Wake Forest Board of Commissioners
Meeting Agenda
November 19, 2024 at 6:00 PM
All items listed are for discussion and possible action.

Notice

In accordance with the requirements of Title II of the Americans with Disabilities Act of 1990 (ADA), the Town of Wake Forest will not discriminate against qualified individuals with disabilities on the basis of disability in its services, programs, or activities. For individuals with impaired hearing, special equipment is available for use during meetings in the Town Hall board chambers. Anyone who requires an auxiliary aid or service for effective communication, or a modification of policies or procedures to participate in a program, service, or activity of Town of Wake Forest should contact ADA Coordinator Mickey Rochelle at 919-435-9455 or Town Clerk Terry Savary at 919-435-9432 as soon as possible, but no less than 48 hours before the scheduled event.

Cable & Online Broadcast of Board of Commissioners Meetings

All Board of Commissioners (BOC) meetings are broadcast live on WFTV 10 beginning at 6 p.m. Meetings are also streamed online on the Public Meetings Portal on the Town of Wake Forest website. Archived meeting videos are also provided and available for one year after the original air date.

Meeting Agendas

The BOC meeting agenda is available to be viewed and downloaded by noon on the Friday prior to the third Tuesday of each month. Citizens may request copies of the agenda or submit questions concerning agenda items by calling the Town Clerk's office at 919-435-9432. Citizens may also receive a copy of each month's agenda via email by enrolling in the free E-Notifier subscription service.

Public Hearings

When an agenda item is denoted as a Public Hearing, persons attending shall be permitted to address the BOC regarding the item under consideration.Anyone wishing to address the BOC concerning a public hearing item should complete and submit the BOC Public Comment Form on the Town website. Proponents and opponents shall each be given three minutes of time to speak and may choose to allow one speaker to utilize the time. In the event either proponent(s) or opponent(s) have not designated a speaker to represent the view, each speaker will be allowed three minutes each to express his/her comments, ideas, concerns, expressions, and desires. A designated speaker for a group will be allowed 10 minutes to speak. Only comments on a Public Hearing will be allowed during this time.

Public Comment

During the Public Comment period, anyone wishing to address the BOC concerning an issue or topic that is not a public hearing item or an agenda item should complete and submit the BOC Public Comment Form on the Town website. Then, during the Public Comment portion of the meeting, Mayor Jones will recognize you and invite you to the podium at which time you will have three minutes to speak. Thank you for your cooperation.

Call to Order

Pledge of Allegiance

1.Approval of Agenda

2.Approval of Minutes

2.A. October 1, 2024 Work Session
October 15, 2024 Regular Meeting
DraftBOCWSMinutesOct202401.pdf
DraftBOCMinutes_Oct202415.pdf

3.Presentations

3.A. Presentation of fiscal year ended June 30, 2024 Annual Comprehensive Financial Report

Presentation of Annual Financial Report for June 30, 2024_summary.pdf

4.Public hearings / Public Comment

4.A. Public Hearing on Multi-Modal Transportation Impact Fee Update
BOC_Agenda Item Summary_Public Hearing
MMTransportationImpactFee_2024_11.19.2024.docx
Wake Forest TIF Presentation 11-5-24 v3 (1).pptx
Wake Forest MMTIF_DRAFT Rpt 10-28-24.pdf

4.B. Public Hearing on LEGISLATIVE CASE TA-24-01, Unified Development Ordinance (UDO) Comprehensive Update
TA-24-01 Agenda Summary
Staff Report TA-24-01 Comprehensive UDO Update
Attachment A - Application
Attachment B - Proposed Changes
Attachment C - TA-24-01 Planning Board Recommendation and Plan Consistency Analysis
Attachment D - Public Comments Received on Draft UDO
Exhibit 1 - Wake Forest UDO Draft For Adoption Consideration
Exhibit 2 Proposed Edits

4.C. Public Hearing on LEGISLATIVE CASE CPA-24-02, Revised Draft Downtown Plan

(November 5, 2024 version)
Agenda Summary_111924.pdf
CPA-24-02 BoC PH Staff Report.pdf
Attachment A - Application.pdf
Attachment C - Summary of Changes 110524.pdf
Attachment D - September Draft Plan Comment Responses Revised.pdf
Ordinance CPA-24-02.docx

4.D. Public Comment: If anyone would like to address the Board of Commissioners on an item other than a public hearing item during the time of public comment, please sign up with the Town Clerk prior to the meeting. Each speaker is asked to limit comments to 3 minutes. Please provide the clerk with copies of any handouts you have for the Board. Although the Board is interested in hearing your concerns, speakers should not expect Board action or deliberation on subject matter brought up during the Public Comment segment. Topics requiring further investigation will be referred to the appropriate Town Staff and may be scheduled for a future agenda. Thank you for your consideration of the Board of Commissioners, staff and other speakers.

5.Consent Agenda

(A Consent Agenda is a group of items passed with a single motion and vote. These matters are of a generally routine nature. No debate is allowable on any item included on the Consent Agenda. If a Commissioner or any citizen of Wake Forest or its ETJ wants separate consideration of any item, it may be removed from the Consent Agenda by request.)

5.A. Approval of a Resolution Prohibiting Viewing of Pornography on Town Networks and Devices
Resolution2024-XX_Pornography on Govt Devices policy_Nov202419.docx

5.B. Approval of the 2025 Board of Commissioners Meeting Schedule
Resolution2024-58,
2025TOWFBoardOfCommissionersMeetingSchedule_Nov202419.pdf

5.C. Approval of Appointment to Citizen Advisory Boards
RESOLUTION2025-XXX_Adv_Board_Appts-HPC.pdf
RESOLUTION2025-XXX_Adv_Board_Appts-TAB.pdf
RESOLUTION2025-XXX_Adv_Board_Appts-HRC.pdf
RESOLUTION2025-XXX_Adv_Board_Appts-PRCR.pdf

5.D. Approval of Contract for the Construction of HL Miller Park Improvements
Agenda Summary_11192024.pdf
Attachment_A_Resolution_HL Miller Park Greenway Construction.docx

Attachment_B_Greenway_Construction_Bid_0006-2024.pdf
Attacment_C_Bid_Tab_HL_Miller_Park.pdf
Attachment_D_HL Miller Park Bid Tabulation Certification.pdf

5.E. Approval of Contract for Dunn Creek Culvert Replacement
Agenda Summary_11192024.pdf
Attachment_A_Resolution_Dunn Creek Culvert Construction Services.docx
Attachment_B_Bid #0005-2024 Dunn Creek Culv Bid_Fred Smith.pdf
Attachment_C_Bid Certification Letter and Tabulations.pdf
Attachment_D_ Project Award Letter.pdf

5.F. Approval of the 2025 Street Resurfacing Project
Summary_Street Resurfacing Contract 2025.docx
Attachment_A_2024-xx_Resolution_.docx
Attachement_B_Street_Resurfacing_Bid_0004-2024.pdf
Attachment_C_Bid Tab.pdf

5.G. Approval of a Resolution for the Joint Use Agreement with the Boys & Girls Club Serving Wake County
Resolution - Boys & Girls Club Joint Use Agreement.docx
Summary Sheet for Resolution - Boys & Girls Club Use Agreement.pdf
Town of Wake Forest - Boys & Girls Club Joint Use Agreement 2024-2034.pdf

6.Legislative Items

7.Planning Items

7.A. Consideration of LEGISLATIVE CASE CPA-24-02, Revised Draft Downtown Plan (November 5, 2024 version)

7.B. Consideration of approval of a Resolution to Support Development of the S-Line Rail Corridor and to Provide Local Funding to Match a Federal Grant Opportunity for Mobility Hub Design and Construction Activities
Agenda Summary
Resolution.docx

8.Administration and Financial Items

8.A. Consideration of approval of updated Special Events Policy and adoption of Motorized Parade Policy
Item Summary_Special Event and Motorized Parade Policies.pdf
Special Events Policy_Final Draft_11_19_2024.pdf

Motorized Parade Policy_Final Draft_11_19_2024.pdf

8.B. Consideration of approval of a Resolution amending Parks & Recreation Impact Fees
BOC_Agenda Item Summary_ConsiderationofAprpoval
ParksRecImpactFeeResolution_2024.docx
Resolution 2024-xx_PRCR_Impact_Fees_11.19.2024.docx

9.Public Services Items

10.Parks and Recreation Items

11.Public Safety Items

12.Other Business

12.A. Wake County Tax Release
WAKE FOREST-TXREP-NOV-2024-BOC-MTG.pdf

12.B. Department Monthly Report
October 2024 Monthly Report.pdf

12.C. Commissioner Reports

13.Adjournment

Board of Commissioners Agenda Item Report

Agenda Item No.: 2024-362-
Submitted by: Terry Savary
Submitting Department: Administration
Meeting Date: November 19, 2024

SUBJECT
October 1, 2024 Work Session
October 15, 2024 Regular Meeting

Recommendation:

Item Summary:

ATTACHMENTS
- DraftBOCWSMinutesOct202401.pdf
- DraftBOCMinutes_Oct202415.pdf

Wake Forest Board of Commissioners
Work Session Meeting Minutes

The Wake Forest Board of Commissioners met on **Tuesday, October 1, 2024,** at **6:00 p.m.** in the Board Room at Wake Forest Town Hall, 301 S Brooks Street.

Mayor Jones called the meeting to order at 6:00 p.m.

Commissioners Present: Mayor Vivian A. Jones, Commissioner Ben Clapsaddle, Commissioner Keith Shackleford, Commissioner Nick Sliwinski, and Commissioner Adam Wright.

Commissioners Absent: Commissioner Faith Cross.

Staff Members Present:
Town Manager Kip Padgett
Assistant Town Manager Candace Davis
Assistant Town Manager Allison Snyder
Assistant Town Manager/CFO Aileen Staples
Town Attorney Hassan Kingsberry
Town Clerk Theresa Savary
Senior Planner Patrick Reidy
Senior Planner Tim Richards
Assistant Planning Director Jennifer Currin
Engineering Director Tim Watson
Finance Director Samantha Sanchez
Budget & Performance Manager Michelle Daniels
Fire Chief Ron Early
Battalion Chief Ed Barrett
Police Chief Jeff Leonard
Police Captain Brandon High
Police Captain Julius Jefferson

Mayor Jones emphasized the importance of supporting Western North Carolina (WNC) and expressed her pride in the community. She commended residents for their generous donations of supplies sent to the western part of the state. The Town of Wake Forest has also sent staff members and equipment to volunteer and assist in WNC.

Mayor Jones announced that Commissioner Cross would not be attending tonight's meeting.

Presentations

1.1. Presentation of LEGISLATIVE CASE RZ-23-11, 418 Jones Dairy Road, a rezoning filed by TMTLA Associates to rezone 5.61 acres located at 418 Jones Dairy Road, being Wake County Tax PIN 1850155522 from Light Industrial (LI) and Rural Holding District (RD) to Neighborhood Business Conditional District (NB-CD).

Senior Planner Patrick Reidy presented on Legislative Case RZ-23-11, 418 Jones Dairy Road.

Mayor Jones asked the Board if they had any questions.

Commissioner Wright inquired about the lighting at the back of the lot. Mr. Reidy explained that the Unified Development Ordinance (UDO) has specific requirements for light placement and direction to minimize the impact on neighboring properties. If the rezoning is approved and construction moves forward, a photometric lighting plan would need to be provided to demonstrate compliance with these requirements.

Mayor Jones asked about the number of parking spaces. Mr. Reidy clarified that a condition had been included, stipulating that regardless of the tenant space, a maximum of 209 parking spaces would be required.

No further questions were heard.

1.2. Proclamation Recognizing October 2024 as "Community Planning Month"

Mayor Jones recognized Community Planning Month and read the proclamation into the record:

NATIONAL COMMUNITY PLANNING MONTH
PROCLAMATION

WHEREAS, *change is constant and affects all cities, towns, suburbs, counties, boroughs, townships, rural areas, and other places; and*
WHEREAS, *community planning and planners can help manage this change in a way that provides better choices for how people work and live; and*
WHEREAS, *community planning provides an opportunity for all residents to be meaningfully involved in discussions regarding the future of their community; and*
WHEREAS, *the full benefits of planning requires public officials and citizens who understand, support, and demand excellence in planning and plan implementation; and*

WHEREAS, *the month of October is designated as National Community Planning Month throughout the United States of America and its territories, and*
WHEREAS, *the American Planning Association and its professional institute, the American Institute of Certified Planners, endorse National Community Planning Month as an opportunity to highlight the contributions sound planning and plan implementation make to the quality of our neighborhoods and environment; and*
WHEREAS, *the celebration of National Community Planning Month gives us the opportunity to publicly recognize the participation and dedication of the members of planning boards and other citizen planners who have contributed their time and expertise to the improvement of the Town of Wake Forest; and*
WHEREAS, *we recognize the many valuable contributions made by the professional community of the Town of Wake Forest and extend our heartfelt thanks for the continued commitment to public service by these professionals;*
BE IT RESOLVED THAT, *the month of October 2024 is hereby designated as "**Community Planning Month**" in the Town of Wake Forest in conjunction with the celebration of National Community Planning Month.*
Adopted this 1st day of October, 2024.

Assistant Planning Director Jennifer Currin, Senior Planner Patrick Reidy, and Senior Planner Tim Richards accepted the proclamation on behalf of the Planning Department.

1.3. Presentation on LEGISLATIVE CASE RZ-23-12, Hyundai Automotive Dealership, a conditional district rezoning filed by Drew Wilkinson on behalf of 10012 CBM LLC, 2517 BMC LLC, and Naught 1 LLC, to rezone 11.16 acres located at 10012 Capital Boulevard and 2517, 2601, and 2605 Burlington Mills Road, being Wake County Tax PIN(s) 1738497725, 1738499517, 1738592719, and 1738593572, from Highway Business (HB) and General Residential (GR3) to Highway Business Conditional District (HB-CD).

Senior Planner Tim Richards gave a presentation on Legislative Case RZ-23-12, Hyundai Automotive Dealership.

Mr. Richards stated that the developer has agreed to fund the improvements needed to extend the road and make it consistent with the four-way cross-section. Commissioner Clapsaddle inquired whether there had been discussions with the landowner. Mr. Richards explained that the first step would involve conducting survey work. He added that staff are currently in discussions with the developer to ensure the timeline is

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flexible, as it will take time to complete the survey work and either reach an agreement with the landowner or proceed with condemnation proceedings.

Commissioner Sliwinski raised a question about the parking spaces having permeable surfaces and how it would impact the site's drainage. Mr. Richards clarified that they are meeting the minimum UDO standard with the permeable spaces. He noted that he didn't have the specifics of the UDO requirements offhand but would find out if necessary. Additionally, Mr. Richards mentioned that they are proposing an underground stormwater treatment in a specific portion of the site. He also highlighted that if approved, there would be further discussions, especially with NCDOT, regarding how stormwater is being managed to ensure it doesn't affect their right-of-way.

Mayor Jones inquired whether they are expected to modify their UDO to comply with the 25-year stormwater standard. Mr. Richards confirmed that they are expected to do so. Commissioner Clapsaddle asked if this is the town's expectation for this site and whether staff has requested the developer to plan based on the 25-year stormwater standard. Mr. Richards responded that they currently comply with the UDO standards in effect, but the draft UDO has a more rigorous standard, and they are discussing whether the developer can meet that standard. He mentioned that the engineers are still evaluating. When asked about stormwater issues in the area, Mr. Richards could only speak anecdotally and mentioned that the landowner has reported issues with flooding.

Mayor Jones asked if the Board had any other questions. No further questions were heard.

2. Discussion of Monthly Financial Report

2.1 Monthly Financial Report

Assistant Town Manager/CFO Aileen Staples informed that the GO Bond Sale was held today, October 1, 2024, at 11:00 am this morning and the town received sixteen bids. She also confirmed that the loan closing will be by the end of the month.

3. Review of Draft Agenda for Upcoming Regular Meeting

3.1 Review of Draft Agenda for Upcoming Regular Meeting

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The draft agenda was reviewed.

4. Other Business

No Other Business presented.

5. Commissioner Reports

Commissioner Sliwinski reported that the Town of Wake Forest's second annual Mental Wellness Fair had a wonderful turnout, with over 200 community members in attendance. National Night Out is scheduled for Monday, October 7th, from 5 to 7:30 pm at the Joyner Park Community Center Parking Lot. The Halloween Boo Bash is scheduled for Saturday, October 19th, from 11 am to 2 pm in Downtown Wake Forest.

Commissioner Clapsaddle thanked the Human Relations Council for their support on Good Neighbor Day and congratulated Samantha Luce as the Good Neighbor of the Year. The Community Celebration of the Arts is scheduled for Saturday, October 5th, from 9 am to 12 pm at the Alston Massenburg Center. The Memorial Flag Raising Ceremony is on Monday, October 7th at 11 am at Centennial Plaza. Commissioner Clapsaddle also expressed gratitude to the first responders, firefighters, water rescue teams, police officers, and all those supporting the people in Western North Carolina. Additionally, he thanked Ryan Hutchinson for a letter he sent to the Board of Commissioners and the Mayor.

Commissioner Shackleford expressed gratitude to Commissioner Sliwinski for leading the Mental Wellness Fair, stating that it is an excellent way to share valuable resources.

Commissioner Wright also thanked Commissioner Sliwinski and everyone involved in organizing the Mental Wellness Fair.

Mayor Jones expressed her excitement about the grant received for Astronomy Night at Joyner Park. She congratulated Suja Jacob and Jugnu Bhatt for their efforts in applying for the grant. Additionally, she mentioned her participation in several community events, including Good Neighbor Day, the JROTC Activation Ceremony, a visit with second graders at Endeavor Charter School, Kiwanis Bingo, and the Joyner Park

Celebration. Mayor Jones also thanked Commissioner Sliwinski for leading the Mental Wellness Fair.

Town Manager Padgett announced that Micro Transit has begun operations today and is already showing signs of success. He also recognized the Planning Staff for their achievements, including winning the 2024 North Carolina Marvin Collins Award for their Community Plan and the Carraway Award of Merit, which is presented annually by Preservation North Carolina for the rehabilitation of the Ailey Young House. Additionally, the Wake Forest Staff is providing assistance and support to Western North Carolina, and donations are being accepted at Fire Department Station #1.

6. Adjournment

The Board of Commissioners adjourned the meeting at 7:04 p.m.

Duly approved in open session this 19th day of November 2024.

(ATTEST)

_____
Vivian A. Jones, Mayor

_____
Theresa Savary, Town Clerk

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Wake Forest Board of Commissioners
Meeting Minutes

The Wake Forest Board of Commissioners met on **Tuesday, October 15, 2024,** at **6:00** p.m. in the Board Room at Wake Forest Town Hall, 301 S Brooks Street.

Mayor Jones called the meeting to order at 6:00 p.m.

Mayor Jones stated that Commissioner Shackleford would not be in attendance for tonight's meeting.

Mayor Jones led everyone in the Pledge of Allegiance.

Council Members Present: Mayor Vivian A. Jones, Commissioner Ben Clapsaddle, Commissioner Faith Cross, Commissioner Keith Shackleford, Commissioner Nick Sliwinski, and Commissioner Adam Wright.

Commissioner Members Absent: None.

Staff Members Present

Town Manager Kip Padgett
Assistant Town Manager Candace Davis
Assistant Town Manager Allison Snyder
Assistant Town Manager/CFO Aileen Staples
Town Attorney Hassan Kingsberry
Town Clerk Theresa Savary
Assistant Planning Director Jennifer Currin
Engineering Director Tim Watson
Senior Planner Patrick Reidy
Senior Planner Tim Richards
Public Facilities Specialist Steven Carpenter
Finance Director Samantha Sanchez
Fire Chief Ron Early
Police Chief Jeff Leonard
Police Captain Julius Jefferson
Police Captain Brandon High

1. Approval of Agenda

ACTION:
Mover: Commissioner Wright moved to approve the agenda as presented.
Seconder: Commissioner Sliwinski.
Vote: Motion carried 5-0.

2. Approval of Minutes

2.A. Approval of Minutes:

- September 3, 2024 Work Session
- September 17, 2024 Regular Meeting

ACTION:
Mover: Commissioner Wright moved to approve the minutes as presented.
Seconder: Commissioner Shackleford.
Vote: Motion carried 5-0.

3. Presentations

3.A. Presentation of Annual Reports from the Town's Advisory Boards

Chairperson Shawn Hagen provided an annual report on behalf of the Urban Forestry Board.

3.B. Proclamation Recognizing November 2024 as "Native American Heritage Month"

Mayor Jones recognized Native American Heritage Month":

PROCLAMATION
RECOGNIZING NOVEMBER 2024 AS
"NATIVE AMERICAN HERITAGE MONTH"

WHEREAS, the history and culture of our great nation have been significantly influenced by American Indians and indigenous peoples; and
WHEREAS, the contributions of American Indians have enhanced the freedom, prosperity, and greatness of America today, and
WHEREAS, their customs and traditions are respected and celebrated as part of a rich legacy throughout the United States; and
WHEREAS, Native American Awareness Week began in 1976 and recognition was expanded by Congress and approved by President George Bush in August 1990, designating the month of November as National American Indian Heritage Month; and
WHEREAS, in honor of National American Indian Heritage Month, community celebrations as well as numerous cultural, artistic, educational, and historical activities

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have been planned.
NOW, THEREFORE, I, Vivian A. Jones, by virtue of the authority vested in me as Mayor of the Town of Wake Forest, North Carolina and the Board of Commissioners do hereby proclaim November 2024 as
"Native American Heritage Month"
in the Town of Wake Forest and urge all our citizens to observe this month with appropriate programs, ceremonies, and activities.

3.C. Introduction of Candidates for the Board of Adjustment and Planning Board

Scott Fultonberg introduced himself to the Board of Commissioners and expressed his interest in service to the Board of Adjustment.

Mark Williams introduced himself to the Board of Commissioners and expressed his interest in service to the Board of Adjustment.

Adam Redler introduced himself to the Board of Commissioners and expressed his interest in service to the Planning Board.

Jordan Banks introduced himself to the Board of Commissioners and expressed his interest in service to the Planning Board.

4. Public hearings / Public Comment

4.A. Public Hearing on LEGISLATIVE CASE RZ-23-11, 418 Jones Dairy Road, a rezoning filed by TMTLA Associates to rezone 5.61 acres located at 418 Jones Dairy Road, being Wake County Tax PIN 1850155522 from Light Industrial (LI) and Rural Holding District (RD) to Neighborhood Business Conditional District (NB-CD).

Mayor Jones opened the public hearing.

The following citizens provided comments:

- Scott Laurent, 1509 Basley Street, Wake Forest, NC 27587
- Cliff Lowe, 1505 Basley Street, Wake Forest, NC 27587
- Julia Lowe, 1505 Basley Street, Wake Forest, NC 27587
- Margaret Watkins, 407 Belmellen Court, Wake Forest, NC 27587

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Mayor Jones asked if anyone else would like to speak. No one came forward to speak.

Mayor Jones declared the public hearing closed.

4.B. Public Hearing on a contiguous annexation submitted by property owner Star Landing LLC for property associated with the rezoning request RZ-23-06, located at 10600 Star Road being Wake County PIN 1739652624 being approximately 26.86 acres.

Mayor Jones asked if anyone would like to speak. No one came forward to speak.

Mayor Jones declared the public hearing closed.

4.C. Public Hearing on LEGISLATIVE CASE RZ-23-12, Hyundai Automotive Dealership, a conditional district rezoning filed by Drew Wilkinson on behalf of 10012 CBM LLC, 2517 BMC LLC, and Naught 1 LLC, to rezone 11.16 acres located at 10012 Capital Boulevard and 2517, 2601, and 2605 Burlington Mills Road, being Wake County Tax PIN(s) 1738497725, 1738499517, 1738592719, and 1738593572, from Highway Business (HB) and General Residential (GR3) to Highway Business Conditional District (HB-CD).

Senior Planner Tim Richards provided an update on the following revised & new conditions:

Revised Condition #8:

- Town has 60 days following approval of rezoning to provide survey for 2521 and 2525 Burlington Mills Rd for those frontage improvements to be included in developer's construction plans
- Town or NCDOT still must acquire the right-of-way before developer starts construction for developer to construct those improvements at developer's cost

New Condition #10:

- Stormwater control measures must attenuate peak flow leaving the site for the 25-year, 24-hour storm to pre-development condition (draft UDO standard)

The following citizens provided comments:

- Veronica Brown, 9716 Clover Bank Street, Wake Forest, NC 27587
- Lynda Thum, 4455 Hillsgrove Road, Wake Forest, NC 27587

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- Margaret Watkins, 407 Belmellen Court, Wake Forest, NC 27587

Toby Coleman from Smith Anderson represented Johnson Automotive and presented information about the new Johnson Hyundai Site.

Travis Fluitt, a Transportation Engineer with Kimley-Horn Associates, addressed the Board but could not confirm whether the intersection at Urial Dr. and Burlington Mills Rd. currently meets the necessary requirements for a traffic signal. He mentioned that they had been operating under the assumption that the development to the south would install the signal and had committed to doing so. If it is later determined that a signal is warranted, they will proceed with its installation. Mr. Fluitt noted that this development alone would not create the need for a traffic signal.

Mayor Jones asked if there was anyone else that wanted to speak. No one came forward to speak.

Mayor Jones declared the public hearing closed.

Public Comment: If anyone would like to address the Board of Commissioners on an item other than a public hearing item during the time of public comment, please sign up with the Town Clerk prior to the meeting. Each speaker is asked to limit comments to 3 minutes. Please provide the clerk with copies of any handouts you have for the Board. Although the Board is interested in hearing your concerns, speakers should not expect Board action or deliberation on subject matter brought up during the Public Comment segment. Topics requiring further investigation will be referred to the appropriate Town Staff and may be scheduled for a future agenda. Thank you for your consideration of the Board of Commissioners, staff and other speakers.

The following citizens provided public comments:

- David Griffin, 905 Traditions Ridge Drive, Wake Forest, NC 27587
- Will Arterburn, 4901 Granite Lake Drive, Wake Forest, NC 27587
- Margaret Watkins, 407 Belmellen Court, Wake Forest, NC 27587
- Mayor Vivian Jones handed the meeting over to Mayor Pro Tem Keith Shackleford

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5. Consent Agenda

(A Consent Agenda is a group of items passed with a single motion and vote. These matters are of a generally routine nature. No debate is allowable on any item included on the Consent Agenda. If a commissioner or any citizen of Wake Forest or its ETJ wants separate consideration of any item, it may be removed from the Consent Agenda by request.)

5.A. Approval of a Resolution to Accept the 2024 North Carolina Parks and Recreation Trust Funds (PARTF) Grant Award

[Filed in the Clerk's Office as Resolution 2024-55.]

ACTION:
Mover: Commissioner Wright moved to approve the consent agenda as presented.
Seconder: Commissioner Sliwinski.
Vote: Motion carried 5-0.

6. Legislative Items

6.A. Consideration of Appointment of Candidates for the Board of Adjustment and Planning Board

Town Clerk Savary stated the following applicants were selected for the Board of Adjustment:

- Joseph Longoria
- Scott Fultonberg – Alternate
- Mark Williams – ETJ

ACTION:
Mover: Commissioner Sliwinski moved to approve as read into the record.
Seconder: Commissioner Wright.
Vote: Motion carried 5-0.

Town Clerk Savary stated the following applicants were selected for the Planning Board:

- Jordan Banks

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- Karin Kuropas
- Adam Redler - ETJ

ACTION:
Mover: Commissioner Wright moved to approve as read into the record.
Seconder: Commissioner Shackleford.
Vote: Motion carried 5-0.

7. Planning Items

7.A. Consideration of LEGISLATIVE CASE RZ-23-11, 418 Jones Dairy Road, a rezoning filed by TMTLA Associates to rezone 5.61 acres located at 418 Jones Dairy Road, being Wake County Tax PIN 1850155522 from Light Industrial (LI) and Rural Holding District (RD) to Neighborhood Business Conditional District (NB-CD).

Commissioner Wright raised concerns about water runoff. Landscape Architect Randy Porter from TMTLA Associates explained that they are now committing to managing a 25-year, 24-hour storm event, which aligns with the new draft Unified Development Ordinance (UDO).

Commissioner Cross inquired whether using permeable pavers would improve the parking area. Mr. Porter responded that permeable pavers require near-level or flat slopes, which are unsuitable for the site's topography. Commissioner Cross then asked if the buildings could function with fewer parking spaces and how the current number had been determined. It was explained that the number of spaces was based on the anticipated use of the medical office and commercial areas, following the guidelines set by the UDO. Mr. Porter noted that there would be room for evaluation as they move toward the construction drawings and further define the actual tenants or users of the property. Civil Consultant Mike Stocks also mentioned that a sand filter would be installed in the far parking lot to manage stormwater, specifically to attenuate runoff from a 25-year, 24-hour storm event.

Commissioner Wright asked how they would capture water in the parking lot given its slope. Mr. Stocks said water would be collected in catch basins, channeled through pipes, and directed to an underground system.

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Commissioner Wright requested additional information about the lighting at the back of the lot. Mr. Porter discussed the existing vegetation, supplemental screening plantings, and the current forest vegetation. He mentioned that the proposed plants include eastern red cedar, wax myrtle, and yaupon holly. He believes the combination of these new plantings and the existing vegetation will provide sufficient screening of vehicular headlights.

Mayor Jones asked if there were any more questions. No further questions were raised.

ACTION:
Mover: Commissioner Sliwinski moved to approve Case RZ-23-11, Jones Dairy Road with the consistency statement.
Seconder: Commissioner Wright.
Vote: Motion carried 5-0.

7.B. Consideration of a contiguous annexation submitted by property owner Star Landing LLC for property associated with the rezoning request RZ-23-06, located at 10600 Star Road being Wake County PIN 1739652624 being approximately 26.86 acres.

ACTION:
Mover: Commissioner Shackleford moved to approve the contiguous annexation submitted by property owner Star Landing LLC for property associated with the rezoning request RZ-23-06, located at 10600 Star Road.
Seconder: Commissioner Sliwinski.
Vote: Motion carried 5-0.

7.C. Consideration of LEGISLATIVE CASE RZ-23-12, Hyundai Automotive Dealership, a conditional district rezoning filed by Drew Wilkinson on behalf of 10012 CBM LLC, 2517 BMC LLC, and Naught 1 LLC, to rezone 11.16 acres located at 10012 Capital Boulevard and 2517, 2601, and 2605 Burlington Mills Road, being Wake County Tax PIN(s) 1738497725, 1738499517, 1738592719, and 1738593572, from Highway Business (HB) and General Residential (GR3) to Highway Business Conditional District (HB-CD).

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ACTION:
Mover: Commissioner Wright moved to approve Case RZ-23-12, Hyundai Automotive Dealership with the consistency statement.
Seconder: Commissioner Sliwinski.
Commissioner Cross inquired about prioritizing the traffic light, regardless of any developments. She noted that there is currently one right-hand turn lane on Burlington Mills Rd. at Capital Blvd. and asked if it would be possible to add a second right-hand turn lane to help manage the volume of vehicles. Mr. Richards explained that an analysis had been conducted to assess where traffic currently backs up and what potential future backups might occur with these improvements. He noted that the challenge lies with the traffic signal, and NCDOT is unlikely to approve dual lanes there due to implications for signal timing. However, Mr. Richards stated that extending the right-hand turn lane along the frontage should significantly help alleviate the issue.

- Mr. Richards explained that an analysis had been conducted to assess where traffic currently backs up and what potential future backups might occur with these improvements. He noted that the challenge lies with the traffic signal, and NCDOT is unlikely to approve dual lanes there due to implications for signal timing. However, Mr. Richards stated that extending the right-hand turn lane along the frontage should significantly help alleviate the issue.
- Commissioner Wright asked about a development agreement, specifically if a traffic light is warranted, and whether they would be open to negotiating an agreement with the other developer.
- Assistant Planning Director Jennifer Currin indicated that the condition depends largely on the other developer agreeing to contribute financially to a project for which they might not currently have funding. Without the other developer present to discuss their current timeline or financial commitments regarding the project to the south, she is reluctant to move forward with conditioning both developments together. If a traffic signal is required due to existing conditions, it is more likely to be a Capital Improvement Project for future consideration rather than a requirement of the developer.

Vote: Motion carried 5-0.

8. Administration and Financial Items

8.A. Consideration of Approval Amending the Parks & Recreation Impact Fees.

DRAFT

The Board discussed the Parks & Recreation Impact Fees and approved an 80% adoption percentage paid over 5 years beginning July 1, 2025.

Mayor Jones stated that approval of an ordinance will be on the November 19, 2024 consent agenda.

9. Public Services Items

No Public Service Items presented.

10. Parks and Recreation Items

10.A. Consideration of Ordinance to Adopt the Parks, Recreation and Cultural Resources Department 2024 Master Plan CPA-24-01

ACTION:
Mover: Commissioner Sliwinski moved to approve the Ordinance to Adopt the Parks, Recreation and Cultural Resources Department 2024 Master Plan CPA-24-01.
Seconder: Commissioner Wright.
Vote: Motion carried 5-0.

11. Public Safety Items

No Public Safety Items presented.

12. Other Business

12.A. Wake County Tax Release

Received.

12.B. Department Monthly Reports

Received.

12.C. Commissioner Reports

DRAFT

Commissioner Sliwinski announced that the Halloween Boo Bash will take place on Saturday, October 19th, from 11:00 a.m. to 2:00 p.m. in Downtown Wake Forest. Additionally, the Ailey Young House Heritage Site/Northeast Gateway Park Open House is scheduled for Thursday, October 24th, from 5:30 p.m. to 7:30 p.m. at the Alston-Massenburg Center.

Commissioner Clapsaddle expressed gratitude to the Wake Forest Fire and Police Departments, along with all the volunteers and staff who contributed to the Wake Forest Pride Event on October 5, 2024. He also thanked Mayor Jones for her earlier comments during the public portion of the meeting.

Commissioner Cross shared her thoughts about the Wake Forest Pride Event. The Autumn Art & Plant Festival will be held on Saturday, October 19th, from 10:00 a.m. to 4:00 p.m. at the Wake Forest Historical Museum. She thanked Police and Fire Department staff for their assistance with relief efforts in Western North Carolina.

Commissioner Shackleford volunteered at the Wake Forest Pride Event and shared his reflections on the event.

Commissioner Wright attended the Wake Forest Pride Event and expressed his thoughts about the event.

Mayor Jones attended the Celebration of Arts at the Alston-Massenburg Center and the B.W. Wells Annual Meeting. She thanked Wake Forest Police Officers for hosting the National Night Out Event. She attended the Boys & Girls Club 2024 Breakfast of Champions. The Wake Forest Chamber of Commerce inducted Don Bowman into their Hall of Fame. She also expressed gratitude to Ann Welton for the Community Assessment Survey for the Age-Friendly Community Program. She noted that the launch event for Go Wake Forest was a success. Additionally, she thanked the Police and Fire Departments for their contributions to the efforts in Western North Carolina.

Town Manager Padgett had no report.

13. Adjournment

With no further business to discuss, the meeting was adjourned at 8:28 p.m.

DRAFT

Duly approved in open session this 19th day of November 2024.

(ATTEST) _____ Vivian A. Jones, Mayor

_____
Theresa Savary, Town Clerk

DRAFT

Board of Commissioners Agenda Item Report

Agenda Item No.: 2024-333-
Submitted by: Aileen J. Staples
Submitting Department: Finance
Meeting Date: November 19, 2024

SUBJECT
Presentation of fiscal year ended June 30, 2024 Annual Comprehensive Financial Report

Recommendation:

Item Summary:

ATTACHMENTS
- Presentation of Annual Financial Report for June 30, 2024_summary.pdf

Presentation of fiscal year ended June 30, 2024 Annual Comprehensive Financial Report

April Adams, partner with Cherry Bekaert LLP will present the audited financial report for the year ended June 30, 2024. There will be a power point presentation summarizing the financial performance of the Town for the fiscal year 2023-2024. Staff will follow up with additional information and be available for questions.

Board of Commissioners Agenda Item Report

Agenda Item No.: 2024-353-
Submitted by: Candace Davis
Submitting Department: Administration
Meeting Date: November 19, 2024

SUBJECT
Public Hearing on Multi-Modal Transportation Impact Fee Update

Recommendation:

Item Summary:

ATTACHMENTS

- BOC_Agenda Item Summary_Public Hearing MMTransportationImpactFee_2024_11.19.2024.docx
- Wake Forest TIF Presentation 11-5-24 v3 (1).pptx
- Wake Forest MMTIF_DRAFT Rpt 10-28-24.pdf

Agenda Item: Public Hearing on Multi-Modal Transportation Impact Fee

Summary: At the November 5th Work Session, the Board of Commissioners received a presenta?on from the consultant team; Benesch. The consultants presented the 2024 Mul?-Modal Transporta?on Impact Fee (MMTIF) Study recommended fees. The Planning Board received the MMTIF analysis report and presenta?on at their November 12th mee?ng. Staff's recommenda?on is to approve the MMTIF analysis report and recommenda?ons as presented by the consultants and requests the Board call a public hearing at the November 19th mee?ng in accordance with NC General Statutes (G.S. 160A-364) to receive addi?onal comments from the public.

A? achments:

- Wake Forest Parks & Recrea?on Impact Fee Update Study -- Report
- Wake Forest Parks & Rec Impact Fee – Presenta?on

TOWN of WAKE FOREST

Multi-Modal Transportation Impact Fee Study

November 12, 2024

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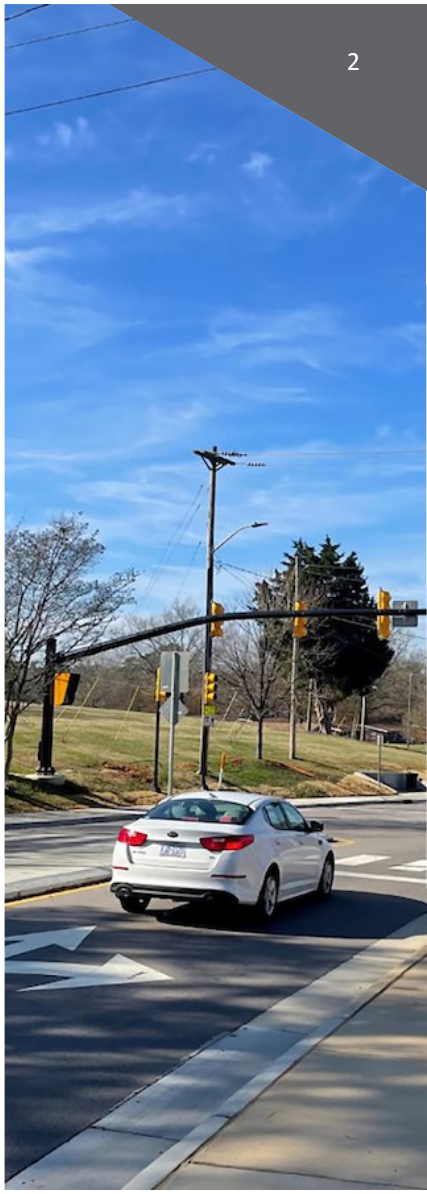
Presentation Overview

Background/ Purpose

Technical Study

Next Steps



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Background/Purpose

- Continuing to experience growth
  - ✓Population increase of 52,000 since 1990
  - ✓Projections indicate 61,000 additional residents by 2040
- Interest in implementing a multi-modal transportation impact fee
  - ✓Allowed per 1989 Enabling Act

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Background/Purpose

Impact fee definition:

- One-time capital charge to new development
- Covers the cost of new capital facility capacity
  - ✓ Frees up other funds for maintenance/renovations
- Implements Capital Improvement Plans

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Background/Purpose

Why Impact Fees?

- Maintain current level-of-service (LOS)
- Calculate the cost of growth
- Most needed when:
  - High growth
  - Limited funding

Background/Purpose

Multi-Modal Impact Fee Revenues

Eligible Expenditure Examples

- New road construction
- Lane addition improvements
- Intersection improvements/turn lane additions
- New bike lanes
- New sidewalks
- New transit capital (buses, shelters, benches)
- Other capacity addition projects

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Background/Purpose

Consumption-Based Methodology

- **Common methodology** used by many jurisdictions
- Charges new growth **based on its consumption of capacity**
- Fees are calculated at a rate to generate revenues sufficient **only for growth related capacity projects**

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Background/Purpose

Basic Impact Fee Formula

Net Impact Fee =

(Cost – Credit) x Demand

Cost to add capacity

Non-impact fee revenue from future development

Person-Miles of Travel

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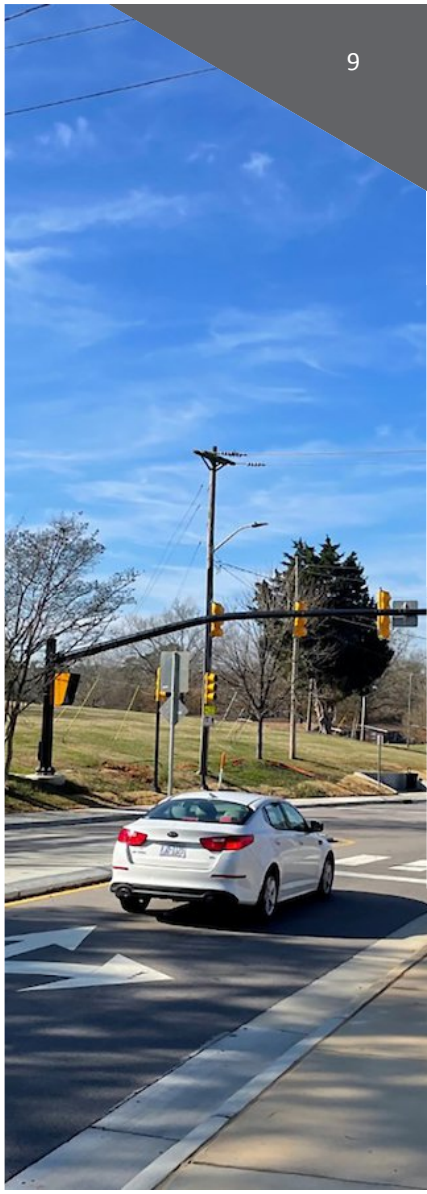
Presentation Overview

Background/ Purpose

Technical Study

Next Steps



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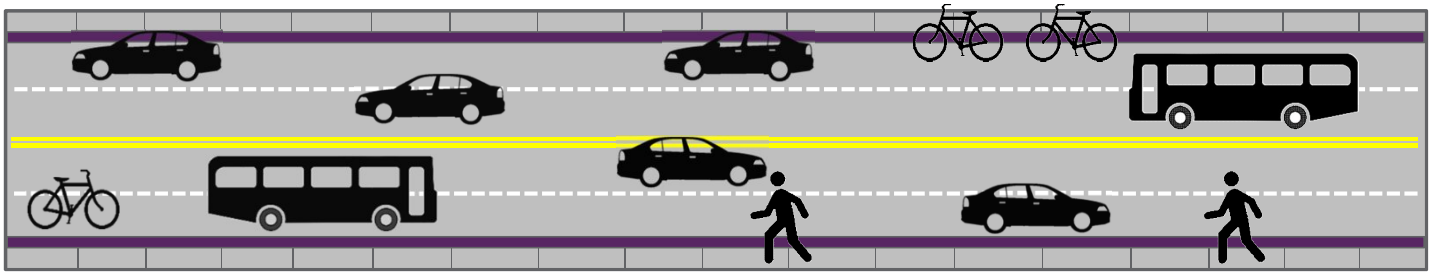
Technical Study

One Lane Mile ≈$4.63 M ÷ **Capacity ≈9,600** = **Person-miles of capacity ≈$482**



Total Credit ≈$1,200

Net Fee ≈$10,600

Total Impact Cost ≈$11,800 ≈ **24.5 person-miles of daily travel** X

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Technical Study

Demand Component

Sources:

- National ITE Reference (11th Edition)
- Trip Characteristics Survey Database
- Triangle Regional Model (Gen. 2)

Demand Calculation:

- Trip Gen. Rate x Trip Length x % New Trips x Interstate & Toll Adjustment Factor x Person-Trip Factor

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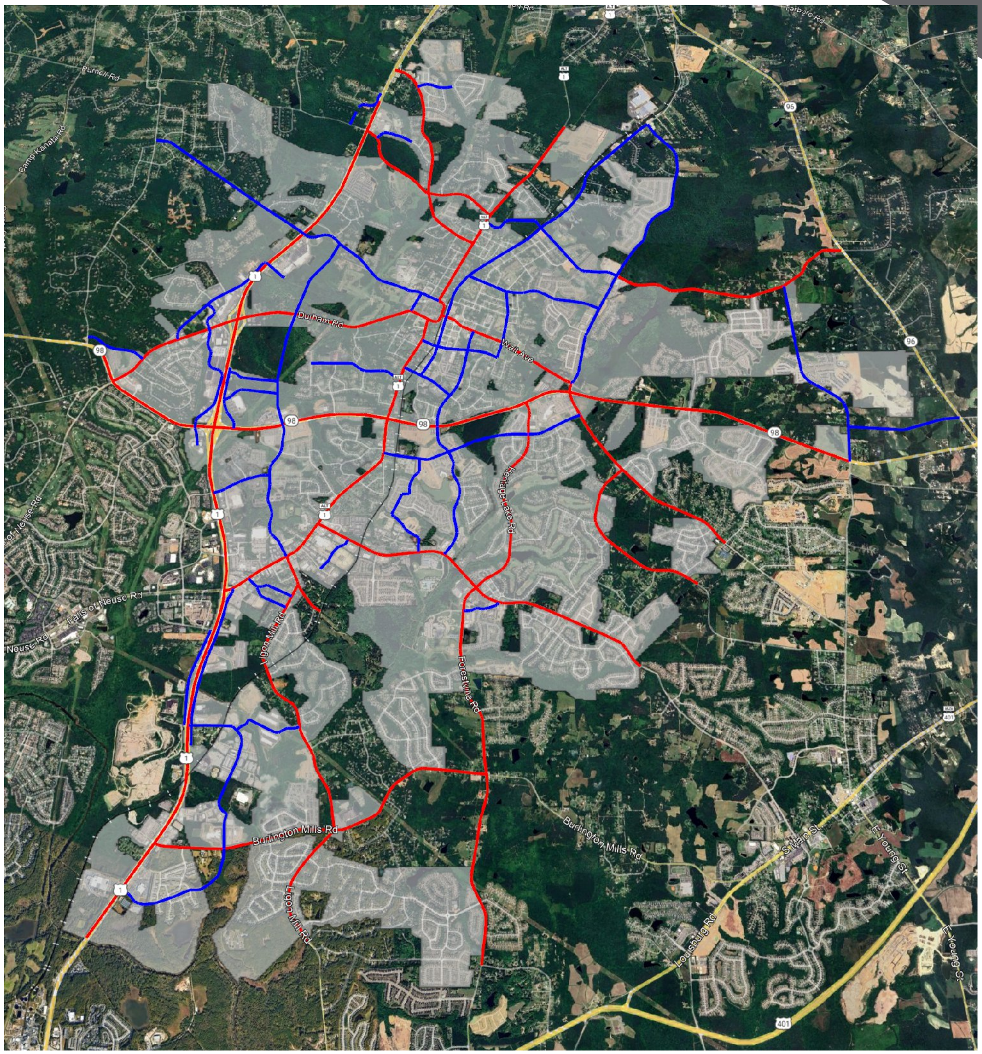
Technical Study

Town Road Adjustment Factor

- Estimated portion of the travel (VMT) that occurs on Town-maintained roadways ≈6%
- Based on the Triangle Regional Model (Generation 2)
- A list of thoroughfares is included in the Comprehensive Transportation Plan



Red = State Maintained
Blue = Town Maintained

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Technical Study

Cost Component

Roadway Improvements (Town)

- Local projects
  - ✓Stadium Dr from Glenco Dr to N. Wingate
  - ✓Ligon Mill Rd from South of S. Main St to N. of Wal-Mart entrance
  - ✓Construction cost ≈ $3.7 million per lane mile
- Nearby Jurisdictions
  - ✓7 improvements ≈ $2.7 million per lane mile
- **Town Roads Construction Cost ≈ $3.0 Million per Lane Mile**

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Technical Study

Cost Component

Roadway Improvements (State)

- 2050 Metropolitan Transportation Plan
  - ✓7 improvements ≈ $7.0 million per lane mile (all phases)
  - ✓Construction portion estimated to be approximately 2/3 of total
- **State Roads Construction Cost ≈ $4.7 Million per Lane Mile**

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Technical Study

Town & State Roads

Phase	Town (95%)	State (5%)	Weighted Average*
Design (15%)	$450,000	$705,000	$463,000
Right-of-Way Acquisition (20%)	$600,000	$940,000	$617,000
Construction	**$3,000,000**	**$4,700,000**	**$3,085,000**
Construction Engineering & Inspections (15%)	$450,000	$705,000	$463,000
Total	**$4,500,000**	**$7,050,000**	**$4,628,000**

*Weighted average based on distribution of future lane miles for capacity improvements in the 2050 Metropolitan Transportation Plan

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Technical Study

Cost per Person-Mile of Capacity

Source	Cost per Lane Mile	Avg PMC Added per Lane Mile	Cost per PMC
Town Roads	$4,500,000	9,200	$489
State Roads	$7,050,000	9,900	$712
Weighted Avg	**$4,628,000**	**9,600**	**$482**

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Technical Study

Credit Component

Revenue Sources

- Town Funding
- State Funding

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Technical Study

Equivalent Pennies of Gas Tax Revenue

Source	Average Annual Expenditures	Value per Penny	Equivalent Pennies per Gallon
Town Revenue	$4,904,685	$6,801,000	$0.007
Town Debt Service	$2,876,498	$6,801,000	$0.005
State Revenue	$92,538,273	$6,801,000	$0.136
Total	**$100,319,456**		**$0.148**

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Technical Study

Calculated MMTIF Rates (Example Land Uses)

Land Use	Unit	Rate	Town Thoroughfare Generation (6%)
Single Family (Detached); 2k sf	Dwelling unit	**$10,601**	**$636**
Multi-Family (Up to 3 Floors)	Dwelling unit	**$6,748**	**$405**
Light Industrial	1,000 sq ft	**$4,431**	**$266**
Office	1,000 sq ft	**$9,862**	**$592**
Retail (40,000-150,000 sf)	1,000 sfgla	**$14,085**	**$845**

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Technical Study

Calculated MMTIF Rates (Single Family Tiered)

Land Use	Unit	Rate	Town Thoroughfare Generation (6%)
- Less than 1,000 sf	Dwelling unit	**$8,593**	**$516**
- 1,000 sf to 1,999 sf	Dwelling unit	**$9,258**	**$555**
- 2,000 sf to 2,999 sf	Dwelling unit	**$10,601**	**$636**
- 3,000 sf or greater	Dwelling unit	**$11,279**	**$677**

Sf = square feet

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Technical Study

Calculated MMTIF Rates

Land Use	Unit	Town of Wake Forest		City of Durham			City of Raleigh	Town of Knightdale	Town of Cary		Town of Zebulon DRAFT
		Calculated	Town Travel (@6%)	North	South	Downtown			Central	Base	
Study Date		**2024**	**2024**	2008	2008	2008	2006	-	-	-	2024
Adoption %		**N/A**	**N/A**	50%	50%	50%	98%	-	-	-	100%
Residential											
Single Family (2,000 sf)	du	**$10,601**	**$636**	$531	$1,405	$293	$2,262	$400	$1,103	$1,573	$2,089
Multi-Family (Low-Rise)	du	**$6,748**	**$405**	$326	$862	$180	$1,512	$300	$684	$975	$1,493
Non-Residential											
Light Industrial	1,000 sf	**$4,431**	**$266**	$389	$1,029	$215	$1,770	$181	$869	$1,238	$1,079
Office (50,000 sq ft)	1,000 sf	**$9,862**	**$592**	$909	$2,406	$503	$2,800	$543	$1,483	$2,113	$2,401
Retail (125,000 sq ft)	1,000 sfgla	**$14,085**	**$845**	$1,892	$5,008	$1,046	$3,672	$1,247	$1,148	$1,637	$5,411

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Technical Study

Indexing

- Used between full updates
- Moderates fee increases and revenue loss
- Examples of other jurisdictions that implemented indexing:
  - ✓Raleigh
  - ✓Apex
  - ✓Morrisville

Producer Price Index (Highway & Street Construction)

Year	Annual Average	Percent Change
2019	115.66	-
2020	113.33	-2.0%
2021	135.54	19.6%
2022	160.84	18.7%
2023	159.69	-0.7%
2024	160.37	0.4%
Average		**7.2%**

Source: U.S. Bureau of Labor Statistics

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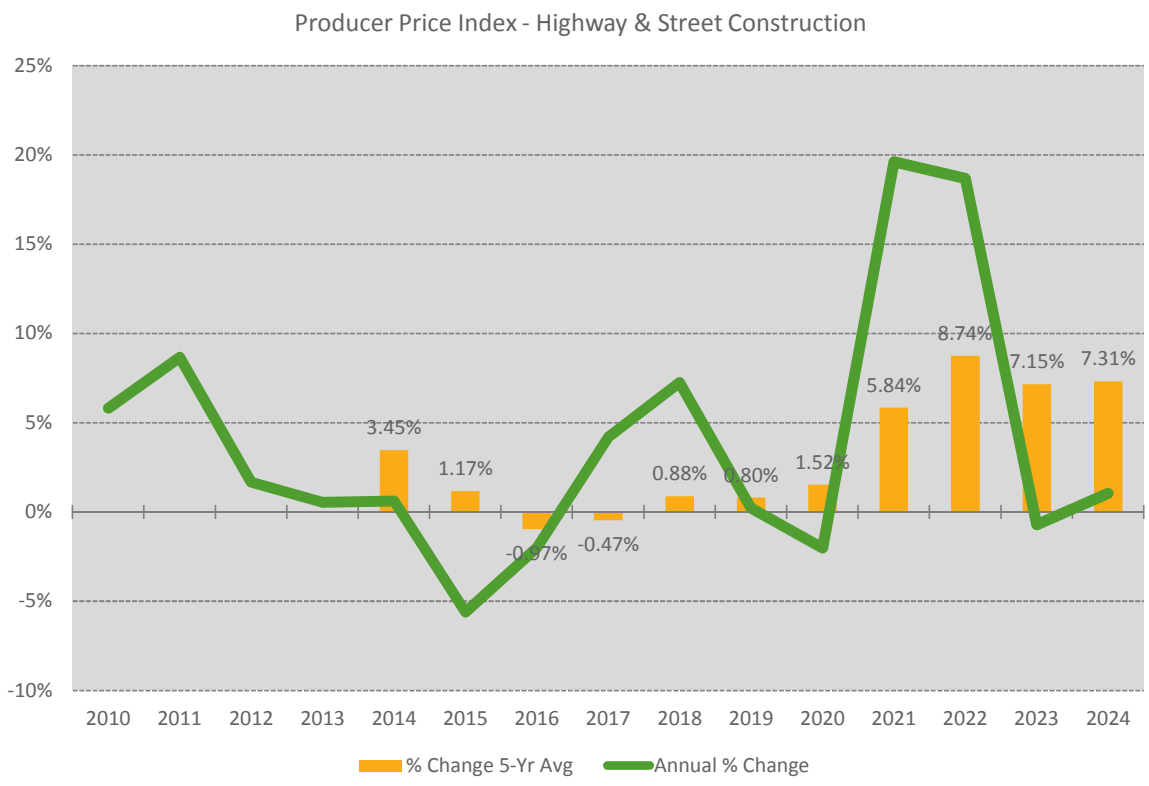
Technical Study

Producer Price Index Trend



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Technical Study

Indexed MMTIF Rates (7.2%)

Land Use	Unit	Rate	Year 1	Year 2	Year 3	Year 4
Full Calculated Rates:						
Single Family (2,000 sf)	Du	**$10,601**	$11,364	$12,182	$13,059	$13,999
Multi-Family, 1-3 Floors	Du	**$6,748**	$7,234	$7,755	$8,313	$8,912
Light Industrial	1,000 sf	**$4,431**	$4,750	$5,092	$5,459	$5,852
Office (50,000 sf)	1,000 sf	**$9,862**	$10,572	$11,333	$12,149	$13,024
Retail (125,000 sf)	1,000 sf	**$14,085**	$15,099	$16,186	$17,351	$18,600
Town Portion ONLY (6%):						
Single Family (2,000 sf)	Du	**$636**	$682	$731	$784	$840
Multi-Family, 1-3 Floors	Du	**$405**	$434	$465	$498	$534
Light Industrial	1,000 sf	**$266**	$285	$306	$328	$352
Office (50,000 sf)	1,000 sf	**$592**	$635	$681	$730	$783
Retail (125,000 sf)	1,000 sf	**$845**	$906	$971	$1,041	$1,116

Sf = square feet

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Technical Study

Adoption Options: Residential

			Option 1			Option 2		
		Annual Index:	-	0%	0%	-	7.2%	7.2%
		Phase %:	5%	10%	15%	5%	10%	15%
Land Use	**Unit**	**Full**	**7/1/2026**	**7/1/2027**	**7/1/2028**	**7/1/2026**	**7/1/2027**	**7/1/2028**
RESIDENTIAL:								
Single Family (Detached); Less than 1,000 sf	Du	**$8,593**	$430	$859	$1,289	$430	$921	$1,481
Single Family (Detached); 1,000 to 1,999 sf	Du	**$9,258**	$463	$926	$1,389	$463	$992	$1,596
Single Family (Detached); 2,000 to 2,999 sf	Du	**$10,601**	$530	$1,060	$1,590	$530	$1,136	$1,827
Single Family (Detached); 3,000 sf or greater	Du	**$11,279**	$564	$1,128	$1,692	$564	$1,209	$1,944
Single Family (Attached)	Du	**$8,622**	$431	$862	$1,293	$431	$924	$1,486
Multi-Family Housing (Low-Rise, 1-3 floors)	Du	**$6,748**	$337	$675	$1,012	$337	$723	$1,163
Multi-Family Housing (Mid/High-Rise, 4+ floors)	Du	**$4,541**	$227	$454	$681	$227	$487	$783
Mobile Home Park	Du	**$3,670**	$184	$367	$551	$184	$393	$633
Senior Adult Housing (Detached)	Du	**$3,687**	$184	$369	$553	$184	$395	$636
Senior Adult Housing (Attached)	Du	**$2,488**	$124	$249	$373	$124	$267	$429

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Technical Study

Adoption Options: Residential

Land Use	Unit	Full	Option 3			Option 4		
		Annual Index:	-	7.2%	7.2%	-	7.2%	7.2%
		Phase %:	10%	10%	10%	6%	6%	6%
			7/1/2026	7/1/2027	7/1/2028	7/1/2026	7/1/2027	7/1/2028
RESIDENTIAL:								
Single Family (Detached); Less than 1,000 sf	Du	**$8,593**	$859	$921	$987	$516	$553	$592
Single Family (Detached); 1,000 to 1,999 sf	Du	**$9,258**	$926	$992	$1,064	$555	$595	$638
Single Family (Detached); 2,000 to 2,999 sf	Du	**$10,601**	$1,060	$1,136	$1,218	$636	$682	$731
Single Family (Detached); 3,000 sf or greater	Du	**$11,279**	$1,128	$1,209	$1,296	$677	$725	$778
Single Family (Attached)	Du	**$8,622**	$862	$924	$991	$517	$555	$594
Multi-Family Housing (Low-Rise, 1-3 floors)	Du	**$6,748**	$675	$723	$775	$405	$434	$465
Multi-Family Housing (Mid/High-Rise, 4+ floors)	Du	**$4,541**	$454	$487	$522	$272	$292	$313
Mobile Home Park	Du	**$3,670**	$367	$393	$422	$220	$236	$253
Senior Adult Housing (Detached)	Du	**$3,687**	$369	$395	$424	$221	$237	$254
Senior Adult Housing (Attached)	Du	**$2,488**	$249	$267	$286	$149	$160	$172

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Technical Study

Multi-Modal Impact Fee Rates

Example Developments

			Annual Index:	-	0%	0%	-	7.2%	7.2%
			Phase %:	5%	10%	15%	5%	10%	15%
Land Use	**Unit**	**Units**	**Full**	**Option 1**			**Option 2**		
				7/1/2026	**7/1/2027**	**7/1/2028**	**7/1/2026**	**7/1/2027**	**7/1/2028**
RESIDENTIAL:									
Single Family (Detached); 1,000 to 1,999 sf	Du	**125**	**$1,157,250**	$57,875	$115,750	$173,625	$57,875	$124,000	$199,500
Single Family (Attached)	Du	**148**	**$1,276,056**	$63,788	$127,576	$191,364	$63,788	$136,752	$219,928
Multi-Family Housing (Mid/High-Rise, 4+ flrs)	Du	**307**	**$1,394,087**	$69,689	$139,378	$209,067	$68,689	$149,509	$240,381
MEDICAL:									
Hospital	1,000 sf	**295,615**	**$3,163,376**	$158,154	$316,308	$474,462	$158,154	$339,070	$545,410
RETAIL:									
Retail 40,000 to 150,000 sfgla	1,000 sfgla	**148,000**	**$2,084,580**	$104,192	$208,532	$312,724	$104,192	$223,480	$359,344
New/Used Auto Sales	1,000 sf	**49,500**	**$848,034**	$42,422	$84,794	$127,215	$42,422	$90,932	$146,174

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Technical Study

Multi-Modal Impact Fee Rates

Example Developments (continued)

				Option 3			Option 4		
			Annual Index:	-	7.2%	7.2%	-	7.2%	7.2%
			Phase %:	10%	10%	10%	6%	6%	6%
Land Use	**Unit**	**Units**	**Full**	**7/1/2026**	**7/1/2027**	**7/1/2028**	**7/1/2026**	**7/1/2027**	**7/1/2028**
RESIDENTIAL:									
Single Family (Detached); 1,000 to 1,999 sf	Du	**125**	**$1,157,250**	$115,750	$124,000	$133,000	$69,375	$74,375	$79,750
Single Family (Attached)	Du	**148**	**$1,276,056**	$127,576	$136,752	$146,668	$76,516	$82,140	$87,912
Multi-Family Housing (Mid/High-Rise, 4+ flrs)	Du	**307**	**$1,394,087**	$139,378	$149,509	$160,254	$83,504	$89,644	$96,091
MEDICAL:									
Hospital	1,000 sf	**295,615**	**$3,163,376**	$316,308	$339,070	$363,606	$189,785	$203,383	$218,164
RETAIL:									
Retail 40,000 to 150,000 sfgla	1,000 sfgla	**148,000**	**$2,084,580**	$208,532	$223,480	$239,612	$125,060	$134,088	$143,708
New/Used Auto Sales	1,000 sf	**49,500**	**$848,034**	$84,794	$90,932	$97,466	$50,886	$54,549	$58,460

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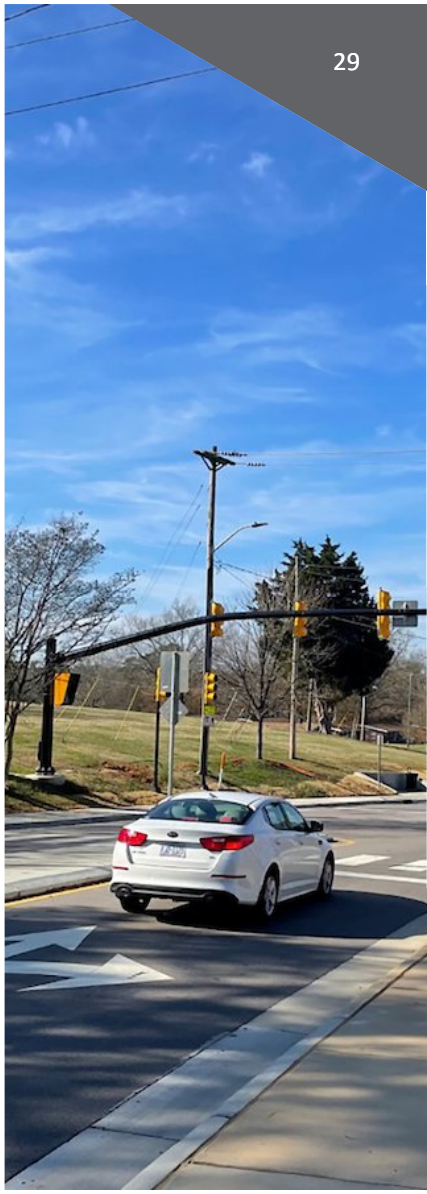
Presentation Overview

Background/ Purpose

Technical Study

Next Steps



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Next Steps

- Board Input/Direction
- Planning Board Presentation – Nov 12, 2024
- Adoption Hearing – Nov 19, 2024
- Request Board of Commissioner Approval – Dec 17, 2024
- Implementation – July 1, 2026

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Questions?
Thank You!

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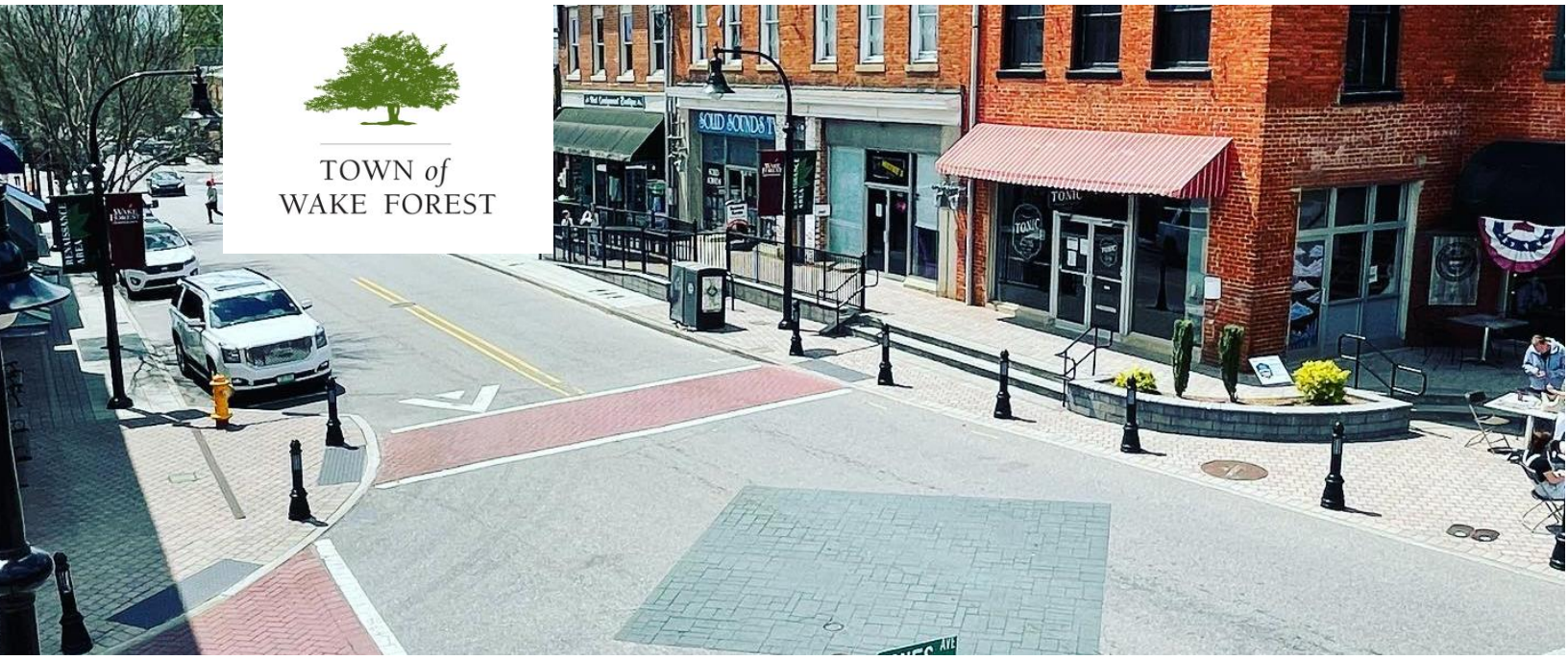

Town of Wake Forest Multi-Modal Transportation Impact Fee Study

Draft Report
October 28, 2024

Prepared for:

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Prepared by:

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E-mail: nkamp@benesch.com

DRAFT

Town of Wake Forest
Multi-Modal Transportation Impact Fee Study

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Introduction

Located just north of the City of Raleigh and northeast of North Carolina's Research Triangle Park, the Town of Wake Forest (the Town) is home to approximately 58,000 residents. The town has been experiencing significant growth since its incorporation in 1880 primarily due to the activities of the Research Triangle and availability of lower cost housing. Between 1990 and 2023, the town's population increased by approximately 52,000 residents. Recent population projections indicate 61,000 additional residents by 2040.

The Town's ability to charge impact fees is recognized and governed by Senate Bill 576 that was passed in 1989 by the General Assembly of North Carolina. The 1989 Enabling Act allows the Town to implement impact fees for 10 services areas, including transportation (sidewalks and thoroughfare rights-of-ways). Historically, Wake Forest has implemented impact fees for fire, parks and recreation, and cultural resource facilities. At this time, the Town is also interested in implementing multi-modal transportation impact fees and has retained Benesch to prepare the impact fee study. This report presents the study methodology, findings and the resulting multi-modal transportation impact fee schedule.

Methodology

The methodology used for the multi-modal impact fee study follows a consumption-based impact fee approach in which new development is charged based upon the proportion of Person-Miles of Travel (PMT) that each unit of new development is expected to consume of a lane-mile of the transportation network.

Included in this document is the necessary support material used in the calculation of the multi-modal transportation impact fee. The general equation used to compute the impact fee for a given land use is:

[Demand x Cost] – Credit = Fee

The "demand" for travel placed on a transportation system is expressed in units of Person-Miles of Travel (daily vehicle-trip generation rate x the trip length x the percent new trips [of total trips] x person-trip factor) for each land use contained in the impact fee schedule. Trip generation represents the average daily rates to provide a stable measure of new development's impact.

The number of trips tends to vary significantly throughout the day by time of day depending on activity levels; however, overall daily trips tend to be stable.
The "cost" of building new capacity typically is expressed in units of dollars per person-mile of transportation capacity.

The "credit" is an estimate of future non-impact fee revenues generated by new development that are allocated to provide transportation capacity expansion. The impact fee is considered to be an "up front" payment for a portion of the cost of building a person-mile of capacity that is directly related to the amount of capacity consumed by each unit of land use contained in the impact fee schedule, that is not paid for by future tax revenues generated by the new development activity. These credits are required under the supporting case law for the calculation of impact fees where a new development activity must be reasonably assured that they are not being charged twice for the same level of service.

The input variables used in the fee equation are as follows:

Demand Variables:

- Trip generation rate
- Trip length
- Percent new trips
- Interstate & toll facility adjustment factor
- Person-trip factor

Cost Variables:

- Cost per person-mile
- Capacity added per lane mile constructed

Credit Variables:

- Equivalent gas tax credit (pennies)
- Present worth
- Fuel efficiency
- Effective days per year

Demand Component

Travel Demand

Travel demand is the amount of transportation system consumed by a unit of new land development activity. Demand is calculated using the following variables and is measured in terms of the person-miles of new travel (PMT) that a unit of development consumes on the existing transportation system:

- Number of daily trips generated (Trip Generation Rate = TGR)
- Average length of those trips (Trip Length = TL)
- Proportion of travel that is new travel, rather than travel that is already on the transportation system and is captured by new development (Percent New Trips = PNT)
- Person-trip factor (converts vehicle-miles of travel to person-miles of travel)

As part of this update, the trip characteristics variables were primarily obtained from two sources:

- The Institute of Transportation Engineers' (ITE) *Trip Generation Handbook* (11th Edition), which is primarily used for trip generation rates.
- Benesch's trip characteristics survey database (TCS database), which includes surveys conducted at individual sites and is used to measure trip length, percent new trips, and the trip generation rate for several land uses. Although this database includes studies primarily conducted in Florida, trip length measurements conducted in Wake Forest suggested that these measures are comparable.

Conversion of Vehicle-Trips to Person-Trips

In the case of the multi-modal approach, it is necessary to estimate travel in units of person-miles. Vehicle-trips were converted to person-trips by applying a vehicle-trip to person-trip conversion factor of 1.41. This value was used in the Triangle Regional Model for passenger vehicles. Given that a large portion of travel occurs via automobile, this approach is found to be reasonable.

Interstate & Toll Facility Adjustment Factor

This variable was used to recognize that interstate highway and toll facility improvements are funded by the State (specifically, the North Carolina Department of Transportation) using earmarked State and Federal funds. Typically, impact fees are not used to pay for these improvements and the portion of travel occurring on the interstate/toll facility system is subtracted from the total travel for each use.

To calculate the interstate and toll (I/T) facility adjustment factor, the loaded highway network file was generated for the Triangle Regional Model (Generation 2). Interstate and toll facilities were identified in the model roadway network for base and future year scenarios.

Currently, several interstate/toll facilities pass through Wake County[1], including I-40, I-87, I-440, I-540, 540 Triex (toll), Morrisville Pkwy, managed lanes, and ramps serving interstates and toll roads. Planned facilities in the 2050 model network were included for the future analysis. The limited access vehicle-miles of travel (Limited Access VMT) for trips on roadways within Wake County was calculated for these facilities. Next, the total VMT was calculated for all travel within Wake County for all roads, including limited access facilities.

The I/T adjustment factor of **36.7 percent** was determined by dividing the total limited access VMT by the total Wake County VMT. The total VMT within the town reduced by this factor is representative of only the roadways that are eligible to be funded with multi-modal impact fee revenues. Appendix A, Table A-1 provides further detail on this calculation.

Adjustment Factor for Travel on Town Roads

This variable reflects the travel handled by the Town roads as opposed to State roads. It was used to adjust the calculated impact fee rate for each land use to reflect the portion of the impact fee that is attributable to Town roads. As shown in Appendix A, Table A-2, approximately **six (6) percent** of the future VMT is projected to occur on Town-owned and maintained roadways.

[1] Although the Town of Wake Forest is located in both Wake and Franklin Counties, because 97% of the land mass is located in Wake County, data from Wake County was utilized for the impact fee analysis.

Table 1
Travel Demand for Town of Wake Forest

ITE LUC	Land Use	Unit	Trip Rate	Assessable Trip Length	Percent New Trips
	RESIDENTIAL:				
210	Single Family (Detached); Less than 1,000 sf	du	6.75	6.62	100%
	Single Family (Detached); 1,000 to 1,999 sf	du	7.27	6.62	100%
	Single Family (Detached); 2,000 to 2,999 sf	du	8.32	6.62	100%
	Single Family (Detached); 3,000 sf or greater	du	8.86	6.62	100%
215	Single Family (Attached)	du	6.77	6.62	100%
220	Multi-Family Housing (Low-Rise, 1-3 floors)	du	6.74	5.21	100%
221/222	Multi-Family Housing (Mid/High-Rise, 4+ floors)	du	4.54	5.21	100%
240	Mobile Home Park	du	4.17	4.60	100%
251	Senior Adult Housing (Detached)	du	3.54	5.42	100%
252	Senior Adult Housing (Attached)	du	2.99	4.34	100%
	LODGING:				
310	Hotel	room	5.56	6.26	66%
320	Motel	room	3.35	4.34	77%
	RECREATION:				
411	Public Park	acre	0.78	5.15	90%
416	Campground/RV Park	site	1.62	4.60	100%
445	Movie Theater	screen	114.83	2.22	88%
492	Health/Fitness Club	1,000 sf	34.50	5.15	94%
	INSTITUTIONS:				
520	Elementary School (Private)	student	2.27	3.31	80%
522	Middle/Junior High School (Private)	student	2.10	3.31	80%
525	High School (Private)	student	1.94	3.31	90%
540/550	University/Junior College (7,500 or fewer students) (Private)	student	2.00	6.62	90%
	University/Junior College (more than 7,500 students) (Private)	student	1.50	6.62	90%
560	Church	1,000 sf	7.60	3.93	90%
565	Day Care Center	1,000 sf	47.62	2.03	73%
	MEDICAL:				
610	Hospital	1,000 sf	10.77	6.62	78%
620	Nursing Home	bed	3.02	2.59	89%
630	Clinic	1,000 sf	37.39	5.10	93%
	OFFICE:				
710	General Office	1,000 sf	10.84	5.15	92%
720	Medical Office/Clinic 10,000 sq ft or less	1,000 sf	23.83	5.55	89%
	Medical Office/Clinic greater than 10,000 sq ft	1,000 sf	34.21	5.55	89%
	RETAIL:				
822	Retail less than 40,000 sfgla	1,000 sfgla	54.45	1.48	48%
821	Retail 40,000 to 150,000 sfgla	1,000 sfgla	67.52	1.94	57%
820	Retail greater than 150,000 sfgla	1,000 sfgla	37.01	2.80	75%
840/841	New/Used Auto Sales	1,000 sf	24.58	4.60	79%
850	Supermarket	1,000 sf	93.84	2.08	56%
862	Home Improvement Superstore	1,000 sf	30.74	2.33	64%
880/881	Pharmacy with & without Drive-Thru	1,000 sf	103.40	2.08	32%
890	Furniture Store	1,000 sf	6.30	6.09	54%
	SERVICES:				
911	Bank/Savings Walk-In	1,000 sf	57.94	2.46	46%
912	Bank/Savings Drive-In	1,000 sf	100.35	2.46	46%
930	Fast Casual Restaurant	1,000 sf	97.14	2.05	58%
931	Fine Dining (Low-Turnover) Restaurant	1,000 sf	83.84	3.14	77%
932	High-Turnover (Sit-Down) Restaurant	1,000 sf	103.46	3.17	71%
934	Fast Food Restaurant w/Drive-Thru	1,000 sf	467.48	2.05	58%
941	Quick Lube	service bay	40.00	3.62	72%
942	Automobile Care Center	1,000 sf	28.19	3.62	72%
944	Gas Station w/Convenience Market <2,000 sq ft	fuel pos.	172.01	1.90	23%
945	Gas Station w/Convenience Market 2,000-5,499 sq ft	fuel pos.	264.38	1.90	23%
	Gas Station w/Convenience Market 5,500+ sq ft	fuel pos.	345.75	1.90	23%
947	Self-Service Car Wash	service bay	43.94	2.18	68%
	INDUSTRIAL:				
110	General Light Industrial	1,000 sf	4.87	5.15	92%
140	Manufacturing	1,000 sf	4.75	5.15	92%
150	Warehousing	1,000 sf	1.71	5.15	92%
151	Mini-Warehouse	1,000 sf	1.45	3.51	92%
154	High-Cube Transload & Short-Term Storage Warehouse	1,000 sf	1.40	5.15	92%

Source: Appendix D, Table D-1

Cost Component

Cost information from the Town of Wake Forest and other nearby jurisdictions in North Carolina was reviewed to develop a unit cost for all phases involved in the construction of one lane-mile of roadway capacity. Appendix B provides the data and other supporting information utilized in these analyses.

Town Roadway Cost

This section examines the right-of-way (ROW), construction, and other cost components associated with Town roads with respect to transportation capacity expansion improvements in the Town of Wake Forest/Wake County. In addition to local data, cost data for recently completed/on-going projects from nearby towns were used to supplement the cost data for town roadway improvements. The cost for each roadway capacity project was separated into four components: design, right-of-way, construction, and construction engineering/inspection (CEI).

Design and CEI

Design and CEI costs for town roads were estimated at **15 percent** of construction phase costs based on a review of local projects and projects built by other nearby jurisdictions. Additional details are provided in Appendix B, Table B-1 and Table B-5.

Right-of-Way

The ROW cost reflects the total cost of the acquisitions along a corridor that are necessary to have sufficient cross-section width to widen an existing road or, in the case of new construction, to build a new road. ROW costs for town roads were estimated at **20 percent** of construction phase costs based on a review of local projects and projects built by other nearby jurisdictions. Additional details are provided in Appendix B, Table B-2.

Construction Cost

A review of construction cost data for local roadway capacity expansion projects included two improvements in the Town of Wake Forest:

- Stadium Drive from Glenco Drive to N. Wingate
- Ligon Mill Road from South of S. Main Street to N. of Wal-Mart entrance

The construction costs for these improvements ranged from $3.61 million per lane mile to $3.81 million per lane mile with a weighted average cost of $3.67 million per lane mile. Due to the

small sample of local improvements, additional project costs from nearby jurisdictions were also reviewed. This review included seven improvements with construction costs ranging from $1.76 million per lane mile to $8.21 million per lane mile with a weighted average cost of $2.76 million per lane mile.

Based on a review of these datasets a construction cost estimate of **$3.00 million per lane mile** for town roads was utilized for the multi-modal transportation impact fee calculations, as shown in Table 2. Additional information is presented in Appendix B, Table B-3.

Table 2
Estimated Total Cost per Lane Mile for Town Roads

Cost Phase	Cost per Lane Mile
Design(1)	$450,000
Right-of-Way(2)	$600,000
Construction(3)	$3,000,000
CEI(4)	$450,000
Total Cost	**$4,500,000**

1) Design is estimated at 15% of construction cost.
2) ROW is estimated at 20% of construction cost.
3) Source: Appendix B, Table B-3
4) CEI is estimated at 15% of construction cost.

Note: All figures rounded to nearest $000

State Roadway Cost

This section examines the right-of-way, construction, and other cost components associated with state roads with respect to transportation capacity expansion improvements in the Town of Wake Forest. The cost for each roadway capacity project was separated into four components: design, ROW, construction, and CEI.

Design and CEI

Given the limited data on design and CEI costs for state roads in the Town of Wake Forest and based on discussions with NCDOT and experience in other jurisdictions, the cost ratios developed for town roads were also applied to state roads.

Right-of-Way

Similarly, due to the limited data on ROW costs for state roads in the Town of Wake Forest and

based on discussions with NCDOT and experience in other jurisdictions, the ROW cost ratio developed for town roads was also applied to state roads.

Construction

A review of the 2050 Metropolitan Transportation Plan identified seven future improvements in Wake Forest (additional detail in Appendix B, Table B-5):

- Harris Rd from US 1 to N. Main St
- Burlington Mills Rd from US 1 to US 401
- Heritage Lake Rd from Rogers Rd to NC 98
- Rogers Rd from Heritage Center Dr to Heritage Branch Rd
- NC 98 from NC 98 Bypass to US 401
- NC 98 from Debarmore St to Ligon Mill Rd (future connector)
- US 1 Alt from Harris Rd to Youngsville Southern Bypass

The estimated cost of these improvements ranged from $5.74 million per lane mile to $12.14 million per lane mile, with a weighted average cost of $7.01 million per lane mile. However, these estimates are for the total cost of the improvement, not just the construction phase. Therefore, the construction cost was estimated using the design, ROW, and CEI ratios previously discussed, resulting in a construction cost estimate of **$4.70 million per lane mile**, as shown in Table 3.

Table 3
Estimated Total Cost per Lane Mile for State Roads

Cost Phase	Cost per Lane Mile
Design[1]	$705,000
Right-of-Way[2]	$940,000
Construction[3]	$4,700,000
CEI[4]	$705,000
Total Cost	**$7,050,000**

1) Design is estimated at 15% of construction cost.
2) ROW is estimated at 20% of construction cost.
3) Source: Appendix B, Table B-4 presents the estimated total cost at $7.0 million. Excluding Design, CEI, and ROW percentages indicated, a construction cost of $4.7 million is calculated.
4) CEI is estimated at 15% of construction cost.

Note: All figures rounded to nearest $000

Summary of Costs (Blended Cost Analysis)

The weighted average cost per lane mile for town and state roads is presented in Table 4. The resulting weighted average cost of approximately $4.63 million per lane mile was utilized as the roadway cost input in the calculation of the multi-modal impact fee schedule. The weighted average cost per lane mile includes town and state roads and is based on the distribution of future lane miles for the capacity improvements in the 2050 Metropolitan Transportation Plan.

Table 4

Estimated Cost per Lane Mile for Town & State Roads

Cost Phase	Town Roads(1)	State Roads(2)	Town and State Roads(3)
Design	$450,000	$705,000	**$463,000**
Right-of-Way	$600,000	$940,000	**$617,000**
Construction	$3,000,000	$4,700,000	**$3,085,000**
CEI	$450,000	$705,000	**$463,000**
Total Cost	**$4,500,000**	**$7,050,000**	**$4,628,000**
Lane Mile Distribution(4)	95%	5%	100%

1) Source: Table 2
2) Source: Table 3
3) Lane mile distribution (item 4) multiplied by the design, ROW, construction, and CEI phases costs by jurisdiction to develop a weighted average cost per lane mile
4) Source: All planned improvements through 2030 are on the Town roads; slight adjustment is incorporated to account for future improvements that may be State roads.

Note: All figures rounded to nearest $000

Person-Miles of Capacity per Lane Mile (Roadways)

An additional component of the multi-modal impact fee equation is the capacity added per lane-mile of roadway constructed. The vehicle-miles of capacity (VMC) is an estimate of capacity added per lane mile for town and state roadway improvements in the 2050 Metropolitan Transportation Plan. As shown in Table 5, each lane mile will add approximately 6,800 VMC. This figure was then converted to person-miles of capacity (PMC) using the person-trip factor (1.41 persons per vehicle) previously discussed, resulting in a weighted average PMC of 9,600 per lane mile.

Table 5
Weighted Average Vehicle-Miles of Capacity per Lane Mile

Road Type	Lane Miles Added[1]	Vehicle-Miles of Capacity Added[1]	VMC Added per Lane Mile[2]	Vehicle-Trip to Person-Trip Factor[3]	PMC Added per Lane Mile[4]
Town Roads	31.16	204,037	**6,500**	1.41	**9,200**
State Roads	32.38	226,127	**7,000**	1.41	**9,900**
Total	**63.54**	**430,164**			
Weighted Average VMC/PMC Added per Lane Mile[4]			**6,800**	1.41	**9,600**

1) Source: Appendix B, Table B-6
2) Vehicle-miles of capacity added divided by lane miles added
3) Source: Triangle Regional Model Generation 2
4) VMC added per lane mile (Item 2) multiplied by the vehicle-trip to person-trip factor (Item 3)

Cost per Person-Mile of Capacity (Roadways)

The transportation cost per unit of development is assessed based on the cost per person-mile of capacity. As shown in Tables 3 and 4, the cost and capacity for roadways in the Town of Wake Forest have been calculated based on typical roadway improvements planned to be constructed in the future. As shown in Table 6, the cost for travel within the town is approximately $482 per PMC.

The cost per PMC figure is used in the multi-modal impact fee calculation to determine the total cost per unit of development based on person-miles of travel consumed. For each person-mile of travel that is added to the roadway system, approximately $482 of transportation capacity is consumed.

Table 6
Cost per Person-Mile of Capacity Added (Roadways)

Source	Cost per Lane Mile[1]	Average PMC Added per Lane Mile[2]	Cost per PMC[3]
Town Roads	$4,500,000	9,200	$489.13
State Roads	$7,050,000	9,900	$712.12
Weighted Average	$4,628,000	9,600	
Weighted Average Cost per VMC Added[4]			**$482.08**

1) Source: Table 4
2) Source: Table 5
3) Cost per lane mile (Item 1) divided by the average PMC added per lane mile (Item 2)

Bicycle and Pedestrian Facility Costs

Bicycle and pedestrian facilities provide for relatively small portion of the total vehicle-miles of travel due to the difference in the average distance traveled by a car trip versus pedestrian/bicycle trips. Because of their relatively small role in the urban travel scheme, they do not have a significant effect on evaluating the costs of providing for mobility. However, bike and pedestrian facilities are important and provide a source of travel for those who cannot drive or cannot afford to drive, and they are a standard part of the urban street and sometimes included in rural roadways. Their costs are included in the standard roadway cross-sections for which costs are estimated for safety and mobility reasons. Thus, the costs of these facilities on major roads are included in the multi-modal fee. The multi-modal fee provides funding for only those bike and pedestrian facilities associated with roadways on the classified road system (excluding local/neighborhood roads) and allows for facilities to be added to existing classified roadways or included in the construction of a new classified roadway or lane addition improvement.

Transit Capital Cost per Person-Mile of Travel

A model for transit service and cost was developed to establish both the capital cost per person-mile of capacity and the system operating characteristics in terms of system coverage, hours of service, and headways. The model developed for the Town of Wake Forest was based on information for the Wake Forest Loop (WFL) transit service. Components of the transit capital cost include:

- Vehicle acquisition tied to new routes
- Bus stops, shelters, and benches
- Cost of road network used by transit vehicles

Transit capital costs are computed as the cost of capital features needed to expand the transit system, as follows:

Transit Capital Cost = Bus Infrastructure Cost + Road Capacity Cost

Taking into account the infrastructure costs and the decline in potential vehicle-capacity that comes with adding transit, it was determined that the difference between constructing a lane mile of roadway (for cars only) versus constructing a roadway with transit is not significant. The

roadway with transit cost per PMC is approximately three (3) percent higher per lane mile than the cost to simply construct a road without transit amenities. Therefore, for the multi-modal fee calculation, the cost per PMC of approximately $482 is representative of the cost to provide transportation capacity for all modes of travel. Additional information regarding the transit capital cost calculation is included in Appendix B, Tables B-7 and B-8.

DRAFT

Credit Component

Capital Improvement Credit

The credit component of the impact fee accounts for the existing Town and State funding sources that are being expended on transportation capacity expansion (excluding impact fee funds). This section summarizes the calculations utilized in the credit for non-impact fee contributions. Additional details are provided in Appendix C.

The present value of the portion of non-impact fee funding generated by new development over a 25-year period that is expected to be expended on capacity expansion projects was credited against the cost of the system consumed by travel associated with new development. In order to provide a connection to the demand component, which is measured in terms of travel, the non-impact fee dollars were converted to a fuel tax equivalency.

Town Credit

As shown in Table 7, the Town of Wake Forest spends an average of $4.9 million per year on transportation capacity-expansion projects funded with non-impact fee revenues (general fund, grants, bonds). These expenditures equate to revenues generated from **0.7 pennies** of one-cent per gallon tax on gasoline and diesel fuels. Additional details are provided in Appendix C, Table C-2.

Additionally, the Town is using non-impact fee revenues to retire debt service used to fund transportation capacity expansion improvements. A total impact fee credit of approximately **0.5 pennies** was calculated for debt service associated with multi-modal improvements. Additional details are provided in Appendix C, Table C-3.

State Credit

As shown in Table 7, state expenditures for transportation capacity projects in Wake County were reviewed and a credit for the capacity-expansion portion attributable to state projects was estimated (excluding expenditures on limited access facilities). This review, which included 11 years of planned expenditures, indicated that NCDOT's transportation capacity spending will average $92.5 million per year and generates a credit of **13.6 pennies** of equivalent gas tax revenue, annually. Additional details are provided in Appendix C, Table C-4.

In summary, for transportation, the Town of Wake Forest allocates 1.2 pennies (including debt service), while the State spends an average of 13.6 pennies, annually. The portion of capital improvement funding included in the multi-modal impact fee equation for credit calculations recognizes the future capital revenue that is expected to be generated by new development from all non-impact fee revenues. This credit does not include revenues generated by the existing population.

Table 7
Equivalent Pennies of Gas Tax Revenue

Credit	Average Annual Expenditures	Value per Penny(4)	Equivalent Pennies per Gallon(5)
Town Revenues(1)	$4,904,685	$6,801,000	$0.007
Town Debt Service(2)	$2,876,498	$6,801,000	$0.005
State Revenues(3)	$92,538,273	$6,801,000	$0.136
Total	**$100,319,456**		**$0.148**

1) Source: Appendix C, Table C-2
2) Source: Appendix C, Table C-3
3) Source: Appendix C, Table C-4
4) Source: Appendix C, Table C-1
5) Average annual expenditures divided by the value per penny (Item 4) divided by 100. Town debt service was slightly adjusted to account for rounding (App. C, Table C-3)

Present Worth Variables

- Facility Life: The roadway facility life used in the impact fee analysis is 25 years, which represents the reasonable life of a roadway.

- Interest Rate: This is the estimated interest rate the Town is likely to pay on future bonds. The discount rate of 4.25 percent was used in the impact fee calculation based on information provided by the Town of Wake Forest.

Fuel Efficiency

The fuel efficiency (i.e., the average miles traveled per gallon of fuel consumed) of the fleet of motor vehicles was estimated using the quantity of gasoline consumed by travel associated with a particular land use.

Appendix C, Table C-16 documents the calculation of fuel efficiency value based on the following equation, where “VMT” is vehicle miles of travel and “MPG” is fuel efficiency in terms of miles per gallon.

$$Fuel\ Efficiency = \sum VMT_{Roadway\ Type} \div \sum \left(\frac{VMT_{Vehicle\ Type}}{MPG_{Vehicle\ Type}} \right)_{Roadway\ Type}$$

The methodology uses non-interstate VMT and average fuel efficiency data for passenger vehicles (i.e., passenger cars and other 2-axle, 4-tire vehicles, such as vans, pickups, and SUVs) and large trucks (i.e., single-unit, 2-axle, 6-tire or more trucks and combination trucks) to calculate the total gallons of fuel used by each of these vehicle types.

The combined total VMT for the vehicle types is then divided by the combined total gallons of fuel consumed to calculate, in effect, a "weighted" fuel efficiency value that reflects the existing fleet mix of traffic on non-interstate roadways. The VMT and average fuel efficiency data were obtained from the most recent Federal Highway Administration's *Highway Statistics 2022*. Based on the calculation completed in Appendix C, Table C-16, the fuel efficiency rate to be used in the updated impact fee equation is 19.47 miles per gallon.

Effective Days per Year

An effective 365 days per year of operation was used for all land uses in the proposed fee. However, this will not be the case for all land uses since some uses operate only on weekdays (e.g., office buildings) and/or only seasonally (e.g., schools). The use of 365 days per year, therefore, provides a conservative estimate, ensuring that non-impact fee contributions are adequately credited against the fee.

Calculated Multi-Modal Transportation Impact Fee Schedule

Detailed impact fee calculations for each land use are included in Appendix D, which includes the major land use categories and the impact fees for the individual land uses contained in each of the major categories. For each land use, Appendix D illustrates the following:

- Demand component variables (trip rate, trip length, and percent of new trips);
- Total impact fee cost;
- Annual capital improvement credit;
- Present value of the capital improvement credit; and
- Net multi-modal transportation impact fee.

For clarification purposes, it may be useful to walk through the calculation of a multi-modal transportation impact fee for one of the land use categories. In the following example, the net multi-modal transportation impact fee is calculated for the single-family residential detached (2,000 sf) land use category (ITE LUC 210) using information from the impact fee schedules included in Appendix D. For each land use category, the following equations are utilized to calculate the net impact fee:

Net Multi-Modal Transportation Impact Fee = Total Impact Cost – Capital Improvement Credit

Where:

Total Multi-Modal Impact Cost = ([Trip Rate × Adjusted Trip Length × % New Trips] / 2) × (1 – Interstate/Toll Facility Adjustment Factor) × (Person-Trip Factor) × (Cost per Person-Mile of Capacity)

Capital Improvement Credit = Present Value (Annual Capital Improvement Credit), given 4.25% interest rate & a 25-year facility life

Annual Capital Improvement Credit = ([Trip Rate × Total Trip Length × % New Trips] / 2) × (Effective Days per Year × $/Gallon to Capital) / Fuel Efficiency

Each of the inputs has been discussed previously in this document; however, for purposes of this example, brief definitions for each input are provided in the following paragraphs, along with the actual inputs used in the calculation of the fee for the single-family detached residential land use category (2,000 sq. ft.):

- *Trip Rate* = the average daily trip generation rate, in vehicle-trips/day (8.32)
- *Assessable Trip Length* = the average trip length on collector roads or above, for the category, in vehicle-miles (6.62)
- *Total Trip Length* = the assessable trip length plus an adjustment factor of half a mile, which is added to the trip length to account for the fact that gas taxes are collected for travel on all roads including local roads (6.62 + 0.50 = 7.12 miles)
- *% New Trips* = adjustment factor to account for trips that are already on the roadway (100%)
- *Divide by 2* = the total daily miles of travel generated by a particular category (i.e., rate*length*% new trips) is divided by two to prevent the double-counting of travel generated between two land use codes since every trip has an origin and a destination
- *Interstate/Toll Facility Adjustment Factor* = discount factor to account for travel demand occurring on interstate highways and/or toll facilities (36.7%)
- *Person-Trip Factor* = converts vehicle-miles of travel to person-miles of travel (1.41)
- *Cost per Lane* Mile = unit cost to construct one lane mile of roadway, in $/lane-mile ($4,628,000)
- *Average Person-Capacity Added per Lane* Mile = represents the average daily person-traffic on one travel lane at capacity for one lane mile of roadway, in person/lane-mile/day (9,600)
- *Cost per Person-Mile of Capacity* = unit of person-miles of capacity consumed per unit of development. Cost per person-mile divided by average capacity added per lane mile ($482.08)
- *Present Value* = calculation of the present value of a uniform series of cash flows, gas tax payments in this case, given an interest rate, "i," and a number of periods, "n;" for 4.25% interest and a 25-year facility life, the uniform series present worth factor is 15.2174
- *Effective Days per Year* = 365 days
- *$/Gallon to Capital* = the amount of equivalent gas tax revenue per gallon of fuel that is used for capital improvements, in $/gallon ($0.148)
- *Fuel Efficiency* = average fuel efficiency of vehicles, in vehicle-miles/gallon (19.47)

Figure 1 presents a simplified impact fee calculation example while a detailed calculation is provided in the next sub-section.

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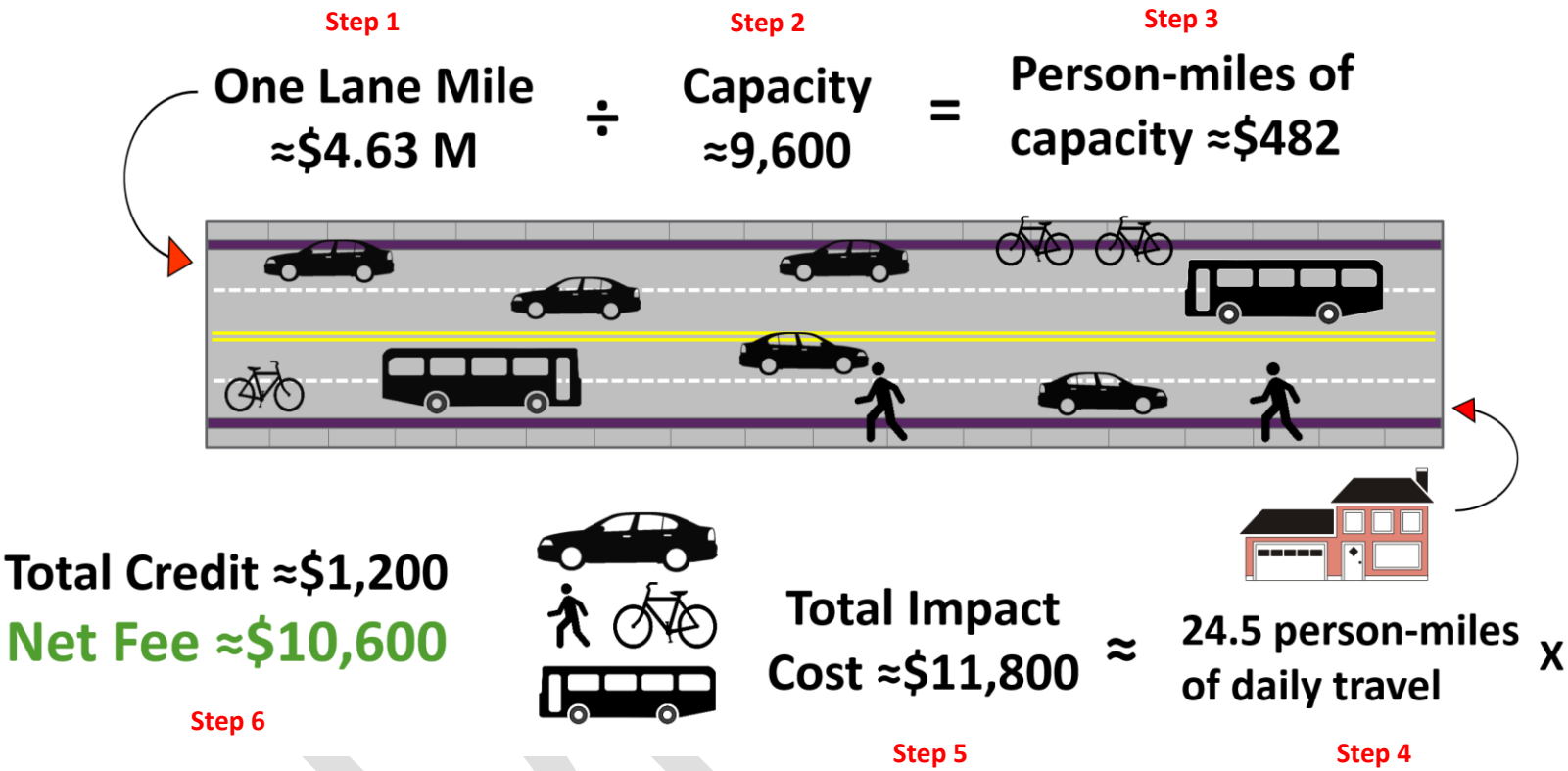
Figure 1

Simplified Multi-Modal Transportation Impact Fee Calculation: Single Family (Detached); 2,000 sq ft:



Multi-Modal Transportation Impact Fee Calculation

Using these inputs, a net impact fee can be calculated for the single-family residential detached (2,000 sf) land use category as follows:

Multi-Modal Transportation Impact Fee:

Total Impact Cost = ([8.32 * 6.62 * 1.0] /2) * (1 - 0.367) * (1.41) * ($482.08) = **$11,849**

Annual Cap. Improv. Credit = ([8.32 * 7.12 * 1.0] /2) * 365 * ($0.148 /19.47) = **$82**
Capital Improvement Credit = $82 * 15.2174 = **$1,248**

Net Impact Fee = $11,849 – $1,248 = **$10,601**

Table 8 presents the full calculated multi-modal transportation impact fee rates for all land uses n the Town's schedule and the town portion of the calculated impact fees. Additional details are provided in Appendix D, Table D-1.

The detailed definition of each land use in the Town's multi-modal impact fee schedule corresponds to the definitions presented in the Institution of Transportation Engineer's Trip Generation Manual, 11th Edition.

Multi-Modal Transportation Impact Fee Comparison

Table 9 presents the calculated multi-modal transportation impact fee rates for the Town of Wake Forest compared to other transportation impact fee rates from surrounding and other jurisdictions in North Carolina.

Note that differences in fee levels for a given land use can be caused by several factors, including the year of the technical study, adoption percentage, study methodology including variation in costs, credits, and travel demand, land use categories included in the fee schedule, etc.

Table 8
Calculated Multi-Modal Transportation Impact Fee Rates

ITE LUC	Land Use	Unit	Full Calculated Rates	Town Portion (6%)
	RESIDENTIAL:			
210	Single Family (Detached); Less than 1,000 sf	du	**$8,593**	$516
	Single Family (Detached); 1,000 to 1,999 sf	du	**$9,258**	$555
	Single Family (Detached); 2,000 to 2,999 sf	du	**$10,601**	$636
	Single Family (Detached); 3,000 sf or greater	du	**$11,279**	$677
215	Single Family (Attached)	du	**$8,622**	$517
220	Multi-Family Housing (Low-Rise, 1-3 floors)	du	**$6,748**	$405
221/222	Multi-Family Housing (Mid/High-Rise, 4+ floors)	du	**$4,541**	$272
240	Mobile Home Park	du	**$3,670**	$220
251	Senior Adult Housing (Detached)	du	**$3,687**	$221
252	Senior Adult Housing (Attached)	du	**$2,488**	$149
	LODGING:			
310	Hotel	room	**$4,425**	$266
320	Motel	room	**$2,149**	$129
	RECREATION:			
411	Public Park	acre	**$687**	$41
416	Campground/RV Park	site	**$1,436**	$86
445	Movie Theater	screen	**$42,464**	$2,548
492	Health/Fitness Club	1,000 sf	**$32,066**	$1,924
	INSTITUTIONS:			
520	Elementary School (Private)	student	**$1,141**	$68
522	Middle/Junior High School (Private)	student	**$1,059**	$64
525	High School (Private)	student	**$1,106**	$66
540/550	University/Junior College (7,500 or fewer students) (Private)	student	**$2,290**	$137
	University/Junior College (more than 7,500 students) (Private)	student	**$1,725**	$104
560	Church	1,000 sf	**$5,144**	$309
565	Day Care Center	1,000 sf	**$13,325**	$800
	MEDICAL:			
610	Hospital	1,000 sf	**$10,701**	$642
620	Nursing Home	bed	**$1,315**	$79
630	Clinic	1,000 sf	**$34,044**	$2,043
	OFFICE:			
710	General Office	1,000 sf	**$9,862**	$592
720	Medical Office/Clinic 10,000 sq ft or less	1,000 sf	**$22,614**	$1,357
	Medical Office/Clinic greater than 10,000 sq ft	1,000 sf	**$32,458**	$1,947
	RETAIL:			
822	Retail less than 40,000 sfgla	1,000 sfgla	**$7,226**	$434
821	Retail 40,000 to 150,000 sfgla	1,000 sfgla	**$14,085**	$845
820	Retail greater than 150,000 sfgla	1,000 sfgla	**$14,788**	$887
840/841	New/Used Auto Sales	1,000 sf	**$17,132**	$1,028
850	Supermarket	1,000 sf	**$20,655**	$1,239
862	Home Improvement Superstore	1,000 sf	**$8,690**	$521
880/881	Pharmacy with & without Drive-Thru	1,000 sf	**$13,010**	$781
890	Furniture Store	1,000 sf	**$3,985**	$239
	SERVICES:			
911	Bank/Savings Walk-In	1,000 sf	**$12,446**	$747
912	Bank/Savings Drive-In	1,000 sf	**$21,539**	$1,292
930	Fast Casual Restaurant	1,000 sf	**$21,820**	$1,309
931	Fine Dining (Low-Turnover) Restaurant	1,000 sf	**$38,649**	$2,319
932	High-Turnover (Sit-Down) Restaurant	1,000 sf	**$44,405**	$2,664
934	Fast Food Restaurant w/Drive-Thru	1,000 sf	**$104,987**	$6,299
941	Quick Lube	service bay	**$19,918**	$1,195
942	Automobile Care Center	1,000 sf	**$14,042**	$843
944	Gas Station w/Convenience Market <2,000 sq ft	fuel pos.	**$14,162**	$850
945	Gas Station w/Convenience Market 2,000-5,499 sq ft	fuel pos.	**$21,782**	$1,307
	Gas Station w/Convenience Market 5,500+ sq ft	fuel pos.	**$28,473**	$1,708
947	Self-Service Car Wash	service bay	**$12,324**	$739
	INDUSTRIAL:			
110	General Light Industrial	1,000 sf	**$4,431**	$266
140	Manufacturing	1,000 sf	**$4,325**	$260
150	Warehousing	1,000 sf	**$1,560**	$94
151	Mini-Warehouse	1,000 sf	**$900**	$54
154	High-Cube Transload & Short-Term Storage Warehouse	1,000 sf	**$1,275**	$77

Source: Appendix D, Table D-1

Table 9
Transportation Impact Fee Comparison

Land Use	Unit[2]	Wake Forest CALCULATED[3]		City of Durham[4]			City of Raleigh[5]	Town of Knightdale[6]	Town of Cary[7]		Town of Zebulon[8]
		Full Fees	Town Portion	North	South	Downtown			Central	Base	
Date of Last Update		**2024**	**2024**	2008	2008	2008	2006	-	-	-	-
Adoption Percentage[1]		**100%**	**100%**	50%	50%	50%	98%	-	-	-	-
Residential:											
Single Family (2,000 sf)	du	**$10,601**	**$636**	$531	$1,405	$293	$2,262	$400	$1,103	$1,573	see note
Multi-Family, 1-3 Floors	du	**$6,748**	**$405**	$326	$862	$180	$1,512	$300	$684	$975	
Non-Residential:											
Light Industrial	1,000 sf	**$4,431**	**$266**	$389	$1,029	$215	$1,770	$181	$869	$1,238	see note
Office (50,000 sq ft)	1,000 sf	**$9,862**	**$592**	$909	$2,406	$503	$2,800	$543	$1,483	$2,113	
Retail (125,000 sq ft)	1,000 sf	**$14,085**	**$845**	$1,892	$5,008	$1,046	$3,672	$1,247	$1,148	$1,637	

1) Represents the portion of the maximum calculated fee for each respective jurisdiction that is actually charged. Fees may have been lowered/raised through indexing or policy discounts. Does not account for moratoriums/suspensions
2) Du = dwelling unit
3) Source: Appendix D, Table D-1
4) Source: City of Durham City-County Inspections Department
5) Source: City of Raleigh Planning and Development Department
6) Source: Town of Knightdale Finance Department
7) Source: Town of Cary Business & Development Department; "Industrial Park" rate is shown for Light Industrial
8) Source: Town of Zebulon Finance Department. All fees are $1,177/peak hour trips as determined in the ITE manual

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Fee Discounts/Exemptions

Local governments can adopt impact fees at a reduced rate when the reduction is applied to all land uses. Care should be given when discounting fees for select land uses and/or areas to ensure those who paid the full fee receive the associated benefit. If the discount results in a compromise of facilities that would have been built with full fees, the equity among land uses is jeopardized. The fees can be reduced for select land uses and/or geographic subareas under the following conditions:

- ***Travel Characteristics:*** If it can be demonstrated that a given land use or an area generates less travel due to certain characteristics, it is appropriate to apply a reduced fee. Examples would be a downtown core with on-street parking and a mix of land uses that result in lower trip generates.

- ***De-minimis Impact:*** If the uses that are being discounted are permitted infrequently such that revenues generated from these groups are considered de-minimis, it is possible to provide the discount without jeopardizing the Town's transportation improvements program. As a general industry standard, if the revenues from these land uses comprise less than five (5) percent of total impact fee revenues generated, the land use is considered de-minimis. When using this methodology, it is important for the Town to set up a monitoring system to track revenue generation levels annually.

In addition to these methods, the Town has the option to buy down the fees with additional taxes and/or other non-impact fee revenue sources to support affordable housing options, economic development goals and other similar policies.

Impact Fee Indexing

In many cases, impact fees are reviewed periodically (every four to five years, etc.) as opposed to on an annual basis. If no adjustment to the impact fee schedule is made during this period, a situation can be created where major adjustments to the impact fee schedule likely become necessary due to the time between the adjustments. During periods of cost increases, the need for significant adjustments also creates major concerns in the development community. To address this issue, it is suggested that the multi-modal transportation impact fees be adjusted on an annual basis.

Producer Price Index (Highway & Street Construction)

For the multi-modal transportation impact fee, the Producer Price Index (PPI) for highway and street construction was utilized for indexing purposes. As shown in Table 10, the average annual cost increase over the past five years was 7.2 percent. The use of a rolling five-year average minimizes large fluctuations in annual increases.

Table 10
Producer Price Index (Hwy & Street Construction)

Year	Annual Average	Percent Change
2019	115.66	-
2020	113.33	-2.0%
2021	135.54	19.6%
2022	160.84	18.7%
2023	159.69	-0.7%
2024*	160.37	0.4%
Average (2019-2024)		**7.2%**

Source: Bureau of Labor Statistics, PPI
*thru September

Application

Table 11 presents the indexed fee schedule for the next four years using the PPI index calculated in Table 10. It is recommended the calculated index be reviewed and recalculated annually to reflect updated five-year averages, especially when the costs fluctuate significantly.

Table 11

Example Impact Fee Rates with Indexing

Land Use	Unit	Calculated Rate	Year 1	Year 2	Year 3	Year 4
Full Calculated Impact Fee Rates:						
Single Family (2,000 sf)	du	**$10,601**	$11,364	$12,182	$13,059	$13,999
Multi-Family, 1-3 Floors	du	**$6,748**	$7,234	$7,755	$8,313	$8,912
Light Industrial	1,000 sf	**$4,431**	$4,750	$5,092	$5,459	$5,852
Office (50,000 sq ft)	1,000 sf	**$9,862**	$10,572	$11,333	$12,149	$13,024
Retail (125,000 sq ft)	1,000 sf	**$14,085**	$15,099	$16,186	$17,351	$18,600
Town Portion ONLY (6%):						
Single Family (2,000 sf)	du	**$636**	$682	$731	$784	$840
Multi-Family, 1-3 Floors	du	**$405**	$434	$465	$498	$534
Light Industrial	1,000 sf	**$266**	$285	$306	$328	$352
Office (50,000 sq ft)	1,000 sf	**$592**	$635	$681	$730	$783
Retail (125,000 sq ft)	1,000 sf	**$845**	$906	$971	$1,041	$1,116

Source: Calculated impact fee rates from Table 9 with annual index (7.2%) applied

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Appendix A
Demand Component

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Appendix A: Demand Component

This appendix presents the detailed calculations for the demand component of the multi-modal transportation impact fee study.

Interstate & Toll Facility Adjustment Factor

Table A-1 presents the interstate and toll facility adjustment factor used in the calculation of the road impact fee. This variable is based on data from the Triangle Regional Model Generation 2, specifically the 2050 projected vehicle-miles of travel of all Wake County-generated trips on all in-county roadways. It should be noted that the adjustment factor excludes all external-to-external trips, which represent traffic that goes through Wake County but does not necessarily stop in the county. This traffic is excluded from the analysis since it does not come from development within the county. The I/T adjustment factor is used to reduce the VMT that the impact fee charges for each land use.

Table A-1
Interstate/Toll Facility Adjustment Factor

Facility Type	Total	
	VMT	%
Interstate/Toll	19,329,304	**36.7%**
Other Roads	33,305,140	63.3%
Total	**52,634,444**	**100.0%**

Source: TRMG2

Town Road Adjustment Factor

As part of this update, the current classified roadway network was reviewed as well as the classified roads within the transportation model. Multi-modal impact fee revenues can only be spent on roadways classified as thoroughfares, and without this change in designation, the Town is limited in its ability to improve transportation performance.

Map A-1 illustrates roadway segments that were added to the transportation model as roadway that are functioning as "collectors" and the classified roadways already included in the model. All the added segments (except for Wake Dr from S Main St to Ligon Mill Rd) are identified as "collectors" in the Wake Forest Comprehensive Transportation Plan but were absent from the classified roads included in TRMG2. **Table A-2** presents the portion of travel on Town vs. State roads. This variable is based on vehicle-miles of travel data from the TRMG2, specifically the 2050

projected VMT for all town-generated trips on all in-town roadways, excluding interstate and toll facilities. Approximately 6 percent of the calculated impact fees are associated with travel handled by Town roads only.

Table A-2
Town Road Adjustment Factor

Facility Type	Total	
	VMT (2050)	%
State	1,436,402	94%
Town of Wake Forest	93,592	**6%**
Total	**1,529,994**	**100%**

Source: Triangle Regional Model (TRMG2 v1.3.1)

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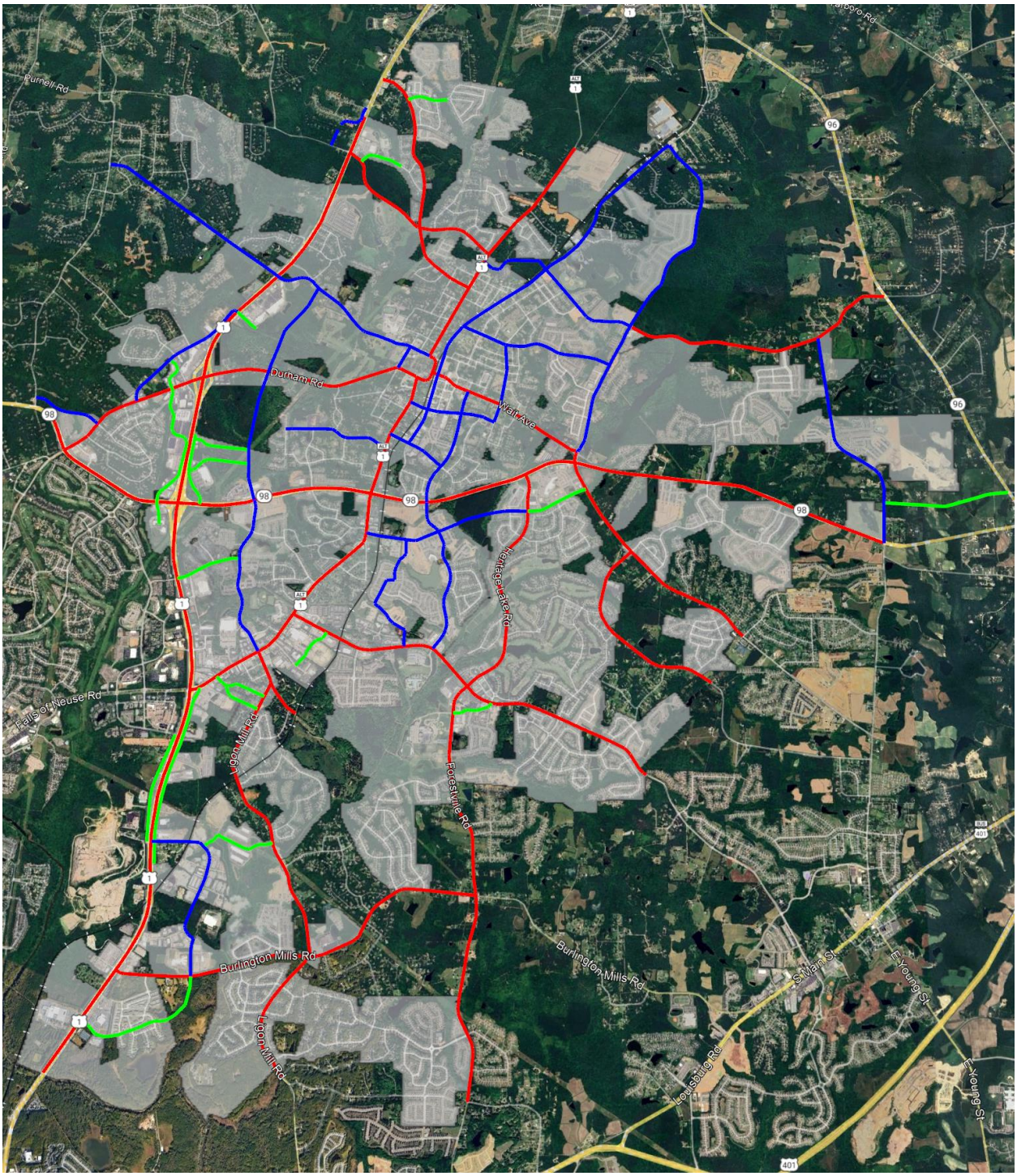
Map A-1

Town of Wake Forest Classified Roadway Network



Red = State Maintained
Blue = Town Maintained
Green = Town Maintained (added to TRMG2)

Single Family (Detached) Trip Generation Rate Tiering

As part of this study, single family (detached) trip generation rate tiering was included to reflect a four-tier analysis to ensure equity by the size of a home. To facilitate this, an analysis was completed on the comparative relationship between housing size and household travel behavior. This analysis utilized data from the 2017 National Household Travel Survey (NHTS)[2] and the 2021 American Housing Survey (AHS) to examine overall trip-making characteristics of households in the United States.

Table A-3 presents the trip characteristics being utilized in the proposed multi-modal impact fee schedule for the residential land use. The 2017 NHTS database was used to assess average annual household vehicle miles of travel (VMT) for various annual household income levels. In addition, the 2021 AHS database was used to compare median annual family/household incomes with housing unit size. It is important to recognize that the use of the income variable in each of these databases is completed simply to provide a convenient linking mechanism between household VMT from the NHTS and housing unit size from the AHS.

Table A-3
Calculated Single Family (Detached) Trip Characteristics

Calculated Values Excluding Tiering	Trip Rate	Assessable Trip Length	Daily VMT
Single Family (Detached)	7.81	6.62	51.70

Source: Table A-6

The results of the NHTS and AHS analyses are included in Tables A-4 and A-5. First, the data shown in Table A-4 presents the average income in the U.S. for families/households living in the different housing tiers. As shown, the average income for housing units between 1,500 square feet and 2,499 square feet in size ($74,416) is higher than the overall average income for the U.S. ($66,289). Next, in Table A-5, the annual average household VMT was calculated from the NHTS database for a number of different income levels and ranges related to the resulting AHS income data from Table A-4.

[2] 2022 NHTS data was available but utilizes a much smaller sample size due to a change in methodology. Therefore, the 2017 NHTS data was used instead.

Table A-4
Annual Income by Housing Size

2021 AHS Average Income Data by Housing Size	Annual Income[1]
Less than 1,000 sf	$43,692
1,000 to 1,999 sf	$63,985
1,500 to 2,499 sf	$74,416
2,000 to 2,999 sf	$82,472
3,000 sf or more	$93,260
Average of All Houses	$66,289

Source: *American Housing Survey for the United States in 2021*
1) Weighted average of annual income for each tier

To calculate a corresponding trip rate for the new tiers it was necessary to rely on comparative ratios. As an example, consider the $43,692 annual income category. First, it was determined that the average annual household VMT for this income level is 17,454 miles. This figure was then compared to the overall average annual VMT per household in the U.S. and normalized to the average of the $74,416 (20,191 miles) category to derive a ratio of 0.864 as shown in Table A-5. It should be noted that the $74,416 (1,500 sq ft to 2,499 sq ft) category is not an impact fee tier, but rather the average home size that corresponds with the trip characteristics data shown in Table A-3.

Next, the normalized ratio was applied to the daily VMT for the average residential housing unit size (less than 1,000 sf) to generate a daily VMT of 44.67 for the new tier, as shown in Table A-6. This daily VMT figure was then divided by the proposed assessable trip length of 6.62 miles to obtain an average trip rate of 6.75 trips per day.

Table A-5
NHTS Annual VMT by Income Category

2017 NHTS Travel Data by Annual HH Income	Annual VMT/HH	Days	Daily VMT	Ratio to Mean	Normalized to 1.054
Total (All Homes)	19,167	365	52.51	1.000	-
Average of $43,692	17,454	365	47.82	0.911	0.864
Average of $63,985	18,800	365	51.51	0.981	0.931
Average of $74,416	20,191	365	55.32	1.054	1.000
Average of $82,472	21,533	365	58.99	1.123	1.065
Average of $93,260	22,926	365	62.81	1.196	1.135

Source: 2017 National Household Travel Survey Database, Federal Highway Administration

Table A-6
Trip Generation Rate by Residential Land Use Tier

Estimation of Trip Rate by Tier	Trip Rate[1]	Assessable Trip Length[2]	Daily VMT[3]	Ratio to Mean[4]
Single Family (Detached)				
Less than 1,000 sf	**6.75**	6.62	44.67	0.864
1,000 to 1,999 sf	**7.27**	6.62	48.13	0.931
1,500 to 2,499 sf	**7.81**	6.62	51.70	1.000
2,000 to 2,999 sf	**8.32**	6.62	55.06	1.065
3,000 sf or more	**8.86**	6.62	58.68	1.135

1) Daily VMT (Item 3) divided by assessable trip length (Item 2) for each tier
2) Source: Table A-3
3) Ratio to the mean (Item 4) divided by total daily VMT for the 1,500 square feet to 2,499 square feet tier for each tier
4) Source: Table A-5

Trip Characteristics Studies Database

The Trip Characteristics Studies (TCS) Database includes approximately 345 studies on 40 different residential and non-residential land uses collected over the last 30 years. Data from these studies include trip generation, trip length, and percent new trips for each land use. This information has been used in the development of impact/multi-modal/mobility fees and the creation of land use plan category trip characteristics for communities throughout the U.S.

Benesch estimates trip generation rates for all land uses in an impact fee schedule using data from studies in the TCS Database and the Institute of Transportation Engineers' (ITE) *Trip Generation* reference report (11th edition). In instances, when both ITE *Trip Generation* reference report (11th edition) and TCS trip generation rate (TGR) data are available for a particular land use, the data is typically blended to increase the sample size and provide a more valid estimate of the average number of trips generated per unit of development. If no TCS data is available, only TGR data from the ITE reference report is used in the fee calculation.

The trip generation rate for each respective land use is calculated using machine counts that record daily traffic into and out of the site studied. The traffic count hoses are set at entrances to residential subdivisions for the residential land uses and at all access points for non-residential land uses.

The trip length information is obtained through origin-destination surveys that ask respondents where they came from prior to arriving at the site and where they intended to go after leaving the site. The results of these surveys were used to estimate average trip length by land use.

The percent new trip variable is based on assigning each trip collected through the origin-destination survey process a trip type (primary, secondary, diverted, and captured). The percent new trip variable is then calculated as 1 minus the percentage of trips that are captured. Benesch has published an article entitled, *Measuring Travel Characteristics for Transportation Impact Fees*, ITE Journal, April 1991, on the data collection methodology for trip characteristics studies.

Table A-6

Land Use 210: Single Family - Detached

Location	Size / Units	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Sarasota Co, FL	76	Jun-93	70	70	10.03	-	6.00	-	60.18	Sarasota County
Sarasota Co, FL	79	Jun-93	86	86	9.77	-	4.40	-	42.99	Sarasota County
Sarasota Co, FL	135	Jun-93	75	75	8.05	-	5.90	-	47.50	Sarasota County
Sarasota Co, FL	152	Jun-93	63	63	8.55	-	7.30	-	62.42	Sarasota County
Sarasota Co, FL	193	Jun-93	123	123	6.85	-	4.60	-	31.51	Sarasota County
Sarasota Co, FL	97	Jun-93	33	33	13.20	-	3.00	-	39.60	Sarasota County
Sarasota Co, FL	282	Jun-93	146	146	6.61	-	8.40	-	55.52	Sarasota County
Sarasota Co, FL	393	Jun-93	207	207	7.76	-	5.40	-	41.90	Sarasota County
Hernando Co, FL	76	May-96	148	148	10.01	9a-6p	4.85	-	48.55	Tindale Oliver
Hernando Co, FL	128	May-96	205	205	8.17	9a-6p	6.03	-	49.27	Tindale Oliver
Hernando Co, FL	232	May-96	182	182	7.24	9a-6p	5.04	-	36.49	Tindale Oliver
Hernando Co, FL	301	May-96	264	264	8.93	9a-6p	3.28	-	29.29	Tindale Oliver
Charlotte Co, FL	135	Oct-97	230	-	5.30	9a-5p	7.90	-	41.87	Tindale Oliver
Charlotte Co, FL	142	Oct-97	245	-	5.20	9a-5p	4.10	-	21.32	Tindale Oliver
Charlotte Co, FL	150	Oct-97	160	-	5.00	9a-5p	10.80	-	54.00	Tindale Oliver
Charlotte Co, FL	215	Oct-97	158	-	7.60	9a-5p	4.60	-	34.96	Tindale Oliver
Charlotte Co, FL	257	Oct-97	225	-	7.60	9a-5p	7.40	-	56.24	Tindale Oliver
Charlotte Co, FL	345	Oct-97	161	-	7.00	9a-5p	6.60	-	46.20	Tindale Oliver
Charlotte Co, FL	368	Oct-97	152	-	6.60	9a-5p	5.70	-	37.62	Tindale Oliver
Charlotte Co, FL	383	Oct-97	516	-	8.40	9a-5p	5.00	-	42.00	Tindale Oliver
Charlotte Co, FL	441	Oct-97	195	-	8.20	9a-5p	4.70	-	38.54	Tindale Oliver
Charlotte Co, FL	1,169	Oct-97	348	-	6.10	9a-5p	8.00	-	48.80	Tindale Oliver
Collier Co, FL	90	Dec-99	91	-	12.80	8a-6p	11.40	-	145.92	Tindale Oliver
Collier Co, FL	400	Dec-99	389	-	7.80	8a-6p	6.40	-	49.92	Tindale Oliver
Lake Co, FL	49	Apr-02	170	-	6.70	7a-6p	10.20	-	68.34	Tindale Oliver
Lake Co, FL	52	Apr-02	212	-	10.00	7a-6p	7.60	-	76.00	Tindale Oliver
Lake Co, FL	126	Apr-02	217	-	8.50	7a-6p	8.30	-	70.55	Tindale Oliver
Pasco Co, FL	55	Apr-02	133	-	6.80	8a-6p	8.12	-	55.22	Tindale Oliver
Pasco Co, FL	60	Apr-02	106	-	7.73	8a-6p	8.75	-	67.64	Tindale Oliver
Pasco Co, FL	70	Apr-02	188	-	7.80	8a-6p	6.03	-	47.03	Tindale Oliver
Pasco Co, FL	74	Apr-02	188	-	8.18	8a-6p	5.95	-	48.67	Tindale Oliver
Pasco Co, FL	189	Apr-02	261	-	7.46	8a-6p	8.99	-	67.07	Tindale Oliver
Marion Co, FL	102	Apr-02	167	-	8.02	7a-6p	5.10	-	40.90	Kimley-Horn & Associates
Marion Co, FL	105	Apr-02	169	-	7.23	7a-6p	7.22	-	52.20	Kimley-Horn & Associates
Marion Co, FL	124	Apr-02	170	-	6.04	7a-6p	7.29	-	44.03	Kimley-Horn & Associates
Marion Co, FL	132	Apr-02	171	-	7.87	7a-6p	7.00	-	55.09	Kimley-Horn & Associates
Marion Co, FL	133	Apr-02	209	-	8.04	7a-6p	4.92	-	39.56	Kimley-Horn & Associates
Citrus Co, FL	111	Oct-03	273	-	8.66	7a-6p	7.70	-	66.68	Tindale Oliver
Citrus Co, FL	231	Oct-03	155	-	5.71	7a-6p	4.82	-	27.52	Tindale Oliver
Citrus Co, FL	306	Oct-03	146	-	8.40	7a-6p	3.94	-	33.10	Tindale Oliver
Citrus Co, FL	364	Oct-03	345	-	7.20	7a-6p	9.14	-	65.81	Tindale Oliver
Citrus Co, FL	374	Oct-03	248	-	12.30	7a-6p	6.88	-	84.62	Tindale Oliver
Lake Co, FL	42	Dec-06	122	-	11.26	-	5.56	-	62.61	Tindale Oliver
Lake Co, FL	51	Dec-06	346	-	18.22	-	9.46	-	172.36	Tindale Oliver
Lake Co, FL	59	Dec-06	144	-	12.07	-	10.79	-	130.24	Tindale Oliver
Lake Co, FL	90	Dec-06	194	-	9.12	-	5.78	-	52.71	Tindale Oliver
Lake Co, FL	239	Dec-06	385	-	7.58	-	8.93	-	67.69	Tindale Oliver
Hernando Co, FL	232	Apr-07	516	-	8.02	7a-6p	8.16	-	65.44	Tindale Oliver
Hernando Co, FL	95	Apr-07	256	-	8.08	7a-6p	5.88	-	47.51	Tindale Oliver
Hernando Co, FL	90	Apr-07	338	-	7.13	7a-6p	5.86	-	41.78	Tindale Oliver
Hernando Co, FL	58	Apr-07	153	-	6.16	7a-6p	8.39	-	51.68	Tindale Oliver
Collier Co, FL	74	Mar-08	503	-	12.81	7a-6p	3.05	-	39.07	Tindale Oliver
Collier Co, FL	97	Mar-08	512	-	8.78	7a-6p	11.29	-	99.13	Tindale Oliver
Collier Co, FL	315	Mar-08	1,347	-	6.97	7a-6p	6.55	-	45.65	Tindale Oliver
Collier Co, FL	42	Mar-08	314	-	9.55	7a-6p	10.98	-	104.86	Tindale Oliver
Total Size	10,380	55	13,130							

Average Trip Length: 6.83
Weighted Average Trip Length: 6.62
Weighted Average Trip Generation Rate: 7.81

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Table A-7

LUC 215: Single Family Attached Housing

Location	Size / Units	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Hernando Co, FL	31	May-96	31	31	6.12	9a-6p	-	-	-	Tindale Oliver
Hernando Co, FL	128	May-96	198	198	6.47	9a-6p	-	-	-	Tindale Oliver
Pasco Co, FL	229	Apr-02	198	198	4.77	9a-6p	-	-	-	Tindale Oliver
Pasco Co, FL	248	Apr-02	353	353	4.24	9a-6p	-	-	-	Tindale Oliver
Total Size	636	4	780			**Average Trip Length:**	**-**			
ITE	2,640	22				**Weighted Average Trip Length:**	**-**			
Blended total	3,276									

Weighted Average Trip Generation Rate:	4.97
ITE Average Trip Generation Rate:	7.20
Blend of FL Studies and ITE Average Trip Generation Rate:	**6.77**

Table A-8

LUC 220/221/222: Multi-Family/Apartment

Location	Size / Units	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Sarasota Co, FL	212	Jun-93	42	42	5.78	-	5.20	-	30.06	Sarasota County
Sarasota Co, FL	243	Jun-93	36	36	5.84	-	-	-	-	Sarasota County
Marion Co, FL	214	Apr-02	175	175	6.84	-	4.61	-	31.53	Kimley-Horn & Associates
Marion Co, FL	240	Apr-02	174	174	6.96	-	3.43	-	23.87	Kimley-Horn & Associates
Marion Co, FL	288	Apr-02	175	175	5.66	-	5.55	-	31.41	Kimley-Horn & Associates
Marion Co, FL	480	Apr-02	175	175	5.73	-	6.88	-	39.42	Kimley-Horn & Associates
Marion Co, FL	500	Apr-02	170	170	5.46	-	5.94	-	32.43	Kimley-Horn & Associates
Lake Co, FL	250	Dec-06	135	135	6.71	-	5.33	-	35.76	Tindale Oliver
Lake Co, FL	157	Dec-06	265	265	13.97	-	2.62	-	36.60	Tindale Oliver
Lake Co, FL	169	Dec-06	212	-	8.09	-	6.00	-	48.54	Tindale Oliver
Lake Co, FL	226	Dec-06	301	-	6.74	-	2.17	-	14.63	Tindale Oliver
Hernando Co, FL	312	Apr-07	456	-	4.09	-	5.95	-	24.34	Tindale Oliver
Hernando Co, FL	176	Apr-07	332	-	5.38	-	5.24	-	28.19	Tindale Oliver
Total Size	3,467	13	2,648			**Average Trip Length:**	**4.91**			
						Weighted Average Trip Length:	**5.21**			

Table A-9

Land Use 240: Mobile Home Park

Location	Size / Units	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Marion Co, FL	67	Jul-91	22	22	5.40	48hrs.	2.29	-	12.37	Tindale Oliver
Marion Co, FL	82	Jul-91	58	58	10.80	24hr.	3.72	-	40.18	Tindale Oliver
Marion Co, FL	137	Jul-91	22	22	3.10	24hr.	4.88	-	15.13	Tindale Oliver
Sarasota Co, FL	996	Jun-93	181	181	4.19	-	4.40	-	18.44	Sarasota County
Sarasota Co, FL	235	Jun-93	100	100	3.51	-	5.10	-	17.90	Sarasota County
Marion Co, FL	188	Apr-02	147	-	3.51	24hr.	5.48	-	19.23	Kimley-Horn & Associates
Marion Co, FL	227	Apr-02	173	-	2.76	24hr.	8.80	-	24.29	Kimley-Horn & Associates
Marion Co, FL	297	Apr-02	175	-	4.78	24hr.	4.76	-	22.75	Kimley-Horn & Associates
Hernando Co, FL	1,892	May-96	425	425	4.13	9a-6p	4.13	-	17.06	Tindale Oliver
Total Size	4,121	9	1,303			**Average Trip Length:**	**4.84**			
						Weighted Average Trip Length:	**4.60**			

Weighted Average Trip Generation Rate:	**4.17**

Table A-10

Land Use 251: Senior Adult Housing - Detached

Location	Size / Units	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Lakeland, FL	67	3/28-4/2/90	26	24	3.50	9am-4pm	2.44	-	8.54	Tindale Oliver
Marion Co, FL	778	Apr-02	175	-	2.96	24hr.	3.49	-	10.33	Kimley-Horn & Associates
Marion Co, FL	877	Apr-02	209	-	2.91	24hr.	5.90	-	17.17	Kimley-Horn & Associates
Marion Co, FL	1,054	Apr-02	173	-	3.65	24hr.	6.00	-	21.90	Kimley-Horn & Associates
Marion Co, FL	3,076	Apr-02	198	-	2.63	24hr.	5.16	-	13.57	Kimley-Horn & Associates
Marion Co, FL	3,625	Apr-02	164	-	2.50	24hr.	5.83	-	14.58	Kimley-Horn & Associates
Total Size	9,477	6	945			**Average Trip Length:**	**4.80**			
ITE	9,690	15				**Weighted Average Trip Length:**	**5.42**			
Blended total	19,167									

Weighted Average Trip Generation Rate:	2.75
ITE Average Trip Generation Rate:	4.31
Blend of FL Studies and ITE Average Trip Generation Rate:	**3.54**

Table A-11

Land Use 252: Senior Adult Housing - Attached

Location	Size / Units	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Sun City Center, FL	208	Oct-91	726	726	2.46	24hr.	-	-	-	Tindale Oliver
Total Size	208	1				**Average Trip Length:**	**-**			
ITE	432	6				**Weighted Average Trip Length:**	**-**			
Blended total	640									

Weighted Average Trip Generation Rate:	2.46
ITE Average Trip Generation Rate:	3.24
Blend of FL Studies and ITE Average Trip Generation Rate:	**2.99**

Table A-12

Land Use 310: Hotel

Location	Size (Rooms)	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Pinellas Co, FL	174	Aug-89	134	106	12.50	7-11a/3-7p	6.30	79.0	62.21	Tindale Oliver
Pinellas Co, FL	114	Oct-89	30	14	7.30	12-7p	6.20	47.0	21.27	Tindale Oliver
Orange Co, FL	123	1997	-	-	6.32	-	-	-	-	Orange County
Orange Co, FL	120	1997	-	-	5.27	-	-	-	-	Orange County
Orange Co, FL	146	1997	-	-	7.61	-	-	-	-	Orange County
Orange Co, FL	252	1997	-	-	5.63	-	-	-	-	Orange County
Orange Co, FL	172	1997	-	-	6.36	-	-	-	-	Orange County
Orange Co, FL	170	1997	-	-	6.06	-	-	-	-	Orange County
Orange Co, FL	128	1997	-	-	6.10	-	-	-	-	Orange County
Orange Co, FL	200	1997	-	-	4.56	-	-	-	-	Orange County
Orange Co, FL	112	1998	-	-	2.78	-	-	-	-	Orange County
Orange Co, FL	130	1998	-	-	9.12	-	-	-	-	Orange County
Orange Co, FL	106	1998	-	-	7.34	-	-	-	-	Orange County
Orange Co, FL	98	1998	-	-	7.32	-	-	-	-	Orange County
Orange Co, FL	120	1998	-	-	5.57	-	-	-	-	Orange County
Orange Co, FL	70	1999	-	-	1.85	-	-	-	-	Orange County
Orange Co, FL	123	1999	-	-	4.81	-	-	-	-	Orange County
Orange Co, FL	123	1999	-	-	3.70	-	-	-	-	Orange County
Orange Co, FL	211	2000	-	-	2.23	-	-	-	-	Orange County
Orange Co, FL	144	2000	-	-	7.32	-	-	-	-	Orange County
Orange Co, FL	105	2001	-	-	5.25	-	-	-	-	Orange County
Orange Co, FL	891	2005	-	-	5.69	-	-	-	-	Orange County
Orange Co, FL	1,584	2005	-	-	5.88	-	-	-	-	Orange County
Orange Co, FL	210	2006	-	-	4.88	-	-	-	-	Orange County
Orange Co, FL	1,499	2006	-	-	4.69	-	-	-	-	Orange County
Orange Co, FL	144	-	-	-	4.74	-	-	-	-	Orange County
Orange Co, FL	148	-	-	-	7.61	-	-	-	-	Orange County
Orange Co, FL	160	-	-	-	6.19	-	-	-	-	Orange County
Orange Co, FL	130	-	-	-	4.29	-	-	-	-	Orange County
Orange Co, FL	130	-	-	-	3.40	-	-	-	-	Orange County
Orange Co, FL	144	-	-	-	7.66	-	-	-	-	Orange County
Orange Co, FL	100	-	-	-	7.37	-	-	-	-	Orange County
Orange Co, FL	190	-	-	-	4.71	-	-	-	-	Orange County
Orange Co, FL	1,501	2011	-	-	3.50	-	-	-	-	Tindale Oliver
Orange Co, FL	174	2011	-	-	7.03	-	-	-	-	Tindale Oliver
Orange Co, FL	238	2014	-	-	4.05	-	-	-	-	Tindale Oliver
Total Size	10,184	36	164				Average Trip Length:	6.25		
ITE	1,036	7					Weighted Average Trip Length:	6.26		
Blended total	11,220							Weighted Percent New Trip Average:	66.3	

Weighted Average Trip Generation Rate:	5.31
ITE Average Trip Generation Rate:	7.99
Blend of FL Studies and ITE Average Trip Generation Rate:	**5.56**

Table A-13

Land Use 320: Motel

Location	Size (Rooms)	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Pinellas Co, FL	48	Oct-89	46	24	-	10a-2p	2.80	65.0	-	Tindale Oliver
Pinellas Co, FL	54	Oct-89	32	22	-	12p-7p	3.80	69.0	-	Tindale Oliver
Pinellas Co, FL	120	Oct-89	26	22	-	2p-7p	5.20	84.6	-	Tindale Oliver
Total Size	222	3	104				Average Trip Length:	3.93		
ITE	654	6					Weighted Average Trip Length:	4.34		
								Weighted Percent New Trip Average:	76.6	

Table A-14

Land Use 445: Movie Theater

Location	Size (Screens)	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Pinellas Co, FL	8	Oct-89	151	116	113.10	2p-8p	2.70	77.0	235.13	Tindale Oliver
Pinellas Co, FL	12	Sep-89	122	116	63.40	2p-8p	1.90	95.0	114.44	Tindale Oliver
Total Size	20	2	273				Average Trip Length:	2.30		
							Weighted Average Trip Length:	2.22		
								Weighted Percent New Trip Average:	87.8	

Weighted Average Trip Generation Rate:	83.28
ITE Average Trip Generation Rate:	220.00
Blend of FL Studies and ITE Average Trip Generation Rate:	**114.83**

Table A-15

Land Use 492: Health/Fitness Club

Location	Size (1,000 sf)	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Tampa, FL	-	Mar-86	33	31	-	-	-	94.0	-	Kimley-Horn & Associates
Total Size		1	33				Average Trip Length:	-		
ITE	37	8						Percent New Trip Average:	94.0	

Table A-16

Land Use 565: Day Care Center

Location	Size (1,000 sf)	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Pinellas Co, FL	5.6	Aug-89	94	66	66.99	7a-6p	1.90	70.0	89.10	Tindale Oliver
Pinellas Co, FL	10.0	Sep-89	179	134	66.99	7a-6p	2.10	75.0	105.51	Tindale Oliver
Tampa, FL	-	Mar-86	28	25	-	-	2.60	89.0	-	Kimley-Horn & Associates
Total Size	15.6	3	301				**Average Trip Length:**	**2.20**		
ITE	135.0	27					**Weighted Average Trip Length:**	**2.03**		
Blended total	150.6						Weighted Percent New Trip Average:	73.2		

Table A-17

Land Use 620: Nursing Home

Location	Size (Beds)	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Lakeland, FL	120	Mar-90	74	66	2.86	11a-4p	2.59	89.0	6.59	Tindale Oliver
Total Size	120	1	74				**Average Trip Length:**	**2.59**		
ITE	480	3					**Weighted Average Trip Length:**	**2.59**		
Blended total	600						Weighted Percent New Trip Average:	89.0		
							Weighted Average Trip Generation Rate:		2.86	
							ITE Average Trip Generation Rate:		3.06	
							Blend of FL Studies and ITE Average Trip Generation Rate:		**3.02**	

Table A-18

Land Use 630: Clinic

Location	Size (1,000 sf)	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Largo, FL	103.9	Aug-89	614	572	37.03	7a-430p	5.10	93.0	175.63	Tindale Oliver
St. Petersburg, FL	-	Oct-89	280	252	-	9a-5p	4.10	90.0	-	Tindale Oliver
Total Size	103.9	2	894				**Average Trip Length:**	**4.60**		
ITE	180.0	9					**Weighted Average Trip Length:**	**5.10**		
	283.9						Weighted Percent New Trip Average:	93.0		
							Weighted Average Trip Generation Rate:		37.03	
							ITE Average Trip Generation Rate:		37.60	
							Blend of FL Studies and ITE Average Trip Generation Rate:		**37.39**	

Table A-19

Land Use 710: General Office Building

Location	Size (1,000 sf)	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Sarasota Co, FL	14.3	Jun-93	14	14	46.85	-	11.30	-	529.41	Sarasota County
Gwinnett Co, GA	98.0	Dec-92	-	-	4.30	-	5.40	-	-	Street Smarts
Gwinnett Co, GA	180.0	Dec-92	-	-	3.60	-	5.90	-	-	Street Smarts
Pinellas Co, FL	187.0	Oct-89	431	388	18.49	7a-5p	6.30	90.0	104.84	Tindale Oliver
St. Petersburg, FL	262.8	Sep-89	291	274	-	7a-5p	3.40	94.0	-	Tindale Oliver
		5	736				**Average Trip Length:**	**6.46**		
							Weighted Average Trip Length:	**5.15**		
							Weighted Percent New Trip Average:	92.3		

Table A-20

LUC 720: Small Medical/Dental Office Building: 10,000 sf or Less

Site	Size (1,000 sf)	Tues., Jan 11		Wedn., Jan 12		Thur., Jan 13		TOTAL		AVERAGE		AVERAGE (per 1,000 sf)		
		IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	TOTAL
Site 1	2.100	35	35	22	22	13	13	70	70	23.33	23.33	**11.11**	**11.11**	**22.22**
Site 2	3.000	40	40	52	52	53	53	145	145	48.33	48.33	**16.11**	**16.11**	**32.22**
Site 3	2.000	28	28	19	21	24	26	71	75	23.67	25.00	**11.84**	**12.50**	**24.34**
Site 4	1.000	30	30	52	52	57	57	139	139	46.33	46.33	**46.33**	**46.33**	**92.66**
Site 5	3.024	31	32	43	43	24	24	98	99	32.67	33.00	**10.80**	**10.91**	**21.71**
Site 6	1.860	22	24	19	17	11	11	52	52	17.33	17.33	**9.32**	**9.32**	**18.64**
Average												**17.59**	**17.71**	**35.30**
Average (excluding Site 4)												**11.84**	**11.99**	**23.83**

Table A-21

Land Use 720: Medical/Dental Office Building

Location	Size (1,000 sf)	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Tampa, FL	-	Mar-86	33	26	-	-	6.00	79.0	-	Kimley-Horn & Associates
Palm Harbor, FL	14.6	Oct-89	104	76	33.98	9a-5p	6.30	73.0	156.27	Tindale Oliver
St. Petersburg, FL	-	Nov-89	34	30	57.20	9a-4p	1.20	88.0	-	Tindale Oliver
Hernando Co, FL	58.4	May-96	390	349	28.52	9a-6p	6.47	89.5	165.09	Tindale Oliver
Hernando Co, FL	28.0	May-96	202	189	49.75	9a-6p	6.06	93.8	282.64	Tindale Oliver
Charlotte Co, FL	11.0	Oct-97	-	186	49.50	9a-5p	4.60	92.1	209.67	Tindale Oliver
Charlotte Co, FL	28.0	Oct-97	-	186	31.00	9a-5p	3.60	81.6	91.04	Tindale Oliver
Charlotte Co, FL	30.4	Oct-97	-	324	39.80	9a-5p	3.30	83.5	109.68	Tindale Oliver
Citrus Co, FL	38.9	Oct-03	-	168	32.26	8-6p	6.80	97.1	213.03	Tindale Oliver
Citrus Co, FL	10.0	Nov-03	-	340	40.56	8-630p	6.20	92.4	232.33	Tindale Oliver
Citrus Co, FL	5.3	Dec-03	-	20	29.36	8-5p	5.25	95.2	146.78	Tindale Oliver
Orange Co, FL	50.6	2009	-	-	26.72	-	-	-	-	Orange County
Orange Co, FL	23.5	2010	-	-	16.58	-	-	-	-	Tindale Oliver
			13	763			**Average Trip Length:**	**5.07**		
							Weighted Average Trip Length:	**5.55**		

Weighted Percent New Trip Average:	88.9
Average Trip Generation Rate:	32.59
ITE Average Trip Generation Rate:	36.00
Blend of FL Studies and ITE Average Trip Generation Rate:	**34.21**

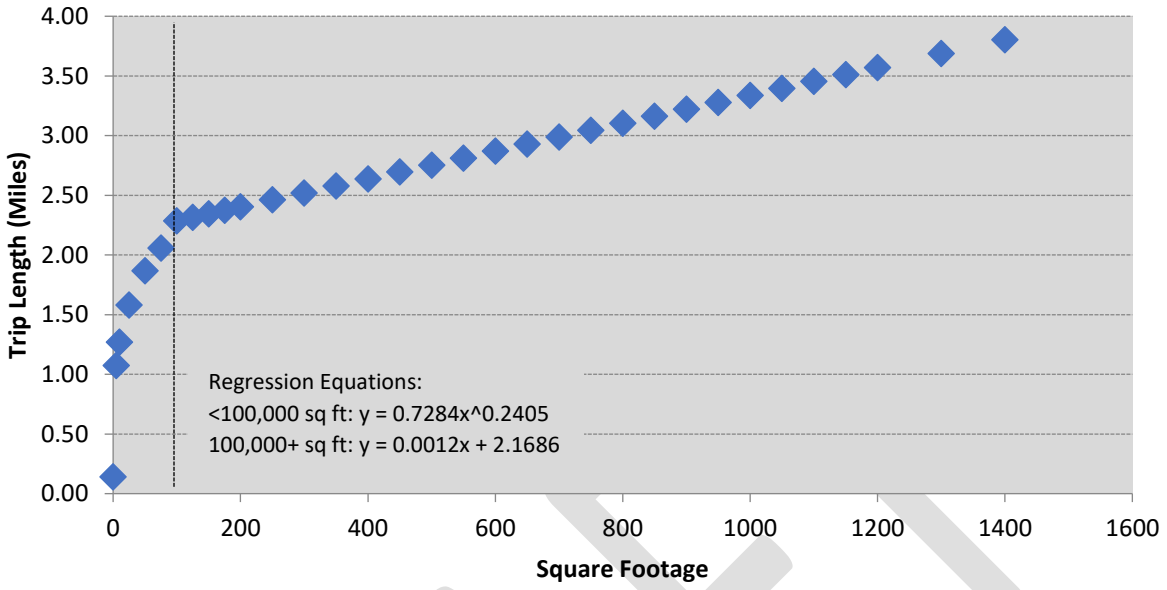
Table A-22

Land Use 820/821/822: Retail/Shopping Center

Location	Size (1,000 sf)	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Tampa, FL	-	Mar-86	527	348	-	-	-	66.0	-	Kimley-Horn & Associates
Tampa, FL	-	Mar-86	170	-	-	-	1.70	-	-	Kimley-Horn & Associates
Tampa, FL	-	Mar-86	354	269	-	-	-	76.0	-	Kimley-Horn & Associates
Tampa, FL	-	Mar-86	144	-	-	-	2.50	-	-	Kimley-Horn & Associates
St. Petersburg, FL	1,192.0	Aug-89	384	298	-	11a-7p	3.60	78.0	-	Tindale Oliver
St. Petersburg, FL	132.3	Sep-89	400	368	77.00	10a-7p	1.80	92.0	127.51	Tindale Oliver
Largo, FL	425.0	Aug-89	160	120	26.73	10a-6p	2.30	75.0	46.11	Tindale Oliver
Dunedin, FL	80.5	Sep-89	276	210	81.48	9a-5p	1.40	76.0	86.69	Tindale Oliver
Pinellas Park, FL	696.0	Sep-89	485	388	-	9a-6p	3.20	80.0	-	Tindale Oliver
Seminole, FL	425.0	Oct-89	674	586	-	-	-	87.0	-	Tindale Oliver
Hillsborough Co, FL	134.0	Jul-91	-	-	-	-	1.30	74.0	-	Tindale Oliver
Hillsborough Co, FL	151.0	Jul-91	-	-	-	-	1.30	73.0	-	Tindale Oliver
Collier Co, FL	-	Aug-91	68	64	-	-	3.33	94.1	-	Tindale Oliver
Collier Co, FL	-	Aug-91	208	154	-	-	2.64	74.0	-	Tindale Oliver
Sarasota/Bradenton, FL	109.0	Sep-92	300	185	-	12a-6p	-	61.6	-	King Engineering Associates, Inc.
Ocala, FL	133.4	Sep-92	300	192	-	12a-6p	-	64.0	-	King Engineering Associates, Inc.
Sarasota Co, FL	110.0	Jun-93	58	58	122.14	-	3.20	-	-	Sarasota County
Sarasota Co, FL	146.1	Jun-93	65	65	51.53	-	2.80	-	-	Sarasota County
Sarasota Co, FL	157.5	Jun-93	57	57	79.79	-	3.40	-	-	Sarasota County
Sarasota Co, FL	191.0	Jun-93	62	62	66.79	-	5.90	-	-	Sarasota County
Hernando Co, FL	107.8	May-96	608	331	77.60	9a-6p	4.68	54.5	197.85	Tindale Oliver
Charlotte Co, FL	88.0	Oct-97	-	-	73.50	9a-5p	1.80	57.1	75.56	Tindale Oliver
Charlotte Co, FL	191.9	Oct-97	-	-	72.00	9a-5p	2.40	50.9	87.97	Tindale Oliver
Charlotte Co, FL	51.3	Oct-97	-	-	43.00	9a-5p	2.70	51.8	60.08	Tindale Oliver
Lake Co, FL	67.8	Apr-01	246	177	102.60	-	3.40	71.2	248.37	Tindale Oliver
Lake Co, FL	72.3	Apr-01	444	376	65.30	-	4.50	59.0	173.37	Tindale Oliver
Pasco Co, FL	65.6	Apr-02	222	-	145.64	9a-5p	1.46	46.9	99.62	Tindale Oliver
Pasco Co, FL	75.8	Apr-02	134	-	38.23	9a-5p	2.36	58.2	52.52	Tindale Oliver
Citrus Co, FL	185.0	Oct-03	-	784	55.84	8a-6p	2.40	88.1	118.05	Tindale Oliver
Citrus Co, FL	91.3	Nov-03	-	390	54.50	8a-6p	1.60	88.0	76.77	Tindale Oliver
			30	6,346			**Average Trip Length:**	**2.71**		

Figure A-1

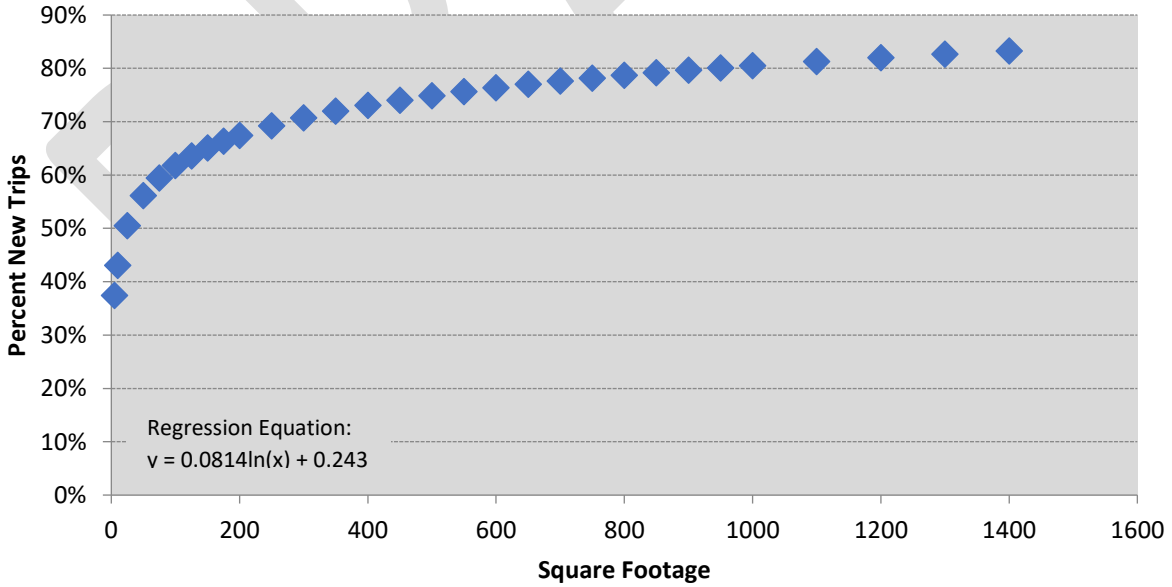
LUC 820: Retail/Shopping Center – TCS Curve Trip Length Regression



Source: Regression analysis based on TCS data for LUC 820

Figure A-2

LUC 820: Retail/Shopping Center – TCS Curve Percent New Trips Regression



Source: Regression analysis based on TCS data for LUC 820

Table A-23

Land Use 840/841: New/Used Automobile Sales

Location	Size (1,000 sf)	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
St.Petersburg, FL	43.0	Oct-89	152	120	-	9a-5p	4.70	79.0	-	Tindale Oliver
Clearwater, FL	43.0	Oct-89	136	106	29.40	9a-5p	4.50	78.0	103.19	Tindale Oliver
Orange Co, FL	13.8	1997	-	-	35.75	-	-	-	-	Orange County
Orange Co, FL	34.4	1998	-	-	23.45	-	-	-	-	Orange County
Orange Co, FL	66.3	2001	-	-	28.50	-	-	-	-	Orange County
Orange Co, FL	39.1	2002	-	-	10.48	-	-	-	-	Orange County
Orange Co, FL	116.7	2003	-	-	22.18	-	-	-	-	Orange County
Orange Co, FL	51.7	2007	-	-	40.34	-	-	-	-	L-TEC
Orange Co, FL	36.6	-	-	-	15.17	-	-	-	-	Orange County
Orange Co, FL	216.4	2008	-	-	13.45	-	-	-	-	Orange County
Total Size	618.0	10	288				**Average Trip Length:**	**4.60**		
ITE (840)	648.0	18					**Weighted Average Trip Length:**	**4.60**		
ITE (841)	28.0	14					Weighted Percent New Trip Average:	78.5		
Blended total	1,294.0								Weighted Average Trip Generation Rate:	21.04
									ITE Average Trip Generation Rate (LUC 840):	27.84
									ITE Average Trip Generation Rate (LUC 841):	27.06
									Blend of FL Studies and ITE Average Trip Generation Rate:	**24.58**

Table A-24

Land Use 850: Supermarket

Location	Size (1,000 sf)	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Palm Harbor, FL	62.0	Aug-89	163	62	106.26	9a-4p	2.08	56.0	123.77	Tindale Oliver
Total Size	62.0	1	163				**Average Trip Length:**	**2.08**		
ITE	1,144.0	22					**Weighted Average Trip Length:**	**2.08**		
Blended total	1,206.0						Weighted Percent New Trip Average:	56.0		

Table A-25

Land Use 880/881: Pharmacy with and without Drive-Through Window

Location	Size (1,000 sf)	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Pasco Co, FL	11.1	Apr-02	138	38	88.97	-	2.05	27.5	50.23	Tindale Oliver
Pasco Co, FL	12.0	Apr-02	212	90	122.16	-	2.04	42.5	105.79	Tindale Oliver
Pasco Co, FL	15.1	Apr-02	1192	54	97.96	-	2.13	28.1	58.69	Tindale Oliver
Total Size	38.2	3	1,542				**Average Trip Length:**	**2.07**		
ITE (LUC 880)	66.0	6					**Weighted Average Trip Length:**	**2.08**		
ITE (LUC 881)	208.0	16					Weighted Percent New Trip Average:	32.4		
Blended total	312.2									

Table A-26

Land Use 890: Furniture Store

Location	Size (1,000 sf)	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Largo, FL	15.0	7/28-30/92	64	34	-	-	4.63	52.5	-	Tindale Oliver
Tampa, FL	16.9	Jul-92	68	39	-	-	7.38	55.7	-	Tindale Oliver
Total Size	31.90	2	132				**Average Trip Length:**	**6.01**		
ITE	779.0	19					**Weighted Average Trip Length:**	**6.09**		
Blended total	810.90						Weighted Percent New Trip Average:	54.2		

Table A-27

Land Use 912: Bank/Savings w/Drive-Thru

Location	Size (1,000 sf)	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Tampa, FL	-	Mar-86	77	-	-	-	2.40	-	-	Kimley-Horn & Associates
Tampa, FL	-	Mar-86	211	-	-	-	-	54.0	-	Kimley-Horn & Associates
Clearwater, FL	0.4	Aug-89	113	52	-	9a-6p	5.20	46.0	-	Tindale Oliver
Largo, FL	2.0	Sep-89	129	94	-	-	1.60	73.0	-	Tindale Oliver
Seminole, FL	4.5	Oct-89	-	-	-	-	-	-	-	Tindale Oliver
Marion Co, FL	2.3	Jun-91	69	29	-	24hr.	1.33	42.0	-	Tindale Oliver
Marion Co, FL	3.1	Jun-91	47	32	-	24hr.	1.75	68.1	-	Tindale Oliver
Marion Co, FL	2.5	Jul-91	57	26	-	48hrs.	2.70	45.6	-	Tindale Oliver
Collier Co, FL	-	Aug-91	162	96	-	24hr.	0.88	59.3	-	Tindale Oliver
Collier Co, FL	-	Aug-91	116	54	-	-	1.58	46.6	-	Tindale Oliver
Collier Co, FL	-	Aug-91	142	68	-	-	2.08	47.9	-	Tindale Oliver
Hernando Co, FL	5.4	May-96	164	41	-	9a-6p	2.77	24.7	-	Tindale Oliver
Marion Co, FL	2.4	Apr-02	70	-	-	24hr.	3.55	54.6	-	Kimley-Horn & Associates
Marion Co, FL	2.7	May-02	50	-	246.66	24hr.	2.66	40.5	265.44	Kimley-Horn & Associates
Total Size	25.2	14	1,407				**Average Trip Length:**	**2.38**		
ITE	114.0	19					**Weighted Average Trip Length:**	**2.46**		
Blended total	139.2						Weighted Percent New Trip Average:	46.2		

Table A-28

Land Use 931: Fine Dining Restaurant

Location	Size (1,000 sf)	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Tampa, FL	-	Mar-86	76	62	-	-	2.10	82.0	-	Kimley-Horn & Associates
St. Petersburg, FL	7.5	Oct-89	177	154	-	11a-2p/4-8p	3.50	87.0	-	Tindale Oliver
Clearwater, FL	8.0	Oct-89	60	40	110.63	10a-2p/5-9p	2.80	67.0	207.54	Tindale Oliver
Total Size	15.5	3	313				**Average Trip Length:**	**2.80**		
ITE	90.0	10					**Weighted Average Trip Length:**	**3.14**		
Blended total	105.5						Weighted Percent New Trip Average:	76.7		

Table A-29

Land Use 932: High-Turnover (Sit-Down) Restaurant

Location	Size (1,000 sf)	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Hernando Co, FL	6.2	1996	242	175	187.51	9a-6p	2.76	72.5	375.00	Tindale Oliver
Hernando Co, FL	8.2	1996	154	93	102.71	9a-6p	4.15	60.2	256.43	Tindale Oliver
St. Petersburg, FL	5.0	1989	74	68	132.60	1130-7p	2.00	92.0	243.98	Tindale Oliver
Kenneth City, FL	5.2	1989	236	176	127.88	4p-730p	2.30	75.0	220.59	Tindale Oliver
Pasco Co, FL	5.2	2002	114	88	82.47	9a-6p	3.72	77.2	236.81	Tindale Oliver
Pasco Co, FL	5.8	2002	182	102	116.97	9a-6p	3.49	56.0	228.77	Tindale Oliver
Orange Co, FL	5.0	1996	-	-	135.68	-	-	-	-	Orange County
Orange Co, FL	9.7	1996	-	-	132.32	-	-	-	-	Orange County
Orange Co, FL	11.2	1998	-	-	18.76	-	-	-	-	Orange County
Orange Co, FL	7.0	1998	-	-	126.40	-	-	-	-	Orange County
Orange Co, FL	4.6	1998	-	-	129.23	-	-	-	-	Orange County
Orange Co, FL	7.4	1998	-	-	147.44	-	-	-	-	Orange County
Orange Co, FL	6.7	1998	-	-	82.58	-	-	-	-	Orange County
Orange Co, FL	11.3	2000	-	-	95.33	-	-	-	-	Orange County
Orange Co, FL	7.2	2000	-	-	98.06	-	-	-	-	Orange County
Orange Co, FL	11.4	2001	-	-	91.67	-	-	-	-	Orange County
Orange Co, FL	5.6	2001	-	-	145.59	-	-	-	-	Orange County
Orange Co, FL	5.5	-	-	-	100.18	-	-	-	-	Orange County
Orange Co, FL	11.3	-	-	-	62.12	-	-	-	-	Orange County
Orange Co, FL	10.4	-	-	-	31.77	-	-	-	-	Orange County
Orange Co, FL	5.9	-	-	-	147.74	-	-	-	-	Orange County
Orange Co, FL	8.9	2008	-	-	52.69	-	-	-	-	Orange County
Orange Co, FL	9.7	2010	-	-	105.84	-	-	-	-	Orange County
Orange Co, FL	9.5	2013	-	-	40.46	-	-	-	-	Orange County
Orange Co, FL	11.0	2015	-	-	138.39	-	-	-	-	Orange County
Total Size	194.9	25	1,102				**Average Trip Length:**	**3.07**		
ITE	250.0	50					**Weighted Average Trip Length:**	**3.17**		
Blended total	444.9						Weighted Percent New Trip Average:	70.8		

Weighted Average Trip Generation Rate:	98.67
ITE Average Trip Generation Rate:	107.20
Blend of FL Studies and ITE Average Trip Generation Rate:	**103.46**

Table A-30

Land Use 934: Fast Food Restaurant with Drive-Through Window

Location	Size (1,000 sf)	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Tampa, FL	-	Mar-86	61	-	-	-	2.70	-	-	Kimley-Horn & Associates
Tampa, FL	-	Mar-86	306	-	-	-	-	65.0	-	Kimley-Horn & Associates
Pinellas Co, FL	2.20	Aug-89	81	48	502.80	11a-2p	1.70	59.0	504.31	Tindale Oliver
Pinellas Co, FL	4.30	Oct-89	456	260	660.40	1 day	2.30	57.0	865.78	Tindale Oliver
Tarpon Springs, FL	-	Oct-89	233	114	-	7a-7p	3.60	49.0	-	Tindale Oliver
Marion Co, FL	1.60	Jun-91	60	32	962.50	48hrs.	0.91	53.3	466.84	Tindale Oliver
Marion Co, FL	4.00	Jun-91	75	46	625.00	48hrs.	1.54	61.3	590.01	Tindale Oliver
Collier Co, FL	-	Aug-91	66	44	-	-	1.91	66.7	-	Tindale Oliver
Collier Co, FL	-	Aug-91	118	40	-	-	1.17	33.9	-	Tindale Oliver
Hernando Co, FL	5.43	May-96	136	82	311.83	9a-6p	1.68	60.2	315.27	Tindale Oliver
Hernando Co, FL	3.13	May-96	168	82	547.34	9a-6p	1.59	48.8	425.04	Tindale Oliver
Orange Co, FL	8.93	1996	-	-	377.00	-	-	-	-	Orange County
Lake Co, FL	2.20	Apr-01	376	252	934.30	-	2.50	74.6	1742.47	Tindale Oliver
Lake Co, FL	3.20	Apr-01	171	182	654.90	-	-	47.8	-	Tindale Oliver
Lake Co, FL	3.80	Apr-01	188	137	353.70	-	3.30	70.8	826.38	Tindale Oliver
Pasco Co, FL	2.66	Apr-02	100	46	283.12	9a-6p	-	46.0	-	Tindale Oliver
Pasco Co, FL	2.96	Apr-02	486	164	515.32	9a-6p	2.72	33.7	472.92	Tindale Oliver
Pasco Co, FL	4.42	Apr-02	168	120	759.24	9a-6p	1.89	71.4	1024.99	Tindale Oliver
Total Size	48.8	18	4,463				**Average Trip Length:**	**2.11**		
ITE	213.0	71					**Weighted Average Trip Length:**	**2.05**		
Blended total	261.8						Weighted Percent New Trip Average:	57.9		

Table A-31

Land Use 942: Automobile Care Center

Location	Size (1,000 sf)	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Largo, FL	5.5	Sep-89	34	30	37.64	9a-5p	2.40	88.0	79.50	Tindale Oliver
Jacksonville, FL	2.3	2/3-4/90	124	94	-	9a-5p	3.07	76.0	-	Tindale Oliver
Jacksonville, FL	2.3	2/3-4/90	110	74	-	9a-5p	2.96	67.0	-	Tindale Oliver
Jacksonville, FL	2.4	2/3-4/90	132	87	-	9a-5p	2.32	66.0	-	Tindale Oliver
Lakeland, FL	5.2	Mar-90	24	14	-	9a-4p	1.36	59.0	-	Tindale Oliver
Lakeland, FL	-	Mar-90	54	42	-	9a-4p	2.44	78.0	-	Tindale Oliver
Orange Co, FL	25.0	Nov-92	41	39	-	2-6p	4.60	-	-	LCE, Inc.
Orange Co, FL	36.6	-	-	-	15.17	-	-	-	-	Orange County
Orange Co, FL	7.0	-	-	-	46.43	-	-	-	-	Orange County

Total Size	86.2	9	519	**Average Trip Length:**	**2.74**
ITE	102.0	6		**Weighted Average Trip Length:**	**3.62**
Blended total	188.2				
	151.1				

Weighted Percent New Trip Average: 72.2

Weighted Average Trip Generation Rate: 22.14

ITE Average Trip Generation Rate (adjusted): 31.10

Blend of FL Studies and ITE Average Trip Generation Rate: 28.19

Table A-32

Land Use 944: Gasoline/Service Station

Location	Size (1,000 sf)	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Largo, FL	0.6	Nov-89	70	14	-	8am-5pm	1.90	23.0	-	Tindale Oliver
Collier Co, FL	-	Aug-91	168	40	-	-	1.01	23.8	-	Tindale Oliver

Total Size	0.6	1	238	**Average Trip Length:**	**1.46**
ITE (vfp)	144.0	18		**Weighted Average Trip Length:**	**1.90**

Weighted Percent New Trip Average: 23.0

Convenience Store/Gas Station (ITE LUC 945) - Mid-Size Blend

ITE	48	Conv. Store 2,000 to 3,999 sf:	265.12
ITE	5	Conv. Store 4,000 to 5,499 sf:	257.13
	53	**Blend of ITE Average Trip Generation Rates for Convenience Store/Gas Station 2,000 to 5,499 sf:**	**264.38**

Table A-33

Land Use 947: Self-Service Car Wash

Location	Size (Bays)	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Largo, FL	10	Nov-89	111	84	-	8am-5pm	2.00	76.0	-	Tindale Oliver
Clearwater, FL	-	Nov-89	177	108	-	10am-5pm	1.30	61.0	-	Tindale Oliver
Collier Co, FL	11	Dec-09	304	-	30.24	-	2.50	57.0	-	Tindale Oliver
Collier Co, FL	8	Jan-09	186	-	22.75	-	1.96	72.0	-	Tindale Oliver

Total Size	29	4	778	**Average Trip Length:**	**1.94**
Total Size (TGR)	19	2		**Weighted Average Trip Length:**	**2.18**
ITE	5	1			
Blended total	24				

Weighted Percent New Trip Average: 67.7

Weighted Average Trip Generation Rate: 27.09

ITE Average Trip Generation Rate: 108.00

Blend of FL Studies and ITE Average Trip Generation Rate: 43.94

Appendix B
Cost Component

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Appendix B: Cost Component

This appendix presents the detailed calculations for the cost component of the multi-modal transportation impact fee study. Supporting data and estimates are provided for all cost variables, including:

- Design
- Right-of-Way
- Construction
- Construction engineering/inspection
- Roadway capacity
- Transit capital costs

Design

Town Roadways

The design cost factor for town roads was estimated as a percentage of the construction cost per lane mile. This factor was determined based on a review of design-to-construction cost ratios from recent projects in and around the Town of Wake Forest. As shown in Table B-1, the design factors ranged from five (5) percent to 25 percent with a weighted average of 17 percent. For purposes of this study, the design cost for town roads was estimated at 15 percent of the construction cost per lane mile.

State Roadways

Due to a lack of recent local data, the design cost factor for state roads was estimated using the same 15 percent ratio developed for Town roads.

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Table B-1
Design-to-Construction Cost Factor

On	From	To	Municipality	Improvement	Constr. Year	Length	Lanes Added	Lane Miles Added	PE/Design	Construction Cost	Design-to-Construction Factor
Town of Wake Forest											
Stadium Dr	Glenco Dr	N. Wingate St	Town of Wake Forest	Widen	2018	0.92	2	1.84	$1,503,587	$6,648,635	23%
Ligon Mill Rd	South of S. Main St	N. of Wal-Mart entrance	Town of Wake Forest	Widen	2020	0.36	2	0.72	$680,765	$2,740,516	25%
Total:								**2.56**	**$2,184,352**	**$9,389,151**	**23%**
Other Jurisdictions											
NW Judd Pkwy	NC 42	NC 55	Town of Fuquay-Varina	New location	2021	1.79	4	7.16	$1,340,965	$12,615,518	11%
Lake Pine Dr	Macgregor Pines Dr	Versailles Dr	Town of Apex	Widen	2023	0.35	2	0.70	$377,000	$2,369,346	16%
Holly Springs Rd Ph II	Flint Point Ln	Sunset Lake Rd	Town of Holly Springs	Widen	2025	1.50	2	3.00	$3,650,000	$15,838,683	23%
Avent ferry Rd	Ralph Stephens	NC 55	Town of Holly Springs	Widen	2022	0.38	2	0.76	$91,258	$1,958,369	5%
Reedy Creek Rd	NC 54	Harison Ave	Town of Cary	Widen	2021	1.14	2	2.28	$872,446	$7,332,794	12%
Total:								**13.90**	**$6,331,669**	**$40,114,710**	**16%**
All Projects											
Total:								**16.46**	**$8,516,021**	**$49,503,861**	**17%**

Source: Town of Wake Forest and other respective jurisdictions

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Right-of-Way

The ROW cost reflects the total cost of the acquisitions along a corridor that was necessary to have sufficient cross-section width to widen an existing road or, in the case of new road construction, build a new road.

Town Roadways

For multi-modal fee purposes, the ROW cost for town roads was estimated as a percentage of the construction cost per lane mile. To determine the ROW cost factor, Benesch conducted a review of ROW-to-construction cost ratios of local projects and projects completed by nearby jurisdictions. As shown in Table B-2, the ROW-to-construction factors ranged from three (3) percent to 52 percent with a weighted average of 27 percent.

Based on a review of this data set ROW costs were estimated at approximately 20 percent of the construction costs. This estimate considers the higher ratios observed outside of the Town of Wake Forest and is comparable to the ratio for the most recent improvement in the Town.

State Roadways

Similar to town roads, the ROW cost for state roads was estimated as a percentage of the construction cost per lane mile. Due to a lack of data for state roads, the ROW-to-construction cost ratio determined for town roads was also applied to state roads.

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Table B-2
Right-of-Way-to-Construction Cost Factor

On	From	To	Municipality	Improvement	Constr. Year	Length	Lanes Added	Lane Miles Added	Right-of-Way	Construction Cost	ROW-to-Construction Factor
Town of Wake Forest											
Stadium Dr	Glenco Dr	N. Wingate St	Town of Wake Forest	Widen	2018	0.92	2	1.84	$223,895	$6,648,635	3%
Ligon Mill Rd	South of S. Main St	N. of Wal-Mart entrance	Town of Wake Forest	Widen	2020	0.36	2	0.72	$527,251	$2,740,516	19%
Total:								**2.56**	**$751,146**	**$9,389,151**	**8%**
Other Jurisdictions											
NW Judd Pkwy	NC 42	NC 55	Town of Fuquay-Varina	New location	2021	1.79	4	7.16	$6,531,965	$12,615,518	52%
Lake Pine Dr	Macgregor Pines Dr	Versailles Dr	Town of Apex	Widen	2023	0.35	2	0.70	$127,000	$2,369,346	5%
Morrisville Carpenter Rd	Davis Dr	NC 54	Town of Morrisville	Widen	2023	1.52	2	3.04	$1,393,851	$6,582,586	21%
Holly Springs Rd Ph II	Flint Point Ln	Sunset Lake Rd	Town of Holly Springs	Widen	2025	1.50	2	3.00	$4,660,000	$15,838,683	29%
Avent ferry Rd	Ralph Stephens	NC 55	Town of Holly Springs	Widen	2022	0.38	2	0.76	$236,146	$1,958,369	12%
Reedy Creek Rd	NC 54	Harison Ave	Town of Cary	Widen	2021	1.14	2	2.28	$1,712,854	$7,332,794	23%
Total:								**16.94**	**$14,661,816**	**$46,697,296**	**31%**
All Projects											
Total:								**19.50**	**$15,412,962**	**$56,086,447**	**27%**

Source: Town of Wake Forest and other respective jurisdictions

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Construction

Town Roadways

A review of construction cost data for local town roadway capacity expansion projects included two recent improvements identified in Wake Forest, as shown in Table B-3.

- Stadium Dr from Glenco Dr to N. Wingate
- Ligon Mill Rd from South of S. Main St to N. of Wal-Mart entrance

These improvements cost approximately $3.67 million per lane mile for construction only.

In addition to local data, a review of recently bid projects from nearby jurisdictions was conducted. As shown in Table B-3, a total of seven (7) projects in five different towns were identified with a weighted average cost of approximately $2.76 million per lane mile.

Based on this review, the construction cost for town roads was estimated at $3.00 million per lane mile for use in the multi-modal transportation impact fee calculation. This estimate considers the lower costs observed outside of the Town of Wake Forest to utilize a larger sample of projects and provide a conservative estimate for impact fee purposes.

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Table B-3
Construction Cost for Town Roads

On	From	To	Municipality	Improvement	Section Design	Constr. Year	Length	Lanes Added	Lane Miles Added	Construction Cost	Construction Cost per Lane Mile
Town of Wake Forest											
Stadium Dr	Glenco Dr	N. Wingate St	Town of Wake Forest	Widen	Curb & Gutter	2018	0.92	2	1.84	$6,648,635	$3,613,389
Ligon Mill Rd	South of S. Main St	N. of Wal-Mart entrance	Town of Wake Forest	Widen	Curb & Gutter	2020	0.36	2	0.72	$2,740,516	$3,806,272
Total:									**2.56**	**$9,389,151**	**$3,668,000**
Other Jurisdictions											
NW Judd Pkwy	NC 42	NC 55	Town of Fuquay-Varina	New location	Curb & Gutter	2021	1.79	4	7.16	$12,615,518	$1,761,944
Lake Pine Dr	Macgregor Pines Dr	Versailles Dr	Town of Apex	Widen	Curb & Gutter	2023	0.35	2	0.70	$2,369,346	$3,384,780
Morrisville Carpenter Rd	Davis Dr	NC 54	Town of Morrisville	Widen	Curb & Gutter	2023	1.52	2	3.04	$6,582,586	$2,165,324
Holly Springs Rd Ph II	Flint Point Ln	Sunset Lake Rd	Town of Holly Springs	Widen	Curb & Gutter	2025	1.50	2	3.00	$15,838,683	$5,279,561
Avent ferry Rd	Ralph Stephens	NC 55	Town of Holly Springs	Widen	Curb & Gutter	2022	0.38	2	0.76	$1,958,369	$2,576,801
Reedy Creek Rd	NC 54	Harison Ave	Town of Cary	Widen	Curb & Gutter	2021	1.14	2	2.28	$7,332,794	$3,216,138
Apex Peakway	James St	Towee Dr	Town of Apex	New location	Curb & Gutter	2025	0.45	4	1.80	$14,769,512	$8,205,284
Total:									**16.94**	**$46,697,296**	**$2,757,000**
All Projects											
Total:									**19.50**	**$56,086,447**	**$2,876,000**

Source: Town of Wake Forest and other respective jurisdictions

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State Roadways

For state road improvements, the North Carolina Capital Area Metropolitan Planning Organizations' 2050 Metropolitan Transportation Plan was utilized. When isolated from the full list of recommended improvements, those within or bordering the Town have an estimated total cost of approximately $7.01 million per lane mile, as shown in Table B-4. This estimate includes design, CEI, and ROW elements already, so they were removed using the design/ROW/CEI cost ratios-to-construction that were previously discussed. After these factors are subtracted, the construction cost estimate amounts to $4.70 million per lane mile for urban design (curb & gutter) state road improvements in the Town of Wake Forest.

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Table B-4
Construction Cost for State Roads

Project ID	Juris	Road Name	From	To	Existing Lanes	Proposed Lanes	Length	Lanes Added	Lane Miles	Total Cost	Total Cost per Lane Mile
A613	State	Harris Rd	US 1	N. Main Street	2	4	1.42	2	2.84	$34,484,398	$12,142,394
A133	State	Burlington Mills Rd	US 1	US 401	3	4	4.77	2	9.54	$54,806,422	$5,744,908
A125b	State	Heritage Lake Rd	Rogers Rd	NC 98	2	4	1.73	2	3.46	$23,937,802	$6,918,440
A605	State	Rogers Rd	Heritage Center Dr	Heritage Branch Rd	3	5	0.35	2	0.70	$4,307,394	$6,153,420
A56c	State	NC 98	NC 98 Bypass	US 401	3	4	5.29	2	10.58	$73,197,093	$6,918,440
A608a	State	NC 98	Debarmore St	Ligon Mill Rd (future connector)	2	4	1.07	2	2.14	$13,524,219	$6,319,729
A760	State	US 1 Alt	Harris Rd	Youngsville Southern Bypass	3	4	1.56	2	3.12	$22,830,851	$7,317,580
Total									**32.38**	**$227,088,179**	**$7,013,224**

Source: Connect 2050: The Triangle Region's Metropolitan Transportation Plan; State projects in the Town of Wake Forest only

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Construction Engineering/Inspection

Town Roadways

The CEI cost factor for town roads was estimated as a percentage of the construction cost per lane mile. This factor was determined based on a review of CEI-to-construction cost ratios from recent projects in and around the Town of Wake Forest. As shown in Table B-5, the CEI factors ranged from five (5) percent to 21 percent with a weighted average of 15 percent. For purposes of this study, the CEI cost for town roads was estimated at 15 percent of the construction cost per lane mile.

State Roadways

Due to a lack of recent local data, the CEI cost factor for state roads was estimated using the same 15 percent ratio developed for Town roads.

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Table B-5
Construction Engineering/Inspection Cost Factor

On	From	To	Municipality	Improvement	Constr. Year	Length	Lanes Added	Lane Miles Added	CEI	Construction Cost	CEI-to-Construction Factor
Town of Wake Forest											
Stadium Dr	Glenco Dr	N. Wingate St	Town of Wake Forest	Widen	2018	0.92	2	1.84	$357,987	$6,648,635	5%
Ligon Mill Rd	South of S. Main St	N. of Walmart entrance	Town of Wake Forest	Widen	2020	0.36	2	0.72	$388,161	$2,740,516	14%
Total:								**2.56**	**$746,148**	**$9,389,151**	**8%**
Other Jurisdictions											
Lake Pine Dr	Macgregor Pines Dr	Versailles Dr	Town of Apex	Widen	2023	0.35	2	0.70	$314,520	$2,369,346	13%
Morrisville Carpenter Rd	Davis Dr	NC 54	Town of Morrisville	Widen	2023	1.52	2	3.04	$1,038,170	$6,582,586	16%
Holly Springs Rd Ph II	Flint Point Ln	Sunset Lake Rd	Town of Holly Springs	Widen	2025	1.50	2	3.00	$2,691,352	$15,838,683	17%
Avent ferry Rd	Ralph Stephens	NC 55	Town of Holly Springs	Widen	2022	0.38	2	0.76	$418,380	$1,958,369	21%
Reedy Creek Rd	NC 54	Harison Ave	Town of Cary	Widen	2021	1.14	2	2.28	$1,279,198	$7,332,794	17%
Total:								**9.78**	**$5,741,620**	**$34,081,778**	**17%**
All Projects											
Total:								**12.34**	**$6,487,768**	**$43,470,929**	**15%**

Source: Town of Wake Forest and other respective jurisdictions

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Roadway Capacity

As shown in Table B-6, the average capacity per lane miles was based on the projects in the Capital Area Metropolitan Planning Organization's (CAMPO) 2050 Metropolitan Transportation Plan project list. The listing of projects reflects the mix of improvements that will yield the vehicle-miles of capacity (VMC) that will be built in the Town of Wake Forest. The resulting weighted average capacity per lane mile of approximately 6,800 was used in the multi-modal transportation impact fee calculation.

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Table B-6

Connect 2050: The Triangle Region's Metropolitan Transportation Plan

Project ID	Juris	Road Name	From	To	Road Classification	Existing Lanes	Proposed Lanes	Type	Length	Lanes Added	Lane Miles	Horizon Year	Initial Capacity	Future Capacity	Added Capacity	VMC Added	VMC per Lane Mile
A834	Town	Collector Street - Wake Forest	Connector Dr	Ligon Mill Rd	Collector	0	2	NC	0.42	2	0.84	2030	0	10,200	10,200	4,284	5,100
A835	Town	Collector Street - Wake Forest	Unicon Dr	Collector Street	Collector	0	2	NC	0.40	2	0.80	2030	0	10,200	10,200	4,080	5,100
A833	Town	Holding Village Way	Highpoint St	Friendship Chapel Rd	Collector	0	2	NC	0.42	2	0.84	2030	0	10,200	10,200	4,284	5,100
A127b1	Town	Ligon Mill Rd Connector	NC 98 Bypass	Richland Creek	Major Thoroughfare	0	4	NC	0.25	4	1.00	2030	0	26,700	26,700	6,675	6,675
A127b2	Town	Ligon Mill Rd Connector	Richland Creek	NC 98	Major Thoroughfare	0	2	NC	0.75	2	1.50	2030	0	12,200	12,200	9,150	6,100
A921	Town	Rogers Branch Rd	Penfield St	Forestville Rd	Collector	0	2	NC	0.13	2	0.26	2030	0	10,200	10,200	1,326	5,100
A881	Town	Stone Monument Dr Extension	Ligon Mill Rd	End of Road	Collector	0	2	NC	0.15	2	0.30	2030	0	10,200	10,200	1,530	5,100
A127a	Town	Ligon Mill Rd	US 1A	NC 98 Bypass	Major Thoroughfare	2	4	LA	0.61	2	1.22	2030	11,700	26,700	15,000	9,150	7,500
A404	Town	S. Franklin St	NC 98 (Wake Forest Bypass)	Rogers Rd	Minor Thoroughfare	3	4	LA	1.10	2	2.20	2030	13,100	26,700	13,600	14,960	6,800
A774	Town	Friendship Chapel Rd	Holding Village Way	Heritage Hills Way	Collector	0	2	NC	0.70	2	1.40	2040	0	10,200	10,200	7,140	5,100
A124a	Town	Northside Loop (Harris Rd)	N. Main Street	N. White St	Major Thoroughfare	0	3	NC	0.44	2	0.88	2040	0	13,300	13,300	5,852	6,650
A672	Town	Unicon Drive Ext	Height Lane	Unicon Drive	Collector	0	2	NC	0.15	2	0.30	2040	0	10,200	10,200	1,530	5,100
A613	State	Harris Rd	US 1	N. Main Street	Major Thoroughfare	2	4	LA	1.42	2	2.84	2040	11,700	26,700	15,000	21,300	7,500
A127b3	Town	Ligon Mill Rd Connector	Richland Creek	NC 98	Major Thoroughfare	2	4	LA	0.75	2	1.50	2040	11,700	26,700	15,000	11,250	7,500
A127c	Town	Ligon Mill Rd Connector	NC 98	Stadium Dr	Major Thoroughfare	0	4	NC	0.78	4	3.12	2050	0	26,700	26,700	20,826	6,675
A133	State	Burlington Mills Rd	US 1	US 401	Major Thoroughfare	3	4	LA	4.77	2	9.54	2050	13,100	26,700	13,600	64,872	6,800
A125a2	Town	Forestville Rd	Buffaloe Rd	Rogers Rd	Minor Thoroughfare	3	4	LA	7.50	2	15.00	2050	13,100	26,700	13,600	102,000	6,800
A125b	State	Heritage Lake Rd	Rogers Rd	NC 98	Minor Thoroughfare	2	4	LA	1.73	2	3.46	2050	11,700	26,700	15,000	25,950	7,500
A605	State	Rogers Rd	Heritage Center Dr	Heritage Branch Rd	Major Thoroughfare	3	5	LA	0.35	2	0.70	2050	13,100	26,800	13,700	4,795	6,850
A56c	State	NC 98	NC 98 Bypass	US 401	Major Thoroughfare	3	4	LA	5.29	2	10.58	2050	13,100	26,700	13,600	71,944	6,800
A608a	State	NC 98	Debarmore St	Ligon Mill Rd (future connector)	Major Thoroughfare	2	4	LA	1.07	2	2.14	2050	11,700	26,700	15,000	16,050	7,500
A760	State	US 1 Alt	Harris Rd	Youngsville Southern Bypass	Major Thoroughfare	3	4	LA	1.56	2	3.12	2050	13,100	26,700	13,600	21,216	6,800
Total											**63.54**					**430,164**	**6,800**
Total (Town ONLY):											**31.16**	**49%**				**204,037**	**6,500**
Total (State ONLY):											**32.38**	**51%**				**226,127**	**7,000**
Total (New Construction ONLY):											**11.24**	**18%**				**204,037**	**18,200**
Total (Lane Addition ONLY):											**52.30**	**82%**				**226,127**	**4,300**

Source: Connect 2050: The Triangle Region's Metropolitan Transportation Plan; Projects in the Town of Wake Forest only

Transit Capital Costs

In the case of multi-modal fees, the marginal cost of adding transit infrastructure needs to be considered. This section details the difference in cost per person-mile of capacity between expanding a roadway without transit amenities versus expanding a roadway with transit amenities. This calculation also accounts for the change in roadway PMC that occurs when a bus is on the road.

First, Table B-7 calculates the person-miles of capacity added for each new transit vehicle on the road. This calculation adjusts for the fact that buses have a significantly higher person-capacity than passenger vehicles. This table also identifies transit capital cost variables that will be used to calculate the added capital cost of constructing/expanding a roadway with transit facilities.

Next, Table B-8 combines the roadway VMC and the transit PMC to calculate the marginal change in cost per PMC. First, the roadway characteristics, including cost and capacity, were used to calculate the roadway cost per VMC for a generic 15-mile roadway segment. Then, an adjustment factor was applied to recognize that incorporating transit along a segment of roadway decreases the vehicle-capacity as the bus makes intermittent stops and interrupts the free-flowing traffic. As shown in Table B-8, the bus blockage adjustment factor is much higher for a 2-lane roadway than for a 4-lane roadway. On a 2-lane road, all cars get caught behind the bus during a stop, while on a 4-lane roadway, there is an unobstructed travel lane that cars can use to pass-by or maneuver around the slower transit vehicle. This adjusted VMC was then converted to PMC using the vehicle-miles to person-miles adjustment factor previously discussed in this report. The additional person-capacity from the buses was added to the adjusted roadway PMC. The person-miles of capacity that a transit system would add to the stretch of roadway (Table B-8) mitigates the decrease in vehicle-miles of capacity due to the bus blockage adjustments.

Next, the capital cost of transit infrastructure was added to the capital cost of the roadway expansion for both new road construction (0 to 2 lanes) and lane addition (2 to 4 lanes). With the transit infrastructure included, the updated cost per PMC was calculated, which now reflects the total cost of building a new road with transit or expanding a roadway and adding transit amenities. When compared to the cost per PMC for simply building/expanding a roadway without transit, the added cost of transit is between two (2) percent and five (5) percent.

As a final step, the increased costs were then weighted by the lane mile distribution of new road construction and lane addition improvements in the Triangle Region's Metropolitan Transportation Plan. As shown, the plan calls for fewer new road construction projects than lane addition improvements. When the marginal cost of transit is included and weighted by this ratio, the resulting percent change is approximately 3.02 percent. Essentially, adding transit does not have a significant effect on the cost per person-mile of capacity for new road construction and lane addition improvements.

As it is currently structured, the transit model detailed in Tables B-7 and B-8 assumes that transit-miles and road-miles will be added to the system at the same rate. If the Town builds more transit-miles, this will increase the bus traffic on existing roads, adding more stops, higher stop frequency, and creating additional bus blockage. As a result, the capital cost per person-mile for a roadway with transit would increase in relation to the ratio of added transit-miles vs. roadway-miles. For example, if the transit-mile investment was double that of roadway construction/expansion, the 3.02 percent change calculated in Table B-8 would increase to approximately 6.04 percent. The annual construction figures for transit-miles and road-miles should be tracked by the Town and adjusted for in subsequent multi-modal transportation impact fee update studies.

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Table B-7

Multi-Modal Fee: Cost per Person-Mile of Capacity

Input	Local Transit	
Transit Person-Miles of Capacity Calculation		**Source:**
Vehicle Capacity[1]	45	1) Source: Local transit is assumed to have 32 seats with a 40 percent standing room capacity equivalent
Number of Vehicles (20% fleet margin)[2]	1	2) Cycle time (Item 9) divided by headway time (Item 6) increased by 20 percent to accommodate the required fleet margin
Service Span (hours)[3]	14	3) Source: Assumption based on current Wake Forest Loop routes
Cycles/Hour (aka Peak Vehicles)[4]	0.80	4) Headway time (Item 6) divided by 60
Cycles per Day[5]	11	5) Service span (Item 3) multiplied by the cycles/hour (Item 4)
Headway Time (minutes)[6]	75	6) Source: Assumption based on current Wake Forest Loop routes
Speed (mph)[7]	20	7) Source: Integrated National Transit Database Analysis System (INTDAS). 6-yr average
Round Trip Length (miles)[8]	15.00	8) Source: Average trip length of Wake Forest Loop
Cycle Time (minutes)[9]	45	9) Round trip length (Item 8) divided by speed (Item 7) multiplied by 60
Total Person-Miles of Capacity[10]	7,425	10) Vehicle capacity (Item 1) multiplied by the cycles per day (Item 5) multiplied by the round trip length (Item 8)
Load Factor/System Capacity[11]	30%	11) Source: Optimistic assumption based on future goals
Adjusted Person-Miles of Capacity[12]	**2,228**	12) Total person-miles of capacity (Item 10) multiplied by the load factor (Item 11)
Capital Cost Variables		
Stops per Mile (w/o Shelter)[13]	3	13) Source: Model assumes 3 bench stops per mile
Shelters per Mile[14]	1	14) Source: Model assumes 1 shelter stop per mile
Vehicle Cost[15]	$725,000	15) Source: Industry data, average of Diesel ($600,000) and Alt. Fuel ($850,000)
Simple Bus Stop[16]	$12,000	16) Source: Assumption based on local characteristics and industry knowledge
Sheltered Bus Stop[17]	$25,000	17) Source: Assumption based on local characteristics and industry knowledge

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Table B-8
Multi-Modal Fee: Transit Component Model

Item	New Road Construction		Lane Addtions		
	Roadway	Transit	Roadway	Transit	
Roadway Characteristics:					**Source:**
Roadway Cost per Mile[1]	$9,256,000		$9,256,000		1) Source: Table 3, adjusted to cost "per mile"
Roadway Segment Length (miles)[2]	15.00		15.00		2) Source: Average length of Wake Forest Loop route
Roadway Segment Cost[3]	$138,840,000	**PMC**	$138,840,000	**PMC**	3) Roadway cost per mile (Item 1) multiplied by the roadway segment length (Item 2)
Average Capacity Added (per mile)[4]	13,600	19,176	13,600	19,176	4) Source: Table 4, adjusted to capacity "per mile"
VMC/PMC Added (entire segment)[5]	204,000	287,640	204,000	287,640	5) Roadway segment length (Item 2) multiplied by the average capacity added (Item 4) for both VMC and PMC
Roadway Cost per VMC/PMC[6]	$680.59	**$482.55**	$680.59	**$482.55**	6) Roadway segment cost (Item 3) divided by the VMC/PMC added (Item 5) individually (adjusted slightly for rounding)
Transit Capacity:					
Adjustment for Bus Blockage[7]	3.2%	-	1.6%	-	7) Source: Highway Capacity Manual 7th Edition, Equation 19-12
VMC/PMC Added (transit deduction)[8]	6,528	9,204	3,264	4,602	8) VMC added (Item 5) multiplied by the adjustment for bus blockage (Item 7). For PMC, multiply the VMC by 1.41 persons per vehicle
VMC/PMC Added (less transit deduction)[9]	197,472	278,436	200,736	283,038	9) VMC/PMC added (entire segment) (Item 5) less the VMC/PMC added (transit deduction) (Item 8) for VMC and PMC individually
PMC Added (transit addition ONLY)[10]		2,228		2,228	10) Source: Table B-7, Adjusted Person-Miles of Capacity (Item 12)
Net PMC Added (transit effect included)[11]		280,664		285,266	11) PMC added (less transit deduction) (Item 9) plus the PMC added (transit addition ONLY) (Item 10)
Road/Transit Cost per PMC (Road Capital)[12]		$494.68		$486.70	12) Road segment cost (Item 3) divided by the net PMC added (transit effect included) (Item 11)
Transit Infrastructure:					
Buses Needed[13]	1	$725,000	1	$725,000	13) Number of vehicles (see Table B-7, Item 2) multiplied by the vehicle cost (see Table B-7, Item 15)
Stops per mile (both sides of street)[14]	3	$1,080,000	3	$1,080,000	14) Stops per mile (3) multiplied by the roadway segment length (Item 2) multiplied by the cost per stop (Table B-7, Item 16)
Shelters per mile (both sides of street)[15]	1	$750,000	1	$750,000	15) Shelters per mile (1) multiplied by the roadway segment length (Item 2) multiplied by the cost per shelter (Table B-7, Item 17)
Total infrastructure[16]		$2,555,000		$2,555,000	16) Sum of buses needed (Item 13), stops needed (Item 14), and shelters needed (Item 15)
Multi-Modal Cost per PMC:					
Road/Transit Cost per PMC[17]		**$503.79**		**$495.66**	17) Sum of the roadway segment cost (Item 3) and the total transit infrastructure cost (Item 16) divided by the net PMC added (Item 11)
Percent Change[18]		**4.40%**		**2.72%**	18) Percent difference between the road/transit cost per PMC (Item 17) and the Roadway cost per PMC (Item 6)
Weighted Multi-Modal Cost per PMC:					
Lane Mile Distribution[19]		18%		82%	19) Source: Table B-6. Lane mile distribution of new road construction versus lane addition
Weighted Roadway Cost per PMC[20]		$86.86		$395.68	20) Roadway cost per PMC (Item 6) multiplied by the lane mile distribution (Item 19)
Weighted Road/Transit Cost per PMC[21]		$90.68		$406.44	21) Road/Transit cost per PMC (Item 17) multiplied by the lane mile distribution (Item 19)
Weighted Average Multi-Modal Cost per PMC:					
Weighted Average Roadway Cost per PMC (new road construction and lane additions)[22]				$482.54	22) Sum of the weighted roadway cost per PMC (Item 20) for new road construction and lane additions
Weighted Average Road/Transit Cost per PMC (new road construction and lane additions)[23]				$497.12	23) Sum of the weighted road/transit cost per PMC (Item 21) for new road construction and lane additions
Percent Change[24]				**3.02%**	24) Percent difference between the weighted average road/transit cost per PMC (Item 23) and the weighted average roadway cost per PMC (Item 22)

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Appendix C
Credit Component

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Appendix C: Credit Component

This appendix presents the detailed calculations for the credit component of the multi-modal transportation impact fee.

Table C-1 shows the estimated revenue generation per penny of motor fuel tax in North Carolina. Using the population ratio of Wake County to the State, the County's share of fuel tax revenues was calculated.

Table C-1
Estimated Revenue Generation per Penny of Motor Fuel Tax

Item	Amount of Levy per Gallon
Statewide Motor Fuel Tax Revenue_2024[1]	$2,520,800,000
Motor Fuel Tax Rate_2024[1]	40.4
Revenue Generation per Penny	$62,396,040
Wake County Population Percentage[2]	10.9%
Revenue Generation per Penny; County share[3]	**$6,801,000**

1) Source: North Carolina Department of Transportation
2) Source: Bureau of Economic Analysis
3) Revenue generation per penny multiplied by the Wake County population percentage

Capital Improvement Credit

A revenue credit for the annual expenditures on multi-modal capacity-expansion projects in the Town of Wake Forest is presented below. The components of the credit are as follows:

- Town capital project funding
- State capital project funding

The annual expenditures from each revenue source are converted to equivalent fuel tax pennies to be able to create a connection between travel by each land use and non-impact fee revenue contributions for all revenue sources.

<u>Town Capital Project Funding</u>

A review of historical expenditures and planned capacity expansion improvements in the Town of Wake Forest identified several lane addition, traffic signal, intersection and sidewalk

improvements, etc. funded with non-impact fee revenues (general fund, grants, bonds). Tables C-5 and C-6 summarize the cost of these improvements. As shown in Table C-2, an equivalent credit of 0.7 pennies was calculated for capacity expansion improvements funded by the Town of Wake Forest.

Table C-2
Town of Wake Forest Fuel Tax Equivalent Pennies

Source	Cost of Projects	Number of Years	Revenue from 1 Penny(3)	Equivalent Pennies(4)
FY 2025-2029 Planned Expenditures(1)	$38,766,500	5	$6,801,000	$0.011
FY 2020-2024 Historical Expenditures(2)	$10,280,345	5	$6,801,000	$0.003
Total	**$49,046,845**	**10**	**$6,801,000**	**$0.007**

1) Source: Table C-5
2) Source: Table C-6
3) Source: Table C-1
4) Cost of projects divided by number of years divided by revenue from 1 penny (Item 3) divided by 100

In addition, an equivalent credit of 0.5 pennies was calculated for outstanding debt service associated with the Town of Forest, as shown in Table C-3

Table C-3
Town of Wake Forest Debt Service Fuel Tax Equivalent Pennies

Source	Cost of Projects	Number of Years	Revenue from 1 Penny(9)	Equivalent Pennies(10)
Public Improvement, Series 2021B(1)	$4,168,337	17	$6,801,000	$0.000
Public Improvement, Series 2021A(2)	$707,250	2	$6,801,000	$0.001
Refunding, Series 2019(3)	$1,398,269	6	$6,801,000	$0.000
Street Improvements(4)	$2,045,018	2	$6,801,000	$0.002
Street/Highway Improvements(5)	$740,849	2	$6,801,000	$0.001
Refunding, Series 2016(6)	$1,135,431	3	$6,801,000	$0.001
Public Improvement, Series 2015(7)	$3,005,431	11	$6,801,000	$0.000
Public Improvement, Series 2018B(8)	$1,569,266	14	$6,801,000	$0.000
Total	**$14,769,851**	**-**	**-**	**$0.005**

1) Source: Table C-7
2) Source: Table C-8
3) Source: Table C-9
4) Source: Table C-10
5) Source: Table C-11
6) Source: Table C-12
7) Source: Table C-13
8) Source: Table C-14
9) Source: Table C-1
10) Outstanding debt divided by number of years divided by revenue from 1 penny (Item 7) divided by 100

State Capital Project Funding

In the calculation of the equivalent pennies of fuel tax from the State, funding on transportation capacity-expansion projects spanning an 11-year period (from FY 2023 to FY 2033) were reviewed. This included capacity expansion projects such as lane additions, new road construction, intersection improvements, interchanges, traffic signal projects, sidewalks, bike lanes, transit, and other capacity-addition projects listed in the State Transportation Improvement Program (STIP).

The total cost of the multi-modal transportation capacity-expansion projects:

- FY 2023-2028 STIP equates to 13.9 pennies
- FY 2029-2033 STIP equates to 13.2 pennies

The combined weighted average over the 11-year period of state expenditure for capacity-expansion transportation projects results in a total of 13.6 equivalent pennies. Table C-4 documents this calculation. The specific projects that were used in the equivalent penny calculations are summarized in Table C-15.

Table C-4
State Fuel Tax Equivalent Pennies

Source	Cost of Projects(1)	Number of Years	Revenue from 1 Penny(2)	Equivalent Pennies(3)
State Transp. Impr. Program, FY 2029 to 2033	$449,743,000	5	$6,801,000	$0.132
State Transp. Impr. Program, FY 2023 to 2028	$568,178,000	6	$6,801,000	$0.139
Total	**$1,017,921,000**	**11**	**$6,801,000**	**$0.136**

1) Source: Table C-15
2) Source: Table C-1
3) Cost of projects divided by number of years divided by revenue from 1 penny (Item 2) divided by 100

Table C-5

Town of Wake Forest – 5-Year Planned Multi-Modal Expenditures, FY 2025-2029

Project Name	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	Total
Streets						
Transportation New Sidewalk Projects	$100,000	$100,000	$100,000	$100,000	$100,000	**$500,000**
Greenways, Transportation, and Pedestrian Access						
Endeavor Charter School Expansion Offsite Improvements	$110,000	$110,000	$0	$0	$0	**$220,000**
Traffic/Pedestrian Signals	$452,000	$520,000	$520,000	$210,000	$210,000	**$1,912,000**
Bus Shelter Installations	$140,000	$140,000	$70,000	$0	$0	**$350,000**
Forbes Property Infrastructure Improvements	$95,000	$0	$0	$0	$0	**$95,000**
NCDOT S-Line Project	$1,100,000	$1,100,000	$1,100,000	$0	$0	**$3,300,000**
General Transportation Improvements	$3,600,000	$250,000	$3,750,000	$250,000	$3,750,000	**$11,600,000**
S. Franklin St Expansion	$1,175,000	$1,175,000	$1,175,000	$0	$0	**$3,525,000**
Friendship Chapel Extension	$200,000	$1,500,000	$1,250,000	$0	$0	**$2,950,000**
Road Connections	$0	$0	$461,500	$3,675,000	$0	**$4,136,500**
Rogers Rd Grade Separation	$0	$0	$200,000	$328,000	$0	**$528,000**
Sidewalk Connectivity	$0	$0	$950,000	$200,000	$0	**$1,150,000**
RCI at US 1 and Purnell	$0	$0	$0	$0	$2,250,000	**$2,250,000**
US 1 Study - Local Improvements	$0	$0	$0	$0	$6,250,000	**$6,250,000**
Total (Capacity Expansion)	**$6,972,000**	**$4,895,000**	**$9,576,500**	**$4,763,000**	**$12,560,000**	**$38,766,500**

Source: Town of Wake Forest Capital Improvement Plan

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Table C-6

Town of Wake Forest – Historical Transportation Expenditures

Project Name	Improvement	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	Total
Stadium Drive	Lane Addition & Intersection Improvement	$6,077,500	$0	$0	$0	$0	**$6,077,500**
Ligon Mill	Lane Addition	$0	$2,616,250	$0	$0	$0	**$2,616,250**
Endeavor Charter	Turn Lane and Traffic Signal	$0	$0	$25,000	$110,000	$110,000	**$245,000**
Forestville Rd Access Management	Dedicated Left Turn Lane	$0	$6,000	$0	$0	$0	**$6,000**
Rogers Branch Ext.	Realign and extend from Penfield St to Forestville	$0	$0	$253,000	$504,595	$0	**$757,595**
Forbes Property Improvements	Blue Bird Ln & Traffic Signal	$0	$0	$95,000	$95,000	$95,000	**$285,000**
Transit Amenities	Three bus stops	$0	$0	$10,000	$100,000	$0	**$110,000**
Transit Plan	Study to evaluate transit needs	$0	$0	$0	$0	$133,000	**$133,000**
Heritage Lake Rd/Heritage Club Traffic Signals	Traffic Signal	$0	$0	$50,000	$0	$0	**$50,000**
Total		**$6,077,500**	**$2,622,250**	**$433,000**	**$809,595**	**$338,000**	**$10,280,345**

Source: Town of Wake Forest

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Table C-7

Public Improvement, Series 2021B

Date	Principal	Interest Rate	Interest	Total Due	Balance Outstanding	Fiscal Year Debt Service
9/1/2024	$0	5.00%	$73,325	$73,325	$4,920,000	$146,650
3/1/2025	$0	5.00%	$73,325	$73,325	$4,920,000	
9/1/2025	$0	5.00%	$73,325	$73,325	$4,920,000	$146,650
3/1/2026	$260,000	5.00%	$73,325	$333,325	$4,920,000	
9/1/2026	$0	5.00%	$66,825	$66,825	$4,660,000	$400,150
3/1/2027	$315,000	5.00%	$66,825	$381,825	$4,660,000	
9/1/2027	$0	2.00%	$58,950	$58,950	$4,345,000	$440,775
3/1/2028	$315,000	2.00%	$58,950	$373,950	$4,345,000	
9/1/2028	$0	5.00%	$55,800	$55,800	$4,030,000	$429,750
3/1/2029	$310,000	5.00%	$55,800	$365,800	$4,030,000	
9/1/2029	$0	5.00%	$48,050	$48,050	$3,720,000	$413,850
3/1/2030	$310,000	5.00%	$48,050	$358,050	$3,720,000	
9/1/2030	$0	2.00%	$40,300	$40,300	$3,410,000	$398,350
3/1/2031	$310,000	2.00%	$40,300	$350,300	$3,410,000	
9/1/2031	$0	4.00%	$37,200	$37,200	$3,100,000	$387,500
3/1/2032	$310,000	4.00%	$37,200	$347,200	$3,100,000	
9/1/2032	$0	3.00%	$31,000	$31,000	$2,790,000	$378,200
3/1/2033	$310,000	3.00%	$31,000	$341,000	$2,790,000	
9/1/2033	$0	3.00%	$26,350	$26,350	$2,480,000	$367,350
3/1/2034	$310,000	3.00%	$26,350	$336,350	$2,480,000	
9/1/2034	$0	2.00%	$21,700	$21,700	$2,170,000	$358,050
3/1/2035	$310,000	2.00%	$21,700	$331,700	$2,170,000	
9/1/2035	$0	2.00%	$18,600	$18,600	$1,860,000	$350,300
3/1/2036	$310,000	2.00%	$18,600	$328,600	$1,860,000	
9/1/2036	$0	2.00%	$15,500	$15,500	$1,550,000	$344,100
3/1/2037	$310,000	2.00%	$15,500	$325,500	$1,550,000	
9/1/2037	$0	2.00%	$12,400	$12,400	$1,240,000	$337,900
3/1/2038	$310,000	2.00%	$12,400	$322,400	$1,240,000	
9/1/2038	$0	2.00%	$9,300	$9,300	$930,000	$331,700
3/1/2039	$310,000	2.00%	$9,300	$319,300	$930,000	
9/1/2039	$0	2.00%	$6,200	$6,200	$620,000	$325,500
3/1/2040	$310,000	2.00%	$6,200	$316,200	$620,000	
9/1/2040	$0	2.00%	$3,100	$3,100	$310,000	$319,300
3/1/2041	$310,000	2.00%	$3,100	$313,100	$310,000	$313,100
Total	**$4,920,000**		**$1,593,027**	**$6,513,027**		**$6,513,027**
					Percent for Transportation Capacity	**64%**
					Portion for Transportation Capacity	**$4,168,337**
					Number of Years of Remaining Payments	**17**

Source: Town of Wake Forest

Table C-8

Public Improvement, Series 2021A

Date	Principal	Interest Rate	Interest	Total Due	Balance Outstanding	Fiscal Year Debt Service
9/1/2024	$0	5.00%	$9,000	$9,000	$360,000	$335,750
3/1/2025	$310,000	5.00%	$9,000	$319,000	$360,000	
9/1/2025	$0	5.00%	$1,250	$1,250	$50,000	$320,250
3/1/2026	$50,000	5.00%	$1,250	$51,250	$50,000	$51,250
Total	**$9,310,000**		**$2,104,594**	**$11,414,594**		**$707,250**
					Percent for Transportation Capacity	**100%**
					Portion for Transportation Capacity	**$707,250**
					Number of Years of Remaining Payments	**2**

Source: Town of Wake Forest

Table C-9

Refunding Note, Series 2019

Date	Principal	Interest Rate	Interest	Total Due	Balance Outstanding	Fiscal Year Debt Service
8/1/2024	$0	1.79%	$19,251	$19,251	$2,151,000	$424,931
2/1/2025	$377,000	1.79%	$19,251	$396,251	$2,151,000	
8/1/2025	$0	1.79%	$15,877	$15,877	$1,774,000	$412,129
2/1/2026	$371,000	1.79%	$15,877	$386,877	$1,774,000	
8/1/2026	$0	1.79%	$12,557	$12,557	$1,403,000	$399,434
2/1/2027	$363,000	1.79%	$12,557	$375,557	$1,403,000	
8/1/2027	$0	1.79%	$9,308	$9,308	$1,040,000	$384,865
2/1/2028	$355,000	1.79%	$9,308	$364,308	$1,040,000	
8/1/2028	$0	1.79%	$6,131	$6,131	$685,000	$370,439
2/1/2029	$347,000	1.79%	$6,131	$353,131	$685,000	
8/1/2029	$0	1.79%	$3,025	$3,025	$338,000	$356,156
2/1/2030	$338,000	1.79%	$3,025	$341,025	$338,000	$341,025
Total	**$3,710,000**		**$362,790**	**$4,072,790**		**$2,688,978**
					Percent for Transportation Capacity	**52%**
					Portion for Transportation Capacity	**$1,398,269**
					Number of Years of Remaining Payments	**6**

Source: Town of Wake Forest

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Table C-10
Street Improvements

Date	Principal	Interest Rate	Interest	Total Due	Balance Outstanding	Fiscal Year Debt Service
11/1/2024	$392,857	2.74%	$21,529	$414,386	$1,571,429	$834,154
5/1/2025	$392,857	2.74%	$16,146	$409,004	$1,178,571	
11/1/2025	$392,857	2.74%	$10,764	$403,621	$785,714	$812,625
5/1/2026	$392,857	2.74%	$5,382	$398,239	$392,857	$398,239
Total	**$5,500,000**		**$565,544**	**$6,065,544**		**$2,045,018**
					Percent for Transportation Capacity	**100%**
					Portion for Transportation Capacity	**$2,045,018**
					Number of Years of Remaining Payments	**2**

Source: Town of Wake Forest

Table C-11
Street/Highway Improvements

Date	Principal	Interest Rate	Interest	Total Due	Balance Outstanding	Fiscal Year Debt Service
11/3/2024	$150,000	3.39%	$10,170	$160,170	$600,000	$322,883
5/3/2025	$150,000	3.39%	$7,628	$157,628	$450,000	
11/3/2025	$150,000	3.39%	$5,085	$155,085	$300,000	$312,713
5/3/2026	$150,000	3.39%	$2,543	$152,543	$150,000	$152,543
Total	**$2,400,000**		**$345,780**	**$2,745,780**		**$788,138**
					Percent for Transportation Capacity	**94%**
					Portion for Transportation Capacity	**$740,849**
					Number of Years of Remaining Payments	**2**

Source: Town of Wake Forest

Table C-12
Refunding Note, Series 2016

Date	Principal	Interest Rate	Interest	Total Due	Balance Outstanding	Fiscal Year Debt Service
10/1/2024	$0	2.05%	$13,407	$13,407	$1,308,000	$483,447
4/1/2025	$444,000	2.05%	$13,407	$457,407	$1,308,000	
10/1/2025	$0	2.05%	$8,856	$8,856	$864,000	$466,263
4/1/2026	$436,000	2.05%	$8,856	$444,856	$864,000	
10/1/2026	$0	2.05%	$4,387	$4,387	$428,000	$449,243
4/1/2027	$428,000	2.05%	$4,387	$432,387	$428,000	$432,387
Total	**$5,125,000**		**$614,082**	**$5,739,082**		**$1,831,340**
					Percent for Transportation Capacity	**62%**
					Portion for Transportation Capacity	**$1,135,431**
					Number of Years of Remaining Payments	**3**

Source: Town of Wake Forest

Table C-13

Public Improvements; Series 2015

Date	Principal	Interest Rate	Interest	Total Due	Balance Outstanding	Fiscal Year Debt Service
10/1/2024	$0	2.00%	$30,369	$30,369	$2,365,000	$277,888
4/1/2025	$215,000	2.00%	$30,369	$245,369	$2,365,000	
10/1/2025	$0	2.10%	$28,219	$28,219	$2,150,000	$273,588
4/1/2026	$215,000	2.10%	$28,219	$243,219	$2,150,000	
10/1/2026	$0	2.25%	$25,961	$25,961	$1,935,000	$269,180
4/1/2027	$215,000	2.25%	$25,961	$240,961	$1,935,000	
10/1/2027	$0	2.30%	$23,543	$23,543	$1,720,000	$264,504
4/1/2028	$215,000	2.30%	$23,543	$238,543	$1,720,000	
10/1/2028	$0	2.40%	$21,070	$21,070	$1,505,000	$259,613
4/1/2029	$215,000	2.40%	$21,070	$236,070	$1,505,000	
10/1/2029	$0	2.55%	$18,490	$18,490	$1,290,000	$254,560
4/1/2030	$215,000	2.55%	$18,490	$233,490	$1,290,000	
10/1/2030	$0	2.65%	$15,749	$15,749	$1,075,000	$249,239
4/1/2031	$215,000	2.65%	$15,749	$230,749	$1,075,000	
10/1/2031	$0	2.75%	$12,900	$12,900	$860,000	$243,649
4/1/2032	$215,000	2.75%	$12,900	$227,900	$860,000	
10/1/2032	$0	3.00%	$9,944	$9,944	$645,000	$237,844
4/1/2033	$215,000	3.00%	$9,944	$224,944	$645,000	
10/1/2033	$0	3.00%	$6,719	$6,719	$430,000	$231,663
4/1/2034	$215,000	3.00%	$6,719	$221,719	$430,000	
10/1/2034	$0	3.25%	$3,494	$3,494	$215,000	$225,213
4/1/2035	$215,000	3.25%	$3,494	$218,494	$215,000	$218,494
Total	**$4,330,000**		**$1,135,150**	**$5,465,150**		**$3,005,431**
					Percent for Transportation Capacity	**100%**
					Portion for Transportation Capacity	**$3,005,431**
					Number of Years of Remaining Payments	**11**

Source: Town of Wake Forest

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Table C-14

Public Improvements; Series 2018B

Date	Principal	Interest Rate	Interest	Total Due	Balance Outstanding	Fiscal Year Debt Service
12/1/2024	$0	5.00%	$215,738	$215,738	$11,670,000	$1,276,913
6/1/2025	$835,000	5.00%	$215,738	$1,050,738	$11,670,000	
12/1/2025	$0	5.00%	$194,863	$194,863	$10,835,000	$1,245,600
6/1/2026	$835,000	5.00%	$194,863	$1,029,863	$10,835,000	
12/1/2026	$0	4.00%	$173,988	$173,988	$10,000,000	$1,203,850
6/1/2027	$835,000	4.00%	$173,988	$1,008,988	$10,000,000	
12/1/2027	$0	4.00%	$157,288	$157,288	$9,165,000	$1,166,275
6/1/2028	$835,000	4.00%	$157,288	$992,288	$9,165,000	
12/1/2028	$0	4.00%	$140,588	$140,588	$8,330,000	$1,132,875
6/1/2029	$835,000	4.00%	$140,588	$975,588	$8,330,000	
12/1/2029	$0	4.00%	$123,888	$123,888	$7,495,000	$1,099,475
6/1/2030	$835,000	4.00%	$123,888	$958,888	$7,495,000	
12/1/2030	$0	4.00%	$107,188	$107,188	$6,660,000	$1,066,075
6/1/2031	$835,000	4.00%	$107,188	$942,188	$6,660,000	
12/1/2031	$0	3.00%	$90,488	$90,488	$5,825,000	$1,032,675
6/1/2032	$835,000	3.00%	$90,488	$925,488	$5,825,000	
12/1/2032	$0	3.00%	$77,963	$77,963	$4,990,000	$1,003,450
6/1/2033	$835,000	3.00%	$77,963	$912,963	$4,990,000	
12/1/2033	$0	3.00%	$65,438	$65,438	$4,155,000	$978,400
6/1/2034	$835,000	3.00%	$65,438	$900,438	$4,155,000	
12/1/2034	$0	3.13%	$52,913	$52,913	$3,320,000	$953,350
6/1/2035	$830,000	3.13%	$52,913	$882,913	$3,320,000	
12/1/2035	$0	3.13%	$39,944	$39,944	$2,490,000	$922,856
6/1/2036	$830,000	3.13%	$39,944	$869,944	$2,490,000	
12/1/2036	$0	3.25%	$26,975	$26,975	$1,660,000	$896,919
6/1/2037	$830,000	3.25%	$26,975	$856,975	$1,660,000	
12/1/2037	$0	3.25%	$13,488	$13,488	$830,000	$870,463
6/1/2038	$830,000	3.25%	$13,488	$843,488	$830,000	$843,488
Total	**$15,850,000**		**$6,021,525**	**$21,871,525**		**$15,692,663**
					Percent for Transportation Capacity	**10%**
					Portion for Transportation Capacity	**$1,569,266**
					Number of Years of Remaining Payments	**14**

Source: Town of Wake Forest

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Table C-15

North Carolina Department of Transportation, State Transportation Improvement Plan FY 2023 to FY 2033

ID	ROUTE/CITY	DESCRIPTION	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033	Total
BL-0051	SR 1379 (PENNY ROAD)	SR 4720 (LOCH HIGHLANDS DR) TO E OF ENT. TO OAK GROVE ELEMENTARY SCHOOL. COMPLETE SIDEWALK GAPS	$50,000	$50,000	$4,000	$346,000	$0	$0	$0	$0	$0	$0	$0	**$450,000**
HE-0002	NEW ROUTE; SR 1152 (HOLLY SPRINGS - NEW HILL ROAD)	CONSTRUCT ACCESS ROAD AND INTERSECTION IMPROVEMENTS	$0	$0	$2,014,000	$5,521,000	$2,155,000	$0	$0	$0	$0	$0	$0	**$9,690,000**
HE-0010	VARIOUS	INTERCHANGE IMPROVEMENTS	$500,000	$0	$293,000	$5,061,000	$4,146,000	$0	$0	$0	$0	$0	$0	**$10,000,000**
HL-0008C	NC 50 (BENSON ROAD)	SR 2812 (TIMBER DRIVE) INTERSECTION IN GARNER. INTERSECTION IMPROVEMENTS	$0	$525,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$525,000**
HL-0008D	SR 1152 (HOLLY SPRINGS ROAD)	SR 1301 (SUNSET LAKE ROAD) INTERSECTION IN HOLLY SPRINGS. INTERSECTION IMPROVEMENTS	$0	$800,000	$1,320,000	$2,080,000	$0	$0	$0	$0	$0	$0	$0	**$4,200,000**
HL-0008H	SR 1371 / SR 1375 (LAKE WHEELER ROAD)	SR 1375 (SIMPKINS ROAD) / NON-SYSTEM (SIMPKINS FARM LANE) INTERSECTION. INTERSECTION IMPROVEMENTS	$0	$1,137,000	$613,000	$0	$0	$0	$0	$0	$0	$0	$0	**$1,750,000**
HL-0008I	SR 1006 (OLD STAGE ROAD)	SR 1006 (OLD STAGE ROAD) AND SR 2736 (ROCK SERVICE STATION ROAD) INTERSECTION IMPROVEMENTS	$0	$1,304,000	$2,278,000	$6,134,000	$3,034,000	$0	$0	$0	$0	$0	$0	**$12,750,000**
HL-0008L	SR 1010 (TEN-TEN ROAD)	SR 1386 (BELLS LAKE ROAD) , SR 1386 (GRAHAM NEWTON ROAD) INTERSECTION. INTERSECTION IMPROVEMENTS	$0	$0	$525,000	$3,000,000	$0	$0	$0	$0	$0	$0	$0	**$3,525,000**
HL-0008O	NC 42	SR 2735 (JOHNSON ROAD) INTERSECTION. INTERSECTION IMPROVEMENTS	$300,000	$0	$1,075,000	$225,000	$0	$0	$0	$0	$0	$0	$0	**$1,600,000**
HL-0008P	SR 1010 (TEN-TEN ROAD)	NC 50 INTERSECTION. INTERSECTION IMPROVEMENTS	$490,000	$0	$1,777,000	$523,000	$0	$0	$0	$0	$0	$0	$0	**$2,790,000**
HL-0008Q	SR 1390 (OPTIMIST FARM ROAD)	SR 1386 (BELLS LAKE ROAD) INTERSECTION IN APEX. INTERSECTION IMPROVEMENTS	$420,000	$0	$1,360,000	$1,674,000	$0	$0	$0	$0	$0	$0	$0	**$3,454,000**
HL-0041	SR 2768 (JUDD PARKWAY)	US 401 (SOUTH MAIN STREET) INTERSECTION IN FUQUAY-VARINA. CONSTRUCT TURN LANES	$8,000	$737,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$745,000**
HL-0050	SR 1349 (DILLARD DRIVE)	VILLAGE TAVERN ROAD TO SR 1319 (JONES FRANKLIN ROAD) IN RALEIGH. INSTALL TWO WAY LEFT TURN LANE	$404,000	$0	$692,000	$0	$0	$0	$0	$0	$0	$0	$0	**$1,096,000**
HL-0051	SR 1319 (JONES FRANKLIN ROAD)	ATHENS DRIVE IN RALEIGH. INSTALL LEFT TURN LANES	$110,000	$80,000	$0	$400,000	$0	$0	$0	$0	$0	$0	$0	**$590,000**
HL-0121	NC 50	INTERSECTION OF NC 50 AND SR 1901 (OLD WEAVER TRAIL) IN CREEDMOOR. IMPROVE INTERSECTION	$0	$1,146,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,146,000**
HO-0001	VARIOUS	NCDOT MULTI-MODAL CONNECTED VEHICLE PILOT PROGRAM, NC STATE UNIVERSITY CAMPUS	$87,000	$94,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$181,000**
HO-0001AA	NCSU CAMPUS	MULTIMODAL CONNECTED VEHICLE PILOT (MMCVP), TRAFFIC SIGNAL IMPROVEMENTS	$1,682,000	$740,000	$564,000	$70,000	$0	$0	$0	$0	$0	$0	$0	**$3,056,000**
HO-0001AC	NCSU CAMPUS	ECO DRIVING APPLICATION	$74,000	$704,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$778,000**
HO-0001B	NCSU CAMPUS	SYSTEMS ENGINEERING, GRANT ADMINISTRATION	$10,000	$10,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$20,000**
HO-0001C	NCSU CAMPUS	BEFORE & AFTER STUDY, EXPANSION FEASIBILITY STUDY	$175,000	$50,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$225,000**
HO-0005	VARIOUS	NCDOT TRAFFIC SYSTEMS OPERATIONS. INSTALL STATEWIDE ITS DEVICE OPERATIONS	$7,285,000	$7,620,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$14,905,000**
HO-0010A	STATEWIDE TRAFFIC OPERATIONS	IMPLEMENT STATEWIDE TRAFFIC OPERATIONS ACTIVITIES SUCH AS INTELLIGENT TRANSPORTATION SYSTEMS (ITS)	$4,000,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$4,000,000**
R-5705B	NC 55	NC 210 TO SR 4809 (JICARILLA LANE). PART ON NEW LOCATION	$28,437,000	$27,581,000	$21,217,000	$8,487,000	$0	$0	$0	$0	$0	$0	$0	**$85,722,000**
R-5777D	US 70	INSTALL BROADBAND FIBER ALONG US 70 FROM I-40 TO PORT OF MOREHEAD CITY	$9,782,000	$7,500,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$17,282,000**
R-5785	VARIOUS	DIVISION 5 PROGRAM TO UPGRADE INTERSECTIONS TO BE ADA COMPLIANT	$1,000,000	$100,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,100,000**
TD-5264B	CARY TRANSIT / C-TRAN	CONSTRUCT BUS MAINTENANCE FACILITY AT TOWERVIEW COURT	$0	$13,487,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$13,487,000**
TD-5269	GO TRIANGLE	UNION STATION IN RALEIGH. CONSTRUCT BUS COMPONENT	$0	$0	$2,215,000	$2,215,000	$2,215,000	$2,215,000	$0	$0	$0	$0	$0	**$8,860,000**
TD-5307	VARIOUS	TRIANGLE TOWN CENTER. CONSTRUCT TRANSIT CENTER AND PARK-AND-RIDE FACILITY	$0	$0	$0	$0	$0	$1,750,000	$1,750,000	$0	$0	$0	$0	**$3,500,000**
TG-4821B	GOTRIANGLE	BUS STOP SHELTERS, BENCHES, SERVICE VEHICLES	$1,575,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,575,000**
TI-6104	GREYHOUND LINES	INTERCITY BUS FROM RALEIGH TO NORFOLK, VA VIA ELIZABETH CITY	$1,156,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,156,000**
TK-6170	WAKE COORDINATED TRANSPORTATION SERVICE	ADMINISTRATION	$336,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$336,000**
TP-4732B	GOTRIANGLE	PLANNING ASSISTANCE	$664,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$664,000**
TP-5100A	CAPITAL AREA TRANSIT	PLANNING ASSISTANCE - 5303	$421,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$421,000**
TP-5100B	GORALEIGH	PLANNING ASSISTANCE - 5307	$450,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$450,000**
U-2901B	NC 55 (WILLIAMS STREET)	US 1 TO NORTH OF SR 1160 (OLIVE CHAPEL ROAD). WIDEN 2-LANE SECTIONS TO MULTILANES	$0	$0	$0	$0	$0	$2,601,000	$4,931,000	$3,106,000	$7,298,000	$9,161,000	$4,959,000	**$32,056,000**
U-5301	US 64	W OF SR 1308 (LAURA DUNCAN RD) TO US 1. CORRIDOR UPGRADE AND IMPROVEMENTS	$0	$0	$0	$0	$21,508,000	$31,259,000	$29,253,000	$3,784,000	$58,685,000	$37,378,000	$32,052,000	**$213,919,000**
U-5302	US 401	S OF SR 1006 (OLD STAGE RD) TO S OF SR 2538 (MECHANICAL BLVD). CONVERT TO REDUCED CONFLICT INTERSECTIONS	$395,000	$395,000	$6,804,000	$8,572,000	$5,699,000	$2,605,000	$395,000	$395,000	$395,000	$395,000	$399,000	**$26,449,000**
U-5307A	US 1	I-540 TO NORTH OF SR 2006 (DURANT ROAD)	$0	$0	$0	$34,625,000	$90,903,000	$81,920,000	$45,632,000	$38,120,000	$0	$0	$0	**$291,200,000**
U-5746	US 401	SR 1467 / SR 2839 (ALLEN ST) TO SR 1010 (TEN-TEN RD). ADD LANES.	$0	$0	$3,005,000	$2,694,000	$0	$0	$0	$0	$0	$0	$0	**$5,699,000**
U-5747	NC 54; SR 1635 (MCCRIMMON PARKWAY)	SR 1635 (MCCRIMMON PKWY) FROM W OF SR 1613 (DAVIS DR) TO N OF SR 1637 (CHURCH ST)	$200,000	$200,000	$200,000	$200,000	$200,000	$200,000	$200,000	$200,000	$200,000	$200,000	$201,000	**$2,201,000**
U-5747A	SR 1635 (MCCRIMMON PARKWAY)	SR 1613 (DAVIS DR) TO N OF SR 1637 (CHURCH ST). WIDEN TO 4-LANE DIVIDED FACILITY	$0	$0	$2,823,000	$8,381,000	$5,849,000	$2,547,000	$0	$0	$0	$0	$0	**$19,600,000**
U-5747B	NC 54	SR 1635 (MCCRIMMON PKWY). CONVERT AT-GRADE INTERSECTION TO GRADE SEPARATION	$5,000	$625,000	$3,106,000	$9,283,000	$6,600,000	$3,130,000	$5,000	$5,000	$5,000	$5,000	$7,000	**$22,776,000**
U-5748	US 401	SR 2044 (LIGON MILL RD) / SR 2224 (MITCHELL MILL RD) AND SR 2006 (PERRY CREEK RD). INTERSECTION IMPROVEMENTS	$261,000	$1,753,000	$9,834,000	$7,570,000	$4,387,000	$261,000	$261,000	$261,000	$261,000	$261,000	$261,000	**$25,371,000**
U-5750	NC 54	NC 540 TO PERIMETER PARK DRIVE IN MORRISVILLE. ADD LANES	$2,024,000	$424,000	$1,110,000	$1,110,000	$6,710,000	$6,710,000	$1,110,000	$1,110,000	$1,110,000	$1,110,000	$1,110,000	**$23,638,000**
U-5751	US 401	NC 55 / NC 42 IN FUQUAY-VARINA. IMPROVE US 401 INTERSECTION WITH NC 55 / NC 42	$0	$0	$0	$0	$0	$8,244,000	$11,541,000	$9,891,000	$12,443,000	$32,410,000	$21,467,000	**$95,996,000**
U-5811	SR 1002 (AVIATION PARKWAY)	NC 54 TO I-40 IN MORRISVILLE. WIDEN TO MULTI-LANES	$0	$0	$0	$640,000	$4,275,000	$2,691,000	$12,358,000	$11,115,000	$6,927,000	$2,372,000	$0	**$40,378,000**
U-5826	SR 2000 (FALLS OF NEUSE ROAD)	I-540 TO SR 2006 (DURANT ROAD). ADD LANES	$2,069,000	$8,051,000	$3,381,000	$0	$0	$0	$0	$0	$0	$0	$0	**$13,501,000**
U-5827	SR 1632 (LOUIS STEPHENS DRIVE)	POPLAR PIKE LN TO SR 2153 (LITTLE DR). CONSTRUCT ROADWAY ON NEW LOCATION	$650,000	$650,000	$650,000	$650,000	$650,000	$650,000	$650,000	$650,000	$650,000	$650,000	$650,000	**$7,150,000**
U-5828	MCCRIMMON PARKWAY	SR 3015 (AIRPORT BLVD) TO SR 1002 (AVIATION PKWY). WIDEN TO A FOUR LANE DIVIDED FACILITY, PART ON NEW LOCATION	$206,000	$206,000	$206,000	$206,000	$206,000	$206,000	$206,000	$206,000	$206,000	$206,000	$213,000	**$2,273,000**
U-5889	SR 1115 (AVENT FERRY ROAD)	SR 1116 (CASS HOLT RD) TO NC 55 BYPASS. WIDEN TO MULTI-LANES, WITH INTERSECTION IMPROVEMENTS	$0	$0	$0	$1,700,000	$0	$7,300,000	$0	$0	$0	$0	$0	**$9,000,000**
U-5967	VARIOUS	TOWN OF MORRISVILLE. CONSTRUCT TOWNWIDE ITS / SIGNAL SYSTEM	$0	$0	$0	$0	$0	$33,000	$747,000	$206,000	$0	$0	$0	**$986,000**
U-6217	SR 1152 (HOLLY SPRINGS ROAD)	SR 1010 (TEN-TEN RD) TO SR 3977 (CARY PKWY). IMPROVE INTERSECTIONS	$0	$0	$0	$0	$0	$917,000	$4,721,000	$4,150,000	$9,946,000	$12,481,000	$6,710,000	**$38,925,000**
Total			**$65,226,000**	**$75,969,000**	**$67,066,000**	**$111,367,000**	**$158,537,000**	**$155,239,000**	**$113,760,000**	**$73,199,000**	**$98,126,000**	**$96,629,000**	**$68,029,000**	**$1,083,147,000**
Subtotals								**$568,178,000**					**$449,743,000**	

Source: North Carolina Department of Transportation

Table C-16

Average Motor Vehicle Fuel Efficiency – Excluding Interstate Travel

Travel Vehicle Miles of Travel (VMT) @			
	22.8	**7.3**	
Other Arterial Rural	329,742,000,000	52,696,000,000	382,438,000,000
Other Rural	325,232,000,000	32,997,000,000	358,229,000,000
Other Urban	1,485,169,000,000	102,144,000,000	1,587,313,000,000
Total	***2,140,143,000,000***	***187,837,000,000***	***2,327,980,000,000***

Percent VMT

@ 22.8 mpg	@ 7.3 mpg
86%	14%
91%	9%
94%	6%
92%	**8%**

Fuel Consumed			
	Gallons @ 22.8 mpg	Gallons @ 7.3 mpg	
Other Arterial Rural	14,462,368,421	7,218,630,137	21,680,998,558
Other Rural	14,264,561,404	4,520,136,986	18,784,698,390
Other Urban	65,138,991,228	13,992,328,767	79,131,319,995
Total	***93,865,921,053***	***25,731,095,890***	***119,597,016,943***

Total Mileage and Fuel	
2,327,980	**miles (millions)**
119,597	**gallons (millions)**
19.47	**mpg**

Source: U.S. Department of Transportation, Federal Highway Administration, *Highway Statistics 2022* , Section V, Table VM-1
Annual Vehicle Distance Traveled in Miles and Related Data - 2022 by Highway Category and Vehicle Type
http://www.fhwa.dot.gov/policyinformation/statistics.cfm

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Table C-17
Annual Vehicle Distance Travelled in Miles and Related Data – 2022[1]
By Highway Category and Vehicle Type

Updated: February 2024 TABLE VM-1

YEAR	ITEM	LIGHT DUTY VEHICLES SHORT WB[2]	MOTOR-CYCLES	BUSES	LIGHT DUTY VEHICLES LONG WB[2]	SINGLE-UNIT TRUCKS[3]	COMBINATION TRUCKS	SUBTOTALS		ALL MOTOR VEHICLES
								ALL LIGHT VEHICLES[2]	SINGLE-UNIT 2-AXLE 6-TIRE OR MORE AND COMBINATION TRUCKS	
	Motor-Vehicle Travel (millions of vehicle-miles):									
2022	Interstate Rural	148,757	1,164	1,601	50,143	11,677	61,652	**198,900**	**73,328**	274,993
2022	Other Arterial Rural	229,877	2,233	2,231	99,865	19,332	33,364	**329,742**	**52,696**	386,901
2022	Other Rural	221,526	3,294	2,293	103,707	19,890	13,106	**325,232**	**32,997**	363,816
2022	All Rural	600,160	6,691	6,125	253,714	50,899	108,122	853,874	159,021	1,025,711
2022	Interstate Urban	378,935	2,842	2,624	104,686	20,397	49,710	**483,621**	**70,108**	559,194
2022	Other Urban	1,158,710	14,232	9,741	326,459	64,928	37,216	**1,485,169**	**102,144**	1,611,287
2022	All Urban	1,537,646	17,074	12,365	431,144	85,325	86,927	1,968,790	172,252	2,170,481
2022	Total Rural and Urban[5]	2,137,805	23,765	18,490	684,859	136,224	195,049	2,822,664	331,272	3,196,191
2022	Number of motor vehicles registered[2]	197,080,414	9,567,664	954,119	61,464,968	11,083,997	3,249,824	258,545,382	14,333,821	283,400,986
2022	Average miles traveled per vehicle	10,847	2,484	19,379	11,142	12,290	60,018	10,917	23,111	11,278
2022	Person-miles of travel (millions)[4]	3,284,669	24,369	391,991	1,007,240	136,224	195,049	4,291,909	331,272	5,039,542
2022	Fuel consumed (thousand gallons)	86,040,199	540,572	2,497,605	37,939,063	17,180,850	28,218,175	123,979,262	45,399,024	172,416,463
2022	Average fuel consumption per vehicle (gallons)	437	56	2,618	617	1,550	8,683	480	3,167	608
2022	Average miles traveled per gallon of fuel consumed	24.8	44.0	7.4	18.1	7.9	6.9	**22.8**	**7.3**	18.5

(1) The FHWA estimates national trends by using State reported Highway Performance and Monitoring System (HPMS) data, fuel consumption data (MF-21), vehicle registration data (MV-1), other data such as the R.L. Polk vehicle data, and a host of modeling techniques.

(2) Light Duty Vehicles Short WB - passenger cars, light trucks, vans and sport utility vehicles with a wheelbase (WM) equal to or less than 121 inches. Light Duty Vehicles Long WB - large passenger cars, vans, pickup trucks, and sport/utility vehicles with wheelbases (WB) larger than 121 inches. All Light Duty Vehicles - passenger cars, light trucks, vans and sport utility vehicles regardless of wheelbase.

(3) Single-Unit - single frame trucks that have 2-Axles and at least 6 tires or a gross vehicle weight rating exceeding 10,000 lbs.

(4) For 2021 and 2020, the vehicle occupancy is estimated by the FHWA from the 2017 National Household Travel Survey (NHTS) and the annual R.L. Polk Vehicle registration data; For single unit truck and heavy trucks, 1 motor vehicle mile traveled = 1 person-mile traveled.

(5) VMT data are based on the latest HPMS data available; it may not match previous published results.

Appendix D
Calculated Multi-Modal Transportation Impact Fee Schedule

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Appendix D: Calculated MMTIF Schedule

This appendix presents the detailed fee calculations for each land use in the Town of Wake Forest's multi-modal transportation impact fee schedule.

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Table D-1

Calculated Multi-Modal Transportation Impact Fee Schedule

		Gasoline Tax								Unit Cost per Lane Mile:	$4,628,000					Interstate/Toll Facility Adjustment Factor:	36.7%	
		$$ per gallon to capital:	$0.148							Average PMC per Lane Mile:	9,600					Cost per PMC:	$482.08	
		Facility life (years):	25			Town Revenues:	$0.012			Fuel Efficiency:	19.47 mpg							
		Interest rate:	4.25%			State Revenues:	$0.136			Effectivedays per year:	365							
ITE LUC	**Land Use**	**Unit**	**Trip Rate**	**Trip Rate Source**	**Assessable Trip Length**	**Total Trip Length**	**Trip Length Source**	**Percent New Trips**	**% New Trips Source**	**Net VMT[1]**	**Person-Trip Factor**	**Net PMC[2]**	**Total Impact Cost**	**Annual Gas Tax**	**Gas Tax Credit**	**Net Multi-Modal Transp. Impact Fee**	**Town Portion (6%)**
	RESIDENTIAL:																
210	Single Family (Detached); Less than 1,000 sf	du	6.75	Appendix A: Table A-5	6.62	7.12	Appendix A: LUC 210	100%	n/a	14.14	1.41	19.94	$9,613	$67	$1,020	**$8,593**	**$516**
	Single Family (Detached); 1,000 to 1,999 sf	du	7.27	Appendix A: Table A-5	6.62	7.12	Appendix A: LUC 210	100%	n/a	15.23	1.41	21.47	$10,354	$72	$1,096	**$9,258**	**$555**
	Single Family (Detached); 2,000 to 2,999 sf	du	8.32	Appendix A: Table A-5	6.62	7.12	Appendix A: LUC 210	100%	n/a	17.43	1.41	24.58	$11,849	$82	$1,248	**$10,601**	**$636**
	Single Family (Detached); 3,000 sf or greater	du	8.86	Appendix A: Table A-5	6.62	7.12	Appendix A: LUC 210	100%	n/a	18.56	1.41	26.17	$12,618	$88	$1,339	**$11,279**	**$677**
215	Single Family (Attached)	du	6.77	Appendix A: LUC 215	6.62	7.12	Same as LUC 210	100%	n/a	14.18	1.41	19.99	$9,642	$67	$1,020	**$8,622**	**$517**
220	Multi-Family Housing (Low-Rise, 1-3 floors)	du	6.74	ITE 11th Edition	5.21	5.71	Appendix A: LUC 220/221/222	100%	n/a	11.11	1.41	15.67	$7,555	$53	$807	**$6,748**	**$405**
221/222	Multi-Family Housing (Mid/High-Rise, 4+ floors)	du	4.54	ITE 11th Edition	5.21	5.71	Appendix A: LUC 220/221/222	100%	n/a	7.49	1.41	10.56	$5,089	$36	$548	**$4,541**	**$272**
240	Mobile Home Park	du	4.17	Appendix A: LUC 240	4.60	5.10	Appendix A: LUC 240	100%	n/a	6.07	1.41	8.56	$4,127	$30	$457	**$3,670**	**$220**
251	Senior Adult Housing (Detached)	du	3.54	Appendix A: LUC 251	5.42	5.92	Appendix A: LUC 251	100%	n/a	6.07	1.41	8.56	$4,128	$29	$441	**$3,687**	**$221**
252	Senior Adult Housing (Attached)	du	2.99	Appendix A: LUC 252	4.34	4.84	Based on LUC 251[3]	100%	n/a	4.11	1.41	5.80	$2,792	$20	$304	**$2,488**	**$149**
	LODGING:																
310	Hotel	room	5.56	Appendix A: LUC 310	6.26	6.76	Appendix A: LUC 310	66%	Appendix A: LUC 310	7.27	1.41	10.25	$4,942	$34	$517	**$4,425**	**$266**
320	Motel	room	3.35	ITE 11th Edition	4.34	4.84	Appendix A: LUC 320	77%	Appendix A: LUC 320	3.54	1.41	4.99	$2,408	$17	$259	**$2,149**	**$129**
	RECREATION:																
411	Public Park	acre	0.78	ITE 11th Edition	5.15	5.65	Same as LUC 710	90%	Based on LUC 710	1.14	1.41	1.61	$778	$6	$91	**$687**	**$41**
416	Campground/RV Park	site	1.62	ITE 11th Edition (adjusted)[4]	4.60	5.10	Same as LUC 240	100%	Same as Residential Land Uses	2.36	1.41	3.33	$1,603	$11	$167	**$1,436**	**$86**
445	Movie Theater	screen	114.83	Appendix A: LUC 445	2.22	2.72	Appendix A: LUC 445	88%	Appendix A: LUC 445	71.00	1.41	100.11	$48,262	$381	$5,798	**$42,464**	**$2,548**
492	Health/Fitness Club	1,000 sf	34.50	ITE 11th Edition (adjusted)[5]	5.15	5.65	Same as LUC 710	94%	Appendix A: LUC 492	52.86	1.41	74.53	$35,931	$254	$3,865	**$32,066**	**$1,924**
	INSTITUTIONS:																
520	Elementary School (Private)	student	2.27	ITE 11th Edition	3.31	3.81	50% of LUC 210 based on Transp. Modeling	80%	Based on LUC 710 (adjusted)[6]	1.90	1.41	2.68	$1,293	$10	$152	**$1,141**	**$68**
522	Middle/Junior High School (Private)	student	2.10	ITE 11th Edition	3.31	3.81	50% of LUC 210 based on Transp. Modeling	80%	Based on LUC 710 (adjusted)[6]	1.76	1.41	2.48	$1,196	$9	$137	**$1,059**	**$64**
525	High School (Private)	student	1.94	ITE 11th Edition	3.31	3.81	50% of LUC 210 based on Transp. Modeling	90%	Based on LUC 710	1.83	1.41	2.58	$1,243	$9	$137	**$1,106**	**$66**
540/	University/Junior College (7,500 or fewer students) (Private)	student	2.00	ITE Regression Analysis	6.62	7.12	Same as LUC 210	90%	Based on LUC 710	3.77	1.41	5.32	$2,564	$18	$274	**$2,290**	**$137**
550	University/Junior College (more than 7,500 students) (Private)	student	1.50	ITE Regression Analysis	6.62	7.12	Same as LUC 210	90%	Based on LUC 710	2.83	1.41	3.99	$1,923	$13	$198	**$1,725**	**$104**
560	Church	1,000 sf	7.60	ITE 11th Edition	3.93	4.43	Midpoint of LUC 710 & LUC 820 (App. A)	90%	Based on LUC 710	8.51	1.41	12.00	$5,783	$42	$639	**$5,144**	**$309**
565	Day Care Center	1,000 sf	47.62	ITE 11th Edition	2.03	2.53	Appendix A: LUC 565	73%	Appendix A: LUC 565	22.33	1.41	31.49	$15,182	$122	$1,857	**$13,325**	**$800**
	MEDICAL:																
610	Hospital	1,000 sf	10.77	ITE 11th Edition	6.62	7.12	Same as LUC 210	78%	Midpoint of LUC 310 & LUC 720	17.60	1.41	24.82	$11,964	$83	$1,263	**$10,701**	**$642**
620	Nursing Home	bed	3.02	Appendix A: LUC 620	2.59	3.09	Appendix A: LUC 620	89%	Appendix A: LUC 620	2.20	1.41	3.10	$1,498	$12	$183	**$1,315**	**$79**

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Table D-1 (continued)
Calculated Multi-Modal Transportation Impact Fee Schedule

ITE LUC	Land Use	Unit	Trip Rate	Trip Rate Source	Assessable Trip Length	Total Trip Length	Trip Length Source	Percent New Trips	% New Trips Source	Net VMT[1]	Person-Trip Factor	Net PMC[2]	Total Impact Cost	Annual Gas Tax	Gas Tax Credit	Net Multi-Modal Transp. Impact Fee	Town Portion (6%)
	MEDICAL:																
630	Clinic	1,000 sf	37.39	Appendix A: LUC 630	5.10	5.60	Appendix A: LUC 630	93%	Appendix A: LUC 630	56.13	1.41	79.14	$38,153	$270	$4,109	**$34,044**	**$2,043**
	OFFICE:																
710	General Office	1,000 sf	10.84	ITE 11th Edition	5.15	5.65	Appendix A: LUC 710	92%	Appendix A: LUC 710	16.26	1.41	22.93	$11,049	$78	$1,187	**$9,862**	**$592**
720	Medical Office/Clinic 10,000 sq ft or less	1,000 sf	23.83	Appendix A: LUC 720 (Small Medical Office)	5.55	6.05	Appendix A: LUC 720	89%	Appendix A: LUC 720	37.25	1.41	52.52	$25,323	$178	$2,709	**$22,614**	**$1,357**
	Medical Office/Clinic greater than 10,000 sq ft	1,000 sf	34.21	Appendix A: LUC 720	5.55	6.05	Appendix A: LUC 720	89%	Appendix A: LUC 720	53.48	1.41	75.41	$36,354	$256	$3,896	**$32,458**	**$1,947**
	RETAIL:																
822	Retail less than 40,000 sfgla	1,000 sfgla	54.45	ITE 11th Edition	1.48	1.98	Appendix A: Fig. A-1 (19k sq ft)	48%	Appendix A: Fig. A-2 (19k sq ft)	12.24	1.41	17.26	$8,322	$72	$1,096	**$7,226**	**$434**
821	Retail 40,000 to 150,000 sfgla	1,000 sfgla	67.52	ITE 11th Edition	1.94	2.44	Appendix A: Fig. A-1 (59k sq ft)	57%	Appendix A: Fig. A-2 (59k sq ft)	23.63	1.41	33.32	$16,063	$130	$1,978	**$14,085**	**$845**
820	Retail greater than 150,000 sfgla	1,000 sfgla	37.01	ITE 11th Edition	2.80	3.30	Appendix A: Fig. A-1 (538k sq ft)	75%	Appendix A: Fig. A-2 (538k sq ft)	24.60	1.41	34.69	$16,721	$127	$1,933	**$14,788**	**$887**
840/841	New/Used Auto Sales	1,000 sf	24.58	Appendix A: LUC 840/841	4.60	5.10	Appendix A: LUC 840/841	79%	Appendix A: LUC 840/841	28.27	1.41	39.86	$19,217	$137	$2,085	**$17,132**	**$1,028**
850	Supermarket	1,000 sf	93.84	ITE 11th Edition	2.08	2.58	Appendix A: LUC 850	56%	Appendix A: LUC 850	34.59	1.41	48.77	$23,516	$188	$2,861	**$20,655**	**$1,239**
862	Home Improvement Superstore	1,000 sf	30.74	ITE 11th Edition	2.33	2.83	Appendix A: Fig. A-1 (135k sq ft)	64%	Appendix A: Fig. A-2 (135k sq ft)	14.51	1.41	20.46	$9,862	$77	$1,172	**$8,690**	**$521**
880/ 881	Pharmacy with & without Drive-Thru	1,000 sf	103.40	ITE 11th Edition	2.08	2.58	Appendix A: LUC 880/881	32%	Appendix A: LUC 880/881	21.78	1.41	30.71	$14,806	$118	$1,796	**$13,010**	**$781**
890	Furniture Store	1,000 sf	6.30	ITE 11th Edition	6.09	6.59	Appendix A: LUC 890	54%	Appendix A: LUC 890	6.56	1.41	9.25	$4,457	$31	$472	**$3,985**	**$239**
	SERVICES:																
911	Bank/Savings Walk-In	1,000 sf	57.94	ITE 11th Edition (adjusted)[7]	2.46	2.96	Same as LUC 912	46%	Same as LUC 912	20.75	1.41	29.26	$14,105	$109	$1,659	**$12,446**	**$747**
912	Bank/Savings Drive-In	1,000 sf	100.35	ITE 11th Edition	2.46	2.96	Appendix A: LUC 912	46%	Appendix A: LUC 912	35.94	1.41	50.68	$24,430	$190	$2,891	**$21,539**	**$1,292**
930	Fast Casual Restaurant	1,000 sf	97.14	ITE 11th Edition	2.05	2.55	Same as LUC 934	58%	Same as LUC 934	36.56	1.41	51.55	$24,848	$199	$3,028	**$21,820**	**$1,309**
931	Fine Dining (Low-Turnover) Restaurant	1,000 sf	83.84	ITE 11th Edition	3.14	3.64	Appendix A: LUC 931	77%	Appendix A: LUC 931	64.16	1.41	90.47	$43,610	$326	$4,961	**$38,649**	**$2,319**
932	High-Turnover (Sit-Down) Restaurant	1,000 sf	103.46	Appendix A: LUC 932	3.17	3.67	Appendix A: LUC 932	71%	Appendix A: LUC 932	73.70	1.41	103.92	$50,096	$374	$5,691	**$44,405**	**$2,664**
934	Fast Food Restaurant w/Drive-Thru	1,000 sf	467.48	ITE 11th Edition	2.05	2.55	Appendix A: LUC 934	58%	Appendix A: LUC 934	175.92	1.41	248.05	$119,580	$959	$14,593	**$104,987**	**$6,299**
941	Quick Lube	service bay	40.00	ITE 11th Edition	3.62	4.12	Same as LUC 942	72%	Same as LUC 942	33.00	1.41	46.53	$22,429	$165	$2,511	**$19,918**	**$1,195**
942	Automobile Care Center	1,000 sf	28.19	Appendix A: LUC 942	3.62	4.12	Appendix A: LUC 942	72%	Appendix A: LUC 942	23.25	1.41	32.78	$15,807	$116	$1,765	**$14,042**	**$843**
944	Gas Station w/Convenience Market <2,000 sq ft	fuel pos.	172.01	ITE 11th Edition	1.90	2.40	Appendix A: LUC 944	23%	Appendix A: LUC 944	23.79	1.41	33.54	$16,171	$132	$2,009	**$14,162**	**$850**
945	Gas Station w/Convenience Market 2,000-5,499 sq ft	fuel pos.	264.38	ITE 11th Edition (adjusted)[8]	1.90	2.40	Same as LUC 944	23%	Same as LUC 944	36.57	1.41	51.56	$24,856	$202	$3,074	**$21,782**	**$1,307**
	Gas Station w/Convenience Market 5,500+ sq ft	fuel pos.	345.75	ITE 11th Edition	1.90	2.40	Same as LUC 944	23%	Same as LUC 944	47.82	1.41	67.43	$32,506	$265	$4,033	**$28,473**	**$1,708**
947	Self-Service Car Wash	service bay	43.94	Appendix A: LUC 947	2.18	2.68	Appendix A: LUC 947	68%	Appendix A: LUC 947	20.62	1.41	29.07	$14,013	$111	$1,689	**$12,324**	**$739**
	INDUSTRIAL:																
110	General Light Industrial	1,000 sf	4.87	ITE 11th Edition	5.15	5.65	Same as LUC 710	92%	Same as LUC 710	7.30	1.41	10.29	$4,964	$35	$533	**$4,431**	**$266**
140	Manufacturing	1,000 sf	4.75	ITE 11th Edition	5.15	5.65	Same as LUC 710	92%	Same as LUC 710	7.12	1.41	10.04	$4,842	$34	$517	**$4,325**	**$260**
150	Warehousing	1,000 sf	1.71	ITE 11th Edition	5.15	5.65	Same as LUC 710	92%	Same as LUC 710	2.56	1.41	3.61	$1,743	$12	$183	**$1,560**	**$94**

Table D-1 (continued)
Calculated Multi-Modal Transportation Impact Fee Schedule

ITE LUC	Land Use	Unit	Trip Rate	Trip Rate Source	Assessable Trip Length	Total Trip Length	Trip Length Source	Percent New Trips	% New Trips Source	Net VMT[1]	Person-Trip Factor	Net PMC[2]	Total Impact Cost	Annual Gas Tax	Gas Tax Credit	Net Multi-Modal Transp. Impact Fee	Town Portion (6%)
	INDUSTRIAL:																
151	Mini-Warehouse	1,000 sf	1.45	ITE 11th Edition	3.51	4.01	Midpoint of LUC 710 & LUC 820 (50k sq ft)	92%	Same as LUC 710	1.48	1.41	2.09	$1,007	$7	$107	**$900**	**$54**
154	High-Cube Transload & Short-Term Storage Warehouse	1,000 sf	1.40	ITE 11th Edition	5.15	5.65	Same as LUC 710	92%	Same as LUC 710	2.10	1.41	2.96	$1,427	$10	$152	**$1,275**	**$77**

1) Net VMT calculated as ((Trip Generation Rate* Trip Length* % New Trips)*(1-Interstate/Toll Facility Adjustment Factor)/2). This reflects the unit of vehicle-miles of capacity consumed per unit of development and is multiplied by the cost per vehicle
2) Net VMT (Item 1) multiplied by the person-trip factor (1.41)
3) The assessable trip length was based on LUC 251 (5.42) but then adjusted by the ratio of the single family (LUC 210) based trip length of 6.62) to the multi-family (LUC 220) trip length (5.21). Adj. = 5.21 / 6.62 = 80%. TL = 80% × 5.42 = 4.34
4) The ITE 11th Edition trip generation rate was adjusted to reflect the average occupancy rate of 60 percent based on data provided by the Association of RV Parks and Campgrounds
5) The ITE 11th Edition trip generation rate for PM Peak Hour of Adjacent traffic was adjusted by a factor of 10 to approximate the Daily TGR
6) The percent new trips for schools was estimated at 90% based on LUC 710, but was then adjusted to 80% to provide a conservative fee rate. This adjustment reflects the nature of elementary and middle school uses where attendees are unable to drive and are typically dropped off by parents/guardians on their way to another destination
7) The daily trip generation rate is estimated based on the ratio of peak hour-to-daily from the Bank w/Drive-In land use applied to the peak hour TGR for Bank w/Walk-In
8) Due to only slight variation, the trip generation rates for LUC 945 2,000 to 3,999 sq ft and 4,000 to 5,499 sq ft were combined into a weighted average trip generation rate for a single land use tier of 2,000 to 5,499 sq ft

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Board of Commissioners Agenda Item Report

Agenda Item No.: 2024-319-
Submitted by: Kari Grace
Submitting Department: Planning
Meeting Date: November 19, 2024

SUBJECT
Public Hearing on LEGISLATIVE CASE TA-24-01, Unified Development Ordinance (UDO) Comprehensive Update

Recommendation:

Item Summary:

ATTACHMENTS

- TA-24-01 Agenda Summary
- Staff Report TA-24-01 Comprehensive UDO Update
- Attachment A - Application
- Attachment B - Proposed Changes
- Attachment C - TA-24-01 Planning Board Recommendation and Plan Consistency Analysis
- Attachment D - Public Comments Received on Draft UDO
- Exhibit 1 - Wake Forest UDO Draft For Adoption Consideration
- Exhibit 2 Proposed Edits

Agenda Item: Public Hearing on LEGISLATIVE CASE TA-24-01, Unified Development Ordinance (UDO) Comprehensive Update

Summary: A public comment session was held at the October 8, 2024, Planning Board meeting. The Planning Board voted 7-0 to find the request consistent with the Comprehensive Plan and reasonable and in the public interest and recommended approval of the text amendment as drafted.

The consultant presented the proposed text amendment to the Board of Commissioners at their November 5, 2024 work session meeting.

Since the Planning Board and Board of Commissioner work session meetings, staff has proposed modifications to the draft UDO, outlined in Exhibit 2, in response to public feedback, further Comprehensive Plan alignment, and clarification.

The public hearing will be opened at the November 19, 2024 Board of Commissioner's meeting and will be continued to the December 17, 2024 meeting to remain open for further comment and action.

Attachments: See Staff Report

Staff Report
TA-24-01: UDO Comprehensive Update

Meeting Date	11/19/2024
Requested Action	Consideration of a Request to Amend the Unified Development Ordinance 1. Act on the Plan Consistency Statement 2. Amend the Unified Development Ordinance
Case Manager	Kari Grace, Senior Planner
Planning Board Recommendation	Recommended approval by a vote of 7-0 of the text amendment request.

Public Meetings

Public Comment Session	Public Hearing
10/8/2024	11/19/2024
	12/17/2024

Case Information

Applicant	Town of Wake Forest Planning Department 301 S. Brooks Street Wake Forest, NC 27587
See Attachment A for copy of the Application.	

Case Summary

Project History

Kickoff: The Town hired Houseal Lavigne Associates as consultants for the comprehensive update of the UDO in the spring of 2022. The project kickoff and initial public engagement began at the time and included public open house sessions, an online survey, and stakeholder interviews.

Analysis: The next stage of the project consisted of an analysis of the current UDO and preliminary recommendations. The findings of that phase were presented to the Planning Board in the fall of 2022. The Existing UDO Analysis and Preliminary Recommendations Report is published on the project webpage.

Drafting and Review: Drafting of the UDO and MSSD sections marked the beginning of the next step.

- Spring 2023: Houseal Lavigne staff presented proposed zoning district and use regulation standards, and a public open house and online survey were conducted to collect community feedback.
- Fall 2023: Houseal Lavigne staff presented proposed development standards related to general standards, building design, access and mobility, tree protection, landscaping, buffers, and lighting. The presentation highlighted proposed standards with emphasis on new and revised regulations stemming from Comprehensive Plan recommendations and community feedback.
- February 2024: Town staff presented a summary of proposed standards pertaining to Planned Unit Developments (PUDs), subdivision and lot standards, and open and community space standards.
- Spring 2024: Houseal Lavigne staff presented proposed standards related to street design, natural resources, signage, nonconformities, and administrative processes.
- September 2024: Houseal Lavigne staff shared an overall summary of the revised UDO chapters and highlighted revisions that had been made since presented in previous work sessions.

<u>Engagement</u>

Various public engagement methods have been used over the course of the project.

- **Stakeholder Meetings:** At the kickoff of the project, stakeholder interviews and focus groups were held with approximately 70 people, including staff department heads, BOC and PB members, regional agencies, other municipalities, school representatives, SEBTS, residential, commercial, multifamily, adaptive reuse development community, affordable housing advocates, Triangle Community Coalition and Homebuilders Association members. Staff has presented to the Historic Preservation Commission and Downtown Wake Forest. Staff has met with interested residents, community organizations/property owners, and developers to receive feedback.
- **Work Sessions:** Seven work sessions were held each with the Planning Board and Board of Commissioners as well as a 12-person Technical Review Group made up of design and development professionals and residents.
- **Events:** Three open house events, with two sessions each, were hosted with approximately 392 attendees. Each open house included postcard mailings to all addresses in Town, which is approximately 25,000 addresses.
- **Online Engagement:** Two online surveys were conducted, totaling 522 responses. Open comment is currently available on the project webpage. Three professional videos were created and shared through various outlets to promote participation and spread awareness about the project.

PROPOSED CHANGES

Chapter	Section
All Chapters	All Sections
See Attachment B for overview of Proposed Changes between the current UDO and the draft UDO. See Exhibit 1 for the Proposed Amendments and Exhibit 2 for the Proposed Edits.	

STAFF RECOMMENDATION

Staff recommends approval of the proposed UDO Text Amendment with the proposed edits incorporated in Exhibit 2 for the following reasons.

- The proposed UDO Text Amendment is consistent with and implements recommendations of the Comprehensive Plan,
- The proposed UDO Text Amendment brings development requirements into compliance with state, federal, and case law,
- The proposed UDO Text Amendment improves the usability of the ordinance, and
- The proposed UDO Text Amendment is reasonable and in the public interest.

ATTACHMENTS

Attachment A: Application
Attachment B: Proposed Changes
Attachment C: Planning Board Recommendation and Plan Consistency Analysis
Attachment D: Public Comments Received on Draft UDO

EXHIBITS

Exhibit 1: Proposed Amendments
Exhibit 2: Proposed Edits

UDO Amendment

GeoCivix, LLC
9420 E. Golf Links Rd. Suite 108, #296 | Tucson, AZ 85730
P: (Phone) 520 319-0988 | F: (Fax) (520) 319-1430 |
E: (Email) jace.coleman@geocivix.com

Project Overview #1429406

Project Title: Comprehensive UDO Update
Application Type: UDO Amendment
Workflow: UDO Amendment - Planning Board
Jurisdiction: Town of Wake Forest (Wake County)
State: NC
County: Wake

Checklist - UDO Amendment

A submittal checklist is available to view additional documents which are required to submitted with this application. After answering the application questions, you will be asked to upload the required documents.

VIEW UDO AMENDMENT SUBMITTAL CHECKLIST

Missing items will result in the application being declined and returned to the applicant to resubmit. A revised and complete application including all missing items must be received or the application will be not be deemed complete and routed for review.

Please confirm that you have reviewed the associated submittal checklist for this permit and that you will submit all documents required on the submittal checklist: Yes

Pre-Application Meeting

Has a pre-application conference been held?: Yes

*Note: This type of project requires a pre-application conference be completed prior to official submittal. If this has not been completed, please return to the home screen and select **Pre-Application Conference** from the application type drop down list in order to schedule your required meeting.*

Pre-Application Conference Date: 07/19/2022
Staff Member Met With: all Planning staff
Pre-application Conference Project Number: n/a

Project Contact - Applicant

Please enter all project contacts related to your application.

This is an important step to ensure all members of the applicant team receive email notifications associated with the project which may include comments, requested revisions, scheduled meetings or hearings, and final decisions. This also informs Town staff of the team members assigned role with the project.

Project Contact - Applicant
Kari Grace
Town of Wake Forest
401 Elm Avenue
Wake Forest, NC 27587
P: (Phone)(919) 5546100
kgrace@wakeforestnc.gov

UDO Text Amendment

Description of Request:

With the update and adoption of the 2023 Public Transit Plan, 2022 Community Plan, 2022 Housing Affordability Plan, 2022 Historic Preservation Plan, 2021 Northeast Community Plan, as well as several other studies and comprehensive plan efforts that are underway, the UDO and MSSD need to be updated to implement the policies and recommendations of the plans. In addition to reflecting the goals and actions of the Comprehensive Plan, the UDO needs to maintain compliance with state, federal and case law, which are constantly evolving. Finally, the update exams best practices and trending topics.

Justification for Amendment:
With the update and adoption of the 2023 Public Transit Plan, 2022 Community Plan, 2022 Housing Affordability Plan, 2022 Historic Preservation Plan, 2021 Northeast Community Plan, as well as several other studies and comprehensive plan efforts that are underway, the UDO and MSSD need to be updated to implement the policies and recommendations of the plans. In addition to reflecting the goals and actions of the Comprehensive Plan, the UDO needs to maintain compliance with state, federal and case law, which are constantly evolving. Finally, the update exams best practices and trending topics.

Applicant Proposed Language:
All chapters of the UDO are proposed to be updated. Proposed language is posted on the project webpage: https://www.wakeforestnc.gov/planning/unified-development-ordinance

This table is summary of changes proposed between the current UDO and draft UDO. The Comments/Recommendation Themes column identifies where proposed changes algin with recommendations from the Comprehensive Plan or the Existing UDO Analysis and Preliminary Recommendations Report that highlighted key themes of Improve Ease of Use, Modernize Standards, Enhance Environmental Stewardship, Address Housing Affordability, and Ensure Compliance with Recent State and Federal Legislation and Case Law.			
Draft Section #	Current UDO	Draft UDO	Comments/Recommendation Themes
	Chapter 1: General Provisions		
	Chapter Name: Purpose & Applicability	Chapter name changed to General Provisions	Improve Ease of Use
Section 1.6	Permit choice and vested right language is not clear	Clarifies permit choice and vested right language required under State law	Improve Ease of Use, State Law Compliance
Section 1.9		Adds general applicability table	This replaces the existing table in Chapter 16 Nonconformities and expands upon more applicability scenarios
	Chapter 2: Zoning Districts and Dimensional Standards		
	Chapter Name: District Provisions	Chapter name changed to Zoning Districts and Dimensional Standards	Improve Ease of Use
	Base zoning districts categorized into “Urban Districts” and “Rural and Suburban Districts.”	Proposed zoning districts are not categorized	Improve Ease of Use
Section 2.3		New base zoning districts are established to implement the Comprehensive Plan land use designations and streamline similar existing districts.	Comprehensive Plan Implementation, Improve Ease of Use
Section 2.3	Current zoning district dimensional standards are outlined in Table 2.2.3 and Table 2.2.5.	Proposed base zoning districts have separate tables per district outlining dimensional standards with distinct	Improve Ease of Use

		standards for different use types allowed within a district.	
Section 2.4	Planned Unit Development (PUD) districts are outlined in Section 2.7.	Proposed PUD standards establish baseline objectives for consideration of approval.	Comprehensive Plan Implementation; Enhance Environmental Stewardship
Section 2.2.2	Current Conditional District provisions are outlined in Section 2.6.	Conditional Districts are proposed to only allow more restrictive conditions.	Improve Ease of Use
Sections 2.5.2, 2.5.3, and 2.5.6	The Historic District and Landmark Overlay standards are outlined in Section 2.4.2. The Water Supply Watershed Protection Overlay standards are outlined in Section 2.4.5. The Glen Royall Mill Village Character Preservation Overlay standards are outlined in Section 2.4.6.	The Local Historic, Mill Village Character, and Watershed Protection Overlays are proposed to be retained.	Comprehensive Plan Implementation
	The Special Highway Overlay standards are outlined in Section 2.4.3. The Shopfront Overlay standards are outlined in Section 2.4.4. The Traditional Neighborhood Development Overlay standards are outlined in Section 2.5.1.	The Shop Front, Special Highway, and Traditional Neighborhood Development (TND) Overlays are proposed to be removed. The Shop Front Overlay standards are incorporated into building design standards. The Special Highway Overlay standards are incorporated into landscape buffer and setback standards. The TND Overlay is currently applied to a limited already developed area of the Town.	Improve Ease of Use; Comprehensive Plan Implementation
Sections 2.5.4 and 2.5.5		The Transit Oriented Development and Activity Center Overlays are proposed to be added.	Comprehensive Plan Implementation

Sections 2.6 and 2.8		Standards related to dimensional requirements, such as infill and allowable encroachments into setbacks are relocated from the current Chapter 4	Improve Ease of Use;
Section 2.7		Height restrictions and transition standards are added.	Modernize Standards; Comprehensive Plan Implementation
Section 2.8	Current infill standards are outlined in Section 4.3.3.B.	Infill development standards are revised to include a broader context area.	Modernize Standards; Comprehensive Plan Implementation
Section 2.9		Affordable housing incentives are added.	Comprehensive Plan Implementation; Housing Affordability
	Chapter 3: Use Regulations		
	Permitted use table is located in Chapter 2	Permitted use table is relocated from Chapter 2 to Chapter 3	Improve Ease of Use
Section 3.2.1.C		Reference to use definitions is added	Improve Ease of Use
Section 3.2.2		Qualification of uses (floor dependency, square footage dependency, public/private designation, and indoor/outdoor designation) are added	Comprehensive Plan Implementation
Section 3.2.2	Use categories include Residential, Lodging, Office/Service, Commercial/Entertainment, Civic, Educational/Institutional, Automotive, Industry/Wholesale/Storage, Agricultural	Use categories include Residential, Public & Institutional, Commercial, Industrial & Automotive, Utilities & Infrastructure, Agriculture & Animal Related	Improve Ease of Use

Section 3.3	Principal use allowances are outlined in Table 2.3.3.	Principal use allowances are separated from accessory uses. Downtown sub-districts have a separate table.	Improve Ease of Use
Section 3.4	Accessory use allowances are outlined in Table 2.3.3.	Accessory use allowances are separated from accessory uses. Downtown sub-districts have a separate table.	Improve Ease of Use
Section 3.5	Temporary use allowances and standards are outlined in Section 4.7.	Temporary uses are expanded and a use table is added for consistency. Downtown sub-districts have a separate table. Use standards immediately follow the use table.	Improve Ease of Use; Modernize Standards
Section 3.3.3.	Supplemental use standards are outlined in Chapter 3.	Supplemental use standards for principal uses immediately follow the use table	Improve Ease of Use; Modernize Standards
Section 3.4.3	Additional accessory use standards are outlined in Section 4.6.	Accessory use standards immediately follow the use table	Improve Ease of Use; Modernize Standards
Sections 3.3, 3.4 and 3.5		Various uses are added to the use tables.	Comprehensive Plan Implementation; Improve Ease of Use; Housing Affordability; State/Federal Law Compliance; Modernize Standards; Enhance Environmental Stewardship
Sections 3.3, 3.4 and 3.5		Various uses are consolidated within the use tables were there is overlap in functions.	Improve Ease of Use

Draft Section #	Current UDO	Draft UDO	Comments/Recommendation Themes
	Chapter 4: Lot and Subdivision Standards		
	Lot standards located in Chapter 4 General Provisions for All Districts. Subdivision standards located in Chapter 6 Subdivision & Infrastructure Standards.	Relocates lot and subdivision standards into one chapter.	Improve Ease of Use
Section 4.1.2.C		Adds provisions to prevent duplicate or similar sounding subdivision names.	Best Practices
Section 4.2.2		Adds cross references to other applicable chapters of the UDO.	Improve Ease of Use
Section 4.2.3		Adds lot arrangement standards	Improve Ease of Use
Section 4.2.6		Prohibits flag lots.	Comprehensive Plan Implementation
Section 4.2.4		Clarifies street frontage requirements.	Improve Ease of Use
Section 4.3		Adds new conservation design standards as an alternative to conventional development. It requires a minimum of 50% open space (compared to 0-20% required otherwise). It is proposed to be required in the Falls Lake Protected, Smith Creek Protected, and Smith Creek	Enhance Environmental Stewardship; Comprehensive Plan Implementation

		Critical subdistricts of the Watershed Protection Overlay District (WP-O). Watershed protection standards still apply.	
Section 4.4		Requirements for subdivision surveys are relocated	Improve Ease of Use
	Chapter 5: Building Configuration and Design Standards		
	Chapter 5 is currently organized based on building usage, which separate sections for Civic/Intuitional, Residential, Commercial, and Industrial buildings.	Chapter is reorganized based on design standards instead of by building usage.	Improve Ease of Use
Section 5.2	Allowable building materials vary by building type: Civic/Institutional in Section 5.4.3, Residential in Section 5.5.6, Commercial in Section 5.6.2, and Industrial in Section 5.7.2.	Material standards continue to emphasize high quality and masonry materials while providing greater flexibility for architectural metal and fewer allowances for EIFS.	Modernize Standards; Comprehensive Plan Implementation
Section 5.3	Required glazing amounts within a specific transparency zone vary by building type: Civic/Institutional in Section 5.4.4, Residential in Section 5.5.5, Commercial in Section 5.6.3, and Industrial in Section 5.7.2.	Required glazing calculations shift from a transparency zone to the entire elevation to offer more flexibility in meeting requirements while continuing to require large amounts of windows	Comprehensive Plan Implementation
Section 5.4	Private frontage regulations are currently required buildings in the urban districts (UR, RMX, NMX, UMX and RA-HC). Within the Shop Front Overlay District, only certain	Building entryway design standards replace the current Private Frontage regulations and Shop Front Overlay requirements with a wider range of options and	Comprehensive Plan Implementation

	private frontage types are permitted.	applicability to all zoning districts and most development types. Standards are also added to address the relationship between the building and the street to prevent disengaged buildings.	
Sections 5.7 and 5.8	Multifamily building design standards currently apply to a range of multifamily building styles.	Design standards for Cottage Home Court and Two over Twos established distinct from Multifamily	Modernize Standards
Section 5.5	Façade articulation standards are required for Commercial buildings in Section 5.6.5 and Industrial buildings in Section 5.7.3. Civic/Institutional and Residential buildings do not have articulation requirements and instead have other required design elements.	All façade articulation and design standards are collocated. Standards are proposed to apply to all building types except for Two over Two and Cottage Courts.	Comprehensive Plan Implementation
Section 5.6	Roof design standards are required for Residential buildings in Section 5.5.2 and Commercial buildings in Section 5.6.5.	All roof design standards are collocated. Standards are proposed to apply to all building types except for and Cottage Courts.	Comprehensive Plan Implementation
Sections 5.10 and 5.11		Site configuration standards are proposed for large and multi-building development sites	Comprehensive Plan Implementation
	Chapter 6: Open and Community Space Standards		
Sections 6.3 and 6.4	Open space and park space standards are required for residential uses and the ICD District only.	Open and community space standards are proposed for residential and non-residential uses	Enhance Environmental Stewardship; Comprehensive Plan Implementation

Sections 6.3, 6.4 and 6.5	Requires active recreation space and specific park types.	Clarifies open space as focused on natural or minimally programmed areas and specifies what is and isn't permitted as open space. Clarifies community space as focused on gathering and amenity space with a point system for improvements.	Best Practices
Sections 6.3 and 6.4	The current required amount for residential developments ranges from 0% in downtown areas to 7% in more compact areas to 12.5% in more dispersed areas. The ICD is the zoning for limited areas of Town and requires 25% open space.	The proposed required amount of open and community space is proposed to range from 2% in downtown areas to 15% in more compact areas to 25% in more dispersed areas.	Comprehensive Plan Implementation; Enhance Environmental Stewardship
Section 6.6		Adds cemetery protection standards	Comprehensive Plan Implementation
	Chapter 7: Tree Preservation, Buffers, and Landscaping Standards		
Section 7.2	The current UDO requires tree canopy cover at the rate of 1 canopy tree per 2,500 square feet of property area for less dense areas and 1 canopy tree per 10,000 square feet of property area for more compact areas. Specimen trees (trees 20" or greater in diameter) that are removed have additional replacement requirements.	The proposed canopy cover requirements are based on the percentage of the property with tree cover rather than the number of trees. Using an estimate of 315 square feet per tree, the current UDO requires 12.6% or 3.15% cover depending on the location, plus replacement trees. The proposed standards require a minimum of 15-20% cover in most zoning districts if the cover is met with existing trees or	Enhance Environmental Stewardship; Comprehensive Plan Implementation

		mostly existing trees. If the required cover is met mostly with replacement trees, additional canopy cover beyond the minimum is required. Targeted areas for compact development in the Activity Center and TOD districts are proposed to require a base of 5-10% while Downtown is exempt due to the small parcel size.	
Section 7.3	Current Type AA Buffer: 50 feet width, 10 Evergreen Trees, 6 Canopy Trees, 6 Understory Trees, 48 Shrubs Current Type A Buffer Options: 40 feet width, 6 Evergreen Trees, 4 Canopy Trees, 4 Understory Trees 48 Shrubs 30 feet width, 4 Evergreen Trees, 2 Canopy Tree, 4 Understory Trees 36 Shrubs, and Berm 20 feet width, 2 Evergreen Tree, 2 Canopy Tree, 3 Understory Trees 18 Shrubs, and 6 feet tall Opaque Fence or Wall	Proposed Type A Buffer Options: 50 feet width, 10 Evergreen Trees, 6 Canopy Trees, 6 Understory Trees, 48 Shrubs/Native Grasses 30 feet width, 3 Evergreen Trees, 3 Canopy Trees, 6 Understory Trees, 36 Shrubs/Native Grasses, and Berm or Fence/Wall	Enhance Environmental Stewardship; Comprehensive Plan Implementation
Section 7.3	Current Type B Buffer Options: 25 feet width, 2 Evergreen Trees, 2 Canopy Tree, 2 Understory Trees, 24 Shrubs	Proposed Type B Buffer Options: 30 feet width, 3 Evergreen Trees, 2 Canopy Trees, 3 Understory Trees, 36 Shrubs/Native Grasses	Enhance Environmental Stewardship; Comprehensive Plan Implementation

	15 feet width, 2 Evergreen Tree, 2 Canopy Tree, 3 Understory Trees, 12 Shrubs, and 4 feet tall semi-opaque fence or wall	20 feet width, 3 Evergreen Trees, 2 Canopy Trees, 3 Understory Trees, 24 Shrubs/Native Grasses, and fence/wall	
Section 7.3	Current Type C Buffer Options: 20 feet width, 1 Canopy Tree, 2 Understory Trees, 8 Shrubs 15 feet width, 2 Canopy Trees, 2 Understory Trees, 12 Shrubs	Proposed Type C Buffer Options: 20 feet width, 3 Evergreen Trees, 2 Canopy Trees, 1 Understory Trees, 35 Shrubs/Native Grasses 15 feet width, 3 Evergreen Trees, 2 Canopy Trees, 20 Shrubs/Native Grasses and fence/wall	Enhance Environmental Stewardship; Comprehensive Plan Implementation
Section 7.4	20 feet width street buffers are currently required for thoroughfare streets with 2 Evergreen Trees, 2 Canopy Tree, 2 Understory Trees, and 24 Shrubs. Special Highway Overlay requires a buffer of 50 in width with 10 trees per 100 linear feet along Highway 98 and US-1 and a buffer of 30 feet in width with 6 trees per 100 linear feet along frontage roads and streets intersecting the highways.	Street buffers are proposed to be required along Highway 98, US-1, industrial sites, and residential uses along thoroughfares with the following options: 30 feet width 3 Evergreen Trees, 3 Canopy Trees, 6 Understory Trees, and 36 Shrubs/Native Grasses with a fence/wall/berm. 30 feet width with a minimum density of 15 trees per 100 linear feet with a fence/wall/berm. Residential only - 20 feet width 3 Evergreen Trees, 2 Canopy Trees, 3 Understory Trees, 24 Shrubs/Native Grasses with a fence/wall/berm.	Improve Ease of Use; Comprehensive Plan Implementation
Section 7.5	The current UDO does not have an alley buffer.	A new alley buffer is proposed in cases where a perimeter buffer is not required and an alley is	Response to Public Comment

		proposed adjacent to existing single family detached or duplex dwellings. The proposed buffer is 5 feet in width with either a fence/wall or vegetation.	
Section 7.7	Current parking area landscaping requirements are outlined in Section 8.7.	Enhanced perimeter parking lot landscaping and new island and median landscaping are proposed. Islands are proposed to be required every 10 to 20 parking spaces. Rain garden landscaping options are proposed.	Modernize Standards; Enhance Environmental Stewardship; Comprehensive Plan Implementation
Section 7.6	The current UDO does not require building foundation landscaping.	New building foundation landscaping standards are proposed	Enhance Environmental Stewardship; Comprehensive Plan Implementation
Section 7.9	The current UDO does not require landscaping on individual residential lots.	New residential lot landscaping is proposed to require one front yard tree and one back yard tree for single family detached, duplex, triplex, quadplex, townhome, and manufactured home residential lots with front setbacks 20 feet or greater.	Enhance Environmental Stewardship
Section 7.10	The current UDO requires the following minimum planting sizes: Canopy Tree: 1.5 inch caliper Understory Tree: 1 inch caliper Evergreen Tree: not specified Shrubs: 18 inches to 3 feet in height	The draft UDO proposes the following minimum planting sizes: Canopy Tree. 2 inch caliper Understory Tree. 1.5 inch caliper Evergreen Tree. 6 foot height Shrub. 2 foot height Native Grasses. 2 foot height	Enhance Environmental Stewardship

Section 7.10	The current UDO requires a minimum spacing of 15 feet for canopy trees and 8 feet for understory trees from light poles.	The draft UDO proposes a minimum spacing of 25 feet for canopy trees and 12 feet for understory trees from light poles.	
Section 7.10	The current UDO does not contain standards on the use of pine straw.	Standards on pine straw and other combustible landscape material are added in the draft UDO.	Best Practice
	Chapter 8: Fence, Wall, Retaining Wall, and Screening Standards		
		Fence and wall standards are relocated from the landscape buffer section to a separate chapter. Screening standards are relocated from the landscape and building design chapters to this chapter.	Improve Ease of Use
Sections 8.2.2 and 8.2.3	The current UDO fence and wall standards lack clarity on the maximum allowable height.	Fence and wall maximum heights are specified by use type and yard as well as allowable materials.	Modernize Standards
Section 8.2.1		Criteria for approval of fences within easements is specified.	Improve Ease of Use
Section 8.3	The current UDO does not have maximum height allowances for retaining walls and design standards are general.	Maximum heights of 15 to 20 feet for retaining walls are proposed along with design standards related to materials, terracing, and landscaping.	Enhance Environmental Stewardship; Comprehensive Plan Implementation
Section 8.4	The current UDO does not have berm standards.	Berm standards are added.	Best Practice
Section 8.5		Screening requirements are enhanced with required vegetation and alternative	Comprehensive Plan Implementation

		methods proposed for increased flexibility.	
	Chapter 9: Access and Circulation		
Section 9.3	The current UDO contains old Street Classifications used prior to the Comprehensive Transportation Plan update.	Street Classifications are removed; street cross sections within the Comprehensive Transportation Plan and other associated CTP improvements are referenced.	Improve Ease of Use
Section 9.2.2	The current UDO uses a range of triggering units for TIA thresholds (e.g. dwelling units, square footage, number of employees, number of hotel rooms, and number of trips).	New TIA thresholds are proposed for consistency and rational nexus. Triggering thresholds for all non-residential uses are the same. Additional thresholds are used to capture a more comprehensive view of impacts by looking at trips over any hour and the entire day instead of only peak hours.	Improve Ease of Use
Section 9.2.5	Current UDO standards for TIA study areas are broad ranging from one-quarter mile to three miles from the development site.	New TIA study areas are proposed for consistency and rational nexus. Proposed study area boundaries are one-half mile of the proposed development site in addition to any intersection on which at least seven percent of any traffic movement approach volume are generated by or as a result of the proposed project.	Best Practice

Section 9.2.7	The current UDO focuses required mitigation identified in TIAs based on level of service.	The draft UDO proposes mitigation based on level of service, safety, and pedestrian experience.	Best Practice
Section 9.4.2.D	The current UDO does not address gated accessways.	The draft UDO propose to prohibit gated streets, roadways, developments, and driveways are except for Industrial uses and Public Service/Safety Facility use.	Best Practice
Section 9.4.3		New connectivity index for subdivisions is proposed. This primarily addresses internal connectivity and reinforces external connectivity standards.	Comprehensive Plan Implementation
Section 9.4.4	The current UDO requires external access for single family lot developments only.	Minimum number of access points to all types of development are established and comply with limitations recently added to NCGS160D-702(c)(3).	State Law Compliance
Section 9.4.5	The current block length requirements are 800 linear feet for the “suburban/rural” districts and 400 linear feet for the “urban” districts.	Revised block length standards to maximum 600 linear feet for all districts and 800 linear feet for the CB, CI, and IND Districts.	Comprehensive Plan Implementation
Section 9.4.9	The current UDO does not have traffic calming provisions.	New traffic calming measures proposed to be required for consideration within street design	Comprehensive Plan Implementation
Section 9.5		New internal access drives are proposed to be required within parking lots to create a pedestrian scale environment	Comprehensive Plan Implementation

Section 9.6.2		Parking requirements are proposed to shift from parking minimums to maximums for multifamily and non-residential uses	Modernize Standards; Enhance Environmental Stewardship; Housing Affordability; Comprehensive Plan Implementation
Section 9.6.2	Current minimum residential parking requirements are: Single Family Detached and Duplex – 1 per dwelling unit or 2 per dwelling unit when a garage is provided Townhome and Multifamily – 1.8 per dwelling unit Accessory Dwelling Unit – 1 per unit Multifamily in RA-HC is exempt	Minimum residential parking requirements are proposed to: Single Family Detached, Duplex, Triplex, Quadplex, Townhome, Two over Two –2 per dwelling unit Multifamily, Cottage Court – minimum 1 per dwelling unit, exempt in DT, TOD-O, and AC-O Districts, 2 per dwelling unit maximum Accessory Dwelling Unit – exempt Overflow parking for Single Family Detached and Townhome – 1 per 10 dwelling units	Best Practice
Section 9.6.7.B		New electric vehicle charging requirements are proposed	Modernize Standards; Enhance Environmental Stewardship; Comprehensive Plan Implementation
Section 9.6.6.A.2	The current UDO allows only parking spaces beyond the minimum to be compact spaces.	The draft UDO proposes to allow 5% of parking spaces to be compact.	Enhance Environmental Stewardship
Section 9.8.5	Residential driveway minimums are currently 12 feet.	Residential driveway minimums are proposed to be 10 feet. Maximum driveway widths for driveways facing a front lot line	Modernize Standards

		are proposed to not exceed 40 percent of the width of the lot.	
Section 9.8.6		Residential driveway length standards are proposed.	Modernize Standards
Section 9.8.3		Driveway spacing standards are added to address multiple street classification types and intersections.	Modernize Standards; Comprehensive Plan Implementation
Section 9.12.1.B		Sidewalk gap standards are proposed.	Comprehensive Plan Implementation
Section 9.12.2		The draft UDO proposes benches, waste receptacles, water fountain, greenway signage, and trees be installed with greenway development.	Comprehensive Plan Implementation
Section 9.13	The current UDO requires that projects with 100 or more residential units or 100,000 square feet of non-residential space that are adjacent to present or planned transit routes provide adequate and well-located space for a shelter and bus drop-off area as specified by the local transit operator/authority.	The draft UDO proposes projects with 100 or more residential units or 100,000 square feet of non-residential space that are adjacent to present or planned transit routes provide a transit easement with bus stop shelter and amenities. Projects meeting the size threshold that are not adjacent to existing or planned routes are proposed to provide a transit easement and amenity pad.	Comprehensive Plan Implementation
	Chapter 10: Lighting Standards		

Section 10.3.1.		Light pole style standards are proposed for certain zoning districts.	Comprehensive Plan Implementation
Section 10.3.2		LED color rendering and temperature standards are proposed.	Best Practice
Section 10.3.3		Backlight, Uplight and Glare (BUG) standards are proposed.	Enhance Environmental Stewardship
Section 10.4.7	The current UDO requires specific illumination levels for different street classifications.	The draft UDO proposes street light spacing standards and fixture lumen requirements.	Improve Ease of Use
Section 10.4.8		Pedestrian scale lighting standards are added.	Comprehensive Plan Implementation
Section 10.4.9		Structured parking light standards are added.	Best Practice
	Chapter 11: Utilities, Services, and Impact Fees		
Section 11.2		Waste management expectations are clarified for the Municipal Service District	Improve Ease of Use
Section 11.2		Provision of recycling is clarified	Enhance Environmental Stewardship
Section 11.3	The current UDO outlines the Recreation Facility Fee requirements.	Co-locates all impact fees together	Improve Ease of Use
	Chapter 12: NATURAL RESOURCE PROTECTION STANDARDS		
Section 12.7	The current UDO requires nutrient (nitrogen and phosphorus) reduction in the Falls Lake watershed.	The draft UDO proposes nutrient reduction requirements Town-wide due to changes in State regulation.	Enhance Environmental Stewardship

Section 12.4 and 12.7	The current UDO requires that stormwater control measures be designed to handle 10-year storm events.	The draft UDO proposes that stormwater control measures be designed to handle 25-year storm events.	Enhance Environmental Stewardship
Section 12.8	The current UDO does not include watershed standards for the Little River Watershed.	The draft UDO propose to add Little River Watershed and associated restrictions. This area is currently outside of the Town's corporate limits and ETJ but is within the utility merger agreement area.	Enhance Environmental Stewardship
Section 12.5		New grading standards are proposed.	Enhance Environmental Stewardship
	Chapter 13: Sign Standards		
Section 13.1.2.A	Current Address/Tenant Identification Signs allowances are outlined in Section 11.8	Address Identification is proposed to be relocated to exemptions	Case Law Compliance
Sections 13.4.1 and 13.4.4	Current Awning/Canopy Signs allowances are outlined in Section 11.8	Awning and Canopy Signs are separated into two different sign types	Modernize Standards
Section 13.5.2	Current Directional Signs allowances are outlined in Section 11.8	This sign type name is revised to Internal Circulation Safety Sign	Case Law Compliance
Section 13.5.1	Current Drive-Thru Menu Boards allowances are outlined in Section 11.8	For content neutrality, this sign type is renamed Drive-Through Sign.	Case Law Compliance
Section 13.3.2	Current Electronic Message Boards allowances are outlined in Section 11.8. Additional standards limit the electronic copy to 25% with a black	Electronic displays are relocated to the illumination section of the chapter instead of being called out as a separate sign type.	Modernize Standards

	background with amber or red text only with 2-minute intervals required.	Additional standards limit the electronic copy to 33% with no color with 1-minute intervals required.	
	Current Gas Station Pricing Canopy, Monument, and Wall Sign allowances are outlined in Section 11.8	These sign types are proposed to be eliminated and are not content neutral.	Case Law Compliance
	Current Government Sign allowances are outlined in Section 11.8	This sign type falls under some of the exempt Regulatory and Warning Signs. All other government signage is proposed to follow other proposed sign types.	Case Law Compliance
Sections 13.4.5 and 13.5.3	Current Historic Identification Sign allowances are outlined in Section 11.8	This sign type is renamed Plaque Sign for content neutrality. Interpretative Marker Sign is also added as a sign type.	Case Law Compliance
Section 13.1.2.A	Current Incidental Sign allowances are outlined in Section 11.8	Incidental Signs are proposed to be relocated to exempt signs subject to certain criteria.	Case Law Compliance
Section 13.1.2.A	Current Legal and Warning Sign allowances are outlined in Section 11.8	Regulatory and Warning Signs are proposed to be relocated to exempt signs subject to certain criteria.	Case Law Compliance
Section 13.5.4	Current Monument Sign standards for single-use/building allowances are outlined in Section 11.8	Monument sign dimensions are proposed to allow increases when located on higher classified streets.	Best Practice
Section 13.5.4	Current Monument Sign standards for multiple non-residential	Monument sign dimensions are proposed to allow increases	Best Practice

	buildings allowances are outlined in Section 11.8	when located on higher classified streets.	
Section 13.5.6	Current Residential Monument Sign allowances are outlined in Section 11.8	This sign type is renamed Residential Entryway Sign.	Case Law Compliance
Section 3.4.3.T	Current Murals/Wall Art allowances are outlined in Section 11.8	Murals are proposed to regulated as an accessory use instead of as a sign.	Case Law Compliance
Section 13.1.2.A	Current Occupant/Street Number Sign allowances are outlined in Section 11.8	Address Identification is proposed to be relocated to exemptions	Case Law Compliance
Section 13.5.5	Current Post & Arm Sign allowances are outlined in Section 11.8	This sign type is renamed Post Sign.	Improve Ease of Use
Sections 13.4.3 and 13.4.2	Current Projecting/Suspended Sign allowances are outlined in Section 11.8	This sign type is separated into two sign types – Bracket-Mounted Sign and Blade Signs	Modernize Standards
	Current Theatre Marquee Sign allowances are outlined in Section 11.8	This sign type is proposed to be eliminated and is similar to the Canopy Sign type	Improve Ease of Use
	Current Vending Machine/Automatic Teller & Gasoline Pump Sign allowances are outlined in Section 11.8	This sign type is proposed to be eliminated and falls under the Incidental Sign type	Case Law Compliance
Section 13.4.5	Current Wall Sign allowances are outlined in Section 11.8	The number of Wall Signs allowed per building is reduced. The total square footage allowed is comparable to current allowances.	Best Practice

Sections 13.4.7 and 13.6.7	Current Window/Door Sign allowances are outlined in Section 11.8	Standards for permanent and temporary window signs are proposed.	Best Practice
Sections 13.6.3, 13.6.6, and 13.7.1	Current Special Event, Grand Opening, and Utility Pole Banner allowances are outlined in Section 11.9	These sign types are proposed to be revised for content neutrality Light Pole Banner Sign, Wall Mounted Banner Sign, and Ground Mounted Banner Sign.	Case Law Compliance
Section 13.7.3	Current Construction Project Sign allowances are outlined in Section 11.9	These sign types are proposed to be revised for content neutrality to Post and Panel Signs	Case Law Compliance
	Current Flag allowances are outlined in Section 11.9	Flags are proposed to regulated as an accessory use instead of as a sign.	Case Law Compliance
Section 13.1.2.A	Current Holiday Decoration allowances are outlined in Section 11.9	Holiday Decorations are proposed to be relocated to exemptions subject to display time limits.	Case Law Compliance
	Current Model Home/Sales Office Sign allowances are outlined in Section 11.9	This sign type is proposed to be eliminated. Other temporary sign types may be used.	Improve Ease of Use
Section 13.1.2.A	Current Political Sign allowances are outlined in Section 11.9	Political Signs are proposed to be relocated to exemptions per state statute	State Law Compliance
Section 13.7.4	Current Portable/A-Frame Sign allowances are outlined in Section 11.9	This sign is proposed to be renamed to Sidewalk Sign.	Improve Ease of Use
	Current Public Event Sign allowances are outlined in Section 11.9	This sign type is proposed to be eliminated due to content	Case Law Compliance

		neutrality. Other temporary sign types may be used.	
Section 13.7.2	Current Real Estate Sign allowances are outlined in Section 11.9	This sign type is proposed to be revised for content neutrality to Temporary Post Signs	Case Law Compliance
Section 13.7.5	Current Temporary Residential Marketing, Directional, and Yard Sale Sign allowances are outlined in Section 11.9	This sign type is proposed to be revised to Yard Sign for content neutrality and to be available to a wider range of development types.	Case Law Compliance
Section 13.1.2.A		Other exempt signage under state law, such as bona-fide farm signs and fence wraps are added.	State Law Compliance
Section 13.6.1		Applied Vinyl Sidewalk Sign is a new sign type proposed	Modernize Standards
Section 13.6.2		Athletic Field Fence Sign is a new sign type proposed	Case Law Compliance
Section 13.6.4		Scoreboard Sign is a new sign type proposed	Case Law Compliance
Section 13.6.5		Sock Sign is a new sign type proposed	Modernize Standards
Section 13.9		A temporary sign plan option is established for Public & Institutional uses.	Case Law Compliance; Modernize Standards
Sections 13.4 and 13.5		Sign copy is proposed to be primarily channel letters or other methods of directly affixing permanent signage without the use of raceways or cabinets.	Modernize Standards
	Chapter 14: Performance and Maintenenance		

	Performance standards are currently located within Chapter 6. Maintenance standards are included throughout the UDO.	Performance and Maintenance is a new chapter to co-locate all performance and maintenance related standards.	Improve Ease of Use
Section 14.2	Payment in Lieu provisions are currently included throughout the UDO.	Payment in Lieu provisions are co-located to this chapter.	Improve Ease of Use
Section 14.3		Performance guarantee standards are aligned with state statute requirements regarding timing and types.	State Law Compliance
Section 14.4		Provisions related to phasing of improvements are added.	Best Practice
Section 14.5		Additional maintenance standards are added, including parking areas, cemeteries, and fences.	Best Practice
	Chapter 15: Nonconformities		
Sections 15.3 and 15.5	Currently nonconforming uses and structures are addressed together.	This chapter is reorganized for clarity, separating nonconforming uses and nonconforming structures into separate sections.	Improve Ease of Use
Section 15.5.2.A	Nonconforming use discontinuation period is one year.	Nonconforming use discontinuation period is proposed to be 90 days.	Best Practice
Section 15.3		Flexibility standards for historic structures are added for nonconforming buildings/structures	Best Practice

Section 15.4	The current applicability matrix does not include all standards or development scenarios.	Nonconforming site elements has its own section and a new general applicability table is added to Chapter 1	Improve Ease of Use
		Nonconforming manufactured home parks is removed because this use is proposed to be removed from the use table and there are no existing manufactured home parks within the Town's jurisdiction.	Improve Ease of Use
	Chapter 16: Administration		
	Administrative agencies and decision bodies are currently outlined in Chapter 14 and processes are outlined in Chapter 15.	This chapter combines the information about both decision making bodies and procedures into one chapter.	Improve Ease of Use
Section 16.2.7		Adds conflict of interest section	State Law Compliance
Section 16.5.11.E	UDO does not currently allow a combined site plan and construction plan review process.	Adds allowances for combined site plan and construction plan review option for certain site scenarios	Improve Ease of Use
Section 16.5.8	UDO does not currently outline an interpretation process.	Add Interpretation process	Improve Ease of Use
Section 16.5.10	UDO does not currently outline a reforestation process.	Add Reforestation Permit process corresponding to recent Code of Ordinances amendment	Improve Ease of Use
Section 16.5.1	Administrative Modifications are currently outlined in Section 15.6.4, and other alternatives or waivers	Clarifies and expands upon current Administrative	Modernize Standards

	are included throughout the UDO, such as parking and landscaping, .	Modification allowances and co-locates standards together	
Section 16.7.4	UDO does not currently outline a development agreement process.	Adds Development Agreement process	State Law Compliance
Section 16.7.11	UDO does not currently outline a process for approving extended vested rights.	Add legislative process for extended vested rights requests	State Law Compliance
	Chapter 17: Enforcement		
		This chapter is reorganized for clarity by creating more sections within the chapter.	Improve Ease of Use
Section 17.6		The citation and civil penalty amounts are consolidated	Improve Ease of Use
Section 17.6.4	Development delays as a tree removal penalty are currently based on the amount of trees removed.	Clarifies tree development delays for removal in accordance with State statutes	State Law Compliance
	Chapter 18: Definitions and Interpretation		
Sections 18.2 and 18.3	Currently some measurement and interpretation rules are located in Chapter 4	Adds and co-locates rules of construction, interpretation, and measurement	Improve Ease of Use
Section 18.2.11		Adds acronyms for clarity	Improve Ease of Use
Section 18.4		Adds more definitions for clarity	Improve Ease of Use

TOWN *of*
WAKE FOREST

Report Requirements:

Per NCGS 160D-604, all proposed amendments to the zoning ordinance or zoning map shall have a written report provided from the Planning Board to the Board of Commissioners within 30 days of referral of the amendment to the Planning Board, or the Board of Commissioners may proceed in its consideration of the amendment without the Planning Board report. Furthermore, in no case is the Board of Commissioners bound by the recommendations, if any, of the Planning Board.

Per NCGS 160D-604, the Planning Board shall advise and comment on whether the proposed zoning ordinance text or map amendment is consistent with all applicable officially adopted plans, and provide a written recommendation to the Board of Commissioners that addresses plan consistency and other matters as deemed appropriate by the Planning Board, but a comment by the Planning Board that a proposed amendment is inconsistent with the officially adopted plans shall not preclude consideration or approval of the proposed amendment by the Board of Commissioners.

GENERAL INFORMATION

Applicant:	Town of Wake Forest
Owner:	N/A
Requested Action:	Amend the Unified Development Ordinance (UDO)
Existing Zoning:	N/A
Location:	N/A
Size:	N/A
Tax PINs:	N/A
Existing Land Use:	N/A

Applicable Officially Adopted Plans:

The request is generally **consistent/inconsistent** (circle one) with the relevant policies in the Comprehensive Plan, and **approval/approval with conditions/denial** (circle one) of the UDO text amendment request is reasonable and in the public interest. See Attachment.

This report reflects the recommendation of the Planning Board, this the 8th day of October 2024.

Introduced by Planning Board member: Matt Davis

Seconded by Planning Board member: Elaine Sheppard

Attest:

Karin Kuroppas, Planning Board Chair

Jennifer Currin, Interim Planning Director

Community Plan Consistency Grid: UDO				
POLICIES FOR AFFORDABLE HOUSING		**YES**	**NO**	**NA**
AH-1	Implement Affordable Housing Plan			
POLICIES FOR RESIDENTIAL CHARACTER		**YES**	**NO**	**NA**
RC-1	Encourage single-family attached and multifamily development to incorporate varied building frontages and rooflines, front porches, front yards, and balconies to provide visual interest and complement the scale and character of surrounding single-family neighborhoods			
RC-2	Setbacks of infill development should match the existing context as much as possible as uniform setbacks can help foster a pedestrian-friendly environment			
RC-3	Promote higher density infill and redevelopment within older established neighborhoods to provide greater housing choices while matching the scale and character of existing properties			
RC-4	Promote higher density housing along key corridors and surrounding activity centers. This includes near areas designated in the Land Use Plan as Commercial Corridor; Neighborhood Commercial; Light Industrial; and Office, Civic, and Institutional			
RC-5	For larger scale planned subdivisions that provide a mix of housing types, work with private developers to locate lower density housing near existing single-family detached neighborhoods to create appropriate transitions and preserve the character of established neighborhoods			
RC-6	Consider requiring a minimum percentage of housing types in new neighborhood developments to increase housing diversity and affordability (e.g. at least 20% duplexes/townhomes)			
RC-7	Review and update the UDO to align with residential character recommendations within this Community Plan			
POLICIES FOR SENIOR HOUSING		**YES**	**NO**	**NA**
SH-1	Promote senior housing within a quarter mile of transit stops, Downtown, shopping areas, parks, and recreational facilities			
SH-2	Encourage smaller lot, single-story housing types for seniors that are ADA accessible			
SH-3	Encourage age-targeted cooperative housing types for community-oriented senior living, such as co-housing and cottage home courts			
SH-4	Promote the development of continuing care retirement communities (CCRC), or life plan communities, which offer distinct types of housing and care levels based on a senior's needs			
SH-5	Encourage developers of age-targeted housing to include amenities attractive to seniors, such as front porches, back patios, walking paths, and outdoor sports facilities, and activated gathering spaces			

Community Plan Consistency Grid: UDO

POLICIES FOR COMMERCIAL DEVELOPMENT		YES	NO	NA
CD-1	Enhance established commercial areas by incentivizing redevelopment and/or renovation of existing businesses.			
CD-2	Support small, local businesses within commercial centers to support unique shopping options within Wake Forest			
CD-3	Establish architectural design standards for commercial building facades that promote quality design while allowing for flexibility that encourages creative design			
CD-4	Promote multi-story structures within Commercial Corridor and Neighborhood Commercial areas at appropriate scales that offer residential or office above ground-floor commercial			
CD-5	Encourage pedestrian-oriented shopping environments with sidewalks, attractive storefronts, and buildings facing each other to create a sense of enclosure			
CD-6	Encourage the incorporation of pedestrian/bicyclist/transit-oriented areas in large-scale shopping centers that provide outdoor seating and gathering areas, bicycle parking stations, and access to transit services			
CD-7	Promote cross-access and pedestrian pathways between adjacent parking lots and leading to buildings to promote well-connected, cohesive shopping areas			
CD-8	Encourage the consolidation of commercial driveways onto major streets to reduce traffic conflicts			
CD-9	Require “360 degree architecture” (high quality architecture on all sides of the building as opposed to just the front-facing façade), including well-designed or screened service areas			
CD-10	Encourage businesses to replace existing, non-conforming signage with attractive signage that meets Town standards			
CD-11	Promote outparcel development to improve the character along primary roadways and break up views of large parking lots			
CD-12	Review and update the UDO, including the US 1 Special Highway Overlay (SH1-O) and Dr Calvin Jones Highway Overlay (SH2-O) districts, to align with commercial development recommendations within this Community Plan			
CD-13	Support accessory commercial units (ACUs) that allow the ground floor of residential properties or an accessory structure facing the street to contain a commercial use beneficial to the surrounding neighborhood			
CD-14	Establish block standards for commercial areas to break up large tracts into more human scale pieces with streets or street-like features within the development			

POLICIES FOR MINORITY & WOMEN-OWNED BUSINESSES		YES	NO	NA
MWOB-1	Work with organizations, such as the Chamber and the Black Business Alliance, to expand diversity, equity, and inclusion programs that are supported with grassroots community engagement			
MWOB-2	Explore successful programs for supporting minority and women-owned businesses in surrounding communities to implement in Wake Forest			
MWOB-3	Explore regional, state, and federal grants available for minority and women businesses, such as grants from the National Institute of Economic Development and Carolina Community Impact			
MWOB-4	Support informational sessions and/or provide educational resources to employers on how they can establish equitable work environments and policies within their businesses			

POLICIES FOR SETBACKS		YES	NO	NA
SB-1	Incentivize businesses to situate new buildings at or near the property line to improve walkability, such as by requiring more landscaping if parking lots are located in front of buildings rather than to the rear/side			
SB-2	Promote consistency in setbacks within commercial and residential areas to form desirable continuity in the streetwall, or the facades of buildings facing the street			
SB-3	Encourage outparcel development with 360 architecture to “hold the corner” of commercial corridor development			

Community Plan Consistency Grid: UDO				
SB-4	Ensure adequate setbacks of industrial or other high intensity uses to reduce potential sound or visual impacts on adjacent lower intensity uses			
SB-5	Allow for flexibly in setbacks in Downtown where existing conditions prevent a consistent streetwall, while maintaining a close interface with the street (e.g., utility, landscaping, and/or topography challenges)			
POLICIES FOR PARKING LOTS		**YES**	**NO**	**NA**
PL-1	For existing front-loaded surface parking lots, encourage property owners to improve their character with perimeter and interior landscaping, and/or decorative walls and fencing			
PL-2	Require off-street parking to be located to the side or rear of the primary building			
PL-3	Encourage shared parking agreements where neighboring uses with different peak parking demand times can use the same parking lot, reducing the need for additional parking lots			
PL-4	Reevaluate minimum parking standards and consider implementing maximum parking standards to reduce excessive requirements			
PL-5	Monitor parking supply and strategically encourage structured or underground parking in higher density areas if needed, such as in Downtown, TOD, and activity center areas, to reduce the amount of land dedicated to surface parking			
PL-6	Consider offering incentives for structured parking, such as density bonuses, allowable lot coverage increases, and height limit increases.			
PL-7	Encourage the integration of structured parking into multifamily buildings to minimize surface parking lots			
PL-8	Encourage North Carolina Department of Environmental Quality's (NCDEQ) Stormwater Nitrogen and Phosphorus (SNAP) nutrient-reducing practices, such as permeable surfaces, that allow water infiltration in parking lots to improve stormwater drainage and water quality			
PL-9	Encourage the provision of pedestrian walkways in parking lots to enhance connectivity and safety to businesses			
POLICIES FOR SCREENING & BUFFERING		**YES**	**NO**	**NA**
SB-1	Ensure sufficient screening and buffering of industrial and commercial uses next to residential uses to minimize potential adverse impacts, such as in the Unicon Drive area			
SB-2	Encourage new development to preserve existing wooded areas along the perimeter of sites to provide natural buffering			
SB-3	Encourage screening of utility, loading, outdoor storage, and trash disposal areas that are visible from the right-of-way and adjacent development			
SB-4	Promote the use of setbacks for walls and fences that allow for plantings between the property line and the right-of-way and adjacent development			

Community Plan Consistency Grid: UDO				
POLICIES FOR COMMUNITY CHARACTER		**YES**	**NO**	**NA**
CC-1	Preserve vistas and view corridors that contribute to the economic and aesthetic value of Wake Forest, such as the church steeple at Southeastern Baptist Theological Seminary, S White Street in Downtown, and N Main Street in the Wake Forest Local Historic District			
CC-2	Curate public outdoor spaces for important monuments and artworks to showcase them as anchors and entry points to neighborhoods			
CC-3	Leverage historic structures, events, and people to create a sense of place through placemaking and branding			
CC-4	Ensure new development is contextual to the existing character of the area in terms of scale, massing, setback, fenestration, and design features (porches, storefronts, etc.)			
CC-5	Encourage developers to incorporate landscaping to beautify neighborhoods and commercial areas, such as landscaped medians and roundabouts.			
CC-6	Incorporate landscaping and gateway features into public rights-of-way, such as landscaped streetscapes, green infrastructure, and public promenades			
CC-7	Emphasize quality development along highly visible thoroughfares in the Town to reinforce its positive image			
CC-8	In accordance with the Land Use Plan, ensure incompatible, high intensity uses are directed away from low intensity residential areas			
CC-9	Continue to provide quality municipal services for the maintenance and upkeep of neighborhoods, such as street cleaning, snow removal, and trash disposal services			
CC-10	Work with NCDOT to identify areas for roadway enhancements			
CC-11	Refer to the Public Art Vision Plan for guidance when public art is being proposed in private development			
CC-12	Work with developers to improve the character of retaining walls, such as by incorporating public art or tiering the walls to reduce their visual impact			
POLICIES FOR UTILITY LINES		**YES**	**NO**	**NA**
UL-1	Create a master plan for burying utility lines with community involvement to identify priority areas for conversion			
UL-2	Ensure major Town entrances and gateway corridors and highly visible, pedestrian-oriented areas are prioritized for conversion			
UL-3	Consider trenching utilities as capital improvements are made in the right-of-way for all areas of the Town			
UL-4	Investigate partnering with private developers to install conduit for fiber and/or burying utility lines in priority conversion areas			
UL-5	Explore partnerships with private developers for boring and burying additional conduit along main roadways			
UL-6	Consider and install conduit with greenway project construction.			

Community Plan Consistency Grid: UDO				
POLICIES FOR HISTORIC PRESERVATION		**YES**	**NO**	**NA**
HP-1	Work with the Historic Preservation Commission (HPC) and the Planning Department to continue to implement the 2019 Historic Property Handbook and Design Standards and continue to preserve existing and new historic landmarks			
HP-2	Continue to enforce the Historic Preservation Ordinance for the Wake Forest Local Historic District and local historic landmarks			
HP-3	Promote State and Federal Tax Incentives for qualified rehabilitation projects for properties listed individually or as contributing historic properties in the National Register of Historic Places			
HP-4	Ensure development surrounding and within historic districts is sensitive to the historic context of the neighborhood			
HP-5	Encourage adaptive reuse, restoration, and repurposing of historic structures to preserve Wake Forest's history			
HP-6	Continue to enforce the Demolition of Historic Structures Ordinance for the protection of all historic properties in Wake Forest			
HP-7	Investigate the adoption of new local historic districts or character historic overlay districts to preserve Wake Forest's historic character			
POLICIES FOR COMMUNITY FACILITIES		**YES**	**NO**	**NA**
CF-1	Expand Town facilities concurrently with new growth			
CF-2	Annually review the Town's Work Management Plan, Staffing, and Budget section to reflect current needs and priorities			
CF-3	Work with the Wake Forest Parks, Recreation, and Cultural Resources Department to identify strategies to close gaps in park service areas, such as west of Capital Boulevard and the southern and eastern portion of Town			
CF-4	Work with the Wake Forest Parks, Recreation, and Cultural Resources Department to expand equity in the quality of public park facilities and programming			
CF-5	Explore green infrastructure options that also beautify spaces, like bioswales and planters			
CF-6	Continue to work with regional educational entities to provide support as they seek new facility locations or expansion with growth			
CF-7	Coordinate with regional educational entities to ensure increased equity in educational facilities across the community			
CF-8	Coordinate with the Police and Fire Departments to ensure response times are sufficient for all areas of town with growth			
CF-9	Consider emerging best practices for community safety, such as mental health crisis response teams			
CF-10	Promote and incorporate sustainable building practices into community facilities, setting a precedent for private developers to implement			
CF-11	Coordinate with regional healthcare providers to explore opportunities to locate a full service hospital or regional medical facilities in the Town			
CF-12	Evaluate existing streets and explore UDO updates to address traffic congestion, traffic speed, reduce collisions, and improve safety conditions for all modes of transporation			
CF-13	Regularly update the Town Pavement Management System program			

Community Plan Consistency Grid: UDO				
POLICIES FOR PUBLIC TRANSIT		**YES**	**NO**	**NA**
PT-1	Continue to work with transit partners to consider more frequent service and route network expansions to key locations to improve rider experience and attract more usage of mass transit			
PT-2	Coordinate with property owners, private developers, and transit partners to set aside land for transit stops at appropriate locations. The Town should obtain a transit easement for these locations and construct and maintain quality bus shelter infrastructure			
PT-3	Work with GoRaleigh and GoTriangle to construct smart bus shelters, or sustainable shelters that incorporate elements like interactive screens with live timetables, smart lighting, solar panels, and bike lock stations			
PT-4	Explore incorporating public art into bus shelters			
PT-5	Continue to evaluate and coordinate Park and Ride locations with transit partners			
PT-6	Explore best long term transit options such as fixed or microtransit			
POLICIES FOR CAPITAL BOULEVARD		**YES**	**NO**	**NA**
CB-1	Continue to work closely with NCDOT to implement the project and promote commercial growth in accordance with the Land Use Plan			
CB-2	Continue advocating for improvements along the corridor to assist in improving the quality of life for Wake Forest residents, businesses, and property owners			
POLICIES FOR STREET CONNECTIVITY		**YES**	**NO**	**NA**
SC-1	Promote short blocks of less than 600 linear feet between intersections of local roads to improve walkability			
SC-2	Avoid dead-ends, cul-de-sacs, and T-intersections in places where four-way intersections can be aligned			
SC-3	Study the appropriateness of traffic circles at four-way intersections to ease congestion and improve safety			
POLICIES FOR SIDEWALKS & MULTI-USE PATHS		**YES**	**NO**	**NA**
SP-1	Update the CTP to include an inventory of sidewalks in addition to multi-use paths and establish project priorities, private-public funding, and time frames for closing gaps in the network			
SP-2	Update the CTP to identify priority areas for high visibility crosswalks, bulb outs, refuge islands, rectangular rapid flashing beacons, and other pedestrian improvements			
SP-3	Work with Public Works to identify crosswalk ramps that are not ADA compliant and prioritize upgrades			
SP-4	In coordination with roadway improvements, upgrade aging sidewalks or install new sidewalks if none exist			
SP-5	Promote sidewalk, multi-use path, or trail connectivity between residential subdivisions and nonresidential development to improve pedestrian and bicycle connectivity			
SP-6	Continue to ensure all new residential development provides sidewalks on both sides of the street			
SP-7	Encourage multi-use paths to be provided along the main road in developments			
SP-8	Ensure multifamily and commercial developments include strong pedestrian networks within and between their sites			

Community Plan Consistency Grid: UDO				
POLICIES FOR BIKEWAYS, GREENWAYS & TRAILS		**YES**	**NO**	**NA**
BGT-1	Identify trail head locations as the greenway and trail network continues to expand			
BGT-2	Explore opportunities along greenways to add amenities (i.e. water fountains, seating /rest areas, pocket parks, public art, and fix it stations) and programming with the Parks, Recreation, and Cultural Resources Department or other organizations like StoryWalks			
BGT-3	Encourage development along greenways to incorporate greenway access into the site, particularly for uses attractive to trail users (i.e. restaurant, cafes, and bars)			
POLICIES FOR LOCAL FOOD SYSTEMS		**YES**	**NO**	**NA**
LFS-1	Continue to support the Northern Community Food Security Team and together explore other locations for community food hubs within the Town			
LFS-2	Partner with local food cooperatives and regional food networks, such as the Capital Area Food Network, to address food insecurity in the community			
LFS-3	Encourage regenerative practices, such as use of organic fertilizers, crop rotation, and crop variation for healthy soil			
LFS-4	Conduct a meal gap survey to better assess the immediate and long term needs in the community			
LFS-5	Evaluate the economic impact of local food systems in the community to encourage localized marketplaces for food producers			
LFS-6	Explore updates to the UDO that would promote urban agriculture and repurposing of vacant or underutilized lots for such uses			
POLICIES FOR CONSERVATION DESIGN		**YES**	**NO**	**NA**
CD-1	Encourage conservation design in the UDO's subdivision development regulations, particularly for areas within watershed protection areas			
CD-2	Explore incentives for promoting conservation design, such as density bonuses to allow for comparable number of housing units but greater preserved green space within the site			
CD-3	Encourage developers to enhance preserved green spaces as accessible amenities for residents, such as trails and outdoor seating			
POLICIES FOR GREEN SPACE PRESERVATION		**YES**	**NO**	**NA**
GSP-1	Prioritize higher density redevelopment and infill development within already developed areas to avoid premature development in long term growth areas and reduce greenfield development			
GSP-2	Work with private developers to preserve significant natural assets within sites, such as streams, steep slopes, unique geological formations, wetlands, and mature stands of trees, which can be incorporated as development amenities			
GSP-3	Continue to identify and strategically acquire environmentally sensitive land to preserve as dedicated conservation areas and publicly accessible open space			
GSP-4	Explore incentives to promote conservation design in future development, such as density bonuses, to promote clusters of taller structures that preserve natural areas of the site			
GSP-5	Explore strategies to further promote green space preservation within the updated UDO, such as increasing set aside requirements, and evaluate what is credited as open space			
GSP-6	Explore strategies to further protect wildlife and environmentally sensitive areas in the UDO			

Community Plan Consistency Grid: UDO				
POLICIES FOR TREE CANOPY		**YES**	**NO**	**NA**
TC-1	Continue to support the Town in administering the Urban Forestry Program and planting, preserving, and maintaining trees on public properties and rights-of-way			
TC-2	Explore updates to the UDO that could further promote tree preservation and replacement in new developments			
TC-3	Review existing incentives and consider additional incentives for private developers to promote tree preservation above what is required by the UDO			
TC-4	Explore ways to increase the number of trees required in parking lots during the update to the UDO, such as requiring an island every 20 parking spaces or decreasing the minimum distance a parking space can be from a tree			
TC-5	Ensure public and private tree plantings and xeriscaping are made up of native plant species that are adapted to local environmental conditions and require less irrigation			
TC-6	Coordinate efforts to influence State regulations related to the expansion of tree preservation standards			
POLICIES FOR SUSTAINABLE DEVELOPMENT		**YES**	**NO**	**NA**
SD-1	Encourage private developers to incorporate green building, LID, and green infrastructure practices in future developments			
SD-2	Incorporate green infrastructure into public streetscapes, prioritizing pedestrian-oriented areas like Downtown, TOD, and Neighborhood Commercial areas			
SD-3	Continue to incorporate sustainable design best practices into Town-owned infrastructure and community facilities, striving to incorporate LEED practices into future facilities			
SD-4	Use the Environmental Protection Agency's (EPA) "Revising Local Codes to Facilitate Low Impact Development" guide to help identify regulations within the UDO that discourage LID practices			
SD-5	Evaluate potential rainwater collection programs and composting programs			
SD-6	Explore an incentive program to encourage development to provide stormwater when lots are exempt from stormwater requirements			
SD-7	Update the Manual of Specifications, Standards and Design to reference green infrastructure design			
SD-8	Explore decommissioned rights-of-way as potential stormwater routes			
SD-9	Support the use of attractive, safe, and sustainable street furniture and infrastructure, such as solar streetlights, and LED traffic lights			
SD-10	Expand the electric vehicle (EV) charging network by requiring the installation of charging stations, or the infrastructure needed to accommodate future charging stations, in all new parking lots, especially parking lots of multifamily and large scale developments, and increasing supply of public charging stations			
SD-11	Promote adaptive reuse over redevelopment for structures that are structurally sound, feature desirable built form, and/or are historically significant. This includes creating an online inventory of buildings available for adaptive reuse			
SD-12	Investigate developing a solar energy ordinance and enrolling in the SolSmart program, a national designation program funded by the US Department of Energy charged with making solar power faster, easier, and more affordable			

Community Plan Consistency Grid: UDO				
SD-13	Explore ways to incentivize renewable energy and passive solar design in the Town's development standards. SolSmart's Solar Energy Toolkit can be used as resource for better promoting solar panels within the code			
SD-14	Continue partnership with Raleigh to encourage homeowners to incorporate practices for water conservation			
POLICIES FOR TOURISM		**YES**	**NO**	**NA**
T-1	Grow the Town's art community and reputation as a regional arts destination with a Downtown focus			
T-2	Explore the potential of constructing a recreational destination facility with a regional draw			
T-3	Develop annual Tourism Economic Impact Reports to help quantify progress made in Wake Forest's tourism sector and identify trends, issues, and opportunities that can help Town staff prioritize future investments			
T-4	Support the Wake Forest Area Chamber to create and market a local visitor's center as a public resource hub for the Town's attractions, events, and businesses for visitors			
T-5	Leverage Wake County's Room Occupancy Tax to build, finance, and create new establishments or run events related to tourism, allowing the Town to capitalize on its success in drawing hotel occupants			
T-6	Create a community-wide wayfinding plan to improve sense of place and signage that directs visitors and residents to Town destinations			
T-7	Continue to support Wake Forest Downtown Inc. (a Main Street America accredited program) in meeting the National Accreditation Standards of Performance as outlined by the National Main Street Center			
T-8	Continue to participate in the NC Main to Main Trail program, a network that connects the State's Main Street America communities, and leverage this designation in the Town's marketing strategy			
T-9	Investigate hiring consultants to provide a comprehensive evaluation of Town events and provide recommendations for improved programs			
T-10	Explore the creation of a social district, where customers can carry and consume food and drinks purchased from businesses outside in a designated zone			
POLICIES FOR GATEWAYS		**YES**	**NO**	**NA**
GW-1	Create a Gateway Plan to identify and prioritize sites for gateway features and establish design standards. Ensure the Plan works in synergy with the Town's Wayfinding Plan.			
GW-2	Improve roadway infrastructure along key gateway routes to enhance their character and multimodal connectivity.			
POLICIES FOR DOWNTOWN WAKE FOREST		**YES**	**NO**	**NA**
DWF-1	Evaluate existing zoning regulations around density in appropriate locations to balance Downtown's development potential with preserving its historic character			
DWF-2	Identify strategies to fill vacant buildings Downtown that promote an entrepreneurial and small-business culture			
DWF-3	Identify strategies to attract families and younger populations to Downtown with inviting public spaces, entertainment, and destinations for all ages			
DWF-4	Provide guidelines for how buildings should be orientated to support pedestrian-friendly environments			
DWF-5	Reassess parking demand and supply with consideration for a new parking garage(s) to minimize surface parking lots			

Community Plan Consistency Grid: UDO				
DWF-6	Identify strategies to create an “experience-based” Downtown retail environment with unique local businesses and a pedestrian-oriented environment			
DWF-7	Reassess strategies to improve gateways and wayfinding to and within Downtown to better direct people and create a distinct sense of place			
DWF-8	Identify opportunities for Downtown events and public gathering spaces to bring the community together, such as live outdoor events and festivals			

Rennaissance Plan Consistency Grid (Note that Downtown Plan update is underway)

POLICIES FOR SUCCESSFUL DOWNTOWNS		YES	NO	NA
SD-1	Maintain and develop short blocks and a dense street network for enhanced walkability and increased connectivity			
SD-2	Provide ample on-street parking to support retail and act as an inherent traffic calming element			
SD-3	Ensure continuous building facade frontages along streets to keep pedestrians and bicyclists interested while traveling along the street			
SD-4	Balance the ratio of building height to street width to achieve a comfortable public realm			
SD-5	Provide and program a diversity of high quality public spaces			
SD-6	Manage parking with thoughtful consideration of location and actual need over the quantity of spaces			
SD-7	Provide active and engaging ground floor uses for downtown buildings			
SD-8	Work with businesses to encourage their hours of operation(s) go beyond 5 PM			
SD-9	Provide ample ambient lighting for both safety and interest			
SD-10	Locate restaurants in close proximity to one another to effectively concentrate a variety of options for visitors			
SD-11	Attract businesses and other uses that provide daytime employment			
SD-12	Provide high-end commercial activity			
SD-13	Increase the amount of pedestrian activity			
SD-14	Provide adequate accessibility and wayfinding for pedestrians			
SD-15	Ensure new building heights are between 2 and 4 stories			
SD-16	Ensure development is easily accessible to transit to accommodate higher volumes of users without adding pressure on parking			
SD-17	Provide dynamic activity with a mixture of sidewalk displays, outdoor dining, creative signage, diverse public spaces, and enticing window shopping			
SD-18	Incorporate unique and enticing human-scaled design features into new development			
SD-19	Attract diverse residential and employment centers within a 5 to 10-minute walk of downtown			
SD-20	Streets shall accommodate two-way, multi-modal traffic with on-street parking, street trees and furnishings			

POLICIES FOR RETAIL STRATEGY		YES	NO	NA
RS-1	Locate Retail Merchandising Units (RMUs) on sites slated, but not ready for redevelopment			
RS-2	Convene stakeholders to generate strategies for marketing downtown and facilitating new retail			
RS-3	Work to attract visitation from nearby neighborhoods/subdivisions			
RS-4	Require active ground floor uses based on the existing character and realistic aspirations for particular streets or areas			
RS-5	Make more efficient use of existing resources and condition motorists to consider parking spaces a little further than directly by their destination			

POLICIES FOR CONNECTIVITY TO THE CORE		YES	NO	NA
CC-1	Build on the identified centers of energy and ensure multi-modal connectivity between them			
CC-2	Transform Owen Street into a festival street that connects the retail core to the civic core with a unique urban experience			
CC-3	Build the Downtown Connection greenway and add a connection from Deacon Ridge Street to Franklin Street at mid-block			
CC-4	Fill any identified gaps in the sidewalk network and construct new sidewalks where suggested			
CC-5	Continue to complete streetscape improvements throughout the Renaissance Area prioritizing those that improve safety			

Rennaissance Plan Consistency Grid (Note that Downtown Plan update is underway)

POLICIES FOR MANAGING CARS		YES	NO	NA
MC-1	Enforce timed parking spaces to create more frequent turnover and availability of those parking spaces			
MC-2	Where feasible, consolidate driveway entrances and reduce curb cuts			
MC-3	Add parking spaces along Taylor Street behind Town Hall			
MC-4	Coordinate shared parking strategies with private lot owners to more efficently utilize parking facilites			
MC-5	Install signage for private lots with shared parking agreements			
MC-6	Investigate the use of the Wake Forest Baptist Church lots for downtown employee parking so that parking spots closer to retail can be used by visitors			
MC-7	Add a pay station to the White Street public parking lot if site continues to be used as public parking area			
MC-8	Meter White Street parking spaces once enforcement of time limits is implemented			
MC-9	Over time, increase public transportation access as well as parking fees for metered spots and public lots			
MC-10	Build a public parking deck to serve a specialized development, and potentially, nearby uses			

POLICIES FOR CREATING A DESTINATION		YES	NO	NA
CD-1	Connect public gathering spaces, so there is a safe, enjoyable journey between them			
CD-2	Identify and implement an interactive civic space in downtown Wake Forest that attracts families through play and water			
CD-3	Develop a community art master plan which identifies opportunities for building murals, sculptures and other forms of creative thinking			
CD-4	Hire an event coordinator to manage, promote and execute Town related activities/festivals			

POLICIES FOR PUTTING PEOPLE FIRST		YES	NO	NA
PPF-1	Implement small-scale tactical improvements to the downtown area, such as parklets, temporary art installations, closed street events, and temporary seating or dining areas.			
PPF-2	Test outdoor dining at The Forks to add outdoor vibrancy and encourage pedestrian activity on Elm Avenue			
PPF-3	Restripe Elm Avenue to include bike lanes to give the east side a dedicated bicycle facility connecting them to downtown			
PPF-4	Install a temporary parklet in the loading zone; upon evaluation of its success, consider enhanced permanent features for the space			
PPF-5	Transform the intersection of Roosevelt Avenue and Front Street into a prominent gateway to downtown Wake Forest			
PPF-6	Transform the pedestrian pathway across the rail line into an art walk to downtown Wake Forest			
PPF-7	Use interesting lighting techniques to make the bridge an iconic and memorable feature of downtown			
PPF-8	Encourage the revitalization of 153 South White Street through strategic renovations			
PPF-9	Create a master list of opportunities and seek civic organizations to partner with in order to test a range of opportunities using tactical techniques			
PPF-10	Layer the downtown environment incrementally with additional furnishings, lighting and landscaping			
PPF-11	Research best practices in public Wi-Fi program implementation and management and subsequently implement public Wi-Fi in the Renaissance Area			
PPF-12	Add ideal spatial enclosure ratios to the Unified Development Ordinance			
PPF-13	Amend the Unified Development Ordinance to better achieve ideal building heights			
PPF-14	Amend the existing Required Shopfront Overlay District to include additional frontages			

Rennaissance Plan Consistency Grid (Note that Downtown Plan update is underway)				
POLICIES FOR DEVELOPMENT AND REDEVELOPMENT OPPORTUNITIES		**YES**	**NO**	**NA**
DRDO-1	Connect the Northeast Community with downtown through a transitional redevelopment area comprised of new mixed-use infill development, renovated buildings, multi-family housing, single-family housing, and walkable street block sizes			
DRDO-2	Encourage the renovation and adaptive reuse of the garage building on Roosevelt Avenue			
DRDO-3	Transform the public and private realm of Wait Avenue and Roosevelt Avenue with redevelopment, adaptive reuse of older buildings, and new mixed-use infill development			
DRDO-4	Close a portion of Wait Avenue and consolidate the block to better accommodate a cohesive redevelopment and contribute in a positive way to downtown			
DRDO-5	Encourage infill and redevelopment along Owen Avenue to serve as a catalytic project that would add vibrancy to a key intersection in the historic core			
DRDO-6	Encourage infill development on vacant and underutilized lots on White Street to maintain a consistent and attractive street edge			
DRDO-7	Explore development and redevelopment of large parcels of land along South White Street, south of Elm Avenue, with primary focus on a mix of multi-family over retail, townhomes and civic buildings			
DRDO-8	Connect the Senior Center to downtown via Brooks Street and ensure that the public streetscape and the frontages of private development contribute to a highly walkable street			
DRDO-9	Replace some of the unsightly and underperforming parking lot area in front of the Renaissance Center with new, mixed-use outparcel development			
DRDO-10	Encourage new mixed-use, infill development and redevelopment of areas around the intersection of Elm Avenue and S. White Street			
POLICIES FOR IMPLEMENTATION STRATEGIES		**YES**	**NO**	**NA**
IS-1	Promote more frequent, smaller events in downtown that are more seasonally predictable and recurring			
IS-2	Attract a broad array of user groups, specifically children and college students, to downtown through strategic programming			

Northeast Community Plan Consistency Grid

POLICIES FOR PRESERVING AND PROTECTING		YES	NO	NA
PP-1	Identify programs, initiatives, targeted funding mechanisms, counseling, and educational opportunities to allow existing residents flexibility in maintaining their chosen place of residence			
PP-2	Update the UDO to require appropriate transitions and buffers between new commercial development and residential neighborhoods			
PP-3	Identify additional green spaces and small-scale social gathering places (e.g. community gardens, pocket parks, playgrounds, etc.) in the Northeast Community and explore opportunities to add these spaces to the open space, greenway, and parks network			
PP-4	Modernize Ailey Young Park to align with other community park improvements. Assess the demands and desires of the community's recreational needs and explore potential improvements at the park			
PP-5	Continue to implement tree planting programs and identify potential locations for additional tree planting			
PP-6	Continue to identify masses of mature and specimen trees throughout the community and encourage their protection where feasible			
PP-7	Identify additional local historic sites within the Northeast Community through engagement activities with local leaders, groups, and places of worship			
PP-8	Work with national, state and local historic preservation programs to formally protect identified historic and culturally significant sites in the Northeast Community			
PP-9	Preserve the Ailey Young House as an African-American heritage site. The site can act as a gateway into the community, as well as a place to celebrate the African-American heritage of Wake Forest			
PP-10	Identify opportunities to provide educational programming to tell the stories of local historic sites and their role in both the Northeast Community and Town of Wake Forest			
PP-11	Continue to install historic markers or other interpretive material at historic sites			
PP-12	Explore the establishment of a historic district and/or cultural landscape to preserve the historic character of the Northeast			
PP-13	Promote maintenance of roadways including street cleaning, shrub maintenance along streets, etc			

POLICIES TO FLOURISH		YES	NO	NA
F-1	Focus additional residential and non-residential growth as per Future Land Use Map recommendations and explore rezoning targeted parcels (e.g., DuBois Campus, parcels along Wait Avenue) to accommodate and encourage non-residential uses			
F-2	Research potential in-fill development sites that could support future affordable housing development in the Northeast Community — which may include a mix of multi-family housing, attached single-family housing, and detached single-family housing			
F-3	Update the UDO to allow Accessory Commercial Units (ACU)			
F-4	Continue to include provisions for accessory dwelling units (ADUs) within development regulations, including future overlay districts, to encourage the creation of such units			
F-5	Establish an overlay zoning district to align new construction with existing orientation, massing, height, size, setback, building and scale. Determine building frontages applicable to each land use category based on research of existing lot widths			
F-6	Prepare and adopt discretionary guidelines to guide the design of residential and non-residential properties			
F-7	Perform a thorough analysis of utility infrastructure systems within the study area - including broadband network coverage. The analysis should be used to update the list of needed improvements in the study area, which may be carried out through the Town's Capital Improvements Plan or through coordination with utility agencies.			
F-8	Explore creation of community gateway improvements at key intersections including identifying signage (i.e. "Northeast Community). Such gateway improvements may include landscaping, public art, signage, lighting, etc			
F-9	Explore opportunities to provide spaces and programming options for the installation of public art, specifically at activity centers in and around the community			
F-10	Encourage the redevelopment of the W.E.B. DuBois School Campus to include uses and programming that benefit both the Alumni Association and surrounding neighborhood			

POLICIES TO CONNECT		YES	NO	NA
C-1	Design and install wayfinding, signage and interpretive panels at existing parks. Such signage may include maps of the larger scale greenway network in addition to information regarding specific locations. Wayfinding signage should consider both pedestrian and bicycle friendly scales as well as vehicular scale for visibility/legibility			
C-2	Implement the streetscape recommendations that align with the 2019 Comprehensive Transportation Plan (CTP – updated 2021)			
C-3	Implement the proposed bicycle, pedestrian, greenways, multiuse paths, roadway, and connectivity facilities outlined in the 2019 Comprehensive Transportation Plan (CTP - updated 2021)			

Northeast Community Plan Consistency Grid				
C-4	Conduct an ADA audit of existing bike and pedestrian facilities within the study area to ensure ADA compliance			
C-5	Consider opportunities to reduce speeding along neighborhood roadways. Interventions could include traffic calming installations, on-street parking to buffer pedestrians from automotive lanes and deter speeding, and warning signage at specific locations to deter cut-through traffic			
C-6	Continue coordination with NCDOT and GoRaleigh to advance the Wake Forest Commuter Rail (S-Line) initiative			
C-7	Explore innovative multimodal technologies (i.e. microtransit / micromobility) to give residents of the Northeast Community additional transportation options			
C-8	As the DuBois Campus redevelops, investigate enhancing the transit service in the study area to include stops in the northern and eastern portions of the study area			
C-9	Investigate the viability of adding a transit route to / from points north of the study area (i.e. Flaherty Park, Youngsville, etc.)			
POLICIES TO PARTNER		**YES**	**NO**	**NA**
P-1	Collaborate with Wake County to identify funding opportunities (e.g., Community Development Block Grants) for affordable housing and other neighborhood improvement activities			
P-2	Work with local community organizations (such as NECC, places of worship, Alumni Association, etc.) to understand needs and requirements for existing community celebrations, as well as identify additional opportunities for new community celebrations. As part of this effort, identify funding sources and collaborative partners to launch new community events			
P-3	Strengthen existing job training and mentorship programs that can be or are provided through local organizations in Wake Forest. Provide additional opportunities as new skills are needed. Enact additional job readiness programs, directed at younger and older residents, to help individuals transition into new jobs			
P-4	Work with local organizations to identify and implement youth programming such as mentoring, after school programs, daily homework initiatives, summer youth programs, recreation activities, etc			
P-5	Work with local organizations and religious institutions to identify and implement child care programming to help support working families in the Northeast Community			

Historic Preservation Plan Consistency Grid

POLICIES FOR STRENGHTEN HISTORIC PRESERVATION PROGRAM		YES	NO	NA
1.1	Continue to flag developments that contain any historic resource that has been previously surveyed for review by the Historic Preservation Planner.			
1.2	Discourage demolition activity regardless of NRHP eligibility.			
1.3	Create a second Historic Preservation Planner position to assist with higher level administration in addition to plan review, reports, HPC support, and general assistance.			
1.4	Encourage deconstruction and salvaging of materials for demolitions. Consider incorporating this practice in HPC decisions.			
1.5	Increase access and transparency to Historic Preservation Program information and practices.			
1.6	Revise the Town of Wake Forest website to increase accessibility for visually impaired citizens (website, brochures, tours, etc.), improve meeting access/ materials, and publish demolition analysis reports to the Development Map.			
1.7	Improve communication between the HPC and the Planning Department by evaluating developing a retreat and evaluating fre quency/content of current outreach.			
1.8	Increase coordination between the HPC and Planning Board by providing combined training opportunities related to historic preservation and development			
1.9	Require the Historic Preservation Planner to meet SOI qualifications to ensure long-term historic preservation qualifications of the position. See Appendix D: Secretary of the Interior Qualifications for qualification standards.			
1.10	Encourage historic property owners to apply for landmark designation.			
1.11	Consider developing appointment criteria for the Planning Board to ensure at least one appointment has a historic preservation interest or background.			
1.12	Continue to encourage the SOI Standards for Rehabilitation to encourage adaptive reuse of existing resources.			
1.13	Continue to fund a summer internship annually.			
1.14	Considering removing the ex-officio appointment to the HPC to better align with 1.14 the structure of the Planning Board and better align with the quasi-judicial nature of the Commission.			
1.15	Seek additional funding to ensure staff and programs are able to continue and expand with the growth of the community.			

POLICIES FOR MAINTAIN HISTORIC CHARACTER		YES	NO	NA
2.1	Enhance experience at the Ailey Young House by creating a formalized gateway park.			
2.2	Expand the Wake Forest Local Historic District to align with the Wake Forest NRHP Historic District.			
2.3	Amend the Wake Forest NRHP Historic District to expand the boundaries, period of significance, and update contributing resources as recommended by the Architectural Survey Update (1958-1975) completed in 2020.			
2.4	Investigate a TOD Overlay or dimensional standards for historic areas adjacent to transit areas to ensure character compatibility and discourage demolition.			
2.5	Explore traffic impacts within the historic core for short- and long-term solutions and continued preservation of community character.			
2.6	Develop an HPC procedural policy for a new survey methodology that includes the evaluation of all NRHP criteria and meets NPS survey standards.			
2.7	Create road cross-sections in the CTP that support the historic character of a neighborhood and allow the installation of sidewalk, stormwater infrastructure, and road widening analysis.			
2.8	Minimize disturbance and protect historic character in new developments by revising Open Space (OS) requirements to buffer resources, if present, through colocation of OS lots next to the resource. Consider increasing OS credits for this circumstance.			

2.9	Complete a comprehensive re-evaluation of the Town's surveyed resources to focusing on underrepresented histories.			
2.10	Develop an inventory of absentee property owners in concert with Wake Forest Downtown and the Downtown Development Office.			
2.11	Identify and explore the creation of new local historic districts.			
2.12	Partner with nonprofits to facilitate the acquisition of properties outright or for the purchase of historic easements/covenants, based on NC G.S. 160D-942(3).			

POLICIES FOR INCREASE DIVERSITY, EQUITY & INCLUSION		YES	NO	NA
3.1	Continue to invest in the Northeast Community through existing programs (Ailey Young House, Rehab Program, etc.).			
3.2	Explore zoning options available to assist in preserving the Northeast Community character.			
3.3	Provide community outreach and education about the Rehabilitation Tax Credit Program.			
3.4	Hold a public meeting with the Northeast Community to determine interest on anti-gentrification tools (age-in-place assistance programs for older adults and affordable housing options for younger adults).			
3.5	Investigate the potential of a NRHP historic district for the Northeast Community under Criterion A for Community Development and African American Heritage.			
3.6	Evaluate developing HPC appointment criteria to improve racial and age diversity.			
3.7	Work with Wake County to add a historic preservation component to the Wake County Multi-Jurisdictional Hazard Mitigation Plan.			
3.8	Work with the Northeast Community, Friendship Chapel Missionary Baptist Church, and WFHM to develop an oral history program focusing on the histories of the Wake Forest's Black community.			
3.9	Expand housing affordability by encouraging adaptive reuse of existing buildings. Create an online database of buildings available for adaptive reuse.			
3.10	Create an interpretative signage program highlighting diverse histories found throughout Wake Forest, especially the Northeast Community.			
3.11	Conduct a historic resource survey to explore underrepresented communities in Wake Forest.			
3.12	Develop historic contexts for underrepresented communities based on survey findings from Item 3.11 above.			
3.13	Develop and expand partnerships with K-12 schools to support local-history oriented curricula in partnership with the WFHM.			
3.14	Continue to work with the DuBois Alumni Association to celebrate the 3.14 significant history of the school and to seek opportunities to rehabilitate/redevelop the campus.			

POLICIES FOR ENCOURAGE COMMUNITY LEARNING OPPORTUNITIES		YES	NO	NA
4.1	Continue to officially celebrate Historic Preservation and Black History months, and consider adding other diversity awareness months.			
4.2	Continue to invest in wayfinding, signage, and branding for historic resources and areas to assist in navigation and promote neighborhood identity.			
4.3	Sponsor historic preservation workshops, economic incentives, and instructional videos.			
4.4	Coordinate and develop strong partnerships with regional institutions, including NECC, WFHM, SEBTS, and NCSU, as well as partnerships with local organizations and businesses that support historic preservation.			
4.5	As part of the Historic Marker Policy, provide an option in downtown/urban areas for plaques or sidewalk markers that require less space than post markers.			
4.6	Create more opportunities for residents, Town staff, and visitors to learn about Town history and its historic buildings, sites, and neighborhoods.			
4.7	Create a GIS-based map of surveyed areas and individual properties showing the cut off date for survey areas and the year in which properties were documented.			
4.8	Utilize historic preservation as a tool for economic assistance by showcasing how historic preservation designation can provide economic assistance and revitalization.			
4.9	Incorporate HPC members as facilitators and leaders of workshops, walking tours, and newsletter writers.			
4.10	Continue to provide educational opportunities for people who want to learn how to repair or restore their own historic buildings or landscapes.			
4.11	Partner with the Urban Forestry Program and explore the opportunity for a heritage tree program and providing incentives for tree preservation as well as markers for significant trees.			
4.12	Clearly specify what constitutes a minor project vs. a major project for COA approval. Even though this difference is articulated in the Design Standards, consider developing more informational tools and infographics that can easily be used by the public.			
4.13	Make use of current technology to expand opportunities to create web-based platforms for educating the public about other untold community histories.			

Parks & Recreation Master Plan Consistency Grid (Note that Parks, Recreation and Cultural Resources Master Plan Update is underway)

POLICIES FOR IMPROVED INTERNAL AND EXTERNAL COMMUNICATION OF ACTIVITIES AND SERVICES		YES	NO	NA
IEC-1	Make use of the Town's Marketing Plan to improve awareness park facilities			
IEC-2	Partner with the Communications Department and the Public Information Office to make the best use of the Town's website and social media outlets			
IEC-3	Adopt open lines of communications and meetings with partners and potential partners			
POLICIES FOR CREATING NEW STAFF ASSIGNMENTS OR NEW HIRES FOR ADDED RESPONSIBILITIES		**YES**	**NO**	**NA**
SANH-1	Add staff to the Maintenance Division to meet current and anticipated future demands			
SANH-2	Add staff for facility operations to meet demand for extended hours of operations for facilities			
SANH-3	Ensure that staffing resource levels can maintain existing and new facilities at or above acceptable standards as master plan is implemented			
SANH-4	Add staff to the Urban Forestry Division to meet anticipated future demands with development and expansion of the parks and greenways system			
POLICIES FOR EQUITABLE USER FEES		**YES**	**NO**	**NA**
EUF-1	Develop a standardized philosophy for pricing programs and services that reflects the Wake Forest community			
POLICIES FOR PURSUING GRANTS		**YES**	**NO**	**NA**
PG-1	Continue to research, submit, and track federal, regional, state, and local grants			
POLICIES FOR IMPLEMENTING PARKS, RECREATION, AND GREENWAYS		**YES**	**NO**	**NA**
PRG-1	Develop a plan for the implementation of the Parks, Recreation, and Greenways Improvements from the 2014 Bond Referendum			
POLICIES FOR INCREASING TAX INCREMENT LEVELS		**YES**	**NO**	**NA**
ITIL-1	Campaign for community investment in long term Master Plan implementation			
POLICIES FOR INCREASING PROGRAMMING FOR FAMILIES, SENIORS, AND TEENS		**YES**	**NO**	**NA**
PFST-1	Expand program opportunities for teens, families, and seniors in all locations			
POLICIES FOR INCREASING PROGRAMS IN WELLNESS, CULTURAL, AND SPECIAL NEEDS		**YES**	**NO**	**NA**
WCSN-1	Expand wellness/fitness, cultural, and special needs programming opportunities			
WCSN-2	As new facilities are developed and constructed, include appropriate spaces for wellness/fitness, cultural, special needs, and aquatic opportunities			
POLICIES FOR INCREASING THE NUMBER OF SPECIAL EVENTS AND FESTIVALS		**YES**	**NO**	**NA**
OC-1	Expand neighborhood and community special event and festival opportunities at a variety of locations community wide with an emphasis in the downtown area			
POLICIES FOR CREATING INCREASED PARTICIPATION AT THE RENAISSANCE CENTER		**YES**	**NO**	**NA**
APRC-1	Create a 3 to 5-year Strategic Plan that focuses on creating awareness and increasing programming, and develop a marketing strategy			
POLICIES FOR CREATING GREATER AWARENESS FOR THE URBAN FORESTY DIVISION		**YES**	**NO**	**NA**
AUFD-1	Develop a marketing strategy for the Urban Forestry Division that creates a greater awareness and public interest in the goals and outcomes of the Division			
AUFD-2	Develop implementation strategies and educational opportunities for the Urban Forestry Management Plan			
POLICIES FOR MAINTAING AND IMPROVING EXISTING FACILITIES		**YES**	**NO**	**NA**
AUFD-1	Continue to implement maintenance strategies that both sustain and make improvements to existing facilities			
AUFD-2	Develop a plan to address the recommendations from the inventory as they relate to individual park improvements			

Parks & Recreation Master Plan Consistency Grid (Note that Parks, Recreation and Cultural Resources				
POLICIES FOR EXPANDING TRAILS AND CONNECTIVITY		**YES**	**NO**	**NA**
AUFD-1	Complete Greenways System as identified in the 2014 Bond			
AUFD-2	Explore the development of trail heads at entrance points to the Greenway			
POLICIES FOR PROVIDING NEW FACILITIES		**YES**	**NO**	**NA**
PNF-1	Explore the opportunity to design and construct a 65,000 square foot Recreation Center in the downtown area that includes a competitive pool, water features, gymnasiums, fitness/wellness space, indoor track, and community space			
PNF-2	Explore the opportunity to construct a dedicated Pickleball facility that could serve the region as a tournament and league play hub			

Comprehensive Transportation Plan Consistency Grid

POLICIES FOR GENERAL RECOMMENDATIONS		YES	NO	NA
GR-1	Update the CTP annually to capture changes in existing conditions, development, Capital Improvement Plan (CIP), and transportation regulations			
GR-2	Continue coordination with CAMPO, Wake County, NCDOT, and other local and regional partners, as appropriate, on infrastructure improvements			
GR-3	Study the Town Historic Districts and Northeast Community to determine if alternative curb/gutter and sidewalk cross-sections are needed			
GR-4	Update the CTP to capture any transportation recommendations from the CAMPO North East Area Study			
GR-5	Update the CTP to capture any transportation recommendations from the Northeast Community Plan			
GR-6	Update the CTP to capture any transportation recommendations from the Wake Forest Community Plan Update			
GR-7	Continue to support public private partnerships for infrastructure projects			

POLICIES FOR RAIL RECOMMENDATIONS		YES	NO	NA
RR-1	Continue coordination with CAMPO, NCDOT, and other local and regional partners, as appropriate, for the advancement of the Southeastern High-Speed Rail or S-Line			
RR-2	Develop TOD small area plans for the station areas			

POLICIES FOR BUS RECOMMENDATIONS		YES	NO	NA
BR-1	Implement Loop B of the Wake Forest Loop bus service			
BR-2	Develop an interactive website for the Wake Forest Loop showing stop location and bus station infrastructure			
BR-3	Explore real time technology options to enhance user experience			
BR-4	Develop a plan to introduce public art into bus shelter design			
BR-5	Explore wayfinding opportunities at bus shelter locations			
BR-6	Develop standardized street furniture and shelter for bus stop locations that are either purchased by the Town or donated by private citizens or groups			
BR-7	Continue coordination with CAMPO, Wake County, Wake Transit, and other local and regional partners, as appropriate, for the advancement of transit in the region			
BR-8	Continue to support fare free bus transit in Wake Forest			
BR-9	Evaluate the Unified Development Ordinance (UDO) for bus stop design standards during site plan review			
BR-10	Implement the CIP bus shelter program to add additional bus shelters annually along the Wake Forest Loop			

POLICIES FOR EMERGING TECHNOLOGIES		YES	NO	NA
ET-1	Develop a plan to optimize the Town's investment in electric vehicle charging infrastructure and identify opportunities to install charging infrastructure			
ET-2	Update the UDO to reflect electric vehicle charging technology and analyze options for incorporating electric vehicle readiness into development regulations			
ET-3	Explore Intelligent Transportation Systems (ITS) and emerging technologies and evaluate their integration into the transportation system			
ET-4	Explore signal integration with regional partners			
ET-5	Consider future impacts of autonomous vehicles on development regulations			
ET-6	Evaluate micro-transit technology as an option for public transportation			

Comprehensive Transportation Plan Consistency Grid

POLICIES FOR PEDESTRIAN RECOMMENDATIONS		YES	NO	NA
PR-1	Support Safe Routes to School events at local Wake Forest schools and explore additional opportunities for safety events			
PR-2	Update the UDO to reflect greenway design and multi-use path design			
PR-3	Develop an inventory of ADA accessible crosswalks and pedestrian ramps and develop an action plan to bring substandard infrastructure into compliance			
PR-4	Develop an updated interactive website for the greenway network			
PR-5	Develop a standard operating procedure for greenway sign locations that as part of the development review process			
PR-6	Expand existing GIS data along greenways to ensure signage, emergency locations, benches, and other amenities have been captured			
PR-7	Expand pedestrian connectivity standards in the UDO for block length and at the ends of cul-de-sacs			
PR-8	Continue to support the funding of sidewalk gaps with Town funding			
PR-9	Evaluate the proposed bicycle network and update proposals after investigating need and if roadways can accommodate proposals			
PR-10	Evaluate all unsignalized greenway trail crossing to determine whether crossing enhancements would be appropriate			
PR-11	Explore grant opportunities such as CDBG funding for improvements in marginalized neighborhoods			
PR-12	Continue coordination with CAMPO, Wake County, NCDOT, and other local and regional partners, as appropriate, on infrastructure improvements and funding sources, such as LAPP			
PR-13	Update pedestrian signage to be interpretive to meet ADA requirements			
PR-14	Support Wake Forest bicycle safety events and explore additional opportunities			
PR-15	Evaluate the use of soft trails and paved surfaces in the development of the Wake Forest Reservoir master plan while ensuring residents with varying ability level access to the reservoir			
PR-16	Evaluate the Town-owned 80 acres behind Heritage High School for any deed restrictions that limit development of the Smith Creek Greenway and neighborhood connections thereto			
PR-17	Evaluate off-street bikeway cross-sections where bicycle infrastructure is out of the roadway and running parallel to the curb			
PR-18	Explore reintroducing bike share as a mode of transportation for the Town			

POLICIES FOR ROADWAY RECOMMENDATIONS		YES	NO	NA
RWR-1	Fund the South Main Street study for access management along South Main Street between US 1 and South Avenue			
RWR-2	Update the UDO access management standards			
RWR-3	Explore the potential for a roundabout at Ligon Mill Road and Burlington Mill Road			
RWR-4	Evaluate the UDO language to examine street connectivity standards during development review			
RWR-5	Evaluate the UDO language to examine street connectivity standards to promote an organic local street network			
RWR-6	Update UDO based on the roadway classifications and remove roadway cross-sections in the UDO			
RWR-7	Work with regional partners to advocate for accelerating the US 1 Project			
RWR-8	Update the UDO to add regulations to match Wake County on how to handle cemeteries in development and roadway projects			

Public Arts Plan Consistency Grid

POLICIES FOR PUBLIC ARTS IMPLEMENTATION		YES	NO	NA
PAI-1	Liason and consult with municipal agencies and departments			
PAI-2	Commission orignal works of public art			
PAI-3	Acquire public art			
PAI-4	Document all accession, deaccession, loans, or donations of public art			
PAI-5	Provide technical feasibility for public art			
PAI-6	Ensure public art commissioned by the Town is owned by the Town			
PAI-7	Ensure the deaccession of public art is handled with cautious, deliberate and scrupulous standards			
PAI-8	Ensure public art emphasizes placemaking with safety, security, maintenance, accessibility, context, departmental support and community support in mind			
PAI-9	Actively engage an artist when undertaking Town capital projects and encourage private developers to include either an artist on the design team or works of art with public access within the development			
PAI-10	Explore incentives for public art such as tax credits, covering maintenance costs and payment-in-lieu to locate artwork on an alternative site			
PAI-11	Consider easements for public art			
PAI-12	Ensure adequate maintenance is performed on public art			
PAI-13	Avoid conflicts of interest in the selection of a project site, finalist or artist			

HOUSING AFFORDABILITY PLAN

POLICIES FOR HOUSING AFFORDABILITY		YES	NO	NA
HA-1	Expand and preserve homeownership			
HA-2	Create new affordable rental housing			
HA-3	Build capacity and partnerships			

Open House 9/4/24 and 9/5/24 Comments	Staff Response
STATION #1 CURRENT ZONING	
Conservation district should allow for higher density than 3 units per acre to allow for more conservation	The maximum density proposed at 3 dwelling units per acre is based on the standards with the Water and Sewer Utility Merger Agreement with City of Raleigh.
Traffic in WF is getting worse over the last few years. Don't add more high density areas w/out improving roads & infrastructure especially in the Smith Creek Area	There are multiple transportation projects and greenway projects recently completed, underway, or beginning design that the Town is leading or partnering with others that will improve connectivity, capacity, and safety for various transportation modes. Oak Grove Church Road is a NCDOT road.
High density housing should not be built across from the park	Map amendments will occur after the adoption of the UDO; therefore, no zoning proposals or decisions have been made yet; however, the Land Use Map within the Community Plan will serve as a guide.
Save nearby Joyner park forests, Joyner Harris Conservations	This area is located outside of the watersheds proposed to require utilization of conservation design; however, watershed protection standards for Richland Creek Protected are still applicable.
SAVE Smith Creek & the WF reservoir	Conservation design is proposed to be required within the Smith Creek Watershed with the purpose of preserving natural resources and minimizing disturbed areas by requiring a minimum of 50% conserved open space.
Way too much 'mixed residential' & not enough 'conventional residential' Just increases traffic congestion	Map amendments will occur after the adoption of the UDO; therefore, no zoning proposals or decisions have been made yet; however, the Land Use Map within the Community Plan will serve as a guide.
BAD IDEA! Need to improve roads & transportation	There are multiple transportation projects and greenway projects recently completed, underway, or beginning design that the Town is leading or partnering with others that will improve connectivity, capacity, and safety for various transportation modes. New microtransit service is debuting for local trips. S-line rail will provide service to regional destinations.
How can this watershed area be zone GR w/out any density restrictions? That makes NO SENSE	Falls Lake Protected, Little River Protected, and Smith Creek Protected and Critical watersheds are proposed to require conservation design with a maximum density of 3 dwelling units per acre. Impervious surface restrictions are still applicable regardless of the base zoning district.
Apts should NOT be permitted in Smith Creek critical area	Map amendments will occur after the adoption of the UDO; therefore, no zoning proposals or decisions have been made yet. The likely zoning proposed for the Smith Creek Critical Area is GR, which does not propose to allow Multifamily.

Agricultural zoning should include forestry as a permitted use in the Smith Creek Watershed	Forestry is permitted within the Town's jurisdiction. Chapter 1 identifies exempted development activity, including forestry: "Forestry activities taking place on a bona fide farm or on land taxed under the present use value standard provided that the forestry activities follow a forestry management plan approved in accordance with NCGS §160D-921."
Forestry should be a permitted use	
PROTECT FORESTS & TREES IN THE SMITH CREEK WATERSHED	Conservation design is proposed to be required within the Smith Creek Watershed with the purpose of preserving natural resources and minimizing disturbed areas by requiring a minimum of 50% conserved open space.
Zoning w/out density guidelines gives developers too much power!!	While neither density minimums nor maximums are proposed, there are other zoning and development parameters that control density – lot width, lot size, height, site configuration, open space and tree canopy requirements, and stormwater control.
Smith Creek Overlay District should be kept as zone WS-II, as the state intended. Do NOT allow 2 or 3 homes per acre. It should be 1 home per 2 acres!	The watershed protection rules set by the State will still be in effect regardless of the base zoning district. The 0.5 dwelling units per acre density identified in the Smith Creek Critical Area is the requirement when the "low impervious" development option is selected that allows a maximum of 6% impervious surface area with limited stormwater control measures required. If the "high impervious" development option is selected, the 0.5 dwelling units per acre is not required and instead more significant stormwater control measures are required and up to 24% of maximum impervious surface area is allowed.
CPA 23 03 acres is on the smith creek watershed. Read your own watershed plan. The critical area of designation is an administrative act. This is the last forest.	
Smith Creek Overlay District should be kept as zone WS-II, as the state intended. Do NOT allow 2 or 3 homes per acre. It should be 1 home per 2 acres!	
Keep the county zoning at 1 house per 2 acres in the SCW	
The town of WF has a MORAL obligation to protect existing homeowners & property values.	The UDO's goal is to balance growth and preservation by focusing growth in certain areas to continue to allow for commercial, recreational, and institutional services to meet the needs of residents.
Create an area plan for the 350 acres & Smith Creek Critical Area	See the 2015 Smith Creek Watershed Restoration Plan. This area has land use plan guidance on page 51 of the Community Plan. This comment is noted should small area plans be added to the work plan.
Please create an AREA PLAN for SCW	

If WF wants to retain the small town feel it should not have as many GR5 & up & MXR, it invites over population	Small town feel is not solely about the size of the population. Historic preservation, scale and design of buildings, active commercial spaces, and opportunity to connect with neighbors contribute to the small town feel, which are promoted in the draft UDO.
Overbuilding in watershed area is likely to negatively impact the reservoir	The amount of impervious surface area allowed to be built in the watershed area is guided by the State and is not proposed to change with new zoning.
WE NEED ESTATE HOMES IN WF!	Estate homes are not proposed to be prohibited. Larger lot residential subdivisions do not guarantee larger amounts of preserved green space.
The growth in WF is on steroids! We need to preserve this last piece of nature, watershed area, for our future	Conservation design is proposed to be required within the Smith Creek Watershed with the purpose of preserving natural resources and minimizing disturbed areas by requiring a minimum of 50% conserved open space. Open space and tree canopy coverage requirements within the rest of the jurisdiction are proposed to increase, in some areas requiring twice as much as the current ordinance.
ZONING WITHOUT DENSITY LIMITS IS REDICULOUS! ESPECIALLY IN FOREST ARES. USE COMMON SENSE!	While neither density minimums nor maximums are proposed, there are other zoning and development parameters that control density – lot width, lot size, height, site configuration, open space and tree canopy requirements, and stormwater control.
GIVE PLANNING BOARD MORE AUTHORITY OVER PLANNING & ZONING DECISIONS	Under state statute the primary function of the Planning Board is to serve in an advisory role.
Please do a survey to find out how many residents feel WF should overpopulate more. I want forest, more than homes.	The comprehensive plans serve as the guiding vision for the Town, which include a range of goals, including strategic and targeted growth with expanded and maintained green spaces as well as diverse housing options. The goals are not mutually exclusive.
This is wholly true. The de-forestation of WF over the last 30 years has not brought value to our town.	
STATION #1 CHAPTER OVERVIEW	
Administrative modifications eliminate useful checks & balances. Do NOT allow staff to make these decisions w/out oversight of elected officials.	Administrative modifications are common practice to allow minor deviations for standards that the ordinances includes specific, neutral, and objective criteria for the modification. Modifications not included, that exceed the specified amount, or that require judgement and discretion require a variance through the quasi-judicial process, which is decided by the Board of Adjustment.
I do NOT agree w/allowing town staff to approve deviations to UDO standards ie. We need larger setbacks to keep the town less	

urban because we do not want the urban feel! (ch15)	
ADMIN/STAFF MODIFICATIONS SHOULD NOT BE ALLOWED. DO NOT TRUST STAFF!!	
Decisions that change the UDO should be decided by the elected people who decide whether or not to implement UDO's in the first place	
3.4.5 Other Requirements E. Backyard animal keeping NCGS160A-203.1 specifies that a town by ordinance may regulate poultry but ONLY if the flock exceeds 20 birds. You cannot regulate how many chickens if <20!	The UDO standards do not propose to regulate the standards of care identified within NCGS160A-203.1
3.4.5 Other Requirements E. Backyard animal keeping f. fowl Regulating poultry #5 b acreage is arbitrary & only serves to prohibit WF residents from having enough to meet their household needs. In addition, the current 10 hen ordinance was decided by signatures of stakeholders & cannot be overwritten	The proposed number of fowl allowed has been revised to a maximum of 10 without lot size requirements.
3.3.3 Principal Use supplemental standards C. Commercial: 1 adult est. These should not operate w/in 1/4 mile of homes. Schools, daycares, or town community centers	Adult Establishment is protected under the First Amendment and must be allowed within a jurisdiction. The use is proposed only in the IND District and with a 750 feet distance requirement from residential and certain civic and institutional uses, including schools, daycares and community centers. Increasing the required distance would effectively prohibit the use because no parcels would fit the criteria.
We should not allow adult establishments to do business in WF it is not for the public good	Adult Establishment is protected under the First Amendment and must be allowed within a jurisdiction.
In reference to ch 5&7- we are not doing this. Large apt complexes, townhomes, & stripping the land do not promote character	Townhomes and multifamily uses offer a range of housing types to address different residential needs, consistent with the Comprehensive Plan. Character is not synonymous with single family detached development. Proposed building design standards, use standards, and height transition standards take scale and massing into consideration.

	The Town does not have statutory authority to prohibit removal of trees; therefore, standards focus on approaches that aim to incentivize tree preservation. The proposed tree canopy and open space standards are approximately double the current UDO requirements.
STATION #2 HOUSING DIVERSITY	
There needs to be a cap on units per acre. This opens the door to high rises & sky-scrapers & ruins the small town feel WF pretends to retain	While neither density minimums nor maximums are proposed, there are other zoning and development parameters that control density – lot width, lot size, height, site configuration, open space and tree canopy requirements, and stormwater control.
ZONING WITHOUT PRECISE DENSITY RESTRICTIONS GIVES DEVELOPERS TOO MUCH POWER!!	
LIMIT DENSITY TO 1 HOUSE PER 2 ACRES IN SCW. DO NOT SUPPORT 1 HOUSE PER 1/3 ACRE!!	
GR is scary! If suddenly someone wants to build 10 dwelling units next door.	
Zoning w/out density means a house could be torn down & an apt built w/out a zoning change- that's bad design.	
The new zoning has NO density limits, which is WRONG! It would allow apts to be built anywhere & it gives developers way too much influence over the town	
There are no defined density limits in the new zoning. This is unacceptable! Especially with other flexibility given to the planning staff. This is too beneficial to the developer & takes power away from the town	
Very concerned about lack of density requirements on zoning. This will lead to massive overdevelopment, overcrowding, and preservation of critical areas	
Overbuilt apartments & townhomes, no buffers or density requirements	Townhomes and multifamily uses offer a range of housing types to address different residential needs, consistent with the Comprehensive Plan. The share of multifamily

	and townhome housing in Wake Forest compared to single family detached is comparable or less than that of Wake County or North Carolina as a whole. Landscape buffers are proposed between land uses that have different characteristics. While not all developments will require buffers, many will. While neither density minimums nor maximums are proposed, there are other zoning and development parameters that control density – lot width, lot size, height, site configuration, open space and tree canopy requirements, and stormwater control.
Solar Farms could be permitted use in transit supportive residential- imagine solar roofing on train stop	Roof mounted, canopy mounted, and ground mounted solar as an accessory use is proposed to be allowed in the TSR District. Solar Farms are larger scale energy production as a principal use and are not proposed to be permitted.
What is the real estate tax impact of adding significantly more housing	It depends on the type of housing. Generally, commercial and multifamily developments contribute more to the tax base and have fewer costs on public services while non-multifamily residential over the long term create more costs on public services with less contribution to the tax base.
STATION #2 HOUSING AFFORDABILITY	
YAY!!! Glad to see these incentives	An additional affordable housing incentive has been added to the draft to allow flexibility for front loaded garages.
What are the historic exclusions for old houses that require amendments that may affect their footprint or appearance?	Section 15.3 allows for some exceptions to nonconforming buildings for historic structures.
STATION #3 COMMUNITY CHARACTER	
Should include MXR because future land map is reclassifying some GR10 to MUR. But the area hasn't changed from single family homes.	The height transition and infill requirements are primarily focused on historic, established, and neighborhoods at risk of displacement. Single Family Detached homes is not the qualifier.
Buffers between historic buildings are needed	Buffers are proposed for the following historic properties - locally designated, State Study List, or National Register of Historic Places districts or individual listings
MUR should also require respecting the character of surrounding homes. For example, single family GR10 on 3 sides should require matching that.	Use transitions are proposed for Townhome developments adjacent to existing Single Family Detached.
STATION #4 SIGNS	

Case law does not trump legislation	The proposed sign standards comply with content neutrality based on legal guidance and precedent.
Rope lights/neon lights- prohibit	Colored rope lighting is proposed to be prohibited. Illuminated window signs are proposed to be limited to one per tenant.
STATION #4 COMMERCIAL DEVELOPMENT	
Don't do this until you expand the roads! (in reference to TOD-O)	There are multiple transportation projects and greenway projects recently completed, underway, or beginning design that to Town is leading or partnering with others that will improve connectivity, capacity, and safety for various transportation modes. One of the goals of transit oriented development is to reduce car dependency by building and designing for more compact development to allow for more trips to be made by other modes of transportation and shorter car trips.
STATION #5 TRANSPORTATION PEDESTRIAN & TRANSIT	
Please give us a bike path!- Moss Creek neighborhood	This comment is noted and shared with Planning staff. The Comprehensive Transportation Plan (CTP) identifies the bicycle infrastructure network, including greenways, multiuse paths, bike lanes, and sharrow lanes. Phase 2 and 3 of the Smith Creek Greenway will extend the existing Phase 1 that connects to Moss Creek to provide access to Downtown Wake Forest. The CTP is scheduled to be updated next year.
WF Greenway connectivity	Certain greenway connections are identified in the Comprehensive Transportation Plan (CTP). The UDO proposes to require greenway connections for new development that abuts greenways.
Wall Rd @ Wallridge sidewalk connection to Harris Rd/Joyner Park	This comment is noted and shared with Engineering and Public Works staff. The Comprehensive Transportation Plan (CTP) identifies the sidewalk and multiuse path network. Wall Road is recommended with a multiuse path in this section. This is not currently designed or funded.
Soft trails in wooded area around Bishops Grant	This comment is noted and shared with Planning staff. The Comprehensive Transportation Plan (CTP) identifies the greenway network and includes greenway around the reservoir and connection to Endgame Court. The CTP is scheduled to be updated next year.
Tie in reservoir greenway into surrounding neighborhoods in bishops grant	The Comprehensive Transportation Plan (CTP) identifies the greenway network and includes greenway around the reservoir and connection to Endgame Court. This is not currently designed or funded.
Greenway connection to Youngsville	The Comprehensive Transportation Plan (CTP) identifies the greenway network, including connections to Youngsville. This is not currently designed or funded.

