CITY OF CHARLES TOWN
PLANNING COMMISSION
AGENDA • SEPTEMBER 25, 2023

Committee Meeting **CITY HALL** **7:00 PM**
101 E Washington Street, Charles Town, WV 25414

1. CALL TO ORDER - Work Session

2. NEW BUSINESS - Work Session

: Text Amendment - Open Space Requirements
1. Report.pdf

: Text Amendment - Commercial Pad Site Preparation
1. Report.pdf

3. CALL TO ORDER

5. UNFINISHED BUSINESS

: SLD2023-08 Huntfield Phase 3B
1. Staff Report.pdf
2. Application.pdf
3. Plan Revisions.pdf

6. NEW BUSINESS

: **Public Hearing**: ZMA2023-01 : Vinton-Hayes Property Rezoning
1. Staff Report.pdf
2. Application.pdf
3. Site.pdf
4. Original Conditions of Annexation.pdf
5. Original hayes concept-drawing.pdf
6. COA Revised.pdf

: **Public Hearing:** WV2023-07: Waiver Request by Joan and Joe's Coffee
1. Staff Report.pdf
2. Application.pdf
3. Plans.pdf

: Commission Review: SLD2023-09: Joan and Joe's Coffee - Sketch Plan Completeness Review
1. Staff Report.pdf
2. Application.pdf
3. Revised Plans.pdf
2023-07-25 KH Comments.pdf

: Commission Review: SLD2023-03: Alla Willa Dr. Casino - Preliminary Plan Review
1. Staff Report.pdf
2. Application.pdf

3. Site Plan.pdf
4. CTUB Availability.pdf
5. SWM Report.pdf
6. Comment Response.pdf

: Commission Review: SLD2023-02 Westover Dental - Sketch Plan Completeness Review
1. Staff Report.pdf
2. Application.pdf
3. Revised Sketch.pdf

7. ADJOURNMENT

8. NOTICE: The Public May View the Meeting Live by Clicking on the Event Link at:

https://www.charlestownwv.us/government/agendas-and-minutes/

Planning Commission
101 East Washington Street
Charles Town, WV 25414

SCHEDULED

Meeting: 09/25/23
Department: Planning Commission
Category: Report
Initiator:

AGENDA ITEM (ID #)

Text Amendment - Open Space Requirements

ATTACHMENTS:

- 1. Report.pdf

Open Space Requirements

Date: For the September 25, 2023 Planning Commission work session
Report by: James Newman, City Planner, Zoning/Subdivision Administrator.

ISSUE

How to reconcile open space requirements when a particular use and a particular zoning district may have differing open space requirements.

COUNCIL ACTION

A request on the City Council August 7, 2023 agenda for a referral to Planning Commission for clarification on the City's Ordinances for Open Space in mixed (SFH/TH) residential developments.

ZONING DISTRICT COMPARISON TABLE

Zoning District	*Minimum Open Space Requirement*
Residential Low Density (R3)	No requirement. Maximum lot coverage is 40%
Residential Medium-High Density (R15)	30% Open Space is required for Mobile Home Parks. 10% Open Space is required for all other Uses in the R-15 District.
Neighborhood Residential (NR)	10%
Neighborhood Commercial (NC)	No requirement. Maximum lot coverage is 90%
General Commercial (GC)	No requirement. Maximum lot coverage is 90%
Old Town Residential (OT-R)	No requirement. Maximum lot coverage is 70%
Old Town Mixed-Use Commercial (OT-MUC)	No requirement. Maximum lot coverage is 90%

PLANNED UNIT DEVELOPMENT

The purpose of Planned Unit Development (PUD) regulations is to encourage and allow more creative and imaginative design of land developments than is possible under district zoning regulations. Planned Unit Developments are intended to allow substantial flexibility in planning and designing a proposal.

…

Required Common Open Space. A minimum of twenty percent (20%) of the total usable land in residential Use in each phase shall be set aside for permanent common Open Space as defined herein.

MOBILE HOME PARKS

All Mobile Home Parks shall provide, and so indicate on the Plat of the Mobile Home Park, suitable areas for recreation and open space uses of at least 20% of the total area of the

Mobile Home Park, of which one-half (0.5) of the area shall be in one place. The remainder may be used to provide pedestrian connecting links to the recreation areas.

