CITY OF COMMERCE

AGENDA • MAY 11, 2026

PLANNING COMMISSION MEETING

Administrative Complex 110 State Street **6:00 PM**
Commerce, GA

1. **CALL TO ORDER**
2. **ROLL CALL**
3. **OPENING PRAYER - Vice Chair Joe Leffew**
4. **APPROVAL OF MINUTES**
    1. Approval of minutes - April 27 Planning Commission Meeting
5. **UPDATES FROM CITY COUNCIL**
6. **UNFINISHED BUSINESS**
    1. **PSP26-0003: Preliminary Plat –** PUD Plat Approval: Ken Gary, applicant, on approximately +/- 23.4 acres located at 1134 State Street, further identified as Map/Parcel 009 028.
    2. **PSP26-0002: Preliminary Plat –** Plat approval for 36 lots: Barry D. Lord, applicant, on approximately +/- 13.854 acres located off Mt Olive Rd and Charleston Avenue, further identified as Map/Parcel 020 009X.
    3. **Readoption of the Unified Development Code with Amendments**
7. **NEW BUSINESS**
    1. **PR26-0002**: Rezoning - Commercial: Jerry Baker, applicant, seek rezoning on approximately +/- 3.00 acres located at 1432 Hospital Rd, further identified as Map/Parcel 020 019F1, from R-1 (Single Family Residential Low-Density District) to C-2 (General Commercial District).
8. **ADJOURN**

EVENTS & REMINDERS

- May 18: City Council Regular Meeting @6pm
- May 25: City office Closed - Memorial Day
- June 1: City Council Work Session Meeting @6pm
- June 15 City Council Regular Meeting @6pm
- June 22: DDA Meeting @4pm/Planning Commission Meeting @6pm (unless canceled)

To see a complete calendar of events, public notices, and announcements, please visit our website at www.commercega.gov

GENERAL INFORMATION

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4.1

CITY OF COMMERCE

City Council Agenda

Subject: Approval of minutes - April 27 Planning Commission Meeting

Date: May 11, 2026

Budget Impact: **Category:**

Funding Source:

City Council Action Requested On:

Department: Planning and Development

Staff recommends

Matthew Hailey

Matthew Hailey, Assistant City Manager

April 27, 2026 PC Meeting Minutes.pdf

MINUTES ● APRIL 27, 2026

PLANNING COMMISSION MEETING

Commerce Administrative Complex 110 **6:00 PM**
State St Commerce GA 30529

1. CALL TO ORDER

Chair Erin Moore called the meeting to order at 6 pm

Attendee Name	Title	Status
Erin Moore	Chair	Present
Joe Leffew	Vice Chair	Present
Rob Brown	Member	Present
Jimbo Stephenson	Member	Present
Micheal Edwardson	Member	Present

2. ROLL CALL

Ansley Tootle, Staff Secretary called roll

Present - Chair Erin Moore
Commissioner Rob Brown
Commissioner Jimbo Stephenson
Vice Chair Joe Leffew
Commissioner Mike Edwardson

3. OPENING PRAYER - Jimbo Stephenson

4. APPROVAL OF MINUTES

Chair Moore asked Commission if any discussion changes deletions or additions being none a motion to approve minutes by commissioner Stephenson 2nd by Vice Chair Leffew. Motion carried unanimously.

A motion made by Councilman Jimbo Stephenson, a second was made by Councilman Joe Leffew, the vote was unanimous to passed Commissioner Stephenson motion to approve Commissioner Leffew second
Motion passed unanimously
.

RESULT:	**PASSED [UNANIMOUS]**
MOVER:	Jimbo Stephenson, Member
SECONDER:	Joe Leffew, Vice Chair
AYES:	Joe Leffew, Rob Brown, Jimbo Stephenson, Erin Moore, Micheal Edwardson

1. Approval of minutes

5. UPDATES FROM CITY COUNCIL

- **Zoning Map Approval**
  - Unanimous approval of the 2026 Zoning Map
- **PR25-0013: Rezoning - Commercial:** Brittany Purcell, applicant, seek rezoning on approximately +/- 0.83 acres located at 170 Cardiology Place, further identified as Map/Parcel C09 018, from R-1 (Single Family Residential Low-Density District) to C-1 (Neighborhood Commercial District). *Unanimously Approved*

Planning, Building, & Zoning Superintendent Dillon Anthony gave staff updates from City Council meeting from February 16, 2026, regarding:

Approvals

Ordinance Amendment - Boards, authorities, commissions - terms, service as chairman and vice chairman
Election of staff secretary
Appointments of Joe Leffew, Rob Brown Term January 2026 - December 2029
Unanimously approved conditional permit on PC25-0002
Unanimously approved annexation PAX25-0003

6. NEW BUSINESS

Planning, Building, & Zoning Superintendent, Dillon Anthony, presented new business.

1. **PR26-0001: Rezoning - Commercial:** Regal Investment Holdings, LLC, applicant, seek rezoning on approximately +/- 29.54 acres located on US Hwy 441 South, further identified as Map/Parcel 009 014, from AR (Agricultural Residential District) to C-2 (General Commercial District).
   Anthony presented PR26-0001, parcel # 009 014 for rezone. Staff recommendation to approve.

   Chair Moore opened public comment asked if anyone in favor to speak. Dianne Gaissert 8116 Hwy 334 Nicholson GA speak on behalf of the property owner. Requested approval for this rezoning and answered questions anyone had.

   Commissioner Leffew asked Gaissert if Aldi was actually the potential customer, which Gaissert responded no.

   Chair Moore asked if anyone else to speak in favor, being none, anyone in opposition of the rezone, being none. Public session is closed.

   Chair Moore asked for a motion.

   A motion made by Councilman Rob Brown, a second was made by Councilman Micheal Edwardson, the vote was unanimous to passed Commissioner Brown motioned for recommendation of approval for rezoning Commissioner Edwardson 2nd motion. Motion passed unanimously.
   .

RESULT:	**PASSED [UNANIMOUS]**
MOVER:	Rob Brown, Member
SECONDER:	Micheal Edwardson, Member
AYES:	Joe Leffew, Rob Brown, Jimbo Stephenson, Erin Moore, Micheal Edwardson

2. **PSP26-0002: Preliminary Plat –** Plat approval for 36 lots: Barry D. Lord, applicant, on approximately +/- 13.854 acres located off Mt Olive Rd and

Charleston Avenue, further identified as Map/Parcel 020 009X.
Chairman Moore asked Anthony to present.
Anthony presented the preliminary plat PSP2-0002 Northwood Phase 3.
Chair Moore asked if anyone to speak in favor of this plat. Mr. Barry Lord 437 Sam Brown Blvd to speak for the representive. Lord told the commissioners he would be open to fixing the issues stated by staff and bring it back to the commission.

Chair Moore asked if anyone to speak in opposition of the plat, being none Moore closed the public session.

Chair Moore opened the conversation to the commissioners. Stephenson motioned to table to the next meeting and a second by Leffew. Motion carried unanimously.

A motion made by Councilman Jimbo Stephenson, a second was made by Councilman Joe Leffew, the vote was unanimous to tabled Motion to table to give the applicant time to comply with the UDC.

Motion by Commissioner Stephenson
Second Vice Chair Leffew

Motion carried unanimously.
.

RESULT:	**TABLED [UNANIMOUS]**
MOVER:	Jimbo Stephenson, Member
SECONDER:	Joe Leffew, Vice Chair
AYES:	Joe Leffew, Rob Brown, Jimbo Stephenson, Erin Moore, Micheal Edwardson

3. **PSP26-0003: Preliminary Plat –** PUD Plat Approval: Ken Gary, applicant, on approximately +/- 23.4 acres located at 1134 State Street, further identified as Map/Parcel 009 028.
Chair Moore asked Anthony to present.

Anthony presented the preliminary plat PSP2-0003 1134 State Street (PUD).

Chair Moore asked if anyone wished to speak in favor of the plat. Matthew Reeves, 1 Sugarloaf Center, Duluth, GA (Andersen, Tate & Carr Law Firm), spoke on behalf of the applicant. Reeves provided background information on the plat and explained that staff's primary concern relates to compliance with on street parking requirements. He stated that the applicant and their engineer do not view the straight in/straight out parking configuration as a safety concern, noting that all driveways in the development also function as straight in/straight out access.

Reeves further explained that the plat complies with IFC requirements for a secondary emergency access, and the engineer confirmed that the proposed cul de sacs meet all applicable fire code standards. Reeves also noted that the setbacks and right of way have been revised to comply with code.

Reeves then introduced Bryan Day, project engineer, 4493 Orchard Grove Drive, to speak further on the plat. Chair Moore reminded those present that there is a total 10 minute allotment of time for speakers in support of the plat and those in opposition. Day reiterated that the straight in/straight out parking configuration does not present a safety concern and compared it to a standard residential driveway. He stated that perpendicular parking has been part of the plans since the rezoning and that the

townhome layout makes parallel parking difficult to accommodate. Day added that, in his and the applicant's opinion, the addition of the fire access road means the development should not be considered a dead-end street exceeding the maximum allowable length for a dead end road or cul de sac. He explained that the hammerhead turnaround was designed to be sufficiently large for emergency service vehicles.

Reeves then asked the applicant, Ken Gary, 5550 Golf Club Drive, to speak. Gary reiterated the previous comments, stating that the plat has been reviewed and discussed with staff, the Planning Commission, and the City Council multiple times, and that the applicant believes the current proposal is the best plan that meets code requirements.

Reeves concluded by again addressing the on street parking issue, stating that the proposal should be considered safe and compliant with code. He requested that the plat be approved or tabled to the next meeting.

Chair Moore asked if there was anyone who wished to speak in opposition. Hearing none, Chair Moore closed the public session.

Chair Moore then opened the discussion to the commissioners.

Chair Moore noted that the Planning Commission did not approve the PUD and that the request proceeded to Council for approval. She asked whether the rezoning had been approved as a site plan specific rezoning, a concept plan, or if there was a condition requiring the development to match what was presented at the rezoning hearing. Anthony responded that it was not approved as a siteâ€˜planâ€˜specific rezoning. Vice Chair Leffew stated that his concern is that this would be the first PUD and the applicant is already requesting special accommodations. Leffew expressed that if changes are needed, the City should consider amending the UDC rather than granting exceptions for this PUD. Commissioner Edwardson agreed with Leffew's comments.

Chair Moore granted Reeves his remaining 50 seconds to respond to the commissioners. Reeves stated that the applicants presented a site plan consistent with the PUD and it was approved by the Mayor and Council. He explained that alternative parking configurations would create wasted space and materials, and that the proposed layout is safer and more efficient. Reeves further stated that the Mayor and Council were aware the applicants would be requesting full access parking spaces and therefore they believe this type of parking has effectively already been approved.

Chair Moore asked if there was any discussion regarding the maximum cul de sac length. No discussion was offered.

Reeves requested to speak again, and Chair Moore granted him the remainder of his allotted time. Reeves stated that the rezoning plan included a road of similar length and therefore the issue should not be a concern now.

Chair Moore called for a motion. Commissioner Edwardson made a motion to table the item, and Vice Chair Leffew seconded the motion. The motion to table passed unanimously.

A motion made by Councilman Micheal Edwardson, a second was made by Councilman Joe Leffew, the vote was unanimous to tabled Motion to table to give the applicant time to comply with the UDC.

Motion Commissioner Edwardson
Second Vice Chair Leffew

Motion carried unanimously.
.

RESULT:	**TABLED [UNANIMOUS]**
MOVER:	Micheal Edwardson, Member
SECONDER:	Joe Leffew, Vice Chair
AYES:	Joe Leffew, Rob Brown, Jimbo Stephenson, Erin Moore, Micheal Edwardson

7. DISCUSSION
Data centers and convenience stores

8. ADJOURN

Chairman Moore asked for motion to adjourn.

Commissioner Edwardson motioned to adjourn and 2nd by Commissioner Brown.
Motion passed unanimously.

A motion made by Councilman Micheal Edwardson, a second was made by Councilman Rob Brown, the vote was unanimous to passed Chairman Moore asked for motion to adjourn.

Commissioner Edwardson motioned to adjourn and 2nd by Commissioner Brown.
Motion passed unanimously.
.

RESULT:	**PASSED [UNANIMOUS]**
MOVER:	Micheal Edwardson, Member
SECONDER:	Rob Brown, Member
AYES:	Joe Leffew, Rob Brown, Jimbo Stephenson, Erin Moore, Micheal Edwardson

EVENTS & REMINDERS

- May 04: City Council Work Session @6pm
- May 08: Meet Me In The Alley Movie Night
- May 11: DDA Meeting @4pm/Planning Commission Meeting @6pm (unless canceled)
- May 18: City Council Regular Meeting @6pm
- May 25: City office Closed - Memorial Day

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City Council Agenda

Subject: **PSP26-0003: Preliminary Plat –** PUD Plat Approval: Ken Gary, applicant, on approximately +/- 23.4 acres located at 1134 State Street, further identified as Map/Parcel 009 028.

Date: May 11, 2026

Budget Impact: **Category:**

Funding Source:

City Council Action Requested On:

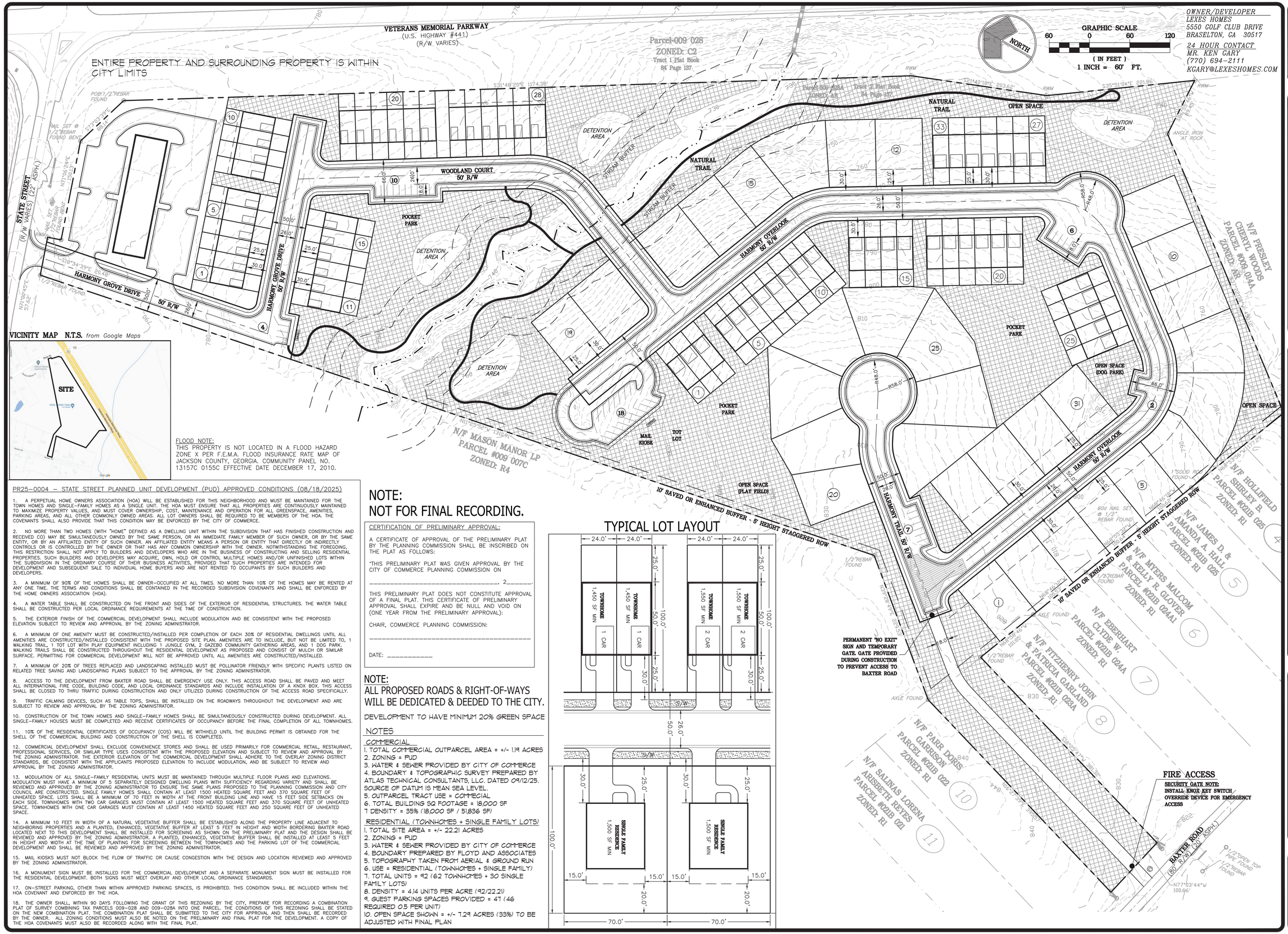
Department: Planning and Development

Staff recommends

Matthew Hailey

Matthew Hailey, Assistant City Manager

Preliminary-Plat_Harmony-Grove-Township.pdf
1134 State Street Preliminary Plat Application_SIGNED.pdf
Revised Preliminary-Plat_Harmony-Grove-Township-Revision.pdf



VICINITY MAP N.T.S. *from Google Maps*

FLOOD NOTE:
THIS PROPERTY IS NOT LOCATED IN A FLOOD HAZARD ZONE X PER F.E.M.A. FLOOD INSURANCE RATE MAP OF JACKSON COUNTY, GEORGIA. COMMUNITY PANEL NO. 13157C 0155C EFFECTIVE DATE DECEMBER 17, 2010.

PR25-0004 – STATE STREET PLANNED UNIT DEVELOPMENT (PUD) APPROVED CONDITIONS (08/18/2025)

1. A PERPETUAL HOME OWNERS ASSOCIATION (HOA) WILL BE ESTABLISHED FOR THIS NEIGHBORHOOD AND MUST BE MAINTAINED FOR THE TOWN HOMES AND SINGLE-FAMILY HOMES AS A SINGLE UNIT. THE HOA MUST ENSURE THAT ALL PROPERTIES ARE CONTINUOUSLY MAINTAINED TO MAXIMIZE PROPERTY VALUES, AND MUST COVER OWNERSHIP, COST, MAINTENANCE AND OPERATION FOR ALL GREENSPACE, AMENITIES, PARKING AREAS, AND ALL OTHER COMMONLY OWNED AREAS. ALL LOT OWNERS SHALL BE REQUIRED TO BE MEMBERS OF THE HOA. THE COVENANTS SHALL ALSO PROVIDE THAT THIS CONDITION MAY BE ENFORCED BY THE CITY OF COMMERCE.

2. NO MORE THAN TWO HOMES (WITH "HOME" DEFINED AS A DWELLING UNIT WITHIN THE SUBDIVISION THAT HAS FINISHED CONSTRUCTION AND RECEIVED CO) MAY BE SIMULTANEOUSLY OWNED BY THE SAME PERSON, OR AN IMMEDIATE FAMILY MEMBER OF SUCH OWNER, OR BY THE SAME ENTITY, OR BY AN AFFILIATED ENTITY OF SUCH OWNER. AN AFFILIATED ENTITY MEANS A PERSON OR ENTITY THAT DIRECTLY OR INDIRECTLY CONTROLS OR IS CONTROLLED BY THE OWNER OR THAT HAS ANY COMMON OWNERSHIP WITH THE OWNER. NOTWITHSTANDING THE FOREGOING, THIS RESTRICTION SHALL NOT APPLY TO BUILDERS AND DEVELOPERS WHO ARE IN THE BUSINESS OF CONSTRUCTING AND SELLING RESIDENTIAL PROPERTIES. SUCH BUILDERS AND DEVELOPERS MAY ACQUIRE, OWN, HOLD OR CONTROL MULTIPLE HOMES AND/OR UNFINISHED LOTS WITHIN THE SUBDIVISION IN THE ORDINARY COURSE OF THEIR BUSINESS ACTIVITIES, PROVIDED THAT SUCH PROPERTIES ARE INTENDED FOR DEVELOPMENT AND SUBSEQUENT SALE TO INDIVIDUAL HOME BUYERS AND ARE NOT RENTED TO OCCUPANTS BY SUCH BUILDERS AND DEVELOPERS.

3. A MINIMUM OF 90% OF THE HOMES SHALL BE OWNER-OCCUPIED AT ALL TIMES. NO MORE THAN 10% OF THE HOMES MAY BE RENTED AT ANY ONE TIME. THE TERMS AND CONDITIONS SHALL BE CONTAINED IN THE RECORDED SUBDIVISION COVENANTS AND SHALL BE ENFORCED BY THE HOME OWNERS ASSOCIATION (HOA).

4. A WATER TABLE SHALL BE CONSTRUCTED ON THE FRONT AND SIDES OF THE EXTERIOR OF RESIDENTIAL STRUCTURES. THE WATER TABLE SHALL BE CONSTRUCTED PER LOCAL ORDINANCE REQUIREMENTS AT THE TIME OF CONSTRUCTION.

5. THE EXTERIOR FINISH OF THE COMMERCIAL DEVELOPMENT SHALL INCLUDE MODULATION AND BE CONSISTENT WITH THE PROPOSED ELEVATION SUBJECT TO REVIEW AND APPROVAL BY THE ZONING ADMINISTRATOR.

6. A MINIMUM OF ONE AMENITY MUST BE CONSTRUCTED/INSTALLED PER COMPLETION OF EACH 30% OF RESIDENTIAL DWELLINGS UNTIL ALL AMENITIES ARE CONSTRUCTED/INSTALLED CONSISTENT WITH THE PROPOSED SITE PLAN. AMENITIES ARE TO INCLUDE, BUT NOT BE LIMITED TO, 1 WALKING TRAIL, 1 TOT LOT WITH PLAY EQUIPMENT INCLUDING 1 JUNGLE GYM, 2 GAZEBO COMMUNITY GATHERING AREAS, AND 1 DOG PARK. WALKING TRAILS SHALL BE CONSTRUCTED THROUGHOUT THE RESIDENTIAL DEVELOPMENT AS PROPOSED AND CONSIST OF MULCH OR SIMILAR SURFACE. PERMITTING FOR COMMERCIAL DEVELOPMENT WILL NOT BE APPROVED UNTIL ALL AMENITIES ARE CONSTRUCTED/INSTALLED.

7. A MINIMUM OF 20% OF TREES REPLACED AND LANDSCAPING INSTALLED MUST BE POLLINATOR FRIENDLY WITH SPECIFIC PLANTS LISTED ON RELATED TREE SAVING AND LANDSCAPING PLANS SUBJECT TO THE APPROVAL BY THE ZONING ADMINISTRATOR.

8. ACCESS TO THE DEVELOPMENT FROM BAXTER ROAD SHALL BE EMERGENCY USE ONLY. THIS ACCESS ROAD SHALL BE PAVED AND MEET ALL INTERNATIONAL FIRE CODE, BUILDING CODE, AND LOCAL ORDINANCE STANDARDS AND INCLUDE INSTALLATION OF A KNOX BOX. THIS ACCESS SHALL BE CLOSED TO THRU TRAFFIC DURING CONSTRUCTION AND ONLY UTILIZED DURING CONSTRUCTION OF THE ACCESS ROAD SPECIFICALLY.

9. TRAFFIC CALMING DEVICES, SUCH AS TABLE TOPS, SHALL BE INSTALLED ON THE ROADWAYS THROUGHOUT THE DEVELOPMENT AND ARE SUBJECT TO REVIEW AND APPROVAL BY THE ZONING ADMINISTRATOR.

10. CONSTRUCTION OF THE TOWN HOMES AND SINGLE-FAMILY HOMES SHALL BE SIMULTANEOUSLY CONSTRUCTED DURING DEVELOPMENT. ALL SINGLE-FAMILY HOUSES MUST BE COMPLETED AND RECEIVE CERTIFICATES OF OCCUPANCY BEFORE THE FINAL COMPLETION OF ALL TOWNHOMES.

11. 10% OF THE RESIDENTIAL CERTIFICATES OF OCCUPANCY (COS) WILL BE WITHHELD UNTIL THE BUILDING PERMIT IS OBTAINED FOR THE SHELL OF THE COMMERCIAL BUILDING AND CONSTRUCTION OF THE SHELL IS COMPLETED.

12. COMMERCIAL DEVELOPMENT SHALL EXCLUDE CONVENIENCE STORES AND SHALL BE USED PRIMARILY FOR COMMERCIAL RETAIL, RESTAURANT, PROFESSIONAL SERVICES, OR SIMILAR TYPE USES CONSISTENT WITH THE PROPOSED ELEVATION AND SUBJECT TO REVIEW AND APPROVAL BY THE ZONING ADMINISTRATOR. THE EXTERIOR ELEVATION OF THE COMMERCIAL DEVELOPMENT SHALL ADHERE TO THE OVERLAY ZONING DISTRICT STANDARDS, BE CONSISTENT WITH THE APPLICANTS PROPOSED ELEVATION TO INCLUDE MODULATION, AND BE SUBJECT TO REVIEW AND APPROVAL BY THE ZONING ADMINISTRATOR.

13. MODULATION OF ALL SINGLE-FAMILY RESIDENTIAL UNITS MUST BE MAINTAINED THROUGH MULTIPLE FLOOR PLANS AND ELEVATIONS. MODULATION MUST HAVE A MINIMUM OF 5 SEPARATELY DESIGNED DWELLING PLANS WITH SUFFICIENCY REGARDING VARIETY AND SHALL BE REVIEWED AND APPROVED BY THE ZONING ADMINISTRATOR TO ENSURE THE SAME PLANS PROPOSED TO THE PLANNING COMMISSION AND CITY COUNCIL ARE CONSTRUCTED. SINGLE FAMILY HOMES SHALL CONTAIN AT LEAST 1500 HEATED SQUARE FEET AND 370 SQUARE FEET OF UNHEATED SPACE. LOTS SHALL BE A MINIMUM OF 70 FEET IN WIDTH AT THE FRONT BUILDING LINE AND HAVE 15 FEET SIDE SETBACKS ON EACH SIDE. TOWNHOMES WITH TWO CAR GARAGES MUST CONTAIN AT LEAST 1500 HEATED SQUARE FEET AND 370 SQUARE FEET OF UNHEATED SPACE. TOWNHOMES WITH ONE CAR GARAGES MUST CONTAIN AT LEAST 1450 HEATED SQUARE FEET AND 250 SQUARE FEET OF UNHEATED SPACE.

14. A MINIMUM 10 FEET IN WIDTH OF A NATURAL VEGETATIVE BUFFER SHALL BE ESTABLISHED ALONG THE PROPERTY LINE ADJACENT TO NEIGHBORING PROPERTIES AND A PLANTED, ENHANCED, VEGETATIVE BUFFER AT LEAST 5 FEET IN HEIGHT AND WIDTH BORDERING BAXTER ROAD LOCATED NEXT TO THIS DEVELOPMENT SHALL BE INSTALLED FOR SCREENING AS SHOWN ON THE PRELIMINARY PLAT AND THE DESIGN SHALL BE REVIEWED AND APPROVED BY THE ZONING ADMINISTRATOR. A PLANTED, ENHANCED, VEGETATIVE BUFFER SHALL BE INSTALLED AT LEAST 5 FEET IN HEIGHT AND WIDTH AT THE TIME OF PLANTING FOR SCREENING BETWEEN THE TOWNHOMES AND THE PARKING LOT OF THE COMMERCIAL DEVELOPMENT AND SHALL BE REVIEWED AND APPROVED BY THE ZONING ADMINISTRATOR.

15. MAIL KIOSKS MUST NOT BLOCK THE FLOW OF TRAFFIC OR CAUSE CONGESTION WITH THE DESIGN AND LOCATION REVIEWED AND APPROVED BY THE ZONING ADMINISTRATOR.

16. A MONUMENT SIGN MUST BE INSTALLED FOR THE COMMERCIAL DEVELOPMENT AND A SEPARATE MONUMENT SIGN MUST BE INSTALLED FOR THE RESIDENTIAL DEVELOPMENT. BOTH SIGNS MUST MEET OVERLAY AND OTHER LOCAL ORDINANCE STANDARDS.

17. ON-STREET PARKING, OTHER THAN WITHIN APPROVED PARKING SPACES, IS PROHIBITED. THIS CONDITION SHALL BE INCLUDED WITHIN THE HOA COVENANT AND ENFORCED BY THE HOA.

18. THE OWNER SHALL, WITHIN 90 DAYS FOLLOWING THE GRANT OF THIS REZONING BY THE CITY, PREPARE FOR RECORDING A COMBINATION PLAT OF SURVEY COMBINING TAX PARCELS 009-028 AND 009-028A INTO ONE PARCEL. THE CONDITIONS OF THIS REZONING SHALL BE STATED ON THE NEW COMBINATION PLAT. THE COMBINATION PLAT SHALL BE SUBMITTED TO THE CITY FOR APPROVAL AND THEN SHALL BE RECORDED BY THE OWNER. ALL ZONING CONDITIONS MUST ALSO BE NOTED ON THE PRELIMINARY AND FINAL PLAT FOR THE DEVELOPMENT. A COPY OF THE HOA COVENANTS MUST ALSO BE RECORDED ALONG WITH THE FINAL PLAT.

NOTE:
NOT FOR FINAL RECORDING.

CERTIFICATION OF PRELIMINARY APPROVAL:

A CERTIFICATE OF APPROVAL OF THE PRELIMINARY PLAT BY THE PLANNING COMMISSION SHALL BE INSCRIBED ON THE PLAT AS FOLLOWS:

"THIS PRELIMINARY PLAT WAS GIVEN APPROVAL BY THE CITY OF COMMERCE PLANNING COMMISSION ON

_____, 2_____.

THIS PRELIMINARY PLAT DOES NOT CONSTITUTE APPROVAL OF A FINAL PLAT. THIS CERTIFICATE OF PRELIMINARY APPROVAL SHALL EXPIRE AND BE NULL AND VOID ON (ONE YEAR FROM THE PRELIMINARY APPROVAL):

CHAIR, COMMERCE PLANNING COMMISSION:

_____

DATE: _____

NOTE:
ALL PROPOSED ROADS & RIGHT-OF-WAYS WILL BE DEDICATED & DEEDED TO THE CITY.

DEVELOPMENT TO HAVE MINIMUM 20% GREEN SPACE

NOTES

COMMERCIAL
1. TOTAL COMMERCIAL OUTPARCEL AREA = +/- 1.19 ACRES
2. ZONING = PUD
3. WATER & SEWER PROVIDED BY CITY OF COMMERCE
4. BOUNDARY & TOPOGRAPHIC SURVEY PREPARED BY ATLAS TECHNICAL CONSULTANTS, LLC. DATED 09/12/25. SOURCE OF DATUM IS MEAN SEA LEVEL.
5. OUTPARCEL TRACT USE = COMMECIAL
6. TOTAL BUILDING SQ FOOTAGE = 18,000 SF
7. DENSITY = 35% (18,000 SF / 51,836 SF)

RESIDENTIAL (TOWNHOMES + SINGLE FAMILY LOTS)
1. TOTAL SITE AREA = +/- 22.21 ACRES
2. ZONING = PUD
3. WATER & SEWER PROVIDED BY CITY OF COMMERCE
4. BOUNDARY PREPARED BY FLOYD AND ASSOCIATES
5. TOPOGRAPHY TAKEN FROM AERIAL & GROUND RUN
6. USE = RESIDENTIAL (TOWNHOMES + SINGLE FAMILY)
7. TOTAL UNITS = 92 (62 TOWNHOMES + 30 SINGLE FAMILY LOTS)
8. DENSITY = 4.14 UNITS PER ACRE (92/22.21)
9. GUEST PARKING SPACES PROVIDED = 47 (46 REQUIRED 0.5 PER UNIT)
10. OPEN SPACE SHOWN = +/- 7.29 ACRES (33%) TO BE ADJUSTED WITH FINAL PLAN

TYPICAL LOT LAYOUT

OWNER/DEVELOPER
LEXES HOMES
5550 GOLF CLUB DRIVE
BRASELTON, GA 30517

24 HOUR CONTACT
MR. KEN CARY
(770) 694-2111
KCARY@LEXESHOMES.COM

CIVIL ENGINEERING
LANDSCAPE ARCHITECTURE
SITE PLANNING
P.O. BOX 848
BUFORD, GA 30515
(770) 271-4676 ph.
(706) 389-8568 fax
ddg@daydesigngroup.com
www.daydesigngroup.com

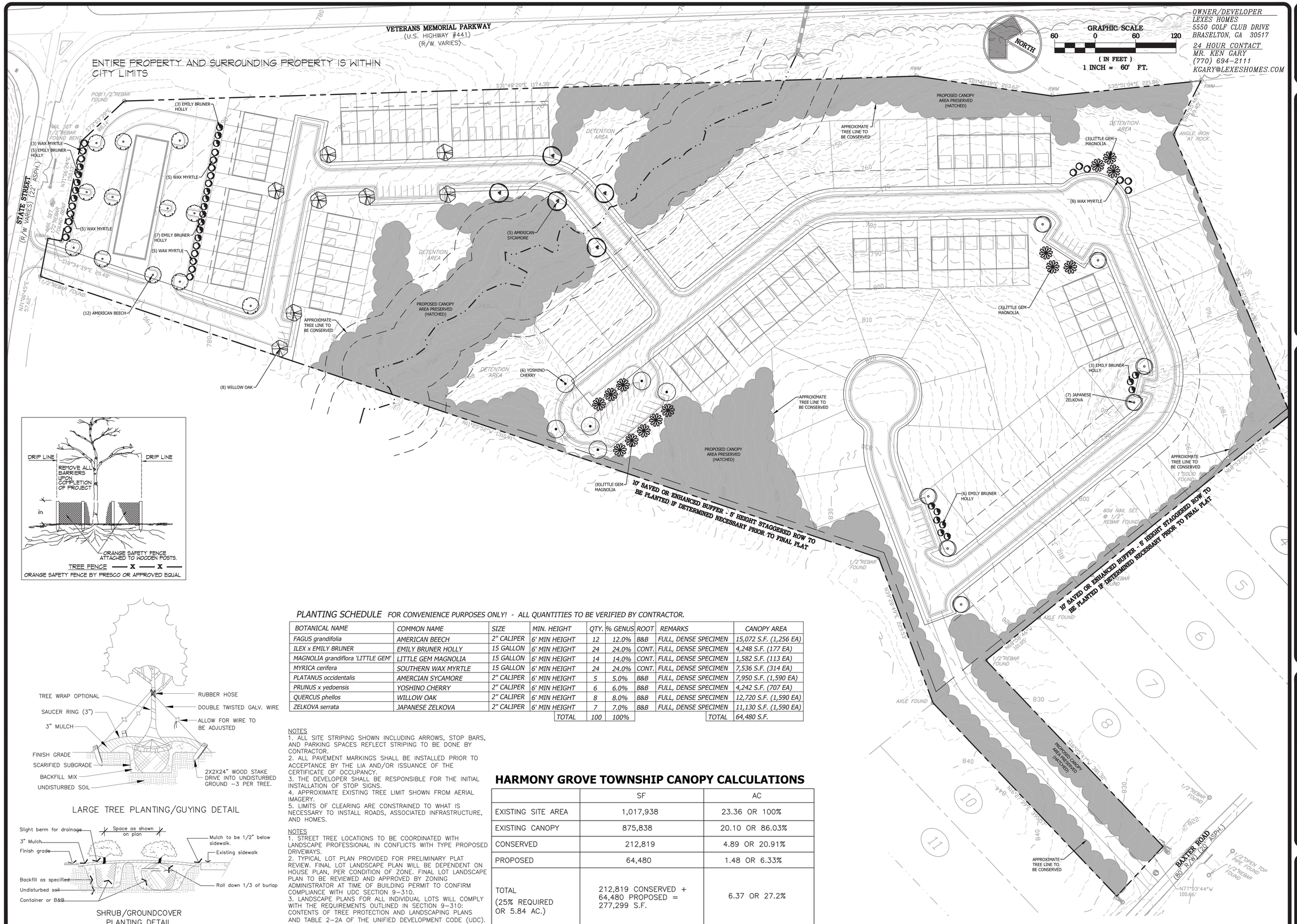
DAY DESIGN GROUP, Inc.

PRELIMINARY PLAT
FOR
HARMONY GROVE TOWNSHIP
PROPOSED RESIDENTIAL & COMMERCIAL PUD
G.M.D. 255 – 1134 STATE STREET
LOCATED IN
CITY OF COMMERCE, JACKSON COUNTY, GEORGIA

NO.	DATE	REVISIONS DESCRIPTION

DATE: 03/12/26
DRAWN BY: BHD
JOB NO.: 22-110

SHEET 1 OF 2



OWNER/DEVELOPER
LEXES HOMES
5550 GOLF CLUB DRIVE
BRASELTON, GA 30517

24 HOUR CONTACT
MR. KEN CARY
(770) 694-2111
KCARY@LEXESHOMES.COM

LARGE TREE PLANTING/GUYING DETAIL

SHRUB/GROUNDCOVER PLANTING DETAIL

PLANTING SCHEDULE

FOR CONVENIENCE PURPOSES ONLY! - ALL QUANTITIES TO BE VERIFIED BY CONTRACTOR.

BOTANICAL NAME	COMMON NAME	SIZE	MIN. HEIGHT	QTY.	% GENUS	ROOT	REMARKS	CANOPY AREA
FAGUS grandifolia	AMERICAN BEECH	2" CALIPER	6' MIN HEIGHT	12	12.0%	B&B	FULL, DENSE SPECIMEN	15,072 S.F. (1,256 EA)
ILEX x EMILY BRUNER	EMILY BRUNER HOLLY	15 GALLON	6' MIN HEIGHT	24	24.0%	CONT.	FULL, DENSE SPECIMEN	4,248 S.F. (177 EA)
MAGNOLIA grandiflora 'LITTLE GEM'	LITTLE GEM MAGNOLIA	15 GALLON	6' MIN HEIGHT	14	14.0%	CONT.	FULL, DENSE SPECIMEN	1,582 S.F. (113 EA)
MYRICA cerifera	SOUTHERN WAX MYRTLE	15 GALLON	6' MIN HEIGHT	24	24.0%	CONT.	FULL, DENSE SPECIMEN	7,536 S.F. (314 EA)
PLATANUS occidentalis	AMERCIAN SYCAMORE	2" CALIPER	6' MIN HEIGHT	5	5.0%	B&B	FULL, DENSE SPECIMEN	7,950 S.F. (1,590 EA)
PRUNUS x yedoensis	YOSHINO CHERRY	2" CALIPER	6' MIN HEIGHT	6	6.0%	B&B	FULL, DENSE SPECIMEN	4,242 S.F. (707 EA)
QUERCUS phellos	WILLOW OAK	2" CALIPER	6' MIN HEIGHT	8	8.0%	B&B	FULL, DENSE SPECIMEN	12,720 S.F. (1,590 EA)
ZELKOVA serrata	JAPANESE ZELKOVA	2" CALIPER	6' MIN HEIGHT	7	7.0%	B&B	FULL, DENSE SPECIMEN	11,130 S.F. (1,590 EA)
			TOTAL	100	100%		TOTAL	64,480 S.F.

NOTES
1. ALL SITE STRIPING SHOWN INCLUDING ARROWS, STOP BARS, AND PARKING SPACES REFLECT STRIPING TO BE DONE BY CONTRACTOR.
2. ALL PAVEMENT MARKINGS SHALL BE INSTALLED PRIOR TO ACCEPTANCE BY THE LIA AND/OR ISSUANCE OF THE CERTIFICATE OF OCCUPANCY.
3. THE DEVELOPER SHALL BE RESPONSIBLE FOR THE INITIAL INSTALLATION OF STOP SIGNS.
4. APPROXIMATE EXISTING TREE LIMIT SHOWN FROM AERIAL IMAGERY.
5. LIMITS OF CLEARING ARE CONSTRAINED TO WHAT IS NECESSARY TO INSTALL ROADS, ASSOCIATED INFRASTRUCTURE, AND HOMES.

NOTES
1. STREET TREE LOCATIONS TO BE COORDINATED WITH LANDSCAPE PROFESSIONAL IN CONFLICTS WITH TYPE PROPOSED DRIVEWAYS.
2. TYPICAL LOT PLAN PROVIDED FOR PRELIMINARY PLAT REVIEW. FINAL LOT LANDSCAPE PLAN WILL BE DEPENDENT ON HOUSE PLAN, PER CONDITION OF ZONE. FINAL LOT LANDSCAPE PLAN TO BE REVIEWED AND APPROVED BY ZONING ADMINISTRATOR AT TIME OF BUILDING PERMIT TO CONFIRM COMPLIANCE WITH UDC SECTION 9-310.
3. LANDSCAPE PLANS FOR ALL INDIVIDUAL LOTS WILL COMPLY WITH THE REQUIREMENTS OUTLINED IN SECTION 9-310: CONTENTS OF TREE PROTECTION AND LANDSCAPING PLANS AND TABLE 2-2A OF THE UNIFIED DEVELOPMENT CODE (UDC).

HARMONY GROVE TOWNSHIP CANOPY CALCULATIONS

	SF	AC
EXISTING SITE AREA	1,017,938	23.36 OR 100%
EXISTING CANOPY	875,838	20.10 OR 86.03%
CONSERVED	212,819	4.89 OR 20.91%
PROPOSED	64,480	1.48 OR 6.33%
TOTAL (25% REQUIRED OR 5.84 AC.)	212,819 CONSERVED + 64,480 PROPOSED = 277,299 S.F.	6.37 OR 27.2%

CIVIL ENGINEERING
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DAY DESIGN GROUP, Inc.

TREE SAVE & LANDSCAPE PLAN - PRELIMINARY PLAT
FOR
HARMONY GROVE TOWNSHIP
PROPOSED RESIDENTIAL & COMMERCIAL PUD
LOCATED IN
1134 STATE STREET
G.M.D. 255 - 1134 STATE STREET
CITY OF COMMERCE, JACKSON COUNTY, GEORGIA

NO.	DATE	DESCRIPTION
		REVISIONS

DATE: 03/12/26
DRAWN BY: BHD
JOB NO.: 22-110

SHEET 2 OF 2

CITY OF COMMERCE

PRELIMINARY PLAT APPLICATION

USE:

- Any subdivision involving the dedication of a public street or public land, any subdivision involving a new private street, and any subdivision requiring a public improvement as defined, shall require the submission and approval by the Commerce Planning Commission of a preliminary plat.
- Approval required prior to the issuance of related development permit.
- Amendment to Preliminary Plat already approved

IMPORTANT INFORMATION-PLEASE READ:

Prior to submission, please ensure your proposed final plat meets all specifications outlined in the City of Commerce's ***Unified Development Code***, specifically ***Article 15 Division 3 Preliminary Plat Specifications*** which can be found online at www.commercega.gov. Once your packet is submitted, staff will conduct a review and advise of any changes needed for staff to forward the plat to the Commerce Planning Commission for consideration. Please complete the form below and submit it along with all required documents and appropriate fee to Planning & Development for review. Incomplete packets will not be further processed.

CHECK ONE: ☑ Preliminary Plat Application ☐ Amendment to previously approved Preliminary Plat

CHECKLIST:

☑ 1. Fee ($250 + $25 per lot over 25 lots)_____

☑ 2. Completed Application including Property Owner Authorization Form_____

☑ 3. Copy of current recorded plat_____

☑ 3. 3 Paper Copies + 1 Digital Copy of:

- ☑ Proposed Preliminary Plat_____
- ☑ Tree Save Plan_____
- ☑ Landscape Plan_____

CITY OF COMMERCE

LANDSCAPE PLAN: 3 hard copies plus one digital copy. The recommended maximum dimensions of the sheet size is 36 inches by 48 inches and the minimum dimensions of 17 inches by 22 inches; however, the Zoning Administrator may approve other sheet sizes and scales as appropriate.

All items below must be included on the Landscape Plan per Sec. 9-310; separate Site Plans may be necessary to address all items.

1. A site plan with property boundaries, proposed buildings, parking areas, loading areas, required buffers, utility easements if any, and other pertinent information as described above (Sec. 15-303). The site plan shall show the location of all trees, shrubs, and landscaping.
2. A planting schedule for all trees, shrubs, and ground covers proposed, with botanical name and common names of each species, the total number of each species planted, and total numbers of trees. Trees and shrubs shall be indicated on the plan using symbols, and the symbols must appear in the planting schedule.
3. Calculations demonstrating the plan meets the following, if applicable:
    a. Minimum landscaped open space specified in Table 2-2A and Table 2-2B of the UDC for the zoning district in which the property is located.
    b. Required number of trees and shrubs within any required frontage landscape strip.
    c. Parking lot landscaping requirements.
    d. Zoning buffer and parking lot screening requirements.
4. Standard details and notes with regard to planting instructions.

Sec. 9-311. Review of Landscape Plans:

In reviewing proposed performance landscape plans, favorable consideration shall be given to exceptional landscape designs that preserve and incorporate existing vegetation and demonstrate innovative design and use of plant materials. Performance landscape plans may be approved upon a finding that the plan meets or exceeds the purposes and objective of this section thorough either:

1. Natural land characteristics or existing vegetation on the proposed development site; or
2. Innovative landscaping or architectural design.

PROPERTY INFORMATION:

TAX MAP & PARCEL #(S): 009 028, 009 028A

ADDRESS OF PROPERTY (if applicable): 1134 State Street, Commerce, GA 30529

WARD #: 5 TOTAL ACREAGE: 23.40 Ac.

NAME OF PROPOSED SUBDIVISION: Harmony Grove Township

ACCESS TO SUBDIVISION FROM: State Street

SOURCE OF WATER SUPPLY: City of Commerce Water

SOURCE / TYPE OF SEWAGE DISPOSAL: City of Commerce Sewer

CITY OF COMMERCE

TYPE OF DEVELOPMENT:

RESIDENTIAL DEVELOPMENT

NUMBER OF LOTS: 92

NUMBER OF DWELLING UNITS: 92

DWELLING UNIT SIZE (Sq. Ft.): 1,450 min.

NUMBER OF NON-DWELLING UNITS: 1

PROVIDE EXPLANATION OF PROPOSED NON-DEWLLING UNITS (eg. Type, use, etc.):

Mixed Use Commercial

NON-RESIDENTIAL DEVELOPMENT (circle one): **INDUSTRIAL** **COMMERCIAL**

NUMBER OF BUILDINGS/LOTS: 1

TOTAL BUILDING SQ FT: 18,000

OWNER/APPLICANT/AGENT INFORMATION:

APPLICANT / ATTORNEY / AGENT INFORMATION:

Check One: ☑ Applicant ☐ Attorney ☐ Agent

Name: Ken Gary

Address: 5550 Golf Club Dr.,

City, State Braselton, GA Zip 30517

Phone Number(s): 770-694-2111

Email Address Kgary@lexeshomes.com

CITY OF COMMERCE

PROPERTY OWNER INFORMATION:

If more than one property owner, add additional pages as needed for each property owner.

Property Owner Name: KENNETH W. GARY

Mailing Address (if different from above): 5350 GOLF CLUB DRIVE

City, State BRASELTON, GA. Zip 30517

Phone Number(s): 770-694-2111

Email Address KGARY@LEXESHOMES.COM

Property Owner Name: KENNETH W. GARY

Mailing Address (if different from above): 5350 GOLF CLUB DR.

City, State BRASELTON, GA. Zip 30517

Phone Number(s): 770-694-2111

Email Address KGARY@LEXESHOMES.COM

CITY OF COMMERCE

APPLICANT'S CERTIFICATION:

THE UNDERSIGNED BELOW STATES UNDER OATH THAT THEY ARE AUTHORIZED TO MAKE THIS APPLICATION.