Textured boardwalk for traction	The construction design details are being updated to include precast concrete boardwalk that is more durable and slip resistant.
Allow solar farms in transit oriented development	Roof mounted, canopy mounted, and ground mounted solar as an accessory use is proposed to be allowed in the TOD-O District. Solar Farms are larger scale energy production as a principal use and are not proposed to be permitted.
Prioritizing safety of pedestrians & cyclists - traffic calming along song sparrow once connected	The draft UDO proposes traffic calming measures be evaluated with new development proposals. For existing residential streets, the Town has a traffic calming policy, and requests for evaluation can be submitted to the Engineering Department – see webpage for additional information. The western portion of Song Sparrow is not maintained or controlled by the Town as it is located within Wake County's jurisdiction.
concerns that change will look like piles of concrete US1 S Main- pressure on neighborhoods	NCDOT project U-5307 to upgrade Capital Boulevard includes an interchange at the US-1/S. Main Street intersection. The project aims to improve congestion on and around US-1 and address safety conflict concerns.
Since the implementation of the buses, I've never seen more than 4 people on a 20-seater us. Counter intuitive to environmental green initiatives	Microtransit service is being piloted in place of the Wake Forest fixed route loop service.
Concerns of lack of sidewalk connections esp at schools	The draft UDO proposes enhanced requirements around sidewalk connections. The Town's Capital Improvements Plan (CIP) includes sidewalk gap connections. The public is encouraged to provide comment on the CIP. See proposed CIP update schedule.
Need to encourage trains to RDU, busses are not the answer!	Routes to RDU would be addressed at the regional level.
Song Sparrow- additional signage to greenway connection at Moss Creek	Additional greenway signage will be installed with the construction of phases 2 and 3 of Smith Creek Greenway, which will run just north of Song Sparrow.
Add bike signage & paths downtown- 98 at Deacons Ridge. At W oak & N Main added sidewalk/make easy access from Flaherty - Joyner	This comment is noted and has been shared with Planning, Engineering, and Public Works staff.
STATION #5 TRANSPORTATION INFRASTRUCTURE	
Don't let tractor trailers park at Walmart- conditions in Plans?	Staff will evaluate the specific concerns and look into relevant mitigation.
Congestion on Forestville Rd and Rogers Rd are a big problem. The UDO should block	NCDOT Project P-5707 includes a grade separation of Rogers Road over the railroad tracks, which will include 2 travel lanes, a center turn lane, and sidewalk to increase

developments that will make problem area worse.	capacity in this area. New development meeting the Transportation Impact Analysis (TIA) thresholds are required to study project impacts and mitigate those attributed to the project.
Connection between White St & Main St so one does not go there m?	Connections between White Street and Main Street are somewhat limited due to the railroad. The Comprehensive Transportation Plan (CTP) identifies locations for pedestrian designated crossings where vehicle crossings will eventually be closed.
Rogers Rd should have a side walk all the way down to Marshall farm if they actually want walkability in the area	Most of the portion of Rogers Road from S. Main Street to Marshall Farm Street that does not have sidewalk is outside of the Town's jurisdiction. If annexation were requested and development proposed on these parcels, sidewalk/multiuse paths would be required to be constructed. Rogers Road is a NCDOT controlled/maintained road. NCDOT Project P-5707 includes a grade separation of Rogers Road over the railroad tracks, which will include sidewalk.
STATION #6 STORMWATER & ENERGY	
12..3 B Lists flood damage prevention- Is there more to be done to address this topic?	The bulk of the flood damage prevention regulations are contained in Section 12.6.
Are there plans in the UDO to address current stormwater threats? Such as Fairlake Dam (overwhelmed by adjacent development)	The draft UDO proposes to require stormwater management to design control measures to the 25-year storm instead of the 10-year storm to address anticipated increase in storm events.
Section 12.c. 5 Mentions stormwater management standards- suggest listing them in table or illustration	12.1.1.C.5 is the introduction and purpose of these sets of standards. The specific standards are outlined later in the chapter in 12.7. The stormwater control measure design details and specifications are contained in the Town's engineering manual, which is being updated with the UDO, and the State's Stormwater Minimum Design Criteria.
12.1.3.c.3 Managing stormwater run off from development sites in construction or most construction	The language from most of Chapter 12 is based on the State's model ordinance to comply with state standards and limitations. "Development sites" includes sites under construction.
More green infrastructure (love moving forward more green) Tree cells (boxes) tied onto storm drains. Subsurface retention w/bioretention system-could be used when space limited on site. Pervious pavement. Bioswales/ vegetated filter strip	Green infrastructure is encouraged through the open space, parking area landscape, and parking maximum standards. Requirements to manage nutrient loading will also facilitate green infrastructure usage.

STATION #6 OPEN & COMMUNITY SPACE	
350 acres of SCW limit cluster development to .5 du/acre	If an applicant proposed to design under the low impervious surface standards (6% maximum impervious surface), the cluster development regulations would require 0.5 du/acre. If the applicant proposed to design under the high impervious surface standards (24% maximum impervious surface), the watershed density regulations do not apply.
Agricultural zoning must include forestry for those people who have owned tree forms for years. You need to save the trees.	Forestry is permitted within the Town's jurisdiction. Chapter 1 identifies exempted development activity, including forestry: "Forestry activities taking place on a bona fide farm or on land taxed under the present use value standard provided that the forestry activities follow a forestry management plan approved in accordance with NCGS §160D-921."
Provide requirement for perimeter buffering (trees) in conjunction w/conservation design. E.g. Hasentree on Rte 98	Perimeter buffering is intended to screen and buffer different use types. If adjacent uses trigger buffer requirements, a conservation design development would be required to provide buffers. The goal of the conservation design is to maximize the amount of preservation for the most sensitive areas, which may not always be on the perimeter of a site. Much of the green area along Hassantree's Durham Road frontage is right-of-way and not designated buffers.
Increase trees along SCG at soccer field. Add benches & colorful stationary objects as are used in parks in neighboring towns	The draft 2024 Parks, Recreation & Cultural Resources Comprehensive Master Plan includes recommendations on placemaking and seating.
We need to strengthen & enhance the incentives for developers to preserve old growth trees in WS-II & other critical water shed areas	The draft UDO proposes incentives for tree preservation in watershed areas through the new conservation design standards.
Required open space should be much wider? In WS-II designated areas!	The draft UDO proposes larger amounts of open space rather than specifying wider areas with the conservation design standards,
STATION #6 TREE PROTECTION & LANDSCAPING	
Street buffer in table 7.4.3 is NOT dense enough. Landscaping to replace cleared old growth trees need to be revised!	The street buffers are intended to balance the aesthetics and visibility of businesses. The canopy coverage requirements are intended to maintain canopy coverage by incentivizing preservation of existing trees and requiring replacement trees.

Why do we not have additional tree canopy requirements for watershed areas especially those a WS-II state designation	The new conservation design standards proposed require a minimum of 50% open space, which includes tree canopy
Buffers should include more trees (less grasses)	The buffers take into consideration adequate spacing of trees so that they have space to establish. Grasses and shrubs help to provide screening at a range of visual levels.
Increase landscape buffer to 100' add more trees to landscaping when DOT take ROW	The street buffers are intended to balance the aesthetics and visibility of businesses.
Agricultural zoning MUST include forestry for those people who have owned tree farms for many years. YOU NEED TO SAVE THE TREES!	Forestry is permitted within the Town's jurisdiction. Chapter 1 identifies exempted development activity, including forestry: "Forestry activities taking place on a bona fide farm or on land taxed under the present use value standard provided that the forestry activities follow a forestry management plan approved in accordance with NCGS §160D-921."
Support your planning board. They vote to deny projects and the commissioners in 2023 ignored them	Under state statute the primary function of the Planning Board is to serve in an advisory role.
Admin Modifications do NOT allow staff to grant 'payment in lieu of trees planted!'	Payment in Lieu of trees is not proposed expect when PIL is collected for street trees along unbuilt stub street extensions. Street stub extensions are typically for a length of less than 20 linear feet due to not being able to build street stubs up to the adjacent property line without off-site construction easements.
Agricultural zoning needs 'forestry' as a permitted use	Forestry is permitted within the Town's jurisdiction. Chapter 1 identifies exempted development activity, including forestry: "Forestry activities taking place on a bona fide farm or on land taxed under the present use value standard provided that the forestry activities follow a forestry management plan approved in accordance with NCGS §160D-921."
PROTECT FORESTS & TREES IN THE SCW	The draft UDO proposes to require new conservation design standards to prioritize protection of watershed areas.
GENERAL COMMENTS	
98Bus/Bypass Food Lion shopping center landscape the large area by the bypass with native plants and bushes that flower & make attractive entrance to WF	This area is identified as a gateway in the Community Plan. Community Plan Action Item 25-1: Create a Gateway Plan to identify and prioritize sites for gateway features and establish design standards, is included as a mid-term timeframe item. This comment is consistent with that recommendation. This area is NCDOT right-of-way and is controlled and maintained by the State, so coordination will be required with that agency when gateway plans are developed.

We don't have neighborhood parks south of 98. Nice shaded parks w/benches to sit would be nice	Gaps in the park system, including south of 98, are recognized in the draft 2024 Parks, Recreation & Cultural Resources Comprehensive Master Plan. Action Item 2.2.1.4: Adopt 10.2 acres per 1,000 population NRPA standard to acquire additional 230 acres of developed + undeveloped parkland in the next five years in the areas currently identified as underserved and growing parts of the Town, especially in the areas identified in the 'park search area' Action Item 2.2.1.9: Ensure that the parkland dedication policy maximizes developable land for building recreational amenities in the underserved areas of the Town while also protecting the sensitive natural areas such as wetlands, streams, and wildlife habitats.
Was Forest? Wake deforest? Wake what? Where have all the forests gone?!	The Town does not have statutory authority to prohibit removal of trees; therefore, standards focus on approaches that aim to incentivize tree preservation. The proposed tree canopy and open space standards are approximately double the current UDO requirements.
Keep RW80 standard 1 house per 2 acres	The watershed protection rules set by the State will still be in effect regardless of the base zoning district. The 0.5 dwelling units per acre density identified in the Smith Creek Critical Area is the requirement when the "low impervious" development option is selected that allows a maximum of 6% impervious surface area with limited stormwater control measures required. If the "high impervious" development option is selected, the 0.5 dwelling units per acre is not required and instead more significant stormwater control measures are required and up to 24% of maximum impervious surface area is allowed.
Address clear cutting in residential areas new construction	The Town does not have statutory authority to prohibit removal of trees; therefore, standards focus on approaches that aim to incentivize tree preservation. The proposed tree canopy and open space standards are approximately double the current UDO requirements.
Protect the reservoir and the feeder streams	The Watershed Protection Overlays are consistent with the state's model ordinance and requirements. State statute does not permit stricter buffers on streams.
Protect the watershed	
Why isn't WF doing more w/preserving green areas? Enhance environmental sustainability to parks. Preserve priority green spaces.	The draft UDO proposes increases in required open space standards, including required open space for residential and non-residential development. The amount of open space proposed is approximately twice the amount currently required.

Expand and enhance ecological connectivity we need to preserve this beautiful natural area.	The draft 2024 Parks, Recreation & Cultural Resources Comprehensive Master Plan recognizes the importance of sustainability and increasing green areas. The following action items are included in the draft plan related to sustainability, preservation, and connectivity: Action Item 4.6.1.1: Consider sustainable design for all building facilities. Action Item 4.6.1.2: Use native plants in landscaping to conserve water and support local wildlife. Action Item 4.6.1.3: Increase tree canopy in existing parks using native plant palette. Action Item 4.6.1.4: Develop a recycling and composting program for all park facilities Action Item 4.6.1.5: Replace traditional lighting with energy-efficient LED fixtures. Action 4.6.1.6: Reduce dependency on fossil fuels by purchasing energy efficient machinery and vehicles. Action Item 4.6.1.7: Provide electric vehicle charging stations at all Town owned facilities and parks. Action Item 4.7.1.1: Form a multidisciplinary task force comprising ecologists, conservationists, and community stakeholders to conduct a comprehensive inventory and assessment of green spaces in Wake Forest. Action Item 4.7.1.2: Utilize GIS mapping and ecological modeling techniques to identify and prioritize areas of high ecological value, habitat connectivity, and potential threats, informing targeted conservation strategies. Action Item 4.7.1.3: Continue to prioritize preserving and protecting the natural resources within existing parks by clustering the built amenities in most developable parts of the site. Action Item 4.7.2.1: Explore funding opportunities from federal, state, and private sources to support land acquisition, conservation easements, and habitat restoration projects. Action Item 4.7.2.2: Leverage partnerships with land trusts and conservation organizations. Action Item 4.7.2.3: Work with landowners, developers, and conservation groups to negotiate voluntary conservation agreements, easements, or land donations to permanently protect critical green spaces from development Action Item 4.7.2.4: Continue to collaborate with the Planning Department to continue conservation efforts through policy and ordinance amendments

	Action Item 4.8.1.1: Conduct a feasibility study to assess potential trail alignments, greenway extensions, and wildlife corridors to enhance connectivity between parks, natural areas, and conservation lands Action Item 4.8.1.2: Collaborate with neighboring municipalities, county governments, and regional conservation agencies to develop coordinated green space connectivity plans and establish ecological corridors across jurisdictional boundaries. Action Item 4.8.1.3: Utilize wayfinding and information signage for existing conservation lands to raise community awareness about conservation efforts.
Why does the town of WF want to chop down all the trees and build cheap apartments and townhomes? What is WF going to look like in 10 years?	The Town does not have statutory authority to prohibit removal of trees; therefore, standards focus on approaches that aim to incentivize tree preservation. The proposed tree canopy and open space standards are approximately double the current UDO requirements. Townhomes and multifamily uses offer a range of housing types to address different residential needs, consistent with the Comprehensive Plan.
You are overbuilding start homes and low income homes. When families start to grow they are going to have to move from WF	There are a range of housing types allowed. Larger homes are not prohibited by the UDO. State statute does not allow ordinances to set a minimum square footage for single family detached, duplex, triplex, quadplex, or townhomes.
Is there a side-by-side compare of current and proposed UDO?	Due to the extent of the proposed revisions, reformatting, and restructuring, it would not be practical to have a redlined document.
Big truck parking overnight at Walmart using std vehicle spaces- permitted? Can UDO prohibit w/ future large parking lot approvals?	Staff will evaluate the specific concerns and look into relevant mitigation.
Put a halt on the construction of more apartments and townhomes. Build more SFH- even if it's smaller more affordable homes & greenspaces. Apts & townhomes are not only unattractive but contribute to our traffic congestion problem. Preserve trees & designate parks & greenspace	Townhomes and multifamily uses offer a range of housing types to address different residential needs, consistent with the Comprehensive Plan. Household sizes for townhomes and multifamily tend to be smaller and do not necessarily contribute more to traffic than single family detached homes. The Town does not have statutory authority to prohibit removal of trees; therefore, standards focus on approaches that aim to incentivize tree preservation. The proposed tree canopy and open space standards are approximately double the current UDO requirements.
4.3.2 Add overlays for other creeks below Falls overlay e.g. Richland Creek	Richland Creek has a watershed protection overlay based on the State's watershed classification of the watershed.

I do not agree with allowing town staff to approve deviations to UDO standards. I.e. we need larger setbacks to keep the town less urban	Administrative modifications are common practice to allow minor deviations for standards that the ordinances includes specific, neutral, and objective criteria for the modification. Modifications not included, that exceed the specified amount, or that require judgement and discretion require a variance through the quasi-judicial process, which is decided by the Board of Adjustment.
Gives staff too much power behind closed doors	
Public art definition more inclusive of other options not just murals and sculptures	The public art definition has been revised.
Why can't we make this 250 acres into a conservation area	The Smith Creek Critical and Protected watershed areas are proposed to require conservation design.
How many residents actually want/need more residential growth? WF already has too large a population & too dense. Stop saying the population NEEDS to grow. Businesses might want it. Residents don't.	The UDO's goal is to balance growth and preservation by focusing growth in certain areas to continue to allow for commercial, recreational, and institutional services to meet the needs of residents.
The updates to the UDO are a great step towards the future. Especially w/EV's/green roofs, LID	This comment is noted.
Green infrastructure needs more alternatives but the LID steps as a blueprint are great. Especially ensuring the H2O quality standards are the same throughout	This comment is noted. We welcome further suggestions on green infrastructure alternatives.
More strategic green spaces need to be identified. Not necessarily a map overlay identify opportunities but instead language holding the town standards that say that opportunities near existing green spaces will be explored. Additionally looking at defunct golf courses or other large spaces to be explored to be part of the greenways	The 2024 Draft Parks, Recreation & Cultural Resources Comprehensive Master Plan includes action items related to strategic green space identification and exploration: Action Item 4.7.1.1: Form a multidisciplinary task force comprising ecologists, conservationists, and community stakeholders to conduct a comprehensive inventory and assessment of green spaces in Wake Forest. Action Item 4.7.1.2: Utilize GIS mapping and ecological modeling techniques to identify and prioritize areas of high ecological value, habitat connectivity, and potential threats, informing targeted conservation strategies.

Love seeing more tree canopy being preserved or put back. However, could language be added that tress of a certain size may not be cut if deemed healthy by certified town or county arborist	Wake Forest does not have special legislation authorized by the State to require preservation of trees or certain size trees. The proposed standards aim to incentivize preservation of large trees by giving greater tree “credits” for specimen trees.
Language regarding native vegetation to be used- especially for residential developments that have HOA's	Several of the proposed landscape standards include native vegetation. The current tree list will also be updated to include a wider range of approved vegetation, such as shrubs, with a focus on native species and those with wildlife value. This list will be located in the manual containing the engineering and construction details.
Love the idea of having conservation or environmentally sensitive areas preserved on development sites	This comment is noted.
Thank you for your efforts & for incorporating resilient green language that is so important	
I live in Heritage 2, the area south of Rogers Rd immediately adjacent to the unincorporated parcel of land (the Darch property). In the future land use map our district is proposed to be changed from GR10 to MUR, as is the adjacent land. As a resident of this area it is my wish for this area to remain GR and so should the adjacent properties since it is surrounded on 3 sides by GR10. Additionally, I would request the wording of the general residential & mixed use standards contain stronger language around respecting the character of existing surrounding homes especially. New development should be required to have properties of the same type on the perimeter as the zone it is adjacent to ex. single family homes. when there is a transition from existing homes, type A buffer should be used for screening. When building townhomes next to single family homes, they should be permitted	Zoning has not been assigned to parcels yet, which will occur after UDO adoption and go through the rezoning and public hearing process. This comment is noted for consideration when that step occurs. The proposed townhome supplemental use standards require a mix of single family detached homes be included in proposed townhome developments when adjacent to existing single family detached homes for projects over 5 acres to serve as a transition. If the proposed townhomes are more than 100 feet from the existing development the transition is not proposed to be required due to the distance. The perimeter buffers serve to transition and mitigate less compatible land uses. Different types of residential uses are often compatible. The draft standards have been revised to require buffers based on land uses rather than zoning district to ensure greater consistency. Buffers are not currently required or proposed for two adjacent land uses that are the same. Alleys are not required to have streetlights.

to be front-loading so our backyard isn't facing an alley with streetlights. Any development adding more than 200 cars, based on parking, must require surrounding roads have a projected safety/congestion rating of a B or better-Forestville Rd currently has a projected rating of F.	The draft has been revised to allow flexibility for front loaded garages for developments utilizing conservation design standards or providing a minimum amount of affordable dwelling units as defined in the draft ordinance. Transportation Impact Analyses (TIAs) are currently and proposed to be required for projects with 100 or more dwelling units. The industry standard for acceptable level of service is D or better.
We are currently in a GR10 that looks to be moving to a MUR. Prairie Aster Ct backs onto a segment that is currently unincorporated but will become MUR. If this happens we need MUR to be redefined to require proper sized buffers between new development and existing single family homes. It also needs to include provisions to keep the character of the neighborhood intact. Townhomes should not require rear entry only as this forces alleys into the backyards of existing single family homes. Alleys should not be allowed behind single family homes as it destroys the character of the home	
If you truly cared about the environment you wouldn't allow the destruction of thousands of acres of trees, displacing wildlife, in order to throw up cracker jack box town homes & apts all over wake forest. It used to be a beautiful place to live, peaceful with natural green spaces. You have allowed all of the to be destroyed in the name of progress. More likely, greed & politics are driving this.	The Town does not have statutory authority to prohibit removal of trees; therefore, standards focus on approaches that aim to incentivize tree preservation. The proposed tree canopy and open space standards are approximately double the current UDO requirements. Townhomes and multifamily uses offer a range of housing types to address different residential needs, consistent with the Comprehensive Plan.
Zoning w/out density limits is ridiculous. You are giving developers too much power to do whatever they want. Give the planning board-	While neither density minimums nor maximums are proposed, there are other zoning and development parameters that control density – lot width, lot size, height, site configuration, open space and tree canopy requirements, and stormwater control.

not staff- more authority to do the right thing and protect forests and trees.	
Why are WF documents so confusing and so voluminous? Agenda packets are 285 pages zoning/udo package is 445 pages land use maps are 500 pages. Stop paying consultants so much $$$$-resident taxpayer $ to build pretty presentations that residents cannot follow	Development ordinances are lengthy and complex in order to capture the range of items being regulated and requirements for the state. The UDO has multiple users. Tables, diagrams, and definitions are included to assist with usability and clarity.
WF has one focus! Overpopulation! There is no mandate to build a house for everyone who wants to live here. 118,000 in 2045? The BOC & chamber of commerce are in an echo chamber our remaining green spaces are gone. Look at Benson Park in Garner and the hundreds of acres they acquired for parks. We have Joyner, Flaherty, and the reservoir. All donated. We would have nothing if not for generosity. WF: Where the college used to be and a forest once stood.	The UDO's goal is to balance growth and preservation by focusing growth in certain areas to continue to allow for commercial, recreational, and institutional services to meet the needs of residents. The 2024 Draft Parks, Recreation & Cultural Resources Comprehensive Master Plan includes action items related to land acquisition: Action Item 4.7.2.1: Explore funding opportunities from federal, state, and private sources to support land acquisition, conservation easements, and habitat restoration projects.
Ch15- DO NOT TRUST WF 'STAFF'!	Administrative modifications are common practice to allow minor deviations for standards that the ordinances includes specific, neutral, and objective criteria for the modification. Modifications not included, that exceed the specified amount, or that require judgement and discretion require a variance through the quasi-judicial process, which is decided by the Board of Adjustment.
3.3.3 Principal use- Residential dwelling cottage home court: Running the math from the numbers provided- area can be a minimum of 3 cottages, at a min of 2500sqft each, which has a footprint of .057 acres which can easily violate the GR3 zoning requirements	The proposed zoning districts do not have density maximums.
3.5.4 Temp Use- The portable outdoor storage device shall not exceed 8ft wide 12ft long 8ft high. This prohibits residents from using	This has been revised to 16 feet long to match products offered by temporary storage services and clarification of allowable surfaces to "all weather surface, such as pavement or gravel."

services like POD section 4: the POSD must be on an impervious surface this prohibits PODS at all on those who don't have paved driveways. No mention of whether gravel driveways or permeable pavement counts as 'impervious' or not. See NC GS ch 160D-804: contexts & requirements of regulation	
3.4.5 Other Requirements: Permit required-a private landowner should not have to appeal to the local govt to keep livestock on their private land. Fowl- the numbers for a certain number per acre is arbitrary and only serves to prohibit WF residents from keeping enough chickens to met their household needs. IN ADDITION, the current ordinance of 10 hens was decided by the signatures of stakeholders and to disregard that is to disenfranchise WF residents. Enclosure: all enclosures shall be removed if necessary for public good. NO. See: NC GS99A-1 Recovery of damages for interference w/property rights. NC GS 14.366 Molesting or injuring livestock. NC GS 14.363 poisoning livestock. NC GS 160 A-203.1 limitations of standards of care for farm animals. NC constitution art. 1 see 7 on illegal suspension of laws. US Bill of Rights 4th amendment on illegal search and seizure reminiscent of writs of assistance	The proposed number of fowl allowed has been revised to a maximum of 10 without lot size requirements.
15.3 Private landowners should have the right to do whatever they wish to buildings on their property. The town should not be able to tell a landowner they cannot amend or repair their own building whether they conform or not. James Madison "As a man is said to have a right	The proposed UDO allows for repair and maintenance. **“Maintenance and Minor Repair**. Nothing in this Chapter shall be construed to prevent or prohibit the routine maintenance and minor repair of nonconforming lots, nonconforming buildings or structures, buildings or structures containing nonconforming uses, nonconforming site features, or nonconforming signs. This

to his property he may equally be said to have a property in his own rights." John Locke, The 2nd treatise of govt 27 "Every man has a property in his own person, this nobody has any right to but himself. The labor of his body and the work of his heads we may say are properly his."	includes strengthening or restoring to a safe condition any building, structure, or part thereof declared to be unsafe by any public official charged with protecting the public safety, health and welfare pursuant to orders of such official or modifications necessary for ADA compliance.”
3.4.3 Accessory Structures A private landowner should be able to manage their land as seen fit. Adam Smith Founding Father of Economics 'An inquiry into the nature & causes of the wealth of nations BLC ch10 pt2 1776 "The patrimony of a poor man lies in the strength and dexterity of his hands; and to hinder him from employing this strength and dexterity in what manner he thinks proper without injury to his neighbor, is a plain violation of this most sacred property." Thomas Jefferson, First Inaugural Address, 1801 'a wise and frugal Government, which shall restrain men from injuring one another, shall leave them otherwise free to regulate their own pursuits of industry and improvement, and shall not take from the mouth of labor the bread it has earned. This is the sum of good government"	Accessory structure regulations primarily pertain to size and setbacks to ensure consistency and ensure that maintenance and access can be contained on the subject lot. If there are specific concerns about certain accessory structure standards, these can be further evaluated.
Concerns: What % of WF is allotted to conservancy? Dense development overall. Larger setbacks/buffer zones between proposed properties. Excess traffic & congestion, parking for all proposed development, the light at rt98 & left turn into traditions area, lack of consistency in planning, development density around reservoir Gilcrest Farm Rd	Conservation: The Town’s Urban Forest Management Plan sets a minimum goal of 40% canopy coverage. Setbacks/buffers: Larger setbacks and buffers do not automatically result in more conserved area. Proposed setbacks and buffers take into account existing conditions to minimize nonconformities. If there are specific uses or districts of concern, this can be further evaluated.

	Traffic: Case law requires that improvements required of a development be both reasonably proportional and related to their impacts. This means that developments make improvements to the subject site and the street frontage for the subject site. Development cannot be required to resolve existing issues. The Town requires development to make transportation improvements for their portion of sites in accordance with the adopted Comprehensive Transportation Plan. This can include right-of-way dedication, installation of sidewalk or multi-use paths, curb and gutter, street widening, greenways, and contributions towards medians. Through impact analyses, the Town and NCDOT may in some cases be able to require turn lanes, signal timing adjustments, and contributions towards new traffic signals. Parking: Oversized parking lots take up space that could otherwise be used for open space or usable building or gathering areas. If there are specific uses of concern related to parking, this can be further evaluated. Reservoir Density: The watershed regulations will still be in place in the Smith Creek Critical and Protected watershed areas, which regulate the amount of impervious surface permitted, which directly relates to water quality and land disturbance more than the number of dwelling units.
Allow for more conservation & wildlife habitat, work with landowners to incentivize allocation of open space, protect wetlands w/buffers and overlays, allocated money for wetland and habitat mitigation	State statute and case law limit if or how much buffer can be required for streams and wetlands. The draft UDO proposes to incentivize and encourage open space in these areas with the specified allowable open space areas and through the new conservation design standards. The 2024 Draft Parks, Recreation & Cultural Resources Comprehensive Master Plan includes action items related to funding and coordination with landowners: Action Item 4.7.2.1: Explore funding opportunities from federal, state, and private sources to support land acquisition, conservation easements, and habitat restoration projects. Action Item 4.7.2.3: Work with landowners, developers, and conservation groups to negotiate voluntary conservation agreements, easements, or land donations to permanently protect critical green spaces from development

We live in Del Webb Traditions, our backyard faces towards the now future medical facility 7 acres. The current buffer is 15-20ft. We proposed25-30ft. Also, propose new medical facility to build one story only. We WF residents are losing a small town feel to urban living-please limit your development in our backyards. Contact poling payton for any positive changes	The draft has been revised so that the perimeter buffers are based on land use instead of zoning district. If the undeveloped property becomes Residential Care Facility, Townhomes, or Multifamily, the required buffer as drafted would be 15-20 feet. The amount of vegetation required within the buffer is almost twice the amount required by the current UDO. If a Public & Institutional or Commercial use is developed, the required buffer as drafted would be 20-30 feet.
Please consider slowing down the growth of WF & working to improve infrastructure before taking on new building projects. When it comes to planting new trees, please follow up with maintenance of those trees. For example, the trees around the Wendy's on S Main St, were neglected so badly that the ropes used to anchor their supports were being grown into the actual tree trunk. So many attempts to beautify new roads have ended in dead trees-like Ligon Mill near 98	The Town has many infrastructure improvement projects, and some of the infrastructure projects are completed by development. Landscape is inspected immediately following construction; however, there is limited staff capacity currently to continuously monitor and inspect landscaping. If you notice dead vegetation or vegetation in need of maintenance, please notify staff through the SeeClickFix program so that we can follow up with the applicable agency or property owner.
Please keep trees in WF! You've already cut down trees behind reservoir view ln/traditions grand townhomes....PLEASE keep reservoir trails & trees! People come hike/walk from all over. Why do we need a 2nd food lion? Not needed. Build based on need and ask people what they prefer. Raising Canes would be a great addition-per my teenager	There are currently no plans for private development on the reservoir property. Recent work has included decommissioning of the treatment facility and safety improvements. Future plans identified in the 5-year Capital Improvement Plan call for a Parks and Recreation concept plan for the Wake Forest Reservoir property that may include paved parking, new boat ramp, dock, new bridge, continuation of soft trail on east side, two additional bridges, facilities, and concession amenities. The Town nor the UDO has authority over specific companies that choose to build, only the proposed land uses (retail, restaurant etc.)
Do not build residential areas near our local parks! Protect Joyner & surrounding forests at all costs. No more cheap-built housing everywhere	Locating residential development near parks allows for more access and enjoyment of these public services.

Would love to see the 'restricted' tag removed from tattooing. This would open up an opportunity for a growing and flourishing industry to move into the downtown area. Tattoo Shops & artists have become more and more a part of communities all over NC, & the right shop would be an amazing addition to our downtown community	The draft proposes to group tattoo shops under Personal Services. The Restricted Personal Services use is removed.
Would love zoning to allow services like a local arts and tattoo shop. We represent a large portion of WF residents who support this specific avenue of the arts. Excited to see changes in the new draft that will allow tattooing to fall under 'personal services' just like salons, or other self-care businesses and not 'restricted'	
Proposed zoning disk-has no zoning density and apts can be built, proposed overlay district-currently allows watershed- 2 houses per acre calling for 2.5 houses per acre, Proposed administrative modification- allows staff to approve deviations to UDO standards. No oversight from planning board or BOC	Density: While neither density minimums nor maximums are proposed, there are other zoning and development parameters that control density – lot width, lot size, height, site configuration, open space and tree canopy requirements, and stormwater control. Multifamily: The proposed zoning districts and use allowances are based on Community Plan guidance. Administrative Modifications: Administrative modifications are common practice to allow minor deviations for standards that the ordinances includes specific, neutral, and objective criteria for the modification. Modifications not included, that exceed the specified amount, or that require judgement and discretion require a variance through the quasi-judicial process, which is decided by the Board of Adjustment.
Concerned about these 3 parts of the plan: the proposed zoning district needs zoning density. Do not allow more apartments. Proposed overlay district- currently allows only 2 houses per acre. New proposal calls for 2.5 houses per acre. Please don't increase. Proposed administrative modification- calls to allow staff to approve deviations to UDO standards w/out approval from planning board or town comm- oversight is needed	

The proposed UDO zoning eliminates density guidelines. This paragraph will be unenforceable unless a density limit is added here. For example- the total number of lots shall not exceed 5 per 10acres	While neither density minimums nor maximums are proposed, there are other zoning and development parameters that control density – lot width, lot size, height, site configuration, open space and tree canopy requirements, and stormwater control.
Accessory food trucks should have allowance for food truck to be located in adjacent ROW if approved by the bos- property owner to pay utilities & insurance	The Food Truck standards have been revised in the draft to propose location in the right-of-way in the DT District due to limited off-street surface parking.
Do NOT allow staff to waive any UDO requirement without board/commission approval. Create 2 new residential use zoning class	Administrative modifications are common practice to allow minor deviations for standards that the ordinances includes specific, neutral, and objective criteria for the modification. Modifications not included, that exceed the specified amount, or that require judgement and discretion require a variance through the quasi-judicial process, which is decided by the Board of Adjustment.

Engage Wake Forest Comments Received as of 11/8/24	Staff Response
Proposed Zoning District - the new zoning has no density limits. So, any land zoned General Residential (GR) can have apartments built on it. Our population has grown 53% since the last census, it's time to stop this continued housing expansion and tearing down the woods. Proposed Overlay Districts - this includes Watershed Protection Overlays for Smith Creek (the 350 acres across from DWT). Wake County has the 350 acres with a Watershed Protection of WS-II which allows only 1 home per 2 acres. The Town of Wake Forest is changing that to a brand new term called Smith Creek Critical Area District which will all 2.5 homes per acre. Why are you allowing this? What is the rationale. It does not seem that it benefits anyone except builders. Proposed Administrative Modifications 15.5 (G) - Allows Administrators (Staff) to approve deviations to UDO standards	The GR District does not propose to allow Multifamily. No changes are proposed to the WS-II standards. The watershed protection rules set by the State will still be in effect regardless of the base zoning district. The 0.5 dwelling units per acre density identified in the Smith Creek Critical Area is the requirement when the “low impervious” development option is selected that allows a maximum of 6% impervious surface area with limited stormwater control measures required. If the “high impervious” development option is selected, the 0.5 dwelling units per acre is not required and instead more significant stormwater control measures are required and up to 24% of maximum impervious surface area is allowed. Administrative modifications are common practice to allow minor deviations for standards that the ordinances includes specific, neutral, and objective criteria for the modification. Modifications

such as: Min/Max setbacks, buffers, and frontage buildout (Shrink the buffer between DWT & the Nursing home). This is ridiculous. Why are you allowing this? Vote NO against this proposal. Payment in lieu of specified improvements. (A specified improvement could be a bike trail or a required number of trees on new development). For example, the proposed Nursing Home needed to plant 360 trees after clear cutting, the final site plan included 98 planted trees and a payment in lieu of the missing 262 trees. Vote NO against this. They should be REQUIRED TO PLANT THE TREES. This is just an easy out and the town calls in income. It worries me that these Administrative Modifications will have have no oversight from the Planning Board or the Board of Commissioners or residents. It is just a closed door conversation between of member of the Town of Wake Forest staff & the developer. Who are these decisions makers and who has given them this authority? Someone needs to publish the names of these decision makers.	not included, that exceed the specified amount, or that require judgement and discretion require a variance through the quasi-judicial process, which is decided by the Board of Adjustment. The standards that are eligible for the modifications are only those explicitly listed in the ordinance and are minor in nature. Payment in Lieu of trees is not proposed expect when PIL is collected for street trees along unbuilt stub street extensions. Street stub extensions are typically for a length of less than 20 linear feet due to not being able to build street stubs up to the adjacent property line without off-site construction easements. Payment in Lieu of greenways is proposed only for portions that cannot built, such as stubbed portions or portions that cannot be accessed until surrounding development occurs.
USO for roads! Too much development and no infrastructure updates!	Case law requires that improvements required of a development be both reasonably proportional and related to their impacts. This means that developments make improvements to the subject site and the street frontage for the subject site. Development cannot be required to resolve existing issues. The Town requires development to make transportation improvements for their portion of sites in accordance with the adopted Comprehensive Transportation Plan. This can include right-of-way dedication, installation of sidewalk or multi-use paths, curb and gutter, street widening, greenways, and contributions towards medians. Through impact analyses, the Town and NCDOT may in some

	cases be able to require turn lanes, signal timing adjustments, and contributions towards new traffic signals. Development is responsible for the installation of new streets (and associated elements such as street trees and street lighting) and water and sewer infrastructure. Public infrastructure is eventually taken over for maintenance by the Town or other public agency after completion.
Wake Forest is rapidly losing the tree canopy and nature that makes it unique. Clear cutting entire lots cannot continue to happen, not only is it destroying the visual appeal, it's increasing temperatures, increasing flooding, and decimating the species that call Wake Forest home. I'd like to see the town insist on a percentage of trees be kept PER ACRE not just around the perimeter. I'd like to see the town purchase conservation acreage that is for the health and wellbeing of the environment ... maybe with soft trails at most but not to be paved for human softball fields or pickleball courts. If wake forest doesn't start preserving our environment now it will be too late in 10 yrs, and what makes our town so desirable will be a memory. I'd like to see a native plant species list for new development and not just non natives that grow fast. More use of tree boxes, rain gardens, permeable surfaces in new development, preservation of wildlife corridors. Better parking lot design that incorporates shade and covered sidewalks instead of paved heat deserts. Wake Forest can be a leader in LEED certifications, conservation eco preserves, responsible green development, and insisting on a healthy balance between humans and nature.	The Town does not have statutory authority to prohibit removal of trees; therefore, standards focus on approaches that aim to incentivize tree preservation. The proposed tree canopy and open space standards are approximately double the current UDO requirements. The 2024 Draft Parks, Recreation & Cultural Resources Comprehensive Master Plan includes action items related to land acquisition: Action Item 4.7.2.1: Explore funding opportunities from federal, state, and private sources to support land acquisition, conservation easements, and habitat restoration projects. Several of the proposed landscape standards include native vegetation. The current tree list will also be updated to include a wider range of approved vegetation, such as shrubs, with a focus on native species and those with wildlife value. This list will be located in the manual containing the engineering and construction details. Section 7.7 Parking Area Landscape increase the amount of trees and plantings currently required for parking lots and includes green infrastructure design options. Parking maximums are proposed to reduce impervious area and promote other modes of transportation. Options to exceed the proposed parking maximums include use of permeable pavement.

As others have stated, we must protect our environment and not insist on being blinded by dollar signs. Climate catastrophe is on the horizon and myself and I'm sure many other residents will not be pleased with insistence on irresponsible and short-sighted development that only helps those who are already wealthy. We should only entertain regenerative and cyclical ways of being, it is long past time to put frameworks centered on extraction and exploitation of our natural resources and neighborhoods to rest. "When the Last Tree Is Cut Down, the Last Fish Eaten, and the Last Stream Poisoned, You Will Realize That You Cannot Eat Money"	The draft UDO proposes increased canopy coverage and open space requirements, incorporation of green infrastructure and native plants, stricter stormwater control standards, and land use patterns that promote pedestrian, bike, and transit usage in an effort to be responsive to climate threats.
I'm a 5 yr resident in Wake Forest after spending several years living in Cary NC. I love the charm and feel of Wake Forest, however, I still have to go to Raleigh for more shopping and night life experience. When my family or friends visit and we're seeking a 4 or 5 star hotel, they have to travel to Raleigh. The hotels in Wake Forest are 3 star. I wouldn't recommend anyone staying. Growth is here in Wake Forest! I think this is shameful. Traffic has become an excessive nightmare getting in and out of Wake Forest.	Attracting and retaining commercial, entertainment, and services uses is more successful with a concentration of customers through residential or office uses. The UDO proposes increased opportunities for mixed use development to support bringing non-residential uses to residents and bringing customers to the non-residential uses in closer proximity and more connected networks. Mixed use development can also alleviate traffic congestion due to shorter trips and trips completed by other modes of transportation other than single use vehicles.
We're disappointed. If approved, the new UDO will cause catastrophic harm to our nonprofit religious organization (The Church Initiative). How so? We'd lose the ability to expand our operations at our current location. And the value of our property would be reduced. As a growing ministry, it's imperative that we retain the option to expand on our property and that we protect its value. Our current building is 12,500 sq ft. It sits on 5.51 acres of land, in a Mixed Use Residential District. The UDO states that, "In the MUR District, Professional Service uses shall have no more than 15,000 square feet total of building or tenant floor area."	The 15,000 square feet maximum is intended to retain the residential nature of the MUR zoning district while providing convenient access to retail, services, and jobs for residents. As the rezoning step begins, staff will discuss conditions to achieve common goals.

As you can see, the new UDO will prevent us from building significant additional structures—on our own property. We would like to work with the Town to preserve our right (or the right of a future property owner) to add additional structures to our property. We're willing to work with the Town to ensure that future development would complement MUR District objectives. Any ideas regarding how we could achieve that? Finally, congratulations on getting to this stage in the UDO process. We appreciate the information you've shared with us and the Town throughout the process. We look forward to continuing to work with you to resolve our concerns.	
I like the goals of keeping more tree canopy, especially more mature trees. I would like to suggest when adding plants and landscaping to use native plants and trees for pollinators.	Several of the proposed landscape standards include native vegetation. The current tree list will also be updated to include a wider range of approved vegetation, such as shrubs, with a focus on native species and those with wildlife value. This list will be located in the manual containing the engineering and construction details.
I do not see the town is listening to the residents ask for more open space. I see transit oriented and high density developments in areas which could be better suited for recreational use. Although the town is proposing a change to increase the tree canopy I don't believe it goes far enough to protect critical streams and watershed especially when high density housing is zoned. Although I read about conservation subdivisions, where are they? Why can't this be the norm? Many people move to Wake Forest from Raleigh and surrounding areas to get more breathing room. People want to live in Wake "forest". The idea of living within a forest is attractive. Let's make this town different from surrounding towns and work to hold development to a higher level— where are solar requirements for huge developments- such as those on 98?	The Watershed Protection Overlays are consistent with the state's model ordinance and requirements. State statute does not permit stricter buffers on streams. The proposed conservation design and open space standards are intended to encourage additional buffering. The watershed regulations will still be in place, which regulate the amount of impervious surface permitted, which directly relates to water quality and land disturbance more than the number of dwelling units. Solar requirements are not proposed; however, commercial buildings greater than 100,000 square feet are proposed to require conditional zoning district approval, which offers an opportunity to work with applicants to incorporate site specific conditions that address specific concerns and make the project more compatible

Wake Forest should live up to its name and be the town known for conservation	with the context and Town goals. The Planned Unit Development (PUD) rezoning proposes to establish standards to for PUD consideration. One of the proposed objectives is sustainability, which could include providing solar energy within the project.
I have read through the UDO and there is no provision for the UDO to request a developer test soil for contaminants if any contamination is suspected. The Concerned Citizens for the Preservation of Open Space in Wake Forest request that Soil Testing, Phase II Soil testing and remediation be included in the UDO updates. I have drafted language to be used in the UDO. The TOWF may request a Phase II Soil Survey Plan in a proposed development suspected of chemical contamination including former golf course properties. The soil sampling plan should be completed by an unbiased, qualified third party using scientifically sound planning and practices in accordance with EPA's Data Quality Objectives or similar guidance document. The Data Quality Objectives (DQOs) Process was developed by US EPA and is a systematic plan for collecting environmental data of a known quality and quantity to support decisions. Results of the soil sampling plan should be evaluated in terms of the original plan objectives and should include recommendations for soil management and remediation if required. Transparency to all parties (town, developer and stakeholder communities) in all phases of the process is essential so that everyone understands the scope of contamination, remediation plans and potential risks. We are quite concerned about any proposed development on the Joyner/former Wake Forest Golf Course property. We have evidence that the soil is contaminated with Chlordane, Hexavalent	Staff plans to include Phase II Soil Survey for sites with known or suspected contamination due to available data or historical use of the site as a required submittal item on the site and subdivision plan submittal checklist. The checklists are not located with the UDO but are codified in Section 16.4.5.A.

Chromium and Arsenic used in pesticides and fertilizers. By including this in the UDO, the town can require this testing by the developer in these situations and help keep our community safe.	
I don't see anything precluding a developer from draining a pond without special consideration from the Planning Dept. It seems that draining a pond as part of a development would be significant from a water protection and environmental management.	Section 12.2.2 proposes to limit development for naturally occurring ponds, lakes and other water bodies.
1. There is no wording in the UDO about soil testing for hazardous chemical presence in development plans or remediation of contaminated soil. If the town has reason to believe soil is contaminated, the UDO needs to provide direction for the developer to test the soil. This is important for the health and safety of the community, new homeowners and anyone working at a chemically contaminated site. In Section 12.Natural Resource Protection Standards there is significant discussion about Storm water management, nitrogen loading in the watershed, and sedimentation. Monitoring, testing and management of contaminated soils should also be included. Existing and Closed Golf Course properties should be specifically identified as they are heavy users of pesticides, fungicides, weed killers and fertilizers. 2. Also in section 12.Natural Resource Protection Standards, there is no wording about development on a property with a pond and the possibility of ponds being drained to gain space for road ways or additional lots. Under section paragraphs 12.7.1.F.1 & 2 (or other appropriate sections), the town should include a restriction or requirement for a variance in order to drain a pond. This would include Existing Conditions/Proposed Plan sites. Ponds provide resources for recreation, wildlife, erosion control, and pollution management. Also under the definitions section pond drainage needs to be added back to the definition of development. It is not magic. The landscape is being altered.	1. Staff plans to include Phase II Soil Survey for sites with known or suspected contamination due to available data or historical use of the site as a required submittal item on the site and subdivision plan submittal checklist. The checklists are not located with the UDO but are codified in Section 16.4.5.A. 2. Section 12.2.2 proposes to limit development for naturally occurring ponds, lakes and other water bodies. 3. Conservation design will be required for the Falls Lake Protected, Little River Protected, Smith Creek Protected, and Smith Creek Critical watershed areas. Staff proposes to include the Little River Protected watershed area as well. Some incentives to encourage conservation design where it is not required is allowing smaller lots, allowing townhomes in the GR district that otherwise would require a conditional rezoning, and allowing some flexibility on the rear alley requirement. 4. One of the goals of the UDO is to implement the goals and recommendations of the Comprehensive Plan. Various recommendations from the Community Plan, Housing Affordability Plan, and Northeast Community Plan speak to diversifying the types of housing. Larger lot or larger homes are not prohibited but rather more options are included. 5. The draft UDO has undergone careful evaluation with most of the changes coming from NC communities and with the primary

3. We are glad to see section 4.3 Conservation Design. Is there anything to further encourage residential developers to consider this kind of plan? If Wake Forest can encourage more residential plans of this design, it will make a major impact on the character of our community and Wake Forest as an environmentally sensitive community. 4. The entire tenor of the UDO is to encourage denser development with smaller and smaller lots and more apartments/townhouses/ and smaller homes. None of this adds to the quality of life for the residents of Wake Forest and will only add to the traffic congestion, crime, and school overcrowding. 5. The BOC is delegating its responsibilities to unelected bureaucrats and consultants. These UDO changes were imported from some other high density city that the consultants consider a success. People moved to Wake Forest to escape high density living. Move all approvals for variances to the UDO back under the BOC and public hearings.	goals of Comprehensive Plan implementation and state/federal/case law compliance. Variances will continue to be heard by the Board of Adjustment. I think you may be referencing the administration modifications, which are reviewed and determined by staff. The current UDO includes administrative modifications from various standards that are only approved when specific, neutral, and objective criteria are met, which are outlined in the ordinance. This is carried forward to the draft UDO, with some additional standards included. Most of these standards are 5 -10% deviations. This is very common practice among NC municipalities.
I cannot stress enough the importance of phase 2 soil testing for potential development of golf course properties. Golf courses are known to have dangerous and health hazard chemicals in the soil. if the soil is dug up, these chemicals are leaked into the air, water and surrounding area putting construction workers, future residents, surrounding residents and wildlife in danger. This is a priority for health and safety of our community. There is known chemical contamination of this land and Phase 2 testing along with remediation of the soil should be included in the UDO to help protect our community. In the section 12, Natural resource protection Standards there is significant discussion about storm water management, nitrogen loading in the watershed and sedimentation monitoring testing and management of contaminated soils should also be included. On this same note, there is no wording about development on a property with a pond	Staff plans to include Phase II Soil Survey for sites with known or suspected contamination due to available data or historical use of the site as a required submittal item on the site and subdivision plan submittal checklist. The checklists are not located with the UDO but are codified in Section 16.4.5.A. Section 12.2.2 proposes to limit development for naturally occurring ponds, lakes and other water bodies. Conservation design will be required for the Falls Lake Protected, Little River Protected, Smith Creek Protected, and Smith Creek Critical watershed areas. Staff proposes to include the Little River Protected watershed area as well. Some incentives to encourage conservation design where it is not required is allowing smaller lots, allowing townhomes in the GR district that otherwise would

and possibly of ponds being drained to gain space for roadways or additional lots. the town should include a restriction or requirement for a variance in order to drain a pond. Ponds provide resources for traveling wildlife, erosion control, and pollution management. Allowing developers to remove ponds at will in order to serve their needs and pockets really needs to be evaluated and monitored. Lastly we are glad to see section 4.3 conservation design. is there a way to encourage developers to consider this kind of plan? if Wake forest can encourage more residential plans of this design it will make a major impact on the character of our community and Wake Forest as an environmentally sensitive community. Keep Wake Forest a forest! The application of this design could be interpreted very differently by each developer and it will be up to staff to make sure that this conservation plan is indeed conserving as much land and trees as possible. There should be incentives and rules for our developers to consider this plan and not just a suggestion.	require a conditional rezoning, and allowing some flexibility on the rear alley requirement.
Soil testing needs to occur before this project planning goes further. Chemicals used on the golf course has been pumped into the ground and could leach into the ponds and waterways around this area if disturbed during course of any construction. This will be hazardous to the current surrounding residents who have wells on this water table and will have an adverse affect on the local wildlife.	Staff plans to include Phase II Soil Survey for sites with known or suspected contamination due to available data or historical use of the site as a required submittal item on the site and subdivision plan submittal checklist. The checklists are not located with the UDO but are codified in Section 16.4.5.A.
I strongly agree with the previous comments specially the phase 2 soil testing.. How could the UDO not contain this safeguard provision? Which Wake Forest citizen including all planning staff & BOC would conscientiously object to soil testing? Which developer would not want to protect us citizens, themselves, wildlife and specifically our environment? Draining of existing ponds and releasing dangerous chemical sediments in our water supplies is of equal importance.	Staff plans to include Phase II Soil Survey for sites with known or suspected contamination due to available data or historical use of the site as a required submittal item on the site and subdivision plan submittal checklist. The checklists are not located with the UDO but are codified in Section 16.4.5.A. Section 12.2.2 proposes to limit development for naturally occurring ponds, lakes and other water bodies.

We would very much like to make sure that Phase II Soil Testing and remediation of contaminated Soil be included. It's important in all areas, but especially in watersheds as these chemicals could pollute the source of drinking water if disturbed by development. Also, there should be restrictions about not being able to drain ponds or interfere with ponds to make space for roadways, infrastructure or development. Thank you for your consideration!	
Also I adamantly object to the deletion of pond draining in the UDO	Section 12.2.2 proposes to limit development for naturally occurring ponds, lakes and other water bodies.
This community has continually expressed well noted and serious concern about any proposed development on the Joyner/former Wake Forest Golf Course property. There is available evidence that the soil is contaminated with Chlordane, Hexavalent Chromium and Arsenic used in pesticides and fertilizers. With this addressed in the UDO, the town can require essential testing by the developer and clear evidence of appropriate remediation (or certification that appropriate remediation given the serious condition of the soils is not available) in these situations with the goal of keeping our community safe. Further, The Concerned Citizens for the Preservation of Open Space in Wake Forest request that Soil Testing, Phase II Soil tests and remediation be included in the UDO updates. What we have here in Wake Forest is of historical significance, a very special environment well worth protecting. It appears that the objective of the entire tenor of the UDO is to encourage denser development with smaller and smaller lots and more apartments/townhouses/ and smaller homes. None of this adds to the quality of life for the residents of Wake Forest, will, as in other similar urban development surely add to sanitation	Staff plans to include Phase II Soil Survey for sites with known or suspected contamination due to available data or historical use of the site as a required submittal item on the site and subdivision plan submittal checklist. The checklists are not located with the UDO but are codified in Section 16.4.5.A. One of the goals of the UDO is to implement the goals and recommendations of the Comprehensive Plan. Various recommendations from the Community Plan, Housing Affordability Plan, and Northeast Community Plan speak to diversifying the types of housing. Larger lot or larger homes are not prohibited but rather more options are included.

concerns (i.e. litter on road ways and citizen properties), increased traffic congestion, crime, and school overcrowding. Too much of what makes Wake Forest special has already fallen victim to unharmonious development. What we lose can never be replaced.	

Email Comments Received on Draft UDO as of 11/8/24	
The minimum lot width requirement does not account for lot tapers in a bulb cul-de-sac. For instance, in GR, the lot width minimum is 50 ft measured at the ROW. So, that would limit the number of lots at a cul-de-sac to 3 (calculated as Pi * D (typically 90') or 180' divided by 50'). This is highly restrictive. Raleigh UDO has an exception to the lot width requirement for cul-de-sac lots.	Some of the reasons for the lot width requirements particularly with front loaded lots is ensuring there is adequate driveway spacing, room for utilities, room for trash and recycling cart pick up, room for on-street parking, and room for street trees. These get even more compressed at the cul-de-sac if narrower frontages are allowed. The goal is also to have more regularly shaped and consistent lots.
My understanding of the UDO reforms was that Wake Forest is pushing its own version of "missing middle" reforms to create more, lower cost housing within existing town boundaries and served by existing infrastructure. The residential infill requirements in proposed Article 2.8 would almost always be more restrictive than the dimensional standards in Article 2.3 et seq and in fact are more restrictive than the current UDO. This seems counter-intuitive unless I have misunderstood the purpose of the new UDO-- is it to make infill development more restrictive and encourage satellite development?	More missing middle housing types are proposed to be added and/or distinguished from each other and also allowed in more places. For example, current GR3 zoning only allows single family detached while the proposed General Residential district allows duplexes, triplexes, quadplexes, and cottage courts. The infill standards are proposed to be applicable in the General Residential, Northeast Community Residential, and Local Historic Overlay districts only while the current UDO applies them townwide, so the intention is to preserve the established, often older neighborhood characteristics with consistent streetscapes, which the lot widths help to carry out. This wouldn't preclude the previously mentioned uses from locating in the infill areas.
Stacking of affordable housing incentives for nonprofit housing builders that provide the majority of the units at affordable levels would be beneficial. The biggest incentive is the fee waivers.	Incentives have been clarified to allow two incentives to be utilized for projects meeting the minimum affordability standards and for three incentives to be utilized for projects providing 50% or more of the units at the specified affordability levels.
Why can't/wouldn't glass be counted as a percentage of the façade materials? If it were, is the proposed credit system needed?	Including glass in the facade percentage would increase the amount of masonry material.

Advocate for keeping parking requirements based on minimums as under the current UDO. Experience with codes that require maximums, often developers are not planning to hold sites long-term and will "underpark" them. Real Estate and parking costs have skyrocketed, so developers will look to cut/save there first. An example cited is Wheatmore Shopping Center in Heritage. This development met the current parking requirements based on minimums and is still woefully under-parked – what would the scenario be like if the parking requirements had been based on maximums?	Short term developers tend to be more common with residential development. Parking maximums can be modified if requested by the applicant and certain criteria are met. With the Wheatfield example, the proposed parking maximums would have been 329, which is 79% higher than the current parking minimum for the site, so the proposed parking maximum would not have exacerbated their parking challenges; however, with no minimum they could have provided less. If there are certain high parking demand users that should be considered for both a minimum and maximum and/or higher allowances for maximums staff will evaluate.
If the Planning Staff doesn't elect to provide flexibility, then none is provided. That doesn't appear very flexible from the standpoint of the developer.	Staff decisions need to be objective with specific and neutral review criteria. Under state law, administrative modifications cannot allow a change in permitted uses or densities. It must be clear on the amount of the modification. Any applicant can request a modification specified within the ordinance. The applicant would submit a request for the modification, which is reviewed by the Administrator (which is usually the Planner Director but could be their designee) based on the criteria included in the UDO. The modification is reviewed based on the information provided within the request and how it compares to the review criteria. If a modification request is denied and the applicant disagrees with the determination, they can submit an appeal.
Quasi-judicial hearings are legal hearings, overly formal, and expensive, time-intensive processes. As a result, many developers—typically those locally-based—don't see this as a viable option to provide flexibility.	Appeals and variances are QJ, consistent with state law. Unlike legislative hearings these are one meeting (versus three) and while they take some time, they are quicker than a rezoning and are targeted to the specific request. Variances and appeals are not appropriate for all situations but are an available tool.
Full rezonings are very expensive and time-consuming. This can kill projects, particularly for local developers	Rezoning is just one option among several avenues for flexibility and may not be appropriate in all cases. The draft UDO proposes to allow concept plans instead of full site plans to be submitted with rezonings, which will reduce the total review time associated with rezonings.
Since rezonings will only be permissible if seeking greater restrictions, what options exist when elements of an existing zoning designation don't fit but don't have another use that would be allowed?	

It appears the ability of the Board of Commissioners to determine permissible uses/conditions within existing zoning districts is being disallowed under the proposed UDO. Why?	The reason for moving to more restrictive conditions only is for consistency and to better distinguish between the PUD process, which allows for creative and unique situations while ensuring Town goals are achieved.
Under the proposal, will the Board of Commissioners only be allowed to remove "by right uses" – wherein any changes can only be more restrictive? If so, why? Shouldn't the Board – and, by extension, the Town – encourage freedom among its elected leaders to work with developers to direct changes to allow developments to move forward as they collectively deem it appropriate?	
As cases in point, it appears two developments recently approved – Wake Forest Exchange and Johnson Hyundai – would not be allowed under the proposed UDO. Both required rezoning but only from their existing zoning designation to add conditions (i.e. HB to HBCD). If this is correct, what is the goal of this change?	
One of the primary challenges for our architectural team was that the UDO was not easily scalable for larger projects with varied uses. Things like the minimum glazing requirements and variations in façade planes are much more challenging to implement on a building that requires repetition and patient privacy.	The current UDO has some stricter standards on façade articulation for larger buildings, which are not proposed in the draft UDO. Increased allowance of spandrel glass is proposed. Variability in the wall design is still included though because larger and repetitive masses have a noticeable visual impact.
Address more qualitative ideas rather than aesthetics. Requiring things like a base, middle, and top of some particular proportion, that's dictated by an architecture from hundreds or even a few thousand years ago and isn't appropriate for the requirements of today's technology and culture. It's akin to having a smart device that looks like a wall-hung phone or an EV that looks and sounds like a Model T rolling down the street.	To be objective, standards need to include quantitative rather than qualitative elements. The current 15% modification is proposed to be reincorporated into the draft to offer some flexibility from the quantitative standards. The current base, middle, cap requirement is not proposed in the draft UDO.
For the Major Redevelopment category – how was the 50% figure arrived at? If I'm thinking about an expansion project, let's say going from 5,000 SF to 7,501 SF, that seems like a low threshold relative to effort required to bring the existing building / site into complaince. I'm also thinking about the burden on an occupied building / operating business when trying to meet the requirements. Could that number be looked at? This also might be	Based on additional research, the major redevelopment category threshold is proposed to be revised to 75% from 50%. The glazing, materials, and entryway standards are proposed to be revised to only be applicable to the expanded or modified portions of the building and not existing elevations that are not being modified that are adjacent to a street, park, or residential use as initially drafted.

a great area where planning staff could have some latitude to make a call as circumstances could be quite different on a case by case basis. I do understand the intent and frankly, I'm more worried about the building piece than the site. I feel site could be relatively easy to tackle, but trying to bring an existing building into compliance would be pretty messy. As far as the effects on existing operations, cutting in windows to an existing exterior wall will obviously be a very invasive and disruptive process. It would, in most every instance, require that whatever operations are being conducted in those affected areas be suspended. Any equipment and existing infrastructure would have to be relocated as well. In cases, structural members may create conflicts that have to be worked around / re-engineered. All these little things would add up cost-wise. Not just the construction aspect, but the downtime and disruption as well. If a building's façade was constructed with primarily materials that are no longer allowed by the UDO or don't meet the new design standard, how would that be addressed? Would that all have to be removed or covered up? That could be very burdensome. I am not sure if I can pinpoint where that threshold should be %-wise, maybe it's 100%? I do think this is where staff having the flexibility to make a call at the administrative level really makes a lot of sense. Maybe it's not a percentage, but some other criteria? Could it be more use-case specific?	
Going through the draft UDO further, I didn't see any explicit mention about what happens to existing structures in cottage court developments. Based on my research on cottage courts and pocket neighborhoods, one of the principles is reuse of existing structures where possible. The cottage courts that I've studied also tend to have taller buildings fronting on the street, in part to	Staff will evaluate the nonconforming and supplemental use standards.

obscure the cottages that lie behind them. I believe that cottage courts would be infinitely more charming, and less disruptive to the neighborhood character, if they could be tucked behind existing houses in the neighborhood. However, most existing houses are over 18 feet tall, so you'd have to demolish everything to build a cottage court. I think that Wake Forest would see higher-quality development, which would be less disruptive to neighborhoods, if existing structures in cottage-court redevelopments were exempt from the cottage court dimensional standards. Do you think that this addition to the UDO would be viable?	
The Concerned Citizens for the Preservation of Open Space in Wake Forest request that Soil Testing, Phase II Soil testing and remediation be included in the UDO updates. I have drafted language to be used in the UDO. The TOWF may request a Phase II Soil Survey Plan in a proposed development suspected of chemical contamination including former golf course properties. The soil sampling plan should be completed by an unbiased, qualified third party using scientifically sound planning and practices in accordance with EPA's Data Quality Objectives or similar guidance document. The Data Quality Objectives (DQOs) Process was developed by US EPA and is a systematic plan for collecting environmental data of a known quality and quantity to support decisions. Results of the soil sampling plan should be evaluated in terms of the original plan objectives and should include recommendations for soil management and remediation if required. Transparency to all parties (town, developer and stakeholder communities) in all phases of the process is essential so that everyone understands the scope of contamination, remediation plans and potential risks.	We will plan to add to the checklist of required information to be submitted with plans an item about phase II soil testing. The checklists themselves are not contained within the UDO but are referenced within the UDO (Section 16.4.1).

As you are aware, we are quite concerned about any proposed development on the Joyner/former Wake Forest Golf Course property. We have evidence that the soil is contaminated based on three limited samples. We need a comprehensive soil test and Phase II testing to evaluate the quantity of Chlordane, Hexavalent Chromium and Arsenic. By including this in the UDO, the town can require this testing of the developers in these situations and help keep our community safe. Please feel free to contact me for further information or background data in support of this request. Thank you for your consideration.	
To keep the number of SF on the perimeter that would require a lot, I would suggest 40 ft lots be required and the developer could decide between rear loaded with alley or garage at the back of the property accessed from the front as is allowed today	The dimensional standards notes for lot width state, "If lot width is less than 50 feet, alley access or shared driveway access to rear loaded garage(s) or parking area(s) is required."
thank-you for our recent meeting and your quick response to my initial comments. As someone who has worked on development regulations for several communities (including Boulder, CO, Palo Alto, CA and Scottsdale AZ) I believe you have done an extraordinary job in crafting this draft UDO. It seems to be both comprehensive and readable as guide to development in Wake Forest. My review of the draft is focused primarily on regulations affecting downtown. Given that each communities downtown is unique one cannot just apply the regulations from national standard which makes the task that much harder. 1. Instead of several districts have a single zoning district for the downtown reflecting the boundaries of the DT Plan Area with an overlay district to protect the National Register Historic District. This provides a unified approach to future downtown development and allows for more flexibility to accommodate future trends and the market to work. Given the small size of the downtown area and	1. The subdistricts proposed within the downtown area are in response to the unique challenges and opportunities identified for certain areas by the Downtown Plan. Post implementation the need for multiple districts will be evaluated. 2. Zoning has not been assigned to parcels yet, which will occur after UDO adoption and go through the rezoning and public hearing process. This comment is noted for consideration when that step occurs. 3. Downtown district design standards propose large percentage of glazing. Post implementation restrictions on ground floor uses will be evaluated. 4. Parking requirements are proposed to be relaxed in the Downtown and a general shift towards maximum parking throughout all districts.

the similar uses in the proposed district this will simplify the development process. 2. Expand this unified downtown zone to include the area immediately north of Roosevelt/Wait St. and the civic uses south of Holding Street. Both sides of the street are visually part of the downtown and any future development or redevelopment should be consistent and compliment the rest of the downtown. 3. Don't restrict downtown first floor uses rather require first floor retail design (e.g. 10'-12' first floor heights and enlarged windows) for development on specific streets. Market conditions will dictate first floor retail. Retail lease rates are normally more profitable. So even if initially there is not a demand for retail in the future it can occur if the ground floor is designed for it. 4. Eliminate parking requirements for most non-residential uses (especially retail and restaurants) and reduce residential parking requirements to one space per unit. This reflects the concept of downtowns that you park once and walk to various destinations and also reflects the different peak demands. This assumes that the Town will provide some public parking as demands dictates. 5. Create from the UDO requirements a stand alone Downtown Design Guidelines that contains most everything a developer needs to know to develop or redevelop in downtown Wake Forest. Not absolutely necessary but the Town is trying to encourage development and redevelopment in downtown and the easier it is to understand the requirements the better. 6. One year after UDO adoption have one or more public meetings inviting developers, residents and builders to give feedback on how it's working. No matter how hard one tries to make it prefect it never is.	5. and 6. Thank you for these suggestions. These will be useful follow up steps.
We moved to Wake Forest almost three years ago for several reasons. In that short time period, the reasons we came have slowly disappeared. The number of new apartments is just hard to believe, while new infrastructure, improvements and street repairs are nowhere to be found. Growth should be responsible, well-	There are multiple transportation projects and greenway projects recently completed, underway, or beginning design that the Town is leading or partnering with others that will improve connectivity, capacity, and safety for various transportation modes.

planned and controlled. It's not in Wake Forest. I suggest you funnel your efforts away from attracting more apartments (and traffic) to improving what you already have. And (1) recruit/establish a regional hospital and (2) build an indoor shooting range for the police department. With sufficient effort, these two goals could be achieved.	Case law requires that improvements required of a development be both reasonably proportional and related to their impacts. This means that developments make improvements to the subject site and the street frontage for the subject site. Development cannot be required to resolve existing issues. The Town requires development to make transportation improvements for their portion of sites in accordance with the adopted Comprehensive Transportation Plan. This can include right-of-way dedication, installation of sidewalk or multi-use paths, curb and gutter, street widening, greenways, and contributions towards medians. Through impact analyses, the Town and NCDOT may in some cases be able to require turn lanes, signal timing adjustments, and contributions towards new traffic signals. Development is responsible for the installation of new streets (and associated elements such as street trees and street lighting) and water and sewer infrastructure. Public infrastructure is eventually taken over for maintenance by the Town or other public agency after completion. Recruiting a regional hospital and building a police indoor shooting range are not determined by the UDO. These comments are shared with other Town staff.
On page 281, we see that a message on the board must be there for at least one minute. We might have a school play on Friday night and the FFA sale that same weekend. In the span of 60 seconds, any vehicle will quickly go by the sign. If the message must last for a minute, we can only get one announcement. Should we care? Also, paragraph 2 on this page says that the message will not "dissolve, fade, scroll, travel or have similar transitions". I guess the genius that put this 439-page epistle together doesn't like art or creativity.	The current UDO requires messages to remain static for 2 minutes before changing and does not permit scrolling. Additionally, the current UDO limits text and graphic colors to red or amber and only one color is allowed. The proposed UDO offers substantial more creativity and flexibility in the proposed sign locations, message timing, and colors. The goal of electronic messaging is to communicate safely and tactfully. More frequent and animated messaging is distracting to drivers and does not support community appearance and character.
I am a resident of the Heritage South Subdivision. Through a recent site Development Plan, my neighbors and I were made	The draft has been revised to allow flexibility for front loaded garages for developments utilizing conservation design standards

aware of what seems to be an oversight with the existing UDO. I live in a single family home on Prairie Aster Court and the proposed Development would have brought Townhomes to the vacant parcel directly behind my home. Our main concern was the inconsistency of land use on the adjacent parcel without sufficient buffer. When the Developer brought the plan before the Planning Board, the Board stressed "transiting" the land, but ultimately there was nothing in the UDO to require it. Had the Developer not walked away from the property, we would have been left with a significant conflict in land use between an established Community and the new Development as follows: 1) The UDO requires construction of alleys for lots less than 40 feet (such as townhomes). We would have had an alley 15-20 feet from our rear property line. 2) The UDO allows 3 Story Townhomes adjacent to 2 / 2.5 story single family homes. We would have had new homes taller than our homes directly adjacent to our backyards. 3) The terrain of the land would require the installation of a significant retaining wall that would have ultimately led to loss of significant mature / specimen Trees along the property boundary. In order to close these gaps, we need to ensure that the updated UDO includes specific language to prohibit conflict in use such as: 1) Require comparable home types (single family) with comparable lot sizes and setbacks for the "Transition" area directly adjacent to the established communities. More dense residential can be used on the interior of the property with single family on the perimeter.	or providing a minimum amount of affordable dwelling units as defined in the draft ordinance. Use transitions are proposed for Townhome developments adjacent to existing Single Family Detached. Retaining wall height and design standards are proposed to minimize their impacts and encourage development that works with the topography. The Type A buffer is meant to buffer incompatible land uses. Staff does not believe that a townhome use or alley design next to a single family detached use requires the level of screening and buffer of the Type A buffer. Some level landscaping is appropriate. The draft alley buffer would be required in the event that a perimeter buffer isn't triggered by the uses themselves. It's not meant to be in addition to one of the other types of buffers. The proposed alley buffer is intended to help delineate and soften that boundary and provides either a fence or landscaping option but not necessarily significant visual screening.

2) If Townhomes with alleys are allowed directly adjacent to established single family homes, a Type A buffer shall be required and the height of the townhomes shall be comparable to that of the established community. 3) If Townhomes without an alley are allowed directly adjacent to established single family homes, the setback of the townhome shall be comparable to the setback (from the rear of the home to the shared property line) of the established community and the height of the townhomes shall be comparable to that of the established community. In addition, a minimum Type C buffer shall be required. In looking at the Draft UDO posted online, I see a provision on page 59 - 3.3.3.A.5.b.i. (a) If located adjacent to existing single-family detached dwellings, the subdivision plan shall site new single-family detached dwellings, so they provide a transition... Does this cover my concern for all proposed zoning types prohibiting townhomes from being built adjacent to existing single family homes? Why does this only apply to 5 acres or less? On Page 18 2.3.4 Note 1 - If a lot width is less than 50 feet, alley access is required. Is this up from the current 40 feet or am I mistaken? This will make it even more difficult to avoid an alley behind our established community. On Page 154 - 7.5.1 All new alleys constructed adjacent to existing single-family detached and/or duplex dwelling shall require a 5 foot buffer.	

This seems to contradict 3.3.3.A.5.b.i.(a) above? If it does not, then this is a loophole that needs to be closed to disallow an alley adjacent to existing single family homes. If an alley is allowed, a Type A buffer PLUS this proposed 5 feet shall be required. Finally I want to stress tree save areas. Topography should not be a work around to clear cut established / specimen trees. As I indicated earlier, the retaining wall that was proposed behind my house would have resulted in the loss of nearly every established tree in the buffer area, and trees on my property and there is seemingly no way to prohibit this. Thanks in advance for ensuring Wake Forest does the right thing to protect the character of the established neighborhoods that put our community on the map.	

I agree with 9.1 General Provisions – challenge is going to be fulfilling A-H
 	
Parking: 9.1.H GP
Most existing and proposed street configurations are too narrow, especially for Townhomes/Cottages, w/wo garages. à Should be a **minimum** of 9.5.4.B or within the CTP 2C – Two lane undivided with one sided Parking.
• These roadways do not allow for Guest Parking which can cause dangerous narrowing for thru traffic, especially for two-sided street parking
  ○ Alleys, with front entrances (garages in back of house) usually means parking on the street, so people enter/exit their front entrances.
  ○ The housing usually has one car garages and short driveways, with no extra parking in the alleyway.
 	
9.2.1 Agee with Purpose/Goals – challenge is going to be accomplishing with only TOWF, and not NCDOT
	Concerns about on-street parking for existing streets can be directed to Engineering for evaluation. New street design standards take into account some on-street parking, which is beneficial for traffic calming. Minimum driveway lengths and setbacks are proposed within the draft to properly accommodate vehicles.
	
	Level of Service D is the industry standard for acceptability. Requiring higher level of service in some cases is not feasible due to space constraints or could result in very wide streets that may not be compatible with other goals, such as character, walkability, and stormwater management.
	
	Mitigation can include a range of actions, such as physical improvements, signal timing, or payment in lieu to contribute to future projects.

9.2.2.B: TIA minimum is 100 or more RD's. I suggest specifying and increasing the ¼ mile to ½ mile radius for 9.2.2.C. & D.&E . 9.2.4: Timing- 6 months is reasonable but a lot can change in 2 YEARS – Suggest reducing that to 1 Year. 9.2.5: Looks good to me, Just Not Sure how this specifically is applied, as per WFD3(?) which is unknown to me, and could be missed during planning considerations 9.2.7.A: "Mitigation" I assume is in combination with 9.2.8 does not seem to be enforceable. Plus, don't see how $'s to Town turns into a fix towards "Mitigation". In my opinion needs more detail and means for resolution. 9.2.7.A.1 & 2 and 9.2.7.B: • If these are signalized intersection then "D" is acceptable, BUT-If an unsignalized intersection then it should be "C". **No one will wait 25-35 seconds!** • For Mitigation level "C" would be a safer objective/goal to accomplish. 9.2.8: As mentioned previously, mitigation is a good goal, but brings into Who, What, How, and enforcement of any directives. Plus, it appears to me that **9.3.2** negates "Mitigation"!! 9.3: I totally agree with the reference to 9.3! **But how will the TOWF, BOC, PB or BOA use this to rule on approval or ordinance amendments.**	
Thank you for attempting to involve the community in your UDO update. Given the size of the document, it would be a great help to all reviewers (including the public) to provide them with a redlined copy (using Microsoft Word red-lining tool) of the updated version,	Due to the extent of the proposed revisions, reformatting, and restructuring, it would not be practical to have a redlined document. Attachment B includes a change comparison table.

that way all proposed changes will be identified from the previous version. Currently, the reviewer needs to compare the updated version with the current version line-by-line to identify what has changed. This is no small effort in a 400+ page document. In addition, the document has no revision history to identify changes over the life of the document. This will also help reviewers put proposed changes in context. Finally, I would suggest you also put out a Summary of Key Changes document calling out the most important updates to the document. The current FAQ document only mentions what isn't affected by the update. Your current approach makes it very difficult to get meaningful community feedback. I'd like to think that wasn't by design...	
Currently section 5.5.4 A requires that all townhomes can only have rear loaded garages as well as any dwelling on a lot less than a 40 feet wide lot. The smallest buffer does not make sense if a townhome is back loaded and the alley is adjacent to the single family home. The UDO update is simple, there are two ways to address this gap: 1. Require bigger buffers with more dense vegetation. Given that an Alley or street will be needed a Type A1 is requested. a. Text added to section 5.5.4 A: "If alleys are proposed along the property boundary, a buffer type A, Option 1 is required. Or 2. An exception to back loaded townhomes written in the UDO when alleys negatively impact adjacent developments.	The draft has been revised to allow flexibility for front loaded garages for developments utilizing conservation design standards or providing a minimum amount of affordable dwelling units as defined in the draft ordinance. The Type A buffer is meant to buffer incompatible land uses. Staff does not believe that a townhome use or alley design next to a single family detached use requires the level of screening and buffer of the Type A buffer. Some level landscaping is appropriate. The draft alley buffer would be required in the event that a perimeter buffer isn't triggered by the uses themselves. It's not meant to be in addition to one of the other types of buffers. The proposed alley buffer is intended to help delineate and soften that boundary and provides either a fence or landscaping option but not necessarily significant visual screening.

a. Text added to section 5.5.4 A: If proposed alleys are adjacent developments, front loaded townhomes can be proposed and will be evaluated by the ordinance Administrator.	
The document organization is logical and easy to follow. Max building setbacks and frontage build outs can be challenging. I understand that intent. I'd just make sure there are some allowances in there for site conditions, etc. that may prevent a site from meeting those requirements. Also, the with the maximums for both NB, there is no room for parking in front of the building. I understand that's not preferred, but small retailers usually like that option since it is more inviting for customers when they can see the parking from the road. Recommend carrying the column headings for the use table onto each page. The 15% and 20% open space requirements seem high at first glance. Some municipalities consider 20% open space a cluster subdivision, for reference. It looks like 100% of that is required as tree canopy coverage as well if I'm understanding the tree canopy coverage table. I think that would be difficult to do and would actually force the open space up even higher.	Alternative perimeter parking requirements have been added as an administrative modification option for instances where parking cannot be located to the side or rear of the building.

Town of Wake Forest

UNIFIED DEVELOPMENT ORDINANCE

Draft for Adoption Consideration
September 30, 2024

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1 GENERAL PROVISIONS

1.1 General Provision

1.1.1 Title

This ordinance, effective as of Month, Day, 2025, shall be known and may be cited as the Unified Development Ordinance of the Town of Wake Forest, North Carolina. This Ordinance may also be known and referred to as "the UDO" or "this UDO.

1.1.2 Zoning Map

The Zoning Map is hereby incorporated into and made part of this UDO. The Administrator shall maintain the Zoning Map in accordance with Section 16.2.1.

1.2 Authority

1.2.1 General

This UDO is adopted pursuant to the authority granted by the North Carolina General Statutes (NCGS), including primarily NCGS §160A and §160D and other provisions in NCGS, the Town Charter, and local legislation that grant specific authority to the Town to regulate land use and development.

1.2.2 References to North Carolina Law

Where this UDO refers to or cites a section of the NCGS and that section is later amended or superseded, then this UDO shall be deemed to refer to the amended section or the section that most nearly corresponds to the superseded section.

CONTENT

1.1 General Provision
1.2 Authority
1.3 Purpose and Applicability
1.4 Consistency with Adopted Plans and Policies
1.5 Required Compliance with all Applicable Laws
1.6 Transitional Provisions
1.7 Conflicting Provisions
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1.9 UDO Standards Applicability Overview

1.3 Purpose and Applicability

1.3.1 Purpose

This UDO is adopted in accordance with the Comprehensive Plan in order to:

A. Support a balanced mix of uses that create attractive residential areas, well-paying employment opportunities, and an abundance of recreation options;

B. Continue efforts to revitalize and extend Downtown into a lively, pedestrian-friendly center of civic activity that provides places to eat, shop, and enjoy outdoor public gathering spaces;

C. Enhance and maintain the Town's green space and tree canopy as growth occurs to protect the natural environment;

D. Establish a well-connected public transit system that improves access to regional and local destinations while supporting transit-oriented development;

E. Reinvest in established neighborhoods, preserve historic assets, and ensure the quality design of future development to maintain Wake Forest's unique charm and desirability as a place to live;

F. Ensure Wake Forest provides a range of housing choices for residents of all income levels, stages of life, and abilities;

G. Establish a highly-connected network for active modes of transportation to ensure residents can safely and conveniently travel between their neighborhoods, shopping areas, and other community destinations without a car;

H. Prioritize infill development and ensure the necessary infrastructure is in place to support future growth; and

I. Support small businesses, innovative industries, and diverse employment opportunities to strengthen the Town's tax base and increase its job, retail, and service options.

1.3.2 Applicability

A. **Jurisdiction.** All lands within the corporate limits of the Town and the Town's extraterritorial jurisdiction, as identified on the Zoning Map, are subject to this UDO.

B. **Application to Government Units.** To the extent allowed by NCGS §160D-913 and other applicable laws, this UDO shall apply to any development, subdivision, land, building, structure, or use by Town, county, state, or federal agencies on lands subject to this UDO. Where this UDO does not control, such agencies are encouraged to meet the provisions of this UDO.

C. **Exemptions.** The following forms of development and activities are exempted from the requirements of this UDO, except for subdivision and lot standards in accordance with Chapter 5 and erosion and sedimentation control, flood damage prevention, stormwater management, watershed protection, and watercourse buffer area standards in accordance with Chapter 12:

1. Agricultural or agritourism related activities taking place in the Town's extraterritorial jurisdiction on a bona fide farm or on land taxed under the present use value standard in accordance with NCGS §160D-903.

2. Forestry activities taking place on a bona fide farm or on land taxed under the present use value standard provided that the forestry activities follow a forestry management plan approved in accordance with NCGS §160D-921.

1.4 Consistency with Adopted Plans and Policies

1.4.1 Implementation of Comprehensive Plan

This UDO is intended to implement the Comprehensive Plan. Amendments to this UDO should be consistent with the Comprehensive Plan. If the Comprehensive Plan is amended, this UDO should be amended as necessary to ensure consistency with the amended Comprehensive Plan.

1.4.2 Amendments to Comprehensive Plan

The Comprehensive Plan shall be amended when a rezoning is approved that is inconsistent with the Comprehensive Plan in accordance with NCGS §160D-605.

1.4.3 Variations to Comprehensive Plan

Specific alignments, locations, or areas of public facilities noted in any adopted plan may be varied on a site-by-site basis as requested by the applicant or the Administrator, provided the integrity of the proposed network and connections, location, or area shown in the plan are maintained.

1.5 Required Compliance with all Applicable Laws

No structure, land, or use of a structure or land shall, after the effective date of this UDO, be established, located, subdivided, extended, converted, altered, developed, or disturbed in any way without full compliance with this UDO.

1.5.1 No Land Developed or Subdivided

Unless exempted, no land shall be developed or subdivided without compliance with this UDO and all other applicable Town, State, and federal regulations.

1.5.2 No Grading or Excavation

Unless exempted, no land shall be cleared, graded, filled, or excavated without compliance with this UDO and all other applicable Town, State, and federal regulations.

1.5.3 No Removal of Trees

Unless exempted, no existing trees shall be removed without compliance with this UDO and all other applicable Town, State, and federal regulations.

1.5.4 No Use or Occupancy

No person shall use, occupy, or divide any land or a building or authorize or permit the use, occupancy, or division of land or a building under their control, except in accordance with this UDO and all other applicable Town, State, and federal regulations.

1.5.5 No Building Constructed

No building or structure, or portion thereof, shall be erected, used, occupied, maintained, moved, or altered except in conformity with this UDO and all other applicable Town, State, and federal regulations.

1.5.6 No Sale or Transfer

No lots in a subdivision may be sold or titles to land transferred until all the requirements of this UDO have been met, except as authorized by NCGS §160D-807.

1.6 Transitional Provisions

1.6.1 Pending Applications

A. **Permit Choice.** If a development permit as defined in NCGS §143-755(2), application is accepted for review under this UDO and a development regulation in this UDO is subsequently amended before a final decision is made on the application, the applicant may choose whether the version in effect at the time the application was submitted or the amended version of the UDO will apply. The applicant may choose only one version or the other and may not elect to comply with select standards from one version and select standards from the other. If the applicant chooses the version of the UDO in effect at the time of the application, the applicant shall not be required to await the outcome of the amendment to the map or ordinance prior to acting on the development permit.

B. **Multiple Permits for Development Project.** Where multiple permits are required to complete a development project, the development permit applicant may choose the version of the UDO applicable to the project upon submittal of the application for the initial development permit. The applicant may choose only one version or the other and may not elect to comply with select standards from one version and select standards from the other.

1. This subsection is applicable only for those subsequent development permit applications filed within 18 months of the approval date of the initial permit. For purposes of this subsection, an erosion and sedimentation control permit or a sign permit is not an initial development permit.

2. This subsection does not limit or affect the duration of any vested right established under subsection 1.6.2 of this section.

1.6.2 Previously Granted Approvals – Vested Rights

This section is intended to implement NCGS §160D-108 with respect to the establishment of zoning vested rights for landowners or applicants who have received a development approval from the Town. As used in this UDO, a vested right is defined as the right to undertake and complete the development and use of land under the terms and conditions of a development approval issued by the Town.

A. **Common Law Vested Rights**.

1. A common law vested right establishes the right to undertake and complete the development and use of property on substantial expenditures in good faith reliance on a valid governmental approval.

2. A request for a determination of a common law vested right shall follow the Interpretations process established in Section 16.7.11.

3. The applicant shall provide satisfactory proof that each of the following standards are met in order to establish a common law vested right:

   a. The applicant has, prior to the adoption or amendment of an ordinance, made substantial expenditures of time, effort, or money on a proposed development;

   b. The obligations and/or expenditures were incurred in good faith;

   c. The obligations and/or expenditures were made in reasonable reliance on and after the issuance of a valid governmental permit, if such permit is required; however, a mistakenly-issued governmental permit shall not give rise to a common law vested right; and

   d. The amended or newly adopted ordinance is a substantial detriment to the applicant.

B. **Statutory Vested Rights**.

1. Development permits, as defined under NCGS §143-755(2), for a building, use of a building, use of land, or subdivision of land establish statutory vested rights, which shall entitle the permit holder to proceed with development in accordance with the approved permit, subject to the following limitations:

   a. A development permit is valid for one year after issuance, unless otherwise specified, and the applicant is vested in that permit for the term of validity.

   b. If the applicant fails to substantially commence authorized work within one year, then the development permit and vesting expire.

   c. Vesting shall continue provided there is a substantial commencement of authorized work under a valid development permit.

   d. The development permit and vesting shall expire after substantial work commences if there is a two-year period of intentional and voluntary discontinuance of work unless otherwise specified by statute.

2. Except as provided by this Section, amendments to the UDO shall not be applicable or enforceable regarding development that has been permitted or approved prior to the amendment so long as the permit or approval remains valid and unexpired. Each type of vested right listed below is defined by and subject to the limitations provided in this Section and the cited sections of NCGS. Vested rights established under this Section are not mutually exclusive.

   a. **Site-Specific Vesting Plan**.

      i. A site-specific vesting plan shall be as defined in Chapter 18.

      ii. A vested right for a site-specific vesting plan shall remain vested for a period of two years. This vesting shall not be extended by any amendments or modifications to a site-specific vesting plan unless expressly provided by the Town. The Town may provide those rights regarding a site-specific vesting plan for a period not exceeding five years, if warranted by the size and phasing of the development, the level of investment, the need for the development, economic cycles, market conditions, or other considerations. This determination shall be at the discretion of the Board of Commissioners in accordance with Section 16.7.11.

C. **Multi-Phased Development**.

1. For the purposes of this section, a multi-phased development shall be any development containing 25 acres or more that is both:

   a. Submitted for development permit approval to occur in more than one phase; and

   b. Subject to a master development plan with committed elements required by the application checklist, showing the type and intensity of use of each phase.

2. A multi-phased development is vested for the entire development with the land development regulations then in place at the time approval is granted for the initial phase of the multi-phased development and shall remain vested for a period of seven years from the time a site plan approval is granted for the initial phase of the multi-phased development.

D. **Process to Claim Vested Rights**. A person claiming statutory vested right may submit information to substantiate that claim to the Administrator who shall make an initial determination as to the existence of the vested right. The Administrator determination may be appealed per the process established in Section 16.6.1. On appeal, the existence of the vested right shall be reviewed de novo. In lieu of seeking such a determination, a person claiming a vested right may bring an original civil action as provided by NCGS §-160D-108.

1. **Relation to Building Permits**.

   a. A right vested as provided in this Section shall terminate at the end of the applicable vesting period with respect to buildings and uses for which no valid building permit applications have been filed. Should a building permit expire or be revoked, the vested right based on the permit is terminated.

   b. Upon issuance of a building permit, the provisions of NCGS §160D-1111 and 1115 shall apply, except that the permit shall not expire or be revoked because of the running of time while a vested right under this Section exists.

E. **Existing Development**. Legally established, existing development, which does not conform to the standards of this UDO shall comply with the standards of Chapter 15 Nonconformities.

1.7 Conflicting Provisions

1.7.1 Relationship to Other Regulations and Agreements

A. Except as hereinafter provided, this UDO shall not be deemed to interfere with, abrogate, annul, or otherwise affect in any manner whatsoever any easement, covenants, or other agreements between parties. However, where the regulations of this UDO are more restrictive or impose higher standards or requirements than an easement, covenant, or other private agreement, then the requirements of this UDO shall govern. Unless deed restrictions, covenants, or other contracts directly involve the Town as a party in interest, the Town shall have no administrative responsibility for enforcing deed restrictions or covenants.

B. Where the requirements of this UDO are in conflict with other requirements of laws of the United States or the State of North Carolina, or with lawfully adopted Town rules, regulations, ordinances, or with overlay district regulations as specified in Section 2.2.D, the most restrictive requirement shall govern. The more restrictive provision is the one that imposes greater restrictions, burdens, or more stringent controls.

1.7.2 Authorized Deviations

Deviations from UDO requirements, such as an approved Administrative Modification, Planned Development Rezoning, Variance, Waiver or alternative form of compliance that are authorized by and established in accordance with this UDO shall control and shall not be considered to conflict with other more restrictive standards in this UDO.

1.8 Severability

1.8.1 UDO Severability

If a court of competent jurisdiction holds any section, subsection, sentence, clause, or phrase of this UDO to be invalid for any reason, such judgment shall not affect the validity of the remaining portions of this UDO.

1.8.2 Development Permit Conditions Severability

If a court of competent jurisdiction holds any condition attached to a development permit or approval granted in accordance with this UDO to be invalid for any reason, such judgment shall not affect the validity of any other conditions of the permit or approval not specifically included in the judgment.

1.8.3 Interpretation Severability

If a court of competent jurisdiction invalidates the application of any provision of this UDO to a development, such judgment shall not affect the application of that provision to any other development not specifically included in the judgment.

1.8.4 Lawful Presumption

There shall be a conclusive presumption when a review authority authorizes regulatory action, that the review authority would not have authorized the action except in the belief that such action was lawful.

1.9 UDO Standards Applicability Overview

1.9.1 Table 1.10.1 Key

The standards of this UDO shall apply as summarized in Table 1.10.1, per the key below.

A. **New Development**. New development shall meet all UDO standards. Development proposed after the demolition of existing buildings and site elements shall constitute new development. Non-exempt subdivisions shall constitute new development. All zoning district, dimensional, and use standards shall apply to new development.

B. **Redevelopment**.

1. Redevelopment and changes to existing development shall meet all zoning district, dimensional, and use standards.

2. Whenever a site feature, building feature, or roadway frontage is impacted by proposed redevelopment, the standards of this UDO must be met for the impacted features, as outlined in subsections 1-6 below. If development activity meets the qualifications of multiple categories, the more restrictive category standards shall apply.

   a. **Major Redevelopment**. Includes 50 percent or more increase in gross floor area, building value, dwelling units, disturbed area, or impervious surface area.

   b. **Intermediate Redevelopment**. Includes 25 percent or more up to less than 50 percent increase in gross floor area, dwelling units, disturbed areas, or impervious surface area; an increase in building height.

   c. **Minor Redevelopment**. Includes any exterior changes to buildings or changes to required site elements not meeting the thresholds of other development categories.

   d. **Change of Use**. Includes changing from one use category to another use category.

   e. **Single-Family Detached, Duplex, or Manufactured Housing on Lot of Record**. Development on existing lots, or lots created from an exempt subdivision, for the following uses:

single family detached, duplex, townhome, or manufactured home. This does not include lots created from a subdivision.

f. **Infrastructure Project**. Projects undertaken by a governmental agency, such as greenway, right-of-way, water, sewer, and drainage construction. This does not include construction of any buildings or structures. For the purposes of this section, structures shall not include non-occupiable structures associated with the infrastructure project such as outfalls, pump stations, fire hydrants, transit shelters, street furniture, fences, bike racks, traffic signals, light poles, transformers, or similar. This does not include any infrastructure construction undertaken as part of development projects.

C. If existing legal nonconformities exist, compliance to the maximum extent practicable is required, as determined by the Administrator.

Table 1.10
UDO Standards Applicability Overview

Key: **● = Standards apply to entire development site and building(s)** **+ = Standards apply to portion of site or building(s) impacted by development activity and portions of site or building(s) adjacent to right of way, public park or residential uses** **○ = Standards apply to portion of site or building(s) impacted by development activity** *** = Additional applicability provisions may apply** **Standard**	**Single-family detached, duplex, or manufactured housing on existing lot**	**Infrastructure only project**	**Minor redevelopment**	**Intermediate redevelopment**	**Major redevelopment**	**Change of use**	**New development**
2. Zoning District & Dimensional Standards							
2.7 Height Restrictions and Transitions	○						●
2.8 Residential Infill Development	○						●
4. Subdivision & Lot Standards							
See Chapter 4							
5. Building Design Standards							
5.2 Exterior Building Cladding Materials					+		●
5.3 Glazing					+		●
5.4 Building Entryway Design*			○	○	+	○	●
5.5 Façade Design and Articulation					○		●
5.6 Roof Design					○		●
5.7 Cottage Home Court Building Design							●
5.8 Two-over-Two Building Design							●
5.9 Multifamily Building Design				○	○		●
5.10 General Commercial, Greater than 100,000 sq ft Building Design*							●
5.11 Multibuilding Development*				○	○		●
6. Open & Community Space Standards							
6.3 Open Space Area					●		●
6.4 Community Space Area					●		●

Table 1.10
UDO Standards Applicability Overview

Key:
● = Standards apply to entire development site and building(s)
+ = Standards apply to portion of site or building(s) impacted by development activity and portions of site or building(s) adjacent to right of way, public park or residential uses
○ = Standards apply to portion of site or building(s) impacted by development activity
*** = Additional applicability provisions may apply**

Standard	Single-family detached, duplex, or manufactured housing on existing lot	Infrastructure only project	Minor redevelopment	Intermediate redevelopment	Major redevelopment	Change of use	New development
6.6 Cemetery Protection	○	○	○	○	○	○	●
7. Tree Protection, Buffers, & Landscaping Standards							
7.2 Tree Canopy Coverage					●	○	●
7.2 Tree Protection			○	○	○	○	●
7.3 Perimeter Buffer				○	●	○	●
7.4 Street Buffer				○	●	○	●
7.6 Building Foundation Landscape			○	○	●	○	●
7.7 Parking Area Landscape – Perimeter			○	●	●	○	●
7.7 Parking Area Landscape - Interior			○	○	●		
7.8 Street Trees	●		●	●	●	●	●
8. Fence, Wall, Retaining Wall, and Screening Standards							
8.2 Fence and Wall Standards			○	○	●	●	●
8.3 Retaining Walls and Wall Systems							●
8.4 Berms							●
8.5 Screening			○	○	●	○	●
9. Access & Mobility Standards							
9.2 Transportation Impact Analysis*			○	○	●	●	●
9.3 CTP- right-of-way dedication				●	●	●	●
9.3 CTP- sidewalk/MUP				●	●		●
9.3 CTP- all other improvements					●		●
9.4 Roadway Design				○	●	●	●
9.5 Internal Access Drives				○	○	○	●
9.6 Vehicle Parking				○	●	●	●
9.7 Loading				○	●	●	●
9.8 Driveways	●			○	●	●	●
9.9 Clear Sight Triangles	○			○	○		●
9.10 Vehicle Stacking				○	●	●	●
9.11 Bicycle Parking		○	○	○	●	●	●
9.12 Sidewalks, Multi-Use Paths, Greenways, and Pedestrian Walkway			○	●	●	●	●
9.13 Public Transit				○	●	●	●

Table 1.10
UDO Standards Applicability Overview

Key:
● = Standards apply to entire development site and building(s)
+ = Standards apply to portion of site or building(s) impacted by development activity and portions of site or building(s) adjacent to right of way, public park or residential uses
○ = Standards apply to portion of site or building(s) impacted by development activity
*** = Additional applicability provisions may apply**

Standard	Single-family detached, duplex, or manufactured housing on existing lot	Infrastructure only project	Minor redevelopment	Intermediate redevelopment	Major redevelopment	Change of use	New development
10. Lighting Standards							
10.3 Design - LED					●	●	●
10.3 Design - BUG					●	●	●
10.3 Design - Footcandles					●	●	●
10.3 Design - Luminaire					●	●	●
10.4 Specific Lighting Type - Street Lighting				●	●	●	●
10.4 Specific Lighting Types - All other Lighting Types			○	○	○	○	●
11. Utilities, Services, & Impact Fees							
11.1 Utilities	○				●		●
11.2 Waste Management	See Chapter 11						
11.3 Impact Fees	See Chapter 11						
12. Natural Resource Protection Standards							
See Chapter 12							
13. Sign Standards							
13.4 Permanent Building Signs				●	●	●	●
13.5 Permanent Ground Signs					●	●	●
13.8 Prohibited Signs and Content			●	●	●	●	●

2 ZONING DISTRICT AND DIMENSIONAL STANDARDS

2.1 General Provisions

2.1.1 Purpose

The purpose of this Chapter is to establish the zoning districts of the Town including their purposes, dimensional standards, and allowed encroachments, in order to accomplish the general purposes of this UDO.

2.1.2 Applicability

All development and use of lands within the Town's jurisdiction shall comply with this Chapter, based on the zoning district classification specified on the Zoning Map.

2.2 Establishment of Zoning Districts

The following zoning districts are established:

2.2.1 Base Districts

Each base zoning district prescribes a set of uniform development regulations for a defined geographic area. Table 2.2.1 identifies the base districts established by this UDO.

Table 2.2.1 Base Districts
General Residential (GR)
Northeast Community Residential (NCR)
Mixed-Use Residential (MUR)
Transit Supportive Residential (TSR)
Downtown (DT)
Neighborhood Business (NB)
Corridor Business (CB)
Civic and Institutional (CI)
Industrial (IND)
Parks and Open Space (OS)

CONTENT

2.1 General Provisions
2.2 Establishment of Zoning Districts
2.3 Base Zoning Districts
2.4 Planned Unit Development Zoning Districts
2.5 Overlay Zoning Districts
2.6 Allowable Encroachments
2.7 Height Restriction and Transition Standards
2.8 Residential Infill Development
2.9 Affordable Housing Incentives

2.2.2 Conditional Districts

Each Conditional District is subject to all corresponding base district requirements, as well as district-specific conditions established as part of the legislative action creating each Conditional District. Conditions agreed to by the Board of Commissioners and landowner establish more restrictive standards than the base district to create stronger community compatibility, ensure conformity with the Comprehensive Plan, and minimize potential impacts on surrounding uses. Conditional Districts are denoted with "CD" following the corresponding base district (for example, "NB-CD"). See Section 16.7.8 for the procedures required to establish a Conditional District.

2.2.3 Planned Unit Development Districts

Each Planned Unit Development (PUD) District includes district-specific standards established as part of the legislative action creating the PUD District. Modifications, both more and less restrictive, to the standards of this UDO may be included to accommodate innovative design and development practices to achieve higher quality development than would otherwise be required and to secure additional community benefits. See Section 16.7.9 for PUD rezoning process.

2.2.4 Overlay Districts

Overlay Districts prescribe a set of development regulations for a defined geographic area that apply in addition to or instead of the underlying base, PUD, or Conditional District regulations. Where the Overlay District regulations are different from the underlying district regulations, the Overlay District regulations control.

Table 2.2.4 Overlay Districts
Local Historic Overlay (LH-O)
Mill Village Overlay (MV-O)
Transit Oriented Development Overlay (TOD-O)
Activity Center Overlay (AC-O)
Watershed Protection Overlay (WP-O)

2.3 Base Zoning Districts

2.3.1 General Residential (GR)

A. **Purpose**. The General Residential District is established to accommodate a range of housing types that supports the traditional single-family character and form of Wake Forest's established residential neighborhoods. Infill housing, including single-family detached, duplexes, cottage courts, townhomes, triplexes, and quadplexes, should complement existing single-family detached housing and provide appropriate transitions that preserve the character of existing neighborhoods including massing, orientation, and scale.

B. **Dimensional Standards**. The dimensional standards for the GR District are as established by use type in Table 2.3.1

C. **Cross References.** Dimensional standard requirements may differ from Table 2.3.1 due to other UDO provisions. These include but are not limited to Section 2.5 Overlay Zoning Districts, Section 2.7 Height Restriction and Transition Standards, Section 2.8 Residential Infill Development, 2.9 Affordable Housing Incentives, 7.3 Perimeter Buffer Requirements, 7.4 Street Buffer Requirements, and Chapter 12 Natural Resource Protection Standards.

Table 2.3.1 GR District Dimensional Standards

	Duplex, Single-Family Detached, Manufactured Home		Triplex / Quadplex		Cottage Court		Townhome		Other Allowed Uses
Lot Standards									
Lot Area, Minimum (sq ft)	7,000		10,000		20,000 [1]		2,200		20,000
Lot Width, Minimum (ft) [2]	50		50		100 [1]		22		150
Yard Setbacks									
	w/ Alley	w/o Alley	w/ Alley	w/o Alley	w/ Alley	w/o Alley	w/ Alley	w/o Alley	w/ or w/o Alley
Front, Minimum (ft)	10	20	10	20	10	20	10	20	20
Front, Maximum (ft)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Street Side, Minimum (ft)	20	20	20	20	20	20	20	20	20
Capital Boulevard, Minimum (ft) [3]	100	100	100	100	100	100	100	100	100
Interior Side, Minimum (ft)	8	8	10	10	5	5	8 [4]	8 [4]	10
Rear, Minimum (ft)	20	25	20	25	20	15	20	25	25
Building Standards									
Height, Maximum (ft)	35		24		18		35		35
Building Coverage, Maximum (%)	n/a		n/a		n/a		n/a		n/a

Notes

[1] See Cottage Court Supplemental Standards (Section 3.3.3) for additional dimensional standards.

[2] If lot width is less than 50 feet, alley access or shared driveway access to rear loaded garage(s) or parking area(s) is required.

[3] An administrative adjustment may be allowed based on NCDOT recommended alternatives for Capital Boulevard North upgrade.

[4] Setback shall be 0 feet if fire rated partition wall provided.

Figure 2: GR District Dimensional Standards – With Alley

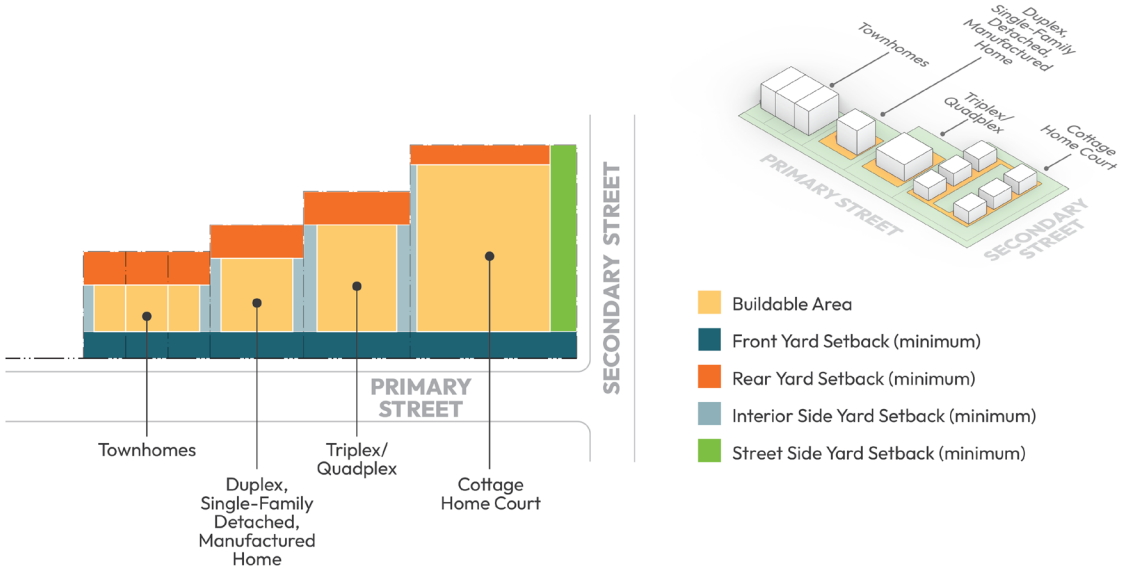


Figure 1: GR District Dimensional Standards - Without Alley

2.3.2 Northeast Community Residential (NCR)

A. **Purpose**. The Northeast Community Residential District is established to preserve and protect the special character of the Northeast Neighborhood as identified in the Northeast Community Plan. Defining characteristics of the district include single-story, detached homes with front porches and without street facing attached garages.

B. **Dimensional Standards**. The dimensional standards for the NCR District are as established by use type in Table 2.3.2.

Table 2.3.2
NCR District Dimensional Standards

	Duplex, Single-Family Detached	Other Allowed Uses
Lot Standards		
Lot Area, Minimum (sq ft)	5,000	10,000
Lot Width, Minimum (ft)	50	100
Yard Setbacks		
Front, Minimum (ft)	[1]	20
Front, Maximum (ft)	n/a	n/a
Street Side, Minimum (ft)	20	20
Interior Side, Minimum (ft)	8	10
Rear, Minimum (ft)	25	25
Building Standards		
Height, Maximum (ft)	24	24
Building Coverage, Maximum – Parcels 10,000 sq ft or less in area (%)	45	45
Building Coverage, Maximum – Parcels more than 10,000 sq ft in area (%)	25	25
Notes		
[1] The principal building setback shall be not more or less than five feet from the average established front yard of developed lots within 600 feet on each side of the lot, fronting on the same street as the lot, and within the NCR District.		

C. **Cross References**. Dimensional standard requirements may differ from Table 2.3.2 due to other UDO provisions. These include but are not limited to Section 2.5 Overlay Zoning Districts, Section 2.7 Height Restriction and Transition Standards, Section 2.8 Residential Infill Development, 2.9 Affordable Housing Incentives, 7.3 Perimeter Buffer Requirements, 7.4 Street Buffer Requirements, and Chapter 12 Natural Resource Protection Standards.

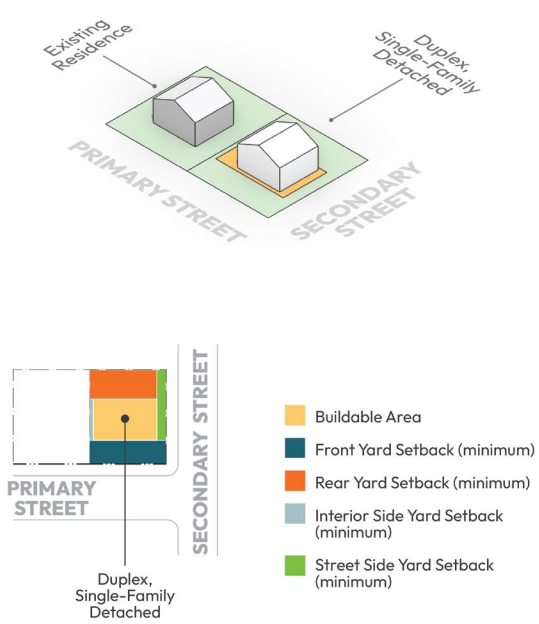


Figure 3: NCR District Dimensional Standards

2.3.3 Mixed-Use Residential (MUR)

A. **Purpose**. The Mixed-Use Residential District is established to incorporate a broad mix of housing types integrated within neighborhoods. Development in this district is more compact and creates highly walkable neighborhoods. This district also offers limited commercial uses in pedestrian-scaled structures that should be safely and conveniently accessible to nearby residents through the pedestrian and bicycle transportation network. The district should serve as a transition between residential districts and non-residential districts.

B. **Dimensional Standards**. The dimensional standards for the MUR District are as established by use or development type in Table 2.3.3.

C. **Cross References**. Dimensional standard requirements may differ from Table 2.3.3 due to other UDO provisions. These include but are not limited to Section 2.5 Overlay Zoning Districts, Section 2.7 Height Restriction and Transition Standards, Section 2.8 Residential Infill Development, 2.9 Affordable Housing Incentives, 7.3 Perimeter Buffer Requirements, 7.4 Street Buffer Requirements, and Chapter 12 Natural Resource Protection Standards.

Table 2.3.3 MUR District Dimensional Standards

	Duplex, Single-Family		Triplex / Quadplex		Cottage Court		Townhome		Other Allowed Uses
Lot Standards									
Lot Area, Minimum (sq ft)	3,000		7,000		20,000 [1]		n/a		10,000
Lot Width, Minimum (ft) [2]	30		50		100 [1]		20		100
Yard Setbacks									
	w/ Alley	w/o Alley	w/ Alley	w/o Alley	w/ Alley	w/o Alley	w/ Alley	w/o Alley	w/ or w/o Alley
Front, Minimum (ft)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Front, Maximum (ft)	20	20	20	20	20	20	20	20	20
Street Side, Minimum (ft)	10	10	10	10	10	10	10	10	10
Capital Boulevard, Minimum (ft) [3]	100	100	100	100	100	100	100	100	100
Interior Side, Minimum (ft) [4]	5	5	5	5	5	5	5 [3]	5 [3]	5 [3]
Rear, Minimum (ft)	20	15	20	15	20	15	20	15	15
Building Standards									
Height, Maximum (ft)	35		35		24		35		50
Height, Minimum (stories)	n/a		2		n/a		2		n/a
Frontage Build Out, Minimum (%)	n/a		n/a		n/a		n/a		60
Building Coverage, Maximum (%)	n/a		n/a		n/a		n/a		n/a

Notes

[1] See Cottage Court Supplemental Standards (Section 3.3.3) for additional dimensional standards.

[2] If lot width is less than 50 feet, alley access or shared driveway access to rear loaded garage(s) or parking area(s) is required.

[3] An administrative adjustment may be allowed based on NCDOT recommended alternatives for Capital Boulevard North upgrade.

[4] Setback shall be 0 feet if fire rated partition wall provided.

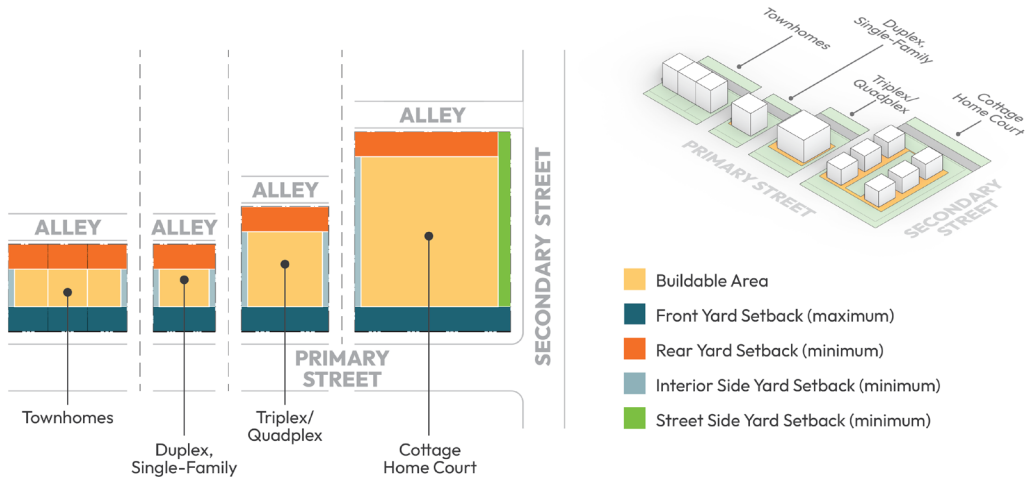


Figure 5: MUR District Dimensional Standards - With Alley

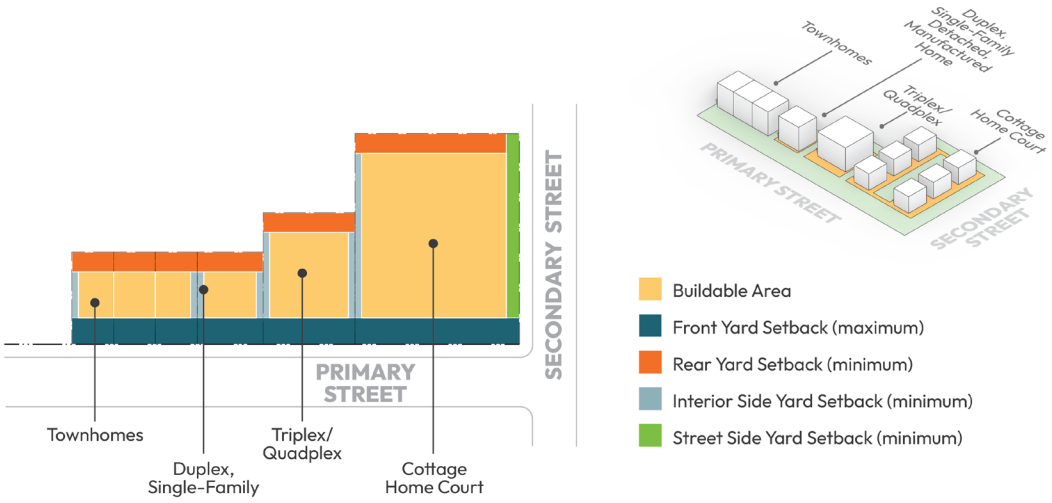


Figure 4: MUR District Dimensional Standards - Without Alley

2.3.4 Transit Supportive Residential (TSR)

A. **Purpose**. The Transit Supportive Residential District is established to accommodate higher intensity residential uses in active, pedestrian friendly environments with proximity to public transportation. Development may include residential and non-residential uses within a single building or development for convenient residential access to amenities, such as commercial, office, and civic uses. Retail and professional office uses should front primary roadways, and residential uses should primarily be located in rear buildings or upper stories. Parking should be located in the rear of buildings to create activated street frontages with enhanced walkability.

B. **Dimensional Standards**. The dimensional standards for the TSR District are as established by use or development type in Table 2.3.4.

C. **Cross References**. Dimensional standard requirements may differ from Table 2.3.4 due to other UDO provisions. These include but are not limited to Section 2.5 Overlay Zoning Districts, Section 2.7 Height Restriction and Transition Standards, Section 2.8 Residential Infill Development, 2.9 Affordable Housing Incentives, 7.3 Perimeter Buffer Requirements, 7.4 Street Buffer Requirements, and Chapter 12 Natural Resource Protection Standards.

Table 2.3.4 TSR District Dimensional Standards

	Two Over Two	Townhome		Other Allowed Uses
Lot Standards				
Lot Area, Minimum (sq ft)	n/a	n/a		n/a
Lot Width, Minimum (ft) [1]	70	18		100
Yard Setbacks				
	w/ or w/o Alley	w/ Alley	w/o Alley	w/ or w/o Alley
Front, Minimum (ft)	n/a	n/a	n/a	n/a
Front, Maximum (ft)	18	10	18	18
Street Side, Minimum (ft)	n/a	n/a	n/a	n/a
Street Side, Maximum (ft)	18	10	18	18
Capital Boulevard, Minimum (ft) [2]	100	100	100	100
Interior Side, Minimum (ft)	5	5 [3]	5 [3]	5
Rear, Minimum (ft)	5	20	5	5
Building Standards				
Height, Maximum (ft)	50	35		75 [4]
Height, Minimum (stories)	2	2		2
Frontage Build Out, Minimum (%)	60	n/a		60
Building Coverage, Maximum (%)	n/a	n/a		n/a
Notes				
[1] If lot width is less than 50 feet, alley access or shared driveway access to rear loaded garage(s) or parking area(s) is required.				
[2] An administrative adjustment may be allowed based on NCDOT recommended alternatives for Capital Boulevard North upgrade.				
[3] Setback shall be 0 feet if fire rated partition wall provided.				
[4] Buildings five stories or greater in height, if not subject to the Height Transition standards established in Section 2.7, shall provide a step back with a minimum depth of 10 feet after the first, second, third, or fourth story.				

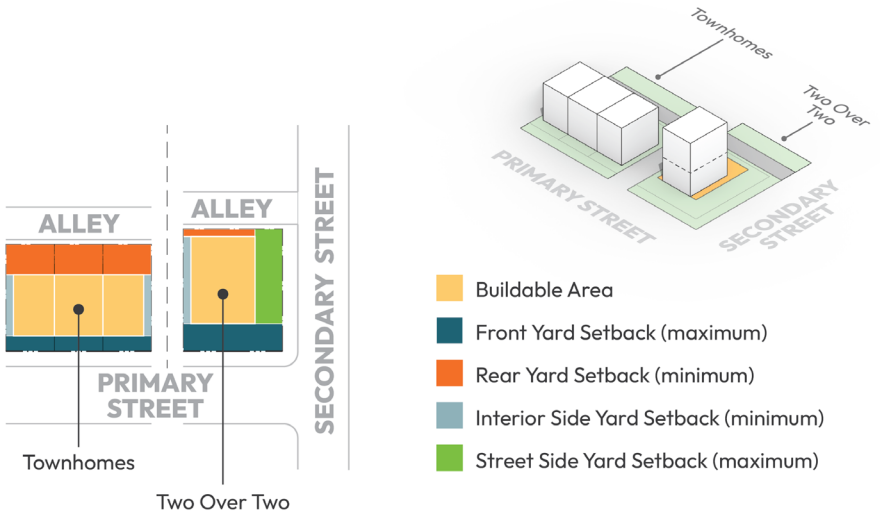


Figure 7: TSR District Dimensional Standards – With Alley

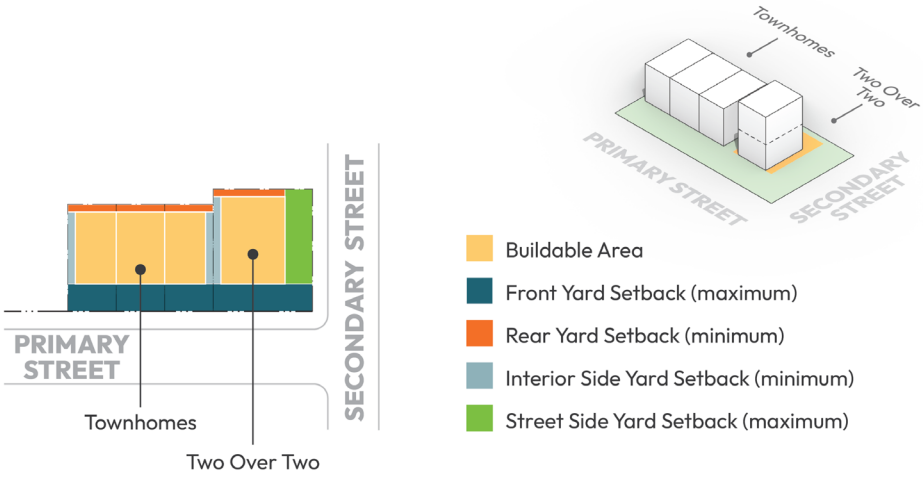


Figure 6: TSR District Dimensional Standards – Without Alley

2.3.5 Downtown District (DT)

A. **Purpose**. The Downtown District is established to accommodate the sensitive continuation of historic White Street and intensification of development in the surrounding area. Recognizing the varying character of the Downtown, subdistricts are established to accomplish specific objectives, such as historic preservation and residential transitions with the overall goal to further enhance walkability and streetscape vibrancy and to offer Downtown living choices that support area businesses.

1. **Downtown - Historic White Street**. The Downtown – Historic White Street Subdistrict is established to preserve the Downtown Wake Forest National Register Historic District. The subdistrict contains historically significant buildings that contribute to Downtown's historic character and heritage. The historic character of the buildings and the subdistrict should continue to be preserved by implementing the Secretary of Interior's Standards for Rehabilitation to renovations. Redevelopment in this area should complement and enhance the character of existing historically significant structures through the setbacks, scale, massing, and materials utilized. A wide variety of commercial and entertainment uses that encourage activity both during the day and in the evening should be supported.

2. **Downtown - North**. The Downtown – North Subdistrict is established to accommodate retrofitted buildings and the mix of residential, commercial, and professional service uses in the northeastern portion of the Downtown District. Redevelopment in this area should include higher density multifamily development along with restaurant and personal and professional service uses in vertically mixed-use buildings. Buildings are located along the property line to create a desirable sense of enclosure and consistent street wall that signal the northern entrance to downtown.

3. **Downtown - Central**. The Downtown – Central Subdistrict is established to accommodate existing civic buildings including the Town Hall, H.L. Miller Park, Fire Station, Police Department, and the former police department building. This area provides services, amenities, and employment uses that bring individuals to Downtown throughout the week. Residents and local business owners are regularly drawn to Downtown Wake Forest for various purposes from public meetings to recreational activities, making it a dynamic focal point of civic life.

4. **Downtown – South.** The Downtown – South Subdistrict is established to accommodate existing residential, commercial, office, and to support mixed-use infill development and adaptive reuse. Redevelopment in this area should include residential and commercial uses in vertically mixed-use and standalone buildings that are pedestrian oriented. Redevelopment should provide connections to other Downtown Subdistricts through improved streetscape and walkability. Adaptive reuse of buildings with desirable built form is promoted to encourage sustainability, placemaking, and historic preservation.

B. **Dimensional Standards**. The dimensional standards for the Historic White Street, Downtown North, Downtown Central, Downtown South are as established in Table 2.3.5.

C. **Cross References**. Dimensional standard requirements may differ from Table 2.3.5 due to other UDO provisions. These include but are not limited to Section 2.5 Overlay Zoning Districts, Section 2.7 Height Restriction and Transition Standards, Section 2.8 Residential Infill Development, 2.9 Affordable Housing Incentives, 7.3 Perimeter Buffer Requirements, 7.4 Street Buffer Requirements, and Chapter 12 Natural Resource Protection Standards.

Table 2.3.5 DT District Dimensional Standards				
	Downtown-Historic White Street	**Downtown - North**	**Downtown - Central**	**Downtown - South**
Lot Standards				
Lot Area, Minimum (sq ft)	n/a	n/a	n/a	n/a
Lot Width, Minimum (ft)	n/a	n/a	n/a	n/a
Yard Setbacks				
Front, Minimum (ft)	0	0	0	0
Front, Maximum (ft)	0	10 [1]	20	10 [1]
Street Side, Minimum (ft)	0	0	0	0
Street Side, Maximum (ft)	0	10 [1]	20	10 [1]
Interior Side, Minimum (ft)	0	5	10	5
Rear, Minimum (ft)	0	5	10	5
Building Standards				
Height, Maximum (ft)	35	75 [2] [3]	75 [2]	75 [3] [4]
Height, Minimum (stories)	2	2	2	2
Frontage Build Out, Minimum (%)	80	60	60	60
Building Coverage, Maximum (%)	100	80	80	80
Impervious Surface Coverage, Maximum (%)	100 [4]	100 [4]	100 [4]	100 [5]
Notes				
[1] Setback may be a maximum of 20 feet to accommodate building entryway design as detailed in Table 5.4.3 or to accommodate activated community space as detailed in Table 6.5.2.				
[2] Buildings five stories or greater in height, if not subject to the Height Transition standards established in Section 2.7, shall provide a step back with a minimum depth of 10 feet after the first, second, third, or fourth story.				
[3] All buildings adjacent to a property in the Historic White Street Subdistrict shall be subject to the Height Transition standards established in Section 2.7.				
[4] This is the maximum impervious cover allowed when utilizing the High Impervious Development option detailed in Chapter 12.				

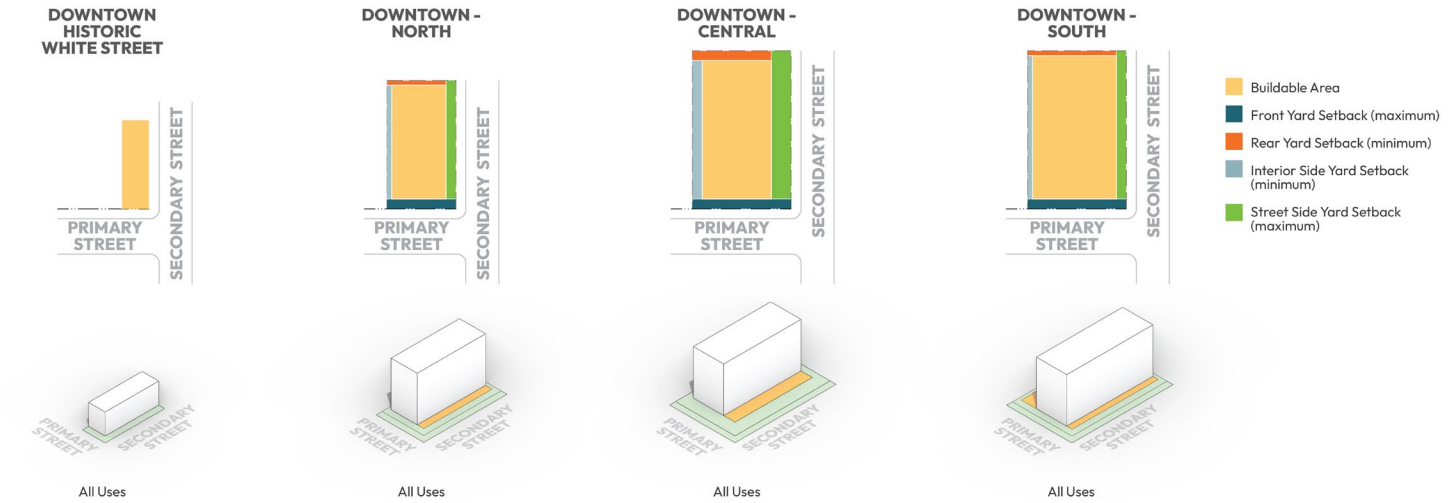


Figure 8: DT District Dimensional Standards

2.3.6 Neighborhood Business (NB)

A. **Purpose**. The Neighborhood Business District is established to accommodate small and moderate scale, local serving non-residential nodes that provide surrounding residents with convenient access to day-to-day goods and services. Development in this district should be compact and pedestrian oriented, provide multimodal connectivity to surrounding development, and may include vertical mixed-use buildings with ground floor non-residential uses and upper floor residential and office uses.

B. **Dimensional Standards**. The dimensional standards for the NB District are as established in Table 2.3.6.

Table 2.3.6
NB District Dimensional Standards

Lot Standards	
Lot Area, Minimum (sq ft)	7,000
Lot Width, Minimum (ft)	50
Yard Setbacks	
Front, Minimum (ft)	n/a
Front, Maximum (ft)	20
Street Side, Minimum (ft)	n/a
Street Side, Maximum (ft)	20
Capital Boulevard, Minimum (ft) [1]	100
Interior Side, Minimum (ft)	15
Rear, Minimum (ft)	20
Building Standards	
Height, Maximum (ft)	40
Height, Minimum (stories)	n/a
Building Footprint, Maximum (sq ft)	25,000
Notes	
[1] An administrative adjustment may be allowed based on NCDOT recommended alternatives for Capital Boulevard North upgrade.	

C. **Cross References.** Dimensional standard requirements may differ from Table 2.3.6 due to other UDO provisions. These include but are not limited to Section 2.5 Overlay Zoning Districts, Section 2.7 Height Restriction and Transition Standards, Section 2.8 Residential Infill Development, 2.9 Affordable Housing Incentives, 7.3 Perimeter Buffer Requirements, 7.4 Street Buffer Requirements, and Chapter 12 Natural Resource Protection Standards.

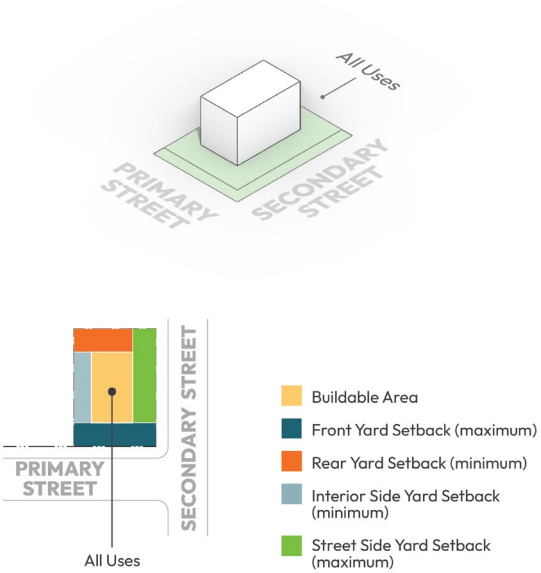


Figure 9: NB District Dimensional Standards

2.3.7 Corridor Business (CB)

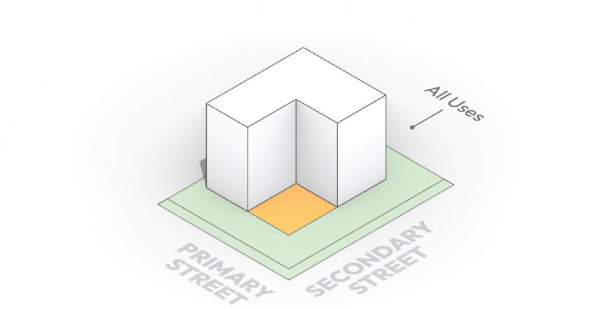
A. **Purpose**. The Corridor Business District is established to accommodate larger scale non-residential uses that serve Wake Forest residents as well as the surrounding region. This district should be located at highly visible and accessible locations along major roadways to facilitate convenient access and minimize traffic congestion while supporting multimodal transportation options through internal and external site connections.

B. **Dimensional Standards**. The dimensional standards for the CB District are as established in Table 2.3.7.

Table 2.3.7
CB District Dimensional Standards

Lot Standards	
Lot Area, Minimum (sq ft)	20,000
Lot Width, Minimum (ft)	150
Yard Setbacks	
Front, Minimum (ft)	30
Front, Maximum (ft) [2] [3]	n/a
Street Side, Minimum (ft)	30
Street Side, Maximum (ft)	n/a
Capital Boulevard, Minimum (ft) [1]	100
Interior Side, Minimum (ft)	10
Rear, Minimum (ft)	30
Building Standards	
Height, Maximum (ft)	75
Height, Minimum (stories)	n/a
Frontage Build Out, Minimum (%) [2]	50
Notes	
[1] An administrative adjustment may be allowed based on NCDOT recommended alternatives for Capital Boulevard North upgrade.	
[2] Buildings and/or building elevations utilized to meet the frontage build out minimum shall be set back a maximum of 50 feet.	
[3] General commercial buildings greater than 100,000 square feet in area shall meet the outlot/liner building setback standards of Section 5.10.	

C. **Cross References**. Dimensional standard requirements may differ from Table 2.3.7 due to other UDO provisions. These include but are not limited to Section 2.5 Overlay Zoning Districts, Section 2.7 Height Restriction and Transition Standards, Section 2.8 Residential Infill Development, 2.9 Affordable Housing Incentives, 7.3 Perimeter Buffer Requirements, 7.4 Street Buffer Requirements, and Chapter 12 Natural Resource Protection Standards.



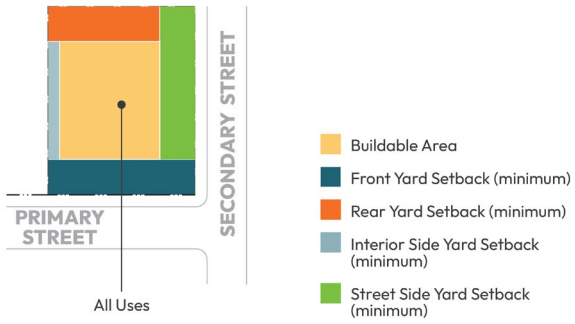


Figure 10: CB District Dimensional Standards

2.3.8 Civic and Institutional (CI)

A. **Purpose**. The Civic and Institutional District is established to accommodate larger scale public or semi-public uses, municipal facilities, educational facilities, and noncommercial places of assembly. This district should be located near residential uses to serve the community while also ensuring sufficient vehicular and pedestrian access is provided.

B. **Dimensional Standards**. The dimensional standards for the CI District are as established in Table 2.3.8.

Table 2.3.8 CI District Dimensional Standards

Lot Standards	
Lot Area, Minimum (sq ft)	40,000
Lot Width, Minimum (ft)	100
Yard Setbacks	
Front, Minimum (ft)	20
Front, Maximum (ft)	n/a
Street Side, Minimum (ft)	20
Street Side, Maximum (ft)	n/a
Capital Boulevard, Minimum (ft) [1]	100
Interior Side, Minimum (ft)	15
Rear, Minimum (ft)	20
Building Standards	
Height, Maximum (ft)	50
Height, Minimum (stories)	n/a
Building Floor Area, Maximum (sq ft)	n/a
Notes	
[1] An administrative adjustment may be allowed based on NCDOT recommended alternatives for Capital Boulevard North upgrade.	

C. **Cross References**. Dimensional standard requirements may differ from Table 2.3.8 due to other UDO provisions. These include but are not limited to Section 2.5 Overlay Zoning Districts, Section 2.7 Height Restriction and Transition Standards, Section 2.8 Residential Infill Development, 2.9 Affordable Housing Incentives, 7.3 Perimeter Buffer Requirements, 7.4 Street Buffer Requirements, and Chapter 12 Natural Resource Protection Standards.

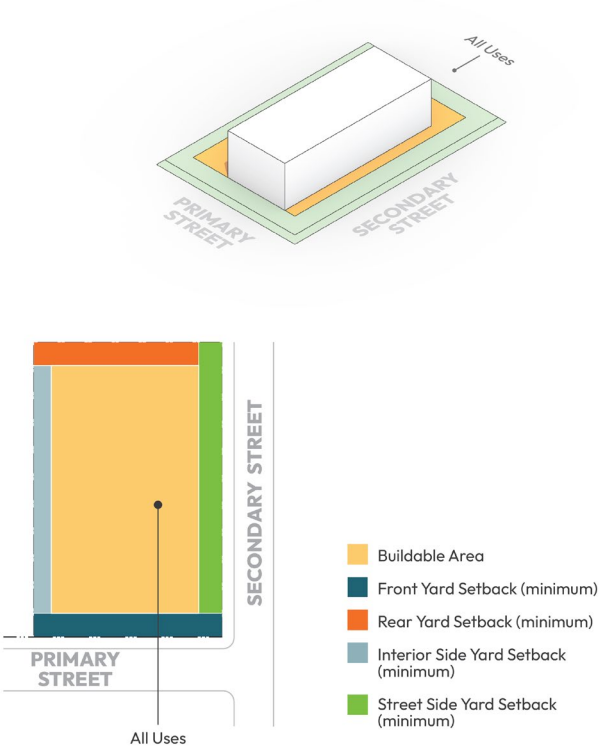


Figure 11: CI District Dimensional Standards

2.3.9 Industrial (IND)

A. **Purpose**. The Industrial District is established to accommodate facilities involved in the manufacturing, processing, storage, and distribution of goods and materials; telecommunication facilities; research centers; life sciences facilities; and flex spaces that support employment opportunities. Development in the IND district should feature large-scale buildings that produce minimal outdoor activity and are concentrated in campus-style industrial parks located near major roadways.

B. **Dimensional Standards**. The dimensional standards for the IND District are as established in Table 2.3.9.

Table 2.3.9 IND District Dimensional Standards

Lot Standards	
Lot Area, Minimum (sq ft)	40,000
Lot Width, Minimum (ft)	100
Yard Setbacks	
Front, Minimum (ft)	30
Front, Maximum (ft)	n/a
Street Side, Minimum (ft)	30
Street Side, Maximum (ft)	n/a
Capital Boulevard, Minimum (ft) [1]	100
Interior Side, Minimum (ft)	15
Rear, Minimum (ft)	20
Building Standards	
Height, Maximum (ft)	50
Height, Minimum (stories)	n/a
Building Floor Area, Maximum (sq ft)	n/a
Notes	
[1] An administrative adjustment may be allowed based on NCDOT recommended alternatives for Capital Boulevard North upgrade.	

C. **Cross References**. Dimensional standard requirements may differ from Table 2.3.9 due to other UDO provisions. These include but are not limited to Section 2.5 Overlay Zoning Districts, Section 2.7 Height Restriction and Transition Standards, Section 2.8 Residential Infill Development, 2.9 Affordable Housing Incentives, 7.3 Perimeter Buffer Requirements, 7.4 Street Buffer Requirements, and Chapter 12 Natural Resource Protection Standards.

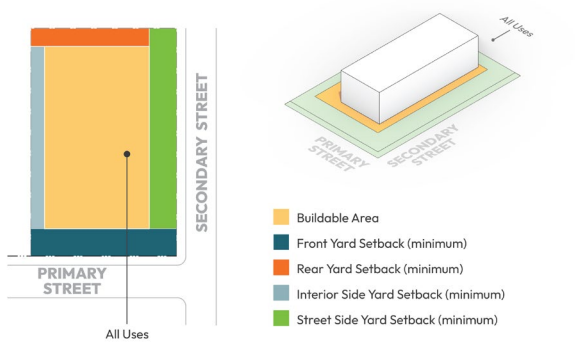


Figure 12: IND District Dimensional Standards

2.3.10 Parks and Open Space (OS)

A. **Purpose**. The Parks and Open Space District is established to preserve and protect environmentally sensitive lands (e.g. floodways, wetlands), historic properties, and properties that are already under public ownership and/or otherwise restricted for use for passive or active recreation.

B. **Dimensional Standards**. The dimensional standards for the OS District are as established in Table 2.310.

Table 2.3.10
OS District Dimensional Standards

Lot Standards	
Lot Area, Minimum (sq ft)	n/a
Lot Width, Minimum (ft)	n/a
Yard Setbacks	
Front, Minimum (ft)	20
Front, Maximum (ft)	n/a
Street Side, Minimum (ft)	20
Street Side, Maximum (ft)	n/a
Capital Boulevard, Minimum (ft) [1]	100
Interior Side, Minimum (ft)	10
Rear, Minimum (ft)	25
Building Standards	
Height, Maximum (ft)	40
Height, Minimum (stories)	n/a
Building Floor Area, Maximum (sq ft)	n/a
Notes	
[1] An administrative adjustment may be allowed based on NCDOT recommended alternatives for Capital Boulevard North upgrade.	

C. **Cross References**. Dimensional standard requirements may differ from Table 2.3.10 due to other UDO provisions. These include but are not limited to Section 2.5 Overlay Zoning Districts, Section 2.7 Height Restriction and Transition Standards, Section 2.8 Residential Infill Development, 2.9 Affordable Housing Incentives, 7.3 Perimeter Buffer Requirements, 7.4 Street Buffer Requirements, and Chapter 12 Natural Resource Protection Standards.

2.4 Planned Unit Development Zoning Districts

2.4.1 Planned Unit Development (PUD)

A. **Purpose.** The Planned Unit Development District is established to achieve high quality, creative, and innovative land planning and site design that furthers the objectives of the Town, as detailed in Section 2.4.1.D, but which cannot be achieved through the strict application of the development and design standards of this UDO. The PUD District provides a process by which customized development and design standards may be approved that meet the needs and character of the site specific features and context of the district.

B. **Governance.** Each PUD adopted applies specific standards over a defined area through the adoption of a new PUD using the procedure in Section 16.7.9.

C. **Types of PUDs**. Two types of PUDs are established, as detailed below:

1. **Type I PUD**. Development sites greater than five acres in gross area may choose to pursue a Type I PUD, as detailed in Section 2.4.1.D.1.d.i,

2. **Type II PUD**. Development sites less than or equal to five acres in gross area may choose to pursue a Type II PUD, as detailed in Section 2.4.1.D.1.d.ii.

D. **PUD District Objectives**.

1. Each PUD shall meet all of the following objectives.

a. **Community Plan Alignment**. The PUD shall be consistent with and clearly put into effect the goals, objectives, and policies set forth in the Community Plan and other adopted plans and policy documents of the Town.

b. **Placemaking**. The PUD shall have a distinctive identity and brand that is utilized in signs, streetscape, public art, architecture, public gathering spaces, and open spaces.

c. **Integrated Design with Identifiable Centers and Edges**. The PUD shall be laid out and developed as a unit in accordance with an integrated overall design. For Type I PUDs, the design shall provide identifiable centers and edges through the harmonious grouping of buildings, uses, facilities, community spaces, and open spaces. The design shall be highly connected internally and externally and maximize multimodal transportation.

d. **Mix of Land Uses**.

i. **Type I PUD.** The Type I PUD shall include:

(a) at least two dwelling types,

(b) at least two commercial use types, and

(c)community and open space.

(d) A Type I PUD may include civic and institutional uses but are not required.

ii. **Type II PUD**. The Type II PUD shall include:

(a) community open space, and

(b) at least two dwelling types,

(c)at least two commercial use types, or

(d) at least one residential and at least one non-residential use.

(e) A Type II PUD may include civic and institutional uses but are not required.

e. **Compatibility with Adjacent Land Uses**. The PUD shall include uses which are generally compatible with the uses of adjacent parcels, with consideration given to the level of activity or intensity, noise, light, and odor. If the uses are not generally compatible, adverse impacts are mitigated through building design, height, and placement; significant screening; landscaping; public open space; and other buffering features that protect uses within the development and surrounding properties beyond what is otherwise required.

f. **Landscape Conservation and Visual Enhancement**. The PUD shall preserve and enhance existing natural features and amenities, such as stands of mature trees, specimen trees, riparian areas, wildlife habitat, unique landforms or topography, and significant viewsheds.

g. **Open Space and Community Space**. The PUD shall include prominent and accessible open space and community space above and beyond that which is required in Chapter 6, including additional land area and enhanced improvements.

h. **Archaeological, Historical, or Cultural Impact**. The PUD shall not substantially adversely impact an archaeological, historical, or cultural resource, including historic properties designated as Local Historic Landmarks, eligible for or listed in the National Register of Historic Places located on or off the parcel(s) proposed for development. Examples of adverse impacts include but are not limited to:

i. Neglect, destruction, damage, or removal of resources; alteration of property inconsistent with the Secretary of the Interior's Standards for the Treatment of Historic Properties,

ii. Change of the character of the physical features of the resource's setting and association that contribute to its historic significance, and

iii. Introduction of visual, atmospheric, or audible elements that diminish the integrity of the property's significant historic features.

2. Each PUD shall meet at least one of the following objectives. The Board of Commissioners may approve an alternate combination of objectives that meet the purpose and intent of the objectives established below.

a. **Environmentally Sustainable Site and Building Design**. The PUD is designed with consideration given to various methods of site design and building location, architectural design of individual buildings, and landscaping design in order to:

i. Substantially reduce energy, waste and water consumption, for example, by meeting LEED certification standards or adaptive reuse,

ii. Enhance local food systems, or

iii. Improve onsite stormwater management and water quality, for example, by designing to the 100-year storm event.

b. **Affordability**.

i. A minimum of 20 percent of dwellings are offered for rent or for sale at an amount no more than 30 percent of the gross annual income of households that earn no more than 80 percent of the area median income as defined by the US Department of Housing and Urban Development for a minimum period of 30 years.

ii. A minimum of 15 percent of dwellings are offered for rent at an amount no more than 30 percent of the gross annual income of households that earn no more than 60 percent of the area median income as defined by the US Department of Housing and Urban Development for a minimum period of 30 years.

iii. A combination of dwellings offered for rent or for sale at an amount no more than 30 percent of the gross annual income of households that earn no more than 80 percent, and more than 60 percent of the area median income as defined by the US Department of Housing and Urban Development for a minimum period of 30 years, which is comparable to the amount required in subsections I and II above.

c. **Senior Oriented and Accessible**. The PUD is designed so that a minimum of 20 percent of dwellings, non-residential buildings, and community and open spaces are accessible (exterior and interior) to persons with limited mobility. The PUD also includes other senior friendly design features such as front porches, back patios, walking paths, outdoor sports facilities, and activated community spaces.

d. **Other**. The applicant may propose an "other" objective for consideration by the Board of Commissioners. An "other" objective shall be a combination of more than one of the options above and/or shall implement Tourism or Community Facilities policies in the Community Plan or address emerging technologies.

E. **Dimensional Standards**. The dimensional standards for the PUD District are as established through the PUD approval process as detailed in Section 16.7.9.

Table 2.4.1
PUD District Dimensional Standards

Lot Standards	
Lot Area, Minimum (sq ft)	Per Approved PUD
Lot Width, Minimum (ft)	
Yard Setbacks	
Front, Minimum (ft)	Per Approved PUD
Front, Maximum (ft)	
Street Side, Minimum (ft)	
Street Side, Maximum (ft)	
Capital Boulevard, Minimum (ft)	
Interior Side, Minimum (ft)	
Rear, Minimum (ft)	
Building Standards	
Height, Maximum (ft)	Per Approved PUD
Height, Minimum (stories)	
Building Floor Area, Maximum (sq ft)	

F. **Prohibited Uses**. A PUD shall not include any of the following uses:

1. Adult Establishment,
2. Agritourism, accessory,
3. Animal Production,
4. Car Wash,
5. Concrete/Cement Manufacturing,
6. Contractor Services,
7. Correctional Institution,
8. Crematorium,
9. Drive-thru/Drive-in Facility,
10. Funeral Home,
11. Halfway Home,
12. Heavy Commercial Sales,
13. Industry, Heavy,
14. Internet Sweepstakes Facility,
15. Landfill,
16. Liquid Natural Gas Processing,
17. Manufactured Housing,
18. Recycle Collection Station,
19. Restricted Commercial,
20. Outdoor Storage Yard,
21. Shooting Range, Indoor or Outdoor,
22. Solar Farm,
23. Storage, Self-service,
24. Vehicle Fueling Station,
25. Vehicle Rental/Leasing/Sales,
26. Vehicle Services – Major repair/body work,
27. Vehicle Services – Minor maintenance/repair,
28. Waste Transfer Facility, or

29. Wholesaling and Distribution.

2.5 Overlay Zoning Districts

2.5.1 Conflicting Zoning District Standards

A. In the event of a conflict between an Overlay District standard in Section 2.5, and another standard in this UDO, the Overlay District standard shall control, even in cases where the Overlay District standard is less restrictive.

B. In cases where land is located in two or more different Overlay Districts and the standards between the Overlay Districts conflict, the more restrictive requirements shall control.

2.5.2 Local Historic Overlay (LH-O)

A. **Purpose**. The Local Historic Overlay District is established to protect designate local historic landmarks and local historic districts in Wake Forest and to require review of applications for Certificate of Appropriateness and ensure the preservation of the special character of historic properties, buildings, structures, and districts in the community.

B. **Applicability.** All locally designated Historic Districts and Historic Landmarks shall be a part of the Local Historic Overlay District.

C. **Demolition by Neglect**. Demolition by neglect of any designated historic landmark or property located within a district shall constitute a violation of this UDO. For the purposes of this UDO, "demolition by neglect" shall generally mean the failure to properly maintain a structure, whether intentionally or not, such that it falls into such disrepair that it may become uninhabitable. The local governing body may take appropriate actions to prevent demolition by neglect, as outlined in Section 16.6.3.D.2.e.

D. **Permitted Uses**. All uses permitted in the base zoning district underlying the LH-O District are permitted with the exception of Dwelling-Cottage Court; Dwelling-Townhome; and Dwelling-Triplex/Quadplex uses. All alterations, additions, new construction, relocation, and demolitions regardless of use are subject to approval by the Wake Forest Historic Preservation Commission and compliance with the Wake Forest Design Standards for the Local Historic District and Local Landmarks and the Secretary of Interiors Standards for Rehabilitation.

2.5.3 Mill Village Overlay (MV-O)

A. **Purpose.** The Mill Village Overlay District is established to preserve and protect the historic and unique characteristics of the buildings, structures, and neighborhood contained within the Glen Royall Mill Village National Register Historic District. This includes promoting traditional development patterns and continuity of the streetscape to reduce conflict between new construction and existing development. The overlay district seeks to protect the charm of this neighborhood originally constructed as housing for mill workers.

B. **Applicability.** All properties within the Mill Village Overlay District. Those properties that are also located within the Wake Forest Local Historic District are exempt from the regulations contained herein but are subject to the regulations contained in Section 2.5.2, the Local Historic Overlay (LH-O) District.

C. **Permitted Uses**. All uses permitted in the base zoning district underlying the MV-O District are permitted with the exception of Dwelling-Cottage Court; Dwelling-Townhome; and Dwelling-Triplex/Quadplex uses.

D. **Dimensional Standards**.

Table 2.5.3
MV-O District Dimensional Standards

	Residential	Non-Residential
Lot Standards		
Lot Area, Minimum (sq ft)	6,500	
Lot Area, Maximum (sq ft)	20,000	87,120
Yard Setbacks		
Front, Minimum (ft)	[1]	
Front, Maximum (ft)	[1]	
Building Standards		
Height, Maximum (ft)	18 [2]	
Building Coverage, Maximum (%)	25	
Notes		
[1] Principal building setback shall be no more or no less than five feet from the average established front yard of developed lots within 300 feet on each side of the lot, fronting on the same street as the lot, and within the MV-O.		
[2] Building height shall not exceed the greater of one story or the average height of the principal buildings of the same use on lots within 300 feet on each side of the lot, fronting on the same street as the lot, and within the MV-O.		

E. **Cross References.** Dimensional standard requirements may differ from Table 2.5.3 due to other UDO provisions. These include but are not limited to Section 2.5 Overlay Zoning Districts, Section 2.7 Height Restriction and Transition Standards, Section 2.8 Residential Infill Development, 2.9 Affordable Housing Incentives, 7.3 Perimeter Buffer Requirements, 7.4 Street Buffer Requirements, and Chapter 12 Natural Resource Protection Standards.

F. **Development Standards.**

1. **Garages and Accessory Structures.**

   a. No portion of any detached garage, carport, or accessory structure shall be located in the front yard nor shall it protrude beyond the primary facade of the principal structure.

   b. Attached garages are prohibited.

   c. Accessory structures shall not exceed 80 percent of the height of the primary structure.

2. **Fences and Walls.**

   Walls are prohibited, except for retaining walls necessary for soil erosion, retaining purposes.
   Height: In front and side yards, fences shall not exceed four feet in height from the front property line to the rear corner of the principal building. In rear yards, fences shall not exceed six feet and shall not be installed in front of the rear corner of the principal building.
   Design: Shall be vertically oriented. Split rail and chain link are prohibited. Privacy fences and garden fences, such as chicken wire, are permitted only in the rear yard.

G. **Design Standards.** The following design standards shall be applied to alterations to existing structures and new construction. The following design standards do not apply to ordinary maintenance or repair of the exterior of existing structures.

1. **Residential and Lodging Uses**.

   a. **Building Orientation.** The main building entrance shall be oriented towards the public right-of-way.

b. **Porches**. Front porches and existing entrances shall be preserved and/or replication of entrances and porches shall be based on historical evidence. As such, existing front porches shall not be enclosed or screened in; however, existing screened in front porches are permitted and may be repaired or replaced provided that transparent screens are utilized and installed from the inside of the porch, behind the railing and other porch features. If new construction is proposed, front porches shall be provided and meet the following standards:

i. Span a minimum of 50 percent of the front façade width,

ii. Be located symmetrically on the front façade,

iii. Be shared for dwelling-duplex uses, and

iv. Shall not be enclosed or screened in.

2. **Roof**: Only Side-Gable, Pyramidal, Triple-A Gable, and Gable-front roof types are permitted.

3. **Building materials:** Exterior walls shall be finished in horizontally oriented wood clapboard, cementitious fiber board, wood shingle, wood drop siding or primed board. Brick, stone, stucco, and vinyl siding are not permitted. Except that:

a. Existing structures may replace existing materials in kind, and

b. Accessory buildings visible from the public right-of-way are subject to the building material requirements.

4. **Foundation materials:** Principal building foundations shall be brick or brick veneer on front and side facades.

5. **Finished Floor Elevation:** The finished floor elevation at the front façade shall be a minimum of 18 inches above grade for principal structures.

6. **Utilities:** Skylights, solar panels, utilities, mechanical equipment, satellite dishes, air conditioning units, and associated structures shall only be located on rear or side slopes of the roof, on rear or side portions of the building, and in rear or side yards provided they are not visible from the public right-of-way or are screened from view from the public right-of-way with vegetation or fencing.

2. **Civic and Educational Uses.**

a. **Building materials**: Exterior walls shall be finished in accordance with Section 5.2, except that stucco, EIFS, and metal shall not be permitted.

b. **Orientation**: The primary entrance shall face the primary street. If side or rear parking is utilized, a front entrance shall still be provided.

c. **ADA Compatibility**: Fire exits, landings, ramps, chair lifts, and other access features shall be located on the building where they have the least visibility and impact to the character of the structure, when possible. When appropriate temporary structures may be approved by the Administrator.

d. **Utilities**: Skylights, solar panels, utilities, mechanical equipment, satellite dishes, air conditioning units, and associated structures shall only be located on rear or side slopes of the roof, on rear or side portions of the building, and in rear or side yards provided they are not visible from the public right-of-way or are screened from view from the public right-of-way with vegetation or fencing.

3. **Non-Residential Uses in Residential Structures.** Historically significant residential structures in the Mill Village may be repurposed for uses other than residential. In order to preserve the architectural integrity and special historical character of these structures in the Mill Village, the following shall apply to non-residential uses within detached dwellings.
   a. The residential character and architectural elements of the house shall remain unchanged,
   b. With the exception of door and window replacements, which shall match the size of the existing openings, and routine repair and maintenance, there may be no other alterations to the front façade of the building,
   c. Building additions must be in accordance with Section 2.5.3.G.4,
   d. On-site parking shall be located to the side or rear of the principal structure.
4. **Additions.** The following standards are applicable to all additions in the Mill Village Character Overlay (MV-O) District
   a. Additions shall be located to the rear of the structure or the most inconspicuous side of the building. Additions to roofs shall not be visible from the front elevation. The addition shall be sited such that it is clearly an appendage and distinguishable from the existing main building. Additions shall be recessed behind the rear corner of the principal structure and shall not exceed the height of the principal structure or be visible from the front of the structure.
   b. Additions shall be constructed with the least possible loss of historic building material and without damaging or obscuring character-defining features of the building, including, but not limited to, rooflines, cornices, eaves, and brackets. Additions shall be designed to be reversible with the least amount of damage to the historic building so that if removed in the future, the historic building will be intact.
   c. Additions, including multiple additions to structures, shall:
      v. Not increase the floor area of the main structure by more than 100 percent,
      vi. Not increase the height of the main structure nor shall the addition exceed the height of the main structure.
   d. Designs for additions shall be compatible with the building design standards of Chapter 5 of this UDO.
5. **Submittal Requirements.** In addition to the standard submittal requirements, applications in the Mill Village Character Overlay District shall also include building elevations, site plan, and floorplans.

2.5.4 Transit Oriented Development Overlay (TOD-O)

A. **Purpose.** The Transit Oriented Development Overlay District is established to accommodate higher density residential development and greater mix of uses in proximity to transit stations in order to increase access to transit services; promote walkable, active environments; and support multimodal transportation. Recognizing the unique character of transit-oriented areas throughout Wake Forest, subdistricts are established to adequately address topics such as historic preservation, residential transitions, and environmental conditions. It is the intent and purpose of this district to protect areas for commercial development and the generation of property tax revenue from the encroachment of nontaxable bodies including non-commercial places of assembly as defined in this UDO.

B. **Subdistricts:**

1. TOD Old Forestville,

2. TOD Burlington Mills.

C. **Dimensional Standards.** The dimensional standards for the TOD-O Subdistricts are as established in Table 2.5.4 and shall supersede the standards of any base district.

Table 2.5.4
TOD-O District Dimensional Standards

	TOD Old Forestville	TOD Burlington Mills
Yard Setbacks		
Front, Minimum (ft)	0	0
Front, Maximum (ft)	10	10
Street Side, Minimum (ft)	5	5
Interior Side, Minimum (ft)	5 [2]	5 [2]
Capital Boulevard, Minimum (ft) [3]	100	100
Rear, Minimum (ft)	5	5
Building Standards		
Height, Maximum (ft)	50 [4]	75 [4]
Height, Minimum (stories)	2	2
Frontage Build Out, Minimum (%)	60	80
Building Coverage, Maximum (%)	n/a	n/a
Notes		
[1] Setback may be a maximum of 10 feet to accommodate building entryway design as detailed in Table 5.4.3 or to accommodate activated community space as detailed in Table 6.4.1.		
[2] Setback shall be 0 feet if fire rated partition wall provided.		
[3] An administrative adjustment may be allowed based on NCDOT recommended alternatives for Capital Boulevard North upgrade.		
[4] Buildings five stories or greater in height, if not subject to the Height Transition standards established in Section 2.7, shall provide a step back with a minimum depth of 10 feet after the first, second, third, or fourth story.		
[5] All buildings adjacent to a property in the Historic White Street Subdistrict shall be subject to the Height Transition standards established in Section 2.7.		

D. **Cross References.** Dimensional standard requirements may differ from Table 2.5.4 due to other UDO provisions. These include but are not limited to Section 2.5 Overlay Zoning Districts, Section 2.7 Height Restriction and Transition Standards, Section 2.8 Residential Infill Development, 2.9 Affordable Housing Incentives, 7.3 Perimeter Buffer Requirements, 7.4 Street Buffer Requirements, and Chapter 12 Natural Resource Protection Standards.

E. **Required Mix of Uses.** All residential developments within the TOD-O District shall include at least a specified mix of uses based whether the uses will be horizontally or vertically integrated, as outlined below. Single-use commercial developments shall be permitted within the district, but standalone residential buildings shall not be allowed.

1. **Horizontal Mixed Use.** If the required mix of uses are provided in standalone buildings within the development site, a minimum of 150 square feet of commercial space shall be provided per unit. Required commercial space shall be constructed by the time 50 percent of dwelling units receive Certificates of Occupancy.

2. **Vertical Mixed Use**. If the required mix of uses is provided in vertically integrated buildings, a minimum of 100 square feet of commercial space shall be provided per unit.

3. **Existing**. If the required mix of uses exists within one quarter mile of the development and can be accessed via a continuous pedestrian network, a minimum of 300 square feet of commercial space shall be provided per unit.

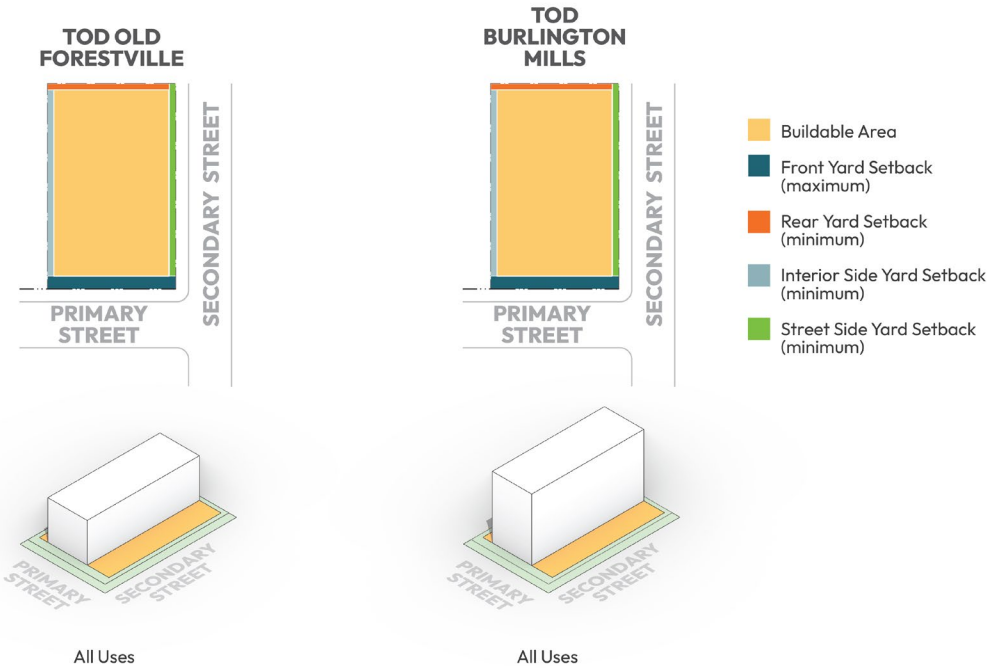


Figure 13: TOD-O District Dimensional Standards

2.5.5 Activity Center Overlay (AC-O)

A. **Purpose.** The Activity Center Overlay District is established to accommodate unique focal points of the community where residents gather, socialize, live, work, and shop. Activity centers should include a wide variety of uses in a pedestrian-scaled environment that enhances quality of life, fosters creative placemaking, and provides living experiences unique to Wake Forest. It is the intent and purpose of this district to protect areas for commercial development and the generation of property tax revenue from the encroachment of nontaxable bodies including non-commercial places of assembly as defined in this UDO.

B. **Dimensional Standards.** The dimensional standards for the AC-O District are as established in Table 2.5.5 and shall supersede the standards of any base district.

Table 2.5.5
AC-O District Dimensional Standards

Yard Setbacks	
Front, Minimum (ft)	0
Front, Maximum (ft) [3]	10
Street Side, Minimum (ft)	0
Street Side, Maximum (ft)	10
Capital Boulevard, Minimum (ft) [1]	100
Interior Side, Minimum (ft)	5
Rear, Minimum (ft)	10
Building Standards	
Height, Maximum (ft)	60 [2]
Height, Minimum (stories)	2
Frontage Build Out, Minimum (%)	70
Notes	
[1] An administrative adjustment may be allowed based on NCDOT recommended alternatives for Capital Boulevard North upgrade.	
[2] Buildings five stories or greater in height, if not subject to the Height Transition standards established in Section 2.7, shall provide a step back with a minimum depth of 10 feet after the first, second, third, or fourth story.	
[3] General commercial buildings greater than 100,000 square feet in area shall meet the outlot/liner building setback standards of Section 5.10.	

C. **Cross References.** Dimensional standard requirements may differ from Table 2.5.5 due to other UDO provisions. These include but are not limited to Section 2.5 Overlay Zoning Districts, Section 2.7 Height Restriction and Transition Standards, Section 2.8 Residential Infill Development, 2.9 Affordable Housing Incentives, 7.3 Perimeter Buffer Requirements, 7.4 Street Buffer Requirements, and Chapter 12 Natural Resource Protection Standards.

D. **Required Mix of Uses.** All residential developments within the AC-O District shall include at least a specified mix of uses based on whether the uses will be horizontally or vertically mixed per the following:

1. **Horizontal Mixed Use.** If the required mix of uses are provided in standalone buildings within the development site, a minimum of 125 square feet of commercial space shall be provided per unit. Required commercial space shall be constructed by the time 50 percent of dwelling units receive Certificates of Occupancy.

2. **Vertical Mixed Use**. If the required mix of uses is provided in vertically integrated buildings, a minimum of 75 square feet of commercial space shall be provided per unit.

3. **Existing**. If the required mix of uses exists within one quarter mile of the development and can be accessed via a continuous pedestrian network, a minimum of 250 square feet of commercial space shall be provided per unit

2.5.6 Watershed Protection Overlay (WP-O)

A. **Purpose.** The Watershed Protection Overlay District is established to protect the integrity of drinking water in Wake Forest and surrounding communities to provide clean and safe water for residents, businesses, industries, and plant and animal life. Development within certain WP-O areas shall follow conservation design standards as established in Section 4.3. As multiple watersheds exist within Wake Forest, the following subdistricts are established to adequately regulate the protected, critical, and nutrient sensitive water protection areas.

1. Falls Lake Critical Area

2. Falls Lake Protected Area

3. Little River Protected Area

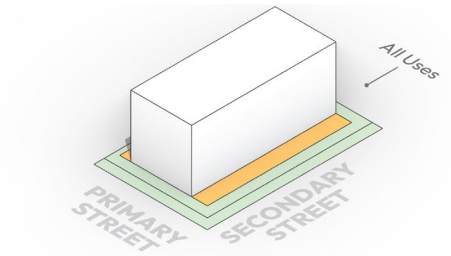
4. Richland Creek Critical Area

5. Richland Creek Protected Area

6. Smith Creek Protected Area

7. Smith Creek Critical Area

B. **Cross References**. Reference Section 12.8 for development standards for state designated water supply watershed protection areas.



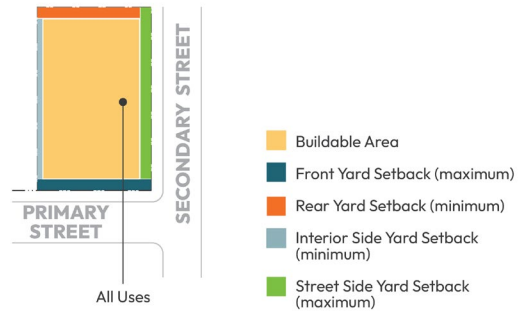


Figure 14: AC-O District Dimensional Standards

2.6 Allowable Encroachments

Table 2.6. Allowable Encroachments into Minimum Setbacks

Encroachment Type	Allowed Location	Allowed Encroachment
Accessibility Ramps and Fire Escapes required by the North Carolina State Building Code	Any minimum setback	May encroach into the minimum setback up to three feet from the property line.
Awnings and Attached Canopies without Support Columns/Posts	Any minimum setback	May encroach up to five feet into the minimum setback.
	Town public right-of-way (air rights)	May encroach up to three feet from the curb if right-of-way encroachment agreement approval is granted. Shall not interfere with street trees. Shall maintain a minimum vertical clearance of eight feet.
Attached Canopies with Support Columns/Posts and Freestanding Canopies	Any minimum setback	May encroach up to five feet into the minimum setback.
Bay Windows and Balconies	Front and street side minimum setbacks	May encroach up to five feet into the minimum setback.
	Interior side and rear minimum setbacks	May encroach up to three feet provided that a minimum building separation of eight feet is maintained.
Bicycle Racks; Public Transit Improvements	Front and street side minimum setbacks	May encroach up to three feet from the curb if right-of-way encroachment agreement approval is granted. Shall not interfere with street trees. Shall maintain a minimum vertical clearance of eight feet.
Building Entryway Design Features (Section 5.4)	Front and street side minimum setbacks	May encroach any amount but shall comply with the standards of Table 5.4.3.
Community Sharing Cabinet	Any minimum setback	May encroach any amount. A maximum of one per parcel shall be allowed in either the front or street side yard.
		May not exceed 15 cubic feet in cabinet interior volume and six feet in height.
Covered Porches, Covered Decks, and Covered Patios associated with the Principal Use	Any minimum setback	May encroach up to eight feet into the minimum setback but may not be closer than five feet from the property line.
		May not exceed 30 inches in height above the average finished grade.
		May not be screened-in or enclosed.
Cornices, Gutters, Eave Overhangs, Chimneys, and Similar Architectural Projections (excluding projections otherwise listed in Table 2.6.A)	Any minimum setback	May encroach up to two feet into the minimum setback.
Electric Vehicle Charging Station	Interior side and rear minimum setbacks	May encroach into the minimum setback up to five feet from the property line.
Fences, Walls, and Berms	Any minimum setback	May encroach any amount but shall comply with the standards of Section 8.1.2 and 8.3.
Flagpole	Any minimum setback	May encroach any amount. A maximum of two shall be allowed within either the front or street side yard.
		Shall have a maximum height of twenty feet.
Garden Features	Any minimum setback	May encroach any amount.

Table 2.6. Allowable Encroachments into Minimum Setbacks

Encroachment Type	Allowed Location	Allowed Encroachment
Lighting – Landscape, Building Façade, Outdoor Recreational, and Pedestrian Scale	Any minimum setback	May encroach any amount but shall comply with the standards of Chapter 10.
Mailbox, Cluster Box Unit (CBU)	Any minimum setback	May encroach into the minimum setback up to three feet from the property line.
Mailbox, Individual	Any minimum setback	May encroach any amount.
Mechanical Equipment	Interior side minimum setback	May encroach into the minimum setback up to three feet from the property line. For townhome lots, may encroach up to one foot from the property line.
	Rear minimum setback	May encroach into the minimum setback up to five feet from the property line.
Pedestrian Walkways and Steps	Any minimum setback	May encroach into the minimum setback up to three feet from the property line.
Signs	Any minimum setback	May encroach any amount but shall comply with the standards of Chapter 13.
Street Furniture	Front and street side minimum setbacks	May encroach up to three feet from the curb if right-of-way encroachment agreement approval is granted. Shall not interfere with street trees.
Swimming Pool	Rear and interior side minimum setback	May encroach into the minimum setback up to 10 feet from the property line.
Uncovered and Unenclosed Steps and Stairs Attached to a Building	Front and street side minimum setbacks	May encroach up to six feet into the minimum setback but may not be closer than five feet from the property line.
Uncovered Porches, Decks, Patios, and similar Features	Interior side and rear minimum setbacks	May encroach into the minimum setback up to five feet from the property line.
		May not exceed 30 inches in height above the average finished grade.

2.7 Height Restriction and Transition Standards

2.7.1 Viewshed Protection

A. **Purpose**. The purpose of the viewshed protection height restrictions is to preserve the views of the steeple of Binkley Chapel, a prominent landmark that holds significant historical and contextual value in Town.

B. **Applicability**. View shed protection height restriction standards shall apply to any development within the viewshed area.

C. **Viewshed Area.** The viewshed area shall be based on the visible corridors from which the steeple of Binkley Chapel is prominently visible, including Joyner Park, Calvin Jones Highway, Forestville Road, and Downtown Wake Forest.

D. **Height Restriction**. No building, structure, and/or portion of a building or structure in the viewshed protection area shall exceed 75 feet in height.

2.7.2 Adjacent Property Transition

A. **Purpose**. The purpose of the height transition standards is to protect the special character of historic buildings and districts either locally designated or listed in the State Study List, or National Register of Historic Places, the special character of the Northeast Neighborhood as identified in the Northeast Community Plan, and the traditional single-family character and form of Wake Forest's established residential neighborhoods in the General Residential district from incompatible new development.

B. **Applicability**. Height transition requirements shall apply to all buildings, regardless of the zoning district, abutting a building in the GR, NCR, or LH-O Districts and/or buildings on the State Study List or listed in the National Register of Historic Places either individually or as part of a district. This requirement shall apply only if the buildings are directly adjacent and shall not apply if separated by a street.

C. **Requirement**. Any building abutting a building in the GR, NCR, or LH-O Districts and/or buildings on the state study list or listed in the National Register of Historic Places either individually or as part of a district that exceeds the height of an adjacent building on an applicable property as detailed in Section 2.7.2.B by more than one story shall provide at least one of the transitions detailed below:

1. Provide a step down in height along the shared property line to meet the height of the building on an applicable property for a minimum of 50 percent of the façade,
2. Utilize dormers and sloping roofs to accommodate stories above the height of the adjacent building on an applicable property,
3. Provide a Type C Buffer to the subject property line adjacent to the applicable property.

2.7.2.C

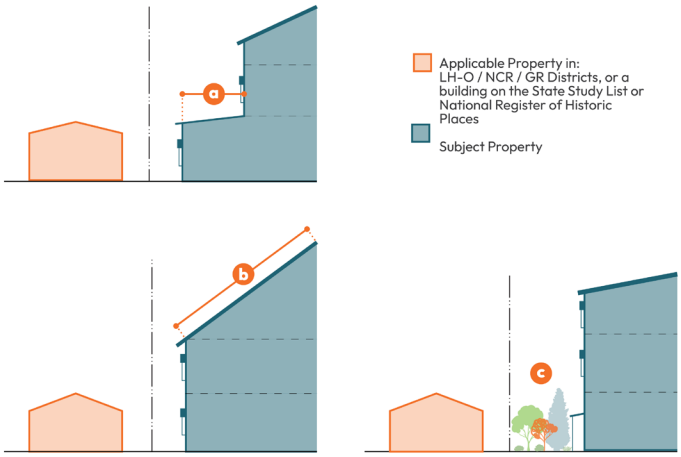


Figure 15:Height Transitions

2.7.3 Step Back

Any building five stories or greater in height in the TOD-O, AC-O, DT, and/or TSR districts shall provide a step back with a minimum depth of 10 feet after the first, second, third, or fourth story.

2.8 Residential Infill Development

2.8.1 Purpose and Applicability

A. **Purpose**. The purpose of the residential infill regulations is to ensure that development of vacant lots or redevelopment of properties in established neighborhoods is sensitive to the context of surrounding development while accommodating a variety of housing types and densities.

B. **Applicability**. Residential infill development regulations shall apply to infill development in the GR, NCR, LH-O, and MV-O Districts.

2.8.2 Building Orientation

The building orientation of infill development shall reflect the orientation of buildings along the same side of the street and on the same block. Corner lots may choose their street alignment.

2.8.3 Dimensional Standards

A. **Lot Width**. Minimum lot width requirements for subdivided infill lots shall be calculated as the average of the lot widths of front-facing lots along the same side of the street and within 300 feet of the subject property. The widest and narrowest lot widths shall be eliminated in calculating average lot widths. A 10 percent deviation from the calculated average may be approved by the Administrator in accordance with the standards of review established in Section 16.5.

B. **Setbacks**.

1. **Front Yard**. The required front yard setback for infill development shall be no more or no less than five feet from the average established front yard of developed lots within 300 feet on each side of the lot, fronting on the same side of the street as the lot. If the lot fronts a cul-de-sac, the average of all lots within 300 feet of the subject lot, on both sides of the cul-de-sac shall be considered.

2. **Street Side Yard**. The required street side yard setback for infill development shall be no more or no less than five feet from the average established street side yard of developed lots within 300 feet on each side of the lot, fronting on the same street as the lot.

2.8.3

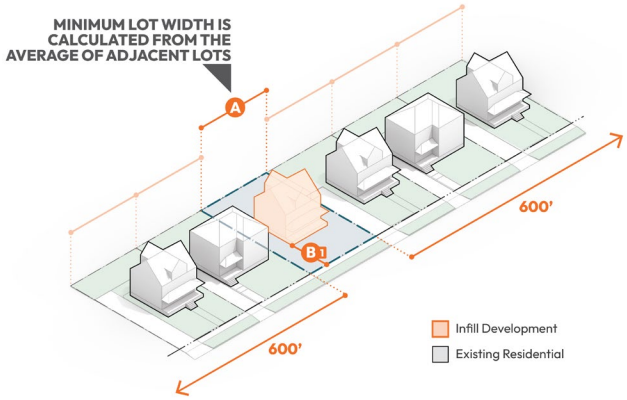


Figure 16: Residential Infill Building Orientation and Dimensional Standards

2.9 Affordable Housing Incentives

2.9.1 Purpose and Applicability

A. **Purpose**. The purpose of the affordable housing incentives is to support and promote the development of dwelling units that are affordable to households making 80 percent or less and 60 percent or less than the Wake County area median income.

B. **Applicability**. The affordable housing incentives may be utilized per residential use type or district, as detailed in Table 2.9.4, where a specified number of dwelling units are deed restricted affordable to households making 80 percent or less than the Wake County area median income.

2.9.2 Affordable Unit Standards

Dwelling units designated as affordable shall be comparable in finishes and size and have access to the same services and amenities as market rate dwelling units on the same development site.

2.9.3 Types of Affordability Requirements

The types of affordability requirements may be utilized, as detailed in Table 2.9.4, to utilize an affordable housing incentive.

A. **Affordability Requirement Type 1**. Twenty percent of dwelling units in the development site shall be deed restricted affordable to households making 80 percent or less than the Wake County area median income for a minimum of 30 years.

B. **Affordability Requirement Type 2**. Ten percent of dwelling units in the development site shall be deed restricted affordable to households making 60 percent or less than the Wake County area median income for a minimum of 30 years.

C. **Affordability Requirement Type 3.** Forty percent of dwelling units resulting from allowed increase in building height shall be deed restricted affordable to households making 80 percent or less than the Wake County area median income for a minimum of 30 years.

D. **Affordability Requirement Type 4.** 20 percent of dwelling units resulting from allowed increase in building height shall be deed restricted affordable to households making 60 percent or less than the Wake County area median income for a minimum of 30 years.

2.9.4 Types of Affordable Housing Incentives

Table 2.9.4
Types of Affordable Housing Incentives

Use	District(s)	Incentive	Applicable Affordability Requirement Type(s)
Cottage Court	GR; MUR	Option 1: A maximum of two dwelling units may be allowed per building. A minimum of four and maximum of 12 dwelling units may be allowed per cottage court. The maximum allowed square footage per building may be increased to 2,700 square feet.	1; 2
		Option 2: Maximum height of a cottage home building may be 35 feet to accommodate a full second story. The maximum allowed square footage per building may be increased to 2,700 square feet.	1; 2
Multifamily	MUR	Up to 40 dwelling units may be allowed per building	1; 2
	AC-O	Maximum height of a multifamily building may be 70 feet to accommodate six full stories.	3; 4
	AC-O; TOD-O	Option 1: If required mix of uses are provided in standalone buildings, required commercial space may be a pad ready outparcel rather than constructed by the time 50 percent of dwelling units are certified for occupancy.	1; 2
		Option 2: Reduction in required non-residential uses provided by 25 percent.	
	TSR	Option 1: Minimum required open space may be reduced by 50 percent.	1; 2
		Option 2: Minimum required tree canopy coverage may be reduced by 25 percent.	
	AC-O; TOD-O	Option 1: Outside of the WP-O District, maximum impervious surface area may be increased to 90 percent.	
Multifamily, above ground floor only	NB	Maximum height of a mixed-use building with above ground floor multifamily dwellings may be 40 feet to accommodate four full stories.	3; 4
All Residential	Any District	The impact fees, except for the Water and Sewer Capital Facility Fees, (Section 11.3) associated with the affordable units may be waived.	1; 2
		Up to 50% of dwelling units may be front loaded. Attached front facing garages shall be set back a minimum of eight feet from the front façade. Attached, front facing garages shall have a maximum width of 14 feet.	

3 USE REGULATIONS

3.1 General Provisions

3.1.1 Purpose

The purpose of this Chapter is to establish the allowed principal, accessory, and temporary uses in each zoning district, including how they are regulated (permitted, special use, etc.) and required supplemental standards.

3.1.2 Applicability

The use regulations established in this Chapter shall apply to all land identified in Chapter 1.

3.2 Classification of Uses

3.2.1 General Use Types

In order to regulate the use of land, general use types have been established. General use types provide a systematic basis for assigning land uses to appropriate categories with other similar uses. General use types classify land uses and activities based on common functional, product or physical characteristics.

A. Characteristics include the type and amount of activity, the hours of operation, the type of customers, how goods or services are sold or delivered, likely impact on surrounding properties and site conditions.

B. Where a general use definition contains a list of example uses, the list is to be considered non-inclusive. Uses shall be categorized through the Interpretation process established in Section 16.5.8.

C. The use types are defined in Chapter 18.

CONTENT

3.1 General Provisions
3.2 Classification of Uses
3.3 Principal Uses
3.4 Accessory Uses
3.5 Temporary Uses

3.2.2 Qualified Uses

A. **Floor Dependent**.

1. If a use includes "above ground floor only" in the title, it shall be allowed on the second story or higher of a building only.

2. If a use does not include "above ground floor only" in the title, it shall be allowed on all building stories.

B. **Square Footage Dependent**.

1. If a use includes a qualifying statement regarding square footage, such as "less than 15,000 sq ft" the total square footage of the building in which the use may operate shall not exceed what is specified.

2. If a use does not include a qualifying statement regarding square footage, the total square footage of the building in which the use may operate is not restricted, unless otherwise stated in this Unified Development Ordinance (UDO).

C. **Public or Private Designation**.

1. Use of the word "public" in the name or description of a general use indicates that it is owned and operated by a non-profit organization or governmental entity.

2. Use of the word "private" in the name or description of a general use indicates that it is owned and operated by a for-profit organization or business or carries out a function and operations typical of a for-profit organization.

D. **Indoor or Outdoor Designation.**

1. If a use includes "indoor" in the title, the use shall be operated within a fully enclosed building only.

2. If a use includes "outdoor" in the title, the use may be operated within a fully enclosed building or an outdoor area meeting applicable supplemental use standards.

E. **Use Categories**. Each use type is grouped under a use category.

1. **Residential**. Premises for long-term human habitation, excluding short-term leasing or rental of less than one month.

2. **Public & Institutional**. Premises for organizations dedicated to religion, government, arts and culture, recreation and sports, or other similar areas of public assembly in addition to uses and premises dedicated to education, social service, and health care.

3. **Commercial**. Premises for the sale of merchandise or prepared foods, food and drink consumption; the transaction of general business and the provision of services; and short-term human habitation, including daily and weekly rental. It does not include wholesale sales.

4. **Industrial & Automotive**. Premises for the creation, assemblage, storage, or repair of items including their wholesale sale in addition to uses and premises dedicated to the sale, maintenance, servicing or storage of automobiles or similar vehicles.

5. **Utilities & Infrastructure**. Uses and structures dedicated to transportation, communication, and utilities.

6. **Agriculture & Animal Related**. Premises for growing crops, raising animals, harvesting timber, and harvesting fish and other animals from a farm, ranch or their natural habitat and all related functions in addition to animal care facilities located in commercial settings.

3.3 Principal Uses

3.3.1 Allowance

A. Principal uses are allowed by district as established in Table 3.3 Principal Uses.

B. A parcel may contain one or more principal uses.

C. A development with multiple principal uses shall include only those principal uses designated in Table 3.3 Principal Uses as allowed in the applicable zoning district, and each principal use shall be subject to all applicable supplemental standards.

3.3.2 Table 3.3 Key

The following shall be used in the interpretation of Table 3.3

A. **Permitted Uses (P)**. Uses which are marked as "P" in the table shall be allowed principal uses subject to all applicable regulations of this UDO.

B. **Special Uses (S)**. Uses which are marked as "S" in the table shall require approval as a Special Use in accordance with Section 16.6.5 prior to establishment.

C. **Conditional District Uses (C)**. Uses which are marked as "C" in the table shall require approval of a Conditional District rezoning in accordance with Section 16.7.8 prior to establishment.

D. **Prohibited Uses**. A blank space in the table indicates that a use is not permitted.

E. **Uses Not Listed**. A use not specifically listed is prohibited unless, through the Interpretation process established in Section 16.5.8, it is determined that the use is a part of a general use type as described in Section 3.2.1 or is nearly similar in terms of type, density/intensity of development, environmental effects, the anticipated amount traffic, noise, light, vibration, odor, and other impacts on neighbors and the community.

F. **Supplemental Standards**. If a use has supplemental standards, they are referenced in the Supplemental Standards column. Use specific standards shall apply to the use, regardless of whether it is a permitted, special, or conditional district use.

G. **Other Districts**. The Planned Unit Development (PUD), LH-O, MV-O, and WP-O districts are not included in Table 3.3 Uses. The uses and how they are allowed in these districts shall be as detailed below:

1. **PUD**. Uses allowed in a PUD district shall be established through the PUD approval process, in accordance with Section 16.7.9.

2. **LH-O, MV-O, and WP-O**. Uses allowed in the LH-O, MV-O, and WP-O districts shall be the uses allowed in the underlying base district unless otherwise specified in Section 2.5.

Table 3.3 Principal Uses												
Key: P = Permitted Use; S = Special Use; C = Conditional District Use												
	SUPPLEMENTAL STANDARDS	GR	NCR	MUR	TSR	NB	CB	IND	CI	OS	TOD-O	AC-O
RESIDENTIAL												
Dormitory									P			
Dwelling-Cottage Court	3.3.3.A.1	P		P								
Dwelling-Duplex	3.3.3.A.2	P	P	P								
Dwelling-Multifamily	3.3.3.A.3			P	P						P	P
Dwelling-Multifamily, Above Ground Floor Only						P						
Dwelling-Single Family Detached	3.3.3.A.4	P	P	P								
Dwelling-Townhome	3.3.3.A.5	C		P	P						P	P
Dwelling-Triplex/Quadplex	3.3.3.A.6	P		P								
Dwelling-Two Over Two				P	P						P	P
Family Care Home	3.3.3.A.7	P	P	P								
Live-Work Unit	3.3.3.A.8			P	P						P	P
Manufactured Housing	3.3.3.A.9	P	P									
Residential Care Facility	3.3.3.A.10	P		P	P		C					
Retirement Housing				P	P							
Single Room Occupancy	3.3.3.A.11			P	P						P	P
PUBLIC & INSTITUTIONAL												
Cemetery	3.3.3.B.1									P		
Child/Adult Day Care Center	3.3.3.B.2	P	P	P	P	P	P		P		P	P
Civic Meeting Facility, 15,000 sq ft or More									P			
Civic Meeting Facility, Less Than 15,000 sq ft		P	P	P	P				P			
College/University									P			
Community Support Facility	3.3.3.B.3					P	P		P		C	
Correctional Institution												
Cultural/Community Facility, Public, 15,000 sq ft or More									P			
Cultural/Community Facility, Public, Less Than 15,000 sq ft		P	P	P	P				P			
Entertainment/Recreation Facility, Public, 15,000 sq ft or More									P			
Entertainment/Recreation Facility, Public, Less Than 15,000 sq ft		P	P	P	P				P			
Halfway Home	3.3.3.B.4					S						
Hospital							P	P				
Park		P	P	P	P	P	P	P	P	P	P	P

Table 3.3 Principal Uses												
Key: P = Permitted Use; S = Special Use; C = Conditional District Use												
	SUPPLEMENTAL STANDARDS	GR	NCR	MUR	TSR	NB	CB	IND	CI	OS	TOD-O	AC-O
Place of Worship, 15,000 sq ft or More	3.3.3.B.5								P			
Place of Worship, Less Than 15,000 sq ft	3.3.3.B.5	P	P	P	P	C	C		P			
Public Service/Safety Facility							P	P	P		P	P
Public Service Maintenance and Storage Facility								P	S			
School, Elementary	3.3.3.B.6	P		P				C	P			
School, High	3.3.3.B.7								P			
School, Middle	3.3.3.B.8							C	P			
School, Vocational/Technical						P	P	P			P	
School, Vocational/Technical, Above Ground Floor Only												P
COMMERCIAL												
Adult Establishment	3.3.3.C.1							S				
Artisan Production	3.3.3.C.2			P	P	P	P	P			P	P
Bar				P	P	P	P				P	P
Bed and Breakfast Home	3.3.3.C.3	S		S	S							
Co-Working						P	P					
Co-Working, Above Ground Floor Only					P						P	P
Contractor Service						P	P	P			P	P
Crematorium								P				
Cultural/Community Facility, Private 15,000 sq ft or More					C	P	P	P			P	P
Cultural/Community Facility, Private, Less Than 15,000 sq ft				P	P	P	P	P			P	P
Entertainment/Recreation Facility, Private, 15,000 sq ft or More					C	P	P	P			P	P
Entertainment/Recreation Facility, Private, Less than 15,000 sq ft				P	P	P	P	P			P	P
Financial Services						P	P				C	
Food Truck, Court	3.3.3.C.4					P	P				P	P
Funeral Home						P	P					
General Commercial, Less Than 100,000 sq ft	3.3.3.C.5			P	P	P	P				P	P
General Commercial, 100,000 sq ft or More	3.3.3.C.5						C					C
Heavy Commercial Sales							P	P				
Hotel	3.3.3.C.6						P				P	P

Table 3.3 Principal Uses												
Key: P = Permitted Use; S = Special Use; C = Conditional District Use												
	SUPPLEMENTAL STANDARDS	GR	NCR	MUR	TSR	NB	CB	IND	CI	OS	TOD-O	AC-O
Internet Sweepstakes Facility												
Medical Clinic						P	P		P		P	P
Medical Clinic, Above Ground Floor Only												
Meeting/Event Facility, Private, 15,000 sq ft or more						C	P	P			P	P
Meeting/Event Facility, Private, less than 15,000 sq ft				C	C	P	P	P			P	P
Micro-Brewery/Distillery/Winery	3.3.3.C.7				P	P	P	P			P	P
Personal Services				P	P	P	P				P	P
Post Office						P						
Studio, Art				C	C	P	P	P			P	P
Studio, Art, Above Ground Floor Only				P	P							
Professional Services	3.3.3.C.8			C	C	P	P	P			P	P
Professional Services, Above Ground Floor Only				P	P							
Restaurant				P	P	P	P				P	P
Restricted Commercial	3.3.3.C.9						P					
Shooting Range, Indoor	3.3.3.C.10						P	P				
Shooting Range, Outdoor	3.3.3.C.11									S		
Short Term Rental	3.3.3.C.12	P	P	P	P						P	P
INDUSTRIAL & AUTOMOTIVE												
Brewery/Distillery/Winery							P	P				
Car Wash	3.3.3.D.1						P	P				
Commercial Kitchen							P	P				
Concrete/Cement Manufacturing	3.3.3.D.2							S				
Industry, Heavy												
Industry, Light	3.3.3.D.3						P	P				
Landfill												
Life Sciences/Biomanufacturing Facilities							P	P				
Liquid Natural Gas Processing	3.3.3.D.4							S				
Materials Recovery								S				
Parking Lot	3.3.3.D.5	P										
Parking Structure							P				P	P
Recycling Collection Station	3.3.3.D.6							P				
Storage, Self-Service	3.3.3.D.7						P	P				

Table 3.3 Principal Uses												
Key: P = Permitted Use; S = Special Use; C = Conditional District Use												
	SUPPLEMENTAL STANDARDS	GR	NCR	MUR	TSR	NB	CB	IND	CI	OS	TOD-O	AC-O
Storage, Self-Service, Above Ground Floor Only	3.3.3.D.7					C						
Storage Warehouse, Indoor								P				
Vehicle Fueling Station	3.3.3.D.8					P	P					
Vehicle Rental/Leasing/Sales	3.3.3.D.9						P					
Vehicle Services - Major Repair/Body Work	3.3.3.D.10						S	P				
Vehicle Services - Minor Maintenance/Repair	3.3.3.D.11					P	P	P				
Waste Transfer Facility	3.3.3.D.12							S				
Wholesaling and Distribution								P				
UTILITIES & INFRASTRUCTURE												
Solar Farm												
Transit Station											P	
Utilities - Class 1		P	P	P	P	P	P	P	P	P	P	P
Utilities - Class 2		P	P	P	P	P	P	P	P	P	P	P
Utilities - Class 3								S				
Wireless Telecommunications Equipment (Small Cell)	3.3.3.E.1	P	P	P	P	P	P	P	P	P	P	P
Wireless Telecommunications Tower	3.3.3.E.1				S	S	S	S	S			S
AGRICULTURE & ANIMAL RELATED												
Animal Production												
Garden		P	P									
Indoor Agriculture								P				
Nursery and Garden Center	3.3.3.F.1	P				P	P	P				
Riding Stable	3.3.3.F.2	P								P		
Veterinary and Animal Care Services, Indoor and Outdoor	3.3.3.F.3						P					
Veterinary and Animal Care Services, Indoor Only	3.3.3.F.3					P	P				P	P

Table 3.3 DT District Principal Uses					
Key: P = Permitted Use; S = Special Use; C = Conditional District Use					
	SUPPLEMENTAL STANDARDS	Downtown Historic White Street	Downtown North	Downtown Central	Downtown South
RESIDENTIAL					
Dormitory					
Dwelling-Cottage Home Court	3.3.3.A.1				
Dwelling-Duplex	3.3.3.A.2				
Dwelling-Multifamily	3.3.3.A.3		P	P	
Dwelling-Multifamily, Above Ground Floor Only		P	P	P	P
Dwelling-Single Family Detached	3.3.3.A.4				
Dwelling-Townhome	3.3.3.A.5				
Dwelling-Triplex/Quadplex	3.3.3.A.6				
Dwelling-Two Over Two					P
Family Care Home	3.3.3.A.7				
Live-Work Unit	3.3.3.A.8		P		P
Manufactured Housing	3.3.3.A.9				
Residential Care Facility	3.3.3.A.10				
Retirement Home					
Single-Room Occupancy	3.3.3.A.11				
PUBLIC & INSTITUTIONAL					
Cemetery	3.3.3.B.1				
Child/Adult Day Care Center	3.3.3.B.2				
Civic Meeting Facility, 15,000 sq ft or More					
Civic Meeting Facility, Less Than 15,000 sq ft					P
College/University					
Community Support Facility	3.3.3.B.3				S
Correctional Institution					
Cultural/Community Facility, Public 15,000 sq ft or More				C	
Cultural/Community Facility, Public, Less than 15,000 sq ft				P	
Entertainment/Recreation Facility, Public, 15,000 sq ft or More				C	C
Entertainment/Recreation Facility, Public, Less than 15,000 sq ft				P	P
Halfway Home	3.3.3.B.4				
Hospital					
Park		P	P	P	P
Place of Worship, 15,000 sq ft or More	3.3.3.B.5				
Place of Worship, Less than 15,000 sq ft	3.3.3.B.5				P
Public Service/Safety Facility				P	
School, Elementary					
School, High	3.3.3.B.6				

Table 3.3 DT District Principal Uses					
Key: P = Permitted Use; S = Special Use; C = Conditional District Use					
	SUPPLEMENTAL STANDARDS	Downtown Historic White Street	Downtown North	Downtown Central	Downtown South
School, Middle	3.3.3.B.7				
School Vocational/Technical	3.3.3.B.8				
School Vocational/Technical, Above Ground Floor Only					P
COMMERCIAL					
Adult Establishment	3.3.3.C.1				
Artisan Production	3.3.3.C.2				P
Bar		P	P	P	P
Bed and Breakfast Home	3.3.3.C.3				
Contractor Services					
Co-Working		C	C	P	P
Co-Working, Above Ground Floor Only		P	P		
Crematorium					
Cultural/Community Facility, Private, 15,000 sq ft or More		C	C	C	C
Cultural/Community Facility, Private, Less Than 15,000 sq ft		P	P	P	P
Entertainment /Recreation Facility, Private, 15,000 sq ft or More		C	C	C	C
Entertainment /Recreation Facility, Private, Less Than 15,000 sq ft		P	P	P	P
Financial Services			C		
Food Truck, Court	3.3.3.C.4				P
Funeral Home					
General Commercial, Less Than 100,000 sq ft	3.3.3.C.5	P	P	P	P
General Commercial, 100,000 sq ft or More	3.3.3.C.5				C
Heavy Commercial Sales					
Hotel	3.3.3.C.6	P	P	P	P
Internet Sweepstakes Facility					
Medical Clinic			P		P
Medical Clinic, Above Ground Floor Only		P			
Micro-Brewery/Distillery/Winery	3.3.3.C.7	P	P	P	P
Personal Services		P	P	P	P
Post Office					
Meeting/Event Facility, Private, 15,000 sq ft or More			C	C	C
Meeting/Event Facility, Private, Less Than 15,000 sq ft			P	P	P
Professional Services	3.3.3.C.8	C	P	P	P
Professional Services, Above Ground Floor Only		P			

Table 3.3 DT District Principal Uses					
Key: P = Permitted Use; S = Special Use; C = Conditional District Use					
	SUPPLEMENTAL STANDARDS	Downtown Historic White Street	Downtown North	Downtown Central	Downtown South
Restaurant		P	P	P	P
Restricted Commercial	3.3.3.C.9				
Shooting Range, Indoor	3.3.3.C.10				
Shooting Range, Outdoor	3.3.3.C.11				
Short Term Rental	3.3.3.C.12	P	P	P	P
Studio, Private - Art, Dance, Martial Arts, Music		C	C	C	P
Studio, Private - Art, Dance, Martial Arts, Music, Above Ground Floor Only		P	P	P	P
INDUSTRIAL & AUTOMOTIVE					
Brewery/Distillery/Winery					
Car Wash	3.3.3.D.1				
Commercial Kitchen					
Concrete/Cement Manufacturing	3.3.3.D.2				
Industry, Heavy					
Industry, Light	3.3.3.D.3				
Landfill					
Liquid Natural Gas Processing	3.3.3.D.4				
Materials Recovery & Waste Transfer Facility					
Parking Lot	3.3.3.D.5	C	C	C	C
Parking Structure		P	P	P	P
Recycling Collection Station	3.3.3.D.6				
Storage Self-Service	3.3.3.D.7				
Storage Self-Service, Above Ground Floor Only	3.3.3.D.7				
Storage Warehouse, Indoor					
Vehicle Fueling Station	3.3.3.D.8				
Vehicle Rental/Leasing/Sales	3.3.3.D.9				
Vehicle Services - Major Repair/Body Work	3.3.3.D.10				
Vehicle Services - Minor Maintenance/Repair	3.3.3.D.11				
Waste Transfer Station	3.3.3.D.12				
Wholesaling and Distribution					
UTILITIES & INFRASTRUCTURE					
Transit Station		P			
Utilities Class 1		P	P	P	P
Utilities Class 2		P	P	P	P
Utilities Class 3					S
Solar Farm					

Table 3.3 DT District Principal Uses					
Key: P = Permitted Use; S = Special Use; C = Conditional District Use					
	SUPPLEMENTAL STANDARDS	Downtown Historic White Street	Downtown North	Downtown Central	Downtown South
Wireless Telecommunications Equipment (Small Cell)	3.3.3.E.1	P	P	P	P
Wireless Telecommunications Tower	3.3.3.E.1			S	
AGRICULTURE & ANIMAL RELATED					
Animal Production					
Garden					
Indoor Agriculture					
Nursery & Garden Center	3.3.3.F.1				
Riding Stable	3.3.3.F.2				
Veterinary and Animal Care Services, Indoor and Outdoor	3.3.3.F.3				
Veterinary and Animal Care Services, Indoor Only	3.3.3.F.3				P

3.3.3 Principal Use Supplemental Standards

A. **Residential**.

1. **Dwelling-Cottage Court**.

a. **Number of Cottage Courts**. Multiple cottage courts are allowed per development site, except for in the GR District where a maximum of one Cottage Court shall be allowed per development site.

b. **Dwelling Unit Standards**.

i. **Dwelling Unit Lot Standards**. If the Dwelling-Cottage Court Buildings are located on individual lots, the following standards shall apply.

(a) **Lot Area**. The minimum size of a Dwelling-Cottage Court building lot shall be 2,500 square feet.

(b) **Subdivision Standards**. An individual Dwelling-Cottage Court building lot shall be exempt from the street frontage subdivision standards established in Chapter 4 provided that the Dwelling-Cottage Court site complies with street frontage requirements.

ii. **Size of Dwelling Units**. A Dwelling-Cottage Court building shall have a maximum floor area of 1,800 square feet.

iii. **Number of Dwelling Units**.

(a) A maximum of one dwelling unit shall be allowed per building in a Dwelling-Cottage Court, except as otherwise approved as an affordable housing incentive per Section 2.9.

(b) A Dwelling-Cottage Court development site shall have a minimum of four and a maximum of 12 principal buildings per site.

(c) One additional building may be utilized for common amenity space.

iv. **Building Orientation and Design**.

(a) **Design Guidelines Voluntary Compliance.** Dwelling-Cottage Court development is a voluntary means of reducing zoning district dimensional requirements in return for voluntary compliance with the Cottage Court design guidelines. Compliance with the design guidelines in Section 5.7 is voluntary and at the discretion of the applicant. In cases where an applicant chooses to comply with the guidelines in this section, the landowner shall sign the following statement of consent and include it with the application for a Subdivision Plan, Site Plan, Final Plat, or Building Permit, as appropriate.

(i) VOLUNTARY COMPLIANCE WITH RESIDENTIAL DESIGN GUIDELINES The Cottage Court depicted on the attached site plan, subdivision plat, or other development approval is subject to the Town of Wake Forest's Cottage Court Design Standards in place at the time the application for this development was determined to be complete. I hereby voluntarily consent to the application of these design standards, this acceptance of which shall run with the land regardless of changes in ownership, and recognize that failure to comply with the applicable standards following approval is a violation of the Wake Forest Unified Development Ordinance.

(b) Buildings shall be oriented with their main entrance facing the shared common court open space, with the exception of corner buildings.

(c) Corner buildings shall be oriented with their main entrance facing the shared common court open space or if abutting the public right-of-way corner buildings shall have an entrance facing the public right-of-way.

c. **Common Court Open Space**.

i. Buildings in a Dwelling-Cottage Court shall be arranged around a common court.

ii. The common court shall be open to and visible from the street.

iii. The common court shall have a minimum area of 2,500 square feet.

iv. The common court shall have a minimum width of 30 feet as measured from the interior of the pedestrian walkway.

v. If the Dwelling-Cottage Court site is subdivided into lots for each building, the required setbacks on each lot do not count as common court open space.

vi. The Common Court Open Space shall count towards the open space and community space standards specified in Chapter 7.

vii. A maximum of 30 percent of a common court open space may be used for stormwater management if designed as a rain garden or bioswale.

d. **Pedestrian Access**.

i. A pedestrian walkway with a minimum width of four feet shall connect all buildings to the public right-of-way, common court open space, and parking areas.

ii. The pedestrian walkway shall be setback a minimum of four feet from building wall.

e. **Vehicle Access and Parking**.

i. Parking and driveways shall be located to the rear of the buildings in a Dwelling-Cottage Court.

ii. Parking shall be accessed by an alley if an alley is provided.

iii. If an alley is not provided, parking shall be accessed by a single driveway to the overall development site.

iv. The driveway serving the overall development site shall be located either:

(a) From the secondary street for a corner development site, or

(b) To the interior side of the buildings on the development site.

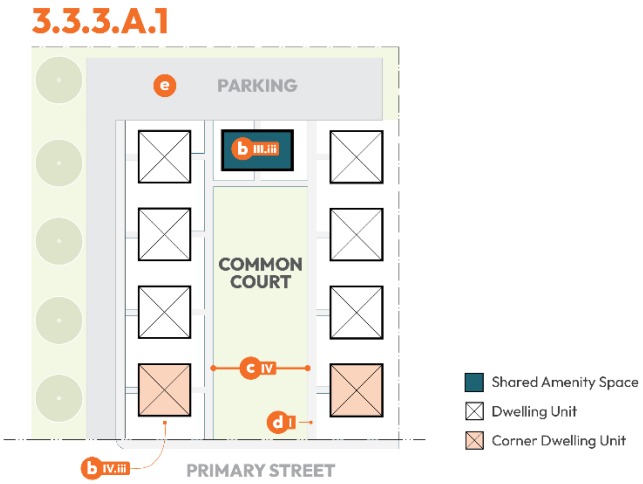


Figure 1: Dwelling-Cottage Court

2. **Dwelling-Duplex**.

a. Duplex Dwellings shall have at least one primary entry oriented toward the public right-of-way.

b. The finished floor elevation at the front façade shall be a minimum of 18 inches above grade unless designed to be the Americans with Disabilities Act (ADA) compliant.

c. A Dwelling-Duplex shall have a maximum floor area of 4,500 square feet.

d. A Dwelling-Duplex shall have a maximum building width of 40 feet. Additional width is permitted up to 60 feet total if:

i. The additional width is setback a minimum of 10 feet from the front building plane, or the height of the portion of the building containing the additional width is reduced by a minimum of 10 feet; and

ii. A minimum of three of the following design features are included to minimize building bulk:

(a) On the side and front façade walls, at least two exterior wall materials in a consistent and harmonious manner such that the material changes occur at logical points, such as at roofline changes, where the foundation wall transitions to the building wall, and at changes in building stories, and that material changes wrap façade corners;

(b) Provide varying roof forms or massing, such as dormers or gables;

(c) Provide trim band, decorative vents, or gable pediments to eliminate large blank exterior side and front façade walls;

(d) Provide glazing on at least 15% of street facing facades;

(e) Provide windows with window trim or window shutters to eliminate large blank exterior side and front façade walls; or

(f) Provide varied wall planes, such as wall bump outs or bay windows.

e. To provide variation to the building bulk, emphasize primary entrances, and support community relationships, Dwelling-Duplexes shall incorporate a shared front porch a minimum of 12 feet in width and six feet in depth.

f. Compliance with the design standards in Section 3.3.3.A.2.d.i and 3.3.3.A.2.d.ii is voluntary and at the discretion of the applicant in return for alternative building dimensional standards. In cases where an applicant chooses to comply with the standards in this section, the landowner shall sign the following statement of consent and include it with the application for a Subdivision Plan, Site Plan, Final Plat, or Building Permit, as appropriate.

i. VOLUNTARY COMPLIANCE WITH DUPLEX DESIGN STANDARDS The duplex depicted on the attached site plan, subdivision plat, or other development approval is subject to the Town of Wake Forest's Duplex Design Standards in place at the time the application for this development was determined to be complete. I hereby voluntarily consent to the application of these design standards, this acceptance of which shall run with the land regardless of changes in ownership, and recognize that failure to comply with the applicable standards following approval is a violation of the Wake Forest Unified Development Ordinance

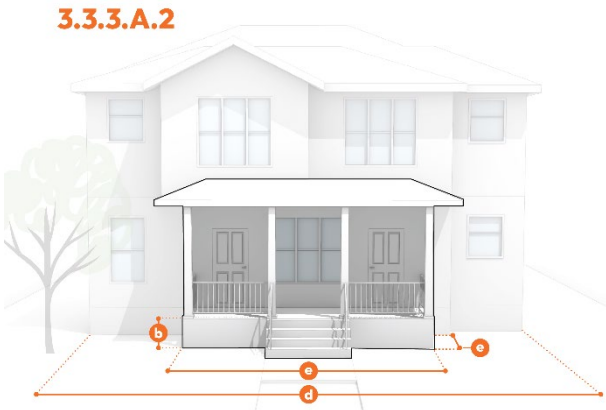


Figure 2: Dwelling-Duplex

3. **Dwelling-Multifamily**.

a. In the MUR District, Dwelling-Multifamily development shall:

i. Be limited to eight units or less per building unless:

(a) All units are located above the ground floor of a mixed-use building,

(b) The development meets the definition of adaptive reuse, or

(c) The affordable housing incentives are met per Section 2.9.

ii. A Dwelling-Multifamily development with one building per development site shall be located within one-quarter mile of a Public & Institutional or Commercial use.

iii. A Dwelling-Multifamily development with more than one building per development site shall be located within one-quarter mile of a Commercial use.

b. In the TSR District, Dwelling-Multifamily development building located within 50 linear feet of a one-story Dwelling-Single Family Detached or Dwelling-Duplex shall step back a minimum of eight feet after the ground floor on the building elevation adjacent to the one-story Dwelling-Single Family Detached or Dwelling-Duplex.

4. **Dwelling-Single Family Detached**.

a. Single Family Detached Dwellings shall have their primary entries oriented toward the street right-of-way.

b. To ensure new development complements the historic character of the NCR District, new Dwelling-Single Family Detached development in the district shall have a front porch a minimum of 12 feet in width and six feet in depth.

c. In the MUR District, new Dwelling-Single Family Detached development shall be allowed only within one-quarter mile of a Public & Institutional or Commercial use.

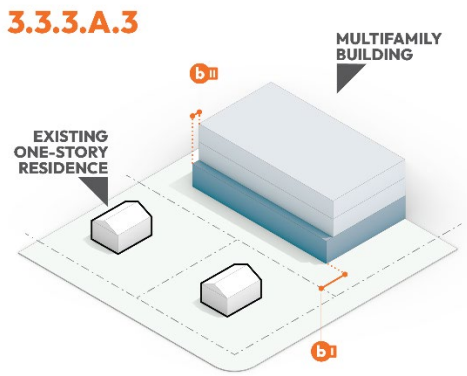


Figure 3: Building Height Step Back

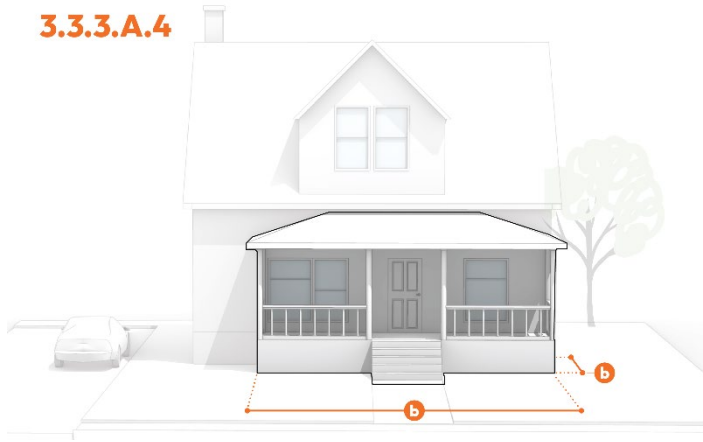


Figure 4 Dwelling-Single Family Detached

5. **Dwelling-Townhome**.

a. **All Districts Where Allowed**. Except for development sites less than five acres in the GR District, New Dwelling-Townhome development shall be:

i. Limited to six Dwelling-Townhome units per building.

ii. Oriented with their primary entrances facing either:

(a) The designated front lot line, in which case the primary entrance of end unit townhomes on corner lots may be oriented toward the designated front or exterior side lot line; or

(b) A Community Space in accordance with Chapter 6, in which case the primary entrance of end unit townhomes closest to the designated front lot line shall be oriented toward the designated front lot line.

b. **GR District**.

i. **Development Sites Five Acres or More in Area**.

(a) If located adjacent to existing Single-Family Detached Dwellings, the subdivision plan shall site new Single-Family Detached Dwellings, so they provide a transition between the existing Single-Family Detached Dwellings and the new Dwelling-Townhome buildings and provide a mix of uses.

ii. **Development Sites Less than Five Acres in Area.**

(a) Dwelling-Townhome uses shall be oriented with their entrance facing the primary street right-of-way, with the exception of corner units which may be oriented toward the secondary street right-of-way.

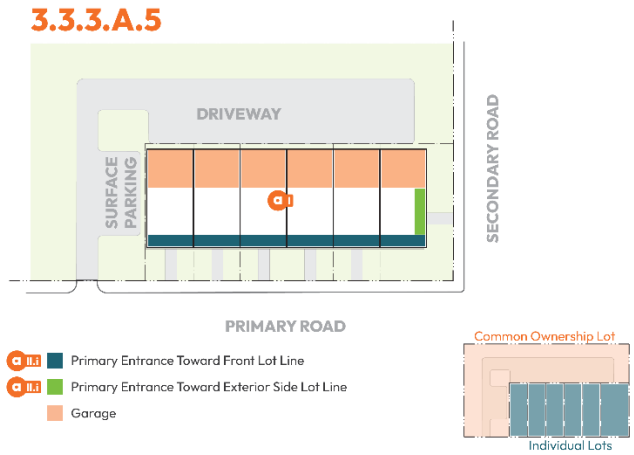


Figure 5: Townhome Orientation - Street Right-of-Way, No Alley

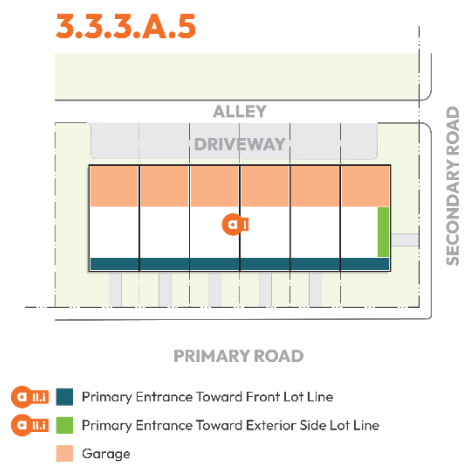


Figure 6: Townhome Orientation - Street Right-of-Way, With Alley

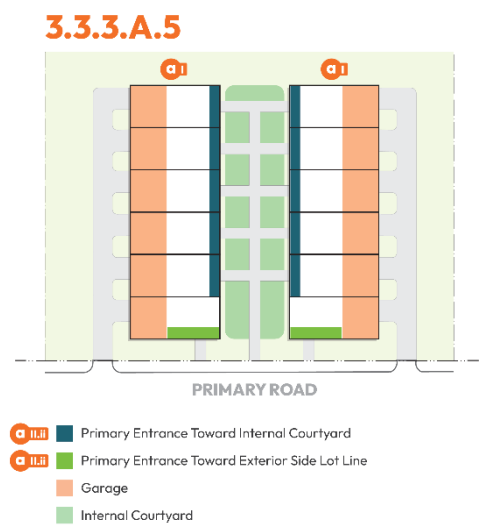


Figure 7: Townhome Orientation – Community Space

(b) **Units per Building.** Dwelling-Townhome development shall be limited to four units per building.

c. **MUR District.**

i. **Proximity to Uses.** New Dwelling-Townhome development shall be allowed only within one-quarter mile of a Public & Institutional or Commercial use.

ii. **Single-Family Detached Transition.** When adjacent to existing Single-Family Detached Dwellings, Townhome development shall incorporate Single-Family Detached Dwellings along the boundary with the adjacent Single-Family Detached Dwellings to serve as transition and provide a mix of residential types.

d. **TOD-O District**. In the TOD-O District, new Dwelling-Townhome development shall be allowed only:

i. If adjacent to a Dwelling-Single-Family Detached development existing prior to the adoption of this UDO, or

ii. As a maximum of 20 percent of all residential units within a development.

6. **Dwelling-Triplex/Quadplex**.

a. **Number of Buildings**.

i. A Dwelling-Triplex/Quadplex development site shall have one principal building per lot.

ii. A maximum of 25 percent of lots within a new subdivision may be used for Dwelling-Triplex/Quadplex development.

b. **Building Orientation and Bulk**.

i. A Dwelling-Triplex/Quadplex shall have a maximum floor area of 4,500 square feet. An additional 1,000 square feet of floor area is allowed if the design standards of iv.a and b below are met.

ii. A Dwelling-Triplex/Quadplex shall be oriented toward the street right-of-way.

iii. The finished floor elevation at the front façade shall be a minimum of 18 inches above grade unless designed to be ADA compliant.

iv. A Dwelling-Triplex/Quadplex shall have a maximum building width of 40 feet. Additional width is permitted up to 60 feet total if:

(a) The additional width is setback a minimum of 10 feet from the front building plane, or the height of the portion of the building containing the additional width is reduced by a minimum of 10 feet; and

(b) A minimum of three of the following design features are included to minimize building bulk:

(i) On the side and front façade walls, at least two exterior wall materials in a consistent and harmonious manner such that the material changes occur at logical points, such as at roofline changes, where the foundation wall transitions to the building wall, and at changes in building stories, and that material changes wrap façade corners;

(ii) Provide varying roof forms or massing, such as dormers or gables;

(iii) Provide trim band, decorative vents, or gable pediments to eliminate large blank exterior side and front façade walls;

(iv) Provide glazing on 15 percent of street facing facades;

(v) Provide windows with window trim or window shutters to eliminate large blank exterior side and front façade walls; or

(vi) Provide varied wall planes, such as wall bump outs or bay windows.

v. To provide variation to the building bulk and emphasize the primary entrance, Dwelling-Triplex/Quadplex development shall incorporate a shared front porch a minimum of 12 feet in width and six feet in depth.

c. Compliance with the design standards in Section 3.3.3.A.6.b is voluntary and at the discretion of the applicant in return for alternative building dimensional standards. In cases where an applicant chooses to comply with the standards in this section, the landowner shall sign the following statement of consent and include it with the application for a Subdivision Plan, Site Plan, Final Plat, or Building Permit, as appropriate.

i. VOLUNTARY COMPLIANCE WITH TRIPLEX/QUADPLEX DESIGN GUIDELINES
The triplex, or quadplex depicted on the attached site plan, subdivision plat, or other development approval is subject to the Town of Wake Forest's Triplex/Quadplex Design Standards in place at the time the application for this development was determined to be complete. I hereby voluntarily consent to the application of these design standards, this acceptance of which shall run with the land regardless of changes in ownership, and recognize that failure to comply with the applicable standards following approval is a violation of the Wake Forest Unified Development Ordinance.

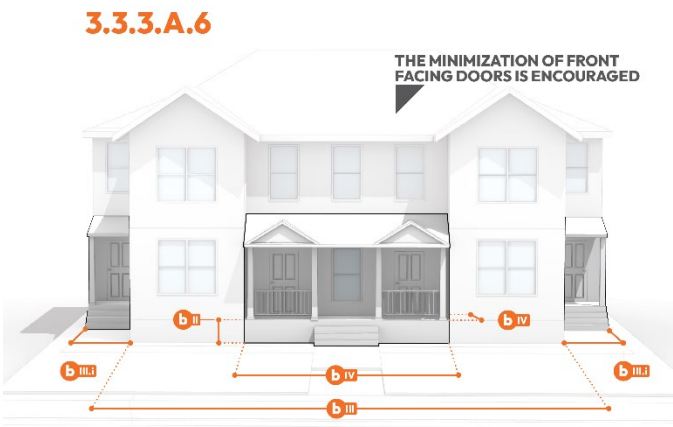


Figure 8: Triplex / Quadplex Building Orientation and Bulk

7. **Family Care Home**. Family Care Homes shall meet all standards applicable to Dwelling-Single Family Detached uses as well as the following standards.

   a. Family Care Homes shall have a maximum of six residents.

   b. Family Care Homes shall meet requirements of all applicable North Carolina Building codes

   c. No Family Care Home shall be closer than a half mile to another such use.

8. **Live-Work Unit**. Construction shall meet requirements of the applicable North Carolina Building Code, and the following:

   a. The maximum total size of a Live-Work unit shall be 3,000 square feet and 3 stories in height.

   b. The work area shall occupy a minimum of 25 percent and maximum of 50 percent of the total unit.

   c. The non-residential area shall be limited to the first or main floor only.

   d. The residential area shall be limited to portions of a first or main floor not adjacent to primary street rights-of-way and upper floors only.

   e. A maximum of five non-resident workers or employees are allowed to occupy the non-residential area at any one time.

   f. The same tenant shall occupy the work area and living area. Mixed occupancy shall be subject to the stricter building code requirements.

9. **Manufactured Home**. All manufactured U.S Department of Housing Urban Development (HUD) homes shall meet the following requirements:

   a. **General Provisions**.

      i. Each Manufactured Home stand and space shall be graded to provide adequate storm drainage away from the structure and such that there will exist no more than three feet difference between the chassis of the home and the finished grade of the stand along the entire perimeter of the property.

      ii. Manufactured Homes shall be set up in accordance with the standards set by the North Carolina Department of Insurance in the current edition of the North Carolina Regulations for Manufactured Homes, including, but not limited to, all footings, supporting piers, anchors, and tie downs.

      iii. The tongue, axles, running lights and removable towing apparatus must be removed prior to the issuance of a certificate of occupancy.

      iv. Stairs, porches, entrance platforms, ramps, and other means of entrance and exit to and from the home are installed in accordance with the requirements of the North Carolina State Building Code, attached firmly to the principal structure, and anchored securely to the ground

      v. Other than those within the Manufactured Home itself, all installations of plumbing and electrical wiring and all gas and oil appliances shall comply with the provisions of the building, plumbing, electrical, heating, and gas regulations of the North Carolina State Building Code.

   b. **Siting and Design Standards**.

      i. **Intent**. It is the intent of these criteria to ensure that Manufactured Homes, when installed, have substantially the appearance of an on-site, conventionally built, single-family home.

ii. **Dimensions**. The length of a Manufactured Home shall not exceed three times the width.

iii. **Orientation**. Manufactured Homes shall be sited so the primary entrance is oriented toward the street right-of-way.

iv. **Exterior Design Standards**. Exterior siding shall be of a material customarily used on site-built dwellings which does not have a high gloss finish, such as wood, fiber cement, metal lap siding, brick, stucco, or similar materials. Smooth, ribbed, or corrugated metal or plastic panels are not permitted.

v. **Foundation**. A continuous permanent masonry foundation, unpierced except for required ventilation and access, shall be installed around the entire perimeter of the home, unless otherwise exempted by NCGS §160D. If the masonry foundation is not brick, stone, or decorative concrete block it shall be parged (coated with a mortar-like finish) on the front and side elevations.

vi. **Front Porch**. Manufactured Homes shall have a front porch a minimum of six feet in width and six feet in depth.

vii. **Roof**.

(a) The pitch of the roof of the Manufactured Home has a minimum vertical rise of three inches for every 12 inches of horizontal run.

(b) The roof must be covered with a material that is customarily used on site-built dwellings. Aluminum or metal roofing is not permitted unless standing seam metal roofing or metal shingles are utilized.

(c) The roof shall have a minimum eave projection and roof overhang of 6 inches, not including the gutter

10. **Residential Care Facility**.

a. **Buffering.**

i. Residential Care Facilities must be buffered from adjacent property in the GR, NCR, or MUR Districts and any parallel Conditional District to those districts, or adjacent to residential uses with a Type C buffer in accordance with Section 7.3

ii. The Administrator may waive the buffer requirement for portions of continuing care retirement facilities that include buildings with four or fewer dwelling units.

b. **Licensing.** Prior to Construction Plan approval, an owner/operator of a Residential Care Facility shall have received a license from the State of North Carolina for such a facility.

c. **Number of Units.** Unless located and having access on a collector street or higher classification street, no Residential Care Facility shall contain more than 16 units.

11. **Single Room Occupancy.**

a. **Parking:** Parking areas shall not be permitted in the front yard and shall be screened from adjacent properties by a Type C buffer in accordance with Section 7.3.

b. **Owner:** The owner shall serve as a full-time manager or otherwise designate a full-time manager, either of which shall permanently reside on the premises.

c. **Building and Lot Standards.**

i. The minimum size of any sleeping room shall be 200 square feet per resident.

ii. One full bath consisting of a tub or shower, toilet and sink shall be provided for each four residents.

iii. Full kitchen facilities, consisting of a stove, oven, sink, refrigerator, food preparation area, and storage areas shall be provided and accessible to all tenants.

iv. Signs shall not be permitted.

d. **Tenancy Restrictions**.

i. The minimum rental period of a Single Room Occupancy shall be 30 days.

ii. A maximum of eight tenants may occupy a Single Room Occupancy at any one time.

B. **Public & Institutional**.

1. **Cemetery**.

a. **North Carolina Cemetery Act.** All cemetery and related uses shall meet the requirements set forth by the North Carolina Cemetery Act, and if applicable shall obtain a license from the North Carolina Cemetery Commission.

b. **Minimum Lot Size.** A minimum of three contiguous acres shall be required to establish a cemetery, columbarium or mausoleum not located on the same tract of land as a Place of Worship.

c. **Minimum Yard Setback Requirements.**

i. The minimum yard setback required for all structures, excluding gatehouses, is 50 feet from any exterior property line. A gatehouse shall meet the setback requirements of the base zoning district in which it is located.

ii. Mausoleums or columbaria adjacent to a street shall meet the setback requirements of the base zoning district in which they are located.

iii. The minimum yard setback required for any grave or burial plot is 50 feet from any exterior property line. This requirement does not apply where the adjacent property contains an existing cemetery.

iv. The minimum yard setback required for any grave or burial plot adjacent to a street shall be equal to a principal building front yard in the district provided that, where graves or burial plots are adjacent to streets and closer than 50 feet, a low planted screen shall be provided between the street and the cemetery. Such screen shall be 8 feet wide planted with evergreen shrubbery placed a maximum of 5 feet on center. All shrubs shall achieve a height of four feet within three years.

d. Should a landowner, next of kin, or other interested party chose to protect a cemetery when a land development or subdivision is not proposed, the applicant shall submit a completed copy of the North Carolina Cemetery Site Form to the State as indicated on the form and submit a copy to the Town. A fence in accordance with Section 8.1 should be installed and the applicant should follow the design standards contained in the Historic Property Handbook with Design Standards for Wake Forest's Local Landmarks and Historic Districts as they relate to cemeteries.

2. **Child/Adult Day Care Center**.

a. In the GR, NCR, MUR, or TSR Districts and any parallel Conditional District to those districts, Child/Adult Day Care Centers shall be located and take access from a Collector Street or higher order street**.**

b. Adult Day Care Centers shall meet the requirements of the North Carolina Department of Health and Human Service's "Adult Day Care and Day Health Services Standards for Certification."

c. Outdoor play spaces for Child/Adult Day Care Centers shall be located:

i. Outside of driveways, drive aisles, parking areas, buffers, and required landscape areas;

ii. In the rear and/or interior side yard; and

iii. Adjacent to the building in which the Child/Adult Day Care Center use is located;

iv. Play structures within the outdoor play spaces are subject to accessory structure setbacks.

3. **Community Support Facility**. No such use may be located within a quarter mile of another such use measured as a straight line on a map unless as part of an accessory use to an existing Place of Worship.

4. **Halfway Home**. No such use may be located within a half mile of another such use.

5. **Place of Worship**. In the DC District, Places of Worship shall be allowed:

a. Above the ground floor only unless combined with another principal use; or

b. As a tenant of a multi-tenant building.

6. **School, Elementary**.

a. Athletic fields and parking areas must be buffered from adjacent property in the GR, NCR, MUR, or TSR Districts and any parallel Conditional District to those districts or adjacent residential uses with a Type B buffer in accordance with Section 7.3.

b. Pedestrian connections in the form of sidewalks or multi-use trails shall connect elementary schools with surrounding residential neighborhoods for a minimum distance of one-quarter mile.

c. Bicycle connections in the form of protected on-street bicycle lanes or multi-use trails shall connect elementary schools with surrounding residential neighborhoods for a minimum distance of one-quarter mile.

d. Student pick-up/drop-off areas shall adhere to NCDOT standards for vehicular circulation and stacking regardless of roadway jurisdiction.

e. Schools shall have access from a street with a minimum classification as collector.

f. No School, Elementary may be located closer than a half mile from another elementary school. This requirement is not applicable for adaptive reuse of existing buildings.

g. Schools over 50,000 square feet in size shall have at least two points of site ingress or egress that are compliant with the driveway provisions in Section 9.8. This requirement is not applicable for adaptive reuse of existing buildings.

7. **School, High**.

i. Athletic fields and parking areas must be buffered from adjacent property in the GR, NCR, MUR, or TSR Districts and any parallel Conditional District to those districts or adjacent residential uses with a Type B buffer in accordance with Section 7.3.

ii. Pedestrian connections in the form of sidewalks or multi-use trails shall connect high schools with surrounding residential neighborhoods for a minimum distance of one-quarter mile.

iii. Bicycle connections in the form of protected on-street bicycle lanes or multi-use trails shall connect high schools with surrounding residential neighborhoods for a minimum distance of one-quarter mile.

iv. Student pick-up/drop-off areas shall adhere to NCDOT standards for vehicular circulation and stacking.

v. Schools shall have access from a street with a minimum classification as thoroughfare.

vi. No School, High may be located closer than a mile from another School, High. This requirement is not applicable for adaptive reuse of existing buildings.

vii. Schools over 50,000 square feet in size shall have at least two points of site ingress or egress that are compliant with the driveway provisions in Section 9.8. This requirement is not applicable for adaptive reuse of existing buildings.

8. **School, Middle**.

a. Athletic fields and parking areas must be buffered from adjacent property in the GR, NCR, MUR, or TSR Districts and any parallel Conditional District to those districts or adjacent residential uses with a Type B buffer in accordance with Section 7.3.

b. Pedestrian connections in the form of sidewalks or multi-use trails shall connect middle schools with surrounding residential neighborhoods for a minimum distance of one-quarter mile.

c. Bicycle connections in the form of protected on-street bicycle lanes or multi-use trails shall connect middle schools with surrounding residential neighborhoods for a minimum distance of one-quarter mile.

d. Student pick-up/drop-off areas shall adhere to NCDOT standards for vehicular circulation and stacking.

e. Schools shall have access from a street with a minimum classification as collector.

f. No School, Middle may be located closer than a half mile from another School, Middle. This requirement is not applicable for adaptive reuse of existing buildings.

g. Schools over 50,000 square feet in size shall have at least two points of site ingress or egress that are compliant with the driveway provisions in Section 9.8. This requirement is not applicable for adaptive reuse of existing buildings.

C. **Commercial**.

1. **Adult Establishment.**

a. Shall be located no closer than 750 feet from properties with the following pre-existing uses:

i. All residential uses,

ii. School, Elementary,

iii. School, High,

iv. School, Middle,

v. Place of Worship,

vi. Public Cultural/Community Facility,

vii. Public Entertainment/Recreation Facility,

viii. Child/Adult Daycare Center,

ix. Park, or

x. Cemetery.

b. An Adult Establishment shall be located no closer than 750 feet from another property with an Adult Establishment.

c. There may be no more than one Adult Establishment on the same property or in the same building.

2. **Artisan Production.**

a. Gross floor area shall not exceed 5,000 square feet.

b. Outdoor storage shall be prohibited.

c. Artisan Production shall not create or cause any perceptible noise, odor, smoke, electrical interference, or vibrations that constitute a public or private nuisance to neighboring properties.

d. Retail sales of goods manufactured on-site shall be required and shall comprise a minimum of 25 percent of the total area of the building. Retail sales areas shall be located on the ground floor and shall be directly adjacent to storefront windows.

e. Manufacturing areas are encouraged to be visible from retail areas.

3. **Bed and Breakfast.**

a. Location:

i. Bed and Breakfasts shall only be permitted in the LH-O District or in buildings on the state study list or listed in the National Register of Historic places either individually or as part of a district.

ii. Bed and Breakfasts meeting the criteria in subsection (a) above that are located in the GR District, with more than four rentable rooms shall be located on corner lots only.

b. An owner/manager of a Bed and Breakfast shall reside on the property.

c. Activities and functions at the Bed and Breakfast shall be provided for overnight guests only and shall be limited to breakfast and an afternoon and/or evening refreshment.

d. In addition to the functions for overnight guests, the Bed and Breakfast home may have six private parties, receptions, or similar activities per year. In no way is this provision meant to restrict the owner/manager's use of their home for personal entertaining.

4. **Food Truck, Court**.

a. A minimum of three food trucks shall be provided per Food Truck Court.

b. The maximum number of food trucks allowed on site will be dependent on the size of the lot and the site's ability to provide required electrical access and parking.

c. A minimum of 10 feet of clearance shall be provided between all individual food trucks and from buildings.

d. The area for a Food Truck Court shall be clearly defined and separated from all patron parking with an enclosure. Any use of fencing, decorative bollards, or planters to separate the food truck park from parking shall provide visibility into the site and shall not exceed four feet in height.

e. To create an inviting and attractive aesthetic environment seating and shade elements shall be provided.

f. A minimum of two permanent restrooms that meet ADA standards within 200 feet of the food truck area shall be made accessible to patrons during hours of operation. Restrooms shall comply with the accessory structure architectural standards in Chapter 5.

g. Food Truck Courts shall be located a minimum of 500 feet away from any brick-and-mortar restaurant unless said restaurant is operating a truck within the Food Truck Court.

h. Any Food Truck Court shall not be located less than 1,500 feet from any other Food Truck Court.

i. A permanent power source shall be provided to each food truck; individual generators shall not be allowed.

j. Food trucks shall be inspected in accordance with the State of North Carolina and County.

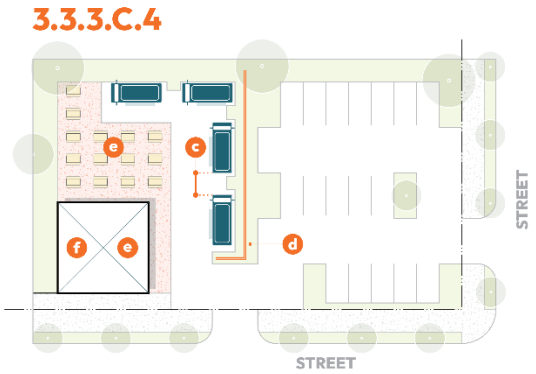


Figure 9 Food Truck, Court

5. **General Commercial**. In the MUR and TSR Districts, General Commercial uses shall be limited to 5,000 square feet unless located on the ground floor of a vertically mixed use building.

6. **Hotel**. In the DT District, a minimum of 25 percent of the ground floor shall be occupied by a Bar, General Commercial, Micro-Brewery/Winery/Distillery, or Restaurant use.

7. **Micro-Brewery/Distillery/Winery**.

   a. A Micro-Brewery/Distillery/Winery shall include one or more accessory or principal uses such as a tasting room, tap room, restaurant, retail, demonstration area, education and training facility or other uses incidental to the Micro-Brewery/Distillery/Winery and open and accessible to the public.

   b. Storage of materials used in the manufacturing, processing, and for distribution shall be located entirely within an enclosed building.

8. **Professional Services**. In the MUR District, Professional Service uses shall have no more than 15,000 square feet total of building or tenant floor area.

9. **Restricted Commercial**. Restricted Commercial uses shall be located no closer than 660 linear feet to any School, Elementary; School, High; School, Middle; public park; or residential use.

10. **Shooting Range, Indoor**. Indoor Shooting Ranges shall be designed as a controlled shooting environment that include:

    a. Impenetrable walls, floor and ceiling,

    b. Adequate ventilation,

    c. Lighting systems and acoustical treatment for sound attenuation suitable for the range's approved use.

11. **Shooting Range, Outdoor.**

    a. **Buffering.** Outdoor Shooting Ranges shall be buffered from adjoining properties with a Type A buffer in accordance with Section 7.3.

    b. **Contamination Prevention.**

       i. New Outdoor Shooting Ranges shall be designed with bullet containment devices, such as earthen berms and backstops, sand, steel, or rubber traps, or shock absorbing concrete.

       ii. To prevent lead from migrating off-site, vegetative ground cover shall be utilized. Vegetation that attracts birds and wildlife shall be avoided to prevent potential lead ingestion.

    c. **Location.** Outdoor Shooting Ranges shall be located no closer than a quarter mile to any Place of Worship; School, Elementary; School, High; School, Middle; or Residential use.

12. **Short Term Rental.**

    a. A Short Term Rental use shall be located no closer than a quarter mile to any other Short Term Rental use.

    b. Information regarding trash pick up days and nonemergency public safety contact information shall be posted in the Short Term Rental unit.

    c. Cooking facilities are not permitted in any bedroom. For the purpose of this regulation, cooking facilities include:

       i. Any refrigerator in excess of seven cubic feet; any stovetop 2 range that operates on 220-volt electric service;

       ii. Any appliance that operates on natural gas; or any cooktop, whether integrated into a countertop or a separate appliance, which contains more than two cooking surfaces or burners.

iii. This shall not prohibit cooking facilities within a one-room studio Short Term Rental. For the purpose of this regulation, a studio shall be a single-room rental with a sleeping area, living area, and kitchen/eating area in one consolidated room.

d. No exterior advertising shall be allowed.

e. For any residential building with three or more dwelling units, no more than five percent, or two dwelling units, whichever is greater, may be used for Short Term Rental in any single building.

f. Short Term Rental operators shall comply with all applicable State and local laws, including those relating to fire and building codes, smoke detecting and carbon monoxide detecting equipment, housing codes, and payment of taxes to appropriate governmental entities, including occupancy taxes.

g. The zoning compliance permit number authorizing the Short Term Rental shall be conspicuously posted on all advertisements for Short Term Rentals, and inside the subject property.

h. Short-Term Rentals shall be exempt from buffer requirements otherwise applicable to commercial uses.

D. **Industrial & Automotive.**

1. **Car Wash**.

a. Hours of operation shall be restricted to between 8 a.m. and 9 p.m. only.

b. All mechanical equipment, excluding self-service vacuum units, shall be enclosed within a building.

c. All facilities shall be designed and configured such that any outdoor spraying preparation or drying activities are directed away from any abutting residential use or the GR, NCR, MUR, or TSR Districts and any parallel Conditional District to those districts.

d. All car wash facilities and accessory equipment such as vacuums, dryers, accessory buildings, etc. shall be set back a minimum of 100 feet from any residential use or the GR, NCR, MUR, or TSR Districts and any parallel Conditional District to those districts.

e. If self-service vacuum facilities are provided, a minimum of one parking space for each vehicle capable of being serviced at any one time at such vacuum facility shall be provided, and parking spaces for accessory vacuum facilities shall not interfere with circulation or entrance or exit drives.

f. Accessory equipment including vacuum facilities shall be set back a minimum of 20 feet from all property lines.

g. All full-service or conveyor-based carwash facilities shall be equipped with, and maintain in operation, a water recycling system that shall recycle a minimum of 50 percent of the water being used by the facility.

2. **Concrete/Cement Manufacturing**.

   a. **Location**. Concrete/Cement Manufacturing uses shall be located a minimum of 500 feet from any residential use or the GR, NCR, MUR, and TSR District and any parallel Conditional District to those districts.

   b. **Environmental Hazards.** All establishments shall be maintained so as not to create environmental hazards (such as oil or gas leaks or spills) that pose a threat to ground or surface water quality, air quality, wildlife and/or humans.

3. **Industry, Light.**

   a. **Off-Site Impacts.** No generation of dust, odors, noise, vibration or electrical interference or fluctuation shall be perceptible beyond the property line.

   b. **Environmental Hazards.** All establishments shall be maintained so as not to create environmental hazards (such as oil or gas leaks or spills) that pose a threat to ground or surface water quality, air quality, wildlife and/or humans.

   c. **Vehicular Access.**

      i. If located outside of the IND District, vehicular access to the site shall be provided on a thoroughfare of suitable industrial capacity as determined by the Administrator and/or any required Transportation Impact Analysis.

      ii. If located in the IND District, the primary vehicular access within the IND District shall be provided on a thoroughfare of suitable industrial capacity as determined by the Administrator and/or any required Transportation Impact Analysis.

4. **Liquid Natural Gas Processing**.

   a. **Location**. Liquid Natural Gas Processing uses shall be located a minimum of 500 feet from any residential use or the GR, NCR, MUR, and TSR District and any parallel Conditional District to those districts.

   b. **Environmental Hazards.** All establishments shall be maintained so as not to create environmental hazards (such as oil or gas leaks or spills) that pose a threat to ground or surface water quality, air quality, wildlife and/or humans.

5. **Parking Lot**.

   a. **Parking Space Limit**. In the GR District, Parking Lots shall be limited to a maximum of 12 spaces.

   b. **Screening.** Parking Lots shall be screened from view from the street and adjacent residential properties with a masonry wall meeting the standards of Chapter 8 with a minimum height of three feet and maximum height of four feet.

6. **Recycling Collection Station**.

   a. **Location.** All outdoor storage, collection loading and processing areas must be located a minimum distance of 200 feet from residential uses or the GR, NCR, MUR, or TSR Districts and any parallel Conditional District to those districts.

   b. **Environmental Hazards**: All establishments shall be maintained so as not to create environmental hazards (such as oil or gas leaks or spills) that pose a threat to ground or surface water quality, air quality, wildlife and/or humans.

   c. **Vehicular Access**: Vehicular access to the site shall be provided on a collector or higher street classification as determined by the Administrator and/or any required Transportation Impact Analysis.

7. **Storage Self-Service**.

a. In the IND District, Storage Self-Service uses accessed from the outside shall be located to the rear of a principal building.

b. A conforming principal building is required and shall occupy a minimum of 60 percent of the parcel frontage.

c. **In the CB District,**

i. All storage units must be contained within a building and accessed internally. Separate entrances to individual storage units from outside the building are not permitted.

ii. The business office of the Storage, Self-Service shall have a front entrance facing the street to allow pedestrian access.

iii. Facilities are only permitted in multi-story structures designed to resemble office buildings.

iv. If storage units are visible from the exterior, glazing shall be tinted so as to minimize the focus on units and reduce glare of interior lighting.

v. The outdoor storage of goods or materials, portable storage units, boats, RVs or similar vehicles is not permitted.

d. **In all Districts.**

i. **Permitted Activities.** The only activities permitted in individual storage units shall be the rental of the unit and the deposit or pick-up of goods and/or property. Storage units shall not be used for activities such as:

(a) Residences, offices, workshop, hobby, or rehearsal area;

(b) Manufacturing, fabrication, processing, service or repair, or any industrial activity;

(c) Retail sales, including garage sales or auctions;

(d) Storage of flammable, perishable, or hazardous materials; or

(e) Keeping of animals

ii. **Hours of Operation.** Self-Service Storage Facilities shall not operate or allow tenant access between the hours of 9 p.m. and 8 a.m. if the site abuts the GR, NCR, MUR, or TSR Districts and any parallel Conditional District to those Districts or a residential use.

8. **Vehicle Fueling Station**.

a. **Canopies/Pumps.**

i. Must be located to the side or rear of a principal building.

ii. In the NB District, pump canopies must be located at least 100 feet from any interior side or rear property line that adjoins residential uses or the GR, NCR, MUR, or TSR Districts and any parallel Conditional District to those districts.

iii. In all other allowable Districts, pump canopies must be located at least 75 feet from any interior side or rear property line that adjoins residentially developed property.

iv. In the NB District, the maximum number of pumps (two sided) permitted at a single fueling station shall be eight.

v. In all other allowable Districts, the maximum number of pumps permitted at a single fueling station shall be 12.

vi. The support columns of canopies shall be constructed with masonry consistent with the principal building materials the full height of the columns.

vii. Plastic or other similar roofing materials are prohibited for canopies.

viii. Canopy height shall not exceed the height of the principal building or 20 feet, whichever is greater.

b. **Principal Buildings**. A conforming principal building is required and shall be a minimum of 1,600 square feet when it is on a stand-alone parcel. In a shopping center, no principal building is required as long as all other standards of this Section are met.

c. **Lighting**. All lighting must be shielded to direct light and glare only onto the lot or parcel where the Vehicle Fueling Station is located and shall be in accordance with Chapter 10.

d. **Access.** In the NB District, Vehicle Fueling Stations shall take access from a thoroughfare only.

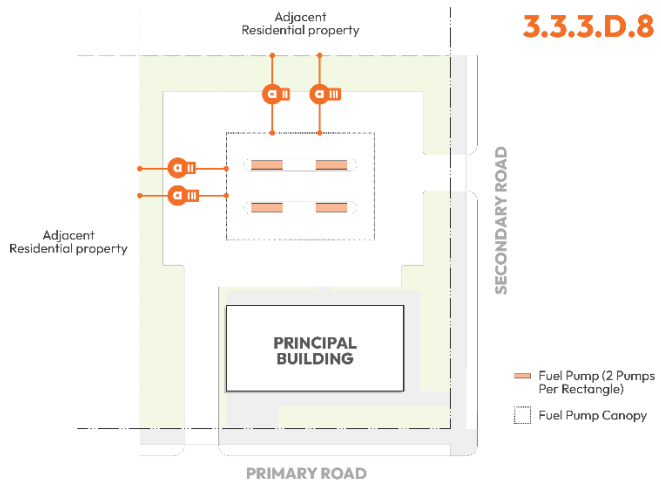


Figure 10: Vehicle Fueling Station Canopies/Pumps

9. **Vehicle Rental/Leasing/Sales**.

   a. The minimum lot size for Vehicle Rental/Leasing/Sales shall be three acres in area.

   b. All displayed vehicles shall be located on hard surfaced areas as approved by the Administrator.

   c. All displayed vehicles shall be operable and suitable for driving. Vehicles which are not operable or suitable for driving shall be stored indoors or in parking areas for a period not to exceed 24 hours.

   d. Operations shall not create obstructions to traffic circulation on public streets.

10. **Vehicle Services, Major Repair/Body Work**.

   a. **Location.** All such uses must be located a minimum distance of 500 feet from any residential use or the GR, NCR, MUR, and TSR Districts and any parallel Conditional District to those Districts.

   b. **Non-Operable Vehicles**. Vehicles which are not operable or suitable for driving shall be stored indoors, in accessory outdoor storage areas meeting all supplemental use standards of this Chapter, or in parking areas for a period not to exceed 24 hours.

   c. **Environmental Hazards:** All establishments shall be maintained so as not to create environmental hazards (such as oil or gas leaks or spills) that pose a threat to ground or surface water quality, air quality, wildlife and/or humans.

11. **Vehicle Services, Minor Maintenance/Repair.**

   a. Vehicle service bays associated with Vehicle Services, Minor Maintenance/Repair shall be located a minimum of 100 feet from any residential uses or the GR, NCR, MUR, or TSR Districts and any parallel Conditional District to those districts.

   b. In the NB District, vehicle service bays shall be set perpendicular to the street or otherwise screened with a Type C buffer from the street right-of-way.

   c. In the NB District, use operation shall be limited to between the hours of 8 a.m. and 9 p.m.

12. **Waste Transfer Facility.**

   a. **Location**. All such uses must be located a minimum distance of 500 feet from any residential use or the GR, NCR, MUR, or TSR Districts and any parallel Conditional District to those districts.

   b. **Environmental Hazards**. All establishments shall be maintained so as not to create environmental hazards (such as oil or gas leaks or spills) that pose a threat to ground or surface water quality, air quality, wildlife and/or humans.

   c. **Vehicular Access.** Vehicular access to the site shall be provided on a thoroughfare of suitable industrial capacity as determined by the Administrator and/or any required Transportation Impact Analysis.

   d. **Screening.**

      i. A minimum 150-foot setback is required along all property lines and public rights-of-way. No waste transfer activities, including parking, access roads, buildings, or disposal shall occur in the setback. Roads for access to the site and monitoring wells may be located within the inner 100-foot area of the setback. All existing trees within the setback shall be preserved, except to allow for construction of necessary road crossings and monitoring wells.

ii. A Type A buffer (Section 7.3) shall be required in the setback along all property lines and public rights-of-way regardless of the adjacent zoning. Existing plant material may be included in the computation of the required plantings, with approval of the Administrator.

E. **Utilities, Infrastructure, and Transportation**.

1. **Small Cell Wireless Facility and Wireless Telecommunications Towers**.

a. **Purpose and Intent**. In accordance with NCGS §160D-930 et al this subsection creates the framework for the siting of Wireless Telecommunication Facilities in a manner which protects the public health, safety, and general welfare of the community, provides comprehensive service to the community, and implements the Town's Policies for said facilities, as detailed below. The provisions of this subsection are in addition to, and do not replace, any obligations an applicant may have under any franchises, licenses, encroachments, or other permits issued by the Town.

i. Facilitate the comprehensive provision of wireless telecommunication services to the residents and businesses of the Town and its Extraterritorial Jurisdiction (ETJ).

ii. Maximize the use of existing and approved Telecommunication Towers, buildings, and structures to accommodate new Wireless Telecommunication Antennas in order to minimize the number of telecommunication towers needed to comprehensively serve the community.

iii. Minimize the number, height, obtrusiveness, and the visual impacts of telecommunications towers, associated equipment, and buildings.

iv. Direct and allow Wireless Telecommunication Facilities to areas which are least disruptive to residential, park, open space, and greenway uses and to be as unobtrusive and invisible as reasonably possible.

v. Ensure that the height of Telecommunications Towers has the least visual impact and is no greater than required to achieve service area requirements and potential co-location.

vi. Site telecommunications towers to minimize locations which are visually solitary or prominent when viewed from residential areas or any public way.

vii. Site Telecommunications Towers at locations which are obscured by vegetation, tree cover, topographic features, buildings or other structures to the maximum extent feasible.

viii. Protect views of and vistas from architecturally or historically significant structures and historically significant landscapes so that these architectural or historical resources are not impaired or diminished by the placement of Telecommunications Towers.

ix. Avoid potential damage to adjacent properties from telecommunication towers failure through structural design standards and setback requirements.

b. **General Applicability**. The provisions, of this subsection shall apply to the following:

i. Wireless Telecommunication Facilities (towers and associated equipment) that are or will be operated by a licensed wireless telecommunication service provider which consists of the equipment and structures involved in the receiving or transmitting of electromagnetic waves associated with wireless telecommunication services.

ii. Small Wireless Telecommunication Towers that meet the following characteristics:

(a) Each antenna is located inside an enclosure of no more than six cubic feet in volume or, in the case of an antenna that has exposed elements, the antenna and all of its exposed elements could fit within an imaginary enclosure of no more than six cubic feet;

(b) All other wireless equipment associated with the facility is cumulatively no more than 28 cubic feet in volume. The following types of associated ancillary equipment are not included in the calculation of equipment volume: electric meter, concealment elements, telecommunications demarcation box, ground-based enclosures, grounding equipment, power transfer switch, cut-off switch, and vertical cable runs for the connection of power and other services; and

(c) An antenna array feature that is attached to a Telecommunications Tower or building to transmit or receive radio waves. For this subsection, this does not include antenna dishes or other antenna features on individual homes or businesses that are intended to receive radio or television broadcasts, or internet communication for said use.

c. **Amateur Radio Exemption**. These provisions neither apply to nor shall be construed to apply to Amateur Radio Operators who are licensed to operate a radio or transmitter by the Federal Communications Commission under Part 97 of the Federal Communications Commission's Rules.

d. **Interference with Public Safety Telecommunications**. No new or existing telecommunications service shall interfere with public safety telecommunications. Before the introduction of new service or changes in existing service, telecommunication providers shall notify the Town at least 10 calendar days in advance of such changes and allow the Town to monitor interference levels during the testing process.

e. **Compliance with Other Laws**. A Telecommunications Tower shall be erected and operated in compliance with the most current Federal Communication Commission and Federal Aviation Administration rules and regulations and other applicable federal and state standards. All Telecommunications Towers shall comply with all ordinances of the Town which are not in conflict with this subsection.

f. **Wireless Telecommunication Facilities Establishment and Siting Alternatives Analysis**.

i. **Co-location Preference**. The Town shall promote the co-location of wireless telecommunications equipment (small cell) on existing towers, buildings, or utilities elements. New standalone wireless telecommunication facilities (towers) may only be allowed where co-location of said facilities on existing towers, buildings, or public infrastructure elements is deemed infeasible through a siting alternatives analysis.

ii. **Siting Alternatives Analysis**. For all new, standalone wireless telecommunication towers, the applicant shall provide a siting alternatives analysis to determine whether co-location on existing structures is feasible within the applicant's search ring, as defined by NCGS §160D-931(17) including information pertaining to the fair market value of similar contracts – this shall be provided as part of the permitting process and submittal requirements pursuant to Chapter 16. The siting alternatives analysis shall determine the feasibility of co-locating the new telecommunication facilities/equipment in the following situations. (i) Co-location on existing towers; (ii) Placement on Town-owned Structure or Building; (iii) Placement on Existing Structure or Building; and (iv) Construction of New Tower Structure. The following describes the various co-location and alternative siting situations.

(a) **Co-location Standards**. The colocation or placement of new telecommunications antennas upon existing telecommunications towers, light poles, and/or buildings.

(b) **Town-owned Structure or Building**. The utilization of existing town-owned structures and buildings for placement of antenna and associated equipment

or buildings, including surface-mounted and roof-mounted applications of telecommunication antennas on existing buildings and structure-mounted applications of telecommunication antennas on electric line transmission towers or other existing structures.

(c) **Existing Structure or Building Utilization**. The utilization of all other existing structures and buildings for placement of antenna and associated equipment or buildings, including surface mounted and roof-mounted applications of telecommunication antennas on existing buildings and structure-mounted applications of telecommunication antennas on existing structures or water towers.

(d) **Construction of New Tower Structure**. The construction of a new Wireless Telecommunications Tower shall be allowed only when the options in subsections i-iii above are not feasible, as determined by the Administrator.

iii. **Consulting Option**. As part of the review procedures, the Administrator shall determine the sufficiency of the information. The Town may choose to hire an outside consultant to conduct a third-party review of the siting alternatives analysis in the following situations: (i) where there are disputes of the findings between the applicant and the Administrator and/or (ii) where expert consultation is deemed necessary to reach conclusions of the analysis. Where the Town utilizes a consultant in its application review, the fee for such services shall be fixed in advance as part of the application fee for a new telecommunications facility.

g. **Telecommunication Tower and Antenna Array Design Standards**. The following design standards apply to new Telecommunication Towers and associated antenna array facilities. These standards do not apply to co-location activities on existing towers, buildings, or public infrastructure elements.

i. **Height**. The maximum height of a Telecommunications Tower, including antenna array, shall be less than 200 feet above grade; whereas, Small Cell towers shall be limited to 50 feet above grade.

ii. **Location**. Telecommunication towers and antenna arrays shall not be located within 300 feet of an existing or future thoroughfare, as identified in the Wake Forest Comprehensive Transportation Plan.

iii. **Guys and Guy Anchors**. All guys and guy anchors shall be located within the buildable area of the lot and shall not be located within any required setback, required landscape area, wetland feature, floodplain, and watercourse riparian buffer.

iv. **Security Fencing**. Securing fencing shall surround the telecommunications tower base, all guy anchors, and equipment. The compound area and all guy anchors shall be secured with a fence of not less than 6 feet in height nor more than 10 feet in height. A security wire (barbed, curved, razor, etc.) may be located on the telecommunications tower-side of the fence but shall not extend above the top of the fence. The type of fence selected shall meet all standards of Chapter 8.

v. **Structural Design**. A Telecommunications Tower shall be designed and built so as to:

(a) Be capable of use by at least two wireless communications providers for a telecommunications tower less than 80 feet in height;

(b) Be capable of use by three or more wireless communications providers for a telecommunications tower of 80 feet in height or greater;

(c) Accommodate antenna arrays consisting of 9 to 12 antennas for each array, provided, however, this regulation shall not apply to slick antenna applications;

(d) Locate such antenna arrays within 15 vertical feet of each other;

(e) Have no more than three degrees of twist and sway at the top elevation; and,

(f) Provide internal cable routing for all tapering monopole Telecommunication Towers.

(g) Meet or exceed associated State and Federal structural standards relating to telecommunication standards (e.g., EIA-222)

vi. **Signs Prohibition**. No lettering, symbols, images, trademarks, signs, or advertising shall be placed on or affixed to any part of a telecommunications tower, antenna array or antenna, other than as required by Federal Communications Commission regulations regarding tower registration or other applicable law.

vii. **Falling Safety**. New wireless Telecommunications Towers shall be designed and located on the property in a manner that would avoid safety hazards on surrounding uses in the event of a fall. If the Telecommunications Tower should fall along its longest dimension, the tower shall remain within the lot lines and avoid dwelling units, habitable structures, public street rights-of-way, utility lines and other Telecommunications Towers.

viii. **Lights**. No signals, lights or other illumination shall be permitted on telecommunications towers unless required by the Federal Communications Commission, the Federal Aviation Administration, or the Town.

ix. **Engineering Compliance for Modifications**. If any additions, changes or modifications are to be made to a Telecommunications Tower, the Administrator may require proof, through the submission of engineering and structural data, that the addition, change or modification conforms to structural wind load and all other requirements of the Town's Building Code.

h. **Separation and Location.**

i. **New Wireless Telecommunication Towers**. New Telecommunication Towers are subject to the following minimum separation radius from another Telecommunications Tower - in determining the required separation between telecommunication towers of different heights, the required separation for the taller tower shall apply.

(a) Quarter mile radius for proposed Telecommunications Towers less than 80 feet in height;

(b) Half mile radius for proposed Telecommunications Towers of 80 feet in height or greater but less than 120 feet in height; or

(c) One-mile radius for proposed Telecommunications Towers 120 feet in height or greater.

ii. **Small Cell Wireless Facility** New Small Wireless Telecommunication Towers are subject to the following minimum separation radius from another Telecommunications Tower, measured from the bases.

(a) **For the Same Wireless Telecommunication Provider**. Each new Small Cell Wireless Facility shall not be located such that the anticipated coverage ring of the Small Wireless Telecommunication Facility substantially overlaps the coverage ring of any other Wireless Telecommunication Facility. Substantial overlap shall be defined as the more than 10% overlap between the anticipated coverage ring of a new Small Wireless Telecommunication Facility and the coverage ring of other existing facilities of the same provider.

(i) Coverage ring shall be defined as the approximate area of coverage that each small wireless telecommunication facility is able to provide; or in the case of new Small Wireless Telecommunication Facilities, the approximate area the

small wireless telecommunication facility is anticipated to provide.

(ii) Coverage is defined as the area in which a person or entity can establish an electronic connection with the Small Wireless Telecommunication Facility.

(b) **For different wireless telecommunication providers**. Each new Small Wireless Telecommunication Facility of different providers shall not be located within three hundred 300 feet of another Small Wireless Telecommunication Facility unless the applicant can show that locating the Small Wireless Telecommunication Facility within the prescribed distance is necessary.

iii. **Deviations**. As part of a Special Use Permit (Section 16.6) review, the Town may authorize deviations from these separation standards due to special circumstances relating to natural features, scarcity of available land, and telecommunications operating standards.

2. **Wireless Telecommunications Antennas Mounted on Existing Buildings or Structures**. The following design standards apply to antennas associated with wireless communication operations and mounted on existing buildings and structures.

(a) **Roof-Mount Elements**. Roof-mounted Wireless Telecommunications Antennas are permitted on buildings and structures in all districts, except for Dwelling-Single Family Detached, Dwelling-Duplex, and Dwelling-Townhouse uses. Said elements shall be subject to the following standards.

(i) Whip telecommunication/antenna features (an antenna which transmits signals in 360 degrees) shall not exceed the height of the building by more than 15 feet and shall be no closer than 15 feet to the perimeter of the building.

(ii) Non-whip telecommunication/antenna features shall not exceed the height of the building by more than 10 feet and shall be no closer than 10 feet to the perimeter of the building.

(iii) The telecommunications antenna and associated equipment located on buildings shall be screened in elevation view with enclosures or façades having an appearance that blends with the building on which they are located; and be located so they are not overtly visible from an adjacent public right-of-way.

(b) **Surface-Mount Elements**. Surface Mounted Telecommunications Antennas (an antenna attached to a building exterior wall) are permitted on buildings or structures in all districts and subject to the following standards.

(i) Telecommunications/Antenna features shall be mounted flush with the exterior of the building or structure so that it projects no more than 30 inches from the surface to which it is attached.

(ii) The Telecommunications/Antenna appearance shall blend with the surrounding surface of the building or structure in terms of color and materials.

(iii) Surface-mount elements are subject to applicable design standards in National Register listed properties and historic districts, Local historic districts, and locally designated historic landmarks.

(c) **Elements Attached to Other Existing Structures**. Telecommunications Antennas are permitted on existing utility, lighting, telecommunications towers, and other structures in all districts and subject to the following standards.

(i) Existing utility, lighting, Telecommunications Towers, and other structures used to affix Telecommunication/Antenna features shall not exceed 50 feet in height above grade.

(ii) The Telecommunications Antenna shall not exceed the height of the existing

structure by more than 10 feet for a non-whip antenna or 15 feet for a whip antenna.

(iii) Existing structures may be rebuilt/modified to support the load of the new telecommunications antenna and subject to the Town's building permitting standards.

(iv) Existing structure mounted elements are subject to applicable design standards in National Register listed properties and historic districts, Local historic districts, and locally designated historic landmarks

(d) **Separation Standards**. Telecommunications Antennas and associated features located on existing buildings or structures are not subject to the separation requirements of this Section.

(e) **Photo Simulation Requirements**. As part of the application process, applicants shall provide photo simulations showing the site of the existing structure with a photo realistic representation of the proposed Telecommunications Antenna and the existing structure or any proposed reconstruction of the structure as it would appear viewed from the closest GR, NCR, MUR, or TSR District and from adjacent public right-of-way. The applicant shall also submit photographs of the same views as in the photo simulations showing the current appearance of the site without the proposed Telecommunications Antenna.

ii. **Abandonment and Removal of Telecommunications Towers, Antenna Arrays, and Associated Equipment**. The following standards apply to all telecommunication features and their associated elements – these standards ensure inoperable features are removed, whereas habitable buildings are exempt from these requirements.

(a) **Abandonment**. Telecommunications Towers, antenna arrays, and associated equipment which have not been used for a period of one year shall be deemed abandoned and shall be removed from the site.

(b) **Notice Required**. The owner of the Telecommunications Tower and the last service provider to use a telecommunications tower shall notify the Administrator within 30 days that use of a telecommunications tower has been discontinued.

iii. **Special Requirements for Small Wireless Telecommunication Facilities Located within the Public Right-of-Way**. To protect the unique aesthetics of the Town, to minimize new visual, aesthetic, and public safety impacts, and to reduce the need for additional antenna-supporting structures, the Town prefers that small wireless telecommunication facilities be located outside the public right-of-way; co-located on existing utility poles or wireless support structures; concealed; and have their accessory equipment mounted on the utility pole or wireless support structure. The following requirements are intended to be reasonable for Small Wireless Telecommunication Facilities located within the public right-of-way while avoiding the intangible public harm of unsightly or out-of-character deployments and are implemented as requirements for an application for small wireless telecommunication facilities. Unless otherwise defined by this UDO, all definitions are the same as defined in NCGS §160D-931.

(a) **Siting Hierarchy of Small Wireless Telecommunication Facilities Located within the Public Right-of-Way**. Any applicant for a new Small Cell Wireless Facility shall evaluate the reasonable feasibility of co-locating new antennas and equipment on existing utility poles, light pole fixtures, or wireless support structures within the applicant's search ring. Co-location on existing utility poles, light pole fixtures, or wireless support structures is not reasonably feasible if colocation is technically or commercially impractical or the owner of the existing utility poles, light pole fixtures, or wireless support structures has refused in writing to the requesting party, after having been offered the fair market fee for co-

location, to enter into a contract for such use at fair market value. Minor alterations or adjustments to the location or technical specifications of the Small Cell Wireless Facility as a result of co-locating on an existing utility pole, light pole fixture, or wireless support structure shall not constitute a technical or commercial impracticality. The applicant shall provide to the Town all information necessary to determine whether co-location on existing utility poles, light pole fixtures, or wireless support structures is reasonably feasible, including information pertaining to the fair market value of similar contracts. The Town shall determine the sufficiency of the information and may employ such experts as outside consultants to evaluate the information. In the event that the Town determines outside consultants are necessary, the fee for such consultant shall be fixed in advance as part of the application fee for a new Small Cell Wireless Facility. Development of small wireless telecommunication facilities shall be in accordance with the following siting alternatives hierarchy. The order of ranking, from highest to lowest, shall be from sub-Section i.a., to sub-Section i.c. Where a lower ranked alternative is proposed, the applicant must demonstrate by substantial evidence that higher ranked options are not technically feasible or available.

(i) **Co-location**. The co-location of Small Cell Wireless Facility on existing utility poles, light pole fixtures, or wireless support structures and associated equipment or buildings shall comply with the following regulations:

(1) **Height**. Each new Small Cell Wireless Facility shall not extend more than 10 feet above the existing utility pole, light pole fixture, or wireless support structure on which it is co-located. No new Small Cell Wireless Facility shall be co-located on any utility pole, light pole fixture, or wireless support structure that is less than 15 feet above grade.

(2) **Separation**. Colocation of small wireless telecommunication facilities on existing utility poles, light pole fixtures, or wireless support structures are not subject to a separation requirement.

(3) **Objective Design Standards**. Small Wireless Telecommunication Facilities to be co-located on an existing utility pole, light pole fixture, or wireless support structure shall be designed to match the style and color of the existing utility pole, light pole fixture, or support structure and designed such that all cabling is inside the existing utility pole, light pole fixture, or wireless support structure, provided, however if cabling cannot be located inside the existing utility pole, light pole fixture, or support structure that cabling is located within a solid enclosure that is designed to match the style and color of the existing utility pole, light pole fixture, or support structure.

a. All Small Wireless Telecommunication Facilities shall be stealth antenna facilities. Stealth antenna and accessory equipment must be shrouded or otherwise concealed.

b. To mitigate the visual impacts of unsightly or out of-character Small Wireless Telecommunication Facilities, ground equipment shall be screened, to the extent possible as approved by the government body with jurisdiction of the right-of-way in which the Small Cell Wireless Facility is to be located.

(4) **Engineer's Certification**. Prior to installation of a Small Cell Wireless Facility or equipment, the Town shall be provided with an engineer's certification that existing utility pole, light pole fixture, or wireless support structure will support the proposed Small Cell Wireless Facility or equipment.

(ii) **New Wireless Telecommunication Facilities (Small Cell)**. Construction of new Small Wireless Telecommunication Facilities on new utility poles or wireless support structures and associated equipment or buildings shall comply with the following regulations:

(i) **Height**. The maximum height of new utility poles or wireless support structures shall be 50 feet above grade. Each new Small Cell Wireless Facility shall not extend more than 10 feet above the utility pole or wireless support structure on which it is located. Notwithstanding the above, in no instance in an area zoned for detached residential dwellings where the existing utilities are installed underground shall a utility pole or wireless support structure exceed 40 feet above grade. No new Small Cell Wireless Facility shall be located on any utility pole or wireless support structure that is less than 15 feet above grade.

(ii) **Location**. No portion of a new utility pole or wireless support structure associated with a Small Cell Wireless Facility may be placed in the public right-of-way in a manner that does any of the following: obstructs pedestrians or vehicular or bicycle access, obstructs sight lines or visibility for traffic, traffic signage, or signals; public art or focal points, or interferes with access by persons with disabilities. An applicant may be required to place equipment in vaults located underground to avoid obstructions or interference. To the greatest extent possible, a new utility pole or wireless support structure associated with a Small Cell Wireless Facility shall align with existing utility poles, light pole fixtures, or wireless support structures installed in the right-of-way.

(iii) **Separation**. New small wireless telecommunication facilities shall have the following minimum separation radius from another Small Cell Wireless Facility: For the same wireless telecommunication provider: Each new Small Cell Wireless Facility shall not be located such that the anticipated coverage ring of the Small Cell Wireless Facility substantially overlaps the coverage ring of any other wireless telecommunication facility. Substantial overlap shall be defined as the more than 10 percent overlap between the anticipated coverage ring of a new Small Cell Wireless Facility and the coverage ring of any other existing wireless telecommunication facility of the same provider; this definition shall also apply between the anticipated coverage rings of two or more new small wireless telecommunication facilities. Coverage Ring shall be defined as the approximate area of coverage that each Small Cell Wireless Facility is able to provide; or in the case of new small wireless telecommunication facilities, the approximate area the Small Cell Wireless Facility is anticipated to provide. Coverage is defined as the area in which a person or entity is able to establish an electronic connection with the Small Cell Wireless Facility.

(iv) **Review**. If an applicant desires that a new Small Cell Wireless Facility be located within the prescribed distance and is necessary, such Small Cell Wireless Facility shall be reviewed by the Administrator and approved on a case by case basis.

(v) **Separation from Different Provider**. For different wireless telecommunication providers, each new Small Cell Wireless Facility of different providers shall not be

located within 300 feet of another Small Cell Wireless Facility unless the applicant can show that locating the Small Cell Wireless Facility within the prescribed distance is necessary. Such Small Cell Wireless Facility shall be reviewed by the Administrator and approved on a case by case basis.

(vi) **Objective Design Standards**. Small wireless telecommunication facilities and utility poles and wireless support structures shall be compatible with the surrounding area. Where existing street light fixtures are present, the utility pole or wireless support structure color shall match that of the street light fixture pole and shall be located in such a manner as to visually appear to be part of a common scheme of street light fixture pole placement.

a. Utility poles and wireless support structures shall be made of galvanized steel or comparable material except when otherwise required by applicable federal or state regulations. Wood utility poles and wireless support structures are prohibited.

b. Small Wireless Telecommunication Facilities shall be located, designed, and/or screened to blend in with the existing natural or built surroundings to reduce the visual impacts as much as possible, and to be compatible with neighboring land uses and the character of the community.

c. All Small Wireless Telecommunication Facilities shall be stealth antenna facilities. Stealth antenna and accessory equipment must be shrouded or otherwise concealed.

d. To mitigate the visual impacts of unsightly or out of-character small wireless telecommunication facilities, ground equipment shall be screened, to the extent possible as approved by the government body with jurisdiction of the right-of-way in which the Small Cell Wireless Facility is to be located.

ii. **Maintenance**.

(a) All Small Wireless Telecommunication Facilities and related equipment, including but not limited to fences, cabinets, poles, and landscaping, shall be maintained in good working condition over the life of the use. This shall include keeping the structures maintained to the visual standards established at the time of approval. The Small Wireless Telecommunication Facilities shall remain free from trash, debris, litter, graffiti, and other forms of vandalism. Any damage shall be repaired as soon as practicable, and in no instance more than 30 calendar days from the date of notification by the Town. In public rights-of-way, damaged or deteriorated components must be corrected within five business days of notification.

(b) No lettering, symbols, images, trademarks, signs, or advertising shall be placed on or affixed to any part of a Small Cell Wireless Facility, other than as required by Federal Communications Commission regulations regarding small wireless telecommunication facilities registration or other applicable law.

iii. **Filing Requirements**. All applications for a Small Cell Wireless Facility shall be required to meet the filing requirements specified in Section 16.4.

F. **Agriculture and Animal Related.**

1. **Nursery & Garden Center**. In the GR District, Nursery & Garden Center uses shall be located on a lot with a minimum size of one acre.

2. **Riding Stable**. Riding Stables shall be located on a lot with a minimum size of one acre.

3. **Veterinary and Animal Care Services**.

   a. No livestock or large animals, such as but not limited to cattle, sheep, pigs, goats, horses, donkeys, and mules, shall be boarded, treated, or kept on the premises. For the purposes of this section, a large animal shall include any animal, other than a dog, that is over 100 pounds.

   b. The use shall be conducted primarily within a fully enclosed building designed with acoustical treatment for sound attenuation.

   c. All litter and waste shall be contained and controlled on site by having appropriate flushing drains and other physical elements to properly dispose of cleaning waste from the animal care area.

   d. The animal care areas must be air-conditioned and heated so that windows, doors or other openings can be closed at any time.

   e. **Outdoor Areas**.

      i. If outdoor areas are provided, drainage shall be directed to gravel, grassed, or other planted areas in a manner that prevents direct discharge to storm drain inlets and surface waters.

      ii. Solid waste shall be removed from outdoor areas after each use of the area.

      iii. Outdoor areas shall be set back a minimum of 150 feet from any residential uses or the GR, NCR, MUR, or TSR Districts and any parallel Conditional District to those districts.

      iv. Outdoor areas shall be screened with a solid, opaque fence or wall at least six feet in height. Slatted chain link fences shall not meet this requirement.

      v. Use of outdoor areas between the hours of 10 p.m. and 7 a.m. is prohibited.

3.4 Accessory Uses

3.4.1 Accessory Uses

Accessory uses are allowed by district, as established in Table 3.4 Accessory Uses, but only incidental to a legally established, conforming principal use.

3.4.2 The following shall be used in the interpretation of Table 3.4.

A. **Permitted Uses**. Uses which are marked as "P" in the table shall be allowed principal uses subject to all applicable regulations of this UDO.

B. **Special Uses**. Uses which are marked as "S" in the table shall require Board of Commissioners approval as a Special Use in accordance with Section 16.6 prior to establishment.

C. **Prohibited Uses**. A blank space in the table indicates that a use is not permitted.

D. **Uses Not Listed**. A use not specifically listed is prohibited unless the Administrator determines the use to be part of a use category as described in Section 3.4.1 or determines the use to meet the definition of Accessory Use as established in Chapter 18.

E. **Supplemental Standards**. If a use has supplemental standards, they are referenced in the Supplemental Standards column. Use specific standards shall apply to accessory uses.

F. **Other Districts**. The PUD, LH-O, MV-O, and WP-O Districts are not included in Table 3.4. The allowed uses in these Districts shall be as detailed below:

1. **PUD**. Uses allowed in a PUD District shall be as established through the PUD approval process, in accordance with Section 16.7.

2. **LH-O, MV-O, and WP-O**. Uses allowed in the LH-O, MV-O, and WP-O Districts shall be the uses allowed in the underlying base district unless otherwise specified in this UDO.

Table 3.4 Accessory Uses

Key: P = Permitted Use; S = Special Use; C = Conditional Use

	SUPPLEMENTAL STANDARDS	GR	NCR	MUR	TSR	NB	CB	IND	CI	OS	TOD-O	AC-O
Accessory Commercial Unit	3.4.3.A	P	P	P	P							
Accessory Dwelling Unit	3.4.3.B	P	P	P								
Accessory Retail/Restaurant					P	P	P	P			P	P
Accessory Structure	3.4.3.C	P	P	P	P	P	P	P	P	P	P	P
Agritourism		P										
ATM	3.4.3.D			P	P	P	P				P	P
Backyard Small Animal Keeping	3.4.3.E	P	P	P						P		
Cemetery		P	P	P	P				P			
Child/Adult Day Care Home	3.4.3.F	P	P	P	P						P	
Cluster Mailbox Unit	3.4.3.G	P	P	P	P	P	P	P	P	P	P	P
Community/Recreation Center	3.4.3.H	P	P	P	P	P	P	P	P	P	P	P
Donation Drop Box	3.4.3.I						P		P	P		
Drive-Through Facility	3.4.3.J					S	P					

Table 3.4 Accessory Uses

Key: P = Permitted Use; S = Special Use; C = Conditional Use

	SUPPLEMENTAL STANDARDS	GR	NCR	MUR	TSR	NB	CB	IND	CI	OS	TOD-O	AC-O
Drone Delivery Operations Facility							P	P				
Electric Vehicle Charging Facility	3.4.3.K	P	P	P	P	P	P	P	P	P	P	P
Fleet Vehicle Storage/Maintenance	3.4.3.L						P	P				
Food Truck, Accessory	3.4.3.M					P	P	P	P	P	P	P
Garden, Accessory	3.4.3.N	P	P	P	P	P	P	P	P	P	P	P
Home Occupation	3.4.3.O	P	P	P	P						P	P
Outdoor Display / Sale of Merchandise, Accessory	3.4.3.P			P	P	P	P	P			P	P
Outdoor Seating, Accessory	3.4.3.Q			P	P	P	P				P	P
Outdoor Storage Yard	3.4.3.R							P				
Parking Lot		P	P	P	P	P	P	P	P	P	P	P
Parking Structure		P	P	P	P	P	P	P	P	P	P	P
Produce Stand	3.4.3.S	P	P	P	P	P	P				P	P
Public Art, Mural	3.4.3.T	P	P	P	P	P	P	P	P	P	P	P
Public Art, Sculpture		P	P	P	P	P	P	P	P	P	P	P
Public Safety Training Structure	3.4.3.U	P	P	P	P	P	P	P	P	P	P	P
Scoreboard	3.4.3.V	P	P	P	P	P	P	P	P	P	P	P
Solar Energy Collection System, Canopy	3.4.3.W			P	P	P	P	P	P	P	P	P
Solar Energy Collection System, Ground Mounted	3.4.3.X	P	P	P	P	P	P	P	P	P	P	P
Solar Energy Collection System, Roof Mounted	3.4.3.Y	P	P	P	P	P	P	P	P	P	P	P
Storage Container	3.4.3.Z						S	P				S

Table 3.4 DT Accessory Uses					
Key: P = Permitted Use; S = Special Use; C = Conditional Use					
	SUPPLEMENTAL STANDARDS	Downtown Historic White Street	Downtown North	Downtown Central	Downtown South
Accessory Commercial Unit	3.4.3.A				
Accessory Dwelling Unit	3.4.3.B				
Accessory Retail/Restaurant		P	P	P	P
Accessory Structure	3.4.3.C				
Agritourism					
ATM	3.4.3.D	P	P	P	P
Backyard Small Animal Keeping	3.4.3.E				
Cemetery					
Child/Adult Day Care Home	3.4.3.F				
Cluster Mailbox Unit	3.4.3.G				
Community/Recreation Center	3.4.3.H				
Donation Drop Box	3.4.3.I				
Drive-Through Facility	3.4.3.J				
Drone Delivery Operations Facility					
Electric Vehicle Charging Facility	3.4.3.K				
Fleet Vehicle Storage/Maintenance	3.4.3.L				
Food Truck, Accessory	3.4.3.M	P	P	P	P
Garden, Accessory	3.4.3.N				
Home Occupation	3.4.3.O				
Outdoor Display / Sale of Merchandise, Accessory	3.4.3.P	P	P	P	P
Outdoor Seating, Accessory	3.4.3.Q	P	P	P	P
Outdoor Storage Yard	3.4.3.R				
Parking Lot			P	P	P
Parking Structure			P	P	P
Produce Stand	3.4.3.S				
Public Art, Mural	3.4.3.T	P	P	P	P
Public Art, Sculpture		P	P	P	P
Public Safety Training Structure	3.4.3.U				
Scoreboard	3.4.3.V				
Solar Energy Collection System, Canopy	3.4.3.W				

Table 3.4 DT Accessory Uses					
Key: P = Permitted Use; S = Special Use; C = Conditional Use					
	SUPPLEMENTAL STANDARDS	Downtown Historic White Street	Downtown North	Downtown Central	Downtown South
Solar Energy Collection System, Ground Mounted	3.4.3.X				
Solar Energy Collection System, Roof Mounted	3.4.3.Y	P	P	P	P
Storage Container	3.4.3.Z				

3.4.3 Accessory Use Supplemental Standards

A. **Accessory Commercial Unit (ACU).**

1. **General Standards.** An ACU shall be clearly incidental and secondary to residential occupancy.

2. **Number.** Only one ACU is permitted per lot.

3. **Placement on the Lot.** A detached ACU shall be sited to the side or rear of the principal building.

4. **Dimensional Standards.** Detached ACU shall meet the following dimensional standards. ACUs attached or internal to the principal dwelling shall meet the dimensional standards applicable to the principal dwelling.

Table 3.4.3.A.4
Detached ACU Dimensional Standards

Yard Setbacks	
Front, Minimum (ft)	5 feet from the front elevation of the principal dwelling
Front, Maximum (ft)	n/a
Street Side, Minimum (ft)	5 feet to the street side elevation of the principal dwelling
Street Side, Maximum (ft)	n/a
Interior Side, Minimum (ft)	5
Rear, Minimum (ft)	5
Building Standards	
Height, Maximum (ft) [1]	25
Height, Minimum (stories)	n/a
Building Floor Area, Maximum (sq ft)	1,000 sq ft or 60% of the total floor area of the principal dwelling, whichever is less
Notes	
[1] Maximum building height is inclusive of the garage story.	

5. **Compatibility**

a. The ACU shall meet all applicable design standards for the zoning district in which it is located in accordance with Chapter 5.

b. The exterior of the ACU shall be compatible with the principal residence in terms of color, siding, and roofing appearance.

c. The activity conducted within an ACU shall not produce noise, vibrations, odors, or other impacts on surrounding property.

d. ACUs with a footprint greater than 600 square feet shall provide a Type C Buffer in accordance with accordance with Section 7.3 if adjacent to the GR, NCR, MUR, or TSR Districts and any parallel conditional district to those districts.

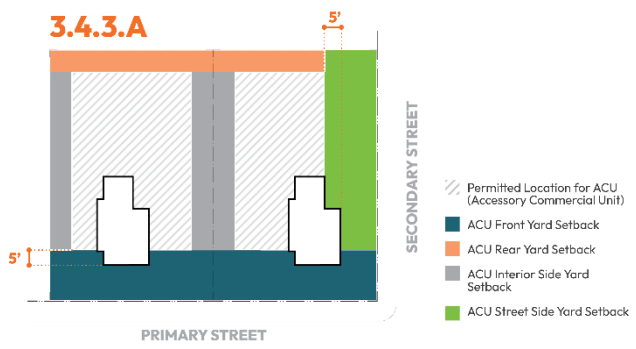


Figure 11: Accessory Commercial Unit Permitted Locations

6. **Number of Employees**. A maximum of three people may be employed at an ACU at a given time.

7. **Hours of Operation**. Hours of operation shall be limited to between the hours of 8 a.m. and 8 p.m.

8. **Manufactured Housing, Campers, Recreational Vehicles, Etc. Prohibited For Use.** Manufactured housing, campers, travel trailers and recreational vehicles are not permitted for use as an ACU.

9. **Outdoor Entrance**. If located within the principal dwelling, the ACU shall have a private outdoor entrance.

10. **Parking.**

    a. One off-street parking space shall be provided in addition to those required for the principal dwelling.

    b. One medium-duty commercial vehicle used exclusively for business purposes, rather than for personal use by employees, may be parked on a lot with an ACU at one time. The vehicle must be parked on a paved surface.

11. **Signs.** One post sign, meeting the standards established in Chapter 12, may be allowed per ACU.

B. **Accessory Dwelling Unit (ADU)**.

1. **Principal Use.** ADUs shall be allowed accessory to Dwelling-Single Family Detached uses only.
2. **Number.** Only one ADU is permitted per lot.
3. **Placement on the Lot.** A detached ADU shall be sited to the side or rear of the principal building.
4. **Dimensional Standards.** Detached ADU shall meet the following dimensional standards. Accessory Dwellings attached or internal to the principal dwelling shall meet the dimensional standards applicable to the principal dwelling.

Table 3.4.3.B.4
Detached ADU Dimensional Standards

Yard Setbacks	
Front, Minimum (ft)	5 feet from the front elevation of the principal dwelling
Front, Maximum (ft)	n/a
Street Side, Minimum (ft)	5 feet to the street side elevation of the principal dwelling
Street Side, Maximum (ft)	n/a
Interior Side, Minimum (ft)	5
Rear, Minimum (ft)	5
Building Standards	
Height, Maximum (ft) [1]	25 [2]
Height, Minimum (stories)	n/a
Building Floor Area, Maximum	1,000 sq ft or 60% of the total floor area of the principal dwelling, whichever is less
Notes	
[1] Maximum building height is inclusive of the garage story.	
[2] Maximum building height shall be the height of the principal dwelling or 25 feet, whichever is less unless otherwise approved by the Administrator based on compliance Building Height Transition standards established in Section 2.7.	

5. **Compatibility.** ADUs with a footprint greater than 600 square feet shall provide an Alley Buffer in accordance with accordance with Section 7.5 if adjacent to the GR, NCR, MUR, or TSR Districts and any parallel conditional district to those districts.
6. **Manufactured Housing, Campers, Recreational Vehicles, Etc. Prohibited For Use.** Manufactured housing, campers, travel trailers and recreational vehicles are not permitted for use as an ADU.
7. **Outside Entrance.** If located within the principal dwelling, the ADU shall have a private outside entrance located on or facing the interior side or rear of the principal dwelling.
8. **Dwelling Features.** The ADU must contain complete kitchen facilities including a stove or cook top and a full bath including lavatory, water closet, and tub or shower (or combination).
9. **Signs.** No signs visible from the street or public sidewalk are permitted.

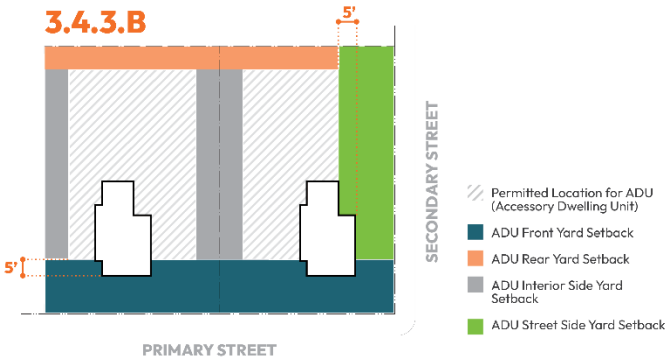


Figure 12: Accessory Dwelling Unit Permitted Locations

C. **Accessory Structure.**

1. **General.**

a. **Allowed Uses.** Accessory Structures may only be used for purposes permitted in the district in which they are located, unless otherwise approved by the Administrator.

b. **Not for Dwelling Purposes.** Accessory Structures shall not be used for dwelling purposes except as approved ADUs in accordance with Section 3.4.3.B.

c. **Building Permits May Be Required.** Depending on the size of the structure and the incorporation of various improvements (e.g., electrical, plumbing) a building permit may also be required.

2. **Number and Area**.

Table 3.4.3.C.2
Detached Accessory Structure Maximum Number and Area

Standards	Dwelling-Single Family Detached / Dwelling-Duplex - Lots less than 1 acre	Dwelling-Single Family Detached / Dwelling-Duplex - Lots 1-3 acres	Dwelling-Single Family Detached / Dwelling-Duplex - Lots larger than 3 acres + All other uses
Maximum Number of Accessory Structures Allowed	2	4	4
Maximum Accessory Structure Area [1]	600 sq ft / structure	1,000 sq ft / structure	
	1,000 sq ft / lot	1,400 sq ft / lot	

Notes

[1] Accessory Dwelling Units (ADUs) and Accessory Commercial Units (ACUs) are subject to separate maximum size requirements. Refer to Table 3.4.3.A.4 and Table 3.4.3.B.4 for detailed information.

3. **Setbacks**. Detached Accessory Structures shall meet the setback standards established in Table 3.4.3.C.3. Attached Accessory Structures shall meet the dimensional standards established for the district in Chapter 2.

Table 3.4.3.C.3
Detached Accessory Structure Setback Standards per Base District

	GR; NCR; MUR; TSR;		DT		NB; CB; CI; IND	OS
Yard Setbacks						
	w/ Alley	w/o Alley	w/ Alley	w/o Alley	w/ or w/o Alley	w/ or w/o Alley
Front, Minimum	5 ft behind the front elevation of principal building [1] [2]					
Street Side, Minimum						
Interior Side, Minimum (ft)	5 [3]		5 [3]		10 [3]	10
Rear, Minimum (ft)	10	5	10	0	20 [4]	25

Notes

[1] If the subject lot is over two acres in area and developed with a Dwelling-Single Family Detached or a Dwelling-Duplex use an accessory structure may be located in the front and/or street side yard as long as it is not located closer than 50 feet to the right-of-way.

[2] A detached or attached garage shall be setback a minimum of 18 feet or 5 feet behind the front elevation of the principal building, whichever is greater.

[3] Setback shall be 0 feet for attached dwelling uses.

[4] Setback shall be 20 feet if adjacent to the GR, NCR, MUR, or TSR Districts and any parallel conditional district to those districts.

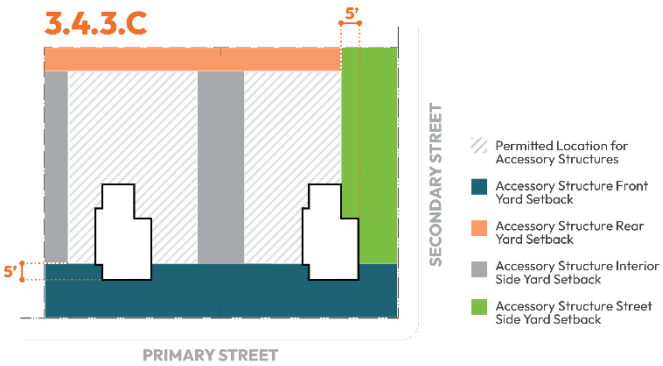


Figure 13: Detached Accessory Structure Allowed Locations

4. **Structure Height**.

   a. **GR, NCR, MUR, NB, and CI Districts.** In the GR, NCR, MUR, NB, and CI Districts, Accessory Structures shall have a maximum height of 24 feet, or the height of the principal building on the parcel, whichever is less.

   b. **All Other Districts.** In all other Districts, Accessory Structures shall have a maximum height of 35 feet, or the height of the principal building on the parcel, whichever is less.

5. **Other Requirements.**

   a. **Buffering.** Accessory Structures with a footprint greater than 600 square feet shall provide a Type C Buffer in accordance with accordance with Section 7.3 if adjacent to any residential use or the GR, NCR, MUR, or TSR Districts and any parallel conditional district to those districts.

   b. **Lighting.** Exterior lighting for Accessory Structures shall meet the requirements by which principal structures are governed in accordance with accordance with Chapter 10.

D. **ATM.** In the DT, TOD-O, and AC-O Districts and any parallel conditional district to those districts, an ATM shall be located and accessed fully within a building.

E. **Backyard Small Animal Keeping.**

1. **Permit Required.** No person shall keep Backyard Small Animals without first obtaining a zoning compliance permit.

2. **Number of Animals Allowed.** The number of Backyard Small Animals allowed shall be as detailed below, but in no instance shall sheep, pigs, goats, or alpacas be allowed on a parcel less than one acre in area:

   a. Alpaca: two per acre

   b. Pigs: two per acre

   c. Sheep: two per acre

   d. Goats: two per acre

   e. Bees: five hives per parcel

   f. Fowl (excluding Roosters): 10 maximum

   g. Rabbits: 10 maximum

3. **Enclosure.**

   a. All Backyard Small Animals shall be kept in an enclosure, such as a chicken coop or beehive, or sufficiently secured area.

   b. Enclosures shall be located in the rear yard only and shall be setback a minimum of 15 feet from side and rear property lines.

   c. Enclosures shall not encroach into any easements.

   d. A beehive shall be placed at ground level or securely attached to an anchor or stand.

   e. All enclosures shall be removed if the owner no longer maintains the enclosure or if removal is necessary to protect the health, safety, and welfare of the public.

4. **Other Standards.**

   a. Backyard Small Animals shall be kept solely as a pet; a hobby; for educational, research, rehabilitation or propagation purposes; or for the production of food products for personal consumption by the resident.

   b. Slaughtering of Backyard Small Animals on premises as part of keeping such animals is prohibited.

F. **Child/Adult Day Care Home.**

1. **Outdoor Play Space for Child Day Care Home.**

   a. Outdoor play space shall be provided in accordance with the regulations of North Carolina Department of Health and Human Services.

   b. Outdoor play space shall be enclosed on all sides by the building and/or walls or fences in accordance with the standards in Section 8.1. The minimum height for such fences shall be four feet.

   c. Outdoor play space may not include driveways, parking areas, or land otherwise unsuitable for children's play space.

   d. Outdoor play space may not be in the established front yard.

G. **Cluster Mailbox Unit.**

1. Cluster Mailbox Units shall meet all applicable standards of the United States Postal Service.
2. Cluster Mailbox Units shall have a powdercoat finish to resist scratches and vandalism.
3. Cluster Mailbox Units shall have a decorative cap and pedestal cover or be located within a kiosk made of materials consistent with the exterior building cladding materials of the principal building(s) on the development site.
4. Cluster Mailbox Units shall be prohibited in National Register of Historic Places and the LH-O District.

H. **Community/Recreation Center.**
Community/Recreation Centers shall be allowed accessory to Park uses only.

I. **Donation Drop Box.**

1. Donation Drop Boxes shall be associated with the principal use of the lot and on properties that contain an existing and operating use.
2. No more than two Donation Drop Boxes shall be permitted on a lot.
3. Each Donation Drop Box shall not exceed seven feet in height and 25 square feet in ground area.
4. Donation Drop Boxes shall be located on a hard surface approved by the Administrator.
5. Donation Drop Boxes shall not be located in a driveway, drive aisle, or pedestrian walkway.
6. Boxes shall not be located in such a way as to disrupt the flow of vehicular or pedestrian traffic.
7. Boxes shall not be located nearer than 40 feet from an adjoining lot in the GR or NCR Districts.
8. A notice shall be permanently affixed to each Donation Drop Box in a highly visible location prohibiting the placement of items outside of the box. The name and 24-hour telephone number of the owner/operator shall be permanently affixed to each Donation Drop Box.
9. No items may be placed or stored outside of Donation Drop Boxes.

J. **Drive-Through Facility.**

1. **Location:** Such facilities shall be located and accessed only in interior side and rear yards.

2. **Circulation:** Vehicle storage/stacking areas for Drive-Through Facility uses shall be located outside of and physically separated from the right-of-way of any street and shall not cause interruption of any public sidewalk or bicycle facility. Furthermore, the Drive-Through Facility use shall be designed to avoid obstructions to pedestrian movement along site sidewalks, through public use areas, or between parking spaces and building entrances.

3. **Vehicle Stacking Spaces.** Drive-Through Facilities shall be required to provide a minimum number of vehicle stacking spaces in accordance with Section 9.10. Vehicle stacking spaces shall meet the standards of Section 9.10.

4. **Overhead Canopy**.

   a. Any overhead canopy or similar structure shall maintain a uniform and consistent roof line with the building to which the Drive-Through Facility is a part but in no instance shall it exceed 20 feet in height as measured to the highest part of the canopy structure.

   b. Any overhead canopy or similar structure shall have columns, solid walls or semi-solid walls placed so that they are similar in their relation to the roof as that of the exterior walls of the building to which the Drive-Through Facility is a part. The support columns of the canopies shall be constructed of masonry materials consistent with the principal building materials and shall extend to the full height of the columns.

   c. Any overhead canopy or similar structure shall be finished with exterior cladding materials consistent with the principal building façade.

5. **Screening**. The following regulations shall apply to any Drive-Through Facility adjacent to a residential use regardless of the use to which it is accessory.

   a. Drive aisles must be effectively screened from view along public rights-of-way and at the edges of sites adjacent to residential properties to minimize the visual impact of menu boards and headlight glare and audio impact of intercoms.

   b. Screening shall be a minimum of six feet wide, and must consist of:

      i. An opaque masonry wall or solid wood fence with a minimum height of four feet and a maximum height of six feet;

      ii. One ornamental tree per every 25 linear feet of screening; and

      iii. One shrub or native grass per every three feet of screening.

K. **Electric Vehicle Charging Facilities.**

1. **Equipment**.

a. Electric Vehicle Charging Facilities that are accessory to mixed-use, multifamily, OR nonresidential uses shall be a minimum of a level 2 charging capacity.

b. Electric Vehicle Charging Facility equipment shall be protected by a wheel stop, curb, or bollards.

c. In parking lot applications, all connections of the charging station to electrical utility equipment shall be underground.

d. All Electric Vehicle Charging Facility equipment shall comply with the National Fire Protection Association/National Electrical Code and be approved by the Underwriters Laboratory.

e. All equipment should be made of low-maintenance, durable materials and shall be vandal-proof to the extent possible.

f. All equipment shall provide a cord management system that minimizes tripping hazards for pedestrians. Charging cords may not cross sidewalks, walkways, or driveways.

g. Electrical equipment such as transformers shall be screened in accordance with Section 8.4. If supporting electrical equipment exceeds six feet in height, the charging facilities shall be located on the perimeter of the parking lot to minimize visibility.

2. **Design Considerations.**

a. Electric Vehicle Charging Facility equipment shall be located in a manner that will not obstruct pedestrian walkways. A minimum of three feet of clear area shall be maintained.

b. Electric Vehicle Charging Facilities shall be located to optimize ease of use for all potential users.

c. Electric Vehicle Charging Facilities shall provide a safe and clearly delineated area for maneuvering around the vehicle for connecting to the equipment.

d. A sign indicating that the electric vehicle parking is for use while charging only shall be provided.

e. All charging stations shall be illuminated. Lighting shall comply with the limitations in Chapter 10.

3. **Accessibility**. A minimum of one accessible charging station is required with any installation of Electric Vehicle Charging Facility. The accessible charging station shall provide equipment, reach, clear area, route, and other applicable building blocks to comply with the North Carolina Accessibility Code as well as incorporating industry recommended best practices and current federal accessibility recommendations.

L. **Fleet Vehicle Storage/Maintenance**.

1. **Storage**. Fleet Vehicle Storage shall be allowed in parking areas meeting all landscape and screening requirements only.

2. **Maintenance**. Fleet Vehicle Maintenance shall occur indoors only.

M. **Food Truck, Accessory**.

1. A food truck shall be considered accessory if located on a site more than one time per week.

2. **Relationship to Principal Use**.

   a. The hours of operation of the Accessory Food Truck shall not exceed the hours of operation of the principal use.

   b. Accessory Food Trucks shall not have separate outdoor seating areas from the principal use.

3. **Location**.

   a. Accessory Food Trucks shall be located outside of public rights-of-way, except in the DT District.

   b. Accessory Food Trucks shall be located a minimum of 10 feet from structures, buildings, and driveways.

   c. Accessory Food Trucks shall be parked in a designated paved area.

   d. Accessory Food Trucks shall not block points of ingress or egress.

   e. Accessory Food Trucks shall not be located in a manner that interferes with vehicle, pedestrian, or bicyclist circulation.

   f. Accessory Food Trucks shall not be located in fire lanes.

   g. Accessory Food Trucks shall not have audio amplification.

   h. An Accessory Food Truck operator shall be responsible for proper disposal of waste, trash, and grease.

   i. An Accessory Food Truck operator shall be responsible for obtaining any applicable state and county approvals/permits and shall provide evidence of having obtained a County Permit (e.g. Wake County Commissary Form), a NC Sales and Use Certificate for collecting and paying the proper sales taxes and prepared meals taxes, and a means for the disposal of grease within an approved grease disposal facility as part of their food truck application. All required Town, County, and State permits and licenses shall be clearly displayed on the food truck.

4. **Other Requirements**.

   a. Accessory Food Trucks shall connect to a permanent power source.

N. **Garden, Accessory.**

1. All storage/stockpiling of materials on site shall:

   a. Be screened from view from adjacent property and the public right-of-way,

   b. Be managed to prevent the harborage of rodents and pests,

   c. Be maintained to prevent odors, and

   d. Be located to prevent leachate from flowing onto adjacent property or into natural or human-made storm channels.

2. The site shall be designed and maintained to prevent water from irrigation and/or other activities and/or fertilizer from draining onto adjacent property.

O. **Home Occupation.**

1. **General Standards.** A Home Occupation shall be clearly incidental and secondary to residential occupancy.

2. **Number**. A maximum of one Home Occupation is permitted per dwelling unit.

3. **Placement on Lot**.

   a. A Home Occupation shall be carried out entirely within an enclosed structure on the premises.

   b. A maximum of 25 percent of the gross floor area of the dwelling unit may be used for the Home Occupation.

4. **Compatibility.**

   a. The use shall not change the residential character of the dwelling.

   b. Storage or display of goods and materials associated with the Home Occupation must be completely within an enclosed structure.

   c. No generation of dust, odors, noise, vibration or electrical interference or fluctuation shall be perceptible beyond the property line.

5. **Number of Employees**.

   a. The Home Occupation shall be operated by a resident of the dwelling.

   b. No full-time equivalent non-residents of the dwelling may be employed on the premises.

6. **Customers/Clients**.

   a. All sales shall be fully online and/or by appointment only.

   b. Any visits to the site by business customers or clients shall be by appointment only.

   c. Appointments may not overlap.

7. **Hours of Operation**. Appointments shall be limited to between the hours of 8 a.m. and 8 p.m.

8. **Outdoor Entrance**. A Home Occupation shall not have a private outdoor entrance.

9. **Parking**.

   a. Customers/clients shall park on-street in front of the Home Occupation or in the driveway of the Home Occupation.

   b. One commercial vehicle may be parked on a lot with a Home Occupation at one time.

   c. Parking must be provided so as not to create hazards or street congestion.

10. **Signs**. Home Occupations shall not have outdoor signs or indoor signs which are visible from the public right-of-way or adjacent residential property.

P. **Outdoor Display / Sale of Merchandise, Accessory.**

1. **Location.** Outside sales must be clearly secondary to the principal use within the associated permanent structure and shall generally be located to the side or rear of the principal structure. Display of merchandise for sale outdoors in the front yard shall not exceed a maximum of 12 feet from the front face of the building.

2. **Displays on Public Sidewalks.** Merchandise for sale may be placed on the public sidewalk in front of the shop where the building is directly adjacent to the sidewalk provided that adequate pedestrian clearance on the sidewalk is maintained (minimum of five feet). Such sales may also be subject to other Town ordinances.

Q. **Outdoor Seating, Accessory.** Outdoor Seating is only allowed as an accessory use to any Restaurant, Bar, or other uses where food or beverages are served for consumption as an accessory use, subject to the following standards:

1. No sound production or reproduction machine or device (including, but not limited to musical instruments, loud-speakers, and sound amplifiers) shall be used, operated, or played in the Outdoor Seating area at a volume that is any louder than necessary for the convenient hearing of persons within the Outdoor Seating area, and that would disturb the peace, quiet, or comfort of adjoining properties or businesses.

2. Hours of operation of the Outdoor Seating area shall be the same as those for the establishment.

3. Food preparation shall occur only within the enclosed principal building, unless otherwise permitted by this UDO.

4. The Outdoor Seating area shall not obstruct the movement of pedestrians along sidewalks or through areas intended for public use.

5. The Outdoor Seating area shall be limited to that part of the sidewalk directly in front of the property containing the eating or drinking establishment unless the owner of adjoining property or business agrees in writing to an extension of the Outdoor Seating area to that part of the sidewalk in front of the adjoining property or business.

6. A clear pathway at least five feet wide shall be maintained to allow through public pedestrian traffic along the sidewalk and from the sidewalk into the entrance to the establishment. A greater width may be required where necessary to ensure the safe and convenient flow of pedestrian traffic.

7. A clear separation of at least five feet shall be maintained from any alley, crosswalk, fire hydrant, or similar public or emergency access feature in or near the sidewalk. A greater clear distance may be required where necessary to ensure use of the public or emergency access feature.

8. No objects shall be placed along the perimeter of the outdoor sidewalk seating area that would have the effect of forming a physical or visual barrier discouraging the use of the sidewalk by the general public.

9. Tables, chairs, umbrellas, and other furnishings associated with the Outdoor Seating area shall be of sufficient quality design, materials, and workmanship to ensure the safety and convenience of area occupants and compatibility with adjacent uses.

10. No tables, chairs, umbrellas, or other furnishings or equipment associated with the Outdoor Seating area shall be attached, chained, or otherwise affixed to any curb, sidewalk, tree, post, sign, or other fixture within the Outdoor Seating area.

11. The Outdoor Seating area may be located in off-street parking located on the same lot as the principal use if:

    a. No more than 15 percent of total parking spaces are utilized;

    b. A fence, landscape hedge, or other barrier approved by the Administrator, with a minimum height of three feet and a maximum height of four feet is utilized to define the outdoor seating area from parking areas; and

    c. Located outside of landscape areas.

12. The Outdoor Seating area may be located in a front yard or cantilevered upper story if all points of building ingress and egress are maintained.

13. The Outdoor Seating area may be permitted on a public sidewalk abutting or adjacent to the front of the property containing the principal establishment also subject to the following requirements:

    a. A Right-of-Way Encroachment Agreement must be obtained from Town Public Works or NCDOT. Terms of the encroachment agreement will include, but are not limited to:

    b. Ensures that the operator is adequately insured against and indemnifies and holds the Town harmless for any claims for damages or injury arising from sidewalk dining operations, and will maintain the sidewalk seating area and facilities in good repair and in a neat and clean condition;

    c. Authorizes the Town, during a public event held within the right-of-way, to temporarily remove or relocate or order the temporary removal or relocation of any sidewalk seating facilities, at the operator's expense, if the operator fails to comply with a Town order to do so within a reasonable time period;

    d. Authorizes the Town to suspend authorization of the Outdoor Seating use, and to remove or relocate or order the removal or relocation of any sidewalk seating facilities, at the owner's expense, as necessary to accommodate repair work being done to the sidewalk or other areas within the right-of-way containing or near the outdoor seating area; and

    e. Authorizes the Town to remove or relocate or order the removal or relocation of any sidewalk seating facilities, at the operator's expense, if the operator fails to comply with a Town order to do so within a reasonable time period.

    f. In the DT District, all furniture must be of similar color and material with the existing street furnishings. Under no circumstances shall plastic tables or chairs, vinyl umbrellas, and/or plastic barriers be permitted.

R. **Outdoor Storage Yard.** Outdoor Storage Yard areas shall be paved in a hard surface material set forth in the WFD3.

S. **Produce Stand.**

1. No more than one stand per lot is allowed.

2. Sales shall be limited to the retail sale of agricultural products, including the sale of value added products made from such agricultural products by the producer (e.g., jams and jellies, juices).

3. The area occupied by the stand shall not exceed 300 square feet.

T. **Public Art, Mural.**

1. **Allowed Principal Uses.** Murals are allowed on multifamily, mixed use, and nonresidential structures and buildings only.

2. **Area and Allowed Elevations.**

    a. **Front Elevation**. Mural may cover up to 50 percent of a front elevation of a building.

    b. **Other Elevations**. Murals may cover up to 100 percent of all other facades of a building.

    c. **Public Arts Commission Project**. If a mural is a Public Arts Commission project, it may cover up to 100 percent of any facade elevation.

3. **Content.**

    a. Except for PAC projects, words shall not comprise more than 25 percent of the area of the mural.

    b. Prohibited content per Section 13.8.2B is prohibited on murals.

    c. Electrical or mechanical components or a changing image art display are prohibited.

4. **Installation and Maintenance.**

    a. Murals shall be maintained in good repair, free from peeling paint or damage due to age, weather, vandalism, or the like.

    b. Anti-graffiti coating (non-sacrificial) is required.

    c. UV ray resistant paint is required.

d. All surfaces must be power washed and primed (two coats) prior to Mural installation.

e. If for any reason the Mural is removed, altered, or destroyed, the property owner is responsible for restoring the surface the Mural is painted or mounted on to the original condition.

f. If a Mural is constructed off-site on moveable panels to be installed on a façade, the attachment of said panel must comply with the NC Building Codes, subject to required permits and inspections, panels, must not cover window or door openings or otherwise impede building egress or pedestrian traffic or block/cover any intake or exhaust openings (maintaining proper clearance), the attached devices must not compromise the structure integrity of the surface to which the panels are attached, and said panels must be securely attached to prevent failure due to high wind conditions, vandalism or age.

i. All installation hardware must be rust resistant

ii. Wooden panels must be sanded, sealed and waterproofed (with proper primer and topcoat) on the front, sides and back.

iii. Panels must be attached in mortar joints not the brick or stone face for installation of moveable panels on contributing buildings within the Downtown Historic White Street District or LH-O District.

g. In the Downtown Wake Forest National Register Historic District.

i. Murals shall not be painted on previously unpainted masonry.

ii. Murals may be painted on existing painted walls provided that a moisture test is conducted and determined that the paint shall provide a sound film.

iii. Decal murals shall not be installed on historic brick walls.

U. **Public Safety Training Structure.**

1. **Accessory Allowance.** Public Safety Training Structures shall be allowed accessory to public service/safety facility use only.

2. **Setbacks.** Public Safety Training Structures shall be setback a minimum of 30 feet from all property lines.

3. **Height.** Public Safety Training Structures shall not exceed 35 feet in height unless the setback from the property line is increased by five feet for each additional foot of structure height to a maximum height of 50 feet.

4. **Design Standards Exemption.** Public Safety Training Structures are exempt from the building configuration and design standards of Chapter 5.

V. **Scoreboard.**

1. **Accessory Allowance.** Scoreboards shall be allowed accessory to Recreation Facility, School, Middle, School, High, and Park uses only.

2. **Location.** Scoreboards shall be located as far from residential property lines as site conditions allow.

3. **Orientation.** Scoreboards shall be oriented with their primary face directed away from residential property lines and public right-of-way.

4. **Height.** Scoreboards shall not exceed 35 feet in height.

5. **Operation.** Scoreboards shall be operated only as a part of an organized event.

6. **Brightness.** Scoreboards shall meet the outdoor lighting standards established in Chapter 10.

7. **Number.** One Scoreboard shall be permitted per outdoor sports field or court.

W. **Solar Energy Collection System, Canopy.**

1. Canopy Solar Energy Collection Systems are permitted over any principal or accessory parking lot.

2. The height of Canopy Solar Energy Collection Systems shall not exceed the height of the principal building that the parking area serves or 20 feet, whichever is greater.

3. The minimum height of Canopy Solar Energy Collection Systems shall allow clearance for emergency and service vehicles.

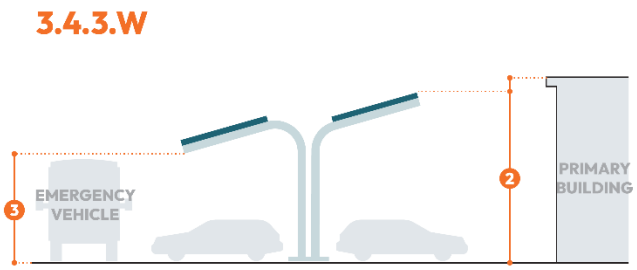


Figure 14: Canopy Solar Energy Collection System

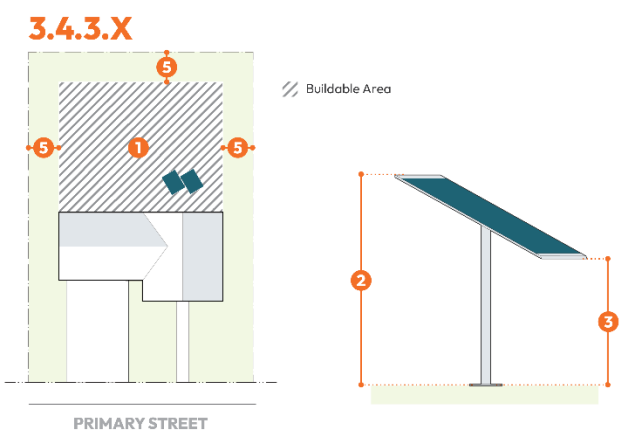


Figure 15: Ground Mounted Solar Energy Collection System

Solar Energy Collection System, Ground Mounted.

1. Ground Mounted Solar Energy Collection systems shall be permitted in the rear yard only.

2. The maximum height of Ground Mounted Solar Energy Collection Systems shall be five feet, measured from the grade at the base of the pole to the highest edge of the system.

3. Minimum clearance between the lowest point of the system and the surface on which the system is mounted shall be 12 inches.

4. Ground Mounted Solar Energy Collection Systems shall be exempt from the impervious surface limits if the ground directly under the solar panel is planted with native plantings and ground cover.

5. All parts of the Ground Mounted Solar Energy Collection System shall be set back five feet from the side and rear lot lines and shall not be located in an easement.

6. **Sites One to Five Acres in Area**. In addition to meeting the standards in provisions (a) through (e) above, Ground Mounted Solar Energy Collection Systems occupying one to five acres in area shall also meet the following requirements:

   a. **Decommissioning Required**. Any Solar Energy use that is not actively in use for 12 consecutive months the operator shall decommission the operator shall have six months to fully decommission the use, including all panels, structures, accessories, and appurtenances, shall be entirely removed from the lot.

   b. **Decommissioning Plan**. Prior to receiving approval, the applicant for any Solar Energy use shall submit a decommissioning plan to ensure that the project is properly decommissioned, which shall include:

      i. Procedures for the removal of structures, debris, and cabling, including those below the soil surface,

      ii. Provisions for the restoration of the natural soil and vegetation,

iii. A provision that the terms of the decommissioning plan shall be binding upon the owner or operator and any of their successors, assigns, or heirs.

Y. **Solar Energy Collection System, Roof Mounted**.

1. Properties in the LH-O District shall receive a Certificate of Appropriateness prior to the installation of roof mounted solar energy collection systems.
2. Roof Mounted Solar Energy Collection Systems may be located on any roof face of principal or accessory buildings. Systems should be flush mounted when possible.
3. Systems on structures 35 feet or less in height shall not extend beyond 12 inches parallel to the roof surface.
4. Systems on structures greater than 35 feet in height shall not extend beyond thirty-six (36) inches parallel to the roof surface.
5. Systems on all structures shall not extend above the highest peak of a pitched roof.
6. All materials used for racking, mounts, mounting clamps, and flashings shall be of a color consistent with the color of the roof surface to minimize visibility.

Z. **Storage Container**.

1. A storage container may include a portable outdoor storage device, shipping container, trailer, or other purpose built storage structure approved by the Administrator.
2. The maximum dimensions of a storage container shall be:
   a. Length: 20 feet
   b. Width: 8 feet
   c. Height: 10 feet
3. Stacking one or more storage containers on top of another storage container or any structure is prohibited.
4. Storage containers shall be located outside of:
   a. Drive aisles,
   b. Fire lanes, and
   c. Rights of way.
5. Storage containers shall be located to the rear of the principal building and shall not be located between a primary building wall and the public right of way.
6. The number of storage containers per lot shall be limited to:
   a. IND District: 4
   b. CB and AC-O Districts: 1

3.5 Temporary Uses

3.5.1 Temporary Uses

Temporary uses are allowed by district as established in Table 3.5 Temporary Uses.

3.5.2 The following shall be used in the interpretation of Table 3.5.

A. **Permitted Uses**. Uses which are marked as "P" in the table shall be allowed temporary uses subject to all applicable regulations of this UDO.

B. **Prohibited Uses**. A blank space in the table indicates that a use is not permitted.

C. **Uses Not Listed**. A use not specifically listed is prohibited unless the Administrator determines the use to be part of a use category as described in Section 3.2 or determines the use to meet the definition of Temporary Use as established in Chapter 18.

D. **Supplemental Standards**. If a use has supplemental standards, they are referenced in the Supplemental Standards column. Use specific standards shall apply to temporary uses.

E. **Other Districts**. The PUD, LH-O, MV-O, and WP-O districts are not included in Table 3.5 Temporary Uses. The allowed uses in these districts shall be as detailed below:

1. **PUD**. Uses allowed in a PUD district shall be as established through the PUD approval process, in accordance with Section 16.7.

2. **LH-O, MV-O, and WP-O**. Uses allowed in the LH-O, MV-O, and WP-O districts shall be the uses allowed in the underlying base district unless otherwise specified in this UDO.

Table 3.5 Temporary Uses

Key: P = Permitted Use; S = Special Use; C = Conditional Use

	SUPPLEMENTAL STANDARDS	GR	NCR	MUR	TSR	NB	CB	IND	CI	OS	TOD-O	AC-O
Contractor Trailer	3.5.4.A	P	P	P	P	P	P	P	P	P	P	P
Emergency Declaration Related		P	P	P	P	P	P	P	P	P	P	P
Farmers Market		P	P	P	P	P	P	P	P	P	P	P
Food Truck, Temporary	3.5.4.B	P	P	P	P	P	P	P	P	P	P	P
Garage / Estate Sale		P	P	P	P	P					P	P
Mobile Classroom	3.5.4.C	P		P				P	P			
Mobile Retail/Services	3.5.4.D	P	P	P	P	P	P	P		P	P	P
Outdoor Display / Sale of Merchandise, Temporary	3.5.4.E			P	P	P	P	P			P	P
Outdoor Storage, Temporary	3.5.4.F				P		P	P			P	P
Pop-up Retail/Restaurant				P	P	P	P	P			P	P
Portable Outdoor Storage Device	3.5.4.G	P	P	P	P	P	P	P	P		P	P
Seasonal Sales	3.5.4.H					P	P					
Special Event		P	P	P	P	P	P	P	P	P	P	P
Temporary Real Estate Sales		P	P	P	P	P	P	P	P	P	P	P

Table 3.5 DT District Temporary Uses					
	Key: P = Permitted Use; S = Special Use; C = Conditional Use				
	SUPPLEMENTAL STANDARDS	Downtown - Historic White Street	Downtown - North	Downtown - Central	Downtown - South
Contractor Trailer	3.5.4.A	P	P	P	P
Emergency Declaration Related		P	P	P	P
Farmers Market		P	P	P	P
Food Truck, Temporary	3.5.4.B	P	P	P	P
Garage / Estate Sale					
Mobile Classroom	3.5.4.C				
Mobile Retail/Services	3.5.4.D		P	P	P
Outdoor Display / Sale of Merchandise, Temporary	3.5.4.E	P	P	P	P
Outdoor Storage, Temporary	3.5.4.F				
Pop-up Retail/Restaurant		P	P	P	P
Portable Outdoor Storage Device	3.5.4.G				
Seasonal Sales	3.5.4.H		P	P	P
Special Event		P	P	P	P
Temporary Real Estate Sales		P	P	P	P

3.5.3 Temporary Use Duration Limits

The allowed duration of temporary uses shall be limited per Table 3.5.3.

Table 3.5.3 Temporary Use Duration Limits			
Temporary Use	Maximum Duration per Period	Minimum Separation of Periods	Maximum Duration per Year
Contractor Trailer / Temporary Real Estate Sales	n/a	1 year	n/a
Emergency Declaration Related	Emergency declaration period	n/a	n/a
Farmers Market	3 days per occurrence, up to 120 days per year	n/a	n/a
Food Truck, Temporary	1 day	n/a	n/a
Garage / Estate Sale	3 days	30 days	24 days
Mobile Classroom	n/a	1 year	n/a
Mobile Retail/Services	1 day	n/a	90 days
Outdoor Display / Sale of Merchandise, Temporary	60 days	30 days	120 days
Outdoor Storage, Temporary	30 days	n/a	60 days
Portable Outdoor Storage Device	30 days	n/a	30 days
Pop-up Retail/Restaurant	60 days	30 days	120 days
Seasonal Sales	60 days	n/a	120 days and limited to four periods per year
Special Event	As determined by Special Event Permit	As determined by Special Event Permit	As determined by Special Event Permit

3.5.4 Temporary Use Supplemental Standards

A. **Contractor Trailer / Temporary Real Estate Sales.**

1. Contractors' Trailers and Temporary Real Estate Sales model units are allowed when accessory to a construction project or a new development.

2. Such use shall be limited to a period not to exceed the duration of the active construction phase of such project or the active selling and leasing of space in such development.

3. No such use shall contain any sleeping or cooking accommodations, except those located in a model unit.

4. No such trailer, unit, or office shall be used as the general office or headquarters of any firm.

B. **Food Truck, Temporary.** A stand-alone Food Truck whether motorized or non-motorized may be set up on a semi-regular, or one-time basis subject to the following criteria:

1. The owner or operator of the Food Truck shall obtain and maintain all required licenses at all times.

2. The permit shall be displayed to the public in a visible location on the Food Truck.

3. Operations shall not be located in a driveway or drive aisle.

4. Operations shall not obstruct parking lot circulation or block access to a public street, alley, sidewalk, or fire lane.

5. The operation of the Food Truck shall not block a pedestrian walkway or public sidewalk in a manner which reduces the width of that walkway or sidewalk to less than five feet or causes damage to any improvements within the public right-of-way.

6. No Food Truck shall be set up on any privately owned lot or parcel without written permission of the owner.

7. Trash receptacles shall be provided, and the owner/operator shall be responsible for keeping the area surrounding the Food Truck clear of any litter and properly cleaned.

8. Signs, except for Freestanding sidewalk signs, shall be permanently affixed to or painted on the food truck. Each Food Truck may have one sandwich board sign which may not be located in any right-of-way or impede pedestrian or vehicular traffic and shall be within 25 feet of the Food truck.

9. Canopies, umbrellas, and outdoor tables and chairs shall not block a pedestrian walkway or public sidewalk in a manner which reduces the width of that walkway or sidewalk to less than five feet or creates a visual obstruction to traffic.

10. Multiple Food Trucks may locate on the same lot or parcel so long as each vendor has the property owner's written permission and all other provisions contained herein are met.

11. No Food Truck shall be located within 50 feet of the established outer boundary of any Town-permitted or licensed event where the sale of merchandise and food has been allowed unless it is part of the event.

12. When not in operation, a Food Truck shall not be stored in the public right-of-way

13. If located in a NCDOT right-of-way, all NCDOT standards shall be met.

14. Food Trucks are permitted in Town right-of-way in the DT District only and subject to the following criteria:

    a. No merchandise shall be offered, displayed or sold and no customers served except from the sidewalk,

    b. Only non-motorized carts may be located on sidewalks,

    c. Carts or trucks shall be located at least 25 feet from any intersection, 15 feet from any driveway, and 10 feet from any building or structure,

    d. Food Trucks shall comply with all traffic and parking ordinances of the Town, as they may be amended.

15. Any location in a Town right-of-way, including sidewalks, may be subject to temporary suspension or revocation without cause, but for

reasons that may include construction, repairs, maintenance or emergencies as determined by the Town.

16. A permit shall not be required for Food Trucks that are:

    a. Part of a Town-permitted event, or

    b. For a private, catered event occurring on private property (private parties, reunions, weddings and the like) in any District.

17. A street closure permit may be required in order to locate a Food Truck on any Town street or right-of-way where the provisions contained in this Section cannot be met. Food Trucks may not cater for private events from either the sidewalk or road right-of-way without an approved street closure permit.

18. The provisions of this Section shall not apply to any minor-operated business.

C. **Mobile Classroom.**

1. **Accessory Allowance.** Mobile Classroom units shall be allowed accessory to School, Elementary, School, High, School, Middle and Place of Worship uses only.

2. **Location.** Mobile Classroom units shall be located to the rear or interior side of the principal building.

3. **Design Standards.**

    a. The design standards established in Chapter 6 shall not apply to Mobile Classroom units; however, screening is required.

    b. Mobile Classroom units shall be placed on a masonry foundation and all wheels, axles, hitches, and other mobile appurtenances shall be removed.

4. **Number.** A maximum of nine Mobile Classroom units shall be allowed on a school and/or place of worship site concurrently.

5. **Connectivity.** Mobile Classroom units shall be connected to the principal building via pedestrian walkways meeting the standards of Chapter 9.

D. **Mobile Retail/Services.** A Mobile Retail/Services use whether motorized or non-motorized may be set up on a semi-regular, or one-time basis subject to the following criteria:

1. The owner or operator of the Mobile Retail/Services use shall obtain and maintain all required licenses at all times.

2. The permit shall be displayed to the public in a visible location on the Mobile Retail/Services structure.

3. Operations shall not be located in a driveway or drive aisle.

4. The owner or operator shall ensure that all trash generated by Mobile Retail/Services use is disposed of in designated receptacles. And shall arrange for regular trash collection services to handle waste generated by the Mobile Structure. Operations shall not obstruct parking lot circulation or block access to a public street, alley, sidewalk, or fire lane.

5. The operation of the Mobile Retail/Services use shall not block a pedestrian walkway or public sidewalk in a manner which reduces the width of that walkway or sidewalk to less than five feet or causes damage to any improvements within the public right-of-way.

6. The owner or operator shall place safety cones around the Mobile Retail/Services structure to alert pedestrians and vehicles to its presence for safety.

7. No Mobile Retail/Services use shall be set up on any privately owned lot or parcel without written permission of the owner.

8. Signs, except for freestanding sidewalk signs shall be permanently affixed to or painted on the Mobile Retail/Services structure. Each Mobile Retail/Services use may have one sandwich board sign which may not be located in any right-of-way or impede pedestrian or vehicular traffic and shall be within 25 feet of the mobile retail/services use.

9. One Mobile Retail/Services uses may locate and operate on a lot or parcel at a time.

10. When not in operation, a Mobile Retail/Services structure shall not be stored in the public right-of-way.

11. If located in a Town right-of-way:

    a. No merchandise shall be offered, displayed or sold and no customers served except from the sidewalk,

    b. Only non-motorized Mobile Retail/Services structures may be located on sidewalks,

    c. Mobile Retail/Services structures shall be located at least 25 feet from any intersection and 15 feet from any driveway,

12. Any location in a Town right-of-way, including sidewalks, may be subject to temporary suspension or revocation without cause, but for reasons that may include construction, repairs, maintenance or emergencies as determined by the Town.

13. A permit shall not be required for Mobile Retail/Services uses that are:

    a. Part of a Town-permitted event, or

    b. For a private, catered event occurring on private property (private parties, reunions, weddings and the like) in any district.

14. A street closure permit may be required in order to locate a Mobile Retail/Services use on any Town street or right-of-way where the provisions contained in this Section cannot be met. Mobile Retail/Services uses may not cater for private events from either the sidewalk or road right-of-way without an approved street closure permit.

15. The provisions of this Section shall not apply to any minor-operated business.

E. **Outdoor Display / Sale of Merchandise, Temporary.**

1. Only those goods and materials offered for sale by the existing on-site use may be displayed or sold.

2. Temporary outdoor display or sales areas shall not be located within any required yard setback, required parking area, required loading space, or fire lane.

3. Temporary outdoor display or sales areas shall be surfaced with an approved hard surface material. Partially paved or unpaved outdoor retail sales areas shall be prohibited.

4. Temporary outdoor display or sales areas shall not exceed 10 percent of the gross floor area of the principal building on the property unless approved through a conditional district rezoning.

F. **Outdoor Storage, Temporary.**

1. Temporary Outdoor Storage shall be located to the rear and interior side of the principal building.

2. Temporary Outdoor Storage shall not be located in any fire lane, required parking space, or loading zone, or in a way that inhibits vehicular and pedestrian circulation.

G. **Portable Outdoor Storage Device.**

1. Only one Portable Outdoor Storage Device may be located on a lot at a time.

2. No portion of any container may extend onto the public right-of-way, including but not limited to sidewalks, parkways, streets, or alleys.

3. The Portable Outdoor Storage Device shall not exceed eight feet in width, 16 feet in length and eight feet in height, or 1,024 cubic feet.

4. The Portable Outdoor Storage Device must be located on an all weather surface, such as pavement or gravel.

5. Every Portable Outdoor Storage Device must be locked and secured when not being loaded or unloaded.

H. **Seasonal Sales.**

1. Seasonal Sales areas may use a maximum of 20 percent of the parking spaces required for the operation of the principal use or 2,000 square feet, whichever is less.
2. Seasonal Sales areas shall not block vehicular circulation and movement of emergency vehicles.
3. Seasonal Sales areas shall not block pedestrian walkways in a manner which reduces the width of that walkway to less than five feet.
4. Seasonal Sales hours of operations shall be limited to between 8 a.m. and 9 p.m.
5. Seasonal Sales operators shall notify the fire department of the duration, location, and nature of seasonal sale activities a minimum of 30 days prior to the commencement of the seasonal sales activity.
6. Seasonal Sales shall not be located in a fire lane.

4 LOT AND SUBDIVISION STANDARDS

4.1 General Provisions

4.1.1 Purpose

The purpose of this Chapter is to establish criteria for lots and subdivision of real property. These standards are set forth to:

A. Provide for the orderly growth and development of the Town;

B. Provide for suitable residential and nonresidential development that further the goals of the Town in accordance with the Comprehensive Plan;

C. Ensure the proper legal description, monumentation, and recordation of subdivided land; and

D. Create conditions essential to public health, safety, and general welfare.

CONTENT

4.1 General Provisions

4.2 Lots

4.3 Conservation Design

4.4 Subdivision Surveys

4.1.2 Applicability

A. The standards of this Chapter shall apply in accordance with Section 1.4.

B. The standards of this Chapter shall not apply to subdivisions statutorily exempted by NCGS §160D, provided that lot standards of Section 4.2 are met as specified in the following exemptions:

1. The combination or recombination of portions of previously subdivided and recorded lots where the total number of lots is not increased and the resultant lots are equal to or exceed the standards of the subdivision regulations of this Unified Development Ordinance (UDO),

2. The division of land into parcels greater than 10 acres where no street right-of-way dedication is involved,

3. The public acquisition by purchase of strips of land for the widening or opening of streets or for public transportation system corridors,

4. The division of a tract in single ownership whose entire area is no greater than two acres into not more than three lots, where no street right-of-way dedication is involved and where the resultant lots are equal to or exceed the standards of the subdivision standards of the UDO,

5. The division of a tract into parcels in accordance with the terms of a probated will or in accordance with intestate succession under NCGS §29.

C. **Naming of Subdivisions and Development**. The name of a subdivision or other development shall not duplicate nor closely approximate the name of an existing subdivision within the Town.

4.2 Lots

4.2.1 Applicability

The standards of this Section shall apply to all subdivisions and lots.

4.2.2 Lot Dimensions

Each lot shall meet the applicable lot area and width standards established in Chapter 2, unless otherwise approved by this UDO, and otherwise be developable in accordance with the standards in this UDO and Wake Forest Development Design and Details (WFD3).

4.2.3 Lot Arrangement

Lots, with the exception of open space lots, remnant lots, and/or lots owned by a homeowner's/property owner's association, shall be arranged:

A. In relationship to topography, flood hazards, tree canopy retention areas, and other site conditions to minimize difficulties in providing a reasonable building site and yard area in accordance with requirements of this UDO and the WFD3, and

B. To minimize the level to which easements encumber lots, easements shall be located, to the maximum extent possible, outside of lots or on lot boundaries and shall be no wider than necessary to perform their function.

4.2.3.B

Figure 1: Easement Encumbrances 01

Figure 2: Easement Encumbrances 02

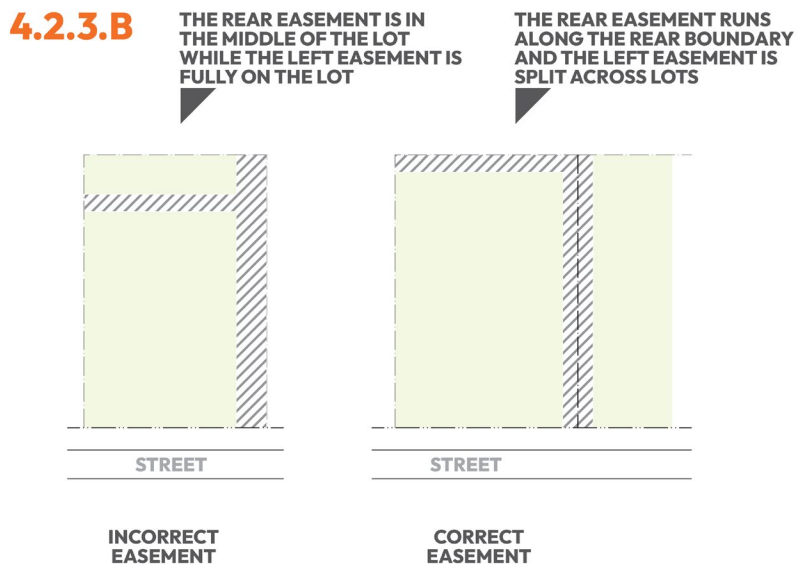


Figure 3: Easement Encumbrances 03

C. So that stormwater may be easily directed away from buildings in subsequent site-specific development. Lots shall be configured so that buildings are not located in drainage ways. No portion of a Stormwater Control Measure (SCM) easement shall be located on subdivided lots.

4.2.4 Lot Frontage

Each lot shall have minimum frontage on a public street right-of-way in accordance with lot width minimum requirements established in Chapter 2 District Standards or the residential infill development standards in Section 2.8, except for the following:

A. In the MUR, TSR, TOD-O or AC-O Districts, if the lot has vehicular access from a rear alley, it may front on pedestrian accessible open space instead of a street,

B. Subdivided lots within Dwelling-Cottage Home Court developments provided that the development site as a whole meets the public street right-of-way frontage requirement.

4.2.5 Through Lots

The creation of through lots shall be avoided except where necessary to provide access to residential development from a street other than a major or minor thoroughfare, or to overcome specific disadvantages of existing, pre-development topography and lot configuration.

4.2.6 Flag Lots

The creation of flag lots is prohibited.

4.2.7 Lot Line Orientation

Lot lines shall intersect a fronting street right-of-way in a substantially perpendicular manner or radially to curves of streets or cul-de-sacs.

4.2.5

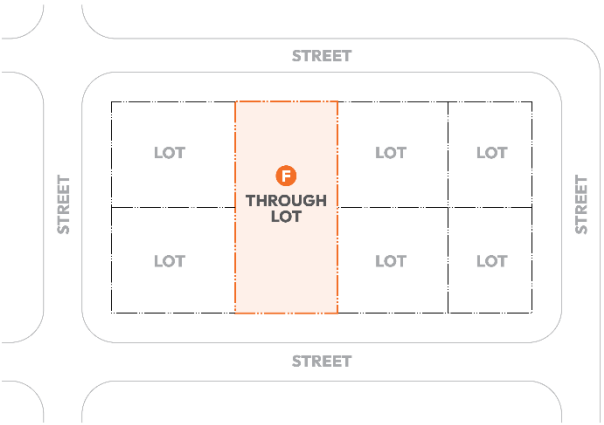


Figure 4: Through Lots

4.2.7

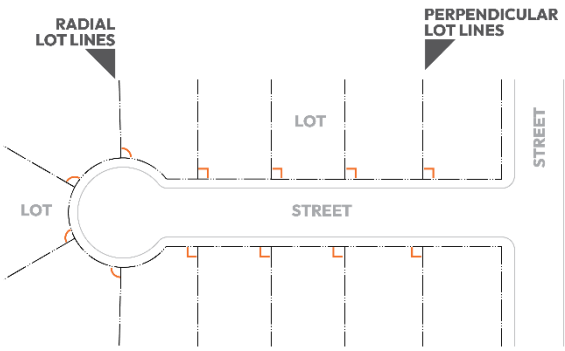


Figure 5: Lot Line Orientation

4.3 Conservation Design

4.3.1 Purpose

The purpose of conservation design is to:

A. Provide flexibility of design in order to promote environmentally sensitive and efficient uses of the land,

B. Preserve in perpetuity unique or sensitive natural resources such as floodplains, wetlands, streams, groundwater, steep slopes, woodlands, and wildlife habitat,

C. Preserve important historic and archaeological sites,

D. Permit clustering of houses and structures on less environmentally sensitive soils which will reduce the amount of infrastructure, including paved surfaces and utility easements, necessary for residential development,

E. Reduce erosion and sedimentation by minimizing land disturbance and removal of vegetation in residential development,

F. Promote interconnected greenways and corridors and contiguous green space within Wake Forest and with adjacent jurisdictions,

G. Encourage interaction in the community by clustering houses and orienting them closer to the street, providing gathering places and encouraging use of parks and community facilities as focal points in the neighborhood, and

H. Protect agricultural land.

4.3.2 Applicability

A. Conservation design is allowed in any residential subdivision and any residential portions of mixed-use subdivisions.

B. Conservation design is required for all residential subdivisions in the Falls Lake Protected and Smith Creek Critical and Protected subdistricts of the WP-O District.

4.3.3 Relation to Chapter 6: Open and Community Space Standards

Conservation design subdivisions shall be exempt from the requirements of Chapter 6: Open and Community Space Standards except for Section 6.2.6 (Ownership and Maintenance).

4.3.4 Conservation Design Standards

A. **Required Conservation Area.** A minimum of 50 percent of the total gross area of the development site shall be identified as a conservation area and placed in a conservation area easement where no development activity, with the exception of required open space activation or low impact infrastructure (Section 6.5), may occur. Routine maintenance and other measures to ensure public safety are permitted within the conservation area.

B. **Ownership and Maintenance.** Required conservation area(s) shall meet the ownership and maintenance standards of Section 6.2.6.

C. **Conservation Area Types.**

1. **Primary Conservation Area.** A minimum of 80 percent of the required conservation area shall consist of primary conservation areas. Primary conservation areas shall include:

   a. Special Flood Hazard Areas and Future Conditions Flood Hazard Areas,

   b. Riparian buffers along all perennial and intermittent streams,

   c. Wetlands and any provided or required buffers,

   d. Tree canopy retention areas greater than 1,600 square feet in contiguous area (Section 7.2.3.B.2.a),

   e. Lakes, ponds, and other water bodies, excluding created stormwater management facilities,

   f. Areas at least 5,000 contiguous square feet in size with any natural slopes greater than 25 percent,

   g. Greenways and other open space identified in adopted plans,

h. Historic properties designated as Local Historic Landmarks, eligible for or listed in the National Register of Historic Places, Cemeteries, and

i. Sites at least five contiguous acres in size identified by the Town, County, State, or federal government as active or inactive farmland or farmland meeting the requirements of "Prime Farmland" as defined by the United States Department of Agriculture.

2. **Secondary Conservation Area**. If all primary conservation area resources identified do not meet the minimum conservation area requirement, the following areas may be credited toward the requirement:

a. Tree canopy retention areas less than or equal to 1,600 square feet in contiguous area (Section 7.2.3.B.2.a),

b. Areas at least 2,000 contiguous square feet in size with any natural slope greater than 20 percent, unless identified as primary conservation area, and

c. Stormwater management facilities engineered as bioretention areas or wetlands.

D. **Activation Elements**. A minimum of 20 percent of the required conservation area shall meet the open space activation element requirements established in Section 6.5.2.

E. **Maximum Density per Acre**. The maximum allowed gross density is three dwelling units per acre.

F. **Allowed Uses**. Allowed uses shall be as established in the governing base or overlay district, except for conservation design in the GR District where townhomes are permitted without Conditional District rezoning.

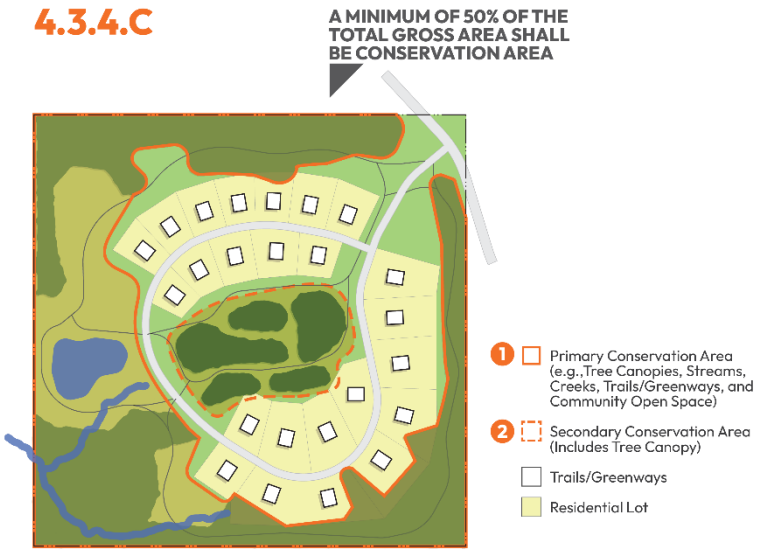


Figure 6: Primary and Secondary Conservation Areas

G. **Conservation Design Dimensional Standards**. Regardless of base district designation, the dimensional standards applicable to conservation design shall be as established in Table 4.3.4.G below.

Table 4.3.4.G
Conservation Design Dimensional Standards

Lot Standards	
Lot Area	No minimum [1]
Lot Width	
Yard Setbacks	
Front, Minimum (ft)	8
Street Side, Minimum (ft)	8
Interior Side, Minimum (ft) [2]	5
Rear w/ Alley, Minimum (ft)	20
Rear w/o Alley, Minimum (ft)	15

Notes

[1] If lot width is less than 50 feet, alley access or shared driveway access to rear loaded garages or parking areas is required unless, the lot(s) is adjacent to a tree canopy retention area or environmental feature and the lot(s) is adjacent to the perimeter of the development site, in which case, a maximum of 50 percent of lots may have an attached, front loaded garage so long as the portion of the building associated with the attached garage is no more than 14 feet in width and recessed a minimum of 8 feet behind the front facade of the unit.

[2] No setback shall be required for townhomes.

4.3.5 Conservation Design Process

The following shall be required for a subdivision proposal to be reviewed as a conservation design subdivision.

A. **Conservation Design and Improvements Plan Requirements**.

1. **Step 1: Development Site Analysis Map**.

a. The applicant shall prepare a map of the development site and all land within 500 feet of the development site that identifies existing natural resources, including but not limited to the resources detailed in Section 12.2.1. The information required to be presented in the development site analysis may be produced primarily from existing sources in order to ensure the process is economical for the applicant.

b. The applicant shall prepare an accompanying narrative analysis of existing natural resources detailing their quality and environmental value.

c. The applicant shall submit the development site analysis map to the Administrator for review.

Step 2: Development Site Inspection. After receipt of the development site analysis map, the applicant shall schedule an inspection of the development site with Town staff. The applicant or applicant's representative shall be present at the development site inspection. The purpose of the development site inspection is to:

d. Familiarize the Administrator with the existing development site conditions and natural and historic features of the development site, and

e. Provide an opportunity to discuss development site concepts, including the general layout of conservation areas and potential locations for proposed structures, utilities, streets, and other development features. Comments made by the Administrator during the development site inspection shall be nonbinding. No official decision on the conservation design plan shall be made during the development site inspection.

2. **Step 3: Conservation Design and Improvements Plan**. Based on the development site analysis map and the development site inspection, the applicant shall prepare:

   a. A conservation design map that depicts proposed primary conservation areas, secondary conservation areas, and development areas, in accordance with Section 4.3.4.C

   b. A conservation design improvements plan including utilities, roadways, open space activation elements, other development features, buffers (if applicable), and lot lines in the proposed development areas.

B. **Conservation Design and Improvements Plan Review and Approval**. Along with the subdivision plan (16.5.12), the applicant shall submit the conservation design and improvements plan to the Administrator for review and approval in accordance with the purpose of conservation design as established in Section 4.3.1.

C. **Final Plat**. The final plat shall identify the primary and secondary conservation areas as a conservation area easement.

4.4 Subdivision Surveys

4.4.1 Applicability

The requirements of this Section shall apply to all subdivisions.

4.4.2 Permanent Concrete Monuments

Permanent concrete monuments four inches in diameter or square, three feet long, shall be placed at not less than two corners of the subdivision provided that additional monuments shall be placed where necessary so that no point within the subdivision lies more than 500 feet from a monument. Two or more of the required monuments shall be designated as control corners. The top of each monument shall have an indented cross, metal pin, or metal plate to identify properly the location of the point. A monument shall be set at least 30 inches in the ground with at least six inches exposed above the ground unless this requirement is impractical because of traffic or other factors. All monuments shall be shown on the final plat.

4.4.3 Markers

All lot corners, all points where the street lines intersect the exterior boundaries of the subdivision, and all angle points and points of curve in each street shall be marked with iron pipe either three quarter inches or one inch in diameter and 18-24 inches long, driven so as to be within one inch of finished grade.

4.4.4 Property Corner Tie

One or more corners of the subdivision shall, by a system of azimuths or courses and distances, be accurately tied to a monument of some United States or State Agency Survey System, such as the United States Coast and Geodetic Survey Systems, where such monument is within 2,000 feet of said corner. Where the North Carolina Grid System coordinates of said monument have been published by the North Carolina Department of Natural and Economic Resources, the coordinates of the referenced corner shall be computed and shown X and Y ordinates on the map. Where such a monument is not available, the tie shall be made to some pertinent and permanent recognizable landmark or identifiable point.

4.4.5 Accuracy

A. The angular error of closure shall not exceed 25 seconds times the square root of the number of angles turned. The linear error of closure shall not exceed one foot per 10,000 feet of perimeter of the lot or tract of land.

B. The accuracy of the survey shall be designated on the Final Plat by a certificate/form completed by the person under whose supervision the survey or plat was made and including all information required by HB #454; 47-30(d)).

5 BUILDING CONFIGURATION AND DESIGN STANDARDS

5.1 General Provisions

5.1.1 Purpose

The purpose of these building design standards is to ensure that the physical characteristics of proposed development are compatible with the context of the surrounding areas, to preserve the unique visual character and streetscapes of Wake Forest, and to create unique and inspiring places that support the pedestrian experience and promote economic vitality. These standards encourage creativity and innovation while avoiding obtrusive, incongruous structures.

5.1.2 Applicability

A. The provisions in this Chapter shall apply to all new buildings and expansions to existing buildings in accordance with the following:

1. **New Buildings**. All standards apply.

2. **Expansions of 50% or Greater in Floor Area**. All standards apply to facades visible from the public right-of-way as well as the expansion area and those areas necessary to visually tie the new to the old. Expansions shall be considered cumulatively and shall be based on the square footage of the building at either:

   a. The effective date of this Unified Development Ordinance (UDO), or

   b. Per the originally approved site plan if the building was constructed after the effective date of this UDO.

3. **Expansions of Less Than 50% of Floor Area**. Standards apply to expansion area only and those areas necessary to visually tie the new to the old.

CONTENT

5.1 General Provisions
5.2 Exterior Building Cladding Materials
5.3 Glazing
5.4 Building Entryway Design
5.5 Façade Design and Articulation
5.6 Roof Design Standards
5.7 Cottage Home Court Building Design Standards
5.8 Two-Over-Two Building Design Standards
5.9 Multifamily Building Design Standards
5.10 General Commercial, Greater than 100,000 sq ft Building Design Standards
5.11 Multibuilding Development Standards

4. **Exterior Changes to Existing Structures**. The standards applicable to the design element being modified shall be met. Standards shall not apply to regular building maintenance.

5. **Change of Use**. If the use of a legally established, nonconforming building changes to another use category, per Table 3.3 Principal Uses, the building shall be brought into compliance with the standards for building entryway design in accordance with Section 5.4.

B. Where there is a conflict between specific architectural elements required as part of an adopted plan or associated with local historic standards, or design standards required by an Overlay District and these standards, the former shall control over the standards of this chapter. In the case of a contributing building to a National Register Historic District, the Secretary of Interior's Standards for Rehabilitation will be used as a guideline for exterior work.

C. The provisions of this Chapter shall not apply to Single-Family Detached, Manufactured Home, Duplex, and Townhome Dwelling uses and Triplex and Quadplex Dwelling uses two stories or less in height. The Multifamily standards of this Chapter shall apply to Triplex and Quadplex Dwelling uses greater than two stories in height.

D. All buildings located within the Primary Fire District shall comply with the Primary Fire District building standards as identified in the Code of Ordinances.

E. In the National Register Downtown Wake Forest Historic District, alteration of existing buildings and construction of new buildings shall be in accordance with the Secretary of the Interior's Standards for the Rehabilitation of Historic Properties.

5.2 Exterior Building Cladding Materials

5.2.1 Exterior Building Cladding Materials Categories

The following standards shall apply to principal and accessory buildings with 20 feet or more of façade length. The exterior building cladding materials of accessory buildings with less than 20 feet of façade length shall be consistent with the principal building.

A. **Prohibited Materials.** Prohibited exterior building cladding materials include:

1. Vinyl siding, excluding windows,

2. Unfinished concrete,

3. EIFS, excluding cornices.

B. **Permitted Materials.** Allowable exterior building cladding materials are divided into the following categories:

1. **Category 1 (CI).** Category 1 shall include:

   a. Brick, excluding stamped concrete,

   b. Stacked stone, stone, and stone masonry units,

   c. Architectural concrete masonry units (CMU).

2. **Category 2 (C2)**. Category 2 shall include:

   a. Cementitious fiber board,

   b. Non-corrugated architectural metal siding,

   c. Wood (allowed above first floor only).

3. **Category 3 (C3)**. Category 3 shall include:

   a. Stucco,

   b. Concrete.

C. **Other Materials**. If materials are proposed that are not listed as allowable or prohibited materials, the Administrator may determine their allowability upon reviewing the proposed manner of usage and determining if they meet the purpose of this Chapter.

5.2.2 Allowable Materials by Use and District

Allowable materials and required percentages shall be in accordance with Table 5.2.2.E. If a building is located in an enumerated district, it shall meet the standards of that district regardless of use. If a building is not located in an enumerated district, it shall meet the standards applicable to the planned use of the building.

A. Category 1 materials or glazing shall be utilized to create a continuous base with a minimum height of two feet from the finished grade of all buildings.

B. Glazing shall not be included in the façade material calculations.

C. Mixed-use buildings shall utilize the exterior building cladding materials identified as appropriate for all other commercial buildings on the ground floor and all other residential buildings on upper floors, as determined appropriate by the Administrator.

D. When part of a common development, buildings shall utilize materials that are consistent with or complement buildings within the development.

E. Material changes shall be integrated and responsive to the design of the building, such as at roofline changes, building entryways, at the top of the building story, or to distinguish tenant spaces.

5.2.2

General Commercial (100,000 sq ft or More)
Principal Front and Street Side Façade

Glazing shall not be included in the façade material calculations

Figure 1: Allowable Exterior Cladding Building Materials Example

Table 5.2.2.E Allowable Exterior Building Cladding Materials by Use and District

	Building Façade Elevation					
	Principal Front or Street Side			Side or Rear		
	C1 %	C2 %	C3 %	C1 %	C2 %	C3 %
By Use						
Cottage Home	any	any [1]	prohibited	any	any [1]	prohibited
All Other Residential	50 min	50 max	prohibited	25 min	75 max	prohibited
Public and Institutional	50 min	50 max	prohibited	25 min	75 max	prohibited
General Commercial, 100,000 sq ft or More	50 min	50 max	prohibited	any	any	50 max
All Other Commercial	75 min	25 max	prohibited	25 min	75 max	25 max
Industrial	25 min [2]	75 max [3]	50 max [4]	any	any	50 max
All Other Uses	50 min	50 max	prohibited	25 min	75 max	25 max
By District						
DT [4]	100 min	prohibited	prohibited	25 min	75 max	prohibited
TOD-O	75 min	25 max	prohibited	25 min	75 max	prohibited
AC-O	50 min	50 max	prohibited	25 min	75 max	prohibited

Notes

[1] Cementitious fiber board shall be allowed only. Non-corrugated architectural metal siding is prohibited.

[2] The minimum 25% requirement can be reduced by one percentage point for each percentage point of glazing that exceeds the required minimum.

[3] The maximum percentage may be increased by one percentage point for each percentage point of glazing that exceeds the minimum requirement or with additional articulation beyond the required minimum.

[4] Non-corrugated architectural metal siding shall be allowed only. Cementitious fiber board is prohibited.

5.2.3 Exterior Building Cladding Material Colors

A. The use of high-intensity, metallic, fluorescent, day glow, or neon colors shall be prohibited, except when included in an approved Public Art-Mural.

B. Exterior building colors shall be low reflectance, earth tone, muted, subtle, or neutral colors. Building trim and design features may include brighter colors, other than those in subsection A above, as an accent material.

C. Color variation shall be provided on individual buildings and within multibuilding development.

D. When part of a multibuilding development, buildings shall utilize colors that are consistent with or complement other buildings within the development.

E. Ventilation grates or emergency exit doors located at the ground floor level in the building facade, which are oriented to any public street, shall be consistent or complementary with the colors of the exterior building cladding materials. Unless otherwise required by the building code, such grates and doors shall be located away from public sidewalks and public gathering spaces.

5.3 Glazing

All principal buildings and accessory buildings with 20 feet or more of façade length shall meet the glazing requirements established in Table 5.3; however, all principal buildings in the DT District shall comply with glazing requirements regardless of façade length. If a building is located in an enumerated district, it shall meet the standards of that district regardless of use. If a building is not located in an enumerated district, it shall meet the standards applicable to the planned use of the building.

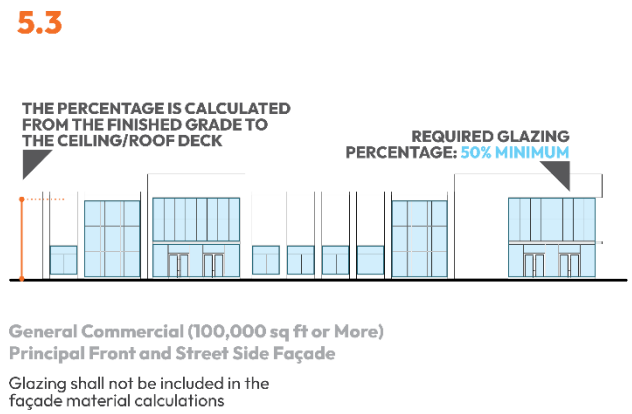


Figure 2: Glazing

Table 5.3
Required Glazing per Building Type

Building Type	Minimum Glazing Percent - Per Ground Floor Façade			
	Principal Front / Street Side [1]	Side	Rear	Minimum Glazing Percent - All Upper- Story Facades
By Use				
Cottage Home	15%	n/a	n/a	15%
All Other Residential	30%	15%	n/a	15%
Public and Institutional	50%	30%	30% [2]	20%
General Commercial, 100,000 sq ft or More	50%	30%	30% [2]	20%
All Other Commercial	60%	40%	30% [2]	20%
Industrial	20%	10%	n/a	15%
Accessory Building [3]	30%	15%	n/a	15%
By District				
DT	70%	40%	40% [2]	20%
TOD-O	70%	40%	40% [2]	20%
AC-O	70%	40%	40% [2]	20%

Notes

[1] 100% of glazing on the principal front and a minimum of 50% of glazing on the street side elevation of a building shall be provide views into the building.

[2] Glazing shall only be required if the façade is adjacent to a parking area or community space.

[3] Standards shall apply to accessory buildings with 20 feet or more of façade length.

5.4 Building Entryway Design

5.4.1 Requirement

A. All building entryways shall be oriented towards a public street right of way.

B. Building entryway design standards shall apply to principal buildings only, with the exception of Cottage Home Court Dwellings.

C. Building entryway design standards shall apply to each building entrance on a façade of an applicable building facing a front or street side yard, including building entrances at a chamfered corner.

5.4.2 Grading

A. **DT, TOD-O, and AC-O Districts**. In the DT, TOD-O, and AC-O districts, the entry of any building adjacent to public right-of-way with existing/planned sidewalk/multi-use path or primary internal drive shall be at the same grade elevation as the adjacent sidewalk in the public right-of-way or in the primary internal drive.

B. **All Other Districts**. In all other districts, the entry of any building adjacent to public right-of-way with existing/planned sidewalk/multi-use path or primary internal drive shall be no more than five feet below or above the grade of the adjacent sidewalk in the public right-of-way or in the primary internal drive.

5.4.2.A

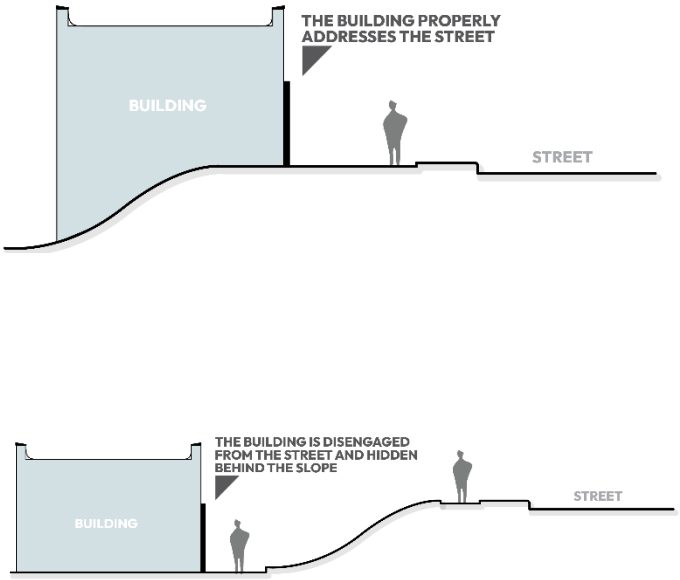


Figure 3: Grading

5.4.3 Design

Building entryways shall be designed for the pedestrian and shall include one or more features for each Two-over-Two entryway and three or more of the features included in Table 5.4.3 for all other applicable uses.

Table 5.4.3 Building Entryway Design
Standards
A. Awning / Canopy
1. Shall be located above all ground floor windows and doors within entryway area
2. Shall project a minimum of three above windows and five feet above doors and a maximum of six feet from the façade of the building, unless otherwise approved by the Administrator to accommodate community space.
3. Shall use a distinct building material or color to highlight the entryway.
B. Portico
1. Shall project a minimum of 5 feet above the doorway and a minimum of 3 feet above the windows.
2. Shall extend a minimum of five feet from either side of the building entry.
3. Portico columns shall be wrapped with one of the Category 1 exterior building cladding materials utilized on the building.
4. Shall incorporate a distinct architectural feature that extends above the primary roof height, such as a tower.
C. Plaza
1. Shall be located within a recessed portion of the building that is enclosed on two or three sides.
2. Shall be a minimum of 100 square feet.
3. Shall have a minimum width of 20 feet.
4. Shall be improved as a public gathering space is accordance with Section 6.2.

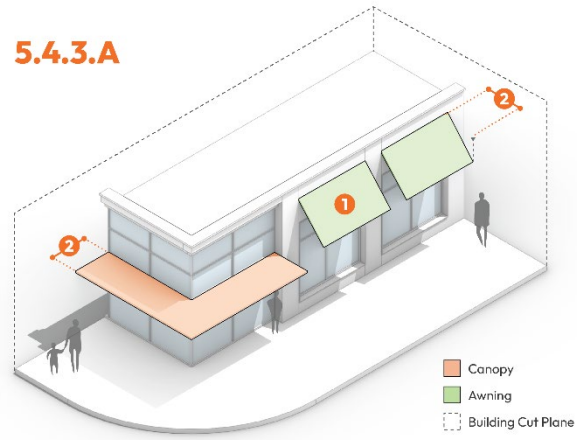


Figure 4: Building Entryway Design - Awning-Canopy

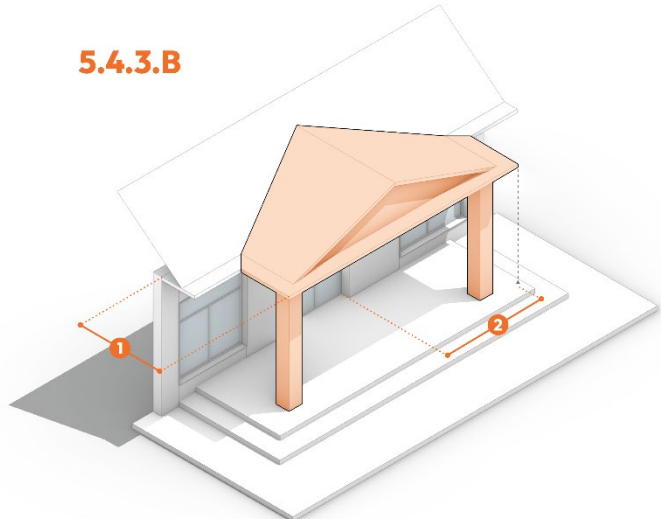


Figure 5: Building Entryway Design - Portico

Figure 6: Building Entryway Design – Plaza

D. Pedestrian Arcade
1. Shall run the full length of the building façade.
2. Shall project over the full width of the on-site pedestrian walkway.
3. Shall have a minimum depth of six feet.
4. Pedestrian arcade columns shall be wrapped with one of the Category 1 exterior building cladding materials utilized on the building.
5. Shall include projections or recesses of at least four feet in the wall plane at the entryway.

E. Landscape Forecourt
1. Shall include permanent planters comprised of the Category 1 building material utilized on the primary building.
2. Shall be located in a manner that frames the building entry.
3. Shall have a minimum depth of 10 feet.
4. Shall be planted and perpetually maintained with landscape including understory trees, and shrubs/native grasses.

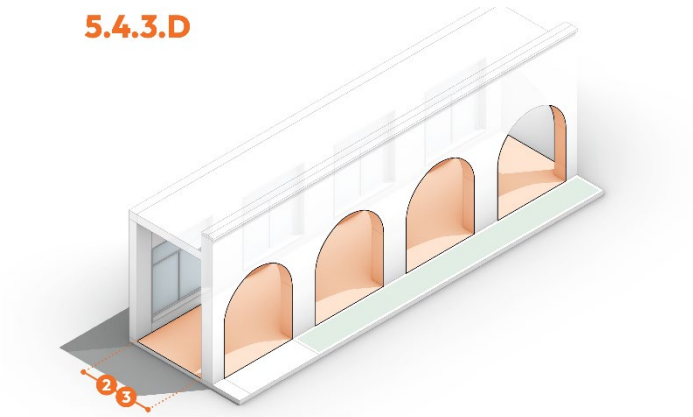


Figure 7: Building Entryway Design – Pedestrian Arcade

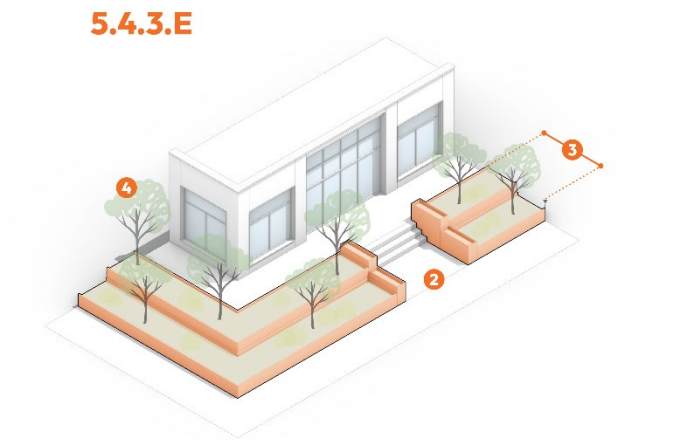


Figure 8: Building Entryway Design - Landscape Forecourt

F. Courtyard
1. The portion of the building façade with the entry, with a minimum width of 10 feet, shall be recessed from the primary façade a minimum of eight feet.
2. A fence or wall, comprised of the allowed materials detailed in Section 8.1.2.C, or a landscape hedge shall extend from the primary façade of the building to create a sense of enclosure in the courtyard.
3. The fence, wall, or landscape hedge shall have a minimum height of three feet and a maximum height of four feet if more than 20 percent opaque.
4. The fence, wall, or landscape hedge shall have a minimum height of three feet and a maximum height of six feet if 20 percent or less opaque.

G. Recessed Entrance
1. Shall apply to buildings with zero-foot front yard setback only.
2. The recessed area shall be proportionally wider than it is deep.
3. The recessed area shall include glazing extending a minimum of 65% of the height of the building at the entryway.
4. The recessed area shall be decorative through the incorporation of design elements including but not limited to a mosaic tile floor, angled storefront windows, use of accent building materials, or other as approved by the Administrator.

H. Other
1. Each of the following building entryway design improvements shall count as one required feature
a. Change in building material or color to highlight the entryway b. Distinct architectural feature that extends above the primary roof height a minimum of four feet c. Projections or recesses of at least four feet in the wall plane at the entryway d. Glazing extending a minimum of 65% of the height of the building at the entryway

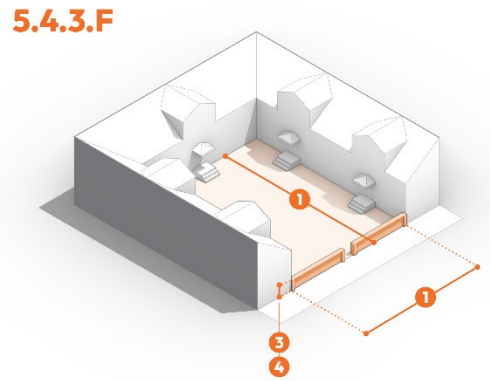


Figure 9: Building Entryway Design - Courtyard

Figure 10: Building Entryway Design - Recessed Entrance

5.5 Façade Design and Articulation

5.5.1 Requirement

Façade design and articulation standards shall apply to principal buildings only. Cottage Home Court Dwelling and Two-Over-Two buildings are exempt from the façade design and articulation standards of this section.

5.5.2 Front and Street Side Façade Articulation Requirements

A. **Single-Tenant and Common Entrance Building**.

1. **Bay / Section Façade Articulation Requirements**. Each front or street side yard facing building façade of a single-tenant or common entrance building shall be divided into architecturally distinct sections or bays with each section taller than it is wide. In no instance shall the width of a bay / section exceed the height of the façade. Sections or bays may also be met through the use of wall plane changes in Section 5.5.2.C.

2. **Dividing Elements**.

   a. Sections or bays shall be visually established by dividing elements such as columns, ribs, pilasters or piers, changes in plane, or an equivalent element, as approved by the Administrator, that visually subdivides the wall with a roof or cap feature that provides a rational terminus and integrates with the overall design of the façade.

   b. Required dividing elements shall extend at least the full height of the ground floor of the building.

   c. The width of required dividing elements shall be a minimum 12 inches.

   d. The required projection of dividing elements shall be based on the width of the dividing element in accordance with Table 5.5.2.A.2.d.:

Table 5.5.2.A.2.d
Minimum Projection of Façade Dividing Elements

Width of Façade Dividing Element	Minimum Projection of Façade Dividing Element
12-23.99 inches	4 inches
24-35.99	8 inches
36 or more inches	12 inches

B. **Multi-Tenant Building**.

1. On each front or street side yard facing building façade of a multi-tenant building, ground floor tenant spaces shall be visually distinguished from one another through the use dividing elements that meet the standards of subsection A.2. or with different building entryway designs per Section 5.4.3. The design element utilized on a subject tenant space shall not be utilized on adjacent tenant space(s).

2. On each front or street side yard facing building façade, the upper floor(s) shall meet the façade articulation requirements of subsection 5.5.2.

C. At least one change in wall plane is required with a minimum depth of two feet for every 60 linear feet of wall length. No single wall plane may extend more than 80 percent of the length of the façade.

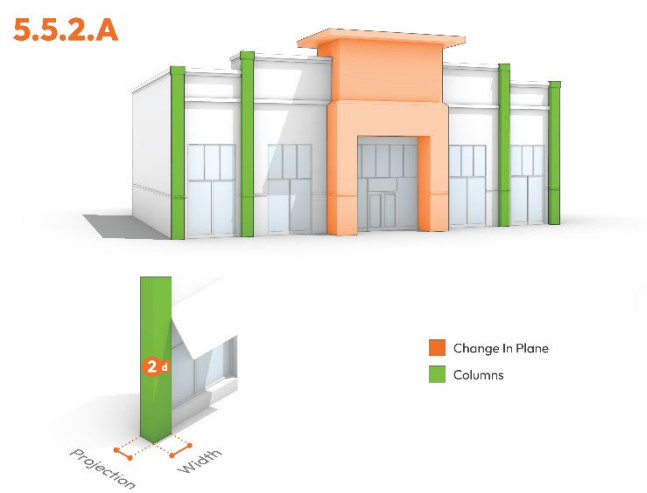


Figure 11: Front and Street Side Facade Articulation Requirements - Single Tenant / Common Entrance Building

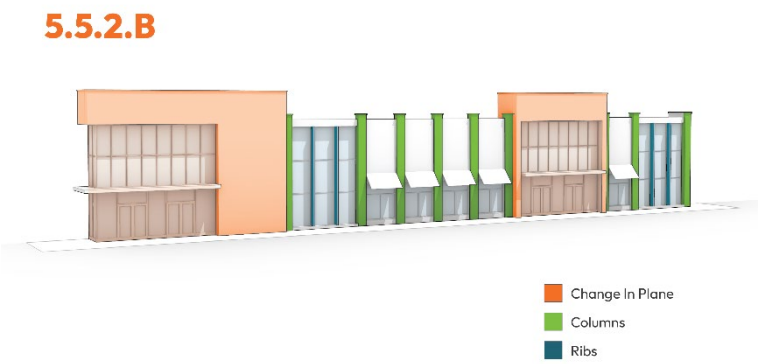


Figure 12: Front and Street Side Façade Articulation Requirements – Multitenant Building

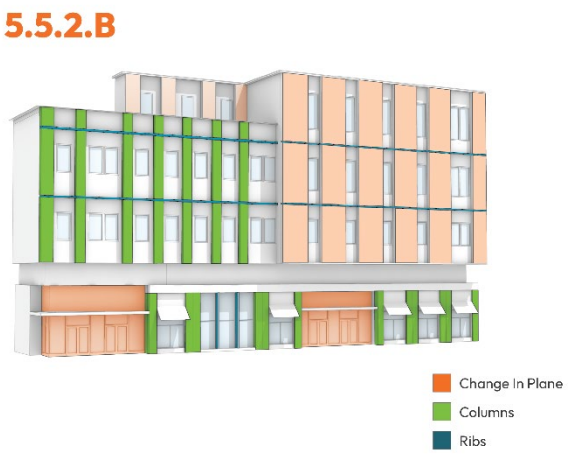


Figure 14: Front and Street Side Façade Articulation Requirements - Multi-Story-Mixed-Use

5.5.3 Side Elevations and Rear Elevations Facing a Parking Lot, Greenway, or Residential Use Type Articulation Requirements

Expanses of blank elevations may not exceed 20 feet in length or 30 feet in height unless at least one of the following is provided:

A. Windows,

B. Doors with transparency or painted to complement the building,

C. Public art,

D. Public gathering space in accordance with Section 6.2,

E. Vertical trellises with landscaping,

F. Canopies with a minimum depth of three feet,

G. Wall plane offsets in accordance with Section 5.5.2.C, or

H. Decorative masonry such as soldier course, rowlock quoins, flat or segmental arches, or protruding brickwork.

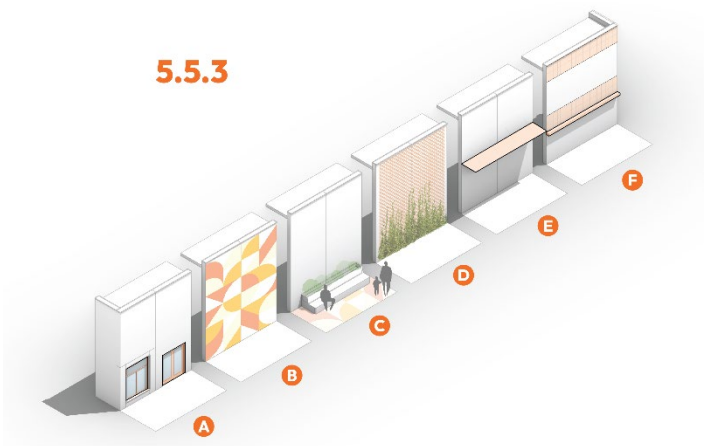


Figure 13:Side Elevations and Rear Elevations Facing a Parking Lot, Greenway, or Residential Use Type Articulation Requirements

5.5.4 National Register Downtown Wake Forest Historic District Design Features

In addition to the other standards of this chapter, a minimum of two of the following design features shall be incorporated for new buildings located within the National Register Downtown Wake Forest Historic District.

A. Decorative or embellished building and/or storefront cornice

B. Regularly spaced, vertically oriented upper story windows

C. Window design features (e.g. hoods, muntins, mullions, trim)

D. Signboard frieze

E. Transom

F. Bulkhead/base panel

Figure 15: Downtown Wake Forest Historic District Design Features

5.6 Roof Design Standards

5.6.1 Requirement

The roof of all buildings, with the exception of Cottage Home Court Dwellings, shall meet the roof design standards of this Section.