SINGLE FAMILY DETACHED REQUIREMENTS

There is no use standard for single-family detached housing that requires a certain percentage of open space when being built.

TOWNHOME REQUIREMENTS

Section 1333.20, Townhouse Development Standards

O. Required Open Space.

1. The difference between the Net Buildable Land Area of a townhouse Development and the total area of the dwelling unit Lots shall be allocated to open space common area as specified in Section 1333.20(B) above.

2. In the event that the Planning Commission, by waiver, permits dwelling unit Lots of less than the 2,000 square foot minimum specified in Section 1333.20(B), compensating open space must be established and provided within the project site equal to the aggregate area by which such Lots are under the 2,000 square foot minimum.

3. In a townhouse Development, open space for the Subdivision/Land Development must at least equal 30 percent of the Net Buildable Land Area of the Subdivision/Land Development.

DEFINITIONS

NET BUILDABLE LAND AREA – When determining the allowed density for any given Lot in the City, the Net Buildable Land Area of the Site is used. Net Buildable Land Area, for the purpose of determining the allowed Dwelling Units for a Site, shall be calculated by subtracting areas here building is prohibited or subject to significant restrictions from the gross Lot area. The area remaining after these exclusions from the gross Lot area represents the Net Buildable Land Area. The following shall be deducted from the gross Lot area to determine Net Buildable Land Area:

1. Sensitive areas including: Type I, II, III and IV wetlands, Riparian Buffers, floodplain area, and Sinkholes

2. Public right-of-ways and public easements, and private Streets and access corridors;

3. Areas dedicated to stormwater management

OPEN SPACE – One or more areas of land and/or bodies of water within a development intended for the use and enjoyment of the residents living within the development. No more than 50% of the required Open Space may be a water body or impervious area. Open Space is calculated as a percentage of the total usable area of land in the development, with the following items excluded in such calculation from both Open Space and the total usable land: Buffer Areas, Streets, Sidewalks, off-Street parking areas, areas dedicated for public use, traditional stormwater management areas, such as stormwater ponds (but stormwater

management areas of low impact design, such as bioretention basins (rain gardens) shall be included), and other areas not practically usable by residents.

POTENTIAL FIXES:

1. Establish a proportional (pro-rata) open space requirement in mixed use development.

2. Require that that the greater open space requirement applies to the entirety of the development. (This path will generally lead to more open space)

3. Require that that the lesser open space requirement applies to the entirety of the development. (This path will generally lead to less open space)

JURISDICTIONAL COMPARISON

Leesburg (https://www.leesburgva.gov/Home/ShowDocument?id=4540)

Except as otherwise specifically provided in this Zoning Ordinance, the open space requirements for a given zoning district shall be considered as a minimum and shall be located on the same lot as the principal use of the property.

In mixed developments having both multi-family and single-family attached (townhouse) sections, density and any resulting active recreation facility requirements may be calculated separately for each respective dwelling category

Planning Commission
101 East Washington Street
Charles Town, WV 25414

SCHEDULED

Meeting: 09/25/23
Department: Planning Commission
Category: Report
Initiator:

AGENDA ITEM (ID #)

Text Amendment - Commercial Pad Site Preparation

ATTACHMENTS:

- 1. Report.pdf

Commercial requirements in Residential Zoning

Date: For the September 25, 2023 Planning Commission work session
Report by: James Newman, City Planner, Zoning/Subdivision Administrator.

ISSUE

A text amendment to clarify the City's Ordinances requiring residential developments that have a required commercial component to have the pad sites graded and utilities made available. This is to be done by the completion of a certain amount of residential units.

COUNCIL ACTION

On August 7, 2023, City Council reviewed this item and referred it to Planning Commission.