Kenneth W. Gary — 3-12-2026

Signature of Applicant / Attorney / Agent — Date

MATT REEVES OWNER'S ATTORNEY

KENNETH W. GARY

Type or Print Name — Notary Seal

[signature] — 3-12-2026

Signature of Notary Public — Date

BAKER GEORGIA NOTARY PUBLIC HALL COUNTY EXPIRES MAY 04, 2029

CITY OF COMMERCE

PROPERTY OWNER'S CERTIFICATION:

Signature page required for each/every owner.

I do solemnly swear and attest, subject to criminal penalties for false swearing, that I am the legal owner, as reflected in the records of Jackson County, Georgia, of the property identified below, which is the subject of the attached application before the City of Commerce, Georgia. As the legal owner of record of the subject property, I hereby authorize the individual named below to act as the applicant in the pursuit of the request of the items indicated below.

I, KENNETH W. GARY (Property Owner), authorize, KENNETH W. GARY (Applicant) / MATT REEVES OWNER'S ATTORNEY,

to file for PRELIMINARY PLAT (Type of Application), at 1134 STATE ST. (Physical address or parcel #s)

on this day 12th of March, 2026.

- I understand that failure to supply all required information (per the relevant Applicant Checklists and requirements of the City of Commerce Zoning Ordinance) will result in REJECTION OF THE APPLICATION.
- I understand that preliminary approval of my design plan does not authorize final approval of my application. I agree to arrange sign permitting separately, after approval is obtained.
- I understand that representation associated with this application on behalf of the property owner, project coordinator, potential property owner, agent or such other representative shall be binding.

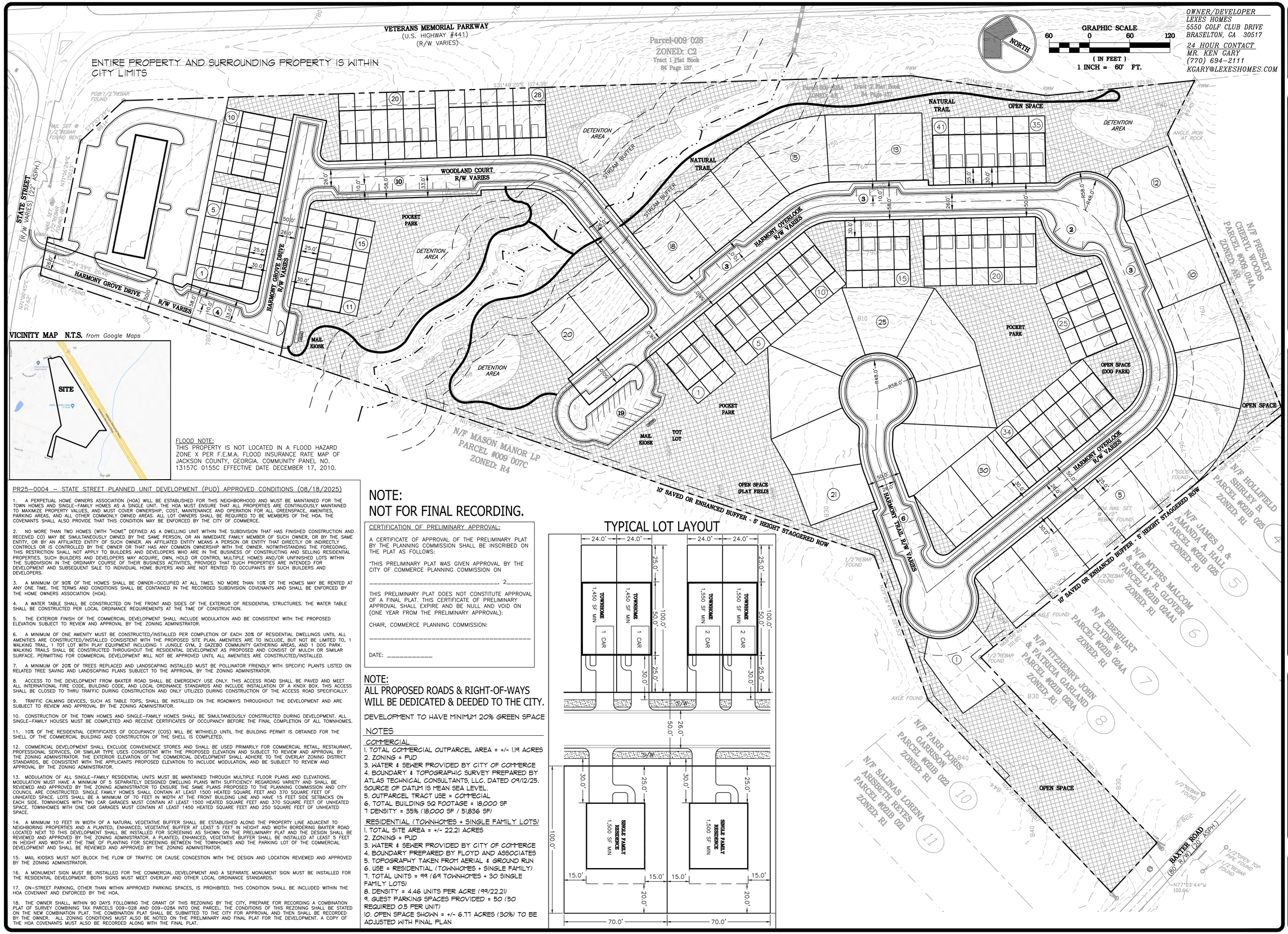
Signature of Property Owner — Date: 3-12-2026

KENNETH W. GARY
Type or Print Name

Notary Seal: BENJAMIN G BAKER HALL, NOTARY PUBLIC, JACKSON COUNTY, GEORGIA, MY COMMISSION EXPIRES JULY 06, 2028

Signature of Notary Public — Date: 3-12-2026

Planning & Development
545 Cedar Street, Commerce, GA 30529
(706) 335-3359 (706) 335-4200
www.commercega.gov



VICINITY MAP N.T.S. *from Google Maps*

FLOOD NOTE:
THIS PROPERTY IS NOT LOCATED IN A FLOOD HAZARD ZONE X PER F.E.M.A. FLOOD INSURANCE RATE MAP OF JACKSON COUNTY, GEORGIA. COMMUNITY PANEL NO. 13157C 0155C EFFECTIVE DATE DECEMBER 17, 2010.

PR25-0004 – STATE STREET PLANNED UNIT DEVELOPMENT (PUD) APPROVED CONDITIONS (08/18/2025)

1. A PERPETUAL HOME OWNERS ASSOCIATION (HOA) WILL BE ESTABLISHED FOR THIS NEIGHBORHOOD AND MUST BE MAINTAINED FOR THE TOWN HOMES AND SINGLE-FAMILY HOMES AS A SINGLE UNIT. THE HOA MUST ENSURE THAT ALL PROPERTIES ARE CONTINUOUSLY MAINTAINED TO MAXIMIZE PROPERTY VALUES, AND MUST COVER OWNERSHIP, COST, MAINTENANCE AND OPERATION FOR ALL GREENSPACE, AMENITIES, PARKING AREAS, AND ALL OTHER COMMONLY OWNED AREAS. ALL LOT OWNERS SHALL BE REQUIRED TO BE MEMBERS OF THE HOA. THE COVENANTS SHALL ALSO PROVIDE THAT THIS CONDITION MAY BE ENFORCED BY THE CITY OF COMMERCE.

2. NO MORE THAN TWO HOMES (WITH "HOME" DEFINED AS A DWELLING UNIT WITHIN THE SUBDIVISION THAT HAS FINISHED CONSTRUCTION AND RECEIVED CO) MAY BE SIMULTANEOUSLY OWNED BY THE SAME PERSON, OR AN IMMEDIATE FAMILY MEMBER OF SUCH OWNER, OR BY THE SAME ENTITY, OR BY AN AFFILIATED ENTITY OF SUCH OWNER. AN AFFILIATED ENTITY MEANS A PERSON OR ENTITY THAT DIRECTLY OR INDIRECTLY CONTROLS OR IS CONTROLLED BY THE OWNER OR THAT HAS ANY COMMON OWNERSHIP WITH THE OWNER. NOTWITHSTANDING THE FOREGOING, THIS RESTRICTION SHALL NOT APPLY TO BUILDERS AND DEVELOPERS WHO ARE IN THE BUSINESS OF CONSTRUCTING AND SELLING RESIDENTIAL PROPERTIES. SUCH BUILDERS AND DEVELOPERS MAY ACQUIRE, OWN, HOLD OR CONTROL MULTIPLE HOMES AND/OR UNFINISHED LOTS WITHIN THE SUBDIVISION IN THE ORDINARY COURSE OF THEIR BUSINESS ACTIVITIES, PROVIDED THAT SUCH PROPERTIES ARE INTENDED FOR DEVELOPMENT AND SUBSEQUENT SALE TO INDIVIDUAL HOME BUYERS AND ARE NOT RENTED TO OCCUPANTS BY SUCH BUILDERS AND DEVELOPERS.

3. A MINIMUM OF 90% OF THE HOMES SHALL BE OWNER-OCCUPIED AT ALL TIMES. NO MORE THAN 10% OF THE HOMES MAY BE RENTED AT ANY ONE TIME. THE TERMS AND CONDITIONS SHALL BE CONTAINED IN THE RECORDED SUBDIVISION COVENANTS AND SHALL BE ENFORCED BY THE HOME OWNERS ASSOCIATION (HOA).

4. A WATER TABLE SHALL BE CONSTRUCTED ON THE FRONT AND SIDES OF THE EXTERIOR OF RESIDENTIAL STRUCTURES. THE WATER TABLE SHALL BE CONSTRUCTED PER LOCAL ORDINANCE REQUIREMENTS AT THE TIME OF CONSTRUCTION.

5. THE EXTERIOR FINISH OF THE COMMERCIAL DEVELOPMENT SHALL INCLUDE MODULATION AND BE CONSISTENT WITH THE PROPOSED ELEVATION SUBJECT TO REVIEW AND APPROVAL BY THE ZONING ADMINISTRATOR.

6. A MINIMUM OF ONE AMENITY MUST BE CONSTRUCTED/INSTALLED PER COMPLETION OF EACH 30% OF RESIDENTIAL DWELLINGS UNTIL ALL AMENITIES ARE CONSTRUCTED/INSTALLED CONSISTENT WITH THE PROPOSED SITE PLAN. AMENITIES ARE TO INCLUDE, BUT NOT BE LIMITED TO, 1 WALKING TRAIL, 1 TOT LOT WITH PLAY EQUIPMENT INCLUDING 1 JUNGLE GYM, 2 GAZEBO COMMUNITY GATHERING AREAS, AND 1 DOG PARK. WALKING TRAILS SHALL BE CONSTRUCTED THROUGHOUT THE RESIDENTIAL DEVELOPMENT AS PROPOSED AND CONSIST OF MULCH OR SIMILAR SURFACE. PERMITTING FOR COMMERCIAL DEVELOPMENT WILL NOT BE APPROVED UNTIL ALL AMENITIES ARE CONSTRUCTED/INSTALLED.

7. A MINIMUM OF 20% OF TREES REPLACED AND LANDSCAPING INSTALLED MUST BE POLLINATOR FRIENDLY WITH SPECIFIC PLANTS LISTED ON RELATED TREE SAVING AND LANDSCAPING PLANS SUBJECT TO THE APPROVAL BY THE ZONING ADMINISTRATOR.

8. ACCESS TO THE DEVELOPMENT FROM BAXTER ROAD SHALL BE EMERGENCY USE ONLY. THIS ACCESS ROAD SHALL BE PAVED AND MEET ALL INTERNATIONAL FIRE CODE, BUILDING CODE, AND LOCAL ORDINANCE STANDARDS AND INCLUDE INSTALLATION OF A KNOX BOX. THIS ACCESS SHALL BE CLOSED TO THRU TRAFFIC DURING CONSTRUCTION AND ONLY UTILIZED DURING CONSTRUCTION FOR THE ACCESS ROAD SPECIFICALLY.

9. TRAFFIC CALMING DEVICES, SUCH AS TABLE TOPS, SHALL BE INSTALLED ON THE ROADWAYS THROUGHOUT THE DEVELOPMENT AND ARE SUBJECT TO REVIEW AND APPROVAL BY THE ZONING ADMINISTRATOR.

10. CONSTRUCTION OF THE TOWN HOMES AND SINGLE-FAMILY HOMES SHALL BE SIMULTANEOUSLY CONSTRUCTED DURING DEVELOPMENT. ALL SINGLE-FAMILY HOUSES MUST BE COMPLETED AND RECEIVE CERTIFICATES OF OCCUPANCY BEFORE THE FINAL COMPLETION OF ALL TOWNHOMES.

11. 10% OF THE RESIDENTIAL CERTIFICATES OF OCCUPANCY (COS) WILL BE WITHHELD UNTIL THE BUILDING PERMIT IS OBTAINED FOR THE SHELL OF THE COMMERCIAL BUILDING AND CONSTRUCTION OF THE SHELL IS COMPLETED.

12. COMMERCIAL DEVELOPMENT SHALL EXCLUDE CONVENIENCE STORES AND SHALL BE USED PRIMARILY FOR COMMERCIAL RETAIL, RESTAURANT, PROFESSIONAL SERVICES, OR SIMILAR TYPE USES CONSISTENT WITH THE PROPOSED ELEVATION AND SUBJECT TO REVIEW AND APPROVAL BY THE ZONING ADMINISTRATOR. THE EXTERIOR ELEVATION OF THE COMMERCIAL DEVELOPMENT SHALL ADHERE TO THE OVERLAY ZONING DISTRICT STANDARDS, BE CONSISTENT WITH THE APPLICANTS PROPOSED ELEVATION TO INCLUDE MODULATION, AND BE SUBJECT TO REVIEW AND APPROVAL BY THE ZONING ADMINISTRATOR.

13. MODULATION OF ALL SINGLE-FAMILY RESIDENTIAL UNITS MUST BE MAINTAINED THROUGH MULTIPLE FLOOR PLANS AND ELEVATIONS. MODULATION MUST HAVE A MINIMUM OF 5 SEPARATELY DESIGNED DWELLING PLANS WITH SUFFICIENCY REGARDING VARIETY AND SHALL BE REVIEWED AND APPROVED BY THE ZONING ADMINISTRATOR TO ENSURE THE SAME PLANS PROPOSED TO THE PLANNING COMMISSION AND CITY COUNCIL ARE CONSTRUCTED. SINGLE FAMILY HOMES SHALL CONTAIN AT LEAST 1500 HEATED SQUARE FEET AND 370 SQUARE FEET OF UNHEATED SPACE. LOTS SHALL BE A MINIMUM OF 70 FEET IN WIDTH AT THE FRONT BUILDING LINE AND HAVE 15 FEET SIDE SETBACKS ON EACH SIDE. TOWNHOMES WITH TWO CAR GARAGES MUST CONTAIN AT LEAST 1500 HEATED SQUARE FEET AND 370 SQUARE FEET OF UNHEATED SPACE. TOWNHOMES WITH ONE CAR GARAGES MUST CONTAIN AT LEAST 1450 HEATED SQUARE FEET AND 250 SQUARE FEET OF UNHEATED SPACE.

14. A MINIMUM 10 FEET IN WIDTH OF A NATURAL VEGETATIVE BUFFER SHALL BE ESTABLISHED ALONG THE PROPERTY LINE ADJACENT TO NEIGHBORING PROPERTIES AND A PLANTED, ENHANCED, VEGETATIVE BUFFER AT LEAST 5 FEET IN HEIGHT AND WIDTH BORDERING BAXTER ROAD LOCATED NEXT TO THIS DEVELOPMENT SHALL BE INSTALLED FOR SCREENING AS SHOWN ON THE PRELIMINARY PLAT AND THE DESIGN SHALL BE REVIEWED AND APPROVED BY THE ZONING ADMINISTRATOR. A PLANTED, ENHANCED, VEGETATIVE BUFFER SHALL BE INSTALLED AT LEAST 5 FEET IN HEIGHT AND WIDTH AT THE TIME OF PLANTING FOR SCREENING BETWEEN THE TOWNHOMES AND THE PARKING LOT OF THE COMMERCIAL DEVELOPMENT AND SHALL BE REVIEWED AND APPROVED BY THE ZONING ADMINISTRATOR.

15. MAIL KIOSKS MUST NOT BLOCK THE FLOW OF TRAFFIC OR CAUSE CONGESTION WITH THE DESIGN AND LOCATION REVIEWED AND APPROVED BY THE ZONING ADMINISTRATOR.

16. A MONUMENT SIGN MUST BE INSTALLED FOR THE COMMERCIAL DEVELOPMENT AND A SEPARATE MONUMENT SIGN MUST BE INSTALLED FOR THE RESIDENTIAL DEVELOPMENT. BOTH SIGNS MUST MEET OVERLAY AND OTHER LOCAL ORDINANCE STANDARDS.

17. ON-STREET PARKING, OTHER THAN WITHIN APPROVED PARKING SPACES, IS PROHIBITED. THIS CONDITION SHALL BE INCLUDED WITHIN THE HOA COVENANT AND ENFORCED BY THE HOA.

18. THE OWNER SHALL, WITHIN 90 DAYS FOLLOWING THE GRANT OF THIS REZONING BY THE CITY, PREPARE FOR RECORDING A COMBINATION PLAT OF SURVEY COMBINING TAX PARCELS 009-028 AND 009-028A INTO ONE PARCEL. THE CONDITIONS OF THIS REZONING SHALL BE STATED ON THE NEW COMBINATION PLAT. THE COMBINATION PLAT SHALL BE SUBMITTED TO THE CITY FOR APPROVAL AND THEN SHALL BE RECORDED BY THE OWNER. ALL ZONING CONDITIONS MUST ALSO BE NOTED ON THE PRELIMINARY AND FINAL PLAT FOR THE DEVELOPMENT. A COPY OF THE HOA COVENANTS MUST ALSO BE RECORDED ALONG WITH THE FINAL PLAT.

NOTE:
NOT FOR FINAL RECORDING.

CERTIFICATION OF PRELIMINARY APPROVAL:

A CERTIFICATE OF APPROVAL OF THE PRELIMINARY PLAT BY THE PLANNING COMMISSION SHALL BE INSCRIBED ON THE PLAT AS FOLLOWS:

"THIS PRELIMINARY PLAT WAS GIVEN APPROVAL BY THE CITY OF COMMERCE PLANNING COMMISSION ON

_____, 2_____.

THIS PRELIMINARY PLAT DOES NOT CONSTITUTE APPROVAL OF A FINAL PLAT. THIS CERTIFICATE OF PRELIMINARY APPROVAL SHALL EXPIRE AND BE NULL AND VOID ON (ONE YEAR FROM THE PRELIMINARY APPROVAL):

CHAIR, COMMERCE PLANNING COMMISSION:

_____

DATE: _____

NOTE:
ALL PROPOSED ROADS & RIGHT-OF-WAYS WILL BE DEDICATED & DEEDED TO THE CITY.

DEVELOPMENT TO HAVE MINIMUM 20% GREEN SPACE

NOTES

COMMERCIAL
1. TOTAL COMMERCIAL OUTPARCEL AREA = +/- 1.19 ACRES
2. ZONING = PUD
3. WATER & SEWER PROVIDED BY CITY OF COMMERCE
4. BOUNDARY & TOPOGRAPHIC SURVEY PREPARED BY ATLAS TECHNICAL CONSULTANTS, LLC. DATED 09/12/25. SOURCE OF DATUM IS MEAN SEA LEVEL.
5. OUTPARCEL TRACT USE = COMMECIAL
6. TOTAL BUILDING SQ FOOTAGE = 18,000 SF
7. DENSITY = 35% (18,000 SF / 51,836 SF)

RESIDENTIAL (TOWNHOMES + SINGLE FAMILY LOTS)
1. TOTAL SITE AREA = +/- 22.21 ACRES
2. ZONING = PUD
3. WATER & SEWER PROVIDED BY CITY OF COMMERCE
4. BOUNDARY PREPARED BY FLOYD AND ASSOCIATES
5. TOPOGRAPHY TAKEN FROM AERIAL & GROUND RUN
6. USE = RESIDENTIAL (TOWNHOMES + SINGLE FAMILY)
7. TOTAL UNITS = 99 (69 TOWNHOMES + 30 SINGLE FAMILY LOTS)
8. DENSITY = 4.46 UNITS PER ACRE (99/22.21)
9. GUEST PARKING SPACES PROVIDED = 50 (50 REQUIRED 0.5 PER UNIT)
10. OPEN SPACE SHOWN = +/- 6.77 ACRES (30%) TO BE ADJUSTED WITH FINAL PLAN

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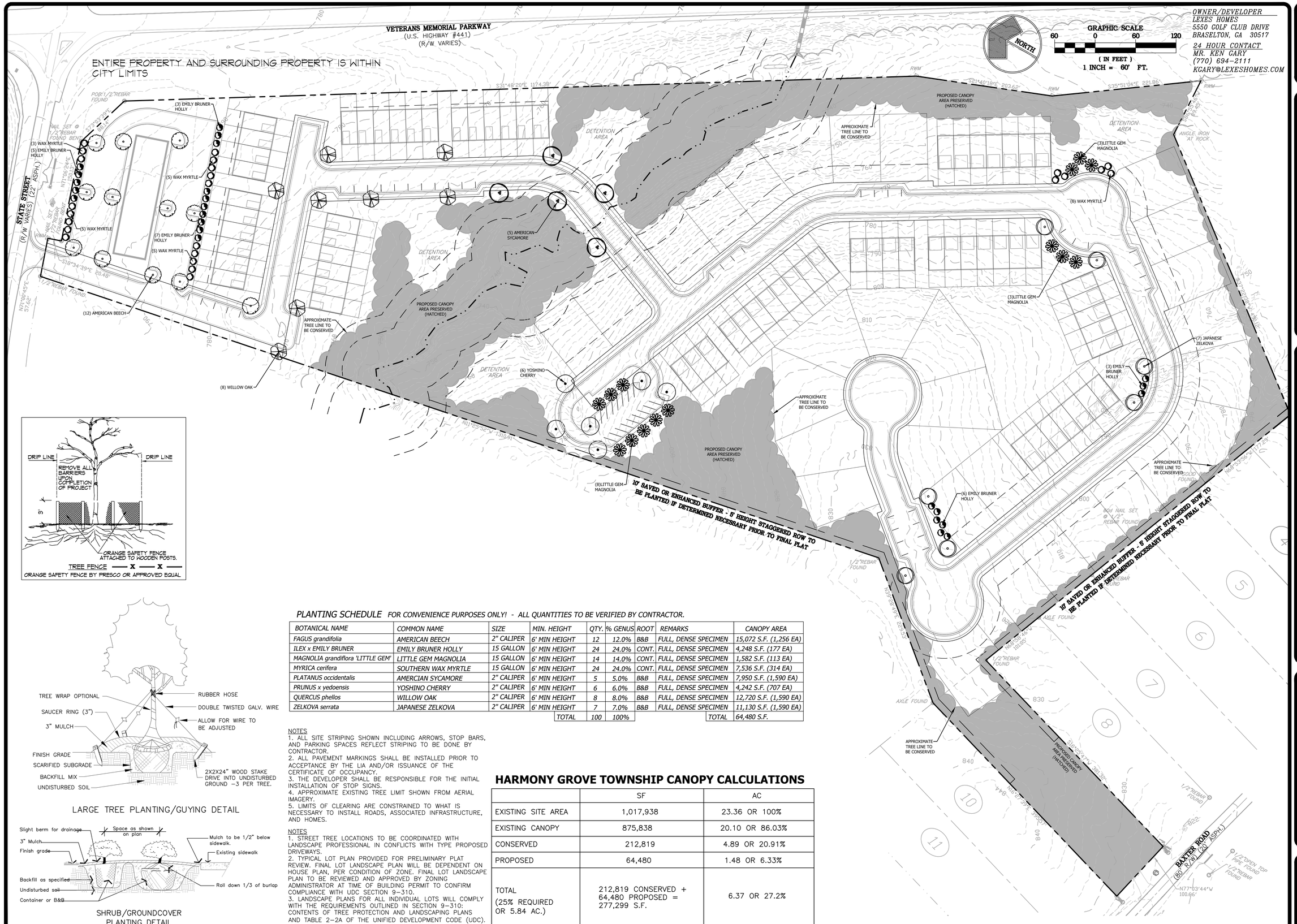
PRELIMINARY PLAT
FOR
HARMONY GROVE TOWNSHIP
PROPOSED RESIDENTIAL & COMMERCIAL PUD
G.M.D. 255 – 1134 STATE STREET
LOCATED IN
CITY OF COMMERCE, JACKSON COUNTY, GEORGIA

NO.	DATE	REVISIONS	DESCRIPTION
1	05/06/26		REVISIONS PER PC MEETING

DATE: 03/12/26
DRAWN BY: BHD
JOB NO.: 22-110

SHEET 1 OF 2



LARGE TREE PLANTING/GUYING DETAIL

SHRUB/GROUNDCOVER PLANTING DETAIL

PLANTING SCHEDULE *FOR CONVENIENCE PURPOSES ONLY! - ALL QUANTITIES TO BE VERIFIED BY CONTRACTOR.*

BOTANICAL NAME	COMMON NAME	SIZE	MIN. HEIGHT	QTY.	% GENUS	ROOT	REMARKS	CANOPY AREA
FAGUS grandifolia	AMERICAN BEECH	2" CALIPER	6' MIN HEIGHT	12	12.0%	B&B	FULL, DENSE SPECIMEN	15,072 S.F. (1,256 EA)
ILEX x EMILY BRUNER	EMILY BRUNER HOLLY	15 GALLON	6' MIN HEIGHT	24	24.0%	CONT.	FULL, DENSE SPECIMEN	4,248 S.F. (177 EA)
MAGNOLIA grandiflora 'LITTLE GEM'	LITTLE GEM MAGNOLIA	15 GALLON	6' MIN HEIGHT	14	14.0%	CONT.	FULL, DENSE SPECIMEN	1,582 S.F. (113 EA)
MYRICA cerifera	SOUTHERN WAX MYRTLE	15 GALLON	6' MIN HEIGHT	24	24.0%	CONT.	FULL, DENSE SPECIMEN	7,536 S.F. (314 EA)
PLATANUS occidentalis	AMERCIAN SYCAMORE	2" CALIPER	6' MIN HEIGHT	5	5.0%	B&B	FULL, DENSE SPECIMEN	7,950 S.F. (1,590 EA)
PRUNUS x yedoensis	YOSHINO CHERRY	2" CALIPER	6' MIN HEIGHT	6	6.0%	B&B	FULL, DENSE SPECIMEN	4,242 S.F. (707 EA)
QUERCUS phellos	WILLOW OAK	2" CALIPER	6' MIN HEIGHT	8	8.0%	B&B	FULL, DENSE SPECIMEN	12,720 S.F. (1,590 EA)
ZELKOVA serrata	JAPANESE ZELKOVA	2" CALIPER	6' MIN HEIGHT	7	7.0%	B&B	FULL, DENSE SPECIMEN	11,130 S.F. (1,590 EA)
			TOTAL	100	100%		TOTAL	64,480 S.F.

NOTES
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DATE: 03/12/26
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SHEET 2 OF 2

CITY OF COMMERCE

City Council Agenda

Subject: **PSP26-0002: Preliminary Plat –** Plat approval for 36 lots: Barry D. Lord, applicant, on approximately +/- 13.854 acres located off Mt Olive Rd and Charleston Avenue, further identified as Map/Parcel 020 009X.

Date: May 11, 2026

Budget Impact: **Category:**

Funding Source:

City Council Action Requested On:

Department: Planning and Development

Staff recommends

Matthew Hailey

Matthew Hailey, Assistant City Manager

nwp3 approved dwg (1).pdf
Northwood Phase 3 Prelim. App.pdf
Northwood Phase 3 Signed Plans.pdf

PRELIMINARY PLAT FOR:

NORTHWOOD SUBDIVISION PHASE 3

CHARLESTON AVENUE AND WINTERGREEN PLACE

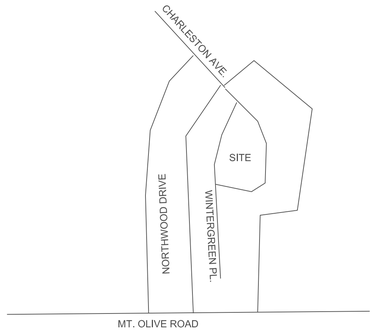
Project Team:
Owner - Name: PONDER DEVELOPMENT
Address: P.O. BOX 198
DEWEY ROSE , GEORGIA
30634
Contact Person:
SCOTT NEAL
Tel. #:404-405-8011

SURVEYOR: INGRAM , LORD AND ASSOC.
437 SAM BROWN BLVD.
COMMERCE , GEORGIA 30529

Contact Person: BARRY D. LORD
Tel. #: 706-335-9069

DATE: 6-22-2021
REVISED: 3-10-2026

VICINITY MAP



SITE

PRIMARY PERMITEE
NAME: SCOTT NEAL
ADDRESS: P.O. BOX 198
DEWEY ROSE ,GA 30634
PHONE #:404-405-8011

24 HOUR EROSION CONTROL CONTACT:
NAME: SCOTT NEAL
ADDRESS:P.O. BOX 198
DEWEY ROSE , GA 30634
PHONE #:404-405-8011

SITE DATA:

ZONING = R2
TOTAL SITE : 13.854 ACRES
TOTAL DISTURBED = 13.602 ACRES

EXISTING LAND USE: RESIDENTIAL LOT UNIMPROVED
FUTURE LAND USE: RESIDENTIAL LOT IMPROVED

EMAIL: sneal@onebox.com

CO : LAT 34.1351^
CO : LONG. -83.2805^

ENGINEER CERTIFICATION STATEMENTS:
"I CERTIFY THAT THE PERMITTEE'S EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN PROVIDES FOR AN APPROPRIATE AND COMPREHENSIVE SYSTEM OF BEST MANAGEMENT PRACTICES REQUIRED BY THE GEORGIA WATER QUALITY CONTROL ACT AND THE DOCUMENT "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA" (MANUAL) PUBLISHED BY THE GEORGIA SOIL AND WATER CONSERVATION COMMISSION AS OF JANUARY 1 OF THE YEAR IN WHICH THE LAND-DISTURBING ACTIVITY WAS PERMITTED, PROVIDES FOR THE SAMPLING OF THE RECEIVING WATER(S) OR THE SAMPLING OF THE STORM WATER OUTFALLS AND THAT THE DESIGNED SYSTEM OF BEST MANAGEMENT PRACTICES AND SAMPLING METHODS IS EXPECTED TO MEET THE REQUIREMENTS CONTAINED IN THE GENERAL NPDES PERMIT NO. GAR 100003."

"I CERTIFY UNDER PENALTY OF LAW THAT THIS PLAN WAS PREPARED AFTER A SITE VISIT TO THE LOCATIONS DESCRIBED HEREIN BY MYSELF OR MY AUTHORIZED AGENT, UNDER MY SUPERVISION."

3-10-2026

GSWCC LEVEL II DESIGN PROFESSIONAL CERTIFICATION # — DATE

GEORGIA SOIL AND WATER CONSERVATION COMMISSION

BARRY D. LORD
Level II Certified Design Professional
CERTIFICATION NUMBER 64379
ISSUED: 7-28-2011 EXPIRES: 8-11-2026

STANDARD EROSION CONTROL NOTES:

THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO, OR CONCURRENT WITH, LAND DISTURBING ACTIVITIES.

EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE.

ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 14 DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING.

PRIOR TO LAND-DISTURBING ACTIVITIES, THE CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION MEETING WITH THE AREA EROSION CONTROL INSPECTOR. CALL 706-335-9069 TO CONTACT THE INSPECTOR.

ANY DISTURBED AREA LEFT IDLE FOR A PERIOD GREATER THAN 14 DAYS SHALL BE STABILIZED WITH TEMPORARY SEEDING; DISTURBED AREAS IDLE 30 DAYS SHALL BE STABILIZED WITH PERMANENT VEGETATION.

EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSPECTED AT LEAST WEEKLY, AFTER EACH RAIN, AND REPAIRED AS NECESSARY.

ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED IF DETERMINED NECESSARY BY ON-SITE INSPECTION.

SILT FENCE SHALL MEET THE REQUIREMENTS OF SECTION 171 - TYPE C TEMPORARY SILT FENCE, OF THE GEORGIA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS (QUALIFIED PRODUCTS LIST #36) AND BE WIRE REINFORCED.

A HAUL ROUTE PERMIT IS REQUIRED WHEN MORE THAN 500 CUBIC YARDS OF HAULED VOLUME TO OR FROM THE SITE. PLANS MUST INCLUDE A STATEMENT INDICATING WHETHER OR NOT A HAUL ROUTE PERMIT IS REQUIRED.

"THIS PRELIMINARY PLAT WAS GIVEN APPROVAL BY THE CITY OF COMMERCE PLANNING COMMISSION ON

_____ 2026

THIS PRELIMINARY PLAT DOES NOT CONSTITUTE APPROVAL OF A FINAL PLAT. THIS CERTIFICATE OF PRELIMINARY APPROVAL SHALL EXPIRE AND BE NULL AND VOID ON (ONE YEAR FROM THE PRELIMINARY APPROVAL)

CHAIR, COMMERCE PLANNING COMMISSION:

_____

DATE:_____

WATER AND SEWAGE DISPOSAL PROVIDED BY THE CITY OF COMMERCE

GSWCC LEVEL II CERTIFICATION # 64379

NORTHWOOD
PHASE 3

DATE: 6-22-2021

6-22-2021		INTIAL DATE OF PLANS
3-10-2026		REVISIONS

S-1

NOT FOR RECORDING

INITIAL E&S PLAN
NORTHWOODS PHASE 3

13.854 ACRES
GMD NO.255
JACKSON COUNTY , GEORGIA
CITY OF COMMERCE
SCALE: 1"=60'
DATE: 6-22-2021

**** LEGEND ****

IPF = IRON PIN FOUND
IPS = IRON PIN SET
CMF = CONCRETE MONUMENT FOUND
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BL = BUILDING LINE
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CB = CATCH BASIN
JB = JUNCTION BOX
DI = DROP INLET
HW = HEAD WALL
FH = FIRE HYDRANT
RCP = REINFORCED CONCRETE PIPE

NARRATIVE:

THE LOTS ARE LOCATED NORTHWOOD PHASE 3.
THE PLAN IS TO CONSTRUCT A SINGLE FAMILY RESIDENCE ON THE LOT.
THE LOT IS WOODED WITH ROLLING TERRAIN.
RUNOFF WHEN STABILIZED FROM THIS LOT SHOULD NOT ADVERSLEY AFFECT THE SURROUNDING AREA.

INTIAL PHASE EROSION SEDIMENT CONTROL SCHEDULE.

1) CONDUCT A PRECONSTRUCTION MEETING WITH EROSION CONTROL INSPECTOR, 706-367-5908 , STAKE CLEARING LIMITS , BUFFERS , WETLANDS , ETC.
2) INSTALL CONSTRUCTION EXIT AND SILT FENCE (Sd1)
3) CLEAR TREES , REMOVE ALL STUMPS , AND STRIP TOP SOIL.
4) TEMPORARY GRASSING / MULCHING Ds1 AND Ds2 (@ 14 DAY INTERVALS)

2. Level II Certification: Barry D. Lord
#64379
Expires: 8-11-2023

3. Disturbed area does not exceed 50 acres.

4. 24-hour local contact: SCOTT NEAL
404-405-8011

5. Contact information for permittee: SCOTT NEAL
P.O. BOX 198
DEWEY ROASE , GEORGIA 30634
404-405-8011

6. Total acerage of project or phase under construction: 13.854 ACRES
Disturbed acerage of project or phase under construction: 13.602ACRES

7. GPS location of construction exit of site: LAT= 34.1351
LONG= -83.2805

8. Initial Plan Date: 6-22-2021
Revised Plan Date:

9. Description of construction activity: Proposed building a SINGLE FAMILY RESIDENCE ON EACH LOT.

10. Vicinity map of area:ON COVER SHEET

11. Receiving waters and sensitive adjacent areas: Unnamed Tributary of BEAVERDAM CREEK.

12. "I certify under penalty of law that this Plan was prepared after a site visit to the locations described herein by myself or my authorized agent, under my supervision."

9-21-2021

13. "I certify that the permittee's Erosion, Sedimentation and Pollution Control Plan provides for an appropriate and comprehensive system of best management practices required by the Georgia Water Quality Control Act and the document "Manual for Erosion and Sediment Control in Georgia: (Manual) published by the Georgia Soil and Water Conservation Commission as of January 1 of the year in which the land-disturbing activity was permitted, provides for the sampling of the receiving water(s) or the sampling of the stormwater outfalls and that the designed system of best management practices and sampling methods is expected to meet the requirements contained in the General NPDES Permit No. GAR100003."

9-21-2021

14. "The design professional who prepared the ES&PC Plan is to inspect the installation of the initial sediment storage requirements and and perimeter control BMPs within 7 days after installation."

15. "Non-exempt activites shall not be conducted within the 25 or 50-foot undisturbed stream buffers as measured from the point of wrested vegetation or within the coastal marshland buffer as measured from the Jurisdictional Determination Line without first aquiring the necessary variances and permits."

16. No buffer encroachments or buffer variance needed.

17. "Amendments/revisions to the ES&PC Plan which have a significant effect on BMPs with a hydraulic component must be certified by the design professional."

18. "Waste materials shall not be discharged to waters of the State, except as authorized by a section 404 permit."

19. "The escape of sediment from the site shall be prevented by the installation of erosion and sediment control measures and practices prior to land disturbing activities."

20. "Erosion control measures will be maintained at all times. If full implementation of the approved Plan does not provide for effective erosion control, additional erosion and sediment control measures shall be implemented to control or treat the sediment source."

21. "Any disturbed area left exposed for a period greater than 14 days shall be stabilized with mulch or temporary seeding."

GEORGIA REGISTERED NO. 3644 LAND SURVEYOR BARRY D. LORD

9-21-2021

27) PLASTIC SHEETING SHOULD BE USED TO COVER ALL BUILDING MATERIALS , BUILDING PRODUCTS , CONSTRUCTION WASTE , TRASH , LANDSCAPE MATERIALS , FERTILIZERS, PESTICIDES, HERBICIDES, DETERGENTS , SANITARY WASTE, IN ORDER TO MINIMIZE EXPOSURE TO PERCIPITATION AND TO STORMWATER.

28) ALL FRONT YARDS AND SIDE YARDS WILL BE STABILIZED WITH SOD TO HELP CONTROL POLLUTANTS AFTER CONSTRUCTION IS COMPLETED. ALL STORM WATER FROM SITE IS DIRECTED INTO A STORM MANAGEMENT EMP .

CALL BEFORE YOU DIG
UTILITIES PROTECTION CENTER
1-800-282-7411
GEORGIA 811

NO CREEKS WITHIN 200' OF SITE
NO WETLANDS WITHIN 200' OF SITE
WASHOUT OF DRUM ON CONSTRUCTION SITE IS PROHIBITED
24 HOUR SOIL EROSION CONTROL CONTACT: SCOTT NEAL 404-405-8011
GSWCC CERTIFICATION # 64379 EXPIRES 8-11-2023

60 0 60 120 180
GRAPHIC SCALE - FEET

Sd1 TYP.
Sd1 S
TYPE C
48" POST
36" FABRIC
30" EXPOSED
6" TRENCHED

BASIN C BYPASS
1.1 AC TO Sd1
590 LF Sd1
1.1/5.9 = 0.19 AC PER 100 LF

BASIN C
2.1 AC TO Sd1
995 LF Sd1
2.1/9.95 = 0.21 AC PER 100 LF

BASIN A
3.3 AC TO Sd4-C

BASIN B
6.7 AC TO Sd3

BASIN D
0.6 AC TO Sd1
375 LF Sd1
0.6/3.75 = 0.16 AC PER 100 LF

Sd3 BOTTOM ELEV 860
TOP ELEV 866
CLEANOUT ELEV 861.1
SEDIMENT ELEV 862.8
BOTTOM 84'x40'

Sd4-C BOTTOM ELEV 856
TOP BERM 861.5
CLEANOUT ELEV 856.9
SEDIMENT ELEV 858.5
SPILLWAY ELEV 860.0
BOTTOM 64'x30'

PER HYDRO
BASIN B
TOTAL AREA 6.69 ACRES

PER HYDRO
BASIN A
3.30 ACRES

BASIN C
28.52 AC.

BASIN D
6.75AC

ACTIVITY	MONTH 1	MONTH 2	MONTH 3	MONTH 4	MONTH 5	MONTH 6
EROSION CONTROL INSTALL.						
EROSION CONTROL MAINT.						
CLEARING AND GRUBBING						
ROUGH GRADING						
TEMP. GRASSING						
FINAL GRASSING						
FINAL LANDSCAPING						
REMOVAL OF E&S MEASURES						

INGRAM,LORD & ASSOCIATES
LAND SURVEYING AND PLANNING
437 SAM BROWN BLVD.
COMMERCE , GEORGIA 30529
706-335-9069

NW3

INTERMEDIATE E&S PLAN
NORTHWOODS PHASE 3

13.854 ACRES
GMD NO.255
JACKSON COUNTY , GEORGIA
CITY OF COMMERCE
SCALE: 1"=60'
DATE: 6-22-2021
Revision 1: 9-21-2021

NARRATIVE:

THE LOTS ARE LOCATED NORTHWOOD PHASE 3.
THE PLAN IS TO CONSTRUCT A SINGLE FAMILY RESIDENCE ON THE LOT.
THE LOT IS WOODED WITH ROLLING TERRAIN.
RUNOFF WHEN STABILIZED FROM THIS LOT SHOULD NOT ADVERSLEY AFFECT THE SURROUNDING AREA.

INTERMEDIATE PHASE EROSION CONTROL SCHEDULE:

1) BEGIN MASS GRADING OF SITE
2) CONSTRUCT ANY RETAINING WALLS
3) INSTALL UTILITIES
4) MAINTAIN TEMPORARY GRASSING @14DAY INTERVALS , SILT FENCE AND CONSTRUCTION EXIT.

SEDIMENT STORAGE VOLUME MUST BE IN PLACE PRIOR TO AND DURING ALL LAND DISTURBANCE ACTIVITIES UNTIL FINAL STABILIZATION OF THE SITE HAS BEEN ACHIEVED. FINAL STABILIZATION REFERS TO SOIL DISTURBANCE ACTIVITIES BEING COMPLETE.

SOIL SERIES: CfC2 CECIL SOILS
PuD2 PACOLET SOILS
MiD2 MADISON SOILS

** LEGEND **

IPF = IRON PIN FOUND
IPS = IRON PIN SET
CMF = CONCRETE MONUMENT FOUND
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HW = HEAD WALL
FH = FIRE HYDRANT
RCP = REINFORCED CONCRETE PIPE

Sd1 TYP.
Sd1 S
TYPE C
48" POST
36" FABRIC
30" EXPOSED
6" TRENCHED

MAGNETIC NORTH

2. Level II Certification: Barry D. Lord #64379 Expires: 8-11-2023
3. Disturbed area does not exceed 50 acres.
4. 24-hour local contact: SCOTT NEAL 404-405-8011
5. Contact information for permittee: SCOTT NEAL P.O. BOX 198 DEWEY ROASE , GEORGIA 30634 404-405-8011
6. Total acreage of project or phase under construction: 13.854 ACRES Disturbed acreage of project or phase under construction: 13.602ACRES
7. GPS location of construction exit of site: LAT= 34.1351 LONG= -83.2805
8. Initial Plan Date: 6-22-2021 Revised Plan Date:
9. Description of construction activity: Proposed building a SINGLE FAMILY RESIDENCE ON EACH LOT.
10. Vicinity map of area:ON COVER SHEET
11. Receiving waters and sensitive adjacent areas: Unnamed Tributary of BEAVERDAM CREEK.
12. "I certify under penalty of law that this Plan was prepared after a site visit to the locations described herein by myself or my authorized agent, under my supervision."

9-21-2021

13. "I certify that the permittee's Erosion, Sedimentation and Pollution Control Plan provides for an appropriate and comprehensive system of best management practices required by the Georgia Water Quality Control Act and the document "Manual for Erosion and Sediment Control in Georgia: (Manual) published by the Georgia Soil and Water Conservation Commission as of January 1 of the year in which the land-disturbing activity was permitted, provides for the sampling of the receiving water(s) or the sampling of the stormwater outfalls and that the designed system of best management practices and sampling methods is expected to meet the requirements contained in the General NPDES Permit No. GAR100003."

9-21-2021

14. "The design professional who prepared the ES&PC Plan is to inspect the installation of the initial sediment storage requirements and and perimeter control BMPs within 7 days after installation."
15. "Non-exempt activities shall not be conducted within the 25 or 50-foot undisturbed stream buffers as measured from the point of wrested vegetation or within the coastal marshland buffer as measured from the Jurisdictional Determination Line without first aquiring the necessary variances and permits."
16. No buffer encroachments or buffer variance needed.
17. "Amendments/revisions to the ES&PC Plan which have a significant effect on BMPs with a hydraulic component must be certified by the design professional."
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GEORGIA REGISTERED No. 3041 LAND SURVEYOR BARRY D. LORD

9-21-2021

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GSWCC CERTIFICATION # 64379 EXPIRES 8-11-2023

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60 0 60 120 180
GRAPHIC SCALE - FEET

GSWCC Georgia Soil and Water Conservation Commission APPROVED

ACTIVITY	MONTH 1	MONTH 2	MONTH 3	MONTH 4	MONTH 5	MONTH 6
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EROSION CONTROL MAINT.						
CLEARING AND GRUBBING						
ROUGH GRADING						
TEMP. GRASSING						
FINAL GRASSING						
FINAL LANDSCAPING						
REMOVAL OF E&S MEASURES						

INGRAM, LORD & ASSOCIATES
LAND SURVEYING AND PLANNING
437 SAM BROWN BLVD.
COMMERCE , GEORGIA 30529
706-335-9069

NW3

FINAL E&S PLAN FOR:
NORTHWOODS PHASE 3

13.854 ACRES
GMD NO.255
JACKSON COUNTY , GEORGIA
CITY OF COMMERCE
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GEORGIA REGISTERED No. 3641 LAND SURVEYOR BARRY D. LORD
9-21-2021

27) PLASTIC SHEETING SHOULD BE USED TO COVER ALL BUILDING MATERIALS , BUILDING PRODUCTS , CONSTRUCTION WASTE , TRASH , LANDSCAPE MATERIALS , FERTILIZERS, PESTICIDES, HERBICIDES, DETERGENTS , SANITARY WASTE, IN ORDER TO MINIMIZE EXPOSURE TO PERCIPITATION AND TO STORMWATER.