5.6.2 Roof Types and Materials

A. **Roof Types**.

1. In the AC-O and TOD-O Districts primary roof lines shall be flat.

2. In all other districts, primary roof types shall be consistent with or complementary to adjacent development.

B. **Roof Materials**. For non-residential buildings, no more than 80% of the roof area shall utilize shake or shingles.

5.6.3 Roofline Change Requirements

A. Roofline change façade articulation shall be provided every 60 feet of roof length. The Administrator may approve alternative distribution of roofline change features in accordance with the review criteria established in Section 16.5.2.C.

B. Requirements for roofline change façade articulation may be met by:

1. Distinctions in roof pitch, such as through the use gables, dormers, shed dormers, flat roofs, or towers, that are visually apparent as seen from the ground,

2. Variation in roof materials, such as on roof accent elements, and

3. Variation of at least two feet in building section height.

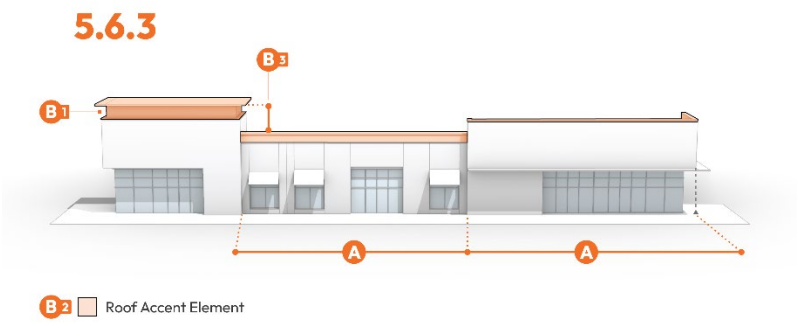


Figure 16: Nonresidential Roofline Change Requirements

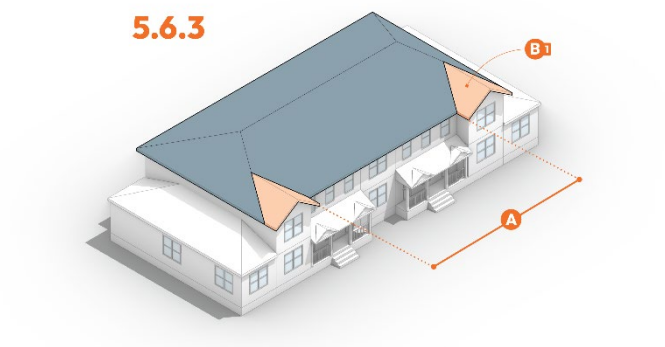


Figure 17: Residential Roofline Change Requirements

5.6.4 Parapet Walls

A. All flat roofs shall utilize parapet walls.

B. Parapet walls shall be designed in a manner that prevents views of the rear of the parapet wall or to any portion of the roof from any adjacent property or right-of-way.

C. Taller parapets shall wrap around on each side of the building or be constructed as a three- or four-sided architectural feature. The material on the sides of the wrapped parapet wall or feature shall be consistent with that on the front of the parapet wall. The color of the backside of the parapet wall shall be selected so as to make it inconspicuous.

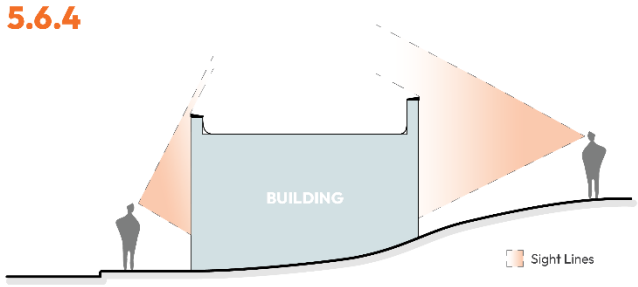


Figure 18: Parapet Walls

5.7 Cottage Home Court Building Design Standards

5.7.1 Applicability

These standards are in addition to those outlined in other sections of the chapter (unless noted as not applicable).

5.7.2 Front Porch

A Cottage Home Court Building shall have a front porch meeting the following standards:

A. **Width**. 12 feet minimum,

B. **Depth**. Six feet minimum.

5.7.3 Front Façade Features

The primary front façade of a Cottage Home Court Building shall feature at least two of the architectural features listed below. In no instance shall one Cottage Home Court Building feature the same required architectural features utilized on another Cottage Home Court Building in the same Cottage Home Court.

A. Bay, bow, and/or box window,

B. Recessed window,

C. Decorative/stained glass window,

D. Permanent landscape planters,

E. Gable pediment, cornice bracket, eave bracket, and porch column brackets,

F. Porch running trim and matching balustrade,

G. Decorative window surrounds, such as shutters, arches, sills, and rails,

H. Use of Category 1 building materials (Section 5.2.1.B.1) for at least 20 percent of façade, or

I. As approved by the Administrator per the review criteria established in Section 16.5.2.C.

5.7.4 Colors

All Cottage Home Buildings in a Cottage Home Court shall utilize one siding color and one trim/accent color from an established palette that includes at least six color options. In no instance shall one cottage home building feature the siding and trim color combination utilized on another Cottage Home Building in the same Cottage Home Court.

5.8 Two-Over-Two Building Design Standards

5.8.1 Applicability

These standards are in addition to those outlined in other sections of the chapter, unless noted as not applicable.

5.8.2 Private Outdoor Space

Two-Over-Twos shall have either:

A. One private outdoor space per Two-Over-Two Dwelling Unit with a minimum area of at least 25 square feet, or

B. One shared outdoor space per Two-Over-Two stack if located on and occupying a minimum of 50 percent of the roof.

5.8.3 Design

A. **Design Components**. Two-Over-Two buildings shall include the following:

1. **Stack**. Dwelling units shall include at least two stories. Typically, the first and second floor dwelling unit and the third and fourth floor dwelling unit create a Two-Over-Two stack. A stack is accessed by a common entrance or by individual entrances if the second is recessed and not visible from the public right-of-way.

2. **Cluster**. A Two-Over-Two cluster includes up to six Two-Over-Two stacks.

B. **Design Standards**.

1. **Stack Width**. The maximum width of a Two-Over-Two stack shall be 50 feet.

2. **Stack Differentiation**. Two-Over-Two stacks included in a Two-Over-Two cluster shall be distinguished from one another through at least two of the methods detailed below:

a. Variation in stack setback,

b. Variation in stack height,

c. Variation in stack roof type,

d. Variation in stack exterior building cladding materials,

e. Variation in stack exterior building cladding material colors,

f. Alternating use of front porches or other building entry design features included in Section 5.4.3,

g. Other as approved by the Administrator.

3. **Cluster Siting**. To the maximum extent practicable, Two-Over-Two clusters shall be sited in a manner that defines street edges, entry points, and public gathering spaces.

5.8.4 Garage Location

A. **Attached Garage**. Access points for attached garages shall be located on the rear façade of the building.

B. **Detached Garage**. Detached garages shall meet the location standards for accessory structures in accordance with Section 3.4.3.C.

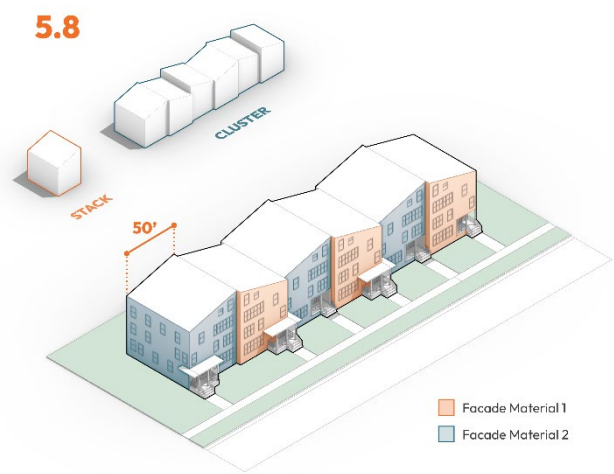


Figure 19: Two-Over-Two Design

5.9 Multifamily Building Design Standards

5.9.1 Applicability

A. These standards are in addition to those outlined in other sections of the chapter, unless noted as not applicable.

B. Residential Care Home and Retirement Home follow Multifamily design standards but are exempt from balcony and patios requirement of Section 5.9.2.

5.9.2 Balconies and Patios

A. Balconies and patios required in subsections B and C below are required on at least 75 percent of the multifamily dwelling units.

B. Upper-story dwelling units adjacent to an existing or proposed street or drive aisle shall incorporate a balcony or screened porch accessible from inside the dwelling unit with a minimum area of at least 25 square feet.

C. Ground-level units adjacent to a sidewalk, walkway, or public open space shall include a patio or porch of at least 25 square feet in area.

D. Balconies and patios required in B and C above shall either project or recess a minimum of two feet from the façade wall, as measured from the edge of the patio or railing, as appropriate, to the façade wall.

5.9.3 Upper-Story Pedestrian Access

Upper-story accessways serving two or more individual Multifamily units shall be located per Table 5.9.3:

Table 5.9.3
Upper-Story Pedestrian Access

Building Façade	Fully Enclosed Stairwell	Open Stairwell [1]
Front	Required	Prohibited
Street Side	Allowed	Allowed
Side, Rear	Allowed	Allowed

Notes

[1] The visibility of an open stairwell from the public right-of-way or adjacent property shall be minimized through the use of decorative screening materials. Where screening is not possible, other decorative elements including but not limited to decorative awnings, railings, stair treads, or Category 1 exterior building cladding materials (Section 5.2.1.B.1).

5.9.4 Mass and Scale

If the street-facing façade of a building is more than 60 feet wide, the perceived mass and scale of the building shall be reduced by incorporating at least three of the following design elements that are consistent with the development's architectural character and create distinctive variations in the façade spaced no more than 60 feet a part:

A. Pronounced (at least two feet deep) recesses and/or projections in the wall plane,

B. Distinct changes in texture, material and color of wall surfaces,

C. Pedestrian building pass-throughs,

D. Eight-foot minimum step back of the entire front facade after the ground, second, or third floor,

E. 20-foot minimum step back of 30 percent of the mass of the front façade after the ground floor in a manner that results in a "C" or "U" shaped building,

F. One-story minimum step down of height of the side or wing of a building.

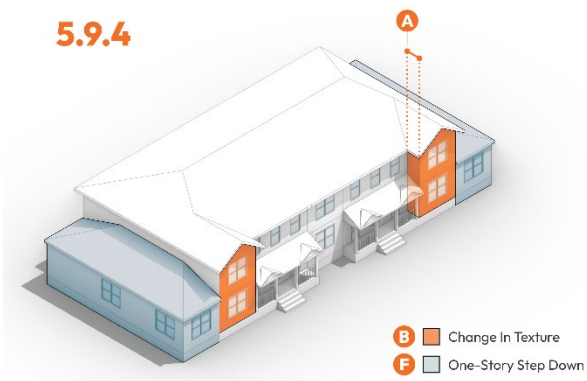


Figure 20: Multifamily Building Mass and Scale

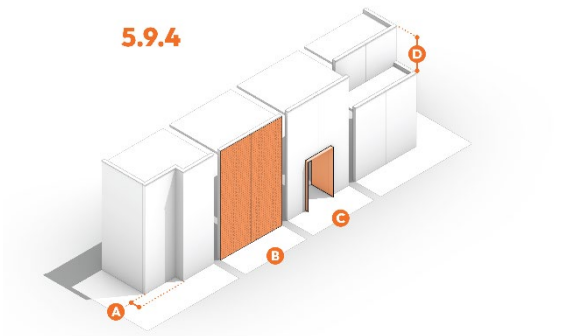


Figure 21: Multifamily Building Mass and Scale - Sections

5.10 General Commercial, Greater than 100,000 sq ft Building Design Standards

5.10.1 Applicability

These standards are in addition to those outlined in other sections of the chapter, unless noted as not applicable.

5.10.2 Requirement

General commercial uses with more than 100,000 square feet of gross floor area have the potential to significantly impact the appearance and function of the commercial corridors of Wake Forest. To minimize negative impacts, outlot/liner buildings shall be utilized in conjunction with all new development including a general commercial use with more than 100,000 square feet of gross floor area.

5.10.3 Outlot/Liner Building Standards

A. **Description**. Outlot/liner buildings are shallow structures, with a typical width of 60 feet.

B. **Front Yard Setback**. The maximum front yard setback of an outlot/liner buildings shall be 30 feet.

C. **Relation**. The relation between the outlot/liner building and a general commercial building(s) with more than 100,000 square feet of gross floor area shall be either:

1. **Attached.** The outlot/liner building is attached to the front and street side facades of the general commercial building(s) with more than 100,000 square feet of gross floor area. A setback between the two buildings is allowed to accommodate service areas only.

2. **Detached.** The general commercial building(s) with more than 100,000 square feet of gross floor area is located to the rear of the parking area and the outlot/liner building(s) is located in a manner that screens the parking area from the right-of-way.

D. **Timing**. Outlot/liner buildings shall be ready to build, including the installation of utility stubs, driveway stubs, and common landscaping, prior to the occupancy of the general commercial use with more than 100,000 square feet of gross floor area.

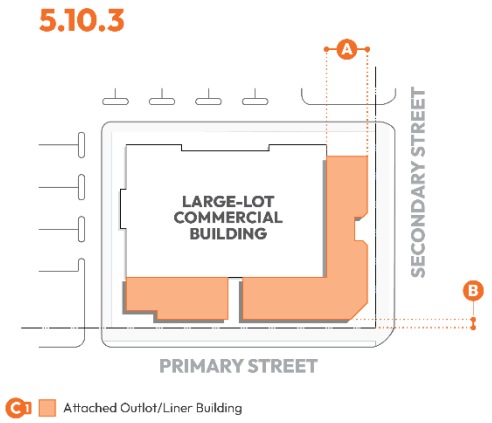


Figure 22: Outlot-Liner Building Standards - Attached

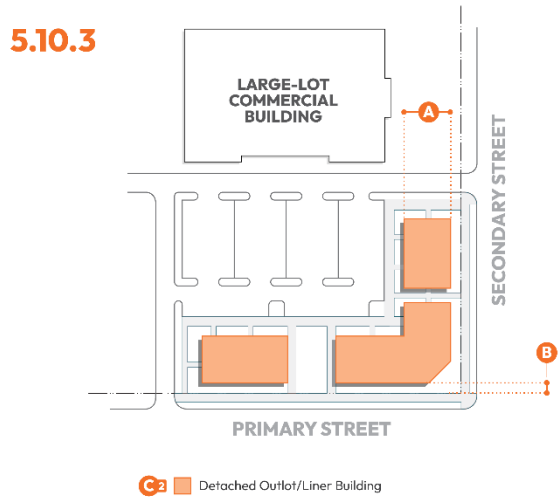


Figure 23: Outlot-Liner Building Standards - Detached

5.11 Multibuilding Development Standards

5.11.1 Applicability

A. These standards are in addition to those outlined in other sections of the chapter, unless noted as not applicable.

B. Multibuilding development standards shall apply to developments with two or more principal buildings and more than 200 parking spaces.

5.11.2 Relation to Other Requirements

Design standards established for all buildings in this Chapter include varying standards based on which yard the façade faces. Rather than applying the requirements based on which yard the façade faces, the application of the requirements shall be as detailed below.

A. **Front / Street Side**. Requirements applicable to front yard and street side yard facing facades shall be applied to a façade with a building entrance or adjacent to:

1. Perimeter public right-of-way,
2. Primary internal street,
3. Park or other common open space/public gathering space.

B. **Side**. Requirements applicable to side yard facing facades shall be applied to a façade without a building entrance if it faces:

1. Park or other common open space/public gathering space,
2. Parking lot (no building entrance).

C. **Rear**. Requirements applicable to rear yard facing facades may be applicable to a façade without a building entrance if it faces:

1. The rear of adjacent buildings,
2. Loading areas.

5.11.3 Building Variability

Sites containing three or more buildings shall incorporate visual diversity through variations in building size, shape, height, color palette, and exterior building cladding materials.

5.11.2

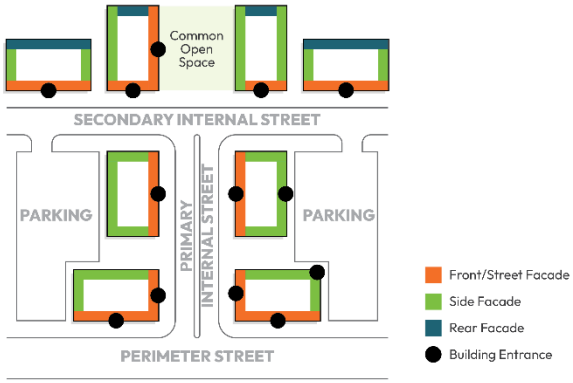


Figure 24: Multibuilding Development Standards

6 OPEN AND COMMUNITY SPACE STANDARDS

CONTENT

6.1 General Provisions
6.2 General Open and Community Space Standards
6.3 Open Space Area Standards
6.4 Community Space Area Standards
6.5 Open and Community Space Improvement Standards
6.6 Cemetery Protection Standards

6.1 General Provisions

6.1.1 Purpose

The purpose of this Chapter is to:

A. Ensure that each new development has a range of community and open spaces within walking or biking distance,

B. Preserve natural, historic, and cultural resources, improve environmental quality, and provide ecosystem services,

C. Enhance community character and sense of place,

D. Provide areas for people to gather and connect,

E. Close gaps in park service areas, and

F. Expand equity in open and community space quality and quantity throughout Wake Forest.

6.1.2 Applicability

A. All new development and substantial redevelopment resulting in five or more residential lots or dwelling units or more than 5,000 square feet of nonresidential gross floor area shall provide open and community space as required by this Chapter.

B. Developments with 12 or fewer dwelling units that are within a quarter mile of a Public Park or Public Cultural/Community Facility are exempt from the provisions of Sections 6.2, 6.3, 6.4, and 6.5.

6.2 General Open and Community Space Standards

6.2.1 Location

A. Development shall be designed in a manner that orients buildings towards required open and community space, making the spaces highly visible focal points.

B. Areas described in the Comprehensive Plan or any other adopted plan as park, recreation, or open space land or greenways shall be dedicated where practical and feasible and in conformance with all applicable federal and state rules and/or interlocal agreements.

6.2.2 Minimum Dimensions

A. **Open Space**. Required open space areas shall have a minimum dimension of 400 square feet.

B. **Community Space**.

1. **Residential**. Required residential community space shall have a minimum dimension of 200 square feet.

2. **Mixed Use and Nonresidential.** Required mixed-use and nonresidential community space shall have no minimum dimension.

6.2.3 Visibility

A. All open and community spaces shall be highly visible and conveniently accessible to all users of the development and shall have at least 20 feet of frontage on at least one public street within the development or be integrated into the pedestrian circulation network.

B. All community spaces should be visible from dwelling units that are adjacent to them.

6.2.4 Accessibility

A. **Contiguous Open/Community Space**. If 50 percent or more of required open space is contiguous, no residential unit within a development shall be further than a half mile, as measured along a sidewalk, greenway, or other similar continuous pedestrian walkway, from an open or community space or other publicly accessible park facility.

B. **Noncontiguous Open/Community Space**. If less than 50 percent of required open space is contiguous, no residential unit within a development shall be further than a quarter mile, as measured along a sidewalk, greenway, or other similar continuous pedestrian walkway, from an open and/or community space or other publicly accessible park facility.

6.2.5 Usability

Within the designated area proposed, sufficient engineering data and/or detail shall be indicated to ensure compliance with the following:

A. At least 25 percent of all open space shall be located outside special flood hazard areas, watercourses, and watershed buffers,

B. All community space shall be located outside special flood hazard areas, watercourses, and watershed buffers,

C. Areas including ponds, lakes, or wetlands shall not exceed more than 30 percent of the required open space and shall not constitute any portion of required community space.

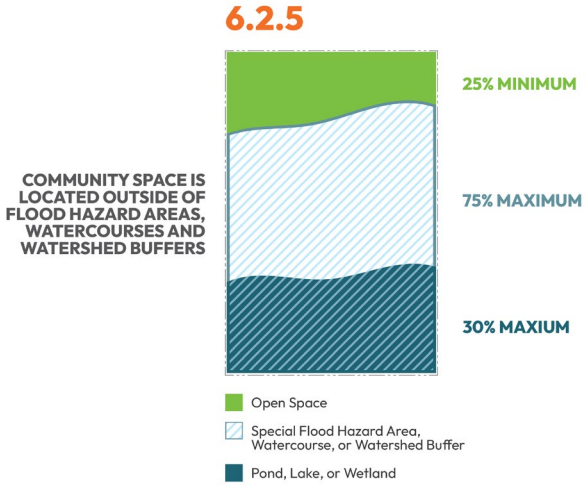


Figure 1: Usability

6.2.6 Ownership and Maintenance

A. The open space shall be protected by a binding legal instrument that is recorded with the deed. The instrument shall be one of the following:

1. A conservation easement in favor of either:

   a. A land trust or similar conservation-oriented non-profit organization with legal authority to accept such easements (the organization shall be bona fide and in perpetual existence and the conveyance instruments shall contain an appropriate provision for retransfer in the event the organization becomes unable to carry out its functions). If the entity accepting the easement is not the Town or the County, then a third party right of enforcement favoring the Town or the County shall be included in the easement; or

   b. A governmental entity with an interest in pursuing goals compatible with the purposes of this Section acceptable to the Town or County, as appropriate.

2. A restrictive covenant for conservation purposes in favor of a governmental entity.

3. An equivalent legal tool that provides permanent protection, if approved by the Town or County, as appropriate.

4. Dedication of the land to an established homeowner's association (with legal standing in the property) that accepts permanent maintenance responsibility.

B. A metes and bounds description of the space to be preserved shall be recorded on the plat, in homeowner/property owner covenants, and on individual deeds when open space lands are not held entirely in common.

C. Required community and open space shall perpetually run with the development site and shall not be developed or separated from the development site at a later date, unless no development of any portion of the project which is benefited by or required to provide such open space has occurred and the entire area of the project is presented for a new construction drawing approval, final plat approval, or rezoning, the effect of which will be to nullify the prior approval.

6.3 Open Space Area Standards

6.3.1 Required Open Space Amount

Development shall set aside a minimum percent of the gross area of the development site as open space, as required per District in Table 6.3.1 below. Open space shall be required in addition to community space in accordance with Section 6.4.

Table 6.3.1 Required Open Space Amount

District	Minimum Required Open Space Percent of Development Site
GR	20%
NCR; MUR: TSR; CI; NB; CB; IND	15%
DT	0%
AC-O	10%
TOD-O	5%
OS	45%

6.3.2 Open Space Areas

A. **Allowed Open Space Areas**. Development site area set aside as open space shall include land that falls into at least one of the following categories:

1. Special Flood Hazard Areas and Future Conditions Flood Hazard Areas,

2. Riparian buffers along all perennial and intermittent streams,

3. Wetlands protected by the Army Corps of Engineers or the North Carolina Department of Environmental Quality and any provided or required buffers,

4. Tree canopy retention areas (Section 7.2.3.B),

5. Lakes, ponds, and other water bodies, excluding created stormwater management facilities,

6. Areas adjacent to land in the LH-O District, on the state study list, or National Register of Historic Places,

7. Cemeteries (Section 6.6),

8. Areas adjacent to riparian buffers (Section 12.9),

9. Areas at least 5,000 contiguous square feet in size with any natural slopes greater than 25 percent,

10. Greenways and other open space identified in adopted plans,

11. Sites at least five contiguous acres in size identified by the Town, County, State, or federal government as active or inactive farmland or farmland meeting the requirements of "Prime Farmland" as defined by the United States Department of Agriculture, or

12. Land left natural or revegetated with native plants and utilized for required open space improvements per Section 6.5.

B. **Prohibited Open Space Areas**. Development site area set aside as open space shall not include land that falls into any of the following categories:

1. Utility easement that does not include land that falls into at least one of the allowed open space area categories per Section 6.3.2.A,

2. Stormwater control measures unless designed with green infrastructure,

3. Required building foundation landscape (Section 7.6) or parking area landscape (Section 7.7) unless designed with green infrastructure, or

4. Other remnant land not covered in subsection A above that is covered in turf grass or an impermeable surface and/or not utilized for required open space improvements per Section 6.5.

6.4 Community Space Area Standards

6.4.1 Required Community Space Amount

Development shall set aside a percent of the gross area of the development site as community space, as required per district in Table 6.4.1 below, except that development site area that is designated or in the process of becoming designated as a local landmark or is on or in the process of getting on the state study list or National Register of Historic Places shall be omitted from the land area used to calculate the required community space amount. Community space shall be required in addition to any open space required by Section 6.3.1.

Table 6.4.1 Required Community Space Amount

District	Required Community Space Percent of Development Site
GR; NCR; MUR; TSR; NB; CB	5%
DT	2%
TOD-O; AC-O; CI	10%
IND; OS	0%

6.4.2 Community Space Location Standards

Community space area shall be located:

A. In a manner that creates a development focal point,

B. To be highly visible and accessible to residents and/or visitors of the development,

C. Outside of:

1. Special Flood Hazard Areas and Future Conditions Flood Hazard Areas,

2. Riparian buffers along all perennial and intermittent streams,

3. Wetlands protected by the Army Corps of Engineers or the North Carolina Department of Environmental Quality and any provided or required buffers,

4. Tree canopy retention areas (Section 7.2.3.B),

5. Lakes, ponds, and other water bodies,

6. Stormwater management facilities, and

7. Areas with average natural slopes greater than 25 percent.

6.5 Open and Community Space Improvement Standards

6.5.1 Open and Community Space Improvement Point System

A point system is utilized to ensure open and community spaces are appropriately activated amenities and to provide flexibility to the applicant to allow improvements to be tailored to each development. Table 6.5.1 establishes the number of points required per district and required open and community space square footage.

6.5.2 Open and Community Space Improvement Types

A. Table 6.5.2 establishes allowed types of open and community space improvements and their corresponding points, that may be used to meet the required number of open and community space improvement points detailed in Table 6.5.1.

B. All improvements shall meet the standards of the WFD3 as applicable.

C. The Administrator shall determine the final mix and location of open and community space improvements to ensure diversity of improvements across the Town and to ensure open space preservation and protection.

Table 6.5.1
Required Community Space Improvement Points

District	Required Community Space Points		
	Less than 1 acre of Required Open / Community Space	1 acre - 3 acres of Required Open / Community Space	More than 3 acres of Required Open / Community Space
GR; NCR; CI; TOD-O; AC-O	10	13	16 [1]
MUR; TSR; NB; CB	7	10	13 [1]
DT	2	4	6 [1]
OS	0	0	0

Notes

[1] Plus one additional point per every two acres over three acres.

Figure 2: Required Open and Community Space Improvement Points

Table 6.5.2
Open and Community Space Improvement Types

Improvement Type	Points	Maximum Point Allowance per Development Site
Amphitheater	1 point per 250 square feet	3 points
Athletic Court	3 points per court sized per industry standard	9 points
BBQ Grilling Station and Outdoor Dining/Seating Area [1]	1 point per BBQ and outdoor dining /seating area with 8-person capacity	3 points
Bench	0.5 per bench	1.5 points
Bicycle Repair Station	1 per station	1 point
Boat Launch	3 points per boat launch	3 points
Community Garden [2]	1 point per 250 square feet	3 points
Covered Gazebo or Pavilion [1]	1 point per 250 square feet of covered area	3 points
Co-Working/Indoor Meeting or Gathering Space/Clubhouse	1 point per 500 square feet	3 points
Dog park [3]	1 point per 2,500 square feet	3 points
Educational / Interpretive Signage	1 point per sign	3 points
Fishing Dock	3 points per fishing dock	3 points
Fire Pit with Seating [1]	1 point per fire pit with seating	3 points
Fountain / Water Feature	3 points per fountain/water feature	3 points
Green Infrastructure [4]	Per LEED BD+C Sustainable Sites	No maximum
Hammock [1]	1 point per 3 hammocks	2 points
Historic Structure Preservation/Restoration and preservation easement dedication to Capital Area Preservation or equivalent nonprofit able to accept preservation easements [5]	5 points	5 points
Impaired Stream Restoration [4]	2 points per 400 linear feet	No maximum
Indoor Fitness Center	1 point per 500 square feet	3 points
Landscape Planter/Supplemental Planting	0.5 points per 2 cubic feet of soil volume plus 1 point per rain garden; 0.5 points per canopy tree and 0.25 points per shrub or ornamental grass	4 points
Observation Lookout	3 points per observation look out	3 points
Other	As determined by the Administrator	
Outdoor Fitness Equipment	1 point per play system with person capacity less than 25	6 points
	2 points per play system with person capacity 25-35	
	3 points per play system with person capacity greater than 35	
Outdoor Seating [1]	1 point per 200 square feet	5 points
Pedestrian Scaled Lighting	1 point per 2 light fixtures	4 points

Improvement Type	Points	Maximum Point Allowance per Development Site
Pedestrian Walkway with Pedestrian Scale Lighting [6]	1 point per 400 linear feet	6 points
Permanent Yard Games [1]	1 point per 2 games	2 points
Pet Waste Station	0.5 per station	1 point
Picnic Shelter	0.5 point per 250 square feet	2 points
Playground [7]	1 point per play system with child capacity less than 25	6 points
	2 points per play system with child capacity 25-35	
	3 points per play system with child capacity greater than 35	
Pollinator Garden	1 point per 250 square feet	3 points
Pool [8]	7 points per pool	7 points
Public Art - Mural	1 point per 250 square feet	3 points
Public Art - Sculpture	3 points per sculpture	6 points
Public Art - Other	1 point per art piece	3 points
Secured and Protected Bicycle Storage	1 point per 2 secured and protected bicycle storage spaces	6 points
Solar Shelter or Solar Tree	2 points per structure	4 points
Splash Pad	2 points per 500 square feet	6 points
Trash and Recycling Receptacle [9]	0.5 points per trash and recycling receptacle	0.5 points per 1,000 square feet
Multiuse Path / Greenway [10]	1 point per 400 linear feet	No maximum

Notes
[1] Improvement shall qualify for one additional point if located on a rooftop patio.
[2] Community gardens shall be enclosed by a fence and have an irrigation source and storage for tools and other equipment.
[3] Dog parks shall include pet waste stations, a double gate, and watering station. Pet waste station points are not granted in addition to dog park points.
[4] Improvement type and points shall be used to satisfy open space improvement point requirements only.
[5] Structures must be reviewed and approved as contributing structures
[6] Pedestrian scale lighting shall meet the standards of Section 10.4.8.
[7] Playground equipment shall be IPEMA certified.
[8] Pool shall include lounge seating and shade structures/umbrellas in the pool deck area. Seating points are not granted in addition to pool points.
[9] Credit shall be given only when not otherwise required by this UDO.
[10] This requirement specifically pertains to multiuse paths and greenways that exceed the minimum standards outlined in the Comprehensive Transportation Plan (CTP) and this UDO.

6.6 Cemetery Protection Standards

To protect and honor the deceased interred in an existing cemetery, the Town regulates the protection of existing cemeteries and encourages their use as private open space. Nonresidential development that is exempt from providing open space is still subject to the protection requirements contained herein.

6.6.1 Identification

A. The Cemetery shall be demarcated in the field prior to submittal of a Site Plan, Subdivision Plan, or Rezoning. A site visit should be scheduled at the pre-application meeting, in order to evaluate the proposed project design and potential impacts to the cemetery.

B. In order to determine and verify the actual boundaries of the Cemetery subsequent to a field evaluation, the applicant, at his or her own expense, shall have an archaeological investigation performed by a registered professional archaeologist (RPA), which shall include Ground Penetrating Radar (GPR). If the topography or other environmental features do not allow for an accurate GPR reading, the Administrator may permit ground probing or other professionally recognized methodology. The applicant shall submit a project methodology and the qualifications of the professional conducting the work for the Administrator's approval. A copy of the report shall accompany the application for subdivision/land development and shall be recorded as a portion of the Final Plat.

C. The location and details of specific grave sites shall be indicated on the Existing Conditions Plan in the site plan, subdivision plan, and construction plan.

6.6.2 Design Standards

A. A minimum 25-foot setback shall be provided around the perimeter of the Cemetery.

B. The Cemetery shall be included in the site design as either its own subdivided lot or as a portion of the open space. Public street right-of-way is not required provided that the access requirements in subsection C below are met. No portion of the Cemetery or its required 25-foot setback shall be included on an individual lot occupied by another use. In all instances, the land occupied by the Cemetery shall be surveyed and indicated with a metes and bounds description that shall be recorded in perpetuity.

C. A means of access to the Cemetery must be provided. However, in accordance with NCGS §65-101, access to the cemetery is limited to kin of the interred, the decedent's designee, or any person with a special interest and only with the consent of the landowner. Landowner consent is not required if Superior Court approval is granted through the procedures in NCGS §65-102. This does not preclude the responsible party or landowner from typical and routine maintenance.

D. If one does not exist, a decorative fence or brick or natural stone wall, 42 inches in height, with a gate, shall be installed or constructed to delineate and protect the cemetery boundaries.

6.6.3 Long Term Maintenance

The applicant shall provide a maintenance plan to ensure in perpetuity public safety and the protection of the Cemetery. The long-term maintenance of the Cemetery shall mean the protection of gravemarkers, graves, plantings, and site features, such as topography and mature trees. Removal of any of these elements is not permitted. If a HOA is to maintain the Cemetery, the maintenance plan must be included as a portion of the recorded documents.

6.6.4 Protection During Construction

A. No construction, grading, excavation, or any other ground disturbing activity is allowed within 25 feet of a Cemetery. A Grave Disturbance Permit is required for all proposed grave disinterment.

B. Silt fencing and/or tree protection fencing shall be installed at the perimeter of the 25-foot setback surrounding the cemetery prior to any land disturbance activity. Further, signage shall be installed on the perimeter fencing indicating, "DO NOT ENTER – SENSITIVE AREA." Fencing shall not be removed until authorization is given by the Town.

6.6.5 Inadvertent Discovery of a Cemetery

If a previously unknown Cemetery, unmarked Cemetery, burial site, graveyard, or human skeletal material is inadvertently discovered during any construction, excavation, or other ground disturbing activity, all excavation and earth moving activity shall cease immediately. The Administrator shall be notified, and the process outlined in NCGS §70-29 through §70-33 shall commence. The investigation and process shall be followed to completion and a Zoning Compliance Permit shall be required prior to resuming construction or excavation activity.

7 TREE PRESERVATION, BUFFERS, AND LANDSCAPING STANDARDS

CONTENT

7.1 General Provisions

7.2 Tree Canopy Coverage and Protection

7.3 Perimeter Buffer Requirements

7.4 Street Buffer Requirements

7.5 Alley Buffer Requirements

7.6 Building Foundation Landscape

7.7 Parking Area Landscape

7.8 Street Trees

7.9 Residential Lot Landscape

7.10 Installation and Maintenance

7.1 General Provisions

7.1.1 Purpose

The purpose of the tree protection, landscaping, and buffer standards is to

A. Preserve and enhance Wake Forest's character,

B. Improve air quality, conserve water, manage stormwater, cool urban heat islands, and mitigate climate change, and

C. Minimize negative off-site impacts including but not limited to noise, glare, and views to parking, service and loading areas.

7.1.2 Applicability

The standards of this Chapter shall apply in accordance with Sections 7.2, 7.3, 7.4, 7.5, 7.6, 7.7, 7.8, and 7.9.

7.1.3 General Requirement

Any development activity involving tree removal shall also be required to remove all invasive landscape from the development site.

7.2 Tree Canopy Coverage and Protection

7.2.1 Applicability

A. **New Development**. The requirements of this Section shall apply to new development on all land, public and private, in the jurisdiction of Wake Forest. A building permit shall not be issued until such requirements are met, unless provided otherwise in this section.

B. **Pre-Existing Development**. Non-conforming pre-existing development is subject to these standards as follows:

1. A change in use which requires an increase in the number of off-street parking spaces or the provision of a buffer,
2. The addition of buildings or expansion of existing buildings which singularly or collectively exceed 25 percent of the land area or gross building floor area existing at the effective date of this Unified Development Ordinance (UDO).

C. **Exemptions**. The following conditions are exempt from the provisions of this Section:

1. Improvements or repairs to interior and exterior features of existing structures or buildings which do not result in expansions or changes in the type of occupancy as set forth in the North Carolina Building Code,
2. A Single-Family Detached Dwelling on an individual lot of record,
3. Property covered by an active forestry management plan written by a North Carolina Registered Forester, provided documentation has been furnished to the town,
4. The removal of dead or naturally-fallen trees,
5. The removal of diseased trees that pose a threat to adjacent trees,
6. The removal of trees as necessary for rescue in an emergency or for clean-up following a natural disaster.

7.2.2 Tree Survey

No grading or construction activity shall commence prior to the submittal and approval of a tree survey conducted by an ISA-certified arborist, registered landscape architect, or registered forester.

D. **Required Trees to Survey.** The tree survey shall identify all specimen trees and their critical root zone (in accordance with the WFD3) on the development site. Specimen trees shall be any tree, other than invasive/noncontributing trees, with a diameter at breast height (DBH) greater than 20 inches.

E. **Optional Trees to Survey.** The tree survey may identify and break other trees and their critical root zone (in accordance with the WFD3) on the development site into the following categories. If a tree identified on the tree survey is preserved, the Administrator may approve a credit for other landscape required on-site, in accordance with Section 16.5.2.

F. **Established Trees**. Established trees shall be any tree, other than invasive/noncontributing trees, with a DBH between 15 and 20 inches.

G. **Young Trees**. Young trees shall be any tree, other than invasive/noncontributing trees, with a DBH of more than five and less than 15 inches.

7.2.2

Figure 1: Tree Survey

7.2.3 Tree Canopy Coverage

A. **Requirement**. All development sites shall, at a minimum, meet the base requirement established in Table 7.2.3.A. Additional tree canopy coverage, in accordance with Table 7.2.3.A, may be required based on the amount of existing tree canopy coverage that will be retained.

Table 7.2.3.A
Required Tree Canopy Coverage [1]

District	Base Requirement [2]	Additional Tree Canopy Coverage Required Beyond Base Requirement			
		If 25%-75% of base requirement met by retained trees		If less than 25% of base requirement met by retained trees	
GR	20%	3%	23% Total	6%	26% Total
NCR; MUR; TSR; CI; NB; CB; IND	15%	3%	18% Total	6%	21% Total
DT	0%	0%		0%	
AC-O	10%	2%	12% Total	5%	15% Total
TOD-O	5%	2%	7% Total	5%	10% Total
OS	45%	0%	45% Total	0%	45% Total

Notes

[1] Calculation of canopy coverage shall be based on site area exclusive of public right-of-way dedication, existing natural surface waters, and existing easements.

[2] For sites with no existing tree canopy or existing tree canopy below the base requirement percentage, the required provision of canopy shall meet the base requirement.

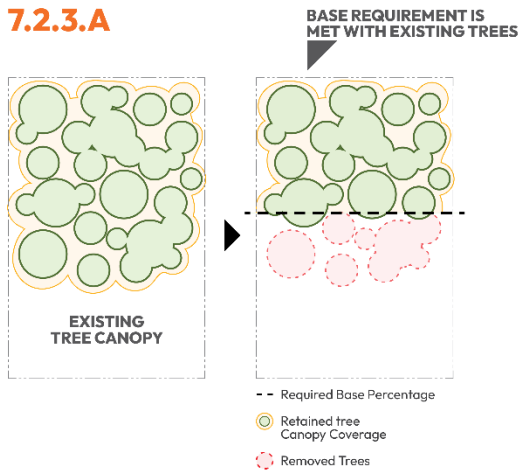


Figure 2: Tree Canopy Coverage 01

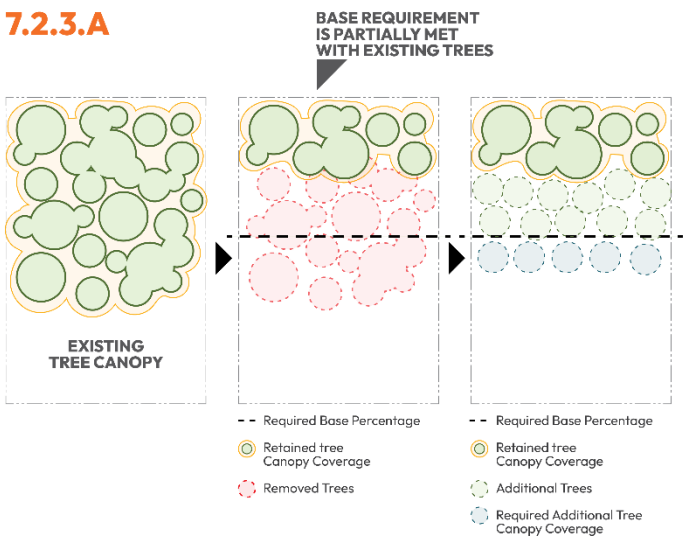


Figure 3: Tree Canopy Coverage 02

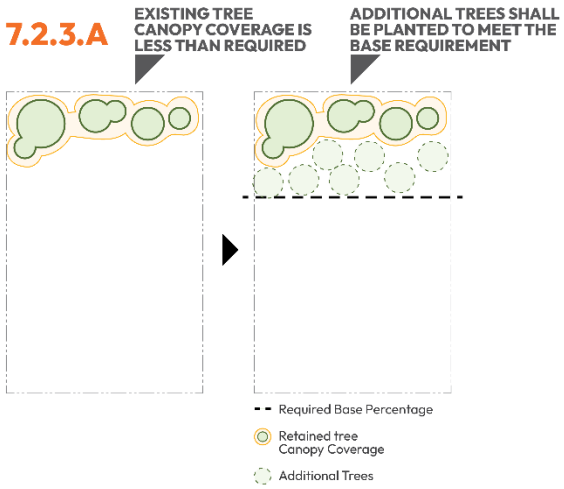


Figure 4: Tree Canopy Coverage 03

B. **Tree Canopy Retention Areas**. All trees utilized to meet the requirements of Table 7.2.3.A shall be located in a tree canopy retention area meeting the following standards.

1. **Tree Canopy Retention Priority Areas**. Priority areas for tree canopy retention areas shall be as listed below:

   a. Area including one or more specimen tree,

   b. Area within a wetland, riparian buffer, floodplain, or other environmentally sensitive area identified by the Administrator,

   c. Area adjacent to a wetland, riparian buffer, floodplain, or other environmentally sensitive area identified by the Administrator,

   d. Area adjacent to neighboring residential uses or adjacent to a Tree Canopy Retention Area on an adjacent parcel,

   e. Area adjacent to parcels in the LH-O District, MV-O district, WP-O district, parks, and greenways.

2. **Tree Canopy Retention Area Standards**.

   a. No tree canopy retention area shall measure less than 1,600 square feet in size,

   b. No tree canopy retention area shall measure less than 20 feet in width at its narrowest point,

   c. Tree canopy retention areas shall be located within required Open Space or Community Space.

3. **Tree Canopy Retention Easement**.

   a. Any tree canopy retention area shall be identified as a tree canopy retention easement on the final plat,

   b. The easement shall be denoted as private and shall not be dedicated to the Town unless otherwise approved through the Open Space standards of Chapter 6,

   c. Tree trimming and other measures to ensure public safety shall be the responsibility of the property owner.

4. **Prohibited Activity in Tree Canopy Retention Areas**.

   a. **Land Disturbance**. There shall be no clearing, excavation, soil compaction or changes of the existing grade within the delineated tree canopy retention area. Any removal of underbrush vegetation shall be done by hand to minimize the disturbance.

   b. **Fences**. Fences may only be installed in tree canopy retention areas if:

      i. The root systems of existing trees shall be taken into consideration, and

      ii. Post holes and trenches close to trees shall be dug by hand and adjusted as necessary to avoid damage to major roots.

C. **Calculating Canopy Coverage of New Trees**. New tree canopy coverage shall be calculated based on the typical canopy size per tree species as detailed below. Detail regarding which tree species fall into the three canopy size categories established below is included in the WFD3.

1. Canopy Size – Small. 50 square feet,

2. Canopy Size – Medium. 175 square feet,

3. Canopy Size – Large. 315 square feet.

7.2.4 Tree Preservation Incentives

If a specimen, established, or young tree identified on a tree survey is preserved, the Administrator may approve a credit for other landscape required on-site, as detailed below, if they determine that the intent of the landscape area (Sections 7.3.4.A, 7.3.5.A, 7.3.6.A, 7.7.1, 7.7.2, and 7.8) is met:

A. **Specimen Trees.**

1. If a specimen tree, with a DBH greater than or equal to 30 is preserved, the Administrator may approve a credit of five trees in required landscaping elsewhere on the site.

2. If a specimen tree, with a DBH less than 30 is preserved, the Administrator may approve a credit of three trees in required landscaping elsewhere on the site.

B. **Established Trees**. If an established tree is preserved, the Administrator may approve a credit of two trees in required landscaping elsewhere on the site.

C. **Young Trees**. If a young tree is preserved, the Administrator may approve a credit of 1.25 trees in required landscaping elsewhere on the site.

7.2.5 Tree Protection During Development Activity

A. **Responsibility**. During any development activity (including demolition activity), the property owner or developer shall be responsible for protecting trees identified in the Construction Plan for compliance with the requirements of Section 7.2.

B. **Storage of Equipment**. The storage of construction or other vehicles and/or equipment, site construction materials, portable buildings, including portable toilets, or other heavy objects is prohibited within delineated tree canopy retention areas.

C. **Encroachments**. If during the course of construction, it does become necessary for activities to take place inside a tree canopy retention area, the Administrator shall be consulted in advance of any activity. Such activities include but are not limited to the erection of scaffolding, vehicle movement, trenching or excavation. The Administrator shall review the most appropriate way to undertake such activities. If such an encroachment is anticipated, the following preventive measures shall be employed at a minimum:

1. Where utilities must encroach upon a delineated tree canopy retention area, they should be installed by tunneling, rather than by trenching. If it is necessary for roots to be disturbed, then proper root pruning procedures shall be employed.

2. The removal of trees adjacent to tree canopy retention areas can cause inadvertent damage to the protected trees. Wherever possible, it is strongly recommended to cut a minimum of one and one-half-foot trenches along the limits of land disturbance, so as to cut, rather than tear, roots.

3. Where compaction might occur due to traffic or the movement of materials through the tree canopy retention area, the area must first be

mulched with a minimum six-inch layer of processed pine bark or coarse wood chips (see WFD3). Equipment or materials storage or disposal shall not be allowed within tree canopy retention areas.

D. **Protective Barriers.**

1. All existing trees and vegetation that are to be preserved shall be completely enclosed with a sturdy and visible fence prior to any land disturbance. Fencing shall extend to the critical root zone. In some instances, the Administrator may require an additional area of no disturbance.

2. Fencing of areas adjacent to existing and proposed roadways also is required. Fencing is required on all Town and NCDOT road projects that are adjacent to protected streetscapes or buffers. The tree protection fencing shall be clearly shown on the site and/or subdivision plan and shall comply with the standards in the WFD3.

3. All protected trees must be protected from silt with wire mesh fencing, as provided for in the WFD3, placed along the outer uphill edge of the tree protection zones at the land disturbance interface.

4. All tree fencing and erosion control measures shall be installed prior to and maintained throughout the land disturbance process and building construction and may not be removed until the authorization is given by the Town.

E. **Excavations.**

1. **Location**. Excavations for utility pipelines shall be routed within a drip line of a tree to be preserved only if the Administrator determines that:

   a. No route bypassing the root area is practical, and

   b. Tunneling under the roots with a power-driven soil augur is impractical or financially infeasible in relation to the value of the tree,

   c. The Administrator shall consult with the public utilities to avoid conflicts with this provision.

2. **Root Protection**. Parties excavating within the root area shall:

   a. Minimize the number of roots cut, especially large main roots, and

   b. Cleanly cut with proper tools such roots as must be cut and re-trim them after excavation, and

   c. Paint cuts of roots of 1/4-inch diameter or larger with a wound dressing like orange shellac, and

   d. Backfill the trench as soon after excavation as possible to minimize the time roots are exposed to the air, and

   e. Leave no pockets of air when backfilling, and

   f. Mix peat moss with fill soil to promote new growth.

3. **Damage Mitigation**. Where, despite the foregoing provisions, significant damage has been done to the roots, the tree shall be replaced in accordance with the replacement rate established in Table 17.6.4.A.

4. **Cleanup.**

   a. **Disposal of Debris**. Debris shall not be burned on site but shall be hauled away to an appropriate disposal site.

   b. **Removal of Barriers**. Protective fences and barriers around trees shall be removed only as the final stage of post-construction cleanup.

7.3 Perimeter Buffer Requirements

7.3.1 Applicability

The standards of this Section shall apply in the following instances:

A. All new residential subdivisions and all new Dwelling-Two-Over-Two, Dwelling-Multifamily, Mixed-Use, and Non-residential development.

B. Substantial reinvestment or redevelopment as defined by this UDO.

C. The perimeter buffer requirements shall apply to the expansion of any existing building or use that results in an increase in gross floor area by more than five percent or 1,000 square feet, whichever is greater. In the case of expansions that trigger compliance with perimeter buffer requirements, perimeter buffer elements are required only in proportion to the degree of expansion. The Administrator is authorized to allow the perimeter buffer to be established adjacent to the area of expansion or to disperse perimeter buffer landscaping along the entire site perimeter buffer area.

D. The perimeter buffer requirements shall apply if the current use of a legally established building is changed to another use category. The Administrator may approve alternative perimeter buffer standards to meet site constraints, in accordance with the review criteria established in Section 16.5.2.

E. The perimeter buffer requirements shall not apply to development in the DT, TOD-O, or AC-O Districts.

F. The perimeter buffer requirements shall not apply to interior lot lines of common development sites.

7.3.2 Location

The perimeter buffer shall be located on a commonly owned portion of the subject property along all property lines not adjacent to a street or alley right-of-way. The perimeter buffer shall not be placed on individual lots within a subdivision.

7.3.3 Perimeter Buffer Type Applicability

The perimeter buffer types shall be required based on the district and land use of the subject lot as compared to the district and land use of the adjacent lot in accordance with Table 7.3.3 below. If the adjacent lot is undeveloped, the more stringent buffer requirement applicable to the district shall apply.

Table 7.3.3
Perimeter Buffer Type Applicability

Key: A = Type A Perimeter Buffer Zone; B = Type B Perimeter Buffer; C = Type C Perimeter Buffer; X = No Perimeter Buffer Required

	Adjacent Land Use Classification										
Subject Land Use Classification	All uses locally designated, State Study List, or National Register of Historic Places districts or individual listings landmarks, buildings, and/or districts	Single-Family Detached, Duplex, Manufactured Home, Triplex, Quadplex	All other Residential, Bed & Breakfast	Public & Institutional	Public & Institutional - All other districts	Commercial	Industrial & Automotive	Class 3 Utilities, Cell Towers, & Infrastructure	Agriculture & Animal Related	Vacant land in OS, GR, NCR, MUR, NB	Vacant Land in TSR, CB, CI, IND
All uses on the historic - locally designated, State Study List, or National Register of Historic Places districts or individual listings	X	B	B	B	A	A	A	A	A	C	A
Single-Family Detached, Duplex, Manufactured Home, Triplex, Quadplex	B	X	C	B	A	B	A	A	A	X	C
All other Residential, Bed & Breakfast	B	C	X	C	B	C	A	A	A	B	C
Public & Institutional	B	B	C	X	B	C	A	A	A	B	X
Commercial	A	B	C	C	C	X	A	A	A	B	X
Industrial & Automotive	A	A	A	A	A	A	X	C	A	A	B
Class 3 Utilities, Cell Towers, & Infrastructure	A	A	A	A	A	A	X	X	A	A	B
Agriculture & Animal Related	B	B	B	B	B	B	B	B	X	A	B

7.3.4 Type A Perimeter Buffer Standards

A. **Intent**. The intent of the Type A perimeter buffer is to create a completely opaque buffer, having no horizontal openings from the ground to a height of eight feet within two years of planting.

B. **Credit**. The Administrator may credit preserved trees for the requirements established in Table 7.3.4.C in accordance with Section 7.2.4.

C. **Requirements**. If a Type A perimeter buffer is required, the standards established for one of the options detailed in Table 7.3.4.C. shall be met, unless a deviation in minimum width is approved by the Administrator to accommodate tree preservation.

Table 7.3.4.C
Type A Perimeter Buffer Requirements

	Specification	Option 1	Option 2	Option 3
1.	Minimum Width [1]	50 feet	30 feet	30 feet
2.	Fence/Wall [2]	optional	optional	required
3.	Berm [3]	optional	required	optional
Minimum Number of Landscape Elements per 100 Linear Feet				
4.	Evergreen Tree [4]	10	3	3
5.	Canopy Tree	6	3	3
6.	Understory Tree	6	6	6
7.	Shrubs/Native Grasses [5]	48	36	36

Notes

[1] Required yard setbacks may be utilized for perimeter buffer landscape on the same property.

[2] Fences/walls shall meet the standards established in Section 8.1.2.

[3] Berms shall meet the standards of Section 8.3 and shall be installed, excluding the planting of required landscape material, at the time of site grading and prior to the commencement of any construction activity.

[4] Evergreen trees are an additional category to understory and canopy trees, regardless of whether the understory and canopy trees utilized to meet the minimum requirements are also evergreen.

[5] 50 percent of required shrubs/ornamental grasses shall be evergreen.

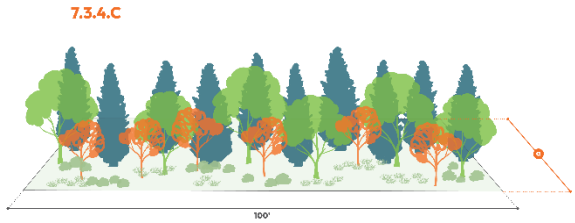


Figure 5: Perimeter Buffer Type A - Option 1

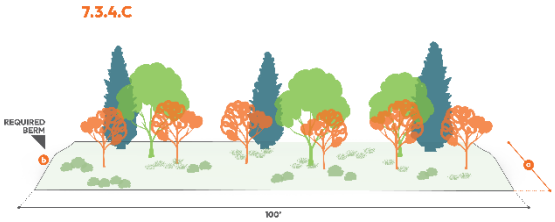


Figure 6: Perimeter Buffer Type A - Option 2

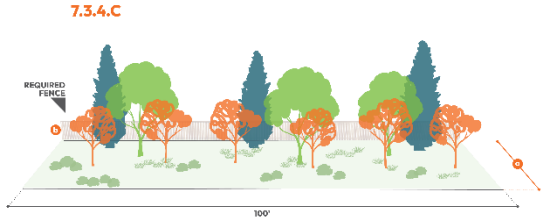
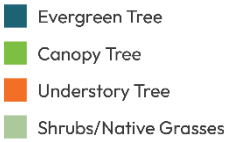


Figure 7: Perimeter Buffer Type A - Option 3



7.3.5 Type B Perimeter Buffer Standards

A. **Intent.** The intent of the Type B perimeter buffer is to create a semi-opaque buffer, having only seasonal horizontal openings, not to exceed 10 percent of the total width, from the ground to a height of eight feet within two years of planting.

B. **Credit**. The Administrator may credit preserved trees for the requirements established in Table 7.3.5.C in accordance with Section 7.2.4.

C. **Requirements**. If a Type B perimeter buffer is required, the standards established for one the options detailed in Table 7.3.5.C shall be met, unless a deviation in minimum width is approved by the Administrator to accommodate tree preservation.

Table 7.3.5.C
Type B Perimeter Buffer Requirements

	Specification	Option 1	Option 2
1.	Minimum Width [1]	30 feet	20 feet
2.	Fence [2]	optional	required
3.	Berm [3]	optional	optional
	Minimum Number of Landscape Elements per 100 Linear Feet		
4.	Evergreen Tree	3	3
5.	Canopy Tree	2	2
6.	Understory Tree	3	2
7.	Shrubs/Native Grasses [4]	36	24

Notes

[1] Required yard setbacks may be utilized for perimeter buffer landscape.

[2] Fences/walls shall meet the standards established in Section 8.1.2

[3] Berms shall meet the standards of Section 8.3.

[4] 50 percent of required shrubs/ornamental grasses shall be evergreen.

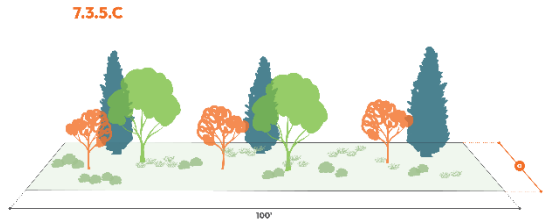


Figure 8: Perimeter Buffer Type B - Option 1

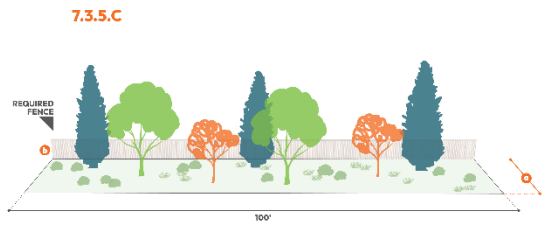


Figure 9: Perimeter Buffer Type B - Option 2

Evergreen Tree
Canopy Tree
Understory Tree
Shrubs/Native Grasses

7.3.6 Type C Perimeter Buffer Standards

A. **Intent**. The intent of the Type C perimeter buffer is to create a semi-opaque buffer, having only seasonal horizontal openings, not to exceed 25 percent of the total width, from the ground to a height of six feet within two years of planting.

B. **Credit**. The Administrator may credit preserved trees for the requirements established in Table 7.3.6.C in accordance with Section 7.2.4.

C. **Requirement**. If a Type C perimeter buffer is required, the standards detailed in Table 7.3.6.C shall be met, unless a deviation in minimum width is approved by the Administrator to accommodate tree preservation.

Table 7.3.6.C
Type C Perimeter Buffer Requirements

	Specification	Option 1	Option 2
1.	Minimum Width [1]	20 feet	15 feet
2.	Fence/Wall [2]	optional	required
3.	Berm [3]	optional	optional
	Minimum Number of Landscape Elements per 100 Linear Feet		
4.	Evergreen Tree	3 [4]	3 [4]
5.	Canopy Tree	2	2
6.	Understory Tree	1	0
7.	Shrubs/Native Grasses	36	20

Notes

[1] Required yard setbacks may be utilized for perimeter buffer landscape.

[2] Fences/walls shall meet the standards established in Section 8.1.2

[3] Berms shall meet the standards of Section 8.3.

[4] Required tree type may be replaced with an equal number of understory trees.

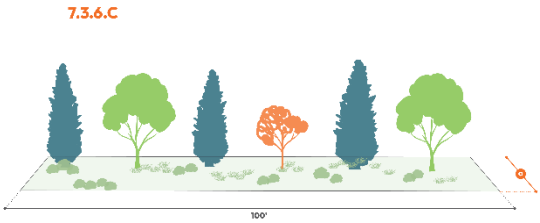


Figure 10: Perimeter Buffer Type C - Option 1

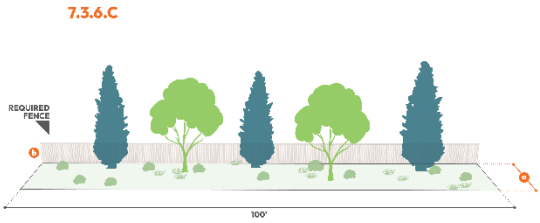


Figure 11: Perimeter Buffer Type C - Option 2

- Evergreen Tree
- Canopy Tree
- Understory Tree
- Shrubs/Native Grasses

7.3.7 Perimeter Buffer Fence/Wall Standards

Any fence or wall included in a buffer shall meet the following standards.

A. **Height.**

1. **Type A and B Buffer**. The fence/wall shall have a minimum height of six feet.

2. **Type C Buffer.**

   a. The fence shall have a minimum height of six feet,

   b. The wall shall have a minimum height of four feet.

B. **Opacity**. Methodology for measuring opacity shall be as established in Section 18.3.5.

1. **Type A and B Buffer**. The fence/wall shall be 100 percent opaque.

2. **Type C Buffer.**

   a. The fence shall have a minimum opacity of 20 percent,

   b. The wall shall have a minimum opacity of 50 percent.

C. **Materials**. The fence/wall shall meet the allowed material standards in Section 8.1.2.C.

D. **Fence Design**. Masonry columns shall be provided and shall have:

1. **Placement**. A minimum placement every 16 linear feet of fence length.

2. **Height**. A minimum height of three inches and a maximum of 12 inches taller than the fence.

3. **Dimensions**. A minimum width and depth of one foot.

E. **Location**. The fence/wall shall be located in the portion of the perimeter buffer adjacent to the property line unless due to the site topography the fence is more effective in another part of the buffer.

F. **Landscape Access**. If landscaping is installed on the adjacent property side of the fence/wall a gate shall be installed for access/maintenance of the plantings.

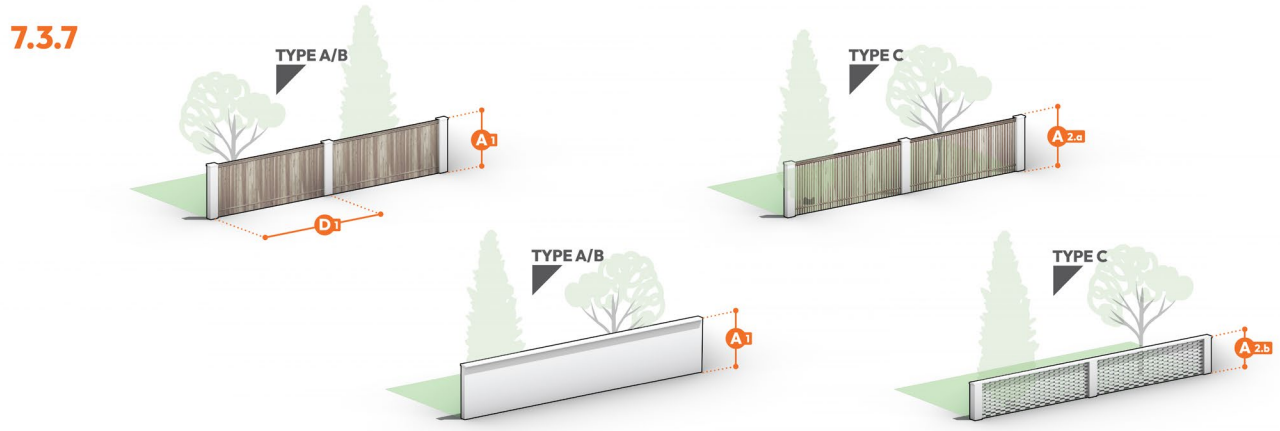


Figure 12: Perimeter Buffer Fence-Wall

7.4 Street Buffer Requirements

7.4.1 Applicability

A. All development adjacent to:

1. Highway 98,
2. Capital Boulevard, including associated service frontage roads when within shared right-of-way, or
3. Any industrial use visible from a public right-of-way.

B. All new residential development adjacent to a major or minor thoroughfare as identified in the Wake Forest Comprehensive Transportation Plan.

C. The following are exempt from the requirements of this Section:

1. Development subject to a maximum front setback adjacent to a major or minor thoroughfare,
2. Development adjacent to South Main Street between Capital Boulevard and Highway 98,
3. Development in the DT District.

7.4.2 Location

D. The street buffer shall be located along the property line nearest the triggering element detailed in Section 7.4.1 above. The street buffer shall not be placed on individual lots within a subdivision and shall be located on a common ownership lot.

E. Perpendicular encroachments by driveways, pedestrian walkways, and utilities are permitted, but should be minimized to the extent feasible.

F. Buildings are prohibited within the street buffer.

G. Structures are prohibited within the street buffer except those integrated into the design of the buffer, limited to fences, walls, monument signs, street lighting, bus stops/shelters, and street furniture.

7.4.3 Requirements

If a street buffer is required, the standards detailed in Table 7.4.3 shall be met, unless a deviation in minimum width is approved by the Administrator to accommodate tree preservation.

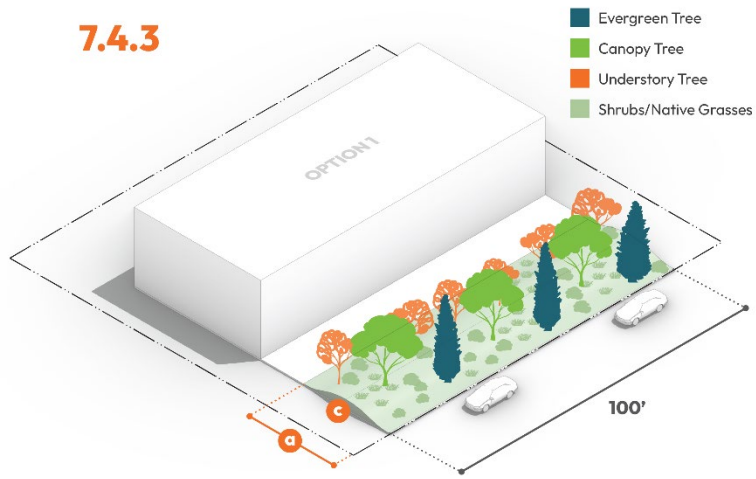


Figure 13: Street Buffer - Option 1

Table 7.4.3
Street Buffer Requirements

	Specification	Option 1	Option 2	Option 3 [1]
a.	Minimum Width [2]	30 feet	30 feet	20 feet
b.	Fence/Wall [3]	Either a fence/wall or berm is required	Either a fence/wall or berm is required	Either a fence/wall or berm is required
c.	Berm [4]			
	Minimum Number of Landscape Elements per 100 Linear Feet			
d.	Evergreen Tree	3	[5]	3
e.	Canopy Tree	3	[5]	2
f.	Understory Tree	6	[5]	3
g.	Shrubs/ Native Grasses	36	[5]	24

Notes

[1] Option 3 shall be available only for residential uses.

[2] Required yard setbacks may be utilized for street buffer landscape.

[3] Fences/walls shall meet the standards established in Section 8.1.2

[4] Berms shall meet the standards of Section 8.3.

[5] Required landscape shall include existing, preserved trees at a minimum density of 15 trees per 100 linear feet of street buffer. If existing, preserved trees do not meet the minimum density, supplemental planting may be permitted to meet the requirement. Option 2 shall not be allowed if the minimum density cannot be achieved through existing, preserved trees or supplemental planting.

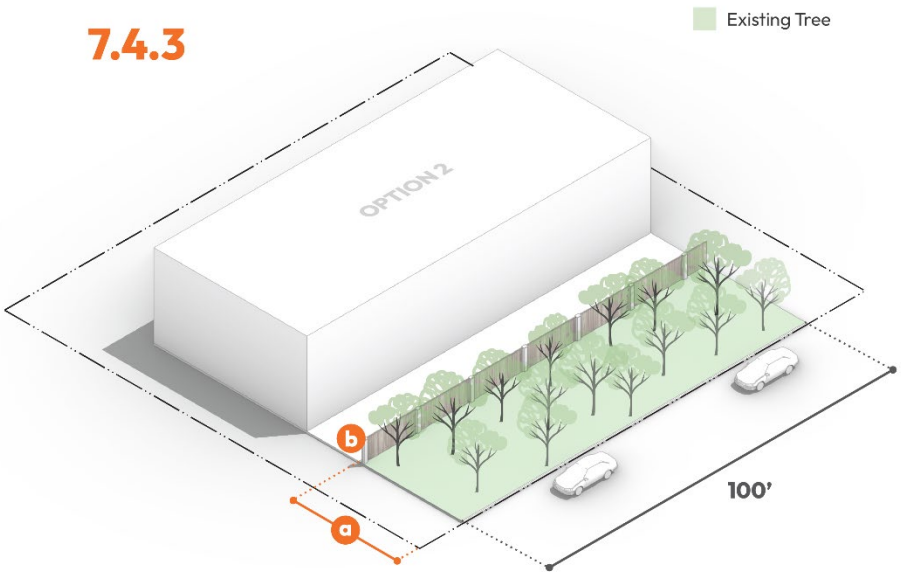


Figure 14: Street Buffer - Option 2

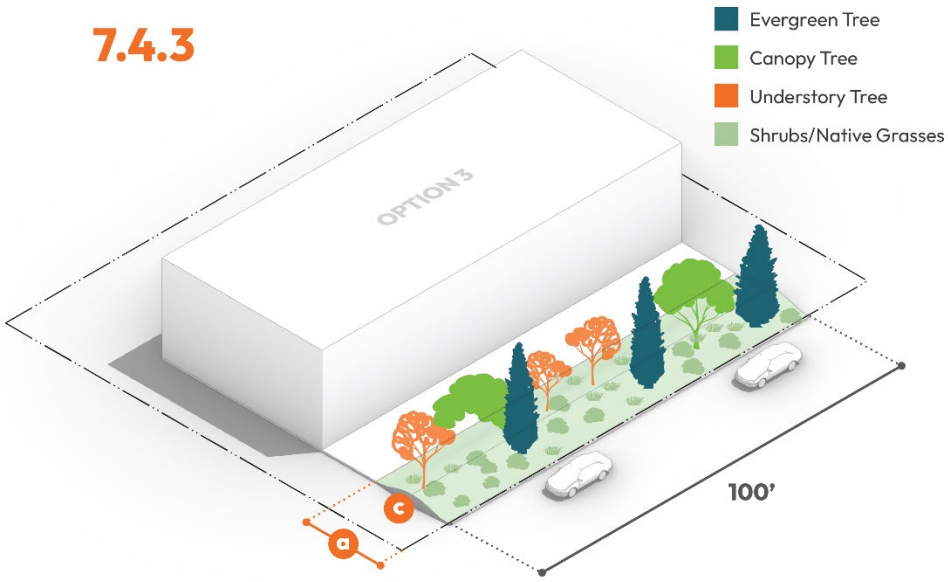


Figure 15: Street Buffer - Option 3

7.5 Alley Buffer Requirements

7.5.1 Applicability

All new alleys constructed adjacent to existing Single-family Detached and/or Duplex Dwellings.

7.5.2 Location

The alley buffer shall be located between the back of curb of the alley and the adjacent property line.

7.5.3 Requirements

If an alley buffer is required, the standards detailed in Table 7.5.1 shall be met, unless a deviation in minimum width is approved by the Administrator to accommodate tree preservation.

Table 7.5.1 Alley Buffer Requirements

	Specification	Option 1	Option 2
a.	Minimum Width	5 feet	5 feet
b.	Fence/Wall [1]	optional	required
c.	Berm	optional	optional
	Minimum Number of Landscape Elements per 100 Linear Feet		
d.	Evergreen Tree	3	0
e.	Canopy Tree	0	0
f.	Understory Tree	0	0
g.	Shrubs/Native Grasses	18	0
	Notes		
[1] Fences/walls shall meet the standards established in Section 8.1.2.			

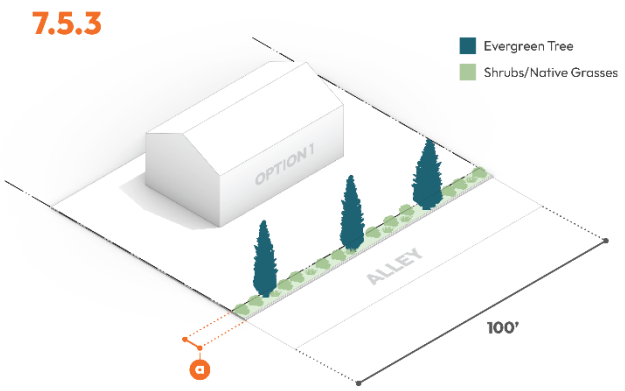


Figure 16: Alley Buffer - Option 1

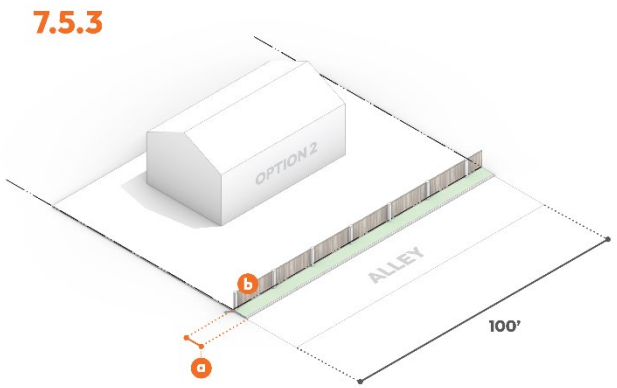


Figure 17: Alley Buffer - Option 2

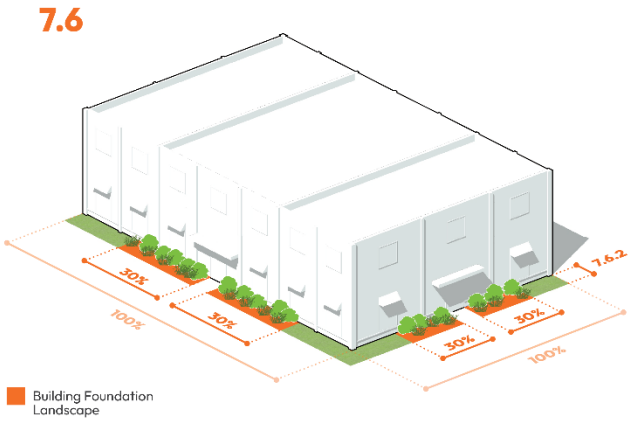
7.6 Building Foundation Landscape

7.6.1 Applicability

Buildings within five feet of the right-of-way shall be exempt from the requirements of this section. It is the objective of this Section to provide a softening effect at the base of buildings. This section shall apply to:

A. All non-residential buildings, two-over-two residential buildings, residential care facility, retirement home, and multifamily buildings.

B. The front facades of residential uses not subject to the residential lot landscape requirements in Section 7.9.



7.6.2 Minimum Width

The building foundation landscape shall have a minimum width of six feet or the width of the building setback from the right-of-way if less than six feet.

7.6.3 Design Objectives

Building foundation landscape shall be designed to supplement other required landscape and to frame important views, while visually softening long expanses of walls.

7.6.4 Landscape Area Requirements

Building foundation landscape shall be installed across 60 percent of the length of any façade of the building facing a public right-of-way or a parking area.

7.6.5 Planting Types

Foundation plantings may include shrubs, native perennial plants, and ornamental grasses.

7.6.6 Alternative Options

Above-ground stormwater planter boxes or permanent planters along building facades may be substituted for foundation plantings.

7.7 Parking Area Landscape

7.7.1 Parking Area Perimeter Landscape

It is the objective of this Section to provide screening between off-street parking areas and rights-of-way, to improve the pedestrian environment, and to accommodate the integration of stormwater management with required landscaping.

A. **Location**. All off-street parking areas which abut a street right-of-way or adjacent property, shall include landscape and trees as required by this Section located between the back of curb of the off-street parking area and the street right-of-way or adjacent property, unless otherwise adequately screened by the perimeter buffer as determined by the Administrator.

B. **Requirements**. The parking area perimeter landscape shall have a minimum width of 10 feet or the distance between the back of curb of the parking area and street right-of-way, whichever is greater, to accommodate vehicle bumper overhang and ensure planting areas that are adequate in size.

1. **DT, TOD-O, and AC-O Districts.**

   a. A low masonry wall or wrought iron style fence, with a minimum height of three feet and a maximum height of four feet, shall be installed between the parking area back of curb and perimeter landscape.

   b. One shrub or ornamental grass shall be planted every four feet of perimeter landscape length. Such plantings may be clustered or spaced at even intervals as deemed appropriate by the Town. At least 50% of the shrubs shall be evergreen species.

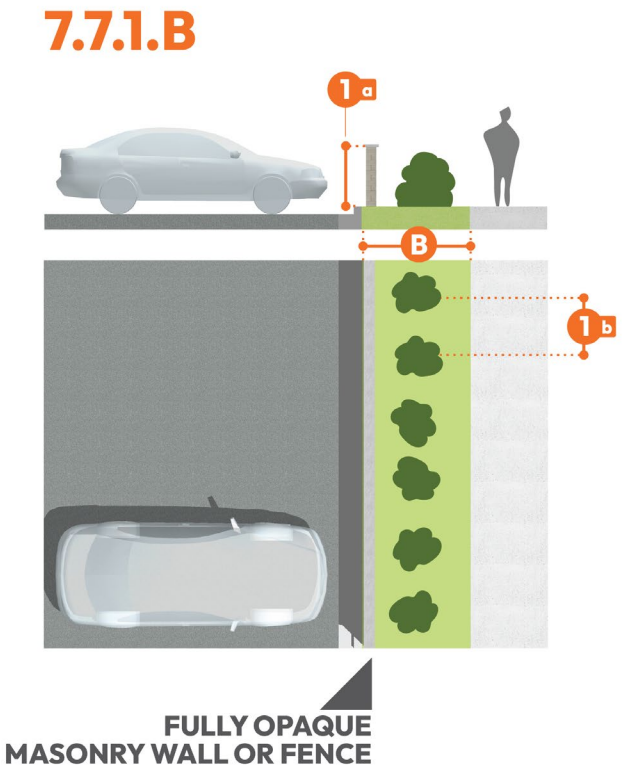


Figure 18: DT, TOD-O, and AC-O Districts Parking Area Perimeter Landscape

2. **All Other Districts.**

a. Option 1 - Traditional.

i. One canopy tree shall be planted every 30 feet of perimeter landscape length.

(a) Where a canopy tree is required and overhead utility lines exist, two understory trees shall be substituted with the approval of the Administrator.

ii. One shrub or ornamental grass shall be planted every four feet of perimeter landscape length. At least 50% of the shrubs shall be evergreen species.

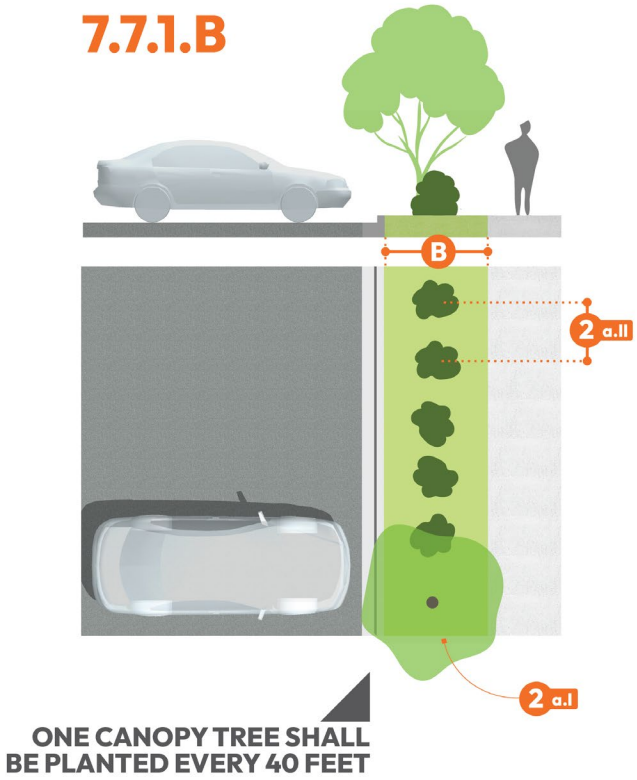


Figure 19: All Other Districts Parking Area Perimeter Landscape - Option 1

b. **Option 2 – Rain Garden**. If a rain garden is utilized, it may be credited towards required stormwater management in accordance with Section 12.7.

i. A curb shall be utilized to separate the parking area perimeter landscape from the parking area one curb cut or inlet structure shall be located in the curb line every 40 feet of parking area perimeter landscape length.

ii. A vegetated ponding area with a minimum width of six feet and a minimum depth of 18 inches below the surface of the parking area shall be provided and shall meet the following standards:

(a) **Top Layer**. The top layer of the vegetated ponding area shall be planted with native flowers, grasses, and shrubs and have a four-inch-thick layer of hardwood mulch.

(b) **Middle Layer**. The middle layer of the vegetated ponding area shall consist of a 24-inch layer of highly permeable mixture of engineered soil including sand and compost.

(c) **Bottom Layer**. The bottom layer of the vegetated ponding area shall consist of 36 inches of gravel.

(d) **Underdrain**. An underdrain, consisting of a perforated pipe running along the bottom of the vegetated ponding area at the top of the bottom layer and connecting to an adjacent sewer inlet shall be provided at the discretion of the Town Engineer.

iii. A perimeter with a minimum width of two feet shall be provided on either side of the vegetated ponding area which shall be planted in native, living groundcover, not including turf grass.

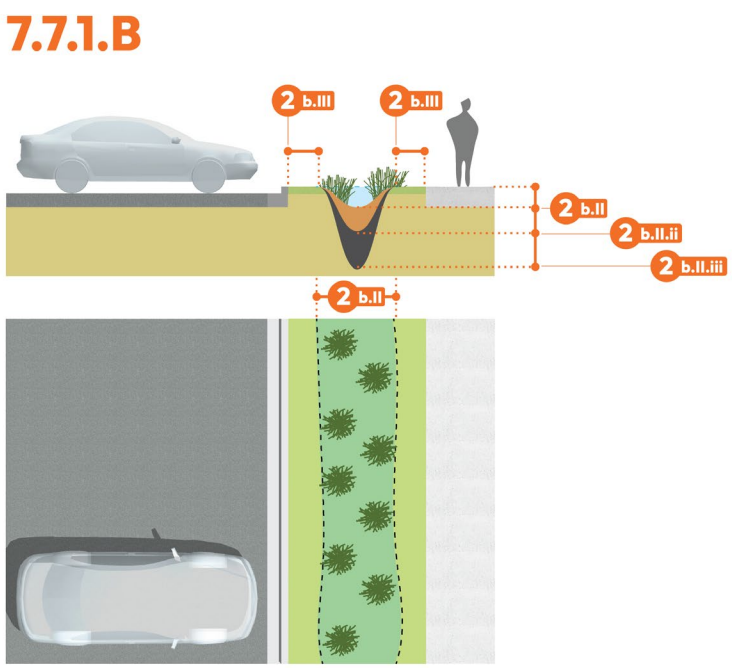


Figure 20: All Other Districts Parking Area Perimeter Landscape - Option 2

7.7.2 Parking Area Interior Landscape

It is the objective of this Section to provide shade within parking areas, break up large expanses of parking area pavement, support stormwater management where appropriate, improve the appearance of parking areas as viewed from rights-of-way, and provide a safe pedestrian environment.

A. **Requirements**. The amount of required parking area interior landscape shall be determined by the location of the off-street parking area as detailed below.

1. **Off-Street Parking Areas in Front or to Side of Principal Buildings**. Off-street parking areas in front or to the side of principal buildings, with the exception of large lot commercial buildings with detached outlot / liner buildings along 60 percent or more of the street frontage, shall include the following landscape elements.

a. **Parking Area End Caps**. A parking area end cap shall be located at the end of every row of parking.

b. **Parking Area Medians**. Parking area medians shall be placed between every four rows of parking.

c. **Parking Area Islands**. Parking area islands shall be located on every parking row. Parking area islands shall be spaced not more than 90 feet or 10 continuous spaces apart.

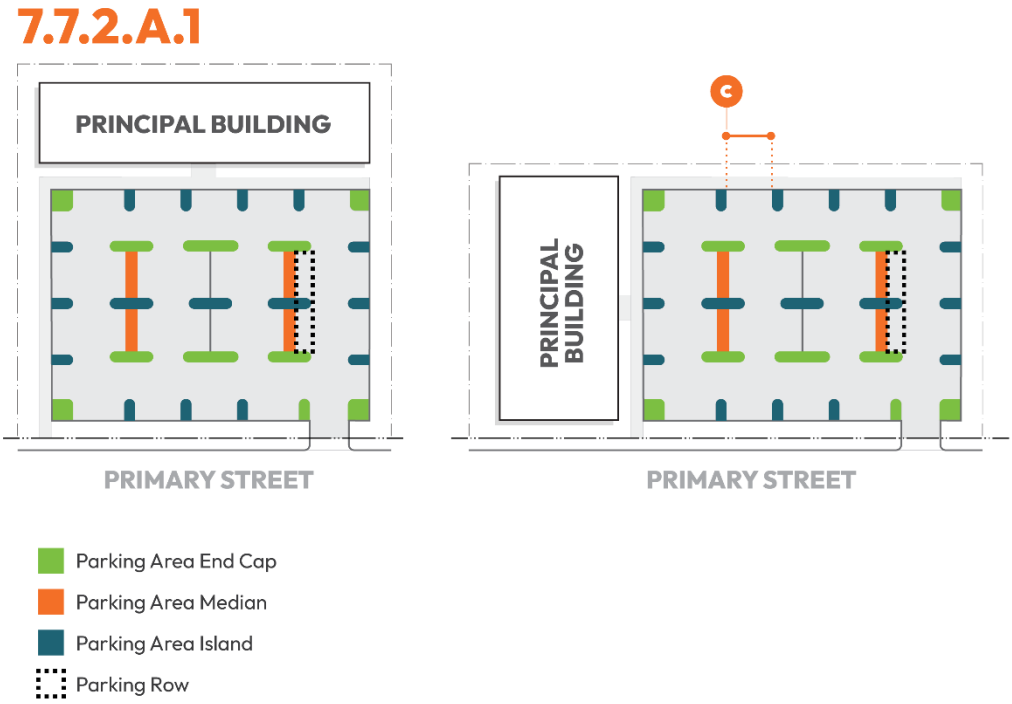


Figure 21: Off-Street Parking Areas in Front or to Side of Principal Buildings

2. **Off-Street Parking Areas in Rear of Principal Building**. Off-street parking areas to the rear of principal buildings or located between large lot Commercial buildings with detached outlot / liner buildings along 60 percent or more of the street frontage, shall include the following landscape elements.

   a. **Parking Area Medians**. Parking area medians shall be placed between every third bay of parking.

   b. **Parking Area Islands**. Parking area islands shall be located on every parking bay. Parking area islands shall be spaced not more than 180 feet or 20 continuous spaces apart.

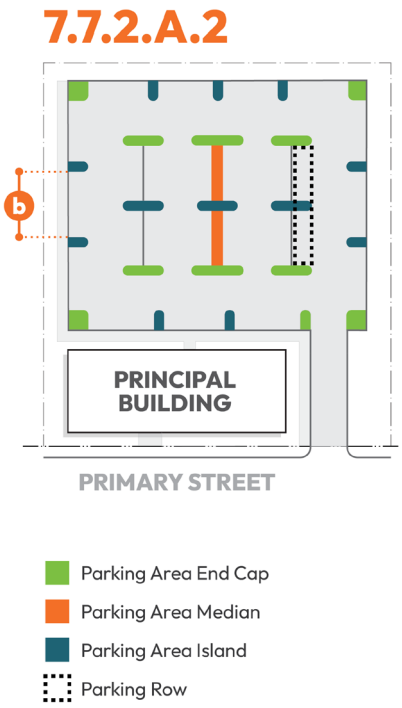


Figure 22: Off-Street Parking Areas in Rear of Principal Building

B. **Parking Area End Cap Standards.**

1. **Size.**

   a. Parking area end caps shall be a minimum of 10 feet wide by 18 feet long and shall have a minimum soil depth of 36 inches.

   b. Double rows of parking shall provide parking area end caps opposite one another to form a continuous single end cap.

2. **Planting.**

   a. A minimum of one canopy tree and three shrubs or ornamental grasses shall be provided for every parking area end cap.

   b. If the end cap extends the width of a double bay, then two canopy trees and six shrubs or ornamental grasses shall be provided.

   c. A minimum of two cubic feet of soil volume per one square foot of projected tree canopy at maturity shall be provided per canopy tree.

   d. Plant height shall not exceed 30 inches to maintain required sight distance.

3. **Design**. Parking area end caps shall be protected with concrete curbing or other suitable barriers approved by the Administrator. Such end caps shall be properly drained and/or irrigated as appropriate to the site conditions to ensure survivability of plant materials or proper stormwater management function.

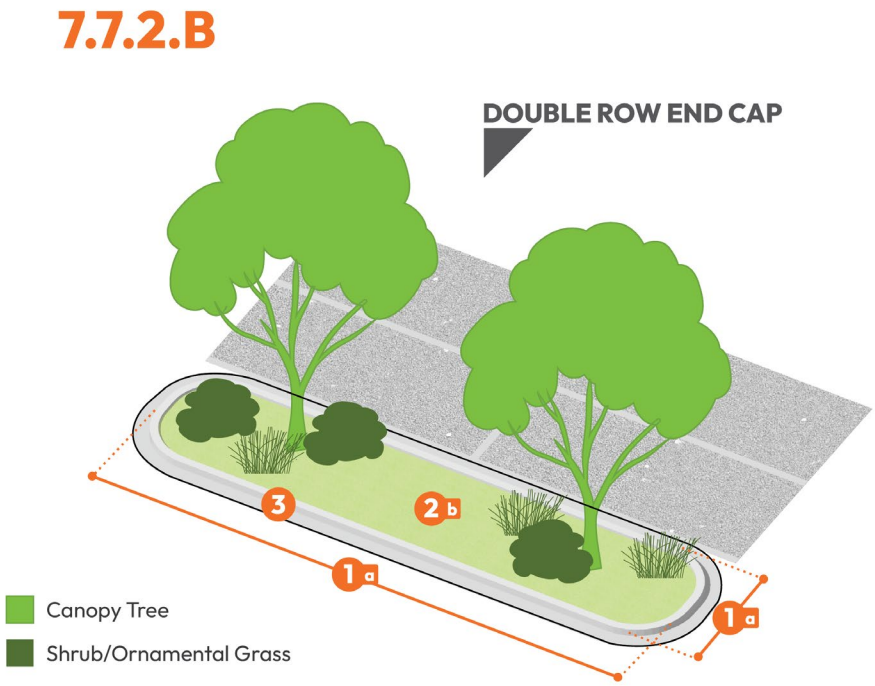


Figure 23: Parking Area End Cap Standards

C. **Parking Area Median Standards**. Parking Area Medians shall meet the standards of one of the options below and shall be designed with consideration given to the pedestrian walkway standards (Chapter 9).

1. **Option 1 – Traditional.**

a. **Width**. Parking area medians shall have a minimum width of 10 feet and minimum soil depth of 48 inches.

b. **Planting**.

i. A minimum of one canopy tree and 20 shrubs or ornamental grasses shall be planted for every 50 linear feet of parking area median.

ii. A minimum of two cubic feet of soil volume per one square foot of projected tree canopy at maturity shall be provided per canopy tree.

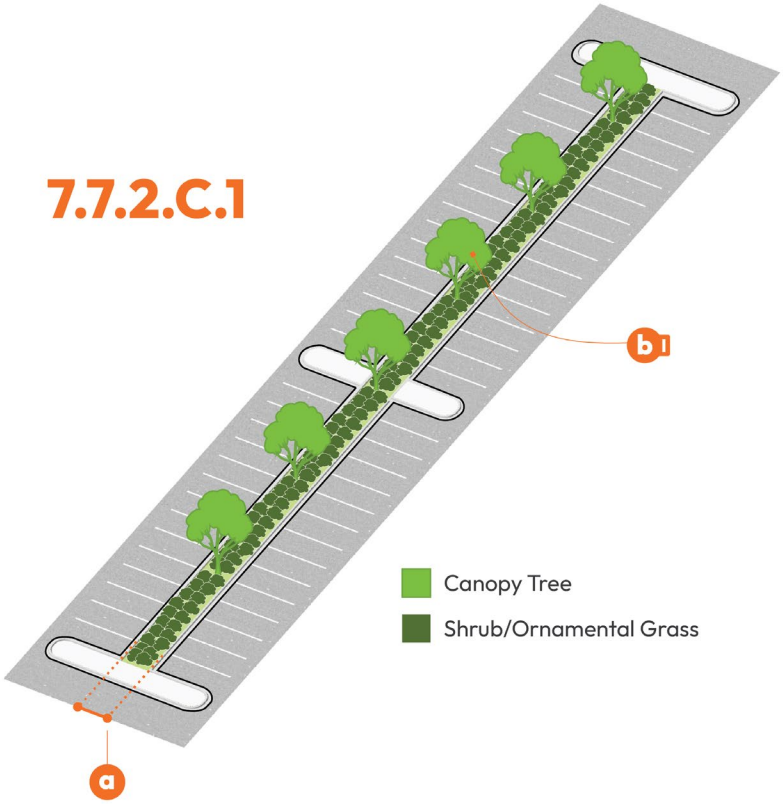


Figure 24: Parking Area Median Standards - Option 1

2. **Option 2 – Rain Garden**. If a rain garden is utilized, it may be credited towards required stormwater management in accordance with Section 12.7.

   a. A curb shall be utilized to separate the parking area median from the parking area one curb cut or inlet structure shall be located in the curb line every 40 feet of parking area perimeter landscape length.

   b. A vegetated ponding area with a minimum width of six feet and a minimum depth of 18 inches below the surface of the parking area shall be provided and shall meet the following standards:

      i. **Top Layer**. The top layer of the vegetated ponding area shall be planted with native flowers, grasses, and shrubs and have a four-inch-thick layer of hardwood mulch.

      ii. **Middle Layer**. The middle layer of the vegetated ponding area shall consist of a 24-inch layer of highly-permeable mixture of engineered soil including sand and compost.

      iii. **Bottom Layer**. The bottom layer of the vegetated ponding area shall consist of 36 inches of gravel.

      iv. **Underdrain**. An underdrain, consisting of a perforated pipe running along the bottom of the vegetated ponding area at the top of the bottom layer and connecting to an adjacent sewer inlet shall be provided at the discretion of the Town Engineer.

   c. A perimeter with a minimum width of two feet shall be provided on either side of the vegetated ponding area which shall be planted in native, living groundcover, not including turf grass.

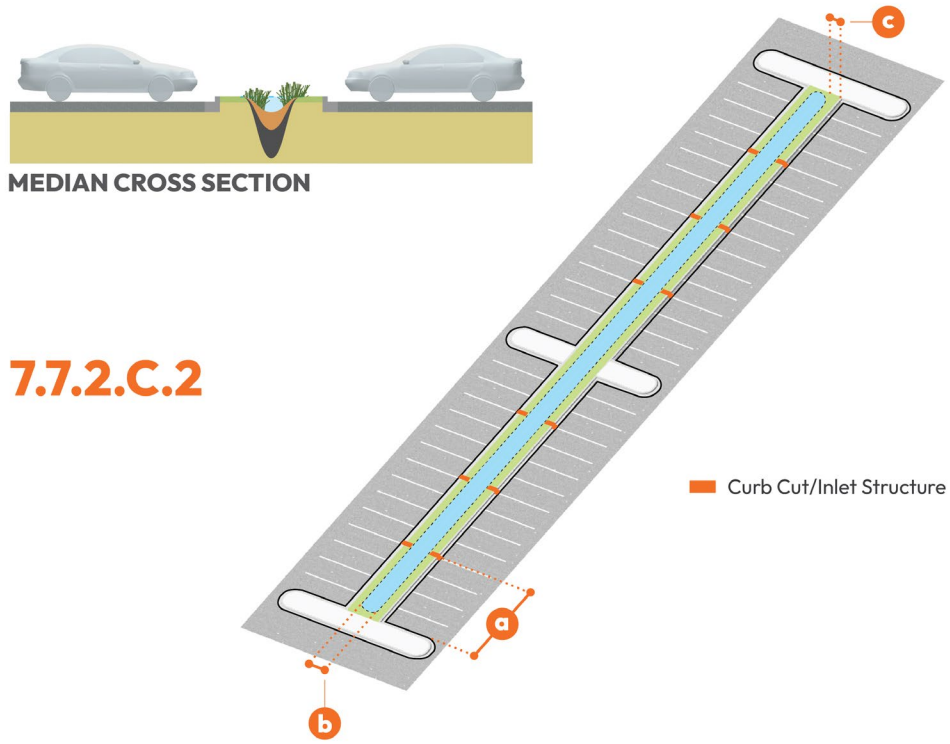


Figure 25: Parking Area Median Standards - Option 2

D. **Parking Area Island Standards.**

1. **Size.**

   a. Parking area islands shall be a minimum 10 feet wide by 18 feet long and shall have a minimum soil depth of 36 inches.

   b. Double rows of parking shall provide parking area islands opposite one another to form a continuous single island.

2. **Planting.**

   a. A minimum of one canopy tree shall be provided for every parking area island.

   b. If the island extends the width of a double bay, then two canopy trees shall be provided.

   c. A minimum of two cubic feet of soil volume per one square foot of projected tree canopy at maturity shall be provided per canopy tree.

3. **Design**. Parking area islands shall be protected with concrete curbing or other suitable barriers approved by the Administrator. Such islands shall be properly drained or irrigated as appropriate to the site conditions to ensure survivability of plant materials or proper stormwater management function.

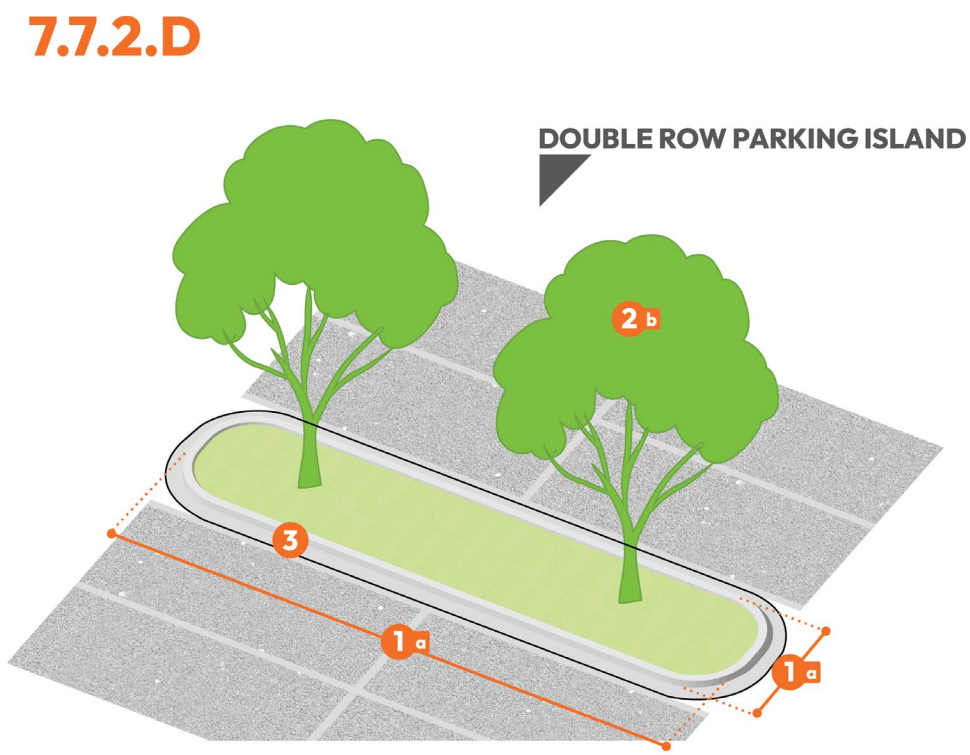


Figure 26: Parking Area Island Standards

7.8 Street Trees

7.8.1 Purpose

Trees required by this Section shall be in addition to trees and landscape required under other Sections of this UDO. It is the objective of this Section to ensure that Wake Forest remains a community of tree-lined streets in order to reduce excessive noise, glare, and heat, and to protect and enhance the aesthetic quality of the Town.

7.8.2 Location

Street trees shall be located in the verge area identified per road type classification in the Wake Forest Comprehensive Transportation Plan.

7.8.3 Requirements

A. One canopy tree shall be planted for every 50 linear feet street tree area length.

B. Where a canopy tree is required and overhead utility lines exist, two understory trees shall be substituted with the approval of the Administrator.

C. Arrangement of and distance between required trees shall correspond to the expected mature spread of the adjacent trees and in no instance shall be less than:

1. 30 feet between canopy trees,

2. 20 feet between canopy trees and understory trees, and

3. 15 feet between understory trees.

D. Required trees shall be located and planted so as not to diminish the effectiveness of required street lighting, and in no instance shall streetlights be located closer than:

1. 25 feet to canopy trees, and

2. 12 feet to understory trees.

E. The location, species, and approximate planting date of any tree in the street tree area must be approved by the Administrator prior to planting.

F. Required trees shall be installed according to the standards in the Wake Forest Manual of Specifications, Standards and Design (WFD3).

G. Trees species shall be approved by the Administrator to ensure they vary in accordance with the recommendations for species, genus, and family diversity in the WFD3.

7.8.3

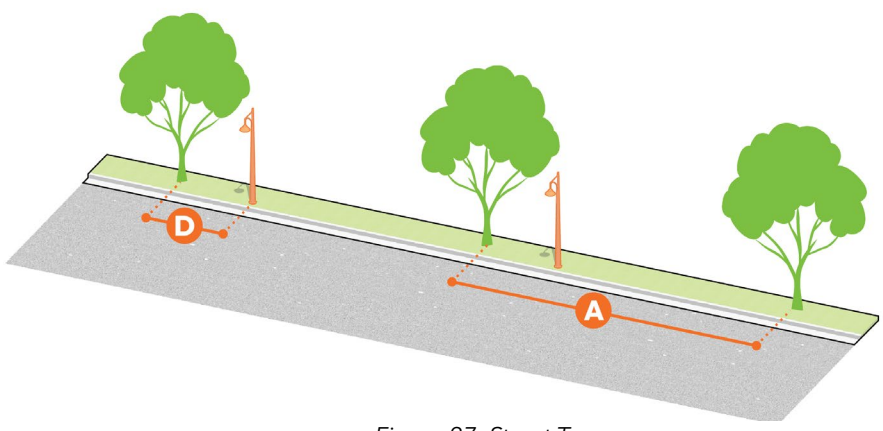


Figure 27: Street Trees

7.9 Residential Lot Landscape

7.9.1 Applicability

The requirements of this section apply to all Single-Family Dwellings, Townhomes, Duplexes, Triplexes, Quadplexes, and Manufactured Homes.

7.9.2 Front Yard Tree Requirements

A. Residential lots greater than 30 feet in width with a front setback of 20 feet or greater shall include at least one tree, planted between the principal building and the right of way. The tree may be either an understory tree or a canopy tree.

7.9.3 Rear Yard Tree Requirements

Residential lots greater than 30 feet in width without alley access shall include at least one tree between the principal building and the rear lot line. The tree may be an understory or canopy tree.

7.10 Installation and Maintenance

7.10.1 Installation

A. Landscape improvements required by this Chapter shall consist of living vegetation in a combination of plants, trees, shrubs, ornamental grasses, perennials, and/or groundcover, as required.

B. Landscape improvements required by this Chapter shall have the following minimum size at the time of planting.

1. **Canopy Tree**. Two-inch caliper,
2. **Understory Tree**. One and one-half-inch caliper,
3. **Evergreen Tree**. Six-foot height,
4. **Shrub**. Two-foot height,
5. **Native Grasses**. Two-foot height.

C. All new plant material shall meet the specifications of and be installed in accordance with the WFD3, including the acceptable planting season. Soil amendments shall be provided where required landscape is installed.

D. All new trees shall be properly guyed and staked at the time of planting.

E. In no instance shall any light pole be located within 25 feet of a canopy tree or 12 feet of an understory tree.

7.10.2 Maintenance

A. In all instances, all required landscaping must be installed prior to the issuance of a final certificate of occupancy.

B. A guarantee, according to the standards outlined in Section 14.3, shall be provided by the applicant for all required landscape improvements.

C. Landscape maintenance shall be performed according to the standards outlined in Section 14.5.3.

D. No pine straw or any other landscape cover material with a fire rate spread of more than 24-inches per minute shall be placed, kept, or stored within 10 feet of buildings with combustible exterior construction.

8 FENCE, WALL, RETAINING WALL, AND SCREENING STANDARDS

8.1 General Provisions

8.1.1 Purpose and Applicability

A. **Purpose**. The purpose of this section is to regulate the location, design, and maintenance of fences, walls, and berms to allow their use for safety, security, privacy, and screening while preserving Wake Forest's natural topography, maintaining visual harmony, and enhancing community appearance.

B. **Applicability**. The following standards shall apply to all new permanent fences, walls, and berms. Special regulations for fences and walls located in buffer yards and in Overlay and Historic Districts supersede the regulations of this Chapter where a conflict exists.

CONTENT

8.1 General Provisions

8.2 Fence and Wall Standards

8.3 Retaining Walls and Wall Systems

8.4 Berms

8.5 Screening

8.2 Fence and Wall Standards

8.2.1 Location

Fences and walls may be located anywhere within or along property lines, except

A Within clear sight triangles as detailed in Section 9.9,

B In a manner that inhibits the function or inspection of stormwater conveyance measures,

C Within public or private stormwater easements or any other public easement, including but not limited to drainage, utility, and tree easements unless written permission by the easement holder is received to place a fence or wall on or within the easement.

1. `Written approval must be submitted to the Town with a fence permit application.

2. The Town shall not be responsible for damage to, the repair of, or the replacement of, fences or walls that must be removed to access such easements if installed within an easement.

8.2

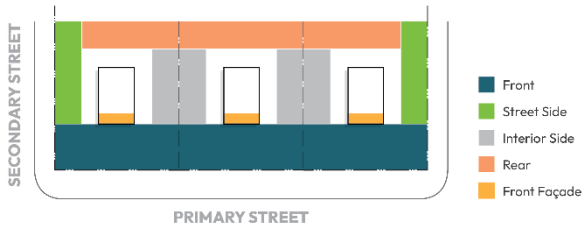


Figure 1: Fence and Wall Location and Height

8.2.2 Height

The maximum height of fences or walls shall be as detailed per use and yard in Table 8.2.2. Measurement of height is outlined in Section 18.3.

Table 8.2.2
Maximum Fence and Wall Height

Yard	Duplex, Single-Family Detached, Triplex/Quadplex, and Manufactured Housing	All Other Residential	Mixed Use, Commercial, Automotive	Public and Institutional, Industrial
Front	4 feet	4 feet	4 feet	4 feet [1]
Street Side	4 feet [2]	4 feet [2]	4 feet [2]	4 feet [1] [2]
Side	6 feet	6 feet	8 feet	8 feet
Rear	6 feet	6 feet	8 feet	8 feet

Notes

[1] Fence or wall height may be increased if approved by the Administrator in accordance with Section 16.5.2, Administrative Modifications/Adjustments.

[2] Fence or wall may have a maximum height of six feet if setback at least five feet from the property line.

8.2.3 Materials

Allowed fence or wall materials shall be as detailed per use in Table 8.1.2.C.

Table 8.2.3
Allowed Fence and Wall Materials

Key: ● = Allowed; ○ = Allowed with Administrator Approval Only (Section 16.5.2, Administrative Modifications/Adjustments); Blank = Not Allowed

Allowed Material	Duplex, Single-Family Detached, Triplex/Quadplex, and Manufactured Housing	All Other Residential	Mixed Use, Commercial, Automotive	Public and Institutional, Industrial
Masonry	●	●	●	●
Stone	●	●	●	●
Decorative Metal [1]	●	●	●	●
Architectural Block	●	●	●	●
Stucco on Masonry	●	●	●	●
Stained or Painted Wood	●	●	●	●
Wood Composite	●	●	●	●
Vinyl/PVC	●			
Chain Link [2]				○
Barbed/Concertina Wire				○
Curved/Spear Tip				●
Above Ground Electrified [3]				○
Deer and other Temporary Fence Material [4]				
Waste Materials [5]				

Notes

[1] Control of access fencing along rights-of-way shall be decorative metal.

[2] Fences around the perimeter of an athletic court meeting all other standards of this UDO may utilize black vinyl-coated chain link fence, without slats or inserts, and with a maximum height of 12 feet.

[3] Administrative Modification is not required in the CB, IND, and CI Districts so long as the standards of NCGS§160A-194.1 are met and demonstrated on the fence permit application.

[4] Accessory gardens may have a deer fence around the garden perimeter if the deer fence is located fully within the side and/or rear yard, the fence is setback a minimum of five feet from the property line, and the fence has a maximum height of eight feet.

[5] Waste materials shall include debris, junk, rolled plastic, sheet metal, plywood, wood pallets, or other materials not designed for use as a fence or wall.

8.3 Retaining Walls and Wall Systems

8.3.1 Height

A. If the retaining wall or wall system is visible from a public right-of-way or public greenway it shall not exceed a cumulative height of 15 feet.

B. If the retaining wall or wall system is not visible from a public right-of-way or public greenway, it shall not exceed a cumulative height of 20 feet.

Table 8.3.2
Retaining Wall and Wall System Design

Wall Height	Wall Type	Terracing [1]	Required Landscaping per 100 Linear Feet [2]
4-7.99 feet	Segmental; Gravity; or Cast in Place	Optional	**Foreground and Terrace (if provided):** 20 Shrubs; 24 Native Grasses
8-14.99 feet	Segmental; Gravity; or Cast in Place	Required	**Foreground:** 2 Evergreen Trees [3]; 1 Understory Tree; 20 Shrubs or Native Grasses **Terrace:** 20 Shrubs; 24 Native Grasses
15-20 feet	Gravity; or Cast in Place	Required if visible from adjacent properties	**Foreground:** 4 Evergreen Trees [3]; 2 Understory Tree; 10 Shrubs 12 Native Grasses **Terrace (if provided):** 20 Shrubs; 24 Native Grasses

Notes

[1] Each level of a terraced retaining wall or wall system shall not exceed eight feet in height at its highest point. Each terraced retaining wall shall have a platform depth between 36 and 42 inches. The terracing requirements of this section shall not apply where the wall or wall system serves as the structural support wall of a connected building or structure.

[2] Trees shall be setback a minimum of 10 feet from the wall. Additional distance may be required for segmental walls.

[3] Maximum mature height of trees shall not exceed 30 feet.

8.3.2 Design

Retaining walls or wall systems shall be designed and improved in accordance with Table 8.3.2. The Administrator may waive required landscaping if deemed in conflict with stormwater control measure access and maintenance requirements.

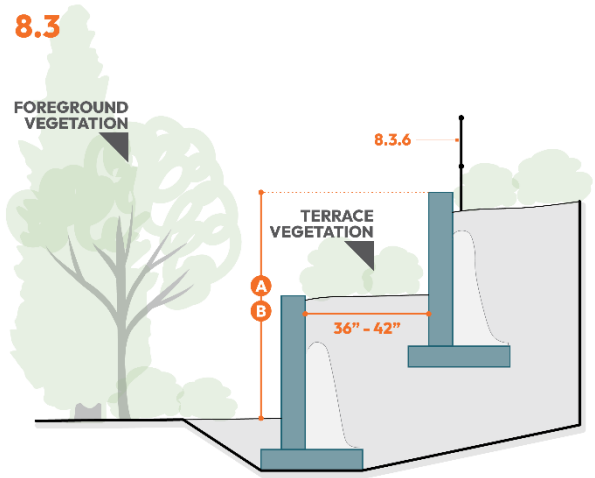


Figure 2: Retaining Wall and Wall System Design-Cast In Place

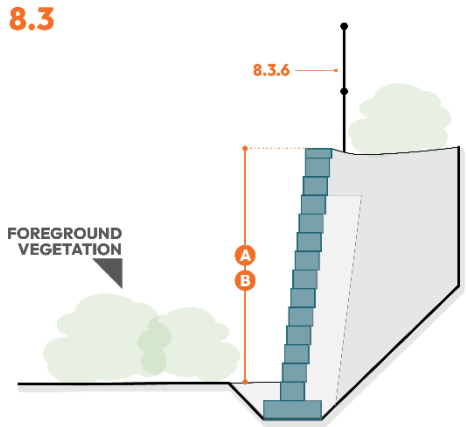


Figure 3: Retaining Wall and Wall System Design-Segmental

8.3.3 Materials

Retaining walls shall be constructed or clad with decorative block, stone, or brick. Concrete walls shall be finished with a decorative mural.

8.3.4 Tie Back System

A. Buildings, structures, and trees shall be set back a minimum of one foot per each foot of height of the segmental retaining wall to avoid disruption of tie back system.

B. Tie backs shall not encroach into the public right-of-way.

8.3.5 Slope and Stormwater Management

A The slope at toe of the wall or wall system shall exceed 3:1.

B No stormwater sheet flow shall over top the wall. A diversion ditch or other adequate measure, per the WFD3, must be installed behind the wall to divert runoff.

8.3.6 Safety Barrier Required

A The installation of black aluminum fencing, four to six feet in height, shall be required at the top level of the retaining wall or wall system greater than 30 inches in height in order to deter unsafe activities near the edge of the wall.

B A guardrail, bollard, or berm shall be installed where vehicular traffic will be within 10 feet of the edge of the top level of the retaining wall.

8.3.7 Engineer Certification Required

Retaining walls and wall systems shall be certified by a professional engineer.

8.3.8 Easements

Retaining wall easements shall be required to allow access for maintenance by the responsible party for any retaining wall crossing a property boundary. The minimum width of the easement shall be 10 feet on all sides of the wall.

8.3.9 Exemptions

The requirements of this section, with the exception of the requirement for professional engineer certification, shall not apply to retaining walls or wall systems associated with culverts, stream crossings, or transportation improvements, such as bridge overpass structures for streets or railroads.

8.4 Berms

8.4.1 Berm Slope

The slope of a berm shall:

A. Not exceed a 3:1 ratio (horizontal to vertical),

B. Have a top width at least one-half the berm height, and

C. Have a maximum height of eight feet above the toe of the berm.

8.4.2 Berm Stabilization

All berms regardless of size, shall be stabilized in accordance with Chapter 12. Topsoil brought in for mounds are to be mixed with native soil to avoid interfacing problems.

8.4.3 Berm Tapering

Berms shall be tapered appropriately to allow for maintenance.

8.4.1

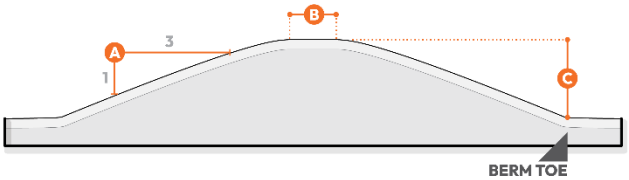


Figure 4: Berm Slope

8.5 Screening

8.5.1 Purpose and Applicability

A. **Purpose**. The purpose of the screening regulations is to minimize views of waste receptacles, exterior building and ground equipment, loading docks, and truck parking areas in order to improve the compatibility between uses and to enhance the appearance of the community.

B. **Applicability**.

1 The standards in this section shall apply to:

a. All new development,

b. Redevelopment having a value of 50 percent or more of the assessed value of the property,

c. Change of use, or

d. When new exterior building of ground equipment, waste receptacles, or loading areas are installed.

2 The standards in this section shall not apply to:

a. Solar Panels,

b. Tanks and/or silos accessory to a Brewery, Winery, and/or Distillery, or

c. Single-Family Detached, Duplex, Townhome, and Manufactured Home uses that utilize rollout waste carts.

8.5.2 Waste Receptacles

A. **General Requirement**. Waste receptacles, including both large dumpsters and small roll-out carts, shall be screened on all four sides with solid, opaque materials. This requirement shall not apply to publicly accessible trash and recycling bins found in streetscapes, parks, greenways, or amenities intended for customer or visitor use.

B. **Location.**

1 Waste receptacle enclosures shall not occupy areas designated for parking spaces or loading areas.

2 Enclosures shall not be located between the primary building and the street right-of-way unless otherwise approved by the Administrator in accordance with the review criteria established in Section 16.5.2 Administrative Modifications/Adjustments.

C. **Dimensions.**

1 Enclosure walls shall be of sufficient height to completely screen waste receptacles from view from the public right-of-way, abutting property, on-site walkways, and common areas.

2 Enclosures shall be of an adequate size to accommodate all on-site waste receptacles.

D. **Materials and Design.**

1 The exterior of the enclosure shall consist of brick, stone, or other masonry materials allowed in Table 8.1.2.C and shall complement the exterior cladding materials and colors of the primary building.

2 Materials and elevations for enclosures that are attached to buildings shall use materials and quality of finish consistent with those of the primary building.

3 The gate shall be constructed of metal, stained or painted wood, or composite wood and shall incorporate colors that are visually consistent with those of the screening walls. All gates shall be provided with wheels, drop pins or rods, or other support mechanisms such as industrial strength hinges, for securing gates when open and closed.

4 Enclosure structures shall be designed to protect the walls from damage by containers. Such protection may be provided on the interior of the enclosure by the use of barrier curbing, reinforced masonry walls, bollards, bumpers, or other similar means.

E. **Landscaping**. Evergreen shrubs shall be installed every three feet along the exterior of the portions of the enclosure adjacent to a public right-of-way or on-site walkways or abutting residential parcels (zoned for residential use or with existing residential uses), with the exception of enclosure openings, to provide a softening effect.

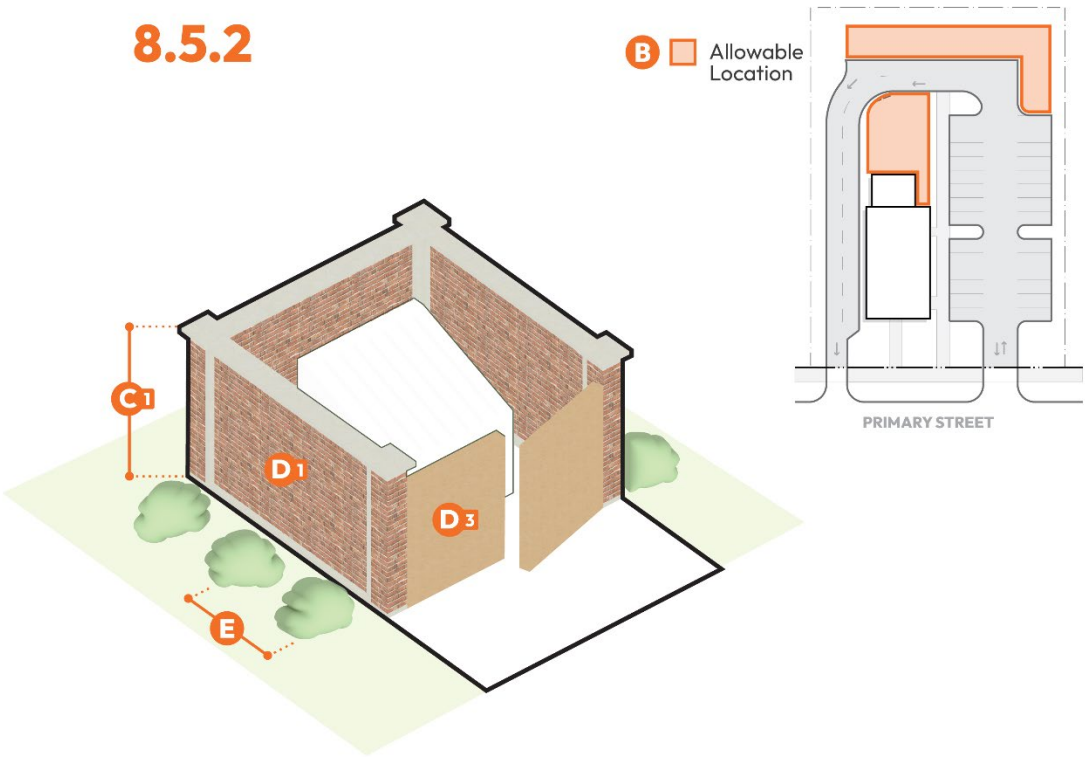


Figure 5: Waste Receptacle Screening

8.5.3 Ground or Wall-Mounted Building Equipment

F. **General Requirements.**

1 Screening shall be provided for all ground or wall-mounted building equipment, including but not limited to: generators, air-conditioning condensers, heat pumps, ventilation units, transformers, backflow preventers, and/or above ground water meters, that is visible from any on-site pedestrian walkway, public right-of-way or adjacent property. Equipment that is located in a side or rear yard and is otherwise screened by landscaping, fence, a building, or distance so that it is not visible from any on-site pedestrian walkway, public right-of-way or adjacent property shall not require additional screening. However, the equipment shall be painted to match or complement the color of the building or enclosure.

2 Locating building equipment within the building or on the roof, as practical, is encouraged in order to minimize exterior visual impacts. Ground mounted equipment is prohibited within the front or street yard, regardless of whether screening is provided. However, an Administrative Modification/Alternative may be considered in cases where it is not feasible to locate equipment, such as transformers or backflow.

G. **Screening Materials**.

1 Materials used for screening shall be a minimum of 80 percent opaque, as measured in Section 18.3 Rules of Measurement.

2 Materials used for screening shall include allowed materials for fences and walls as established in Table 8.1.2.C and shall complement the exterior building cladding materials of the primary building.

3 Evergreen shrubs installed to meet the opacity requirements outlined above and with a minimum height to screen the equipment may be utilized.

H. **Alternatives**. If, due to site constraints or utility provider restrictions, it is not possible to screen ground or wall-mounted building equipment in accordance with the requirements above, the Administrator may approve an alternative screening method such as but not limited to painting equipment to match or complement the building façade or wrapping the equipment with public art.

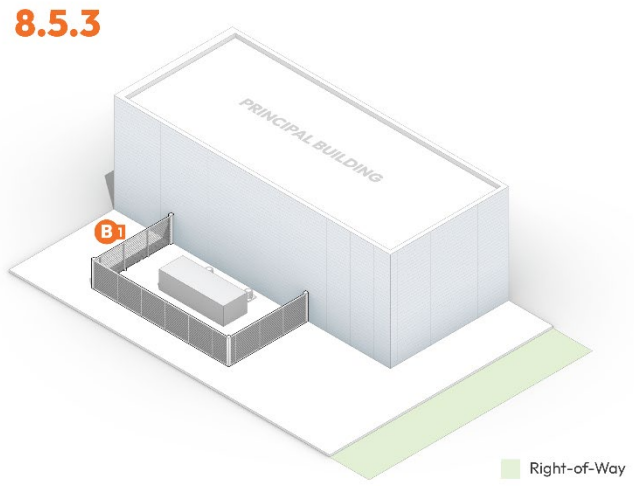


Figure 6: Ground or Wall Mounted Building Equipment Screening

8.5.4 Roof-Mounted Building Equipment

I. **General Requirements**. Roof-mounted building equipment shall be screened from adjacent properties and rights-of-way with a continuous, permanent material that is architecturally integrated with the building on a minimum of three building elevations, including the front elevation.

J. **Other Approaches**. In accordance with the review criteria established in Section 16.5.2 Administrative Modifications/Adjustments, the Administrator may approve other methods that provide superior screening if parapets or mechanical wells cannot be provided.

8.5.5 Loading Docks and Truck Parking Areas

Loading docks and truck parking areas adjacent to a residential use or visible from a public right-of-way shall be screened with a Type A perimeter buffer as detailed in Section 7.3.4.

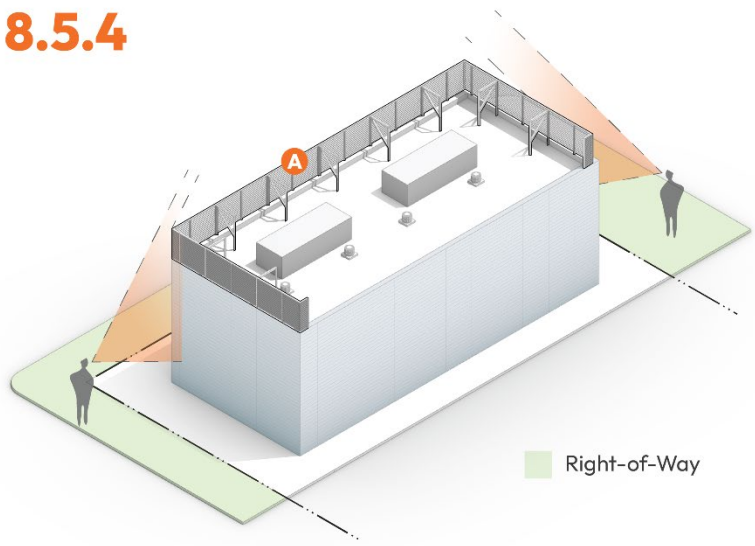


Figure 7: Roof Mounted Building Equipment Screening

9 ACCESS AND CIRCULATION

9.1 General Provisions

9.1.1 Purpose

The purpose of this Chapter is to regulate vehicular, transit user, pedestrian, and bicyclist access and mobility in a manner that:

A. Provides local and regional transportation options including bicycling, transit, walking, and ride sharing services,

B. Ensures the safety of all transportation system users through designs that prioritize pedestrian and bicyclist movements over automobile movements where appropriate, maintain a safe separation of movements in other cases, and avoid unnecessary or unsafe conflicts between vehicular movements,

C. Supports the efficient movement of people and goods through a multi-modal, interconnected transportation network to improve quality of life, support the local economy, and facilitate rapid emergency response,

D. Minimizes negative impacts on the environment through a reduction in carbon emissions associated with automobile use,

E. Prioritizes a human-scaled built environment that accommodates pedestrians to improve physical, mental, and emotional health,

F. Preserves the community's historic small-town character and enhances it as a business-friendly environment,

G. Relieves traffic congestion on streets by limiting curb cuts and promoting alternative modes of transportation,

H. Provides adequate, but not excessive, off-street parking.

CONTENT

9.1 General Provisions
9.2 Transportation Impact Analysis
9.3 Comprehensive Transportation Plan Improvements
9.4 Roadway Design
9.5 Internal Access Drives Standards
9.6 Vehicle Parking
9.7 Loading
9.8 Driveways
9.9 Clear Sight Triangle
9.10 Vehicle Stacking
9.11 Bicycle Parking
9.12 Sidewalks, Multi-Use Paths, Greenways, and Pedestrian Walkways
9.13 Public Transit Improvements

9.1.2 Applicability

The provisions in this Chapter shall apply to:

A. **New Development.** All new buildings and structures established after the adoption of this Unified Development Ordinance (UDO) shall comply with the regulations established in this Chapter.

B. **Redevelopment.** Redevelopment of a building and/or site shall require compliance with the regulations established in this Chapter as defined in Sections 18.22.

C. **Change of Use.** Change of use as defined in Section 18.7 shall comply with the off-street parking requirements in Table 9.6.2.C and shall be subject to any exemptions or adjustments to required off-street parking established in Section 9.6.3 and 9.6.4.

D. **Utility Extensions.** If utilities in the public right-of-way are required to be extended or improved to serve the subject property, the frontage requirements of Section 9.8 shall be met.

E. **Relation to NCDOT Standards**. Should NCDOT and Town standards apply, the more stringent of the requirements shall apply.

9.2 Transportation Impact Analysis

9.2.1 Purpose

A Transportation Impact Analysis (TIA) is a specialized study that evaluates the effects of a development's traffic on the surrounding transportation infrastructure. A TIA helps identify where the development may have a significant impact on safety, traffic, and transportation operations, and provides a means for the developer and government agencies to mitigate these impacts. A TIA can be used to evaluate whether the scale of development is appropriate for a particular site and what improvements may be necessary, on and off the site, to provide safe and efficient access and traffic flow.

9.2.2 Threshold

The TIA shall be required when proposed development meets any of the following criteria:

A. The development is projected to generate 100 or more vehicle trips in any one-hour period,

B. The development includes 100 or more residential dwelling units,

C. The development is projected to generate 1000 or more vehicle trips daily,

D. The development is located within one quarter mile of a Comprehensive Transportation Plan (CTP) Hotspot and is projected to generate 50 or more vehicle trips in any one-hour period, or

E. Additional phases or changes to existing development bring the development above one of the aforementioned thresholds.

9.2.3 Licensed Engineer Required

TIAs must have been conducted by a licensed traffic engineer.

9.2.4 Timing

TIAs, including traffic counts, must have been conducted within the previous six months from time of submittal. If development approval is not received within two years of the completion of the TIA, a new TIA shall be required.

9.2.5 Study Area Boundaries

Site drives, intersections, adjacent roadways within a one-half mile of the proposed development site shall be studied within the TIA in addition to any intersection on which at least seven percent of any traffic movement approach volume are generated by or as a result of the proposed project. Study area boundaries may be modified in accordance with the WFD3.

9.2.6 Study Scope

Prior to submitting a TIA for review, the Professional Engineer preparing the analysis shall conduct a scoping meeting with Town staff, and NCDOT if applicable, to determine the level of detail and assumptions for the scope of the study. After the scoping meeting, the agreed upon details shall be outlined in a Memorandum of Understanding (MOU). Required factors for discussion and inclusion in the MOU are outlined in the WFD3.

9.2.7 Mitigation Requirements and Level of Service (LOS)

Development has the responsibility to not create unsafe or inefficient traffic conditions.

A. Based on the TIA findings, identified improvements, and staff review, the applicant shall be required to make mitigation improvements to the transportation network if at least one of the following conditions exists when comparing base network conditions to project conditions:

1. The total average delay at an intersection or individual approach increases by 25% or greater, while maintaining the same level of service or degrading to a LOS "D",
2. LOS is "E" or "F" at an intersection or individual approach,
3. When the analysis of a turning lane indicates that the 95th percentile queue exceeds the storage capacity of the existing lane,
4. The Pedestrian Analysis fails to reach the minimum score required in the WFD3, or
5. Safety issues are exacerbated or created within the study area boundaries as a result of the proposed development.

B. Mitigation measures shall improve study areas to operate at acceptable levels of service of "D" or better.

C. Typical mitigation measures may involve roadway construction and physical improvements as well as non-construction measures, such as changes to traffic signal timing or phasing, and transportation management strategies. The Administrator will be responsible for determination of mitigation improvements required to be constructed by the applicant.

9.2.8 Payment in Lieu

A payment may be provided in lieu of required mitigation, or a combination of mitigation measures and payment in lieu of improvements, at the discretion of the Administrator in cases where the applicant has provided sufficient documentation to demonstrate that the required improvements cannot physically be constructed with the associated development. The amount, form, and timing of the payment shall comply with Section 14.2.

9.3 Comprehensive Transportation Plan Improvements

9.3.1 Right of Way Dedication and Improvement

In conjunction with applicable development or construction activity, the developer shall be responsible for dedicating and improving the adjacent right-of-way in accordance with the Comprehensive Transportation Plan (CTP) and Manual of Standards and Specifications and Design (WFD3).

A. The entire right-of-way shall be provided and improved in accordance with the CTP where any part of a development is on both sides of an existing or proposed street.

B. The required right-of-way, measured from the center line of the existing street, shall be provided and improved in accordance with the CTP where a new development is located on one side of an existing street.

C. Development may not be required to construct a multilane facility unless a TIA (Section 9.2) requires the additional capacity.

D. If the property adjacent to the opposite side of the right-of-way is a service road, railroad right-of-way, or similar the developer shall be responsible for dedicating the entire required right-of-way width but shall only be responsible for half of the improvement requirements, unless full construction is needed to provide required or desired access to the development.

9.3.2 Payment in Lieu

Payment in lieu (PIL), in accordance with Chapter 14 of this UDO, may be paid in lieu of providing required improvements at the discretion of the Administrator in cases where the applicant has provided sufficient documentation to demonstrate that the required improvements cannot physically be constructed with the associated development.

9.4 Roadway Design

9.4.1 Applicability

A. All roadways within or adjacent to a new development site shall be brought into conformity with the standards of this Section.

B. All roadways within or adjacent to a redevelopment site shall be brought into conformity with the standards of this Section.

9.4.2 General Provisions

A. **Roadway Classifications and Required Improvements.** Each roadway shall be classified per and include the elements detailed in the CTP.

B. **Acceptance by Town.** All roadways shall be dedicated to and accepted by the Town, in accordance with Section 14.4, with the exception of alleys which shall be private unless approval is granted by the Public Works Director.

C. **Roadway Naming.**

1. Roadway names must be approved by the County in which they are located.
2. Extensions of existing named roadways shall continue the existing roadway name.
3. Roadway signs shall comply with the standards established in the WFD3.

D. **Gated Entranceways Prohibited.** Gated streets, roadways, developments, and driveways are prohibited except for Industrial uses and Public Service/Safety Facility use.

9.4.3 Subdivision Connectivity Index

A connectivity index shall be used to determine the adequacy of roadway network design. Conservation design subdivisions and subdivisions resulting in five or fewer lots shall be exempt from the requirements of this subsection.

A. The subdivision connectivity index standards of this section shall apply to all subdivision applications only.

B. A connectivity index is calculated as the ratio of the number of roadway links (road sections between intersections) in the subdivision roadway layout divided by the number of roadway nodes (intersections and cul-de-sac heads).

1. Intersections located outside a subdivision but entering into it may count as roadway links.

2. Intersections between a road and an alley shall not count as roadway links.

C. Roadways within a subdivision shall have a minimum connectivity index measurement of 1.5.

D. Other features that create an internally connected subdivision may be substituted for required roadway links at a rate of 1:1 as approved by the Administrator, including the features below:

1. Pedestrian or bicycle trail connections outside the street right-of-way that connect different portions within the subdivision or connect the subdivision with adjacent development,

2. Midblock pedestrian street crossings.

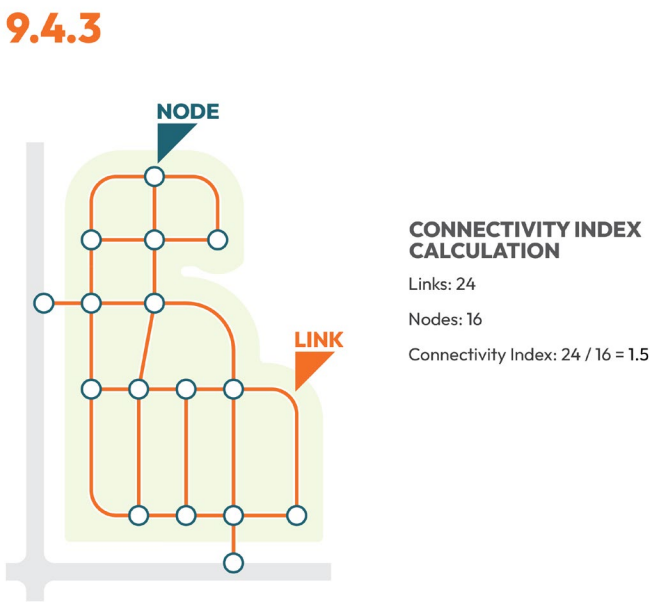


Figure 1: Connectivity Index

9.4.4 External Connections

A. **Development Site Access Points.**

1. Development sites shall maintain external access points through roadway and/or internal access drive connections to existing roads and existing internal access drives in accordance with the NC Fire Code.

2. Except as otherwise regulated by NCGS, development generating more than 100 vehicular trips per peak hour shall provide a minimum of two access points to the development site, and development generating more than 500 vehicular trips per peak hour shall provide a minimum of three access points to the development site.

B. **External Roadway Connections.** To the extent feasible, the roadway network shall be designed to align with and extend existing roadways. Roadway connections included in the CTP are required. Reserve strips are prohibited.

C. **Roadway Stubs.**

1. The roadway stub standards of this subsection shall apply unless:

   a. The development contains one or more of the following land uses: a lot less than two acres in area with a Dwelling-Duplex or Dwelling-Single-Family Detached use; School, Elementary; School, Middle; School, High; Landfill, Cemetery, Public Service/Safety Facility, Correctional Institution, Place of Worship, or

   b. The development is in the LH-O District or is individually listed on the State or National Registers of Historic Places.

2. **Roadway Stub Location and Arrangement.**

   a. All development shall connect to any existing roadway stub from an adjacent property. If the Town collected PIL from the adjacent development for an unbuilt roadway stub, the Town shall issue the amount collected to be used by the owner or applicant to construct the existing stub onto the parcel under development. If an existing roadway stub is located on nearby property other than adjacent property, new roadway stubs shall be arranged to allow for future connection to existing roadway stubs.

   b. All development shall stub to all adjacent properties at the rate of at least one roadway stub per 800 feet of property boundary.

9.4.4.C.2

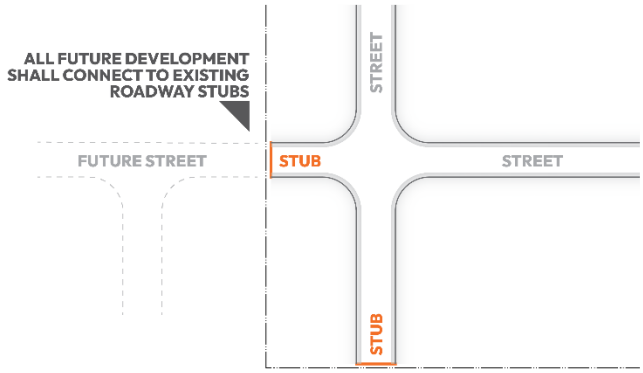


Figure 2: Roadway Stub Location and Arrangement

9.4.4.C.2

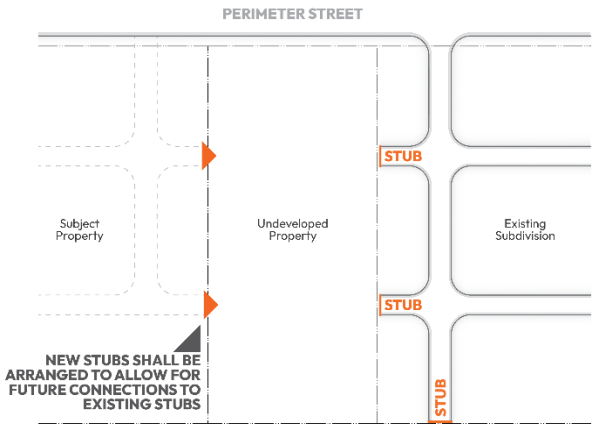


Figure 3: Roadway Stub Location and Arrangement - Nearby Property Stub

9.4.4.C.5

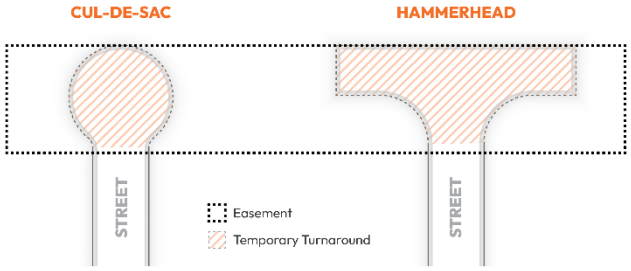


Figure 4: Dead End Roadway Temporary Turn Around Types

c. Local roadway stubs to adjacent parcels shall be arranged and designed to allow future constructable connections. Local roadways shall not be designed or located in a manner to stub to the following:

i. Railroad or controlled access highway, or

ii. Previously established tree canopy retention area, open space, or community space, or

iii. Significant physical barrier where steep slopes or wetlands prevent the construction of a roadway at the maximum slope requirements per the WFD3, or

iv. Adjacent development containing one or more of the following land uses: lot less than two acres in area with a Dwelling-Duplex or Dwelling-Single-Family Detached use; School, Elementary; School, Middle; High, School; Landfill, Cemetery, Public Service/Safety Facility, Correctional Institution, Place of Worship, or

v. Adjacent property containing a Local Historic Landmark or individually listed in the National Register of Historic Places.

d. The Administrator may waive the requirement for roadway stubs after all viable locations for a roadway stub to an adjacent property have been exhausted.

3. Roadway stubs and roadways shall be designed and constructed to the property line or as close to the line, as practicable. The owner or applicant shall provide a PIL of the remainder of the unbuilt roadway on their property, including all required elements within the roadway cross-section and any other required infrastructure as identified in Section 9.3 and/or the WFD3. PIL shall be in accordance with Chapter 14 of this UDO.

4. Any slope easements, construction easements, and/or right-of-way needed to construct the future connection shall be dedicated.

5. Roadway stubs shall not exceed 150 feet in length without a paved turnaround per WFD3 standards.

a. **Temporary Turnaround**.

i. A temporary turnaround shall be placed in an easement until such time that the roadway is extended. The easement shall be designed to allow for the necessary construction space for future conversion. A PIL (per Section 14.2) shall be required for conversion.

b. **Payment in Lieu.** PIL, in accordance with Chapter 14 of this UDO, shall be paid for the future conversion of the temporary turnaround.

6. When a roadway stub is provided, a clearly visible roadway sign per WFD3 standards shall be erected at the end of the stub roadway stating that the roadway is planned to connect to a future roadway.

9.4.5 Blocks

A. **Block Length.** Block lengths shall adhere to the standards established in Table 9.4.5 below and shall be measured from centerline to centerline of the roadway intersections.

Table 9.4.5
Block Length Standards

	GR; NCR; MUR; TSR;	NB; DT; TOD-O; AC-O	CB; CI; IND	OS
Minimum Block Length – Local Roadway	250 feet	250 feet	250 feet	250 feet
Maximum Block Length – Local Roadway	600 feet	600 feet	800 feet	600 feet
Minimum Block Length – Collector/Minor Thoroughfare Roadway	250 feet	250 feet	250 feet	250 feet
Maximum Block Length – Collector/Minor Thoroughfare Roadway	800 feet	800 feet	800 feet	800 feet

B. **Block Bulbs.** Partial bulbs, also called eyebrows or elbows are prohibited.

9.4.6 Dead End Roadways

A. **Allowed Use**. Dead end roadways shall be avoided and utilized only when necessary due to existing site conditions such as:

1. **Topographical Conditions**. Dead end roadways may be used to preserve areas with pre-development slopes 25 percent or greater, if the entirely of the steep sloped area is to remain undisturbed,
2. **Open Space.** Dead end roadways may be used when adjacent to preserved open space per Chapter 6,
3. **Property Shape.** Dead end roadways may be used if the development site is uniquely shaped, and an extended roadway is not possible,
4. **Property Accessibility.** Dead end roadways may be used if access to the development site is restricted by the governing jurisdiction,
5. **Land Use Relationships.** Dead end roadways may be used to minimize issues of land use incompatibility.

B. **Length**.

1. Dead end roadways designed to have one end permanently closed shall not exceed 300 feet in length.
2. Dead end roadways exceeding 150 feet in length shall terminate with a turnaround meeting the standards of this section.

C. **Adequate Turn-Around Required**. Dead end roadways shall terminate in a cul-de-sac or hammerhead, meeting the standards of the WFD3 and the NC Fire Code.

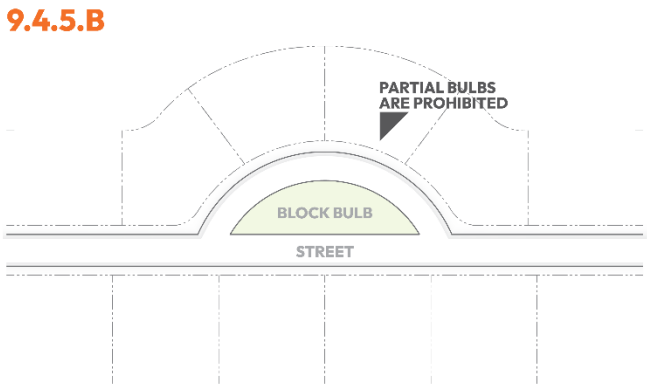


Figure 5: Block Bulbs

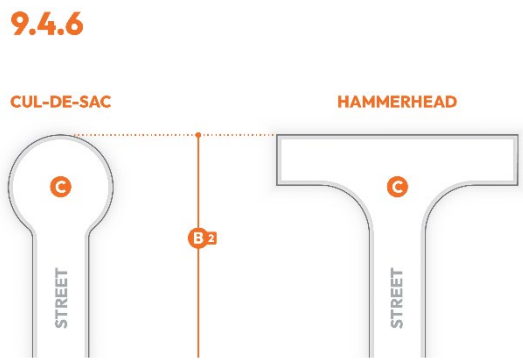


Figure 6: Dead End Roadway Turn Around Types

9.4.7 Intersections

Roadway intersections shall be designed in the following manner:

A. No more than two roadways shall intersect at one point unless the intersection is designed as a roundabout.

B. Roadways shall intersect as nearly as possible at right angles, and no roadway shall intersect any other roadway at an angle of less than 60 degrees, unless the intersection is designed as a roundabout.

C. Intersections with major thoroughfares shall be at least 800 feet apart, measured from centerline to centerline. The Board of Commissioners may waive this requirement if:

1. Such requirement would prevent a property owner fronting on a major thoroughfare from having access to such a facility, and

2. Vehicular cross access from an adjacent property is not available.

D. Roadway jogs with centerline offsets of less than 150 feet are prohibited.

E. Property lines at roadway intersections shall be rounded with a minimum radius of 20 feet.

F. All proposed connections to NCDOT roads shall meet the criteria of the latest revisions of the NCDOT "Subdivision Roads Minimum Construction Standards," and the "Policy on Street and Driveway Access to North Carolina Highways."

9.4.8 Grades and Curves

Vertical and horizontal roadway curves and grades shall be designed in accordance with the WFD3 or NCDOT, as applicable.

9.4.9 Traffic Calming

A. All new residential developments shall provide for the installation of traffic calming measures on each residential roadway within the development where public roadways exceed 1,000 linear feet for safe pedestrian and cyclist mobility. The location and type of measure shall be determined by the Administrator and in compliance with the WFD3. Traffic calming measures include but are not limited to those listed below:

1. Roundabouts,
2. Traffic circles,
3. Pedestrian refuge island,
4. Rapid flash beacon,
5. Chicane,
6. Curb extensions/Bump outs,
7. Other as approved by the Administrator.

B. Vertical deflection devices such as speed bumps and speed tables are not allowed.

C. Traffic calming measures on existing roadways shall refer to the Town's Traffic Calming Policy.

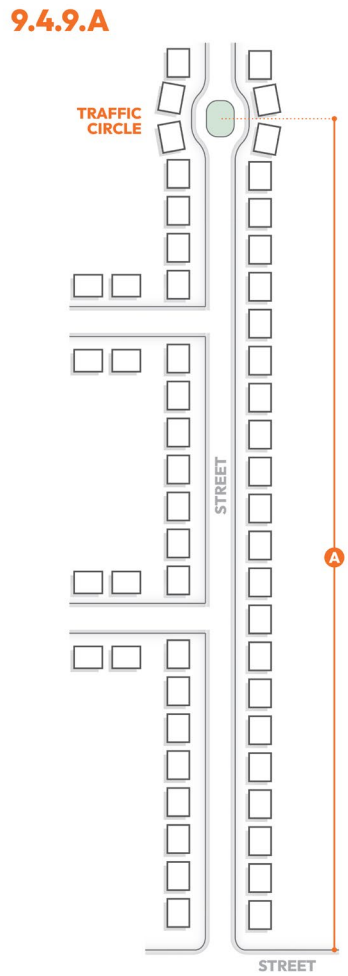


Figure 7: Traffic Calming Requirement Scenario

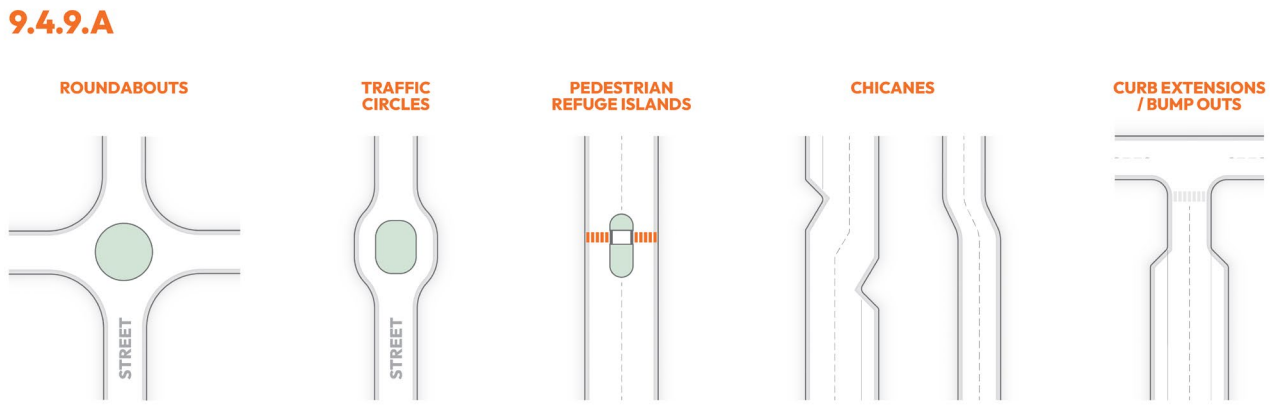


Figure 8:Traffic Calming Measure Types

9.5 Internal Access Drives Standards

9.5.1 Applicability

Internal access drives include all private vehicular travel lanes outside of drive aisles in parking areas within a development site greater than five acres in gross area or with 200 or more parking spaces.

9.5.2 Site Access and Circulation

Site access and circulation shall be provided via internal access drives and not drive aisles in parking areas.

9.5.3 Internal access drives shall meet all applicable standards of the WFD3 and include:

A. **Primary Internal Drive.** A primary internal drive shall connect a site to the public right-of-way, provide access to secondary internal drives, and meet the standards established in Table 9.5.4.A.

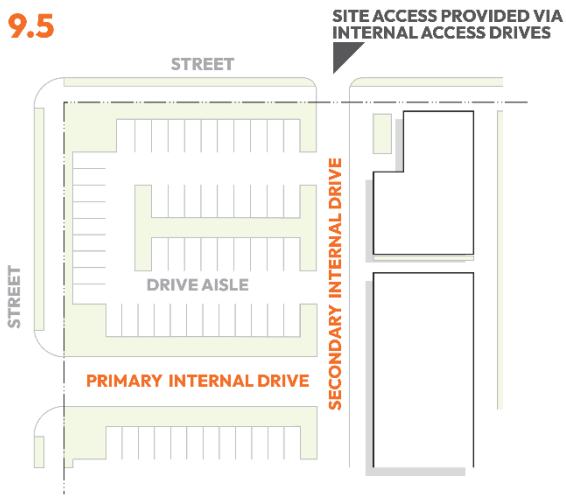


Figure 9: Internal Access Drives

Table 9.5.4.A
Primary Internal Drive Standards

Primary Internal Drive Component	Required	Minimum Dimensions
Two Travel Lanes	Yes	18 feet per lane
Planted Median	Yes	9 feet [1]
Bike Lane	No	5 feet, within 18-foot travel lane
Parallel Parking	No	10 feet
Angled Parking [2]	No	20 feet
Curb and Gutter	Yes	Per WFD3
Verge	Yes	6 feet
Verge Landscape	Yes	Shall meet the standards of Section 7.8
Sidewalk – both sides of drive [3]	Yes	6 feet
Bump outs [4]	Yes [4]	Per WFD3

Notes

[1] Planted medians shall be improved with a mountable curb with a minimum height of nine inches and a gutter with a minimum width of nine inches. Medians shall taper to a minimum of two feet in width at intersections. Medians may have breaks to accommodate turning movements. Medians shall be planted with a minimum of one canopy tree, two understory trees, and 10 shrubs or native grasses every 50 feet.

[2] If 45- or 60-degree angled parking is utilized, the minimum width of the adjacent sidewalk shall be 10 feet in order to accommodate bicycle traffic.

[3] Pedestrian walkways shall connect the primary internal drive to the building.

[4] Bump outs shall be required at intersections/pedestrian crosswalks when parking is included.

9.5.4.A

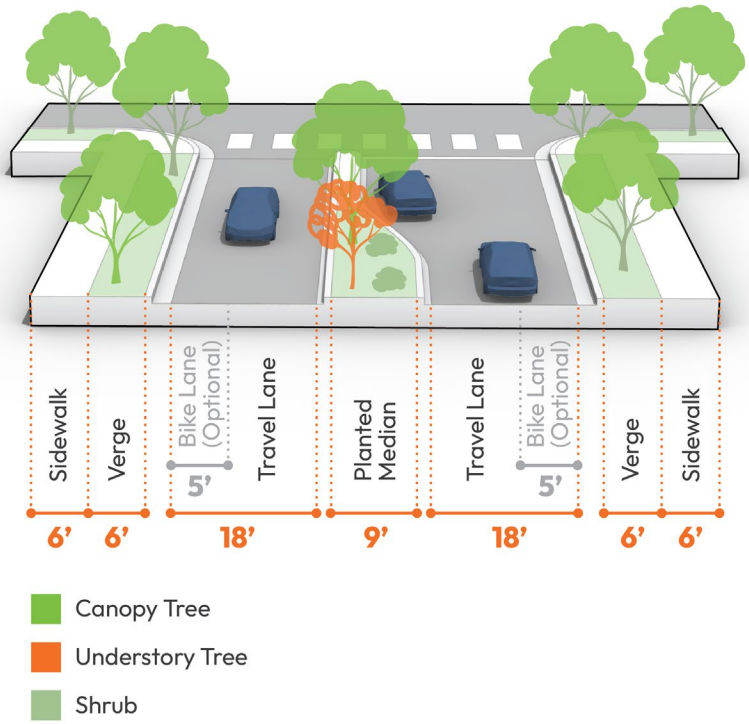


Figure 10: Primary Internal Drive - No Parking

9.5.4.A

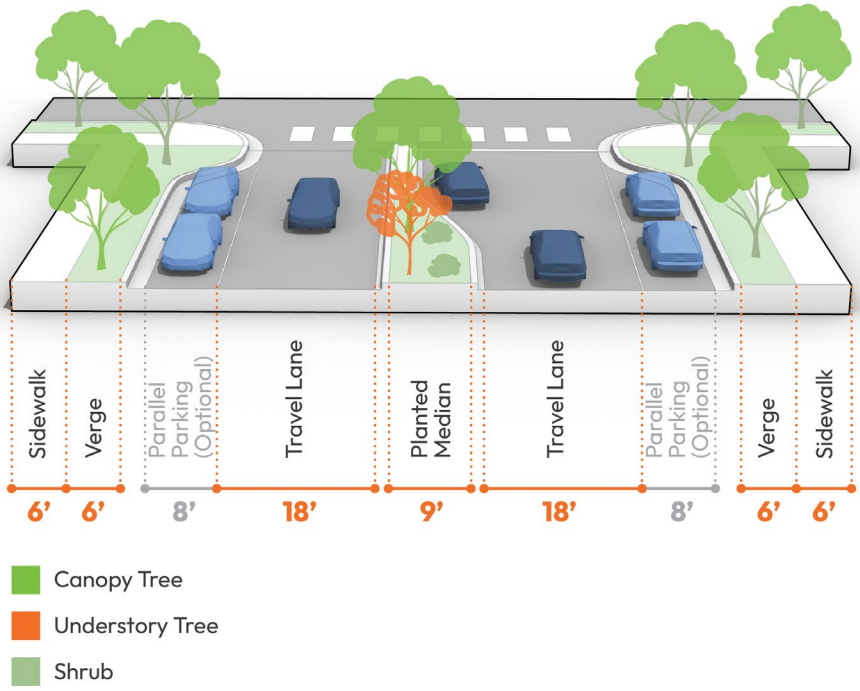


Figure 11: Primary Internal Drive - With Parking

B. **Secondary Internal Drive.** A secondary internal drive shall connect primary internal drives to buildings and parking areas on a site and meet the standards established in Table 9.5.4.B.

Table 9.5.4.B Secondary Internal Roadway Standards		
Secondary Internal Drive Component	**Required**	**Minimum Dimensions**
Two Travel Lanes	Yes	10 feet per lane
Bike Lane	No	5 feet
Parallel Parking	No	10 feet
Angled Parking [1]	No	20 feet
Curb and Gutter	Yes	per WFD3
Verge	Yes	6 feet
Sidewalk – one side of drive [2]	Yes	6 feet
Notes		
[1] If 45- or 60-degree angled parking is utilized, the minimum width of the adjacent sidewalk shall be 10 feet in order to accommodate bicycle traffic.		
[2] Pedestrian walkways shall connect the primary internal drive to the building.		

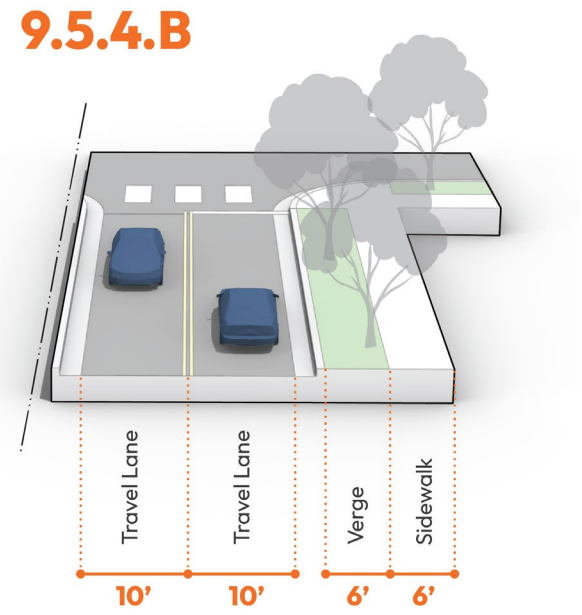
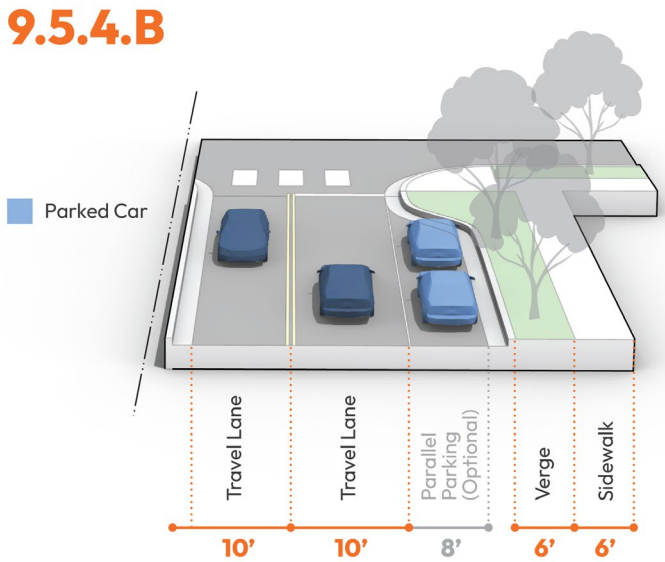


Figure 12: Secondary Internal Drive - No Parking

Figure 13: Secondary Internal Drive – With Parking



9.6 Vehicle Parking

9.6.1 Permitted Parking Area Locations

The allowed location of accessory parking areas shall be in accordance with Table 9.6.1.

Table 9.6.1
Allowed Parking Area Location

Key: • = Allowed; ○ = Allowed per [1]; Blank = Not Allowed

District	Between Building(s) and any Street Right-of-Way	Between Building(s) and Side Lot Line	Between Building(s) and Rear Lot Line
GR (Duplex, Single-Family Detached)	•	•	•
NCR (Duplex, Single-Family Detached)		•	•
GR; NCR (all other uses)		•	•
MUR; TSR; NB;		•	•
DT; TOD-O; AC-O	○	○	•
CB; IND; CI	○	•	•

Note

[1] If a parking area is located between building(s) and any street right-of-way the parking area shall be separated from the building(s) by a primary internal access drive meeting the standards of Section 9.5. Alternatively, upon approval of an Administrative Modification (Section 16.5.2) and determining that it is impracticable to comply with the allowed parking area location requirements, alternative parking locations and arrangements are allowed provided that enhanced parking area perimeter landscaping is provided between the parking area and the street right-of-way with the following composition: A solid masonry wall, with a minimum height of three feet and a maximum height of four feet, three canopy trees per 100 linear feet, six understory trees per 100 linear feet, and one shrub or ornamental grass planted every four feet of the wall length. Such plantings may be clustered or spaced at even intervals as deemed appropriate by the Town. At least 50% of the shrubs shall be evergreen species.

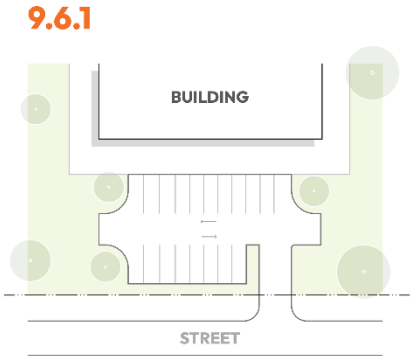


Figure 14: Permitted Parking Area Location - Between Building and any Street ROW

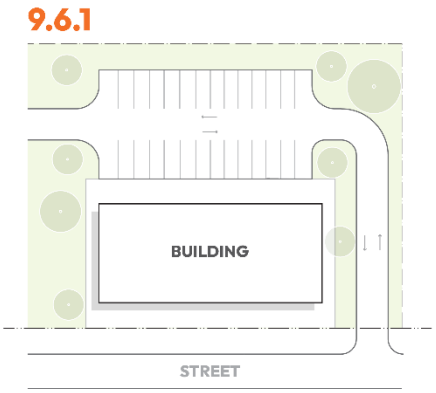


Figure 16: Permitted Parking Area Location - Between Building and Rear Lot Line

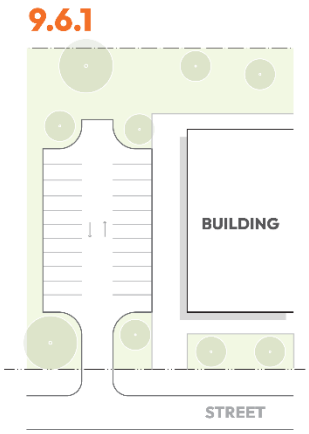


Figure 15: Permitted Parking Area Location - Between Building and Side Lot Line

9.6.2 Minimum and Maximum Parking Space Standards

A. The number of required and allowed off-street parking spaces shall be calculated according to the formulas established in Table 9.6.2.C.

1. Multifamily uses in the DT and TOD-O Districts shall be exempt from the minimum parking requirements of Table 9.6.2.C.

2. The parking standards of Table 9.6.2.C. may be adjusted per the standards established in Sections 9.6.3 and 9.6.4.

B. Mixed-use developments or lots containing more than one use shall determine the total number of required parking spaces by adding together the required number of spaces for each of the proposed uses as if they were separate.

C. The minimum required and maximum allowed number of parking per use shall be as established in Table 9.6.2.C.

1. **Per Square Footage**. "Sq ft" shall mean the square footage of the gross floor area.

2. **Per Other**. Other variables are measured according to their common meanings.

Table 9.6.2.C
Parking Schedule

	MINIMUM REQUIRED PARKING	MAXIMUM ALLOWED PARKING
RESIDENTIAL		
Dormitory	1/dorm	n/a
Dwelling-Cottage Court	1/unit	
Dwelling-Duplex	2/unit	
Dwelling-Multifamily	1/unit	2/unit
Dwelling-Multifamily, Above Ground Floor Only		
Dwelling-Single-Family Detached	2/unit and 1/10 units for guests	no maximum
Dwelling-Townhome		
Dwelling-Triplex/Quadplex	2/unit	
Dwelling-Two-Over-Two		
Family-Care Home		
Live-Work Unit	1.5/unit	
Manufactured Housing		
Single-Room Occupancy	0.5/bedroom	
Residential Care Facility		
Retirement Housing	0.75/unit	2/unit
PUBLIC & INSTITUTIONAL		
Cemetery	no minimum	n/a
Child/Adult Day Care Center		1/300 sq ft
Civic Meeting Facility, 15,000 sq ft or More		1/100 sq ft
Civic Meeting Facility, Less Than 15,000 sq ft		
College/University		1/200 sq ft
Community Support Facility		
Correctional Institution		
Cultural/Community Facility, Public 15,000 sq ft or More		1/150 sq ft
Cultural/Community Facility, Public, Less than 15,000 sq ft		
Entertainment/Recreation Facility, Public, 15,000 sq ft or More		
Entertainment/Recreation Facility, Public Less Than 15,000 sq ft		

Table 9.6.2.C
Parking Schedule

	MINIMUM REQUIRED PARKING	MAXIMUM ALLOWED PARKING
Halfway Home	no minimum	1/200 sq ft
Hospital		
Park		
Place of Worship, 15,000 sq ft or More		
Place of Worship, Less Than 15,000 sq ft		
Public Service Maintenance and Storage Facility		no maximum
Public Service/Safety Facility		
School, Elementary		
School, High		
School, Middle		
School Vocational/Technical		1/200 sq ft
School Vocational/Technical, Above Ground Floor Only		
COMMERCIAL		
Adult Establishment	no minimum	1/250 sq ft
Artisan Manufacturing		
Bar		1/100 sq ft
Bed and Breakfast Home		1.5/room
Co-Working		1/250 sq ft
Co-Working, Above Ground Floor Only		
Crematorium		
Cultural/Community Facility, Private, 15,000 sq ft or More		
Cultural/Community Facility, Private, Less than 15,000 sq ft		
Entertainment /Recreation Facility, Private, 15,000 sq ft or More		
Entertainment /Recreation Facility, Private, Less than 15,000 sq ft		
Financial Services		
Food Truck, Court		10/food truck stall
Funeral Home		1/200 sq ft
General Commercial, Less Than 100,000 sq ft		1/250 sq ft
General Commercial, 100,000 sq ft or More		
Heavy Commercial Sales		
Hotel		1.5/room
Medical Clinic		1/250 sq ft
Medical Clinic, Above Ground Floor Only		
Meeting/Event Facility, Private, 15,000 sq ft or More		
Meeting/Event Facility, Private, Less than 15,000 sq ft		
Micro-Brewery/Winery/Distillery		1/150 sq ft
Multitenant Commercial Center		
Personal Services		1/250 sq ft
Post Office		
Professional Services		
Professional Services, Above Ground Floor Only		

Table 9.6.2.C
Parking Schedule

	MINIMUM REQUIRED PARKING	MAXIMUM ALLOWED PARKING
Restaurant		1/100 sq ft
Restricted Commercial		1/250 sq ft
Shooting Range, Indoor		3/lane
Shooting Range, Outdoor		
Short-Term Rental	1/bedroom	1.5/bedroom
Studio, Private - Art, Dance, Martial Arts, Music	no minimum	1/250 sq ft
Studio, Private - Art, Dance, Martial Arts, Music, Above Ground Floor Only		
INDUSTRIAL & AUTOMOTIVE		
Brewery/Winery/Distillery	no minimum	1/100 sq ft of public area; 1/1,000 sq ft of production area
Car Wash		1/vacuum
Commercial Kitchen		8/tenant or leasable space
Concrete/Cement Manufacturing		1/1,000 sq ft
Industry, Heavy		
Industry, Light		
Landfill		
Life Sciences/Biomanufacturing Facility		
Liquid Natural Gas Processing		
Materials Recovery & Waste Transfer Facility		
Parking Lot		no maximum
Parking Structure		
Recycling Collection Station		1/1,000 sq ft
Storage Self-Service		
Storage Self-Service, Above Ground Floor Only		
Storage Warehouse, Indoor		
Vehicle Fueling Station		1/250 sq ft
Vehicle Rental/Leasing/Sales		
Vehicle Services - Major Repair/Body Work		
Vehicle Services - Minor Maintenance/Repair		
Wholesaling and Distribution		1/1,000 sq ft
UTILITIES & INFRASTRUCTURE		
Transit Station	n/a	
Utilities Class 1		
Utilities Class 2		
Utilities Class 3		
Wireless Telecommunications Equipment		

Table 9.6.2.C
Parking Schedule

	MINIMUM REQUIRED PARKING	MAXIMUM ALLOWED PARKING
Wireless Telecommunications Tower		
AGRICULTURE & ANIMAL RELATED		
Garden	no minimum	no maximum
Indoor Agriculture		1/1,000 sq ft
Nursery & Garden Center		
Riding Stable		
Veterinary and Animal Care Services, Indoor and Outdoor		1/250 sq ft
Veterinary and Animal Care Services, Indoor Only		

Table 9.6.2.C
Parking Schedule

	MINIMUM REQUIRED PARKING	MAXIMUM ALLOWED PARKING
ACCESSORY		
Accessory Dwelling Unit	no minimum	no maximum
Accessory Commercial Unit		1/unit
Accessory Retail/Restaurant		1/150 sq ft
Accessory Structure		no maximum
Agritourism		1/300 sq ft
ATM		no maximum
Backyard Small Animal Keeping		
Cemetery		
Child/Adult Day Care Home		1/200 sq ft
Cluster Mailbox Unit		no maximum
Community/Recreation Center		1/200 sq ft
Donation Drop Box		2/box
Drive-Through Facility		no maximum
Drone Delivery Operations Facility		
Electric Vehicle Charging Facilities		
Fleet Vehicle Storage/Maintenance		
Food Truck, Accessory		
Garden, Accessory		
Home Occupation		
Outdoor Display / Sale of Merchandise, Accessory		1/250 sq ft
Outdoor Seating, Accessory		no maximum
Outdoor Storage Yard		
Produce Stand		10/stand
Public Art		no maximum
Public Recreation/Community Center		
Solar Energy Collection System, Canopy		
Solar Energy Collection System, Ground Mounted		
Solar Energy Collection System, Roof Mounted		

9.6.3 Adjustments to Minimum Parking Requirements

The minimum parking required per use as established in Table 9.6.2.C may be adjusted by the Administrator per Table 9.6.3.

Table 9.6.3
Adjustments to Minimum Parking Requirements

Type	Criteria	Adjustment
Tree Preservation	Reduction is necessary to preserve a specimen or established tree from being damaged or removed and/or to protect tree retention areas.	Administrator may approve a 25 percent maximum reduction in required parking.
Transit	Use is located within 1,000 feet of a public transit stop or station and is connected to the stop or station via a continuous sidewalk and/or pedestrian walkway system.	Administrator may approve a 15 percent maximum reduction in required parking.
On-Street Parking	Dwelling, Single-Family Detached or Dwelling, Duplex use is located along one or more public street frontages where public parking is permitted and which have bump outs and chokers, in accordance with the WFD3.	A maximum of one required parking space may be credited for one legal on-street parking space immediately abutting the subject property. Where a partial space straddles an extension of a side property line, the space may be counted by the abutting property owner in front of whose property 50 percent or more of the space is located.
	Multifamily use is incorporated into and visually integrated with the street design of one or more public street frontages where public parking is permitted and which have bump outs and chokers, in accordance with the WFD3. To qualify, Multifamily uses shall feature a greater quantity of balconies, pedestrian paths and access, and façade articulations than the requirements in Section 5.9.	One required parking space may be substituted if one legal on-street parking space immediately abuts the subject property. Where a partial space straddles an extension of a side property line, the space may be counted by the abutting property owner in front of whose property 50 percent or more of the space is located. A maximum of 10 percent of required parking may be adjusted.
Affordable Units	A unit of a Dwelling, Cottage Home Court; Dwelling-Multifamily; Dwelling-Townhome; Dwelling-Triplex/Quadplex; Dwelling-Two Over Two; or Single-Room Occupancy is deed restricted to be affordable to households making 80 percent or less of the area median income.	Administrator may approve the reduction of 0.5 parking spaces per deed restricted affordable unit.

9.6.4 Adjustments to Maximum Parking Requirements

The maximum parking allowed per use as established in Table 9.6.2.C may be adjusted by the Administrator per Table 9.6.4 In no instance shall parking spaces beyond those allowed in Tables 9.6.2.C be located in front of or to the side of the principal building(s) on the property.

9.6.5 Parking Study

Upon receiving a request for an adjustment to required or allowed parking, the Administrator may require the applicant prepare and submit a parking study. Such a study must include estimates of parking demand based on recommendations of the Institute of Traffic Engineers (ITE), or other acceptable estimates as approved by the Administrator, and should include other reliable data collected from uses or combinations of uses that are the same as, or comparable with, the proposed use. Comparability will be determined by density, scale, bulk, area, type of activity, and location. The study must document the source of data used to develop the recommendations.

Table 9.6.4
Adjustments to Maximum Parking Requirements

Type	Criteria	Adjustment
Permeable Surfacing	All parking spaces are surfaced with a permeable paving material approved by the Town Engineer.	Administrator may approve a 15 percent maximum increase in allowed parking.
Parking Area Interior Landscape	Parking area interior landscape meets the standards of 7.7.2.	Administrator may approve a 25 percent maximum increase in allowed parking.
Parking Study	A parking study (meeting the requirements of Section 9.6.5) identifies a need for more parking spaces than allowed.	Administrator may approve the increase in allowed parking identified as necessary in the parking study.
Parking Structure	All parking spaces are located in a parking structure meeting the standards of Section 9.6.6.E.	Administrator may approve an unlimited increase in allowed parking.

9.6.6 Parking Area and Space Dimensional and Design Standards

A. **Parking Space and Drive Aisle Dimensional Requirements**.

1. **Standard Parking Space and Drive Aisle Dimensions.** Standard parking spaces, including interlocking standard parking spaces, shall comply with the minimum dimensional and layout requirements specified in the WFD3.

2. **Compact Parking Space and Drive Aisle Dimensional Requirements**.

   a. Compact parking stalls and aisles shall comply with the minimum dimensional and layout requirements specified in the WFD3.

   b. In parking areas containing more than 10 spaces, up to five percent of the spaces exceeding the first 10 spaces may be designed for compact vehicles.

   c. Compact parking spaces shall be shown on plans and labeled for such purposes through pavement markings and/or signage.

B. **Parking Area General Design Standards**.

1. Parking areas shall be located and designed to avoid undue interference with the use of public rights-of-way, driveways, or pedestrian ways. Parking spaces shall not be located in areas that would require backing into access driveways or streets except for Dwelling, Single-Family or Dwelling, Duplex uses.

2. Parking stalls shall be located a minimum of 10 feet from public rights-of-way and buildings to accommodate the required parking area perimeter landscape zone (Section 7.7.1), allow sufficient separation for sidewalks with a minimum width of eight feet, and other site features. Designated loading and unloading areas along the backs of buildings are exempt from this requirement.

3. A minimum of 70 percent of all parking area drive aisles shall connect to secondary access drives or connect to an adjoining parking lot.

4. Parking shall not be located in landscape, open space, or tree canopy retention areas.

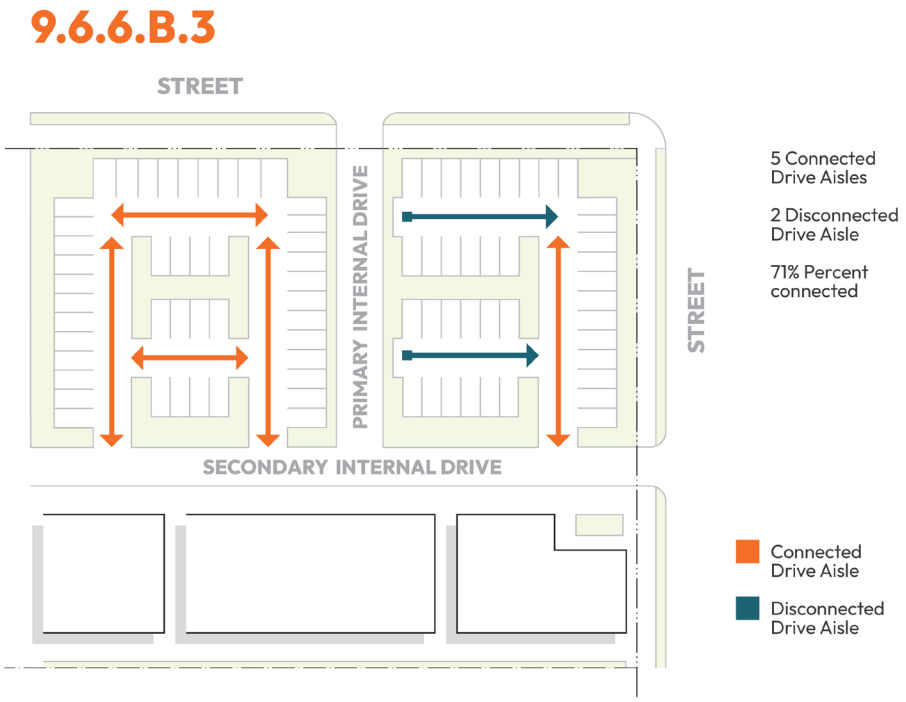


Figure 17: Aisle connectivity

5. Tractor trailers, cargo trucks, busses and other large commercial vehicles or heavy equipment parking and storage shall comply with parking access, location and design requirements except for stall size and aisle size which shall be as appropriate for the vehicles to be stored and shall be designated on a site plan.

6. Pavement directional arrows shall be provided on one-way driveways, one-way drive aisles, drive aisles with angled parking, and locations warranted by the Administrator for safety and traffic operations.

7. Parking spaces shall be delineated with pavement surface markings so that they are easily identified.

8. Stop bars, directional arrows, crosswalks, and any regulatory pavement markings required by MUTCD standards shall be marked with white thermoplastic.

9. If a development utilizes shopping carts, an adequate number of corrals shall be provided within parking areas and shall be delineated with a fence the design of which is consistent with or complementary to the design of the principal building or curb,

C. **Surfacing Materials**. Parking areas shall be properly graded, marked, and located on improved lots or within parking structures. The material for surface parking spaces and corresponding drive aisles required by this Chapter shall consist of suitable material as set forth below.

1. **Suitable Materials.** Suitable paving materials for parking areas include, but are not limited to:

   a. Asphalt,

   b. Pervious pavement,

   c. Porous paving blocks,

   d. Concrete, or

   e. Reinforced grass (satellite parking areas only).

2. **Accessible Spaces**. All accessible spaces and corresponding access paths shall consist of concrete or asphalt.

3. **Gravel.** The use of gravel as a parking area surfacing material shall be allowed only on properties with a historic structure or site registered on the local, state, or national register.

4. **Exceptions to Paved Parking**. An overflow parking lot used only for occasional use (use that occurs no more than one day per week) or is temporary in nature (not exceeding six months) is exempted from the requirements of this Chapter, provided that the parking surface is maintained in a clean and dust-free condition and with compacted ground cover, such as gravel or reinforced turf.

5. **Non-Paved Areas**. Whenever a permanent parking area is exempt from the paved parking requirements or otherwise not required to be paved, the Administrator shall:

   a. Require that landscape aisles or spatial separations be provided where the Administrator finds it is desirable to ensure that the parking spaces will be readily identifiable to the users, and

   b. Require the perimeter of the vehicle accommodation area encompassing the parking stalls and the side of any unpaved drive or aisle leading to said stalls, to be edged with brick, pressure treated timbers, or cast in place concrete, and anchored into place. Alternate borders may be considered on a case-by-case basis for historic properties.

D. **Vehicular Connectivity**.

1. Adjoining parking lots serving (or potentially serving) nonresidential or Multifamily uses shall be interconnected as follows:

   a. At least one vehicular connection shall be provided at all lot lines that are coincident for at least 60 feet with another lot zoned for nonresidential or Multifamily use,

   b. The vehicular connection shall be at least 20 feet wide,

   c. The vehicular connection shall align with a vehicular connection that has been previously constructed on an adjacent property or shall be stubbed for future vehicular connection if the adjacent site is undeveloped,

   d. The vehicular connection shall have a slope of no greater than eight percent. Administrator approval is required for slopes greater than eight percent,

   e. The vehicular connection shall not be placed where a building on an adjacent property is within 50 feet of the lot line which would hamper traffic movements within the parking lot,

   f. The vehicular connection shall be placed in an area which will not require the removal of significant natural features such as wetlands or trees with a caliper of 12 inches or more.

2. In the event these conditions cannot be met without undue hardship, such vehicular connections would create undesirable traffic flow, or at least one of the parking lots is located in the IND district, the Administrator may waive the connection requirement per Section 16.5.2.

3. Where a vehicular connection is required an easement for ingress and egress to adjacent lots shall be recorded by the property owner with the county Register of Deeds in the form of an easement plat.

4. Vehicular connections shall be channelized in accordance with the WFD3.

9.6.6.D

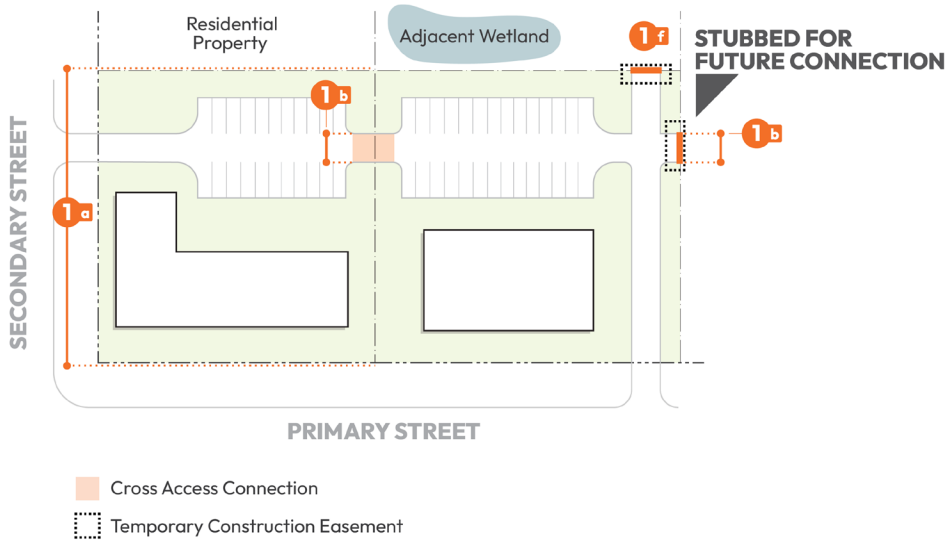


Figure 18: Vehicular Connectivity Example

5. **Vehicular Connectivity Payment in Lieu.**

   a. PIL, in accordance with Chapter 14 of this UDO, may be paid in lieu of providing required improvements at the discretion of the Administrator in cases where the applicant has provided sufficient documentation to demonstrate that the required improvements cannot physically be constructed with the associated development.

   b. Should PIL be approved, a temporary construction easement, in accordance with the WFD3, shall be established.

E. **Structured Parking**.

1. **Screening**. Vehicles shall be screened from view from the street and adjacent properties with walls or decorative screens (architectural or vegetative). Sloped ramps cannot be discernible along the perimeter of a parking structure.

2. **Materials**.

   a. **First Level**. Category 1 materials identified in Section 5.2.1.B shall be used on a minimum of 70 percent of the first level of the structure's exterior façade.

   b. **Upper Levels**. Category 1 materials identified in Section 5.2.1.B shall be used on a minimum of 50 percent of the upper levels of the structure's exterior façade.

3. **Blank Walls**. When adjacent to a street, residentially developed parcel, or a GR, NCR, MUR, and TSR zoned parcel, blank wall voids or lacking features of visual interest may not exceed 40 feet in length or height. Visual interest features include façade articulation, change in material pattern, vegetation walls, murals, canopies, and glazing.

4. **Entries**. Pedestrian entries shall be clearly visible from a public street.

5. **Stairwells**. Stairwells shall be open or enclosed with glass and be visible to the street for security reasons.

9.6.7 Reserved Parking Spaces

A. **Short-Term Parking**. Parking spaces reserved for curb-side pickup patrons, rideshare pick up and drop off, or other short-term parking needs, shall be located either to the side of the principal building, in the rear of the parking lot, away from main building entrances, near employee exits or in another location approved by the Administrator so as not to inhibit pedestrian travel between the principal building entrance and off-street parking areas.

B. **Electric Vehicle Charging Stations**.

1. **Parking Area**. Any parking area with 40 or more parking spaces serving a Multifamily, Mixed Use, or Commercial development shall provide electric vehicle charging stations for at least five percent of provided parking spaces. However, the maximum number of required EV charging stations shall not exceed 10 per single development. Any additional required EV parking spaces beyond this limit shall be designed with the infrastructure needed as EV-ready to allow for the future installation of charging stations if needed.

2. **Parking Structure**.

   a. Parking structures with 40 or more parking spaces shall provide electric vehicle charging stations for at least five percent of provided parking spaces and the infrastructure needed for a minimum of 10 percent of provided parking spaces to be converted to electric vehicle charging stations.

   b. Parking structures with fewer than 40 parking spaces shall provide the infrastructure needed for a minimum of 10 percent of provided parking spaces to be converted to electric vehicle charging stations.

9.6.8 Shared Parking

One parking lot may contain required parking spaces for several different uses; however, the required parking spaces assigned to one use may not be counted or assigned to another use(s), unless otherwise allowed in this Section.

A. To the extent that developments that wish to make joint use of the same parking spaces operate at different, off-peak times, the same spaces may be credited to both uses.

B. If the joint use of the same parking spaces by two or more principal uses involves satellite parking spaces, then the provisions of Section 9.6.9 are also applicable.

C. Where vehicular cross access is provided between adjoining nonresidential developments and the operating hours of adjoining uses do not significantly overlap, the uses may share up to 50 percent of required parking spaces.

D. An applicant proposing the use of the shared parking must:

1. Demonstrate that the express legal right to use the parking spaces in question has been obtained,

2. Provide a shared use parking agreement detailing how the parking spaces will be shared among the uses, which shall be recorded with the County Register of Deeds upon approval, and

3. Sign an acknowledgement that the continuing validity of the applicant's development permit depends upon the continuing ability to provide the requisite number of parking spaces. If the shared parking is no longer available or the property owner fails to comply with the requirements of this Section, the parking requirement reverts to those requirements found in the Table 9.6.2.C and the property owner or applicant must demonstrate compliance with said requirements or the development permit shall be revoked.

E. Should there be a change in owner, change in use, expansion or reduction in building or parking area, a new shared use agreement and agreement in outlined in subsection D above shall be submitted to the Town and additional parking may have to be provided as required by this UDO or the permit shall be revoked.

9.6.9 Satellite Parking

A. If the parking spaces required by this Section cannot be reasonably provided on the same lot on which the principal use is located, such space may be provided on any land within 660 feet, with the exception of land in the GR, NCR, MV-O, or LH-O districts. Such measurement shall be taken from the edge of the satellite parking area to the entryway of the principal use for which the parking is provided.

B. A continuous pedestrian walkway, meeting the standards of Section 9.12.3 shall be provided between the lot and the entrance of the principal use.

C. If satellite parking is utilized to fulfill parking requirements, the owner or authorized agent for the land upon which such satellite parking is located shall restrict the use of such parking area for parking only in connection with the use(s) or structure(s) for which such satellite parking is provided. Such restriction shall be recorded through an easements plat properly filed with the county Register of Deeds, which may be released only by written consent of the Town.

D. Satellite parking for a particular use shall not be established in any district that does not allow that use.

E. The applicant wishing to utilize the provisions of this section must present satisfactory written evidence that the applicant has the legal right to use the satellite parking spaces, and that such right is exclusive during the operating hours of the use in question. The applicant must also sign an acknowledgement that the continuing validity of the applicant's permit depends upon the continuing ability to provide exclusive use during operating hours of the requisite number of parking spaces. If the parking spaces are required for residential uses, "operating hours" shall be considered 24 hours a day for the purposes of this section.

F. The applicant using satellite parking to comply with the requirements of this section must sign an acknowledgement that the continuing validity of the applicant's permit depends on the continuing ability

to provide the requisite number of parking spaces. If the applicant or property owner fails to comply with the requirement so this section, the parking requirements reverts to those requirements in this Chapter and the property owner and applicant must demonstrate compliance with said requirements or the development permit may be revoked.

G. Should there be a change in owner, change in use, expansion or reduction in building or parking area, the applicant will have to demonstrate continued compliance through the satellite parking and/or provide additional parking as required by this UDO or the permit shall be revoked.

9.7 Loading

9.7.1 Required Loading

On the same premises with every building erected and occupied for any nonresidential use involving the receipt or distribution of vehicles, materials, or merchandise, there shall be provided and maintained adequate, designated space for standing, turning, loading, and unloading services in a manner that does not interfere with required vehicle or bicycle parking, pedestrian walkways, or with the public use of rights-of-way.

9.7.2 Location

A. All required loading bays shall be located on the same lot as the use served.

B. No loading bay for vehicles over two tons capacity shall be located closer than 50 feet to any property in the GR, NCR, or MUR Districts unless completely enclosed by building walls or a uniformly painted solid fence or wall, or any combination thereof, not less than six feet high.

C. No permitted or required loading bay shall be located within 25 feet of the nearest point of intersection of any two streets.

D. No loading or unloading bays shall be located in any front yard or street side yard.

E. No loading or unloading bays shall be located in a fire lane.

F. No loading bay may intrude into any portion of a required parking drive aisle.

G. An occupied loading space shall not prevent access to a required off-street parking space.

9.7.3 Access

A. Each required off-street loading bay shall be designed to provide access to a street or easement by the largest vehicle likely to serve the lot in a manner which will least interfere with traffic movements.

B. Every loading bay shall be provided with sufficient maneuvering space to accommodate the largest vehicle likely to serve the lot.

C. The loading bay access design shall allow vehicles to access and exit the loading space without having to make any backing movement onto a public right-of-way.

9.7.4 Utilization

Space allocated to any off-street loading bay shall not be used to satisfy the requirements for any vehicle or bicycle parking space.

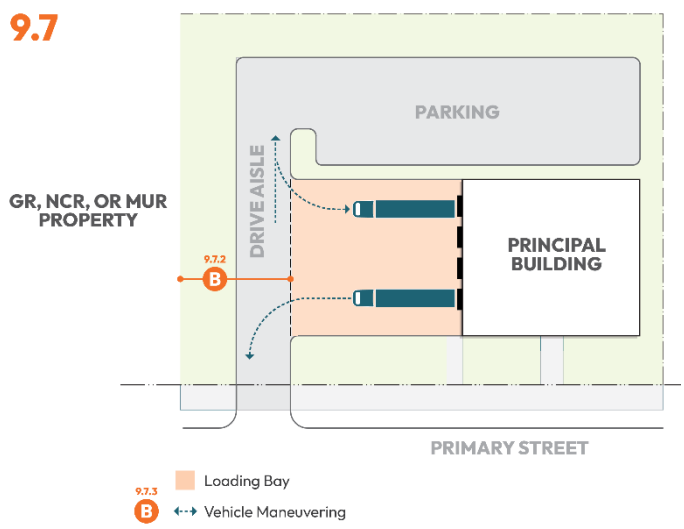


Figure 19: Loading Standards

9.8 Driveways

9.8.1 Applicability

Any use which requires lowered or cutaway curbs, for purposes of ingress or egress, shall be subject to the provisions below.

9.8.2 Number of Allowed Driveways

A. **Residential Lots, Excluding Multifamily**. The number of driveways allowed per residential lot, excluding lots with Multifamily uses, shall be as identified in Table 9.8.2.A.

Table 9.8.2.A
Number of Allowed Driveways on Residential Lots, Excluding Multifamily

Frontage Width	Maximum Permitted Driveways
Less than 75 feet	1
More than 75 feet	2

B. **Multifamily and Nonresidential Lots**. The number of driveways allowed per lot shall be as identified in Table 9.8.2.B unless otherwise approved by the Administrator due to actual necessity as demonstrated in a parking study meeting the standards of Section 9.6.5.

Table 9.8.2.B
Number of Allowed Driveways on Lots with Multifamily and Nonresidential Uses

Frontage Width	Maximum Permitted Driveways
Less than 500 feet	1
501-1,200 feet	2
More than 1,200 feet	3

9.8.3 Location of Driveway Access Points

A. Access shall be taken from an alley if an alley exists.

B. Access shall be taken from an alley on any lot less than 50 feet in width.

C. Access shall be taken from the lower-classified fronting roadway in scenarios where a through lot or corner lot fronts on roadways of different classifications. The Administrator may modify this requirement, per Section 16.5.2, if:

1. The frontage along the lower-classified roadway is less than 50 feet in width,
2. The shape of the parcel and/or placement of existing buildings would require the driveway to be 50 or more feet longer than if the access was taken from the higher-classified street,
3. The lower-classified roadway primarily serves residential uses and the use of the subject lot is nonresidential, or
4. If necessary to protect public safety.

D. All non-shared access driveways shall be constructed to be at least five feet from any property line at the right-of-way, except that a curb return may become tangent to a curb line at a point where said property line extended intersects said curb line.

E. Nonresidential driveways shall be constructed at least five feet from any property line. Residential driveways shall be constructed at least two feet from any property line.

F. The Town reserves the right to permit access where it deems appropriate for the operational needs of the site and existing infrastructure, such as protecting the function, safety, and efficiency of travel on the roadway and any associated bicycle and pedestrian facilities. There is no guarantee of access to the applicant's preferred driveway location or access point.

G. Access may be restricted to less than full access movement and if so, the infrastructure shall be improved in accordance with the WFD3.

H. The minimum distance between driveways/curb cuts, as measured from back of curb to back of curb (or back of pavement to back of pavement if no curb is present), on the same side of the street shall be in accordance with Table 9.8.3 The required separation shall be based on the roadway classification of the higher-classified roadway within the intersection.

9.8.3

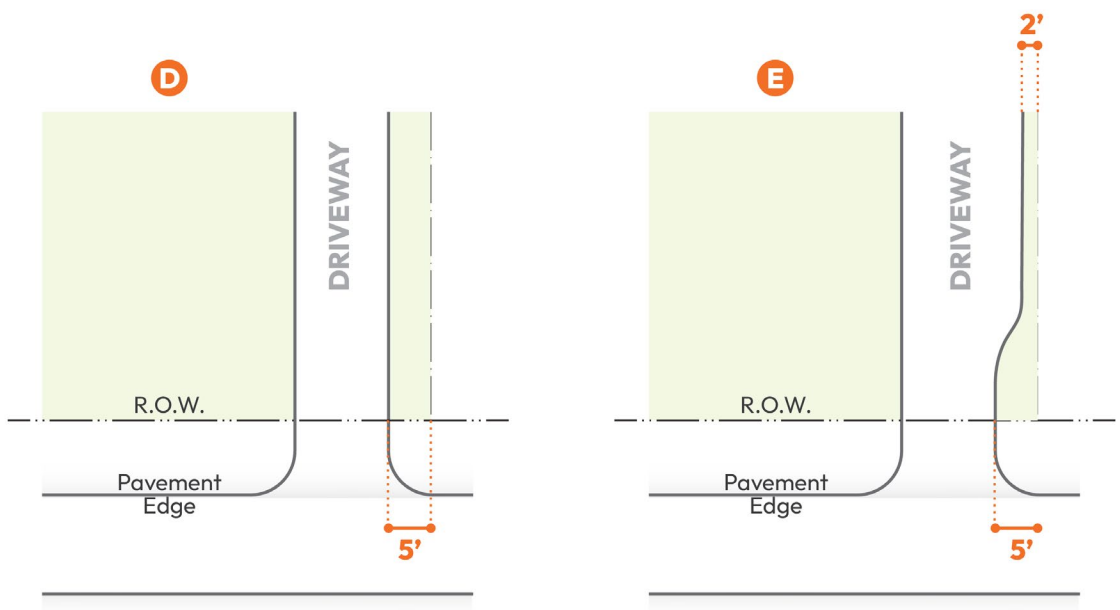


Figure 20: Driveway Setbacks

Table 9.8.3 Driveway Separation

Roadway Type	Signalized Intersection	Unsignalized Intersection	Other On-Site Driveways	Other Off-Site Driveway
Alley	100 ft	30 ft	30 ft	n/a
Local, Residential (excluding Multifamily)	200 ft	50 ft	30 ft	10 ft
Local, Multifamily and Nonresidential	200 ft	75 ft	75 ft	75 ft
Collector	200 ft	100 ft	100 ft	100 ft
Minor Thoroughfare	250 ft	150 ft	100 ft	n/a
Major Thoroughfare	400 ft	200 ft	200 ft	200 ft

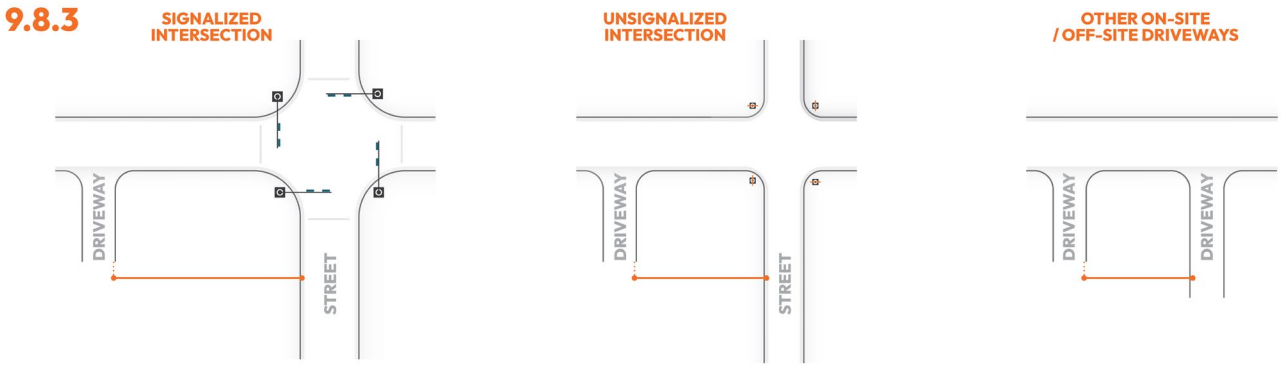


Figure 21: Driveway Separation Scenarios

9.8.4 Driveway Channelization

Driveways shall be channelized in accordance with the WFD3.

9.8.5 Driveway Width

A. The minimum and maximum width of a driveway, as measured at the right-of-way shall be in accordance with Table 9.8.5.

B. At other points in the driveway the width may vary. However, in no instance shall the width of a driveway facing a front lot line exceed 40 percent of the width of the lot on a property with a residential use.

9.8.6 Driveway Length

A residential driveway shall have a minimum length of 18 feet, excluding Multifamily residential.

Table 9.8.5 Minimum and Maximum Allowed Driveway Width

Related Use	Minimum Width	Maximum Width [2][3]
Residential, Excluding Multifamily	10 feet	20 feet
Public Service [1]	Exempt	
Industrial, One-Way	12 feet	32 feet
Industrial, Two-Way	16 feet	40 feet
All Other Uses, One-Way	12 feet	30 feet
All Other Uses, Two-Way	16 feet	36 feet

Notes

[1] Public service uses shall include fire protection, law enforcement, and other related uses as determined by the Administrator per Section 16.5.8.

[2] Maximum width shall exclude any planted medians required per Section 9.5.

[3] Wider driveways may be approved by the Administrator where required by the turning radii of vehicles accessing the site or to accommodate existing topography as certified by a licensed design or engineering professional; or a traffic reported prepared by a licensed design or engineering professional indicates the need for a wider driveway.

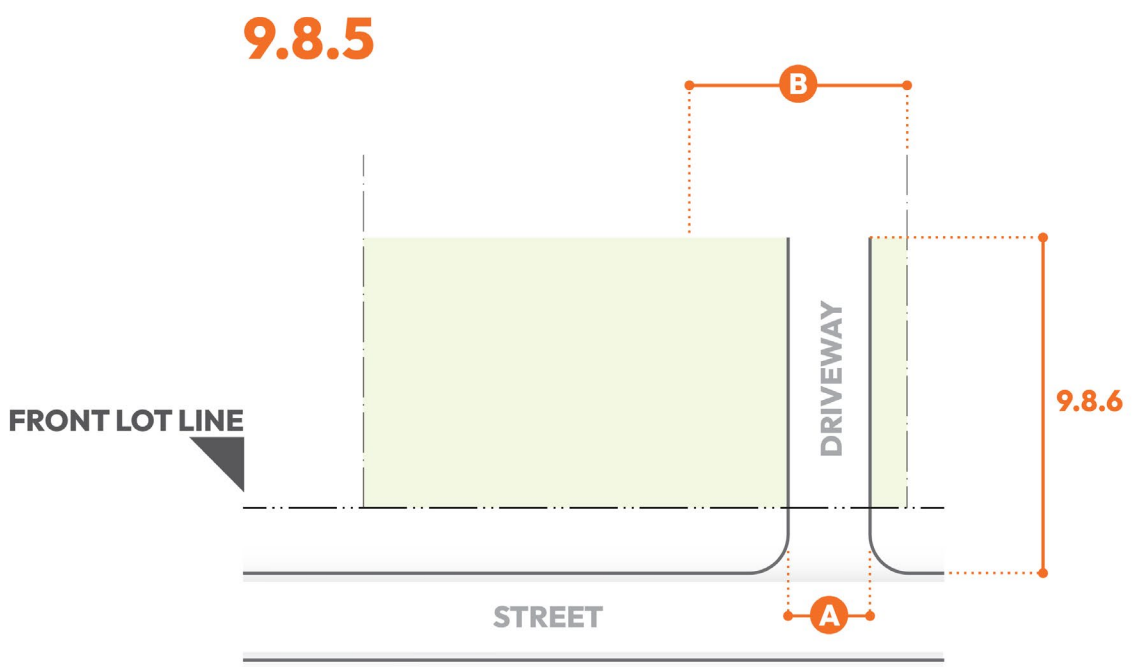


Figure 22: Driveway Width and Length Standards

9.8.7 Joint Use Driveway

Wherever feasible, the Administrator shall require the establishment of a joint use driveway serving two abutting Multifamily, Mixed-Use, or nonresidential properties.

9.8.8 Utility Driveways

To provide access to utility easements for utility equipment, a curb depression or alternative curb design per the WFD3 is allowed at locations where standard curb abuts utility entrances.

9.8.9 Compliance with Local and State Requirements

Any person or corporation desiring to construct a driveway or other connection within the right-of-way of the town or state shall, before beginning any construction, secure the appropriate permits from the authorizing agency, allowing such construction. Driveway connections to residences are normally excluded from this requirement but may be included at the option of the authorizing agency.

9.8.10 Clear Sight

All driveways shall meet the sight distance triangle standards established in the WFD3 and the clear sight triangle standards of Section 9.9.

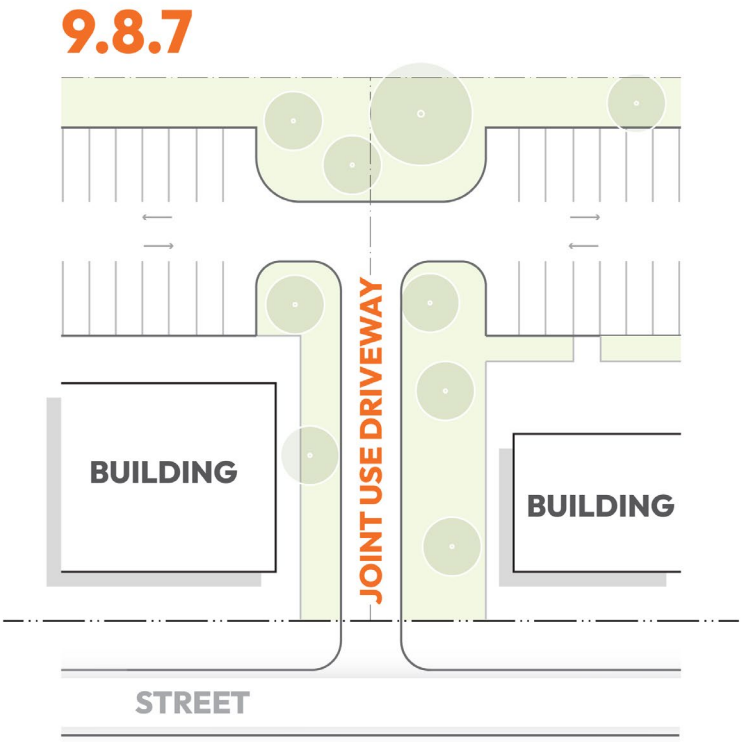


Figure 23: Joint Use Driveway Example

9.9 Clear Sight Triangle

9.9.1 Purpose and Applicability

A. **Purpose**. The purpose of the clear sight triangle regulations is to protect public safety by limiting development activity at intersections in a manner that minimizes sight obstructions.

B. **Applicability**. The clear sight triangle regulations shall apply to all property throughout the Wake Forest jurisdiction.

9.9.2 Unobstructed Visibility Requirements

Unobstructed visibility shall be maintained at the intersection of any driveway and right-of-way, and at the intersection of two or more rights-of-way. Such area of unobstructed visibility shall be referred to as a clear sight triangle.

9.9.3 Measurement Guidelines

A clear sight triangle shall be measured perpendicular to and starting at the back of curb of each intersecting right-of-way or driveway.

9.9.4 Prohibition on Structures

No building or structure shall be located within the clear sight triangle.

9.9.5 Landscape and Berm Height

The maximum height of any landscaping or berms within the clear sight triangle shall be three feet.

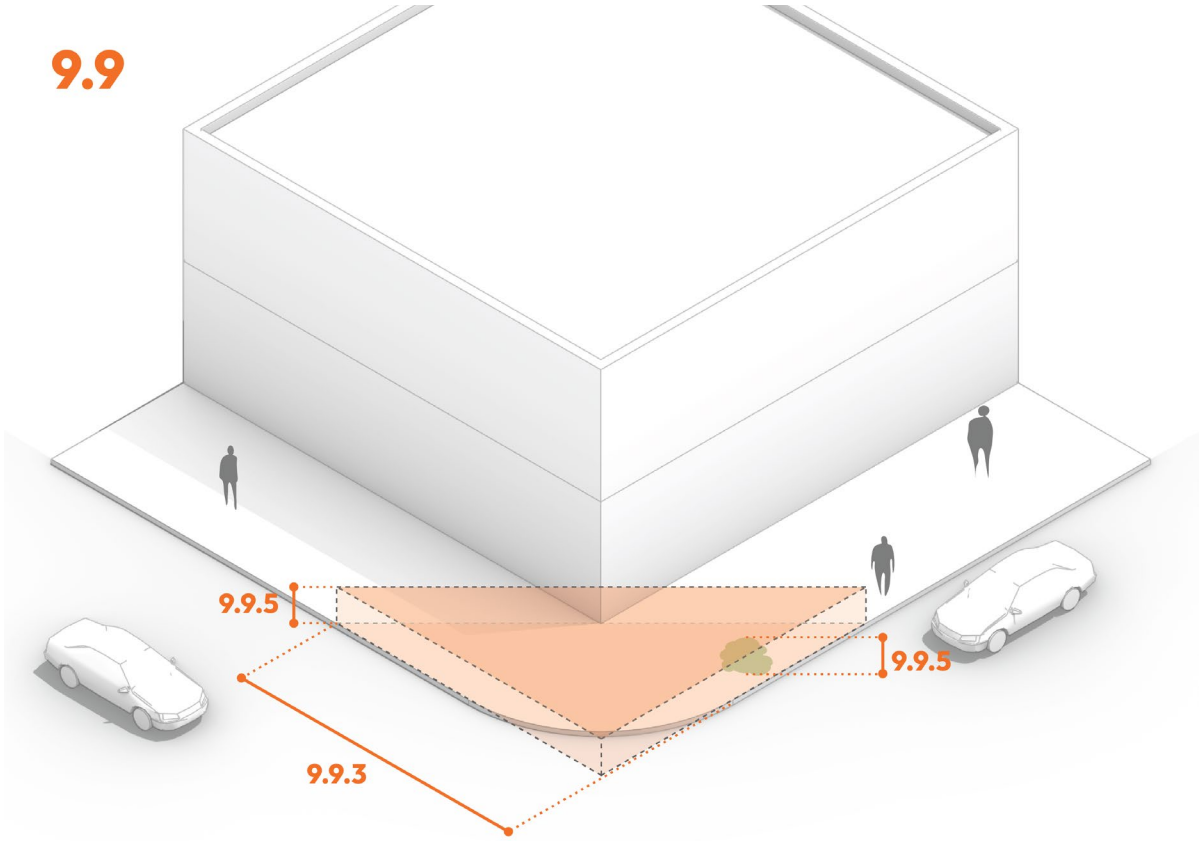


Figure 24: Clear Sight Triangle Standards

9.10 Vehicle Stacking

9.10.1 Location

Stacking spaces shall be designed so as not to interfere with the ingress and egress to the off-street parking, traffic circulation on or off site, and traffic visibility.

9.10.2 Dimensions

Stacking lanes shall have a minimum depth of 20 feet per stacking space and the following minimum lane widths:

A. One lane: 12 feet,

B. Two or more lanes: 10 feet per lane.

9.10.3 Minimum Requirement

Table 9.10.3
Drive-Through Facility Stacking Requirements

Use	Minimum Stack	Measure From
Automated Teller Machine (ATM)	3 per machine	teller machine
Bank Teller Lane	2 per lane	teller or window
Restaurant	6 per mobile ordering station/ order box	order box [1]
Carwash Stall	5 per stall	stall entrance
Oil Change Shop	3 per service bay	service bay entrance
Pharmacy	4 per lane	machine or window
Other Use	As determined by the Administrator	

Notes

[1] Four of the required stacking spaces shall be located between the order-box and pick-up window, including the stacking space at the order box.

9.10.4 Study Required

A stacking/queuing study shall be required to ensure adequate capacity and flow.

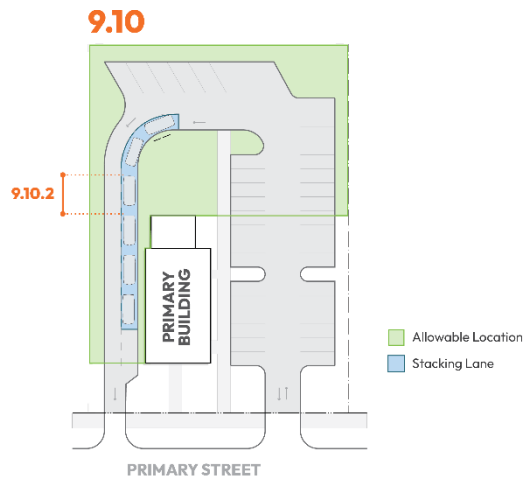


Figure 25: Vehicle Stacking

9.11 Bicycle Parking

9.11.1 Minimum Bicycle Parking Requirements

A. **Minimum Short-Term Bicycle Parking Requirements**. The minimum short-term bicycle parking requirements established in Table 9.11.1.A shall apply to nonresidential developments only.

Table 9.11.1.A Minimum Short-Term Bicycle Parking Requirements

District	Minimum Required Number of Bicycle Parking Spaces
GR; NCR; MUR	2 per 50 vehicle parking spaces or 3, whichever is greater
TSR; DT; NB; TOD-O; AC-O	2 per 40 vehicle parking spaces or 5, whichever is greater
CB; IND; CI	2 per 60 vehicle parking spaces or 3, whichever is greater

B. **Minimum Long-Term Bicycle Parking Requirements**. The minimum long-term bicycle parking requirements established in Table 9.11.1.B shall apply to Multifamily and Mixed-Use developments only.

Table 9.11.1.B Minimum Long-Term Bicycle Parking Requirements

District	Minimum Required Number of Bicycle Parking Spaces
MUR; TSR; DT; NB; TOD-O; AC-O	2 per 30 vehicle parking spaces or 10, whichever is greater

9.11.2 Bicycle Facilities Standards

A. **General Bicycle Parking Facilities Standards**.

1. **Surfacing**. Bicycle parking, with the exception of indoor long-term parking facilities, shall be provided on a hard-surface, all-weather pavement of asphalt or concrete.

2. **Placement**.

   a. Bicycle parking shall be located so as not to interfere with pedestrian access.

   b. Proposed bike parking facilities must comply with the spacing standards set forth in the WFD3.

   c. Bicycle parking shall be located three feet away from walls, fences, and the edge of landscaping at the time of maturity, as measured from the edge of the rack closet to the wall, fence, or landscaping.

3. **Rack Types**.

   a. Bicycle racks shall meet all requirements of the Americans with Disabilities Act.

   b. Grid bicycle racks are prohibited.

   c. Bicycle lockers or similar types of facilities are permitted and count towards required bicycle parking standards.

B. **Short-Term Bicycle Parking Facilities Standards**.

1. Short-term bicycle parking facilities shall be located such that they are highly visible, with adequate lighting, from the street and/or building entrance(s) from where bicyclists approach.
2. The location of short-term bicycle parking facilities shall not conflict with pedestrian and/or vehicle access and mobility.
3. If provided outdoors, short-term bicycle parking facilities shall be sited within 50 feet of the main entrance of a building.
4. If provided indoors, short-term bicycle parking facilities shall be located within an easily accessible common area designated for secure bicycle storage.
5. Short-term bicycle parking facilities adjacent to a pedestrian walkway shall be sited to ensure that a minimum five-foot walkway clearance is maintained.

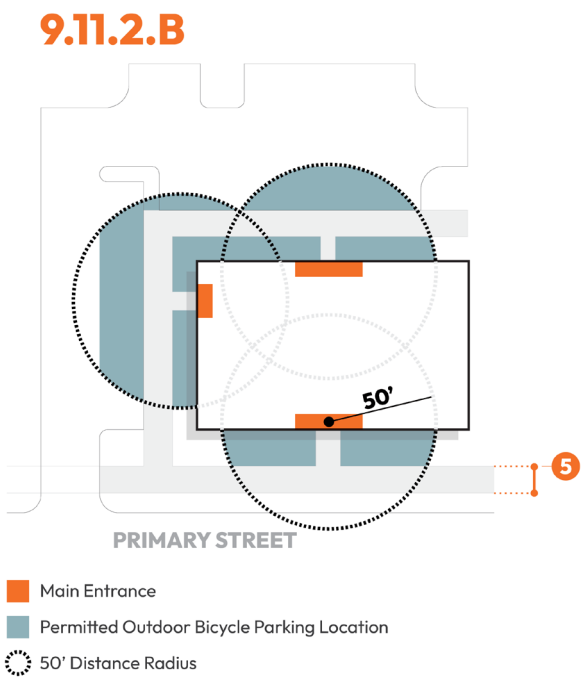


Figure 26: Short Term Bicycle Parking Location Standards

C. **Long-Term Bicycle Parking Facilities Standards**.

1. Long-term bicycle parking shall be covered and weather resistant.
2. Long-term bicycle parking shall be located near the building entrance it is intended to serve.
3. Long-term bicycle parking may be located within an internal area accessible by the public (such as bike locker rooms) or located in stairwells.
4. Storage within a Multifamily Dwelling unit shall not be considered a long-term bicycle parking space.

D. **Parking Structures**.

1. Parking structures shall provide bicycle parking within the structure.
2. Bicycle parking shall be located on the level closest to the street and/or a primary building entrance.

9.12 Sidewalks, Multi-Use Paths, Greenways, and Pedestrian Walkways

Sidewalks, multi-use paths, greenways, and pedestrian walkways shall be provided on- and off-site to ensure the safety of pedestrians, bicyclists, and motorists throughout the site and to connect off-street parking, the on-site destination, and public sidewalks.

9.12.1 Sidewalks and Multi-Use Paths

A. Where sidewalks or multi-use paths do not exist in the public right-of-way but are identified as required by the CTP, they shall be provided along each frontage.

1. New sidewalks or multi-use paths shall connect to existing and adjacent sidewalks or multi-use paths or to likely future locations of sidewalks or multi-use paths in the right-of-way along adjacent properties.

2. New sidewalks or multi-use paths shall meet the standards established in the CTP and WFD3.

B. Where sidewalks or multi-use paths do not exist in the public right-of-way but are identified as required by the CTP, they shall be provided along nearby frontages as detailed below.

1. If there is an existing sidewalk/multi-use on the same side of the street as the development within 400 feet of a development site in either direction and sufficient right-of-way is available, the sidewalk/multi-use path shall be extended from the site to meet the existing sidewalk/multi-use, subject to rough proportionality.

9.12.1.A

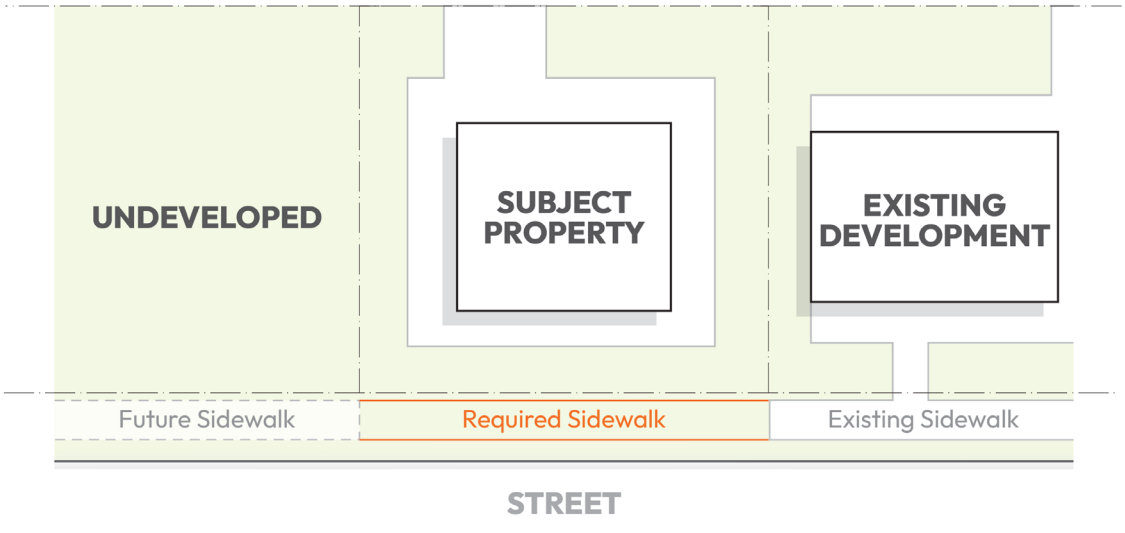


Figure 27: Sidewalk and Multi-Use Path Requirements - Scenario 1

2. As part of any development proposal or change in use resulting in an additional 1,000 vehicle trips or more per day, an applicant shall be required to identify direct, safe (1.25 x the straight line distance) pedestrian routes within one half miles of their site to all transit facilities and Public & Institutional and Commercial uses as identified in Table 3.3. If no existing route exists, or if there is a gap, a connection must be provided if sufficient right-of-way is available, subject to rough proportionality.

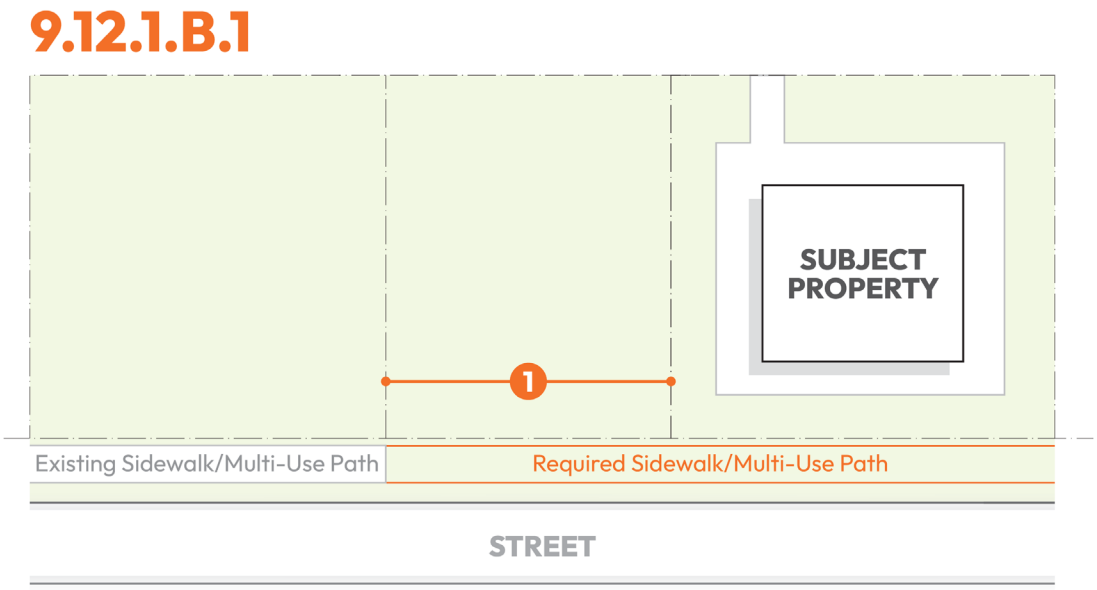


Figure 28: Sidewalk and Multi-Use Path Requirements - Scenario 2

Figure 29: Sidewalk and Multi-Use Path Requirements - Scenario 3

9.12.2 Greenways

Where existing or planned greenways, as identified in the CTP, are adjacent to or traverse a development, the developer shall:

A. Provide a 30-foot public greenway easement and construct the greenways in accordance with the standards established in the CTP and WFD3. If a PIL of the greenway construction is approved a 50-foot easement shall be required,

B. Install regulatory and identification greenway signage, trash and pet waste receptacles, benches, and water fountains in accordance with the WFD3 specifications and details,

C. If vegetation is cleared within 50 feet of the greenway, canopy trees shall be planted one per 50 linear feet along the greenway path, outside of the greenway easement, to provide shade for greenway users,

D. Provide pedestrian and bicycle accessways to the greenway every quarter mile. The exact spacing and location of the accessways shall be as determined by the Administrator. Where a cul-de-sac street is permitted within a development, pedestrian/bicycle accessways to greenways, parks and open space areas must be provided where such streets back up to these areas.

9.12.3 Pedestrian Walkways

A. On-site, pedestrian walkways shall meet all standards for sidewalks as established in the WFD3.

B. On-site, pedestrian walkways shall have a minimum width of six feet, or eight feet if adjacent to a parking area.

C. On-site, pedestrian walkways shall connect all buildings on the site to one another.

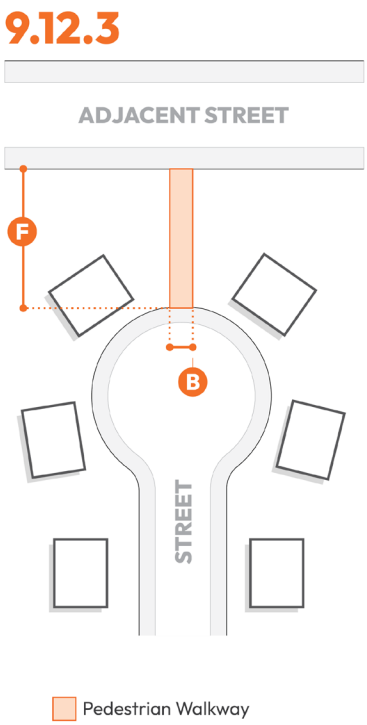


Figure 30: Pedestrian Walkway Dead End Street to Adjacent Sidewalk Connection

D. On-site, pedestrian walkways shall provide connections to parking areas.

E. On-site, pedestrian walkways shall connect the primary internal drive to the building.

F. On-site, pedestrian walkways shall connect two dead end streets that are within 300 feet of each other and to dead end streets within 300 feet of an existing street with sidewalk.

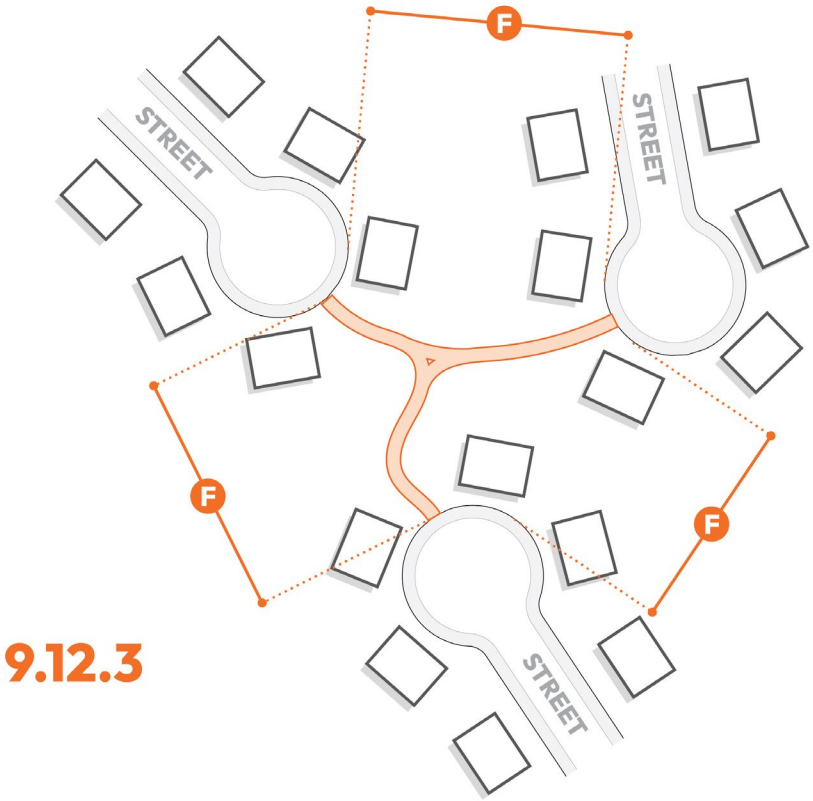


Figure 31: Pedestrian Walkway Dead End Street to Dead End Street Connections

G. On-site, pedestrian walkways shall connect each building on a development site to greenways, parks, open space, and community space located within the developments or adjacent to the development site. Access points to the greenway, park, open space, and/or community space shall be provided every 600 feet.

H. On-site, pedestrian walkways shall connect building entrances to transit stops on the same property.

I. On-site, pedestrian walkways shall connect each building entrance to adjacent public sidewalks along direct routes of travel.

J. Where driveways, parking, and loading entrance and exits cross pedestrian walkways, the pedestrian walkway shall be designed with minimal disruptions to safe, continuous pedestrian connectivity.

K. In parking lots with an interior parking lot median, pedestrian walkways shall be collocated with the median, unless otherwise approved by the Administrator. The collocation of the pedestrian walkway with the median shall not cause a pedestrian to walk over or through required landscape materials.

L. Pedestrian walkways shall be lit with one of the pedestrian scale lighting options, in accordance with Chapter 10.

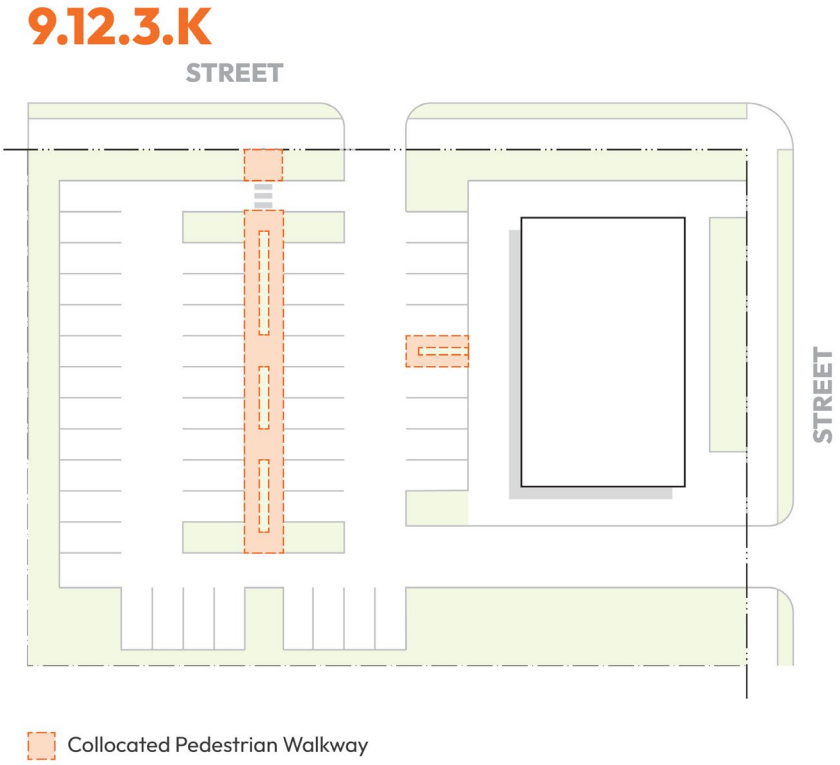


Figure 32: Pedestrian Walkway and Landscape Median Co-Location

M. **Midblock Crosswalks.**

1. A pedestrian crosswalk not less than 10 feet in width shall be required across any street or internal access drive 800 feet or more in length where deemed essential by the Administrator.

2. A pedestrian crosswalk not less than 10 feet in width may be approved on any street or internal access drive less than 800 feet in length.

3. All midblock pedestrian crosswalks shall meet the standards of the WFD3 and/or NCDOT.

9.12.4 Sidewalk, Multi-Use Path, Greenway, and Pedestrian Walkway Stubs

A. **Sidewalk, Multi-Use Path, Greenway, and Pedestrian Walkway Stub Location and Arrangement**.

1. All development shall connect to any existing sidewalk, multi-use path, greenway, and pedestrian walkway stub from an adjacent property. If the Town collected PIL from the adjacent development for an unbuilt sidewalk, multi-use path, greenway, and pedestrian walkway stub, the Town shall issue the amount collected to be used by the owner or applicant to construct the existing stub onto the parcel under development. If an existing sidewalk, multi-use path, greenway, and pedestrian walkway stub is located on nearby property other than adjacent property, new sidewalk, multi-use path, greenway, and pedestrian walkway stubs shall be arranged to allow for future connection to existing sidewalk, multi-use path, greenway, and pedestrian walkway stubs.

2. Local sidewalk, multi-use path, greenway, and pedestrian walkway stubs to adjacent parcels shall be arranged and designed to allow future constructable connections. Local sidewalks, multi-use paths, greenways, and pedestrian walkways shall not be designed or located in a manner to stub to the following:

   a. Railroad or controlled access highway, or

   b. Previously established tree canopy retention area, open space, or community space, or

   c. Significant physical barrier where steep slopes or wetlands prevent the construction of a roadway at the maximum slope requirements per the WFD3, or

   d. The Administrator may waive the requirement for roadway stubs after all viable locations for a roadway stub to an adjacent property have been exhausted.

3. Sidewalk, multi-use path, greenway, and pedestrian walkway stubs shall be designed and constructed to the property line or as close to the line, as practicable.

B. **Payment in Lieu**. The owner or applicant shall provide a PIL of the remainder of the unbuilt sidewalk, multi-use path, greenway, and/or pedestrian walkway on their property. PIL shall be in accordance with Chapter 14 of this UDO.

9.12.5 Design Criteria

All pedestrian walkways and sidewalks shall comply with the CTP and meet the standards established in the WFD3.

9.13 Public Transit Improvements

9.13.1 Applicability

All new development and redevelopment on a development site and meeting either of the following criteria shall meet the public transit improvement requirements of this Section.

A. A development containing residential uses and proposing 100 dwelling units or more.

B. A development containing nonresidential uses and proposing 100,000 square feet or more of nonresidential space.

9.13.2 Requirements

A. **Adjacent to Existing or Planned Transit Stop.** Sites adjacent to an existing or planned transit stop or route shall provide all the following amenities where they are not already installed.

1. **Landing Pad**. A landing pad, in compliance with the WFD3, shall be provided.
2. **Amenity Pad**. An amenity pad, in compliance with the WFD3, shall be provided.
3. **Shelter**. A public transit stop shelter, in compliance with the WFD3, shall be provided.
4. **Trash Cans.** Trash cans, in compliance with the WFD3 shall be provided.
5. **Benches.** Benches, in compliance with the WFD3 shall be provided.
6. **Bicycle Racks**. Bicycle racks, in compliance with the WFD3 shall be provided.
7. **Signs**. Signs, in compliance with the WFD3, shall be provided.
8. **Transit Easement.** A transit easement if encroachments are needed outside of the right-of-way.

B. **Not Adjacent to Existing or Planned Transit Stop**. Sites not adjacent to an existing or planned transit stop or route shall provide the following amenities.

1. **Amenity Pad**. An amenity pad, in compliance with the WFD3, shall be provided.
2. **Transit Easement.** A transit easement if encroachments are needed outside of the right-of-way.

9.13.3 Payment in Lieu

PIL, in accordance with Chapter 14 of this UDO, may be paid in lieu of providing required improvements at the discretion of the Administrator in cases where the applicant has provided sufficient documentation to demonstrate that the required improvements cannot physically be constructed with the associated development.

10 LIGHTING STANDARDS

10.1 General Provisions

10.1.1 Purpose

The standards set forth in this section are designed to regulate the physical effects of lighting and minimize the negative impact that lighting may have on surrounding properties. It is the intent of this section to:

A. Minimize light pollution, such as glare and light trespass,

B. Conserve energy and resources,

C. Maintain night-time safety and utility,

D. Improve the night-time visual environment.

10.1.2 Applicability

Unless otherwise specified, this Chapter shall apply to all development in the Town which requires an application and/or Unified Development Ordinance (UDO) approval as specified in this ordinance. This includes, but is not limited to, changes of use, building expansions/reconstruction and parking area expansions for existing development as defined in Chapter 18. The notable exception shall be any Planned Unit Development District, which may create its own lighting standards through the Planned Unit Development (PUD) Concept Plan.

CONTENT

10.1 General Provisions
10.2 Exemptions
10.3 Design Standards
10.4 Specific Lighting Type Standards
10.5 Prohibited Lighting

10.2 Exemptions

10.2.1 The following exemptions shall be granted from the requirements of this Chapter:

A. Streetlights and other fixtures installed or temporarily used for public-roadway illumination may be installed at a maximum height of 37 feet and may be positioned at that height up to the edge of any bordering property.

B. All temporary emergency lighting needed by the Police or Fire Departments or other emergency services, as well as all vehicular luminaires, shall be exempt from the requirements of this ordinance.

C. All hazard warning luminaires required by Federal regulatory agencies are exempt from the requirements of this Chapter, except that all luminaires used must be red and must be shown to be as close as possible to the federally required minimum lumen output for the specific task.

D. Individual residential lighting that is not part of a site plan or subdivision plan for street or other common or public area outdoor lighting.

E. Lighting associated with holiday, festival or other temporary uses permitted in Chapter 3.

F. Lighting of fountains or public art that has been permitted or otherwise approved by the Town.

G. Other Municipal or State lighting installed for the benefit of public health, safety, and welfare.

H. Lighting of US and North Carolina State Flags provided the flag standard does not exceed the maximum permitted building height for that district.

10.3 Design Standards

10.3.1 General Design Standards

A. No outdoor pole lighting fixture shall be located within any required landscape buffer yard or street yard, except for those lighting encroachments permitted by Section 2.6.

B. The design of outdoor lighting fixtures shall be as detailed in Table 10.3.1.

Table 10.3.1
Outdoor Lighting Fixture Design

District	Design [1]	Scale
LH-O	As detailed in the Historic Property Preservation Handbook & Design Guidelines	
DT	Tear Drop	Roadway; Pedestrian
TOD-O, AC-O	Pendant, Lantern, Acorn, Sphere, Other decorative design as approved by the Administrator [2]	Roadway; Pedestrian
All Other Districts	Shoe box or Cobra head	Roadway

Notes

[1] Non-cutoff decorative post-mounted fixtures equipped with a solid top and mounted 18 feet or less above ground and other non-cutoff dusk to dawn utility type fixtures mounted 25 feet or less may be used. The maximum initial lumens generated by each fixture shall not exceed 9500 initial lamp lumens.

[2] Fixture design shall be consistent with the fixture design utilized elsewhere within a TOD subdistrict or within the contiguous boundaries of an activity center.

10.3.2 LED Fixtures

All outdoor lighting utilizing a light-emitting diode (LED) fixture shall meet the following standards:

A. **Color Rendering.** Outdoor LED fixtures shall be rated at a minimum Color Rendering Index (CRI) value of seventy (70) or higher.

B. **Color Temperature.** Outdoor LED fixtures shall have a correlated color temperature between 3,000 and 4,000 degrees Kelvin.

10.3.3 BUG Rating

Backlight Uplight Glare (BUG) ratings are a published luminaire classification system to comprehensively address light pollution from all directions. Streetlights and lighting fixtures in parking areas shall not exceed the BUG rating established per District in Table 10.3.3.

Table 10.3.3
BUG Rating per District

District	Backlight (B) Rating	Uplight (U) Rating	Glare (G) Rating
OS; GR; NCR	B2	U1	G1
MUR; NB	B2	U2	G2
TSR; DT; CI; TOD-O; AC-O	B3	U2	G2
CB; I	B4	U3	G3

10.3.4 Lighting Standards in Footcandles (Fc)

Lighting levels shall adhere to the standards in Table 10.3.4. All numerical values in Table 10.3.4 represent measurements in footcandles.

Table 10.3.4
Lighting Standards in Footcandles

Lighting Area	Measurement	OS; GR; NCR	MUR; NB	TSR; DT; CI; TOD-O; AC-O;	CB; I
		District of Adjacent Property			
At Property Line [1] [2]	maximum point of illuminance at the property line	0.1 Fc	0.3 Fc	0.8 Fc	1 Fc
Lighting Area	**Measurement**	**District of Subject Property**			
Display/Canopy Areas	maximum point of illuminance at grade	8 Fc	12 Fc	15 Fc [3]	15 Fc [3]
Parking Areas [4]	minimum point of horizontal illuminance	1 Fc	1 Fc	2 Fc	2 Fc
	average point of horizontal illuminance	4 Fc	4 Fc	6 Fc	6 Fc
All Other On-Site Lighting	maximum point of illuminance at grade	4 Fc	4 Fc	6 Fc	6 Fc
Pedestrian Walkways	minimum point of illuminance at grade	n/a	0.2 Fc	0.2 Fc	0.2 Fc
Building Entrances	minimum point of illuminance at grade	n/a	2 Fc	2 Fc	3 Fc

Notes

[1] In the case of buildings closer than 10 feet to the property line using only wall packs, light trespass may be greater than one foot-candle as long as the wall packs are fully shielded to direct the light downward, have a light output of 1,600 lumens or lower, and the light source (lamp) is not visible from off-site.

[2] Meaning the line on the side of the property that is abutting an adjacent property.

[3] Outdoor display lots for vehicle sales and leasing may exceed 15 foot-candles if outdoor white lighting is cut off, leaving only security lighting that is amber in color (a temperature rating equal to or less than 2,700 Kelvin), after closing or 11 p.m., whichever comes earlier.

[4] In all districts the maximum uniformity ratio shall be 4:1 on average. Minimum lighting in parking areas shall not apply to driveways serving residential uses.

10.3.5 Luminaire Design

A. **Fixture Classification.**

1. All outdoor lighting fixtures shall be a light-emitting diode (LED) luminaire or another equally or more energy efficient fixture approved by the Administrator, per Section 16.5.2.
2. All outdoor lighting fixtures, with the exception of wall mounted accent lighting, floodlights, and flood lamps, shall either have a fixture cutoff classification of "Full Cutoff" or be fully shielded, unless otherwise expressly permitted in this UDO.
3. Any fixture that is not full cut off shall be a directional fixture (such as flood lights) and may be used provided they shall be aimed, are fully shielded to prevent light spillage, and meet the maximum foot candles at the property line as established per district in Table 10.3.4.

B. **Pole and Fixture Finish**. Light poles and fixtures shall be of a matte or low-gloss finish, unless permission is granted by the Administrator for a special color scheme or theme. Upgrades in fixture or pole style or color from the electric provider's standard shall be paid for by the developer.

C. **Mounting Height.**

1. The maximum mounting height of all outdoor lighting with a 90 or less degree cut-off fixture shall be 30 feet.
2. The maximum mounting height of all outdoor lighting without a full 90 degree or less cut-off fixture shall be 16 feet.
3. The concrete pier utilized to mount a pole light shall be fully buried.

10.4 Specific Lighting Type Standards

10.4.1 Security Lighting

A. Unshielded flood lights and spotlights, installed for security and activated by motion sensor, are permitted. These unshielded lights must be mounted and aimed in a manner that minimizes up-lighting and light trespass.

B. All floodlights shall be installed such that the fixture shall be aimed down at least 45 degrees from vertical. All flood or spot lamps emitting 1,000 or more lumens shall be aimed at least 60 degrees down from vertical or shielded such that the main beam from the light source is not visible from adjacent properties or the public street right-of-way.

C. Flood lights and display lights shall be positioned such that any such fixture located within 50 feet of a public street right-of-way is mounted and aimed perpendicular to the right-of-way, with a side-to-side horizontal aiming tolerance not to exceed 15 degrees from perpendicular to the right-of-way.

10.4.2 Landscape Lighting

Landscape and decorative lighting with a light output of 800 lumens or less is permitted, provided that the light is installed and aimed to prevent lighting build up and light trespass and shielded to prevent view from the public right-of-way.

10.3.5.A

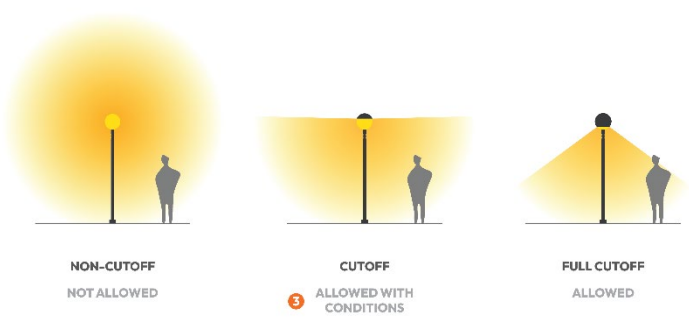


Figure 1: Lighting Fixture Cutoffs

10.4.3 Building Façade Lighting

A. Floodlights, spotlights, or any other similar lighting shall not be used to illuminate buildings or other site features unless approved as an integral architectural element on the development plan.

B. On-site lighting may be used to accent architectural elements but not used to illuminate entire building(s).

C. Where accent lighting is used, the maximum illumination on any vertical surface or angular roof surface shall not exceed 5.0 average maintained footcandles.

D. Building facade and accent lighting will not be approved unless the light fixtures are selected, located, aimed, and shielded so that light is directed only onto the intended target and spillover light is minimized.

E. Lighting may be installed under canopies that light the sidewalk, or downlights onto the architectural features of a building.

F. Wall packs on buildings may be used at entrances/exits to a building to light unsafe areas and shall:

1. Be low profile and project from the wall a maximum of six inches,
2. Be consistent or complementary in color with the color of the building materials,
3. Be fully shielded to direct the light downward,
4. Have a light output of 1,600 lumens or lower, and
5. Shield the light source so it is not visible from off-site.

10.4.4 Outdoor Display Areas

The mounting height of outdoor display area fixtures shall not exceed 30 feet above finished grade.

10.4.5 Lighting for Vehicular Canopies

Lighting under vehicular canopies shall be either recessed or flush with the bottom surface of the vehicular canopy.

10.4.6 Outdoor Recreational Lighting

Ball fields, basketball courts, tennis courts, outdoor performance areas and similar recreational uses are exempt from otherwise applicable exterior lighting standards and shall instead adhere to the requirements below.

A. Outdoor recreational lighting shall not exceed a maximum permitted post height of 80 feet. The Administrator may set a shorter maximum pole height if the specific recreational use does not require the taller pole.

B. Lights shall be shielded and positioned so as not to shine onto adjacent roadways or properties.

10.4.7 Street Lighting

Street lighting shall be placed on all streets and at the intersection of all streets to allow for the safe use of public rights-of-way by motorists, cyclists, and pedestrians.

A. **Streetlight Spacing.** Streetlights on roads under the jurisdiction of the Town shall be located:

1. At least every 200 linear feet,
2. At intersections,
3. At the end of a cul-de-sac or dead-end road, and
4. At street curves.

B. **Fixture Minimum Initial Lumen Levels.** The roadway illumination requirements shall be enforced per the fixture minimum initial lumens in Table 10.4.7.B. Roadway illumination of freeways and interstates shall be as required by NCDOT or Wake County, as applicable.

Table 10.4.7.B
Roadway Illumination Requirements by Street Classification

	Street Classification		
Standard	**Boulevard; Thoroughfare**	**Collector**	**Local**
Fixture Minimum Initial Lumens	18,500	12,500	4,800

1. Lighting is not required to be installed in alleys, but if installed shall:

a. Have a maximum height of 16 feet, and

b. Be a full cut-off fixture.

10.4.8 Pedestrian Scale Lighting

A. Pedestrian-scaled street lighting (no taller than 16 feet) shall be placed on all local roads in the TOD-O and AC-O Districts to allow for the safe use of public rights-of-way by motorists, cyclists, and pedestrians.

1. Pedestrian-scaled street lighting on local roads shall be located at least every 200 linear feet.
2. Pedestrian-scaled street lighting on local roads shall have a minimum average maintained illuminance of .3-foot candles.
3. Pedestrian-scaled street lighting on local roads shall have uniformity ratio of 6:1.

B. In the TOD-O and AC-O districts, pedestrian-scaled lighting (no taller than 16 feet) shall be required in public gathering spaces and along on-site pedestrian walkways (Section 9.12.3) and shall be placed in a manner to limit the casting of shadows on sidewalks. Pedestrian-scaled lighting may include:

1. Lamp post lighting,
2. Bollard lighting,
3. Fence post cap lighting,
4. Festoon lighting,
5. Pathway lighting, or
6. Other as approved by the Administrator.

10.4.9 Parking Structure Lighting

A. Parking structures shall meet the lighting requirements established in Table 10.4.9.A. All areas of a parking structure shall have a horizontal uniformity ratio of 10:1.

Table 10.4.9.A
Parking Structure Lighting

Parking Structure Area	Minimum Horizontal Illuminance [1]	Minimum Vertical Illuminance
Parking/General Areas		
Day and Night [2]	1 Fc	0.5 Fc
Ramps		
Day [3]	2 Fc	1 Fc
Night	1 Fc	0.5 Fc
Entrance Areas [2]		
Day [3]	50 Fc	25 Fc
Night	1 Fc	0.5 Fc
Stairways		
Day and Night	2 Fc	1.0 Fc
Notes		
[1] Daylight may be considered in the design calculation		
[2] These values are intended to address personal security issues for typical conditions.		
[3] A high illuminance level for the first 65 feet inside the structure is required to help with the transition from bright daylight to a lower internal level.		

B. Top levels of parking structures that are open to the sky shall:

1. Not exceed minimum horizontal illuminance of 0.5 Fc,
2. Not exceed horizontal illuminance maximum to minimum uniformity ratio of 15:1, and
3. Not exceed minimum vertical illuminance of 0.25 Fc,
4. Provide full cutoff fixtures mounted no higher than 22 feet above the parking deck top floor.

10.5 Prohibited Lighting

10.5.1 Types of Prohibited Lighting

The following lighting types shall be prohibited within the jurisdiction of the Town:

A. The use of laser source light or any similar high intensity light for outdoor advertising or entertainment,

B. The operation of searchlights for advertising purposes,

C. Site lighting that may be confused with warning, emergency, or traffic signals,

D. Lights that flash, move, revolve, rotate, scintillate, blink, flicker, vary in intensity or color, or use intermittent electrical pulsation, and

E. Colored LED rope lighting that outlines windows, doors, or other architectural features.

11 UTILITIES, SERVICES, AND IMPACT FEE STANDARDS

11.1 Utilities

11.1.1 Purpose

This chapter establishes the standards for utilities, services, and impact fees to ensure that new developments in Wake Forest are well-integrated with municipal infrastructure and support community resources.

11.1.2 Connection To Municipal Water Supply and Sanitary Sewer Systems

All development within the corporate limits of the Town shall connect with water and sewer utilities except for a single lot serving one dwelling unit upon demonstrating the connection is not feasible due to topography or the cost of the extension exceeds the cost of installation.

A. Development with public sewer and potable water are conditioned on the availability of sufficient sewer or water capacity in the City of Raleigh sewer and/or water systems to serve the proposed development.

B. For any development applications located within the ETJ, the property owner of the development site shall submit a petition for voluntary annexation of the area including the development site. Annexation approval is required prior to Construction Plan approval. For any development applications located outside of the ETJ but within the Annexation and Water and Sewer Utility Service Agreement Areas, the property owner shall submit a petition for voluntary annexation of an area that includes the development site with the initial development application.

CONTENT

11.1 Utilities
11.2 Waste Management
11.3 Impact Fees

11.1.3 Oversized Improvements and Reimbursements

Where deemed necessary, in the interest of the health, safety, and general welfare of the residents of Wake Forest, the developer shall make certain water and sewer improvements at sizes in excess of those which would normally be required to serve only the development site and/or subdivision. Where such oversized improvements are required, the developer shall be reimbursed for costs incurred over and above those required to serve the development site and/or subdivision, according to the adopted water and sewer extension policy of the City of Raleigh Public Utilities Department.

11.1.4 Utility Easements

A. Developments shall provide utility easements to the appropriate utility service provider as necessary to accommodate the installation and maintenance of utility lines and facilities that are not proposed within street rights-of-way or access easements. The width and location of easements shall be as required by the utility service provider or WFD3 but generally shall be centered along or adjacent to lot lines to the greatest extent practicable.

B. Development within utility easements shall comply with the standards and restrictions of the appropriate utility service provider(s).

11.1.5 Underground Wiring

A. **General Requirement.** All new power or communication lines shall be installed underground. The burial of existing, above ground lines shall be required when located on property under development.

B. **Administrative Modification Option.** An administrative modification (Section 16.5.2) to the underground wiring requirement may be granted based on an Infeasibility Determination. In making its decision on the adequacy of the documentation, the Administrator shall consider the following factors: Terrain; Load characteristics; Reliability; Accessibility; System flexibility; Equipment availability; Geologic difficulties; Safety; and Timing.

C. **Exemptions**.

1. Transmission lines with a voltage of 115 kV or greater.

2. Development meeting both of the following criteria:

   a. The power lines existed above ground at the time of the first approval of a plat or development plan by the Town, whether or not the power lines are subsequently relocated during construction of the subdivision or development plan.

   b. The power lines are located outside the boundaries of the parcel of land that contains the subdivision, or the property covered by the development plan.

11.2 Waste Management

All developments shall incorporate effective waste management practices, including provisions for recycling. The use of compactors and shared disposal facilities, such as shared dumpsters, shall be encouraged. Eligible properties within the Municipal Service District (MSD) shall be required to use the shared municipal waste disposal facilities.

11.3 Impact Fees

Pursuant to the authority granted to the Town by the State of North Carolina in Chapter 502, Senate Bill 576 (1989), the Town shall impose a Parks, Recreation and Cultural Resources Impact Fee, Fire Protection Impact Fee, Water and Sewer Capital Facility Fee, and Multi-Modal Transportation Impact Fee for each new structure in the Town or the Town's extraterritorial planning area.

11.3.1 Applicability

A. All residential development for which Town approval or permitting is required, or real property improvement which results in the creation of residential dwelling units shall be subject to payment of the Parks, Recreation and Cultural Resources Impact Fee.

B. All new structures or expansions to existing structures built shall be subject to payment of the Fire Protection Impact Fee.

C. All new structures or expansions to existing structures shall be subject to payment of the Water and Sewer Capital Facility Fee.

D. <placeholder Multi-Modal Transportation Impact Fee applicability>

11.3.2 Exceptions

A. The Parks, Recreation and Cultural Resources Impact Fee shall not apply to fences, billboards, poles, pipelines, transmission lines, advertising signs or similar structures and improvements, renovations and repairs which do not generate the need for additional or expanded recreational facilities.

B. The Parks, Recreation and Cultural Resources Impact Fee shall not apply to residential subdivisions, Multi-Family Developments, Planned Unit Developments and Manufactured Home Parks, which have received master plan approval and are still valid and active or have an established zoning vested right prior to November 17, 1998.

11.3.3 Fee Amounts

Impact Fees shall be paid to the Town in the amounts as determined by the Board of Commissioners or as published on the adopted fee schedule.

11.3.4 Credits

The required Parks, Recreation, and Cultural Resources Impact Fee may be credited, subject to approval by the Board of Commissioners, for:

A. An equivalent amount of land dedication based on the land value and/or

B. Construction costs beyond the average for construction of greenways identified on an adopted comprehensive plan.

11.3.5 Appeals

Any person who feels aggrieved by any action of the Town in imposing the facilities fee on a development or the Town's classification for the purpose of establishing the rate, must first pay the amount of the facilities fee so charged to them, with such amount clearly marked as paid under protest, and thereafter follow the Appeals procedures established in Section 16.6.1.A.

12 NATURAL RESOURCE PROTECTION STANDARDS

12.1 General Provisions

12.1.1 Purpose

A. **Erosion and Sedimentation Control**. The erosion and sedimentation control regulations of this chapter are adopted for the purposes of regulating certain land-disturbing activities to control accelerated erosion and sedimentation in order to control water pollution from sedimentation, inhibit the accelerated erosion and sedimentation of lakes and watercourses and prevent damage to public and private property by erosion and sedimentation.

B. **Flood Damage Prevention**.

1. It is the purpose of this section to promote public health, safety, and general welfare and to minimize public and private losses due to flood conditions within the flood prone areas by provisions designed to:

   a. Restrict or prohibit uses that are dangerous to health, safety, and property due to water or erosion hazards or that result in damaging increases in erosion, flood heights or velocities,

   b. Require that uses vulnerable to floods, including facilities that serve such uses, be protected against flood damage at the time of initial construction,

   c. Control the alteration of natural floodplains, stream channels, and natural protective barriers, which are involved in the accommodation of floodwaters,

   d. Control filling, grading, dredging, and all other development that may increase erosion or flood damage, and

   e. Prevent or regulate the construction of flood barriers that will unnaturally divert flood waters

CONTENT

12.1 General Provisions
12.2 Development Site Environmental Assessment
12.3 Permits Required
12.4 Erosion and Sedimentation Control Regulations
12.5 Grading
12.6 Flood Damage Prevention
12.7 Stormwater Management
12.8 Watershed Protection
12.9 Watercourse (Riparian) Buffer Areas

or which may increase flood hazards to other lands.

2. Specific objectives of the flood damage prevention provisions are as follows:

   a. To protect human life and health,

   b. To minimize expenditure of public money for costly flood control projects,

   c. To minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public,

   d. To minimize prolonged business losses and interruptions,

   e. To minimize damage to public facilities and utilities,

   f. To minimize damage to private and public property due to flooding,

   g. To maintain the natural and beneficial functions of floodplains,

   h. To help maintain a stable tax base by providing for the sound use and development of flood prone areas, and

   i. To ensure that potential buyers are aware that property is in a Special Flood Hazard Area.

C. **Stormwater Management**. The purpose of this section is to protect, maintain and enhance the public health, safety, environment, and general welfare by establishing minimum requirements and procedures to control the adverse effects of increased post-development stormwater runoff and nonpoint and point source pollution associated with new development and redevelopment (nitrogen and phosphorous are of particular interest). This UDO seeks to meet its general purpose through the following specific objectives and means:

1. Establishing decision-making processes for development that protects the integrity of watersheds and preserves the health of water resources

2. Requiring that new development and redevelopment maintain the pre-development hydrologic response in their post-development state as practicable for the applicable design storm in order to reduce flooding, stream bank erosion, nonpoint and point source pollution and increases in stream temperature, and to maintain the integrity of stream channels and aquatic habitats,

3. Requiring that new development not exceed export targets for nitrogen and phosphorus in stormwater runoff for the watershed through site layout, engineering stormwater controls, or permanent nutrient offset credit,

4. Establishing minimum post-development stormwater management standards and design criteria for the regulation and control of stormwater runoff quantity and quality,

5. Establishing design and review criteria for the construction, function, and use of structural Stormwater Control Measures (SCMs) that may be used to meet the minimum post-development stormwater management standards,

6. Encouraging the use of better management and site design practices, such as the use of vegetated conveyances for stormwater and the preservation of greenspace and other conservation areas to the maximum extent practicable,

7. Establishing provisions for the long-term responsibility for and maintenance of structural and nonstructural SCMs to ensure that they continue to function as designed, are maintained appropriately, and pose no threat to public safety,

8. Establishing administrative procedures for the submission, review, approval, and disapproval of stormwater management plans, for the inspection of approved projects, and to assure appropriate long-term maintenance,

9. Controlling illicit discharges into the municipal separate stormwater system and waters of the State,

10. Providing education and outreach to the public regarding methods to prevent and minimize pollutant contributions to the municipal separate stormwater system and waters of the State.

D. **Watershed Protection**. The Watershed Protection regulations are established to preserve and improve water quality and provide safe drinking water now and in the future.

12.1.2 Applicability

The various erosion control, flood damage prevention, stormwater management and watershed protection provisions of this Chapter apply according to Table 12.1.2 below.

Table 12.1.2 Natural Resource Protection Standard Applicability

Regulation Type	Geographic Applicability	Relevant Subsections
Erosion and Sedimentation Control Regulations	All Districts	12.1.3.A
Flood Damage Prevention Regulations	Special Flood Hazard Areas and Future Conditions Flood Hazard Areas (established in Section 12.6.1.C)	12.6
Stormwater Management Regulations	All Districts (subject to the provisions of Section 12.7.1.A)	12.7, 12.9
Watershed Protection Regulations	Watershed Protection Overlay Districts (established in Section 12.8.1.)	12.7, 12.8

12.1.3 Findings

A. **Erosion and Sedimentation Control**.

1. The erosion of soil from un-stabilized development sites has adverse impacts on the condition of public and private property, impairs the Town stormwater system, and causes pollution and accelerated siltation of lakes, streams, and other watercourses.

2. Pursuant to the North Carolina Sedimentation Pollution Control Act of 1973, as amended, the Town has been directed to implement an erosion and sedimentation control program as outlined in this chapter.

B. **Flood Damage Prevention**.

1. The flood prone areas within the jurisdiction of the Town are subject to periodic inundation which can result in loss of life, property, health and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures of flood protection and relief, and impairment of the tax base, all of which adversely affect the public health, safety, and general welfare.

2. These flood losses can be caused by the cumulative effect of obstructions in floodplains causing increases in flood heights and velocities and by the occupancy in flood prone areas of uses vulnerable to floods or other hazards to other lands which are inadequately elevated, floodproofed, or otherwise unprotected from flood damages.

C. **Stormwater Management**.

1. It has been determined that development and redevelopment (as defined in NCGS §143-214.7) can alter the hydrologic response of local watersheds and increases stormwater runoff rates and volumes, flooding, soil erosion, stream channel erosion, nonpoint and point source pollution, and sediment transport and deposition, as well as reducing groundwater recharge.

2. These changes in stormwater runoff contribute to increased quantities of water-borne pollutants and alterations in hydrology which are harmful to public health and safety as well as to the natural environment.

3. These effects can be managed and minimized by applying proper design and well-planned controls to manage stormwater runoff from development sites.

4. Further, the Federal Water Pollution Control Act of 1972 ("Clean Water Act") and federal Phase II Stormwater Rules promulgated under it, as well as rules of the North Carolina Environmental Management Commission promulgated in response to federal Phase II requirements, compel certain urbanized areas, including the Town, to adopt stormwater controls such as those included in this chapter.

5. Further, the Commission has identified the Neuse River Estuary, as nutrient sensitive waters; has identified all or a portion of the estuary as impaired waters due to exceedances of the chlorophyll a standard; and has promulgated rules (the Neuse Nutrient Strategy Rules) to reduce the average annual loads of nitrogen and phosphorus delivered to the estuary from all point and nonpoint sources of these nutrients located within its watershed, including stormwater from new development in this jurisdiction.

D. **Watershed Protection**. The Legislature of the State of North Carolina has, in NCGS §143-21, Watershed Protection Rules, directed local governmental units to adopt regulations that meet or exceed the minimum requirements of NCGS §143-214.5 and water supply watershed protection rules adopted by the State Environmental Management Commission in order to protect the water supplies throughout the state.

12.1.4 Review and Decision Making

The Administrator shall be responsible for review and decision-making related to the floodplain management program as follows:

A. Review all floodplain development applications and issue permits for all proposed development within Special Flood Hazard Areas and Future Conditions Flood Hazard Areas to assure that the requirements of this UDO have been satisfied.

B. Advise permittee that additional Federal or State permits (Wetlands, Endangered Species, Erosion and Sedimentation Control, Riparian Buffers, Mining, etc.) may be required, and require that copies of such permits be provided and maintained on file with the floodplain development permit.

C. Notify adjacent communities and the North Carolina Department of Crime Control and Public Safety, Division of Emergency Management, State Coordinator for the National Flood Insurance Program prior to any alteration or relocation of a watercourse, and submit evidence of such notification to the Federal Emergency Management Agency (FEMA).

D. Assure that maintenance is provided within the altered or relocated portion of said watercourse so that the flood-carrying capacity is not diminished.

E. Assure that maintenance is provided within the altered or relocated portion of said watercourse so that the flood-carrying capacity is not diminished.

F. Obtain actual elevation (in relation to mean sea level) to which all new and substantially improved structures and utilities have been floodproofed, in accordance with Section 16.5.7.

G. Obtain actual elevation (in relation to mean sea level) of all public utilities in accordance with Section 16.5.7.

H. When floodproofing is utilized for a particular structure, obtain certifications from a registered professional engineer or architect in accordance with Section 16.5.7 and Section 12.6.2.B.

I. Where interpretation is needed as to the exact location of boundaries of the Special Flood Hazard Areas or Future Conditions Flood Hazard Areas (for example, where there appears to be a conflict between a mapped boundary and actual field conditions), make the necessary interpretation. The person contesting the location of the boundary shall be given a reasonable opportunity to appeal the interpretation as provided in this UDO.

J. When Base Flood Elevation (BFE) data has not been provided, obtain, review, and reasonably utilize any Base Flood Elevation (BFE) data, along with floodway data or non-encroachment area data available from a Federal, State, or other source, in order to administer the provisions of this UDO.

K. When Base Flood Elevation (BFE) data is provided but no floodway nor non-encroachment area data has been provided, obtain, review, and reasonably utilize any floodway data or non-encroachment area data available from a Federal, State, or other source in order to administer the provisions of this UDO.

L. When the lowest ground elevation of a parcel or structure located within Zone AE is above the Base Flood Elevation (BFE), advise the property owner of the option to apply for a Letter of Map Amendment (LOMA) from FEMA. Maintain a copy of the Letter of Map Amendment (LOMA) issued by FEMA in the floodplain development permit file.

M. Permanently maintain all records that pertain to the administration of this UDO and make these records available for public inspection.

N. Make on-site inspections of work in progress. As the work pursuant to a floodplain development permit progresses, the floodplain administrator shall make as many inspections of the work as may be necessary to ensure that the work is being done according to the provisions of the local ordinance and the terms of the permit. In exercising this power, the floodplain administrator has a right, upon presentation of proper credentials, to enter on any premises within the jurisdiction of the community at any reasonable hour for the purposes of inspection or other enforcement action.

O. Issue stop-work orders as required. Whenever a building or part thereof is being constructed, reconstructed, altered, or repaired in violation of this UDO, the floodplain administrator may order the work to be immediately stopped. The stop-work order shall be in writing and directed to the person doing the work. The stop-work order shall state the specific work to be stopped, the specific reason(s) for the stoppage, and the condition(s) under which the work may be resumed. Violation of a stop-work order constitutes a misdemeanor.

P. Revoke floodplain development permits as required. The floodplain administrator may revoke and require the return of the floodplain development permit by notifying the permit holder in writing stating the reason(s) for the revocation. Permits shall be revoked for any substantial departure from the approved application, plans, or specifications; for refusal or failure to comply with the requirements of State or local laws; or for false statements or misrepresentations made in securing the permit. Any floodplain development permit mistakenly issued in violation of an applicable State or local law may also be revoked.

Q. Make periodic inspections throughout all special flood hazard areas within the jurisdiction of the community. The floodplain administrator and each member of his or her inspections department shall have a right, upon presentation of proper credentials, to enter on any premises within the territorial jurisdiction of the department at any reasonable hour for the purposes of inspection or other enforcement action.

R. Follow through with corrective procedures of Chapter 17.

S. Review and provide input for variance requests.

T. Maintain a current map repository to include, but not limited to, the FIS Report, FIRM and other official flood maps and studies adopted in accordance with Section 12.6 of this UDO, including any revisions thereto including Letters of Map Change, issued by FEMA, and to notify the State and FEMA of mapping needs.

U. Coordinate revisions to FIS reports and FIRMs, including Letters of Map Revision Based on Fill (LOMR-F) and Letters of Map Revision (LOMR

12.2 Development Site Environmental Assessment

12.2.1 Assessment Features

All environmental assets on a development site shall be assessed and protected in accordance with the requirements of this Section. Environmental assets shall include but are not limited to:

A. Special Flood Hazard Areas and Future Conditions Flood Hazard Areas,

B. Riparian buffers along all perennial and intermittent streams,

C. Wetlands protected by the Army Corps of Engineers or the North Carolina Department of Environmental Quality,

D. Tree canopy retention areas (Section 7.2.3.B.),

E. Lakes, ponds, and other water bodies, excluding created stormwater management facilities,

F. Rock outcroppings,

G. Endangered species habitat,

H. Cemetery,

I. Areas at least 5,000 contiguous square feet in size with any natural slopes greater than 25 percent,

J. Sites at least five contiguous acres in size identified by the Town, County, State, or federal government as farmland or agricultural land that is prime, unique, or of statewide or local importance.

12.2.2 Development Limitation per Environmental Feature Type

If the environmental assessment identifies any environmental features on the development site, development shall be limited as detailed in Table 12.2.2.

Table 12.2.2 Development Limitation per Environmental Asset

Environmental Asset	Development Limitation
Tree canopy retention areas (Section 7.2.3.B)	No development allowed.
Natural lakes, ponds, and other water bodies, excluding created stormwater management facilities, farm ponds, etc.	No development allowed.
Rock outcroppings	No development allowed.
Endangered species habitat	No development allowed.
Cemetery	Development allowed if protection standards of Section 6.6 and/or grave removal process of NCGS §65-106 are met.
Areas at least 5,000 contiguous square feet in size with any natural slopes greater than 25 percent.	No more than 80 percent of the total combined area shall be disturbed unless a variance is granted (Section 16.6.6).
Sites at least five contiguous acres in size identified by the Town, County, State, or federal government as farmland or agricultural land that is prime, unique, or of statewide or local importance.	No more than 30 percent of the total combined area shall be disturbed unless a variance is granted (Section 16.6.6).
Other	As determined by the Administrator per Section 16.5.

12.3 Permits Required

12.3.1 Land Disturbance (Erosion and Sedimentation Control) Permit

No person shall undertake any land-disturbing activity for which a permit is required, as specified by the erosion and sedimentation control provisions of this chapter, until plans for controlling erosion associated with the activity have been reviewed and approved in accordance with the procedures set forth in Section 16.5.9.

12.3.2 Floodplain Development Permit

A Floodplain Development Permit shall be required to develop in a Flood Hazard Area in conformance with the provisions of this chapter and Section 16.5.7 prior to the commencement of any development activities within Special Flood Hazard Areas and Future Conditions Flood Hazard Areas.

12.3.3 Stormwater Approvals

Stormwater approval is required for all development and redevelopment unless exempt pursuant to Section 12.7.1 Stormwater approvals pursuant to this chapter shall be granted as part of the Site Plan process outlined in Section 16.5.11 or Zoning Compliance Permit Process outlined in Section 16.5.14.

12.3.4 Watershed Development

A Site Plan shall be required, as outlined in Section 16.5.11, indicating conformance with the watershed protection provisions of this chapter prior to the commencement of development activities within the Watershed Protection Overlay District.

12.4 Erosion and Sedimentation Control Regulations

12.4.1 Scope and Exclusions

No person shall undertake any land-disturbing activity subject to this UDO without first obtaining a Plan approval from the Town.

A. **Applicability**.

1. A Land Disturbance Permit shall be required for all land-disturbing of ½ acre (21,780 square feet) or more in surface area in accordance with Section 16.5.9 of this UDO, this includes individual residences.

2. Single-family lots being graded/built by the same builder/developer at the same time within the same subdivision, whether they are contiguous or non-contiguous, must obtain a Land Disturbance Permit.

3. Separate parcels or lands under one or diverse ownership, being developed as a unit will be aggregated to determine disturbed area,

4. The town may require a Land Disturbance Permit for land-disturbing activities that are less than 1/2 acre (21,780 square feet) in surface area where sediment control measures are needed to protect against off-site damages, in accordance with Section 16.5.9 of this UDO. Regardless of size, the persons conducting land-disturbing activity shall take all reasonable measures to protect all public and private property from damage caused by the activity.

5. Additionally, the Town requires a Land Disturbance Permit for activities in common plans of development or sale as a condition of NC Construction General Permit NCG01 regulations.

6. The NCG01 permit establishes requirements for construction site operators to control waste such as discarded building materials, concrete truck washout, chemicals litter, and sanitary waste at the construction site that may cause adverse impacts to water quality.

B. **Compliance Required Regardless of Land Disturbance Permit Requirement**. Erosion control devices must be installed to prevent any offsite sedimentation for any construction site regardless of the size of the land disturbance. Land-disturbing activity for which a Land Disturbance Permit is not required must still comply with the erosion and sedimentation control regulations of this Chapter, unless specifically excluded in Section 12.4.1.C, below.

C. **Exclusions**. This Section shall not apply to the following types of land-disturbing activity:

1. An activity which is essential to protect human life during an emergency.

2. Land-disturbing activities undertaken on established bona-fide farms for the production of plants and animals, including but not limited to: forage and sod crops, grain and feed crops, tobacco, cotton, and peanuts; dairy animals and dairy products; poultry and poultry products; livestock, including the breeding and grazing of any or all such animals; bees and apiary products; and fur producing animals; and mulch, ornamental plants, and other horticultural products. For purposes of this section "mulch" means substances composed primarily of plant remains or mixtures of such substances.

3. Land-disturbing activities undertaken on forestland for the production and harvesting of timber and timber products and which are conducted in accordance with Forest Practice Guidelines Related to Water Quality (best management practices) as adopted by the North Carolina Department of Agriculture and Consumer Services. If activities are undertaken in a manner that is not in accordance with the Forest Practice Guidelines referenced above, the provisions of this UDO shall apply to such activity and any related land-disturbing activity on the tract.

4. Land-Disturbing activities for which a permit is required under the Mining Act of 1971, Article 7 of Chapter 74 of the General Statutes.

5. Land-Disturbing activities over which the State has exclusive regulatory jurisdiction as provided in NCGS §113A-56(a). Such activities include:

   a. Land-Disturbing activities conducted by the State.

   b. Land-Disturbing activities conducted by the United States.

   c. Land-Disturbing activities conducted by persons having the power of eminent domain.

   d. Land-Disturbing activities conducted by local governments, except that the Town has declared that all the departments and agencies of the town and its contractors and subcontractors must comply with the regulations of this Chapter according to Section 12.4.1.E, below.

   e. Land-Disturbing activities funded in whole or in part by the County, State or United States.

6. Activities undertaken to restore the wetland functions of converted wetlands to provide compensatory mitigation to offset impacts permitted under Section 404 of the Clean Water Act or pursuant to Natural Resources Conservation Service standards to restore the wetland functions of a converted wetland as defined in Title 7 Code of Federal Regulations §12.2.

D. **Affidavit for Exclusions**. Except for exclusions in the event of an emergency, as outlined in Section 12.4.1.C, the owner of the property will be required to file an application for an exclusion and an affidavit stating the use of the property. The Application for Exemption must be filed with the Administrator. The Administrator must review and grant or deny the Application within 30 working days, after receipt of the complete Land Disturbance Permit application (including fees) and provide its decision in writing to the applicant. The erosion and sedimentation control plan must be implemented according to schedule. Failure to meet the conditions of the exemption constitutes a violation of the erosion and sedimentation control regulations of this article and will be retroactive to the granted date of the original exemption. If a complete Land Disturbance Permit application package (including fees) is not received

at initial submittal, the application will be automatically disapproved.

E. **Expressly Applied**. The erosion and sedimentation control regulations of this article shall expressly apply to all of the following land-disturbing activities:

1. Temporary access and haul roads, other than public roads, constructed or used in connection with any land-disturbing activity are considered a part of such activity.

2. When the person conducting the land-disturbing activity is also the person conducting the borrow or waste disposal activity, areas from which borrow is obtained and which are not regulated by the provisions of the Mining Act of 1971, and waste areas for surplus materials other than landfills regulated by the North Carolina Department of Environmental Quality (NCDEQ), or the Town, will be considered as part of the land-disturbing activity where the borrow material is being used or from which the waste material originated. When the person conducting the land-disturbing activity is not the person obtaining borrow and/or disposing of the waste, these areas are considered a separate land-disturbing activity.

3. Land-Disturbing activities connected with utility construction over which the State does not have exclusive regulatory jurisdiction as provided in NCGS §113A-56(a).

12.4.2 Erosion and Sedimentation Control Plans

A. **Erosion and Sedimentation Control Plan Required**. Any person engaged in land-disturbing activity, who fails to file a plan in accordance with the erosion and sedimentation control regulations of this Chapter, or who conducts a land-disturbing activity except in accordance with provisions of an approved plan will be deemed in violation of the erosion and sedimentation control regulations of this section.

B. **Erosion and Sedimentation Control Plan Content**. Applications for a Land Disturbance Permit must contain at least all of the information required for Land Disturbance Permits in Section 16.5.9. Developers shall include NCG01 plan sheets in with their submission.

C. **Control Objectives**. An erosion and sedimentation control plan may be disapproved if the plan fails to adequately address the following control objectives:

1. **Identify Critical Areas**. On-site areas which are subject to severe erosion, and off-site areas which are especially vulnerable to damage from erosion and/or sedimentation, are to be identified and receive special attention.

2. **Limit Time of Exposure**. All land-disturbing activity is to be planned and phased to limit exposure to the stabilization timeframes established in most recently published NCDEQ guidelines. The construction sequence shall explain the phasing in detail.

3. **Limit Exposed Areas**. All land-disturbing activity is to be planned and conducted to minimize the size of the area to be exposed at any one time.

4. **Mass Land Disturbing**.

   a. In order to help maintain remaining town topography, trees, buffers, and to limit exposed areas that are open at once, mass land-disturbing will not be allowed except in conformance with an approved plan.

   b. For development over 20 acres in land disturbance area, phased grading must be shown on the plans to limit the potential for soil erosion and off-site sedimentation.

   c. Single-Family Residential Developments shall not grade more than 20 acres per phase at one time.

   d. Each phase of the development must be stabilized with adequate ground cover sufficient to restrain erosion and all infrastructure installed prior to grading an additional phase of development.

5. Exceptions to this requirement may be granted by the Town if compliance is not practicable due to physical site constraints, such as topography, presence of stream buffers or other natural features, or lot dimensions, or due to presence of existing development or infrastructure.

6. **Control Surface Water**. Surface water runoff originating upgrade of exposed areas should be controlled to reduce erosion and sediment loss during the period of exposure via sediment control basins in accordance with NC Sediment and Erosion Control Planning and Design Manual.

7. **Control Sedimentation**. All land-disturbing activity is to be planned and conducted to prevent off-site sedimentation damage.

8. **Manage Stormwater Runoff**. Plans are to include measures to control the velocity at the point of discharge to minimize accelerated erosion and increased sedimentation of the site and stream. Such measures shall be in accordance with this section, the NC Stormwater Design Manual, and the National Pollutant Discharge Elimination System.

9. **Materials Handling**. Any structural controls installed to manage construction materials and wastes stored on-site shall be in the Erosion and Sediment Control plan. Requirements for handling materials on construction sites can be found in the NCG01 Permit in in Section F of the NCG01 Permit.

D. **Grounds for Disapproval**. An erosion control plan may be disapproved upon finding that an applicant, or any parent or subsidiary corporation (if the applicant is a corporation):

1. Proposed content which is insufficient or ineligible for permit coverage. A disapproval based upon a plan's content will specifically state in writing the reasons for disapproval,

2. Has not submitted a complete application, including the Land Disturbance checklist,

3. Is conducting or has conducted land-disturbing activity without an approved plan or has received a notice of violation on a plan previously approved and has not complied with the notice within the time specified in the notice,

4. Has failed to pay a civil penalty assessed pursuant to the North Carolina Sedimentation Pollution Control Act or a local ordinance adopted pursuant to the Act which is due and for which no appeal is pending,

5. Has been convicted of a misdemeanor pursuant to a NCGS §113A-64(b) or any criminal provision of a local ordinance adopted pursuant to the North Carolina Sedimentation Pollution Control Act (An applicant's criminal record may be considered for only the two years prior to the application date), or

6. Has failed to comply with State rules or local ordinances and regulations adopted pursuant to the North Carolina Sedimentation Pollution Control Act on properties located within Town jurisdiction,

7. Owns neighboring property that is in violation of the erosion and sedimentation control regulations of this UDO, no permit shall be issued until that violation is corrected.

E. **Financial Responsibility**.

1. Plans may be disapproved unless accompanied by an authorized statement of financial responsibility and documentation of property ownership (part of the Town's land-disturbing permit application).

   a. This statement shall be signed by the Person financially responsible for the land-disturbing activity or his/her attorney in fact. The statement shall include the mailing and street addresses of the principal place of business of:

      i. The Person financially responsible,

      ii. The owner of the land, and

      iii. Any registered agents.

   b. If the Person financially responsible is not a resident of North Carolina, a North Carolina agent must be designated in the statement for the purpose of receiving notice of compliance or non-compliance.

   c. Except as provided below, if the applicant is not the owner of the land to be disturbed, the draft erosion and sedimentation control plan must include the owner's written consent for the applicant to submit a draft erosion and sedimentation control plan and to conduct the anticipated land-disturbing activity.

2. If the applicant is not the owner of the land to be disturbed and the anticipated land-disturbing

activity involves the construction of utility lines for the provision of water, sewer, gas, telecommunications, or electrical service, the draft erosion and sedimentation control plan may be submitted without the written consent of the owner of the land, so long as the owner of the land has been provided prior notice of the project.

F. **Sale of Property**. If the property associated with the approved plan is sold in whole or in part before all conditions of the approved plan are met, the permit holder must provide notice to the new owner/s of conditions of the Land Disturbance Permit and provide the Town with revised financially responsible owner forms. The new owner(s) shall be required to attend a preconstruction conference.

G. **Effect of Approval**.

1. Until all construction is complete, all permanent erosion and sedimentation control measures are installed, and the site has been stabilized, a copy of the approved plan must be available and accessible on-site in a weather proof container. All NPDES, EPA, turbidity and other state laws must be followed. Self-inspections of erosion control sites are required per NCGS §113A-54.1(e) law 15ANCAC 04B.0131.

2. The Town must forward to the NCDEQ a copy of each plan for a land-disturbing activity that involves the utilization of ditches for the purpose of de-watering or lowering the water table of the tract.

H. **Revised Plans**. If the town, whether upon review of a plan or upon inspection of the job site, determines that a significant risk of accelerated erosion or off-site sedimentation exists, or the plan is inadequate to meet the requirements of this article, the town may require a revised plan. Pending the approval of the revised plan, work must stop or continue only under conditions outlined by the Administrator.

I. **Plan Appeals**. The appeal of a disapproval or approval with modifications of a plan shall be governed by the provisions listed in the Sediment Pollution Control Act (SPCA) and as described in Section 16.6.2 of this UDO.

12.4.3 Standards

No land-disturbing activity subject to the control of this UDO shall be undertaken except in accordance with the following mandatory standards. Persons conducting land-disturbing activities must take all reasonable measures to protect public and private property from damage caused by such activities. Whenever conflicts exist between federal, state, or local laws, ordinance, or rules, the more restrictive provision shall apply. The town reserves the right to require preparation and approval of an erosion control plan in any instance wherein extensive control measures are required.

A. **Initiation of Activity**.

1. The Town requires a preconstruction conference prior to the initiation of any land-disturbing activities. If a preconstruction conference is not required, this condition will be noted on the approved plan.

2. No Person may initiate a land-disturbing activity before notifying the Town of the date that land-disturbing activity will begin. The start date should be shared with the Town prior to or during the preconstruction conference.

3. A plan approval issued under this article and a copy of the approved plan shall be prominently displayed on the job site until all construction is complete, all temporary measures have been removed, all permanent sedimentation and erosion control measures are installed, and the site has been stabilized.

4. If an approved plan is found to be ineffective at controlling erosion and sediment loss or an amendment is required, the Town will require a revised plan. Pending approval of the revised plan, work may be required to cease, or continue under conditions outlined by the Town and/or the original permit approval. Upon approval of the revised plan, work may advance and the revised plan shall be maintained onsite.

B. **Erosion Control Measure Must Conform to State Design Manual**. All soil erosion and sedimentation control plans and measures must conform to the minimum applicable standards specified in the most recent North Carolina's Erosion and

Sedimentation Control Planning and Design Manual and applicable Town standard details.

C. **Fill Material**. Materials being used as fill shall be consistent with those described in 15A NCAC 13B.0562 unless the site is permitted by the Department of Environmental Quality's Division of Waste Management to operate as a landfill. Not all materials described in Section .0562 may be suitable to meet geotechnical considerations of the fill activity and should be evaluated accordingly.

D. **Sediment to be Held on Site**. The person conducting the land-disturbing activity shall install erosion and sedimentation control devices and practices that are sufficient to retain the sediment generated by the land-disturbing activity within the boundaries of the tract during construction upon and development of said tract. All land-disturbance is required to have silt fence on the low side of the lot and a construction entrance with approved woven fabric that meets ASTM D 4632 standards.

E. **Stormwater Outlet Protection**.

1. Land-disturbing activity shall be conducted in a manner so that the post construction velocity of the 25-year storm runoff in the receiving watercourse to the discharge point does not exceed the greater of:

a. The maximum permissible velocity as listed in WFD3.

b. The velocity of the 25-year storm runoff in the receiving watercourse prior to development.

2. If neither of these conditions can be met, the receiving watercourse to and including the discharge point shall be designed and constructed to withstand the expected velocity anywhere the velocity exceeds the pre-development velocity by greater than or equal to 10 percent.

3. This outlet protection conditions will not apply where it can be demonstrated to the Town that stormwater discharge velocities will not create an erosion problem in the receiving watercourse.

F. **Sediment Basins**. Sediment basins shall have settling efficiency as outlined in the North Carolina Erosion and Sediment Control Planning and Design Manual.

G. **Stabilization Required**. Stabilization shall be provided whenever land-disturbing activities have ceased, or have temporarily ceased, on any portion of the site. Stabilization timeframes should match most recently published NCDEQ guidelines.

H. **Ground Cover**. Whenever land-disturbing activity that will disturb more than one-half acre (21,780 square feet) is undertaken on a tract, the Person conducting the land-disturbing activity shall install erosion and sedimentation control devices and practices that are sufficient to retain the sediment generated by the land-disturbing activity within the boundaries of the tract during construction upon and development of said tract, and shall plant or otherwise provide a permanent ground cover sufficient to restrain erosion after completion of construction or development. Permanent ground cover sufficient to restrain erosion must be accomplished within 90 calendar days following completion of construction or development.

I. **Slope and Fill Angles**. The angle for graded slopes and fills may not be greater than the angle that can be retained by vegetative cover or other adequate erosion control devices or structures (typically two horizontal feet per every vertical foot, or a ratio of 2:1), as detailed in Section 12.5. In any event, slopes left exposed shall be provided with ground cover, devices, or structures sufficient to restrain erosion. For all areas of moderate or steep slopes, temporary ground cover shall be provided if the slope has not been disturbed for a period of 14 days.

J. **Protection from Storm Required**.

1. **Design Storm**. Except as provided below, erosion and sedimentation control measures, structures, and devices must be planned, designed, and constructed to provide protection from the calculated maximum peak rate of runoff from the 25-year storm. Runoff rates shall be calculated using the procedures in the latest edition of the United States Department of Agriculture (USDA), Natural Resources Conservation Service's "National Engineering Field Handbook", or other Town approved methods.

2. **Falls Lake Watershed**. Such erosion and sedimentation control measures, structures, and devices must be so planned, designed, and constructed as to provide protection from the calculated maximum peak rate of runoff from the 25-year storm. Runoff rates must be calculated using acceptable calculation procedures.

   a. **Maximum Peak Rate of Runoff Protection**. Erosion and sedimentation control measures, structures, and devices shall be planned designed and constructed to provide protection from the runoff of the 25-year storm which produces the maximum peak rate of runoff as calculated according to the procedures in the United States Department of Agriculture Soil Conservation Service's "National Engineering Field Manual for Conservation Practices" or according to procedures adopted by any other agency of the state or the United States or Town approved approach.

   b. **Sediment Settling Efficiency**. Sediment basins shall be planned, designed, and constructed so that the basin will have a settling efficiency of at least 70 percent for the 40-micron size soil particle transported into the basin by the runoff of the two-year storm that produces the maximum peak rate of runoff as calculated according to procedures in the latest edition of the United States Department of Agriculture Natural Resources Conservation Service's "National Engineering Field Handbook" or according to procedures adopted by any other agency of the State or the United States.

   c. **Channel Grades**. Newly constructed open channels shall be planned, designed, and constructed with side slopes no steeper than two feet horizontal to one foot vertical if a vegetative cover is used for stabilization unless soil conditions permit steeper side slopes or where the side slopes are stabilized by using mechanical devices, structural devices, or other ditch liners enough to restrain accelerated erosion. The angle for side slopes shall be enough to restrain accelerated erosion.

   d. **Ground Cover.** For an area of land-disturbing activity where grading activities have been completed, temporary or permanent ground cover sufficient to restrain erosion shall be provided as soon as practicable, but in no case later than seven calendar days after completion of grading. For an area of land-disturbing activity where grading activities have not been completed, temporary ground cover shall be provided as detailed in Table 12.4.3.J.2.d.

Table 12.4.3.J.2.d
Ground Cover Requirements per Slope Type

Slope Type	Standard	Administrative Approval Required
No slope	Temporary ground cover shall be provided for the area if it has not been disturbed for a period of 14 calendar days.	No
Moderate slope - For purposes of this Item, "moderate slope" means an inclined area, the inclination of which is less than or equal to three (3) feet horizontal to one (1) foot vertical.	Temporary ground cover shall be provided for the area if it has not been disturbed for a period of 10 calendar days.	No
Steep slope - For purposes of this Item, "steep slope" means an inclined area, the inclination of which is greater than three (3) units of horizontal distance to one (1) unit of vertical distance.	Temporary ground cover shall be provided for the area if it has not been disturbed for a period of seven calendar days.	Yes

3. **High Quality Water (HQW) Zones**. In HQW zones the following design standards shall apply as described below. HQW in the Town includes the Smith Creek Critical Area District and Little River Protected Area District (see Official Zoning Map).

   a. **Limit on Uncovered Areas**. Uncovered areas in HQW zones shall be limited at any time to a maximum of 20 acres within the boundaries of the tract. Only the portion of the land-disturbing activity within the HQW zone shall be governed by this section. Larger areas may be uncovered within the boundaries of the tract with the written approval of the Administrator, upon providing engineering justification with a construction sequence that considers phasing, limiting exposure, weekly submitted self-inspection reports, and a more conservative design than the 25-year storm.

   b. **Maximum Peak Rate of Runoff Protection**. Same as for Falls Lake Watershed (12.4.3.J.2.a) above.

   c. **Sediment Settling Efficiency**. Sediment Basins within HQW zones shall be designed and constructed such that the basin shall be planned, designed, and constructed to:

      i. Use a surface withdrawal mechanism, except when the basin drainage area is less than one acre,

      ii. Have a minimum of 1800 cubic feet of storage area per acre of disturbed area,

      iii. Have a minimum surface area of 325 square feet per cfs of the 25-year peak flow,

      iv. Incorporate three baffles, unless the basin is less than 20 feet in length, in which case two baffles is sufficient,

      v. Upon written request, alternative design and control measures in lieu of subsections I through iv above may be reviewed and approved if they will provide an equal or more effect level of erosion and sediment control on the site.

   d. **Grade**. Same as for Falls Lake Watershed (12.4.3.J.2.d) above.

12.4.4 Construction Buffer Zones

A. **Standard Buffer**. All land-disturbing activity shall adhere to the watercourse buffer requirements in Section 12.9.7. In addition, no land-disturbing activity during periods of construction or improvement to land shall be permitted in proximity to a lake or natural watercourse unless a watercourse buffer zone is provided along the margin of the watercourse of sufficient width to confine visible siltation within the 25 percent of the buffer zone nearest the land-disturbing activity.

   1. **Projects On, Over or Under Water**. The construction buffer requirement shall not apply to a land-disturbing activity in connection with the construction of facilities to be located on, over, or under a lake or natural watercourse. Additional requirements of the NCDEQ and/or USACE may apply.

      a. Projects shall minimize the extent and duration of disruption of the stream channel. Where relocation of a stream forms an essential part of the proposed activity, the relocation shall minimize changes in the stream flow characteristics.

   2. **Construction Buffer Measurement**. Unless otherwise provided, the width of a buffer zone is measured horizontally from the edge of the water to the nearest edge of the disturbed area, with the 25 percent of the strip nearer the land-disturbing activity containing natural or artificial means of confining visible siltation.

12.4.5 Responsibility for Maintenance

A. **Owner Shall Be Responsible for Maintenance**. During the development of a site, the financially responsible owner must install and maintain all temporary and permanent erosion and sedimentation control measures as required by the approved plan, any provision of this article, or state regulations. After site development, the landowner, association, or person in possession or control of the land must maintain all necessary permanent erosion and sediment control measures, except those measures installed within a road or street right-of-way or easement accepted for maintenance by a governmental agency.

B. **Maintenance Violations**. It is a violation of the erosion and sedimentation control regulations of this section for any persons, companies, or corporations to leave mud, dirt, dust or other material upon open public streets, sidewalks, greenways, other travel ways or off site.

C. **Additional Measures**. Whenever the Town, determines that accelerated erosion and sedimentation continues despite the installation of protective practices, they shall direct the Person conducting the land-disturbing activity to take additional protective action necessary to achieve compliance with the conditions specified in the SPCA or its rules.

D. **Inspections**.

1. The landowner, the financially responsible party, or the landowner's or the financially responsible party's agent shall perform an inspection of the area any time a permit is required according to section 12.4.1.A.

   a. The inspection shall be conducted in accordance with Part III of the NCG01 permit regardless of whether the disturbance exceeds 1 acre.

   b. Inspections shall be performed after each phase of the plan has been completed and after establishment of temporary ground cover in accordance with NCGS §113A-57(2). In addition, weekly and rain-event self-inspections are required by federal regulations, that are implemented through the NPDES Construction General Permit No. NCG01.

   c. The Person who performs the inspection shall maintain and make available a record of the inspection at the site of the land-disturbing activity. The record shall set out any significant deviation from the approved erosion control plan, identify any measures that may be required to correct the deviation, and document the completion of those measures. The record shall be maintained until permanent ground cover has been established as required by the approved erosion and sedimentation control plan.

   d. The inspections required by this subsection shall be in addition to inspections required by NCGS §113A-61.1.

2. Agents, officials, or other qualified persons authorized by the Town, will periodically inspect land-disturbing activities to ensure compliance with the SPCA, this UDO, or rules or orders adopted or issued pursuant to this UDO and to determine whether the measures required in the plan are effective in controlling erosion and sedimentation resulting from the land-disturbing activity. Notice of the right to inspect shall be included in the certificate of approval of each plan.

3. No person shall willfully resist, delay, or obstruct an authorized representative, employee, or agent of the Town, while that person is inspecting or attempting to inspect a land-disturbing activity under this section. The Town shall have the power to conduct inspections or investigations as it may reasonably deem necessary to carry out its duties as administrator of this UDO. The Town shall also have the power to require written statements, or filing of reports under oath, with respect to pertinent questions relating to land-disturbing activity.

4. If the Town determines that a person engaged in land-disturbing activity has failed to comply with the SPCA, this UDO, or rules, or orders adopted or issued pursuant to this UDO, a notice of violation shall be served upon that person. The notice may be served by any means authorized under GS 1A-1, Rule 4. The notice shall specify a date by which the person must comply and inform the person of the actions that need to be taken to comply. Any person who fails to comply within the time specified is subject to additional civil and criminal penalties for a continuing violation. If the person engaged in the land-disturbing activity has not received a previous notice of violation under this section, the Town shall offer assistance in developing corrective measures.

5. Erosion self-inspections must be conducted by each permit holder per NCGS §15A NCAC 04B .0131.

6. Stormwater self-inspections must be conducted by each permit holder per NCG01.

12.4.6 Operation in Lakes or Natural Watercourses

Land-disturbing activity in connection with construction in, on, over, or under a lake or natural watercourse shall comply with the watercourse buffer requirements in Section 12.9.7, the requirements of NCDEQ and the US Army Corps of Engineers.

12.5 Grading

12.5.1 General Grading Standards

A. **Allowable Slopes**.

1. Except as otherwise specified in this UDO, the maximum allowable slope of disturbed areas shall be 2:1 with suitable vegetation for slope stabilization as detailed in the WFD3. Turf grasses (e.g., grasses that need to be mowed) shall not be utilized.

2. The maximum allowable slope at the toe of retaining walls shall be 3:1.

3. If grading is proposed in perimeter landscape buffers or other areas along property lines, slopes no greater than 3:1 are allowed in order to ensure proper transition of grades between properties and to facilitate landscaping and maintenance.

B. **Verification.** Existing and proposed topography grades shall be verified by a licensed surveyor.

12.5.2 Fine Grading

A. **Changes to Grade.** After rough grading of a residential subdivision is completed, the grade of any residential lot shall not be raised or lowered more than four feet at any point, except the grade may be raised or lowered up to 12 feet to accommodate foundation walls incorporated into the principal structure for walk-out basements.

B. **Positive Drainage**.

1. Positive drainage away from buildings shall be required.

2. The minimum allowed slope for an impervious area is one percent except where building code is more stringent.

3. The minimum allowed slope for a pervious area is two percent.

4. Efforts shall be made to mitigate drainage impacts of downstream properties.

12.6 Flood Damage Prevention

12.6.1 General Provisions

A. **Authorization**. The Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Article 6 of Chapter 153A; Article 8 of Chapter 160A; and Article 7, 9, and 11 of Chapter 160D of the North Carolina General Statutes, delegated to the Town the authority to adopt regulations designed to promote the public health, safety, and general welfare.

B. **Applicability**. This section shall apply to all Special Flood Hazard Areas within the jurisdiction, including ETJ, of the Town.

C. **Exemptions**.

1. All new residential construction and substantial residential improvements proposed on a parcel of land that has no buildable area outside the Special Flood Hazard Area (SFHA), and that was recorded prior to May 2, 2006, shall be permitted for development provided that all applicable provisions of this UDO area met.

2. All subdivisions approved prior to May 2, 2006, shall be exempted from the requirements prohibiting the platting of lots located within the Special Flood Hazard Area, provided the subdivision complies with the requirements in place prior to May 2, 2006.

D. **Establishment of Flood Hazard Areas**.

1. The Special Flood Hazard Areas and Future Conditions Flood Hazard Areas are those identified under the Cooperating Technical State (CTS) agreement between the State of North Carolina and FEMA in its Flood Insurance Study (FIS) and its accompanying Flood Insurance Rate Maps (FIRM) for Wake County and Franklin County dated July 19, 2022 and April 16, 2013 and their accompanying Digital Flood Insurance Rate Map Panels (1738, 1739, 1748, 1749, 1759,1830, 1831, 1832, 1840, 1841, 1842, 1850, 1851, 1852, 1860, and 1861), and any revisions thereto, including any digital data developed as part of the FIS, which are adopted by reference and declared to be part of this UDO. The "Special Flood Hazard Areas" also include those defined through standard engineering analysis for private developments or by governmental agencies, but which have not yet been incorporated into the FIRM. Preliminary FIRM data may be used for design purposes, Conditional Letters of Map Revisions (CLOMR), and No-Rise analysis with concurrence of the Floodplain Administrator for the floodplain development permit. Letters of Map Change (LOMC) must be based on the most recently adopted effective model approved by FEMA.

2. In addition, upon annexation to the Town or inclusion in the ETJ, the Special Flood Hazard Areas identified by the Federal Emergency Management Agency (FEMA) and/or produced under the Cooperating Technical State agreement between the State of North Carolina and FEMA as stated above, for the unincorporated areas of Wake County and Franklin County, with accompanying maps and other supporting data are adopted by reference and declared to be part of this UDO.

3. A professional evaluation shall be provided of the potential changes in the Special Flood Hazard Area elevation caused by the obstruction, encroachment, alteration, or relocation of areas identified to have flood hazard soils by Wake County with a total drainage area of more than five acres.

E. **General Development Restrictions**. In general, no new development is allowed in the Special Flood Hazard Areas unless one or more of the following are met:

1. The property/use is exempted from this requirement as identified in Section 12.6.1.C,

2. The development is for roads, greenways, pedestrian crossings, park-related equipment, or public utilities and facilities such as wastewater, gas, electrical, and water systems that are located and constructed to minimize flood damage. Structures for pedestrian crossings (e.g., footbridges, etc.), playground equipment, and other similar items may be permitted if the applicant provides certification by a Professional Engineer, architect, or landscape architect that these encroachments will not result in an increase in flood levels during the base flood.

F. **Warning and Disclaimer of Liability**. The degree of flood protection required by this UDO is considered reasonable for regulatory purposes and is based on scientific and engineering consideration. Floods larger than those considered by this UDO can and will occur on rare occasions. Actual flood heights may be increased by man-made or natural causes. This UDO does not imply that land outside the Special Flood Hazard Areas or uses permitted within such areas will be free from flooding or flood damages. This UDO shall not create liability on the part of the Town or by any officer or employee thereof for any flood damages that result from reliance on this UDO or any administrative decision lawfully made hereunder.

G. **Definitions**. Definitions specific to the application and administration of the provisions for flood damage reduction in this section shall be indicated as such in Chapter 18 with the parenthetical note "(Floodplain Development)". All other terms in this section shall be defined according to their standard definition in Chapter 18, or if not listed, shall have their everyday meaning as determined by their dictionary definition.

12.6.2 Provisions for Flood Hazard Reduction

A. **General Standards**. In all Special Flood Hazard Areas the following provisions are required:

1. All new construction and substantial improvements shall be designed (or modified) and adequately anchored to prevent flotation, collapse, and lateral movement of the structure.

2. All new construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage in accordance with the FEMA Technical Bulletin 2, Flood Damage-Resistant Materials Requirements.

3. All new construction and substantial improvements shall be constructed by methods and practices that minimize flood damages.

4. All new electrical, heating, ventilation, air-conditioning, plumbing, duct systems, and other building utility systems, equipment, and service facilities must be located at or above the Regulatory Flood Protection Elevation (RFPE) and/or specially designed to prevent water from entering or accumulating within the components and installed to resist hydrostatic and hydrodynamic loads and stresses, including the effects of buoyancy, during the occurrence of flooding to the design flood elevation. These utility systems, equipment, and service facilities include, but are not limited to, HVAC equipment, water softener units, bath/kitchen plumbing fixtures, ductwork, electric/gas meter panels/boxes, utility/cable boxes, appliances (washers, dryers, refrigerators, freezers, etc.), hot water heaters, and electric outlets/switches. All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of floodwaters into the system.

5. New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of floodwaters into the systems and discharges from the systems into flood waters.

6. On-site waste disposal systems shall be located and constructed to avoid impairment to them or contamination from them during flooding.

7. Any alteration, repair, reconstruction, or improvements to a structure, which is in compliance with the provisions of this UDO, shall meet the requirements of "new construction" as contained in this UDO.

8. Nonconforming buildings or uses may not be enlarged, replaced, or rebuilt unless such enlargement or reconstruction is accomplished in conformance with the provisions of this Section. Nothing in this UDO shall prevent the repair, reconstruction, or replacement of a building or structure existing on the effective date of this UDO and located totally or partially within the floodway, non-encroachment area, or stream setback, provided there is no additional encroachment below the Regulatory Flood Protection Elevation in the floodway, non-encroachment area, or stream setback, and provided that such repair, reconstruction, or replacement meets all of the other requirements of this UDO.

9. For applications for building permits to improve buildings and structures, including alterations, movement, enlargement, replacement, repair, change of occupancy, additions, rehabilitations, renovations, substantial improvements, repairs of substantial damage, and any other improvement of or work on such buildings and structures, the planning, design and construction shall be coordinated with the Floodplain Administrator. The administrator will provide guidance for confirming whether the proposed work constitutes substantial improvement or repair of substantial damage.

10. New solid waste disposal facilities and sites, hazardous waste management facilities, salvage yards, and chemical storage facilities shall not be permitted in a Special Flood Hazard Area. No variances shall be granted for these facilities.

11. All subdivision proposals and other development proposals shall be consistent with the need to minimize flood damage.

12. All subdivision proposals and other development proposals shall have public utilities and facilities such as sewer, gas, electrical, and water systems located and constructed to minimize flood damage.

13. All subdivision proposals and other development proposals shall have adequate drainage provided to reduce exposure to flood hazards.

14. All subdivision proposals and other development proposals shall have received all necessary permits from those governmental agencies for which approval is required by Federal or State law, including Section 404 of the Federal Water Pollution Control Act Amendments of 1972, 33 U.S.C. 1334.

B. **Specific Standards and Restrictions**. In all Special Flood Hazard Areas where Base Flood Elevation (BFE) data has been provided and in Future Conditions Flood Hazard Areas where Future Conditions Flood Elevations data has been provided, the following additional provisions are required:

1. **Residential Construction**.

a. New construction of or substantial improvements to any residential structure (including manufactured homes) shall have the reference level, including basement, elevated no lower than the Regulatory Flood Protection Elevation.

b. No proposed lot for development that is wholly or partly subject to flooding shall be approved unless there is established on the final plat a line representing an actual contour as determined by field survey of the Special Flood Hazard Area elevation as determined by the Federal Emergency Management Agency (FEMA) Special Hazard Area Maps.

c. Such a line shall be known and identified on the site plan or subdivision plan and final plat as the "Development Restriction Flood line."

d. Subdivisions approved after May 2, 2006, may not plat lots for development located within the Special Flood Hazard Area unless all of the following exemptions are met:

i. The Special Flood Hazard Area affects a maximum area of 10% or less of the total acreage of the subdivision,

ii. There is no reason for the formation of a homeowner's association other than to retain ownership and maintenance responsibility for the Special Flood Hazard Area (e.g., covenant, other common areas), and

iii. The Special Flood Hazard Area is placed in a permanent conservation easement at plat recordation.

2. **Non-Residential Construction**.

a. New construction and substantial improvement of any commercial, industrial, or other non-residential structure shall have the reference level, including basement, elevated no lower than the Regulatory Flood Protection Elevation.

b. Structures located in A, AE, and X (Future) Zones may be floodproofed to the Regulatory Flood Protection Elevation in lieu of elevation provided that all areas of the structure, together with attendant utility and sanitary facilities, below the Regulatory Flood Protection Elevation are watertight with walls substantially impermeable to the passage of water, using structural components having the capability of resisting hydrostatic and hydrodynamic loads and the effect of buoyancy.

c. A Professional Engineer, Professional Land Surveyor or Registered Architect shall certify that the standards of this subsection are satisfied. Such certification shall be provided to the Floodplain Administrator as set forth in Section 16.5.7 along with the operational and maintenance plans.

3. **Elevated Buildings**. In new construction or substantial improvements of elevated buildings, fully-enclosed areas below the lowest floor shall conform to the following standards:

a. Such enclosed areas shall not be designed or used for human habitation, but shall only be used for parking of vehicles, building access, or limited storage of maintenance equipment used in connection with the premises.

b. Access to the enclosed area shall be the minimum necessary to allow for parking of vehicles (garage door) or limited storage of maintenance equipment (standard exterior door), or entry to the living area (stairway or elevator). The interior portion of such enclosed area shall not be finished or partitioned into separate rooms, except to enclose storage areas.

c. Such enclosed areas shall be constructed entirely of flood resistant materials below the Regulatory Flood Protection Elevation.

d. In Zones A, AE and X (Future), such enclosed areas shall include flood openings to automatically equalize hydrostatic flood forces on walls by allowing for the entry and exit of floodwaters. To meet this requirement, the openings must either be certified by a professional engineer or architect or meet or exceed the following minimum design criteria:

i. Provide a minimum of two flood openings on different sides of each enclosed area subject to flooding,

ii. The total combined area of all flood openings must be at least one square inch for each square foot of enclosed area subject to flooding,

iii. If a building has more than one enclosed area, each enclosed area must have flood openings to allow floodwaters to automatically enter and exit,

iv. The bottom of all required flood openings shall be no higher than one foot above the adjacent grade,

v. Flood openings may be equipped with screens, louvers, or other coverings or devices, provided they permit the automatic flow of floodwaters in both directions, and

vi. Enclosures made of flexible skirting are not considered enclosures for regulatory purposes, and, therefore, do not require flood openings. Masonry or wood underpinning, regardless of structural status, is considered an enclosure and requires flood openings as outlined above.

4. **Additions**. All additions must meet the applicable standards for new construction.

5. **Recreational Vehicles**. Recreational vehicles shall either:

a. **Temporary Placement**. Be on-site for fewer than 180 consecutive days and be fully licensed and ready for highway use with up-to-date state inspection and tags (a recreational vehicle is ready for highway use if it is on its wheels or jacking system, is attached to the site only by quick disconnect type utilities, and has no permanently attached additions), or

b. **Permanent Placement**. Meet all the requirements for new construction if the Recreational vehicles do not meet the limitations of Temporary Placement.

6. **Accessory Structures**. When accessory structures (sheds, detached garages, etc.) are to be placed within a Special Flood Hazard Area, the following criteria shall be met:

a. Accessory structures shall not be used for human habitation.

b. Accessory structures shall be constructed and placed on the building site to offer the minimum resistance to the flow of floodwaters.

c. Flood openings to facilitate automatic equalization of hydrostatic flood forces shall be provided below regulatory flood protection elevation in conformance with Section 12.6.2.B.3.d.

d. Certification requirements: An accessory structure with a footprint less than 150 square feet that satisfies the criteria outlined above does not require an elevation or floodproofing certificate. Elevation or floodproofing certifications are required for all other accessory structures in accordance with Section 16.5.7.

7. **Temporary Non-Residential Structures**. Prior to the issuance of a floodplain development permit for a temporary structure, the applicant must submit to the Floodplain Administrator a plan for the removal of such structure(s) in the event of a hurricane, flash flood or other type of flood warning notification. The following information shall be submitted in writing to the Floodplain Administrator for review and written approval:

   a. A specified time period for which the temporary use will be permitted. Time specified may not exceed three months, renewable up to one year,

   b. The name, address, and phone number of the individual responsible for the removal of the temporary structure,

   c. The time frame prior to the event at which a structure will be removed (i.e. minimum of 72 hours before landfall of a hurricane or immediately upon flood warning notification),

   d. A copy of the contract or other suitable instrument with the entity responsible for physical removal of the structure, and

   e. Designation, accompanied by documentation, of a location outside the Special Flood Hazard Area to which the structure will be moved.

C. **Standards for Floodplains Without Established Base Flood Elevations.** Within the Special Flood Hazard Areas designated as Approximate Zone A where no Base Flood Elevation (BFE) data has been provided by FEMA, the following provisions shall apply:

1. No encroachments, including fill, new construction, substantial improvements, or new development shall be permitted within a distance of 20 feet, each side, from the top of bank or five times the width of the stream, whichever is greater, unless certification with supporting technical data by a registered professional engineer is provided demonstrating that such encroachments shall not result in any increase in flood levels during the occurrence of the base flood discharge.
2. The BFE used in determining the Regulatory Flood Protection Elevation shall be determined based on one of the following criteria set in priority order:

   a. If Base Flood Elevation (BFE) data is available from other sources, all new construction and substantial improvements within such areas shall also comply with all applicable provisions of this UDO and shall be elevated or in accordance with elevations established by the Floodplain Administrator.

   b. All subdivision, manufactured home park and other development proposals shall provide Base Flood Elevation (BFE) data if development is greater than five acres or has more than 50 lots/manufactured home sites. Such Base Flood Elevation (BFE) data shall be adopted by reference to be utilized in implementing this UDO.

D. **Standards for Riverine Floodplains with Base Flood Elevations but without Established Floodways or Non-Encroachment Areas**. Along rivers and streams where BFE data is provided by FEMA or is available from another source but neither floodway nor non-encroachment areas are identified for a Special Flood Hazard Area on the FIRM or in the FIS report, the following requirements shall apply to all development within such areas:

1. Standards of 12.6.2.A and B; and

2. Until a regulatory floodway or non-encroachment area is designated, no encroachments, including fill, new construction, substantial improvements, or other development, shall be permitted unless certification with supporting technical data by a registered professional engineer is provided demonstrating that the cumulative effect of the proposed development, when combined with all other existing and anticipated development, will not increase the water surface elevation of the base flood more than one foot at any point.

E. **Floodway and Non-Encroachment Areas**. Areas designated as floodways or non-encroachment areas are located within the Special Flood Hazard Areas. The floodways and non-encroachment areas are extremely hazardous areas due to the velocity of floodwaters that have erosion potential and carry debris and potential projectiles. The following additional provisions shall apply to all development within such areas:

1. No encroachments, including fill, new construction, substantial improvements, and other developments shall be permitted unless it has been demonstrated that:

   a. the proposed encroachment would not result in any increase in the flood levels during the occurrence of the base flood, based on hydrologic and hydraulic analyses performed in accordance with standard engineering practice and presented to the Floodplain Administrator prior to issuance of floodplain development permit, or

   b. if an increase in base flood will occur due to the proposed encroachments, an evaluation of alternatives, which would not result in the base flood increase, should be provided for review by the Floodplain Administrator demonstrating why these alternatives are not feasible. Upon approval by the Floodplain Administrator, a Conditional Letter of Map Revision (CLOMR) must be approved by FEMA. A Letter of Map Revision (LOMR) must also be obtained upon completion of the proposed encroachment,

   c. No manufactured or mobile homes shall be permitted, except an existing manufactured home subdivision or mobile home park. A replacement manufactured, or mobile home may be placed on a lot in an existing manufactured home subdivision or mobile home park provided the anchoring and the elevation standards of this UDO are met 12.6.2.E.3.a.

2. If paragraph 1, above, is satisfied, all development shall comply with all applicable flood hazard reduction provisions of this UDO.

3. No manufactured homes shall be permitted within floodways or non-encroachment areas, except replacements of existing manufactured homes which meet the following provisions:

   a. Manufactured and mobile homes shall be anchored to prevent flotation, collapse, or lateral movement in accordance with the Regulations for Mobile Homes and Modular Housing adopted by the Commissioners of Insurance pursuant to NCGS 143-143.15. Additionally, when the chassis elevation is 36 inches or less above the grade within a flood prone area, the chassis shall be supported by reinforced piers or other foundation elements of at least equivalent strength. If the elevation of the chassis exceeds 36 inches in height an engineering certification is required. All enclosures or skirting below the lowest floor shall meet the requirements of Section 12.6.2.B.3.

   b. The no encroachment standard of Section 12.6.2.E.1.

   c. An evacuation plan shall be developed for evacuation of all residents of all new, substantially improved or substantially damaged manufactured home subdivisions or mobile home parks located within flood prone areas. This plan shall be filed with and approved by the Floodplain Administrator and the local emergency management coordinator.

   d. An existing manufactured home subdivision or mobile home park on which a manufactured or mobile home has incurred "substantial damage" as a result of a flood, must be elevated on a permanent foundation such that the lowest floor of the manufactured or mobile home is elevated no lower than two feet above the base flood elevation.

12.7 Stormwater Management

12.7.1 General Provisions

A. **Applicability**.

1. Beginning with and subsequent to its effective date (July 16, 2013), this stormwater ordinance shall be applicable to all development and expansion of development throughout the corporate limits and extraterritorial jurisdiction including, but not limited to, site plan applications, subdivision applications, and grading applications, unless exempt pursuant to this UDO. No development or expansion of development for which a permit is required pursuant to this UDO shall occur except in compliance with the provisions, conditions, and limitations of the permit. All projects shall meet the stormwater system design requirements set forth in 15A NCAC 02H .1003.

2. Table 12.7.1 details the development and redevelopment types that are exempt from the standards of this Section. The exemptions of this Section shall not exempt compliance with building coverage requirements established in Section 2.3.

3. The exemptions granted above, do not apply to illicit discharges and connections. The provisions regarding illicit discharges and connections in Section 12.7.10 shall apply in all districts and for all types of development.

Table 12.7.1 Development/Redevelopment Type Stormwater Exemptions

Development/Redevelopment Type	Size Disturbed	Can Expand Existing Structures on Parcel
Single-Family and Duplex residential and related recreational development and expansion of development [1]	< 1 acre	Yes, if cumulative built-upon area ≤ 50%
Commercial, Industrial, Institutional, Multifamily residential or local government development [1]	< 0.5 acre	No
Commercial, Industrial, Institutional, Multifamily Residential or local government development [1]	< 0.5 acre	Yes, if cumulative built-upon area ≤ 24 %
Development of an individual Single-Family or Duplex Residential lot that is not part of a larger common plan of development or sale	Any	Yes, if cumulative built-upon area ≤ 5%
Existing development or redevelopment with no net increase in built-upon area and/or impervious surface coverage	Any, if proposed improvements include greater or equal stormwater control as previous development	No
Development or redevelopment of State or Federally owned properties	Any	Yes
Activities subject to requirements of the Neuse Agriculture Rule, 15A NCAC 02B .0712	Any	Yes
Development or expansion of development with a vested right per the standards of NCGS §160D-108	Any	Yes
Notes		

[1] Development that disturbs less than the above thresholds are not exempt if such activities are part of a larger common plan of development or sale and the larger common plan exceeds the relevant threshold, even though multiple, separate, or distinct activities take place at different times on different schedules.

B. **Concurrency with Clean Water Act**. Activities that are exempt from the permit requirements of Section 404 of the federal Clean Water Act, as specified in 40 CFR 232 (primarily, ongoing farming and forestry activities), are exempt from the stormwater management provisions of this section.

C. **Concurrency with State Neuse River Basin Standards**. All development and redevelopment in the jurisdiction of this UDO shall comply with the standards of the Neuse River Basin: Nutrient Sensitive Waters Management Strategy: Protection and Maintenance of Riparian Areas with Existing Forest Vegetation, readopted as an effective 1 April 2020 (15A NCAC 2B .0710), or as amended.

1. Note specifically the protection and maintenance of riparian areas (15A NCAC 2B .0233) and the stormwater guidance (15A NCAC 2B .0711). Proposed development not excluded from these standards shall meet either a nitrogen loading rate target of 3.6 pounds/acre/year or "runoff volume match" as detailed therein.

D. **Deed Restriction or Covenants Required**. The approval of a land disturbance permit shall require an enforceable restriction on property usage that runs with the land, such as a recorded deed restriction or protective covenants, to ensure that future development and redevelopment maintains the site consistent with the approved plan.

E. **Calculation Requirements**. All stormwater calculations (runoff, pipe, ditch and inlet sizing, outlet protection, and detention routing (if required)) shall be submitted to the Administrator. Calculations shall consider inlet and outlet control, hydraulic grade line and backwater as applicable. All detention facilities shall be designed to attenuate developed condition peak discharges to the existing conditions for the given storm as described in the Manual of Specifications, Standards and Design.

F. **Review Procedures**. A stormwater review is required for all development and expansion of development unless exempt pursuant to this UDO. The review will be performed during the application process (see Chapter 16) and will only commence upon receipt of a properly submitted permit application. The Stormwater Administrator may impose conditions of approval as needed to ensure compliance with this UDO. The conditions shall be included as part of the approval Applications and shall include the following components:

1. **Existing Conditions / Proposed Site Plans**. Existing conditions and proposed site layout plans, which illustrate at a minimum:

   a. Existing and proposed topography,

   b. Perennial and intermittent streams,

   c. Mapping of predominant soils from soil surveys (if available),

   d. Stream and other buffers and features used in designing buffers and meeting any applicable buffer requirements,

   e. Boundaries of existing predominant vegetation,

   f. Proposed limits of clearing and grading, and

   g. Location of existing and proposed roads, buildings, parking areas and other impervious surfaces with the square footage and percentage of impervious area listed.

2. **Natural Resources Inventory**. A written or graphic inventory of natural resources at the site and surrounding area as it exists prior to the commencement of the project. This description should include a discussion of soil conditions, forest cover, geologic features, topography, wetlands, and native vegetative areas on the site, as well as the location and boundaries of other natural feature protection and conservation areas such as lakes, ponds, floodplains, stream buffers and other setbacks (e.g., drinking water well setbacks, septic setbacks, etc.). Particular attention should be paid to environmentally sensitive features that provide particular opportunities or constraints for development and stormwater management.

3. **Stormwater Management System Concept Plan**. A written or graphic concept plan of the proposed post-development stormwater management system including:

   a. Preliminary selection and location of proposed engineered stormwater controls,

   b. Low-impact design elements,

   c. Location of existing and proposed conveyance systems such as grass channels, swales, and storm drains,

   d. Flow paths,

   e. Preliminary pre- and post-development flows for the site,

   f. Location of floodplain/floodway limits,

   g. Relationship of site to upstream and downstream properties and drainages, and

   h. Preliminary location of any proposed stream channel modifications, such as bridge or culvert crossings.

12.7.2 Nitrogen Loading

A. **Loading Rate Targets**. The project shall meet either a nitrogen stormwater loading rate target of 3.6 pounds per acre per year (lb/ac/yr) or meet "runoff volume match" as defined in 15A NCAC 02H.1002.

B. **Calculation Area**. The project area used for nutrient calculation and stormwater requirements includes the site area less any existing built-upon area. The project density used for determining stormwater requirements is the amount of built-upon area subject to this UDO at project completion divided by the project area.

C. **Accounting for SCMs**. The developer shall determine the nitrogen load and loading rate generated from the project area without engineered stormwater controls and determine the needed nitrogen load reduction to meet nutrient targets by using the approved accounting tool.

D. **Standards are Supplemental**. The nitrogen loading standards in this UDO are supplemental to, not replacements for, stormwater standards otherwise required by federal, state or local law, including without limitation any riparian buffer or water supply watershed requirements applicable to the location of the development. This includes, without limitation, the riparian buffer protection requirements of 15A NCAC 02B .0714 and .0295.

E. **Methods to Meet Loading Requirements**. Projects may reduce export of nitrogen through any combination of engineered stormwater controls treating runoff on the site, in an approved offsite regional engineered stormwater control, or through the acquisition of permanent nutrient offset credits. The developer shall calculate the nitrogen reduction provided by these controls using the Stormwater Nitrogen and Phosphorus (SNAP) accounting tool, as updated.

F. **Nutrient Offset Credits**. Sufficient permanent nutrient offset credits to meet project nutrient reduction needs not provided by engineered stormwater controls serving the project shall be acquired prior to approval of the development plan. The Stormwater Administrator shall issue an approval letter for the development that documents the needed nitrogen credits and where the development is located relative to the Name of Watershed Rules' geographic requirements. All permanent nutrient offset credits permitted by this UDO shall meet the requirements of 15A NCAC 02B .0703.

   1. Permanent nutrient offset credits shall be acquired pursuant to NCGS §143-214.26 and 15A NCAC 02B .0703 prior to the start of construction of the project.

   2. A developer subject to this UDO may acquire permanent nutrient offset credits through one of the following methods:

      a. Through a private nutrient bank,

      b. Through offsite offset provided by the developer and approved by name of local government,

      c. Through payment into the Riparian Buffer Restoration Fund established in NCGS §143-214.21.

3. Excess permanent nutrient offset credits acquired beyond what is required for the development may not be applied to any other development.

12.7.3 General Impervious Surface Standards for All Development

A. **Impervious Threshold and Design Criteria**. Regarding stormwater treatment and other onsite post-construction elements, projects not subject to more stringent standards under one of the following State stormwater rules or a local ordinance shall meet 15A NCAC 02H .1003, which includes specifications for low and high-impervious surface coverage designs, vegetated setbacks, and stormwater outlets for all projects. Such projects shall use a high-impervious treatment threshold of 24 percent or greater built-upon area and a storm depth of one inch for SCM design.

B. **Calculation of Impervious Surface/Built-Upon Area**.

1. Impervious surface/built-upon area calculations shall be made based on the total acreage of built-upon area within a proposed development, divided by the total acreage of the lot area. Total project area shall include total acreage in the tract on which the project is to be developed (refer to 15A NCAC 02H .1003). Impervious surface area shall be as defined within Chapter 17. Pervious materials may be excluded from the calculation of impervious area as provided by the NCDEQ Stormwater Design Manual as amended.

2. An expansion project with existing development, may calculate project imperviousness based on the net increase. The calculated imperviousness shall be the total acreage of built-upon area proposed beyond the existing development, divided by the total acreage of the lot, minus the area of existing development. "Existing development" is any development or built-upon area which existed prior to the effective date of this UDO (July 16, 2013). Note that for development in water supply watersheds (Section 12.8 below) a different date is utilized.

3. Projects under a common plan of development shall be considered as a single project for purposes of imperviousness calculation except that on a case-by-case basis, the Town may allow projects to be considered to have both high and low impervious surface coverage design areas based on one drainage area boundaries, deviations in land use, or construction phasing. Examples are provided below:

4. **Development/Redevelopment of Existing BUA Calculation.**

Table 12.7.3.B.4
BUA Calculations

	Type of Development/Redevelopment		
	New Construction	**Addition of a New and Separate BUA on an Existing BUA Developed Property**	**Redevelopment Including the Modification of Existing BUA or "No Net Increase" in BUA**
Built-Upon Area (%)	= (Proposed BUA Acreage / Total Project Site Area Acreage) x 100	= [BUA Increased by Redevelopment / (Total Parcel Acreage – Total Existing or Adjusted BUA Acreage)] x 100	= [(Total BUA of Redevelopment – Portion within Existing BUA) / (Total Parcel Acreage – Total Existing or Adjusted BUA Acreage)] x 100
Example 1	An undeveloped 50-acre site will be developed to include 12 acres of built-upon area. Calculation of built-upon area for the site would be: % Built-upon Area = (12 acres) / (50 acres) x 100 = 24%.	A 20-acre site has 2 acres of existing BUA constructed prior to the effective UDO date (existing development). Redevelopment in an undeveloped portion of the site is proposed to increase the BUA by 4 acres to a total of 6 acres. The % BUA is calculated dividing the proposed redeveloped BUA acreage by the total project acreage less the existing pervious area as follows: % BUA = [4 acres/(20 acres - 2 acres)] x 100 = 22.2% BUA. Since the proposed 22.2% BUA does not exceed 24% BUA, the project is considered Low Impervious Design. However, the total impervious surface area is increased to 6 acres or a total BUA of 30% which would be considered High-Impervious Design.	A proposed 2.1-acre site has 1 acre of existing BUA that existed prior to the effective UDO date. Redevelopment is proposed for 0.5 acres of the existing 1 acres of BUA with an additional proposed 0.5 acres of BUA. The % BUA is calculated using the proposed additional BUA over the total area minus the unmodified BUA area as follows: % BUA = [(1.0 acre - 0.5 acres)/(2.1 acres – 1.0 acre)] x 100 = 45.5% BUA. Since the proposed 45.5% BUA exceeds 24% BUA, the project is considered High-Impervious Design.
Example 2			A proposed 2.1-acre site has 2 acres of existing BUA that existed prior to the effective UDO date. Redevelopment is proposed for 1.1 acres of the existing 2 acres of BUA with no net increase in impervious area. The % BUA is calculated using the proposed new BUA over the total area minus the unmodified BUA area as follows: % BUA = [(1.1 acre - 1.1 acres)/(2.1 acres – 2 acres)] x 100 = 0% BUA. Since the proposed 0% BUA is does not exceed 24% BUA, the project is considered Low Impervious Design.

5. **Drainage Area Considerations for New Development BAU Calculations**. Per 15A NCAC .0624 (4d), projects may receive split consideration according to natural drainage area boundaries. This split evaluation is not acceptable for all projects and must be approved in advance by the Town. Drainage area determinations should be made based upon the site area(s) within the project boundaries that drain to a common point. A proposed project site could contain multiple drainage areas that need to be evaluated individually. To determine the drainage area(s) of a particular project, locate the point at which a stream or drainage feature leaves the property. Any on-site area that drains to that point is considered a distinct drainage area for BUA calculations. Off-Site drainage should not be included in this calculation. BUA calculations can allow district drainage areas to be combined into one drainage areas for evaluation if the district drainage areas converge together off-site near the project boundary. The determination of "near" the project boundary shall be calculated as 500 feet down stream and to a point where the proposed development is 10 percent of the total watershed.

Table 12.7.3.B.5
Separate Drainage Area Calculation Approach Example

	Drainage Areas	
	Area A	**Area B**
Total Project Site		
Acres	50	50
Drainage Area		
Acres	30	20
Built-upon area	4.1	8
Results		
High-Impervious Development Limit	0.24	0.24
% Built-Upon Area A&B	= (4.1 acres + 8 acres)/(50 acres) x 100=24.2%	
Result	24.2% > 24%, entire project site is considered High Impervious	

12.7.4 Standards for Low Impervious Surface Projects

Low impervious surface projects shall include those developments that have no more than 24 percent built-upon area for all residential and non-residential development. Total project area shall include total acreage in the tract on which the project is to be developed. In addition to complying with the project density development requirements of each water supply watershed in 12.8.1.E, low impervious surface projects shall comply with each of the following standards:

A. **Runoff Transport**. Stormwater runoff shall be transported by vegetated conveyances to the maximum extent practicable.

1. **Vegetated Conveyances**. Stormwater runoff from the project shall be released to vegetated areas as dispersed flow or transported by vegetative conveyances to the maximum extent practicable. Vegetative conveyances shall be maintained in perpetuity to ensure that they function as designed. Vegetative conveyances shall meet the minimum design criteria (MDC) of 15A NCAC 02B.0624 5 (a).

2. **Curb Outlet Systems**. Curb and gutter systems with outlets to convey stormwater to grassed swales or vegetated areas may be used in lieu of vegetated conveyances if designed and constructed to meet the MDC of 15A NCAC 02B.0624 5(b).

3. Treatment swales may be used in lieu of vegetated conveyances and curb outlet systems if designed in accordance with 15A NCAC 02H.1061.

B. **Watercourse Buffers (Minimum Each Side).** See Section 12.9.7.

12.7.5 Standards for High-Impervious Surface Projects

High-impervious surface projects shall include those developments that have more than 24 percent built-upon area for all residential and non-residential development. Total project area shall include total acreage in the tract on which the project is to be developed. In addition to complying with the project density requirements of each water supply watershed in 12.8.1.E., high-impervious surface projects shall comply with each of the following standards:

A. **Runoff Control**. One or more primary SCM (or a combination of primary and secondary) shall be installed to achieve "Runoff Treatment" and "Runoff Attenuation" as defined in Chapter 18. The measures shall control and treat the volume of runoff generated from all built-upon area by one inch of rainfall and attenuate the peak flow leaving the project site for the 25-year, 24-hour so that it is the same or less than the pre-development condition. SCMs shall meet the MDC of 15A NCAC 02H.1050 through .1062 and the be design in accordance with the Stormwater Design Manual published by the NCDEQ and WFD3.

B. **Impervious Surface Maximum**.

1. New development shall not exceed 70 percent impervious surface on a project-by project basis in all districts other than the DT district, where new development is allowed 100 percent impervious surface.

2. For the purpose of calculating the impervious surface area, total project area shall include total acreage in the tract on which the project is to be developed. The Administrator or approving authority may reduce the impervious cover requirement at the time of plan approval based on plans adopted for specific areas of the town or where it is impractical to meet current requirements.

C. **Watercourse Buffers (Minimum Each Side)**. See Section 12.9.7.

12.7.6 Additional Standards for Falls Lake Watershed

A. **Applicability**. The requirements of this section shall apply within the Falls Lake Watershed as described below, and in accordance with 15A NCAC 2B .0277 3 (a-b). The watershed limits are displayed on the Town's Official Zoning Map.

1. Development or redevelopment of single family/duplex residential properties or recreational facilities that disturbs more than a half acre;

2. Development or redevelopment of commercial, industrial, institutional, or multifamily residential land uses that disturb more than 12,000 square feet.

B. **Conflicts and Relation to Neuse Standards and Water Supply Watershed Protection Regulations**.

1. The additional standards included herein, applicable to the Falls Lake Watershed are in addition to, and do not replace or negate any of the other standards in section 12.7. These standards only apply in the Falls Lake Watershed Management Area and do not affect the design or permitting requirements in the remainder of the Town's jurisdiction. In the case of a conflict, the more conservative/restrictive standard shall apply.

2. Similarly, these standards are in addition to the regulations in section 12.8 below. Refer to section 12.8 for additional information applicable to the Falls Lake Water Supply Watershed.

C. **Nitrogen and Phosphorous Loading**.

1. Nitrogen and phosphorus loads contributed by the proposed new development shall not exceed the following unit-area mass loading rates:

   a. 2.2 pounds per acre per year for nitrogen, and

   b. 0.33 pounds per acre per year for phosphorus.

2. Proposed development that would replace or expand structures or improvements that existed as of December 2006, the end of the baseline period, and that would not result in a net increase in built-upon area shall not be required to meet the nutrient loading targets or high-density requirements except to the extent that the

developer shall provide stormwater control at least equal to the previous development.

3. Redevelopment subject to this UDO that would replace or expand existing structures or improvements and would result in a net increase in built-upon area shall have the option of either meeting the loading standards identified in 12.7.6.C.1, above, or meeting a loading rate that achieves the following nutrient loads from the net increase in built-upon area (15A NCAC 02B .0275):

   a. 40 percent reduction for nitrogen, and

   b. 77 percent reduction for phosphorus.

4. The developer shall determine the need for engineered stormwater controls to meet these loading rate targets by using the accounting tool for nutrient loading approved by the Environmental Management Commission for the relevant geography and development type under review. The accounting tool is available through the NC DWQ website at: https://deq.nc.gov/about/divisions/water-resources/planning/nonpoint-source-management/nutrient-offset-information#stormwater-nutrient-accounting-tools.

D. **Runoff Control**. Stormwater systems shall be designed to achieve "Runoff Treatment" (as defined in Chapter 18) To ensure that the integrity and nutrient processing functions of receiving waters and associated riparian buffers are not compromised by erosive flows, stormwater flows from the development shall not contribute to degradation of waters of the State. At a minimum, the development shall not result in a net increase in peak flow leaving the site from pre-development conditions for the one-year, 24-hour storm event. Additional clarification for runoff treatment is provided in 15A NCAC 02B .0277.

E. **Erosion and Sediment Control.** In accordance with Section 12.4.3.J.2, additional requirements apply for erosion and sediment control during construction.

F. **Open Channels**. In accordance with Section 12.4.3.J.2.c, additional requirements apply for open channel design.

G. **Partial Offset of Nutrient Control Requirements**. Development subject to this section shall attain nitrogen and phosphorus loading rate reductions on-site, as determined by the Administrator, that meet the criteria established in Table 12.7.6.G prior to using an offsite offset measure. Offsite measures shall be pre-approved by the Administrator and achieve the full remainder of the required nutrient reduction in accordance with 15A NCAC 2B .0277 (4). Before using an offsite offset option, a development shall implement onsite structural stormwater controls that achieve one of the following levels of reductions:

Table 12.7.6.G Partial Offset of Nutrient Control Requirements

Development/Redevelopment Type	Size Disturbed	Level of Nitrogen and Phosphorus Loading Reduction from the Untreated Conditions
Any Single-Family Detached, and Duplex residential development	0.51 - 1 acre	≥ 30%
All new development, including Single-Family, Multifamily, Commercial, and Industrial development	> 1 acre	≥ 50%
Other development, including Multifamily Residential, Commercial, and Industrial development	12,000 sf - 0.99 acre	≥ 30%
Proposed development that would replace or expand structures or improvements that are existing as of December 2006 and that increase impervious surface within a local government's designated downtown area	Any	≥ 30%

H. **Offset Measures**. Offsite offsetting measures shall achieve at least equivalent reductions in nitrogen and phosphorus loading to the remaining reduction needed onsite to comply with the loading rate targets. A developer may use any measure that complies with the requirements of 15A NCAC 02B .0282 and .0703.

I. **Offset Payments**. An applicant subject to this section may achieve the additional reductions in nitrogen and phosphorus loading required by this section by purchasing permanent nutrient offset credits contingent upon acceptance of payments by that program. All offset measures permitted by this UDO shall meet the requirements of 15A NCAC 02B.0275, .0277,.0282 and .0703 as well as Sections 12.7.6.G and H above.

12.7.7 Standards For Stormwater Control Measures

A. **Evaluation According to NC Stormwater Design Manual.**

1. All stormwater control measures and stormwater treatment practices (also referred to as Stormwater Control Measures, or SCMs) required under this UDO shall be evaluated by the Administrator according to the policies, criteria, and information, including technical specifications and standards and the specific design criteria for each stormwater practice, in the Stormwater Design Manual published by the NCDEQ (hereafter referred to as "SCM Manual"). The Administrator shall determine whether they will be adequate to meet the requirements of this section as amended. Additionally, all SCMs must comply with the MDC requirements listed in 15A NCAC 02H .1050.

2. The SCM Manual includes a list of acceptable stormwater treatment practices and the specific design criteria for each stormwater practice. Stormwater treatment practices that are designed, constructed, and maintained in accordance with the criteria and specifications in the SCM Manual and WFD3 will be presumed to meet the minimum water quality and quantity performance standards of this UDO.

B. **Relationship of SCM Manual to Other Laws and Regulations**. If the specifications or guidelines of the SCM Manual are more restrictive or apply a higher standard than other laws or regulations, that fact shall not prevent application of the specifications or guidelines in the SCM Manual.

C. **Changes to Standards and Specifications**. If the standards, specifications, guidelines, policies, criteria, or other information in the SCM Manual are amended prior to the submittal of a complete application for approval pursuant to this UDO, the new information shall control and shall be utilized in reviewing the application and in implementing this UDO with regard to the application.

D. **Alternative Stormwater Control Measures**. Whenever an applicant proposes to utilize a practice or practices not designed and constructed in accordance with the criteria and specifications in the SCM Manual, the applicant shall have the burden of demonstrating that the practice(s) will satisfy the minimum water quality and quantity performance standards of this UDO. The Administrator may require the applicant to provide such documentation, calculations, and examples as necessary for the Administrator to determine whether such an affirmative showing is made.

E. **Dedications**. The Town, upon Board of Commissioners approval, may accept dedication of any existing or future stormwater management facility for maintenance, provided such facility meets all the requirements of this chapter and the requirements for easements and dedications in Section 4.2.

F. **Performance Guarantees**. Performance guarantees for the installation of required stormwater control structures shall be provided in accordance with Section 14.3.

12.7.8 Operation, Maintenance, and Inspection

A. **Function of SCMs As Intended**. The owner of each structural SCM installed pursuant to this UDO shall maintain and operate it to preserve and continue its function in controlling stormwater quality and quantity at the degree or amount of function for which the structural SCM was designed.

B. **Nuisance Conditions Prohibited**. The owner of each stormwater SCM shall maintain it so as not to create or result in a nuisance condition.

C. **Annual Maintenance Inspection and Report**. The person responsible for maintenance of any structural SCM installed pursuant to this UDO shall submit to the Administrator an inspection report from a qualified inspector. All inspection reports shall be on forms supplied by the Administrator. An original inspection report shall be provided to the Administrator beginning one year from the date of as-built certification and each year thereafter by December 31st. Inspection reports shall contain at a minimum the information requested on the Town's SCM Annual Inspection Report and in the WFD3.

D. **Records of Maintenance Activities.** The owner of each structural SCM shall keep records of inspections, maintenance, and repairs for at least five years and shall submit the same, upon reasonable request, to the Administrator.

E. **Operation and Maintenance Agreement.**

1. Prior to the conveyance or transfer of any lot or building site to be served by a structural SCM pursuant to this UDO, and prior to issuance of any permit for development or redevelopment requiring structural SCM pursuant to this UDO, the applicant or owner of the site must execute an operation and maintenance agreement that shall be binding on all subsequent owners of the site, portions of the site, and lots or parcels served by the structural SCM. Until the transference of 80% of all property, sites, or lots served by the structural SCM, the original owner or applicant shall have primary responsibility for carrying out the provisions of the maintenance agreement.

2. The operation and maintenance agreement shall require the owner or owners to maintain, repair and, if necessary, reconstruct the structural SCM, and shall state the terms, conditions, and schedule of maintenance for the structural SCM. In addition, it shall grant to Town a right of entry in the event that the Administrator has reason to believe it has become necessary to inspect, monitor, maintain, repair, or reconstruct the structural SCM; however, in no case shall the right of entry, of itself, confer an obligation on Town to assume responsibility for the structural SCM.

3. The operation and maintenance agreement must be approved by the Administrator prior to Construction Plan approval, and it shall be referenced on the Final Plat and shall be recorded with the county Register of Deeds upon Final Plat approval. A copy of the recorded maintenance agreement shall be given to the Administrator within 14 days following its recordation.

F. **Special Requirement for Homeowners' and Other Associations**. For all structural SCMs required pursuant to this UDO and that are to be or are owned and maintained by a homeowners' association, property owners' association, or similar entity, the required operation and maintenance agreement shall include all the following provisions:

1. Acknowledgment that the association shall continuously operate and maintain the stormwater control and management facilities according to the specifications laid out in the Operation and Maintenance Agreement,

2. Granting to the Town a right of entry to inspect, monitor, maintain, repair, and reconstruct structural SCMs,

3. A statement that this agreement shall not obligate the Town to maintain or repair any structural SCMs, and the Town shall not be liable to any person for the condition or operation of structural SCMs,

4. A statement that this agreement shall not in any way diminish, limit, or restrict the right of the Town to enforce any of its UDO as authorized by law.

G. **Inspection Program.**

1. Inspections and inspection programs by Town may be conducted or established on any reasonable basis, including but not limited to routine inspections; random inspections; inspections based upon complaints or other notice of possible violations; and joint inspections with other agencies inspecting under environmental or safety laws. Inspections may include, but are not limited to, reviewing maintenance and repair records; sampling discharges, surface water, groundwater, and material or water in SCMs; and evaluating the condition of SCMs.

2. If the owner or occupant of any property refuses to permit such inspection, the Administrator shall proceed to obtain an administrative search warrant pursuant to NCGS §15-27.2 or its successor. No person shall obstruct, hamper, or interfere with the Administrator while carrying out his or her official duties.

H. **Deed Recordation**. The applicable operations and maintenance agreement pertaining to every structural SCM shall be recorded with the county Register of Deeds upon final plat approval. If no subdivision plat is recorded for the site, then the operations and maintenance agreement shall be recorded with the county Register of Deeds so as to appear in the chain of the title of all subsequent purchasers under generally accepted searching principles.

I. **Maintenance Easement**. Every structural SCM and its associated maintenance accesses on privately-owned land installed pursuant to this UDO shall be made accessible for adequate maintenance and repair by a permanent maintenance easement. The easement shall be recorded and its terms shall specify who may make use of the easement and for what purposes. The engineered stormwater control will be shown and labeled within the easement. The easement shall be accessible from the public right-of-way.

J. **Signage**. Where appropriate, in the determination of the Administrator to assure compliance with this UDO, structural SCMs shall be posted with a conspicuous sign stating who is responsible for required maintenance and annual inspection. The sign shall be maintained by the owner so as to remain visible and legible.

12.7.9 Installation of Stormwater Infrastructure

A. **New Subdivisions**. Storm drainage systems in any new subdivision shall be the sole responsibility of the developer and shall be provided and installed by the developer in accordance with requirements of this UDO, the Town's Manual of Specifications, Standards, and Designs, and other applicable standards (including but not limited to: NCDOT Construction Specifications and the North Carolina Stormwater Design Manual.)

B. **Roadside Ditch Pipe**. Once driveway or roadside ditch pipe is bought and installed by a property owner abutting a street, the material remains the property of the property owner. If the pipe is determined by the town to need replacing for any reason, the town will remove the pipe from the ditch and leave it on-site for the property owner to dispose of. The abutting property owner will not be charged for any pipe size increase nor will owner be given any credits.

12.7.10 Illicit Discharges and Connections

A. **Applicability**. Notwithstanding the provisions of Section 12.7.1.A, the following provisions for illicit discharges and connections to the Town stormwater system shall apply to all areas within the jurisdiction of this UDO.

B. **Illicit Discharges**. No person shall cause or allow the discharge, emission, disposal, pouring, or pumping directly or indirectly to any stormwater conveyance, the waters of the State, or upon the land in manner and amount that the substance is likely to reach a stormwater conveyance or the waters of the State, any liquid, solid, gas, or other substance, other than stormwater except as provided for in Section 1, below.

1. **Permitted Discharges**. Non-stormwater discharges associated with the following activities are allowed, provided that they do not significantly impact water quality:

   a. Water line flushing,

   b. Landscape irrigation,

   c. Diverted stream flows,

   d. Rising ground waters,

e. Uncontaminated ground water infiltration (as defined at 40 CFR 35.2005(20),

f. Uncontaminated pumped ground water,

g. Discharges from potable water sources,

h. Foundation drains,

i. Air-conditioning condensation,

j. Irrigation water,

k. Springs,

l. Water from crawl space pumps,

m. Footing drains,

n. Lawn watering,

o. Individual residential car washing,

p. Flows from riparian habitats and wetlands,

q. Dechlorinated swimming pool discharges,

r. Street wash water, and

s. Other non-stormwater discharges for which a valid NPDES discharge permit has been approved and issued by the State of North Carolina.

2. **Prohibited Substances**. Prohibited substances include but are not limited to: oil, anti-freeze, chemicals, animal waste, yard debris, paints, garbage, and litter.

3. **Spills**. Spills or leaks of polluting substances released, discharged to, or having the potential to released or discharged to the stormwater conveyance system, shall be contained, controlled, collected, and properly disposed. All affected areas shall be restored to their preexisting condition. Persons in control of the polluting substances immediately prior to their release or discharge, and persons owning the property on which the substances were released or discharged, shall immediately notify the (title of the individual in charge of managing accidental hazardous material releases in the local jurisdiction, such as a municipal Fire Chief) of the release or discharge, as well as making any required notifications under state and federal law. Notification shall not relieve any person of any expenses related to the restoration, loss, damage, or any other liability which may be incurred as a result of said spill or leak, nor shall such notification relieve any person from other liability which may be imposed by State or other law.

C. **Prohibited Connections.** Connections to a stormwater conveyance or stormwater conveyance system that allow the discharge of non-stormwater, other than the exclusions described in Section 12.7.10.B.1, are unlawful. Prohibited connections include, but are not limited to: floor drains, waste water from washing machines or sanitary sewers, wash water from commercial vehicle washing or steam cleaning, and waste water from septic systems.

D. **Amortization of Prohibited Connections.**

1. Where such connections exist in violation of this section and said connections were made prior to the adoption of this provision or any other UDO prohibiting such connections, the property owner or the person using said connection shall remove the connection within one year following the effective date of this UDO.

2. However, the one-year grace period shall not apply to connections which may result in the discharge of hazardous materials or other discharges which pose an immediate threat to health and safety or are likely to result in immediate injury and harm to real or personal property, natural resources, wildlife, or habitat. The Administrator shall designate the time within which such connections shall be removed. In setting the time limit for compliance, the Administrator shall take into consideration:

   a. The quantity and complexity of the work,

   b. The consequences of delay,

   c. The potential harm to the environment, to the public health, and to public and private property, and

   d. The cost of remedying the damage.

E. **Illicit Discharge Enforcement/Penalties.**

1. Whenever the Town finds that any user of the municipal separate storm sewer system is violating the improper disposal provisions, the Administrator, or their designee, shall serve upon such a person a notice of violation and direct the responsible part to:

   a. Comply immediately,

   b. Comply in accordance with a schedule set forth in the notice, or

   c. Take appropriate remedial or preventative action in the event of a continuing or threating violation. No penalty shall be assessed without following the outlined notice of violation procedures for stormwater in section 17.4.3 of the UDO. Civil penalties also apply as listed in 17.6.

F. **Appeals Process.**

1. Any person who has been served a notice of violation or assessed a civil penalty under this section may request an appeal hearing from the Administrator, or designee, provided such appeal is taken within 30 days of the challenged action as outlined in Chapter 16 of the UDO.

2. Appeals of the decisions of the Administrator shall be heard by the Board of Adjustment in accordance with Section 16.6.2.

12.8 Watershed Protection

12.8.1 Water Supply Watershed Protection Overlay (Falls Lake, Richland Creek and Smith Creek)

A. **Applicability**. The following regulations shall apply to all parcels or portions of parcel that fall within designated watershed areas as noted on the official zoning map. Where the standards of these regulations differ from the base district (e.g., density, maximum impervious surface) these regulations shall take precedence. The Water Supply Watershed Protection Overlay District shall apply to all Special Flood Hazard Areas within the Town and its extraterritorial jurisdiction (ETJ) as noted in section 12.6.1.C.

B. **Authority**. These regulations are adopted pursuant to NCGS §143-214.5, as amended, and the Water Supply Watershed Protection Rules established by the North Carolina Environmental Management Commission.

1. The purpose of the Watershed Protection Overlay Districts is to ensure the protection, availability, and quantity of public water supplies for recreational and aesthetic purposes, to minimize sedimentation of streams, and to protection the environment, health, and general welfare of present and future residents of the Town and the Triangle Region under the authority set forth in Section 1.2 Authority of this UDO and in NCGS §160A-174.

2. In addition, the Legislature of the State of North Carolina has, in Chapter 143, Article 21 of the North Carolina General Statutes, entitled Water and Air Resources, directed local governmental units to adopt regulations designed to promote the public health, safety, and general welfare pursuant to the more specific requirements set forth in 15A NCAC 2B .0100, 15A NCAC 2B .0200, and in the Falls Lake Reservoir Water Supply Nutrient Strategy Rules 15A NCAC 2B .0276, .0277, .0281 and .0282 and Neuse River Basin-Nutrient Sensitive Waters Management Strategy Rules 15A NCAC 02B.0710.

3. Additional authority is pursuant to the Federal Water Pollution Control Action of 1972 (Clean Water Act), federal Phase II Stormwater rules promulgated under it, and NCGS §143-215.1 and S.L.2006-246, the Town is required to obtain a Phase II National Pollutant Discharge Elimination System (NPDES) permit for stormwater management for its municipal separate storm sewer system and to adopt, among other things, requirements and procedures to control the adverse effects of increased post-development stormwater runoff and nonpoint and point source pollution associated with new development and redevelopment.

C. **Exceptions**. All land in the Watershed Protection Overlay Districts shall be developed in accordance with the requirements of this section except for the following:

1. Development existing prior to the date indicated for each water supply watershed in the table below is exempt from these requirements, but expansions to structures, other than Single-Family development, shall be treated as new development and meet the requirements of this section. In these instances, the built-upon area of the existing development is not required to be included in the density or impervious surface area calculations for the expansion (15A NCAC 2B .0104 (d2)).

2. Redevelopment or reconstruction of existing development is allowed if the rebuilding activity does not have a net increase in built-upon area or provides equal or greater storm water control than the previous development as allowed by this section, except that there are no restrictions on Single-Family Residential redevelopment. Note that this exception does not apply if:

   a. Redevelopment converts existing development to allowable use, then it shall not thereafter revert to any prohibited use,

   b. An existing use ceases for a period of at least 12 months, then it shall not be re-established except in accordance with the guidance established herein.

3. Repair or reconstruction of any nonconforming existing built-upon area shall be initiated within 12 months and completed within two years of damage. However, there shall be no increase of built-upon area compared to the condition immediately prior to damage.

4. A deeded Single-Family lot owned by an individual prior to the date indicated for each water supply watershed in the table in Section 12.8.1.C.1, provided it is developed for Single-Family use.

5. A non-conforming lot of record, not contiguous to any other lot owned by the same party, provided it is developed for Single-Family use.

6. Any lot or parcel created as part of a family subdivision on or after the date indicated for each water supply watershed in the table Section 12.8.1.C.1 above, provided it is developed for one Single-Family Detached residence and if it is exempt from the subdivision regulations.

Table 12.8.1.C.1
Exempt Water Supply Watershed Development Existing Prior to Date

Water Supply Watershed	Date
Falls Lake Water Supply Watershed	1-Jul-1993
Richland Creek Water Supply Watershed	1-Apr-2005
Smith Creek Water Supply Watershed	1-Jul-1993
Little River Watershed	25-Nov-2008

D. **Surface Water Classification**. The regulations in Table 12.8.1.D apply according to the Surface Fresh Water Classifications pursuant to 15A NCAC 02B.0101 of the water supply watershed established by NCDEQ.

Table 12.8.1.D
Surface Water Classification

NCDEQ Surface Fresh Water Classification	Regulations		
	Waters Located within Wake Forest & ETJ	Use	General Location
Water Supply IV (WS-IV)	Horse Creek in Falls Lake Watershed, Neuse River, Richland Creek in Upper Neuse River Basin	Sources of water supply for drinking, culinary, or food processing purposes where a WS-I, II or III classification is not feasible	In moderately to highly developed watersheds or Protected Areas
Water Supply II (WS-II) [1]	Wake Forest Reservoir, Little River, Smith Creek Watershed from source to Wake Forest Reservoir dam	Sources of water supply for drinking, culinary, or food processing purposes where a WS-I classification is not feasible	In predominantly undeveloped watersheds

Notes

[1] All WS-II waters are designated as High-Quality Waters (HQW) by supplemental classification

E. **Specific Standards by Water Supply Watershed Area**. The standards established in Table 12.8.1.E shall apply to all mapped watershed areas and shall take precedence over the underlying zoning district standards. In each watershed area standards for Low Density Development Options and High-Density Development Options pursuant to the March 1, 2019 revisions to the Water Supply Watershed Protection Rules 15A NCAC 02B.0624 as outlined in the tables below: Note: The term "impervious area" refers to mainly artificial surfaces which are covered by impenetrable materials like asphalt, brick, stone etc. for "built-upon are" means impervious surface and partially impervious surfaces to the extent that the partially impervious surfaces do not allow water to infiltrate into the subsoil. Built-upon area is referenced in Appendix A-4 of the NCDEQ Stormwater Manual.

Table 12.8.1.E
Specific Standards by Water Supply Watershed Area

	Maximum Allowable Project Density or Minimum Lot Size		
	Low Impervious Development Option		High-Impervious Development Option
Location in Watershed	**Single-Family Residential**	**Non-Residential and All Other Residential**	**All Types**
Falls Lake Water Supply Watershed/Horse Creek & Upper Neuse/Richland Creek (Class WS-IV)			
Critical Area (CA)-Not located within the current Town Limits or ETJ (FL-CA) (RC-CA)	2 dwelling unit per acres or 20,000 sq. ft. lot excluding right-of-way (ROW) or 24% built-upon area	24% built-upon area	24%-50% built-upon area
Protected Area (PA) [1] -within the current Town limits or ETJ – See Overlay Districts (FL-WMA) (RC-WMA)	2 dwelling unit per acre or 20,000 sq. ft. lot excluding right-of-way (ROW) or 24% built-upon area	24% built-upon area	24% built-upon area to 70% built-upon
Smith Creek Water Supply Watershed including Wake Forest Reservoir & Little River (Class WS-II)			
Critical Area from Source to the Wake Forest Reservoir Dam (WS-II, HQW, NSW, CA)(SC-CA)	1 dwelling unit per 2 acres or 80,000 sq. ft. lot, excluding roadway ROW or 6% built-upon area	6% built-upon area	6%-24% built-upon area*
Protected Area WS-II Watershed-Not located within the current Town Limits of ETJ (SC-WMA) (LR-WMA)	1 dwelling unit per 1 acre or 40,000 sq. ft. lot, excluding roadway ROW or 12% built-upon area	12% built-upon area	12% to 30% built-upon area*
Notes			
[1] Protected Area (PA) was previously referred to was Watershed Management Area (WMA)			

F. **Cluster Development.** Cluster development is allowed in all Water Supply Watershed Areas [except WS-I] in accordance with 15A NCAC 02B .0624 (and as summarized below).

1. Minimum lot sizes are not applicable to single-family cluster development projects; however, the total number of lots shall not exceed the number of lots allowed for single-family detached developments. Density or built-upon area for the project shall not exceed that allowed for the critical area, balance of watershed or protected area, whichever applies.

2. All built-upon area shall be designed and located to minimize stormwater runoff impact to the receiving waters and minimize concentrated stormwater flow, maximize the use of sheet flow through vegetated areas, and maximize the flow length through vegetated areas.

3. Areas of concentrated density development shall be located in upland area and away, to the maximum extent practicable, from surface waters and drainageways.

4. The remainder of the tract shall remain in a vegetated or natural state. The title to the open space area shall be conveyed to an incorporated homeowners association for management; to a local government for preservation as a park or open space; or to a conservation organization for preservation in a permanent easement. Where a property association is not incorporated, a maintenance agreement shall be filed with the property deeds.

5. Cluster developments that meet the applicable low density requirements shall transport stormwater runoff by vegetated conveyances to the maximum extent practicable.

G. **Prohibited Uses**. The following uses are prohibited in the Water Supply Watershed Protection Overlay Districts:

1. Processing of mineral products,

2. Lumber mills and saw mills (Allowable silviculture activities shall be subject to the provisions of the Forest Practice Guidelines related to Water Quality),

3. Processing of animal and vegetable products (Allowable agriculture activities shall be subject to the provisions of the Food Security Act of 1985 and the Food, Agriculture, Conservation, and Trade Act of 1990, and regulations of the Soil and Water Conservation Commission),

4. The storage of toxic and hazardous materials unless a spill containment plan is implemented,

5. Landfills and discharging landfills,

6. Sites for land application of sludge/residuals or petroleum contaminated soils,

7. Discharges of sewage, domestic wastewater, industrial wastes, non-process industrial wastes, or other wastes except as permitted by the Division of Environmental Health, N.C. Department of Environment, Health and Natural Resources or successor authority,

8. Any use determined by the Town to be detrimental to the quality of water in water supply watersheds by posing a threat of run-off, leaching or other types of pollution.

H. **Hazardous Materials.**

1. Existing and new industrial development shall maintain an inventory of all hazardous materials used and stored on the premises; and, prepare a spill/failure containment plan and implement safeguards against contamination; and, encourage waste minimization and the appropriate recycling of materials.

2. New industrial development shall incorporate adequately designed, constructed, and maintained spill containment structures if hazardous materials are used, stored, or manufactured on the premises.

I. **Watercourse Buffers (Minimum Each Side)**. See Section 12.9.7

12.8.2 Impervious Surface Averaging

A. **Purpose**. Impervious surface averaging allows development plans for two noncontiguous parcels to be submitted together and treated as a single project in order to meet the requirements of this section. This option is intended to enhance water supply watershed protection and provide greater development flexibility for properties in Water Supply Watershed Protection Overlay Districts by allowing the transfer of impervious area "credits" across parcels.

B. **Limitations**. In order to qualify for an impervious surface averaging allowance:

1. All other requirements of this UDO must be met,
2. Must be in compliance with NCS 143-214.5,
3. The property from which the impervious area credits are taken must not have been used in the calculation of impervious area allowance for an existing or approved development project,
4. No parcel for which a watershed variance has been granted, or would be required, may be included as a part of a parcel pair, and
5. The development proposal for the parcel pair shall conform to the intent and requirements of this section, shall be consistent with the orderly and planned distribution of development throughout the community, and shall assure protection of the public interest.

C. **Location.**

1. Parcels from which development “credits” are taken must be located in a Watershed Protection Overlay District.
2. Parcels to which development “credits” are applied must be located within the same water supply watershed as the paired parcel.

D. **Combined Impervious Surface Area Limit**. The total amount of development (impervious surface area) allowed for the paired parcels taken together cannot exceed the amount of development that would be allowed if the parcels were developed separately.

E. **Overall Density Limit.** Overall density of the paired parcel, averaged-impervious surface development, calculated either by dwelling units per acre or built-upon area shall not exceed the density that would be allowed if the parcels were developed separately.

F. **Runoff Volume**. Peak flow must be controlled on the developing lot or project using the acreage or area of the developing lot or project only, so as to minimize drainage impact on downstream properties.

G. **Stormwater Flow**. Plans shall be designed to:

1. Minimize stormwater runoff impact to the receiving waters by minimizing concentrated stormwater flow,
2. Maximize the use of sheet flow through vegetated areas and vegetated conveyances,
3. Minimize impervious surface areas,
4. Locate development away from surface waters and drainage ways to the maximum extent practicable, and
5. Where concentrated flow is unavoidable, convey stormwater from developed areas by vegetated swales to the maximum extent practicable.

H. **Procedure for Approval.**

1. An impervious surface averaging allowance shall be conveyed as part of a land disturbance permit and site plan review, in accordance with Chapter 16. Only owners of both of the paired parcels may submit an application for a development using an impervious surface averaging allowance.

2. Included with the development permit application shall be a site plan, registered plats/sealed boundary survey for both properties, a description of both properties, appropriate calculations and documentation of the proposed impervious surface averaging agreement, and documentation indicating the intent to convey the undeveloped parcel(s) or portion(s) thereof to the town.

3. If an impervious surface averaging allowance is granted as part of a Development Permit, no change in the development proposal authorized for either parcel shall be made unless the impervious surface averaging allowance is amended and reapproved by the Administrator.

4. Before a Building Permit is issued, the undeveloped parcel(s) or portion(s) thereof shall be deeded (fee simple and at no cost) to the Town, and the Town shall place a permanent conservation easement on the same, as provided under NCGS §121-35, granted to the town, a land conservation organization, or other entity capable of providing for the ongoing maintenance of the undeveloped property. No such agreement shall be accepted without approval of the Town Attorney as to the legal sufficiency of the documents involved.

5. Once ownership of such land is conveyed, a plat showing the properties and conservation easements involved in the development and outlining the impervious surface averaging requirements associated with the parcel pair must be reviewed, approved, and recorded prior to the issuance of the building permit.

I. **Agreements Shall Continue Indefinitely**. Applicants shall agree to bind themselves and their successors in title, individually and collectively, to maintain the pattern of development proposed for so long as the requirements of this section are applicable. Parties to enforcement of such agreement shall include the town.

12.9 Watercourse (Riparian) Buffer Areas

12.9.1 General Provisions

A. **Purpose.** It is the intent of this section to seek to maximize retention of the natural beauty of vegetation along creeks, streams, rivers, and lakes, and other bodies of water while simultaneously providing for the retention of surface water run-off from areas adjacent to these natural and/or built features, resulting in a net reduction of pollutants that enter these water features. Natural resource buffers are intended to provide an area where stormwater flows in a diffuse manner so that the stormwater runoff does not become channeled an infiltration of the stormwater and filtering of pollutants can occur. The location and allowable activity within watercourse buffer areas shall be in accordance with 15A NCAC 02B .0714 and the guidance and restrictions provided within this section (12.9) of the Town's UDO.

B. **Applicability.** No new clearing, grading, or development shall occur, nor shall any new building permits be issued in violation of this section. No exemptions shall be permitted from this section except for any use, development, or activity that has been specifically exempted by any applicable state law from local regulations of the type of establishment by this UDO. Any activities impacting Zone 1 and/or 2 of riparian buffers in the Falls Lake Watershed or in the Neuse River Basin, including activities conducted under the authority of the State, the United States, multiple jurisdictions, or locate units of government, silviculture and/or agricultural activities shall be administered by the NC Department of Environmental Quality (NCDEQ) in accordance with 15A NCAC 02B.0622 dated March 1, 2019.

12.9.2 Establishment of Buffers

A. **Applicability**.

1. All protected drainageways and surface waters shall have riparian buffers directly adjacent to such surface waters of the width specified in Section 12.9.2 below. When multiple watercourse buffer standards apply, the more stringent standard shall dictate.

2. Riparian buffers shall be delineated and recorded on final subdivision plats or at the time of development of the property.

3. Riparian buffers shall be maintained for all perennial and intermittent streams, lakes and ponds in accordance with Section 12.9.1.B of this UDO.

B. **Location of Buffers**.

1. For the purposes of this section, intermittent streams, perennial streams, upper watershed drainageways that drain more than five acres, water supply impoundments, lakes, ponds, and wetlands shall be deemed to be present if the feature is indicated on the most recent versions of the following:

   a. United States Geological Survey 1:24,000 scale (7.5-minute quadrangle) topographic maps,

   b. A soil survey map prepared by the Natural Resources Conservation Service of the United States Department of Agriculture,

   c. The North Carolina Division of Water Resources (NCDWR) identification methodology for determination of perennial and intermittent streams, or

   d. Other site-specific evidence.

2. Wetlands may also be identified, as either a bordering or isolated wetland, using the 1987 Corp of Engineers Federal Unified Method, most recent version of the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountains and Piedmont, and/or supplemental Corps-approved methodology.

3. In order to determine the amount of land drained by an upper watershed drainageway, USGS or Wake County topographic maps may be used or the USGS StreamStats web application may be used.

4. Where obvious conflicts between actual field conditions and USGS and county soil survey maps exist, appeals may be made to the Administrator or, for appeals related to Neuse River Basin buffer requirements, the North Carolina Department of Environmental Quality.

5. All surface waters shall be determined by a qualified person that has successfully completed the NCDEQ's Surface Water Identification Training Certification course, its successor, or other equivalent training curriculum approved by the NCDEQ using the most recent version of Identification Method for the Origins of Intermittent and Perennial Streams and verified by qualified Town Staff and/or the NCDEQ.

C. **Buffer Measurement**.

1. The width of each required riparian buffer shall be measured perpendicular to the banks of the protected drainageway, beginning at the most landward limit of the top of bank or the rooted herbaceous vegetation. When no watercourse banks exist, the centerline of the watercourse shall be used. For ponds, lakes and reservoirs subject to this Rule, Zone 1 shall begin at the normal water level and extend landward, measured horizontally on a line perpendicular to the surface water.

2. All building and structure setbacks shall be a minimum of 10 feet, agricultural activities shall be a setback minimum of 10 feet and all vehicular roads and parking lots shall be set back a minimum of five feet from the edge of a riparian buffer.

D. **Exceptions.** Surface waters that appear on the maps used to determine surface water classifications shall not be subject to the requirements of Section 12.9.1 if a site evaluation reveals any of the following cases:

1. Man-made or isolated ponds and lakes that are not part of a natural drainage way or hydraulically connected or have significant nexus to waters of the United States (WOTUS) as determined by the US Army Corps of Engineers (USACE) that is classified in accordance with 15A NCAC 2B .0100, including ponds and lakes created for animal watering, irrigation, or other agricultural uses. A pond or lake is included as a part of a natural drainage way when its source is an intermittent or perennial stream or when it has a direct discharge point to an intermittent or perennial stream as determined by a qualified person in accordance with 12.9.2.B.5 of this UDO. Details can be found in the Town's Manual of Specifications, Standards and Design (WFD3) and Public Policy Manual,

2. Ephemeral streams or streams that only flow briefly during and following a period of rainfall in the immediate area,

3. The absence on the ground of a corresponding intermittent or perennial stream, lake, reservoir, or pond,

4. Ditches or man-made water conveyances, other than modified natural streams.

E. **Diffuse Flow Requirements**. All stormwater runoff from new man-made stormwater control facilities, including new ditches or canals, which flow into a watercourse natural resource buffer or into riparian surface water buffer shall be diffused flow so as not to concentrate stormwater or form gullies. Diffuse flow of surface runoff shall be maintained in watercourse buffers by dispersing concentrated flow and reestablishing vegetation. The requirement for diffuse flow is provided for in 15A NCAC 02B .0714.(9). Options for achieving diffuse flow are presented in the NCDEQ-DWR Memo dated March 7, 2014 "Options for Meeting Diffuse Flow Provisions of Stormwater and Riparian Buffer Programs", including Diffuse Flow Options 1 to 4.

1. Concentrated runoff from new ditches or manmade conveyances shall be converted to diffuse flow before the runoff enters the riparian buffer.

2. Periodic corrective action to restore diffuse flow shall be take in necessary, to impede the formation of erosion gullies.

3. As set out in this UDO, Zones of the Riparian Buffer and 12.9.7.A respectively, no new stormwater conveyances are allowed through the buffers except for those which may be authorized under 12.9.7.A of this UDO.

12.9.3 Neuse River Basin Buffers

When located in the Neuse River Basin, the state regulations for water management as outlined in 15 A NCAC 2B.0233 and detailed in Table 12.9.3 shall apply for all development.

12.9.4 Water Supply Watershed Buffers

When located in the Falls Lake, Richland Creek, or Smith Creek Water Supply Watersheds (both the Critical Area & Protected Area), the watercourse buffer standards established in Table 12.9.4 shall apply for all development projects. Table 12.9.4 lists the required vegetated setbacks as buffers where they exceed the Neuse buffer requirements in 15A NCAC 02B .0714.

Table 12.9.3
Neuse River Basin Buffers

Surface Water Features	Zone 1 Buffer Minimum	Zone 2 Buffer Minimum	Additional Standards
All intermittent streams, perennial streams, water supply impoundments, lakes, and ponds	30 feet	20 feet	All buildings and structures shall be set back a minimum 10 ft from the edge of any required buffer. See Section 12.9.7

Table 12.9.4
Water Supply Watershed Buffers

Surface Water Features	Zone 1 Buffer Minimum	Zone 2 Buffer Minimum	Zone 3 Buffer Minimum	Additional Standards
Intermittent Stream	30 feet	20 feet	Not Required	All buildings and structures shall be set back a minimum 10 ft from the edge of any required buffer. See Sections 12.8 and 12.9.7
Perennial Waterbodies and Streams (w/ low density development option)	30 feet	20 feet	Not Required	
Perennial Waterbodies and Streams (w/ high-density development option)	30 feet	20 feet	50 feet	
Watershed Drainageway (drains more than 5 acres but less than 25 acres)	30 feet	Not Required	Not Required	
Water Supply Impoundments (Drains 25 acres or more)	30 feet	20 feet	50 feet	
WS-II Waterbodies and Streams (Smith Creek), WS-IV Waterbodies and Streams (Falls Lake & Richland Creek)	30 feet	20 feet	50 feet	

12.9.5 General Buffers

The watercourse buffer standards established in Table 12.9.5 shall apply for all development projects. Table 12.9.5 applies to upper watershed drainageways and other features above which are not covered by 15A NCAC 02B .0714 or .0624.

Table 12.9.5
General Buffers

Surface Water Features	Zone 1 Buffer Minimum	Zone 2 Buffer Minimum	Additional Standards
Intermittent and Perennial Streams (not subject to Neuse River Buffer or Falls Lake Riparian Buffer Rules)	30 feet	20 feet	See Section 12.9.7
Wetlands (included as part of buffer if within 50 feet of surface waters)	10 feet	Not Required	

12.9.6 Delineation of Buffer Zones

A. **Zone 1**. Zone 1 begins at the landward limit of the top of bank for surface water features and extends landward a distance of 30 feet on all sides of the water body. For all other water bodies, Zone 1 begins at the top of bank or mean high water line. Zone 1 is an undisturbed area of vegetation.

B. **Zone 2**. Zone 2 begins at the outer edge of Zone 1 and extends landward a distance of 20 feet on all sides of the water body. Zone 2 consists of a stable vegetated area that may be graded and revegetated provided that the health of vegetation in Zone 1 is not compromised.

C. **Water Supply Watershed Buffer Zones**. The width of Zone 1 shall be measured horizontally from the normal pool elevation of impounded structures, from the top of bank of each side of streams or river, and from the mean high waterline of tidal water, perpendicular to the shoreline. Zone 2 begins at the outer edge of Zone 1 and Zone 3 the outer edge of Zone 2. The Zone 3 buffers may be cleared or graded but shall be replanted and maintained in grass or other vegetation.

12.9.5 - 12.9.6

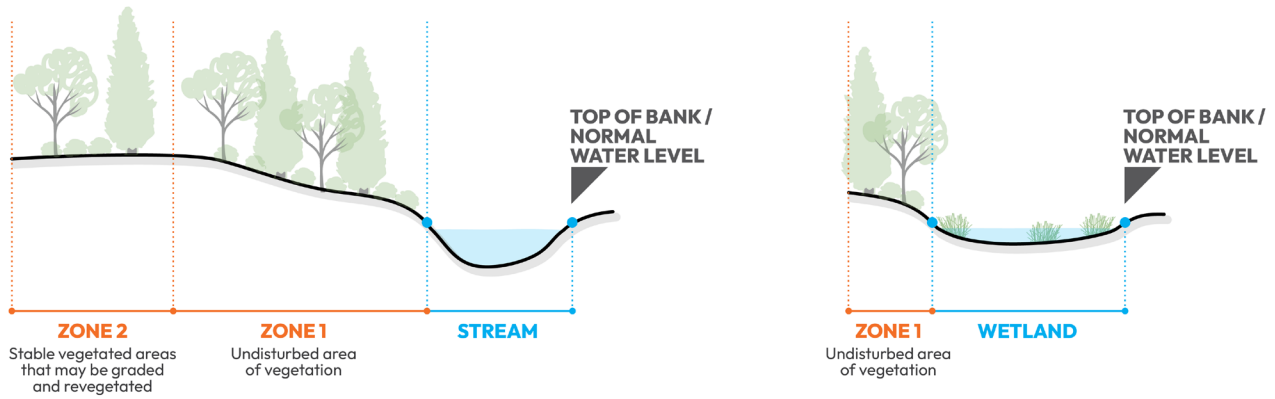


Figure 1: Buffer Standards

12.9.7 Watercourse Buffer Standards

A. **Permitted Uses in Watercourse Buffers**.

1. All required buffers shall remain natural and undisturbed except as allowed by Neuse River Basin: Nutrient Sensitive Waters Management Strategy: Protection and Maintenance of Existing Riparian Buffers Rules, as amended, or as may be necessary to accommodate any of the uses (Allowable and Allowable with Mitigation) permitted in 15A NCAC 02B .0714 and Water Supply Watershed Protection Program: Nonpoint Source and Stormwater Pollution Control 15A NCAC 02B.0624. Some watercourses may require both water supply watershed and Neuse Riparian buffers.

2. In event of conflict with other applicable regulations, the more restrictive regulation governs. These activities shall minimize built-upon surface area, direct run-off away from the surface waters and maximize the utilization of SCMs.

3. New drainage conveyances shall be designed with a primary SCM to treat the drainage area to the conveyance and comply with an approved stormwater management plan.

4. Existing conveyances may be allowable, provided the addition of new flow does not result in the need to alter the conveyance. Additional information on allowable uses and the authorization process is included in 15A NCAC 02B .0714 (9).

B. **Additional Neuse River Buffer Standards**.

1. The Neuse River regulations of this section and 15A NCAC 02B .0714shall not apply to riparian buffer areas with existing and ongoing uses established as of July 27, 1997. A use shall be considered converted, and no longer excluded from this rule if:

   a. Impervious surface is added to the riparian buffer in locations where it did not exist previously,

   b. An agricultural operation within the riparian buffer is converted to a non-agricultural use,

   c. A lawn within the riparian buffer ceases to be maintained.

2. Existing forest vegetation of any width present after this date must be protected and maintained in accordance with the Neuse River regulations of this section and 15 A NCAC 2B.0233.

C. **Buffers to be Shown on Plans**. All required watercourse buffers shall be shown on all approved site plans and subdivision plans. Where designated by the Administrator, the placement of signs may be required to relay the buffer protection requirements to the public.