ZONING DISTRICT COMPARISON TABLE

Zoning District	*Commercial Space Requirement*
Residential Low Density (R3)	No requirement
Residential Medium-High Density (R15)	No requirement
Neighborhood Residential (NR)	10% of total area must be Neighborhood Commercial uses. **Note:** *Does not specify that such uses must be commercial in nature.*
Neighborhood Commercial (NC)	No requirement
General Commercial (GC)	No requirement
Old Town Residential (OT-R)	No requirement
Old Town Mixed-Use Commercial (OT-MUC)	No requirement

ZONING DISTRICTS AFFECTED

This first draft of the text amendment will affect:

Neighborhood Residential (*The purpose of the NR District is to provide for a mix of housing types and related services and Uses, including Commercial Uses and office services*)

Neighborhood Commercial (*The purpose of the NC District is to provide for necessary Commercial Uses of a convenient nature within residential areas.*)

The other districts are either entirely planned solely for residential development (*Residential Low Density, Residential Medium High Density*); designed for predominantly commercial use (*General Commercial*), or cover areas of the City not conducive to brand-new large scale mixed-use development (*Old Town Mixed Use Commercial, Old Town Residential*).

PROPOSED TEXT

The following text could be used in both the NR and NC zoning districts:

> *To incentivize and attract commercial development within the City, all commercially zoned areas associated with the land development shall be prepared in a way that includes grading and utility installation. No more than 40% of residential dwelling units shall be built prior to the grading and utility installation of the commercial sites.*

JURISDICTIONAL COMPARISON

Neither Martinsburg WV nor Jefferson County WV have similar regulations to what is proposed.

Leesburg VA
(https://www.leesburgva.gov/home/showpublisheddocument/9925/638282313544500000)

Development Phasing. Requests for (Mixed Use Business District) zoning or site plan approval for development in the (Mixed-Use) District shall be accompanied by a phasing plan that identifies the stages of development build-out. The phasing plan shall identify the sequence of development for all proposed land uses and include information regarding the phasing of internal and external traffic circulation systems, amenities, and utility improvements that will be constructed to support the proposed development.

The applicant shall provide assurances that all the use categories will be constructed and that the project will, in fact, result in the type of multi-use development proposed. The Town Council may require performance guarantees or such other measures, as it deems reasonable and necessary to assure the proper phasing of development and to assure the provision of public amenities and public facilities upon completion of each phase or upon full development. At no time shall the number of residential uses exceed the maximum ratio established in Sec. [1]-A.

(Emphasis added).

City of Frederick MD (https://www.cityoffrederickmd.gov/DocumentCenter/View/428/-Land-Management-Code---ARTICLE-4-Zoning---Section-423?bidId=)

Mixed Use Districts (MU1, MU2)

(d) *Phasing*

Construction of the MU project must be phased such that:

(1) Building permits for no more than 75% of the residential dwelling units may be issued until at least 25% of the non-residential floor area is constructed; and

(2) Building permits for no more than 75% of the non-residential floor area may be issued until record plats for at least 25% of the dwelling units have been recorded among the Land Records of Frederick County. For the residential units on a multifamily lot to be counted toward the 25% minimum, a site plan for those units must be unconditionally approved.

Planning Commission
101 East Washington Street
Charles Town, WV 25414

Meeting: 09/25/23
Department: Planning Commission
Category: Report
Initiator:

SCHEDULED

AGENDA ITEM (ID #)