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60 0 60 120 180
GRAPHIC SCALE - FEET

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EROSION CONTROL MAINT.						
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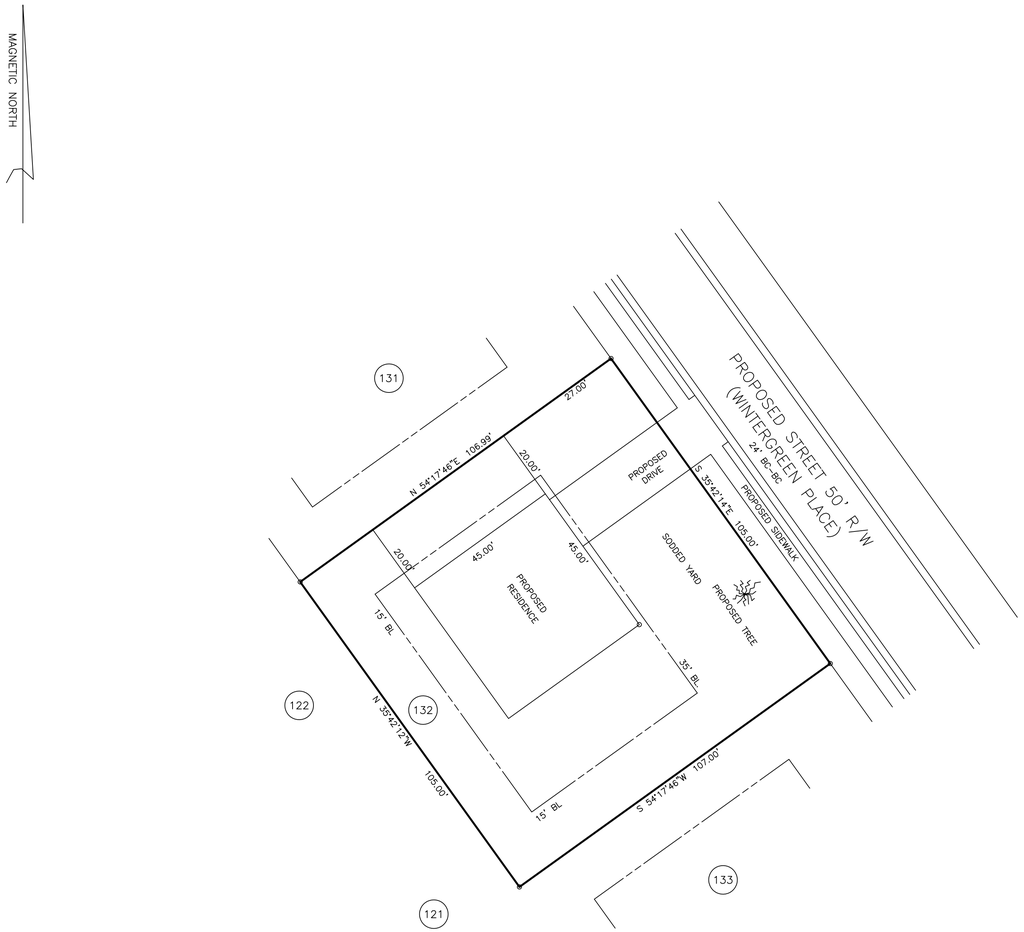
ROUGH GRADING						
TEMP. GRASSING						
FINAL GRASSING						
FINAL LANDSCAPING						
REMOVAL OF E&S MEASURES						

GSWCC Georgia Soil & Water Conservation Commission APPROVED

INGRAM,LORD & ASSOCIATES
LAND SURVEYING AND PLANNING
437 SAM BROWN BLVD.
COMMERCE , GEORGIA 30529
706-335-9069

NW3



TYPICAL LOT LAYOUT FOR
SIDEWALK AND LANDSCAPING
NORTHWOODS PHASE 3

GEORGIA REGISTERED No. 2641 LAND SURVEYOR BARRY D. LORD

20 0 20 40 60
GRAPHIC SCALE – FEET

APPROVED TREE LIST FROM UDC

Article 9 Buffers, Tree Protection, and Landscaping

Elm, Chinese	Ulmus parvifolia	Overstory	X			X				
Elm, Winged	Ulmas alata	Overstory	X	X		X	X			
Hickory	Carya spp.	Overstory	X							
Honeylocust (seedless)	Gleditsia triacanthos	Overstory	X							
Magnolia, Southern	Magnolia grandiflora	Overstory	X					X	X	
Maple, Sugar	Acer saccharum	Overstory	X	X		X			X	
Oak, Black	Quercus velutina	Overstory	X	X		X				
Oak, Chestnut	Quercus prinus	Overstory	X	X		X	X			
Oak, Laurel	Quercus hemisphaerica	Overstory	X	X		X	X			
Oak, Northern Red	Quercus rubra	Overstory	X	X		X				
Oak, Nuttal	Quercus nuttalli	Overstory	X	X		X	X			
Oak, Overcup	Quercus lyrata	Overstory	X	X		X	X			
Oak, Post	Quercus stellata	Overstory	X	X		X	X			
Oak, Scarlet	Quercus coccinea	Overstory	X	X		X	X			
Oak, Shumard	Quercus shumardii	Overstory	X	X		X	X			
Oak, Swamp White	Quercus bicolor	Overstory	X	X		X	X			
Oak, Water	Quercus nigra	Overstory	X	X		X				
Oak, White	Quercus alba	Overstory	X	X		X	X			
Oak, Willow	Quercus phellos	Overstory	X	X		X	X			
Pecan	Carya illinoesis	Overstory	X	X		X				
Poplar, Tulip	Liriodendron tulipifera	Overstory	X						X	
Sweetgum (fruitless)	Liquidambar styraciflua 'Rotundiloba'	Overstory	X				X			

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Article 9 Buffers, Tree Protection, and Landscaping

Sycamore, American	Platanus occidentalis	Overstory	X							
Walnut, Black	Juglans nigra	Overstory	X						X	
MIDSTORY										
Birch, River (std.)	Betula nigra	Midstory	X	X		X			X	X
Cherrylaurel, Carolina	Prunus caroliniana	Midstory				X		X	X	X
Hophornbeam, American	Ostrya virginiana	Midstory	X				X		X	
Hornbeam, American	Carpinus caroliniana	Midstory	X			X	X	X		X
Locust, Black (seedless)	Robinia pseudoacacia	Midstory	X	X					X	
Magnolia, Southern "Little Gem"	Magnolia grandiflora 'Little Gem'	Midstory		X		X	X		X	X
Magnolia, Sweetbay	Magnolia virginiana	Midstory	X			X			X	X
Maple, Red (var.)	Acer rubrum	Midstory	X	X		X	X		X	X
Maple, Southern Sugar	Acer barbatum	Midstory	X	X		X	X	X	X	X
Pine, Virginia	Pinus virginiana	Midstory							X	
Redcedar, Eastern	Juniperus virginiana	Midstory	X			X			X	
Sassafras	Sassafras albidum	Midstory	X			X				
Silverbell, Carolina	Halesia carolina	Midstory	X							
Sourwood	Oxydendrum arboreum	Midstory	X			X				
UNDERSTORY & SMALL										
Hawthorn, Washington	Crataegus phaenopyrum	Understory		X		X		X			X
Redbud, Eastern	Cercis canadenssis	Understory	X	X		X	X		X		X
Alder, Hazel	Alnus, serrulate	Small	X						X	X
Holly, American	Ilex opaca	Small				X	X		X	

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INGRAM, LORD & ASSOCIATES
LAND SURVEYING AND PLANNING
437 SAM BROWN BLVD.
COMMERCE , GEORGIA 30529
706-335-9069

NORTHWOODS PHASE 3

13.854 ACRES
GMD NO.255
JACKSON COUNTY , GEORGIA
CITY OF COMMERCE
SCALE: 1"=60'
DATE: 4-08-2021

TREE PROTECTION PLAN

FOR:

PONDER DEVELOPMENT

•• LEGEND ••

IPF = IRON PIN FOUND
IPS = IRON PIN SET
CMF = CONCRETE MONUMENT FOUND
R\W = RIGHT OF WAY
BL = BUILDING LINE
LLL = LAND LOT LINE
LL = LAND LOT
N/F = NOW OR FORMERLY
NTS = NOT TO SCALE
CL = CENTER LINE
BM = BENCH MARK
TBM = TEMPORARY BENCH MARK
PC = POINT OF CURVATURE
PI = POINT OF INTERSECTION
PT = POINT OF TANGENCY
R = RADIUS
CH = CHORD
IE = INVERT ELEVATION
-T- = TELEPHONE LINE
-W- = WATER LINE
-G- = GAS LINE
-S- = SEWER LINE
-P- = POWER LINE
MH = MAN HOLE
SSE = SANITARY SEWER EASEMENT
DE = DRAINAGE EASEMENT
CE = CONSTRUCTION EASEMENT
CB = CATCH BASIN
JB = JUNCTION BOX
DI = DROP INLET
HW = HEAD WALL
FH = FIRE HYDRANT
RCP = REINFORCED CONCRETE PIPE

TYPICAL LOT
TREE CANOPY
PROTECTION AREA

16212 sf TREE CANOPY PROTECTION AREA

47995 sf TREE CANOPY PROTECTION AREA

TYPICAL LOT
TREE CANOPY
PROTECTION AREA

24155 sf EXISTING TREE
CANOPY PROTECTION AREA

40910 sf EXISTING TREE CANOPY PROTECTION AREA

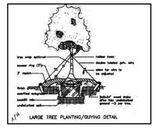
TYPICAL LOT
TREE CANOPY
PROTECTION AREA

CHARLESTON AVE
NORTHWOOD DRIVE
WINTERGREEN PLACE
MOUNT OLIVE ROAD
80' R/W
CHARLESTON AVE.

POND LOT

N/F LOCKMART 020 009L
N/F SPICER 020 009S
N/F MAKUNE 020 009J
N/F ELROD 020 009J
N/F KRM PROPERTY LLC 020 009K
N/F WILKENS 020 019C

MAGNETIC NORTH







TREE PROTECTION NOTES

TREE PROTECTION TAPE MUST BE INSTALLED AND INSPECTED PRIOR TO OR CONCURRENT WITH ANY CLEARING, GRUBBING OR GRADING. CALL FOR DEPARTMENT OF PLANNING AND DEVELOPMENT.

THE DENSITY REQUIREMENTS SHOWN ON THE TREE PLAN(S) MUST BE VERIFIED PRIOR TO THE ISSUANCE OF THE CERTIFICATE OF OCCUPANCY OR ACCEPTANCE OF THE FINAL PLAT.

WITH THE EXCEPTION OF SINGLE FAMILY RESIDENTIAL DEVELOPMENTS, MAINTENANCE INSPECTION FOR TREES WILL BE PERFORMED AFTER ONE FULL GROWING SEASON FROM THE DATE OF THE FINAL SITE INSPECTION. PROJECT OWNERS AT THE TIME OF THE MAINTENANCE INSPECTION ARE RESPONSIBLE FOR ORDINANCE COMPLIANCE.

1. ALL TREE PROTECTION AREAS TO BE PROTECTED FROM SEDIMENTATION.
2. ALL TREE PROTECTION FENCING TO BE INSPECTION DAILY AND REPLACED OR REPAIRED AS NEEDED.
3. ALL TREE PROTECTION DEVICES ARE TO E INSTALLED PRIOR TO START OF LAND DISTRUBANCE AND MAINTAINED UNTIL FINAL LANDSCAPING IS INSTALLED.
4. NO PARKING, STORAGE, OR OTHER CONSTRUCTION SITE ACTIVITIES ARE TO OCCUR WITHIN TREE PROTECTION AREAS.
5. ALL REQUIRED VEGETATION MUST BE MAINTAINED FOR ONE YEAR AFTER THE DATE OF ISSUANCE OF THE CERTIFICATE OF OCCUPANCY.
6. TREE PLAN T2 FOR EXISTING AERIAL PHOTO

TOTAL MINIMUM TREE CANOPY COVERAGE BY LANDUSE 35% 4.85 ACRE
PROPOSED EXISTING TREE CANOPY AREA 2.97 ACRES
PROPOSED TREE CANOPY AREA TO BE PLANTED 1.88 ACRES (37 LOTS) AVG 2213 SF/LOT

GEORGIA REGISTERED No. 2641 LAND SURVEYOR BARRY D. LORD

60 0 60 120 180
GRAPHIC SCALE – FEET

INGRAM,LORD & ASSOCIATES
LAND SURVEYING AND PLANNING
437 SAM BROWN BLVD.
COMMERCE , GEORGIA 30529
706-335-9069


020
020
020

Erosion, Sedimentation, and Pollution Control Notes

1. **Checklist.** Each plan shall include a completed Erosion, Sedimentation and Pollution Control Plan Checklist established by the Georgia Soil and Water Conservation Commission (GSWCC) as of January 1 of the year in which the land-disturbing activity was permitted and amendments to the applicable Checklist as approved by the GSWCC up until the date of the NOI submittal. The applicable checklists are available on the GSWCC website.
2. **Seals and Certifications.** Certification Number is 64379, Expires 8-11-2023. Appropriate seals and certifications are on each sheet of the plan.
3. **Limit of Disturbance.** The limit of disturbance for this plan is not more than 50 acres.
4. **24-Hour Contact.** The 24-hour contact is noted on the plans as per the checklist.
5. **Permittee.** The relevant permittee is noted on the plans as per the checklist.
6. **Acreages.** Total and disturbed acres are noted on the plans as per the checklist.
7. **GPS of Construction Exit (Co).** The GPS Coordinates of the Construction Exit (Co) are as follows:
   a.
8. **Plan Dating.** All initial and revised dates have been noted on the plans. The requesting entity has been noted for any revised dates.
9. **Nature of Construction Activity and Site Conditions.** The nature of construction activity and site conditions are noted on the plans as per the checklist.
10. **Vicinity Map.** A vicinity map of the area is provided on the plans as per the checklist.
11. **Receiving Waters.** The receiving waters are noted on the plans as per the checklist.
12. **Certification Statement – Site Visit.**
    a. "I certify under penalty of law that this Plan was prepared after a site visit to the locations described herein by myself or my authorized agent, under my supervision."

    9-21-2021
13. **Certification Statement – BMP.**
    a. ""I certify that the permittee's Erosion, Sedimentation and Pollution Control Plan provides for an appropriate and comprehensive system of Best Management Practices required by the Georgia Water Quality Control Act and the document "Manual for Erosion and Sediment Control in Georgia" (Manual) published by the Georgia Soil and Water Conservation Commission as of January 1 of the year in which the land-disturbing activity was permitted, provides for the sampling of the receiving water(s) or the sampling of the storm water outfalls and that the designed system of best management practices and sampling methods is expected to meet the requirements contained in the General NPDES Permit No. GAR 100003."
14. **BMP Inspection – Design Professional.**
    a. "The design professional who prepared the ES&PC Plan is to inspect the installation of the initial sediment storage requirements and perimeter control BMPs within 7 days after installation."
15. **Non-Exempt Activities.**
    a. "Non-exempt activities shall not be conducted within the 25 or 50-foot undisturbed stream buffers as measured from the point of wrested vegetation or within 25-feet of the coastal marshland buffer as measured from the Jurisdictional Determination Line without first acquiring the necessary variances and permits."
16. **Buffer Encroachment and Variances.**
    a. Any encroachments and variance requirements are noted on the plans as per the checklist.
17. **Amendments/Revisions to the Plan.**
    a. "Amendments/revisions to the ES&PC Plan which have a significant effect on BMPs with a hydraulic component must be certified by the design professional."
18. **Waste Materials.**
    a. "Waste materials shall not be discharged to waters of the State, except as authorized by a Section 404 permit."
19. **Sediment Escape.**
    a. "The escape of sediment from the site shall be prevented by the installation of erosion and sediment control measures and practices prior to land disturbing activities."
20. **Maintenance of E&S Measures.**
    a. "Erosion control measures will be maintained at all times. If full implementation of the approved Plan does not provide for effective erosion control, additional erosion and sediment control measures shall be implemented to control or treat the sediment source."
21. **14-Day Mulching and Seeding**
    a. "Any disturbed area left exposed for a period greater than 14 days shall be stabilized with mulch or temporary seeding."
22. **Primary and Secondary Permittees.**
    a. There are no Primary and Secondary Permittees as this is a Tertiary Permittee Plan.
23. **Impaired Stream Segment BMPs.**
    a. Any discharges into Impaired Stream Segments and the BMPs required are noted on the Plan as per the checklist.
24. **TMDL Implementation Plan.**
    a. Any site-specific TMDL Implementation Plan information has been incorporated into the Plan as per the checklist.
25. **Concrete BMPs.**
    a. BMPs for concrete washdown of tools, concrete mixer chutes, hoppers and the rear of the vehicles are noted on the Plan as per the checklist.
26. **Petroleum and Oil Spill BMPs.**
    a. Any required BMPs for Petroleum and Oil Spills are included in the plan as required by the checklist.
27. **Building Materials Coverage.**
    a. Measures for the coverage of building supplies, as required by the checklist, are described on the Plan as needed.
28. **Storm Water Pollutant Measures.**
    a. Any required measures to control Storm Water Pollutants are noted on the Plan as required by the checklist.
29. **Storm Water Pollutant Practices.**
    a. Any required practices to control Storm Water Pollutants are noted on the Plan as required by the checklist.
30. **Activity Schedule.**
    a. The Activity Schedule is included on the Plan as required by the checklist.
31. **Inspections and Record Keeping.**
    a. Tertiary Permittee
       i. (1). Each day when any type of construction activity has taken place at a tertiary permittee's site, certified personnel provided by the tertiary permittee shall inspect: (a) all areas used by the tertiary permittee where petroleum products are stored, used, or handled for spills and leaks from vehicles and equipment; and (b) all locations at the tertiary permittee site where that permittee's vehicles enter or exit the site for evidence of off-site sediment tracking. These inspections must be conducted until a Notice of Termination is submitted. This paragraph is not applicable to utility companies and utility contractors performing only service line installations or when conducting repairs on existing line installations.
       ii. (2). Measure and record rainfall within disturbed areas of the site that have not met final stabilization once every 24 hours except any non-working Saturday, non-working Sunday and non-working Federal holiday. The data collected for the purpose of compliance with this permit shall be representative of the monitored activity. Measurement of rainfall may be suspended if all areas of the site have undergone final stabilization or established a crop of annual vegetation and a seeding of target perennials appropriate for the region.
       iii. (3). Certified personnel (provided by the tertiary permittee) shall inspect at least the following once every seven calendar days and within 24 hours of the end of a storm that is 0.5 inches rainfall or greater (unless such storm ends after 5:00 PM on any Friday or on any non-working Saturday, non-working Sunday or any nonworking Federal holiday in which case the inspection shall be completed by the end of the next business day and/or working day, whichever occurs first): (a) disturbed areas of the tertiary permittee's construction site; (b) areas used by the tertiary permittee for storage of materials that are exposed to precipitation; and (c) structural control measures. Erosion and sediment control measures identified in the Plan applicable to the tertiary permittee's site shall be observed to ensure that they are operating correctly. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving water(s). For areas of a site that have undergone final stabilization or established a crop of annual vegetation and a seeding of target perennials appropriate for the region, the permittee must comply with Part IV.D.4.c.(4). These inspections must be conducted until a Notice of Termination is submitted. This paragraph is not applicable to utility companies and utility contractors performing only service line installations or when conducting repairs on existing line installations.
       iv. (4). Certified personnel (provided by the tertiary permittee) shall inspect at least once per month during the term of this permit (i.e., until a Notice of Termination is submitted to EPD) the areas of their sites that have undergone final stabilization or established a crop of annual vegetation and a seeding of target perennials appropriate for the region. These areas shall be inspected for evidence of, or the potential for, pollutants entering the drainage system and the receiving water(s). Erosion and sediment control measures identified in the Plan shall be observed to ensure that they are operating correctly. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving water(s). This paragraph is not applicable to utility companies and utility contractors performing only service line installations or when conducting repairs on existing line installations.
       v. (5). Based on the results of each inspection, the site description and the pollution prevention and control measures identified in the Erosion, Sedimentation and Pollution Control Plan, the Plan shall be revised as appropriate not later than seven (7) calendar days following each inspection. Implementation of such changes shall be made as soon as practical but in no case later than seven (7) calendar days following the inspection.
       vi. (6). A report of each inspection that includes the name(s) of certified personnel making each inspection, the date(s) of each inspection, construction phase (i.e., initial, intermediate or final), major observations relating to the implementation of the Erosion, Sedimentation and Pollution Control Plan, and actions taken in accordance with Part IV.D.4.c.(5) of the permit shall be made and retained at the site or be readily available at a designated alternate location until the entire site has undergone final stabilization and a Notice of Termination is submitted to EPD. Such reports shall be readily available by the end of the second business day and/or working day and shall identify all incidents of best management practices that have not been properly installed and/or maintained as described in the Plan. Where the report does not identify any incidents, the inspection report shall contain a certification that the best management practices are in compliance with the Erosion, Sedimentation and Pollution Control Plan. The report shall be signed in accordance with Part V.G.2. of this permit. This paragraph is not applicable to utility companies and utility contractors performing only service line installations or when conducting repairs on existing line installations.
32. **Sampling Frequency and Reporting**
    a. Sampling Frequency
       i. (1). The primary permittee with a total planned disturbance equal to or greater than one (1) acre and tertiary permittee with a total planned disturbance equal to or greater than five (5) acres must sample in accordance with the Plan at least once for each rainfall event described below. For a qualifying event, the permittee shall sample at the beginning of any stormwater discharge to a monitored receiving water and/or from a monitored outfall within forty-five (45) minutes or as soon as possible.
       ii. (2). However, where manual and automatic sampling are impossible (as defined in this permit), or are beyond the permittee's control, the permittee shall take samples as soon as possible, but in no case more than twelve (12) hours after the beginning of the stormwater discharge.
       iii. (3). Sampling by the permittee shall occur for the following qualifying events:
          1. (a). For each area of the site that discharges to a receiving water or from an outfall, the first rain event that reaches or exceeds 0.5 inch with a stormwater discharge that allows for sampling during normal business hours as defined in this permit after all clearing and grubbing operations have been completed, but prior to completion of mass grading operations, in the drainage area of the location selected as the sampling location;
          2. (b). In addition to (a) above, for each area of the site that discharges to a receiving water or from an outfall, the first rain event that reaches or exceeds 0.5 inch with a stormwater discharge that occurs during normal business hours as defined in this permit either 90 days after the first sampling event or after all mass grading operations have been completed, but prior to submittal of a NOT, in the drainage area of the location selected as the sampling location, whichever comes first;
          3. (c). At the time of sampling performed pursuant to (a) and (b) above, if BMPs in any area of the site that discharges to a receiving water or from an outfall are not properly designed, installed and maintained, corrective action shall be defined and implemented within two (2) business days, and turbidity samples shall be taken from discharges from that area of the site for each subsequent rain event that reaches or exceeds 0.5 inch during normal business hours* until the selected turbidity standard is attained, or until post-storm event inspections determine that BMPs are properly designed, installed and maintained;
          4. (d). Where sampling pursuant to (a), (b) or (c) above is required but not possible (or not required because there was no discharge), the primary permittee, in accordance with Part IV.D.4.a.(6)., or the tertiary permittee, in accordance with Part IV.D.4.c.(6)., must include a written justification in the inspection report of why sampling was not performed. Providing this justification does not relieve the permittee of any subsequent sampling obligations under (a), (b) or (c) above; and
          5. (e). Existing construction activities, i.e., those that are occurring on or before the effective date of this permit, that have met the sampling required by (a) above shall sample in accordance with (b). Those existing construction activities that have met the sampling required by (b) above shall not be required to conduct additional sampling other than as required by (c) above.
          6. *Note that the Permittee may choose to meet the requirements of (a) and (b) above by collecting turbidity samples from any rain event that reaches or exceeds 0.5 inch and allows for sampling at any time of the day or week.
    b. Reporting
       i. 1. The applicable permittees are required to submit the sampling results to the EPD at the address shown in Part II.C. by the fifteenth day of the month following the reporting period. Reporting periods are months during which samples are taken in accordance with this permit. Sampling results shall be in a clearly legible format. Upon written notification, EPD may require the applicable permittee to submit the sampling results on a more frequent basis. Sampling and analysis of any stormwater discharge(s) or the receiving water(s) beyond the minimum frequency stated in this permit must be reported in a similar manner to the EPD. The sampling reports must be signed in accordance with Part V.G.2. Sampling reports must be submitted to EPD using the electronic submittal service provided by EPD. Sampling reports must be submitted to EPD until such time as a NOT is submitted in accordance with Part VI.
       ii. 2. All sampling reports shall include the following information:
          1. a. The rainfall amount, date, exact place and time of sampling or measurements;
          2. b. The name(s) of the certified personnel who performed the sampling and measurements;
          3. c. The date(s) analyses were performed;
          4. d. The time(s) analyses were initiated;
          5. e. The name(s) of the certified personnel who performed the analyses;
          6. f. References and written procedures, when available, for the analytical techniques or methods used;
          7. g. The results of such analyses, including the bench sheets, instrument readouts, computer disks or tapes, etc., used to determine these results;
          8. h. Results which exceed 1000 NTU shall be reported as "exceeds 1000 NTU" and
          9. i. Certification statement that sampling was conducted as per the Plan.
       iii. 3. All written correspondence required by this permit shall be submitted by return receipt certified mail (or similar service) to the appropriate District Office of the EPD according to the schedule in Appendix A of this permit. The applicable permittees shall retain a copy of the proof of submittal at the construction site or the proof of submittal shall be readily available at a designated location from commencement of construction until such time as a NOT is submitted in accordance with Part VI.
33. **Retention of Records.**
    a. 3. Each tertiary permittee shall retain the following records at the construction site or the records shall be readily available at a designated alternate location from commencement of construction until such time as a NOT is submitted in accordance with Part VI:
       i. a. A copy of all Notices of Intent submitted to EPD;
       ii. b. A copy of the Erosion, Sedimentation and Pollution Control Plan required by this permit;
       iii. c. The design professional's report of the results of the inspection conducted in accordance with Part IV.A.5. of this permit;
       iv. d. A copy of all sampling information, results, and reports required by this permit;
       v. e. A copy of all inspection reports generated in accordance with Part IV.D.4.c. of this permit;
       vi. f. A copy of all violation summaries and violation summary reports generated in accordance with Part III.D.2. of this permit; and.
       vii. g. Daily rainfall information collected in accordance with Part IV.D.4.c.(2). of this permit.
34. **Analytical Method to Analyze Samples.**
    a.See plans.
35. **NTU Rationale – Appendix B.**
    a.

APPENDIX B

Nephelometric Turbidity Unit (NTU) TABLES

Trout Streams

Surface Water Drainage Area, square miles

	0.5-4.9	5.0-9.9	10-24.9	25-49.9	50-99.9	100-249.9	250-499.99	500+
1.00-6.49	25	50	75	100	200	500	500	500
6.50-12.49	25	25	50	75	150	250	500	500
12.50-50	25	25	25	50	75	100	250	500
50.01-100	25	25	25	25	50	75	150	250
100.01 +	25	25	25	25	25	50	100	100

Warm Supporting Warm Water Fisheries

Surface Water Drainage Area, square miles

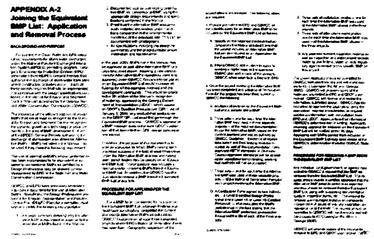
	0.5-4.9	5.0-9.9	10-24.9	25-49.9	50-99.99	100-249.9	250-499.99	500+
1.00-6.49	75	150	200	400	750	750	750	750
6.50-12.49	50	100	150	200	500	500	750	750
12.50-50	50	50	100	150	300	500	750	750
50.01-100	50	50	50	100	150	250	500	600
100.01 +	50	50	50	50	50	100	200	250

To use these tables, select the size category of the construction site. Then, select the surface water drainage area category miles. The NTU matrix value arrived at from the above tables is the value to use in Part III.D.2.

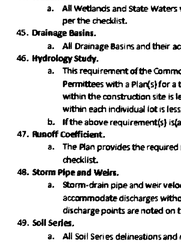
    b. The rationale for measure from Appendix B is as follows:
       i. See plans.
36. **Sampling Locations and Stream Locations.**
    a. All Sampling and Stream Locations for storm water discharge are noted on the Plan as required by the checklist.
37. **Initial, Intermediate, and Final BMPs.**
    a. Each Phase is shown on a separate sheet and BMPs for each phase are noted as required by the checklist.
38. **BMPs for Common Phases of Development.**
    a. This is not required of Tertiary Permittees per the checklist.
39. **Graphic Scale and North Arrow.**
    a. The Graphic Scale and a North Arrow are provided on all sheets of the plan as required by the checklist.
40. **Existing and Proposed Contour Lines.**
    a. Existing and Proposed Contour Lines are in accordance with the following:
       i.

Map Scale	Ground Slope	Contour Intervals, ft
1 inch = 100ft or larger scale	Flat 0 - 2%	0.5 or 1
	Rolling 2 - 8%	1 or 2
	Steep 8% +	2,5 or 10

41. **Alternate BMP – Permit.**
    a. (4). Alternative BMPs. The use of alternative BMPs whose performance has been documented to be equivalent or superior to conventional BMPs as certified by a Design Professional may be allowed (unless disapproved by EPD or the Georgia Soil and Water Conservation Commission).
42. **Alternate BMP – Appendix A-2.**
    a



APPENDIX A-2
Joining the Equivalent BMP List: Application and Removal Process



43. **Required Buffers.**
    a. All buffers, both State and Local, are noted on the Plan as per the checklist.
44. **Wetlands and State Waters.**
    a. All Wetlands and State Waters within 200' of the project site are noted on the Plan as per the checklist.
45. **Drainage Basins.**
    a. All Drainage Basins and their acreage are delineated on the plan as per the checklist.
46. **Hydrology Study.**
    a. This requirement of the Common Development permit is not applicable to Tertiary Permittees with a Plan(s) for a typical individual lot(s), if the total land disturbance within the construction site is less than five (5) acres and the total land disturbance within each individual lot is less than one (1) acre.
    b. If the above requirement(s) is(are) not met, a hydrology study is provided.
47. **Runoff Coefficient.**
    a. The Plan provides the required Runoff Coefficient calculations, as needed, as per the checklist.
48. **Storm Pipe and Weirs.**
    a. Storm-drain pipe and weir velocities with appropriate outlet protection to accommodate discharges without erosion are noted on the plan. All storm water discharge points are noted on the plan. This is per the checklist.
49. **Soil Series.**
    a. All Soil Series delineations and required information are provided on the Plan as per the checklist.
50. **Limits of Disturbance.**
    a. All Limits of Disturbance (LODs) are provided on the Plan as per the checklist.
51. **Sediment Basin or Alternate.**
    a. A required Sediment Basin or Equivalent Control Measures with explanation are provided on the Plan as per the checklist.
52. **BMPs and Coding.**
    a. All BMPs used are noted on the Plan using the uniform coding symbols and are not less stringent than the Manual.
53. **BMP Drawings.**
    a. A worksheet for each BMP design is provided on the Plan as per the checklist.
54. **Vegetative Plans.**
    a. All Vegetative Plans are provided on the Plan as per the checklist.

GSWCC
Georgia Soil and Water Conservation Commission
APPROVED

E&S NOTES

GEORGIA REGISTERED No. 2981 LAND SURVEYOR BARRY O. LORD

9-21-2021

GSWCC Level II Certification # 64379
Expires 8-11-2023

Initial Date of Plans:
6-22-2021

Revision per comments:
9-21-2021

Notes:

Sheet 5

Ingram, Lord and Associates
Land Surveying and Planning
437 Sam Brown Blvd
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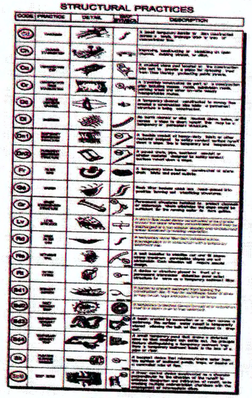
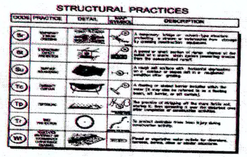
GEORGIA
UNIFORM CODING SYSTEM
FOR SOIL EROSION AND SEDIMENTATION CONTROL PRACTICES
GEORGIA SOIL AND WATER CONSERVATION COMMISSION

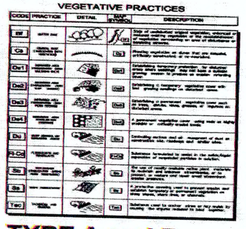
STRUCTURAL PRACTICES



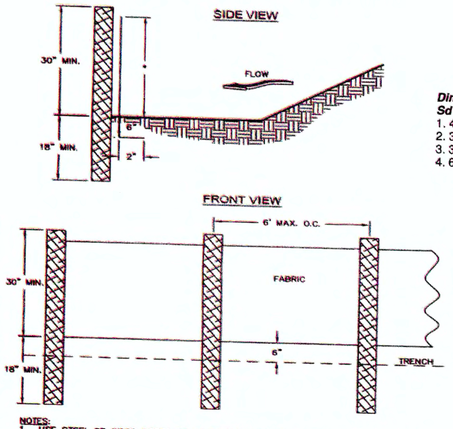
STRUCTURAL PRACTICES



VEGETATIVE PRACTICES



SILT FENCE - TYPE A and B

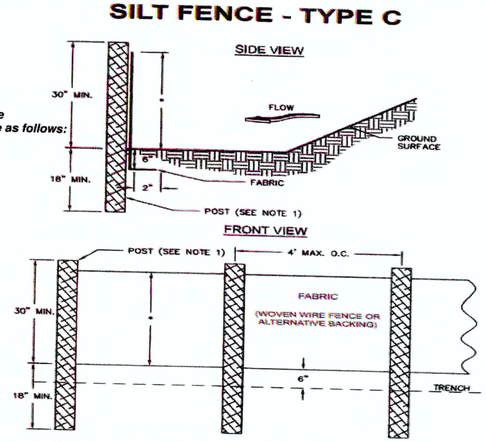


NOTES:
1. USE STEEL OR WOOD POSTS OR AS SPECIFIED BY THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN.
2. HEIGHT (*) IS TO BE SHOWN ON THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN.

Figure 6-27.1

SILT FENCE - TYPE C

Dimensions for the Sd1-S (Type C) are as follows:
1. 48" Post
2. 36" Fabric
3. 30" Exposed
4. 6" Trench



NOTES:
1. USE STEEL OR WOOD POSTS OR AS SPECIFIED BY THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN.
2. HEIGHT (*) IS TO BE SHOWN ON THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN.

Figure 6-27.2

Construction Exit (Co)



DEFINITION
A stone stabilized pad located at any point where traffic will be leaving a construction site to a public right-of-way, street, alley, sidewalk or parking area or any other area where there is a transition from bare soil to a paved area.

PURPOSE
To reduce or eliminate the transport of mud from the construction area onto public rights-of-way by motor vehicles or by runoff.

CONDITIONS
This practice is applied at appropriate points of construction egress. Geotextile underliners are required to stabilize and support the pad aggregates.

DESIGN CRITERIA
Formal design is not required. The following standards shall be used:

Aggregate Size
Stone will be in accordance with National Stone Association R-2 (1.5 to 3.5 inch stone).

Pad Thickness
The gravel pad shall have a minimum thickness of 6 inches.

Pad Width
At a minimum, the width should equal full width of all points of vehicular egress, but not less than 20 feet wide.

Pad Length
The gravel pad shall have a minimum length of 50 feet. When the construction is less than 50' from the paved access, the length shall be from the edge of existing pavement to the permitted building being constructed.

Washing
If the action of the vehicle traveling over the gravel pad does not sufficiently remove the mud, the tires should be washed prior to entrance onto public rights-of-way. When washing is required, it shall be done on an area stabilized with crushed stone and provisions that intercept the sediment-laden runoff and direct it into an approved sediment trap or sediment basin.

Location
The exit shall be located or protected to prevent sediment from leaving the site.

CONSTRUCTION SPECIFICATIONS
It is recommended that the agress area be excavated to a depth of 3 inches and be cleared of all vegetation and roots.

Diversion Ridge
On sites where the grade toward the paved area is greater than 2%, a diversion ridge 6 to 8 inches high with 3:1 side slopes shall be constructed across the foundation approximately 15 feet above the road.

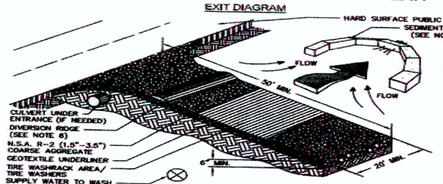
Geotextile
The geotextile underliner must be placed the full length and width of the entrance. Geotextile selection shall be based on AASHTO M288-06 specification:

1. For subgrades with a CBR greater than or equal to 3 or shear strength greater than 90 kPa, geotextile must meet requirements of section AASHTO M288-06 Section 7.3, *Separation Requirements*.
2. For subgrades with a CBR between 1 and 3 or sheer strength between 30 and 90 kPa, geotextile must meet requirements of section AASHTO M288-06 Section 8, *Geotextile Property Requirements for Subsurface Drainage, Separation, Stabilization, and Permanent Erosion Control (Geotextile Property Requirements)*..

MAINTENANCE
The exit shall be maintained in a condition that will prevent tracking or flow of mud onto public rights-of-way. This may require periodic top dressing with 1.5-3.5 inch stone, as conditions demand, and repair and/or cleanout of any structures to trap sediment. All materials spilled, dropped, washed, or tracked from vehicles or site onto roadways or into storm drains must be removed immediately.

CRUSHED STONE CONSTRUCTION EXIT

EXIT DIAGRAM



ENTRANCE ELEVATION



NOTES:
1. AVOID LOCATING ON STEEP SLOPES OR AT CURVES ON PUBLIC ROADS.
2. REMOVE ALL VEGETATION AND OTHER UNSUITABLE MATERIAL FROM THE FOUNDATION AREA, GRADE, AND CROWN FOR POSITIVE DRAINAGE.
3. AGGREGATE SIZE SHALL BE IN ACCORDANCE WITH NATIONAL STONE ASSOCIATION R–2 (1.5"–3.5" STONE).
4. GRAVEL PAD SHALL HAVE A MINIMUM THICKNESS OF 6".
5. PAD WIDTH SHALL BE EQUAL FULL WIDTH AT ALL POINTS OF VEHICULAR EGRESS, BUT NO LESS THAN 20'.
6. A DIVERSION RIDGE SHOULD BE CONSTRUCTED WHEN GRADE TOWARD PAVED AREA IS GREATER THAN 2%.
7. INSTALL PIPE UNDER THE ENTRANCE IF NEEDED TO MAINTAIN DRAINAGE DITCHES.
8. WHEN WASHING IS REQUIRED, IT SHOULD BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN (DIVERT ALL SURFACE RUNOFF AND DRAINAGE FROM THE ENTRANCE TO A SEDIMENT CONTROL DEVICE.)
9. WASHRACKS AND/OR TIRE WASHERS MAY BE REQUIRED DEPENDING ON SCALE AND CIRCUMSTANCE. IF NECESSARY, WASHRACK DESIGN MAY CONSIST OF ANY MATERIAL SUITABLE FOR TRUCK TRAFFIC THAT REMOVE MUD AND DIRT.
10. MAINTAIN AREA IN A WAY THAT PREVENTS TRACKING AND/OR FLOW OF MUD ONTO PUBLIC RIGHTS–OF–WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.

Figure 6-14.1

Dust Control on Disturbed Areas (Du)



DEFINITION
Controlling surface and air movement of dust on construction sites, roads, and demolition sites.

PURPOSE
- To prevent surface and air movement of dust from exposed soil surfaces.
- To reduce the presence of airborne substances that may be harmful or injurious to human health, welfare, or safety, or to animals or plant life.

CONDITIONS
This practice is applicable to areas subject to surface and air movement of dust where on and off-site damage may occur without treatment.

METHOD AND MATERIALS

A. Temporary Methods

Mulches. See standard **Ds1 - Disturbed Area Stabilization (With Mulching Only)**. Synthetic resins may be used instead of asphalt to bind mulch material. Refer to specification **Tac - Tackifiers**. Resins should be used according to manufacturer's recommendations.

Vegetative Cover. See specification **Ds2 - Disturbed Area Stabilization (With Temporary Seeding)**.

Spray-on Adhesives. These are used on mineral soils (not effective on muck soils). Keep traffic off these areas. Refer to specification **Tac - Tackifiers**.

Tillage. This practice is designed to roughen and bring clods to the surface. It is an emergency measure that should be used before wind erosion starts. Begin plowing on windward side of site. Chisel-type plows spaced about 12 inches apart, spring-toothed harrows, and similar plows are examples of equipment that may produce the desired effect.

Irrigation. This is generally done as an emergency treatment. Site is sprinkled with water until the surface is wet. Repeat as needed.

Barriers. Solid board fences, snowfences, burlap fences, crate walls, bales of hay and similar material can be used to control air currents and soil blowing. Barriers placed at right angles to prevailing currents at intervals of about 15 times their height are effective in controlling wind erosion.

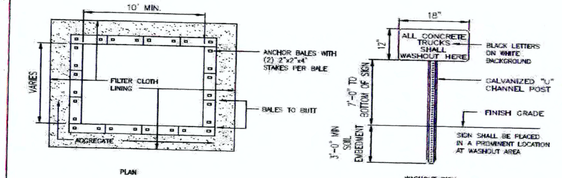
Calcium Chloride. Apply at rate that will keep surface moist. May need retreatment.

B. Permanent Methods

Permanent Vegetation. See specification **Ds3 -Disturbed Area Stabilization (With Permanent Vegetation)**. Existing trees and large shrubs may afford valuable protection if left in place.

Topsoiling. This entails covering the surface with less erosive soil material. See specification **Tp - Topsoiling**.

Stone. Cover surface with crushed stone or coarse gravel. See specification **Cr-Construction Road Stabilization**.



NOTES:
1. WASHOUT AREA(S) SHALL BE INSTALLED IN A LOCATION EASILY ACCESSIBLE BY CONCRETE TRUCKS.
2. ONE OR MORE AREAS MAY BE INSTALLED ON THE CONSTRUCTION SITE AND MAY BE RELOCATED AS CONSTRUCTION PROGRESSES.
3. AT LEAST WEEKLY REMOVE ACCUMULATION OF SAND AND AGGREGATE AND DISPOSE OF PROPERLY.
4. A plastic lining will be used.

CONCRETE WASHOUT AREA DETAIL (CW)
NTS

GEORGIA
Major Land Resource Areas

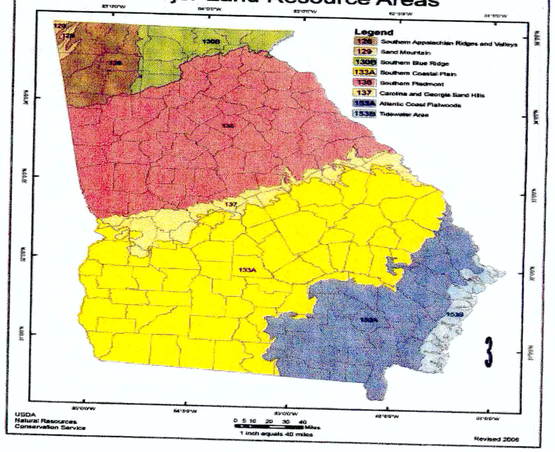
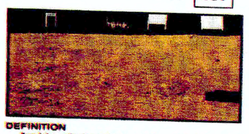


Figure 6-4.1

Disturbed Area Stabilization (With Mulching Only) (Ds1)



DEFINITION
Applying plant residues or other suitable materials, produced on the site if possible, to the soil surface.

PURPOSE
- To reduce runoff and erosion
- To conserve moisture
- To prevent surface compaction or crusting
- To control undesirable vegetation
- To modify soil temperature
- To increase biological activity in the soil

REQUIREMENT FOR REGULATORY COMPLIANCE
Mulch or temporary grassing shall be applied to all exposed areas within 14 days of disturbance. Mulch can be used as a singular erosion control device for up to six months, but it shall be applied at the appropriate depth, depending on the material used, anchored and have a continuous 90% cover or greater of the soil surface.

Maintenance shall be required to maintain appropriate depth and 90% cover. Temporary vegetation may be employed instead of mulch if the area will remain undisturbed for less than six months.

If any area will remain undisturbed for greater than six months, permanent vegetative techniques shall be employed. Refer to **Ds2 -Disturbed Area Stabilization (With Temporary Seeding), Ds3 - Disturbed Area Stabilization (With Permanent Seeding), and Ds4 - Disturbed Area Stabilization (With Sodding)**.

SPECIFICATIONS
Mulching Without Seeding
This standard applies to graded or cleared areas where seedings may not have a suitable growing season to produce an erosion retardant cover, but can be stabilized with a mulch cover.

Site Preparation
1. Grade to permit the use of equipment for applying and anchoring mulch.
2. Install needed erosion control measures as required such as dikes, diversions, berms, terraces and sediment barriers.
3. Loosen compact soil to a minimum depth of 3 inches.

Mulching Materials
Select one of the following materials and apply at the depth indicated:
1. Dry straw or hay shall be applied at a depth of 2 to 4 inches providing complete soil coverage. One advantage of this material is easy application.
2. Wood waste (chips, sawdust or bark) shall be applied at a depth of 2 to 3 inches. Organic material from the clearing stage of development should remain on site, be chipped, and applied as mulch. This method of mulching can greatly reduce erosion control costs.
3. Polyethylene film shall be secured over banks or stockpiled soil material for temporary protection. This material can be salvaged and re-used.

Applying Mulch
When mulch is used without seeding, mulch shall be applied to provide full coverage of the exposed area.
1. Dry straw or hay mulch and wood chips shall be applied uniformly by hand or by mechanical equipment.
2. If the area will eventually be covered with perennial vegetation, 20-30 pounds of nitrogen per acre in addition to the normal amount shall be applied to offset the uptake of nitrogen caused by the decomposition of the organic mulches.
3. Apply polyethylene film on exposed areas.

Anchoring Mulch
1. Straw or hay mulch can be pressed into the soil with a disk harrow with the disk set straight or with a special "packer disk." Disks may be smooth or serrated and should be 20 inches or more in diameter and 8 to 12 inches apart. The edges of the disk should be dull enough not to cut the mulch but to press it into the soil leaving much of it in an erect position. Straw or hay mulch shall be anchored immediately after application.

   Straw or hay mulch spread with special blower-type equipment may be anchored. Tackifiers, binders and hydraulic mulch with tackifier specifically designed for tacking straw can be substituted for emulsified asphalt. Please refer to specification **Tac-Tackifiers**. Plastic mesh or netting with mesh no larger than one inch by one inch shall be installed according to manufacturer's specifications.
2. Netting of the appropriate size shall be used to anchor wood waste. Openings of the netting shall not be larger than the average size of the wood waste chips.
3. Polyethylene film shall be anchor trenched at the top as well as incrementally as necessary.

Disturbed Area Stabilization (With Temporary Seeding) (Ds2)



DEFINITION
The establishment of temporary vegetative cover with fast growing seedings for seasonal protection on disturbed or denuded areas.

PURPOSE
- To reduce runoff and sediment damage of down stream resources
- To protect the soil surface from erosion
- To improve wildlife habitat
- To improve aesthetics
- To improve tilth, infiltration and aeration as well as organic matter for permanent plantings

REQUIREMENT FOR REGULATORY COMPLIANCE
Mulch or temporary grassing shall be applied to all exposed areas within 14 days of disturbance. Temporary grassing, instead of mulch, can be applied to rough graded areas that will be exposed for less than six months. If an area is expected to be undisturbed for longer than six months, permanent perennial vegetation shall be used. If optimum planting conditions for temporary grassing is lacking, mulch can be used as a singular erosion control device for up to six months but it shall be applied at the appropriate depth, anchored, and have a continuous 90% cover or greater of the soil surface. Refer to specification **Ds1-Disturbed Area Stabilization (With Temporary Seeding).**

CONDITIONS
Temporary vegetative measures should be coordinated with permanent measures to assure economical and effective stabilization. Most types of temporary vegetation are ideal to use as companion crops until the permanent vegetation is established. Note: Some species of temporary vegetation are not appropriate for companion crop plantings because of their potential to out-compete the desired species (e.g. annual ryegrass). Contact NRCS or the local SWCD for more information.