D. **Exclusion of Watercourse Buffer Areas from Lots**. Single-Family lots created through a site and/or subdivision plan shall not be platted into a watercourse buffer area except through the approval of the Administrator when all of the following conditions are met:

1. The subdivision is limited in size and has no homeowners association,

2. There is no other reason for the formation of a homeowners association (e.g., covenant, other common areas, engineered stormwater control structures),

3. The buffer is placed in a permanent conservation or other legal instrument dedicated to the town or other approved conservation or governmental entity (required documents must be provided prior to recordation of the plat for the impacted area).

13 SIGN STANDARDS

13.1 General Provisions

13.1.1 Purpose

The purpose of this Chapter is to provide a balanced and fair legal framework for design, construction, and placement of signs that preserves the right of free speech and expression and that:

A. Promotes the safety of persons and property by ensuring that signs do not create a hazard by:

1. Collapsing, catching fire, or otherwise decaying,
2. Confusing or distracting motorists, or
3. Impairing drivers' ability to see pedestrians, bicyclists, obstacles, or other vehicles, or to read traffic signs.

B. Promotes the efficient communication of messages, and ensures that persons exposed to signs:

1. Are not overwhelmed by the number of messages presented, and
2. Are able to exercise freedom of choice to observe or ignore said messages according to the observer's purpose.

C. Protects the public welfare and enhances the appearance and economic value of the landscape by protecting scenic views and avoiding sign clutter that can compromise the character, quality, and prosperity of neighborhoods and commercial corridors,

D. Ensures that signs are compatible with their surroundings, and prevents the display of signs that are a nuisance to occupants of adjacent and contiguous property due to brightness, reflectivity, bulk, or height,

E. Promotes the use of signs that are, of appropriate scale, and integrated with the built environment, in order to meet the objectives related to the quality and character of development set forth in the Comprehensive Plan,

CONTENT

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13.2 Permitted and Allowed Sign Types by District
13.3 General Sign Standards
13.4 Permanent Building Sign Standards
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13.6 Temporary Attached Sign Standards
13.7 Temporary Freestanding Sign Standards
13.8 Prohibited Signs and Content
13.9 Temporary Sign Plan
13.10 Abandonment

F. Enhances property values and business opportunities,

G. Assists in wayfinding, and

H. Provides fair and consistent permitting and enforcement.

13.1.2 Applicability

The standards of this Chapter shall apply to all signs with the exception of exempt signs as detailed below.

A. **Exempt Signs**. The following sign types shall be exempt from other regulations of this Chapter provided all standards of this Section are met.

1. Incidental Signs.

a. Incidental signs shall be permanent signs only made of durable and weather resistant materials. Plywood, cardboard, and plastic are prohibited materials.

b. Incidental signs shall not be visible from and/or oriented towards a public right-of-way or adjacent residential property.

c. Incidental signs shall have a maximum area of four-square feet.

d. Freestanding incidental signs shall have a maximum height of eight feet.

e. Incidental signs attached to a building or structure shall not extend beyond the building or structure.

f. Incidental signs shall not be illuminated.

g. Incidental signs shall meet the location and encroachment standards of Section 13.3.1.B.

2. **Political Signs**. Political signs meeting the standards of NCGS §136.32.

3. **Bona-Fide Farm Signs.** Bona-fide farm signs meeting the standards of NCGS §136.32.

4. **Fence wraps**. Fence wraps displaying signage when affixed to perimeter construction fencing until the certificate of occupancy is issued for the final portion of any construction or other final government approval is issued if a certificate of occupancy is not required at that site per NCGS §160D.

2. **Regulatory and Warning Signs**.

a. Signs required by local, state, and federal governmental agencies with the express purpose of helping right-of-way and greenway users navigate safely.

b. Signs required for or specifically authorized for a public purpose by any law, statute, or ordinance.

c. Signs erected to warn of danger or hazardous conditions such as signs erected by public utility companies or construction companies.

d. Signs that display information pertinent to the safety or legal responsibilities of the general public regarding a particular piece of property if located on the premises to which the information pertains.

e. The allowed number and size of regulatory and warning signs shall be as reasonably necessary to convey the intended message.

f. All regulatory and warning signs shall meet applicable MUTCD and WFD3 provisions.

3. **Address Identification**. Signs bearing property numbers in a manner compliant with Fire Code and US Postal Service standards.

4. **Holiday Decorations**. Temporary decorations or displays are customarily and commonly associated with any cultural or religious holiday or celebration. Holiday decorations shall be securely mounted to a building, structure, or the ground and shall not exceed the height of the principal building(s) on the development site. Holiday decorations shall not be displayed more than 60 days before or 15 days after the holiday.

5. **Maintenance.** Cleaning, electrical repair, resurfacing, and other maintenance of a sign shall not require a permit.

6. **Sign Copy.** Replacing or changing sign copy, manually or electronically, if no changes are made to a sign base and structure that meets all the requirements of this Chapter, shall not require a sign permit. Should a sign be attached directly to a wall or structure other than a sign base, a permit shall be required for all changes.

13.2 Permitted and Allowed Sign Types by District

13.2.1 Permsitted and Allowed Sign Types by District

The following key is to be used in the interpretation of Table 13.2.1.

A. **Sign Types Requiring a Permit**. Sign types marked as "●" in the table shall be permitted subject to all applicable regulations of this Unified Development Ordinance (UDO) and only after the issuance of a Zoning Compliance Permit in accordance with Section 16.5.14.

B. **Sign Types Not Requiring a Permit**. Sign types marked as "○" in the tables shall be allowed subject to all applicable regulations of this UDO and do not require a Zoning Compliance Permit.

C. **Prohibited Sign Types**. A blank space in the table indicates that a sign type is prohibited in the respective district.

D. **Interpretation of Similar Sign Type**. If a proposed sign is not listed in the table, the Administrator shall determine if the sign is substantially similar to a sign listed in the table, per the criteria established in Section 16.5.8.C. If it is, the standards applied to the proposed sign shall be the standards applicable to the similar sign. If not, the sign shall be regarded as prohibited.

Table 13.2.1
Permitted and Allowed Sign Types by District

Sign Types	Reference	GR	NCR	MUR	TSR	DT	NB	CB	IND	CI	OS
Permanent Building Signs											
Awning Sign [1]	Section 13.4.1	●	●	●	●	●	●	●	●	●	●
Blade Sign [1]	Section 13.4.2			●	●	●	●	●			
Bracket-Mounted Sign [1]	Section 13.4.3	●	●	●	●	●	●	●		●	
Canopy Sign [1]	Section 13.4.4	●	●	●	●	●	●	●	●	●	●
Plaque Sign [2]	Section 13.4.5	●	●	●	●	●	●	●	●	●	●
Wall Sign [1]	Section 13.4.6	●	●	●	●	●	●	●	●	●	●
Window Sign, Permanent [1]	Section 13.4.7	○	○	○	○	○	○	○	○	○	○

Sign Types	Reference	GR	NCR	MUR	TSR	DT	NB	CB	IND	CI	OS
Permanent Ground Signs											
Drive-Through Sign	Section 13.5.1						●	●			
Internal Circulation Safety Sign	Section 13.5.2	●	●	●	●	●	●	●	●	●	●
Interpretive Marker Sign [2]	Section 13.5.3	●	●	●	●	●	●	●	●	●	●
Monument Sign [1] [3]	Section 13.5.4	●	●	●	●		●	●	●	●	●
Post Sign, Permanent [1]	Section 13.5.5	●	●	●	●		●				
Residential Entry Sign	Section 13.5.6	●	●	●	●						
Temporary Attached Signs											
Applied Vinyl Sidewalk Sign [1]	Section 13.6.1	●	●	●	●	●	●	●	●	●	●
Athletic Field Fence Sign	Section 13.6.2							○		○	○
Light Pole Banner Sign	Section 13.6.3	●	●	●	●	●	●	●	●	●	●
Scoreboard Sign	Section 13.6.4							○		○	○
Sock Sign [1]	Section 13.6.5	○	○	○	○	○	○	○	○	○	○
Wall Mounted Banner Sign [4]	Section 13.6.6					●	●	●	●	●	●
Window Sign, Temporary	Section 13.6.7					○	○	○	○	○	○
Temporary Freestanding Signs											
Ground Mounted Banner Sign [4]	Section 13.7.1	●	●	●		●		●	●	●	●
Post Sign, Temporary	Section 13.7.2	○	○	○	○						
Post and Panel Sign [4]	Section 13.7.3							●	●	●	●
Sidewalk Sign [5]	Section 13.7.4	○	○	○	○	○	○	○	○	○	○
Yard Sign [6]	Section 13.7.5	●	●	●	●	●	●	●	●	●	●

Notes

[1] Sign type shall be permitted for Multifamily and Nonresidential developments only.

[2] Sign type shall be allowed only when installed in conjunction with a government sponsored program for historic preservation or public art.

[3] Sign type is prohibited in the LH-O and MV-O districts.

[4] A Zoning Compliance Permit shall not be required if the property on which the sign shall be placed is actively marketed for sale or lease. All requirements of Section 13.3 shall be met.

[5] Sign type shall be allowed for multifamily, nonresidential, and temporary real estate sales uses only.

[6] Sign type shall not require a permit if placed on a parcel developed with a Dwelling-Cottage Home Court; Dwelling-Duplex; Dwelling-Single Family Detached; Dwelling-Townhome; and/or Dwelling-Triplex/Quadplex use.

13.3 General Sign Standards

13.3.1 All Signs

A. **Sign Measurement**.

1. **Sign Face Area**

a. **General**. The area of a sign is determined by the total area of the smallest quadrilateral enclosing the copy. A maximum of two quadrilaterals may be utilized in sign area calculation.

b. **Double-Faced Sign**. The calculation for a double-faced sign shall be the area of one face only where the sign faces are parallel or the interior angle formed by the faces is 60 degrees or less.

c. **Multi-Faced Sign**. The areas of all faces of a multi-faced sign shall be added together to compute the area of the sign. Sign area of multi-faced signs is calculated based on the principle that all sign elements that can be seen at one time or from one vantage point should be considered in measuring that side of the sign.

2. **Height**.

a. Sign height shall be measured by the vertical distance between the highest point on the sign structure to the average elevation of the ground upon which the sign supports or façade of the building upon which the sign is affixed are placed, including the height of the sign base, when a sign base is a structural part of the sign, except when:

i. The sign supports rest upon a berm or other area elevated above the surrounding ground, or

ii. The sign supports rest upon a ditch or other area lower than the surrounding ground.

b. In the cases detailed in Section 13.3.1.A.2.a.i-ii above, the elevation of the centerline of the adjacent roadway or other elevation from which the sign will be primarily viewed shall be considered the ground level.

B. **Location and Encroachment**.

1. All signs regulated by this Chapter shall be located:

a. Outside of any easements, except for sign easements,

b. Outside the public right-of-way, except where encroachments are specifically permitted by the provisions of this Chapter,

c. Outside required sight triangles, and

d. So as to not obstruct building or site ingress, egress, or public safety features, such as fire hydrants and standpipes.

2. All signs shall be located outside of required landscape or buffer areas in accordance with Chapter 7, with the exception of residential entry signs and monument signs which may be located in a required street buffer.

3. A sign easement is required when a sign serving a common development site is located on a property not owned by the homeowner's/property owner's association. The easement shall allow use and access for maintenance of the sign.

4. If an encroachment into the public right-of-way is proposed, an encroachment agreement must be granted by the Town or NCDOT prior to permit approval; or placing a sign if a permit is not required.

C. **Illumination**.

1. **Location and Design of Light Source**.

   a. Whenever an external artificial light source is used for a sign, such source shall be located, shielded, and directed so as not to be directly visible from any public right-of-way or residential property.

   b. No receptacle or device housing a permitted light source for a sign shall protrude more than 24 inches from the face of the sign or building to which it is attached except if such light source is ground mounted, locked in place, and cannot be redirected.

2. **Installation and Level of Illumination**.

   a. In no event shall the illumination of any sign, resulting from any internal or external artificial light source, exceed the standards established in Chapter 10.

   b. All artificial illumination shall be designed, located, shielded, and directed as to prevent the casting of glare or direct light upon public right-of-way or residential property.

   c. All artificial illumination shall be certified by the manufacturer as compliant with the standards of a. and b. above.

3. **Prohibited Lighting**.

   a. No flashing or intermittent illumination shall be permitted on any sign or structure.

   b. No internal illumination shall occur within a National Register Historic District.

   c. No raceways shall be installed on any sign or structure.

D. **Installation and Structural**.

1. All attached and building signs and their support frames shall be mounted and attached to building in a secure manner, shall not include wire or turnbuckle guy, and shall be maintained in good repair for safety and appearance. The installation of backer panels with returns is permitted on permanent sign types.

2. All permanent signs shall be able to resist normal loads from positive and negative wind pressure, snow, and other conditions as required by the Building Code.

3. The Administrator reserves the right to require sign load calculations and attachment design from a licensed structural engineer, and to require the same engineer to certify the sign installation in writing.

4. All signs attached to buildings shall be installed so as to not cover any architectural features, including but not be limited to, a pediment, cornice, belt course, pier, windows, pilaster, roof, decorative stone or inlay, kick plate/bulkhead, raised or colored brick pattern, and corbel of the building to which it is affixed.

13.3.2 Electronic Display

Monument and drive-through signs in the CB and CI Districts (as permitted) and drive-through signs in the NB District (as permitted) may incorporate an electronic display component in accordance with the following:

A. **Allowed Sign Area**.

1. A maximum of one-third of a monument sign may be an electronic sign.

2. The entirety of a drive-through sign may be an electronic display.

3. The area of the sign devoted to an electronic display shall be part of, not in addition to, the maximum sign area allowed.

B. **Display Standards**.

1. The sign will display a static message or image only and not have movement, or the appearance of movement, during the static display period.
2. The transition to change from one message or image to another shall be instant and not dissolve, fade, scroll, travel, or have similar transitions.
3. The message shall not change more frequently than once every minute.
4. Electronic displays must be equipped with a mechanism that will stop the messaging or freeze the image in one position when a malfunction in electronic programming occurs.

C. **Illumination**.

1. Electronic displays shall be equipped with a sensor or other device that automatically determines the ambient illumination and is programmed to automatically dim according to light conditions.
2. Illumination of electronic displays shall meet the standards established in Chapter 10.

13.4 Permanent Building Sign Standards

13.4.1 Awning Signs

Awning signs shall meet the standards of Table 13.4.1.

Table 13.4.1
Awning Sign Standards

Standards	GR	NCR	MUR	TSR	DT	NB	CB	IND	CI	OS
Maximum Area [1]	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%
Maximum Number of Signs	One per awning structure									
Maximum Number of Sign Faces	1	1	1	1	1	1	1	1	1	1
Illumination	Prohibited									
Location	Awning signs shall be allowed on awnings that extend over ground floor main entrances only.									
Other Provisions	Any common entrance or single tenant building or tenant space façade of a multi-tenant building may display either an awning sign, blade sign, bracket-mounted sign, or wall sign.									

Notes

[1] Percent of the total area of the valance or face of the awning to which the sign is to be affixed.

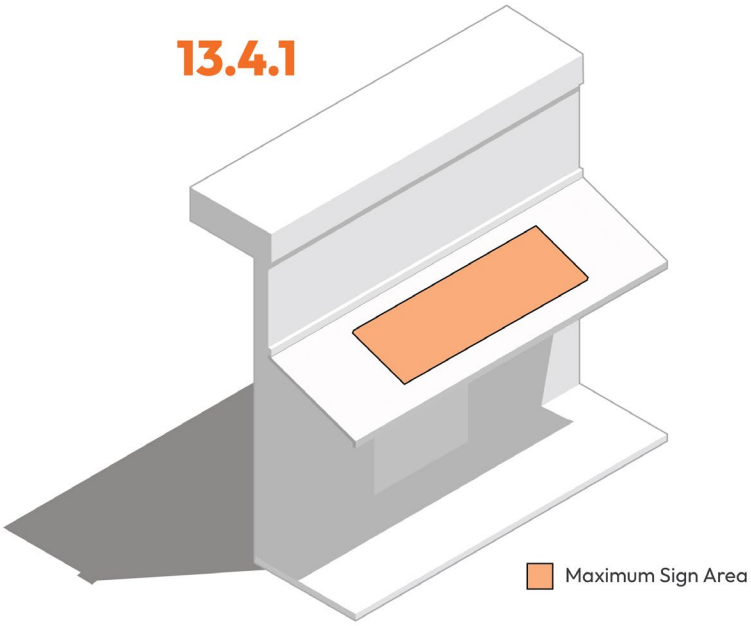

Figure 1: Awning Signs

13.4.2 Blade Signs

Blade signs shall meet the standards of Table 13.4.2.

Table 13.4.2: Blade Sign Standards

Standards	GR	NCR	MUR	TSR	DT	NB	CB	IND	CI	OS
Single Tenant and Common Entrance Building Blade Signs										
Maximum Area – Building Mounted Blade Sign [1]				25 sq ft	25 sq ft	25 sq ft	25 sq ft			
Maximum Area – Canopy Mounted Blade Sign				4 sq ft	4 sq ft	4 sq ft	4 sq ft			
Multi-Tenant Building Blade Signs										
Maximum Area – Building Mounted Blade Sign [1]				4 sq ft	4 sq ft	4 sq ft	4 sq ft			
All Blade Signs										
Maximum Projection	Four feet from the building or canopy to which it is attached.									
Minimum Vertical Clearance	10 feet above the established grade immediately below.									
Maximum Number of Signs	One blade sign per single tenant building or common entrance building and one per tenant in a multi-tenant building.									
Maximum Number of Sign Faces				2	2	2	2			
Illumination	Internal									
Location	May be mounted on a building, awning, or canopy located on the ground floor of a building only.									
	Shall not extend above the roofline of the building to which it is attached.									
Other Provisions	The property owner shall be required to obtain a right-of-way encroachment agreement from the Town or NCDOT prior to the construction of a blade sign over a public right-of-way.									
	A building may have either an awning sign, blade sign, bracket-mounted sign, or wall sign but is prohibited from having two or more of the aforementioned sign types on the same façade.									
Notes										
[1] 10 additional square feet of sign area is permitted per each building story above two stories.										

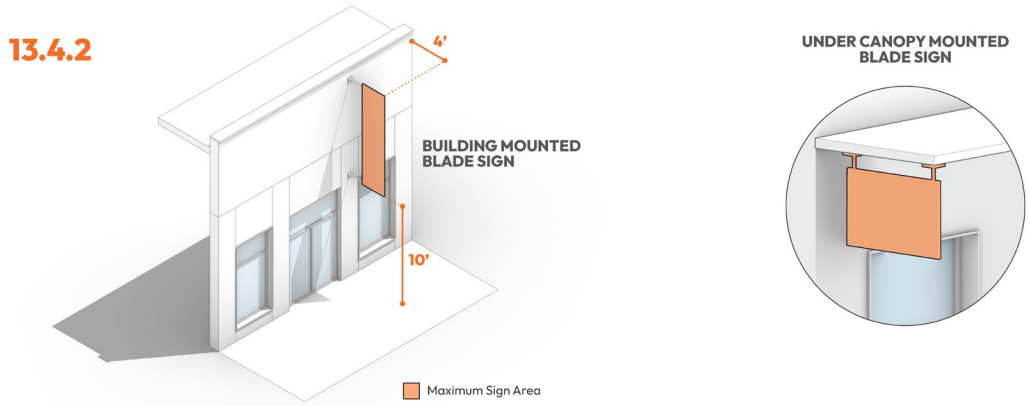

Figure 2: Blade Signs

13.4.3 Bracket-Mounted Signs

Bracket-mounted signs shall meet the standards of Table 13.4.3.

Table 13.4.3
Bracket-Mounted Sign Standards

Standards	GR	NCR	MUR	TSR	DT	NB	CB	IND	CI	OS
Maximum Area	6 sq ft	6 sq ft	6 sq ft	6 sq ft	6 sq ft	6 sq ft	6 sq ft	6 sq ft	6 sq ft	6 sq ft
Maximum Projection	Four feet from the building or canopy to which it is attached.									
Minimum Vertical Clearance	10 feet above the established grade immediately below.									
Maximum Number of Signs	One per single tenant building, common entrance building, or tenant of a multi-tenant building.									
Maximum Number of Sign Faces	2	2	2	2	2	2	2	2	2	2
Illumination	Internal									
Location	May be mounted on a building, awning, or canopy located on the ground floor of a building only.									
	Shall not extend above the ground floor of the building to which it is attached.									
Other Provisions	The property owner shall be required to obtain a right-of-way encroachment agreement from the Town prior to the construction of a bracket-mounted sign over a public right-of-way.									
	A building may have either an awning sign, blade sign, bracket-mounted sign, or wall sign but is prohibited from having two or more of the aforementioned sign types on the same façade.									

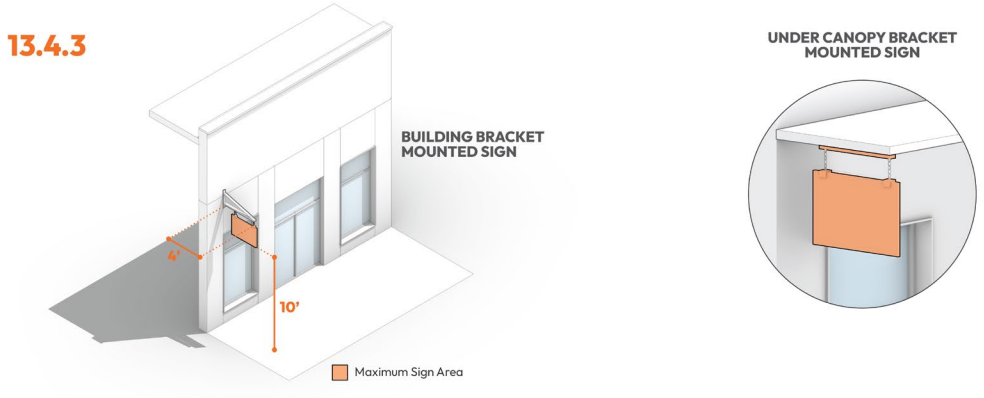

Figure 3: Bracket Mounted Signs

13.4.4 Canopy Signs

Canopy signs shall meet the standards of Table 13.4.4.

Table 13.4.4: Canopy Sign Standards

Standards	GR	NCR	MUR	TSR	DT	NB	CB	IND	CI	OS
Maximum Area [1]	1 sq ft	1 sq ft	1 sq ft	1.5 sq ft	1.5 sq ft	1.5 sq ft	1.5 sq ft	1.5 sq ft	1.5 sq ft	1 sq ft
Maximum Height [2]	1 ft	1 ft	1 ft	1.5 ft	1.5 ft	1.5 ft	2 ft	2 ft	2 ft	1 ft
Maximum Number of Signs	One per tenant									
Maximum Number of Sign Faces	1	1	1	1	1	1	1	1	1	1
Sign Copy	Channel letters individually affixed to the canopy structure.									
Illumination	Internal, external, or lit with allowed building façade lighting per Section 10.4.3.									
Location	For building canopies, signs shall be allowed on ground floor canopies only.									
	For building canopies, signs shall be mounted on top of or on the front of the canopy structure.									
	If on freestanding canopies shall be mounted on the front of the canopy structure and shall not extend above or below the canopy structure.									
Other Provisions	A building may have either an awning sign, blade sign, bracket-mounted sign, or wall sign but is prohibited from having two or more of the aforementioned sign types on any façade.									

Notes

[1] Per linear foot of the length of the portion of the canopy upon which that sign shall be applied.

[2] Of sign copy

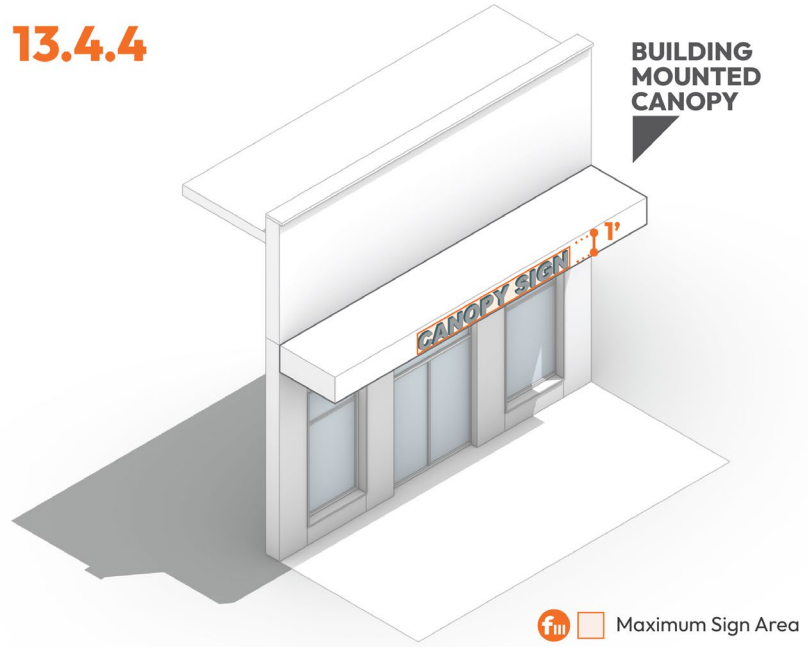

Figure 4: Building Canopy – Front Mounted Sign

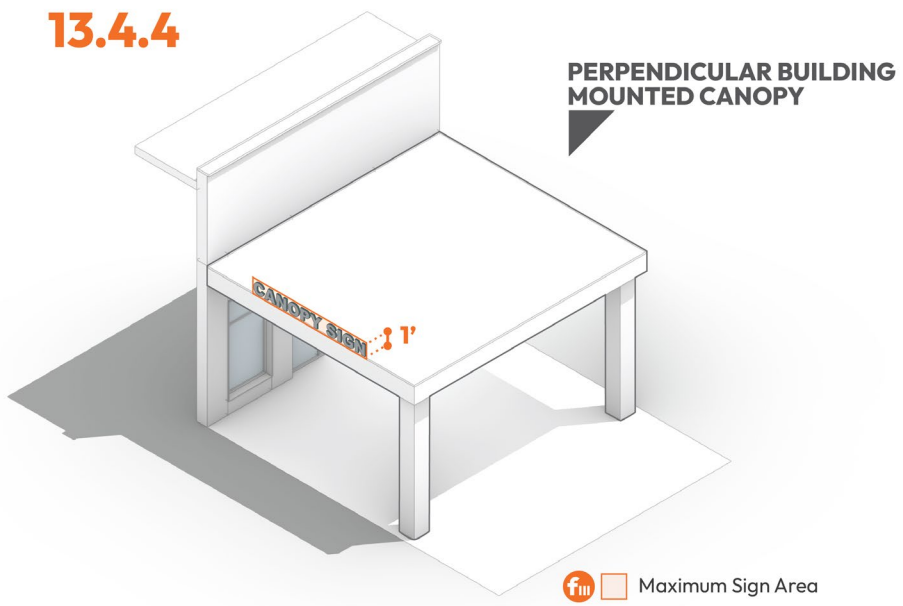

Figure 5: Building Canopy – Top Mounted Sign

Figure 4: Freestanding Canopy Sign

13.4.5 Plaque Signs

Plaque signs shall meet the standards of Table 13.4.5.

Table 13.4.5
Plaque Sign Standards

Standards	GR	NCR	MUR	TSR	DT	NB	CB	IND	CI	OS
Maximum Area	2 sq ft	2 sq ft	2 sq ft	2 sq ft	2 sq ft	2 sq ft	2 sq ft	2 sq ft	2 sq ft	2 sq ft
Maximum Number of Signs	One per historic building or structure entrance.									
Maximum Number of Sign Faces	1	1	1	1	1	1	1	1	1	1
Illumination	Prohibited									
Location	Signs shall be located on the ground floor of ground a building or structure.									
Other Provisions	Shall only be allowed as a part of a government sponsored historic preservation or public art program.									

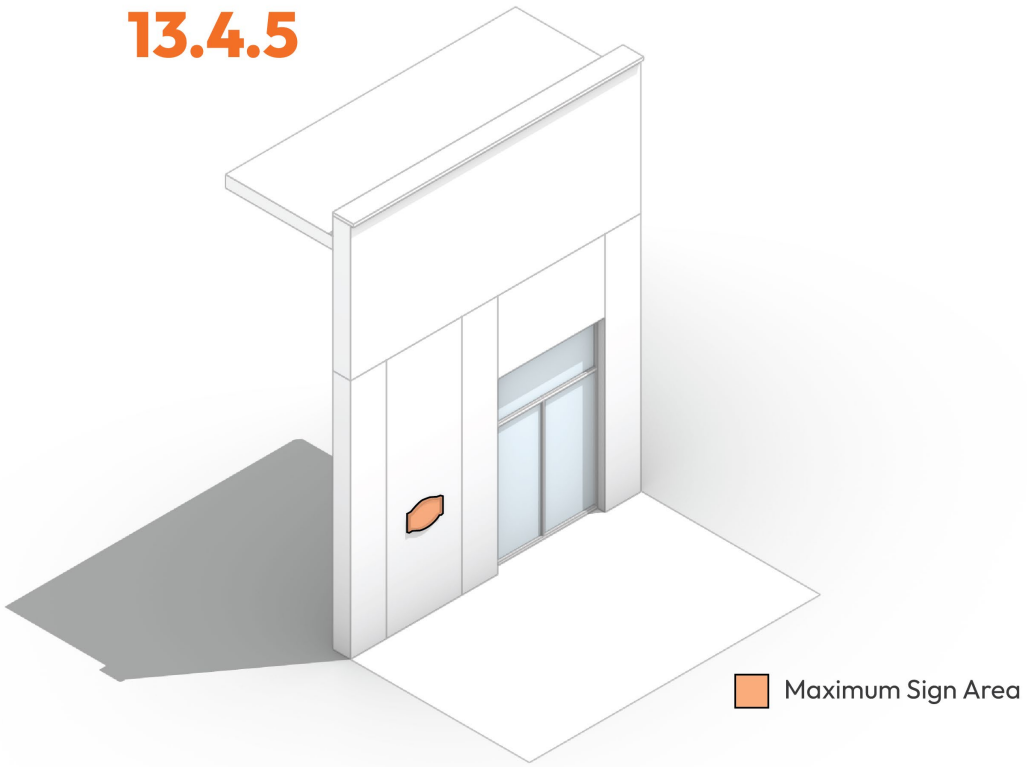

Figure 6: Plaque Signs

13.4.6 Wall Signs

Wall signs shall meet the standards of Table 13.4.6.

Table 13.4.6
Wall Sign Standards

Standards	GR	NCR	MUR	TSR	DT	NB	CB	IND	CI	OS
Single Tenant or Common Entrance Buildings										
Maximum Number of Signs [1]	2	2	2	2	2	3	3	2	2	2
Multi-Tenant Buildings										
Maximum Number of Signs [2][3]	1	1	1	1	1	1	1	1	1	1
All Wall Signs										
Maximum Area [4]	1 sq ft	1 sq ft	1 sq ft	1 sq ft	1 sq ft	1 sq ft	1.5 sq ft	1.5 sq ft	1.5 sq ft	1 sq ft
Maximum Projection	Shall not extend more than 12 inches from the face of the wall to which sign is attached.									
	Shall not extend beyond the end of the wall to which sign is attached.									
Maximum Number of Sign Faces	1	1	1	1	1	1	1	1	1	1
Sign Copy	100 percent may be individually affixed letters, applied vinyl, or printed, etched, or otherwise incorporated directly on the sign's backing plate, or may be painted directly on the building façade.									
	20 percent or less may be a box/cabinet sign if the remaining 80 percent of the sign is comprised of individually affixed letters.									
Illumination	Internal or external, except that in the LH-O and MV-O districts only external illumination is permitted.									
Location	For a building without a parapet wall, shall not extend above the roof deck.									
	For a building with a parapet wall, may extend two feet above the roof deck of a building, provided no portion of the sign extends above the parapet.									
	For a building with a pitched roof, shall not extend above the lower eave line of a building.									
	Shall not be affixed to HVAC screening, elevator overrun, or other structures protruding from the roof of the principal building.									

Notes

[1] For multi-tenant buildings with shared, common entrances the allowed number of signs shall be that of single tenant buildings. Ground floor tenant spaces with dedicated entrances are allowed the number of signs of multi-tenant buildings.

[2] Per tenant space

[3] End units in a multi-tenant building may have up to two wall signs, provided one is on the primary façade and the other is on a secondary façade.

[4] Per linear foot of building or tenant space wall on which sign will be affixed.

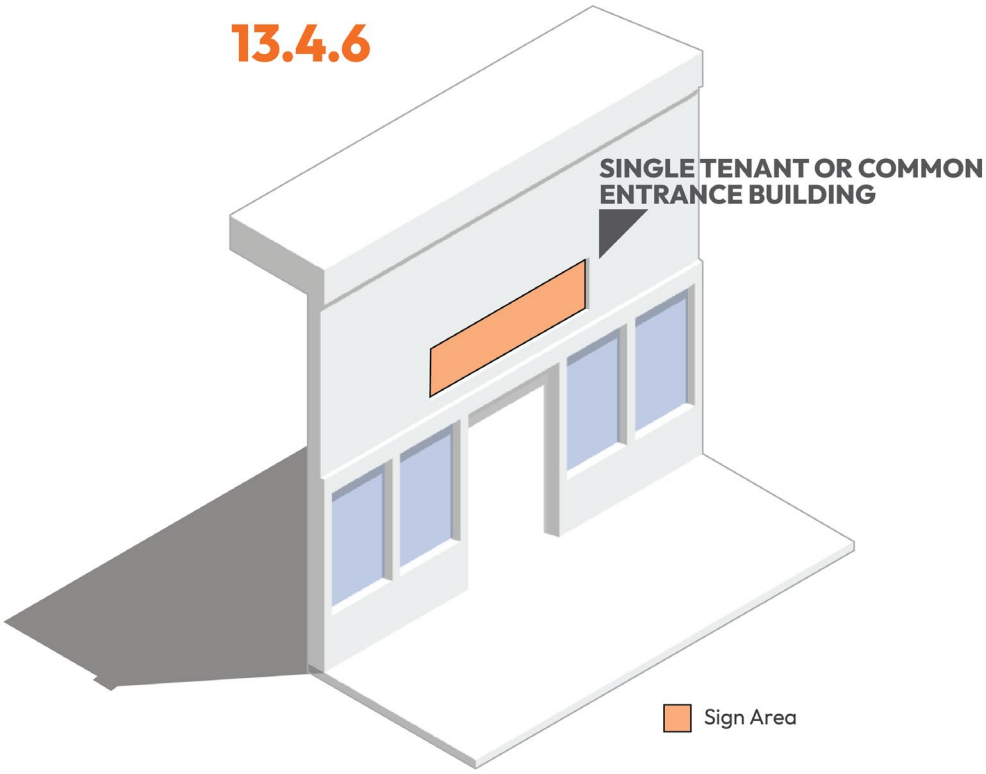

Figure 7: Wall Signs – Single Tenant and Common Entrance Buildings

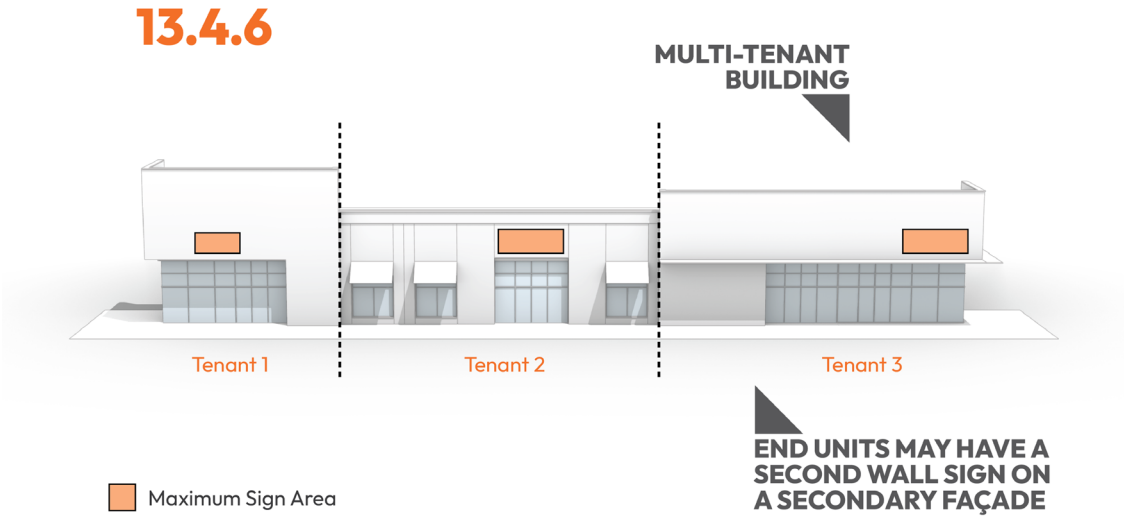

Figure 8: Wall Signs – Multitenant Building

13.4.7 Permanent Window Signs

Permanent window signs shall meet the standards of Table 13.4.7.

Table 13.4.7
Permanent Window Sign Standards

Standards	GR	NCR	MUR	TSR	DT	NB	CB	IND	CI	OS
Maximum Area [1]	15%	15%	15%	15%	20%	20%	25%	25%	25%	25%
Sign Copy	Applied vinyl only									
Illumination	Prohibited									
Location	Shall be located on ground floor windows or doors only.									

Notes

[1] Of the square footage of the individual window on which the sign shall be located.

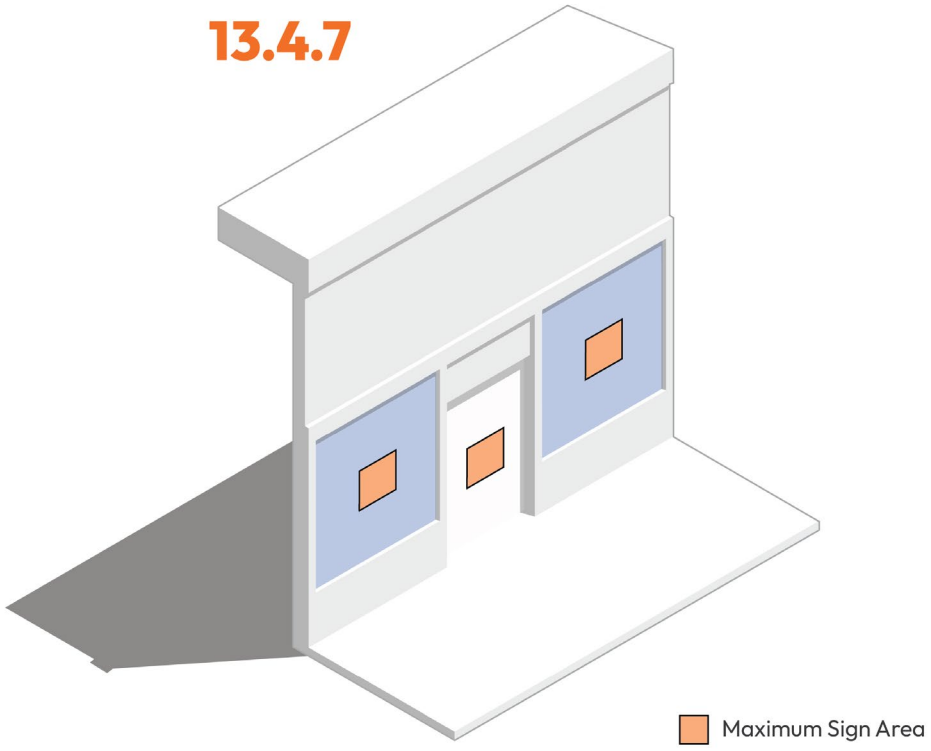

Figure 9: Permanent Window Signs

13.5 Permanent Ground Sign Standards

13.5.1 Drive-Through Signs

Drive-through signs shall meet the standards of Table 13.5.1.

Table 13.5.1
Drive-Through Sign Standards

Standards	GR	NCR	MUR	TSR	DT	NB	CB	IND	CI	OS
Maximum Area per Sign						40 sq ft	40 sq ft			
Maximum Height						6 ft	6 ft			
Maximum Number of Signs per Drive Thru Lane						2	2			
Maximum Number of Sign Faces						1	1			
Sign Copy	May be comprised 100 percent of an electronic display, meeting all requirements of Section 13.3.2 with the exception of subsection B.3.									
Illumination	Shall meet the illumination standards of Section 13.3.1.C.									
	Internal									
	Shall be illuminated during business hours only.									
Location	Within five feet of the drive-through lane(s) and shall meet all other location standards established in Section 13.3.1.B.									
	If facing a roadway or residential use shall be fully screened from view utilizing a fence, wall, vegetation, or a combination there of.									

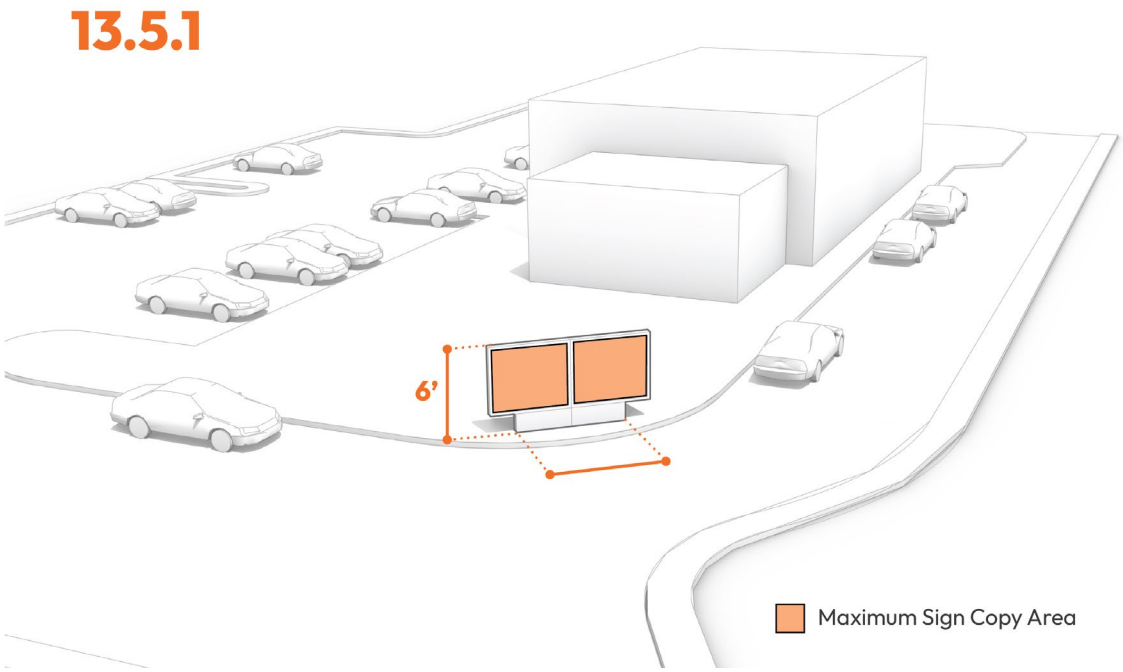

Figure 10: Drive-Through Signs

13.5.2 Internal Circulation Safety Sign

Internal circulation safety signs shall meet the standards of Table 13.5.2.

Table 13.5.2
Internal Circulation Safety Sign Standards

Standards	GR	NCR	MUR	TSR	DT	NB	CB	IND	CI	OS
Maximum Area	4 sq ft	4 sq ft	4 sq ft	4 sq ft	4 sq ft	4 sq ft	4 sq ft	4 sq ft	4 sq ft	4 sq ft
Maximum Height	3 ft	3 ft	3 ft	3 ft	3 ft	3 ft	3 ft	3 ft	3 ft	3 ft
Maximum Number of Signs	Two per site entrance/exit and two per drive aisle, internal access drive, or drive-through lane intersection.									
Maximum Number of Sign Faces	2	2	2	2	2	2	2	2	2	2
Illumination	Prohibited									
Location	Shall meet all location and encroachment standards in accordance with Section 13.3.1.B.									

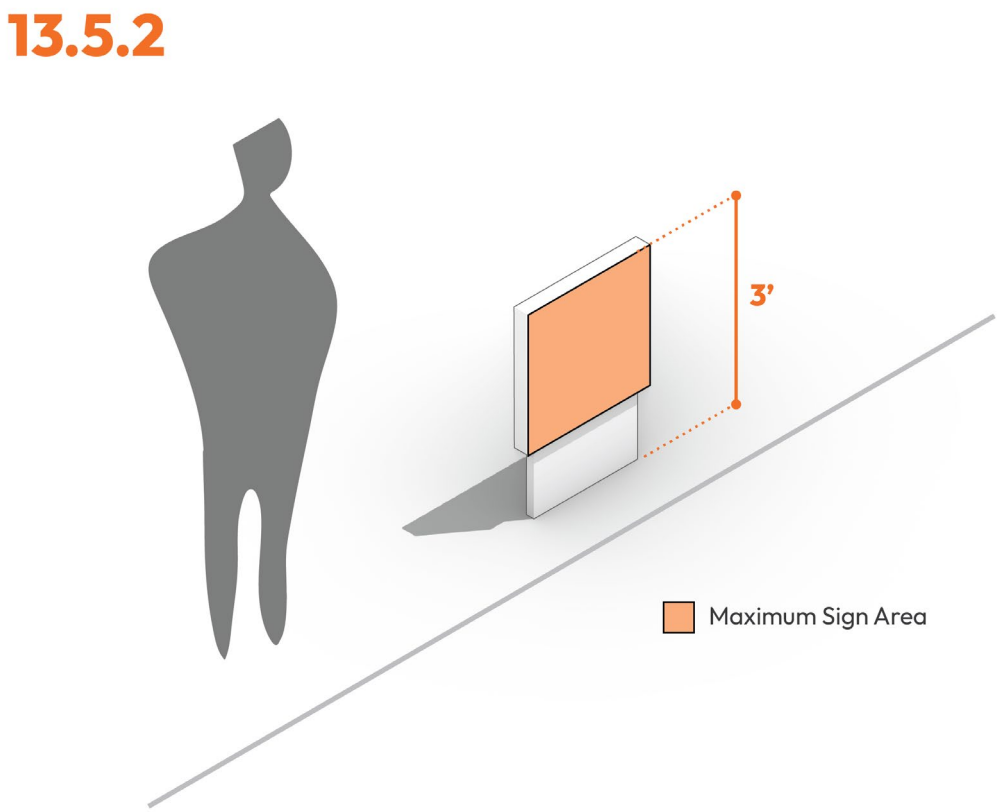

Figure 11: Internal Circulation Safety Sign

13.5.3 Interpretive Marker Signs

Interpretive marker signs shall meet the standards of Table 13.5.3.

Table 13.5.3
Interpretive Marker Sign Standards

Standards	GR	NCR	MUR	TSR	DT	NB	CB	IND	CI	OS
Maximum Area	9 sq ft	9 sq ft	9 sq ft	9 sq ft	9 sq ft	9 sq ft	9 sq ft	9 sq ft	9 sq ft	9 sq ft
Maximum Height	8 ft	8 ft	8 ft	8 ft	8 ft	8 ft	8 ft	8 ft	8 ft	8 ft
Maximum Number of Signs	Three per lot									
Maximum Number of Sign Faces	2	2	2	2	2	2	2	2	2	2
Illumination	Prohibited									
Location	Shall meet all location and encroachment standards in accordance with Section 13.3.1.B.									
	May be located in a right-of-way subject to an encroachment agreement approval from the Town Manager or their designee.									
Other Provisions	Only allowed as a part of a government sponsored historic preservation program, in a public park, or in a conservation/open space easement.									

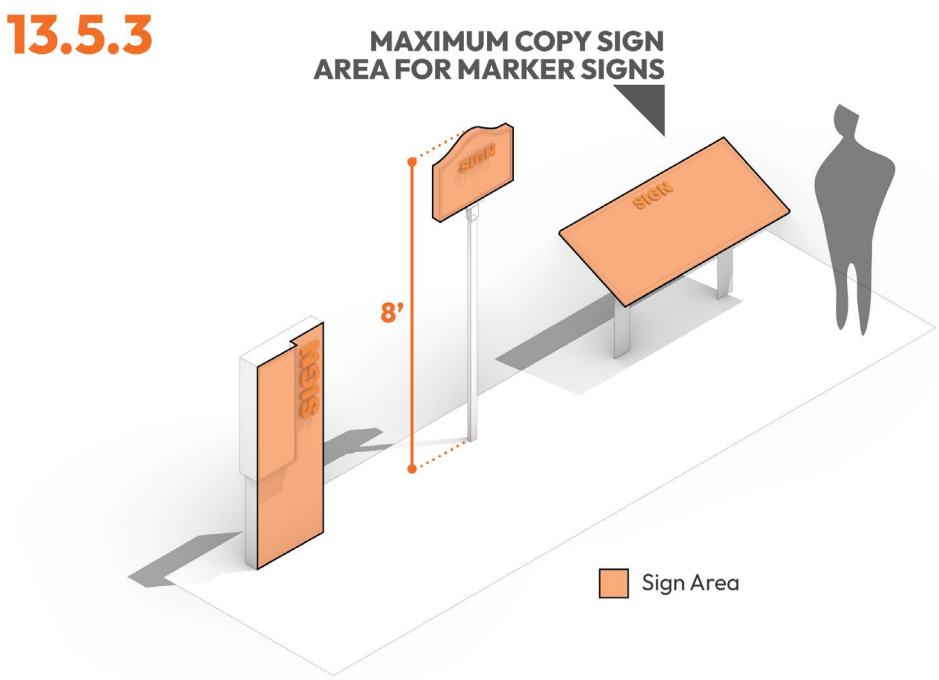

Figure 12: Interpretive Marker Signs

13.5.4 Monument Signs

Monument signs shall meet the standards of Table 13.5.4.

Table 13.5.4
Monument Sign Standards

Standards	GR	NCR	MUR	TSR	DT	NB	CB	IND	CI	OS
Single-Tenant and Common Entrance Buildings Monument Signs										
Maximum Area [1]	25 sq ft	25 sq ft	25 sq ft	25 sq ft		40 sq ft	50 sq ft	50 sq ft	50 sq ft	50 sq ft
Maximum Height [2]	6 ft	6 ft	6 ft	6 ft		6 ft	8 ft	8 ft	9 ft	9 ft
Sign Base Minimum Height	2 ft	2 ft	2 ft	2 ft		2 ft	3 ft	3 ft	2 ft	2 ft
Multi-Tenant Buildings										
Maximum Area [1]	25 sq ft	25 sq ft	25 sq ft	25 sq ft		40 sq ft	75 sq ft	75 sq ft	75 sq ft	50 sq ft
Maximum Height	6 ft	6 ft	6 ft	6 ft		6 ft	12 ft	12 ft	12 ft	9 ft
Sign Base Minimum Height	2 ft	2 ft	2 ft	2 ft		2 ft	4 ft	4 ft	2 ft	2 ft
All Monument Signs										
Maximum Number of Signs per Development Site Frontage Adjacent to Street ROW	1	1	1	1		1	1	1	1	1
Maximum Number of Sign Faces	2	2	2	2		2	2	2	2	2
Sign Copy	Shall be individually affixed letters, applied vinyl, or be printed, etched, or otherwise incorporated directly on the sign's backing plate.									
Sign Base Design	Sign base, including all structural components, shall extend from the sign face on at least one side, a minimum of 10 percent and a maximum of 40 percent of the width of the sign face.									
	Sign face may extend a maximum of 40 percent off of the sign base.									
	Sign base shall be constructed from a Category 1 exterior building cladding material (Section 5.2.1.B.1.). If a Category 1 building material is utilized on the primary building the sign base shall be constructed of the same material.									
Illumination	Internal or external									
Landscape	A landscape area at the sign base shall be required to be planted and maintained by the property owner.									
	The minimum size of the landscape area shall be equal to half of the square footage of the sign area of the associated sign.									
	Landscape areas shall be planted with shrubs, native grasses, annuals, and/or perennials at a rate of one planting per three square feet of required landscape area.									
Location	Shall meet all location and encroachment standards in accordance with Section 13.3.1.B.									
Other	A development site shall be permitted either a post sign or a monument sign per development site frontage adjacent to a street right-of-way.									
Notes										
[1] If adjacent to a minor thoroughfare, major thoroughfare, or boulevard, in accordance with the CTP, maximum sign area may be increased by 10 square feet.										
[2] If adjacent to a minor thoroughfare, major thoroughfare, or boulevard, in accordance with the CTP, maximum sign height may be increased by two feet.										

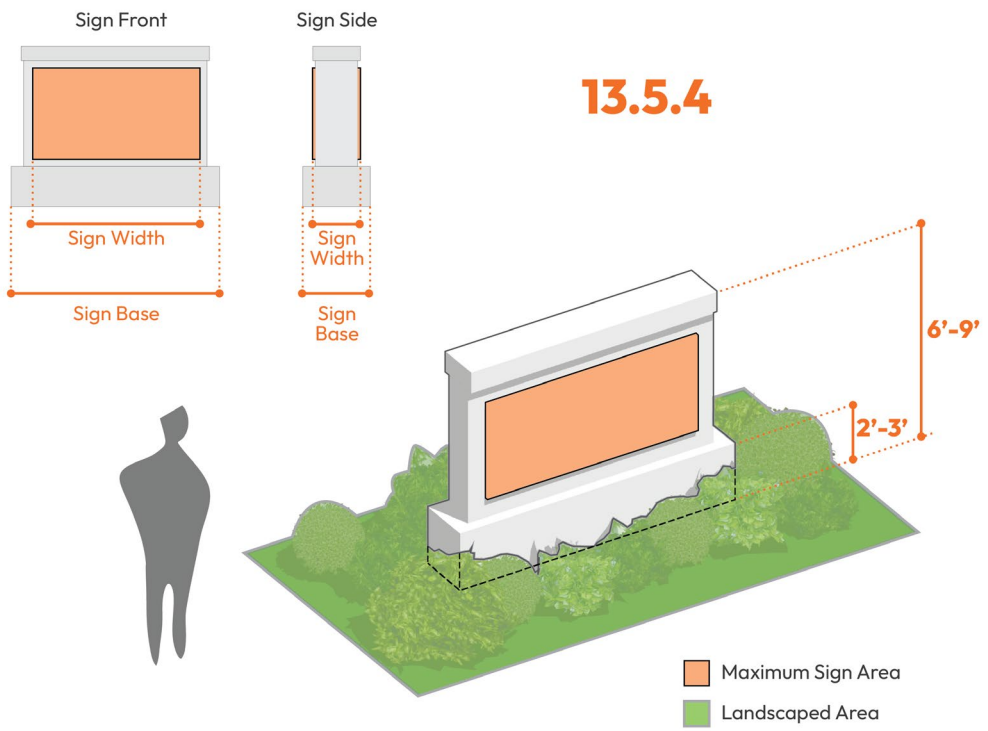

Figure 13: Monument Sign – Single Tenant and Common Entrance Building

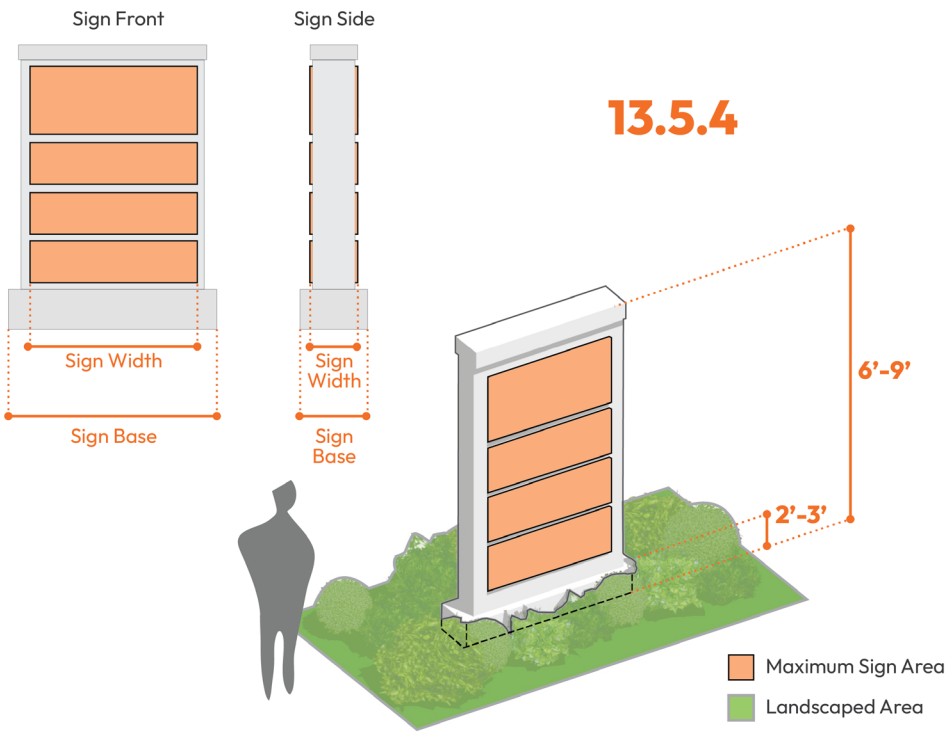

Figure 14: Monument Sign – Multitenant Building

13.5.5 Post Signs

Post signs shall meet the standards of Table 13.5.5

Table 13.5.5
Permanent Post Sign Standards

Standards	GR	NCR	MUR	TSR	DT	NB	CB	IND	CI	OS
Maximum Area	6 sq ft	6 sq ft	6 sq ft	6 sq ft		6 sq ft				
Maximum Height	6 ft	6 ft	6 ft	6 ft		6 ft				
Maximum Number of Signs per Development Site Frontage Adjacent to Street ROW	1	1	1	1		1				
Maximum Number of Sign Faces	2	2	2	2		2				
Sign Copy	Shall be channel letters or be printed, etched, or otherwise directly incorporated on the sign backing.									
Sign Base Design	Shall be aluminum, aluminum composite, acrylic, PVC board, exterior-grade plywood, or other weather resistant, purpose built material approved by the Administrator.									
Illumination	External if the landscape lighting standards of Section 10.4.2. are met.									
Location	Shall meet all location and encroachment standards in accordance with Section 13.3.1.B.									
Other	A development site shall be permitted either a post sign or a monument sign.									

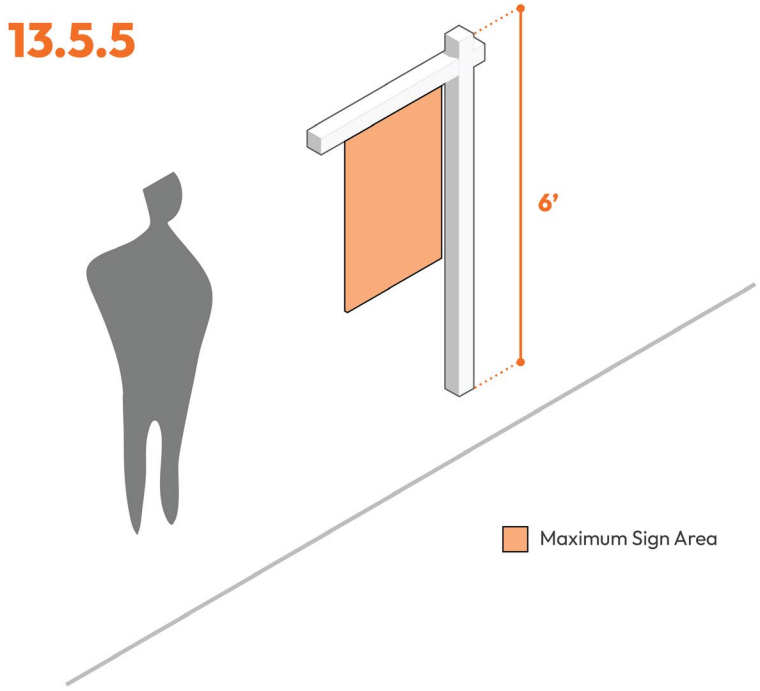

Figure 15: Post Signs

13.5.6 Residential Entryway Signs

Residential Entryway signs shall meet the standards of Table 13.5.6.

Table 13.5.6
Residential Entryway Sign Standards

Standards	GR	NCR	MUR	TSR	DT	NB	CB	IND	CI	OS
Maximum Area [1]	25 sq ft	25 sq ft	25 sq ft	25 sq ft						
Total Maximum Height [2]	6 ft	6 ft	6 ft	6 ft						
Sign Base Minimum Height	2 ft	2 ft	2 ft	2 ft						
Maximum Number of Signs per Development Site Frontage Adjacent to Street ROW	1	1	1	1						
Maximum Number of Sign Faces	2	2	2	2						
Sign Copy	Shall be individually affixed letters, applied vinyl, or be printed, etched, or otherwise incorporated directly on the sign's backing plate.									
	Box/cabinet signs are prohibited.									
Sign Base Design	Sign base, including all structural components, shall extend from the sign face on at least one side, a minimum of 10 percent and a maximum of 40 percent of the width of the sign face.									
	Sign face may extend a maximum of 40 percent off of the sign base.									
	Sign base shall be constructed from a Category 1 exterior building cladding material (Section 5.2.1.B.).									
Illumination	External or backlit									
Landscape	A landscape area at sign base shall be required to be planted and maintained by the property owner in perpetuity.									
	The minimum size of the landscape area shall be equal to half of the square footage of the sign area of the associated sign.									
	Landscape areas shall be planted with shrubs, native grasses, annuals, and/or perennials at a rate of one planting per three square feet of required landscape area.									
Location	Shall be located at residential subdivision entryways and shall meet all location and encroachment standards in accordance with Section 13.3.1.B.									

Notes

[1] If adjacent to a minor thoroughfare, major thoroughfare, or boulevard, in accordance with the CTP, maximum sign area may be increased by 10 square feet.

[2] If adjacent to a minor thoroughfare, major thoroughfare, or boulevard, in accordance with the CTP, maximum sign height may be increased by two feet.

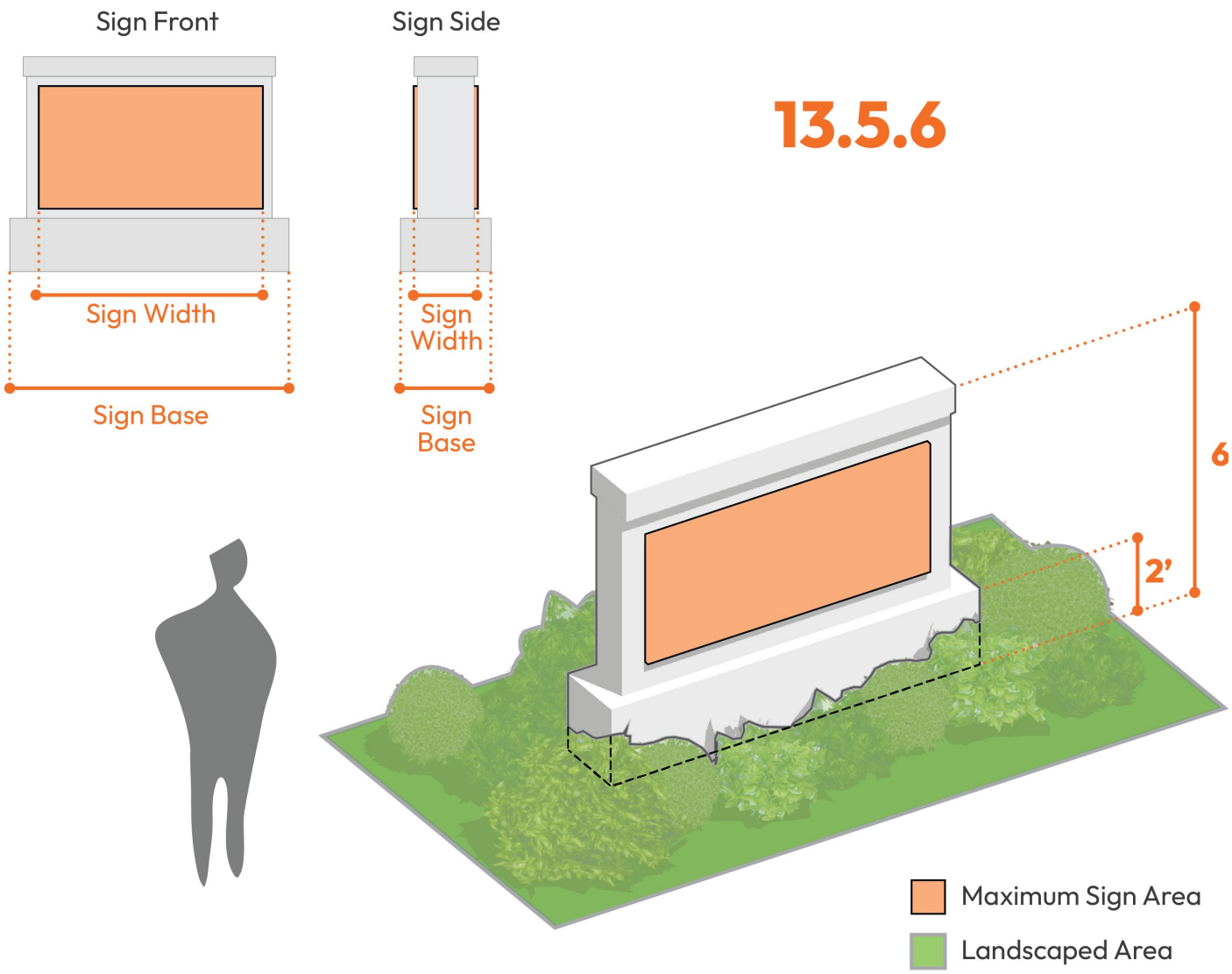

Figure 16: Residential Entryway Signs

13.6 Temporary Attached Sign Standards

13.6.1 Applied Vinyl Sidewalk Signs

Applied vinyl sidewalk signs shall meet the standards of Table 13.6.1.

Table 13.6.1
Applied Vinyl Sidewalk Sign Standards

Standards	GR	NCR	MUR	TSR	DT	NB	CB	IND	CI	OS
Maximum Area	4 sq ft	4 sq ft	4 sq ft	4 sq ft	4 sq ft	4 sq ft	4 sq ft	4 sq ft	12 sq ft	12 sq ft
Maximum Number of Signs per Building Entryway	1	1	1	1	1	1	1	1	2	2
Maximum Number of Signs per 100 lineal feet of Sidewalk or Pedestrian Walkway [1]	1	1	1	1	1	1	1	1	1	1
Minimum Separation of Signs Development Site Frontage	20 ft	20 ft	20 ft	20 ft	20 ft	20 ft	20 ft	50 ft	50 ft	50 ft
Maximum Number of Sign Faces	1	1	1	1	1	1	1	1	1	1
Sign Materials	Removable vinyl material									
Illumination	Prohibited									
Location	Sidewalk, pedestrian walkway, or other outdoor hard surface that is owned by the person or entity on the Zoning Compliance permit (Section 16.5.14).									
Duration of Display – Single Tenant or Common Entrance Buildings	A minimum of 10 and a maximum of 90 days.									
	A single tenant or common entrance building shall be permitted to display up to three per year. A minimum of 10 days shall separate each display period.									
Duration of Display – Multi-tenant Buildings	A minimum of 10 and a maximum of 90 days.									
	A maximum of three may be displayed per multi-tenant building concurrently.									
	The property owner shall be responsible for determining which tenants may display applied vinyl sidewalk signs concurrently.									

Notes

[1] Sign may be installed on public sidewalk by governing jurisdiction only.

13.6.1

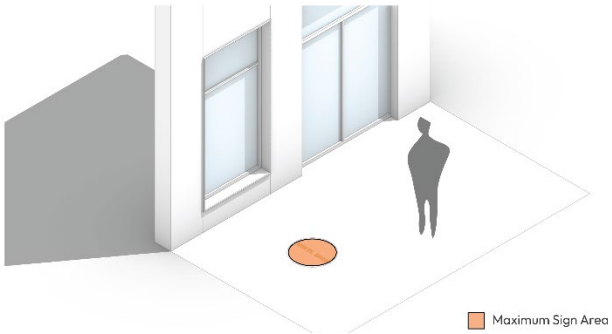

Figure 17: Applied Vinyl Sidewalk Sign

13.6.2 Athletic Field Fence Sign

Athletic field fence signs shall meet the standards of Table 13.6.2.

Table 13.6.2
Athletic Field Fence Sign Standards

Standards	GR	NCR	MUR	TSR	DT	NB	CB	IND	CI	OS
Maximum Area	No Maximum Area									
Maximum Number	No Maximum Number									
Maximum Projection	Shall be affixed flat against the fence to which they are mounted.									
Maximum Number of Sign Faces	1	1	1	1	1	1	1	1	1	1
Sign Materials	18-oz vinyl or a similarly heavy-duty material purpose made for outdoor display.									
	If larger than 32 square feet shall utilize wind resistant measures.									
Illumination	Prohibited									
Location	No portion may extend above or beyond the fence to which it is mounted.									
	Shall be oriented in a manner where sign copy is not visible from the right-of-way or adjacent property.									
Duration of Display	Shall not be limited so long as all maintenance requirements are met (Section 14.5.8).									

Figure 18: Athletic Field Fence Sign

13.6.3 Light Pole Banner Signs

Light pole banner signs shall meet the standards of Table 13.6.3.

Table 13.6.3
Light Pole Banner Sign Standards

Standards	GR	NCR	MUR	TSR	DT	NB	CB	IND	CI	OS
Maximum Length	4.5 ft	4.5 ft	4.5 ft	4.5 ft	4.5 ft	4.5 ft	6 ft	6 ft	6 ft	6 ft
Maximum Width	2.5 ft	2.5 ft	2.5 ft	2.5 ft	2.5 ft	2.5 ft	2.5 ft	2.5 ft	2.5 ft	2.5 ft
Minimum Clearance	11 feet									
Maximum Number of Signs per Light Pole	1	1	1	1	1	1	1	1	1	1
Maximum Number of Sign Faces	2	2	2	2	2	2	2	2	2	2
Sign Materials	PVC flex material, laminated for outdoor use.									
Illumination	Prohibited									
Location	Shall be attached to functioning light poles only.									
	Shall not be attached to wooden poles.									
Duration of Display	Shall not be limited so long as all maintenance requirements are met (Section 14.5.8).									
Other Provisions	Shall have wind flaps or utilize wind deflecting mounting brackets.									
	Brackets shall be painted to match the color of the light pole.									
	The property owner shall be required to obtain a right-of-way encroachment agreement from the Town prior to the display of a light pole banner in a Town maintained public right-of-way and provide a release or hold harmless to the owner of the light pole.									

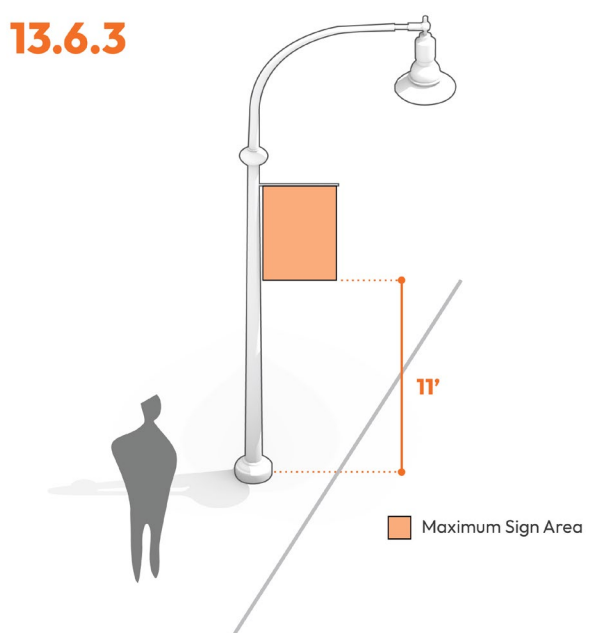

Figure 19: Light Pole Banner Sign

13.6.4 Scoreboard Sign, Temporary

Scoreboard signs, temporary shall meet the standards of Table 13.6.4.

Table 13.6.4
Scoreboard Sign, Temporary Standards

Standards	GR	NCR	MUR	TSR	DT	NB	CB	IND	CI	OS
Maximum Area	32 sq ft	32 sq ft	32 sq ft	32 sq ft	32 sq ft	32 sq ft	32 sq ft	32 sq ft	32 sq ft	32 sq ft
Minimum Vertical Clearance	8 ft	8 ft	8 ft	8 ft	8 ft	8 ft	8 ft	8 ft	8 ft	8 ft
Maximum Projection	Affixed flat against the scoreboard to which they are mounted or on a scoreboard support.									
Maximum Number of Signs per Scoreboard	No Maximum Number									
Maximum Number of Sign Faces	1	1	1	1	1	1	1	1	1	1
Sign Materials	18-oz vinyl or a similarly heavy-duty material purpose made for outdoor display.									
Illumination	Prohibited									
Location	No portion may extend above or beyond the scoreboard to which it is mounted.									
	Shall be located in a manner that orients the sign copy internal to the development site.									
Duration of Display	Shall not be limited so long as all maintenance requirements are met (Section 14.5.8).									

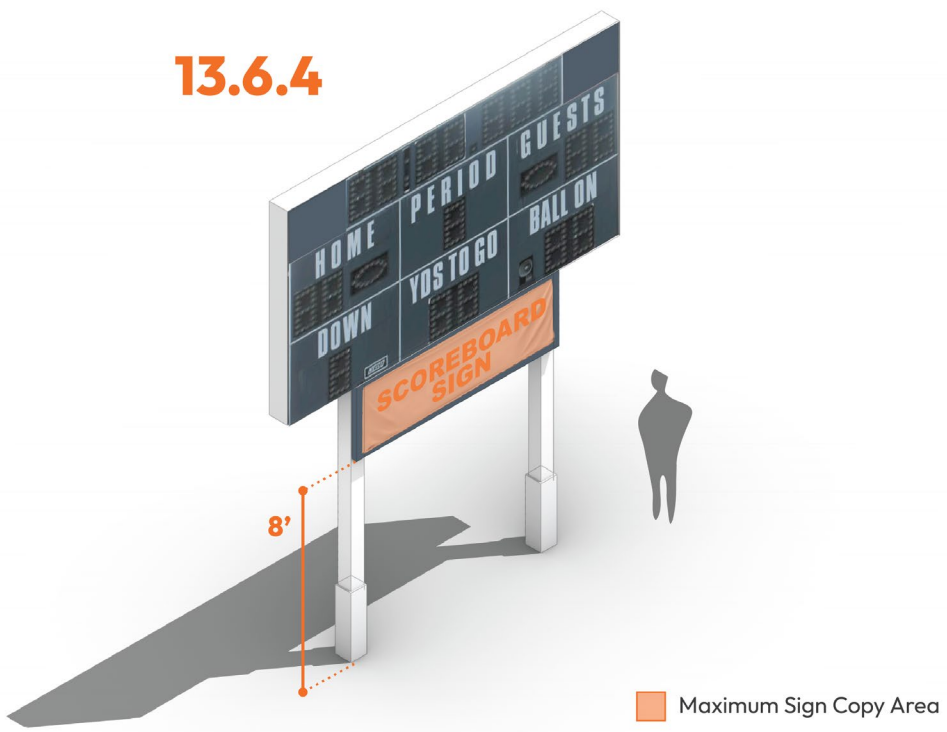

Figure 20: Scoreboard Sign, Temporary

13.6.5 Sock Signs

Sock signs shall meet the standards of Table 13.6.5

Table 13.6.5
Sock Sign Standards

Standards	GR	NCR	MUR	TSR	DT	NB	CB	IND	CI	OS
Maximum Dimensions	Same as issued permanent sign permit.									
Maximum Projection	Same as issued permanent sign permit.									
Maximum Number of Signs	Same as issued permanent sign permit.									
Maximum Number of Sign Faces	Same as issued permanent sign permit.									
Sign Materials	18-oz vinyl or a similarly heavy-duty material purpose made for outdoor display									
Illumination	Same as issued permanent sign permit.									
Location	Placed over any existing permanent sign									
Duration of Display	Maximum of 90 consecutive days, starting from the issuance of the permanent sign permit.									

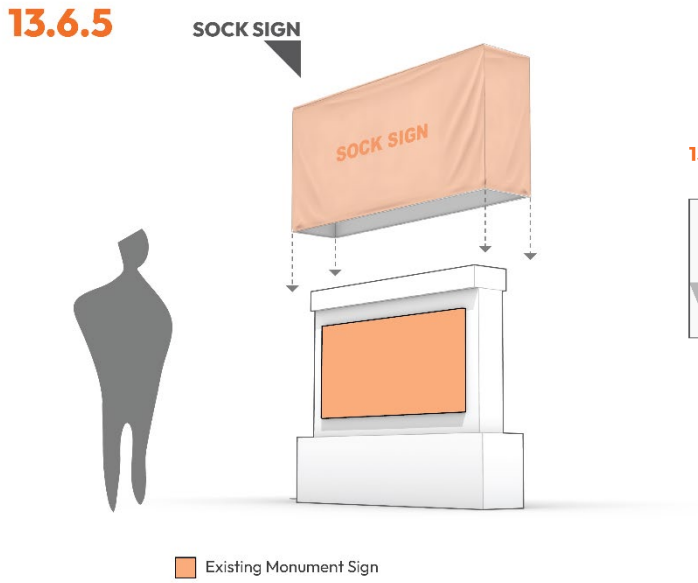

Figure 22: Sock Sign Monument

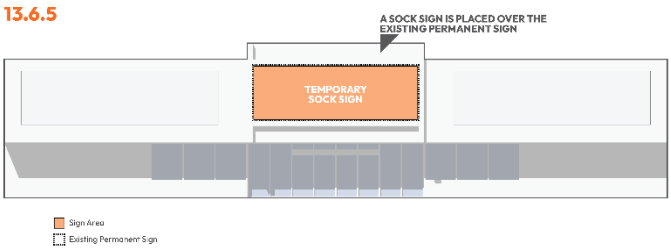

Figure 21: Sock Sign

13.6.6 Wall Mounted Banner Signs

Wall mounted banner signs shall meet the standards of Table 13.6.6.

Table 13.6.6
Wall Mounted Banner Sign Standards

Standards	GR	NCR	MUR	TSR	DT	NB	CB	IND	CI	OS
Single Tenant or Common Entrance Building										
Maximum Number of Signs per Wall	1	1	1	1	1	1	1	1	1	1
Duration of Display	Minimum of 10 and a maximum of 30 days.									
	A single tenant or common entrance building shall be permitted to display up to one per year.									
Multi-Tenant Building										
Maximum Number of Signs per Wall	1	1	1	1	1	1	1	1	1	1
Duration of Display	Minimum of 10 and a maximum of 30 days.									
	One per multi-tenant building concurrently.									
	The property owner shall be responsible for determining which tenants may display concurrently.									
All Wall-Mounted Signs										
Maximum Area	32 sq ft	32 sq ft	32 sq ft	32 sq ft	32 sq ft	32 sq ft	32 sq ft	32 sq ft	32 sq ft	32 sq ft
Maximum Length	8 ft	8 ft	8 ft	8 ft	8 ft	8 ft	8 ft	8 ft	8 ft	8 ft
Maximum Projection	Affixed flat against the building to which they are mounted.									
Maximum Number of Sign Faces	1	1	1	1	1	1	1	1	1	1
Sign Materials	18-oz vinyl or a similarly heavy-duty material purpose made for outdoor display.									
Illumination	Prohibited									
Location	For a building without a parapet wall, no portion may extend above the roofline.									
	For a building with a parapet wall, no portion may extend two feet above the roof line of a building, provided no portion of the sign extends above the parapet.									
	For a building with a pitched roof, no portion may extend above the lower eave line of a building.									
	Shall not be affixed to HVAC screening, elevator overrun, or other structures protruding from the roof of the principal building.									

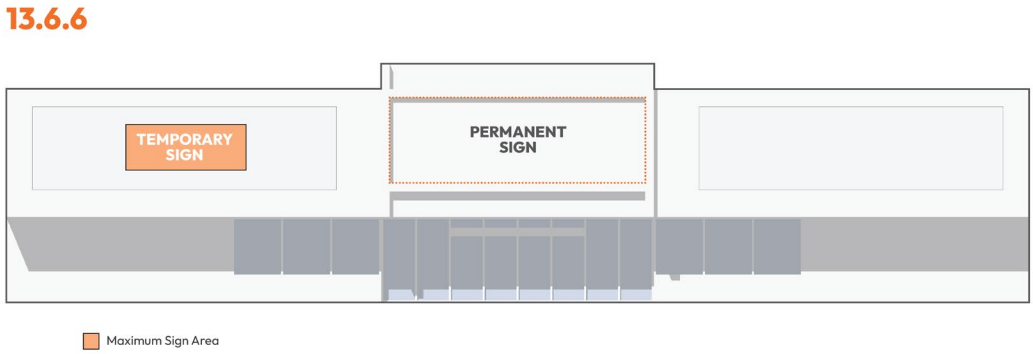

Figure 23: Wall Mounted Banner Signs

13.6.7 Window Signs, Temporary

Window signs, temporary shall meet the standards of Table 13.6.7.

Table 13.6.7
Window Sign, Temporary Standards

Standards	GR	NCR	MUR	TSR	DT	NB	CB	IND	CI	OS
Maximum Area [1]					15%	15%	20%	20%	20%	20%
Location	On ground floor windows or doors only.									
Illumination	Prohibited				One illuminated temporary window sign may be allowed per property.			Prohibited		
Duration of Display	Shall not be limited so long as all maintenance requirements are met (Section 14.5.8).									

Notes

[1] Of the square footage of the individual window on which the sign shall be located.

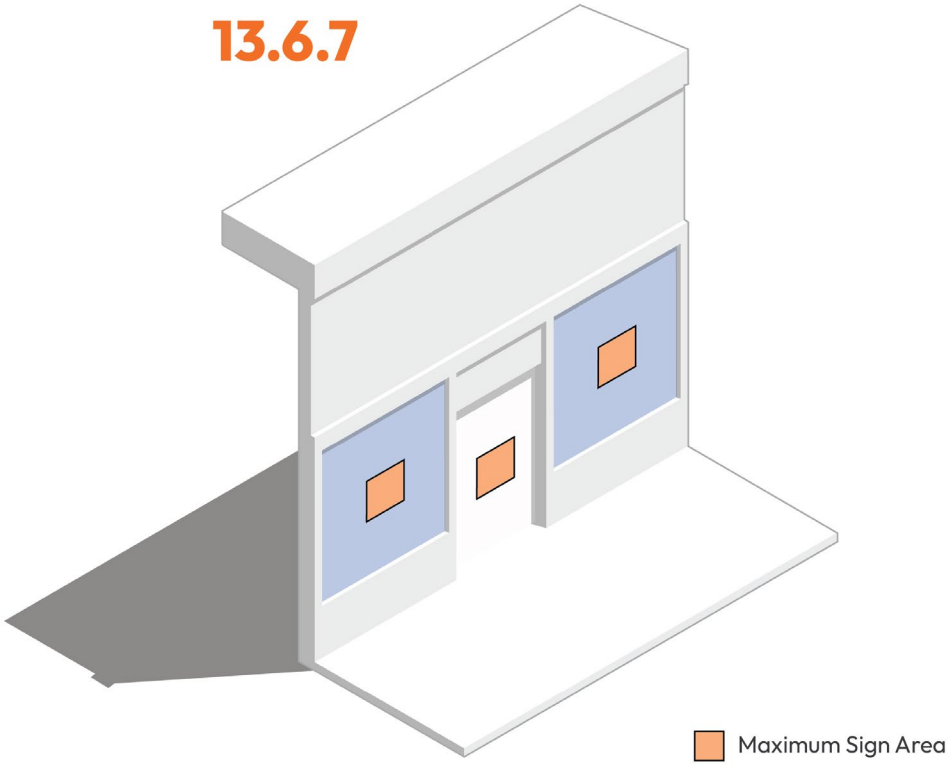

Figure 24: Window Signs, Temporary.

13.7 Temporary Freestanding Sign Standards

13.7.1 Ground Mounted Banner Signs

Ground mounted banner signs shall meet the standards of Table 13.7.1.

Table 13.7.1
Ground Mounted Banner Sign Standards

Standards	GR	NCR	MUR	TSR	DT [1]	NB	CB	IND	CI	OS
Maximum Area					15 sq ft		32 sq ft	32 sq ft	32 sq ft	15 sq ft
Maximum Height					5 ft		8 ft	8 ft	8 ft	5 ft
Maximum Number of Signs per Development Site Frontage Adjacent to Street ROW					1		1	1	1	1
Maximum Number of Sign Faces					2		2	2	2	2
Location	Shall meet all location and encroachment standards in accordance with Section 13.3.1.B.									
Sign Materials	Banners: cloth, canvas, vinyl, or other similarly durable material purpose made for outdoor display.									
	Base and Frame: vinyl, steel, or other similarly durable material purpose made for outdoor display with a minimum width of three inches.									
Illumination	Prohibited									
Duration of Display	Minimum of 10 and a maximum of 30 days.									
	A single tenant or common entrance building shall be permitted to display up to three per year. A minimum of 10 days shall separate each display period.									
	A maximum of one per multi-tenant building concurrently.									
	The property owner shall be responsible for determining which tenants may display ground mounted banner signs concurrently.									
Other Provisions	Shall be securely anchored into the ground or secured in a portable base designed for such function.									
	Shall be maintained in good condition and shall not sag, lie on the ground, be torn, or otherwise kept in a disorderly state.									
	Shall not be displayed concurrently with a post and panel sign.									

Notes

[1] Sign type allowed in the Downtown – Central Subdistrict and on properties with buildings set back 20 feet or more from the street only.

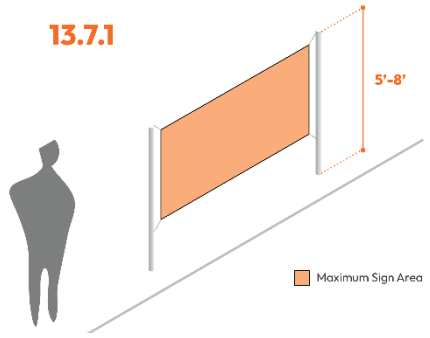

Figure 25: Ground Mounted Banner Signs

13.7.2 Post Signs, Temporary

Post signs, temporary shall meet the standards of Table 13.7.2.

Table 13.7.2
Post Sign, Temporary Standards

Standards	GR	NCR	MUR	TSR	DT	NB	CB	IND	CI	OS
Maximum Area	6 sq ft	6 sq ft	6 sq ft	6 sq ft						
Maximum Height	6 ft	6 ft	6 ft	6 ft						
Maximum Number of Signs per Development Site Frontage Adjacent to Street ROW	1	1	1	1						
Maximum Number of Sign Faces	2	2	2	2						
Sign Materials	Sign face shall be made of durable vinyl, plastic, or comparable material.									
	Frames shall be made of metal, PVC, wood, or a similarly durable material purpose made for outdoor display.									
Illumination	Prohibited									
Location	Shall meet all location and encroachment standards in accordance with Section 13.3.1.B.									
Duration of Display	Minimum of 10 and a maximum of 30 days.									
	If the property on which the sign shall be placed is actively marketed for sale or lease the duration of display shall be until the property is no longer actively marketed for sale or lease so long as all maintenance requirements are met (Section 14.5.8).									
Other Provisions	Shall be securely anchored into the ground with a metal, PVC, or wood stake									

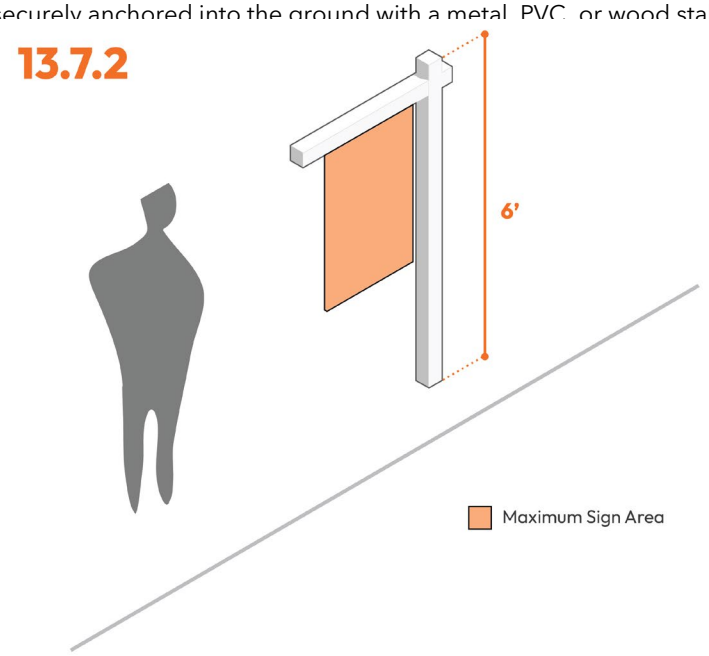

Figure 26: Post Signs, Temporary

13.7.3 Post and Panel Signs

Post and panel signs shall meet the standards of Table 13.7.3.

Table 13.7.3
Post and Panel Sign Standards

Standards	GR	NCR	MUR	TSR	DT	NB	CB	IND	CI	OS
Maximum Area	32 sq ft	32 sq ft	32 sq ft	32 sq ft	32 sq ft	32 sq ft	32 sq ft	32 sq ft	32 sq ft	15 sq ft
Maximum Height	8 ft	8 ft	8 ft	8 ft	8 ft	8 ft	8 ft	8 ft	8 ft	5 ft
Maximum Number of Signs per Development Site Frontage Adjacent to Street ROW	1	1	1	1	1	1	1	1	1	1
Maximum Number of Sign Faces	2	2	2	2	2	2	2	2	2	2
Location	Shall meet all location and encroachment standards in accordance with Section 13.3.1.B.									
Sign Materials	10 mm gauge engineered corrugated plastic, aluminum composite, finished wood, wood composite, or comparable material.									
Illumination	Prohibited									
Duration of Display	From issuance of construction plan approval to issuance of a certificate of occupancy for the final phase of any construction.									
Other Provisions	Shall be securely anchored into the ground with a minimum of two metal or finished wood posts.									
	Shall be maintained in good condition and shall not sag, lie on the ground, be torn, or otherwise kept in a disorderly state.									
	Shall not be displayed concurrently with a ground mounted banner sign.									

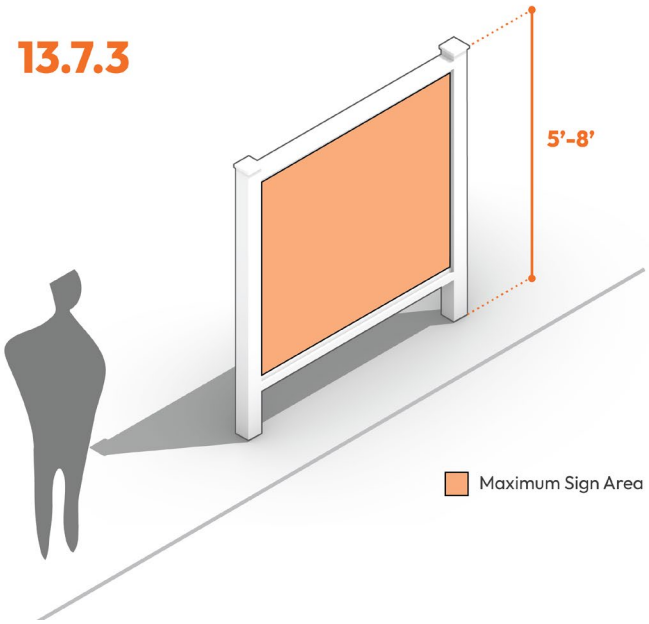

Figure 27: Post and Panel Signs

13.7.4 Sidewalk Signs

Sidewalk signs shall meet the standards of Table 13.7.4.

Table 13.7.4
Sidewalk Sign Standards

Standards	GR	NCR	MUR	TSR	DT	NB	CB	IND	CI	OS
Maximum Area	6 sq ft	6 sq ft	6 sq ft	6 sq ft	6 sq ft	6 sq ft	6 sq ft	6 sq ft	6 sq ft	6 sq ft
Maximum Height	4 ft	4 ft	4 ft	4 ft	4 ft	4 ft	4 ft	4 ft	4 ft	4 ft
Maximum Number of Signs per Single Tenant or Common Entrance Building Frontage Adjacent to Street ROW; and per Multi-tenant Building [1]	1	1	1	1	1	1	1	1	1	1
Maximum Number of Sign Faces	2	2	2	2	2	2	2	2	2	2
Sign Materials	Vinyl, plastic, chalkboard, marker board, or comparable material.									
	Frames shall be made of metal, plastic, or a similarly durable material purpose made for outdoor display.									
Minimum Separation	Shall be separated from all other sidewalk signs by at least 15 feet.									
Location	Shall be placed in a manner to preserve a continuous sidewalk width of a minimum of five feet.									
	No part shall block points of ingress or egress.									
	Shall be placed no more than six feet from the building entrance of the building or tenant space of a building to which the sign is associated.									
	Shall not be placed in or adjacent to an ADA ramp.									
Illumination	Prohibited									
Duration of Display	Shall be displayed only during the operating hours of the use to which the sign is associated.									
Other Provisions	The property owner shall be required to obtain a right-of-way encroachment agreement from the Town prior to the display of a sidewalk sign in a public right-of-way.									
	Shall be secured in a portable base made of metal, plastic, or a similarly durable material purpose made for outdoor display.									
	Shall be maintained in good condition and shall not sag, lie on the ground, be torn, or otherwise kept in a disorderly state.									

Notes

[1] Per tenant space

13.7.4

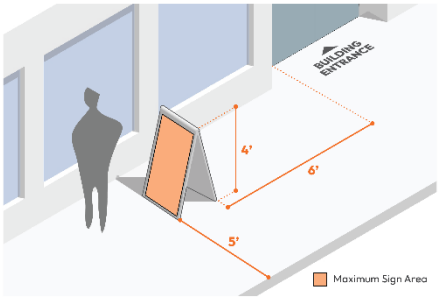

Figure 28: Sidewalk Signs

13.7.5 Yard Signs

Yard signs shall meet the standards of Table 13.7.5.

Table 13.7.5: Yard Sign Standards

Standards	GR	NCR	MUR	TSR	DT	NB	CB	IND	CI	OS
Maximum Area	6 sq ft	6 sq ft	6 sq ft	6 sq ft	6 sq ft	6 sq ft	6 sq ft	6 sq ft	6 sq ft	6 sq ft
Maximum Height	4 ft	4 ft	4 ft	4 ft	4 ft	4 ft	4 ft	4 ft	4 ft	4 ft
Maximum Number of Signs per Development Site Frontage	2 [1]	2 [1]	2 [1]	2 [1]	2 [1]	2 [1]	2 [1]	2 [1]	2 [1]	2 [1]
Maximum Number of Sign Faces	2	2	2	2	2	2	2	2	2	2
Sign Materials	Corrugated plastic, plastic, or comparable material are permitted; cardboard and plywood are prohibited.									
Illumination	Prohibited									
Location	Shall meet all location and encroachment standards in accordance with Section 13.3.1.B.									
	Front and corner side yards only.									
Duration of Display	90 days per calendar year.									
Other Provisions	Shall be securely anchored into the ground with a metal, plastic, or wood stake.									
	Shall be maintained in good condition and shall not sag, lie on the ground, be torn, or otherwise kept in a disorderly state.									

Notes

[1] 30 days before the start of early voting or a primary or election day and 10 days after a primary or election day a maximum of eight yard signs may be displayed. No sign permits shall be required for the display of yard signs during this period.

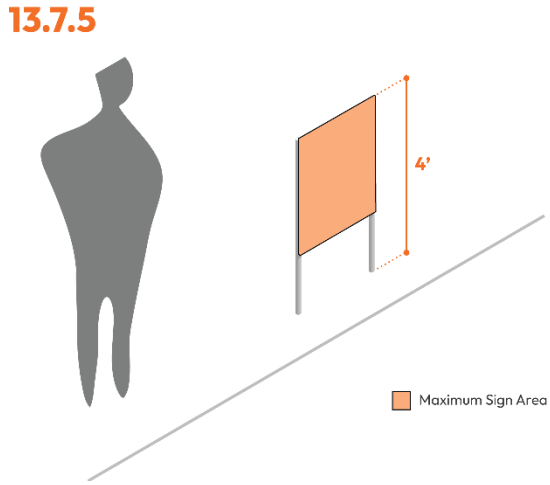

Figure 29: Yard Signs

13.8 Prohibited Signs and Content

13.8.1 Prohibited Sign Types

A. Off-premises signs,

B. Feather signs,

C. Pole/pylon signs,

D. Flashing signs,

E. Roof signs,

F. Marquee signs,

G. Colored rope lighting,

H. Signs painted or otherwise attached to utility poles, trees, fences, retaining walls, standpipes, gutters, drains, fire escapes, parking meter, bridges and overpasses, rocks, other signs, benches, or refuse containers unless otherwise allowed by this Chapter,

I. Signs erected so as to impair access to a roof,

J. Signs located, erected or maintained upon, over or project into any public or private right-of-way, sight distance triangle, or utility easement unless otherwise allowing by this Chapter,

K. Pennants, streamers, balloons, and portable signs not specifically permitted or allowed by this Chapter,

L. Signs, not specifically permitted or allowed by this Chapter, which move or have moving parts, which movement is caused manually, by the wind, or mechanically,

M. Signs that produce noise unless otherwise allowing by this Chapter,

N. Signs in conflict with traffic signals, vehicular or pedestrian travel, access to fire hydrants and fire lanes and exits, and other signs which can reasonably be determined to impede or impair the public health, safety and welfare,

O. Signs on vehicles, boats, or trailers parked so as to be visible from a public right-of-way, with the exception of food trucks that have a valid permit,

P. Electronic message boards on vehicles, boats, trailers, or other wheeled devices,

Q. All other signs not expressly permitted in this ordinance shall be considered prohibited.

13.8.2 Prohibited Content

A. The following content is prohibited without reference to the viewpoint of the individual speaker:

1. Text or graphics of an indecent or immoral nature and harmful to minors,

2. Text or graphics that promote unlawful activity,

3. Text or graphics that are obscene, fighting words, defamation, incitement to imminent lawless action, or true threats, or

4. Text or graphics that present a clear and present danger due to their potential confusion with traffic control signs or signs that provide public safety information (for example, signs that use the words "Stop," "Yield," "Caution," or "Danger," or comparable words, phrases, symbols, or characters in such a manner as to imply a safety hazard that does not exist).

B. The narrow classifications of content that are prohibited by this subsection are either not protected by the United States or are offered limited protection that is outweighed by the substantial governmental interests in protecting the public safety and welfare. It is the intent that each paragraph of this Subsection be individually severable if a court of competent jurisdiction were to nullify one or more of them.

13.9 Temporary Sign Plan

13.9.1 Guidelines for Temporary Signs in Public and Institutional Uses.

Public & Institutional uses (in accordance with Table 3.3) may submit a temporary sign plan to the Administrator for review and approval. The temporary sign plan shall:

A. Be approved annually,

B. Account for all temporary signs utilized on the subject property. Temporary sign permits shall not be issued for temporary signs not identified in the temporary sign plan,

C. Allow for deviations in the minimum and/or maximum number of days allowed per display period,

D. Allow for deviations in the minimum required separation between display periods,

E. Allow for the substitution of ground mounted banner signs in place of allowed wall mounted banner sign; and

F. Not allow standards not otherwise mentioned in subsections 13.9.1 through 13.9.5 above to be modified or exceeded, and

G. Temporary signs displayed for a period of 48 hours or less per week shall be exempt from the requirements of this Section and may be included in the temporary sign plan.

13.10 Abandonment

Sign copy shall be removed, and in the case of a wall sign the building façade shall be repaired, when the use which the sign is associated with is no longer conducted on the premises. The sign copy shall be removed within 30 days of when the use ceases to operate.

14 PERFORMANCE AND MAINTENANCE

14.1 General Provisions

14.1.1 Purpose

The purpose of this Chapter is to:

A. Ensure successful completion of required improvements in a reasonable time period,

B. Require mitigation of proportional development impacts,

C. Ensure that public infrastructure meets all standards of this Unified Development Ordinance (UDO) and the WFD3, and

D. Require perpetual maintenance to be undertaken for continuing quality and performance of all development improvements.

14.1.2 Applicability

All development and use of land within the Town shall comply with the performance and maintenance requirements of this Chapter.

14.2 Payment in Lieu of Required Improvement

14.2.1 Applicability

The Administrator may approve the payment to the Town in lieu of the provision of select improvement requirements, including:

A. Street Trees (Section 7.8),

B. Transportation Impact Analysis (Section 9.2),

C. Roadway Stubs (Section 9.4.4.C),

D. Temporary Turnaround (Section 9.4.4.C.4.a),

E. Connectivity (Section 9.6.6.D),

F. Comprehensive Transportation Plan Improvements (Section 9.3),

CONTENT

14.1 General Provisions
14.2 Payment in Lieu of Required Improvement
14.3 Performance Guarantees
14.4 Improvements Completion and Acceptance by Town
14.5 Maintenance

G. Public Transit Improvements (Section 9.13), and

H. Sidewalks, Multi-Use Paths, Greenways, and Pedestrian Walkways (Section 9.12).

14.2.2 Approval

The Administrator may approve a payment in lieu when:

A. Improvements are required and necessary off-site right-of-way and/or easements cannot be obtained, or

B. Other physical property limitations are present that have not been created by the applicant or property owner of the development site.

14.2.3 Amount

A. The payment amount required by the Administrator in lieu of improvements shall be equal to 150 percent of the estimated full cost of completing the installation of the required improvements, including the costs of design, materials, labor, project management, permitting, mitigation, and other factors necessary to complete the installation.

B. Estimated costs for the in-lieu payment shall be itemized by improvement type and entered into NCDOT construction cost estimate forms, certified by a licensed Professional Engineer and approved by the Administrator. For improvements not listed in the NCDOT database, estimates shall be certified by a licensed Professional Engineer.

C. If the payment in lieu has not been paid within one-year from the time the estimated costs were approved by the Administrator, an updated cost estimate may be required.

14.2.4 Payment Form

The in-lieu payment shall be provided in cash or certified check from a North Carolina lender to the Town prior to Construction Plan approval.

14.3 Performance Guarantees

14.3.1 General Provisions

Any development application that includes public or private utility work, public right-of-way improvements, or required erosion control measures shall meet the performance guarantee requirements of this Section.

14.3.2 Type

The developer shall provide the required performance guarantee in one of the following forms:

A. Surety bond issued by any company authorized to do business in this State,

B. Letter of credit issued by any financial institution licensed to do business in this State, or

C. Other form of guarantee that provides equivalent security to a surety bond or letter of credit.

14.3.3 Duration

The duration of the performance guarantee shall initially be one year, unless the developer determines that the scope of work for the required improvements necessitates a longer duration.

14.3.4 Extension

A developer shall demonstrate reasonable, good-faith progress toward completion of the required improvements that are secured by the performance guarantee or any extension. If the improvements are not completed to the specifications of the Town, and the current performance guarantee is likely to expire prior to completion of the required improvements, the performance guarantee shall be extended, or a new performance guarantee issued, for an additional period necessary to complete the required improvements. If a new performance guarantee is issued, the amount shall be determined by the procedure provided in Section 14.3.6 of this Section and shall include the total cost of all incomplete improvements.

14.3.5 Reduction and Release

The performance guarantee shall be returned, released, or reduced as appropriate, in a timely manner upon the acknowledgement by the Town that the improvements for which the performance guarantee is being required are complete. The Town shall return letters of credit or escrowed funds upon completion of the required improvements to its specifications or upon acceptance of the required improvements if the required improvements are subject to Town acceptance, whichever occurs later If a warranty period is required, the improvement guarantee shall not be released until the warranty surety for the phase or project has been secured and delivered to the Town.

14.3.6 Amount

The amount of the performance guarantee shall be reviewed and approved by the Administrator and shall be 125 percent of the reasonably estimated cost of completion at the time the performance guarantee is issued, including the costs for all labor, materials, and project management necessary for completion of the required improvements. Where applicable, the costs shall be based on unit pricing. The amount of any extension of any performance guarantee shall be determined according to the procedures for determining the initial guarantee and shall be 125 percent of the reasonably estimated cost of completion of the remaining incomplete improvements still outstanding at the time the extension is obtained.

14.3.7 Timing

The performance guarantee shall be posted no later than the time of plat recordation.

14.3.8 Coverage

In case of default by the developer, the performance guarantee shall only be used for completion of the required improvements and not for repairs or maintenance after completion.

14.3.9 Legal Responsibilities

No person shall have or may claim any rights with respect to any performance guarantee provided pursuant to this subsection or in the proceeds of any such performance guarantee other than the following:

A. The local government to whom the performance guarantee is provided.

B. The developer at whose request or for whose benefit the performance guarantee is given.

C. The person or entity issuing or providing the performance guarantee at the request of or for the benefit of the developer.

14.3.10 Multiple Guarantees

The developer shall have the option to post one type of a performance guarantee as provided for in Section 14.3.2 of this section, in lieu of multiple bonds, letters of credit, or other equivalent security, for all development matters related to the same project requiring performance guarantees.

14.3.11 Erosion and Stormwater Control

Performance guarantees associated with erosion, sedimentation, and stormwater control shall instead meet the following requirements.

A. **Applicability**. Temporary erosion, sedimentation, and stormwater control performance guarantees shall be required as follows:

1. **Stormwater Control.** Performance guarantees shall be provided for stormwater control measures and associated drainage infrastructure.

2. **Temporary Erosion and Sedimentation Control.** Performance guarantees shall be provided to the town for all projects of one-half acre or more in surface area.

B. **Amount of Performance Guarantee.** The amount of a performance guarantee for temporary erosion, sedimentation and stormwater controls shall be reviewed and approved by the Administrator and shall be no less than 125 percent of the cost for removal, maintenance or repair of all erosion control measures; installation of stormwater control measures; and conversion of temporary stormwater

control measures to permanent stormwater control measures. Such guarantee shall be provided in the manner outlined in Section 14.3.2.

C. **Timing.** The performance guarantee shall be posted prior to Construction Plan approval.

D. **Reduction and Release of Performance Guarantees.** Temporary erosion, sedimentation, and stormwater control guarantees may be reduced as land is stabilized and will be released upon issuance of a Certificate of Completion and final Land Disturbance Permit closeout.

14.3.12 Forfeiture

A. **Forfeiture Provisions**. All performance guarantees shall contain forfeiture provisions for failure, after proper notice, to complete work within the time specified, or to initiate or maintain any actions which may be required of the applicant or owner in accordance with this ordinance, approvals issued pursuant to this ordinance, or an operation and maintenance agreement established pursuant to this ordinance.

B. **Improper Release of Performance Guarantees**. If the Town releases a performance guarantee through error, the error shall not release the developer from responsibility for the completion of all improvements in accordance with this UDO and the WFD3.

C. **Default by Developer**.

1. Upon default, meaning failure on the part of the developer or surety to make timely completion of the required improvements, the town may require the developer, the surety, or the financial institution holding the escrow account to pay all or any portion of the bond or escrow account fund to the town.

2. Before requesting payment, the Town shall request the developer or owner to comply with the permit or maintenance agreement.

3. Upon payment, the town, at its discretion, may expend such portion of the funds as it deems necessary to complete all or any portion of the required improvements.

14.4 Improvements Completion and Acceptance by Town

14.4.1 Timeline for Completion of Improvements

A. **Timeline**.

1. **Public Utilities and Access.** Public utilities and initial surface of primary site access, including fire lanes and public street right of way, shall be installed and inspected by the Administrator or other agencies if applicable for compliance prior to plat recordation.

   a. All right-of-way improvements required in Chapter 9 shall be completed prior to occupancy of buildings, unless phased improvements have been approved as part of a TIA.

   b. **Phasing.**

      i. The numbering of phases shall be sequential and coincide with the order in which the different development phases are proposed to be constructed.

      ii. Each phase shall be designed to include all improvements and other aspects of development necessary to meet all requirements of this UDO and other applicable regulations, either as a standalone development or in conjunction with completed and accepted phases of the same development.

2. **Other Improvements**. All other improvements included on the approved construction plan, or phase of an approved construction plan, must be completed by the developer no later than the following:

   a. For residential subdivisions, 85 percent of the dwelling units are approved for occupancy.

   b. Two years have passed since the subdivision or final plat, or phase thereof, has been recorded.

   c. For non-residential projects, one-year has passed since the approval of the performance guarantee in accordance with Section 14.4.

B. **Extension of Time Limit**. This time limit may be extended at the discretion of the Administrator upon submittal by the applicant of sufficient justification for the extension. Sufficient justification may include, but is not limited to, delays in other regulatory permits, financing institution delays, or other similar reasons beyond the control of the applicant.

14.4.2 Warranty Against Defects

A. Upon completion of construction of new streets, greenways, stormwater controls or other required utilities, the developer shall request a warranty inspection. Once all the improvements are deemed acceptable by the Administrator and pass the warranty inspection, the developer shall submit the following to the Administrator:

1. A set of acceptable as-built drawings,
2. A written warranty against defects which shall guarantee the material and workmanship of required improvements for a period of not less than one-year from the date of such acceptance,
3. A financial guarantee payable to the town equal to at least 25 percent of the cost of the installation of such improvements as determined by the Administrator. Such financial guarantee shall be in a form as provided for in Section 14.3.2.

B. Upon approval of these materials and acceptance of the improvements by the town, a one-year warranty period shall commence. During the one-year warranty period, the developer shall repair any latent defects that occur. For the purposes of this section, the term "defects" refers to any condition in publicly dedicated facilities, utilities or streets that requires the town to make repairs to such improvements over and above the normal amount of maintenance that they would require. If such defects appear, the warranty may be enforced regardless of whether the facilities, utilities or streets were constructed in accordance with the requirements of this ordinance. Approximately 60 days prior to the warranty expiration, the developer shall request a final inspection. Upon successful completion of all warranty items, the developer shall be released from maintenance responsibilities for the warranted construction.

C. Warranty repairs shall be corrected in accordance with the deficiencies identified by the Administrator.

D. If a developer fails to complete warranty items, future projects of the developer may not be reviewed by the town. In addition, the town shall take appropriate legal action against the developer.

14.4.3 Acceptance by Town

Any development-related improvements shall not be officially accepted until the inspections, corrections, and warranty required in the previous section are completed.

14.5 Maintenance

14.5.1 General Maintenance Requirements

When the standards and procedures of this UDO, or a development approval issued pursuant with this UDO, or conditions attached to any such approval require that any building or site feature be constructed or installed, the owner of the affected property shall be responsible for maintaining the building(s) or site feature(s) in good repair, and for replacing them if they are damaged or destroyed or, in the case of living materials, if they die or are effectively destroyed after installation. In addition, property owners shall be responsible for each of the additional maintenance and replacement standards set forth in this Section.

14.5.2 Inspection and Investigation

The Administrator is authorized to conduct any lawful inspection and investigation necessary to ensure compliance with this UDO.

A. Inspections may be conducted from public areas or common areas, including premises open to the general public, public right-of-way, as well as adjacent private areas where permission has been granted by the property owner. These inspections shall be carried out during normal business hours unless the Administrator determines there is a special circumstance or an emergency necessitating inspection at another time.

B. Inspections of private areas not visible from a public area may only occur upon presentation of proper credentials and with the consent of the premises owner or with an administrative inspection warrant.

C. No person shall willfully resist, delay, or obstruct an authorized representative, employee, or agent of the Town while that person is inspecting or attempting to inspect land or structures nor shall any person obstruct, hamper, or interfere with any such representative while in the process of carrying out their official duties.

D. A registered professional archaeologist must be on-site during any ground disturbance within 25 feet of the limits of the cemetery in the event of inadvertent discovery of human remains during the disturbance. Town staff must be notified at least 10 business days prior to the disturbance.

14.5.3 Fence Installation and Maintenance

The finished side of a fence shall face the exterior of the property. Fences and walls shall be maintained in good repair, clean of visible mold and mildew, and in a safe condition. Maintenance of fences and walls includes the replacement of missing, decayed, or broken elements and the repair of deteriorated or damaged fence materials, including sagging sections and posts that lean more than ten degrees from vertical.

14.5.4 Landscape and Buffers

A. Dead plant materials shall be replaced within 60 days upon notification from the Town, taking into consideration the season of the year, and shall be of the same quantity and quality as initially approved. If the particular project is constructed in more than one phase, the 60-day timeframe shall apply to each individual phase. If the plant material cannot be replaced within 60 days due to the planting season, a performance guarantee shall be provided until such time the planting occurs.

B. The ground surface of required landscape areas shall be covered with regularly maintained turf or other types of pervious groundcover or mulch.

14.5.5 Waste Receptacle Screening

A. Enclosure openings shall be kept closed at all times except when the receptacle is being accessed.

B. Property owners shall be responsible for ensuring that grease traps, trash, and recycling receptacles are placed in the enclosure at all times except when they are being accessed.

C. The property owner or tenant shall ensure service truck access to the enclosure is maintained year-round.

D. Waste shall be stored in closed containers and regularly emptied. The enclosure shall be maintained in a clean condition to avoid vermin and foul odors from impacting surrounding areas.

14.5.6 Parking Areas, Loading Areas, and Access Drives

The property owner shall be responsible for the maintenance of parking areas, loading areas, and access drives including but not limited to:

A. Removing debris and litter,

B. Treating asphalt with sealant,

C. Filling cracks and potholes,

D. Replacing pavement directional arrows and parking space delineation markings, and

E. Repairing/replacing stop bars, shopping cart corrals, and other parking area improvements.

14.5.7 Lighting

All outdoor lighting provided on a property, whether required by this UDO or not, shall be continually maintained in working order.

14.5.8 Cemeteries

A. A 25-foot setback is required from the outer boundary of the cemetery. No grading, earth disturbance, or new structures are permitted within this setback. However, existing dead or dying vegetation and neglected structures that are currently located within this setback may need to be removed for public safety and in order to protect the cemetery from damage.

B. Prior to the issuance of a Zoning Compliance Permit, for the removal of existing structures and vegetation only, the applicant shall submit the necessary documentation, including plans showing proposed disturbance location, area of disturbance, location of cemetery in relation to the proposed disturbance, and photographs of the structure and/or vegetation to be removed. The applicant shall include a plan for removal of the vegetation and/or structures, including the method of removal and all protective measures (including matting to prevent rutting), remediation of the disturbance and long-term maintenance for approval by the Administrator or the Board of Commissioners. It is recommended that heavy machinery is not utilized during this removal process. Such remediation should include additional buffering methods, landscaping, etc. while minimalizing additional disturbance to the cemetery and the required setback.

14.5.9 Signs

A. Every sign and all parts thereof, including base, copy, framework, supports, anchors, and wiring systems shall:

1. Be constructed and maintained in compliance with the applicable codes of the Town.

2. Be kept in proper repair and without exposed wiring.

3. When not galvanized or constructed of approved corrosion resistive, noncombustible materials, be painted, when necessary, to prevent corrosion, rust, peeling paint, and excessive fading.

B. Failure of owners to keep signs maintained in good mechanical and visual repair shall be deemed a violation of this UDO.

C. It shall be the duty and responsibility of the owner of every sign to maintain the immediate surrounding areas occupied by the sign in a clean condition, free of rubbish. Any landscaping surrounding the sign shall be kept trimmed and in good repair. If the landscaping installed at the time of sign approval dies, said landscaping shall be replaced immediately or as soon as the planting season, specified in the WFD3, begins.

D. Every existing sign shall be subject to inspection whenever the Administrator deems it necessary. In the event an inspection demonstrates that said repairs, and/or maintenance is necessary, the sign owner shall be notified and required to complete said repairs and/or maintenance within 30 days of notification. The Administrator is authorized to grant one 30-day extension, if, upon written request, it is deemed necessary due to extenuating circumstances.

E. If the Administrator shall find that any sign is unsafe or unsecure, or is a threat to the public safety, or was, after the adoption of this UDO constructed, erected, or maintained in violation of the provisions of this UDO, they shall give written notice to the sign owner. Such notice shall specify the manner in which the sign is unsafe or in violation of this UDO.

F. Sign copy shall be removed and in the case of a wall sign, the building façade shall be repaired, by the sign and/or property owner when the use which the sign is associated with is no longer conducted on the premises. The sign copy shall be removed within 30 days of when the use ceases to operate. If the owner fails to remove the sign copy, the Administrator shall give the owner 30 days written notice to remove it. Failure to comply with the notice shall be deemed a violation of this UDO.

14.5.10 Ownership and Maintenance of Common Areas

All developments containing land, amenities or other facilities under private common ownership shall provide for the ownership and maintenance of such areas. Developments that are subject to fee-simple ownership shall convey all such common areas to a non-profit corporate property owners' association with a membership of 100 percent of the lots/units in the development. The developer shall file with the County Register of Deeds a "dedication of covenants" and must meet the following criteria:

A. The homeowners'/property owners' association must be established before the units are sold,

B. The homeowners'/property owners' association is established as the responsible entity for the liability insurance, pertinent local taxes, and maintenance of all recreation and other facilities,

C. Sums levied by the homeowners'/property owners' association that remain unpaid shall become a lien on the delinquent property,

D. For condominium development, documents must meet the requirements of NCGS 47A Unit Ownership, and

E. All easements over common areas for access, ingress, egress, and parking shall be shown and recorded on a final plat with the Franklin or Wake County Register of Deeds.

F. See Section 7.2.F. for ownership and maintenance requirements specific to open and community space.

15 NON - CONFORMITIES

15.1 General Provisions

15.1.1 Purpose

The purpose of this Chapter is to:

A. Bring as many nonconforming lots, buildings, structures, site elements, uses, and signs into conformance or closer to conformance as feasible or reasonably practical to further town goals and promote safety and consistency with new development standards,

B. Recognize the existing investments made and interests of property owners in continuing to use nonconforming lots, buildings, structures, site elements, uses, and signs, and

C. Preclude the expansion, reconstruction or reestablishment of nonconforming lots, buildings, structures, site elements, uses, and signs unless doing so can serve as an incentive to achievement of even greater public benefit, such as redevelopment and historic preservation.

15.1.2 Applicability

A. **General Applicability**.

1. The standards of this Chapter apply to nonconforming lots, buildings, structures, site features, uses, and/or signs created by initial adoption of, or amendments to, this Unified Development Ordinance (UDO) or due to existing conditions of areas brought into the Town's jurisdiction, unless otherwise expressly provided in this UDO.

2. The standards of this Chapter do not apply to nonconforming lots, buildings, structures, development improvements, uses, and/or signs that were not legally established pursuant to the laws and regulations that were in effect at that time; those situations are deemed illegal and not protected under the allowances of this Chapter.

CONTENT

15.1 General Provisions
15.2 Nonconforming Lots
15.3 Nonconforming Buildings and Structures
15.4 Nonconforming Site Elements
15.5 Nonconforming Uses
15.6 Nonconforming Signs

3. The standards of this Chapter do not prohibit the exercise of statutory or common law vested rights while the approval is valid.

B. **Maintenance and Minor Repair**. Nothing in this Chapter shall be construed to prevent or prohibit the routine maintenance and minor repair of nonconforming lots, nonconforming buildings or structures, buildings or structures containing nonconforming uses, nonconforming site features, or nonconforming signs. This includes strengthening or restoring to a safe condition any building, structure, or part thereof declared to be unsafe by any public official charged with protecting the public safety, health and welfare pursuant to orders of such official or modifications necessary for ADA compliance.

C. **Change in Ownership or Tenancy**. A change of ownership or tenancy shall not, in and of itself, affect the nonconformity status of a lot, building, structure, development improvement, use, or sign.

D. **Nonconformity Due to Right of Way Expansion Through Eminent Domain**. A lot, building, structure, or development improvements made nonconforming due to right of way expansion as a result of eminent domain, shall be exempt from the standards of this Chapter.

15.2 Nonconforming Lots

15.2.1 Applicability

A. The standards of this Section apply to nonconforming lots. A nonconforming lot is a lot of record that does not meet the lot standards of Chapter 4 and the lot area and lot width requirements for the zoning district in which it is located.

B. The standards of this Section shall not apply to a nonconforming lot located in a subdivision that has a valid subdivision or final plat approval but has not yet been recorded.

15.2.2 Regulations

A. A nonconforming lot may be used for any use or structure provided that all applicable dimensional and use requirements for the district in which the lot is located are met.

B. Development on a nonconforming lot is prohibited if the nonconforming lot can be combined with an adjoining lot owned by the same person or party to create a single conforming or to reduce the extent of the nonconformity.

C. A conforming building or structure on a nonconforming lot may undergo a change of use so long as any redevelopment activity or required improvements associated with the new use do not create new nonconformities.

15.2.3 Discontinuance.

If a nonconforming lot is consolidated with an adjoining lot to create a single conforming or to reduce the extent of the nonconformity, it may not later be subdivided in a nonconforming manner.

15.3 Nonconforming Buildings and Structures

15.3.1 Applicability

The standards of this Section shall apply to nonconforming buildings and structures. A nonconforming building or structure is an existing building or structure that does not comply with the dimensional, design, locational or other standards applied to buildings of this UDO.

15.3.2 Regulations

A. **Principal Buildings and Structures**.

1. A nonconforming building or structure shall not be moved or relocated over any distance, unless it is locally designated or listed in the State Study List, or National Register of Historic Places, or it complies with the regulations of this UDO.
2. A nonconforming building or structure shall not be enlarged or expanded in a way that increases the nonconformity.
3. A nonconforming building or structure may be modified if such modifications comply with the standards of this UDO.
4. As a part of redevelopment as defined in Chapter 18, nonconforming buildings or structures shall be brought into compliance in accordance with the standards of this UDO.
5. A nonconforming building or structure may undergo a change of use if the proposed use complies with the regulations of this UDO.

B. **Accessory Buildings and Structures**.

1. No nonconforming accessory building or structure shall continue after the principal use, building, or structure on the lot is terminated by abandonment, damage, or destruction unless such accessory use or structure is made to conform to the standards for the zoning district in which it is located or it is a locally designated landmark, listed in the State Study List, or listed in the National Register of Historic Places.
2. No nonconforming accessory building or structure shall become or replace any terminated principal nonconforming building or structure.

15.3.3 Damage or Destruction

A. A building, structure, or part thereof shall be considered destroyed if the cost of repair is more than 50 percent of its assessed value.

B. Should a nonconforming building or structure or nonconforming portion of a building or structure be destroyed by any means, it shall not be reconstructed except in conformity with the provisions of this UDO.

C. The above requirement does not apply to primary and accessory buildings or structures located in the LH-O District or properties listed in the National Register of Historic Places. Structures meeting these classifications may be reconstructed as long as such reconstruction does not increase the nonconformity of the original structure.

15.4 Nonconforming Site Elements

15.4.1 Applicability

The standards of this Section shall apply to nonconforming site elements. A nonconforming site element is any fence, wall, retaining wall, berm, screening, sight distance triangle obstruction, utility, open space, community space, tree preservation, buffers, landscaping, parking, loading, driveways, bicycle parking, pedestrian infrastructure, transit accommodations, or lighting that does not comply with the standards of this UDO.

15.4.2 Regulations

A. **Redevelopment.** As a part of redevelopment, nonconforming site elements shall be brought into compliance in accordance with Table 1.10. (Chapter 1).

B. **Change of Use.** As a part of a change of use, nonconforming site elements shall be brought into compliance in accordance with Table 1.10. (Chapter 1).

15.4.3 Compliance

Where full compliance with the requirements of this Section is precluded by a lack of sufficient developable area due to the size of the lot, the layout of existing development, or the presence of significant wetlands, floodplains, watercourses, or other significant environmental constraints on development, the applicant shall comply with the requirements of this Section to the maximum extent practicable, as determined by the Administrator.

15.4.4 Discontinuance

Nonconforming development improvements shall be allowed to remain in place until an applicable nonconformity compliance scenario is triggered.

15.5 Nonconforming Uses

15.5.1 Applicability

The standards of this Section shall apply to nonconforming uses. A nonconforming use is the use of land, buildings, or structures that was lawfully established that does not comply with the use regulations of this UDO, including supplemental use standards. Nonconforming uses include principal, accessory, and temporary uses. Existing uses that would normally require special approval to be established, such as a Special Use Permit or Conditional Zoning approval, that were lawfully established without special approval shall also constitute a nonconforming use.

15.5.2 Regulations

A. **Continuation**.

1. No nonconforming use shall be extended, expanded, enlarged, or moved to occupy a different or greater area of a development site, building, or structure than was occupied by such use at the time it became nonconforming, provided that a nonconforming use may be extended throughout any parts of a building that were specifically designed and arranged for such use at the time it became nonconforming.

2. No building or structure devoted to a nonconforming use shall be enlarged, extended, or moved unless such building or structure is thereafter devoted to a conforming use.

3. Accessory uses to nonconforming uses shall be considered extensions, expansions, or enlargements of nonconforming uses.

4. If a nonconforming use ceases for more than 90 consecutive days or a total of 180 days in any 12-month period, subsequent use of the development site, building, or structure previously devoted to such use shall not be used for any nonconforming uses and shall thereafter be devoted to conforming uses only, including accessory uses.

B. **Change of Use**.

1. **Principal Uses**.

a. As a part of change of use, the principal use of the tenant space or building shall comply with the allowances established in Table 3.3.

b. Should the change of use occur on a multi-use site, nonconforming uses of currently occupied tenant spaces and buildings may continue.

2. **Accessory Uses**. As a part of change of use, nonconforming accessory uses shall be discontinued.

15.5.3 Damage or Destruction

A. If a building or structure (whether conforming or nonconforming) containing a nonconforming use is damaged to an extent less than 50 percent of its assessed value, the structure may be reconstructed and used as before if a Building Permit for the reconstruction is secured within 12 months after such damage. Any delays in reconstruction due to factors beyond the control of the structure's owner or occupant shall not be considered in determining this time period.

B. If a building or structure (whether conforming or nonconforming) containing a nonconforming use is damaged to an extent exceeding 50 percent of its assessed value, the structure shall not be reconstructed or used except in conformity with the provisions of this UDO.

15.6 Nonconforming Signs

15.6.1 Applicability

The standards of this Section shall apply to nonconforming signs except as otherwise exempt by NCGS §160D-912.1.

15.6.2 Regulations

A. **Alterations.** A nonconforming sign shall not be altered, enlarged, or relocated unless made to be conforming or replaced with a conforming sign. Replacement of sign copy shall not be considered an applicable sign alteration.

B. **Removal.** Removal of a nonconforming sign shall require that sign to conform if replaced.

C. **Redevelopment**. As a part of redevelopment, nonconforming signs shall be brought into compliance in accordance with Table 1.10. (Chapter 1).

D. **Change of Use**. As a part of a change of use, nonconforming signs shall be brought into compliance in accordance with Table 1.10. (Chapter 1).

15.6.3 Damage or Destruction

A. If a nonconforming sign is damaged less than 50 percent of its assessed value, such sign may be reconstructed if a Development Permit for reconstruction is secured within 90 days after the date of damage and the sign is reconstructed in a manner that does not increase the nonconformity.

B. If a nonconforming sign is damaged 50 percent or more of its assessed value, such sign may be reconstructed only in compliance with the regulations of this UDO.

16 ADMINISTRATION

16.1 General Provisions

16.1.1 Purpose

The purpose of this Chapter is to establish the application types, review and decision-making processes required to develop land within the jurisdiction of the Town, and the roles of review and decision-making bodies.

16.1.2 Applicability

The provisions of this chapter shall be applicable to all development activity within the Town's jurisdiction, including amendments to previously approved development activity. Where there are ambiguities in the associated review procedures and decision-making criteria for particular applications, the Administrator shall interpret the procedures and identify the review process for such application or development activity.

A. **No Construction to Commence Without Permit.** No land shall be used or occupied, and no structures shall be erected, moved, extended, or enlarged, nor shall any timbering, clearing and grubbing, or filling of any lot for the construction of any building, infrastructure, or site improvement be initiated until the Administrator has issued an appropriate permit which will certify that the proposed work is in conformity with the provisions of this ordinance.

B. **Inspections**.

1. Agents and officials of the Town are authorized to inspect land-disturbing activities to ensure compliance with this Unified Development Ordinance (UDO), or rules or orders adopted or issued pursuant to this UDO, and to determine whether the measures required in approved development plans are being appropriately followed. Notice of the right to inspect shall be included in the notice of approval of each Plan.

2. No person shall willfully resist, delay, or obstruct an authorized representative, employee, or agent of the Town while that person is inspecting or attempting to inspect a land-disturbing activity.

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16.1 General Provisions
16.2 Review and Decision-Making Bodies
16.3 Review Procedures Overview
16.4 General Procedures
16.5 Administrative Procedures
16.6 Quasi-Judicial Procedures
16.7 Legislative Procedures

16.1.3 Chapter Overview

Table 16.1.3 provides an overview of the procedures detailed in Section 16.5, 16.6, and 16.7.

Table 16.1.3 Chapter Overview

Administrative Procedures	Reference
Administrative Modifications/Adjustments	16.5.2
Architectural Design Review	16.5.3
Certificate of Appropriateness - Minor Works	16.5.4
Certificate of Completion	16.5.5
Construction Plan	16.5.6
Floodplain Development Permit	16.5.7
Interpretations	16.5.8
Land Disturbance Permit	16.5.9
Reforestation Permit	16.5.10
Site Plan	16.5.11
Subdivision	16.5.12
Temporary Use Permit	16.5.13
Zoning Compliance Permit	16.5.14
Quasi-Judicial Procedures	
Administrative Appeals	16.6.2
Certificate of Appropriateness - Demolition of Historic Structures	16.6.3
Certificate of Appropriateness - Major Works	16.6.4
Special Use Permits	16.6.5
Variances	16.6.6
Legislative Procedures	
Annexation	16.7.2
Comprehensive Plan Amendment	16.7.3
Development Agreement	16.7.4
Designation of Historic Landmarks	16.7.5
Extraterritorial Jurisdiction Expansion	16.7.6
Map Amendment - Base District	16.7.7
Map Amendment - Conditional District	16.7.8
Map Amendment - Planned Unit Development	16.7.9
Text Amendment	16.7.10
Vested Rights Certificate	16.7.11

16.2 Review and Decision-Making Bodies

16.2.1 Administrator

Information on administrative roles and delegation is detailed in Chapter 18 of this UDO.

A. The Administrator or designees shall have the following powers and duties under this ordinance:

1. Maintain a record of permits and approvals on file, in accordance with the Town's record retention policy, which has been approved by the State, and to make copies available to individuals requesting access,
2. Carry out the review authority and responsibilities outlined in Table 16.3, Review Procedures Overview for compliance with the terms of this ordinance and consult with Technical Review Committee (TRC) and other staff as needed,
3. Serve as professional staff to and provide to the Board of Commissioners, the Planning Board, Board of Adjustment, and the Historic Preservation Commission with reports and recommendations regarding matters before these bodies, either as required by this ordinance, other laws or regulations or at the request of the body,
4. Enforce this ordinance in accordance with Chapter 17,
5. Review all development plans for compliance with street and utility requirements of the Town.
6. Administer the sedimentation and erosion control program for the town.
7. Administer the floodplain management program in accordance with Chapter 12.

16.2.2 Technical Review Committee

A. **Membership.** The TRC shall be chaired by the Planning Director, or their designee, and shall consist of members of technical staff and representatives from Town departments and other agencies involved in development review.

B. **Powers and Duties.** The TRC shall have the following powers and duties:

1. Assist in the establishment of technical requirements for all applications, including: submission schedules, size and number of drawings, type of media, etc.,
2. Interpret the most appropriate construction details and standards consistent with the intent of the UDO,
3. Carry out the review authority and responsibilities outlined in Table 16.3, Review Procedures Overview.

16.2.3 Board of Commissioners

A. **Powers and Duties.** The Board of Commissioners shall have the following powers and duties:

1. Conduct any and all business in accordance with their Charter and NCGS,
2. Adopt the Comprehensive Plan and amend as necessary,
3. Carry out the review authority and responsibilities outlined in Table 16. 3, Review Procedures Overview.

16.2.4 Planning Board

A. **Powers and Duties.** The Planning Board shall have the following powers and duties:

1. Review and recommend to the Board of Commissioners the adoption and amendment of a Comprehensive Plan and updates as necessary,
2. Advise the Board of Commissioners concerning the implementation of the Comprehensive Plan, including, but not limited to, review and comment on all zoning text and map amendments as required by NCGS §160D,
3. Develop and recommend policies, ordinances, development regulations, administrative procedures, and other means for carrying out the Comprehensive Plan in a coordinated and efficient manner, including directing staff to initiate amendments to this UDO,
4. Carry out the review authority and responsibilities outlined in Table 16.3, Review Procedures Overview,
5. The Planning Board shall also have any additional powers and duties as may be set forth in NCGS §160D as amended, or at the direction of the Board of Commissioners.

B. **Membership and Quorum**.

1. The Planning Board shall consist of seven members. A quorum of four members shall be necessary to transact business.
2. The Wake Forest Board of Commissioners shall appoint members from a list of qualified applicants who have submitted an advisory board application. A minimum of five members shall reside in the corporate limits and a minimum of one member shall reside in the extraterritorial jurisdiction (ETJ), unless the proportional calculation for the ETJ representation, which shall be determined based on the population of residents of the extraterritorial area, which requires more than one ETJ member. The population estimates for this calculation shall be updated no less frequently than after each decennial census. The town resident members shall be appointed by the Wake Forest Board of Commissioners and the ETJ resident members shall be appointed by the Wake County Board of Commissioners after a recommendation of the Wake Forest Board of Commissioners. The representatives

of the extraterritorial area shall have equal rights, privileges, and duties with the other members of the Planning Board.

3. Vacancies shall be filled by the Wake Forest Board of Commissioners or the Wake County Board of Commissioners, as applicable, as they occur.

4. Members shall serve three-year terms. No member shall serve more than two full consecutive terms. Once a member has served two full consecutive terms, the member must be off the Planning Board for a minimum of one year before being eligible to serve again. This term limit requirement may be waived by the Board of Commissioners. The Board of Commissioners may also remove members of appointed boards/commissions who are in violation of the attendance policy.

5. Officers shall be elected in accordance with the adopted rules of procedure.

6. All members shall, before entering their duties, qualify by taking an oath of office as required by NCGS §160D.

C. **Conduct of Business.** The Planning Board shall conduct its business in accordance with the Planning Board Handbook.

16.2.5 Board of Adjustment

A. **Powers and Duties**. The Town's Board of Adjustment shall have the following powers and duties to be carried out in accordance with the terms of this ordinance.

1. Carry out the review authority and responsibilities outlined in Table 16.3, Review Procedures Overview, including:

   a. To hear and decide appeals where it is alleged by the appellant that there is error in any order, requirement, permit, decision, determination, or refusal made by the Administrator in the carrying out or enforcement of any provision of this ordinance. A concurring vote of a majority of members of the Board shall be necessary to reverse, wholly or partly any order, requirement, decision, permit, determination, or refusal,

   b. To authorize upon appeal, in specific cases, such variances from the terms of this ordinance in accordance with the procedures set out in Section 16.6.6.

2. Any additional powers and duties as may be set forth in other laws and regulations or at the direction of the Board of Commissioners.

B. **Membership and Quorum**.

1. The Board of Adjustment shall consist of five regular members plus one alternate member. A quorum of four members shall be necessary to transact business. The Wake Forest Board of Commissioners shall appoint members from a list of qualified applicants who have submitted an advisory board application. A minimum of three members shall reside in the corporate limits and a minimum of one member shall reside in the ETJ, unless the proportional calculation for the ETJ representation, which shall be determined based on the population of residents of the extraterritorial area, which requires more than one ETJ member. The population estimates for this calculation shall be updated no less frequently than after each decennial census. The town resident members shall be appointed by the Wake Forest Board of Commissioners and the ETJ resident members shall be appointed by the Wake County Board of Commissioners after a recommendation of the Wake Forest Board of Commissioners. The representatives of the extraterritorial area shall have

equal rights, privileges, and duties with the other members of the Board of Adjustment.

2. Vacancies shall be filled by the Wake Forest Board of Commissioners or the Wake County Board of Commissioners, as applicable, as they occur.

3. Members shall serve three-year terms. No member shall serve more than two full consecutive terms. Once a member has served two full consecutive terms, the member must be off the Board of Adjustment for a minimum of one year before being eligible to serve again. This term limit requirement may be waived by the Board of Commissioners. The Board of Commissioners may also remove members of appointed boards/commissions who are in violation of the attendance policy.

4. Officers shall be elected in accordance with the adopted rules of procedure.

5. All members shall, before entering their duties, qualify by taking an oath of office as required by NCGS §160D.

C. **Conduct of Business.** The Board of Adjustment shall conduct business in accordance with the Board of Adjustment Handbook.

16.2.6 Historic Preservation Commission

A. **Powers and Duties.** The Historic Preservation Commission (HPC) shall have the following powers and duties to be carried out in accordance with the terms of this ordinance and NCGS §160D-942:

1. Undertake an inventory of properties of historical, prehistorical, architectural, and/or cultural significance,

2. Recommend to the Board of Commissioners areas to be designated by ordinance as "Historic Districts" and individual structures, buildings, sites, areas, or objects to be designated by ordinance as "Landmarks",

3. Acquire by any lawful means the fee or any lesser included interest, including options to purchase, to properties within established districts or to any such properties designated as landmarks to hold, manage, preserve, restore, and improve such properties, and to exchange or dispose of the property by public or private sale, lease or otherwise, subject to covenants or other legally binding restrictions that will secure appropriate rights of public access and promote the preservation of the property,

4. Restore, preserve, and operate historic properties,

5. Recommend to the Board of Commissioners that designation of any area as a historic district or part thereof, or designation of any building, structure, site, area, or object as a landmark, be revoked or removed for cause,

6. Conduct an educational program regarding historic properties and districts within its jurisdiction,

7. When authorized by the Board of Commissioners, may contract with the State, or the United States of America, or any agency of either, or with any other organization provided the terms are not inconsistent with State or federal law,

8. Enter, solely in performance of its official duties and only at reasonable times, upon private lands for examination or survey thereof. However, no member, employee, or agent of the commission may enter any private building or structure without the express consent of the owner or occupant thereof,

9. Prepare and recommend the official adoption of a preservation element as part of the Town's Comprehensive Plan,

10. Review and act upon proposals for alterations, demolitions, or new construction within historic districts, or for the alteration or demolition of designated landmarks, as described in Section 16.6.3,

11. Negotiate at any time with the owner of a building, structure, site, area, or object for its acquisition or its preservation, when such action is reasonably necessary or appropriate,

12. Take steps during the period of postponement of demolition or alteration of any historic landmark or property to ascertain what the local governing body can or may do to preserve such property including consultation with private civic groups, interested private citizens, and other public boards or agencies, and including investigation of potential acquisition by the Board of Commissioners when

the preservation of a given historic property is clearly in the interest of the general welfare of the community and such property is of certain historic and architectural significance,

13. Propose to the Board of Commissioners changes to this or any other ordinance and propose new ordinances or laws relating to historic landmarks and districts or relating to a total program for the protection and/or development of the historic resources of the Town and its environs,

14. Carry out the review authority and responsibilities outlined in Table 16.3 Review Procedures Overview,

15. Any additional powers and duties as may be set forth for in other laws and regulations or at the direction of the Board of Commissioners.

B. **Membership and Quorum.**

1. The HPC shall consist of nine members. A quorum of five members shall be necessary to transact business.

2. The Wake Forest Board of Commissioners shall appoint all members. A majority of the members of the HPC shall have a demonstrated special interest, experience, or education in history, architecture, archaeology or related fields.

3. All members shall reside within the Town's jurisdiction, except as allowed by NCGS. At least one member shall reside in a Locally Designated Historic Landmark or Local Historic District. At least one member shall reside in the ETJ of the Town. Vacancies shall be filled as they occur. The town resident members shall be appointed by the Wake Forest Board of Commissioners. The required ETJ resident member shall be appointed by the Wake County Board of Commissioners after a recommendation by the Wake Forest Board of Commissioners. If despite good faith efforts, a resident of the ETJ cannot be found to fill the seat reserved for the ETJ member, then the Wake County Board of Commissioners may appoint another resident of the county (including a resident of the Town) to fill the ETJ seat. If the Wake County Board of Commissioners fails to make the appointment within 90 days after receiving a resolution from the Town Board of Commissioners requesting that the appointment be made, the Town Board of Commissioners may make the appointment. Representatives of the extraterritorial area shall have equal rights, privileges, and duties with the other members of the HPC.

4. The HPC may appoint one, but no more than two additional ex-officio (non-voting) members to provide special expertise as they deem appropriate. Such members are not required to live within the jurisdiction of the Town. The HPC will determine the length of term at the time of appointment, not to exceed two years.

5. All members shall serve three-year terms. No member shall serve more than two full consecutive terms. Once a member has served two full consecutive terms, the member must be off the commission for a minimum of one year before being eligible to serve again. This term limit requirement may be waived by the Board of Commissioners.

6. Officers shall be elected in accordance with the adopted rules of procedure. The Board of Commissioners may also remove members of appointed boards/commissions who are in violation of the attendance policy.

7. The Board of Commissioners may appoint at least one and no more than two youth as ex-officio (non-voting) members as they deem appropriate. Such members are not required to live within the jurisdiction of the Town but are required to attend a high school located within the Town Limits. Youth ex-officio members shall serve two-to-four-year terms or until graduating from high school, whichever comes first.

8. All members shall, before entering their duties, qualify by taking an oath of office as required by NCGS §160D.

C. **Conduct of Business.** The HPC shall conduct business in accordance with the Historic Preservation Commission Handbook.

16.2.7 Conflict of Interest

The North Carolina General Assembly has adopted rules in NCGS §160D-109 regarding conflicts of interest for governing boards, appointed boards, and administrative staff:

A. **Board of Commissioners.** A member of the Board of Commissioners shall not vote on any legislative decision regarding a development regulation, adopted pursuant to this UDO where the outcome of the matter being considered is reasonably likely to have a direct, substantial, and readily identifiable financial impact on the member. A member of the Board of Commissioners shall not vote on any zoning map amendment if the landowner of the property subject to a zoning map amendment or the applicant for a text amendment is a person with whom the member has a close familial, business, or other associational relationship.

B. **Appointed Boards.** Members of appointed boards shall not vote on any advisory recommendation or quasi-judicial decision regarding a development regulation adopted pursuant to this UDO where the outcome of the matter being considered is reasonably likely to have a direct, substantial, and readily identifiable financial impact on the member. Members shall not vote on any zoning map amendment recommendation if the property owner subject to a zoning map amendment or an applicant for a text amendment is a person with whom the member has a close familial, business, or other associational relationship.

C. **Administrative Staff.** No staff member shall make a recommendation to an elected or appointed board or final administrative decision required by this UDO if the outcome of that decision would have a direct, substantial, and readily identifiable financial impact on the staff member or if the applicant or other person subject to that decision is a person with whom the staff member has a close familial, business, or other associational relationship. If a staff member has a conflict of interest under this section, the decision shall be assigned to the supervisor of the staff person or such other staff person as may be designated by the development regulation or other ordinance. No staff member shall be financially interested or employed by a business that is financially interested in a development subject to regulation under this UDO unless the staff member is the owner of the land or building involved. No staff member or other individual or an employee of a company contracting with the Town to provide staff support shall engage in any work that is inconsistent with his or her duties or with the interest of the Town, as determined by the Town.

D. **Quasi-Judicial Decisions.** A member of any board exercising quasi-judicial functions pursuant to this UDO shall not participate in or vote on any quasi-judicial matter in a manner that would violate affected persons' constitutional rights to an impartial decision maker. Impermissible violations of due process include, but are not limited to, a member having a fixed opinion prior to hearing the matter that is not susceptible to change, undisclosed ex-parte communications, a close familial, business, or other associational relationship with an affected person, or a financial interest in the outcome of the matter.

E. **Familial Relationship.** For the purposes of this section, a "close familial relationship" means a spouse, parent, child, brother, sister, grandparent, or grandchild. The term also includes the step, half, and in-law relationships.

16.3 Review Procedures Overview

A. Table 16.3 provides an overview of the review and decision-making bodies for the review procedures of this UDO.

Table 16.3 Review Procedures Overview

Key: R = Recommending Body; D = Decision-Making Body; * = Public Hearing / Public Comment Session Required; ^ = Pre-Application Meeting Required	Reference	Administrative Agency					
		Administrator	Technical Review Committee	Board of Commissioners	Planning Board	Board of Adjustment	Historic Preservation Commission
Administrative Procedures							
Administrative Modifications/ Adjustments	16.5.2	D	R				
Architectural Design Review	16.5.3	D					
Certificate of Appropriateness - Minor Work	16.5.4	D					
Certificate of Completion	16.5.5	D	R				
Construction Plan	16.5.6	D	R				
Floodplain Development Permit	16.5.7	D	R				
Interpretation	16.5.8	D					
Land Disturbance Permit	16.5.9	D	R				
Reforestation Permit	16.5.10	D	R				
Site Plan	16.5.11	D^	R				
Subdivision	16.5.12	D^	R				
Temporary Use Permit	16.5.13	D					
Zoning Compliance Permit	16.5.14	D					
Quasi-Judicial Procedures							
Administrative Appeal	16.6.2	R				D*	
Certificate of Appropriateness - Demolition of Historic Structure	16.6.3	R^					D*
Certificate of Appropriateness - Major Work	16.6.4	R^					D*
Special Use Permit	16.6.5	R^		D*			
Variance	16.6.6	R				D*	
Legislative Procedures							
Annexation	16.7.2	R		D*			
Comprehensive Plan Amendment	16.7.3	R		D*	R*		
Development Agreement	16.7.4	R		D*			
Designation of Historic Landmarks and Districts	16.7.5	R		D*			R*
Extraterritorial Jurisdiction Expansion	16.7.6	As required by NCGS 160(D)					
Map Amendment - Base District	16.7.7	R^		D*	R*		
Map Amendment - Conditional District	16.7.8	R^		D*	R*		
Map Amendment - Planned Unit Development	16.7.9	R^		D*	R*		
Text Amendment	16.7.10	R		D*	R*		
Vested Rights Certificate	16.7.11	R		D			

16.4 General Procedures

16.4.1 Application Requirements

The specific requirements for each type of plan are specified in the Town application requirement checklists.

16.4.2 Pre-Application Meeting

A. The purpose of a pre-application meeting is to provide an opportunity for the applicant and Town staff to review applicable submittal requirements, procedures, and schedules and discuss development requirements.

B. A pre-application meeting is required for particular application types in accordance with Table 16.3 Review Procedures Overview. A pre-application meeting is optional for all other application types.

C. If a pre-application meeting is required or requested, the applicant shall provide the materials detailed in the Town application requirement checklists.

D. The pre-application meeting is intended to facilitate the review process. Discussion and review are not binding.

16.4.3 Authority to File

A. Applications for development approvals may be made by the landowner, a lessee or person holding an option or contract to purchase or lease land, or an authorized agent of the landowner.

B. An easement holder may also apply for development approval for such development as is authorized by the terms of the easement.

C. The Administrator may require an applicant to present evidence of authority to submit the application.

16.4.4 Submittal Provisions

A. **Application Information.** The presumption shall be that all of the information required in the application forms is necessary to satisfy the requirements of this section. However, it is recognized that each application is unique, and therefore more or less information may be required according to the needs of the particular case.

B. **Application Submittal Deadline.** Applications sufficient for processing shall be submitted to the Administrator in accordance with the published workflow schedule.

C. **Fees.** The Board of Commissioners is authorized to establish fees for processing and administering applications. Review fees, as published on the adopted fee schedule, shall be paid at the time of application submittal.

16.4.5 Completeness Review

A. **Sufficiency to be Determined by Administrator.** All applications shall be sufficient for processing before the Administrator is required to review the application. An application shall be sufficient for processing when it contains all of the information necessary, in accordance with the appropriate Zoning Compliance Permit checklist, to decide whether or not the development as proposed will comply with the requirements of this ordinance. The Administrator will prepare and disseminate appropriate checklists for use by applicants in their submission. These checklists are located on the Town website and are made a part of this ordinance by reference.

B. **Application Incomplete.** On determining an application is incomplete, the Administrator shall provide the applicant with written notice of the submittal deficiencies. Incomplete applications submitted have 30 days to make revisions to be sufficient for processing for review. If a complete application is not received within 30 days of initial submittal, the application is considered abandoned. If the applicant submits a request in writing to the Administrator within 15 calendar days of the application abandonment date, 50 percent of the application fee paid for the abandoned application shall be refunded.

C. **Application Complete.** On determining an application is complete, the Administrator shall provide written notice to the applicant that the application has been accepted for review.

16.4.6 Resubmittal

Upon receiving review comments from staff or TRC on an application that has been accepted for review, a revised application shall be resubmitted no later than six months from the date of the comments. If a revised application is not resubmitted within the stated timeframe, the application will be considered withdrawn, and a new application and review fee shall be submitted.

16.4.7 Amendments

Unless otherwise specified in this Chapter, any change to approved plans, permits, or other approvals must be approved as a new plan, permit, or other approval. Any amendment not approved shall invalidate the plan, permit, or other approval and any subsequent building permits.

16.4.8 Public Notification

A. **Public Notification Requirements by Permit/Process Type**. Public notification shall be required per permit / process type in accordance with Table 16.4.8.

Table 16.4.8
Public Notification Requirements by Permit / Process Type

Key: • = Notice Required	Reference	Public Notification Level 1	2	3	4	5
Administrative Procedures						
All Administrative Procedures	16.5	No Notice Required				
Quasi-Judicial Procedures						
Special Use Permits	16.6.5	•	•	•	•	•
Variances	16.6.6	•	•	•	•	
Certificate of Appropriateness - Major Works	16.6.4	•		•	•	
Certificate of Appropriateness - Demolition of Historic Structures	16.6.3	•		•	•	
Appeal of Administrative Decisions	16.6.2	•		•		
Legislative Procedures						
Text Amendment						
Planning Board Public Comment Session	16.7.10.B.3	•				
Board of Commissioners Public Hearing	16.7.10.B.4	•	•			
Map Amendment - Base District						
Planning Board Public Comment Session	16.7.7.B.4	•		•	•	•
Board of Commissioners Public Hearing [1]	16.7.7.B.5	•	•	•	•	•
Map Amendment - Conditional District						
Planning Board Public Comment Session	16.7.8.B.4	•		•	•	•
Board of Commissioners Consideration	16.7.8.B.5	•	•	•	•	•
Map Amendment - Planned Unit Development District						
Planning Board Public Comment Session	16.7.9.B.4	•		•	•	•
Board of Commissioners Public Hearing	16.7.9.B.5	•	•	•	•	•
Comprehensive Plan Amendment						
Planning Board Public Comment Session	16.7.3.B.4	•				
Board of Commissioners Public Hearing	16.7.3.B.5	•	•			
Other						
Designation of Historic Landmarks/Historic Districts	16.7.5	•	•	•		•
Annexation	16.7.2	As required by NCGS 160(D)				
Development Agreement	16.7.4					
Extraterritorial Jurisdiction Expansion	16.7.6					
Notes						
[1] If the land development map amendment includes 50 or more properties, owned by at least 50 different property owners, the town may elect to utilize the expanded published notice provisions found in NCGS §160D.						

B. **Types of Public Notification**. The following procedures have been established for development applications/petitions that require notification of the public prior to consideration and/or approval

1. **Level 1 – Distribution List.**

   a. A notice of the pending application/meeting shall be posted in a prominent location in Town Hall and on the town's web site, and a notice of such meeting shall be mailed, e-mailed, or delivered to each person and media provider that has filed a written request for notice with the Town Clerk.

   b. This notice shall be posted and mailed, e-mailed, or delivered at least 48 hours before the time of the meeting.

   c. Non-media members of this list shall be charged an annual fee (as set in the fee schedule) to receive all notices by mail. Members of this distribution list must renew their participation in this distribution on an annual basis.

2. **Level 2 – General Notice in Newspaper.**

   a. A notice shall be published in a newspaper of general circulation in the town once a week for two successive weeks, unless the notice is for an annexation public hearing which requires a single notice.

   b. The first publication shall appear no less than 10 days or more than 25 days prior to the date fixed for the legislative or evidentiary public hearing.

   c. The notice shall include the time, place and date of the hearing/meeting and include a description of the property and the nature of the proposal.

3. **Level 3 – Notification to Affected Property Owners.**

   a. **Mailed Notice.**

      i. The owners of all property affected by a pending action (e.g., new overlay district) shall be notified of the hearing/meeting by first class mail.

      ii. Such notification shall be postmarked at least 10 but not more than 25 days prior to the date of the meeting at which the matter is to be heard.

   b. **Published Notice – Full Community Notification.**

      i. As an alternative to the mailed notice requirements in paragraph 3.a the Town may elect to serve notice through a full community notification for pending actions that affect at least 50 properties with at least 50 different property owners.

      ii. The Town shall publish notice of the hearing/meeting in a newspaper of general circulation in the town.

      iii. Two advertisements shall be published in separate calendar weeks.

      iv. Each advertisement shall not be less than one-half of a newspaper page in size.

      v. The advertisement shall only be effective for property owners who reside in the area of general circulation of the newspaper which publishes the notice.

      vi. Property owners who reside outside of the newspaper circulation area, according to the address listed on the most recent property tax listing for the affected property, shall be notified by first class mail.

   c. **Posted Notice.** In addition to providing mailed notice or published notice, as required in paragraphs a and b above, a sign or signs shall be placed in prominent location(s) on the subject property(ies) or on an adjacent public street or highway right-of-way with a notice of the pending action and a phone number to contact for additional information. The sign(s) shall not be required to be placed on each parcel where an application site includes multiple contiguous parcels, provided that enough signs are posted to give reasonable notice to interested persons passing by the site.

   d. **Additional Requirements for Third Party Re-Zonings.**

      i. Except for a town-initiated zoning map amendment, when an application is filed to request a zoning map amendment and that application is not made by the owner of the parcel of land to which the amendment would apply, the applicant shall certify to the Board of

Commissioners that the owner of the parcel of land as shown on the county tax listing has received actual notice of the proposed amendment and a copy of the notice of legislative or evidentiary public hearing.

ii. The applicant shall certify that proper notice has been provided in fact, and such certificate shall be deemed conclusive in the absence of fraud.

iii. If notice cannot with due diligence be achieved by personal delivery, registered, or certified mail, or by a designated delivery service authorized pursuant to 26 USC §7502(f)(2), notice may be given by publication consistent with NCGS §1A-1, Rule 4(j1).

iv. This applies only to an application to request a zoning map amendment where the application is not made by the owner of the parcel of land to which the amendment would apply.

v. Except for a town-initiated zoning map amendment, third party down-zonings are prohibited.

4. **Level 4 - Notification To Adjacent Property Owners.**

a. The owners of property within 500 feet on all sides of the subject property shall be notified of the hearing/meeting by first class mail.

b. Such notification shall be postmarked at least 10 but not more 25 days prior to the date of the meeting at which the matter is to be heard.

c. In addition, a sign shall be prominently posted on the subject property(ies) or on an adjacent public street or highway right-of-way with a notice of the pending action and a phone number to contact for additional information. The sign(s) shall not be required to be placed on each parcel where an application site includes multiple contiguous parcels, provided that enough signs are posted to give reasonable notice to interested persons passing by the site.

5. **Level 5 - Neighborhood Meeting.**

a. The applicant shall conduct a neighborhood meeting where required in Section 16.4.8 prior to any legislative or evidentiary public hearing or review by an approving board or commission.

b. This meeting will allow the applicant to explain the proposed project and to be informed of the concerns of the neighborhood and surrounding property owners.

c. The neighborhood meeting shall be held after the first round of staff review has been completed and prior to application resubmitted for the second round of staff review.

d. The applicant shall send a meeting notice to property owners within 500 feet of the proposed development.

e. The notice shall be sent by first class mail and be postmarked at least 10 but not more than 25 days prior to the date of the neighborhood meeting. A copy of the notice shall also be sent to the Planning Department.

f. The letter shall contain a summary of the proposed development, including the property location and proposed uses and intensity, as well as the applicant's contact information, the date, time, and location of the meeting.

g. The location of the neighborhood meeting should be within a reasonable distance of the proposed project.

h. The meeting shall be held at a reasonable time giving the nearby property owners an opportunity to attend.

i. A summary of the meeting in the form of meeting notes or minutes along with a list and contact information for all attendees shall be submitted to the approving board or commission for their review at all subsequent legislative or evidentiary hearings.

C. **Concurrent Procedures**. Should public notification be required for concurrent proceedings, joint notification may be provided.

16.5 Administrative Procedures

16.5.1 General Administrative Procedures

Administrative review procedures are procedures which are reviewed and decided upon by the Director based on an established set of objective criteria.

A. **Limitation on Administrative Discretion**. All decisions regarding administrative procedures shall be made based on the objective review criteria established per procedure type.

B. **Delivery of Administrative Decision**. All administrative decisions shall be in writing and delivered via electronic mail, personal delivery, or first class mail to the property owner and party seeking determination, if different from the owner.

C. **Appeals**. All results of an administrative procedure may be appealed to the Board of Adjustment per Section 16.6.2.

16.5.2 Administrative Modifications/Adjustments

A. **Applicability**. Administrative Modifications/Adjustments allow the Administrator to approve specific modifications from the following standards of this UDO:

1. **Standards Subject to General Review Criteria**.

   a. Section 3.3.3.A.10 – Buffer requirements for independent living portion of continuing care retirement facilities,

   b. Section 3.4.3.B.4 – Maximum building height of Accessory Dwelling Unit (ADU) based on building height transition standards,

   c. Section 9.6.3 – Adjustments to minimum parking requirements,

   d. Section 9.6.4 – Adjustments to maximum parking allowances,

   e. Section 10.3.5.B – Allowed finish of lighting pole and fixtures.

2. **Standards Subject to General and Additional Review Criteria**.

   a. Chapter 2 – Zoning Districts and Dimensional standards:

      i. Lot area and width minimum up to five percent of standard,

      ii. Front and exterior side setbacks up to five percent of standard,

      iii. Interior side and rear setbacks up to 10 percent of standard,

      iv. Frontage build out up to 10 percent of standard, or

      v. Building coverage up to five percent of standard,

      vi. Increase the maximum block length by up to 20 percent.

   b. Section 3.4.3.C– Allowed use of accessory structures,

   c. Section 8.1.2.B – Maximum fence/wall height,

   d. Section 8.1.2.C – Allowed fence materials,

   e. Section 8.4.2.B – Location and visibility of trash/recycling enclosures from a right of way,

   f. Section 7.3 – Perimeter buffer requirements,

   g. Section 9.6.1 – Parking area location,

   h. Section 9.6.6.D – Vehicular connectivity between adjoining parking lots,

   i. Section 9.8.3 - Location of Driveway Access Points,

   j. Section 11.1.5 – Underground Wiring,

   k. Section 12.4.1.C – Exclusions for erosion and sedimentation control,

   l. Section 12.8.2.B – Reduction in impervious surface.

B. **Procedures.**

1. **Pre-Application Meeting.** If a pre-application meeting is required, in accordance with Table 16.3 Review Procedures Overview, or requested it shall

follow the process detailed in Section 16.4.2 Pre-Application Meetings

2. **Application Submittal and Acceptance**. Application submittal and acceptance shall follow the standards and process established in Section 16.4.4 and 16.4.5.

3. **Administrator Review and Decision**. Once the application is accepted, the Administrator shall review the application based on the review criteria and either:

   a. Issue an approval of the Administrative Modification, or

   b. Issue a denial of the Administrative Modification, detailing the application's failure to comply with the review criteria, to the applicant.

C. **Review Criteria**.

1. **General Review Criteria**.

   a. The modification is consistent with the purpose and intent of the applicable regulation,

   b. The modification, in the case of dimensional standard modifications, is the smallest modification necessary to accommodate the proposed improvement or resolve the subject issue, and

   c. The modification is consistent with the Comprehensive Plan.

2. **Additional Review Criteria**. The Administrative Modification is either:

   a. Required to compensate for some unusual aspect of the development site or the proposed development that is not shared by landowners generally (e.g. lot shape or configuration),

   b. Proposed to protect sensitive natural resources or save healthy existing trees,

   c. Required to eliminate a minor inadvertent failure to fully comply with a standard,

   d. Required due to natural conditions, such as watercourses, riparian buffers, natural rock formations, or topography,

   e. Required due to the presence of existing utilities or other easements,

   f. Proposed for site security purposes, based on a site security plan meeting all checklist requirements.

D. **Effect of Decisions.**

1. **Permit Validity:** Upon approval, the Administrative Modification shall be valid for one year from the date of the approved Construction Plan.

2. **Permit Extension:** The Administrator may grant one, one-year extension of this period upon submittal by the applicant of sufficient justification for the extension. Sufficient justification may include, but is not limited to, delays in other outside agency permits, financing institution delays, or other similar reasons beyond the control of the applicant.

16.5.3 Architectural Design Review

A. **Applicability.** Any application for new buildings and structures or changes to existing buildings and structures, other than Single-Family Detached, Duplex or Townhomes uses, shall be reviewed by the Administrator for architectural design compliance with the standards of this ordinance.

B. **Procedures.**

1. **Pre-Application Meeting.** If a pre-application meeting is required, in accordance with Table 16.3 Review Procedures Overview, or requested it shall follow the process detailed in Section 16.4.2 Pre-Application Meetings.

2. **Application Submittal and Acceptance.** Application submittal and acceptance shall follow the standards and process established in Section 16.4.4 and 16.4.5.

3. **Administrator Review and Decision.** Once the application is accepted, the Administrator shall review the application based on the review criteria and either:

   a. Issue the Determination of Compliance, or

   b. Issue a Denial of Determination of Compliance letter, detailing the application's failure to comply with the review criteria, to the applicant.

C. **Review Criteria.** The following criteria shall be used in the review of architectural design approval.

1. All applicable standards of this UDO are met.

D. **Effect of Decisions.**

1. **Approval Validity.** Upon the approval of the application, the applicant shall have two years to obtain a building permit. Failure to secure building permits within this time shall render the approval void. Any change to the approved plans that has not been authorized by the Administrator shall invalidate the approval and any subsequent building permits.

16.5.4 Certificate of Appropriateness (COA) – Minor Works

A. **Applicability.** Minor works are exterior changes to properties in the LH-O district that do not involve substantial alterations, additions, or removals that could impair the integrity of the property and/or historic district as a whole, in accordance with the Wake Forest Historic Property Handbook and Design Standards.

B. **Procedures.**

1. **Pre-Application Meeting.** If a pre-application meeting is required, in accordance with Table 16.3 Review Procedures Overview, or requested it shall follow the process detailed in Section 16.4.2 Pre-Application Meetings.

2. **Application Submittal and Acceptance**. Application submittal and acceptance shall follow the standards and process established in Section 16.4.4 and 16.4.5.

3. **Administrator Review and Decision**. Once the application is accepted, the Administrator shall review the application based on the review criteria and either:

   a. Issue the Certificate of Appropriateness, or

   b. Issue a letter, detailing the application's failure to comply with the review criteria, to the applicant.

C. **Review Criteria**. The following criteria shall be used in the review of a COA for minor works.

1. The minor work is consistent with the Wake Forest Historic Property Handbook and Design Standards the Secretary of Interiors Standards for Rehabilitation, and

2. All applicable standards of this UDO are met.

D. **Effect of Decisions.**

1. **Permit Validity.** Upon approval the Certificate of Appropriateness shall be valid for one year.

2. **Permit Extension.** The Administrator may grant one, one-year extension of this period upon submittal by the applicant of sufficient justification for the extension. Sufficient justification may include, but is not limited to, delays in other outside agency permits, financing institution delays, or other similar reasons beyond the control of the applicant.

16.5.5 Certificate of Completion

A. **Applicability**. A certificate of completion shall be required prior to the occupancy or use of any new construction and re-occupancy or re-use of any renovation/rehabilitation in the Town.

B. **Procedures.**

1. **Pre-Application Meeting.** If a pre-application meeting is required, in accordance with Table 16.3 Review Procedures Overview, or requested it shall follow the process detailed in Section 16.4.2 Pre-Application Meetings.

2. **Application Submittal and Acceptance**. Application submittal and acceptance shall follow the standards and process established in Section 16.4.4 and 16.4.5.

3. **Administrator Review and Decision**. Once the application is accepted, the Administrator shall review the application based on the review criteria and either:

   a. Inspect the development site per the review criteria of subsection C, and

   b. Issue the Certificate of Completion, or

   c. Issue a Denial of Certificate of Completion letter, detailing the deficiencies in the building(s) or development site that prevents the issuance of the Certificate of Completion, to the applicant.

C. **Review Criteria**. The following criteria shall be used in the review of a certificate of completion.

1. The development site complies with the approved construction plan, and

2. All applicable standards of this UDO and the WFD3 are met.

D. **Effect of Decision.** The issuance of a Certificate of Completion allows for occupancy or use of any new construction and re-occupancy or re-use of any renovation/rehabilitation in the Town.

16.5.6 Construction Plan

A. **Applicability**. Construction Plan approval shall be required prior to the commencement of any construction activity.

B. **Procedures.**

1. **Pre-Application Meeting.** If a pre-application meeting is required, in accordance with Table 16.3 Review Procedures Overview, or requested it shall follow the process detailed in Section 16.4.2 Pre-Application Meetings.

2. **Application Submittal and Acceptance**. Application submittal and acceptance shall follow the standards and process established in Section 16.4.4 and 16.4.5.

3. **Administrator Review and Decision**. Once the application is accepted, the Administrator shall review the application based on the review criteria and either:

   a. Issue the Construction Plan Approval, or

   b. Issue the Construction Plan Approval with specified conditions, or

   c. Issue a Denial of Construction Plan Approval letter, detailing the application's failure to comply with the review criteria, to the applicant.

C. **Review Criteria**. The following criteria shall be used in the review of a construction plan.

1. All applicable standards of this UDO are met.

D. **Effect of Decisions.**

1. **Approval Validity.** Issuance of a Construction Plan Approval shall be valid for two years from the date of approval. A Final Plat (See Section 16.5.12.C) shall be recorded prior to the end of this two-year period.

2. **Approval Extension.** The Administrator may grant a one, one-year extension of this time period upon submittal by the applicant of sufficient justification for the extension. Sufficient justification may include, but is not limited to:

   a. Delays in other outside agency permits,

b. Financing institution delays, or

c. Other similar reasons beyond the control of the applicant.

E. **Concurrent Review.** If one of the following conditions are met, an applicant may elect for concurrent review of a Site Plan and a Construction Plan (Sections 16.5.11 and 16.5.6).

1. Proposed development does not involve new public utility extensions,

2. Proposed development is exempt from stormwater management requirement or stormwater management requirements are met via a shared/regional stormwater control measure.

16.5.7 Floodplain Development Permit

A. **Applicability**.

1. No approval shall be granted for construction in an area designated as a Special Flood Hazard Area by the flood insurance rate maps, as provided by the Federal Emergency Management Agency without the issuance of a floodplain development permit.

2. Because Special Flood Hazard Areas are determined by FEMA and State requirements, if activities are permitted in Special Flood Hazard Areas at the State or Federal level, then they are exempt from the requirements of this section.

B. **Procedures.**

1. **Pre-Application Meeting.** If a pre-application meeting is required, in accordance with Table 16.3 Review Procedures Overview, or requested it shall follow the process detailed in Section 16.4.2 Pre-Application Meetings.

2. **Application Submittal and Acceptance**. Application submittal and acceptance shall follow the standards and process established in Section 16.4.4 and 16.4.5.

3. **Administrator Review and Decision**.

a. Once the application is accepted, the Administrator shall:

i. Issue the Floodplain Development Permit, or

ii. Issue a Denial of Floodplain Development Permit letter, detailing the application's failure to comply with the review criteria, to the applicant.

b. An approved Floodplain Development Permit shall include:

i. A description of the development to be permitted under the floodplain development permit,

ii. The Special Flood Hazard Area or Future Conditions Flood Hazard Area determination for the proposed development per available data specified in Section 12.6.1.D,

iii. The regulatory flood protection elevation required for the reference level and all attendant utilities,

iv. The regulatory flood protection elevation required for the protection of all public utilities,

v. All certification submittal requirements with timelines,

vi. A statement that no fill material or other development shall encroach into the floodway or non-encroachment area of any watercourse, as applicable,

vii. The flood openings requirements, if in Zones A, AE, or X (Future).

C. **Review Criteria**.

1. All applicable standards of this UDO are met.

D. **Effect of Decisions.**

1. **Permit Validity:** Floodplain development permits shall be valid for one year. Failure to initiate construction, or otherwise begin the permitted use, within this time period shall render the permit void.

2. **Permit Extension:** Renewal of an expired floodplain development permit shall require the same application procedure as the initial permit. No further development activity is to be performed until the new permit is issued.

16.5.8 Interpretations

A. **Applicability**. The Administrator shall render official interpretations of the meanings of the provisions in this ordinance in accordance with procedures and criteria in this Section.

B. **Procedures**.

1. **Pre-Application Meeting**. If a pre-application meeting is required, in accordance with Table 16.3 Review Procedures Overview, or requested it shall follow the process detailed in Section 16.4.2 Pre-Application Meetings.

2. **Application Submittal and Acceptance**. Application submittal and determination of completion shall follow the standards and process established in Section 16.4.4 and 16.4.5.

3. **Administrator Review and Decision**. After the application is accepted for review, the Administrator shall:

   a. Review the application based on the review criteria,

   b. Prepare the Memorandum of Interpretation,

   c. Send the Memorandum of Interpretation to the applicant, and

   d. Maintain a record of all interpretations.

C. **Review Criteria**. The following criteria shall be used in the review of interpretations.

1. **Text Provisions**. Interpretations of the text of this UDO shall be based on the applicable purpose and applicability language per Chapter and the following criteria:

   a. The clear and plain meaning of the provision's wording, as defined by the meaning and significance given specific terms used in the provision—as established in Chapter 18, and by the common and accepted usage of the term,

   b. The intended purpose of the provision, as indicated by purpose statements, its context and consistency with surrounding and related provisions, and any legislative history to its adoption,

   c. The general purposes served by this UDO, as set forth in Chapter 1, and

   d. Consistency with the Comprehensive Plan.

2. **Unspecified Uses**.

   a. Actual or projected characteristics of each activity likely to occur at the unlisted use,

   b. The type, size, orientation, and nature of buildings, and structures devoted to each activity,

   c. The number and density of employees and customers per unit area of site in relation to business hours and employment shifts,

   d. Vehicles used and their parking requirements, including the ratio of the number of spaces required per unit area or activity,

   e. Transportation demands, including the volume and frequency of trips generated to and from the site, the split of traffic volume among various means of transportation, and other characteristics of trips and traffic,

   f. Relative amounts of sales from each activity,

   g. The nature and location of storage and outdoor display of merchandise, whether enclosed, open, inside or outside the principal building, and the predominant types of items stored,

   h. Customer type for each activity,

   i. How each use is advertised, including signage,

   j. The amount and nature of any nuisances generated on the premises, including but not limited to noise, smoke, odor, glare, vibration, radiation, and fumes,

   k. Any special public utility requirements for serving the proposed use type, including but not limited to water supply, wastewater output, pre-treatment of wastes and emissions required or recommended, and any significant power structures and communications towers or facilities, and

   l. The impact on adjacent lands created by the proposed use type, which should not be greater than that of other use types allowed in the zoning district.

3. **Zoning Map Boundaries**.

a. Boundaries shown as approximately following a utility line or a street, road, alley, railroad, or other public access way shall be interpreted as following the centerline of the right-of-way or easement for the utility line or access way,

b. Boundaries shown as approximately following a property line shall be interpreted as following the property line as it existed when the boundary was established. If a subsequent minor adjustment (such as from settlement of a boundary dispute or overlap) results in the property line moving 10 feet or less, the zoning boundary shall be interpreted as moving with the property line,

c. Boundaries shown as approximately following a watercourse shall be interpreted as following the centerline of the watercourse as it actually exists, and as moving with that centerline to the extent the watercourse moves as a result of natural processes (flooding, erosion, sedimentation, etc.),

d. Boundaries shown as approximately following the shoreline of a body of water shall be interpreted as following the shoreline and as moving with shoreline to the extent the shoreline moves as a result of natural processes (flooding, erosion, sedimentation, etc.),

e. Boundaries shown as entering a body of water shall be interpreted as continuing in the direction at which they enter the body of water and extending until they intersect another zoning district boundary or similarly extended boundary, or the limits of the Town's jurisdiction,

f. Boundaries shown as approximately following established municipal corporate limits or other political boundaries shall be interpreted as following the corporate limits or boundary,

g. Boundaries shown parallel to or as extensions of features indicated in this subsection shall be interpreted as such,

h. If the specific location of a depicted boundary cannot be determined from notations on the Zoning Map or application of the above standards, it shall be determined by using the map's scale to determine the boundary's distance from other features shown on the map.

D. **Effect of Decision**. An interpretation shall be binding on subsequent decisions by the Administrator or other Town administrative official applying the same provision of this UDO or Zoning Map boundary, unless the interpretation is reversed or modified on appeal to the Board of Adjustment.

E. **Vested Rights**. Interpretations shall not retroactively impact vested rights, in accordance with NCGS § 160D-108.1.

16.5.9 Land Disturbance Permit

A. **Applicability**. Land Disturbance Permits shall be required for any activity which disturbs a half-acre or more of land in the Town, including but not limited to the following:

1. Construction, demolition, replacement of, or addition to buildings or structures,

2. Removing vegetation, or

3. Excavation, filling, or grading.

B. **Procedures.**

1. **Pre-Application Meeting.** If a pre-application meeting is required, in accordance with Table 16.3 Review Procedures Overview, or requested it shall follow the process detailed in Section 16.4.2 Pre-Application Meetings.

2. **Application Submittal and Acceptance**.

   a. Application submittal and acceptance shall follow the standards and process established in Section 16.4.4 and 16.4.5.

   b. The Town shall also have the power to require written statements or filing reports under oath, with respect to pertinent questions relating to the land-disturbing activity.

   c. Any plan submitted for a land-disturbing activity for which the North Carolina Environmental Policy Act requires an environmental document must be deemed incomplete until a complete environmental document is available for review.

3. **Administrator Review and Decision.**

   a. Once the application is accepted, the Administrator shall:

i. Forward the application to the Town Department of Engineering for review for compliance with the requirements of this UDO, and

ii. Issue the Land Disturbance Permit, or

iii. Issue a Denial of Land Disturbance Permit letter, detailing the application's failure to comply with the review criteria, to the applicant,

b. Subsequent plan revisions shall be reviewed and acted upon by the staff and notice given the applicant within 15 days of receipt of the revision.

c. If an application has been disapproved, the applicant has 12 months to submit revised plans addressing the reasons for disapproval or the plan is deemed null and void.

C. **Review Criteria**.

1. All applicable standards of this UDO are met.

D. **Effect of Decisions.**

1. **Permit Validity.** When work under a land disturbance permit is not completed within two years following the date of issuance of the land disturbance permit, the land disturbance permit shall be deemed expired.

2. **Permit Extension.** Permits may be renewed in one-year increments until the project is complete. The appropriate renewal fees shall apply. Any significant changes to the plan must be re-submitted and re-reviewed.

16.5.10 Reforestation Permit

A. **Applicability**. A reforestation permit shall be required for undeveloped property returning to a vegetated condition to qualify for exemptions from Code of Ordinances Chapter 14, Article II.

B. **Procedures**.

1. **Pre-Application Meeting.** If a pre-application meeting is required, in accordance with Table 16.3 Review Procedures Overview, or requested it shall follow the process detailed in Section 16.4.2 Pre-Application Meetings.

2. **Application Submittal and Acceptance**. Application submittal and acceptance shall follow the standards and process established in Section 16.4.4 and 16.4.5.

3. **Administrator Review and Decision**. Once the application is accepted, the Administrator shall review the application based on the review criteria and either:

a. Issue the Reforestation Permit, or

b. Issue a Denial of Reforestation Permit letter, detailing the application's failure to comply with the review criteria, to the applicant.

C. **Review Criteria**.

1. The reforestation plan achieves a density of 80 canopy trees per acre.

2. The reforestation plan utilizes canopy trees with a minimum caliper of one and one-half inches as measured at six inches above grade.

3. The reforestation plan includes a maintenance schedule including replacing damaged or diseased trees, until a heavily wooded lot is achieved.

D. **Effect of Decisions.**

1. **Permit Validity.** Upon approval a reforestation permit shall be valid until a heavily wooded lot is achieved.

2. **Other Permit Restriction.** Until a heavily wooded lot is achieved, no other plans, permits, or other approvals may be issued for the subject site.

16.5.11 Site Plan

A. **Applicability**. Approval of a Site Plan shall be required prior to the approval of Site Construction Plan for all new development, substantial redevelopment, and minor development activity not otherwise approved by other Zoning Compliance Permits or approvals.

B. **Procedures.**

1. **Pre-Application Meeting.** If a pre-application meeting is required, in accordance with Table 16.3 Review Procedures Overview, or requested it shall follow the process detailed in Section 16.4.2 Pre-Application Meetings.

2. **Application Submittal and Acceptance**. Application submittal and acceptance shall follow the standards and process established in Section 16.4.4 and 16.4.5.

3. **Administrator Review and Decision.** Once the application is accepted, the Administrator shall review the application based on the review criteria and either:

   a. Issue the Site Plan Approval, or

   b. Issue the Site Plan Approval with specified conditions, or

   c. Issue a Denial of letter, detailing the application's failure to comply with the review criteria, to the applicant.

C. **Review Criteria**.

1. All applicable standards of this UDO are met.

D. **Effect of Decisions.**

1. **Approval Validity.** Approval of a Site Plan shall be valid for two years from the date of approval. A Construction Plan shall be approved prior to the end of this two-year period.

2. **Approval Extension.**

   a. The Administrator may grant a one, one-year extension of upon submittal by the applicant of sufficient justification for the extension. Sufficient justification may include, but is not limited to,

      i. Delays in other outside agency permits,

      ii. Financing institution delays, or

      iii. Other similar reasons beyond the control of the applicant.

   b. If an extension is denied, or a Construction Plan is not approved within a granted extension period, the applicant may reapply for a Site Plan using the same process as if the application was being considered for the first time.

E. **Concurrent Review.** If one of the following conditions are met, an applicant may elect for concurrent review of a Site Plan and a Construction Plan (Sections 16.5.11 and 16.5.6).

1. The proposed development does not involve new public utility extensions,

2. Proposed development is exempt from stormwater management requirement or stormwater management requirements are met via a shared/regional stormwater control measure.

F. **Amendments**. If any of the amendments listed below are made to a development plan after the approval of both a site plan and a construction plan, amendments to the site plan shall be required. Amendments outside of those listed below are required to be made to the construction plan only.

1. Land area added to the development plan,

2. A change in land use from the approved development plan,

3. Increase of 10 percent or greater in dwelling units from the approved development plan,

4. Increase of 10 percent or greater in floor area from the approved development plan,

5. When there is introduction of a new vehicular access point to an existing street not previously designated for access, or

6. Increase of 10 percent or greater in building height.

16.5.12 Subdivision Plan

A. **Applicability**. The subdivision review process is required for all divisions of land, except those subdivisions exempt by state statute.

B. **Subdivision Plan**.

1. **Procedures**.

a. **Pre-Application Meeting.** If a pre-application meeting is required, in accordance with Table 16.3 Review Procedures Overview, or requested it shall follow the process detailed in Section 16.4.2 Pre-Application Meetings.

b. **Application Submittal and Acceptance**. Application submittal and acceptance shall follow the standards and process established in Section 16.4.4 and 16.4.5.

c. **Administrator Review and Decision.** Once the application is accepted, the Administrator shall review the application based on the review criteria and either:

i. Issue the Subdivision Plan Approval Certificate, or

ii. Issue a Denial of Subdivision Plan Approval Certificate letter, detailing the application's failure to comply with the review criteria, to the applicant.

2. **Effect of Decisions.**

a. **Approval Validity.**

i. Issuance of a Subdivision Plan Approval shall be valid for two years from the date of approval.

ii. If a Construction Plan Approval (Section 16.5.6) has not been obtained prior to the end of this two-year period, the Subdivision Plan approval shall become void unless a Construction Plan Approval is not required.

iii. Subdivisions may be phased according to a schedule established by the applicant.

iv. If the approved Subdivision Plan provides for multiple phases within the subdivision, a Construction Plan Approval for any one phase shall extend the Subdivision Plan Approval for all other phases for a period of two years from the date of the Construction Plan approval for that phase.

b. **Approval Extension.**

i. The Administrator may grant one, one-year extension of this time period upon submittal by the applicant of sufficient justification for the extension. Sufficient justification may include, but is not limited to,

a) Delays in other outside agency permits,

b) Financing institution delays, or

c) Other similar reasons beyond the control of the applicant,

ii. If an extension is denied, or a Construction Plan is not approved within a granted extension period, the application may reapply for a Subdivision Plan Approval using the same process as if the application was being considered for the first time.

C. **Final Plat.**

1. **Procedures.**

a. **As-Builts Required.** Upon completion of a Construction Plan project, and before a Final Plat shall be approved (unless financially guaranteed), the applicant shall certify that the completed project is in substantial accordance with the approved plans and designs, and shall submit actual "as built" plans for all public infrastructure after final construction is completed.

b. **Administrator Review and Decision.** Once the application is accepted, the Administrator shall:

i. Review the final plat for compliance with the review criteria and conformity with the approved Construction Plan, and

ii. Issue the Final Plat Approval, or

iii. Issue a Denial of Final Plat Approval letter, detailing the application's failure to comply with the review criteria, to the applicant.

2. **Effect of Decisions.**

a. **Effect of Approval.**

i. The issuance of a Final Plat Approval does not constitute acceptance for maintenance or other purposes of improvements in rights-of-way, such as utility lines, street paving, drainage facilities or sidewalks.

ii. Such improvements, when located within the corporate limits of the Town, may be accepted only by action of the town following inspection and approval.

iii. Land designated as public open space or a park on a plat shall be considered to be offered for dedication, but not accepted until the Board of Commissioners has by expressed action done so.

iv. Improvements shall be completed and performance guarantees provided in accordance with Chapter 14 prior to plat recordation.

b. **Phasing.** Final plats for phased subdivisions shall be recorded in accordance with the schedule presented by the applicant during the Construction Plan approval.

c. **Approval Validity.** Final plats that have been granted approval must be recorded within 30 days following approval or the approval becomes invalid. No lots in a subdivision shall be sold prior to approval by the town and recording of the Final Plat for the subdivision.

d. **Approval Extension.** None.

16.5.13 Temporary Use Permit

A. **Applicability**. A Temporary Use Permit is required prior to the commencement of any temporary use in accordance with Table 3.5 Temporary Uses.

B. **Procedures.**

1. **Pre-Application Meeting.** If a pre-application meeting is required, in accordance with Table 16.3 Review Procedures Overview, or requested it shall follow the process detailed in Section 16.4.2 Pre-Application Meetings.

2. **Application Submittal and Acceptance**. Application submittal and acceptance shall follow the standards and process established in Section 16.4.4 and 16.4.5.

3. **Administrator Review and Decision**. Once the application is accepted, the Administrator shall review the application based on the review criteria and either:

   a. Issue the Temporary Use Permit, or

   b. Issue a Denial of Temporary Use Permit letter, detailing the application's failure to comply with the review criteria, to the applicant.

C. **Review Criteria**. The following criteria shall be used in the review of a temporary use permit.

   a. The use is allowed by right in the district in which it shall be located, or all required approvals for the use have been received,

   b. All applicable standards of this UDO are met.

D. **Effect of Decision.** Upon approval, the Temporary Use permit shall be valid for the duration as specified in the Temporary Use Permit.

E. **Vested Rights.** A temporary Use Permit shall not vest rights.

16.5.14 Zoning Compliance Permit

A. **Applicability**. A Zoning Compliance Permit is required to ensure site features (fences, driveways, etc.), residential accessory structures and uses, and signs comply with the applicable standards in this ordinance in situations where that compliance is not reviewed as part of another development approval or permit.

B. **Procedures.**

1. **Pre-Application Meeting.** If a pre-application meeting is required, in accordance with Table 16.3 Review Procedures Overview, or requested it shall follow the process detailed in Section 16.4.2 Pre-Application Meetings.

2. **Application Submittal and Acceptance**. Application submittal and acceptance shall follow the standards and process established in Section 16.4.4 and 16.4.5.

3. **Administrator Review and Decision**. Once the application is accepted, the Administrator shall review the application based on the review criteria and either:

   a. Issue the Zoning Compliance Permit, or

   b. Issue a Denial of Zoning Compliance Permit letter, detailing the application's failure to comply with the review criteria, to the applicant.

C. **Review Criteria**. The following criteria shall be used in the review of a Zoning Compliance Permit.

1. The use is allowed by right in the district in which it shall be located, or all required approvals for the use have been received, and

2. All applicable standards of this UDO are met.

D. **Effect of Decision.**

1. **Permit Validity.** Upon the approval of the Zoning Compliance Permit, the applicant shall have one year to obtain a building permit or otherwise begin the permitted use, install the approved structure, or undertake the approved development activity. Failure to secure building permits for the permitted work within this time shall render the compliance void. Upon issuance of a building permit, the Zoning Compliance Permit shall remain valid as long as a valid building permit exists for the project.

2. **Permit Extension.** The Administrator may grant two extensions of this time period of up to six months upon submittal by the applicant of sufficient justification for the extension. Sufficient justification may include, but is not limited to, delays in other outside agency permits, financing institution delays, or other similar reasons beyond the control of the applicant.

16.6 Quasi-Judicial Procedures

16.6.1 General Quasi-Judicial Procedures

Quasi-Judicial procedures are decision-making processes where an official body or agency acts as a court, examines evidence, and applies legal standards to make impartial decisions.

A. **Appeals**

1. **Generally**.

   a. An appeal from the decision of a quasi-judicial procedure, with the exception of a decision made by the Historic Preservation Commission or an appeal relating to sedimentation and erosion control, may be made by an aggrieved party and shall be made to the Superior Court of Wake County in the nature of certiorari.

   b. Any such petition shall be filed with the clerk of the superior court within 30 days after the decision is filed with the Town Clerk, or after a written copy thereof is delivered to every aggrieved party who has filed a written request for such copy with the secretary or chairman of the applicable board at the time of its hearing of the case, whichever is later.

   c. The decision may be delivered to the aggrieved party either by personal service or by registered mail or certified mail return receipt requested.

2. **Historic Preservation Commission Appeals**. An appeal from the decision of the Historic Preservation Commission may be made in accordance with Section 16.6.3.

3. **Sedimentation and Erosion Control Appeals**. Any appeal from a decision relating to sedimentation and erosion control shall be made to the North Carolina Sedimentation Control Commission.

16.6.2 Administrative Appeals

A. **Applicability**. The Administrative Appeals process is established to provide an appeal process for:

1. Parties aggrieved by any order, requirement, decision, or determination, made by an administrative officer charged with enforcing the provisions of this ordinance, and,

2. Parties aggrieved by the decision of the Historic Preservation Committee according to the appellate procedure outlined in NCGS §160D.

B. **Procedures**.

1. **Pre-Application Meeting.** If a pre-application meeting is required, in accordance with Table 16.3 Review Procedures Overview, or requested it shall follow the process detailed in Section 16.4.2 Pre-Application Meetings.

2. **Application Submittal and Acceptance**.

   a. Application submittal and acceptance shall follow the standards and process established in Section 16.4.4 and 16.4.5.

   b. Complete applications for Administrative Appeal shall be submitted within 30 days of the receipt by such aggrieved party of the written notice of decision from the Administrator, or in the case of an office, department, or board of the town, within 30 days of the filing of the written notice with the Town Clerk.

3. **Administrator Review**. Once the application is accepted, the Administrator shall:

   a. Stay all proceedings in furtherance of the contested action unless in their opinion, by reason of facts stated in the certification, such a stay would cause imminent peril to life and property. In such a case, proceedings shall not be stayed except by restraining order or preliminary injunction granted by the Superior Court of Wake County in accordance with Rule 65 of the North Carolina Rules of Civil Procedure.

   b. Schedule the Board of Adjustment Public Hearing.

4. **Board of Adjustment Hearing and Decision**. The Board of Adjustment shall:

   a. Conduct a public hearing on the application,

   b. Review and discuss the application, and

      i. Affirm the decision in whole, and issue or direct the issuance of a permit as applicable,

      ii. Affirm the decision in part, and issue or direct the issuance of a permit as applicable,

      iii. Reverse the decision in whole, Administrator shall issue a denial letter, detailing the decision to the applicant, or

      iv. Reverse the decision in part, Administrator shall issue a denial letter, detailing the decision to the applicant.

C. **Review Criteria**. An Administrative Appeal shall be granted if a minimum of one of the following findings is made:

1. The decision constituted an erroneous application or interpretation of this UDO,

2. The decision constituted an abuse of the Administrator's discretion to interpret or apply this UDO, or

3. The decision was rendered based upon an erroneous material fact.

D. **Effect of Decision**.

1. Any appeal from a decision of the Board of Adjustment may be made in accordance with the standards of Section 16.6.1.A.

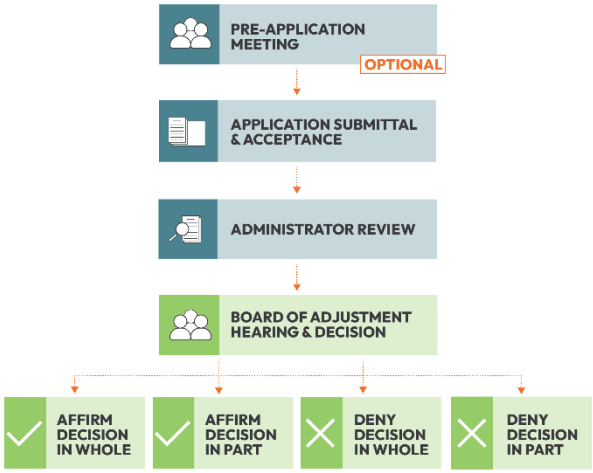

Figure 1: Administrative Appeals Flowchart

16.6.3 Certificate of Appropriateness – Demolition of Historic Structures

A. **Applicability**. A COA, approved and issued by the HPC subject to the provisions below, is required prior to the demolition, removal or destruction of any of the following historic structures:

1. **Locally Designated Historic Properties.** All locally designated historic landmarks or properties within a local historic district pursuant to the authority granted in NCGS 160D, and

2. **Other Historic Structures.** All other historic structures located within the corporate limits and extraterritorial jurisdiction of the Town pursuant to the authority granted in Session Law 2007-66, House Bill 827 ratified June 7, 2007, by the General Assembly of the State of North Carolina. Such structures shall include those which are:

   a. Designated as a state or national landmark,

   b. Individually listed in the National Register of Historic Places,

   c. Individually identified as a contributing structure in a historic district listed in the National Register of Historic Places,

   d. Certified or preliminarily determined by the Secretary of the Interior as contributing to the significance of a registered historic district or a district preliminarily determined by the Secretary to qualify as a registered historic district,

   e. Individually listed in the state inventory of historic places,

   f. Individually listed in the county Register of Historic Places, or,

   g. Individually listed in the Town local inventory of historic places, as per Section 16.7.5.

B. **Procedures**.

1. **Pre-Application Meeting.** If a pre-application meeting is required, in accordance with Table 16.3 Review Procedures Overview, or requested it shall follow the process detailed in Section 16.3.2 Pre-Application Meetings.

2. **Application Submittal and Acceptance**. Application submittal and acceptance shall follow the standards and process established in Section 16.4.4 and 16.4.5.

3. **Administrator Review.** Once the application is accepted, the Administrator shall:

   a. **Determination of Compliance – Locally Designated Historic Structures.** For applications regarding "locally designated historic structures" in accordance with Section 16.6.3.A.1, the Administrator shall review the application to ensure that it is complete and schedule the matter for a public hearing before the HPC.

   b. **Determination of Compliance – Other Historic Structures.** For applications regarding "other historic structures" in accordance with Section 16.6.3.A.2, the Administrator shall review the application to ensure that it is complete and assign a Demolition Approval System Score (DASS) as described below. If, according to the DASS table below, a Certificate of Appropriateness is required to authorize the demolition, removal or destruction of a designated landmark or a building, structure or site within a historic district, the Administrator shall schedule the matter for a public hearing before the HPC.

4. **Historic Preservation Commission Hearing and Decision**. The Historic Preservation Commission shall:

   a. Conduct a public hearing on the application,

   b. Receive and hear testimony regarding the application, and

      i. Approve the Certificate of Appropriateness,

      ii. Approve the Certificate of Appropriateness with Conditions, or

      iii. Deny the Certificate of Appropriateness, Administrator shall issue a denial letter, detailing the decision to the applicant.

Figure 2: Certificate of Appropriateness - Demolition of Historic Structures Flowchart

C. **Review Criteria**.

1. **Demolition Approval Score System**.

Table 16.6.3.C.1
Demolition Approval System Score (DASS)

DASS Tier [1]	Criteria for Assignment of Tier Category	Required Action
Tier 1	Appears on the Historic Building Survey Map/Inventory of the town; OR Located in an area on the state study list as a potential historic district	Staff shall determine if property appears on the survey map/inventory or located in a study list is a potential historic district or if the property is a potential for listing on the state study list. If either is true an application for a COA shall be filed by the applicant for review by the HPC. The HPC shall grant a COA authorizing demolition or may order a delay of up to 365 days before demolition may commence. If neither is true, the site is not in a potential historic district and is not a potential for listing on the state study list no COA is required and the demolition may proceed without delay.
Tier 2	Certified or preliminarily determined by the Secretary of the Interior as contributing to the significance of a district preliminarily determined by the Secretary to qualify as a registered historic district; OR Individually listed in the state study list; OR Individually listed in any county or local inventory of historic buildings or sites	An application for a COA shall be filed by the applicant for review by the HPC. The HPC shall grant a COA authorizing demolition or may order a delay of up to 365 days before demolition may commence.
Tier 3	Individually listed in National Register; OR Designated as "contributing" in a National Register historic district	An application for a COA shall be filed by the applicant for review by the HPC. The HPC shall grant a COA authorizing demolition or may order a delay of up to 365 days before demolition may commence. (A Tier 3 DASS score will likely result in an automatic delay of 365 days.)
None	None of the above criteria apply.	No delay of demolition. No COA required.

Notes

[1] A property shall be classified in the higher Tier Category for which is meets the criteria.

a) **Locally Designated Historic Landmarks and properties within locally designated historic districts.** An application for a Certificate of Appropriateness authorizing the demolition, removal or destruction of a "locally designated historic structure," in accordance with 16.6.3.A.1 above, may not be denied or delayed except as provided below:

(i) The effective date of such a certificate may be delayed for up to 365 days from the date of approval. The period of delay should be reduced by the HPC if it finds that the owner would suffer extreme hardship or be permanently deprived of all beneficial use or return from such property by virtue of the delay.

(ii) During the delay period the HPC shall negotiate with the owner in an effort to find a means of preserving the building, structure or site.

(iii) If the HPC has voted to recommend the designation of a landmark or the designation of an area as a historic district, and final designation has not been made by the Board of Commissioners, the demolition or destruction of any building, structure or site in the proposed district or of the designated landmark may be delayed by the commission for up to 365 days after the Board of Commissioners takes final action on the designation.

(iv) An application for a Certificate of Appropriateness authorizing the demolition of a building, structure or site determined by the State of North Carolina's Historic Preservation Officer as having statewide significance as defined in the criteria of the National Register of Historic Places may be denied except where the HPC finds that the owner would suffer extreme hardship or be permanently deprived of all beneficial use or return by virtue of the denial as provided under NCGS 160D-949.

b) **Other Historic Structures.** An application for a COA authorizing the demolition, removal or destruction of "other historic structures" in accordance with Section 16.6.3.A.2 above, shall be evaluated by the HPC based on 3 standards, 1. Architectural Style & Integrity; 2. Cultural Significance, and 3. Structural Integrity. The elements of each standard will be weighed using a point scale of 0 to 2, where 0 means that the structure does not meet the element, 1 means the structure moderately meets the element, and 2 means the structure significantly meets the element. Each standard is worth 8 points. A total score of 18 or greater will result in issuance of a COA with an order for delay of demolition for 365 days from the date in the COA. A total score of less than 18 may result in the issuance of a COA with a delay of less than 365 days or no delay of demolition. The elements of each standard are as follows:

(i) **Architectural Integrity and Style.**

1. The structure has maintained the integrity of its original architectural form.
2. Changes made to the structure over 50 years ago have gained historic significance.
3. The structure has a distinctive architectural style or is the last example of its kind.
4. It is one of a cluster of buildings that are significant as a group.

(ii) **Cultural Significance.**

1. The structure is culturally significant due to its historic use, event, person, or builder/craftsman.
2. The structure is one of a cluster of buildings that are culturally significant as a group.
3. The structure is significant to the community it represents.

4. The structure is the last example of a culturally significant property within the community.

(iii) **Structural Integrity.**

1. The structure will be given a score of 8 points for structural integrity unless the applicant has provided an engineer's report stating otherwise. The engineer's report will be paid for by the applicant using a structural engineer on the SHPO's consultant list.

2. The following points are assigned to the structural components whereas 0 is failed, 1 is poor condition, 2 is stable condition, the HPC can reduce the score of 8 if they find a system has failed or is in poor condition.

   i. Roof 2 points

   ii. Wall 2 points

   iii. Floor 2 points

   iv. Foundation 2 points

3. If the report states that a system is structurally unsound the score of 8 will be reduced by 2 points per system rated at 50% or more unsound.

ii. **Effect of Decision**.

a) **HPC Decision and Findings of Fact.** The action on an application must be supported by specific findings of fact indicating the extent to which the application meets the criteria above. The HPC may choose to include previous documented time spent in the search for an alternative to demolition, such as moving the structure, as part of any required delay of demolition.

b) **Immediate Demolition – Other Historic Structures.** For applications regarding "other historic structures" in accordance with Section 16.6.3.A.2 above, the applicant may avoid a delay in demolition imposed by the HPC if the State Building Inspector orders the immediate demolition of the structure, or if the applicant makes a claim of unsafe conditions according to the following provisions.

(i) Any application for demolition of a Tier 2 or 3 structure must include documentation as to the condition of the property to support a claim of unsafe conditions.

(ii) This documentation shall be in the form of a report from a structural engineer recommended by the SHPO and paid for by the applicant. This report shall specifically address the roof, wall, floor, and foundation systems rated as a percentage structurally unsound.

(iii) If the structure to be demolished is an accessory structure, a similar report from the town building inspector may be submitted for the engineer's report although the HPC may require that the applicant return with an engineer's report at the applicant's expense.

(iv) The HPC may also require an engineer's report for any Tier 1 property at their discretion and at the applicant's expense based on the considerations of the specific site.

(v) A structure found to be unsafe shall not automatically be issued a COA with no delay of demolition. The COA may be issued with a delay of demolition and an order for stabilization to avoid demolition by neglect as a condition.

c) **Salvage of Materials – Other Historic Structures.** For applications regarding "other historic structures" in accordance with Section 16.6.3.A.2 above, the applicant shall make all materials available to salvagers prior to demolition according to the provisions below.

(i) The applicant may make such materials available to be sold to a salvage company or any other interested party, donated to "Habitat for Humanity" or similar organizations, given away to individuals, businesses, or other organizations, or any combination thereof.

(ii) The applicant must publicly advertise, at least two weeks prior, a date and time for any interested materials salvager or other interested parties to visit the building to be demolished and arrange to acquire any desired salvage materials. The requirement of advertising may be waived by staff or the HPC when the salvage is handled in another acceptable manner, or the potential salvage is of minimal value.

(iii) The applicant shall time the collection of materials in a logical manner, such as doors, windows, fireplace surrounds and mantels, cabinets, fixtures, etc. will be collected prior to wood flooring, although carpets could be collected early.

(iv) At the time the salvaged materials are collected the applicant, or his agent must be on site to assure that materials are not damaged in the acquisition of other materials.

16.6.4 Certificate of Appropriateness – Major Works

A. **Applicability**. Major works are exterior changes to properties in the LH-O district that involve substantial alterations, additions, or removals that could impair the integrity and special character of the property and/or historic district as a whole, in accordance with the Wake Forest Historic Property Handbook and Design Standards.

B. **Procedures**.

1. **Pre-Application Meeting.** If a pre-application meeting is required, in accordance with Table 16.3 Review Procedures Overview, or requested it shall follow the process detailed in Section 16.4.2 Pre-Application Meetings.

2. **Application Submittal and Acceptance**. Application submittal and acceptance shall follow the standards and process established in Section 16.4.4 and 16.4.5.

3. **Administrator Review.** Once the application is accepted, the Administrator shall:

   a. Prepare a report and recommendation on the application, and

   b. Schedule the Historic Preservation Commission Public Hearing.

4. **Historic Preservation Commission Hearing and Decision**. The Historic Preservation Commission shall:

   a. Conduct a public hearing on the application,

   b. Receive and hear testimony regarding the application, and

   c. Approve the Certificate of Appropriateness,

   d. Approve the Certificate of Appropriateness with Conditions, or

   e. Deny the Certificate of Appropriateness, Administrator shall issue a denial letter, detailing the decision to the applicant.

C. **Review Criteria.** The following criteria shall be used in the review of a major works certificate of appropriateness.

1. The major work is consistent with the Wake Forest Historic Property Handbook and Design Standards,

2. The major work meets the Secretary of the Interior's Standards for the Rehabilitation of Historic Buildings, and

3. All applicable standards of this UDO are met.

D. **Effect of Decisions**.

1. **Certificate Validity**. Issuance of a Certificate of Appropriateness shall be valid for one year from the date of approval.

2. **Certificate Extension**. The Administrator may grant a one, one-year extension of this time period upon submittal by the applicant of sufficient justification for the extension. Sufficient justification may include, but is not limited to:

   a. Delays in other outside agency permits,

   b. Financing institution delays, or

   c. Other similar reasons beyond the control of the applicant.

Figure 3: Certificate of Appropriateness - Major Works Flowchart

16.6.5 Special Use Permit

A. **Applicability**. Special uses are land uses that are generally compatible with the land uses permitted by right in a zoning district, but which require individual review of their location, design, and configuration so as to evaluate the potential for adverse impacts on adjacent property and uses. Special uses ensure the appropriateness of the use at a particular location within a given zoning district. Uses for which a Special Use Permit Application is required shall be as specified in Table 16.3.

B. **Procedures**.

1. **Pre-Application Meeting.** If a pre-application meeting is required, in accordance with Table 16.3 Review Procedures Overview, or requested it shall follow the process detailed in Section 16.4.2 Pre-Application Meetings.

2. **Application Submittal and Acceptance**. Application submittal and acceptance shall follow the standards and process established in Section 16.4.4 and 16.4.5.

3. **Administrator Review**. Once the application is accepted, the Administrator shall:

   a. Prepare a report and recommendation on the application, and

   b. Schedule the Board of Commissioners Public Hearing.

4. **Board of Commissioners Hearing and Decision**. The Board of Commissioners shall:

   a. Conduct a public hearing on the application,

   b. Review and discuss the application, and

      i. Approve the Special Use Permit,

      ii. Approve the Special Use Permit with Conditions, or

      iii. Deny the Special Use Permit, Administrator shall issue a denial letter, detailing the decision to the applicant.

C. **Review Criteria**. The following criteria shall be used in the review of a Special Use Permit.

1. **General Review Criteria**. All of the following criteria shall be met prior to the approval of a Special Use Permit:

   a. All standards of this UDO are met (no variances or administrative modifications/Adjustments are permitted),

   b. The proposed special use conforms to the character of the neighborhood, considering the location, type and height of buildings or structures and the type and extent of landscaping on the site,

   c. The proposed use will not cause undue traffic congestion or create a traffic hazard,

   d. Adequate utilities (water, sewer, drainage, electric, etc.) are available for the proposed use,

   e. The proposed use shall not be noxious or offensive by reason of vibration, noise, odor, dust, smoke, or gas,

   f. The establishment of the proposed use shall not impede the orderly development and improvement of surrounding property,

   g. The establishment, maintenance or operation of the proposed use shall not be detrimental to or endanger the public health, safety, or general welfare,

   h. The proposed use will not substantially injure the value of adjoining or abutting property,

   i. The proposed use is consistent with the officially adopted plans and policies of the town.

2. **Additional Considerations for Special Flood Hazard Areas**. In addition to the general review criteria, the Board of Commissioners shall weigh the following considerations prior to the approval of a Special Use Permit in a Special Flood Hazard Area or Future Conditions Flood Hazard Area:

   a. The danger that material may be swept onto other lands to the injury of others,

   b. The danger to life and property due to flooding or erosion damage,

   c. The proposed water supply and sanitation systems and the ability of these systems to prevent disease, contamination, and unsanitary conditions,

   d. The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner,

   e. The importance of the services provided by the proposed facility to the community,

   f. The necessity to the facility of a waterfront location, where applicable,

   g. The availability of alternative locations, not subject to flooding or erosion damage, for the proposed use,

   h. The compatibility for the proposed use with existing development anticipated in the foreseeable future,

   i. The relationship of the proposed use to the comprehensive plan and floodplain management program for that area,

   j. The safety of access to the property in times of flood for ordinary and emergency vehicles,

   k. The expected heights, velocity, duration, rate of rise, and sediment transport of the floodwaters and the effects of wave action, if applicable, expected at the site,

   l. The costs of providing governmental services during and after flood conditions including maintenance and repair of public utilities and facilities such as sewer, gas, electrical and water systems, and streets and bridges.

3. **Additional Conditions**.

   a. The Board of Commissioners may place conditions on the use as part of the approval to assure that mitigation measures are associated with the use if written consent to the conditions is obtained by the applicant or the landowner.

   b. The conditions shall become part of the Special Use Permit approval and shall be included in the final site plan application.

D. **Effect of Decision.**

1. **Permit Validity.** Special Uses that have been granted approval must begin site development within two years following approval or the approval becomes invalid.

2. **Permit Extension.** The Board of Commissioners may grant one, one-year extension of this time period upon submittal by the applicant of sufficient justification for the extension. Sufficient justification may include, but is not limited to:

   a. Delays in other outside agency permits,

   b. Financing institution delays, or

   c. Other similar reasons beyond the control of the applicant.

E. **Amendments.**

1. **Minor Amendments**. Minor amendments to a Special Use Permit shall be required to receive Administrator approval in accordance with the Site Plan procedures of Section 16.5.11. Minor amendments to a Special Use Permit shall be any amendment which does not qualify as a major amendment.

2. **Major Amendments.** Major amendments to a Special Use Permit shall follow the procedures outlined in Section 16.6.5.B. Major amendments to a Special Use Permit shall include:

   a. Modification of special performance criteria, design standards, or other requirements specified by the Special Use Permit,

   b. A change in land use or development type beyond that permitted by the approved Special Use Permit,

   c. When there is introduction of a new vehicular access point to an existing street, road or thoroughfare not previously designated for access,

   d. When there is an increase in the total number of residential dwelling units originally authorized by the approved Special Use Permit,

   e. When the total floor area of a commercial or industrial classification is increased more than 10 percent beyond the total floor area last approved by Board of Commissioners. Changes of less than 10 percent may be approved by the Administrator,

   f. Any change which alters the basic development concept of the Special Use Permit.

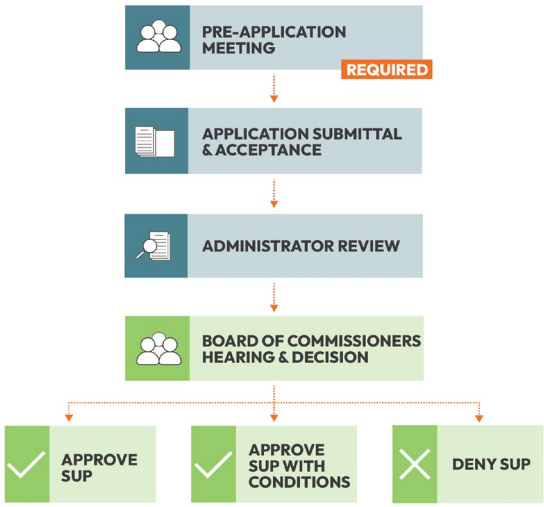

Figure 4: Special Use Permit Flowchart

16.6.6 Variance

A. **Applicability**. The variance process is intended to provide limited relief from the requirements of this UDO in those cases where strict application of a particular requirement will create a practical difficulty or unnecessary physical hardship prohibiting the use of the land in a manner otherwise allowed under this UDO.

1. **Use Variances Prohibited.** In no event shall a variance be granted which would allow the establishment of a use which is not otherwise allowed in a district, or which would change the district classification or the district boundary of the property in question.

2. **Authority Limited to this Ordinance/Conflicts with other Laws Prohibited**. In no event shall a variance be granted which would conflict with any State code, unless otherwise authorized by laws and regulations.

B. **Procedures**.

1. **Pre-Application Meeting.** If a pre-application meeting is required, in accordance with Table 16.3 Review Procedures Overview, or requested it shall follow the process detailed in Section 16.4.2 Pre-Application Meetings.

2. **Application Submittal and Acceptance**. Application submittal and acceptance shall follow the standards and process established in Section 16.4.4 and 16.4.5.

3. **Administrator Review**. Once the application is accepted, the Administrator shall:

   a. Prepare a report and recommendation on the application, and

   b. Schedule the Board of Adjustment Public Hearing.

4. **Board of Adjustment Decision**. The Board of Adjustment shall:

   a. Conduct a public hearing on the application,

   b. Review and discuss the application, and

      i. Approve the Variance, a concurring vote of four-fifths of the members shall be required,

      ii. Deny the Variance, Administrator shall issue a denial letter, detailing the decision to the applicant.

C. **Review Criteria**. The following criteria shall be used in the review of a variance.

1. **General Review Criteria**. All of the following criteria shall be met prior to the approval of a Variance:

   a. Carrying out the strict letter of the ordinance would result in an unnecessary hardship. It shall not be necessary to demonstrate that, in the absence of the variance, no reasonable use can be made of the property,

   b. The hardship results from conditions that are peculiar to the property, such as location, size, or topography. Hardships resulting from personal circumstances, as well as hardships resulting from conditions that are common to the neighborhood or the general public, may not be the basis for granting a variance. A variance may be granted when necessary and appropriate to make reasonable accommodation under the Federal Fair Housing Act for a person with a disability,

   c. The hardship did not result from actions taken by the applicant of the property owner. The act of purchasing property with knowledge that circumstances exist that may justify the granting of a variance shall not be regarded as a self-created hardship,

   d. The requested variance is consistent with the spirit, purpose, and intent of this ordinance, such that public safety is secured, and substantial justice is achieved.

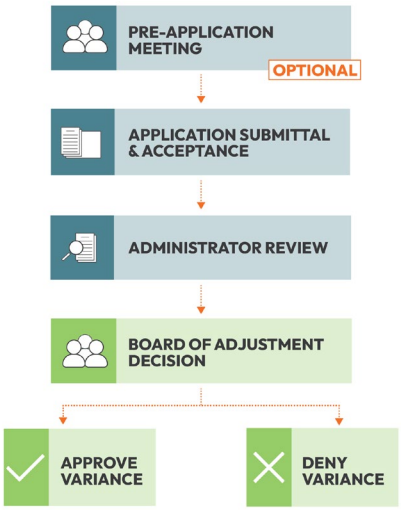

Figure 5: Variance Flowchart

2. **Additional Considerations for Floodplain, Watershed, and Stormwater Regulation Variance Requests**. Variances from the standards set forth in this ordinance for flood damage prevention, watershed protection and stormwater regulation may be granted subject to the following additional provisions:

a. Variances shall not be issued within any designated floodway if any increase in flood levels during the base flood discharge would result or when the variance will make the structure in violation of other federal, state, or local laws.

b. Variances shall only be issued upon:

i. A determination that the variance is the minimum necessary, considering the flood hazard, to afford relief,

ii. A showing of good and sufficient cause,

iii. A determination that failure to grant the variance would result in exceptional hardship; and,

iv. A determination that the granting of a variance will not result in a substantial increase in flood heights, additional threats to public safety, extraordinary public expense, create nuisance, cause fraud on or victimization of the public, or conflict with existing laws or ordinances.

c. In passing upon variances, the Board of Adjustment shall consider all technical evaluations, all relevant factors, all standards specified in other sections of this chapter and:

i. The danger that material may be swept onto other lands to the injury of others,

ii. The danger to life and property due to flooding or erosion damage,

iii. The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner,

iv. The importance of the services provided by the proposed facility to the community,

v. The availability of alternative locations, not subject to flooding or erosion damage, for the proposed use,

vi. The compatibility of the proposed use with existing and anticipated development,

vii. The relationship of the proposed use to the land development plan and flood damage prevention program for that area,

viii. The safety of access to the property in times of flood for ordinary and emergency vehicles,

ix. The expected heights, velocity, duration, rate of rise, and sediment transport of the floodwaters and the effects of wave action, if applicable, expected at the site,

x. The costs of providing governmental services during and after flood conditions including maintenance and repair of public utilities and facilities such as sewer, gas, electrical and water systems, and streets and bridges.

d. Any applicant to whom a variance from the floodplain development regulations is granted shall be given written notice. This notice shall specify the difference between the base flood elevation and the elevation to which the structure is to be built and contain a written statement that such construction below the Base Flood Elevation increases risks to life and property, and that the issuance of a variance to construct a structure below the Base Flood Elevation will result in increased premium rates for flood insurance up to $25 per $100 of insurance coverage. Such notification shall be maintained with a record of all variance actions. Variances records shall be provided to the Federal Emergency Management Agency upon request.

3. **Additional Conditions**. In granting any variance, the Board of Adjustment may attach such conditions to the approval as it deems necessary and appropriate to satisfy the purposes and objectives of this ordinance. The Board of Adjustment may also attach conditions in order to reduce or minimize any injurious effect of such variance upon other property in the neighborhood and to ensure compliance with other terms of this ordinance. Such conditions and safeguards must be reasonably related to the condition or circumstance that gives rise to the need for a variance.

D. **Effect of Decisions**.

1. **Approval Validity.** Variances that have been granted approval must begin site development within two years following approval or the approval becomes invalid.

2. **Approval Extension.** The Board of Adjustment may grant one, one-year extension of this time period upon submittal by the applicant of sufficient justification for the extension. Sufficient justification may include, but is not limited to:

   a. Delays in other outside agency permits,

   b. Financing institution delays, or

   c. Other similar reasons beyond the control of the applicant.

16.7 Legislative Procedures

16.7.1 General Legislative Procedures

Legislative procedures are decision-making processes where the Board of Commissioners uses discretion to make decisions based on established Town policy, recommendations from Town staff and applicable boards and commissions, and public comment.

A. **All Meetings to be Open**. All meetings of elected or appointed bodies under this ordinance shall be open to the public in accordance with NCGS §143-318 (Meetings of Public Bodies) and shall be conducted in accordance with the procedures set forth in these regulations and rules of procedure adopted by the respective bodies and approved by the Board of Commissioners.

B. **Rules of Procedures**. All boards/commissions shall adopt formal rules of procedure consistent with the level of decision-making vested with that board/commission (e.g., advisory review, quasi-judicial). Any adopted rules of procedure shall be kept on file at the Planning Department, shall be made available to the public, and shall be posted on the Town website.

C. **Minutes**. Accurate minutes of each meeting and any collected audio/visual recordings shall be maintained by each elected or appointed board/commission set out in this chapter, showing the vote of each member on each question, or if absent or failing to vote, indicating such fact. Each elected or appointed board/commission set out in this chapter shall keep records of its examinations and official actions. All of these minutes and records shall be filed in the office of the Town Clerk for the public record. At the discretion of the Administrator, audio/video records of each meeting will be made available through the Town web site.

D. **Meetings**.

1. All bodies authorized under this ordinance shall meet at regularly scheduled times and at such other times as determined by the chair as provided for in the rules of procedure.

2. Special meetings may be called at any time by the chairperson or by request of a majority of members of the board.

16.7.2 Annexation

A. **Applicability.** The Annexation process is established to accommodate voluntary annexations, requested by property owners and is required:

1. Prior to the provision of Town services as well as water and sewer services. Annexation does not guarantee the availability of such services,
2. Prior to construction plan approval for those developments requesting Town services and water and sewer service, and
3. Before or concurrent with rezoning and development applications for property within the Town's urban service areas or annexation agreement areas.

B. **Procedures**.

1. **Application Submittal and Acceptance**. Application submittal and acceptance shall follow the standards and process established in Section 16.4.
2. **Pre-Application Meeting.** If a pre-application meeting is required, in accordance with Table 16.3 Review Procedures Overview, or requested it shall follow the process detailed in Section 16.4.2 Pre-Application Meetings.
3. **Administrator Review**. Once the application is accepted, the Administrator shall:
   a. Prepare a report and recommendation on the application, and
   b. Schedule the Board of Commissioners public hearing.
4. **Board of Commissioners Public Hearing and Decision**. The Board of Commissioners shall:
   a. Conduct a public hearing on the application,
   b. Review and discuss the application, and
      i. Approve the Annexation, or
      ii. Deny the Annexation.

C. **Review Criteria**. The following criteria shall be used in the review of an annexation.

1. The application is consistent with the Town Community Plan and other adopted planning documents of the Town.

D. **Effect of Decision**.

1. **Effectiveness**. The subject property shall be considered annexed effective the date listed in the adopted ordinance approving the annexation. Once annexed, the area and its owners and occupants are subject to the same debts, laws, ordinances, and regulations and are entitled to the same privileges and benefits as other parts of the town.
2. **Notification**. The adopted ordinance along with the legal description and property map shall be recorded with the Register of Deeds and filed with the Secretary of State.

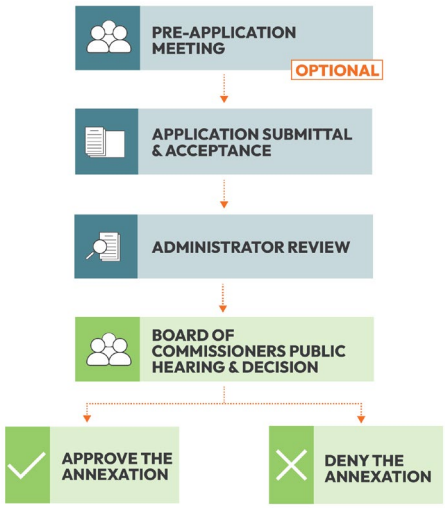

Figure 6: Annexations Flowchart

16.7.3 Comprehensive Plan Amendment

A. **Applicability**. The Comprehensive Plan Amendment process is established to allow the parties detailed below to propose a change to the adopted Comprehensive Plan.

1. Board of Commissioners,
2. Planning Board,
3. Administrator, and/or
4. Any resident or property owner within the land use jurisdiction of the Town

B. **Procedures**.

1. **Application Submittal and Acceptance**. Application submittal and acceptance shall follow the standards and process established in Section 16.4.4 and 16.4.5.
2. **Pre-Application Meeting.** If a pre-application meeting is required, in accordance with Table 16.3 Review Procedures Overview, or requested it shall follow the process detailed in Section 16.4.2 Pre-Application Meetings.
3. **Administrator Review**. Once the application is accepted, the Administrator shall:
   a. Prepare a report and recommendation on the application, and
   b. Schedule the Planning Board public comment session.
4. **Planning Board Public Comment Session and Recommendation**. The Planning Board shall:
   a. Conduct a public comment session on the application,
   b. Review and discuss the application, and
   c. Recommend approval,
   d. Recommend approval with revisions,
   e. Defer a recommendation for further deliberation, in which case a decision shall be rendered in 30 days of the first consideration, or
   f. Recommend denial.
5. **Board of Commissioners Public Hearing and Decision**. The Board of Commissioners shall:
   a. Conduct a public hearing on the application,
   b. Review and discuss the application,
   c. Review and discuss the recommendation of the Planning Board, and
      i. Approve the Comprehensive Plan Amendment,
      ii. Approve the Comprehensive Plan Amendment with revisions,
      iii. Refer the Comprehensive Plan Amendment back to the Planning Board for further deliberation, or
      iv. Deny the Comprehensive Plan Amendment.

C. **Review Criteria**.

1. The proposed amendment is in keeping with the vision and goals established in the Comprehensive Plan, and
2. The proposed amendment is in keeping with the growth strategy established in the Comprehensive Plan.

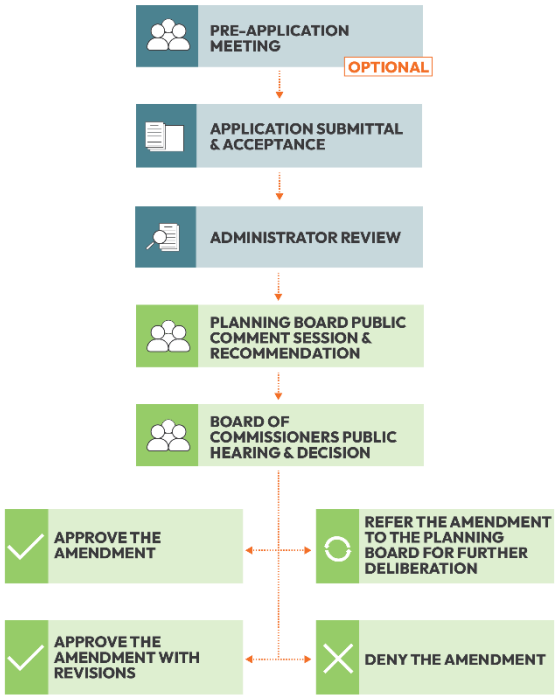

Figure 7: Comprehensive Plan Amendment Flowchart

D. **Effect of Decision**.

1. **Waiting Period for Subsequent Applications**.

   a. After the Board of Commissioners has rendered their decision on a Comprehensive Plan Amendment application, there shall be a six-month waiting period before an application shall be considered for the same topic.

   b. This waiting period may be waived by the Board of Commissioners (three-fourths vote required) if it determines that there have been substantial changes in conditions or circumstances which may relate to the request.

16.7.4 Development Agreements

A. **Applicability**. The Board of Commissioners may enter into a development agreement with a developer, subject to NCGS Chapter 160D. In entering into a development agreement, the Town may not exercise any authority or make any commitment not authorized by general or local act and may not impose any tax or fee not authorized by otherwise applicable law.

B. **Procedures**.

1. **Pre-Application Meeting.** If a pre-application meeting is required, in accordance with Table 16.3 Review Procedures Overview, or requested it shall follow the process detailed in Section 16.4.2 Pre-Application Meetings.

2. **Application Submittal and Acceptance**. Application submittal and acceptance shall follow the standards and process established in Section 16.4.4 and 16.4.5.

3. **Administrator Review**. Once the application is accepted, the Administrator shall:

   a. Prepare a report and recommendation on the application, and

4. **Board of Commissioners Decision**. The Board of Commissioners shall:

   a. Conduct a public hearing on the application,

   b. Review and discuss the application,

   c. Review and discuss the recommendation of the Planning Board, and

      i. Enter into the Development Agreement,

      ii. Enter into the Development Agreement with Conditions agreed to in writing by the developer, or

      iii. Not enter into the Development Agreement.

C. **Review Criteria**. A development agreement shall meet and be subject to all requirements and provisions in NCGS Chapter 160D, including the following:

1. Section 160D-1004 site area and duration requirements,

2. Section 160D-1006 requirement that delivery of public facilities be tied to implementation of the proposed development,

3. Section 160D-1006 requirements for minimum contents of development agreements, phasing, performance standards and agreement modifications, and

4. Section 160D-1009 provisions for amendment or cancellation of development agreements.

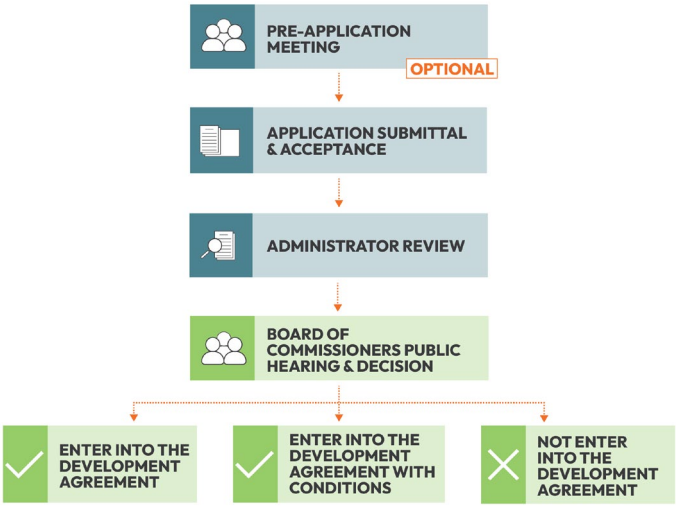

Figure 8: Development Agreements Flowchart

D. **Effect of Decision**. Development pursuant to the Development Agreement shall be subject to the terms and conditions of the agreement and to the laws in force at the time of execution of the agreement unless otherwise provided by specific provisions in the agreement or the North Carolina General Statutes. The Development Agreement shall be subject to the requirements of Section 160D-1001 et seq.

E. **Periodic Review**.

1. At least every 12 months following execution of the agreement, the Administrator shall conduct a periodic review during which the developer shall be required to demonstrate good faith compliance with the terms of the agreement.

2. If the periodic review finds a material breach of the terms or conditions of the Development Agreement has occurred, notice of the breach and a reasonable opportunity to correct it shall be provided in accordance with Section 160D 1008 of the General Statutes.

3. If the breach is not cured within the time given, the Town may terminate or modify the Development Agreement.

F. **Amendments.**

1. Amendments to a Development Agreement may be made with the mutual consent of all parties to the agreement.

2. Amendments to a Development Agreement shall be recorded in accordance with NCGS 160D-1010.

16.7.5 Designation of Historic Districts and Historic Landmarks

. The Legislative procedure for the Designation of Historic Districts is governed by NCGS §160D-944

A. The Legislative procedure for the Designation of Historic Landmarks is governed by NCGS §160D-945 and §160D-946.

16.7.6 Extraterritorial Jurisdiction Expansion

NCGS 160D allows the Town to extend the boundaries of its Extraterritorial Jurisdiction. The notification period and process, including for any associated rezoning, and boundary amendment procedures outlined in NCGS 160D shall be followed.

16.7.7 Map Amendment – Base District

A. **Applicability**. The Base District Map Amendment process is established to allow the parties listed below to propose a change to the base district designation of a parcel or development site.

1. Board of Commissioners,

2. Planning Board,

3. Administrator, and/or

4. Any resident or property owner within the land use jurisdiction of the town, a lessee or person holding an option or contract to purchase or lease land, or an authorized agent of the landowner, provided that any rezoning or text amendment requests that down zone property, thereby reducing allowable density or reducing the number of allowable uses, shall obtain written consent by all property owners of such impacted property.

B. **Procedures**.

1. **Application Submittal and Acceptance**. Application submittal and acceptance shall follow the standards and process established in Section 16.4.

2. **Pre-Application Meeting.** If a pre-application meeting is required, in accordance with Table 16.3 Review Procedures Overview, or requested it shall follow the process detailed in Section 16.4.2 Pre-Application Meetings.

3. **Administrator Review**. Once the application is accepted, the Administrator shall:

   a. Prepare a report and recommendation on the application, and

   b. Schedule the Planning Board public comment session.

4. **Planning Board Public Comment Session and Recommendation**. The Planning Board shall:

   a. Conduct a public comment session on the application,

   b. Review and discuss the application, and

      i. Recommend approval,

      ii. Recommend approval with revisions,

      iii. Defer a recommendation for further deliberation, in which case a decision shall be rendered in 30 days of the first consideration, or

      iv. Recommend denial.

5. **Board of Commissioners Public Hearing and Decision**. The Board of Commissioners shall:

   a. Conduct a public hearing on the application,

   b. Review and discuss the application,

   c. Review and discuss the recommendation of the Planning Board, and

      i. Approve the Base District Map Amendment,

      ii. Approve the Base District Map Amendment with revisions,

      iii. Refer the Base District Map Amendment back to the Planning Board for further deliberation, or

      iv. Deny the Base District Map Amendment.

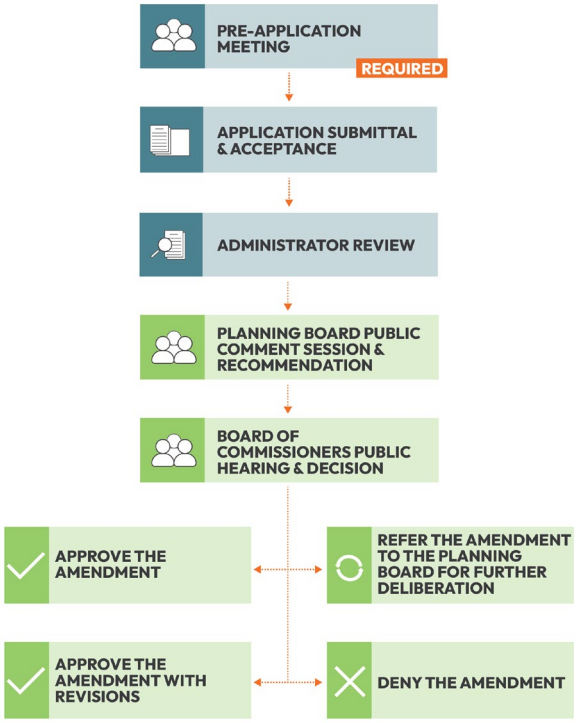

Figure 9: Base District Map Amendment Flowchart

C. **Review Criteria**. The following criteria shall be used in the review of a base district map amendment.

1. In accordance with NCGS §160D, the proposed amendment shall be made in accordance with the Community Plan and any other officially adopted applicable plan.
2. The subject site is suitable for the uses and development allowed within the requested map amendment.
3. The proposed map amendment will result in compatible development patterns in terms of use and scale with adjacent existing and planned future development.
4. The proposed map amendment will not generate traffic, environmental, or aesthetic concerns that would generate undue impact on adjacent properties.
5. The proposed map amendment will not be detrimental to the health, safety, and welfare of the neighborhood or Town as a whole.

D. **Effect of Decision**.

1. **Waiting Period For Subsequent Applications**.

   a. After the Board of Commissioners has rendered their decision on a Base District Map Amendment application, there shall be a six-month waiting period before an application shall be considered for the same parcel or development site.

   b. This waiting period may be waived by the Board of Commissioners (three-fourths vote required) if it determines that there have been substantial changes in conditions or circumstances which may relate to the request.

16.7.8 Map Amendment – Conditional District

A. **Applicability**.

1. The Conditional District Map Amendment process is established to accommodate uses or developments which are not appropriate in a base district without additional reasonable, appropriate, and mutually agreed upon conditions such as but not limited to the following use and site-specific standards:

   a. Location,

   b. Nature,

   c. Hours of operation,

   d. Extent, or

   e. Other standards that address conformance of the development and use of the site to this ordinance and officially adopted plans and those standards and conditions that address the impacts reasonably expected to be generated by the development and use of the site.

2. A Conditional District Map Amendment shall only be considered upon the request of the owners and/or their representatives of all the property to be included in the specific Conditional District.

3. A Conditional District Map Amendment shall consist of land under unified control which may be planned and developed as a single development or as an approved programmed series of development phases by multiple developers. "Unified control" means that all land to be included within a Conditional District shall be owned or otherwise under the legal control of the applicant for a conditional zoning request.

B. **Procedures**.

1. **Application Submittal and Acceptance**. Application submittal and acceptance shall follow the standards and process established in Section 16.4.4 and 16.4.5.

2. **Pre-Application Meeting.** If a pre-application meeting is required, in accordance with Table 16.3 Review Procedures Overview, or requested it shall follow the process detailed in Section 16.4.2 Pre-Application Meetings.

3. **Administrator Review**. Once the application is accepted, the Administrator shall:

   a. Prepare a report and recommendation on the application, and

   b. Schedule the Planning Board public comment session.

4. **Planning Board Public Comment Session and Recommendation**. The Planning Board shall:

   a. Conduct a public comment session on the application,

   b. Review and discuss the application, and

      i. Recommend approval,

      ii. Recommend approval with revisions,

      iii. Defer a recommendation for further deliberation, in which case a decision shall be rendered in 30 days of the first consideration, or

      iv. Recommend denial.

5. **Board of Commissioners Public Hearing and Decision.** The Board of Commissioners shall:

   a. Conduct a public hearing on the application,

   b. Review and discuss the application,

   c. Review and discuss the recommendation of the Planning Board, and

      i. Approve the Conditional District Map Amendment,

      ii. Approve the Conditional District Map Amendment with revisions,

      iii. Refer the Conditional District Map Amendment back to the Planning Board for further deliberation, or

      iv. Deny the Conditional District Map Amendment.

C. **Review Criteria.** The following criteria shall be used in the review of a conditional district map amendment.

1. All applicable standards of this UDO are met.

2. All conditions are more restrictive than the related standard of this UDO and:

   a. Create stronger community compatibility,

   b. Ensure conformity with the Comprehensive Plan, and

   c. Minimize potential impacts on surrounding uses.

D. **Effect of Decision.**

1. The applicant may proceed with development only after approval of any necessary Construction Plans and Plats.

2. The development and use of all land within the Conditional District shall be in keeping with the approval and all applicable provisions therein.

3. The Board of Commissioners may allow the phasing of final development if specified in the Conditional District approval. Each phase of development shall adhere to all applicable provisions and standards of this section and the Conditional District.

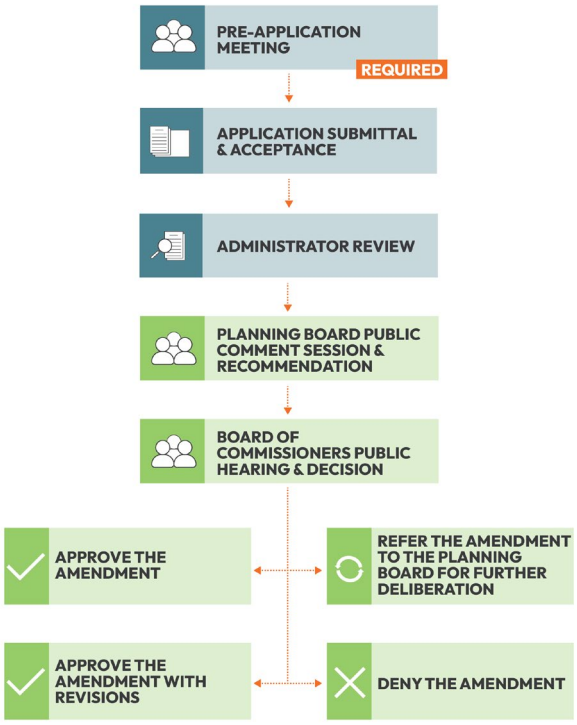

Figure 10: Conditional District Map Amendment Flowchart

E. **Amendments.**

1. **Minor Amendments**. Minor amendments to a Conditional District shall be required to receive Administrator approval in accordance with the Site Plan procedures of Section 16.5.11. Minor amendments to a Conditional District shall be any amendment which does not qualify as a major amendment.

2. **Major Amendments.** Major amendments to a Conditional District shall be required to receive approval as a new Conditional District Map Amendment. Major amendments to a Conditional District shall include:

   a. Land area being added or removed from the Conditional District,

   b. Modification of special performance criteria, design standards, or other requirements specified by the enacting ordinance,

   c. A change in land use or development type beyond that permitted by the approved Conditional District Master Plan,

   d. When there is introduction of a new vehicular access point to an existing street, road or thoroughfare not previously designated for access,

   e. When there is an increase in the total number of residential dwelling units originally authorized by the approved Conditional District Master Plan,

   f. When the total floor area of a non-residential classification is increased more than 10 percent beyond the total floor area last approved by Board of Commissioners,

   g. Any change which alters the basic development concept of the Conditional District Master Plan.

16.7.9 Map Amendment – Planned Unit Development (PUD)

A. **Applicability.**

1. The PUD Map Amendment process is established to provide flexibility in the strict application of the standards of this UDO to accommodate innovative design and development practices that would not otherwise be achievable in exchange for higher quality development and additional community benefits than would otherwise be required.

2. A PUD Map Amendment shall only be considered upon the request of the owners and/or their representatives of all the property to be included in the specific PUD District.

3. A PUD Map Amendment shall consist of land under unified control which may be planned and developed as a single development or as an approved programmed series of development phases by multiple developers. "Unified control" means that all land to be included within a PUD District shall be owned or otherwise under the legal control of the applicant for a conditional zoning request.

B. **Procedures.**

1. **Application Submittal and Acceptance**. Application submittal and acceptance shall follow the standards and process established in Section 16.4.

2. **Pre-Application Meeting.** If a pre-application meeting is required, in accordance with Table 16.3 Review Procedures Overview, or requested it shall follow the process detailed in Section 16.4.2 Pre-Application Meetings.

3. **Administrator Review**. Once the application is accepted, the Administrator shall:

   a. Prepare a report and recommendation on the application, and

   b. Schedule the Planning Board public comment session.

4. **Planning Board Public Comment Session and Recommendation**. The Planning Board shall:

   a. Conduct a public comment session on the application,

   b. Review and discuss the application, and

      i. Recommend approval,

      ii. Recommend approval with revisions,

      iii. Defer a recommendation for further deliberation, in which case a decision shall be rendered in 30 days or by a time period agreed to by the applicant after the first consideration, or

      iv. Recommend denial.

5. **Board of Commissioners Public Hearing and Decision**. The Board of Commissioners shall:

   a. Conduct a public hearing on the application,

   b. Review and discuss the application,

   c. Review and discuss the recommendation of the Planning Board, and

      i. Approve the PUD Map Amendment,

      ii. Approve the PUD Map Amendment with revisions,

      iii. Refer the PUD Map Amendment back to the Planning Board for further deliberation, or

      iv. Deny the PUD Map Amendment.

C. **Review Criteria.** Planned unit developments shall meet the PUD District Objectives established in Section 2.4.A.4.

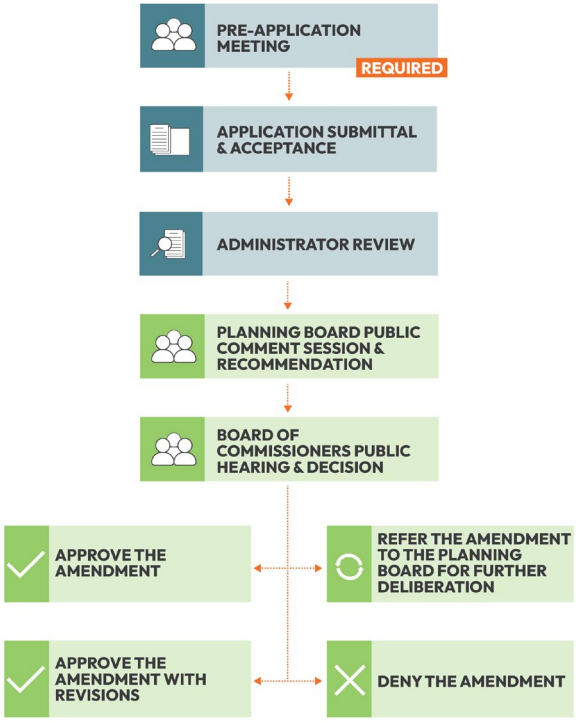

Figure 11: Planned Unit Development Map Amendment Flowchart

A. **Effect of Decision**.

1. The applicant may proceed with development only after approval of any necessary Construction Plans and Plats.
2. The development and use of all land within the PUD shall be in keeping with the approved Concept Plan (Type I PUD) or Site Plan (Type II PUD) and all applicable provisions therein.
3. If so reflected on the Master Plan, the Board of Commissioners may allow the phasing of final development. Each phase of development shall adhere to all applicable provisions and standards of this section and the applicable PUD Concept Plan.

B. **Amendments**.

1. **Minor Amendments**. Minor amendments to a PUD shall be required to receive Administrator approval in accordance with the Site Plan procedures of Section 16.5.11. Minor amendments to a PUD shall be any amendment which does not qualify as a major amendment.
2. **Major Amendments.** Major amendments to a PUD shall be required to receive approval as a new PUD Map Amendment. Major amendments to a PUD shall include:
   a. Land area being added or removed from the Planned Unit Development.
   b. Modification of special performance criteria, design standards, or other requirements specified by the enacting ordinance.
   c. A change in land use or development type beyond that permitted by the approved PUD Concept Plan or Site Plan.
   d. When there is introduction of a new vehicular access point to an existing street, road or thoroughfare not previously designated for access.
   e. When there is an increase in the total number of residential dwelling units originally authorized by the approved PUD Concept Plan or Site Plan.
   f. When the total floor area of a non-residential classification is increased more than 10 percent beyond the total floor area last approved by Board of Commissioners.
   g. Any change which alters the basic development concept of the PUD Concept Plan or Site Plan.

16.7.10 Text Amendment

A. **Applicability**. The Text Amendment process is established to allow the Board of Commissioners, Planning Board, and/or Administrator to propose a change to the text of this UDO.

B. **Procedures**.

1. **Application Submittal and Acceptance**. Application submittal and acceptance shall follow the standards and process established in Section 16.4.

2. **Administrator Review**. Once the application is accepted, the Administrator shall:

   a. Prepare a report and recommendation on the application, and

   b. Schedule the Planning Board public comment session.

3. **Planning Board Public Comment Session and Recommendation**. The Planning Board shall:

   a. Conduct a public comment session on the application,

   b. Review and discuss the application, and

      i. Recommend approval,

      ii. Recommend approval with revisions,

      iii. Defer a recommendation for further deliberation, in which case a decision shall be rendered in 30 days of the first consideration, or

      iv. Recommend denial.

4. **Board of Commissioners Public Hearing and Decision**. The Board of Commissioners shall:

   a. Conduct a public hearing on the application,

   b. Review and discuss the application,

   c. Review and discuss the recommendation of the Planning Board, and

      i. Approve the Text Amendment,

      ii. Approve the Text Amendment with revisions,

      iii. Refer the Text Amendment back to the Planning Board for further deliberation, or

      iv. Deny the Text Amendment.

C. **Review Criteria**. The following criteria shall be used in the review of a text amendment.

1. In accordance with NCGS §160D, the proposed amendment shall be made in accordance with the Community Plan and any other officially adopted applicable plan.

2. The amendment shall result in compatible relationships between existing and future development patterns.

3. The proposed amendment shall not substantially impair health, safety, or general welfare in the neighborhood or the Town as a whole.

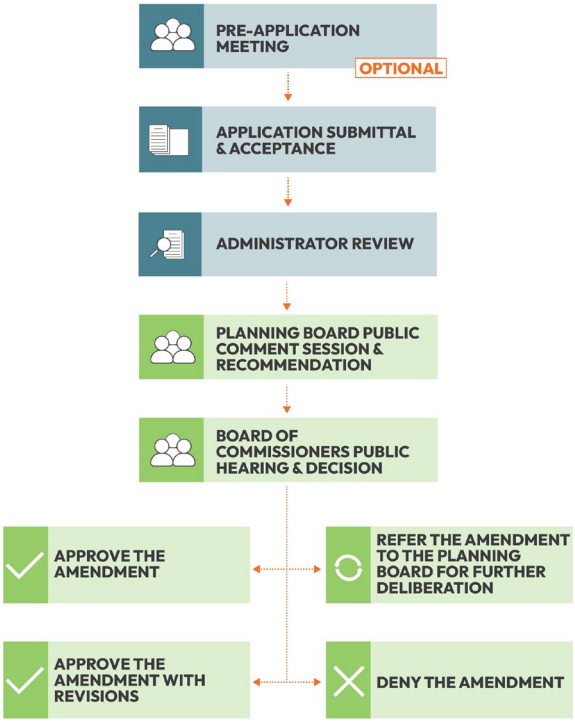

Figure 12: Text Amendment Flowchart

D. **Effect of Decision**.

1. **Waiting Period for Subsequent Applications**.

   a. After the Board of Commissioners has rendered their decision on a Text Amendment application, there shall be a six-month waiting period before an application shall be considered on the same issue.

   b. This waiting period may be waived by the Board of Commissioners (three-fourths vote required) if it determines that there have been substantial changes in conditions or circumstances which may relate to the request.

16.7.11 Vested Rights Certificate

A. **Applicability**. The Vested Rights Certificate process is established to permit an applicant to request vesting, or an extended vesting period, from changes in this UDO that take place after approval of a development application but prior to completion of an approved site-specific vesting plan associated with the application.

B. **Procedures**.

1. **Application Submittal and Acceptance**. Application submittal and acceptance shall follow the standards and process established in Section 16.4.4 and 16.4.5.

2. **Administrator Review**. Once the application is accepted, the Administrator shall:

   a. Prepare a report and recommendation on the application, and

   b. Schedule the Board of Commissioners Meeting.

3. **Board of Commissioners Decision**. The Board of Commissioners shall:

   a. Review and discuss the application, and

      i. Approve the Vested Rights Certificate,

      ii. Approve the Vested Rights Certificate with Conditions, or

      iii. Deny the Vested Rights Certificate, Administrator shall issue a denial letter, detailing the decision to the applicant.

C. **Review Criteria**. A Vested Rights Certificate shall be approved if:

1. The Vested Rights Certificate is for an approved site-specific vesting plan,

2. The development is valid and unexpired,

3. Any required Variances have been obtained, and

4. The request is in accordance with NCGS§160D-108, and Section 1.7.B.1

D. **Effect of Decision**.

1. Each document used to establish a site-specific vesting plan shall bear the following notation: "Approval of this application establishes a zoning vested right under Section 160D-108 of the North Carolina General Statutes, as amended. Unless terminated at an earlier date, the vested right shall be valid until _____(date)."

2. The establishment of a vested right shall not preclude the application of overlay zoning district provisions that impose additional requirements but do not affect the allowable type and intensity of use, or through ordinances that are general in nature and are applicable to all property subject to land use regulation by the Town, including, but not limited to: building, fire, plumbing, electrical, and mechanical codes.

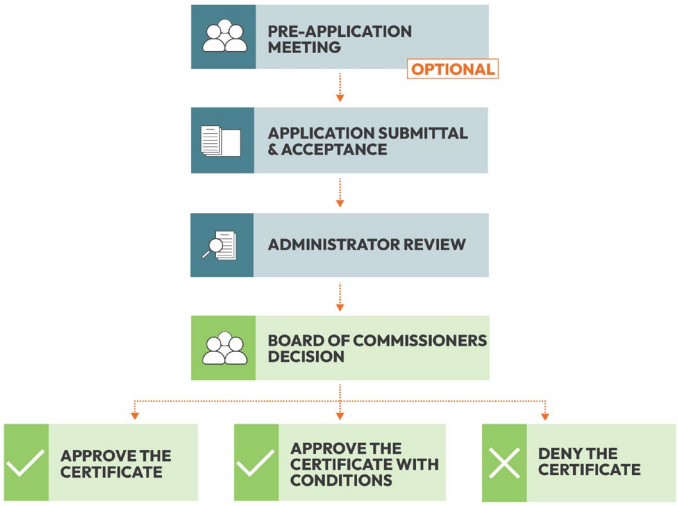

Figure 13: Vested Rights Certificate Flowchart

17 ENFORCEMENT

17.1 General Provisions

17.1.1 Purpose

This Chapter establishes procedures through which the Town seeks to ensure compliance with the provisions of this Unified Development Ordinance (UDO) and obtain corrections for UDO violations. It also sets forth the remedies and penalties that apply to violations of this UDO.

17.1.2 Applicability

A. Compliance with all the procedures, standards, and other provisions of this UDO is required by all persons owning, developing, managing, using, or occupying land or structures in the Town and the Extraterritorial jurisdiction (ETJ).

B. Any violation of an ordinance of the Town which was initiated prior to the effective date of this UDO shall:

1. Continue to be a violation under this ordinance and shall be subject to the penalties set forth at the time of the violation,

2. Unless the use, development, construction, or other activity is clearly consistent with the express terms of this ordinance.

CONTENT

17.1 General Provisions
17.2 Violations
17.3 Responsible Entities
17.4 Enforcement Procedures
17.5 Remedies
17.6 Penalties

17.2 Violations

Any of the following shall be a violation of this UDO and shall be subject to the remedies and penalties provided by this UDO and State law.

17.2.1 Development without Authorization

Engaging in the development, use, construction, land disturbance, or any other activity subject to the jurisdiction of this UDO without all required plan approvals, permits, certificates, or other forms of authorization required by this UDO shall constitute a violation of this UDO.

17.2.2 Development Inconsistent with Authorization

Engaging in development, use, construction, land disturbance or other activity subject to the jurisdiction of this UDO inconsistent with any approved plan, plat, permit, certificate, other form of authorization granted for such activity, including conditions of such approvals, shall constitute a violation of this UDO.

17.2.3 Violation by Act or Omission

Undertaking any activity contrary to the provisions of this UDO, including but not limited to any act or omission, or failure to comply with any other provisions, procedures, or standards as required by this UDO shall constitute a violation of this UDO.

17.2.4 Illegal Subdivisions/Sales of Land

Subdividing land contrary to the provisions of this UDO or transferring or selling of land by reference to, exhibition of, or any other use or a plat showing a subdivision of the land before the plat has been properly approved under the terms of this UDO and recorded in the office of the Wake County or Franklin County Register of Deeds, as appropriate, shall constitute a violation of this UDO.

17.2.5 Demolition by Neglect of Historic Properties

Demolition by Neglect of any designated historic landmark or property located within a locally designated historic district shall constitute a violation of this UDO. Owners of historic properties and structures shall have the responsibility to preserve those properties and structures against decay, deterioration, and structural defects and to correct conditions that would compromise those properties' and structures' long-term integrity.

17.2.6 Cemetery Violations

A. It is considered a violation of this ordinance UDO and NCGS §14-148 to willfully place any refuse in a cemetery, disturb any element of a wall or fence that encloses a cemetery, or disturb any plant, flower or other article planted or placed within a cemetery to designate where human remains are interred or to preserve the memory and name of any person without consent of the surviving spouse or next of kin.

B. It is considered a violation of this ordinance UDO and NCGS §14-149 to knowingly and willfully disturb any casket or repository of human remains by any means, remove any grave or portion thereof, disturb a tombstone, headstone, grave marker, etc. placed or erected within any cemetery to designate where human remains are interred or to preserve the memory and name of any person without authorization of the law or the consent of the surviving spouse or next of kin.

C. Any person convicted of violating the provision of this Chapter shall be subject to fine as outlined in accordance with Chapter 16, Enforcement. Any person convicted of violating NCGS §14-148 and 14-149 may result in a fine and/or misdemeanor or felony charges.

17.3 Responsible Entities

17.3.1 Entity Responsible for Violation

Any of the following parties who participate in, assists, directs, creates or maintains a situation that constitutes a violation of this UDO shall be held responsible and shall be subject to the remedies and penalties set forth in this Chapter.

A. Property owner(s),

B. Developer or permit/approval holder,

C. Tenant or occupant of any land, building, structure, sign, use of land, or part thereof,

D. Financially responsible party,

E. Contractor or designated agent,

F. Architect, engineer, or builder, or

G. Any person conducting the violating activity.

17.3.2 Failure by Town does not Relieve Violator

Failure of the Administrator to observe or recognize conditions which violate this UDO or to deny the issuance of development permits shall not relieve the violator from responsibility for the condition or damages that may result and shall not result in the Town, its officers, or agents being responsible for conditions or damages, except as statutes of limitation under NCGS Chapter 1.

17.3.3 Entity Responsible for Enforcement

The Administrator shall be responsible for enforcing the provisions of this UDO. Other employees of the Town may assist in enforcement by reporting apparent violations of this UDO to enforcement officials. Primary responsibility for enforcing the provisions of this UDO shall be divided among Town officials as follows:

A. The Planning Director, or their designee, shall be responsible for all enforcement of all parts of this UDO not under the purview of the Engineering Director or Building Official as delineated below,

B. The Engineering Director, or their designee, shall be responsible for enforcement of the watercourse buffers, erosion control, floodplains, stormwater management, illicit discharges, and engineering provisions in the text of this UDO and compliance with conditions of approval,

C. The Building Official, or their designee, is responsible for all enforcement of the Building Code.

17.4 Enforcement Procedures

17.4.1 Complaints Regarding Violations

When the Administrator identifies or is made aware of a potential UDO violation, the enforcement procedures shall take place in accordance with this Section. Any person may submit a complaint alleging a violation of this UDO.

A. Upon receiving a complaint that fully states the basis for the allegation, including the apparent cause of the alleged violation, the Administrator shall properly record such complaint, investigate the alleged violation, and take appropriate action as provided by this UDO.

B. Nothing shall limit the Administrator from investigating possible violations of this UDO without receipt of a complaint.

17.4.2 Inspection and Investigation

The Administrator is authorized to conduct any lawful inspection and investigation necessary to ensure compliance with this UDO.

A. Inspections may be conducted from public areas or common areas, including premises open to the general public, public right-of-way, as well as adjacent private areas where permission has been granted by the property owner. These inspections shall be carried out during normal business hours unless the Administrator determines there is a special circumstance or an emergency necessitating inspection at another time.

B. Inspections of private areas not visible from a public area may only occur upon presentation of proper credentials and with the consent of the premises owner or with an administrative inspection warrant.

C. No person shall willfully resist, delay, or obstruct an authorized representative, employee, or agent of the Town while that person is inspecting or attempting to inspect land or structures nor shall any person obstruct, hamper, or interfere with any such representative while in the process of carrying out their official duties.

D. A registered professional archaeologist must be on-site during any ground disturbance within 25 feet of the limits of the cemetery in the event of inadvertent discovery of human remains during the disturbance. Town staff must be notified at least 10 business days prior to the disturbance.

17.4.3 Notice of Violation and Correction Order

Upon finding that a violation of this UDO exists, the Town shall provide written notice of the violation and correction order.

A. **Contents of Written Notice of Violation.** The notice of the violation and correction order shall:

1. Describe the location and nature of the violation,
2. State the actions necessary to abate the violation,
3. Order that the violation be corrected within a specified reasonable time period not to exceed 30 days after receipt of the notice of the violation and correction order and with the limit for correction of the violation beginning five days after the notice if posted on the property,
4. State that remedies and/or penalties may be assessed if the violation is not addressed within the time period for correction, and
5. State a notice of the violation and correction order may be appealed to the Board of Adjustment except as provided by NCGS §160D-1403.1 or otherwise provided by law. The owner, other party, or person with standing has 30 days from receipt of the written notice of the determination within which to file an appeal.

B. **Delivery of Written Notice of Violation.** The notice of the violation and correction order shall be served to the responsible entity(ies) and the landowner of the property (if different) on which the violation exists and the person causing or maintaining the violation.

1. The notice of violation and correction order shall be delivered in any manner permitted by NCGS, including:
   a. Personal delivery,
   b. Electronic delivery,
   c. First-class mail, or
   d. Posted on the property.

C. The person providing the notice of the violation and correction order shall certify to the local government that the notice was provided, and the certificate shall be deemed conclusive in the absence of fraud.

D. In the absence of evidence to the contrary, notice given pursuant to NCGS §160D-403(b) by first-class mail is deemed received on the third business day following deposit of the notice for mailing with the United States Postal Service.

17.4.4 Initial Notice Shall Constitute Final Notice

The initial written notice of a violation shall constitute final notice regarding a violation, though additional written notice may be provided, in the sole discretion of the Administrator.

17.4.5 Extension of Time Limit to Correct Violation

On receiving a written request for an extension of the time limit for correction specified in the Notice of the Violation and Correction Order, the Administrator may grant a single extension of time limit for up to 90 days for good cause shown. The notice of extension shall state the date prior to which correction must be made or the violator will be subject to the penalties described in the Notice of the Violation and Correction Order.

17.4.6 Emergency Enforcement Without Notice

If it is determined that delay in correcting the violation would pose a danger to the public health, safety, or welfare, the Administrator may seek immediate enforcement without prior written notice by invoking any of the remedies and penalties authorized in Section 17.5, Remedies and Section 17.6 Penalties.

17.4.7 Repeat Violations

If the same violation is repeated by the same offender over any two-year period, the Town may commence the application of remedies or penalties at the stage in the process where the previous violation was resolved.

17.4.8 Authority to Require Statements

The Town shall have the authority to require written statements, or the filing of reports under oath, with respect to pertinent questions related to land-disturbing activities constituting a potential violation of this UDO.

17.4.9 Demolition by Neglect of Historic Structures Enforcement Procedure

A. **Determination by Neglect.** If the Administrator determines that a "Demolition by Neglect" violation has occurred notice will be given to the Historic Preservation Commission (HPC).

B. **Determination of Neglect.** The HPC shall call an administrative public hearing. Written notice of such administrative public hearing shall be mailed by first-class mail to the owner, not less than 10 days prior to the date of the hearing. If the HPC determines at the administrative public hearing that a state of "Demolition by Neglect" exists then it will issue a finding of such condition and either issue a Certificate of Appropriateness (COA) for minor repairs, if appropriate, and/or order that an application for a COA be submitted for repairs requiring a separate evidentiary hearing before the Historic Preservation Commission. Any required time limit for repairs will automatically be adjusted, as needed, to allow the normal COA process.

C. **Notice of Violation and Corrective Order.** When the HPC finds that a state of "Demolition by Neglect" exists, a Notice of Violation and Corrective Order shall be issued in accordance with standard Town procedures in Section 17.4.3. If an order to apply for a COA has been issued by the Historic Preservation Commission, the Notice of Violation and Corrective Order will include a statement to that fact and the time allowed for compliance will be appropriately adjusted.

D. **Safeguards from Undue Economic Hardship**

1. When a written claim of undue economic hardship is made owing to the effects of this article, the Administrator shall notify the Hardship Review Committee (Hardship Review Committee) which shall be made up of the Finance Officer, the Assistant Planning Director and the Inspections Director or their designees. The Administrator shall schedule an administrative hearing on the claim within 15 business days of receipt of the written request.

2. The petitioner submitting the written claim shall present the information required by the Hardship Review Committee to determine if an undue economic hardship owing to the effects of a "Demolition by Neglect" finding has occurred. If any of the required information is not reasonably available, the petitioner shall describe the reasons why such information cannot be obtained. The minimum necessary evidence shall include, but is not limited to:

   a. Nature of ownership (individual, business, or non-profit) or legal possession, custody, and control,

   b. Financial resources of the owner and/or parties in interest,

   c. Estimated cost of repairs,

   d. Assessed value of the land and improvements (existing),

   e. Real estate taxes for the previous two years,

   f. Amount paid for the property, date of purchase, and party from whom purchased, including a description of the relationship between the owner and the person from whom the property was purchased, or other means of acquisition of title, such as by gift or by inheritance,

   g. Annual debt service, if any, for the previous two years,

   h. Any listing of the property for sale or for rent, the price asked, and offers received, if any.

3. In addition, for all income-producing properties, the petitioner must also provide the following:

   a. Annual gross income from the property for the previous two years,

   b. Itemized operating and maintenance expenses for the previous two years, including proof that adequate and competent management procedures were followed,

   c. Annual cash flow, if any, for the previous two years.

4. Within 30 business days after the administrative hearing, the Hardship Review Committee shall cause to be made a finding of undue or no undue economic hardship and shall provide a copy of the decision to the Administrator and the Historic Preservation Commission. In the event of a finding of no undue economic hardship, the Administrator shall cause to be issued an order for such property to be repaired within the time specified.

5. In the event of a finding of undue economic hardship, the finding may be accompanied by a recommended plan to relieve the economic hardship. This plan may include, but is not limited to, the following: property tax relief as may be allowed under North Carolina law, loans, or grants from the Town, the county, or other public, private, or nonprofit sources, acquisition by purchase, building code modifications, or changes in applicable zoning regulations proving sufficient to mitigate the undue economic hardship. The Hardship Review Committee shall report such finding and the recommended plan to the Administrator who will then cause to be issued an order for such property to be repaired within the time specified, and according to the provisions of the recommended plan.

17.5 Remedies

17.5.1 Application of Remedies

On determining that the violator has failed to correct the violation by the time limit set forth in the final Notice of Violation and Correction Order (or any granted extension thereof), has failed to request an administrative hearing, or has failed to appeal the Notice of Violation and Correction Order in accordance with Section 16.6.2, Appeals of Administrative Decisions, the Administrator shall take appropriate action, as provided in this Section or in Section 17.6, Penalties, to correct the violation and to ensure compliance with this UDO.

17.5.2 Issuance of Stop Work Order

A. The Administrator may issue a stop work order whenever any development subject to this UDO, including a building or structure that is being constructed, demolished, renovated, altered, or repaired, is in violation of any applicable provision of this UDO.

B. The Stop Work Order shall be in writing, directed to the person doing the work, and shall state the specific work to be stopped, the specific reasons for cessation, and the action(s) necessary to lawfully resume work.

17.5.3 Revocation of Permit or Approval

A. The Administrator may revoke any permit or approval granted under this UDO, by written notice to the permit or approval holder, when:

1. False statements or misrepresentations were made in securing the permit or approval,
2. Work is being or has been done in substantial departure from the approved application or plan,
3. There has been a failure to comply with the requirements of this UDO, or
4. A permit or approval has been mistakenly granted in violation of this UDO.

B. The development permit cannot be revoked if a public hearing was required to approve the development permit without following the same development review and approval process required for issuance of the development approval.

17.5.4 Denial or Withholding of Related Permits.

The Administrator may deny or withhold a Certificate of Compliance or Certificate of Occupancy in accordance with the Building Code or deny or withhold any permit, approval, or other authorization under this UDO to use or develop any land, structure, or improvements—until an alleged violation related to such land, use, or development is corrected and any associated civil penalty is paid.

17.5.5 Removal of Illegal Signs

A. The Town may remove any sign placed within the right-of-way of a Town or state-maintained street in violation of the standards in this UDO.

B. Pursuant to NCGS, the Administrator shall have the authority to summarily remove, abate, or remedy a sign or sign structure which the building inspector has determined to be dangerous or prejudicial to the public health or safety.

C. The expense of the action shall be paid by the sign owner or if the sign owner cannot be ascertained, by the property owner.

17.5.6 Land Disturbance Restoration

The Administrator may require any person who undertakes a land-disturbing activity and who fails to retain sediment generated by the activity, as required by Section 12.3.1, to restore the waters and land affected by the failure so as to minimize the detrimental effects of the resulting pollution by sedimentation.

17.5.7 Injunction

The Administrator may apply to the appropriate court for a mandatory or prohibitory injunction ordering the offender to correct the unlawful condition or cease the unlawful use of the land in question.

17.5.8 Order of Abatement

A. The Administrator may apply for, and the court may enter into an Order of Abatement as part of the judgment in the case. An Order of Abatement may direct any of the following actions:

1. Buildings or other structures on the property be closed, demolished, removed,
2. Fixtures, furniture, or other moveable property be moved or removed entirely,
3. Improvements, alterations, modifications, or repairs be made,
4. Trees be replaced, or
5. Any other action be taken that is necessary to bring the property into compliance with this UDO.

B. If an Order of Abatement is executed, a lien may be placed on the property for the cost of executing the order in accordance with Chapter 160D of the General Statutes.

17.5.9 Equitable Remedy

The Town may apply to the appropriate court for any appropriate equitable remedy to enforce the provisions of this UDO. The fact that other remedies are provided under general law or this UDO shall not be used by a violator as a defense to the Town's application for equitable relief.

17.6 Penalties

17.6.1 Application of Penalties

On determining that the violator has failed to correct the violation by the time limit set forth in the final Notice of Violation and Correction Order (or any granted extension thereof), has failed to request an administrative hearing, or has failed to appeal the Notice of Violation and Correction Order in accordance with Section 16.6.2, Appeals of Administrative Decisions, the Administrator shall take appropriate action, as provided in this Section or in Section 17.5, Remedies, to correct the violation and to ensure compliance with this UDO.

17.6.2 Citations and Civil Penalties

A. **Erosion and Sedimentation Control Violations**

1. **Applicability**. Any person, firm, or corporation who violates any provisions in Section 12.4, Erosion and Sedimentation Controls Regulations shall be subject to civil penalties.
2. **Maximum Penalty**. The maximum civil penalty per violation is $5,000. Each day of a continuing violation shall constitute a separate violation. The maximum cumulative total civil penalty assessed is $25,000.
3. **Determination of Penalty Amount**. The Administrator shall determine the amount of the civil penalty based upon the following factors:
   a. The degree and extent of harm caused by the violation,
   b. The cost of rectifying the damage,
   c. The amount of money the violator saved by noncompliance,
   d. Whether the violation was committed willfully, and
   e. The prior record of the violator in complying or failing to comply with this UDO.
4. **Notice of Assessment.**
   a. The Administrator shall issue a notice of assessment to direct the violator to either pay the assessment or contest the assessment within 30 days by filing a petition for hearing with the Town.

b. If a violator does not pay a civil penalty assessed by a local government within 30 days after it is due, the local government may institute a civil action to recover the amount of the assessment.

c. The civil action may be brought in the superior court of any county where the violation occurred or the violator's residence or principal place of business is located.

d. A civil action must be filed within three years of the date the assessment was due.

e. An assessment that is not contested is due when the violator is served with a notice of assessment.

f. An assessment that is contested is due at the conclusion of the administrative and judicial review of the assessment.

5. **Remission of Penalties.**

a. A request for remission of a civil penalty imposed under NCGS §113A-64 may be filed with the Commission within 30 days of receipt of the notice of assessment. A remission request must be accompanied by a waiver of the right to a contested case hearing pursuant to NCGS 150B and a stipulation of the facts on which the assessment was based.

b. The following factors shall be considered in determining whether a civil penalty remission request will be approved:

i. Whether one or more of the civil penalty assessment factors in NCGS §113A-64(a)(3) were wrongly applied to the detriment of the petitioner,

ii. Whether the petitioner promptly abated continuing environmental damage resulting from the violation,

iii. Whether the violation was inadvertent or a result of an accident,

iv. Whether the petitioner had been assessed civil penalties for any previous violations,

v. Whether payment of the civil penalty will prevent payment for necessary remedial actions or would otherwise create a significant financial hardship,

vi. The assessed property tax valuation of the petitioner's property upon which the violation occurred, excluding the value of any structures located on the property.

c. The petitioner has the burden of providing information concerning the financial impact of a civil penalty on the petitioner and the burden of showing the petitioner's financial hardship.

d. The Commission may remit the entire amount of the penalty only when the petitioner has not been assessed civil penalties for previous violations and payment of the civil penalty will prevent payment for necessary remedial actions.

e. The Commission may not impose a penalty under this section that is in excess of the civil penalty imposed by the Department.

6. **Failure to Pay.** If a violator does not pay a civil penalty assessed by the Administrator within 30 days after it is due, the Town shall request the Attorney General to institute a civil action to recover the amount of the assessment.

B. **Flood Damage Prevention Violations.** Any person, firm, or corporation who violates any provisions in Section 12.6, Flood Damage Prevention, or order made pursuant to Section 12.6, shall be subject to civil penalties in the amount of $100 per day violation. Each day a violation continues shall be considered a separate and distinct offense.

C. **Landscaping Violations.** Any person, firm, or corporation who violates the provisions of Chapter 7, Tree Protection, Buffers, and Landscaping Standards, shall be subject to the following:

1. A base fine of $2.00 for every square foot of the Critical Root Zone occupied by the damaged or removed vegetation within any areas required to be protected,

2. A base fine of $100.00 per tree for any tree excessively pruned shall be applied in addition to the replacement of plant material using the "inch for inch" standard as determined by the Administrator.

D. **Stormwater Management Violations.** Any person, firm, or corporation who violates the Stormwater Management requirements of this UDO, including failing to provide a passing SCM Inspection Report or illicitly discharging, shall be subject to penalties. The maximum civil penalty for a violation is $1,000 per violation. Each day of a continuing violation shall constitute a separate violation. The maximum cumulative total civil penalty assessed is $25,000.

E. **Watercourse (Riparian) Buffer Area Violations.** Any person, firm, or corporation who violates any provisions in Section 12.9, Watercourse (Riparian) Buffer Areas, shall be subject to civil penalties. The maximum civil penalty for a violation is $10,000 per day. For a continuing violation, the civil penalty may be a maximum of $25,000 per day. Each day of a continuing violation shall constitute a separate violation.

F. **Other Violations.** Any person, firm, or corporation who violations the provisions of this UDO other than those listed above in Section 17.4.2, shall be subject to civil penalties in the amount of $50 per violation for the first day and $100 per violation for any day thereafter in violation. Each day's continuing violation shall be a separate and distinct offense.

17.6.3 Citation

A. **Contents of Written Citation.** To impose a civil penalty, the Administrator shall first provide the violator a written citation. The written citation shall:

1. Describe the violation,
2. Describe the action required to correct the violation,
3. Specify the amount of the civil penalty being issued,
4. Direct the violator to remit payment for the civil penalty within 30 days to the Town or contest the citation by submitting a written request for an administrative hearing in accordance within accordance with Section 17.6.3.C, and
5. Advise the violator of the right to appeal the citation to the Board of Adjustment in accordance with Section 16.6.2, Appeals of Administrative Decisions.

B. **Delivery of Written Citation.** The written citations shall be served either by personal delivery or certified mail with return receipt requested.

C. **Administrative Hearing.**

1. If the violator requests an administrative hearing within the deadline set forth in the citation, the Administrator shall schedule a hearing not less than seven days or no more than 30 days after receiving the request and shall provide the violator written notice of the time and place of the hearing.
2. At the conclusion of the hearing, the Administrator shall make a final determination of (1) whether the citation is warranted, and (2) whether the penalty amount is appropriate or should be reduced or waived. If finding that the citation is warranted and the penalty amount is confirmed or reduced, the Administrator shall order the violator to pay the civil penalty to the Town.
3. The Administrator shall also advise the violator of the right to appeal the citation to the Board of Adjustment in accordance with Section 16.6.2, Appeals of Administrative Decisions.

D. **First-Time Offender Civil Penalty Reduction.** If a Civil Penalty is issued to a first-time offender, the offender may make a written request to the Administrator for a reduction in the citation amount. Such request must be made within ten days of curing the violation. If a reduction in the citation amount is granted, the offender shall pay the reduced civil penalty within five business days of such reduction approval. If the reduced civil penalty is not paid within this timeframe, the original civil penalty amount shall be enforced.

E. **Civil Action.** If the violator fails to either pay the civil penalty, or as reduced from administrative hearing, or has failed to appeal the citation deadline listed in the citation in accordance with Section 16.6.2, Appeals of Administrative Decisions, the Town may institute a civil action in the nature of a debt in a court of competent jurisdiction to recover the civil penalty.

17.6.4 Tree Protection Penalties

A. **With A Tree Survey.** In instances where a Tree Survey has been approved by the Administrator and a tree identified for preservation is damaged or removed, the tree shall be replaced in accordance with Table 17.6.4 Replacement trees shall not be credited towards required landscape.

Table 17.6.4
Tree Removal Replacement Penalty

Tree Types	Replacement Rate
Specimen Trees	Trees of the same species
Established Trees	Seven trees of a noninvasive species
Young Trees	Three trees of a noninvasive species
Invasive / Noncontributing Trees	n/a

B. **Without A Tree Survey.**

1. In instances where a Tree Survey has not been approved by the Administrator and a tree is damaged or removed, the tree shall be replaced with the number of trees needed to meet the tree canopy coverage requirements (Section 7.2.3) for:

   a. **1-5 Trees Removed**. 75 percent or more retained tree canopy coverage,

   b. **6-15 Trees Removed**. Less than 75 percent and more than 25 percent retained tree canopy coverage,

   c. **16+ Trees Removed**. 25 percent or less retained tree canopy coverage.

C. **Development Stay.** No development, except for tree replanting or vegetation re-establishment, shall occur on a property if 50 percent or more of existing trees or existing tree canopy coverage subject to protection is removed in violation of this UDO for a period of:

1. Three years if the forestry activity is exempt per NCGS §160D-921, and

2. Five years if the forestry activity is non-exempt per NCGS §160D-921.

17.6.5 Unauthorized Demolition of Historic Property

Violations. In addition to Section 17.6.2, Citations and Civil Penalties, any person, firm, or corporation who demolishes a structure subject to this UDO or in violation of the Certificate of Appropriateness shall be prohibited from submitting redevelopment plans for the property for 48 months from the date of the Notice of Violation and Corrective Order issuance. The length of the delay may be shortened at the discretion of the Planning Administrator, following an administrative hearing, depending on the specific circumstances of the site, structure, and violation.

17.6.6 Criminal Penalties

Violations of this UDO may be enforced as a Class 3 misdemeanor, where permissible under North Carolina law, and shall be subject to a fine of $500.00. No further work or activity shall take place in violation of a stop work order pending a ruling on the appeal. Violation of a stop work order, and other pertinent provisions of NCGS §160D where allowed and specified, shall constitute a Class 1 Misdemeanor.

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18 DEFINITIONS AND INTERPRETATION

18.1 Purpose and Applicability

18.1.1 Purpose

For the purpose of interpreting this UDO, certain words, concepts, and ideas are defined herein. Except as defined herein, all other words used in this UDO shall have their everyday meaning as determined by their dictionary definition.

18.1.2 Applicability

The definitions established herein shall apply to the interpretation of all standards of this UDO unless otherwise specified.

18.2 Rules of Construction and Interpretation

In interpreting the language of this UDO, the following general rules of construction shall apply, unless explicitly stated otherwise in a particular use of a term or phrase. The requirements of this UDO shall be interpreted and applied as the minimum requirements necessary to carry out the purpose of the UDO and to promote public health, safety, and general welfare.

18.2.1 Mandatory and Permissive Terms

A. **Mandatory**. The words "shall," "must," and "will" are mandatory in nature.

B. **Permissive**. The word "may" is permissive in nature.

18.2.2 Conjunctions

A. **And / Or**. The term “and/or” means either or both of the subject components.

18.2.3 Tenses and Plurals

A. **Tense**. Words used in the present tense include the future tense.

B. **Plurals**. Words used in the singular number include the plural number and the plural number includes the singular number, unless the context of the particular usage clearly indicates otherwise.

18.2.4 Computation of Time.

The time in which an act is to be done shall be computed by excluding the first day and including the last day. If a deadline or required date of action falls on a Saturday, Sunday, or holiday observed by the Town, the deadline or required date of action shall be the next day that is not a Saturday, Sunday, or holiday observed by the Town. References to days are calendar days unless otherwise stated.

18.2.5 Lists and Examples

A. **Including**. The word "including" is considered non-exclusive unless stated otherwise.

18.2.6 Numerical Standards

A. **Fractions**. When any requirement of this UDO results in a fraction of a unit, a fraction of one-half or more is considered a whole unit and a fraction of less than one-half is disregarded. When the determination of the number of dwelling units permitted on a lot results in a fraction of a dwelling unit, any fractional component is disregarded and rounded down to the nearest whole number.

18.2.7 Text and Illustrations

A. In the event of a conflict or inconsistency between the text of this UDO and any heading, caption, figure, illustration, or map, the text shall control.

B. Diagrams and other illustrations are provided for informational purposes only and should not be relied upon as a complete and accurate description of all applicable regulations or requirements.

18.2.8 Terms

B. **Person.** The word "person" includes a firm, association, partnership, trust, company, corporation, or any other entity usually defined in legal usage as a person.

C. **Used or Occupied.** The words "used" and "occupied" include the words "intended, designed, or arranged to be used or occupied."

D. **Lot.** The word "lot" includes the words "plot" and/or "parcel."

E. **On the Premises Of.** The phrase "on the premises of," means "on the same lot."

F. **Telecommunication.** The inclusion of the word "telecommunication" in a term name indicates defined terms that apply only to the application and administration of the Wireless Telecommunications Facility provisions of this UDO.

18.2.9 Terms not Defined

If a term used in this UDO is not defined, the Administrator is authorized to interpret the term in accordance with Section 16.5.8, Interpretations, based upon the definitions used in professionally accepted sources.

18.2.10 Reference to Other Regulations / Publications

Whenever reference is made to a resolution, UDO, code, statute, regulation, or document, it shall be construed as a reference to the most recent edition of such regulation, manual, resolution, UDO, code, statute, regulation, or document, unless otherwise specifically stated.

18.2.11 Acronyms

A. **ADA.** Americans with Disabilities Act,

B. **ACU.** Accessory Commercial Unit,

C. **ADU.** Accessory Dwelling Unit,

D. **CMU.** Concrete Masonry Unit,

E. **COA.** Certificate of Appropriateness,

F. **CTP.** Comprehensive Transportation Plan,

G. **DBH.** Diameter at Breast Height,

H. **FT.** Foot or Feet,

I. **HUD.** Housing and Urban Development,

J. **HPC.** Historic Preservation Commission,

K. **IN.** Inches,

L. **LBCS.** Land-based Classification Standards,

M. **LOS.** Level of Service,

N. **MOU.** Memorandum of Understanding,

O. **NAICS.** North American Industrial Classification System,

P. **NCDOT.** North Carolina Department of Transportation,

Q. **NCGS.** North Carolina General Statutes,

R. **PE.** Professional Engineer,

S. **PIL.** Payment in Lieu,

T. **PUD.** Planned Unit Development,

U. **SQ FT.** Square Foot or Feet,

V. **TIA.** Transportation Impact Analysis,

W. **TRC.** Technical Review Committee,

X. **UDO.** Unified Development Ordinance,

Y. **WFD3.** Wake Forest Development Design and Details.

18.3 Rules of Measurement

Unless a particular use of a term or phrase in this UDO explicitly states otherwise, the following general rules of measurement shall govern the application of the numerical standards in this UDO.

18.3.1 Separation

If a standard of this UDO requires a use or development to be separated from another use or development by a minimum distance, that distance is measured as the linear distance (also referred to as 'as the crow flies') between the nearest property line of the subject use or development and the property line of the use or development from which the subject use must be separated.

18.3.1

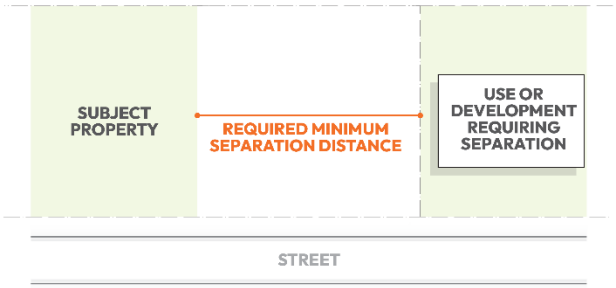

Figure 1:Rules of Measurement - Separation

18.3.2 Building Height

The vertical distance measured from the average elevation of the proposed finished grade at the façade adjacent to the front lot line to the highest point of the roof deck of a flat roof, to the highest point of a mansard roof, or to the mean height level between the eaves and ridge of a gable, hip, or gambrel roof. Parapets, spires, cupolas, antennae attached to a building, projections from buildings, mechanical equipment, and accessory structures associated with an activated roof deck, are not to be included in the calculation of building height.

18.3.2

Figure 2: Rules of Measurement - Building Height Flat

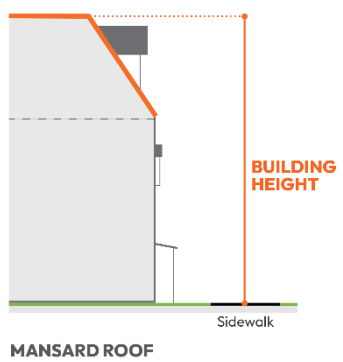

Figure 3: Rules of Measurement - Building Height Mansard

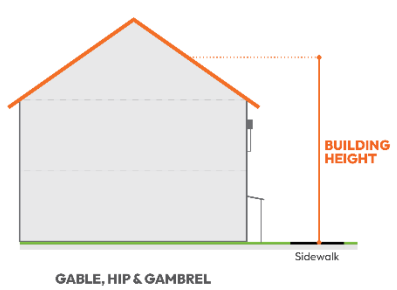

Figure 4: Rules of Measurement - Building Height Gable, Hip & Gambrel

18.3.3 Story

A story is a habitable level within a building. Where minimum height in stories is required in this UDO, the minimum story height shall be 16 feet. Unoccupied attics less than seven feet in height and raised basements less than six feet in height (as measured from the average grade of the fronting sidewalk) are not considered stories for the purposes of determining building height. A mezzanine shall be considered a story if it is contiguous with at least 60 percent of the building's front façade, is designed to be occupiable, and maintains an average depth of at least 16 feet. A penthouse shall be considered a story if it exceeds one-third of the area of the roof. The under-roof area with dormers does not count as a story.

18.3.4 Opacity

Opacity, the degree to which light or view is blocked, is measured perpendicular to the fence or screening structure for each fence/screening structure section between supports.

18.3.5 Maximum Setback

At least 50 percent of the building frontage must meet the maximum setback.

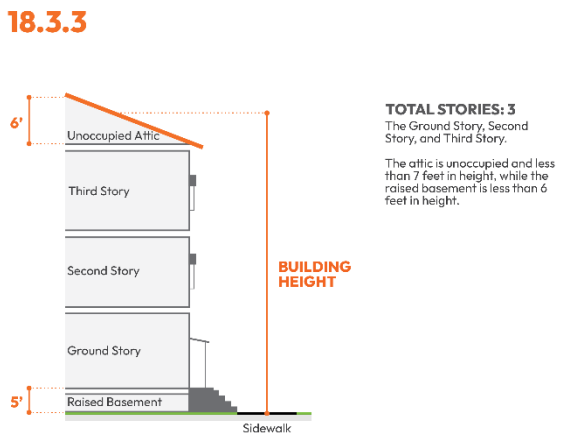

Figure 5: Rules of Measurement - Story

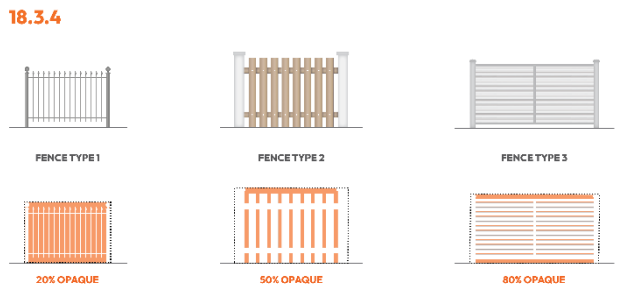

Figure 6: Rules of Measurement - Opacity

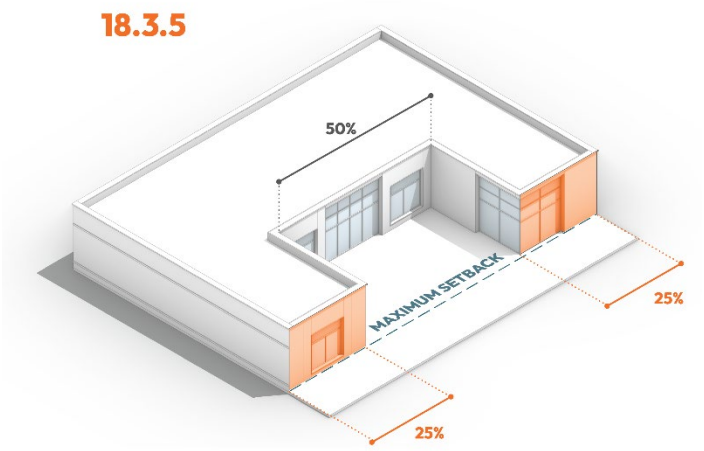

Figure 7: Rules of Measurement - Maximum Setback

18.3.6 Frontage Buildout Standards

For the purposes of calculating frontage build out, the figure representing the linear footage of buildings occupying the lot frontage shall only include those portions of the building(s) that meet the maximum setback requires for the zoning district. The figure representing the linear footage of the lot frontage shall be determined by the width of the property at the primary front. The Administrator may allow linear footage of the following items to be subtracted from the lot frontage:

A. Existing easements that cannot be abandoned and do not allow the construction of structures or buildings,

B. Floodplain as shown on FIRM or preliminary FIRM maps,

C. Wetlands,

D. Streams and riparian buffers,

E. Portions of property deemed unbuildable due to the shape of the property, where the lot depth is 60 feet or less, and

F. Tree canopy retention area.

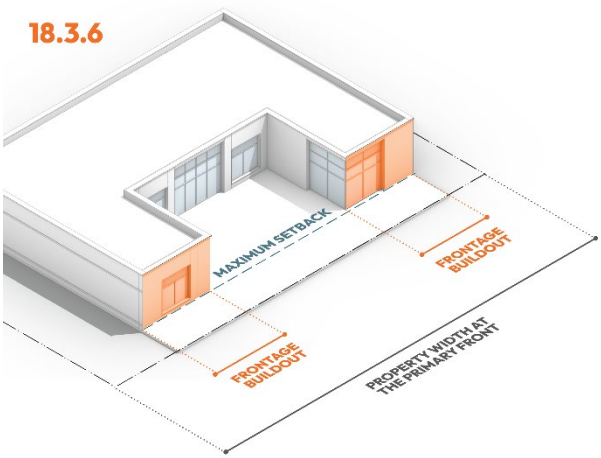

Figure 8: Rules of Measurement - Frontage Buildout

18.4

25-Year Storm Runoff

The storm water runoff resulting from precipitation of an intensity expected to be equaled or exceeded on the average, once in 25-years, and of a duration which will produce the maximum peak rate of runoff for the watershed of interest under average antecedent wetness conditions.

18.5 A

Above Ground Floor

A self-contained portion of a building that is above a ground floor commercial business used or designed to be used by a household, containing independent and separate sleeping, cooking and sanitary facilities intended as a permanent residence and having an independent entrance either directly from the outside of the building or through a common area inside the building.

Abut/Abutting

Having a common border with or being separated from such a common border by a right-of-way, alley, or easement.

Accelerated Erosion

An increase over the rate of natural erosion as a result of land-disturbing activities.

Accessory Commercial Unit

An occupation or profession conducted within a dwelling unit or building accessory to the dwelling unit by a resident of the dwelling unit that is incidental to the primary use of the dwelling as a residence. Accessory Commercial Units may be visible from the frontage, receive clients/customers without appointment, and have non-resident employment.

Accessory Dwelling Unit

A dwelling unit located on a lot with a single-family detached dwelling, that is incidental and subordinate to the principal dwelling. An Accessory Dwelling Unit may be detached, such as a cottage, or attached to the principal dwelling, such as an attached garage apartment.

Accessory Retail/Restaurant

A commercial Retail or Restaurant use accessory to another nonresidential or multifamily use and located within the same building as such use. Retail or Restaurant use is an amenity and ancillary to the principal use. Examples include cafeterias, snack bars, and gift shop uses in a hotel, hospital, or office.

Accessory Structure

A structure that is clearly incidental to and customarily found in connection with a principal building, is located on the same parcel and serves a principal building, and is subordinate in area, extent and purpose to the principal building served. Accessory Structures include but are not limited to canopies, composting bins, flag poles, detached garages, detached carports, sheds, swimming pools, cisterns, fences, walls, decks, patios, pergolas, and gazebos.

Accessory Use

A use subordinate to the principal use in terms of area, extent, and purpose that contributes to the comfort, convenience, or necessity of occupants of the principal building or principal use served and is located on the same lot as the principal use served.

Active Construction

An activity that contributes directly to the building of facilities including land-disturbing activities for roads, parking lots, footings, etc.

Adaptive Reuse

The establishment of a use in an existing structure where the use is of a different category than the use for which the building was constructed or historically used.

Addition (Floodplain Development)

An extension or increase in the floor area or height of an existing building or structure.

Adequate Erosion Control Measure, Structure, or Device

A measure, structure or device that controls the soil material within the land areas under responsible control of the person conducting the land-disturbing activity.

Adjacent

Property that touches or is directly across a street, private street or access easement, or right-of-way (other than a freeway or principal arterial) from the subject property.

Adjoining

See Adjacent.

Administrative Decision

A decision made in the implementation, administration, or enforcement of this UDO that involves the determination of facts and the application of objective standards set forth in this UDO.

Administrative Hearing

A proceeding to gather facts needed to make an administrative decision.

Administrative Modification

A request by an applicant to deviate from a specified numerical standard of this UDO by a specified percentage, subject to consistency with applicable review criteria.

Administrator

For the purposes of this UDO, the Planning Director, Public Works Director, Engineering Director, Town Manager, and their designated professional-level subordinate staffs are collectively referred to as the Administrator, unless provisions of this UDO specify otherwise. The Engineering Director administers the erosion and sedimentation control, stormwater management, watercourse buffers, floodplain, and engineering provisions of this UDO. The Planning Director administers all parts of this UDO not under the purview of the Engineering Director.

Adult Establishment

As defined by NCGS §14-202.10.

Affordable Housing

Housing that has a sale price or rental amount that is within the means of a household that may occupy middle-, moderate-, or low-income housing. In the case of dwelling units for sale, housing that is affordable means housing in which mortgage, amortization, taxes, insurance, and condominium or association fees, if any, constitute no more than 30 percent of such gross annual household income for a household of the size which may occupy the unit in question. In the case of dwelling units for rent, housing that is affordable means housing for which the rent and utilities constitute no more than 30 percent of such gross annual income for a household of the size that may occupy the unit in question.

Agritourism

Any activity carried out on a working farm or ranch that allows members of the general public, for recreational, entertainment, or educational purposes, to view or enjoy rural activities, including farming, ranching, historic, cultural, harvest-your-own activities, or natural activities and attractions.

Alley

A specialized accessway that primarily functions to provide secondary vehicular access and/or service and delivery vehicle access between a street and the rear or sides of lots or buildings. Alleys also may provide primary vehicular access for dwellings designed to have no driveway access from the fronting street.

Animal Production

A business that raises or fattens animals for the sale of animals or animal products including but not limited to ranches, farms, hatcheries, and feedlots primarily engaged in keeping, grazing, breeding, or feeding animals, including the farm raising and production of aquatic animals in controlled or selected outdoor aquatic environments and apiculture.

Annexation

A request by an applicant to deviate from a specified numerical standard of this UDO by a specified percentage, subject to consistency with applicable review criteria.

Appeal

A request for a review of a determination, decision, or the application of any provision of this UDO.

Applicant

The party applying for permits or other approval required by this UDO.

Application

The completed form or forms and all accompanying documents, exhibits, and fees required of an applicant by the applicable department, board, or commission of the city for development review, approval, or permitting purposes.

Architectural Design Review

Regulations and procedures requiring the exterior design of structures to be suitable, harmonious, and in keeping with the general appearance, historic character, and/or style of surrounding areas. A process used to exercise control over the design of buildings and their settings.

Architectural Elevation

A scaled, flat representation of one side of a building or structure. It provides a comprehensive view of the exterior façade, highlighting key architectural features, such as doors, windows, materials, and proportions.

Area, Gross

The total horizontal area within a lot(s) or parcel(s) of land before streets, easements, or other areas to be dedicated or reserved for public or private use are deducted from such lot(s) or parcel(s).

Area, Net

The total area of a site, expressed in either acres or square feet, for residential or nonresidential development, excluding rights-of-way and other publicly dedicated improvements such as parks, open space, and stormwater detention and retention facilities, excluding public rights-of-way and other publicly dedicated fee simple land such as parks and open space.

Articulation

The stepping and recessing of external walls of a building in plan and in section.

Artisan Production

A fully indoor small-scale business that produces goods or specialty foods, primarily for direct sales to consumers, such as artisan leather, glass, wood, paper, ceramic, textile and yarn products, specialty foods and baked goods. This land use includes the design, processing, fabrication, assembly, treatment and packaging of products; as well as the incidental storage, sales and distribution of such products. This land use does not include uses producing noise, odor, vibration, or similar impacts perceivable by the natural senses outside of the structure or portion of the structure where the use is located.

As-Built

Final design specifications for all public infrastructure.

Assessed Value

The value of a property, as determined (assessed) by a tax assessor or appraiser, for tax calculation purposes.

ATM

A computerized, self-service machine used by banking customers of financial institutions, including deposits, withdrawals, and fund transfers, without face-to-face contact with financial institution personnel. These machines may be located at or within banks, or in other locations. When an ATM is provided for use by customers in motor vehicles, the ATM is considered a drive-through facility accessory use. At other locations, an ATM may be considered a separate accessory use to the principal use(s) of the location.

Awning

A frame structure with a covering extending over building windows or doors and generally designed and constructed to provide protection against weather.

18.6 B

Backer Panel

A background behind the graphics of a sign that is made from a solid opaque material on which the graphics may be attached and intended to hide a wireway or minimize the number of potential penetrations into the surface that the sign is being mounted onto.

Backyard Small Animal Keeping

The long-term keeping of backyards bees, fowl, rabbits, and other similar small creatures as accessory to existing residential structures.

Bar

A business including Bars, Taverns, Pubs, and similar establishments that serves beer, wine, or liquor for consumption on-premises as the predominant use, and where any food service is subordinate to the sale of alcoholic beverages.

Base Flood (Floodplain Development)

A flood having a one percent chance of being equaled or exceeded in any given year based on current conditions hydrology.

Base Flood Elevation (BFE) (*Floodplain Development)*

A determination of the water surface elevations of the base flood based on current conditions hydrology or future conditions hydrology as published in the Flood Insurance Study. When the BFE has not been provided in a "Special Flood Hazard Area", it may be obtained from engineering studies available from a Federal or State other source using FEMA approved engineering methodologies. This elevation, when combined with two additional vertical feet, establishes the regulatory flood protection elevation in flood hazard areas.

Basement (Floodplain Development)

An area of a building having its floor subgrade (below ground level) on all sides.

Bed and Breakfast Home

A private home containing not more than eight guest rooms that offers rooming and meal accommodations to guests for a fee.

Bedroom

A room designated for sleeping, also known as a sleeping room.

Berm

An earthen mound designed to provide visual interest, screen undesirable views, and/or decrease noise.

Bicycle Rack

A facility for short-term or long-term bicycle parking.

Bicycle Rack, Grid

A type of bicycle rack in which the grid consists of vertical bars that connect larger upper and lower metal tubing that accept bicycles on one or both sides of the rack. Grid style racks can be left freestanding or anchored to the ground with permanent or temporary anchors. This rack does not allow both the wheel and frame of the bicycle to be locked, allowing for potential theft of the bicycle.

Block

An area of land generally bounded by streets or rights-of-way and occupied by or intended for buildings.

Bona Fide Farm Purposes

Includes the production and activities relating or incidental to the production of crops, grains, fruits, vegetables, ornamental and flowering plants, dairy, livestock, poultry; horse rearing, feeding, training, caring, boarding and management; and all other forms of agriculture as defined in NCGS §106-581.1 and all other purposes described in NCGS §160D-903.

Borrow

Fill material that is required for on-site construction and is obtained from other locations.

Brewery

An establishment primarily engaged in the brewing of ale, beer, malt liquors, and/or nonalcoholic beer that are permitted to do so in accordance with the Alcoholic Beverage Control Commission. Breweries have a capacity of 15,000 barrels or more per year. The definition includes a public tasting room, and retail sales of ale, beer, or related products brewed or manufactured on site.

Brick

Block made of kiln-fired material, usually clay or ground shale, laid in small, individual units with concrete mortar joints. This does not include concrete walls with a brick pattern liner to give the appearance of brick.

Buffer

A combination of physical space and vertical elements, such as plantings or fencing, used to separate and screen incompatible land uses from each other.

Buffer, Perimeter

A buffer primarily on the perimeter of the property.

Buffer, Street

A buffer along the border of where land use meets a right-of-way, intended primarily to screen land uses and the street from each other.

Buffer Zone

The strip of land adjacent to a lake, river, creek, stream.

Building

A structure built for support, shelter or enclosure for any occupancy or storage.

Building Coverage

A percentage figure referring to that portion of a lot covered with principal and accessory buildings as measured by dividing the total area of building and structure footprints by the area of the lot.

Building Elevation

The perimeter surface of a building set approximately parallel to a lot line.

Building Floor Area

The gross floor area of an individual structure built for support, shelter or enclosure for any occupancy or storage.

Building Frontage

The horizontal linear dimension located along a front or street side property line.

Building Height

The vertical dimension from the lowest point of the building, structure, or wall exposed above the ground surface to the highest point of the roof, parapet wall, or uppermost part. Chimneys, vents, or utility service structures are not included in the measurement of vertical dimensions.

Built-Upon-Area (BUA)

See Impervious Surface definition.

Bulk

The size and mutual relationships of a building or structure and the location of same with respect to: size and height of the building; location of exterior walls at all levels in relation to lot lines, streets, or other buildings; gross floor area of the building in relation to the lot area; all open space allocated to the building.

18.7 C

Canopy, Attached

A permanent structure of rigid construction with a covering that is partially supported by the building and one or more posts or is fully supported by the building.

Canopy, Freestanding

A permanent, non-enclosed structure of rigid construction with a covering that is self-supporting on open on three sides or more.

Canopy Tree

A large-growing, shade-producing tree with an expected mature height of 40 feet or greater and an expected mature crown spread of 30 feet or greater.

Car Wash

The use of a site for automated or manual washing and cleaning of passenger vehicles. A car wash may include vacuum stations, self-service cleaning stations, and automated services.

Cemetery

An area used for the internment of human or pet remains, including structures such as gravestones, markers, foot stones, columbariums, mausoleums, crypts, fences, and walls.

Certificate of Appropriateness

A permit issued by the Historic Preservation Commission granting an applicant approval for the constructing, altering, moving, or demolishing exterior features of a locally designated historic landmark or property within a locally designated historic district (LH-O). Exterior features include architectural style, general design, size, scale of the building, type and style of windows, doors, light fixtures, signs, and other appurtenant features and landscape, site features that contribute to the special character of the property or district.

Certificate of Completion for Soil Erosion and Sedimentation Control

A certificate issued by the Town Engineering Department indicating that the permittee has achieved acceptable stabilization in accordance with the approved plan and has completed all work necessary on the site related to soil erosion. All land-disturbance shown on the approved plan is stabilized with permanent ground cover, permanent armor, or impervious surface. All proposed roads, utilities, permanent erosion control devices, and other infrastructure are installed as per approved plans. All temporary sediment control devices required by the approved plan are removed.

Certificate of Compliance for Preliminary Soil Erosion and Sedimentation Control

A certificate issued by the Town Engineering Department indicating that the erosion control devices shown on the approved plan have been constructed correctly and are operating correctly.

Certified Arborist

An individual who has successfully completed the International Society of Arboriculture (ISA) exam process.

Change of Use

For the purposes of this UDO only this term means any alteration in the use of a lot or structure which, in the determination of the Administrator, changes the primary use of such lot or property from one use type listed in the Table 3.3 to another use type.

Channel Letter

A three-dimensional graphic sign element with an individual structure. If internally illuminated, each graphic structure is separately illuminated.

Chemical Storage Facility (Floodplain Development)

A building, portion of a building, or exterior area adjacent to a building used for the storage of any chemical or chemically reactive products.

Child/Adult Day Care Center

An individual, agency, or organization providing supervision or care on a regular basis for children or adults who are not related by blood or marriage to, and who are not the legal wards or foster children of, the supervising adults; and who are not residents in the center; designed and approved to accommodate more than eight children or adults at a time based on State regulations; not an accessory to residential use.

Child/Adult Day Care Home

Supervision or care provided on a regular basis as an Accessory Use within a principal residential dwelling unit, by a resident of the dwelling, for, as regulated by NCGS 110-86(2) and 110-91(7)(b):

- A maximum of eight children, with no more than five children who are from birth to five years of age, plus three school-age children,
- A maximum of three children from birth to 24 months of age, plus three children from two to five years of age and three school-age children up to 13 years of age, for a total of nine children,
- A maximum of 10 children if all children are older than 24 months of age.

The children or adults cared for do not live in the home or reside there overnight.

Civic Meeting Facility

A not-for-profit membership organization such as alumni associations, booster clubs, scouting organizations, ethnic associations, social clubs, fraternal lodges, and veterans' membership organizations primarily engaged in promoting the civic and social interests of their members. This use often includes meeting and storage facilities.

Cluster Mailbox Unit

A freestanding, pedestal-mounted mailbox that consists of multiple mailbox compartments and parcel lockers that can lock individually.

College/University

An institution for post-secondary education, public or private, offering courses in general or religious education and not operated for profit. It operates in buildings owned or leased by the institution for administrative and faculty offices, classrooms, laboratories, chapels, auditoriums,

lecture halls, libraries, student and faculty centers, performing arts facilities, athletic facilities, health centers, dormitories, fraternities, sororities, and other on-campus housing, as well as associated maintenance facilities. It does not include vocational schools, online/remote programs, or colleges/universities operated for profit.

Commercial Kitchen

A facility containing a kitchen or kitchens in which food is prepared for off-site consumption, including catering services. This type of facility is also called a Ghost Kitchen.

Common Development

A multi-phased and/or multi-building development under common ownership or governed by a property or homeowners association.

Common Entrance Building

A building leased or owned by multiple entities that share building entrances and allow for access to tenant spaces from the interior.

Community Support Facility

A permanent, stand-alone support facility providing personal assistance to individuals in need. Primary services include temporary shelter and food services provisions. Incidental services include instruction, medical services, and other support services. This definition does not include emergency/hazard shelters or clothing/food collection centers as accessory uses.

Community/Recreation Center (Accessory Use)

A structure or other facility used for recreational programs within parks.

Community Space

An accessible, publicly or semi-publicly owned or designated area within a community or development that is designed and intended to foster social interaction, recreation, and community engagement. It may include but is not limited to parks, plazas, green spaces, community gardens, playgrounds, and other similar facilities.

Comprehensive Plan

The plans adopted and as amended by the Board of Commissioners that set forth goals, policies, and guidelines intended to direct the present and future physical, social, and economic development that occurs within the Town's limits and the ETJ for the public and private development of land and water, including but not limited to the Community Plan, Comprehensive Transportation Plan, small area plans, and Parks, Recreation and Cultural Resources Master Plan.

Comprehensive Plan Amendment

A change or revision to the Comprehensive Plan.

Complementary

Building materials, colors, design elements, or other architectural characteristics that are not the same as but instead enhances or emphasizes the qualities of another building material, color, design element, or other architectural characteristic on the building or utilized within a common development.

Completion of Construction or Development

No further land-disturbing activity is required on a phase of a project except that which is necessary for establishing a permanent ground cover.

Concrete/Cement Manufacturing

An operation that produces concrete, cement or other concrete products including facilities for the administration and management of the business, the indoor stockpiling of bulk materials used in the production process or a finished product manufactured on the premise, and the indoor storage of the materials and equipment required to manufacture concrete. It may also include the manufacturing and indoor storage of concrete products and supplies and maintenance of required equipment. It does not include the retail sale of finished concrete.
The resulting zoning district of a conditional zoning process, containing site-specific conditions.

Conditional Zoning

A legislative zoning map amendment with site-specific conditions incorporated into the zoning map amendment.

Conservation Subdivision

A subdivision in which the lot sizes are reduced below those normally required in the zoning district in which the development is located, in return for the provision of a greater amount of permanent open space.

Conservation Easement

An easement granting a right or interest in real property that is appropriate to retaining land or water areas predominantly in their natural, scenic, open, or wooded condition.

Construction Plan

A full and complete set of engineered drawings necessary for final permitting and construction.

Corner Lot

A lot which abuts the right-of-way of two streets at their intersection.

Consistent

Building materials, colors, design elements, or other architectural characteristics that are the same as another building material, color, design element, or other architectural characteristic on the building or utilized within a common development.

Contiguous

In contact, adjoining, or touching another object or item, as distinguished from being adjacent.

Contractor Service

A space used by a building, heating, plumbing, electrical, or other development contractor, as well as locksmiths and pest management providers, both as an office and for the storage of a limited quantity of materials, supplies, and equipment inside the building. Services are often provided to customers at other locations. This does not include fleet storage and outdoor storage, which are separately defined as accessory uses.

Contractor Trailer

A modular or portable office or storage structure for use by a contractor during construction activity.

Cornice

A horizontal member, structural or nonstructural, of a building, projecting outward from the exterior walls at the meeting of the roof and wall.

Correctional Institution

A government facility generally designed for the confinement, correction, and rehabilitation of offenders sentenced by a court. It does not include temporary holding facilities at a police station.

Co-Working

A neutral, non-exclusive, limited shared space defined in a membership-based service arrangement or agreement or subscription wherein a firm has no tenancy interest, leasehold estate, or other real property interest with respect to the accommodation on an as-needed basis. The agreement gives the firm a right to share the use of the space and may include an exclusive mailing address and office services. An executive suite/exclusive desk/dedicated desk/secured suite/private office under a co-working space agreement falls under this definition.

Crematorium

A facility containing properly installed, certified apparatus intended for use in the act of cremation.

Cultural/Community Facility

A building used for the programming, production, presentation, exhibition of any of the arts and cultural disciplines. This use often includes auditorium, gallery, office, and meeting facilities as well as museums and libraries.

- *A **public facility*** is owned and operated by not-for-profit, governmental, or other non-taxing bodies.
- *A **private facility*** is owned and operated for-profit by a private person or business.

Critical Root Zone

The circular area of ground surrounding a tree extending from the center of tree to the greater of one- and one-half feet per caliper inch DBH of the tree or the dripline (furthest extent of tree canopy). The area uniformly encompassed by a circle with a radius equal to one- and one-half feet per inch of DBH tree trunk of the preserved tree.

Cross Access

A drive providing vehicular access between two or more contiguous sites so the driver does not have to enter the public street system.

18.8 D

Dead-end Street

A roadway that has only one outlet for vehicular traffic, terminates in a vehicular turn-around, and is not intended to be extended or continued in the future.

Dedication

The offer of real property by its owner(s) for a public purpose and its acceptance by a government entity having jurisdiction over the public function for which it will be used. Dedications may be made for streets, recreation areas, parks, greenways, utility easements, etc.

Demolition by Neglect

A condition in which a property owner neglects to maintain or repair a historic property, resulting in its progressive deterioration and loss of structural integrity, thereby creating an imminent risk of structural failure or requiring eventual demolition.

Density

The number of dwelling units per acre determined by dividing the total number of dwelling units located on a development site by the gross area. Accessory Dwelling Units are not included in density calculations.

Determination

A written, final and binding order or requirement regarding an administrative decision.

Developer

A person, including a governmental agency or redevelopment authority, who undertakes any development and who is the landowner of the property to be developed or who has been authorized by the landowner to undertake development on that property.

Development Agreement

A written agreement between the Town and a developer or applicant that sets down the rights and responsibilities of each party as pertaining to a single development.

Development Approval

A written, administrative, or quasi-judicial approval that is required prior to commencing development or undertaking a specific activity, project, or development proposal. Development approvals include, but are not limited to, administrative permits, site plan approvals, construction plan approvals, special use permits, and certificates of appropriateness. The term also includes all other regulatory approvals required by regulations adopted pursuant to this UDO, including plat approvals and permits issued.

Development/Development Activity

One of the following:

- The construction, erection, alteration, enlargement, renovation, substantial repair, movement to another site, or demolition of any structure,
- The excavation, grading, filling, clearing, or alteration of land,
- The subdivision of land as defined in NCGS 160D-802,
- The initiation or substantial change in the use of land or the intensity of use of land.

Development (Floodplain Development)

A man-made change to improved or unimproved real estate, including, but not limited to, buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations, or storage of equipment or materials.

Development Regulation

A regulation contained or incorporated by reference within this UDO or any other regulation adopted pursuant to NCGS.

Development Site

A legally established lot or parcel of land, or a group of lots/parcels developed together, which is occupied or capable of being occupied by a building or group of buildings including accessory structure(s) and accessory use(s), together with such yards or open spaces, and setback areas as are required by this UDO and having frontage upon a street.

Diameter at Breast Height (DBH)

A standard measure of a tree trunk size, measured four and one-half feet (breast height) above ground level or the total diameter of all stems of a multi-truck tree measured at four and one-half feet above grade. If a tree splits into multiple trunks below four and one-half feet, then the trunk is measured at its most narrow point beneath the split.

Discharge Point

That point at which stormwater runoff leaves a tract of land in a concentrated flow pattern.

Display Period

The specific time during which a temporary sign may be exhibited.

Disposal (Floodplain Development)

As defined in NCGS 130A-290(a)(6), the discharge, deposit, injection, dumping, spilling, leaking, or placing of any solid waste into or on any land or water so that the solid waste or any constituent part of the solid waste may enter the environment or be emitted into the air or discharged into any waters, including groundwaters.

Distillery

An establishment primarily engaged in the manufacturing of fortified spirits that is permitted to do so in accordance with the Alcoholic Beverage Control Commission. Distilleries have a capacity of more than 25,000 gallons per year. The definition includes a public tasting room and retail sales of spirits or related products manufactured on site.

Ditch or Canal

A man-made channel other than a modified natural stream constructed for drainage purposes that is typically dug through inner-stream divide areas. A ditch or canal may have flows that are perennial, intermittent, or ephemeral.

Donation Drop Box

A receptacle, located on a lot with a principal, nonresidential use, used for the purpose of collecting items, such as clothing, donated by the public.

Dormer

A window vertical in a roof or the roofed structure containing such a window. A dormer is considered an alteration to a building, as it stays within the roof line and does not increase the floor area dimensions.

Dormitory

A building used as group living quarters for a student body or religious order for a College, University, Boarding School, Convent, Monastery or other similar public, semi-public use.

Drainageway

A natural or artificial stream or depression that conveys surface water.

Drip Line

A vertical line extending from the outer edge of a tree canopy to the ground.

Drive Aisle

A vehicle passageway or maneuvering space by which vehicles enter and depart parking stalls.

Driveway

A private driving surface providing access for vehicles to a parking space, garage, dwelling, or other structure.

Drive-Through/Drive-In Facility

An accessory facility where goods or services may be obtained by motorists without leaving their vehicles. These facilities include drive-through bank teller windows, dry cleaners, fast-food restaurants, drive-through coffee, photo stores, pharmacies, Automated Teller Machines (ATMs), etc. It does not include: Vehicle Fueling Stations or other Vehicle Services, which are separately defined.

Drone Delivery Operations Facility

An establishment where licensed unmanned aircraft systems are operated for delivery purposes.

Dwelling

A building or part of a building, containing living, sleeping, housekeeping accommodations, and sanitary facilities for occupancy by one or more families.

Dwelling-Cottage Court

A group of small-scale, detached dwelling units located on a single lot or individual lots and arranged around a shared court visible from the street.

Dwelling-Duplex

A single detached dwelling on a lot that contains two dwelling units and is divided vertically or horizontally. Each unit has a separate entrance from the outside or through a common vestibule.

Dwelling-Multifamily

A building or a group of buildings, including a portion thereof, containing five or more dwelling units, with the exception of Multifamily located above a ground floor non-residential use, which may include one to two units only on a single lot where each unit has a separate entrance from the outside or through a common vestibule. The dwelling units may be located side by side in a horizontal configuration or stacked one above the other in a vertical configuration, sharing common vertical walls or horizontal floors and ceilings. Multifamily dwellings also include carriage-style buildings with Multifamily dwelling units over garages. A Multifamily structure where dwelling units are available for lease or rent for less than one month is be considered lodging. Dwelling-Multifamily is not include other dwelling types defined by this UDO.

Dwelling-Single-Family Detached

A single detached dwelling on a lot, other than a Manufactured Home Dwelling, that contains a single dwelling unit (excluding any Dwelling-Accessory). This also includes factory-built, modular housing units that comply with the NC State Building Code.

Dwelling-Townhome

A residential building containing two or more dwelling units each on a separate lot.

Dwelling-Triplex

A single detached dwelling on a lot that contains three dwelling units and is divided vertically or horizontally.

Dwelling-Two-Over-Two

A residential building in which dwelling units are arranged in vertical stacks of two units, with each vertical stack separated from other stacks by a fire-rated vertical common party wall running from the foundation to the roof of the building.

Dwelling Unit

A dwelling unit includes permanent provisions for living, sleeping, cooking, and sanitation, and can be owner or tenant occupied.

Dwelling-Quadplex

A single detached dwelling on a lot that contains four dwelling units and is divided vertically or horizontally.

18.9 E

Easement

A grant of one or more of the property rights by the property owner for limited use of private land for a public or quasi-public purpose and within which the owner of the property cannot erect any permanent structures except when authorized by the Town.

Eave

The projecting lower edges of a roof overhanging the wall of a building.

Electronic Display

A fixed or changing display or message as part of an electronic message board composed of a series of lights that may be changed through electronic means.

Electric Vehicle Charging Facility

A parking space designed and constructed with Electric Vehicle Supply Equipment (EVSE) that supplies electric energy for the recharging of electric vehicles with at least a Level 2 charger.

Elevated Building (Floodplain Development)

A non-basement building which has its lowest elevated floor raised above ground level by foundation walls, shear walls, posts, piers, pilings, or columns.

Electronic Message Board

A sign designed to accommodate frequent message changes composed of characters, letters, or illustrations and that can be changed or rearranged electronically, without altering the face or surface of such sign.

Elevation

Height or distance above sea level.

Emergency Declaration Related

A modular or portable structure for use by governmental and not-for-profit organizations during local, state, or federal emergencies.

Enclosed

Surrounded on all sides at any time by solid walls, screens, fences, windows or similar structures.

Encroachment (Floodplain Development)

The advance or infringement of uses, fill, excavation, buildings, permanent structures, or development into a floodplain, which may impede or alter the flow capacity of a floodplain.

Entertainment Facility

A place in which members of the public can view and/or experience an amusement for a fee or charge including but not limited to movie theaters and performing arts venues. This use does not include Adult Establishment.

- ***Public facilities*** are owned and operated by not-for-profit, governmental, or other non-taxing bodies.
- ***Private facilities*** are owned and operated for-profit by a private person or business.

Ephemeral Stream

A feature that carries only stormwater in direct response to precipitation with water flowing only during and shortly after large precipitation events. An ephemeral stream may or may not have a well-defined channel, the aquatic bed is always above the perched or seasonal high-water table, and stormwater runoff is the primary source of water. An ephemeral stream typically lacks the biological, hydrological, and physical characteristics commonly associated with continuous or intermittent conveyance of water. (15A NCAC 02B.0610(14)).

Erosion

The wearing away of land surface by the action of the wind, water, gravity, or any combination thereof.

Evergreen

A plant which has foliage that remains green and functional throughout the year.

Evidentiary Hearing

A hearing to gather competent, material, and substantial evidence in order to make findings for a quasi-judicial decision required by this UDO.

Existing Development

Those projects that are built or those projects that have established a vested right under North Carolina law as of the effective date of the state stormwater program or applicable local government UDO to which the project is subject.

Existing Manufactured Home Park or Manufactured Home Subdivision *(Floodplain Development)*

A Manufactured Home Park or Subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including, at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) was completed before the original effective date of the floodplain management regulations adopted by the Town (May 16, 2006).

Expansion

A structural modification which increases the existing structure's envelope or footprint.

Expressway

A divided street or road which serves through traffic with full or full partial control of access and generally with grade separations at intersections; however, infrequent at-grade crossings may be permitted.

Exterior Insulation and Finish System (EIFS)

A multi-layered system of Styrofoam panels typically adhered to wood or gypsum sheathing and finished with a waterproof resin.

Extraterritorial Jurisdiction (ETJ)

The part of the planning jurisdiction of the Town located outside the Town's corporate boundaries, established and amended from time to time in accordance with NCGS160D-202.

18.10 F

Facade

That portion of any exterior elevation on the building extending from grade to top of the parapet, wall, or eaves and the entire width of the building elevation.

Family Care Home

A home with support and supervisory personnel that provides room and board, personal care, and rehabilitation services in a family environment for not more than six resident handicapped persons and is certified by the State of North Carolina. (NCGS 168-21)

Farmers Market

A common facility or area where the primary purpose is for growers and producers to gather to sell a variety of fresh fruits and vegetables and other locally produced farm and food products directly to consumers.

Fence, Deer

A fence intended to prevent deer from entering an area that is constructed of dark, heavy-weight open mesh plastic material ranging from one- and one-half inches x one- and one-half inches and two inches x two- and one-half inches that allows a clear view through the fence. Posts may be constructed of wood, metal, or fiberglass.

Fencing, Construction

A fence placed along the perimeter of a construction site.

Financial Services

An establishment that engages in financial transactions that create, liquidate, or change ownership of financial assets. Banks, credit unions, and savings institutions may perform central banking functions, accept deposits, and lend funds from these deposits. In addition to banks and credit unions, financial services institutions may include: credit agencies, trust companies, holding companies, savings and loan institutions, check cashing services, accounting services, bookkeeping services, payroll services, securities/commodity contract brokers and dealers, security and commodity exchanges, vehicle finance (equity) leasing agencies, and investment companies.

Finished Grade

The grade after construction, exclusive of any filling, berming, mounting, or excavating.

Flag

A piece of cloth or similar material, typically oblong or square, attachable by one edge to a pole or rope.

Flagpole

A freestanding structure or a structure attached to a building or to the roof of a building on a parcel of record and used for the sole purpose of displaying flags.

Fleet Vehicle Storage/Maintenance

An indoor or outdoor area for the storage of motor vehicles owned or leased by a business, government agency, or other organization rather than by an individual(s) and an accompanying indoor area for vehicle service work. Maintenance may include fueling of fleet vehicles but does not include sale of vehicle fuels.

Flood/Flooding (Floodplain Development)

A general and temporary condition of partial or complete inundation of normally dry land areas from the overflow of inland or tidal waters; and/or the unusual and rapid accumulation of runoff of surface waters from any source.

Flood Hazard Soils

Those types of soils in the relatively flat areas associated with natural watercourses which are subject to periodic flooding. The types of soils and their corresponding symbols are as follows:

Flood Hazard Soil Identification	Map Symbol
Altavista fine sandy loam, 0 to 4% slopes	AfA
Buncombe, 0 to 2% slopes	Bu
Chewacla, 0 to 2% slopes	Cm
Colfax fine sand loam, 0 to 6% slopes	Cn
Manatachie soils, 0 to 4% slopes	Me
Wahee fine sandy loam, 0 to 2% slopes	Wh
Wehadkee silt loam, 0 to 2% slopes	Wn
Wehandkee and Bibb soils	Wo
Worsham sandy loam, 0 to 4% slopes	Wy

Flood Insurance (Floodplain Development)

The insurance coverage provided under the National Flood Insurance Program.

Flood Insurance Rate Map (FIRM) (Floodplain Development)

An official map of a community, issued by the Federal Emergency Management Agency, on which the Special Flood Hazard Areas, the Future Conditions Flood Hazard Areas, and the risk premium zones applicable to the community are delineated.

Flood Insurance Study (FIS) *(Floodplain Development)*

An examination, evaluation, and determination of flood hazards, corresponding water surface elevations (if appropriate), flood hazard risk zones, and other flood data in a community issued by the Federal Emergency Management Agency. The Flood Insurance Study report includes Flood Insurance Rate Maps (FIRMs) and Flood Boundary and Floodway Maps (FBFMs), if published.

Floodplain/Flood-Prone Area *(Floodplain Development)*

A land area susceptible to being inundated by water from any source. The maximum area, adjoining a river, stream, watercourse, or lake, which is likely to be flooded, by the base flood or the future conditions flood. The floodplain, flood-prone and/or flood-hazard areas includes "floodway" areas, "floodway fringe" areas and future conditions flood hazard areas. These areas are illustrated on flood hazard boundary maps, flood hazard soils plus additional distances, recorded flood storage areas required by this UDO and drainage basin study maps.

Floodplain Management (Floodplain Development)

The operation of an overall program of corrective and preventive measures for reducing flood damage and preserving and enhancing, where possible, natural resources in the floodplain, including, but not limited to, emergency preparedness plans, flood control works, floodplain management regulations, and open space plans.

Floodproofing *(Floodplain* Development*)*

A combination of structural and nonstructural additions, changes, or adjustments to structures, which reduce or eliminate flood damage to real estate or improved real property, water and sanitation facilities, structures, and their contents. Any combination of structural and nonstructural features, additions, changes or adjustments to properties and structures in accordance with or comparable to guidelines set forth in "Floodproofing Regulations" June 1972 edition, published by the Office of the Chief Engineers U.S. Army, Washington, D.C. for an essentially dry floodproof class (W2).

Floodway *(Floodplain* Development*)*

The channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one foot.

Food Truck

A readily movable wheeled structure, motorized vehicle, towed vehicle, trailer, or cart that is equipped and operated for the purpose of vending food and/or drink.

Food Truck, Accessory

A food truck that is accessory to the principal use of a lot, such as a brewery, longer than a temporary basis.

Food Truck, Court

A permanent site for the location of multiple food trucks simultaneously.

Food Truck, Temporary

A food truck that is temporarily located within parking lots or other approved areas in the community.

Freeway

A divided street or road which serves through traffic with full control of access and with grade separations at intersections.

Frontage Built Out/Build-to Zone

The percent of the lot frontage that needs to be occupied with building(s), as established in zoning district dimensional standards,

Front Facade

The front vertical face of a building that is substantially in one plane, has associated with it a primary entrance, and is composed from the following architectural components: exterior walls; columns or other vertical structural elements; windows; doors; roof edges; permanently roofed recesses; and arcades, balconies, or porches with permanent roofs supported by vertical structural supports.

Front Lot Line

The boundary of a lot that typically faces the street. For unconventional designs, like end unit townhomes, the front lot line is the boundary where the primary entrance is oriented, even if it does not directly face the street.

Full Cutoff Lighting Fixture

A lighting fixture that has no direct up-light and does not emit any light above the horizontal plane.

Funeral Home

An establishment for preparing the dead for burial or internment and conducting funerals (i.e. providing facilities for wakes, arranging transportation for the dead, indoor stonecutting, and selling caskets and related merchandise). Funeral Homes may include accessory Crematoriums.

Future Conditions Flood (Floodplain Development)

A flood having a one percent chance of being equaled or exceeded in any given year based on future conditions hydrology.

Future Conditions Flood Elevation *(Floodplain Development)*

A determination of the water surface elevations of the one percent annual chance flood based on future conditions hydrology as published in the Flood Insurance Study. This elevation, when combined with the freeboard, establishes the "Regulatory Flood Protection Elevation" in Future Conditions Flood Hazard Areas.

Future Conditions Flood Hazard Area *(Floodplain Development)*

The land area that would be inundated by the one percent annual chance flood based on future conditions hydrology.

18.11 G

Garage

A building or structure, or part thereof, used or designed to be used for the parking and storage of vehicles.

Garage/Estate Sale

The temporary sale of personal property from a residential dwelling.

Garden

A principal use of a lot for the small-scale production of vegetables and flowering plants for personal or small commercial use. This definition includes community and private gardens. This definition does not include Nursery & Garden Center.

Garden, Accessory

An exterior area for the small-scale production of vegetables and flowering plants for personal or small commercial use. This definition includes community and private gardens. This definition does not include Nursery & Garden Center.

Garden Features

A non-plant item used for landscape area ornamentation and decoration such as a bird bath, birdfeeder, or garden gnome.

General Commercial

A place of business providing the sale and display of goods or sale of services directly to the consumer, with goods, including prepared foods, available for immediate purchase and removal from the premises by the purchaser.

Glazing

The glass component of a building's facade.

Greenway

A linear natural preserve available for free and unstructured recreation to the general public, including related structures such as but not limited to boardwalks, steps, rails, and signage. This term is not meant to be inclusive of required pedestrian/bicycle connections from adjacent development to greenways.

Green Infrastructure

A range of practices and systems that use natural and engineered elements, such as plants, permeable surfaces, and rainwater harvesting to manage stormwater, reduce pollution, and enhance environmental and community resilience.

Ground Cover

Natural vegetative growth or other material that renders the soil surface stable against accelerated erosion.

Ground Floor

The first floor of a building other than a cellar or basement.

18.12 H

Halfway Home

A place where persons are aided in readjusting to society following a period of imprisonment, hospitalization or institutionalized treatment related to a criminal offense.

Heavily Wooded Lot

A premise being densely wooded with trees, shrubs, and overgrowth where equipment cannot maneuver because of the density of the vegetation.

Heavy Commercial Sales

An establishment which may have showrooms or open lots for selling, renting, or leasing heavy equipment such as but not limited to appliances, tile/flooring/countertops, swimming pools, play equipment, buses, trucks, manufactured homes, construction equipment, or boats or marine craft.

High Impervious Surface Project

A project that has more than 24 percent built-upon area (BUA) for all residential and non-residential development in the Falls Creek, Richland Creek, and Neuse River Watersheds, and 6-30 percent BUA for all residential and non-residential development in the Smith Creek Watershed. See Section 12.8.1.E for the Low Impervious Surface limits for areas located in protected watershed such as Falls Creek, Richland Creek, and Smith Creek.

High-Quality Waters (HQW)

Those classified as such in 15A NCAC 2B.0101(e)(5) - General Procedures.

Historic Structure (Floodplain Development)

A structure that is:

- Listed individually in the National Register of Historic Places (a listing maintained by the US Department of Interior) or preliminarily determined by the Secretary of Interior as meeting the requirements for individual listing on the National Register,
- Certified or preliminarily determined by the Secretary of Interior as contributing to the historical significance of a registered historic district or a district preliminarily determined by the Secretary to qualify as a registered historic district,
- Individually listed on a local inventory of historic landmarks in communities with a "Certified Local Government (CLG) Program", or
- Certified as contributing to the historical significance of a historic district designated by a community with a "Certified Local Government (CLG) Program.

Home Occupation

An occupation or profession conducted within a dwelling unit or Accessory Building by a resident of the dwelling that is incidental to the primary use of the dwelling as a residence. Home Occupations are invisible from the frontage, receive clients/customers on an appointment only basis, and have no additional employees.

Hospital

A health care facility and related facilities that provide care, treatment, testing for physical, emotional, or mental injury, illness, or disability, and overnight boarding of patients, either on a for-profit or not-for-profit basis; but not including group homes. Hospital includes ancillary facilities such as clinical laboratories, outpatient facilities, training facilities, central services facilities, and staff offices.

Hotel

An establishment providing short-term lodging for paying guests. Hotels may offer food services, convention hosting services, laundry services, and/or entertainment and recreation activities. This definition does not include Bed and Breakfast establishments or Short-Term Rentals.

18.13 I

Illicit Connection

An illegal and/or unauthorized connection to the Town separate stormwater system whether or not such connections result in discharges into that system.

Illicit Discharge

An illegal and/or unauthorized direct or indirect non stormwater discharge to the Town separate storm sewer system.

Illumination, Backlit

Illumination of a sign that is affected by an artificial source of light not contained within the sign itself and located between the sign copy and the sign base or building or structure to which the sign is attached.

Illumination, External

Illumination of a sign that is affected by an artificial source of light not contained within the sign itself and located in a manner that directs the illumination at the sign.

Illumination, Internal

Illumination of a sign that is affected by an artificial source of light contained within the sign itself.

Impervious Surface

Impervious surface area, sometimes referred to as built-upon area (BUA), includes any material which reduces and/or prevents absorption of storm water. This includes but is not limited to, buildings, roads, pavement, gravel surfaces, etc. The effective impervious coverage for certain surfaces listed below are as follows:

1. Asphalt, concrete, crusher-run, gravel, masonry, marl, wood, and other impermeable surfaces that prevent land area from infiltrating stormwater are 100 percent impervious,
2. Porous surfaces that permit direct infiltration of unconcentrated stormwater into ground areas which are prepared in accordance with plans approved by the Town, so that the first one-half inch of stormwater infiltrates into the bare ground are 10 percent through 70 percent impervious, depending on:
   a. Compaction,
   b. Condition of subgrade,
   c. Extent of land disturbance,
   d. Extent of porous openings,
   e. Protection from siltation and clogging,
   f. Slope of the ground area, and
   g. Volume of stormwater stored.
   h. Slatted wood decks that allow the drainage of water through the slats to an unpaved surface below are 50 percent impervious. If the area covered by the deck is washed gravel, the deck is 30 percent impervious.
   i. Un-graveled natural footpaths, water surfaces of swimming pools and drainfields areas zero percent impervious.
   j. All other necessary determinations about impervious surfaces will be based on hydrological tests based on existing subgrade soils, slope, rainfall intensity and rainfall duration.

Indoor Agriculture

The production of crops completely indoors through methods including but not limited to horticulture, hydroponics, and pisciculture.

Industry, Heavy

A non-residential use that requires a National Pollutant Discharge Elimination System (NPDES) permit for an industrial or stormwater discharge; or that involves the use or storage of any hazardous materials or substances; or that is used for the purpose of manufacturing, assembling, finishing, cleaning, or developing any product or commodity; or that involves the mining or extraction of any minerals, ore, fossil fuels, or other materials from beneath the surface of the earth. Structures house complex operations, some of which might be continuous (operated 24 hours a day, seven days a week).

Industry, Light

A non-residential use that involves the manufacturing, assembling, finishing, cleaning, or developing any product or commodity. Facilities are typically designed to look and generate impacts like a typical office building, but rely on special power, water, or waste disposal systems for operation. Noise, odor, dust, and glare of each operation are completely confined within an enclosed building, insofar as practical. This includes medical and testing laboratories, facilities for scientific research, and the design, development, and testing of electrical, electronic, magnetic, optical, computer and telecommunications components in advance of product manufacturing, and the

assembly of related products from parts produced off-site, where the manufacturing activity is secondary to the research and development activities. Also included are laundry/dry-cleaning plants as principal uses engaged primarily in high volume laundry and garment services, including: carpet and upholstery cleaners; diaper services; dry-cleaning and garment pressing; and commercial laundries.

Infill Development

Development that meets the following qualifiers: 1) a development site less than five acres in area; 2) Development on a lot where 80 percent or more of the lots within 600 linear feet of the site, on the same side of the street, are built out and; 3) development on a lot with existing water mains along the development site frontage or that was platted more than 20 years prior to the adoption of this UDO and not developed.

Intermediate Redevelopment

Redevelopment (as defined herein) which includes 25 percent or more up to less than 50 percent increase in gross floor area, dwelling units, disturbed area, or impervious surface area; an increase in building height.

Intermittent Stream

A well-defined channel that contains water for only a part of the year, typically during winter and spring when the aquatic bed is below the water table. The flow may be heavily supplemented by stormwater runoff. Intermittent streams often lack biological and physical characteristics commonly associated with the perennial conveyances of water. 15A NCAC 02B.0233 (2)(g).

Internet Sweepstakes Facility

A business enterprise where persons utilize computers, gaming terminals, or other electronic machines to conduct games of chance, including sweepstakes, and where cash, merchandise or other items of value are redeemed or otherwise distributed, whether or not the value of such distribution is determined by electronic games played or by predetermined odds. This does not include any lottery or sports betting approved by the State of North Carolina.

Interpretation

A determination, made in writing, by the Administrator regarding the proper application of provisions in this UDO, vested rights, the boundaries on the Official Zoning Map, or a prior-approved condition of approval.

Invasive Trees

Tree species that are non-native (or alien) to the ecosystem under consideration; and whose introduction causes or is likely to cause economic or environmental harm or harm to human health.

18.14 J

Jurisdiction

Any political subdivision which adopts this code for administrative regulations within its sphere of authority.

18.15 K

RESERVE

18.16 L

Lake or Natural Watercourse

A stream, river, brook, swamp, sound, bay, creek, run, branch, canal, waterway, estuary, and any reservoir, lake, or pond, natural or impounded, in which sediment may be moved or carried in suspension, and which could be damaged by accumulation of sediment.

Land-Disturbing Activity

A use of the land by any person in residential, industrial, educational, institutional, or commercial development, highway and road construction and maintenance, that results in a change in the natural cover or topography and that may cause or contribute to sedimentation.

Landfill

A disposal facility for hazardous or nonhazardous solid waste. These establishments also manage recycling and resource recovery facilities that operate in conjunction with landfills.

Landscape Plan

A plan illustrating the design and specifications for the preservation of existing vegetation; the placement of any live plant materials such as trees, shrubs, grasses, ground covers, etc.; and the location and design of built features such as berms, fencing, walls, etc.

Larger Common Plan of Development or Sale

An area where multiple separate and distinct construction or land-disturbing activities will occur under one plan. A plan is any announcement or piece of documentation (including but not limited to a sign, public notice or hearing, sales pitch, advertisement, loan application, drawing, permit application, zoning request, or computer design) or physical demarcation (including but not limited to boundary signs, lot stakes, or surveyor markings) indicating that construction activities may occur on a specific plot.

Legislative Decision

The adoption, amendment, or repeal of a regulation. It also includes the decision to approve, amend, or rescind a development agreement.

Letter of Map Amendment (LOMA)

A letter from FEMA that officially removes a property or building from the FEMA special flood hazard area (SFHA) that was inadvertently shown in the SFHA on the FIRM.

Letter of Map Revision (LOMR)

An official revision to the currently effective FEMA FIRM based on as-built conditions and/or more accurate data. It is issued by FEMA and may change FEMA base flood elevations; the location of the FEMA floodway lines and/or the location of the FEMA flood fringe line.

Level of Service (LOS)

Level of Service (LOS) is a measure of congestion derived from traffic volumes and roadway capacity. LOS has ratings of A, B, C, D, E, and F. Ratings of E and F indicate the roadway is congested with existing volume and capacity. Ratings of C and D indicate congestion is present, but there is no adverse effect on traffic flow.

Life Sciences/Biomanufacturing

Buildings used for research, development, and production related to biotechnology, pharmaceuticals, and other biological sciences. This includes laboratory work and the manufacture of life sciences products.

Lighting, Amber

A non-white color lighting similar to the color of high-pressure sodium lighting and with a temperature rating of less than 2,700 Kelvin.

Lighting, Landscape

Lighting used to illuminate of trees, shrubs, or other plant material as well as garden features as defined herein.

Lighting, Building Façade

Lighting used to illuminate of exterior surfaces of buildings for the enhancement of their nighttime appearance.

Lighting, Outdoor Recreational

Lighting used to illuminate sports fields, ball courts, playgrounds, or similar outdoor recreational facilities.

Lighting, Pedestrian Scale

Lighting used to illuminate pedestrian walkways, sidewalks, community space, and other public gathering space.

Lighting, Wall Pack

Outdoor lighting that is commonly mounted on the outside facing walls of buildings and is generally used to provide illumination to ground areas frequented by vehicles and pedestrians.

Live-Work Unit

An attached residential building type with a small commercial enterprise on the ground floor and a residential unit above or behind with a common tenant in both spaces.

Liquid Natural Gas Processing

A plant designed to separate and recover natural gas liquids and/or other non-methane gases and liquids from a stream of produced natural gas using equipment performing one or more of the following processes: Oil and condensate removal, water removal, separation of natural gas liquids, sulfur and carbon dioxide removal, fractionation of natural gas liquids, or other processes, and also the capture of CO2 separated from natural gas streams for delivery outside the facility.

Loading Area

An off-street space on the same lot with a building or group of buildings for temporary parking of a commercial vehicle while loading and unloading merchandise or materials.

Lot

A parcel of land having frontage on a public street or other officially approved means of access.

Lot Area

The computed area contained with the lot lines.

Lot Area, Flag

The total horizontal area within the lot lines of a lot, but not including the private driveway area of a flag lot.

Lot Coverage

A measure of intensity of land use that represents the portion of a site that is impervious (i.e., does not absorb water). This portion includes but is not limited to all areas covered by buildings, parked structures, driveways, roads, sidewalks, and any area of concrete asphalt.

Lot, Flag

A lot with minimal frontage on a public street where access to the public street is by a narrow private driveway.

Lot Frontage

The lot width measured at the street right-of-way line from which the lot obtains access.

Lot Line

A line forming a boundary of a lot.

Lot Line, Front

A lot line separating the lot from the public street right-of-way or private street. On a lot with more than one street frontage, the principal front lot line is generally the lot line abutting the street of higher classification. If both streets have the same classification or in the case of infill development, the front is the lot line that continues the established building pattern.

Lot Line, Interior Side

A lot line not abutting a street and connecting the lot's front and rear lot lines.

Lot Line, Rear

A lot line connecting the lot's interior side lot lines, or an interior side lot line and a street side lot line, along the edge of the lot opposite its front lot line.

Lot Line, Street Side

A lot line, other than a front lot line, separating the lot from an abutting public street right-of-way or private street. There may be multiple street side lot lines if the lot has more than one street frontage. Generally, the street side lot line is the lot line abutting a street of lower classification.

Lot of Record

A lot that was legally recorded by plat or description with the county Register of Deeds.

Lot Width

The horizontal distance between side lines measured along a line between side lot lines that is parallel to the front lot line.

Lot Width, Minimum

The smallest allowable horizontal distance between the side lot lines of a lot, measured at the right-of-way. The minimum lot width must be maintained across the depth of the lot from the right-of-way to the front building plane.

Lowest Floor *(Floodplain Development)*

The lowest floor of the lowest enclosed area (including basement). An unfinished or flood resistant enclosure, usable solely for parking of vehicles, building access, or limited storage in an area other than a basement area is not considered a building's lowest floor, provided that such an enclosure is not built so as to render the structure in violation of the applicable non-elevation design requirements of this UDO.

Low Impervious Surface Project

A project that has no more than 24 percent built-upon area (BUA) for all residential and non-residential development. See Section 12.8.1.E for the Low Impervious Surface limits for areas located in protected watershed such as Falls Creek, Richland Creek, and Smith Creek.

18.17 M

Major Redevelopment

Redevelopment (as defined herein) which includes 50 percent or more increase in gross floor area, building value, dwelling units, disturbed area, or impervious surface area.

Manufactured Home (Floodplain Development)

A structure, transportable in one or more sections, which is built on a permanent chassis and designed to be used with or without a permanent foundation when connected to the required utilities. This term does not include a "recreational vehicle".

Manufactured Home Park or Subdivision *(Floodplain Development)*

A parcel (or contiguous parcels) of land divided into two or more manufactured home lots for rent or sale.

Manufactured Housing

A residential structure that is transportable in one or more sections. In traveling mode, it is eight feet or more in width or 40 feet or more in length. A Manufactured Home is designed and constructed to the Federal Manufactured Construction and Safety Standards and is so labeled. When erected on site, the home is at least 320 square feet, built and remains on a permanent chassis, designed to be used as a dwelling with a permanent foundation built to FHA criteria. The structure must be designed for occupancy as a principal residence by a single-family.

Map Amendment

A change or revision to one or more of the maps of the comprehensive plan or the zones of the Town. A map amendment to the zoning code may either be an area-wide amendment or a site-specific amendment.

Market Value (Floodplain Development)

The building value, not including the land value and that of any accessory structures or other improvements on the lot. Market value may be established by independent certified appraisal; replacement cost depreciated for age of building and quality of construction (Actual Cash Value); or adjusted tax assessed values.

Marquee

A permanent, roofed structure fully supported by the building, and projecting beyond a building wall at an entrance.

Masonry

Stonework, brickwork, or concrete masonry unit bonded with mortar by a mason.

Materials Recovery Facility

An establishment primarily engaged in operating facilities for separating and sorting recyclable materials from nonhazardous waste streams (i.e., garbage). This includes the processing of commingled recyclable materials, such as paper, plastics, used beverage cans, and metals, are sorted into distinct categories.

Maximum Extent Practicable

The highest level of performance that is achievable but is not equivalent to a performance standard identified in this UDO.

Mean Sea Level (Floodplain Development)

The National Geodetic Vertical Datum (NGVD) as corrected in 1929, the North American Vertical Datum (NAVD) as corrected in 1988, or other vertical control datum used as a reference for establishing varying elevations within the floodplain, to which Base Flood Elevations (BFEs) shown on a FIRM are referenced. Refer to each FIRM panel to determine datum used.

Measurements

Determining distances, heights, areas, and other spatial dimensions required to ensure compliance with the standards and requirements set forth in this UDO.

Mechanical Equipment

A machine or device including electrical, heating, ventilation, plumbing, and other service facilities, which can include ductwork.

Medical Clinic

A medical service facility that provides outpatient ambulatory or outpatient health care such as emergency medical clinics; ambulatory surgical centers; dialysis centers; outpatient family planning services; community health centers and clinics; blood and organ banks; and medical services such as physician's and dentist's offices.

Meeting/Event Facility

A commercial venue available for rent by private persons or entities for the hosting of parties, meetings, banquets, and other events, as well as conferences. Such facilities may include kitchens for the preparation or catering of food, and the sale of alcoholic beverages to guests only for on premise consumption during scheduled events.

Micro-Brewery

An establishment primarily engaged in the brewing of ale, beer, malt liquors, and/or nonalcoholic beer that is permitted to do so in accordance with the Alcoholic Beverage Control Commission. Micro-Breweries have a capacity of up to 15,000 barrels per year. The definition includes a public tasting room and retail sales of spirits or related products manufactured on site.

Micro-Distillery

An establishment primarily engaged in the manufacturing of fortified spirits that is permitted to do so in accordance with the Alcoholic Beverage Control Commission. Micro-distilleries have a capacity of up to 25,000 gallons per year. The definition includes a public tasting room and retail sales of spirits or related products manufactured on site.

Micro-Winery

An establishment primarily engaged in the manufacture of unfortified or fortified wine of not more than 25,000 gallons per year that is permitted to do in accordance with NCGS 18B-1100 and regulations of the Alcoholic Beverage Control Commission. Accessory uses include a public tasting room and retail sales of wine and related products.

Minor Redevelopment

Redevelopment (as defined herein) which includes any exterior changes to buildings or changes to required site elements not meeting the thresholds of other development categories.

Mixed Use Horizontal

A development configuration where residential and nonresidential uses are organized in separate buildings on the same development site.

Mixed Use Vertical

A development configuration where nonresidential uses, such as retail or office spaces, are located on the ground floor, while residential or additional office spaces are situated on the upper floors within the same building.

Mobile Classroom

A classroom building that is designed and constructed to be relocated and transportable over public streets and is temporary in nature.

Mobile Retail/Services

A readily movable wheeled structure, motorized vehicle, towed vehicle, trailer, or cart that is equipped and operated for the purpose of retail sales or the provision of services such as, but not limited to pet grooming. The use does not include Food Trucks, which are separately defined.

Modified Natural Stream

An on-site channelization or relocation of a stream channel and subsequent relocation of the intermittent or perennial flow as evidenced by topographic alterations in the immediate watershed. A modified natural stream must have the typical biological, hydrological, and physical characteristics commonly associated with the continuous conveyance of water (perennial stream).

Multi-Tenant Building

A property leased by multiple entities each with its own exterior building entrance.

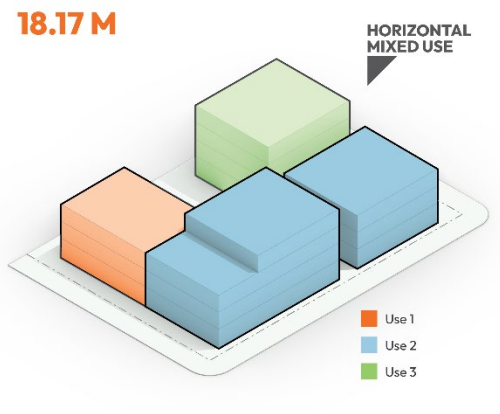

Figure 9: Mixed Use Horizontal

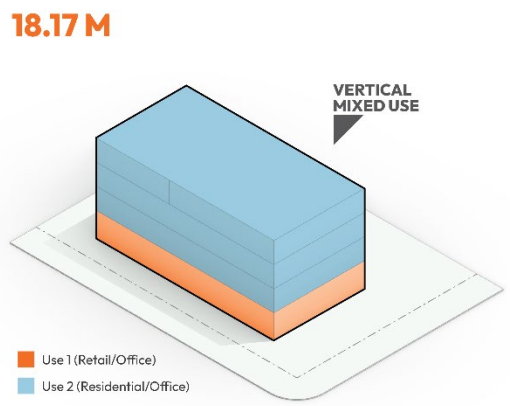

Figure 10: Mixed Use Vertical

18.19 N

NCGS

The North Carolina General Statutes and all rules and orders adopted pursuant to them.

NCDOT

The North Carolina Department of Transportation.

New Construction (Floodplain Development)

A structure for which the "start of construction" commenced on or after the effective date of the original version of the community's Flood Damage Prevention UDO (May 16, 2006) and includes any subsequent improvements to such structures.

New Development

Development of a site that was previously unimproved (with no existing principal structures or uses) or has been or will be cleared of structures. New development is distinguished from existing development and the expansion or alteration of existing development.

Non-Commercial Place of Assembly

A building or outdoor area operated not-for-profit wherein individuals or groups of people gather for an attraction or service, such as but not limited to, place of worship, public cultural/community facilities, and public entertainment/recreation facilities as defined by this UDO.

Nonconforming

As detailed in Chapter 15.

Nonconforming Buildings and Structures

As detailed in section 15.3.1.

Nonconforming Lots

As detailed in section 15.2.1.

Nonconforming Site Elements

As detailed in section 15.4.1.

Nonconforming Uses

As detailed in section 15.5.1.

Nonconforming Signs

As detailed in section 15.6.1.

Noncontributing Trees

Tree species that are not recommended by the North Carolina Forest Service.

Non-Encroachment Area (Floodplain Development)

The channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one foot as designated in the Flood Insurance Study report.

Notice of Violation

A written notice prepared by an enforcement official that informs a responsible person of UDO violations and orders them to take certain steps to correct the violations.

Nursery & Garden Center

A place of business where retail and wholesale products for the care of plants and produce are sold to the consumer. These centers, which may include a nursery and/or greenhouses, import most of the items sold, and may include plants, nursery products and stock, potting soil, hardware, power equipment and machinery, hoes, rakes, shovels, and other garden and farm variety tools and utensils.

18.20 O

One-Year, 24-Hour Storm

The surface runoff resulting from a 24-hour rainfall of an intensity expected to be equaled or exceeded, on average, once in 12 months and with a duration of 24 hours.

Opacity

The degree to which a material blocks light.

Open Space

An area set aside and protected from development which may be left in a generally unimproved state.

Outdoor Display/Sale of Merchandise, Accessory

The accessory sale of goods and products outside of a permanent structure that are clearly related to the function contained in that structure. This includes, but is not limited to, landscape materials, lawn, garden supplies, and produce.

Outdoor Display/Sale of Merchandise, Temporary

The temporary sale of goods and products outside of a permanent structure that are clearly related to the function contained in that structure. This includes, but is not limited to, landscape materials, lawn, garden supplies, and produce.

Outdoor Seating, Accessory

The provision of on-site or on sidewalk outdoor seating areas by a restaurant, bar, or other use where food or beverages are served for consumption.

Outdoor Storage Yard

The storage of various materials outside of a structure, as an accessory use. This includes salvage yards used for the storage and/or collection of any type of equipment.

Outdoor Storage, Temporary

The storage of any material for a period greater than 48 hours, including items for sale, lease, processing, and repair (excluding vehicles for sale) outside the principal or accessory buildings on a property.

Owner

The legal or beneficial owner of land, including but not limited to a mortgagee or vendee in possession, receiver, executor, trustee, or long-term or commercial lessee, or any other person or entity holding proprietary rights in the property or having legal power of management and control of the property. “Owner” includes long-term commercial tenants; management entities, such as those charged with or engaged in the management of properties for profit; and every person or entity having joint ownership of the property. A secured lender not in possession of the property does not constitute an owner, unless the secured lender is included within the meaning of “owner” under another description in this definition, such as a management entity.

18.21 P

Parapet

That portion of a wall which extends above the roof line.

Parcel

See definition of lot.

Park

An area of open space that is maintained in its natural condition or improved for outdoor recreation purposes.

Parking Lot Island

A raised barrier, sometimes landscaped, located in parking lot.

Parking Lot

A stand-alone or accessory, off-street surface parking area for temporary storage of vehicles.

Parking Structure

A stand-alone or accessory parking deck or garage for temporary storage of vehicles.

Payment in Lieu

An alternative method of complying with UDO requirements by paying a fee instead of constructing specified improvements.

Pedestrian Arcade

A public or private right-of-way across a block or within a block to provide access to be used by pedestrians.

Pedestrian Walkways

A pathway, which may include stairs, ramps or passageways, made of a hard, stable surface to facilitate the movement of pedestrians.

Perennial Stream

A well-defined channel that contains water year-round during a year of normal rainfall with the aquatic bed below the water table for most of the year. Groundwater is the primary source of water for perennial streams. A perennial stream exhibits the typical biological, hydrological, and physical characteristics commonly associated with the continuous conveyance of water. 15A NCAC 02B.033 (2)(I).

Performance Guarantee

A financial deposit to ensure that all improvements, facilities, or work required will be completed in conformance with the approved plan.

Permit

An approval document allowing land-disturbing activities to be initiated. A project may be developed in phases with separate permits for each phase.

Permit, Building

An approval statement signed by the Building Official authorizing the construction, alteration, reconstruction, or demolition of all or part of any building as complying with the Building Code.

Permit, Floodplain

An approval for a man-made change to improved or unimproved real estate, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation, or drilling operations, located within the area of special flood hazard.

Permit, Lands Disturbance

An approval for construction by grading or excavation and temporary or permanent construction for all buildings, parking areas, driveways, roads, sidewalks, and other areas of concrete, asphalt, or other construction materials.

Permit, Reforestation

An approval for replanting or planting of forest plant materials. Also includes planting in areas not originally forested for mitigation purposes.

Permit, Special Use

An approval for development or land uses in a particular zoning district upon presentation of competent, material, and substantial evidence establishing compliance with general standards requiring that judgment and discretion be exercised as well as compliance with specific standards.

Permit, Temporary Use

An approval for a temporary use.

Permit, Tree Clearing

An approval for the direct or indirect removal of trees and/or ground cover from any public or private undeveloped, partially developed, or developed property.

Permit, Zoning Compliance

A permit or approval under this chapter or the Town's building code that must be obtained before initiating a use or development activity.

Person

An individual, partnership, firm, association, joint venture, public or private corporation, trust, estate, commission, board, public or private institution, utility, cooperative, interstate body, or other legal entity.

Personal Services

An establishment primarily engaged in providing individual services generally related to personal needs or cosmetic services, such as hair and nail salons, barber shops, clothing alterations, shoe repair, tattoo shops, weight loss centers, makeup services, and laundry services.

Place of Worship

A facility such as a church, temple, monastery, synagogue, or mosque used for worship by a not-for-profit organization and their customary related uses, such as administrative offices, classrooms, meetings rooms, cooking and eating facilities, and dwelling units housing no more than two faith leaders. Place of worship does not include other principal uses, such as Child/Adult Day Care Center, Cemetery, School, Entertainment Facility, or Recreation Facility.

Planned Unit Development (PUD)

A zoning district designed to achieve high-quality, creative, and innovative land planning and site design that cannot be achieved through the strict application of standard development and design standards. The PUD District allows for customized development and design standards tailored to the specific features and context of the site.

Plat

A document, prepared by a registered surveyor or engineer, delineates property lines and shows monuments and other landmarks for the purpose of identifying property.

Pop-up Retail/Restaurant

A retail or restaurant use established on a temporary basis in an existing commercial building.

Porch

A covered but unenclosed projection from the main wall of a building that may or may not use columns or other ground supports for structural purposes.

Portable Outdoor Storage Device

A vessel, container, or unit owned, rented, or leased for the temporary storage of commercial, industrial, or residential household goods, that does not contain a foundation or wheels for movement. Examples of this use include POD-type boxes that can be transported on a flatbed or other truck; but do not include prefabricated sheds that are not designed for transport after erection or cargo containers, or commercial trailers used by construction or other uses in the regular performance of their business.

Post Office

An establishment conducting operations of the United States Postal Service including permanent, contract, and lease stations, not including mail boxes and cluster box units.

Primary Conservation Area

An area such as a riparian corridor, special flood hazard area, unique geological formation, rock outcropping, rare plant, rare plant community, rare habitat, wetland, and prime agricultural area/farmland.

Principal Use

The primary purpose or function of a building, structure, or parcel of land.

Produce Stand

A temporary open-air stand or place for the seasonal selling of agricultural produce by an individual.

Professional Services

An activity conducted in an office setting and generally focusing on business, professional, or technical services that make available the knowledge and skills of employees to others. Examples include advertising, communications/media production, counseling, data analysis, design, insurance, legal, not-for-profit organizations, and real estate services.

Public Art, Mural

A painting or other work of art that is painted, drawn, or affixed to any exterior structure, including but not limited to wall, retaining wall, steps, utility boxes, or similar surfaces. The artwork should be intended solely for artistic and aesthetic purposes and should not be used for advertising purposes.

Public Art, Sculpture

A freestanding, three-dimensional work of art situated in a public open place and open for the public to experience.

Public Safety and/or Nuisance *(Floodplain Development)*

Something which is injurious to the safety or health of an entire community or neighborhood, or any considerable number of persons, or unlawfully obstructs the free passage or use, in the customary manner, of any navigable lake, or river, bay, stream, canal, or basin.

Public Safety Training Structure

A training facility or prop designed to provide hands-on, tactical training for police, fire professionals, and students.

Public Service Maintenance and Storage, Facility

A facility used for housing government-operated workshops, maintenance and repair centers, equipment storage, and outdoor storage yards.

Public Service/Safety Facility

A facility for federal, state, and local governmental uses, law enforcement, and fire protection agencies, and their accessory uses including office space, temporary holding cells, equipment and evidence storage facilities, training facilities, and vehicle garages. This definition is not intended to be inclusive of vehicle impoundment lots or Correctional Institution.

18.22 Q

Quasi-Judicial Decision

A decision that involves the findings of facts regarding a specific application of an UDO and the exercise of discretion when applying the standards of the UDO.

Quorum

The minimum number of members of a board or commission that must be present at a meeting to conduct official business or take official action.

18.23 R

Raceway

An enclosed visible conduit or physical pathway for housing electrical wiring, transformers, and other non-visible sign components and used to protect these elements from environmental factors. Usually mounted between the sign graphics and the mounting surface.

Real Estate Sales, Temporary

A temporary structure utilized for model home and subdivision sales office uses.

Recreation Facility

A use or structure for active recreation including a gymnasium, natatorium, fitness center, athletic equipment, indoor running track, climbing facility, court facility and their customary accessory uses.

- A ***public facility*** is owned and operated by not-for-profit, governmental, or other non-taxing bodies.
- A ***private facility*** is owned and operated for-profit by a private person or business.

Recycling Collection Station

A center primarily dedicated to the collection of recyclable materials through donation, redemption, or purchase of recyclable materials from the public. It focuses on gathering materials intended for recycling, repurposing, or composting.

Recreational Vehicle (RV) *(Floodplain Development)*

A vehicle, which is:

- Built on a single chassis,
- 400 square feet or less when measured at the largest horizontal projection,
- Designed to be self-propelled or permanently towable by a light duty truck, and
- Designed primarily not for use as a permanent dwelling, but as temporary living quarters for recreational, camping, travel, or seasonal use.

Redevelopment

A proposed expansion, addition, or major facade change to an existing building, structure, or parking facility.

Redevelopment, Stormwater

A rebuilding activity that results in no net increase in built-upon area and provides equal or greater stormwater control than the previous development.
The top of the lowest floor for structures within Special Flood Hazard Areas and Future Conditions Flood Hazard Areas designated as Zone AE, A, A99 or X (Future).

Residential Care Facility

A staffed premises (not a single-family detached dwelling) with paid or volunteer staff that provides full-time care to more than six individuals. Residential care facilities include group homes (NCGS §131D), nursing homes (NCGS §131E-101), residential child-care facilities (NCGS §131D-10.2), assisted living residences (NCGS 131D-2), adult care homes (NCGS §131D-2), congregate living services, assisted living services, continuing care retirement centers, skilled nursing services and orphanages. This term excludes family care homes and halfway houses. Ancillary uses within the Residential Care Facility may include congregate dining facilities, recreational and social facilities, health care facilities, gift shops, snack shops, banks, barber/beauty shops, and similar services for residents.

Restaurant

A retail business selling ready-to-eat food and/or beverages for on or off-premise consumption. Customers may be served from an ordering counter (i.e. cafeteria or limited service restaurant); at their tables (full-service restaurant); and at exclusively pedestrian-oriented facilities that serve from a walk-up ordering counter (snack and/or nonalcoholic bars). To qualify as a restaurant, an establishment's gross receipts from food and nonalcoholic beverages shall be not less than 30 percent of the total gross receipts from food, nonalcoholic beverages, and alcoholic beverages.

Restricted Commercial

A retail establishment selling any form of tobacco, tobacco products, or tobacco paraphernalia as a principal use.

Retirement Housing

Independent living with services and programs such as meals, recreational, social and housekeeping.

Rezoning

See Map Amendment.

Riding Stable

An establishment where horses are boarded and cared for, and where instruction in riding, jumping, and showing and/or the hiring of horses for riding is offered.

Right-Of-Way

An area of land not on a lot that is dedicated or taken for public or private use to accommodate a transportation system. It may incorporate the roadway, curbs, gutters, lawn strips, sidewalks, and lighting, and may include special features (required by the topography or treatment) such as grade separation, bridges, or other transportation infrastructure.

Right-Of-Way, Assumed

Where no right-of way exists or if the right-of-way is only inclusive of the street pavement then the assumed right of-way line is parallel to the edge of pavement and setback a minimum of 10 feet from the edge of pavement. This definition is for setback calculation purposes only and does not represent any expressed or implied taking of property.

Riverine (Floodplain Development)

Relating to, formed by, or resembling a river (including tributaries), stream, brook, etc.

Roof Form

The roof appearance defined by the type, shape, and pitch of the roof of a building.

Roof Line

A horizontal line intersecting the highest point or points of a roof.

Runoff Attenuation

The capture and release of runoff generated from the 10-yr, 24-hr storm event in a non-erosive manner by one or more primary Stormwater Control Measures (SCMs) or a combination of primary and secondary SCMs that provides equal or better treatment. Additionally, the peak flow for that storm is be the same, or lower, in the post-development condition as compared to the pre-development condition.

Runoff Treatment

The volume of stormwater runoff generated from all the built-upon area of a project at build-out during a precipitation event of one inch is treated in one or more primary SCMs or a combination of primary and secondary SCMs that provides equal or better treatment.

Runoff Volume Match

The annual runoff volume after development shall not be more than 10 percent higher than the annual runoff volume before development.

18.24 S

Salvage Yard (Floodplain Development)

A non-residential property used for the storage, collection, and/or recycling of any type of equipment, and including but not limited to vehicles, appliances, and related machinery.

Scale

The size of a structure or element relative to the structures or elements around it.

School, Elementary

A public or private institution for education or learning including athletic or recreational facilities, which does not include lodging. This institution includes any school licensed by the state and that meets the state requirements for elementary education. Elementary school is considered to generally include pre-kindergarten through fifth grades.

School, High

A public or private institution for education or learning including athletic or recreational facilities, which does not include lodging. This institution includes any school licensed by the state and that meets the state requirements for secondary education. High school is considered to generally include grades 9-12.

School, Middle

A public or private institution for education or learning including athletic or recreational facilities, which does not include lodging. This institution includes any school licensed by the state and that meets the state requirements for elementary education. Middle school is considered to generally include grades 6-8.

School, Vocational/Technical

A public or private institution for education or learning including athletic or recreational facilities, which does not include lodging. These schools offer vocational and technical training in a variety of technical subjects and trades. Training may lead to job-specific certification.

Scoreboard

A freestanding sign or a wall sign located at an athletic field to display schedules, scores, statistics, and similar athletic event information.

Seasonal Sales

Temporary outdoor sales, typically recurring on an annual basis, located on a lot with a principal use for which the seasonal sales are not associated.

Sediment

The solids particulate matter both mineral and organic that has been or is being transported by water, air, gravity, or ice from its site of origin.

Sediment Pollution Control Act (SPCA ACT)

The North Carolina Sediment Pollution Control Act of 1973 and all rules and orders adopted pursuant to it.

Sedimentation

The process by which sediment resulting from accelerated erosion has been or is being transported off the site of the land-disturbing activity or into a lake or natural watercourse.

Semi-Cutoff Lighting Fixture

A lighting fixture that limits the spread of illumination to a mid-range area with a downward and forward throw illuminating specific areas of interest.

Setback

The shortest horizontal distance from a lot line of a lot to the nearest point of a structure on the lot.

Setback, Front

The shortest horizontal distance from the front lot line of a lot to the nearest point of a structure on the lot. Where no right-of-way exists or if the right-of-way is only inclusive of the street pavement then the front setback shall be measured from an assumed right-of-way line.

Setback, Interior Side

The shortest horizontal distance from the interior side lot line of a lot to the nearest point of a structure on the lot.

Setback, Maximum

A line parallel to the lot line at or in front of which a building may be erected. Maximum setbacks area figured from the right-of-way line.

Setback, Minimum

A line parallel to the lot line in front of which no building shall be erected. Minimum setbacks shall be figured from the right-of-way line, lot line, or in the case of alley-accessed lots the alley easement.

Setback, Rear

The shortest horizontal distance from the rear lot line of a lot, or in the case of alley-accessed lots to the alley easement boundary, to the nearest point of a structure on the lot.

Setback, Street Side

The shortest horizontal distance from the street side lot line of a lot to the nearest point of a structure on the lot.

Shooting Range, Indoor

An enclosed indoor facility that is designed for the discharging of firearms for recreational or training purposes.

Shooting Range, Outdoor

A permanently located and improved area that is designed and operated for the use of rifles, shotguns, pistols, silhouettes, skeet, trap, black powder, or any other similar sport shooting in an outdoor environment. Outdoor shooting range excludes any area for the exclusive use of archery or air guns or an enclosed indoor shooting range facility.

Short-Term Rental

The rental of any dwelling, in whole or in part to any person(s) for transient use for less than a continuous period of 30 days. This does not include a Bed and Breakfast use or ongoing month-to-month tenancy granted to the same renter for the same dwelling.

Sight Distance Triangle

An area of land at the intersection of streets, or a street and a driveway, within which nothing may be erected, planted, placed, or allowed to grow in a manner which will obstruct the vision of motorists entering or leaving the intersection.

Sign

An object, device, display or structure or part thereof which is used to advertise, identify, display, direct or attract the attention to an object, person, institution, organization, business, project, service, event or location by any means including words, letters, figures, designs, symbols, fixtures, colors, motion illumination or projected images. The term sign includes, but is not limited to, every projecting sign, wall sign, roof sign, billboard, posterboard, freestanding sign, ground sign, window sign, vehicle sign, awning, canopy, marquee, changeable copy sign, illuminated sign, flashing sign, animated sign, temporary sign, portable sign or any other attention getting device or other display whether affixed to a building or separate from any building.

Sign, Applied Vinyl Sidewalk

A temporary sign applied directly to a sidewalk or other similar outdoor hard surface designed to accommodate pedestrians.

Sign, Athletic Field Fence

A sign located within and affixed to the fence of an athletic field or court used for sports programs.

Sign, Attached

A sign mounted or otherwise secured to a building or structure not designed or constructed solely for sign support.

Sign, Awning

A sign that is applied to an awning that is otherwise permitted by the Town.

Sign, Banner

A temporary sign made of fabric or other similar nonrigid material with no enclosing framework or electrical components that is supported or anchored on two or more edges or at all four corners.

Sign Base

The post(s) or supporting structure between the ground and the background or frame (if present) of a ground sign.

Sign, Blade

A sign that projects perpendicular from a building's supporting wall and does not swing or otherwise move via natural, manual, or automated methods.

Sign, Box/Cabinet

A sign that is self-enclosed in a typically square or rectangular structure with or without internal lighting. A box/cabinet sign can be single or double sided.

Sign, Bracket-Mounted

A sign affixed, attached, or secured to a wall or another structure through the use of a bracket or another type of supportive hardware and may swing or otherwise move via natural methods.

Sign, Canopy

A sign that is mounted to a canopy that is otherwise permitted by the Town.

Sign Copy

A combination of letters, numerals, words, symbols, pictures, emblems or other characters that constitute a message in either permanent or removable form.

Sign, Double-Faced

A sign constructed to display its message on the outer surfaces of two identical and opposite parallel planes.

Sign, Drive-Through

A sign appurtenant to a drive-through facility as defined herein.

Sign Face

The portion of a sign that contains or displays sign copy.

Sign, Flashing

An illuminated sign that contains an intermittent or sequential flashing light source.

Sign, Freestanding

A sign on a frame, pole or other support structure not attached to any building.

Sign, Feather

A generally narrow vertical temporary sign with or without copy where the sign is mounted onto a pole or individual mounting device with the intent of utilizing natural or man-made air movement.

Sign, Ground

A sign which is attached to or is a part of a self-supporting structure, other than a building or portion of a building.

Sign, Ground-Mounted Banner

A sign consisting of non-rigid, flexible, fabric like materials enclosed in a rigid frame attached and secured to the ground.

Sign, Incidental

A sign not visible from the public right-of-way that is located and displayed in a manner to aid on-site users, generally with instructions, directives, or restrictions. Examples include but are not limited to freestanding signs in parking areas; signage affixed to structures dispensing products such as fuel pumps, EV chargers, and ATMs; and structures receiving items such as shopping cart corrals and donation drop off bins.

Sign, Internal Circulation Safety

A sign which conveys information to drivers, cyclists, and pedestrians that is pertinent to protect public safety, including but not limited to signs that identify one-way drive-aisles and access points, areas of low clearance, and the location of drive-through lanes.

Sign, Interpretive Marker

A sign that provides information regarding an event or site.

Sign, Light Pole Banner

A sign made of cloth, fabric, or other lightweight material with only material for backing and designed for hanging from light poles or light posts.

Sign, Marquee

A sign attached to and made part of a marquee.

Sign, Monument

A freestanding sign supported primarily by an internal structural framework or integrated into landscaping or other solid structural features other than support poles. This definition does not include residential entryway signs.

Sign, Multi-Faced

A sign constructed to display its message on the outer surface of more than two planes.

Sign, Off-Premises

A sign which directs attention to or advertises a use, business, commodity, service or activity not conducted, sold, or offered upon the premises where the sign is located. This term also includes those signs commonly known as advertising signs, billboards and poster panels.

Sign, On-Premises

A sign which directs attention to or advertises a use, business, commodity, service or activity conducted, sold, or offered upon the premises where the sign is located.

Sign, Permanent

A sign constructed of durable, weather resistant material and intended to be displayed for a long period of time.

Sign, Plaque

A sign constructed as an ornamental tablet typically made of porcelain, metal, or wood commemorating or memorializing a person, event, structure, or site.

Sign, Portable

A sign that is not permanently affixed to a building, a structure or the ground, but not including customary identification lettering on vehicles and advertising posters on buses and taxicabs.

Sign, Post

A freestanding sign affixed to the ground with one or no more than two wood stakes or poles with an arm from which the sign hangs.

Sign, Pole

See Pylon Sign definition.

Sign, Political

Any sign that advocates for political action.

Sign, Post/Panel

A sign, the face of which is affixed to a minimum of two posts installed on the ground without footings.

Sign, Projecting

A sign that is wholly or partially dependent upon a building for support, that projects more than twelve inches from such building, and whose face is perpendicular to the façade of the building upon which it is attached.

Sign, Pylon Sign

A sign that is mounted on a freestanding pole or another support that is narrower than the sign face.

Sign, Regulatory

A sign that informs users of regulations or laws and indicate the applicability of legal requirements.

Sign, Residential Entry

A freestanding sign that is located at a vehicular entrance to a residential subdivision that is supported primarily by an internal structural framework or integrated into landscaping or other solid structural features other than support poles.

Sign, Roof

A sign that is mounted or painted on the roof of a building, or that is wholly dependent upon a building for support and that projects above the highest point of a building with a flat roof, the eave line of a building with gambrel, gable or hip roof or the deck line of a building with a mansard roof.

Sign, Scoreboard

A sign attached to a scoreboard structure in an outdoor athletic field.

Sign, Sidewalk

A sign constructed in such a manner as to form an "A", "T", or a tent-like shape and not secured or attached to the ground.

Sign, Sock

A sign constructed of flexible material designed to fit over and cover a permanent sign, face, or mount which are typically installed while a new permanent sign is being designed or fabricated.

Sign, Temporary

A sign constructed of cloth, canvas, fabric, paper, plywood or other light material and intended to be displayed for a short period of time.

Sign, Wall-Mounted Banner

A sign consisting of non-rigid, flexible, fabric like materials enclosed in a rigid frame attached and secured to the exterior wall of a building.

Sign, Wall

A sign attached to the wall of a building or structure in such a manner that the wall becomes the supporting structure for, or forms the background surface of, the sign and whose face is parallel to the façade of the building upon which it is attached.

Sign, Window

A sign that is applied or attached to the exterior or interior of a window or located within the interior of a structure so that its copy can be read from the exterior of the structure. Window film, decals, and clings which are more than fifty percent opaque and/or contain sign copy shall be

considered a window sign. Permanent window signs are those that are affixed to the window or its frame in a manner intended to be long-lasting or fixed, such as etched glass or permanently adhered vinyl. Temporary window signs include items like open/closed signs, hours of operation signs, or electronic "open" signs, which are intended to be easily removed or changed.

Sign, Yard

A freestanding, moveable sign on a wire or plastic frame, wood stake or similar support.

Siltation

Sediment resulting from accelerated erosion which can be settled or removed by properly designed, constructed, and maintained control measures; and which has been transported from its point of origin within the site of a land-disturbing activity; and which has been deposited, or is in suspension in water.

Single Room Occupancy

A residential structure with individual, secure rooms containing no food preparation facilities, which are rented on a long-term basis. Food preparation facilities are shared between all tenants and sanitary facilities and living areas may be shared between all tenants.

Single-Tenant Building

A building leased or used by a singular entity.

Site Plan

A detailed two-dimensional drawing that illustrates all of the required site features and all related development calculations in sufficient detail to show compliance with the UDO.

Site-Specific Vesting Plan

The type and intensity of use for a specific parcel or parcels of property and identify boundaries, significant topography, natural features, the approximate location and dimensions (including height) of proposed buildings, and the approximate location of proposed infrastructure, including utilities and street and pedestrian facilities. The following development applications constitute site-specific vesting plans: site plan, site construction plan, subdivision plan, subdivision construction plan, special use permit, a conditional district master plan, and a planned unit development.

Small Cell Wireless Facility

A type of wireless telecommunications infrastructure that is smaller and more densely sited than wireless telecommunications towers and is primarily located in the right-of-way. A small cell wireless facility is comprised of an antenna less than three cubic feet, an equipment box, and wiring, or 'fiber.' Antennae and equipment may be shrouded or enclosed. Small cell wireless facilities must be less than 50 feet tall.

Solar Energy Collection System, Canopy

A solar energy collection system consisting of elevated solar panels installed above parking lots, carports, and other paved areas.