SLD2023-08 Huntfield Phase 3B

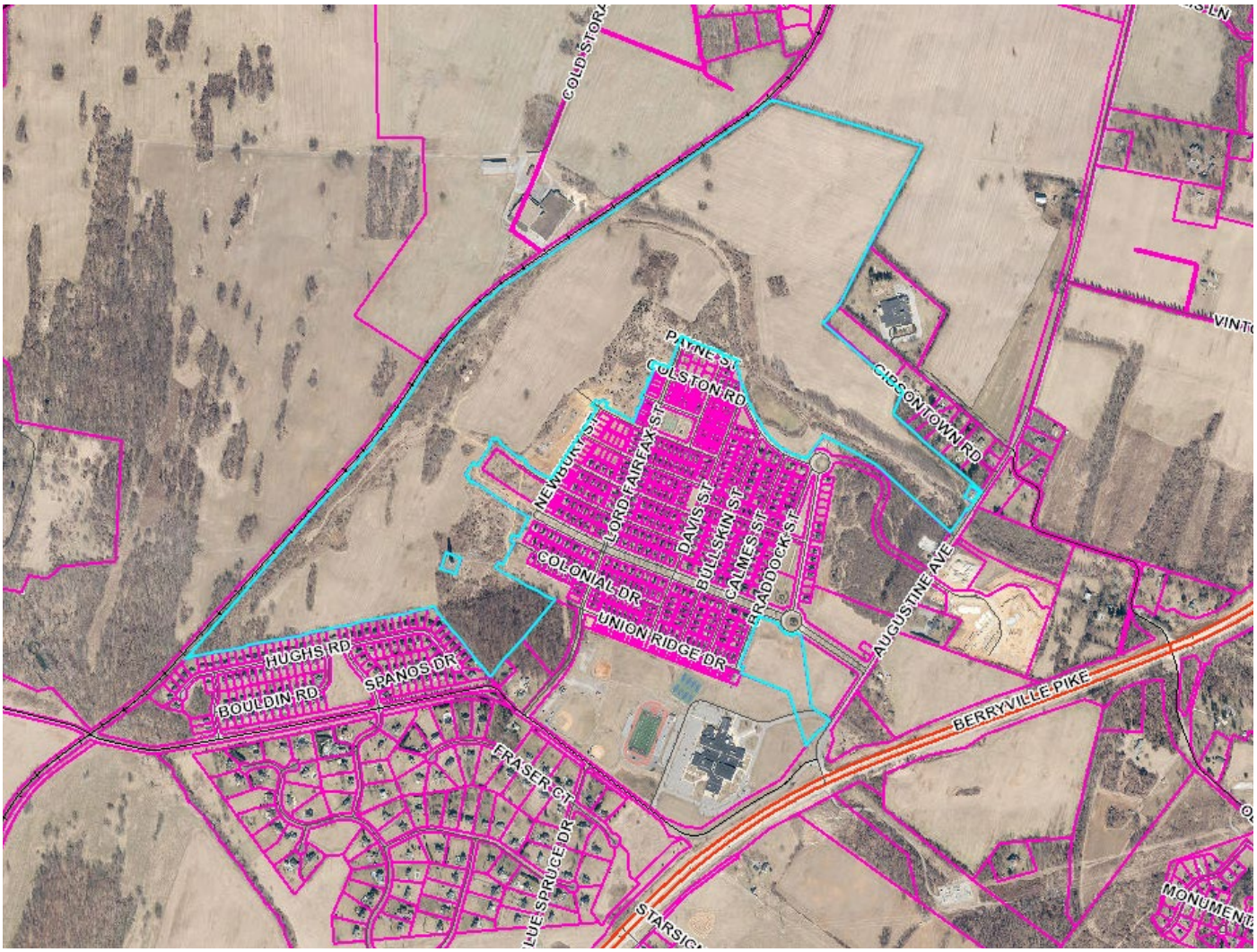
ATTACHMENTS:

- 1. Staff Report.pdf
- 2. Application.pdf
- 3. Plan Revisions.pdf

Final Plans Change Review

SLD2023-08

Date: For the September 25, 2023 Planning Commission meeting
Applicant: Matthew Stare on behalf of DR Acquisitions LLC
Property Owner: DR Acquisitions LLC
Report by: James Newman, City Planner, Zoning/Subdivision Administrator.
Proposal: Change of plans
Property Location: TD 03 / Map: 11 / Pcl: 1.
Current Zoning: Neighborhood Residential (NR)



PROJECT OVERVIEW

Request by DR Acquisitions to modify a final plan for Huntfield Phase 3B. The changes alter the road design by removing medians and on-street parking; changing the parking access to dwellings from rear access to front-load garages; changing an alley from an access road to open space; and adjusting sidewalk location, amongst other changes.

PLANNING COMMISSION

This item was approved by the Planning Commission on May 22, 2006. In a letter dated May 23, 2021, then City manager Darryl Hennessy stated that "*the City will honor previously approved plans for partially developed project phases*…". Both the Planning Commission minutes and that letter are attachments to this staff report.

As the City has chosen to honor the 2006 plans, and because the applicant is making changes to those plans, a public hearing is required.

The Planning Commission considered the proposed revisions at their meeting on August 28, 2023. There were three public comments, two opposed and one with questions. The Commission discussed the item and table action to the September 25 meeting.