SPECIFICATIONS
Grading and Shaping
Excessive water run-off shall be reduced by properly designed and installed erosion control practices such as closed drains, ditches, dikes, diversions, sediment barriers and others.

No shaping or grading is required if slopes can be stabilized by hand-seeded vegetation or if hydraulic seeding equipment is to be used.

Seedbed Preparation
When a hydraulic seeder is used, seedbed preparation is not required. When using conventional or hand-seeding, seedbed preparation is not required if the soil material is loose and not sealed by rainfall.

When soil has been sealed by rainfall or consists of smooth cut slopes, the soil shall be pitted, trenched or otherwise scarified to provide a place for seed to lodge and germinate.

Lime and Fertilizer
Agricultural lime is required unless soil tests indicate otherwise. Apply agricultural lime at a rate determined by soil test for pH. Quick acting lime should be incorporated to modify pH during the germination period. Bio stimulants should also be considered when there is less than 3% organic matter in the soil. Graded areas require lime application. Soils must be tested to determine required amounts of fertilizer and amendments. Fertilizer should be applied before land preparation and incorporated with a disk, ripper, or chisel. On slopes too steep for, or inaccessible to equipment, fertilizer shall be hydraulically applied, preferably in the first pass with seed and some hydraulic mulch, then topped with the remaining required application rate.

Seeding
Select a grass or grass-legume mixture suitable to the area and season of the year. Seed shall be applied uniformly by hand, cyclone seeder, drill, cultipacker-seeder, or hydraulic seeder (slurry including seed and fertilizer). Drill or cultipacker seeders should normally place seed one-quarter to one-half inch deep. Appropriate depth of planting is ten times the seed diameter. Soil should be "raked" lightly to cover seed with soil if seeded by hand. See Table 6-4.1

Mulching
Temporary vegetation can, in most cases, be established without the use of mulch, provided there is little to no erosion potential. However, the use of mulch can often accelerate and enhance germination and vegetation establishment. Mulch without seeding should be considered for short term protection. Refer to **Ds1 - Disturbed Area Stabilization (With Mulching Only)**.

Irrigation
During times of drought, water shall be applied at a rate not causing runoff and erosion. The soil shall be thoroughly wetted to a depth that will insure germination of the seed. Subsequent applications should be made when needed.

Table 6-4.1 - Temporary Cover or Companion Cover Crops
PLANT, PLANTING RATE, AND PLANTING DATE FOR TEMPORARY COVER OR COMPANION CROPS

Species	Broadcast Rates (Rate Per Acre)	Pure Live Seed (PLS) Per 1000 sq ft	Resource Area*	Planting Dates by Resource Area (Solid lines indicate optimum dates, dotted lines indicate permissible but marginal dates.) J F M A M J J A S O N D	Remarks
BARLEY *Hordeum vulgare*					
alone	3 bu. (144 lbs)	3.3 lbs	M-L		
in mixture	1/2 bu. (24 lbs)	0.6 lb	P		14,000 seed per pound. Winter hardy. Use on productive soils.
			C		
LESPEDEZA, ANNUAL *Lespedeza striata*					
alone	40 lbs	0.9 lb	M-L		
in mixture	10 lbs	0.2 lb	P		350,000 seed per pound. May reseed for several years. Use inoculant.
			C		
LOVEGRASS, WEEPING *Eragrostis curvula*					
alone	4 lbs	0.1 lb	M-L		
in mixture	2 lbs	0.05 lb	P		1,000,000 seed per pound. May last for several years. Mix with Sericea lespedeza.
			C		
MILLET, BROOMCORN *Panicum miliaceum*					
alone	40 lbs	0.9 lb	M-L		
in mixture	10 lbs	0.2 lb	P		127,000 seed per pound. Quick, dense cover. Will provide excessive competition in mixtures if planted at high rate.
			C		
MILLET, PEARL *Pennisetum glaucum*					
alone	60 lbs	1.1 lbs	M-L		
			P		66,000 seed per pound. Quick, dense cover. May reach 5 feet in height. Not recommended for pastures.
			C		
OATS *Avena sativa*					
alone	4 bu. (128 lbs)	2.9 lbs	M-L		
in mixture	1 bu. (32 lbs)	0.7 lb	P		13,000 seed per pound. Use on productive soils. Not as is winter hardy as rye or barley.
			C		
RYE *Secale cereale*					
alone	3 bu. (168 lbs)	3.9 lbs	M-L		
in mixture	1/2 bu. (28 lbs)	0.6 lb	P		18,000 seed per pound. Quick cover. Drought tolerant and winter hardy.
			C		
RYEGRASS, ANNUAL *Lolium temulentum*					
alone	40 lbs	0.9 lb	M-L		
			P		227,000 seed per pound. Dense cover. Very competitive; best to be used in mixtures.
			C		
SUDANGRASS *Sorghum sudanense*					
alone	60 lbs	1.4 lbs	M-L		
			P		85,000 seed per pound. Good on droughty areas. Not recommended for pastures.
			C		

Species	Broadcast Rates (Rate Per Acre)	Pure Live Seed (PLS) Per 1000 sq ft	Resource Area*	Planting Dates by Resource Area (Solid lines indicate optimum dates, dotted lines indicate permissible but marginal dates.) J F M A M J J A S O N D	Remarks
TRITICALE *X Triticosecale*					
alone	3 bu. (144 lbs)	3.3 lbs	C		Use on lower part of Southern Coastal Plain and in Atlantic Coastal Flatwoods only.
in mixture	1/2 bu. (24 lbs)	0.6 lb			
WHEAT *Triticum aestivum*					
alone	3 bu. (180 lbs)	4.1 lbs	M-L		
in mixture	1/2 bu. (30 lbs)	0.7 lb	P		15,000 seed per pound. Winter hardy.
			C		

*Temporary cover crops are very competitive and will crowd out perennials if seeded too heavily.
*Numbers and key refer to 10% when drilled.
*M-L represents the Mountain, Blue Ridge and Ridges and Valleys MLRAs.
*P represents the Southern Piedmont MLRA.
*C represents Southern Coastal Plain, Sand Hills, Black Lands, and Atlantic Coast Flatwoods MLRA.

GSWCC Georgia Soil and Water Conservation Commission

E&S DETAILS

GEORGIA REGISTERED No. 3040 LAND SURVEYOR BARRY D. LORD
9-21-2021

GSWCC Level II Certification # 64379
Expires 8-11-2023

Initial Date of Plans:
6-22-2021

Revision per comments:
9-21-2021

Notes:

Sheet 6

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Disturbed Area Stabilization (With Permanent Vegetation)

Ds3



DEFINITION

The planting of perennial vegetation such as trees, shrubs, vines, grasses, or legumes on exposed areas for final permanent stabilization. Permanent perennial vegetation shall be used to achieve final stabilization.

PURPOSE

- To protect the soil surface from erosion
- To reduce damage from sediment and runoff to down-stream areas
- To improve wildlife habitat and visual resources
- To improve aesthetics

REQUIREMENT FOR REGULATORY COMPLIANCE

This practice shall be applied immediately to rough graded areas that will be undisturbed for longer than six months. This practice or sodding shall be applied immediately to all areas at final grade. **Final Stabilization** means that all soil disturbing activities at the site have been completed, and that for unpaved areas and areas not covered by permanent structures and areas located outside the waste disposal limits of a landfill cell that has been certified by the GA EPD for waste disposal, 100% of the soil surface is uniformly covered in permanent vegetation with a density of 70% or greater, or landscaped according to the Plan (uniformly covered with landscaping materials in planned landscaped areas) or equivalent permanent stabilization measures

tion establishment enhancement, and erosion control effectiveness. Select the mulching material from the following and apply as indicated:

1. *Dry straw or dry hay* of good quality and free of weed seeds can be used. Dry straw shall be applied at the rate of 2 tons per acre. Dry hay shall be applied at a rate of 2 1/2 tons per acre.
2. *Wood cellulose mulch* or *wood pulp fiber* shall be used with hydraulic seeding. It shall be applied at the rate of 500 pounds per acre. Dry straw or dry hay shall be applied (at the rate indicated above) after hydraulic seeding.
3. One thousand pounds of *wood cellulose* or *wood pulp fiber*, which includes a tackifier, shall be used with hydraulic seeding on slopes 3/4:1 or steeper.
4. *Sericea Lespedeza* hay containing mature seed shall be applied at a rate of three tons per acre.
5. *Pine straw* or *pine bark* shall be applied at a thickness of 3 inches for bedding purposes. Other suitable materials in sufficient quantity may be used where ornamentals or other ground covers are planted. This is not appropriate for seeded areas.
6. When using temporary erosion control blankets or block sod, mulch is not required.
7. *Bituminous treated roving* may be applied on planted areas, slopes, in ditches or dry waterways to prevent erosion. Bituminous treated roving shall be applied within 24 hours after an area has been planted. Application rates and materials must meet Georgia Department of Transportation specifications.

Wood cellulose and wood pulp fibers shall not contain germination or growth inhibiting factors. They shall be evenly dispersed when agitated in water. The fibers shall contain a dye to allow visual metering and aid in uniform application during seeding.

Applying Mulch

Straw or hay mulch will be spread uniformly within 24 hours after seeding and/or plant-

Permanent vegetation shall consist of: planted trees, shrubs, perennial vines; or a crop of perennial vegetation appropriate for the region, such that within the growing season a 70% coverage by perennial vegetation shall be achieved. Final stabilization applies to each phase of construction. For linear construction projects on land used for agricultural or silvicultural purposes, final stabilization may be accomplished by stabilizing the disturbed land for its agricultural or silvicultural use. Until this standard is satisfied and permanent control measures and facilities are operational, interim stabilization measures and temporary erosion and sedimentation control measures shall not be removed.

CONDITIONS

Permanent perennial vegetation is used to provide a protective cover for exposed areas including cuts, fills, dams, and other denuded areas.

PLANNING CONSIDERATIONS

1. Use conventional planting methods where possible.
2. When mixed plantings are done during marginal planting periods, companion crops shall be used.
3. No-till planting is effective when planting is done following a summer or winter annual cover crop. Sericea lespedeza planted no-till into stands of rye is an excellent procedure.
4. Block sod provides immediate cover. It is especially effective in controlling erosion adjacent to concrete flumes and other structures. Refer to Specification **Ded-Disturbed Area Stabilization (With Sodding).**
5. Irrigation should be used when the soil is dry or when summer plantings are done.
6. Low maintenance plants, as well as natives, should be used to ensure long-lasting erosion control.
7. Mowing should not be performed during the quail nesting season (May to September).
8. Wildlife plantings should be included in critical area plantings.

Wildlife Plantings

Commercially available plants beneficial to wildlife species include the following:

Mast Bearing Trees

Beech, Black Cherry, Blackgum, Chestnut, Chinkapin, Hackberry, Hickory, Honey Locust, Native Oak, Persimmon, Sawtooth Oak and Sweetgum.

All trees that produce nuts or fruits are favored by many game species. Hickory provides nuts used mainly by squirrels and bear.

Shrubs and Small Trees

Bayberry, Bicolor Lespedeza, Crabapple, Dogwood, Huckleberry or Native Blueberry, Mountain Laurel, Native Holly, Red Cedar, Red Mulberry, Sumac, Wax Myrtle, Wild Plum and Blackberry.

Plant in patches without tall trees to develop stable shrub communities. All produce fruits used by many kinds of wildlife, except for lespedeza that produces seeds used by quail and songbirds.

Grasses, Legumes, Vines and Temporary Cover

Bahiagrass, Bermudagrass, Grass-Legume mixtures, Partridge Pea, Annual Lespedeza, Orchardgrass (for mountains), Browntop Millet (for temporary cover), and Native grapes.

Provides herbaceous cover in clearings for a game bird brood-rearing habitat. Appropriate legumes such as vetches, clovers, and lespedezas may be mixed with grass, but they may die out after a few years.

CONSTRUCTION SPECIFICATIONS

Grading and Shaping

Grading and shaping may not be required where hydraulic seeding and fertilizing equipment is to be used. Vertical banks shall be sloped to enable plant establishment.

When conventional seeding and fertilizing are to be done, grade and shape where feasible and practical, so that equipment can be used safely and efficiently during seedbed preparation, seeding, mulching and maintenance of the vegetation.

Concentrations of water that will cause excessive

Material	Depth
Grain straw	4" to 6"
Grass Hay	4" to 6"
Pine needles	3" to 5"
Wood waste	4" to 6"

Irrigation

Irrigation will be applied at a rate that will not cause runoff.

Topdressing

Topdressing will be applied on all temporary and permanent (perennial) species planted alone or in mixtures with other species. Recommended rates of application are listed in Table 6-5.1.

Second Year and Maintenance Fertilization

Second year fertilizer rates and maintenance fertilizer rates are listed in Table 6-5.1.

Lime Maintenance Application

Apply one ton of agricultural lime every 4 to 6 years or as indicated by soil tests. Soil tests can be conducted to determine more accurate requirements, if desired.

Use and Management

Mow Sericea Lespedeza only after frost to ensure that the seeds are mature. Mow between November and March.

Bermudagrass, Bahiagrass and Tall Fescue may be mowed as desired. Maintain at least 6 inches of top growth under any use and management. Moderate use of top growth is beneficial after establishment.

Exclude traffic until the plants are well established. Because of the quail nesting season, mowing should not take place between May and September.

soil erosion shall be diverted to a safe outlet. Diversions and other treatment practices shall conform with the appropriate standards and specifications.

Lime and Fertilizer Rates and Analysis

Agricultural lime is required at the rate of one to two tons per acre unless soil tests indicate otherwise. Graded areas require lime application. If lime is applied within six months of planting permanent perennial vegetation, additional lime is not required. Agricultural lime shall be within the specifications of the Georgia Department of Agriculture.

Lime spread by conventional equipment shall be "ground limestone." Ground limestone is calcitic or dolomitic limestone ground so that 90 percent of the material will pass through a 10-mesh sieve, not less than 50 percent will pass through a 50-mesh sieve and not less than 25 percent will pass through a 100-mesh sieve.

Fast-acting lime spread by hydraulic seeding equipment should be "finely ground limestone" spanning from the 180 micron size to the 5 micron size. Finely ground limestone is calcitic or dolomitic limestone ground so that 95 percent of the material will pass through a 100-mesh sieve.

It is desirable to use dolomitic limestone in the Sand Hills, Southern Coastal Plain and Atlantic Coast Flatwoods MLRAs. (See Figure 6-4.1)

Agricultural lime is generally not required where only trees are planted.

Initial fertilization, nitrogen, topdressing, and maintenance fertilizer requirements for each species or combination of species are listed in Table 6-5.1.

Lime and Fertilizer Application

When *hydraulic seeding* equipment is used, the initial fertilizer shall be mixed with seed, inoculant (if needed), and wood cellulose or wood pulp fiber mulch and applied in a slurry. The inoculant, if needed, shall be mixed with the seed prior to being placed into the hydraulic seeder. The slurry mixture will be agitated during application to keep the ingredients thoroughly mixed. The mixture will be spread uniformly over the area within one hour after being placed in the hydroseeder.

Finely ground limestone can be applied in the mulch slurry or in combination with the top dressing.

When *conventional planting* is to be done, lime and fertilizer shall be applied uniformly in one of the following ways:

1. Apply before land preparation so that it will be mixed with the soil during seedbed preparation.
2. Mix with the soil used to fill the holes, distribute in furrows.
3. Broadcast after steep surfaces are scarified, pitted or trenched.
4. A fertilizer pellet shall be placed at root depth in the closing hole beside each pine tree seedling.

Plant Selection

Refer to Tables 6-4.1, 6-5.2, 6-5.3 and 6-5.4 for approved species. Species not listed shall be approved by the State Resource Conservationist of the Natural Resources Conservation Service before they are used.

Plants shall be selected on the basis of species characteristics, site and soil conditions, planned use and maintenance of the area; time of year of planting, method of planting, and the needs and desires of the land user.

Some perennial species are easily established and can be planted alone. Examples of these are Common Bermuda, Tall Fescue, and Weeping Lovegrass.

Other perennials, such as Bahia Grass and Sericea Lespedeza, are slow to become established and should be planted with another perennial species. The additional species will provide quick cover and ample soil protection until the target perennial species become established. For example, Common seeding combinations are 1) Weeping Lovegrass with Sericea Lespedeza (scarified) and 2) Tall Fescue with Sericea Lespedeza (unscarified).

Plant selection may also include annual companion crops. Annual companion crops should be used only when the perennial species are not planted during their optimum planting period. A common mixture is Brown Top Millet with Common Bermuda in mid-summer. Care should be taken in selecting companion crop species and seeding rates because annual crops will compete with perennial species for water, nutrients, and growing space. A high seeding rate of the companion crop may prevent the establishment of perennial species.

Ryegrass shall not be used in any seeding mixtures containing perennial species due to its ability to out-compete desired species chosen for permanent perennial cover.

Table 6-5.1. Fertilizer Requirements

TYPE OF SPECIES	YEAR	ANALYSIS OR EQUIVALENT N-P-K	RATE	N TOP DRESSING RATE
1. Cool season grasses	First	6-12-12	1500 lbs./ac	50-100 lbs./ac. 1/2/
	Second	6-12-12	1000 lbs./ac.	
	Maintenance	10-10-10	400 lbs./ac.	30
2. Cool season grasses and legumes	First	6-12-12	1500 lbs./ac	0-50 lbs./ac. 1/
	Second	0-10-10	1000 lbs./ac.	—
	Maintenance	0-10-10	400 lbs./ac.	—
3. Ground covers	First	10-10-10	1300 lbs./ac. 3/	—
	Second	10-10-10	1300 lbs./ac. 3/	—
	Maintenance	10-10-10	1100 lbs./ac.	—
4. Pine seedlings	First	20-10-5	one 21-gram pellet per seedling placed in the closing hole	—
5. Shrub Lespedeza	First	0-10-10	700 lbs./ac.	—
	Maintenance	0-10-10	700 lbs./ac. 4/	
6. Temporary cover crops seeded alone	First	10-10-10	500 lbs./ac.	30 lbs./ac. 5/
7. Warm season grasses	First	6-12-12	1500 lbs./ac.	50-100 lbs./ac. 2/6/
	Second	6-12-12	800 lbs./ac.	50-100 lbs./ac. 2/
	Maintenance	10-10-10	400 lbs./ac.	30 lbs./ac.
8. Warm season grasses and legumes	First	6-12-12	1500 lbs./ac.	50 lbs./ac. 4/6/
	Second	0-10-10	1000 lbs./ac.	
	Maintenance	0-10-10	400 lbs./ac.	

1/ Apply in spring following seeding.
2/ Apply in split applications when high rates are used.
3/ Apply in 3 split applications.
4/ Apply when plants are pruned.
5/ Apply to grass species only.
6/ Apply when plants grow to a height of 2 to 4 inches.

mixture is Brown Top Millet with Common Bermuda in mid-summer. Care should be taken in selecting companion crop species and seeding rates because annual crops will compete with perennial species for water, nutrients, and growing space. A high seeding rate of the companion crop may prevent the establishment of perennial species.

Ryegrass shall not be used in any seeding mixtures containing perennial species due to its ability to out-compete desired species chosen for permanent perennial cover.

Seed Quality

The term "*pure live seed*" is used to express the quality of seed and is not shown on the label. Pure live seed, PLS, is expressed as a percentage of the seeds that are pure and will germinate. Information on percent germination and purity can be found on seed tags. PLS is determined by multiplying the percent of pure seed with the percent of germination, i.e.,

(PLS = % germination x % purity)

EXAMPLE

Common Bermuda seed
70% germination, 80% purity

PLS = 70% germination x 80% purity

PLS = 56%

The percent of PLS helps you determine the amount of seed you need. If the seeding rate is 10 pounds PLS and the bulk seed is 56 % PLS, the bulk seeding rate is:

10 lbs. PLS/acre = 17.9 lbs/acre
56% PLS

You would need to plant 17.9 lbs/acre to provide 10 lbs/acre of pure live seed.

Seedbed Preparation

Seedbed preparation may not be required where hydraulic seeding and fertilizing equipment is to be used (but is strongly recommended for any seeding process, when possible). When conventional seeding is to be used, seedbed preparation will be done as follows:

Broadcast plantings

1. Tillage, at a minimum, shall adequately

loosen the soil to a depth of 4 to 6 inches, alleviate compaction, incorporate lime and fertilizer, smooth and firm the soil; allow for the proper placement of seed, sprigs, or plants, and allow for the anchoring of straw or hay mulch if a disk is to be used.
2. Tillage may be done with any suitable equipment.
3. Tillage should be done on the contour where feasible.
4. On slopes too steep for the safe operation of tillage equipment, the soil surface shall be pitted or trenched across the slope with appropriate hand tools to provide two places 4 to 8 inches apart in which seed may lodge and germinate. Hydraulic seeding may also be used.

Individual Plants

1. Where individual plants are to be set, the soil shall be prepared by excavating holes, opening furrows, or dibble planting.
2. For nursery stock plants, holes shall be large enough to accommodate roots without crowding.
3. Where pine seedlings are to be planted, subsoil under the row 36 inches deep on the contour four to six months prior to planting. Subsoiling should be done when the soil is dry, preferably in August or September.

Inoculants

All legume seed shall be inoculated with appropriate nitrogen-fixing bacteria. The inoculant shall be a pure culture prepared specifically for the seed species and used within the dates on the container.

A mixing medium recommended by the manufacturer shall be used to bond the inoculant to the seed. For conventional seeding, use twice the amount of inoculant recommended by the manufacturer. For hydraulic seeding, four times the amount of inoculant recommended by the manufacturer shall be used.

All inoculated seed shall be protected from the sun and high temperatures and shall be planted

the same day inoculated. No inoculated seed shall remain in the hydroseeder longer than one hour.

Planting

Hydraulic Seeding

Mix the seed (inoculated if needed), fertilizer, and wood cellulose or wood pulp fiber mulch with water and apply in a slurry uniformly over the area to be treated. Apply within one hour after the mixture is made.

Conventional Seeding

Seeding will be done on a freshly prepared and firmed seedbed. For broadcast planting, use a cultipacker-seeder, drill, rotary seeder, other mechanical seeder, or hand seeding to distribute the seed uniformly over the area to be treated. Cover the seed lightly with 1/8 to 1/4 inch of soil for small seed and 1/2 to 1 inch for large seed when using a cultipacker or other suitable equipment.

No-Till Seeding

No-till seeding is permissible into annual cover crops when planting is done following maturity of the cover crop or if the temporary cover stand is sparse enough to allow adequate growth of the permanent (perennial) species. No-till seeding shall be done with appropriate no-till seeding equipment. The seed must be uniformly distributed and planted at the proper depth.

Individual Plants

Shrubs, vines and sprigs may be planted with appropriate planters or hand tools. Pine trees shall be planted manually in the subsoil furrow. Each plant shall be set in a manner that will avoid crowding the roots.

Nursery stock plants shall be planted at the same depth or slightly deeper than they grew at the nursery. The tips of vines and sprigs must be at or slightly above the ground surface.

Where individual holes are dug, fertilizer shall be placed in the bottom of the hole, two inches of soil shall be added and the plant shall be set in the hole.

Mulching

Mulch is required for all permanent vegetation applications. Mulch applied to seeded areas shall achieve 75% to 100% soil cover. When selecting a mulch, design professionals should consider the mulch's functional longevity, vegeta-

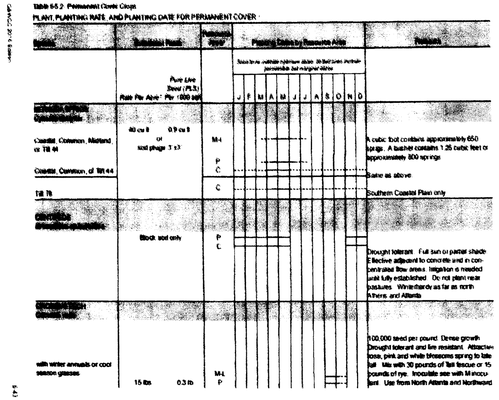
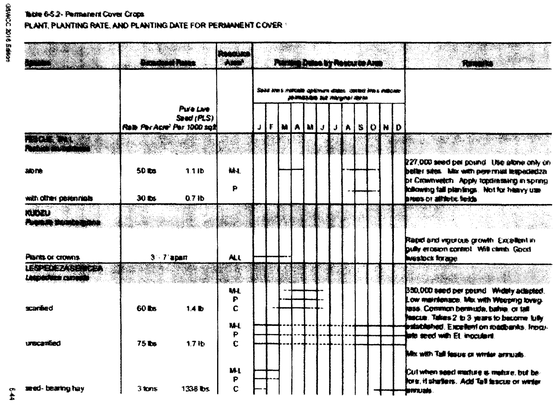


Table 6-5.2- Permanent Cover Crops
PLANT, PLANTING RATE, AND PLANTING DATE FOR PERMANENT COVER 1

Species	Seedbed Rates		Resource Area2	Planting Dates by Resource Area (Solid lines indicate optimum dates, dotted lines indicate permissible but marginal dates.) J F M A M J J A S O N D	Remarks
	Rate Per Acre	Pure Live Seed (PLS) Per 1000 sqft			
BAHIA, PENSACOLA *Paspalum notatum*					
alone or with temporary cover	60 lbs	1.4 lbs	P		165,000 seed per pound. Low growing. Sod forming. Slow to establish. Plant with a companion crop. Will spread into bermuda pastures and lawns. Mix with Sericea lespedeza or weeping lovegrass.
with other perennials	30 lbs	0.7 lb	C		
BAHIA, WILMINGTON *Paspalum notatum*					
alone or with temporary cover	60 lbs	1.4 lb	M-L		Same as above.
with other perennials	30 lbs	0.7 lb	P		
BERMUDA, COMMON *Cynodon dactylon*					
Hulled seed			P		
alone	10 lbs	0.2 lb	C		1,787,000 seed per pound. Quick cover. Low growing and sod forming. Full sun. Good for athletic fields.
with other perennials	6 lbs	0.7 lb			
BERMUDA, COMMON *Cynodon dactylon*					
Unhulled seed					
with temporary cover	10 lbs	0.2 lb	P		Plant with winter annuals.
with other perennials	6 lbs	0.1 lb	C		Plant with Tall Fescue



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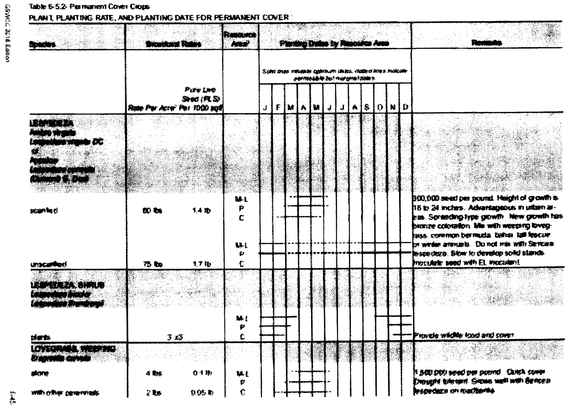
	Rate Per Acre	Pure Live Seed (PLS) Per 1000 sqft			
FESCUE, TALL *Festuca arundinacea*					
alone	50 lbs	1.1 lb	M-L		227,000 seed per pound. Use alone only on better sites. Mix with perennial lespedeza or Crownvetch. Apply topdressing in spring following fall plantings. Not for heavy use areas or athletic fields.
with other perennials	30 lbs	0.7 lb	P		
KUDZU *Pueraria thunbergiana*					
Plants or crowns	3 - 7 apart		ALL		Rapid and vigorous growth. Excellent in gully erosion control. Will climb. Good livestock forage.
LESPEDEZA, SERICEA *Lespedeza cuneata*			M-L		330,000 seed per pound. Widely adapted. Low maintenance. Mix with Weeping lovegrass. Common bermuda, bahia, or tall fescue. Takes 2 to 3 years to become fully established. Excellent on roadbanks. Inoculate seed with EL inoculant.
scarified	60 lbs	1.4 lb	P		
			C		
unscarified	75 lbs	1.7 lb	M-L		
			P		
			C		
LESPEDEZA, SHRUB *Lespedeza bicolor (Lespedeza thunbergi)*			M-L		Provide wildlife food and cover.
plants	3 x3		P		
			C		
LOVEGRASS, WEEPING *Eragrostis curvula*			M-L		1,800,000 seed per pound. Quick cover. Drought tolerant. Grows well with Sericea lespedeza on roadbanks.
alone	4 lbs	0.1 lb	P		
with other perennials	2 lbs	0.05 lb	C		



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	Rate Per Acre	Pure Live Seed (PLS) Per 1000 sqft			
LESPEDEZA *Kobe, Korean, Lespedeza stipulacea DC or Kobe Lespedeza intermedia (Lespedeza x Dunn)*					
scarified	60 lbs	1.4 lb	M-L		300,000 seed per pound. Height of growth is 18 to 24 inches. Advantageous in urban areas. Spreading-type growth. New growth has bronze coloration. Mix with weeping lovegrass, common bermuda, bahia, tall fescue or winter annuals. Do not mix with Sericea lespedeza. Slow to develop solid stands. Inoculate seed with EL inoculant.
			P		
			C		
unscarified	75 lbs	1.7 lb	M-L		
			P		
			C		
LESPEDEZA, SHRUB *Lespedeza bicolor (Lespedeza thunbergi)*			M-L		Provide wildlife food and cover.
plants	3 x3		P		
			C		
LOVEGRASS, WEEPING *Eragrostis curvula*			M-L		1,800,000 seed per pound. Quick cover. Drought tolerant. Grows well with Sericea lespedeza on roadbanks.
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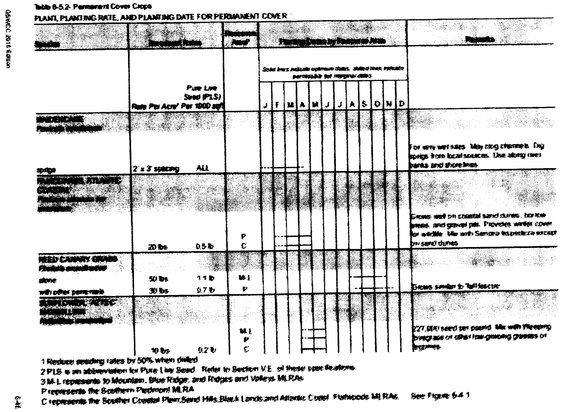

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	Rate Per Acre	Pure Live Seed (PLS) Per 1000 sqft			
HONEYSUCKLE, *Reclamation/Wildlife*					
sprigs	2 x 2' spacing	ALL			For very wet sites. May clog channels. Dig sprigs from local sources. Use along river banks and shorelines.
PANICGRASS, ATLANTIC COASTAL *Panicum amarum var. Amarulum*					
	20 lbs	0.5 lb	P		Grows well on coastal sand dunes, borrow areas, and gravel pits. Provides winter cover for wildlife. Mix with Sericea lespedeza except on sand dunes.
			C		
REED CANARY GRASS *Phalaris arundinacea*					
alone	50 lbs	1.1 lb	M-L		Grows similar to Tall fescue.
with other perennials	30 lbs	0.7 lb	P		
SUDANGRASS, HYBRIDS, COMMON *Sorghum bicolor (Sudanensis)*			M-L		227,000 seed per pound. Mix with Weeping lovegrass or other fast-growing grasses or legumes.
	10 lbs	0.2 lb	P		
			C		

1 Reduce seeding rates by 50% when drilled.
2 PLS is an abbreviation for Pure Live Seed. Refer to Section V.E. of these spec sections.
3 M-L represents the Mountain, Blue Ridge, and Ridges and Valleys MLRAs.
P represents the Southern Piedmont MLRA.
C represents the Southern Coastal Plain,Sand Hills,Black Lands,and Atlantic Coast Flatwoods MLRAs. See Figure 6-4.1.

Table 6-5.2- Permanent Cover Crops
PLANT, PLANTING RATE, AND PLANTING DATE FOR PERMANENT COVER 1

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HONEYSUCKLE, *Reclamation/Wildlife*					
sprigs	2 x 2' spacing	ALL			For very wet sites. May clog channels. Dig sprigs from local sources. Use along river banks and shorelines.
PANICGRASS, ATLANTIC COASTAL *Panicum amarum var. Amarulum*					
	20 lbs	0.5 lb	P		Grows well on coastal sand dunes, borrow areas, and gravel pits. Provides winter cover for wildlife. Mix with Sericea lespedeza except on sand dunes.
			C		
REED CANARY GRASS *Phalaris arundinacea*					
alone	50 lbs	1.1 lb	M-L		Grows similar to Tall fescue.
with other perennials	30 lbs	0.7 lb	P		
SUDANGRASS, HYBRIDS, COMMON *Sorghum bicolor (Sudanensis)*			M-L		227,000 seed per pound. Mix with Weeping lovegrass or other fast-growing grasses or legumes.
	10 lbs	0.2 lb	P		
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E&S DETAILS

GEORGIA REGISTERED No. 2641 LAND SURVEYOR BARRY D. LORD

9-21-2021

GSWCC Level II Certification # 64379
Expires 8-11-2023

Initial Date of Plans:

6-22-2021

Revision per comments:

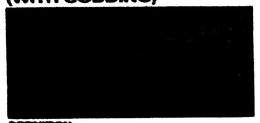
9-21-2021

Notes:

Sheet 7

Ingram, Lord and Associates
Land Surveying and Planning
437 Sam Brown Blvd
Commerce, GA 30529
706.335.9069

DISTURBED AREA STABILIZATION (WITH SODDING) Ds4



DEFINITION
A permanent vegetative cover using sods on highly erodible or critically eroded lands.

PURPOSE
- Establish immediate ground cover.
- Reduce runoff and erosion.
- Improve aesthetics and land value.
- Reduce dust and sediments.
- Stabilize waterways, critical areas.
- Filter sediments, nutrients and bugs.
- Reduce downstream complaints.
- Reduce likelihood of legal action.
- Reduce likelihood of work stoppage due to legal action.
- Increase "good neighbor" benefits.

CONDITIONS
This application is appropriate for areas that require immediate vegetative covers, drop inlets, grass swales, and waterways with intermittent flow.

PLANNING CONSIDERATIONS
Sodding can initially be more costly than seeding, but the advantages justify the increased initial costs:

1. Immediate erosion control, green surface, and quick use.
2. Reduced failure as compared to seed as well as the lack of weeds.
3. Can be established nearly year-round.

Sodding is preferable to seed in waterways and swales because of the immediate protection of the channel after application. Sodding must be staked in concentrated flow areas (See Figure 6-6.1).

Consider using sod framed around drop inlets to reduce sediments and maintaining the grade.

CONSTRUCTION SPECIFICATIONS
Soil Preparation
Bring soil surface to final grade. Clear surface of trash, woody debris, stones and clods larger than 1". Apply sod to soil surfaces only and not frozen surfaces, or gravel type soils.

Topsoil properly applied will help guarantee a stand. Don't use topsoil recently treated with herbicides or soil sterilants.

Mix fertilizer into soil surface. Fertilize based on soil tests or Table 6-6.1.

Table 6-6.1, Fertilizer Requirements for Soil Surface Application

Fertilizer Type	Fertilizer Rate (lbs/acre)	Fertilizer Rate (lbs/sq ft)	Season
10-10-10	1000	.025	Fall

Agricultural lime should be applied based on soil tests or at a rate of 1 to 2 tons per acre.

Installation
Lay sod with tight joints and in straight lines. Don't overlap joints. Stagger joints and do not stretch sod (See Figure 6-6.2)

On slopes steeper than 3:1, sod should be anchored with pins or other approved methods. Installed sod should be rolled or tamped to provide good contact between sod and soil.

Irrigate sod and soil to a depth of 4" immediately after installation.

Sod should not be cut or spread in extremely wet or dry weather. Irrigation should be used to supplement rainfall for a minimum of 2-3 weeks.

MATERIALS
Sod selected should be certified. Sod grown in the general area of the project is desirable.

1. Sod should be machine cut and contain 3/4" (+ or -1/4") of soil, not including shoots or thatch.
2. Sod should be cut to the desired size within + or -5%. Torn or uneven pads should be rejected.
3. Sod should be cut and installed within 36 hours of digging.
4. Avoid planting when subject to frost heave or hot weather, if irrigation is not available.
5. The sod type should be shown on the plans or installed according to Table 6-6.2. See Figure 6-4.1 for your Resource Area.

MAINTENANCE
Re-sod areas where an adequate stand of sod is not obtained. New sod should be mowed sparingly. Grass height should not be cut less than 2"-3" or as specified (See Figure 6-6.2).

Apply one ton of agricultural lime as indicated by soil test or every 4-8 years. Fertilize grasses in accordance with soil tests or Table 6-6.3.

Table 6-6.2 Sod Planting Requirements

Grass	Varieties	Resource Area	Growing Season
Bermudagrass	Common Tifway Tifgreen Tifdwarf	M-L,P,C P,C P,C P,C	warm weather
Bahiagrass	Pensacola	P,C	warm weather
Centipede	–	P,C	warm weather
St. Augustine	Common Bitterblue Raleigh	C	warm weather
Zoysia	Emerald Meyer	P,C	warm weather
Tall Fescue	Kentucky	M-L,P	cool weather

Table 6-6.3 Fertilizer Requirements for Sod

Types of Species	Planting Year	Fertilizer (N-P-K)	Rate (lbs./acre)	Nitrogen Top Dressing Rate (lbs./acre)
cool season grasses	first second maintenance	6-12-12 6-12-12 10-10-10	1500 1000 400	50-100 30
warm season grasses	first second maintenance	6-12-12 6-12-12 10-10-10	1500 800 400	50-100 50-100 30

hydroseeder.

Finely ground limestone can be applied in the mulch slurry or in combination with the top dressing.

When *conventional planting* is to be done, lime and fertilizer shall be applied uniformly in one of the following ways:

1. Apply before land preparation so that it will be mixed with the soil during seedbed preparation.
2. Mix with the soil used to fill the holes, distribute in furrows.
3. Broadcast after steep surfaces are scarified, pitted or trenched.
4. A fertilizer pellet shall be placed at root depth in the closing hole beside each pine tree seedling.

Plant Selection
Refer to Tables 6-4.1, 6-5.2, 6-5.3 and 6-5.4 for approved species. Species not listed shall be approved by the State Resource Conservationist of the Natural Resources Conservation Service before they are used.

Plants shall be selected on the basis of species characteristics, site and soil conditions, planned use and maintenance of the area, time of year of planting, method of planting, and the needs and desires of the land user.

Some perennial species are easily established and can be planted alone. Examples of these are Common Bermuda, Tall Fescue, and Weeping Lovegrass.

Other perennials, such as Bahia Grass and Sericea Lespedeza, are slow to become established and should be planted with another perennial species. The additional species will provide quick cover and ample soil protection until the target perennial species become established. For example: Common seeding combinations are 1) Weeping Lovegrass with Sericea Lespedeza (scarified) and 2) Tall Fescue with Sericea Lespedeza (unscarified).

Plant selection may also include annual companion crops. Annual companion crops should be used only when the perennial species are not planted during their optimum planting period. A common mixture is Brown Top Millet with Common Bermuda in mid-summer. Care should be taken in selecting companion crop species and seeding rates because annual crops will compete with perennial species for water, nutrients, and growing space. A high seeding rate of the companion crop may prevent the establishment of perennial species.

Ryegrass shall not be used in any seeding mixtures containing perennial species due to its ability to out-compete desired species chosen for permanent perennial cover.

Seed Quality
The term "pure live seed" is used to express the quality of seed and is not shown on the label. Pure live seed, PLS, is expressed as a percentage of the seeds that are pure and will germinate. Information on percent germination and purity can be found on seed tags. PLS is determined by multiplying the percent of pure seed with the percent of germination; i.e.,

(PLS = % germination x % purity)

EXAMPLE:

Common Bermuda seed
70% germination, 80% purity

PLS = 70% germination x 80% purity

PLS = 56%

The percent of PLS helps you determine the amount of seed you need. If the seeding rate is 10 pounds PLS and the bulk seed is 56 % PLS, the bulk seeding rate is:

10 lbs. PLS/acre = 17.9 lbs/acre
56% PLS

You would need to plant 17.9 lbs/acre to provide 10 lbs/acre of pure live seed.

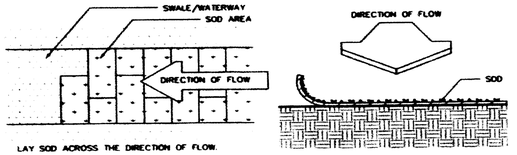
Seedbed Preparation
Seedbed preparation may not be required where hydraulic seeding and fertilizing equipment is to be used (but is strongly recommended for any seeding process, when possible). When conventional seeding is to be used, seedbed preparation will be done as follows:

Broadcast plantings

1. Tillage, at a minimum, shall adequately

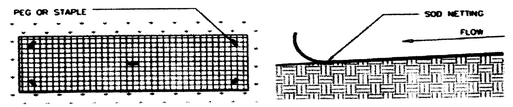
SODDED WATERWAYS

SOD DIRECTIONS



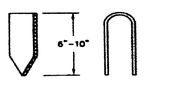
LAY SOD ACROSS THE DIRECTION OF FLOW.

NETTING DIRECTIONS



LAY NET WITH THE DIRECTION OF FLOW.

PEG DETAIL



Source: Va. DSWC

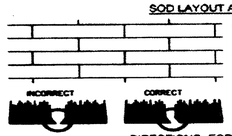
IN CRITICAL AREAS, SECURE SOD WITH NETTING USING STAPLES.

USE PEGS OR STAPLES TO FASTEN SOD FIRMLY -- AT THE ENDS OF STRIPS, AND IN THE CENTER, OR EVERY 3-4 FEET IF THE STRIPS ARE LONG. WHEN READY TO MOW, DRIVE PEGS OR STAPLES FLUSH WITH THE GROUND.

Figure 6-6.1

SOD MAINTENANCE AND INSTALLATION

SOD LAYOUT AND PREPARATION



LAY SOD IN A STAGGERED PATTERN. BUTT THE STRIPS TIGHTLY AGAINST EACH OTHER. DO NOT LEAVE SPACES AND DO NOT OVERLAP. A SHARPENED MASON'S TROWEL IS A HANDY TOOL FOR TUCKING DOWN THE ENDS AND TRIMMING PIECES.

BUTTING: ANGLED ENDS CAUSED BY THE AUTOMATIC SOD CUTTER MUST BE MATCHED CORRECTLY.

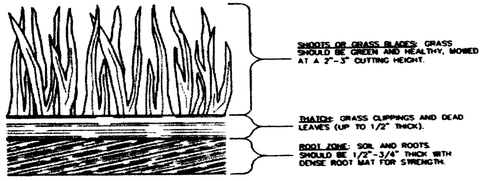
DIRECTIONS FOR INITIAL MAINTENANCE

Step 1. ROLL SOD IMMEDIATELY TO ACHIEVE FIRM CONTACT WITH THE SOIL.

Step 2. WATER TO A DEPTH OF 4" AS NEEDED. WATER WELL AS SOON AS THE SOD IS LAID.

Step 3. MOW WHEN THE SOD IS ESTABLISHED -- IN 2-3 WEEKS. SET THE MOWER HIGH (2"-3").

APPEARANCE OF GOOD SOD

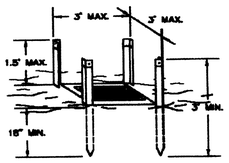


Source: Va. DSWC

Figure 6-6.2

FABRIC AND SUPPORTING FRAME FOR INLET PROTECTION

STEEL FRAME AND TYPE C SILT FENCE INSTALLATION



NOTES:
1. DESIGN IS FOR SLOPES NO GREATER THAN 5% (NOT DESIGNED FOR CONCENTRATED FLOW).
2. THE STEEL POSTS SUPPORTING THE SILT FENCE MATERIAL SHOULD BE SPACED EVENLY AROUND THE PERIMETER OF THE INLET (MAXIMUM OF 3' APART).
3. THE STEEL POSTS SHOULD BE SECURELY DRIVEN AT LEAST 18" DEEP.
4. THE FABRIC SHOULD BE ENTRENCHED AT LEAST 12" AND THEN BACKFILLED WITH CRUSHED STONE OR COMPACTED SOIL.

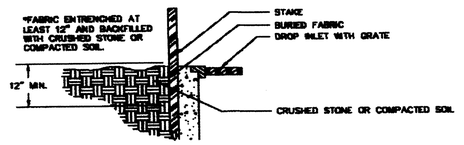
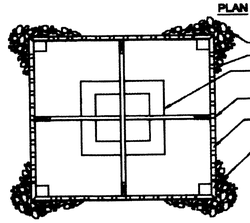
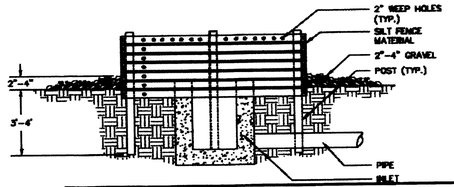


Figure 6-28.1 - Fabric and Supporting Frame For Inlet Projection

PLAN



SIDE

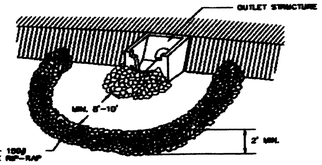


Filter Fabric with Supporting Frame S42-F

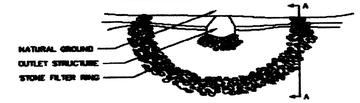
This method of inlet protection is applicable where the inlet drains a relatively flat area (slope no greater than 5%) and shall not apply to inlets receiving concentrated flows, such as in street or highway medians. As shown in Figure 6-28.1, Type S silt fence supported by steel posts should be used. The stakes shall be spaced evenly around the perimeter of the inlet a maximum of 3 feet apart, and securely driven into the ground, approximately 18 inches deep. The fabric shall be 36 inches tall and entrenched 12 inches and backfilled with crushed stone or compacted soil. Fabric and wire shall be securely fastened to the posts, and fabric ends must be overlapped a minimum of 18 inches or wrapped together around a post to provide a continuous fabric barrier around the inlet.

STONE FILTER RING

PERSPECTIVE VIEW



PLAN VIEW (NOT TO SCALE)



CROSS SECTION (NOT TO SCALE)

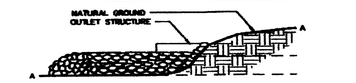


Figure 6-20.1

REMEDIATION OF PETROLEUM SPILLS AND LEAKS

LOCAL, STATE AND MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEANUP WILL BE CLEARLY POSTED AND PROCEDURES WILL BE MADE AVAILABLE TO SITE PERSONNEL.

MATERIALS AND EQUIPMENT NECESSARY FOR SPILL CLEANUP WILL BE KEPT IN THE MATERIAL STORAGE AREAS. TYPICAL MATERIALS AND EQUIPMENT INCLUDES, BUT IS NOT LIMITED TO BROOMS, DUSTPANS, MOPS, RAGS, GLOVES, GOGGLES, CAT LITTER, SAND, SAWDUST, AND PROPERLY LABELED PLASTIC AND METAL WASTE CONTAINERS.

SPILL PREVENTION PRACTICES AND PROCEDURES WILL BE REVIEWED AFTER A SPILL AND ADJUSTED AS NECESSARY TO PREVENT FUTURE SPILLS.

ALL SPILLS WILL BE CLEANED UP IMMEDIATELY UPON DISCOVERY. ALL SPILLS WILL BE REPORTED AS REQUIRED BY LOCAL, STATE, AND FEDERAL REGULATIONS.