Solar Energy Collection System, Ground Mounted

A solar energy collection system and associated mounting hardware that is affixed to or placed upon the ground including but not limited to fixed, passive, or active tracking racking systems and located on a site with a primary use.

Solar Energy Collection System, Roof Mounted

A solar energy collection system that is structurally mounted to the roof of a building or other permitted structure, including limited accessory equipment associated with system which may be ground mounted.

Solar Farm

A series of solar energy collection systems and associated mounting hardware that are affixed to or placed upon the ground including but not limited to fixed, passive, or active tracking racking systems and located on a site with no other principal use. Definition includes appurtenant office, utility, storage, and other required structures.

Special Event

A temporary event such as a block party, festival, musical event, competition, or other community-oriented event. The land in the floodplain subject to a one percent or greater chance of being flooded in any given year based on current conditions hydrology.

Stabilization

The process of restoring a site with ground cover or armor to resist soil erosion from the forces of air, wind, or water.

Start of Construction (Floodplain Development)

Includes substantial improvement, and means the date the building permit was issued, provided the actual start of construction, repair, reconstruction, rehabilitation, addition placement, or other improvement was within 180 days of the permit date. The actual start means either the first placement of permanent construction of a structure on a site, such as the pouring of slab or footings, the installation of piles, the construction of columns, or any work beyond the stage of excavation; or the placement of a manufactured home on a foundation. Permanent construction does not include land preparation, such as clearing, grading, and filling; nor does it include the installation of streets and/or walkways; nor does it include excavation for a basement, footings, piers, or foundations or the erection of temporary forms; nor does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not part of the main structure. For a substantial improvement, the actual start of construction means the first alteration of any wall, ceiling, floor, or other structural part of the building, whether or not that alteration affects the external dimensions of the building.

Stop Work Order

A written order to stop work, issued by the Administrator, upon determining that work is being conducted in violation of this UDO.

Storage Container, Accessory

A container used primarily for the storage of goods, materials, or personal items that is secondary to the main use of the property. This includes structures such as shipping containers or cargo boxes.

Storage, Self-Service

A building containing separate enclosed storage spaces of varying sizes leased or rented on an individual basis.

Storage Warehouse, Indoor

facility for the storage of furniture, household goods, or other commercial goods of any nature. This use includes cold storage. It does not include warehouse, storage, or mini-storage facilities offered for rent or lease to the general public; warehouse facilities primarily used for wholesaling and distribution; or terminal facilities for handling freight.

Stormwater Manual

The Stormwater Design Manual approved for use in Phase II jurisdictions by the N.C. Department of Environmental Quality and certified by this jurisdiction is at least as stringent as the Stormwater Design Manual approved for use in Phase II jurisdictions the proper implementation of the requirements of the federal Phase II stormwater program. All references herein to the Stormwater Design Manual are to the latest published edition or revision.

Stormwater Runoff

The surface flow of water resulting from precipitation in any form and occurring immediately after rainfall or melting.

Story

That portion of a building, other than a basement, included between the surface of any floor and the surface of the floor next above it, or if there is no floor above it, then the space between the floor and the ceiling above the floor of such story.

Stream

An intermittent or perennial surface water subject to US Army Corps of Engineers (Corps) and/or NC Division of Water Resources (DWR) 404/401 jurisdiction. To confirm jurisdictional status, a formal Corps and/or DWQ response is required (e.g. Jurisdictional Determination).

Stream Restoration

The re-establishment of the natural channel form, function, and processes of a self-sustaining system that existed prior to watershed perturbation.

Street

A dedicated and accepted public right-of-way, or privately maintained access, for vehicular traffic which conforms to the CTP and WFD3.

Structure

Something principally above ground that is erected, installed, or constructed on or affixed to the ground or attached to something located on the ground including, a gas or liquid storage tank, or other man-made facilities or infrastructure.

Structure (Floodplain Development)

A walled and roofed building, a manufactured home, or a gas, liquid, or liquefied gas storage tank that is principally above ground, meaning at least 51 percent of the actual cash value of the structure is above ground.

Structural SCM

A physical device designed to trap, settle out, or filter pollutants from stormwater runoff; to alter or reduce stormwater runoff velocity, amount, timing, or other characteristics; to approximate the pre-development hydrology on a developed site; or to achieve any combination of these goals. Structural SCM includes physical practices such as constructed wetlands, vegetative practices, filter strips, grassed swales, and other methods installed or created on real property. "Structural SCM" is synonymous with "structural practice", "stormwater control facility," "stormwater control practice," "stormwater treatment practice," "stormwater management practice," "stormwater control measures," "structural stormwater treatment systems," and similar terms used in this UDO.

Stub Street

A roadway that has only one outlet for vehicular traffic, terminates in a vehicular turn-around, and is intended to be extended or continued in the future.

Studio, Art

A small facility for individual and group instruction and training in the arts, including dance and music; production rehearsal; photography, and the processing of photographs produced only by users of the studio facilities; martial arts training studios; gymnastics, yoga, and similar instruction; and aerobics and gymnastics studios with no other fitness facilities or equipment.

Subdivision

A division of a tract or parcel of land into two or more lots, building sites, or other divisions for the purpose of sale, or building development (whether immediate or future) and shall include all divisions of land involving the dedications of a new street or a change in existing streets. Does not include exempt subdivision as defined by NC General Statutes.

Subdivision Plan

A tentative plan showing the proposed development of a tract of land for which platting and development is to be carried out in two or more stages.

Subsidiary

An affiliate that is, directly or indirectly, through one or more intermediaries, controlled by another person.
A project status that states that:

1. The development has received and maintained a valid erosion and sedimentation control permit and conducted grading activity on a continuous basis and not discontinued it for more than 30 days,
2. The development has installed substantial on-site infrastructure, or
3. The development has received and maintained a valid building permit for the construction and approval of a building foundation.

Substantial Damage (Floodplain Development)

Damage of any origin sustained by a structure during any one-year period whereby the cost of restoring the structure to its before damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred. See Substantial Improvement definition. Substantial damage also means flood-related damage sustained by a structure on two separate occasions during a 10-year period for which the cost of repairs at the time of each such flood event, on the

average, equals or exceeds 25 percent of the market value of the structure before the damage occurred.

Substantial Improvement *(Floodplain Development)*

A combination of repairs, reconstruction, rehabilitation, addition, or other improvement of a structure, taking place during any one-year period for which the cost equals or exceeds 50 percent of the market value of the structure before the "start of construction" of the improvement. This term includes structures which have incurred "substantial damage", regardless of the actual repair work performed. The term does not, however, include either:

- Any correction of existing violations of State or community health, sanitary, or safety code specifications which have been identified by the community code enforcement official and which are the minimum necessary to assure safe living conditions, or

Any alteration of a historic structure provided that the alteration will not preclude the structure's continued designation as a historic structure.

Swimming Pool

An artificial basin of water constructed or erected for wading or swimming.

18.25 T

Telecommunication - Amend, Amendment and Amended

A change, addition, correction, deletion, replacement, or substitution, other than typographical changes of no effect in an application or other document or filing.

Telecommunication Antenna

A system of electrical conductors that transmit or receive electromagnetic waves or radio frequency or other wireless signals.

Telecommunication Application

Necessary and required documentation that an applicant submits in order for a Special Use Permit or Building Permit for Wireless Telecommunications Facilities to be reviewed.

Telecommunication Co-location

The use of an approved telecommunications structure to support Antenna for the provision of wireless services.

Telecommunication - Commercial Impracticability or Commercially Impractical

The inability to perform an act on terms that are reasonable in commerce; the cause or occurrence of which could not have been reasonably anticipated or foreseen and that jeopardizes the financial efficacy of the project. The inability to achieve a satisfactory financial return on investment or profit, standing alone, shall not deem a situation to be "commercial impractical" and shall not render an act or the terms of an agreement "commercially impractical."

Telecommunication Facility

A set of wireless transmitting and/or receiving equipment, including any associated electronics and electronics shelter or cabinet and generator.

Telecommunication Height

When referring to a Tower or wireless support structure for a Wireless Telecommunications Facility, "height" includes the distance measured from the pre-existing grade level to the highest point on the tower or structure, even if said highest point is an antenna or lightening protection device

extending above the support structure. For all other structures and uses, see Measurement of Height.

Telecommunication Maintenance

Plumbing, electrical or mechanical work that may require a building permit but that does not constitute a Modification to the Wireless Telecommunications Facility provisions of this UDO.

Telecommunication - Modification or Modify

The addition, removal or change of any of the physical and visually discernible components or aspects of a wireless Facility or Complex with identical components, including but not limited to antennas, cabling, equipment shelters, landscaping, fencing, utility feeds, or the color or materials of any visually discernible components, vehicular access, parking and/or an upgrade or change-out of equipment for different, better, or more modern equipment.

Telecommunication - Necessary, Necessity or Need

What is technologically required for the equipment to function as designed by the manufacturer and that anything less will result in prohibiting the provision of service as intended and described in the narrative of the Application. Necessary or Need does not mean what may be desired, preferred or the most cost-efficient approach and is not related to an Applicant's specific chosen design standards. Any situation involving a choice between or among alternatives or options is not a Need or a Necessity.

Telecommunications

The transmission and/or reception of audio, video, data, and other information by wire, radio frequency, light, and other electronic or electromagnetic systems.

Telecommunication - Stealth Or Stealth Technology

A design or treatment that minimizes adverse aesthetic and visual impacts on the land, property, buildings, and other facilities adjacent to, surrounding, and in generally the same area as the requested location of such Wireless Telecommunications Facilities, which shall mean building the least visually and physically intrusive facility and Complex that is not technologically or commercially impracticable under the facts and circumstances. Stealth technology includes such techniques as DAS or its functional equivalent or camouflage where the Tower is disguised to make it less visually obtrusive and not recognizable to the average person as a Wireless Facility or Complex.

Telecommunication - Substantial Modification

A change or modification that increases the existing vertical height of the structure by the greater of (a) more than 10 percent or (b) the height of one additional antenna array with separation from the nearest existing antenna not to exceed 20 feet; or (a) except where necessary to shelter the antenna from inclement weather or to connect the antenna to the tower via cable, adding an appurtenance to the body of a wireless support structure that protrudes horizontally from the edge of the wireless support structure the greater of (i) more than 20 feet or (ii) more than the width of the wireless support structure at the level of the appurtenance; or (b) increases the square footage of the existing equipment compound by more than 2,500 square feet.

Temporary Use

A use or structure on improved or unimproved real estate which is of impermanent nature, and is used for a limited number of days per calendar year.

Temporary Use Permit

A permit allowing temporary use of a property for a specified period, such as for events or seasonal activities, that deviates from standard zoning regulations.

Temporary Real Estate Sales

A short-term office use for the on-site sale of real property.

Text Amendment

An amendment to the text of the UDO.

Through Lot

A lot with two or more opposite lot lines that front a public or private roadway, excluding alleys.

Tilt-Up Concrete

Concrete that has been cast on the site of installation and raised into place.

Tobacco Paraphernalia

Cigarette papers or wrappers, pipes, holders of smoking materials of all types, cigarette rolling machines, and any other item designed for the consumption, use, or preparation of tobacco products.

Tobacco Product

A product containing, made, or derived from tobacco or nicotine intended for human consumption, whether smoked, heated, chewed, absorbed, dissolved, inhaled, snorted, sniffed, or ingested by any other means, including, but not limited to cigarettes, cigars, little cigars, chewing tobacco, pipe tobacco, or snuff. It also includes any electronic device that delivers nicotine or other substances to the person inhaling from the device, including, but not limited to an electronic cigarette, cigar, pipe, or hookah. A tobacco product does not include any product that has been approved by the United States Food and Drug Administration for sale as a tobacco cessation product or for other therapeutic purposes where such product is marketed and sold solely for such an approved purpose.

Toe of Slope

The angle at which the grade below the wall slopes away from the wall face.

Top of Bank

The points in a cross-section where the stream channel makes a transition to flood plain. Top of bank can be identified by a change in the slope of the land, a transition from terrestrial to riparian vegetation, and/or changes in the composition of substrate materials.

Tower

A structure designed primarily to support an antenna for receiving and/or transmitting a wireless signal.

Town

Town of Wake Forest, North Carolina.

Tract

Contiguous land and bodies of water being disturbed or to be disturbed as a unit, regardless of ownership.

Transit Station

A facility, structure, stop, shelter, bus zone, property, and right-of-way of all kinds that is owned, leased, held, or used by a transit authority for the purpose of providing public transportation services.

Transportation Impact Analysis

An analysis of the effect of traffic generated by a development on the capacity, operations, and safety of the public street and highway system.

18.26 U

Uncovered

The removal of ground cover from, on, or above the soil surface.

Understory Tree

A small-growing tree with an expected mature height of 20 to 40 feet.

Unified Development UDO

A land-use UDO that combines the provisions of ordinarily separate zoning and subdivision UDOs.

Upper Watershed Drainageway

A natural or artificial stream or depression that drains more than five acres of surface water located within a Water Supply Watershed Overlay District.

Utilities - Class 1

Transmission and collection lines (above and below ground) including electrical, natural, gas, wastewater collection/transmission, and water distribution lines; pumping stations, lift stations, and telephone switching facilities up to 200 square feet.

Utilities – Class 2

Elevated water storage tanks; water and wastewater package treatment plants, telephone switching facilities (over 200 sq. ft), substations, or other similar facilities in connection with telephone, electric, steam, and water facilities.

Utilities - Class 3

Generation, production, or treatment facilities such as power plants, water and sewage plants (greater than 0.3 mgd), and landfills.

18.27 V

Variance

A grant of relief from the requirements of the UDO. A variance may grant relief from water-related standards (stormwater, stream, water supply watershed, or special flood hazard area) or relief from other zoning or subdivision standards in the UDO.

Vehicle Fueling Station

An establishment that sells gasoline or other automotive fuels, dispensed directly to the users of motor vehicles. Use may include tire pressure and air stations, and other customarily incidental uses that do not fall under the definition of major or minor vehicle services.

Vehicle Rental/Leasing/Sales

An establishment which may have showrooms or open lots for selling, renting, or leasing automobiles, light trucks, motorcycles, and ATVs.

Vehicle Services - Major Repair/Body Work

The repair, servicing, alteration, restoration, towing, painting, cleaning, or finishing of automobiles, trucks, recreational vehicles, boats, large appliances, commercial and industrial equipment, and other vehicles as a primary use, including the incidental wholesale and retail sale of vehicle parts as an accessory use. This includes major repair and body work which encompasses towing, collision repair, other body work and painting services, and tire recapping.

Vehicle Services - Minor Maintenance/Repair

The repair, servicing, alteration, restoration, towing painting, cleaning, or finishing of automobiles, trucks, recreational vehicles, boats, and other vehicles as a primary use, including the incidental wholesale and retail sale of vehicle parts as an accessory use. Minor facilities providing limited repair and maintenance services. Examples include car stereo and alarm system installers; detailing services; muffler and radiator shops; quick-lube services; tire and battery sales and installation (not including recapping).

Velocity

The average velocity of flow through the cross-section of the main channel at the peak flow of the storm of interest. The cross-section of the main channel is defined by the geometry of the channel plus the area of flow below the flood height defined by vertical lines at the main channel banks. Overload flows are not to be included for the purpose of computing velocity of flow.

Verge

The area between the property boundary or sidewalk and the nearest edge of the road, used for landscaping or utility placement.

Vested Right

The right to undertake and complete the development and use of property under the terms and conditions of an approval secured as specified by NC General Statutes or under common law.

Vested Right, Common Law

The right to undertake and complete the development and use of property on substantial expenditures in good faith reliance on a valid governmental approval.

Vested Right, Statutory

The right to complete a project based on how it was originally approved, even if development regulations have changed.

Violation (Floodplain Development)

The failure of a structure or other development to be fully compliant with the community's floodplain management regulations. A structure or other development without the elevation certificate, other certifications, or other evidence of compliance is presumed to be in violation until such time as that documentation is provided.

Veterinary and Animal Care Services

An establishment that includes services by licensed practitioners of veterinary medicine, dentistry, or surgery for animals; boarding services for pets; daycare, training, and grooming.

18.28 W

Wake Forest Development Design & Details (WFD3)

A manual detailing construction, engineering, and other technical requirements for development.

Waste

Surplus soil or earth material resulting from on-site construction and disposed of at other locations.

Waste Receptacles

A container used to store waste that will be collected for off-site disposal, including but not limited to carts, bins, cans, dumpsters, or barrels.

Waste Transfer Facility

An establishment primarily engaged in operating facilities where nonhazardous waste streams, including recyclable materials and garbage, are collected, temporarily stored, and prepared for further transportation or processing.

Watercourse (Floodplain Development)

A lake, river, creek, stream, or other topographic feature on or over which waters flow at least periodically. Watercourse includes specifically designated areas in which substantial flood damage may occur.

Water Surface Elevation (WSE) *(Floodplain Development)*

The height, in relation to mean sea level, of floods of various magnitudes and frequencies in the floodplains of coastal or riverine areas.

Wetland

An area inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances does support a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas. This definition of wetlands is used by the U.S. Army Corps of Engineers (Corps) and the U.S. Environmental Protection Agency (EPA) since the 1970s for regulatory purposes in Section 404 of the Clean Water Act.

Wholesaling and Distribution

An establishment engaged in selling merchandise to retailers; to contractors, industrial, commercial, institutional, farm or professional business users; to other wholesalers; or acting as agents or brokers in buying merchandise for or selling merchandise to such persons or companies. This does not include selling to the public. Examples of these establishments include agents, merchandise or commodity brokers, and commission merchants; assemblers, buyers and associations engaged in the cooperative marketing of farm products; merchant wholesalers; stores primarily selling electrical plumbing, heating, and air conditioning supplies and equipment.

Winery

An establishment primarily engaged in the manufacturing of fortified or unfortified wine that is permitted to do so in accordance with the Alcoholic Beverage Control Commission. Wineries shall have a capacity of more than 25,000 gallons per year. The definition includes a public tasting room and retail sales of spirits or related products manufactured on site.

Wireless Telecommunications Tower

A structure, including a freestanding mast, pole, monopole, guyed tower, lattice tower, freestanding tower, or other structure, designed and constructed for the primary purpose of supporting any Federal Communications Commission licensed or authorized wireless telecommunications facility antennas and their associated facilities.

18.29 X

RESERVE

18.30 Y

Yard

The area within a lot that lies between the principal structure(s) on the lot and the nearest lot line

18.31 Z

Zoning Compliance Permit

A permit required to ensure that site features (such as fences and driveways), residential accessory structures, and signs meet the standards set forth in the ordinance, in cases where compliance is not reviewed through another development approval or permit process.

Zoning District

A district delineated on the official zoning district map under the terms and provisions of this code or which may hereinafter be created subsequent to the enactment of this code for which regulations governing the area, height, use of buildings, or use of land, and other regulations relating to development or maintenance of existing uses or structures, are uniform.

Zoning District, Base

A standard zoning district classification which is combined with an overlay district for purposes of development regulation specificity. The base (underlying) district regulations shall apply unless expressly superseded by overlay district provisions.

Zoning District, Overlay

An area where certain additional requirements are superimposed upon a base zoning district or underlying district and where the requirements of the base or underlying district may or may not be altered.

Zoning Map

Town of Wake Forest, North Carolina Zoning Map, as amended.

The following list outlines the proposed edits to the draft UDO based on public comment, further staff review, clarification, consistency, and alignment with the draft Downtown Plan. Additions are shown in green underlined text. Deletions are shown in red strikethrough text. Rows highlighted in orange depict additions since the November 5 Board of Commissioners Work Session meeting.

Page/Section #	Chapter 1 General Provisions - Proposed Edits	Reason
Page 7; Section 1.9.1.B.2	a. Major Redevelopment. Includes ~~50~~ 75 percent or more increase in gross floor area, building value, dwelling units, disturbed area, or impervious surface area. b. Intermediate Redevelopment. Includes 25 percent or more up to less than ~~50~~ 75 percent increase in gross floor area, dwelling units, disturbed areas, or impervious surface area; an increase in building height.	Public Comment
Page 8; Table 1.10	**Table 1.10** **UDO Standards Applicability Overview**	Public Comment

Key:
● = Standards apply to entire development site and building(s)
~~+ = Standards apply to portion of site or building(s) impacted by development activity and portions of site or building(s) adjacent to right of way, public park or residential uses~~
○ = Standards apply to portion of site or building(s) impacted by development activity
*** = Additional applicability provisions may apply**

Standard	Single-family detached, duplex, or manufactured housing on existing lot	Infrastructure only project	Minor redevelopment	Intermediate redevelopment	Major redevelopment	Change of use	New development
5. Building Design Standards							
5.2 Exterior Building Cladding Materials			○	○	~~+~~ ○		●
5.3 Glazing			○	○	~~+~~ ○		●
5.4 Building Entryway Design*			○	○	~~+~~ ○	○	●
5.5 Façade Design and Articulation			○	○	○		●
5.6 Roof Design			○	○	○		●
5.7 Cottage Home Court Building Design							●

	5.8 Two-over-Two Building Design							●	
	5.9 Multifamily Building Design				○	○		●	
	5.10 General Commercial, Greater than 100,000 sq ft Building Design*							●	
	5.11 Multibuilding Development*				○	○		●	

Page/Section #	Chapter 2 Zoning District and Dimensional Standards - Proposed Edits	Reason
Page 11; Table 2.2.1 Base Districts	Add Activity Center (AC) to the table **Table 2.2.1 Base Districts** General Residential (GR) Northeast Community Residential (NCR) Mixed-Use Residential (MUR) Transit Supportive Residential (TSR) Downtown (DT) Neighborhood Business (NB) Corridor Business (CB) Civic and Institutional (CI) Industrial (IND) Parks and Open Space (OS) Activity Center (AC)	Ease of Use
Page 12; Table 2.2.4 Overlay Districts	Remove Activity Center Overlay (AC-O) from the table **Table 2.2.4 Overlay Districts** Local Historic Overlay (LH-O) Mill Village Overlay (MV-O) Transit Oriented Development Overlay (TOD-O) ~~Activity Center Overlay (AC-O)~~ Watershed Protection Overlay (WP-O)	Ease of Use

Page 15; Section 2.3.2.B	[1] The principal building setback shall be not more or less than five feet from the average established front yard of developed lots within ~~600~~ 300 feet on each side of the lot, fronting on the same street as the lot, and within the NCR District.	Consistency
After page 26	Relocate 2.5.5 Activity Center Overlay (AC-O) to a new Section 2.3.11 for Activity Center. Relace AC-O with AC to denote base district instead of overlay.	Ease of Use
Page 41 Section 2.7.3 Step Back	**2.7.3 Step Back** Any building five stories or greater in height in the TOD-O, AC~~-O~~, DT, and/or TSR districts shall: A. provide a step back with a minimum depth of 10 feet after the first, second, third, or fourth story a minimum of 40% of the wall length for any front or street side elevation 150 linear feet or greater, B. Provide a one foot building setback for each foot of building height greater than 50 feet a minimum of 40% of the wall length for any front or street side elevation, or C. Provide a pedestrian arcade at the ground floor a minimum of 40% of the wall length for any front elevation.	Downtown Plan Alignment
Page 41 Section 2.8.3	Update Figure 16 labels with 600 feet distance to 300 feet distance to match text.	Consistency
Page 43; 2.9.4 Types of Affordable Housing Incentives	Before Table 2.9.4, add: Projects providing affordable housing in accordance with the standards of this section may utilize up to two of the following affordable housing incentives. Projects providing 50% or more of the dwelling units at the specified affordability levels may utilize up to three of the following affordable housing incentives.	Clarification
Page 43; Table 2.9.4 Types of Affordable Housing Incentives	Update Table 2.9.4 to reflect AC-O to AC District change and new Downtown incentives.	Downtown Plan Alignment

Table 2.9.4

Types of Affordable Housing Incentives

Use	District(s)	Incentive	Applicable Affordability Requirement Type(s)
Cottage Court	GR; MUR	Option 1: A maximum of two dwelling units may be allowed per building. A minimum of four and maximum of 12 dwelling units may be allowed per cottage court. The maximum allowed square footage per building may be increased to 2,700 square feet.	1; 2

		Option 2: Maximum height of a cottage home building may be 35 feet to accommodate a full second story. The maximum allowed square footage per building may be increased to 2,700 square feet.	1; 2
Multifamily	MUR	Up to 40 dwelling units may be allowed per building	1; 2
	AC~~-O~~	Maximum height of a multifamily building may be 70 feet to accommodate six full stories.	3; 4
	AC~~-O~~; TOD-O	Option 1: If required mix of uses are provided in standalone buildings, required commercial space may be a pad ready outparcel rather than constructed by the time 50 percent of dwelling units are certified for occupancy.	1; 2
		Option 2: Reduction in required non-residential uses provided by 25 percent.	
	TSR	Option 1: Minimum required open space may be reduced by 50 percent.	1; 2
		Option 2: Minimum required tree canopy coverage may be reduced by 25 percent.	
	AC~~-O~~; TOD-O	Option 1: Outside of the WP-O District, maximum impervious surface area may be increased to 90 percent.	
	DT (except DT-HWS subdistrict)	Option 1: Maximum building height may be increased to 85 feet	1; 2
		Option 2: Exemption from Section 2.7.3 Step Back	
		Option 3: Multifamily allowed on the ground floor in the DT-South subdistrict.	
Multifamily, above ground floor only	NB	Maximum height of a mixed-use building with above ground floor multifamily dwellings may be 40 feet to accommodate four full stories.	3; 4
All Residential	Any District	The impact fees, except for the Water and Sewer Capital Facility Fees, (Section 11.3) associated with the affordable units may be waived.	1; 2
		Up to 50% of dwelling units may be front loaded. Attached front facing garages shall be set back a minimum of eight feet from the front façade. Attached, front facing garages shall have a maximum width of 14 feet.	

Page/Section #	Chapter 3 Use Regulations - Proposed Edits	Reason
Page 47; Table 3.3 Principal Uses	Add Residential Care Facility and Retirement Housing as allowable uses in the TOD-O and AC Districts.	Community Plan Alignment

Page 47; Table 3.3 Principal Uses	Add a supplemental standards section for Retirement Housing. This renumbers the section reference for Single Room Occupancy.	Community Plan Alignment
Page 47; Table 3.3 Principal Uses	Change AC-O to AC.	Ease of Use
Page 49; Table 3.3 Principal Uses and Page 51; Table 3.3 DT District Principal Uses	Revise Professional Services allowance and supplemental standard for consistency with other square footage based use allowances	Public Comment
Page 49; Table 3.3 Principal Uses and Page 51; Table 3.3 DT District Principal Uses	Add a supplemental standards section for Restaurant.	Staff Comment

Table 3.3 Principal Uses

Key: P = Permitted Use; S = Special Use; C = Conditional District Use

	SUPPLEMENTAL STANDARDS	GR	NCR	MUR	TSR	NB	CB	IND	CI	OS	TOD-O	AC-~~O~~
RESIDENTIAL												
Residential Care Facility	3.3.3.A.10	P		P	P		C				P	P
Retirement Housing	3.3.3.A.11			P	P						P	P
Single Room Occupancy	3.3.3.A.1~~1~~2			P	P						P	P
COMMERCIAL												
Professional Services, 15,000 sq ft or More	~~3.3.3.C.8~~			C	C	P	P	P			P	P
Professional Services, Less Than 15,000 sq ft				P	P	P	P	P			P	P
Professional Services, Above Ground Floor Only				P	P							
Restaurant	3.3.3.C.8			P	P	P	P				P	P

	SUPPLEMENTAL STANDARDS	Downtown Historic White Street	Downtown North	Downtown Central	Downtown South
Professional Services, 15,000 sq ft or More	~~3.3.3.C.8~~	C	P	P	P
Professional Services, Less Than 15,00 sq ft		C	P	P	P
Professional Services, Above Ground Floor Only		P			
Restaurant	3.3.3.C.8	P	P	P	P

Page/Section #	Chapter 3 Use Regulations - Proposed Edits	Reason
Page 59; Section 3.3.3.A.5.b.i(a)	If located 100 linear feet or less from adjacent ~~to~~ existing Single-Family Detached Dwellings, the subdivision plan shall site new Single-Family Detached Dwellings, so they provide a transition between the existing Single-Family Detached Dwellings and the new Dwelling-Townhome buildings and provide a mix of uses.	Clarification
Page 59; Section 3.3.3.A.5.b	Add language to clarify required dimensional standards. When approved through the Conditional District rezoning process or conservation design, the infill dimensional standards of Section 2.8.3 shall not apply.	Clarification
Page 60; Section 3.3.3.A.5.c.ii	**Single-Family Detached Transition.** If located 100 linear feet or less from ~~When~~ adjacent ~~to~~ existing Single-Family Detached Dwellings, Townhome development shall incorporate Single-Family Detached Dwellings along the boundary with the adjacent Single-Family Detached Dwellings to serve as transition and provide a mix of residential types.	Clarification
Page 6	Add supplemental standard section to Retirement Housing. **Proximity to Commercial Uses.** In the AC, TOD-O, and DT districts, Retirement Housing is only permitted if located within 660 linear feet of a commercial use.	Community Plan Alignment
Page 63; Section 3.3.3.A.10	Add supplemental standard to Residential Care Facility supplemental standards. d. **Proximity to Commercial Uses.** In the AC, TOD-O, and DT districts, Residential Care Facility is only permitted if location within 660 linear feet of a commercial use.	Community Plan Alignment
Page 68; Section 3.3.3.C.8	~~Professional Services. In the MUR District, Professional Service uses shall have no more than 15,000 square feet total of building or tenant floor area.~~	Ease of Use
Page 68;	Add a supplemental standards section for Restaurant.	Staff Comment

	Outdoor cooking facilities shall not be permitted adjacent to residential uses. Where allowed, the outdoor cooking facility area shall be properly ventilated	
Page 85; Table 3.4 Accessory Uses	Add Flagpole and Flag to the Accessory Use Table as allowed in all districts.	Staff Comment
Page 93; Section 3.4.3.D ATM	**ATM**. In the DT, TOD-O, and AC~~-O~~ Districts and any parallel conditional district to those districts, an ATM shall be located and accessed fully within a building.	Ease of Use
Page 93; Section 3.4.3.E Backyard Small Animal Keeping	Remove provision related to permitting for consistency with other accessory use standards. Clarify provision for allowable purpose. E. **Backyard Small Animal Keeping.** ~~1. **Permit Required.** No person shall keep Backyard Small Animals without first obtaining a zoning compliance permit.~~ 2. **Number of Animals Allowed.** The number of Backyard Small Animals allowed shall be as detailed below, but in no instance shall sheep, pigs, goats, or alpacas be allowed on a parcel less than one acre in area: a. Alpaca: two per acre b. Pigs: two per acre c. Sheep: two per acre d. Goats: two per acre e. Bees: five hives per parcel f. Fowl (excluding Roosters): 10 maximum g. Rabbits: 10 maximum 3. **Enclosure.** a. All Backyard Small Animals shall be kept in an enclosure, such as a chicken coop or beehive, or sufficiently secured area. b. Enclosures shall be located in the rear yard only and shall be setback a minimum of 15 feet from side and rear property lines. c. Enclosures shall not encroach into any easements. d. A beehive shall be placed at ground level or securely attached to an anchor or stand.	Public Comment

	e. All enclosures shall be removed if the owner no longer maintains the enclosure or if removal is necessary to protect the health, safety, and welfare of the public. 4. **Other Standards.** a. Backyard Small Animals shall be kept solely as a pet; a hobby; for educational~~, research,~~ or rehabilitation ~~or propagation~~ purposes; ~~or~~ for the production of food products for personal consumption by the resident, or for small scale business enterprise. b. Slaughtering of Backyard Small Animals on premises as part of keeping such animals is prohibited.	
Page 96; Section 3.4.3.K Electric Vehicle Charging Facilities	Add a supplemental standard for design consideration to Electric Vehicle Charging Facilities. When located within a parking structure, Electric Vehicle Charging Facilities shall be located on the first level and along the exterior perimeter to the extent practicable.	Staff Comment
Page 96	Add supplemental standards for flags and flagpoles. This renumbers the supplemental standards sections that follow. **L. Flagpole and Flag.** 1. No more than one flagpole and two flags per flagpole shall be allowed on a residential lot. No more than three flagpoles and two flags per flagpoles shall be allowed on a nonresidential development site. 2. Flagpoles shall be located on the same lot as the principal building and shall not be located within a public right-of-way. 3. Flagpoles may not be taller than the principal building. 4. The area of a flag shall not exceed five feet by eight feet.	Staff Comment
Page 103; Section 3.4.3.~~Z~~ ~~AA~~ Storage Containers	6. The number of storage containers per lot shall be limited to: a. IND District: 4 b. CB and AC~~-O~~ Districts: 1	Ease of Use
Page/Section #	Chapter 4 Lot and Subdivision Standards - Proposed Edits	Reason
Page 113; Section 4.2.4. Lot Frontage	A. In the MUR, TSR, TOD-O or AC~~-O~~ Districts, if the lot has vehicular access from a rear alley, it may front on pedestrian accessible open space instead of a street,	Ease of Use

Page 114; Section 4.3.2.B	Conservation design is required for all residential subdivisions in the Falls Lake Protected, Little River Protected, and Smith Creek Critical and Protected subdistricts of the WP-O District.	Public Comment
Page/Section #	**Chapter 5 Building Configuration and Design Standards - Proposed Edits**	**Reason**
Page 118; Section 5.1.2.A Applicability	2. Expansions ~~of 50% or Greater in Floor Area. All standards apply to facades visible from the public right-of-way as well as the expansion area and those areas necessary to visually tie the new to the old. Expansions shall be considered cumulatively and shall be based on the square footage of the building at either:~~ ~~a. The effective date of this Unified Development Ordinance (UDO), or~~ ~~b. Per the originally approved site plan if the building was constructed after the effective date of this UDO.~~ ~~3. Expansions of Less Than 50% of Floor Area.~~ Standards apply to expansion area only and where practical should apply to those areas necessary to visually tie the new to the old.	
Page 119; Section 5.1.2 Applicability	Add a subsection B for Modification of Standards. F. Modification of Standards and Design Exceptions. Modifications to standards of this Chapter may be granted by the Administrator when the applicant proposes an alternative design and demonstrates that compliance is not feasible or practicable due to site topography, lot shape, lot size, other restraining site features, unique building occupancy, safety requirements, the utilization of green building practices (e.g. green roof, cool roof, solar roof), or better compatibility with surrounding development.	Ease of Use
Page 199; Section 5.2.1 Exterior Building Cladding Materials Categories	To explain the intent and purpose of the exterior building cladding material standards, the following sentence is added. High quality materials shall be utilized to ensure durability, enhance value and preserve the visual character of the community.	Clarification
Pages 120 and 122; Tables 5.2.2.E Allowable Exterior Building Cladding Materials by	Change AC-O to AC and clarify footnote. [3] The maximum percentage may be increased by one percentage point for each percentage point of glazing that exceeds the minimum requirement or with additional one foot of articulation beyond the required minimum.	Ease of Use; Clarification

Use and District		
Page 122; Section 5.3 Glazing	Revise required glazing table for clarification and flexibility after testing application of the requirements with the new calculation of glazing area.	Clarification; Staff Comment

Table 5.3
Required Glazing per Building Type

Building Type	Minimum Glazing Percent - Per Ground Floor Façade [1]			
	Principal Front / Street Side[1]	Side	Rear	Minimum Glazing Percent - All Upper- Story Facades
By Use				
Cottage Home	15%	n/a	n/a	15%
All Other Residential	30%	15%	n/a	15%
Public and Institutional	35~~50~~%	30%	30% [2]	20%
General Commercial, 100,000 sq ft or More	30~~50~~%	30%	30% [2]	20%
General Commercial, Less than 100,000 sq ft and Restaurant	50%	40%	30% [2]	20%
All Other Commercial	35~~60~~%	30~~40~~%	30% [2]	20%
Industrial	20%	10%	n/a	15%
Accessory Building [3]	20~~30~~%	15%	n/a	15%
By District				
DT	70%	40%	40% [2]	20%
TOD-O	70%	40%	40% [2]	20%
AC~~-O~~	70%	40%	40% [2]	20%

Notes

[1] The glazing percentage is calculated from the finished grade to the ceiling/roof deck. 100% of glazing on the principal front and a minimum of 50% of glazing on the street side elevation of a building shall provide views into the building. A minimum of 50% of glazing on the side or rear elevation of a building shall provide views into the building if adjacent to a parking area or community space.

[2] Glazing shall only be required if the façade is adjacent to a parking area or community space.

[3] Standards shall apply to accessory buildings with 20 feet or more of façade length.

Page 123; Section 5.4.2 Grading	A. DT, TOD-O, and AC~~-O~~ Districts. In the DT, TOD-O, and AC~~-O~~ districts, the entry of any building adjacent to public right-of-way with existing/planned sidewalk/multi-use path or primary internal drive shall be at the same grade elevation as the adjacent sidewalk in the public right-of-way or in the primary internal drive.	Ease of Use
Page 124; Table 5.4.3 Building Entryway Design	Add to the Awning/Canopy standards: 1. Shall be located above all ground floor windows and doors within entryway area. Awnings fit within the frame of the storefront without hiding the building's façade, distorting its proportions, or covering architectural features. If the building has transom windows, awnings or canopies shall be mounted above the transom window. 2. Shall project a minimum of three above windows and five feet above doors and a maximum of six feet from the façade of the building, unless otherwise approved by the Administrator to accommodate community space. 3. Shall use a distinct building material or color to highlight the entryway while maintaining consistency and compatibility with the building and surroundings. Materials shall be high quality, such as canvas or durable fabric for awning and metal for canopies. Vinyl is prohibited.	Downtown Plan Alignment
Page 127; Section 5.5.2.A.2.d Front and Street Side Façade Articulation Requirements	The required projection or recess of dividing elements shall be based on the width of the dividing element in accordance with Table 5.5.2.A.2.d.	Public Comment
Page 127; Section 5.5.2.C Front and Street Side Façade Articulation Requirements	C. **All Buildings.** 1. At least one horizontal or vertical change in wall plane is required with a minimum depth of two feet for every 120 linear feet of wall length in the IND District and every 60 linear feet of wall length in all other districts. No single wall plane may extend more than 80 percent of the length of the façade. Wall plane changes shall be incorporated in a way that creates appropriately scaled visual rhythm and unity over the building elevation. This standard shall apply to all elevations; however, in the IND District it shall not apply to rear facades unless within 200 linear feet of residential uses.	Public Comment; Downtown Plan Alignment

	2. Except for buildings in the IND District, any building wall greater than 250 linear feet shall provide a recess in the wall plane a minimum depth of 15 feet.	
Page 128; Section 5.5.3 Side Elevations and Rear Elevations Facing a Parking Lot, Greenway, or Residential Use Type Articulation Requirements	E. Vertical trellises with landscaping or planters integrated with the building wall with landscaping,	Staff Comment
Page 130; Section 5.6.2.A Roof Types	1. In the AC~~-O~~ and TOD-O Districts primary roof lines shall be flat.	Ease of Use
Page 130; Section 5.6.3.A Roofline Change Requirements	Roofline change façade articulation shall be provided every 120 feet of roof length in the IND District and every 60 feet of roof length in all other districts. The Administrator may approve alternative distribution of roofline change features in accordance with the review criteria established in Section 16.5.2.C. This standard shall apply to all elevations; however, in the IND District it shall not apply to rear facades unless within 200 linear feet of residential uses.	Public Comment
Page 137; Section 5.11.1 Applicability	Add to Multibuilding Development Standards Applicability: The standards of this section do not apply to development located in the IND District.	Public Comment
Page/Section #	**Chapter 6 Open and Community Space - Proposed Edits**	**Reason**
Pages 140, 141, and 142; Table 6.3.1 Required Open Space Amount, Table 6.4.1 Required Community Space Amount, and Table 6.5.1 Required Community Space	Change AC-O to AC.	Ease of Use

<table>
<tr><td>Improvement Points</td><td></td><td></td></tr>
<tr><td>Page 142; Table 6.5.1 Required Community Space Improvement Points</td><td>
<table>
<tr><th colspan="4">Table 6.5.1
Required Open and Community Space Improvement Points</th></tr>
<tr><th rowspan="2">District</th><th colspan="3">Required Open and Community Space Points</th></tr>
<tr><th>Less than 1 acre of Required Open / Community Space</th><th>1 acre - 3 acres of Required Open / Community Space</th><th>More than 3 acres of Required Open / Community Space</th></tr>
<tr><td>GR; NCR; CI; TOD-O; AC-O</td><td>10</td><td>13</td><td>16 [1]</td></tr>
<tr><td>MUR; TSR; NB; CB</td><td>7</td><td>10</td><td>13 [1]</td></tr>
<tr><td>DT</td><td>2</td><td>4</td><td>6 [1]</td></tr>
<tr><td>OS</td><td>0</td><td>0</td><td>0</td></tr>
<tr><td colspan="4">Notes</td></tr>
<tr><td colspan="4">[1] Plus one additional point per every two acres over three acres.</td></tr>
</table>
</td><td>Consistency</td></tr>
<tr><th>Page/Section #</th><th>Chapter 7 Tree Preservation, Buffers, and Landscaping Standards - Proposed Edits</th><th>Reason</th></tr>
<tr><td>Page 149; Table 7.2.3.A Required Tree Canopy Coverage</td><td>Change AC-O to AC.</td><td>Ease of Use</td></tr>
<tr><td>Page 153; Section 7.3.1.E Applicability</td><td>E. The perimeter buffer requirements shall not apply to development in the DT, TOD-O, or AC~~-O~~ Districts.</td><td>Ease of Use</td></tr>
<tr><td>Page 164; Section 7.7.1.B.1 Parking Area Perimeter Landscape</td><td>1. DT, TOD-O, and AC~~-O~~ Districts.
a. A low masonry wall or wrought iron style fence, with a minimum height of three feet and a maximum height of four feet, shall be installed between the parking area back of curb and perimeter landscape.
b. One shrub or ornamental grass shall be planted every four feet of perimeter landscape length. Such plantings may be clustered or spaced at even intervals as deemed appropriate by the Town. At least 50% of the shrubs shall be evergreen species.</td><td>Ease of Use</td></tr>
<tr><td>Page 169; Section 7.7.2.B.2</td><td>Add flexibility for parking area landscape requirements for utilities, such as light poles, fire hydrants, utility boxes or easements on the islands.
Where required utilities, easements, or pedestrian walkways prevent the installation of a tree within the parking area end cap, the required</td><td>Ease of Use</td></tr>
</table>

	tree may be waived provided that all parking spaces are located no further than 50 linear feet from a tree.	
Page 172; Section 7.7.2.D.2	Add flexibility for parking area landscape requirements for utilities, such as light poles, fire hydrants, utility boxes or easements on the islands. Where required utilities, easements, or pedestrian walkways prevent the installation of a tree within the parking area island, the required tree may be waived provided that all parking spaces are located no further than 50 linear feet from a tree.	Ease of Use
Page/Section #	**Chapter 9 Access and Circulation - Proposed Edits**	**Reason**
Page 185; Section 9.2.2.D TIA Threshold	The development is located within one ~~quarter~~ half mile of a Comprehensive Transportation Plan (CTP) Hotspot and is projected to generate 50 or more vehicle trips in any one-hour period, or	Staff Comment
Page 185; Section 9.2.4 Timing	TIAs, including traffic counts, must have been conducted within the previous six months from time of submittal. If ~~development~~ site or subdivision plan approval is not received within two years of the ~~completion~~ submittal of the TIA, a new TIA shall be required.	Clarification
Page 186; Section 9.2.5 Study Area Boundaries	Site drives, intersections, and adjacent roadways within a one-half mile of the proposed development site shall be studied within the TIA in addition to any intersection ~~on~~ at which at least seven percent of any traffic movement approach volume ~~are~~ is generated by or as a result of the proposed project. Study area boundaries may be modified in accordance with the WFD3.	Clarification
Page 186; Section 9.2.7.A.1 Mitigation Requirements and Level of Service	The total average delay at an intersection or individual approach increases by ~~25~~20% or greater during the peak hour of analysis, while maintaining the same level of service or degrading to a LOS "D",	Staff Comment
Page 188; Section 9.4.3.B	1. Intersections located outside a subdivision but entering into it may count ~~as~~ towards roadway links and nodes. 2. Intersections between a road and an alley shall not count ~~as~~ towards roadway links and nodes.	Clarification
Pages 190 and 197, Table 9.4.5 Block Length Standards and Table 9.6.1 Allowed Parking Area Location	Change AC-O to AC.	Ease of Use

Page 194; Section 9.5.1 Internal Access Drives Standards Applicability	Internal access drives include all private vehicular travel lanes outside of drive aisles in parking areas within a development site greater than five acres in gross area or with 200 or more parking spaces located outside of a parking structure. Development in the IND District is exempt from the requirements of this Section.	Clarification; Staff Comment
Page 198; Section 9.6.2 Minimum and Maximum Parking	Multifamily uses in the ~~DT and~~ TOD-O District~~s~~ and residential uses less than 100 dwelling units in the DT District shall be exempt from the minimum parking requirements of Table 9.6.2.C.	Downtown Plan Alignment
Page 204; Table 9.6.4 Adjustments to Maximum Marking Requirements	All parking spaces are surfaced with a permeable paving material and associated maintenance plan approved by the ~~Town Engineer~~ Administrator.	Clarification
Page 208; Section 9.6.6.E Structured Parking	To incentivize structured parking: 6. Development providing parking through the use of structure parking is exempt from the building step back requirements of Section 2.7.3.	Downtown Plan Alignment
Page 208; Section 9.6.7.B Electric Vehicle Charging	Clarify the charging capabilities and reduce the number of required installed chargers for commercial and mixed use development. B. **Electric Vehicle Charging ~~Stations~~** Spaces. 1. **Parking Area**. Any parking area with 40 or more parking spaces serving a Multifamily, Mixed Use, or Commercial development shall provide electric vehicle charging ~~stations~~ spaces for at least five percent of provided parking spaces. However, the maximum number of required EV charging ~~stations~~ spaces shall not exceed 10 per ~~single~~ Multifamily development and 4 per Commercial or Mixed Use development. Any additional required EV parking spaces beyond this limit shall be designed with the infrastructure needed as EV-~~ready~~ Capable to allow for the future installation of charging stations if needed. 2. **Parking Structure**. a. Parking structures with 40 or more parking spaces shall provide electric vehicle charging ~~stations~~ spaces for at least five percent of provided parking spaces and the infrastructure needed for a minimum of 10 percent of	Public Comment; Clarification

	provided parking spaces to be converted to electric vehicle charging ~~stations~~ spaces. b. Parking structures with fewer than 40 parking spaces shall provide the infrastructure needed for a minimum of 10 percent of provided parking spaces to be converted to electric vehicle charging ~~stations~~ spaces.	
Page 211; Section 9.8.3 Location of Driveway Access Points	Revise driveway separation from 30 feet to 25 feet.	Public Comment

Table 9.8.3 Driveway Separation

Roadway Type	Signalized Intersection	Unsignalized Intersection	Other On-Site Driveways	Other Off-Site Driveway
Alley	100 ft	~~30~~25 ft	~~30~~25 ft	n/a
Local, Residential (excluding Multifamily)	200 ft	50 ft	~~30~~25 ft	10 ft
Local, Multifamily and Nonresidential	200 ft	75 ft	75 ft	75 ft
Collector	200 ft	100 ft	100 ft	100 ft
Minor Thoroughfare	250 ft	150 ft	100 ft	n/a
Major Thoroughfare	400 ft	200 ft	200 ft	200 ft

Page 218; Table 9.11.1.A Minimum Short-Term Bicycle Parking Requirements and Table 9.11.1.B Minimum Long-Term Bicycle Parking Requirements	Change AC-O to AC.	Ease of Use

Page 224; Section 9.12.3.G Pedestrian Walkways	On-site, pedestrian walkways shall connect each building on a development site to greenways, parks, open space, and community space located within the developments or adjacent to the development site. Access points to the greenway, park, open space, and/or community space shall be provided every ~~600 feet~~ quarter mile.	Consistency with Section 9.12.2.D
Page 225; Section 9.12.3.M Midblock Crosswalks	A pedestrian crosswalk not less than 10 feet in width shall be required across any street or internal access drive 800 feet or more in length or where deemed essential by the Administrator.	Clarification
Page 225; Section 9.12.4.B Sidewalk, Multi-Use Path, Greenway, and Pedestrian Walkway Stubs	**Payment in Lieu**. The owner or applicant shall provide a PIL of the remainder of the unbuilt sidewalk, multi-use path, greenway, and/or pedestrian walkway on their property. PIL shall be in accordance with Chapter 14 of this UDO. A temporary construction easement in accordance with WFD3 shall be established.	Consistency
Page/Section #	Chapter 10 Lighting Standards - Proposed Edits	Reason
Pages 229 and 230; Table 10.3.1 Outdoor Lighting Fixture Design, Table 10.3.3. BUG Rating per District, Table 10.3.4 Lighting Standards in Footcandles	Change AC-O to AC.	Ease of Use
Page 233; Section 10.4.8 Pedestrian Scale Lighting	A. Pedestrian-scaled street lighting (no taller than 16 feet) shall be placed on all local roads in the TOD-O and AC~~-O~~ Districts to allow for the safe use of public rights-of-way by motorists, cyclists, and pedestrians. 1. Pedestrian-scaled street lighting on local roads shall be located at least every 200 linear feet. 2. Pedestrian-scaled street lighting on local roads shall have a minimum average maintained illuminance of .3-foot candles. 3. Pedestrian-scaled street lighting on local roads shall have uniformity ratio of 6:1.	Ease of Use

	B. In the TOD-O and AC~~-O~~ districts, pedestrian-scaled lighting (no taller than 16 feet) shall be required in public gathering spaces and along on-site pedestrian walkways (Section 9.12.3) and shall be placed in a manner to limit the casting of shadows on sidewalks. Pedestrian-scaled lighting may include: 1. Lamp post lighting, 2. Bollard lighting, 3. Fence post cap lighting, 4. Festoon lighting, 5. Pathway lighting, or 6. Other as approved by the Administrator.	
Page/Section #	Chapter 11 Utilities, Services, and Impact Fee Standards - Proposed Edits	Reason
Page 237; Section 11.2	All developments shall incorporate effective waste management practices, including provisions for recycling. Sufficient access, space, and appropriate waste containers shall be provided. The use of compactors and shared disposal facilities, such as shared dumpsters, shall be encouraged. ~~Eligible properties within the Municipal Service District (MSD) shall be required to use the shared municipal waste disposal facilities.~~	Clarification
Page 237; Section 11.3 Impact Fees	Replace placeholder applicability and exceptions information for the Multi-Modal Transportation Impact Fee. **11.3.1 Applicability** A. All residential development for which Town approval or permitting is required, or real property improvement which results in the creation of residential dwelling units shall be subject to payment of the Parks, Recreation and Cultural Resources Impact Fee. B. All new structures or expansions to existing structures built shall be subject to payment of the Fire Protection Impact Fee. C. All new structures or expansions to existing structures shall be subject to payment of the Water and Sewer Capital Facility Fee. D. All new development or expansions to existing non-residential structures shall be subject to payment of the ~~placeholder~~ Multi-Modal Transportation Impact Fee ~~applicability~~. **11.3.2 Exceptions** A. The Parks, Recreation and Cultural Resources Impact Fee shall not apply to fences, billboards, poles, pipelines, transmission	Clarification

	lines, advertising signs or similar structures and improvements, renovations and repairs which do not generate the need for additional or expanded recreational facilities. B. The Parks, Recreation and Cultural Resources Impact Fee shall not apply to residential subdivisions, Multi-Family Developments, Planned Unit Developments and Manufactured Home Parks, which have received master plan approval and are still valid and active or have an established zoning vested right prior to November 17, 1998. C. The Multi-Modal Transportation Impact fee shall not apply to accessory uses, temporary uses, renovations and repairs, changes of use, or expansions to existing residential buildings.	
Page/Section #	Chapter 12 Natural Resource Protection Standards - Proposed Edits	Reason
Page 243; Table 12.2.2	Include allowance for pond development when safety concerns are present **Table 12.2.2** **Development Limitation per Environmental Asset** **Environmental Asset** / **Development Limitation** Natural lakes, ponds, and other water bodies, excluding created stormwater management facilities, farm ponds, etc. / No development allowed, except for dam safety hazard concerns.	Clarification
Page/Section #	Chapter 13 Sign Standards - Proposed Edits	Reason
Page 285; Section 13.1.2 Applicability	A. **Exempt Signs**. The following sign types shall be exempt from other regulations of this Chapter provided all standards of this Section and Section 13.8 Prohibited Signs and Content are met.	Clarification
Chapter 13	Add sign standards for the AC District due to conversion from overlay to base district	Ease of Use

Table 13.2.1
Permitted and Allowed Sign Types by District

Sign Types	Reference	GR	NCR	MUR	TSR	DT	NB	CB	IND	CI	OS	AC
Permanent Building Signs												

Awning Sign [1]	Section 13.4.1	●	●	●	●	●	●	●	●	●	●	●
Blade Sign [1]	Section 13.4.2			●	●	●	●	●				●
Bracket-Mounted Sign [1]	Section 13.4.3	●	●	●	●	●	●	●		●		●
Canopy Sign [1]	Section 13.4.4	●	●	●	●	●	●	●	●	●	●	●
Plaque Sign [2]	Section 13.4.5	●	●	●	●	●	●	●	●	●	●	●
Wall Sign [1]	Section 13.4.6	●	●	●	●	●	●	●	●	●	●	●
Window Sign, Permanent [1]	Section 13.4.7	○	○	○	○	○	○	○	○	○	○	○

Sign Types	Reference	GR	NCR	MUR	TSR	DT	NB	CB	IND	CI	OS	AC
Permanent Ground Signs												
Drive-Through Sign	Section 13.5.1						●	●				
Internal Circulation Safety Sign	Section 13.5.2	●	●	●	●	●	●	●	●	●	●	●
Interpretive Marker Sign [2]	Section 13.5.3	●	●	●	●	●	●	●	●	●	●	●
Monument Sign [1] [3]	Section 13.5.4	●	●	●	●		●	●	●	●	●	●
Post Sign, Permanent [1]	Section 13.5.5	●	●	●	●		●					
Residential Entry Sign	Section 13.5.6	●	●	●	●							●
Temporary Attached Signs												
Applied Vinyl Sidewalk Sign [1]	Section 13.6.1	●	●	●	●	●	●	●	●	●	●	●
Athletic Field Fence Sign	Section 13.6.2							○		○	○	
Light Pole Banner Sign	Section 13.6.3	●	●	●	●	●	●	●	●	●	●	●
Scoreboard Sign	Section 13.6.4							○		○	○	
Sock Sign [1]	Section 13.6.5	○	○	○	○	○	○	○	○	○	○	○
Wall Mounted Banner Sign [4]	Section 13.6.6					●	●	●	●	●	●	●
Window Sign, Temporary	Section 13.6.7					○	○	○	○	○	○	○
Temporary Freestanding Signs												
Ground Mounted Banner Sign [4]	Section 13.7.1	●	●	●		●		●	●	●	●	●
Post Sign, Temporary	Section 13.7.2	○	○	○	○							
Post and Panel Sign [4]	Section 13.7.3							●	●	●	●	●
Sidewalk Sign [5]	Section 13.7.4	○	○	○	○	○	○	○	○	○	○	○

Yard Sign [6]	Section 13.7.5	•	•	•	•	•	•	•	•	•	•	•

Notes
[1] Sign type shall be permitted for Multifamily and Nonresidential developments only.
[2] Sign type shall be allowed only when installed in conjunction with a government sponsored program for historic preservation or public art.
[3] Sign type is prohibited in the LH-O and MV-O districts.
[4] A Zoning Compliance Permit shall not be required if the property on which the sign shall be placed is actively marketed for sale or lease. All requirements of Section 13.3 shall be met.
[5] Sign type shall be allowed for multifamily, nonresidential, and temporary real estate sales uses only.
[6] Sign type shall not require a permit if placed on a parcel developed with a Dwelling-Cottage Home Court; Dwelling-Duplex; Dwelling-Single Family Detached; Dwelling-Townhome; and/or Dwelling-Triplex/Quadplex use.

Table 13.4.1
Awning Sign Standards

Standards	GR	NCR	MUR	TSR	DT	NB	CB	IND	CI	OS	AC
Maximum Area [1]	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%
Maximum Number of Signs	One per awning structure										
Maximum Number of Sign Faces	1	1	1	1	1	1	1	1	1	1	1
Illumination	Prohibited										
Location	Awning signs shall be allowed on awnings that extend over ground floor main entrances only.										
Other Provisions	Any common entrance or single tenant building or tenant space façade of a multi-tenant building may display either an awning sign, blade sign, bracket-mounted sign, or wall sign.										

Notes
[1] Percent of the total area of the valance or face of the awning to which the sign is to be affixed.

Table 13.4.2:
Blade Sign Standards

Standards	GR	NCR	MUR	TSR	DT	NB	CB	IND	CI	OS	AC
Single Tenant and Common Entrance Building Blade Signs											
Maximum Area – Building Mounted Blade Sign [1]				25 sq ft	25 sq ft	25 sq ft	25 sq ft				25 sq ft

Maximum Area – Canopy Mounted Blade Sign				4 sq ft	4 sq ft	4 sq ft	4 sq ft				4 sq ft
Multi-Tenant Building Blade Signs											
Maximum Area – Building Mounted Blade Sign [1]				4 sq ft	4 sq ft	4 sq ft	4 sq ft				4 sq ft
All Blade Signs											
Maximum Projection	Four feet from the building or canopy to which it is attached.										
Minimum Vertical Clearance	10 feet above the established grade immediately below.										
Maximum Number of Signs	One blade sign per single tenant building or common entrance building and one per tenant in a multi-tenant building.										
Maximum Number of Sign Faces				2	2	2	2				2
Illumination	Internal										
Location	May be mounted on a building, awning, or canopy located on the ground floor of a building only.										
	Shall not extend above the roofline of the building to which it is attached.										
Other Provisions	The property owner shall be required to obtain a right-of-way encroachment agreement from the Town or NCDOT prior to the construction of a blade sign over a public right-of-way.										
	A building may have either an awning sign, blade sign, bracket-mounted sign, or wall sign but is prohibited from having two or more of the aforementioned sign types on the same façade.										
Notes											
[1] 10 additional square feet of sign area is permitted per each building story above two stories.											

Table 13.4.3
Bracket-Mounted Sign Standards

Standards	GR	NCR	MUR	TSR	DT	NB	CB	IND	CI	OS	AC
Maximum Area	6 sq ft	6 sq ft	6 sq ft	6 sq ft	6 sq ft	6 sq ft	6 sq ft	6 sq ft	6 sq ft	6 sq ft	6 sq ft
Maximum Projection	Four feet from the building or canopy to which it is attached.										
Minimum Vertical Clearance	10 feet above the established grade immediately below.										
Maximum Number of Signs	One per single tenant building, common entrance building, or tenant of a multi-tenant building.										
Maximum Number of Sign Faces	2	2	2	2	2	2	2	2	2	2	2
Illumination	Internal										

Location	May be mounted on a building, awning, or canopy located on the ground floor of a building only.
	Shall not extend above the ground floor of the building to which it is attached.
Other Provisions	The property owner shall be required to obtain a right-of-way encroachment agreement from the Town prior to the construction of a bracket-mounted sign over a public right-of-way.
	A building may have either an awning sign, blade sign, bracket-mounted sign, or wall sign but is prohibited from having two or more of the aforementioned sign types on the same façade.

Table 13.4.4:
Canopy Sign Standards

Standards	GR	NCR	MUR	TSR	DT	NB	CB	IND	CI	OS	AC
Maximum Area [1]	1 sq ft	1 sq ft	1 sq ft	1.5 sq ft	1.5 sq ft	1.5 sq ft	1.5 sq ft	1.5 sq ft	1.5 sq ft	1 sq ft	1.5 sq ft
Maximum Height [2]	1 ft	1 ft	1 ft	1.5 ft	1.5 ft	1.5 ft	2 ft	2 ft	2 ft	1 ft	2 ft
Maximum Number of Signs	One per tenant										
Maximum Number of Sign Faces	1	1	1	1	1	1	1	1	1	1	1
Sign Copy	Channel letters individually affixed to the canopy structure.										
Illumination	Internal, external, or lit with allowed building façade lighting per Section 10.4.3.										
Location	For building canopies, signs shall be allowed on ground floor canopies only.										
	For building canopies, signs shall be mounted on top of or on the front of the canopy structure.										
	If on freestanding canopies shall be mounted on the front of the canopy structure and shall not extend above or below the canopy structure.										
Other Provisions	A building may have either an awning sign, blade sign, bracket-mounted sign, or wall sign but is prohibited from having two or more of the aforementioned sign types on any façade.										

Notes

[1] Per linear foot of the length of the portion of the canopy upon which that sign shall be applied.

[2] Of sign copy

Table 13.4.5
Plaque Sign Standards

Standards	GR	NCR	MUR	TSR	DT	NB	CB	IND	CI	OS	AC
Maximum Area	2 sq ft	2 sq ft	2 sq ft	2 sq ft	2 sq ft	2 sq ft	2 sq ft	2 sq ft	2 sq ft	2 sq ft	2 sq ft
Maximum Number of Signs	One per historic building or structure entrance.										

Maximum Number of Sign Faces	1	1	1	1	1	1	1	1	1	1	1
Illumination	Prohibited										
Location	Signs shall be located on the ground floor of ground a building or structure.										
Other Provisions	Shall only be allowed as a part of a government sponsored historic preservation or public art program.										

Table 13.4.6
Wall Sign Standards

Standards	GR	NCR	MUR	TSR	DT	NB	CB	IND	CI	OS	AC
Single Tenant or Common Entrance Buildings											
Maximum Number of Signs [1]	2	2	2	2	2	3	3	2	2	2	3
Multi-Tenant Buildings											
Maximum Number of Signs [2][3]	1	1	1	1	1	1	1	1	1	1	1
All Wall Signs											
Maximum Area [4]	1 sq ft	1 sq ft	1 sq ft	1 sq ft	1 sq ft	1 sq ft	1.5 sq ft	1.5 sq ft	1.5 sq ft	1 sq ft	1.5 sq ft
Maximum Projection	Shall not extend more than 12 inches from the face of the wall to which sign is attached.										
	Shall not extend beyond the end of the wall to which sign is attached.										
Maximum Number of Sign Faces	1	1	1	1	1	1	1	1	1	1	1
Sign Copy	100 percent may be individually affixed letters, applied vinyl, or printed, etched, or otherwise incorporated directly on the sign's backing plate, or may be painted directly on the building façade.										
	20 percent or less may be a box/cabinet sign if the remaining 80 percent of the sign is comprised of individually affixed letters.										
Illumination	Internal or external, except that in the LH-O and MV-O districts only external illumination is permitted.										
Location	For a building without a parapet wall, shall not extend above the roof deck.										
	For a building with a parapet wall, may extend two feet above the roof deck of a building, provided no portion of the sign extends above the parapet.										
	For a building with a pitched roof, shall not extend above the lower eave line of a building.										
	Shall not be affixed to HVAC screening, elevator overrun, or other structures protruding from the roof of the principal building.										
Notes											

[1] For multi-tenant buildings with shared, common entrances the allowed number of signs shall be that of single tenant buildings. Ground floor tenant spaces with dedicated entrances are allowed the number of signs of multi-tenant buildings.
[2] Per tenant space
[3] End units in a multi-tenant building may have up to two wall signs, provided one is on the primary façade and the other is on a secondary façade.
[4] Per linear foot of building or tenant space wall on which sign will be affixed.

Table 13.4.7
Permanent Window Sign Standards

Standards	GR	NCR	MUR	TSR	DT	NB	CB	IND	CI	OS	AC
Maximum Area [1]	15%	15%	15%	15%	20%	20%	25%	25%	25%	25%	25%
Sign Copy	Applied vinyl only										
Illumination	Prohibited										
Location	Shall be located on ground floor windows or doors only.										

Notes

[1] Of the square footage of the individual window on which the sign shall be located.

Table 13.5.1
Drive-Through Sign Standards

Standards	GR	NCR	MUR	TSR	DT	NB	CB	IND	CI	OS	AC
Maximum Area per Sign						40 sq ft	40 sq ft				
Maximum Height						6 ft	6 ft				
Maximum Number of Signs per Drive Thru Lane						2	2				
Maximum Number of Sign Faces						1	1				
Sign Copy	May be comprised 100 percent of an electronic display, meeting all requirements of Section 13.3.2 with the exception of subsection B.3.										
Illumination	Shall meet the illumination standards of Section 13.3.1.C.										
	Internal										
	Shall be illuminated during business hours only.										
Location	Within five feet of the drive-through lane(s) and shall meet all other location standards established in Section 13.3.1.B.										

	If facing a roadway or residential use shall be fully screened from view utilizing a fence, wall, vegetation, or a combination there of.

Table 13.5.2
Internal Circulation Safety Sign Standards

Standards	GR	NCR	MUR	TSR	DT	NB	CB	IND	CI	OS	AC
Maximum Area	4 sq ft	4 sq ft	4 sq ft	4 sq ft	4 sq ft	4 sq ft	4 sq ft	4 sq ft	4 sq ft	4 sq ft	4 sq ft
Maximum Height	3 ft	3 ft	3 ft	3 ft	3 ft	3 ft	3 ft	3 ft	3 ft	3 ft	3 ft
Maximum Number of Signs	Two per site entrance/exit and two per drive aisle, internal access drive, or drive-through lane intersection.										
Maximum Number of Sign Faces	2	2	2	2	2	2	2	2	2	2	2
Illumination	Prohibited										
Location	Shall meet all location and encroachment standards in accordance with Section 13.3.1.B.										

Table 13.5.3
Interpretive Marker Sign Standards

Standards	GR	NCR	MUR	TSR	DT	NB	CB	IND	CI	OS	AC
Maximum Area	9 sq ft	9 sq ft	9 sq ft	9 sq ft	9 sq ft	9 sq ft	9 sq ft	9 sq ft	9 sq ft	9 sq ft	9 sq ft
Maximum Height	8 ft	8 ft	8 ft	8 ft	8 ft	8 ft	8 ft	8 ft	8 ft	8 ft	8 ft
Maximum Number of Signs	Three per lot										
Maximum Number of Sign Faces	2	2	2	2	2	2	2	2	2	2	2
Illumination	Prohibited										
Location	Shall meet all location and encroachment standards in accordance with Section 13.3.1.B. May be located in a right-of-way subject to an encroachment agreement approval from the Town Manager or their designee.										
Other Provisions	Only allowed as a part of a government sponsored historic preservation program, in a public park, or in a conservation/open space easement.										

Table 13.5.4
Monument Sign Standards

Standards	GR	NCR	MUR	TSR	DT	NB	CB	IND	CI	OS	AC
Single-Tenant and Common Entrance Buildings Monument Signs											
Maximum Area [1]	25 sq ft	25 sq ft	25 sq ft	25 sq ft		40 sq ft	50 sq ft	50 sq ft	50 sq ft	50 sq ft	50 sq ft
Maximum Height [2]	6 ft	6 ft	6 ft	6 ft		6 ft	8 ft	8 ft	9 ft	9 ft	8 ft
Sign Base Minimum Height	2 ft	2 ft	2 ft	2 ft		2 ft	3 ft	3 ft	2 ft	2 ft	3 ft
Multi-Tenant Buildings											
Maximum Area [1]	25 sq ft	25 sq ft	25 sq ft	25 sq ft		40 sq ft	75 sq ft	75 sq ft	75 sq ft	50 sq ft	75 sq ft
Maximum Height	6 ft	6 ft	6 ft	6 ft		6 ft	12 ft	12 ft	12 ft	9 ft	12 ft
Sign Base Minimum Height	2 ft	2 ft	2 ft	2 ft		2 ft	4 ft	4 ft	2 ft	2 ft	4 ft
All Monument Signs											
Maximum Number of Signs per Development Site Frontage Adjacent to Street ROW	1	1	1	1		1	1	1	1	1	1
Maximum Number of Sign Faces	2	2	2	2		2	2	2	2	2	2
Sign Copy	Shall be individually affixed letters, applied vinyl, or be printed, etched, or otherwise incorporated directly on the sign's backing plate.										
Sign Base Design	Sign base, including all structural components, shall extend from the sign face on at least one side, a minimum of 10 percent and a maximum of 40 percent of the width of the sign face.										
	Sign face may extend a maximum of 40 percent off of the sign base.										
	Sign base shall be constructed from a Category 1 exterior building cladding material (Section 5.2.1.B.1.). If a Category 1 building material is utilized on the primary building the sign base shall be constructed of the same material.										
Illumination	Internal or external										
Landscape	A landscape area at the sign base shall be required to be planted and maintained by the property owner.										

	The minimum size of the landscape area shall be equal to half of the square footage of the sign area of the associated sign.
	Landscape areas shall be planted with shrubs, native grasses, annuals, and/or perennials at a rate of one planting per three square feet of required landscape area.
Location	Shall meet all location and encroachment standards in accordance with Section 13.3.1.B.
Other	A development site shall be permitted either a post sign or a monument sign per development site frontage adjacent to a street right-of-way.

Notes
[1] If adjacent to a minor thoroughfare, major thoroughfare, or boulevard, in accordance with the CTP, maximum sign area may be increased by 10 square feet.
[2] If adjacent to a minor thoroughfare, major thoroughfare, or boulevard, in accordance with the CTP, maximum sign height may be increased by two feet.

Table 13.5.5
Permanent Post Sign Standards

Standards	GR	NCR	MUR	TSR	DT	NB	CB	IND	CI	OS	AC
Maximum Area	6 sq ft	6 sq ft	6 sq ft	6 sq ft		6 sq ft					
Maximum Height	6 ft	6 ft	6 ft	6 ft		6 ft					
Maximum Number of Signs per Development Site Frontage Adjacent to Street ROW	1	1	1	1		1					
Maximum Number of Sign Faces	2	2	2	2		2					
Sign Copy	Shall be channel letters or be printed, etched, or otherwise directly incorporated on the sign backing.										
Sign Base Design	Shall be aluminum, aluminum composite, acrylic, PVC board, exterior-grade plywood, or other weather resistant, purpose built material approved by the Administrator.										
Illumination	External if the landscape lighting standards of Section 10.4.2. are met.										
Location	Shall meet all location and encroachment standards in accordance with Section 13.3.1.B.										
Other	A development site shall be permitted either a post sign or a monument sign.										

Table 13.5.6
Residential Entryway Sign Standards

Standards	GR	NCR	MUR	TSR	DT	NB	CB	IND	CI	OS	AC
Maximum Area [1]	25 sq ft	25 sq ft	25 sq ft	25 sq ft							25 sq ft

Total Maximum Height [2]	6 ft	6 ft	6 ft	6 ft							6 ft
Sign Base Minimum Height	2 ft	2 ft	2 ft	2 ft							2 ft
Maximum Number of Signs per Development Site Frontage Adjacent to Street ROW	1	1	1	1							1
Maximum Number of Sign Faces	2	2	2	2							2
Sign Copy	Shall be individually affixed letters, applied vinyl, or be printed, etched, or otherwise incorporated directly on the sign's backing plate.										
	Box/cabinet signs are prohibited.										
Sign Base Design	Sign base, including all structural components, shall extend from the sign face on at least one side, a minimum of 10 percent and a maximum of 40 percent of the width of the sign face.										
	Sign face may extend a maximum of 40 percent off of the sign base.										
	Sign base shall be constructed from a Category 1 exterior building cladding material (Section 5.2.1.B.).										
Illumination	External or backlit										
Landscape	A landscape area at sign base shall be required to be planted and maintained by the property owner in perpetuity.										
	The minimum size of the landscape area shall be equal to half of the square footage of the sign area of the associated sign.										
	Landscape areas shall be planted with shrubs, native grasses, annuals, and/or perennials at a rate of one planting per three square feet of required landscape area.										
Location	Shall be located at residential subdivision entryways and shall meet all location and encroachment standards in accordance with Section 13.3.1.B.										

Notes

[1] If adjacent to a minor thoroughfare, major thoroughfare, or boulevard, in accordance with the CTP, maximum sign area may be increased by 10 square feet.

[2] If adjacent to a minor thoroughfare, major thoroughfare, or boulevard, in accordance with the CTP, maximum sign height may be increased by two feet.

Table 13.6.1
Applied Vinyl Sidewalk Sign Standards

Standards	GR	NCR	MUR	TSR	DT	NB	CB	IND	CI	OS	AC
Maximum Area	4 sq ft	4 sq ft	4 sq ft	4 sq ft	4 sq ft	4 sq ft	4 sq ft	4 sq ft	12 sq ft	12 sq ft	12 sq ft

Maximum Number of Signs per Building Entryway	1	1	1	1	1	1	1	1	2	2	2
Maximum Number of Signs per 100 lineal feet of Sidewalk or Pedestrian Walkway [1]	1	1	1	1	1	1	1	1	1	1	1
Minimum Separation of Signs Development Site Frontage	20 ft	20 ft	20 ft	20 ft	20 ft	20 ft	20 ft	50 ft	50 ft	50 ft	50 ft
Maximum Number of Sign Faces	1	1	1	1	1	1	1	1	1	1	1
Sign Materials	Removable vinyl material										
Illumination	Prohibited										
Location	Sidewalk, pedestrian walkway, or other outdoor hard surface that is owned by the person or entity on the Zoning Compliance permit (Section 16.5.14).										
Duration of Display – Single Tenant or Common Entrance Buildings	A minimum of 10 and a maximum of 90 days.										
	A single tenant or common entrance building shall be permitted to display up to three per year. A minimum of 10 days shall separate each display period.										
Duration of Display – Multi-tenant Buildings	A minimum of 10 and a maximum of 90 days.										
	A maximum of three may be displayed per multi-tenant building concurrently.										
	The property owner shall be responsible for determining which tenants may display applied vinyl sidewalk signs concurrently.										

Notes

[1] Sign may be installed on public sidewalk by governing jurisdiction only.

Table 13.6.2
Athletic Field Fence Sign Standards

Standards	GR	NCR	MUR	TSR	DT	NB	CB	IND	CI	OS	AC
Maximum Area	No Maximum Area										

Maximum Number	No Maximum Number										
Maximum Projection	Shall be affixed flat against the fence to which they are mounted.										
Maximum Number of Sign Faces	1	1	1	1	1	1	1	1	1	1	1
Sign Materials	18-oz vinyl or a similarly heavy-duty material purpose made for outdoor display.										
	If larger than 32 square feet shall utilize wind resistant measures.										
Illumination	Prohibited										
Location	No portion may extend above or beyond the fence to which it is mounted.										
	Shall be oriented in a manner where sign copy is not visible from the right-of-way or adjacent property.										
Duration of Display	Shall not be limited so long as all maintenance requirements are met (Section 14.5.8).										

Table 13.6.3
Light Pole Banner Sign Standards

Standards	GR	NCR	MUR	TSR	DT	NB	CB	IND	CI	OS	AC
Maximum Length	4.5 ft	4.5 ft	4.5 ft	4.5 ft	4.5 ft	4.5 ft	6 ft	6 ft	6 ft	6 ft	6 ft
Maximum Width	2.5 ft	2.5 ft	2.5 ft	2.5 ft	2.5 ft	2.5 ft	2.5 ft	2.5 ft	2.5 ft	2.5 ft	2.5 ft
Minimum Clearance	11 feet										
Maximum Number of Signs per Light Pole	1	1	1	1	1	1	1	1	1	1	1
Maximum Number of Sign Faces	2	2	2	2	2	2	2	2	2	2	2
Sign Materials	PVC flex material, laminated for outdoor use.										
Illumination	Prohibited										
Location	Shall be attached to functioning light poles only.										
	Shall not be attached to wooden poles.										
Duration of Display	Shall not be limited so long as all maintenance requirements are met (Section 14.5.8).										
Other Provisions	Shall have wind flaps or utilize wind deflecting mounting brackets.										
	Brackets shall be painted to match the color of the light pole.										
	The property owner shall be required to obtain a right-of-way encroachment agreement from the Town prior to the display of a light pole banner in a Town maintained public right-of-way and provide a release or hold harmless to the owner of the light pole.										

Table 13.6.4
Scoreboard Sign, Temporary Standards

Standards	GR	NCR	MUR	TSR	DT	NB	CB	IND	CI	OS	AC
Maximum Area	~~32 sq ft~~	~~32 sq ft~~	~~32 sq ft~~	~~32 sq ft~~	~~32 sq ft~~	~~32 sq ft~~	32 sq ft	~~32 sq ft~~	32 sq ft	32 sq ft	
Minimum Vertical Clearance	~~8 ft~~	~~8 ft~~	~~8 ft~~	~~8 ft~~	~~8 ft~~	~~8 ft~~	8 ft	~~8 ft~~	8 ft	8 ft	
Maximum Projection	Affixed flat against the scoreboard to which they are mounted or on a scoreboard support.										
Maximum Number of Signs per Scoreboard	No Maximum Number										
Maximum Number of Sign Faces	~~1~~	~~1~~	~~1~~	~~1~~	~~1~~	~~1~~	1	~~1~~	1	1	
Sign Materials	18-oz vinyl or a similarly heavy-duty material purpose made for outdoor display.										
Illumination	Prohibited										
Location	No portion may extend above or beyond the scoreboard to which it is mounted.										
	Shall be located in a manner that orients the sign copy internal to the development site.										
Duration of Display	Shall not be limited so long as all maintenance requirements are met (Section 14.5.8).										

Table 13.6.5
Sock Sign Standards

Standards	GR	NCR	MUR	TSR	DT	NB	CB	IND	CI	OS	AC
Maximum Dimensions	Same as issued permanent sign permit.										
Maximum Projection	Same as issued permanent sign permit.										
Maximum Number of Signs	Same as issued permanent sign permit.										
Maximum Number of Sign Faces	Same as issued permanent sign permit.										
Sign Materials	18-oz vinyl or a similarly heavy-duty material purpose made for outdoor display										
Illumination	Same as issued permanent sign permit.										
Location	Placed over any existing permanent sign										
Duration of Display	Maximum of 90 consecutive days, starting from the issuance of the permanent sign permit.										

Table 13.6.6
Wall Mounted Banner Sign Standards

Standards	GR	NCR	MUR	TSR	DT	NB	CB	IND	CI	OS	AC
Single Tenant or Common Entrance Building											
Maximum Number of Signs per Wall	1	1	1	1	1	1	1	1	1	1	1
Duration of Display	Minimum of 10 and a maximum of 30 days.										
	A single tenant or common entrance building shall be permitted to display up to one per year.										
Multi-Tenant Building											
Maximum Number of Signs per Wall	1	1	1	1	1	1	1	1	1	1	1
Duration of Display	Minimum of 10 and a maximum of 30 days.										
	One per multi-tenant building concurrently.										
	The property owner shall be responsible for determining which tenants may display concurrently.										
All Wall-Mounted Signs											
Maximum Area	32 sq ft	32 sq ft	32 sq ft	32 sq ft	32 sq ft	32 sq ft	32 sq ft	32 sq ft	32 sq ft	32 sq ft	32 sq ft
Maximum Length	8 ft	8 ft	8 ft	8 ft	8 ft	8 ft	8 ft	8 ft	8 ft	8 ft	8 ft
Maximum Projection	Affixed flat against the building to which they are mounted.										
Maximum Number of Sign Faces	1	1	1	1	1	1	1	1	1	1	1
Sign Materials	18-oz vinyl or a similarly heavy-duty material purpose made for outdoor display.										
Illumination	Prohibited										
Location	For a building without a parapet wall, no portion may extend above the roofline.										
	For a building with a parapet wall, no portion may extend two feet above the roof line of a building, provided no portion of the sign extends above the parapet.										
	For a building with a pitched roof, no portion may extend above the lower eave line of a building.										
	Shall not be affixed to HVAC screening, elevator overrun, or other structures protruding from the roof of the principal building.										

Table 13.6.7
Window Sign, Temporary Standards

Standards	GR	NCR	MUR	TSR	DT	NB	CB	IND	CI	OS	AC
Maximum Area [1]					15%	15%	20%	20%	20%	20%	
Location	On ground floor windows or doors only.										

Illumination	Prohibited	One illuminated temporary window sign may be allowed per property.	Prohibited	One illuminated temporary window sign may be allowed per property.
Duration of Display	Shall not be limited so long as all maintenance requirements are met (Section 14.5.8).			

Notes

[1] Of the square footage of the individual window on which the sign shall be located.

Table 13.7.1
Ground Mounted Banner Sign Standards

Standards	GR	NCR	MUR	TSR	DT [1]	NB	CB	IND	CI	OS	AC
Maximum Area					15 sq ft		32 sq ft	32 sq ft	32 sq ft	15 sq ft	32 sq ft
Maximum Height					5 ft		8 ft	8 ft	8 ft	5 ft	8 ft
Maximum Number of Signs per Development Site Frontage Adjacent to Street ROW					1		1	1	1	1	1
Maximum Number of Sign Faces					2		2	2	2	2	2
Location	Shall meet all location and encroachment standards in accordance with Section 13.3.1.B.										
Sign Materials	Banners: cloth, canvas, vinyl, or other similarly durable material purpose made for outdoor display.										
	Base and Frame: vinyl, steel, or other similarly durable material purpose made for outdoor display with a minimum width of three inches.										
Illumination	Prohibited										
Duration of Display	Minimum of 10 and a maximum of 30 days.										
	A single tenant or common entrance building shall be permitted to display up to three per year. A minimum of 10 days shall separate each display period.										
	A maximum of one per multi-tenant building concurrently.										
	The property owner shall be responsible for determining which tenants may display ground mounted banner signs concurrently.										
Other Provisions	Shall be securely anchored into the ground or secured in a portable base designed for such function.										
	Shall be maintained in good condition and shall not sag, lie on the ground, be torn, or otherwise kept in a disorderly state.										

	Shall not be displayed concurrently with a post and panel sign.

Notes

[1] Sign type allowed in the Downtown – Central Subdistrict and on properties with buildings set back 20 feet or more from the street only.

Table 13.7.2
Post Sign, Temporary Standards

Standards	GR	NCR	MUR	TSR	DT	NB	CB	IND	CI	OS	AC
Maximum Area	6 sq ft	6 sq ft	6 sq ft	6 sq ft							
Maximum Height	6 ft	6 ft	6 ft	6 ft							
Maximum Number of Signs per Development Site Frontage Adjacent to Street ROW	1	1	1	1							
Maximum Number of Sign Faces	2	2	2	2							
Sign Materials	Sign face shall be made of durable vinyl, plastic, or comparable material.										
	Frames shall be made of metal, PVC, wood, or a similarly durable material purpose made for outdoor display.										
Illumination	Prohibited										
Location	Shall meet all location and encroachment standards in accordance with Section 13.3.1.B.										
Duration of Display	Minimum of 10 and a maximum of 30 days.										
	If the property on which the sign shall be placed is actively marketed for sale or lease the duration of display shall be until the property is no longer actively marketed for sale or lease so long as all maintenance requirements are met (Section 14.5.8).										
Other Provisions	Shall be securely anchored into the ground with a metal, PVC, or wood stake.										

Table 13.7.3
Post and Panel Sign Standards

Standards	GR	NCR	MUR	TSR	DT	NB	CB	IND	CI	OS	AC
Maximum Area	32 sq ft	32 sq ft	32 sq ft	32 sq ft	32 sq ft	32 sq ft	32 sq ft	32 sq ft	32 sq ft	15 sq ft	32 sq ft
Maximum Height	8 ft	8 ft	8 ft	8 ft	8 ft	8 ft	8 ft	8 ft	8 ft	5 ft	8 ft

Maximum Number of Signs per Development Site Frontage Adjacent to Street ROW	1	1	1	1	1	1	1	1	1	1	1
Maximum Number of Sign Faces	2	2	2	2	2	2	2	2	2	2	2
Location	Shall meet all location and encroachment standards in accordance with Section 13.3.1.B.										
Sign Materials	10 mm gauge engineered corrugated plastic, aluminum composite, finished wood, wood composite, or comparable material.										
Illumination	Prohibited										
Duration of Display	From issuance of construction plan approval to issuance of a certificate of occupancy for the final phase of any construction.										
Other Provisions	Shall be securely anchored into the ground with a minimum of two metal or finished wood posts.										
	Shall be maintained in good condition and shall not sag, lie on the ground, be torn, or otherwise kept in a disorderly state.										
	Shall not be displayed concurrently with a ground mounted banner sign.										

Table 13.7.4
Sidewalk Sign Standards

Standards	GR	NCR	MUR	TSR	DT	NB	CB	IND	CI	OS	AC
Maximum Area	6 sq ft	6 sq ft	6 sq ft	6 sq ft	6 sq ft	6 sq ft	6 sq ft	6 sq ft	6 sq ft	6 sq ft	6 sq ft
Maximum Height	4 ft	4 ft	4 ft	4 ft	4 ft	4 ft	4 ft	4 ft	4 ft	4 ft	4 ft
Maximum Number of Signs per Single Tenant or Common Entrance Building Frontage Adjacent to Street ROW; and per Multi-tenant Building [1]	1	1	1	1	1	1	1	1	1	1	1
Maximum Number of Sign Faces	2	2	2	2	2	2	2	2	2	2	2
Sign Materials	Vinyl, plastic, chalkboard, marker board, or comparable material.										
	Frames shall be made of metal, plastic, or a similarly durable material purpose made for outdoor display.										
Minimum Separation	Shall be separated from all other sidewalk signs by at least 15 feet.										
Location	Shall be placed in a manner to preserve a continuous sidewalk width of a minimum of five feet.										
	No part shall block points of ingress or egress.										
	Shall be placed no more than six feet from the building entrance of the building or tenant space of a building to which the sign is associated.										

	Shall not be placed in or adjacent to an ADA ramp.
Illumination	Prohibited
Duration of Display	Shall be displayed only during the operating hours of the use to which the sign is associated.
Other Provisions	The property owner shall be required to obtain a right-of-way encroachment agreement from the Town prior to the display of a sidewalk sign in a public right-of-way.
	Shall be secured in a portable base made of metal, plastic, or a similarly durable material purpose made for outdoor display.
	Shall be maintained in good condition and shall not sag, lie on the ground, be torn, or otherwise kept in a disorderly state.

Notes

[1] Per tenant space

Table 13.7.5:
Yard Sign Standards

Standards	GR	NCR	MUR	TSR	DT	NB	CB	IND	CI	OS	AC
Maximum Area	6 sq ft	6 sq ft	6 sq ft	6 sq ft	6 sq ft	6 sq ft	6 sq ft	6 sq ft	6 sq ft	6 sq ft	6 sq ft
Maximum Height	4 ft	4 ft	4 ft	4 ft	4 ft	4 ft	4 ft	4 ft	4 ft	4 ft	4 ft
Maximum Number of Signs per Development Site Frontage	2 [1]	2 [1]	2 [1]	2 [1]	2 [1]	2 [1]	2 [1]	2 [1]	2 [1]	2 [1]	2 [1]
Maximum Number of Sign Faces	2	2	2	2	2	2	2	2	2	2	2
Sign Materials	Corrugated plastic, plastic, or comparable material are permitted; cardboard and plywood are prohibited.										
Illumination	Prohibited										
Location	Shall meet all location and encroachment standards in accordance with Section 13.3.1.B.										
	Front and corner side yards only.										
Duration of Display	90 days per calendar year.										
Other Provisions	Shall be securely anchored into the ground with a metal, plastic, or wood stake.										
	Shall be maintained in good condition and shall not sag, lie on the ground, be torn, or otherwise kept in a disorderly state.										

Notes

[1] 30 days before the start of early voting or a primary or election day and 10 days after a primary or election day a maximum of eight yard signs may be displayed. No sign permits shall be required for the display of yard signs during this period.

Page/Section #	Chapter 16 Administration - Proposed Edits	Reason
Page 348; Section 16.5.2.A.2	Carry over existing building design modification up to 15%. This also renumbers the subsections. **Standards Subject to General and Additional Review Criteria**. a. Chapter 2 – Zoning Districts and Dimensional standards: i. Lot area and width minimum up to five percent of standard, ~~ii. Front and exterior side setbacks up to five percent of standard,~~ iii. ~~Interior side and rear~~ Building setbacks up to 10 percent of standard, iv. Frontage build out up to 10 percent of standard, or v. Building coverage up to five percent of standard, vi. Increase the maximum block length by up to 20 percent. b. Section 3.4.3.C– Allowed use of accessory structures, c. Chapter 5 – numerical standards up to 15 percent of standard in accordance with criteria in Section 5.1.2.B d. Section 5.6.3 – Distribution of roofline changes e. Section 8.1.2.B – Maximum fence/wall height, f. Section 8.1.2.C – Allowed fence materials, g. Section 8.4.2.B – Location and visibility of trash/recycling enclosures from a right of way,	Ease of Use; Clarification

	h. Section 7.3 – Perimeter buffer width requirements up to 10 percent of the standard, i. Section 9.6.1 – Parking area location, j. Section 9.6.6.D – Vehicular connectivity between adjoining parking lots, k. Section 9.8.3 - Location of Driveway Access Points, l. Section 11.1.5 – Underground Wiring, m. Section 12.4.1.C – Exclusions for erosion and sedimentation control, n. Section 12.8.2.B – Reduction in impervious surface.	
Page 382; Section 16.7.8.D Map Amendment – Conditional District, Effect of Decision	**4. Waiting Period For Subsequent Applications.** a. After the Board of Commissioners has rendered their decision on a Conditional District Map Amendment application, there shall be a six-month waiting period before an application shall be considered for the same parcel or development site. b. This waiting period may be waived by the Board of Commissioners (three-fourths vote required) if it determines that there have been substantial changes in conditions or circumstances which may relate to the request.	Consistency
Page/Section #	Chapter 18 Definitions and Interpretation - Proposed Edits	Reason
Page 403; Section 18.3.2 Building Height	The vertical distance measured from the average elevation of the proposed finished grade at the façade adjacent to the front lot line to the highest point of the roof deck of a flat roof, to the highest point of a mansard roof, or to the mean height level between the eaves and ridge of a gable, hip, or gambrel roof. For multibuilding development sites, the height of buildings not located towards a front	Clarification

	lot line may be measured from the average elevation of the proposed finished grade at the main entrance of the building. Parapets, spires, cupolas, antennae attached to a building, projections from buildings, mechanical equipment, and accessory structures associated with an activated roof deck, are not to be included in the calculation of building height.	
Page 408; Section 18.6 B Definitions	**Bay** Principal divisions of a wall, roof, or other part of a building marked off by vertical or transverse supports	Clarification
Page 412; Section 18.7 C Definitions	**Column** A vertical structural member.	Clarification
Page 413; Section 18.7 C Definitions	**Courtyard** An improved, open area partly or wholly enclosed by buildings or walls.	Clarification
Page 417; Section 18.9 E Definitions	**Electric Vehicle (EV) Capable Space** A vehicle parking space served by infrastructure that can accommodate future EV chargers. It is connected by a continuous electrical conduit or raceway to an electrical panel or panel room with sufficient space to accommodate future charging and wiring. **Electric Vehicle Charging Facility or Space** A parking space designed and constructed with Electric Vehicle Supply Equipment (EVSE) that supplies electric energy for the recharging of electric vehicles with at least a Level 2 charger.	Clarification
Page 421; Section 18.10 F Definitions	**Forecourt** A courtyard before the entrance to a building or a group of buildings.	Clarification
Page 422; Section 18.11 G Definitions	**Gable** The triangular portion of wall formed by two intersecting roof planes or enclosing the end of a pitched roof from cornice or eaves to ridge.	Clarification
Page 434; Section 18.21 P Definitions	**Pediment** A wide, low-pitched gable surmounting a porch, portico, or major division of a façade.	Clarification

Page 433; Section 18.21 P Definitions	**Pier** A vertical supporting structure, as a section of wall between two openings or one supporting the end of an arch or lintel.	Clarification
Page 433; Section 18.21 P Definitions	**Pilaster** A rectangular column projecting from a wall with a capital and base that is attached or affixed to a wall as an ornamental design feature.	Clarification
Page 433; Section 18.21 P Definitions	**Plaza** An improved open area at ground level partially enclosed by a building or buildings provided with amenities, such as seating, ornamental features, and landscaping, for use by pedestrians.	Clarification
Page 433; Section 18.21 P Definitions	**Portico** A large porch with a pediment or roof supported by columns, often leading to the entrance of a building.	Clarification
Page 437; Section 18.23 R Definitions	**Rib** A decorative or structural device consisting of a series of narrow vertical projections or ribs along a building's façade, often used to screen structural supports.	Clarification
Page 445; Section 18.24 S Definitions	**Stucco** A course plaster composed of portland or masonry cement, sand, and hydrated lime, mixed with water and applied in a plastic state to form a hard covering for exterior walls.	Clarification
Page 448; Section 18.25 T Definitions	**Transom Window** A horizontal window opening over a door or window	Clarification

Board of Commissioners Agenda Item Report

Agenda Item No.: 2024-332-
Submitted by: Jennifer Currin
Submitting Department: Planning
Meeting Date: November 19, 2024

SUBJECT
Public Hearing on LEGISLATIVE CASE CPA-24-02, Revised Draft Downtown Plan (November 5, 2024 version)

Recommendation:

Item Summary:

ATTACHMENTS
- Agenda Summary_111924.pdf
- CPA-24-02 BoC PH Staff Report.pdf
- Attachment A - Application.pdf
- Attachment C - Summary of Changes 110524.pdf
- Attachment D - September Draft Plan Comment Responses Revised.pdf
- Ordinance CPA-24-02.docx

Agenda Item: Public Hearing on LEGISLATIVE CASE CPA-24-02, Revised Draft Downtown Plan (November 5, 2024 version).

Summary: The draft Plan establishes a cohesive vision for how growth in Downtown Wake Forest should occur over the next 10 years. The basis of the Plan is rooted in community input and data analysis, which was obtained during the initial project phases, and included activities such as key stakeholder meetings, community survey, service provider survey, and visioning workshop. Several key themes emerged during the community engagement process and there are the nine proposed Plan goals: Encourage Business Variety; Improve Transportation, Pedestrian, and Bicycling Experience; Preserve Historic Charm; Improve Streetscape; Shift Development Patterns; Enrich Placemaking; Balance Redevelopment Opportunities; Expand Greenspace and Increase Gathering Space Options; and Incentivize Housing Options and Affordability.

A public comment session was held at the October 8, 2024, Planning Board meeting. The Planning Board voted 7-0 to find the request consistent with the Comprehensive Plan and reasonable and in the public interest and recommended approval of the Plan as drafted.

The consultant presented the draft Plan to the Board of Commissioners at their November 5, 2024 work session meeting.

Attachments: Staff Report.

Staff Report
Case CPA-24-02: Wake Forest Downtown Plan

Meeting Date	November 19, 2024
Requested Actions	Public Hearing and Consideration of Legislative Case CPA-24-02, Draft Downtown Plan (November 5, 2024 version)
Case Manager	Jennifer Currin, Interim Planning Director
Planning Board Recommendation	The Planning Board, at their October 8, 2024 meeting, recommended 7-0 to approve the Comprehensive Plan Amendment.

PUBLIC MEETINGS

Public Comment Session	Public Hearing
October 8, 2024	November 19, 2024

CASE INFORMATION

Applicant	Town of Wake Forest 301 S. Brooks Street Wake Forest, NC
See Attachment A for a copy of the application.	

CASE SUMMARY

The Renaissance Plan for Downtown Wake Forest was adopted in September 2017. With the update and adoption of several comprehensive plans, including the 2022 Community Plan and 2021 Northeast Community Plan, as well as development occurring in the current Renaissance Plan area, the Plan needed to be updated. In May 2023, the Town contracted with Houseal Lavigne to update the Plan, which is now being referred to as the Wake Forest Downtown Plan. The draft Plan establishes a cohesive vision for Downtown and how growth should occur over the next 20 years. The foundation of the Plan is rooted in community input and data analysis, which was obtained during the initial project phases and included activities such as key stakeholder meetings, online downtown survey, service provider survey, DIY kits and visioning workshops. Several key themes emerged during the community engagement process and are the 9 proposed Plan goals: Encourage Business Variety; Preserve Historic Charm; Shift Development Patterns; Balance Redevelopment Opportunities; Incentive Housing Options and Affordability; Improve Transportation, Pedestrian, and Bicycling Experience; Improvement Streetscapes, Enrich Placemaking; and Expand Greenspace and Increase Gathering Space Options. An action matrix with the action item, relevant goal and timeline is included to provide step-by step guidance for the Town and the community.

STAFF RECOMMENDATION

Staff recommends approval of the November 5, 2024 revised draft Downtown Plan (Exhibit 1) with the following revisions:

- Remove Action Items 4-15 and 4-16, which are duplicated in 5-49 and 5-50.
- Add new Action Item: Implement road diets on Elm Avenue and Brooks Street.
- Renumber Action Items as needed.

ATTACHMENTS

Attachment A:	Application
Attachment B (Link):	November 5, 2024 Revised Draft Downtown Plan
Attachment C:	Summary of Changes
Attachment D	September Draft Plan Comment Responses

EXHIBIT

Exhibit 1 (Link):	November 5, 2024 Revised Draft Downtown Plan

Comprehensive Plan Amendment Application

(Comprehensive Plan Amendment Workflow)

Town of Wake Forest, NC
301 S. Brooks St.
Wake Forest, NC 27587-2932
TEL (919) 435-9510 | FAX (919) 435-9539

Project Overview #1484739

Project Title: Downtown Plan
Application Type: Comprehensive Plan Amendment
Workflow: Comprehensive Plan Amendment
Jurisdiction: Town of Wake Forest (Wake County)
State: NC
County: Wake

Confirmation Checklist Items Submitted

A submittal checklist is available to view additional documents which are required to submitted with this application. After answering the application questions, you will be asked to upload the required documents.

VIEW COMPREHENSIVE PLAN AMENDMENT SUBMITTAL CHECKLIST

Missing items will result in the application being declined and returned to the applicant to resubmit. A revised and complete application including all missing items must be received or the application will be not be deemed complete and routed for review.

Please confirm that you have reviewed the associated submittal checklist for this permit and that you will submit all documents required on the submittal checklist: Yes

Pre-Application Meeting

Has a pre-application conference been held?: No

*Note: This type of project requires a pre-application conference be completed prior to official submittal. If this has not been completed, please return to the home screen and select **Pre-Application Conference** from the application type drop down list in order to schedule your required meeting.*

Pre-Application Conference Date:
Staff Member Met With:
Pre-application Conference Project Number: N/A

Project Contact - Applicant/Owner

Please enter all project contacts related to your application.

This is an important step to ensure all members of the applicant team receive email notifications associated with the project which may include comments, requested revisions, scheduled meetings or hearings, and final decisions. This also informs Town staff of the team members assigned role with the project.

Project Contact - Applicant
Jennifer Currin

Town of Wake Forest
401 Elm Avenue
Wake Forest, NC 27587
P:(919) 5546100
jcurrin@wakeforestnc.gov

Amendment Type

Please provide answers to the questions below. Other application materials specified in the submittal checklist must be uploaded as separate documents. You will have the opportunity to upload documents prior to finalizing and submitting this application.

Plan Being Amended: Renaissance Plan

Type of Amendment: Text,Map or Cross-Section

Description of Request:
Update Renaissance Plan

Revised Draft Downtown Plan
Summary of Changes

Page # 9/8/24 Draft	Page # 10/3/24 Draft	Page # 11/5/24 Draft	Type of Revision	Revision Summary
		ii	Text	Added post-nominal letters behind name.
iii	iii		Text	Revised Advisory Group, Town Planning Staff and Town Departments.
v	v		Text	Added Chapter numbers and revised subheadings.
	1	1	Text	Revised "Draft Staff Only" to "Draft for Adoption".
3	3		Text	Clarifications.
	3	3	Text	Added Downtown Planning Area acreage.
4 & 5	4 & 5		Text	Hyperlinked Plan references.
	5	5	Text	Updated language in CTP on loop service and in PRCR Master Plan on adoption date.
6	6		Text	Updated outreach point information.
	13	13	Text	Clarifications.
	17	17	Text	Grammatical corrections.
19	19		Text	Clarifications.
	20	20	Text	Grammatical corrections.
21	21		Text	Grammatical corrections.
	21	21	Text	Clarifications in Expand Greenspace and Increase Gathering Space Options goal.
23	23		Text	Grammatical corrections.
	23	23	Text	Grammatical corrections.
	24	24	Text	Grammatical corrections and revised text.
	25	25	Text	Revised text and added a supporting use under Mixed-Use Building Type.
26	26		Text	Revised Civic Center label to Civic Core.
	26	26	Text & Graphic	Clarified text and revised Downtown Plan line weight on map.
27	27		Text	Clarifications.
	27	27	Text	Clarifications.
28	28		Text	Added development consideration for affordable housing.
	28	28	Text	Clarified text.
29	29		Text	Added development consideration for affordable housing.
	29	29	Graphic	Revised example photo.
30	30		Text	Added development consideration for affordable housing.
	30	30	Graphic	Revised example photo.
	31	31	Graphic	Revised example photo.

Revised Draft Downtown Plan
Summary of Changes

Page # 9/8/24 Draft	Page # 10/3/24 Draft	Page # 11/5/24 Draft	Type of Revision	Revision Summary
32	32		Text	Revised name of Functional Subarea to Civic Core.
33	33		Text	Added development consideration for affordable housing.
	34	34	Text	Grammatical corrections.
35	35		Text	Revised recommendations.
	35	35	Text	Grammatical corrections.
40	40		Text	Clarified text.
	40	40	Text	Grammatical corrections.
	43	43	Text	Clarified text.
	47	47	Text	Added recommendation for roundabouts for throughput edge street types.
48	48		Graphic	Updated graphic to show walksheds.
	49	49	Text	Relocated S-line considerations, added mobility hub image, and added WRX text.
		50 & 51	Text & Graphic	New Pages.
	53	55	Text	Relocated recommendation to façade articulation.
	54	56	Text	Grammatical corrections.
	55	57	Text	Updated height for Brooks Street infill.
56	56		Text	Revised Civic Center label to Civic Core.
	58	60	Text	Grammatical correction.
	60	62	Text	Grammatical Correction.
	61	63	Text	Clarified text.
63	63		Text	Clarified text.
	63	65	Graphic	Updated map colors.
	67	69	Text	Clarified text.
	68	70	Text	Grammatical corrections.
	69	71	Text	Grammatical correction.
	70-71		Text & Graphic	New Pages.
	70	72	Text	Grammatical corrections.
74	76		Text	Grammatical corrections.
75	77		Graphic	Clarification.
	77	79	Graphic	Clarification.
	78	80	Text	Grammatical corrections.
79	81		Text	Revised recommendations.

Revised Draft Downtown Plan
Summary of Changes

Page # 9/8/24 Draft	Page # 10/3/24 Draft	Page # 11/5/24 Draft	Type of Revision	Revision Summary
	80	82	Graphic	Updated photo.
	81	83	Text	Grammatical correction.
83	85		Text	Clarified text.
	83	85	Text & Graphic	Clarified text and updated images.
	85	87	Text & Graphic	Updated HL Miller Park text and image.
	87	89	Text	Clarified text.
89	91		Graphic	Revised mobility hub to catalyst site.
90	92		Text & Graphic	Updated images from model and text to past tense.
91	93		Text & Graphic	Revised description and concept based on feedback.
	93	96	Text	Clarified text.
	94	97	Text	Clarified text.
	95	98	Text	Grammatical correction.
		95	Graphic	New Page.
95	96		Text	Clarified text.
92	97		Text & Graphic	Relocated page in document. Revised concept to better align with NCDOT concept. Revised to catalyst site.
97	99		Text & Graphic	Revised concept and Civic Center reference to Civic core.
100	102		Text	Formatting
	102	106	Text	Clarified text.
101	103		Text	Formatting and clarified text.
	103	107	Text	Added hyperlink.
		103	Text & Graphic	New Page.
	104-109		Text	Added Action Matrix.
	104	108	Text	Clarified text.
	105	108	Text	Added Action Items 3-22-3-24.
	106	110	Text	Added timeframe to Action Item 5-11.
	107	111	Text	Revised Action Items 5-17-5-19 and 5-29 and removed Action Item 5-25.
	108	112	Text	Revised Action Item 5-40 and added goal alignments to Action Items 5-52-5-54.
	109	113	Text	Revised Action Items 5-65, 5-66, and 5-69, added goal alignments to 5-74 and 5-75, and added a new Action item 5-76.

Comments on September 9, 2024 Draft
Revised November 5, 2024

Comment	Response
Open House - Pedestrian Mobility Board	
Sidewalk gaps, especially those adjacent to downtown need to be addressed. For example along Wait Avenue.	See Action Item 4-8.
Does the through zone include cyclists? If not, there needs to be more bike paths throughout all streets to enable safe travel.	See Page 76. Plan proposes to include a dedicated bike lane on portions of Elm Ave. and Brooks Street.
Would like to see street side seating for restaurants.	See Page 69. Plan provides recommendations on outdoor dining.
Pedestrian and bike through paths should be separate and safe from cars.	See Page 76. Plan proposes to include a dedicated bike lane on portions of Elm Ave. and Brooks Street.
One way streets are confusing for visitors.	See Page 77. Plan proposed to convert E. Jones Avenue and Wait Avenue one-ways to two-way streets.
Where is the discussion of cyclists getting into downtown areas also? Cyclists also need protected and safe areas to be in.	See Action Item 4-8.
Exclude on street parking bike lanes and trees, pollinator gardens, or make white street one way for restaurants to have outdoor seating and social district.	No revision. See Page 69. Plan provides recommendations on outdoor dining.
Pedestrian cross-walk at Main Street and E. Holding to access Post Office Library east from Tyler Run neighborhood.	See Action Items 4-13 and 4-14.
White street pedestrian only please	No revision.
Make White Street a courtyard safer for pedestrians, lots of great areas to hang out, no road (like Friday night on White Street)	No revision.
Pedestrian crosswalk from S. White to Downtown at Elm Street is dangerous. Consider a 4-way stop or pedestrian fly over (bridge).	See Action Items 4-15 and 4-16.
Make White Street one-way southbound between Elm and Roosevelt street.	No Revision.
Open House - Bicycle Mobility Board	
Not obvious on map that the through corridor has a separate bike lane.	See Page 76. Plan proposes to include a dedicated bike lane on portions of Elm Ave. and Brooks Street.
What will be the speed limit for high level traffic? Franklin and Holding streets	No revision. Speed limits are not proposed to be modified at this time.

Comment	Response
Consider bike lane being separated from car travel by placing a natural area and/or dedicated street parking to create a natural physical barrier (safer lines on road?	See Page 76. Plan proposes to include a dedicated bike lane on portions of Elm Ave. and Brooks Street.
I like all the idea about more bike access in downtown, but the problem is getting to downtown from neighborhoods surrounding Wake Forest. Also, walking to downtown really bad on North Main around Harris road.	See Action Item 4-8.
Micro transit with ability to carry bikes? Please	Bikes can be accommodated on Go Wake Forest.
Open House - Vehicle Mobility Board	
Roundabouts are much better than signals.	No revision.
No more signals! Wake Forest has too many already, and the one at the intersection is enough.	No revision. No new signals are proposed at this time.
Yes to new connections and shorter blocks.	See Action Item 5-1.
I do not support multi-lane roads/4 lane. They'll be way too cramped in such close quarters.	No revision. No 4-lane roads are proposed Downtown at this time.
Do not close a portion of Elm please.	The S-line project requires Elm to be closed between S. White Street and Railroad Street (railroad tracks); a grade separated pedestrian crossing is proposed.
East-West travel DNTN WF is BAD. Closing Elm will make it worse!	The S-line project requires Elm to be closed between S. White Street and Railroad Street (railroad tracks); a grade separated pedestrian crossing is proposed.
Open House - Parking Mobility Board	
No meters this can hurt downtown businesses. Instead focus on parking decks, etc.	See Action Items 4-1 and 5-72. The Town has received feedback that parking spaces do not turn over in downtown. Parking meters are one option the Town could explore. Funding the parking deck near SunTrust was approved in the 2022 Bond Referendum.
I do not want meters in downtown WF.	No revision. The Town has received feedback that parking spaces do not turn over in downtown. Parking meters are one option the Town could explore.

Comment	Response
Facilitated turnover parking/parking meter 1/hr. are preferred over meters	See Action Item 5-72. The Town has received feedback that parking spaces do not turn over in downtown. Parking meters are one option the Town could explore.
Keep the parking lots! They keep cars off the streets!	See Action Item 4-1.
Open House - Transit Mobility Board	
Stantec's design is terrible! It fails to fit in with the surrounding Historic Buildings.	No revision. There was a 4 day charette held in August and the design was based on feedback received from the community. Comment passed along to NCDOT and Stantec.
Consider bike-share and other micro-mobility options such as scooters.	See Action Item 4-9.
Hardly anyone rides the buses. Focus on more eco-friendly micro transit.	See Action Items 4-6 and 4-7. Go Wake Forest launched October 1.
This is an ideal conceptual location for a rail transit hub. Its unlikely to be feasible at this location, no parking, grade differences, landlocked, the stone rail overpass is historic but aging and may need replacement.	No revision.
Open House - Streetwall Board	
How is loss of parking accounted for in these plans. Mobility designs doesn't seem to acknowledge this.	See Action Item 4-1. Funding the parking deck near SunTrust was approved in the 2022 Bond Referendum.
I like this a lot actually.	No revision.
Because the smaller on has much less parking than the larger one!	No revision.
If you were purpose a parking lot into a building, THEN, you should repurpose the smaller one, so that you don't impact parking w/the larger one.	See Action Item 4-1. Funding the parking deck near SunTrust was approved in the 2022 Bond Referendum.
Occasional breaks give opportunities to produce gather spaces and remove wall barrier fatigue. Breaks for plazas.	See Action Item 5-4.
Open House - Step Down & Terraces Buildings Board	
Mixed use residents will only add to traffic congestion. The designs of these pics are terrible. Also, Wake Forest does not need skyscrapers keep them all below 4 stories!	See Action Item 3-21.

Comment	Response
You should stepdown the stories of the buildings that go down hill because it will look like a skyscraper wall and that will not be attractive to people living down hill!	See Action Items 5-2, 5-5, and 5-10.
Tallest building at "low levels" are cliff wall when virtually walked. This is bad. Stepped buildings upper floor and setbacks.	See Action Items 5-1 and 5-17.
The examples look like "anywhere USA". Keep the charm of current architectural elements.	See Action Items 5-1, 5-2, 5-5, 5-10, and 5-14-5-18.
Stepped back buildings design is a good thing to avoid the tight, can you feel. Taller buildings along Jones and Brooks are ok if stepped back.	See Action Item 5-17.
Downtown development shouldn't feel like modern Ikea buildings keep the historic feel. Old Town Alexandria, VA should be inspiration.	See Action Items 5-1, 5-2, 5-5, 5-10, and 5-14-5-18.
The architectural design of all these buildings suck!	See Action Items 5-1, 5-2, 5-5, 5-10, and 5-14-5-18.
Open House - Road Diet Board	
Yay for road diet.	No revision.
Protected bike lane please.	See Page 76. Plan proposes to include a dedicated bike lane on portions of Elm Ave. and Brooks Street.
Prefer two-way to avoid confusion and keep slow speeds.	See Page 77. Plan proposed to convert E. Jones Avenue and Wait Avenue one-ways to two-way streets.
Shade is a key part of walkability. Free cover is key along roadways.	See Action Item 5-39.
White street one-way Downtown wait and Elm	No revision.
Open House - Main Street Board	
More money for public art. Private mural money for private buildings.	See Action Items 5-60-5-62, and 5-64.
Yes to wide sidewalks and bike lanes.	No revision.
White Street one way to circle on Brooks or Taylor for seating and sidewalks.	See Page 69. Plan provides recommendations on outdoor dining.
One way circle South White around to South Taylor. Use Brooks for FNoW	See Page 69. Plan provides recommendations on outdoor dining.

Comment	Response
Seating!	See Action Item 5-4. See Page 69. Plan provides recommendations on outdoor dining.
OUTDOOR DINNING!! BIKE LANES	No revision. See Page 69 and 76. Plan provides recommendations on outdoor dining and includes a dedicated bike lane on portions of Elm Avenue and Brooks Street.
Open House - Functional Subareas Board	
Can you add the clauses for zoning to include roof top gardens not only to reduce heat but also absorb runoff? Especially the larger multi story buildings.	No revision. Provided comment to Unified Development Ordinance project manager.
Open House - 120 S White Street Board	
The mobility hub takes away key parking zone that is vital for the businesses in that immediate area. Where will local residents park if they come downtown. Problem parking = bad experience.	See Action Item 4-1. Funding the parking deck near SunTrust was approved in the 2022 Bond Referendum.
Put a small parking deck at the Jones Street lot to help with downtown residents parking as well as transit hub parking.	See page 98. See Action Item 4-1.
The design of this hub, is solely on the fact of the parking deck. We are repurposing one of Wake Forests largest parking spaces.	See Action Item 4-1. Funding the parking deck near SunTrust was approved in the 2022 Bond Referendum.
Have someone with common sense design it.	No revision. There was a 4 day charette held in August and the design was based on feedback received from the community. Comment passed along to NCDOT and Stantec.
Parking deck to anticipate growth.	See Action Item 4-1. Funding the parking deck near SunTrust was approved in the 2022 Bond Referendum.
Or parking deck with park on top floor.	See Action Item 4-1. Funding the parking deck near SunTrust was approved in the 2022 Bond Referendum.
I get this appeal but I think you risk breaking up this sight lines.	No revision. An immersive model was created in conjunction with the Downtown Plan to assist in understanding how heights could impact Downtown.
Consider using older train stations (Rocky Mount) as design inspiration.	No revision. There was a 4 day charette held in August and the design was based on feedback received from the community. Comment passed along to NCDOT and Stantec.
Open House - 216 E Roosevelt Avenue Board	

Comment	Response
Parking Deck here! Parking decks do not belong on Downtown Main Street.	See Page 93. Concept revised.
Parking Deck. Put Multifamily on South East lot	See Page 93. Concept revised.
This proposal will put a burden on existing parking resources.	See Page 93. Concept revised.
Parking deck. Food hall will need parking space.	See Page 93. Concept revised.
Open House - Brooks Street & E. Jones Avenue Board	
Affordable Housing? Percentage dedicated to affordable housing.	Pages 28-30 and 33 have been revised. See Action Item 3-16.
This will absolutely ruin our small town feel. I do not approve.	No revision.
Dumpsters (trash & recycling) for these businesses should be a top priority.	No revision. Comment has been provided to the Unified Development Ordinance project manager.
Pathway with outdoor seating for pedestrians	See Action Item 5-4.
Drive aisle could be designed to encourage non-vehicle traffic to use as cut through for pedestrians.	See Action Item 5-32.
Why do we need five story buildings downtown. Takes away from historic charm.	No revision. An immersive model was created in conjunction with the Downtown Plan to assist in understanding heights due to the topography.
Open House - 320 & 352 S. Franklin Street Board	
Do not like the multi family buildings. Five stories too tall, limit to three stories, just build one of these. Put a park in other space.	No revision. Multifamily is currently located on the site and an appropriate use Downtown.
Not in favor of dense housing conditions.	No revision. To support additional commercial uses in Downtown, additional residential units are needed. If property redevelops with multifamily, could develop differently than Plan concept and would have to meet UDO requirements.
You must mandate a minimum percentage of affordable units as a condition for approval of any multifamily project.	Pages 28-30 and 33 have been revised. See Action Item 3-13.
This is "affordable housing" We must create more close by to assist these and future residents.	Pages 28-30 and 33 have been revised. See Action Item 3-13.

Comment	Response
Wake Forest is not Raleigh, Cary, Durham, Charlotte, etc. Too many stories! Should be at most three stories.	See Action Item 5-17. There is significant topography in Wake Forest that can be advantageous to building design and height. Buildings taller than 3 stories in Downtown Wake Forest have been constructed. Depending on location, upper-floor step back may be appropriate. See Page 57.
NO! Do not make it denser. No parking decks. Let the trees grow.	No revision. To support additional commercial uses in Downtown, additional residential units are needed. If property redevelops with multifamily, could develop differently than Plan concept and would have to meet UDO requirements.
Density cant come at a cost of all the trees. Keep some mature tree line!	No revision. To support additional commercial uses in Downtown, additional residential units are needed. If property redevelops with multifamily, could develop differently than Plan concept and would have to meet UDO requirements.
Ensure large parcels have ped. connections across site and to adjacent sites.	No revision. Provided comment to Unified Development Ordinance project manager.
Open House - 508-534 S. White Street Board	
Any new or redevelopment should in corporate existing architectural details that are prevalent around downtown. The windows details, brick details, modern looking windows, should be discouraged. Make it look nice please.	See Action Items 5-13-5-17.
Trees along the street please.	No revision. Street trees were installed with the Town's streetscape project. See Action Item 5-39.
I like the plaza and the pedestrian connection through the site.	No revision.
Where are the trees?	See Action Item 5-39. Street trees were installed with the Town's streetscape project.
Open House - 310-352 S White Street Board	
Great opportunities to activate gaps in the street wall and provide more opportunity for retailers and residents to support downtown.	No revision.

Comment	Response
Where will people park??	See Action Item 4-1. The Plan recommends any future development incorporate parking in their design to accommodate on-site parking demand. Funding the parking deck near SunTrust was approved in the 2022 Bond Referendum.
New Buildings should look historic.	No revision. New buildings should be compatible and complementary, but do not need to look historic, since they are not historic.
Open House - Tell Us What You Think Board	
Varied building heights for visual appeal	See Action Items 5-2 and 5-5.
Strongly support. Implement an annual vacancy fee for property owners in downtown area.	See Action Item 3-8. Staff will continue to research options to discourage vacant buildings.
more local own dining	See Action Items 3-18 and 3-19.
Look at what Concord, NC doing to Union Street	No revision.
Please close Brick Street Crossing. Thanks	No revision. Intersection is outside of Downtown Plan scope.
Dedicated affordable housing across all residential development. Dedicated percent (7.5%-10% for example.)	Pages 28-30 and 33 have been revised. See Action Item 3-16.
Focus on the walkability of White Street. Wait-Elm	See Action Items 4-13-4-16.
Pedestrian, sidewalks, bike lanes, outdoor dinning, public art, green space. This is the charm of Wake Forest	See Action Items 4-13-4-16, 5-46, and 5-60-5-66.
Concerned about 1)increased traffic 2)noise 3)losing town character	One of the Plan's goals is to Preserve Historic Charm. The Action Matrix on Pages 104-109 enumerate which action items align with that goal. Also, see Action Item 3-21.
Five story buildings and density apartments destroy the charm of Wake Forest Keep open spaces and low buildings.	See Action Items 5-2 and 5-17.
Parking with the mobility hub including overnight/long term parking	See Action Item 4-1. Funding the parking deck near SunTrust was approved in the 2022 Bond Referendum.
In terms of new/planned developments (specifically retail/dining) try to pursue tenants that will be functional/provide a useful service new restaurants (local not chains, financial services, legal offices. etc.)	See Action Items 3-18 and 3-19.

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Comment	Response
Roundabouts are amazing. More of them.	No revision. Roundabouts can be explored with roadway projects.
All looks good, start w/a parking garage (hopefully free space)	See Action Item 4-1. Funding the parking deck near SunTrust was approved in the 2022 Bond Referendum.
When I invite others to downtown Wake Forest, we cant really do anything with a lot of the downtown tenants.	See Action Items 3-18 and 3-19.
Prior to adoption need a traffic analysis of the impact on the community	See Action Item 3-21.
More Sidewalk dining restaurants	See Action Item 5-46.
Shopping	See Action Items 3-18 and 3-19.
Avoid buildings higher than three stories. Drive-up drop off in front of transit hub. The challenge is to mix new with old esthetically. (not all old buildings are pretty) Maximize retail opportunity.	See Action Items 3-18 , 3-19, and 5-2.
Require new buildings or additions to keep the external character of the historic district	See Action Item 3-4.
Incorporate outdoor dining spaces on White Street and outdoor spaces in general (e.g. pocket parks)	See Action Item 5-46.
Don’t let existing downtown buildings decay from owners lack of care	See Action Item 3-8.
Bike lanes and pedestrian lanes (not combined)	See Page 76. Plan proposes to include a dedicated bike lane on portions of Elm Ave. and Brooks Street.
Ensure to as great extent as possible that traffic to all schools is not made impossible by these traffic changes	See Action Item 3-21.
A nice well thought-out plan. Parking is issue in each area. Hoping you will keep the historic flavor and charm and do very little damage to existing business and structures on White Street.	Se Action Item 4-1.
Love the 3D model! Can we require developers in the downtown area to submit renderings to the model for review character feel?	No revision. Comment has been provided to Unified Development Ordinance project manager.
Good start- looking forward to seeing how you incorporate our feedback!	No revision.
I would really like to see encouragement of green spaces and a better (Japanese-like) areas including roof top gardens and green walls.	See Action Items 5-39 and 5-41.

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Comment	Response
Dedicated bike lane on White	No revision. The right-of-way is not adequate to accommodate a dedicated bike lane on S. White Street. However, a bike lane is proposed on portions of Elm Ave. and Brooks St.
More pedestrian bike friendly from greenway. More family restaurants/bars	See Action Item 4-8.
Do any of the consultants/developers for this live in Wake Forest? I doubt it	No revision.
The massive of block long five story building in completely inconsistent with the existing Downtown and overwhelms the history and charm of this town	See Action Items 5-1-5-5, 5-10, 5-16, and 5-17.
Would love a dog park area near a bar/coffee place (similar to Cary's new dog park.)	No revision. Comment has been provided to the Parks, Recreation, and Cultural Resourced Department.
Need more focus on type of businesses you want to attract restaurants (sit-down) retail etc.	See Action Items 3-18 and 3-19.
Good-transit system Building-max 3 stories. Integrity of architecture maintained especially White street but all downtown.	See Action Items 5-2, 5-5, and 5-10.
More green space. More three story building. More trees. Less residential, more businesses. Example architecture are terrible designs	See Action Items 5-2, 5-5, and 5-10.
Thank you for allowing the public the opportunity to provide input. Please make sure you plant native trees and plants everywhere possible. We want to have as much shade as possible.	See Action Items 5-39.
Disagree w/ making White, Brooks, etc. one-way.	No revision.
Cultural events that support diversity, equity	See Action Item 5-69.
More murals	See Action Items 5-63 and 5-64.
Keep building (new) 3-4 floors max within historic area with "old" look	See Action Items 5-2, 5-5, and 5-10.
Include shaded seating areas	See Action Item 5-4.
Include areas to gather	See Action Item 5-4.
Make White street one way to allow for more ped/bike and add interdistrict transportation (connecting neighborhoods)	See Action Item 4-8.

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Comment	Response
Small gardens/pollinator gardens	See Action Item 5-4 and 5-39.
The 2 acre forested patch near the senior center should remain as a park or forest maybe passive recreation.	No revision. Comment has been provided to the Parks, Recreation, and Cultural Resourced Department.
No to five stories!	See Action Items 5-2, 5-5, and 5-10.
Big concern: Affordability. I moved here because of that. I worry we price out many potential buyers who add to the diversity and character and culture of our town. Please consider the ways to not price out existing and future neighbors.	Pages 28-30 and 33 have been revised. See Action Item 3-16.
Open House - Comment Cards	
Excellent, well-done report! Information is very interesting and useful. Great look and very consistent formatting.	No revision.
PDF format would be preferable to me. Easier to download and print and work offline. I prefer to highlight and write my notes in the margins.	Plan will be converted into Flipping Book.
Need to solve the "last mile" problem on BOTH ENDS. Home>train> office and back!	See Action Item 4-7. Go Wake Forest launched on October 1.
All data for charts and statistics are a bit stale. Wake Forest housing and demographics appear to be from 2021. The town's demographics and housing situations have changed quite a bit recently.	No revision. The most current data available was used when that phase of the Plan was completed.
Pages 4-5 links to the references studies would be helpful. For example, a reference is made to the NCDOT mobility study. Maybe provide a link to that study? Click Here	Links added.
Parking! Seems adequately addressed in both the Wake Forest and NCDOT reports. More parking is a must, unfortunately, and must be near the station/downtown WF. Parking is already needed for the downtown businesses as it is.	See Action Item 4-1. Funding the parking deck near SunTrust was approved in the 2022 Bond Referendum.

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Comment	Response
Closing streets will further divided the "White Street" side from the "non-White Street" side. Closing streets will create hardships on non-vehicular traffic especially. Need MORE non-vehicular crossings than are shown to be planned. This is mentioned as a "Potential Challenge" on page 46 (for downtown WF and many other placed in the NCDOT study) Click Here	The S-line project requires Elm to be closed between S. White Street and Railroad Street (railroad tracks); a grade separated pedestrian crossing is proposed.
Also, there will be more temptation by pedestrians to cross the tracks, rather than walk the extra distance, creating a safety issue.	No revision. Comment provided to NCDOT rail project manager.
The 1/4 mile "walk sheds" mentioned in the NCDOT report are very misleading. I may live 1/4 mile from the station as the crow flies, but closing/moving pedestrian crossings can easily double that distance.	No revision. Comment provided to NCDOT rail project manager.
Environmental Impact Statements: diesel exhaust for trains loading and unloading, noise abatement, locomotion, track improvements…	No revision. Comment provided to NCDOT rail project manager.
Businesses need to stay open later in the evenings. Food desert in the evenings. Grocery store to pick up milk while walking home.	See Action Items 3-18 and 3-19.
Coffee shop(s), bistro, coffee and dessert in evenings	See Action Items 3-18 and 3-19.
Pedestrian walkway along RR ROW?	No revision. Comment provided to NCDOT rail project manager.
Diagonal parking (Elm Street, "wide", etc.)	See Page 76. Plan proposes to include parallel parking on portions of Elm Ave. and Brooks Street.
Avoid Public Art (separate committee), but leave spaces for the art in the future.	See Action Items 5-60-5-66.
Move Chamber of Commerce out of downtown	No revision.
Effect of frequent and high-speed trains on old downtown buildings	No revision. Comment provided to NCDOT rail project manager.
Reasonably priced parking. Needs to be cost effective to ride the train. Monthly stickers and parking. If I have to get in my car, go to WF, and pay too much to park, I may as well just drive to Raleigh.	No revision. Comment provided to NCDOT rail project manager (train) and Town staff (parking)
Rules regarding skates, skateboards, scooters, ebikes, etc. might need to be revised.	No revision. Comment provided to Town staff.

Comment	Response
Page 42 of the Downtown Plan for WF shows dotted lines as "extensions". Will this be for non-vehicular traffic or will roads be put in as well.	Those connections were also proposed vehicular connections to assist in creating more pedestrian friendly, walkable blocks.
Separate, non-flammable building for ebikes, scooters, etc. to look up. Must be separated and detached from other buildings. Beware of Lithium batteries and fire potential!	No revision. Comment provided to NCDOT rail project manager.
People "trickle" into train stations but "flow" off when the train arrives. Be certain that you account for this in entrances, exits, and waiting areas.	No revision. Comment provided to NCDOT rail project manager.
Waiting areas outside the station should at minimum be covered. Possibly covered, with skylights for openness.	No revision. Comment provided to NCDOT rail project manager.
Bike amenities (wrench and air pump station) need to be at or near the station. The one by the water town right now might as well be invisible.	No revision. Comment provided to NCDOT rail project manager.
Welch (?) building (warehouse next to Loading Dock) is shown on maps as "vacant", but is currently open.	No revision. The map was a point in time and no Certificates of Occupancies issued.
All landscape plantings must be native to our area (Redbuds, willow oaks, etc.)	See Action Items 5-38 to 5-41.
Less grass, more native perennials.	See Action Items 5-38 to 5-41.
The jarring shock of leaving the downtown area, crossing the tracks into dark neighborhoods: maybe incorporate S. Main down to E. Holding as part of the study.	See Action Item 4-8.
Current resident at Retreat at Renaissance. I understand the desire to increase population density to support increased retail, however this plan (if implemented) drastically changes the nature of life and surrounds of current WF, in a direction not to my liking. I wonder what other downtown residents think?	No revision. There have been several engagement opportunities in the planning process. The open houses were an opportunity for community feedback and input. One of our outreach notification methods was to mail postcards to everyone address in the Town of Wake Forest to notify the public about the open houses.
Would like to see Downtown WF keep its suburban feel. Not too cramped with Multi-purposed buildings or cookie cutter architecture that gives the feeling of too much uniformity. Keep it more in line with the current homey ambiance!	See Action Items 5-1-5-5, 5-10, 5-16, and 5-17.

Comment	Response
Being new, always experience cross traffic at Elm & Brooks challenging. I understand the proximity to the RR Xing, but, perhaps more visible, prominent signage indicating cross traffic does not stop would help, or a caution light for Elm & blink red for Brooks?	See Action Items 4-14-4-16.
I'm excited for proposed changes but it feels unclear how we ensure adequate or increased density in parking. For example to maintain consistent streetwall, parking will be lost. I don't see how or where that is taken into account in other posters, or if new high density residential parking might also be open to the public.	See Action Item 4-1. Funding the parking deck near SunTrust was approved in the 2022 Bond Referendum.
I'd like to see more green areas with native plants and trees. Gardens. Pollinator gardens. Mature trees. Seating Areas	See Action Items 5-4 and 5-39.
We need a local historic district for downtown to protect the buildings from neglect! No façade grants for owners of empty buildings without a lease. Make alley from bank lot-->Jones outdoor walkway with seating. Add dumpsters for businesses on St. White between Jones & Owen	See Action Item 3-3, 3-9, and 5-32.
I would love if green stormwater infrastructure is included in the streetscape plans. Currently Downtown is exempt from stormwater infrastructure, but providing green stormwater infrastructure will help attenuate the volume of stormwater while providing aesthetic appeal/value. it would also provide educational opportunities if we installed a placard explaining what the device is/does.	See Action Items 3-20 and 5-41.
Is there a plan in place to secure the community when railways are activities for general transportation?	No revision. Comment provided to NCDOT rail project manager.
Email Comments	

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Comment	Response
What are the five most significant changes from the existing Downtown Plan that the draft plan proposes? The draft is a long document knowing what is significant allows one to focus on what is different from the current plan e.g. The potential S-Line train.	The current Renaissance Plan was adopted in 2017. In a rapidly growing community, like Wake Forest, it is ideal to update your plans every 5-10 years. One major factor in updating the Renaissance Plan was to impact the S-Line would have on Downtown and to plan for that catalytic project in Downtown Wake Forest. The Action Items provide a roadmap to achieve the type of Downtown envisioned by the community.
Identify other cities that WF might use as a template for how a successful implementation of the Downtown Plan might look like. Pictures of images of other existing downtown success will help people visualize the potential and perhaps a visit to learn from their efforts.	Throughout the engagement process, staff heard that Wake Forest is unique and they did not want to be "anywhere" USA. However, staff can discuss if we should identify cities to use as a template for implementation comparison. There are a myriad of variables that differentiate municipalities and could affect implementation so this task is more difficult than it appears on the surface.

Comment	Response
The most significant comment deals with the issue of the proposed scale of new development. As proposed new development outside the Historic District and existing residential recommends development up to five and six stories which I believe is not appreciate for several reasons. -Given the existing ownership pattern and the difficulty of assembling properties, actually achieving the potential height is remote. However, every property owner will value their property assuming it will redevelop at that height. This unrealistic expectation becomes a constrain on redevelopment. -The higher number of stories is not necessary for redevelopment to occur or for a successful downtown. Other cities have created great downtowns with lower height limits e.g. Boulder CO 55', Palo Alto CA 50', Scottsdale AZ normally 50', even San Francisco outside the financial district is 50'. I am doing this from memory so the limits need to be checked but the scale of three and four story buildings is right. -If several five/six story buildings might happen downtown I believe it would totally change the character of the downtown that the vision statement talked about and the community wants. Instead of massing blocks insert actual 5/6 story buildings from the Raleigh area to the video to give a better representation to the visual impact.	The current UDO allows for 6 story development by right, except for S. White St. between Elm and Roosevelt. The Town is not requiring developers to build up to 6 stories. However, the draft Plan does provide guidance on minimum heights and upper floor step backs to minimize impacts along the street and ensure consistent street walls. It is also important to note that the downtowns mentioned (Boulder, Palo Alto, San Francisco) have a significantly larger geographical area than Wake Forest's downtown area. To ensure the commercial uses that the community noted were desired, additional residential uses are needed in Downtown, and those residential uses could be achieved in buildings up to 6 stories.

Comment	Response
The appropriate size/boundaries of the Downtown Plan should include the area north of Wait Ave and south of Holding Street. This is a more accurate planning area to reflect the actual downtown uses and appropriately guides any redevelopment that might occur. The larger size also reflects the longer time frame of the plan.	The Downtown Plan boundary was evaluated and discussed in detail. The previous Renaissance Plan boundary was too large and encompassed areas that weren't characteristic of a dense and walkable commercial core. To the north of E. Roosevelt Avenue/Wait Avenue is the Northeast neighborhood. The Downtown Plan speaks to ensure interconnections between adjacent neighborhoods, but does not need to extend into the Northeast neighborhood. E. Holding Avenue is the southern boundary since this is the area where it begins to feel like you are entering "Downtown" and the commercial core. Furthermore, the S-Line will realign E. Holding Avenue and this will become a major roadway into Downtown, not Elm Avenue.
Within the Opportunity Sites identify the proposed role of WF government in supporting development or redevelopment e.g. providing common public parking, joint ventures with a property owner and/or developer etc.	See Action Items 3-12, 3-18, 3-19, and 4-1. The Plan intentionally does not specific partners. Those will be identified as projects are identified through the CIP and budgeting process. Since specific private development hasn't been proposed, staff cannot review them to determine if there is a public purpose.
If the recommendation remains for 5/6 story buildings there should be an analysis of the traffic and parking impact on downtown and surrounding neighborhoods. Analysis should be done prior to plan adoption of the increased traffic generated and parking needs assuming a mix of building heights.	See Action Item 3-21.
Preserve and protect the existing historic district if necessary consider TDRs or other incentives. Support existing buildings to upgrade the appearance through incentives.	See Action Item 3-3.
New development and redevelopment should be supportive but not try to duplicate/copy the existing historic buildings. The emphasizes should be on good urban design, scale, and interesting architecture that complements the Historic District.	See Action Item 3-4.

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Comment	Response
Encourage retail and commercial development throughout the downtown. Don't focus on a retail extension of White Street. The pedestrian distance of White Street from Wait to Holding is too long (a good rule of thumb is 1/4 mile) from that. Require first floor retail design (not require retail) on selected streets.	See Action Items 3-18 and 3-19. Nonresidential uses are encouraged throughout Downtown. However, we anticipate that a concentration of commercial will be located on S. White Street at the intersection of Elm Ave. and Brooks St.
Recommend created a developers guide to Downtown Wake Forest development that includes the relevant land uses and urban design provisions of the new UDO.	Once the UDO is adopted and effective, staff and evaluate if this is necessary. Generally, staff has found that the fewer documents developers and businesses need to reference is beneficial and leads to fewer errors if a document isn't updated in a timely manner.
Prepare a 5 year implementation plan for projects and actions including any Town financial requirements that would be needed in achieving the Downtown Plan.	When Plans are adopted, staff references those plans to develop and recommend projects to be included in the Town's Capital Improvements Plan (CIP) for Board of Commissioners consideration. Once the Downtown Plan is adopted, any short- and mid-term projects will be proposed in future CIP and budget years.
Finally, recommend staff, on a regular bases, give a public update to the Town Council and community on the progress of achieving the plan. Make sure it is not a plan that looks pretty, but one that makes positive change.	Planning staff tracks our Comprehensive Plan goals and once the Downtown Plan is adopted, will add all Action Items to our tracking mechanism to ensure the Plan is being implemented.

ORDINANCE 2024-XXX

ORDINANCE OF THE BOARD OF COMMISSIONERS OF THE TOWN OF WAKE FOREST TO ADOPT THE DOWNTOWN PLAN (CPA-24-02)

WHEREAS, the Town of Wake Forest has grown significantly since the adoption of the 2017 Renaissance Plan for Downtown Wake Forest; and

WHEREAS, adoption of the Downtown Plan will offer guidance on a long-term vision for the Town to implement over the next 10-20 years; and

WHEREAS, the Town has conducted an 18-month planning process that has engaged thousands of community members; and

WHEREAS, the planning process led to the development of policy recommendations and an action matrix found within the Downtown Plan; and

WHEREAS, the application submitted by the Town of Wake Forest to update the Downtown Plan was duly filed with the Planning Department; and

WHEREAS, the Planning Board held a public comment session on October 8, 2024 and the Board of Commissioners held a public hearing on November 19, 2024; and

WHEREAS, a print ad was published in a paper of general circulation for the public hearing pursuant with G.S. § 160D-602 and the Unified Development Ordinance; and

WHEREAS, the Planning Board at their October 8, 2024 meeting voted unanimously to recommend approval of said application to adopt the Downtown Plan; and

NOW, THEREFORE, BE IT ORDAINED BY THE BOARD OF COMMISSIONERS OF THE TOWN OF WAKE FOREST:

Section 1. Adopts the 2024 Downtown Plan (Exhibit 1) with the following changes:

- Remove Action Items 4-15 and 4-16, which are duplicated in 5-49 and 5-50.
- Add new Action Item: Implement road diets on Elm Avenue and Brooks Street.
- Renumber Action Items as needed.

Section 2. Repeals the 2017 Renaissance Plan for Downtown Wake Forest.

Section 3. Deems the 2024 Downtown Plan effective immediately upon adoption.

Adopted and effective this 19th day of November, 2024.

_____

Vivian A. Jones
Mayor

ATTEST:

_____

Theresa Savary
Town Clerk

APPROVED AS TO FORM:

_____

Hassan Kingsberry
Town Attorney

Board of Commissioners Agenda Item Report

Agenda Item No.: 2024-345-
Submitted by: Terry Savary
Submitting Department: Administration
Meeting Date: November 19, 2024

SUBJECT
Public Comment: If anyone would like to address the Board of Commissioners on an item other than a public hearing item during the time of public comment, please sign up with the Town Clerk prior to the meeting. Each speaker is asked to limit comments to 3 minutes. Please provide the clerk with copies of any handouts you have for the Board. Although the Board is interested in hearing your concerns, speakers should not expect Board action or deliberation on subject matter brought up during the Public Comment segment. Topics requiring further investigation will be referred to the appropriate Town Staff and may be scheduled for a future agenda. Thank you for your consideration of the Board of Commissioners, staff and other speakers.

Recommendation:

Item Summary:

ATTACHMENTS

-

Board of Commissioners Agenda Item Report

Agenda Item No.: 2024-311-
Submitted by: Terry Savary
Submitting Department: Administration
Meeting Date: November 19, 2024

SUBJECT
Approval of a Resolution Prohibiting Viewing of Pornography on Town Networks and Devices

Recommendation:

Item Summary:

ATTACHMENTS
- Resolution2024-XX_Pornography on Govt Devices policy_Nov202419.docx

RESOLUTION 2024-XX

A RESOLUTION PROHIBITING VIEWING OF PORNOGRAPHY ON TOWN NETWORKS AND DEVICES

WHEREAS, NCGS 143-805 requires affirmative action by municipalities to prohibit viewing of pornography on town networks and devices,

NOW, THEREFORE, BE IT RESOLVED that the following policies shall apply in the Town of Wake Forest:

1. No employee of the Town of Wake Forest shall view pornography on any computer network owned, leased, maintained, or otherwise controlled by the Town, whether on a device controlled by the Town or on a privately owned, leased, maintained, or otherwise controlled device.
2. No employee, elected official, or appointee of the Town shall view pornography on a device owned, leased, maintained, or otherwise controlled by the Town.
3. Paragraphs 1, 2, and 6 shall not apply to a police officer if the use falls under the provisions of NCGS 143-805(d), but shall follow the recommendations for appropriate viewing of pornography issued by the State Chief Information Officer under NCGS 143- 805(d)
4. Annually, no later than August 1 and in the format required by the State Chief Information Officer, the Town Clerk shall report information to the State Chief Information Officer on the number of incidences of unauthorized viewing or attempted viewing of pornography on the Town's network.
5. The terms used herein shall be defined as set forth in NCGS 143-805(g).
6. Any employee, elected official, or appointee of the Town who has saved pornography to a device owned, leased, maintained, or otherwise controlled by the Town shall remove, delete, or uninstall the pornography no later than January 1, 2025.
7. Any employee of the Town who becomes aware of a violation of any provision of this policy shall report the violation to the Human Resources Director. If the violation was by an appointee of the Board of Commissioners, the Human Resources Director shall report the violation to the Town Board unless the appointee first resigns from the position held.
8. Any employee of the Town who violates any provision of this policy shall be subject to disciplinary action under the Town's personnel policy.

9. Any appointee of the Town who violates any provision of this policy shall be subject to removal by the Town Board.

This resolution shall be in full force and effect upon its passage.

This the 19th day of November 2024.

_____

Vivian Jones, Mayor

ATTEST:

_____

Theresa Savary, Town Clerk

APPROVED AS TO FORM AND LEGAL SUFFICIENCY:

_____

Hassan T. Kingsberry, Town Attorney

Board of Commissioners Agenda Item Report

Agenda Item No.: 2024-320-
Submitted by: Terry Savary
Submitting Department: Administration
Meeting Date: November 19, 2024

SUBJECT
Approval of the 2025 Board of Commissioners Meeting Schedule

Recommendation:

Item Summary:

ATTACHMENTS
- Resolution2024-58, 2025TOWFBoardOfCommissionersMeetingSchedule_Nov202419.pdf

Town of Wake Forest
Resolution 2024–58
2025 Town of Wake Forest Board of Commissioners Meeting Schedule

WHEREAS, the Wake Forest Board of Commissioners exists to conduct the business of the citizens; and

WHEREAS, the Wake Forest Board of Commissioners meetings are held the first and third Tuesday of the month at 6:00 p.m. in the Wake Forest Town Hall Board Room, 301 S. Brooks Street, unless otherwise noted; and

WHEREAS, each meeting of the Wake Forest Board of Commissioners is open to the public, except as provided by NC GS 143-318.11; and

WHEREAS, the Wake Forest Board of Commissioners may amend the yearly meeting schedule in accordance with NC GS 143-318.12:

Town of Wake Forest
2025 Calendar
Board of Commissioners Meetings

Month	Meeting #1	Meeting #2
January	January 7, 2025	January 21, 2025
February	February 4, 2025	February 18, 2025
March	March 4, 2025	March 18, 2025
April	April 1, 2025	April 15, 2025
May	May 6, 2025	May 20, 2025
June	June 3, 2025	June 17, 2025
July	July 1, 2025	July 15, 2025
August	August 5, 2025	August 19, 2025
September	September 2, 2025	September 16, 2025
October	October 7, 2025	October 21, 2025
November	November 6, 2025*	November 18, 2025
December	December 2, 2025	December 16, 2025

Annual Retreat: January 17, 2025, 9:00 a.m. at the Wake Forest Renaissance Centre.

**During municipal elections, the work session is held on Thursday following the November election.*

NOW THEREFORE BE IT RESOLVED that the Wake Forest Board of Commissioners hereby adopts the 2025 Town of Wake Forest Board of Commissioners Meeting Schedule as presented.

Duly adopted this 19th day of November 2024 while in regular session.

ATTEST:

Vivian A. Jones, Mayor

Theresa Savary, Town Clerk

Board of Commissioners Agenda Item Report

Agenda Item No.: 2024-344-
Submitted by: Terry Savary
Submitting Department: Administration
Meeting Date: November 19, 2024

SUBJECT
Approval of Appointment to Citizen Advisory Boards

Recommendation:

Item Summary:

ATTACHMENTS
- RESOLUTION2025-XXX_Adv_Board_Appts-HPC.pdf
- RESOLUTION2025-XXX_Adv_Board_Appts-TAB.pdf
- RESOLUTION2025-XXX_Adv_Board_Appts-HRC.pdf
- RESOLUTION2025-XXX_Adv_Board_Appts-PRCR.pdf

RESOLUTION 2025 - XXX

ADVISORY BOARD/COMMISSION APPOINTMENTS
FOR THE TOWN OF WAKE FOREST, NORTH CAROLINA

NOW, THEREFORE, BE IT RESOLVED by the Board of Commissioners of the Town of Wake Forest, North Carolina, that the following persons be appointed to the following citizen advisory boards:

Historic Preservation Commission
Pamala Jeffries
(January 2025 – December 2027)

Duly resolved this 19th day of November 2024.

_____
Vivian A. Jones
Mayor

ATTEST:

_____
Theresa Savary
Town Clerk

RESOLUTION 2025 - XXX

ADVISORY BOARD/COUNCIL APPOINTMENTS
FOR THE TOWN OF WAKE FOREST, NORTH CAROLINA

NOW, THEREFORE, BE IT RESOLVED by the Board of Commissioners of the Town of Wake Forest, North Carolina, that the following persons be appointed to the following citizen advisory boards:

Technology Advisory Board
Philip Carter
(January 2025 – December 2027)

Ryan Holbrook
(January 2025 – December 2027)

Adam Compton
(January 2025 – December 2027)

Duly resolved this 19th day of November 2024.

_____
Vivian A. Jones
Mayor

ATTEST:

_____
Theresa Savary
Town Clerk

RESOLUTION 2025 - XXX

ADVISORY BOARD/COUNCIL APPOINTMENTS
FOR THE TOWN OF WAKE FOREST, NORTH CAROLINA

NOW, THEREFORE, BE IT RESOLVED by the Board of Commissioners of the Town of Wake Forest, North Carolina, that the following persons be appointed to the following citizen advisory boards:

Human Relations Council
Steve Schlossberg
(January 2025 – December 2027)

Joye Carter Rush
(January 2025 – December 2027)

Sydnei Holmes
(January 2025 – December 2027)

Diego Botti
(January 2025 – December 2027)

Duly resolved this 19th day of November 2024.

_____
Vivian A. Jones
Mayor

ATTEST:

_____
Theresa Savary
Town Clerk

RESOLUTION 2025 - XXX

ADVISORY BOARD/COMMISSION APPOINTMENTS
FOR THE TOWN OF WAKE FOREST, NORTH CAROLINA

NOW, THEREFORE, BE IT RESOLVED by the Board of Commissioners of the Town of Wake Forest, North Carolina, that the following persons be appointed to the following citizen advisory boards:

Parks, Recreation & Cultural Resources

Danny Hupp
(January 2025 – December 2027)

Sandy Thomason
(January 2025 – December 2027)

Christi Spencer
(January 2025 – December 2027)

Jack Everitt
(January 2025 – December 2027)

Janet Lowe
(January 2025 – December 2027)

Duly resolved this 19th day of November 2024.

_____
Vivian A. Jones
Mayor

ATTEST:

_____
Theresa Savary
Town Clerk

Board of Commissioners Agenda Item Report

Agenda Item No.: 2024-369-
Submitted by: Steven Meyer
Submitting Department: Engineering
Meeting Date: November 19, 2024

SUBJECT
Approval of Contract for the Construction of HL Miller Park Improvements

Recommendation:
Approval

Item Summary:

ATTACHMENTS

- Agenda Summary_11192024.pdf
- Attachment_A_Resolution_HL Miller Park Greenway Construction.docx
- Attachment_B_Greenway_Construction_Bid_0006-2024.pdf
- Attacment_C_Bid_Tab_HL_Miller_Park.pdf
- Attachment_D_HL Miller Park Bid Tabulation Certification.pdf

ITEM TITLE: Approval of the Resolution to award the H. L. Miller Park Greenway SP-24-01 construction contract.

ITEM SUMMARY: The Engineering Department put together a scope of work for the H. L. Miller Park Greenway with funding by the American Rescue Plan Act (ARPA). The scope was advertised on October 4th, 2024, and the bid opening was on October 23rd, 2024. The November 19th Board Meeting will include the resolution to authorize the Town Manager to award the bid.

ATTACHMENTS: Attachment_A_2024-xx Resolution

Attachment_B_Greenway_Construction_Bid_0006-2024

Attachment_C_Bid_Tab_HL_Miller_Park

Attachment_D_HL Miller Park Bid Tabulation Certification

RESOLUTION 2024-XX

RESOLUTION AUTHORIZING THE TOWN MANAGER TO EXECUTE ON BEHALF OF THE TOWN OF WAKE FOREST, THE CONTRACT FOR THE HL MILLER PARK GREENWAY CONSTRUCTION PROJECT, BID # 0006-2024 - H.L. MILLER PARK GREENWAY SP-24-01

WHEREAS, the Engineering Department posted a call for bids for a stream restoration and greenway trail improvements project as an opportunity to collect competitive bids for construction services as specified in the bid documents; and

WHEREAS, the Town of Wake Forest received American Rescue Plan Act Funding in 2021 to fund Stormwater Improvements; and

WHEREAS, consistent with the Town's purchasing policy, on October 4th, the Town published a Notice to Bidders inviting interested and qualified contractors to submit; and

WHEREAS, on October 23rd at 3:00pm the bid opening was closed, and Town had received a total of 3 submissions; and

WHEREAS, a bid tabulation was completed, and all bids were reviewed to confirm receipt of required bid documentation; and

WHEREAS, the lowest bidder was selected as the contractor to perform the park greenway construction and stream restoration; and

BE IT RESOLVED by the governing body of the Town of Wake Forest hereby authorizes the Town Manager to execute a contract with J. M. Thompson Company for the Bid #0006-2024 H. L. Miller Park Greenway.

Adopted and effective this the _____ day of _____ 2024.

_____

Vivian A. Jones, Mayor

ATTEST:

APPROVED AS TO FORM:

_____

Theresa Savary, Town Clerk

_____

Hassan Kingsberry, Town Attorney

Docusign Envelope ID: D4DC54E9-545B-4231-9D3B-4CE6B2B69330

PROPOSAL FORM

H.L. Miller Park Greenway SP-24-01

The undersigned bidder affirms and declares that he has carefully examined all bidding documents and Instructions to Bidders which are acknowledged to be a part of this proposal, and agrees to provide all labor, materials, equipment, supervision, permits; abide by all local, state and federal laws, rules, regulations, and ordinances applicable to perform the work listed in the specifications and scope of work for the following sum to wit:

TOTAL BASE BID – Lump Sum

Two Million Five Hundred Fifteen Thousand One Hundred Fifty-Six Dollars $ 2,515,156.00

TOTAL BASE ALTERNATE 1 – Lump Sum

Seven Hundred Fifty-nine Thousand Eight Hundred Ninety-five Dollars $ 759,895.00

Construction Duration is 270 Consecutive Calendar Days from the date the contractor elects to begin the work.

Address technical questions about the project to the Project Engineer: Project Engineer, Caleb Lowman, P.E. at caleb.lowman@kimley-horn.com

Written questions received up to 5 days prior to bid opening will receive a proper response.

ITEM 1- Scope of Project

Greenway from existing multi-use path at Northwest corner of Elm Ave and S Franklin St Intersection to existing sidewalk on Northwest Corner of S Taylor St and E Jones Ave intersection with connection trails within the park. Proposed stream restoration along Elm Ave and S Franklin St Intersection to existing culvert on Northwest Corner of S Taylor St and E Jones Ave intersection.

ITEM 2- Addendums

All addendums must be acknowledged in order for the proposal to be considered.

Addendum #1 ✓

Addendum #2 ✓

Addendum#3 ✓

The Town of Wake Forest intends to award a contract to the overall lowest responsible, responsive bidder taking into consideration quality, performance, and the time specified in this bid. The Town of Wake Forest reserves the right to reject or all proposals and to make the award as deemed in the best interest of the Town of Wake Forest.

All bidders MUST complete and submit with their bid the enclosed Non-Collusion Affidavit of Prime Bidder.

SIGNATURE PAGE

The undersigned certifies that they have read and understood all the provided bidding documents, the project specifications, and agree to the terms and conditions stated herein.

This bid must be signed by a responsible official of the bidding organization and notarized.

10.23.2024

Date

J.M. Thompson Company

Company

Authorized Signature

John Thompson, President

Printed Name and Title

P.O. Box 33066

Street Mailing Address

474

Contactor's NC License No.

(Seal)

J. M. THOMPSON CO. CORPORATE SEAL 1950 NORTH CAROLINA

56-0520742

Federal Identification #

jthompson@jmthompson.com

Email Address

Raleigh, NC 27636

City, State, Zip Code

919-851-1611

Telephone Number

On this day of Oct., 2024, before me John Thompson (name) appeared and, being duly sworn, did execute the foregoing proposal, and did so state that he/she was properly authorized by JM Thompson Company (name of company) to execute the proposal and did so on his/her free act and deed.

Notary Public Madeline Page Thompson My Commission Expires Sep. 14 2027 (SEAL)

MADELINE PAGE THOMPSON NOTARY PUBLIC My Commission Expires September 14, 2027 WAKE COUNTY, NC

SCHEDULE OF PRICES

PROJECT: **H.L. Miller Park Greenway SP-24-01**

COUNTY: **Wake County**

The low bidder shall be determined based on the lowest submitted bid amount for the items that comprise the base bid. Bid Alternate Items may be included on the bid sheet but shall not be considered as part of the base bid. Only after the low bidder is determined should bid alternate items be considered. The owner reserves the right to elect any Alternate or combination of Alternate items.

Line Item	Sec No	Pay Item	Quantity	Unit	Unit Price	Amount
1	800	Mobilization (5%)	1	LS	$ 107,252	$ 107,252
2	SP	Project Management Communication	2	EA	$2,161.00	$4,322
3	801	Construction Surveying	1	LS	$ 47,252	$ 47,252
4	226	Undercut Excavation	300	CY	$ 30.71	$ 9,214
5	226	Grading	1	LS	$ 141,317	$ 141,317
6	SP	Exploratory Excavation - Standard	10	HR	$ 206.72	$ 2067
7	SP	Exploratory Excavation - Vacuum	10	HR	$ 413.45	$ 4135
8	505	Shallow Undercut	150	CY	$ 30.71	$ 4607
9	240	Drainage Ditch Excavation	30	CY	$ 30.71	$ 921
10	265	Select Granular Material, Class III	200	CY	$ 53.15	$ 10,632
11	310	18" RC Pipe Culverts, Class IV	296	LF	$ 80.32	$ 23,777
12	401	Removal of Existing Structure (1)	1	EA	$ 11,813	$ 11,813
13	402	Removal of Existing Structure (2)	1	EA	$ 11,813	$ 11,813
14	403	Removal of Existing Structure (3)	1	EA	$ 11,813	$ 11,813
15	505	Geotextile for Soil Stabilization	450	SY	$ 4.13	$ 1861
16	505	Class IV Subgrade Stabilization	300	TON	$ 53.15	$ 15,947
17	520	Aggregate Base Course	600	TON	$ 82.69	$ 49,614
18	610	Asphalt Conc Surface Course, Type S9.5B	170	TON	$ 389.82	$ 66,271
19	620	Asphalt Binder for Plant Mix	15	TON	$ 945	$ 14,176
20	815	Subdrain Excavation	45	CY	$ 47.25	$ 2126

Addendum #3 _____

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Line Item	Sec No	Pay Item	Quantity	Unit	Unit Price	Amount
21	815	Geotextile for Subsurface Drains	200	SY	$ 6.49	$ 1299
22	815	Subdrain Coarse Aggregate	35	CY	$ 95.68	$ 3349
23	815	6" Perforated Subdrain Pipe	200	LF	$ 14.17	$ 2835
24	815	6" Outlet Pipe	6	LF	$ 778.47	$ 4671
25	815	Subdrain Pipe Outlet	1	EA	$ 142	$ 142
26	840	Masonry Drainage Structures	5	EA	$ 6,863	$ 34,317
27	840	Masonry Drainage Structures	8.3	LF	$ 368.56	$ 3,059
28	840	Frame with 2 Grates STD 840.24	4	EA	$ 727.68	$ 2,911
29	840	Frame with Cover STD 840.54	1	EA	$ 1271	$ 1271
30	846	2'-6" Concrete Curb & Gutter	80	LF	$ 94.50	$ ~~6143~~ 7560
31	848	4" Concrete Sidewalk	65	SY	$ 94.50	$ 6143
32	848	Concrete Curb Ramp (Multi-Use Path)	1	EA	$ 2953	$ 2953
33	858	Adjustment of Drop Inlets	1	EA	$ 1418	$ 1418
34	SP	Composite Wood Safety Fence	190	LF	$ 53.15	$ 10,100
35	876	Rip-Rap, Class I	67	TON	$ 67.33	$ 4511
36	876	Rip-Rap, Class B	95	TON	$ 66.15	$ 6284
37	876	Geotextile For Drainage	620	SY	$ 4.13	$ 2563
38	SP	Fixed Steel Bollard	6	EA	$ 1181.29	$ 7088
39	SP	Hinged Metal Bollard	3	EA	$ 1771.94	$ 5316
40	SP	Structure 1 (-L1- 14+90.00) Prefabricated Steel	1	LS	$ 283,511	$ 283,511
41	SP	Structure 1 (-L1- 15+45.00) Precast Concrete Boardwalk with Timber Railing	1	LS	$ 132,305	$ 132,305
42	SP	Structure 2 (-L1- 18+75.00) Precast Concrete Boardwalk with Timber Railing	1	LS	$ 581,197	$ 581,197
43	SP	R1 - Rules & Regulations Sign	2	EA	$ 5050	$ 10,100
44	SP	EM1 - Emergency Sign	2	EA	$ 4725	$ ~~14,176~~ 9450
45	SP	G1/G2 - Vehicular Sign Double Sided	3	EA 4725	$ ~~4488.52~~	$ ~~17,956~~ 14,176
46	SP	W1 - Clearance Warning Sign	4	~~4488~~	$ ~~4425.86~~	$ ~~8860~~ 17,956
47	SP	W2 - Slippery Warning Sign	2	EA	$ ~~4488.52~~ 4429.86	$ 8860

Docusign Envelope ID: D4DC54E9-545B-4231-9D3B-4CE6B2B69330

Line Item	Sec No	Pay Item	Quantity	Unit	Unit Price	Amount
48	SP	Supports, Aluminum	130	LF	$ 70,87	$ 9214
49	907	Disposal of Sign System, U-Channel	4	EA	$ 147,66	$ 591
50	907	Disposal of Sign System, Wood	2	EA	$ 147,66	$ 295
51	1150	Flagger	20	DAY	$ 1,831	$ 36,620
52	SP	Traffic Control	1	LS	$ 19,176	$ 19,176
53	1205	Thermoplastic Pavement Marking lines (4", 90 Mils)	70	LF	$ 41,34	$ 2894
54	SP	Fabric Insert Inlet Protection, Type 2	12	EA	$ 383,92	$ 4607
55	SP	Fabric Insert Inlet Protection Cleanout	12	EA	$ 129,94	$ 1559
56	SP	Mud Mats	185	LF	$ 236.25	$ 43,708
57	SP	Tree Protection (Safety) Fence	3000	LF	$ 3,54	$ 10,632
58	1515	6" Tapping Sleeve & Valve	1	EA	$ 7501	$ 7501
59	1515	Fire Hydrant	1	EA	$ 10853	$ 10,853
60	1515	Fire Hydrant Leg	10	LF	$ 144,11	$ 1441
61	1530	Remove Fire Hydrant	1	EA	$ 2126	$ 2126
62	1605	Temporary Silt Fence	1920	LF	$ 4,19	$ 8052
63	1610	Stone For Erosion Control, Class A	150	TON	$ 70,87	$ 10,632
64	1610	Sediment Control Stone	100	TON	$ 64,57	$ 6457
65	1615	Temporary Mulching	2.2	ACR	$ 1896	$ 4171
66	1620	Seed for Temporary Seeding	150	LB	$ 5,90	$ 886
67	1620	Fertilizer for Temporary Seeding	0.5	TON	$ 1299,88	$ 650
68	1631	Matting for Erosion Control	2000	SY	$ 2.56	$ 5316
69	1632	1/4" Hardware Cloth	250	LF	$ 7,08	$ 1772
70	1638	Stilling Basins	1	EA	$ 1772	$ 1772
71	1642	Wattle	1570	LF	$ 16,53	$ 25,965
72	1660	Seeding & Mulching	2.2	ACR	$ 5,096	$ 12,544
73	1660	Mowing	1.2	ACR	$ 413,46	$ 496
74	1661	Seed for Repair Seeding	13.5	LB	$ 5,90	$ 80
75	1661	Fertilizer for Repair Seeding	0.25	TON	$ 1299	$ 325

Line Item	Sec No	Pay Item	Quantity	Unit	Unit Price	Amount
76	1662	Seed for Supplemental Seeding	50	LB	$ 5,90	$ 80
77	1665	Fertilizer Topdressing	1	TON	$ 1299	$ 1299
78	SP	Concrete Washout Structure	3	EA	$ 885,57	$ 2,658
79	SP	Response for Erosion Control	20	EA	$ 236,25	$ 4725
80	SP	Temporary Stream Crossing	1	EA	$ 14,176	$ 14176
81	SP	Backless Bench	2	EA	$ 4134,53	$ 8269
82	SP	Bench with Back	4	EA	$ 5315,82	$ 21,263
83	SP	Pet Waste Station	4	EA	$ 679,24	$ 2717
84	SP	Waste and Recycle Receptacle	5	EA	$ 3543,80	$ 17,719
85	SP	Stream Restoration Grading	1	LS	$ 105 328	$ 105, 328
86	SP	Log J-Hook Vane	7	EA	$ 5380,8	$ 37,666
87	SP	Boulder Toe Protection	30	LF	$ 598,91	$ 17,968
88	SP	Rock Toe Protection	100	LF	$ 151,20	$ 15121
89	SP	Toe Wood Protection	130	LF	$ 163,019	$ 21,192
90	SP	Constructed Riffles	930	SF	$ 27.17	$ 25,268
91	SP	Rock And Roll Riffle	630	SF	$ 69,69	$ 43,909
92	SP	Step Pool Structure	330	SF	$ 92.14	$ 30,407
93	SP	Rock Cross Vane	2	EA	$ 5788,35	$ 11,577
94	SP	Tuck Behind Steps	1	LS	$ 46,07	$ 46,071
95	SP	Diversion/Pump Around Operation	1	LS	$ 21263	$ 21263
96	SP	Coir Fiber Matting	4200	SY	$ 7,08	$ 29769
97	SP	Temporary Seed And Mulch	2	AC	$ 9353	$ 18,707
98	SP	Soil Amendments	9700	SY	$ 1,477	$ 14,323
99	SP	Permanent Seeding (Riparian)	1	AC	$ 9687	$ 9687
100	SP	Permanent Seeding (Uplands)	0.1	AC	$ 4,181	$ 418
101	SP	Permanent Seeding (Wetland)	0.1	AC	$ 4561	$ 456
102	SP	Live Stakes	1430	EA	$ 3,83	$ 5450
103	SP	Herbaceous Plugs	720	EA	$ 4,43	$ 3190

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Line Item	Sec No	Pay Item	Quantity	Unit	Unit Price	Amount
104	SP	Containerized Plantings - 1-Gallon	90	EA	$ 25,39	$ 2286
105	SP	Containerized Plantings - 3-Gallon	180	EA	$ 244,52	$ 44,015
					TOTAL BID	$ 2,515,156

Line Item	Sec No	Pay Item	Quantity	Unit	Unit Price	Amount
106	PSP	Structure 1 (-L1- 15+45.00) Precast Concrete Boardwalk with Metal Railing	1	LS	$ 147,956	$ 147,956
107	PSP	Structure 2 (-L1- 18+75.00) Precast Concrete Boardwalk with Metal Railing	1	LS	$ 611,939	$ 611,939
					BID ALTERNATE 1	$ 759,895

NON-COLLUSION AFFIDAVIT OF PRIME BIDDER

attach to bid (required)

State of North Carolina)

County of Wake)

Project: H.L. Miller Park Greenway SP-24-01

John Thompson, being first duly sworn, deposes and says that:

1. He is (owner, partner, officer, representative or agent) of J.M. Thompson Company, the Bidder that has submitted the attached Bid;

2. He is fully informed respecting the preparation and contents of the attached bid and of all pertinent circumstances respecting such Bid;

3. Such Bid is genuine and is not a collusive or sham Bid;

4. Neither the said Bidder nor any of its officers, partners, owners, agents, representatives, employees or parties in interest, including this Affiant, has in any way colluded, conspired, connived or agreed, directly or indirectly, with any other Bidder, firm or person to submit a collusive or sham Bid in connection with the Contract for which the attached Bid has been submitted or to refrain from bidding in connection with such contract, or has in any manner, directly or indirectly, sought by agreement or collusion or communication or conference with any other Bidder, firm or person to fix the price or prices in the attached Bids of any other Bidder, or to fix any overhead, profit or cost element of the Bid price or the Bid price of any other Bidder, or to secure through any collusion, conspiracy, connivance or unlawful agreement any advantage against the Town of Wake Forest or any person interested in the proposed Contract; and

5. The price or prices quoted in the attached Bid are fair and proper and are not tainted by any collusion, conspiracy, connivance or unlawful agreement on the part of the Bidder or any of its agents, representatives, owners, employees or parties in interest, including this Affiant.

John Thompson	President
Name	Title

Subscribed and Sworn to before me this 22 Day of October, 20 24

Notary Public: Madeline Page Thompson (Seal)

My Commission Expires: Sep. 14 2027

MADELINE PAGE THOMPSON
My Commission Expires
NOTARY PUBLIC
September 14, 2027
WAKE COUNTY, NC

IDENTIFICATION OF MINORITY BUSINESS PARTICIPATION

Project: H. L. Miller Greenway - SP-24-01

I, J.M. Thompson Company
(Name of Bidder)

do hereby certify that on this project, we ***intend to*** use the following M/WBE firms as construction subcontractors, vendors, suppliers, or providers of professional services.

Minority Firm Name and Address	Minority Category*	Phone Number	Type of Work
State Contracting PO Box 1954 Wakeforest, NC 27560	DBE/WBE	9194532955	paving/concrete
Signcraft Solutions 4154 Sharon Farms #109 Wakeforest, NC 27587	WBE	919556-2672	signage

* Minority Categories: Black or African American (B), Hispanic (H), Asian American (A), American Indian (I), Female (F), and Socially and Economically Disadvantaged (D).

The total value of M/WBE firms contracting is proposedto be $ 132,128

The total percentage of M/WBE firms contracting is proposedto be .052 %

Identification of HUB Certified/ Minority Business Participation

I, J.M. Thompson Company,

(Name of Bidder)

do hereby certify that on this project, we will use the following HUB Certified/ minority business as construction subcontractors, vendors, suppliers or providers of professional services.

Firm Name, Address and Phone #	Work Type	Minority Category	HUB Certified (Y/N)	$ Amount
State Contracting P.O Box 1934 Wakeforest, NC	Paving Concrete	DBE / WBE	Y	111,880.00
Signcraft 4154 Sheroodforest #129 Wakeforest, NC 27587	Signage	WBE	Y	20,248.00

*Minority categories: Black, African American (**B**), Hispanic (**H**), Asian American (**A**) American Indian (**I**), Female (**F**) Socially and Economically Disadvantaged (**D**)

** HUB Certification with the state HUB Office required to be counted toward state participation goals.

The total value of minority business contracting will be ($)_$132,128 00

The total percentage of minority business contracting will be (%)__.
.052

Contract No.
County Wake County

DEBARMENT CERTIFICATION

Conditions for certification:

1. The prequalified bidder shall provide immediate written notice to the Department if at any time the bidder learns that his certification was erroneous when he submitted his debarment certification or explanation that is file with the Department, or has become erroneous because of changed circumstances.

2. The terms *covered transaction*, *debarred*, *suspended*, *ineligible*, *lower tier covered transaction*, *participant*, *person*, *primary covered transaction*, *principal*, *proposal*, and *voluntarily excluded*, as used in this provision, have the meanings set out in the Definitions and Coverage sections of the rules implementing Executive Order 12549. A copy of the Federal Rules requiring this certification and detailing the definitions and coverages may be obtained from the Contract Officer of the Department.

3. The prequalified bidder agrees by submitting this form, that he will not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in NCDOT contracts, unless authorized by the Department.

4. For Federal Aid projects, the prequalified bidder further agrees that by submitting this form he will include the Federal-Aid Provision titled *Required Contract Provisions Federal-Aid Construction Contract (Form FHWA PR 1273)* provided by the Department, without subsequent modification, in all lower tier covered transactions.

5. The prequalified bidder may rely upon a certification of a participant in a lower tier covered transaction that he is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless he knows that the certification is erroneous. The bidder may decide the method and frequency by which he will determine the eligibility of his subcontractors.

6. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this provision. The knowledge and information of a participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

7. Except as authorized in paragraph 6 herein, the Department may terminate any contract if the bidder knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available by the Federal Government.

Contract No.
County Wake County

DEBARMENT CERTIFICATION

The prequalified bidder certifies to the best of his knowledge and belief, that he and his principals:

a. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;

b. Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records; making false statements; or receiving stolen property;

c. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph b. of this certification; and

d. Have not within a three-year period preceding this proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

e. Will submit a revised Debarment Certification immediately if his status changes and will show in his bid proposal an explanation for the change in status.

If the prequalified bidder cannot certify that he is not debarred, he shall provide an explanation with this submittal. An explanation will not necessarily result in denial of participation in a contract.

Failure to submit a non-collusion affidavit and debarment certification will result in the prequalified bidder's bid being considered non-responsive.

☐ Check here if an explanation is attached to this certification.

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STATE OF NORTH CAROLINA
TOWN OF WAKE FOREST
RALEIGH, NC

BID BOND

Principal: J.M. Thompson Company
Name of Principal Contractor

Surety: Fidelity and Deposit Company of Maryland
Name of Surety

Contract Number: Bid #0006-2024- H.L. Miller Park Greenway SP-24-01 County: Wake

Date of Bid: October 23, 2024

KNOW ALL MEN BY THESE PRESENTS, That we, the PRINCIPAL CONTRACTOR (hereafter, PRINCIPAL) and SURETY above named, are held and firmly bound unto the **TOWN OF WAKE FOREST** in the full and just sum of five (5) percent of the total amount bid by the Principal for the project stated above, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, and successors, jointly and severally, firmly by these presents.

NOW, THEREFORE, the condition of this obligation is: the Principal shall not withdraw its bid within sixty (60) days after the opening of the bids, or within such other time period as may be provided in the proposal, and if the **TOWN OF WAKE FOREST** shall award a contract to the Principal, the Principal shall, within ten (10) calendar days after written notice of award is received by him, provide bonds with good and sufficient surety, as required for the faithful performance of the contract and for the protection of all persons supplying labor, material, and equipment for the prosecution of the work. In the event the Principal requests permission to withdraw his bid due to mistake in accordance with the provisions of Article 103-3 of the *Standard Specifications for Roads and Structures*, the conditions and obligations of this Bid Bond shall remain in full force and effect until the **TOWN OF WAKE FOREST** makes a final determination to either allow the bid to be withdrawn or to proceed with award of the contract. In the event a determination is made to award the contract, the Principal shall have ten (10) calendar days to comply with the requirements set forth above. In the event the Principal withdraws its bid after bids are opened except as provided in Article 103-3, or after award of the contract has been made fails to execute such additional documents as may be required and to provide the required bonds within the time period specified above, then the amount of the bid bond shall be immediately paid to the **TOWN OF WAKE FOREST** as liquidated damages.

IN TESTIMONY WHEREOF, the Principal and Surety have caused these presents to be duly signed and sealed.

This the 23rd day of October, 20 24

Fidelity and Deposit Company of Maryland
Surety

By
General Agent or Attorney-in-Fact Signature

Seal of Surety

Michelle S. Isola, Attorney-in-Fact
Print or type Signer's Name

ign Envelope ID: D4DC54E9-545B-4231-9D3B-4CE6B2B89330

Contract No. Bid #0006-2024- H.L. Miller Park Greenway SP-24-01 Rev. 8-28-23
County Wake

BID BOND

CORPORATION

SIGNATURE OF CONTRACTOR (Principal)

J.M. Thompson Company
Full name of Corporation

1002 E. Chatham Street, Cary, NC 27511
Address as prequalified

By
Signature of **President, Vice President, Assistant Vice President**
Select appropriate title

John Thompson
Print or type Signer's name

J. M. THOMPSON CO. CORPORATE SEAL 1950 NORTH CAROLINA
Affix Corporate Seal

Attest
Signature of **Secretary, Assistant Secretary**
Select appropriate title

Hal M. Thompson
Print or type Signer's name

Bond Number: Bid Bond

Obligee: Town of Wake Forest

ZURICH AMERICAN INSURANCE COMPANY
COLONIAL AMERICAN CASUALTY AND SURETY COMPANY
FIDELITY AND DEPOSIT COMPANY OF MARYLAND
POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS: That the ZURICH AMERICAN INSURANCE COMPANY, a corporation of the State of New York, the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, a corporation of the State of Illinois, and the FIDELITY AND DEPOSIT COMPANY OF MARYLAND a corporation of the State of Illinois (herein collectively called the "Companies"), by Robert D. Murray, Vice President, in pursuance of authority granted by Article V, Section 8, of the By-Laws of said Companies, which are set forth on the reverse side hereof and are hereby certified to be in full force and effect on the date hereof, do hereby nominate, constitute, and appoint **Michelle S Isola**, its true and lawful agent and Attorney-in-Fact, to make, execute, seal and deliver, for, and on its behalf as surety, and as its act and deed: **any and all bonds and undertakings,** and the execution of such bonds or undertakings in pursuance of these presents, shall be as binding upon said Companies, as fully and amply, to all intents and purposes, as if they had been duly executed and acknowledged by the regularly elected officers of the ZURICH AMERICAN INSURANCE COMPANY at its office in New York, New York., the regularly elected officers of the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY at its office in Owings Mills, Maryland., and the regularly elected officers of the FIDELITY AND DEPOSIT COMPANY OF MARYLAND at its office in Owings Mills, Maryland., in their own proper persons.

The said Vice President does hereby certify that the extract set forth on the reverse side hereof is a true copy of Article V, Section 8, of the By-Laws of said Companies, and is now in force.

IN WITNESS WHEREOF, the said Vice-President has hereunto subscribed his/her names and affixed the Corporate Seals of the said **ZURICH AMERICAN INSURANCE COMPANY, COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, and FIDELITY AND DEPOSIT COMPANY OF MARYLAND**, this 10th day of October, A.D. 2023.

Colonial American Casualty and Surety Company CORPORATE SEAL
Zurich American Insurance Company CORPORATE SEAL 1972 NEW YORK
Fidelity and Deposit Company of Maryland CORPORATE SEAL 1890

ATTEST:
ZURICH AMERICAN INSURANCE COMPANY
COLONIAL AMERICAN CASUALTY AND SURETY COMPANY
FIDELITY AND DEPOSIT COMPANY OF MARYLAND

By: Robert D. Murray
Vice President

By: Dawn E. Brown
Secretary

State of Maryland
County of Baltimore

On this 10th day of October, A.D. 2023, before the subscriber, a Notary Public of the State of Maryland, duly commissioned and qualified, **Robert D. Murray, Vice President and Dawn E. Brown, Secretary** of the Companies, to me personally known to be the individuals and officers described in and who executed the preceding instrument, and acknowledged the execution of same, and being by me duly sworn, deposeth and saith, that he/she is the said officer of the Company aforesaid, and that the seals affixed to the preceding instrument are the Corporate Seals of said Companies, and that the said Corporate Seals and the signature as such officer were duly affixed and subscribed to the said instrument by the authority and direction of the said Corporations.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my Official Seal the day and year first above written.

Genevieve M. Maison

GENEVIEVE M. MAISON
NOTARY PUBLIC
BALTIMORE COUNTY, MD
My Commission Expires JANUARY 27, 2025

GENEVIEVE M. MAISON NOTARY PUBLIC BALTIMORE COUNTY, MD 01/27/2025

Authenticity of this bond can be confirmed at bondvalidator.zurichna.com or 410-559-8790

EXTRACT FROM BY-LAWS OF THE COMPANIES

"Article V, Section 8, Attorneys-in-Fact. The Chief Executive Officer, the President, or any Executive Vice President or Vice President may, by written instrument under the attested corporate seal, appoint attorneys-in-fact with authority to execute bonds, policies, recognizances, stipulations, undertakings, or other like instruments on behalf of the Company, and may authorize any officer or any such attorney-in-fact to affix the corporate seal thereto; and may with or without cause modify of revoke any such appointment or authority at any time."

CERTIFICATE

I, the undersigned, Vice President of the ZURICH AMERICAN INSURANCE COMPANY, the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, and the FIDELITY AND DEPOSIT COMPANY OF MARYLAND, do hereby certify that the foregoing Power of Attorney is still in full force and effect on the date of this certificate; and I do further certify that Article V, Section 8, of the By-Laws of the Companies is still in force.

This Power of Attorney and Certificate may be signed by facsimile under and by authority of the following resolution of the Board of Directors of the ZURICH AMERICAN INSURANCE COMPANY at a meeting duly called and held on the 15th day of December 1998.

RESOLVED: "That the signature of the President or a Vice President and the attesting signature of a Secretary or an Assistant Secretary and the Seal of the Company may be affixed by facsimile on any Power of Attorney...Any such Power or any certificate thereof bearing such facsimile signature and seal shall be valid and binding on the Company."

This Power of Attorney and Certificate may be signed by facsimile under and by authority of the following resolution of the Board of Directors of the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY at a meeting duly called and held on the 5th day of May, 1994, and the following resolution of the Board of Directors of the FIDELITY AND DEPOSIT COMPANY OF MARYLAND at a meeting duly called and held on the 10th day of May, 1990.

RESOLVED: "That the facsimile or mechanically reproduced seal of the company and facsimile or mechanically reproduced signature of any Vice-President, Secretary, or Assistant Secretary of the Company, whether made heretofore or hereafter, wherever appearing upon a certified copy of any power of attorney issued by the Company, shall be valid and binding upon the Company with the same force and effect as though manually affixed.

IN TESTIMONY WHEREOF, I have hereunto subscribed my name and affixed the corporate seals of the said Companies, this 23rd day of October, 2024.

By: Mary Jean Pethick
Vice President

TO REPORT A CLAIM WITH REGARD TO A SURETY BOND, PLEASE SUBMIT A COMPLETE DESCRIPTION OF THE CLAIM INCLUDING THE PRINCIPAL ON THE BOND, THE BOND NUMBER, AND YOUR CONTACT INFORMATION TO:

Zurich Surety Claims
1299 Zurich Way
Schaumburg, IL 60196-1056
reportsfclaims@zurichna.com
800-626-4577

Authenticity of this bond can be confirmed at bondvalidator.zurichna.com or 410-559-8790

NCDOR
Web-Fill
7-18

E-589CI
Affidavit of Capital Improvement

Form E-589CI, Affidavit of Capital Improvement, may be used to substantiate that a contract, or a portion of work to be performed to fulfill a contract, is to be taxed for sales and use tax purposes, as a real property contract for a capital improvement to real property.

The receipt of an affidavit of capital improvement for services to real property, absent fraud or other egregious activities, establishes that the subcontractor or other person receiving the affidavit should treat the transaction as a real property contract for sales and use tax purposes.

A real property contract is a contract between a real property contractor and another person to perform a capital improvement to real property.

Section I. Single Use *(Complete this section to issue the affidavit for a single capital improvement.)*

(A) **Owner, Lessee/Tenant, or Real Property Contractor**

Address

City **State** **Zip Code**

(B) **Real Property Contractor** *(General Contractor or Subcontractor)* *Hired to perform capital improvement*

Address

City **State** **Zip Code**

Describe capital improvement to be performed:

Project Name

Project Address (where the work is to be performed) **City** **State** **Zip Code**

I certify that, to the best of my knowledge, this affidavit is accurate and complete and that the transaction described to be performed by the Real Property Contractor (General Contractor or Subcontractor identified in box "B") shall be treated as a real property contract for a capital improvement to real property for sales and use tax purposes. I understand that if it is determined that I issued this affidavit in error and the transaction is subject to sales tax as a retail sale of repair, maintenance, and installation services to real property, I will be liable for payment of any additional taxes determined to be due.

Signature of Authorized Person: _____ Title: _____ Date: _____

Section II. Blanket Use *(Complete this section to execute a blanket affidavit for capital improvements.)*

(C) **Real Property Contractor**

J.M. THOMPSON COMPANY

Address

1002 E. CHATHAM STREET

City **State** **Zip Code**

CARY NC 27511

(D) **Real Property Contractor or Subcontractor** *Hired to perform capital improvement*

Address

City **State** **Zip Code**

To be completed by the Real Property Contractor identified in Box C.

I certify that I am a Real Property Contractor who performs capital improvements to real property and all transactions with the real property contractor (subcontractor) identified in box "D" shall be treated as real property contracts for capital improvements to real property for sales and use tax purposes. I understand that if it is determined that I issued this affidavit in error and the transaction is subject to sales tax as a retail sale of repair, maintenance, and installation services to real property, I will be liable for payment of any additional taxes determined to be due.

Signature of Authorized Person: [signature] Title: PRESIDENT Date: 10/22/24

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Town of Wake Forest -AFFIDAVIT A – Listing of Good Faith Efforts

County of Wake

Affidavit of J.M. Thompson Company (Name of Bidder)

I have made a good faith effort to comply under the following areas checked:
Bidders must earn at least 50 points from the good faith efforts listed for their bid to be considered responsive. (1 NC Administrative Code 30 I.0101)

- ☒ **1 – (10 pts)** Contacted minority businesses that reasonably could have been expected to submit a quote and that were known to the contractor, or available on State or local government maintained lists, at least 10 days before the bid date and notified them of the nature and scope of the work to be performed.
- ☒ **2 --(10 pts)** Made the construction plans, specifications and requirements available for review by prospective minority businesses, or providing these documents to them at least 10 days before the bids are due.
- ☐ **3 – (15 pts)** Broken down or combined elements of work into economically feasible units to facilitate minority participation.
- ☐ **4 – (10 pts)** Worked with minority trade, community, or contractor organizations identified by the Office of Historically Underutilized Businesses and included in the bid documents that provide assistance in recruitment of minority businesses.
- ☒ **5 – (10 pts)** Attended prebid meetings scheduled by the public owner.
- ☐ **6 – (20 pts)** Provided assistance in getting required bonding or insurance or provided alternatives to bonding or insurance for subcontractors.
- ☒ **7 – (15 pts)** Negotiated in good faith with interested minority businesses and did not reject them as unqualified without sound reasons based on their capabilities. Any rejection of a minority business based on lack of qualification should have the reasons documented in writing.
- ☐ **8 – (25 pts)** Provided assistance to an otherwise qualified minority business in need of equipment, loan capital, lines of credit, or joint pay agreements to secure loans, supplies, or letters of credit, including waiving credit that is ordinarily required. Assisted minority businesses in obtaining the same unit pricing with the bidder's suppliers in order to help minority businesses in establishing credit.
- ☐ **9 – (20 pts)** Negotiated joint venture and partnership arrangements with minority businesses in order to increase opportunities for minority business participation on a public construction or repair project when possible.
- ☒ **10 - (20 pts)** Provided quick pay agreements and policies to enable minority contractors and suppliers to meet cash- flow demands.

The undersigned, if apparent low bidder, will enter into a formal agreement with the firms listed in the Identification of Minority Business Participation schedule conditional upon scope of contract to be executed with the Owner. Substitution of contractors must be in accordance with GS143-128.2(d) Failure to abide by this statutory provision will constitute a breach of the contract.

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The undersigned hereby certifies that he or she has read the terms of the minority business commitment and is authorized to bind the bidder to the commitment herein set forth.

Date: 10/22/24 Name of Authorized Officer: JOHN M. THOMPSON

SEAL

Signature: John M. Thompson

Title: PRESIDENT

State of NC **, County of** Wake

Subscribed and sworn to before me this 22 **day of** Oct. **20** 24

Notary Public Madeline Page Thompson

My commission expires Sep. 14 2027

MADELINE PAGE THOMPSON
My Commission Expires
NOTARY PUBLIC
September 14, 2027
WAKE COUNTY, NC

Docusign Envelope ID: BE08B786-1A29-4427-AA3D-40D007F6085E

TO: PROSPECTIVE BIDDERS HOLDING PLANS AND SPECIFICATIONS FOR TOWN OF WAKE FOREST, H.L. MILLER PARK GREENWAY PROJECT

RE: H.L. MILLER PARK GREENAY PROJECT ADDENDUM NO. 1

The following changes and clarifications are applicable to the referenced project and are now a part of its contract documents. Where any article, division, or subparagraph of the original contract documents or other addenda is supplemented herein, the provisions of the original documents shall remain in effect. All the supplemental provisions shall be considered as added thereto. Where any such article, division, or subparagraphs are amended, voided, or superseded thereby, the provisions of such article, division, or subparagraph not so specifically amended, voided, or superseded shall remain in effect.

The attention of each contractor is called to the following clarifications, additions to, and changes in the plans sealed September 18, 2024, and specifications sealed September 25, 2024, on the above projects. It will be the responsibility of each contractor to call such clarifications, additions, and changes in plans and specifications to the attention of subcontractors concerned. The Town in no way assumes any responsibility for notifying any subcontractor, material dealers, or others not having received the original contract documents.

Bidder must acknowledge receipt of Addendum No. 1 by signing appropriately on each of the revised Itemized Proposal and submitting them with other bid documents. Original Pages with strikethroughs will not be accepted.

Item 1: Table of Contents
Replace Pages 3-9 with Addendum No. 1 Page 3-9

Item 2: Instruction to Bidders
Replace Page 13 with Addendum No. 1 Page 13.

Item 3: NCDOT Standard Notes
Add Addendum No. 1 Pages 20A and 20B

Item 4: Forms
Remove Page F-7 and Replace Page F-8 with Addendum No. 1 Page F-8.

Item 5: Notice to Proceed
Replace Page F-44 with Addendum No. 1 Page F-44

Item 6: General Special Provisions
Replace G-60 with Addendum No. 1 Page G-60

Item 7: Stream Restoration Special Provisions
Replace ST-27 with Addendum No. 1 Page ST-27

ATTACHMENTS:

- Pre-Bid Meeting Minutes
- Addendum No. 1 – Table of Contents, Instructions to Bidders, NCDOT Standard Notes, Forms, Notice to Proceed, General Special Provisions, Stream Restoration Special Provisions

Addendum #1 _____

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ALL OTHER CONDITIONS REMAIN THE SAME.

By: Caleb D. Lowman, P.E.
Kimley-Horn and Associates, Inc.

NORTH CAROLINA PROFESSIONAL SEAL 048386 ENGINEER CALEB D. LOWMAN

DocuSigned by:
Caleb D. Lowman
128034ZBF39B470...
10/11/2024

END OF ADDENDA #1

Addendum #1 _____

- **Notice to Proceed (Date of Availability)** – To be determined with contractor after selection.

- **Status of Utility Relocations**
  - Project water/sewer work
    - Will be performed and coordinated during construction as part of contract (City of Raleigh owned)
  - Companies within the corridor:
    - No other companies noted to be in conflict within the greenway.
  - Contractor is to coordinate with utility companies as needed throughout the project construction

- **Town Contacts**
  - Timothy Watson and Steven Meyer will serve as the Town contact for the project.
  - The Town is providing full-time inspection for the project.
  - Town will provide materials testing for project.

- **Construction Meetings**
  - The Contractor is required to attend Monthly Progress meetings during the construction of this project. The meetings will be held at the project site or in the Town offices, as determined by the Town.

- **DBE Requirements**
  - The Town expects that the bidders provide a good faith effort to achieve the DBE participation goal of 10%. The DBE contractors must have current certification with the NCDOT. (F-7)
  - The Town requests that the Letter of Intent to Perform as a Subcontractor be provided within 5 calendar days after the opening of bids from ALL subcontractors. (F-42) – Form is for DBE companies only

- **Right-of-way Acquisitions**
  - Easements are in progress and being acquired by the Town of Wake Forest

- **Public Advisory and Business Access**
  - Citizen Notification – Contractor shall be responsible for notifying, in writing, all property owner/residents/tenants directly affected by this project just prior to beginning construction. (G-40)
  - 72 hour notice prior to interruption to any water/sewer service (See City of Raleigh Public Utility Guidelines)
  - Special attention should be directed to the property owner special provision (G-54)

- **Adjacent Development Coordination**
  - No adjacent development anticipated at this time

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Bid #0006-2024 H.L. Miller Park Greenway SP-24-01

Pre-Bid Conference Agenda

- Sign-In Sheet and Introduction

NAME	REPRESENTING	PHONE	EMAIL
Steve Meyer	Town of Wake Forest	919-435-9510	smeyer@wakeforestnc.gov
Randy Driver	Town of Wake Forest	919-435-9474	rdriver@wakeforestnc.gov
Hollie Aldridge	Town of Wake Forest	919-435-9483	haldridge@wakeforestnc.gov
Caleb Lowman	Kimley-Horn	919-677-2108	caleb.lowman@kimley-horn.com
Mitchell Cross	Kimley-Horn	919-677-2162	mitchell.cross@kimley-horn.com
Brianna Andrews	Pinam Construction	984-459-7707	brianna@pinamconstruction.com
Robert Osborne	Backwater Environmental	336-707-1965	osborne@backwater.biz
Gabe Adams	Backwater Environmental	336-635-8036	adams@backwater.biz
BJ Lanier	Lanier Construction	252-286-6739	bj@lanierconstruction.com
Joe Hollis	Fred Smith Consulting	984-332-0138	jhollis@fredsmithcompany.net
Mark Abbot	JM Thompson	919-805-0194	mabbot@jmthompson.com
Marty Thompson	JM Thompson	919-427-7120	mthompson@jmthompson.com

- **Project Overview:**
  - **H.L. Miller Park Greenway:** This project consists of a greenway from existing multi-use path at Northwest corner of Elm Ave and S Franklin St intersection to existing sidewalk on the Northwest corner of S Taylor St and E Jones Ave intersection including a prefabricated bridge, boardwalks, and connecting trails within the park. Proposed stream restoration will also be included through the park between the existing culverts.

- **Bid Opening**: October 23, 2024 at 3:00 pm
  - Submit bids to: Town of Wake Forest Planning Department; Attention: BID # 0006-2024 – H.L. Miller Park Greenway SP-24-01; Ground Floor Conference Room A-B, 301 S. Brooks Street, Wake Forest, NC, 27587
  - Bidders must be properly licensed under Chapter 87-10 of the General Statutes of North Carolina and must comply with nondiscriminatory provisions.
  - Bid Bond is 5% and must be submitted with bid
  - Project includes ARPA funding

- **Construction Time**
  - 270 days

- **Liquidated Damages**
  - Contract Time - $750 per day will be assessed for each calendar day of delay, until the work is completed.
  - ICT No.1 - $250 per 15 minutes for roadway restrictions
  - ICT No.2 – $250 per 15 minutes for roadway restrictions on or during holiday weekends, special events, or when traffic is unusually heavy

- **Electronic files**
  - Electronic CAD files will be provided to the selected contractor.
  - **Contractor shall submit hard copy of Schedule of Prices with their Bids and sign each addendum sheet at the bottom.**

- **Permit Status**
  - Permits are in process and expected to be complete by the notice to proceed and will be listed in the appendix for this project.

- **Addendums**
  - An addendum is anticipated which will include the Pre-Bid meeting minutes, which will go to all official bidders in attendance
  - The addendum will include any Plan or Bid Clarifications questions resulting from this Pre-Bid Meeting
  - Any questions need to be sent to Timothy Watson twatson@wakeforestnc.gov or Caleb Lowman at Caleb.Lowman@kimley-horn.com by 1:00 pm on Thursday, October 16th.
  - Addendum No. 1 is projected to be sent out to Contractors on Monday, October 11th.

- **Bidders**
  - Hard copies of all required forms/documents are required for the bid submittal. Only bids from bidders on the official bidder list from Accent Imaging will be considered by the Town. Plans are available via the Accent Imaging website (https://www.planscope.com). Note that plans must be purchased via the Accent Imaging website for bidders to be registered on the official bidders list.

- **Additional Discussion**
  - Town of Wake Forest has clarified they would like the Corona Virus Form needs to be completed and submitted with Bid Documents (F-56 to F-75). This has been updated on page 13 of the bid documents.
  - The Town would like to clarify that a thumb drive with bid documents is NOT required.

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- **Pre-Bid Questions 10/09/2024**

Question: Does this project use Daivs Bacon Wages?
Response: Yes.

Question: Will we receive the addendums via email?
Response: Yes.

Question: Is this a mandatory Pre-Bid?
Response: Yes.

Question: Can the clearing and grubbing and demolition be completed by the same contractor ore are sperate contractors required?
Response: Yes, there is no requirement that states the clearing and grubbing of the project and the clearing, and the grubbing related to the stream restoration has to be completed by the one or multiple contractors. Clearing and grubbing for the stream restoration is considered incidental to stream restoration grading per the specifications. It is up to the contractor to show the cost associated with clearing and grubbing as incidental to stream restoration grading. Refer to Stream Restoration Grading Special Provision (ST-1).

Question: How many trees are anticipated to be transplanted and where are they to be kept?
Response: Shrub and tree transplant is not expected to be performed on the project. Shrub and Tree Transplants Special Provision has been removed. Refer to Plan Sheet ST-17 through ST-18 for proposed planting plan. The trees anticipated to be retained are shown on the erosion control plans.

Question: Can Kimley-Horn provide a cut/fill table for the stream work or provide CAD Files?
Response: CAD files will not be provided till after the Town of Wake Forest has selected the low bidder. The Stream Earthwork Summary for all stream sections based on the plan cross sections total the following amounts: 1,520 CY of cut and 690 CY of fill. Contractor is encouraged to utilize the provided plans and cross-sections to verify grading volumes.

Question: Is this a mandatory Pre-Bid?
Response: Yes.

Question: Question: We note bid form sheets F-7 and F-8 call for HUB certification and minority classification. We are inquiring if the NCDOT minority list can be used to meet the goal on this project or is it strictly HUB?
Response: Both the NCDOT minority list or the HUB list can be used to meet the goal on this project. See revised form page.

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14. PREPARATION OF BID

The Town's bid forms must be used when provided – submit one original. Bidders shall label their bid proposal with business name, bid name and bid date, then seal their bid proposal inside an envelope. If mailing a bid proposal, provide a sealed envelope within the postal envelope.

15. ITEMS REQUIRED TO BE SUBMITTED WITH THE BID

Failure to submit the following with the bid is considered a non-responsive bid and the bid will not be considered:

_____ Bid Form with bid price(s) written or typed
_____ Signatures on Forms and notarized where noted
_____ Non-Collusion Affidavit of Prime Bidder
_____ Addendums (if issued)
_____ Minority Participation forms
_____ E-589 CI Form
_____ Bid Bond
_____ Coronavirus State and Local Fiscal Recovery Funds Addendum

16. RECEIPT AND OPENING OF BIDS

Each Bid is to be submitted in a sealed envelope and plainly marked with the project name, bid number, and bid opening time. If mailed, the sealed envelope containing the Bid is to be enclosed in another envelope to avoid it being opened before the advertised time. Bids received prior to the advertised bid opening will be securely kept as sealed. Bids received after the advertised bid opening time will be returned to the Bidder unopened.

17. WITHDRAWAL OF BIDS

Bids may be withdrawn by written request prior to or within seventy-two hours (72) after the opening of bids by contacting the bidding officer. To withdraw an opened bid, proof must be given of a mathematical error or omission as opposed to judgment or interpretation error.

18. MINIMUM NUMBER OF BIDS (FORMAL CONTRACTS ONLY)

North Carolina General Statute 143-129 and 143-132 prohibits the awarding of a formal contract unless at least three (3) competitive bids are received from reputable and qualified contractors. Therefore, if fewer than three (3) such bids are received, they will not be opened but returned to the contractors; and the project may be re advertised. The Town's formal limit is $500,000.

19. ALTERNATIVE BIDS

No alternative bids will be considered unless alternative bids are specifically requested.

20. AWARD OF CONTRACT; REJECTION OF BIDS

The Town reserves the right to hold bids for a period of sixty (60) days for the purpose of reviewing the bids and investigating the qualifications of the Bidders. The Town reserves the right to reject any or all bids, for any reason. The Town intends to award a contract to the lowest responsive, responsible bidder, complying with the conditions of the bidding documents. The Town reserves the right to award a contract that is deemed in its best interest.

Addendum #1 _____

NCDOT STANDARD NOTES (Federal Aid)

A. *NCDOT Standard Specifications* – The *2024 North Carolina Department of Transportation Standard Specifications for Roads and Structures*, herein referred to as the 'Standard Specifications', and the *2024 Roadway Standard Drawings*, shall apply to all portions of this project except as may be modified by this document.

B. *Bidder Prequalification* - Bidders are required to be prequalified with NCDOT for their specific discipline. Contractors wishing to become prequalified may obtain information through the NCDOT website at: https://connect.ncdot.gov/business/Pages/default.aspx

C. *Disadvantaged Business Enterprise References* - Since this is a Federal-aid project with DBE participation, only those requirements and goals set forth by NCDOT Goal Setting Committee are applicable. References to any other requirements or to N.C. General Statute 143-128.2 shall not apply to this project. Refer to Special Provision SP1 G63.

D. *Award of Contract* - The contract will be awarded to the lowest responsible, responsive bidder. Alternate items will not be considered in determining the low bidder and will only be evaluated after the award of the contract is made.

E. *Contractor Licensing* – On all Federal-aid contracts, non-licensed contractors are permitted to submit bids, however they must be licensed prior to performing any work. Bidders are permitted 60 days, after bid opening, to become licensed by the North Carolina Licensing Board. If they fail to do so within 60 days, their bid will be considered non-responsive and will be rejected. If the successful bidder does not hold the proper license to perform any plumbing, heating, air conditioning, or electrical work in this contract, he will be required to sublet such work to a contractor properly licensed in accordance with *Article 2 of Chapter 87 of the General Statutes* (licensing of heating, plumbing, and air conditioning contractors) and *Article 4 of Chapter 87 of the General Statutes* (licensing of electrical contractors).

F. *Bonds* - Please note that all Bid Bonds, Payment Bonds, and Performance Bonds required for this project shall be those found on the NCDOT website. The bonds are located at:

Bid Bonds:
Bid Proposals for LGAs (ncdot.gov)

Payment Bonds:
Bid Proposals for LGAs (ncdot.gov)

Performance Bonds:
Bid Proposals for LGAs (ncdot.gov)

Addendum #1 _____

G. *Liability Insurance* – In addition to any insurance requirements as may be required by the LGA, the Contractor is obligated to comply with Article 107-15 of the *Standard Specifications* including the dollar limits set forth.

H. *Buy America* – This project shall be governed by the Buy America requirements for the use of domestic steel and iron products, as outlined in the *Standard Specifications.*

I. *Build America, Buy America (BABA)* – This project shall be governed by the Build America, Buy America (BABA) requirements as outlined in the *Standard Specifications.*

J. *Retainage by LGAs* – The LGA for this contract will not retain any amount or percentage from progress payments or final estimates due the contractor.

Retainage by Contractors – Contractors are NOT permitted to retain any amount or percentage from monies due their subcontractors or material suppliers on federally funded projects except as permitted by Subarticle 109-4(B) of the *Standard Specifications.*

K. *Traffic Control* –The requirements of the *Manual on Uniform Traffic Control Devices (MUTCD) – FHWA*, as amended by the *NCDOT Supplement to MUTCD*, shall apply. Traffic Control, both vehicular and pedestrian, shall be maintained throughout the project as required by these specifications as modified by the project plans or special provisions.

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Identification of HUB Certified/ DBE / WBE / MBE / Minority Business Participation

I,_____,

(Name of Bidder)

do hereby certify that on this project, we will use the following HUB Certified / DBE / WBE / MBE / minority business as construction subcontractors, vendors, suppliers or providers of professional services.

Firm Name, Address and Phone #	Work Type	Minority Category	HUB Certified (Y/N)	$ Amount

Addendum #1 _____

Docusign Envelope ID: BE08B786-1A29-4427-AA3D-40D007F6085E

NOTICE TO PROCEED

To:

From: (Owner)
Town of Wake Forest
Wake Forest Town Hall
Third Floor
301 S. Brooks Street
Wake Forest, NC 27587

PROJECT: **H.L. Miller Park Greenway SP-24-01: Greenway from existing multi-use path at northwest corner of Elm Ave and S Franklin St intersection to existing sidewalk on northwest corner of S Taylor St and E Jones Ave intersection with connection trails within the park. Proposed stream restoration along Elm Ave and S Franklin St intersection to existing culvert on northwest corner of S Taylor St and E Jones Ave Intersection.**

CONTRACT AMOUNT: $_____

You are hereby notified to commence work on the above referenced project on or before _____ and are to fully complete the work within 270 consecutive calendar days thereafter. Your contract completion date is therefore _____.

The contract provides for assessment of the sum of $750.00 as liquidated damages for each consecutive calendar day after the above established contract completion date that the work remains incomplete.

DATE: _____ BY: _____

NAME: _____

TITLE: _____

_____

TOWN OF WAKE FOREST

PHONE: 919-435-9410

Addendum #1 _____

PRODUCT DATA SHEET 0 –

3.01 MEASUREMENT AND PAYMENT

A. Payment for "Project Management Communication" shall be at the set unit price per e-Builder® license as indicated on the Itemized Proposal. If no line item is provided it shall be considered incidental to the project.

B. The OWNER will reimburse the CONTRACTOR for the actual cost of (1) e-Builder® license per contract year. Payment for "e-Builder License Reimbursement" shall be paid for as a lump sum pay item at the set unit price for one (1) e-Builder® license per contract year as indicated on the Itemized Proposal. Additional licenses can be purchased at the OWNERS expense.

BUILD AMERICA, BUY AMERICA (BABA):

(11-15-22)(Rev. 7-16-24) 106 SP1 G05

Revise the *Standard Specifications* as follows:

Page 1-48, Article 106-1 GENERAL REQUIREMENTS, add the following after line 49:

(C) Build America, Buy America (BABA)

All manufactured products and construction materials permanently incorporated into any project must meet requirements of the Build America, Buy America (BABA) Act of the Infrastructure Investment and Jobs Act (IIJA). Before any material or product shown on the Department's Build America, Buy America (BABA) List is included for payment on a monthly estimate, the Contractor shall furnish the Engineer with a notarized certification certifying that the items conform to the BABA Act. The Department's Build America Buy America (BABA) List can be found on the Department's website below.

https://connect.ncdot.gov/letting/LetCentral/NCDOT%20BABA%20Materials%20List.pdf

Each purchase order issued by the Contractor or a subcontractor for items on the BABA List to be permanently incorporated into any project shall contain in bold print a statement advising the supplier that the manufactured products and construction materials must be produced in the United States of America. The Contractor and all affected subcontractors shall maintain a separate file for BABA List items so that verification of the Contractor's efforts to purchase items produced in the United States can readily be verified by an authorized representative of the Department or the Federal Highway Administration (FHWA).

END OF SECTION

Docusign Envelope ID: BE08B786-1A29-4427-AA3D-40D007F6085E

Payment will be made under:

Herbaceous Plugs.....Each (EA)

Addendum #1 _____

Docusign Envelope ID: E33BDA2D-2D3A-4DEA-654F-FA9BCA6B9426

Question: Will your surveying division will be quoting staking & as-builts to contractors?

Response: No. Kimley-Horn does not have a surveying division and will not be quoting staking & as-builts to contractors.

Question: Are any permits by General Contractor?

Response: All anticipated permits are noted in the project specifications and appendix. No additional permit requirements are known at this time.

Question: During Prebid it was discussed Notice to Proceed may not be issued until first of year while permits are obtained. How long do prices have to be held? Will Notice of award and Owner Contract be executed so prices can be locked in, and long lead items procured??

Response: Yes, the notice of award and contract are planned to be executed by early December.

Question: How many property Owners should we anticipate needing to notify?

Response: Approximately 20 property owners.

Question: Spec Section G47 Personnel Parking states Contractor to provide off-site parking and transportation to and from Site. Is public on or off-street parking available?

Response: Parking will not be available along S Taylor St, S Franklin St, or in the adjacent business parking lots near to the project. The Town is open to allowing contractor parking along S Elm Ave. between S Taylor St. and S Franklin St. The on-street parking at that location will only be for personnel use, not parking equipment. The parking is subject to the Towns's parking ordinances.

Question: What is the spec for the step material for pay item 94 Tuck Behind Steps? Detail indicates boulder but shows a flat tread. Is it a manufactured product?

Response: The Tuck behind step are to utilize boulders, which have boulder dimensions of 2' x 2' x 1.5', as seen on sheet ST-10. Please see Boulder Selection Spec as seen on the Project Special Provisions ST-5. This is to create a stepped walkway access down the stream bank from the path to the stream. The Tuck Behind Step detail in the stream plans is shown for illustration.

Question: Site furnishings specification states: Shop Drawings: Contractor to provide a complete set of shop drawings, signed by a professional engineer certified in the state of North Carolina, showing the overall construction of the Backless Bench based off the design details provided. Is a NC PE required? Are shop drawings required or will manufacturer product data suffice?

Response: Yes, an NC PE is required. Shop drawings are required for the foundations and any other items required to construct the site furnishings as noted in the details, along with manufacturer product data.

Docusign Envelope ID: E33BDA2D-2D3A-4DEA-654F-FA9BCA6B9426

H.L. Miller Park Greenway SP-24-01
Questions Prior to 10/16/2024 at 5:00 pm

Question: Can a staging area be designated for material and storage trailers?

Response: Staging area is located near the intersection of S Taylor St and driveway to Elec. Tel Cooperative Federal Credit Union, this area is denoted on plan sheet EC-1.

Question: Is an office trailer required?

Response: No.

Question: Where is Exploratory Standard and Vacuum Excavation anticipated?

Response: This is a contingency item for any unknown utilities not currently shown in the plans/survey, that is encountered during construction. Exploratory Excavation (Standard and Vacuum) will only be paid if directed to excavate by the Town or Engineer, R-7, if it is determined to be above and beyond standard pot holing procedures per 811 protocol and NCDOT Specifications.

Question: Please provide a line item for Site Demo, Clearing & Grading. Bid Item 85, ST-3 Clearing & Grading is by Stream Restoration Subcontractor.

Response: Per Addendum #1, 1 or more contractors can be utilized for Line Item 5 Grading or Line Item 85 Stream Restoration Grading. The demo and clearing and grubbing included 85 is for items located within the Stream construction limits. Line Item 5 covers all other items located within the Greenway construction limits and within the park. Separate line items for Site Demo and Clearing and Grubbing are not anticipated to be added to the contract at this time.

Question: PermaTrak estimates approximately (70) interior bent piles for this project, each with an embedment of approximately 20'-0", and a minimum tip diameter of 10". Is this acceptable for use of bid quantities?

Response: We cannot confirm your assumptions noted above as the number of bent piles will vary depending on span configuration and loading submitted during the shop drawing process. However, we can clarify that bent piles are to be placed along the specified trail alignment as illustrated on Sheets S-3 and S-4. A summary of pile information can be found on Sheet S-5 and in the geotechnical report located in the appendix.

Question: Will Kimley-Horn be pricing construction staking & as-builts? If so, please provide contact.

Response: Construction staking & as-builts are the responsibility of the contractor. Please review the standard specifications related to line item 3 and the as-built survey specification on page G-29 for more information.

Docusign Envelope ID: E33BDA2D-2D3A-4DEA-854F-FA9BCA6B9426

TO: PROSPECTIVE BIDDERS HOLDING PLANS AND SPECIFICATIONS FOR TOWN OF WAKE FOREST, H.L. MILLER PARK GREENWAY PROJECT

RE: H.L. MILLER PARK GREENAY PROJECT ADDENDUM NO. 2

The following changes and clarifications are applicable to the referenced project and are now a part of its contract documents. Where any article, division, or subparagraph of the original contract documents or other addenda is supplemented herein, the provisions of the original documents shall remain in effect. All the supplemental provisions shall be considered as added thereto. Where any such article, division, or subparagraphs are amended, voided, or superseded thereby, the provisions of such article, division, or subparagraph not so specifically amended, voided, or superseded shall remain in effect.

The attention of each contractor is called to the following clarifications, additions to, and changes in the plans sealed September 18, 2024, and specifications sealed September 25, 2024, on the above projects. It will be the responsibility of each contractor to call such clarifications, additions, and changes in plans and specifications to the attention of subcontractors concerned. The Town in no way assumes any responsibility for notifying any subcontractor, material dealers, or others not having received the original contract documents.

Bidder must acknowledge receipt of Addendum No. 2 by signing appropriately on each of the revised Itemized Proposal and submitting them with other bid documents. Original Pages with strikethroughs will not be accepted.

ATTACHMENTS:

- Questions Prior to 10/16/2024 at 5:00 pm

ALL OTHER CONDITIONS REMAIN THE SAME.

By: Caleb D. Lowman, P.E.
Kimley-Horn and Associates, Inc.

NORTH CAROLINA PROFESSIONAL SEAL 048988 ENGINEER CALEB D. LOWMAN

DocuSigned by:
Caleb D. Lowman
42803A7BF39B470...
10/17/2024

END OF ADDENDA #2

Addendum #2 _____

Docusign Envelope ID: B345673B-7365-4CD9-9D95-66F77092D13B

TO: PROSPECTIVE BIDDERS HOLDING PLANS AND SPECIFICATIONS FOR TOWN OF WAKE FOREST, H.L. MILLER PARK GREENWAY PROJECT

RE: H.L. MILLER PARK GREENAY PROJECT ADDENDUM NO. 3

The following changes and clarifications are applicable to the referenced project and are now a part of its contract documents. Where any article, division, or subparagraph of the original contract documents or other addenda is supplemented herein, the provisions of the original documents shall remain in effect. All the supplemental provisions shall be considered as added thereto. Where any such article, division, or subparagraphs are amended, voided, or superseded thereby, the provisions of such article, division, or subparagraph not so specifically amended, voided, or superseded shall remain in effect.

The attention of each contractor is called to the following clarifications, additions to, and changes in the plans sealed September 18, 2024, and specifications sealed September 25, 2024, on the above projects. It will be the responsibility of each contractor to call such clarifications, additions, and changes in plans and specifications to the attention of subcontractors concerned. The Town in no way assumes any responsibility for notifying any subcontractor, material dealers, or others not having received the original contract documents.

Bidder must acknowledge receipt of Addendum No. 3 by signing appropriately on each of the revised Itemized Proposal and submitting them with other bid documents. Original Pages with strikethroughs will not be accepted.

Item 1: Table of Contents
Replace Pages 6-9 with Addendum No. 3 Page 6-9

Item 2: Schedule of Prices
Replace Page F-1 with Addendum No. 3 Page F-1.

Item 3: Roadway Special Provisions
Replace Page R-2 with Addendum No. 3 Page R-2.

ATTACHMENTS:
- Questions Prior to 10/17/2024 at 5:00 pm
- Addendum 3 – Table of Contents, Schedule of Prices, Roadway Special Provisions

ALL OTHER CONDITIONS REMAIN THE SAME.

By: Caleb D. Lowman, P.E.
Kimley-Horn and Associates, Inc.

NORTH CAROLINA PROFESSIONAL SEAL 048080 ENGINEER CALEB D. LOWMAN
DocuSigned by: Caleb D. Lowman 42903A7BF39B470...
10/17/2024

END OF ADDENDA #3

Addendum #2 _____

Docusign Envelope ID: B3456753-7365-4CD9-9D95-66F77092D13B

H.L. Miller Park Greenway SP-24-01
Questions Prior to 10/17/2024 at 5:00 pm

Question: Addendum 1, page 20A states: F. Bonds - Please note that all Bid Bonds, Payment Bonds, and Performance Bonds required for this project shall be those found on the NCDOT website. The bonds are located at: Bid Bonds: Bid Proposals for LGAs (ncdot.gov) Spec Section F12&13 has Town of Wake Forest Bid Bond. Which one should we use?

Response: The Town of Wake Forest bid bond in the specification package is acceptable.

Question: Bid item 18 identifies the asphalt as Type 9.5S. Should this be type S9.5B?

Response: S9.5B is correct.

Question: Is the asphalt indexed? I see there is no fuel adjustment, but I don't see anything about an asphalt adjustment or what month to base the index on.

Response: The contractor will be paid the bid price for asphalt binder for plant mix, no price adjustment will be allowed for asphalt binder for plant mix.

Docusign Envelope ID: B3456735-7365-4CD9-9D95-66F77092D13B

MATERIAL SAMPLING AND TESTING G-42
TOOLS, PLANT AND EQUIPMENT G-42
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SCHEDULE OF PRICES

PROJECT: **H.L. Miller Park Greenway SP-24-01**

COUNTY: **Wake County**

The low bidder shall be determined based on the lowest submitted bid amount for the items that comprise the base bid. Bid Alternate Items may be included on the bid sheet but shall not be considered as part of the base bid. Only after the low bidder is determined should bid alternate items be considered. The owner reserves the right to elect any Alternate or combination of Alternate items.

Line Item	Sec No	Pay Item	Quantity	Unit	Unit Price	Amount
1	800	Mobilization (5%)	1	LS	$	$
2	SP	Project Management Communication	2	EA	$2,161.00	$4,322
3	801	Construction Surveying	1	LS	$	$
4	226	Undercut Excavation	300	CY	$	$
5	226	Grading	1	LS	$	$
6	SP	Exploratory Excavation - Standard	10	HR	$	$
7	SP	Exploratory Excavation - Vacuum	10	HR	$	$
8	505	Shallow Undercut	150	CY	$	$
9	240	Drainage Ditch Excavation	30	CY	$	$
10	265	Select Granular Material, Class III	200	CY	$	$
11	310	18" RC Pipe Culverts, Class IV	296	LF	$	$
12	401	Removal of Existing Structure (1)	1	EA	$	$
13	402	Removal of Existing Structure (2)	1	EA	$	$
14	403	Removal of Existing Structure (3)	1	EA	$	$
15	505	Geotextile for Soil Stabilization	450	SY	$	$
16	505	Class IV Subgrade Stabilization	300	TON	$	$
17	520	Aggregate Base Course	600	TON	$	$
18	610	Asphalt Conc Surface Course, Type S9.5B	170	TON	$	$
19	620	Asphalt Binder for Plant Mix	15	TON	$	$
20	815	Subdrain Excavation	45	CY	$	$

Addendum #3 _____

INCIDENTAL STONE BASE

(7-1-95)(Rev.1-16-24) 545 SP5 R28R

Description

Place incidental stone base on driveways, mailboxes, etc. immediately after paving and do not have the paving operations exceed stone base placement by more than one week without written permission of the Engineer.

Materials and Construction

Provide and place incidental stone base in accordance with Section 545 of the *Standard Specifications*.

Measurement and Payment

Incidental Stone Base will be measured and paid in accordance with Article 545-6 of the *Standard Specifications*.

FUEL PRICE ADJUSTMENT

SP (Kimley-Horn and Associates, Inc.)

No Payment shall be made for Fuel Price Adjustment.

PRICE ADJUSTMENT - ASPHALT BINDER FOR PLANT MIX:

SP (Kimley-Horn and Associates, Inc.)

No Price Adjustment shall be made for Asphalt Binder for Plant Mix.

FINAL SURFACE TESTING NOT REQUIRED

(5-18-04) (Rev. 2-16-16) 610 SP6 R45

Final surface testing is not required on this project in accordance with Section 610-13, *Final Surface Testing and Acceptance*.

ADJUSTMENT TO MANHOLES

(7-1-95)(Rev. 1-16-24) 858 SP8 R96R

The Contractor's attention is directed to Section 858-3 of the *Standard Specifications*.

Make adjustments to manholes on this project by using rings or rapid set (grout, mortar, or concrete) as approved by the Engineer.

TEMPORARY TRAFFIC CONTROL

(9-1-21)(Rev. 10-13-23)

General Requirements

Maintain traffic on all roads in accordance with Divisions 10, 11 and 12 of the *NCDOT Standard Specifications* and the following provisions:

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TOWN *of*
WAKE FOREST

CORONAVIRUS STATE AND LOCAL FISCAL RECOVERY FUNDS ADDENDUM

This **CORONAVIRUS STATE AND LOCAL FISCAL RECOVERY FUNDS ADDENDUM** (this "*Addendum*") is entered into by and between J M Thompson (name of counterparty) , a General Contractor (type of legal entity) ("*Contractor*"), and The Town of Wake Forest, a municipal corporation of the State of North Carolina ("*Unit*"), and forms an integral part of the Contract (as defined in Section I hereof).

RECITALS

WHEREAS, on July 14, 2021, Unit has received, either as a Recipient or Subrecipient (as each such term is defined in Section I hereof) a payment from the Coronavirus State Fiscal Recovery Fund ("*State Fiscal Recovery Fund*") or Coronavirus Local Fiscal Recovery Fund ("*Local Fiscal Recovery Fund*" and, together with the State Fiscal Recovery Fund, the "*Fiscal Recovery Funds*") established pursuant to Sections 602 and 603, respectively, of the Social Security Act, as added by Section 9901 of the American Rescue Plan Act of 2021, Pub. L. No. 117-2 ("*ARPA*") (March 11, 2021); and

WHEREAS, Unit intends to pay, in part or in whole, for the cost of the Contract (as defined in Section I hereof) using monies received from the Fiscal Recovery Funds; and

WHEREAS, in using such funds, Unit must comply with the terms of ARPA, regulations issued by the U.S. Department of the Treasury ("*Treasury*") governing the expenditure of monies distributed from the Fiscal Recovery Funds (including, without limitation, the Interim Final Rule (86 Fed. Reg. 26,786 (May 17, 2021) and Final Rule (87 Fed. Reg. 4,338 (Jan. 27, 2022)), the Award Terms and Conditions applicable to the Fiscal Recovery Funds, and such other guidance as the Treasury has issued or may issue governing the expenditure of monies distributed from the Fiscal Recovery Funds (collectively, the "*Regulatory Requirements*"); and

WHEREAS, pursuant to the Regulatory Requirements, Unit must comply with the Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards, 2 C.F.R. Part 200, other than such provisions as Treasury has determined or may determine are inapplicable to the Fiscal Recovery Funds; and

WHEREAS, pursuant to 2 C.F.R. § 200.327, Unit must include within the Contract applicable provisions described in Appendix II to 2 C.F.R. Part 200, each of which is contained in this Addendum; and

WHEREAS, Unit shall not enter into the Contract or make any distributions of funds to Contractor using monies from the Fiscal Recovery Funds absent Contractor's agreement and adherence to each term and condition contained herein.

NOW THEREFORE, Contractor and Unit do mutually agree as follows:

AGREEMENTS

I. ***Definitions***. Unless otherwise defined in this Addendum, capitalized terms used in this Addendum shall have the meanings ascribed thereto in this Section I.

a) "*ARPA*" shall mean the American Rescue Plan Act of 2021, Pub. L. No. 117-2, as amended.

b) "*Administering Agency*" shall have the meaning specified in 41 C.F.R. § 60-1.3.

c) "*Applicant*" shall have the meaning specified in 41 C.F.R. § 60-1.3, which is provided here for ease of reference: ("An applicant for Federal assistance involving a construction contract, or other participant in a program involving a construction contract as determined by regulation of an administering agency. The term also includes such persons after they become recipients of such Federal assistance.").

d) "*Construction Work*" shall have the meaning specified in 41 C.F.R. § 60-1.3, which is provided here for ease of reference: ("[T]he construction, rehabilitation, alteration, conversion, extension, demolition or repair of buildings, highways, or other changes or improvements to real property, including facilities providing utility services. The term also includes the supervision, inspection, and other onsite functions incidental to the actual construction.").

e) "*Contract*" shall mean the legal instrument by which Unit, as a Recipient or Subrecipient, shall purchase from Contractor property or services needed to carry out a project or program under a Federal award, and of which this Addendum shall constitute an integral part.

f) "*Contractor*" shall mean the entity named as "Contractor" in this Addendum that has received a Contract from Unit.

g) "*Federally Assisted Construction Contract*" shall have the meaning specified in 41 C.F.R. §60-1.3, which is provided here for ease of reference: ("[A]ny agreement or modification thereof between any applicant and a person for construction work which is paid for in whole or in part with funds obtained from the Government or borrowed on the credit of the Government pursuant to any Federal program involving a grant,

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contract, loan, insurance, or guarantee, or undertaken pursuant to any Federal program involving such grant, contract, loan, insurance, or guarantee, or any application or modification thereof approved by the government of the United States of America for a grant, contract, loan, insurance, or guarantee under which the applicant itself participates in the construction work.").

h) "*Government*" shall have the meaning specified in 41 C.F.R. § 60-1.3, which is provided here for ease of reference: ("[T]he government of the United States of America.").

i) "*Laborer*" or "*Mechanic*" shall have the meaning specified in 29 C.F.R. § 5.2(m), which is provided here for ease of reference ("The term laborer or mechanic includes at least those workers whose duties are manual or physical in nature (including those workers who use tools or who are performing the work of a trade), as distinguished from mental or managerial. The term laborer or mechanic includes apprentices, trainees, helpers, and, in the case of contracts subject to the Contract Work Hours and Safety Standards Act, watchmen or guards. The term does not apply to workers whose duties are primarily administrative, executive, or clerical, rather than manual. Persons employed in a bona fide executive, administrative, or professional capacity as defined in part 541 of [Title 40 of the United States Code] are not deemed to be laborers or mechanics. Working foremen who devote more than 20 percent of their time during a workweek to mechanic or laborer duties, and who do not meet the criteria of [Title 40 of the United States Code], are laborers and mechanics for the time so spent.").

j) "*Recipient*" shall mean an entity that receives a Federal award directly from a Federal awarding agency. The term does not include subrecipients or individuals that are beneficiaries of an award.

k) "*Subcontract*" shall mean any agreement entered into by a Subcontractor to furnish supplies or services for the performance of this Contract or a Subcontract. It includes, but is not limited to, purchase orders, and changes and modifications to purchase orders.

l) "*Subcontractor*" shall mean an entity that receives a Subcontract.

m) "*Subrecipient*" shall mean an entity that receives a subaward from a pass-through entity to carry out part of a Federal award; but it does not include an individual that is a beneficiary of such award. A subrecipient may also be a recipient of other Federal awards directly from a Federal awarding agency.

n) "*Tier*" shall have the meaning indicated in 2 C.F.R. Part 180 and illustrated in 2 C.F.R. Part 180, Appendix II.

o) "*Unit*" shall have the meaning indicated in the preamble to this Addendum.

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II. *Equal Employment Opportunity*

a) If this Contract is a Federally Assisted Construction Contract exceeding $10,000, during the performance of this Contract, Contractor agrees as follows:

i. Contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, or national origin. Contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, sexual orientation, gender identity, or national origin. Such action shall include, but not be limited to the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

ii. Contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin.

iii. Contractor will not discharge or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation of the employee or applicant or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other employees or applicants as a part of such employee's essential job functions discloses the compensation of such other employees or applicants to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or is consistent with the Contractor's legal duty to furnish information.

iv. Contractor will send to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of Contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

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v. Contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

vi. Contractor will furnish to the Administering Agency and the Secretary of Labor all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to its books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

vii. In the event of Contractor's noncompliance with the nondiscrimination clauses of this Contract or with any of the said rules, regulations, or orders, this contract may be canceled, terminated, or suspended in whole or in part and the Contractor may be declared ineligible for further Government contracts or Federally Assisted Construction Contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965. Such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

viii. Contractor will include the portion of the sentence immediately preceding paragraph (a)(i) of this Section II and the provisions of paragraphs (a)(i) through (a)(vii) in every Subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each Subcontractor or vendor. Contractor will take such action with respect to any Subcontract or purchase order as the Administering Agency may direct as a means of enforcing such provisions, including sanctions for noncompliance.

Provided, however, that in the event Contractor becomes involved in, or is threatened with, litigation with a Subcontractor or vendor as a result of such direction by the Administering Agency, the Contractor may request the United States to enter into such litigation to protect the interests of the United States.

Unit further agrees that it will be bound by the above equal opportunity clause with respect to its own employment practices when it participates in federally assisted construction work: Provided, that if Unit so participating is a State or local government, the above equal opportunity clause is not applicable to any agency, instrumentality or subdivision of such government which does not participate in work on or under the contract.

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ix. Unit agrees that it will assist and cooperate actively with the Administering Agency and the Secretary of Labor in obtaining the compliance of Contractors and Subcontractors with the equal opportunity clause and the rules, regulations, and relevant orders of the Secretary of Labor, that it will furnish the Administering Agency and the Secretary of Labor such information as they may require for the supervision of such compliance, and that it will otherwise assist the Administering Agency in the discharge of the agency's primary responsibility for securing compliance.

x. Unit further agrees that it will refrain from entering into any contract or contract modification subject to Executive Order 11246 of September 24, 1965, with a Contractor debarred from, or who has not demonstrated eligibility for, Government contracts and Federally Assisted Construction Contracts pursuant to the Executive Order and will carry out such sanctions and penalties for violation of the equal opportunity clause as may be imposed upon Contractors and Subcontractors by the Administering Agency or the Secretary of Labor pursuant to Part II, Subpart D of the Executive Order. In addition, Unit agrees that if it fails or refuses to comply with these undertakings, the Administering Agency may take any or all of the following actions: Cancel, terminate, or suspend in whole or in part this grant (contract, loan, insurance, guarantee); refrain from extending any further assistance to the applicant under the program with respect to which the failure or refund occurred until satisfactory assurance of future compliance has been received from such applicant; and refer the case to the Department of Justice for appropriate legal proceedings.

b. If this Contract is not a Federally Assisted Construction Contract exceeding $10,000, the provisions of Section I(a) of this Addendum shall not apply.

III. *Copeland "Anti-Kickback" Act*

a) Contractor and any Subcontractors performing work under the Contract shall comply with 18 U.S.C. § 874. Unit shall report all suspected or reported violations to the Department of the Treasury.

IV. *Contract Work Hours and Safety Standards Act*

a) *Overtime Requirements.* No Contractor or Subcontractor contracting for any part of the Contract work which may require or involve the employment of Laborers or Mechanics shall require or permit any such Laborer or Mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such Laborer or Mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

b) *Violation; Liability for Unpaid Wages; Liquidated Damages.* In the event of any violation of the clause set forth in Section IV(a) (*Overtime Requirements*) above, Contractor and any Subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such Contractor and Subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual Laborer or Mechanic, including watchmen and guards, employed in violation of the clause set forth in Section IV(a) (*Overtime Requirements*) above, in the sum of $27 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in Section IV(a) (*Overtime Requirements*) above.

c) *Withholding for Unpaid Wages and Liquidated Damages.* Unit shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by Contractor or Subcontractor under any such contract or any other federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such Contractor or Subcontractor for unpaid wages and liquidated damages as provided in Section IV(b) (*Violation; Liability for Unpaid Wages; Liquidated Damages*) of this section.

d) *Subcontracts.* Contractor or Subcontractor shall insert in any Subcontract the clauses set forth in Sections IV(a) through IV(d) and also a clause requiring the Subcontractors to include these clauses in any lower Tier Subcontracts. Contractor shall be responsible for compliance by any first Tier Subcontractor or lower Tier Subcontractor with the clauses set forth in Sections IV(a) through IV(d).

e) *Payroll and Records.* Contractor or Subcontractor shall maintain payrolls and basic payroll records during the course of the work and shall preserve them for a period of three years from the completion of the Contract for all Laborers and Mechanics, including guards and watchmen, working on the Contract. Such records shall contain the name and address of each such employee, Social Security number, correct classifications, hourly rates of wages paid, daily and weekly number of hours worked, deductions made, and actual wages paid. Records to be maintained under this provision shall be made available by Contractor or Subcontractor for inspection, copying, or transcription by authorized representatives of the Department of the Treasury and the Department of Labor, and Contractor or Subcontractor will permit such representatives to interview employees during working hours on the job.

a) *Exceptions.* None of the requirements of Section IV of this Addendum shall apply if this Contract is a Contract (1) for transportation by land, air, or water; (2) for the transmission of intelligence; (3) for the purchase of supplies or materials or articles ordinarily available in the open market; or (4) in an amount that is equal to or less than $100,000.

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V. ***Rights to Inventions Made under a Contract or Agreement***

a) The Government reserves a royalty-free, non-exclusive and irrevocable license to reproduce, publish, or otherwise use, and to authorize others to use for "Government purposes", any subject data or copyright described below.11 "Government purposes," means use only for the direct purposes of the Government. Without the copyright owner's consent, the Government may not extend its Federal license to any other party.

   i. Any subject data developed under the Contract, whether or not a copyright has been obtained; and

   ii. Any rights of copyright purchased by Contractor using Federal assistance funded in whole or in part by the Department of the Treasury.

b) Unless Treasury determines otherwise, a Contractor performing experimental, developmental, or research work required as part of this Contract agrees to permit Treasury to make available to the public, either (1) Department of the Treasury's license in the copyright to any subject data developed in the course of the Contract, or (2) a copy of the subject data first produced under the Contract for which a copyright has not been obtained. If the experimental, developmental, or research work, which is the subject of this Contract, is not completed for any reason whatsoever, all data developed under the Contract shall become subject data as defined herein and shall be delivered as the Government may direct.

c) Unless prohibited by North Carolina law, upon request by the Government, Contractor agrees to indemnify, save, and hold harmless the Government, its officers, agents, and employees acting within the scope of their official duties against any liability, including costs and expenses, resulting from any willful or intentional violation by Contractor of proprietary rights, copyrights, or right of privacy, arising out of the publication, translation, reproduction, delivery, use, or disposition of any data furnished under the Contract. Contractor shall be required to indemnify the Government for any such liability arising out of the wrongful act of any employee, official, or agent of the Contractor.

d) Nothing contained in this clause shall imply a license to the Government under any patent or be construed as affecting the scope of any license or other right otherwise granted to the Government under any patent.

e) Data developed by Contractor and financed entirely without using Federal assistance provided by the Federal Government that has been incorporated into work required by the underlying Contract is exempt from the requirements herein, provided that Contractor identifies those data in writing at the time of delivery of the Contract work. The Contractor agrees to include these requirements in each Subcontract for experimental, developmental, or research work financed in whole or in part with Federal assistance.

f) For the purposes of this Section V, "subject data" means "recorded information, whether or not copyrighted, that is delivered or specified to be delivered as required by the Contract." Examples of "subject data" include, but are not limited to "computer software, standards, specifications, engineering drawings and associated lists, process sheets, manuals, technical reports, catalog item identifications, and related information, but do not include financial reports, cost analyses or other similar information used for performance or administration of the Contract."

VI. *Clean Air Act and Federal Water Pollution Act*

a) *Clean Air Act.* Contractor agrees to comply with all applicable standards, orders and regulations issued pursuant to the Clean Air Act, as amended, 42 U.S.C. §§ 7401 et seq. Contractor agrees to report each violation to Unit and understands and agrees that Unit will, in turn, report each violation as required to the U.S. Department of the Treasury and the appropriate Environmental Protection Agency Regional Office. Contractor agrees to include these requirements in each Subcontract exceeding $150,000 financed in whole or in part with Federal assistance provided by Treasury.

b) *Federal Water Pollution Control Act.* Contractor agrees to comply with all applicable standards, orders, and regulations issued pursuant to the Federal Water Pollution Control Act, as amended, 33 U.S.C. §§ 1251 et seq. Contractor agrees to report each violation to Unit and understands and agrees that Unit will, in turn, report each violation as required to assure notification to the U.S. Department of the Treasury and the appropriate Environmental Protection Agency Regional Office. Contractor agrees to include these requirements in each Subcontract exceeding $150,000 financed in whole or in part with Federal assistance provided by Treasury.

VII. *Debarment and Suspension*

a) Due to its receipt of Fiscal Recovery Funds, Unit is a participant in a nonprocurement transaction (defined at 2 C.F.R. § 180.970) that is a covered transaction pursuant to 2 C.F.R. §180.210 and 31 C.F.R. § 19.210. Therefore, this Contract is a lower-Tier covered transaction for purposes of 2 C.F.R. Part 180 and 31 C.F.R. Part 19 if (1) the amount of this Contract is greater than or equal to $25,000 (2 C.F.R. § 180.220(b)(1); 31 C.F.R. § 19.220(b)(1)); (2) the Contract requires the consent of an official of the Department of the Treasury (2 C.F.R. §180.220(b)(2); 31 C.F.R. § 19.220(b)(2)); or (3) this Contract is for federally-required audit services (2 C.F.R. § 180.220(b)(3); 31 C.F.R. § 19.220(b)(3)).

b) **If this Contract is a covered transaction as set forth in Section VII(a) above, Contractor hereby certifies as of the date hereof that Contractor, Contractor's principals (defined at 2 C.F.R. § 180.995), and the affiliates (defined at 2 C.F.R. § 180.905) of both Contractor and Contractor's principals are not excluded (defined at 2 C.F.R. § 180.935) and are not disqualified (defined at 2 C.F.R. § 180.935). If any of the foregoing persons are excluded or disqualified and the Secretary of the Treasury has not granted an exception pursuant to 31 C.F.R. § 19.120(a), (1) this Contract shall be void, (2) Unit shall not make any payments of Federal financial**

assistance to Contractor, and (3) Unit shall have no obligations to Contractor under this Contract.

c) Contractor must comply with 2 C.F.R. Part 180, Subpart C, and 31 C.F.R. Part 19, and must include a requirement to comply with these regulations in any lower-Tier covered transaction into which it enters.15 This certification is a material representation of fact relied upon by Unit and all liability arising from an erroneous representation shall be borne solely by Contractor.

d) If it is later determined that Contractor did not comply with 2 C.F.R. Part 180, Subpart C and 31 C.F.R. Part 19, in addition to remedies available to Unit, the Government may pursue available remedies, including but not limited to suspension and/or debarment.

VIII. *Byrd Anti-Lobbying Amendment*

a) Contractor certifies to Unit, and Contractor shall cause each Tier below it to certify to the Tier directly above such Tier, that it has not used and will not use Federally appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, officer or employee of Congress, or an employee of a Member of Congress in connection with obtaining any Federal contract, grantor any other award covered by 31 U.S.C. § 1352. Contractor shall, and shall cause each Tier below it, to disclose any lobbying with non-Federally appropriated funds that takes place in connection with obtaining any Federal award. Such disclosures (to be set forth on Standard Form-LLL contained in 31 C.F.R. Part 21, Appendix B) shall be forwarded from Tier to Tier up to the Unit which will, in turn, forward the certification(s) to the Department of the Treasury. Contractor shall cause the language of this Section VIII(a) to be included in all Subcontracts. This certification is a material representation of fact upon which Unit has relied when entering into this Contract and all liability arising from an erroneous representation shall be borne solely by Contractor.

b) Contractors that bid or apply for a contract exceeding $100,000 (including this Contract, if applicable) also must file with Unit the certification in Attachment 1 to this Addendum, which is attached hereto and incorporated herein.

c) Contractor also shall cause any Subcontractor with a Subcontract (at any Tier) exceeding $100,000 to file with the Tier above it the certification in Attachment 1 to this Addendum, which is attached hereto and incorporated herein.

IX. *Procurement of Recovered Materials*

a) Section IX(b) shall apply if (1) this Contract involves the purchase of an item designated by the Environmental Protection Agency ("EPA") in 40 C.F.R. Part 247 that exceeds $10,000, or (2) the total value of such designated items acquired during the Unit's preceding fiscal year exceeded $10,000.

b) In the performance of the Contract, Contractor shall make maximum use of products containing recovered materials that are EPA-designated items unless the product cannot (1) be acquired competitively within a timeframe providing for compliance with the Contract performance schedule, (2) meet Contract performance requirements; or (3) at a reasonable price. Information about this requirement, along with the list of EPA-designated items, is available at EPA's website. Contractor also agrees to comply with all other applicable requirements of Section 6002 of the Solid Waste Disposal Act.

X. ***Prohibition on Contracting for Covered Telecommunications Equipment or Services***

a) *Definitions.* Unless otherwise defined in this Contract, capitalized terms used in this Section IX shall have the meanings ascribed thereto in this Section IX(a):

i. *"Backhaul"* means intermediate links between the core network, or backbone network, and the small subnetworks at the edge of the network (e.g., connecting cell phones/towers to the core telephone network). Backhaul can be wireless (e.g., microwave) or wired (e.g., fiber optic, coaxial cable, Ethernet).

ii. *"Covered Foreign Country"* means the People's Republic of China.

iii. *"Covered Telecommunications Equipment or Services"* means: (a) telecommunications equipment produced by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities); (b) for the purpose of public safety, security of Government facilities, physical security surveillance of critical infrastructure, and other national security purposes, video surveillance and telecommunications equipment produced by Hytera Communications Corporation, Hangzhou Hikvision Digital Technology Company, or Dahua Technology Company (or any subsidiary or affiliate of such entities); (c) telecommunications or video surveillance services provided by such entities or using such equipment; or (d) telecommunications or video surveillance equipment or services produced or provided by an entity that the Secretary of Defense, in consultation with the Director of National Intelligence or the Director of the Federal Bureau of Investigation, reasonably believes to be an entity owned or controlled by, or otherwise connected to, the government of a Covered Foreign Country.

iv. "*Critical Technology*"20 means (1) defense articles or defense services included on the United States Munitions List set forth in the International Traffic in Arms Regulations under subchapter M of chapter I of title 22, Code of Federal Regulations; (2) items included on the Commerce Control List set forth in Supplement No. 1 to part 774 of the Export Administration Regulations under subchapter C of chapter VII of title 15, Code of Federal Regulations, and controlled (a) pursuant to multilateral regimes, including for reasons relating to national security, chemical and biological weapons proliferation, nuclear nonproliferation, or missile technology; or (b) for reasons relating to regional stability or surreptitious listening; (3) specially designed and prepared nuclear equipment, parts and components, materials, software, and technology covered by part 810 of title 10,

Code of Federal Regulations (relating to assistance to foreign atomic energy activities); (4) nuclear facilities, equipment, and material covered by part 110 of title 10, Code of Federal Regulations (relating to export and import of nuclear equipment and material); (5) select agents and toxins covered by part 331 of title 7, Code of Federal Regulations, part 121 of title 9 of such Code, or part 73 of title 42 of such Code; or (6) emerging and foundational technologies controlled pursuant to section 1758 of the Export Control Reform Act of 2018 (50 U.S.C. § 4817).

v. *"Interconnection Arrangements"* means arrangements governing the physical connection of two or more networks to allow the use of another's network to hand off traffic where it is ultimately delivered (e.g., connection of a customer of telephone provider A to a customer of telephone company B) or sharing data and other information resources.

vi. *"Roaming"* means cellular communications services (e.g., voice, video, data) received from a visited network when unable to connect to the facilities of the home network either because signal coverage is too weak or because traffic is too high.

vii. "Substantial or Essential Component" means any component necessary for the proper function or performance of a piece of equipment, system, or service.

viii. *"Telecommunications Equipment or Services"* means telecommunications or video surveillance equipment or services, such as, but not limited to, mobile phones, land lines, internet, video surveillance, and cloud services.

b) Prohibitions.

i. Section 889(b) of the John S. McCain National Defense Authorization Act for Fiscal Year 2019, Pub. L. No. 115-232 and 2 C.F.R. § 200.216 prohibit the head of an executive agency on or after August 13, 2020, from obtaining or expending grant, cooperative agreement, loan, or loan guarantee funds on certain telecommunications products or from certain entities for national security reasons.

ii. Unless an exception in Section X(c) applies, Contractor and any Subcontractors may not use grant, cooperative agreement, loan, or loan guarantee funds (including, without limitation, Fiscal Recovery Funds) received from a Federal government to:

1. Procure or obtain any equipment, system, or services that uses Covered Telecommunications Equipment or Services as a Substantial or Essential Component of any system, or as Critical Technology of any system;

2. Enter into, extend, or renew a contract to procure or obtain any equipment, system, or service that uses Covered Telecommunications Equipment or Services as a Substantial or Essential Component of any system, or as Critical Technology of any system;

3. Enter into, extend, or renew contracts with entities that use Covered Telecommunications Equipment or Services as a Substantial or Essential Component of any system, or as Critical Technology as part of any system; or

4. Provide, as part of its performance of this Contract, any Subcontract, any contractual instrument, or any equipment, system, or service that uses Covered Telecommunications Equipment or Services as a Substantial or Essential Component of any system or as Critical Technology as part of any system.

c) Exceptions.

i. This clause does not prohibit Contractor or Subcontractors from providing:

1. A service that connects to the facilities of a third-party, such as Backhaul, Roaming, or Interconnection Agreements; or

2. Telecommunications equipment that cannot route or redirect user data traffic or permit visibility into any user data or packets that such equipment transmits or otherwise handles.

ii. By necessary implication and regulation, the prohibitions also do not apply to:

1. Covered telecommunications equipment that:

a. Is not used as a Substantial or Essential Component of any system; and

b. Is not used as Critical Technology of any system.

2. Other telecommunications equipment or services that are not considered Covered Telecommunications Equipment or Services.

d) Reporting Requirement

i. In the event Contractor identifies, during contract performance, covered Telecommunications Equipment or Services used as a Substantial or Essential Component of any system, or as Critical Technology as part of any system, during Contract performance, or if Contractor is notified of such by a Subcontractor at any Tier or by any other source, Contractor shall report the information in paragraph (d)(2)of this Section X to Unit, unless procedures for reporting the information are elsewhere established in this Contract.

ii. Contractor shall report the following information to Unit pursuant to paragraph (d)(1) of this Section X:

1. Within one business day from the date of such identification or notification: contract number; order number(s), if applicable; supplier name; supplier unique entity identifier (if known); supplier Commercial and Government Entity (CAGE) code (if known); brand; model number (original equipment manufacturer number, manufacturer part number, or wholesaler number); item description; and any readily available information about mitigation actions undertaken or recommended.

2. Within ten business days of submitting the information in paragraph (d)(2)(i) of this Section: any further available information about mitigation actions undertaken or recommended. In addition, contractor shall describe the efforts it undertook to prevent use or submission of Covered Telecommunications Equipment or Services, and any additional efforts that will be incorporated to prevent future use or submission of Covered Telecommunications Equipment or services.

e) Subcontractor. Contractor shall cause to be inserted the substance of this Section X, including this paragraph (e), in all Subcontracts and other contractual instruments relating to the performance of this Contract.

XI. *Domestic Preferences for Procurements*

a) As applicable, and to the extent consistent with law, Contractor should, to the greatest extent practicable, provide a preference for the purchase, acquisition, or use of goods, products or materials Produced in the United States. This includes, but is not limited to iron, aluminum, steel, cement, and other Manufactured Products. Contractor shall cause any Subcontractors to include the requirements of this Section XI in any Subcontracts.

b) For purposes of this Section XI, the following terms shall mean:

i. *"Produced in the United States"* means, for iron and steel products, that all manufacturing processes, from the initial melting stage through the application of coating, occurred in the United States.

ii. *"Manufactured Products"* means items and construction materials composed in whole or in part of non-ferrous metals such as aluminum; plastics and polymer-based products such as polyvinyl chloride pipe; aggregates such as concrete; glass, including optical fiber; and lumber.

XII. *Solicitation of Minority and Women-Owned Business Enterprises*

a) If Contractor intends to let any Subcontracts, Contractor shall (1) place qualified small and minority businesses and women's business enterprises on its solicitation lists; (2) assure that small and minority businesses, and women's business enterprises are solicited whenever they are potential sources; (3) divide total requirements, when economically

feasible, into smaller tasks or quantities to permit maximum participation by small and minority businesses, and women's business enterprises; (4) establish delivery schedules, where the requirement permits, which encourage participation by small and minority businesses, and women's business enterprises; (5) use the services and assistance, as appropriate, of the Small Business Administration, the Minority Business Development Agency of the Department of Commerce, and the North Carolina Office for Historically Underutilized Businesses.

b) For the purposes of Section XII(a), an entity shall qualify (1) as a "minority business" or "women's business enterprise" if it is currently certified as a North Carolina "historically underutilized business" under Chapter 143, Section 143-128.4(a) of the N.C. General Statutes (hereinafter G.S.), and (2) as a "small business" if it is independently owned and operated and is qualified under the Small Business Administration criteria and size standards at 13 C.F.R. Part 21.

XIII. *Access to Records*

a) Contractor agrees to provide Unit, the Department of the Treasury, the Treasury Office of Inspector General, the Government Accountability Office, and the Comptroller General of the United States, or any authorized representatives of these entities access to any records (electronic and otherwise) of Contractor which are directly pertinent to this Contract to conduct audits or any other investigation. Contractor agrees to permit any of the foregoing parties to reproduce such records by any means whatsoever or to copy excerpts and transcriptions as reasonably needed.

b) Contractor agrees to retain all records covered by this Section XIII through December 31, 2031, or such longer period as is necessary for the resolution of any litigation, claim, negotiation, audit, or other inquiry involving the Contract.

XIV. *Conflicts of Interest; Gifts and Favors*

a) Contractor understands that (1) Unit will use Fiscal Recovery Funds to pay for the cost of this Contract, and (2) the expenditure of Fiscal Recovery Funds is governed by Conflict of Interest Policy of the Unit, the Regulatory Requirements (including, without limitation, C.F.R. § 200.318(c)(1)), and North Carolina law (including, without limitation, G.S. § 14-234(a)(1) and G.S. § 14-234.3(a)).

b) Contractor certifies to Unit that as of the date hereof, to the best of its knowledge after reasonable inquiry, no employee, officer, or agent of Unit involved in the selection, award, or administration of this Contract (each, a "Covered Individual"), no member of a Covered Individual's immediate family, no partner of a Covered Individual, and no organization (including Contractor) which employs or is about to employ a Covered Individual, has a financial or other interest in or has received a tangible personal benefit from Contractor. Should Contractor obtain knowledge of any such interest or any tangible personal benefit described in the preceding sentence after the date hereof, Contractor shall promptly disclose the same to Unit in writing.

c) Contractor certifies to Unit that it has not provided, nor offered to provide, any gratuities, favors, or anything of value to an officer, employee, or agent of Unit. Should Contractor obtain knowledge of the provision, or offer of any provision, of any gratuity, favor, or anything of value to an officer, employee, or agent described in the preceding sentence after the date hereof, Contractor shall promptly disclose the same to Unit in writing.

XV. *Assurances of Compliance with Title VI of the Civil Rights Act of 1964*

a) Contractor and any Subcontractor, or the successor, transferee, or assignee of Contractor or any Subcontractor, shall comply with Title VI of the Civil Rights Act of 1964, which prohibits recipients of federal financial assistance from excluding from a program or activity, denying benefits of, or otherwise discriminating against a person on the basis of race, color, or national origin (42 U.S.C. § 2000d et seq.), as implemented by the Department of the Treasury's Title VI regulations, 31 C.F.R. Part 22, which are herein incorporated by reference and made a part of this Contract. Title VI also provides protection to persons with "Limited English Proficiency" in any program or activity receiving federal financial assistance, 42 U.S.C. § 2000d et seq., as implemented by Treasury's Title VI regulations, 31 C.F.R. Part 22, and herein incorporated by reference and made a part of this Contract.

XVI. *Other Non-Discrimination Statutes.* Contractor acknowledges that Unit is bound by and agrees, to the extent applicable to Contractor, to abide by the provisions contained in the federal statutes enumerated below, and any other federal statutes and regulations that may be applicable to the expenditure of Fiscal Recovery Funds:

a) The Fair Housing Act, Title VIII of the Civil Rights Act of 1968 (42 U.S.C. §§ 3601 et seq.), which prohibits discrimination in housing on the basis of race, color, religion, national origin, sex, familial status, or disability;

b) Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. § 794), which prohibits discrimination on the basis of disability under any program or activity receiving federal financial assistance;

c) The Age Discrimination Act of 1975, as amended (42 U.S.C. §§ 6101 et seq.), and Treasury's implementing regulations at 31 C.F.R. Part 23, which prohibit discrimination on the basis of age in programs or activities receiving federal financial assistance; and

d) Title II of the Americans with Disabilities Act of 1990, as amended (42 U.S.C. §§ 12101 et seq.), which prohibits discrimination on the basis of disability under programs, activities, and services provided or made available by state and local governments or instrumentalities or agencies thereto.

XVII. Termination for Cause or Convenience

The Unit, by written notice, may terminate this contract, in whole or in part, when it is in the Unit's

interest. If this contract is terminated, the Unit shall be liable only for payment under the payment provisions of this contract for services rendered before the effective date of termination.

The Unit may, by written notice of default to the Contractor, terminate this contract in whole or in part if the Contractor fails to:

i. Deliver the supplies or to perform the services within the time specified in this contract or any extension;
ii. Make progress, so as to endanger performance of this contract; or
iii. Perform any of the other provisions of this contract.

The Unit's right to terminate this contract may be exercised if the Contractor does not cure such failure within 10 days (or more if authorized in writing by the Unit) after receipt of the notice from the Unit specifying the failure.

If the Unit terminates this contract in whole or in part, it may acquire, under the terms and in the manner the Unit considers appropriate, supplies or services similar to those terminated. However, the Contractor shall continue the work not terminated.

If this contract is terminated for default, the Unit may require the Contractor to transfer title and deliver to the Unit any (1) completed supplies, and (2) partially completed supplies and materials, parts, tools, dies, jigs, fixtures, plans, drawings, information, and contract rights (collectively referred to as "materials" in this clause) that the Contractor has specifically produced or acquired for the terminated portion of this contract. Upon direction of the Unit, the Contractor shall also protect and preserve property in its possession in which the Unit has an interest.

The Unit shall pay contract price for completed supplies delivered and accepted. The Unit may withhold from these amounts any sum the Unit determines to be necessary to protect the Unit against loss because of outstanding liens or claims of former lien holders.

The rights and remedies of the Town in this clause are in addition to any other rights and remedies provided by law or under this contract.

XVIII. Administrative, Contractual, or Legal Remedies

The Contractor shall, in a satisfactory and proper manner in accordance with industry standards, complete all obligations and duties as stipulated in this Agreement. Failure of the Contractor to perform or deliver required work, services, or reports under this Agreement may result in the withholding of payments by the Unit to the Contractor. Breach of contract disputes will be decided by arbitration, if the parties mutually agree, or in a North Carolina court of competent jurisdiction.

The Contractor understands that failure to meet the requirements under this Agreement may result in withdrawal of other state or federal funds that may have been made available to the Contractor.

XVIX. *Miscellaneous*

a) **Increasing Seat Belt Use in the United States.** Pursuant to Executive Order 13043, 62 Fed. Reg. 19216 (Apr. 18, 1997), Unit encourages Contractor to adopt and enforce on-the-job seat belt policies and programs for its employees when operating company-owned, rented or personally owned vehicles.

b) **Reducing Text Messaging While Driving.** Pursuant to Executive Order 13513, 74 Fed. Reg. 51225 (Oct. 6, 2009), Unit encourages Contractor to adopt and enforce policies that ban text messaging while driving.

XX. ***Conflicts and Interpretation.*** To the extent that any portion of this Addendum conflicts with any term or condition of the Contract expressed outside of this Addendum, the terms of this Addendum shall govern.

CONTRACTOR:

By: _____

Name: John Thompson

Title: President

Docusign Envelope ID: D4DC54E9-545B-4231-9D3B-4CE6B2B69330

ATTACHMENT 1
TO
CORONAVIRUS STATE AND LOCAL FISCAL RECOVERY FUNDS ADDENDUM

APPENDIX A, 31 C.F.R. PART 21 – CERTIFICATION REGARDING LOBBYING

The undersigned certifies, to the best of their knowledge and belief, that:

1. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

2. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

3. The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all contractors shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

The Contractor certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Contractor understands and agrees that the provisions of 31 U.S.C. Ch. 38, Administrative Remedies for False Claims and Statements, apply to this certification and disclosure, if any.

Signature of Contractor's authorized official

Date: 10/21/24

John Thompson
(Print name of person signing above)

President
(Print title of person signing above)

Town of Wake Forest
H.L. Miller Park Greenway SP-24-
01 Bid Tabulations

					Engineers Estimate		JM Thompson Company		Lanier Construction Company		Fred Smith Company	
Line Item	Sec No	Item Description	Quantity	Unit	Price	Amount	Price	Amount	Price	Amount	Price	Amount
1	800	Mobilization (5%)	1	LS	$ 106,642.60	$ 106,642.60	$ 107,252.00	$ 107,252.00	$ 128,500.00	$ 128,500.00	$ 150,000.00	$ 150,000.00
2	SP	Project Management Communication	2	EA	$ 2,161.00	$ 4,322.00	$ 2,161.00	$ 4,322.00	$ 2,161.00	$ 4,322.00	$ 2,161.00	$ 4,322.00
3	801	Construction Surveying	1	LS	$ 30,000.00	$ 30,000.00	$ 47,252.00	$ 47,252.00	$ 50,000.00	$ 50,000.00	$ 35,000.00	$ 35,000.00
4	226	Undercut Excavation	300	CY	$ 40.00	$ 12,000.00	$ 30.71	$ 9,213.00	$ 30.00	$ 9,000.00	$ 55.00	$ 16,500.00
5	226	Grading	1	LS	$ 150,000.00	$ 150,000.00	$ 141,317.00	$ 141,317.00	$ 410,000.00	$ 410,000.00	$ 826,000.00	$ 826,000.00
6	SP	Exploratory Excavation - Standard	10	HR	$ 250.00	$ 2,500.00	$ 206.72	$ 2,067.20	$ 200.00	$ 2,000.00	$ 260.00	$ 2,600.00
7	SP	Exploratory Excavation - Vacuum	10	HR	$ 300.00	$ 3,000.00	$ 413.45	$ 4,134.50	$ 350.00	$ 3,500.00	$ 475.00	$ 4,750.00
8	505	Shallow Undercut	150	CY	$ 35.00	$ 5,250.00	$ 30.71	$ 4,606.50	$ 40.00	$ 6,000.00	$ 55.00	$ 8,250.00
9	240	Drainage Ditch Excavation	30	CY	$ 45.00	$ 1,350.00	$ 30.71	$ 921.30	$ 60.00	$ 1,800.00	$ 20.00	$ 600.00
10	265	Select Granular Material, Class III	200	CY	$ 70.00	$ 14,000.00	$ 53.15	$ 10,630.00	$ 50.00	$ 10,000.00	$ 40.00	$ 8,000.00
11	310	18" RC Pipe Culverts, Class IV	296	LF	$ 180.00	$ 53,280.00	$ 80.32	$ 23,774.72	$ 110.00	$ 32,560.00	$ 125.00	$ 37,000.00
12	401	Removal of Existing Structure (1)	1	EA	$ 10,000.00	$ 10,000.00	$ 11,813.00	$ 11,813.00	$ 2,500.00	$ 2,500.00	$ 15,000.00	$ 15,000.00
13	402	Removal of Existing Structure (2)	1	EA	$ 10,000.00	$ 10,000.00	$ 11,813.00	$ 11,813.00	$ 2,500.00	$ 2,500.00	$ 15,000.00	$ 15,000.00
14	403	Removal of Existing Structure (3)	1	EA	$ 10,000.00	$ 10,000.00	$ 11,813.00	$ 11,813.00	$ 2,500.00	$ 2,500.00	$ 15,000.00	$ 15,000.00
15	505	Geotextile for Soil Stabilization	450	SY	$ 15.00	$ 6,750.00	$ 4.13	$ 1,858.50	$ 5.00	$ 2,250.00	$ 6.00	$ 2,700.00
16	505	Class IV Subgrade Stabilization	300	TON	$ 90.00	$ 27,000.00	$ 53.15	$ 15,945.00	$ 60.00	$ 18,000.00	$ 40.00	$ 12,000.00
17	520	Aggregate Base Course	600	TON	$ 70.00	$ 42,000.00	$ 82.69	$ 49,614.00	$ 55.00	$ 33,000.00	$ 50.00	$ 30,000.00
18	610	Asphalt Conc Surface Course, Type S9.5B	170	TON	$ 120.00	$ 20,400.00	$ 389.82	$ 66,269.40	$ 275.00	$ 46,750.00	$ 160.00	$ 27,200.00
19	620	Asphalt Binder for Plant Mix	15	TON	$ 584.00	$ 8,760.00	$ 945.00	$ 14,175.00	$ 850.00	$ 12,750.00	$ 600.00	$ 9,000.00
20	815	Subdrain Excavation	45	CY	$ 35.00	$ 1,575.00	$ 47.25	$ 2,126.25	$ 25.00	$ 1,125.00	$ 35.00	$ 1,575.00
21	815	Geotextile for Subsurface Drains	200	SY	$ 7.00	$ 1,400.00	$ 6.49	$ 1,298.00	$ 9.00	$ 1,800.00	$ 5.00	$ 1,000.00
22	815	Subdrain Coarse Aggregate	35	CY	$ 60.00	$ 2,100.00	$ 95.68	$ 3,348.80	$ 85.00	$ 2,975.00	$ 60.00	$ 2,100.00
23	815	6" Perforated Subdrain Pipe	200	LF	$ 12.00	$ 2,400.00	$ 14.17	$ 2,834.00	$ 20.00	$ 4,000.00	$ 15.00	$ 3,000.00
24	815	6" Outlet Pipe	6	LF	$ 60.00	$ 360.00	$ 778.47	$ 4,670.82	$ 120.00	$ 720.00	$ 50.00	$ 300.00
25	815	Subdrain Pipe Outlet	1	EA	$ 50.00	$ 50.00	$ 142.00	$ 142.00	$ 550.00	$ 550.00	$ 400.00	$ 400.00
26	840	Masonry Drainage Structures	5	EA	$ 5,000.00	$ 25,000.00	$ 6,863.00	$ 34,315.00	$ 6,000.00	$ 30,000.00	$ 7,000.00	$ 35,000.00
27	840	Masonry Drainage Structures	8.3	LF	$ 1,000.00	$ 8,300.00	$ 368.56	$ 3,059.05	$ 500.00	$ 4,150.00	$ 300.00	$ 2,490.00
28	840	Frame with 2 Grates STD 840.24	4	EA	$ 1,100.00	$ 4,400.00	$ 727.68	$ 2,910.72	$ 985.00	$ 3,940.00	$ 1,350.00	$ 5,400.00
29	840	Frame with Cover STD 840.54	1	EA	$ 900.00	$ 900.00	$ 1,271.00	$ 1,271.00	$ 950.00	$ 950.00	$ 1,250.00	$ 1,250.00
30	846	2'-6" Concrete Curb & Gutter	80	LF	$ 40.00	$ 3,200.00	$ 94.50	$ 7,560.00	$ 50.00	$ 4,000.00	$ 45.00	$ 3,600.00
31	848	4" Concrete Sidewalk	65	SY	$ 75.00	$ 4,875.00	$ 94.50	$ 6,142.50	$ 80.00	$ 5,200.00	$ 75.00	$ 4,875.00
32	848	Concrete Curb Ramp (Multi-Use Path)	1	EA	$ 4,000.00	$ 4,000.00	$ 2,953.00	$ 2,953.00	$ 5,000.00	$ 5,000.00	$ 4,000.00	$ 4,000.00
33	858	Adjustment of Drop Inlets	1	EA	$ 1,000.00	$ 1,000.00	$ 1,418.00	$ 1,418.00	$ 750.00	$ 750.00	$ 1,500.00	$ 1,500.00
34	SP	Composite Wood Safety Fence	190	LF	$ 90.00	$ 17,100.00	$ 53.15	$ 10,098.50	$ 55.00	$ 10,450.00	$ 50.00	$ 9,500.00
35	876	Rip-Rap, Class I	67	TON	$ 120.00	$ 8,040.00	$ 67.33	$ 4,511.11	$ 150.00	$ 10,050.00	$ 100.00	$ 6,700.00
36	876	Rip-Rap, Class B	95	TON	$ 100.00	$ 9,500.00	$ 66.15	$ 6,284.25	$ 175.00	$ 16,625.00	$ 90.00	$ 8,550.00
37	876	Geotextile For Drainage	620	SY	$ 12.00	$ 7,440.00	$ 4.13	$ 2,560.60	$ 8.00	$ 4,960.00	$ 4.00	$ 2,480.00
38	SP	Fixed Steel Bollard	6	EA	$ 1,500.00	$ 9,000.00	$ 1,181.28	$ 7,087.68	$ 3,000.00	$ 18,000.00	$ 2,400.00	$ 14,400.00
39	SP	Hinged Metal Bollard	3	EA	$ 2,000.00	$ 6,000.00	$ 1,771.94	$ 5,315.82	$ 3,500.00	$ 10,500.00	$ 3,000.00	$ 9,000.00
40	SP	Structure 1 (-L1- 14+90.00) Prefabricated Steel	1	LS	$ 240,000.00	$ 240,000.00	$ 283,511.00	$ 283,511.00	$ 290,500.00	$ 290,500.00	$ 248,900.00	$ 248,900.00
41	SP	Structure 1 (-L1- 15+45.00) Precast Concrete Boardwalk with Timber Railing	1	LS	$ 170,000.00	$ 170,000.00	$ 132,305.00	$ 132,305.00	$ 131,500.00	$ 131,500.00	$ 120,000.00	$ 120,000.00
42	SP	Structure 2 (-L1- 18+75.00) Precast Concrete Boardwalk with Timber Railing	1	LS	$ 560,000.00	$ 560,000.00	$ 581,197.00	$ 581,197.00	$ 580,000.00	$ 580,000.00	$ 537,000.00	$ 537,000.00
43	SP	R1 - Rules & Regulations Sign	2	EA	$ 3,500.00	$ 7,000.00	$ 5,050.00	$ 10,100.00	$ 300.00	$ 600.00	$ 3,158.00	$ 6,316.00
44	SP	EM1 - Emergency Sign	2	EA	$ 1,000.00	$ 2,000.00	$ 4,725.00	$ 9,450.00	$ 300.00	$ 600.00	$ 154.00	$ 308.00
45	SP	G1/G2 - Vehicular Sign Double Sided	3	EA	$ 1,750.00	$ 5,250.00	$ 4,725.00	$ 14,175.00	$ 350.00	$ 1,050.00	$ 615.00	$ 1,845.00
46	SP	W1 - Clearance Warning Sign	4	EA	$ 1,500.00	$ 6,000.00	$ 4,488.00	$ 17,952.00	$ 350.00	$ 1,400.00	$ 697.00	$ 2,788.00
47	SP	W2 - Slippery Warning Sign	2	EA	$ 1,500.00	$ 3,000.00	$ 4,429.86	$ 8,859.72	$ 350.00	$ 700.00	$ 697.00	$ 1,394.00
48	SP	Supports, Aluminum	130	LF	$ 50.00	$ 6,500.00	$ 70.87	$ 9,213.10	$ 40.00	$ 5,200.00	$ 13.00	$ 1,690.00
49	907	Disposal of Sign System, U-Channel	4	EA	$ 60.00	$ 240.00	$ 147.66	$ 590.64	$ 65.00	$ 260.00	$ 270.00	$ 1,080.00
50	907	Disposal of Sign System, Wood	2	EA	$ 75.00	$ 150.00	$ 147.66	$ 295.32	$ 65.00	$ 130.00	$ 270.00	$ 540.00
51	1150	Flagger	20	DAY	$ 300.00	$ 6,000.00	$ 1,831.00	$ 36,620.00	$ 400.00	$ 8,000.00	$ 800.00	$ 16,000.00
52	SP	Traffic Control	1	LS	$ 15,000.00	$ 15,000.00	$ 19,176.00	$ 19,176.00	$ 45,000.00	$ 45,000.00	$ 15,000.00	$ 15,000.00
53	1205	Thermoplastic Pavement Marking lines (4", 90 Mils)	70	LF	$ 5.00	$ 350.00	$ 41.34	$ 2,893.80	$ 45.00	$ 3,150.00	$ 28.00	$ 1,960.00
54	SP	Fabric Insert Inlet Protection, Type 2	12	EA	$ 50.00	$ 600.00	$ 383.92	$ 4,607.04	$ 200.00	$ 2,400.00	$ 250.00	$ 3,000.00
55	SP	Fabric Insert Inlet Protection Cleanout	12	EA	$ 150.00	$ 1,800.00	$ 129.94	$ 1,559.28	$ 115.00	$ 1,380.00	$ 250.00	$ 3,000.00
56	SP	Mud Mats	185	LF	$ 100.00	$ 18,500.00	$ 236.25	$ 43,706.25	$ 120.00	$ 22,200.00	$ 450.00	$ 83,250.00
57	SP	Tree Protection (Safety) Fence	3000	LF	$ 2.50	$ 7,500.00	$ 3.54	$ 10,620.00	$ 4.10	$ 12,300.00	$ 2.00	$ 6,000.00
58	1515	6" Tapping Sleeve & Valve	1	EA	$ 10,000.00	$ 10,000.00	$ 7,501.00	$ 7,501.00	$ 8,000.00	$ 8,000.00	$ 12,500.00	$ 12,500.00
59	1515	Fire Hydrant	1	EA	$ 8,000.00	$ 8,000.00	$ 10,853.00	$ 10,853.00	$ 11,750.00	$ 11,750.00	$ 9,250.00	$ 9,250.00
60	1515	Fire Hydrant Leg	10	LF	$ 150.00	$ 1,500.00	$ 144.11	$ 1,441.10	$ 185.00	$ 1,850.00	$ 125.00	$ 1,250.00
61	1530	Remove Fire Hydrant	1	EA	$ 3,000.00	$ 3,000.00	$ 2,126.00	$ 2,126.00	$ 1,500.00	$ 1,500.00	$ 3,000.00	$ 3,000.00
62	1605	Temporary Silt Fence	1920	LF	$ 5.00	$ 9,600.00	$ 4.19	$ 8,044.80	$ 5.00	$ 9,600.00	$ 2.75	$ 5,280.00
63	1610	Stone For Erosion Control, Class A	150	TON	$ 65.00	$ 9,750.00	$ 70.87	$ 10,630.50	$ 150.00	$ 22,500.00	$ 60.00	$ 9,000.00

Line Item	Sec No	Item Description	Quantity	Unit	Price	Amount	Price	Amount	Price	Amount	Price	Amount
64	1610	Sediment Control Stone	100	TON	$ 70.00	$ 7,000.00	$ 64.97	$ 6,497.00	$ 60.00	$ 6,000.00	$ 55.00	$ 5,500.00
65	1615	Temporary Mulching	2.2	ACR	$ 2,250.00	$ 4,950.00	$ 1,896.00	$ 4,171.20	$ 1,000.00	$ 2,200.00	$ 1,850.00	$ 4,070.00
66	1620	Seed for Temporary Seeding	150	LB	$ 25.00	$ 3,750.00	$ 5.90	$ 885.00	$ 10.00	$ 1,500.00	$ 4.00	$ 600.00
67	1620	Fertilizer for Temporary Seeding	0.5	TON	$ 2,000.00	$ 1,000.00	$ 1,299.38	$ 649.69	$ 2,500.00	$ 1,250.00	$ 1,200.00	$ 600.00
68	1631	Matting for Erosion Control	2000	SY	$ 5.00	$ 10,000.00	$ 2.56	$ 5,120.00	$ 4.00	$ 8,000.00	$ 2.40	$ 4,800.00
69	1632	1/4" Hardware Cloth	250	LF	$ 5.00	$ 1,250.00	$ 7.08	$ 1,770.00	$ 13.50	$ 3,375.00	$ 4.00	$ 1,000.00
70	1638	Stilling Basins	1	EA	$ 750.00	$ 750.00	$ 1,772.00	$ 1,772.00	$ 1,500.00	$ 1,500.00	$ 2,400.00	$ 2,400.00
71	1642	Wattle	1570	LF	$ 20.00	$ 31,400.00	$ 16.53	$ 25,952.10	$ 19.75	$ 31,007.50	$ 11.00	$ 17,270.00
72	1660	Seeding & Mulching	2.2	ACR	$ 3,800.00	$ 8,360.00	$ 5,096.00	$ 11,211.20	$ 6,000.00	$ 13,200.00	$ 1,950.00	$ 4,290.00
73	1660	Mowing	1.2	ACR	$ 250.00	$ 300.00	$ 413.46	$ 496.15	$ 800.00	$ 960.00	$ 225.00	$ 270.00
74	1661	Seed for Repair Seeding	13.5	LB	$ 20.00	$ 270.00	$ 5.90	$ 79.65	$ 15.00	$ 202.50	$ 10.00	$ 135.00
75	1661	Fertilizer for Repair Seeding	0.25	TON	$ 2,500.00	$ 625.00	$ 1,299.00	$ 324.75	$ 2,500.00	$ 625.00	$ 1,200.00	$ 300.00
76	1662	Seed for Supplemental Seeding	50	LB	$ 25.00	$ 1,250.00	$ 5.90	$ 295.00	$ 10.00	$ 500.00	$ 6.90	$ 345.00
77	1665	Fertilizer Topdressing	1	TON	$ 2,500.00	$ 2,500.00	$ 1,299.00	$ 1,299.00	$ 1,000.00	$ 1,000.00	$ 1,200.00	$ 1,200.00
78	SP	Concrete Washout Structure	3	EA	$ 3,500.00	$ 10,500.00	$ 885.97	$ 2,657.91	$ 1,200.00	$ 3,600.00	$ 1,750.00	$ 5,250.00
79	SP	Response for Erosion Control	20	EA	$ 500.00	$ 10,000.00	$ 236.25	$ 4,725.00	$ 75.00	$ 1,500.00	$ 25.00	$ 500.00
80	SP	Temporary Stream Crossing	1	EA	$ 5,000.00	$ 5,000.00	$ 14,176.00	$ 14,176.00	$ 20,000.00	$ 20,000.00	$ 16,328.00	$ 16,328.00
81	SP	Backless Bench	2	EA	$ 2,250.00	$ 4,500.00	$ 4,134.53	$ 8,269.06	$ 2,500.00	$ 5,000.00	$ 3,500.00	$ 7,000.00
82	SP	Bench with Back	4	EA	$ 3,300.00	$ 13,200.00	$ 5,315.82	$ 21,263.28	$ 2,850.00	$ 11,400.00	$ 4,000.00	$ 16,000.00
83	SP	Pet Waste Station	4	EA	$ 1,300.00	$ 5,200.00	$ 679.24	$ 2,716.96	$ 750.00	$ 3,000.00	$ 4,400.00	$ 17,600.00
84	SP	Waste and Recycle Receptacle	5	EA	$ 955.00	$ 4,775.00	$ 3,543.88	$ 17,719.40	$ 4,500.00	$ 22,500.00	$ 5,000.00	$ 25,000.00
85	SP	Stream Restoration Grading	1	LS	$ 125,000.00	$ 125,000.00	$ 105,328.00	$ 105,328.00	$ 85,000.00	$ 85,000.00	$ 134,000.00	$ 134,000.00
86	SP	Log J-Hook Vane	7	EA	$ 2,000.00	$ 14,000.00	$ 5,380.80	$ 37,665.60	$ 5,500.00	$ 38,500.00	$ 5,000.00	$ 35,000.00
87	SP	Boulder Toe Protection	30	LF	$ 300.00	$ 9,000.00	$ 598.91	$ 17,967.30	$ 610.00	$ 18,300.00	$ 550.00	$ 16,500.00
88	SP	Rock Toe Protection	100	LF	$ 25.00	$ 2,500.00	$ 151.20	$ 15,120.00	$ 155.00	$ 15,500.00	$ 140.00	$ 14,000.00
89	SP	Toe Wood Protection	130	LF	$ 15.00	$ 1,950.00	$ 163.02	$ 21,192.47	$ 165.00	$ 21,450.00	$ 150.00	$ 19,500.00
90	SP	Constructed Riffles	930	SF	$ 20.00	$ 18,600.00	$ 27.17	$ 25,268.10	$ 30.00	$ 27,900.00	$ 24.00	$ 22,320.00
91	SP	Rock And Roll Riffle	630	SF	$ 60.00	$ 37,800.00	$ 69.69	$ 43,904.70	$ 75.00	$ 47,250.00	$ 64.00	$ 40,320.00
92	SP	Step Pool Structure	330	SF	$ 70.00	$ 23,100.00	$ 92.14	$ 30,406.20	$ 95.00	$ 31,350.00	$ 85.00	$ 28,050.00
93	SP	Rock Cross Vane	2	EA	$ 4,000.00	$ 8,000.00	$ 5,788.35	$ 11,576.70	$ 6,000.00	$ 12,000.00	$ 5,300.00	$ 10,600.00
94	SP	Tuck Behind Steps	1	LS	$ 15,000.00	$ 15,000.00	$ 46,071.00	$ 46,071.00	$ 46,500.00	$ 46,500.00	$ 42,000.00	$ 42,000.00
95	SP	Diversion/Pump Around Operation	1	LS	$ 25,000.00	$ 25,000.00	$ 21,263.00	$ 21,263.00	$ 21,500.00	$ 21,500.00	$ 19,500.00	$ 19,500.00
96	SP	Coir Fiber Matting	4200	SY	$ 8.00	$ 33,600.00	$ 7.08	$ 29,736.00	$ 8.00	$ 33,600.00	$ 6.00	$ 25,200.00
97	SP	Temporary Seed And Mulch	2	AC	$ 2,500.00	$ 5,000.00	$ 9,353.00	$ 18,706.00	$ 2,500.00	$ 5,000.00	$ 7,900.00	$ 15,800.00
98	SP	Soil Amendments	9700	SY	$ 2.00	$ 19,400.00	$ 1.48	$ 14,326.90	$ 1.50	$ 14,550.00	$ 1.25	$ 12,125.00
99	SP	Permanent Seeding (Riparian)	1	AC	$ 3,000.00	$ 3,000.00	$ 9,687.00	$ 9,687.00	$ 9,850.00	$ 9,850.00	$ 8,175.00	$ 8,175.00
100	SP	Permanent Seeding (Uplands)	0.1	AC	$ 2,000.00	$ 200.00	$ 4,181.00	$ 418.10	$ 4,250.00	$ 425.00	$ 3,600.00	$ 360.00
101	SP	Permanent Seeding (Wetland)	0.1	AC	$ 3,000.00	$ 300.00	$ 4,961.00	$ 496.10	$ 5,020.00	$ 502.00	$ 4,200.00	$ 420.00
102	SP	Live Stakes	1430	EA	$ 8.00	$ 11,440.00	$ 3.83	$ 5,476.90	$ 4.00	$ 5,720.00	$ 3.30	$ 4,719.00
103	SP	Herbaceous Plugs	720	EA	$ 12.00	$ 8,640.00	$ 4.43	$ 3,189.60	$ 5.00	$ 3,600.00	$ 4.00	$ 2,880.00
104	SP	Containterized Plantings - 1-Gallon	90	EA	$ 35.00	$ 3,150.00	$ 25.39	$ 2,285.10	$ 25.55	$ 2,299.50	$ 22.00	$ 1,980.00
105	SP	Containterized Plantings - 3-Gallon	180	EA	$ 70.00	$ 12,600.00	$ 244.52	$ 44,013.60	$ 250.00	$ 45,000.00	$ 215.00	$ 38,700.00
					CONTINGENCY (10%)	$ 221,700.00						
					BASE ESTIMATE	$ 2,451,200.00	BASE BID	$ 2,512,274.49	BASE BID	$ 2,699,363.50	BASE BID	$ 3,049,000.00
							% DIFF	102%	% DIFF	110%	% DIFF	124%

BID ALTERNATE 1

Line Item	Sec No	Item Description	Quantity	Unit	Engineers Estimate Price	Engineers Estimate Amount	JM Thompson Company Price	JM Thompson Company Amount	Lanier Construction Company Price	Lanier Construction Company Amount	Fred Smith Company Price	Fred Smith Company Amount
106	SP	Structure 1 (-L1- 15+45.00) Precast Concrete Boardwalk with Metal Railing	1	LS	$ 170,000.00	$ 170,000.00	$ 147,956.00	$ 147,956.00	$ 150,000.00	$ 150,000.00	$ 140,000.00	$ 140,000.00
107	SP	Structure 2 (-L1- 18+75.00) Precast Concrete Boardwalk with Metal Railing	1	LS	$ 560,000.00	$ 560,000.00	$ 611,939.00	$ 611,939.00	$ 605,000.00	$ 605,000.00	$ 585,000.00	$ 585,000.00
					BID ALT 1 EST	$ 730,000.00	BID ALT 1	$ 759,895.00	BID ALT 1	$ 755,000.00	BID ALT 1	$ 725,000.00
							% DIFF	104%	% DIFF	103%	% DIFF	99%

A cell highlighted in red indicates a difference in the submitted Schedule of Prices, Proposal

PROJECT TOTAL BASE	$ 2,451,20	PROJECT TOTAL BASE ESTIMATE	$ 2,512,274.49	PROJECT TOTAL BASE ESTIMATE	$ 2,699,363.50	PROJECT TOTAL BASE ESTIMATE	$ 3,049,000.00
		% DIFF	102%	% DIFF	110%	% DIFF	124%

Kimley»Horn

October 25, 2024

Timothy Watson
Town of Wake Forest
Engineering Director
301 S. Brooks St.
Wake Forest, NC 27587

Re: H.L. Miller Park Greenway SP-24-01
Bid Tab Certification

Dear Mr. Watson:

In the Wake Forest Town Hall at 3:00 pm on October 23, 2024, the bidding for the above referenced project was closed. The bid received was opened, and the apparent low bidder was **J.M. Thompson Company.**

After reviewing the bidding documents, we find J.M. Thompson Company's bid to be in compliance with the contract documents, but they provided an incorrect bid amount of $2,515,156.00. The corrected bid amount for J.M. Thompson Company is **$2,512,274.49**. The certified bid tabulations are attached.

If you have any questions, please call me at (919) 677-2108.

Sincerely,

KIMLEY-HORN AND ASSOCIATES, INC.

By: Caleb Lowman, P.E.
Project Manager

cc: Steven Meyer, Town of Wake Forest
Randy Driver, Town of Wake Forest
Hollie Aldridge, Town of Wake Forest

Town of Wake Forest
H.L. Miller Park Greenway SP-24-01
Bid Tabulations

					Engineers Estimate		JM Thompson Company		Lanier Construction Company		Fred Smith Company	
Line Item	**Sec No**	**Item Description**	**Quantity**	**Unit**	**Price**	**Amount**	**Price**	**Amount**	**Price**	**Amount**	Price	Amount
1	800	Mobilization (5%)	1	LS	$ 106,642.60	$ 106,642.60	$ 107,252.00	$ 107,252.00	$ 128,500.00	$ 128,500.00	$ 150,000.00	$ 150,000.00
2	SP	Project Management Communication	2	EA	$ 2,161.00	$ 4,322.00	$ 2,161.00	$ 4,322.00	$ 2,161.00	$ 4,322.00	$ 2,161.00	$ 4,322.00
3	801	Construction Surveying	1	LS	$ 30,000.00	$ 30,000.00	$ 47,252.00	$ 47,252.00	$ 50,000.00	$ 50,000.00	$ 35,000.00	$ 35,000.00
4	226	Undercut Excavation	300	CY	$ 40.00	$ 12,000.00	$ 30.71	$ 9,213.00	$ 30.00	$ 9,000.00	$ 55.00	$ 16,500.00
5	226	Grading	1	LS	$ 150,000.00	$ 150,000.00	$ 141,317.00	$ 141,317.00	$ 410,000.00	$ 410,000.00	$ 826,000.00	$ 826,000.00
6	SP	Exploratory Excavation - Standard	10	HR	$ 250.00	$ 2,500.00	$ 206.72	$ 2,067.20	$ 200.00	$ 2,000.00	$ 260.00	$ 2,600.00
7	SP	Exploratory Excavation - Vacuum	10	HR	$ 300.00	$ 3,000.00	$ 413.45	$ 4,134.50	$ 350.00	$ 3,500.00	$ 475.00	$ 4,750.00
8	505	Shallow Undercut	150	CY	$ 35.00	$ 5,250.00	$ 30.71	$ 4,606.50	$ 40.00	$ 6,000.00	$ 55.00	$ 8,250.00
9	240	Drainage Ditch Excavation	30	CY	$ 45.00	$ 1,350.00	$ 30.71	$ 921.30	$ 60.00	$ 1,800.00	$ 20.00	$ 600.00
10	265	Select Granular Material, Class III	200	CY	$ 70.00	$ 14,000.00	$ 53.15	$ 10,630.00	$ 50.00	$ 10,000.00	$ 40.00	$ 8,000.00
11	310	18" RC Pipe Culverts, Class IV	296	LF	$ 180.00	$ 53,280.00	$ 80.32	$ 23,774.72	$ 110.00	$ 32,560.00	$ 125.00	$ 37,000.00
12	401	Removal of Existing Structure (1)	1	EA	$ 10,000.00	$ 10,000.00	$ 11,813.00	$ 11,813.00	$ 2,500.00	$ 2,500.00	$ 15,000.00	$ 15,000.00
13	402	Removal of Existing Structure (2)	1	EA	$ 10,000.00	$ 10,000.00	$ 11,813.00	$ 11,813.00	$ 2,500.00	$ 2,500.00	$ 15,000.00	$ 15,000.00
14	403	Removal of Existing Structure (3)	1	EA	$ 10,000.00	$ 10,000.00	$ 11,813.00	$ 11,813.00	$ 2,500.00	$ 2,500.00	$ 15,000.00	$ 15,000.00
15	505	Geotextile for Soil Stabilization	450	SY	$ 15.00	$ 6,750.00	$ 4.13	$ 1,858.50	$ 5.00	$ 2,250.00	$ 6.00	$ 2,700.00
16	505	Class IV Subgrade Stabilization	300	TON	$ 90.00	$ 27,000.00	$ 53.15	$ 15,945.00	$ 60.00	$ 18,000.00	$ 40.00	$ 12,000.00
17	520	Aggregate Base Course	600	TON	$ 70.00	$ 42,000.00	$ 82.69	$ 49,614.00	$ 55.00	$ 33,000.00	$ 50.00	$ 30,000.00
18	610	Asphalt Conc Surface Course, Type S9.5B	170	TON	$ 120.00	$ 20,400.00	$ 389.82	$ 66,269.40	$ 275.00	$ 46,750.00	$ 160.00	$ 27,200.00
19	620	Asphalt Binder for Plant Mix	15	TON	$ 584.00	$ 8,760.00	$ 945.00	$ 14,175.00	$ 850.00	$ 12,750.00	$ 600.00	$ 9,000.00
20	815	Subdrain Excavation	45	CY	$ 35.00	$ 1,575.00	$ 47.25	$ 2,126.25	$ 25.00	$ 1,125.00	$ 35.00	$ 1,575.00
21	815	Geotextile for Subsurface Drains	200	SY	$ 7.00	$ 1,400.00	$ 6.49	$ 1,298.00	$ 9.00	$ 1,800.00	$ 5.00	$ 1,000.00
22	815	Subdrain Coarse Aggregate	35	CY	$ 60.00	$ 2,100.00	$ 95.68	$ 3,348.80	$ 85.00	$ 2,975.00	$ 60.00	$ 2,100.00
23	815	6" Perforated Subdrain Pipe	200	LF	$ 12.00	$ 2,400.00	$ 14.17	$ 2,834.00	$ 20.00	$ 4,000.00	$ 15.00	$ 3,000.00
24	815	6" Outlet Pipe	6	LF	$ 60.00	$ 360.00	$ 778.47	$ 4,670.82	$ 120.00	$ 720.00	$ 50.00	$ 300.00
25	815	Subdrain Pipe Outlet	1	EA	$ 50.00	$ 50.00	$ 142.00	$ 142.00	$ 550.00	$ 550.00	$ 400.00	$ 400.00
26	840	Masonry Drainage Structures	5	EA	$ 5,000.00	$ 25,000.00	$ 6,863.00	$ 34,315.00	$ 6,000.00	$ 30,000.00	$ 7,000.00	$ 35,000.00
27	840	Masonry Drainage Structures	8.3	LF	$ 1,000.00	$ 8,300.00	$ 368.56	$ 3,059.05	$ 500.00	$ 4,150.00	$ 300.00	$ 2,490.00
28	840	Frame with 2 Grates STD 840.24	4	EA	$ 1,100.00	$ 4,400.00	$ 727.68	$ 2,910.72	$ 985.00	$ 3,940.00	$ 1,350.00	$ 5,400.00
29	840	Frame with Cover STD 840.54	1	EA	$ 900.00	$ 900.00	$ 1,271.00	$ 1,271.00	$ 950.00	$ 950.00	$ 1,250.00	$ 1,250.00
30	846	2'-6" Concrete Curb & Gutter	80	LF	$ 40.00	$ 3,200.00	$ 94.50	$ 7,560.00	$ 50.00	$ 4,000.00	$ 45.00	$ 3,600.00
31	848	4" Concrete Sidewalk	65	SY	$ 75.00	$ 4,875.00	$ 94.50	$ 6,142.50	$ 80.00	$ 5,200.00	$ 75.00	$ 4,875.00
32	848	Concrete Curb Ramp (Multi-Use Path)	1	EA	$ 4,000.00	$ 4,000.00	$ 2,953.00	$ 2,953.00	$ 5,000.00	$ 5,000.00	$ 4,000.00	$ 4,000.00
33	858	Adjustment of Drop Inlets	1	EA	$ 1,000.00	$ 1,000.00	$ 1,418.00	$ 1,418.00	$ 750.00	$ 750.00	$ 1,500.00	$ 1,500.00
34	SP	Composite Wood Safety Fence	190	LF	$ 90.00	$ 17,100.00	$ 53.15	$ 10,098.50	$ 55.00	$ 10,450.00	$ 50.00	$ 9,500.00
35	876	Rip-Rap, Class I	67	TON	$ 120.00	$ 8,040.00	$ 67.33	$ 4,511.11	$ 150.00	$ 10,050.00	$ 100.00	$ 6,700.00
36	876	Rip-Rap, Class B	95	TON	$ 100.00	$ 9,500.00	$ 66.15	$ 6,284.25	$ 175.00	$ 16,625.00	$ 90.00	$ 8,550.00
37	876	Geotextile For Drainage	620	SY	$ 12.00	$ 7,440.00	$ 4.13	$ 2,560.60	$ 8.00	$ 4,960.00	$ 4.00	$ 2,480.00
38	SP	Fixed Steel Bollard	6	EA	$ 1,500.00	$ 9,000.00	$ 1,181.28	$ 7,087.68	$ 3,000.00	$ 18,000.00	$ 2,400.00	$ 14,400.00
39	SP	Hinged Metal Bollard	3	EA	$ 2,000.00	$ 6,000.00	$ 1,771.94	$ 5,315.82	$ 3,500.00	$ 10,500.00	$ 3,000.00	$ 9,000.00
40	SP	Structure 1 (-L1- 14+90.00) Prefabricated Steel	1	LS	$ 240,000.00	$ 240,000.00	$ 283,511.00	$ 283,511.00	$ 290,500.00	$ 290,500.00	$ 248,900.00	$ 248,900.00
41	SP	Structure 1 (-L1- 15+45.00) Precast Concrete Boardwalk with Timber Railing	1	LS	$ 170,000.00	$ 170,000.00	$ 132,305.00	$ 132,305.00	$ 131,500.00	$ 131,500.00	$ 120,000.00	$ 120,000.00
42	SP	Structure 2 (-L1- 18+75.00) Precast Concrete Boardwalk with Timber Railing	1	LS	$ 560,000.00	$ 560,000.00	$ 581,197.00	$ 581,197.00	$ 580,000.00	$ 580,000.00	$ 537,000.00	$ 537,000.00
43	SP	R1 - Rules & Regulations Sign	2	EA	$ 3,500.00	$ 7,000.00	$ 5,050.00	$ 10,100.00	$ 300.00	$ 600.00	$ 3,158.00	$ 6,316.00
44	SP	EM1 - Emergency Sign	2	EA	$ 1,000.00	$ 2,000.00	$ 4,725.00	$ 9,450.00	$ 300.00	$ 600.00	$ 154.00	$ 308.00
45	SP	G1/G2 - Vehicular Sign Double Sided	3	EA	$ 1,750.00	$ 5,250.00	$ 4,725.00	$ 14,175.00	$ 350.00	$ 1,050.00	$ 615.00	$ 1,845.00
46	SP	W1 - Clearance Warning Sign	4	EA	$ 1,500.00	$ 6,000.00	$ 4,488.00	$ 17,952.00	$ 350.00	$ 1,400.00	$ 697.00	$ 2,788.00
47	SP	W2 - Slippery Warning Sign	2	EA	$ 1,500.00	$ 3,000.00	$ 4,429.86	$ 8,859.72	$ 350.00	$ 700.00	$ 697.00	$ 1,394.00
48	SP	Supports, Aluminum	130	LF	$ 50.00	$ 6,500.00	$ 70.87	$ 9,213.10	$ 40.00	$ 5,200.00	$ 13.00	$ 1,690.00
49	907	Disposal of Sign System, U-Channel	4	EA	$ 60.00	$ 240.00	$ 147.66	$ 590.64	$ 65.00	$ 260.00	$ 270.00	$ 1,080.00
50	907	Disposal of Sign System, Wood	2	EA	$ 75.00	$ 150.00	$ 147.66	$ 295.32	$ 65.00	$ 130.00	$ 270.00	$ 540.00
51	1150	Flagger	20	DAY	$ 300.00	$ 6,000.00	$ 1,831.00	$ 36,620.00	$ 400.00	$ 8,000.00	$ 800.00	$ 16,000.00
52	SP	Traffic Control	1	LS	$ 15,000.00	$ 15,000.00	$ 19,176.00	$ 19,176.00	$ 45,000.00	$ 45,000.00	$ 15,000.00	$ 15,000.00
53	1205	Thermoplastic Pavement Marking lines (4", 90 Mils)	70	LF	$ 5.00	$ 350.00	$ 41.34	$ 2,893.80	$ 45.00	$ 3,150.00	$ 28.00	$ 1,960.00
54	SP	Fabric Insert Inlet Protection, Type 2	12	EA	$ 50.00	$ 600.00	$ 383.92	$ 4,607.04	$ 200.00	$ 2,400.00	$ 250.00	$ 3,000.00
55	SP	Fabric Insert Inlet Protection Cleanout	12	EA	$ 150.00	$ 1,800.00	$ 129.94	$ 1,559.28	$ 115.00	$ 1,380.00	$ 250.00	$ 3,000.00
56	SP	Mud Mats	185	LF	$ 100.00	$ 18,500.00	$ 236.25	$ 43,706.25	$ 120.00	$ 22,200.00	$ 450.00	$ 83,250.00
57	SP	Tree Protection (Safety) Fence	3000	LF	$ 2.50	$ 7,500.00	$ 3.54	$ 10,620.00	$ 4.10	$ 12,300.00	$ 2.00	$ 6,000.00
58	1515	6" Tapping Sleeve & Valve	1	EA	$ 10,000.00	$ 10,000.00	$ 7,501.00	$ 7,501.00	$ 8,000.00	$ 8,000.00	$ 12,500.00	$ 12,500.00
59	1515	Fire Hydrant	1	EA	$ 8,000.00	$ 8,000.00	$ 10,853.00	$ 10,853.00	$ 11,750.00	$ 11,750.00	$ 9,250.00	$ 9,250.00
60	1515	Fire Hydrant Leg	10	LF	$ 150.00	$ 1,500.00	$ 144.11	$ 1,441.10	$ 185.00	$ 1,850.00	$ 125.00	$ 1,250.00
61	1530	Remove Fire Hydrant	1	EA	$ 3,000.00	$ 3,000.00	$ 2,126.00	$ 2,126.00	$ 1,500.00	$ 1,500.00	$ 3,000.00	$ 3,000.00
62	1605	Temporary Silt Fence	1920	LF	$ 5.00	$ 9,600.00	$ 4.19	$ 8,044.80	$ 5.00	$ 9,600.00	$ 2.75	$ 5,280.00
63	1610	Stone For Erosion Control, Class A	150	TON	$ 65.00	$ 9,750.00	$ 70.87	$ 10,630.50	$ 150.00	$ 22,500.00	$ 60.00	$ 9,000.00

Line Item	Sec No	Item Description	Quantity	Unit	Price	Amount	Price	Amount	Price	Amount	Price	Amount
64	1610	Sediment Control Stone	100	TON	$ 70.00	$ 7,000.00	$ 64.97	$ 6,497.00	$ 60.00	$ 6,000.00	$ 55.00	$ 5,500.00
65	1615	Temporary Mulching	2.2	ACR	$ 2,250.00	$ 4,950.00	$ 1,896.00	$ 4,171.20	$ 1,000.00	$ 2,200.00	$ 1,850.00	$ 4,070.00
66	1620	Seed for Temporary Seeding	150	LB	$ 25.00	$ 3,750.00	$ 5.90	$ 885.00	$ 10.00	$ 1,500.00	$ 4.00	$ 600.00
67	1620	Fertilizer for Temporary Seeding	0.5	TON	$ 2,000.00	$ 1,000.00	$ 1,299.38	$ 649.69	$ 2,500.00	$ 1,250.00	$ 1,200.00	$ 600.00
68	1631	Matting for Erosion Control	2000	SY	$ 5.00	$ 10,000.00	$ 2.56	$ 5,120.00	$ 4.00	$ 8,000.00	$ 2.40	$ 4,800.00
69	1632	1/4" Hardware Cloth	250	LF	$ 5.00	$ 1,250.00	$ 7.08	$ 1,770.00	$ 13.50	$ 3,375.00	$ 4.00	$ 1,000.00
70	1638	Stilling Basins	1	EA	$ 750.00	$ 750.00	$ 1,772.00	$ 1,772.00	$ 1,500.00	$ 1,500.00	$ 2,400.00	$ 2,400.00
71	1642	Wattle	1570	LF	$ 20.00	$ 31,400.00	$ 16.53	$ 25,952.10	$ 19.75	$ 31,007.50	$ 11.00	$ 17,270.00
72	1660	Seeding & Mulching	2.2	ACR	$ 3,800.00	$ 8,360.00	$ 5,096.00	$ 11,211.20	$ 6,000.00	$ 13,200.00	$ 1,950.00	$ 4,290.00
73	1660	Mowing	1.2	ACR	$ 250.00	$ 300.00	$ 413.46	$ 496.15	$ 800.00	$ 960.00	$ 225.00	$ 270.00
74	1661	Seed for Repair Seeding	13.5	LB	$ 20.00	$ 270.00	$ 5.90	$ 79.65	$ 15.00	$ 202.50	$ 10.00	$ 135.00
75	1661	Fertilizer for Repair Seeding	0.25	TON	$ 2,500.00	$ 625.00	$ 1,299.00	$ 324.75	$ 2,500.00	$ 625.00	$ 1,200.00	$ 300.00
76	1662	Seed for Supplemental Seeding	50	LB	$ 25.00	$ 1,250.00	$ 5.90	$ 295.00	$ 10.00	$ 500.00	$ 6.90	$ 345.00
77	1665	Fertilizer Topdressing	1	TON	$ 2,500.00	$ 2,500.00	$ 1,299.00	$ 1,299.00	$ 1,000.00	$ 1,000.00	$ 1,200.00	$ 1,200.00
78	SP	Concrete Washout Structure	3	EA	$ 3,500.00	$ 10,500.00	$ 885.97	$ 2,657.91	$ 1,200.00	$ 3,600.00	$ 1,750.00	$ 5,250.00
79	SP	Response for Erosion Control	20	EA	$ 500.00	$ 10,000.00	$ 236.25	$ 4,725.00	$ 75.00	$ 1,500.00	$ 25.00	$ 500.00
80	SP	Temporary Stream Crossing	1	EA	$ 5,000.00	$ 5,000.00	$ 14,176.00	$ 14,176.00	$ 20,000.00	$ 20,000.00	$ 16,328.00	$ 16,328.00
81	SP	Backless Bench	2	EA	$ 2,250.00	$ 4,500.00	$ 4,134.53	$ 8,269.06	$ 2,500.00	$ 5,000.00	$ 3,500.00	$ 7,000.00
82	SP	Bench with Back	4	EA	$ 3,300.00	$ 13,200.00	$ 5,315.82	$ 21,263.28	$ 2,850.00	$ 11,400.00	$ 4,000.00	$ 16,000.00
83	SP	Pet Waste Station	4	EA	$ 1,300.00	$ 5,200.00	$ 679.24	$ 2,716.96	$ 750.00	$ 3,000.00	$ 4,400.00	$ 17,600.00
84	SP	Waste and Recycle Receptacle	5	EA	$ 955.00	$ 4,775.00	$ 3,543.88	$ 17,719.40	$ 4,500.00	$ 22,500.00	$ 5,000.00	$ 25,000.00
85	SP	Stream Restoration Grading	1	LS	$ 125,000.00	$ 125,000.00	$ 105,328.00	$ 105,328.00	$ 85,000.00	$ 85,000.00	$ 134,000.00	$ 134,000.00
86	SP	Log J-Hook Vane	7	EA	$ 2,000.00	$ 14,000.00	$ 5,380.80	$ 37,665.60	$ 5,500.00	$ 38,500.00	$ 5,000.00	$ 35,000.00
87	SP	Boulder Toe Protection	30	LF	$ 300.00	$ 9,000.00	$ 598.91	$ 17,967.30	$ 610.00	$ 18,300.00	$ 550.00	$ 16,500.00
88	SP	Rock Toe Protection	100	LF	$ 25.00	$ 2,500.00	$ 151.20	$ 15,120.00	$ 155.00	$ 15,500.00	$ 140.00	$ 14,000.00
89	SP	Toe Wood Protection	130	LF	$ 15.00	$ 1,950.00	$ 163.02	$ 21,192.47	$ 165.00	$ 21,450.00	$ 150.00	$ 19,500.00
90	SP	Constructed Riffles	930	SF	$ 20.00	$ 18,600.00	$ 27.17	$ 25,268.10	$ 30.00	$ 27,900.00	$ 24.00	$ 22,320.00
91	SP	Rock And Roll Riffle	630	SF	$ 60.00	$ 37,800.00	$ 69.69	$ 43,904.70	$ 75.00	$ 47,250.00	$ 64.00	$ 40,320.00
92	SP	Step Pool Structure	330	SF	$ 70.00	$ 23,100.00	$ 92.14	$ 30,406.20	$ 95.00	$ 31,350.00	$ 85.00	$ 28,050.00
93	SP	Rock Cross Vane	2	EA	$ 4,000.00	$ 8,000.00	$ 5,788.35	$ 11,576.70	$ 6,000.00	$ 12,000.00	$ 5,300.00	$ 10,600.00
94	SP	Tuck Behind Steps	1	LS	$ 15,000.00	$ 15,000.00	$ 46,071.00	$ 46,071.00	$ 46,500.00	$ 46,500.00	$ 42,000.00	$ 42,000.00
95	SP	Diversion/Pump Around Operation	1	LS	$ 25,000.00	$ 25,000.00	$ 21,263.00	$ 21,263.00	$ 21,500.00	$ 21,500.00	$ 19,500.00	$ 19,500.00
96	SP	Coir Fiber Matting	4200	SY	$ 8.00	$ 33,600.00	$ 7.08	$ 29,736.00	$ 8.00	$ 33,600.00	$ 6.00	$ 25,200.00
97	SP	Temporary Seed And Mulch	2	AC	$ 2,500.00	$ 5,000.00	$ 9,353.00	$ 18,706.00	$ 2,500.00	$ 5,000.00	$ 7,900.00	$ 15,800.00
98	SP	Soil Amendments	9700	SY	$ 2.00	$ 19,400.00	$ 1.48	$ 14,326.90	$ 1.50	$ 14,550.00	$ 1.25	$ 12,125.00
99	SP	Permanent Seeding (Riparian)	1	AC	$ 3,000.00	$ 3,000.00	$ 9,687.00	$ 9,687.00	$ 9,850.00	$ 9,850.00	$ 8,175.00	$ 8,175.00
100	SP	Permanent Seeding (Uplands)	0.1	AC	$ 2,000.00	$ 200.00	$ 4,181.00	$ 418.10	$ 4,250.00	$ 425.00	$ 3,600.00	$ 360.00
101	SP	Permanent Seeding (Wetland)	0.1	AC	$ 3,000.00	$ 300.00	$ 4,961.00	$ 496.10	$ 5,020.00	$ 502.00	$ 4,200.00	$ 420.00
102	SP	Live Stakes	1430	EA	$ 8.00	$ 11,440.00	$ 3.83	$ 5,476.90	$ 4.00	$ 5,720.00	$ 3.30	$ 4,719.00
103	SP	Herbaceous Plugs	720	EA	$ 12.00	$ 8,640.00	$ 4.43	$ 3,189.60	$ 5.00	$ 3,600.00	$ 4.00	$ 2,880.00
104	SP	Containterized Plantings - 1-Gallon	90	EA	$ 35.00	$ 3,150.00	$ 25.39	$ 2,285.10	$ 25.55	$ 2,299.50	$ 22.00	$ 1,980.00
105	SP	Containterized Plantings - 3-Gallon	180	EA	$ 70.00	$ 12,600.00	$ 244.52	$ 44,013.60	$ 250.00	$ 45,000.00	$ 215.00	$ 38,700.00
					CONTINGENCY (10%)	$ 221,700.00						
					BASE ESTIMATE	$ 2,451,200.00	BASE BID	$ 2,512,274.49	BASE BID	$ 2,699,363.50	BASE BID	$ 3,049,000.00
							% DIFF	102%	% DIFF	110%	% DIFF	124%

BID ALTERNATE 1

Line Item	Sec No	Item Description	Quantity	Unit	Engineers Estimate Price	Engineers Estimate Amount	JM Thompson Company Price	JM Thompson Company Amount	Lanier Construction Company Price	Lanier Construction Company Amount	Fred Smith Company Price	Fred Smith Company Amount
106	SP	Structure 1 (-L1- 15+45.00) Precast Concrete Boardwalk with Metal Railing	1	LS	$ 170,000.00	$ 170,000.00	$ 147,956.00	$ 147,956.00	$ 150,000.00	$ 150,000.00	$ 140,000.00	$ 140,000.00
107	SP	Structure 2 (-L1- 18+75.00) Precast Concrete Boardwalk with Metal Railing	1	LS	$ 560,000.00	$ 560,000.00	$ 611,939.00	$ 611,939.00	$ 605,000.00	$ 605,000.00	$ 585,000.00	$ 585,000.00
					BID ALT 1 EST	$ 730,000.00	BID ALT 1	$ 759,895.00	BID ALT 1	$ 755,000.00	BID ALT 1	$ 725,000.00
							% DIFF	104%	% DIFF	103%	% DIFF	99%
					PROJECT TOTAL BASE ESTIMATE	$ 2,451,200.00	PROJECT TOTAL BASE ESTIMATE	$ 2,512,274.49	PROJECT TOTAL BASE ESTIMATE	$ 2,699,363.50	PROJECT TOTAL BASE ESTIMATE	$ 3,049,000.00
							% DIFF	102%	% DIFF	110%	% DIFF	124%

A cell highlighted in red indicates a difference in the submitted Schedule of Prices, Proposal Form and the Bid Tabulation

J.M. THOMPSON COMPANY

GENERAL CONTRACTORS SINCE 1921

October 25, 2024

Randy Driver
Purchasing Manager
Town of Wake Forest
234 Friendship Chapel Road
Wake Forest, NC 27587

Re: H L Miller Park Bid Tabulation

Dear Randy,

We agree with the Base Bid tabulation amount of $2,512,274.49 and the Alternate 1 amount of $759,859.00. We look forward to a mutually successful project.

Best wishes,

Mark Abbott
Senior Project Manager/Estimator, J.M. Thompson
(P) 919-851-1611 x 150 | (M) 919-805-0194 |
mabbott@jmthompson.com
www.jmthompson.com
P.O. Box 33066 Raleigh, NC 27636 | (F) 919-859-9583

Board of Commissioners Agenda Item Report

Agenda Item No.: 2024-370-
Submitted by: Steven Meyer
Submitting Department: Engineering
Meeting Date: November 19, 2024

SUBJECT
Approval of Contract for Dunn Creek Culvert Replacement

Recommendation:
Approval

Item Summary:

ATTACHMENTS

- Agenda Summary_11192024.pdf
- Attachment_A_Resolution_Dunn Creek Culvert Construction Services.docx
- Attachment_B_Bid #0005-2024 Dunn Creek Culv Bid_Fred Smith.pdf
- Attachment_C_Bid Certification Letter and Tabulations.pdf
- Attachment_D_ Project Award Letter.pdf

Agenda Item: Approval of the Contract for the Construction of Dunn Creek Culvert Replacement SP-23-23 to FSC II, LLC dba Fred Smith Company

Summary: The Engineering Department contracted professional engineering services with Kimley-Horn & Associates in August 2023 for Dunn Creek Culvert Replacement. This project, received funding from the American Rescue Plan Act (ARPA), was advertised for construction on September 25, 2024, for four weeks. The bid opening took place on October 23, 2024, however there were only one bid provided meaning the minimum three-bid threshold was not met. Town staff decided to re-advertise the bid for an additional period starting on October 25, 2024, and ending November 4th, 2024 at 11:00 AM. The Town received two bids again, however due to it being a readvertisement, the three-bid threshold was no longer a requirement. At the time of the second bid opening, Fred Smith Company was the apparent lowest bidder at a $1,250,906.00.

Upon review of the Qualifications Statement of the low bidder, Town staff recommends awarding the contract to Fred Smith Company, dba FSC II. Provided in this agenda item is the resolution to authorize the Town Manager to award the bid.

Attachments: Attachment_A_Resolution Dunn Creek Culvert Construction Services
Attachment_B_Bid #0005-2024 – Dunn Creek Culv Bid_ Fred Smith
Attachment_C_Bid Certification Letter and Tabulations
Attachment_D_Project Award Letter

RESOLUTION 2024-XX

RESOLUTION AUTHORIZING THE TOWN MANAGER TO EXECUTE ON BEHALF OF THE TOWN OF WAKE FOREST, THE CONTRACT FOR THE DUNN CREEK CULVERT REPLACEMENT CONSTRUCTION SP-23-23, BID #0005-2024

WHEREAS, the Engineering Department posted a call for bids for the Dunn Creek Culvert Replacement construction project as an opportunity to collect competitive bids for construction services as specified in the bid documents; and

WHEREAS, the Town of Wake Forest received American Rescue Plan Act Funding in 2021 to fund Stormwater Improvements; and

WHEREAS, consistent with the Town's purchasing policy, on October 4th, the Town published a Notice to Bidders inviting interested and qualified contractors to submit; and

WHEREAS, on October 23rd , 2024 at 3:00pm we received one bid, which did not meet the required three bid minimum for formal bidding; and

WHEREAS, on October 25th , 2024 the project was readvertised for bid; and

WHEREAS, on November 4th , 2024th the bidding for this project was closed and the Town received a total of 2 submissions; and

WHEREAS, a bid tabulation was completed, and all bids were reviewed to confirm receipt of required bid documentation; and

WHEREAS, the lowest bidder was selected as the contractor to perform the culvert replacement construction; and

BE IT RESOLVED by the governing body of the Town of Wake Forest hereby authorizes the Town Manager to execute a contract with FSC II, LLC dba Fred Smith Company for Bid #0005-2024 in the amount of $1,250,906.00 for the Dunn Creek Culvert Replacement construction project.

Adopted and effective this the _____ day of _____ 2024.

_____

Vivian A. Jones, Mayor

ATTEST:

APPROVED AS TO FORM:

_____

_____

Theresa Savary, Town Clerk

Hassan Kingsberry, Town Attorney

TOWN *of*
WAKE FOREST

REQUEST FOR BIDS

DUNN CREEK CULVERT REPLACEMENT *SP-23-23*

DUNN CREEK CULVERT REPLACEMENT AND MULTI-USE PATH INSTALLATION LOCATED ON E. JUNIPER AVE. BETWEEN MEADOWGRASS LANE AND TRADITIONS GRADE BLVD.

Bid # 0005-2024

Sealed Bids to be received until
Wednesday, October 23rd, 2024 at 2:00 pm

Pre-Bid Conference
Wednesday, October 9th, 2024 at 9:30 am

CERTIFICATION

I HEREBY CERTIFY THAT THE ACCOMPANYING PLANS FOR THIS PROJECT WERE PREPARED BY ME OR UNDER MY DIRECT SUPERVISION UNLESS NOTED OTHERWISE BY A SIGNATURE AND SEAL FROM ANOTHER REGISTERED ENGINEER ON THESE PROJECT SPECIFICATIONS AND PLANS

SIGNED, SEALED, AND DATED THIS 25th DATE OF September, 2024.

NORTH CAROLINA PROFESSIONAL SEAL 046186 ENGINEER CALEB D. LOWMAN

DocuSigned by:
Caleb Lowman
65D3523F4408492...

By: 9/25/2024

Caleb D. Lowman, P.E.

Title: Project Engineer
Kimley-Horn & Associates, Inc.
NC License No. F-0102

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NOTICE TO BIDDERS

Sealed bids will be received by the Town of Wake Forest Planning Department, North Carolina at Wake Forest Town Hall, Ground Floor Conference Room A-B, 301 South Brooks Street, 301 South Brooks Street, Wake Forest, NC 27587, until Wednesday, October 23rd, 2024 at 2:00 pm where they will be publicly opened and read aloud for the following:

Bid # 0005-2024

Dunn Creek Culvert Replacement SP-23-23

A mandatory pre-bid conference will be held on *Wednesday, October 9th, 2024 at 9:30 am* at Wake Forest Town Hall, Conference Room 303, Third Floor, 301 South Brooks Street, Wake Forest, NC 27587. All prospective bidders are required to attend

Copies of the bid documents may be obtained by contacting Accent Imaging, 8121 Brownleigh Dr., Raleigh, NC 27617.

The Town of Wake Forest reserves the right to reject any or all bids and to make the award as deemed in the best interest of the Town of Wake Forest.

Instruction to Bidders

1. Submittal
   All *bids* must be submitted by *Wednesday, October 23rd, 2024 at 2:00 pm* to Town of Wake Forest Planning Department at the Wake Forest Town Hall, Ground Floor Conference Room A-B, 301 South Brooks Street, Wake Forest, NC 27587. All *bids* must be submitted in a sealed envelope marked:

   Bid # 0005-2024 – Dunn Creek Culvert Replacement SP-23-23.

2. PREBID MEETING
   A Mandatory pre-bid conference will be held on Wednesday, October 9th, 2024 at 9:30 am at Wake Forest Town Hall, Conference Room 303, Third Floor, 301 South Brooks Street, Wake Forest, NC 27587. *All prospective bidders are required to attend.*

3. USE OF CONTRACT DOCUMENTS
   These Bidding Documents are to be used only for the purpose of understanding this bid and consideration toward submitting a proposal. They may not be used for any other purpose.

4. SPECIFICATIONS
   The Specifications are intended to describe the complete project including all materials, processes, equipment, etc. Bidders are expected to carefully examine the Contract Documents, visit the site of the proposed construction, and determine the availability of materials and method required, in order to become thoroughly familiar with the project, the requirements, and to include the cost thereof in the proposal. Bidders shall contact the Project Coordinator at least five (5) days prior to the bid date for clarification of any item not fully understood.

5. BIDDER'S QUALIFICATIONS
   For projects exceeding $30,000, consideration will be given only to Contractors who submit evidence that they are properly licensed as required by Chapter 87 of the North Carolina Licensed General Statutes to bid and perform the work described herein as the general contractor. In addition, the Owner may make such other investigations as he deems necessary to determine the ability of the Bidder to perform the work, and the Bidder shall furnish the Owner all such information and data for this purpose as the Owner may request.

   The Owner reserves the right to consider as unqualified to do the work of general construction any Bidder who does not habitually perform with his own forces a minimum of ten percent (10%) of the work involved in construction of the improvements embraced in this contract.

   Awarded contractor shall be authorized to conduct business in the state of North Carolina as found by checking the Secretary of State records and/or Register of Deeds office, indicating proper registration and active status. This is a condition of executing the contract.

6. FAMILIARITY WITH LAWS
   It is assumed that the Bidders are familiar with local, state and federal laws, rules, ordinances, and regulations that may in any manner affect those engaged or employed in the work, or the

materials or equipment used in or upon the work, or in any way affects the conduct of the work. No plea for misunderstanding or ignorance on the part of the Contractor will in any way serve to modify the provisions of this contract.
The Contractor agrees that in carrying out this contract he will comply with all applicable Federal, state and local laws, specifically including, without limitation, the Occupational Safety and Health Act of 1970 and Section 1324A, the Immigration Reform and Control Act.

7. AMERICAN WITH DISABILITIES ACT (ADA)
The Contractor shall comply with the provisions of the Americans with Disabilities Act (ADA) (www.ADA.gov) as amended from time to time and all rules and regulations promulgated thereunder. The contractor hereby agrees to indemnify the Owner from and against all claims, suits, damages, costs, losses and expenses in any manner arising out of or connected with the failure of the contractor, its subcontractors, agents, successors, assigns, officers or employees to comply with the provisions of the ADA or rules and regulations promulgated thereunder.

8. Minority Participation
The Town of Wake Forest's minority participation goal is 10% of the bid amount.

9. ADDENDA
No oral interpretation will be made to any Bidder as to the meaning of the Bidding Documents. Questions and requests for such interpretation shall be made in writing to the Project Coordinator listed. Any Addenda will be provided to known interested parties, but it shall be the Bidder's responsibility to make inquiry as to any Addenda issued. All such Addenda shall become part of the Contract and all Bidders shall be bound by such Addenda whether or not received or acknowledged.

The last day for addendums to be issued is *Thursday, October 17th, 2024.*

10. UNBALANCED BIDS
The Contractor shall not submit a bid containing any unbalanced bid prices. Any unit or lump sum bid price that does not reflect reasonable actual costs that the Contractor anticipates for the performance of the item(s) in question along with a reasonable proportional share of the Contractor's anticipated profit, overhead cost, and other indirect costs is an unbalanced bid price. Any bid containing unbalanced bid prices may be deemed non-responsive and rejected.

11. COLLUSIVE AGREEMENTS
Each bidder submitting a bid shall execute and attach the Non-Collusion Affidavit of Prime Bidder affidavit attesting that he has not entered into a collusive agreement with any other person, firm or corporation in regard to any bid submitted.

12. BID Bond
5% of bid amount or Not required for this project

13. PERFORMANCE AND PAYMENT BOND
100% of bid amount or Not required for this project.

14. PREPARATION OF BID

The Town's bid forms must be used when provided – submit one original. Bidders shall label their bid proposal with business name, bid name and bid date, then seal their bid proposal inside an envelope. If mailing a bid proposal, provide a sealed envelope within the postal envelope.

15. ITEMS REQUIRED TO BE SUBMITTED WITH THE BID

Failure to submit the following with the bid is considered a non-responsive bid and the bid will not be considered:

__✓__ Bid Form with bid price(s) written or typed
__✓__ Signatures on Forms and notarized where noted
__✓__ Non-Collusion Affidavit of Prime Bidder
__✓__ Addendums (if issued)
__✓__ Minority Participation forms
_____ E-589 CI Form
_____ Bid Bond
_____ Coronavirus State and Local Fiscal Recovery Funds Addendum

16. RECEIPT AND OPENING OF BIDS

Each Bid is to be submitted in a sealed envelope and plainly marked with the project name, bid number, and bid opening time. If mailed, the sealed envelope containing the Bid is to be enclosed in another envelope to avoid it being opened before the advertised time. Bids received prior to the advertised bid opening will be securely kept as sealed. Bids received after the advertised bid opening time will be returned to the Bidder unopened.

17. WITHDRAWAL OF BIDS

Bids may be withdrawn by written request prior to or within seventy-two hours (72) after the opening of bids by contacting the bidding officer. To withdraw an opened bid, proof must be given of a mathematical error or omission as opposed to judgment or interpretation error.

18. MINIMUM NUMBER OF BIDS (FORMAL CONTRACTS ONLY)

North Carolina General Statute 143-129 and 143-132 prohibits the awarding of a formal contract unless at least three (3) competitive bids are received from reputable and qualified contractors. Therefore, if fewer than three (3) such bids are received, they will not be opened but returned to the contractors; and the project may be re advertised. The Town's formal limit is $500,000.

19. ALTERNATIVE BIDS

No alternative bids will be considered unless alternative bids are specifically requested.

20. AWARD OF CONTRACT; REJECTION OF BIDS

The Town reserves the right to hold bids for a period of sixty (60) days for the purpose of reviewing the bids and investigating the qualifications of the Bidders. The Town reserves the right to reject any or all bids, for any reason. The Town intends to award a contract to the

Addendum #1 _____

lowest responsive, responsible bidder, complying with the conditions of the bidding documents. The Town reserves the right to award a contract that is deemed in its best interest.

21. BID PROTEST PROCEDURE

Prospective bidders or suppliers who feel disadvantaged by the solicitation must submit a written protest within five (5) calendar days prior to the opening of proposals. Actual bidders or subcontractors who are aggrieved by the award of a contract must submit a written protest within five (5) days of the Town announcing its intent to award. The protest must be addressed to the Purchasing Manager, Town of Wake Forest, who will make the final determination after consulting with counsel.

22. EXECUTION OF AGREEMENT

The successful Bidder is required to execute a Contract within ten days (10) days after notice of award. Failure to do so constitutes a default and the Owner may elect to award to the next lowest bidder or re-advertise the bid.

23. LIQUIDATED DAMAGES

See Project Special Provisions – General section of the Specifications.

24. INSURANCE REQUIREMENTS

A. Workers' Compensation: Insurance covering all employees meeting Statutory limits in compliance with the applicable state and federal laws. The coverage must include employer's liability with a minimum limit of $1,000,000 for each accident.

B. Commercial General Liability: Coverage shall have minimum limits of $1,000,000 per occurrence, general aggregate, products/completed operations aggregate, personal and advertising injury. This shall include premises and operations, independent contractors, products and completed operations, broad form property damage, XCU coverage and contractual liability. The coverage shall be written on an occurrence basis. This limit should apply on a per project or per location aggregate basis. The Town of Wake Forest shall be listed as an additional insured, under this coverage.

C. Business Auto Liability: Coverage shall have a minimum limit of $500,000 per occurrence, combined single limit for bodily injury liability and property damage liability. This shall include owned vehicles, hired vehicles and non-owned vehicles.

D. Umbrella/Excess Liability: At the option of the contractor, the limits of the primary general liability, auto liability and employers' liability may be less than stipulated herein, with an excess policy providing the additional limits needed. This form of coverage must be approved by the municipality and will only be acceptable when both the primary and excess policies include the coverage and endorsements required herein.

E. Professional Liability: Coverage shall have a minimum limit of $1,000,000 per occurrence, unless a higher limit is required by the Town. This coverage is only required for contracts that include professional services.

F. Special Requirements

1. Current, valid insurance policies meeting the requirements herein identified shall be maintained to be considered an "eligible contractor". Renewal certificates shall be sent to the Town 30 days prior to any expiration date. There shall also be a 30-day notification to the Town in the event Of cancellation or modification of any stipulated insurance coverage. Certificates of insurance meeting the required insurance provisions shall be forwarded to the Town of Wake Forest. Wording on the certificate, which states that no liability shall be imposed upon the company for failure to provide such notice, is not acceptable.

2. It shall be the responsibility of the contractor to insure that all subcontractors comply with the same insurance requirements that he is required tomeet.

3. The Town of Wake Forest shall be listed as certificate holder on the certificate of insurance.

25. INDEMNIFICATION

To the extent permitted by law, the Contractor agrees to defend, pay on behalf of, indemnify, and hold-harmless the Town of Wake Forest, its elected and appointed officials, employees, agents, and volunteers against any and all claims, demands, suits or losses, including all costs connected therewith, for any damages which may be asserted, claimed or recovered against or from the Town of Wake Forest, its elected or appointed officials, employees, agents, and volunteers by reason of personal injury, including bodily injury or death and/or property damage, including loss of use thereof resulting from the negligence of the Contractor.

26. MATERIALS

The name of a certain brand, make, manufacturer or definite specification is to denote the quality standard of the article desired and not to restrict competitive bidding. It is set forth and conveyed to prospective bidders the general style, type, character and quality of the article desired. Bidders, however, may submit to the Project Coordinator evidence that proposed substitutions are fully up to standards specified and obtain his approval before placing orders.

27. ERRORS, OMISSIONS, AND DEVIATIONS

The Contractor is responsible for all errors, omissions, and deviations from the Contract requirements.

28. OSHA COMPLIANCE PLAN/POLICY

Contractor hereby acknowledges that it has reviewed and agrees to abide by all OSHA safety regulations and Town of Wake Forest safety regulations. Contractor may be required to submit a copy of the company's current written OSHA Compliance Plan/Policy within 48 hours of request. If requested, no field work shall take place until the plan has been submitted and reviewed by the Town's Safety Officer.

29. NON-COLLUSION and ANTI-DISCRIMINATION

Bidder certifies that this proposal is made in good faith and without collusion or in connection with any other person bidding on the same work, nor will any official or employee of the Town of Wake Forest be admitted to share any part of this contract should an award be made to the

undersigned. Bidder further certifies that in connection with the performance of this contract not to discriminate against any employee or applicant for employment because of race, creed, color, religion, national origin, gender, age, political affiliation, or handicap.

30. TAXES

FEDERAL: The Town of Wake Forest is exempt from and will not pay Federal Excise or Transportation taxes.

STATE: Applicable North Carolina Sales and Use Taxes shall not be shown on bids, but shall be added to invoices as a separate item. The Town is not tax exempt.

NORTH CAROLINA SALES TAX

The Owner may apply for a refund of all sales and/or use taxes paid in North Carolina by the Contractor on purchases of items which are annexed to, affixed to, or in some manner become a part of any building or structure being erected, altered or repaired under Contract with the Owner; and these taxes shall not be included in the bid amounts or the Contract sum. The Contractor shall include and pay all other taxes imposed by governmental authorities, which are applicable to the work.

The Contractor will be reimbursed for applicable sales and/or use taxes he has paid in North Carolina based on the following. The Contractor should apply for reimbursement by itemizing and completing a notarized sales and use tax report form and submitting it with each pay request. Failure to submit this form will result in the invoice not being paid. The contractor will be required to complete a sales and use tax report affidavit in order to receive the last payment of the project.

A Sales Tax Affidavit must be completed and submitted for this project before final payment will be released.

31. PAYMENT

N.C.G.S. 143-134.1 prohibits retainage on public projects that cost less than $100,000.00 in total. Prior to final payment, the Contractor will be required to submit any forms, warranties, etc. that the Owner requires. The payment of the final amount due the Contractor shall release the Owner from any and all claims or liabilities on account of the work performed and the materials furnished upon the work. The payment terms shall be Net 30 days.

32. ETHICS POLICY / CODE OF CONDUCT

The Town of Wake Forest has established guidelines for ethical standards of conduct in that Town *representatives should maintain high standards of personal integrity, truthfulness, honesty, and fairness* in carrying out public duties; avoid any improprieties in their roles as public servants including the appearance of impropriety; and never use their position or power for improper gain. In establishing an ethics policy, the Town of Wake Forest desires to protect the public against decisions that are affected by undue influence, conflicts of interest, or any other violation of these policies as well as promote and strengthen the confidence of the public in their governing body.

33. E-VERIFY

CONTRACTOR shall comply with the requirements of Article 2 of Chapter 64 of the NC General Statutes. Further, if CONTRACTOR utilizes a subcontractor, CONTRACTOR shall require the subcontractor to comply with the requirements of Article 2 of Chapter 64 of the NC General Statutes.

34. HUBSCO REPORTING

All building construction and repair projects ($30,000 & Over) require a E-Verify. Contractor shall comply with the requirements of Article 2 of Chapter 64 of the NC General Statutes. Further, if Contractor utilizes a subcontractor, Contractor shall require the subcontractor to comply with the requirements of Article 2 of Chapter 64 of the NC General Statutes. If a minority participation report is required to be submitted to the State of NC Department of Administration HUB Office, any information that is requested from the contractor must be provided before the last invoice will be paid.

35. Iran Divestment Act

Contractor certifies that; (i) it is not identified on the Final Divestment List or any other list of prohibited investments created by the NC State Treasurer pursuant to N.C.G.S. 143-6A-4; (ii) it will not take any action causing it to appear on any such list during the term of this Purchase Order, and (iii) it will not utilize any subcontractor to provide goods or services hereunder that is identified on any list.

36. Divestment from Companies that Boycott Israel

Contractor represents, covenants, and certifies that it is not listed on the list of restricted companies developed and published by the North Carolina State Treasurer as required by N.C.G.S. 147-86.81.

37. Dispute Resolution

Any construction related disputes resulting from this bid shall be resolved using the procedures set for by the State Building Commission pursuant to NCGS 143-128(g) 143-135.26(11). These procedures may be viewed at: https://files.nc.gov/ncdoa/documents/files/sbc_Dis_rules.pdf

38. Title VI

During the performance of this contract, the Consultant, for itself, its assignees and successors in interest (hereinafter referred to as the "contractor") agrees as follows:

(1) Compliance with Regulations: The contractor shall comply with the Regulation relative to nondiscrimination in Federally-assisted programs of the Town of Wake Forest (hereinafter, "Town") Title 49, Code of Federal Regulations, Part 21, as they may be amended from time to time, (hereinafter referred to as the Regulations), which are herein incorporated by reference and made a part of this contract.

(2) Nondiscrimination: The contractor, with regard to the work performed by it during the contract, shall not discriminate on the grounds of race, color, national origin, sex, religion, age, or disability in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor shall not participate either directly or indirectly in the discrimination prohibited by section21.5 of the Regulations, including employment practices when the contract covers a program set forth in Appendix B of the Regulations.

(3) Solicitations for Subcontractors, Including Procurements of Materials and Equipment: In all solicitations either by competitive bidding or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials or leases of equipment, each potential subcontractor or supplier shall be notified by the contractor of the contractor's obligations under this contract and the Regulations relative to nondiscrimination on the grounds of race, color, or national origin.
(4) Information and Reports: The contractor shall provide all information and reports required by the Regulations or directives issued pursuant thereto, and shall permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the Town to be pertinent to ascertain compliance with such Regulations, orders, and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish this information the contractor shall so certify to the Town as appropriate and shall set forth what efforts it has made to obtain the information.
(5) Sanctions for Noncompliance: In the event of the contractor's noncompliance with the nondiscrimination provisions of this contract, the Town shall impose such contract sanctions as it or the Town may determine to be appropriate, including, but not limited to:

(a) withholding of payments to the contractor under the contract until the contractor complies, and/or
(b) cancellation, termination, or suspension of the contract, in whole or in part.

(6) Incorporation of Provisions: The contractor shall include the provisions of paragraphs (1) through (6) in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Regulations, or directives issued pursuant thereto. The contractor shall take such action with respect to any subcontract or procurement as the Town may direct as a means of enforcing such provisions including sanctions for noncompliance: Provided, however, that, in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or supplier as a result of such direction, the contractor may request the Town to enter into such litigation to protect the interests of the Town, and, in addition, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

39. PROJECT COORDINATION / CONTACT

Min Htun
Town Civil Engineer
mailto:mhtun@wakeforestnc.gov
Office: 919-435-9446

40. QUESTIONS AND CLARIFICATIONS

Any questions regarding this bid must be submitted by contact method to the Project Coordinator. All questions may be submitted until *Wednesday, October 16th, 2024.*
All questions will be answered individually and then combined and posted in an addendum.

41. REFERENCES

All bidders must submit a minimum of three references for similar public projects. Please submit the name of the project, the city/town the project was for and contact information for the person that was responsible for the project for the client.

42. STANDARD TERMS AND CONDITIONS

The Town of Wake Forest's Standard Terms and Conditions listed at: https://www.wakeforestnc.gov/sites/default/files/uploads/purchasing/2023/9-27-23_towf_standard_terms_and_conditions.pdf will govern all matters related to the goods and/or services provided by you or your company (the "Vendor") to the Town of Wake Forest (the "Town") under a Town purchase order. Additional Terms and Conditions stated on the face of a Town purchase order shall take precedence over any conflicting Standard Terms and Conditions stated. Any Terms and Conditions not stated, but incorporated by reference therein, shall be binding only if provided or signed by the Town and attached hereto. In the event that a binding written contract signed by both the Vendor and the Town exists, the Terms and Conditions of that contract shall supersede any conflicting Standard Terms and Conditions.

G. *Liability Insurance – In addition to any insurance requirements as may be required by the LGA, the Contractor is obligated to comply with Article 107-15 of the Standard Specifications including the dollar limits set forth.*

H. *Buy America – This project shall be governed by the Buy America requirements for the use of domestic steel and iron products, as outlined in the Standard Specifications.*

I. *Build America, Buy America (BABA) – This project shall be governed by the Build America, Buy America (BABA) requirements as outlined in the Standard Specifications.*

J. *Retainage by LGAs – The LGA for this contract will not retain any amount or percentage from progress payments or final estimates due the contractor.*

Retainage by Contractors – Contractors are NOT permitted to retain any amount or percentage from monies due their subcontractors or material suppliers on federally funded projects except as permitted by Subarticle 109-4(B) of the Standard Specifications.

K. *Traffic Control –The requirements of the Manual on Uniform Traffic Control Devices (MUTCD) – FHWA, as amended by the NCDOT Supplement to MUTCD, shall apply. Traffic Control, both vehicular and pedestrian, shall be maintained throughout the project as required by these specifications as modified by the project plans or special provisions.*

PROPOSAL FORM

DUNN CREEK CULVERT REPLACEMENT SP-23-23

The undersigned bidder affirms and declares that he has carefully examined all bidding documents and Instructions to Bidders which are acknowledged to be a part of this proposal, and agrees to provide all labor, materials, equipment, supervision, permits; abide by all local, state and federal laws, rules, regulations, and ordinances applicable to perform the work listed in the specifications and scope of work for the following sum to wit:

TOTAL BASE BID – Lump Sum

ONE MILLION TWO HUNDRED FIFTY THOUSAND NINE HUNDRED SIX Dollars $ 1,250,906.00
AND ZERO CENTS

Construction Duration is 210 Consecutive Calendar Days from the date the contractor elects to begin the work.

Address technical questions about the project to the Project Engineer: Project Engineer, Caleb Lowman, P.E. at caleb.lowman@kimley-horn.com

Written questions received up to 5 days prior to bid opening will receive a proper response.

ITEM 1- Scope of Project

Replacement of the existing 2-72" CMPs and a failing segmental block headwall with a reinforced concrete box culvert for the Dunn Creek crossing along East Juniper Ave. and associated roadway improvements along East Juniper Ave.

ITEM 2- Addendums

All addendums must be acknowledged in order for the proposal to be considered.

Addendum #1 M

Addendum #2 _____

Addendum#3 _____

The Town of Wake Forest intends to award a contract to the overall lowest responsible, responsive bidder taking into consideration quality, performance, and the time specified in this bid. The Town of Wake Forest reserves the right to reject or all proposals and to make the award as deemed in the best interest of the Town of Wake Forest.

All bidders MUST complete and submit with their bid the enclosed Non-Collusion Affidavit of Prime Bidder.

SIGNATURE PAGE

The undersigned certifies that they have read and understood all the provided bidding documents, the project specifications, and agree to the terms and conditions stated herein.

This bid must be signed by a responsible official of the bidding organization and notarized.

11/04/2024 (Seal)

Date

FSC II, LLC dba Fred Smith Company

Company

Thomas J Johnson

Authorized Signature

56-2106089

Federal Identification #

THOMAS T. JOHNSON, JR., PRESIDENT

Printed Name and Title

ccollie@Fredsmithcompany.net

Email Address

701 CORPORATE CENTER DRIVE

Street Mailing Address

RALEIGH NC 27607

City, State, Zip Code

43848

Contactor's NC License No.

919-783-5700

Telephone Number

On this 4 day of November, 2024, before me Thomas T Johnson, Jr. (name) appeared and, being duly sworn, did execute the foregoing proposal, and did so state that he/she was properly authorized by FSC II LLC, dba Fred Smith Company (name of company) to execute the proposal and did so on his/her free act and deed.

Notary Public W. Lee Steele My Commission Expires 01/11/28 (SEAL)

W. LEE STEELE
Notary Public
Wake
County
NORTH CAROLINA

SCHEDULE OF PRICES

PROJECT: **Dunn Creek Culvert Replacement SP-23-23**

COUNTY: **Wake County**

The low bidder shall be determined based on the lowest submitted bid amount for the items that comprise the base bid. Bid Alternate Items may be included on the bid sheet but shall not be considered as part of the base bid. Only after the low bidder is determined should bid alternate items be considered. The owner reserves the right to elect any Alternate or combination of Alternate items.

Line Item	Sec No	Pay Item	Quantity	Unit	Unit Price	Amount
1	800	Mobilization (5%)	1	LS	$ 62,000.00	$ 62,000.00
2	PSP	Project Management Communication	2	EA	$ 2,161.00	$ 4,322.00
3	801	Construction Surveying	1	LS	$ 18,500.00	$ 18,500.00
4	226	Grading	1	LS	$ 61,200.00	$ 61,200.00
5	240	Drainage Ditch Excavation	50	CY	$ 30.00	$ 1,500.00
6	270	Geotextile for Soil Stabilization	310	SY	$ 4.00	$ 1,240.00
7	300	Foundation Conditioning Material, Minor Structures	80	TON	$ 30.00	$ 2,400.00
8	300	Foundation Conditioning Geotextiles	150	SY	$ 3.00	$ 450.00
9	310	15" RC Pipe Culverts, Class IV	348	LF	$ 100.00	$ 34,800.00
10	340	Pipe Removal	104	LF	$ 30.00	$ 3,120.00
11	414	Culvert Excavation, Sta 12+63.74 -L-	1	LS	$ 142,503.00	$ 142,503.00
12	414	Foundation Conditioning Material, Box Culvert	150	TON	$ 69.00	$ 10,350.00
13	420	Class A Concrete (Culvert)	155	CY	$ 2,500.00	$ 387,500.00
14	425	Reinforcing Steel (Culvert)	31542	LB	$ 2.50	$ 78,855.00
15	520	Aggregate Base Course	360	TON	$ 65.00	$ 23,400.00
16	545	Incidental Stone Base	30	TON	$ 40.00	$ 1,200.00
17	607	Incidental Milling	120	SY	$ 44.50	$ 5,340.00
18	610	Asphalt Conc Base Course, Type B25.0B	90	TON	$ 135.00	$ 12,150.00
19	610	Asphalt Conc Surface Course, Type S9.5C	80	TON	$ 135.00	$ 10,800.00
20	610	Asphalt Conc Surface Course, Type S9.5B	50	TON	$ 150.00	$ 7,500.00
21	620	Asphalt Binder For Plant Mix	15	TON	$ 750.00	$ 11,250.00

Line Item	Sec No	Pay Item	Quantity	Unit	Unit Price	Amount
22	654	Asphalt Plant Mix, Pavement Repair	10	TON	$ 185.00	$ 1,850.00
23	840	Masonry Drainage Structures	10	EA	$ 5,000.00	$ 50,000.00
24	840	Frame with Grate, Std 840.03, Type E	2	EA	$ 1,300.00	$ 2,600.00
25	840	Frame with Grate, Std 840.03, Type F	4	EA	$ 1,300.00	$ 5,200.00
26	840	Frame with Grate, Std 840.03, Type G	4	EA	$ 1,300.00	$ 5,200.00
27	PSP	Flowable Fill	10	CY	$ 450.00	$ 4,500.00
28	846	2'-6" Concrete Curb & Gutter	420	LF	$ 25.65	$ 10,773.00
29	863	Remove Existing Guardrail	128	LF	$ 5.00	$ 640.00
30	858	Adjustment of Manholes	1	EA	$ 600.00	$ 600.00
31	876	Rip Rap, Class II	115	TON	$ 60.00	$ 6,900.00
32	876	Rip Rap, Class B	10	TON	$ 75.00	$ 750.00
33	876	Geotextile for Drainage	115	SY	$ 5.00	$ 575.00
34	903	Supports, 3-LB Steel U-Channel	24	LF	$ 10.00	$ 240.00
35	904	Sign Erection Relocate, Type D	2	EA	$ 190.00	$ 380.00
36	907	Disposal of Support, U-Channel	2	EA	$ 20.00	$ 40.00
37	SP	Relocate Wayfinding Sign	1	EA	$ 500.00	$ 500.00
38	1110	Work Zone Signs (Stationary)	19	EA	$ 68.00	$ 1,292.00
39	1110	Work Zone Signs (Barricade Mounted)	9	EA	$ 64.00	$ 576.00
40	1130	Drums	10	EA	$ 66.00	$ 660.00
41	1145	Barricades (Type III)	64	LF	$ 21.00	$ 1,344.00
42	PSP	Pedestrian Channelizing Devices	18	LF	$ 35.00	$ 630.00
43	1170	Water filled barrier	60	LF	$ 50.00	$ 3,000.00
44	1205	Paint Marking Line, 4"	400	LF	$ 4.00	$ 1,600.00
45	1205	Thermoplastic Pavement Marking Lines (4", 90 Mils)	350	LF	$ 7.50	$ 2,625.00
46	1205	Thermoplastic Pavement Marking Lines (8", 90 Mils)	20	LF	$ 12.00	$ 240.00
47	1205	Thermoplastic Pavement Marking Lines (24", 90 Mils)	72	LF	$ 17.00	$ 1,224.00
48	1510	12" Water Line	127	LF	$ 345.00	$ 43,815.00

Line Item	Sec No	Pay Item	Quantity	Unit	Unit Price	Amount
49	1510	Ductile Iron Water Pipe Fittings	460	LB	$ 22.00	$ 10,120.00
50	1515	12" Insertion Valve	1	EA	$ 33,000.00	$ 33,000.00
51	PSP	Generic Utility Item - Thrust Collar On Existing Pipe	1	EA	$ 6,500.00	$ 6,500.00
52	1520	8" Sanitary Gravity Sewer	101	LF	$ 220.00	$ 22,220.00
53	1520	4' DIA Utility Manhole	1	EA	$ 12,000.00	$ 12,000.00
54	1520	Abandon 8" Utility Pipe	101	LF	$ 40.00	$ 4,040.00
55	1530	Abandon 12" Utility Pipe	132	LF	$ 33.00	$ 4,356.00
56	1530	Remove Utility Manhole	1	EA	$ 3,900.00	$ 3,900.00
57	PSP	Generic Utility Item - Sewer Bypass	1	LS	$ 47,500.00	$ 47,500.00
58	1605	Temporary Silt Fence	420	LF	$ 3.55	$ 1,491.00
59	PSP	Tree Protection Fence/ Safety Fence	60	LF	$ 4.00	$ 240.00
60	1610	Sediment Control Stone	50	TON	$ 50.00	$ 2,500.00
61	1610	Stone for Erosion Control, Class A	50	TON	$ 65.00	$ 3,250.00
62	1615	Temporary Mulching	0.7	ACR	$ 1,850.00	$ 1,295.00
63	1620	Seed For Temporary Seeding	40	LB	$ 2.00	$ 80.00
64	1620	Fertilizer For Temporary Seeding	0.2	TON	$ 1,100.00	$ 220.00
65	1630	Silt Excavation	100	CY	$ 10.00	$ 1,000.00
66	1631	Matting for Erosion Control	380	SY	$ 2.00	$ 760.00
67	1632	1/4" Hardware Cloth	30	LF	$ 6.00	$ 180.00
68	PSP	Fabric Insert Inlet Protection, Type 2	10	EA	$ 315.00	$ 3,150.00
69	PSP	Fabric Insert Inlet Protection Cleanout	10	EA	$ 89.00	$ 890.00
70	1642	Wattle	100	LF	$ 13.00	$ 1,300.00
71	1639	Special Stilling Basin	1	EA	$ 1,500.00	$ 1,500.00
72	1660	Seeding & Mulching	0.7	ACR	$ 5,000.00	$ 3,500.00
73	1660	Mowing	0.7	ACR	$ 300.00	$ 210.00
74	1661	Seed For Repair Seeding	4	LB	$ 25.00	$ 100.00
75	1661	Fertilizer For Repair Seeding	0.25	TON	$ 1,100.00	$ 275.00

Line Item	Sec No	Pay Item	Quantity	Unit	Unit Price	Amount
76	1662	Seed For Supplemental Seeding	10	LB	$ 10.00	$ 100.00
77	1665	Fertilizer Topdressing	0.25	TON	$ 1,100.00	$ 275.00
78	PSP	Impervious Dike	80	LF	$ 70.00	$ 5,600.00
79	PSP	15" Temporary Pipe	40	LF	$ 48.00	$ 1,920.00
80	PSP	Concrete Washout Structure	7	EA	$ 100.00	$ 700.00
81	PSP	Stream Bank Restoration	75	SY	$ 350.00	$ 26,250.00
82	1675	Response for Erosion Control	15	EA	$ 10.00	$ 150.00
83	PSP	Culvert Diversion Channel	70	CY	$ 180.00	$ 12,600.00
84	PSP	Aluminum Fence	240	LF	$ 40.00	$ 9,600.00
				TOTAL BID	**$** 1,250,906.00	

NON-COLLUSION AFFIDAVIT OF PRIME BIDDER

attach to bid (required)

State of NORTH CAROLINA)

County of WAKE)

Project: Dunn Creek Culvert Replacement SP-23-23

THOMAS T. JOHNSON, JR., being first duly sworn, deposes and says that:

1. He is (owner, partner, officer, representative or agent) of FSC II, LLC dba FRED SMITH COMPANY the Bidder that has submitted the attached Bid;

2. He is fully informed respecting the preparation and contents of the attached bid and of all pertinent circumstances respecting such Bid;

3. Such Bid is genuine and is not a collusive or sham Bid;

4. Neither the said Bidder nor any of its officers, partners, owners, agents, representatives, employees or parties in interest, including this Affiant, has in any way colluded, conspired, connived or agreed, directly or indirectly, with any other Bidder, firm or person to submit a collusive or sham Bid in connection with the Contract for which the attached Bid has been submitted or to refrain from bidding in connection with such contract, or has in any manner, directly or indirectly, sought by agreement or collusion or communication or conference with any other Bidder, firm or person to fix the price or prices in the attached Bids of any other Bidder, or to fix any overhead, profit or cost element of the Bid price or the Bid price of any other Bidder, or to secure through any collusion, conspiracy, connivance or unlawful agreement any advantage against the Town of Wake Forest or any person interested in the proposed Contract; and

5. The price or prices quoted in the attached Bid are fair and proper and are not tainted by any collusion, conspiracy, connivance or unlawful agreement on the part of the Bidder or any of its agents, representatives, owners, employees or parties in interest, including this Affiant.

Thomas T Johnson Jr — Name

PRESIDENT — Title

Subscribed and Sworn to before me this 4 Day of November, 20 24

Notary Public: W. Lee Stell

My Commission Expires: 01/16/25

W. LEE STELL
Notary Public
Wake County
NORTH CAROLINA
(Seal)

IDENTIFICATION OF MINORITY BUSINESS PARTICIPATION

Project: Dunn Creek Culvert Replacement

I, FSL II, LLC dba Fred Smith Company
(Name of Bidder)

do hereby certify that on this project, we *intend to* use the following M/WBE firms as construction subcontractors, vendors, suppliers, or providers of professional services.

Minority Firm Name and Address	Minority Category*	Phone Number	Type of Work
Arborex Tree Services 4605 Windy Knoll Rd., Raleigh NC	A	919-800-7718	Clearing
Austin Trucking, LLC 3600 Athletic Club Blvd, Clayton NC	H	919-200-1600	Hauling

* Minority Categories: Black or African American (B), Hispanic (H), Asian American (A), American Indian (I), Female (F), and Socially and Economically Disadvantaged (D).

The total value of M/WBE firms contracting is proposed to be $ 68,000.00

The total percentage of M/WBE firms contracting is proposed to be 5.43 %

Identification of HUB Certified/ DBE / WBE / MBE / Minority Business Participation

I, FSC II, LLC dba FRED SMITH COMPANY,

(Name of Bidder)

do hereby certify that on this project, we will use the following HUB Certified/ DBE / WBE / MBE / minority business as construction subcontractors, vendors, suppliers or providers of professional services.

Firm Name, Address and Phone #	Work Type	Minority Category	HUB Certified (Y/N)	$ Amount
ARBOREX TREE SERVICES, 919-800-7718 4605 WINDY KNOLL RD. RALEIGH NC 27616	CLEARING	A	Y	28,000.00
AUSTIN TRUCKING 919-200-1600 368 ATHLETIC CLUB BLVD. CLAYTON NC 27527	HAULING	H	Y	40,000.00

Addendum #1 _____

*Minority categories: Black, African American (**B**), Hispanic (**H**), Asian American (**A**) American Indian (**I**), Female (**F**) Socially and Economically Disadvantaged (**D**)

** HUB Certification with the state HUB Office required to be counted toward state participation goals.

The total value of minority business contracting will be ($)68,000.00

The total percentage of minority business contracting will be (%)5.43 %

Contract No. _____
County _____

DEBARMENT CERTIFICATION

Conditions for certification:

1. The prequalified bidder shall provide immediate written notice to the Department if at any time the bidder learns that his certification was erroneous when he submitted his debarment certification or explanation that is file with the Department, or has become erroneous because of changed circumstances.

2. The terms *covered transaction*, *debarred*, *suspended*, *ineligible*, *lower tier covered transaction*, *participant*, *person*, *primary covered transaction*, *principal*, *proposal*, and *voluntarily excluded*, as used in this provision, have the meanings set out in the Definitions and Coverage sections of the rules implementing Executive Order 12549. A copy of the Federal Rules requiring this certification and detailing the definitions and coverages may be obtained from the Contract Officer of the Department.

3. The prequalified bidder agrees by submitting this form, that he will not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in NCDOT contracts, unless authorized by the Department.

4. For Federal Aid projects, the prequalified bidder further agrees that by submitting this form he will include the Federal-Aid Provision titled *Required Contract Provisions Federal-Aid Construction Contract (Form FHWA PR 1273)* provided by the Department, without subsequent modification, in all lower tier covered transactions.

5. The prequalified bidder may rely upon a certification of a participant in a lower tier covered transaction that he is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless he knows that the certification is erroneous. The bidder may decide the method and frequency by which he will determine the eligibility of his subcontractors.

6. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this provision. The knowledge and information of a participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

7. Except as authorized in paragraph 6 herein, the Department may terminate any contract if the bidder knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available by the Federal Government.

Contract No. _____
County _____

DEBARMENT CERTIFICATION

The prequalified bidder certifies to the best of his knowledge and belief, that he and his principals:

a. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;

b. Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records; making false statements; or receiving stolen property;

c. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph b. of this certification; and

d. Have not within a three-year period preceding this proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

e. Will submit a revised Debarment Certification immediately if his status changes and will show in his bid proposal an explanation for the change in status.

If the prequalified bidder cannot certify that he is not debarred, he shall provide an explanation with this submittal. An explanation will not necessarily result in denial of participation in a contract.

Failure to submit a non-collusion affidavit and debarment certification will result in the prequalified bidder's bid being considered non-responsive.

☐ Check here if an explanation is attached to this certification.

STATE OF NORTH CAROLINA
TOWN OF WAKE FOREST
RALEIGH, NC

BID BOND

Principal: _____
Name of Principal Contractor

Surety: _____
Name of Surety

Contract Number: _____ County: _____

Date of Bid: _____

KNOW ALL MEN BY THESE PRESENTS, That we, the PRINCIPAL CONTRACTOR (hereafter, PRINCIPAL) and SURETY above named, are held and firmly bound unto the **TOWN OF WAKE FOREST** in the full and just sum of five (5) percent of the total amount bid by the Principal for the project stated above, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, and successors, jointly and severally, firmly by these presents.

NOW, THEREFORE, the condition of this obligation is: the Principal shall not withdraw its bid within sixty (60) days after the opening of the bids, or within such other time period as may be provided in the proposal, and if the **TOWN OF WAKE FOREST** shall award a contract to the Principal, the Principal shall, within ten (10) calendar days after written notice of award is received by him, provide bonds with good and sufficient surety, as required for the faithful performance of the contract and for the protection of all persons supplying labor, material, and equipment for the prosecution of the work. In the event the Principal requests permission to withdraw his bid due to mistake in accordance with the provisions of Article 103-3 of the *Standard Specifications for Roads and Structures*, the conditions and obligations of this Bid Bond shall remain in full force and effect until the **TOWN OF WAKE FOREST** makes a final determination to either allow the bid to be withdrawn or to proceed with award of the contract. In the event a determination is made to award the contract, the Principal shall have ten (10) calendar days to comply with the requirements set forth above. In the event the Principal withdraws its bid after bids are opened except as provided in Article 103-3, or after award of the contract has been made fails to execute such additional documents as may be required and to provide the required bonds within the time period specified above, then the amount of the bid bond shall be immediately paid to the **TOWN OF WAKE FOREST** as liquidated damages.

IN TESTIMONY WHEREOF, the Principal and Surety have caused these presents to be duly signed and sealed.

This the _____ day of _____, 20 _____

_____
Surety

By _____
General Agent or Attorney-in-Fact Signature

Seal of Surety

_____
Print or type Signer's Name

STATE OF NORTH CAROLINA
TOWN OF WAKE FOREST
RALEIGH, NC

BID BOND

Principal: FSC II, LLC
Name of Principal Contractor

Surety: Western Surety Company and Liberty Mutual Insurance Company
Name of Surety

Contract Number: Bid # 0005-2024 County: Wake

Date of Bid: October 23, 2024

KNOW ALL MEN BY THESE PRESENTS, That we, the PRINCIPAL CONTRACTOR (hereafter, PRINCIPAL) and SURETY above named, are held and firmly bound unto the **TOWN OF WAKE FOREST** in the full and just sum of five (5) percent of the total amount bid by the Principal for the project stated above, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, and successors, jointly and severally, firmly by these presents.

NOW, THEREFORE, the condition of this obligation is: the Principal shall not withdraw its bid within sixty (60) days after the opening of the bids, or within such other time period as may be provided in the proposal, and if the **TOWN OF WAKE FOREST** shall award a contract to the Principal, the Principal shall, within ten (10) calendar days after written notice of award is received by him, provide bonds with good and sufficient surety, as required for the faithful performance of the contract and for the protection of all persons supplying labor, material, and equipment for the prosecution of the work. In the event the Principal requests permission to withdraw his bid due to mistake in accordance with the provisions of Article 103-3 of the *Standard Specifications for Roads and Structures*, the conditions and obligations of this Bid Bond shall remain in full force and effect until the **TOWN OF WAKE FOREST** makes a final determination to either allow the bid to be withdrawn or to proceed with award of the contract. In the event a determination is made to award the contract, the Principal shall have ten (10) calendar days to comply with the requirements set forth above. In the event the Principal withdraws its bid after bids are opened except as provided in Article 103-3, or after award of the contract has been made fails to execute such additional documents as may be required and to provide the required bonds within the time period specified above, then the amount of the bid bond shall be immediately paid to the **TOWN OF WAKE FOREST** as liquidated damages.

IN TESTIMONY WHEREOF, the Principal and Surety have caused these presents to be duly signed and sealed.

This the 23rd day of October, 20 24

Western Surety Company and
Liberty Mutual Insurance Company
Surety

By
General Agent or Attorney-in-Fact Signature

Seal of Surety

Maria D. Zuniga, Attorney-in-Fact
Print or type Signer's Name

Contract No. _____
County _____

Rev. 8-28-23

BID BOND

CORPORATION

SIGNATURE OF CONTRACTOR (Principal)

_____
Full name of Corporation

_____
Address as prequalified

By _____
Signature of **President, Vice President, Assistant Vice President**
Select appropriate title

_____
Print or type Signer's name

Affix Corporate Seal

Attest _____
Signature of **Secretary, Assistant Secretary**
Select appropriate title

_____
Print or type Signer's name

Contract No. _____
County _____

Rev. 8-28-23

BID BOND

LIMITED LIABILITY COMPANY

SIGNATURE OF CONTRACTOR (Principal)

Name of Contractor _____
Full name of Firm

_____
Address as prequalified

Signature of Member/ Manager/Authorized Agent _____
Individually

_____
Print or type Signer's name

Contract No. Bid # 0005-2024
County Wake

Rev. 8-28-23

BID BOND

LIMITED LIABILITY COMPANY

SIGNATURE OF CONTRACTOR (Principal)

Name of Contractor FSC II, LLC

Full name of Firm

701 Corporate Center Drive, Suite 195, Raleigh, NC 27607

Address as prequalified

Signature of ~~Member~~/ ~~Manager~~/Authorized Agent

Individually

FSC II, LLC dba Fred Smith Company
CORPORATE
SEAL
NC Limited Liability Company

JASON M. WILLIAMS

Print or type Signer's name

Contract No. _____
County _____

Rev. 8-28-23

BID BOND

INDIVIDUAL DOING BUSINESS UNDER A FIRM NAME

SIGNATURE OF CONTRACTOR (Principal)

Name of Contractor _____
Individual Name

Trading and doing business as _____
Full name of Firm

_____
Address as prequalified

Signature of Contractor _____
Individually

_____
Print or type Signer's name

_____
Signature of Witness

_____
Print or type Signer's name

Contract No. _____
County _____

Rev. 8-28-23

BID BOND

INDIVIDUAL DOING BUSINESS IN HIS OWN NAME

SIGNATURE OF CONTRACTOR (Principal)

Name of Contractor _____
Print or type Individual Name

_____
Address as prequalified

Signature of Contractor _____
Individually

_____
Print or type Signer's name

_____
Signature of Witness

_____
Print or type Signer's name

Contract No. _____
County _____

Rev. 8-28-23

BID BOND

PARTNERSHIP

SIGNATURE OF CONTRACTOR (Principal)

_____
Full name of Partnership

_____
Address as prequalified

By _____
Signature of Partner

_____
Print or type Signer's name

_____
Signature of Witness

_____
Print or type Signer's name

Contract No. _____
County _____

Rev. 8-28-23

BID BOND
JOINT VENTURE (2 or 3)
SIGNATURE OF CONTRACTORS (Principal)

Instructions to Bidders: **2 Joint Ventures**, Fill in lines (1), (2) and (3) and execute. **3 Joint Venturers** Fill in lines (1), (2), (3), (4) and execute. Line (1), print or type the name of Joint Venture. On line (2), print or type the name of one of the joint venturers and execute below in the appropriate manner required by Article 102-8 of the *Specifications*. On Line (3), print or type the name of second joint venturer and execute below in the appropriate manner required by said article of the Specifications. On Line (4), print or type the name of the third joint venturer, if applicable and execute below in the appropriate manner required by said article of the Specifications. This form of execution must be strictly followed.

(1) _____
Name of Joint Venture

(2) _____
Name of Contractor

_____
Address as prequalified

_____	By	_____
Signature of Witness or Attest		Signature of Contractor
_____		_____
Print or type Signer's name		Print or type Signer's name

If Corporation, affix Corporate Seal

and

(3) _____
Name of Contractor

_____
Address as prequalified

_____	By	_____
Signature of Witness or Attest		Signature of Contractor
_____		_____
Print or type Signer's name		Print or type Signer's name

If Corporation, affix Corporate Seal

and

(4) _____
Name of Contractor *(for 3 Joint Venture only)*

_____
Address as prequalified

_____	By	_____
Signature of Witness or Attest		Signature of Contractor
_____		_____
Print or type Signer's name		Print or type Signer's name

If Corporation, affix Corporate Seal

Western Surety Company

POWER OF ATTORNEY APPOINTING INDIVIDUAL ATTORNEY-IN-FACT

Know All Men By These Presents, That WESTERN SURETY COMPANY, a South Dakota corporation, is a duly organized and existing corporation having its principal office in the City of Sioux Falls, and State of South Dakota, and that it does by virtue of the signature and seal herein affixed hereby make, constitute and appoint

Marc W Boots, Vickie Lacy, Richard Covington, Maria D Zuniga, Heather Noles, Stephanie Moore Harold, Ryan Varela, Ashley Koletar, Melanie Salinas, Joseph R Aulbert, Individually

of Houston, TX, its true and lawful Attorney(s)-in-Fact with full power and authority hereby conferred to sign, seal and execute for and on its behalf bonds, undertakings and other obligatory instruments of similar nature

- In Unlimited Amounts -

and to bind it thereby as fully and to the same extent as if such instruments were signed by a duly authorized officer of the corporation and all the acts of said Attorney, pursuant to the authority hereby given, are hereby ratified and confirmed.

This Power of Attorney is made and executed pursuant to and by authority of the Authorizing By-Laws and Resolutions printed at the bottom of this page, duly adopted, as indicated, by the shareholders of the corporation.

In Witness Whereof, WESTERN SURETY COMPANY has caused these presents to be signed by its Vice President and its corporate seal to be hereto affixed on this 11th day of April, 2024.

WESTERN SURETY COMPANY

Larry Kasten, Vice President

State of South Dakota
County of Minnehaha } ss

On this 11th day of April, 2024, before me personally came Larry Kasten, to me known, who, being by me duly sworn, did depose and say: that he resides in the City of Sioux Falls, State of South Dakota; that he is a Vice President of WESTERN SURETY COMPANY described in and which executed the above instrument; that he knows the seal of said corporation; that the seal affixed to the said instrument is such corporate seal; that it was so affixed pursuant to authority given by the Board of Directors of said corporation and that he signed his name thereto pursuant to like authority, and acknowledges same to be the act and deed of said corporation.

My commission expires
March 2, 2026

M. BENT
NOTARY PUBLIC
SOUTH DAKOTA

M. Bent, Notary Public

CERTIFICATE

I, Paula Kolsrud, Assistant Secretary of WESTERN SURETY COMPANY do hereby certify that the Power of Attorney hereinabove set forth is still in force, and further certify that the By-Law and Resolutions of the corporation printed below this certificate are still in force. In testimony whereof I have hereunto subscribed my name and affixed the seal of the said corporation this 23rd day of October, 2024.

WESTERN SURETY COMPANY

Paula Kolsrud, Assistant Secretary

Authorizing By-Laws and Resolutions

ADOPTED BY THE SHAREHOLDERS OF WESTERN SURETY COMPANY

This Power of Attorney is made and executed pursuant to and by authority of the following By-Law duly adopted by the shareholders of the Company.

Section 7. All bonds, policies, undertakings, Powers of Attorney, or other obligations of the corporation shall be executed in the corporate name of the Company by the President, Secretary, and Assistant Secretary, Treasurer, or any Vice President, or by such other officers as the Board of Directors may authorize. The President, any Vice President, Secretary, any Assistant Secretary, or the Treasurer may appoint Attorneys in Fact or agents who shall have authority to issue bonds, policies, or undertakings in the name of the Company. The corporate seal is not necessary for the validity of any bonds, policies, undertakings, Powers of Attorney or other obligations of the corporation. The signature of any such officer and the corporate seal may be printed by facsimile.

This Power of Attorney is signed by Larry Kasten, Vice President, who has been authorized pursuant to the above Bylaw to execute power of attorneys on behalf of Western Surety Company.

This Power of Attorney may be signed by digital signature and sealed by a digital or otherwise electronic-formatted corporate seal under and by the authority of the following Resolution adopted by the Board of Directors of the Company by unanimous written consent dated the 27th day of April, 2022:

"RESOLVED: That it is in the best interest of the Company to periodically ratify and confirm any corporate documents signed by digital signatures and to ratify and confirm the use of a digital or otherwise electronic-formatted corporate seal, each to be considered the act and deed of the Company."

Go to www.cnasurety.com > Owner / Obligee Services > Validate Bond Coverage, if you want to verify bond authenticity.

This Power of Attorney limits the acts of those named herein, and they have no authority to bind the Company except in the manner and to the extent herein stated.

Liberty Mutual. SURETY

Liberty Mutual Insurance Company
The Ohio Casualty Insurance Company
West American Insurance Company

Certificate No: **8212371 - 022004**

POWER OF ATTORNEY

KNOWN ALL PERSONS BY THESE PRESENTS: That The Ohio Casualty Insurance Company is a corporation duly organized under the laws of the State of New Hampshire, that Liberty Mutual Insurance Company is a corporation duly organized under the laws of the State of Massachusetts, and West American Insurance Company is a corporation duly organized under the laws of the State of Indiana (herein collectively called the "Companies"), pursuant to and by authority herein set forth, does hereby name, constitute and appoint, Ashley Koletar, Dylan Young, Heather Noles, Jacob Boots, Joseph R. Aulbert, Marc W. Boots, Maria D. Zuniga, Melanie Salinas, Richard Covington, Ryan Varela, Stephanie Moore Harold, Susan Golla, Vickie Lacy

all of the city of Houston state of TX each individually if there be more than one named, its true and lawful attorney-in-fact to make, execute, seal, acknowledge and deliver, for and on its behalf as surety and as its act and deed, any and all undertakings, bonds, recognizances and other surety obligations, in pursuance of these presents and shall be as binding upon the Companies as if they have been duly signed by the president and attested by the secretary of the Companies in their own proper persons.

IN WITNESS WHEREOF, this Power of Attorney has been subscribed by an authorized officer or official of the Companies and the corporate seals of the Companies have been affixed thereto this 9th day of September, 2024.

LIBERTY MUTUAL INSURANCE COMPANY INCORPORATED 1912 MASSACHUSETTS — THE OHIO CASUALTY INSURANCE COMPANY INCORPORATED 1919 NEW HAMPSHIRE — WEST AMERICAN INSURANCE COMPANY INCORPORATED 1991 INDIANA

Liberty Mutual Insurance Company
The Ohio Casualty Insurance Company
West American Insurance Company

By: _____
Nathan J. Zangerle, Assistant Secretary

State of PENNSYLVANIA
County of MONTGOMERY ss

On this 9th day of September, 2024 before me personally appeared Nathan J. Zangerle, who acknowledged himself to be the Assistant Secretary of Liberty Mutual Insurance Company, The Ohio Casualty Company, and West American Insurance Company, and that he, as such, being authorized so to do, execute the foregoing instrument for the purposes therein contained by signing on behalf of the corporations by himself as a duly authorized officer.

IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed my notarial seal at Plymouth Meeting, Pennsylvania, on the day and year first above written.

TERESA PASTELLA COMMONWEALTH OF PENNSYLVANIA NOTARY PUBLIC

Commonwealth of Pennsylvania - Notary Seal
Teresa Pastella, Notary Public
Montgomery County
My commission expires March 28, 2025
Commission number 1126044
Member, Pennsylvania Association of Notaries

By: _____
Teresa Pastella, Notary Public

This Power of Attorney is made and executed pursuant to and by authority of the following By-laws and Authorizations of The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company which resolutions are now in full force and effect reading as follows:

ARTICLE IV – OFFICERS: Section 12. Power of Attorney.
Any officer or other official of the Corporation authorized for that purpose in writing by the Chairman or the President, and subject to such limitation as the Chairman or the President may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Corporation to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact, subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Corporation by their signature and execution of any such instruments and to attach thereto the seal of the Corporation. When so executed, such instruments shall be as binding as if signed by the President and attested to by the Secretary. Any power or authority granted to any representative or attorney-in-fact under the provisions of this article may be revoked at any time by the Board, the Chairman, the President or by the officer or officers granting such power or authority.

ARTICLE XIII – Execution of Contracts: Section 5. Surety Bonds and Undertakings.
Any officer of the Company authorized for that purpose in writing by the chairman or the president, and subject to such limitations as the chairman or the president may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Company by their signature and execution of any such instruments and to attach thereto the seal of the Company. When so executed such instruments shall be as binding as if signed by the president and attested by the secretary.

Certificate of Designation – The President of the Company, acting pursuant to the Bylaws of the Company, authorizes Nathan J. Zangerle, Assistant Secretary to appoint such attorneys-in-fact as may be necessary to act on behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations.

Authorization – By unanimous consent of the Company's Board of Directors, the Company consents that facsimile or mechanically reproduced signature of any assistant secretary of the Company, wherever appearing upon a certified copy of any power of attorney issued by the Company in connection with surety bonds, shall be valid and binding upon the Company with the same force and effect as though manually affixed.

I, Renee C. Llewellyn, the undersigned, Assistant Secretary, The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company do hereby certify that the original power of attorney of which the foregoing is a full, true and correct copy of the Power of Attorney executed by said Companies, is in full force and effect and has not been revoked.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the seals of said Companies this 23rd day of October, 2024.

LIBERTY MUTUAL INSURANCE COMPANY INCORPORATED 1912 MASSACHUSETTS — THE OHIO CASUALTY INSURANCE COMPANY INCORPORATED 1919 NEW HAMPSHIRE — WEST AMERICAN INSURANCE COMPANY INCORPORATED 1991 INDIANA

By: _____
Renee C. Llewellyn, Assistant Secretary

Not valid for mortgage, note, loan, letter of credit, currency rate, interest rate or residual value guarantees.

For bond and/or Power of Attorney (POA) verification inquiries, please call 610-832-8240 or email HOSUR@libertymutual.com.

Contract No. _____
County _____

Rev. 11-1-12

TOWN OF WAKE FOREST

CONTRACT PAYMENT BOND

Date of Payment Bond Execution _____

Name of Principal Contractor _____

Name of Surety: _____

Name of Contracting Body: _____

_____

Amount of Bond: _____

Contract ID No.: _____

County Name: _____

KNOW ALL MEN BY THESE PRESENTS, That we, the PRINCIPAL CONTRACTOR (hereafter, PRINCIPAL) and SURETY above named, are held and firmly bound unto the above named Contracting Body, hereinafter called the Contracting Body, in the penal sum of the amount stated above for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that whereas the principal entered into a certain contract with the Contracting Body, numbered as shown above and hereto attached:

NOW THEREFORE, if the principal shall promptly make payment to all persons supplying labor and material in the prosecution of the work provided for in said contract, and any and all duly authorized modifications of said contract that may hereafter be made, notice of which modifications to the surety being hereby waived, then this obligation to be void; otherwise to remain in full force and virtue.

IN WITNESS WHEREOF, the above-bound parties have executed this instrument under their several seals on the date indicated above, the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

Contract No. _____
County _____

Rev. 11-1-12

CONTRACT PAYMENT BOND

Affix Seal of Surety Company

_____
Print or type Surety Company Name

By _____
Print, stamp or type name of Attorney-in-Fact

_____
Signature of Attorney-in-Fact

_____
Signature of Witness

_____
Print or type Signer's name

_____
Address of Attorney-in-Fact

Contract No. _____
County _____

Rev. 11-1-12

CONTRACT PAYMENT BOND

CORPORATION

SIGNATURE OF CONTRACTOR (Principal)

_____
Full name of Corporation

_____
Address as prequalified

By _____
Signature of **President, Vice President, Assistant Vice President**
Select appropriate title

_____
Print or type Signer's name

Affix Corporate Seal

Attest _____
Signature of **Secretary, Assistant Secretary**
Select appropriate title

_____
Print or type Signer's name

Contract No. _____
County _____

Rev. 4-19-11

CONTRACT PAYMENT BOND

LIMITED LIABILITY COMPANY

SIGNATURE OF CONTRACTOR (Principal)

Name of Contractor _____

Full name of Firm

_____

Address as prequalified

By: _____

Signature of **Member, Manager, Authorized Agent**
Select appropriate title

_____

Print or type Signer's name

Contract No. _____
County _____

Rev. 4-19-11

CONTRACT PAYMENT BOND

INDIVIDUAL DOING BUSINESS UNDER A FIRM NAME

SIGNATURE OF CONTRACTOR (Principal)

Name of Contractor _____
Individual Name

Trading and doing business as _____
Full name of Firm

_____
Address as prequalified

Signature of Contractor _____
Individually

_____
Print or type Signer's name

_____
Signature of Witness

_____
Print or type Signer's name

Contract No. _____
County _____

Rev. 4-19-11

CONTRACT PAYMENT BOND

INDIVIDUAL DOING BUSINESS IN HIS OWN NAME

SIGNATURE OF CONTRACTOR (Principal)

Name of Contractor _____
Print or type Individual name

_____
Address as prequalified

Signature of Contractor _____
Individually

_____
Print or type Signer's name

_____
Signature of Witness

_____
Print or type Signer's name

Contract No. _____
County _____

Rev. 4-19-11

CONTRACT PAYMENT BOND

PARTNERSHIP

SIGNATURE OF CONTRACTOR (Principal)

_____
Full name of Partnership

_____
Address as prequalified

By _____
Signature of Partner

_____
Print or type Signer's name

_____
Signature of Witness

_____
Print or type Signer's name

Contract No. _____
County _____

Rev. 4-19-11

CONTRACT PAYMENT BOND
JOINT VENTURE (2) or (3)
SIGNATURE OF CONTRACTORS (Principal)

Instructions to Bidders: **2 Joint Ventures**, Fill in lines (1), (2) and (3) and execute. **3 Joint Venturers** Fill in lines (1), (2), (3), (4) and execute. On Line (1), print or type the name of Joint Venture. On line (2), print or type the name of one of the joint venturers and execute below in the appropriate manner required by Article 102-8 of the *NCDOT Standard Specifications*. On Line (3), print or type the name of second joint venturer and execute below in the appropriate manner required by said article of the Specifications. On Line (4), print or type the name of the third joint venturer, if applicable and execute below in the appropriate manner required by said article of the Specifications. This form of execution must be strictly followed.

(1) _____
Name of Joint Venture

(2) _____
Name of Contractor

_____
Address as prequalified

_____		_____
Signature of Witness or Attest	By	Signature of Contractor
_____		_____
Print or type Signer's name		Print or type Signer's name

If Corporation, affix Corporate Seal

and

(3) _____
Name of Contractor

_____
Address as prequalified

_____		_____
Signature of Witness or Attest	By	Signature of Contractor
_____		_____
Print or type Signer's name		Print or type Signer's name

If Corporation, affix Corporate Seal

and

(4) _____
Name of Contractor *(for 3 Joint Venture only)*

_____
Address as prequalified

_____		_____
Signature of Witness or Attest	By	Signature of Contractor
_____		_____
Print or type Signer's name		Print or type Signer's name

If Corporation, affix Corporate Seal

Contract No. _____
County _____

Rev. 4-19-11

CONTRACT PAYMENT BOND

Attach certified copy of Power of Attorney to this sheet

Contract No. _____
County _____

Rev. 11-1-12

TOWN OF WAKE FOREST

CONTRACT PERFORMANCE BOND

Date of Performance Bond Execution: _____

Name of Principal Contractor: _____

Name of Surety: _____

Name of Contracting Body: _____

_____

Amount of Bond: _____

Contract ID No.: _____

County Name: _____

KNOW ALL MEN BY THESE PRESENTS, That we, the PRINCIPAL CONTRACTOR (hereafter, PRINCIPAL) and SURETY above named, are held and firmly bound unto the above named Contracting Body, hereinafter called the Contracting Body, in the penal sum of the amount stated above for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that whereas the principal entered into a certain contract with the Contracting Body, numbered as shown above and hereto attached:

NOW THEREFORE, if the principal shall well and truly perform and fulfill all the undertakings, covenants, terms, conditions, and agreements of said contract during the original term of said contract and any extensions thereof that may be granted by the Contracting Body, with or without notice to the Surety, and during the life of any guaranty required under the contract, and shall also well and truly perform and fulfill all the undertakings, covenants, terms, conditions, and agreements of any and all duly authorized modifications of said contract that may hereafter be made, notice of which modifications to the surety being hereby waived, then this obligation to be void; otherwise to remain in full force and virtue.