FINAL PLAN – APPLICATION REVIEW DIVERGENCE - UPDATE

This item was reviewed by staff and presented to the public and the Planning Commission on August 28, 2023 under Subdivision Ordinance Section 1332.03.C.4.D.1, which states

"***Application Review Divergence.*** *In the event that there is a discrepancy between Staff and the applicant regarding the required standards or the requirements of the approved Sketch Plan, a written request by either the Staff or the applicant to be on the next available agenda for the Planning Commission shall be permitted. Specific differences shall be clearly described so that the Planning Commission can make an informed decision*"

Upon further review, Staff has concluded that the previous consideration of applicant's request under Section 1332.03(C)(4)(d) was misplaced. The Application Review Divergence process applies during the Final Plan and Plat Submission stage when differences arise between Staff and the applicant regarding the required standards or requirements of the Sketch Plan.

The applicant's current request concerns a Site Plan that was approved in 2006. A Site Plan under the 2006 version of the Zoning Ordinance is the functional equivalent of a Final Plan and Plat under the current Zoning Ordinance. Because the Application Review Divergence process applies only during the stage leading up to approval of Final Plan and Plat (i.e., Site Plan in this case) and because the applicant's Site Plan was approved long ago, the Application Review Divergence process is not relevant to applicant's request.

Instead, applicant's request should be considered under Section 1332.09, Amendment of Approved Final Plan and Plats, and specially under section *2*. That Code language states:

*"**1.** If the amendments and changes proposed in an application to amend would, if proposed in an original S/LD Application to be made to land existing in the condition reflected in the approved Final Plat, constitute a Minor Subdivision/Land Development (such as creation of a Utility Lot or a merger of lots), then the Subdivision Administrator may approve, approve with conditions, or deny the proposed amendment. The proposed amendment will be approved if it meets all requirements of this Ordinance. Upon such approval, the revised Final Plat shall be stamped and signed on behalf of the Planning Commission and thereafter recorded as the Final Record Plat.*

***2.** If the amendments and changes proposed in an application do not qualify for approval by the Subdivision Administrator under the test in Section 1332.09(B)(1), then the Planning Commission shall consider the application to amend after a publicly-noticed public hearing. The Planning Commission may approve, approve with conditions, or deny the proposed amendment. The proposed amendment will be approved if it meets all requirements of this Ordinance. Upon such approval, the revised Final Plat shall be stamped and signed on behalf of the Planning Commission and thereafter recorded as the Final Record Plat*."

REVIEW CRITERIA

Based on point 2 above, the staff report has been modified and the staff recommendation is based on the plan adherence to "*all requirements of this [*Subdivision and Land Development*] Ordinance."* The previous staff report for this item was included in the August 28, 2023 Planning Commission packet, and discussed the differences between the proposal plan and the approved plans for the property.

This report focuses solely on adherence to the requirements of the Subdivision Ordinance. This report will focus solely on those items not met by the requirements of the Subdivision ordinance.

SUBDIVISION/LAND DEVELOPMENT ORDINANCE REVIEW

Section 1333.01.C *Blocks shall have a maximum perimeter boundary length of 2,050 feet and the block layout should uphold the pattern of existing blocks where applicable*.

Lord Fairfax Street has a consistent pattern of block design. The road is two lanes divided by a vegetated median. There is on-street parking on both sides of the road, and curb cuts exist only for alley access. The proposed changes would bring a variety of curb cuts to this block, would remove on-street parking, and would remove the vegetated median.

Section 1333.02.C.3.D. *Neighborhood Center Streets link neighborhoods with collector Streets. They are similar to Minor Collector Streets, but with greater emphasis on traffic calming measures and lower speeds. Direct access to abutting Lots is permitted. Street parking is permitted.*

Lord Fairfax Street functions as a neighborhood center street. In comparison, Berryville Pike is a primary street, Augustine Avenue is a major collector street, Prospect Hill Boulevard is a minor collector street, Lord Fairfax is a neighborhood center street.

Per Table 1333.02, on-street parking is required on both sides of a neighborhood center street. Even if Lord Fairfax were considered a lower impact neighborhood street, it would be required to have on-street parking on one side of the road. Considering that the proposed plans specifically remove on-street parking from single-family (eastern) side of the road, and that the townhome (western) side of the road will be perorated with curb cuts for the proposed front-loading units, on-street parking will be limited to non-existent.