THE CONTRACTOR SHALL NOTIFY THE LICENSED PROFESSIONAL WHO PREPARED THIS PLAN IF MORE THAN 1320 GALLONS OF PETROLEUM IS STORED ONSITE (THIS INCLUDES CAPACITIES FOR EQUIPMENT) OR IF ANY ONE PIECE OF EQUIPMENT HAS A COUNTERMEASURES PLAN PREPARED BY THAT LICENSED PROFESSIONAL.

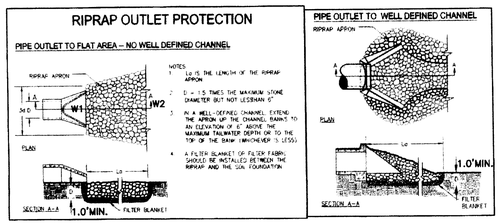
FOR SPILLS THAT IMPACT SURFACE WATER (LEAVE A SHEEN ON SURFACE WATER), THE NATIONAL RESPONSE CENTER (NRC) WILL BE CONTACTED WITHIN 24 HOURS AT 1-800-424-8802.

FOR SPILLS OF AN UNKNOWN AMOUNT, THE NATIONAL RESPONSE CENTER (NRC) WILL BE CONTACTED WITHIN 24 HOURS AT 1-800-424-8802.

FOR SPILLS GREATER THAN 25 GALLONS AND NO SURFACE WATER IMPACTS, THE GEORGIA ENVIRONMENTAL PROTECTION DIVISION (EPD) WILL BE CONTACTED WITHIN 24 HOURS.

FOR SPILLS LESS THAN 25 GALLONS AND NO SURFACE WATER IMPACTS, THE SPILL WILL BE CLEANED UP AND LOCAL AGENCIES WILL BE CONTACTED AS REQUIRED.

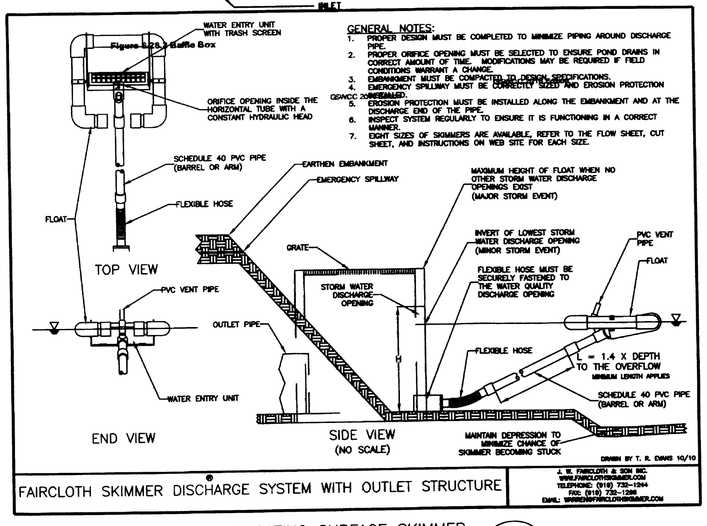
RIPRAP OUTLET PROTECTION



NOTES
1. Lo IS THE LENGTH OF THE RIPRAP APRON.
2. D = 1.5 TIMES THE MAXIMUM STONE DIAMETER BUT NOT LESS THAN 6".
3. IN A WELL-DEFINED CHANNEL EXTEND THE APRON UP THE CHANNEL BANKS TO AN ELEVATION OF 6" ABOVE THE MAXIMUM TAILWATER DEPTH OR TO THE TOP OF THE BANK (WHICHEVER IS LESS).
4. A FILTER BLANKET OR FILTER FABRIC SHOULD BE INSTALLED BETWEEN THE RIPRAP AND THE SOIL FOUNDATION.

STRUCTURE	Q25 CFS	V25 FPS	TW	DIA. INCH	Lo FT.	D50 FT.	D FT.	W1 FT.	W2 FT.
S43 BASIN B	52.8	5.2	<.50IN	36	19	0.6	1.0	9.0	22

STORM DRAIN OUTLET PROTECTION (St)



GENERAL NOTES:
1. PROPER DESIGN MUST BE COMPLETED TO MINIMIZE PIPING AROUND DISCHARGE PIPE.
2. PROPER ORIFICE OPENING MUST BE SELECTED TO ENSURE POND DRAINS IN CORRECT AMOUNT OF TIME. MODIFICATIONS MAY BE REQUIRED IF FIELD CONDITIONS WARRANT A CHANGE.
3. EMBANKMENT MUST BE COMPACTED TO DESIGN SPECIFICATIONS.
4. EMERGENCY SPILLWAY MUST BE CORRECTLY SIZED AND EROSION PROTECTION INSTALLED.
5. EROSION PROTECTION MUST BE INSTALLED ALONG THE EMBANKMENT AND AT THE DISCHARGE END OF THE PIPE.
6. INSPECT SYSTEM REGULARLY TO ENSURE IT IS FUNCTIONING IN A CORRECT MANNER.
7. EIGHT SIZES OF SKIMMERS ARE AVAILABLE, REFER TO THE FLOW SHEET, CUT SHEET, AND INSTRUCTIONS ON WEB SITE FOR EACH SIZE.

FAIRCLOTH SKIMMER DISCHARGE SYSTEM WITH OUTLET STRUCTURE

DRAWN BY T. R. DAVIS 10/10

J. W. FAIRCLOTH & SON INC.
WWW.FAIRCLOTHSKIMMER.COM
TELEPHONE: (910) 732-1244
FAX: (910) 732-1288
EMAIL: WARREN@FAIRCLOTHSKIMMER.COM

FLOATING SURFACE SKIMMER (Sk)
NO SCALE

NORTHWOODS PHASE 3
SK TEMP SEDIMENT BASIN
EQUIVALENT VOLUME

Calculate Skimmer Size

Basin Volume in Cubic Feet	12,120 Cu.Ft	Skimmer Size	2.5 Inch
Days to Drain*	3 Days	Orifice Radius	1.8 inch[es]
*As NC assume 3 days to drain		Orifice Diameter	2.8 inch[es]

Estimate Volume of Basin

	Length	Width		
Top of water surface in feet	56	64	Feet	VOLUME 12112.8 Cu. Ft.
Bottom dimensions in feet	54	40	Feet	
Depth in feet	2.8		Feet	

E&S DETAILS

GEORGIA REGISTERED No. 3241 LAND SURVEYOR LARRY D. LORD
9-21-2021

GSWCC Level II Certification # 64379
Expires 8-11-2023

Initial Date of Plans:
6-22-2021

Revision per comments:
9-21-2021

Notes:

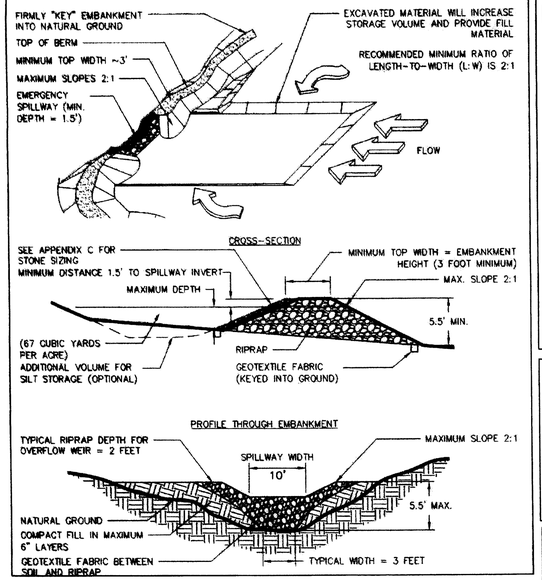
Sheet 8

Ingram, Lord and Associates
Land Surveying and Planning
437 Sam Brown Blvd
Commerce, GA 30529
706.335.9069

TEMPORARY SEDIMENT TRAP

COURTESY OF CITY OF KNOXVILLE BMP EROSION AND SEDIMENT

ROCK OUTLET



SEDIMENT TRAP (Sd4-C)

NO SCALE

ROCK OUTLET

NORTHWOODS PHASE 3 9/23/2021

BASIN A

Sd4 VOLUME — SEDIMENT VOLUME FOR 3.3 AC.

STAGE FEET	ELEV. FEET	AREA SQ. FT.	VOL CHANGE CU. FT.	TOTAL VOL CU. FT.	COMMENT
0	856.0	1916	-	0	BOTTOM SED. TRAP
1.0	857.0	2298	2107	2107	1970 CF C/O VOL. = 856.93
2.0	858.0	2705	2502	4609	5970 CF SED. VOL = 858.47
3.0	859.0	3137	2921	7530	SPILLWAY = 860.0
4.0	860.0	3594	3366	10895	TOP BERM = 861.5
5.0	861.0	4076	3835	14730	

Sd4 VOLUME = DA x 67cy x 27cf
SED. VOLUME = 3.3AC x 67cy x 27cf = 5970 CF REQUIRED
CLEANOUT VOL. = 3.3AC x 22cy x 27cf = 1960 CF REQUIRED

Sd1-S VOLUME — BASINS C, C-BYPASS, D

BASIN C	DA = 2.1 AC, TOTAL LENGTH = 995 LF 0.21 AC. / 100 LF
BASIN C BYPASS	DA = 1.1 AC, TOTAL LENGTH = 590 LF 0.19 AC. / 100 LF
BASIN D	DA = 0.6 AC, TOTAL LENGTH = 375 LF 0.16 AC. / 100 LF

21024ES *Type II 24-hr 25 YR Rainfall=6.23"*
Prepared by MLE ENGINEERING COMPANY, LLC Printed 9/21/2021
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Events for Subcatchment 1S: BASIN A

Event	Rainfall (inches)	Runoff (cfs)	Volume (acre-feet)	Depth (inches)
2 YR	3.81	13.83	0.607	2.21
10 YR	5.25	21.08	0.952	3.46
25 YR	6.23	26.01	1.193	4.34

21024ES *Type II 24-hr 25 YR Rainfall=6.23"*
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Events for Subcatchment 2S: BASIN B

Event	Rainfall (inches)	Runoff (cfs)	Volume (acre-feet)	Depth (inches)
2 YR	3.81	28.08	1.233	2.21
10 YR	5.25	42.79	1.933	3.46
25 YR	6.23	52.81	2.422	4.34

21024ES *Type II 24-hr 25 YR Rainfall=6.23"*
Prepared by MLE ENGINEERING COMPANY, LLC Printed 9/23/2021
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Summary for Subcatchment 1S: BASIN A

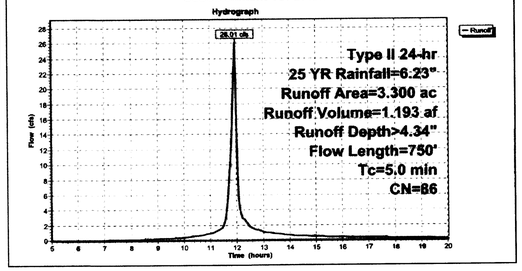
Runoff = 26.01 cfs @ 11.95 hrs, Volume= 1.193 af, Depth> 4.34"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 25 YR Rainfall=6.23"

	Area (ac)	CN	Description
*	3.300	86	
	3.300		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.8	100	0.0500	2.17		Sheet Flow, Smooth surfaces n= 0.011 P2= 3.81"
3.2	650	0.1170	3.42		Shallow Concentrated Flow, Nearly Bare & Untilled Kv= 10.0 fps
4.0	750	Total, Increased to minimum Tc = 5.0 min			

Subcatchment 1S: BASIN A



21024ES *Type II 24-hr 25 YR Rainfall=6.23"*
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Summary for Subcatchment 2S: BASIN B

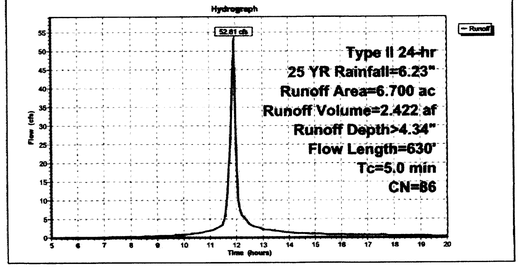
Runoff = 52.81 cfs @ 11.95 hrs, Volume= 2.422 af, Depth> 4.34"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 25 YR Rainfall=6.23"

	Area (ac)	CN	Description
*	6.700	86	
	6.700		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.1	100	0.0200	1.50		Sheet Flow, Smooth surfaces n= 0.011 P2= 3.81"
2.4	530	0.1360	3.69		Shallow Concentrated Flow, Nearly Bare & Untilled Kv= 10.0 fps
3.5	630	Total, Increased to minimum Tc = 5.0 min			

Subcatchment 2S: BASIN B



TEMPORARY SEDIMENT BASIN

CROSS-SECTIONAL DETAIL

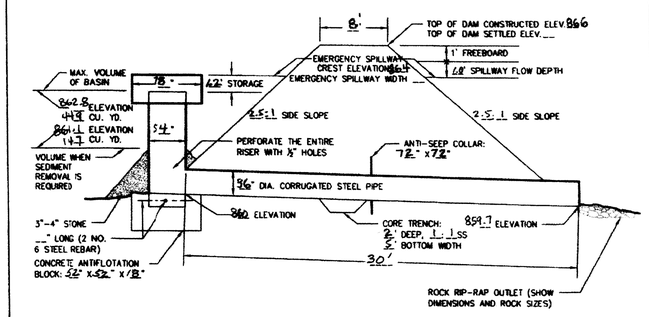


Figure 6-29.7

TEMPORARY SEDIMENT BASIN DESIGN SHEET
Project Name NORTHWOODS PH 3
Page 2 BASIN B

14. Determine diameter of principal spillway (D_w) and flow through the principal spillway (Q) from Table 6-29.1 using H and Q_w.
D_w = 36" in. Q = 50 cfs (value directly from table)
15. Compute actual flow through the principal spillway, using Table 6-29.1 to determine the correction factor for pipe length, L.
Q_w = Q * correction factor = 50 cfs * 1.18
Q_w = 59 cfs
16. Compute riser diameter (D_r).
D_r = 1.5 * D_w
D_r = 1.5 * 36 in.
D_r = 54 in.
D_r = 54 in.
17. Compute trash rack diameter (D_t).
D_t = 1.4 * D_r
D_t = 1.4* 54 in.
D_t = 76 in.
D_t = 78 in.
18. Determine the minimum distance between the riser crest and the emergency spillway crest, h, using Table 6-29.2 D_w and Q_w.
h = 1.5 ft

Concrete Riser Base Design
19. Determine the volume of concrete per vertical foot of riser height needed, from Table 6-29.3 to prevent flotation.
Required volume of concrete per vertical foot = _____ cf/v.f.
20. Compute total volume of concrete required.
Total required volume of concrete = Required volume per vertical foot * Riser length
Total required volume of concrete = 73.9 cf/v.f. * 3 ft
Total volume of concrete required = 41.7 cf
21. Assume base thickness, B (usually 18").
B = 18 in = 1.5 ft
22. Compute required surface area.
Required surface area = Total volume required / B
Required surface area = 27.8 cf / 1.5 ft
Required surface area = 18.53 sf
23. Compute riser base length (l) and width (w) (assume square base).
l = w = (required surface area)^0.5
l = w = (18.53 sf)^0.5
l = w = 4.3 ft = 12in/ft _____ ft = 52 in SQUARE

Anti-Seep Collar Design
24. Determine if anti-seep collar is required. If yes, to any of the following conditions, a collar is required:
_____ The settled height of the dam is greater than 15 feet.
_____ The principal spillway diameter (D_w) is smooth pipe larger than 8".
X The principal spillway diameter (D_w) is corrugated metal pipe larger than 12".
25. Determine size of anti-seep collar required.
X 18-inch projection (for heads (H) less than or equal to 10 feet).
_____ 24-inch projection (for heads (H) greater than 10 feet).

Emergency Spillway (es)
26. Compute minimum capacity of emergency spillway (Q_{es})
Q_{es} = Q_w - Q = 52.0 cfs - 59 cfs
Q_{es} = Max cfs

TEMPORARY SEDIMENT BASIN DESIGN SHEET

Sd3

Computed by _____ Date _____
Checked by _____ Date _____

Project Name NORTHWOODS PH 3
Basin No. B
Total area draining to basin = 6.7 acres
Disturbed area draining to basin = 6.7 acres

Volume
1. Compute minimum required storage volume (V_r).
V_r = 67 cy/ac * 6.7 acres = 449 cy 12,120 C.F.
2. Compute volume of basin at clean-out (Vc).
V_c = 22 cy/ac * 6.7 acres = 147.4 cy 3,980 C.F.
3. Determine elevation corresponding to minimum required storage volume, V_r.
Minimum riser crest elevation = 862.8 ft (determined by stage/storage relationship)
4. Determine elevation corresponding to clean-out volume, V_c.
Clean-out elevation = 861.1 ft (determined by stage/storage relationship)
Note: Clean-out elevation shall be clearly marked on the riser or marked by a post near the riser.
5. Compute length of riser.
Riser length = Minimum elevation of riser crest - Lowest elevation of pipe at riser
Riser length = 862.8 ft - 860 ft
Riser length = 2.8 ft

Stormwater Runoff
6. Compute peak discharge from a 2-yr, 24-hr storm event.
Q_2 = 28.1 cfs (Attach runoff computation sheet.)
7. Compute peak discharge from a 25-yr, 24-hr storm event.
Q_{25} = 52.8 cfs (Attach runoff computation sheet.)

Surface Area/Configuration Design
8. Compute minimum basin surface area (SA_{min}).
SA_{min} = 0.01 ac/cfs * Q_2
SA_{min} = 0.01 ac/cfs * 28.1 cfs
SA_{min} = .281 ac = 43560 sf/ac * .281 ac = 12,240 sf
9. Check available area at elevation of riser crest.
Available area = 18,172 sf (determined by stage/storage relationship)
Available area SA_{min}? Yes _____ No X
10. Compute required length to achieve 2:1 L:W ratio.
Average width = 140 ft
Required length = 2 * average width
Required length = 2 * 40 ft
Required length = 80 ft
Available length = 84 ft
2:1 L:W ratio satisfied? Yes X No _____
If "no", refer to Figure 6-29.2 for baffle designs. Note any required baffles on E&SC Plan and include calculations and details for baffle(s).

Principal Spillway (ps)
11. Determine maximum principal spillway capacity.
Q_{ps} = Q_2 = 28.1 cfs
12. Compute the vertical distance between the centerline of the outlet pipe and the emergency spillway crest (H). 861.5 864
H = 2.5 ft
13. Compute the total pipe length of the principal spillway, L, using Figure 6-29.3.
L = [A + (S+C)*2 | (Z1+Z2) + T + E = (____-(____+____)*2 | (____+____) + ____ + ____
L = 30 ft

TEMPORARY SEDIMENT BASIN DESIGN SHEET
Project Name NORTHWOODS PH.3
Page 3 BASIN B

27. Determine stage (H_s), bottom width (b), velocity (V) and minimum exit slope (S) using Table 6-29.4 and Q_w.
H_s = 1.0 ft b = 10 ft V = 4.0 fps S = 3.0 %
28. Actual entrance channel slope, S_c = 4.0 %
29. Actual exit channel slope, S_e = 3.0 %
Note: If S_e is steeper than S (from Table 6-29.4), then the velocity in the exit channel will increase.

a.) Calculate new exit velocity (V_e)
V_e = V (S/S_e) ** c _____ fps * (_____/_____) 0.5
V_e = _____ fps
Note: Refer to Channel Stabilization (Ch) to determine the proper lining for the emergency spillway.
Grass _____ Rip-rap _____ Concrete _____

Design Elevations
30. Riser crest elevation = 862.8 ft
31. Compute minimum emergency spillway crest elevation.
Minimum emergency spillway crest elevation = Riser crest elevation + h
Minimum emergency spillway crest elevation = 862.8 ft + 1.2 ft
Minimum emergency spillway crest elevation = 864 ft
32. Determine design high water elevation
Design high water elevation = Minimum emergency spillway crest elevation + Stage elevation (Hp)
Design high water elevation = 864 ft + 1.0 ft
Design high water elevation = 865 ft
33. Determine elevation of top of dam
Elevation of top of dam = Design high water elevation + 1 ft freeboard
Elevation of top of dam = 865 ft + 1 ft
Elevation of top of dam = 866 ft

PLEASE NOTE THAT DESIGN VALUES DETERMINED BY THIS SHEET REPRESENT THE MINIMUM REQUIREMENTS FOR A TEMPORARY SEDIMENT BASIN.

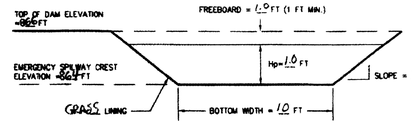
Sd3 BASIN B 9/23/2021
NORTHWOODS PHASE 3
TEMPORARY SEDIMENT POND STORAGE

STAGE - STORAGE TABLE

STAGE FEET	ELEV FEET	AREA SQ. FT.	VOL CHANGE CU. FT.	TOTAL VOL CU. FT.	COMMENT
0	860	3378		0	BOTTOM POND
			3699		
1	861	4019		3699	3980 CF C/O ELEV 861.1
			4359		
2	862	4699		8058	
			5059		12120 CF SED ELEV 862.8
3	863	5418		13116	
			5798		RISER CREST 863.0
4	864	6177		18914	SPILLWAY 864.0
			6576		
5	865	6975		25490	
			7394		
6	866	7812		32883	TOP EMBANKMENT 866.0

CROSS-SECTIONAL DETAIL OF EMERGENCY SPILLWAY

PROFILE ALONG CENTERLINE



EMERGENCY SPILLWAY

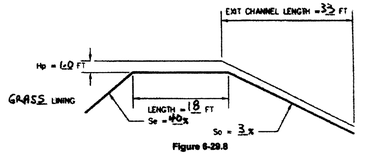


Figure 6-29.8

GSWCC
Georgia Soil and Water Conservation Commission
APPROVED

E&S DETAILS

GEORGIA REGISTERED No. 3041 LAND SURVEYOR BARRY D. LORD
9-21-2021

GSWCC Level II Certification # 64379
Expires 8-11-2023

Initial Date of Plans:
6-22-2021

Revision per comments:
9-21-2021

Notes:

Sheet 9

Ingram, Lord and Associates
Land Surveying and Planning
437 Sam Brown Blvd
Commerce, GA 30529
706.335.9069

CITY OF COMMERCE

PRELIMINARY PLAT APPLICATION

USE:

- Any subdivision involving the dedication of a public street or public land, any subdivision involving a new private street, and any subdivision requiring a public improvement as defined, shall require the submission and approval by the Commerce Planning Commission of a preliminary plat.
- Approval required prior to the issuance of related development permit.
- Amendment to Preliminary Plat already approved

IMPORTANT INFORMATION-PLEASE READ:

Prior to submission, please ensure your proposed final plat meets all specifications outlined in the City of Commerce's ***Unified Development Code***, specifically ***Article 15 Division 3 Preliminary Plat Specifications*** which can be found online at www.commercega.gov. Once your packet is submitted, staff will conduct a review and advise of any changes needed for staff to forward the plat to the Commerce Planning Commission for consideration. Please complete the form below and submit it along with all required documents and appropriate fee to Planning & Development for review. Incomplete packets will not be further processed.

CHECK ONE: ☑ Preliminary Plat Application ☐ Amendment to previously approved Preliminary Plat

CHECKLIST:

☑ 1. Fee ($250 + $25 per lot over 25 lots)_____

☑ 2. Completed Application including Property Owner Authorization Form_____

☑ 3. Copy of current recorded plat_____

☑ 3. 3 Paper Copies + 1 Digital Copy of:

- ☐ Proposed Preliminary Plat_____
- ☐ Tree Save Plan_____
- ☐ Landscape Plan_____

CITY OF COMMERCE

PROPERTY INFORMATION:

PROJECT NAME : Northwood Phase 3

TAX MAP & PARCEL #(S): MAP 020 009X

ADDRESS OF PROPERTY: _____

PROPOSED USE OF DEVELOPMENT: Residential

ROADWAY(S) TO ACCESS PROPERTY: Charleston Ave

OF LAND LOT(S): 36 TOTAL ACREAGE: 13.854

CURRENT ZONING DISTRICTS(S): A-2

RESIDENTIAL DEVELOPMENT

No. of Lots/Dwelling Units: 36

Dwelling Unit Size(s) (Heated sq. ft./ Total sq. ft.): 1600/2000

Dwelling Unit Size(s) (Heated sq. ft./ Total sq. ft.): _____

NON-RESIDENTIAL DEVELOPMENT

No. of Buildings/Lots: _____

Lot(s) abutting residential district? _____

PROPOSED SOURCE OF WATER: ☑ CITY OF COMMERCE ☐ WELL ☐ OTHER: _____

PROPOSED WASTEWATER SERVICE: ☑ CITY OF COMMERCE SEWER ☐ SEPTIC ☐ OTHER: _____

PROFESSIONAL DESIGNER INFORMATION:

Name: Barry D. Lord

Business Name: Ingram Lord & Assoc.

Address: 437 Sam Brown Blvd

City, State Commerce GA Zip 30529

Phone Number(s): 706 335 9069

Email Address barrydlord@gmail.com

CITY OF COMMERCE

TYPE OF DEVELOPMENT:

RESIDENTIAL DEVELOPMENT

NUMBER OF LOTS: 36

NUMBER OF DWELLING UNITS: ~~1600~~ 36

DWELLING UNIT SIZE (Sq. Ft.): 1600/2000

NUMBER OF NON-DWELLING UNITS: 0

PROVIDE EXPLANATION OF PROPOSED NON-DEWLLING UNITS (eg. Type, use, etc.):

NON-RESIDENTIAL DEVELOPMENT (circle one): INDUSTRIAL COMMERCIAL

NUMBER OF BUILDINGS/LOTS: _____

TOTAL BUILDING SQ FT: _____

OWNER/APPLICANT/AGENT INFORMATION: [redacted]

APPLICANT / ATTORNEY / AGENT INFORMATION:

Check One: ☑ Applicant ☐ Attorney ☐ Agent

Name: Barry D. Lord

Address: 437 Sam Brown Blvd

City, State Commerce GA Zip 30529

Phone Number(s): 706 335 9069

Email Address barry d lord @ gmail.com

CITY OF COMMERCE

OWNER/APPLICANT/AGENT INFORMATION:

APPLICANT / ATTORNEY / AGENT INFORMATION:

Check One: ☑ Applicant ☐ Attorney ☐ Agent

Name: Barry D. Lord

Address: 437 SAM Brown Blvd

City, State Commerce GA Zip 30529

Phone Number(s): 706 335 9069

Email Address barrydlord@gmail.com

PROPERTY OWNER INFORMATION:

If more than one property owner, add additional pages as needed for each property owner.

Property Owner Name: ProSteel Building Systems INC.

Mailing Address (if different from above): P.O. Box 198

City, State Dewey Rose, GA Zip 30634

Phone Number(s): 404-405-8011

Email Address careyscottneal@gmail.com

Property Owner Name: _____

Mailing Address (if different from above): _____

City, State _____ Zip _____

Phone Number(s): _____

Email Address _____

CITY OF COMMERCE

PROPERTY INFORMATION:

TAX MAP & PARCEL #(S): Tax Parcel 020 009X

ADDRESS OF PROPERTY (if applicable): _____

WARD #: _____ TOTAL ACREAGE: 13.854

NAME OF PROPOSED SUBDIVISION: North Wood Phase 3

ACCESS TO SUBDIVISION FROM: Charleston Ave

SOURCE OF WATER SUPPLY: City of Commerce

SOURCE / TYPE OF SEWAGE DISPOSAL: City of Commerce

TYPE OF DEVELOPMENT:

RESIDENTIAL DEVELOPMENT

NUMBER OF LOTS: 36

NUMBER OF DWELLING UNITS: 36

DWELLING UNIT SIZE (Sq. Ft.): 1600/2000

NUMBER OF NON-DWELLING UNITS: 0

PROVIDE EXPLANATION OF PROPOSED NON-DWELLING UNITS (eg. Type, use, etc.):

_____

_____

NON-RESIDENTIAL DEVELOPMENT (circle one): INDUSTRIAL COMMERCIAL

NUMBER OF BUILDINGS/LOTS: _____

TOTAL BUILDING SQ FT: _____

CITY OF COMMERCE

APPLICANT'S CERTIFICATION:

THE UNDERSIGNED BELOW STATES UNDER OATH THAT THEY ARE AUTHORIZED TO MAKE THIS APPLICATION.

Signature of Applicant / Attorney / Agent — Date: 3-13-2026

Barry D. Lord
Type or Print Name

Notary Seal

Tonya Gaydon
Signature of Notary Public — Date: 3-13-26

TONYA GAYDON NOTARY PUBLIC FRANKLIN COUNTY GEORGIA EXPIRES JAN. 21, 2030

CITY OF COMMERCE

PROPERTY OWNER'S CERTIFICATION:

Signature page required for each/every owner.

I do solemnly swear and attest, subject to criminal penalties for false swearing, that I am the legal owner, as reflected in the records of Jackson County, Georgia, of the property identified below, which is the subject of the attached application before the City of Commerce, Georgia. As the legal owner of record of the subject property, I hereby authorize the individual named below to act as the applicant in the pursuit of the request of the items indicated below.

I, Prosteel Building Systems authorize, _____,
(Property Owner) (Applicant)

to file for Preliminary Plat, at MAP 020 009X
(Type of Application) (Physical address or parcel #s)

on this day _____ of _____, 20_____.

- I understand that failure to supply all required information (per the relevant Applicant Checklists and requirements of the City of Commerce Zoning Ordinance) will result in REJECTION OF THE APPLICATION.
- I understand that preliminary approval of my design plan does not authorize final approval of my application. I agree to arrange sign permitting separately, after approval is obtained.
- I understand that representation associated with this application on behalf of the property owner, project coordinator, potential property owner, agent or such other representative shall be binding.

Prosteel Building Systems Inc.

X _____ 3-13-26
Signature of Property Owner Date

Scott Neal
Type or Print Name

Notary Seal

TONYA GAYDON NOTARY EXPIRES GEORGIA JAN. 21, 2030 PUBLIC FRANKLIN COUNTY

_____ 3/13/26
Signature of Notary Public Date

NORTHWOOD SUBDIVISION PHASE 3

CHARLESTON AVENUE AND WINTERGREEN PLACE

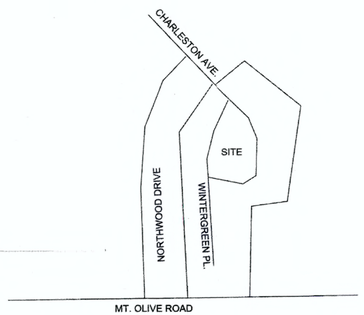
DATE: 6-22-2021
Revision 1: 9-21-2021

Project Team:
Owner - Name: PONDER DEVELOPMENT
Address: P.O. BOX 198
DEWEY ROSE , GEORGIA
30634
Contact Person:
SCOTT NEAL
Tel. #:404-405-8011

SURVEYOR: INGRAM , LORD AND ASSOC.
437 SAM BROWN BLVD.
COMMERCE , GEORGIA 30529

Contact Person: BARRY D. LORD
Tel. #: 706-335-9069

VICINITY MAP



PRIMARY PERMITEE
NAME: SCOTT NEAL
ADDRESS: P.O. BOX 198
DEWEY ROSE ,GA 30634
PHONE #:404-405-8011

24 HOUR EROSION CONTROL CONTACT:
NAME: SCOTT NEAL
ADDRESS:P.O. BOX 198
DEWEY ROSE , GA 30634
PHONE #:404-405-8011

SITE DATA:

ZONING = R5
TOTAL SITE : 13.854 ACRES
TOTAL DISTURBED = 13.602 ACRES

EXISTING LAND USE: RESIDENTIAL LOT UNIMPROVED
FUTURE LAND USE: RESIDENTIAL LOT IMPROVED

EMAIL: sneal@onebox.com

CO : LAT 34.1351^
CO : LONG. -83.2805^

ENGINEER CERTIFICATION STATEMENTS:
"I CERTIFY THAT THE PERMITTEE'S EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN PROVIDES FOR AN APPROPRIATE AND COMPREHENSIVE SYSTEM OF BEST MANAGEMENT PRACTICES REQUIRED BY THE GEORGIA WATER QUALITY CONTROL ACT AND THE DOCUMENT "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA" (MANUAL) PUBLISHED BY THE GEORGIA SOIL AND WATER CONSERVATION COMMISSION AS OF JANUARY 1 OF THE YEAR IN WHICH THE LAND-DISTURBING ACTIVITY WAS PERMITTED, PROVIDES FOR THE SAMPLING OF THE RECEIVING WATER(S) OR THE SAMPLING OF THE STORM WATER OUTFALLS AND THAT THE DESIGNED SYSTEM OF BEST MANAGEMENT PRACTICES AND SAMPLING METHODS IS EXPECTED TO MEET THE REQUIREMENTS CONTAINED IN THE GENERAL NPDES PERMIT NO. GAR 100003."

"I CERTIFY UNDER PENALTY OF LAW THAT THIS PLAN WAS PREPARED AFTER A SITE VISIT TO THE LOCATIONS DESCRIBED HEREIN BY MYSELF OR MY AUTHORIZED AGENT, UNDER MY SUPERVISION."

GSWCC LEVEL II DESIGN PROFESSIONAL CERTIFICATION # — DATE: 9-21-2021

GEORGIA SOIL AND WATER CONSERVATION COMMISSION

BARRY D. LORD
Level II Certified Design Professional
CERTIFICATION NUMBER 64379
ISSUED: 7-28-2011 EXPIRES: 8-11-2023

GEORGIA REGISTERED No. 2641 LAND SURVEYOR BARRY D. LORD
9-21-2021

GSWCC LEVEL II CERTIFICATION # 64379

NORTHWOOD
PHASE 3

DATE: 6-22-2021
Revision 1: 9-21-2021

6-22-2021	INTIAL DATE OF PLANS
9-21-2021	Revised per comments

STANDARD EROSION CONTROL NOTES:

THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO, OR CONCURRENT WITH, LAND DISTURBING ACTIVITIES.

EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE.

ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 14 DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING.

PRIOR TO LAND-DISTURBING ACTIVITIES, THE CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION MEETING WITH THE AREA EROSION CONTROL INSPECTOR. CALL 706-335-9069 TO CONTACT THE INSPECTOR.

ANY DISTURBED AREA LEFT IDLE FOR A PERIOD GREATER THAN 14 DAYS SHALL BE STABILIZED WITH TEMPORARY SEEDING; DISTURBED AREAS IDLE 30 DAYS SHALL BE STABILIZED WITH PERMANENT VEGETATION.

EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSPECTED AT LEAST WEEKLY, AFTER EACH RAIN, AND REPAIRED AS NECESSARY.

ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED IF DETERMINED NECESSARY BY ON-SITE INSPECTION.

SILT FENCE SHALL MEET THE REQUIREMENTS OF SECTION 171 - TYPE C TEMPORARY SILT FENCE, OF THE GEORGIA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS (QUALIFIED PRODUCTS LIST #36) AND BE WIRE REINFORCED.

A HAUL ROUTE PERMIT IS REQUIRED WHEN MORE THAN 500 CUBIC YARDS OF HAULED VOLUME TO OR FROM THE SITE. PLANS MUST INCLUDE A STATEMENT INDICATING WHETHER OR NOT A HAUL ROUTE PERMIT IS REQUIRED.

Oconee River Soil and Water Conservation District
BANKS, CLARKE, JACKSON AND OCONEE COUNTIES

Project Name: Northwood S/D Phase 3
Property Address: Charleston Drive
Total Project area: 13.854 ac
Total disturbed area: 13.602 Ac
Soil series: CfC2 , PuD2 , MrD2
Date received by ORSWCD:
GPS location of Construction (left to decimal degrees) Lat = 34.1351°
Long = -83.2806°
Is this a residential? Yes
Issuing Authority (include email address for comments) City of Commerce dillon@e commerce.ga.gov
Design Professional (include email address for comments) Barry D. Lord barrydlord@gmail.com
Design professional Level II certification number and expiration # 64379 8-11-2023
Applicant name address and phone number: Ponder Development P.O. Box 198 DEWEY Rose, GA 30634

2 COPIES OF PLANS FROM OCONEE AND BARROW COUNTIES MUST INCLUDE A SHIPPING LABEL

REQUIRED TO CONSERVE OUR SOIL AND WATER OUR NATURAL RESOURCES

approved by City of Commerce Planning Commission
1/24/2022

EROSION, SEDIMENTATION & POLLUTION CONTROL PLAN CHECKLIST
COMMON DEVELOPMENT CONSTRUCTION PROJECTS (Primary and Tertiary Permittees)
GAEPC

Project Name: Northwood Phase 3 Address: Charleston Ave.
City/County: Commerce, Jackson Date on Plans: 9-21-2021
Name & email of person filling out checklist: Barry@Lord Email: Lord

Plan Page # | Included Y/N | TO BE SHOWN ON ESAPC PLAN

1 Y — The applicable Erosion, Sedimentation and Pollution Control Plan Checklist established by the Commission as of January 1 of the year in which the land-disturbing activity was permitted (The completed Checklist must be submitted with the ESAPC Plan or the Plan will not be reviewed)
2 Y — Level II certification number issued by the Commission, signature and seal of the certified design professional. (Signature, seal and Level II number must be on each sheet pertaining to ESAPC Plan or the Plan will not be reviewed)
N/A — 3 Limit of disturbance shall be no greater than 50 acres at any one time without prior written authorization from the GAEPD District Office. If GAEPD approve the request to disturb 50 acres or more at any one time, the Plan must include at least 4 of the BMPs listed in Appendix 1 of this checklist and the GAEPD approval letter. * (A copy of the written approval by GAEPD must be attached to the Plan for the Plan to be reviewed.)
4 Y — The name and phone number of the 24-hour contact responsible for erosion, sedimentation and pollution controls.
5 Y — Provide the name, address, email address, and phone number of the primary permittee or tertiary permittee.
6 Y — Note total and disturbed acreages of the project or phase under construction.
7 Y — Provide the GPS location of the construction exit for the site. Give the Latitude and Longitude in decimal degrees.
8 Y — Initial date of the Plan and the dates of any revisions made to the Plan including the entity who requested the revisions.
9 Y — Descriptions of the nature of construction activity and existing site conditions.
10 Y — Provide vicinity map showing site's relation to surrounding areas. Include designation of specific phase, if necessary
11 Y — Identify the project receiving waters and describe all sensitive adjacent areas including streams, lakes, residential areas, wetlands, marshlands, etc. which may be affected.
12 Y — Design professional's certification statement and signature that the site was visited prior to development of the ESAPC Plan as stated on Part IV page 23 of the permit.
13 Y — Design professional's certification statement and signature that the permittee's ESAPC Plan provides for an appropriate and comprehensive system of BMPs and sampling to meet permit requirements as stated on Part IV pg 22 of the permit.
14 Y — Clearly note the statement that "The design professional who prepared the ESAPC Plan is to inspect the installation of the initial sediment storage requirements and perimeter control BMPs within 7 days after installation." in accordance with Part IV.A.3 page 27 of the permit. *
15 Y — Clearly note the statement that "Non-exempt activities shall not be conducted within the 25 or 50-foot undisturbed stream buffers as measured from the point of wrested vegetation or within 25-feet of the coastal marshland buffer as measured from the Jurisdictional Determination Line without first acquiring the necessary variances and permits."
16 Y — Provide a description of any buffer encroachments and indicate whether a buffer variance is required.
17 Y — Clearly note the statement that "Areas/constructions to the ESAPC Plan which have a significant effect on BMPs with a hydraulic component must be certified by the design professional. *
18 Y — Clearly note the statement that "Waste materials shall not be discharged to waters of the State, except as authorized by a Section 404 permit." *

19 Y — Clearly note statement that "The escape of sediment from the site shall be prevented by the installation of erosion and sediment control measures and practices prior to land disturbing activities."
20 Y — Clearly note statement that "Erosion control measures will be maintained at all times. If full implementation of the approved Plan does not provide for effective erosion control, additional erosion and sediment control measures shall be implemented to control or treat the sediment source."
21 Y — Clearly note the statement "Any disturbed area left exposed for a period greater than 14 days shall be stabilized with mulch or temporary seeding."
N/A — 22 Indication that the applicable portion of the primary permittees ESAPC Plan is to be provided to each secondary permittee prior to the secondary conducting any construction activity and that each secondary shall sign the Plan or portion of the Plan applicable to their site. List the names and addresses of all secondary permittees. *
N/A — 23 Any construction activity which discharges storm water into an Impaired Stream Segment, or within 1 linear mile upstream of and within the same watershed as any portion of a 6/byte Impaired Stream Segment, must comply with Part III. C. of the permit. Include the completed Appendix 1 listing all the BMPs that will be used for those areas of the site which discharge to the Impaired Stream Segment. *
N/A — 24 If a TMDL Implementation Plan for sediment has been finalized for the Impaired Stream Segment (identified in Item 23 above) at least six months prior to submittal of NOI, the ESAPC Plan must address any site-specific conditions or requirements included in the TMDL Implementation Plan. *
25 Y — BMPs for concrete washdown of tools, concrete mixer chutes, hoppers and the rear of the vehicles. Washout of the drum at the construction site is prohibited.
26 Y — Provide BMPs for the remediation of oil petroleum spills and leaks.
27 Y — Description of practices to provide cover for building materials and building products on site. *
28 Y — Description of the measures that will be installed during the construction process to control pollutants in storm water that will occur after construction operations have been completed.
29 Y — Description of the practices that will be used to reduce the pollutants in storm water discharges.
30 Y — Description and chart or timeline of the intended sequence of major activities which disturb soils for the major portions of the site (i.e., initial perimeter and sediment storage BMPs, clearing and grubbing activities, excavation activities, utility activities, temporary and final stabilization). *
31 Y — Provide complete requirements of Inspections and record keeping by the primary permittee or tertiary permittee.
32 Y — Provide complete requirements of Sampling Frequency and Reporting of sampling results. *
33 Y — Provide complete details for Retention of Records as per Part IV.F. of the permit.
34 Y — Description of analytical methods to be used to collect and analyze the samples from each location. *
35 N/A — Appendix B rationale for NTU values at all outfall sampling points where applicable. *
36 N/A — Delineate all sampling locations if applicable, perennial and intermittent streams and other water bodies into which storm water is discharged. *
37 Y — A description of appropriate controls and measures that will be implemented at the construction site including: (1) Initial sediment storage requirements and perimeter control BMPs, (2) intermediate grading and drainage BMPs, and (3) final BMPs. For construction sites where there will be no mass grading and the initial perimeter control BMPs, intermediate grading and drainage BMPs, and final BMPs are the same, the Plan may combine all of the BMPs into a single phase.
38 Y — Plan addresses BMPs for all phases of common development including individual building lots and out-parcels, etc. regardless of who owns or operates the individual sites. Include a typical and any situational lots applicable.

39 Y — Graphic scale and North arrow.
40 Y — Existing and proposed contour lines with contour lines drawn at an interval in accordance with the following:

Map Scale	Ground Slope	Contour Intervals, ft.
1 inch = 1000 or larger scale	Flat 0 - 2%	0.5 or 1
	Rolling 2 - 8%	1 or 2
	Steep 8% +	2,5 or 10

N/A — 41 Use of alternative BMPs whose performance has been documented to be equivalent to or superior to conventional BMPs as certified by a Design Professional (unless disapproved by GAEPD or the Georgia Soil and Water Conservation Commission). Please refer to the Alternative BMP Guidance Document found at www.gaswcc.georgia.gov.
N/A — 42 Use of alternative BMP for application to the Equivalent BMP List. Please refer to Appendix A-2 of the Manual for Erosion & Sediment Control in Georgia 2016 Edition.
N/A — 43 Delineation of the applicable 25-foot or 50-foot undisturbed buffers adjacent to State waters and any additional buffers required by the Local Issuing Authority. Clearly note and delineate all areas of impact.
N/A — 44 Delineation of on-site wetlands and all State waters located on and within 200 feet of the project site.
2,3 Y — 45 Delineation and acreage of contributing drainage basins on the project site.
7 Y — 46 Provide hydrology study and maps of drainage basins for both the pre- and post-developed conditions. *
7 Y — 47 An estimate of the runoff coefficient or peak discharge flow of the site prior to and after construction activities are completed. *
N/A — 48 Storm drain pipe and weir velocities with appropriate outlet protection to accommodate discharges without erosion. Identify/Delineate all storm water discharge points.
7 Y — 49 Soil series for the project site and their delineation.
2,3 Y — 50 The limits of disturbance for each phase of construction.
2,3 Y — 51 Provide a minimum of 67 cubic yards of sediment storage per acre drained using a temporary sediment basin, retrofitted detention pond, and/or embedded inlet sediment traps for each common drainage location. Sediment storage volume must be in place prior to and during all land disturbance activities until final stabilization of the site has been achieved. A written justification explaining the decision to use equivalent controls when a sediment basin is not attainable must be included in the Plan for each common drainage location in which a sediment basin is not provided. A written justification as to why 67 cubic yards of storage is not attainable must also be given. Worksheets from the Manual must be included for structural BMPs and all calculations used by the design professional to obtain the required sediment storage when using equivalent controls. When discharging from sediment basins and impoundments, permittees are required to utilize outlet structures that withdraw water from the surface, unless infeasible. If outlet structures that withdraw water from the surface are not feasible, a written justification explaining this decision must be included in the Plan.
2,3 Y — 52 Location of Best Management Practices that are consistent with, and no less stringent than, the Manual for Erosion and Sediment Control in Georgia. Use uniform coding symbols from the Manual, Chapter 6, with legend.
7,8 Y — 53 Provide detailed drawings for all structural practices. Specifications must, at a minimum, meet the guidelines set forth in the Manual for Erosion and Sediment Control in Georgia.
7,8 Y — 54 Provide vegetative plan, noting all temporary and permanent vegetative practices. Include species, planting dates and seeding, fertilizer, lime and mulching rates. Vegetative plan shall be site specific for appropriate time of year that seeding will take place and for the appropriate geographic region of Georgia.

* This requirement of the Common Development permit is not applicable to Tertiary Permittees with a Plan(s) for a typical individual lot(s). If the total land disturbance within the construction site is less than five (5) acres and the total land disturbance within each individual lot is less than one (1) acre. If applicable, the * checklist item would be N/A

Effective January 1, 2023

GSWCC
Georgia Soil and Water Conservation Commission
APPROVED

S-1

INITIAL E&S PLAN
NORTHWOODS PHASE 3

13.854 ACRES
GMD NO.255
JACKSON COUNTY , GEORGIA
CITY OF COMMERCE
SCALE: 1"=60'
DATE: 6-22-2021

MAGNETIC NORTH

** LEGEND **

IPF = IRON PIN FOUND
IPS = IRON PIN SET
CMF = CONCRETE MONUMENT FOUND
R/W = RIGHT OF WAY
BL = BUILDING LINE
LL = LAND LOT LINE
LL = LAND LOT
N/F = NOW OR FORMERLY
NTS = NOT TO SCALE
CL = CENTER LINE
BM = BENCH MARK
TBM = TEMPORARY BENCH MARK
PC = POINT OF CURVATURE
PI = POINT OF INTERSECTION
PT = POINT OF TANGENCY
R = RADIUS
CH = CHORD
IE = INVERT ELEVATION
-T- = TELEPHONE LINE
-W- = WATER LINE
-G- = GAS LINE
-S- = SEWER LINE
-P- = POWER LINE
MH = MAN HOLE
SSE = SANITARY SEWER EASEMENT
DE = DRAINAGE EASEMENT
CE = CONSTRUCTION EASEMENT
CB = CATCH BASIN
JB = JUNCTION BOX
DI = DROP INLET
HW = HEAD WALL
FH = FIRE HYDRANT
RCP = REINFORCED CONCRETE PIPE

NARRATIVE:

THE LOTS ARE LOCATED NORTHWOOD PHASE 3.
THE PLAN IS TO CONSTRUCT A SINGLE FAMILY RESIDENCE ON THE LOT.
THE LOT IS WOODED WITH ROLLING TERRAIN.
RUNOFF WHEN STABILIZED FROM THIS LOT SHOULD NOT ADVERSLEY AFFECT THE SURROUNDING AREA.