IN WITNESS WHEREOF, the above-bound parties have executed this instrument under their several seals on the date indicated above, the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

Contract No. _____
County _____

Rev. 11-1-12

CONTRACT PERFORMANCE BOND

Affix Seal of Surety Company

_____
Print or type Surety Company Name

By _____
Print, stamp or type name of Attorney-in-Fact

_____
Signature of Attorney-in-Fact

_____
Signature of Witness

_____
Print or type Signer's name

_____
Address of Attorney-in-Fact

Contract No. _____
County _____

Rev. 11-1-12

CONTRACT PERFORMANCE BOND

CORPORATION

SIGNATURE OF CONTRACTOR (Principal)

_____
Full name of Corporation

_____
Address as prequalified

By _____
Signature of **President, Vice President, Assistant Vice President**
Select appropriate title

_____
Print or type Signer's name

Affix Corporate Seal

Attest _____
Signature of **Secretary, Assistant Secretary**
Select appropriate title

_____
Print or type Signer's name

Contract No. _____
County _____

Rev. 4-19-11

CONTRACT PERFORMANCE BOND

LIMITED LIABILITY COMPANY

SIGNATURE OF CONTRACTOR (Principal)

Name of Contractor _____

Full name of Firm

_____

Address as prequalified

By: _____

Signature of **Member, Manager, Authorized Agent**
Select appropriate title

_____

Print or type Signer's name

Contract No. _____
County _____

Rev. 4-19-11

CONTRACT PERFORMANCE BOND

INDIVIDUAL DOING BUSINESS UNDER A FIRM NAME

SIGNATURE OF CONTRACTOR (Principal)

Name of Contractor _____
Individual Name

Trading and doing business as _____
Full name of Firm

_____
Address as prequalified

Signature of Contractor _____
Individually

_____
Print or type Signer's name

_____
Signature of Witness

_____
Print or type Signer's name

Contract No. _____
County _____

Rev. 4-19-11

CONTRACT PERFORMANCE BOND

INDIVIDUAL DOING BUSINESS IN HIS OWN NAME

SIGNATURE OF CONTRACTOR (Principal)

Name of Contractor _____
Print or type Individual name

_____
Address as prequalified

Signature of Contractor _____
Individually

_____
Print or type Signer's name

_____
Signature of Witness

_____
Print or type Signer's name

Contract No. _____
County _____

Rev. 4-19-11

CONTRACT PERFORMANCE BOND

PARTNERSHIP

SIGNATURE OF CONTRACTOR (Principal)

_____
Full name of Partnership

_____
Address as prequalified

By _____
Signature of Partner

_____
Print or type Signer's name

_____
Signature of Witness

_____
Print or type Signer's name

Contract No. _____
County _____

Rev. 4-19-11

CONTRACT PERFORMANCE BOND
JOINT VENTURE (2) OR (3)
SIGNATURE OF CONTRACTORS (Principal)

Instructions to Bidders: **2 Joint Ventures**, Fill in lines (1), (2) and (3) and execute. **3 Joint Venturers** Fill in lines (1), (2), (3), (4) and execute. On Line (1), print or type the name of Joint Venture. On line (2), print or type the name of one of the joint venturers and execute below in the appropriate manner required by Article 102-8 of the *NCDOT Standard Specifications*. On Line (3), print or type the name of second joint venturer and execute below in the appropriate manner required by said article of the Specifications. On Line (4), print or type the name of the third joint venturer, if applicable and execute below in the appropriate manner required by said article of the Specifications. This form of execution must be strictly followed.

(1) _____
Name of Joint Venture

(2) _____
Name of Contractor

_____
Address as prequalified

_____		_____
Signature of Witness or Attest	By	Signature of Contractor
_____		_____
Print or type Signer's name		Print or type Signer's name

If Corporation, affix Corporate Seal

and

(3) _____
Name of Contractor

_____
Address as prequalified

_____		_____
Signature of Witness or Attest	By	Signature of Contractor
_____		_____
Print or type Signer's name		Print or type Signer's name

If Corporation, affix Corporate Seal

and

(4) _____
Name of Contractor *(for 3 Joint Venture only)*

_____
Address as prequalified

_____		_____
Signature of Witness or Attest	By	Signature of Contractor
_____		_____
Print or type Signer's name		Print or type Signer's name

If Corporation, affix Corporate Seal

Contract No. _____
County _____

Rev. 4-19-11

CONTRACT PERFORMANCE BOND

Attach certified copy of Power of Attorney to this sheet

CONTRACT AGREEMENT

PROJECT: **Dunn Creek Culvert Replacement SP-23-23**

COUNTY: **Wake County**

ACCEPTED BY THE
Contractor

_____
(Name)

_____
(Title)

_____
(Date)

Town of Wake Forest

_____
(Name)

_____
(Title)

_____
(Date)

OWNER'S CERTIFICATION OF PAYMENTS

I hereby certify that I am the legal and duly appointed Financial Officer for the Owner of this project and that provision for the payment of the moneys to fall due under this agreement has been made by appropriation duly made, or by Bonds or notes duly authorized, as required by the Local Government.

_____
(Name)

_____
(Title)

_____
(Date)

Town of Wake Forest -AFFIDAVIT A – Listing of Good Faith Efforts

County of WAKE

(Name of Bidder)

Affidavit of FSC II, LLC dba FRED SMITH COMPANY

I have made a good faith effort to comply under the following areas checked:
Bidders must earn at least 50 points from the good faith efforts listed for their bid to be considered responsive. (1 NC Administrative Code 30 I.0101)

- ☒ **1 – (10 pts)** Contacted minority businesses that reasonably could have been expected to submit a quote and that were known to the contractor, or available on State or local government maintained lists, at least 10 days before the bid date and notified them of the nature and scope of the work to be performed.
- ☒ **2 --(10 pts)** Made the construction plans, specifications and requirements available for review by prospective minority businesses, or providing these documents to them at least 10 days before the bids are due.
- ☒ **3 – (15 pts)** Broken down or combined elements of work into economically feasible units to facilitate minority participation.
- ☐ **4 – (10 pts)** Worked with minority trade, community, or contractor organizations identified by the Office of Historically Underutilized Businesses and included in the bid documents that provide assistance in recruitment of minority businesses.
- ☒ **5 – (10 pts)** Attended prebid meetings scheduled by the public owner.
- ☒ **6 – (20 pts)** Provided assistance in getting required bonding or insurance or provided alternatives to bonding or insurance for subcontractors.
- ☒ **7 – (15 pts)** Negotiated in good faith with interested minority businesses and did not reject them as unqualified without sound reasons based on their capabilities. Any rejection of a minority business based on lack of qualification should have the reasons documented in writing.
- ☒ **8 – (25 pts)** Provided assistance to an otherwise qualified minority business in need of equipment, loan capital, lines of credit, or joint pay agreements to secure loans, supplies, or letters of credit, including waiving credit that is ordinarily required. Assisted minority businesses in obtaining the same unit pricing with the bidder's suppliers in order to help minority businesses in establishing credit.
- ☐ **9 – (20 pts)** Negotiated joint venture and partnership arrangements with minority businesses in order to increase opportunities for minority business participation on a public construction or repair project when possible.
- ☒ **10 - (20 pts)** Provided quick pay agreements and policies to enable minority contractors and suppliers to meet cash- flow demands.

The undersigned, if apparent low bidder, will enter into a formal agreement with the firms listed in the Identification of Minority Business Participation schedule conditional upon scope of contract to be executed with the Owner. Substitution of contractors must be in accordance with GS143-128.2(d) Failure to abide by this statutory provision will constitute a breach of the contract.

The undersigned hereby certifies that he or she has read the terms of the minority business commitment and is authorized to bind the bidder to the commitment herein set forth.

Date: 11/04/2024 Name of Authorized Officer: THOMAS T. JOHNSON, SR.

W. LEE STELL
Notary Public
SEAL Wake County
NORTH CAROLINA

Signature: Thomas T Johnson Sr

Title: PRESIDENT

State of North Carolina **, County of** Wake

Subscribed and sworn to before me this 4 **day of** November **20** 24

Notary Public W. Lee Stell

My commission expires 01/16/25

Town of Wake Forest --AFFIDAVIT B-- Intent to Perform Contract

With Own Workforce.

County of_____

Affidavit of_____

(Name of Bidder)

I hereby certify that it is our intent to perform 100% of the work required for the _____

_____contract.

(Name of Project)

In making this certification, the Bidder states that the Bidder does not customarily subcontract elements of this type project, and normally performs and has the capability to perform and will perform all elements of the work on this project with his/her own current work forces; and

The Bidder agrees to provide any additional information or documentation requested by the owner in support of the above statement. The Bidder agrees to make a Good Faith Effort to utilize minority suppliers where possible.

The undersigned hereby certifies that he or she has read this certification and is authorized to bind the Bidder to the commitments herein contained.

Date:_____Name of Authorized Officer:_____

SEAL

Signature:_____

Title:_____

State of_____**, County of**_____

Subscribed and sworn to before me this__**day of** _____**20**_____

Notary Public_____

My commission expires _____

STATE OF NORTH CAROLINA

AFFIDAVIT

TOWN OF WAKE FOREST

I, THOMAS T. JOHNSON, JR. (the individual attesting below), being duly authorized by and on behalf of FSC II, LLC (the entity bidding on project hereinafter "Employer") after first being duly sworn hereby swears or affirms as follows:

1. Employer understands that E-Verify is the federal E-Verify program operated by the United States Department of Homeland Security and other federal agencies, or any successor or equivalent program used to verify the work authorization of newly hired employees pursuant to federal law in accordance with NCGS §64-25(5).
2. Employer understands that Employers Must Use E-Verify. Each employer, after hiring an employee to work in the United States, shall verify the work authorization of the employee through E- Verify in accordance with NCGS§64-26(a).
3. Employer is a person, business entity, or other organization that transacts business in this State and that employs 25 or more employees in this State. (mark Yes or No)
   a. YES X, or
   b. NO ____
4. Employer's subcontractors comply with E-Verify, and if Employer is the winning bidder on this project Employer will ensure compliance with E-Verify by any subcontractors subsequently hired by Employer.

This 4TH day of NOVEMBER, 2024.

Thomas T Johnson Jr

Signature of Affiant

Print or Type Name: THOMAS T. JOHNSON, JR., PRESIDENT

State of North Carolina County of Wake

Signed and sworn to (or affirmed) before me, this the 4 day of November, 2024.

(Affix Seal)

NORTH CAROLINA
Notary Public
Wake
County
W. LEE STELL

My Commission Expires:

01/14/25

Notary Public

LETTER OF INTENT TO PERFORM AS A SUBCONTRACTOR

CONTRACT:	NAME OF BIDDER:

The undersigned intends to perform work in connection with the above contract upon execution of the bid and subsequent award of contract by the Local Public Agency as:

Name of MBE/WBE/DBE Subcontractor_____
Address_____
City_____State_____Zip_____

Please check all that apply:
Minority Business Enterprise (MBE)____
Women Business Enterprise (WBE)_____
Disadvantaged Business Enterprise (DBE)____

The MBE /WBE /DBE status of the above named subcontractor is certified by the North Carolina Department of Transportation. The above named subcontractor is prepared to perform the described work listed on the attached MBE/WBE/DBE Commitment Items sheet, in connection with the above contract upon execution of the bid and subsequent award of contract by the Local Public Agency. The above named subcontractor is prepared to perform the described work at the estimated Commitment Total for Subcontractor Price identified on the MBE/WBE/DBE Commitment Items sheet and amount indicated below.

Commitment Total based on estimated Unit Prices and Quantities on the "attached" MBE/WBE/DBE Commitment Items sheet:

Amount $ _____

The above named bidder and subcontractor mutually accepts the Commitment Total estimated for the Unit Prices and Quantities. This commitment total is based on estimated quantities only and most likely will vary up or down as the project is completed. Final compensation will be based on actual quantities of work performed and accepted during the pursuance of work. The above listed amount represents the entire dollar amount quoted based on these estimated quantities. No conversations, verbal agreements, and/or other forms of non-written representations shall serve to add, delete, or modify the terms as stated.

This document shall not serve in any manner as an actual subcontract between the two parties. A separate subcontractor agreement will describe in detail the contractual obligations of the bidder and the MBE/WBE/DBE subcontractor.

Affirmation

The above named MBE/ WBE/ DBE subcontractor affirms that it will perform the portion(s) of the contract for the estimated dollar value as stated above.

Name of MBE/ WBE/ DBE Subcontractor	**Name of Bidder**
Signature / Title	**Signature / Title**
Date	**Date**

NOTICE OF AWARD

To:

From: (Owner)
Town of Wake Forest
Wake Forest Town Hall
Third Floor
301 S. Brooks Street
Wake Forest, NC 27587

PROJECT: **Dunn Creek Culvert Replacement SP-23-23: Culvert replacement across Dunn Creek with sidewalk and roadway improvements. Located along E Juniper Ave. between Meadowgrass lane and Transitions Grade Bld.**

CONTRACT AMOUNT: $_____

You are hereby notified the Town of Wake Forest has accepted your Bid dated _____ for the above described project. The Project name must be cited on all Invoices and/or Payment Request.

You are required to execute the formal contract with the Town of Wake Forest and to furnish any required Bonds and Insurance Certificates within **ten (10) days** from the date of delivery of the Notice to you.

If you fail to execute said contract and to furnish any required Bonds and Certificates within **ten (10) days** from the delivery of this Notice, the Town of Wake Forest will be entitled to consider all your rights arising out of their acceptance of your Bid as abandoned and to award the work covered by the contract to another contractor, to re-advertise the Project, or otherwise dispose thereof as the Town of Wake Forest sees fit.

Dated this_____day _____, 2024.

By: _____
Title: Engineering Department
Town of Wake Forest

This instrument has been pre-audited in the manner required by the Local Government Budget and Fiscal Control Act.

_____
Finance Director

Distribution: Contractor Mail ☐ Fax ☐ Finance ☐ Planning ☐

ACCEPTANCE OF AWARD

Receipt of the Notice of Award is hereby acknowledged.

By: _____ Date: _____

Title: _____

NOTICE TO PROCEED

To:

From: (Owner)
Town of Wake Forest
Wake Forest Town Hall
Third Floor
301 S. Brooks Street
Wake Forest, NC 27587

PROJECT: **Dunn Creek Culvert Replacement SP-23-23: Culvert replacement across Dunn Creek with sidewalk and roadway improvements. Located along E Juniper Ave. between Meadowgrass lane and Transitions Grade Bld.**

CONTRACT AMOUNT: __$_____

You are hereby notified to commence work on the above referenced project on or before _____ and are to fully complete the work within 210 consecutive calendar days thereafter. Your contract completion date is therefore _____.

The contract provides for assessment of the sum of $1200.00 as liquidated damages for each consecutive calendar day after the above established contract completion date that the work remains incomplete.

DATE: _____ BY: _____

NAME: _____

TITLE: _____

_____

TOWN OF WAKE FOREST

PHONE: 919-435-9410

TOWN *of*
WAKE FOREST

301 S. Brooks Street
Wake Forest, NC 27587
t 919.435.9400
www.wakeforestnc.gov

[Organization Name]

[Address]

[City, State Zip]

[Date]

Dear [Vendor Name],

We would like to thank you for your work on the [project name]. Below you will find the sales tax verification to be completed for the project. Prior to the official closeout and the issuance of the final payment, the Town of Wake Forest must receive a copy of this document with a notarized signature of an authorized official of your organization.

Sales Tax Affidavit

The Town of Wake Forest will not accept any transfer of liability for taxes due on admissions that the lessee has failed to charge and remit to the State of North Carolina or other taxing jurisdictions.

All users of facilities are solely responsible for collecting and remitting any and all applicable sales and use taxes to the North Carolina Department of Revenue and that the Town of Wake Forest assumes no obligation or responsibility for said taxes.

Authorized Official Name: _____

Authorized Official Signature: _____

Date: _____

Subscribed and sworn before me this_____day of_____,_____.

Notary Public: _____

My Commission Expires: _____

CONTRACTOR'S SALES TAX REPORT

N. C. State and Local Sales Taxes Paid

OWNER:	Town of Wake Forest	Project:	
CONTRACTOR:		For Period:	
ADDRESS:		To:	

Name of Vendor or Subcontractor	Items Purchased	Date	Invoice Number	Invoice Amount	N. C. Tax Paid	County Tax Paid	Name of County
			TOTAL	$	$	$	

I hereby certify that, during the period identified, North Carolina and local sales & use taxes were paid as listed above, with respect to building materials, supplies, fixtures and equipment which have become part of, or affixed to, a building / structure erected, altered or repaired for the Town of Wake Forest, and that vendors from whom the property was purchased, the dates and numbers of the invoices covering the purchases, the total amount of the invoices for each vendor, the sales & use taxes paid thereon, are as set forth above. I further certify that the above figures do not include any tax paid on supplies, tools & equipment which were used to perform this contract. Sworn to and subscribed before me, this the _____ day of _____20____.

My commission expires: _____

Signed: _____

Print Name: _____

(SEAL)

Note: This certified statement may be subject to audit.

SUBCONTRACT APPROVAL FORM

Contract No.: _____ F.A. No.: _____ Subcontract Request Number: _____

WBS Element: _____ T.I.P. No.: _____ County: _____

APPROVAL IS REQUESTED TO SUBLET THE FOLLOWING ITEMS OF WORK ON THIS PROJECT TO:

_____
Subcontractor Name and Address

Retainage ☐ Certification _____ Reporting No. _____

_____
2nd Tier-1 Subcontractor Name and Address

Retainage ☐ Certification _____ Reporting No. _____

Line Code Number	Item Description	Portion (●)	Partial (♦)	Sub or 2nd Tier	Quantity	UOM	CP *	DBE/MBE/WBE Unit Price	DBE/MBE/WBE Sublet Amount	Subcontract Unit Price	Total Subcontract Amount

Indicates a Portion of Work (●) Indicates a Partial Item (♦) **DBE/MBE/WBE Amount** _____ **Subcontract Amt.** _____

SUBCONTRACT CERTIFICATION (applies only to Federal projects)

The Contractor / Subcontractor certifies that the subcontract is in writing and that FHWA 1273, "Required Contract Provisions," and Title VI and Nondiscrimination Assurances have been included in the subcontract / 2nd tier subcontract in its entirety.

SUBCONTRACT CERTIFICATION (applies only to State projects)

The Contractor / Subcontractor certifies that the subcontract is in writing and Title VI and Nondiscrimination Assurances have been included in the subcontract/2nd tier subcontract in its entirety.

Contractor: _____
Signature: _____ Date _____
Title: _____

Subcontractor: _____
Signature: _____ Date _____
Title: _____

2nd Tier Subcontractor _____
Signature: _____ Date _____
Title: _____

APPROVED:

Resident Engineer Date

Approved with the understanding that the Contractor will be responsible for the satisfactory performance and completion of the work in compliance with the terms of the contract and that all payments will be made to the Contractor.

SUBCONTRACT APPROVAL FORM

Contract No.: ____________________ F.A. No.: ____________ Subcontract Request Number: __________

Line Code Number	Item Description	Portion (•)	Partial (♦)	Sub or 2nd Tier	Quantity	UOM	CP *	DBE/MBE/WBE Unit Price	DBE/MBE/WBE Sublet Amount	Subcontract Unit Price	Total Subcontract Amount

Indicates a Portion ofWork (●) Indicates a Partial Item (♦)

Form DBE-IS

State of North Carolina

Department of Transportation

Subcontractor Payment Information

Submit with Invoice To: Engineering Department
Wake Forest Town Hall
Third Floor
301 S. Brooks St.
Wake Forest, NC 27587

Firm Invoice No. Reference _____

NCDOT PO / Contract Number _____ _____

WBS No. (State Project No.) _____

Date of Invoice _____

Signed _____

Invoice Line Item Reference	Payer Name	Payer Federal Tax Id	Subcontractor / Subconsultant/ Material Supplier Name	Subcontractor / Subconsultant / Material Supplier Federal Tax Id	Amount Paid To Subcontractor / Subconsultant / Material Supplier This Invoice	Date Paid To Subcontractor / Subconsultant / Material Supplier This Invoice

Total Amount Paid to Subcontractor Firms $ _____

NOTE: - These documents are scanned into our Fiscal program. Please do not highlight or shade the figures.

I certify that this information accurately reflects actual payments made and the dates the payments were made to Subcontractors/ Subconsultants/Material Suppliers on the above referenced project.

Signature _____ Title _____

Print Name _____ Date _____

Rev.
01/07

TOWN OF WAKE FOREST SUPPLEMENTAL AGREEMENT or FORCE ACCOUNT DOCUMENTATION

SUPPLEMENTAL AGREEMENT NO.: _____ **FORCE ACCOUNT DOCUMENTATION NO.:** _____

PROJECT NO.: _____ **FEDEAL AID NO.:** _____

COUNTY: _____ **CONTRACT NO.:** _____

CONTRACTOR: _____

1. **Description, location, and justification for change:**

2. **Estimation of quantities of work resulting from change and the basis of payment:**

Line Code No.	Adj.	Description	Unit	Negotiated or Contract Price	Field Change		Original Plan	
					Quantity	Amount	Quantity	Amount
						$ -		$ -
						$ -		$ -
						$ -		$ -
						$ -		$ -
						$ -		$ -
						$ -		$ -
						$ -		$ -
						$ -		$ -
						$ -		$ -
						$ -		$ -

Total Field Change Amount$** - **Total Original Plan Amount$ -
Supplemental Agreement Net Underrun$: - **Supplemental Agreement Net Overrun$:** -

3. **Extension of contract time (if applicable):**

No time extension will be granted for this work.
Time will be granted in accordance with 108-10(B)(1), pro rata.
Time to be considered upon completion of the work, 108-10(B)(4).
Contract (ICT #XX) will be extended by XX days.

BASIS OF AGREEMENT BETWEEN
THE TOWN OF WAKE FOREST AND CONTRACTOR

1. **The Contractor agrees to perform the work described in this Supplemental Agreement in consideration of the payment set out herein.**
2. **The terms and conditions of said contract are hereby ratified and remain in full force and effect except as modified by such Supplemental Agreement(s) as may heretofore have been entered into between the Town and the Contractor and as modified by this Supplemental Agreement.**
3. **All terms and conditions of this Supplemental Agreement are herein set out and there are no agreements relating thereto not expressed herein.**
4. **This Supplemental Agreement shall not constitute a release or waiver of any lawful claims that the Contractor has or may have against the Town under said contract pursuant to G.S. 136-29 except for the matters specifically covered herein.**

In witness whereof, the Town and the Contractor have caused this Supplemental Agreement to be executed by their duty authorized representatives.

APPROVAL RECOMMENDED: BY: _____ LOCAL GOVERNMENT AGENCY OFFICIAL DATE:_____	CONTRACTOR BY: _____ AUTHORIZED REPRESENTATIVE DATE:_____

FORCE ACCOUNT DOCUMENTATION

Documentation of the authorized Force Account work shall be completed for all state and federally-funded projects.

APPROVAL GRANTED: BY: _____ LOCAL GOVERNMENT AGENCY OFFICIAL DATE:_____	APPROVAL GRANTED: BY: _____ LOCAL GOVERNMENT CEI ENGINEER DATE:_____

FOR CONSTRUCTION AND MATERIALS BRANCH USE ONLY

Approval of the Federal Highway Administration ☐ **is** ☐ **is not** **requested.**

APPROVED with the understanding that Federal participation in this work, the cost of which cannot be met from Federal aid funds provided for under the now effective project agreement, will be contingent upon additional Federal aid funds being made available for the project by a modified project agreement, to be executed prior to or at the final voucher stage.

APPROVED: FEDERAL HIGHWAY ADMINISTRATION **REVIEWED: CONSTRUCTION UNIT**

BY:_____ **BY:**_____

DATE:_____ **DATE:**_____

COMMENTS: _____

te NCDOR
Web-Fill
7-18

E-589CI
Affidavit of Capital Improvement

Form E-589CI, Affidavit of Capital Improvement, may be used to substantiate that a contract, or a portion of work to be performed to fulfill a contract, is to be taxed for sales and use tax purposes, as a real property contract for a capital improvement to real property.

The receipt of an affidavit of capital improvement for services to real property, absent fraud or other egregious activities, establishes that the subcontractor or other person receiving the affidavit should treat the transaction as a real property contract for sales and use tax purposes.

A real property contract is a contract between a real property contractor and another person to perform a capital improvement to real property.

Section I. Single Use *(Complete this section to issue the affidavit for a single capital improvement.)*

A

Owner, Lessee//Tenant, or RealProperty Contractor

TOWN OF WAKE FOREST

Address

301 S. BROOKS STREET

City	State	Zip Code
WAKE FOREST	NC	27587

B

Real Property Contractor *(General Contractoror Subcontractor)* *Hired to perform capital improvement*

Address

City	State	Zip Code

Describe capital improvement to be performed:

Dunn Creek culvert replacement and multi-use path installation located on E. Juniper Ave. between Meadowgrass Lane and Traditions Grade Blvd.

Project Name Dunn Creek Culvert Replacement SP-23-23

Project Address East Juniper Ave. between Meadowgrass Ln. and Tradition Grande Blvd. **City** Wake Forest **State** NC **Zip Code** 27587

I certify that, to the best of my knowledge, this affidavit is accurate and complete and that the transaction described to be performed by the Real Property Contractor (General Contractor or Subcontractor identified in box "B") shall be treated as a real property contract for a capital improvement to real property for sales and use tax purposes. I understand that if it is determined that I issued this affidavit in error and the transaction is subject to sales tax as a retail sale of repair, maintenance, and installation services to real property, I will be liable for payment of any additional taxes determined to be due.

Signature of Authorized Person: Jason M. Wilson Title: SR. VICE PRESIDENT Date: 10/23/2024

Section II. Blanket Use *(Complete this section to execute a blanket affidavit for capital improvements.)*

C	D
Real Property Contractor	**Real Property Contractor or Subcontractor** *Hired to perform capital improvement*
Address	**Address**
City **State** **Zip Code**	**City** **State** **Zip Code**

To be completed by the Real Property Contractor identified in Box C.

I certify that I am a Real Property Contractor who performs capital improvements to real property and all transactions with the real property contractor (subcontractor) identified in box "D" shall be treated as real property contracts for capital improvements to real property for sales and use tax purposes. I understand that if it is determined that I issued this affidavit in error and the transaction is subject to sales tax as a retail sale of repair, maintenance, and installation services to real property, I will be liable for payment of any additional taxes determined to be due.

Signature of Authorized Person:_____ Title:_____ Date: _____

Affidavit of Capital Improvement Instructions

Form E-589CI, Affidavit of Capital Improvement, may be issued to substantiate that a contract, or a portion of work performed to fulfill a contract, is a capital improvement to real property and subject to sales and use tax as a real property contract. Generally, services to real property are retail sales of or the gross receipts derived from repair, maintenance, and installation services, unless a person substantiates that a transaction is subject to tax as a real property contract, subject to tax as a mixed transaction contract, or the transaction is not subject to sales and use tax. A "real property contract" is a contract between a real property contractor and another person to perform a capital improvement to real property.

A mixed transaction contract is a contract that includes both a real property contract for a capital improvement and repair, maintenance, and installation services for real property that are not related to the capital improvement. For a mixed transaction contract, if the allocated sales price of the taxable repair, maintenance, and installation services included in the contract is less than or equal to twenty-five percent (25%) of the contract price, then the repair, maintenance, and installation services portion of the contract, and the tangible personal property, digital property, or service used to perform those services, are taxable as a real property contract for sales and use tax purposes.

- A person that issues Form E-589CI is liable for any additional tax due on the transaction in excess of tax paid on purchases pursuant to N.C. Gen. Stat. § 105-164.4H(a), if it is determined that the transaction is not a capital improvement, but rather the transaction is subject to tax as a retail sale.
- A person who receives Form E-589CI from another person, absent fraud or other egregious activities, is not liable for any additional tax on the gross receipts from the transaction if it is determined that the transaction is not a capital improvement.
- Form E-589CI **is not an affidavit of tax paid** on tangible personal property, or digital property purchased or used to fulfill a real property contract.
- Form E-589CI may not to be used to purchase tangible personal property, or digital property exempt from sales and use tax.

Exceptions from the Issuance of Form E-589CI to Establish a Transaction is to be Taxed as a Real Property Contract
In lieu of issuing an affidavit of capital improvement, a person may substantiate by other records that a transaction is a real property contract or a mixed transaction contract subject to tax as a real property contract, as discussed above, for a capital improvement to real property. However, where subcontractors are involved, it may be in the best interest of all parties to use Form E-589CI to ensure proper application of the sales and use tax laws.

Section I. Single Use Instructions
A person may complete "Section I - Single Use" for a one time use to substantiate that a transaction is a real property contract for a single capital improvement to real property and subject to sales and use tax as a real property contract. When a real property contractor hires a subcontractor to perform a portion of the overall real property contract and there is not a recurring business relationship between the two parties (when a period of no more than twelve months elapse between transactions between two parties), "Section I – Single Use" may be completed and the form issued to the subcontractor as notice that the transaction is subject to sales and use tax as a real property contract.

The following scenarios are for reference to assist a person to complete and issue Form E-589CI. The scenarios presented are not intended to cover all possible uses of the form.

A property owner oversees the entire activity to real property that is a real property contract for a capital improvement to real property. The property owner hires various subcontractors to complete the real property contract or portions thereof:

- **Box A - Owner, Lessee/Tenant or Real Property Contractor:** Enter property owner's name and address.
- **Box B - Real Property Contractor** *(General Contractor or Subcontractor)*: Enter a single subcontractor's name and address.
- Owner listed in Box A must describe the real property contract activity to be performed.
- Owner listed in Box A must enter the project address (if different than the address entered in BoxA).
- Authorized Person (owner) signs, enters title (owner), enters the date, and issues to the person listed in Box B.

A property owner hires a general contractor to oversee the entire activity to real property that is a real property contract for a capital improvement to real property. The general contractor hires a subcontractor to perform the real property contract, or portion thereof:

- **Box A - Owner, Lessee/Tenant or Real Property Contractor:** Enter general contractor's name and address.
- **Box B - Real Property Contractor** *(General Contractor or Subcontractor)*: Enter subcontractor's name and address.
- General contractor listed in Box A must describe the real property contract activity to be performed.
- General contractor listed in Box A must enter the project address.
- Authorized Person (general contractor) signs, enters title (general contractor), enters the date, and issues to the person listed in Box B.

A lessee/tenant hires a general contractor for the installation of equipment that is to be attached to real property and will be depreciated under the Internal Revenue Code:

- **Box A - Owner, Lessee/Tenant or Real Property Contractor:** Enter lessee/tenant's name and address.
- **Box B - Real Property Contractor** *(General Contractor or Subcontractor)*: Enter general contractor's name and address.
- Lessee or tenant listed in Box A must describe the capital improvement to be performed and indicate the equipment will be depreciated under the Internal Revenue Code.
- Authorized Person (typically lessee or tenant) signs, enters title (lessee or tenant), enters the date, and issues to the person listed in Box B.

Section II. Blanket Use Instructions
A real property contractor may complete "Section II – Blanket Use" and issue the form to another real property contractor (subcontractor) who is used **exclusively** to perform part, or all, of real property contracts with respect to capital improvements to real properties, where the parties have a recurring business relationship (when a period of no more than twelve months elapse between transactions between two parties). A blanket use affidavit continues in force so long as the real property contractor named in "Box C" and the real property contractor (subcontractor) named in "Box D" maintain a recurring business relationship or until the affidavit is withdrawn or otherwise notified by the issuer of the form.

The blanket use will generally apply for the following: (1) a builder who hires the same contractor(s) only for new construction; (2) a real property contractor who hires the same subcontractor(s) only for reconstruction; (3) a real property contractor who hires the same subcontractor(s) for remodeling or renovation and the activities performed by the subcontractor(s) for the other party are never repair, maintenance, and installation services for real property based on the contract or agreement between the parties; and (4) a real property contractor who exclusively hires the same subcontractor(s) to perform part, or all, of its real property contracts for capital improvements to real properties.

A general contractor or subcontractor hires a subcontractor that will replace the complete electrical wiring in all renovated homes:

- **Box C - Real Property Contractor:** Enter the hiring real property contractor's name and address.
- **Box D - Real Property Contractor** *(General Contractor or Subcontractor)*: Enter the hired subcontractor's name and address.
- Authorized person listed in Box C signs, enters title, enters the date, and issues to the person listed in Box D.

TOWN *of*
WAKE FOREST

CORONAVIRUS STATE AND LOCAL FISCAL RECOVERY FUNDS ADDENDUM

This **CORONAVIRUS STATE AND LOCAL FISCAL RECOVERY FUNDS ADDENDUM** (this "*Addendum*") is entered into by and between FSC II, LLC (name of counterparty) , a LIMITED LIABILITY CO. (type of legal entity) ("*Contractor*"), and The Town of Wake Forest, a municipal corporation of the State of North Carolina ("*Unit*"), and forms an integral part of the Contract (as defined in Section I hereof).

RECITALS

WHEREAS, on July 14, 2021, Unit has received, either as a Recipient or Subrecipient (as each such term is defined in Section I hereof) a payment from the Coronavirus State Fiscal Recovery Fund ("*State Fiscal Recovery Fund*") or Coronavirus Local Fiscal Recovery Fund ("*Local Fiscal Recovery Fund*" and, together with the State Fiscal Recovery Fund, the "*Fiscal Recovery Funds*") established pursuant to Sections 602 and 603, respectively, of the Social Security Act, as added by Section 9901 of the American Rescue Plan Act of 2021, Pub. L. No. 117-2 ("*ARPA*") (March 11, 2021); and

WHEREAS, Unit intends to pay, in part or in whole, for the cost of the Contract (as defined in Section I hereof) using monies received from the Fiscal Recovery Funds; and

WHEREAS, in using such funds, Unit must comply with the terms of ARPA, regulations issued by the U.S. Department of the Treasury ("*Treasury*") governing the expenditure of monies distributed from the Fiscal Recovery Funds (including, without limitation, the Interim Final Rule (86 Fed. Reg. 26,786 (May 17, 2021) and Final Rule (87 Fed. Reg. 4,338 (Jan. 27, 2022)), the Award Terms and Conditions applicable to the Fiscal Recovery Funds, and such other guidance as the Treasury has issued or may issue governing the expenditure of monies distributed from the Fiscal Recovery Funds (collectively, the "*Regulatory Requirements*"); and

WHEREAS, pursuant to the Regulatory Requirements, Unit must comply with the Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards, 2 C.F.R. Part 200, other than such provisions as Treasury has determined or may determine are inapplicable to the Fiscal Recovery Funds; and

WHEREAS, pursuant to 2 C.F.R. § 200.327, Unit must include within the Contract applicable provisions described in Appendix II to 2 C.F.R. Part 200, each of which is contained in this Addendum; and

WHEREAS, Unit shall not enter into the Contract or make any distributions of funds to Contractor using monies from the Fiscal Recovery Funds absent Contractor's agreement and adherence to each term and condition contained herein.

NOW THEREFORE, Contractor and Unit do mutually agree as follows:

AGREEMENTS

I. ***Definitions***. Unless otherwise defined in this Addendum, capitalized terms used in this Addendum shall have the meanings ascribed thereto in this Section I.

a) "*ARPA*" shall mean the American Rescue Plan Act of 2021, Pub. L. No. 117-2, as amended.

b) "*Administering Agency*" shall have the meaning specified in 41 C.F.R. § 60-1.3.

c) "*Applicant*" shall have the meaning specified in 41 C.F.R. § 60-1.3, which is provided here for ease of reference: ("An applicant for Federal assistance involving a construction contract, or other participant in a program involving a construction contract as determined by regulation of an administering agency. The term also includes such persons after they become recipients of such Federal assistance.").

d) "*Construction Work*" shall have the meaning specified in 41 C.F.R. § 60-1.3, which is provided here for ease of reference: ("[T]he construction, rehabilitation, alteration, conversion, extension, demolition or repair of buildings, highways, or other changes or improvements to real property, including facilities providing utility services. The term also includes the supervision, inspection, and other onsite functions incidental to the actual construction.").

e) "*Contract*" shall mean the legal instrument by which Unit, as a Recipient or Subrecipient, shall purchase from Contractor property or services needed to carry out a project or program under a Federal award, and of which this Addendum shall constitute an integral part.

f) "*Contractor*" shall mean the entity named as "Contractor" in this Addendum that has received a Contract from Unit.

g) "*Federally Assisted Construction Contract*" shall have the meaning specified in 41 C.F.R. §60-1.3, which is provided here for ease of reference: ("[A]ny agreement or modification thereof between any applicant and a person for construction work which is paid for in whole or in part with funds obtained from the Government or borrowed on the credit of the Government pursuant to any Federal program involving a grant,

contract, loan, insurance, or guarantee, or undertaken pursuant to any Federal program involving such grant, contract, loan, insurance, or guarantee, or any application or modification thereof approved by the government of the United States of America for a grant, contract, loan, insurance, or guarantee under which the applicant itself participates in the construction work.").

h) "*Government*" shall have the meaning specified in 41 C.F.R. § 60-1.3, which is provided here for ease of reference: ("[T]he government of the United States of America.").

i) "*Laborer*" or "*Mechanic*" shall have the meaning specified in 29 C.F.R. § 5.2(m), which is provided here for ease of reference ("The term laborer or mechanic includes at least those workers whose duties are manual or physical in nature (including those workers who use tools or who are performing the work of a trade), as distinguished from mental or managerial. The term laborer or mechanic includes apprentices, trainees, helpers, and, in the case of contracts subject to the Contract Work Hours and Safety Standards Act, watchmen or guards. The term does not apply to workers whose duties are primarily administrative, executive, or clerical, rather than manual. Persons employed in a bona fide executive, administrative, or professional capacity as defined in part 541 of [Title 40 of the United States Code] are not deemed to be laborers or mechanics. Working foremen who devote more than 20 percent of their time during a workweek to mechanic or laborer duties, and who do not meet the criteria of [Title 40 of the United States Code], are laborers and mechanics for the time so spent.").

j) "*Recipient*" shall mean an entity that receives a Federal award directly from a Federal awarding agency. The term does not include subrecipients or individuals that are beneficiaries of an award.

k) "*Subcontract*" shall mean any agreement entered into by a Subcontractor to furnish supplies or services for the performance of this Contract or a Subcontract. It includes, but is not limited to, purchase orders, and changes and modifications to purchase orders.

l) "*Subcontractor*" shall mean an entity that receives a Subcontract.

m) "*Subrecipient*" shall mean an entity that receives a subaward from a pass-through entity to carry out part of a Federal award; but it does not include an individual that is a beneficiary of such award. A subrecipient may also be a recipient of other Federal awards directly from a Federal awarding agency.

n) "*Tier*" shall have the meaning indicated in 2 C.F.R. Part 180 and illustrated in 2 C.F.R. Part 180, Appendix II.

o) "*Unit*" shall have the meaning indicated in the preamble to this Addendum.

II. *Equal Employment Opportunity*

a) If this Contract is a Federally Assisted Construction Contract exceeding $10,000, during the performance of this Contract, Contractor agrees as follows:

i. Contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, or national origin. Contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, sexual orientation, gender identity, or national origin. Such action shall include, but not be limited to the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

ii. Contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin.

iii. Contractor will not discharge or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation of the employee or applicant or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other employees or applicants as a part of such employee's essential job functions discloses the compensation of such other employees or applicants to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or is consistent with the Contractor's legal duty to furnish information.

iv. Contractor will send to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of Contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

v. Contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

vi. Contractor will furnish to the Administering Agency and the Secretary of Labor all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to its books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

vii. In the event of Contractor's noncompliance with the nondiscrimination clauses of this Contract or with any of the said rules, regulations, or orders, this contract may be canceled, terminated, or suspended in whole or in part and the Contractor may be declared ineligible for further Government contracts or Federally Assisted Construction Contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965. Such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

viii. Contractor will include the portion of the sentence immediately preceding paragraph (a)(i) of this Section II and the provisions of paragraphs (a)(i) through (a)(vii) in every Subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each Subcontractor or vendor. Contractor will take such action with respect to any Subcontract or purchase order as the Administering Agency may direct as a means of enforcing such provisions, including sanctions for noncompliance.

Provided, however, that in the event Contractor becomes involved in, or is threatened with, litigation with a Subcontractor or vendor as a result of such direction by the Administering Agency, the Contractor may request the United States to enter into such litigation to protect the interests of the United States.

Unit further agrees that it will be bound by the above equal opportunity clause with respect to its own employment practices when it participates in federally assisted construction work: Provided, that if Unit so participating is a State or local government, the above equal opportunity clause is not applicable to any agency, instrumentality or subdivision of such government which does not participate in work on or under the contract.

ix. Unit agrees that it will assist and cooperate actively with the Administering Agency and the Secretary of Labor in obtaining the compliance of Contractors and Subcontractors with the equal opportunity clause and the rules, regulations, and relevant orders of the Secretary of Labor, that it will furnish the Administering Agency and the Secretary of Labor such information as they may require for the supervision of such compliance, and that it will otherwise assist the Administering Agency in the discharge of the agency's primary responsibility for securing compliance.

x. Unit further agrees that it will refrain from entering into any contract or contract modification subject to Executive Order 11246 of September 24, 1965, with a Contractor debarred from, or who has not demonstrated eligibility for, Government contracts and Federally Assisted Construction Contracts pursuant to the Executive Order and will carry out such sanctions and penalties for violation of the equal opportunity clause as may be imposed upon Contractors and Subcontractors by the Administering Agency or the Secretary of Labor pursuant to Part II, Subpart D of the Executive Order. In addition, Unit agrees that if it fails or refuses to comply with these undertakings, the Administering Agency may take any or all of the following actions: Cancel, terminate, or suspend in whole or in part this grant (contract, loan, insurance, guarantee); refrain from extending any further assistance to the applicant under the program with respect to which the failure or refund occurred until satisfactory assurance of future compliance has been received from such applicant; and refer the case to the Department of Justice for appropriate legal proceedings.

b. If this Contract is not a Federally Assisted Construction Contract exceeding $10,000, the provisions of Section I(a) of this Addendum shall not apply.

III. *Copeland "Anti-Kickback" Act*

a) Contractor and any Subcontractors performing work under the Contract shall comply with 18 U.S.C. § 874. Unit shall report all suspected or reported violations to the Department of the Treasury.

IV. *Contract Work Hours and Safety Standards Act*

a) *Overtime Requirements.* No Contractor or Subcontractor contracting for any part of the Contract work which may require or involve the employment of Laborers or Mechanics shall require or permit any such Laborer or Mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such Laborer or Mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

b) *Violation; Liability for Unpaid Wages; Liquidated Damages.* In the event of any violation of the clause set forth in Section IV(a) (*Overtime Requirements*) above, Contractor and any Subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such Contractor and Subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual Laborer or Mechanic, including watchmen and guards, employed in violation of the clause set forth in Section IV(a) (*Overtime Requirements*) above, in the sum of $27 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in Section IV(a) (*Overtime Requirements*) above.

c) *Withholding for Unpaid Wages and Liquidated Damages.* Unit shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by Contractor or Subcontractor under any such contract or any other federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such Contractor or Subcontractor for unpaid wages and liquidated damages as provided in Section IV(b) (*Violation; Liability for Unpaid Wages; Liquidated Damages*) of this section.

d) *Subcontracts.* Contractor or Subcontractor shall insert in any Subcontract the clauses set forth in Sections IV(a) through IV(d) and also a clause requiring the Subcontractors to include these clauses in any lower Tier Subcontracts. Contractor shall be responsible for compliance by any first Tier Subcontractor or lower Tier Subcontractor with the clauses set forth in Sections IV(a) through IV(d).

e) *Payroll and Records.* Contractor or Subcontractor shall maintain payrolls and basic payroll records during the course of the work and shall preserve them for a period of three years from the completion of the Contract for all Laborers and Mechanics, including guards and watchmen, working on the Contract. Such records shall contain the name and address of each such employee, Social Security number, correct classifications, hourly rates of wages paid, daily and weekly number of hours worked, deductions made, and actual wages paid. Records to be maintained under this provision shall be made available by Contractor or Subcontractor for inspection, copying, or transcription by authorized representatives of the Department of the Treasury and the Department of Labor, and Contractor or Subcontractor will permit such representatives to interview employees during working hours on the job.

a) *Exceptions.* None of the requirements of Section IV of this Addendum shall apply if this Contract is a Contract (1) for transportation by land, air, or water; (2) for the transmission of intelligence; (3) for the purchase of supplies or materials or articles ordinarily available in the open market; or (4) in an amount that is equal to or less than $100,000.

V. *Rights to Inventions Made under a Contract or Agreement*

a) The Government reserves a royalty-free, non-exclusive and irrevocable license to reproduce, publish, or otherwise use, and to authorize others to use for "Government purposes", any subject data or copyright described below.11 "Government purposes," means use only for the direct purposes of the Government. Without the copyright owner's consent, the Government may not extend its Federal license to any other party.

   i. Any subject data developed under the Contract, whether or not a copyright has been obtained; and

   ii. Any rights of copyright purchased by Contractor using Federal assistance funded in whole or in part by the Department of the Treasury.

b) Unless Treasury determines otherwise, a Contractor performing experimental, developmental, or research work required as part of this Contract agrees to permit Treasury to make available to the public, either (1) Department of the Treasury's license in the copyright to any subject data developed in the course of the Contract, or (2) a copy of the subject data first produced under the Contract for which a copyright has not been obtained. If the experimental, developmental, or research work, which is the subject of this Contract, is not completed for any reason whatsoever, all data developed under the Contract shall become subject data as defined herein and shall be delivered as the Government may direct.

c) Unless prohibited by North Carolina law, upon request by the Government, Contractor agrees to indemnify, save, and hold harmless the Government, its officers, agents, and employees acting within the scope of their official duties against any liability, including costs and expenses, resulting from any willful or intentional violation by Contractor of proprietary rights, copyrights, or right of privacy, arising out of the publication, translation, reproduction, delivery, use, or disposition of any data furnished under the Contract. Contractor shall be required to indemnify the Government for any such liability arising out of the wrongful act of any employee, official, or agent of the Contractor.

d) Nothing contained in this clause shall imply a license to the Government under any patent or be construed as affecting the scope of any license or other right otherwise granted to the Government under any patent.

e) Data developed by Contractor and financed entirely without using Federal assistance provided by the Federal Government that has been incorporated into work required by the underlying Contract is exempt from the requirements herein, provided that Contractor identifies those data in writing at the time of delivery of the Contract work. The Contractor agrees to include these requirements in each Subcontract for experimental, developmental, or research work financed in whole or in part with Federal assistance.

f) For the purposes of this Section V, "subject data" means "recorded information, whether or not copyrighted, that is delivered or specified to be delivered as required by the Contract." Examples of "subject data" include, but are not limited to "computer software, standards, specifications, engineering drawings and associated lists, process sheets, manuals, technical reports, catalog item identifications, and related information, but do not include financial reports, cost analyses or other similar information used for performance or administration of the Contract."

VI. *Clean Air Act and Federal Water Pollution Act*

a) *Clean Air Act.* Contractor agrees to comply with all applicable standards, orders and regulations issued pursuant to the Clean Air Act, as amended, 42 U.S.C. §§ 7401 et seq. Contractor agrees to report each violation to Unit and understands and agrees that Unit will, in turn, report each violation as required to the U.S. Department of the Treasury and the appropriate Environmental Protection Agency Regional Office. Contractor agrees to include these requirements in each Subcontract exceeding $150,000 financed in whole or in part with Federal assistance provided by Treasury.

b) *Federal Water Pollution Control Act.* Contractor agrees to comply with all applicable standards, orders, and regulations issued pursuant to the Federal Water Pollution Control Act, as amended, 33 U.S.C. §§ 1251 et seq. Contractor agrees to report each violation to Unit and understands and agrees that Unit will, in turn, report each violation as required to assure notification to the U.S. Department of the Treasury and the appropriate Environmental Protection Agency Regional Office. Contractor agrees to include these requirements in each Subcontract exceeding $150,000 financed in whole or in part with Federal assistance provided by Treasury.

VII. *Debarment and Suspension*

a) Due to its receipt of Fiscal Recovery Funds, Unit is a participant in a nonprocurement transaction (defined at 2 C.F.R. § 180.970) that is a covered transaction pursuant to 2 C.F.R. §180.210 and 31 C.F.R. § 19.210. Therefore, this Contract is a lower-Tier covered transaction for purposes of 2 C.F.R. Part 180 and 31 C.F.R. Part 19 if (1) the amount of this Contract is greater than or equal to $25,000 (2 C.F.R. § 180.220(b)(1); 31 C.F.R. § 19.220(b)(1)); (2) the Contract requires the consent of an official of the Department of the Treasury (2 C.F.R. §180.220(b)(2); 31 C.F.R. § 19.220(b)(2)); or (3) this Contract is for federally-required audit services (2 C.F.R. § 180.220(b)(3); 31 C.F.R. § 19.220(b)(3)).

b) **If this Contract is a covered transaction as set forth in Section VII(a) above, Contractor hereby certifies as of the date hereof that Contractor, Contractor's principals (defined at 2 C.F.R. § 180.995), and the affiliates (defined at 2 C.F.R. § 180.905) of both Contractor and Contractor's principals are not excluded (defined at 2 C.F.R. § 180.935) and are not disqualified (defined at 2 C.F.R. § 180.935). If any of the foregoing persons are excluded or disqualified and the Secretary of the Treasury has not granted an exception pursuant to 31 C.F.R. § 19.120(a), (1) this Contract shall be void, (2) Unit shall not make any payments of Federal financial**

assistance to Contractor, and (3) Unit shall have no obligations to Contractor under this Contract.

c) Contractor must comply with 2 C.F.R. Part 180, Subpart C, and 31 C.F.R. Part 19, and must include a requirement to comply with these regulations in any lower-Tier covered transaction into which it enters.15 This certification is a material representation of fact relied upon by Unit and all liability arising from an erroneous representation shall be borne solely by Contractor.

d) If it is later determined that Contractor did not comply with 2 C.F.R. Part 180, Subpart C and 31 C.F.R. Part 19, in addition to remedies available to Unit, the Government may pursue available remedies, including but not limited to suspension and/or debarment.

VIII. *Byrd Anti-Lobbying Amendment*

a) Contractor certifies to Unit, and Contractor shall cause each Tier below it to certify to the Tier directly above such Tier, that it has not used and will not use Federally appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, officer or employee of Congress, or an employee of a Member of Congress in connection with obtaining any Federal contract, grantor any other award covered by 31 U.S.C. § 1352. Contractor shall, and shall cause each Tier below it, to disclose any lobbying with non-Federally appropriated funds that takes place in connection with obtaining any Federal award. Such disclosures (to be set forth on Standard Form-LLL contained in 31 C.F.R. Part 21, Appendix B) shall be forwarded from Tier to Tier up to the Unit which will, in turn, forward the certification(s) to the Department of the Treasury. Contractor shall cause the language of this Section VIII(a) to be included in all Subcontracts. This certification is a material representation of fact upon which Unit has relied when entering into this Contract and all liability arising from an erroneous representation shall be borne solely by Contractor.

b) Contractors that bid or apply for a contract exceeding $100,000 (including this Contract, if applicable) also must file with Unit the certification in Attachment 1 to this Addendum, which is attached hereto and incorporated herein.

c) Contractor also shall cause any Subcontractor with a Subcontract (at any Tier) exceeding $100,000 to file with the Tier above it the certification in Attachment 1 to this Addendum, which is attached hereto and incorporated herein.

IX. *Procurement of Recovered Materials*

a) Section IX(b) shall apply if (1) this Contract involves the purchase of an item designated by the Environmental Protection Agency ("EPA") in 40 C.F.R. Part 247 that exceeds $10,000, or (2) the total value of such designated items acquired during the Unit's preceding fiscal year exceeded $10,000.

b) In the performance of the Contract, Contractor shall make maximum use of products containing recovered materials that are EPA-designated items unless the product cannot (1) be acquired competitively within a timeframe providing for compliance with the Contract performance schedule, (2) meet Contract performance requirements; or (3) at a reasonable price. Information about this requirement, along with the list of EPA-designated items, is available at EPA's website. Contractor also agrees to comply with all other applicable requirements of Section 6002 of the Solid Waste Disposal Act.

X. ***Prohibition on Contracting for Covered Telecommunications Equipment or Services***

a) *Definitions.* Unless otherwise defined in this Contract, capitalized terms used in this Section IX shall have the meanings ascribed thereto in this Section IX(a):

i. *"Backhaul"* means intermediate links between the core network, or backbone network, and the small subnetworks at the edge of the network (e.g., connecting cell phones/towers to the core telephone network). Backhaul can be wireless (e.g., microwave) or wired (e.g., fiber optic, coaxial cable, Ethernet).

ii. *"Covered Foreign Country"* means the People's Republic of China.

iii. *"Covered Telecommunications Equipment or Services"* means: (a) telecommunications equipment produced by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities); (b) for the purpose of public safety, security of Government facilities, physical security surveillance of critical infrastructure, and other national security purposes, video surveillance and telecommunications equipment produced by Hytera Communications Corporation, Hangzhou Hikvision Digital Technology Company, or Dahua Technology Company (or any subsidiary or affiliate of such entities); (c) telecommunications or video surveillance services provided by such entities or using such equipment; or (d) telecommunications or video surveillance equipment or services produced or provided by an entity that the Secretary of Defense, in consultation with the Director of National Intelligence or the Director of the Federal Bureau of Investigation, reasonably believes to be an entity owned or controlled by, or otherwise connected to, the government of a Covered Foreign Country.

iv. "*Critical Technology*"20 means (1) defense articles or defense services included on the United States Munitions List set forth in the International Traffic in Arms Regulations under subchapter M of chapter I of title 22, Code of Federal Regulations; (2) items included on the Commerce Control List set forth in Supplement No. 1 to part 774 of the Export Administration Regulations under subchapter C of chapter VII of title 15, Code of Federal Regulations, and controlled (a) pursuant to multilateral regimes, including for reasons relating to national security, chemical and biological weapons proliferation, nuclear nonproliferation, or missile technology; or (b) for reasons relating to regional stability or surreptitious listening; (3) specially designed and prepared nuclear equipment, parts and components, materials, software, and technology covered by part 810 of title 10,

Code of Federal Regulations (relating to assistance to foreign atomic energy activities); (4) nuclear facilities, equipment, and material covered by part 110 of title 10, Code of Federal Regulations (relating to export and import of nuclear equipment and material); (5) select agents and toxins covered by part 331 of title 7, Code of Federal Regulations, part 121 of title 9 of such Code, or part 73 of title 42 of such Code; or (6) emerging and foundational technologies controlled pursuant to section 1758 of the Export Control Reform Act of 2018 (50 U.S.C. § 4817).

v. *"Interconnection Arrangements"* means arrangements governing the physical connection of two or more networks to allow the use of another's network to hand off traffic where it is ultimately delivered (e.g., connection of a customer of telephone provider A to a customer of telephone company B) or sharing data and other information resources.

vi. *"Roaming"* means cellular communications services (e.g., voice, video, data) received from a visited network when unable to connect to the facilities of the home network either because signal coverage is too weak or because traffic is too high.

vii. "Substantial or Essential Component" means any component necessary for the proper function or performance of a piece of equipment, system, or service.

viii. *"Telecommunications Equipment or Services"* means telecommunications or video surveillance equipment or services, such as, but not limited to, mobile phones, land lines, internet, video surveillance, and cloud services.

b) Prohibitions.

i. Section 889(b) of the John S. McCain National Defense Authorization Act for Fiscal Year 2019, Pub. L. No. 115-232 and 2 C.F.R. § 200.216 prohibit the head of an executive agency on or after August 13, 2020, from obtaining or expending grant, cooperative agreement, loan, or loan guarantee funds on certain telecommunications products or from certain entities for national security reasons.

ii. Unless an exception in Section X(c) applies, Contractor and any Subcontractors may not use grant, cooperative agreement, loan, or loan guarantee funds (including, without limitation, Fiscal Recovery Funds) received from a Federal government to:

1. Procure or obtain any equipment, system, or services that uses Covered Telecommunications Equipment or Services as a Substantial or Essential Component of any system, or as Critical Technology of any system;

2. Enter into, extend, or renew a contract to procure or obtain any equipment, system, or service that uses Covered Telecommunications Equipment or Services as a Substantial or Essential Component of any system, or as Critical Technology of any system;

3. Enter into, extend, or renew contracts with entities that use Covered Telecommunications Equipment or Services as a Substantial or Essential Component of any system, or as Critical Technology as part of any system; or

4. Provide, as part of its performance of this Contract, any Subcontract, any contractual instrument, or any equipment, system, or service that uses Covered Telecommunications Equipment or Services as a Substantial or Essential Component of any system or as Critical Technology as part of any system.

c) Exceptions.

i. This clause does not prohibit Contractor or Subcontractors from providing:

1. A service that connects to the facilities of a third-party, such as Backhaul, Roaming, or Interconnection Agreements; or

2. Telecommunications equipment that cannot route or redirect user data traffic or permit visibility into any user data or packets that such equipment transmits or otherwise handles.

ii. By necessary implication and regulation, the prohibitions also do not apply to:

1. Covered telecommunications equipment that:

a. Is not used as a Substantial or Essential Component of any system; and

b. Is not used as Critical Technology of any system.

2. Other telecommunications equipment or services that are not considered Covered Telecommunications Equipment or Services.

d) Reporting Requirement

i. In the event Contractor identifies, during contract performance, covered Telecommunications Equipment or Services used as a Substantial or Essential Component of any system, or as Critical Technology as part of any system, during Contract performance, or if Contractor is notified of such by a Subcontractor at any Tier or by any other source, Contractor shall report the information in paragraph (d)(2)of this Section X to Unit, unless procedures for reporting the information are elsewhere established in this Contract.

ii. Contractor shall report the following information to Unit pursuant to paragraph (d)(1) of this Section X:

1. Within one business day from the date of such identification or notification: contract number; order number(s), if applicable; supplier name; supplier unique entity identifier (if known); supplier Commercial and Government Entity (CAGE) code (if known); brand; model number (original equipment manufacturer number, manufacturer part number, or wholesaler number); item description; and any readily available information about mitigation actions undertaken or recommended.

2. Within ten business days of submitting the information in paragraph (d)(2)(i) of this Section: any further available information about mitigation actions undertaken or recommended. In addition, contractor shall describe the efforts it undertook to prevent use or submission of Covered Telecommunications Equipment or Services, and any additional efforts that will be incorporated to prevent future use or submission of Covered Telecommunications Equipment or services.

e) Subcontractor. Contractor shall cause to be inserted the substance of this Section X, including this paragraph (e), in all Subcontracts and other contractual instruments relating to the performance of this Contract.

XI. *Domestic Preferences for Procurements*

a) As applicable, and to the extent consistent with law, Contractor should, to the greatest extent practicable, provide a preference for the purchase, acquisition, or use of goods, products or materials Produced in the United States. This includes, but is not limited to iron, aluminum, steel, cement, and other Manufactured Products. Contractor shall cause any Subcontractors to include the requirements of this Section XI in any Subcontracts.

b) For purposes of this Section XI, the following terms shall mean:

i. *"Produced in the United States"* means, for iron and steel products, that all manufacturing processes, from the initial melting stage through the application of coating, occurred in the United States.

ii. *"Manufactured Products"* means items and construction materials composed in whole or in part of non-ferrous metals such as aluminum; plastics and polymer-based products such as polyvinyl chloride pipe; aggregates such as concrete; glass, including optical fiber; and lumber.

XII. *Solicitation of Minority and Women-Owned Business Enterprises*

a) If Contractor intends to let any Subcontracts, Contractor shall (1) place qualified small and minority businesses and women's business enterprises on its solicitation lists; (2) assure that small and minority businesses, and women's business enterprises are solicited whenever they are potential sources; (3) divide total requirements, when economically

feasible, into smaller tasks or quantities to permit maximum participation by small and minority businesses, and women's business enterprises; (4) establish delivery schedules, where the requirement permits, which encourage participation by small and minority businesses, and women's business enterprises; (5) use the services and assistance, as appropriate, of the Small Business Administration, the Minority Business Development Agency of the Department of Commerce, and the North Carolina Office for Historically Underutilized Businesses.

b) For the purposes of Section XII(a), an entity shall qualify (1) as a "minority business" or "women's business enterprise" if it is currently certified as a North Carolina "historically underutilized business" under Chapter 143, Section 143-128.4(a) of the N.C. General Statutes (hereinafter G.S.), and (2) as a "small business" if it is independently owned and operated and is qualified under the Small Business Administration criteria and size standards at 13 C.F.R. Part 21.

XIII. *Access to Records*

a) Contractor agrees to provide Unit, the Department of the Treasury, the Treasury Office of Inspector General, the Government Accountability Office, and the Comptroller General of the United States, or any authorized representatives of these entities access to any records (electronic and otherwise) of Contractor which are directly pertinent to this Contract to conduct audits or any other investigation. Contractor agrees to permit any of the foregoing parties to reproduce such records by any means whatsoever or to copy excerpts and transcriptions as reasonably needed.

b) Contractor agrees to retain all records covered by this Section XIII through December 31, 2031, or such longer period as is necessary for the resolution of any litigation, claim, negotiation, audit, or other inquiry involving the Contract.

XIV. *Conflicts of Interest; Gifts and Favors*

a) Contractor understands that (1) Unit will use Fiscal Recovery Funds to pay for the cost of this Contract, and (2) the expenditure of Fiscal Recovery Funds is governed by Conflict of Interest Policy of the Unit, the Regulatory Requirements (including, without limitation, C.F.R. § 200.318(c)(1)), and North Carolina law (including, without limitation, G.S. § 14-234(a)(1) and G.S. § 14-234.3(a)).

b) Contractor certifies to Unit that as of the date hereof, to the best of its knowledge after reasonable inquiry, no employee, officer, or agent of Unit involved in the selection, award, or administration of this Contract (each, a "Covered Individual"), no member of a Covered Individual's immediate family, no partner of a Covered Individual, and no organization (including Contractor) which employs or is about to employ a Covered Individual, has a financial or other interest in or has received a tangible personal benefit from Contractor. Should Contractor obtain knowledge of any such interest or any tangible personal benefit described in the preceding sentence after the date hereof, Contractor shall promptly disclose the same to Unit in writing.

c) Contractor certifies to Unit that it has not provided, nor offered to provide, any gratuities, favors, or anything of value to an officer, employee, or agent of Unit. Should Contractor obtain knowledge of the provision, or offer of any provision, of any gratuity, favor, or anything of value to an officer, employee, or agent described in the preceding sentence after the date hereof, Contractor shall promptly disclose the same to Unit in writing.

XV. ***Assurances of Compliance with Title VI of the Civil Rights Act of 1964***

a) Contractor and any Subcontractor, or the successor, transferee, or assignee of Contractor or any Subcontractor, shall comply with Title VI of the Civil Rights Act of 1964, which prohibits recipients of federal financial assistance from excluding from a program or activity, denying benefits of, or otherwise discriminating against a person on the basis of race, color, or national origin (42 U.S.C. § 2000d et seq.), as implemented by the Department of the Treasury's Title VI regulations, 31 C.F.R. Part 22, which are herein incorporated by reference and made a part of this Contract. Title VI also provides protection to persons with "Limited English Proficiency" in any program or activity receiving federal financial assistance, 42 U.S.C. § 2000d et seq., as implemented by Treasury's Title VI regulations, 31 C.F.R. Part 22, and herein incorporated by reference and made a part of this Contract.

XVI. ***Other Non-Discrimination Statutes.*** Contractor acknowledges that Unit is bound by and agrees, to the extent applicable to Contractor, to abide by the provisions contained in the federal statutes enumerated below, and any other federal statutes and regulations that may be applicable to the expenditure of Fiscal Recovery Funds:

a) The Fair Housing Act, Title VIII of the Civil Rights Act of 1968 (42 U.S.C. §§ 3601 et seq.), which prohibits discrimination in housing on the basis of race, color, religion, national origin, sex, familial status, or disability;

b) Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. § 794), which prohibits discrimination on the basis of disability under any program or activity receiving federal financial assistance;

c) The Age Discrimination Act of 1975, as amended (42 U.S.C. §§ 6101 et seq.), and Treasury's implementing regulations at 31 C.F.R. Part 23, which prohibit discrimination on the basis of age in programs or activities receiving federal financial assistance; and

d) Title II of the Americans with Disabilities Act of 1990, as amended (42 U.S.C. §§ 12101 et seq.), which prohibits discrimination on the basis of disability under programs, activities, and services provided or made available by state and local governments or instrumentalities or agencies thereto.

XVII. Termination for Cause or Convenience

The Unit, by written notice, may terminate this contract, in whole or in part, when it is in the Unit's

interest. If this contract is terminated, the Unit shall be liable only for payment under the payment provisions of this contract for services rendered before the effective date of termination.

The Unit may, by written notice of default to the Contractor, terminate this contract in whole or in part if the Contractor fails to:

i. Deliver the supplies or to perform the services within the time specified in this contract or any extension;
ii. Make progress, so as to endanger performance of this contract; or
iii. Perform any of the other provisions of this contract.

The Unit's right to terminate this contract may be exercised if the Contractor does not cure such failure within 10 days (or more if authorized in writing by the Unit) after receipt of the notice from the Unit specifying the failure.

If the Unit terminates this contract in whole or in part, it may acquire, under the terms and in the manner the Unit considers appropriate, supplies or services similar to those terminated. However, the Contractor shall continue the work not terminated.

If this contract is terminated for default, the Unit may require the Contractor to transfer title and deliver to the Unit any (1) completed supplies, and (2) partially completed supplies and materials, parts, tools, dies, jigs, fixtures, plans, drawings, information, and contract rights (collectively referred to as "materials" in this clause) that the Contractor has specifically produced or acquired for the terminated portion of this contract. Upon direction of the Unit, the Contractor shall also protect and preserve property in its possession in which the Unit has an interest.

The Unit shall pay contract price for completed supplies delivered and accepted. The Unit may withhold from these amounts any sum the Unit determines to be necessary to protect the Unit against loss because of outstanding liens or claims of former lien holders.

The rights and remedies of the Town in this clause are in addition to any other rights and remedies provided by law or under this contract.

XVIII. Administrative, Contractual, or Legal Remedies

The Contractor shall, in a satisfactory and proper manner in accordance with industry standards, complete all obligations and duties as stipulated in this Agreement. Failure of the Contractor to perform or deliver required work, services, or reports under this Agreement may result in the withholding of payments by the Unit to the Contractor. Breach of contract disputes will be decided by arbitration, if the parties mutually agree, or in a North Carolina court of competent jurisdiction.

The Contractor understands that failure to meet the requirements under this Agreement may result in withdrawal of other state or federal funds that may have been made available to the Contractor.

XVIX. *Miscellaneous*

a) **Increasing Seat Belt Use in the United States.** Pursuant to Executive Order 13043, 62 Fed. Reg. 19216 (Apr. 18, 1997), Unit encourages Contractor to adopt and enforce on-the-job seat belt policies and programs for its employees when operating company-owned, rented or personally owned vehicles.

b) **Reducing Text Messaging While Driving.** Pursuant to Executive Order 13513, 74 Fed. Reg. 51225 (Oct. 6, 2009), Unit encourages Contractor to adopt and enforce policies that ban text messaging while driving.

XX. ***Conflicts and Interpretation.*** To the extent that any portion of this Addendum conflicts with any term or condition of the Contract expressed outside of this Addendum, the terms of this Addendum shall govern.

CONTRACTOR:

By: Jason M. Williams

Name: JASON M. WILLIAMS

Title: SR. VICE PRESIDENT

ATTACHMENT 1
TO
CORONAVIRUS STATE AND LOCAL FISCAL RECOVERY FUNDS ADDENDUM

APPENDIX A, 31 C.F.R. PART 21 – CERTIFICATION REGARDING LOBBYING

The undersigned certifies, to the best of their knowledge and belief, that:

1. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

2. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

3. The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all contractors shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

The Contractor certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Contractor understands and agrees that the provisions of 31 U.S.C. Ch. 38, Administrative Remedies for False Claims and Statements, apply to this certification and disclosure, if any.

Jason M. Williams _____ Date: 10/23/2024

Signature of Contractor's authorized official

JASON M. WILLIAMS

(Print name of person signing above)

SR. VICE PRESIDENT

(Print title of person signing above)

- This form is required only for purchases of more than $100,000 -

November 5, 2024

Min Htun
Town of Wake Forest
Senior Civil Engineer
301 S. Brooks St.
Wake Forest, NC 27587

Re: Dunn Creek Culvert Replacement SP-23-23
Bid Tab Certification

Dear Mr. Htun:

In the Wake Forest Town Hall at 11:00 am on November 4, 2024, the bidding for the above referenced project was closed. The bid received was opened, and the apparent low bidder was **FSC II, LLC dba Fred Smith Company.**

After reviewing the bidding documents, we find FSC II, LLC dba Fred Smith Company's bid to be in compliance with the contract documents with a bid amount of **$1,250,906.00**. The certified bid tabulations are attached.

If you have any questions, please call me at (919) 677-2108.

Sincerely,

KIMLEY-HORN AND ASSOCIATES, INC.

By: Caleb Lowman, P.E.
Project Manager

cc: Steven Meyer, Town of Wake Forest
Tim Watson, Town of Wake Forest
Randy Driver, Town of Wake Forest
Hollie Aldridge, Town of Wake Forest

Town of Wake Forest
Dunn Creek Culvert Replacment SP-23-23
Bid Tabulations

					Engineers Estimate		Fred Smith Company		Roadworks Construction Company, LLC	
Line Item	**Sec No**	**Item Description**	**Quantity**	**Unit**	**Price**	**Amount**	**Price**	**Amount**	**Price**	**Amount**
1	800	Mobilization (5%)	1	LS	$ 57,588.85	$ 57,588.85	$ 62,000.00	$ 62,000.00	$ 64,960.00	$ 64,960.00
2	PSP	Project Management Communication	2	EA	$ 2,161.00	$ 4,322.00	$ 2,161.00	$ 4,322.00	$ 2,161.00	$ 4,322.00
3	801	Construction Surveying	1	LS	$ 75,000.00	$ 75,000.00	$ 18,500.00	$ 18,500.00	$ 21,050.00	$ 21,050.00
4	226	Grading	1	LS	$ 150,000.00	$ 150,000.00	$ 61,200.00	$ 61,200.00	$ 249,920.00	$ 249,920.00
5	240	Drainage Ditch Excavation	50	CY	$ 45.00	$ 2,250.00	$ 30.00	$ 1,500.00	$ 77.80	$ 3,890.00
6	270	Geotextile for Soil Stabilization	310	SY	$ 15.00	$ 4,650.00	$ 4.00	$ 1,240.00	$ 3.60	$ 1,116.00
7	300	Foundation Conditioning Material, Minor Structures	80	TON	$ 40.00	$ 3,200.00	$ 30.00	$ 2,400.00	$ 55.70	$ 4,456.00
8	300	Foundation Conditioning Geotextiles	150	SY	$ 5.00	$ 750.00	$ 3.00	$ 450.00	$ 9.85	$ 1,477.50
9	310	15" RC Pipe Culverts, Class IV	348	LF	$ 250.00	$ 87,000.00	$ 100.00	$ 34,800.00	$ 128.90	$ 44,857.20
10	340	Pipe Removal	104	LF	$ 50.00	$ 5,200.00	$ 30.00	$ 3,120.00	$ 34.00	$ 3,536.00
11	414	Culvert Excavation, Sta 12+63.74 -L-	1	LS	$ 90,000.00	$ 90,000.00	$ 142,503.00	$ 142,503.00	$ 81,250.00	$ 81,250.00
12	414	Foundation Conditioning Material, Box Culvert	150	TON	$ 110.00	$ 16,500.00	$ 69.00	$ 10,350.00	$ 64.20	$ 9,630.00
13	420	Class A Concrete (Culvert)	155	CY	$ 1,200.00	$ 186,000.00	$ 2,500.00	$ 387,500.00	$ 1,245.00	$ 192,975.00
14	425	Reinforcing Steel (Culvert)	31542	LB	$ 3.00	$ 94,626.00	$ 2.50	$ 78,855.00	$ 2.70	$ 85,163.40
15	520	Aggregate Base Course	360	TON	$ 70.00	$ 25,200.00	$ 65.00	$ 23,400.00	$ 41.00	$ 14,760.00
16	545	Incidental Stone Base	30	TON	$ 70.00	$ 2,100.00	$ 40.00	$ 1,200.00	$ 82.90	$ 2,487.00
17	607	Incidental Milling	120	SY	$ 40.00	$ 4,800.00	$ 44.50	$ 5,340.00	$ 26.25	$ 3,150.00
18	610	Asphalt Conc Base Course, Type B25.0B	90	TON	$ 190.00	$ 17,100.00	$ 135.00	$ 12,150.00	$ 110.25	$ 9,922.50
19	610	Asphalt Conc Surface Course, Type S9.5C	80	TON	$ 200.00	$ 16,000.00	$ 135.00	$ 10,800.00	$ 147.00	$ 11,760.00
20	610	Asphalt Conc Surface Course, Type S9.5B	50	TON	$ 200.00	$ 10,000.00	$ 150.00	$ 7,500.00	$ 210.00	$ 10,500.00
21	620	Asphalt Binder For Plant Mix	15	TON	$ 600.00	$ 9,000.00	$ 750.00	$ 11,250.00	$ 708.75	$ 10,631.25
22	654	Asphalt Plant Mix, Pavement Repair	10	TON	$ 190.00	$ 1,900.00	$ 185.00	$ 1,850.00	$ 262.50	$ 2,625.00
23	840	Masonry Drainage Structures	10	EA	$ 5,000.00	$ 50,000.00	$ 5,000.00	$ 50,000.00	$ 4,842.00	$ 48,420.00
24	840	Frame with Grate, Std 840.03, Type E	2	EA	$ 800.00	$ 1,600.00	$ 1,300.00	$ 2,600.00	$ 1,480.00	$ 2,960.00
25	840	Frame with Grate, Std 840.03, Type F	4	EA	$ 800.00	$ 3,200.00	$ 1,300.00	$ 5,200.00	$ 1,500.00	$ 6,000.00
26	840	Frame with Grate, Std 840.03, Type G	4	EA	$ 800.00	$ 3,200.00	$ 1,300.00	$ 5,200.00	$ 1,412.00	$ 5,648.00
27	PSP	Flowable Fill	10	CY	$ 400.00	$ 4,000.00	$ 450.00	$ 4,500.00	$ 773.00	$ 7,730.00
28	846	2'-6" Concrete Curb & Gutter	420	LF	$ 40.00	$ 16,800.00	$ 25.65	$ 10,773.00	$ 28.82	$ 12,104.40
29	863	Remove Existing Guardrail	128	LF	$ 7.00	$ 896.00	$ 5.00	$ 640.00	$ 43.00	$ 5,504.00
30	858	Adjustment of Manholes	1	EA	$ 2,000.00	$ 2,000.00	$ 600.00	$ 600.00	$ 1,575.00	$ 1,575.00
31	876	Rip Rap, Class II	115	TON	$ 75.00	$ 8,625.00	$ 60.00	$ 6,900.00	$ 126.00	$ 14,490.00
32	876	Rip Rap, Class B	10	TON	$ 75.00	$ 750.00	$ 75.00	$ 750.00	$ 180.90	$ 1,809.00
33	876	Geotextile for Drainage	115	SY	$ 4.00	$ 460.00	$ 5.00	$ 575.00	$ 16.00	$ 1,840.00
34	903	Supports, 3-LB Steel U-Channel	24	LF	$ 10.00	$ 240.00	$ 10.00	$ 240.00	$ 10.50	$ 252.00
35	904	Sign Erection Relocate, Type D	2	EA	$ 125.00	$ 250.00	$ 190.00	$ 380.00	$ 198.00	$ 396.00
36	907	Disposal of Support, U-Channel	2	EA	$ 50.00	$ 100.00	$ 20.00	$ 40.00	$ 21.00	$ 42.00
37	SP	Relocate Wayfinding Sign	1	EA	$ 50.00	$ 50.00	$ 500.00	$ 500.00	$ 3,800.00	$ 3,800.00
38	1110	Work Zone Signs (Stationary)	19	EA	$ 125.00	$ 2,375.00	$ 68.00	$ 1,292.00	$ 70.80	$ 1,345.20
39	1110	Work Zone Signs (Barricade Mounted)	9	EA	$ 75.00	$ 675.00	$ 64.00	$ 576.00	$ 67.20	$ 604.80
40	1130	Drums	10	EA	$ 50.00	$ 500.00	$ 66.00	$ 660.00	$ 37.50	$ 375.00
41	1145	Barricades (Type III)	64	LF	$ 30.00	$ 1,920.00	$ 21.00	$ 1,344.00	$ 4.30	$ 275.20
42	PSP	Pedestrian Channelizing Devices	18	LF	$ 35.00	$ 630.00	$ 35.00	$ 630.00	$ 13.65	$ 245.70
43	1170	Water filled barrier	60	LF	$ 100.00	$ 6,000.00	$ 50.00	$ 3,000.00	$ 15.20	$ 912.00
44	1205	Paint Marking Line, 4"	400	LF	$ 1.00	$ 400.00	$ 4.00	$ 1,600.00	$ 2.28	$ 912.00
45	1205	Thermoplastic Pavement Marking Lines (4", 90 Mils)	350	LF	$ 8.00	$ 2,800.00	$ 7.50	$ 2,625.00	$ 6.08	$ 2,128.00
46	1205	Thermoplastic Pavement Marking Lines (8", 90 Mils)	20	LF	$ 10.00	$ 200.00	$ 12.00	$ 240.00	$ 60.80	$ 1,216.00
47	1205	Thermoplastic Pavement Marking Lines (24", 90 Mils)	72	LF	$ 15.00	$ 1,080.00	$ 17.00	$ 1,224.00	$ 30.40	$ 2,188.80
48	1510	12" Water Line	127	LF	$ 300.00	$ 38,100.00	$ 345.00	$ 43,815.00	$ 530.25	$ 67,341.75
49	1510	Ductile Iron Water Pipe Fittings	460	LB	$ 15.00	$ 6,900.00	$ 22.00	$ 10,120.00	$ 26.25	$ 12,075.00
50	1515	12" Insertion Valve	1	EA	$ 21,000.00	$ 21,000.00	$ 33,000.00	$ 33,000.00	$ 44,310.00	$ 44,310.00
51	PSP	Generic Utility Item - Thrust Collar On Existing Pipe	1	EA	$ 4,000.00	$ 4,000.00	$ 6,500.00	$ 6,500.00	$ 9,030.00	$ 9,030.00
52	1520	8" Sanitary Gravity Sewer	101	LF	$ 225.00	$ 22,725.00	$ 220.00	$ 22,220.00	$ 466.20	$ 47,086.20
53	1520	4' DIA Utility Manhole	1	EA	$ 5,500.00	$ 5,500.00	$ 12,000.00	$ 12,000.00	$ 22,102.00	$ 22,102.00

Line Item	Sec No	Item Description	Quantity	Unit	Price	Amount	Price	Amount	Price	Amount
54	1520	Abandon 8" Utility Pipe	101	LF	$ 14.00	$ 1,414.00	$ 40.00	$ 4,040.00	$ 25.20	$ 2,545.20
55	1530	Abandon 12" Utility Pipe	132	LF	$ 18.00	$ 2,376.00	$ 33.00	$ 4,356.00	$ 25.20	$ 3,326.40
56	1530	Remove Utility Manhole	1	EA	$ 3,500.00	$ 3,500.00	$ 3,900.00	$ 3,900.00	$ 3,570.00	$ 3,570.00
57	PSP	Generic Utility Item - Sewer Bypass	1	LS	$ 60,000.00	$ 60,000.00	$ 47,500.00	$ 47,500.00	$ 48,580.00	$ 48,580.00
58	1605	Temporary Silt Fence	420	LF	$ 3.00	$ 1,260.00	$ 3.55	$ 1,491.00	$ 3.70	$ 1,554.00
59	PSP	Tree Protection Fence/ Safety Fence	60	LF	$ 3.00	$ 180.00	$ 4.00	$ 240.00	$ 2.06	$ 123.60
60	1610	Sediment Control Stone	50	TON	$ 52.00	$ 2,600.00	$ 50.00	$ 2,500.00	$ 78.25	$ 3,912.50
61	1610	Stone for Erosion Control, Class A	50	TON	$ 60.00	$ 3,000.00	$ 65.00	$ 3,250.00	$ 114.00	$ 5,700.00
62	1615	Temporary Mulching	0.7	ACR	$ 1,200.00	$ 840.00	$ 1,850.00	$ 1,295.00	$ 1,942.50	$ 1,359.75
63	1620	Seed For Temporary Seeding	40	LB	$ 6.25	$ 250.00	$ 2.00	$ 80.00	$ 2.10	$ 84.00
64	1620	Fertilizer For Temporary Seeding	0.2	TON	$ 1,500.00	$ 300.00	$ 1,100.00	$ 220.00	$ 1,146.00	$ 229.20
65	1630	Silt Excavation	100	CY	$ 15.00	$ 1,500.00	$ 10.00	$ 1,000.00	$ 16.80	$ 1,680.00
66	1631	Matting for Erosion Control	380	SY	$ 5.00	$ 1,900.00	$ 2.00	$ 760.00	$ 2.10	$ 798.00
67	1632	1/4" Hardware Cloth	30	LF	$ 6.00	$ 180.00	$ 6.00	$ 180.00	$ 6.04	$ 181.20
68	PSP	Fabric Insert Inlet Protection, Type 2	10	EA	$ 50.00	$ 500.00	$ 315.00	$ 3,150.00	$ 288.00	$ 2,880.00
69	PSP	Fabric Insert Inlet Protection Cleanout	10	EA	$ 150.00	$ 1,500.00	$ 89.00	$ 890.00	$ 91.00	$ 910.00
70	1642	Wattle	100	LF	$ 15.00	$ 1,500.00	$ 13.00	$ 1,300.00	$ 12.08	$ 1,208.00
71	1639	Special Stilling Basin	1	EA	$ 500.00	$ 500.00	$ 1,500.00	$ 1,500.00	$ 1,434.00	$ 1,434.00
72	1660	Seeding & Mulching	0.7	ACR	$ 2,250.00	$ 1,575.00	$ 5,000.00	$ 3,500.00	$ 5,985.00	$ 4,189.50
73	1660	Mowing	0.7	ACR	$ 250.00	$ 175.00	$ 300.00	$ 210.00	$ 310.00	$ 217.00
74	1661	Seed For Repair Seeding	4	LB	$ 10.00	$ 40.00	$ 25.00	$ 100.00	$ 4.40	$ 17.60
75	1661	Fertilizer For Repair Seeding	0.25	TON	$ 1,500.00	$ 375.00	$ 1,100.00	$ 275.00	$ 1,146.00	$ 286.50
76	1662	Seed For Supplemental Seeding	10	LB	$ 6.00	$ 60.00	$ 10.00	$ 100.00	$ 5.25	$ 52.50
77	1665	Fertilizer Topdressing	0.25	TON	$ 1,000.00	$ 250.00	$ 1,100.00	$ 275.00	$ 1,146.00	$ 286.50
78	PSP	Impervious Dike	80	LF	$ 60.00	$ 4,800.00	$ 70.00	$ 5,600.00	$ 131.00	$ 10,480.00
79	PSP	15" Temporary Pipe	40	LF	$ 25.00	$ 1,000.00	$ 48.00	$ 1,920.00	$ 68.25	$ 2,730.00
80	PSP	Concrete Washout Structure	7	EA	$ 850.00	$ 5,950.00	$ 100.00	$ 700.00	$ 268.00	$ 1,876.00
81	PSP	Stream Bank Restoration	75	SY	$ 10.00	$ 750.00	$ 350.00	$ 26,250.00	$ 38.00	$ 2,850.00
82	1675	Response for Erosion Control	15	EA	$ 500.00	$ 7,500.00	$ 10.00	$ 150.00	$ 152.00	$ 2,280.00
83	PSP	Culvert Diversion Channel	70	CY	$ 25.00	$ 1,750.00	$ 180.00	$ 12,600.00	$ 119.80	$ 8,386.00
84	PSP	Aluminum Fence	240	LF	$ 150.00	$ 36,000.00	$ 40.00	$ 9,600.00	$ 110.25	$ 26,460.00
					CONTINGENCY (10%)	**$ 121,400.00**				
					BASE ESTIMATE	**$ 1,335,100.00**	**BASE BID**	**$ 1,250,906.00**	**BASE BID**	**$ 1,299,344.35**
							% DIFF	**94%**	**% DIFF**	**97%**

A cell highlighted in red indicates a difference in the submitted Schedule of Prices, Proposal Form and the Bid Tabulation

PROJECT TOTAL BASE ESTIMATE	**$ 1,335,100.00**	**PROJECT TOTAL BASE ESTIMATE**	**$ 1,250,906.00**	**PROJECT TOTAL BASE ESTIMATE**	**$ 1,299,344.35**
		% DIFF	**94%**	**% DIFF**	**97%**

Kimley»Horn

November 5, 2024
Min Htun
Town of Wake Forest
Senior Civil Engineer

301 S. Brooks St.
Wake Forest, NC 27587

Re: Dunn Creek Culvert Replacement SP-23-23
Project Award Recommendation

Dear Mr. Htun:

In the Wake Forest Town Hall at 11:00 am on November 4, 2024, the bidding for the above referenced project was closed. Two bids were received for Dunn Creek Culvert Replacement SP-23-23. Kimley-Horn has reviewed these bids and prepared the certified bid tabulation.

Based on the information provided in the certified bid tabulation, with a base bid amount of **$1,250,906.00**, it appears that **FSC II, LLC dba Fred Smith Company** is the qualified low bidder and is in good standing for this project. This information is not a guarantee of their performance on this project. However, we have found no definitive objectionable information that would suggest that FSC II, LLC dba Fred Smith Company should not be awarded this project. As such, we recommend award of the Dunn Creek Culvert Replacement SP-23-23 project to FSC II, LLC dba Fred Smith Company.

If you have any questions, please call me at (919) 677-2108.

Sincerely,

KIMLEY-HORN AND ASSOCIATES, INC.

By: Caleb Lowman, P.E.
Project Manager

cc: Steven Meyer, Town of Wake Forest
Tim Watson, Town of Wake Forest
Randy Driver, Town of Wake Forest
Hollie Aldridge, Town of Wake Forest

Board of Commissioners Agenda Item Report

Agenda Item No.: 2024-368-
Submitted by: Min Htun
Submitting Department: Engineering
Meeting Date: November 19, 2024

SUBJECT
Approval of the 2025 Street Resurfacing Project

Recommendation:
Required Approval from the Board

Item Summary:

ATTACHMENTS

- Summary_Street Resurfacing Contract 2025.docx
- Attachment_A_2024-xx_Resolution_.docx
- Attachement_B_Street_Resurfacing_Bid_0004-2024.pdf
- Attachment_C_Bid Tab.pdf

ITEM TITLE: Approval for the Streets Resurfacing Contract for 2025 construction.

ITEM SUMMARY: The Engineering Department put together a scope of work for the Annual Street Resurfacing Project FY 25. The scope was advertised on October 4th, 2024, and the bid opening was on October 24th, 2024. The November 19th Board Meeting will include the resolution to authorize the Town Manager to award the bid.

ATTACHMENTS:

Attachment_A_2024-xx_Resolution

Attachment_B_Street Resurfacing Bid_0004-2024

Attachment_C_Bid Tab

SPECIFIC ACTION REQUESTED: Recommend approval.

RESOLUTION 2024-XX

RESOLUTION AUTHORIZING THE TOWN MANAGER TO EXECUTE ON BEHALF OF THE TOWN OF WAKE FOREST, THE CONTRACT FOR THE STREET RESURFACING PROJECT, BID #0004-2024

WHEREAS, the Engineering Department posted a call for bids for a street resurfacing project as an opportunity to collect competitive bids for construction services as specified in the bid documents; and

WHEREAS, consistent with the Town's purchasing policy, on October 4th, the Town published a Notice to Bidders inviting interested and qualified contractors to submit; and

WHEREAS, on October 24th at 2:00pm the bid opening was closed, and Town had received a total of 5 submissions; and

WHEREAS, a bid tabulation was completed, and all bids were reviewed to confirm receipt of required bid documentation; and

WHEREAS, the lowest bidder was selected as the contractor to perform the street resurfacing with a total of $5,464,565.40; and

NOW, THEREFORE, BE IT RESOLVED by the governing body of the Town of Wake Forest hereby authorizes the Town Manager to execute a contract with Blythe Construction for the Bid #0004-2024 Street Resurfacing Project.

This the 19th day of November 2024.

_____
Vivian A. Jones
Mayor

(ATTEST)

_____
Theresa Savary
Town Clerk

TOWN *of*
WAKE FOREST

Engineering Department

301 S. Brooks Street | Wake Forest, NC 27587

NAME OF BIDDER: _____

Address _____

N.C. License No. _____

BID DOCUMENT AND SPECIFICATION FOR

STREET RESURFACING PROJECT

BID # 0004-2024

DATE OF ADVERTISING

October 4th, 2024

DATE OF BID OPENING

October 24th, 2024

at 2:00pm

TABLE OF CONTENTS

ADVERTISEMENT---------- BD-1
PROPOSAL FORM
BIDDER'S CERTIFICATION
BID BOND
INSTRUCTIONS TO CONTRACTORS
CONTRACT
E-VERIFY AFFIDAVIT
MWBE DOCUMENTATION FORMS
PERFORMANCE BOND
PAYMENT BOND
PROCEDURE FOR REPORTING SALES TAX
FINAL PAYMENT AFFIDAVIT---------- BD-25

SCHEDULE OF PRICES----------SOP-1-2

GENERAL INFORMATION SHEET----------GIS-1-8

STREET ESTIMATE TOTAL SHEET----------SET-1-10

GENERAL CONDITIONS---------- GC-1-23

STANDARD GENERAL PROVISIONS---------- SGP-1-4

PROJECT SPECIAL PROVISIONS---------- PSP-1-24

GIS STREET MAPS---------- GSM-1-70

STANDARD DETAILS---------- PSP-1-93

NO PARKING SIGN & NOTIFICATION LETTER

TOWN *of*
WAKE FOREST

REQUEST FOR BIDS

Street Resurfacing Project

BID # 0004-2024

Sealed Bids to be received until

Thursday, October 24,2024, at 2:00 p.m.

NOTICE TO BIDDERS

Sealed bids will be received by the Town of Wake Forest, North Carolina, at the Town of Wake Forest Purchasing Department, 234 Friendship Chapel Road, Wake Forest, NC 27587 until 1:00 p.m. Afterward, they will be received at the Wake Forest Town Hall Meeting Rooms A & B, Wake Forest, NC 27587 from 1:00 p.m. until 2:00 p.m. on Thursday, October 24, 2024, where the bids will be publicly opened and read aloud for the following:

Bid # 0004-2024

STREET RESURFACING PROJECT

Bidding Documents may be obtained in printed or digital form from Duncan Parnell's bid room at ***https://www.dpibidroom.com/View/Default.aspx*** for the non-refundable price as listed on their website. All payments are to be made to Duncan Parnell, via their bid room. Prospective bidders must purchase Bidding Documents directly through Duncan Parnell to be considered an official plan holder. Neither Owner nor Engineer will be responsible for full or partial sets of Bidding Documents, including any Addenda, obtained from any other source. All payments are to be made to Duncan Parnell, via their bid room at ***http://www.dpibidroom.com*.** If you need any assistance ordering or getting registered, please email **raleigh@Duncan-Parnell.com.**

The Town of Wake Forest reserves the right to reject any or all bids and to make the award as deemed in the best interest of the Town of Wake Forest.

Instruction to Bidders

1. SUBMITTAL

All bids must be submitted by ***October 24, 2024 @ 2:00 p.m.*** *Bids may be submitted until 1:00 p.m.* to Town of Wake Forest Purchasing Department, 234 Friendship Chapel Road Wake Forest, NC 27587 Attn: Randy Driver, Purchasing Manager or submitted at the bid opening location at Wake Forest Town Hall, Meeting Rooms A-B, 301 S. Brooks Street from 1:00 p.m. until bid closing at 2:00 p.m. All *bids* must be submitted in a sealed envelope marked: **Bid # 0004-2024** – **STREET RESURFACING PROJECT**.

2. USE OF CONTRACT DOCUMENTS

These Bidding Documents are to be used only for the purpose of understanding this bid and consideration toward submitting a proposal. They may not be used for any other purpose.

3. SPECIFICATIONS

The Specifications are intended to describe the complete project including all materials, processes, equipment, etc. Bidders are expected to carefully examine the Contract Documents, visit the site of the proposed construction, and determine the availability of materials and method required, in order to become thoroughly familiar with the project, the requirements, and to include the cost thereof in the proposal. Bidders shall contact the Project Coordinator at least five (5) days prior to the bid date for clarification of any item not fully understood.

4. BIDDER'S QUALIFICATIONS

For projects exceeding $30,000, consideration will be given only to Contractors who submit evidence that they are properly licensed as required by Chapter 87 of the North Carolina Licensed General Statutes to bid and perform the work described herein as the general contractor. In addition, the Owner may make such other investigations as he deems necessary to determine the ability of the Bidder to perform the work, and the Bidder shall furnish the Owner all such information and data for this purpose as the Owner may request.

The Owner reserves the right to consider as unqualified to do the work of general construction any Bidder who does not habitually perform with his own forces a minimum of ten percent (10%) of the work involved in construction of the improvements embraced in this contract.

Awarded contractor shall be authorized to conduct business in the state of North Carolina as found by checking the Secretary of State records and/or Register of Deeds office, indicating proper registration and active status. This is a condition of executing the contract.

5. FAMILIARITY WITH LAWS

The Contractor agrees that in carrying out this contract he will comply with all applicable Federal, state, and local laws, specifically including, without limitation, the Occupational Safety and Health Act of 1970 and Section 1324A, the Immigration Reform and Control Act.

6. AMERICAN WITH DISABILITIES ACT (ADA)

The Contractor shall comply with the provisions of the Americans with Disabilities Act (ADA) (www.ADA.gov) as amended from time to time and all rules and regulations promulgated thereunder. The contractor hereby agrees to indemnify the Owner from and against all claims, suits, damages, costs, losses and expenses in any manner arising out of or connected with the failure of the contractor, its subcontractors, agents, successors, assigns, officers or employees to comply with the provisions of the ADA or rules and regulations promulgated thereunder.

7. MINORITY PARTICIPATION

The Town of Wake Forest's minority participation goal is **10%** of the bid amount.

8. ADDENDA

No oral interpretation will be made to any Bidder as to the meaning of the Bidding Documents. Questions and requests for such interpretation should be made in writing to the Project Coordinator Listed. Any Addenda will be provided to known interested parties, but it shall be the Bidder's responsibility to make inquiry as to any Addenda issued. All such Addenda shall become part of the Contract and all Bidders shall be bound by such Addenda whether or not received or acknowledged. ***All addendums will be posted by 2:00 p.m. on Friday, October 18th ,2024***.

9. UNBALANCED BIDS

The Contractor shall not submit a bid containing any unbalanced bid prices. Any unit or lump sum bid price that does not reflect reasonable actual costs that the Contractor anticipates for the performance of the item(s) in question along with a reasonable proportional share of the Contractor's anticipated profit, overhead cost, and other indirect costs is an unbalanced bid price. Any bid containing unbalanced bid prices may be deemed non-responsive and rejected.

10. COLLUSIVE AGREEMENTS

Each bidder submitting a bid shall execute and attach the Non-Collusion Affidavit of Prime Bidder affidavit attesting that he has not entered into a collusive agreement with any other person, firm or corporation in regard to any bid submitted.

11. BID Bond

5% of bid amount.

12. PERFORMANCE AND PAYMENT BOND

100% of bid amount.

13. PREPARATION OF BID

The Town's bid forms must be used when provided – submit one original. Bidders shall label their bid proposal with business name, bid name and bid date, then seal their bid proposal inside an envelope. If mailing a bid proposal, provide a sealed envelope within the postal envelope.

14. ITEMS REQUIRED TO BE SUBMITTED WITH THE BID

Failure to submit the following with the bid is considered a non-responsive bid and the bid will not be considered:

- ❑ Bid Form with bid price(s) written or typed

- ❑ Signatures on Forms and notarized where noted
- ❑ Non-Collusion Affidavit of Prime Bidder
- ❑ Addendums (if issued)
- ❑ Minority Participation forms
- ❑ E-589 CI Form

15. RECEIPT AND OPENING OF BIDS

Each Bid is to be submitted in a sealed envelope and plainly marked with the project name, bid number, and bid opening time. If mailed, the sealed envelope containing the Bid is to be enclosed in another envelope to avoid it being opened before the advertised time. Bids received prior to the advertised bid opening will be securely kept as sealed. Bids received after the advertised bid opening time will be returned to the Bidder unopened.

16. WITHDRAWAL OF BIDS

Bids may be withdrawn by written request prior to or within seventy-two hours (72) after the opening of bids by contacting the bidding officer. To withdraw an opened bid, proof must be given of a mathematical error or omission as opposed to judgment or interpretation error.

17. MINIMUM NUMBER OF BIDS (FORMAL CONTRACTS ONLY)

North Carolina General Statute 143-129 and 143-132 prohibits the awarding of a formal contract unless at least three (3) competitive bids are received from reputable and qualified contractors. Therefore, if fewer than three (3) such bids are received, they will not be opened but returned to the contractors; and the project may be re advertised. The Town's formal contract limit is $500,000.

18. ALTERNATIVE BIDS

No alternative bids will be considered unless alternative bids are specifically requested.

19. AWARD OF CONTRACT; REJECTION OF BIDS

The Town reserves the right to hold bids for a period of sixty (60) days for the purpose of reviewing the bids and investigating the qualifications of the Bidders. The Town reserves the right to reject any or all bids, for any reason. The Town intends to award a contract to the lowest responsive, responsible bidder, complying with the conditions of the bidding documents. The Town reserves the right to award a contract that is deemed in its best interest.

20. BID PROTEST PROCEDURE

Prospective bidders or suppliers who feel disadvantaged by the solicitation must submit a written protest within five (5) calendar days prior to the opening of proposals. Actual bidders or subcontractors who are aggrieved by the award of a contract must submit a written protest within five (5) days of the Town announcing its intent to award. The protest must be addressed to the Purchasing Manager, Town of Wake Forest, who will make the final determination after consulting with counsel.

21. EXECUTION OF AGREEMENT

The successful Bidder is required to execute a Contract within ten days (10) days after notice of award. Failure to do so constitutes a default and the Owner may elect to award to the next lowest bidder or re- advertise the bid.

22. LIQUIDATED DAMAGES

$1500 per day after scheduled completion date of project. Any exceptions must be issued in writing by the Town of Wake Forest.

23. INSURANCE REQUIRMENTS

A. Workers' Compensation: Insurance covering all employees meeting Statutory limits in compliance with the applicable state and federal laws. The coverage must include employer's liability with a minimum limit of $1,000,000 for each accident.

B. Commercial General Liability: Coverage shall have minimum limits of $1,000,000 per occurrence, general aggregate, products/completed operations aggregate, personal and advertising injury. This shall include premises and operations, independent contractors, products and completed operations, broad form property damage, XCU coverage and contractual liability. The coverage shall be written on an occurrence basis. This limit should apply on a per project or per location aggregate basis. **The Town of Wake Forest shall be listed as an additional insured, under this coverage.**

C. Business Auto Liability: Coverage shall have a minimum limit of $500,000 per occurrence, combined single limit for bodily injury liability and property damage liability. This shall include owned vehicles, hired vehicles and non-owned vehicles.

D. Umbrella/Excess Liability: At the option of the contractor, the limits of the primary general liability, auto liability and employers' liability may be less than stipulated herein, with an excess policy providing the additional limits needed. This form of coverage must be approved by the municipality and will only be acceptable when both the primary and excess policies include the coverage and endorsements required herein.

E. Professional Liability: Coverage shall have a minimum limit of $1,000,000 per occurrence, unless a higher limit is required by the Town. This coverage is only required for contracts that include professional services.

F. Special Requirements

1. Current, valid insurance policies meeting the requirements herein identified shall be maintained to be considered an "eligible contractor". Renewal certificates shall be sent to the Town 30 days prior to any expiration date. There shall also be a 30-day notification to the Town in the event of cancellation or modification of any stipulated insurance coverage. Certificates of insurance meeting the required insurance provisions shall be forwarded to the Town of Wake Forest. Wording on the certificate, which states that no liability shall be imposed upon the company for failure to provide such notice, is not acceptable.

2. It shall be the responsibility of the contractor to ensure that all subcontractors comply with the same insurance requirements that he is required to meet.

3. The Town of Wake Forest shall be listed as certificate holder on the certificate of insurance.

24. INDEMNIFICATION

To the extent permitted by law, the Contractor agrees to defend, pay on behalf of, indemnify, and hold- harmless the Town of Wake Forest, its elected and appointed officials, employees, agents, and volunteers against any and all claims, demands, suits or losses, including all costs connected therewith, for any damages which may be asserted, claimed or recovered against or from the Town of Wake Forest, its elected or appointed officials, employees, agents, and volunteers by reason of personal injury, including bodily injury or death and/or property damage, including loss of use thereof resulting from the negligence of the Contractor.

25. MATERIALS

The name of a certain brand, make, manufacturer or definite specification is to denote the quality standard of the article desired and not to restrict competitive bidding. It is set forth and conveyed to prospective bidders the general style, type, character and quality of the article desired. Bidders, however, may submit to the Project Coordinator evidence that proposed substitutions are fully up to standards specified and obtain his approval before placing orders.

26. ERRORS, OMISSIONS, AND DEVIATIONS

The Contractor is responsible for all errors, omissions, and deviations from the Contract requirements.

27. OSHA COMPLIANCE PLAN/POLICY

Contractor hereby acknowledges that it has reviewed and agrees to abide by all OSHA safety regulations and Town of Wake Forest safety regulations. Contractor may be required to submit a copy of the company's current written OSHA Compliance Plan/Policy within 48 hours of request. If requested, no field work shall take place until the plan has been submitted and reviewed by the Town's Safety Officer.

28. NON-COLLUSION and ANTI-DISCRIMINATION

Bidder certifies that this proposal is made in good faith and without collusion or in connection with any other person bidding on the same work, nor will any official or employee of the Town of Wake Forest be admitted to share any part of this contract should an award be made to the undersigned. Bidder further certifies that in connection with the performance of this contract not to discriminate against any employee or applicant for employment because of race, creed, color, religion, national origin, gender, age, political affiliation or handicap.

29. TAXES

FEDERAL: The Town of Wake Forest is exempt from and will not pay Federal Excise or Transportation taxes. **STATE:** Applicable North Carolina Sales and Use Taxes shall not be shown on bids, but shall be added to invoices as a separate item. The Town is not tax exempt.

NORTH CAROLINA SALES TAX

The Owner may apply for a refund of all sales and/or use taxes paid in North Carolina by the Contractor on purchases of items which are annexed to, affixed to, or in some manner become a part of any building or structure being erected, altered or repaired under Contract with the Owner; and these taxes shall not be

included in the bid amounts or the Contract sum. The Contractor shall include and pay all other taxes imposed by governmental authorities, which are applicable to the work.

The Contractor will be reimbursed for applicable sales and/or use taxes he has paid in North Carolina based on the following. **The Contractor should apply for reimbursement by itemizing and completing a notarized sales and use tax report form and submitting it with each pay request. Failure to submit this form will result in the invoice not being paid.** The contractor will be required to complete a sales and use tax report affidavit in order to receive the last payment of the project.

A Sales Tax Affidavit must be completed and submitted for this project before final payment will be released.

30. PAYMENT

N.C.G.S. 143-134.1 prohibits retainage on public projects that cost less than $100,000.00 in total. Prior to final payment, the Contractor will be required to submit any forms, warranties, etc. that the Owner requires. The payment of the final amount due the Contractor shall release the Owner from any and all claims or liabilities on account of the work performed and the materials furnished upon the work. The payment terms shall be Net 30 days.

31. ETHICS POLICY / CODE OF CONDUCT

The Town of Wake Forest has established guidelines for ethical standards of conduct in that Town *representatives should maintain high standards of personal integrity, truthfulness, honesty, and fairness* in carrying out public duties; avoid any improprieties in their roles as public servants including the appearance of impropriety; and never use their position or power for improper gain. In establishing an ethics policy, the Town of Wake Forest desires to protect the public against decisions that are affected by undue influence, conflicts of interest, or any other violation of these policies as well as promote and strengthen the confidence of the public in their governing body.

32. E-VERIFY

Contractor shall comply with the requirements of Article 2 of Chapter 64 of the NC General Statutes. Further, if Contractor utilizes a subcontractor, Contractor shall require the subcontractor to comply with the requirements of Article 2 of Chapter 64 of the NC General Statutes.

33. HUBSCO REPORTING

All **building** construction and repair projects ($30,000 & Over) require a E-Verify. Contractor shall comply with the requirements of Article 2 of Chapter 64 of the NC General Statutes. Further, if Contractor utilizes a subcontractor, Contractor shall require the subcontractor to comply with the requirements of Article 2 of Chapter 64 of the NC General Statutes. If a minority participation report is required to be submitted to the State of NC Department of Administration HUB Office, any information that is requested from the contractor must be provided before the last invoice will be paid.

34. IRAN DIVESTMENT ACT.

Contractor certifies that; (i) it is not identified on the Final Divestment List or any other list of prohibited investments created by the NC State Treasurer pursuant to N.C.G.S. 143-6A-4; (ii) it will not take any action causing it to appear on any such list during the term of this Purchase Order, and

(iii) it will not utilize any subcontractor to provide goods or services hereunder that is identified on any list.

35. DIVESTMENT FROM COMPANIES THAT BOYCOTT ISRAEL.

Contractor represents, covenants, and certifies that it is not listed on the list of restricted companies developed and published by the North Carolina State Treasurer as required by N.C.G.S. 147-86.81.

36. DISPUTE RESOLUTION

Any construction related disputes resulting from this bid shall be resolved using the procedures set for by the State Building Commission pursuant to NCGS 143-128(g) 143-135.26(11). These procedures may be viewed at: https://www.nccourts.gov/assets/inline-files/Rules-of-the-Dispute-Resolution-Commission-Codified-1-May-2023.pdf?VersionId=Ymqtk7BJomYKhbLUzNR.fyHAMv7Sev4X

37. STANDARD TERMS AND CONDITIONS

The Town of Wake Forest's Standard Terms and Conditions listed at: https://www.wakeforestnc.gov/sites/default/files/uploads/purchasing/2023/9-27-23_towf_standard_terms_and_conditions.pdf will govern all matters related to the goods and/or services provided by you or your company (the "Vendor") to the Town of Wake Forest (the "Town") under a Town purchase order. Additional Terms and Conditions stated on the face of a Town purchase order shall take precedence over any conflicting Standard Terms and Conditions stated. Any Terms and Conditions not stated, but incorporated by reference therein, shall be binding only if provided or signed by the Town and attached hereto. In the event that a binding written contract signed by both the Vendor and the Town exists, the Terms and Conditions of that contract shall supersede any conflicting Standard Terms and Conditions.

38. PROJECT COORDINATOR / CONTACT

Htun, Min – mhtun@wakeforestnc.gov

39. QUESTIONS AND CLARIFICATIONS

Any questions regarding this bid must be submitted ***by email*** to the Project Coordinator. All questions may be submitted ***starting on Thursday October, 10th 2024 and ending on Thursday October 17th @ 2:00 pm***

All questions will be answered individually and then combined and posted in an addendum.

40. REFERENCES

All bidders must submit a minimum of three references for similar public projects. Please submit the name of the project, the city/town the project was for and contact information for the person that was responsible for the project for the client.

PROPOSAL FORM

STREET RESURFACING PROJECT

BID # 0004-2024

The undersigned bidder affirms and declares that he has carefully examined all bidding documents and Instructions to Bidders which are acknowledged to be a part of this proposal, and agrees to provide all labor, materials, equipment, supervision, permits; abide by all local, state and federal laws, rules, regulations, and ordinances applicable to perform the work listed in the specifications and scope of work for the following sum to wit:

TOTAL BASE BID – Lump Sum

_____ Dollars $_____

Construction Duration from NTP _____ , this construction duration shall not exceed 250 Calendar days.

Address technical questions about the project to the Project Engineer: **Tim Watson / Min Htun.**

Tim Watson, PE
Engineering Director
twatson@wakeforestnc.gov

Min Htun
Senior Civil Engineer
mhtun@wakeforestnc.gov

ITEM 1- Scope of Project

Town's various streets will be resurfaced.

ITEM 2- Addendums

All addendums must be acknowledged in order for the proposal to be considered.

Addendum #1 _____

Addendum #2 _____

Addendum#3 _____

The Town of Wake Forest intends to award a contract to the overall lowest responsible, responsive bidder taking into consideration quality, performance, and the time specified in this bid. The Town of Wake Forest reserves the right to reject or all proposals and to make the award as deemed in the best interest of the Town of Wake Forest.
All bidders MUST complete and submit with their bid the enclosed Non-Collusion Affidavit of Prime Bidder.

SIGNATURE PAGE

The undersigned certifies that they have read and understood all the provided bidding documents, the project specifications, and agree to the terms and conditions stated herein.

This bid must be signed by a responsible official of the bidding organization and notarized.

_____ **(SEAL)**

Date

_____

Company

_____	_____
Authorized Signature	Federal Identification #
_____	_____
Printed Name and Title	Email Address
_____	_____
Street Mailing Address	City, State, Zip Code
_____	_____
Contactor's NC License No.	Telephone Number

On this day of_____, 20___, before me_____(name) appeared and, being duly sworn, did execute the foregoing proposal, and did so state that he/she was properly authorized by _____ _____(name of company) to execute the proposal and did so on his/her free act and deed.

Notary Public_____My Commission Expires_____(SEAL)

NON-COLLUSION AFFIDAVIT OF PRIME BIDDER

attach to bid (required)

State of_____)

County of_____)

Project: Bid # 0004-2024-Street Resurfacing Project

_____, being first duly sworn, deposes and says that:

1. He is (owner, partner, officer, representative or agent) of_____, the Bidder that has submitted the attached Bid;

2. He is fully informed respecting the preparation and contents of the attached bid and of all pertinent circumstances respecting such Bid;

3. Such Bid is genuine and is not a collusive or sham Bid;

4. Neither the said Bidder nor any of its officers, partners, owners, agents, representatives, employees or parties in interest, including this Affiant, has in any way colluded, conspired, connived or agreed, directly or indirectly, with any other Bidder, firm or person to submit a collusive or sham Bid in connection with the Contract for which the attached Bid has been submitted or to refrain from bidding in connection with such contract, or has in any manner, directly or indirectly, sought by agreement or collusion or communication or conference with any other Bidder, firm or person to fix the price or prices in the attached Bids of any other Bidder, or to fix any overhead, profit or cost element of the Bid price or the Bid price of any other Bidder, or to secure through any collusion, conspiracy, connivance or unlawful agreement any advantage against the Town of Wake Forest or any person interested in the proposed Contract; and

5. The price or prices quoted in the attached Bid are fair and proper and are not tainted by any collusion, conspiracy, connivance or unlawful agreement on the part of the Bidder or any of its agents, representatives, owners, employees or parties in interest, including this Affiant.

_____ _____

Name Title

Subscribed and Sworn to before me this_____Day of_____, 20_____

Notary Public:_____ (Seal)

My Commission Expires:_____

IDENTIFICATION OF MINORITY BUSINESS PARTICIPATION

Project: _____

I, _____
(Name of Bidder)

do hereby certify that on this project, we ***intend to*** use the following M/WBE firms as construction subcontractors, vendors, suppliers, or providers of professional services.

Minority Firm Name and Address	Minority Category*	Phone Number	Type of Work

* Minority Categories: Black or African American (B), Hispanic (H), Asian American (A), American Indian (I), Female (F), and Socially and Economically Disadvantaged (D).

The total value of M/WBE firms contracting is proposed to be $_____

The total percentage of M/WBE firms contracting is proposed to be _____%

Identification of HUB Certified/ Minority Business Participation

I,_____,

(Name of Bidder)

do hereby certify that on this project, we will use the following HUB Certified/ minority business as construction subcontractors, vendors, suppliers or providers of professional services.

Firm Name, Address and Phone #	Work Type	Minority Category	HUB Certified (Y/N)	$ Amount

*Minority categories: Black, African American (**B**), Hispanic (**H**), Asian American (**A**) American Indian (**I**), Female (**F**) Socially and Economically Disadvantaged (**D**)

** HUB Certification with the state HUB Office required to be counted toward state participation goals.

The total value of minority business contracting will be ($)_____.

The total percentage of minority business contracting will be (%)_____.

Town of Wake Forest -AFFIDAVIT A – Listing of Good Faith Efforts

County of _____

(Name of Bidder)

Affidavit of_____

I have made a good faith effort to comply under the following areas checked:

Bidders must earn at least 50 points from the good faith efforts listed for their bid to be considered responsive. (1 NC Administrative Code 30 I.0101)

- ❑ **1 – (10 pts)** Contacted minority businesses that reasonably could have been expected to submit a quote and that were known to the contractor, or available on State or local government maintained lists, at least 10 days before the bid date and notified them of the nature and scope of the work to be performed.
- ❑ **2 --(10 pts)** Made the construction plans, specifications and requirements available for review by prospective minority businesses or providing these documents to them at least 10 days before the bids are due.
- ❑ **3** – **(15 pts)** Broken down or combined elements of work into economically feasible units to facilitate minority participation.
- ❑ **4 – (10 pts)** Worked with minority trade, community, or contractor organizations identified by the Office of Historically Underutilized Businesses and included in the bid documents that provide assistance in recruitment of minority businesses.
- ❑ **5** – **(10 pts)** Attended Prebid meetings scheduled by the public owner.
- ❑ **6** – **(20 pts)** Provided assistance in getting required bonding or insurance or provided alternatives to bonding or insurance for subcontractors.
- ❑ **7 – (15 pts)** Negotiated in good faith with interested minority businesses and did not reject them as unqualified without sound reasons based on their capabilities. Any rejection of a minority business based on lack of qualification should have the reasons documented in writing.
- ❑ **8** – **(25 pts)** Provided assistance to an otherwise qualified minority business in need of equipment, loan capital, lines of credit, or joint pay agreements to secure loans, supplies, or letters of credit, including waiving credit that is ordinarily required. Assisted minority businesses in obtaining the same unit pricing with the bidder's suppliers in order to help minority businesses in establishing credit.
- ❑ **9** – **(20 pts)** Negotiated joint venture and partnership arrangements with minority businesses in order to increase opportunities for minority business participation on a public construction or repair project when possible.
- ❑ **10** - **(20 pts)** Provided quick pay agreements and policies to enable minority contractors and suppliers to meet cash-flow demands.

The undersigned, if apparent low bidder, will enter into a formal agreement with the firms listed in the Identification of Minority Business Participation schedule conditional upon scope of contract to be executed with the Owner. Substitution of contractors must be in accordance with GS143-128.2(d) Failure to abide by this statutory provision will constitute a breach of the contract.

The undersigned hereby certifies that he or she has read the terms of the minority business commitment and is authorized to bind the bidder to the commitment herein set forth.

Date:_____Name of Authorized Officer:_____

Signature:_____

SEAL

Title:_____

State of _____***, County of*** _____

Subscribed and sworn to before me this _____ ***day of*** _____ ***20*** _____

Notary Public _____

My commission expires _____

Town of Wake Forest --AFFIDAVIT B-- Intent to Perform Contract With Own Workforce

County of _____

Affidavit of_____
(Name of Bidder)

I hereby certify that it is our intent to perform 100% of the work required for the _____

_____contract.

(Name of Project)

In making this certification, the Bidder states that the Bidder does not customarily subcontract elements of this type project, and normally performs and has the capability to perform and will perform all elements of the work on this project with his/her own current work forces; and

The Bidder agrees to provide any additional information or documentation requested by the owner in support of the above statement. The Bidder agrees to make a Good Faith Effort to utilize minority suppliers where possible.

The undersigned hereby certifies that he or she has read this certification and is authorized to bind the Bidder to the commitments herein contained.

Date:_____Name of Authorized Officer:_____

SEAL

Signature:_____

Title:_____

State of_____, County of_____ Subscribed and sworn to before me

this_____day of_____20_____Notary Public _____

My commission expires._____.

STATE OF NORTH CAROLINA

TOWN OF WAKE FOREST

AFFIDAVIT

I,_____(the individual attesting below), being duly authorized by and

on behalf of_____(the entity bidding on project hereinafter "Employer") after first being duly sworn hereby swears or affirms as follows:

1. Employer understands that E-Verify is the federal E-Verify program operated by the United States Department of Homeland Security and other federal agencies, or any successor or equivalent program used to verify the work authorization of newly hired employees pursuant to federal law in accordance with NCGS §64-25(5).

2. Employer understands that Employers Must Use E-Verify. Each employer, after hiring an employee to work in the United States, shall verify the work authorization of the employee through E- Verify in accordance with NCGS§64-26(a).

3. Employer is a person, business entity, or other organization that transacts business in this State and that employs 25 or more employees in this State. (Mark Yes or No)

a) YES_____, or
b) NO _____

4. Employer's subcontractors comply with E-Verify, and if Employer is the winning bidder on this project Employer will ensure compliance with E-Verify by any subcontractors subsequently hired by Employer.

This_____day of_____, 20_____.

_____
Signature of Affiant

Print or Type Name: _____

State of_____ County of _____ (Affix Seal)

Signed and sworn to (or affirmed) before me, this the _____

day of_____, 20_____.
My Commission Expires:
Notary Public

_____ _____

TOWN of
WAKE FOREST

301 S. Brooks Street
Wake Forest, NC 27587
t 919.435.9400

www.wakeforestnc.gov

[Organization Name] [Address]
[City, State Zip] [Date]

Dear [Vendor Name],

We would like to thank you for your work on the [project name]. Below you will find the sales tax verification to be completed for the project. Prior to the official closeout and the issuance of the final payment, the Town of Wake Forest must receive a copy of this document with a notarized signature of an authorized official of your organization.

Sales Tax Affidavit

The Town of Wake Forest will not accept any transfer of liability for taxes due on admissions that the lessee has failed to charge and remit to the State of North Carolina or other taxing jurisdictions.

All users of facilities are solely responsible for collecting and remitting any and all applicable sales and use taxes to the North Carolina Department of Revenue and that the Town of Wake Forest assumes no obligation or responsibility for said taxes.

Authorized Official Name: _____

Authorized Official Signature: _____

Date: _____

Subscribed and sworn before me this_____day of_____,_____.

Notary Public: _____

My Commission Expires: _____

TOWN OF WAKE FOREST,NC
CERTIFICATE FOR NORTH CAROLINA SALES TAX

Project or Contract Number:______________________________ **Date:**______________________

Contractor:____ **Period Covered:**_______________

Invoice	Invoice Number	Name of Vendor	Item Cost	State Tax	County Tax	Extra Tax	Total Invoice	County Paid
							-	
							-	
							-	
							-	
							-	
							-	
							-	
							-	
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							-	
		TOTALS	-	-	-	-	-	

I certify that the above listed vendors were paid sales tax upon purchase of building material during the period covered by the construction estimate, and the property upon which such taxes were paid with will be used in the performance of this contract. No tax on purchases of tangible personal property purchased by such contractors for use in performing the contract which does not annex to, affix to, or in some manner become a part of the project, building, structure or repairs is included in the above list.

Signed:______________________________ Subscribed and sworn before me this__________________________day of

____________, ____________.
(date) (year)

Dated:______________________________

NCDOR
Web-Fill
7-18

E-589CI
Affidavit of Capital Improvement

Form E-589CI, Affidavit of Capital Improvement, may be used to substantiate that a contract, or a portion of work to be performed to fulfill a contract, is to be taxed for sales and use tax purposes, as a real property contract for a capital improvement to real property.

The receipt of an affidavit of capital improvement for services to real property, absent fraud or other egregious activities, establishes that the subcontractor or other person receiving the affidavit should treat the transaction as a real property contract for sales and use tax purposes.

A real property contract is a contract between a real property contractor and another person to perform a capital improvement to real property.

Section I. Single Use *(Complete this section to issue the affidavit for a single capital improvement.)*

A

Owner, Lessee//Tenant, or RealProperty Contractor

TOWN OF WAKE FOREST

Address

301 S. BROOKS STREET

City **State** **Zip Code**

WAKE FOREST NC 27587

B

Real Property Contractor *(General Contractoror Subcontractor)* *Hired to perform capital improvement*

Address

City **State** **Zip Code**

Describe capital improvement to be performed:

Project Name

Project Address (where the work is tobe performed) **City** **State** **Zip Code**

I certify that, to the best of my knowledge, this affidavit is accurate and complete, and that the transaction described to be performed by the Real Property Contractor (General Contractor or Subcontractor identified in box "B") shall be treated as a real property contract for a capital improvement to real property for sales and use tax purposes. I understand that if it is determined that I issued this affidavit in error and the transaction is subject to sales tax as a retail sale of repair, maintenance, and installation services to real property, I will be liable for payment of any additional taxes determined to be due.

Signature of Authorized Person:_____Title:_____Date: _____

Section II. Blanket Use *(Complete this section to execute a blanket affidavit for capital improvements.)*

C	D
Real Property Contractor	**Real Property Contractor or Subcontractor** *Hired to perform capital improvement*
Address	**Address**
City **State** **Zip Code**	**City** **State** **Zip Code**

To be completed by the Real Property Contractor identified in Box C.

I certify that I am a Real Property Contractor who performs capital improvements to real property and all transactions with the real property contractor (subcontractor) identified in box "D" shall be treated as real property contracts for capital improvements to real property for sales and use tax purposes. I understand that if it is determined that I issued this affidavit in error and the transaction is subject to sales tax as a retail sale of repair, maintenance, and installation services to real property, I will be liable for payment of any additional taxes determined to be due.

Signature of Authorized Person:_____Title:_____Date: _____

Affidavit of Capital Improvement Instructions

Form E-589CI, Affidavit of Capital Improvement, may be issued to substantiate that a contract, or a portion of work performed to fulfill a contract, is a capital improvement to real property and subject to sales and use tax as a real property contract. Generally, services to real property are retail sales of or the gross receipts derived from repair, maintenance, and installation services, unless a person substantiates that a transaction is subject to tax as a real property contract, subject to tax as a mixed transaction contract, or the transaction is not subject to sales and use tax. A "real property contract" is a contract between a real property contractor and another person to perform a capital improvement to real property.

A mixed transaction contract is a contract that includes both a real property contract for a capital improvement and repair, maintenance, and installation services for real property that are not related to the capital improvement. For a mixed transaction contract, if the allocated sales price of the taxable repair, maintenance, and installation services included in the contract is less than or equal to twenty-five percent (25%) of the contract price, then the repair, maintenance, and installation services portion of the contract, and the tangible personal property, digital property, or service used to perform those services, are taxable as a real property contract for sales and use tax purposes.

- A person that issues Form E-589CI is liable for any additional tax due on the transaction in excess of tax paid on purchases pursuant to N.C. Gen. Stat. § 105- 164.4H(a), if it is determined that the transaction is not a capital improvement, but rather the transaction is subject to tax as a retail sale.
- A person who receives Form E-589CI from another person, absent fraud or other egregious activities, is not liable for any additional tax on the gross receipts from the transaction if it is determined that the transaction is not a capital improvement.
- Form E-589CI **is not an affidavit of tax paid** on tangible personal property, or digital property purchased or used to fulfill a real property contract.
- Form E-589CI may not to be used to purchase tangible personal property, or digital property exempt from sales and use tax.

Exceptions from the Issuance of Form E-589CI to Establish a Transaction is to be Taxed as a Real Property Contract

In lieu of issuing an affidavit of capital improvement, a person may substantiate by other records that a transaction is a real property contract or a mixed transaction contract subject to tax as a real property contract, as discussed above, for a capital improvement to real property. However, where subcontractors are involved, it may be in the best interest of all parties to use Form E-589CI to ensure proper application of the sales and use tax laws.

Section I. Single Use Instructions

A person may complete "Section I - Single Use" for a one time use to substantiate that a transaction is a real property contract for a single capital improvement to real property and subject to sales and use tax as a real property contract. When a real property contractor hires a subcontractor to perform a portion of the overall real property contract and there is not a recurring business relationship between the two parties (when a period of no more than twelve months elapse between transactions between two parties), "Section I – Single Use" may be completed and the form issued to the subcontractor as notice that the transaction is subject to sales and use tax as a real property contract.

The following scenarios are for reference to assist a person to complete and issue Form E-589CI. The scenarios presented are not intended to cover all possible uses of the form.

A property owner oversees the entire activity to real property that is a real property contract for a capital improvement to real property. The property owner hires various subcontractors to complete the real property contract or portions thereof:

- **Box A - Owner, Lessee/Tenant or Real Property Contractor**: Enter property owner's name and address.
- **Box B - Real Property Contractor** (General Contractor or Subcontractor): Enter a single subcontractor's name and address.
- Owner listed in Box A must describe the real property contract activity to be performed.
- Owner listed in Box A must enter the project address (if different than the address entered in Box A).
- Authorized Person (owner) signs, enters title (owner), enters the date, and issues to the person listed in Box B.

A property owner hires a general contractor to oversee the entire activity to real property that is a real property contract for a capital improvement to real property. The general contractor hires a subcontractor to perform the real property contract, or portion thereof:

- Box A - Owner, Lessee/Tenant or Real Property Contractor: Enter general contractor's name and address.
- Box B - Real Property Contractor (General Contractor or Subcontractor): Enter subcontractor's name and address.
- General contractor listed in Box A must describe the real property contract activity to be performed.
- General contractor listed in Box A must enter the project address.
- Authorized Person (general contractor) signs, enters title (general contractor), enters the date, and issues to the person listed in Box B.

A lessee/tenant hires a general contractor for the installation of equipment that is to be attached to real property and will be depreciated under the Internal Revenue Code:

- **Box A - Owner, Lessee/Tenant or Real Property Contractor**: Enter lessee/tenant's name and address.
- **Box B - Real Property Contractor** (*General Contractor or Subcontractor*): Enter general contractor's name and address.
- Lessee or tenant listed in Box A must describe the capital improvement to be performed and indicate the equipment will be depreciated under the Internal Revenue Code.
- Authorized Person (typically lessee or tenant) signs, enters title (lessee or tenant), enters the date, and issues to the person listed in Box B.

Section II. Blanket Use Instructions

A real property contractor may complete "Section II – Blanket Use" and issue the form to another real property contractor (subcontractor) who is used **exclusively** to perform part, or all, of real property contracts with respect to capital improvements to real properties, where the parties have a recurring business relationship (when a period of no more than twelve months elapse between transactions between two parties). A blanket use affidavit continues in force so long as the real property contractor named in "Box C" and the real property contractor (subcontractor) named in "Box D" maintain a recurring business relationship or until the affidavit is withdrawn or otherwise notified by the issuer of the form.

The blanket use will generally apply for the following: (1) a builder who hires the same contractor(s) only for new construction; (2) a real property contractor who hires the same subcontractor(s) only for reconstruction; (3) a real property contractor who hires the same subcontractor(s) for remodeling or renovation and the activities performed by the subcontractor(s) for the other party are never repair, maintenance, and installation services for real property based on the contract or agreement between the parties; and (4) a real property contractor who exclusively hires the same subcontractor(s) to perform part, or all, of its real property contracts for capital improvements to real properties.

A general contractor or subcontractor hires a subcontractor that will replace the complete electrical wiring in all renovated homes:

- **Box C - Real Property Contractor**: Enter the hiring real property contractor's name and address.
- **Box D - Real Property Contractor** (*General Contractor or Subcontractor*): Enter the hired subcontractor's name and address.
- Authorized person listed in Box C signs, enters title, enters the date, and issues to the person listed in Box D.

TOWN OF WAKE FOREST
2024 STREET RESURFACING PROJECT
SCHEDULE OF PRICES

ITEM NO.	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT BID PRICE	BID AMOUNT
	RESURFACING				
1	ASPHALT CONCRETE SURFACE MIX S9.5B	0	TON		$ -
2	ASPHALT CONCRETE SURFACE MIX S9.5C	23,354	TON		$ -
3	ASPHALT BINDER	1,404	TON		$ -
	RESURFACING SECTION SUBTOTAL				**$ -**
	UTILITY ADJUSTMENTS				
4	MANHOLE ADJUSTMENT (RAISE ONLY)		EA		$ -
5	WATER VALVE BOX ADJUSTMENT (RAISE ONLY)		EA		$ -
6	MANHOLE ADJUSTMENT (LOWER/RAISE)	320	EA		$ -
7	WATER VALVE BOX ADJUSTMENT (LOWER/RAISE)	316	EA		$ -
8	MILLING / CHIPPING AROUND UTILITY NOT ADJUSTED		EA		$ -
9	MANHOLE ADJUSTMENT - OVERSIZE (LOWER/RAISE)		EA		$ -
10	PROVIDE AND INSTALL MANHOLE RISER		EA		$ -
11	PROVIDE AND INSTALL WATER VALVE RISER		EA		$ -
12	PROVIDE NEW 7.5" MANHOLE FRAME & COVER		EA		$ -
13	PROVIDE NEW 4" MANHOLE FRAME & COVER		EA		$ -
	UTILITY ADJUSTMENTS SECTION SUBTOTAL				**$ -**
	SIDEWALK IMPROVEMENTS				
14	SIDEWALK REMOVAL		SY		$ -
15	4" SIDEWALK REPLACEMENT	1,370.3	SY		$ -
16	6" SIDEWALK REPLACEMENT	12	SY		$ -
17	6" CONCRETE DRIVEWAY	699	SY		$ -
18	SAWCUT & REMOVAL OF CONCRETE CURB		LF		$ -
19	SAWCUT & REMOVAL OF GRANITE CURB		LF		$ -
20	CURB & GUTTER REMOVAL / REPLACEMENT	8,320	LF		$ -
21	INSTALL NEW CURB & GUTTER	140	LF		$ -
22	CONCRETE SIDEWALK ACCESS RAMPS WITH DETECTABLE WARNING SURFACE	146	EA		$ -
23	CONCRETE SIDEQALK ACCESS RAMP REMOVAL	32	EA		$ -
24	5" CONCRETE MONOLITHIC ISLAND	94.3	SY		$ -
	SIDEWALK IMPROVEMENTS SECTION SUBTOTAL				**$ -**
	MILLING				
25	MILLING (0-2") EDGE	0	SY		$ -
26	MILLING (0-2") FULL WIDTH	95,376	SY		$ -
27	MILLING (0-3") MILL & FILL	91,602	SY		$ -
28	INCIDENTAL MILLING	12,175	SY		$ -
	MILLING SECTION SUBTOTAL				**$ -**
	PAVEMENT PATCHING				

29	PAVEMENT PATCHING	225.5	TN		$ -
	PAVEMENT PATCHING SECTION SUBTOTAL				**$ -**
	PAVEMENT MARKINGS				
30	THERMOPLASTIC PAVEMENT MARKINGS - 4", 90 MILS	21,018.9	LF		$ -
31	THERMOPLASTIC PAVEMENT MARKINGS - 8", 90 MILS	366	LF		$ -
32	THERMOPLASTIC PAVEMENT MARKINGS - 24", 90 MILS	3,177.3	LF		$ -
33	THERMOPLASTIC SYMBOLS - 90 MILS	103	EA		$ -
34	THERMOPLASTIC CHARACTERS - 90 MILS	32	EA		$ -
35	SPEED HUMP SYMBOL - 90 MILS		EA		$ -
36	BIKE LANE ARROW - 90 MILS		EA		$ -
37	BIKE SYMBOL - 90 MILS		EA		$ -
38	BIKE SHARROW - 90 MILS		EA		$ -
39	GREEN PAINT, 24"		LF		$ -
40	SHARK TEETH SYMBOL, 24"		EA		$ -
41	TEMPORARY PAINT, 4"		LF		$ -
42	TEMPORARY PAINT, 8"		LF		$ -
43	TEMPORARY PAINT, 24"		LF		$ -
44	TEMPORARY PAINT SYMBOLS		EA		$ -
45	TEMPORARY PAINT CHARACTERS		EA		$ -
46	THERMOPLASTIC ERADICATION, LINES (4-24")		LF		$ -
47	THERMOPLASTIC ERADICATION, SYMBOLS		EA		$ -
48	THERMOPLASTIC ERADICATION, CHARACTERS		EA		$ -
49	FLEXIBLE DELINEATORS		EA		$ -
	PAVEMENT MARKINGS SECTION SUBTOTAL				**$ -**
	SIGNALS & INTELLIGENT TRANSPORTATION SYSTEMS				
50	INDUCTIVE LOOP SAWCUT	2,335	LF		$ -
51	BIKE COUNT LOOP SAWCUT		LF		$ -
52	DETECTOR CARD (2070)		EA		$ -
53	JUNCTION BOX, STANDARD		EA		$ -
	SIGNALS & INTELLIGENT TRANS SYSTEMS SECTION SUBTOTAL				**$ -**
	SPEED HUMPS				
54	REMOVE SPEED HUMP	4	EA		$ -
55	INSTALL SPEED HUMP		EA		$ -
	SPEED HUMPS SECTION SUBTOTAL				**$ -**
	TRAFFIC CONTROL				
56	TEMPORARY TRAFFIC CONTROL		LS		$ -
57	LAW ENFORCEMENT		HR		$ -
58	PORTABLE LIGHTING, IF USED		LS		$ -
59	SHALLOW UNDERCUT		CY		$ -
60	FABRIC FOR SOIL STABILIZATION		SY		$ -
61	GEOGRID FOR SOIL STABILIZATION		SY		$ -
62	CLASS IV STONE FOR SOIL STABILIZATION		TN		$ -
	TRAFFIC CONTROL SECTION SUBTOTAL				**$ -**

TOWN OF WAKE FOREST
RESURFACING CONTRACT
GENERAL INFORMATION SHEET

BID # 0004-2024

STREET	FROM	TO	MAP NO.	LENGTH (ft)	LENGTH (mi)	AREA (SY)	MILLING TYPE	MILLING TREATMENT	OVERLAY DEPTH	TRAFFIC MARKS	SIGNAL LOOPS	ASPHALT IN/ABOVE GUTTER
7TH ST	BEST ST	CONSTRUCTION JOINT	1	955	0.279	2405	Full width	Mill 1.25" and replace with 1.5"	1.5 inch	no	no	no
ALDONCASTER DR	WAKE UNION CHURCH RD	PENFOLD LN	2	590	0.112	1312	Full width	Mill 1.5" and replace with 1.5"	1.5 inch	yes	no	no
ALPINE CLOVER DR	CDS	CDS	3	1210	0.23	3960	Full width	Mill 2.0" and replace with 2.0"	2.0 inch	yes	no	no
AMARYLLIS WAY	CALADIUM DR	KULLANA LN	4	1400	0.265	1334	Full width	Mill 1.5" and replace with 1.5"	1.5 inch	no	no	no
AMERSHAM LN	HARRIS RD	MELKSHAM RD	5	807	0.15	2090	Full width	Mill 2.5" and replace with 3.0"	3.0 inch	no	no	no
BARRETT HALL LN	KEMBLE RIDGE DR	LONESOME SPUR CIR	6	719	0.14	2090	Full width	Mill 2.25" and replace with 2.50"	2.50 inch	yes	no	no
BEST ST	N ALLEN RD	7TH ST	7	415	0.08	890	Full width	Mill 1.5” and replace with 2.0"	2.0 inch	no	no	no

BORAGE DR	NAXOS DR	CDS	8	850	0.161	2161	Full width	Mill 2.0" and replace with 2.0"	2.0 inch	no	no	no
BREWER CIR	CARROLL ST	DEAD END	9	1175	0.223	2350	Full width	Mill 1.75" and replace with 2.0"	2.0 inch	no	no	no
BREWERS GLYNN CT	CDS	CDS	10	550	0.104	1495	Full width	Mill 2.25" and replace with 2.25"	2.25 inch	no	no	no
CALADIUM DR	ROSE PETAL RUN	AMARYLLIS WAY	11	600	0.114	1334	Full width	Mill 2.0" and replace 2.0"	2.0 inch	no	no	no
CARROLL ST	BREWER CIR	DEAD END	12	1330	.252	2956	Full width	Mill 2.5" and replace with 3.0"	3.0 inch	no	no	no
CHALK RD	JONES DAIRY RD	GRACIW GIRL WAY	13	1075	0.204	5500.0	Full width	Mill 1.5" and replace with 1.5"	1.5 inch	yes	yes	no
CLATTER AVE	JONES WYND	INTERSECTION	14	440	0.08	1060	Full width	Mill 1.5" and replace with 1.5"	1.5 inch	no	no	no
COMPHERY CT	BORAGE DR	CDS	15	60	0.011	406.0	Full width	Mill 2.0" and replace with 2.0"	2.0 inch	no	no	no
CRENSHAW POINT	JONES WYND 2ND INTERSECTION	TO CONSTRUCTION JOINT	16	623.0	0.117	1460	Full width	Mill 1.5" and replace with 2.0"	2.0 inch	no	no	no
DUNN CREEK CROSSING	MOULTONBORO AVE	TO ASPHALT JOINT	17	522.0	0.10	1950.0	Full width	Mill 2.0" and replace with 2.0"	2.0 inch	no	no	no

E CEDAR AVE	N MAIN ST	BREWER AVE	18	920	0.174	1840	Full width	Mill 1.5" and replace with 1.5"	1.5 inch	no	no	no
E HOLDING AVE	S ALLEN RD	CDS	19	240	0.045	806.0	Full width	Mill 1.75" and replace with 2.0"	2.0 inch	no	no	no
E NELSON AVE	7TH ST	N ALLEN RD	20	233	0.044	1220	Full width	Mill 1.25" and replace with 1.75"	1.75 inch	no	no	no
E OAK AVE	MILL ST	N MAIN ST	21	1058	0.164	2000	Full width	Mill 1.0" and replace with 1.5"	1.5 inch	no	no	no
E SPRING ST	N FRANKLIN ST	N WHITE ST	22	1250	0.237	2778	Full width	Mill 2.25" and replace with 2.5"	2.5 inch	no	no	no
EDGFORD PARK LN	N. MAIN ST	CALADIUM DR	23	330	0.063	734	Full width	Mill 2.5" and replace with 2.5"	2.5 inch	no	no	no
FALCONHURST DR	LIGON MILL RD	CDS	24	2000	0.379	6861	Full width	Mill 2.75" and replace with 3.0"	3.0 inch	yes	no	no
FEDERAL HOUSE AVE	FLEMMING HOUSE ST	CDS	25	140	0.027	567.6	Full width	Mill 1.5" and replace with 1.5"	1.5 inch	no	no	no
FINCHURCH CIR	MELKSHAM RD	CDS	26	210	0.040	738.7	Full width	Mill 2.0" and replace with 2.0"	2.0 inch	yes	no	no
FLEMMING HOUSE ST	DURHAM RD	CLATTER AVE	27	2200	0.417	4889	Full width	Mill 1.5" and replace with 1.5"	1.5 inch	yes	no	no

FLICKER CT	WALLRIDGE DR	CDS	28	541	0.102	1473.2	Full width	Mill 2.0" and replace with 2.0"	2.0 inch	no	no	no
FOREST LYNKS DR	SOVEREIGN WAY	LIGON MILL RD	29	430	0.081	955.6	Full width	Mill 2.0" and replace with 2.0"	2.0 inch	no	no	no
HAMPTON WAY	WAKE UNION CHURCH RD	NC 98	30	1,340.00	0.25	2889	Full width	Mill 1.5" and replace with 2.0"	1.5 inch	yes	yes	no
HERITAGE BRANCH RD	ROGERS RD	CONSTRUCTION JOINT AT BOULDER POINTE DR	31	934.9	.178	4000	Full width	Mill 1.75" and replace with 2.0”	2.0 inch	yes	yes	no
HERITAGE VIEW TRAIL	ROGERS RD	HERITAGE SPRING CIR	32	1173	0.222	4000	Full width	Mill 1.50" and replace with 1.50”	1.50 inch	yes	no	no
HOBBLEBUSH WAY	ROGERS RD	ALPINE CLOVER DR	33	650	0.123	1444.4	Full width	Mill 1.5" and replace with 1.5"	1.5 inch	yes	no	no
HYSOP LN	WALLRIDGE DR	CDS	34	150	0.28	606	Full width	Mill 2.5" and replace with 2.5"	2.5 inch	no	no	no
JONES WYND	DURHAM RD	CDS	35	3010	0.57	10870	Full width	Mill 1.75" and replace with 2.0"	2.0 inch	yes	no	no
KEMBLE RIDGE DR	FALCONHURST DR	COACH LANTERN RD	36	2245	.425	7400	Full width	Mill 2.0" and replace with 2.0"	2.0 inch	no	no	no
KULLANA	AMARYLLIS WAY	CONSTRUCTION JOINT	37	173	.033	590	Full width	Mill 1.5" and replace with 1.5"	1.5 inch	no	no	no

LEDGEROCK RD	S ALLEN RD	CDS	38	1026	0.194	2689.0	Full width	Mill 2.5" and replace with 2.5"	2.5 in	no	no	no
LEDYARD CT	LEDGEROCK RD	CDS	39	129	0.02	549.0	Full width	Mill 2" and replace with 2"	2.0 in	no	no	no
LITTLE TURTLE WAY	ALPINE CLOVER DR	HERITAGE VIEW TRAIL	40	510	0.097	1134.0	Full width	Mill 1.5" and replace with 2.0"	2.0 inch	yes	no	no
LOTUS LN	ROSE PETAL RUN	CDS	41	150	0.028	606.0	Full width	Mill 2.5" and replace with 2.5"	2.5 inch	yes	no	no
MARJORAM CT	BORAGE DR	CDS	42	240	0.045	767	Full width	Mill 2.0" and replace with 2.0"	2.0 inch	yes	no	no
MCDOWELL DR	STADIUM DR	DEAD END	43	1100	0.208	4157	Full width	Mill 2.75" and replace with 3.0"	3.0 inch	yes	no	no
MELKSHAM RD	FINCHURCH CIR	CDS	44	758	0.144	2500	Full width	Mill 2.25" and replace with 2.25"	2.25 inch	no	no	no
MILL ST	E CEDAR AVE	DEAD END	45	1505	0.29	3900	Full width	Mill 1.25" and replace with 2.0"	2.0 inch	no	no	no
MITHRASDOWNE CT	PENFOLD LN	CDS	46	205	0.04	750	Full width	Mill 1.5" and replace with 2.0"	2.0 inch	no	no	no
MONTVILLE CT	S ALLEN RD	CDS	47	140	0.027	637.6	Full width	Mill 2.0" and replace with 2.0"	2.0 inch	no	no	no

MOULTONBORO AVE	N WHITE ST	CDS	48	2175	0.41	7422.68	Full width	Mill 2.0" and replace with 2.0"	2.0 inch	yes	no	no
N FRANKLIN ST	E SPRING ST	E PINE AVE	49	225	0.043	500.0	Full width	Mill 1.25" and replace with 1.5"	1.5 inch	yes	no	no
N WHITE ST	FLAHERTY AVE	700 FT PAST MOULTONBOROUGH	50	6700	1.27	12000	Full width	Mill 1.5" and replace with 2.0"	2.0 inch	yes	no	no
NORTHPARK DR	NC 98	DEAD END	51	850	0.161	2834	Full width	Mill 1.5" and replace with 2.0"	2.0 inch	yes	yes	no
PANTONBURY PL	PENFOLD LN	CDS	52	293.00	0.06	1,089.00	Full width	Mill 1.5" and replace with 2.0"	2.0 inch	no	no	no
PENFOLD LN	ALDONCASTER DR	ENTIRE PENFOLD LOOP TO CONSTRUCTION JOINT	53	4846	0.92	10245	Full width	Mill 2.5" and replace with 3.0"	2.0 inch	yes	no	no
QUERCUS CT	PENDFOLD LN	CDS	54	315	0.06	1050	Full width	Mill 1.5" and replace with 2.0"	2.0 inch	no	no	no
RETAIL DR	NC 98	DURHAM RD	55	4800	0.909	12800	Full width	Mill 2.0" and replace with 2.0"	2.0 inch	yes	yes	no
ROCK SPRING RD	STADIUM DR	W JUNIPER AVE	56	1500	0.29	3695	Full width	Mill 2.5" and replace with 2.5"	2.5 inch	yes	yes	no
ROSE PETAL RUN	LOSTUS LN	CALADIUM DR	57	1500	0.29	3334	Full width	Mill 2.0" and replace with 2.25"	2.25 inch	no	no	no

S ALLEN RD	E HOLDING AVE	LEDGEROCK RD	58	1071	0.2	3234	Full width	Mill 1.5" and replace with 1.5"	1.5 inch	no	no	no
SARRATT RIDGE CT	WALLRIDGE DR	CDS	59	225	0.043	773	Full width	Mill 1.5" and replace with 2.0"	2.0 inch	no	no	no
SHAPINSAY AVE	MELKSHAM RD	HARRIS RD	60	500	0.095	1112	Full width	Mill 1.5" and replace with 1.5"	1.5 inch	no	no	no
SHASTA DAISY DR	FAWN LILY DR	CDS	61	3300	0.625	7605	Full width	Mill 1.5" and replace with 1.5"	1.5 inch	yes	no	no
SHEPSTONE PL	PENFOLD LN	CDS	62	330	0.063	1006	Full width	Mill 1.5" and replace with 2.25"	2.25 inch	no	no	no
SINEWELL DR	WALLRIDGE DR	WALL RD	63	550	0.104	1223	Full width	Mill 2.25" and replace with 2.25"	2.25 inch	no	no	no
SOVEREIGN WAY	CDS	CDS	64	670	0.127	1761	Full width	Mill 1.5" and replace with 1.5"	1.5 inch	yes	no	no
TENBURY WOODS	SINEWELL DR	CDS	65	230	0.044	783.2	Full width	Mill 2.0" and replace with 2.25"	2.25 inch	no	no	no
TRAMMEL CT	FLEMMING HOUSE ST	CDS	66	185	0.035	773	Full width	Mill 1.5" and replace with 1.5"	1.5 inch	yes	no	no
TULIP GROVE LN	ROSE PETAL RUN	AMARYLLIS WAY	67	350	0.066	778.0	Full width	Mill 1.5" and replace with 1.5"	1.5 inch	no	no	no

WALLRIDGE DR	WALL RD	CONSTRUCTION JOINT 833 WALLRIDGE DR	68	1675	0.32	5624	Full width	Mill 1.5" and replace with 2.0"	2.0 inch	yes	no	no
WINTER BLOOM CT	ROSE PETAL RUN	CDS	69	260	0.049	850.0	Full width	Mill 2.25" and replace with 2.25"	2.25 inch	no	no	no

Notes:
1. For Edge Mill streets, depth indicated is final depth of milling and asphalt at edge of pavement.
2. For Full Mill streets, depth indicates specific depth below curb at edge of pavement. For example, if an existing full mill street has existing asphalt 1.5" above the curb & gutter or paved into the gutter, existing asphalt shall be "full milled" a total depth of 1.5" plus depth indicated for the street to achieve the desired final pavement elevation.
3. For mill & fill streets, the pavement shall be milled to stone and paved back in a period to satisfy ICT No.1-No.4.
4. All AC Adjustments shall be based upon NCDOT FOB Base Price Index of $591.63 effective September 2024.
5. Taper paving to be flush with the gutter.
6. Field adjustments to the milling treatment and overlay may be required, depending on the performance of the existing pavement structure during construction.

BID # 0004-2024

2024 Resurfacing Street Estimate Totals Sheet									
Line Item	Description	Unit	7th St	Aldoncaster Dr	Alpine Clover Dr	Amaryllis Way	Amersham Ln	Barrett Hall Ln	Best St
1	Asphalt Concrete Surface Course, Type S9.5B	TN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	Asphalt Concrete Surface Course, Type S9.5C	TN	213.0	116.0	466.0	288.0	369.0	308.0	105.0
3	Asphalt Binder for Plant Mix, Type PG64-22	TN	13.0	7.0	28.0	17.0	9.0	19.0	7.0
4	Manhole Adjustment (Raise Only)	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	Water Valve Box Adjustment (Raise Only)	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	Manhole Adjustment (Lower/Raise)	EA	7.0	0.0	8.0	5.0	4.0	4.0	2.0
7	Water Valve Box Adjustment (Lower/Raise)	EA	6.0	1.0	8.0	6.0	3.0	5.0	2.0
8	Milling/Chipping - Manhole/Valve Box	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	Manhole Adjustment - Oversize - (Lower/Raise)	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	Provide and Install Manhole Riser	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	Provide and Install Water Valve Box Riser	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	Provide New 7.5" Manhole Frame and Cover	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	Provide New 4.0" Manhole Frame and Cover	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	Sidewalk Removal	SY	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	4" Sidewalk	SY	16.0	0.0	20.0	20.0	33.0	25.0	0.0
16	6" Sidewalk	SY	0.0	0.0	0.0	0.0	0.0	0.0	12.0
17	6" Concrete Driveway	SY	150.0	0.0	0.0	0.0	65.0	9.0	0.0
18	Sawcut and Removal of Concrete Curb	LF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	Sawcut and Removal of Granite Curb	LF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	Curb & Gutter Removal and Replacement	LF	1250.0	0.0	10.0	85.0	300.0	225.0	375.0
21	Install New Curb & Gutter	LF	0.0	0.0	0.0	0.0	0.0	0.0	40.0
22	Concrete Sidewalk Access Ramp w/Warning Surface	EA	2.0	0.0	2.0	2.0	4.0	4.0	0.0
23	Concrete Sidewalk Access Ramp Removal	EA	0.0	1.0	0.0	0.0	3.0	3.0	0.0
24	Concrete Monolithic Island	SY	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	Milling Asphalt Pavement, Edge Milling (0-2")	SY	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	Milling Asphalt Pavement, Full Mill (0-2")	SY	0.0	1312.0	3960.0	1334.0	0.0	0.0	0.0
27	Milling Asphalt Pavement, Mill & Fill (0-3")	SY	2405.0	0.0	0.0	0.0	2090.0	2090.0	890.0
28	Incidental Milling	SY	120.3	75.0	198.0	133.4	209.0	104.5	44.5
29	Pavement Patching	TN	0	2	9	6	0	0	0
30	Thermoplastic Lines, 4" 90mils	LF	0.0	610.5	0.0	0.0	0.0	0.0	0.0
31	Thermoplastic Lines, 8" 90mils	LF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
32	Thermoplastic Lines, 24" 90mils	LF	0.0	0.0	0.0	0.0	0.0	50.0	14.0
33	Thermoplastic Symbols, 90mils	EA	0.0	3.0	0.0	0.0	0.0	0.0	0.0
34	Thermoplastic Characters, 90mils	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
35	Speed Hump Symbols, 90mils	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
36	Bike Lane Arrow, 90mils	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
37	Bike Lane Symbol, 90mils	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
38	Bike Sharrow, 90mils	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
39	Green Thermoplastic, 24" 90mils	LF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40	Shark Teeth Symbols, 90mils	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
41	Temporary Paint, 4"	LF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
42	Temporary Paint, 8"	LF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
43	Temporary Paint, 24"	LF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
44	Temporary Paint Symbols	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
45	Temporary Paint Characters	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
46	Thermoplastic Eradication, Lines (4-24")	LF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
47	Thermoplastic Eradication, Symbols	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
48	Thermoplastic Eradication, Characters	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
49	Flexible Delinators	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50	Inductive Loop Sawcut	LF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
51	Bike Count Loop Sawcut	LF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
52	Detector Card (Type 2070)	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
53	Junction Box, Std.	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
54	Remove Speed Hump	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
55	Install Speed Hump	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
56	Temporary Traffic Control	LS	0.0	0.0	0.0	0.0	0.0	0.0	0.0
57	Law Enforcement	HR	0.0	0.0	0.0	0.0	0.0	0.0	0.0
58	Portable Lighting	LS	0.0	0.0	0.0	0.0	0.0	0.0	0.0
59	Shallow Undercut	CY	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60	Fabric For Soil Stabilization	SY	0.0	0.0	0.0	0.0	0.0	0.0	0.0
61	GeoGrid for Soil Stabilization	SY	0.0	0.0	0.0	0.0	0.0	0.0	0.0
62	Class IV Stone for Soil Stabilization	TN	0.0	0.0	0.0	0.0	0.0	0.0	0.0

SET-1

BID # 0004-2024

2024 Resurfacing Street Estimate Totals Sheet									
Line Item	Description	Unit	Borage Dr	Brewer Cir	Brewers Glynn Ct	Caladium Dr	Carroll St	Chalk Rd	Clatter Ave
1	Asphalt Concrete Surface Course, Type S9.5B	TN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	Asphalt Concrete Surface Course, Type S9.5C	TN	255.0	277.0	198.0	157.0	522.0	486.0	94.0
3	Asphalt Binder for Plant Mix, Type PG64-22	TN	16.0	17.0	12.0	10.0	31.0	29.0	6.0
4	Manhole Adjustment (Raise Only)	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	Water Valve Box Adjustment (Raise Only)	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	Manhole Adjustment (Lower/Raise)	EA	5.0	1.0	3.0	4.0	6.0	1.0	2.0
7	Water Valve Box Adjustment (Lower/Raise)	EA	7.0	4.0	1.0	6.0	11.0	1.0	5.0
8	Milling/Chipping - Manhole/Valve Box	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	Manhole Adjustment - Oversize - (Lower/Raise)	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	Provide and Install Manhole Riser	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	Provide and Install Water Valve Box Riser	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	Provide New 7.5" Manhole Frame and Cover	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	Provide New 4.0" Manhole Frame and Cover	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	Sidewalk Removal	SY	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	4" Sidewalk	SY	8.5	0.0	16.0	45.0	0.0	0.0	0.0
16	6" Sidewalk	SY	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	6" Concrete Driveway	SY	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	Sawcut and Removal of Concrete Curb	LF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	Sawcut and Removal of Granite Curb	LF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	Curb & Gutter Removal and Replacement	LF	100.0	0.0	300.0	35.0	0.0	0.0	0.0
21	Install New Curb & Gutter	LF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	Concrete Sidewalk Access Ramp w/Warning Surface	EA	1.0	0.0	2.0	5.0	0.0	0.0	0.0
23	Concrete Sidewalk Access Ramp Removal	EA	0.0	0.0	0.0	1.0	0.0	0.0	0.0
24	Concrete Monolithic Island	SY	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	Milling Asphalt Pavement, Edge Milling (0-2")	SY	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	Milling Asphalt Pavement, Full Mill (0-2")	SY	0.0	0.0	0.0	0.0	0.0	5500.0	1060.0
27	Milling Asphalt Pavement, Mill & Fill (0-3")	SY	2161.0	2350.0	1495.0	1334.0	2956.0	0.0	0.0
28	Incidental Milling	SY	216.1	117.5	74.8	133.4	147.8	275.0	53.0
29	Pavement Patching	TN	0	0	0	0	0	10	2
30	Thermoplastic Lines, 4" 90mils	LF	0.0	0.0	0.0	0.0	0.0	2370.0	0.0
31	Thermoplastic Lines, 8" 90mils	LF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
32	Thermoplastic Lines, 24" 90mils	LF	0.0	0.0	0.0	0.0	0.0	56.0	0.0
33	Thermoplastic Symbols, 90mils	EA	0.0	0.0	0.0	0.0	0.0	11.0	0.0
34	Thermoplastic Characters, 90mils	EA	0.0	0.0	0.0	0.0	0.0	6.0	0.0
35	Speed Hump Symbols, 90mils	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
36	Bike Lane Arrow, 90mils	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
37	Bike Lane Symbol, 90mils	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
38	Bike Sharrow, 90mils	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
39	Green Thermoplastic, 24" 90mils	LF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40	Shark Teeth Symbols, 90mils	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
41	Temporary Paint, 4"	LF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
42	Temporary Paint, 8"	LF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
43	Temporary Paint, 24"	LF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
44	Temporary Paint Symbols	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
45	Temporary Paint Characters	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
46	Thermoplastic Eradication, Lines (4-24")	LF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
47	Thermoplastic Eradication, Symbols	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
48	Thermoplastic Eradication, Characters	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
49	Flexible Delinators	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50	Inductive Loop Sawcut	LF	0.0	0.0	0.0	0.0	0.0	520.0	0.0
51	Bike Count Loop Sawcut	LF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
52	Detector Card (Type 2070)	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
53	Junction Box, Std.	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
54	Remove Speed Hump	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
55	Install Speed Hump	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
56	Temporary Traffic Control	LS	0.0	0.0	0.0	0.0	0.0	0.0	0.0
57	Law Enforcement	HR	0.0	0.0	0.0	0.0	0.0	0.0	0.0
58	Portable Lighting	LS	0.0	0.0	0.0	0.0	0.0	0.0	0.0
59	Shallow Undercut	CY	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60	Fabric For Soil Stabilization	SY	0.0	0.0	0.0	0.0	0.0	0.0	0.0
61	GeoGrid for Soil Stabilization	SY	0.0	0.0	0.0	0.0	0.0	0.0	0.0
62	Class IV Stone for Soil Stabilization	TN	0.0	0.0	0.0	0.0	0.0	0.0	0.0

SET-2

BID # 0004-2024

2024 Resurfacing Street Estimate Totals Sheet									
Line Item	Description	Unit	Comphery Ct	Crenshaw Point	Dunn Creek Crossing	E Cedar Ave	E Holding Ave	E Nelson Ave	E Oak Ave
1	Asphalt Concrete Surface Course, Type S9.5B	TN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	Asphalt Concrete Surface Course, Type S9.5C	TN	48.0	172.0	230.0	163.0	95.0	126.0	177.0
3	Asphalt Binder for Plant Mix, Type PG64-22	TN	3.0	11.0	14.0	10.0	6.0	8.0	11.0
4	Manhole Adjustment (Raise Only)	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	Water Valve Box Adjustment (Raise Only)	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	Manhole Adjustment (Lower/Raise)	EA	2.0	3.0	3.0	1.0	3.0	2.0	1.0
7	Water Valve Box Adjustment (Lower/Raise)	EA	1.0	5.0	0.0	1.0	3.0	0.0	0.0
8	Milling/Chipping - Manhole/Valve Box	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	Manhole Adjustment - Oversize - (Lower/Raise)	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	Provide and Install Manhole Riser	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	Provide and Install Water Valve Box Riser	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	Provide New 7.5" Manhole Frame and Cover	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	Provide New 4.0" Manhole Frame and Cover	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	Sidewalk Removal	SY	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	4" Sidewalk	SY	0.0	0.0	8.5	0.0	0.0	5.0	0.0
16	6" Sidewalk	SY	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	6" Concrete Driveway	SY	0.0	0.0	20.0	0.0	0.0	25.0	0.0
18	Sawcut and Removal of Concrete Curb	LF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	Sawcut and Removal of Granite Curb	LF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	Curb & Gutter Removal and Replacement	LF	0.0	120.0	30.0	0.0	0.0	360.0	0.0
21	Install New Curb & Gutter	LF	0.0	0.0	0.0	0.0	0.0	100.0	0.0
22	Concrete Sidewalk Access Ramp w/Warning Surface	EA	0.0	0.0	1.0	0.0	0.0	1.0	0.0
23	Concrete Sidewalk Access Ramp Removal	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	Concrete Monolithic Island	SY	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	Milling Asphalt Pavement, Edge Milling (0-2")	SY	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	Milling Asphalt Pavement, Full Mill (0-2")	SY	0.0	1460.0	0.0	1840.0	0.0	0.0	2000.0
27	Milling Asphalt Pavement, Mill & Fill (0-3")	SY	406.0	0.0	1950.0	0.0	806.0	1220.0	0.0
28	Incidental Milling	SY	40.6	73.0	195.0	184.0	40.3	61.0	200.0
29	Pavement Patching	TN	0	3	0	3	0	0	4
30	Thermoplastic Lines, 4" 90mils	LF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	Thermoplastic Lines, 8" 90mils	LF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
32	Thermoplastic Lines, 24" 90mils	LF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
33	Thermoplastic Symbols, 90mils	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
34	Thermoplastic Characters, 90mils	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
35	Speed Hump Symbols, 90mils	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
36	Bike Lane Arrow, 90mils	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
37	Bike Lane Symbol, 90mils	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
38	Bike Sharrow, 90mils	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
39	Green Thermoplastic, 24" 90mils	LF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40	Shark Teeth Symbols, 90mils	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
41	Temporary Paint, 4"	LF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
42	Temporary Paint, 8"	LF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
43	Temporary Paint, 24"	LF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
44	Temporary Paint Symbols	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
45	Temporary Paint Characters	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
46	Thermoplastic Eradication, Lines (4-24")	LF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
47	Thermoplastic Eradication, Symbols	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
48	Thermoplastic Eradication, Characters	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
49	Flexible Delinators	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50	Inductive Loop Sawcut	LF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
51	Bike Count Loop Sawcut	LF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
52	Detector Card (Type 2070)	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
53	Junction Box, Std.	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
54	Remove Speed Hump	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
55	Install Speed Hump	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
56	Temporary Traffic Control	LS	0.0	0.0	0.0	0.0	0.0	0.0	0.0
57	Law Enforcement	HR	0.0	0.0	0.0	0.0	0.0	0.0	0.0
58	Portable Lighting	LS	0.0	0.0	0.0	0.0	0.0	0.0	0.0
59	Shallow Undercut	CY	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60	Fabric For Soil Stabilization	SY	0.0	0.0	0.0	0.0	0.0	0.0	0.0
61	GeoGrid for Soil Stabilization	SY	0.0	0.0	0.0	0.0	0.0	0.0	0.0
62	Class IV Stone for Soil Stabilization	TN	0.0	0.0	0.0	0.0	0.0	0.0	0.0

SET-3

BID # 0004-2024

2024 Resurfacing Street Estimate Totals Sheet									
Line Item	Description	Unit	E Spring St	Edgeford park Ln	FalconHurst Dr	Federal House Ave	Finchurch Cir	Flemming House St	Flicker Ct
1	Asphalt Concrete Surface Course, Type S9.5B	TN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	Asphalt Concrete Surface Course, Type S9.5C	TN	409.0	108.0	1211.0	51.0	87.0	432.0	174.0
3	Asphalt Binder for Plant Mix, Type PG64-22	TN	25.0	7.0	72.0	4.0	6.0	26.0	11.0
4	Manhole Adjustment (Raise Only)	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	Water Valve Box Adjustment (Raise Only)	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	Manhole Adjustment (Lower/Raise)	EA	6.0	2.0	5.0	1.0	2.0	11.0	1.0
7	Water Valve Box Adjustment (Lower/Raise)	EA	8.0	3.0	10.0	1.0	1.0	12.0	0.0
8	Milling/Chipping - Manhole/Valve Box	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	Manhole Adjustment - Oversize - (Lower/Raise)	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	Provide and Install Manhole Riser	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	Provide and Install Water Valve Box Riser	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	Provide New 7.5" Manhole Frame and Cover	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	Provide New 4.0" Manhole Frame and Cover	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	Sidewalk Removal	SY	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	4" Sidewalk	SY	35.0	9.0	45.0	0.0	0.0	75.0	0.0
16	6" Sidewalk	SY	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	6" Concrete Driveway	SY	70.0	0.0	35.0	0.0	28.0	0.0	84.0
18	Sawcut and Removal of Concrete Curb	LF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	Sawcut and Removal of Granite Curb	LF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	Curb & Gutter Removal and Replacement	LF	590.0	40.0	400.0	0.0	110.0	130.0	75.0
21	Install New Curb & Gutter	LF	0.0	0.0	0.0	0.0		0.0	0.0
22	Concrete Sidewalk Access Ramp w/Warning Surface	EA	4.0	1.0	5.0	0.0	0.0	9.0	0.0
23	Concrete Sidewalk Access Ramp Removal	EA	1.0	0.0	0.0	0.0	0.0	3.0	0.0
24	Concrete Monolithic Island	SY	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	Milling Asphalt Pavement, Edge Milling (0-2")	SY	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	Milling Asphalt Pavement, Full Mill (0-2")	SY	0.0	0.0	0.0	568.0	0.0	4889.0	0.0
27	Milling Asphalt Pavement, Mill & Fill (0-3")	SY	2778.0	734.0	6861.0	0.0	739.0	0.0	1473.2
28	Incidental Milling	SY	138.9	73.4	343.1	28.4	73.9	244.5	147.3
29	Pavement Patching	TN	0	0	0	1	0	9	0
30	Thermoplastic Lines, 4" 90mils	LF	32.4	0.0	80.0	0.0	0.0	0.0	0.0
31	Thermoplastic Lines, 8" 90mils	LF	0.0	0.0	128.0	0.0	0.0	0.0	0.0
32	Thermoplastic Lines, 24" 90mils	LF	0.0	0.0	95.0	0.0	0.0	193.6	0.0
33	Thermoplastic Symbols, 90mils	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
34	Thermoplastic Characters, 90mils	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
35	Speed Hump Symbols, 90mils	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
36	Bike Lane Arrow, 90mils	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
37	Bike Lane Symbol, 90mils	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
38	Bike Sharrow, 90mils	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
39	Green Thermoplastic, 24" 90mils	LF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40	Shark Teeth Symbols, 90mils	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
41	Temporary Paint, 4"	LF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
42	Temporary Paint, 8"	LF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
43	Temporary Paint, 24"	LF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
44	Temporary Paint Symbols	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
45	Temporary Paint Characters	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
46	Thermoplastic Eradication, Lines (4-24")	LF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
47	Thermoplastic Eradication, Symbols	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
48	Thermoplastic Eradication, Characters	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
49	Flexible Delinators	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50	Inductive Loop Sawcut	LF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
51	Bike Count Loop Sawcut	LF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
52	Detector Card (Type 2070)	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
53	Junction Box, Std.	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
54	Remove Speed Hump	EA	0.0	0.0	0.0	0.0	0.0	2.0	0.0
55	Install Speed Hump	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
56	Temporary Traffic Control	LS	0.0	0.0	0.0	0.0	0.0	0.0	0.0
57	Law Enforcement	HR	0.0	0.0	0.0	0.0	0.0	0.0	0.0
58	Portable Lighting	LS	0.0	0.0	0.0	0.0	0.0	0.0	0.0
59	Shallow Undercut	CY	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60	Fabric For Soil Stabilization	SY	0.0	0.0	0.0	0.0	0.0	0.0	0.0
61	GeoGrid for Soil Stabilization	SY	0.0	0.0	0.0	0.0	0.0	0.0	0.0
62	Class IV Stone for Soil Stabilization	TN	0.0	0.0	0.0	0.0	0.0	0.0	0.0

BID # 0004-2024

2024 Resurfacing Street Estimate Totals Sheet									
Line Item	Description	Unit	Forest Lynks Dr	Hampton Way Dr	Heritage Branch Rd	Heritage View Trail	Hobblebush Way	Hysop Ln	Jones Wynd
1	Asphalt Concrete Surface Course, Type S9.5B	TN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	Asphalt Concrete Surface Course, Type S9.5C	TN	113.0	340.0	471.0	353.0	128.0	89.0	1280.0
3	Asphalt Binder for Plant Mix, Type PG64-22	TN	7.0	21.0	28.0	21.0	8.0	6.0	76.0
4	Manhole Adjustment (Raise Only)	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	Water Valve Box Adjustment (Raise Only)	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	Manhole Adjustment (Lower/Raise)	EA	2.0	6.0	0.0	7.0	3.0	1.0	8.0
7	Water Valve Box Adjustment (Lower/Raise)	EA	1.0	7.0	7.0	18.0	12.0	1.0	7.0
8	Milling/Chipping - Manhole/Valve Box	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	Manhole Adjustment - Oversize - (Lower/Raise)	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	Provide and Install Manhole Riser	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	Provide and Install Water Valve Box Riser	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	Provide New 7.5" Manhole Frame and Cover	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	Provide New 4.0" Manhole Frame and Cover	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	Sidewalk Removal	SY	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	4" Sidewalk	SY	17.0	125.0	0.0	112.0	60.0	17.0	0.0
16	6" Sidewalk	SY	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	6" Concrete Driveway	SY	17.0	0.0	0.0	0.0	0.0	17.0	0.0
18	Sawcut and Removal of Concrete Curb	LF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	Sawcut and Removal of Granite Curb	LF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	Curb & Gutter Removal and Replacement	LF	85.0	700.0	0.0	0.0	0.0	75.0	0.0
21	Install New Curb & Gutter	LF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	Concrete Sidewalk Access Ramp w/Warning Surface	EA	2.0	12.0	0.0	12.0	6.0	2.0	0.0
23	Concrete Sidewalk Access Ramp Removal	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	Concrete Monolithic Island	SY	0.0	69.0	0.0	0.0	0.0	0.0	0.0
25	Milling Asphalt Pavement, Edge Milling (0-2")	SY	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	Milling Asphalt Pavement, Full Mill (0-2")	SY	0.0	2889.0	0.0	4000.0	1445.0	0.0	10870.0
27	Milling Asphalt Pavement, Mill & Fill (0-3")	SY	956.0	0.0	4000.0	0.0	0.0	605.4	0.0
28	Incidental Milling	SY	47.8	144.5	200.0	200.0	72.3	60.5	543.5
29	Pavement Patching	TN	0	7	0	7	3	0	26
30	Thermoplastic Lines, 4" 90mils	LF	0.0	160.0	317.0	0.0	0.0	0.0	0.0
31	Thermoplastic Lines, 8" 90mils	LF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
32	Thermoplastic Lines, 24" 90mils	LF	0.0	200.0	95.0	467.0	239.0	0.0	408.5
33	Thermoplastic Symbols, 90mils	EA	0.0	4.0	2.0	0.0	0.0	0.0	0.0
34	Thermoplastic Characters, 90mils	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
35	Speed Hump Symbols, 90mils	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
36	Bike Lane Arrow, 90mils	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
37	Bike Lane Symbol, 90mils	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
38	Bike Sharrow, 90mils	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
39	Green Thermoplastic, 24" 90mils	LF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40	Shark Teeth Symbols, 90mils	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
41	Temporary Paint, 4"	LF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
42	Temporary Paint, 8"	LF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
43	Temporary Paint, 24"	LF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
44	Temporary Paint Symbols	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
45	Temporary Paint Characters	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
46	Thermoplastic Eradication, Lines (4-24")	LF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
47	Thermoplastic Eradication, Symbols	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
48	Thermoplastic Eradication, Characters	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
49	Flexible Delinators	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50	Inductive Loop Sawcut	LF	0.0	400.0	320.0	0.0	0.0	0.0	0.0
51	Bike Count Loop Sawcut	LF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
52	Detector Card (Type 2070)	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
53	Junction Box, Std.	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
54	Remove Speed Hump	EA	0.0	2.0	0.0	0.0	0.0	0.0	0.0
55	Install Speed Hump	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
56	Temporary Traffic Control	LS	0.0	0.0	0.0	0.0	0.0	0.0	0.0
57	Law Enforcement	HR	0.0	0.0	0.0	0.0	0.0	0.0	0.0
58	Portable Lighting	LS	0.0	0.0	0.0	0.0	0.0	0.0	0.0
59	Shallow Undercut	CY	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60	Fabric For Soil Stabilization	SY	0.0	0.0	0.0	0.0	0.0	0.0	0.0
61	GeoGrid for Soil Stabilization	SY	0.0	0.0	0.0	0.0	0.0	0.0	0.0
62	Class IV Stone for Soil Stabilization	TN	0.0	0.0	0.0	0.0	0.0	0.0	0.0

SET-5

BID # 0004-2024

2024 Resurfacing Street Estimate Totals Sheet									
Line Item	Description	Unit	Kemble Ridge Dr	Kullana Ln	Ledgerock Rd	Ledyard Ct	Little Turtle Way	Lotus Ln	Marjoram Ct
1	Asphalt Concrete Surface Course, Type S9.5B	TN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	Asphalt Concrete Surface Course, Type S9.5C	TN	871.0	53.0	396.0	65.0	134.0	89.0	90.0
3	Asphalt Binder for Plant Mix, Type PG64-22	TN	52.0	4.0	24.0	4.0	8.0	6.0	6.0
4	Manhole Adjustment (Raise Only)	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	Water Valve Box Adjustment (Raise Only)	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	Manhole Adjustment (Lower/Raise)	EA	10.0	1.0	5.0	1.0	2.0	4.0	2.0
7	Water Valve Box Adjustment (Lower/Raise)	EA	11.0	1.0	7.0	0.0	2.0	4.0	1.0
8	Milling/Chipping - Manhole/Valve Box	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	Manhole Adjustment - Oversize - (Lower/Raise)	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	Provide and Install Manhole Riser	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	Provide and Install Water Valve Box Riser	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	Provide New 7.5" Manhole Frame and Cover	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	Provide New 4.0" Manhole Frame and Cover	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	Sidewalk Removal	SY	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	4" Sidewalk	SY	17.0	9.0	60.0	0.0	35.0	0.0	0.0
16	6" Sidewalk	SY	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	6" Concrete Driveway	SY	60.0	0.0	12.0	12.0	0.0	0.0	0.0
18	Sawcut and Removal of Concrete Curb	LF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	Sawcut and Removal of Granite Curb	LF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	Curb & Gutter Removal and Replacement	LF	180.0	0.0	50.0	0.0	25.0	110.0	80.0
21	Install New Curb & Gutter	LF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	Concrete Sidewalk Access Ramp w/Warning Surface	EA	1.0	1.0	3.0	0.0	4.0	0.0	0.0
23	Concrete Sidewalk Access Ramp Removal	EA	1.0	0.0	4.0	0.0	0.0	0.0	0.0
24	Concrete Monolithic Island	SY	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	Milling Asphalt Pavement, Edge Milling (0-2")	SY	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	Milling Asphalt Pavement, Full Mill (0-2")	SY	0.0	590.0	0.0	0.0	1134.0	0.0	0.0
27	Milling Asphalt Pavement, Mill & Fill (0-3")	SY	7400.0	0.0	2689.0	550.0	0.0	606.0	767.0
28	Incidental Milling	SY	370.0	59.0	134.5	27.5	56.7	60.6	76.7
29	Pavement Patching	TN	0	1	0	0	3	0	0
30	Thermoplastic Lines, 4" 90mils	LF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	Thermoplastic Lines, 8" 90mils	LF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
32	Thermoplastic Lines, 24" 90mils	LF	0.0	0.0	0.0	0.0	177.0	0.0	0.0
33	Thermoplastic Symbols, 90mils	EA	0.0	0.0	0.0	0.0	0.0	0.0	1.0
34	Thermoplastic Characters, 90mils	EA	0.0	0.0	6.0	6.0	0.0	0.0	0.0
35	Speed Hump Symbols, 90mils	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
36	Bike Lane Arrow, 90mils	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
37	Bike Lane Symbol, 90mils	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
38	Bike Sharrow, 90mils	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
39	Green Thermoplastic, 24" 90mils	LF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40	Shark Teeth Symbols, 90mils	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
41	Temporary Paint, 4"	LF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
42	Temporary Paint, 8"	LF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
43	Temporary Paint, 24"	LF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
44	Temporary Paint Symbols	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
45	Temporary Paint Characters	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
46	Thermoplastic Eradication, Lines (4-24")	LF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
47	Thermoplastic Eradication, Symbols	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
48	Thermoplastic Eradication, Characters	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
49	Flexible Delinators	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50	Inductive Loop Sawcut	LF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
51	Bike Count Loop Sawcut	LF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
52	Detector Card (Type 2070)	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
53	Junction Box, Std.	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
54	Remove Speed Hump	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
55	Install Speed Hump	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
56	Temporary Traffic Control	LS	0.0	0.0	0.0	0.0	0.0	0.0	0.0
57	Law Enforcement	HR	0.0	0.0	0.0	0.0	0.0	0.0	0.0
58	Portable Lighting	LS	0.0	0.0	0.0	0.0	0.0	0.0	0.0
59	Shallow Undercut	CY	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60	Fabric For Soil Stabilization	SY	0.0	0.0	0.0	0.0	0.0	0.0	0.0
61	GeoGrid for Soil Stabilization	SY	0.0	0.0	0.0	0.0	0.0	0.0	0.0
62	Class IV Stone for Soil Stabilization	TN	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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2024 Resurfacing Street Estimate Totals Sheet									
Line Item	Description	Unit	McDowell Dr	Melksham Rd	Mill St	Mithrasdowne Ct	Montville Ct	MoultonBoro Ave	N Franklin St
1	Asphalt Concrete Surface Course, Type S9.5B	TN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	Asphalt Concrete Surface Course, Type S9.5C	TN	734.0	331.0	459.0	89.0	75.0	874.0	45.0
3	Asphalt Binder for Plant Mix, Type PG64-22	TN	44.0	20.0	28.0	6.0	5.0	52.0	3.0
4	Manhole Adjustment (Raise Only)	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	Water Valve Box Adjustment (Raise Only)	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	Manhole Adjustment (Lower/Raise)	EA	7.0	4.0	6.0	0.0	2.0	12.0	0.0
7	Water Valve Box Adjustment (Lower/Raise)	EA	6.0	5.0	1.0	1.0	1.0	8.0	0.0
8	Milling/Chipping - Manhole/Valve Box	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	Manhole Adjustment - Oversize - (Lower/Raise)	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	Provide and Install Manhole Riser	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	Provide and Install Water Valve Box Riser	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	Provide New 7.5" Manhole Frame and Cover	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	Provide New 4.0" Manhole Frame and Cover	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	Sidewalk Removal	SY	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	4" Sidewalk	SY	41.0	50.0	0.0	0.0	0.0	50.0	0.0
16	6" Sidewalk	SY	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	6" Concrete Driveway	SY	0.0	60.0	0.0	0.0	0.0	0.0	0.0
18	Sawcut and Removal of Concrete Curb	LF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	Sawcut and Removal of Granite Curb	LF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	Curb & Gutter Removal and Replacement	LF	400.0	500.0	0.0	0.0	50.0	130.0	0.0
21	Install New Curb & Gutter	LF	0.0		0.0	0.0	0.0	0.0	0.0
22	Concrete Sidewalk Access Ramp w/Warning Surface	EA	5.0	3.0	0.0	0.0	0.0	6.0	0.0
23	Concrete Sidewalk Access Ramp Removal	EA	0.0	3.0	0.0	0.0	0.0	0.0	0.0
24	Concrete Monolithic Island	SY	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	Milling Asphalt Pavement, Edge Milling (0-2")	SY	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	Milling Asphalt Pavement, Full Mill (0-2")	SY	0.0	0.0	3900.0	0.0	0.0	4839.0	0.0
27	Milling Asphalt Pavement, Mill & Fill (0-3")	SY	4157.0	2500.0	0.0	750.0	638.0	0.0	500.0
28	Incidental Milling	SY	207.9	250.0	390.0	37.5	31.9	483.9	25.0
29	Pavement Patching	TN	0	0	9	0	0	17	0
30	Thermoplastic Lines, 4" 90mils	LF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	Thermoplastic Lines, 8" 90mils	LF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
32	Thermoplastic Lines, 24" 90mils	LF	57.7	0.0	0.0	0.0	0.0	91.1	12.0
33	Thermoplastic Symbols, 90mils	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
34	Thermoplastic Characters, 90mils	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
35	Speed Hump Symbols, 90mils	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
36	Bike Lane Arrow, 90mils	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
37	Bike Lane Symbol, 90mils	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
38	Bike Sharrow, 90mils	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
39	Green Thermoplastic, 24" 90mils	LF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40	Shark Teeth Symbols, 90mils	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
41	Temporary Paint, 4"	LF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
42	Temporary Paint, 8"	LF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
43	Temporary Paint, 24"	LF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
44	Temporary Paint Symbols	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
45	Temporary Paint Characters	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
46	Thermoplastic Eradication, Lines (4-24")	LF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
47	Thermoplastic Eradication, Symbols	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
48	Thermoplastic Eradication, Characters	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
49	Flexible Delinators	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50	Inductive Loop Sawcut	LF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
51	Bike Count Loop Sawcut	LF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
52	Detector Card (Type 2070)	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
53	Junction Box, Std.	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
54	Remove Speed Hump	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
55	Install Speed Hump	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
56	Temporary Traffic Control	LS	0.0	0.0	0.0	0.0	0.0	0.0	0.0
57	Law Enforcement	HR	0.0	0.0	0.0	0.0	0.0	0.0	0.0
58	Portable Lighting	LS	0.0	0.0	0.0	0.0	0.0	0.0	0.0
59	Shallow Undercut	CY	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60	Fabric For Soil Stabilization	SY	0.0	0.0	0.0	0.0	0.0	0.0	0.0
61	GeoGrid for Soil Stabilization	SY	0.0	0.0	0.0	0.0	0.0	0.0	0.0
62	Class IV Stone for Soil Stabilization	TN	0.0	0.0	0.0	0.0	0.0	0.0	0.0

SET-7

BID # 0004-2024

2024 Resurfacing Street Estimate Totals Sheet									
Line Item	Description	Unit	N White St	Northpark Dr	Pantonbury Pl	Penfold Ln	Quercus Ct	Retail Dr	Rock Spring Rd
1	Asphalt Concrete Surface Course, Type S9.5B	TN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	Asphalt Concrete Surface Course, Type S9.5C	TN	1412.0	334.0	124.0	1808.0	124.0	1506.0	574.0
3	Asphalt Binder for Plant Mix, Type PG64-22	TN	84.0	20.0	8.0	108.0	8.0	89.0	35.0
4	Manhole Adjustment (Raise Only)	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	Water Valve Box Adjustment (Raise Only)	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	Manhole Adjustment (Lower/Raise)	EA	9.0	19.0	2.0	25.0	2.0	7.0	7.0
7	Water Valve Box Adjustment (Lower/Raise)	EA	3.0	22.0	2.0	2.0	0.0	12.0	6.0
8	Milling/Chipping - Manhole/Valve Box	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	Manhole Adjustment - Oversize - (Lower/Raise)	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	Provide and Install Manhole Riser	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	Provide and Install Water Valve Box Riser	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	Provide New 7.5" Manhole Frame and Cover	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	Provide New 4.0" Manhole Frame and Cover	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	Sidewalk Removal	SY	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	4" Sidewalk	SY	83.0	50.0	0.0	0.0	0.0	0.0	0.0
16	6" Sidewalk	SY	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	6" Concrete Driveway	SY	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	Sawcut and Removal of Concrete Curb	LF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	Sawcut and Removal of Granite Curb	LF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	Curb & Gutter Removal and Replacement	LF	0.0	150.0	0.0	0.0	0.0	0.0	0.0
21	Install New Curb & Gutter	LF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	Concrete Sidewalk Access Ramp w/Warning Surface	EA	10.0	6.0	0.0	0.0	0.0	0.0	0.0
23	Concrete Sidewalk Access Ramp Removal	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	Concrete Monolithic Island	SY	0.0	0.0	0.0	0.0	0.0	25.3	0.0
25	Milling Asphalt Pavement, Edge Milling (0-2")	SY	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	Milling Asphalt Pavement, Full Mill (0-2")	SY	12000.0	2834.0	0.0	0.0	0.0	12800.0	0.0
27	Milling Asphalt Pavement, Mill & Fill (0-3")	SY	0.0	0.0	1050.0	10245.0	1050.0	0.0	3695.0
28	Incidental Milling	SY	1200.0	141.7	52.5	512.3	52.5	640.0	184.8
29	Pavement Patching	TN	42	7	0	0	0	30	0
30	Thermoplastic Lines, 4" 90mils	LF	0.0	150.0	0.0	5060.0	0.0	12239.0	0.0
31	Thermoplastic Lines, 8" 90mils	LF	0.0	0.0	0.0	0.0	0.0	110.0	0.0
32	Thermoplastic Lines, 24" 90mils	LF	0.0	144.0	0.0	0.0	0.0	199.0	75.0
33	Thermoplastic Symbols, 90mils	EA	0.0	2.0	0.0	6.0	0.0	67.0	0.0
34	Thermoplastic Characters, 90mils	EA	0.0	0.0	0.0	0.0	0.0	8.0	0.0
35	Speed Hump Symbols, 90mils	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
36	Bike Lane Arrow, 90mils	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
37	Bike Lane Symbol, 90mils	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
38	Bike Sharrow, 90mils	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
39	Green Thermoplastic, 24" 90mils	LF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40	Shark Teeth Symbols, 90mils	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
41	Temporary Paint, 4"	LF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
42	Temporary Paint, 8"	LF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
43	Temporary Paint, 24"	LF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
44	Temporary Paint Symbols	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
45	Temporary Paint Characters	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
46	Thermoplastic Eradication, Lines (4-24")	LF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
47	Thermoplastic Eradication, Symbols	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
48	Thermoplastic Eradication, Characters	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
49	Flexible Delinators	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50	Inductive Loop Sawcut	LF	360.0	400.0	0.0	0.0	0.0	600.0	135.0
51	Bike Count Loop Sawcut	LF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
52	Detector Card (Type 2070)	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
53	Junction Box, Std.	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
54	Remove Speed Hump	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
55	Install Speed Hump	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
56	Temporary Traffic Control	LS	0.0	0.0	0.0	0.0	0.0	0.0	0.0
57	Law Enforcement	HR	0.0	0.0	0.0	0.0	0.0	0.0	0.0
58	Portable Lighting	LS	0.0	0.0	0.0	0.0	0.0	0.0	0.0
59	Shallow Undercut	CY	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60	Fabric For Soil Stabilization	SY	0.0	0.0	0.0	0.0	0.0	0.0	0.0
61	GeoGrid for Soil Stabilization	SY	0.0	0.0	0.0	0.0	0.0	0.0	0.0
62	Class IV Stone for Soil Stabilization	TN	0.0	0.0	0.0	0.0	0.0	0.0	0.0

BID # 0004-2024

2024 Resurfacing Street Estimate Totals Sheet									
Line Item	Description	Unit	Rose Petal Run	S Allen Rd	Sarratt Ridge Ct	Shapinsay Ave	Shasta Daisy Dr	Shepstone Pl	Sinewell Dr
1	Asphalt Concrete Surface Course, Type S9.5B	TN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	Asphalt Concrete Surface Course, Type S9.5C	TN	441.0	286.0	91.0	98.0	671.0	134.0	162.0
3	Asphalt Binder for Plant Mix, Type PG64-22	TN	27.0	17.0	6.0	6.0	40.0	8.0	10.0
4	Manhole Adjustment (Raise Only)	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	Water Valve Box Adjustment (Raise Only)	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	Manhole Adjustment (Lower/Raise)	EA	8.0	5.0	0.0	2.0	22.0	3.0	6.0
7	Water Valve Box Adjustment (Lower/Raise)	EA	7.0	8.0	3.0	1.0	14.0	2.0	4.0
8	Milling/Chipping - Manhole/Valve Box	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	Manhole Adjustment - Oversize - (Lower/Raise)	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	Provide and Install Manhole Riser	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	Provide and Install Water Valve Box Riser	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	Provide New 7.5" Manhole Frame and Cover	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	Provide New 4.0" Manhole Frame and Cover	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	Sidewalk Removal	SY	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	4" Sidewalk	SY	33.0	25.0	0.0	25.0	66.0	0.0	42.0
16	6" Sidewalk	SY	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	6" Concrete Driveway	SY	0.0	20.0	0.0	11.0	0.0	0.0	0.0
18	Sawcut and Removal of Concrete Curb	LF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	Sawcut and Removal of Granite Curb	LF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	Curb & Gutter Removal and Replacement	LF	240.0	140.0	0.0	160.0	30.0	0.0	25.0
21	Install New Curb & Gutter	LF	0.0	0.0	0.0		0.0	0.0	0.0
22	Concrete Sidewalk Access Ramp w/Warning Surface	EA	2.0	3.0	0.0	1.0	8.0	0.0	3.0
23	Concrete Sidewalk Access Ramp Removal	EA	2.0	3.0	0.0	2.0	0.0	0.0	2.0
24	Concrete Monolithic Island	SY	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	Milling Asphalt Pavement, Edge Milling (0-2")	SY	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	Milling Asphalt Pavement, Full Mill (0-2")	SY	0.0	3235.0	0.0	0.0	7605.0	0.0	0.0
27	Milling Asphalt Pavement, Mill & Fill (0-3")	SY	3334.0	0.0	773.0	1112.0	0.0	1006.0	1223.0
28	Incidental Milling	SY	333.4	161.8	77.3	111.2	380.3	50.3	122.3
29	Pavement Patching	TN	0	6	0	0	13	0	0
30	Thermoplastic Lines, 4" 90mils	LF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	Thermoplastic Lines, 8" 90mils	LF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
32	Thermoplastic Lines, 24" 90mils	LF	0.0	0.0	0.0	0.0	550.0	0.0	0.0
33	Thermoplastic Symbols, 90mils	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
34	Thermoplastic Characters, 90mils	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
35	Speed Hump Symbols, 90mils	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
36	Bike Lane Arrow, 90mils	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
37	Bike Lane Symbol, 90mils	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
38	Bike Sharrow, 90mils	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
39	Green Thermoplastic, 24" 90mils	LF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40	Shark Teeth Symbols, 90mils	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
41	Temporary Paint, 4"	LF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
42	Temporary Paint, 8"	LF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
43	Temporary Paint, 24"	LF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
44	Temporary Paint Symbols	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
45	Temporary Paint Characters	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
46	Thermoplastic Eradication, Lines (4-24")	LF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
47	Thermoplastic Eradication, Symbols	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
48	Thermoplastic Eradication, Characters	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
49	Flexible Delinators	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50	Inductive Loop Sawcut	LF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
51	Bike Count Loop Sawcut	LF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
52	Detector Card (Type 2070)	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
53	Junction Box, Std.	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
54	Remove Speed Hump	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
55	Install Speed Hump	EA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
56	Temporary Traffic Control	LS	0.0	0.0	0.0	0.0	0.0	0.0	0.0
57	Law Enforcement	HR	0.0	0.0	0.0	0.0	0.0	0.0	0.0
58	Portable Lighting	LS	0.0	0.0	0.0	0.0	0.0	0.0	0.0
59	Shallow Undercut	CY	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60	Fabric For Soil Stabilization	SY	0.0	0.0	0.0	0.0	0.0	0.0	0.0
61	GeoGrid for Soil Stabilization	SY	0.0	0.0	0.0	0.0	0.0	0.0	0.0
62	Class IV Stone for Soil Stabilization	TN	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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2024 Resurfacing Street Estimate Totals Sheet								
Line Item	Description	Unit	Sovereign Way	Tenburry Woods Ct	Trammel Ct	Tulip Grove Ln	Wallridge Dr	Winter Bloom Ct
1	Asphalt Concrete Surface Course, Type S9.5B	TN	0.0	0.0	0.0	0.0	0.0	0.0
2	Asphalt Concrete Surface Course, Type S9.5C	TN	156.0	104.0	69.0	69.0	662.0	113.0
3	Asphalt Binder for Plant Mix, Type PG64-22	TN	10.0	7.0	5.0	5.0	40.0	7.0
4	Manhole Adjustment (Raise Only)	EA	0.0	0.0	0.0	0.0	0.0	0.0
5	Water Valve Box Adjustment (Raise Only)	EA	0.0	0.0	0.0	0.0	0.0	0.0
6	Manhole Adjustment (Lower/Raise)	EA	5.0	1.0	1.0	1.0	14.0	3.0
7	Water Valve Box Adjustment (Lower/Raise)	EA	5.0	1.0	1.0	2.0	7.0	2.0
8	Milling/Chipping - Manhole/Valve Box	EA	0.0	0.0	0.0	0.0	0.0	0.0
9	Manhole Adjustment - Oversize - (Lower/Raise)	EA	0.0	0.0	0.0	0.0	0.0	0.0
10	Provide and Install Manhole Riser	EA	0.0	0.0	0.0	0.0	0.0	0.0
11	Provide and Install Water Valve Box Riser	EA	0.0	0.0	0.0	0.0	0.0	0.0
12	Provide New 7.5" Manhole Frame and Cover	EA	0.0	0.0	0.0	0.0	0.0	0.0
13	Provide New 4.0" Manhole Frame and Cover	EA	0.0	0.0	0.0	0.0	0.0	0.0
14	Sidewalk Removal	SY	0.0	0.0	0.0	0.0	0.0	0.0
15	4" Sidewalk	SY	8.3	0.0	0.0	42.0	17.0	25.0
16	6" Sidewalk	SY	0.0	0.0	0.0	0.0	0.0	0.0
17	6" Concrete Driveway	SY	0.0	4.0	0.0	0.0	0.0	0.0
18	Sawcut and Removal of Concrete Curb	LF	0.0	0.0	0.0	0.0	0.0	0.0
19	Sawcut and Removal of Granite Curb	LF	0.0	0.0	0.0	0.0	0.0	0.0
20	Curb & Gutter Removal and Replacement	LF	175.0	50.0	10.0	50.0	350.0	20.0
21	Install New Curb & Gutter	LF	0.0	0.0	0.0	0.0	0.0	0.0
22	Concrete Sidewalk Access Ramp w/Warning Surface	EA	1.0	0.0	0.0	4.0	6.0	2.0
23	Concrete Sidewalk Access Ramp Removal	EA	0.0	0.0	0.0	1.0	1.0	1.0
24	Concrete Monolithic Island	SY	0.0	0.0	0.0	0.0	0.0	0.0
25	Milling Asphalt Pavement, Edge Milling (0-2")	SY	0.0	0.0	0.0	0.0	0.0	0.0
26	Milling Asphalt Pavement, Full Mill (0-2")	SY	1761.0	0.0	773.0	778.0	0.0	0.0
27	Milling Asphalt Pavement, Mill & Fill (0-3")	SY	0.0	783.2	0.0	0.0	5624.0	850.0
28	Incidental Milling	SY	88.1	78.3	38.7	77.8	562.4	85.0
29	Pavement Patching	TN	3	0	1	1	0	0
30	Thermoplastic Lines, 4" 90mils	LF	0.0	0.0	0.0	0.0	0.0	0.0
31	Thermoplastic Lines, 8" 90mils	LF	0.0	0.0	128.0	0.0	0.0	0.0
32	Thermoplastic Lines, 24" 90mils	LF	0.0	0.0	0.0	0.0	53.4	0.0
33	Thermoplastic Symbols, 90mils	EA	1.0	0.0	0.0	0.0	6	0.0
34	Thermoplastic Characters, 90mils	EA	0.0	0.0	0.0	0.0	6.0	0.0
35	Speed Hump Symbols, 90mils	EA	0.0	0.0	0.0	0.0	0.0	0.0
36	Bike Lane Arrow, 90mils	EA	0.0	0.0	0.0	0.0	0.0	0.0
37	Bike Lane Symbol, 90mils	EA	0.0	0.0	0.0	0.0	0.0	0.0
38	Bike Sharrow, 90mils	EA	0.0	0.0	0.0	0.0	0.0	0.0
39	Green Thermoplastic, 24" 90mils	LF	0.0	0.0	0.0	0.0	0.0	0.0
40	Shark Teeth Symbols, 90mils	EA	0.0	0.0	0.0	0.0	0.0	0.0
41	Temporary Paint, 4"	LF	0.0	0.0	0.0	0.0	0.0	0.0
42	Temporary Paint, 8"	LF	0.0	0.0	0.0	0.0	0.0	0.0
43	Temporary Paint, 24"	LF	0.0	0.0	0.0	0.0	0.0	0.0
44	Temporary Paint Symbols	EA	0.0	0.0	0.0	0.0	0.0	0.0
45	Temporary Paint Characters	EA	0.0	0.0	0.0	0.0	0.0	0.0
46	Thermoplastic Eradication, Lines (4-24")	LF	0.0	0.0	0.0	0.0	0.0	0.0
47	Thermoplastic Eradication, Symbols	EA	0.0	0.0	0.0	0.0	0.0	0.0
48	Thermoplastic Eradication, Characters	EA	0.0	0.0	0.0	0.0	0.0	0.0
49	Flexible Delinators	EA	0.0	0.0	0.0	0.0	0.0	0.0
50	Inductive Loop Sawcut	LF	0.0	0.0	0.0	0.0	0.0	0.0
51	Bike Count Loop Sawcut	LF	0.0	0.0	0.0	0.0	0.0	0.0
52	Detector Card (Type 2070)	EA	0.0	0.0	0.0	0.0	0.0	0.0
53	Junction Box, Std.	EA	0.0	0.0	0.0	0.0	0.0	0.0
54	Remove Speed Hump	EA	0.0	0.0	0.0	0.0	0.0	0.0
55	Install Speed Hump	EA	0.0	0.0	0.0	0.0	0.0	0.0
56	Temporary Traffic Control	LS	0.0	0.0	0.0	0.0	0.0	0.0
57	Law Enforcement	HR	0.0	0.0	0.0	0.0	0.0	0.0
58	Portable Lighting	LS	0.0	0.0	0.0	0.0	0.0	0.0
59	Shallow Undercut	CY	0.0	0.0	0.0	0.0	0.0	0.0
60	Fabric For Soil Stabilization	SY	0.0	0.0	0.0	0.0	0.0	0.0
61	GeoGrid for Soil Stabilization	SY	0.0	0.0	0.0	0.0	0.0	0.0
62	Class IV Stone for Soil Stabilization	TN	0.0	0.0	0.0	0.0	0.0	0.0

GENERAL CONDITIONS

1. Definitions:

a) The Contract documents shall consist of the Contract, the accepted Proposal, the General Conditions of the Contract, and the Drawings and Specifications, including all modifications thereof incorporated in the documents before their execution.

b) Whenever the term "Contractor" is used, it shall be understood as referring to the General Contractor, subcontractor, and all other contractors or their duly authorized agent to whom the work here described is awarded by Contract.

c) Whenever the term “Resurface” or "Resurfacing” is used, it shall be understood to mean all work associated with the Contract, including but not limited to utility adjustments, milling, patching, and asphalt overlay.

d) Whenever the term "Director of Engineering" is mentioned, it is understood to mean the Director of Engineering, Town of Wake Forest, North Carolina, his assistant or duly authorized agent. The Director of Engineering or his authorized agent shall make all necessary explanations as to the meaning and intent of the Specifications, Plans, Special Provisions, or Contract and may correct any errors or omissions in same which is necessary for the proper fulfillment of its intentions. The term “Director of Engineering” or his authorized agent shall be synonymous or equivalent with the term “Engineer” and shall have full authority over the work as specified in Section 105-1 of the “North Carolina Department of Transportation Standard Specifications for Roads and Structures” latest edition.

e) Whenever the term "Town" is used, it is to mean the Town of Wake Forest, North Carolina.

f) The term "Work" of the Contractor or subcontractor includes labor or materials, or both, equipment, transportation, or other facilities necessary to complete the Contract.

g) The "North Carolina Department of Transportation Standard Specifications for Roads and Structures”, latest edition shall be considered a part of these specifications in to.

h) The "North Carolina Department of Transportation Policies Procedures”, for 2002 accommodating utilities on highway right of way shall be considered a part of these specifications in instances to which they are referred.

i) The terms “Supplemental Agreement” and “Town Change Order” shall be understood to be synonymous.

2. Intent of Documents:

The intention of the documents is to include all labor and materials, equipment, and transportation necessary for the proper execution of the work. It is not intended, however, that materials or work not covered by or properly inferable from any heading, branch, class, or trade of the Specifications shall be supplied unless distinctly so noted on the drawings. Materials or work described in words which so applied have a well-known technical or trade meaning shall be held to refer to such recognized standards.

3. Detail Drawings and Instructions:

The Director of Engineering shall furnish with reasonable promptness, additional instructions, by means of drawings or otherwise, necessary for the proper execution of the work. All such drawings and instructions shall be consistent with the Contract documents, true developments thereof, and reasonably inferable therefrom.

4. <u>Progress Schedule:</u>

The Contractor shall prepare and submit for review and approval a schedule of proposed working progress. This schedule shall be submitted on forms supplied by the Engineer or in a format that is approved by the Engineer. A detailed Critical Path Method (CPM) schedule shall not be submitted to replace the progress schedule details required below.

The proposed progress schedule shall be submitted no later than 7 calendar days before the date of the project preconstruction conference and shall be approved before any payments will be processed for the project. In addition to the progress schedule, the contractor shall submit a two-week lookahead during construction if activities scheduled deviate from the most recently submitted progress schedule.

When the Engineer has extended the completion date or if the project overrun is anticipated to exceed 5%, the Contractor may submit a revised progress schedule to the Engineer for review and approval. If plan revisions are anticipated to change the sequence of operations in such a manner as will affect the progress but not the completion date, then the Contractor may submit a revised progress schedule for review and approval, but the completion date shall remain unchanged.

The proposed progress schedule shall contain the following items:

1. A time scale diagram with major work activities and milestones clearly labeled.

a. For purposes of composing the progress schedule, major work activities are defined as components comprising more than 5% of the total project cost or occupying more than 10% of total contract time and shall include, if applicable, the following

i. Asphalt Patching

ii. Utility Adjustments

iii. Other Incidental Concrete

iv. Milling Asphalt Pavement

v. Asphalt Resurfacing

vi. Pavement Markings

b. For purposes of composing the progress schedule, major milestones are derived from the project construction phasing and shall include, if applicable, the following:

i. Start of Work (May change based on NTP)

ii. Project ICTs

iii. Map Completion Dates

iv. Project Completion Date

2. A cash curve corresponding to the milestones of work and activities established in Part 1 above.

A written narrative that explains the sequence of work, the controlling operations, ICT completion dates, milestones, project phasing, anticipated work schedule and estimated resources. In addition, explain how any permit requirements, submittal tracking, and coordination with subcontractors, utility companies and other entities will be performed.

Failure to Maintain Satisfactory Progress

The Director of Engineer will check the Contractor's progress at the time each partial pay estimate is prepared.

The Town shall follow guidelines set forth in the NCDOT Standard Specifications, Latest Edition using the Article(s) referenced below.

The Contractor's progress may be considered as unsatisfactory as follows:

(A) The Contractor's progress is found to be less than that described in either count below:

(1) The dollar value of the work completed, excluding material payments allowed by Article 109-5, is less than the dollar value of the work that should have been completed, on the basis of the Contractor's approved progress schedule, by more than 10% of the current contract amount. The dollar value of the work completed will be the total estimate to date shown in the latest partial pay estimate, excluding material payments allowed by Article 109-5. The current contract amount will be the total amount bid plus accumulated overruns less accumulated underruns shown in the latest partial pay estimate.

(2) The percentage of the work completed is less than the percentage of contract time elapsed on the work by more than 10%. The percentage of work completed will be the dollar value of the work completed as defined above, divided by the current contract amount as defined above. The percentage of contract time elapsed will be the number of calendar days elapsed as shown in the latest partial pay estimate divided by the total contract time in calendar days.

(B) The Contractor fails to begin and pursue the work in accordance with Article 108-1 before the expiration of 5% of the original contract time after the date work was scheduled to begin based upon the approved progress schedule.

(C) The Director of Engineer anticipates the Contractor will not complete the work described in the contract by the intermediate contract time or the contract completion date. When the Contractor's progress is found to be unsatisfactory as described in Sub-articles 108-8(A), 108-8(B) and 108-8(C) above, the Director of Engineer may make written demand of the Contractor to state in writing the reason for the unsatisfactory progress and produce such supporting data as the Town may require or the Contractor may desire to submit. The Director of Engineer will consider the justifications submitted by the Contractor and extensions of the completion date have or may be allowed in accordance with Subarticle 108-10(B).

6. Contractor's Understanding:

It is understood and agreed that the Contractor has, by careful examination satisfied himself as to the nature and location of the work, the conformation of the ground, the character, quality, and

quantity of materials to be encountered, the character of equipment and facilities needed preliminary to and during the prosecution of the work, the general and local conditions, and all other matters which can in any way affect the work under this Contract. No verbal agreement or conversation with any officer, agent, or employee of the Town, either before or after the execution of the Contract shall affect or modify any terms or obligations herein contained.

7. Superintendence by Contractor:

Except where the Contractor is an individual and gives his personal superintendence to the work, the Contractor shall provide a competent superintendent, satisfactory to the Town of Wake Forest on the work at all times during working hours with full authority to act for him. The Contractor shall also provide an adequate staff for the proper coordination and prosecution of the work.

8. Materials, Appliances, Employees:

Unless otherwise specified, the Contractor shall provide and pay for all materials, labor, water, tools, equipment, light, power, transportation, and other facilities necessary for the execution and completion of the work.

Unless otherwise specified, all materials shall be new and both workmanship and materials shall be of good quality. The Contractor shall, if required, furnish satisfactory evidence as to the kind and quality of materials.

The Contractor shall at all times enforce strict discipline and good order among his employees and shall not employ on the work any unfit person or anyone not skilled in the work assigned to him.

9. Technical Specifications and Drawings:

Anything mentioned in the Technical Specifications and not shown on the Drawings or shown on the Drawings and not mentioned in the Technical Specifications shall be of like effect as if shown on or mentioned in both. In case of difference between Drawings and Technical Specifications, the Technical Specifications shall govern. In case of any discrepancy in Drawings, or Technical Specifications, the matter shall be immediately submitted to the Town of Wake Forest without whose decision, said discrepancy shall not be adjusted by the Contractor, save only at his own risk and expense.

10. Royalties and Patents:

The Contractor shall pay all royalties and patent fees. He shall defend all suits or claims for infringement of any patent rights and shall save the Town harmless from loss on account thereof, except that the town shall be responsible for such loss when a particular process or the product of a particular manufacturer or manufacturers is specified, but if the Contractor has information that the process or article specified is an infringement of a patent, he shall be responsible for such loss unless he promptly gives such information to the Director of Engineering.

11. Permits:

Permits and licenses of a temporary nature necessary for the prosecution of the work shall be secured and paid for by the Contractor unless otherwise stipulated.

Permits, licenses and easements for permanent structures or permanent changes in existing facilities shall be secured and paid for by the Town unless otherwise stipulated.

12. Protection of Work and Property:

The Contractor shall continuously maintain adequate protection of all his work from damage and shall protect the Town's and private property from injury or loss arising in connection with this Contract. He shall make good any such damages, injury, or loss, except such as may directly be due to errors in the Contract documents or caused by agents or employees of the Town.

13. Cooperation with Utility Owners:

Prior to the beginning of construction, the Town will notify all utility owners known to have facilities affected by the construction of the project. The Contractor shall coordinate the schedule with the utility owners for the necessary adjustments of all affected public or private utility facilities. The utility adjustments may be made either before or after the beginning of construction of the project. The adjustments will be made by the utility owner or his representative or by the Contractor when such adjustments are part of the work covered by his Contract.

The Contractor shall use special care in working around and near all existing utilities that are encountered during construction, protecting them where necessary so that they will give uninterrupted service. The Contractor shall call the agency concerned for location of all utilities and shall be responsible for any damage to existing utilities and structures resulting from his work around these utilities or structures.

The Contractor shall cooperate with the utility owner, and/or the owner's representative in the adjustment or placement of utility facilities when such adjustment or placement is made necessary by the construction of the project or has been authorized by the Town.

In the event that utility services are interrupted by the Contractor, the Contractor shall promptly notify the owners and shall cooperate with the owners and/or the owner's representative in the restoration of service in the shortest time possible.

Existing fire hydrants shall be kept accessible to fire department personnel at all times.

Prior to submitting his bid, the Contractor shall make his own determination as to the nature and extent of the utility facilities, including proposed adjustments, new facilities, or temporary work to be performed by the utility owner or his representative; and as to whether or not any utility work is planned by the owner in conjunction with the project construction. The Contractor shall consider in his bid all of the permanent and temporary utility facilities in their present or relocated positions, whether or not specifically shown on the plans or covered in the project special provisions. It will be the Contractor's responsibility to anticipate any additional costs to him resulting from such utility work and to reflect these costs in his bid for the various items in the Contract.

Where changes to utility facilities are to be made solely for the convenience of the Contractor, it shall be the Contractor's responsibility to arrange for such changes and the Contractor shall bear all costs of such changes.

14. Inspection of Work:

The Director of Engineering and his representatives shall at all times have access to the work wherever it is in preparation or progress and the Contractor shall provide facilities for such access and for inspection.

If the specifications, the Director of Engineering's instructions, laws, or ordinances or any public authority require any work to be specially tested or approved, the Contractor shall give the Director of Engineering timely notice of its readiness for inspection. Inspections by the Director of Engineering shall be promptly made, and where practicable at the source of supply. If any work should be covered up without approval or consent of the Director of Engineering, it must, if required by the Director of Engineering, be uncovered for examination at the Contractor's expense.

The presence of the Engineer, Director of Engineering or Inspector at the work site shall in no way lessen the Contractor's responsibility for conformity with the contract. Should the Engineer, Director of Engineering, or Inspector, at any time before final acceptance or during the contractual warranty period, fail to point out or reject materials or work that does not conform to the contract, whether from lack of discovery or for any other reason, it shall in no way prevent later rejection or corrections to the unsatisfactory materials or work when discovered. The contractor shall have no claim for losses suffered due to any necessary removals or repairs resulting from the unsatisfactory work.

15. <u>Changes in Work:</u>

The Town of Wake Forest, the Engineering Department, without invalidating the Contract, may direct additional work, extra work or make changes by altering, adding or deducting from the work, the Contract sum being adjusted accordingly. In case the method of construction or character of any part of the work is not covered by the plans, specifications, or contract documents, these provisions shall apply. The Town reserves the right to add or delete resurfacing maps to or from the contract.

The Contractor shall perform all work in accordance with the plans, specifications, standard drawings, and contract documents or that may be modified by written orders and shall do such additional, extra, and incidental work as may be considered necessary to complete the work to the full intent of the plans, specifications and contract provisions. Unless otherwise provided in the contract, the Contractor shall furnish all implements, machinery, tools, materials, supplies, transportation and labor necessary for the prosecution and completion of the work.

When it is necessary to make amendments to the contract to satisfactorily complete the proposed construction or to provide authorized time extensions, the Director of Engineering or his agent shall have the authority to enter into a Town Change Order (TCO) covering such amendments.

Town Change Orders (TCO's) shall become a part of the contract when executed by the Director of Engineering or his agent and an authorized representative of the Contractor.

Additional Work

Additional Work or alterations of the plans or details of construction shall be governed by NCDOT Specifications for Roads and Structures (Latest Edition) – Section 104-3

Overruns and Underruns in Contract Quantities

Overruns and Underruns in contract quantities shall be governed by NCDOT Specifications for Roads and Structures (Latest Edition) – Section 104-5

Eliminated Contract Items

Eliminated Contract Items shall be governed by NCDOT Specifications for Roads and Structures (Latest Edition)– Section 104-6

Extra Work

Extra Work Items shall be governed by NCDOT Specifications for Roads and Structures (Latest Edition) – Section 104-7

Compensation and Record Keeping

Compensation and Record Keeping for items of work in this section shall be governed by the NCDOT Specifications for Roads and Structures (Latest Edition) – Section 104-8.

The following items shall be governed by section 104-8:

1. Compensation for Additional Work or Extra work.
2. Claims for additional compensation.
3. Claims for additional compensation for suspension of work or alleged suspension of work.

Final Determination will be made by the Director of Engineering on all claims for additional compensation before payment of the final project invoice.

Claims for Time Extension

All claims for time extension shall be governed by the NCDOT Specifications for Roads and Structures (Latest Edition) – 108-10

16. <u>Conformity with Plans and Specifications:</u>

All work performed, and all materials furnished shall be in reasonably close conformity with the lines, grades, cross sections, dimensions, and material requirements, including tolerances, shown on the plans, or indicated in the specifications.

In the event the Director of Engineering finds the materials or the finished product in which the materials are used not within reasonably close conformity with the plans and specifications, but that reasonably acceptable work has been produced, he will then make a determination if the work is to be accepted and remain in place. If the Director of Engineering agrees that the work is to be accepted, he will have the authority to make such adjustment in Contract price as he deems warranted based upon sound engineering judgment and the final estimate will be paid accordingly.

In the event the Director of Engineering finds the materials or the finished product in which the materials are used, or the work performed are not in reasonably close conformity with the plans and specifications and have resulted in an inferior or unsatisfactory product, the work or materials shall be removed and replaced or otherwise corrected by the Contractor at no cost to the Town.

17. <u>Liquidated Damages and Delays:</u>

a) Liquidated Damages. If the work cannot be completed within the time stipulated in the Contract, including any extensions of time for excusable delays as herein provided, the Contractor shall pay to the Town of Wake Forest, a fixed and agreed amount, as liquidated damages for each calendar day of delay, until the work is completed, the amount as set forth in the Contract and the Contractor and his sureties shall be liable to the Town of Wake Forest for the amount thereof.

Liquidated Damages will not be waived during completion of the final project punchlist, unless the contract time has been extended as allowed by the contract provisions.

b) Excusable Delays. The right of the Contractor to proceed shall not be terminated nor shall the Contractor be charged with liquidated damages for any delays in the completion of the work due to:

i. Any act or omission of the Town outside the scope of the Contract, including extra work; acts of God; unusually severe and abnormal weather conditions; acts of any other contractor in the performance of work for the Town; or other conditions, events, or circumstances beyond the control and without the fault or negligence of the Contractor, which the Contractor could not have reasonably anticipated; or

ii. Any delay of any Subcontractor occasioned by any of the causes specified in subparagraph (1) above. Provided, however, the Contractor shall provide written notice to the Director of Engineering within ten (10) days from the occurrence, condition, event, or other cause which is claimed to have delayed the completion of the work. Such notice shall state what effect, if any, such occurrence, condition, event, or other cause is claimed to have upon the time for completing the Contract work, and shall state in what respects, if any, the Contract completion deadline should be revised, and the reasons, therefore. No claim by the Contractor for an extension of time for completion shall be considered unless notice of such delay claim is given the Town in accordance with the provisions of this subparagraph.

c) No Damages for Delays. The Town shall not be obligated or liable to the Contractor for, and the Contractor hereby expressly waives any claims against the Town for, any damages, costs, or expenses of any nature occasioned by delays, work disruptions or interference, changes in work sequence, work suspension or rescheduling arising from any act or omission of the Town outside the scope of the Contract, acts of God, unusually severe and abnormal weather conditions, or other causes beyond the Contractor's control, it being understood and agreed that the Contractor's sole and exclusive remedy in the event of his inability to achieve completion by the Contract deadline due to claimed delays shall be an extension of the Contract schedule, but only if a claim for such extension is properly made in accordance with the provisions of subparagraph (b) above.

18. <u>Opening Sections of Project to Traffic</u>:

The Town of Wake Forest, at its election, may give notice to the Contractor and place in use those sections of the improvements which have been completed, inspected, and can be accepted as complying with the technical specifications; and if, in its opinion, each such section is reasonably safe, fit, and convenient for the use and accommodations for which it was intended. On such sections which are open, the Contractor shall conduct the remainder of his operations to cause the least obstruction to traffic. The Contractor shall not be relieved of his liability or responsibility, shall not receive any additional compensation due to the added cost of the work, nor shall he receive any extension of the completion date, by reason of such openings.

The Contractor shall not be responsible for any maintenance cost due directly to the use of such sections. The period of guarantee stipulated in Section 51 – Guarantee of Work, shall not begin to

run until the date "of release of final inspection punch list items" for all work which the Contractor is required to construct under this Contract.

19. Town's Right to Do Work:

If the Contractor should neglect to prosecute the work promptly or fail to perform any provisions of the Contract, the Town, after 24 hours written notice to the Contractor, may without prejudice to any other remedy he may have, make good such deficiencies, and may deduct the cost thereof from the payment then or thereafter due the Contractor.

20. Correction of Work Before Final Payment:

Before issuing final payment, the Contractor shall promptly remove from the premises all materials condemned by the Director of Engineering as failing to conform with the Contract, whether incorporated in the work or not, and the Contractor shall promptly replace and re execute his own work in accordance with the Contract and without expense to the Town and shall bear the expense of making good all work of other Contractors destroyed or damaged by such removal or replacement.

21. Final Inspection, Clean Up and Project Final Acceptance:

a) Final Inspection

i. When the improvements contained in this Contract are fully completed, the Contractor shall notify the Director of Engineering in writing that the work will be ready for final inspection on a definite date which shall be stated in the notice. The notice shall be given at least ten (10) days prior to the date stated for final inspection and bear the signed concurrence of the representative of the Director of Engineering having charge of the inspection. If the Director of Engineering determines that the status of the improvements is accurately represented, the Director of Engineering will make the arrangements necessary to have the final inspection on the date stated in the notice, or soon thereafter as is practicable. The Final Inspection Team will include the Director of Engineering's representatives and the Contractor. The Final Inspection Team may also include representatives of each department of the Town of Wake Forest as well as a representative of the North Carolina Department of Transportation.

ii. The Final Inspection Team, on the date agreed upon in 21.01(a), shall make a thorough visual inspection to ensure that the project is fully completed according to the plans and specifications of the Contract and that all clean-up work is complete.

iii. The Final Inspection Team, following the final inspection, shall prepare a written list of the deficient items and clean-up work that needs to be corrected before the issuance of the Final Acceptance Document.

b) Clean Up Work

Clean up work shall include removal of resurfacing materials and debris, and trash in the medians, rights of way, and driveways of the project and intersecting streets.

c) Project Final Acceptance

The Contractor, after finishing all clean-up work and correction of all deficient items, shall notify the appropriate party on the Inspection Team to make a final inspection of the project. If the Final Inspection Team, during its inspection finds that the deficient items and clean-up work have been fully completed according to the terms of this Article and the contract specifications, then the Final Inspection Team recommends to the Director of Engineering's Representative to issue the Final Acceptance Document.

22. <u>Payments to Contractor and Retainage:</u>

a) Partial Payments

i. Partial payment will be based upon progress estimates prepared by the Director of Engineering once each month on the date established by the Director of Engineering.

ii. Monthly or partial payments made by the Town of Wake Forest to the Contractor are monies advanced for the purpose of assisting the Contractor to expedite the work of construction. The Contractor shall be responsible for the care and protection of all materials and work upon which payments have been made until final acceptance of such work and materials by the Town of Wake Forest. Such payments shall not constitute a waiver of the right of the Town of Wake Forest to require the fulfillment of all terms of the contract and the delivery of all improvements embraced in this contract complete and satisfactory to the Town of Wake Forest in all details.

b) Pay Application

The Pay Application <u>must be submitted</u> promptly and accurately reflecting both the work completed during the billing period and <u>the line items completed per street</u>. Additionally, the contractor must keep accurate records of line items completed for each street and pay period. These records shall be provided upon request by the Director of Engineering or their representative during the review of the submitted Pay Application for the relevant period.

c) Retainage

Retainage will be deducted in accordance with Section 30 of the Contract documents.

d) Final Payment

i. After final inspection and acceptance by the Town of Wake Forest and Director of Engineering all work under the contract, the Contractor shall prepare his requisition for final payment which shall be the sum of the Bid Unit Prices multiplied by the quantities actually issued or this sum adjusted by approved change orders less prior payments. Final payment request must be accompanied by the Final Payment Affidavit.

ii. The Town of Wake Forest before paying the final estimate may require the Contractor to furnish releases or receipts from all subcontractors having performed any work and all persons having supplied materials, equipment, and services to the Contractor, if the Town of Wake Forest deems the same necessary in order to protect its interest. The Town of Wake Forest, however, may, if it deems such action

advisable, make payment in part or in full to the Contractor without requiring the furnishing of such releases or receipts and any payments so made shall in no way impair the obligations of any surety or sureties furnished under the contract.

iii. Withholding of any amount due the Town of Wake Forest as "Liquidated Damages", shall be deducted from payments due to the Contractor. The Town may withhold on account of subsequently discovered evidence, nullify whole or part of any certificate to such extent as may be necessary to project itself from loss on account of:

- Defective work not remedied.
- Claims filed or reasonable evidence indicating probable filing of claims.
- Failure of the Contractor to make payments properly to Subcontractor or for materials or labor.
- A reasonable doubt that the Contract can be completed for the balance unpaid.
- Damage to another Contractor.

When the above items have been cleared to the satisfaction of the Director of Engineering, payment shall be made for amounts withheld because of them.

23. Town's Right to Terminate Contract:

If the Contractor should be adjudged as bankrupt, or if he should make a general assignment for the benefit of his creditors, or if a receiver should be appointed on account of insolvency, or if he should persistently or repeatedly refuse or should fail, except in cases for which extension of time is provided, to supply enough properly skilled workmen or proper materials, or if he should fail to make prompt payment to Subcontractors or for material or labor, or persistently discharged laws, ordinances or the instructions of the Director of Engineering, or otherwise be guilty of a substantial violation of any provision of the contract, then the Town, upon the certificate of the Director of Engineering that sufficient cause exists to justify such action, may without prejudice to any other right or remedy and after giving the Contractor seven days written notice, terminate the employment of the Contractor and take possession of the premises and of all materials, tools, appliances, there and finish the work by whatever method it may deem expedient. In such case, the Contractor shall not be entitled to receive any further payment until the work is finished. If the unpaid balance of the contract price shall exceed the expense of finishing the work, including compensation for additional managerial and administrative services, such excess shall be paid to the Contractor. If such expense shall exceed the unpaid balance, the Contractor shall pay the difference to the Town. The expense incurred by the owner as herein provided, and the damage incurred through the Contractor's default, shall be certified by the Director of Engineering.

24. Contractor's Right to Stop Work or Terminate Contract:

If the work should be stopped under an order of any Court, or other public authority, for a period of three months, through no act or fault of the Contractor or of anyone employed by him, then the Contractor may, upon seven days written notice to the Director of Engineering, stop work or terminate this contract and recover from the Town payment for all work executed and loss sustained upon any plant or materials and reasonable profit and damages.

25. Liability Insurance:

The Contractor shall maintain such insurance as will protect him from claims under workman's compensation acts and such other insurance as will protect him and the Town from any other claims for damages for property damage and personal injury, including death, which may arise from operations under this contract whether such operations be by himself, or by any subcontractor or anyone directly or indirectly employed by either of them. Certificates of insurance shall be filed with the Director of Engineering, if he so requires, and shall be subject to his approval for adequacy of protection. Policies of insurance coverage for personal liability and property damage shall be submitted.

26. Care of Work:

a) The Contractor shall be responsible for all damages to person or property that occur as a result of his fault or negligence in connection with the prosecution of the work and shall be responsible for protection of all materials delivered and work performed until completion and final acceptance, whether or not the same has been covered in whole or in part by payments made by the Town of Wake Forest.

b) In an emergency affecting the safety of life or property, including adjoining property, the Contractor, without special instructions or authorization is authorized to act at his discretion to prevent such threatened loss or injury and he shall so act. He shall likewise act if instructed to do so by the Town of Wake Forest. Any compensation claimed by the Contractor on account of such emergency work will be determined by the Town of Wake Forest as provided in Section 15 "CHANGES IN WORK" under GENERAL CONDITIONS.

c) The Contractor shall avoid damage as a result of his operations to existing sidewalks, streets, curbs, pavements, utilities (except those which are to be replaced or removed), adjoining property, etc., and he shall at his own expense completely repair any damage thereto caused by his operations.

d) The Contractor shall shore up, brace, underpin, secure, and protect as may be necessary, all foundations and other parts of existing structures adjacent to, adjoining, and in the vicinity of the site, which may be in any way affected by the excavations or other operations connected with the construction of the improvements embraced in this contract. The Contractor shall be responsible for the giving of any and all required notices to any adjoining or adjacent property owner or other party before the commencement of any work. The Contractor shall indemnify and save harmless the Town of Wake Forest from any damages on account of settlements or the loss of lateral support of adjoining property and from all loss or expense and all damages for which the Town of Wake Forest may become liable in consequence of such injury or damage to adjoining and adjacent structures and their premises. Any claim for damage arising under this contract shall be made in writing to the party liable within reasonable time of the first observance of such damage.

27. Safety and Accident Prevention:

a) General

The Contractor shall exercise proper precautions at all times for the protection of persons and property and shall be responsible for all damages to persons or property, either on or off the site, which occur as a result of his prosecution of the work. The Contractor shall abide by all applicable

safety standards and regulations contained in the Occupational Safety and Health Act, for the construction industry and any other applicable Laws.

i. All excavation and trenching work shall conform to OSHA requirements under 29 CFR Part 1926 Subpart P and any other applicable requirements.

ii. The Contractor shall have an employee who is a designated competent person as described under OSHA regulations, 29 CFR Part 1926 Subpart P. The person shall be capable of identifying existing or predictable hazards in the surroundings, or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.

iii. The Contractor shall provide and maintain safety equipment as outlined under OSHA 29 CFR Part 1926 Subpart P and other applicable safety provisions, which include trench boxes, ladders, shoring, barricades, warning vests, gas monitors, meter for hazardous atmospheres and other necessary safety equipment to protect the employees and the job site.

b) Records

The Contractor shall maintain an accurate record of all cases of death, occupational diseases, and injury requiring medical attention or causing loss of time from work, arising out of and in the course of employment on work under the contract. The Contractor shall promptly furnish the Town of Wake Forest with reports concerning these matters.

c) Indemnity

The Contractor shall indemnify and save harmless the Town of Wake Forest from any claims for damages resulting from personal injury and/or death suffered or alleged to have been suffered by any person as a result of any work conducted under this contract.

29. <u>Sanitary Facilities:</u>

The Contractor shall furnish, install, and maintain ample sanitary facilities for the workers. As the needs arise, a sufficient number of enclosed temporary toilets shall be conveniently placed as required by the sanitary codes of the State and Town of Wake Forest. Drinking water shall be provided from an approved source, so piped or transported as to keep it safe and fresh and served from single service containers or satisfactory types of sanitary drinking stands or fountains. All such facilities and services shall be furnished in strict accordance with existing and governing health regulations.

30. <u>Use of Premises:</u>

a) The Contractor shall confine his equipment, storage of materials, and construction operations to the contract limits as shown on the Drawings or if no contract limits are shown, to the right of way shown and as prescribed by ordinances or permits or as may be directed by the Town of Wake Forest and shall not unreasonably encumber the site or public rights of way with his materials and construction equipment.

b) The Contractor shall comply with all reasonable instructions of the Town of Wake Forest and the ordinances and codes of the Town of Wake Forest, regarding signs, advertising, traffic, fires, explosives, danger signals, and barricades.

31. Liens:

Neither the final payment nor any part of the retained percentage shall become due until the Contractor, shall deliver to the Town a complete release of all liens arising out of the contract, or receipts in full in lieu thereof and, if required in either case, an affidavit that so far as he has knowledge or information the releases and receipts include all labor and materials for which a lien could be filed but the Contractor may, if any subcontractor refuses to furnish a release or receipt in full, furnish a bond satisfactory to the Director of Engineering, to indemnify the Town against any lien. If any lien remains unsatisfied after all payments are made, the Contractor, shall refund to the Town all monies that the latter may be compelled to pay in discharging such a lien, including all costs and a reasonable attorney's fee.

A copy of the Affidavit is included with the Payment Bond Contract and shall be submitted with the Contractor's request for final payment.

32. Working Time Restrictions:

Intermediate Contract Time No. 1

No work on or street obstruction shall occur during the peak traffic hours of 6:30 a.m.-8:30 a.m. or 5:00 p.m.- 7:00 p.m., Monday through Friday, on the following streets.

a) Any street within the Town having a marked centerline or having marked lanes.

b) All streets with five (5) or more traffic lanes at the point of work, all streets with two (2) traffic lanes in each direction divided by a median, and all streets within the business area and district.

Work adjacent to traffic lanes may occur during these hours if proper signage and safety precautions are in effect as described in latest edition of the Manual on Uniform Traffic Control Devices.

The Contractor shall have monies withheld due to public inconvenience, obstruction and delay to traffic, safety, and other considerations, for any work performed on time restricted streets during 7:00 a.m. to 9:00 a.m. or 4:00 p.m. to 6:00 p.m., Monday-Friday at the rate of $500.00 for every 15 minutes of violation or fraction thereof.

All town noise ordinances shall be observed, and Contractors are required to satisfy Town's ordinances Article III, Section 14-70.

No traffic lane closure (through or turn lane) shall occur on Red Alert Days. Red Alert Days are determined by North Carolina Ozone Forecast Center, Division of Air Quality.

The Contractor shall notify the Director of Engineering 72 hours in advance of any work scheduled on weekends.

No work on or street obstruction shall occur near heavy traffic generating venues during events such as, but not limited to amphitheaters, churches (Sunday), stadiums, etc. as directed by the Town. Such events shall include, but are not limited to, concerts, road races, parades, festivals, etc.

Intermediate Contract Time No.2

Night work shall be performed between the hours of 7:00 p.m. to 6:00 a.m. unless otherwise specified. Night shift work pay quantities shall be recorded on the day the shift begins. Patching,

milling, and resurfacing operations shall be performed at night on the following streets: Chalk Rd, Hampton Way Dr, Heritage Branch Rd, N White St, Northpark Dr, Retail Dr, and Rock Spring Rd.

At the Town's election, concrete work, and utility adjustments may be allowed during daytime operations on the above maps. At no time will final milling and paving be allowed during daytime hours.

Message Boards will be required three (3) days in advance of work beginning for traffic notification.

The Contractor shall have monies withheld due to public inconvenience, obstruction and delay to traffic, safety, and other considerations, for any work performed on night work restricted streets during 6:00 a.m. until 7:00p.m. Monday-Friday at the rate of $500.00 for every 15 minutes of violation or fraction thereof.

Intermediate Contract Time No. 3

Streets within school zones shall be resurfaced when schools are not in session. All other work may be performed during hours which do not impact school vehicular and pedestrian traffic.

The last day of school on the traditional calendar is June 12, 2024, and the first day is August 28, 2024.

Additionally, no resurfacing work shall not take place during hours of 7am-9am and 3pm-5pm Monday through Friday on streets adjacent to daycares.

The Contractor shall have monies withheld due to public inconvenience, obstruction and delay to traffic, safety, and other considerations, for any work performed on these streets during times that impact school traffic at a rate of $500.00 for every 15 minutes of violation or fraction thereof.

Intermediate Contract Time No. 4

For all streets that have milling recommendations as Full Mill (0"-2") or Mill & Fill (0"-3") at any depth, shall be paved back within 72 hours of initial milling activities for the street. Streets which also fall under ICT No.1 or No.2 shall be paved back to the same station and elevation the same workday that they are milled.

The Contractor shall have monies withheld due to public inconvenience, obstruction and delay to traffic, safety, and other considerations, for any work performed on these streets during at a rate of $500.00 for every calendar day past either the 72-hour requirement or same working day requirement, whichever one applies for the individual street.

34. Holiday Time Restrictions

The Contractor shall not narrow or close a lane of traffic on any road, detain and /or alter the traffic flow, and/or perform any work on or during holiday weekends, special events, or any other time when traffic is unusually heavy, including the following schedules without first obtaining approval from the Town of Wake Forest project representative:

a) For unexpected occurrence that creates unusually high traffic volumes, as directed by the Engineer.

b) For New Year's Day, between the hours of 6:00 P.M. December 31st and 7:00 A.M. January 2nd. If New Year's Day is on a Friday, Saturday, Sunday, or Monday, then until 7:00 A.M. the following Tuesday.

c) For Easter, between the hours of 6:00 P.M. Thursday and 7:00 A.M. Monday.

d) For Memorial Day, between the hours of 6:00 P.M. Friday and 7:00 A.M. Tuesday.

e) For Independence Day, between the hours of 6:00 P.M. the day before Independence Day and 7:00 A.M. the day after Independence Day. If Independence Day is on a Friday, Saturday, Sunday, or Monday, then between the hours of 6:00 P.M. the Thursday before Independence Day and 7:00 A.M. the Tuesday after Independence Day.

f) For Labor Day, between the hours of 6:00 P.M. Friday and 7:00 A.M. Tuesday.

g) For Veteran's Day, between the hours of 6:00 PM November 10th and 7:00 AM November 12th.

h) For Thanksgiving Day, between the hours of 6:00 P.M. Tuesday and 7:00 A.M. Monday.

i) For Christmas, between the hours of 6:00 P.M. the Friday before the week of Christmas Day and 7:00 A.M. the following Tuesday after the week of Christmas Day.

Holidays and holiday weekends shall include New Year's, Easter, Memorial Day, Independence Day, Labor Day, Thanksgiving, and Christmas. The Contractor shall schedule his work so that lane closures are not required during these periods, unless otherwise directed by the Engineer.

The time of availability for this intermediate contract work shall be the time the Contractor begins to install all traffic control devices for lane closures according to the time restrictions listed herein.

The completion time for this intermediate contract work shall be the time the Contractor is required to complete the removal of all traffic control devices for lane closures according to the time restrictions stated herein and place traffic in the existing traffic pattern.

The Contractor shall have monies withheld due to public inconvenience, obstruction and delay to traffic, safety, and other considerations, for any work performed during Holiday Time Restrictions at the rate of $500.00 for every 15 minutes of violation or fraction thereof.

35. <u>Assignment:</u>

Neither party to the contract shall assign the contract or sublet it as a whole without the written consent of the other, nor shall the Contractor assign any monies due or to become due to him hereunder, without previous written consent of the Board of Commissioners of the Town of Wake Forest.

36. <u>Citizen Notification:</u>

The contractor shall be responsible for notifying, in writing, all property owners/residents directly affected by this project just prior to beginning construction. A copy of this notification shall be submitted and approved by the Director of Engineering or his duly appointed representative prior to its issuance to the residents. This also includes all businesses whether owned, leased or rented by the property owner of record.

Notices are to be mailed and delivered. Hand delivered notices shall be door-hanger type printed on card stock.

The contractor shall distribute Notice of Schedule to resurface Notice of Work a minimum of 1-MONTH in advance of when resurfacing is planned. Notice of Schedule sent to residents should consist of no more streets than the streets proposed for resurfacing for a 1-week period.

The contractor shall distribute Notice of Work and signs to be performed a minimum of 72-HOURS but no more than 2-WEEKS prior to performing such work. In the event resurfacing is scheduled for a weekend or holiday, the Notice of Work and signs shall be distributed a minimum of 72-HOURS but no more than 120-HOURS prior to the resurfacing.

The contractor shall post "Temporary No Parking" signs at least 3 feet above ground in conspicuous places facing traffic a minimum of 72-HOURS prior to actual resurfacing with a maximum spacing of 100 ft. required. A closer spacing may be required as directed by the Town of Wake Forest. Parking shall not be restricted for more than 7 days unless approved by the Town. The expected date and duration of resurfacing shall be posted on the "Temporary No Parking" sign. The duration for temporarily prohibiting parking shall not exceed 7 days. It shall be the contractor's responsibility to update the "Temporary No Parking" signs and work dates with any changes to the project schedule. Updates to the signs must be documented. Pictures with time stamps are the preferred documentation. Other forms of documentation need approval from the Town's engineer. It is the contractor's responsibility to keep this record and provide it if requested. The cost of towing and vehicle storage will be the responsibility of the contractor if proof of posted signs and notices cannot be provided.

The time of day that "Temporary No Parking" signs and Notices of Work are posted should be recorded along with the license numbers of cars parked on the street at that time and a copy made available for the Director of Engineering and the POLICE DEPARTMENT if towing is necessary. The document is to be electronic and searchable.

If towing is necessary, the Director of Engineering or his designee will make the final decision if the vehicles are to be towed. The time and location in which the "Temporary No Parking" signs were posted, and the Notices of Work were distributed will be a considering factor for the towing of vehicles.

On the day of actual work, any towing necessary shall be the responsibility of the Contractor, in accordance with Town of Wake Forest Codes, Section 30-3 and Section 30-53, and Section 30-164. Police contact number is 919-554-6150.

Special permission may be required by agencies performing work within the street right-of-way under the following conditions. This permit may be required when:

(a) When the traveled portion of the roadway is obstructed between the hours of 7 a.m. to 9 a.m. and 4 p.m. to 6 p.m. if the street involved is marked with either painted center lines or lane lines.

(b) Any street which is totally closed to through traffic.

(c) Any streets within the business area.

contractor shall notify the Town during distribution of citizen notifications if the street meets the above criteria. Any needed permits shall be coordinated through the Engineering Department in advance. The Director of Engineering has the authority to approve or deny issuance of any permit.

37. Separate Contracts:

The Town reserves the right to let other contracts in connection with this work. The Contractor shall afford other Contractors reasonable opportunity for the introduction and storage of their materials and the execution of their work and shall properly connect and coordinate his work with others.

38. Subcontracted Work and Subcontractors:

a) The Contractor shall, as soon as practicable after the signing of the contract, notify the Director of Engineering in writing of the names of subcontractors proposed for the work and shall not employ any subcontractors that the Director of Engineering may within a reasonable time object to as incompetent or unfit. The Contractor agrees that he is as fully responsible to the Town for the acts and omissions of his subcontractor and of persons either directly or indirectly employed by them, as he is for the acts and omissions of persons directly employed by him. Nothing in the Contract Documents shall create any contractual relation between any subcontractor and the Town.

b) The Contractor shall obtain approval of subcontractors as well as any change in subcontractors during the work on the contract from the Director of Engineering. A period of seven (7) days minimum is required for the approval of a subcontractor.

39. Points and Instructions:

The Contractor shall provide reasonable and necessary opportunities and facilities for setting points and making measurements. He shall not proceed until he has made timely demand upon the Director of Engineering for, and has received from him, such points and instructions as may be necessary as the work progresses. The work shall be done in strict conformity with such points and instructions.

The Contractor shall carefully preserve benchmarks, reference points, markings and stakes, and in case of willful or careless destruction, he shall be charged with the resulting expense and shall be responsible for any mistakes that may be caused by their unnecessary loss or disturbance.

40. Status of Director of Engineering:

The Director of Engineering shall have general supervision and direction of the work. He has authority to stop the work wherever such stoppage may be necessary to insure proper execution of the contract. He shall also have authority to reject all work and materials which do not conform to the contract, to direct the application of force to any portion of the work, as in his judgment is required, and to order the force increased or diminished, and to decide questions which arise in the execution of the work.

41. Director of Engineering's Decision:

The Director of Engineering shall, within a reasonable time after their presentation to him, make decisions in writing on all claims of the Town or the Contractor and on all other matters relating to the execution and progress of the work or the interpretation of the contract documents. All such decisions of the Director of Engineering shall be final.

42. Lands for Work:

The Town shall provide the lands upon which the work under this contract is to be done, except that the Contractor shall provide land required for the erection of temporary construction facilities and storage of his materials, together with right of access to same.

43. Cleaning Up:

The Contractor shall, as directed by the Director of Engineering, remove from the Town's property and from all other public and private property, at his own expense, all temporary structures, rubbish, and waste materials resulting from his own operations.

44. Access to Property:

The Contractor shall, where necessary, provide and maintain access to and from all properties along the line of his work.

45. Safeguards:

The Contractor shall provide, erect, and maintain adequate barricades, warning signs, and lights at all excavations, closures, detours, and points of danger.

46. Survey Construction Stakes:

a) The Town shall furnish all surveys unless otherwise specified.

b) The Director of Engineering will set sufficient points to establish alignment and grade. The Contractor shall be responsible for preserving all stakes and marks.

47. Materials Sampling and Testing:

All tests of material shall be made by a recognized and approved testing laboratory designated by the Director of Engineering. The expense of such tests shall be borne by the Town unless otherwise specified.

The Engineer shall have the option to reject request for testing due to the Contractor's inadequate preparation of material or other reasonable causes determined by the Engineer as necessary for the delay of testing. The Contractor shall notify the Director of Engineering 48 hours ahead of time for the needed test.

48. Tools, Plant and Equipment:

If at any time before the commencement or during the work, tools, plant, or equipment appear to the Director of Engineering to be insufficient, inefficient, or inappropriate to secure the quality of the work required or the proper rate of progress, the Director of Engineering may order the Contractor to increase their efficiency, to improve their character, to augment their number, or to substitute new tools, plant or equipment as the case may be, and the Contractor must conform to such order; but the failure of the Director of Engineering to give such an order shall not relieve the Contractor to secure the quality of work and the rate of progress necessary to complete the work within the time required.

49. Measurement of Quantities:

The quantities of work performed will be computed by the Director of Engineering on the basis of measurements taken by him or his assistants, and these measurements shall be final and binding. The specifications shall designate the manner in which the measurements of the various types of work shall be measured.

50. Working Day Defined:

A day shall be counted as a working day in the opinion of the Director of Engineering, whether conditions would permit the Contractor to do six (6) hours of work within daylight hours. Days of delay due to acts of GOD, strikes, court orders, and things of like nature causing delay of the work shall not be counted a working day. The Director of Engineering shall keep a daily record of working conditions and when requested to do so, he/she shall furnish the Contractor within a reasonable time the number of working days that have elapsed.

Unless crews are on site prior to 1:00 p.m. of any workday, the Director of Engineering has the right to refuse any work that the Contractor may do. To start work after 1:00 p.m. on a workday, the Contractor must have prior permission from the Director of Engineering. Should this occur, it will be counted as a working day that the Contractor should have worked. It will not be counted as a day of delay. When work is to resume, one (1) day prior notice must be given to the Director of Engineering. That work will begin the next There are specific streets that need to be paved on weekends (Saturday and Sunday). Where possible, streets that can be identified, will be marked, streets not marked on Contract, as weekend work, may be added by the Transportation Director. Advance notice must be given to Contractor, and a date mutually set to pave on that weekend.

51. Project Time Defined:

Project time shall consist of all calendar days, including weekends and holidays, from the contract notice to proceed date through the specified number of days allowed for the completion of the project in the contract document. The Contractor has been given a project time inclusive of an anticipated amount of bad weather, be it due to the winter months or abnormal rainfall during the remainder of the calendar year.

52. Guarantee of Work:

The Contractor shall guarantee his work performed under his contract against failures or trouble due to faulty workmanship or materials for a period of twelve (12) months from the date of acceptance of the work.

53. Force Account Work:

Force account work shall be performed when pricing associated with changes in work in Item 15 cannot be agreed upon by the Town and Contractor.

No work shall begin without the express approval of the Director of Engineering or his authorized agent.

All information shall be submitted and approved along with recordkeeping performed in accordance with the North Carolina Department of Transportation Standard Specifications Article 109-3.

54. Disposal of Waste Materials from Street and any Other Types of Construction:

Disposal of all waste material from construction sites shall be made in strict accordance with all Town ordinances pertaining to disposal of construction waste. It shall be the responsibility of the Contractor to secure the necessary permits and provide all information required to secure said permits. The Contractor shall designate the disposal site prior to beginning construction and in the event waste material is to be disposed of on private property a letter from the property owner shall be furnished the Director of Engineering granting the Contractor or his agent such permission and listing the requirements made by the property owner or the Contractor, if any.

55. <u>Contractor License:</u>

All invited bidders and contractors shall be advised that those who submit formal bids on this project must be licensed in the State of North Carolina whether he (they) is/are a resident or nonresident of this State, in accordance with GS 87 10 and shall be advised that they must show evidence of a license issued by the North Carolina Licensing Board for General Contractors before the bid is considered. The bidders are advised that Article 37 Subcontractors, of the General Conditions shall be strictly adhered to during the term of this contract.

56. <u>Emergency Work Crew:</u>

The Contractor and/or the Contractor's subcontractors shall provide an emergency repair crew with adequate trucks and other equipment available when needed to make repairs, clean up, signing and other work required in connection with this contract. This repair crew shall be on call during non-working hours and during weekends and holidays. The name, address, and phone number of at least two responsible members of this crew shall be provided the Director of Engineering or his representatives prior to beginning any work. The members of this crew shall be based, reside, live, or stay in Wake County during the periods that they are on call. Should this "emergency" crew be unavailable for any reason when needed, the Town shall have the right have the required work performed by the quickest means available and the Contractor shall be back charged at a rate of two (2) times the total cost to the Town.

57. <u>Construction Water:</u>

a) Contractors are responsible for securing adequate construction water for their job sites.

b) All construction water usage must be metered and will be billed to the Contractor. The Contractor must contact the Public Utilities Department, Meter Services Division (919-250-2737) to make the applicable arrangements for billing the water usage. The Contractor may provide his own meter or if available upon advance notice to the Public Utilities Department, a number changed to meter will be provided. If the Contractor provides his own meter it must meet City of Raleigh standards for the meter and include a backflow device.

c) Construction water for all Town contract projects shall be billed by the City of Raleigh, Public Utilities Department.

d) Contractors must furnish the following information for water usage.

   i. Meter location and project name.

   ii. Address where applicable and responsible party name.

   iii. Duration of use and frequency of meter reading.

e) Contractors observed using unmetered water will be fined by the City of Raleigh, Public Utilities Department in accordance with City of Raleigh Code provisions.

f) Contractors are to reference the Public Utilities Handbook, Part 10, entitled Construction Specifications for Water and Sewer Mains, for additional regulations applicable to construction water usage.

58. Dust Control:

The Contractor shall, as directed by the Director of Engineering provide adequate equipment and use other available means to control the dust during the term of this contract. Failure on the part of the Contractor to correct dust control problems as directed will result in the Director of Engineering notifying the Contractor to comply with the contract provisions. In the event that the Contractor fails to begin such remedial action within 24 hours after receipt of such notice, the Director of Engineering may proceed to have the work performed with other forces. The actual cost of the work so performed along with a 20% administrative fee will be deducted from monies due to the Contractor on his contract. Under adverse conditions, the Director of Engineering may choose to suspend the Contractor's operations on the project until all dust control problems have been completed to his satisfaction. Such suspension will not justify an extension of contract time.

59. Traffic Control:

All traffic control shall be performed in accordance with the latest edition of the Manual on Uniform Traffic Control Devices (MUTCD) and NCDOT Standard Drawings.

The contractor shall provide all traffic control devices and signs including Portable Changeable Message Signs (PCMS) in accordance with MUTCD to warn the traveling public. PCMS are required on all streets with four (4) or more marked lanes. PCMS shall be installed at least three (3) days in advance of work and maintained throughout the duration of the work.

Two-way traffic shall be maintained at all times unless otherwise approved by the traffic control plan. Total road closures shall not be allowed.

Any work performed without traffic control per MUTCD, will not be paid for by the Owner.

60. Clearing Tree Limbs and Vegetation:

It shall be the responsibility of the Contractor to remove vegetation and tree limbs less than 6” diameter from the street right-of-way that present an obstruction to performing street maintenance on the streets listed in the Contract. No separate payment will be made for clearing tree limbs and vegetation as such work will be incidental to resurfacing.

The Contractor shall notify the Town at least 30 days in advance of the scheduled work of any tree limbs 6” diameter or greater for the Town to have removed.

The Contractor shall notify the Town at least 30 days in advance of the scheduled work of any shrubs or ornamental trees on private property that overhang into the right-of-way and present an obstruction. The Town will arrange for the obstruction to be removed.

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STANDARD GENERAL PROVISIONS

All construction shall conform to pertinent OSHA requirements, City of Raleigh Standards and Specifications, Town of Wake Forest Standards and Specifications, and NCDOT Standard Specifications for Roads and Structures. Editions in effect at the time of the bid date shall govern.

1. Construction Progress Schedule and Bi-Weekly Meetings

The Contractor shall provide, at the pre-construction conference, a completed Town of Wake Forest progress schedule. The schedule shall be kept up to date and presented with each month's billing information and shall be made available at the bi-weekly progress meetings and at other times as may be deemed necessary by the Director of Engineering or his representative. The Contractor will be represented at bi-weekly progress meetings during the construction of this project. The meetings will be held at the project site or in the Town offices as determined by the Town.

2. Contract Completion and Progress Schedule Liquidated Damages

1) If this Contract is awarded, the bidder must, upon completion of this Contract, or at any other time requested, furnish to the Town of Wake Forest an accurate itemized statement of North Carolina Sales Tax paid on materials, supplies, equipment, and any other items charged to this Contract, and otherwise fully comply with the "Procedure for Reporting North Carolina Sales Tax Expenditures", attached.

2) The bidder further agrees to begin work within 10 calendar days from date of Contract Notice to Proceed.

3) The bidder represents and agrees to complete resurfacing work by September 30, 2025, and all other work by October 15, 2025.

Failure to complete the work within the contract time will result in damages due to public inconvenience, obstruction and delay to traffic, safety, and other considerations. For each consecutive calendar day in excess of the contract time specified, the Contractor shall pay, or have withheld monies due, a sum of ONE THOUSAND DOLLARS ($1,500.00) per day.

3. Unit Bid Price

The unit bid price on the items in this contract shall include all materials, labor, equipment, and incidentals necessary to satisfactorily install said items completely in place and accepted unless otherwise mentioned in this contract document.

4. Point of Contact

The Contractor upon start of construction shall provide the Engineer with names, addresses, and telephone numbers of two people to be contacted after office hours in case of emergency.

5. Material Tickets

The Contractor shall turn in all material tickets for the purpose of payment to the Project Inspector on a daily basis.

6. Trenches

All trenches shall be backfilled and made safe at the end of each workday. Payment for installation of utility and drainage lines that requires open cut to existing pavement shall include the cost of pavement for repairs (including pavement saw cut and removal) as incidental to the installation of the utility. No separate payment will be made for this work unless otherwise specifically mentioned in this contract.

7. Subsurface Investigation

The Contractor shall make his/her own subsurface investigations. Any information obtained by the Town as a result of its own subsurface investigations will be made available upon request. This information is provided for informational purposes only and shall not relieve the Contractor of responsibility for making his own investigations.

8. Grading, Shoulders and Slopes

Shoulders and slopes shall be free of all stone and clods that exceed one inch in diameter. Fine grading (raking) shall take place just before seeding and mulching. No separate payment will be made for shoulder construction or material for shoulder construction as all work necessary to complete the work will be considered incidental to other items in the contract unless otherwise provided in the contract.

9. Traffic Control

The Contractor shall provide all traffic control devices and signs to warn the traveling public in accordance with the latest Manual on Uniform Traffic Control Devices (MUTCD) and NCDOT Standard Drawings. Two-way traffic shall be maintained at all times, unless otherwise required by the traffic control plan.

10. Materials and Equipment Storage and Parking

When vehicles, equipment, and materials are not being actively used they shall be moved at least 30 feet away from the edge of any travel way open to traffic (or as directed by the Engineer). All debris shall be immediately moved to a location at least 30 feet from the edge of any travel way open to traffic. If vehicles, equipment, materials, and debris are protected by guardrail or barrier, a 5-foot minimum offset from the rail shall be used.

11. Personnel Parking

All personnel involved with construction operations shall not park their personal vehicles within the right of way of the project limits for the duration of the construction project. The Contractor shall furnish a parking area that is located off the project limits. The Contractor shall be responsible for daily transportation of all employees to and from the provided parking area and the project site.

There will be no direct payment for the work cover by this provision. Payment at the contract unit prices for the various items in the contract will be full compensation for all work covered by this provision.

12. Sidewalk, Driveway, Curb & Gutter Removal and Replacement

Care should be taken during construction to avoid damaging the existing sidewalk, curb & gutter, and pavement outside the immediate construction area. If damaged, it shall be replaced in accordance with the NCDOT Standard Specifications for Roads and Structures, Town of Wake Forest Standards, as determined by the Engineer, without extra cost to the Town. Prior to construction, the Contractor shall inspect the site and report to the Engineer any damages existing before construction.

The Contractor shall be advised that when a portion of any area of concrete driveways, curb and gutter and pavement must be removed, all areas to be removed shall be defined by a machine-sawed joint, prior to

removal. Saw cut of concrete driveway, curb & gutter and pavement are considered incidental to removal unless otherwise provided in the contract.

13. Maintenance of Mailboxes, Signs, Miscellaneous Appurtenances

The Contractor shall be required to maintain mailboxes, signs and all miscellaneous appurtenances impacted by construction activities in working order for the duration of construction as directed by the Engineer. Work on the same items shall be done in a timely manner. No separate payment for work on these items will be made as the work will be considered incidental to other items in the contract unless otherwise mentioned in the contract document.

14. Project Completion

When the project is nearing completion, the Town will obtain comments from the impacted property owners concerning items that are outstanding, yet to be completed. The Engineer will determine which items have sufficient justification to be included in the final punch-list, and the Contractor will be required to complete these items with no additional payment and in a timely fashion.

15. Videotape of Project Site

The Contractor will videotape the project site in its entirety before construction begins, with emphasis on properties adjoining the project, drives, trees, appurtenances, and other distinguishing features. Appropriate narration will include location and description of property and physical features. The Contractor will provide two copies of the project tape in USB or Electronic format to the Town. No separate payment will be made for this work, and all associated costs will be considered incidental to other items in the contract.

16. Coordination with Utility Companies

(See Article 13 of General Conditions)

Utilities as shown on the plans are intended to represent general locations only. It shall be the responsibility of the Contractor, prior to construction, to contact appropriate utility owners and precisely locate utilities that could be affected by the proposed construction. If the utility belongs to the Town of Wake Forest or the City of Raleigh, the Contractor shall dig sample holes to uncover the utility. The digging of sample holes shall be coordinated with the Engineer who will determine the number of such holes and will schedule the Town of Wake Forest or the City of Raleigh to locate utility vertical and horizontal locations. There is no line item to pay for digging work. Work is considered incidental to other pay items.

The Contractor shall be responsible for repair of any damage to the utility as well as any other damage may be caused due to the disturbance of the utility. The Contractor will not be permitted to submit any claims for delays caused by utility relocation and proposed utility construction.

The Town has coordinated designs of utility relocation with private utility owner representatives. Existing utility, design and conflict resolution plans are included as a part of the contract.

The Contractor shall be responsible for coordinating concurrent construction directly with utility owner representatives. Coordination efforts and concurrent construction conflicts will be addressed and discussed during the pre-construction meeting. The Town, at the time of pre-construction conference, will provide names, addresses and telephone numbers of private utility owner representatives.

All underground utilities may not have been identified. The Contractor shall call North Carolina One Call to identify underground utilities before starting any digging and/or excavation operation.

The Contractor shall be responsible for field verifying heights and locations of power lines and will be required to maintain the distance from the power lines in accordance with local, State and Federal Safety regulations.

17. <u>Protection of Existing Plants</u>

The work under this item shall consist of the protection of selected trees, shrubs, or other woody plants.

The plants protective fencing shall meet the requirements of Town of Wake Forest. Fencing shall encompass the plants to the dripline. Deviations from this must be approved by the Engineer.

Plant protective fencing shall be installed prior to beginning any construction on this project. Plant protective fencing shall be constructed at the locations as directed by the Engineer and in accordance with Town specification. The fencing shall be maintained in place until all construction operations in that particular area are complete. At completion, only light grading equipment such as small agricultural tractors shall be allowed on the plants' roots. Fill dirt no deeper than two inches shall be allowed under the limb spread of any plant.

No building materials, dirt, or equipment shall be stored inside the protective fencing. Plants that die as a result of the Contractor's negligence shall be removed and replaced as directed by the Engineer at the Contractor's expenses. The new plant shall be guaranteed for a year, planted in the proper season, and planted with approved arboricultural specifications.

The Contractor will be required to cooperate with other contractors, utility companies and others needing access to the project site as (approved by the engineer) to complete the work.

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PROJECT SPECIAL PROVISIONS

SECTION 1: MOBILIZATION

Description

This work consists of preparatory work and operations to mobilize personnel, materials, and equipment to the project site.

Measurement and Payment

Mobilization will be paid as the contract lump sum price when the Contractor initially mobilizes. Contractor may elect to either draw fractions of the lump sum throughout project or the whole lump sum once.

SECTION 2: RESURFACING

Trackless Tack

Description

Trackless tack shall be used as the tack coat material. In the event that trackless tack is unavailable, standard tack coat material that meets NCDOT Standard Specifications shall be used. Standard tack material shall be incidental to the asphalt surface course. Asphalt tack coat shall be in accordance with the latest version of NCDOT Standard Specifications for Roads and Structures section 605. There will be no direct payment for work covered by this section. Payment at the contract unit prices for the various mix items covered by section 610, 650 and 654 will be full compensation for all work covered by this section.

Weather Limitations

Apply tack coat material to existing asphalt or concrete surfaces in accordance with NCDOT Specifications. Apply tack coat only when the surface to be treated is sufficiently dry and when the atmospheric temperature in the shade away from artificial heat is 35 degrees F or above. Do not apply tack coat when the weather is foggy or rainy.

Surface Preparation

Ensure that the existing asphalt or concrete surface is free of all dust and foreign material before applying the tack coat. Remove grass, dirt, and other materials from the edge of the existing pavement before the placement of tack coat.

Application Rates and Temperatures

Apply tack coat uniformly across existing surface at target application rates shown in Table 605-1.

TABLE 605-1 APPLICATION RATES FOR TACK COAT	
Existing Surface	**Target Rate (gal/sy)** **Emulsified Asphalt**
New Asphalt	0.04 ± 0.01
Oxidized or Milled Asphalt	0.06 ± 0.01
Concrete	0.08 ± 0.01

Apply tack coat at a temperature within the ranges shown in Table 605-2. Tack coat shall not be overheated during storage, transport, or at application.

TABLE 605-2 APPLICATION TEMPERATURE FOR TACK COAT	
Asphalt Material	**Temperature Range**
Asphalt Binder, Grade PG 58-28 or PG 64-22	350 - 400°F
Emulsified Asphalt, Grade RS-1H	130 - 160°F
Emulsified Asphalt, Grade CRS-1	130 - 160°F
Emulsified Asphalt, Grade CRS-1H	130 - 160°F
Emulsified Asphalt, Grade HFMS-1	130 - 160°F
Emulsified Asphalt, Grade CRS-2	130 - 160°F

Application of Tack Coat

If public traffic is being maintained, cover the tack coat in the same day's operation. Provide safe traffic conditions. If needed, apply suitable granular material so it bonds to the tack coat. In addition, the Engineer may limit the application of tack coat in advance of the paving operation depending on traffic conditions, project location, proximity to business or residential areas or other reasons.

Take necessary precautions to limit the tracking or accumulation of tack coat on either existing or newly constructed pavements. Excessive accumulation of tack coat requires corrective measures.

Apply tack coat with a distributor spray bar that can be adjusted to uniformly coat the entire surface at the directed rate. Use a hand hose attachment only on irregular areas and areas inaccessible to the spray bar. Cover these areas uniformly and completely.

Apply tack coat as directed by and in the presence of the Engineer. Do not place any asphalt mixture until the tack coat has sufficiently cured.

Apply tack coat to all exposed transverse and longitudinal edges of each course before mixture is placed adjacent to such surfaces. Apply tack coat to contact surfaces of headers, curbs, gutters, manholes and vertical faces of old pavements.

Sand, screenings, or other environmentally safe products may be required to prevent tracking the tack coat onto adjacent streets, when directed by the Director of Engineering. The sand screenings shall be minimum

length in order for a haul truck tire to make one full rotation and remain in contact with the screenings. The width shall be the same as the existing roadway. The Contractor shall remove screening materials placed to eliminate tracking upon completion of paving operations each day.

Tack coat material will not be tolerated on the exposed face of curb and gutters. If this occurs, the tack shall be removed as soon as practicable. Special attention shall be utilized while paving in areas with existing granite curb and gutter.

Asphalt Concrete Plant Mix Pavements

Description

Perform the work covered by this section including, but not limited to, the construction of one or more courses of asphalt mixture placed on a prepared surface in accordance with these Specifications and in reasonably close conformity with the lines, grades, thickness and typical sections shown on the plans. This work includes producing, weighing, transporting, placing and compacting the plant mix; furnishing aggregate, asphalt binder, anti-strip additive and all other materials for the plant mix; furnishing scales; maintaining the course until final acceptance of the project; making any repairs or corrections to the course that may become necessary; providing and conducting QC as specified in Section 609 of the NCDOT; and surface testing of the completed pavement.

Perform all activities in accordance with the NCDOT Asphalt Quality Management System (QMS) Manual in effect on the date of contract advertisement.

Asphalt Concrete Surface Course Type S9.5B or S9.5C, as directed by the Engineer, shall be used. It shall be in accordance with Section 610 of the NCDOT Standard Specifications for Roads and Structures.

Asphalt Leveling Course

Asphalt paving consisting of a leveling course may be required on specific streets. This shall be performed as determined by the Director of Engineering and at the same unit price as noted in the Contract. In the event a leveling course is required, this shall be performed prior to the installation of any surface treatment applications if applicable.

Mill & Fill Operations

Streets designated as Mill & Fill shall have their lanes milled, cleaned, and paved. Utility adjustments and patching, as necessary, shall be performed prior to the Mill & Fill process. Mill & Fill operations shall be performed within 1 week after patching on such streets is completed.

Cleaning Streets

It shall be the responsibility of the Contractor to thoroughly clean the street before resurfacing. Any leaves, vegetative material, and debris shall be removed from the Public Right of Way. Depositing any debris or other material behind the curb will not be permitted. If large piles of leaves of other debris exist that in the opinion of the Director of Engineering are in excess of that which is required for the Contractor to remove, they shall be removed by the Director of Engineering provided adequate notice is given for this purpose.

The Contractor shall clean each street of waste materials resulting from his own operations no more than 2 days after the final overlay is complete. Should this period of time be exceeded, all resurfacing operations shall be suspended until streets are clean.

Infrastructure Damage

The Contractor shall be responsible for repairing any damage to the Town of Wake Forest's infrastructure. This includes damage to curb & gutter and pavement. Tack will not be tolerated on the exposed face of curbs and/or gutters. If this occurs, the tack shall be removed immediately. Special attention shall be utilized while paving in areas with existing granite curbs and gutter.

Resident Notification

The Contractor's attention is directed to Article 45, SAFEGUARDS of the General Conditions. In addition to the above, it shall be the responsibility of the Contractor for notification of residents before commencement of work in accordance with the Town Code. A copy of the notification will be provided to the Contractor by the Director of Engineering.

Paving Lift Requirements and Time Limitations

For milling and paving lifts of 3.0 inches or less, bring all newly resurfaced lanes to the same station and elevation within 72 hours. If not brought up to the same station and elevation within 72 hours, the Contractor shall place portable "Uneven Pavement" signs in advance of the uneven pavement and spaced every ½ mile along the section of uneven pavement. Once mitigated, all portable "Uneven Pavement" signs shall be removed. No additional compensation will be made for these signs or any other type of portable warning signs as these are included in the Temporary Traffic Control pay item.

For milling and paving lifts greater than 3 inches, bring all newly resurfaced lanes to the same station and elevation by the end of each workday unless the Contractor utilizes the notched wedge paving methods. Longitudinal joints 2" or greater in difference of elevation shall not be permitted within a travel lane.

ICT No.1- No.4 shall still apply during pave back period after milling activities end.

AC Adjustment

When it is determined that the monthly selling price of asphalt binder on the first business day of the calendar month during which the last day of the partial payment period occurs varies either upward or downward from the base price index, the contract unit price for asphalt binder for plant mix will be adjusted. The adjusted contract unit price will be determined by adding the difference between the selling price and the base price index to the contract unit bid price for asphalt binder.

The adjusted contract unit price will then be applied to the theoretical quantity of asphalt binder authorized for use in the plant mix placed during the partial payment period involved, except that where recycled plant mix is used, the adjusted unit price will be applied only to the theoretical number of tons of additional asphalt binder materials required by the Job Mixed Formula (JMF).

Adjusted contract unit prices for all grades of asphalt binder, including additional asphalt binder materials in recycled mixtures, will be based on the average selling price and base price index for asphalt binder, grade PG 64- 22, regardless of the actual grade required by the JMF.

In determining the adjusted contract unit price for any material specified in this section the following formula will be used:

$$A = B + (D - C)$$

Where:

A = Adjusted Contract Unit Price
B = Contract Unit Price
C = Base Price Index
D = Monthly Average Terminal F.O.B. Selling Price

In the event the Department is unable to secure and F.O.B. selling price from at least 4 terminals in a given month, payment will be at the contract unit price for each ton of asphalt binder used in the work during that month.

Measurement and Payment

Asphalt Concrete Surface Course, Type 9.5B and Asphalt Concrete Surface Course, Type 9.5C will be measured and paid as the actual number of tons of each type of hot mix asphalt pavement incorporated into the completed and accepted work in accordance with NCDOT Standard Specifications for Roads and Structures, Article 106-7.

Trackless Tack to be paid by the ton of Asphalt Concrete Surface Course, Type S9.5B & S9.5C placed. If standard tack is used, it shall be incidental to the placement of Asphalt Concrete Surface Course, Type S9.5B & S9.5C.

Asphalt Binder, Type PG 64-22 will be measured and paid as the theoretical number of tons required by the applicable JMF based on the actual number of tons of plant mix completed and accepted on the job.

There will be no direct payment for anti-strip additive. Payment at the contract unit prices for the various asphalt plant mix items will be full compensation for the work.

SECTION 3: UTILITY ADJUSTMENTS

Description

The work covered in this section consists of the adjustment of manholes, water valve boxes, and other utilities in the roadway. The Contractor shall complete the work in strict accordance with Town of Wake Forest Standards and Specifications, City of Raleigh Standards and Specifications, NCDOT Standard Specifications for Roads and Structures, and ACI Specifications.

Standards for Manhole and Valve Box Adjustments

Manholes in Streets

All manhole covers installed within streets, parking lots, and other paved areas shall have only one (1) one-inch hole, which shall be off center, unless seal-down manholes are required. All covers must be domestically cast and so indicated by manufacturer name and “USA” in castings. Covers shall have

"DANGER PERMIT REQUIRED – CONFINED SPACE DO NOT ENTER" cast onto the face as shown in Details W-20 and S-29.

Manhole rings and covers shall be manufactured to the dimensions shown on City of Raleigh Details S-25, W-20 and shall be made from Class 30 gray iron, meeting the requirements of ASTM A48-94ae1. Covers shall have the appropriate facility name cast onto the face as shown in Details S-25, W-20, WATER and Town of Wake Forest Stormwater Manhole Standard Details 2.60 and 2.61

All existing manholes on full-mill streets shall be removed and replaced with new manhole rings and covers. Existing manholes on all other streets that have been determined by the Director of Engineering to be damaged shall be replaced by the Contractor.

Water Valve Boxes

Adjustable water valve boxes shall be Class 35 gray cast iron and manufactured in accordance with ASTM A48 and be of the dimensions specified in Detail W-17 of these specifications. Lids shall have the word "WATER" cast into the lid. See Detail W-18. All castings must be domestically cast and so indicated by the manufacturers name and "USA" cast into all sections of the valve box. All castings must meet or exceed AASHTO H-20 load rating.

The Contractor shall provide new valve boxes and lids that are approved by the City of Raleigh Public Utilities Department. The unit rate shall include the cost of purchase and installation.

Sewer Test Station Boxes

Adjustable water valve boxes shall be Class 35 gray cast iron and manufactured in accordance with ASTM A48 and be of the dimensions specified in Detail S-20A of these specifications. Lids shall have the word "TS" cast into the lid. All castings must be domestically cast and so indicated by the manufacturers name and "USA" cast into all sections of the valve box. All castings must meet or exceed AASHTO H-20 load rating.

Adjustment of Sewer Test Stations shall be compensated as a Water Valve Box Adjustment.

Construction Methods

Adjustments on all manhole and valve boxes will not exceed a tolerance of more than ¼ inch from finished grade as measured with an 8-foot straightedge.

Manholes and valve boxes will be centered and aligned for proper access to manhole or operating nut on valves. Necessary precautions will be taken to prevent debris from falling into these structures and interfering with proper operation of said utility.

For valve boxes make a circular cut 1' from the outside edge of the valve box. Top section of each valve box shall be completely removed to allow proper tamping of materials before final adjustment is made. All material around manholes and valve boxes shall be tamped to a minimum of 95 percent compaction before the applying tack coat and placing of minimum 4-inch of new asphalt surface course. The final compaction on asphalt shall be mechanical tamping. The asphalt shall be left low enough to accommodate the final resurfacing lift.

Floor the inside of the manhole with some material to catch any debris that may fall inside the manholes during construction.

For manholes, make a circular cut 2' from the outside edge of the manhole. With pick and shovel remove the broken debris down to a depth in accordance with City of Raleigh Standard Manhole Frame and Cover Detail Within Paved Surfaces.

Remove the ring and cover and set it off to one side. Do not try to raise or adjust the manhole with the ring in place.

Mix the mortar. Mortar shall be composed of one (1) part Portland Cement (and may contain no more than 10 percent lime, based on the volume of cement) and two (2) parts clean sand. Mortar will be mixed in a clean, tight mortar box or mechanical mixer and will be used within 45 minutes after mixing. It will be a fairly stiff mixture so it can be shaped.

Starting on a solid foundation, raise the top of the manhole with a level, solid layer of mortar or mortar and bricks. If bricks are used, they must be laid solid leaving no voids or empty spaces. The final product must be a smooth, level area so that the entire width of the flange on the bottom of the manhole ring will be sitting on a solid, uniform bearing surface.

After the manhole has been properly brought up to the desired level, set the ring back in place and fill the hole around the outside of the casting for a minimum depth of 8" with 3000 PSI ready-mix concrete having no more than a 4-inch slump.

Set the concrete before the applying the tack coat and placing a minimum 2-inch layer of new asphalt surface course. The final compaction on asphalt shall be mechanical tamping. Install a reflectorized barricade equipped with a functioning flashing warning light over the utility until such time required for the concrete and asphalt to set/harden to a point where traffic will not damage the utility.

Raised utility castings shall be painted with reflectorized fluorescent paint to warn the traveling public of this condition.

Any utility raised more than one (1) inch above the existing grade shall have asphalt or NCDOT approved manhole safety ramp placed as a wedge around such utility.

All utilities that are removed for milling shall have a steel plate of sufficient thickness to support vehicle traffic placed in the bottom of the excavation. The excavation shall be backfilled with compacted hot mix asphalt. Any debris that falls into the utility shall be removed immediately.

All utility work areas shall be maintained in satisfactory condition until the final pavement layer is placed. Final paving layer shall be placed at least 72 hours after the placement of concrete around utilities.

Utility Risers

If the decision is made by the Engineer to selectively utilize NCDOT approved risers, the Contractor shall provide and install manhole and water valve box risers immediately prior to resurfacing. No cast iron risers will be allowed for the adjustment of manholes.

Raised Utilities

No manholes or valve boxes shall be raised and left for a period of time greater than 14 days before the street is resurfaced. Should this period of time be exceeded, utility adjustments shall be suspended until the resurfacing of such streets has been completed.

Utility Adjustments for Milling

The Contractor shall be required to adjust the manhole and water valve boxes prior to milling in accordance with Construction Methods.

If the decision is made by the Engineer not to adjust (lower and raise) utilities on selected streets, asphalt shall be milled and/or chipped from around existing utilities to a depth equal to the new asphalt depth.

Chipping around utilities shall only be performed by hand operated pneumatic tools or by pick and shovel. At no time shall heavy or mini track/wheel equipment be used to chip around utilities. As an alternative, small milling heads on backhoes, track loaders, or mini excavators may be used to chip the bulk of the material, with final cleanup around the utility done by hand tools.

Utilities removed for milling shall not be removed for more than 14 days. Should this period of time be exceeded, utility adjustments and milling on all other streets shall be suspended until utilities are raised on such streets.

Manhole frames and lids removed for milling and designated for reuse shall be paired together. This may be done by labeling, numbering or other means that clearly identifies the frame and lid go together. Any manhole frames and lids returned for reuse that are not labeled will be replaced with new frames and lids at the Contractor's expense.

Measurement and Payment

Manhole Adjustment (Raise Only) shall be paid by the number of manholes raised by adjustment.

Water Valve Box Adjustment (Raise Only) shall be paid by the number of water valves or test stations raised by adjustment. Payment shall include new water valve boxes and lids.

Manhole Adjustment (Lower/Raise), Manhole Adjustment Oversize (Lower/Raise) shall be paid by the number of utilities when the final raise adjustment has been completed.

Water Valve Box Adjustment (Lower/Raise) shall be paid by the number of water valves and test stations when the final raise adjustment has been completed. Payment shall include new water valve boxes and lids.

Milling / Chipping Around Utility Not Adjusted shall be paid by the number of utilities that have been left in place and milled/chipped around. Utilities on mill and fill streets shall be considered under this pay item except in cases where the utility is adjusted prior to mill and fill operations.

Provide and Install Manhole Risers and Provide and Install Water Valve Risers shall be paid by the number of utilities that have been left at existing grade and the Engineer has approved the use of NCDOT approved risers.

Provide New Manhole Frame and Cover shall be paid by the number of new manhole frames and covers typically on full mill streets and as directed by the Engineer.

SECTION 4: SIDEWALK ACCESS RAMPS, CURB AND GUTTER, AND DRIVEWAY APRON CONSTRUCTION

Description

The Contractor shall complete the work in this section in strict accordance with Town of Wake Forest Standard Details Curb Ramps and ACI Specifications. The project consists of constructing or reconstructing identified intersections with sidewalk access ramps. The location of each facility may vary due to existing

catch basins, fire hydrants, poles, or other constraints. Prior to beginning any construction, each work site shall be examined by the Contractor and the Director of Engineering, at which time the Director of Engineering will give specific direction as to the concrete removal limits and location of the new facility.

Sidewalk Access Ramps Construction

North Carolina General Statute 136-44.14 requires that all street curbs being constructed or reconstructed for maintenance procedures, traffic operations, repairs, corrections of utilities, or altered for any reason after September 1, 1973 shall provide sidewalk access ramps for the physically handicapped at all intersections where both curb and gutter and sidewalks are provided and at the other points of pedestrian flow. In accordance with the MUTCD, an accessible detour shall be provided for pedestrian traffic during construction of sidewalk and/or sidewalk access ramps.

In addition, Section 228 of the 1973 Federal Aid Highway Safety Act requires provision of curb ramps on any curb construction after July 1, 1976, whether a sidewalk is proposed initially or is planned for a future date.

The Americans with Disabilities Act (ADA) of 1990 extends to individuals with disabilities comprehensive civil rights protections similar to those provided to persons on the basis of race, sex, national origin, and religion under the civil rights act of 1964. The adopted curb ramps have been designed to comply with Title III of the ADA that became effective on January 26, 1992.

Town of Wake Forest standard curb ramps shall comply with the Americans with Disabilities Act (ADA) and Public Right of Way Access Guidelines.

Sidewalk access ramps shall be provided at locations as shown on the plans or as directed by the Director of Engineering. Sidewalk access ramps shall be located as indicated in these details; however, the location may be adjusted as directed by the Director of Engineering where existing light poles, fire hydrants, drop inlets, or other constraints affect placement.

Sidewalk access ramps shall be constructed in accordance with Town of Wake Forest Standard Details which are incorporated into the contract documents. Sidewalk access ramps shall generally be Single Type N-1A or R-1 and Double Type N-2, N-3, N-3A, or R-3 at the majority of locations. Some locations may require a shared ramp as shown in Town of Wake Forest's Standard Detail 9.13. A shared ramp shall serve both street crossings. Pay limits are identified on the details the shaded curb and gutter shall be incidental to the ramp. The detectable warning surface width may vary and is included as part of ramp pay limits. The detectable warning surface shall be yellow in color, cast-in- place and approved by the North Carolina Department of Transportation. Sidewalk removal and replacement within the pay limits shall be included in the concrete sidewalk access ramp unit rate. Sidewalk removal and replacement outside the pay limits will be paid at the appropriate contract unit rate.

The Contractor shall at no time remove any street sign without prior approval from the Director of Engineering.

Subgrade Preparation: The subgrade for sidewalks and access ramps shall be formed by excavating to the required depth, shaped to the proper cross-section, and shall be thoroughly compacted by rolling or tamping before placing any concrete.

Forms: Forms used in constructing sidewalks shall be of wood or metal, of the full depth of the concrete, straight, free from warp, and of sufficient strength, and/or of a flexible material pre-approved before construction by the Director of Engineering as to allow for narrowing, mounding, and curving of walks.

They shall be staked securely enough to resist the pressure of the concrete without springing. If of wood, they shall be of two (2) inch surfaced plank. All forms shall be subject to the approval of the Director of Engineering. All wood forms shall be thoroughly wetted, and metal forms oiled before placing concrete. All forms shall be thoroughly cleaned before re-use.

Placing Concrete: Concrete shall be NCDOT approved Class "A" concrete. No concrete shall be placed until the forms and subgrades have been approved by the Director of Engineering. The subgrade shall be thoroughly wetted, and the concrete shall be placed thereon in one course to the required depth. The concrete shall be consolidated and struck off with a template to the required grade and cross section.

Joints: Contraction joints shall be provided uniformly to separate the slab and shall be cut in a straight line to a depth equal to at least one-third (1/3) of the total slab thickness. The joint shall be not less than one-eight (1/8) inch no more than one-fourth (1/4) inch in width. Joints shall be sealed in accordance with NCDOT specifications.

Finishing: After the freshly poured concrete has been brought to at the established grade, it shall be floated to produce a surface free from irregularities. The final surface shall be obtained by troweling with a steel trowel or hand float and brushing lightly with a lightweight brush in a transverse direction so as to produce a uniform gritty surface of the proper texture. All edges and joints shall be rounded to one-fourth (1/4) of an inch.

Cold Weather Pouring: Concreting operations shall not be undertaken or continued when the surrounding air temperature is below 40°F or the local weather reports indicate the possibility of temperatures of 32°F or lower within the ensuing 24 hours unless provisions are made to insulate or heat the concrete in a manner satisfactory to the Transportation Director. In any event, the Contractor shall plan and protect his/her work in a manner which will assure satisfactory results. Any concrete damaged by freezing shall be removed and replaced by the Contractor at his/her own expense.

Concrete, when deposited in the forms, shall have a temperature of not less than 50°F or more than 90°F. The concrete shall be maintained at a temperature of not less than 50°F for a period of at least 72 hours in the case of normal concrete or 24 hours when high early cement is used. Concrete shall not be deposited on a frozen subgrade. The North Carolina Department of Transportation Standard Specifications for Roads and Structures, Latest Edition Section 420-7 "Placing Concrete in Cold Weather" (A), (B), and (C) will be strictly adhered to for this alternate, unless directed by the Transportation Director.

Hot Weather Concreting: The maximum allowable concrete temperature shall be limited to 95°F. Deliver and discharge concrete within 1-1/2 hours or before the truck-mixer has revolved 300 revolutions, whichever comes first.

Removal of Forms and Backfilling: After the concrete has set sufficiently the forms shall be removed and the spaces on both sides shall be immediately backfilled with suitable earth uniformly spread and compacted. The areas between the curb and sidewalk and immediately back of the sidewalk shall be left in a smooth, neat, and workmanlike condition. When necessary the backfill material will be sloped further to account for change in slope or grade as directed by the Director of Engineering.

Special attention shall be given in the seeding and mulching in the established areas. Lawn quality care shall be taken, and appropriate seed used to match existing lawn types on a lot per lot basis. Seeding, mulching, and seedbed preparation shall be approved by the Director of Engineering prior to acceptance and payment. Backfilling, seeding, and mulching is considered incidental to the completion of the sidewalk access ramp and as such no separate pay item is included.

Sidewalk access ramps shall be backfilled, landscaped, and completed no more than 3 days after construction. Should this period of time be exceeded, all sidewalk ramp construction shall be suspended until such ramps are completed.

Removal of Defective/Damaged Work: The Director of Engineering shall have the authority to and shall require the removal of any sidewalk laid under these specifications which does not conform to the requirements as set forth herein or existing sidewalk damaged by the Contractor. Upon notification by the Director of Engineering, the Contractor shall take immediate action to correct the faulty work, or damaged work, at the Contractor's own expense.

Construction Water:

1) Contractors are responsible for securing adequate construction water for their job sites.

2) All construction water usage must be metered and will be billed to the Contractor. The Contractor must contact the Public Utilities Department of City of Raleigh, Meter Services Division (919-996-2742) to make the applicable arrangements for billing the water usage. The Contractor may not provide his/her own meter. Upon advance notice to the Public Utilities Department, a meter equipped with a backflow device can be rented at the expense of the Contractor.

3) Construction water for all Town contract projects shall be billed by the City of Raleigh, Public Utilities Department.

4) Contractors must furnish the following information for water usage.

i. Meter location and project name.

ii. Address where applicable and responsible party name.

iii. Duration of use and frequency of meter reading.

Sidewalk and Access Ramp Removal

The Contractor shall be advised that when a portion of any area of concrete sidewalk or access ramp must be removed, all areas to be removed shall be defined by a machine sawed joint before removal. Any sidewalk or access ramp that is removed and not replaced shall be backfilled using suitable material free of large lumps, wood, or other undesirable material. Brick pavers within existing sidewalk ramp locations being reconstructed shall be retained and neatly stacked for pickup by Town of Wake Forest staff.

Disposal of all waste material from construction sites shall be made in strict accordance with all Town ordinances pertaining to disposal of construction waste. It shall be the responsibility of the Contractor to secure the necessary permits and provide all information required to secure said permits. The Contractor shall designate the disposal site prior to beginning construction, and in the event waste material is to be disposed of on private property, a letter from the property owner shall be furnished to the Director of Engineering granting the Contractor or their agent such permission and listing the requirements made by the property owner or the Contractor, if any.

The Contractor shall not use the right-of-way for storage of equipment or materials, etc.

Curb and Gutter Construction

Curb and gutter shall be constructed in accordance with Town of Wake Forest Standard Details for Curb Ramps and Curb and Gutter Standard Detail 9.13. Curb and gutter removal and replacement in areas other than access ramps shall be of the same type as adjacent curb and gutter.

Payment for this item shall include removal, disposal and replacement of new curb and gutter in accordance with the specified slopes, dimensions, etc.

Curb depressions for sidewalk access ramps may be accomplished, when applicable, by the use of a machine sawed cut, utilizing equipment which has been specifically designed for this purpose and approved by the Director of Engineering. A smooth transition shall be provided between the gutter section and the curb section. All sharp edges, which were created by the cutting operations, shall be beveled. Grinding if required shall be utilized to accomplish these items. Concrete debris shall be immediately removed from the job site. If any asphalt patching is needed due to damage during construction, the Contractor shall be responsible for repair of these items using hot plant mixed asphalt. If pavement patching is necessary, it shall be incidental to the work and not a pay item.

Subcontractors

The Contractors (bidders) are advised that Subcontractors will be limited to a maximum of 50 percent (50%) of this contract. The successful bidder shall abide by the requirements set forth in Article 37 Subcontractors of the General Conditions.

Traffic Control

In addition to items set forth in the General Conditions, Articles 44 and 59, the Contractor shall provide adequate reflectorized barrels, barricades and traffic cones as directed by the Director of Engineering, to protect the traveling public as well as pedestrian traffic. In addition, the Contractor shall utilize Sidewalk Closed signs at every location in which the construction activity may interfere with pedestrian traffic. Sidewalk detour signs shall be placed at designated crosswalk locations.

Granite Curb

The Contractor shall reshape the granite curb, in place, to the grade required by the detail drawings. This work will involve sawing, and or grinding to achieve the desired grade and a texture consistent with the original granite curb.

Driveway Apron Construction

Driveway aprons shall be constructed in accordance with Town of Wake Forest Standard Details for Driveway and Sidewalk Standard Detail 9.08, 9.11, 9.12, and 9.13. Driveway aprons shall match existing widths, joints, and grades to provide for positive drainage towards stormwater drainage basins.

Measurement and Payment

Sidewalk Removal will be measured and paid in square yards, measured along the surface of the actual sidewalk removed. Such price includes, but is not limited to, sawing the existing sidewalk, excavating, removal, disposal, backfilling, seeding, and mulching.

4” Sidewalk Replacement will be measured and paid in square yards, measured along the surface of the completed and accepted work. Such price includes, but is not limited to, forming, furnishing, and placing concrete, finishing, constructing, and sealing joints, backfilling, seeding, and mulching.

6” Sidewalk Replacement will be measured and paid in square yards, measured along the surface of the completed and accepted work. Such price includes, but is not limited to, forming, furnishing, and placing concrete, finishing, constructing, and sealing joints, backfilling, seeding, and mulching.

Sawcut and Removal of Concrete Curb will be measured and paid in linear feet, measured along the surface of the top of the concrete curb. Such price includes sawing the existing curb, removal of debris, and beveling or grinding sharp edges.

Sawcut and Removal of Granite Curb will be measured and paid in linear feet, measured along the surface of the top of the granite curb. Such price includes sawing the existing curb, removal of debris, and beveling or grinding sharp edges.

Curb and Gutter Removal/Replacement will be measured and paid in linear feet, accepted in place. Measurement will be made along the surface of the top of the curb. Such price includes sawing the existing curb and gutter, removal of debris, forming, furnishing, and placing concrete, finishing, constructing, and sealing joints, backfilling, seeding, and mulching.

Concrete Sidewalk Access Ramps will be measured and paid in units of each. Ramps shall be constructed in accordance with the Standard Details. Pay limits are identified on the Standard Details and in Provision 2 of this Section. Curb and gutter removal/replacement within the ramp pay limits shall be incidental to the ramp construction. Single ramps shall be paid as 1-unit, double ramps as 2 units, and shared ramps as 2 units. Such price includes, but is not limited to, sawing the existing sidewalk or driveway, removal, and disposal of sidewalk, excavating, forming, furnishing, and placing concrete, constructing, and sealing joints, backfilling, seeding, and mulching. Furnishing and installing the detectable warning surface shall be included as part of the ramp.

Concrete Sidewalk Access Ramp Removal will be measured and paid in units of each. Pay limits are identified on the Standard Details and in Provision 2 of this Section. Curb and gutter removal/replacement within the ramp pay limits shall be incidental to the ramp removal and reharmonization. Single ramps shall be paid as 1-unit, double ramps as 2 units, and shared ramps as 2 units. Such price includes, but is not limited to, sawing the existing sidewalk or driveway, removal, and disposal of sidewalk, excavating, forming, furnishing, and placing of incidental concrete, constructing, and sealing joints, backfilling, seeding, and mulching.

6” Concrete Driveway (Remove and Replace) will be measured and paid as the actual number of each driveway apron removed and replaced. No additional payment will be made for curb and gutter removal and replacement within the apron radii.

SECTION 5: MILLING / PAVEMENT REHABILITATION

Description

Perform the work covered by this section including, but not limited to, milling and re-milling the pavement at locations, depths, widths and typical sections indicated in the contract; cleaning the milled surface; loading, hauling and stockpiling the milled material for use in recycled asphalt mixtures; and disposal of any excess milled material in areas provided by the Contractor in accordance with Town Ordinances pertaining to disposal of construction waste.

Construction Methods

Prior to construction, the Contractor shall carefully examine each signalized intersection for vehicle sensors. When encountered, the Contractor shall contact the Town of Wake Forest's Director of Engineering, and NCDOT's Transportation Operations Division, Traffic Signal Shop for coordination of construction and sensors relocation.

The Contractor shall work with the Town Inspections staff to identify drainage issues and assist in determining a course of action to resolve.

If milled areas are not paved back within 72 hours, the Contractor is to furnish and install portable signs to warn drivers of the conditions. These are to include, but not limited to "Rough Road" (W8-8), "Uneven Lanes" (W8-11) with Motorcycle Plaque mounted below. These are to be dual indicated on Multi-Lane Roadways with speed limits 45 mph and greater. These portable signs are incidental to the other items of work included in the temporary traffic control pay item. In addition , ICTs No.1-No.4 shall continue to apply.

The existing pavement shall be milled in a manner which will restore the pavement surface to a uniform longitudinal profile and cross section at the locations as indicated in the schedule of provisions or at locations as directed by the Engineer where indicated the asphalt removal shall be to a specified depth and shall produce a specific cross slope. The Contractor shall mill intersections and other irregular areas as indicated in the schedule of provisions or as directed by the Engineer. The milling shall extend from curb to curb, with excess asphalt material being removed to expose the existing face of curb and gutter.

The milling equipment shall be operated in such a manner as to prevent damages to the underlying pavement structure, utilities, drainage facilities, curb and gutter, paved surfaces outside the milled area, and any other appurtenances. Any damages to the above stated areas shall be replaced or repaired at no cost to the Town. The milled pavement surface shall be reasonably smooth and free of excessive scarification marks, gouges, ridges, continuous groves, or the damage as determined by the Director of Engineering. All butt joints shall be straight and true. Any leveling or patching required as a result of negligence by the Contractor shall be repaired with hot bituminous plant mix at no cost to the Town of Wake Forest and in a manner acceptable to the Engineer. The Contractor shall coordinate the adjustment of manholes, meter boxes, and valve boxes and resurfacing with the milling operation.

Catch basins and drop inlets shall be protected from milling debris by use of filter materials or other means that will prevent debris from entering the Town stormwater system. Any debris that enters catch basins and drop inlets shall be removed by the Contractor.

Wash water from milling machines shall be filtered by use of stormwater filter devices for catch basins and drop inlets. Stormwater filter devices shall be submitted for approval prior to work starting. Failure to use stormwater filter devices shall be considered an "illicit discharge" as defined in Code of Ordinances and State law references: G.S. Chapter 113A Article 4 (Pollution Control Act); G.S. Chapter 143 Article 21 (Water and Air Resources); Emission of pollutants and contaminants, G.S. 160A-185; Town of Wake Forest's Code of Ordinances, Article VI – ILLICIT STORMWATER DISCHARGE.

All milled pavement surfaces shall be thoroughly cleaned of all loose aggregate particles, dust, and other objectionable material within 24 hours, by the use of an approved street sweeper. Street sweepers to be utilized shall be of the Vacuum or Regenerative Air Sweeper type with a minimum six (6) cubic yard capacity. No mechanical sweepers will be allowed, except to assist the above noted approved sweeper types. The Contractor can also utilize additional equipment as necessary for this removal. This debris shall not be allowed to accumulate on the Right-of-Way, private property, sidewalks, or driveways. If this occurs, it shall be cleaned off immediately.

Edge & Double Edge Milling

Edge milling shall be at least 4' in width. Butt joints may be required at intersecting streets. Butt joints will be paid at the Edge Milling rate. Double edge mill shall overlap 1-2' but shall not exceed 7' in width. Resurfacing shall be performed within 7 days after patching is completed on such streets.

Full Mill Operations

Streets designated as Full Mill shall have lanes milled to a depth of 0" – 4" depending on existing road cross section milling recommendations. Utilities shall be lowered prior to milling operations and final adjustments performed after milling is complete. Milling and replacement shall be performed within 1 week after the patching is completed on such streets.

Temporary pavement markings on milled surfaces shall be installed as soon as milling operations allow. The milled pavement surface shall be thoroughly cleaned of all loose aggregate particles, dust, and other objectionable material before temporary markings are installed.

Mill & Fill Operations

Streets designated as Mill & Fill shall have lanes milled, cleaned, and paved back by within 72 hours or at the end of the workday, which ever one applies to the specific street to satisfy ICT No.1-No.4. Traffic is to be kept at a minimum to ride on the milled surface. Utility adjustments and patching, as needed, shall be performed prior to the Mill & Fill operation. Mill & Fill operations shall be performed within 7 days after patching is completed on such streets. Any utilities damaged during milling shall be repaired or replaced as soon as possible at no cost to the Town. The Mill & Fill unit rate will be used for streets designated as such. This rate is not in addition to any other milling rate.

Temporary pavement markings shall be installed as directed in the Pavement Markings portion of this contract. The pavement markings shall be installed as soon as the milling operations will allow. The milled pavement surface shall be thoroughly cleaned of all loose aggregate particles, dust, and other objectionable material before temporary pavement markings are installed.

Equipment

Equipment shall include a self-propelled unit capable of removing the existing bituminous pavement to the depths, widths, and typical sections as indicated in the schedule or provisions or as directed by the Engineer. The equipment shall have been designed and built exclusively for pavement milling operations and shall have sufficient power, traction, and stability to accurately maintain depth of cut and slope. The milling machine shall be equipped with a grade control system, which will automatically control the longitudinal profile and cross slope of the pavement surface. The machine shall be capable of leaving a uniform surface suitable for handling traffic without excessive damage to the underlying pavement structure.

Additional equipment necessary to satisfactorily remove the pavement in the area of curb and gutter, and other obstructions shall be provided. The milling equipment shall be equipped with a means of effectively limiting the amount of dust escaping from the removal operations in accordance with local, state, and federal air pollution control laws and regulations.

Patching

The Contractor shall be responsible for pavement patching on all streets which have been milled. Milled pavement areas, in which exposed subgrade materials are present after the milling has been completed, shall be patched no later than the end of the workday.

Measurement and Payment

Milling (0-2") Edge, Milling (0-2") Double Edge, Milling (0-2") Full Width, and Milling (0-3") Mill and Fill to be paid for will be the actual number of square yards of pavement surface which has been milled in accordance with the requirements of this section. In measuring this quantity, the length will be the actual length milled, measured along the pavement surface. The width will be the actual width milled measured along the pavement surface, including any incidental areas which require removing, i.e., small areas adjacent to curb and gutter, etc.

Incidental milling to be paid will be the actual number of square yards of surface milled where the Contractors is required to mill butt joints, irregular areas and intersections milled as a separate operation from mainline milling and re-mill areas that are not due to the Contractor's negligence whose length is less than 100 feet. In measuring this quantity, the length will be the actual length milled, measured along the pavement surface. The width will be the width required by the plans or directed, measured along the pavement surface. Areas to be paid under these items include radius areas, butt joints and irregular areas as desired to complete the work or correct a pavement running/cross slope issue. Where the Contractor elects to make multiple cuts to achieve the final depth, no additional measurement will be made. Compensation will be made at the contract unit price per square yard for Incidental Milling Pavement Patching will be paid as the actual number of tons of asphalt plant mix, complete in place, used to make completed and accepted repairs, including skim patching on exposed subgrade, except for those repairs made necessary by the Contractor's negligence. The asphalt plant mix material will be measured by weighed in trucks on platform scales or other certified weighing devices.

SECTION 6: SHALLOW UNDERCUT

The published volume entitled "North Carolina Department of Transportation, Standard Specifications for Roads and Structures", Latest Edition, with all amendments and supplements thereto, is by reference incorporated into and made part of this contract; that, except as herein modified, all the construction and work included in this contract is to be performed in accordance with the specifications contained in said volume, and amendments and supplements thereto, under the direction of the Director of Engineering.

Description

All work in this section shall consist of elements to complete shallow undercut on specified sections of Town streets which exhibit unsuitable soils.

Construction Methods

When shallow undercut is required to construct aggregate subgrades, undercut 12" to 24" as shown on the plans or as directed. Perform undercut excavation in accordance with Section 225. Install geotextile for soil stabilization in accordance with NCDOT Standard Specifications for Roads and Structures Article 270-3. Place Class IV subgrade stabilization (standard size no. ABC) by end dumping ABC on geotextiles. Do not operate heavy equipment on geotextiles until geotextiles are covered with Class IV subgrade stabilization. Compact ABC to 92% of AASHTO T 180 as modified by the Department or to the highest density that can be reasonably obtained. Maintain Class IV subgrade stabilization in an acceptable condition and minimize the use of heavy equipment on ABC in order to avoid damaging aggregate subgrades. Provide and maintain drainage ditches and drains as required to prevent entrapping water in aggregate subgrades.

Placement of Geotextile and Geogrid

Geotextile and Geogrid materials shall conform to Section 1056 of NCDOT Standard Specifications. Following the shallow undercut operation, geotextile material shall be placed in the work area covering the full width and length of the excavation. Geotextile shall be overlapped a minimum of 12 inches in cases where multiple pieces or rolls are used. Geotextile shall be pinned to the subgrade.

One layer of geogrid shall be placed on top of the geotextile material prior to back filling with Class IV stone. In cases where geogrid is overlapped, follow manufacturer's recommendations.

Backfill and compact the excavation with Class IV Stone for Stabilization to within 6" of the finish pavement elevation grade. Complete the patch using the prescribed pavement detail of I19.0C and S9.5C placed in 2 lifts.

Payment for Shallow Undercut, Geotextile / Geogrid and Class IV Stone shall be considered full payment for, but not limited to, all labor, materials, equipment, incidentals, overhead and profit associated with the work.

Measurement and Payment

Shallow Undercut will be measured and paid in cubic yards. The contract unit price for Shallow Undercut will be full compensation for excavating, hauling, and disposing of materials to construct aggregate subgrades.

Fabric for Soil Stabilization will be measured and paid in square yards. The contract unit price for Fabric for Soil Stabilization will be full compensation for providing and installing the fabric.

Geogrid for Soil Stabilization will be measured and paid in square yards. The contract unit price for Geogrid for Soil Stabilization will be full compensation for furnishing and installing the geogrid.

Class IV Stone for Soil Stabilization will be measured and paid in tons. Class IV soil stabilization will be measured by weighing material in trucks in accordance with NCDOT Standard Specifications for Roads and Structures article 106-7. The contract unit price for Class IV Stone for Soil Stabilization will be full compensation for furnishing, hauling, handling, placing, compacting, and maintaining ABC.

SECTION 7: PAVEMENT PATCHING

Description

Perform the work covered by this section including, but not limited to, repairing of existing pavement with asphalt plant mix in order to provide a safe, passable, and convenient condition for traffic.

Perform the work by cutting the existing pavement to a neat vertical joint and uniform line; removing and disposing of pavement, base, and subgrade material as approved or directed; coating the area to be repaired with a tack coat; furnishing, placing, and compacting asphalt plant mix; and replacing of the removed material with asphalt plant mix.

Materials

Where a pavement repair detail is not shown in the plans, use an Asphalt Concrete Intermediate Course, Type I19.0C. Where a pavement repair detail is shown in the plans, the type of plant mix shall be in accordance with the pavement repair detail except where the Specifications permit the substitution of another type of plant mix or where approved.

Patching on all streets shall generally consist of milling and placing 2.5" - 4" of Asphalt Concrete Intermediate Course, Type I19.0C. In some cases, the Town may elect to use B25.0C as directed. For permanent repairs associated with Raleigh Water pavement patching, Contractor may be required to pave full lane width and match existing depths and mix types to meet NCDOT requirements. Patching on Mill & Fill streets shall be paid at the patching unit rate.

The Contractor will be responsible for providing, installing, and maintaining all temporary traffic control during pavement patching operations.

Construction Methods

The Contractor shall excavate in areas as directed by the Engineer to the depth directed. Excavation shall be neatly squared with clean vertical sides. All loose material shall be removed from the excavated area. If the subgrade materials are disturbed, the Director of Engineering may require the subgrade materials to be recompacted utilizing compaction equipment suitable for this purpose. Existing pavement areas shall be tacked, and bituminous material shall be placed in even, uniform lifts. Bituminous material shall be compacted using steel wheeled mechanical compaction equipment, in accordance with current NCDOT standards.

The finished surface shall be smoothed and shaped to provide a final compacted surface grade consistent with the adjacent existing pavement grades. The final surface grade of the patch shall be within one-eighth inch (1/8" ±) of the adjacent existing pavement and grade. Any patch areas more than one-eighth inch (1/8" ±) above adjacent existing pavement shall be milled to proper grade at Contractor's expense.

All pavement patching areas shall be maintained in satisfactory condition until resurfacing occurs.

A minimum depth of 2 inches of patching material shall be utilized. Additional areas shall be patched as directed by the Engineer. All patching shall be performed as per the special provision section as outlined in the Pavement Patching portion of this Contract.

Measurement and Payment

Pavement Patching will be paid as the actual number of tons of asphalt plant mix, complete in place, used to make completed and accepted repairs, including skim patching on exposed subgrade, except for those repairs made necessary by the Contractor's negligence. The asphalt plant mix material will be measured by weighed in trucks on platform scales or other certified weighing devices.

Any requirement included in the contract that provide for adjustments in compensation for to variations in the price of asphalt cement will not be applicable to payment for the work covered by this section.

SECTION 8: THERMOPLASTIC PAVEMENT MARKINGS

The project will include the furnishing and placement of Thermoplastic Alkyd/Maleic Retroreflective Pavement Markings in the form of lines and symbols of the type specified herein. The work shall be performed in strict accordance with NCDOT Standard Specifications for Roads and Structures (Latest Edition) Section 1205.

Revise the 2018 Standard Specifications as follows: Page 12-6, Sub article 1205-4(A)(1) General, lines 5-8, delete the second sentence and replace with the following:

Use application equipment that provides multiple width settings ranging from 4 inches to 12 inches and multiple thickness settings to achieve a minimum pavement marking thickness of 0.090 inch above the surface of the pavement.

Page 12-7, Table 1205-3, THICKNESS REQUIREMENTS FOR THERMOPLASTIC, replace with the following:

Table 1205-3 Minimum Thickness Requirements for Thermoplastic	
Thickness	Location
240 mils	In-lane and shoulder-transverse pavement markings (rumble strips). May be placed in 2 passes
90 mils	Center lines, skip lines, transverse bands, mini-skip lines, characters, bike lane symbols, crosswalk lines, edge lines, gore lines, diagonals, and arrow symbols

Pavement markings shall be applied within **24 hours** of resurfacing. If pavement markings are not installed within the 24-hour period, additional resurfacing shall not be permitted.

Temporary pavement markings on milled surfaces shall be installed as soon as milling operations allow. The milled pavement surface shall be thoroughly cleaned of all loose aggregate particles, dust, and other objectionable material before temporary markings are installed.

Interim marking paint shall be covered with thermoplastic pavement marking within 30 calendar days of placement. Should this period of time be exceeded, all resurfacing operations shall be suspended until thermoplastic pavement marking material is applied and completed on such streets.

If the pavement marking plans and NCDOT standards conflict, the Transportation Director shall be notified prior to the installation of such work.

No payment will be made for final thermoplastic pavement markings until all markings have been completed on the entire street.

The Contractor shall submit Thermoplastic Pavement Marking quantities for verification in spreadsheet format identifying pavement markings on a street-by-street basis.

Removal of Pavement Markings

This work includes the removal of all types of pavement marking lines, symbols and characters including removal for long life marking preparation. This work does not include removal of removable tape pavement markings.

Remove pavement marking lines, characters and symbols by acceptable methods to the Engineer that will not materially or structurally damage the surface or the texture of the pavement. Leave the pavement surface in a condition that will not mislead or misdirect the motorist.

Where existing pavement markings are to be removed and replaced by other pavement markings, do not begin removal until adequate provisions have been made to complete the installation of the replacement markings. Remove pavement markings such that the surface is in proper condition for adequate bonding of

the new markings. Promptly remove any material deposited on the pavement as a result of removing pavement markings as the work progresses by acceptable methods. Provide the equipment necessary to control dust and the accumulation of debris resulting from the removal process. The removal equipment shall provide dust control and the capture of the removed material shall be done using a separate vacuum equipped vehicle or other approved system. Perform the recovery process within the same operation as the removal. Do not let traffic use the lane where the removal is taking place until the recovery system is finished. Should the recovery system fail, cease removal operations until the recovery system is properly operating. The Contractor is responsible for all cleanup and proper disposal of all removed debris from the project site. When using a grinding method for pavement marking removal, the equipment shall have multiple heads working in tandem or have a removal head with operator dialed controls to result in a planed surface and provide adequate preparation of the surface to accept the new marking material.

Application of polyurea over existing pavement marking materials will require at least 95% of the existing pavement marking material to be removed; however, if one 15 mil application of paint was placed on asphalt pavement less than 6 months old, do not remove the existing paint pavement markings.

Thermoplastic may be installed over existing thermoplastic on asphalt. Application over existing pavement marking materials other than thermoplastic will require the existing pavement marking material to be removed so that at least 85% of the existing pavement marking surface is removed. Before applying thermoplastic pavement markings over the existing thermoplastic pavement markings, remove at least 25% of the oxidized existing thermoplastic. On newly installed failed thermoplastic that is to be removed and replaced, remove a minimum of 85% of the existing thermoplastic. However, if one 15 mil application of paint was placed on asphalt pavement less than 6 months old, do not remove the existing paint pavement markings.

Use black color #37038 in paint or tape, as determined by Contractor, to cover any remaining conflicting pavement marking after removal from asphalt pavement surfaces. Do not use black paint or tape on concrete pavement surfaces. The black paint will not have a defined shape or edges with a width not exceeding double of the existing lines.

Measurement and Payment

Thermoplastic Pavement Markings 4”, Thermoplastic Pavement Markings – 8”, Thermoplastic Pavement Markings – 24”, Green Thermoplastic, 24” will be measured and paid as the actual number of linear feet of placement marking lines satisfactorily placed and accepted by the Engineer. The quantity of solid lines will be the summation of the linear feet of solid line measured end-to-end of the line. The quantity of skip or broken lines will be the summation of the linear feet derived by multiplying the nominal length of a line by the number of marking lines satisfactorily placed.

Thermoplastic Symbol, Thermoplastic Character, Thermoplastic Roundabout Symbol, Speed Hump Symbol, Bike Lane Arrow, Bike Sharrow, Bike Lane Symbol, and Shark Teeth Symbol will be measured and paid as the actual number of pavement marking symbols and characters satisfactorily placed and accepted by the engineer. A character is considered to be one letter or one number of a word message.

Temporary Paint, 4”, Temporary Paint, 8”, and Temporary Paint, 24” will be measured and paid as the actual number of linear feet of placement marking lines satisfactorily placed and accepted by the Engineer.

Temporary Paint Symbols and Temporary Paint Characters will be measured and paid as the actual number of pavement marking symbols and characters satisfactorily placed and accepted by the engineer

Thermoplastic Eradication, Lines will be measured and paid as the actual number of linear feet of pavement markings satisfactorily removed and accepted by the Engineer. The quantity of solid lines will be the summation of the linear feet of solid line measured end-to-end of the line. The quantity of skip or broken lines will be the summation of the linear feet derived by multiplying the nominal length of a line by the number of marking lines satisfactorily removed. No payment will be made for the removal of removable pavement marking tape.

Thermoplastic Eradication, Symbol and Thermoplastic Eradication, Character will be measured and paid as the actual number of pavement markings symbols and characters satisfactorily removed and accepted by the Engineer.

Flexible Delineator will be measured and paid as the actual number of each delineator post installed.

SECTION 9: SIGNALS AND INTELLIGENT TRANSPORTATION SYSTEMS

All work associated with signals and intelligent transportation systems shall be installed in strict accordance with NCDOT Standard Specifications for Roads and Structures (Latest Edition) Division 17.

Street locations for inductive detection loops and associated work are indicated on the Pavement Markings List.

The Contractor shall notify the Town of Wake Forest, Engineering Department at least 48 hours before milling an intersection with signal detection loops. After signal detection loops are installed, the Contractor shall notify the Engineering Department for inspection at least 48 hours before resurfacing occurs. Notify Engineer one week before installing inductive detection loops.

Coordinate saw-cutting and loop placement with pavement markings. For new construction or resurfacing, install inductive detection loops before placing final lay of surface course. On unmarked pavement, pre-mark locations of stop lines and lane lines before locating inductive detection loops.

Measurement and Payment

Inductive Loop Sawcut and Bike Count Loop Sawcut will be measured and paid as the actual linear feet of inductive loop sawcut installed and accepted.

Detector Cards and Junction Boxes will be measured and paid as the actual number of detector cards and junction boxes installed and accepted.

SECTION 10: SPEED HUMPS

Speed Hump Removal

Break up, remove, and satisfactorily dispose of asphalt components of an existing structure and repair pavement to match existing adjacent pavement surface.

Measurement and Payment

Speed Hump Removal will be measured and paid for per each speed hump removed. A speed hump will be counted as full width of road. No direct payment will be made for the following: milling, hot mix asphalt, asphalt binder, and pavement markings associated with speed hump removal.

SECTION 11: WORK ZONE TRAFFIC CONTROL

Description

Maintain traffic through work zones in accordance with these Specification, the MUTCD, NCDOT Roadway Standard Drawings, 23 CFR 630 Subparts J and K and any additional Transportation Management Plans.

Temporary Lane Closures

Operate all equipment and personnel within the designated work area during lane closures. Do not impede or stop traffic for the purpose of performing construction related work on the traffic side of the lane closure.

Install lane closures with traffic flow, beginning with devices on the upstream side of traffic. Remove lane closures against the traffic flow, beginning with devices on the downstream side of traffic.

When construction proceeds through an intersection, provide flaggers and all other necessary traffic control as required to direct the traffic through the intersection. When an intersection is signalized, place the signal in flash mode and provide law enforcement or other adequate traffic control measures to direct traffic through the intersection before beginning work in the intersection.

Traffic Control Supervision

Provide the service of at least one qualified work zone supervisor. The work zone supervisor shall have the overall responsibility for the proper implementation of the TMP and ensure all employees working inside the NCDOT right of way have received the proper training appropriate to the job decisions each individual is required to make.

The work zone supervisor is not required to be on site at all times but shall be available to address concerns of the Engineer. The name and contact information of the work zone supervisor shall be provided to the Engineer prior to or at the preconstruction conference.

Qualification of work zone supervisors shall be done by an NCDOT approved training agency or other approved training provider. For a complete listing of these, see the Work Zone Traffic Control's webpage. Coordinate with and cooperate with work zone supervisors of adjacent or overlapping construction projects to ensure safe and adequate traffic control is maintained throughout the projects at all times including periods of construction inactivity in accordance with Article 105-7.

Vehicular Access

Maintain Continuous and safe vehicular access, including but not limited to, all residences businesses, schools, police and fire stations, hydrants, other emergency services, hospitals and mailboxes. Conduction operations so as to limit the inconvenience to property owners.

Pedestrian Access

Maintain pedestrian access at all times. When existing pedestrian facilities are disrupted, closed or relocated, provide temporary facilities that are detectable and include accessibility features consistent with the features present in the existing pedestrian facility. The work zone supervisor is responsible for the implementation of all traffic control plans, and installation and maintenance of the pedestrian devices. The work zone shall be inspected weekly or as directed by the Engineer. When pedestrian movement through

or around a work zone is necessary, provide a separate usable footpath. If the previous pedestrian facility was accessible to pedestrians with disabilities, provide a footpath during temporary traffic control that is comparable. Do not have any abrupt changes in grade or terrain that could cause a tripping hazard or could be a barrier to wheelchair use. Provide channelizing devices that are detectable to pedestrians who have visual disabilities. Provide temporary pedestrian facilities that are made of concrete, asphalt or other suitable material as approved by the Engineer, at all locations where the existing sidewalks have been removed for construction operations.

Do not sever or move pedestrian facilities for non-construction activities such as parking for vehicles and equipment. Separate pedestrian movements from both work zone activity and vehicular traffic.

Temporary Traffic Control Devices

Furnish, install, maintain, relocate, and remove temporary traffic control devices. All temporary traffic control devices furnished by the Contractor shall remain the property of the Contractor, unless otherwise specified in the contract.

Ensure all temporary traffic control devices are inspected and approved before using them on the project. Install temporary traffic control devices before construction operations begin and during the proper phase of construction. Maintain and relocate temporary traffic control devices during the time they are in use. Keep these devices in place as long as they are needed and immediately remove thereafter. When operations are performed in stages, install only those devices that apply to the present conditions.

Perform continuous maintenance and daily scheduled inspections of temporary traffic control devices. Review and maintain all traffic handling measures to ensure that adequate provisions are in place for public and workers' safety. Maintenance activities include cleaning, repair, or replacement, and prompt disposal of temporary traffic control devices that are damaged, torn, crushed, discolored, displaced or deteriorated beyond effectiveness. Replace work zone traffic control devices deemed unacceptable according to the guidelines set forth in the American Traffic Safety Service Association's (ATSSA) Quality Guidelines for Work Zone Traffic Control Devices.

Failure to maintain acceptable traffic control measures or temporary traffic control devices may result in formal notification of noncompliance. Implement remedial action immediately for imminent danger situations as directed by the Engineer. Implement remedial action within 48 hours after notification of a safety issue that is not an imminent danger.

Failure to comply may result in having the work performed with available forces and equipment. In cases of willful disregard for the safety of the public, the Engineer may proceed immediately to implement the measures necessary to provide the appropriate level of traffic control to ensure that the safety of all concerned parties is maintained.

Measurement and Payment

Temporary Traffic Control will be paid as a lump sum unit cost. The contract unit price for shallow undercut will be full compensation for all traffic control materials and labor required by these Specifications.

SECTION 12: TRAFFIC ISLANDS AND MEDIANS

Description

Construct traffic islands and medians of the type required by the plans. Perform the work in accordance with the contract.

Construction Methods

Construct curb and gutter in accordance with Section 4.

Uniformly grade and compact the earth or base course under any island or median to the same requirements as the surrounding material. Concrete islands shall be constructed after milling has occurred and before final resurfacing.

Construct concrete in accordance with Section 4 and give a sidewalk finish, except as otherwise provided herein. Broom concrete surfaces in medians transverse to the direction of traffic unless otherwise directed. Locate joints in island and median covers to line up with the joints in the curb and curb and gutter wherever possible. Locate joints in monolithic concrete islands and medians constructed adjacent to concrete pavement to line up with the joints in the concrete pavement wherever possible. Seal all joints. Form openings in the island or island cover to accommodate signposts.

Measurement and Payment

5" Monolithic Concrete Islands/Medians will be measured and paid in square yards of concrete island that has been placed and accepted. Measurement will be made parallel to the bottom surface of the island or median. This work includes, but is not limited to, excavation and backfilling, constructing base, furnishing and placing concrete, forming holes for signposts and constructing and sealing joints.

The remainder of this page is left blank intentionally.

GENERAL NOTES

1. ALL WORK TO BE DONE IN ACCORDANCE WITH NCDOT, CITY OF RALEIGH, AND TOWN OF WAKE FOREST STANDARD SPECIFICATIONS.

2. PROPERTY AND RIGHT-OF-WAY LINES FROM GIS INFORMATION ARE NOT ACTUAL SURVEY.

3. ALL TREATMENTS MAY REQUIRE ADVANCE STRIPING BASED ON ROADWAY GEOMETRY.

4. ALL WORK SHALL BE CONFINED WITHIN THE LIMIT OF TOWN OWNED PROPERTY, PUBLIC RIGHT-OF-WAY, AND EASEMENTS.

5. CONTRACTOR SHALL NOTIFY NC-811 TEN (10) WORKING DAYS BEFORE STARTING CONSTRUCTION AND COORDINATE WITH TOWN ENGINEER AND CITY OF RALEIGH.

6. THE CONTRACTOR IS RESPONSIBLE FOR THE CONTROL OF DUST AND DEBRIS ON ANY PUBLIC ROAD ACCESSED BY CONSTRUCTION ENTRANCES AS A RESULT OF CONSTRUCTION VEHICLES ENTERING AND LEAVING THE PROJECT SITE DURING CONSTRUCTION.

7. THE CONTRACTOR SHALL LIMIT THEIR WORK AREA TO AREAS DESIGNATED HEREIN AND APPROVED BY THE TOWN ENGINEER.ON-SITE STORAGE AND STAGING AREA SHALL BE DESIGNATED PRIOR TO CONSTRUCTION AND APPROVED BY THE TOWN ENGINEER. ADDITIONAL OFFSITE STORAGE AS REQUIRED WILL BE COORDINATED BY THE CONTRACTOR.

8. THE CONTRACTOR SHALL LIMIT THEIR WORKING HOURS AS DESIGNATED BY THE TOWN OF WAKE FOREST.

9. THE CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS ON ALL LOCATIONS WHERE EXISTING UTILITIES ARE ON THE ROADS.

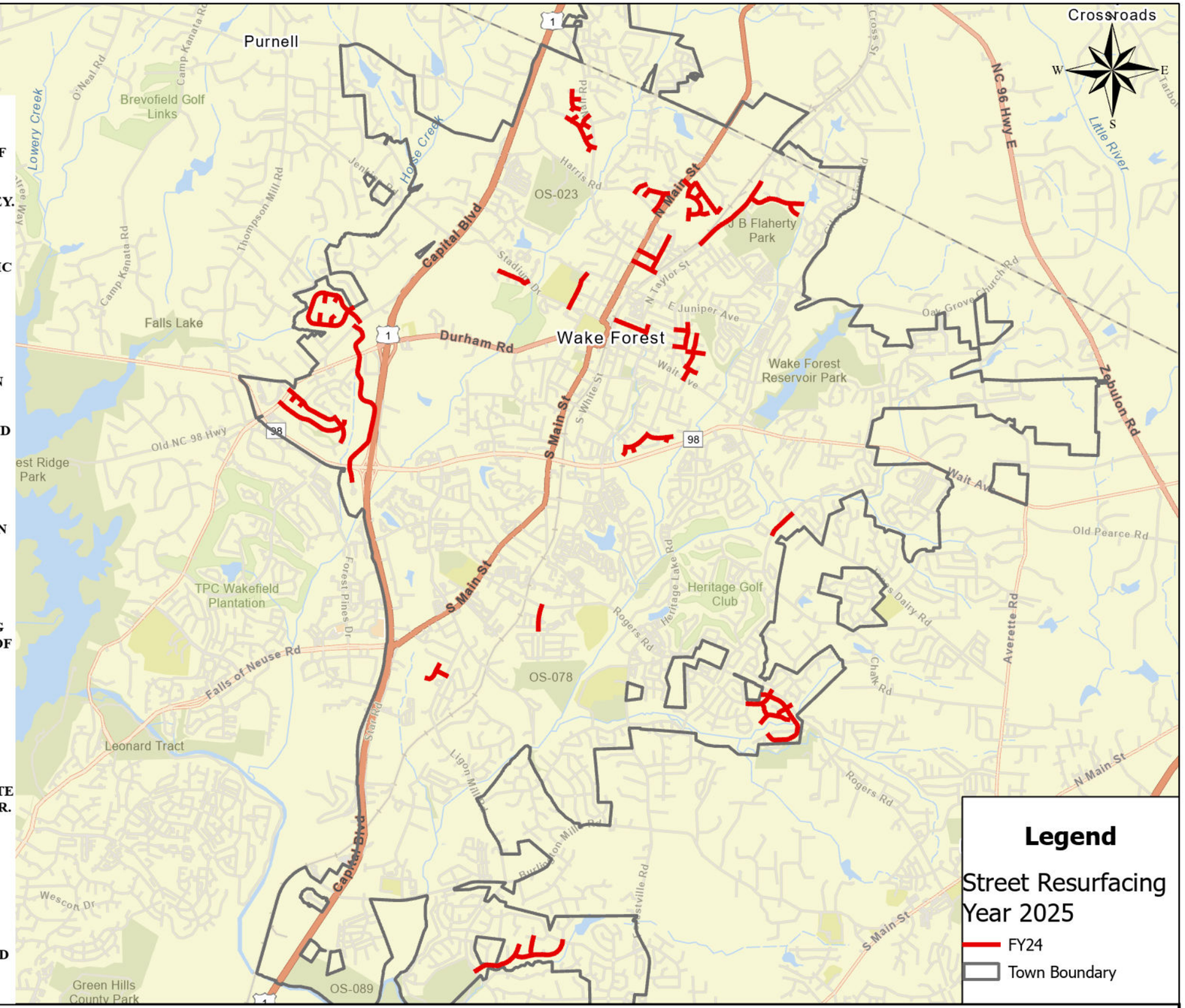
10. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING STRUCTURES, UTILITIES AND EQUIPMENT, AND TO MAINTAIN UNINTERRUPTED SERVICE OF THE EXISTING UTILITES.

11. THE CONTRACTOR SHALL PROVIDE ALL TEMPORARY SUPPORTS, BRACES, SHEETING AND SHORING AS NECESSARY. ANY DAMAGES TO EXISTING STRUCTURES, UTILITIES, OR EQUIPMENT, EVEN THOSE NOT INDICATED ON THE CONTRACT DOCUMENTS AND DRAWINGS, RESULTING FROM THE ACTIONS OR LACK OF ACTIONS BY THE CONTRACTOR SHALL BE REPAIRED IMMEDIATELY BY THE CONTRACTOR AT HIS/HER EXPENSE.

12. NO GUARANTEE IS MADE THAT THE INFORMATION CONTAINED HEREIN IS AN ACCURATE REPRESENTATION OF THE FIELD CONDITIONS TO BE ENCOUNTERED BY THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE TO FIELD CHECK AND MEASURE LOCATIONS, ELEVATIONS AND DIMENSIONS FOR COMPLETE THE PROJECT.

13. THE CONTRACTOR SHALL COMPLY WITH LEGAL HIGHWAY LOADINGS OF NORTH CAROLINA WHEN USING EXISTING ROADS WITHIN THE PROJECT SITE.

14. ALL COSTS ASSOCIATED WITH COMPLIANCE WITH THESE GENERAL NOTES AND CONTRACT DOCUMENT, OR ANY OTHER GENERAL NOTES INCLUDED ON OTHER DOCUEMNTS AND DRAWINGS, SHALL BE INCLUDED IN THE VARIOUS CONTRACT ITEMS AND NO SEPARATE PAYMENT WILL BE MADE THEREFORE.