INTIAL PHASE EROSION SEDIMENT CONTROL SCHEDULE:

1) CONDUCT A PRECONSTRUCTION MEETING WITH EROSION CONTROL INSPECTOR, 706-367-5908 , STAKE CLEARING LIMITS , BUFFERS , WETLANDS , ETC.
2) INSTALL CONSTRUCTION EXIT AND SILT FENCE (SD1)
3) CLEAR TREES , REMOVE ALL STUMPS , AND STRIP TOP SOIL.
4) TEMPORARY GRASSING / MULCHING Ds1 AND Ds2 (@ 14 DAY INTERVALS)

2. Level II Certification: Barry D. Lord #64379 Expires: 8-11-2023
3. Disturbed area does not exceed 50 acres.
4. 24-hour local contact: SCOTT NEAL 404-405-8011
5. Contact information for permittee: SCOTT NEAL P.O. BOX 198 DEWEY ROASE , GEORGIA 30634 404-405-8011
6. Total acreage of project or phase under construction: 13.854 ACRES Disturbed acerage of project or phase under construction: 13.602ACRES
7. GPS location of construction exit of site: LAT= 34.1351 LONG= -83.2805
8. Initial Plan Date 6-22-2021 Revised Plan Date
9. Description of construction activity: Proposed building a SINGLE FAMILY RESIDENCE ON EACH LOT.
10. Vicinity map of area:ON COVER SHEET
11. Receiving waters and sensitive adjacent areas: Unnamed Tributary of BEAVERDAM CREEK.
12. "I certify under penalty of law that this Plan was prepared after a site visit to the locations described herein by myself or my authorized agent, under my supervision."

9-21-2021

13. "I certify that the permittee's Erosion, Sedimentation and Pollution Control Plan provides for an appropriate and comprehensive system of best management practices required by the Georgia Water Quality Control Act and the document "Manual for Erosion and Sediment Control in Georgia: (Manual) published by the Georgia Soil and Water Conservation Commission as of January 1 of the year in which the land-disturbing activity was permitted, provides for the sampling of the receiving water(s) or the sampling of the stormwater outfalls and that the designed system of best management practices and sampling methods is expected to meet the requirements contained in the General NPDES Permit No. GAR100003."

9-21-2021

14. "The design professional who prepared the ES&PC Plan is to inspect the installation of the initial sediment storage requirements and and perimeter control BMPs within 7 days after installation."
15. "Non-exempt activites shall not be conducted within the 25 or 50-foot undisturbed stream buffers as measures from the point of wrested vegetation or within the coastal marshland buffer as measured from the Jurisdictional Determination Line without first aquiring the necessary variances and permits."
16. No buffer encroachments or buffer variance needed.
17. "Amendments/revisions to the ES&PC Plan which have a significant effect on BMPs with a hydraulic component must be certified by the design professional."
18. "Waste materials shall not be discharged to waters of the State, except as authorized by a section 404 permit."
19. "The escape of sediment from the site shall be prevented by the installation of erosion and sediment control measures and practices prior to land disturbing activities."
20. "Erosion control measures will be maintained at all times. If full implementation of the approved Plan does not provide for effective erosion control, additional erosion and sediment control measures shall be implemented to control or treat the sediment source."
21. "Any disturbed area left exposed for a period greater than 14 days shall be stabilized with mulch or temporary seeding."

GEORGIA REGISTERED No. 2641 LAND SURVEYOR BARRY D. LORD

9-21-2021

27) PLASTIC SHEETING SHOULD BE USED TO COVER ALL BUILDING MATERIALS , BUILDING PRODUCTS , CONSTRUCTION WASTE , TRASH , LANDSCAPE MATERIALS , FERTILIZERS, PESTICIDES, HERBICIDES, DETERGENTS , SANITARY WASTE, IN ORDER TO MINIMIZE EXPOSURE TO PERCIPITATION AND TO STORMWATER.

28) ALL FRONT YARDS AND SIDE YARDS WILL BE STABILIZED WITH SOD TO HELP CONTROL POLLUTANTS AFTER CONSTRUCTION IS COMPLETED. ALL STORM WATER FROM SITE IS DIRECTED INTO A STORM MANAGEMENT BMP .

CALL BEFORE YOU DIG
UTILITIES PROTECTION CENTER
1-800-282-7411
GEORGIA 811

NO CREEKS WITHIN 200' OF SITE
NO WETLANDS WITHIN 200' OF SITE
WASHOUT OF DRUM ON CONSTRUCTION SITE IS PROHIBITED
24 HOUR SOIL EROSION CONTROL CONTACT: SCOTT NEAL 404-405-8011
GSWCC CERTIFICATION # 64379 EXPIRES 8-11-2023

60 0 60 120 180
GRAPHIC SCALE - FEET

Sd1 TYP.
Sd1 S
TYPE C
48" POST
36" FABRIC
30" EXPOSED
6" TRENCHED

BASIN C BYPASS
1.1 AC TO Sd1
590 LF Sd1
1.1/5.9 = 0.19 AC PER 100 LF

BASIN C
2.1 AC TO Sd1
995 LF Sd1
2.1/9.95 = 0.21 AC PER 100 LF

BASIN D
0.6 AC TO Sd1
375 LF Sd1
0.6/3.75 = 0.16 AC PER 100 LF

BASIN A
3.3 AC TO Sd4-C

BASIN B
6.7 AC TO Sd3

Sd4-C
BOTTOM ELEV 856
TOP BERM 861.5
CLEANOUT ELEV 856.9
SEDIMENT ELEV 858.5
SPILLWAY ELEV 860.0

Sd3
BOTTOM ELEV 860
TOP ELEV 866
CLEANOUT ELEV 861.1
SEDIMENT ELEV 862.8

ACTIVITY	MONTH 1	MONTH 2	MONTH 3	MONTH 4	MONTH 5	MONTH 6
EROSION CONTROL INSTALL.						
EROSION CONTROL MAINT.						
CLEARING AND GRUBBING						
ROUGH GRADING						
TEMP. GRASSING						
FINAL GRASSING						
FINAL LANDSCAPING						
REMOVAL OF E&S MEASURES						

INGRAM,LORD & ASSOCIATES
LAND SURVEYING AND PLANNING
437 SAM BROWN BLVD.
COMMERCE , GEORGIA 30529
706-335-9069

NW3

INTERMEDIATE E&S PLAN

NORTHWOODS PHASE 3

13.854 ACRES
GMD NO.255
JACKSON COUNTY , GEORGIA
CITY OF COMMERCE
SCALE: 1"=60'
DATE: 6-22-2021
Revision 1: 9-21-2021

MAGNETIC NORTH

SOIL SERIES: CfC2 CECIL SOILS
PuD2 PACOLET SOILS
MiD2 MADISON SOILS

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NARRATIVE:

THE LOTS ARE LOCATED NORTHWOOD PHASE 3.
THE PLAN IS TO CONSTRUCT A SINGLE FAMILY RESIDENCE ON THE LOT.
THE LOT IS WOODED WITH ROLLING TERRAIN.
RUNOFF WHEN STABILIZED FROM THIS LOT SHOULD NOT ADVERSLEY AFFECT THE SURROUNDING AREA.

INTERMEDIATE PHASE EROSION CONTROL SCHEDULE:

1) BEGIN MASS GRADING OF SITE
2) CONSTRUCT ANY RETAINING WALLS
3) INSTALL UTILITIES
4) MAINTAIN TEMPORARY GRASSING @14DAY INTERVALS , SILT FENCE AND CONSTRUCTION EXIT.

SEDIMENT STORAGE VOLUME MUST BE IN PLACE PRIOR TO AND DURING ALL LAND DISTURBANCE ACTIVITIES UNTIL FINAL STABILIZATION OF THE SITE HAS BEEN ACHIEVED. FINAL STABILIZATION REFERS TO SOIL DISTURBANCE ACTIVITIES BEING COMPLETE.

Sd1 TYP.
TYPE C
48" POST
36" FABRIC
30" EXPOSED
6" TRENCHED

2. Level II Certification: Barry D. Lord #64379 Expires: 8-11-2023
3. Disturbed area does not exceed 50 acres.
4. 24-hour local contact: SCOTT NEAL 404-405-8011
5. Contact information for permittee: SCOTT NEAL P.O. BOX 198 DEWEY ROASE , GEORGIA 30634 404-405-8011
6. Total acreage of project or phase under construction: 13.854 ACRES Disturbed acreage of project or phase under construction: 13.602ACRES
7. GPS location of construction exit of site: LAT= 34.1351 LONG= -83.2805
8. Initial Plan Date: 6-22-2021 Revised Plan Date:
9. Description of construction activity: Proposed building a SINGLE FAMILY RESIDENCE ON EACH LOT.
10. Vicinity map of area:ON COVER SHEET
11. Receiving waters and sensitive adjacent areas: Unnamed Tributary of BEAVERDAM CREEK.
12. "I certify under penalty of law that this Plan was prepared after a site visit to the locations described herein by myself or my authorized agent, under my supervision."

9-21-2021

13. "I certify that the permittee's Erosion, Sedimentation and Pollution Control Plan provides for an appropriate and comprehensive system of best management practices required by the Georgia Water Quality Control Act and the document "Manual for Erosion and Sediment Control in Georgia: (Manual) published by the Georgia Soil and Water Conservation Commission as of January 1 of the year in which the land-disturbing activity was permitted, provides for the sampling of the receiving water(s) or the sampling of the stormwater outfalls and that the designed system of best management practices and sampling methods is expected to meet the requirements contained in the General NPDES Permit No. GAR100003."

9-21-2021

14. "The design professional who prepared the ES&PC Plan is to inspect the installation of the initial sediment storage requirements and and perimeter control BMPs within 7 days after installation."
15. "Non-exempt activities shall not be conducted within the 25 or 50-foot undisturbed stream buffers as measured from the point of wrested vegetation or within the coastal marshland buffer as measured from the Jurisdictional Determination Line without first aquiring the necessary variances and permits."
16. No buffer encroachments or buffer variance needed.
17. "Amendments/revisions to the ES&PC Plan which have a significant effect on BMPs with a hydraulic component must be certified by the design professional."
18. "Waste materials shall not be discharged to waters of the State, except as authorized by a section 404 permit."
19. "The escape of sediment from the site shall be prevented by the installation of erosion and sediment control measures and practices prior to land disturbing activities."
20. "Erosion control measures will be maintained at all times. If full implementation of the approved Plan does not provide for effective erosion control, additional erosion and sediment control measures shall be implemented to control or treat the sediment source."
21. "Any disturbed area left exposed for a period greater than 14 days shall be stabilized with mulch or temporary seeding."

GEORGIA REGISTERED No. 3041 LAND SURVEYOR BARRY D. LORD

9-21-2021

27) PLASTIC SHEETING SHOULD BE USED TO COVER ALL BUILDING MATERIALS , BUILDING PRODUCTS , CONSTRUCTION WASTE , TRASH , LANDSCAPE MATERIALS , FERTILIZERS, PESTICIDES, HERBICIDES, DETERGENTS , SANITARY WASTE, IN ORDER TO MINIMIZE EXPOSURE TO PERCIPITATION AND TO STORMWATER.

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24 HOUR SOIL EROSION CONTROL CONTACT: SCOTT NEAL 404-405-8011
GSWCC CERTIFICATION # 64379 EXPIRES 8-11-2023

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UTILITIES PROTECTION CENTER
1-800-282-7411
GEORGIA 811

60 0 60 120 180
GRAPHIC SCALE - FEET

GSWCC Georgia Soil and Water Conservation Commission APPROVED

ACTIVITY	MONTH 1	MONTH 2	MONTH 3	MONTH 4	MONTH 5	MONTH 6
EROSION CONTROL INSTALL.						
EROSION CONTROL MAINT.						
CLEARING AND GRUBBING						
ROUGH GRADING						
TEMP. GRASSING						
FINAL GRASSING						
FINAL LANDSCAPING						
REMOVAL OF E&S MEASURES						

INGRAM, LORD & ASSOCIATES
LAND SURVEYING AND PLANNING
437 SAM BROWN BLVD.
COMMERCE , GEORGIA 30529
706-335-9069

NW3

FINAL E&S PLAN FOR:

NORTHWOODS PHASE 3

13.854 ACRES

GMD NO.255

JACKSON COUNTY , GEORGIA

CITY OF COMMERCE

SCALE: 1"=60'

DATE: 6-22-2021

Revision 1: 9-21-2021

NARRATIVE:

THE LOTS ARE LOCATED NORTHWOOD PHASE 3.
THE PLAN IS TO CONSTRUCT A SINGLE FAMILY RESIDENCE ON THE LOT.
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FH = FIRE HYDRANT
RCP = REINFORCED CONCRETE PIPE

2. Level II Certification: Barry D. Lord #64379 Expires: 8-11-2023

3. Disturbed area does not exceed 50 acres.

4. 24-hour local contact: SCOTT NEAL 404-405-8011

5. Contact information for permittee: SCOTT NEAL
P.O. BOX 198
DEWEY ROASE , GEORGIA 30634
404-405-8011

6. Total acerage of project or phase under construction: 13.854 ACRES
Disturbed acerage of project or phase under construction: 13.602ACRES

7. GPS location of construction exit of site: LAT= 34.1351
LONG= -83.2805

8. Initial Plan Date: 6-22-2021
Revised Plan Date:

9. Description of construction activity: Proposed building a SINGLE FAMILY RESIDENCE ON EACH LOT.

10. Vicinity map of area:ON COVER SHEET

11. Receiving waters and sensitive adjacent areas: Unnamed Tributary of BEAVERDAM CREEK.

12. "I certify under penalty of law that this Plan was prepared after a site visit to the locations described herein by myself or my authorized agent, under my supervision."

9-21-2021

13. "I certify that the permittee's Erosion, Sedimentation and Pollution Control Plan provides for an appropriate and comprehensive system of best management practices required by the Georgia Water Quality Control Act and the document "Manual for Erosion and Sediment Control in Georgia: (Manual) published by the Georgia Soil and Water Conservation Commission as of January 1 of the year in which the land-disturbing activity was permitted, provides for the sampling of the receiving water(s) or the sampling of the stormwater outfalls and that the designed system of best management practices and sampling methods is expected to meet the requirements contained in the General NPDES Permit No. GAR100003."

9-21-2021

14. "The design professoinal who prepared the ES&PC Plan is to inspect the installation of the initial sediment storage requirements and and perimeter control BMPs within 7 days after installation."

15. "Non-exempt activites shall not be conducted within the 25 or 50-foot undisturbed stream buffers as measured from the point of wrested vegetaion or within the coastal marshland buffer as measured from the Jurisdictional Determination Line without first aquiring the necessary variances and permits."

16. No buffer encroachments or buffer variance needed.

17. "Amendments/revisions to the ES&PC Plan which have a significant effect on BMPs with a hydraulic component must be certified by the design professional."

18. "Waste materials shall not be discharged to waters of the State, except as authorized by a section 404 permit."

19. "The escape of sediment from the site shall be prevented by the installation of erosion and sediment control measures and practices prior to land disturbing activities."

20. "Erosion control measures will be maintained at all times. If full implementation of the approved Plan does not provide for effective erosion control, additional erosion and sediment control measures shall be implemented to control or treat the sediment source."

21. "Any disturbed area left exposed for a period greater than 14 days shall be stabilized with mulch or temporary seeding."

GEORGIA REGISTERED No. 3641 LAND SURVEYOR BARRY D. LORD

9-21-2021

27) PLASTIC SHEETING SHOULD BE USED TO COVER ALL BUILDING MATERIALS , BUILDING PRODUCTS , CONSTRUCTION WASTE , TRASH , LANDSCAPE MATERIALS , FERTILIZERS, PESTICIDES, HERBICIDES, DETERGENTS , SANITARY WASTE, IN ORDER TO MINIMIZE EXPOSURE TO PERCIPITATION AND TO STORMWATER.

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24 HOUR SOIL EROSION CONTROL CONTACT: SCOTT NEAL 404-405-8011
GSWCC CERTIFICATION # 64379 EXPIRES 8-11-2023

CALL BEFORE YOU DIG
UTILITIES PROTECTION CENTER
1-800-282-7411
GEORGIA 811

60 0 60 120 180
GRAPHIC SCALE - FEET

ACTIVITY	MONTH 1	MONTH 2	MONTH 3	MONTH 4	MONTH 5	MONTH 6
EROSION CONTROL INSTALL.						
EROSION CONTROL MAINT.						
CLEARING AND GRUBBING						
ROUGH GRADING						
TEMP. GRASSING						
FINAL GRASSING						
FINAL LANDSCAPING						
REMOVAL OF E&S MEASURES						

GSWCC Georgia Soil & Water Conservation Commission APPROVED

INGRAM,LORD & ASSOCIATES
LAND SURVEYING AND PLANNING
437 SAM BROWN BLVD.
COMMERCE , GEORGIA 30529
706-335-9069

NW3

Erosion, Sedimentation, and Pollution Control Notes

1. **Checklist.** Each plan shall include a completed Erosion, Sedimentation and Pollution Control Plan Checklist established by the Georgia Soil and Water Conservation Commission (GSWCC) as of January 1 of the year in which the land-disturbing activity was permitted and amendments to the applicable Checklist as approved by the GSWCC up until the date of the NOI submittal. The applicable checklists are available on the GSWCC website.
2. **Seals and Certifications.** Certification Number is 64379, Expires 8-11-2023. Appropriate seals and certifications are on each sheet of the plan.
3. **Limit of Disturbance.** The limit of disturbance for this plan is not more than 50 acres.
4. **24-Hour Contact.** The 24-hour contact is noted on the plans as per the checklist.
5. **Permittee.** The relevant permittee is noted on the plans as per the checklist.
6. **Acreages.** Total and disturbed acres are noted on the plans as per the checklist.
7. **GPS of Construction Exit (Co).** The GPS Coordinates of the Construction Exit (Co) are as follows:
   a.
8. **Plan Dating.** All initial and revised dates have been noted on the plans. The requesting entity has been noted for any revised dates.
9. **Nature of Construction Activity and Site Conditions.** The nature of construction activity and site conditions are noted on the plans as per the checklist.
10. **Vicinity Map.** A vicinity map of the area is provided on the plans as per the checklist.
11. **Receiving Waters.** The receiving waters are noted on the plans as per the checklist.
12. **Certification Statement – Site Visit.**
    a. "I certify under penalty of law that this Plan was prepared after a site visit to the locations described herein by myself or my authorized agent, under my supervision."

    9-21-2021
13. **Certification Statement – BMP.**
    a. ""I certify that the permittee's Erosion, Sedimentation and Pollution Control Plan provides for an appropriate and comprehensive system of Best Management Practices required by the Georgia Water Quality Control Act and the document "Manual for Erosion and Sediment Control in Georgia" (Manual) published by the Georgia Soil and Water Conservation Commission as of January 1 of the year in which the land-disturbing activity was permitted, provides for the sampling of the receiving water(s) or the sampling of the storm water outfalls and that the designed system of best management practices and sampling methods is expected to meet the requirements contained in the General NPDES Permit No. GAR 100003."
14. **BMP Inspection – Design Professional.**
    a. "The design professional who prepared the ES&PC Plan is to inspect the installation of the initial sediment storage requirements and perimeter control BMPs within 7 days after installation."
15. **Non-Exempt Activities.**
    a. "Non-exempt activities shall not be conducted within the 25 or 50-foot undisturbed stream buffers as measured from the point of wrested vegetation or within 25-feet of the coastal marshland buffer as measured from the Jurisdictional Determination Line without first acquiring the necessary variances and permits."
16. **Buffer Encroachment and Variances.**
    a. Any encroachments and variance requirements are noted on the plans as per the checklist.
17. **Amendments/Revisions to the Plan.**
    a. "Amendments/revisions to the ES&PC Plan which have a significant effect on BMPs with a hydraulic component must be certified by the design professional."
18. **Waste Materials.**
    a. "Waste materials shall not be discharged to waters of the State, except as authorized by a Section 404 permit."
19. **Sediment Escape.**
    a. "The escape of sediment from the site shall be prevented by the installation of erosion and sediment control measures and practices prior to land disturbing activities."
20. **Maintenance of E&S Measures.**
    a. "Erosion control measures will be maintained at all times. If full implementation of the approved Plan does not provide for effective erosion control, additional erosion and sediment control measures shall be implemented to control or treat the sediment source."
21. **14-Day Mulching and Seeding**
    a. "Any disturbed area left exposed for a period greater than 14 days shall be stabilized with mulch or temporary seeding."
22. **Primary and Secondary Permittees.**
    a. There are no Primary and Secondary Permittees as this is a Tertiary Permittee Plan.
23. **Impaired Stream Segment BMPs.**
    a. Any discharges into Impaired Stream Segments and the BMPs required are noted on the Plan as per the checklist.
24. **TMDL Implementation Plan.**
    a. Any site-specific TMDL Implementation Plan information has been incorporated into the Plan as per the checklist.
25. **Concrete BMPs.**
    a. BMPs for concrete washdown of tools, concrete mixer chutes, hoppers and the rear of the vehicles are noted on the Plan as per the checklist.
26. **Petroleum and Oil Spill BMPs.**
    a. Any required BMPs for Petroleum and Oil Spills are included in the plan as required by the checklist.
27. **Building Materials Coverage.**
    a. Measures for the coverage of building supplies, as required by the checklist, are described on the Plan as needed.
28. **Storm Water Pollutant Measures.**
    a. Any required measures to control Storm Water Pollutants are noted on the Plan as required by the checklist.
29. **Storm Water Pollutant Practices.**
    a. Any required practices to control Storm Water Pollutants are noted on the Plan as required by the checklist.
30. **Activity Schedule.**
    a. The Activity Schedule is included on the Plan as required by the checklist.
31. **Inspections and Record Keeping.**
    a. Tertiary Permittee
       i. (1). Each day when any type of construction activity has taken place at a tertiary permittee's site, certified personnel provided by the tertiary permittee shall inspect: (a) all areas used by the tertiary permittee where petroleum products are stored, used, or handled for spills and leaks from vehicles and equipment; and (b) all locations at the tertiary permittee site where that permittee's vehicles enter or exit the site for evidence of off-site sediment tracking. These inspections must be conducted until a Notice of Termination is submitted. This paragraph is not applicable to utility companies and utility contractors performing only service line installations or when conducting repairs on existing line installations.
       ii. (2). Measure and record rainfall within disturbed areas of the site that have not met final stabilization once every 24 hours except any non-working Saturday, non-working Sunday and non-working Federal holiday. The data collected for the purpose of compliance with this permit shall be representative of the monitored activity. Measurement of rainfall may be suspended if all areas of the site have undergone final stabilization or established a crop of annual vegetation and a seeding of target perennials appropriate for the region.
       iii. (3). Certified personnel (provided by the tertiary permittee) shall inspect at least the following once every seven calendar days and within 24 hours of the end of a storm that is 0.5 inches rainfall or greater (unless such storm ends after 5:00 PM on any Friday or on any non-working Saturday, non-working Sunday or any nonworking Federal holiday in which case the inspection shall be completed by the end of the next business day and/or working day, whichever occurs first): (a) disturbed areas of the tertiary permittee's construction site; (b) areas used by the tertiary permittee for storage of materials that are exposed to precipitation; and (c) structural control measures. Erosion and sediment control measures identified in the Plan applicable to the tertiary permittee's site shall be observed to ensure that they are operating correctly. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving water(s). For areas of a site that have undergone final stabilization or established a crop of annual vegetation and a seeding of target perennials appropriate for the region, the permittee must comply with Part IV.D.4.c.(4). These inspections must be conducted until a Notice of Termination is submitted. This paragraph is not applicable to utility companies and utility contractors performing only service line installations or when conducting repairs on existing line installations.
       iv. (4). Certified personnel (provided by the tertiary permittee) shall inspect at least once per month during the term of this permit (i.e., until a Notice of Termination is submitted to EPD) the areas of their sites that have undergone final stabilization or established a crop of annual vegetation and a seeding of target perennials appropriate for the region. These areas shall be inspected for evidence of, or the potential for, pollutants entering the drainage system and the receiving water(s). Erosion and sediment control measures identified in the Plan shall be observed to ensure that they are operating correctly. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving water(s). This paragraph is not applicable to utility companies and utility contractors performing only service line installations or when conducting repairs on existing line installations.
       v. (5). Based on the results of each inspection, the site description and the pollution prevention and control measures identified in the Erosion, Sedimentation and Pollution Control Plan, the Plan shall be revised as appropriate not later than seven (7) calendar days following each inspection. Implementation of such changes shall be made as soon as practical but in no case later than seven (7) calendar days following the inspection.
       vi. (6). A report of each inspection that includes the name(s) of certified personnel making each inspection, the date(s) of each inspection, construction phase (i.e., initial, intermediate or final), major observations relating to the implementation of the Erosion, Sedimentation and Pollution Control Plan, and actions taken in accordance with Part IV.D.4.c.(5) of the permit shall be made and retained at the site or be readily available at a designated alternate location until the entire site has undergone final stabilization and a Notice of Termination is submitted to EPD. Such reports shall be readily available by the end of the second business day and/or working day and shall identify all incidents of best management practices that have not been properly installed and/or maintained as described in the Plan. Where the report does not identify any incidents, the inspection report shall contain a certification that the best management practices are in compliance with the Erosion, Sedimentation and Pollution Control Plan. The report shall be signed in accordance with Part V.G.2. of this permit. This paragraph is not applicable to utility companies and utility contractors performing only service line installations or when conducting repairs on existing line installations.
32. **Sampling Frequency and Reporting**
    a. Sampling Frequency
       i. (1). The primary permittee with a total planned disturbance equal to or greater than one (1) acre and tertiary permittee with a total planned disturbance equal to or greater than five (5) acres must sample in accordance with the Plan at least once for each rainfall event described below. For a qualifying event, the permittee shall sample at the beginning of any stormwater discharge to a monitored receiving water and/or from a monitored outfall within forty-five (45) minutes or as soon as possible.
       ii. (2). However, where manual and automatic sampling are impossible (as defined in this permit), or are beyond the permittee's control, the permittee shall take samples as soon as possible, but in no case more than twelve (12) hours after the beginning of the stormwater discharge.
       iii. (3). Sampling by the permittee shall occur for the following qualifying events:
          1. (a). For each area of the site that discharges to a receiving water or from an outfall, the first rain event that reaches or exceeds 0.5 inch with a stormwater discharge that allows for sampling during normal business hours as defined in this permit after all clearing and grubbing operations have been completed, but prior to completion of mass grading operations, in the drainage area of the location selected as the sampling location;
          2. (b). In addition to (a) above, for each area of the site that discharges to a receiving water or from an outfall, the first rain event that reaches or exceeds 0.5 inch with a stormwater discharge that occurs during normal business hours as defined in this permit either 90 days after the first sampling event or after all mass grading operations have been completed, but prior to submittal of a NOT, in the drainage area of the location selected as the sampling location, whichever comes first;
          3. (c). At the time of sampling performed pursuant to (a) and (b) above, if BMPs in any area of the site that discharges to a receiving water or from an outfall are not properly designed, installed and maintained, corrective action shall be defined and implemented within two (2) business days, and turbidity samples shall be taken from discharges from that area of the site for each subsequent rain event that reaches or exceeds 0.5 inch during normal business hours* until the selected turbidity standard is attained, or until post-storm event inspections determine that BMPs are properly designed, installed and maintained;
          4. (d). Where sampling pursuant to (a), (b) or (c) above is required but not possible (or not required because there was no discharge), the primary permittee, in accordance with Part IV.D.4.a.(6)., or the tertiary permittee, in accordance with Part IV.D.4.c.(6)., must include a written justification in the inspection report of why sampling was not performed. Providing this justification does not relieve the permittee of any subsequent sampling obligations under (a), (b) or (c) above; and
          5. (e). Existing construction activities, i.e., those that are occurring on or before the effective date of this permit, that have met the sampling required by (a) above shall sample in accordance with (b). Those existing construction activities that have met the sampling required by (b) above shall not be required to conduct additional sampling other than as required by (c) above.
          6. *Note that the Permittee may choose to meet the requirements of (a) and (b) above by collecting turbidity samples from any rain event that reaches or exceeds 0.5 inch and allows for sampling at any time of the day or week.
    b. Reporting
       i. 1. The applicable permittees are required to submit the sampling results to the EPD at the address shown in Part II.C. by the fifteenth day of the month following the reporting period. Reporting periods are months during which samples are taken in accordance with this permit. Sampling results shall be in a clearly legible format. Upon written notification, EPD may require the applicable permittee to submit the sampling results on a more frequent basis. Sampling and analysis of any stormwater discharge(s) or the receiving water(s) beyond the minimum frequency stated in this permit must be reported in a similar manner to the EPD. The sampling reports must be signed in accordance with Part V.G.2. Sampling reports must be submitted to EPD using the electronic submittal service provided by EPD. Sampling reports must be submitted to EPD until such time as a NOT is submitted in accordance with Part VI.
       ii. 2. All sampling reports shall include the following information:
          1. a. The rainfall amount, date, exact place and time of sampling or measurements;
          2. b. The name(s) of the certified personnel who performed the sampling and measurements;
          3. c. The date(s) analyses were performed;
          4. d. The time(s) analyses were initiated;
          5. e. The name(s) of the certified personnel who performed the analyses;
          6. f. References and written procedures, when available, for the analytical techniques or methods used;
          7. g. The results of such analyses, including the bench sheets, instrument readouts, computer disks or tapes, etc., used to determine these results;
          8. h. Results which exceed 1000 NTU shall be reported as "exceeds 1000 NTU" and
          9. i. Certification statement that sampling was conducted as per the Plan.
       iii. 3. All written correspondence required by this permit shall be submitted by return receipt certified mail (or similar service) to the appropriate District Office of the EPD according to the schedule in Appendix A of this permit. The applicable permittees shall retain a copy of the proof of submittal at the construction site or the proof of submittal shall be readily available at a designated location from commencement of construction until such time as a NOT is submitted in accordance with Part VI.
33. **Retention of Records.**
    a. 3. Each tertiary permittee shall retain the following records at the construction site or the records shall be readily available at a designated alternate location from commencement of construction until such time as a NOT is submitted in accordance with Part VI:
       i. a. A copy of all Notices of Intent submitted to EPD;
       ii. b. A copy of the Erosion, Sedimentation and Pollution Control Plan required by this permit;
       iii. c. The design professional's report of the results of the inspection conducted in accordance with Part IV.A.5. of this permit;
       iv. d. A copy of all sampling information, results, and reports required by this permit;
       v. e. A copy of all inspection reports generated in accordance with Part IV.D.4.c. of this permit;
       vi. f. A copy of all violation summaries and violation summary reports generated in accordance with Part III.D.2. of this permit; and.
       vii. g. Daily rainfall information collected in accordance with Part IV.D.4.c.(2). of this permit.
34. **Analytical Method to Analyze Samples.**
    a.See plans.
35. **NTU Rationale – Appendix B.**
    a.

APPENDIX B

Nephelometric Turbidity Unit (NTU) TABLES

Trout Streams

Surface Water Drainage Area, square miles

	0.5-4.9	5.0-9.9	10-24.9	25-49.9	50-99.9	100-249.9	250-499.99	500+
< 100 ft.	25	50	75	100	200	500	500	500
100-249.9 ft.	25	25	50	75	150	250	500	500
250-499.99 ft.	25	25	25	50	75	100	300	500
500-999.99 ft.	25	25	25	25	50	75	150	300
1000 ft. +	25	25	25	25	25	50	100	100

Stream Supporting Warm Water Fisheries

Surface Water Drainage Area, square miles

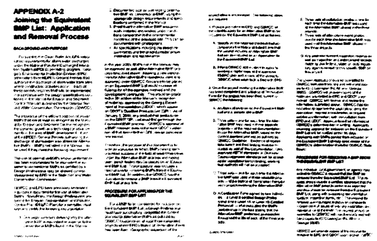
	0.5-4.9	5.0-9.9	10-24.99	25-49.9	50-99.99	100-249.9	250-499.99	500+
< 100 ft.	75	150	200	400	750	750	750	750
100-249.9 ft.	50	100	150	200	500	500	750	750
250-499.99 ft.	50	50	100	150	300	500	750	750
500-999.99 ft.	50	50	50	100	150	250	500	600
1000 ft. +	50	50	50	50	50	100	200	300

To use these tables, select the size category of the contributing area. Then, select the surface water drainage area category miles. The NTU limit value selected from the above tables is the one to use in Part III.D.2

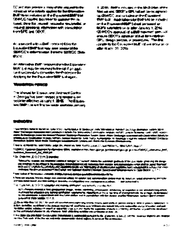
    b. The rationale for measure from Appendix B is as follows:
       i. See plans.
36. **Sampling Locations and Stream Locations.**
    a. All Sampling and Stream Locations for storm water discharge are noted on the Plan as required by the checklist.
37. **Initial, Intermediate, and Final BMPs.**
    a. Each Phase is shown on a separate sheet and BMPs for each phase are noted as required by the checklist.
38. **BMPs for Common Phases of Development.**
    a. This is not required of Tertiary Permittees per the checklist.
39. **Graphic Scale and North Arrow.**
    a. The Graphic Scale and a North Arrow are provided on all sheets of the plan as required by the checklist.
40. **Existing and Proposed Contour Lines.**
    a. Existing and Proposed Contour Lines are in accordance with the following:
       i.

Map Scale	Ground Slope	Contour Intervals, ft
1 inch = 100ft or larger scale	Flat 0 - 2%	0.5 or 1
	Rolling 2 - 8%	1 or 2
	Steep 8% +	2,5 or 10

41. **Alternate BMP – Permit.**
    a. (4). Alternative BMPs. The use of alternative BMPs whose performance has been documented to be equivalent or superior to conventional BMPs as certified by a Design Professional may be allowed (unless disapproved by EPD or the Georgia Soil and Water Conservation Commission).
42. **Alternate BMP – Appendix A-2.**
    a



APPENDIX A-2
Joining the Equivalent BMP List: Application and Removal Process



43. **Required Buffers.**
    a. All buffers, both State and Local, are noted on the Plan as per the checklist.
44. **Wetlands and State Waters.**
    a. All Wetlands and State Waters within 200' of the project site are noted on the Plan as per the checklist.
45. **Drainage Basins.**
    a. All Drainage Basins and their acreage are delineated on the plan as per the checklist.
46. **Hydrology Study.**
    a. This requirement of the Common Development permit is not applicable to Tertiary Permittees with a Plan(s) for a typical individual lot(s), if the total land disturbance within the construction site is less than five (5) acres and the total land disturbance within each individual lot is less than one (1) acre.
    b. If the above requirement(s) is(are) not met, a hydrology study is provided.
47. **Runoff Coefficient.**
    a. The Plan provides the required Runoff Coefficient calculations, as needed, as per the checklist.
48. **Storm Pipe and Weirs.**
    a. Storm-drain pipe and weir velocities with appropriate outlet protection to accommodate discharges without erosion are noted on the plan. All storm water discharge points are noted on the plan. This is per the checklist.
49. **Soil Series.**
    a. All Soil Series delineations and required information are provided on the Plan as per the checklist.
50. **Limits of Disturbance.**
    a. All Limits of Disturbance (LODs) are provided on the Plan as per the checklist.
51. **Sediment Basin or Alternate.**
    a. A required Sediment Basin or Equivalent Control Measures with explanation are provided on the Plan as per the checklist.
52. **BMPs and Coding.**
    a. All BMPs used are noted on the Plan using the uniform coding symbols and are not less stringent than the Manual.
53. **BMP Drawings.**
    a. A worksheet for each BMP design is provided on the Plan as per the checklist.
54. **Vegetative Plans.**
    a. All Vegetative Plans are provided on the Plan as per the checklist.

GSWCC
Georgia Soil and Water Conservation Commission
APPROVED

E&S NOTES

GEORGIA REGISTERED No. 2981 LAND SURVEYOR BARRY O. LORD

9-21-2021

GSWCC Level II Certification # 64379
Expires 8-11-2023

Initial Date of Plans:
6-22-2021

Revision per comments:
9-21-2021

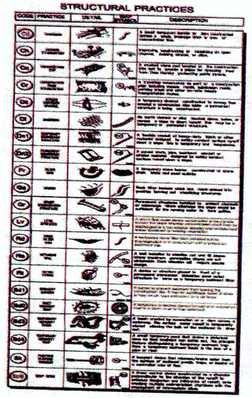
Notes:

Sheet 5

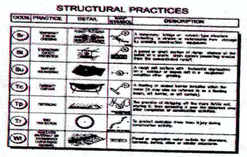
Ingram, Lord and Associates
Land Surveying and Planning
437 Sam Brown Blvd
Commerce, GA 30529
706.335.9069

GEORGIA
UNIFORM CODING SYSTEM
FOR SOIL EROSION AND SEDIMENTATION CONTROL PRACTICES
GEORGIA SOIL AND WATER CONSERVATION COMMISSION

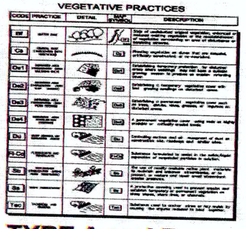
STRUCTURAL PRACTICES



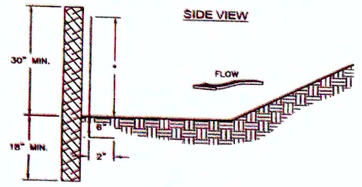
STRUCTURAL PRACTICES



VEGETATIVE PRACTICES



SILT FENCE - TYPE A and B

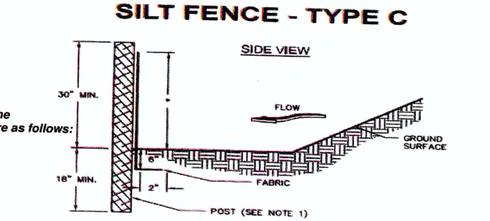


NOTES:
1. USE STEEL OR WOOD POSTS OR AS SPECIFIED BY THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN.
2. HEIGHT (*) IS TO BE SHOWN ON THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN.

Figure 6-27.1

SILT FENCE - TYPE C

Dimensions for the Sd1-S (Type C) are as follows:
1. 48" Post
2. 36" Fabric
3. 30" Exposed
4. 6" Trench



NOTES:
1. USE STEEL OR WOOD POSTS OR AS SPECIFIED BY THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN.
2. HEIGHT (*) IS TO BE SHOWN ON THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN.

Figure 6-27.2

Construction Exit (Co)



DEFINITION
A stone stabilized pad located at any point where traffic will be leaving a construction site to a public right-of-way, street, alley, sidewalk or parking area or any other area where there is a transition from bare soil to a paved area.

PURPOSE
To reduce or eliminate the transport of mud from the construction area onto public rights-of-way by motor vehicles or by runoff.

CONDITIONS
This practice is applied at appropriate points of construction egress. Geotextile underliners are required to stabilize and support the pad aggregates.

DESIGN CRITERIA
Formal design is not required. The following standards shall be used:

Aggregate Size
Stone will be in accordance with National Stone Association R-2 (1.5 to 3.5 inch stone).

Pad Thickness
The gravel pad shall have a minimum thickness of 6 inches.

Pad Width
At a minimum, the width should equal full width of all points of vehicular egress, but not less than 20 feet wide.

Pad Length
The gravel pad shall have a minimum length of 50 feet. When the construction is less than 50' from the paved access, the length shall be from the edge of existing pavement to the permitted building being constructed.

Washing
If the action of the vehicle traveling over the gravel pad does not sufficiently remove the mud, the tires should be washed prior to entrance onto public rights-of-way. When washing is required, it shall be done on an area stabilized with crushed stone and provisions that intercept the sediment-laden runoff and direct it into an approved sediment trap or sediment basin.

Location
The exit shall be located or protected to prevent sediment from leaving the site.

CONSTRUCTION SPECIFICATIONS
It is recommended that the agress area be excavated to a depth of 3 inches and be cleared of all vegetation and roots.

Diversion Ridge
On sites where the grade toward the paved area is greater than 2%, a diversion ridge 6 to 8 inches high with 3:1 side slopes shall be constructed across the foundation approximately 15 feet above the road.

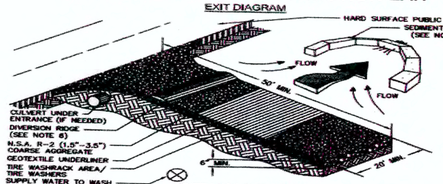
Geotextile
The geotextile underliner must be placed the full length and width of the entrance. Geotextile selection shall be based on AASHTO M288-06 specification:

1. For subgrades with a CBR greater than or equal to 3 or shear strength greater than 90 kPa, geotextile must meet requirements of section AASHTO M288-06 Section 7.3, *Separation Requirements*.
2. For subgrades with a CBR between 1 and 3 or sheer strength between 30 and 90 kPa, geotextile must meet requirements of section AASHTO M288-06 Section 8, *Geotextile Property Requirements for Subsurface Drainage, Separation, Stabilization, and Permanent Erosion Control (Geotextile Property Requirements)*..

MAINTENANCE
The exit shall be maintained in a condition that will prevent tracking or flow of mud onto public rights-of-way. This may require periodic top dressing with 1.5-3.5 inch stone, as conditions demand, and repair and/or cleanout of any structures to trap sediment. All materials spilled, dropped, washed, or tracked from vehicles or site onto roadways or into storm drains must be removed immediately.

CRUSHED STONE CONSTRUCTION EXIT

EXIT DIAGRAM



ENTRANCE ELEVATION



NOTES:
1. AVOID LOCATING ON STEEP SLOPES OR AT CURVES ON PUBLIC ROADS.
2. REMOVE ALL VEGETATION AND OTHER UNSUITABLE MATERIAL FROM THE FOUNDATION AREA, GRADE, AND CROWN FOR POSITIVE DRAINAGE.
3. AGGREGATE SIZE SHALL BE IN ACCORDANCE WITH NATIONAL STONE ASSOCIATION R–2 (1.5"–3.5" STONE).
4. GRAVEL PAD SHALL HAVE A MINIMUM THICKNESS OF 6".
5. PAD WIDTH SHALL BE EQUAL FULL WIDTH AT ALL POINTS OF VEHICULAR EGRESS, BUT NO LESS THAN 20'.
6. A DIVERSION RIDGE SHOULD BE CONSTRUCTED WHEN GRADE TOWARD PAVED AREA IS GREATER THAN 2%.
7. INSTALL PIPE UNDER THE ENTRANCE IF NEEDED TO MAINTAIN DRAINAGE DITCHES.
8. WHEN WASHING IS REQUIRED, IT SHOULD BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN (DIVERT ALL SURFACE RUNOFF AND WASHRACKS AND/OR TIRE WASHERS MAY BE REQUIRED DEPENDING ON SCALE AND CIRCUMSTANCE. IF NECESSARY, WASHRACK DESIGN MAY CONSIST OF ANY MATERIAL SUITABLE FOR TRUCK TRAFFIC THAT REMOVE MUD AND DIRT.
10. MAINTAIN AREA IN A WAY THAT PREVENTS TRACKING AND/OR FLOW OF MUD ONTO PUBLIC RIGHTS–OF–WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.

Figure 6-14.1

Dust Control on Disturbed Areas (Du)



DEFINITION
Controlling surface and air movement of dust on construction sites, roads, and demolition sites.

PURPOSE
- To prevent surface and air movement of dust from exposed soil surfaces.
- To reduce the presence of airborne substances that may be harmful or injurious to human health, welfare, or safety, or to animals or plant life.

CONDITIONS
This practice is applicable to areas subject to surface and air movement of dust where on and off-site damage may occur without treatment.

METHOD AND MATERIALS

A. Temporary Methods

Mulches. See standard **Ds1 - Disturbed Area Stabilization (With Mulching Only)**. Synthetic resins may be used instead of asphalt to bind mulch material. Refer to specification **Tac - Tackifiers**. Resins should be used according to manufacturer's recommendations.

Vegetative Cover. See specification **Ds2 - Disturbed Area Stabilization (With Temporary Seeding)**.

Spray-on Adhesives. These are used on mineral soils (not effective on muck soils). Keep traffic off these areas. Refer to specification **Tac - Tackifiers**.

Tillage. This practice is designed to roughen and bring clods to the surface. It is an emergency measure that should be used before wind erosion starts. Begin plowing on windward side of site. Chisel-type plows spaced about 12 inches apart, spring-toothed harrows, and similar plows are examples of equipment that may produce the desired effect.

Irrigation. This is generally done as an emergency treatment. Site is sprinkled with water until the surface is wet. Repeat as needed.

Barriers. Solid board fences, snowfences, burlap fences, crate walls, bales of hay and similar material can be used to control air currents and soil blowing. Barriers placed at right angles to prevailing currents at intervals of about 15 times their height are effective in controlling wind erosion.

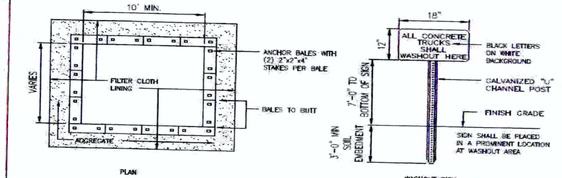
Calcium Chloride. Apply at rate that will keep surface moist. May need retreatment.

B. Permanent Methods

Permanent Vegetation. See specification **Ds3 -Disturbed Area Stabilization (With Permanent Vegetation)**. Existing trees and large shrubs may afford valuable protection if left in place.

Topsoiling. This entails covering the surface with less erosive soil material. See specification **Tp - Topsoiling**.

Stone. Cover surface with crushed stone or coarse gravel. See specification **Cr-Construction Road Stabilization**.



NOTES:
1. WASHOUT AREA(S) SHALL BE INSTALLED IN A LOCATION EASILY ACCESSIBLE BY CONCRETE TRUCKS.
2. ONE OR MORE AREAS MAY BE INSTALLED ON THE CONSTRUCTION SITE AND MAY BE RELOCATED AS CONSTRUCTION PROGRESSES.
3. AT LEAST WEEKLY REMOVE ACCUMULATION OF SAND AND AGGREGATE AND DISPOSE OF PROPERLY.
4. A plastic lining will be used.

CONCRETE WASHOUT AREA DETAIL (CW)
NTS

GEORGIA
Major Land Resource Areas

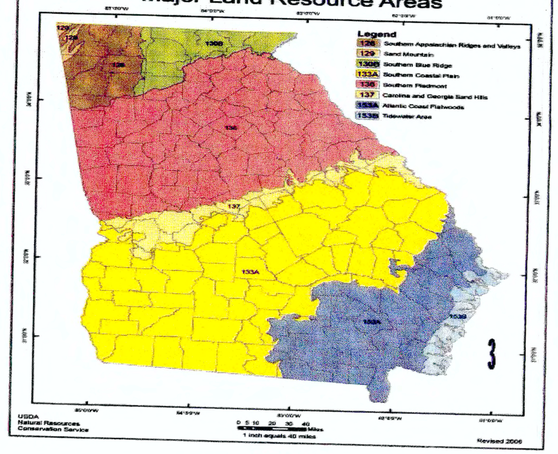
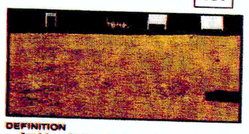


Figure 6-4.1

Disturbed Area Stabilization (With Mulching Only) (Ds1)



DEFINITION
Applying plant residues or other suitable materials, produced on the site if possible, to the soil surface.

PURPOSE
- To reduce runoff and erosion
- To conserve moisture
- To prevent surface compaction or crusting
- To control undesirable vegetation
- To modify soil temperature
- To increase biological activity in the soil

REQUIREMENT FOR REGULATORY COMPLIANCE
Mulch or temporary grassing shall be applied to all exposed areas within 14 days of disturbance. Mulch can be used as a singular erosion control device for up to six months, but it shall be applied at the appropriate depth, depending on the material used, anchored and have a continuous 90% cover or greater of the soil surface.

Maintenance shall be required to maintain appropriate depth and 90% cover. Temporary vegetation may be employed instead of mulch if the area will remain undisturbed for less than six months.

If any area will remain undisturbed for greater than six months, permanent vegetative techniques shall be employed. Refer to **Ds2 -Disturbed Area Stabilization (With Temporary Seeding), Ds3 - Disturbed Area Stabilization (With Permanent Seeding), and Ds4 - Disturbed Area Stabilization (With Sodding)**.

SPECIFICATIONS
Mulching Without Seeding
This standard applies to graded or cleared areas where seedings may not have a suitable growing season to produce an erosion retardant cover, but can be stabilized with a mulch cover.

Site Preparation
1. Grade to permit the use of equipment for applying and anchoring mulch.
2. Install needed erosion control measures as required such as dikes, diversions, berms, terraces and sediment barriers.
3. Loosen compact soil to a minimum depth of 3 inches.

Mulching Materials
Select one of the following materials and apply at the depth indicated:
1. Dry straw or hay shall be applied at a depth of 2 to 4 inches providing complete soil coverage. One advantage of this material is easy application.
2. Wood waste (chips, sawdust or bark) shall be applied at a depth of 2 to 3 inches. Organic material from the clearing stage of development should remain on site, be chipped, and applied as mulch. This method of mulching can greatly reduce erosion control costs.
3. Polyethylene film shall be secured over banks or stockpiled soil material for temporary protection. This material can be salvaged and re-used.

Applying Mulch
When mulch is used without seeding, mulch shall be applied to provide full coverage of the exposed area.
1. Dry straw or hay mulch and wood chips shall be applied uniformly by hand or by mechanical equipment.
2. If the area will eventually be covered with perennial vegetation, 20-30 pounds of nitrogen per acre in addition to the normal amount shall be applied to offset the uptake of nitrogen caused by the decomposition of the organic mulches.
3. Apply polyethylene film on exposed areas.

Anchoring Mulch
1. Straw or hay mulch can be pressed into the soil with a disk harrow with the disk set straight or with a special "packer disk." Disks may be smooth or serrated and should be 20 inches or more in diameter and 8 to 12 inches apart. The edges of the disk should be dull enough not to cut the mulch but to press it into the soil leaving much of it in an erect position. Straw or hay mulch shall be anchored immediately after application.

   Straw or hay mulch spread with special blower-type equipment may be anchored. Tackifiers, binders and hydraulic mulch with tackifier specifically designed for tacking straw can be substituted for emulsified asphalt. Please refer to specification **Tac-Tackifiers**. Plastic mesh or netting with mesh no larger than one inch by one inch shall be installed according to manufacturer's specifications.
2. Netting of the appropriate size shall be used to anchor wood waste. Openings of the netting shall not be larger than the average size of the wood waste chips.
3. Polyethylene film shall be anchor trenched at the top as well as incrementally as necessary.

Disturbed Area Stabilization (With Temporary Seeding) (Ds2)



DEFINITION
The establishment of temporary vegetative cover with fast growing seedings for seasonal protection on disturbed or denuded areas.

PURPOSE
- To reduce runoff and sediment damage of down stream resources
- To protect the soil surface from erosion
- To improve wildlife habitat
- To improve aesthetics
- To improve tilth, infiltration and aeration as well as organic matter for permanent plantings

REQUIREMENT FOR REGULATORY COMPLIANCE
Mulch or temporary grassing shall be applied to all exposed areas within 14 days of disturbance. Temporary grassing, instead of mulch, can be applied to rough graded areas that will be exposed for less than six months. If an area is expected to be undisturbed for longer than six months, permanent perennial vegetation shall be used. If optimum planting conditions for temporary grassing is lacking, mulch can be used as a singular erosion control device for up to six months but it shall be applied at the appropriate depth, anchored, and have a continuous 90% cover or greater of the soil surface. Refer to specification **Ds1-Disturbed Area Stabilization (With Temporary Seeding).**

CONDITIONS
Temporary vegetative measures should be coordinated with permanent measures to assure economical and effective stabilization. Most types of temporary vegetation are ideal to use as companion crops until the permanent vegetation is established. Note: Some species of temporary vegetation are not appropriate for companion crop plantings because of their potential to out-compete the desired species (e.g. annual ryegrass). Contact NRCS or the local SWCD for more information.

SPECIFICATIONS
Grading and Shaping
Excessive water run-off shall be reduced by properly designed and installed erosion control practices such as closed drains, ditches, dikes, diversions, sediment barriers and others.

No shaping or grading is required if slopes can be stabilized by hand-seeded vegetation or if hydraulic seeding equipment is to be used.

Seedbed Preparation
When a hydraulic seeder is used, seedbed preparation is not required. When using conventional or hand-seeding, seedbed preparation is not required if the soil material is loose and not sealed by rainfall.

When soil has been sealed by rainfall or consists of smooth cut slopes, the soil shall be pitted, trenched or otherwise scarified to provide a place for seed to lodge and germinate.

Lime and Fertilizer
Agricultural lime is required unless soil tests indicate otherwise. Apply agricultural lime at a rate determined by soil test for pH. Quick acting lime should be incorporated to modify pH during the germination period. Bio stimulants should also be considered when there is less than 3% organic matter in the soil. Graded areas require lime application. Soils must be tested to determine required amounts of fertilizer and amendments. Fertilizer should be applied before land preparation and incorporated with a disk, ripper, or chisel. On slopes too steep for, or inaccessible to equipment, fertilizer shall be hydraulically applied, preferably in the first pass with seed and some hydraulic mulch, then topped with the remaining required application rate.

Seeding
Select a grass or grass-legume mixture suitable to the area and season of the year. Seed shall be applied uniformly by hand, cyclone seeder, drill, cultipacker-seeder, or hydraulic seeder (slurry including seed and fertilizer). Drill or cultipacker seeders should normally place seed one-quarter to one-half inch deep. Appropriate depth of planting is ten times the seed diameter. Soil should be "raked" lightly to cover seed with soil if seeded by hand. See Table 6-4.1

Mulching
Temporary vegetation can, in most cases, be established without the use of mulch, provided there is little to no erosion potential. However, the use of mulch can often accelerate and enhance germination and vegetation establishment. Mulch without seeding should be considered for short term protection. Refer to **Ds1 - Disturbed Area Stabilization (With Mulching Only)**.

Irrigation
During times of drought, water shall be applied at a rate not causing runoff and erosion. The soil shall be thoroughly wetted to a depth that will insure germination of the seed. Subsequent applications should be made when needed.

Table 6-4.1 - Temporary Cover or Companion Cover Crops
PLANT, PLANTING RATE, AND PLANTING DATE FOR TEMPORARY COVER OR COMPANION CROPS

Species	Broadcast Rates		Resource Area*	Planting Dates by Resource Area (Solid lines indicate optimum dates, dotted lines indicate permissible but marginal dates.) J F M A M J J A S O N D	Remarks
	Rate Per Acre	Pure Live Seed (PLS) Per 1000 sq ft			
BARLEY *Hordeum vulgare*					
alone	3 bu. (144 lbs)	3.5 lbs	M-L		
in mixture	1/2 bu. (24 lbs)	0.6 lb	P		14,000 seed per pound. Winter hardy. Use on productive soils.
			C		
LESPEDEZA, ANNUAL *Lespedeza striata*					
alone	40 lbs	0.9 lb	M-L		
in mixture	10 lbs	0.2 lb	P		350,000 seed per pound. May reseed for several years. Use inoculant.
			C		
LOVEGRASS, WEEPING *Eragrostis curvula*					
alone	4 lbs	0.1 lb	M-L		
in mixture	2 lbs	0.05 lb	P		1,000,000 seed per pound. May last for several years. Mix with *Sericea lespedeza*.
			C		
MILLET, BROOMCORN *Panicum miliaceum*					
alone	40 lbs	0.9 lb	M-L		
in mixture	10 lbs	0.2 lb	P		127,000 seed per pound. Quick, dense cover. Will provide excessive competition in mixtures if planted at high rate.
			C		

Species	Broadcast Rates		Resource Area*	Planting Dates by Resource Area (Solid lines indicate optimum dates, dotted lines indicate permissible but marginal dates.) J F M A M J J A S O N D	Remarks
	Rate Per Acre	Pure Live Seed (PLS) Per 1000 sq ft			
MILLET, PEARL *Pennisetum glaucum*					
alone	60 lbs	1.1 lbs	M-L		
			P		66,000 seed per pound. Quick dense cover. May reach 6 feet in height. Not recommended for pastures.
			C		
OATS *Avena sativa*					
alone	4 bu. (128 lbs)	2.9 lbs	M-L		
in mixture	1 bu. (32 lbs)	0.7 lb	P		13,000 seed per pound. Use on productive soils. Not as is winter hardy as rye or barley.
			C		
RYE *Secale cereale*					
alone	3 bu. (168 lbs)	3.9 lbs	M-L		
in mixture	1/2 bu. (28 lbs)	0.6 lb	P		18,000 seed per pound. Quick cover. Drought tolerant and winter hardy.
			C		
RYEGRASS, ANNUAL *Lolium temulentum*					
alone	40 lbs	0.9 lb	M-L		
			P		227,000 seed per pound. Dense cover. Very competitive; best for hay or for use in mixtures.
			C		
SUDANGRASS *Sorghum sudanense*					
alone	50 lbs	1.4 lbs	M-L		
			P		55,000 seed per pound. Good on droughty areas. Not recommended for hay/grazing.
			C		

Species	Broadcast Rates		Resource Area*	Planting Dates by Resource Area (Solid lines indicate optimum dates, dotted lines indicate permissible but marginal dates.) J F M A M J J A S O N D	Remarks
	Rate Per Acre	Pure Live Seed (PLS) Per 1000 sq ft			
TRITICALE *X Triticosecale*					
alone	3 bu. (144 lbs)	3.5 lbs	C		
in mixture	1/2 bu. (24 lbs)	0.6 lb			Use on lower part of Southern Coastal Plain and in Atlantic Coastal Flatwoods only.
WHEAT *Triticum aestivum*					
alone	3 bu. (180 lbs)	4.1 lbs	M-L		
in mixture	1/2 bu. (30 lbs)	0.7 lb	P		15,000 seed per pound. Winter hardy.
			C		

*Temporary cover crops are very competitive and will crowd out perennials if seeded too heavily.
*Replace annuals rates by 50% when drilled.
*M-L represents the Mountain, Blue Ridge and Ridges and Valleys MLRAs.
*P represents the Southern Piedmont MLRA.
*C represents Southern Coastal Plain, Sand Hills, Blue Ridge and Atlantic Coast Flatwoods MLRA.

GSWCC Georgia Soil and Water Conservation Commission

E&S DETAILS

GEORGIA REGISTERED No. 3040 LAND SURVEYOR BARRY D. LORD
9-21-2021

GSWCC Level II Certification # 64379
Expires 8-11-2023

Initial Date of Plans:
6-22-2021

Revision per comments:
9-21-2021

Notes:

Sheet 6

Ingram, Lord and Associates
Land Surveying and Planning
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Disturbed Area Stabilization (With Permanent Vegetation)

Ds3



DEFINITION

The planting of perennial vegetation such as trees, shrubs, vines, grasses, or legumes on exposed areas for final permanent stabilization. Permanent perennial vegetation shall be used to achieve final stabilization.

PURPOSE

- To protect the soil surface from erosion
- To reduce damage from sediment and runoff to down-stream areas
- To improve wildlife habitat and visual resources
- To improve aesthetics

REQUIREMENT FOR REGULATORY COMPLIANCE

This practice shall be applied immediately to rough graded areas that will be undisturbed for longer than six months. This practice or sodding shall be applied immediately to all areas at final grade. **Final Stabilization** means that all soil disturbing activities at the site have been completed, and that for unpaved areas and areas not covered by permanent structures and areas located outside the waste disposal limits of a landfill cell that has been certified by the GA EPD for waste disposal, 100% of the soil surface is uniformly covered in permanent vegetation with a density of 70% or greater, or landscaped according to the Plan (uniformly covered with landscaping materials in planned landscaped areas) or equivalent permanent stabilization measures

tion establishment enhancement, and erosion control effectiveness. Select the mulching material from the following and apply as indicated:

1. *Dry straw or dry hay* of good quality and free of weed seeds can be used. Dry straw shall be applied at the rate of 2 tons per acre. Dry hay shall be applied at a rate of 2 1/2 tons per acre.
2. *Wood cellulose mulch* or *wood pulp fiber* shall be used with hydraulic seeding. It shall be applied at the rate of 500 pounds per acre. Dry straw or dry hay shall be applied (at the rate indicated above) after hydraulic seeding.
3. One thousand pounds of *wood cellulose* or *wood pulp fiber*, which includes a tackifier, shall be used with hydraulic seeding on slopes 3/4:1 or steeper.
4. *Sericea Lespedeza* hay containing mature seed shall be applied at a rate of three tons per acre.
5. *Pine straw* or *pine bark* shall be applied at a thickness of 3 inches for bedding purposes. Other suitable materials in sufficient quantity may be used where ornamentals or other ground covers are planted. This is not appropriate for seeded areas.
6. When using temporary erosion control blankets or block sod, mulch is not required.
7. *Bituminous treated roving* may be applied on planted areas, slopes, in ditches or dry waterways to prevent erosion. Bituminous treated roving shall be applied within 24 hours after an area has been planted. Application rates and materials must meet Georgia Department of Transportation specifications.

Wood cellulose and wood pulp fibers shall not contain germination or growth inhibiting factors. They shall be evenly dispersed when agitated in water. The fibers shall contain a dye to allow visual metering and aid in uniform application during seeding.

Applying Mulch

Straw or hay mulch will be spread uniformly within 24 hours after seeding and/or plant-

Permanent vegetation shall consist of: planted trees, shrubs, perennial vines; or a crop of perennial vegetation appropriate for the region, such that within the growing season a 70% coverage by perennial vegetation shall be achieved. Final stabilization applies to each phase of construction. For linear construction projects on land used for agricultural or silvicultural purposes, final stabilization may be accomplished by stabilizing the disturbed land for its agricultural or silvicultural use. Until this standard is satisfied and permanent control measures and facilities are operational, interim stabilization measures and temporary erosion and sedimentation control measures shall not be removed.

CONDITIONS

Permanent perennial vegetation is used to provide a protective cover for exposed areas including cuts, fills, dams, and other denuded areas.

PLANNING CONSIDERATIONS

1. Use conventional planting methods where possible.
2. When mixed plantings are done during marginal planting periods, companion crops shall be used.
3. No-till planting is effective when planting is done following a summer or winter annual cover crop. Sericea lespedeza planted no-till into stands of rye is an excellent procedure.
4. Block sod provides immediate cover. It is especially effective in controlling erosion adjacent to concrete flumes and other structures. Refer to Specification **Ded-Disturbed Area Stabilization (With Sodding).**
5. Irrigation should be used when the soil is dry or when summer plantings are done.
6. Low maintenance plants, as well as natives, should be used to ensure long-lasting erosion control.
7. Mowing should not be performed during the quail nesting season (May to September).
8. Wildlife plantings should be included in critical area plantings.

Wildlife Plantings

Commercially available plants beneficial to wildlife species include the following:

Mast Bearing Trees

Beech, Black Cherry, Blackgum, Chestnut, Chinkapin, Hackberry, Hickory, Honey Locust, Native Oak, Persimmon, Sawtooth Oak and Sweetgum.

All trees that produce nuts or fruits are favored by many game species. Hickory provides nuts used mainly by squirrels and bear.

Shrubs and Small Trees

Bayberry, Bicolor Lespedeza, Crabapple, Dogwood, Huckleberry or Native Blueberry, Mountain Laurel, Native Holly, Red Cedar, Red Mulberry, Sumac, Wax Myrtle, Wild Plum and Blackberry.

Plant in patches without tall trees to develop stable shrub communities. All produce fruits used by many kinds of wildlife, except for lespedeza that produces seeds used by quail and songbirds.

Grasses, Legumes, Vines and Temporary Cover

Bahiagrass, Bermudagrass, Grass-Legume mixtures, Partridge Pea, Annual Lespedeza, Orchardgrass (for mountains), Browntop Millet (for temporary cover), and Native grapes.

Provides herbaceous cover in clearings for a game bird brood-rearing habitat. Appropriate legumes such as vetches, clovers, and lespedezas may be mixed with grass, but they may die out after a few years.

CONSTRUCTION SPECIFICATIONS

Grading and Shaping

Grading and shaping may not be required where hydraulic seeding and fertilizing equipment is to be used. Vertical banks shall be sloped to enable plant establishment.

When conventional seeding and fertilizing are to be done, grade and shape where feasible and practical, so that equipment can be used safely and efficiently during seedbed preparation, seeding, mulching and maintenance of the vegetation.

Concentrations of water that will cause excessive

soil erosion shall be diverted to a safe outlet. Diversions and other treatment practices shall conform with the appropriate standards and specifications.

Lime and Fertilizer Rates and Analysis

Agricultural lime is required at the rate of one to two tons per acre unless soil tests indicate otherwise. Graded areas require lime application. If lime is applied within six months of planting permanent perennial vegetation, additional lime is not required. Agricultural lime shall be within the specifications of the Georgia Department of Agriculture.

Lime spread by conventional equipment shall be "ground limestone." Ground limestone is calcitic or dolomitic limestone ground so that 90 percent of the material will pass through a 10-mesh sieve, not less than 50 percent will pass through a 50-mesh sieve and not less than 25 percent will pass through a 100-mesh sieve.

Fast-acting lime spread by hydraulic seeding equipment should be "finely ground limestone" spanning from the 180 micron size to the 5 micron size. Finely ground limestone is calcitic or dolomitic limestone ground so that 95 percent of the material will pass through a 100-mesh sieve.

It is desirable to use dolomitic limestone in the Sand Hills, Southern Coastal Plain and Atlantic Coast Flatwoods MLRAs. (See Figure 6-4.1)

Agricultural lime is generally not required where only trees are planted.

Initial fertilization, nitrogen, topdressing, and maintenance fertilizer requirements for each species or combination of species are listed in Table 6-5.1.

Lime and Fertilizer Application

When *hydraulic seeding* equipment is used, the initial fertilizer shall be mixed with seed, inoculant (if needed), and wood cellulose or wood pulp fiber mulch and applied in a slurry. The inoculant, if needed, shall be mixed with the seed prior to being placed into the hydraulic seeder. The slurry mixture will be agitated during application to keep the ingredients thoroughly mixed. The mixture will be spread uniformly over the area within one hour after being placed in the hydroseeder.

Finely ground limestone can be applied in the mulch slurry or in combination with the top dressing.

When *conventional planting* is to be done, lime and fertilizer shall be applied uniformly in one of the following ways:

1. Apply before land preparation so that it will be mixed with the soil during seedbed preparation.
2. Mix with the soil used to fill the holes, distribute in furrows.
3. Broadcast after steep surfaces are scarified, pitted or trenched.
4. A fertilizer pellet shall be placed at root depth in the closing hole beside each pine tree seedling.

Plant Selection

Refer to Tables 6-4.1, 6-5.2, 6-5.3 and 6-5.4 for approved species. Species not listed shall be approved by the State Resource Conservationist of the Natural Resources Conservation Service before they are used.

Plants shall be selected on the basis of species characteristics, site and soil conditions, planned use and maintenance of the area; time of year of planting, method of planting, and the needs and desires of the land user.

Some perennial species are easily established and can be planted alone. Examples of these are Common Bermuda, Tall Fescue, and Weeping Lovegrass.

Other perennials, such as Bahia Grass and Sericea Lespedeza, are slow to become established and should be planted with another perennial species. The additional species will provide quick cover and ample soil protection until the target perennial species become established. For example, Common seeding combinations are 1) Weeping Lovegrass with Sericea Lespedeza (scarified) and 2) Tall Fescue with Sericea Lespedeza (unscarified).

Plant selection may also include annual companion crops. Annual companion crops should be used only when the perennial species are not planted during their optimum planting period. A common

mixture is Brown Top Millet with Common Bermuda in mid-summer. Care should be taken in selecting companion crop species and seeding rates because annual crops will compete with perennial species for water, nutrients, and growing space. A high seeding rate of the companion crop may prevent the establishment of perennial species.

Ryegrass shall not be used in any seeding mixtures containing perennial species due to its ability to out-compete desired species chosen for permanent perennial cover.

Seed Quality

The term "*pure live seed*" is used to express the quality of seed and is not shown on the label. Pure live seed, PLS, is expressed as a percentage of the seeds that are pure and will germinate. Information on percent germination and purity can be found on seed tags. PLS is determined by multiplying the percent of pure seed with the percent of germination, i.e.,

(PLS = % germination x % purity)

EXAMPLE

Common Bermuda seed
70% germination, 80% purity

PLS = 70% germination x 80% purity

PLS = 56%

The percent of PLS helps you determine the amount of seed you need. If the seeding rate is 10 pounds PLS and the bulk seed is 56 % PLS, the bulk seeding rate is:

10 lbs. PLS/acre = 17.9 lbs/acre
56% PLS

You would need to plant 17.9 lbs/acre to provide 10 lbs/acre of pure live seed.

Seedbed Preparation

Seedbed preparation may not be required where hydraulic seeding and fertilizing equipment is to be used (but is strongly recommended for any seeding process, when possible). When conventional seeding is to be used, seedbed preparation will be done as follows:

Broadcast plantings

1. Tillage, at a minimum, shall adequately loosen the soil to a depth of 4 to 6 inches, alleviate compaction, incorporate lime and fertilizer, smooth and firm the soil; allow for the proper placement of seed, sprigs, or plants, and allow for the anchoring of straw or hay mulch if a disk is to be used.
2. Tillage may be done with any suitable equipment.
3. Tillage should be done on the contour where feasible.
4. On slopes too steep for the safe operation of tillage equipment, the soil surface shall be pitted or trenched across the slope with appropriate hand tools to provide two places 4 to 8 inches apart in which seed may lodge and germinate. Hydraulic seeding may also be used.

Individual Plants

1. Where individual plants are to be set, the soil shall be prepared by excavating holes, opening furrows, or dibble planting.
2. For nursery stock plants, holes shall be large enough to accommodate roots without crowding.
3. Where pine seedlings are to be planted, subsoil under the row 36 inches deep on the contour four to six months prior to planting. Subsoiling should be done when the soil is dry, preferably in August or September.

Inoculants

All legume seed shall be inoculated with appropriate nitrogen-fixing bacteria. The inoculant shall be a pure culture prepared specifically for the seed species and used within the dates on the container.

A mixing medium recommended by the manufacturer shall be used to bond the inoculant to the seed. For conventional seeding, use twice the amount of inoculant recommended by the manufacturer. For hydraulic seeding, four times the amount of inoculant recommended by the manufacturer shall be used.

All inoculated seed shall be protected from the sun and high temperatures and shall be planted

the same day inoculated. No inoculated seed shall remain in the hydroseeder longer than one hour.

Planting

Hydraulic Seeding

Mix the seed (inoculated if needed), fertilizer, and wood cellulose or wood pulp fiber mulch with water and apply in a slurry uniformly over the area to be treated. Apply within one hour after the mixture is made.

Conventional Seeding

Seeding will be done on a freshly prepared and firmed seedbed. For broadcast planting, use a cultipacker-seeder, drill, rotary seeder, other mechanical seeder, or hand seeding to distribute the seed uniformly over the area to be treated. Cover the seed lightly with 1/8 to 1/4 inch of soil for small seed and 1/2 to 1 inch for large seed when using a cultipacker or other suitable equipment.

No-Till Seeding

No-till seeding is permissible into annual cover crops when planting is done following maturity of the cover crop or if the temporary cover stand is sparse enough to allow adequate growth of the permanent (perennial) species. No-till seeding shall be done with appropriate no-till seeding equipment. The seed must be uniformly distributed and planted at the proper depth.

Individual Plants

Shrubs, vines and sprigs may be planted with appropriate planters or hand tools. Pine trees shall be planted manually in the subsoil furrow. Each plant shall be set in a manner that will avoid crowding the roots.

Nursery stock plants shall be planted at the same depth or slightly deeper than they grew at the nursery. The tips of vines and sprigs must be at or slightly above the ground surface.

Where individual holes are dug, fertilizer shall be placed in the bottom of the hole, two inches of soil shall be added and the plant shall be set in the hole.

Mulching

Mulch is required for all permanent vegetation applications. Mulch applied to seeded areas shall achieve 75% to 100% soil cover. When selecting a mulch, design professionals should consider the mulch's functional longevity, vegeta-

Material	Depth
Grain straw	4" to 6"
Grass Hay	4" to 6"
Pine needles	3" to 5"
Wood waste	4" to 6"

Irrigation

Irrigation will be applied at a rate that will not cause runoff.

Topdressing

Topdressing will be applied on all temporary and permanent (perennial) species planted alone or in mixtures with other species. Recommended rates of application are listed in Table 6-5.1.

Second Year and Maintenance Fertilization

Second year fertilizer rates and maintenance fertilizer rates are listed in Table 6-5.1.

Lime Maintenance Application

Apply one ton of agricultural lime every 4 to 6 years or as indicated by soil tests. Soil tests can be conducted to determine more accurate requirements, if desired.

Use and Management

Mow Sericea Lespedeza only after frost to ensure that the seeds are mature. Mow between November and March.

Bermudagrass, Bahiagrass and Tall Fescue may be mowed as desired. Maintain at least 6 inches of top growth under any use and management. Moderate use of top growth is beneficial after establishment.

Exclude traffic until the plants are well established. Because of the quail nesting season, mowing should not take place between May and September.

Table 6-5.1. Fertilizer Requirements

TYPE OF SPECIES	YEAR	ANALYSIS OR EQUIVALENT N-P-K	RATE	N TOP DRESSING RATE
1. Cool season grasses	First	6-12-12	1500 lbs./ac	50-100 lbs./ac. 1/2/
	Second	6-12-12	1000 lbs./ac.	
	Maintenance	10-10-10	400 lbs./ac.	30
2. Cool season grasses and legumes	First	6-12-12	1500 lbs./ac.	0-50 lbs./ac. 1/
	Second	0-10-10	1000 lbs./ac.	—
	Maintenance	0-10-10	400 lbs./ac.	—
3. Ground covers	First	10-10-10	1300 lbs./ac. 3/	—
	Second	10-10-10	1300 lbs./ac. 3/	—
	Maintenance	10-10-10	1100 lbs./ac.	—
4. Pine seedlings	First	20-10-5	one 21-gram pellet per seedling placed in the closing hole	—
5. Shrub Lespedeza	First	0-10-10	700 lbs./ac.	—
	Maintenance	0-10-10	700 lbs./ac. 4/	
6. Temporary cover crops seeded alone	First	10-10-10	500 lbs./ac.	30 lbs./ac. 5/
7. Warm season grasses	First	6-12-12	1500 lbs./ac.	50-100 lbs./ac. 2/6/
	Second	6-12-12	800 lbs./ac.	50-100 lbs./ac. 2/
	Maintenance	10-10-10	400 lbs./ac.	30 lbs./ac.
8. Warm season grasses and legumes	First	6-12-12	1500 lbs./ac.	50 lbs./ac. 4/6/
	Second	0-10-10	1000 lbs./ac.	
	Maintenance	0-10-10	400 lbs./ac.	

1/ Apply in spring following seeding.
2/ Apply in split applications when high rates are used.
3/ Apply in 3 split applications.
4/ Apply when plants are pruned.
5/ Apply to grass species only.
6/ Apply when plants grow to a height of 2 to 4 inches.

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Table 6-5.2- Permanent Cover Crops
PLANT, PLANTING RATE, AND PLANTING DATE FOR PERMANENT COVER [1]

Species	Seedbed Rates: Pure Live Seed (PLS) Rate Per Acre	Seedbed Rates: Pure Live Seed (PLS) Rate Per 1000 sq ft	Resource Area[2]	Planting Dates by Resource Area: Solid lines indicate optimum dates, dotted lines indicate permissible but marginal dates. J F M A M J J A S O N D	Remarks
BAHIA, PENSACOLA *Paspalum notatum*					
alone or with temporary cover	60 lbs	1.4 lbs	P		165,000 seed per pound. Low growing. Sod forming. Slow to establish. Plant with a companion crop. Will spread into bermuda pastures and lawns. Mix with Sericea lespedeza or weeping lovegrass.
with other perennials	30 lbs	0.7 lb	C		
BAHIA, WILMINGTON *Paspalum notatum*					
alone or with temporary cover	60 lbs	1.4 lb	M-L		
with other perennials	30 lbs	0.7 lb	P		Same as above.
BERMUDA, COMMON *Cynodon dactylon*					
Hulled seed			P		
alone	10 lbs	0.2 lb	C		1,787,000 seed per pound. Quick cover. Low growing and sod forming. Full sun. Good for athletic fields.
with other perennials	6 lbs	0.7 lb			
BERMUDA, COMMON *Cynodon dactylon*					
Unhulled seed					
with temporary cover	10 lbs	0.2 lb	P		Plant with winter annuals.
with other perennials	6 lbs	0.1 lb	C		Plant with Tall Fescue

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Table 6-5.2- Permanent Cover Crops
PLANT, PLANTING RATE, AND PLANTING DATE FOR PERMANENT COVER [1]

Species	Seedbed Rates: Pure Live Seed (PLS) Rate Per Acre	Seedbed Rates: Pure Live Seed (PLS) Rate Per 1000 sq ft	Resource Area[2]	Planting Dates by Resource Area: Solid lines indicate optimum dates, dotted lines indicate permissible but marginal dates. J F M A M J J A S O N D	Remarks
CENTIPEDE *Eremochloa ophiuroides*					
sprigs	2 x 2' spacing	ALL			For very wet sites. May clog channels. Dig sprigs from local sources. Use along river banks and shorelines.
FESCUE, ATLANTIC COAST *Festuca arundinacea* var. *Atlantic Coast*					
alone	50 lbs	1.1 lb	M-L		Grows well on coastal sand dunes, borrow areas, and gravel pits. Provides winter cover for wildlife. Mix with Sericea lespedeza except on sand dunes.
with other perennials	30 lbs	0.7 lb	P		
KUDZU *Pueraria lobata*			C		
Plants or crowns	3 - 7 apart	ALL			Rapid and vigorous growth. Excellent in gully erosion control. Will climb. Good livestock forage
LESPEDEZA, ANNUAL *Lespedeza cuneata*					
scarified	60 lbs	1.4 lb	M-L		330,000 seed per pound. Widely adapted. Low maintenance. Mix with Weeping lovegrass. Common bermuda, bahia, or tall fescue. Takes 2 to 3 years to become fully established. Excellent on roadbanks. Inoculate seed with EL inoculant.
			P		
			C		
unscarified	75 lbs	1.7 lb	M-L		
			P		
			C		
LESPEDEZA, BUSH *Lespedeza bicolor* (*Lespedeza thunbergii*)					
plants	3 x3		M-L		Provides wildlife food and cover
			P		
			C		
LOVEGRASS, WEEPING *Eragrostis curvula*					
alone	4 lbs	0.1 lb	M-L		1,500,000 seed per pound. Quick cover. Drought tolerant. Grows well with Sericea lespedeza on roadbanks.
			P		
with other perennials	2 lbs	0.05 lb	C		

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Table 6-5.2- Permanent Cover Crops
PLANT, PLANTING RATE, AND PLANTING DATE FOR PERMANENT COVER [1]

Species	Seedbed Rates: Pure Live Seed (PLS) Rate Per Acre	Seedbed Rates: Pure Live Seed (PLS) Rate Per 1000 sq ft	Resource Area[2]	Planting Dates by Resource Area: Solid lines indicate optimum dates, dotted lines indicate permissible but marginal dates. J F M A M J J A S O N D	Remarks
MIMOSA *Albizia julibrissin*					
seedlings	3 x 3' spacing	ALL			Provides wildlife food and cover
MILLET, BROWNTOP *Panicum ramosum*					
alone	15 lbs	0.3 lb	M-L		1,000,000 seed per pound. Quick cover. Drought tolerant. Grows well with Sericea lespedeza on roadbanks.
			P		
with other perennials	10 lbs	0.2 lb	C		
MILLET, GERMAN *Setaria italica*					
alone	30 lbs	0.7 lb	M-L		1,000,000 seed per pound. Quick cover. Drought tolerant. Grows well with Sericea lespedeza on roadbanks.
			P		
with other perennials	20 lbs	0.5 lb	C		
MILLET, JAPANESE *Echinochloa esculenta*					
alone	30 lbs	0.7 lb	M-L		1,000,000 seed per pound. Quick cover. Drought tolerant. Grows well with Sericea lespedeza on roadbanks.
			P		
with other perennials	20 lbs	0.5 lb	C		

GSWCC 2016 Edition

Table 6-5.2- Permanent Cover Crops
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OATS *Avena sativa*					
alone	80 lbs	1.8 lbs	M-L		14,500 seed per pound. Quick cover. Drought tolerant. Grows well with Sericea lespedeza on roadbanks.
			P		
with other perennials	50 lbs	1.1 lb	C		
RYEGRASS, ANNUAL *Lolium multiflorum*					
alone	30 lbs	0.7 lb	M-L		227,000 seed per pound. Quick cover. Drought tolerant. Grows well with Sericea lespedeza on roadbanks.
			P		
with other perennials	20 lbs	0.5 lb	C		
RYEGRASS, PERENNIAL *Lolium perenne*					
alone	30 lbs	0.7 lb	M-L		227,000 seed per pound. Quick cover. Drought tolerant. Grows well with Sericea lespedeza on roadbanks.
			P		
with other perennials	20 lbs	0.5 lb	C		

GSWCC 2016 Edition

Table 6-5.2- Permanent Cover Crops
PLANT, PLANTING RATE, AND PLANTING DATE FOR PERMANENT COVER [1]

Species	Seedbed Rates: Pure Live Seed (PLS) Rate Per Acre	Seedbed Rates: Pure Live Seed (PLS) Rate Per 1000 sq ft	Resource Area[2]	Planting Dates by Resource Area: Solid lines indicate optimum dates, dotted lines indicate permissible but marginal dates. J F M A M J J A S O N D	Remarks
RYEGRASS, WEEPING *Eragrostis curvula*					
alone	4 lbs	0.1 lb	M-L		1,500,000 seed per pound. Quick cover. Drought tolerant. Grows well with Sericea lespedeza on roadbanks.
			P		
with other perennials	2 lbs	0.05 lb	C		
SUDANGRASS *Sorghum sudanense*					
alone	30 lbs	0.7 lb	M-L		227,000 seed per pound. Quick cover. Drought tolerant. Grows well with Sericea lespedeza on roadbanks.
			P		
with other perennials	20 lbs	0.5 lb	C		
WHEAT *Triticum aestivum*					
alone	120 lbs	2.8 lbs	M-L		14,500 seed per pound. Quick cover. Drought tolerant. Grows well with Sericea lespedeza on roadbanks.
			P		
with other perennials	90 lbs	2.1 lbs	C		

1 Reduce seeding rates by 50% when drilled.
2 PLS is an abbreviation for Pure Live Seed. Refer to Section V.E. of these spec sections.
3 M-L represents the Mountain, Blue Ridge, and Ridges and Valleys MLRAs.
P represents the Southern Piedmont MLRA.
C represents the Southern Coastal Plain,Sand Hills,Black Lands,and Atlantic Coast Flatwoods MLRAs. See Figure 6-4.1.

E&S DETAILS

GEORGIA REGISTERED No. 3441 LAND SURVEYOR BARRY D. LORD

9-21-2021

GSWCC Level II Certification # 643799
Expires 8-11-2023

Initial Date of Plans:

6-22-2021

Revision per comments:

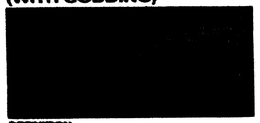
9-21-2021

Notes:

Sheet 7

Ingram, Lord and Associates
Land Surveying and Planning
437 Sam Brown Blvd
Commerce, GA 30529
706.335.9069

DISTURBED AREA STABILIZATION (WITH SODDING) Ds4



DEFINITION
A permanent vegetative cover using sods on highly erodible or critically eroded lands.

PURPOSE
- Establish immediate ground cover.
- Reduce runoff and erosion.
- Improve aesthetics and land value.
- Reduce dust and sediments.
- Stabilize waterways, critical areas.
- Filter sediments, nutrients and bugs.
- Reduce downstream complaints.
- Reduce likelihood of legal action.
- Reduce likelihood of work stoppage due to legal action.
- Increase "good neighbor" benefits.

CONDITIONS
This application is appropriate for areas that require immediate vegetative covers, drop inlets, grass swales, and waterways with intermittent flow.

PLANNING CONSIDERATIONS
Sodding can initially be more costly than seeding, but the advantages justify the increased initial costs:

1. Immediate erosion control, green surface, and quick use.
2. Reduced failure as compared to seed as well as the lack of weeds.
3. Can be established nearly year-round.

Sodding is preferable to seed in waterways and swales because of the immediate protection of the channel after application. Sodding must be staked in concentrated flow areas (See Figure 6-6.1).

Consider using sod framed around drop inlets to reduce sediments and maintaining the grade.

CONSTRUCTION SPECIFICATIONS
Soil Preparation
Bring soil surface to final grade. Clear surface of trash, woody debris, stones and clods larger than 1". Apply sod to soil surfaces only and not frozen surfaces, or gravel type soils.

Topsoil properly applied will help guarantee a stand. Don't use topsoil recently treated with herbicides or soil sterilants.

Mix fertilizer into soil surface. Fertilize based on soil tests or Table 6-6.1.

Table 6-6.1, Fertilizer Requirements for Soil Surface Application

Fertilizer Type	Fertilizer Rate (lbs/acre)	Fertilizer Rate (lbs/sq ft)	Season
10-10-10	1000	.025	Fall

Agricultural lime should be applied based on soil tests or at a rate of 1 to 2 tons per acre.

Installation
Lay sod with tight joints and in straight lines. Don't overlap joints. Stagger joints and do not stretch sod (See Figure 6-6.2)

On slopes steeper than 3:1, sod should be anchored with pins or other approved methods. Installed sod should be rolled or tamped to provide good contact between sod and soil.

Irrigate sod and soil to a depth of 4" immediately after installation.

Sod should not be cut or spread in extremely wet or dry weather. Irrigation should be used to supplement rainfall for a minimum of 2-3 weeks.

MATERIALS
Sod selected should be certified. Sod grown in the general area of the project is desirable.

1. Sod should be machine cut and contain 3/4" (+ or -1/4") of soil, not including shoots or thatch.
2. Sod should be cut to the desired size within + or -5%. Torn or uneven pads should be rejected.
3. Sod should be cut and installed within 36 hours of digging.
4. Avoid planting when subject to frost heave or hot weather, if irrigation is not available.
5. The sod type should be shown on the plans or installed according to Table 6-6.2. See Figure 6-4.1 for your Resource Area.

MAINTENANCE
Re-sod areas where an adequate stand of sod is not obtained. New sod should be mowed sparingly. Grass height should not be cut less than 2"-3" or as specified (See Figure 6-6.2).

Apply one ton of agricultural lime as indicated by soil test or every 4-8 years. Fertilize grasses in accordance with soil tests or Table 6-6.3.

Table 6-6.2 Sod Planting Requirements

Grass	Varieties	Resource Area	Growing Season
Bermudagrass	Common Tifway Tifgreen Tifdwarf	M-L,P,C P,C P,C P,C	warm weather
Bahiagrass	Pensacola	P,C	warm weather
Centipede	–	P,C	warm weather
St. Augustine	Common Bitterblue Raleigh	C	warm weather
Zoysia	Emerald Meyer	P,C	warm weather
Tall Fescue	Kentucky	M-L,P	cool weather

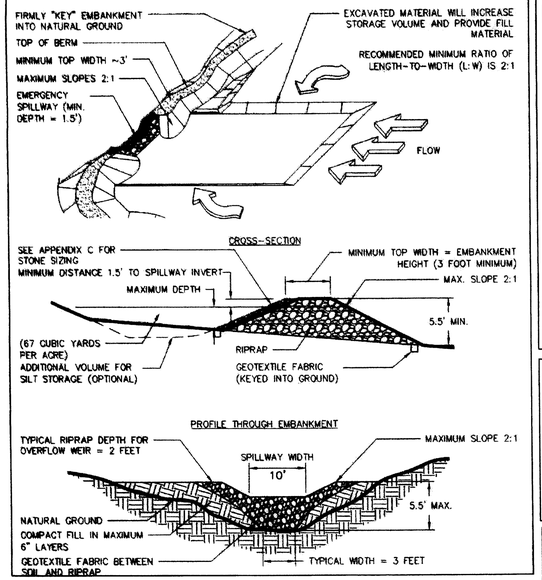
Table 6-6.3
Fertilizer Requirements for Sod

Types of Species	Planting Year	Fertilizer (N-P-K)	Rate (lbs./acre)	Nitrogen Top Dressing Rate (lbs./acre)
cool season grasses	first second maintenance	6-12-12 6-12-12 10-10-10	1500 1000 400	50-100 30
warm season grasses	first second maintenance	6-12-12 6-12-12 10-10-10	1500 800<

TEMPORARY SEDIMENT TRAP

COURTESY OF CITY OF KNOXVILLE BMP EROSION AND SEDIMENT

ROCK OUTLET



SEDIMENT TRAP Sd4-C

NO SCALE

ROCK OUTLET

NORTHWOODS PHASE 3 9/23/2021

BASIN A

Sd4 VOLUME — SEDIMENT VOLUME FOR 3.3 AC.

STAGE FEET	ELEV. FEET	AREA SQ. FT.	VOL CHANGE CU. FT.	TOTAL VOL CU. FT.	COMMENT
0	856.0	1916	-	0	BOTTOM SED. TRAP
1.0	857.0	2298	2107	2107	1970 CF C/O VOL. = 856.93
2.0	858.0	2705	2502	4609	5970 CF SED. VOL = 858.47
3.0	859.0	3137	2921	7530	SPILLWAY = 860.0
4.0	860.0	3594	3366	10895	TOP BERM = 861.5
5.0	861.0	4076	3835	14730	

Sd4 VOLUME = DA x 67cy x 27cf
SED. VOLUME = 3.3AC x 67cy x 27cf = 5970 CF REQUIRED
CLEANOUT VOL. = 3.3AC x 22cy x 27cf = 1960 CF REQUIRED

Sd1-S VOLUME — BASINS C, C-BYPASS, D

BASIN C	DA = 2.1 AC, TOTAL LENGTH = 995 LF 0.21 AC. / 100 LF
BASIN C BYPASS	DA = 1.1 AC, TOTAL LENGTH = 590 LF 0.19 AC. / 100 LF
BASIN D	DA = 0.6 AC, TOTAL LENGTH = 375 LF 0.16 AC. / 100 LF

21024ES *Type II 24-hr 25 YR Rainfall=6.23"*
Prepared by MLE ENGINEERING COMPANY, LLC Printed 9/21/2021
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Events for Subcatchment 1S: BASIN A

Event	Rainfall (inches)	Runoff (cfs)	Volume (acre-feet)	Depth (inches)
2 YR	3.81	13.83	0.607	2.21
10 YR	5.25	21.08	0.952	3.46
25 YR	6.23	26.01	1.193	4.34

21024ES *Type II 24-hr 25 YR Rainfall=6.23"*
Prepared by MLE ENGINEERING COMPANY, LLC Printed 9/21/2021
HydroCAD® 10.10-5a s/n 10346 © 2020 HydroCAD Software Solutions LLC

Events for Subcatchment 2S: BASIN B

Event	Rainfall (inches)	Runoff (cfs)	Volume (acre-feet)	Depth (inches)
2 YR	3.81	28.08	1.233	2.21
10 YR	5.25	42.79	1.933	3.46
25 YR	6.23	52.81	2.422	4.34

21024ES *Type II 24-hr 25 YR Rainfall=6.23"*
Prepared by MLE ENGINEERING COMPANY, LLC Printed 9/23/2021
HydroCAD® 10.10-5a s/n 10346 © 2020 HydroCAD Software Solutions LLC Page 2

Summary for Subcatchment 1S: BASIN A

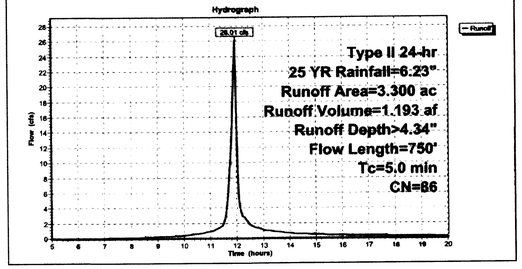
Runoff = 26.01 cfs @ 11.95 hrs, Volume= 1.193 af, Depth> 4.34"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 25 YR Rainfall=6.23"

Area (ac)	CN	Description
* 3.300	86	
3.300		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.8	100	0.0500	2.17		Sheet Flow, Smooth surfaces n= 0.011 P2= 3.81"
3.2	650	0.1170	3.42		Shallow Concentrated Flow, Nearly Bare & Untilled Kv= 10.0 fps
4.0	750	Total, Increased to minimum Tc = 5.0 min			

Subcatchment 1S: BASIN A



21024ES *Type II 24-hr 25 YR Rainfall=6.23"*
Prepared by MLE ENGINEERING COMPANY, LLC Printed 9/23/2021
HydroCAD® 10.10-5a s/n 10346 © 2020 HydroCAD Software Solutions LLC Page 1

Summary for Subcatchment 2S: BASIN B

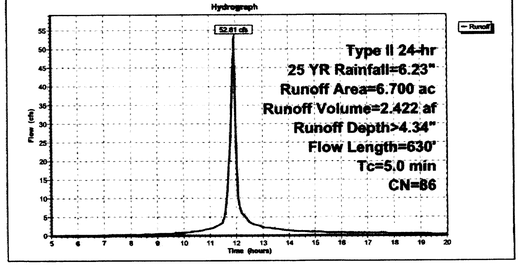
Runoff = 52.81 cfs @ 11.95 hrs, Volume= 2.422 af, Depth> 4.34"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 25 YR Rainfall=6.23"

Area (ac)	CN	Description
* 6.700	86	
6.700		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.1	100	0.0200	1.50		Sheet Flow, Smooth surfaces n= 0.011 P2= 3.81"
2.4	530	0.1360	3.69		Shallow Concentrated Flow, Nearly Bare & Untilled Kv= 10.0 fps
3.5	630	Total, Increased to minimum Tc = 5.0 min			

Subcatchment 2S: BASIN B



TEMPORARY SEDIMENT BASIN

CROSS-SECTIONAL DETAIL

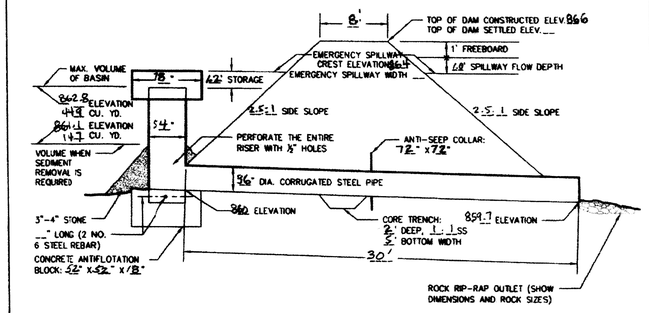


Figure 6-29.7

TEMPORARY SEDIMENT BASIN DESIGN SHEET
Project Name NORTHWOODS PH3
Page 2 BASIN B

14. Determine diameter of principal spillway (D_w) and flow through the principal spillway (Q) from Table 6-29.1 using H and Q_w.
D_w = 36" in. Q = 50 cfs (value directly from table)
15. Compute actual flow through the principal spillway, using Table 6-29.1 to determine the correction factor for pipe length, L.
Q_w = Q * correction factor = 50 cfs * 1.18
Q_w = 59 cfs
16. Compute riser diameter (D_r).
D_r = 1.5 * D_w
D_r = 1.5 * 36" in.
D_r = 54" in.
D_r = 54" in.
17. Compute trash rack diameter (D_t).
D_t = 1.4 * D_r
D_t = 1.4* 54" in.
D_t = 76" in.
D_t = 78" in.
18. Determine the minimum distance between the riser crest and the emergency spillway crest, h, using Table 6-29.2 D_w and Q_w.
h = 1.5' ft

Concrete Riser Base Design
19. Determine the volume of concrete per vertical foot of riser height needed, from Table 6-29.3 to prevent flotation.
Required volume of concrete per vertical foot = _____ cf/v.f.
20. Compute total volume of concrete required.
Total required volume of concrete = Required volume per vertical foot * Riser length
Total required volume of concrete = 73.9 cf/v.f. * 3 ft
Total volume of concrete required = 41.7 cf
21. Assume base thickness, B (usually 18").
B = 18 in = 1.5 ft
22. Compute required surface area.
Required surface area = Total volume required / B
Required surface area = 27.8 cf / 1.5 ft
Required surface area = 18.53 sf
23. Compute riser base length (l) and width (w) (assume square base).
l = w = (required surface area)^0.5
l = w = (18.53 sf)^0.5
l = w = 4.3 ft = 12in/ft _____ ft = 52 in SQUARE

Anti-Seep Collar Design
24. Determine if anti-seep collar is required. If yes, to any of the following conditions, a collar is required:
_____ The settled height of the dam is greater than 15 feet.
_____ The principal spillway diameter (D_w) is smooth pipe larger than 8".
X The principal spillway diameter (D_w) is corrugated metal pipe larger than 12".
25. Determine size of anti-seep collar required.
X 18-inch projection (for heads (H) less than or equal to 10 feet).
_____ 24-inch projection (for heads (H) greater than 10 feet).