Legend

Street Resurfacing Year 2025

FY24

Town Boundary

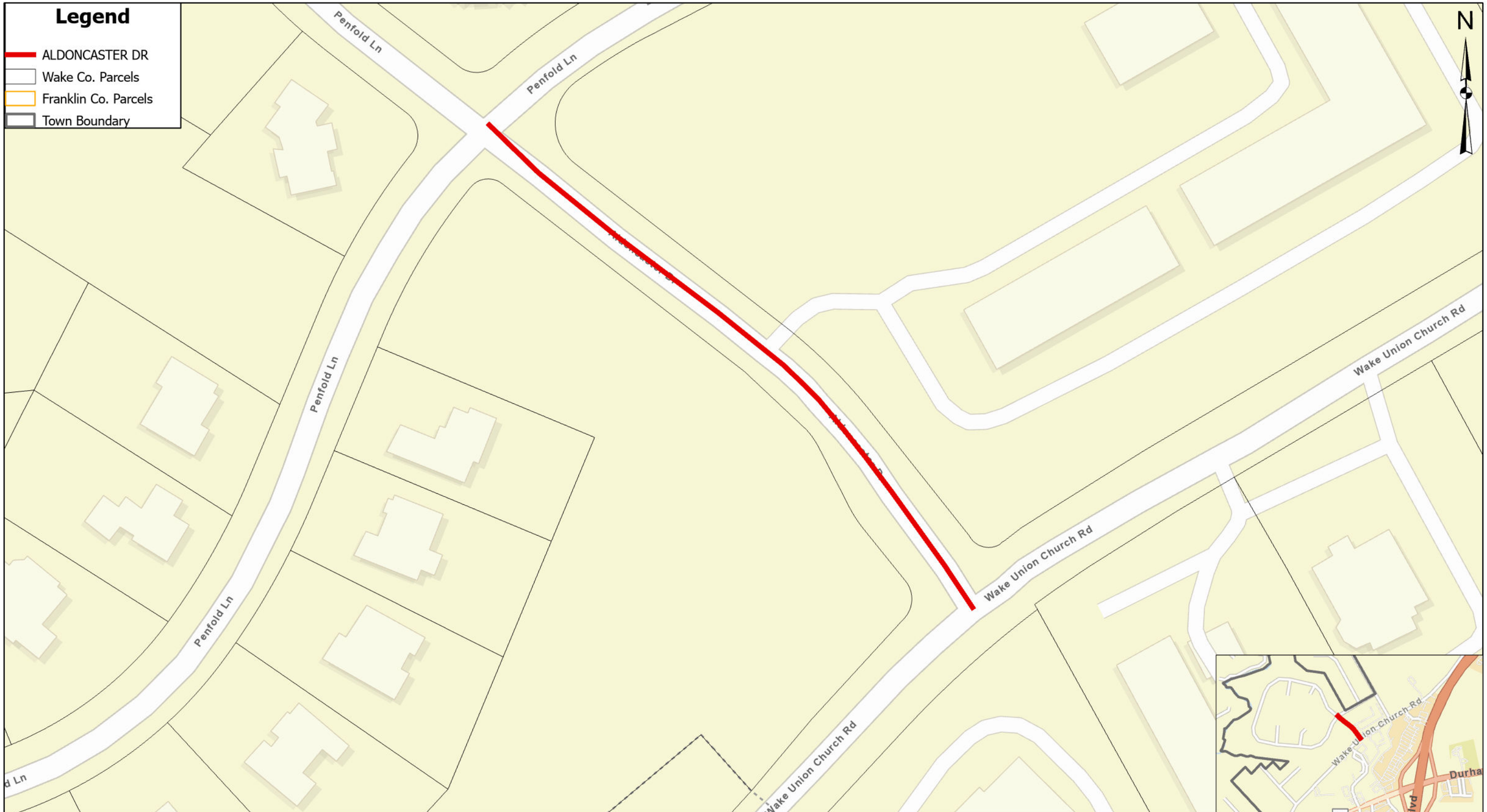
0 0.5 1 1.5

Miles

Min Htun - 8/5/2024

TOWN of WAKE FOREST

Street Resurfacing Project
Year 2025



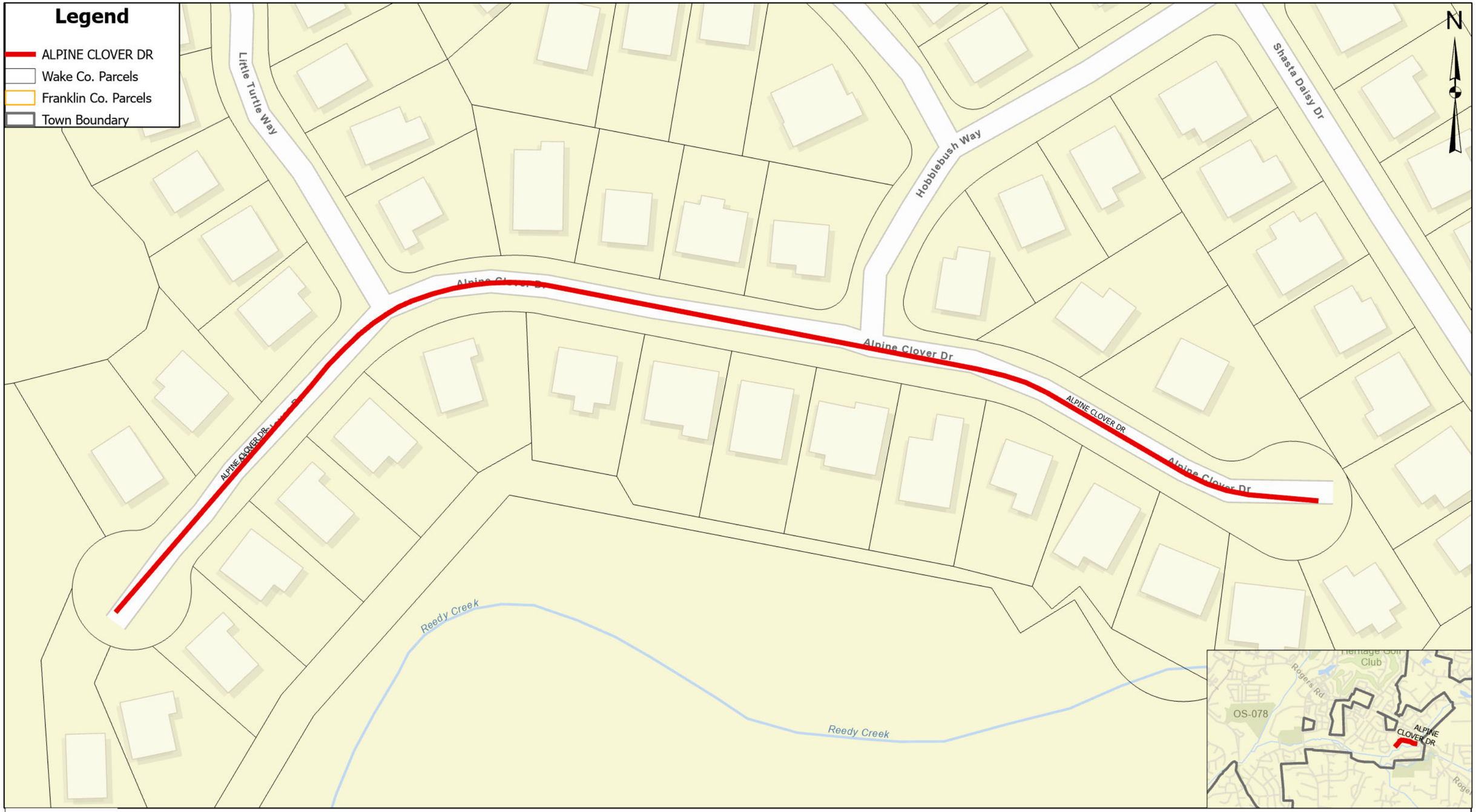
TOWN of WAKE FOREST

Map No.1

ALDONCASTER DR

0 0.010.01 0.02
Miles

Min Htun - 8/1/2024



TOWN of WAKE FOREST

Map No.2

ALPINE CLOVER DR

0 0.010.01 0.02
Miles

Min Htun - 1/30/2024

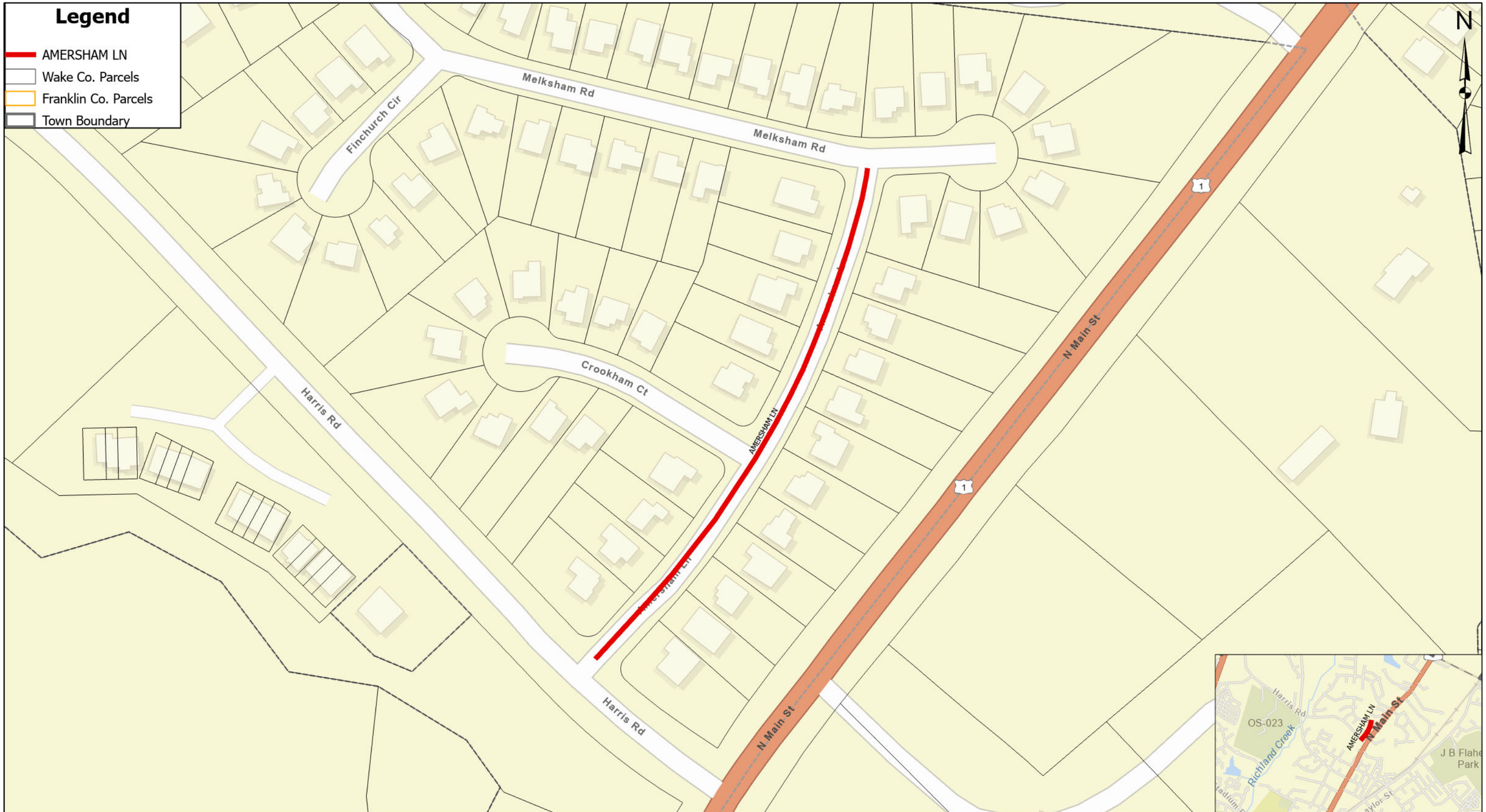
TOWN of WAKE FOREST

Map No.3

AMARYLLIS WAY

0 0.010.02 0.04
Miles

Min Htun - 1/22/2024



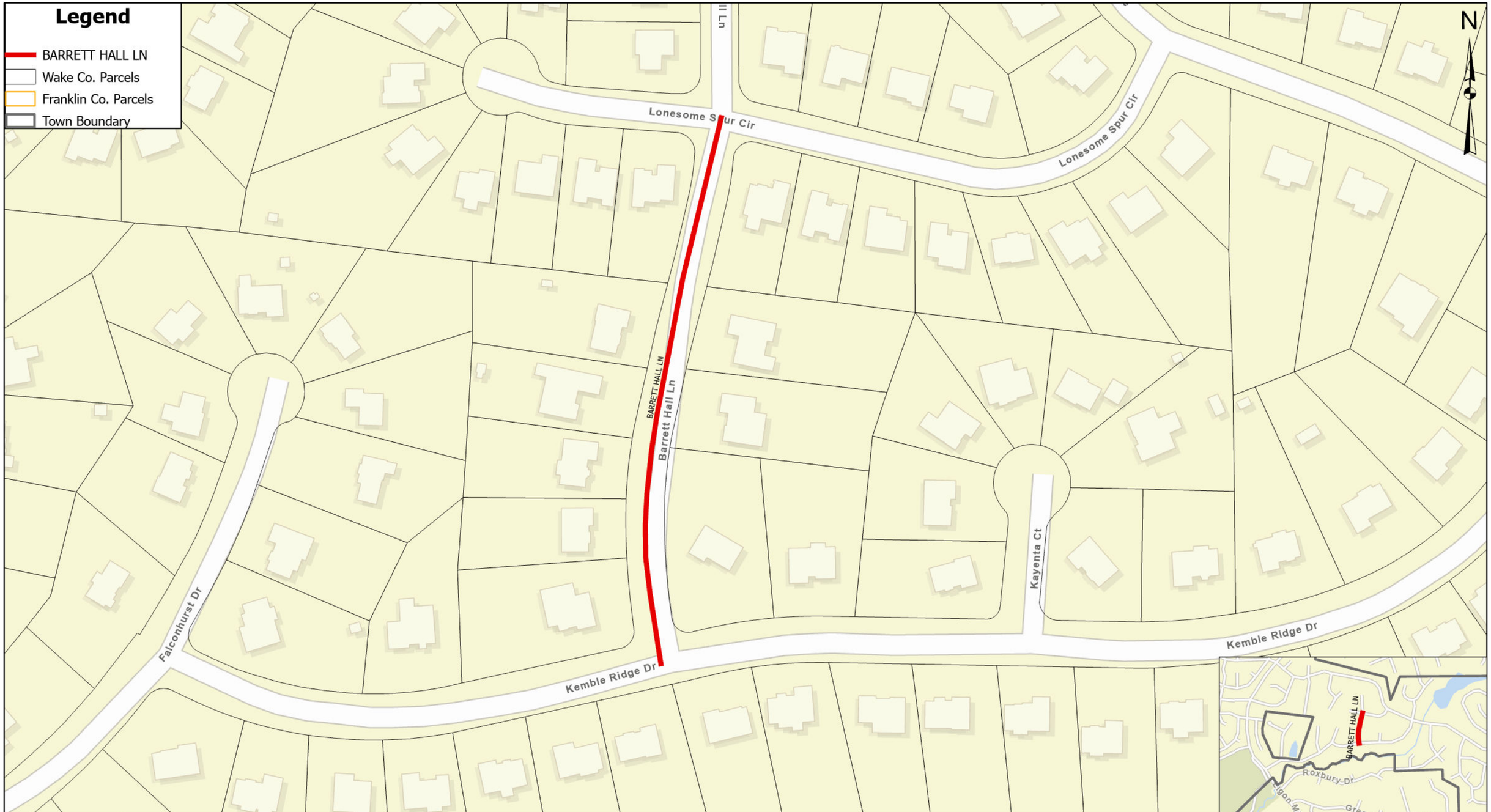
TOWN of WAKE FOREST

Map No.4

AMERSHAM LN

0 0.010.01 0.03
Miles

Min Htun - 1/8/2024



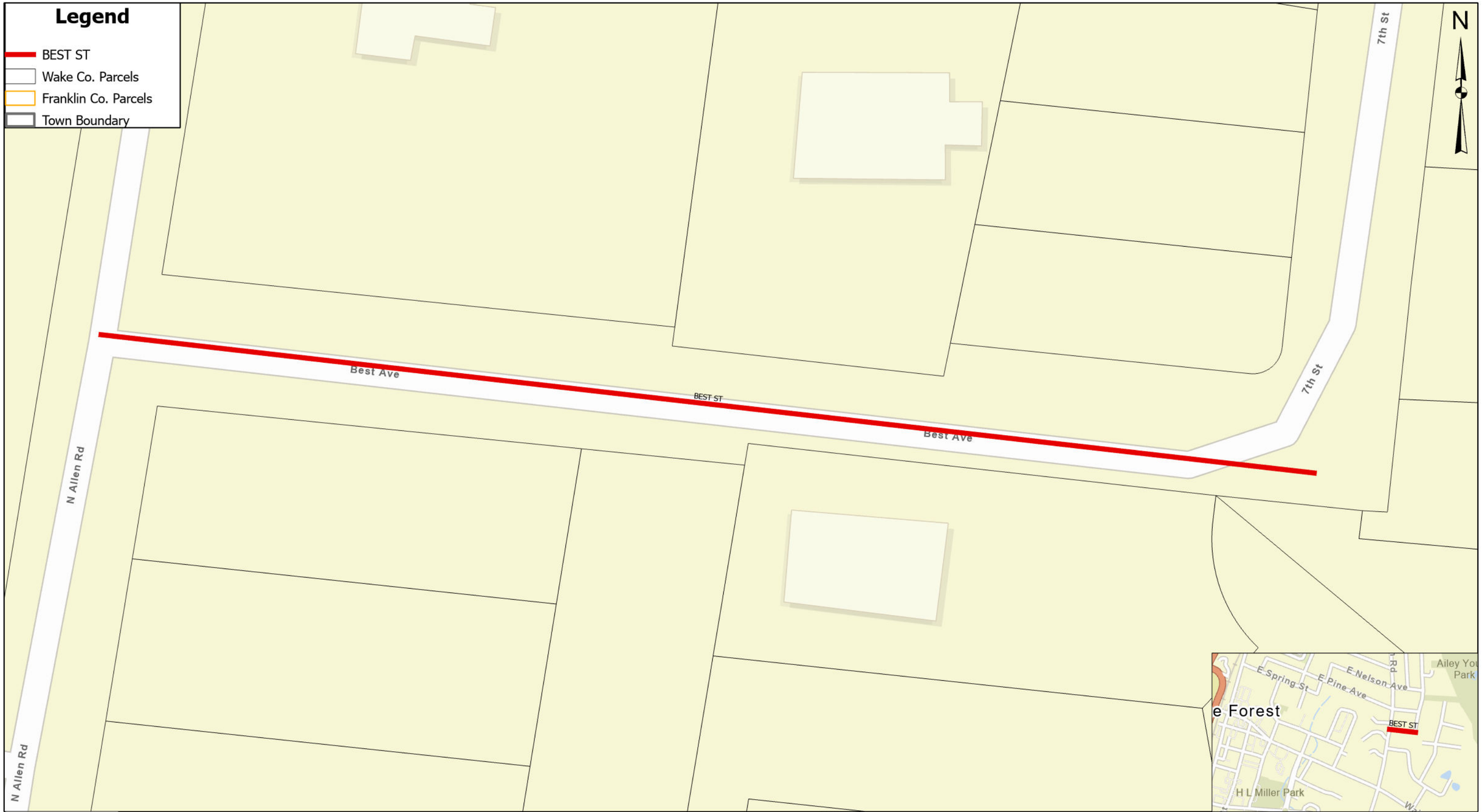
TOWN of WAKE FOREST

Map No.5

BARRETT HALL LN

0 0.010.01 0.03
Miles

Min Htun - 2/1/2024



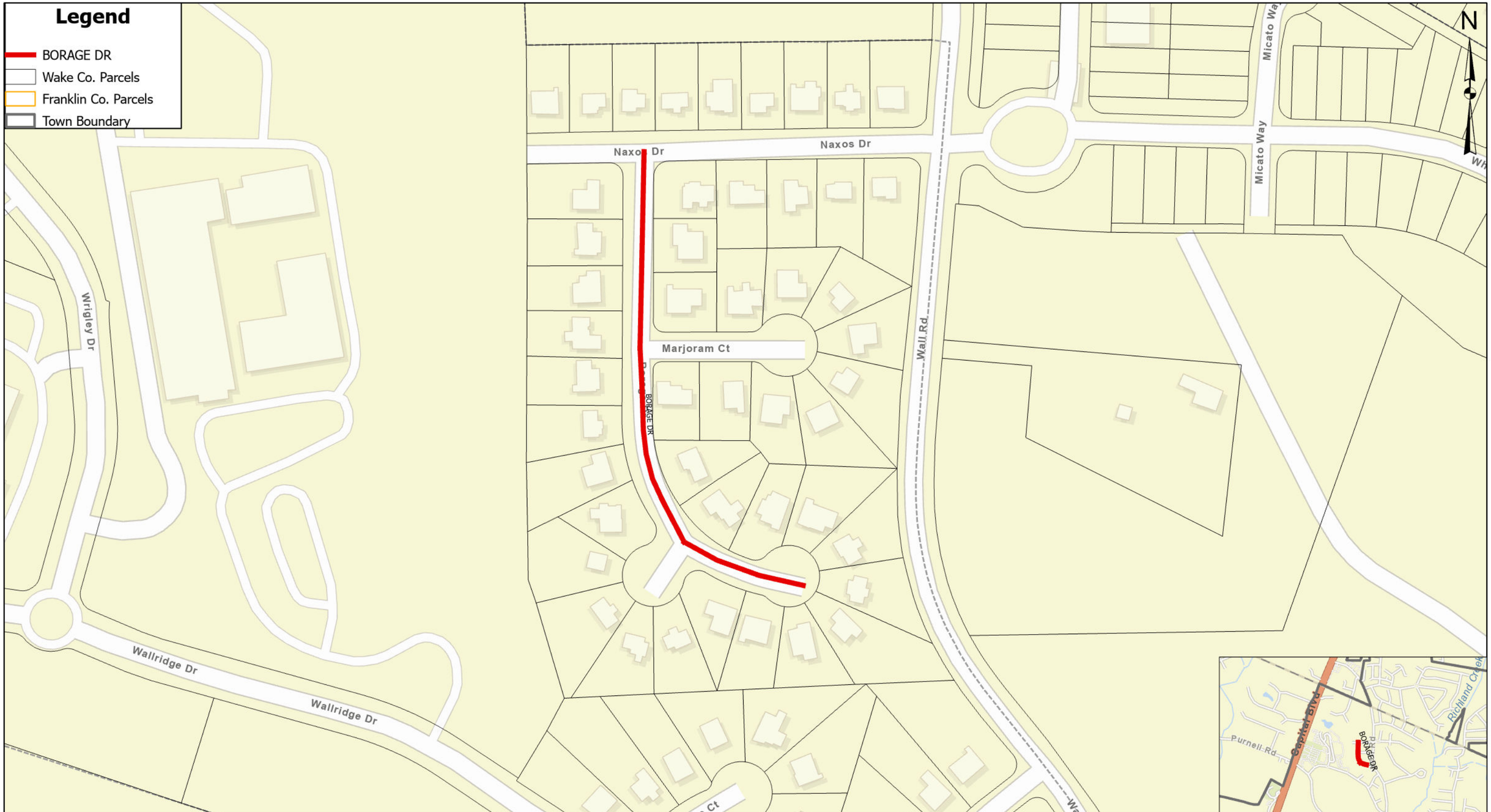
TOWN of WAKE FOREST

Map No.6

BEST ST

0 0 0 0.01
Miles

Min Htun - 1/18/2024



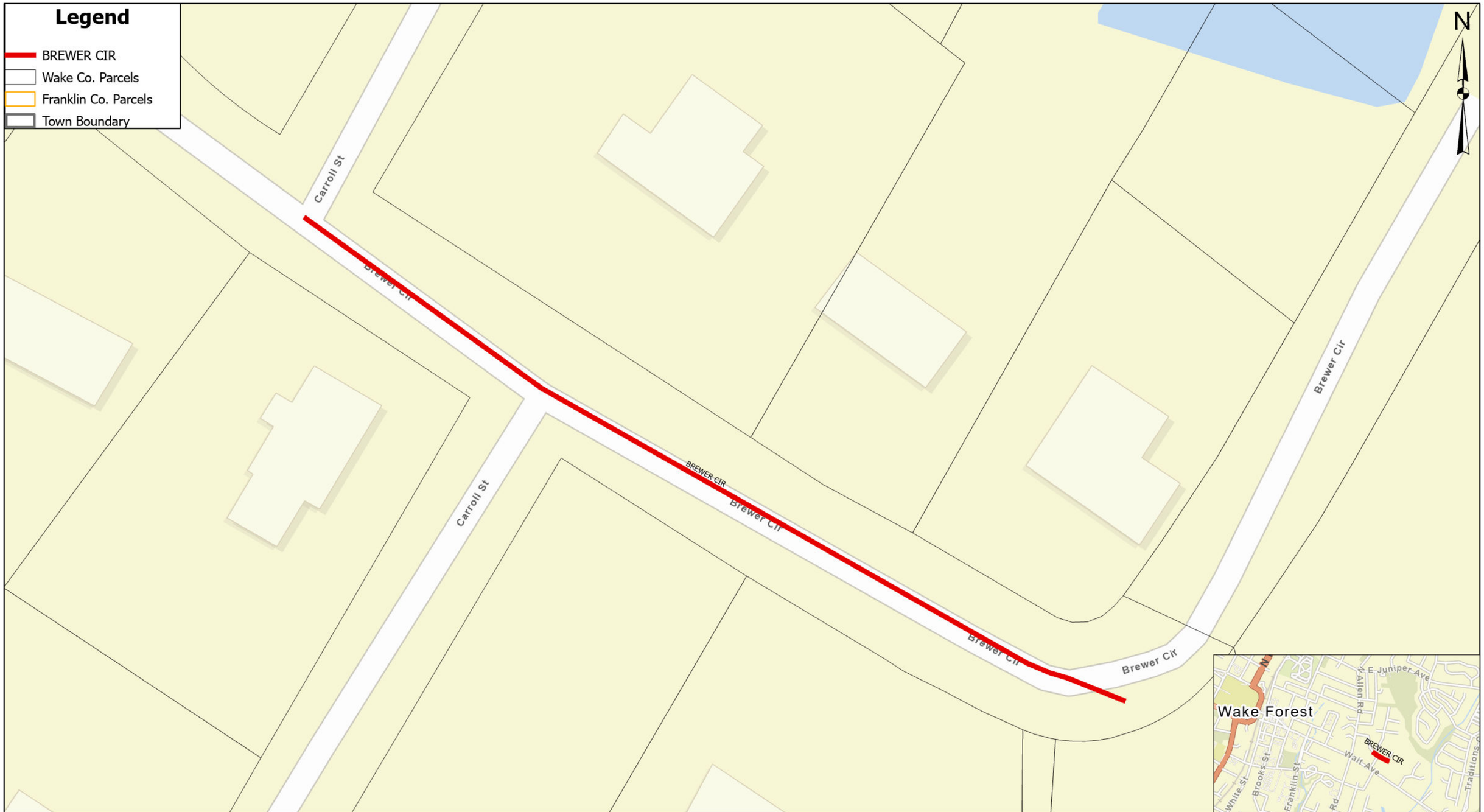
TOWN of WAKE FOREST

Map No.7

BORAGE DR

0 0.01 0.02 0.04
Miles

Min Htun - 1/9/2024



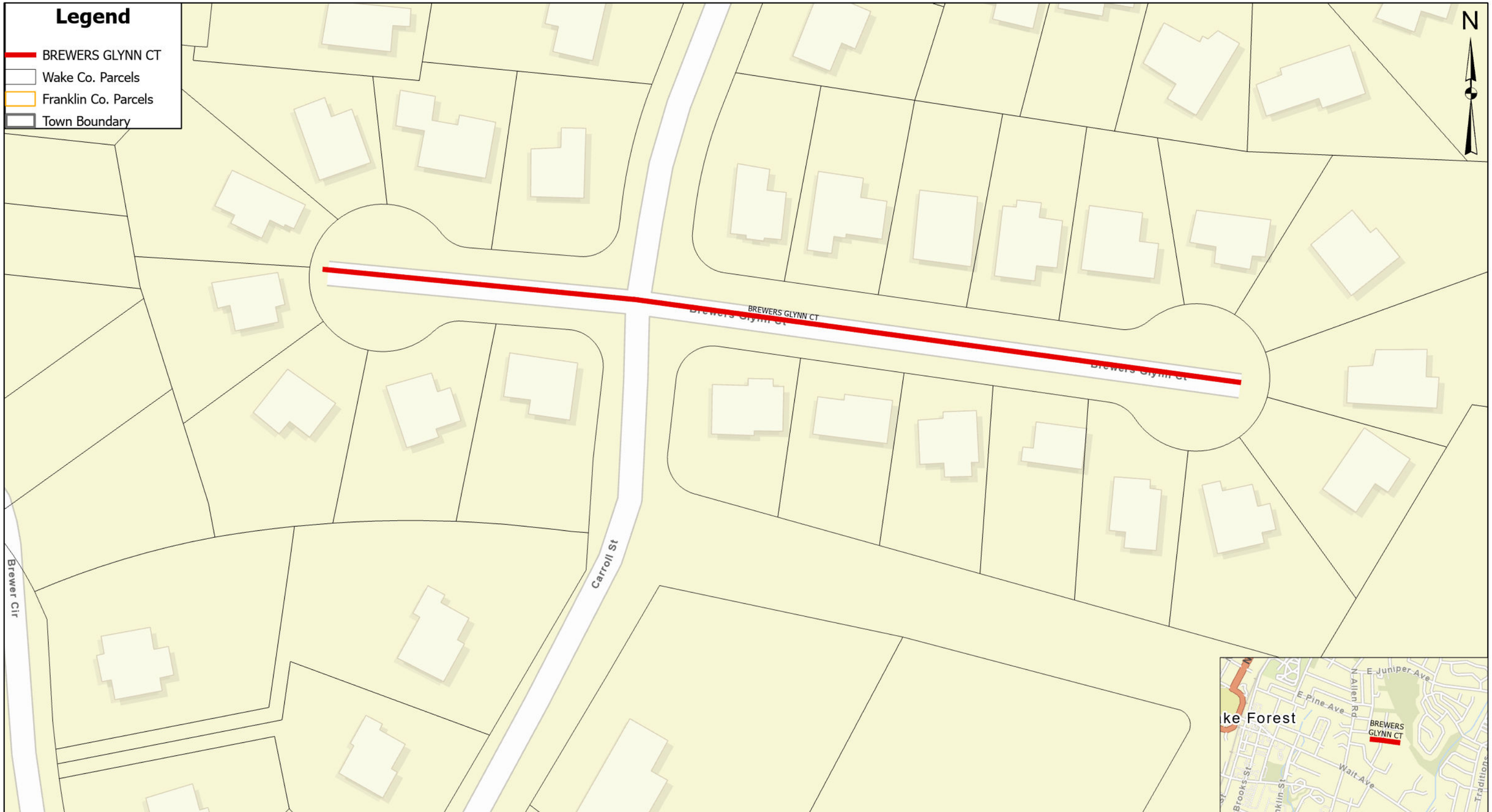
TOWN of WAKE FOREST

Map No.8

BREWER CIR

0 0 0.01 0.01
Miles

Min Htun - 1/11/2024



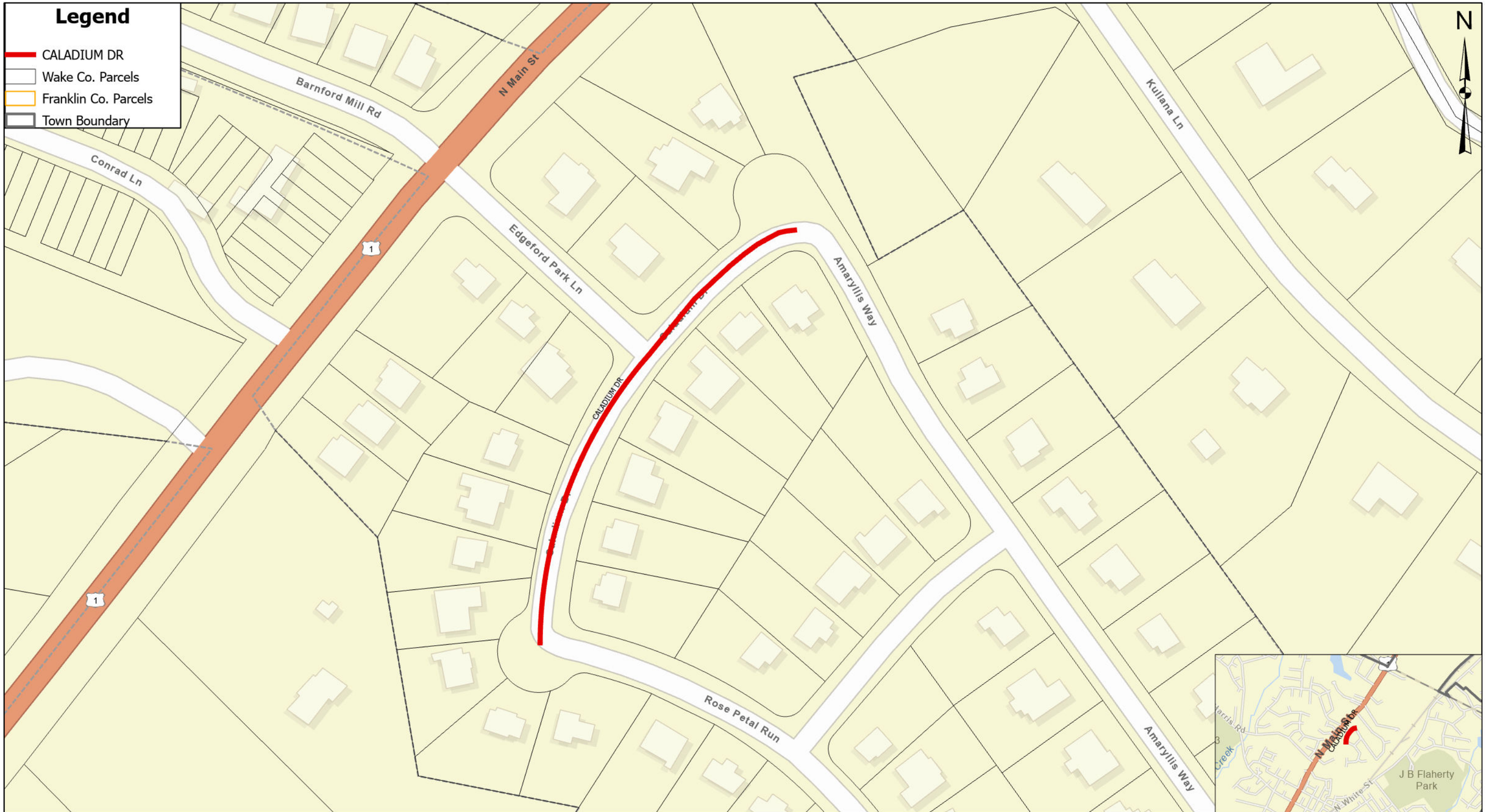
TOWN of WAKE FOREST

Map No.9

BREWERS GLYNN CT

0 0 0.01 0.02
Miles

Min Htun - 1/11/2024



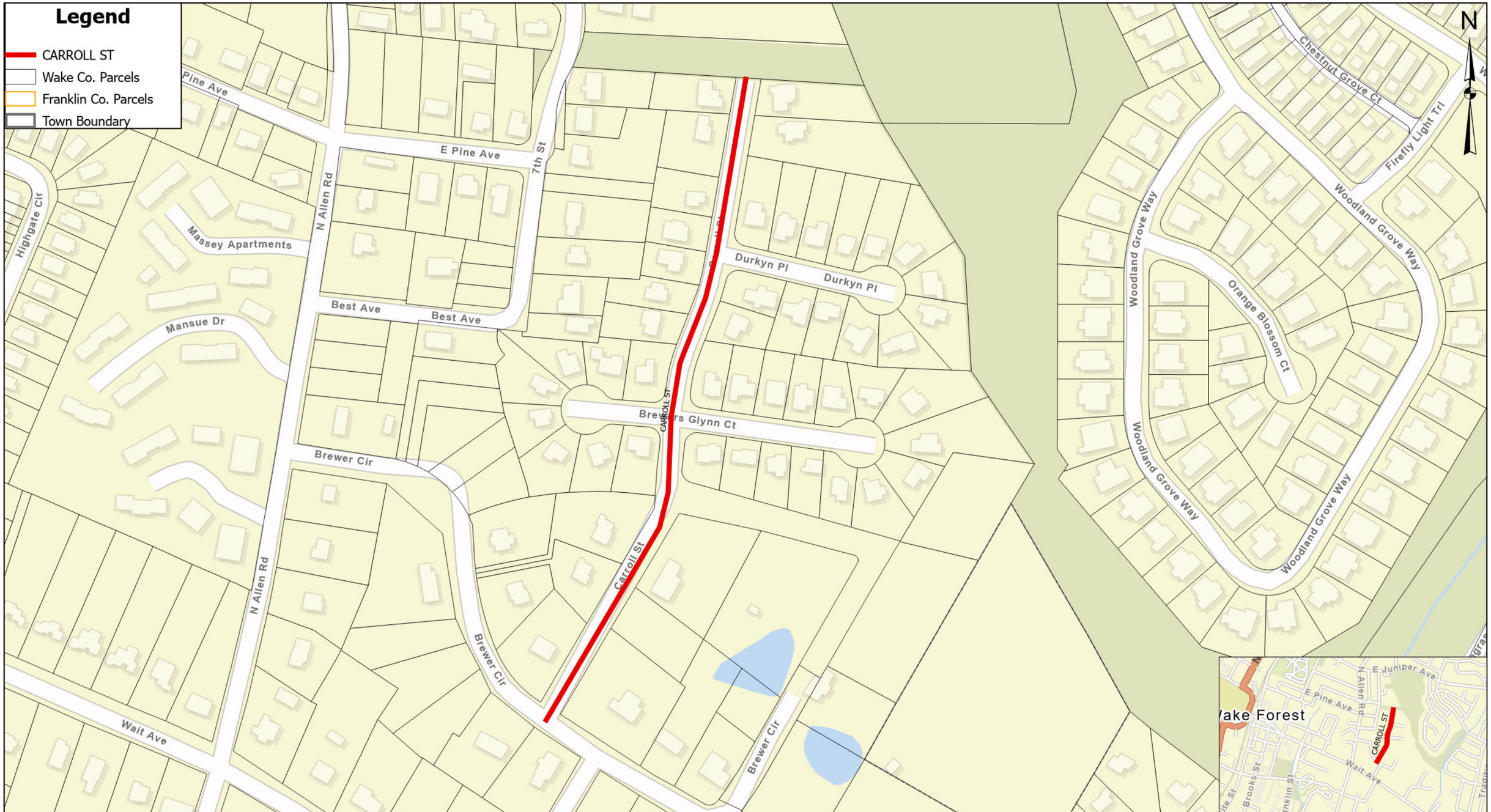
TOWN of WAKE FOREST

Map No.10

CALADIUM DR

0 0.01 0.01 0.03
Miles

Min Htun - 1/22/2024



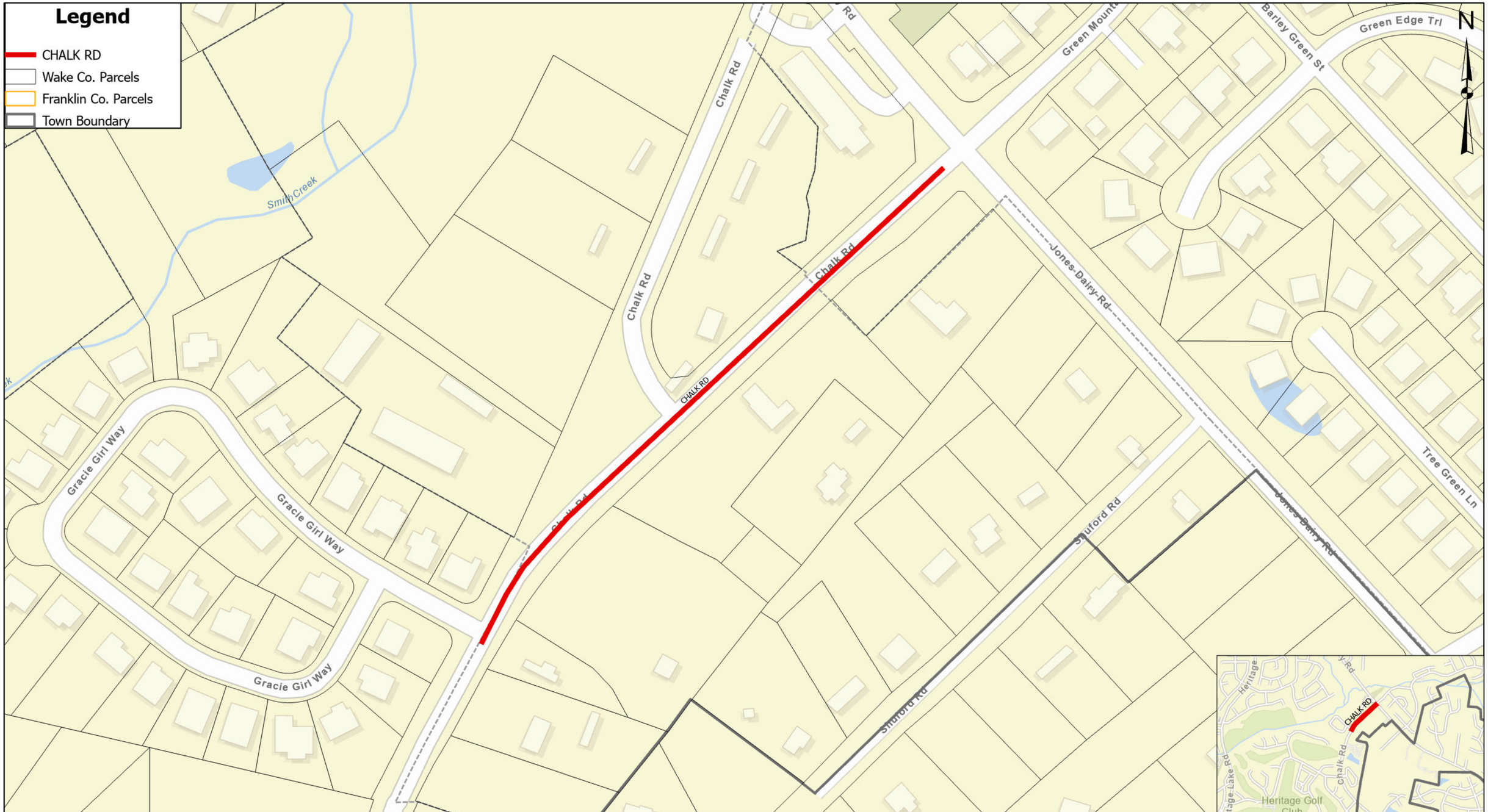
TOWN of WAKE FOREST

Map No.11

CARROLL ST

0 0.01 0.03 0.05
Miles

Min Htun - 1/11/2024



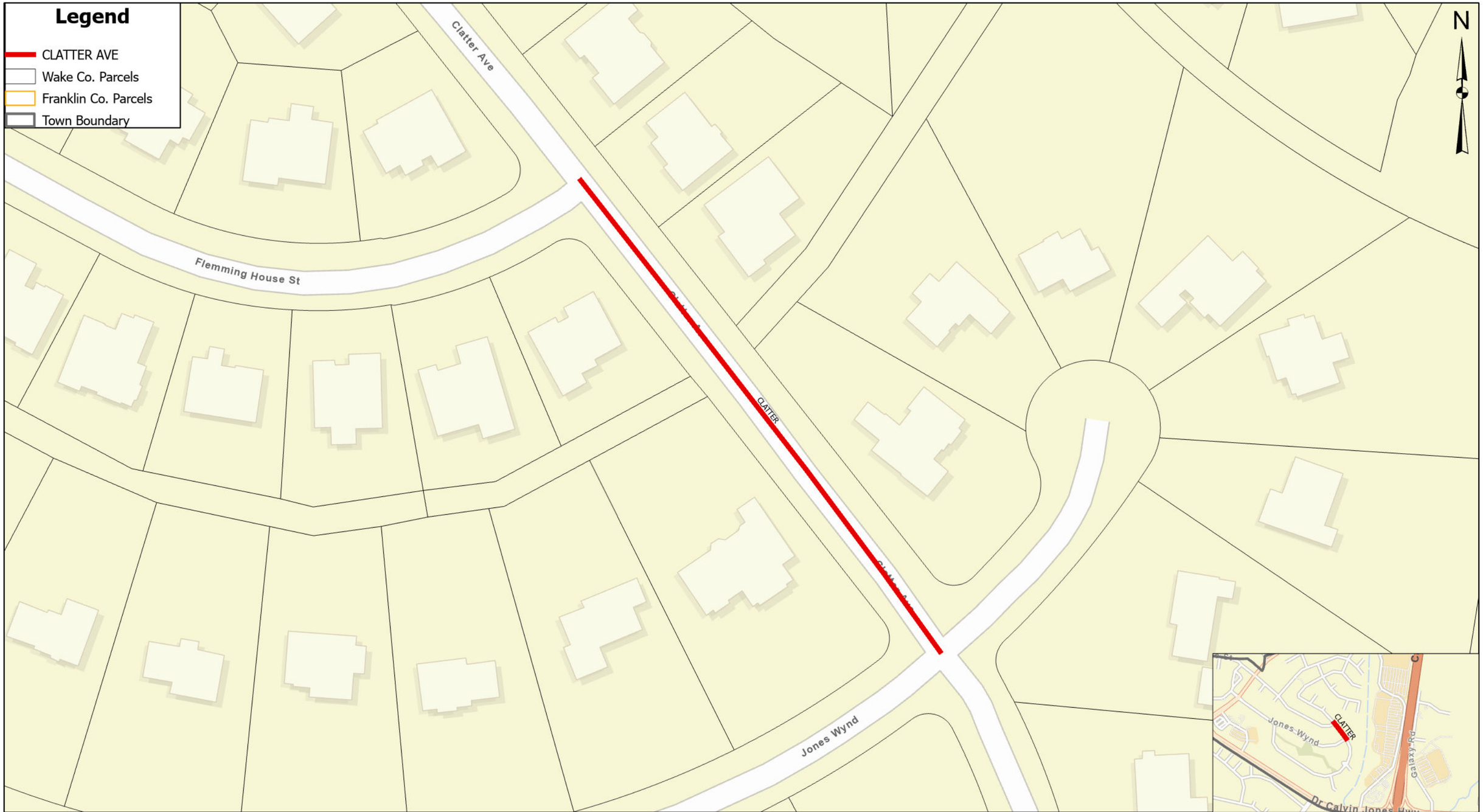
TOWN of WAKE FOREST

Map No.12

CHALK RD

0 0.01 0.02 0.04
Miles

Min Htun - 3/20/2024



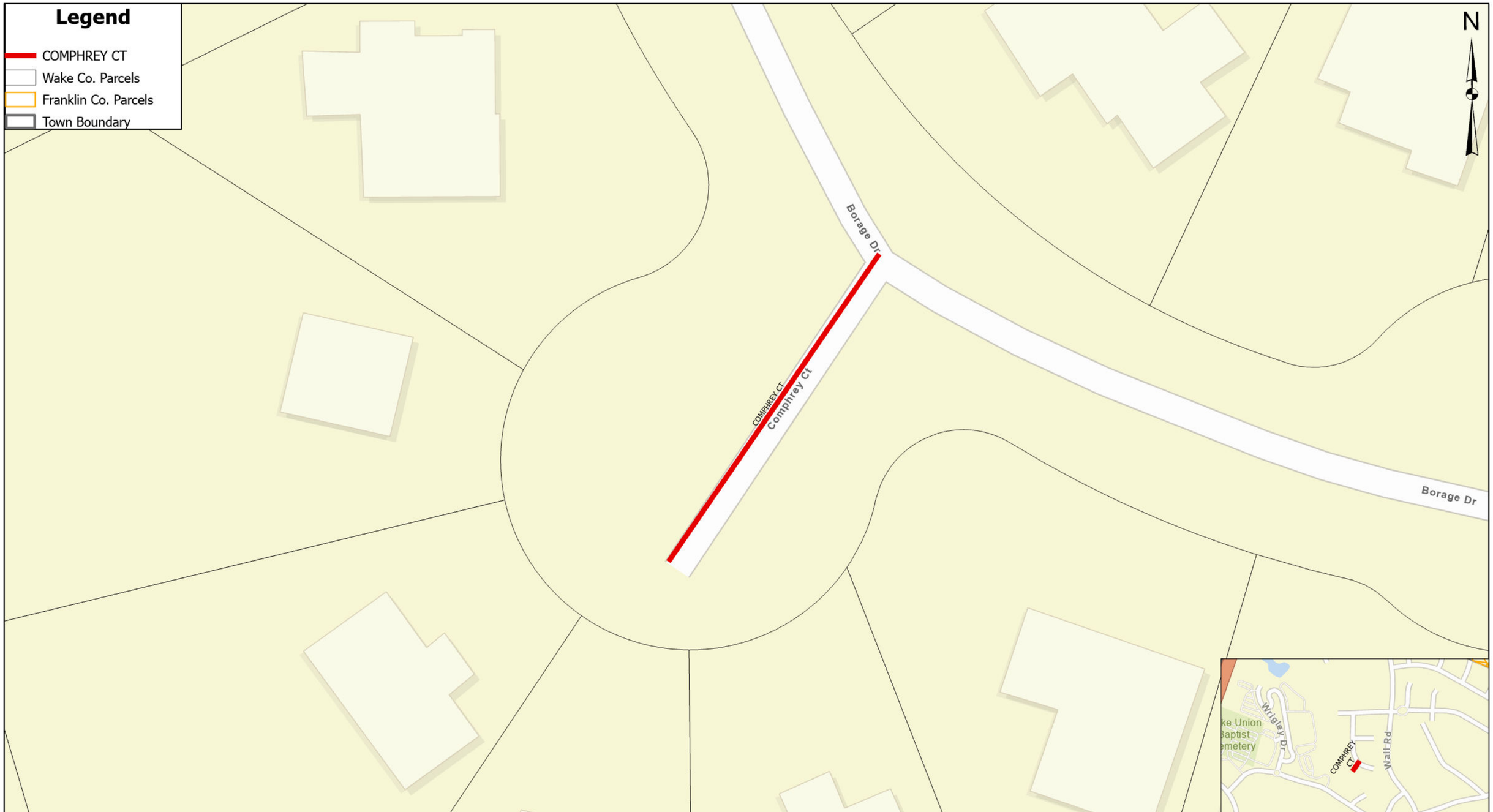
TOWN of WAKE FOREST

Map No.13

CLATTER AVE

0 0 0.01 0.02
Miles

Min Htun - 2/22/2024



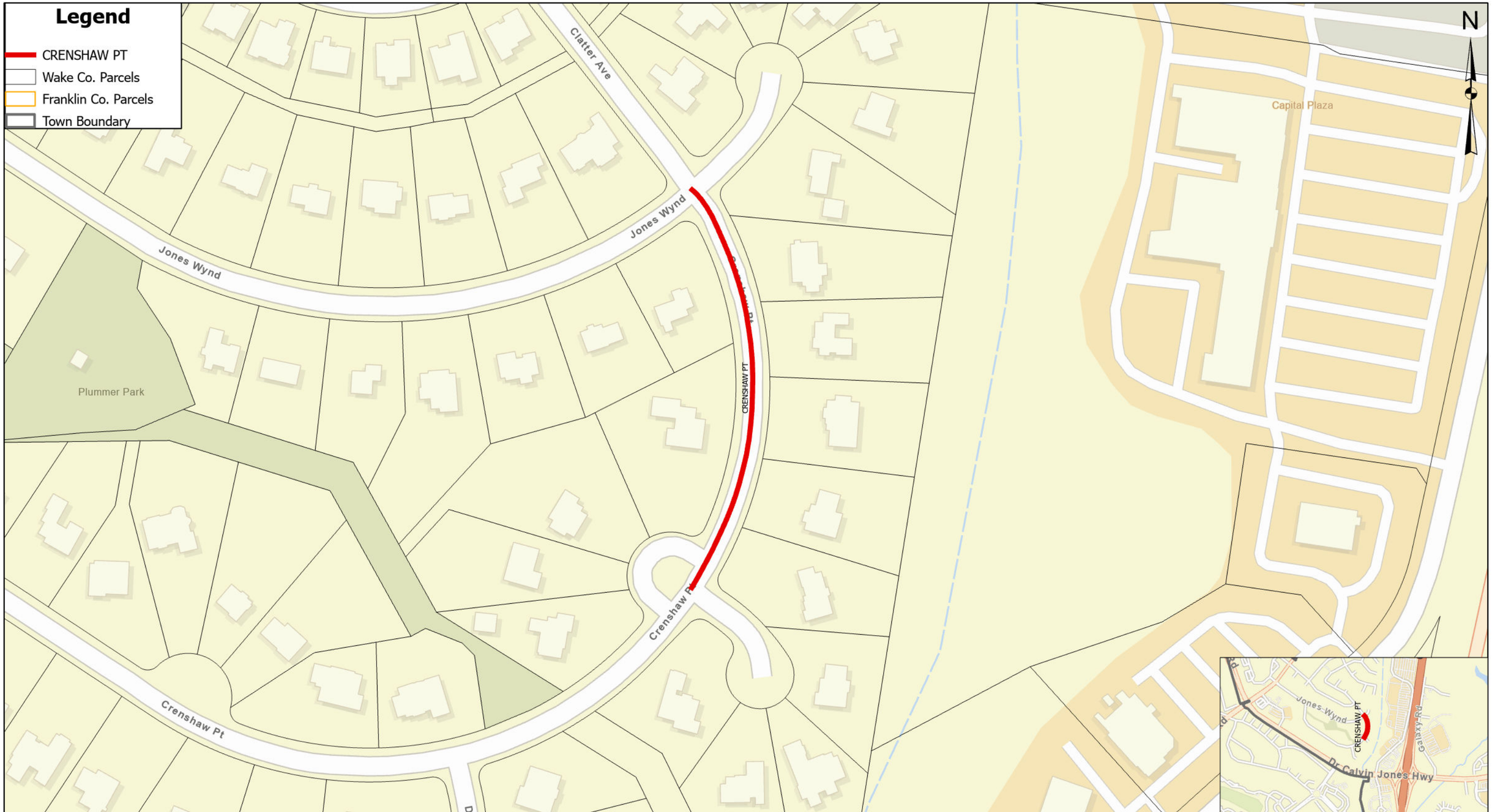
TOWN of WAKE FOREST

Map No.14

COMPHREY CT

0 0 0 0.01
Miles

Min Htun - 1/9/2024



TOWN of WAKE FOREST

Map No.15

CRENSHAW PT

0 0.01 0.01 0.03
Miles

Min Htun - 2/22/2024

TOWN of WAKE FOREST

Map No.16

DUNN CREEK CROSSING

0 0.010.01 0.02
Miles

Min Htun - 1/23/2024

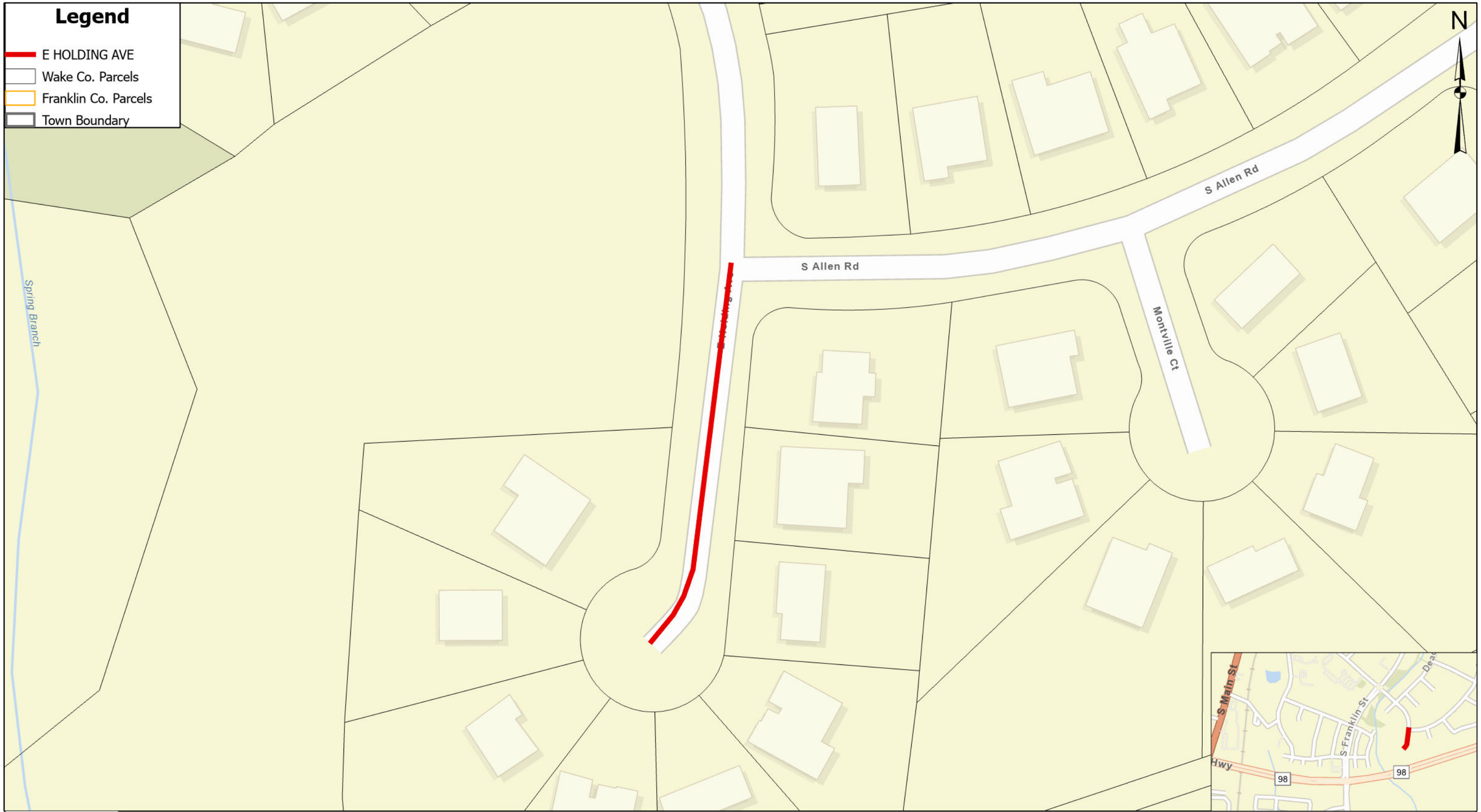
TOWN of WAKE FOREST

Map No.17

E CEDER AVE

0 0.010.01 0.02
Miles

Min Htun - 1/23/2024



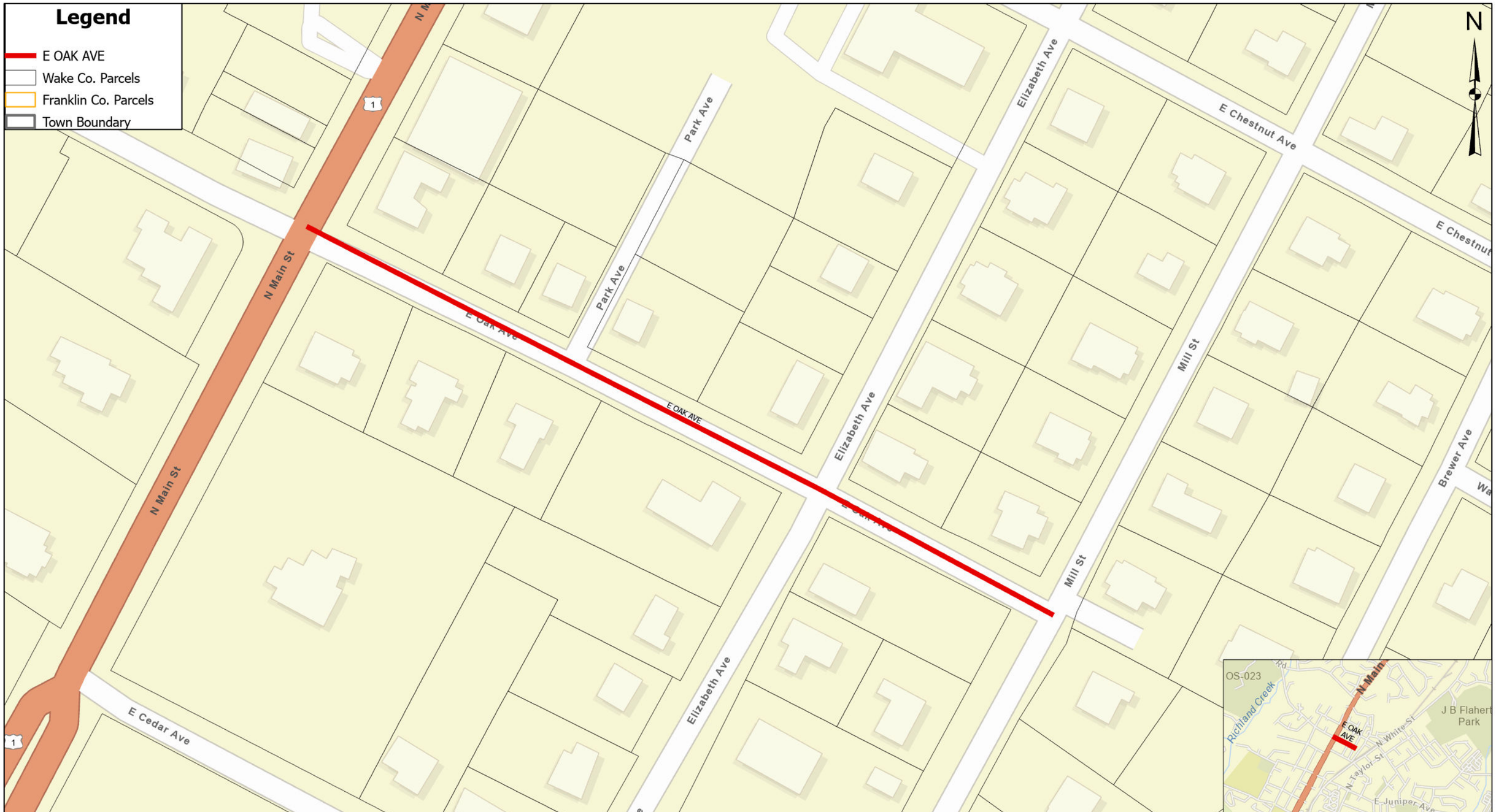
TOWN of WAKE FOREST

Map No.18

E HOLDING AVE

0 0 0.01 0.02
Miles

Min Htun - 7/31/2024



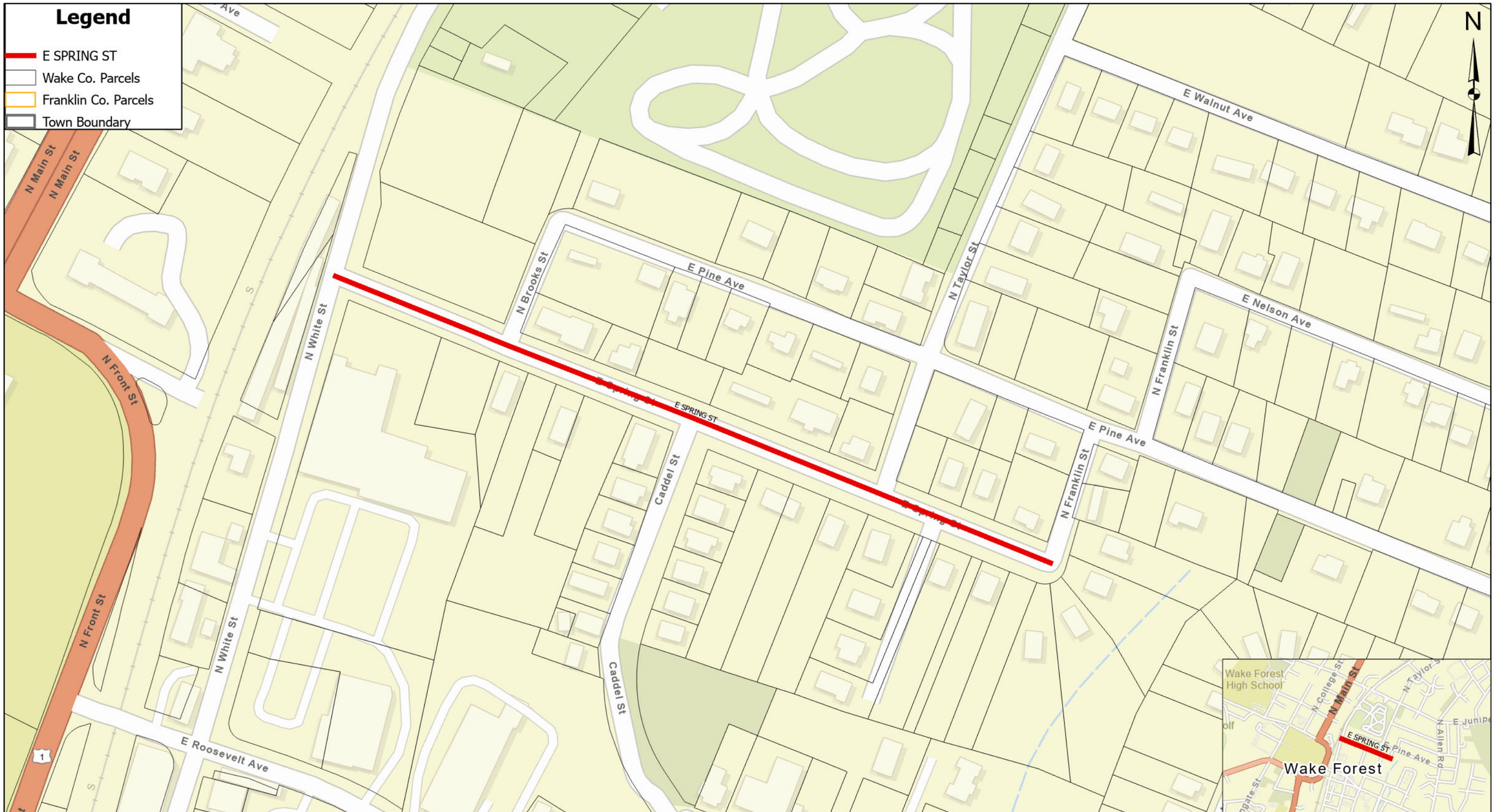
TOWN of WAKE FOREST

Map No.19

E OAK AVE

0 0.010.01 0.02
Miles

Min Htun - 6/27/2024



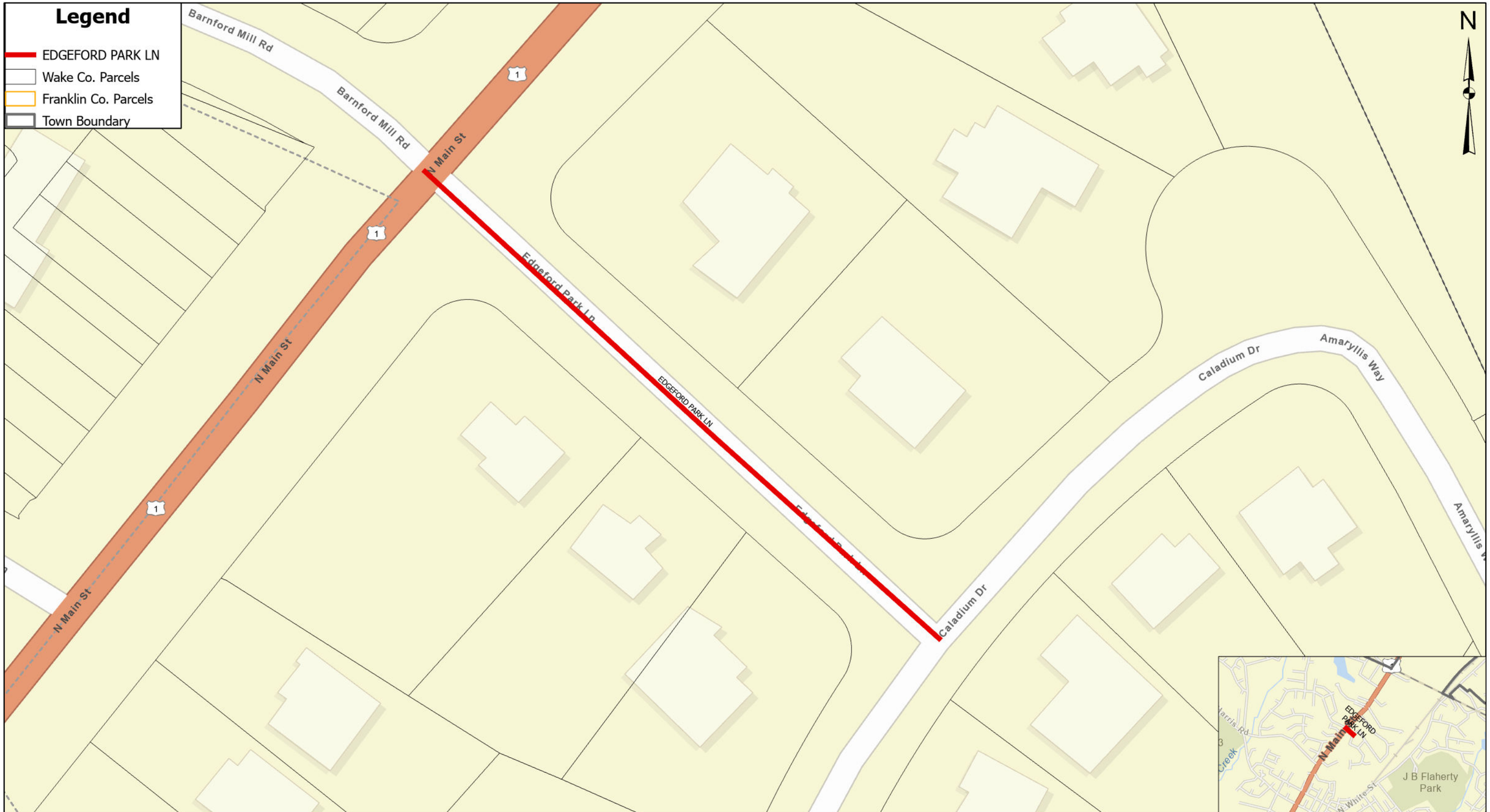
TOWN of WAKE FOREST

Map No.20

E SPRING ST

0 0.01 0.02 0.04
Miles

Min Htun - 1/25/2024



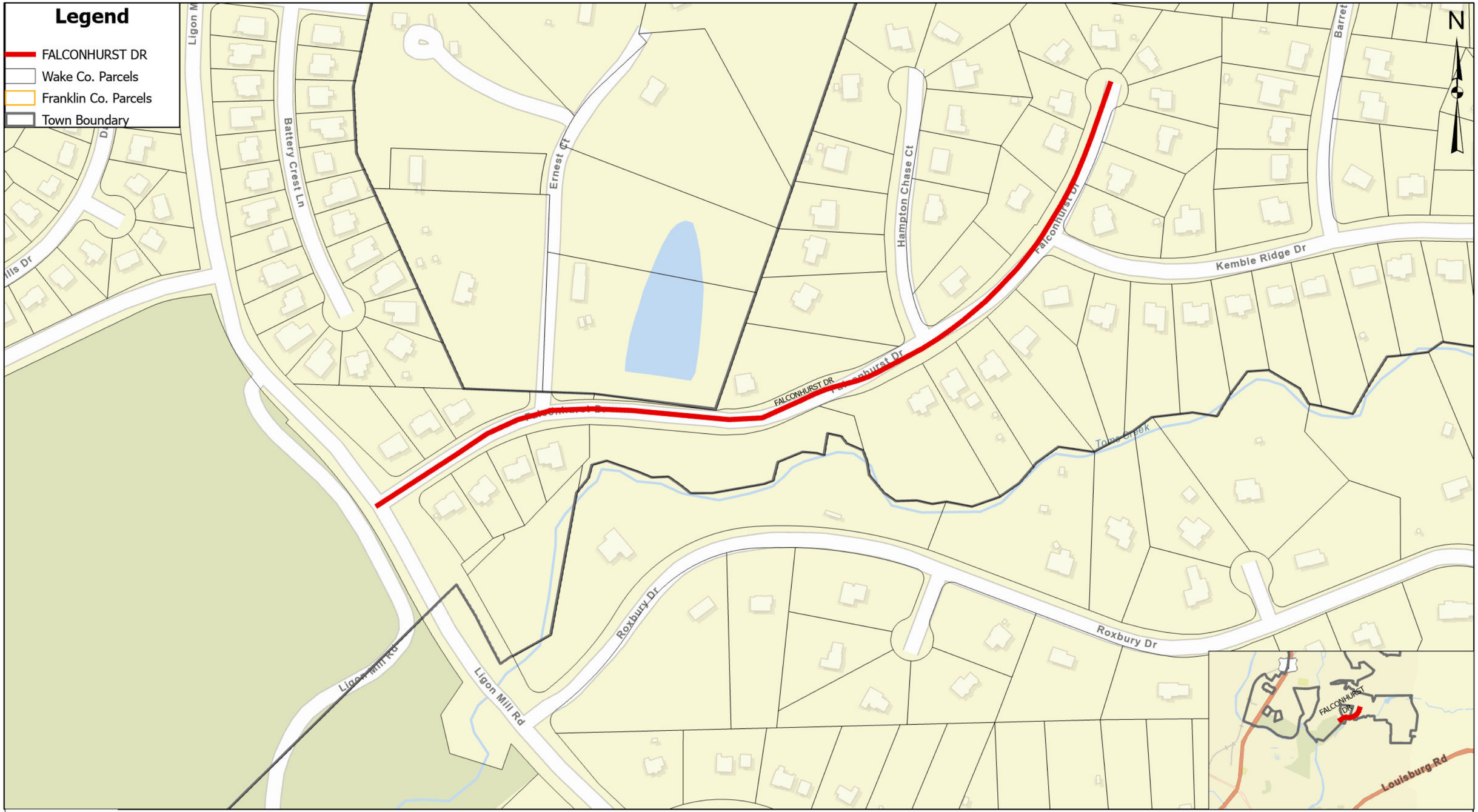
TOWN of WAKE FOREST

Map No.21

EDGEFORD PARK LN

0 0 0.01 0.01
Miles

Min Htun - 1/22/2024



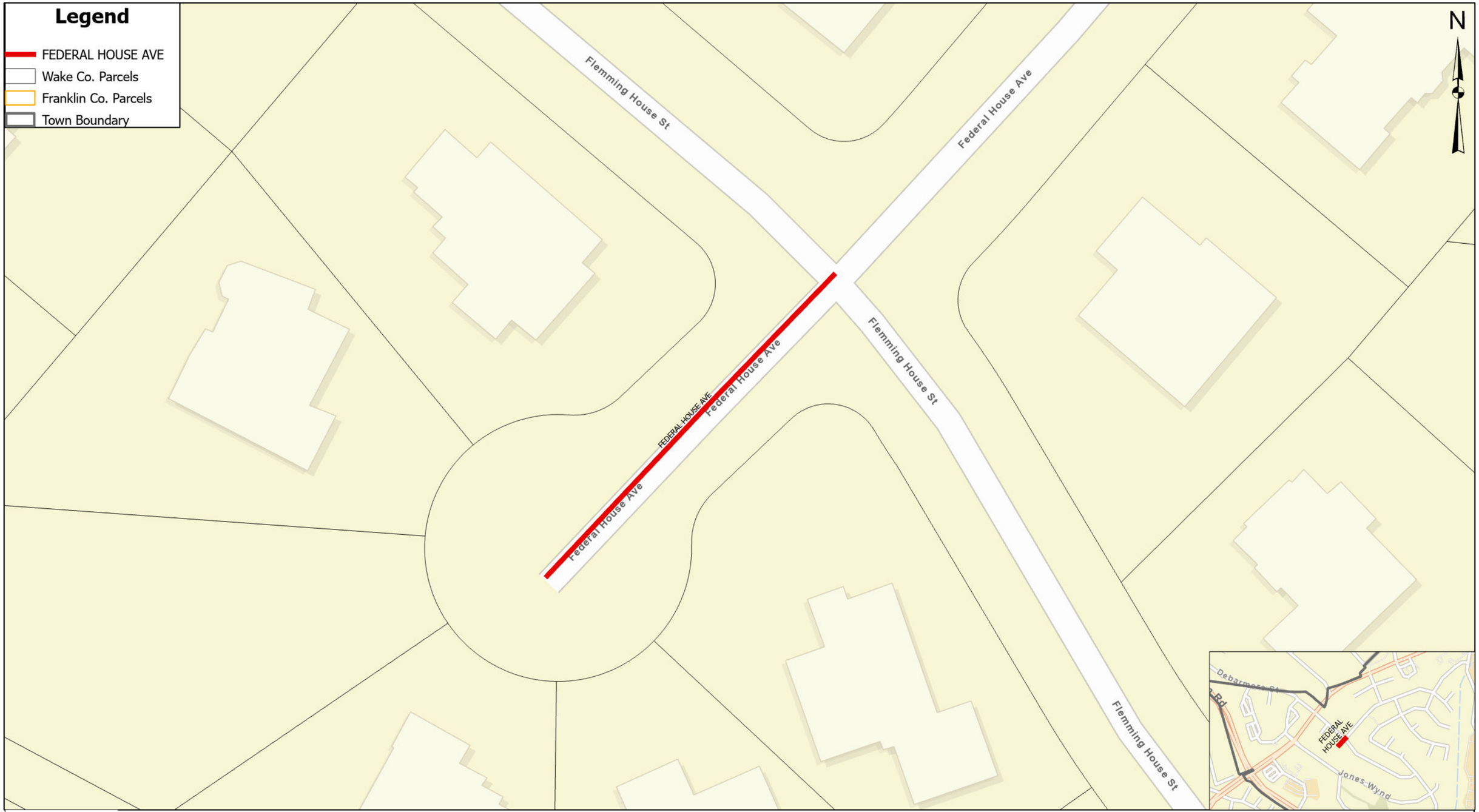
TOWN of WAKE FOREST

Map No.22

FALCONHURST DR

0 0.01 0.03 0.06
Miles

Min Htun - 6/27/2024



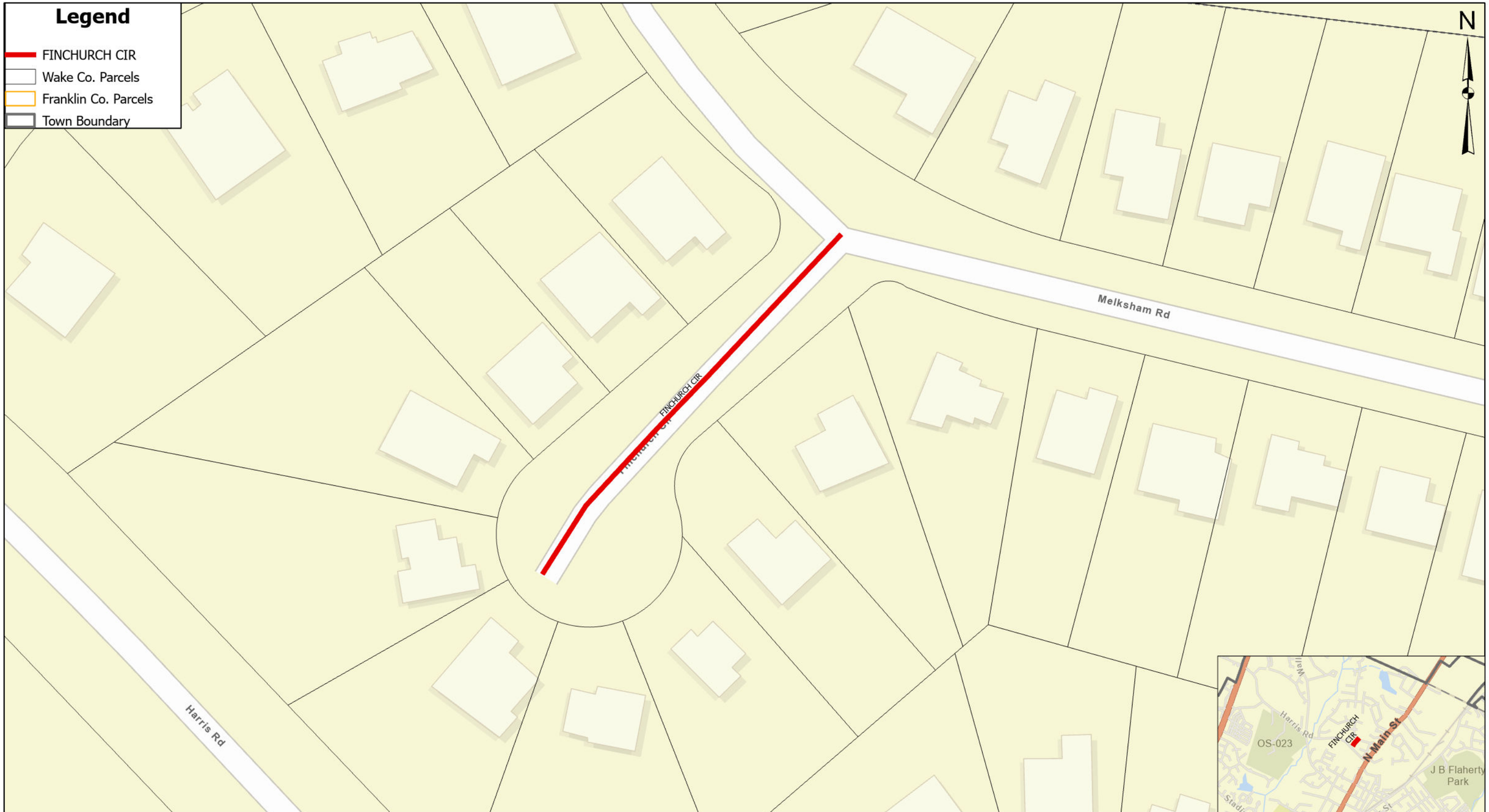
TOWN of WAKE FOREST

Map No.23

FEDERAL HOUSE AVE

0 0 0 0.01
Miles

Min Htun - 2/22/2024



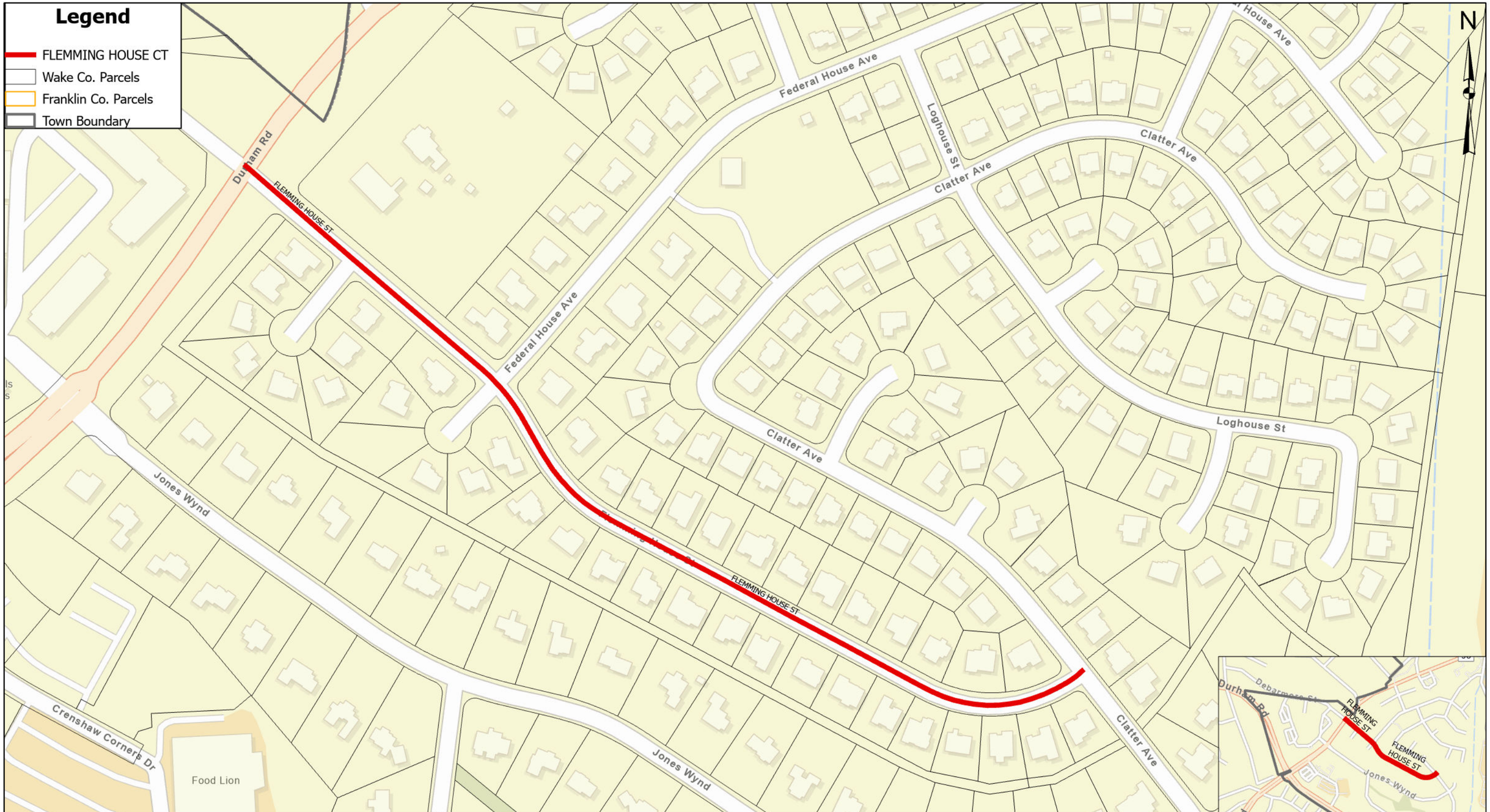
TOWN of WAKE FOREST

Map No.24

FINCHURCH CIR

0 0 0.01 0.01
Miles

Min Htun - 1/9/2024



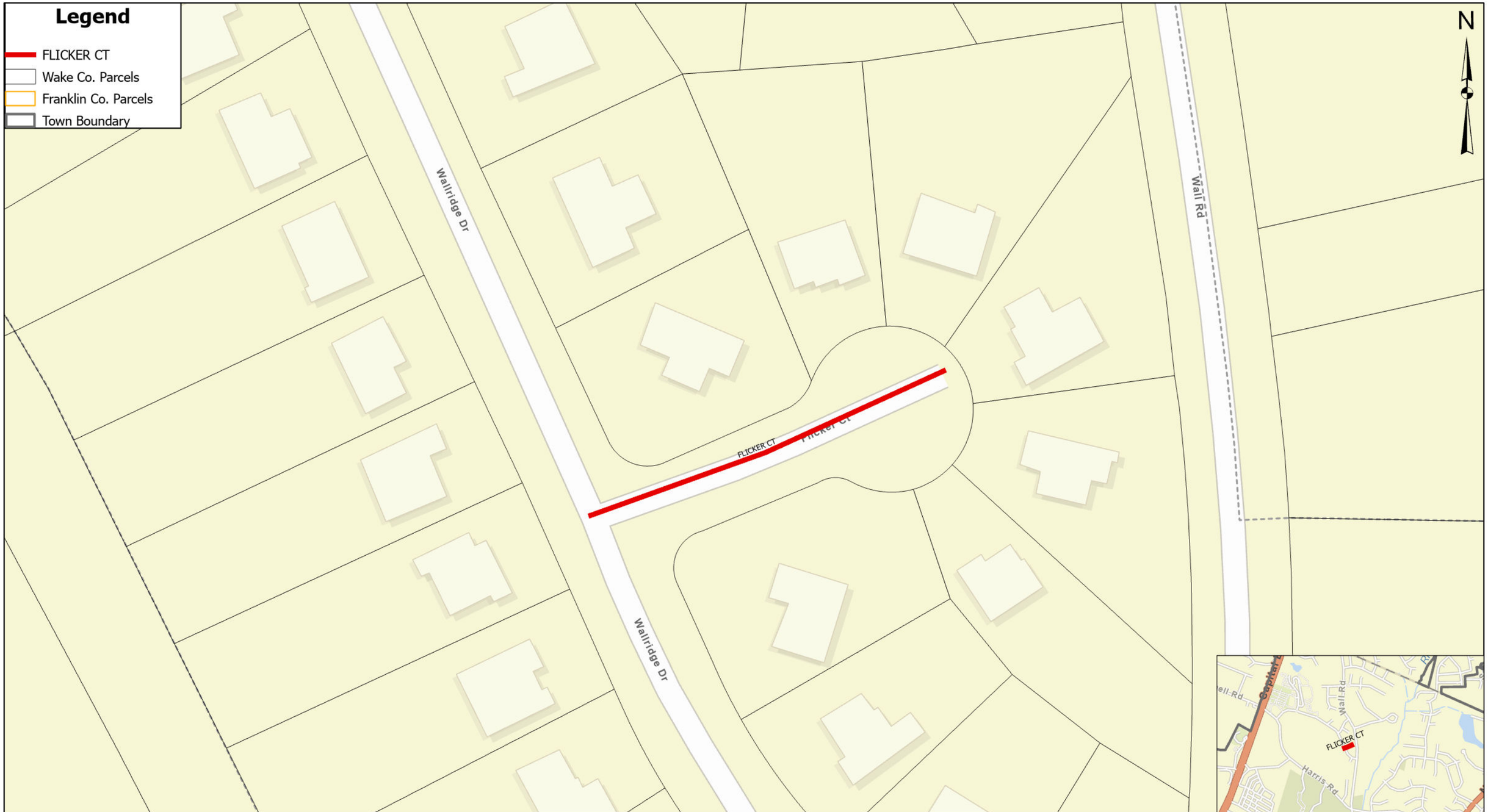
TOWN of WAKE FOREST

Map No.25

FLEMMING HOUSE ST

0 0.010.03 0.05
Miles

Min Htun - 2/22/2024



TOWN of WAKE FOREST

Map No.26

FLICKER CT

0 0 0.01 0.01
Miles

Min Htun - 1/9/2024

TOWN of WAKE FOREST

Map No.27

FOREST LYNKS DR

0 0 0.01 0.02
Miles

Min Htun - 1/25/2024

TOWN of WAKE FOREST

Map No.28

HAMPTON WAY DR

0 0.010.02 0.04
Miles

Min Htun - 1/25/2024

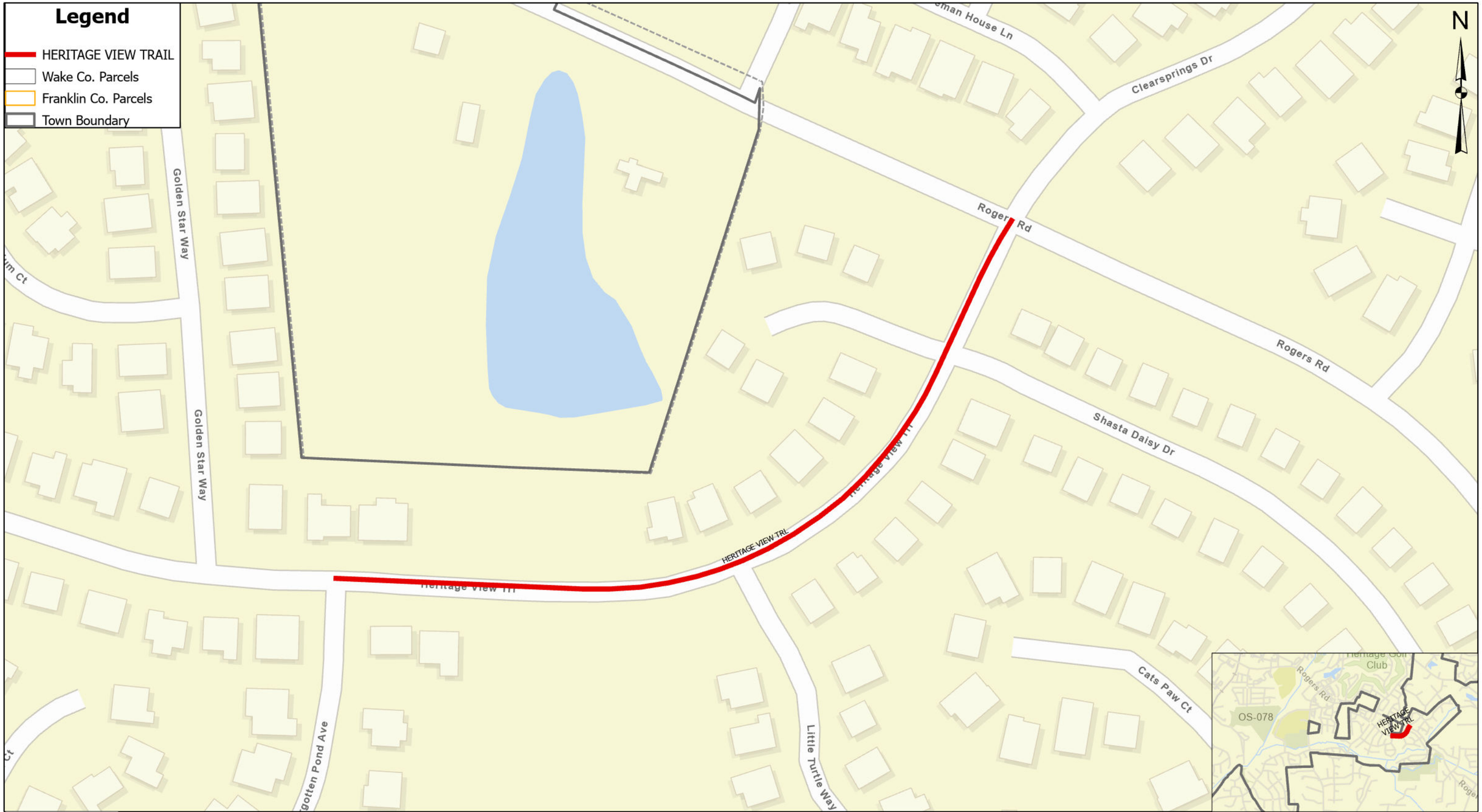
TOWN of WAKE FOREST

Map No.29

HERITAGE BRANCH RD

0 0.01 0.02 0.04
Miles

Min Htun - 2/1/2024



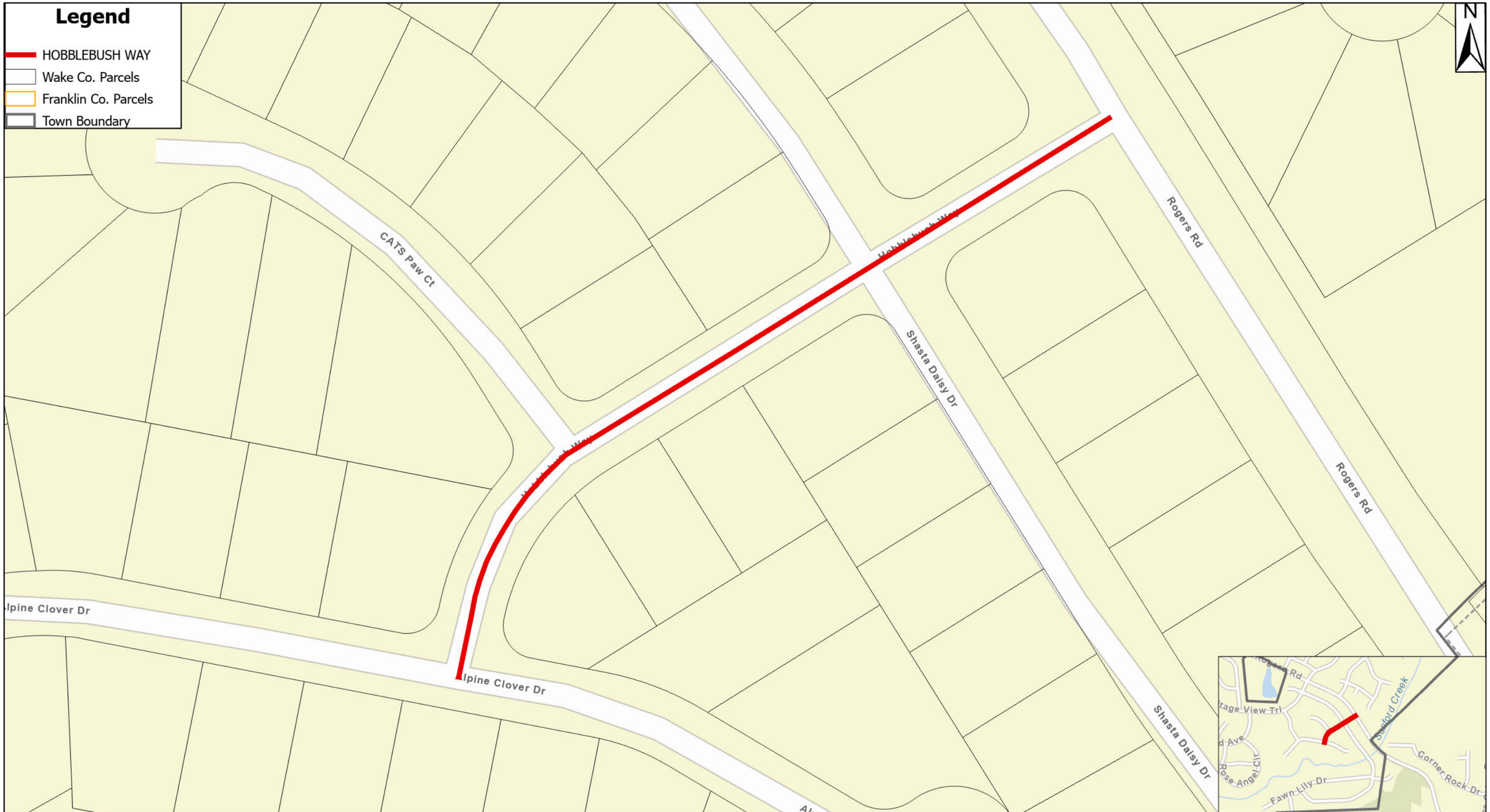
TOWN of WAKE FOREST

Map No.30

HERITAGE VIEW TRL

0 0.010.01 0.03
Miles

Min Htun - 2/20/2024



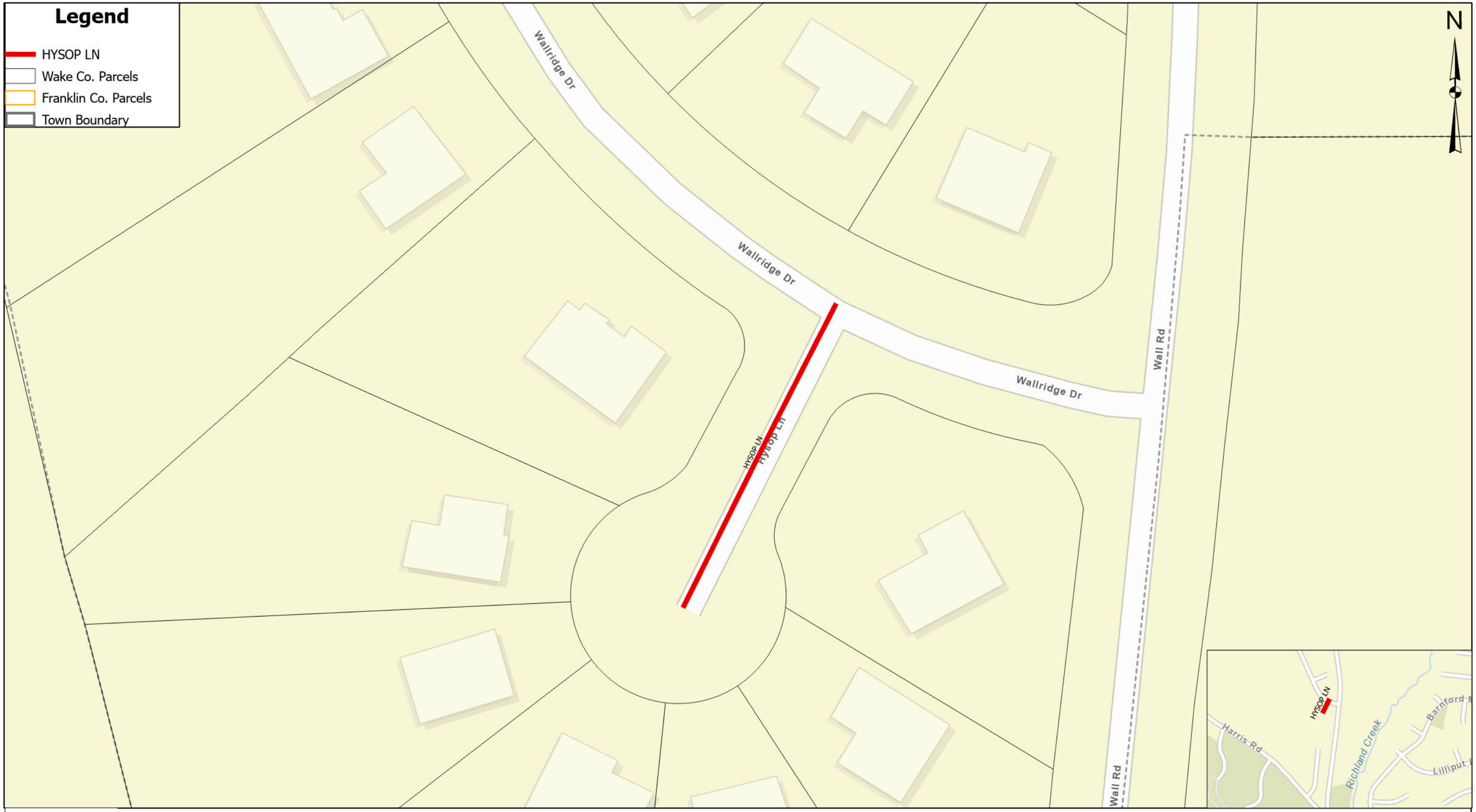
TOWN of WAKE FOREST

Map No.31

HOBBLEBUSH WAY

0 0.01 0.01 0.02
Miles

Min Htun - 3/23/2023



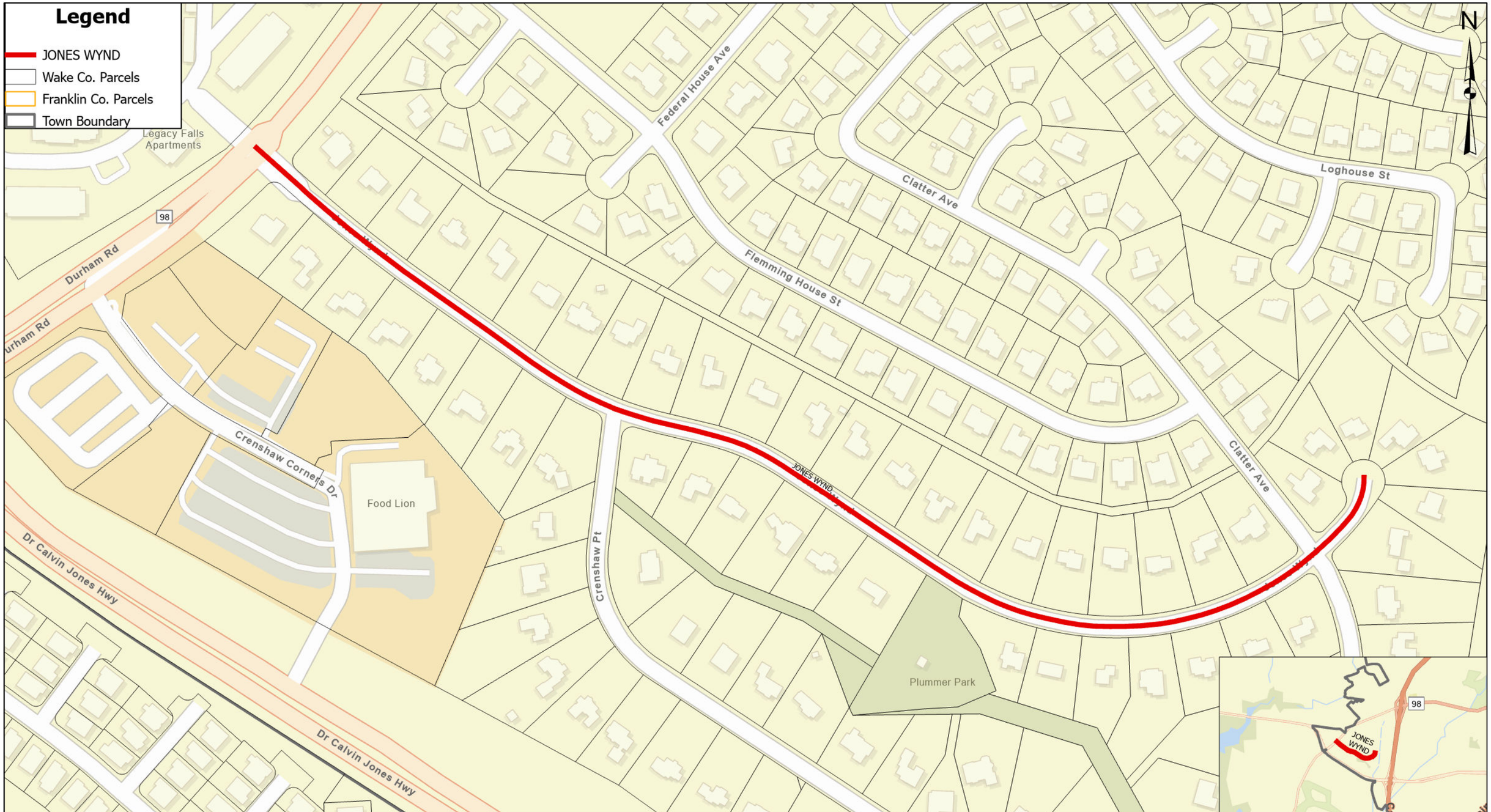
TOWN of WAKE FOREST

Map No.32

HYSOP LN

0 0 0.01 0.01
Miles

Min Htun - 1/9/2024



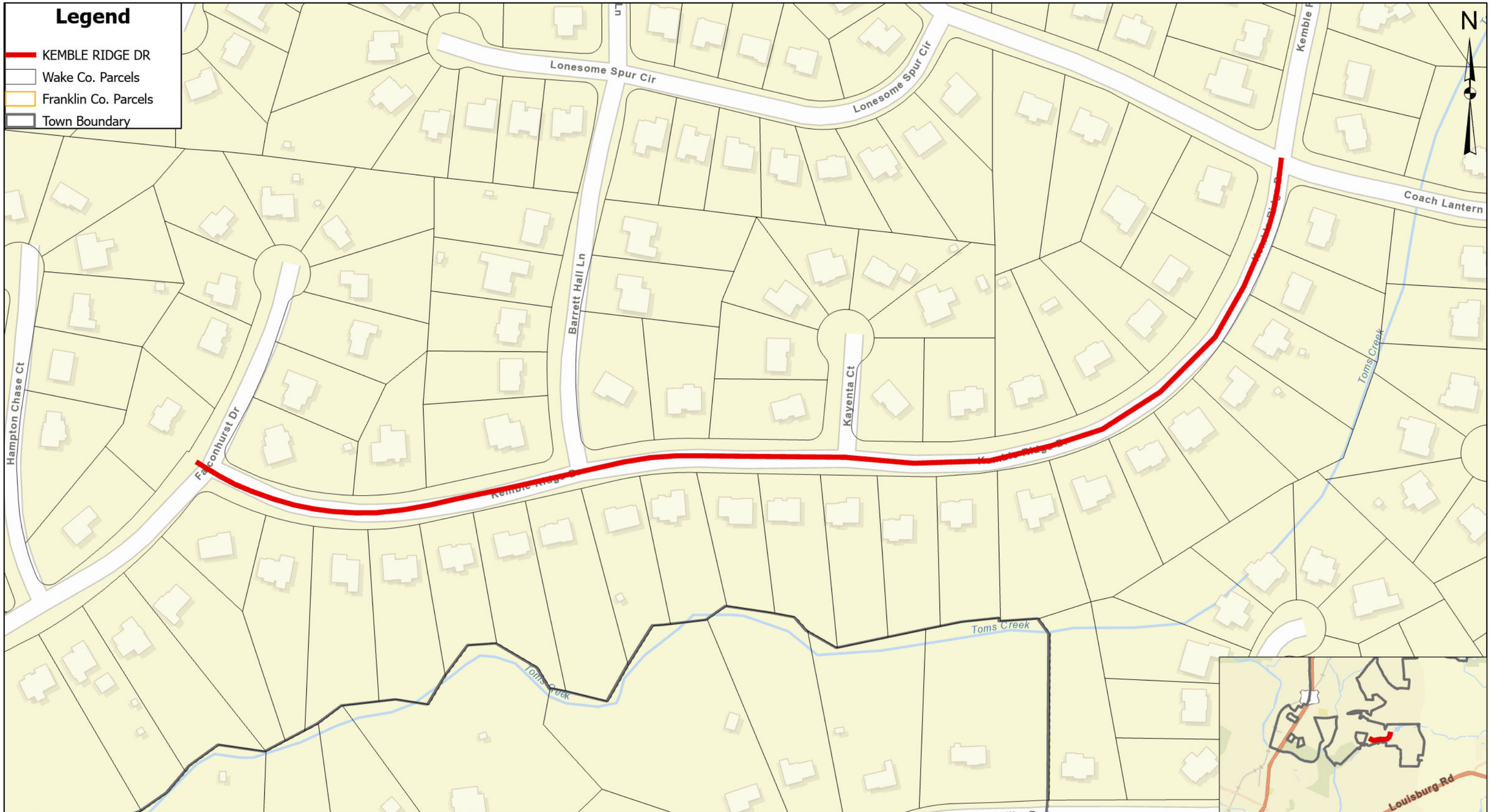
TOWN of WAKE FOREST

Map No.33

JONES WYND

0 0.01 0.03 0.06
Miles

Min Htun - 6/27/2024



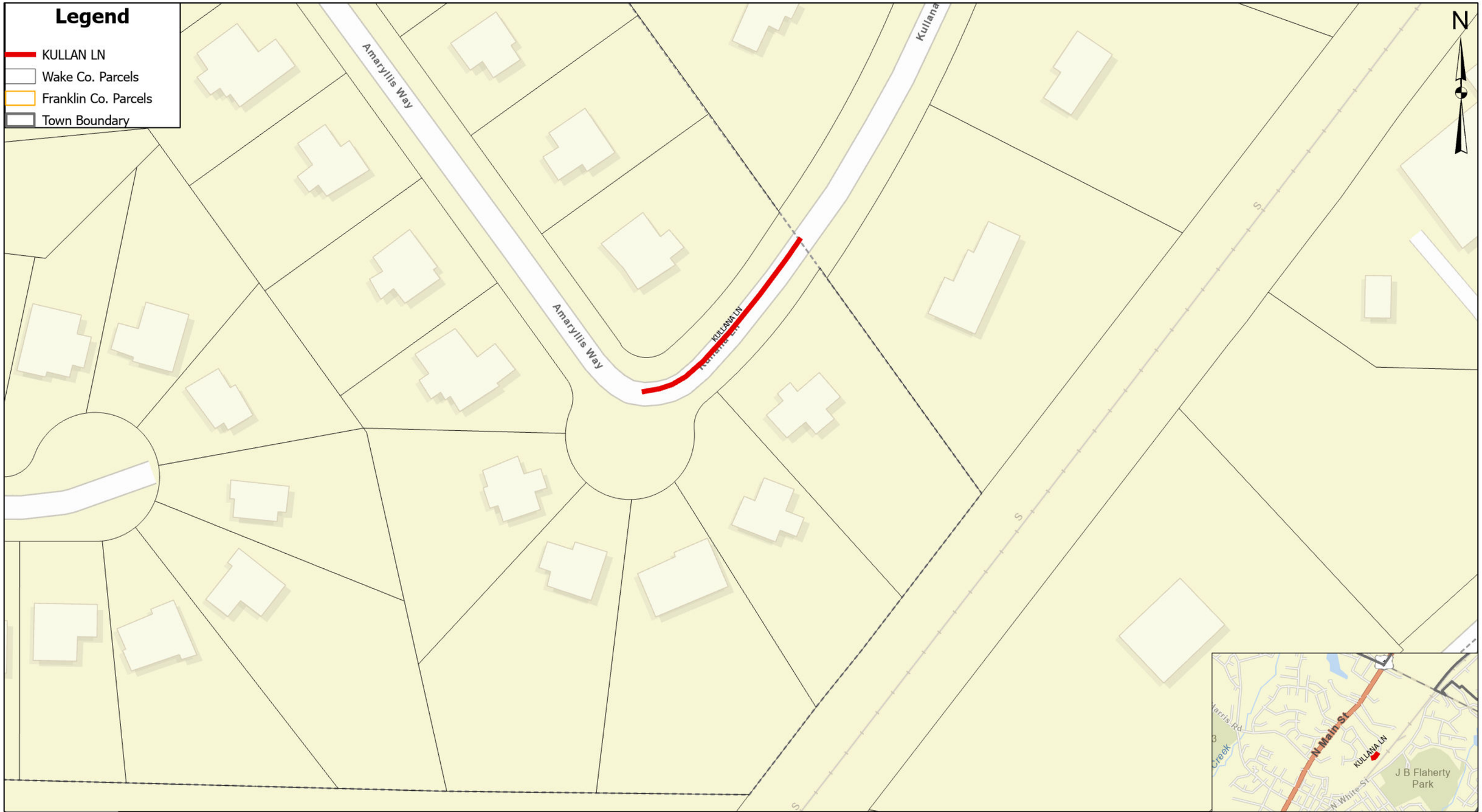
TOWN of WAKE FOREST

Map No.34

KEMBLE RIDGE DR

0 0.010.02 0.04
Miles

Min Htun - 7/31/2024



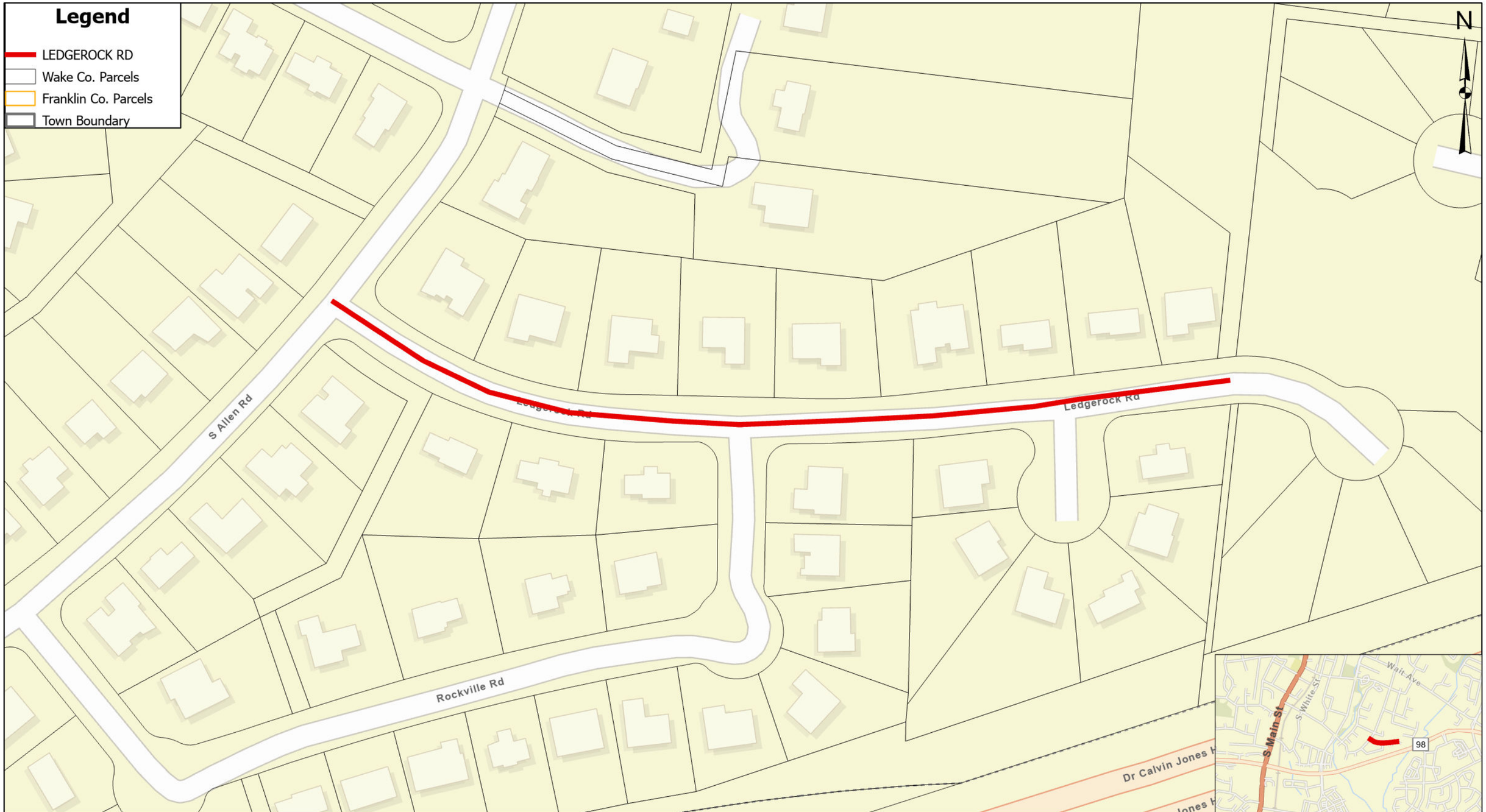
TOWN of WAKE FOREST

Map No.35

KULLANA LN

0 0.01 0.01 0.02
Miles

Min Htun - 1/22/2024



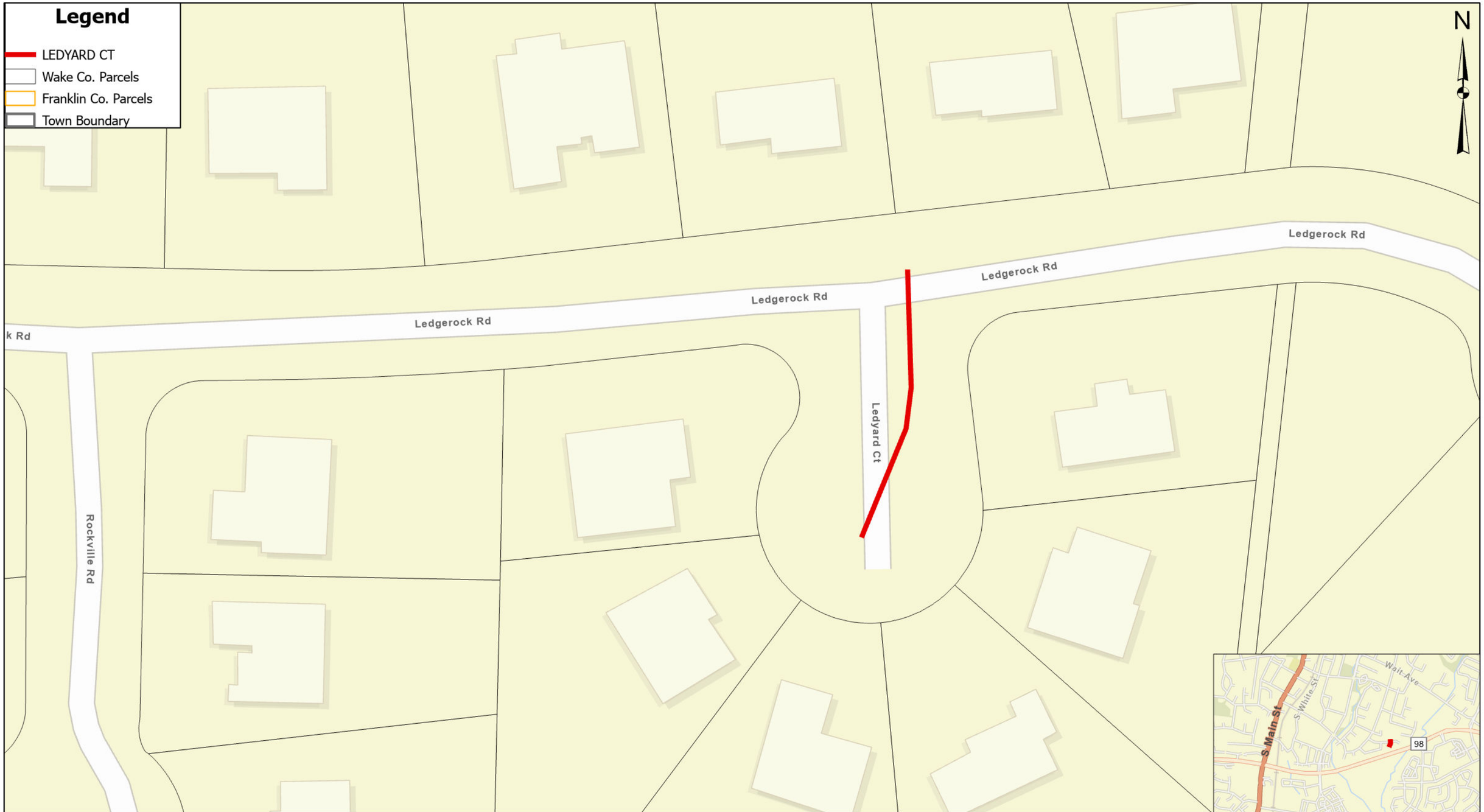
TOWN of WAKE FOREST

Map No.36

LEDGEROCK RD

0 0.01 0.01 0.02
Miles

Min Htun - 7/31/2024



TOWN of WAKE FOREST

Map No.37

LEDYARD CT

0 0 0.01 0.01
Miles

Min Htun - 7/31/2024

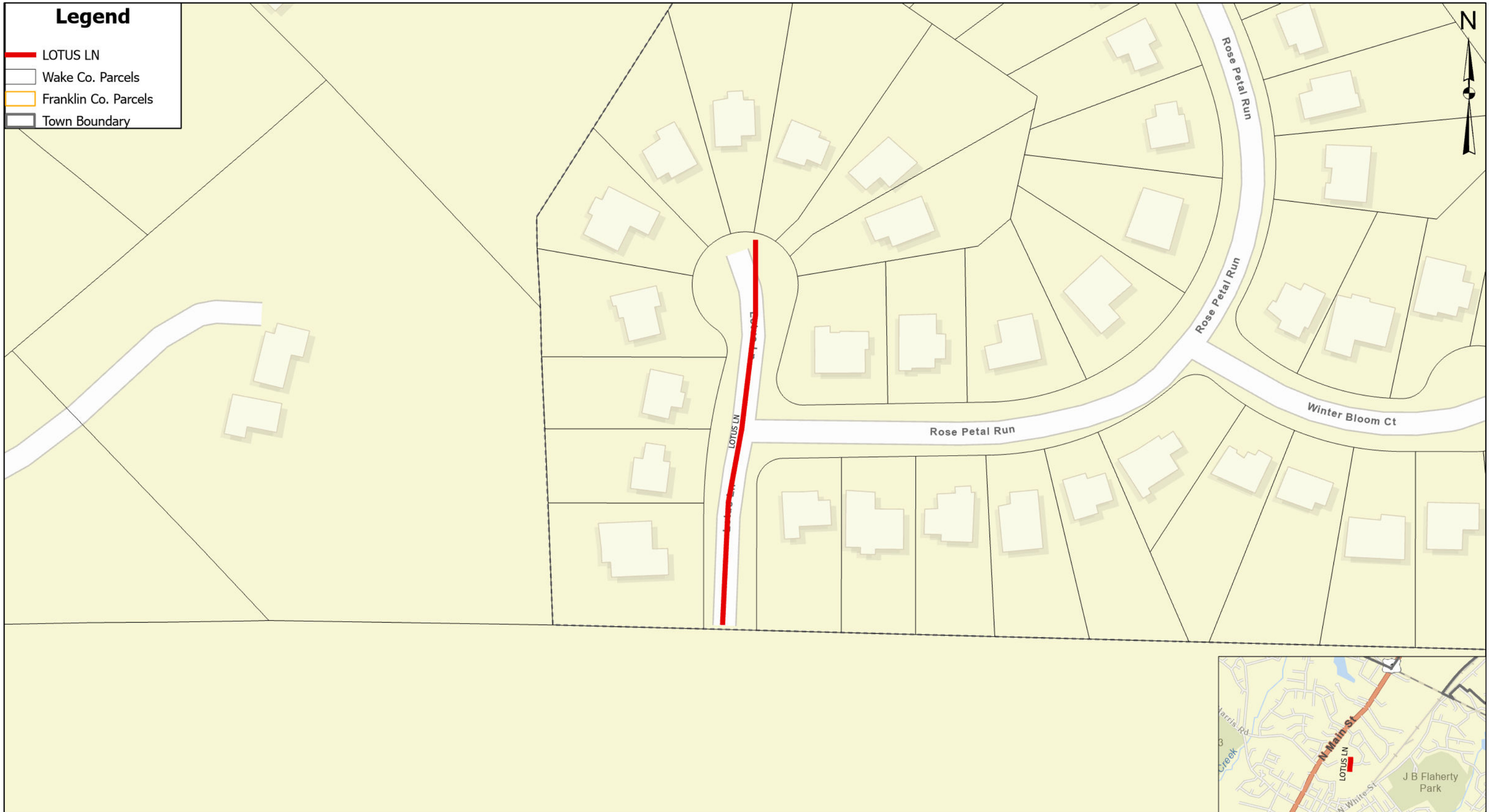
TOWN of WAKE FOREST

Map No.38

LITTLE TURTLE WAY

0 0.010.01 0.02
Miles

Min Htun - 1/30/2024



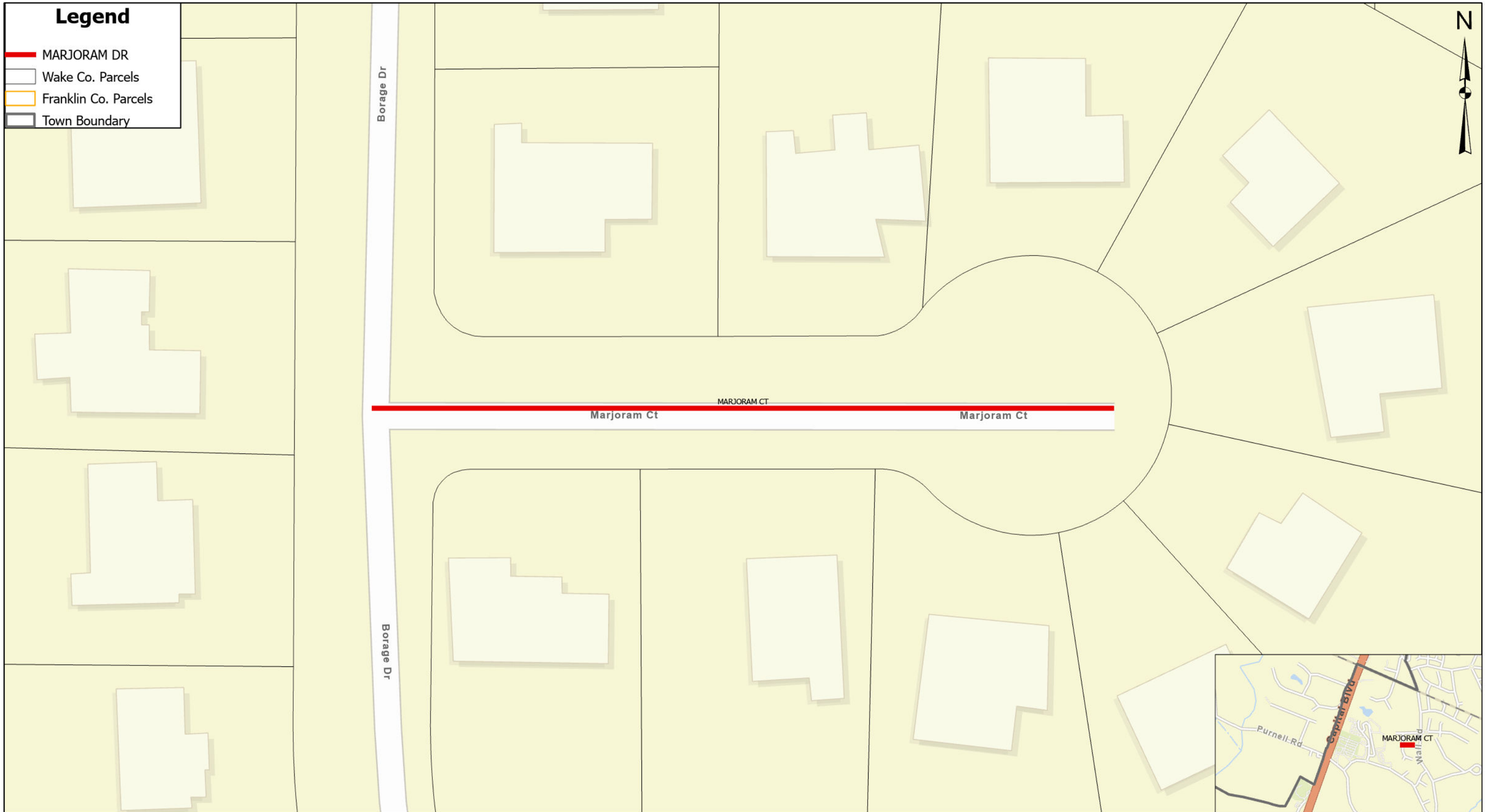
TOWN of WAKE FOREST

Map No.39

LOTUS LN

0 0.010.01 0.02
Miles

Min Htun - 1/22/2024



TOWN of WAKE FOREST

Map No.40

MARJORAM CT

0 0 0 0.01
Miles

Min Htun - 2/20/2024

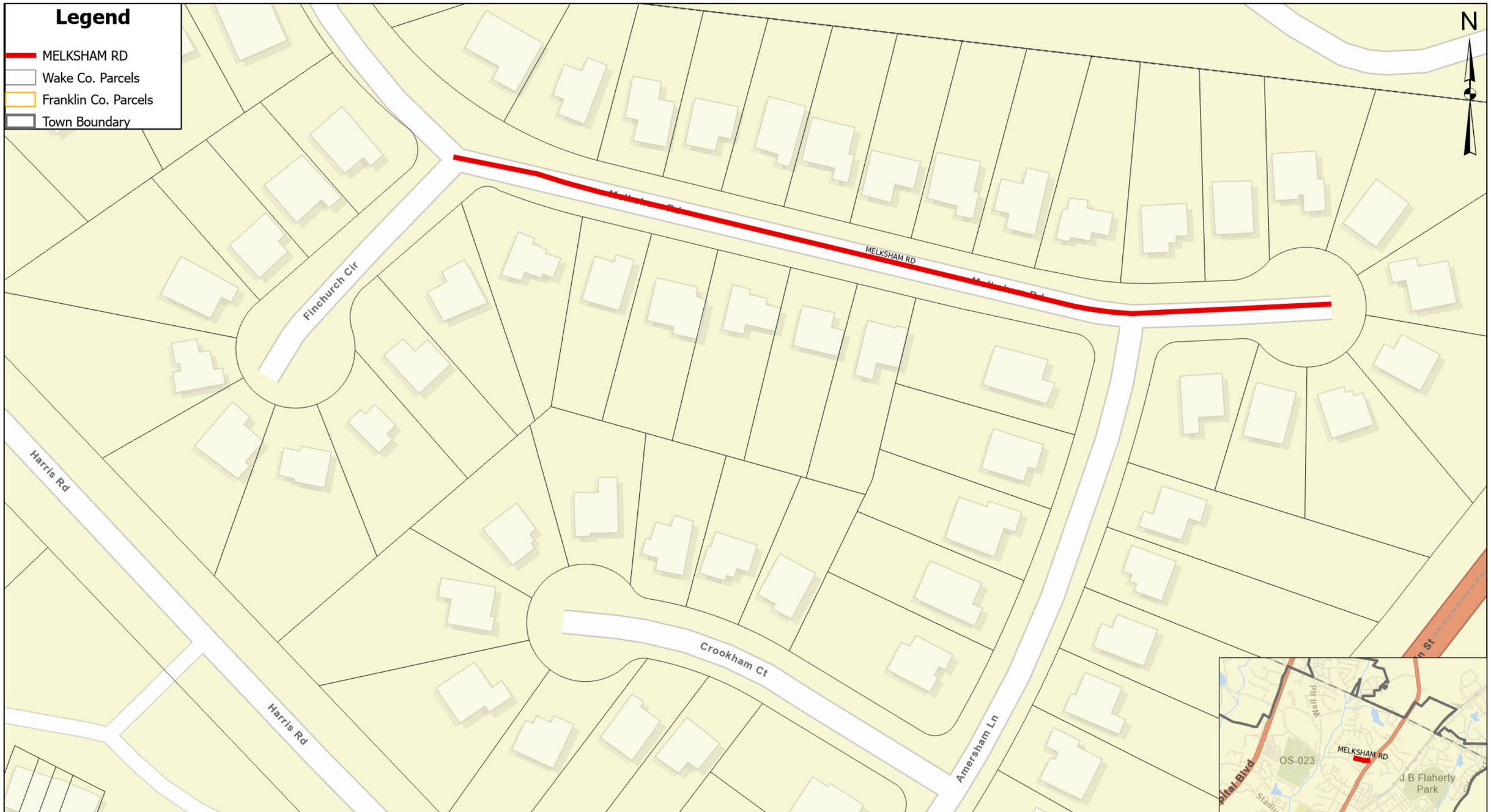
TOWN of WAKE FOREST

Map No.41

MCDOWELL DR

0 0.010.01 0.03
Miles

Min Htun - 2/20/2024



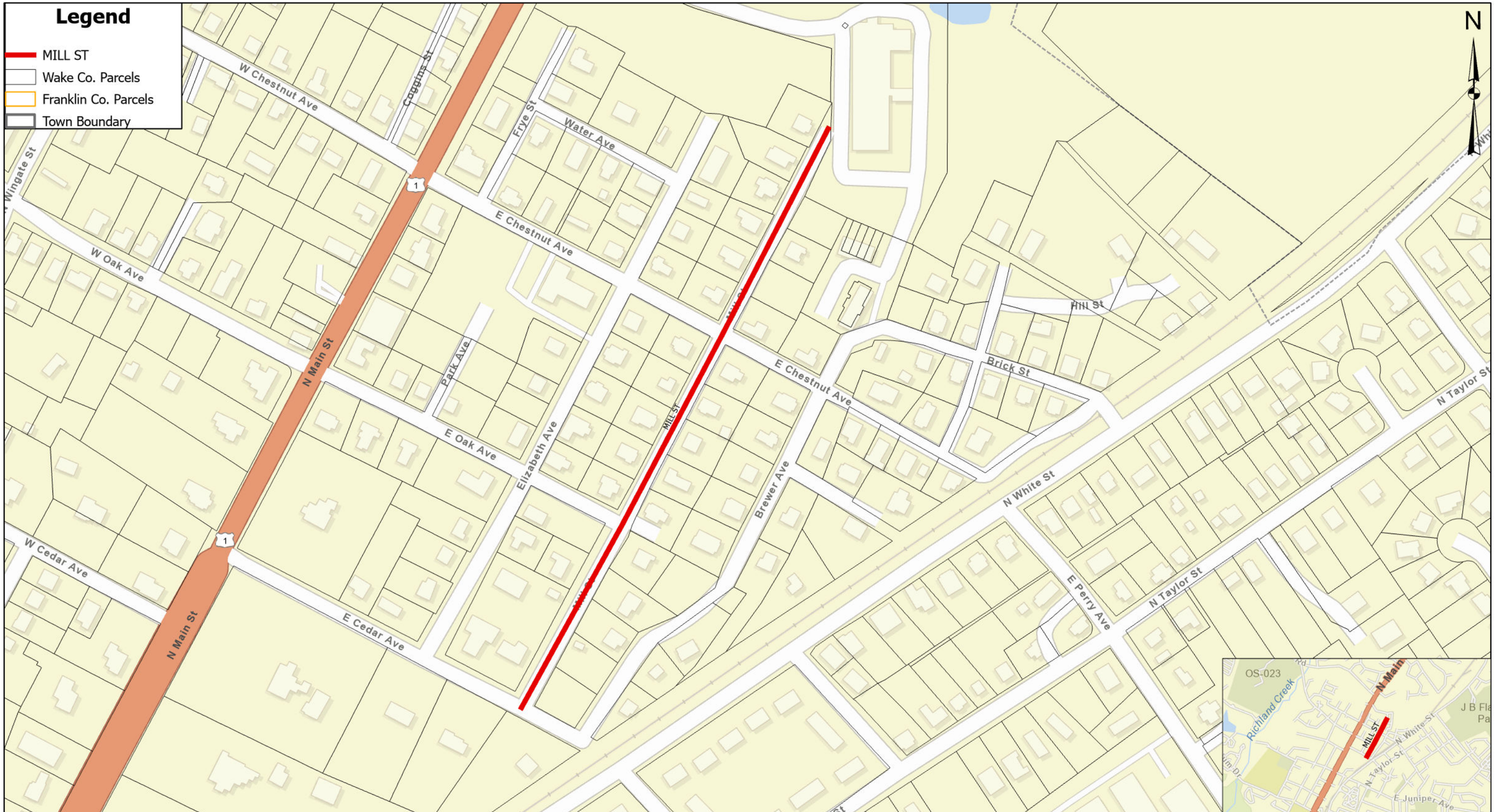
TOWN of WAKE FOREST

Map No.42

MELKSHAM RD

0 0.010.01 0.02
Miles

Min Htun - 1/8/2024



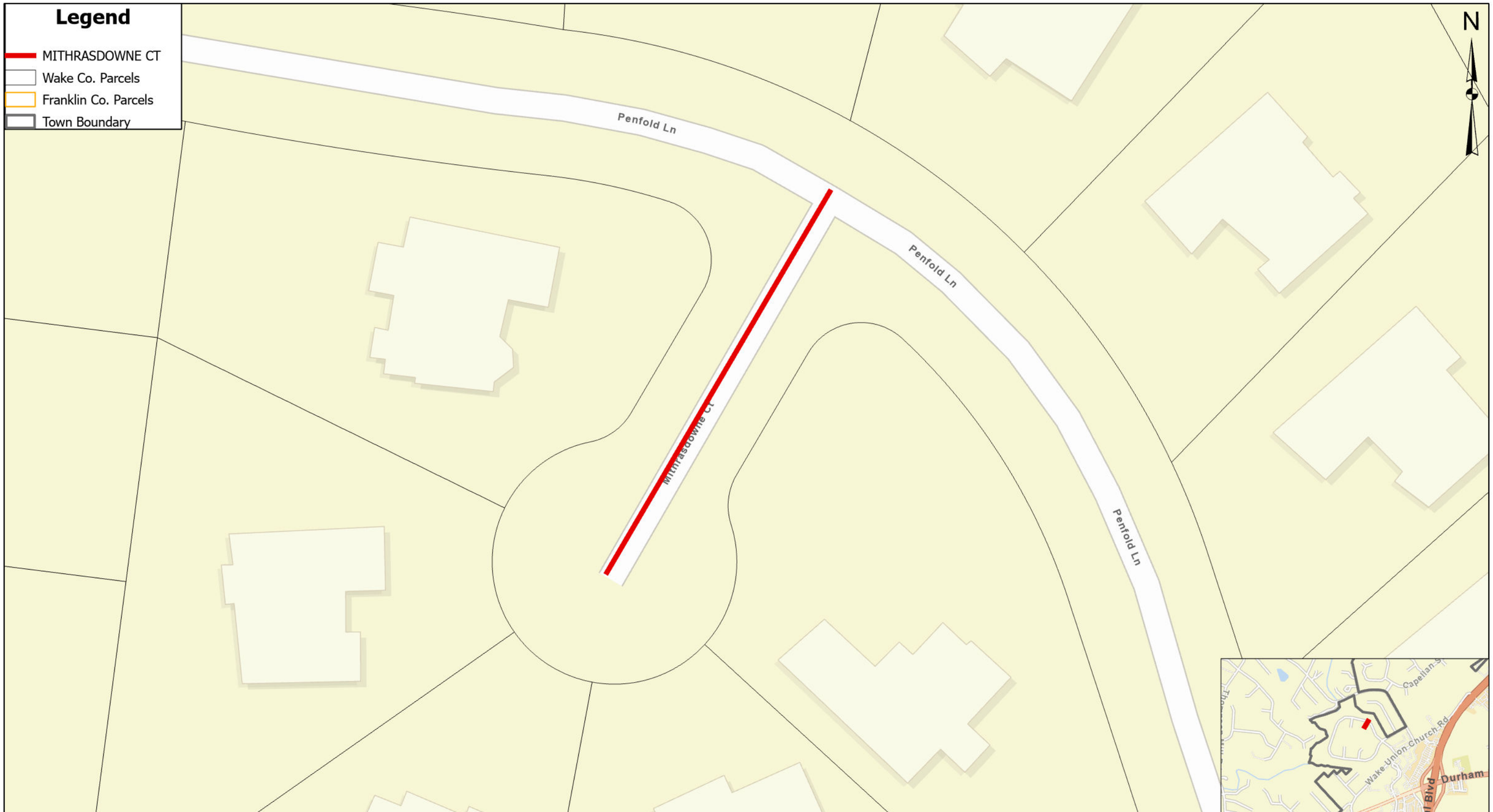
TOWN of WAKE FOREST

Map No.43

MILL ST

0 0.01 0.03 0.06
Miles

Min Htun - 1/23/2024



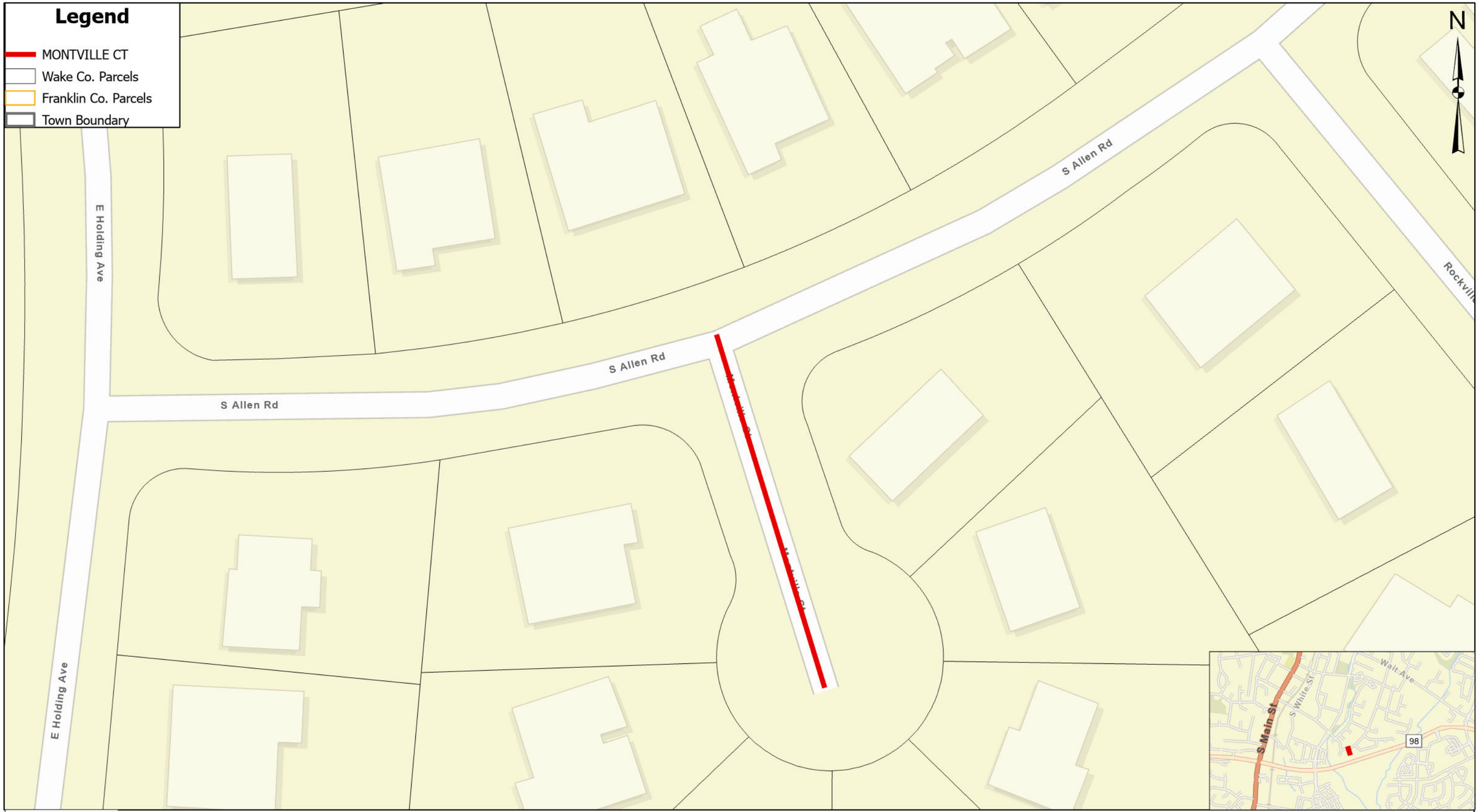
TOWN of WAKE FOREST

Map No.44

MITHRASDOWNE CT

0 0 0.01 0.01
Miles

Min Htun - 7/2/2024



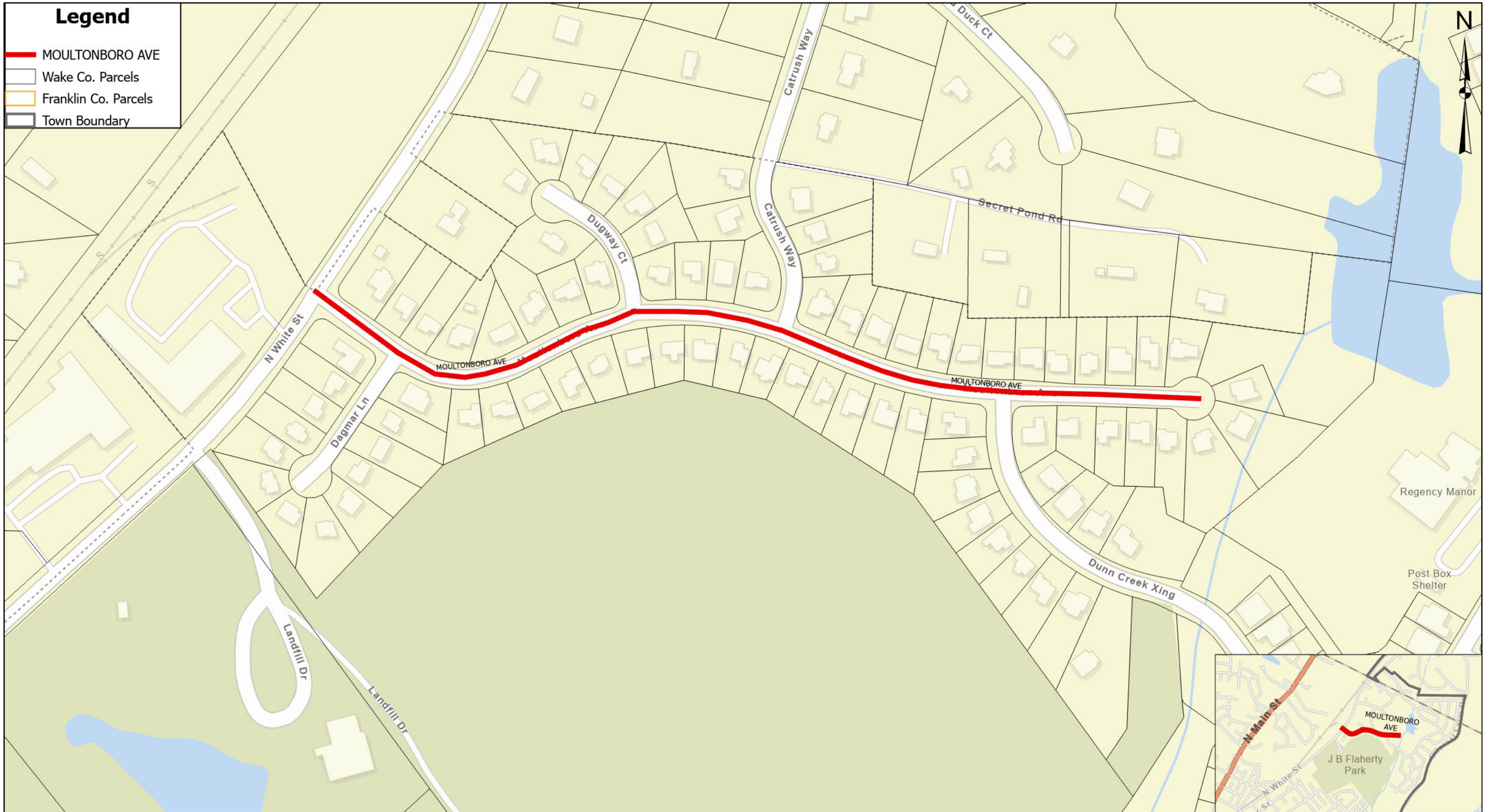
TOWN of WAKE FOREST

Map No.45

MONTVILLE CT

0 0 0.01 0.01
Miles

Min Htun - 7/31/2024



TOWN of WAKE FOREST

Map No.46

MOULTONBORO AVE

0 0.01 0.03 0.06
Miles

Min Htun - 8/5/2024

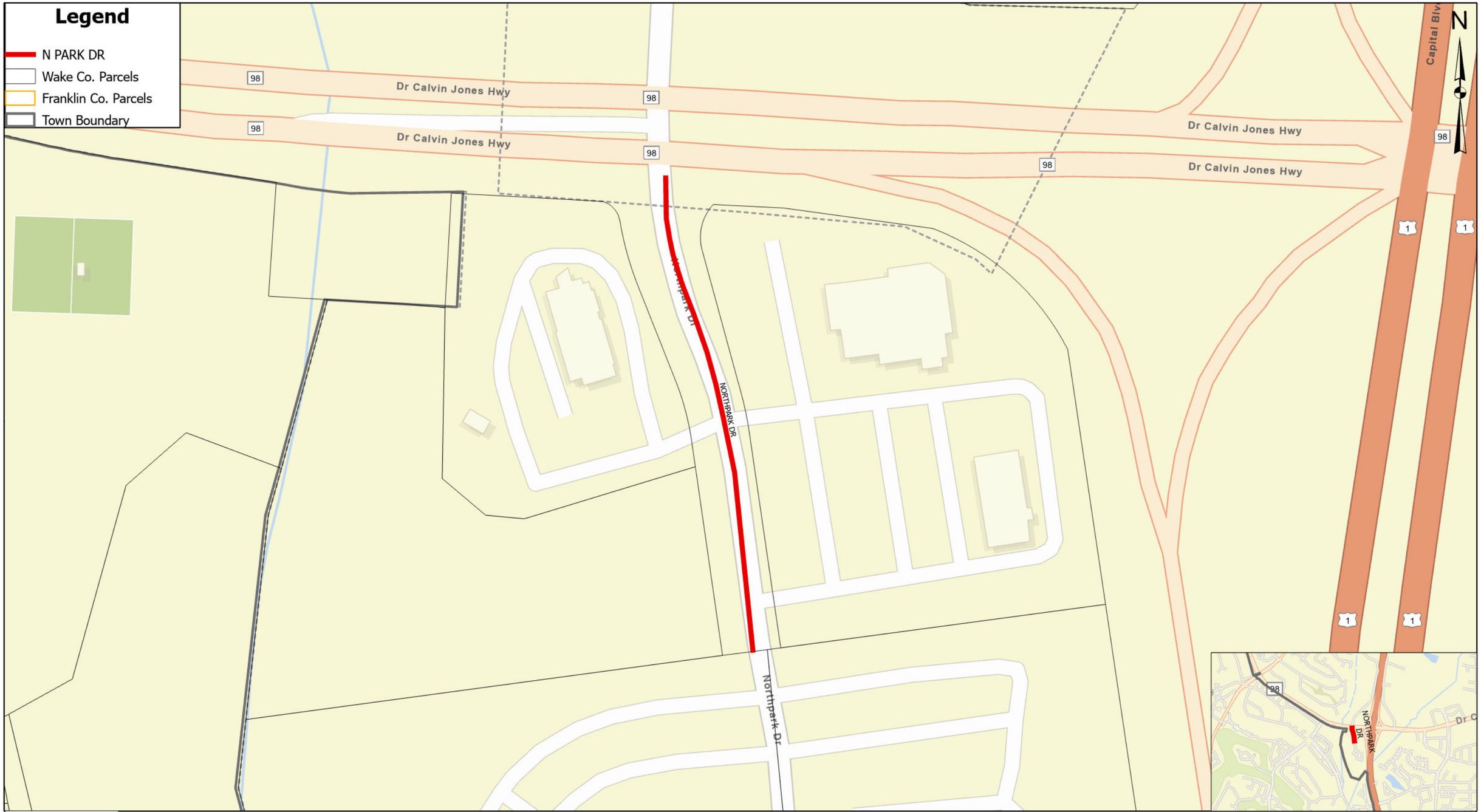
TOWN of WAKE FOREST

Map No.47

N FRANKLIN ST

0 0 0.01 0.01
Miles

Min Htun - 2/20/2024



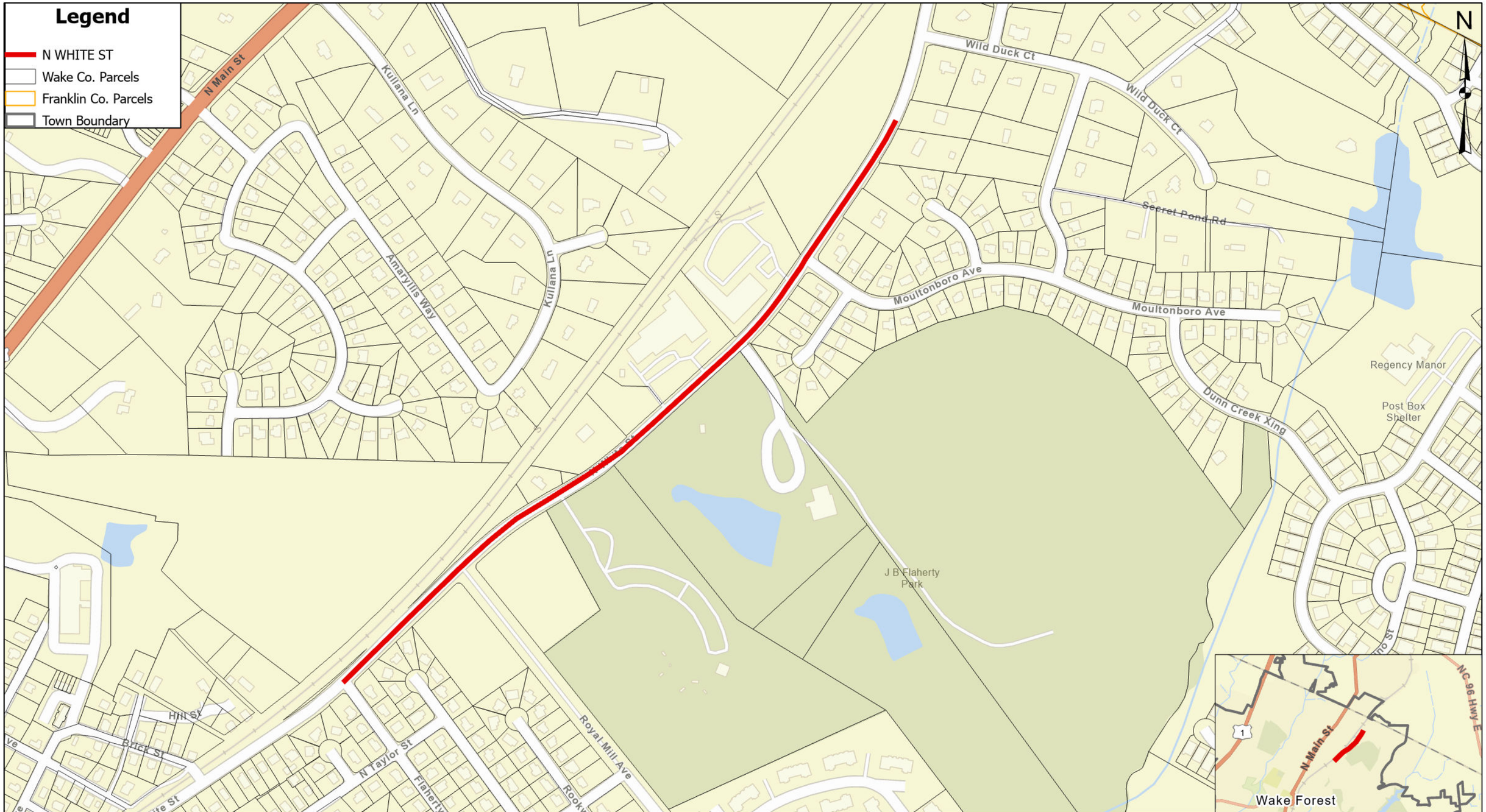
TOWN of WAKE FOREST

Map No.48

N PARK DR

0 0.01 0.01 0.02
Miles

Min Htun - 1/25/2024



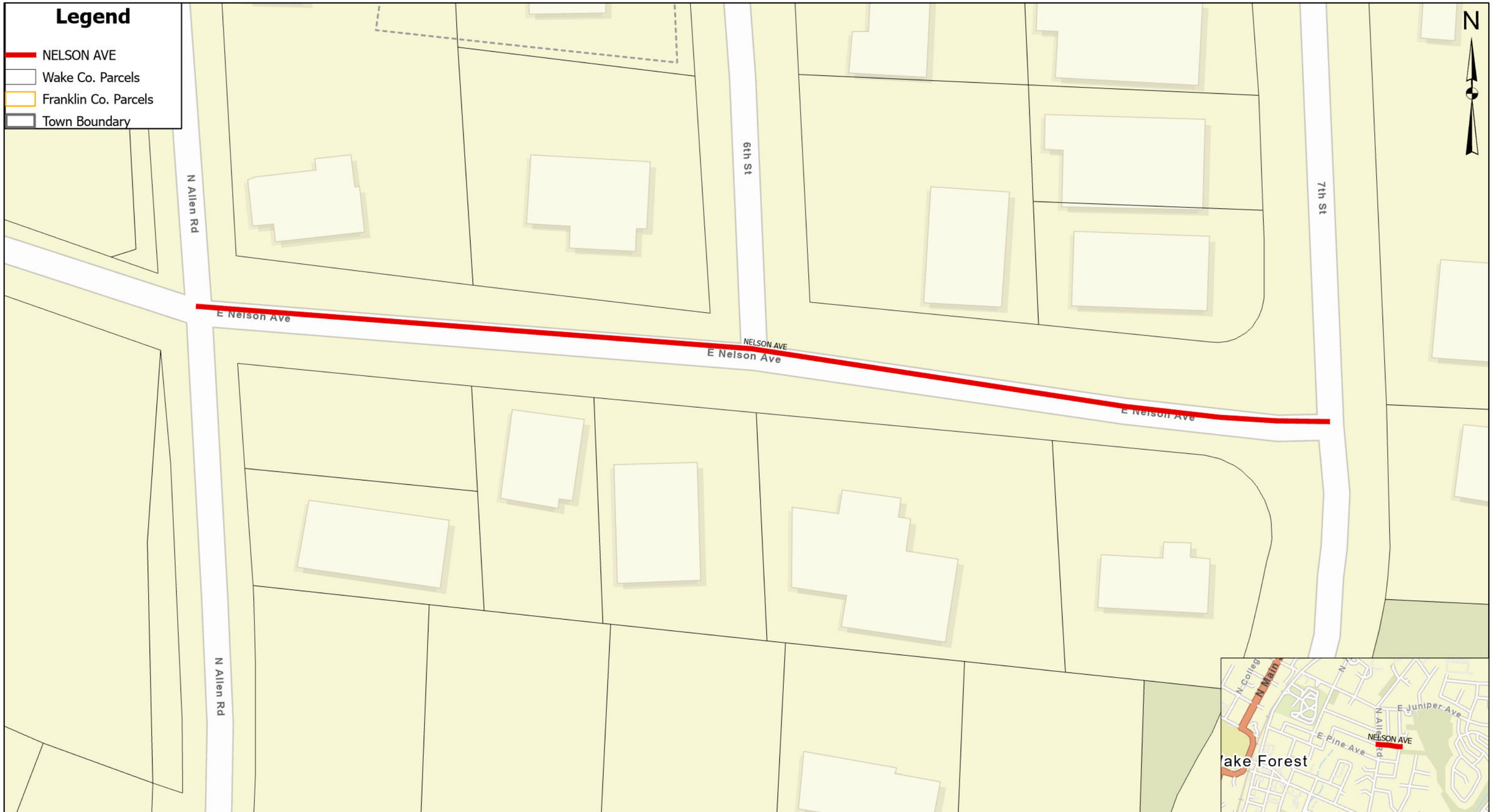
TOWN of WAKE FOREST

Map No.49

N WHITE ST

0 0.03 0.06 0.11
Miles

Min Htun - 7/31/2024



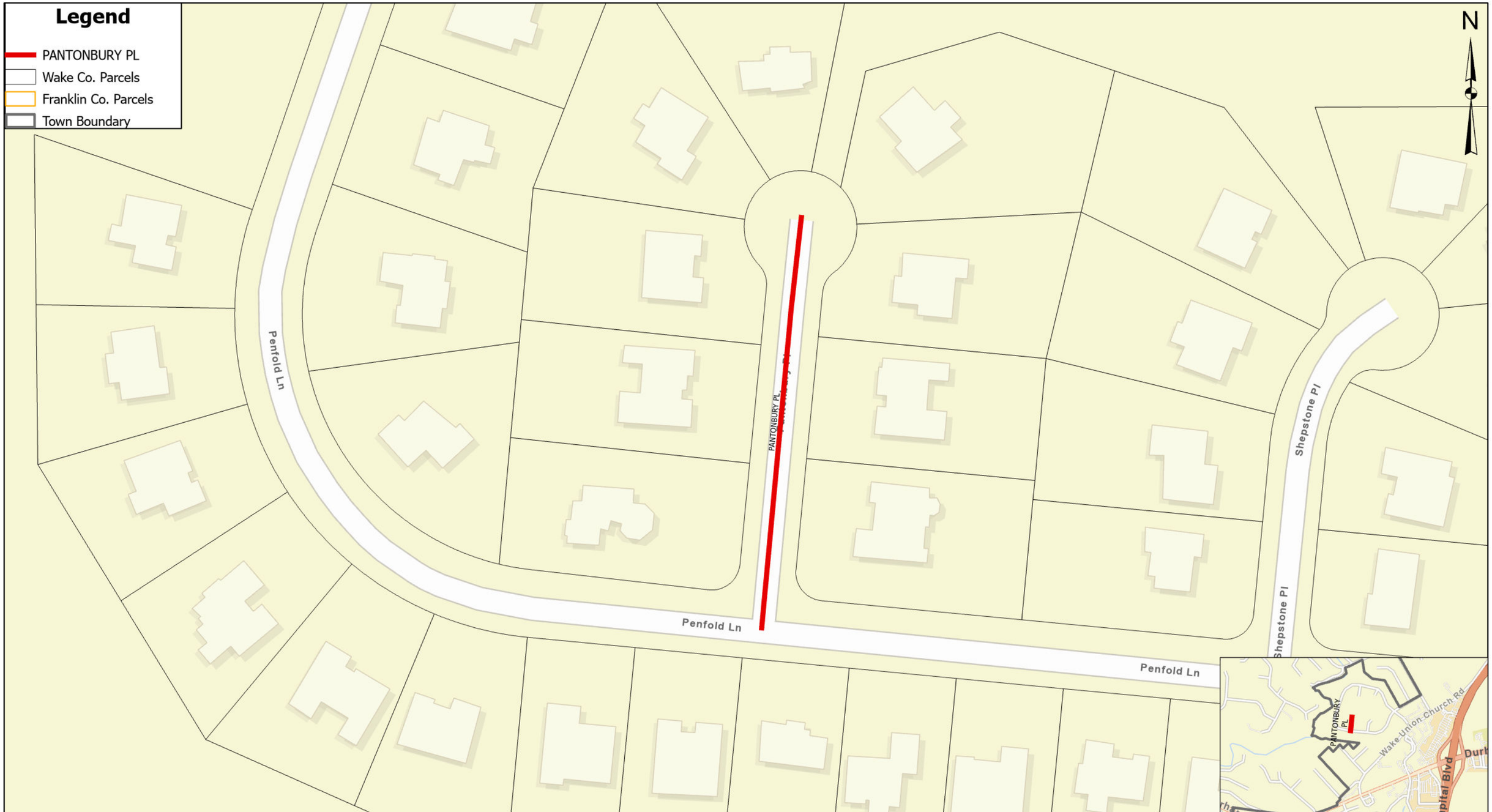
TOWN of WAKE FOREST

Map No.50

NELSON AVE

0 0 0.01 0.01
Miles

Min Htun - 2/19/2024



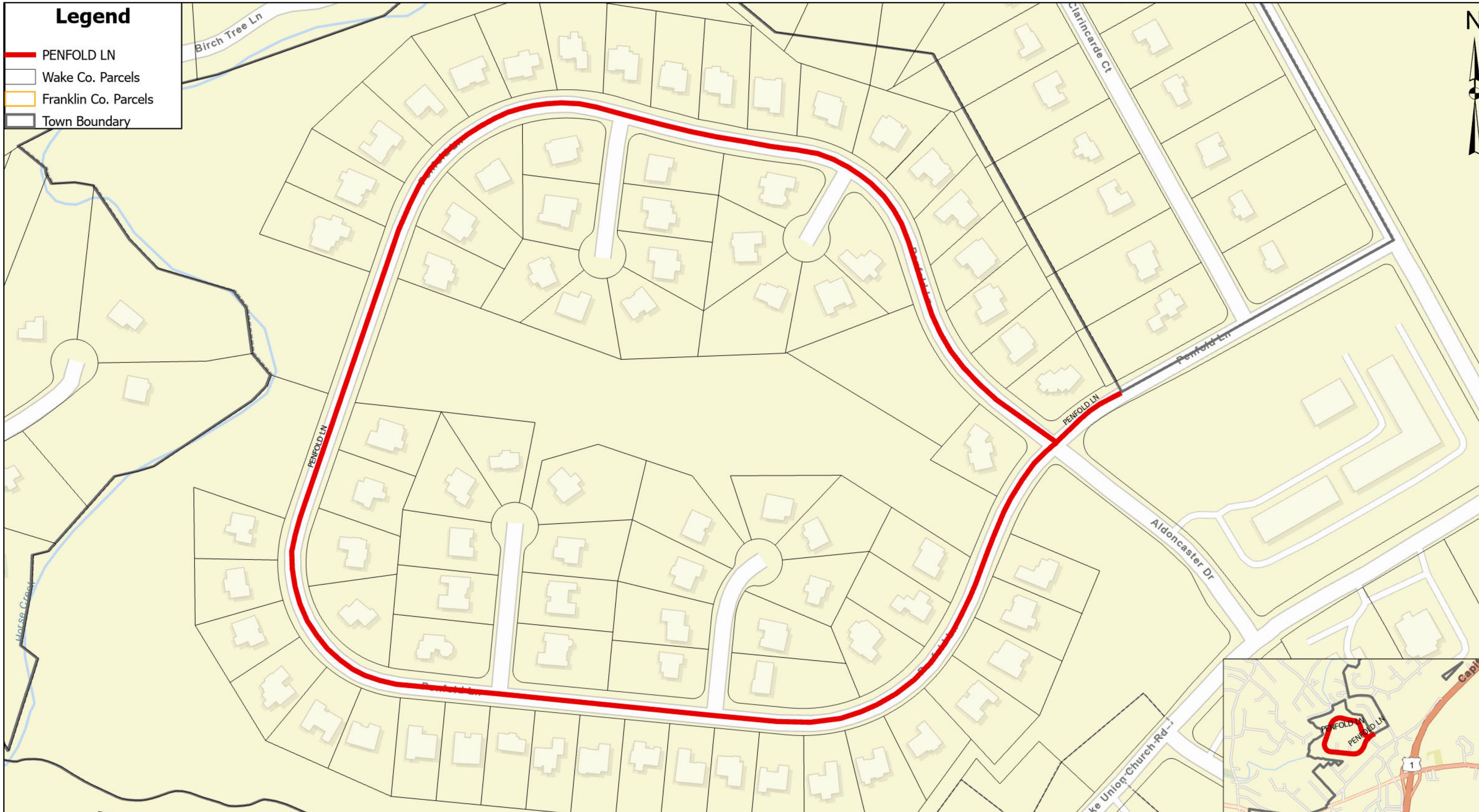
TOWN of WAKE FOREST

Map No.51

PANTONBURY PL

0 0.010.01 0.02
Miles

Min Htun - 7/2/2024



TOWN of WAKE FOREST

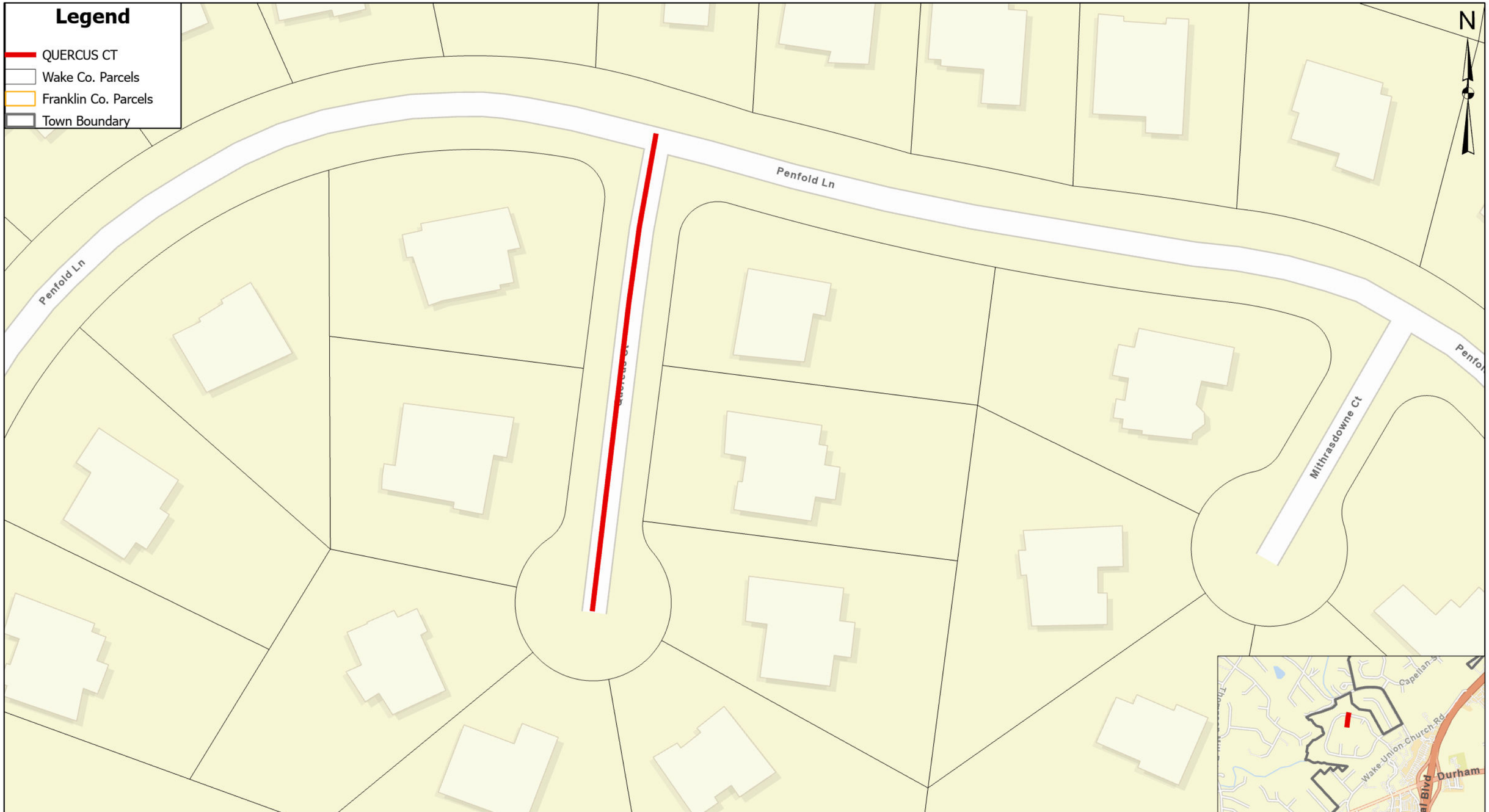
Map No.52

PENFOLD LN

0 0.010.03 0.05

Miles

Min Htun - 1/30/2024



TOWN of WAKE FOREST

Map No.53

QUERCUS CT

0 0 0.01 0.02
Miles

Min Htun - 7/2/2024

TOWN of WAKE FOREST

Map No.54

RETAIL DR

0 0.05 0.1 0.2
Miles

Min Htun - 1/8/2024

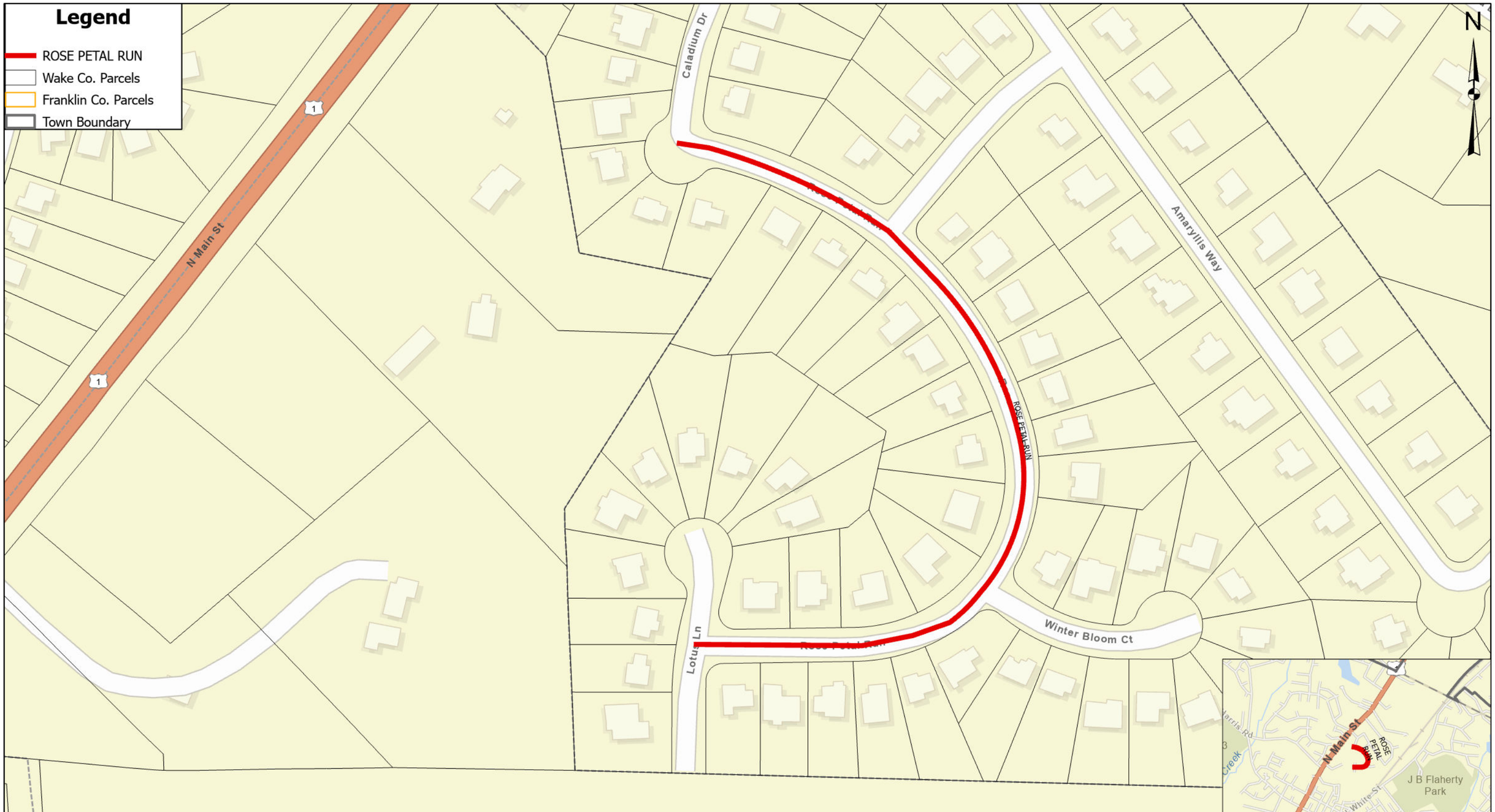
TOWN of WAKE FOREST

Map No.55

ROCK SPRING RD

0 0.01 0.03 0.06
Miles

Min Htun - 2/5/2024



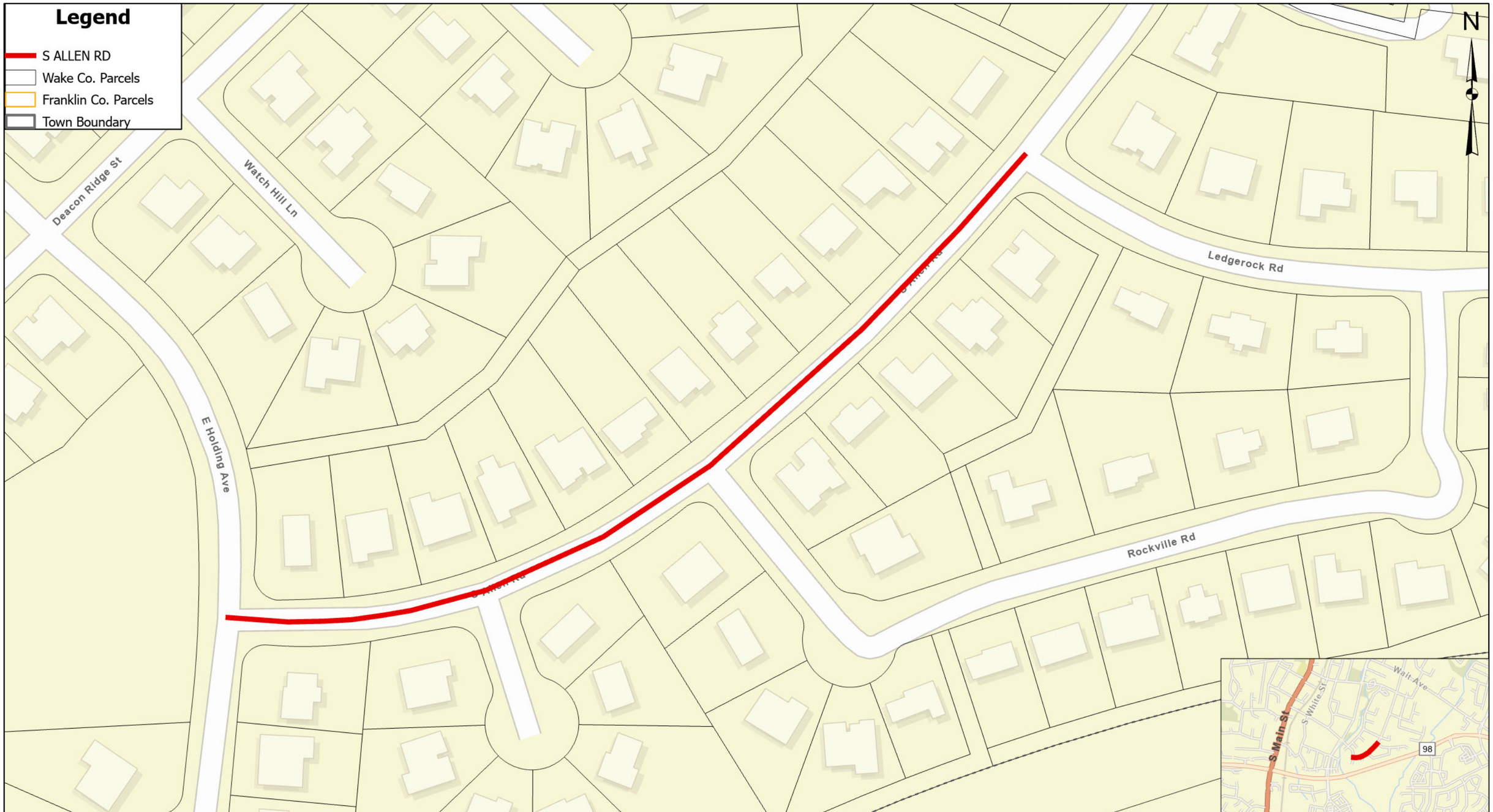
TOWN of WAKE FOREST

Map No.56

ROSE PETAL RUN

0 0.01 0.01 0.03
Miles

Min Htun - 1/23/2024



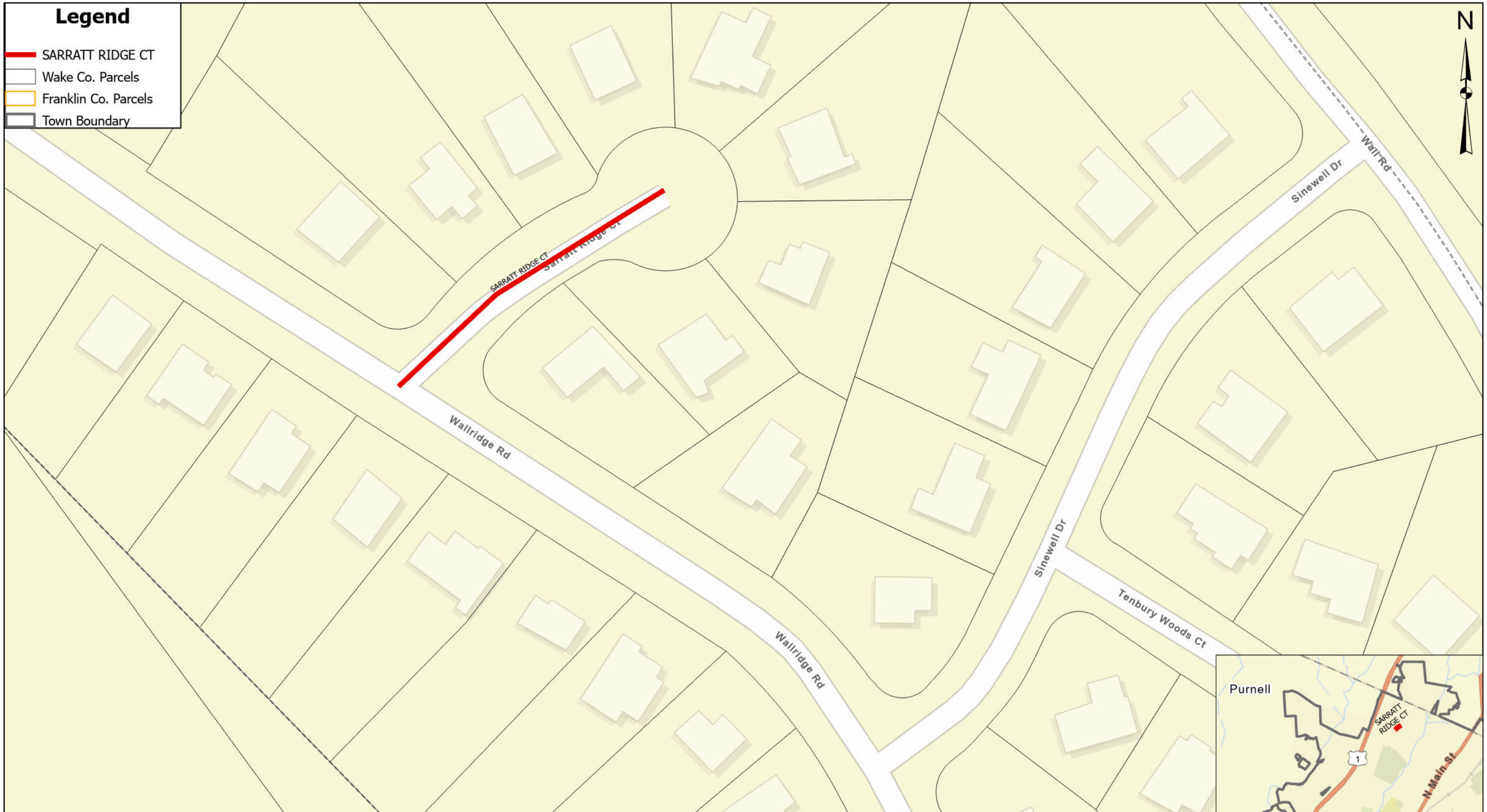
TOWN of WAKE FOREST

Map No.57

S ALLEN RD

0 0.01 0.01 0.02
Miles

Min Htun - 7/31/2024



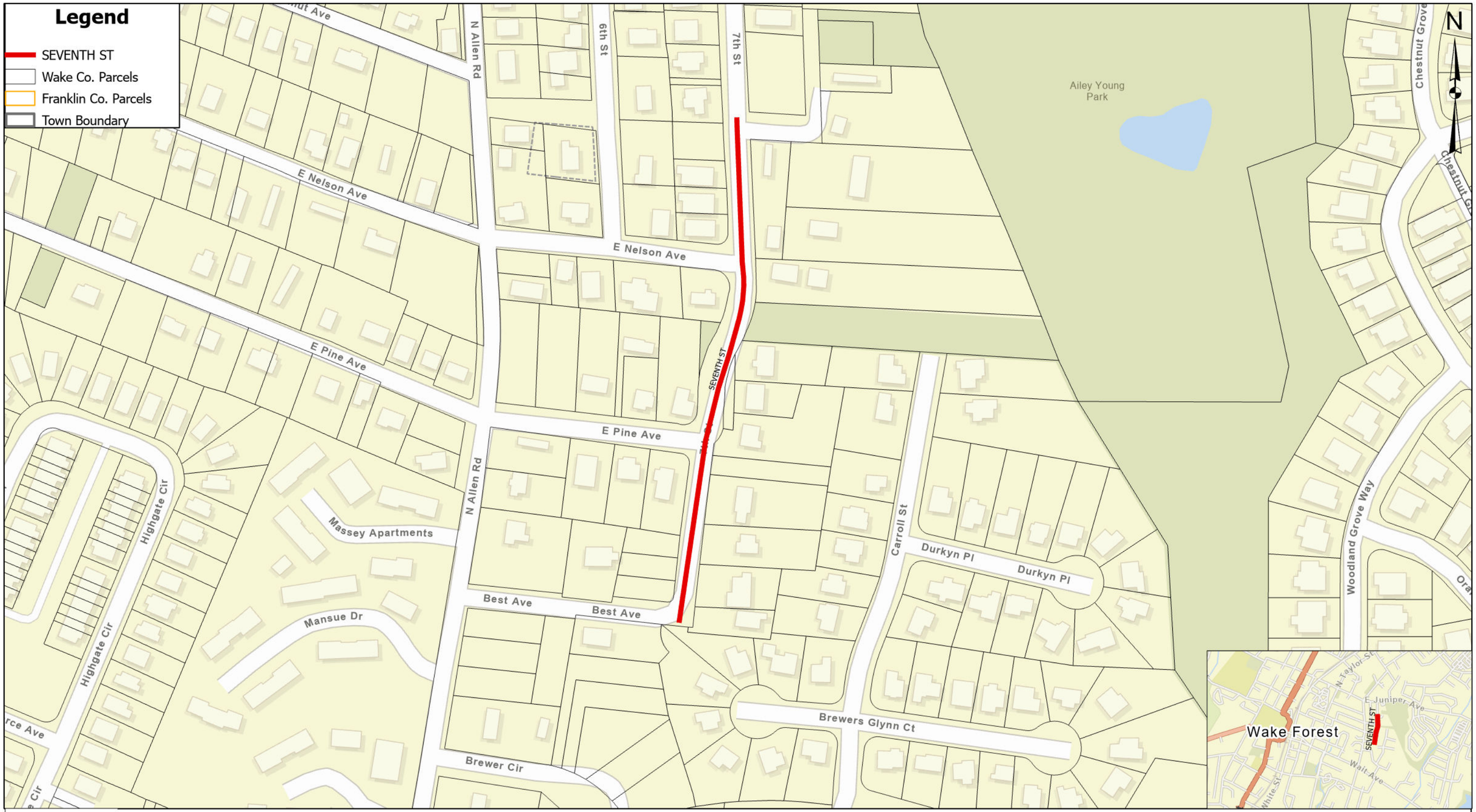
TOWN of WAKE FOREST

Map No.58

SARRATT RIDGE CT

0 0 0.01 0.02
Miles

Min Htun - 1/9/2024



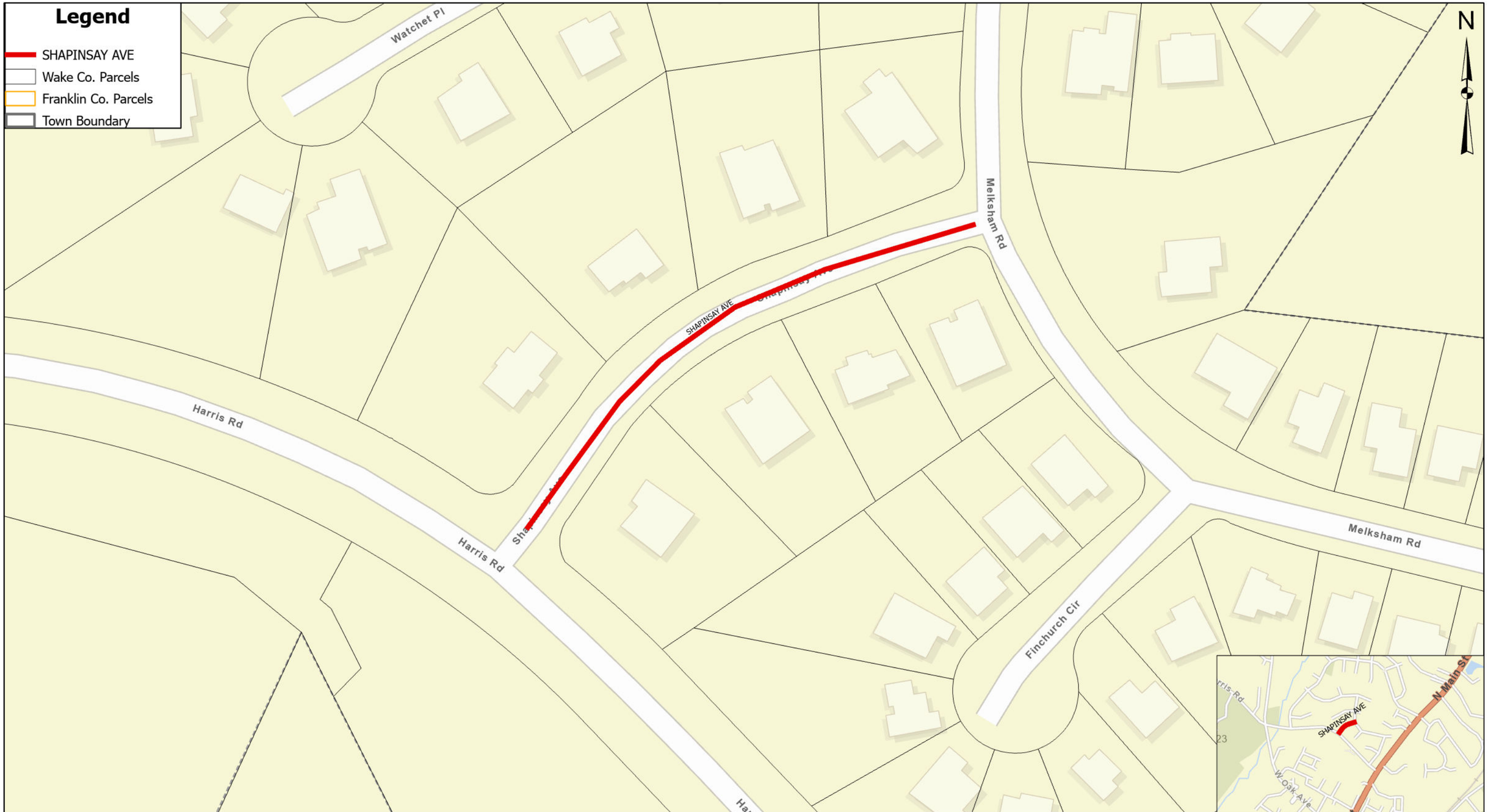
TOWN of WAKE FOREST

Map No.59

SEVENTH ST

0 0.010.02 0.04
Miles

Min Htun - 2/20/2024



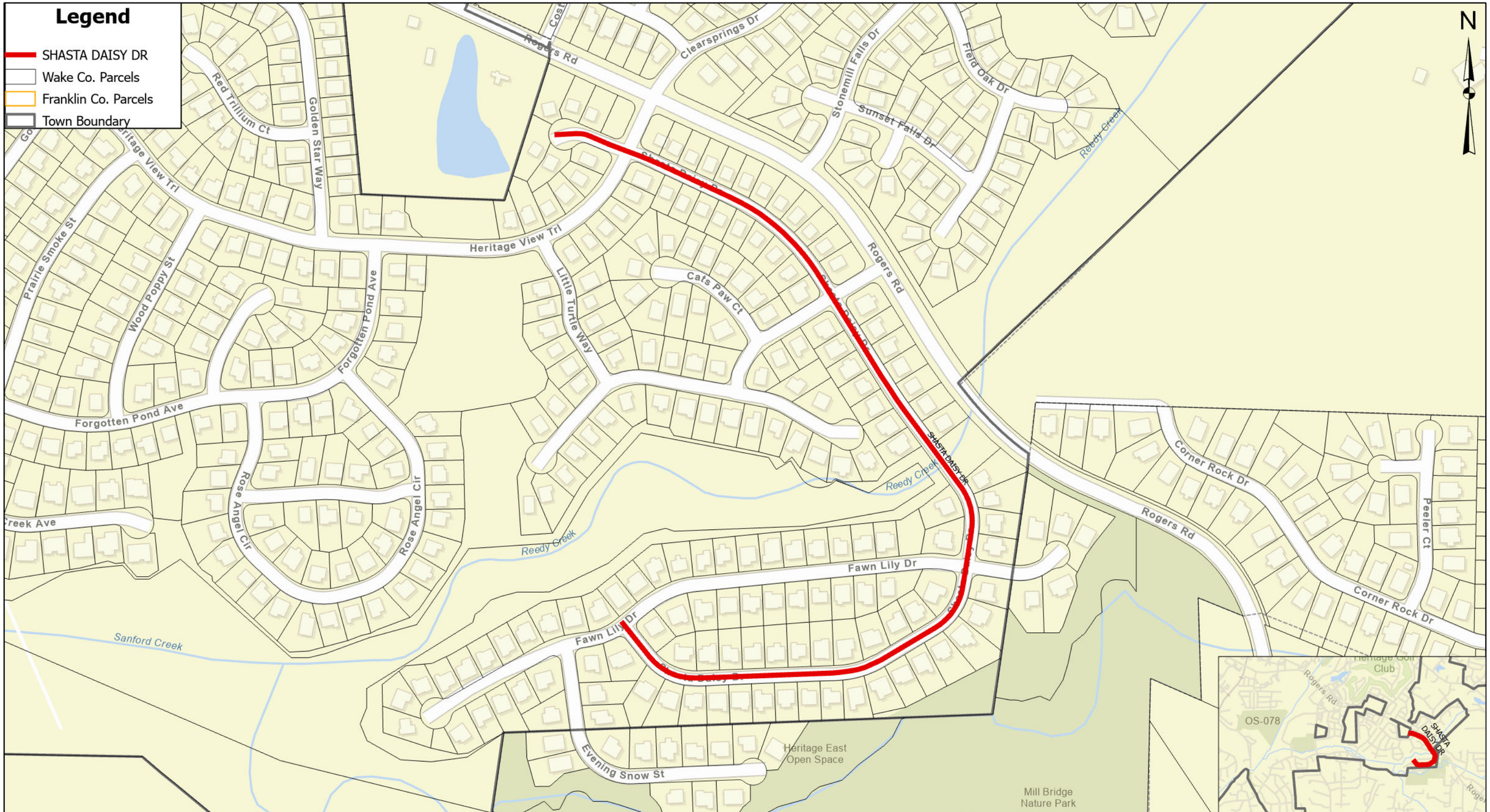
TOWN of WAKE FOREST

Map No.60

SHAPINSAY AVE

0 0.01 0.01 0.02
Miles

Min Htun - 1/9/2024



TOWN of WAKE FOREST

Map No.61

SHASTA DAISY DR

0 0.02 0.04 0.08
Miles

Min Htun - 1/30/2024

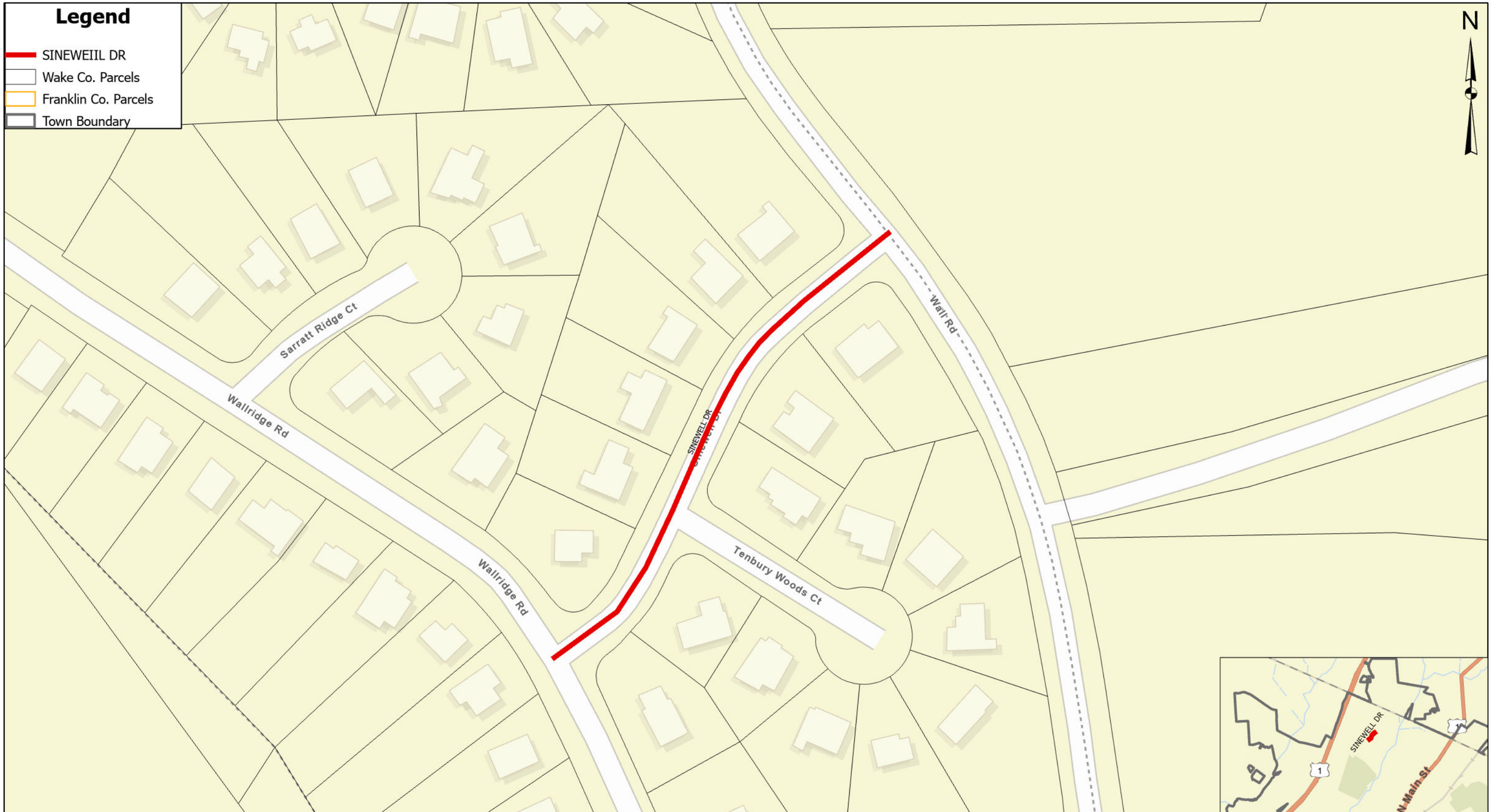
TOWN of WAKE FOREST

Map No.62

SHEPSTONE PL

0 0.010.01 0.02
Miles

Min Htun - 1/30/2024

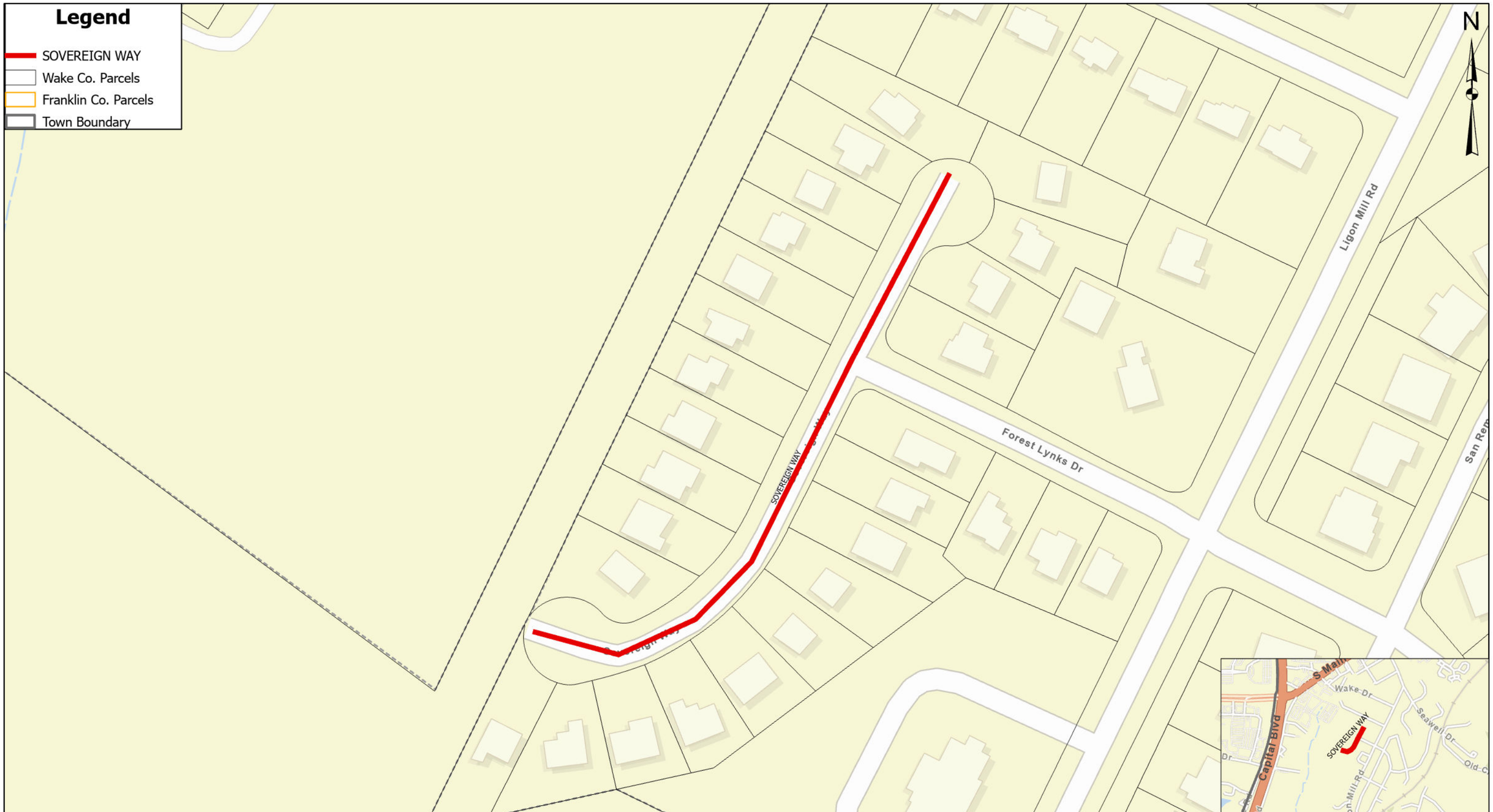


TOWN of WAKE FOREST

Sinewell Dr

0 0.01 0.01 0.02
Miles

Min Htun - 8/15/2024



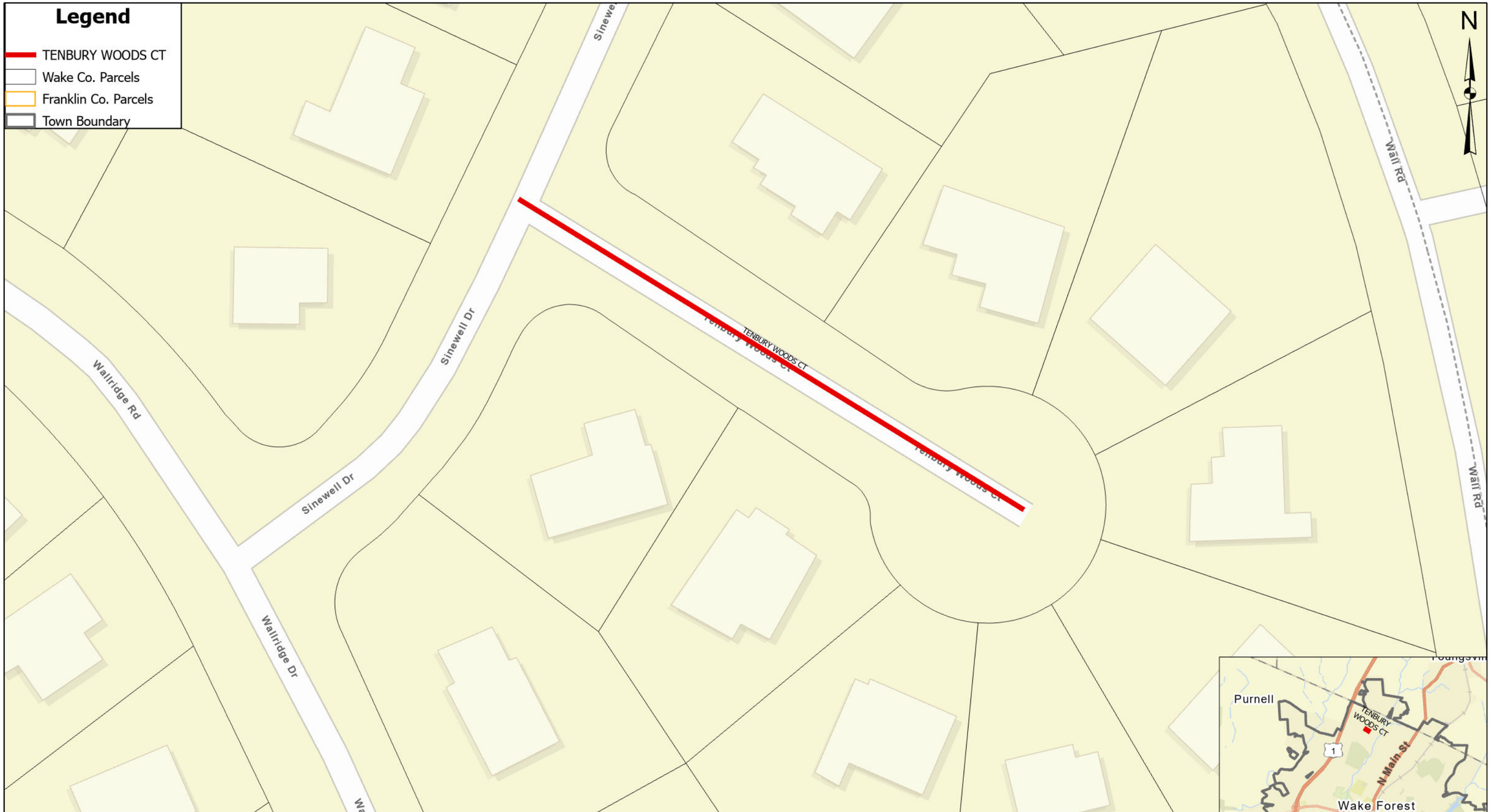
TOWN of WAKE FOREST

Map No.64

SOVEREIGN WAY

0 0.00 0.01 0.02
Miles

Min Htun - 1/25/2024



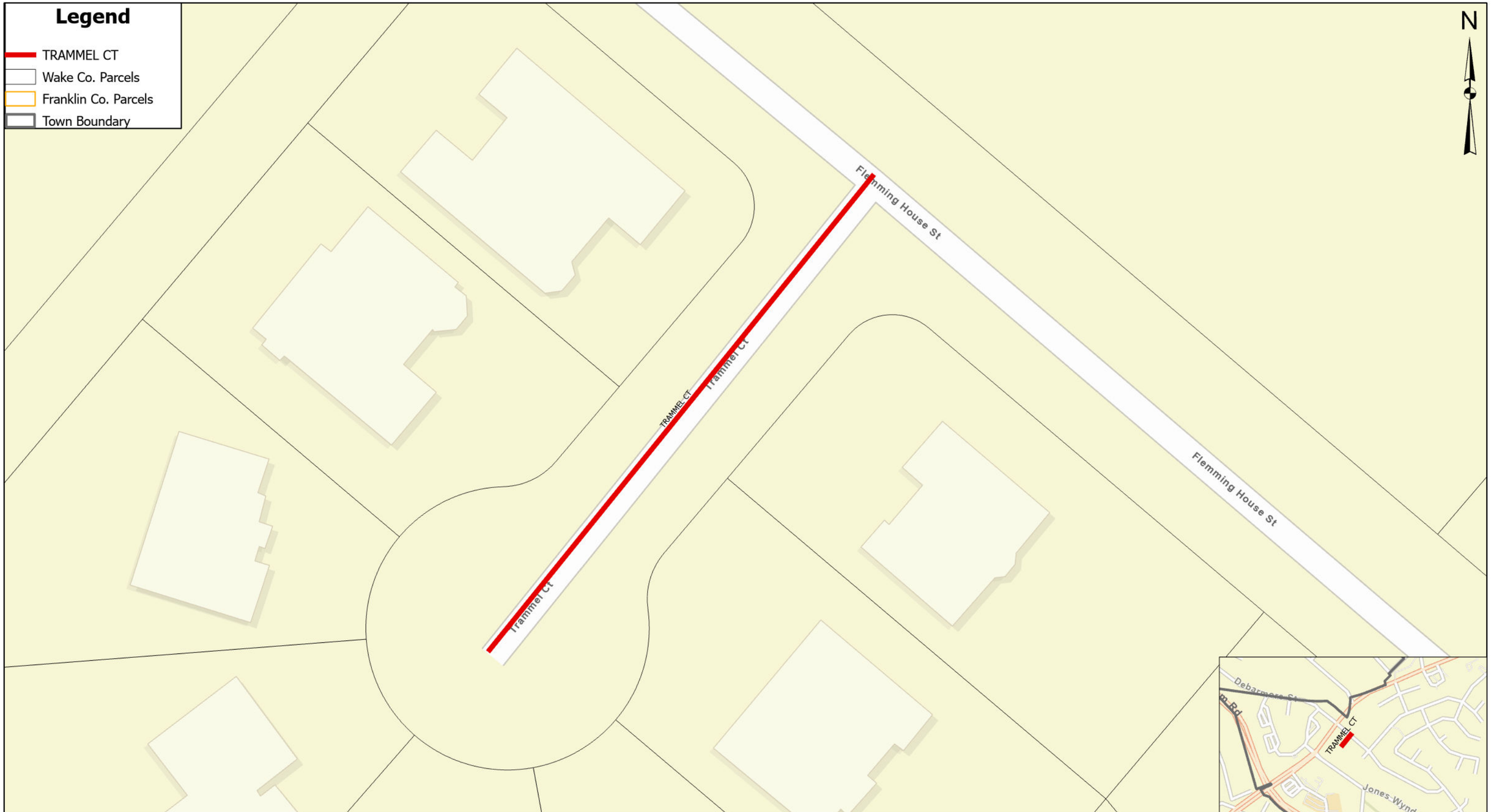
TOWN of WAKE FOREST

Map No.65

TENBURY WOODS CT

0 0 0.01 0.01
Miles

Min Htun - 1/9/2024



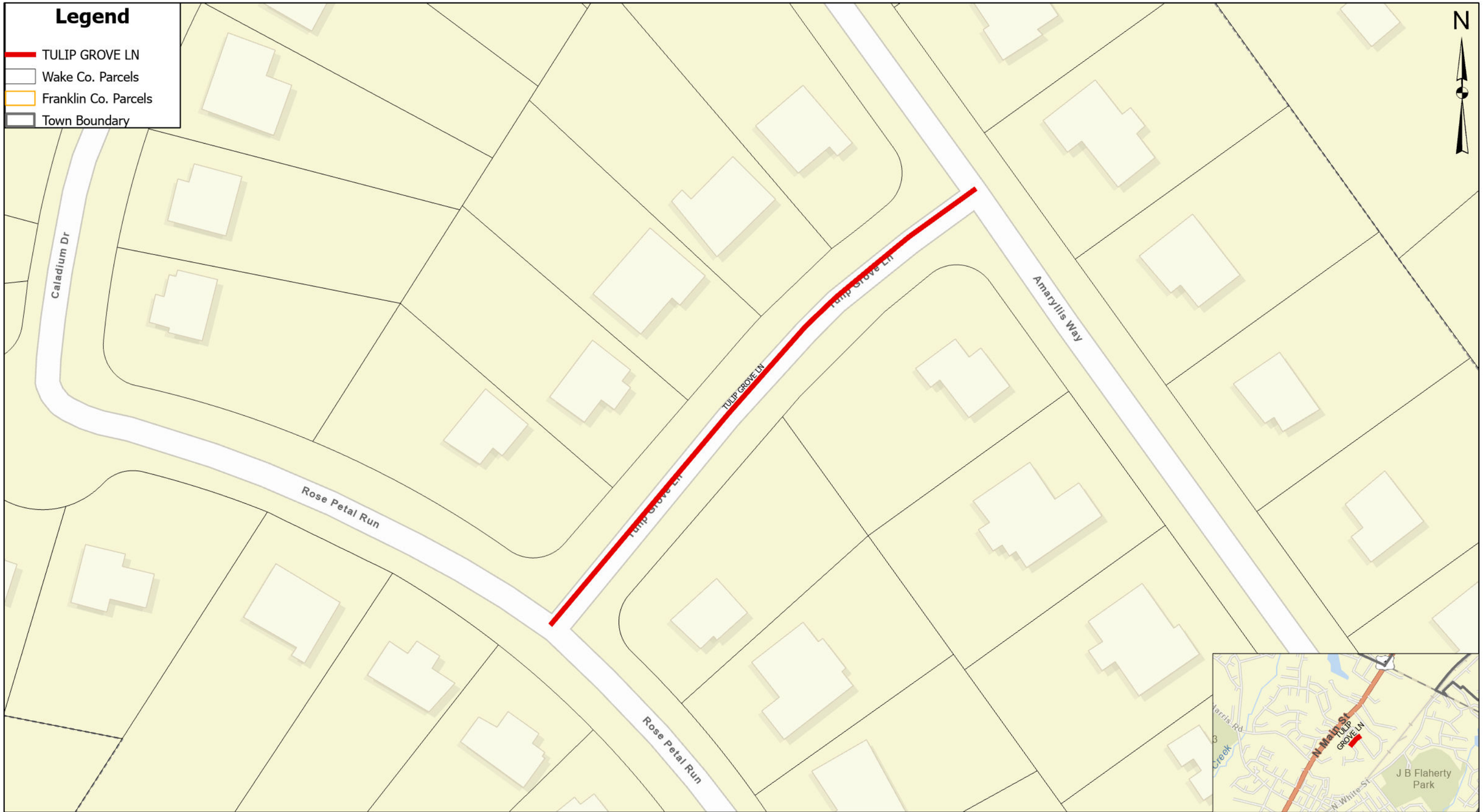
TOWN of WAKE FOREST

Map No.66

TRAMMEL CT

0 0 0 0.01
Miles

Min Htun - 2/22/2024



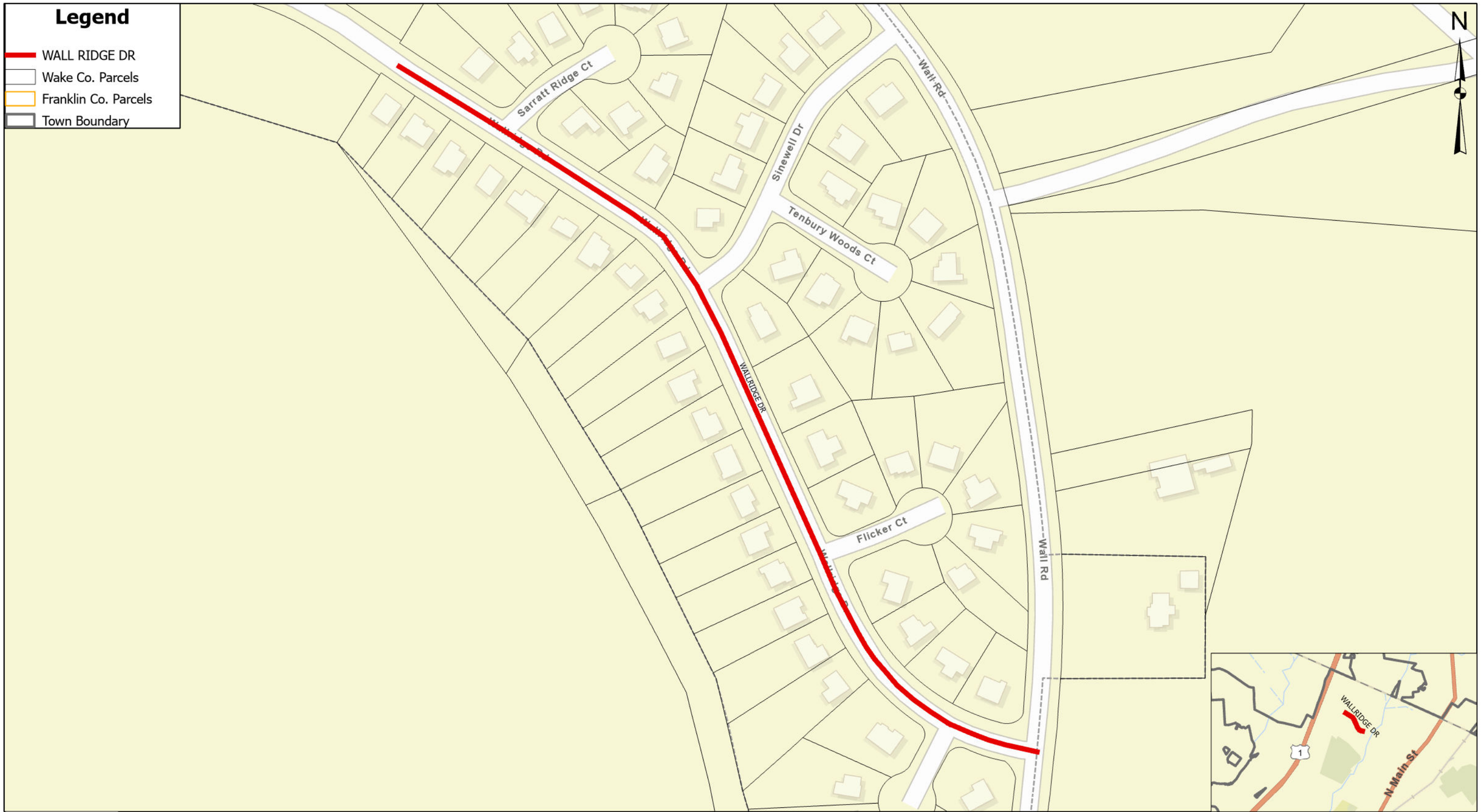
TOWN of WAKE FOREST

Map No.67

TULIP GROVE LN

0 0 0.01 0.01
Miles

Min Htun - 1/23/2024



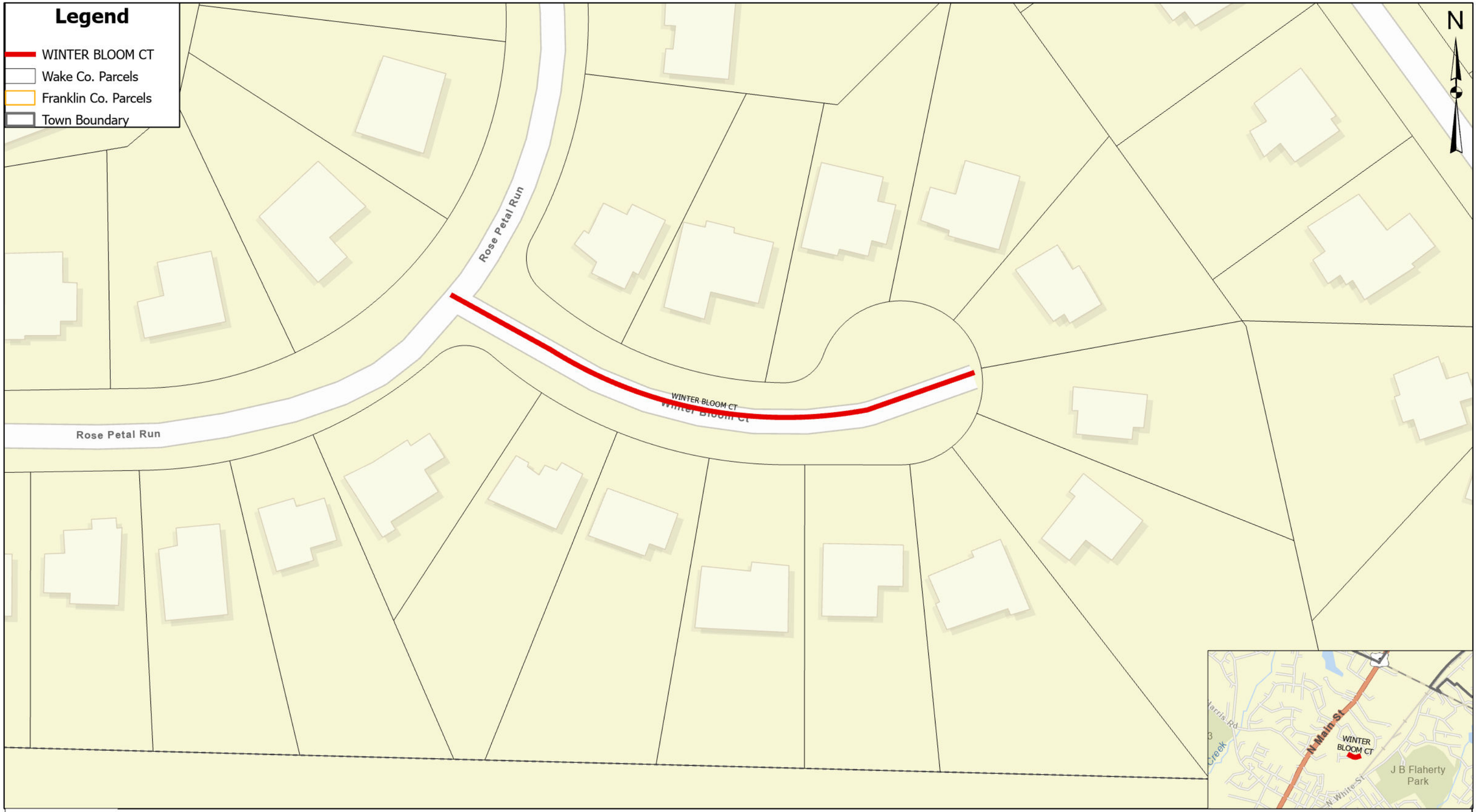
TOWN of WAKE FOREST

Map No.68

WALL RIDGE DR

0 0.010.02 0.04
Miles

Min Htun - 1/9/2024



TOWN of WAKE FOREST

Map No.69

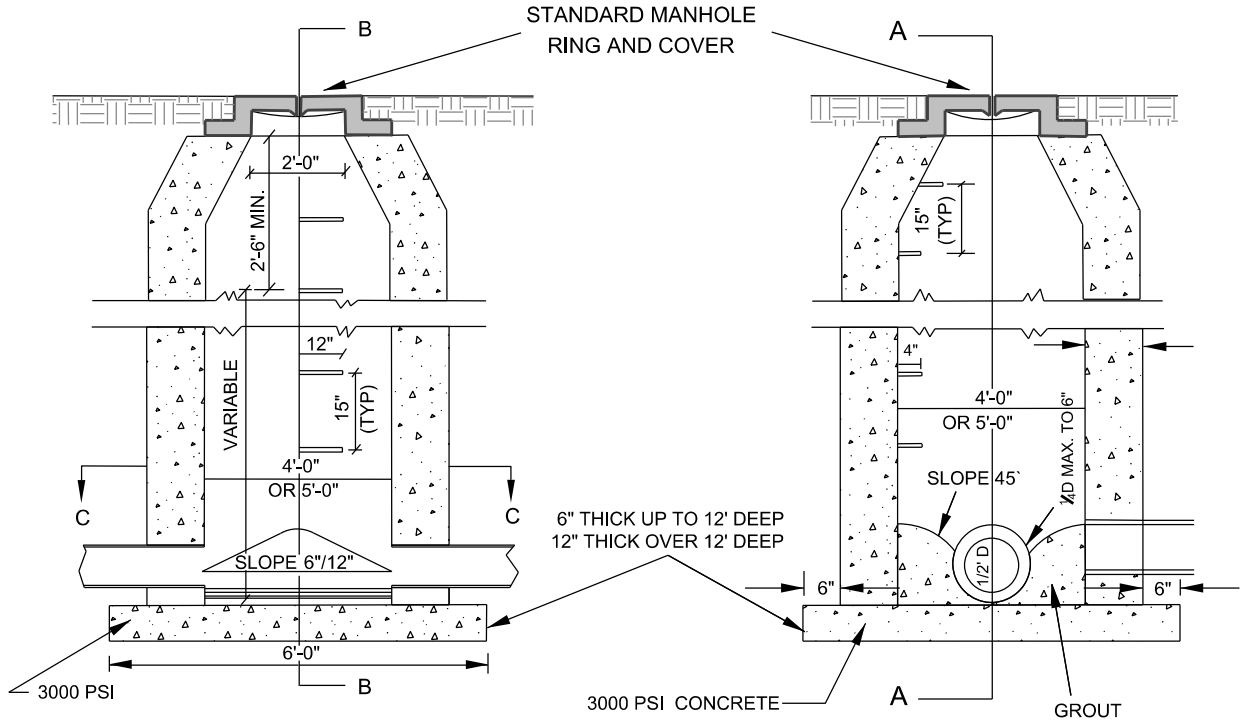
WINTER BLOOM CT

0 0 0.01 0.01
Miles

Min Htun - 1/23/2024

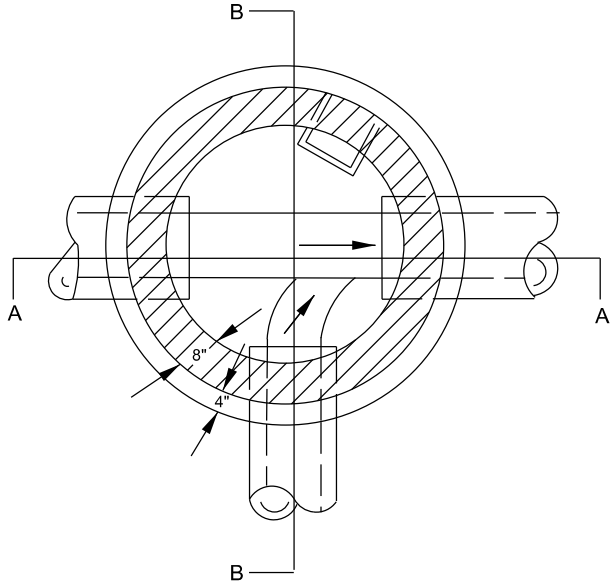
TYPICAL MH FOR STORM SEWER

PIPE SIZE	MH DIAMETER
12-24"	4'-0"
30-42"	5'-0"
48"	6'-0"
54"	8'-0"



SECTION A-A

SECTION B-B



TYPE A

SECTION C-C

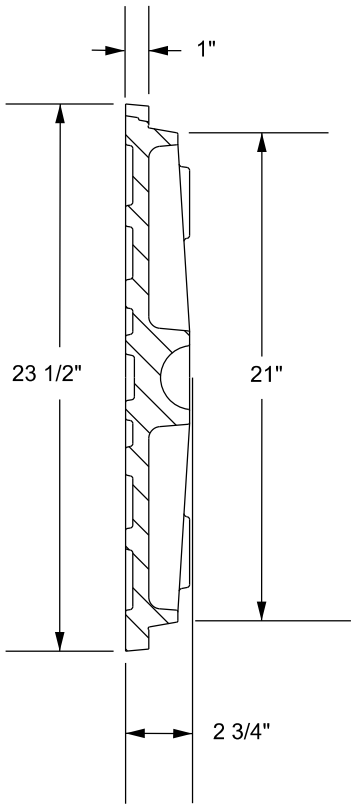
NOTES:

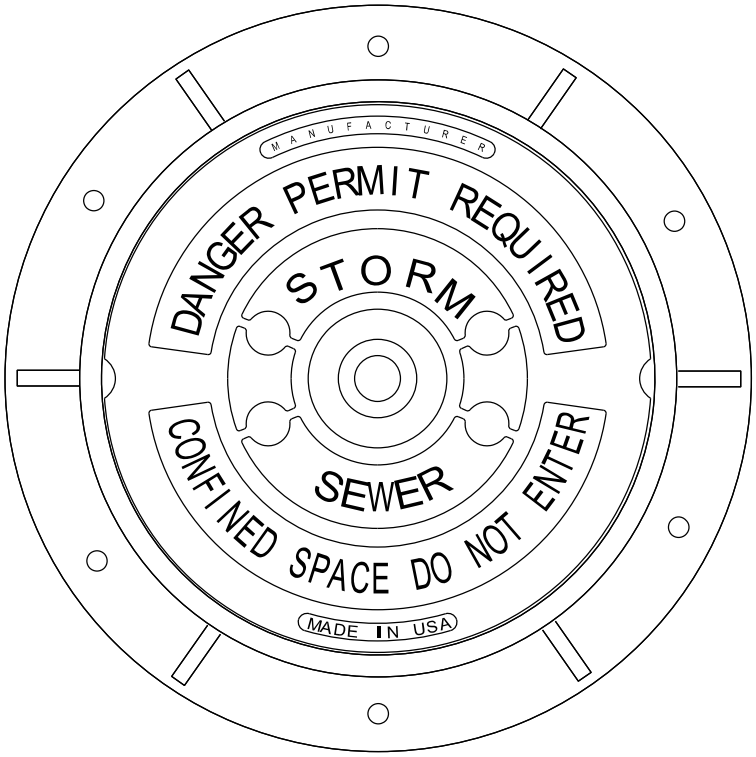
1. DEPTH MEASURED FROM TOP OF CASTING TO INVERT OF MANHOLE.
2. PRECAST MANHOLE COMPONENTS SHALL MEET ASTM-C-478 REQUIREMENTS.
3. SEE STANDARD. SW-10.10 FOR MANHOLE COVER DETAIL.
4. DOMESTIC CASTINGS REQUIRED WITHIN STREET RIGHT-OF-WAY.

CITY OF RALEIGH

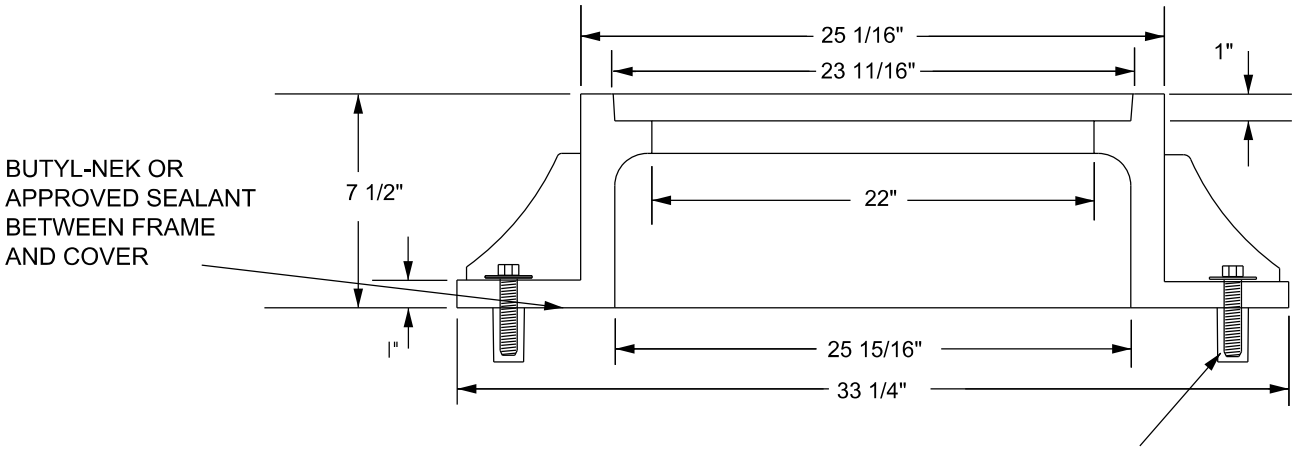
STANDARD DETAIL

REVISIONS	DATE: 8/2020	NOT TO SCALE
	STANDARD CLASS "A" MANHOLE	
	SW-10.05	**1140**





COVER 120 LBS. MINIMUM

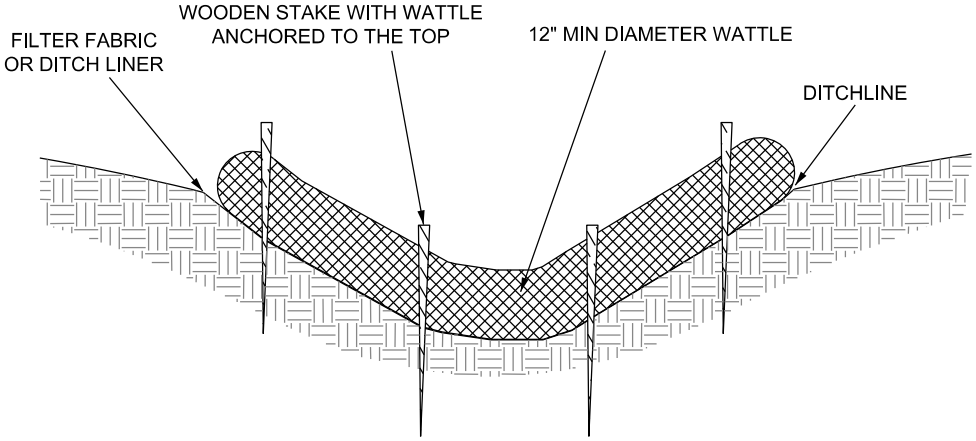


NOTES:

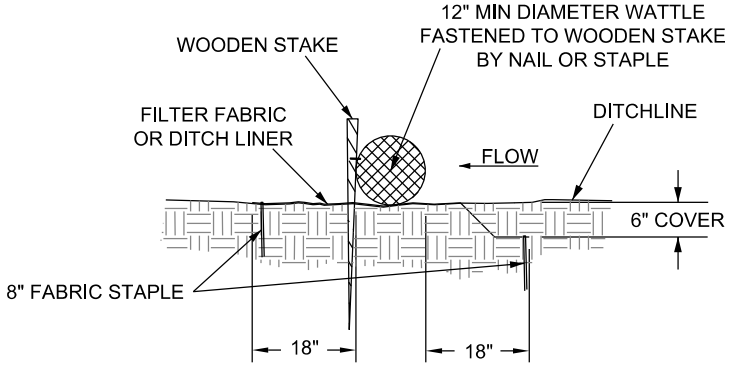
1. ALL MANHOLE FRAMES SHALL BE DOMESTICALLY CAST.
2. FRAME SHALL BE A MINIMUM WEIGHT OF 182 LBS. WITHIN PUBLIC ROW AND 160 LBS. WITHIN EASEMENTS.
3. COVER SHALL WEIGH A MINIMUM OF 120 LBS.
4. ALL MANHOLE FRAMES OUTSIDE OF PAVED SURFACE SHALL BE BOLTED TO THE CONE SECTION OR RING WITH A MINIMUM OF 4 BOLTS PER FRAME.

CITY OF RALEIGH
STANDARD DETAIL

REVISIONS	DATE: 8/2020	NOT TO SCALE
	STANDARD STORM MANHOLE COVER	
	SW-10.10	1141

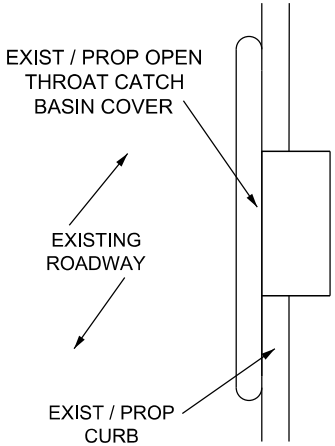


PROFILE VIEW

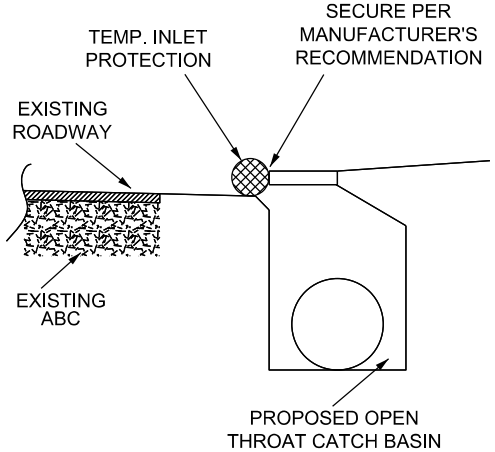


NOTES:

1. WATTLES SHALL BE FILLED WITH STRAW OR OTHER APPROVED MATERIAL.
2. SPACING FOR WATTLES SHALL BE DETERMINED BY THE SITE ENGINEER.
3. WATTLES MAY BE USED FOR PROTECTION OF CATCH BASINS AND DROP INLETS WITH APPROVAL BY THE STORMWATER PROGRAM MANAGER OR DESIGNEE.
4. FOR USE OF WATTLE IN A DITCH, GRADE OF DITCH MUST BE <2.5%.



PLAN W / INLET
INLET PROTECTION - COR BOX



CROSS SECTION

CITY OF RALEIGH
STANDARD DETAIL

REVISIONS

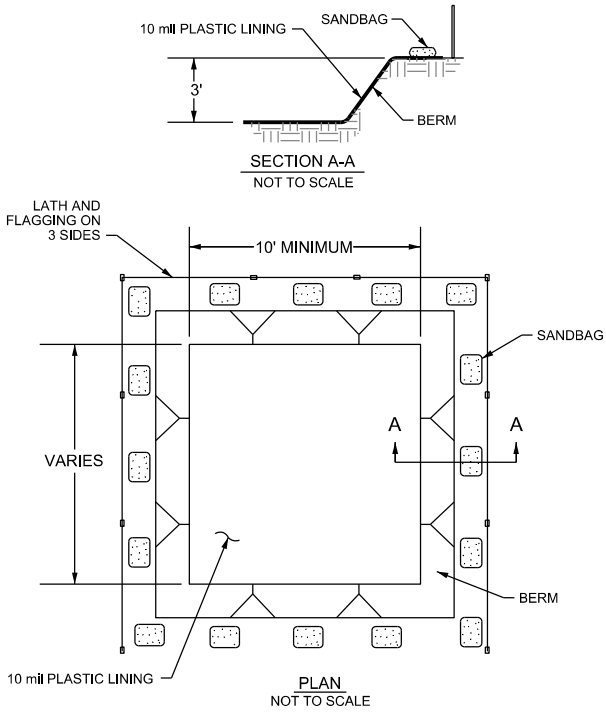
DATE: 8/2020

NOT TO SCALE

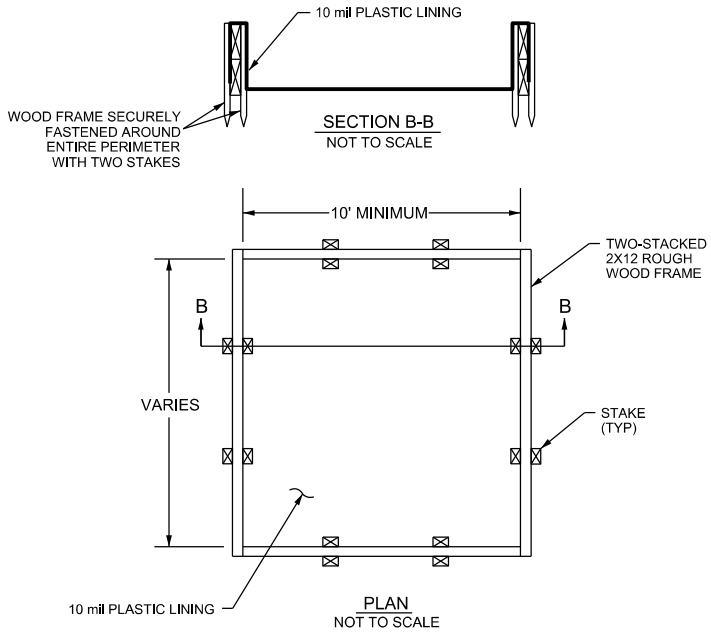
WATTLE / INLET
PROTECTION DETAIL

SW-20.23

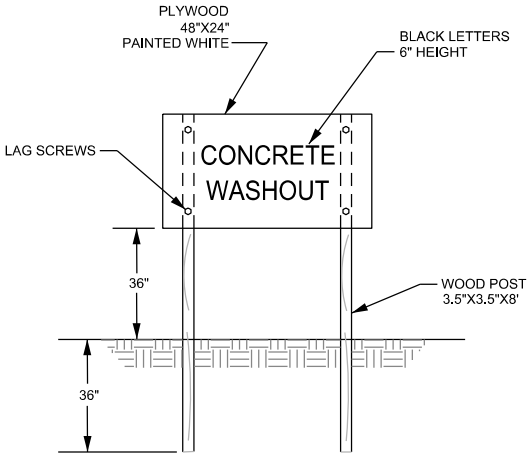
1142



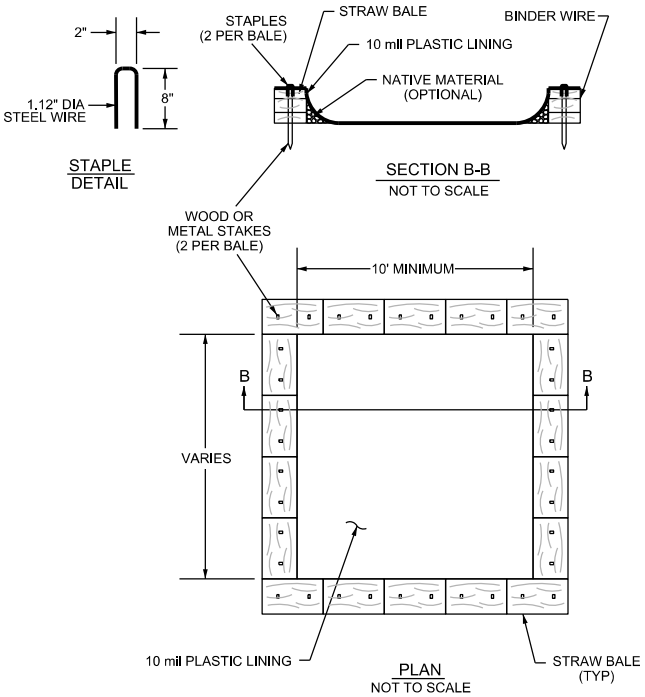
TYPE "BELOW GRADE"



TYPE "ABOVE GROUND" WITH WOOD PLANKS



CONCRETE WASHOUT SIGN DETAIL (OR EQUIVALENT)



TYPE "ABOVE GRADE" WITH STRAW BALES

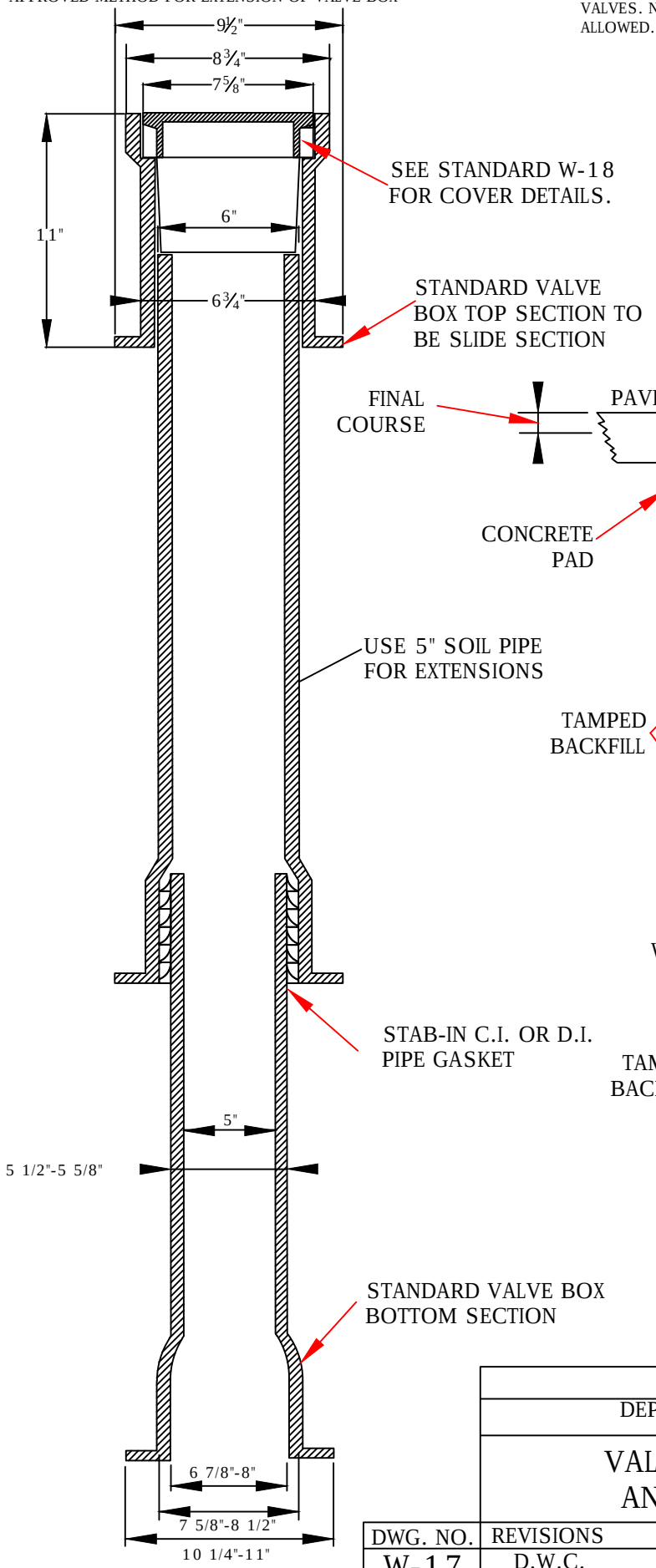
NOTES:

1. ACTUAL LAYOUT TO BE DETERMINED IN THE FIELD.
2. A CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30' OF THE TEMPORARY CONCRETE WASHOUT FACILITY.
3. MATERIALS USED TO CONSTRUCT TEMPORARY CONCRETE WASHOUT FACILITIES SHALL BE REMOVED FROM THE SITE OF THE WORK AND DISPOSED OF OR RECYCLED.
4. HOLES, DEPRESSIONS OR OTHER GROUND DISTURBANCE CAUSED BY THE REMOVAL OF THE TEMPORARY CONCRETE WASHOUT FACILITIES SHALL BE BACKFILLED, REPAIRED, AND STABILIZED TO PREVENT EROSION.
5. MUST BE LOCATED >50 FT AWAY FROM INLETS/WATERWAYS UNLESS THERE IS NO OTHER PRACTICAL ALTERNATIVE.

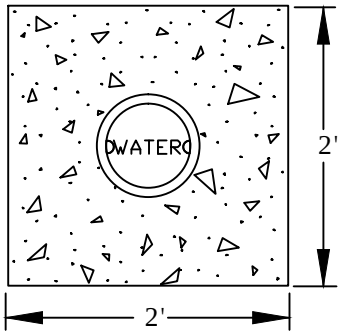
CITY OF RALEIGH
STANDARD DETAIL

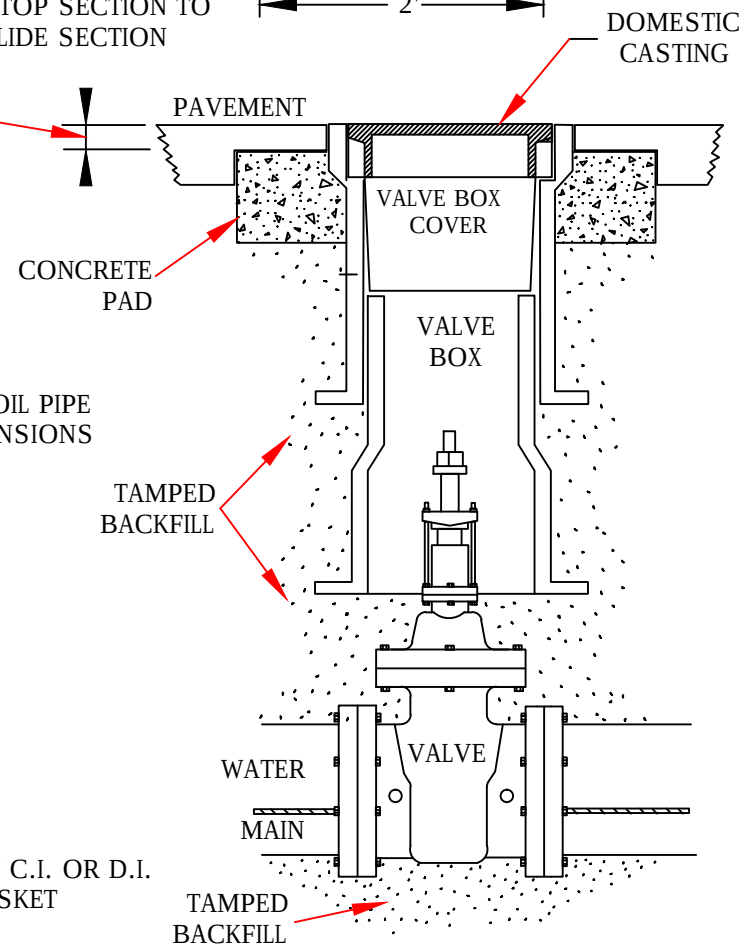
REVISIONS	DATE: 8/2020	NOT TO SCALE
	CONCRETE WASHOUT	
	SW-20.25	**1143**

APPROVED METHOD FOR EXTENSION OF VALVE BOX



NOTE: 2'x 2'x 6" CONCRETE PAD REQUIRED ON ALL VALVES. NO PRECAST CONCRETE DOUGHNUT ALLOWED.





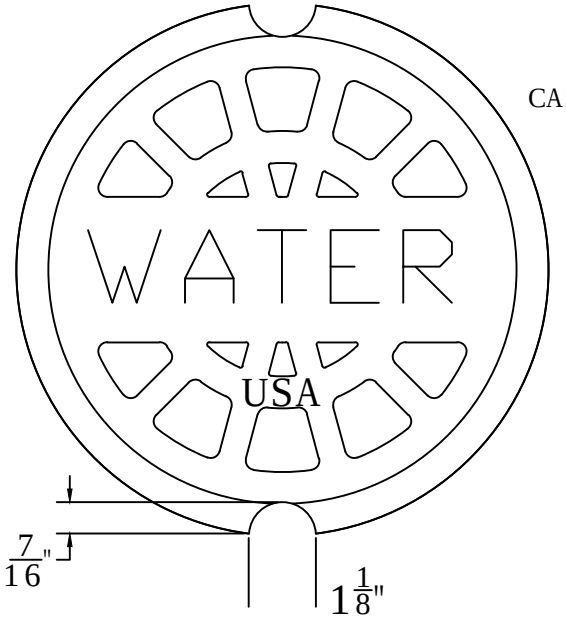
NOTES:
1) VALVE BOX NOT TO CONTACT WATER MAIN
2) ALL TRAFFIC CASTINGS MUST BE CLASS 35 OR GREATER.
3) FOR ANY VALVES OVER 10' DEEP, A VALVE STEM EXTENSION MUST BE USED TO BRING TO A DEPTH OF NO MORE THAN 5', EXTENSION MUST BE A MINIMUM OF 1" SOLID STOCK.
4) TOTAL VALVE BOX WEIGHT: MINIMUM OF 85 LBS.

CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES

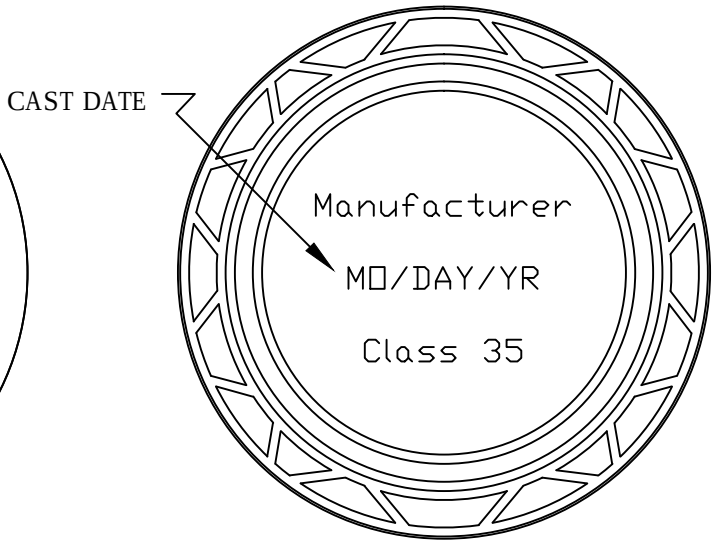
VALVE BOX INSTALLATION AND EXTENSION DETAIL

DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-17	D.W.C.	9-7-99	A.B.B.	4-15-04
	RRH	3-31-00	DHL	8-16-0

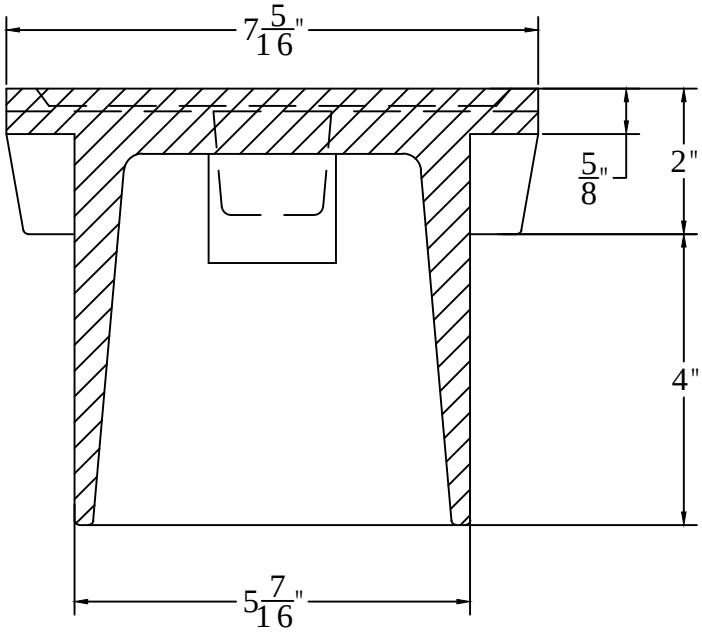
1144



PLAN VIEW



BOTTOM VIEW



SECTION VIEW

NOTE 1 - "WATER" LETTERING MUST BE 1" RAISED (RECESSED FLUSH)
NOTE 2 - VALVE COVER SHALL BE DOMESTICALLY CAST.
NOTE 3 - COVER MUST HAVE A MINIMUM WEIGHT OF 25 POUNDS.
NOTE 4 - COVER MUST BE CLASS 35 OR GREATER.
NOTE 5 - COVER MUST MEET OR EXCEED AASHTO H-20 LOAD REQUIREMENTS.

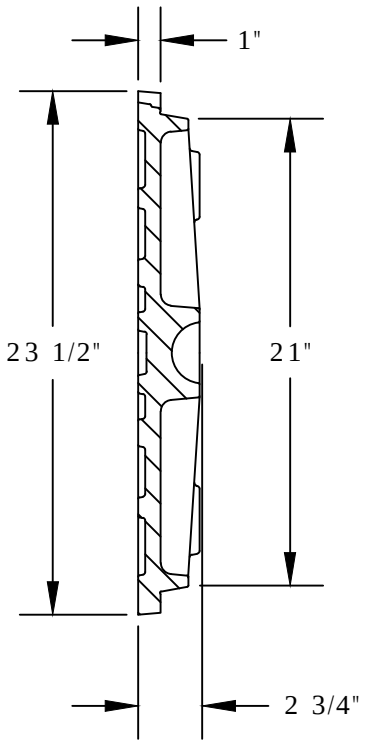
CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES

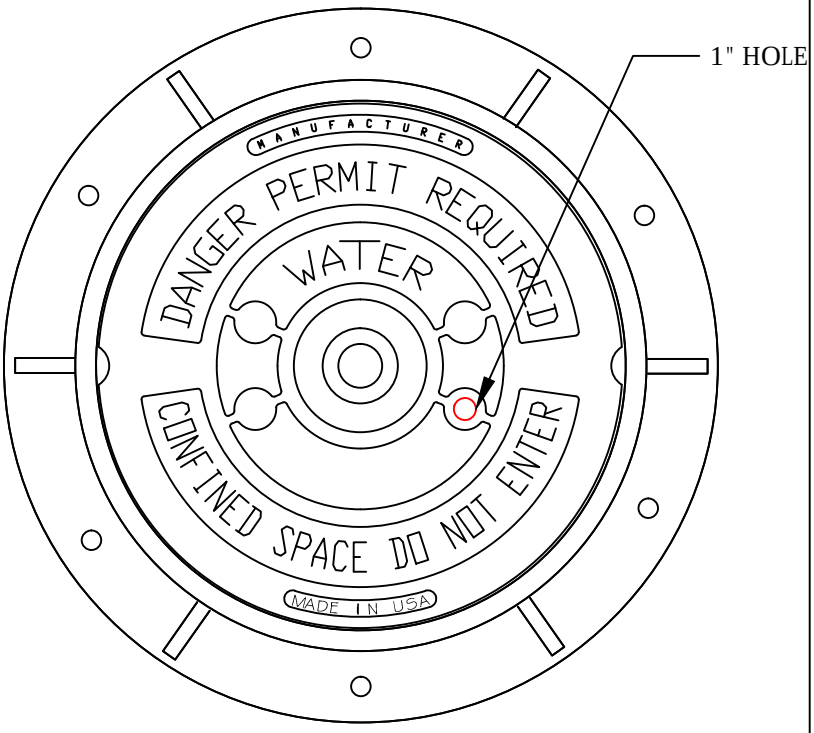
5 1/4" VALVE BOX DROP LID
WITH 4" SKIRT

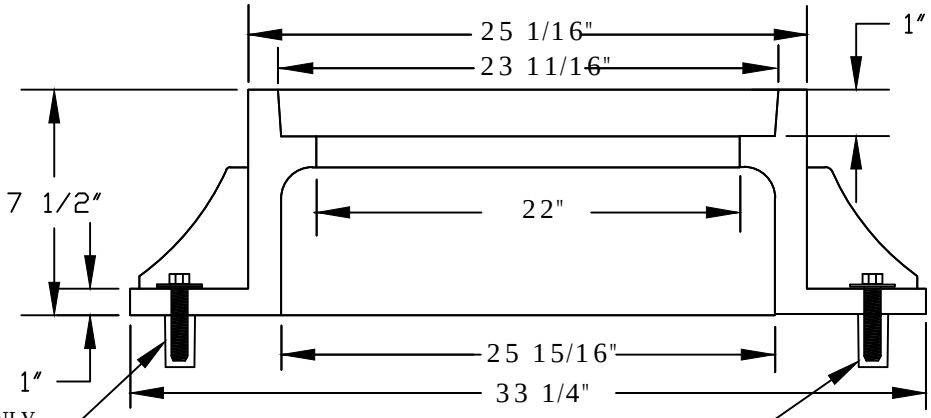
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-18				

MANHOLE FRAME AND COVER

COVER 120 LBS. MINIMUM







LAGSHIELDS MAY ONLY BE USED IN ROADWAY APPLICATIONS.

5/8"X3" LAGSHIELD IN HOLE DRILLED INTO CONE OR RING WITH ANCHOR SUNK TO DEPTH RECOMMENDED BY MANUFACTURER, AND 3/8"X3" HOT DIPPED GALVANIZED LAG BOLT AND WASHER.

NOTES:

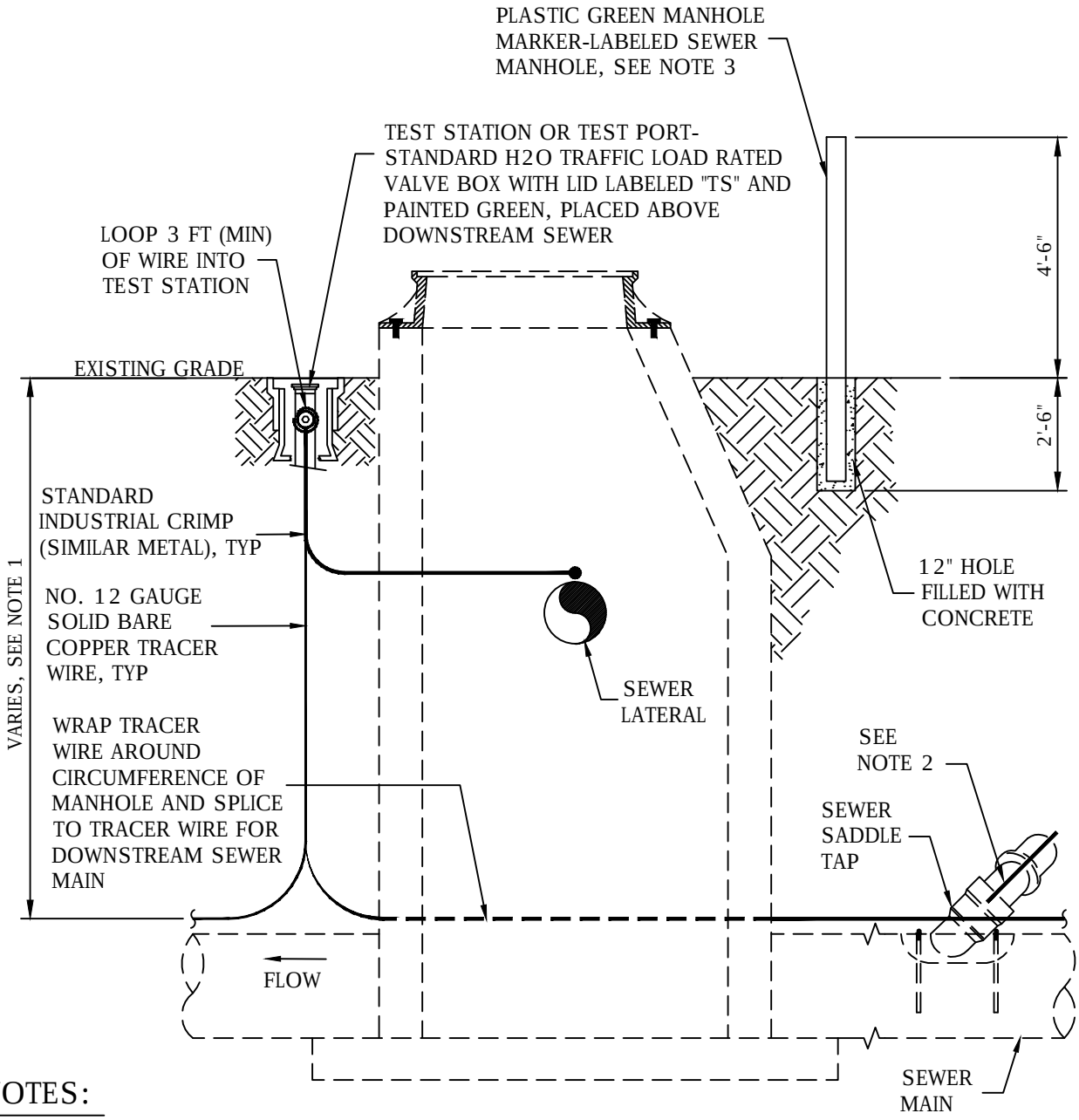
1) ALL MANHOLE FRAMES SHALL BE BE DOMESTICALLY CAST
2) FRAME SHALL BE A MINIMUM WEIGHT OF 182 LBS.
3) COVER SHALL WEIGH A MIN. OF 120 LBS.
4) MANHOLES WITHIN PAVED SURFACES SHALL BE CONSTRUCTED IN ACCORDANCE WITH S-29.

CITY OF RALEIGH

DEPARTMENT OF PUBLIC UTILITIES

STANDARD MANHOLE COVER

DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-20	A.B.B.	4-8-04		
	D.H.L.	6-18-08		



NOTES:

1. THE TRACER WIRE SHALL BE CONTINUOUS TO THE GREATEST EXTENT POSSIBLE. FOR GRAVITY MAIN AND OR LATERAL INSTALLATIONS LESS THAN 8 FT, THE TRACING WIRE SHALL BE ATTACHED TO THE PIPE. TRACER WIRE SHALL BE LAID FLAT AND SECURELY AFFIXED TO THE PIPE AT 10 FOOT INTERVALS. FOR GRAVITY MAIN AND OR LATERAL INSTALLATION DEEPER THAN 8 FT, THE TRACING WIRE SHALL BE INSTALLED AT A DEPTH OF 7-8 FT. THE WIRE SHALL BE PROTECTED FROM DAMAGE DURING THE EXECUTION OF THE WORK. NO BREAKS OF CUTS IN THE TRACER WIRE SHALL BE PERMITTED.
2. WHERE LATERAL TAPS ARE MADE BY SERVICE SADDLES, THE TRACER WIRE SHALL NOT BE ALLOWED TO TO BE PLACED BETWEEN THE SADDLE AND MAIN.
3. MANHOLE MARKERS SHALL BE PLACED ADJACENT TO MANHOLES AT THE DISCRETION OF OWNER OR OWNER'S REPRESENTATIVE.

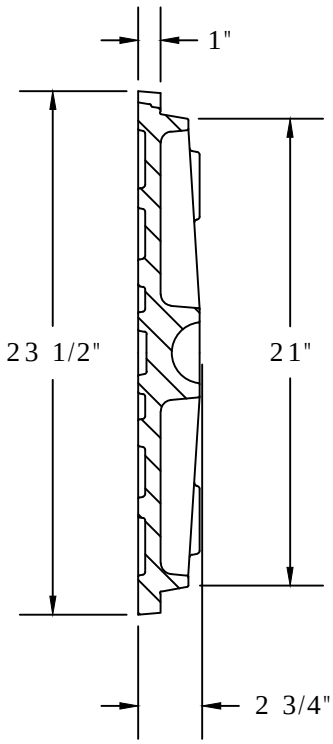
CITY OF RALEIGH

DEPARTMENT OF PUBLIC UTILITIES

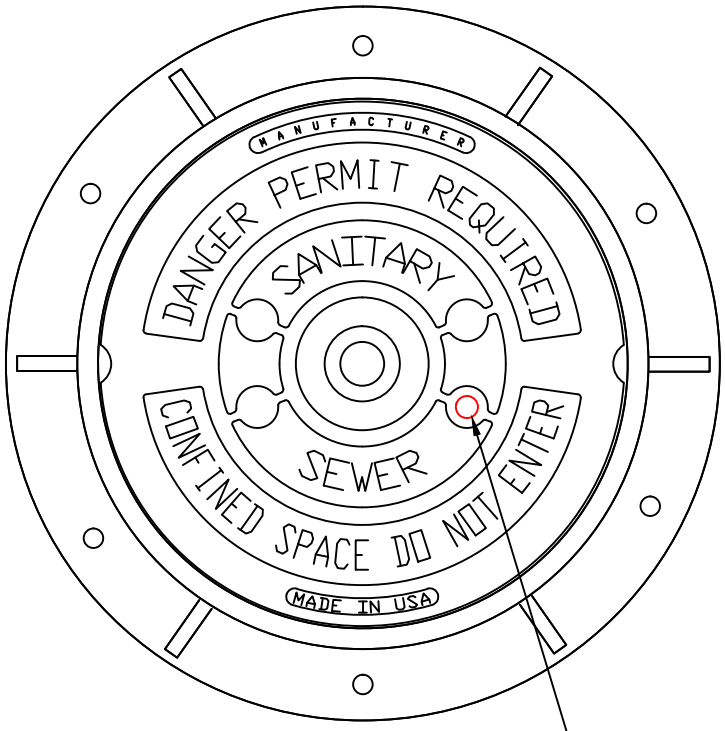
GRAVITY SEWER MAIN TRACER WIRE AND MANHOLE MARKER

DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
S-20A	WKD	09-14		

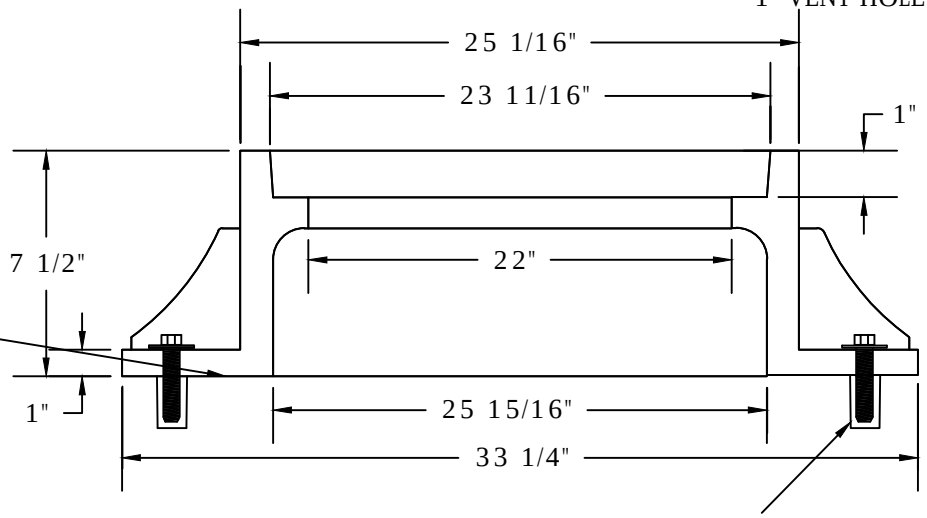
COVER 120 LBS. MINIMUM



MANHOLE FRAME AND COVER



1" VENT HOLE



BUTYL-NEK OR APPROVED SEALANT BETWEEN FRAME AND COVER

5/8"X3" LAGSHIELD IN HOLE DRILLED INTO CONE OR RING WITH ANCHOR SUNK TO DESIGN DEPTH, AND 3/8"X3" HOT DIPPED GALVANIZED LAG BOLT AND WASHER.

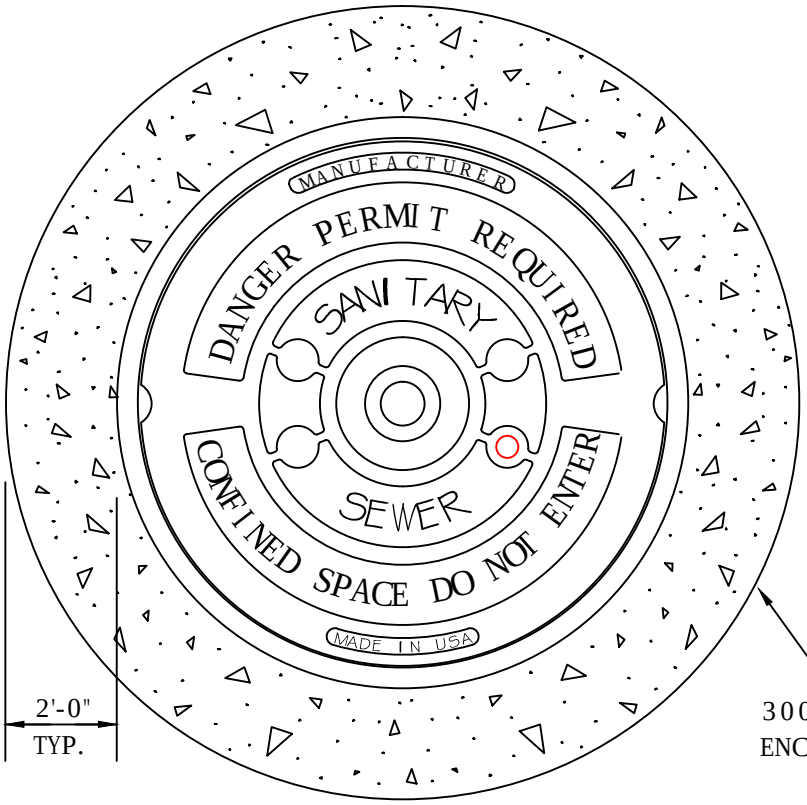
NOTES:
1) ALL MANHOLE FRAMES SHALL BE DOMESTICALLY CAST.
2) FRAME SHALL BE A MINIMUM WEIGHT OF 182 LBS. WITHIN PUBLIC ROW AND 160 LBS. WITHIN EASEMENTS.
3) COVER SHALL WEIGH A MIN. OF 120 LBS.
4) ALL MANHOLE FRAMES OUTSIDE OF PAVED SURFACES SHALL BE BOLTED TO THE CONE SECTION OR RING WITH A MINIMUM OF 4 BOLTS PER FRAME.

CITY OF RALEIGH

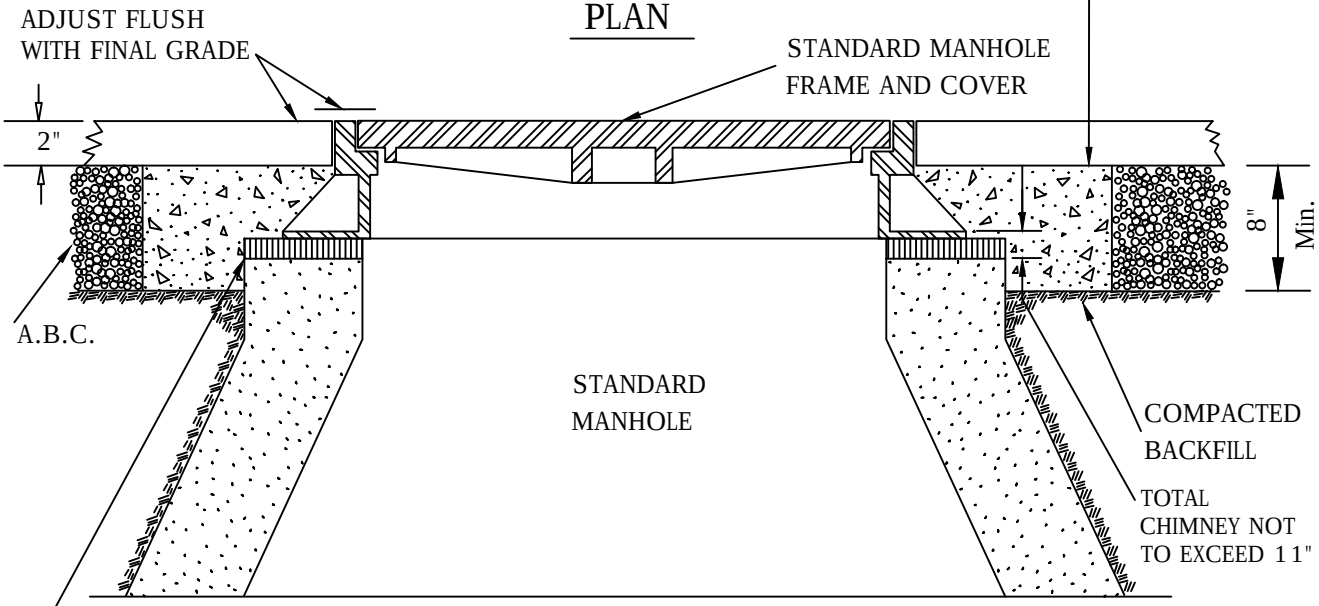
DEPARTMENT OF PUBLIC UTILITIES

STANDARD MANHOLE COVER

DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
S-25	3-1-87	3-1-87	A.B.B.	2-9-05
	RRH	3-30-00	D.H.L.	6-18-



PLAN



SECTION

PRECAST CONCRETE SPACER (DONUT RINGS) IN TRAFFIC AREAS ONLY. DONUT RINGS NOT ALLOWED IN EASEMENTS.

CITY OF RALEIGH

DEPARTMENT OF PUBLIC UTILITIES

STANDARD MANHOLE FRAME AND COVER DETAIL WITHIN PAVED SURFACES

DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
S-29	Y.C.A.	12-31-91	ABB	9-20-04
	RRH	3-30-00	DHL	11-29-0

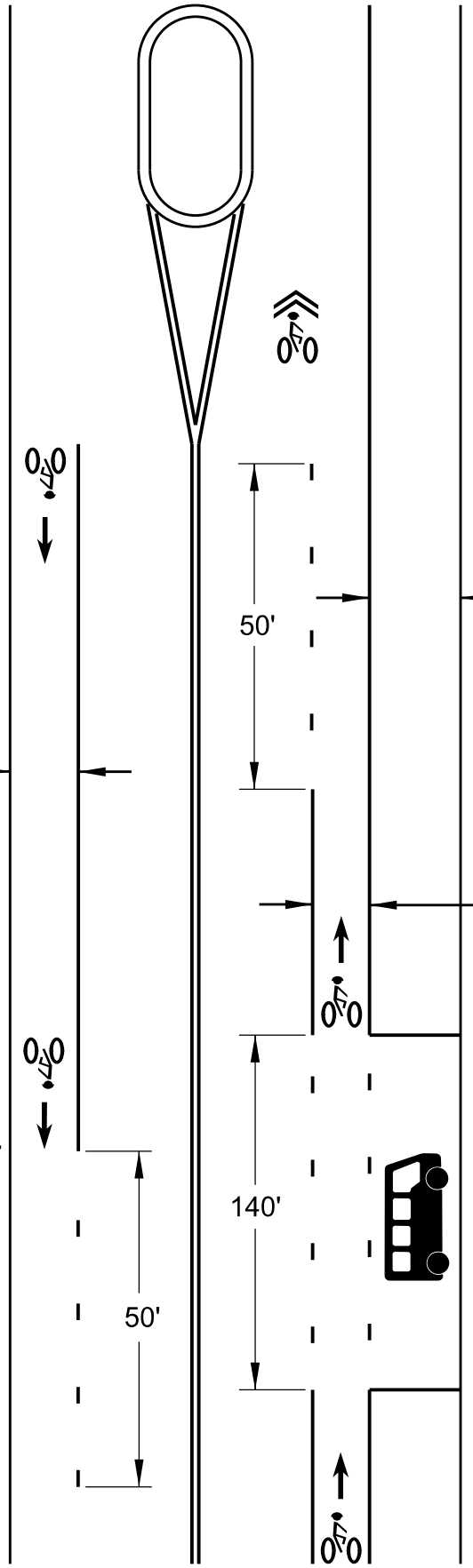
PLACEMENT & SPACING

PLACE BIKE LANE MARKINGS AT THE BEGINNING OF EACH BIKE LANE SEGMENT - I.E. AFTER EVERY INTERSECTION AND MAJOR DRIVEWAY AND WHERE BIKE LANES END.

CONSIDER ADDITIONAL BIKE LANE MARKINGS AS NEEDED TO CLEARLY DELINEATE THE BIKE LANE ON A CASE-BY-CASE BASIS. DESIRED SPACING IS 250' IN DOWNTOWN RALEIGH AND 500' ELSEWHERE.

MEDIAN TRANSITIONS

END BIKE LANE AND PLACE SHARED LANE MARKINGS IN THE CENTER OF THE TRAVEL LANE THROUGH A MEDIAN AREA



PARKING LANE WIDTH, W_3

THE PARKING LANE WIDTH (INCLUDING THE GUTTER PAN) SHOULD BE : 8' DESIRED
7.5' MINIMUM

BIKE LANE WIDTH,W_1

WHERE ADJACENT TO THE EDGE OF PAVEMENT, THE BIKE LANE WIDTH (EXCLUDING THE GUTTER PAN) SHOULD BE: 5' DESIRED
4' MINIMUM

BIKE LANE WIDTH, W_2

WHERE ADJACENT TO A PARKING LANE, THE BIKE LANE WIDTH SHOULD BE: 5' MINIMUM, 6' DESIRED
2' STRIPED BUFFER DESIRED

BIKE LANE SIGN

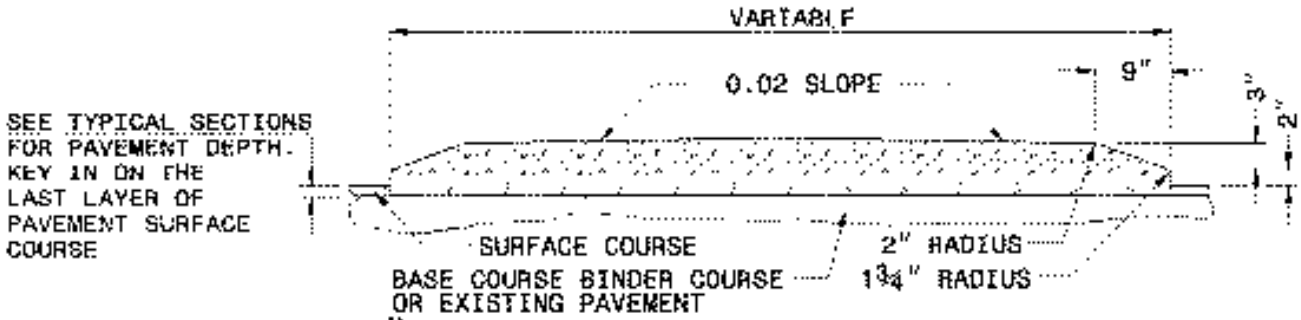
WHERE THE BIKE LANE ENDS AT MID-BLOCK LOCATIONS, PLACE "BIKE LANE ENDS" SIGNAGE AT THE BEGINNING OF THE BIKE LANE MINI-SKIPS.

BIKE LANE MINI-SKIPS

USE 2' DASHED WITH 6' GAPS TO END BIKE LANES AND INDICATE CONFLICT ZONES, E.G. AT BUS STOPS.

CITY OF RALEIGH
STANDARD DETAIL

REVISIONS	DATE: 8/2020	NOT TO SCALE
	BIKE LANE SIGNS AND MARKINGS	
	B-10.01	1150

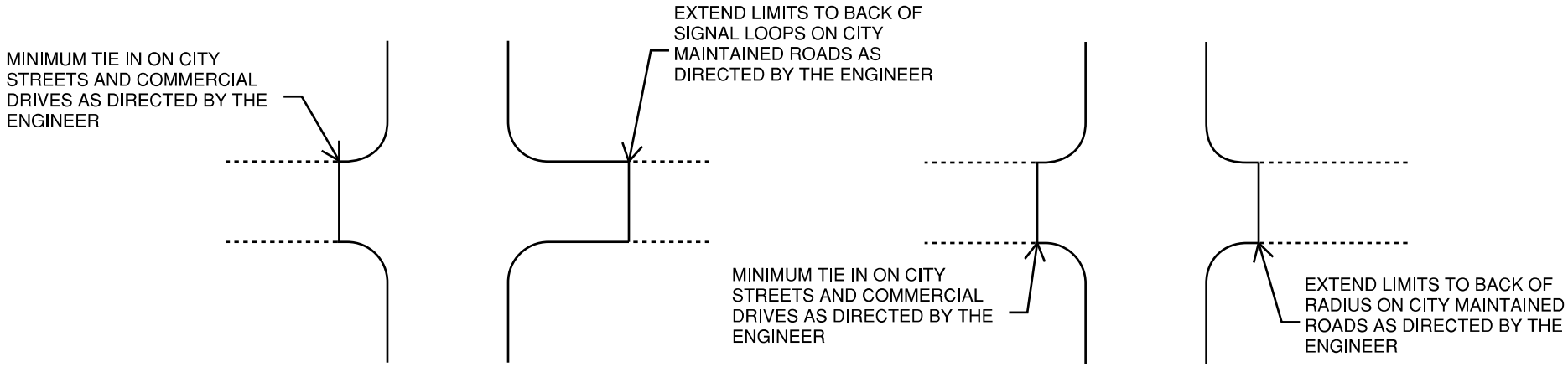


5" MONOLITHIC CONCRETE ISLAND (KEYED IN)

ON ASPHALT CONCRETE PAVEMENT

(USE ON ISLAND LESS THAN 4' WIDE)

STANDARD DETAIL FOR
CONCRETE ISLANDS

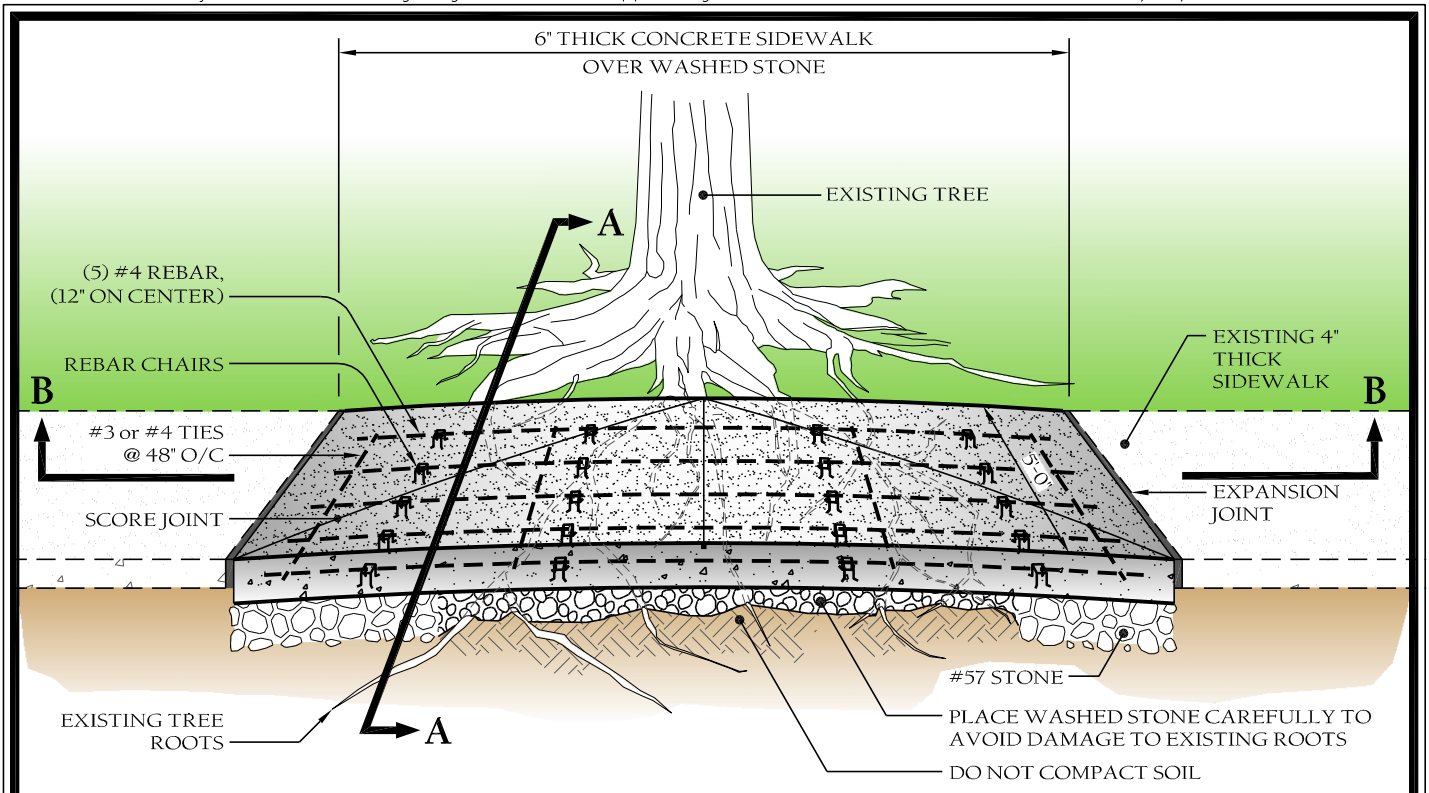


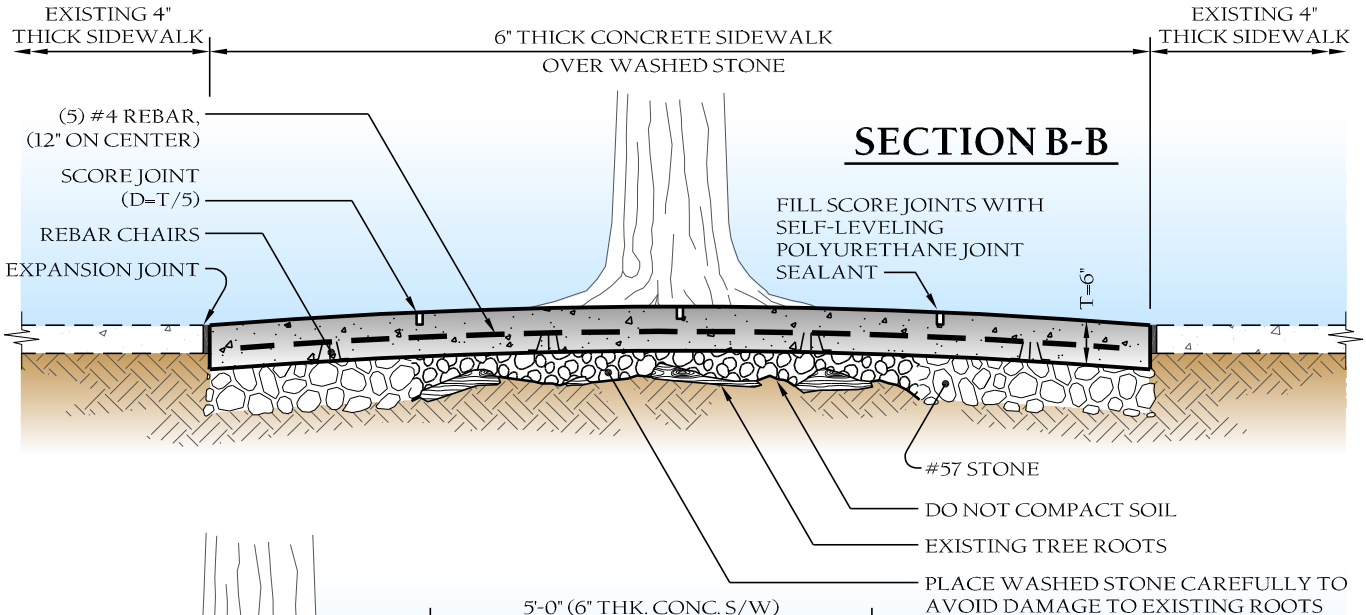
DETAIL OF PROJECT LIMITS AT SIGNALIZED Y LINES

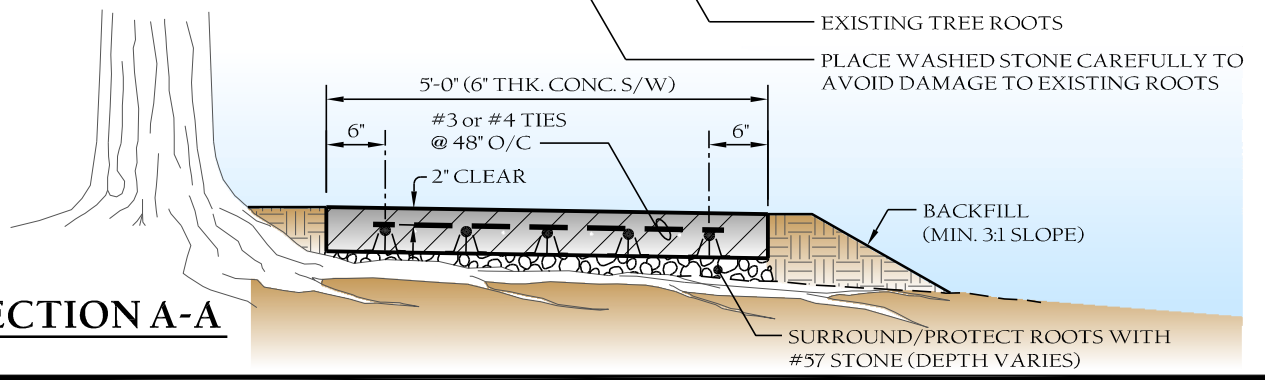
DETAIL OF PROJECT LIMITS AT UNSIGNALIZED Y LINES

NOTES:
1. Y-LINE STREETS SHALL NOT BE PULLED AS PART OF THE MAIN-LINE STREET RESURFACING OPERATION. ALL Y-LINE STREETS SHALL BE RESURFACED AFTER THE MAIN STREET.

RESURFACING LIMITS AT Y-LINES AND COMMERCIAL DRIVES







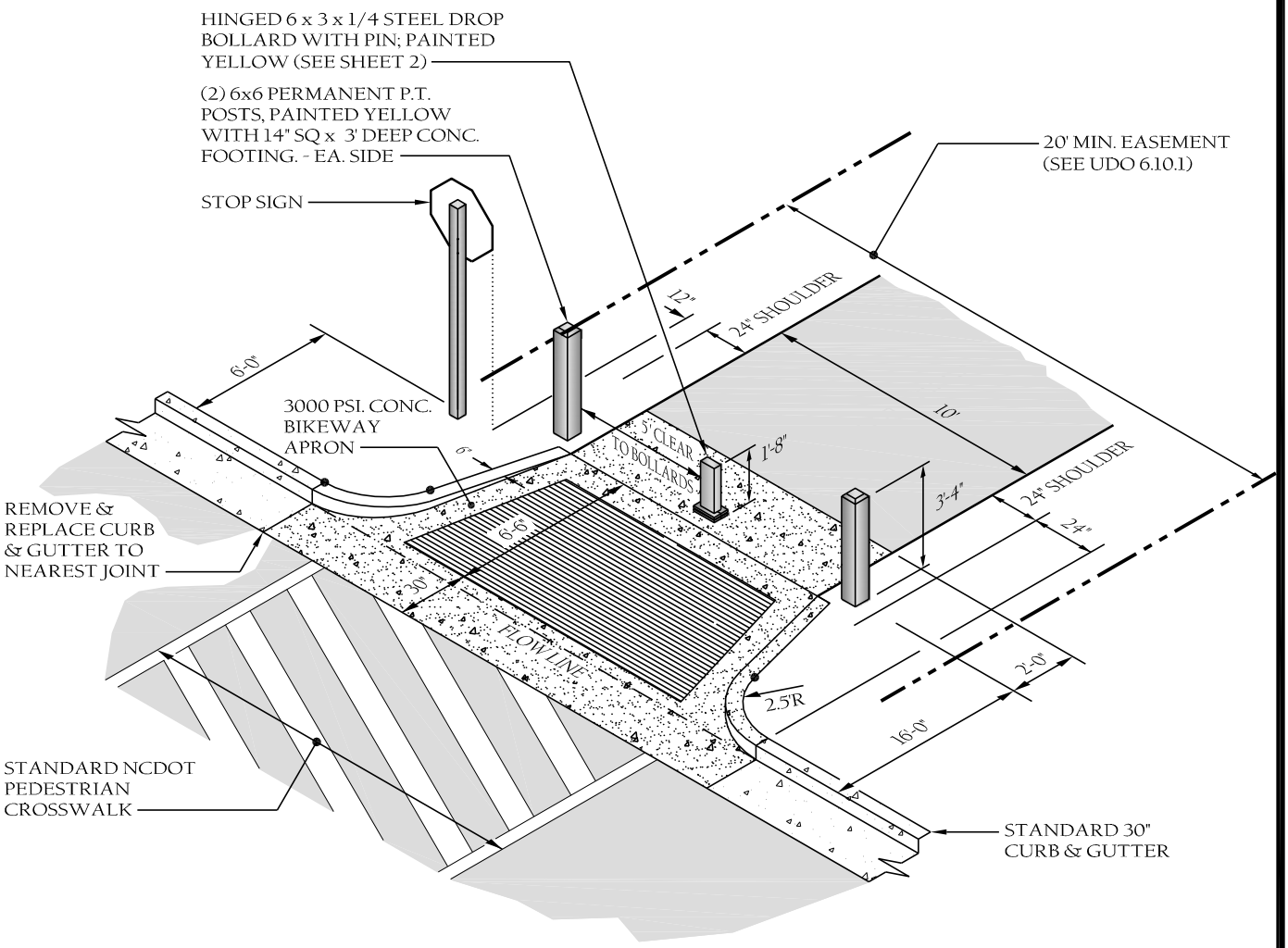
TOWN of WAKE FOREST

TOWN of WAKE FOREST, NC

Manual of Specifications, Standards and Design

REINFORCED CONCRETE SIDEWALK (BRIDGING TREE ROOTS)

Scale:	Detail #:
Not To Scale	8.07
Revision Date: Feb., 2015	1153



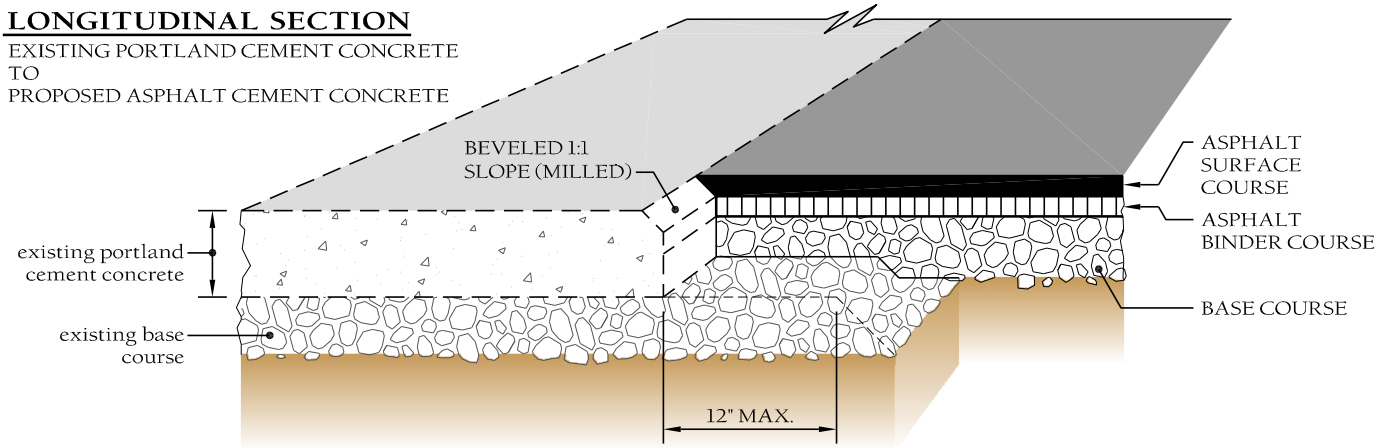
NOTES:

1. *Steel drop bollard may be constructed as shown on sheet 2 or a Traffic Guard Low Profile Heavy Duty Hinged Bollard may be used (Model LPHDHB) installed per manufacturer's directions.*

TOWN of WAKE FOREST	**TOWN of WAKE FOREST, NC** Manual of Specifications, Standards and Design		
	MULTI-USE PATH DETAIL STREET TIE-IN	Scale: Not To Scale	Detail #: 8.08
		Revision Date: Feb., 2015	1154

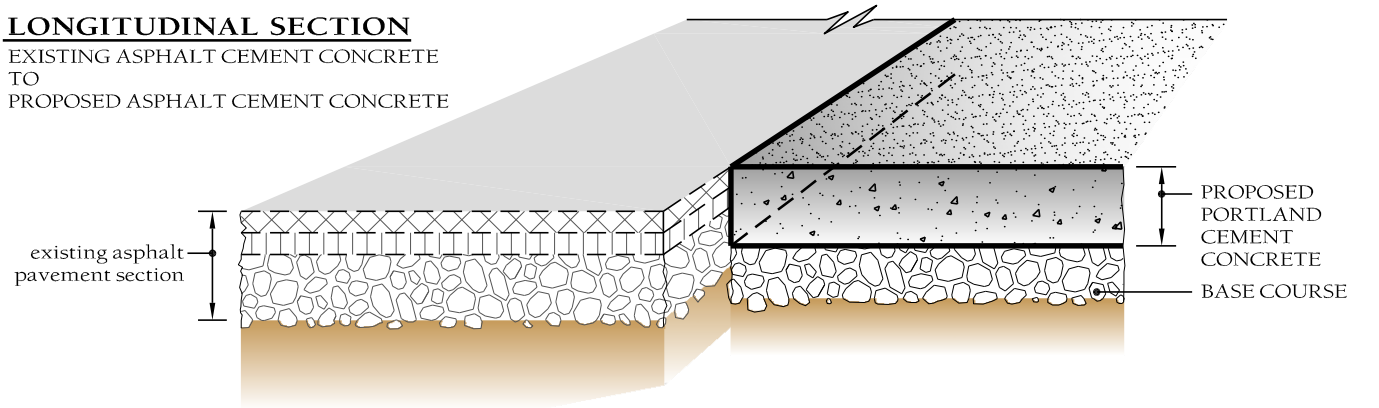
LONGITUDINAL SECTION

EXISTING PORTLAND CEMENT CONCRETE
TO
PROPOSED ASPHALT CEMENT CONCRETE



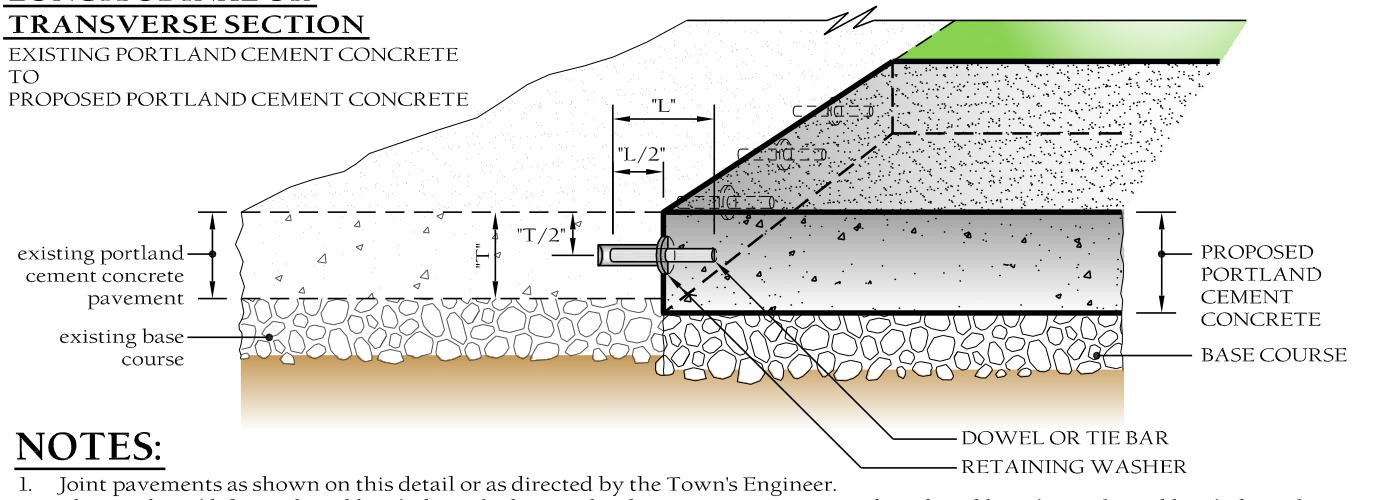
LONGITUDINAL SECTION

EXISTING ASPHALT CEMENT CONCRETE
TO
PROPOSED ASPHALT CEMENT CONCRETE



LONGITUDINAL OR TRANSVERSE SECTION

EXISTING PORTLAND CEMENT CONCRETE
TO
PROPOSED PORTLAND CEMENT CONCRETE



NOTES:

1. Joint pavements as shown on this detail or as directed by the Town's Engineer.
2. Place tie bars (deformed steel bars) along the longitudinal joints at 30" on center. Place dowel bars (smooth steel bars) along the traverse joints at 12" on center. The placement and/or spacing of tie or dowel bars may be modified by the plans of the Town's Engineer. Measure the holes, to accept these bars, the O.D. of the bar plus 1/8" in diameter and 1/2 the length of the bar plus 1" unless otherwise specified by the manufacturer of the adhesive. Use retaining washers (nylon, plastic or composite) on all bars to hold the adhesive material in place. The retaining washers shall be: I.D. = bar O.D., O.D. = hole I.D. + 1/4" min., thickness = 1/16" min. See NCDOT standard drawing 700.01 for bar sizes and other joint related information. Provide adhesive bonding material specified by Section 1081 of the 2012 NCDOT Standard Specifications for Type 3 or 3A adhesives.
3. See typical sections for pavement composition and for other specific information.

TOWN of
WAKE FOREST

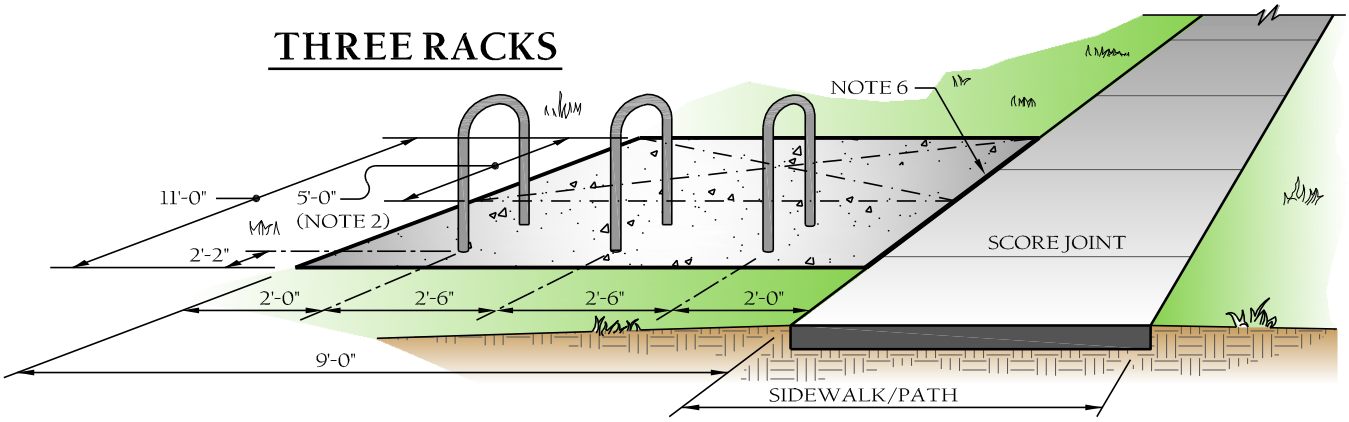
TOWN of WAKE FOREST, NC

Manual of Specifications, Standards and Design

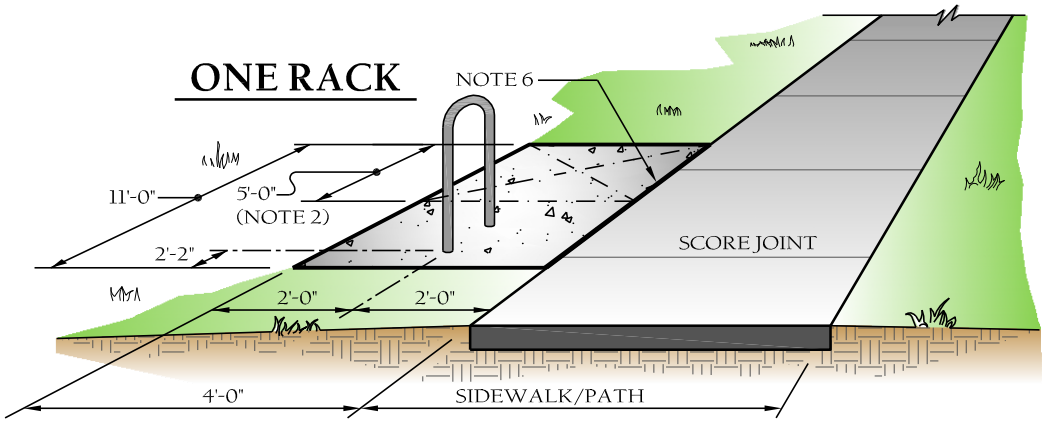
TYING PROPOSED PAVEMENT TO EXISTING PAVEMENT

Scale:	Detail #:
Not To Scale	8.09
Revision Date: Feb., 2015	1155

THREE RACKS



ONE RACK

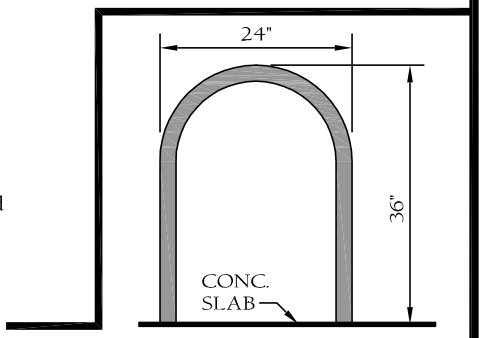


OPTION 1:

PARALLEL TO SIDEWALK
(PREFERRED)

NOTES:

1. Parking pad to be min. 6" thick, 3,000 psi concrete. Size as shown. (Pad to be min. 4X6 for single rack and 2'-6" additional width per rack, with racks spaced 2'-6" o/c if more than one.)
2. A 5'-0" wide unobstructed maneuvering area is required behind racks when orientated parallel to a sidewalk as shown; requires a min. 4'-0" x 11'-0" pad.
3. Racks shall be flange mounted and shall have black polyester powder coat. Other placements shall meet minimum size requirements.
4. Bicycle parking shall not encroach on accessible paths.
5. Designated placement within parking lots may also be acceptable.
6. Provide expansion joint where concrete pad abuts concrete sidewalk, pad or pathway.
7. Other bike rack designs will be considered upon approval of the Town of Wake Forest Planning Department.



INVERTED "U" RACKS

TOWN of WAKE FOREST

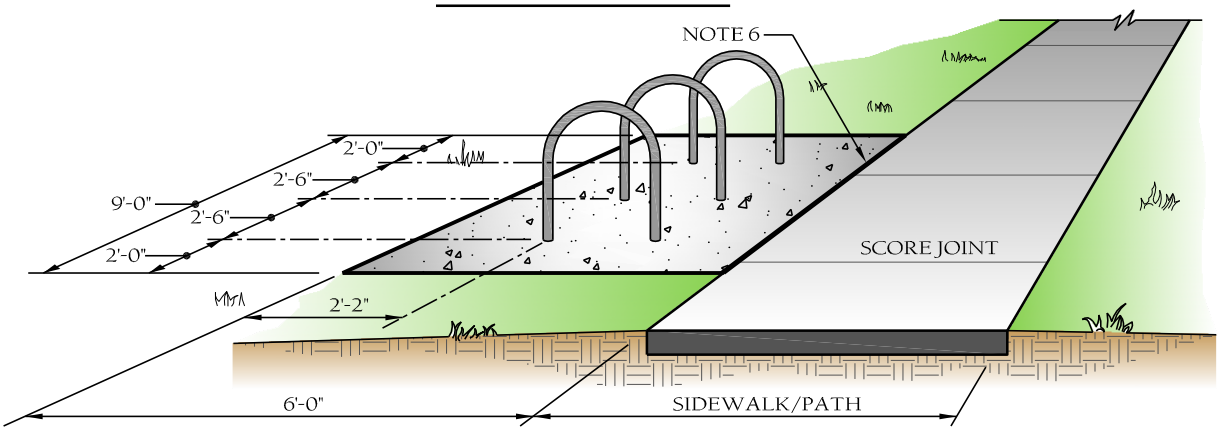
TOWN of WAKE FOREST, NC

Manual of Specifications, Standards and Design

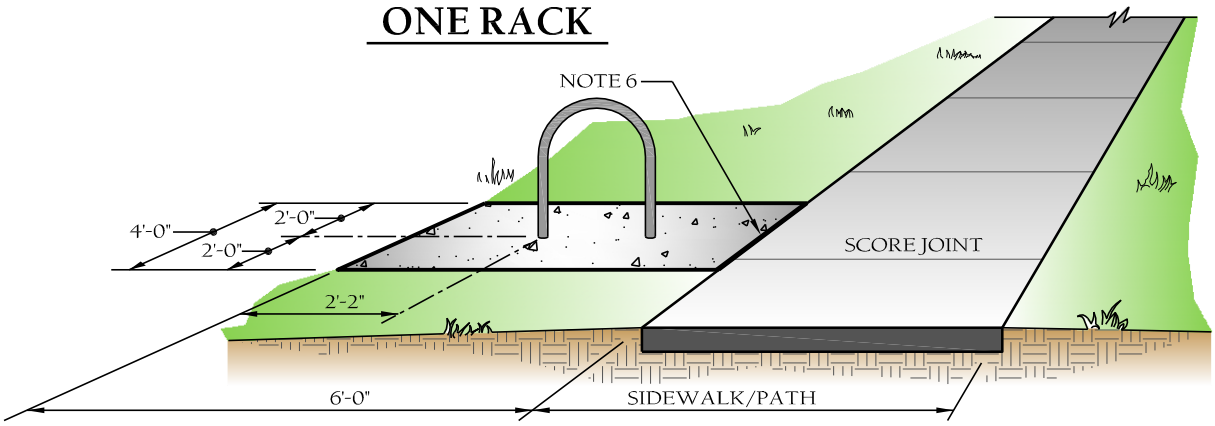
BICYCLE PARKING PARALLEL TO SIDEWALK

Scale:	Detail #:
Not To Scale	8.16
Revision Date: Feb., 2015	1156

THREE RACKS



ONE RACK



OPTION 2:

PERPENDICULAR TO SIDEWALK
(OPTIONAL)

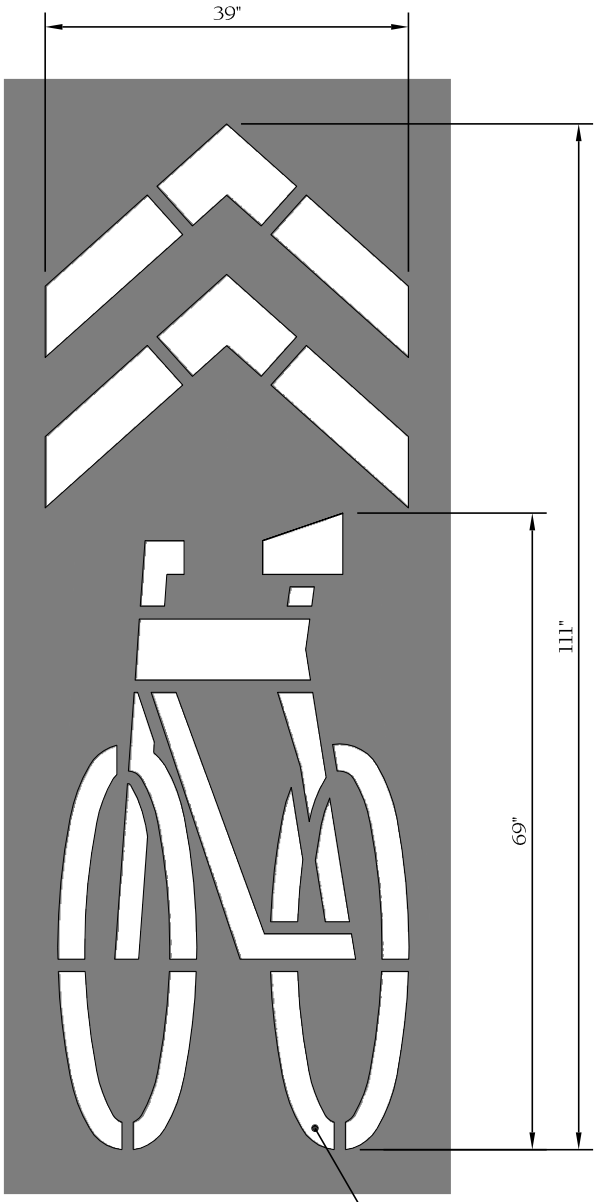
TOWN of WAKE FOREST

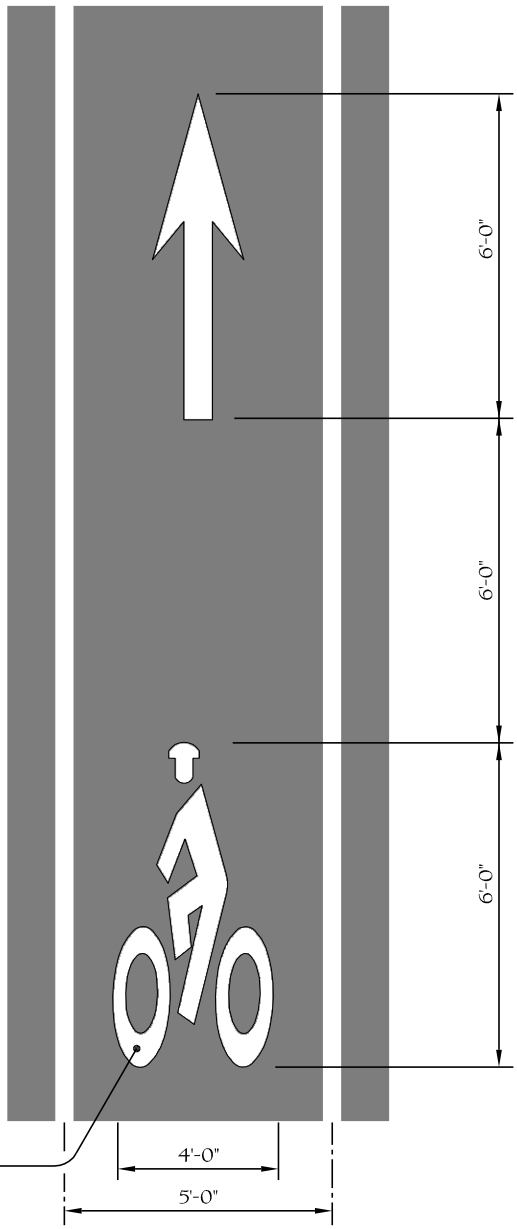
TOWN of WAKE FOREST, NC

Manual of Specifications, Standards and Design

BICYCLE PARKING PERPENDICULAR TO SIDEWALK

Scale:	Detail #:
Not To Scale	8.16
Revision Date: Feb., 2015	1157





WHITE REFLECTORIZED PAINT OR THERMOPLASTIC MARKINGS

SHARED BIKE LANE MARKINGS

"SHARROW"

BIKE LANE SYMBOL MARKINGS

TOWN of WAKE FOREST

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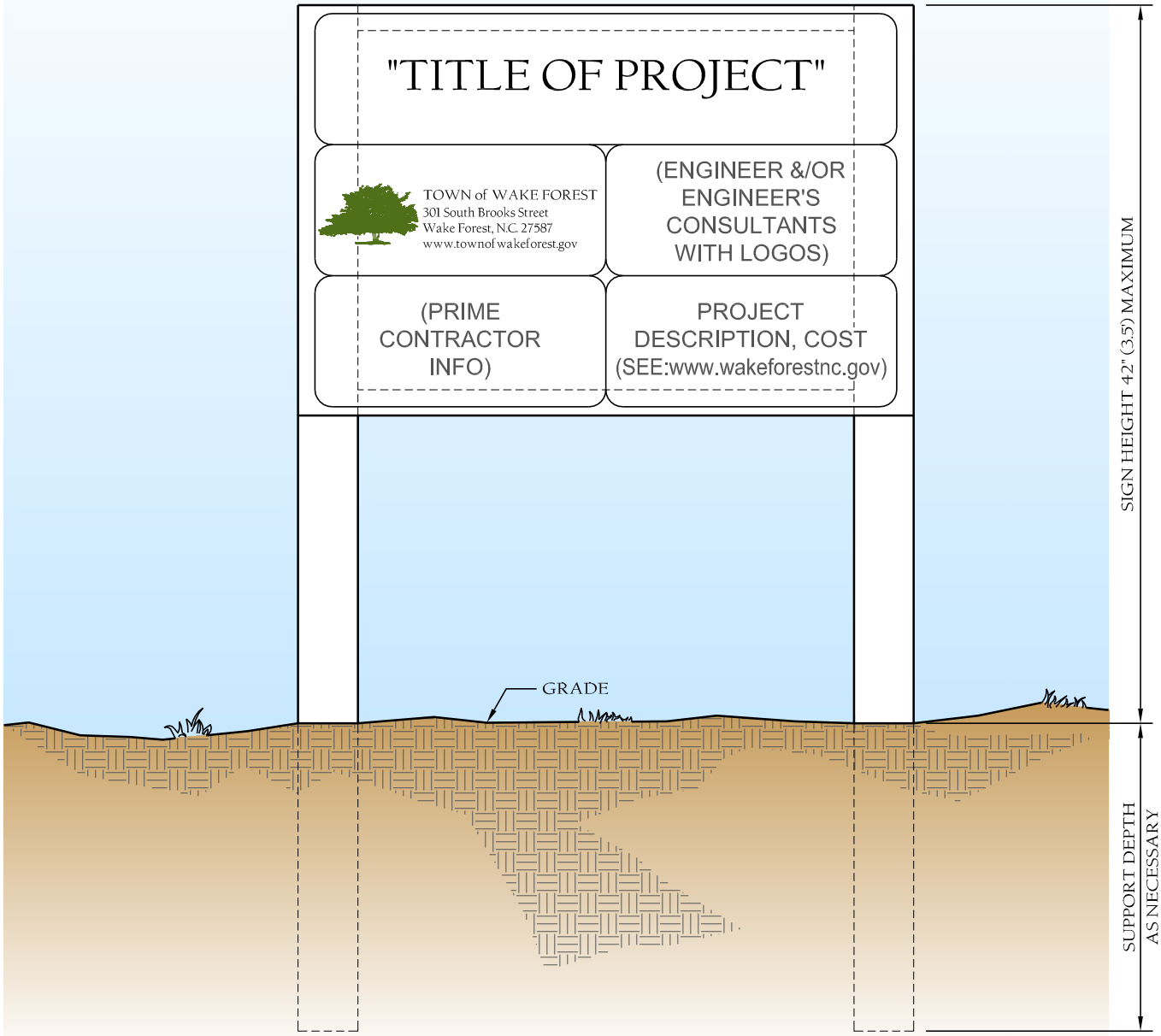
BIKE LANE SYMBOL MARKINGS

Scale:	Detail #:
Not To Scale	8.17
Revision Date: Feb., 2015	1158



NOTES:

1. Total sign area = 32 S.F. per side (Maximum).

TOWN of WAKE FOREST

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PROJECT IDENTIFICATION SIGN for TOWN FUNDED CAPITAL PROJECTS

Scale:	Detail #:
Not To Scale	8.18
Revision Date: Feb., 2015	1159

PAVEMENT SECTION MATRIX

UDO Street Type (See UDO paragraph 6.7.2 "Town Street Classifications" for R/W & street cross-section requirements	ADT (vpd)	Minimum Pavement Section					
		SuperPave Asphalt Thickness			Aggregate Base (ABC)	Geogrid [1]	Curb & Gutter [2]
		Riding Surface (S-9.5B)	Intermediate Course (I-19.0B)	Base Course (B-25.0)			
Urban Boulevard (UDO 6.7.2B)	25k to 55k	As Designed	As Designed	As Designed	8	Note 1	Type 3
Avenue (UDO 6.7.2C)	15k to 30k	As Designed	As Designed	As Designed	5	-	Type 2
Commercial Street (UDO 6.7.2D)	10k to 18k	2	-	4	5	-	Type 1
Large Residential Street (UDO 6.7.2E)	2.5k to 15k	2	-	4	5	-	Type 2 or 4
Residential Yield Street (UDO 6.7.2F)	0 to 1k	2	-	-	8	Note 1	Type 2 or 4
Lane (UDO 6.7.2G)	0 to 3k	2	-	-	8	Note 1	Type 1 or 5
Alley (UDO 6.7.2H)	N/A	2	-	-	6	-	N/A
Industrial Access [3]	N/A	As Designed	As Designed	As Designed	8	Note 1	Type 3

1. *For all street classifications within the street right-of-way, the aggregate base thickness may be reduced by 2 inches if an approved Geogrid is installed between the compacted subgrade and the aggregate base. Geogrid to be Tensar BX1100 (SS-2), an approved equal, or as otherwise specified by a NC Licensed PE (Geotechnical Engineer).*
2. *Curb & Gutter Types (see Standard Detail 9.02):*
   - *Type 1 = 30-inch Standard Curb & Gutter.*
   - *Type 2 = 30-inch Standard Curb & Gutter or approved alternate.*
   - *Type 3 = 30-inch Standard Curb & Gutter with 5 inches of ABC below curb and extending a minimum of 6 inches beyond the back of the curb or approved alternate.*
   - *Type 4 = 30-inch Valley Curb.*
   - *Type 5 = LID or Swale.*
3. *Right-of-way and street section to be as required by Town Engineer.*
4. *Street pavement sections must be designed using the procedures outlined in the UDO, Section 3, Street and Subdivision Design, paragraph 3.3 Pavement Design Methods except that individual elements shall not be less than shown in the above table.*
5. *See UDO Section 6, Infrastructure Standards, paragraphs 6 5.3 Pedestrian/Bicycle Connections, 6.7.2 Town Street Classification, 6.8 Sidewalk and Other Pedestrian Facilities and 6.9 Bikeway Facilities for sidewalk and bikeway requirements.*

Notes:

1. *Sidewalk and curb to be 3000 psi at 28 days air entrained concrete. Sidewalk to be scored every 5 ft with 1/2" expansion joints at 30 ft intervals. Provide non-slip finish. Concrete sidewalks to be 4" except thickness to increase to 6" at all driveway crossings and for a distance 5' either side of the driveway. Place 1/2" expansion joints at junction of 4" and 6" sidewalks.*
2. *Maximum grades and "K" valves for streets shall follow NCDOT guidelines for the Piedmont area (rolling topography). See Table 9.03.*
3. *All pavement thickness' shall generally be confirmed by a geotechnical investigation and report. However, if a developer wishes, he may design residential streets using a subgrade CBR one standard deviation to the left of the average of all CBR's determined by geotechnical reports thus far. If, in the opinion of the Town's representative, soils appear weaker or have inherent problems such as a high mica content, the services of a geotechnical engineer shall be required in any case for the design of pavements.*
4. *Electric service will not go in until street section is graded at final and approved.*
5. *The Town Engineer shall require a 1" overlay over any segment of street in which there are 3 or more trench failures, utility cuts, egregious imperfections or patches per 800 foot of street. If final surface is already placed, it must be milled down so as not to encroach into the gutter pan. A trench failure shall be defined as a depression of 1/2" or greater at the deepest point over a trench width. Extent of length of resurfacing shall be as determined by the Town's Engineer.*
6. *Time limits for completion of improvement: Refer to UDO Section 6.38.*

Concrete Testing Requirements:

Initial Test

The initial test (from first ready-mix truck) is to be taken after the second yard is dispatched from the mixer and is to consist of the following:

1. *One slump test*
2. *Pull, prepare and store 3 cylinders on-site for 24 hours.*
3. *Temperature*

Subsequent Tests

After the above tests are pulled from the initial truck, every 5th truck thereafter is to be tested in the same manner as noted above.

Asphalt Testing Requirements:

Compaction: *Testing for asphalt density is to follow NCDOT "Standard Specifications for Roads and Structures", Section 609-7 "Field Compaction Quality Control" and Section 609-9, "Quality Assurance" latest revision.*

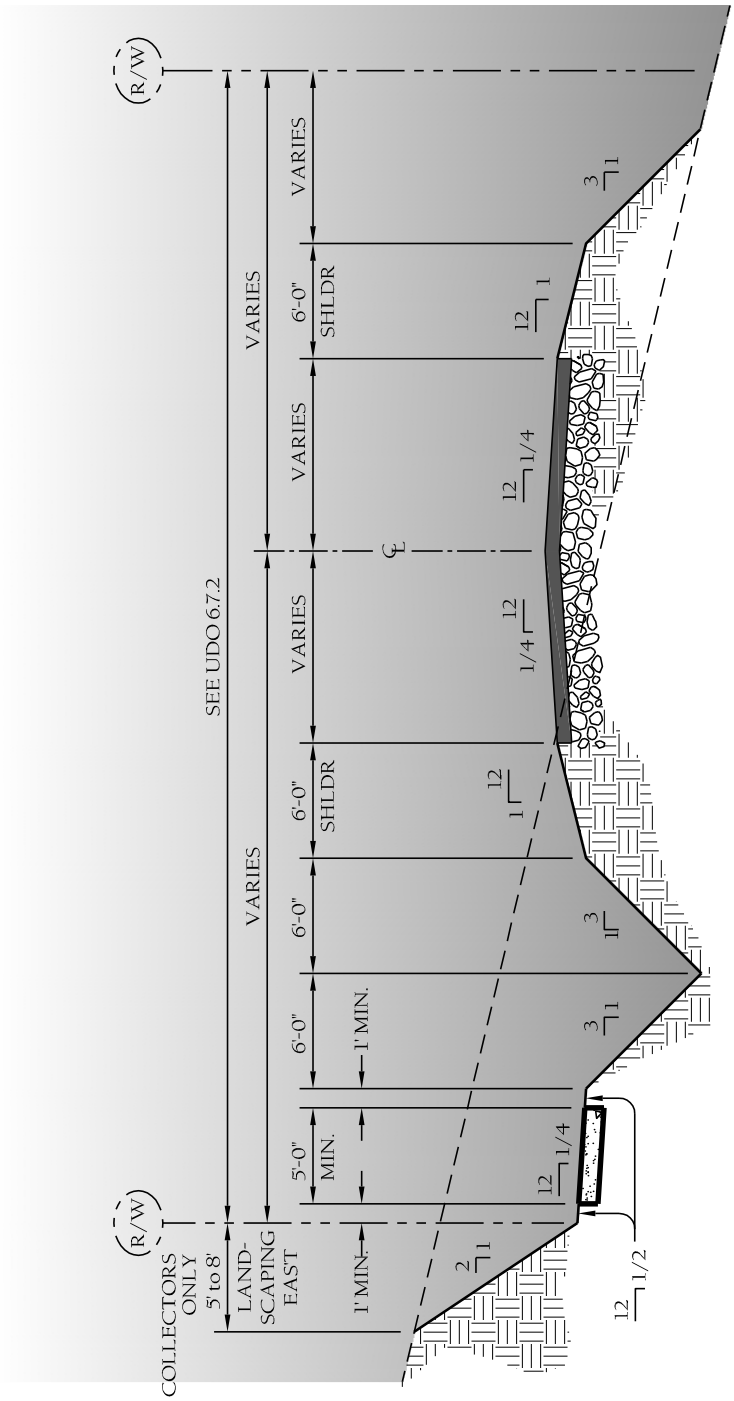
Thickness: *The minimum frequency of coring for thickness testing shall be on the basis of test sections consisting of not more than 1500 linear feet of lay down width, exclusive of intersections and irregular areas. The test sample is to be a 6-inch cored sample. The sample is to be numbered and logged for identification purposes.*

Contractor's Quality Control System:
Follow NCDOT "Standard Specifications for Roads and Structures", Section 609-4 "Contractor's Quality Control Personnel Requirements" and Section 609-5, "Contractor's Quality Control Field Laboratory Requirements," latest revision.

Mixture and Job Mix Formula Adjustments:
Follow NCDOT "Standard Specifications for Roads and Structures", Section 609-3. "Field Verification of Mixture and Job Mix Formula Adjustments", latest revision.

General: *All other applicable sections of Section 609 of the NCDOT "Standard Specifications for Roads and Structures" shall apply relating to Quality Control Plan, mix design, control limits, corrective action, equipment and measurement.*

Testing Cost: *Project Owner is responsible for cost of testing.*



APPLIES TO STREET WHERE SIDE WALK IS REQUIRED

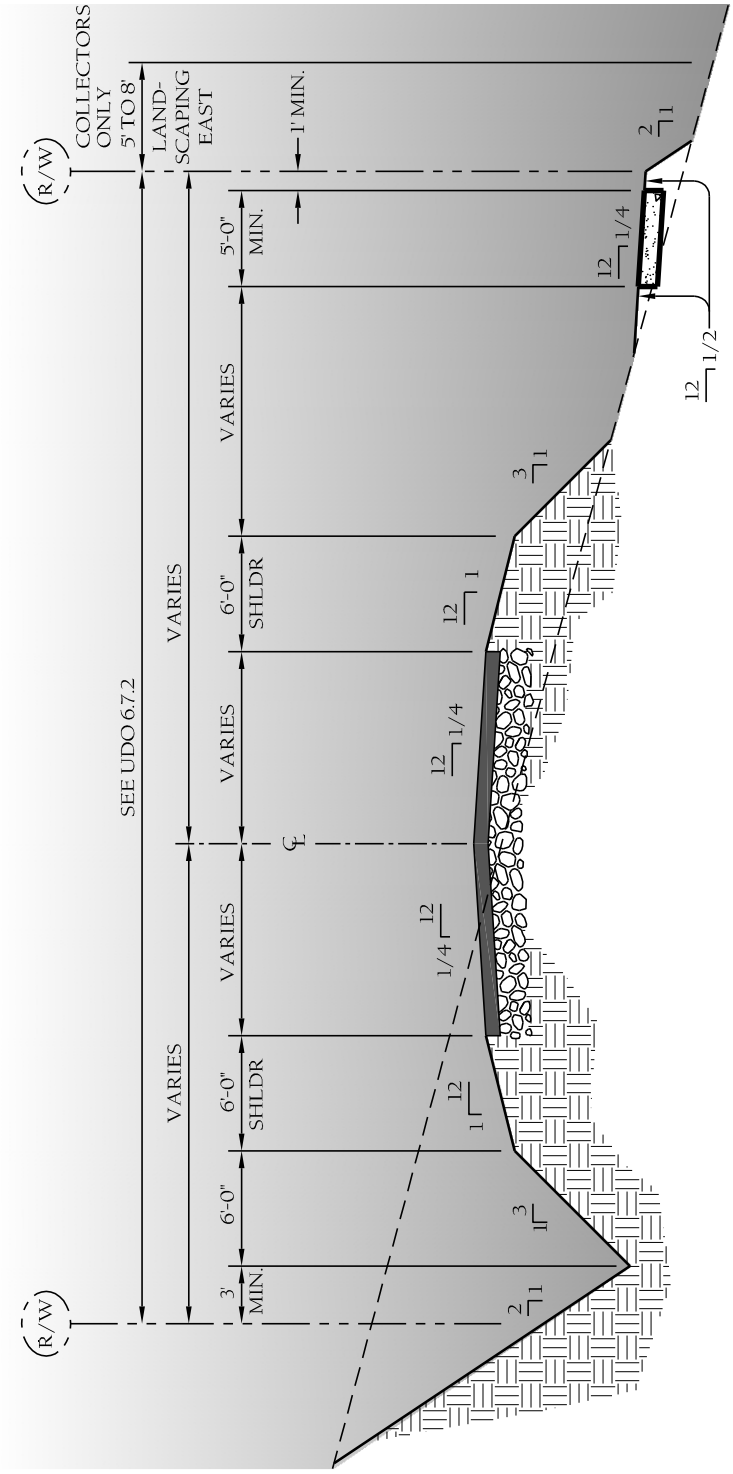
TOWN of WAKE FOREST

TOWN of WAKE FOREST, NC

Manual of Specifications, Standards and Design

TYPICAL ASYMETRIC X-SECTION WITH SIDEWALK (ON CUT SLOPE)

Scale:	Detail #:
Not To Scale	9.01A
Revision Date:	Sheet #:
Feb., 2015	1 of 2



APPLIES TO STREET WHERE SIDE WALK IS REQUIRED

TOWN of WAKE FOREST

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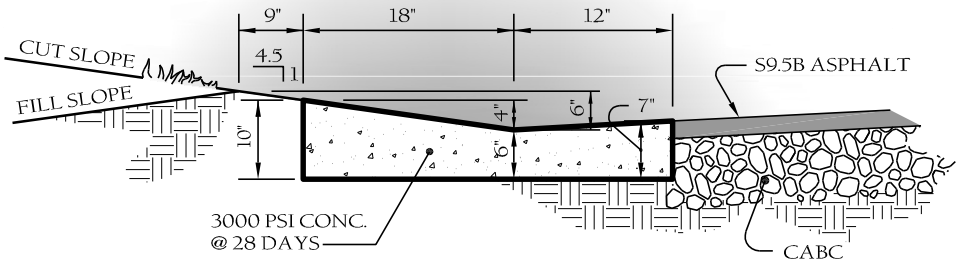
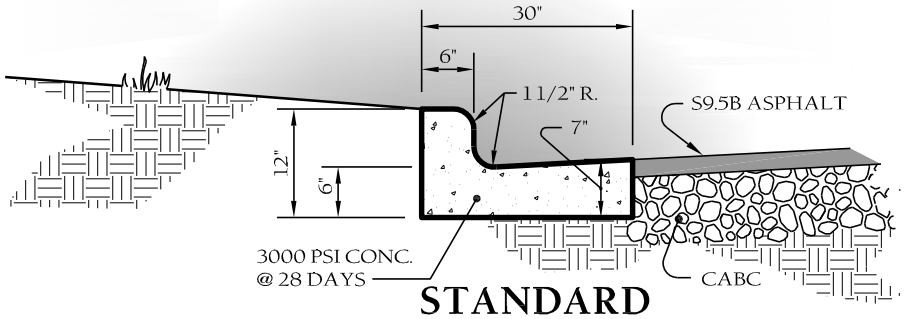
Manual of Specifications, Standards and Design

TYPICAL ASYMETRIC X-SECTION WITH SIDEWALK (ON FILL SLOPE)

Scale:	Detail #:
Not To Scale	9.01A
Revision Date:	Sheet #:
Feb., 2015	2 of 2



30" VALLEY - STANDARD



STANDARD

NOTES:

1. *Score curb / valley gutter at 15' O.C.*
2. *Provide 1/2" expansion joints at 90' O.C.*
3. *For transition of curb to curb opening inlet, see standard detail 9.50*

TOWN of WAKE FOREST

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STD. CURB & GUTTER & VALLEY GUTTER DETAIL

Scale:	Detail #:
Not To Scale	9.02
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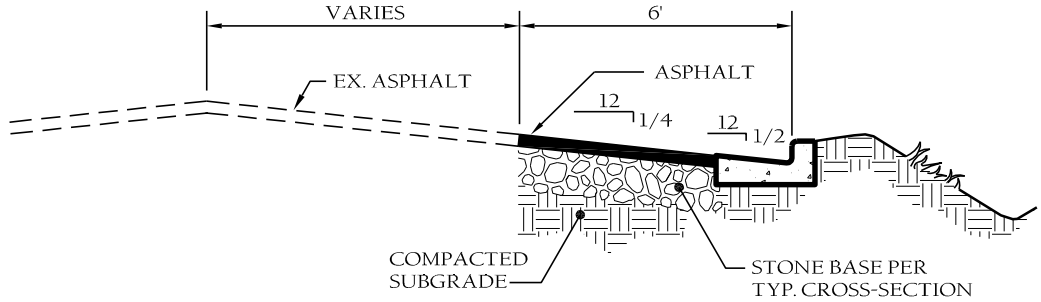
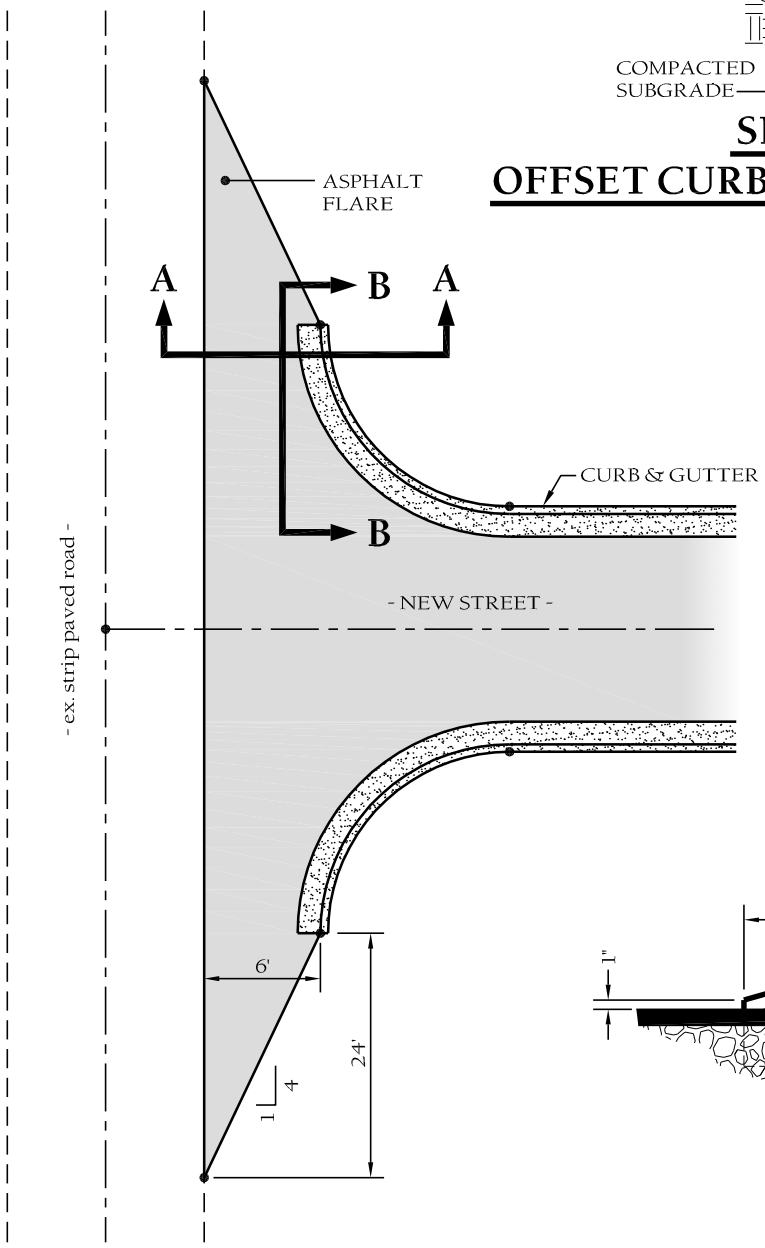
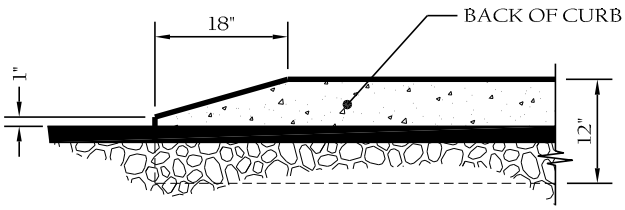


SECTION A-A
OFFSET CURB PAVEMENT WIDENING





SECTION B-B
CURB END TAPER

TOWN of WAKE FOREST

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TERMINAL END OF CURB at SHOULDER SECTIONS

Scale:	Detail #:
Not To Scale	9.03
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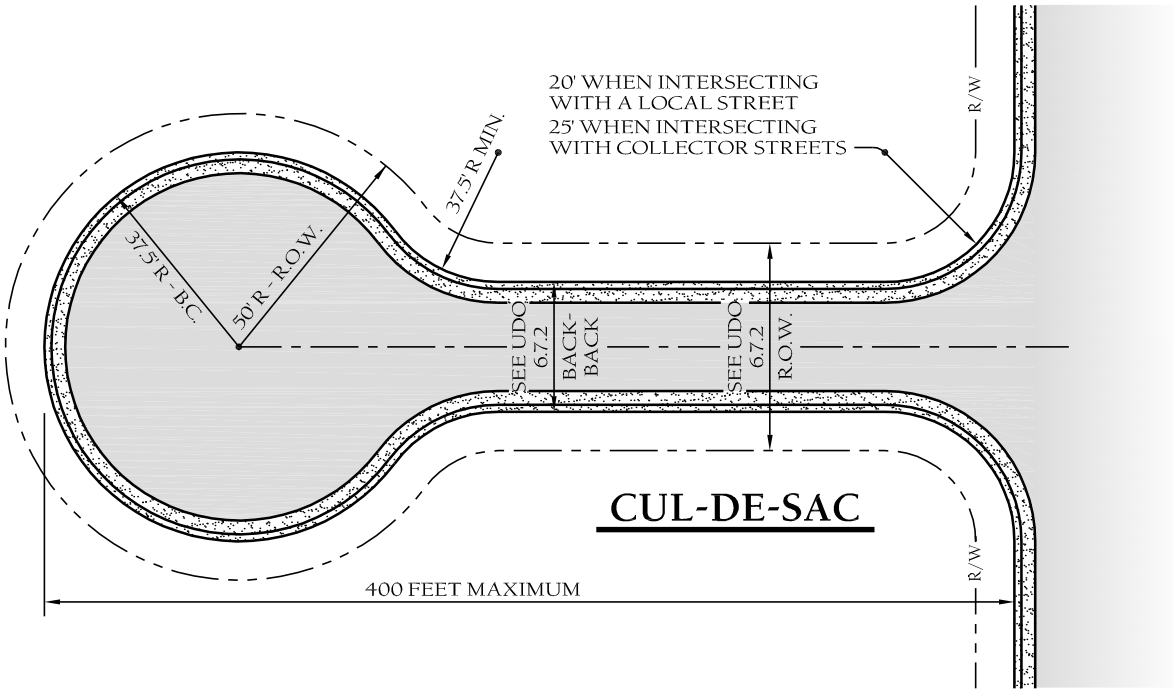

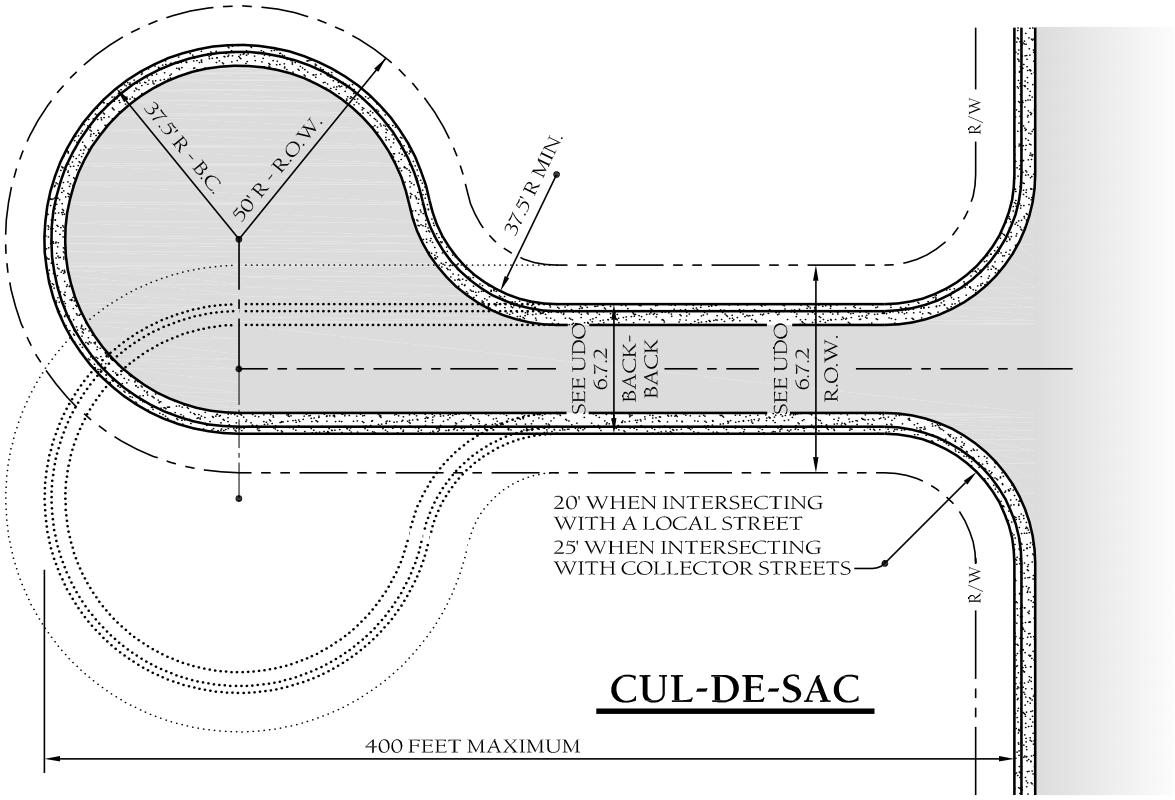

NOTES:

1. *See UDO 6.7.2 for pavement and right-of-way dimensions.*

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CUL-DE-SAC DIMENSIONS

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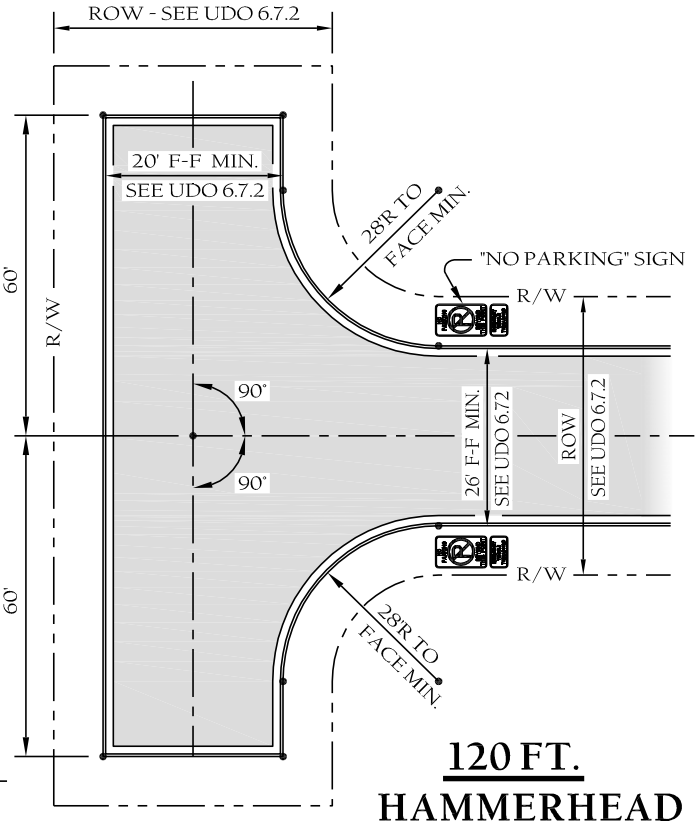
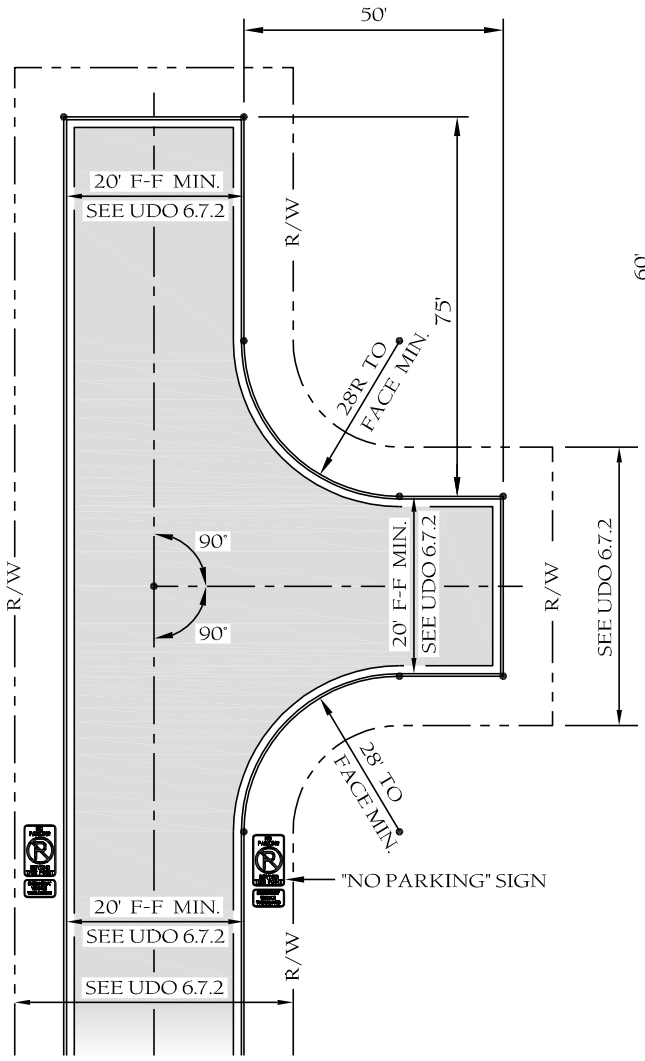
ROW = RIGHT OF WAY



120 FT. HAMMERHEAD



ALTERNATE TO 120 FT. HAMMERHEAD

NO PARKING SIGN

NOTES:

1. *See UDO 6.7.2 for pavement and right-of-way dimensions.*
2. *Ref: N.C. Fire Code Appendix B.*

TOWN of WAKE FOREST

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CUL-DE-SAC DIMENSIONS

Scale:	Detail #:
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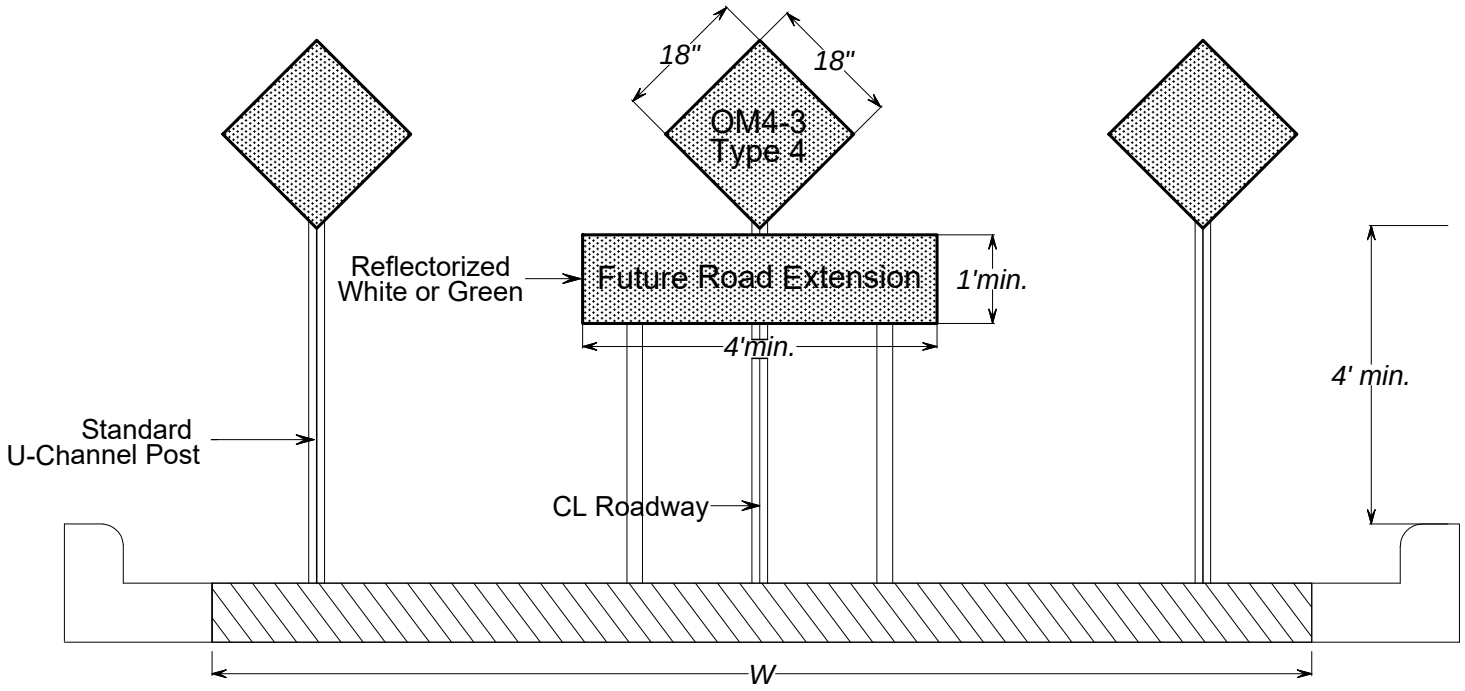

Notes:

1. OM4-3 signs should be evenly spaced between curb and gutter.
2. Spacing shall be adjusted for wider roadways. Additional signage may be required.
3. Advance warning sign W14-1 (Dead End) shall be placed after last intersection.
4. If subdivision has no additional exits, advance signage shall be placed at entrance(s).

TOWN of WAKE FOREST

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END OF ROAD SIGNAGE

Scale Not To Scale	Detail # 9.05
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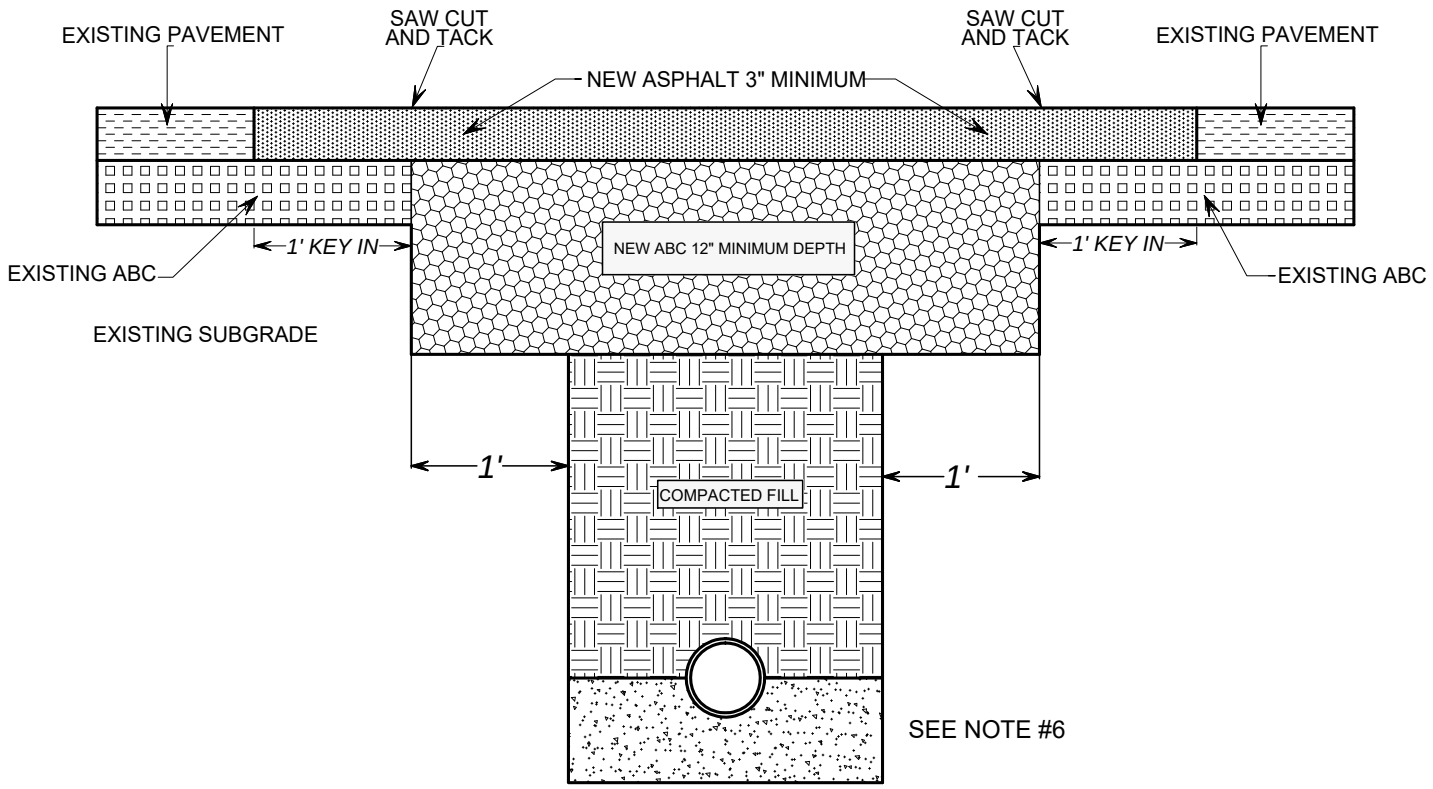

Notes:

1. Trench is to be backfilled in 6” lifts with suitable material and compacted to a density of at least 95% asdetermined by AASHTO test method T-99.
2. The final 1’ of fill shall consist of ABC material compacted to a density equal to 100% as determined by AASHTO test method T-80. Bituminous base or binder may be supplemented with the approval of the Transportation Engineer.
3. The entire existing depth of pavement shall be sawcut, clean of any debris, and tacked prior to paving.
4. The same depth of pavement material shall be reinstalled to match what exists. In no case shall the asphalt be less than 3” thick.
5. Patch shall be installed and compacted to provide a smooth and even transition.
6. For RCP 36” or greater, #57 washed stone shall be installed to the spring line prior to backfill.
7. All density tests may be required to be performed in the presence of a Town Construction Inspector.
8. For small, non-compactable holes, flowable fill may be required

TOWN of WAKE FOREST

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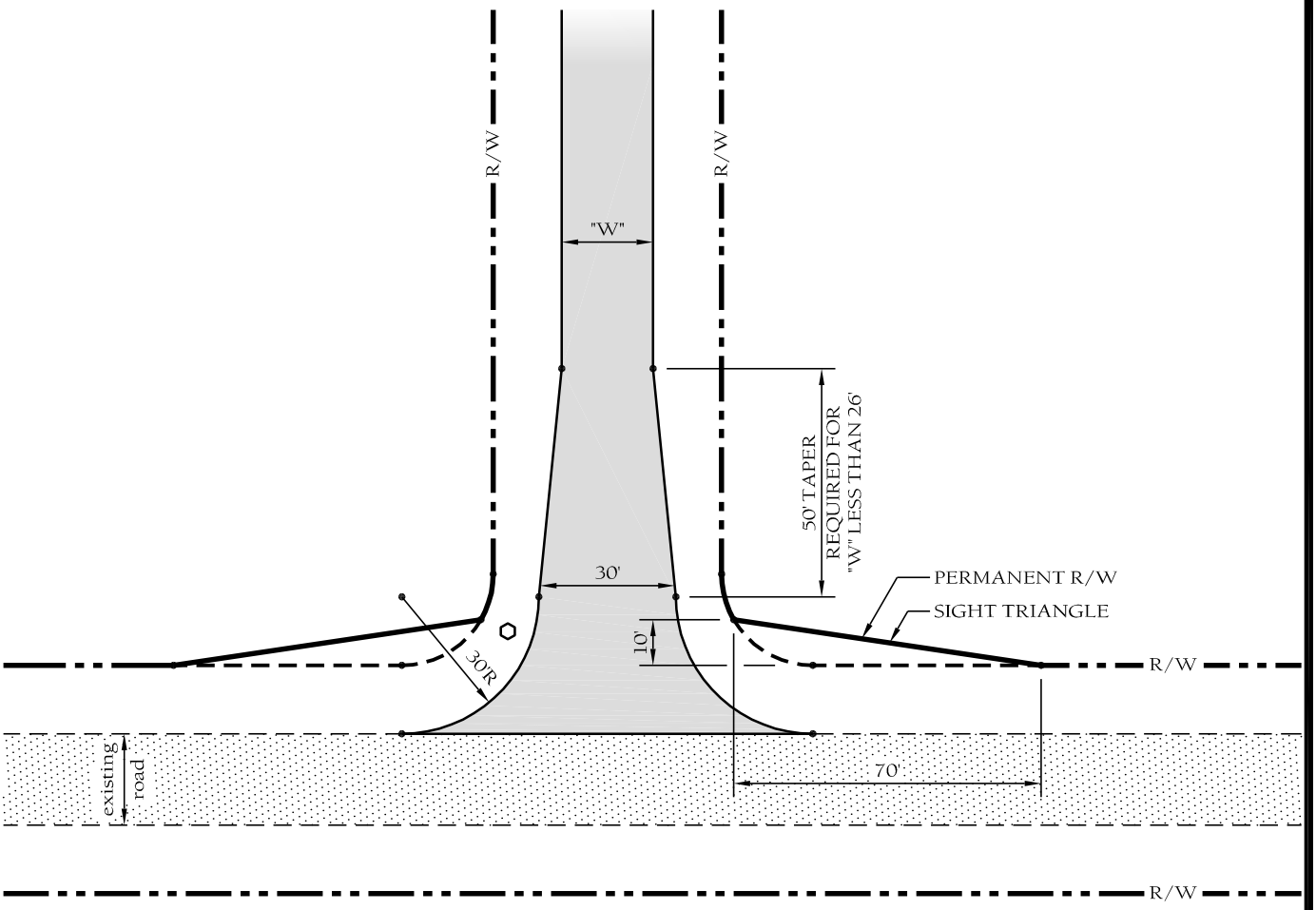
Full Depth Asphalt Repair Detail For Utility Cuts	Scale Not To Scale	Detail # 9.06
	Revision Date *Dec.* 2019	Sheet # 1 of 1



TOWN of WAKE FOREST

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TIE-IN OF STREETS at DOT SHOULDER ROADS - STREETS

Scale:	Detail #:
Not To Scale	9.07
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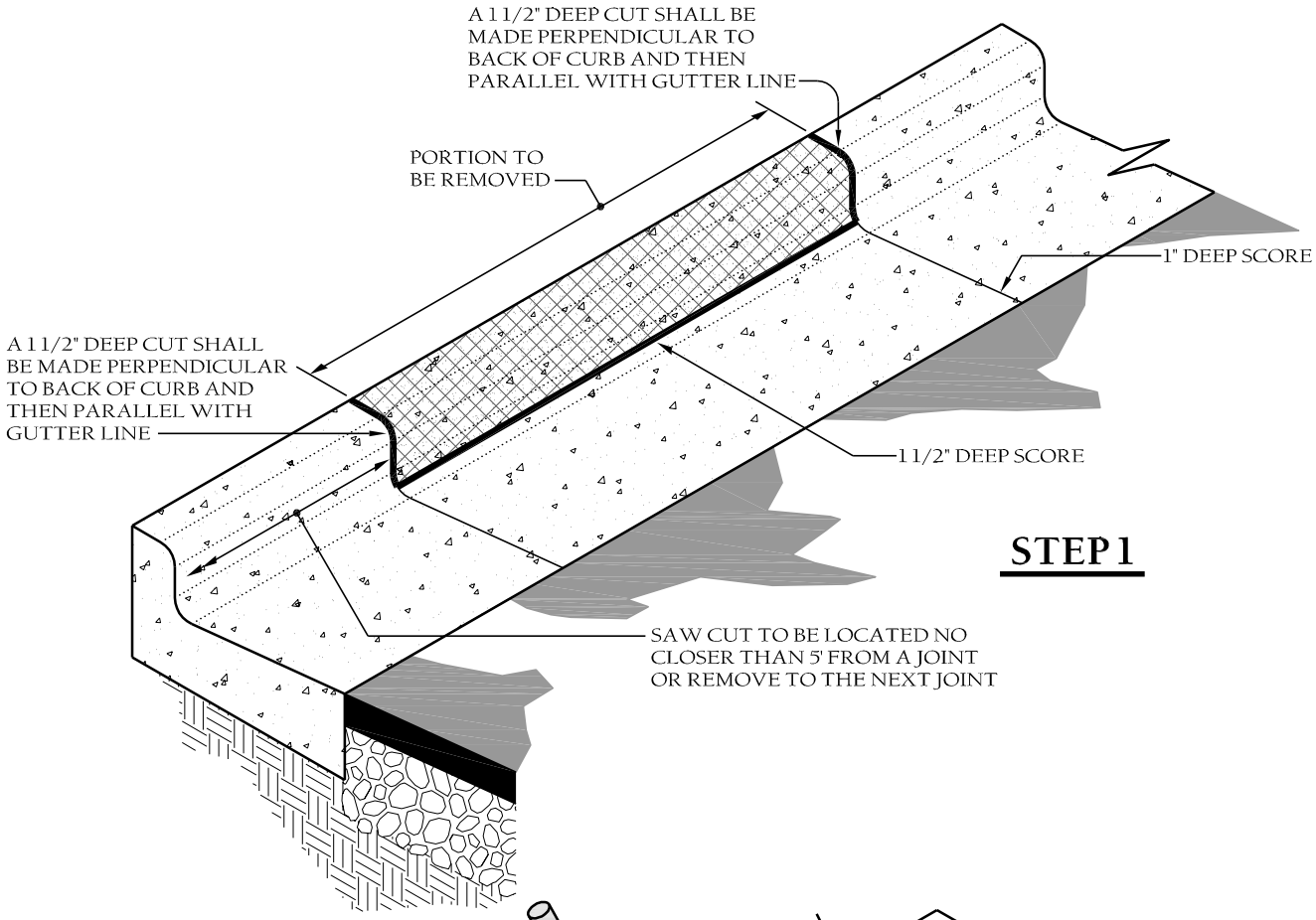
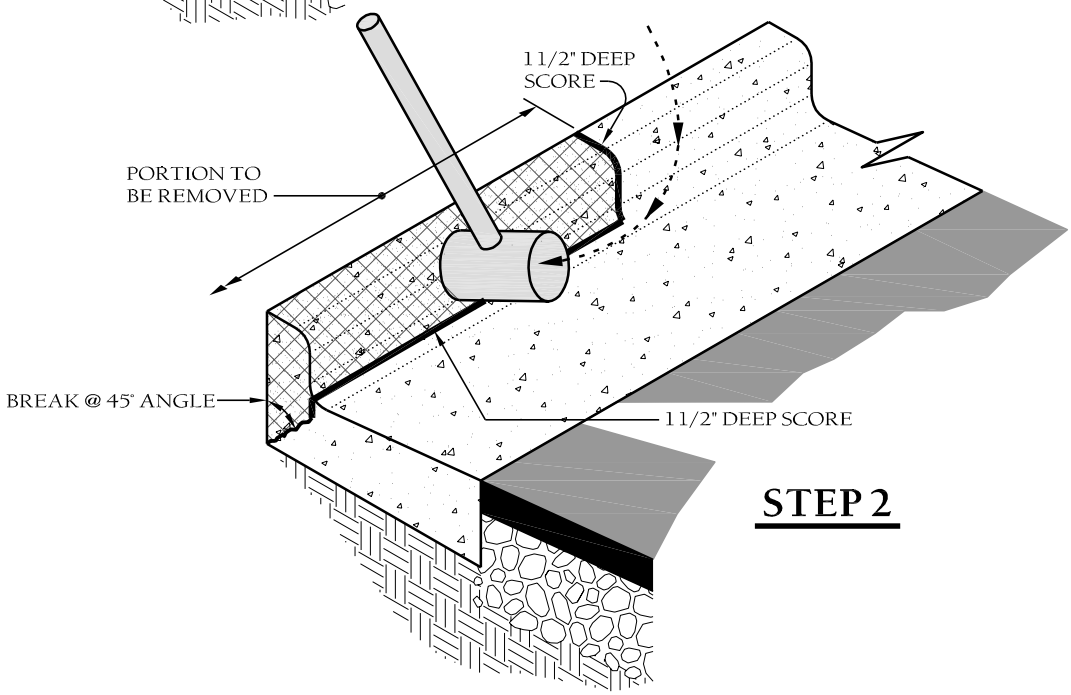


STEP 1



STEP 2

TOWN of WAKE FOREST, NC

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TOWN of WAKE FOREST

STREET CURB CUT FOR DRIVEWAYS ON C&G STREETS

Scale:	Detail #:
Not To Scale	9.08
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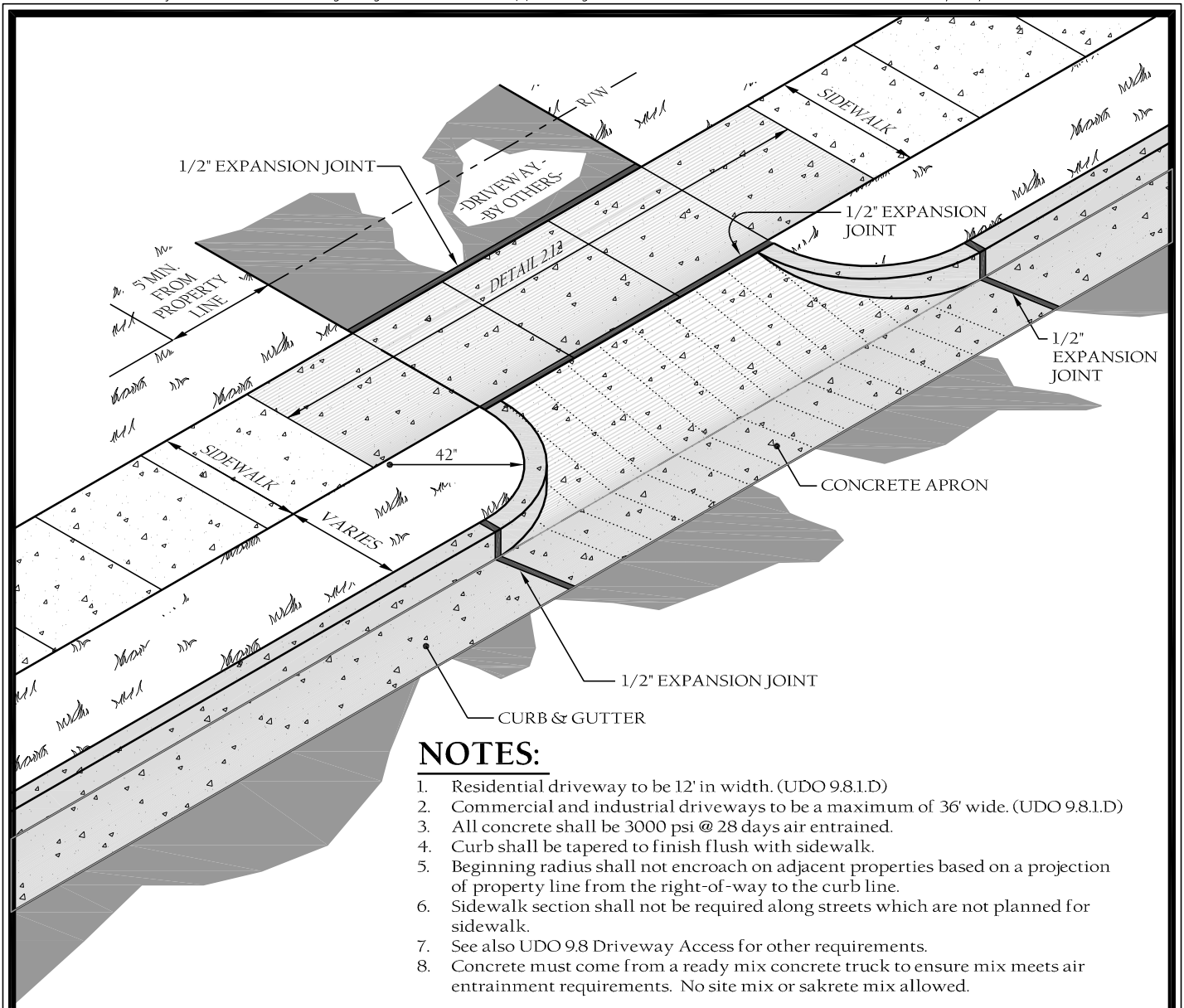
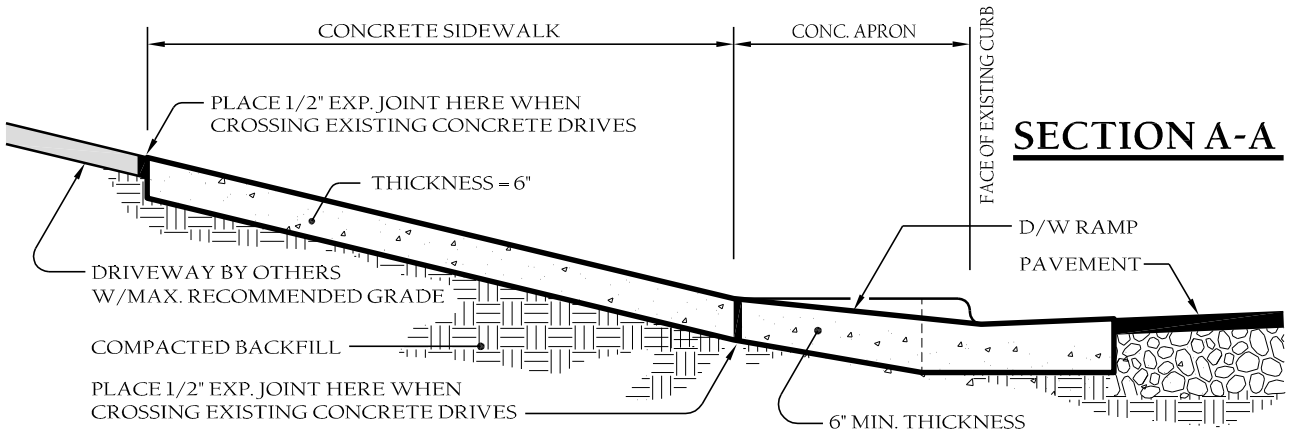


NOTES:

1. Residential driveway to be 12' in width. (UDO 9.8.1.D)
2. Commercial and industrial driveways to be a maximum of 36' wide. (UDO 9.8.1.D)
3. All concrete shall be 3000 psi @ 28 days air entrained.
4. Curb shall be tapered to finish flush with sidewalk.
5. Beginning radius shall not encroach on adjacent properties based on a projection of property line from the right-of-way to the curb line.
6. Sidewalk section shall not be required along streets which are not planned for sidewalk.
7. See also UDO 9.8 Driveway Access for other requirements.
8. Concrete must come from a ready mix concrete truck to ensure mix meets air entrainment requirements. No site mix or sakrete mix allowed.



SECTION A-A

TOWN of WAKE FOREST

TOWN of WAKE FOREST, NC

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STREET CURB CUT FOR DRIVEWAYS ON C&G STREETS

Scale:	Detail #:
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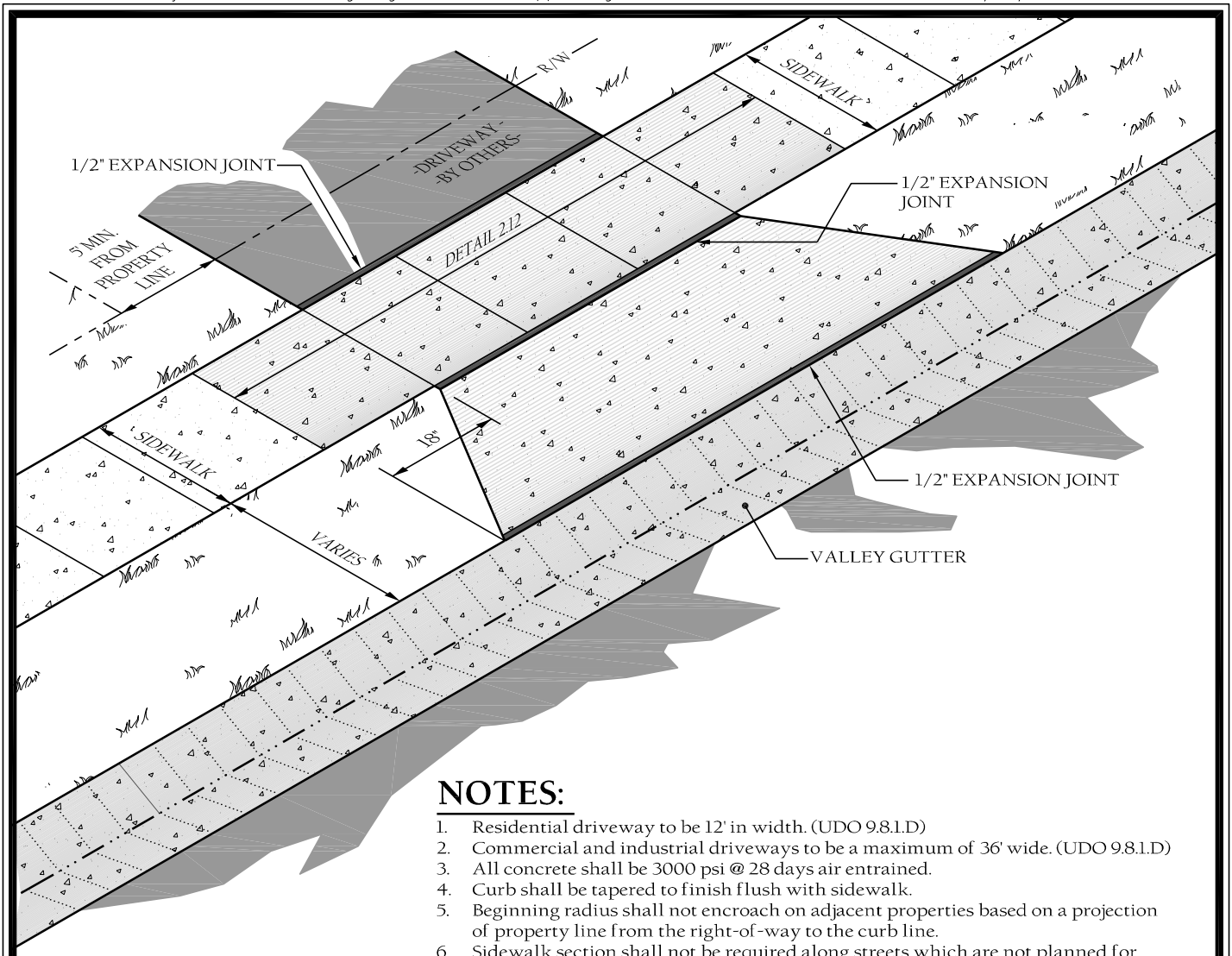

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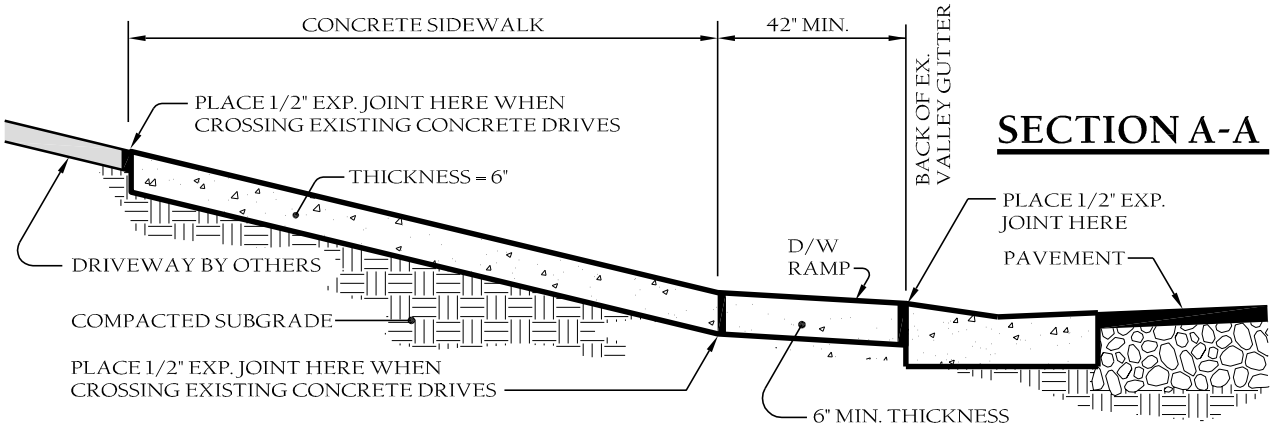
SECTION A-A



TOWN of WAKE FOREST

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FLARED DRIVEWAY ENTRANCE TO VALLEY GUTTER

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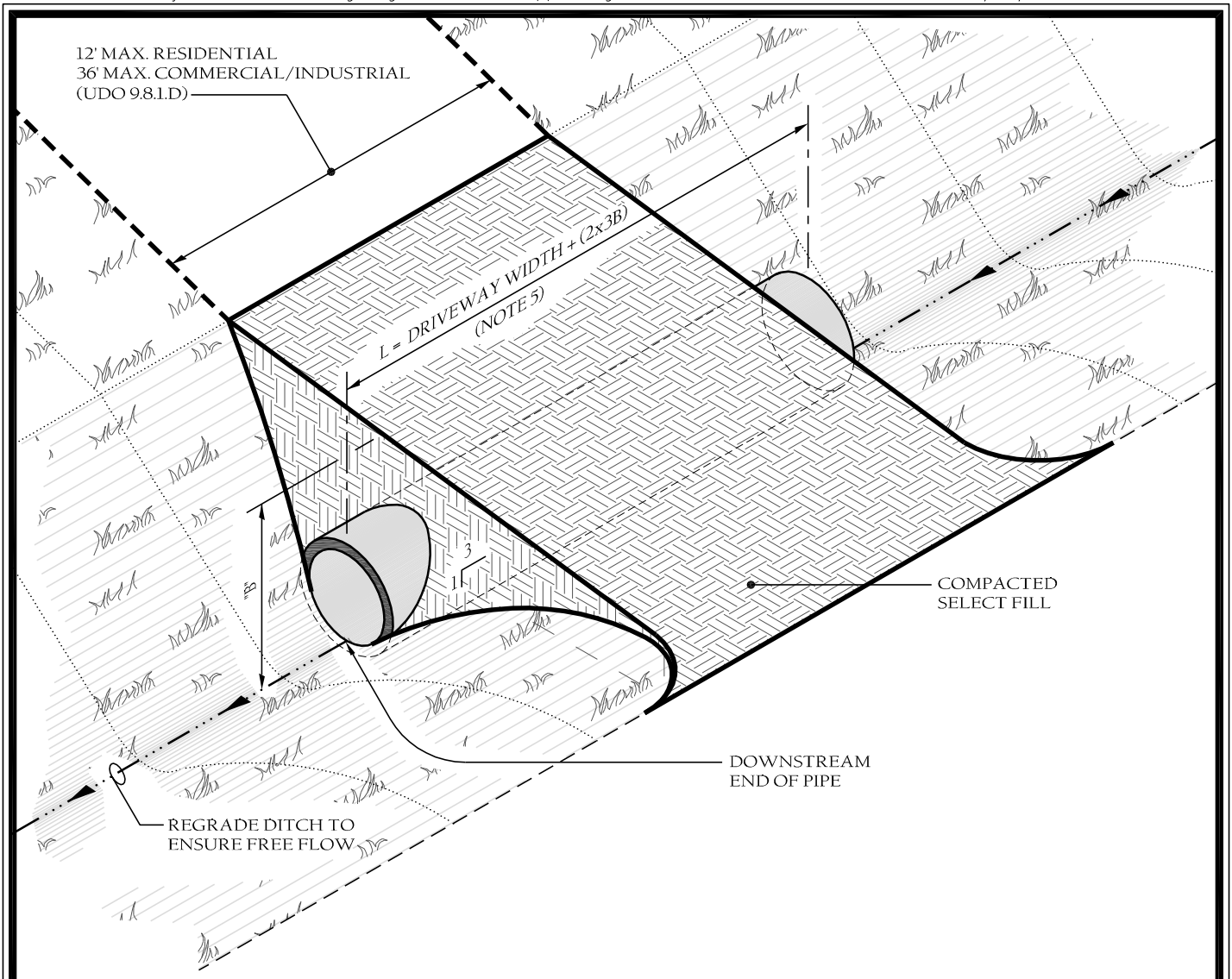

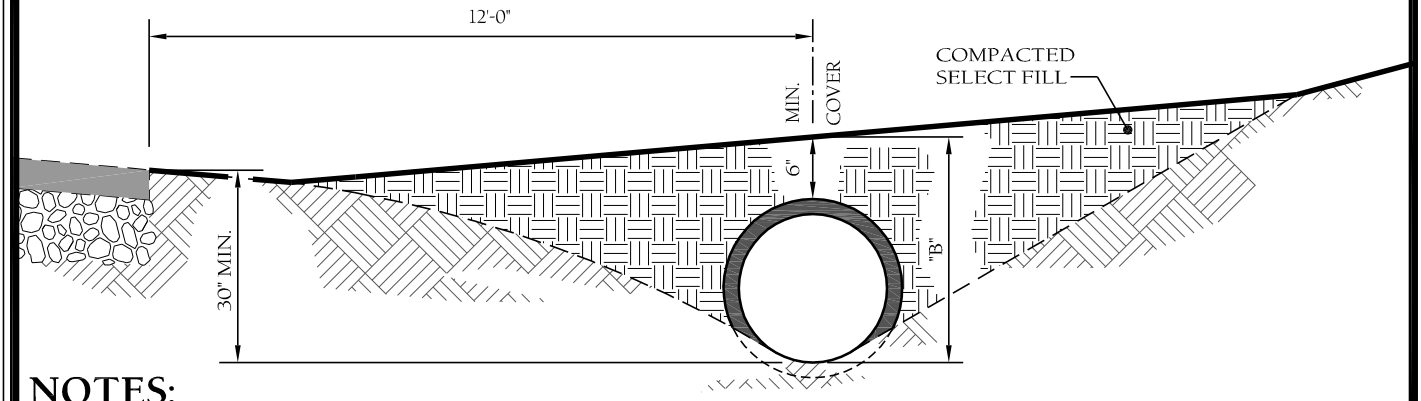

NOTES:

1. D/w pipe 18" and above to have flared end sections.
2. Minimum diameter pipe to be 15" class III "C" wall.
3. D/W pipe to be staked by N.C. licensed surveyor.
4. Driveway pipe shall be concrete pipe only.
5. "L" to be rounded up to next 4' increment.
6. Decorative headwalls may be allowed at discretion of Town's Engineer. An encroachment agreement will be required.

TOWN of WAKE FOREST

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INSTALLATION OF D/W PIPE IN STREET SECTION

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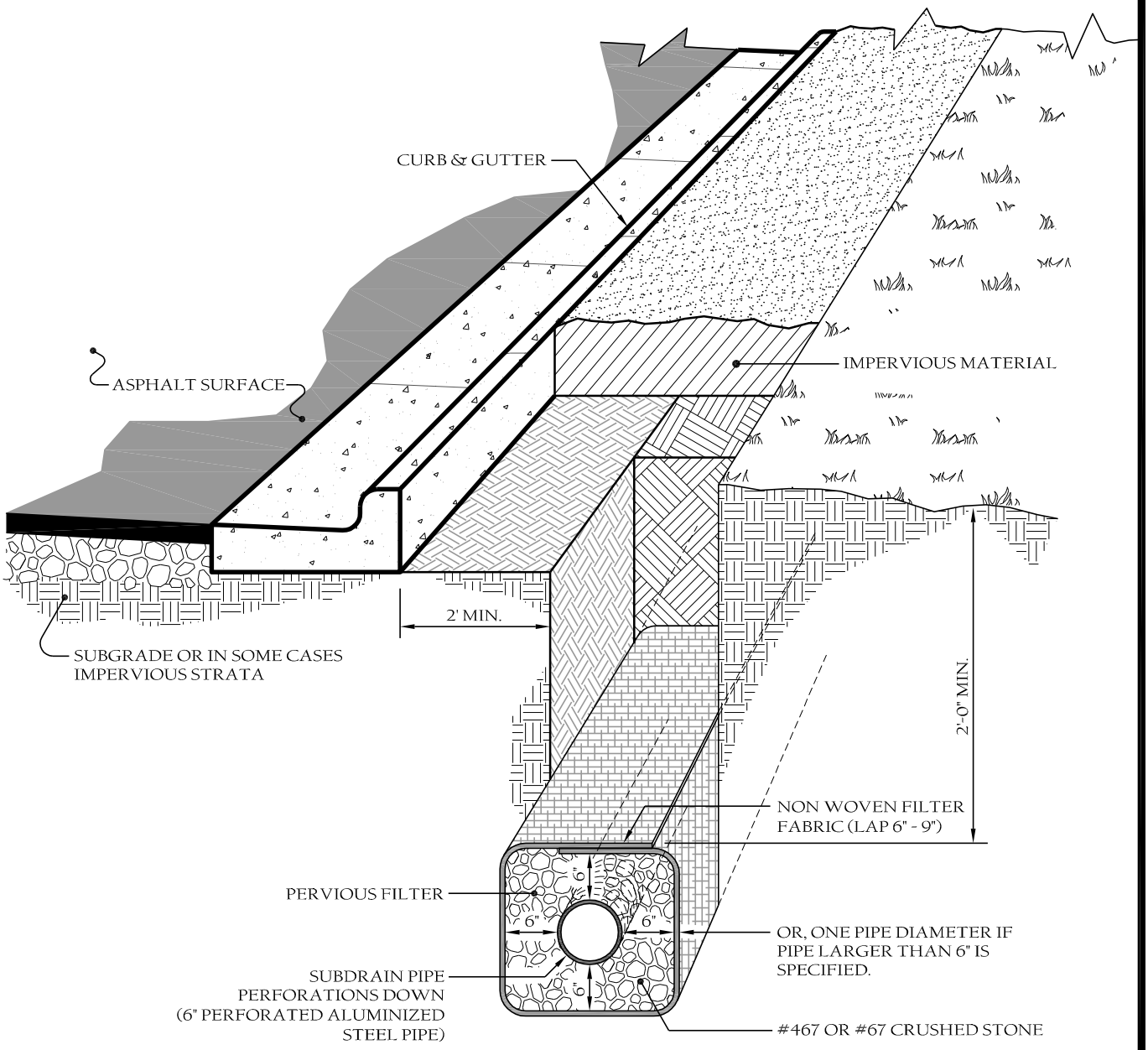

NOTES:

1. Subdrains shall tie or empty into catch basin only. No ties or connections will be allowed on a pipe culvert of any kind.

TOWN of WAKE FOREST

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STANDARD SUBDRAIN BEHIND CURB & GUTTER

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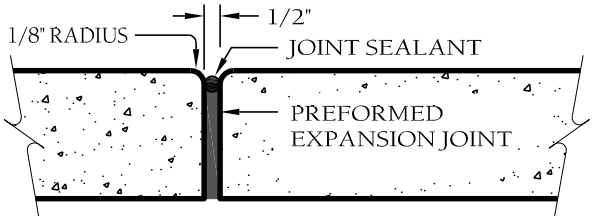
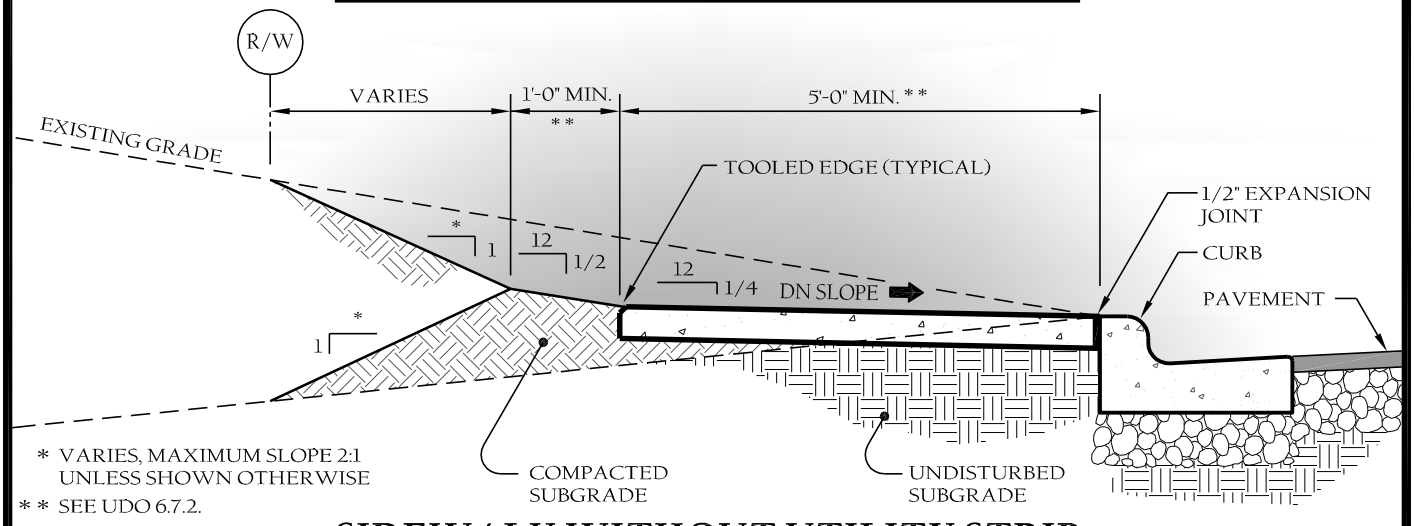
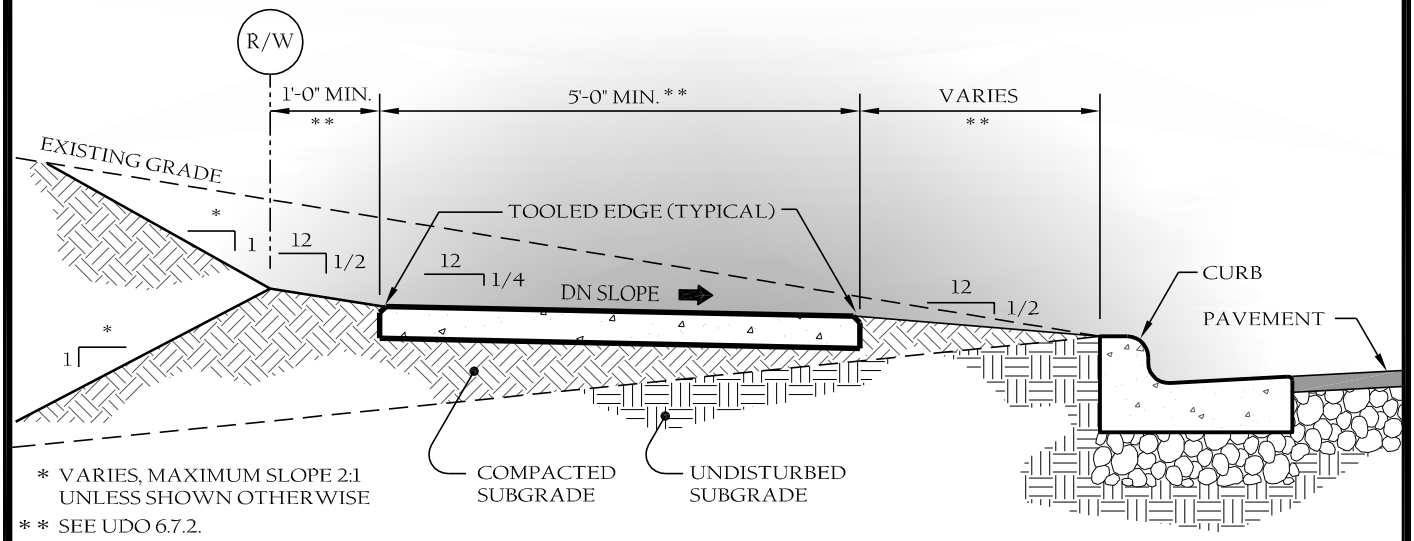


TYPICAL EXPANSION JOINT DETAIL



SIDEWALK WITHOUT UTILITY STRIP



SIDEWALK WITH UTILITY STRIP

NOTES:

1. Provide 3/4" deep tooled score at 5'-0" O.C.
2. Expansion joints to be placed 30'-0" O.C. longitudinally, adjacent to curbs, and when butting existing structures, concrete, or buildings.
3. Concrete to be 3,000 P.S.I. at 28 days, air-entrained.
4. Subgrade should not contain organic matter or plastic clays. When found, refer to specs or contact engineer for directions.
5. Areas of fill are to be compacted to 95% standard proctor using NCDOT Class III borrow or better. Remove topsoil before placing borrow.
8. Concrete must come from a ready mix concrete truck to ensure mix meets air entrainment requirements. No site mix or sakrete mix allowed.
9. See Specification 02400, paragraph 2.1.3 & 2.1.4 for expansion joint & joint sealer specs.

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TYP SIDEWALK in CUT or FILL SECTIONS

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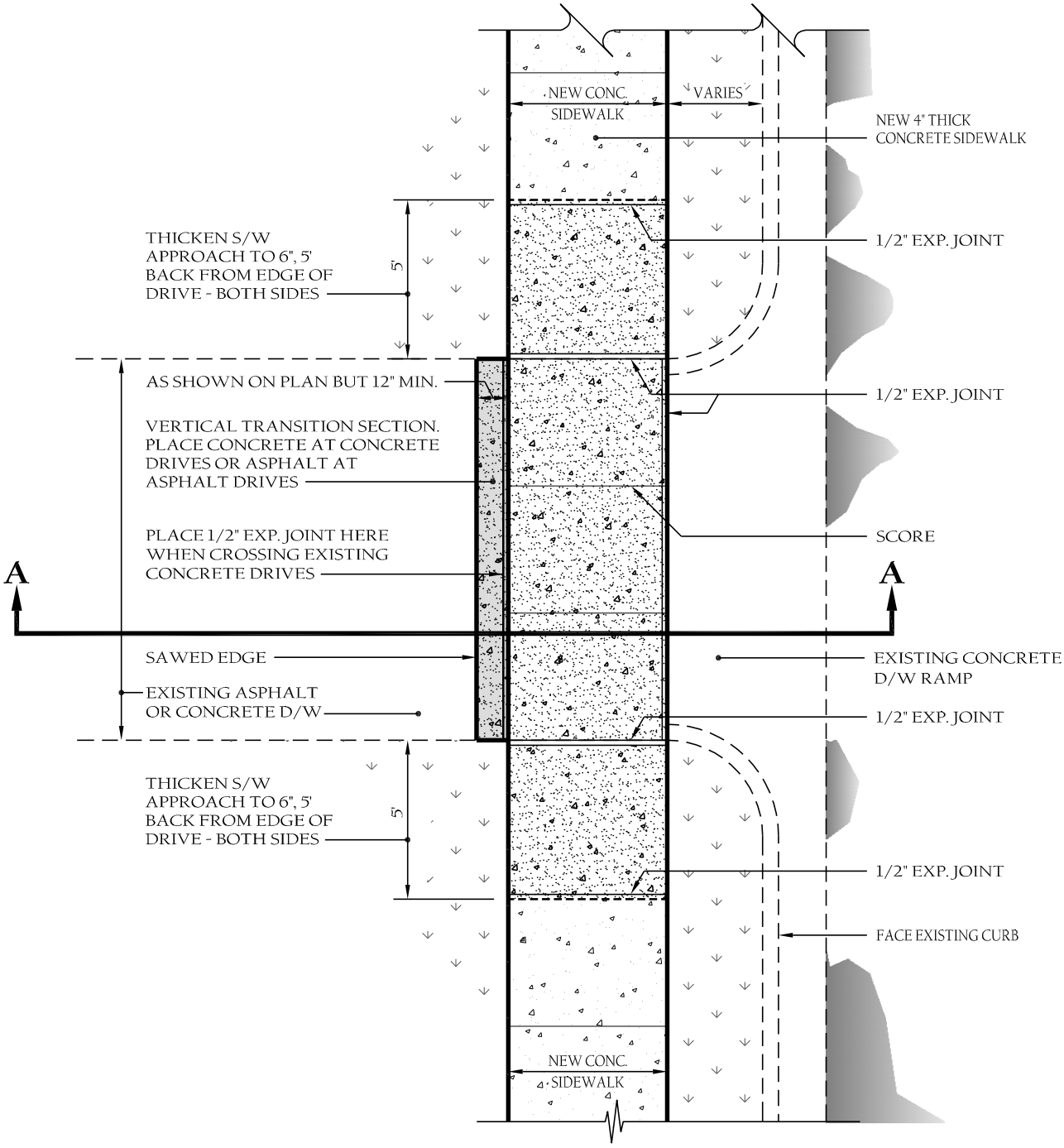

NOTES:

1. Concrete must come from a ready mix concrete truck to ensure mix meets air entrainment requirements. No site mix or sakrete mix allowed.

TOWN of WAKE FOREST

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SIDEWALK DETAIL X-ING EX. DRIVEWAYS

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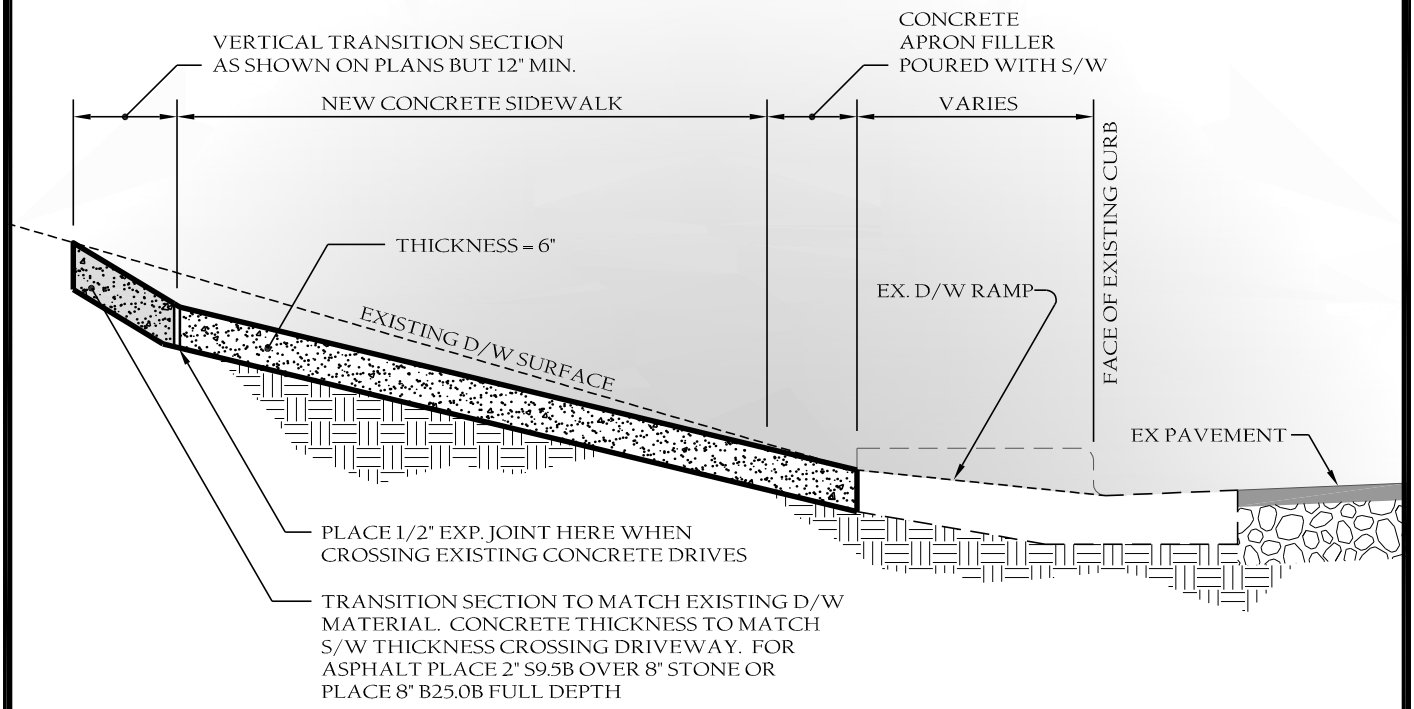

SECTION A-A

TOWN of WAKE FOREST

TOWN of WAKE FOREST, NC

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SIDEWALK DETAIL X-ING EX. DRIVEWAYS

Scale:	Detail #:
Not To Scale	9.12
Revision Date:	Sheet #:
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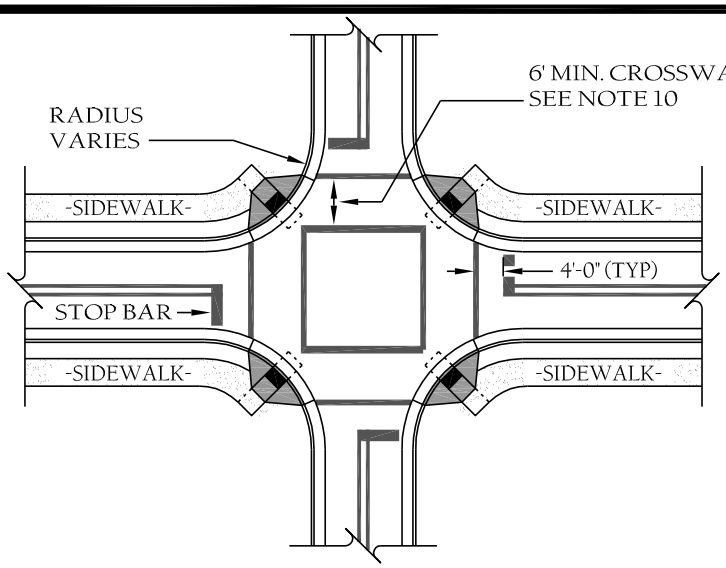
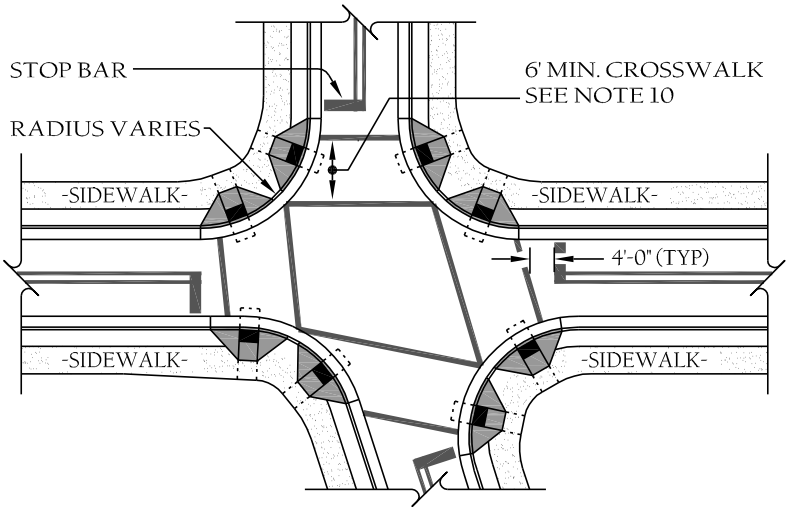


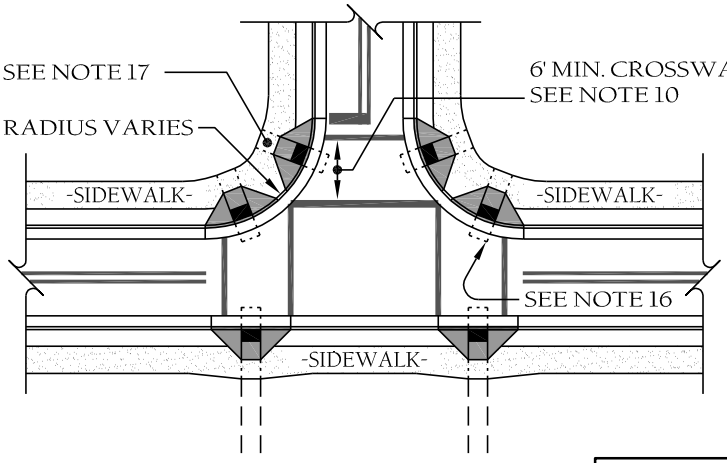
FOR CROSSING INTERSECTIONS

DETAIL SHOWING TYPICAL LOCATION OF SINGLE CURB RAMPS, PEDESTRIAN CROSSWALKS AND STOP LINES FOR TEE INTERSECTIONS



FOR CROSSING INTERSECTIONS

DETAIL SHOWING TYPICAL LOCATION OF DUAL CURB RAMPS, PEDESTRIAN CROSSWALKS AND STOP LINES FOR TEE INTERSECTIONS



FOR TEE INTERSECTIONS

DETAIL SHOWING TYPICAL LOCATION OF CURB RAMPS, PEDESTRIAN CROSSWALKS AND STOP LINES FOR TEE INTERSECTIONS

PROPOSED CURB RAMP

-SIDEWALK- *PROPOSED OR FUTURE SIDEWALK*

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TOWN of WAKE FOREST, NC

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STANDARD CURB RAMP PLACEMENT DETAIL

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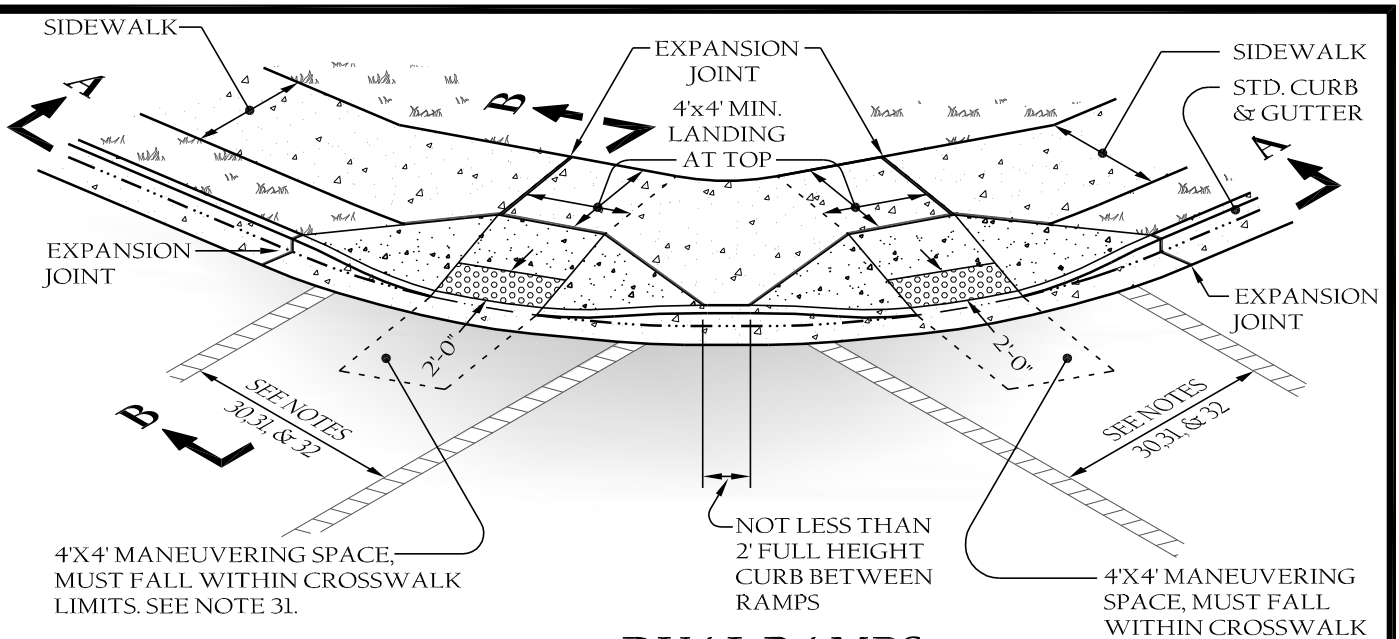
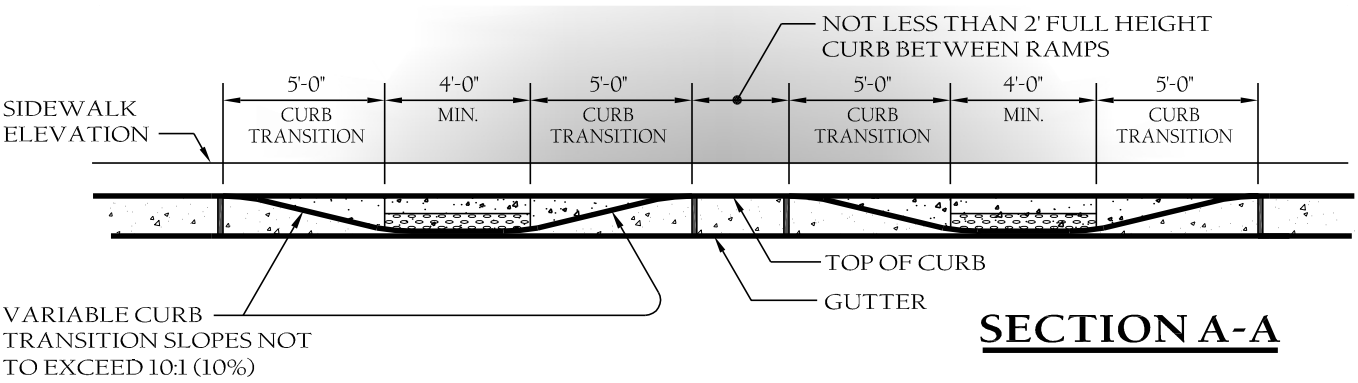


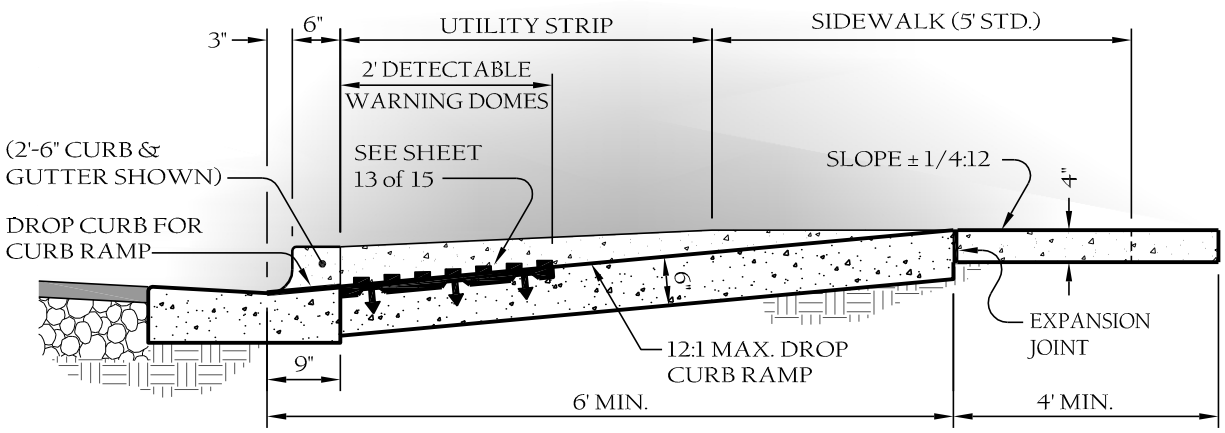
DUAL RAMPS

ANY RADII

NOTE: A PORTION OF ONE OR BOTH RAMPS MAY EXTEND OUTSIDE THE RETURNS



SECTION A-A



SECTION B-B

TOWN of WAKE FOREST

TOWN of WAKE FOREST, NC

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STANDARD CURB RAMP DETAILS

Scale:	Detail #:
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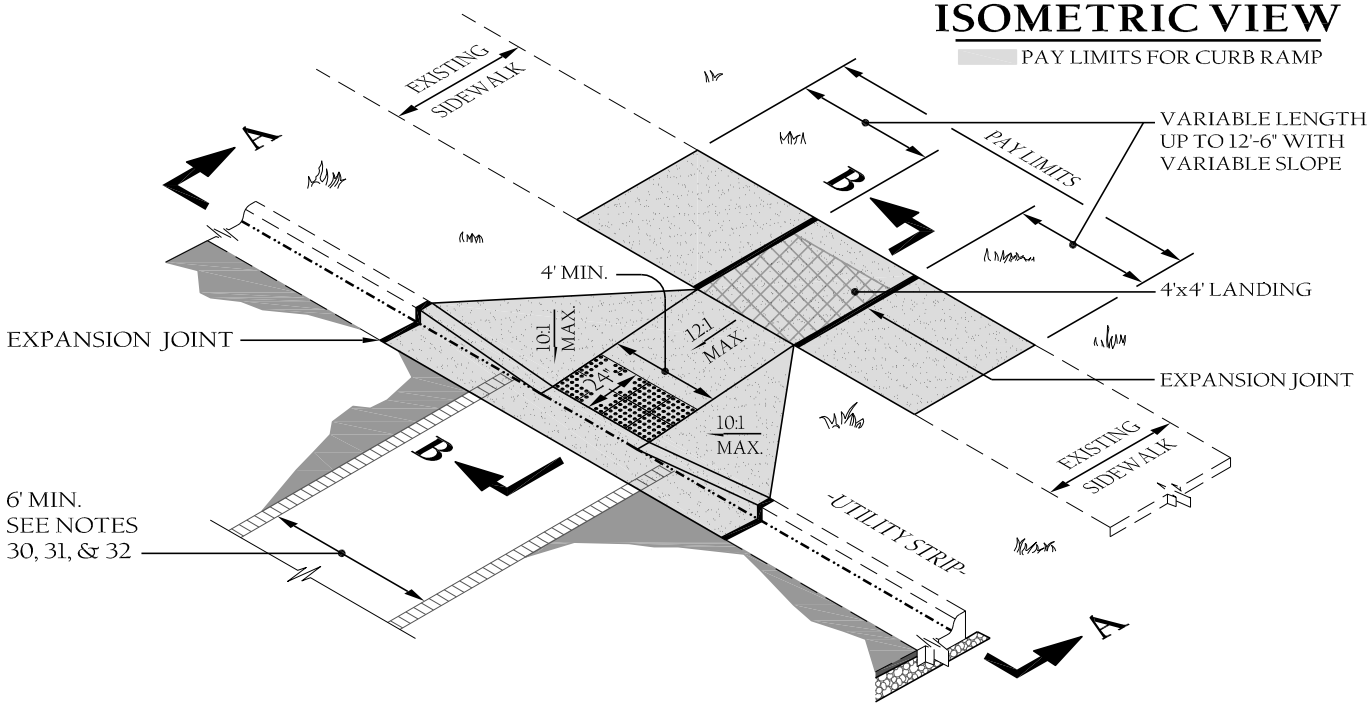
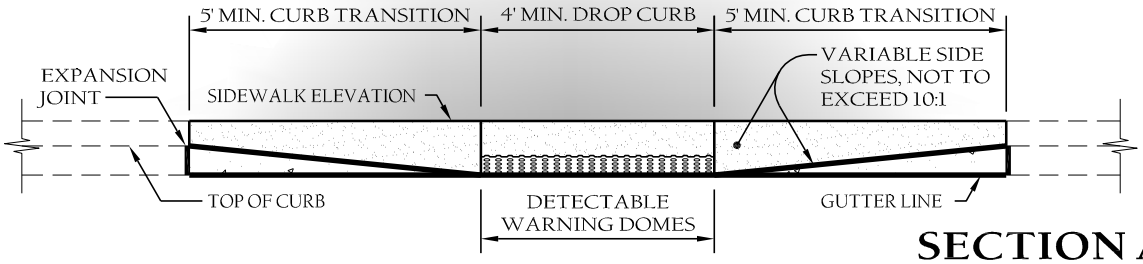
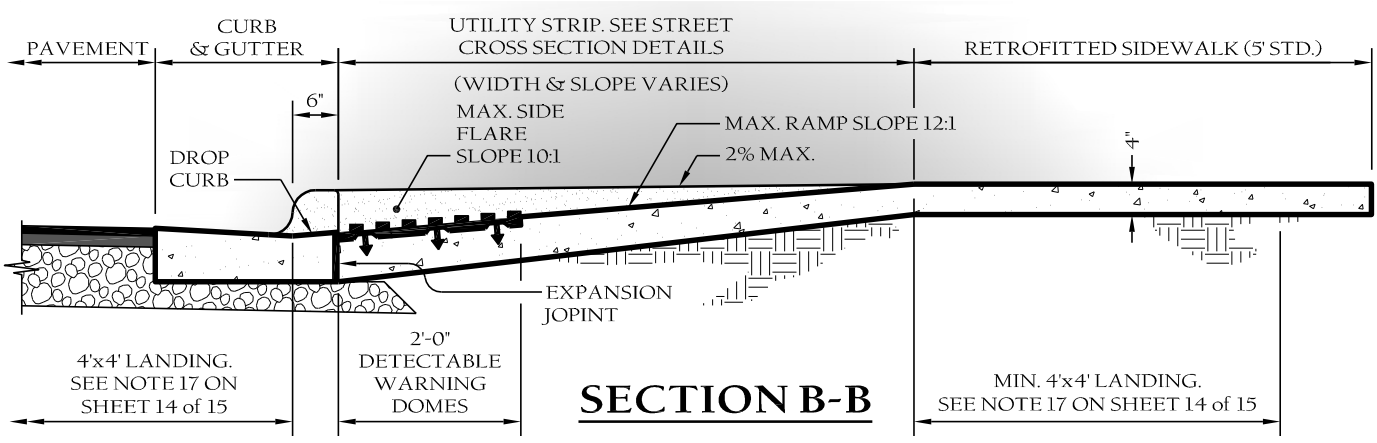
ISOMETRIC VIEW





SECTION A-A



SECTION B-B

NOTES:

1. Detectable warning domes will cover 2'-0" length and full width of the ramp floor as shown on sheet 13 of 15.

TOWN of WAKE FOREST

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SINGLE CURB RAMP WITH EXISTING CURB & GUTTER

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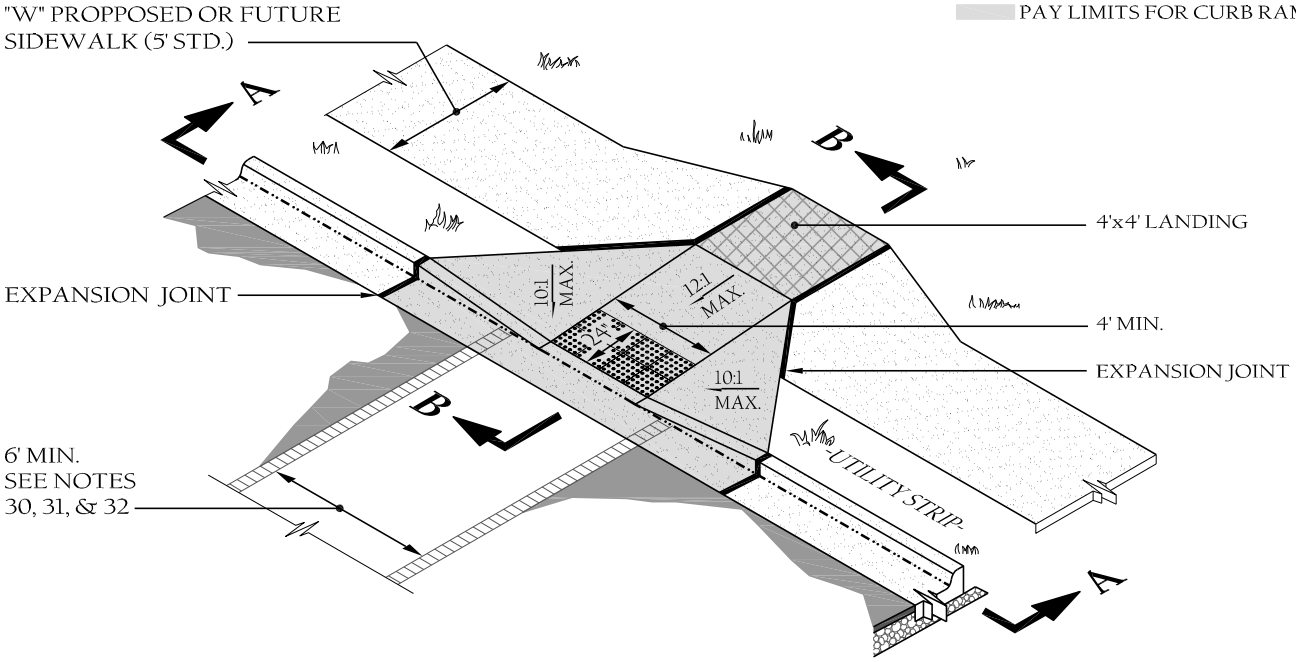
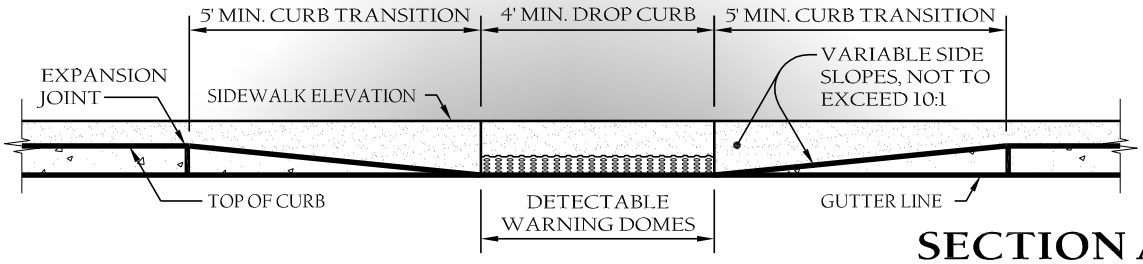
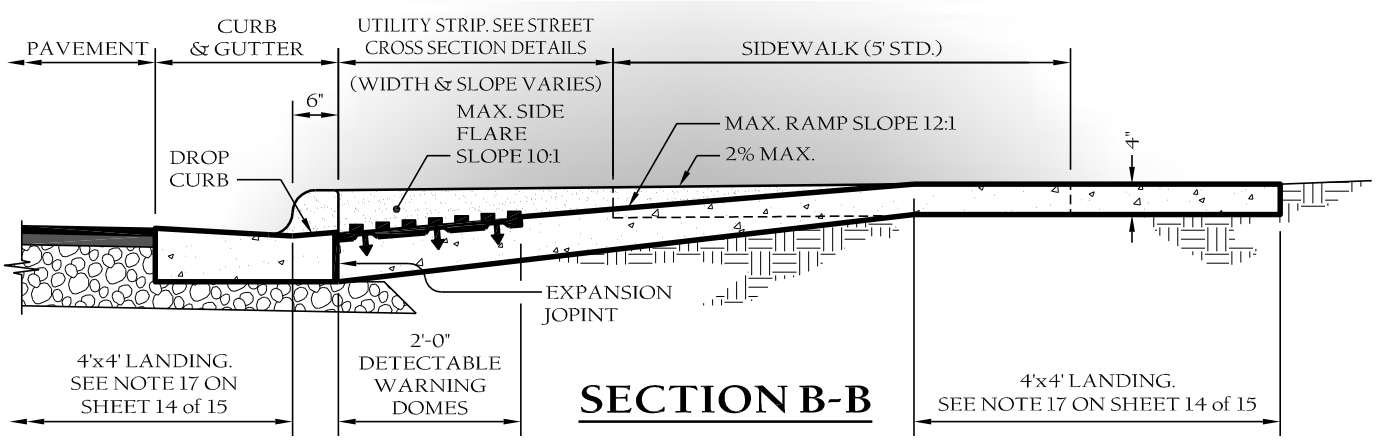
ISOMETRIC VIEW

PAY LIMITS FOR CURB RAMP





SECTION A-A



SECTION B-B

NOTES:

1. Detectable warning domes will cover 2'-0" length and full width of the ramp floor as shown on sheet 13 of 15.

TOWN of WAKE FOREST

TOWN of WAKE FOREST, NC

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SINGLE CURB RAMP WITH PROPOSED CURB & GUTTER

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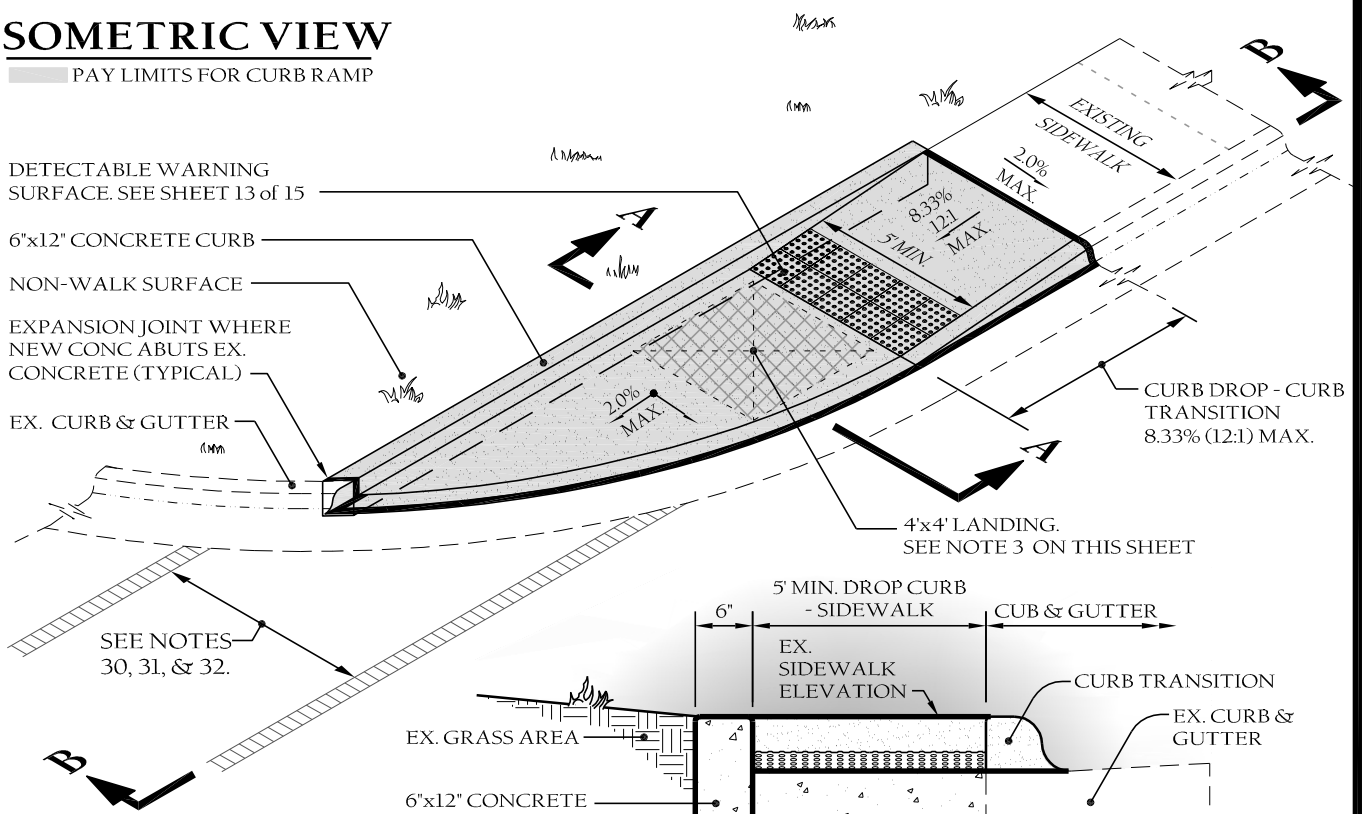
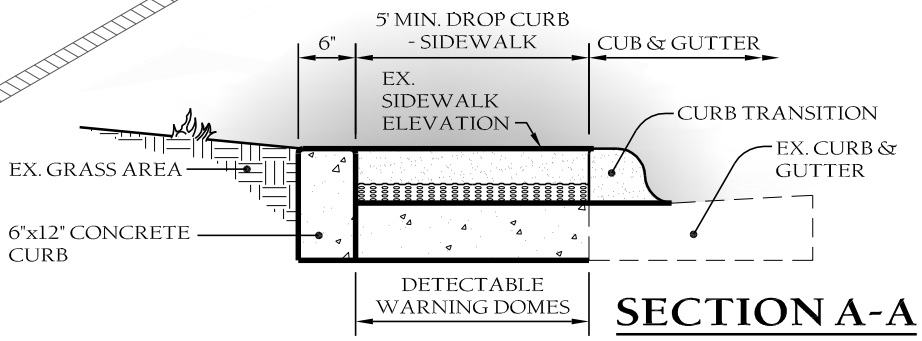
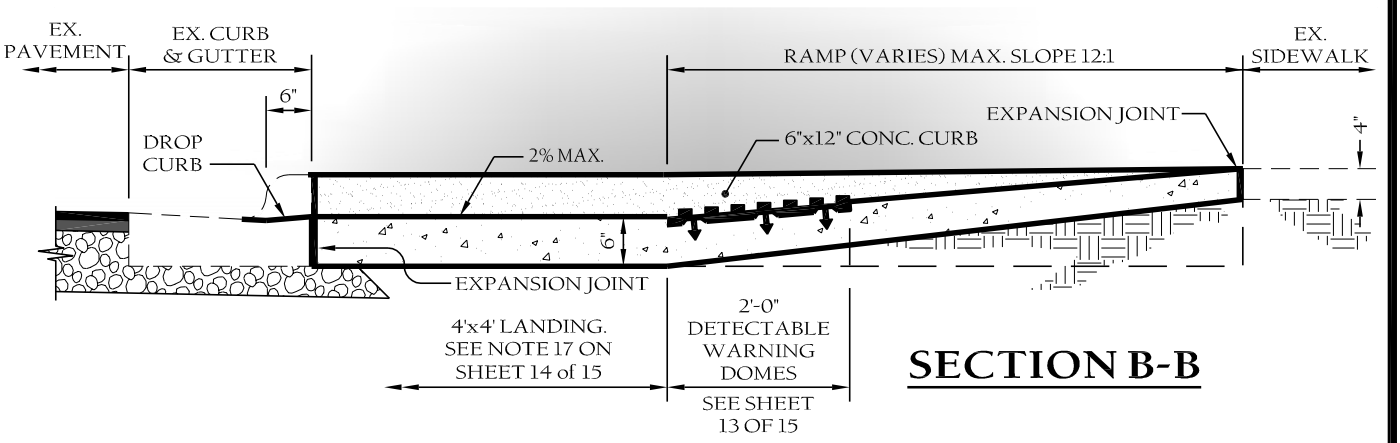
ISOMETRIC VIEW

PAY LIMITS FOR CURB RAMP





SECTION A-A



SECTION B-B

NOTES:

1. Maximum curb ramp slope 8.33% (12:1)
2. Maximum cross slope 2.00%
3. Curb ramps require a (4'-0") minimum landing with a maximum cross slope and longitudinal slope of 2.00% where pedestrians perform turning maneuvers. Slope to drain to curb.
4. Detectable warning domes will cover 2'-0" length and full width of the ramp floor as shown on sheet 13 of 15.
5. Refer to sheet 14 & 15 of 15 for all ramp notes. Adopted from NCDOT Alternate Curb Ramp Details.

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CURB RAMPS - DIRECTIONAL TYPE 1

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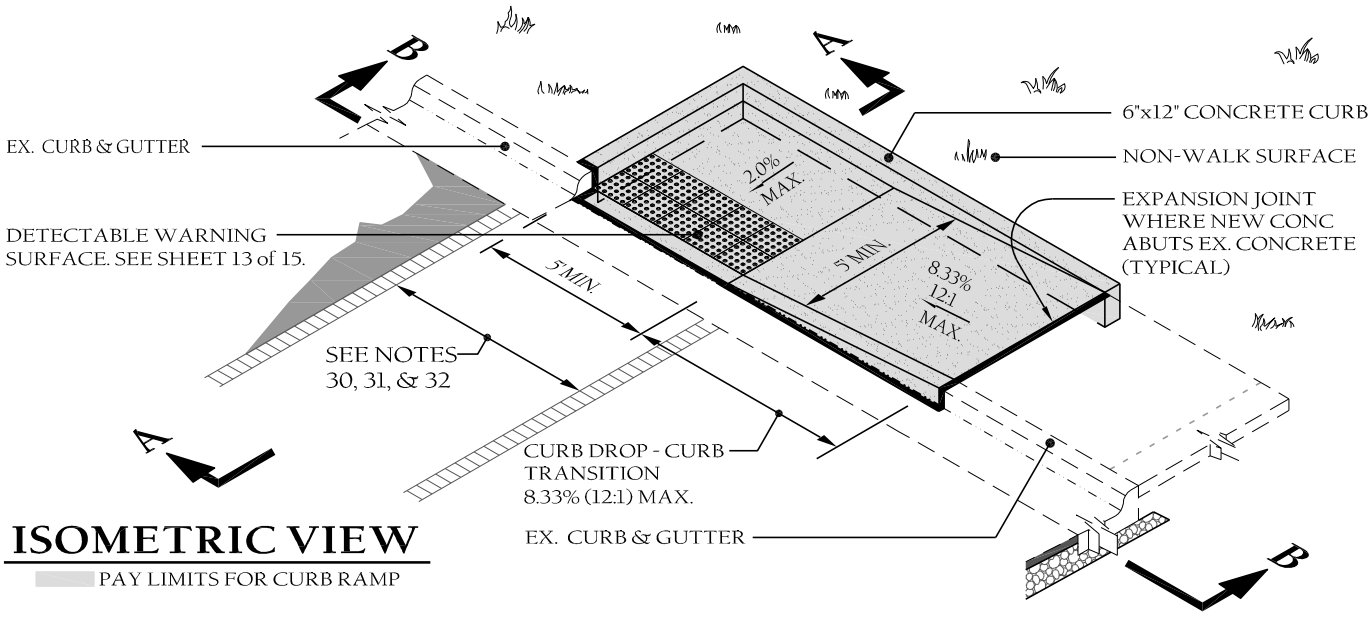
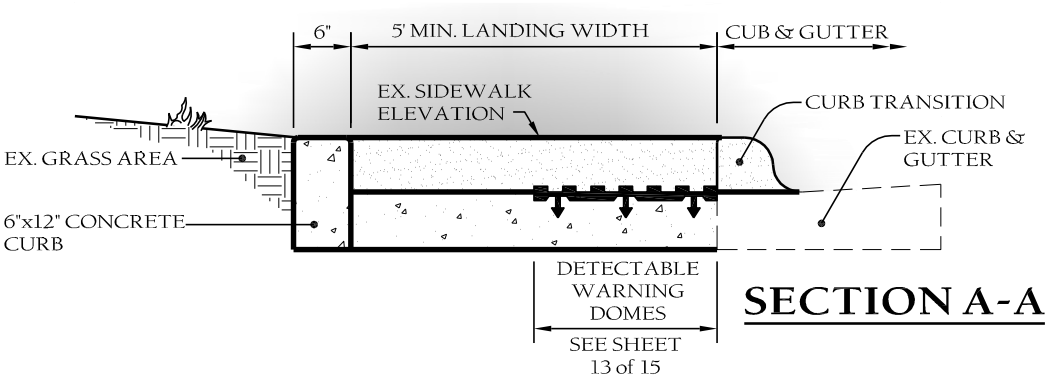
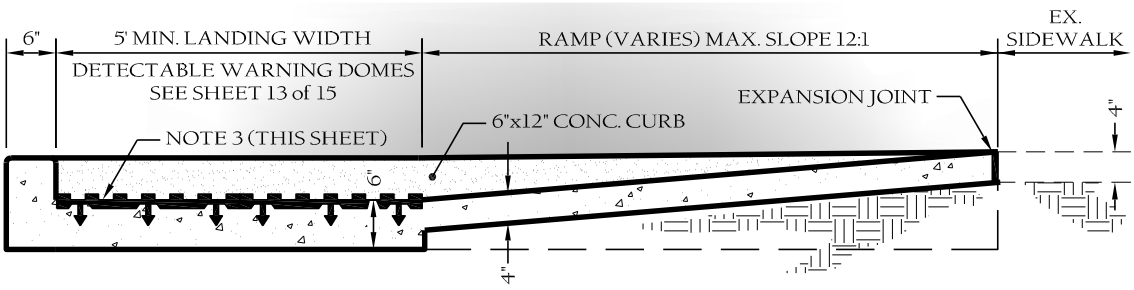


ISOMETRIC VIEW

PAY LIMITS FOR CURB RAMP



SECTION A-A



SECTION B-B

NOTES:

1. Maximum curb ramp slope 8.33% (12:1)
2. Maximum cross slope 2.00%
3. Curb ramps require a (4'-0") minimum landing with a maximum cross slope and longitudinal slope of 2.00% where pedestrians perform turning maneuvers. Slope to drain to curb.
4. Detectable warning domes will cover 2'-0" length and full width of the ramp floor as shown on sheet 13 of 15.
5. Refer to sheet 14 & 15 of 15 for all ramp notes. Adopted from NCDOT Alternate Curb Ramp Details.

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CURB RAMPS - DIRECTIONAL TYPE 1A

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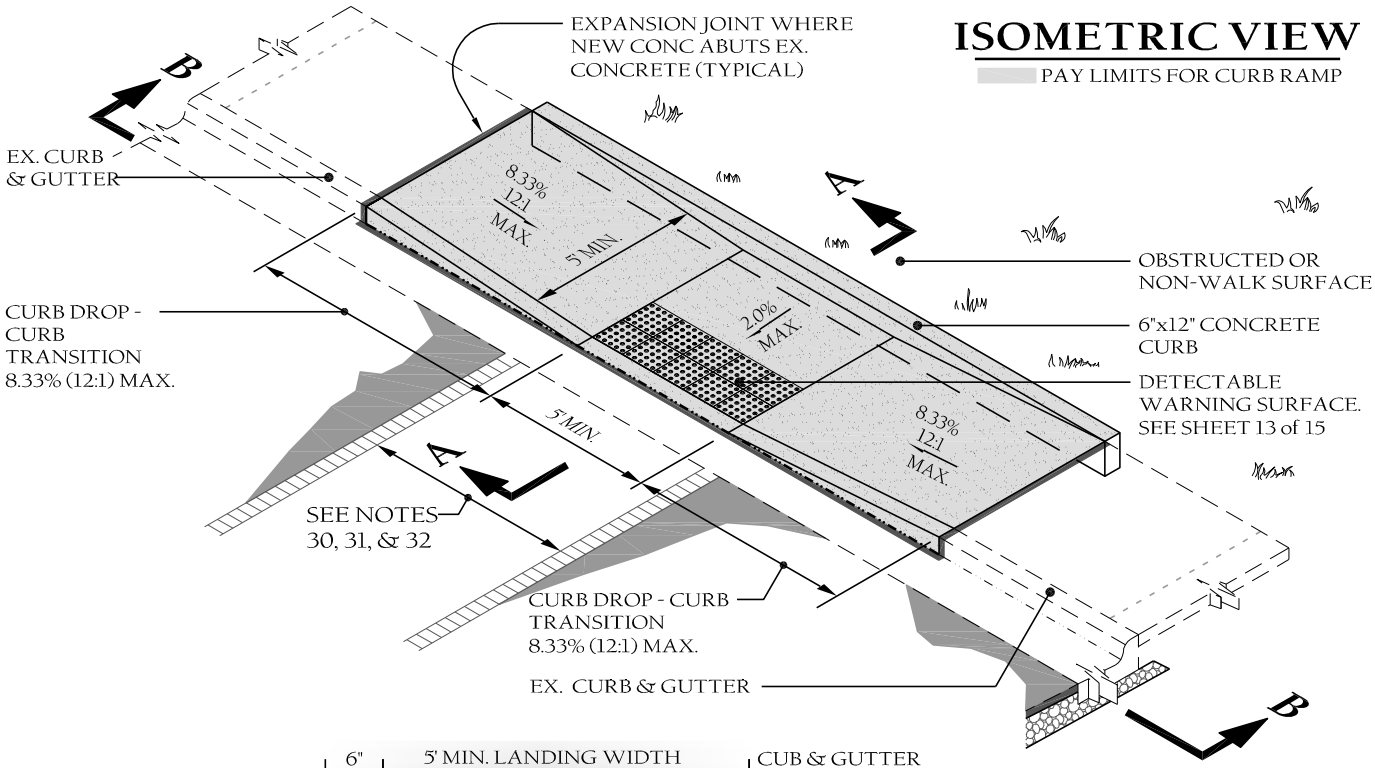
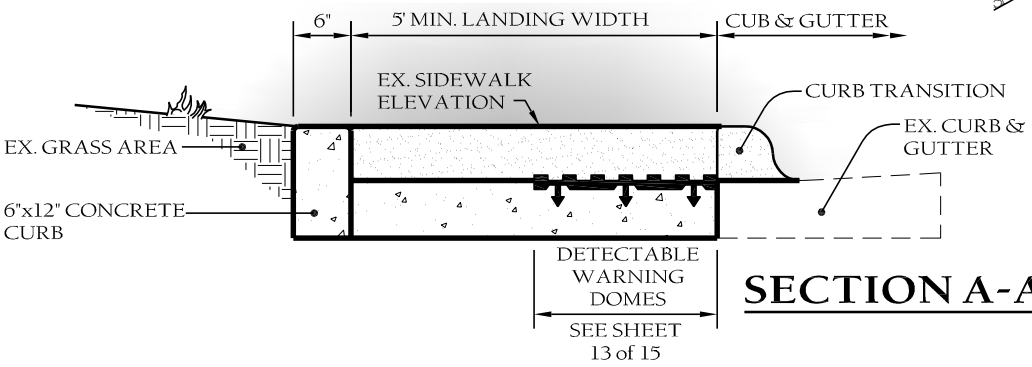
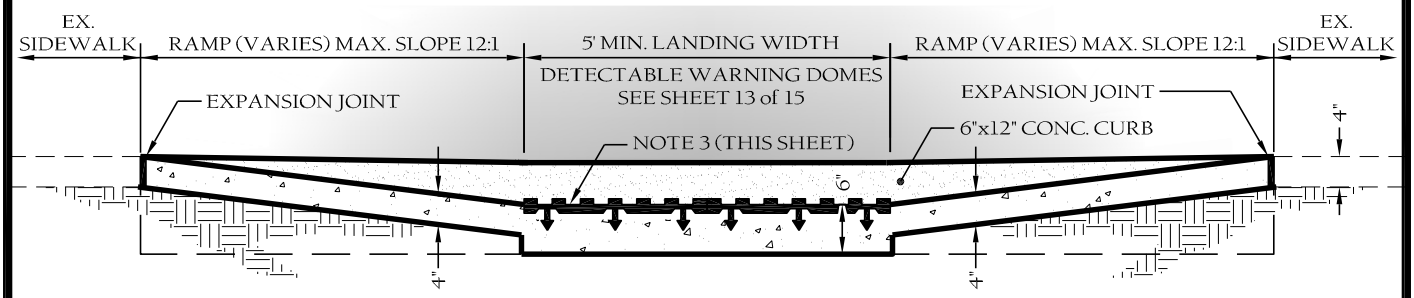
ISOMETRIC VIEW

PAY LIMITS FOR CURB RAMP





SECTION A-A



SECTION B-B

NOTES:

1. Maximum curb ramp slope 8.33% (12:1)
2. Maximum cross slope 2.00%
3. Curb ramps require a (4'-0") minimum landing with a maximum cross slope and longitudinal slope of 2.00% where pedestrians perform turning maneuvers. Slope to drain to curb.
4. Detectable warning domes will cover 2'-0" length and full width of the ramp floor as shown on sheet 13 of 15.
5. Refer to sheet 14 & 15 of 15 for all ramp notes. Adopted from NCDOT Alternate Curb Ramp Details.

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CURB RAMPS - DIRECTIONAL TYPE 2

Scale:	Detail #:
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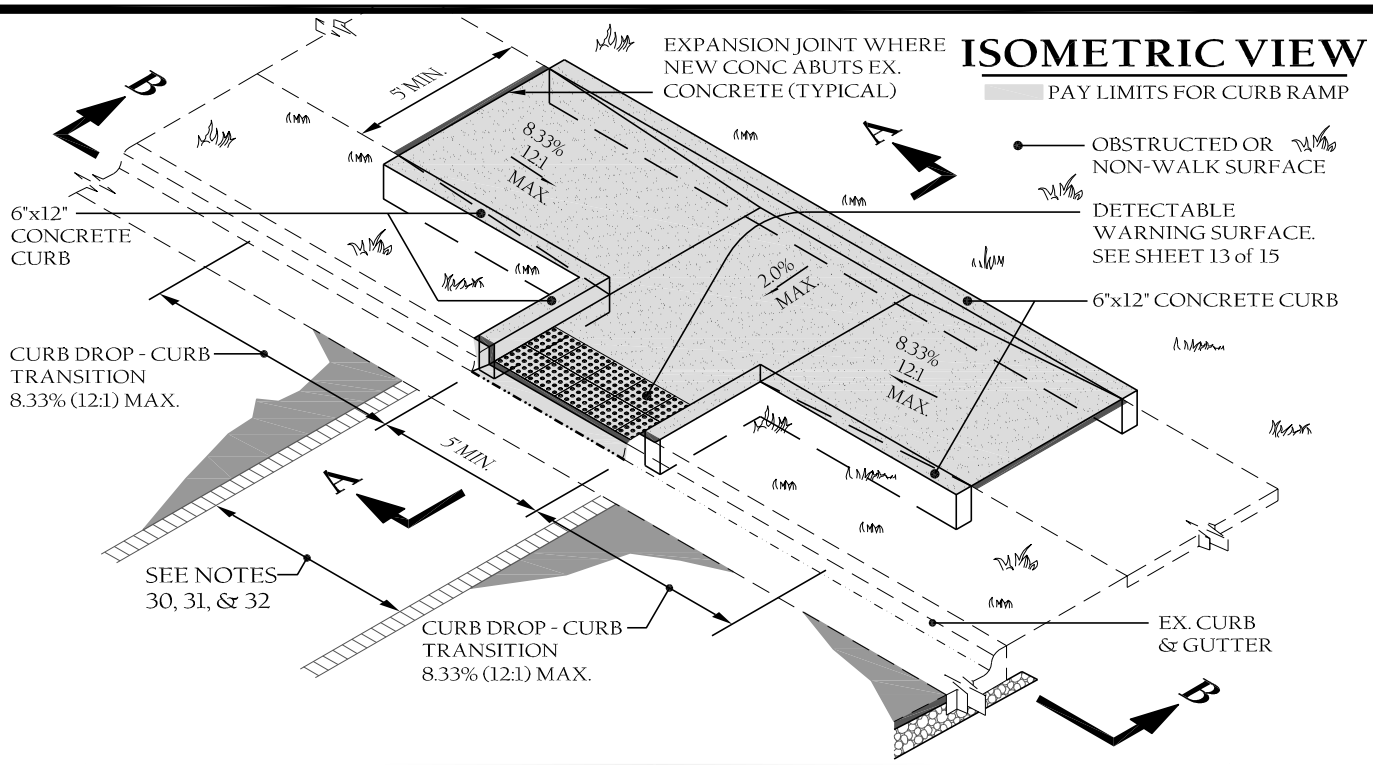
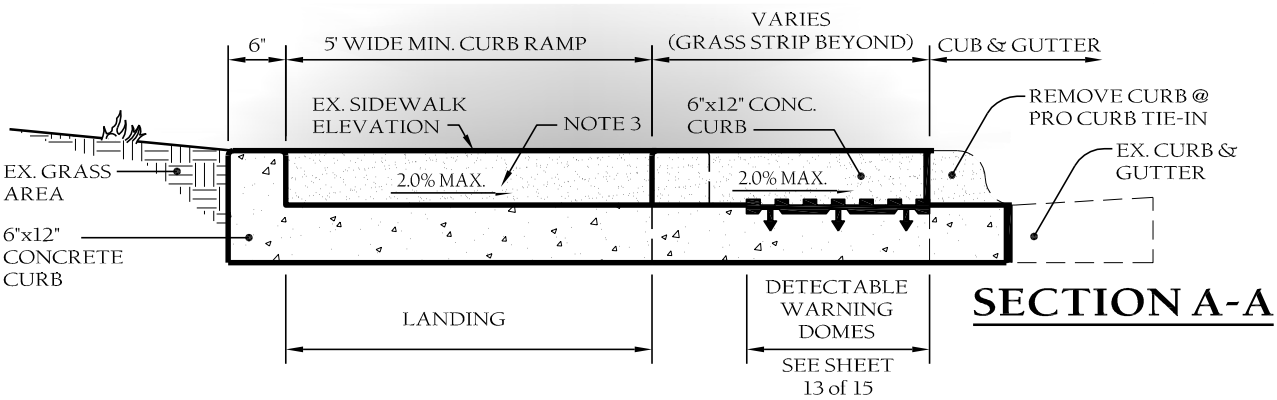
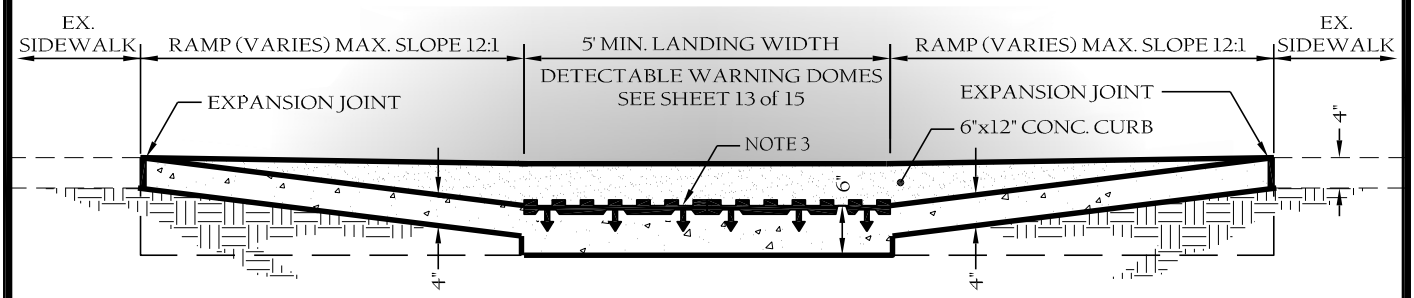




SECTION A-A



SECTION B-B

NOTES:

1. Maximum curb ramp slope 8.33% (12:1)
2. Maximum cross slope 2.00%
3. Curb ramps require a (4'-0") minimum landing with a maximum cross slope and longitudinal slope of 2.00% where pedestrians perform turning maneuvers. Slope to drain to curb.
4. Detectable warning domes will cover 2'-0" length and full width of the ramp floor as shown on sheet 13 of 15.
5. Refer to sheet 14 & 15 of 15 for all ramp notes. Adopted from NCDOT Alternate Curb Ramp Details.

TOWN of WAKE FOREST

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CURB RAMPS - DIRECTIONAL TYPE 3

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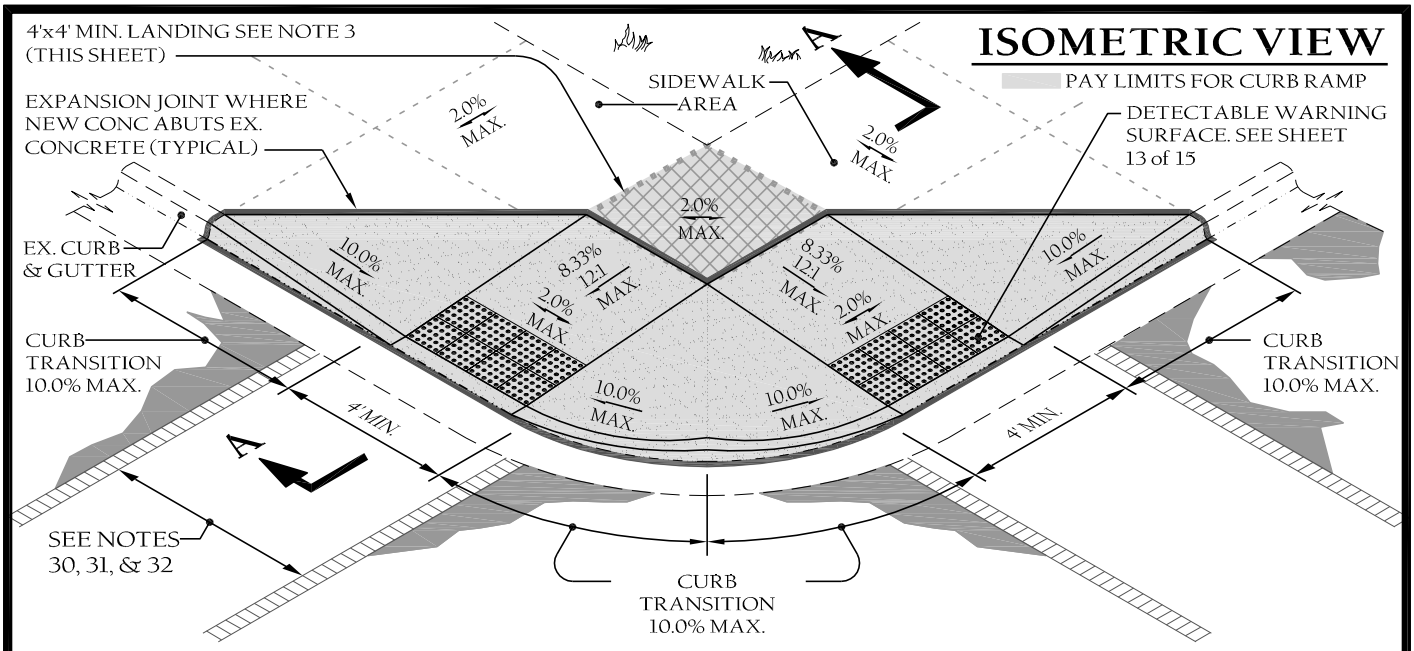
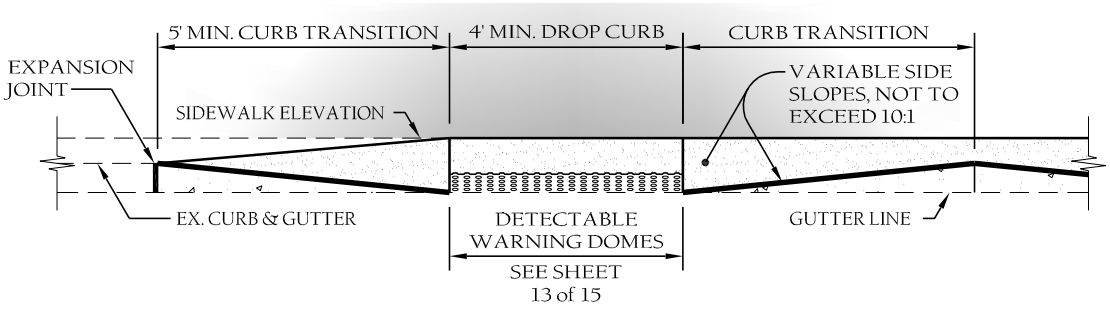
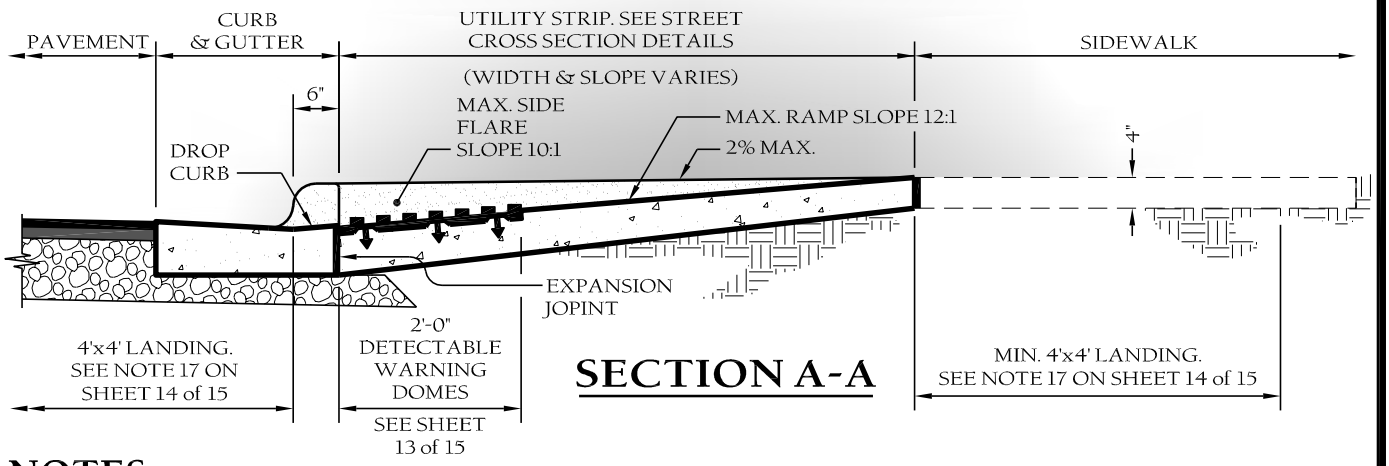
ISOMETRIC VIEW





PARTIAL CURB ELEVATION



SECTION A-A

NOTES:

1. Maximum curb ramp slope 8.33% (12:1)
2. Maximum cross slope 2.00%
3. Curb ramps require a (4'-0") minimum landing with a maximum cross slope and longitudinal slope of 2.00% where pedestrians perform turning maneuvers. Slope to drain to curb.
4. Detectable warning domes will cover 2'-0" length and full width of the ramp floor as shown on sheet 13 of 15.
5. Refer to sheet 14 & 15 of 15 for all ramp notes. Adopted from NCDOT Alternate Curb Ramp Details.

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CURB RAMPS - SHARED LANDING TYPE 4

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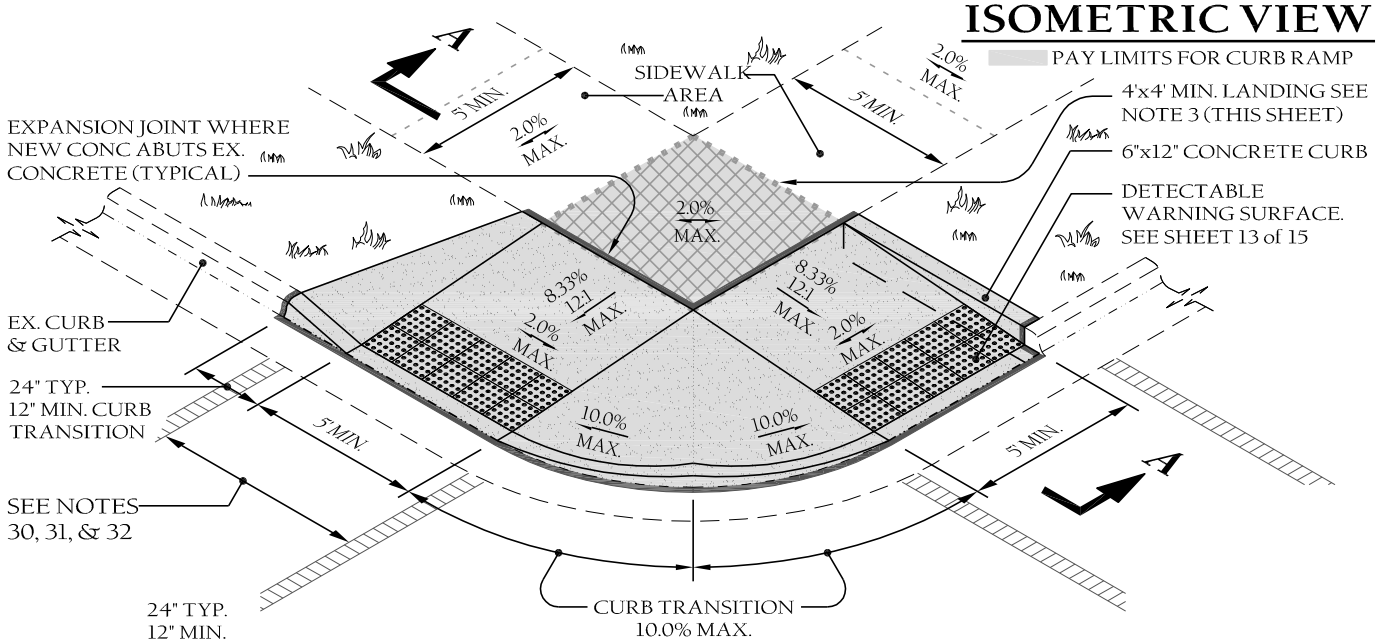
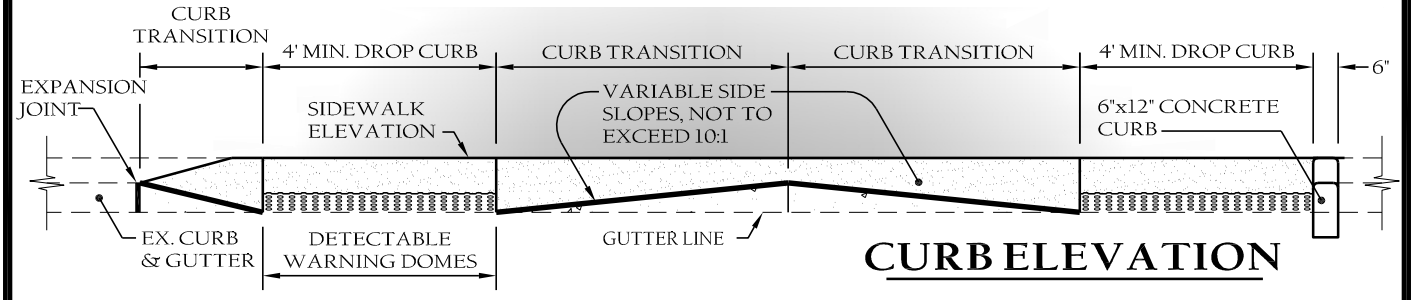
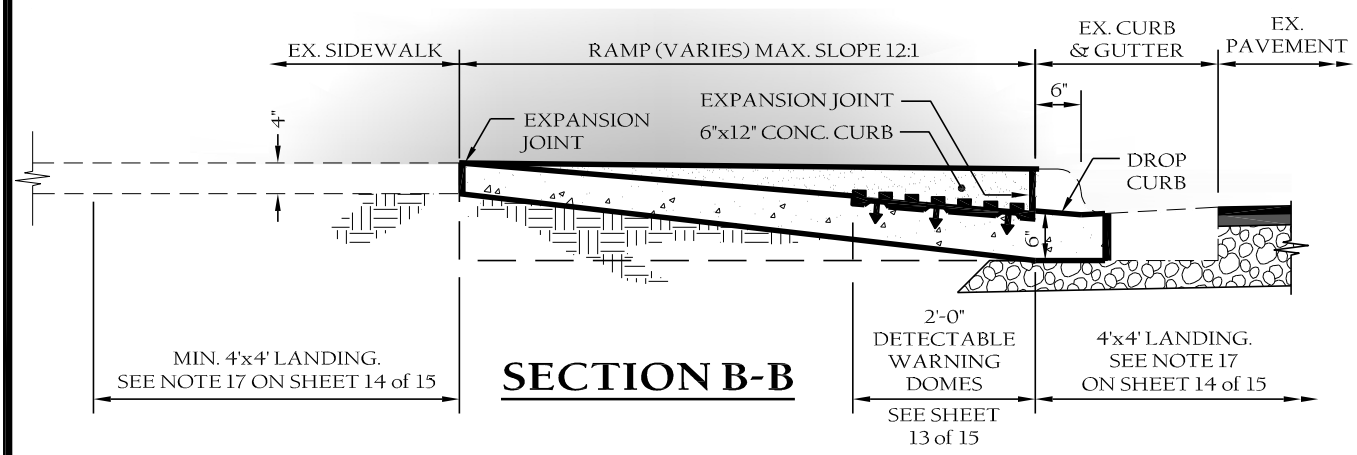
ISOMETRIC VIEW





CURB ELEVATION



SECTION B-B

NOTES:

1. Maximum curb ramp slope 8.33% (12:1)
2. Maximum cross slope 2.00%
3. Curb ramps require a (4'-0") minimum landing with a maximum cross slope and longitudinal slope of 2.00% where pedestrians perform turning maneuvers. Slope to drain to curb.
4. Detectable warning domes will cover 2'-0" length and full width of the ramp floor as shown on sheet 13 of 15.
5. Refer to sheet 14 & 15 of 15 for all ramp notes. Adopted from NCDOT Alternate Curb Ramp Details.

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CURB RAMPS - SHARED LANDING TYPE 4A

Scale:	Detail #:
Not To Scale	9.13
Revision Date:	Sheet #:
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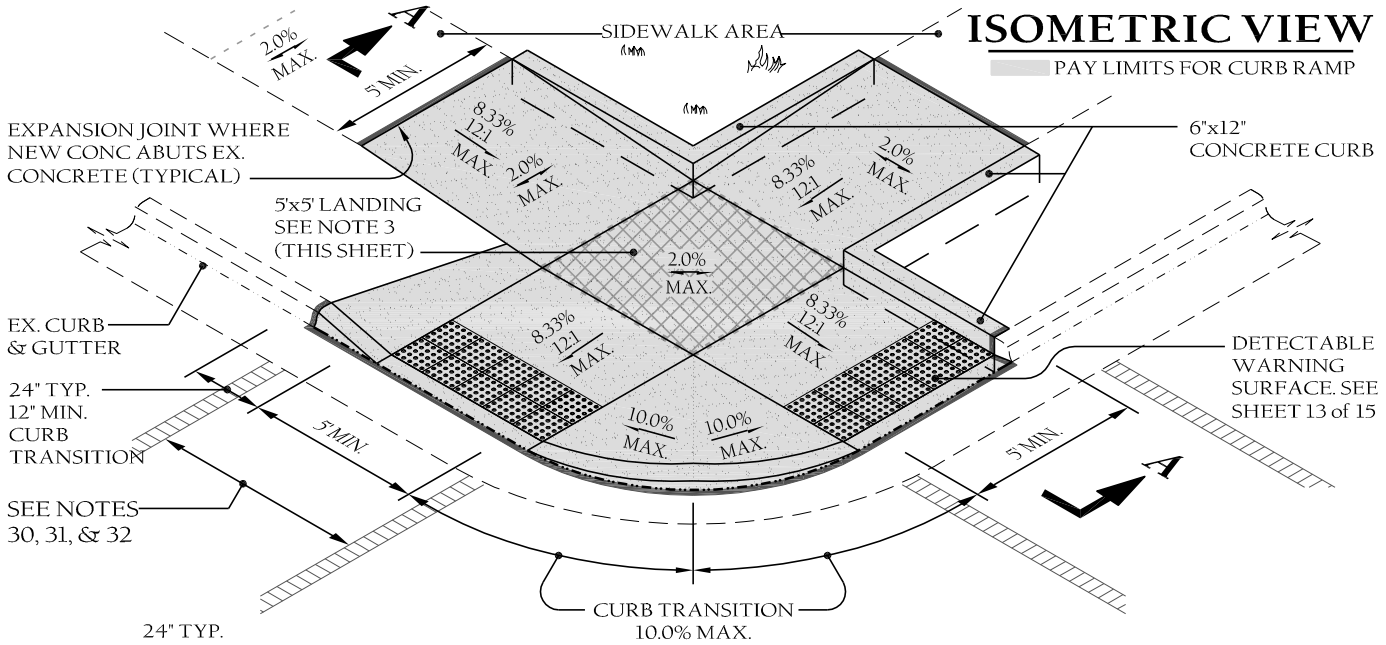
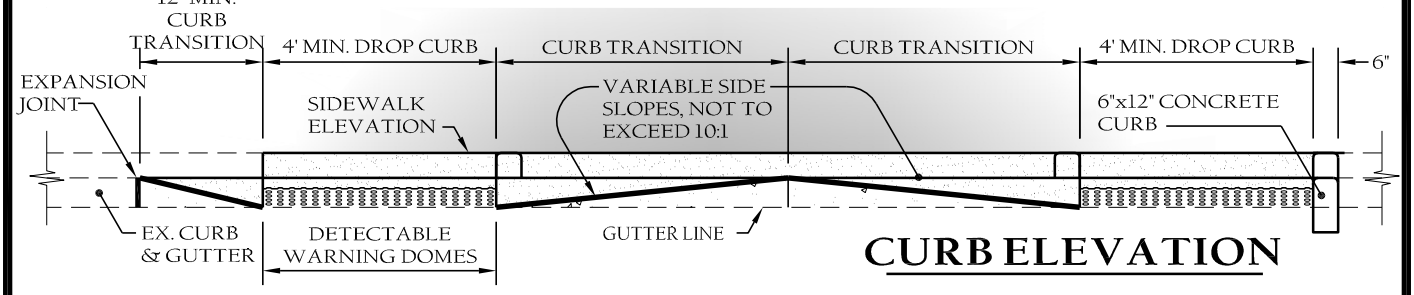
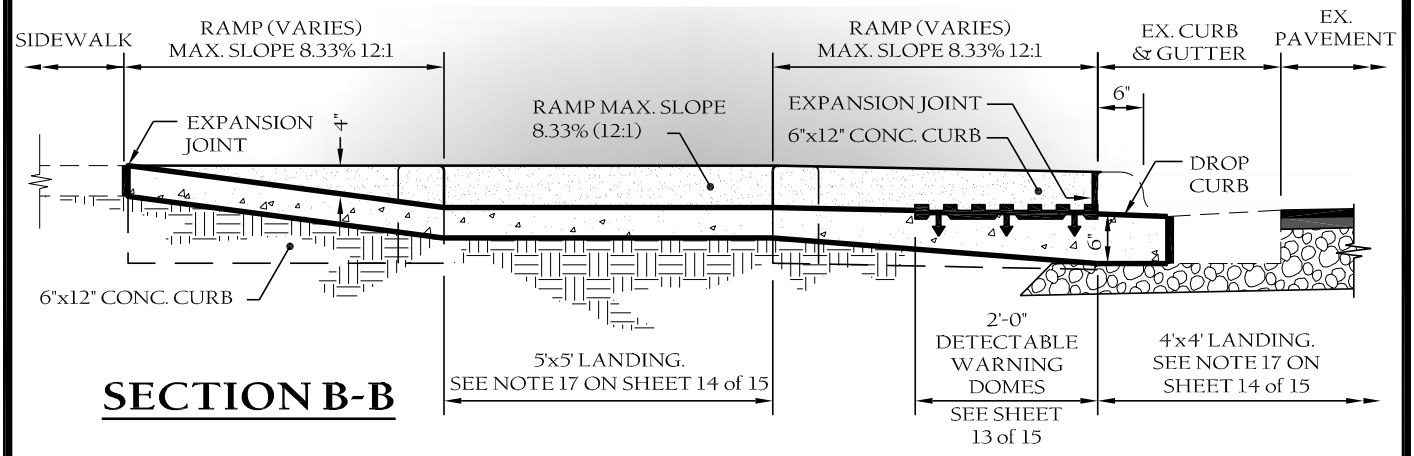




CURB ELEVATION



SECTION B-B

NOTES:

1. Maximum curb ramp slope 8.33% (12:1)
2. Maximum cross slope 2.00%
3. Curb ramps require a (4'-0") minimum landing with a maximum cross slope and longitudinal slope of 2.00% where pedestrians perform turning maneuvers. Slope to drain to curb.
4. Detectable warning domes will cover 2'-0" length and full width of the ramp floor as shown on sheet 13 of 15.
5. Refer to sheet 14 & 15 of 15 for all ramp notes. Adopted from NCDOT Alternate Curb Ramp Details.

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CURB RAMPS - SHARED LANDING TYPE 5

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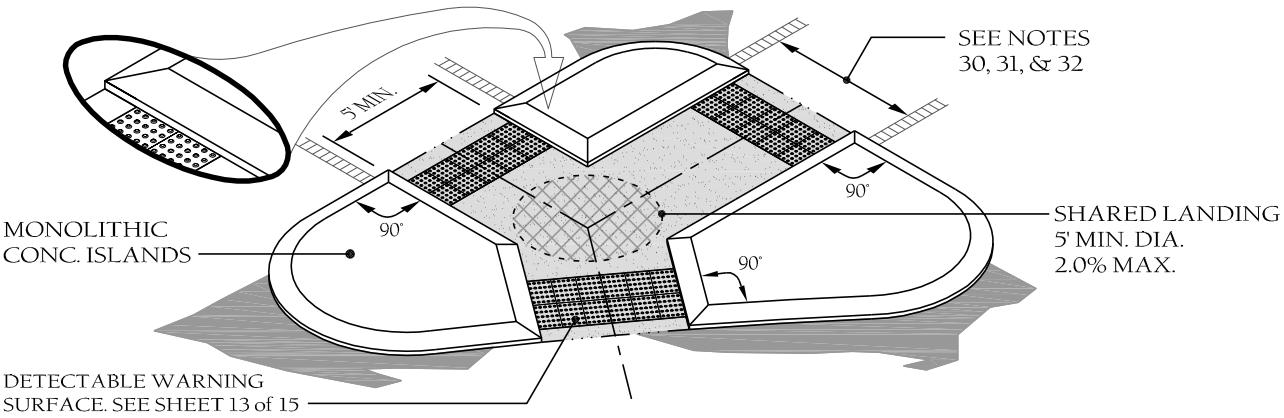
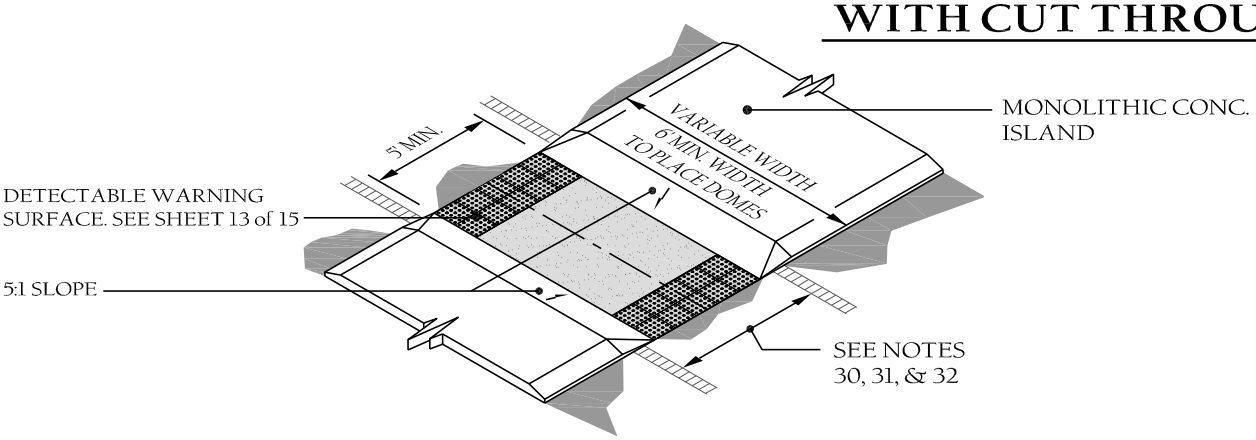
PAY LIMITS FOR CURB RAMP

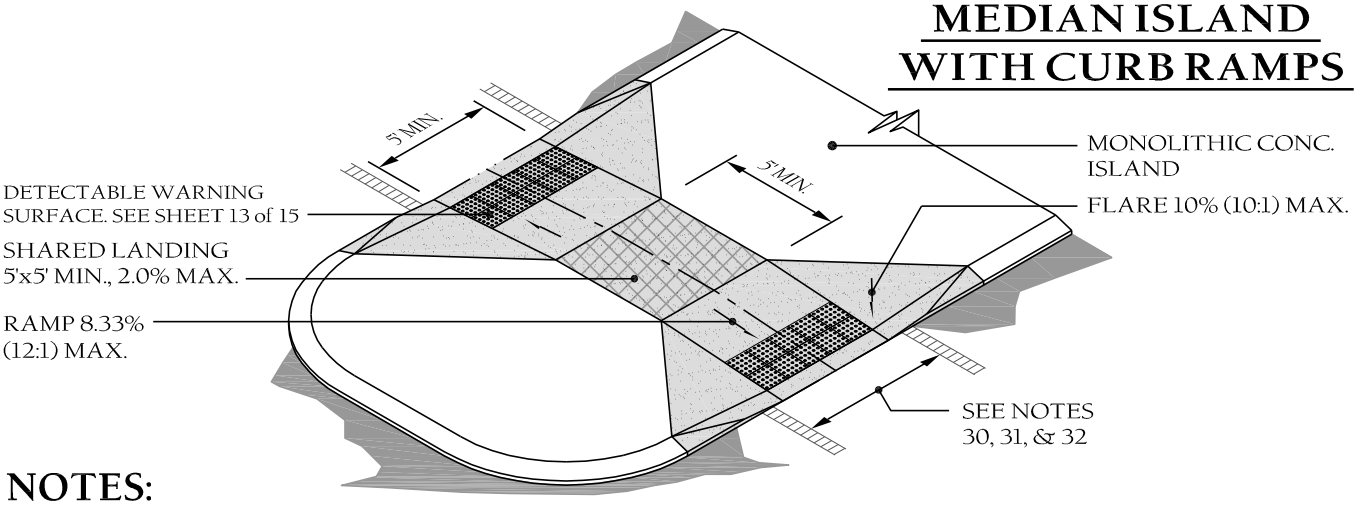
TRIANGULAR ISLAND WITH CUT THROUGH



MEDIAN ISLAND WITH CUT THROUGH



MEDIAN ISLAND WITH CURB RAMPS



NOTES:

1. Maximum curb ramp slope 8.33% (12:1)
2. Maximum cross slope 2.00%
3. Detectable warning domes will cover 2'-0" length and full width of the ramp floor as shown on sheet 13 of 15.
4. See NCDOT Roadway Std. Drawing 852.01 for concrete island dimensions.

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CURB RAMPS
MEDIAN ISLANDS

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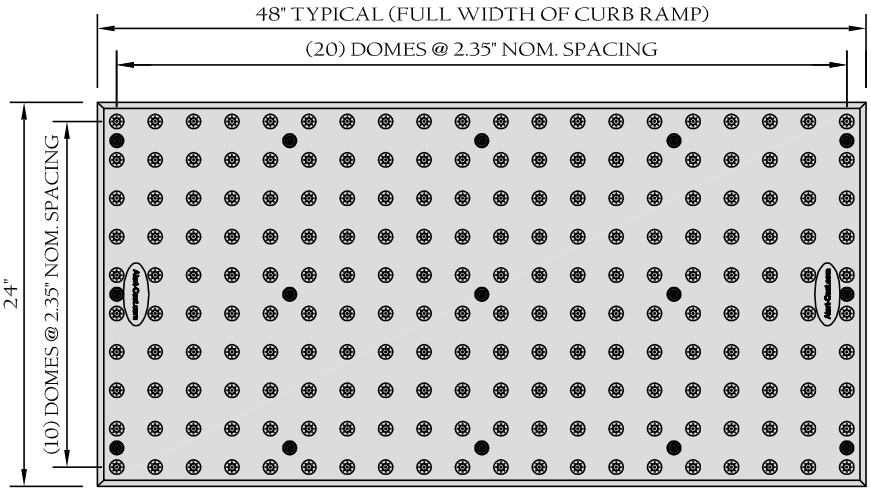
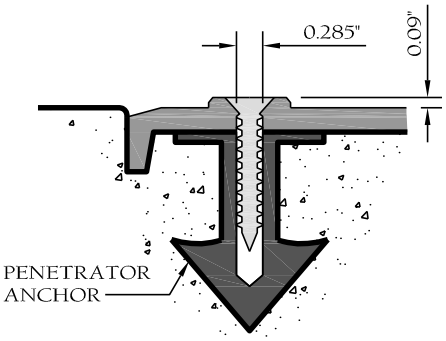
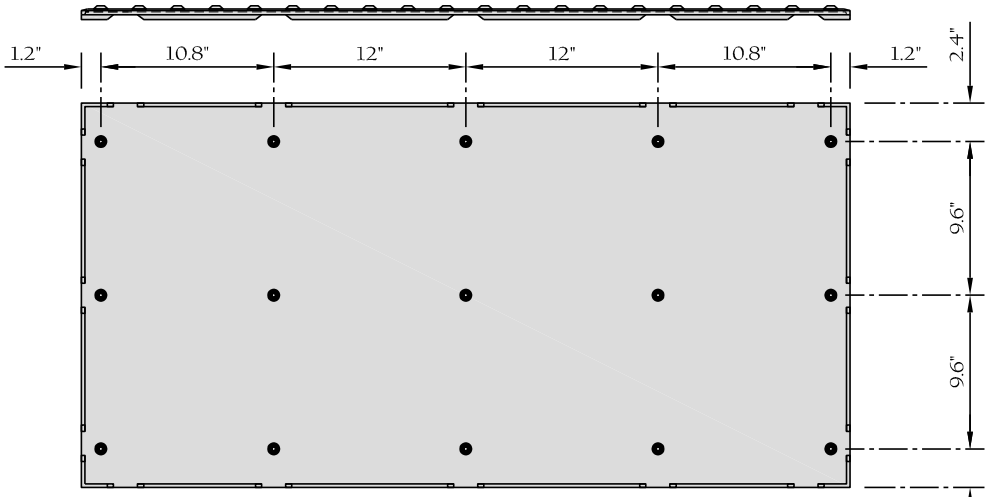
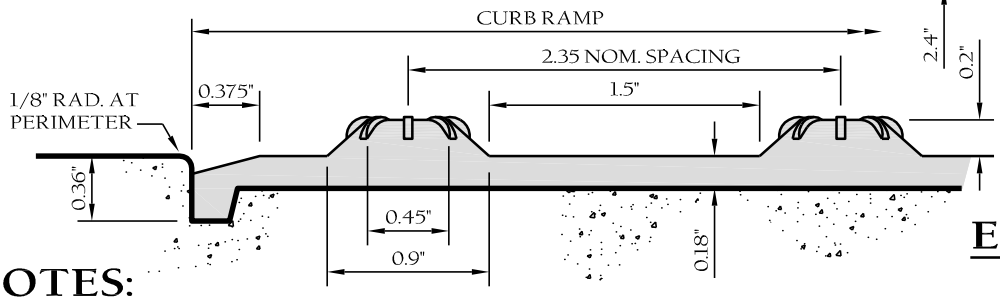




PENETRATOR SECTION





END SECTION

NOTES:

1. Detectable warning System. Cast in place with Penetrator anchors. See pre-approved products list.
2. Other sizes available to meet site specific requirements. Verify with Town.
3. Truncated domes in a detectable warning surface shall have a base diameter of 0.9 inch minimum to 1.4 inches maximum, a top diameter of 50% of the base diameter minimum to 65% of the base diameter maximum, and a height of 0.2 inches.
4. Truncated domes in a detectable warning surface shall have a center-to-center spacing of 1.6 inches minimum and 2.4 inches maximum, and a base-to-base spacing of 0.65 inches minimum, measured between the most adjacent domes on square grid.
5. Detectable warning surfaces shall extend 24 inches minimum in the direction of travel and the full width of the curb ramp, landing, or blended transition. The edge nearest the curb line shall be a minimum of 6 inches and a maximum of 8 inches from curb (ICC/ANSI A117.1 Fig C406.13.2). See notes 21 & 22.
6. See note 23, sheet 5.
7. Any NCDOT street must conform to DOT standard/ADA Curb Ramp detail 848.05 sheet 1-4.

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STANDARD DETECTABLE WARNING SYSTEM

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STANDARD NOTES:

1. North Carolina General Statute 136-44.14 requires that all street curbs being constructed or reconstructed for maintenance procedures, traffic operations, repairs, correction of utilities or altered for any reason after September 1, 1973 shall provide curb ramps for the physically disabled at all intersections where both curb and gutter and sidewalks are provided and at other points of pedestrian flow.
   In addition, section 228 of the 1973 Federal Aid Highway Safety Act requires provision of curb ramps on any curb construction after July 1, 1976 whether a sidewalk is proposed initially or is planned for a future date.
   The Americans with Disability Act (ADA) of 1990 extends to individuals with disabilities. Comprehensive civil rights protections similar to those provided to persons on the basis of race, sex, national origin and religion under the Civil Rights Act of 1964. These curb ramps have been designed to comply with the current ADA standards (2010 ADA Standards for Accessible Design, dated September 15, 2010 & effective March 15, 2012).
2. Curb ramps are required when streets are altered for resurfacing (spanning one intersection to another and includes overlay of additional material to the road surface with or without milling), reconstructed, rehabilitated or widened. Maintenance activities on streets, such as crack filling sealing, pavement markings, surface sealing and pavement patching, are not alterations. However, if there is no block-to-block resurfacing but resurfacing is occurring at a crosswalk itself, partial resurfacing (curb-to-curb resurfacing of a crosswalk) requires the provision of curb ramps at that crosswalk.
   Curb ramps are not required in the absence of a pedestrian walkway with a prepared surface nor are curb ramps required in the absence of curb, elevation or other barrier between the street and the walkway. [USDOJ July 8, 2013]
3. Curb ramps are required at all curb returns.
4. Detectable warning domes are required for curb ramps.
5. Single curb ramp at the center of the return are not permitted.
6. Dimensions assume 90° centerline intersection of streets.
7. Construct the ramp surface to be stable, firm and slip resistant. Located and construct the curb ramp type as shown in these details.
8. Curb ramps shall be constructed perpendicular to the roadway travel lane.
9. Coordinate the curb ramp and pedestrian crosswalk markings so a 4'x4' clear space at the base of the curb ramp will fall within the pedestrian crosswalk lines.
10. Set back distance from inside corner of an intersection crosswalk marking to nearest edge of travel lane is 4 feet minimum.
11. Terminate parking a minimum of 20 feet back of a pedestrian crosswalk.
12. Construct a curb ramps a minimum of 4 feet wide. Width may exceed 48".
13. Construct the running slope of the ramp at a maximum of 8.33% (1 : 12).
14. Allowable cross slope on sidewalks and ramps to be a maximum of 2%.
15. Construct the side flare slope to a maximum of 10% measured along the curb line.;
16. Construct the counter-slope of the gutter or street at the base of the curb ramp at a maximum of 5% and maintain a smooth transition.
17. Construct landings for sidewalk at a minimum of 4'x4' with a maximum slope of 2% in any direction. Construct landings for median islands a minimum of 5'x5' with a maximum slope of 2% in any direction.
18. To use a median island as a pedestrian refuge area, median islands will be a minimum of 6 feet wide. Construct median islands to provide passage over or through the island.
19. Small channelization islands that cannot provide a 5'x5' landing at the top of a curb ramp, will be cut through level with the surface of the street.
20. Curb ramps with returned side curbs may be used only where pedestrians would not normally walk across the ramp such as where there the adjacent surface is plantings, other non-walking surface, or the side approach is substantially obstructed.
21. The typical 2'x4' truncated dome pad shall be placed with the short dimension perpendicular to the curb. See curb ramp typical details. Truncated dome pads shall abutt the back of the curb (ICC/ANSI A117.1 Fig C406.13.2).
22. Curved truncated dome pads are permitted when ramp width is greater than 4 feet.
23. Color contrast required only when detectable warning plates are employed. (ADA Standards for Accessible Design, section 705, Latest Edition). Recommended Min. light reflectance contrast is 70% (American National Standard ICC/ANSI A117.1 - Standard & Commentary Section 705.3, Latest Edition). Painted surface will not be acceptable. (See note 4).
24. Place a 1/2-inch expansion joint where the concrete curb ramp joins/abuts the curb.
25. Curb ramps through median islands, single ramps at dual crosswalks or limited right-of-way situations will be handled by special details. Consult with the Town Engineer.
26. When construction is on a NCDOT Right-of-Way, construction shall conform to the latest edition of the NCDOT Roadway Standard drawings.
27. Construction of curb ramps shall conform to the latest edition of the ICC/ANSI A117, Chapter 4 Accessible Routes.

STANDARD NOTES (continued):

28. Curb ramps shall be provided at locations as shown on these plans or as directed by the engineer. Curb ramps shall be located as indicated in these details; however, the location may be adjusted as directed by the engineer where existing light poles, fire hydrants, drop inlets, etc. Affect placement. At these locations, not less than 2 feet of full height curb shall be placed between adjacent ramps.
29. Use air entrained 3000 psi concrete with a sidewalk finish in order to obtain a rough non-skid type surface.
30. Crosswalk widths and configuration vary but must conform to traffic design standards.
31. Place the inside pedestrian crosswalk lines no closer in the intersection then would be established by bisecting the intersection radii, with an allowance of a 4'x4' maneuvering space (2003 ICC/ANSI a117 Commentary. Fig. C406.6 & 406.10) in the vehicular travel way when one ramp is installed.
32. Place all pavement markings in accordance with the latest edition of the Manual of Uniform Traffic Control Devices (MUTCD) published by the Federal Highway Administration and the North Carolina Supplement to the MUTCD.
33. For asphalt greenways transition greenway to concrete to enable truncated dome placement.
34. Concrete must come from a ready mix concrete truck to ensure mix meets air entrainment requirements. No site mix or sakrete mix allowed.

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RESERVED
FUTURE DETAIL

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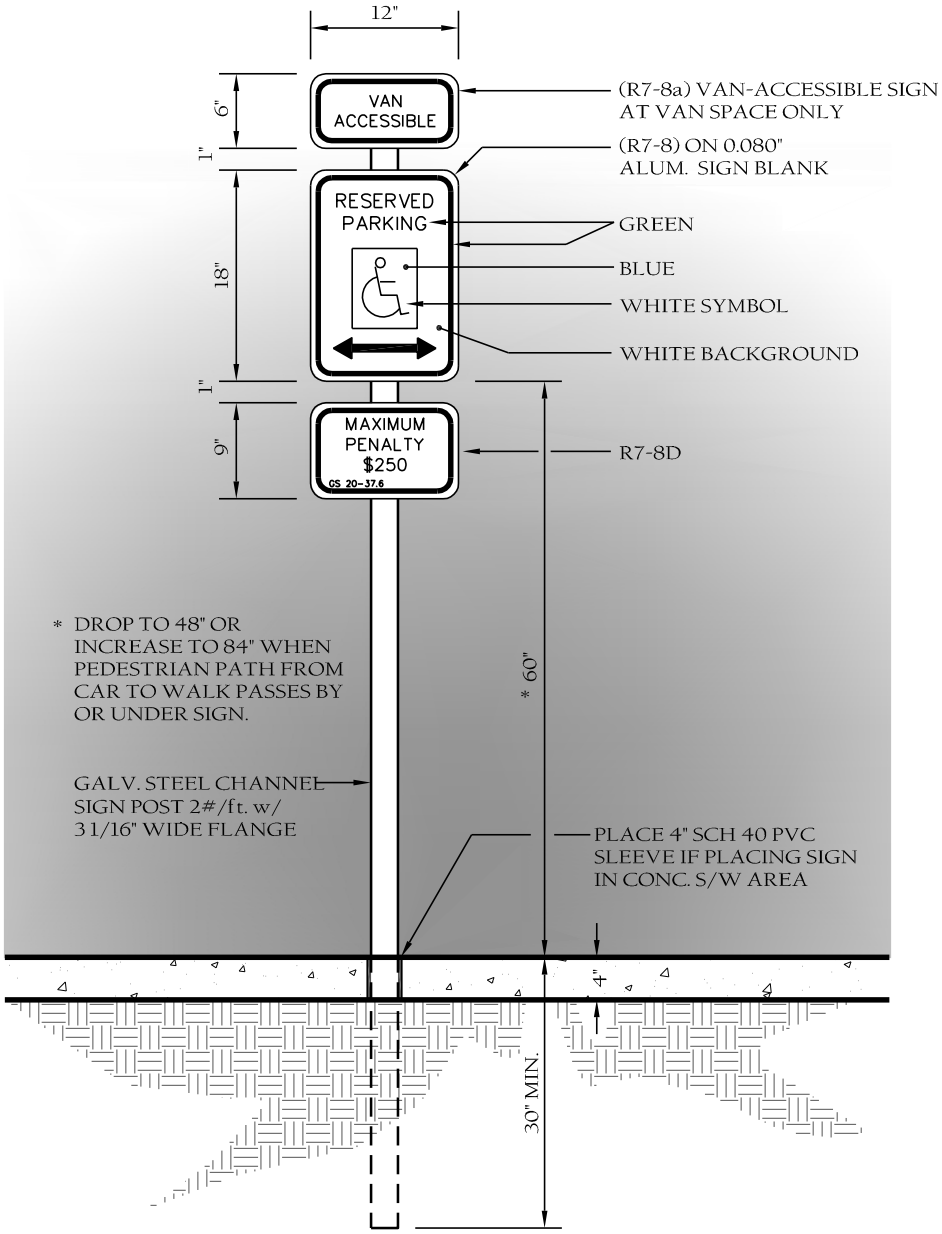

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R7-8 HANDICAP SIGN DETAIL

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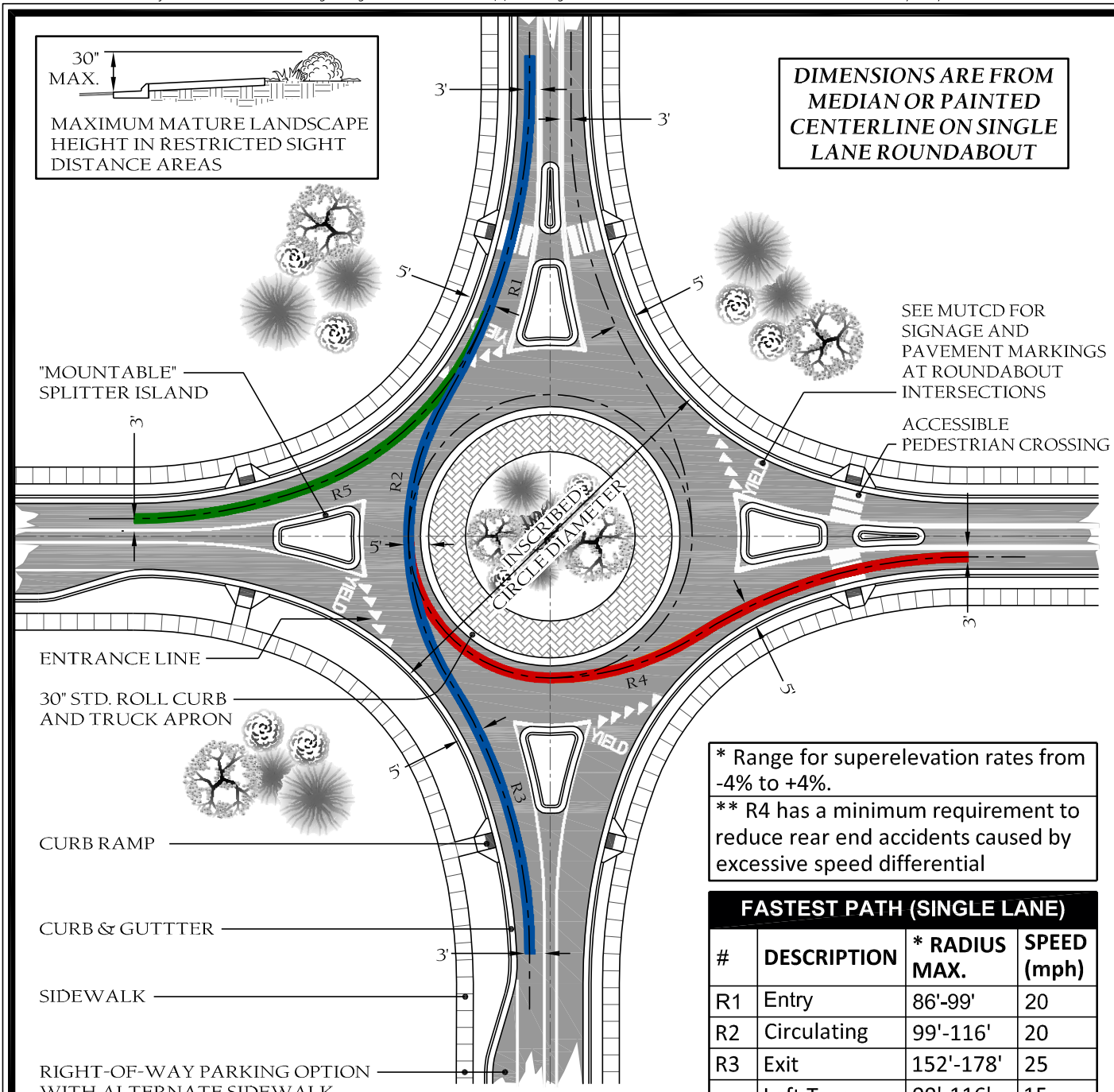

* Range for superelevation rates from -4% to +4%.

** R4 has a minimum requirement to reduce rear end accidents caused by excessive speed differential

FASTEST PATH (SINGLE LANE)

#	DESCRIPTION	* RADIUS MAX.	SPEED (mph)
R1	Entry	86'-99'	20
R2	Circulating	99'-116'	20
R3	Exit	152'-178'	25
R4	Left Turn	99'-116'	15
	Minimum **	18'-20'	10
R5	Right Turn	152'-178'	20

NOTES:

1. *Decision Sight Distance (DSD) and Stopping Sight Distance (SSD) must be checked for horizontal and vertical alignment. DSD & SSD are measured along vehicle path.*
2. *SSD for pedestrians measured to point 6' behind curb.*
3. *Refer to the FHWA Technical Summary on Roundabouts for considerations in the design section & implementation of Roundabouts (FHWA-SA-10-006, latest revision).*

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ROUNDABOUT STANDARD DETAIL

Scale: Not To Scale

Detail #: 9.16

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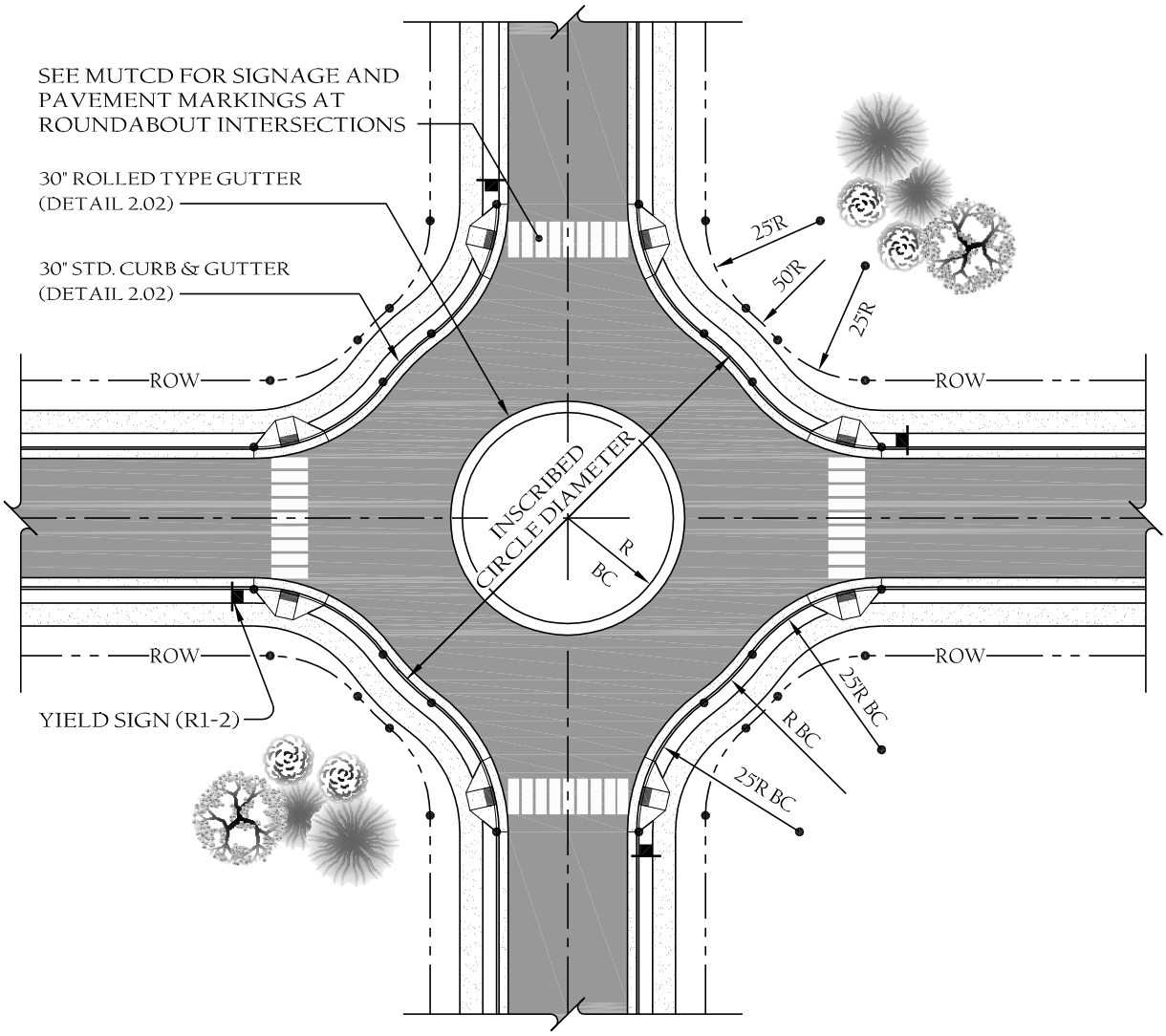

NOTES:

1. *Decision Sight Distance (DSD) and Stopping Sight Distance (SSD) must be checked for horizontal and vertical alignment. DSD & SSD are measured along vehicle path.*
2. *SSD for pedestrians measured to point 6' behind curb.*
3. *Refer to the FHWA Technical Summary on Roundabouts for considerations in the design section & implementation of Neighborhood Traffic Circles (FHWA-SA-10-006, latest revision).*
4. *Dimensions shown are minimum and to be verified with a traffic design. Coordinate design with Town Engineer.*
5. *R1-2 is a MUTCD sign designations (Manual on Uniform Traffic Control Devices.)*

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ROUNDABOUT STANDARD DETAIL

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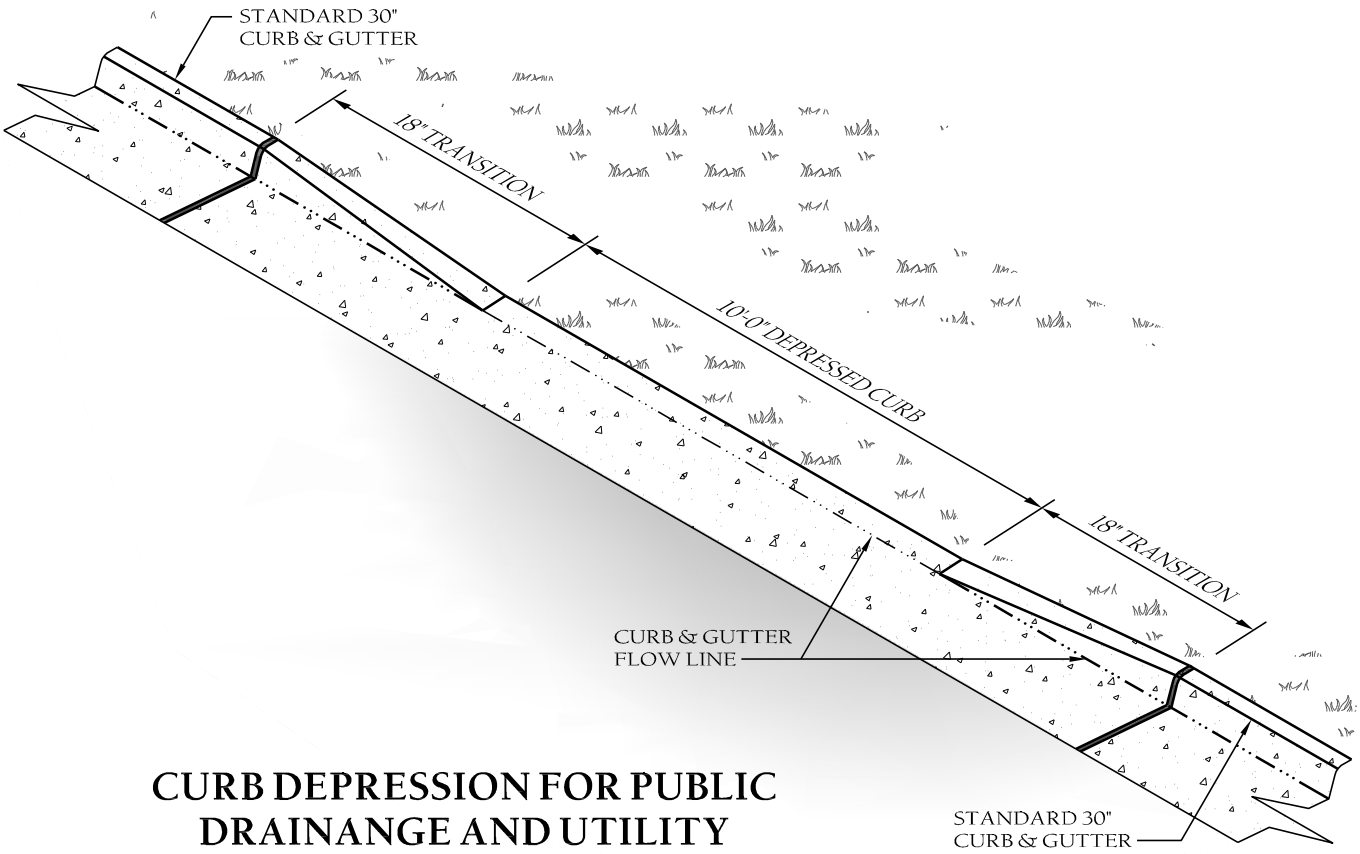

CURB DEPRESSION FOR PUBLIC DRAINANGE AND UTILITY EASEMENT ACCESS

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10' CURB DEPRESSION

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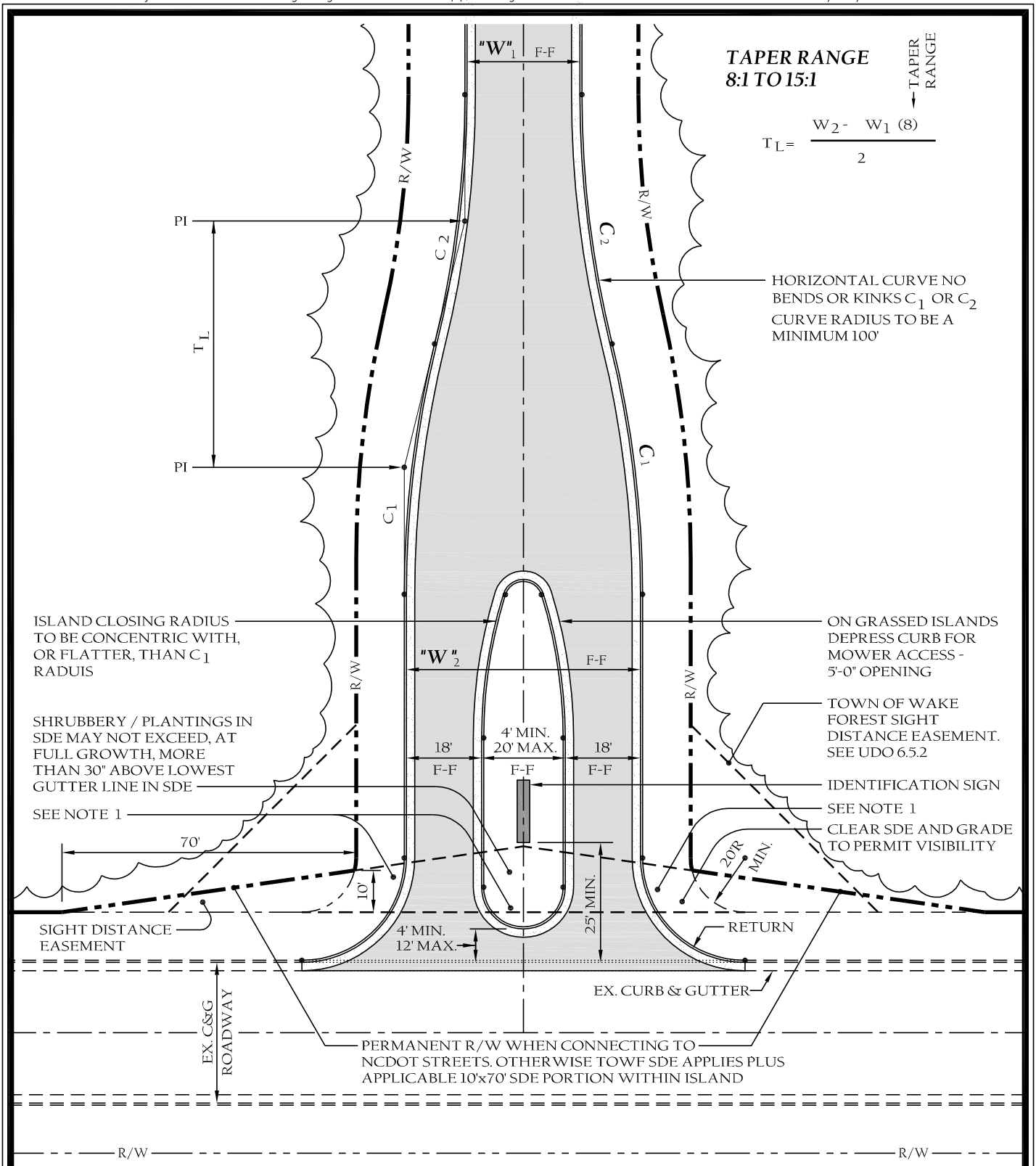

NOTES:

1. Refer to curb ramp details for requirements where sidewalks ar required

TOWN of WAKE FOREST

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ISLAND ENTRANCE TO EXISTING CURB & GUTTER

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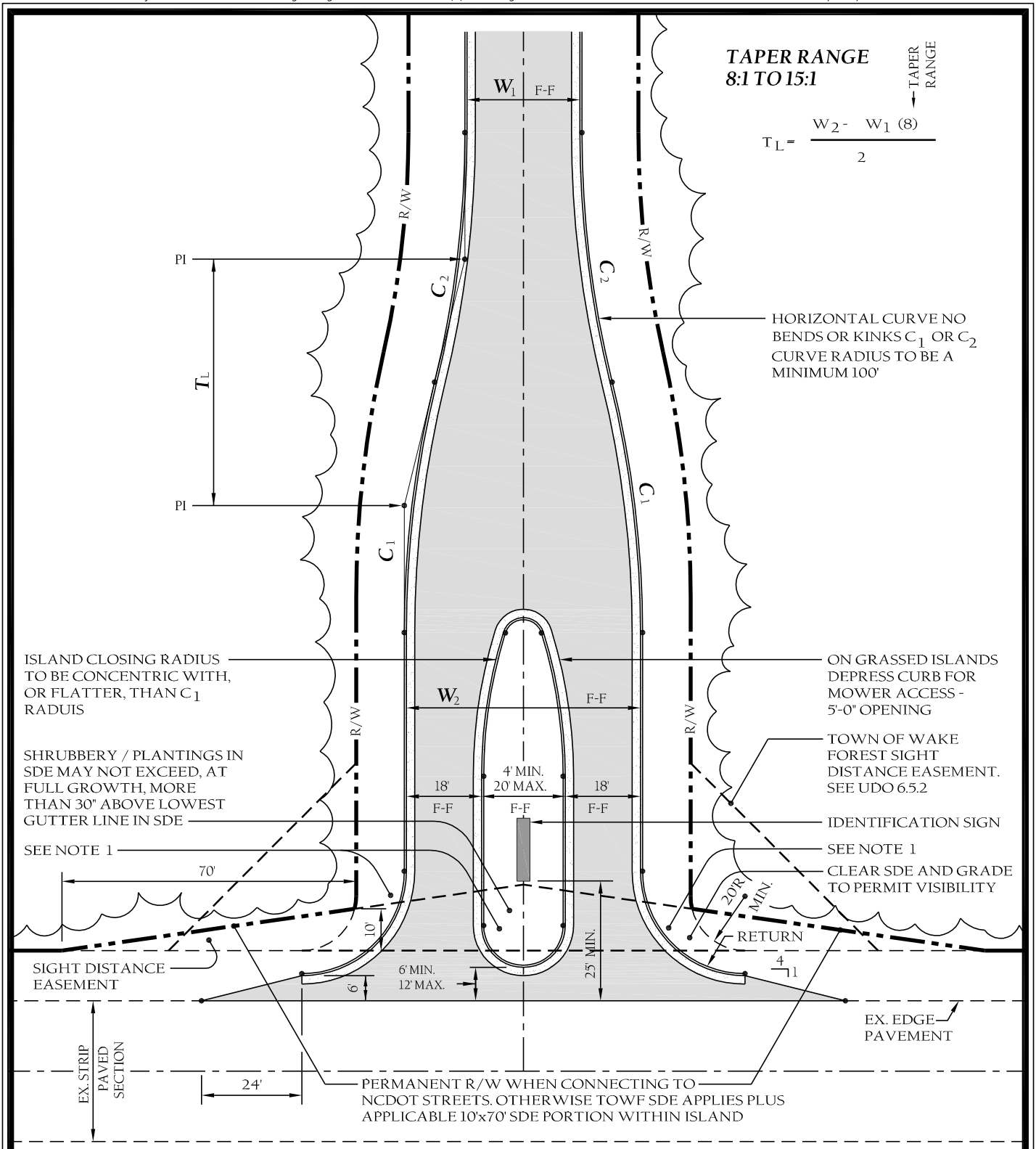

NOTES:

1. Refer to curb ramp details for requirements where sidewalks ar required

TOWN of WAKE FOREST

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ISLAND ENTRANCE TO EXISTING STRIP PAVED

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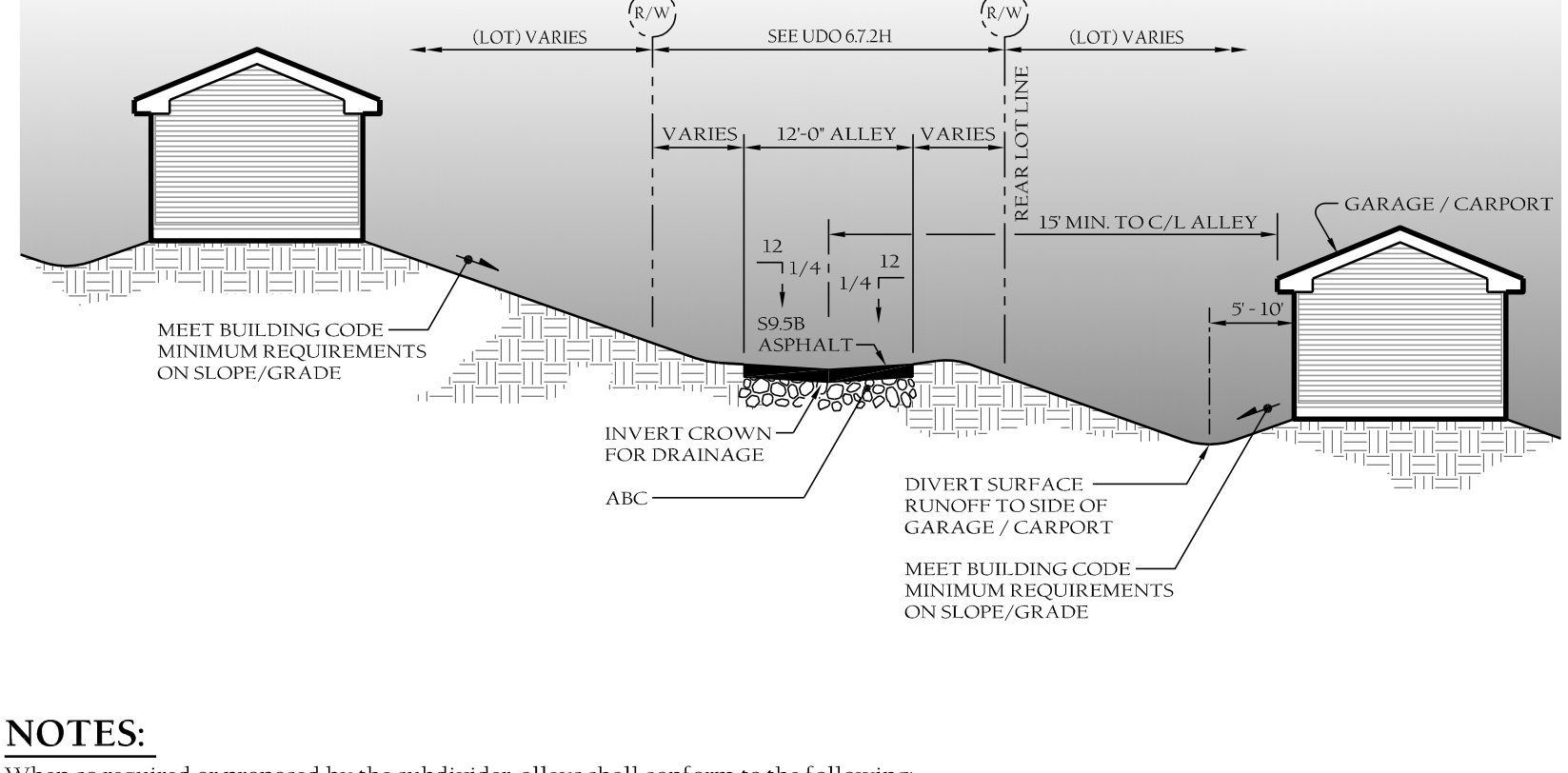
Details Provided by APPIAN Consulting Engineers – www.appianengineers.com 03/09/2015 – 5:23:20 PM



NOTES:

When so required or proposed by the subdivider, alleys shall conform to the following:

1. Property line radius at intersections.....20 ft.
2. Minimum radius to centerline when deflection angle of more than 10 degrees occurs.....35 ft..
3. Pavement radius at intersecting street.....20 ft.
4. See UDO 6.7.2 for other requirements.

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TYPICAL SERVICE ALLEY DETAIL

Scale: Not To Scale

Detail #: 9.20

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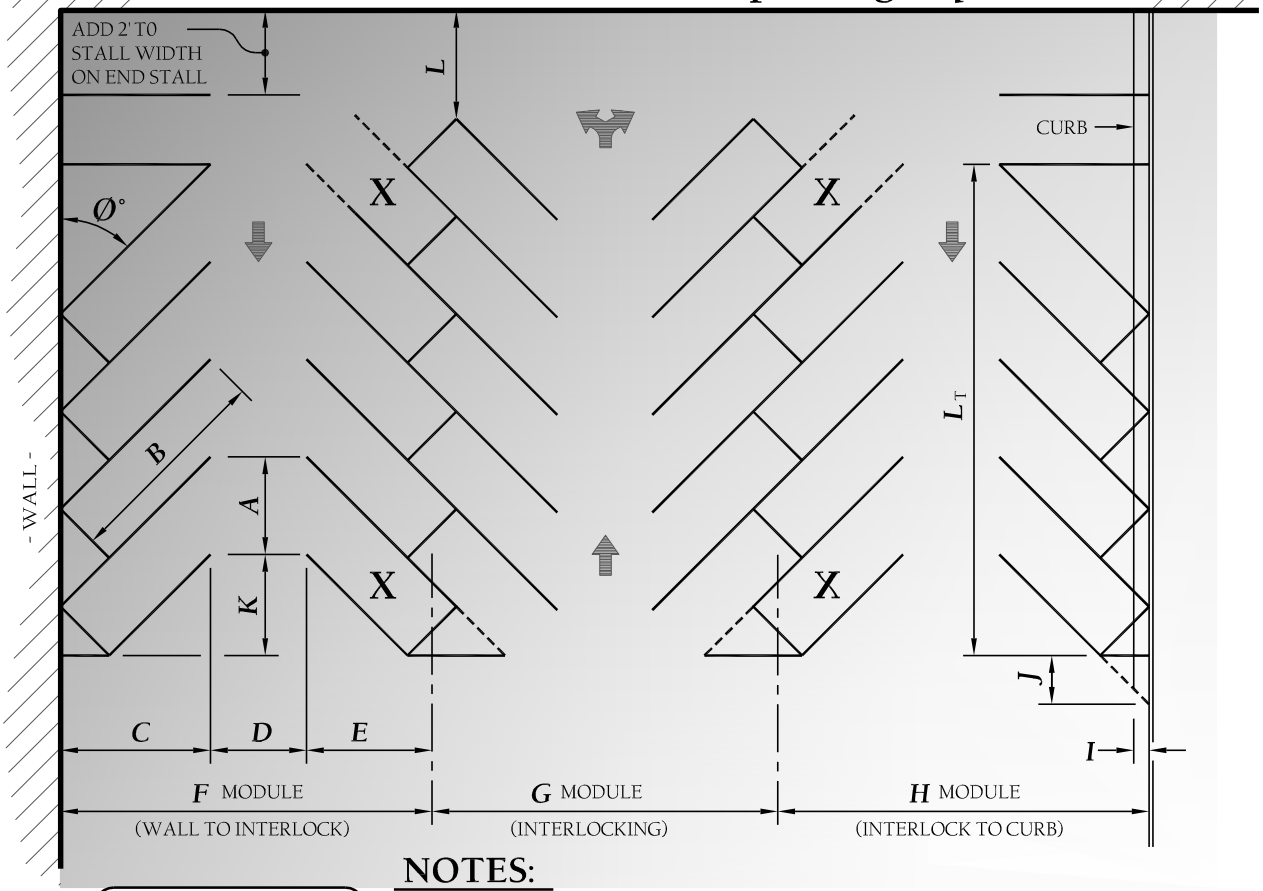
1202

Note: See UDO 9.4 & 9.5 for other parking requirements.



L_T = TOTAL LENGTH AVAILABLE

$\frac{L_T - K}{A}$ = # SPACES PER ROW

NOTES:

X = *STALL NOT ACCESSIBLE IN CERTAIN LAYOUTS*

90° MUST HAVE 2 WAY ISLES

STALL LAYOUT ELEMENTS. SOURCE:
BASED ON PARKING PRINCIPLES, SPECIAL REPORT NO. 125, HIGHWAY RESEARCH BOARD, WASHINGTON, D.C., 1971, P99.

PARKING LAYOUT DIMENSIONS at VARIOUS ANGLES

(DIMENSION IN FEET)

		STANDARD CARS (9'x18.5' STALLS)				COMPACT CARS (8'x16' STALLS)			
		ANGLE Ø°				ANGLE Ø°			
Dimension	*On Diagram*	*45°*	*60°*	*75°*	*90°*	*45°*	*60°*	*75°*	*90°*
Stall width, parallel to aisle	A	12.7	10.4	9.3	9.0	11.3	9.2	8.3	8
Stall length of line	B	27.5	23.7	20.9	18.5	24.0	20.6	18.1	16
Stall depth to wall	C	19.5	20.5	20.0	18.5	17.0	17.9	17.5	16
Aisle width between stall lines	D	12.0	16.0	23.0	26.0	12.0	16.0	20.0	22
Stall depth, interlock	E	16.5	18.5	19.0	18.5	14.2	15.9	16.5	16
Module, wall to interlock	F	48.0	55.0	62.0	63.0	43.2	49.8	54.0	54
Module, interlocking	G	45.0	53.0	61.0	63.0	39.3	47.3	53.0	52
Module, interlock to curb face	H	46.0	52.5	59.5	60.5	40.7	48.0	52.0	50
Bumper overhang (typical)	I	2.0	2.3	2.5	2.5	1.5	1.8	2.0	2
Offset	J	6.4	2.6	0.6	0.0	5.7	2.3	0.6	0
Setback	K	13.1	9.3	4.8	0.0	11.3	8.0	4.1	0
Cross aisle, one-way	L	14.0	14.0	14.0	14.0	13.0	13.0	13.0	13
Cross aisle, two-way	-	24.0	24.0	24.0	24.0	20.0	20.0	20.0	20

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PARKING STALL LAYOUT

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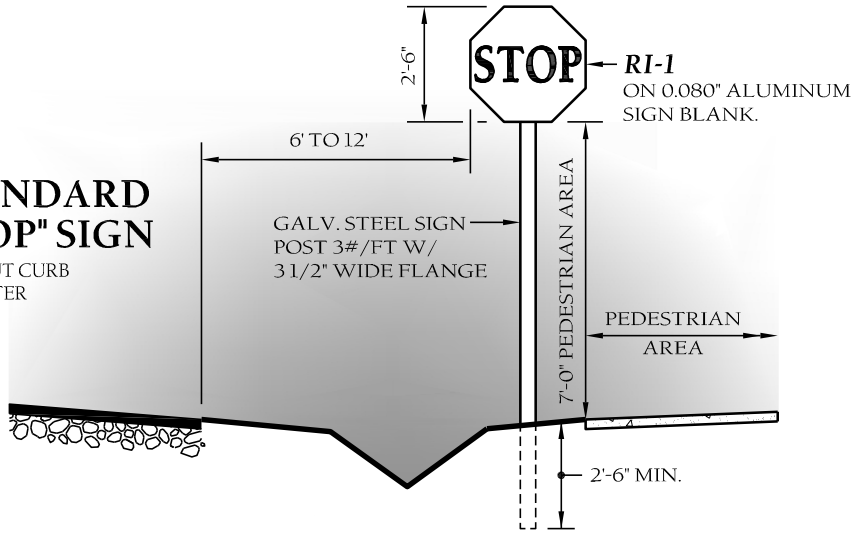
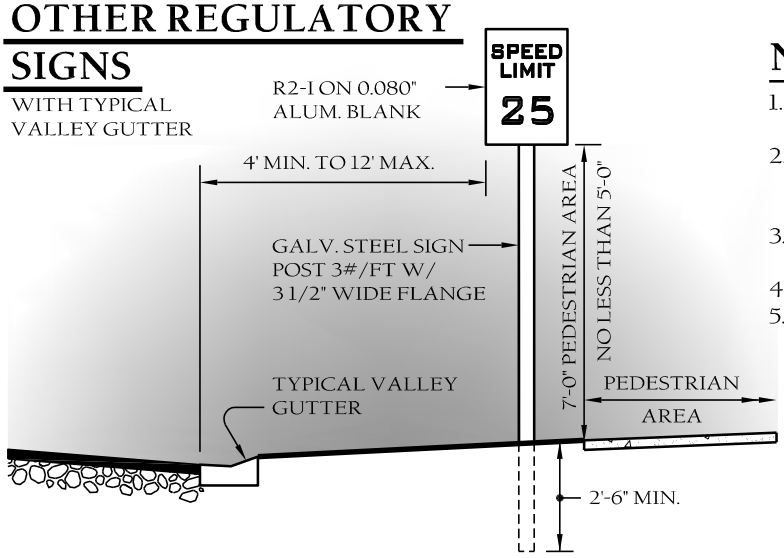
STANDARD "STOP" SIGN

WITHOUT CURB
OR GUTTER



OTHER REGULATORY SIGNS

WITH TYPICAL
VALLEY GUTTER

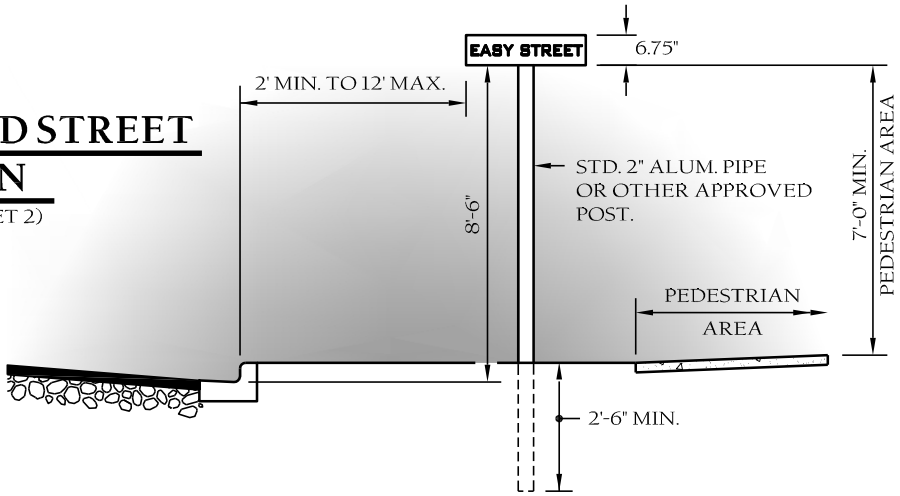


NOTES:

1. Street name signs shall be a minimum of extruded aluminum blades. See sheet 2.
2. All reflective signs shall be made of engineering grade or high intensity grade reflective sheeting or approved equivalent.
3. All signs placed in right-of-way will be approved by town's engineer.
4. Erect street signs plumb.
5. Developer shall be responsible for furnishing & erecting all street name & regulatory signs.

STANDARD STREET NAME SIGN

(SEE NOTES & SHEET 2)
WITH CONCRETE
CURB & GUTTER



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STANDARD SIGN INSTALLATION DETAIL

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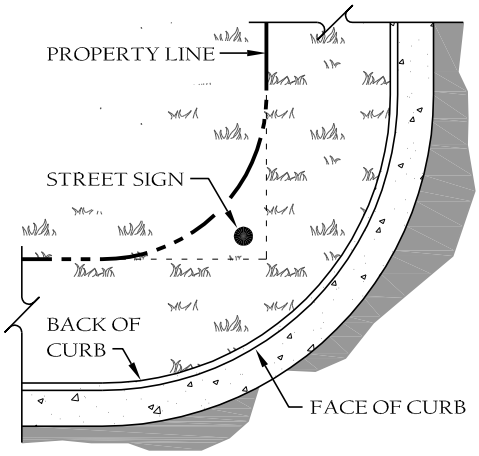
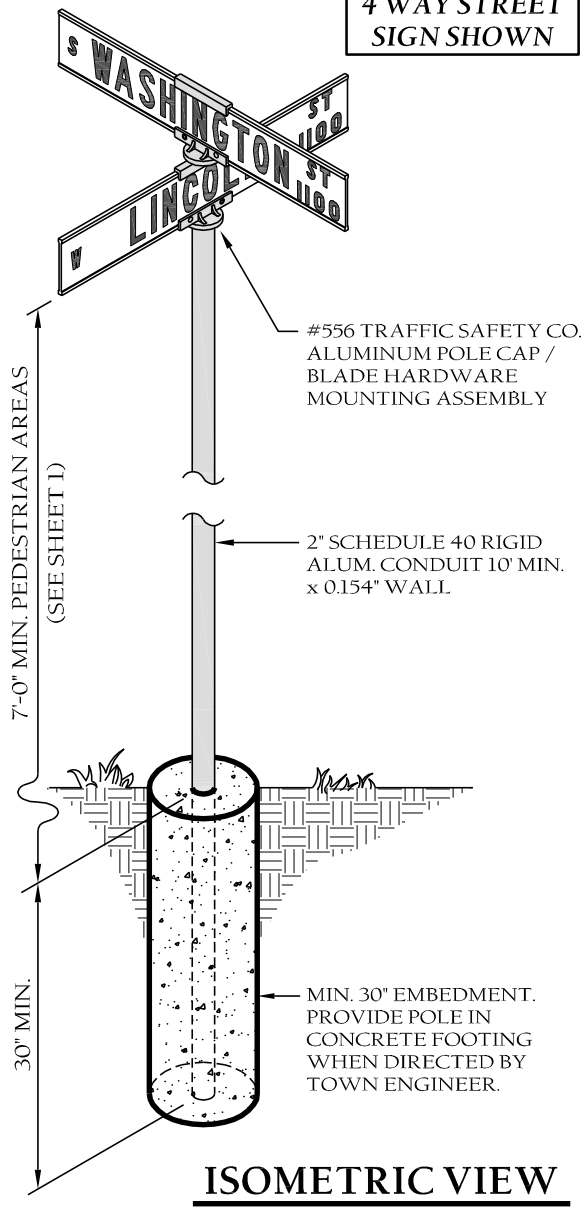
4 WAY STREET SIGN SHOWN



PLAN VIEW



ISOMETRIC VIEW

NOTES:

1. 4" letters to be series "C" (FHWA)
2. 2" letters to be series "C" (FHWA)
   All letters and background materials to be "Scotchlite" or an approved equal and meet I.T.E. Specifications on reflectivity.
3. Sign appearance shall be green background with white letters.
4. Fabricate sign as follows: Base sheeting shall be 3-M 3930 Hi-Intensity Prismatic (or equal). Overlay letter mask using 3-M 1177-C translucent EC green film. (Note: 3-M DG3 material acceptable alternative)
5. Aluminum sign blank materials to be 0.080" thick with extruded aluminum blades.

RECOMMENDED INSTALLATION

1. Street name sign to be one-foot from property line if said lines were extended.
2. Sign blades not to extend past back of curb into road.
3. Sign location to be placed on low side of block numbering.
4. Any exceptions shall be approved by the Town Engineer.
5. Developer responsible for installation of all street signs.

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RESIDENTIAL STREET NAME SIGNS 6 3/4" SIGN HEIGHT

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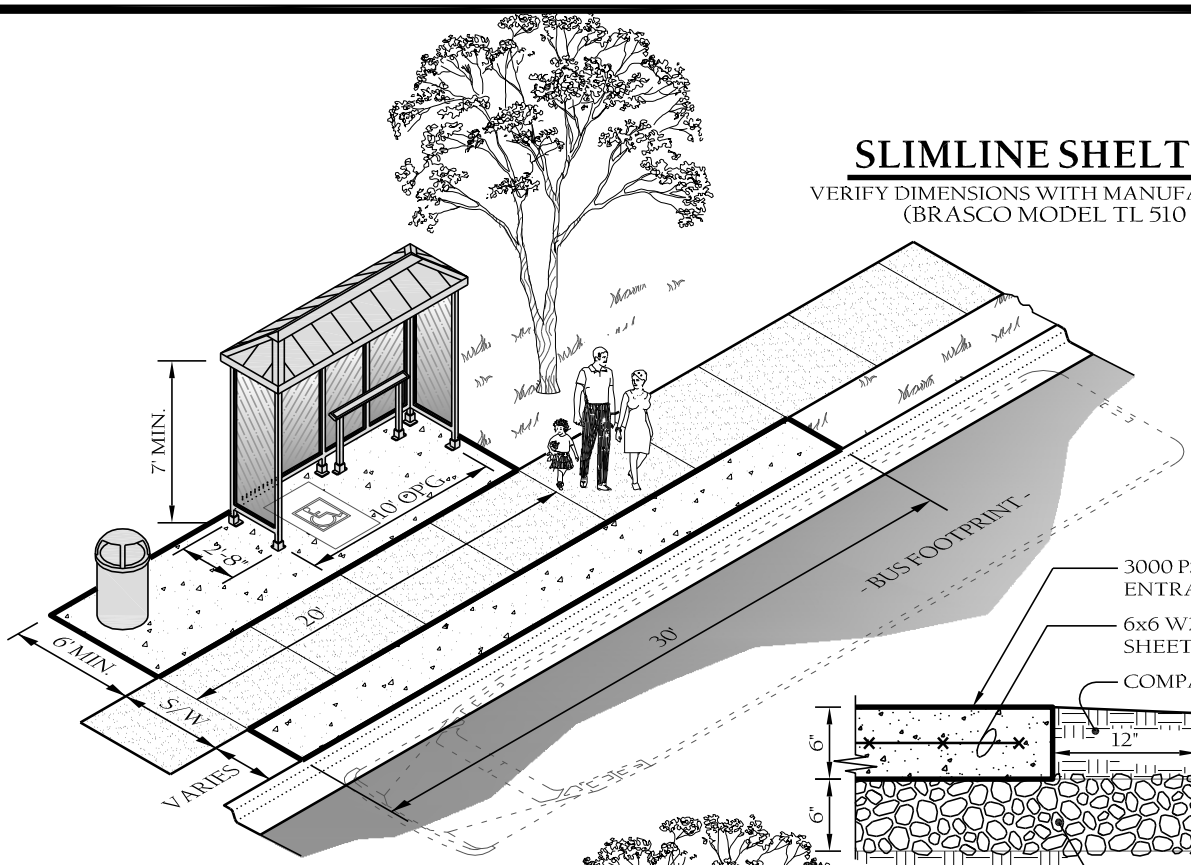
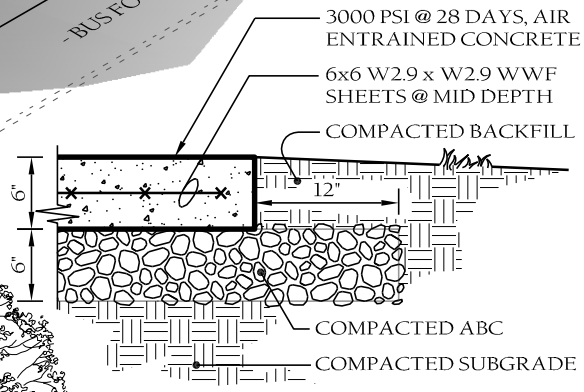
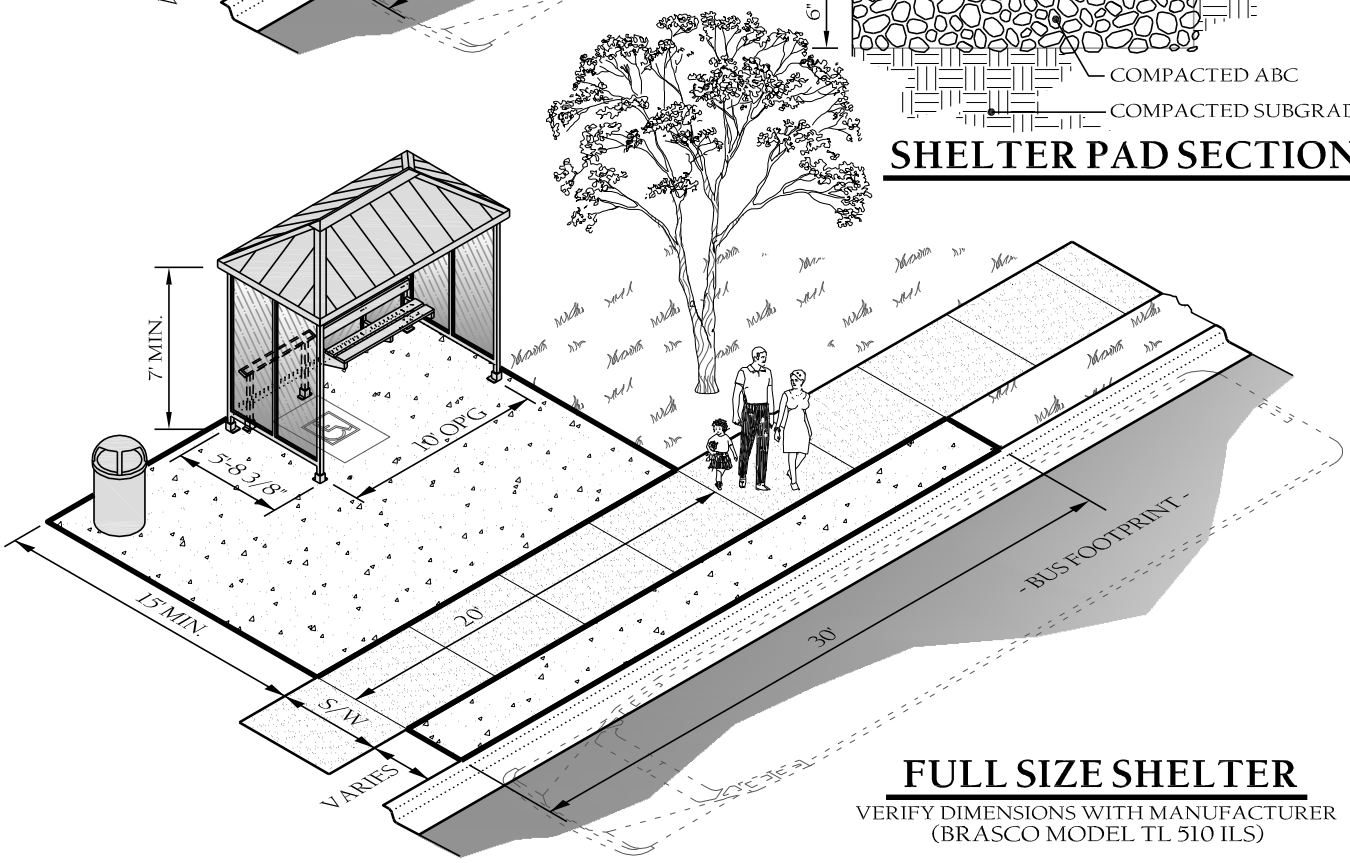


SLIMLINE SHELTER

VERIFY DIMENSIONS WITH MANUFACTURER
(BRASCO MODEL TL 510 C)



SHELTER PAD SECTION



FULL SIZE SHELTER

VERIFY DIMENSIONS WITH MANUFACTURER
(BRASCO MODEL TL 510 ILS)

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BUS SHELTER DETAILS

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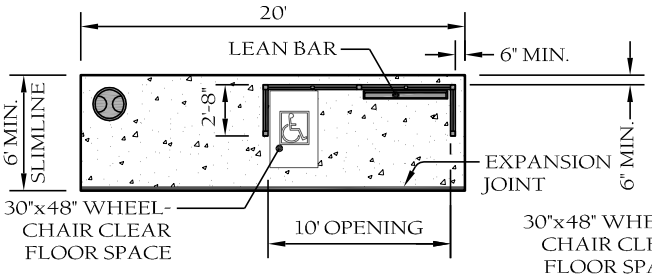
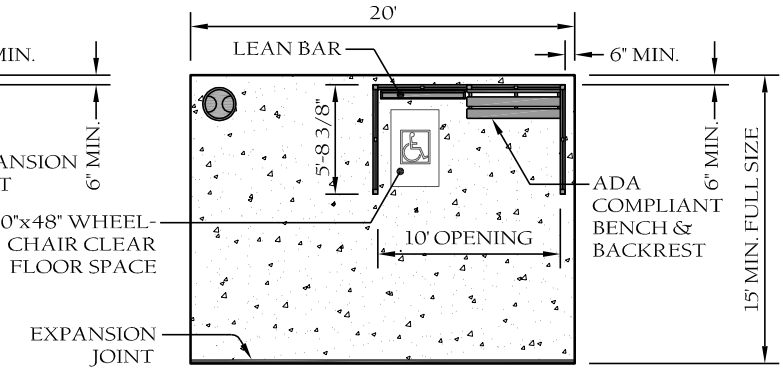


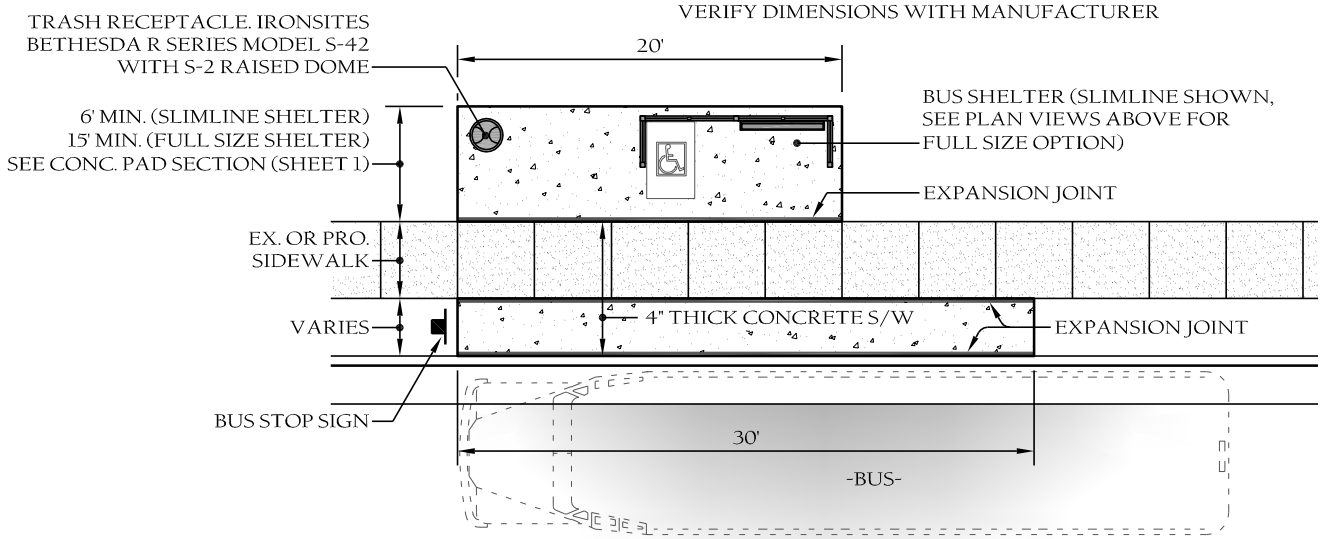
SLIMLINE SHELTER

VERIFY DIMENSIONS WITH MANUFACTURER

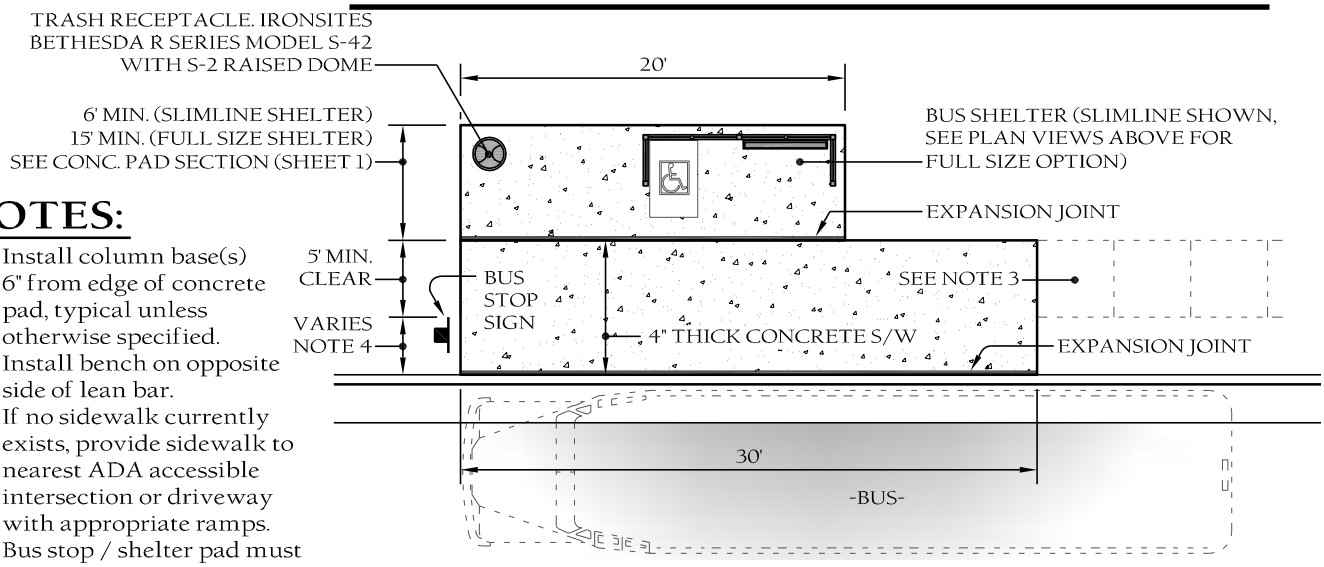


FULL SIZE SHELTER

VERIFY DIMENSIONS WITH MANUFACTURER



SHELTER LAYOUT WITH EXISTING SIDEWALK



SHELTER LAYOUT WITHOUT EXISTING SIDEWALK

NOTES:

1. Install column base(s) 6" from edge of concrete pad, typical unless otherwise specified.
2. Install bench on opposite side of lean bar.
3. If no sidewalk currently exists, provide sidewalk to nearest ADA accessible intersection or driveway with appropriate ramps.
4. Bus stop / shelter pad must be clear of utility poles, fire hydrants & other similar obstacles.
5. See UDO 6.7.2.

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BUS SHELTER DETAILS

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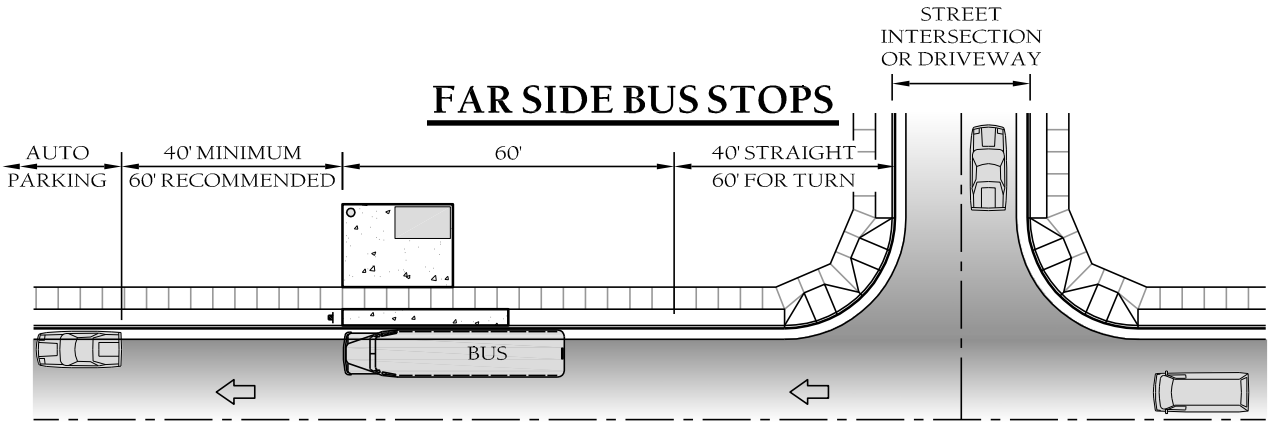
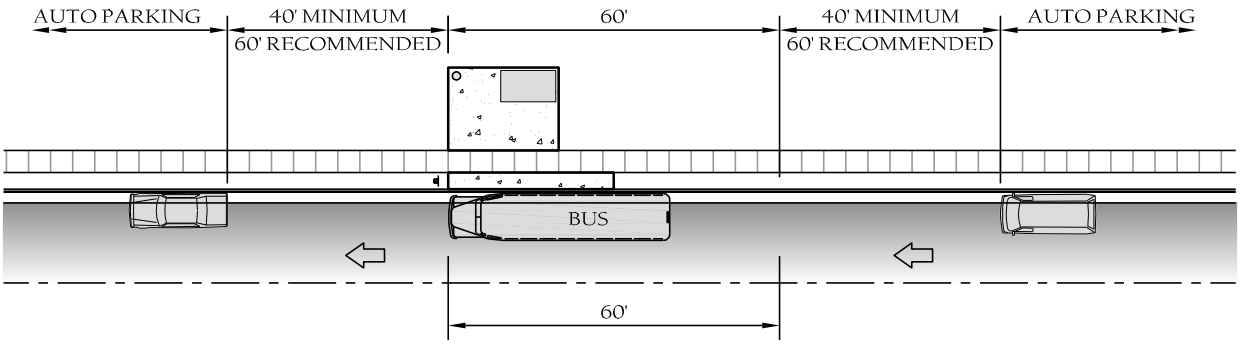
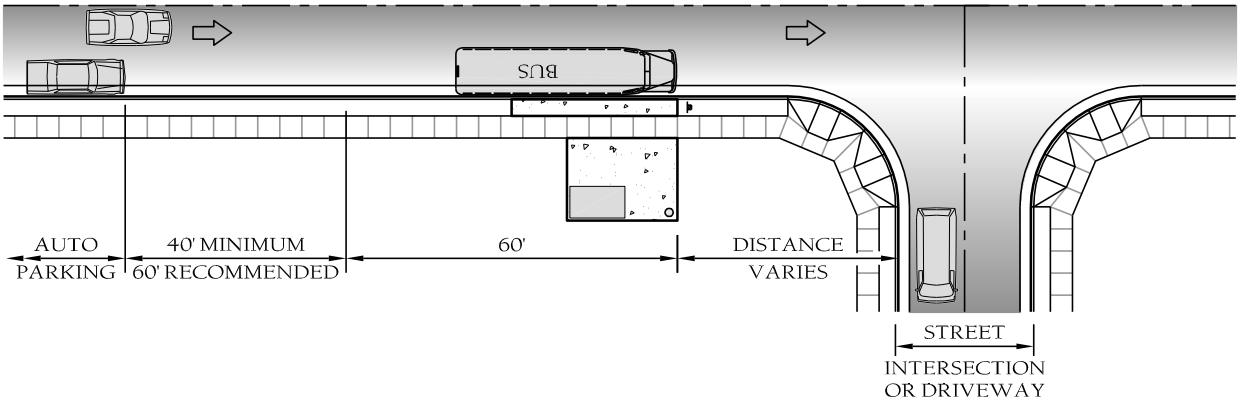
FAR SIDE BUS STOPS



MID BLOCK BUS STOPS



NEAR SIDE BUS STOPS



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BUS SHELTER DETAILS

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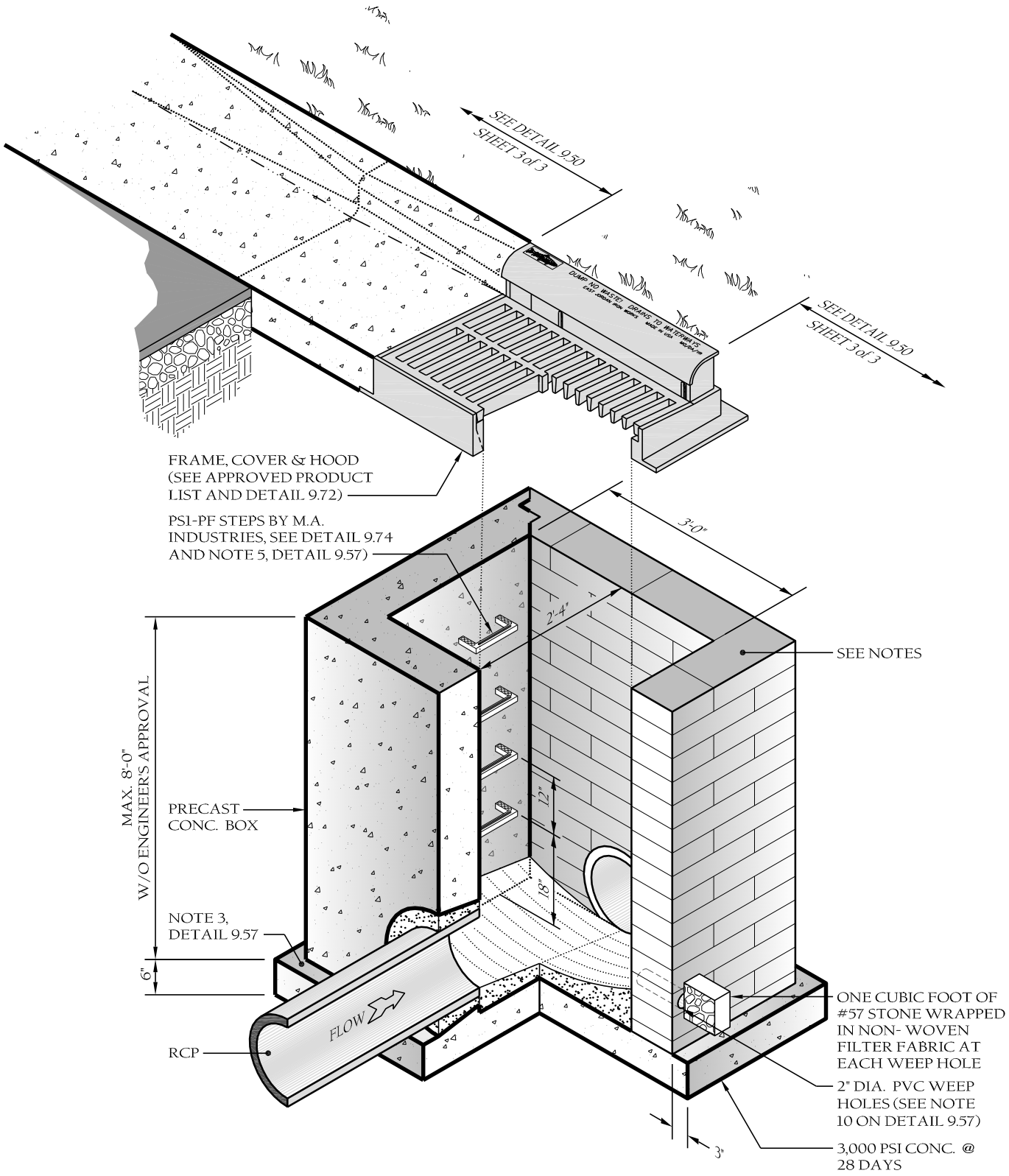

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STD. C&G INLET W/HOOD DETAIL

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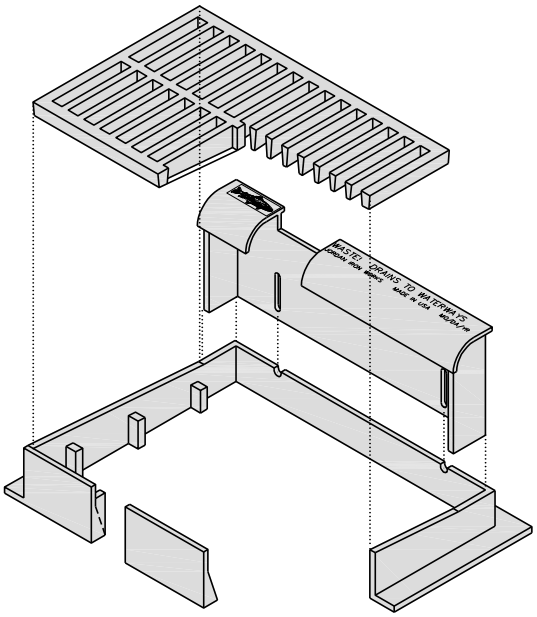
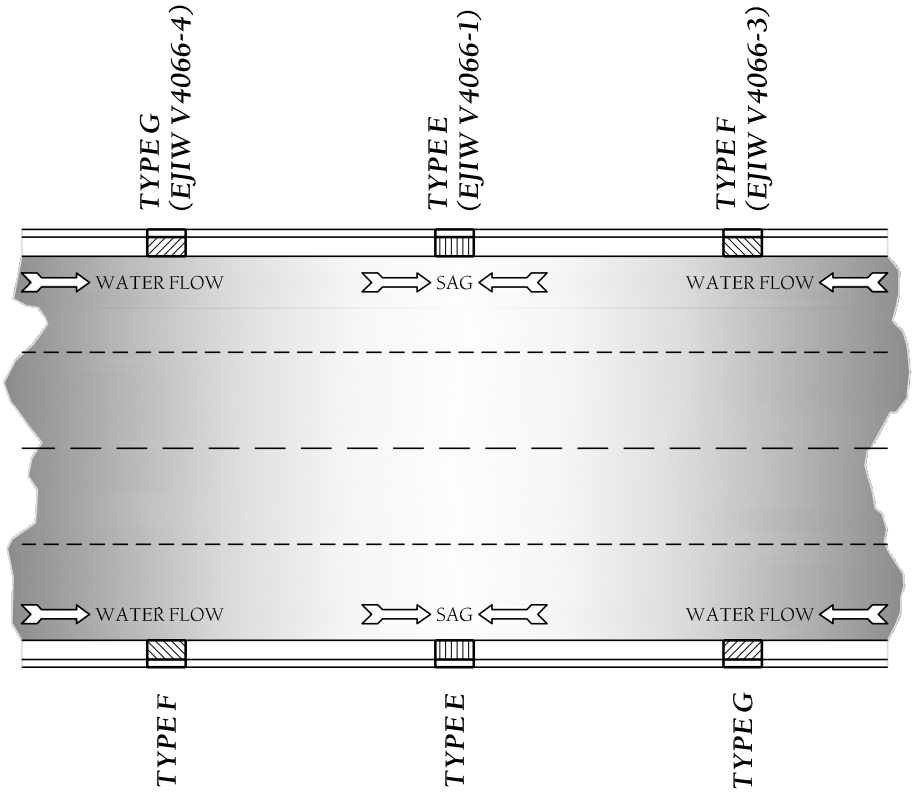
- SEE DETAIL 9.72 AND PRE-APPROVED PRODUCT LIST. (NCDOT DETAIL 840.03 - SHOWN WITH TYPE "E" GRATE) HEAVY DUTY FRAME, COVER & HOOD
- BIKE-FRIENDLY GRATES ARE REQUIRED AT BIKE/PEDESTRIAN CORRIDORS.





DETAIL SHOWING TYPES OF GRATES TO BE USED ACCORDING TO WATER FLOW

TOWN of WAKE FOREST

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STD. C&G INLET W/HOOD DETAIL

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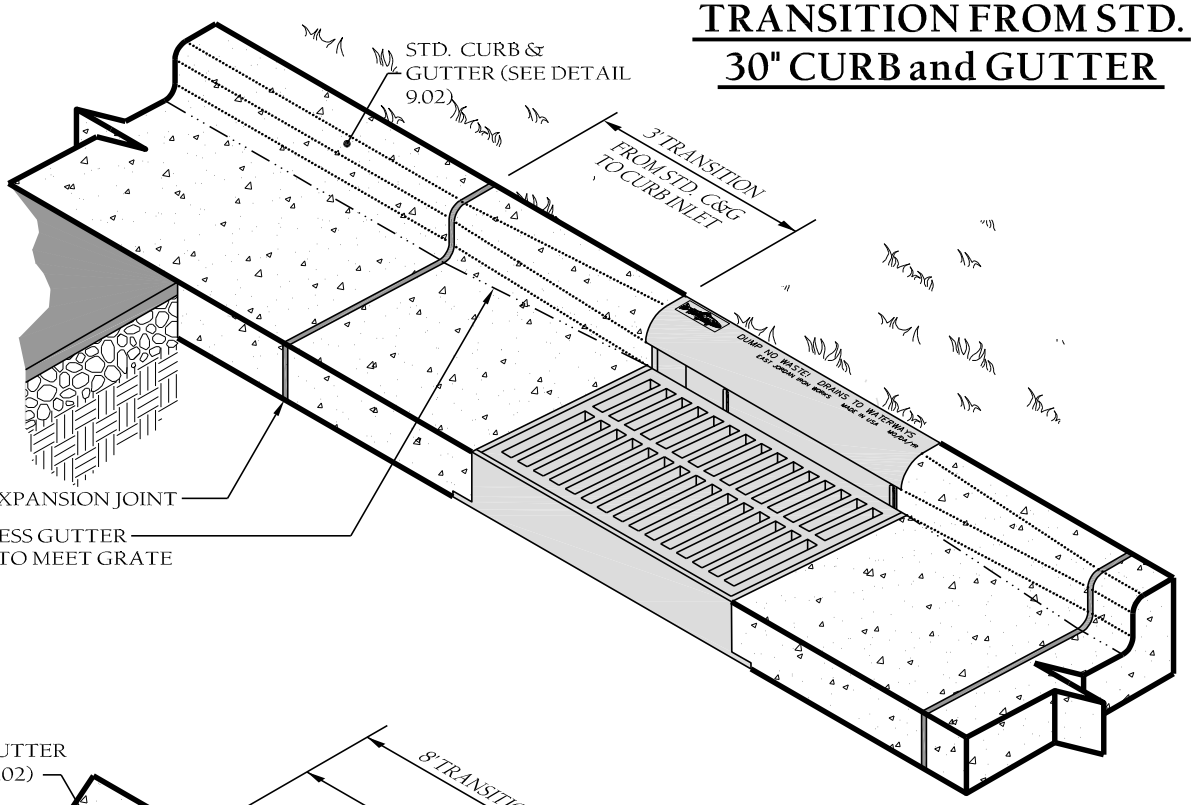
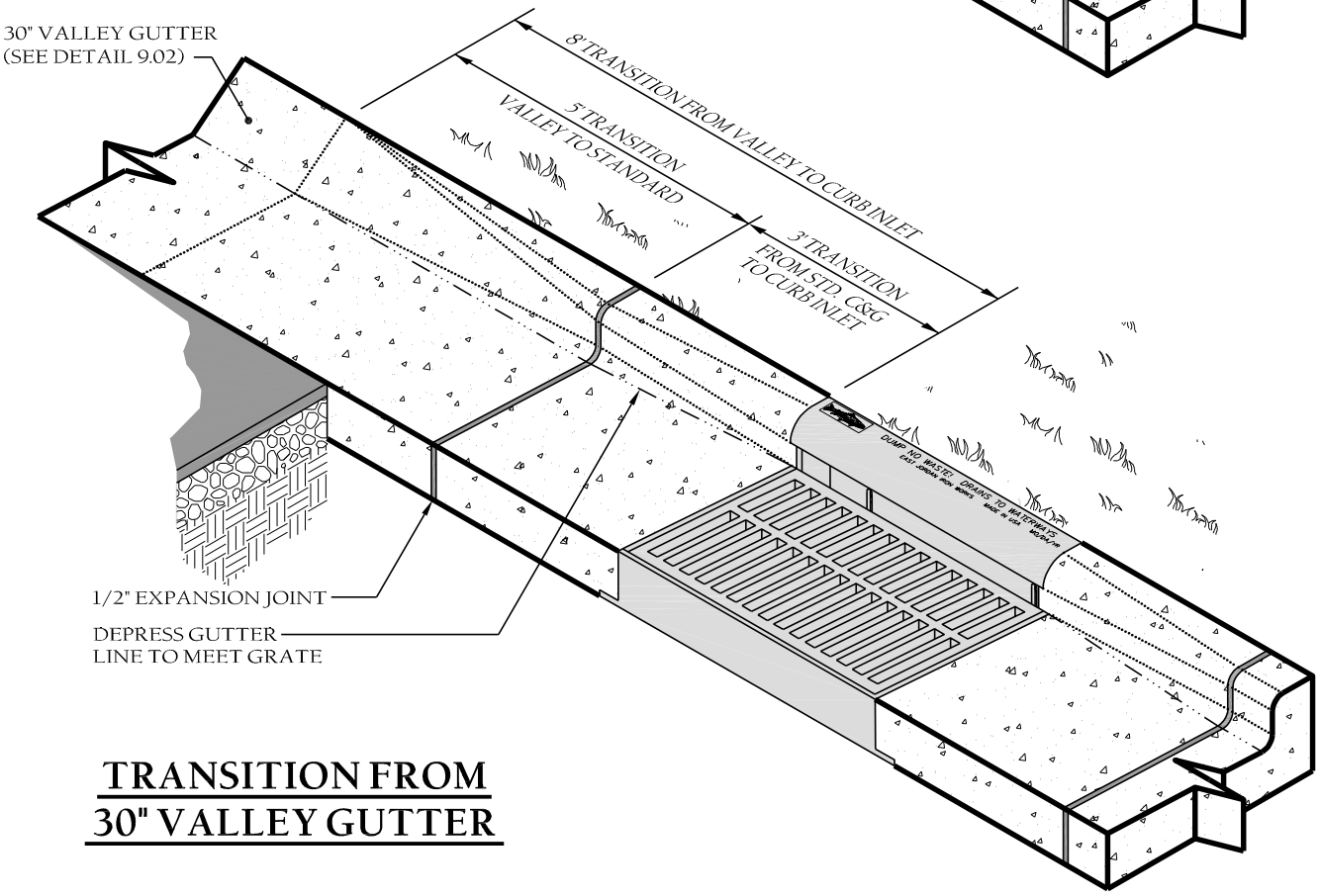
TRANSITION FROM STD. 30" CURB and GUTTER





TRANSITION FROM 30" VALLEY GUTTER

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STD. C&G INLET W/HOOD DETAIL

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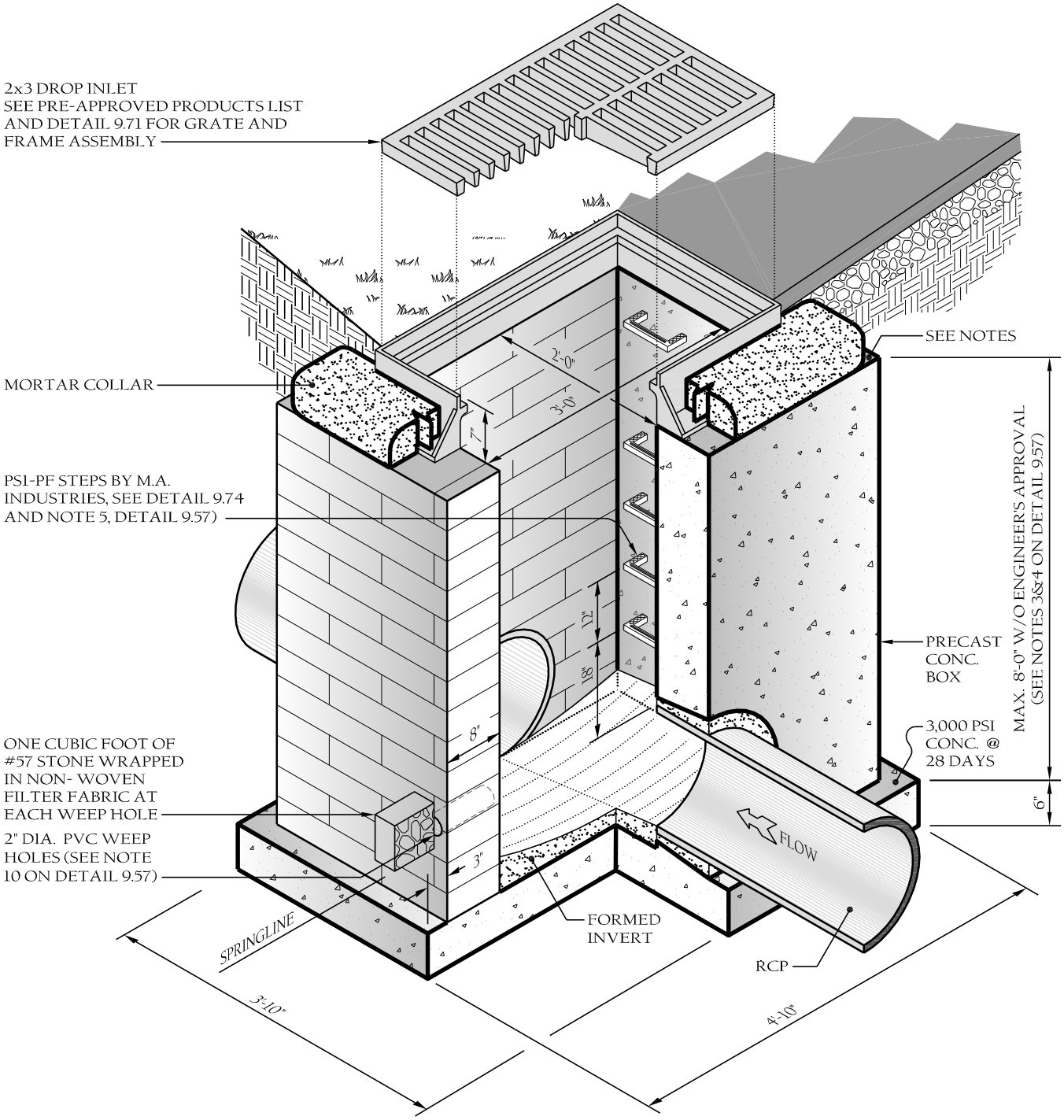

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TOWN of WAKE FOREST

STANDARD 2x3 CATCH BASIN

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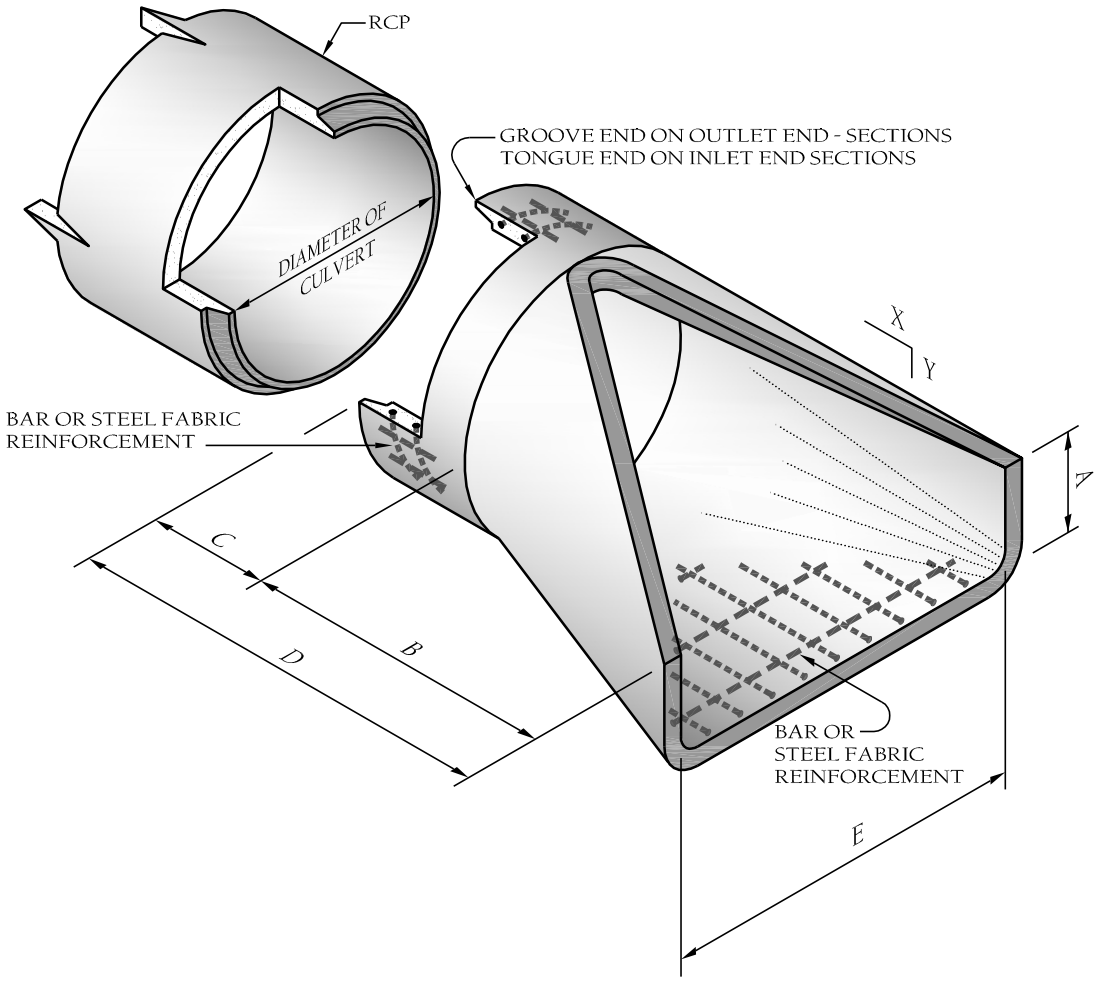
END SECTION DIMENSIONS						
DIA.	A	B	C	D	E	X:Y
15"	6"	2'-3"	3'-10"	6'-1"	2'-8:	2.4:1
18"	9"	2'-3"	3'-10"	6'-1"	3'-0"	2.4:1
24"	10"	3'-8"	2'-6"	6'-2"	4'-0"	2.3:1
30"	1'-0"	4'-6"	1'-8"	6'-2"	5'-0"	2.5:1
36"	1'-3"	5'-3"	2'-11"	8'-2"	6'-0"	2.5:1
42"	1'-9"	5'-3"	2'-11"	8'-2"	6'-6"	2.5:1



NOTES:

1. *Design Of End-section Shall Conform To Standard Reinforced Sectional Concrete Culvert Pipe.*
2. *Any Twin Barrel System Greater Than 42" Rcp Requires a headwall.*
3. *Any System Of More Than 2 Pipes Requires a headwall.*
4. *See NCDOT "Roadway Standard Drawings" for headwall construction details.*
5. *See Erosion & Sedimentation Manual for dissipation pad design requirements.*

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STD. FLARED END SECTIONS DESIGN AID DETAIL

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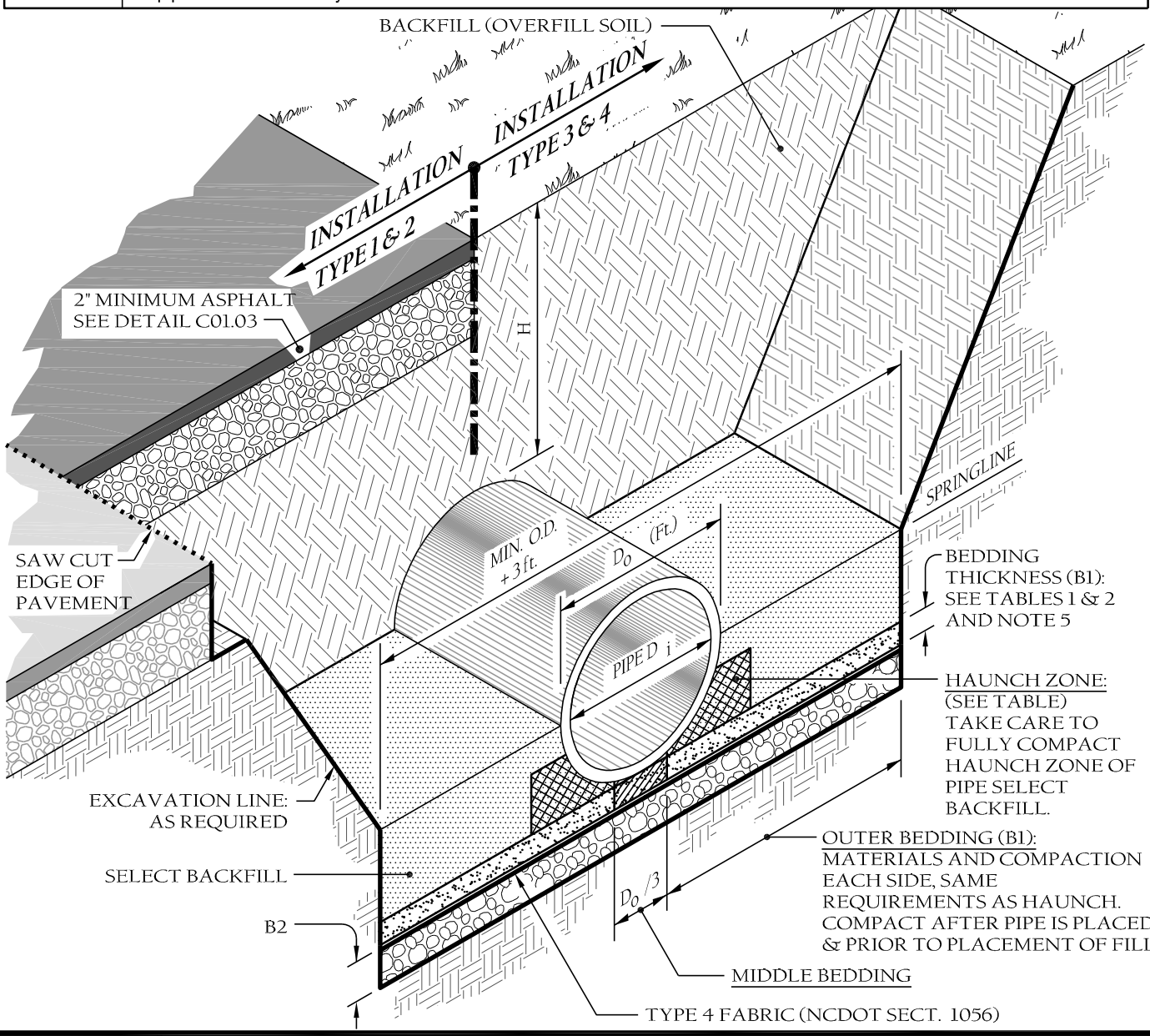
H=	The fill height measured vertically at any point along the pipe from the top of the pipe to the top of the embankment at that point. Do not operate heavy equipment over any pipe culvert until the pipe culvert has been properly backfilled and covered with at least 3 feet of approved material.
	Undisturbed earth material
	Bedding (Middle and Outer): Loosely placed select backfill material meeting NCDOT Class **II**, Type 1 (washed or unwashed crushed stone screenings) or Class **III**, Type 1 (NCDOT 2S or 2MS fine aggregate). Leave section directly beneath pipe uncompacted as pipe seating and backfill will accomplish compaction.
	Select Backfill (Below springline): Select backfill material meeting NCDOT Class **II**, Types 1 or 2 or NCDOT Class **III**, Types 1 or 2.
	Backfill: Approved suitable local compactable material above springline of pipe meeting Town of Wake Forest specifications.
	Rock Foundation or Unsuitable Material Foundation: Select material NCDOT Class V (#78M stone) or NCDOT Class VI (#57 stone) for foundation conditioning. Encapsulate with engineering fabric as directed by the Engineer; Type 4 soil stabilization fabric (NCDOT Table 1056-1). Overlap all transverse and longitudinal joints in fabric at least 18 inches. Maintain the pipe foundation in a dry condition.



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STORM DRAIN PIPE INSTALLATION

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Table 1
Equivalent USCS[a] and AASHTO Soil Classifications for SIDD[b] Soil Designations

SIDD	USCS	NCDOT/AASHTO
Gravelly Sand (Category I)	SW, SP, GW, GP	- NCDOT Class II-Type I (crushed stone screenings), LL < 30; PI ≤ 6. - NCDOT Class III, Type 1 (2S or 2MS), LL < 30; PI ≤ 6.
Sandy Silt (Category II)	GM, SM, Also GC, SC with less than 20% passing #200 sieve	- NCDOT Class II Type 1 (crushed stone screenings) and Class II, Type 2 (AASHTO M145 for A-2-4 with maximum PI of 6, A-4 w/ max 45% passing No. 200 Sieve and a maximum PI of 6) - NCDOT Class III, Type 1 (2S or 2MS) or Class III, Type 2 (AASHTO M145 for soil classification A-1 or A-3)
Silty Clay (Category III)	CL, MH, GC, SC	A5, A6

[a] Unified Soil Classification System
[b] Standard Installations Direct Design

Table 2
Standard Installations Soils and Minimum Compaction Requirements

Installation Type	Bedding Thickness	Outer Bedding (B1) Note 5 (% compaction/Category)	Haunch Zone & Select Backfill Area (% compaction/Category)	Location
Type 1	B1 = Di/6 (6" min) B2 = If Rock foundation or over unsuitable foundation, ½"/ft of 'H', 12" min/24" max	95% Category I	90% Category I, 95% Category II	Paved Areas with 2' or less bury
Type 2	B1 = Di/6 (6" min) B2 = If Rock foundation or over unsuitable foundation, ½"/ft of 'H', 12" min/24" max	90% Category I	85% Category I, 90% Category II	Paved Areas with greater than 2' of bury
Type 3	B1 = Di/6 (6" min) B2 = If Rock foundation or over unsuitable foundation, ½"/ft of 'H', 12" min/24" max	85% Category I 90% Category II	85% Category I, 90% Category II, or 95% Category III	In R/W outside of Pavement
Type 4	B1 = Di/6 (6" min) B2 = If Rock foundation or over unsuitable foundation, ½"/ft of 'H', 12" min/24" max	No Compaction required, except if Category III, use 85% Category III	No Compaction required, except if Category III, use 85% Category III	Natural Areas

NOTES:

1. *Compaction and soil symbols - i.e. "95% Category I" - refers to Category I soil material with minimum standard Proctor compaction of 95%.*
2. *Soil in the outer bedding, haunch, and lower side zones, except under the middle 1/3 of the pipe, shall be compacted to at least the same compaction as the majority of the soil in the overfill (backfill) zone.*
3. *For trenches, the top elevation shall be no lower than 0.1H below finished grade or, for roadways, its top shall be no lower than an elevation of 1-foot below the bottom of the pavement base material.*
4. *For trenches, the width shall be wider than shown if required for adequate space to attain the specified compaction in the haunch and bedding zones.*
5. *Compact outer bedding after pipe is placed and prior to placement of select fill. Middle bedding is uncompacted.*
6. *Overfill (Backfill) soils to be placed per standard specification 02700 Storm Drainage for the applicable backfill type and bury limitations.*
7. *These two tables were excerpted from Design Data 9 and modified to generally conform to the NCDOT Standards as shown in Detail 300.01, Rigid Pipe in Trench Condition.*

Reference Sources:

1. *ACPA Design Data 9 [April, 2009] (formerly Design Data 40).*
2. *2012 NCDOT Standard Specifications for Roads and Structures and NCDOT Standard Details 300.01 for Rigid Pipe, "Trench Condition."*

Fill Height Table[a]

	Type 3 (Bedding) Installation (0.01 Inch Crack)		Type 4 (Bedding) Installation (0.01 Inch Crack)	
Inside Pipe Diameter D_i (inches)	Class III Pipe Maximum Bury H (feet)	Class IV Pipe Maximum Bury H (feet)	Class III Pipe Maximum Bury H (feet)	Class IV Pipe Maximum Bury H (feet)
15	2 min, 12 max	1 min, 20 max	3 min, 7 max	2 min, 12 max
18	2 min, 12 max	1 min, 20 max	3 min, 7 max	1 min, 13 max
24	1 min, 12 max	1 min, 20 max	2 min, 8 max	1 min, 13 max
30	1 min, 12 max	1 min, 20 max	1 min, 8 max	1 min, 13 max
36	1 min, 12 max	1 min, 20 max	1 min, 8 max	1 min, 13 max
42	1 min, 12 max	1 min, 20 max	1 min, 8 max	1 min, 13 max
48	1 min, 12 max	1 min, 19 max	1 min, 8 max	1 min, 13 max
54	1 min, 12 max	1 min, 19 max	1 min, 8 max	1 min, 13 max
60	1 min, 12 max	1 min, 19 max	1 min, 8 max	1 min, 13 max
72	1 min, 11 max	1 min, 19 max	1 min, 7 max	1 min, 13 max

Fill Height Tables Based On:

1. Ys= 120 pcf (backfill load)
2. AASHTO HL-93 live load
3. Positive Projecting Embankment Condition (this gives conservative results in comparison to trench conditions).
4. Pipe = Reinforced Concrete Pipe meeting ASTM C76 (AASHTO M170), wall C thickness.
5. Concrete pipe should be installed in accordance with AASHTO LRFD Bridge Construction Specifications, Section 27 or ASTM C1479.

[a]Fill Height Tables, the portion excerpted here, was developed by the American Concrete Pipe Association (ACPA) using the indirect design method in accordance with Section 12.10.4.3 of the AASHTO LRFD Bridge Design Specification, 4th Edition, 2007 with 2008 Interim.

NOTES:

1. *Greater bury depths than those shown above are achievable by either using Type 1 or 2 Installation, using Class V pipe, controlling backfill type, calculating depth using a trench condition, or by Special Design. See also Design Data 9 published by the ACPA for design methodology.*
2. *In lieu of calculating bury depth for other conditions, first see "LRFD Fill Height Tables for Concrete Pipe", last revised July 2009 (or later), prepared by the ACPA for other bury depth possibilities.*

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STORM DRAIN PIPE INSTALLATION

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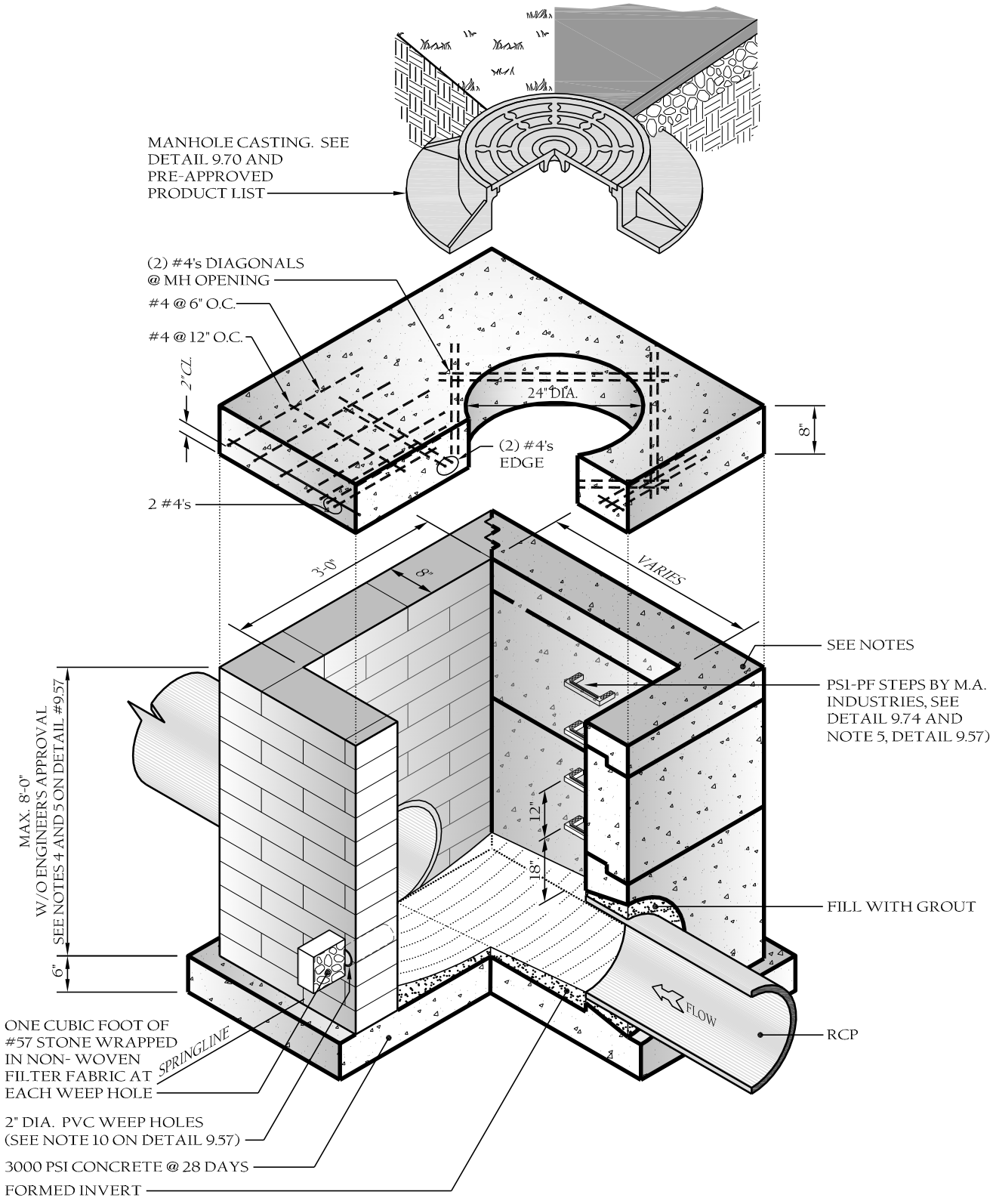

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STD. M.H. J.B. VARIABLE LENGTH

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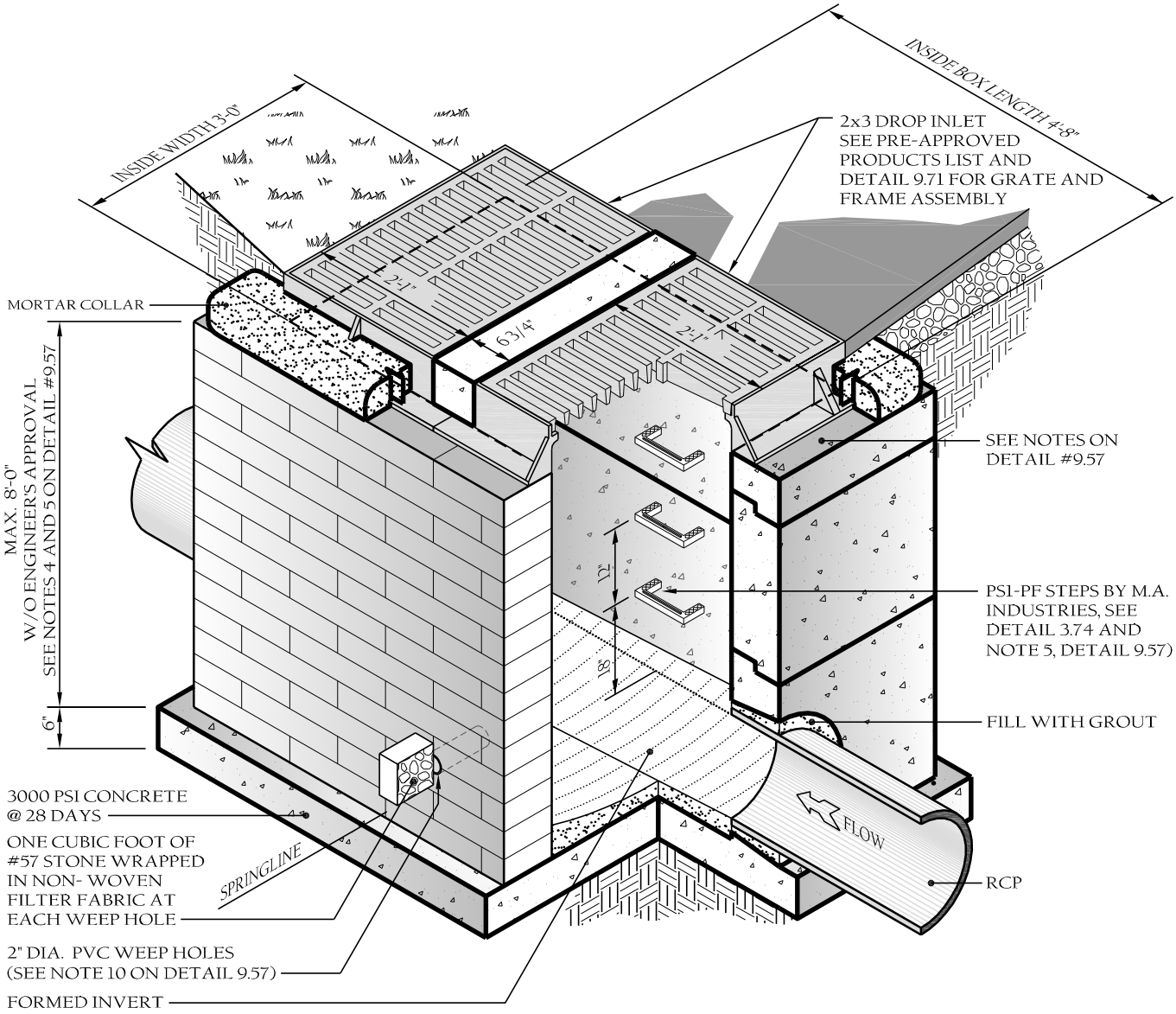

TOWN of WAKE FOREST

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STD. MULTIPLE 2' x 3' CATCH BASIN DETAIL

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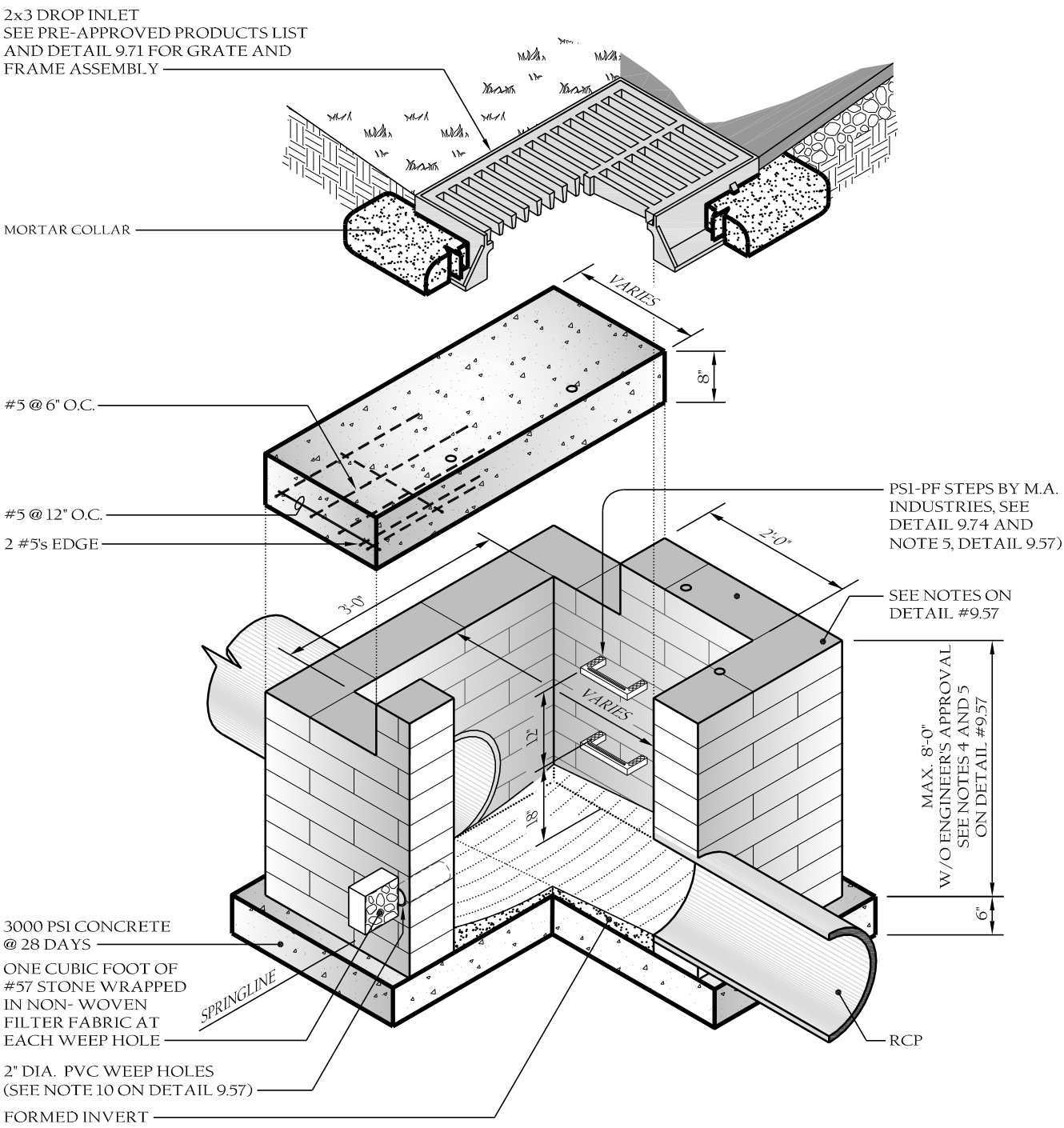

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STD. 3' x VARIABLE LENGTH BRICK BOX WITH 2' x 3' CATCH BASIN

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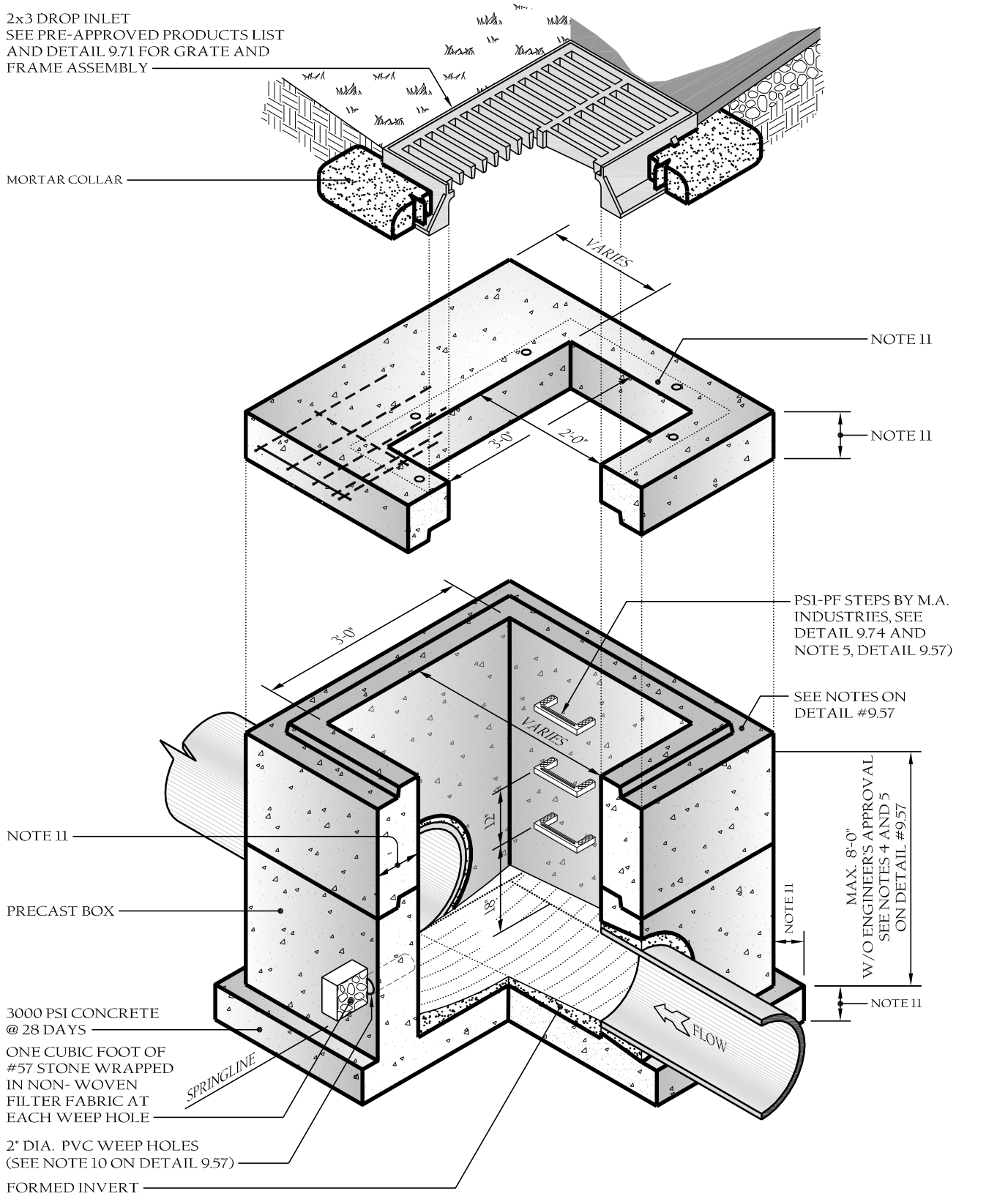

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STD. 3' x VARIABLE LENGTH PRECAST BOX WITH 2' x 3' CATCH BASIN

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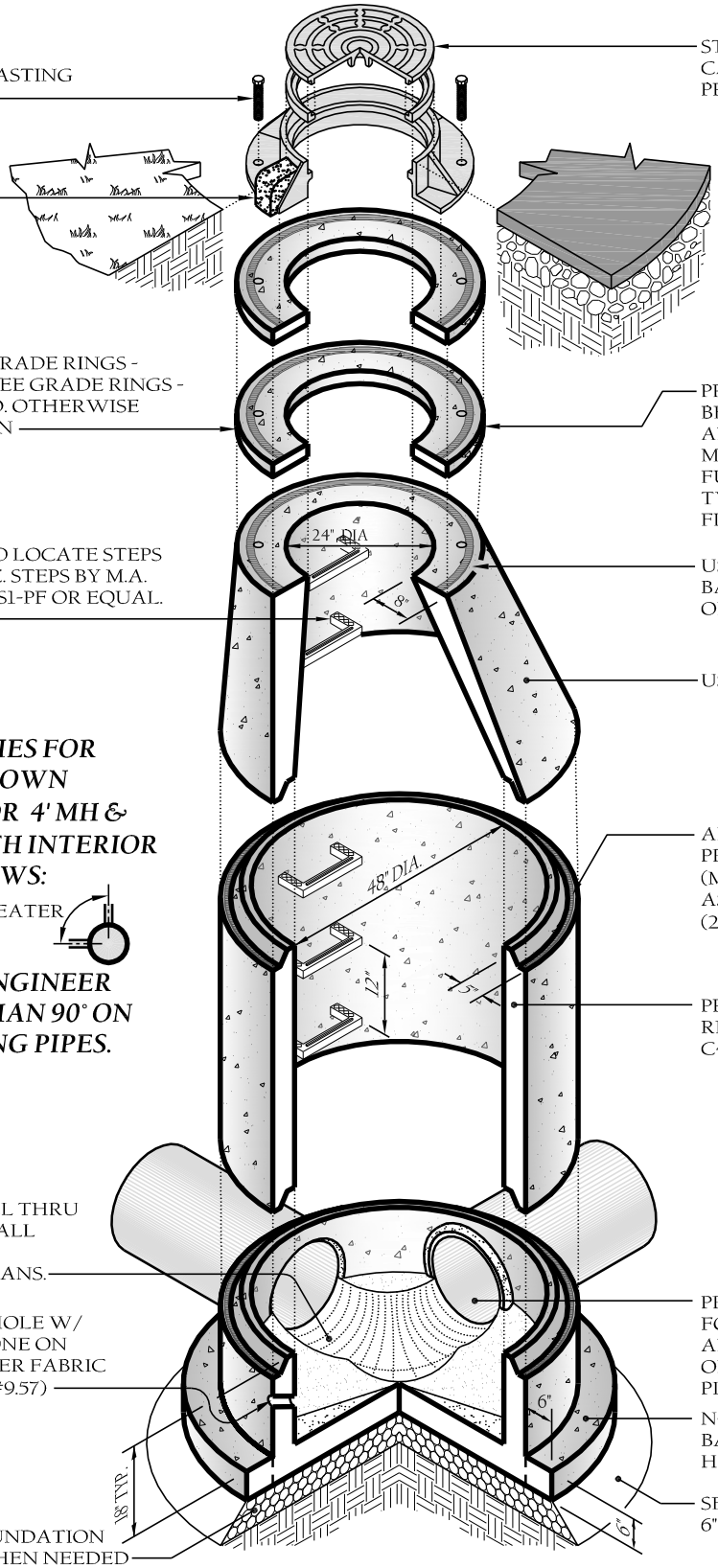
Notes:

Drainage Structures Notes.

1. *Boxes may be reinforced masonry, masonry, precast concrete or cast-in-place reinforced concrete.*
2. *Any non-standard box (non-standard meaning not shown in this manual), is to be designed by a NC Professional Engineer.*
3. *The maximum height of an unreinforced masonry drainage structure with 8" walls shall be limited to 8'-0" from invert of the outlet pipe to the top of the iron casting. Depths greater than 8'-0" shall have walls 12" thick. Basins over 12' in total depth shall be designed by a NC Professional Engineer. Four inch walls are not allowed on drainage structures. Bottom slab on structures shall be reinforced when box depth exceeds 8 ft. The maximum horizontal span of an unreinforced brick/block box at 8' deep without engineering, = 5'-0" clear (K_0=0.66, EFP=65 psf silty/clayey sand).*
4. *Steps are to be provided on all basins deeper than 42".*
5. *Steps are to be PS1-PF as manufactured by M. A. Industries or an approved equal. Locate on non-pipe walls. See detail 9.74.*
6. *Mortar in masonry boxes is to be type M.*
7. *Clay brick structures are not allowed.*
8. *Concrete pipe is to be minimum class III.*
9. *Concrete building brick is to meet ASTM C-90 for Type II. Solid concrete block to be used in lieu of clay brick for minor drainage structure and manholes to meet ASTM C139.*
10. *Basin located in wet areas, or as otherwise required by the town engineer, shall have weep holes as shown on details.*
11. *All cast-in-place or precast concrete drainage structures located in paved areas accessible to truck loadings to be designed to meet AASHTO HS 20-44 loading. See manufacturers details for wall, top and bottom thickness.*
12. *Place minimum 6" #57 stone bedding beneath precast structures.*



NOTE:

THIS DETAIL APPLIES FOR LARGEST PIPES SHOWN BELOW (I.E.: 30" FOR 4' MH & 42" FOR 5' MH) WITH INTERIOR ANGLES AS FOLLOWS:

90° OR GREATER

CONSULT WITH ENGINEER IF ANGLES LESS THAN 90° ON TWO INTERSECTING PIPES. SEE DETAIL 9.75.

TOWN of WAKE FOREST

TOWN of WAKE FOREST, NC

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PRECAST CONCRETE 4' DIA. MH JB

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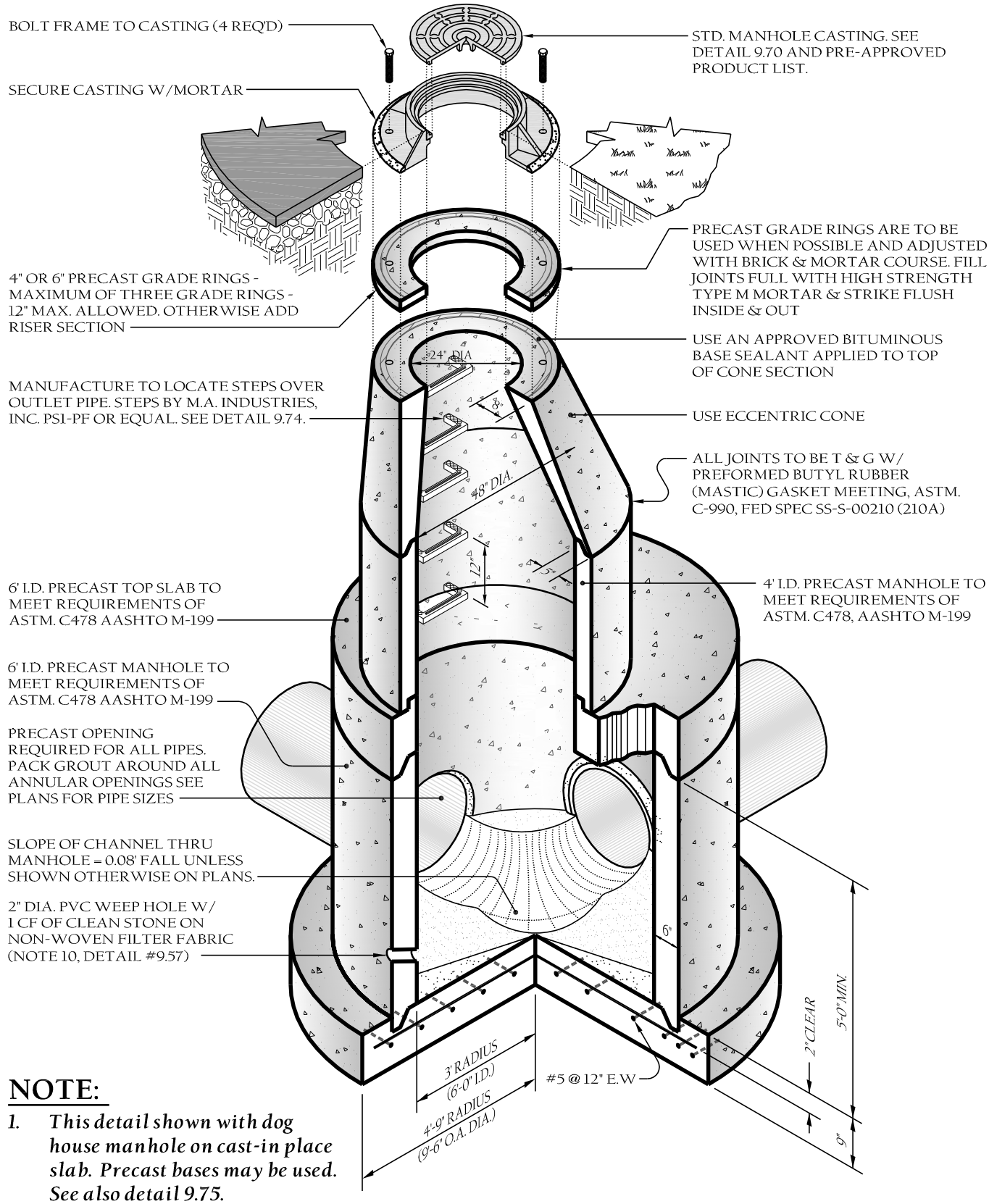

NOTE:

1. *This detail shown with dog house manhole on cast-in place slab. Precast bases may be used. See also detail 9.75.*

TOWN of WAKE FOREST

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PRECAST CONCRETE 6' TO 4' DIA. MH JB

Scale:	Detail #:
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Revision Date:	Sheet #:
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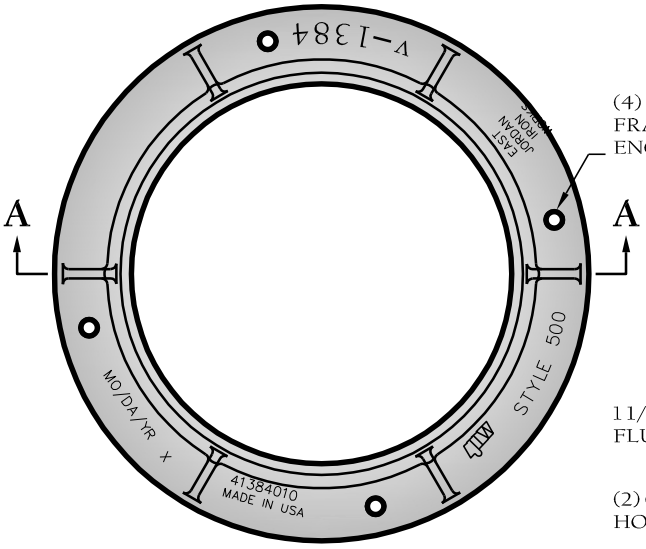
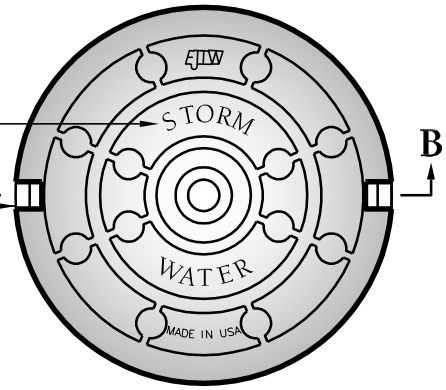


(4) 1" DIA. ANCHOR BOLT. HOLES EQUALLY SPACED. BOLT FRAME TO CONE SECTION WHEN ORDERED BY CITY ENGINEER OR WATER RESOURCES.

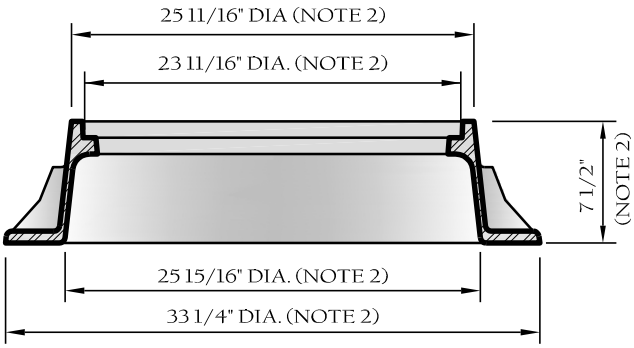
FRAME TOP

1 1/4" LETTERS (RECESSED FLUSH

(2) CLOSED PICK HOLES

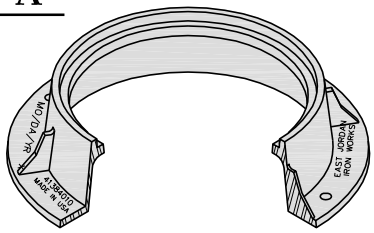


COVER FACE

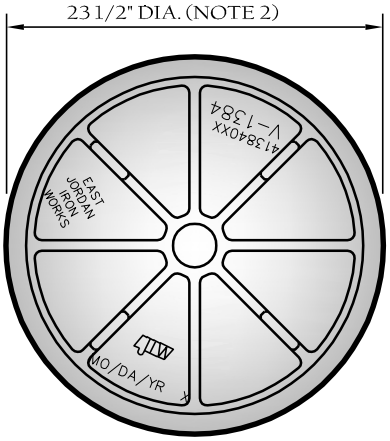


FRAME SECTION A-A

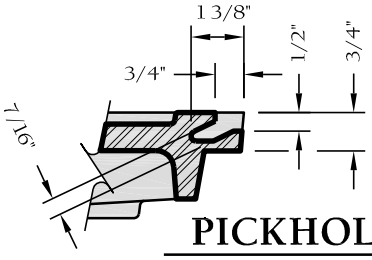
COVER SECTION B-B



ISOMETRICS



COVER BACK



PICKHOLE

APPROVED MODELS	EAST JORDON V-1384 *
COVER WEIGHT	128 Lbs.
FRAME WEIGHT	153 Lbs.
LOAD RATING	HEAVY DUTY
MATERIAL	ASTM A 48 CLASS 35B
FINISH	UN COATED

* EJIW OR APPROVED EQUAL
SEE PRE-APPROVED PRODUCTS LIST

NOTES:

1. *Frame & Cover weight may not deviate by more than -5.0%.*
2. *Iron casting to comply with AASHTO M306.*

TOWN of WAKE FOREST

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STANDARD MANHOLE CASTING STORM DRAINAGE STRUCTURES

Scale:	Detail #:
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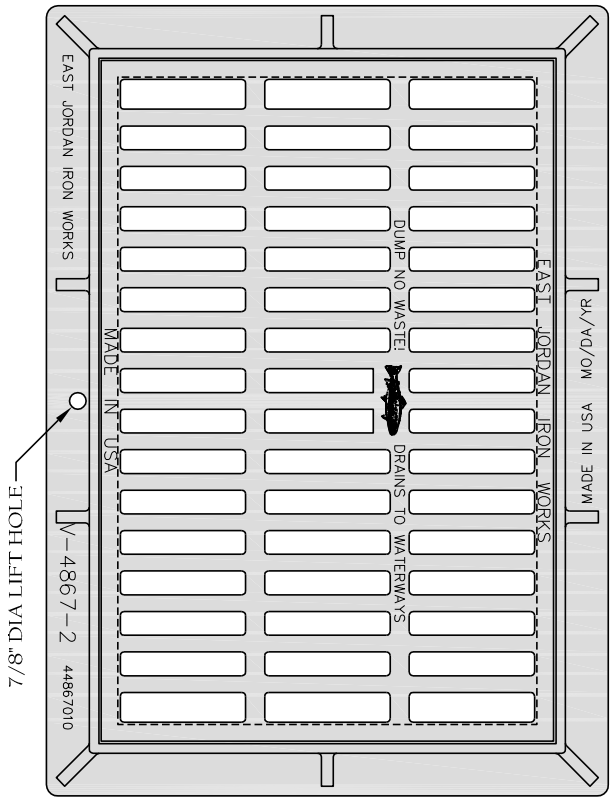
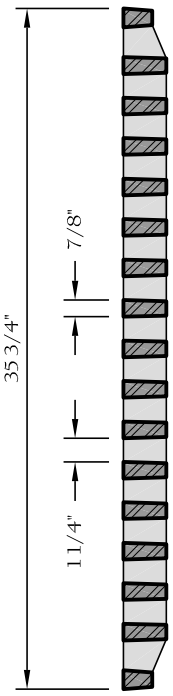
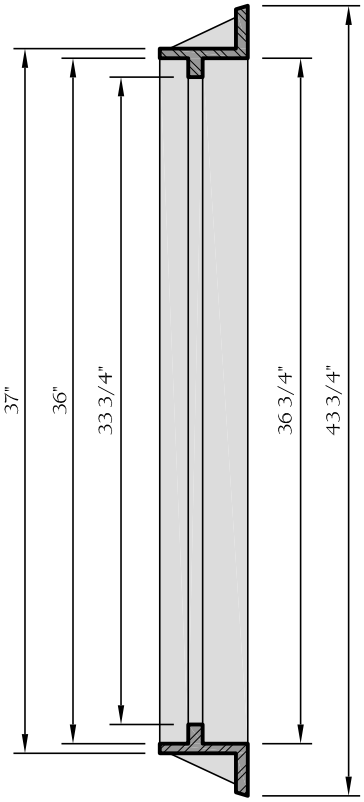
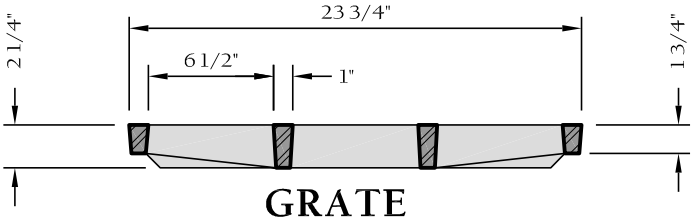




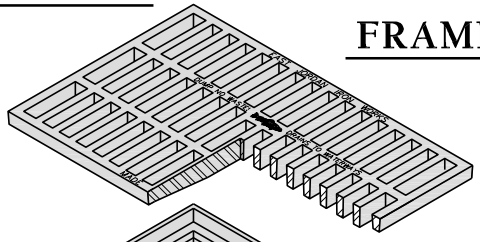
GRATE



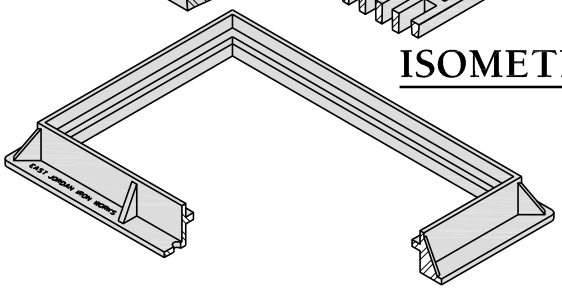
FRAME

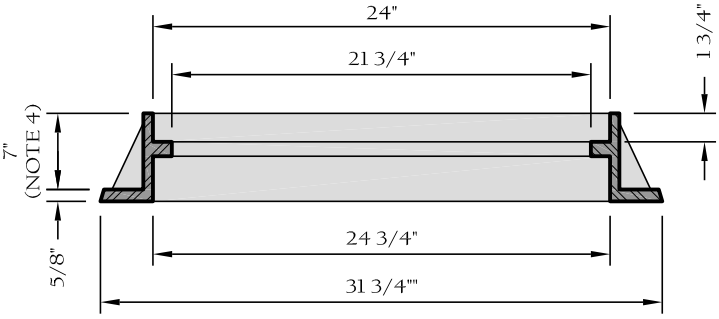


GRATE



ISOMETRIC





FRAME

APPROVED MODELS	EAST JORDON V-4867-2 *
GRATE WEIGHT	190 Lbs.
FRAME WEIGHT	159 Lbs.
LOAD RATING	HEAVY DUTY
MATERIAL	ASTM A 48 CLASS 35B
FINISH	UNDIPPED

* EJIW OR APPROVED EQUAL. SEE PRE-APPROVED PRODUCT LIST

NOTES:

1. *Frame & Cover weight may not deviate by more than -5.0%.*
2. *Iron casting to comply with AASHTO M306.*
3. *Net open area = 390 Sq. In.*
4. *For a 4" high frame, Use EJIW V-5660 or approved equal.*

TOWN of WAKE FOREST

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STANDARD CATCH BASIN ASSEMBLY FRAME & GRATE

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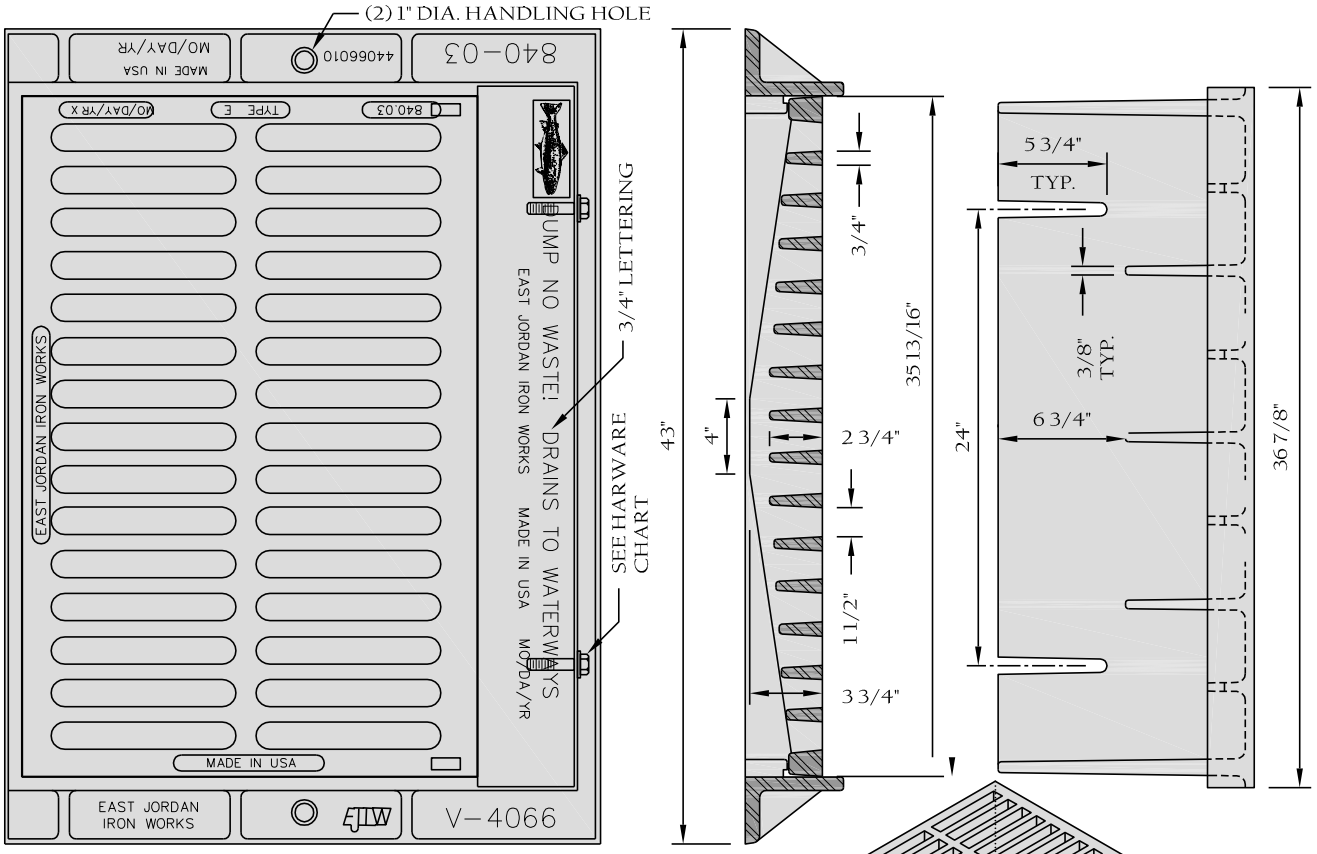
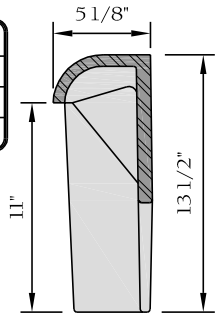
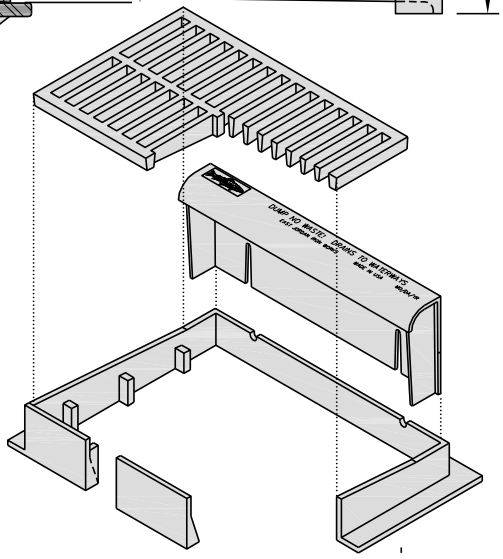
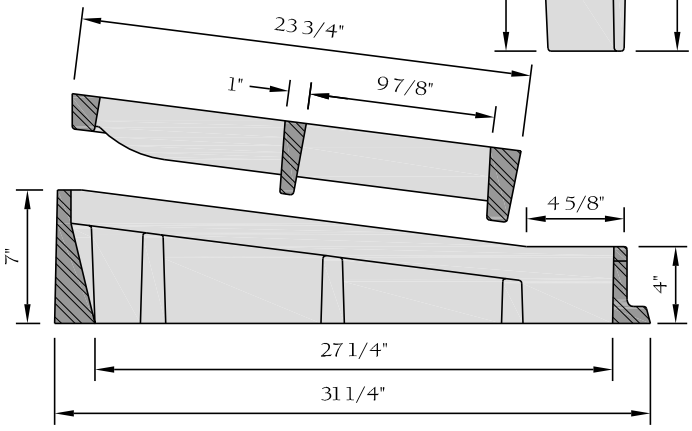


HARDWARE CHART:
(2) 00981234 BLT HX 5/8-11x2.5 ZN2
(2) 00981290 NUT HX 5/8-11 ZN
(4) 00981291 WSHR 5/8 ID 1.75 OD ZN







APPROVED MODELS	EAST JORDON V-4066-1 *
GRATE WEIGHT	218 Lbs.
FRAME WEIGHT	215 Lbs.
BACK WEIGHT	140 Lbs.
LOAD RATING	HEAVY DUTY
MATERIAL	ASTM A 48 CLASS 35B
FINISH	UNDIPPED

* EJIW OR APPROVED EQUAL. SEE PRE-APPROVED PRODUCT LIST.

NOTES:

1. *Frame & Cover weight may not deviate by more than -5.0%.*
2. *Iron casting to comply with AASHTO M306.*

TOWN of WAKE FOREST

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STANDARD COMBINATION FRAME, HOOD & GRATE (NCDOT 840.03)

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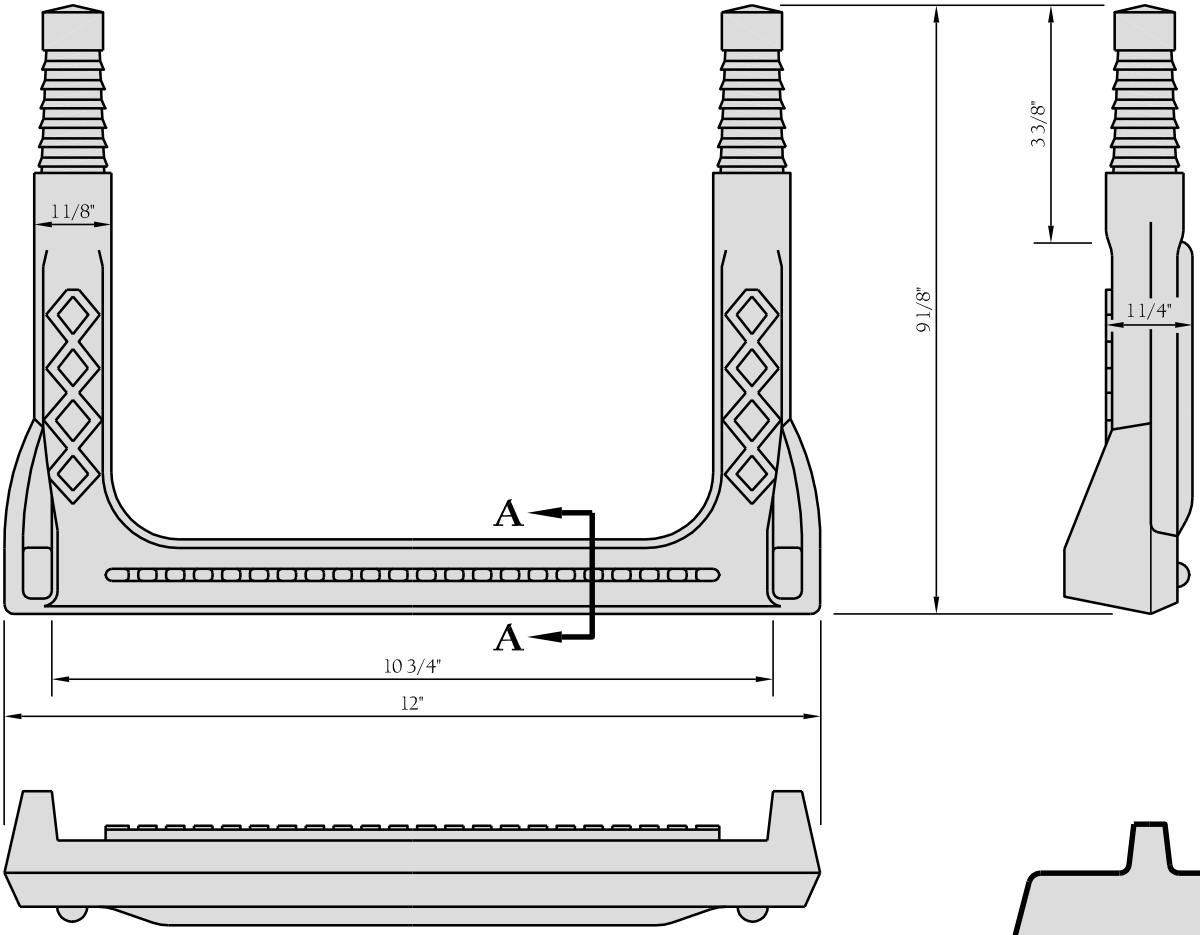
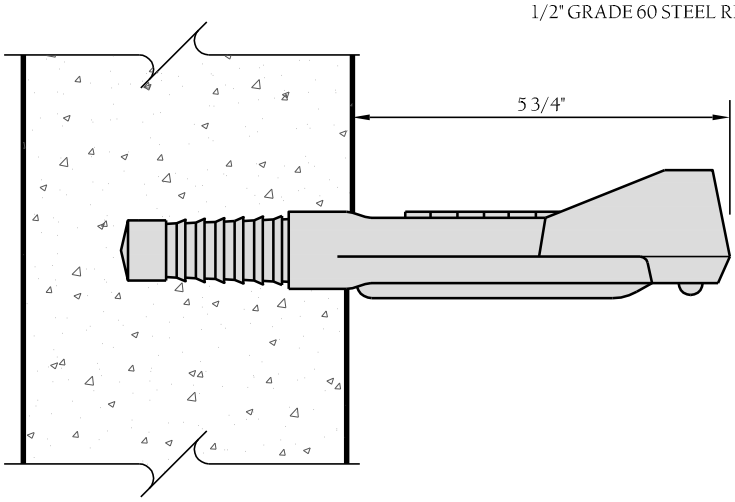
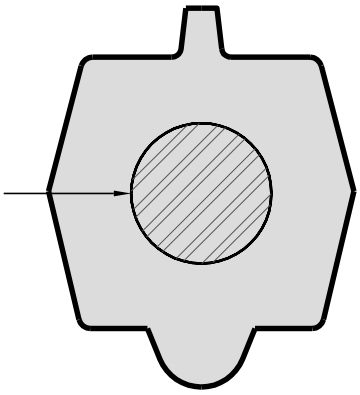


COPOLYMER POLYPROPYLENE PLASTIC
1/2" GRADE 60 STEEL REINFORCEMENT





SECTION A-A

NOTES:

1. *Step shown is PS1-PF BY M.A. Industries Inc. Peachtree City, GA. Alternate may be used if approved by town.*

TOWN of WAKE FOREST

TOWN of WAKE FOREST, NC

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MANHOLE STEP DETAIL

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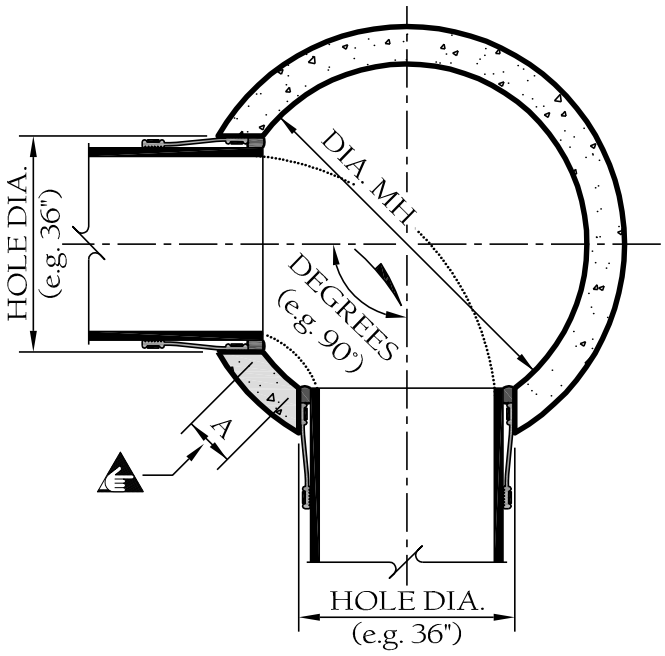
To calculate the closest possible distance between two holes (openings) on the same horizontal centerline, use the following formula:

A = Distance between holes (in degrees)
B = Angle between centerline of pipes
C = Degrees for hole number one from chart below
D = Degrees for hole number two from chart below



If A < 0, the openings are overlapping
If A > 0, A = the distance between holes (in degrees)

4' DIA:

A = 90 - 1/2(95+95) = 90 - 95 = -5, *Holes too close*

5' DIA:

A = 90 - 1/2(75+75) = 90 - 75 = 15, *O.K. for 5' dia.*

There are 15° of angle between holes which is 7 7/8".

4' Dia. MH	
Hole Dia.	Degrees
12"	28°
12"	28°
18"	45°
24"	60°
30"	76°
36"	95°

5' Dia. MH	
Hole Dia.	Degrees
12"	22°
18"	35°
24"	48°
30"	62.6°
36"	75°
40"	82°
48"	108°

6' Dia. MH	
Hole Dia.	Degrees
12"	20°
16"	25°
20"	32°
24"	38°
36"	60°
40"	65°
43"	70°
48"	84°
55"	98°
63"	125°

8' Dia. MH	
Hole Dia.	Degrees
12"	15°
18"	22°
24"	28°
36"	44°
40"	48°
42"	52°
48"	60°
55"	68°
60"	80°
70"	90°
78"	108°

10' Dia. MH	
Hole Dia.	Degrees
12"	12°
18"	18°
24"	24°
36"	36°
40"	38°
48"	46°
55"	55°
62"	62°
70"	70°
78"	80°

TOWN of WAKE FOREST

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DISTANCE BETWEEN TWO HOLES (OPENINGS) FORMULA

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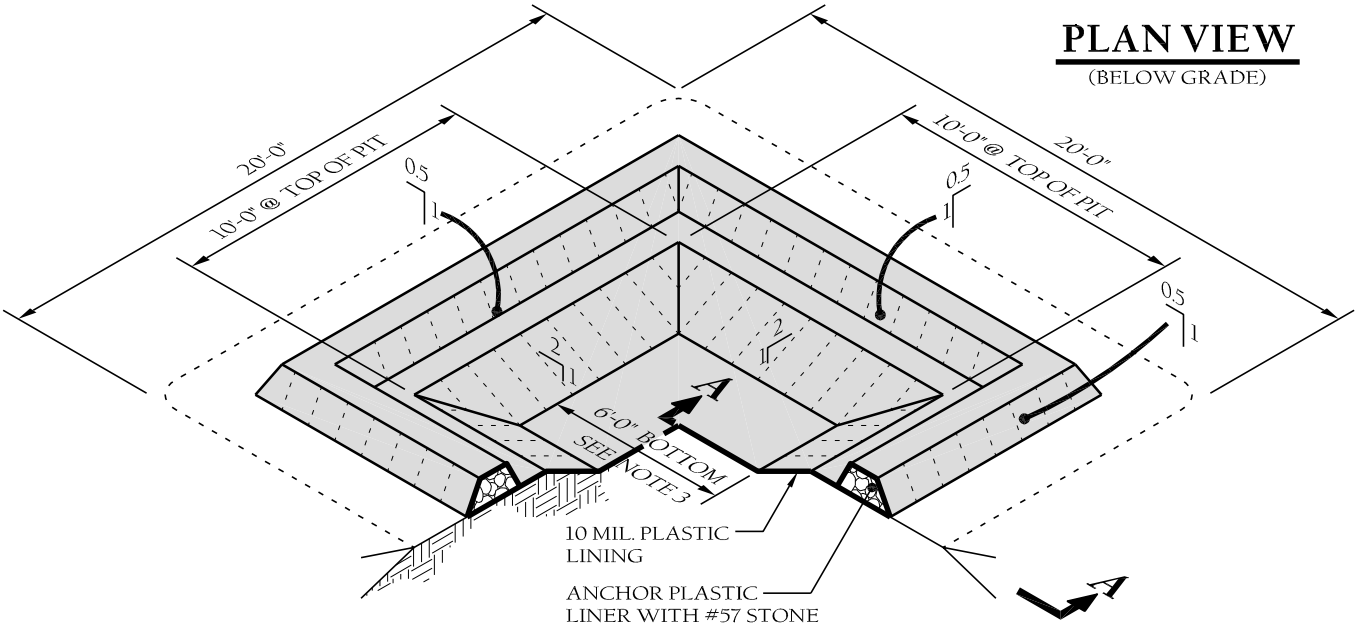
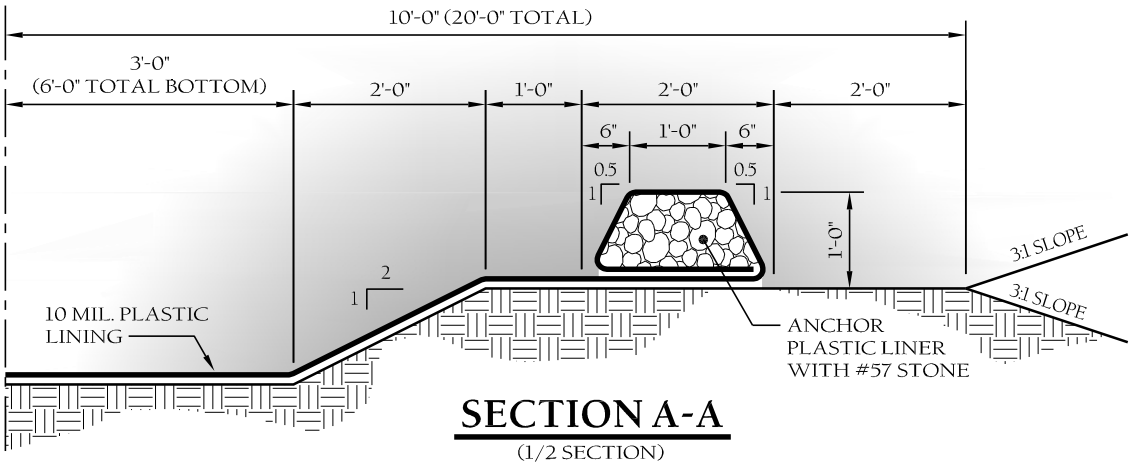
PLAN VIEW
(BELOW GRADE)





SECTION A-A
(1/2 SECTION)

EXCAVATED PIT WITH STONE SUPPORT
NOT TO SCALE

STONE SUPPORT NOTES:

1. Actual layout to be determined in field.
2. The "concrete washout" sign shall be installed within 30 ft of the temporary concrete washout facility.
3. Pit capacity is minimum of 6 cu ft per 10 cu yd of concrete.
4. Contractor to coordinate with usage contracting officer for proper disposal of concrete.

TOWN of WAKE FOREST

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CONCRETE WASHOUT PIT DETAIL

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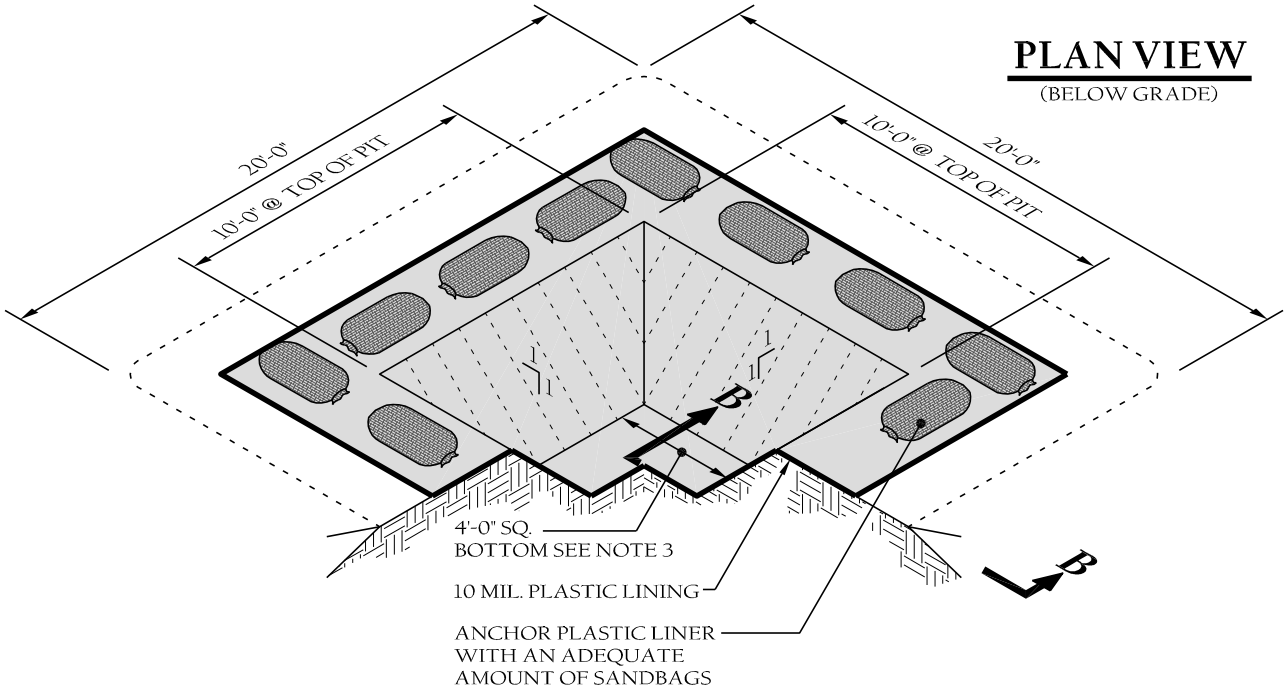

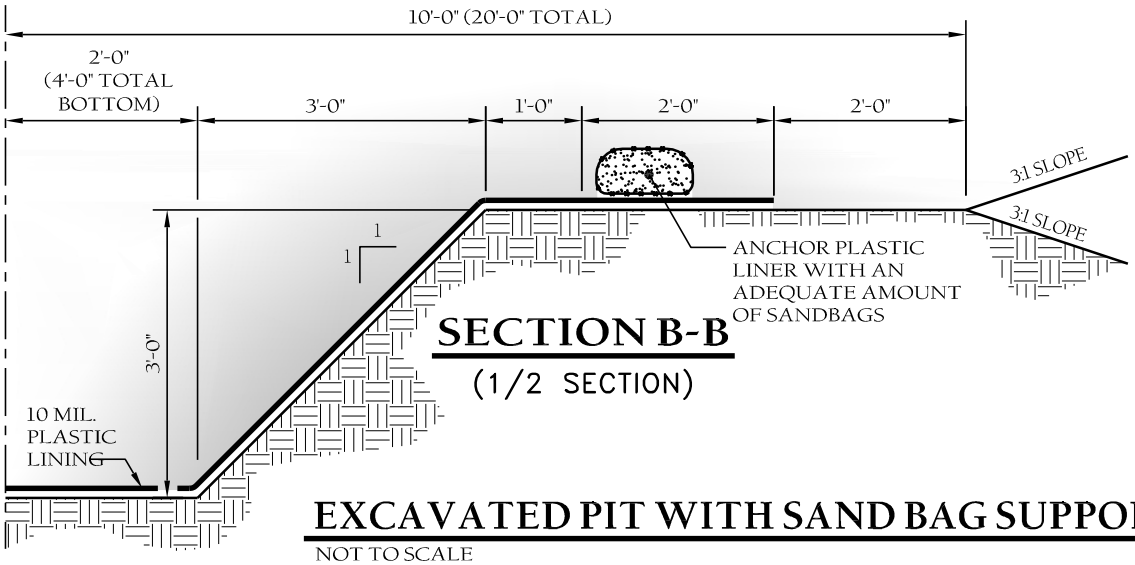

EXCAVATED PIT WITH SAND BAG SUPPORT

NOT TO SCALE

SAND BAG SUPPORT NOTES:

1. Actual layout to be determined in field.
2. The "concrete washout" sign shall be installed within 30 ft of the temporary concrete washout facility.
3. Pit capacity is minimum of 6 cu ft per 10 cu yd of concrete.
4. Contractor to coordinate with usage contracting officer for proper disposal of concrete.

TOWN of WAKE FOREST

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CONCRETE WASHOUT PIT DETAIL

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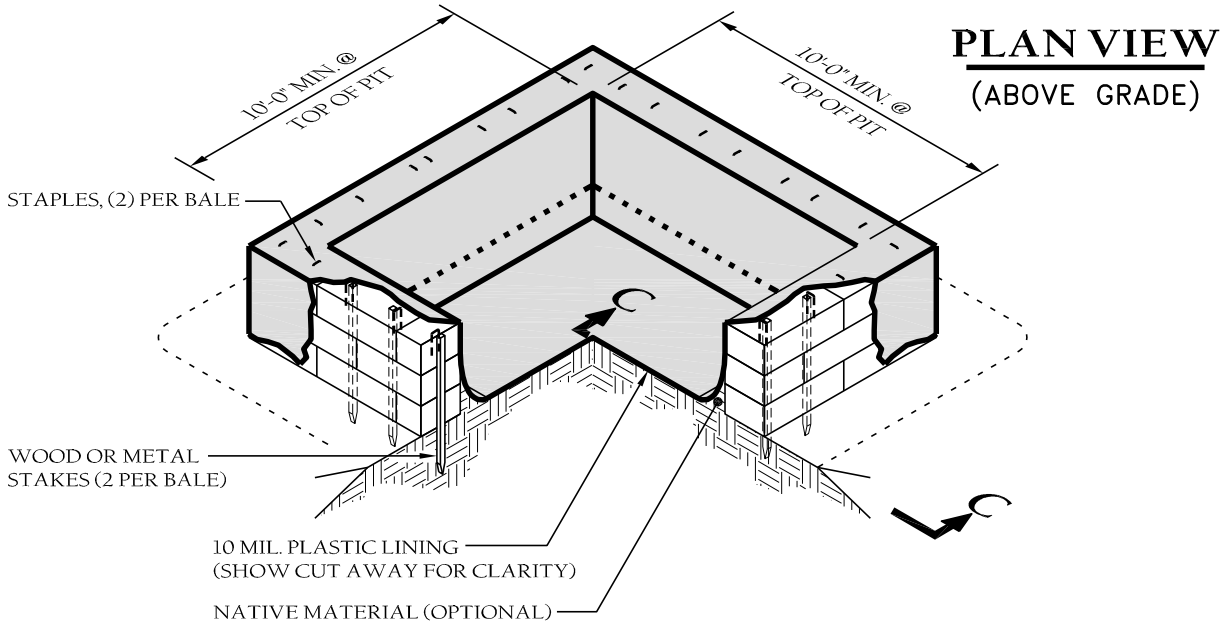

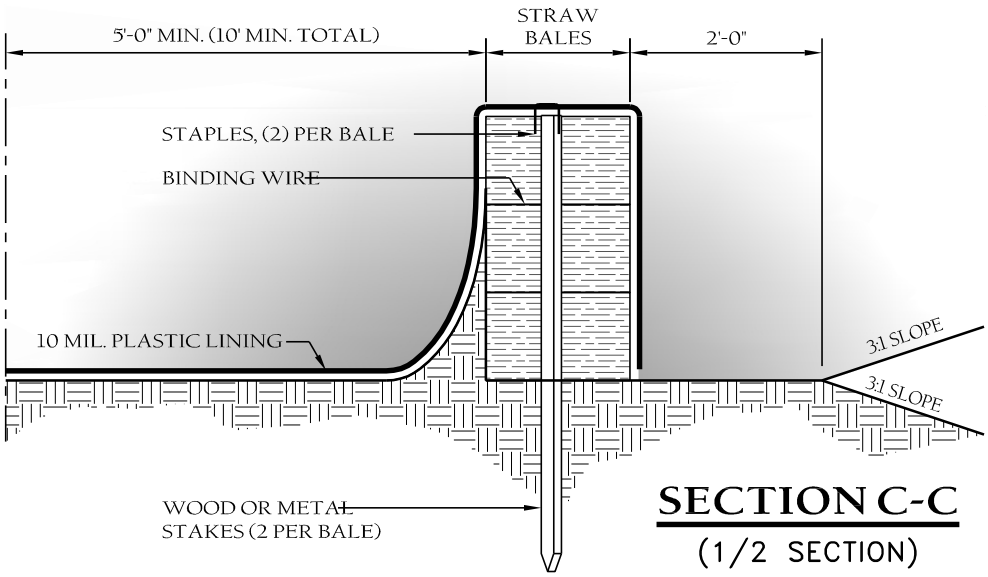

ELEVATED PIT WITH STRAW BALE DETENTION WALLS

NOT TO SCALE

STRAW BALE DETENTION NOTES:

1. Actual layout to be determined in field.
2. The "concrete washout" sign shall be installed within 30 ft of the temporary concrete washout facility.
3. Pit capacity is minimum of 6 cu ft per 10 cu yd of concrete.
4. Contractor to coordinate with usage contracting officer for proper disposal of concrete.

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	CONCRETE WASHOUT PIT DETAIL	Scale: Not To Scale	Detail #: 9.76
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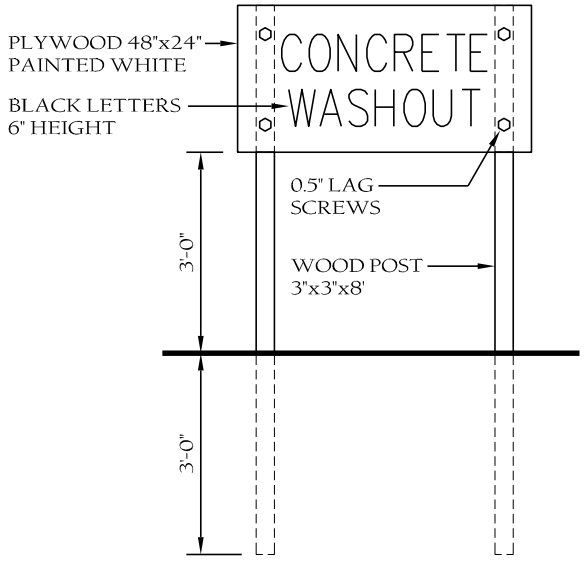

SIGN DETAIL

(OR EQUIVILANT)

CONCRETE WASHOUT DETAIL NOTES

Concrete washouts are used to contain concrete and liquids when the chutes of concrete mixers and hoppers of concrete pumps are rinsed out after delivery. The washout facilities consolidate solids for easier disposal and prevent runoff of liquids. The wash water is alkaline and contains high levels of chromium, which can leach into the ground and contaminate groundwater. It can also migrate to a storm drain, which can increase the pH of area waters and harm aquatic life. Revised NPDES and NC General Construction Permits require the use of concrete washout areas on all sites using concrete:

1. No concrete or cement slurry shall be discharged from the site.
2. Any hardened concrete residue shall be disposed of, or recycled on site, in accordance with local and state solid waste regulations.
3. Concrete washout area to be minimum 50' from storm drain inlets and surface waters (ie, detention pond, ditches, etc).
4. Prefabricated washout container or pit equal detail provided may be used if approved by Engineer.
5. Install concrete washout pit at all construction entrances used by concrete trucks.
6. Dimensions may be modified to fit topography. Provide minimum 100 Sf. of surface area level.
7. Locations shown on plans are for illustrative purposes only. Contractor shall determine final number of pits required, and their placement.
8. Inspection:
   a. Contractor to check all concrete washout facilities daily to determine if they have been filled to 75% capacity, which is when materials need to be removed.
   b. Both above- and below- ground self-installed washouts should be inspected daily to ensure that plastic linings are intact and sidewalls have not been damaged by construction activities. Contractor to repair plastic lining as needed.
   c. Prefabricated washout containers should be inspected daily as well to ensure the container is not leaking or nearing 75 percent capacity.
   d. Inspectors should also note whether the facilities are being used regularly.
6. Material Removal:
   a. Concrete washouts are designed to promote evaporation where feasible. However, if stored liquids have not evaporated and the washout is nearing capacity, vacuum and dispose of them in an approved manner - check with the local sanitary sewer authority to determine if there are special disposal requirements for concrete wash water.
   b. Remove liquids or cover the structures before predicted rainstorms to prevent overflows. Companies that offer prefabricated and watertight washout containers generally offer a vacuum service to remove the liquid material.
   c. Contractor to remove hardened solids or reuse onsite or haul them away for recycling.
   d. When removing materials from the concrete washout, building a new structure or, if the previous structure is still intact, Contractor is to inspect the structure for signs of weakening or damage and make any necessary repairs. Line the structure with new plastic that is free of holes or tears and replace signage if necessary. It is very important that new plastic is used after every cleaning because pumps and concrete removal equipment can damage the existing liner.
7. At completion of project, washout area to be backfilled and graded to be level with existing grade..
8. General Contractor is to educate concrete subcontractors, post signage indicating the location and designated use of these areas, and provide careful oversight to inspect for evidence of improper dumping of concrete waste and wash water. Contractor should include requirements in contracts with concrete delivery companies that drivers must use designated concrete washout facilities.

TOWN of WAKE FOREST

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CONCRETE WASHOUT PIT DETAIL

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TEMPORARY

NO PARKING

TIME _____ _____

DATE From _____ To _____

CONSTRUCTION ZONE

TOW-AWAY

TOWN of WAKE FOREST

www.wakeforestnc.gov

Tel: 919-435-9400

301 S. Brooks Street, Wake Forest, NC 27587

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Month Day, 2025

REGARDING WORK IN YOUR AREA

Dear Resident:

The Town of Wake Forest plans to do street rehabilitation in your neighborhood. Construction is expected to begin in, **Month Day, 2025** and be completed by **Month Day, 2025**, weather permitting.

The affected streets include:

The Town of Wake Forest maintains approximately 150 centerline miles of paved roadways and we are committed to performing necessary maintenance and street rehabilitation to improve the longevity of these assets withing the Town's limits. The street rehabilitation process requires maintenance and preservation practices to reduce and minimize the deterioration processes. For this reason, maintaining and rehabilitation of the pavement is a top priority for the Town, and it can be utilized to extend the pavement service life. The street rehabilitation project includes the milling and placement of new asphalt on the Town owned roadways. Your cooperation is greatly appreciated, and every effort will be made to minimize inconveniences to those adjacent to the work areas.

During the construction period, residents will have access to their driveways. No parking will be allowed along the street during the designated time of the construction. All vehicles will be towed, if necessary, to complete the work.

All work is expected to be conducted during weekdays from 7:00 a.m. to 7:00 p.m. Town employees and their contractor will work closely with residents and regulatory agencies to deliver a high-quality project on time, while minimizing disruptions to traffic and the environment. Noise and dust may cause temporary impacts to residents during the construction, and this will be limited to a few hours at a time. If the construction work must be rescheduled due to weather, personnel, or equipment, the residents will be notified at the rescheduled construction dates.

Also please note that some trees may have to be pruned or removed to accommodate the work. For any tree removal, residents will be notified ahead of time.

If you have any questions about this project or need additional information, please contact me at (919-435-9438) or by e-mail at twatson@wakeforestnc.gov. However, if you experience a water or sewer emergency, please call City of Raleigh's **24-hr hotline** at **919-996-3245**. For your convenience, you will find a map on the back of this letter showing the affected streets.

Sincerely,

Timothy Watson, PE
Director of Engineering
Office: 919-435-9510 | Direct: 919-435-9438
twatson@wakeforestnc.gov

Date 10/24/2024 at 2:00 PM

TOWN OF WAKE FOREST
2025 STREET RESURFACING PROJECT
SCHEDULE OF PRICES

				Third Lowest		First Lowest		Second Lowest					
				$ 5,640,580.25		$ 5,464,565.40		$ 5,465,972.85		$ 5,965,254.02		$ 6,325,000.00	
				FSC II, LLC DBA Fred Smith 701 Corporate Center Drive, Raleigh NC 27607		Blythe Construction 2911 North Graham St Charlotte, NC 28206		Carolina Sunrock 200 Horizon Dr. Suite 100 Raleigh, NC 27615		Turner Asphalt GC, LLC 5805 Lease Lane Raleigh, NC, 27617		ST Wooten Corporation PO Box 2408 Wilson, NC 27894-2408	
ITEM NO.	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT BID PRICE	BID AMOUNT	UNIT BID PRICE	BID AMOUNT	UNIT BID PRICE	BID AMOUNT	UNIT BID PRICE	BID AMOUNT	UNIT BID PRICE	BID AMOUNT
	RESURFACING												
1	ASPHALT CONCRETE SURFACE MIX S9.5B	0	TON										
2	ASPHALT CONCRETE SURFACE MIX S9.5C	23,354	TON	$ 69.00	$ 1,611,426.00	$ 65.00	$ 1,518,010.00	$ 63.25	$ 1,477,140.50	$ 82.43	$ 1,925,070.22	$ 81.75	$ 1,909,189.50
3	ASPHALT BINDER	1,404	TON	$ 650.00	$ 912,600.00	$ 605.00	$ 849,420.00	$ 545.00	$ 765,180.00	$ 591.63	$ 830,648.52	$ 500.00	$ 702,000.00
	RESURFACING SECTION SUBTOTAL			$	2,524,026.00	$	2,367,430.00	$	2,242,320.50	$	2,755,718.74	$	2,611,189.50
	UTILITY ADJUSTMENTS												
4	MANHOLE ADJUSTMENT (RAISE ONLY)		EA										
5	WATER VALVE BOX ADJUSTMENT (RAISE ONLY)		EA										
6	MANHOLE ADJUSTMENT (LOWER/RAISE)	320	EA	$ 1,100.00	$ 352,000.00	$ 1,100.00	$ 352,000.00	$ 1,143.00	$ 365,760.00	$ 475.00	$ 152,000.00	$ 1,165.00	$ 372,800.00
7	WATER VALVE BOX ADJUSTMENT (LOWER/RAISE)	316	EA	$ 750.00	$ 237,000.00	$ 750.00	$ 237,000.00	$ 772.00	$ 243,952.00	$ 475.00	$ 150,100.00	$ 782.50	$ 247,270.00
8	MILLING / CHIPPING AROUND UTILITY NOT ADJUSTED		EA										
9	MANHOLE ADJUSTMENT - OVERSIZE (LOWER/RAISE)		EA										
10	PROVIDE AND INSTALL MANHOLE RISER		EA										
11	PROVIDE AND INSTALL WATER VALVE RISER		EA										
12	PROVIDE NEW 7.5" MANHOLE FRAME & COVER		EA										
13	PROVIDE NEW 4" MANHOLE FRAME & COVER		EA										
	UTILITY ADJUSTMENTS SECTION SUBTOTAL			$	589,000.00	$	589,000.00	$	609,712.00	$	302,100.00	$	620,070.00
	SIDEWALK IMPROVEMENTS												
14	SIDEWALK REMOVAL		SY										
15	4" SIDEWALK REPLACEMENT	1,370.30	SY	$ 75.00	$ 102,772.50	$ 75.00	$ 102,772.50	$ 75.00	$ 102,772.50	$ 50.85	$ 69,679.76	$ 75.00	$ 102,772.50
16	6" SIDEWALK REPLACEMENT	12	SY	$ 230.00	$ 2,760.00	$ 230.00	$ 2,760.00	$ 230.00	$ 2,760.00	$ 89.55	$ 1,074.60	$ 230.00	$ 2,760.00
17	6" CONCRETE DRIVEWAY	699	SY	$ 130.00	$ 90,870.00	$ 130.00	$ 90,870.00	$ 130.00	$ 90,870.00	$ 89.55	$ 62,595.45	$ 130.00	$ 90,870.00
18	SAWCUT & REMOVAL OF CONCRETE CURB		LF										
19	SAWCUT & REMOVAL OF GRANITE CURB		LF										
20	CURB & GUTTER REMOVAL / REPLACEMENT	8,320	LF	$ 55.00	$ 457,600.00	$ 55.00	$ 457,600.00	$ 55.00	$ 457,600.00	$ 54.00	$ 449,280.00	$ 55.00	$ 457,600.00
21	INSTALL NEW CURB & GUTTER	140	LF	$ 45.00	$ 6,300.00	$ 45.00	$ 6,300.00	$ 45.00	$ 6,300.00	$ 25.00	$ 3,500.00	$ 45.00	$ 6,300.00
22	CONCRETE SIDEWALK ACCESS RAMPS WITH DETECTABLE WARNING SURFACE	146	EA	$ 2,400.00	$ 350,400.00	$ 2,400.00	$ 350,400.00	$ 2,400.00	$ 350,400.00	$ 4,630.00	$ 675,980.00	$ 2,400.00	$ 350,400.00
23	CONCRETE SIDEQALK ACCESS RAMP REMOVAL	32	EA	$ 1,000.00	$ 32,000.00	$ 1,000.00	$ 32,000.00	$ 1,000.00	$ 32,000.00	$ 2,125.00	$ 68,000.00	$ 1,000.00	$ 32,000.00
24	5" CONCRETE MONOLITHIC ISLAND	94.3	SY	$ 80.00	$ 7,544.00	$ 80.00	$ 7,544.00	$ 80.00	$ 7,544.00	$ 83.25	$ 7,850.48	$ 80.00	$ 7,544.00
	SIDEWALK IMPROVEMENTS SECTION SUBTOTAL			$	1,050,246.50	$	1,050,246.50	$	1,050,246.50	$	1,337,960.28	$	1,050,246.50
	MILLING												
25	MILLING (0-2") EDGE	0	SY										
26	MILLING (0-2") FULL WIDTH	95,376	SY	$ 2.90	$ 276,590.40	$ 3.10	$ 295,665.60	$ 4.10	$ 391,041.60	$ 3.85	$ 367,197.60	$ 3.30	$ 314,740.80
27	MILLING (0-3") MILL & FILL	91,602	SY	$ 4.30	$ 393,888.60	$ 4.15	$ 380,148.30	$ 3.50	$ 320,607.00	$ 3.85	$ 352,667.70	$ 5.00	$ 458,010.00
28	INCIDENTAL MILLING	12,175	SY	$ 8.60	$ 104,705.00	$ 6.25	$ 76,093.75	$ 13.00	$ 158,275.00	$ 8.25	$ 100,443.75	$ 9.00	$ 109,575.00
	MILLING SECTION SUBTOTAL			$	775,184.00	$	751,907.65	$	869,923.60	$	820,309.05	$	882,325.80
29	PAVEMENT PATCHING	225.5	TN	$ 370.00	$ 83,435.00	$ 275.00	$ 62,012.50	$ 253.00	$ 57,051.50	$ 148.50	$ 33,486.75	$ 800.00	$ 180,400.00
	PAVEMENT PATCHING SECTION SUBTOTAL			$	83,435.00	$	62,012.50	$	57,051.50	$	33,486.75	$	180,400.00
	PAVEMENT MARKINGS												
30	THERMOPLASTIC PAVEMENT MARKINGS - 4", 90 MILS	35,819	LF	$ 1.35	$ 48,355.65	$ 1.35	$ 48,355.65	$ 1.35	$ 48,355.65	$ 1.50	$ 53,728.50	1.35	$ 48,355.65
31	THERMOPLASTIC PAVEMENT MARKINGS - 8", 90 MILS	636	LF	$ 3.00	$ 1,908.00	$ 3.00	$ 1,908.00	$ 3.00	$ 1,908.00	$ 3.00	$ 1,908.00	3	$ 1,908.00
32	THERMOPLASTIC PAVEMENT MARKINGS - 24", 90 MILS	3,177.30	LF	$ 11.00	$ 34,950.30	$ 11.00	$ 34,950.30	$ 11.00	$ 34,950.30	$ 9.00	$ 28,595.70	11	$ 34,950.30
33	THERMOPLASTIC SYMBOLS - 90 MILS	106	EA	$ 125.00	$ 13,250.00	$ 125.00	$ 13,250.00	$ 125.00	$ 13,250.00	$ 150.00	$ 15,900.00	$ 125.00	$ 13,250.00
34	THERMOPLASTIC CHARACTERS - 90 MILS	32	EA	$ 100.00	$ 3,200.00	$ 100.00	$ 3,200.00	$ 100.00	$ 3,200.00	$ 200.00	$ 6,400.00	$ 100.00	$ 3,200.00
35	SPEED HUMP SYMBOL - 90 MILS		EA										
36	BIKE LANE ARROW - 90 MILS	8	EA	$ 175.00	$ 1,400.00	$ 175.00	$ 1,400.00	$ 175.00	$ 1,400.00	$ 197.00	$ 1,576.00	$ 175.00	$ 1,400.00
37	BIKE SYMBOL - 90 MILS	7	EA	$ 325.00	$ 2,275.00	$ 325.00	$ 2,275.00	$ 325.00	$ 2,275.00	$ 450.00	$ 3,150.00	$ 325.00	$ 2,275.00
38	BIKE SHARROW - 90 MILS		EA										
39	GREEN PAINT, 24"		LF										
40	SHARK TEETH SYMBOL, 24"	16	EA	$ 50.00	$ 800.00	$ 50.00	$ 800.00	$ 50.00	$ 800.00	$ 105.75	$ 1,692.00	$ 50.00	$ 800.00
41	TEMPORARY PAINT, 4"	30,036	LF	$ 0.30	$ 9,010.80	$ 0.30	$ 9,010.80	$ 0.30	$ 9,010.80	$ 0.60	$ 18,021.60	$ 0.30	$ 9,010.80
42	TEMPORARY PAINT, 8"	380	LF	$ 1.00	$ 380.00	$ 1.00	$ 380.00	$ 1.00	$ 380.00	$ 1.20	$ 456.00	$ 1.00	$ 380.00
43	TEMPORARY PAINT, 24"	769	LF	$ 6.00	$ 4,614.00	$ 6.00	$ 4,614.00	$ 6.00	$ 4,614.00	$ 3.60	$ 2,768.40	$ 6.00	$ 4,614.00
44	TEMPORARY PAINT SYMBOLS	91	EA	$ 65.00	$ 5,915.00	$ 65.00	$ 5,915.00	$ 65.00	$ 5,915.00	$ 75.00	$ 6,825.00	$ 65.00	$ 5,915.00
45	TEMPORARY PAINT CHARACTERS	14	EA	$ 65.00	$ 910.00	$ 65.00	$ 910.00	$ 65.00	$ 910.00	$ 45.00	$ 630.00	$ 65.00	$ 910.00
46	THERMOPLASTIC ERADICATION, LINES (4-24")		LF										
47	THERMOPLASTIC ERADICATION, SYMBOLS		EA										
48	THERMOPLASTIC ERADICATION, CHARACTERS		EA										
49	FLEXIBLE DELINEATORS		EA										
	PAVEMENT MARKINGS SECTION SUBTOTAL			$	126,968.75	$	126,968.75	$	126,968.75	$	141,651.20	$	126,968.75
	SIGNALS & INTELLIGENT TRANSPORTATION SYSTEMS												
50	INDUCTIVE LOOP SAWCUT	2,735	LF	$ 12.00	$ 32,820.00	$ 12.00	$ 32,820.00	$ 12.00	$ 32,820.00	$ 14.00	$ 38,290.00	$ 12.00	$ 32,820.00
51	BIKE COUNT LOOP SAWCUT		LF										
52	DETECTOR CARD (2070)		EA										
53	JUNCTION BOX, STANDARD		EA										
	SIGNALS & INTELLIGENT TRANS SYSTEMS SECTION SUBTOTAL			$	32,820.00	$	32,820.00	$	32,820.00	$	38,290.00	$	32,820.00
	SPEED HUMPS												
54	REMOVE SPEED HUMP	4	EA	$ 900.00	$ 3,600.00	$ 795.00	$ 3,180.00	$ 1,615.00	$ 6,460.00	$ 800.00	$ 3,200.00	$ 1,000.00	$ 4,000.00
55	INSTALL SPEED HUMP		EA										
	SPEED HUMPS SECTION SUBTOTAL			$	3,600.00	$	3,180.00	$	6,460.00	$	3,200.00	$	4,000.00
	TRAFFIC CONTROL												
56	TEMPORARY TRAFFIC CONTROL	1	LS	$ 151,500.00	$ 151,500.00	$ 215,000.00	$ 215,000.00	$ 338,250.00	$ 338,250.00	$ 442,400.00	$ 442,400.00	$ 454,179.45	$ 454,179.45
57	LAW ENFORCEMENT	1	LS	$ 8,250.00	$ 8,250.00	$ 6,500.00	$ 6,500.00	$ 4,000.00	$ 4,000.00	$ 7,238.00	$ 7,238.00	$ 30,800.00	$ 30,800.00
58	PORTABLE LIGHTING, IF USED	1	LS	$ 13,550.00	$ 13,550.00	$ 7,500.00	$ 7,500.00	$ 21,670.00	$ 21,670.00	$ 13,900.00	$ 13,900.00	$ 15,000.00	$ 15,000.00
59	SHALLOW UNDERCUT		CY										
60	FABRIC FOR SOIL STABILIZATION		SY										
61	GEOGRID FOR SOIL STABILIZATION		SY										
62	CLASS IV STONE FOR SOIL STABILIZATION		TN										
63	SEALING OF STRUCTURE WEEP HOLE	4	EA	$ 500.00	$ 2,000.00	$ 500.00	$ 2,000.00	$ 500.00	$ 2,000.00	$ 750.00	$ 3,000.00	$ 500.00	$ 2,000.00
64	MOBILIZATION	1	LS	$ 280,000.00	$ 280,000.00	$ 250,000.00	$ 250,000.00	$ 104,550.00	$ 104,550.00	$ 66,000.00	$ 66,000.00	$ 315,000.00	$ 315,000.00
	TRAFFIC CONTROL SECTION SUBTOTAL			$	455,300.00	$	481,000.00	$	470,470.00	$	532,538.00	$	816,979.45
	PROJECT TOTAL			**$**	**5,640,580.25**	**$**	**5,464,565.40**	**$**	**5,465,972.85**	**$**	**5,965,254.02**	**$**	**6,325,000.00**
SubCo	FULFORD & JONES			$	620,460.00	$	1,755,246.50	$	1,752,460.00			$	1,784,559.50
	FIRST CLASS TRUCKING , INC									$	579,741.28		

Board of Commissioners Agenda Item Report

Agenda Item No.: 2024-372-
Submitted by: Ruben Wall
Submitting Department: Parks & Recreation
Meeting Date: November 19, 2024

SUBJECT
Approval of a Resolution for the Joint Use Agreement with the Boys & Girls Club Serving Wake County

Recommendation:

Item Summary:

ATTACHMENTS
- Resolution - Boys & Girls Club Joint Use Agreement.docx
- Summary Sheet for Resolution - Boys & Girls Club Use Agreement.pdf
- Town of Wake Forest - Boys & Girls Club Joint Use Agreement 2024-2034.pdf

RESOLUTION

RESOLUTION AUTHORIZING THE TOWN MANAGER TO EXECUTE A JOINT USE AGREEMENT ON BEHALF OF THE TOWN OF WAKE FOREST WITH THE BOYS & GIRLS CLUB SERVING WAKE COUNTY

WHEREAS, in 2021, the Town entered into a joint use agreement with the Boys & Girls Club of Wake County for the use of Forrest Field, and

WHEREAS, both parties feel it's in their best interest to have an on-going relationship, it is recommended that the joint use agreement be extended and amended, to include funding to replace the gymnasium floor at the Wake Forest Boys & Girls Club, and

WHEREAS, by providing this funding, the Town's Parks, Recreation and Cultural Resources Department will now have access to the Wake Forest Boys & Girls Clubs gymnasium for youth basketball practices, and

NOW, THEREFORE, BE IT RESOLVED that the Town Manager is hereby authorized to execute on behalf of the Town of Wake Forest a joint use agreement for a period of ten-years and provide funds to replace the gymnasium floor in the amount of $64,8000.

Duly Adopted this 19th day of November 2024.

ATTEST:

Vivian A. Jones, Mayor

Theresa Savary, Town Clerk

Approval of a Resolution for the Joint Use Agreement with the Boys & Girls Club Serving Wake County (Wake Forest Club)

Summary

Agenda Item: Approval of a Resolution for the Joint Use Agreement with the Boys & Girls Club Serving Wake County (Wake Forest Club)

- **Summary:** The Wake Forest Parks, Recreation and Cultural Resources Department and the Wake Forest Boys & Girls Club have a long-standing relationship by partnering to serve the citizens of Wake Forest. In 2021, the Town entered into a three-year joint use agreement with the Boys & Girls Club Serving Wake County for the use of Forrest Field in Wake Forest. This new ten-year agreement would continue to allow the Club to have access to Forrest field. The Town would also provide funding for the replacement of the gymnasium floor located at the Wake Forest Boys & Girls Club in the amount of $64,800. By providing these funds, the Town's Parks, Recreation and Cultural Resources Department will have access to the Wake Forest Boys & Girls Club for youth basketball practice for a period of ten-years.

Attachment:

- Resolution
- Joint Use Agreement

TOWN *of*
WAKE FOREST

301 S. Brooks Street
Wake Forest, NC 27587
t 919.435.9400

www.wakeforestnc.gov

NORTH CAROLINA

WAKE FOREST BOYS & GIRLS CLUB FACILITY JOINT USE AGREEMENT

THIS Agreement made and entered into this 1st day of December 2024, by and between the TOWN OF WAKE FOREST, a municipal corporation of the State of North Carolina (hereinafter referred to as "the Town"), and Boys & Girls Club Serving Wake County, 701 Raleigh Blvd, Raleigh, NC 27610 - (Wake Forest Club), a non-profit corporation, (hereinafter referred to as "the Boys & Girls Club") located at 325 S Wingate St, Wake Forest, NC 27587

W I T N E S S E T H:

WHEREAS the Town and the Boys & Girls Club are mutually interested in providing adequate programming facilities for community parks and recreation; and

WHEREAS, said parties are authorized to enter into agreements with each other, and to do any and all things necessary or convenient to aid and cooperate in the cultivation of citizenship by providing for adequate programs; and

WHEREAS, in the interest of providing the best service with the least possible expenditure of public funds, full cooperation between the Town and the Boys & Girls Club is necessary; and

NOW, THEREFORE, the parties agree as follows:

Joint Use and Scheduling

The Town and the Boys & Girls Club agrees to allow access to the facilities listed below at no charge. This agreement does not terminate either party's rights to continue to offer other programs at these facilities.

- The Town will provide access to R. H. Forrest Field as per a written schedule that is agreed upon by both parties, with the understanding that Wake County Public School programs have first priority, followed by Town programs and events, and Boys & Girls Club use is scheduled outside of the other parties' programming needs.
- The Boys & Girls Club shall be responsible for general cleanup at R.H. Forrest Field after each event/program to maintain acceptable appearance and required safety levels.
- Schedule adjustments outside of this agreement will be subject to site availability.

- The Boys & Girls Club will provide access to the facility located at 325 S Wingate St, Wake Forest, NC 27587 starting December 1, 2024 for the Town's youth basketball practice.
- The facility will be open from ___a.m. to ___p.m. each Saturday until_____, 202__.

FINANCIAL DETAILS

The Town agrees to provide funding for the replacement of the gymnasium floor located at 325 S. Wingate St. in Wake Forest in the amount of $64,800. Both parties agree to waive any and all rental fees related to the use of each facility. The Boys & Girls Club will be responsible for general maintenance and upkeep of the gymnasium floor.

UTILITIES.

Each party shall be responsible for the cost of utilities at their respective facilities.

SUPERVISION

The Boys & Girls Club will provide adequate staff supervision on site to ensure the safety of participants and to ensure the established parameters of care and use are observed at the Boys & Girls Club and while the club utilizes R.H. Forrest Field.

RENEWAL & TERMINATION

The terms of this agreement will be for a ten-year period beginning December 1, 2024, ending December 1, 2034. This agreement may be cancelled by either party at any time upon sixty (60) days written notice to the other. Both parties reserve the right to cancel this agreement without a sixty (60) days' notice if it is determined that the terms have been violated. In the event that the agreement is terminated, the Town shall be reimbursed the estimated value of the gymnasium floor at the time of termination.

SCHEDULING

Any scheduling conflicts between the Town and the Boys & Girls Club shall be resolved in favor of the facility owner. In the event that the facility has to be closed for an extended period for scheduled maintenance, a thirty (30) day notice will be given when possible. In the event of emergency/unplanned maintenance, the parties agree to notify each other of closure once it is apparent that the facility has to be closed.

INSURANCE/LIABILITY.

Both parties shall maintain and keep in full force the following coverage. Secure and maintain a policy of general liability insurance in the minimum amount of $1,000,000.00 covering for any personal injuries or property damage caused, or alleged to be caused, by the acts or omissions of the either party or its officers, directors, employees, or agents. Both parties will provide a Certificate of Insurance evidencing this policy of insurance upon request of each.

COMMUNITY PARTNER AGREEMENT

Demonstrating mutual respect is essential to establishing and maintaining a productive working relationship between the Town and its community partners. For this reason, members of organizations partnering with the Town are expected to report/address issues or concerns about the Town through appropriate channels, including contacting the responsible Town department or representative. Critical public comments and/or social media posts by members of partnering organizations may result in the forfeiture of the organization's current and future partnerships with the Town.

Miscellaneous Terms and Conditions

(a) Choice of Law and Forum. This contract shall be deemed made in Wake County, North Carolina. This contract shall be governed by and construed in accordance with the law of North Carolina. The exclusive forum and venue for all actions arising out of this contract shall be the appropriate division of the North Carolina General Court of Justice in Wake County. Such actions shall neither be commenced in nor removed to federal court. This section shall not apply to subsequent actions to enforce a judgment entered in actions heard pursuant to this section.

(b) Waiver. No action or failure to act by the Town shall constitute a waiver of any of its rights or remedies that arise out this contract, nor shall such action or failure to act constitute approval of or acquiescence in a breach thereunder, except as may be specifically agreed in writing.

(c) Performance of Government Functions: Nothing contained in this contract shall be deemed or construed in any way to stop, limit, or impair the Town from exercising or performing any regulatory, policing, legislative, governmental, or other powers or functions.

(d) Severability. If any provision of this contract shall be unenforceable, the remainder of this contract shall be enforceable to the extent permitted by law.

(e) Assignment, Successors and Assigns. Without the Town's written consent, the Contractor shall not assign (which includes to delegate) any of its rights (including the right to payment) or duties that arise out this contract. Unless the Town otherwise agrees in writing, the Contractor and all assigns shall be subject to all of the Town's defenses and shall be liable for all of the Contractor's duties that arise out of this contract and all of the Town's claims that arise out of this contract. Without granting the Contractor the right to assign, it is agreed that the duties of the Contractor that arise out of this contract shall be binding upon it and its heirs, personal representatives, successors, and assigns.

(f) Compliance with Law. In performing all of the Work, the Contractor shall comply with all applicable law.

(g) Town Policy. THE TOWN OPPOSES DISCRIMINATION ON THE BASIS OF RACE AND SEX AND URGES ALL OF ITS CONTRACTORS TO PROVIDE A FAIR OPPORTUNITY FOR MINORITIES AND WOMEN TO PARTICIPATE IN THEIR

WORK FORCE AND AS SUBCONTRACTORS AND VENDORS UNDER CITY CONTRACTS.

(h) EEO Provisions. During the performance of this Contract the Contractor agrees as follows:

(1) The Contractor shall not discriminate against any employee or applicant for employment because of race, color, religion, sex, national origin, political affiliation or belief, age, or handicap. The Contractor shall take affirmative action to ensure that applicants are employed and that employees are treated equally during employment, without regard to race, color, religion, sex, national origin, political affiliation or belief, age, or handicap. The Contractor shall post in conspicuous places available to employees and applicants for employment, notices setting forth these EEO provisions.

(2) The Contractor in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, national origin, political affiliation or belief, age, or handicap.

(i) No Third Party Right Created. This contract is intended for the benefit of the Town and the Contractor and not any other person.

(j) Principles of Interpretation. In this contract, unless the context requires otherwise, the singular includes the plural and the plural the singular. The pronouns "it" and "its" include the masculine and feminine. Reference to statutes or regulations include all statutory or regulatory provisions consolidating, amending, or replacing the statute or regulation. References to contracts and agreements shall be deemed to include all amendments to them. The word "person" includes natural persons, firms, companies, associations, partnerships, trusts, corporations, governmental agencies and units, and any other legal entities.

(k) Modifications, Entire Agreement. A modification of this contract is not valid unless signed by both parties and otherwise in accordance with requirements of law. Further, a modification is not enforceable against the Town unless the Town Manager or other duly authorized official signs it for the Town. This contract contains the entire agreement between the parties pertaining to the subject matter of this contract. With respect to that subject matter, there are no promises, agreements, conditions, inducements, warranties, or understandings, written or oral, expressed or implied, between the parties, other than as set forth or referenced in this contract.

(l) E-Verify. Contractor shall comply with the requirements of Article 2 of Chapter 64 of the NC General Statutes, "Verification of Work Authorization". Further, if Contractor utilizes a subcontractor, Contractor shall require the subcontractor to comply with the requirements of Article 2 of Chapter 64 of the NC General Statutes. Contractor will provide documentation or sign affidavits or any other documents requested by the Town of Wake Forest demonstrating such compliance.

(m) Iran Divestment Act. Contractor certifies that; (i) it is not identified on the Final Divestment List or any other list of prohibited investments created by the NC State Treasurer pursuant to N.C.G.S. 147-86.58; (ii) it will not take any action causing it to appear on any such list during the term of this Contract, and (iii) it will not utilize any subcontractor to provide goods or services hereunder that is identified on any list.

(n) Divestment from Companies that Boycott Israel. Contractor represents, covenants, and certifies that it is not listed on the list of restricted companies developed and published by the North Carolina State Treasurer as required by N.C.G.S. 147-86.81.

(o) Quality and Workmanship. All work performed and/or services rendered shall be performed to the satisfaction of the Town of Wake Forest. The work performed and/or services rendered shall not be considered complete, nor applicable payments rendered, until the Town is satisfied with the work performed and/or services rendered.

(p) Title VI. During the performance of this contract, the Contractor, for itself, its assignees and successors in interest (hereinafter referred to as the "contractor") agrees as follows:

(1) Compliance with Regulations: The contractor shall comply with the Regulation relative to nondiscrimination in Federally-assisted programs of the Town of Wake Forest (hereinafter, "Town") Title 49, Code of Federal Regulations, Part 21, as they may be amended from time to time, (hereinafter referred to as the Regulations), which are herein incorporated by reference and made a part of this contract.

(2) Nondiscrimination: The contractor, with regard to the work performed by it during the contract, shall not discriminate on the grounds of race, color, national origin, sex, religion, age, or disability in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor shall not participate either directly or indirectly in the discrimination prohibited by section 21.5 of the Regulations, including employment practices when the contract covers a program set forth in Appendix B of the Regulations.

(3) Solicitations for Subcontractors, Including Procurements of Materials and Equipment: In all solicitations either by competitive bidding or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials or leases of equipment, each potential subcontractor or supplier shall be notified by the contractor of the contractor's obligations under this contract and the Regulations relative to nondiscrimination on the grounds of race, color, or national origin.

(4) Information and Reports: The contractor shall provide all information and reports required by the Regulations or directives issued pursuant thereto, and shall permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the Town to be pertinent to ascertain

compliance with such Regulations, orders, and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish this information the contractor shall so certify to the Town as appropriate and shall set forth what efforts it has made to obtain the information.

(5) Sanctions for Noncompliance: In the event of the contractor's noncompliance with the nondiscrimination provisions of this contract, the Town shall impose such contract sanctions as it or the Town may determine to be appropriate, including, but not limited to:

(a) withholding of payments to the contractor under the contract until the contractor complies, and/or

(b) cancellation, termination, or suspension of the contract, in whole or in part.

(6) Incorporation of Provisions: The contractor shall include the provisions of paragraphs (1) through (6) in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Regulations, or directives issued pursuant thereto. The contractor shall take such action with respect to any subcontract or procurement as the Town may direct as a means of enforcing such provisions including sanctions for noncompliance: Provided, however, that, in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or supplier as a result of such direction, the contractor may request the Town to enter into such litigation to protect the interests of the Town, and, in addition, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

(q) Pre-Audit. This instrument has been pre-audited in the manner required by the Local Government Budget and Fiscal Control Act.

(r) Non-appropriation clause. Contractor acknowledges that the Town of Wake Forest is a governmental entity, and the contract validity is based upon the availability of public funding under the authority of its statutory mandate. In the event that public funds are unavailable and not appropriated for the performance of the Town of Wake Forest's obligations under this contract, then this contract shall automatically expire without penalty to the Town of Wake Forest thirty (30) days after written notice to Contractor of the unavailability and non-appropriation of public funds. It is expressly agreed that the Town of Wake Forest shall not activate this non-appropriation provision for its convenience or to circumvent the requirements of this contract, but only as an emergency fiscal measure during a substantial fiscal crisis, which affects generally its governmental operations. In the event of a change in the Town of Wake Forest's statutory authority, mandate and mandated functions, by state and federal legislative or regulatory action, which adversely affects the Town of Wake Forest's authority to continue its obligations under this contract, then this contract shall automatically

terminate without penalty to the Town of Wake Forest upon written notice to Contractor of such limitation or change in the Town of Wake Forest's legal authority.
(s) No pledge of taxing authority. The taxing power of the Town of Wake Forest is not pledged directly or indirectly to secure any monies due under this contract.
(t) No waiver of governmental immunity; Violation of law. Except for waiver of governmental immunity resulting from the execution of a valid contract, the Town of Wake Forest makes no other waiver of governmental immunity. If any provision of the Contract or Agreement is in violation of any legal, statutory or state constitutional prohibition, then such provision(s) shall be unenforceable against the Town of Wake Forest.
(u) Conflict of Interest. If this is a contract for design, engineering, contract administration or similar services, the Contractor will not enter into contracts or agreements with third parties that may present a potential for conflict of interest between the Town of Wake Forest and the third parties regarding the subject matter of this Contract or Agreement.
(v) Public Record. This Contract or Agreement is subject to disclosure under the public records laws of the State of North Carolina.
(w) Miscellaneous Provision. In the event of any inconsistency, conflict, or ambiguity between these miscellaneous terms and conditions and other associated contract documents, the parties agree that the miscellaneous terms and conditions of this document shall prevail.

INDEMNITY

- To the extent and limits of the North Carolina Tort Claims Act, Article 31 of Chapter 143 of the North Carolina General Statutes, and without waiving the Town's governmental immunity, the Town of Wake Forest shall indemnify Boys & Girls Club for any liabilities, damages, costs and claims arising from or relating to the negligent acts or omissions of The Town of Wake Forest committed in connection with this Agreement to the extent that it results from or is caused by the asserted sole ordinary negligence of the Town of Wake Forest . This indemnification is limited to any insurance coverage applicable to The Town of Wake Forest's negligent acts or omissions committed in connection with this Agreement. Such liability arises out of acts for which any defense of governmental, statutory, or common law immunity is not available. The indemnification provided for herein shall not be construed as a waiver of any applicable defense of governmental, statutory, or common law immunity, and shall not prevent the Town of Wake Forest from asserting any defense of such immunity; provided that if a court of competent jurisdiction determines that no such immunity applies, then the indemnity provided for herein shall apply.
- To the fullest extent allowed by law, Boys & Girls Club hereby agrees to hold harmless and indemnify the Town of Wake Forest from any claim, suit, or loss, sustained by the Town of Wake Forest, its officers, directors, employees, or agents for any asserted property damage, injury, or death of any person to the extent that it results from or is caused by the asserted sole ordinary negligence of Boys & Girls Club or fault of Boys &

Girls Club if such fault is the proximate cause of loss, damage, or expense indemnified, while participating in such activity, or while in, on or upon the premises where the activity is being conducted. The Boys & Girls Club acknowledges that its employees, agents, or private contractors are not employees of the Town of Wake Forest. Boys & Girls Club, its employees, or its agents/contractor also waives any and all rights to file any claim against the Town of Wake Forest under the NC Workman's Compensation Act which might arise out of an in the course of performing said instructions.

- If any party hereto receives notice of an event or possible event that would give rise to indemnification as required hereunder, such party shall provide immediate notice to the other party of such event. Further, if either party that is to be indemnified and held harmless hereunder receives payment or other compensation from a third party, any such amount received shall be applied to any amounts owed by the indemnifying party to the indemnified party or to a third party. Neither party shall be responsible for payment of any amount or any damages in excess of such amount actually incurred or suffered by the indemnified party. Both parties represent that neither does not discriminate against any participant in their programs because of sex, race, color, religion, creed, national origin, citizenship status, age, or handicap.

To the Town:	Company:
Town of Wake Forest	Boys & Girls Club Serving Wake County
Park, Recreation and Cultural Resources	
Attn: Ruben Wall	Attn: Matt Taliaferro
301 S. Brooks St.	701 Raleigh Blvd,
Wake Forest, NC 27587	Raleigh, NC 27610

PRE-AUDIT.

"This instrument has been pre-audited in the manner required by the Local Government Budget and Fiscal Control Act.

_____

(Signature of Finance Officer)
Town of Wake Forest
301 S. Brooks Street
Wake Forest, NC 27587

CONTRACT MONITORING.

Staff member responsible for monitoring the contract performance requirement is:

Name and Title: Ruben Wall, Director RW Department Head Initial

IN WITNESS WHEREOF, the Town of Wake Forest being duly authorized, and the Agency have caused this contract to be executed under seal by their respective duly authorized agents or officers.

TOWN OF WAKE FOREST,	AGENCY: Boys & Girls Club Serving Wake County
a North Carolina municipal corporation	Organization
By: _____	By: _____
Kip Padgett, Town Manager	
_____	_____
Printed	Printed
Witnessed by:	Witnessed by:
_____	_____
Name	Name
_____	_____
Printed	Printed
(SEAL)	(SEAL)

Board of Commissioners Agenda Item Report

Agenda Item No.: 2024-332-
Submitted by: Jennifer Currin
Submitting Department: Planning
Meeting Date: November 19, 2024

SUBJECT
Consideration of LEGISLATIVE CASE CPA-24-02, Revised Draft Downtown Plan (November 5, 2024 version)

Recommendation:

Item Summary:

ATTACHMENTS
-

Board of Commissioners Agenda Item Report

Agenda Item No.: 2024-377-
Submitted by: Brad West
Submitting Department: Planning
Meeting Date: November 19, 2024

SUBJECT
Consideration of approval of a Resolution to Support Development of the S-Line Rail Corridor and to Provide Local Funding to Match a Federal Grant Opportunity for Mobility Hub Design and Construction Activities

Recommendation:
Approve

Item Summary:

ATTACHMENTS
- Agenda Summary
- Resolution.docx

Agenda Item: Approval of a Resolution to Support Development of the S-Line Rail Corridor and to Provide Local Funding to Match a Federal Grant Opportunity for Mobility Hub Design and Construction Activities

Summary: NCDOT is preparing a Federal-State Partnership for Intercity Passenger Rail (FSP) Grant Program application for the North Carolina S-Line and Downtown Wake Forest Mobility Hub (Amtrak station).

The NCDOT Rail Division's grant application proposes to include final engineering design and construction of the Town's Mobility Hub as a phase of work along with the proposed engineering design for the S-Line rail corridor. The Town's funding will be shown as local funding match to support the Mobility Hub phase.

Based on the requirements of the grant program, Wake Forest is required to provide a 20% funding match. Specifically, the Town of Wake Forest would contribute $6,000,000 to receive $24,000,000 in federal funding towards final engineering and construction costs related to the Mobility Hub within Downtown Wake Forest, totaling $30,000,000.

Funds would need to be fully obligated by April 1st, 2028, with increments for engineering design work obligated prior to April 1st, 2028, as to be determined.

Please note: NCDOT, in partnership with the Town, applied for both the federal Reconnecting Communities & Neighborhoods (RCN) grant and Rebuilding American Infrastructure with Sustainability and Equity (RAISE) grant earlier this year. However, NCDOT was not awarded these grant funds. The FSP grant would be NCDOT's latest attempt at securing funds for the Downtown Wake Forest Mobility Hub.

Attachments: None

RESOLUTION 2024-XX

RESOLUTION TO SUPPORT DEVELOPMENT OF THE S-LINE RAIL CORRIDOR AND TO PROVIDE LOCAL FUNDING TO MATCH A FEDERAL GRANT OPPORTUNITY FOR MOBILITY HUB DESIGN AND CONSTRUCTION ACTIVITIES

WHEREAS, the North Carolina Department of Transportation (NCDOT) has a long tradition of progressing successful passenger and freight rail projects and supporting the development of rail infrastructure; and

WHEREAS, NCDOT has worked with state, regional, and federal partners to develop plans for the federally-designated Southeast Corridor ("S-Line"), a passenger and freight rail network extending from Washington, D.C. through North Carolina to Jacksonville, Florida; and

WHEREAS, a Record of Decision to develop the Raleigh to Richmond portion of the Southeast Corridor was approved by the Federal Rail Administration (FRA) in March 2017, in accordance with the National Environmental Policy Act; and

WHEREAS, the development of the S-Line corridor supports and promotes economic development in communities along the corridor, including those in rural areas; and

WHEREAS, the developed S-Line would provide greater access to jobs, health care, and education and provide new options for the movement of both goods and people; and

WHEREAS, the developed S-Line would provide efficient and reliable commuting options for communities and businesses along the corridor;

WHEREAS, NCDOT is working with communities along the S-Line to plan stations, mobility hubs, infrastructure needs, and other land use considerations to prepare for rail service and maximize mobility options in each community;

WHEREAS, NCDOT is pursuing a Federal-State Partnership for Intercity Passenger Rail (FSP) grant opportunity to provide funding for final engineering design and construction of the Downtown Wake Forest Mobility Hub, as a phase of S-Line rail corridor work;

WHEREAS, communities participating in the FSP grant application must provide a local 20% match ($6,000,000) for their portion of the grant application;

BE IT RESOLVED that the governing body of the Town of Wake Forest hereby authorize to commit $6,000,000 as the 20% match for the grant and supports further design and construction efforts of the S-Line rail corridor.

Adopted and effective this the 19th day of November 2024.

_____

Vivian A. Jones

Mayor

ATTEST:

_____

Theresa Savary

Town Clerk

APPROVED AS TO FORM:

_____

Hassan Kingsberry

Town Attorney

Board of Commissioners Agenda Item Report

Agenda Item No.: 2024-357-
Submitted by: Lisa Hayes
Submitting Department: Administration
Meeting Date: November 19, 2024

SUBJECT
Consideration of approval of updated Special Events Policy and adoption of Motorized Parade Policy

Recommendation:
Approval of policies effective November 19, 2024

Item Summary:

ATTACHMENTS
- Item Summary_Special Event and Motorized Parade Policies.pdf
- Special Events Policy_Final Draft_11_19_2024.pdf
- Motorized Parade Policy_Final Draft_11_19_2024.pdf

Consideration of Approval of updated Special Events Policy and adoption of Motorized Parade Policy

Item Summary:

The current Special Events Policy was last updated on April 2018. The Town of Wake Forest does not currently have a Motorized Parade Policy. Town staff recommends approval of both policies.

Attachments:

Special Events Policy_Final Draft_11_19_2024

Motorized Parade Policy_Final Draft_11_19_2024

SPECIAL EVENTS POLICY

Revision Date: November 19, 2024

Introduction:

Special Events are an important component of the high quality of life in Wake Forest. These events support a sense of place and community, have a positive economic impact on surrounding businesses and encourage residential, commercial, and professional office investment in the Town of Wake Forest ("Town"). The Town has long been a supporter of community events that provide leisure and recreational activities.

When the Town organizes a Special Event, any adverse consequences such as security, traffic and crowd control, property damage, and sanitation are minimized. Similar Special Events sponsored by private groups may not adequately address the adverse consequences. The Town believes it is in the public interest and promotes the public health, safety, and welfare to regulate such Special Events that interfere with the free flow of vehicular and pedestrian traffic on Public Areas and/or utilize private property for events that may impact traffic or public safety.

This Policy is intended to permit many types of Special Events in Public Areas but under guidelines that will prevent, or at least reduce the adverse consequences.

The Wake Forest Board of Commissioners (BOC) of the Town of Wake Forest do hereby enact and ordain:

Special Event Policy:

This policy shall be known and cited as the Special Events Policy ("Policy").

It is the policy of the Town that Public Areas, as defined below, are set aside primarily for use by the public at large and should not ordinarily be reserved for private events, parties and gatherings that do not promote a public purpose that benefits and is made available to the entire community. However, on a limited basis, private events that accomplish public

good by celebrating the history, heritage and diversity of Wake Forest may be allowed within a Public Area subject to the provisions of this Policy.

The Town Manager is hereby given the authority to authorize the temporary closure of Public Areas, as defined below, for Special Events subject to the provisions of this Policy.

The Town Manager shall have the right to grant waivers concerning scheduling or other minor requirements of this Policy where there is a hardship caused to the event organizer by the strict enforcement of this Policy provided the health, safety and welfare of the public is not placed at risk and the overall intent of this Policy can be achieved.

This policy shall not apply to events taking place in our public parks, greenways, playgrounds and at The Renaissance Centre. The Parks, Recreation, and Cultural Resources Department and The Renaissance Centre have policies in place to regulate events held in these venues.

Definitions:

For the purposes of this Policy, the following Definitions shall apply unless the context clearly indicates or requires a different meaning:

Centennial Plaza: Plaza located directly in front of Town Hall located along Brooks Street. See section for special conditions related to Centennial Plaza use.

Certificate of Insurance (COI): A certificate showing proof of the required insurance coverage(s) in the form of an original current certificate of insurance presented by the Insured's agency. The Town, its officers, officials, agents, and employees, shall be named as additional insured on the General Liability Policy.

Community Event: These are approved "special events" that a business, religious institution, community group, or other organization runs, pays for, and plans after applying for and receiving a Special Event Permit from the Town. Examples of Community Events include the Wake Forest Rotary Club's Cars & Carnivores Street Festival, Wake Forest Downtown, Inc.'s Forest Fest, and the Wake Forest Area Chamber of Commerce's Meet in the Street. Town staff may approve an event location (Festival Street/East Owen Avenue, South White Street, etc.), and may require staff from Police, Public Works, and other departments, as necessary. Community Event Organizers are invoiced for the cost of Town staff required to work the event.

Community Events Coordinator: The Town's employee(s) and/or contact(s) that help guide the event organizer(s) throughout the various special event processes and stages (application, planning, requirements/regulations, etc.) in the Special Event Policy. They also act as a liaison between the event organizer and other Town departments throughout the event process.

Crowd Manager: The person(s) responsible for defining their event organization/ establishment's emergency plan for evacuation. They are also responsible for ensuring that all event personnel, including volunteers, properly understand their roles in crowd management and assisting in directing the crowd in an orderly manner for evacuation. They provide direction for all event personnel in assigned areas by continuously communicating necessary changes of events or strategies consistent with event management as well as monitor crowd behavior, intervening as necessary.

Downtown Wake Forest: Defined by a geographical area designated as the Municipal Service District (MSD). See map for details: https://www.wakeforestnc.gov/sites/default/files/uploads/planning/municipalservicedistrict.pdf

Event Organizer: The individual(s) completing the Special Event Permit Application and point-of-contact for the event. This individual is responsible for coordinating and submitting all the requirements and conditions pertaining to the Special Event Permit and complying with the Town's Special Event Policy. The Event Organizer is to remain on-site beginning at event set up, during the event and after, until all equipment is picked up, clean up, etc. has been completed. The permit will be issued in the name of the specific individual and that individual shall be physically present throughout the duration of the event, and personally responsible for the information provided, for compliance with the terms and conditions of the permit and all terms set forth in this policy.

Event Site Plan/Map: A comprehensive plan/map of the event site that includes (as applicable) such items as street closures, stage location(s), restroom facilities/locations, vendor areas, food/food truck areas, information tent, designated parking areas, first aid stations, missing child relocation area, emergency shelter locations, and volunteer stations.

General Event: Minimal-impact events that take place in off-street venues and do not close roads; have fewer than 200 estimated total attendees; affect a minimal number of residents or establishments; and have no significant event infrastructure.

Neighborhood Event: Organized small-scale activity that closes a small section of a local street. Events are limited to a neighborhood cul-de-sac or on a road with only one entrance where all the affected residents have been notified. These small-scale gatherings are initiated by, and are intended to, attract only local residents who live on or in close proximity to the street being closed. They are not intended for the general public.

Political Events/Parties: A group of people engaged in political activities and/or events (i.e. lobbying, community organizing, campaign advertising, etc.) aimed at achieving clearly defined political goals, which typically benefit the interests of their members.

Positive Protective Barrier: The measures and/or devices which contain and/or redirect motorized vehicles and meet applicable crash standard criteria. Examples may include Class III barriers, Meridian barriers, highly mobile barriers, movable and temporary steel barriers, movable concrete barriers, and traditional concrete barriers.

Private Property Events: Events held entirely on private property where a disruption to vehicular or pedestrian traffic is anticipated. .

Public Area: Primarily an area dedicated, reserved, or set aside for public use and maintained by or under the control of the Town. Among other places, it includes streets, alleys, sidewalks, parking lots, parks, and other open space and property owned by the Town. Further, streets under the control of the North Carolina Department of Transportation (NCDOT) and the sidewalks along those streets are a Public Area for the purposes herein when the appropriate review and consent has been obtained from the Town and NCDOT.

Public Purpose: Events that accomplish public good by celebrating the history, heritage and diversity of Wake Forest. These events support a sense of place and community, have a positive economic impact on surrounding businesses and encourage residential, commercial, and professional office investment in the Town.

Special Event: An event which is expected to attract/assemble fifty or more persons on a Public Area (Centennial Plaza has additional permitting requirement – please refer to that section), or which may require the closing of public streets and sidewalks, or which may restrict or interfere with the right of merchants, the public and private individuals to have access to offices, stores, residences, or other places. Streets under the control of NCDOT are considered a Public Area for the purposes of this definition when appropriate consent has been obtained from NCDOT.

Special events include, but are not limited to general events, neighborhood events, walk/race events, street festivals, carnivals, concerts, parades, processions, block parties, private property events, performances, rallies, ceremonies, and festivals of any kind.

Special Event Emergency Action Plan (SEEAP): A plan that includes and identifies such items as, but not limited to comprehensive site map(s), crowd managers, emergency access, event communication/contacts, how event organizer(s) deal with emergencies, notification, safety/security information, and weather contingency plans.

Sponsor/Sponsoring Organizations: An individual or organization that pays some or all of the costs involved in an event in return for advertising.

Street Festival/Carnival/Concert/Parade: Greater impact on the community, which may involve the closure of multiple town blocks; closure that affects numerous residents or establishments; high noise levels; estimated attendance of 200 or more people; and/or significant event infrastructure such as multiple vendors, stages, and tents.

Town-Organized Event: These are events that the Town creates, pays for, and plans. Town staff manage the programming, including activities, logistics, sponsors and vendors. These are often referred to as “Town Events.” Examples of Town events include Friday Night on White, Halloween Boo Bash, and the Wake Forest Cares Holiday Kickoff.

Walk/Race Event: Organized activity involving running, biking, walking or other means of transportation, involving three or more participants and utilizing a fixed course that involves the use or obstruction of Town street right-of-way, Town sidewalks, and greenways.

Special Event Permit:

Special Event Permit Exceptions:

The following events are exceptions to the permit and will not apply to nor require a permit:

- Funerals.
- Educational activities involving students and/or faculty provided the event is under the immediate direction and supervision of school administrative personnel and does not require closure of a public area or have traffic, safety or noise impacts.
- The Town or any other governmental unit carrying out its normal functions.
- Town-Organized Events, or an authorized agent of the Town provided the Special Event is insured against accidents and liabilities by the Town or by the entity acting on behalf of the Town.
- Spontaneous events lasting no more than two (2) hours occasioned by news or public affairs coming into the public knowledge within three (3) days of the event provided the organizer of the event provides immediate written notice to Wake Forest Police Department.
- Official observances for national holidays, national, state, and local events which are of short duration and open to the public at large without the payment of admission fees or other charges and do not involve commercial activity.
- Picketing. Regulations for picketing are stated in Article IV, Section 20-103,104 of the Code of Ordinances of the Town.

Special Event Permit Required:

It shall be unlawful for any person to conduct, sponsor, maintain or assist in maintaining a Special Event, as defined above, within or on any Public Area without first obtaining the permit required herein and maintaining the validity of the permit throughout the Special Event.

Special Event Permit Application Process:

Application:

An electronic application for a Special Event Permit shall be filed with the Town Manager or their designee using the form link below.

1. Applying for a Special Event Permit does not guarantee approval.

The Town assumes no liability if an event is not approved; selling tickets, advertising, gaining sponsorship, and any other activities done prior to the event approval will be done at the risk of the event organizer.

2. Read the Special Events Policy thoroughly and please direct any questions to the Community Events Coordinator(s) at: communityeventscoordinator@wakeforestnc.gov or (919) 435-9415.

3. Complete the Town Special Event Permit Application online:

   https://www.cognitoforms.com/TownOfWakeForestNC1/SpecialEventApplication

4. Pay the required, non-refundable application fee (see below) and upload any required documentation (i.e., event site plan/map, private property approval letters) at the time of application submittal.

Determination and Issuance of Special Event Permit:

The event organizer should review the table below to understand event type classifications. In issuing any permit applied for under this Policy, the Town Manager and/or designee, shall determine which departments should review and make recommendations for approval, approval with conditions, or denial. Applications for Special Events shall be submitted in accordance with the schedule below:

Event Type	Examples	Application Deadline	Application Fee (non-refundable)
General	Less than 200 people; no public road closures	Minimum 90 days prior to event	$25
Neighborhood Events	Cul-de-sac closures	Minimum 60 days prior to event	$25
Walk/Race Events	5Ks, half-marathons	Minimum 120 days prior to event	$50
Private Property Events	Car shows, music nights, carnivals, retail grand openings, etc.	120 days prior to event	$50
Street Festivals/ Carnivals/Concerts/ Parades	Car shows, festivals, parades	Minimum 180 days prior to event	$100

Evaluation Criteria:

Determinations:

The Special Event Permit process utilizes the following criteria when evaluating and permitting Special Event Permit Applications:

- The event purpose meets the public purpose requirement (events that accomplish public good by celebrating the history, heritage and diversity of Wake Forest);
- The Public Area to be used can accommodate the number of people expected to participate;
- The general health, safety, and welfare of the participants in/or attending the event as well as the surrounding community;
- Potential conflicts with prior scheduled permitted Special Events. Please also see maximum number of events allowable below in the Additional Determinations section;
- Whether the activities are in compliance with other applicable laws and Town ordinances;
- Frequency - No permit shall be issued which allows a particular Public Area to be closed for more than twelve (12) continuous hours; for more than two (2) days in a calendar month;
- Benefit - No permit shall be issued for an event which is substantially intended to financially benefit the event organizer or sponsor of the event unless the individual or sponsor can demonstrate the public purposes to be achieved;
- The individual making the application is a responsible individual with no criminal record;
- Priority is given to Town-based groups, chapters, and organizations (these are events organized by a group, chapter or organization that is Wake Forest-based either through its non-profit status, physical location, or with a chapter/group providing community services in Wake Forest); and
- No political groups/events.

Additional Determinations:

No permit shall be issued unless the permit can reasonably find:

- The property owners and public have pedestrian access to residences and businesses located along the closed portion of the Public Area.
- If alcohol will be served, or available, there is a plan for security, crowd control and emergency services.
- Availability of public safety and town personnel to ensure event safety.
- All other permissions, licenses and permits have been obtained.

- Adherence to event frequency limitations listed below which attempt to minimize the impact on residents, property owners and businesses affected by street closures, traffic, noise, etc.:

    - Limitation on Number of Events - In order to continue to cost-effectively support these events with public staff, to protect the interests of community members who are regular users of streets, sidewalks, and greenways from undue inconvenience, and to continue to support these events that are positive for the health, recreation and well-being of participants and for the economic development of the Town, the following restrictions shall be considered during the Special Event Approval Process:

        - Downtown Wake Forest - Maximum two (2) events per month on Downtown streets, including but not limited to S. White Street, S. Brooks Street, Elm Avenue, E. Owen Avenue, E. Jones Avenue, or Wait Avenue; this maximum number of events includes events hosted by the Town.
        - Community-Wide – Maximum of two (2) permitted events Town-wide per day (if Town Public Safety Resources are needed, event request will be evaluated and approved based on availability of Town Public Safety Resources).
        - Blackout Dates – Due to the reduced availability of supporting Town resources, applications for dates that fall on, or around, Town-Organized and sponsored events and Town observed holidays may not be approved. Please check the Town's website for a list of official Town holidays.
        - Maximum Number of Street Closure Events for each Organization Per Calendar Year (excluding Festival Street):
            - Downtown – one (1) per entity

Form of Special Event Permit:

An electronic application form will be provided by the Town.

- Upon submitting your application, you will receive a confirmation email that your application has been received.
- An application is not considered complete until all required fee(s), information, and documents are submitted. Incomplete applications will not be considered.
- Event Organizer - If the event organizer represents an organization or group, that information should be included; however, the permit will be issued in the name of

the specific individual and that individual shall be personally responsible for the information provided and for compliance with the terms and conditions of the permit. The person designated by the application as the person responsible for the Special Event shall be physically present and accept responsibility for compliance with any and all terms as set forth in this policy.

- Transferability - The permit granted under this policy will not be transferable or assignable.
- Vendors and Event Displays: The event organizer has control of event vendors and displays. All vendors and displays must meet the criteria in this policy.

Revocation or Denial of a Special Event Permit:

The application for any permit may be denied and any permit issued under this Policy may be revoked if:

- The application contains false or misleading information or does not set forth all the information requested, or
- The Special Event is operated in such a manner as to create a public nuisance or to constitute a hazard to the public health, safety, and welfare, or
- The event organizer and/or sponsor of the event has failed to obtain and maintain any health, business or other license or permit required by law for the activities carried on during the Special Event, or
- The event organizer and/or sponsor of the Special Event has violated or is attempting to violate any of the terms and conditions of this Policy or in prior approved events, or
- If there is a conflict with any previously scheduled Special Event. Events sponsored by the Town or carried out on behalf of the Town as part of its public service shall be given priority in scheduling.

Appeals:

Event organizer(s) denied a permit may appeal before the Wake Forest BOC at a regularly scheduled meeting by filing with the Town Clerk. Appeal filing must occur within fifteen (15) business days of notification of denial.

Property and business owners unreasonably and unduly affected by a permitted Special Event may appeal before the Wake Forest BOC at a regularly scheduled meeting by filing with the Town Clerk.

Policy Overview:

Special Event Permit Regulations:

The permit issued for a Special Event under this Policy shall be subject to the regulations, conditions, and reservations of rights as set forth in this section.

- Additional Permits - Any other permit required for the Special Event shall be obtained, including, but not limited to, permits for the service and consumption of alcoholic beverages, permits issued by NCDOT, Wake County Health Department, use of private property, and other similar licenses or permits. The Special Event will be operated in strict compliance with the terms and conditions set forth in those licenses and permits.

- Public Safety Officers - The event organizer is responsible for all aspects of event management including crowd control and safety. The event organizer may be required to arrange for Wake Forest Public Safety Officers, at the event organizer's expense, to be present at the event. The number of officers required will be determined by the Wake Forest Police Department ("WFPD") and communicated in advance as a condition of the event permit approval.

- Event Barriers - Events requiring street closures may require the use of large vehicles or heavy barriers to prevent vehicular traffic into event areas. Barrier requirements will be determined by the WFPD and will be communicated in advance as a condition of the event permit approval. The event organizer will be responsible for the cost of the required barriers.

- Access - Pedestrian access will be provided for businesses and/or residences located along the Public Area; as well as access for fire and other protective services required by the Town.

- Crowd Control - In compliance with the NC State Fire Prevention Code (Section 403.3), the event organizer agrees to provide one certified crowd manager for every 250 people during events with 1,000 or more people in attendance. A copy of the primary event organizer's "Certificate of Completion" of Crowd Manager Training (see link to training below) must be submitted to the Town no later than ten (10) business days prior to the event and certificates of the remaining required crowd managers must be available at the event for viewing by Town officials.

  https://www.ncosfm.gov/licensing-cert/pyrotechnics/classes-pyrotechnic-license-fusing-crowd-manager

- Special Event Emergency Action Plan – The event organizer must submit a Special Event Emergency Action Plan ("SEEAP") no later than fourteen (14) business days prior to the event. A SEEAP template can be found on the Town website: https://www.wakeforestnc.gov/sites/default/files/uploads/towf_special_event_emergency_action_plan_template_2024_6_27.pdf

- Tents - All event tents must be secured with weighted devices and proper permits must be obtained for tents in excess of 400 square feet.

- Sanitation - The event organizer is responsible for litter and debris cleanup of the event site both during and after the event. The event organizer agrees to provide cleaning services to ensure that the event area is left in a clean, sanitary manner with all event trash removed from the event area.

- Electricity - If the event organizer elects to use Town electrical outlets, they must contract with the Town to provide a minimum of one (1) Facilities employee for onsite electrical set up and will have the option of contracting with Facilities staff to stay for the event or to have on an "on call" basis. Event organizer will be assessed fees for this service as per our fee schedule. This service is subject to availability of staff which will be determined at the time of event application.

- Equipment: No equipment is provided unless it is a Town-sponsored event. This includes, but is not limited to, event signage, tents, cord covers, PA systems, trash cans, electrical equipment, toilets, and other various event equipment.

- Toilets - The event organizer is responsible to provide adequate on-site toilets to support the needs of their event. Handicapped accessible toilets are required for all special events that require the use of on-site toilets.

- Alcohol - The sale, distribution, possession and consumption of beer, wine and any other alcoholic beverages within Public Areas is prohibited (as per Article 20-2 of the Town of Wake Forest Code of Ordinances).

    - A waiver may be approved by the Wake Forest BOC at a regularly scheduled meeting. Alcohol waiver must be requested at least ninety (90) days in advance of actual event date.
    - If a waiver is approved, all applicable state and local laws governing such matters must be observed.
    - Only alcohol vendors with an appropriate ABC license who are authorized to serve at a festival/special event will be allowed to provide and/or dispense

alcoholic beverages and are subject to the insurance requirements listed below. A copy of the appropriate ABC license must be furnished to the Town no later than ten (10) business days prior to the event and said license, in compliance with NC ABC laws, must be prominently displayed during the event.

- Alcohol vendors operating under a limited use ABC license – The event organizer must present documentation of successful completion of NC ABC "Responsible Alcohol Seller Program" training no later than two weeks prior to the event. Event organizer assumes all responsibility to ensure that all servers comply with NC ABC laws as per their ABC license.

Special Regulations for Parades and Processions:

The following regulations are set forth for Parades and Processions:

- Every parade or procession shall follow the route designated and approved by the permit.
- No person shall unreasonably hamper, obstruct, impede, or interfere with any parade or procession, or with any person, vehicle or animal participating or used in a parade or procession.
- No hand-carried signs or posters transported in any parade or procession shall be of greater density than eight-ply three hundredths (.03) thickness cardboard. No support, staff or pole for such sign or poster shall be made of metal or metal alloy. If made of wood, the support, staff, or pole shall be no greater than three-fourths (.75) inch in diameter at any point and must be blunt at both ends.
- Number of allowed motorized vehicles, placement of motorized vehicles and any required motorized vehicle inspections will be determined by Wake Forest Public Safety Officers and will be communicated in advance as a condition of the event permit approval.
- Event Organizer must comply with all requirements in the Town's Motorized Parade Policy.

Special Regulations for Centennial Plaza:

The following additional regulations are set forth for Centennial Plaza:

- All programming or organized gathering in Centennial Plaza requires a permit, regardless of number of event participants.
- No alcoholic beverages permitted.
- No equipment provided unless it is a Town-sponsored event.

- Restrooms not provided or available. Event organizer must make appropriate accommodations.
- Centennial Plaza is not available during Town Hall regular operating hours. Availability is limited to evenings between 5pm and 9pm and weekends when available.
- Use of the Plaza is limited to two (2) events per year per event organizer/ club/organization.
- No vehicles or heavy equipment are permitted on Centennial Plaza.

Special Regulations for Festival Street:

The following additional regulations are set forth for Festival Street:

- No equipment provided unless it is a Town-sponsored event.
- Restrooms not provided or available. Event organizer must make appropriate accommodations.
- Use of the Festival Street is limited to one (1) time per quarter per event organizer/club/organization.
- Event availability (including set up) is limited to evenings between 5pm and 9pm Monday through Thursday, 6pm and 9pm on Friday, and 6am and 9pm with event to end no later than 9pm on Saturday and Sunday.

Special Regulations for Neighborhood Events:

The following regulations are set forth for Neighborhood Events:

- Public Area street closures for Neighborhood Events are limited to a neighborhood cul-de-sac or on a road with only one (1) entrance where all the affected residents have been notified.

Applicable Ordinances:

The event organizer and other sponsors of the event will comply with applicable ordinances of the Town, state, and federal laws.

Deposit:

The event organizer will be required to post a deposit with the Town which will be used to reimburse the Town for any actual expense incurred for special services, damages or clean up. The Organizational Performance Director, in consultation with other Department Directors, will establish the amount of deposit required for the event. The minimum deposit

will be five hundred ($500) dollars for events not including alcohol and three thousand ($3,000) dollars for events including alcohol. The deposit must be submitted to the Town no later than ten (10) business days prior to the event. Upon satisfactory inspection of the event area, the deposit refund will be processed within thirty (30) business days of the event's end.

Public Notification Process:

The event organizer must notify all affected community members within, and adjacent to the event area, including residents, businesses, schools, and places of worship about the event, associated road closures and other event impacts such as amplified sound.

Notification must be provided a minimum of three (3) weeks prior to the event and must include the following:

- Name of event;
- Sponsoring organization(s);
- Date and time of the event;
- Description of road closures (locations and times);
- Description of event;
- Noise impacts, such as permitted amplified sound;
- Name, email address, and phone number of event organizer(s);
- Website associated with event; and
- A copy of the emailed or printed notification must be provided to the Community Events Coordinator(s) a minimum of three (3) weeks prior to the event.

Conditions:

The following minimum conditions (and those outlined in the final, approved Special Event Permit) are set forth for Special Events:

- Indemnity - In consideration of the granting of the permit under this Policy, the Event Organizer and any entity represented by such person shall indemnify and hold harmless the Town, its officers, agents and employees against all loss, expense or liability of any kind, including attorney's fees, caused by or in any way resulting from the acts of any person attending the Special Event or in any way resulting from the activities carried on during the Special Event.

- Insurance - The event organizer and sponsor of the Special Event shall secure, and at all times, maintain in full force and effect, a comprehensive general liability insurance policy providing bodily injury and property damage liability protection in

the amount of $2,000,000; and, if applicable, liquor liability protection in the amount of $3,000,000. The following should be included and/or applied:

- The Town, its officers, agents, and employees are included as additional insured with respect to the general liability insurance policy.
- The insurance shall be issued by a company licensed to do business in the State of North Carolina and shall be endorsed to the effect that the policy shall not be terminated or cancelled prior to its expiration date except upon thirty (30) business days advance written notice to the Town.
- The insurance shall cover the Special Event, and the types of activities carried on at the Special Event. Typically, this is noted in the description of activities section.
- The event organizer and sponsor shall provide proof of the required insurance coverage in the form of an original current certificate of insurance presented by the insured's agency.
- Evidence of such insurance shall be provided to the Town's Community Events Coordinator(s) at least five (5) business days before the date of the Special Event.
- Event Organizers shall assume all risks incident to, or in connection with, the permitted activity and shall be solely responsible for damage or injury, of whatever kind or nature, to person or property, directly or indirectly arising out of, or in connection with the permitted activity or the conduct of the Organizer's operation,
- If the Special Event does not involve the closing of a public street or sidewalk, the comprehensive general liability insurance required hereunder may be waived by the Town Manager in accordance with contractual insurance requirement policy. Waiver of such insurance is not assured.

Reservation of Right:

The Town reserves the right to suspend all or any part of a Special Event and to require all persons to immediately vacate the Public Area during any period of national or local emergency, natural disaster, lawlessness and other acts or events which threaten the public safety.

MOTORIZED PARADE POLICY

Effective Date: November 19, 2024

Objective:

To establish safety measures for all parades involving motorized vehicles that take place on the streets of the Town of Wake Forest ("Town"), with the purpose of promoting the general welfare of every person at the event, establishing minimum safety requirements for drivers, vehicles, floats, and participants, and establishing clear expectations for the Event Organizer responsible for ensuring that all requirements are met prior to any trailer, motorized vehicle, or driver participating in the event.

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1. Definitions:

In addition to the definitions contained in the Town's Special Events Policy, the following definitions apply to this Motorized Parade Policy:

A. Animal Entries: Animal entries are limited to animals weighing less than 150 pound that are healthy, behave well in crowded places, and do not react negatively to loud noise. All animals must be fully controlled for safety purposes.

B. Entry or Parade Entry: A group or organization represented in a parade. A parade entry may include individual units such as marchers, motorized vehicles, or floats.

C. Evacuation: Rapid egress out of some or all of an event space in response to an unexpected situation that threatens the health or safety of guests which will require a greater degree of crowd management than a controlled and scheduled egress.

D. Event Organizer: The individual(s) completing the Special Event Permit Application and point-of-contact for the event. This individual is responsible for coordinating and submitting all the requirements and conditions pertaining to the Special Event Permit and complying with the Town's Special Event Policy and Motorized Vehicle Policy.

E. Fall Prevention Mitigation: Includes safety devices for all riders, such as access to a guardrail, tether (a line to which someone is attached for safety), or harness (a set of straps to hold a person in place) for each rider.

F. Guardrail: A guardrail is a barrier secured to uprights and erected along the exposed sides and ends of platforms to prevent falls of persons.

G. Parade Marshal: As used in this standard, a parade marshal is the head of operations for the parade during pre-event staging and on the day of the event. At the beginning of a parade, a marshal ensures that each unit is ready

to proceed consistent with parade rules and enforces spacing between units as they enter the route. Along the parade route, other walking parade marshals may help enforce parade rules. These functions are different from a Grand Marshal, which is usually a ceremonial leader of the parade.

H. Parade Unit: Each motorized or towed vehicle, parade animal, performance platform or float, or similar object used to transport people in a parade.

I. Risk Assessment: A systematic analysis of reasonably foreseeable threats to determine the risk for each issue identified in the hazard identification process, including the frequency, likelihood of occurrence, and the potential severity of outcome.

J. Special Event Emergency Action Plan (SEEAP): A plan that includes and identifies such items as but not limited to, comprehensive site map(s), crowd managers, emergency access, event communication/contacts, Event Organizer(s) deal with emergencies, notification, safety/security information, and weather contingency plans.

K. Walking Marshals and Spotters: Walking Marshals or Spotters are placed along the event route, or may walk alongside the parade, to ensure that each unit is proceeding consistent with parade rules, adhering to spacing in between, and following the safety protocol defined by this policy.

2. General Requirements:

In addition to the requirements set out in the Town's Special Events Policy, which parade organizers are required to adhere to, this Motorized Parade Policy provides additional requirements for any parade that includes a motorized vehicle. A motorized parade imposes additional event risks, and the Town Manager and/or designee may require additional safety measures to address unusual circumstances.

- Every parade or procession shall follow the route designated and approved by the permit.
- No person shall unreasonably hamper, obstruct, impede, or interfere with any parade or procession, or with any person, motorized vehicle or animal participating or used in a parade or procession.
- Number of allowed vehicles, placement of vehicles and any required motorized vehicle inspections will be determined by Wake Forest Public Safety Officers and will be communicated in advance as a condition of the event permit approval.

- Event Organizer must comply with all requirements in the Town's Motorized Parade Policy and Special Events Policy.

3. Event Organizer's Responsibilities:

The Event Organizer is responsible for the operation of the parade. The Event Organizer must:

A. Ensure compliance with all parade requirements, including the requirements of this policy and the Town's Special Event Policy.

B. Conduct a risk assessment.

C. Using the risk assessment and any other relevant information, create a written Special Event Emergency Action Plan (SEEAP). The SEEAP should address ways to mitigate risk for the event. It should also address communication issues, such as contact with parents or guardians in the event of an emergency involving a child.

D. Select a proposed parade route for the Town's review and approval. The parade route should mitigate the reasonably foreseeable health and safety risks to each Parade Unit, the spectators watching them, as well as the workers and Public Safety Officers supporting the event. It should avoid broken pavement, speed bumps, railroad crossings, and construction zones - any of which can present trip hazards to marchers on foot or jeopardize the stability of parade floats and the people or materials riding on them. For Parade Units, hills along the route can create bottlenecks by slowing the parade pace, and sharp turns can be challenging for vehicles with wide turn radius requirements. Low-hanging wires, streetlights, and trees can create hazards from above. The parade route should ensure access for emergency vehicles to reach participants, spectators, or any other individuals or businesses who live or work along the route.

E. Obtain insurance coverage for the event in the minimum amount of $5,000,000 per occurrence and list the Town as an additional insured.

F. Inform all parade participants of parade safety and participant rules required by this policy. Event Organizers may also establish their own instructions and rules of conduct that provide additional requirements for the event. It is not sufficient for parade organizers to simply tell motorized vehicle operators to "follow the unit in front of you," or instruct float riders to "hang on." Instead, organizers should provide clear written guidance, on the participant website and/or in a registration packet, explaining all the operational requirements parade participants will need to know. Then, at the staging area, this guidance can be reinforced orally rather than being introduced for the first time in a busy environment where it is likely to be forgotten in the press of events.

G. Collect and maintain records of required information from parade participants. The

Town Manager and/or designee will provide Event Organizers with a list of information that must be collected from each parade entry information form. As a part of the entry process, Parade Entries should be provided with applicable safety requirements contained in this policy. Required records must be maintained for three years and made available to the Town on request. These records include:

- Parade Entry Information Form submitted by each Parade Entry.
- Documentation that parade participants received the parade safety information as required by this policy, (documentation can include training sign in sheets, email read/receipt verifications, signed documents, etc.).
- Proof of insurance for each motorized vehicle.
- Records from motorized vehicle operators that list motorized vehicle make/model, tow rating and estimated weight of the towed float to Event Organizers.
- Signed copies of the Operator Safety Acknowledgment
- Signed copies of the Town's Waiver of Liability and Hold Harmless Agreement.

H. Create records showing that required training has occurred and that relevant safety information has been provided.

I. Conduct the required first-time entry workshop, entry meeting, and meeting for drivers, marshals, and spotters.

J. Supervise the parade. Event Organizers must be present to supervise the event throughout the parade setup, event and cleanup.

K. Establish the order of Parade Units. Event Organizers should label each Parade Unit with a number or letter designation so that Parade Units can be identified during the parade. Parade Units must be organized to provide reasonable distance between motorized Parade Units and units comprised of pedestrians or animals. Event Organizers must anticipate issues that may slow normal parade progress (e.g., heat) and establish an order that considers these factors.

L. Provide a parade lineup and any other operational information needed by law enforcement.

M. Ensure compliance with the required Points of Inspection for Motorized Vehicles in Parades for each Parade Unit before that Parade Unit leaves the staging area.

N. Prepare for weather that may affect the parade. Event Organizers should monitor the weather forecast and know how long it would take to notify entries and spectators that it is time to take shelter, and they should have a plan to communicate their weather decision to all parade stakeholders. These recommendations are intended to be scalable so small local parades may reasonably rely on weather apps, figuring that most people can evacuate quickly to their vehicles, homes, or businesses along the route. But larger parades with many people who lack an obvious place to shelter should consider the safety benefits of a professional consulting meteorologist for accurate and timely weather data. Similarly, high winds can negatively affect production elements of even smaller parades, such as temporary viewing stands, portable restrooms, suspended inflatables, balloons, and other large props, and rain accumulation on floats and trailers can cause loads to shift or make them slippery for riders.

Once Event Organizers have obtained weather information and decided to respond, they must convey their intentions so spectators and parade entries can take timely action for their own safety. Lines of communication are important. Event Organizers can contact law enforcement who are participating in or supporting the parade, who can then help Event Organizers with evacuation and crowd management. Because parade routes tend to be spread out over a considerable distance, lower tech means of communication such as bullhorns or even Event Organizers on bicycles can notify spectators and participants along the route that it is time to evacuate, and where they should go.

4. Requirements for Motorized Vehicle Operators:

A. Motorized Vehicle Operators must be at least 25 years old.
B. Motorized Vehicle Operators must be experienced in operating the type of motorized vehicle they will be driving during the parade. Prior to the day of the event, they must have obtained any training needed to safely operate the vehicle.
C. Motorized Vehicle Operators may operate a Parade Unit during the parade only if they are well rested and sufficiently healthy to safely operate the vehicle.
D. For at least twenty-four (24) hours before the parade, Motorized Vehicle Operators will not consume alcoholic beverages or take drugs or medication that will impair their ability to safely operate a Parade Unit.
E. Motorized Vehicle Operators must be familiar with the parade route, including the location of turns, intersections, and where slowing is likely.
F. Motorized Vehicle Operators may operate their Parade Unit only after confirming it is in good working condition and safe to participate in the parade.

G. Motorized Vehicle Operators must have a valid driver's license of the type required for the motorized vehicle that they are operating, .

H. Motorized Vehicle Operators must ensure that valid liability insurance is in place for the motorized vehicle they will operate during the parade.

I. Motorized Vehicle Operators must confirm that the motorized vehicle they are driving is rated sufficiently to tow any float and passengers riding on it that they are assigned. Motorized Vehicle Operators must also submit motorized vehicle make/model, tow rating and estimated weight of the towed float to Event Organizers.

J. Motorized Vehicle Operators must be present with their Parade Unit in their designated location at the designated staging time.

K. Motorized Vehicle Operators must know the signal for an emergency (identified by the Event Organizer) that occurs during the parade and must know the steps to take when the emergency signal occurs.

L. Motorized Vehicle Operators must attend a "Driver, Marshal, and Spotter Meeting" for the parade and must attend any mandatory operator meetings that may take place.

M. Motorized Vehicle Operators must familiarize themselves with walking marshals and/or spotters who are available to help Parade Unit operators safely navigate the parade route.

N. Motorized Vehicle Operators must maintain visual and auditory communication with any walking marshal and/or spotter with the Parade Unit.

O. Motorized Vehicle Operators must obey all instructions from Parade Marshals and public safety officers along the route.

P. Motorized Vehicle Operators must ensure that their visibility remains unobstructed at all times when they are operating the Parade Unit.

Q. Motorized Vehicle Operators must ensure that they are informed of the intended pace/speed of the parade and must maintain that pace.

R. Motorized Vehicle Operators must refrain from cell phone use, eating, smoking, or any other form of distracted driving. Passengers assisting the Motorized Vehicle Operator may utilize a mobile device or two-way radio for event-related communication purposes only. The purpose and function of the passenger is to observe the surroundings, assist the driver with outside, event-related communication, and keep a proper lookout during the event.

S. Motorized Vehicle Operators must know the route clearing process should they or another unit break down on the parade route.

T. Motorized Vehicle Operators must ensure there are no riders on the Parade Unit except in the staging area and on the parade route.

U. Motorized Vehicle Operators must maintain a distance of approximately 55 feet (two white or yellow lines on the road) from the Parade Entry before theirs and must maintain that spacing throughout the parade.

V. All Motorized Vehicle Operators participating in the parade must exercise good judgment and maintain a slow and reasonable speed based on the size of the motorized vehicle and/or Parade Unit and weather conditions.

W. Motorized Vehicle Operators must not allow anyone within their Parade Unit to throw items, including candy, from their Parade Unit.

X. Before participating in the parade, including any pre-event staging, Motorized Vehicle Operators must sign the Town's Parade Release and Waiver of Liability and Hold Harmless Agreement and provide that agreement to the Event Organizer.

Y. Before entering the parade route and as a requirement of the entry inspection process, each Motorized Vehicle Operator must review, sign, and provide to the Event Organizer, an Operator Safety Acknowledgement indicating that they understand the safety requirements set out in this section and will abide by them. The Operator Safety Acknowledgement must be in a form that is acceptable to the Town Manager and/or designee.

5. Parade Unit Requirements:

Event Organizers must provide a list of requirements applicable to Parade Units to all applicants as a part of the entry process. The following requirements apply to Parade Units:

A. <u>Recent Safety Inspection</u>

As a condition of bringing a motorized vehicle, float, trailer, or towed object into the staging area, Event Organizers must be presented in advance with written or electronic evidence of a safety inspection by a qualified mechanic familiar with that type of powered motorized vehicle, trailer, or other towed object(s). The safety inspection must occur no more than thirty (30) days from the date of the parade. The inspection should include the operation of the vehicle's brakes, tires, lights, horn, emissions, and confirm a current registration, if required.

Vehicles that will carry individuals must be inspected to ensure that there are no trip hazards or exposed wires or cables on board, and that there is adequate fall prevention mitigation for all riders, such as access to a guardrail, tether, or harness for each rider. Holding onto something is better

than nothing. Even riders sitting on the back of a classic convertible can wedge their feet under a lap belt if one is available.

B. Motorized Vehicle and Trailer Requirements

i. All applicable vehicles must have a current and valid motorized vehicle registration plate issued by North Carolina or another state.

ii. All towing vehicles that are registered in North Carolina must have a current, valid, electronic inspection authorization as required by N.C.G.S. § 20-183.8(a). Vehicles registered in a state other than North Carolina must provide proof that the motorized vehicle has the safety equipment required by Part 9 of Article 3 of N.C.G.S. Chapter 20. *(Including but not limited to properly functioning brakes, lights, horn, steering mechanism, windows and windshield wipers, directional signals, tires, mirrors, and exhaust systems.)*

iii. All Motorized Vehicle Operators must provide proof of valid automobile and general liability coverage with a minimum of $1,000,000 to the Event Organizer at least seven (7) days before the parade. The Town of Wake Forest and the event organizer must be named as additional insured. All motorized vehicles that are towing another motorized vehicle or trailer must provide proof of valid automobile liability coverage that does not exclude towing motorized vehicles or trailers.

iv. All trailers must be registered with the North Carolina Division of Motor Vehicles and display a current North Carolina registration plate, as required by N.C.G.S. §20-111.(1). Trailers that are registered in another state must show proof of compliance with that state's registration requirements.

v. All trailers or towed devices must be equipped with two stop lamps.

vi. All trailers and towed vehicles must be equipped with properly inflated tires that are free from defects.

vii. Trailers and towed vehicles must be firmly and securely attached to the towing motorized vehicle with a properly functioning and sized coupling system (ball hitch, pintle hitch, etc.) that meets or exceeds the towing capacity of the towing motorized vehicle and size and weight of the trailer or towed vehicle. The hitch used to attach a float to the motorized vehicle must be a factory "receiver" type or a welded pick-up bumper. No "bolt-on" hitches are permitted.

All towed trailers or other motorized vehicles using a ball hitch must be

attached to the towing motorized vehicle using safety chains or cables which shall be of sufficient strength to hold the gross weight of the towed motorized vehicle in the event the primary towing device fails or becomes disconnected. Towing motorized vehicle and trailer combinations using fifth wheel assemblies that include locking devices do not have to be equipped with safety chains or cables.

viii. All vehicles pulling a trailer and/or float must be equipped with an up-to-date fire extinguisher that is stored securely. Float Operators must know the location of the fire extinguisher, how to operate it, and how to shut off any electrical equipment.

ix. Windshield and front driver and passenger windows must be clean, free of obstruction, and meet the North Carolina window tinting restrictions.

x. Vehicles carrying individuals must have adequate fall prevention mitigation for all riders, such as access to a guardrail, tether, or harness for each rider.

xi. No trip hazards or exposed wires or cables are allowed on board any float.

xii. Rider seats must be secured to the float deck. For maximum protection, a guardrail barrier must be erected along the exposed sides and ends of platforms to prevent float riders from falling out of the float.

C. Points of Inspection

Before a Parade Unit may leave the staging area, the Event Organizer or its designee must confirm compliance with the Points of Inspection for Motorized Vehicles in Parades set out below.

POINTS OF INSPECTION FOR MOTORIZED VEHICLES IN PARADES

1. Valid **licensee** with required endorsements and/or restrictions.
2. Valid **registration** for motorized vehicle (trailer also if applicable).
3. Valid **inspection** for motorized vehicle.
4. Valid **insurance.**
5. **Brake lights** in proper working order and visible to rear.
6. **Coupling device** in proper working order (if applicable).
7. **Safety chains** (if required).
8. **Tires** in good condition.
9. Adequate **load securement.**
10. Up-to-date **fire extinguisher** on each motorized vehicle towing a float and on any float that will carry a passenger.

11. Functional motorized vehicle **horn**.
12. No objects may extend past the dimensions of the motorized vehicle it is carried on or surpass 13' 6" in height. If a parade route passes under a bridge, the motorized vehicle or objects must be sized so that they do not come into contact with any portion of the bridge.
13. No more than one (1) gallon of flammable liquids, in an O.S.H.A. approved container to support auxiliary operations, can be carried on floats and must be adequately secured from spillage.
14. Motorized Vehicles have adequate mirrors that eliminate blind spots around the motorized vehicle.

D. Passengers in Motorized Vehicles and on Floats

Event Organizers must provide a list of rules applicable to float passengers as a part of the entry process. Passengers in motorized vehicles and on floats must comply with the following requirements:

i. Passengers in a convertible car must be seated in the motorized vehicle seats and not on the top of the back seat. The total number of individuals in a convertible car must not exceed the total number of seatbelts if the motorized vehicle has seatbelts.
ii. Passengers riding in the bed of a pickup truck must be seated inside of the truck bed and are not permitted to sit on sides of the truck. The truck bed needs to be closed unless there is a guardrail in place.
iii. Any additional seating in the bed of a pickup truck must be adequately secured.
iv. Minors riding in the bed of a pickup truck must be accompanied by an adult.
v. Number of occupants in the motorized vehicle are not to exceed the number of seatbelts if the motorized vehicle has seatbelts.
vi. Children riding on floats must be supervised by an adult. The chaperone ratio for float passengers is not less than one (1) adult for every four (4) children. Children less than eighteen (18) years old may ride on or in a Parade Unit provided they are safely holding onto inspected harnesses or tether devices, standing behind inspected railings, or strapped into seat belts or car seats, as applicable. No strollers carrying youngsters are allowed.
vii. Float riders may not mount or dismount the float or tow the motorized vehicle when it is in motion.
viii. Float riders must remain in safety belts and/or holding handholds or other safety rails or barriers rails while the unit is moving. Riders may not

jump or dangle any body part over the edge of their float when it is in motion.

ix. Riders are prohibited from standing or riding on the edge of a float.

x. Any float with riders or articles hanging over the edge of the float is subject to immediate removal from the parade.

6. Safety Requirements for all Parade Participants:

Before participating in the parade, including any pre-event staging, participants must sign the Town's Parade Release, and Waiver of Liability and Hold Harmless Agreement and provide that agreement to the Event Organizer. All parade participants must follow the Parade Safety and Participant Rules set out below and any additional safety rules implemented by the Event Organizer. The Event Organizer must provide copies of the Town's participant rules to every parade entry as a part of the initial application process, and each participant is required to acknowledge receipt of the requirements.

Parade Safety and Participant Rules

1. To keep the parade moving smoothly, entries MUST NOT stop for pictures or performances EXCEPT at designated areas along the route. For the rest of the parade, entries must keep pace with the entries in front of and behind them.
2. Parade Units may not reverse course within their entry, drive from sidewalk to sidewalk to engage with spectators, or perform stunts. These activities raise safety issues and are likely to cause gaps between entries that detract from spectators' experience.
3. **Parade participants are strictly prohibited from throwing, tossing, or launching any objects into the crowd. This will prevent anyone from getting hit by a flying object and will reduce the likelihood of any spectators entering the parade route to retrieve an object.**
4. First-time parade participants must attend the First Time Entry Workshop. Event Organizers will explain these rules and answer any questions.
5. All entries must provide their own walking marshal to lead and manage their entry.
6. All parade entry groups involving minors must have adult supervision in the form of 'spotters' that walk with the group to supervise from all angles, including front, rear and side angles. Entries that have both motorized vehicles and walkers must provide at least one additional spotter to ensure safe spacing between motorized vehicles and pedestrians.

7. The chaperone ratio for walking/dancing groups is not less than one (1) adult for every fifteen (15) children. Children walking in the parade must be not less than eight (8) years old.

8. Entries must maintain a moderate volume of sound effects and music that will not interfere with other parade entries (drivers and/or animals), or to be so loud that emergency auditory instructions or alerts cannot be heard by the driver and entry participants and does not violate the Town noise limitations.
9. All Parade Unit Operators must participate in the Entry Orientation.
10. Animal entries must ensure all animals are healthy, behave well in crowded places, and do not react negatively to loud noise. All animals must be fully controlled for safety purposes. Animal entries must clean and remove waste in the staging area, along the parade route, and in the de-staging area. All animal waste must be disposed of properly.
11. All entries must be able to travel at a speed of one (1) to two (2) miles per hour for the entire parade route. The official parade pace is 60-75 steps per minute.
12. Failure to obey parade officials or public safety officers by a participant or their parents will result in that entry being removed from the parade.
13. If you suffer a breakdown during the parade, move the motorized vehicle to the right side and allow the entries behind you to pass. If you can get your entry restarted, you may proceed down the route at the position you occupy once you are moving.
14. Parade spacing between each entry is approximately 55 feet (two white or yellow lines on the road). Entries must maintain that spacing throughout the parade.
15. In the event of an emergency, local public safety officers have management control of the parade and will provide Event Organizer and entries with instructions.
16. Entries may not exit the parade route once the parade has begun. If there is an issue with your entry, safely pull out of the way, to the right-hand side, so other entries can continue.
17. No one participating in a parade or proceeding along the route of a parade shall distribute any candy, prizes, or favors of any kind.
18. The dimensions of an entry must accommodate the route's street widths, turns, bridges, streetlights, and overhanging branches.
19. All fueling of combustible engines must be completed prior to the start of the parade. Excess flammable liquids (stored gas containers) are not permitted on any floats or towing vehicles.

20. All decorating materials used on the floats must be flame resistant.
21. No hand-carried signs or posters transported in any parade or procession shall be of greater density than eight-ply three hundredths (.03) thickness cardboard. No support, staff or pole for such sign or poster shall be made of metal or metal alloy. If made of wood, the support, staff, or pole shall be no greater than three-fourths (.75) inch in diameter at any point and must be blunt at both ends.
22. Open flames are prohibited (i.e., no use of fire, flames, or fireworks).
23. No smoking is permitted on or near any float.
24. Any participants riding a bicycle, or any other two-wheeled apparatus must wear a helmet.
25. Alcohol consumption is prohibited by all parade participants during the event.

7. Required Meetings:

In addition to planning meetings and walkthroughs required of all permitted special events, the following types of meetings are required for Event Organizers and entries to ensure Parade Unit operators, marshals, and public safety officers understand and are trained to carry out their responsibilities to mitigate risk:

A. First Time Entry Workshop: (**six to eight weeks prior to event**) This is an informational meeting conducted by the Event Organizer for first time participants and/or those interested in an in-depth look at the entry guidelines, and the entry inspection process. Return entries are welcome to attend to discuss updates and to share ideas and insight with newcomers.

B. Entry Meeting: (**two to four weeks prior to event**) This is an informational meeting conducted by the Event Organizer for all entry representatives and walking marshals to review the staging and de-staging plans, receive the parade line-up, discuss any last-minute changes and announcements, as well as to pick up parade packets.

C. Driver, Marshal, and Spotter Meeting: (**one to seven days prior to event**) This is an informational meeting conducted by the Event Organizer for all vehicle, float, or towing unit drivers to cover specific regulations.

8. Consequences of Policy Violations:

The Event Organizer is responsible for removal of parade participants that do not comply with these regulations and should take all reasonable steps to ensure compliance with applicable requirements. Law enforcement personnel

may also remove parade participants not in compliance with these regulations as necessary. The Town may also remove any Parade Unit or participant from the event if there is a clear violation of North Carolina motorized vehicle safety requirements.

9. Accommodations under the Americans with Disabilities Act (ADA):

The Town Manager and/or designee is authorized to make reasonable accommodations in accordance with the Americans with Disabilities Act.

10. Policy Waivers:

The Town Manager shall have the right to grant waivers concerning minor requirements of this Policy where there is a hardship caused to the Event Organizer by the strict enforcement of this Policy, provided the health, safety and welfare of the public is not placed at risk and the overall intent of this Policy can be achieved

11. Attachments (to be drafted/developed):

- SEEAP – Parade Section
- Risk Assessment Template
- List of Collected Information (from pages 4-5)
- Parade Entry Information Form
- Operator Safety Acknowledgement
- Town's Parade Release
- Town's Waiver of Liability and Hold Harmless Agreement

Board of Commissioners Agenda Item Report

Agenda Item No.: 2024-350-
Submitted by: Candace Davis
Submitting Department: Administration
Meeting Date: November 19, 2024

SUBJECT
Consideration of approval of a Resolution amending Parks & Recreation Impact Fees

Recommendation:

Item Summary:

ATTACHMENTS

- BOC_Agenda Item Summary_ConsiderationofAprpoval ParksRecImpactFeeResolution_2024.docx
- Resolution 2024-xx_PRCR_Impact_Fees_11.19.2024.docx

Agenda Item: Considera?on of Approval of a Resolu?on amending Parks & Recrea?on Impact Fees

Summary: At the September 3rd Work Session, the Board of Commissioners received a presenta?on from the consultant team; Benesch. The consultants presented the 2024 Parks & Recrea?on Impact Fee Study recommended fees. The Planning Board received the park & recrea?on impact fee analysis report and presenta?on at their September 4th mee?ng. A public hearing was called during the September 17th mee?ng in accordance with NC General Statutes (G.S. 160A-364). During the October 15th mee?ng, the Board agreed on an 80% adop?on percentage paid over 5 years beginning July 1, 2025.

The a?ached resolu?on amends the resolu?on and fee structure previously adopted with an effec?ve date of July 1, 2025

A? achments:

- Resolu?on

RESOLUTION 2024-xx

RESOLUTION APPROVING UPDATED RECREATION IMPACT (FACILITY) FEES

WHEREAS, the current fee structure in place was updated and adopted in 2018 and the Board of Commissioners decided to evaluate and update respective fees more frequently to be consistent and in line with the town's growth, and

WHEREAS, in FY 2023-2024, the Board approved funds to update the Recreation Impact Fees in conjunction with the 2024 Parks and Recreation Master Plan Update. The Town hired Benesch to gather information, conduct the study, and complete the update, and

WHEREAS, the staff received the final report that was presented to the Board of Commissioners on September 3, 2024, and

WHEREAS, the recommended fees were presented to the Planning Board on September 4, 2024, a public hearing was held on September 17, 2024, and the Board of Commissioners agreed to an 80% adoption percentage paid over 5 years, and

WHEREAS, fees are payable at the time of building permit issuance. Any land dedication and respective credits will be coordinated directly with the Planning Department accordingly, and

NOW, THEREFORE, BE IT RESOLVED the Board of Commissioners of the Town of Wake Forest authorizes the approval of the new Recreation Impact Fees effective July 1, 2025 (80% paid over 5 years) as listed in the schedule below; furthermore, the effective dates for phasing in the increases thereafter will be July 1, 2026, through 2029 respectively.

Land Use	Town of Wake Forest							
	2024 Calculated Fee (@100%)	Approved Fee Schedule					2018 Study Calc. Fee (@100%)	Current Adopted
Date of Last Update	2024	July 1, 2025	July 1, 2026	July 1, 2027	July 1, 2028	July 1, 2029	**2018**	**2018**
Adop?on Percentage	N/A	80%					N/A	90%
Residen?al:								
Single Family (detached), Townhouse & Mobile Home	$8,856	$4,370	$5,049	$5,728	$6,407	$7,085	$4,101	$3,691
Mul?-Family (a?ached) and Mul?-Family	$4,789	$2,528	$2,854	$3,180	$3,506	$3,831	$2,447	$2,202

Duly adopted this 19th of November 2024.

Vivian A. Jones
Mayor

(ATTEST)

Theresa Savary
Town Clerk

Board of Commissioners Agenda Item Report

Agenda Item No.: 2024-359-
Submitted by: Terry Savary
Submitting Department: Administration
Meeting Date: November 19, 2024

SUBJECT
Wake County Tax Release

Recommendation:

Item Summary:

ATTACHMENTS
- WAKE FOREST-TXREP-NOV-2024-BOC-MTG.pdf

WAKE COUNTY
NORTH CAROLINA

Board of Commissioners
P.O. Box 550 • Raleigh, NC 27602

TEL 919 856 6180
FAX 919 856 5699

SHINICA THOMAS, CHAIR
SUSAN EVANS, VICE-CHAIR
VICKIE ADAMSON
MATT CALABRIA
DON MIAL
CHERYL STALLINGS
TARA WATERS

November 5, 2024

Mr. Kip Padgett
Town Manager
Town of Wake Forest
301 S. Brooks Street
Wake Forest, North Carolina 27587

Dear Mr. Padgett:

The Wake County Board of Commissioners, in regular session on November 4, 2024, approved and accepted the enclosed tax report for the Town of Wake Forest.

The attached adopted actions are submitted for your review; no local board action is required.

Sincerely,

Yvonne Gilyard
Clerk to the Board
Wake County Board of Commissioners

WAKE COUNTY TAX ADMINISTRATION

09/01/2024 - 09/30/2024

Rebate Detail Report

WAKE FOREST

DATE 10/03/2024 TIME 2:32:11 PM

REBATE NUM	PROPERTY	SPEC DIST	CITY TAG	LATE LIST	BILLED INTEREST	TOTAL REBATED	PROCESS DATE	ACCOUNT NUMBER	TAX YEAR	YEAR FOR	BILLING TYPE	OWNER
BUSINESS ACCOUNTS												
892603	1,313.11	0	0.00	0.00	0.00	1,313.11	9/13/2024	0006820086	2024	2024	000000	LIDL US OPERATIONS LLC
SUBTOTALS FOR BUSINESS ACCOUNTS	**1,313.11**	**0.00**	**0.00**	**0.00**	**0.00**	**1,313.11**	**1,313.11**		**1 Properties Rebated**			
BUSINESS REAL ESTATE ACCOUNTS												
892106	83.54	0	0.00	0.00	0.00	83.54	9/9/2024	0000205446	2024	2024	000000	HPA BORROWER 2016-1 LLC
891687	101.59	0	0.00	0.00	0.00	101.59	9/4/2024	0000165446	2024	2024	000000	FKH SFR PROPCO J LP
893428	1,968.82	0	0.00	0.00	0.00	1,968.82	9/19/2024	0000198403	2024	2024	000000	M & W/SHEARON FARMS LLC
890625	415.18	0	0.00	0.00	0.00	415.18	9/4/2024	0000512642	2024	2024	000000	E&D HAWKSTONE LLC
892451	104.64	0	0.00	0.00	0.00	104.64	9/16/2024	0000307932	2024	2024	000000	AMH 2015-2 BORROWER LP
893067	1,541.56	0	0.00	0.00	0.00	1,541.56	9/17/2024	0000404953	2024	2024	000000	LIMITED PARTNERSH ONG 110 CAPCOM AVE LLC
SUBTOTALS FOR BUSINESS REAL ESTATE ACCOUNTS	**4,215.33**	**0.00**	**0.00**	**0.00**	**0.00**	**4,215.33**	**4,215.33**		**6 Properties Rebated**			
INDIVIDUAL PROPERTY ACCOUNTS												
890948	238.14	0	30.00	0.00	0.00	268.14	9/3/2024	0006988810	2024	2024	000000	LRM LEASING COMP INC
SUBTOTALS FOR INDIVIDUAL PROPERTY ACCOUNTS	**238.14**	**0.00**	**30.00**	**0.00**	**0.00**	**268.14**	**268.14**		**1 Properties Rebated**			
INDIVIDUAL REAL ESTATE ACCOUNTS												
891271	274.05	0	0.00	0.00	0.00	274.05	9/5/2024	0000184640	2024	2024	000000	CABRERA, JULIO CESAR
890633	415.18	0	0.00	0.00	0.00	415.18	9/4/2024	0000512648	2024	2024	000000	BEDINER, ROMAN
890631	418.87	0	0.00	0.00	0.00	418.87	9/4/2024	0000512646	2024	2024	000000	SIMS, STANLEY LAWRENCE
893238	256.69	0	0.00	0.00	0.00	256.69	9/18/2024	0000214540	2024	2024	000000	SCOTT, TYLER M
892597	107.02	0	0.00	0.00	0.00	107.02	9/12/2024	0000246037	2024	2024	000000	KOSTER, PAUL G
890629	415.18	0	0.00	0.00	0.00	415.18	9/4/2024	0000512644	2024	2024	000000	ROCAMORA, MELISSA
SUBTOTALS FOR INDIVIDUAL REAL ESTATE ACCOUNTS	**1,886.99**	**0.00**	**0.00**	**0.00**	**0.00**	**1,886.99**	**1,886.99**		**6 Properties Rebated**			
	7,653.57	**0.00**	**30.00**	**0.00**	**0.00**	**7,683.57**	**7,683.57**		**14 Properties Rebated for the District City**			

TOTAL FOR WAKE FOREST	7,653.57	0.00	30.00	0.00	0.00	7,683.57	7,683.57	14 Properties Rebated for all Cities
GRAND TOTAL	362,132.72	3,368.23	180.00	552.08	0.00	366,233.03	366,233.03	236 Properties Rebated for all Cities

Board of Commissioners Agenda Item Report

Agenda Item No.: 2024-360-
Submitted by: Terry Savary
Submitting Department: Administration
Meeting Date: November 19, 2024

SUBJECT
Department Monthly Report

Recommendation:

Item Summary:

ATTACHMENTS
- October 2024 Monthly Report.pdf

October 2024 | Department Monthly Report

TOWN of WAKE FOREST

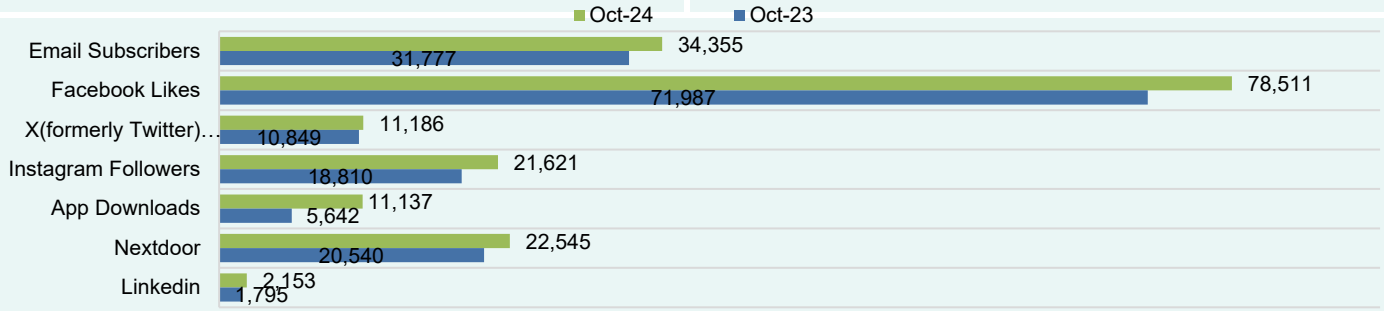
Communications

ANNOUNCEMENTS	
Media Releases	58
Email Announcements	24
Town-to-Resident Phone Calls	38

TOP 5 VIEWED PAGES ON WEBSITE

RANK	PAGE	VIEWS
1	Forms & Applications	15,960
2	Home	5,403
3	Boo Bash	3,718
4	Hurricane Helene Relief	3,822
5	News Release-Early Voting	3,120

SUBSCRIBERS



Downtown Development

OCCUPANCY	OCT - DEC 2024	OCT – DEC 2023
Occupancy Rate in Percentage	91%	93%

NEW BUSINESSES	OCT 2024	FISCAL YEAR-TO-DATE
Number of New Businesses	0	3
Number of Businesses Closed	2	3

UPDATES PROVIDED QUARTERLY

EVENTS		
THIRD QUARTER EVENTS (SEPT. – Nov.)	ATTENDANCE IN 2024	ATTENDANCE IN 2023
Spirits of Wake Forest	747	765

The 23/34 Community Impact Report for Wake Forest Downtown is now available. This highlights our annual statistics and accomplishments for the 23/24 fiscal year, and we look forward to seeing what exciting things 24/25 brings.
https://www.wakeforestnc.gov/sites/default/files/uploads/wake_forest_downtown_community_impact_report_2023-2024.pdf

Wake Forest Downtown, Inc. successfully wrapped up 2024 Spirits of Wake Forest Haunted History Tours with 747 tickets sold. They ran a promotion the week of October 3-October 10 with a 20% of ticket sales being donated to Western, NC and funds raised were $388. On October 21 dedicated meetings were held with retail businesses with 9 businesses in attendance and service businesses with 8 businesses in attendance. Key updates were provided, and business owners were encouraged to collaborate and provide feedback. Good discussion ensued with business owners offering insight on various topics.

Economic Development

WFBIP MONTHLY NEWSLETTER VIEW

The Wake Forest Business & Industry Partnership Quarterly Report is updated at the end of each quarter.

Use Chrome, Firefox, Safari, or Edge to view the newsletter and/or the report.

REQUESTS FOR INFORMATION (RFIs)	OCTOBER 2024	OCTOBER 2023
Number of Responses to RFIs	0	1

Economic Development

BUSINESS RETENTION & EXPANSION
NAMES OF BUSINESSES VISITED THIS MONTH
Pickles & Play
WakeMed

Engineering

PROJECT UPDATES	
Street Resurfacing	FY23-24 is 98% complete, with around 11.5 miles of streets resurfaced. Remainder of work is punch list items and final pavement markings. Street list for next years work is complete.
S. Franklin Street	Utility work is ongoing. Culvert extension and stormwater structure installation is in progress. Lane closures are expected throughout the project.
Flaherty Park Dam	The Flaherty Park Dam project is around 98% complete. Final completion is anticipated late November. Punch list items are being addressed along with dock enhancements for ADA access.
Dunn Creek Greenway Phase III	The contract has been signed, and NTP will be issued soon.
Dunn Creek Greenway Phase IV	Contract has been signed and NTP will be issued soon.

Finance

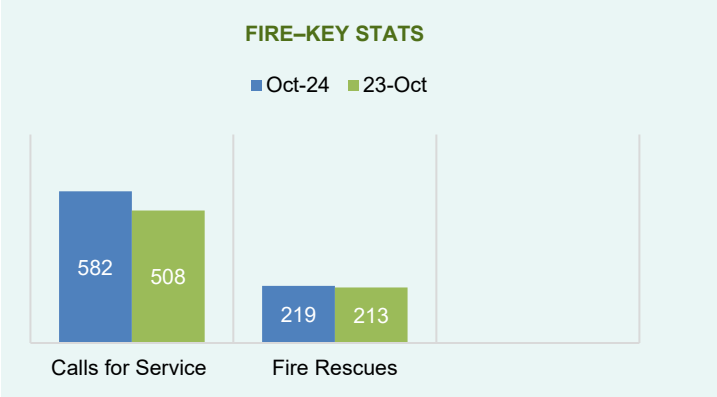
FINANCIAL TASKS COMPLETED	
TAX RETURNS & REPORTS	COMPLETION DATE
NC Sales and Use Tax Form E500 and Payment	10-17-2024
Utility Sales Tax Return – E500 E	10-15-2024
Food & Beverage Tax Report	10-08-2024
ACCOUNTING/FINANCE	AMOUNT
Total $ Accounts Payable Disbursement	$5,011,550
Total ePayables & Payroll Disbursement	$1,096,837
Total Number of Invoices Paid	27

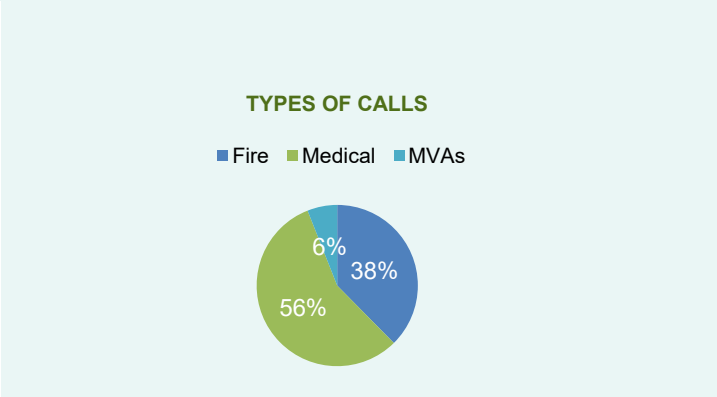
PURCHASING / WAREHOUSE	
Purchase Orders Processed	50
New Vendors Set Up	11
Informal Quotes	20
$ Received Surplus Items Sold	$0
Number of Surplus Items Sold	0
HUBSCO Reports	1

Fire

KEY STATS		
	OCTOBER 2024	OCTOBER 2023
Calls for Service	582	508
Average Response Time	4:47	4:41

TYPES OF CALLS		
	OCTOBER 2024	OCTOBER 2023
Fire	219	213
Medical	328	255
Motor Vehicle Accidents (MVA)	35	40





Human Resources

EMPLOYMENT

	OCTOBER 2024	OCTOBER 2023
Positions filled	430	405
Vacancies	23	35
Total Authorized Positions FY 2023–2024	**453**	**440**

PROMOTIONS/TRANSFERS

NAME	DEPARTMENT	POSITION	DATE
Aaron Cashwell	Fire	Fire Lieutenant	9-15-2024
Justin Schwenk	Fire	Fire Captain	9-15-2024

Information Technology

SERVICE STATS

	OCTOBER 2024	OCTOBER 2023
Service Requests Completed	570	389
Network Uptime Percentage	100%	100%

Inspections & Public Facilities

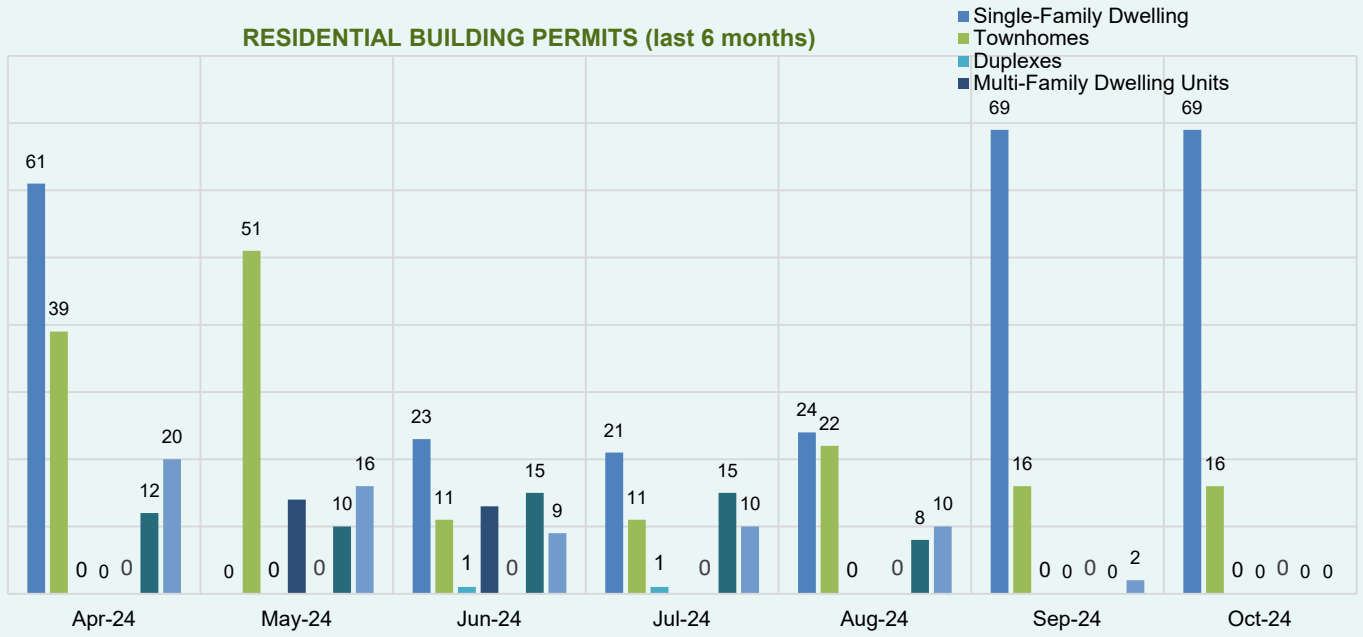
RESIDENTIAL PERMITS

	OCTOBER 2024	OCTOBER 2023
Single-Family Dwelling	69	31
Townhomes	16	22
Duplexes	0	0
Multi-Family Dwelling Units	0	0
Other	145	138
Total	**230**	**191**

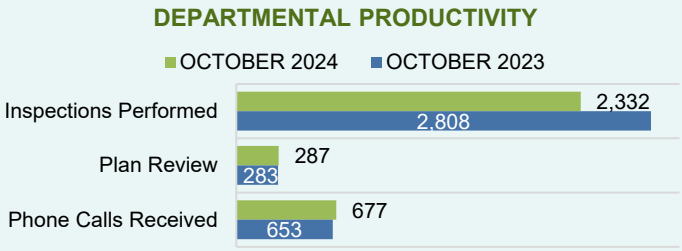
NON-RESIDENTIAL PERMITS

	OCTOBER 2024	OCTOBER 2023
New Commercial	1	1
Fit-Ups	4	5
Other	32	19
Total	**37**	**25**

Inspections & Public Facilities



PUBLIC FACILITIES		
	OCTOBER 2024	OCTOBER 2023
Preventative Maintenance Completed	585	484
Reactive Work Orders	146	102



BUSINESSES	
NEW COMMERCIAL BUSINESSES	
4 Rivers Wake Forest Self Storage	1950 Friendship Chapel Rd
FIT-UPS	
Cardinal Restaurant	535 S White St 120
Lil' Hombre Restaurant	535 S White St 125
Cook Out Restaurant	11690 Northpark Dr
Sable Fermentation Inc	745 Merritt Capital Dr 122
PRE-OCCUPANCIES	
Papa Murphy's (Change of Owner)	11721 Retail Dr 105
El Patron Barbershop Bar Inc	12520 Capital Blvd 501
Wellons Inc	12339 Wake Union Church Rd 104
Home Staging To Sell LLC	5105 Unicon Dr J
A Place To Copy	10501 Ligon Mill Rd 150
Princess Eyebrow	12215 Hampton Way Dr 101
Heritage Jiu Jitsu	745 Merritt Capital Dr 118
Capital One World Property LLC	5036 One World Way

Organizational Performance

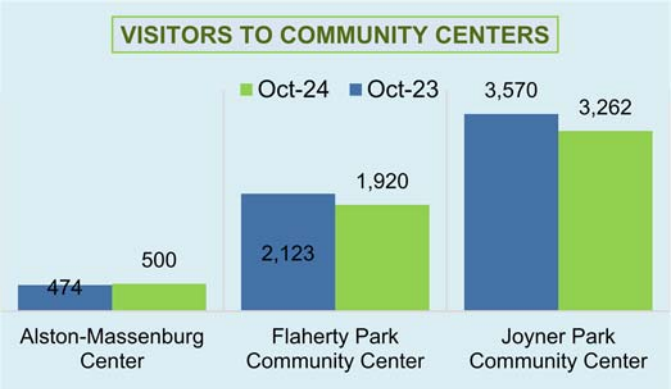
NORTHERN WAKE FOOD SECURITY TEAM	
Staff Hours	16 hrs./week
Updates	Eat, Well Wake - 12 clients (8 WF & 4 Rolesville) NCFST - maintaining an average of 60 patrons/visit Society of St. Andrew's Muscadine Gleaning event.

GUEST SERVICES VOLUNTEER (GSV) PROGRAM	
Updates	21 in the program
	20 active (one is out due to health)

Parks, Recreation & Cultural Resources

ATHLETICS

	OCTOBER 2024	OCTOBER 2023
Registrations Received – Youth	0	24
Registrations Received – Adult	0	0
Games Held	196	111
Revenue	$0	$1,860



FACILITY RENTALS

	OCTOBER 2024	OCTOBER 2023
Athletic Fields	2	2
Joyner Park Outdoor / Open Space	3	5
General Outdoor / Open Space	0	2
Picnic Shelters	1	3
Wake Forest Community House	8	8
Joyner Park Community Center	3	2
Flaherty Park Community Center	1	4
Alston-Massenburg Center	3	5

RECCONNECT PROGRAM GUIDE VIEW

The program guide is updated twice per year in January and July.

PROGRAMS

	OCTOBER 2024	OCTOBER 2023
Registrations Received – Youth	167	149
Registrations Received – Adult	152	151
Classes/Programs Held	36	40
Revenue	$8,499	$6,909

PARK MAINTENANCE

TYPE OF MAINTENANCE	QUANTITY
Vandalism	0
Reactive Maintenance	3
PM Inspections & Services	73
Evening & Weekend Park Services	5

VISITORS TO AQUATIC CENTER & SPRAYGROUND

	OCTOBER 2024	OCTOBER 2023
Aquatic Center	0	CLOSED
Taylor Street Sprayground	0	CLOSED

Planning

DEVELOPMENT SERVICES MONTHLY REPORT VIEW

ZONING VIOLATIONS DASHBOARD VIEW

Use Chrome, Firefox, Safari, or Edge to view the newsletter and/or the report.

CERTIFICATES OF APPROPRIATENESS

	OCTOBER 2024	OCTOBER 2023
COAs Received	0	0
COAs Approved	0	0

Police

KEY STATS

	OCTOBER 2024	OCTOBER 2023
Calls for Service	5,249	3,830
Vehicle Crashes	241	186

Public Works

Streets: • Replaced 333 Ft of sidewalk (28 Yards) • Repaired 20 asphalt patches (153 Tons) • Swept 128 miles and collected 19 loads of debris • Cut water points for Wake Forest Fire • Historic sign installation at Holding Park • Installed post for cameras at Holding Park • Marked 3 head stones at the cemetery

Fleet: Fleet welcomed a new mechanic, Wesley Hight on 10/14/24. Fleet was able to repair in-house the roof panel on one of the Solid Waste refuge trucks. By performing the repair in-house, it saved an estimate cost of over $59,000.00 dollars. Fleet completed 282 work orders in September for a combined shop productivity average of 78% of billable hours. The mechanics completed 5.5 hours of combined training.

Solid Waste: - Loose-leaf pick up began on October 7. - Sustainability hosted a composting presentation on October 29 at the Renaissance Center - Fall brings much more yard waste debris. Crews stayed on schedule all month. - Many litter kits went out to residents who picked up well over 30 bags of trash from public areas.

Urban Forestry:

Admin: Work on yearly audit of CAPs residents. Requested 3 headstones to be marked in Cemetery by Streets.

RECYCLING		
	OCTOBER 2024	OCTOBER 2023
Volunteer Collected Litter		200
Volunteer Collected Recycling		100
Volunteer Hours		33
Volunteer Miles of Streets		0
Sections of Roads Cleaned (not miles)		1
Number of Creeks Cleaned		2
Number of Litter Kits Issued / Returned		4

SOLID WASTE		
	OCTOBER 2024	OCTOBER 2023
New Construction Homes Added	78	57
New Cart Sets	78	57

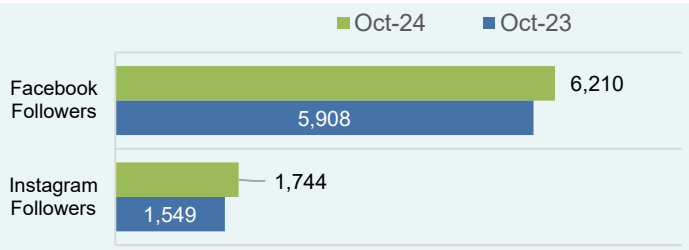
CEMETERY		
	OCTOBER 2024	OCTOBER 2023
Number of Niches Sold	0	0

Renaissance Centre for the Arts

EVENT & PROGRAM ATTENDANCE		
	OCTOBER 2024	OCTOBER 2023
Monthly In-Person Attendance	1,410	1,783
Virtual Views	1,456	77
Ticketed Events Held	1	0
Free Events Held	1	4

RENAISSANCE CENTRE BROCHURE VIEW

SOCIAL ENGAGEMENT



Renaissance Centre for the Arts

The mural entitled “Roots of Unity” was revealed on October 5th. The mural is located on the steps of the Alston-Massenburg Center. This is the seventy-fifth piece of public art introduced to Wake Forest under the direction of the Public Arts Commission. Artist Junior Gomez engaged the Northeast Community throughout the process as they were invited to offer input and feedback during the design stage.
Celebration of the Arts had a record-breaking crowd this year. The attendees enjoyed free food and free art experiences. A highlight of the day was storyteller Donna Washington. The event took place at the Alton-Massenburg Center and Taylor Street Park. The Public Art Commission produces celebration the Arts in conjunction with the Renaissance Centre and Parks, Recreation, and Cultural Resources.
The Renaissance Centre Arts Annex hosted an art exhibit featuring the works of artists on the Town’s virtual public art tour.
The Main Stage Performance series continued with The Legacy of Jazz this month. The near capacity show received rave reviews from audience members. One audience member had this to say in the post-show survey, “Exceptional show! My husband and I were amazed by the talent and professionalism of the entertainers. This show could have been performed at a NYC jazz club. Great venue with kind attentive staff. We will be back again!”

Wake Forest Power

CUSTOMER SUMMARY

	OCTOBER 2024	OCTOBER 2023
Electric Meters/Customers	7,826	7,598
Pre-Pay Power Customers	452	468
H.O.P.E. Participants	42	45
N.C. GreenPower Participants	17	17

POWER OUTAGES

	OCTOBER 2024	OCTOBER 2023
Total Number of Customers Affected by Outages this Month	296	242
Average Number of Customers Affected per Outage	49	48.4

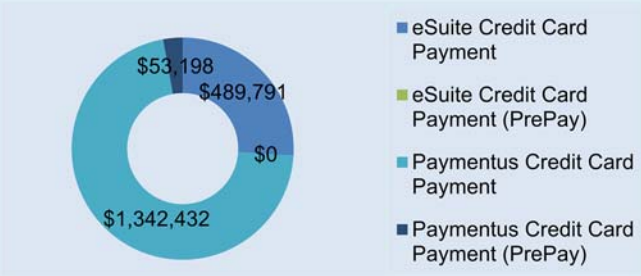
PAYMENTS RECEIVED

	OCTOBER 2024	OCTOBER 2023
eSuite Credit Card Payments	$489,791	$307,700
eSuite Credit Card Payments (Pre-Pay)	$0	$0
Paymentus CC Payments	$1,342,432	$707,502
Paymentus CC Payments (Pre-Pay)	$53,198	$53,821

NUMBER OF TRANSACTIONS

	OCTOBER 2024	OCTOBER 2023
eSuite Credit Card Payments	382	441
Paymentus CC Payments	6,811	3,634
Paymentus CC Payments (Pre-Pay)	1,426	1,466

PAYMENTS RECEIVED OCTOBER 2024



PAYMENTS RECEIVED OCTOBER 2024

Historic Preservation Commission

MEETINGS	
Most recent meeting held	10/22/2024
Number of members in attendance: 5 out of 9	

The HPC received training in the legislative process of Local Landmark Designation. Staff notified the group that Nancy Ginger has resigned from the HPC due to a family illness. Staff provided updates on the Cemetery Preservation Workshop held on October 12 and the Preservation Conference held October 16-18.

Human Relations

MEETINGS	
Most recent meeting held	10/24/2024
Number of members in attendance: 3 out of 10	

The HRC Council met with two youth candidates and one board member candidate to vote on as new members with the Council. Additionally, ongoing planning took place for the upcoming Minority & Women Owned Business Expo to be held at the Renaissance Centre on Saturday, February 22, 2025 - 1:00 PM to 4:00 PM.

Public Art

MEETINGS	
Most recent meeting held	10/24/2024
Number of members in attendance: 7 out of 11	

Celebration of the Arts was a good event. Excitement about the new Alston Massenburg mural. Partnership projects with downtown design and appearance group. Planning art around town projects.

Parks, Recreation & Cultural Resources Advisory Board

MEETINGS	
Most recent meeting held	10/28/2024
Number of members in attendance: 11out of 12	

The board discussed the following items: Special Events - Volunteer Sign-up Genius: Calls from Santa Dec. 5 - 6-8 pm; Snowball Dance – Dec. 13 - 6:30-8 pm Staff Holiday Luncheon – Nov. 22 at the Community House 12noon Voted to support the Accessible Parks Grant for Taylor Street Park.

Technology Advisory

MEETINGS	
Most recent meeting held	10/28/2024
Number of members in attendance: 9 out of 13	

The TAB discussed the upcoming STEM event scheduled for April 12, 2025. They also elected three TAB members to begin their terms in January.

Urban Forestry Board

MEETINGS	
Most recent meeting held	10/22/2024
Number of members in attendance: 4 out of 9	

The self-guided tree tour at Joyner will open this week. We discussed the declining health of the pecan grove.

Board of Commissioners Agenda Item Report

Agenda Item No.: 2024-361-
Submitted by: Terry Savary
Submitting Department: Administration
Meeting Date: November 19, 2024

SUBJECT
Commissioner Reports

Recommendation:

Item Summary:

ATTACHMENTS

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