Emergency Spillway (es)
26. Compute minimum capacity of emergency spillway (Q_{es})
Q_{es} = Q_w - Q = 52.0 cfs - 59 cfs
Q_{es} = Max cfs

TEMPORARY SEDIMENT BASIN DESIGN SHEET

Sd3

Computed by _____ Date _____
Checked by _____ Date _____

Project Name NORTHWOODS PH.3
Basin No. B
Total area draining to basin = 6.7 acres
Disturbed area draining to basin = 6.7 acres

Volume
1. Compute minimum required storage volume (V_r).
V_r = 67 cy/ac * 6.7 acres = 449 cy 12,120 C.F.
2. Compute volume of basin at clean-out (Vc).
V_c = 22 cy/ac * 6.7 acres = 147.4 cy 3,980 C.F.
3. Determine elevation corresponding to minimum required storage volume, V_r.
Minimum riser crest elevation = 862.8 ft (determined by stage/storage relationship)
4. Determine elevation corresponding to clean-out volume, V_c.
Clean-out elevation = 861.1 ft (determined by stage/storage relationship)
Note: Clean-out elevation shall be clearly marked on the riser or marked by a post near the riser.
5. Compute length of riser.
Riser length = Minimum elevation of riser crest - Lowest elevation of pipe at riser
Riser length = 862.8 ft - 860 ft
Riser length = 2.8 ft

Stormwater Runoff
6. Compute peak discharge from a 2-yr, 24-hr storm event.
Q_2 = 28.1 cfs (Attach runoff computation sheet.)
7. Compute peak discharge from a 25-yr, 24-hr storm event.
Q_{25} = 52.8 cfs (Attach runoff computation sheet.)

Surface Area/Configuration Design
8. Compute minimum basin surface area (SA_{min}).
SA_{min} = 0.01 ac/cfs * Q_2
SA_{min} = 0.01 ac/cfs * 28.1 cfs
SA_{min} = .281 ac = 43560 sf/ac * .281 ac = 12,240 sf
9. Check available area at elevation of riser crest.
Available area = 7817* sf (determined by stage/storage relationship)
Available area SA_a? Yes _____ No X
10. Compute required length to achieve 2:1 L:W ratio.
Average width = 140 ft
Required length = 2 * average width
Required length = 2 * 40 ft
Required length = 80 ft
Available length = 94 ft
2:1 L:W ratio satisfied? Yes X No _____
If "no", refer to Figure 6-29.2 for baffle designs. Note any required baffles on E&SC Plan and include calculations and details for baffle(s).

Principal Spillway (ps)
11. Determine maximum principal spillway capacity.
Q_{ps} = Q_2 = 28.1 cfs
12. Compute the vertical distance between the centerline of the outlet pipe and the emergency spillway crest (H). 861.5 864
H = 2.5 ft
13. Compute the total pipe length of the principal spillway, L, using Figure 6-29.3.
L = [A + (S+C)*2 | (Z1+Z2) + T + E = (____-(____+____)*2) [____+____] + ____ + ____
L = 30 ft

TEMPORARY SEDIMENT BASIN DESIGN SHEET
Project Name NORTHWOODS PH.3
Page 3 BASIN B

27. Determine stage (H_s), bottom width (b), velocity (V) and minimum exit slope (S) using Table 6-29.4 and Q_w.
H_s = 1.0 ft b = 10 ft V = 4.0 fps S = 3.0 %
28. Actual entrance channel slope, S_c = 4.0 %
29. Actual exit channel slope, S_e = 3.0 %
Note: If S_e is steeper than S (from Table 6-29.4), then the velocity in the exit channel will increase.

a.) Calculate new exit velocity (V_e)
V_e = V (S/S_e) ** c _____ fps * (____/____) 0.5
V_e = _____ fps
Note: Refer to Channel Stabilization (Ch) to determine the proper lining for the emergency spillway.
Grass _____ Rip-rap _____ Concrete _____

Design Elevations
30. Riser crest elevation = 862.8 ft
31. Compute minimum emergency spillway crest elevation.
Minimum emergency spillway crest elevation = Riser crest elevation + h
Minimum emergency spillway crest elevation = 862.8 ft + 1.2 ft
Minimum emergency spillway crest elevation = 864 ft
32. Determine design high water elevation
Design high water elevation = Minimum emergency spillway crest elevation + Stage elevation (Hp)
Design high water elevation = 864 ft + 1.0 ft
Design high water elevation = 865 ft
33. Determine elevation of top of dam
Elevation of top of dam = Design high water elevation + 1 ft freeboard
Elevation of top of dam = 865 ft + 1 ft
Elevation of top of dam = 866 ft

PLEASE NOTE THAT DESIGN VALUES DETERMINED BY THIS SHEET REPRESENT THE MINIMUM REQUIREMENTS FOR A TEMPORARY SEDIMENT BASIN.

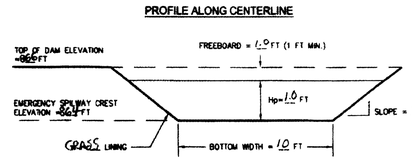
Sd3 BASIN B 9/23/2021
NORTHWOODS PHASE 3
TEMPORARY SEDIMENT POND STORAGE

STAGE - STORAGE TABLE

STAGE FEET	ELEV FEET	AREA SQ. FT.	VOL CHANGE CU. FT.	TOTAL VOL CU. FT.	COMMENT
0	860	3378		0	BOTTOM POND
			3699		
1	861	4019		3699	3980 CF C/O ELEV 861.1
			4359		
2	862	4699		8058	
			5059		12120 CF SED ELEV 862.8
3	863	5418		13116	
			5798		RISER CREST 863.0
4	864	6177		18914	SPILLWAY 864.0
			6576		
5	865	6975		25490	
			7394		
6	866	7812		32883	TOP EMBANKMENT 866.0

CROSS-SECTIONAL DETAIL OF EMERGENCY SPILLWAY

PROFILE ALONG CENTERLINE



EMERGENCY SPILLWAY

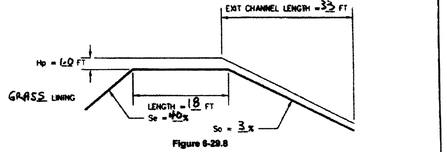


Figure 6-29.8

GSWCC
Georgia Soil and Water Conservation Commission
APPROVED

E&S DETAILS

GEORGIA REGISTERED No. 3041 LAND SURVEYOR BARRY D. LORD

9-21-2021

GSWCC Level II Certification # 64379
Expires 8-11-2023

Initial Date of Plans:
6-22-2021

Revision per comments:
9-21-2021

Notes:

Sheet 9

Ingram, Lord and Associates
Land Surveying and Planning
437 Sam Brown Blvd
Commerce, GA 30529
706.335.9069

6.3

CITY OF COMMERCE

City Council Agenda

Subject: Readoption of the Unified Development Code with Amendments

Date: May 11, 2026

Budget Impact: **Category:**

Funding Source:

City Council Action Requested On:

Department: Planning and Development

Staff recommends

Matthew Hailey

Matthew Hailey, Assistant City Manager

UDC Amendements April 2026 PC Meeting.pdf

Comprehensive Plan: The Comprehensive Plan for Commerce, adopted by the Commerce City Council, as readopted or amended from time to time in accordance with the Georgia Planning Act of 1989 and administrative rules of the Georgia Department of Community Affairs. Comprehensive plan also broadly includes any other functional plans adopted by the Commerce City Council pertaining to land use, transportation, community facilities, natural and historic resources, and the environment.

Condition of zoning or use approval: A requirement adopted by the Commerce City Council at the time of approval of a rezoning, or conditional use, placing greater or additional requirements or restrictions on the property than provided in this UDC to reduce an adverse impact of the use and to further protect the public health, safety, or general welfare.

Cul-de-sac: A paved area terminating a cul-de-sac street, provided for the purpose of enabling vehicles to reverse direction while driving continuously in a forward but circular manner.

Cul-de-sac street: A street having one end open to traffic and the other end terminated with a turnaround.

Data Processing and Housing/Data Centers: A facility primarily used for the centralized storage, processing, transmission, or management of digital data. This includes, but is not limited to, hyperscale, enterprise, colocation, edge, high-performance computing (HPC), and blockchain operations. Data centers typically house computer servers, networking equipment, and related infrastructure necessary for continuous digital operations, and generally require significant electrical capacity, broadband connectivity, and cooling systems.

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Development: (1) a land development project involving the construction of streets, utilities, buildings, or other improvements required for the habitation or use of property, such as a residential neighborhood, an apartment complex, a store, or a shopping center; (2) any man-made change to improved or unimproved real estate, including, but not limited to, buildings or other structures, mining, dredging, filling, grading, paving, excavating, drilling operations, or permanent storage of materials; (3) the act of constructing or carrying out a land development project, including the alteration of land or vegetation in preparation for construction activity.

Dwelling: A building or portion of a building arranged or designed to provide living quarters for one or more families or households on a permanent or long-term basis.

Floor: The top surface of an enclosed area in a building, from the top of slab in concrete slab construction or top of wood flooring in wood frame construction.

Frontage or street frontage: The width in linear feet where it abuts the right of way of any street from which access may be gained.

Height of building: The vertical distance measured from the grade to the highest point of the coping of a flat roof; to the deck lines of a mansard roof; or to the mean height level between the

Table 2-1A
Permitted and Conditional Uses in Agricultural and Residential Zoning Districts
P = Permitted C = Conditional Use X = Prohibited

ACCESSORY USES GENERALLY	SEE SEC.	AF	AR	R-1E	R-1	R-2	R-3	R-4	R-5	R-6
Accessory uses and structures not otherwise listed in this table, determined by the Zoning Administrator to be normally incidental to one or more permitted principal uses		P	P	P	P	P	P	P	P	P
Amateur radio tower		P	P	P	P	P	P	P	P	P
Construction field office, temporary		P	P	P	P	P	P	P	P	P
Fallout shelter or underground bunker		P	P	P	P	P	X	X	X	X
Intermodal container, temporary		P	P	P	P	P	P	P	P	X
Parking space (surface), accessory to one or more permitted uses		P	P	P	P	P	P	P	P	P
Produce stand, temporary		P	C	X	X	X	X	X	X	X
Satellite dish antenna		P	P	P	P	P	P	P	P	P
Solar energy system, building mounted		P	P	P	P	P	P	P	P	P
Solar energy system, ground mounted		P	P	X	X	X	X	X	X	X
Utility substation or installation		~~P~~C	~~P~~C	~~P~~C	~~P~~C	~~P~~C	~~P~~C	~~P~~C	~~P~~C	~~P~~C
Wind turbine		C	C	C	C	C	C	C	C	C
USES ACCESSORY TO PRINCIPAL DWELLING	**SEE SEC.**	**AF**	**AR**	**R-1E**	**R-1**	**R-2**	**R-3**	**R-4**	**R-5**	**R-6**
Accessory dwelling unit		P	P	P	P	P	X	X	X	X
Carport (freestanding)		P	P	P	P	P	X	X	X	X
Enclosure or structure for household pet(s)		P	P	P	P	P	P	P	P	P
Family day care home		P	P	P	P	P	P	P	P	P
Garage (private)		P	P	P	P	P	P	P	P	P
Greenhouse, private		P	P	P	X	X	X	X	X	X
Guest house		P	P	P	P	P	X	X	X	X
Home occupation		P	P	P	P	P	P	P	P	P
Pet, household domesticated		P	P	P	P	P	P	P	P	P
Produce stand		X	X	X	X	X	X	X	X	X
Recreation facility, private (pool, tennis court) (community recreation)		P	P	P	P	P	P	P	P	P
Recreational vehicle or boat storage, outside		P	P	P	X	X	X	X	X	X
Storage building or shed		P	P	P	P	P	P	P	P	P
Yard or garage sale		P	P	P	P	P	P	P	P	P
USES ACCESSORY TO NON-RESIDENTIAL USE	**SEE SEC.**	**AF**	**AR**	**R-1E**	**R-1**	**R-2**	**R-3**	**R-4**	**R-5**	**R-6**
Cemetery, accessory to church/place of worship		P	P	P	P	P	P	P	P	P
RESIDENTIAL USES	**SEE SEC.**	**AF**	**AR**	**R-1E**	**R-1**	**R-2**	**R-3**	**R-4**	**R-5**	**R-6**
Dwelling, attached for sale		X	X	X	X	X	X	X	X	P
Dwelling, detached single-family, fee simple		P	P	P	P	P	P	P	P	X
Dwelling, detached single-family, condominium		X	X	X	X	X	X	P	X	X
Dwelling, two-family (duplex)		X	X	X	X	X	P	X	X	X
Dwelling, fee simple townhouse		X	X	X	X	X	X	X	X	X
Dwelling, multiple-family		X	X	X	X	X	X	P	X	X
Fraternity or sorority house or dormitory		X	X	X	X	X	X	C	X	X
Group home, dormitory, or rooming or boarding house		X	X	X	X	X	X	C	X	X
Live-work unit		X	X	X	X	X	X	X	X	X
Manufactured home (individual lot)		X	X	X	X	X	X	X	P	X
Manufactured home park		X	X	X	X	X	X	X	C	X
Mobile home		X	X	X	X	X	X	X	X	X
Model home; temp. sales facility		P	P	P	P	P	P	P	X	X

Table 2-1B
Permitted and Conditional Uses for Commercial and Industrial Zoning Districts
(Amended 01/16/23)

P = Permitted C = Conditional Use X = Prohibited

ACCESSORY USES GENERALLY	OCR	CBD	C-1	C-2	M-1	M-2
Accessory uses and structures not otherwise listed in this table, determined by the Zoning Administrator to be normally incidental to one or more permitted principal uses	P	P	P	P	P	P
Amateur radio tower	P	P	P	P	P	P
Collection bin	X	X	X	X	X	X
Construction field office, temporary	P	P	P	P	P	P
Fallout shelter or underground bunker	X	P	X	X	P	P
Intermodal container, temporary	P	P	P	P	P	P
Parking space (surface), accessory to one or more permitted uses	P	P	P	P	P	P
Produce stand, temporary	X	P	X	P	X	X
Satellite dish antenna	P	P	P	P	P	P
Solar energy system, mounted	P	P	P	P	P	P
Solar energy system, ground mounted	X	X	X	X	X	X
Utility substation or installation	P	P	P	P	P	P
Wind turbine	C	C	C	C	C	C
USES ACCESSORY TO PRINCIPAL DWELLING	**OCR**	**CBD**	**C-1**	**C-2**	**M-1**	**M-2**
Accessory dwelling unit	C	X	X	X	X	X
Carport (freestanding)	X	X	X	X	X	X
Enclosure or structure for household pet(s)	P	X	X	X	X	X
Family day care home	P	X	X	X	X	X
Garage (private)	P	X	X	X	X	X
Greenhouse, private	X	X	X	X	X	X
Guest house	C	X	X	X	X	X
Home occupation	P	X	X	X	X	X
Pet, household domesticated	P	X	X	X	X	X
Produce stand	X	X	X	~~X~~P	X	X
Recreation facility, private (pool, tennis court) (community recreation)	X	X	X	X	X	X
Recreational vehicle or boat storage, outside	X	X	X	X	X	X
Storage building or shed	P	X	X	X	X	X
Yard or garage sale	P	X	X	X	X	X
ACCESSORY BUILDINGS, STRUCTURES AND USES ACCESSORY TO NONRESIDENTIAL PRINCIPAL USES	**OCR**	**CBD**	**C-1**	**C-2**	**M-1**	**M-2**
Automated teller machine with drive-through	X	X	X	P	X	X
Automated teller machine without drive-through	P	P	P	P	P	P
Caretaker or night watchman residence	X	X	X	C	P	P
Cemetery, accessory to church/place of worship	~~P~~X	~~P~~X	X~~P~~	~~P~~X	~~P~~C	~~P~~C
Community food or housing shelter, accessory to church or place of worship, or crisis center	X	C	X	P	C	X
Food truck or mobile food vendor	P	P	P	P	P	P
Helicopter landing pad	C	C	C	C	C	P
Open air business establishment, temporary	X	P	X	P	X	X
Taxi stand, dispatching	X	P	X	P	P	P
RESIDENTIAL USES	**OCR**	**CBD**	**C-1**	**C-2**	**M-1**	**M-2**
Dwelling, detached single-family, fee simple	P	X	X	X	X	X
Dwelling, detached single-family, fee simple, existing on effective date of this ordinance	P	P	P	P	P	P
Fraternity or sorority house or dormitory	X	C	X	C	X	X
Group home, rooming or boarding house	X	X	X	X	X	X
Live-work unit	P	P	X	P	X	X
Relocated residential structure	X	X	X	X	X	X
Recreational vehicle park	X	X	X	C	X	X

INSTITUTIONAL USES	OCR	CBD	C-1	C-2	M-1	M-2
Adult day services	P	P	P	P	X	X
Cemetery, excluding mausoleum	X	X	X	P	C	C
Child care learning center	P	P	P	P	P	P
Church, temple, synagogue, place of worship	P	P	P	P	P	P
Club or lodge, nonprofit	P	P	P	P	P	P
College or university, private	X	P	X	P	P	X
Community donation center	X	C	X	P	P	X
Community food or housing shelter (nonprofit) or crisis center (nonprofit)	X	C	X	P	X	X
Continuing care retirement community	C	C	C	C	X	X
Hospital	P	P	P	P	PX	XP
Nursing or personal care home or other institutionalized residential living and care facility	C	P	C	P	X	X
Public use	P	P	P	P	P	P
School, private	P	P	P	P	P	P
School, public	P	P	P	P	P	P
School, special	P	P	P	P	P	P
School, trade	P	P	P	P	P	P
Therapeutic camp	X	X	X	C	X	X
COMMERCIAL USES	**OCR**	**CBD**	**C-1**	**C-2**	**M-1**	**M-2**
Adult entertainment establishment	X	X	X	X	X	C
Animal hospital or veterinary clinic	C	C	C	P	C	X
Art gallery	P	P	P	P	X	X
Appliance repair or general merchandise repair	X	X	X	P	P	X
Auction house or auction yard	X	X	X	C	C	C
Automobile or other vehicle repair or maintenance or paint	X	X	X	P	P	P
Automobile or other vehicle sales, rental, lease, new	X	X	X	P	C	C
Automobile or other vehicle sales, rental, lease, pre-owned/used	X	X	X	P	C	C
Automobile (or other vehicle) service or wash	X	X	P	P	P	P
Bail bonding or bondsperson	X	P	X	P	X	X
Bank or financial establishment	P	P	P	P	X	X
Bed and breakfast inn	P	P	P	P	X	X
Body piercing	X	X	X	P	X	X
Botanical garden	X	X	X	P	X	X
Broadcasting, television, radio, movie studio	P	P	P	P	P	X
Building materials sales	X	X	X	P	P	P
Business service establishment	P	P	P	P	P	P
Camp or campground	X	X	X	C	X	X
Caterer (food preparation and delivery)	P	P	P	P	P	X
Check cashing or payday loan establishment	X	X	X	P	X	X
Clinic	P	P	P	P	X	X
Consumer fireworks retail sales facility	C	C	C	C	C	C
Consumer fireworks retail sales stand	C	C	C	C	C	C
Community donation center, principal or accessory	X	C	X	P	P	X
Contractor's establishment	X	X	X	P	P	X
Convenience store with fuel pumps	C	X	X	PC	PC	PC
Convenience store without fuel pumps	C	X	C	X	X	X
Country club	X	X	X	P	X	X
Courier or messenger	P	P	P	P	P	P
Custom order shop	P	P	P	P	P	P
Data processing and hosting	X	X	X	XC	PX	PC
Drive-through, accessory	X	X	X	P	P	P
Driving school, auto, truck, etc.	X	X	X	X	P	P
Dry cleaner, laundry or laundromat	P	P	P	P	P	P
Equipment rental	X	X	X	P	P	P
Exterminator or pest control service	C	P	C	P	P	P
Farm equipment and implement sales	X	X	X	P	P	P
Flea, farmer, or other outdoor market	X	P	X	P	X	X
Funeral home, mortuary, or mausoleum	C	C	C	C	P	P

Gasoline service station	C	X	C	~~P~~C	~~P~~C	~~P~~C
COMMERCIAL USES (continued)	**OCR**	**CBD**	**C-1**	**C-2**	**M-1**	**M-2**
Golf course, not part of residential subdivision	X	X	X	P	X	X
Greenhouse, landscape nursery	X	X	X	P	P	X
Health care services	P	P	P	P	P	P
Health and personal care stores	P	P	P	P	X	X
Health spa (exercise gym, fitness center)	X	P	X	P	P	P
Hospital	X	P	X	P	P	X
Insurance (office)	P	P	P	P	X	X
Janitor or cleaning service	X	X	X	P	P	P
Jewelry and silverware manufacturing (accessory to enclosed retail sales)	P	P	P	P	X	X
Kennel or animal breeding facility	X	C	X	P	P	X
Landscaping company	X	X	X	P	P	P
Linen or uniform supply	X	X	X	P	P	P
Lodging service, including extended stay	X	P	X	P	X	X
Manufactured or industrialized building sales	X	X	X	P	P	P
Micro-brewery or micro-distillery	X	P	X	P	C	X
Mixed use building	P	P	P	P	X	X
Museum	P	P	P	P	P	X
Office	P	P	P	P	P	P
Open air business	C	C	C	P	P	P
Parking lot, off-site	P	P	P	P	P	P
Parking lot for trucks, off-site	X	X	X	P	P	P
Parking structure	C	P	P	P	P	P
Pawn shop or pawnbroker	X	P	X	P	X	X
Pay day loan establishment	X	P	X	P	X	X
Personal service establishment	P	P	P	P	P	P
Pet care (excludes animal boarding)	X	P	P	P	X	X
Printing, publishing or reproducing establishment	P	P	P	P	P	P
Printing or publishing industry	X	X	X	X	P	P
Professional, scientific or technical service (including research laboratory)	C	C	C	C	C	C
Psychic service establishment	X	X	X	P	X	X
Real estate (office)	P	P	P	P	P	P
Recreation, commercial indoor	C	P	C	P	P	X
Recreation, commercial outdoor	X	C	X	C	C	X
Recreational vehicle dealer	X	X	X	P	P	P
Recycling collection center	X	X	X	X	C	C
Restaurant, bar, or tavern without drive-through	P	P	P	P	X	X
Restaurant, with drive-through	X	P	P	P	X	X
Retail trade establishment, enclosed	P	P	P	P	P	X
Retreat center	X	P	C	P	X	X
Riding academy or equestrian center	X	X	X	P	X	X
Security service including locksmith	P	P	P	P	P	P
Self-service storage facility (mini-warehouses)	X	X	X	C	P	X
Special event facility	X	X	P	P	P	P
Stadium, sports arena, or amphitheater	X	C	C	C	C	C
Tattoo studio	X	X	X	~~P~~P	~~X~~X	~~X~~X
Taxi-cab or limousine or bus service, or vehicle for hire	X	X	X	~~P~~C	~~P~~C	~~P~~C
Taxidermist	C	C	C	P	P	P
Tire shop or tire display	X	X	X	P	P	P
Tow service	X	X	X	P	P	P
Travel arrangement and reservation services	P	P	P	P	P	P
Truck stop	X	X	X	C	C	C
Utility company	P	P	P	P	P	P
Vapor bar or vapor lounge	X	X	X	P	X	X
Vehicle emission testing facility	X	X	X	P	P	P
GENERAL INDUSTRIAL USES	**OCR**	**CBD**	**C-1**	**C-2**	**M-1**	**M-2**
Brewery	X	P	X	X	P	P
Bulk storage	X	X	X	X	C	P

(g) **Maintenance.** Dumpster pad enclosures shall remain clean, free of trash and debris, and be maintained in good repair at all times. Structures that become dilapidated or derelict shall be repaired within 30 days' notice of disrepair from the city Zoning Administrator or Code Enforcement officer.

Sec. 3-034. Dwelling, fee simple townhouse.

In zoning districts where permitted, single-family attached, fee simple dwellings (townhouses) shall meet the following requirements:

(a) **Setback.** Zero lot line between fee-simple units within the same building shall be permitted, subject to applicable fire and building codes.

(b) **Units in building.** There shall be no less than 3 dwelling units in a building, and no more than 6 units may have common walls.

(c) **Staggered front facades.** Any building with common walls must have the roof and front building wall (façade) of each attached unit distinct from the other through offsets of three feet or more in roof design and front building wall location.

(d) **Building separation.** Buildings in townhouse developments shall be separated by a distance of at least 10 feet per story.

(e) **Plat approval.** See Article 15 in this UDC for platting requirements.

Sec. 3-035. Fallout shelter or underground bunker.

Fallout shelters or underground bunkers shall be subject to the following requirements:

(a) **Location.** A fallout shelter shall only be placed in or under a side or rear yard of the lot.

(b) **Setback for above-ground portion.** If any portion of the structure extends above the ground, then the portion above the ground must comply with side and rear setbacks applicable to principal buildings for the zoning district in which the shelter or bunker structure is located.

(c) **Obstructions.** A fallout shelter or underground bunker shall not be placed under any septic tank drain field, any buried utilities, or within or under any utility easement.

(d) **Permit.** A permit shall be required to be issued by the Building Official.

Sec. 3-036. Fence, wall, and/or screening.

(a) **Allowed materials.** In residential areas, wood, stone, chain link, vinyl and composite materials are allowed.

(b) **Access**. All fences or walls must allow for utility meter access at all times.

(c) **Height.** In a front yard of a dwelling in a residential zoning district abutting a public street, no fence or wall shall exceed 4 feet in height. In a side or rear yard of a dwelling in a residential zoning district, fences and walls shall not exceed 6 feet 8 inches in height. No fence or wall in any zoning district shall exceed 8 feet in height, unless otherwise required as determined by the City Engineer, Building Inspector, or Zoning Administrator.

(d) **Location.** Fences and walls are not subject to setbacks for buildings or accessory structures. Fences and walls shall not encroach on public right of way without the approval of the Zoning Administrator.

(e) **Materials prohibited.** Fences or walls shall not be composed of plywood, particle board, paper, plastic, plastic tarp, tires, pallets, garage doors, canvas, glass block, bottles, bamboo, recycled or discarded materials, or any other cast-off, secondhand, or other items not originally intended to be used for constructing or maintaining a fence or wall. In residential zoning districts, no fence or wall shall be constructed of hog wire, barbed wire, poultry netting, or razor wire. Fencing or walls constructed of hog wire, barbed wire, poultry netting, razor wire or roll type fencing will only be permitted in AR and AF zoning districts.

(f) **Screening and security fence materials.** Fences for screening of storage in commercial and industrial areas shall be opaque, consisting of brick, stone, composite, or wing slats and maintained in good condition. Wood shall not be used. Fences for security may be chain link.

(g) **Screening of loading docks and service areas.**
Loading docks, storage areas. Loading docks, storage of materials or vehicles, and other service areas shall be screened from public view. Unless otherwise specified in this UDC, screening may include plant materials, fencing, walls, or a combination as approved by the Zoning Administrator.

(h) **Chain link.**

1. Residential Zoning Districts:

   a. ~~Non-vinyl coated chain link fence is permitted in a rear yard and in a side~~ yard only such that the fence does not extend beyond the front building line of the dwelling.

   b. All types of chain link fencing are prohibited for use within front yard/forward of the front building line of the dwelling.

   c. Netting or mesh may be installed for screening purposes.

   d. Chain link fences with plastic, vinyl, or metal slats (inserts) are prohibited.

In zoning districts where permitted, wrecked or inoperable vehicles may be stored outdoors in a rear yard if fully screened from view of all public roads and nearby properties via buildings and/or a solid, opaque fence or masonry wall at least 6 feet in height.

Sec. 3-085. Yard or garage sale.

Yard or garage sales, where permitted, shall not exceed 72 hours for each yard sale. A yard sale on a particular property shall not occur more frequently than twice annually.

Sec. 3-086 Data Processing and Housing/Data Centers
The following standards shall apply to all data centers regulated under this ordinance:

(a) Minimum Site Area. The minimum lot size for any data center shall be ten (10) acres.

(b) Fencing & Security Requirements.

All data centers shall be enclosed by a secure perimeter.

1. All data centers shall be enclosed by a perimeter fence a minimum of eight (8) feet in height.
2. Fencing along public road frontages shall not be chain link, barbed wire, or razor wire. Public-facing fencing shall incorporate one or more of the following:
    a. Decorative or architectural materials such as masonry or wood (solid metal panel fencing is prohibited)
    b. A vegetative buffer of sufficient density to screen the fence from public view.
3. Controlled access gates, security signage, and continuous on-site or remote surveillance shall be required.
4. Along public road frontages, all perimeter fencing shall be located behind the required landscape buffer and integrated with plantings to minimize visual mass from the right-of-way.

(c) Setbacks and Buffers.

1. Data centers shall maintain a minimum separation of one thousand (1,000) feet from any existing residence, measured from the nearest point of the data center building to the residential structure.
2. A minimum buffer of five hundred (500) feet shall be provided where a data center abuts property zoned for residential or agricultural use.
3. From public road rights-of-way, the following minimum setbacks shall apply:
    a. Major arterials, collectors, and designated corridor roads: one hundred fifty (150) feet, with required vegetative or architectural screening.
    b. Local industrial access roads: one hundred (100) feet, with vegetative screening where visible from the public right-of-way.

(d) Infrastructure and Utility Requirements.

1. A Power, Water, and Broadband Impact Study shall be submitted with any Special Use application, including projected utility demand at build-out, proposed phasing, and identification of necessary off-site improvements or extensions.
2. Applicants shall prioritize air-cooled, liquid immersion, or hybrid cooling systems. Any facility proposing water-cooled systems shall incorporate a mandatory water reclamation and reuse

system. The applicant must demonstrate that the selected cooling method is the least water-intensive technology feasible for the site.

(e) Environmental, Energy, and Noise Standards.

1. A stormwater management plan shall be required, incorporating best management practices and designed to address runoff from large impervious surfaces associated with data center development.
2. Data centers exceeding ten (10) megawatts of power demand shall submit an Energy and Sustainability Plan identifying measures to reduce carbon intensity, improve energy efficiency, and mitigate environmental impacts.
3. Noise generated by any equipment, operations, or activities associated with a data center, including but not limited to cooling systems and emergency backup generators, shall not exceed 65 dB(A) during daytime hours (7:00 a.m.–11:00 p.m.) or 55 dB(A) during nighttime hours (11:00 p.m.–7:00 a.m.), as measured at the property line where the site adjoins residentially or agriculturally zoned property.
4. Primary data center buildings shall be constructed of materials with demonstrated soundattenuation properties, such as tilt-up concrete panels, concrete masonry units (CMU), or equivalent assemblies. Metal panel construction shall only be permitted where the applicant demonstrates, through an acoustical analysis, that the building envelope will achieve compliance with the City's noise performance standards at the property line.

(f) Emergency Response & Public Safety.

1. Data centers shall install fire suppression systems appropriate for sensitive electrical equipment and meeting, at a minimum, the fire and life safety codes adopted by the City.
2. A site-specific Emergency Response Plan (ERP) shall be prepared by the operator and coordinated with local fire and emergency services prior to issuance of a Certificate of Occupancy.
3. The ERP shall be updated as needed to reflect changes in site operations, equipment, or emergency procedures, and a current copy shall be maintained on file with the City.
4. Operators shall conduct emergency drills in coordination with local fire and emergency services at intervals specified by the City as a condition of Special Use approval.

(g) Compliance and Enforcement.

1. Facilities shall be subject to inspection by the City, or its authorized agents, at such times and intervals as determined by the City to verify compliance with this section and all conditions of Special Use approval.
2. Violations of this section or any conditions of approval shall be subject to fines of up to one thousand dollars ($1,000) per day for each violation.
3. Repeated or continued noncompliance may result in suspension or revocation of Special Use approval, business license, or certificate of occupancy.
4. No new permits, inspections, or certificates of occupancy shall be issued to any operator with unresolved violations or unpaid penalties
3. Facilities shall comply with water efficiency standards established by the applicable utility provider, including any maximum allowable usage thresholds in effect at the time of approval.

Applicants shall provide documentation from the utility provider confirming service capacity and applicable efficiency requirements prior to issuance of a building permit. Compliance with these standards shall be a condition of Special Use approval.

4. Direct connections to surface water sources or aquifers are prohibited unless no alternative supply is available. Any such withdrawals shall require offset measures approved by the City and utility provider.
5. Applicants shall enter into binding agreements with affected utility providers to fund and implement all necessary improvements. Such agreements shall include provisions for monitoring, reporting, and enforcement to ensure long-term sustainability of water and infrastructure resources.
6. No building permit shall be issued until the City has received written confirmation from all affected utility providers that adequate service capacity will be available upon project completion and that all reclamation and reuse requirements have been met

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Sec. 4-213. Dumpsters.

(a) **Location.** Dumpsters and trash receptacles shall be located to the rear of the principal building so that they are not visible from any public street or any adjacent residentially zoned and residentially used properties. Dumpsters shall be set back a minimum of five (5) feet from all property lines. Dumpsters shall not be located within any required buffer or landscape strip.

(b) **Screening.** Dumpsters shall, regardless of location, be screened on three (3) sides with a solid masonry wall to match the principal building, eight (8) feet in height with an opaque gate on the accessible side.

(c) **Pad.** Dumpsters shall be placed on concrete pads of sufficient size and strength to support the weight of service vehicles. Restaurants and other food service establishments shall place dumpsters on concrete pads that are designed to slope into a drain that is equipped with a grease trap.

Sec. 4-214. HVAC and mechanical equipment.

(a) All ground mechanical, HVAC, and like systems shall be screened from public street view (within 300 feet) on all sides by an opaque masonry wall or landscaping.

(b) For all buildings, roof-mounted mechanical, HVAC, and like systems shall be screened from public street view (within 300 feet) on all sides by a raised parapet or pitched roof along the edge of the roofline.

Sec. 4-215. Building architecture, materials, and colors.

(a) **Applicability.** The following design guidelines and standards apply to all newly constructed buildings. In addition, the design guidelines and standards will apply to all existing buildings upon a change of use. Buildings include, but are not limited to, multi-family residential, office, institutional, commercial, or industrial purposes to include all accessory structures. These standards do not apply to single-family residential uses approved prior to the enactment of the overlay district(s) unless there is a change of use.

(b) **Architectural review.** All design and construction for buildings subject to this section shall require architectural review by the Zoning Administrator for consistency with the provisions of this division. All building plans must be submitted with the development plan for review, although the Zoning Administrator may authorize the deferral of architectural review to the building permit stage of development. All building plans shall clearly indicate all of the proposed building materials and colors for each façade sufficient to demonstrate compliance with this section. Approval of architecture must be granted by the Zoning Administrator prior to issuance of a development permit, or if deferred to the building permit stage, prior to issuance of a building permit.

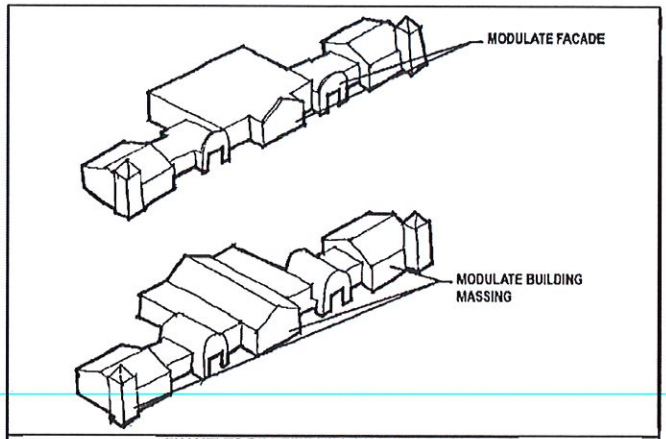
(c) **Consistent architectural identity.** Buildings that are located within the same development shall be constructed of similar materials and colors to show continuity between all out parcels, accessory buildings, and principal building. The use of a common palette of building materials should be maintained for building façades to create a consistent and traditional architectural identity. Traditional architecture shall include, for example, the use of brick, pitched roofs, low-profile signage, and subdued colors.

(d) **Building orientation.** Principal building entrances shall be oriented to public streets.

(e) **Modulation.** For projects with more than one commercial/retail building and multi-family residential developments, variations in façade, roofline and depth should be provided to lend the appearance of multi-tenant occupancy. The massing of building façades longer than one hundred and fifty (150) feet that are approximately parallel to the right-of-way and oriented to a public street shall be modulated to increase visual interest, as follows:

1. Building façades that are less than five-hundred (500) feet long shall be modulated at intervals no greater than one-hundred (100) feet in length.

2. Building façades that are more than five-hundred (500) feet long shall be modulated at intervals no greater than twenty percent (20%) of the length of the façade.



EXAMPLES OF DESIRABLE BUILDING MASSING

DESIGN GUIDELINES FOR:
HIGHWAY CORRIDOR OVERLAY
JACKSON COUNTY, GA

FIGURE 6

(f) **Contrasting base.** Building designs shall include a minimum two-foot high contrasting base, along the entire front façade of buildings and extending for a distance of at least ten (10) feet along the sides of buildings.

(g) **Primary building materials.** This subsection specifies the primary building materials that may be used and combined to create a consistent, attractive, interesting and long-lasting building design. There shall be no more than two primary building materials used on a single building façade (excludes authorized use of secondary or accent materials). This subsection does not apply to doors:

1. Brick, except that brick veneers that are intended to simulate brick exteriors are not acceptable.

2. Stone. Natural stone such as, but not limited to, granite, limestone, and acid marble are allowed building materials. Terra cotta and/or cast stone, which simulate natural stone, are also acceptable. Painted stone is not allowed.

3. Split-face block/concrete masonry unit (CMU) is restricted to ten percent (10%) of the surface area of the façade on institutional and commercial buildings and fifty percent (50%) on industrial buildings.

4. Tilt/architectural pre-cast concrete is permitted by special use approval only and with a design plan consistent with the surrounding development and area

5. High grade stucco is restricted to fifty percent (50%) of the surface area of a façade (the amount of material shall be calculated using the gross square footage of wall area per façade).

6. Natural wood and/or cement-based artificial wood siding are allowed only for residential buildings.

7. Glass is restricted to fifty percent (50%) of the wall area per façade.

8. Metal is restricted to use on the sides and rear of an industrial building to a maximum of 85% per building facade. The remaining percentage of the building facade must be brick or stone as set forth in this ~~article.The~~article. The front of the building (which could be multiple sides) shall be considered any facade that can be seen from a public or private roadway leading to or past the building. Metal exterior siding is prohibited on all sides of residential and commercial structures.

9. Exposed concrete block~~, and tile~~concrete tile, and vinyl siding ~~are not allowed as~~ building materials on a façade.

(h) **Secondary (accent) materials.** Other building materials not authorized as primary building materials in this Section, including but not limited to wood, tile, or metal, may be used as secondary or accent building materials to enhance the façade of the building or for decorative elements not to exceed fifteen percent (15%) of total wall area per façade for institutional and commercial buildings and thirty percent (30%) of total wall area per façade for industrial buildings.

(Amended 09/16/2024)

Sec. 4-216. Outdoor and street lighting.

(a) Along the entire property frontage of any new development fronting on and accessing a city or county road (excludes State Routes) in the highway corridor overlay district, streetlights shall be required to be installed by the developer at no installation cost to the city consistent with the specifications of this section.

(b) ~~All parking lot lighting and pedestrian lighting shall meet the specifications of this section.~~Developer will provide engineered lighting plans subject to review and approval by the Zoning Administrator to ensure adequate lighting coverage.

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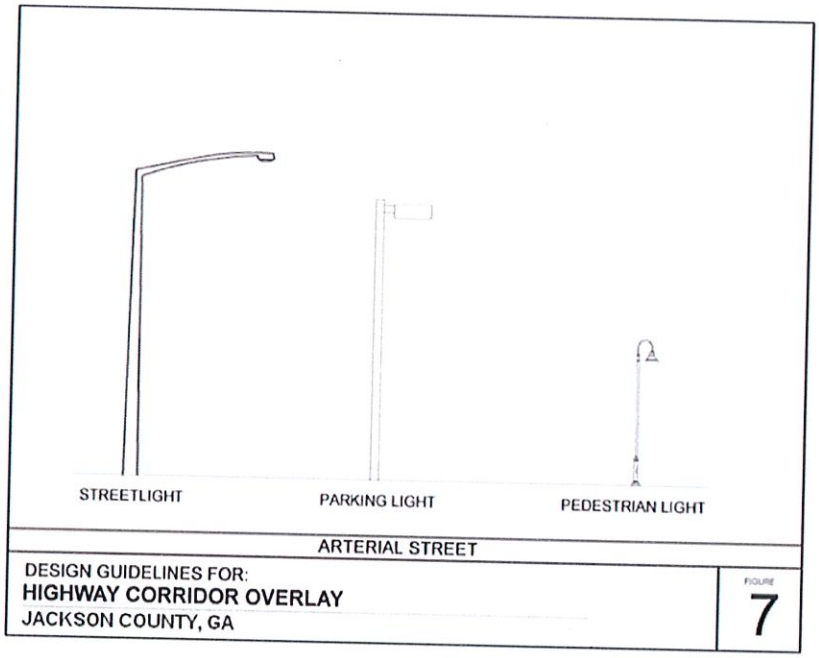
(c) Lighting shall be designed to prevent light spillover onto adjacent properties.



Sec. 4-217. Signage.

Except as provided in this section, signage shall comply with the sign regulations in Article 17 of this UDC.

(a) **Prohibitions.** Electronic multiple message signs, animated signs, neon signs, and the outlining of windows or doors with any lights are prohibited. Externally illuminated signs are allowed, but only with full cut-off luminaires that are directed downward and away from streets and adjacent properties. Internally illuminated signs shall comply with the provisions of this Article.

(b) **Monument ground signs.** Freestanding and project entrance signs shall be monument signs. The base and sign structure shall be constructed of materials such as brick, or stone, consistent with the architecture and primary building materials for the building or buildings served.

(c) **Ground sign maximum height.** Ground signs for lots zoned commercial or industrial shall be limited to a height of no greater than fifteen (15) feet, including the base and sign structure.

For any freestanding canopy, 1 sign per canopy wall is permitted, not to exceed 20% of the canopy area.

Sec. 17-304. Window signs.

1. Window signage is allowable for non-residential permitted uses only, in certain zoning districts only, as provided in this section. Window signage is not permitted for dwellings in the zoning districts shown. Where permitted, window signage is not limited in number. The area covered is measured on the basis of each window.

Zoning District	Area Allowed (Percent of Window)
Any Residential or Agricultural District	20%
OCR	20%
CBD	20%
C-2	20%
M-1 or M-2	20%

2. No window sign shall extend from one window to another.

3. In CBD, C-1, C-2, and OCR zoning districts, one illuminated sign that flashes is permitted within a building window for non-residential permitted uses only, not to exceed two square feet in area, but only when the business or establishment is open (i.e., during business hours). No such sign shall be illuminated after the close of the business or establishment.

~~3.~~4. This Section applies to building windows and also applies to any front wall, front door, or front building surface constructed of glass or other clear material.

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CITY OF COMMERCE

City Council Agenda

Subject: **PR26-0002**: Rezoning - Commercial: Jerry Baker, applicant, seek rezoning on approximately +/- 3.00 acres located at 1432 Hospital Rd, further identified as Map/Parcel 020 019F1, from R-1 (Single Family Residential Low-Density District) to C-2 (General Commercial District).

Date: May 11, 2026

Budget Impact: **Category:**

Funding Source:

City Council Action Requested On:

This property is currently zoned AR (Agricultural Residential District), and the applicant is requesting a rezoning to C-2 (General Commercial District). The Future Land Use Map designates this area as Suburban Residential.

Department: Planning and Development

Staff recommends

Matthew Hailey

Matthew Hailey, Assistant City Manager

City of Commerce (VT) - 119019.pdf

CITY OF COMMERCE
NOTICE OF PUBLIC HEARING

The Commerce Planning Commission will conduct a public hearing at its meeting on **May 11, 2026,** at 6:00 p.m. at the Commerce Civic Center, 110 State St., Commerce, GA, 30529, on the following matters. During its regular meeting on **June 15, 2026,** at 6:00 p.m., at the Commerce Civic Center, 110 State St., Commerce, GA, 30529, the Commerce City Council may act on these applications.

1. **PR26-0002: Rezoning - Commercial:** Jerry Baker, applicant, seek rezoning on approximately +/- 3 acres located at 1432 Hospital Road, further identified as Map/Parcel 020 019F1, from R-1 (Single -Family Residential (Low Density) District) to C-2 (General Commercial District).
2. **Readoption of the Unified Development Code with Amendments**

All interested persons are invited to attend. The applications are on file at the Commerce Planning & Development Office, 110 State Street, Commerce, GA, 30529 and are available for public inspection during regular business hours. For more information, call 706-335-3164. This the 2nd day of April 2026.