On-street parking serves an important purpose. Besides providing additional room for vehicle storage, it also serves as a traffic calming measure. When combined with the originally design median, on-street parking reduces the width of the travel, which can force drivers to lower their speeds. Lower vehicle speeds allows for a safer pedestrian environment, which is especially useful in a residential designed neighborhood with lots of residents.

CONCLUSION

The proposed changes would remove two access alleys from public use, and would remove a consistent street feature (the median) from Lord Fairfax Street. Additionally, the revised street design removes on-street parking.

RECOMMENDATION

Denial.

S/LD Application No._____

RECEIVED
JUL 17 2023
BY:_____

SUBDIVISION AND LAND DEVELOPMENT APPLICATION

SUBDIVISION AND LAND DEVELOPMENT ORDINANCE
ARTICLE 1332, SUBDIVISION AND LAND DEVELOPMENT APPLICATION & APPROVAL REQUIREMENTS

To assist the Subdivision Administrator in the review of a Subdivision and Land Development (S/LD) Application, the Applicant must utilize this form to supply the City with the information prescribed under Section 1332.03 of the Charles Town Subdivision Ordinance. The submission of this form, along with the prescribed information and required fees, shall serve as the Applicant's S/LD Application as required by Ordinance Section 1332.03.

1. DATE July 17th, 2023

2. APPLICATION TYPE

☐ Minor Subdivision | Final S/LD Plan

☑ Major Subdivision Development*
- Preliminary S/LD Plan and Final Plat

☐ Major Land Development**
- Preliminary S/LD Plan

☐ Major Subdivision and Land Development***
- Preliminary S/LD Plan and Final Plat

*Conventional Subdivision – A Preliminary Plan and Plat Approval and a Final Plan and Plat Approval is required.

**No Division/Merger of Land – A Preliminary Plan and Plat Approval is required for the submission of a building or multiple buildings on one lot where there is no subdivision of land (commonly referred to as a site plan).

***A Preliminary Plan and Plat Approval and a Final Plan and Plat Approval is required for the submission of a building or multiple buildings that will require the merger, adjustment or subdivision of land.

3. APPLICANT'S NAME* Matthew Stare - DR Aquisitions

Address: 7945 Wormans Mill Rd. Frederick, MD 21701

Telephone Number (240)420-6046 Ext 2031 Fax Number ( )

Email Address mstare@drbgroup.com

4. PROPERTY OWNER'S NAME Matthew Stare - DR Aquisitions

Address: 7945 Wormans Mill Rd. Frederick, MD 21701

Telephone Number (240)420-6046 Ext 2031 Fax Number ( )

Email Address mstare@drbgroup.com

5. LEGAL DESCRIPTION OF THE SUBJECT PROPERTY (list all parcels that apply)

Property Address:

Tax Map # and Parcel: 03 11000100000000

Deed Book and Page #:

Property Area in Square Feet or Acres: 284.98 Acres

6. DESCRIPTION OF PROJECT AND PROPOSED USE(S) OF THE PROPERTY:

Residential

7. DESCRIPTION OF THE EXISTING (OR FORMER) USE(S) OF THE PROPERTY AND CURRENT ZONING:

PUD

*Applicants include: Property owner(s), Engineer(s), Surveyor(s), or Consultant(s)

8. ARE THERE ANY ANTICIPATED WAIVERS OR VARIANCES? IF YES, PROVIDE DETAILS.

None

9. PARCEL HISTORY (List all pending or previously approved applications on the subject parcels inventoried above, including previous site plan applications if this application is a site plan amendment)

Application No.	Project Name and Phase	Status	Approval Date
	Huntfield, Phase 3B	Approved	5/22/2006

10. HAS THE PROPERTY BEEN THE SUBJECT OF ANY COURT ACTION?

☐ Yes (Please specify nature of all proceedings and current status and attach any documents showing court decisions, etc.)

☑ No

11. PLAN/PLAT SUBMISSION TO OTHER AGENCIES (Documentation of all required approvals must be attached to this Application or submitted prior to Preliminary S/LD Application approval)

Agency (Specify others as applicable)	Submittal Date	Approval/Permit Issued	Date of Approval/Issuance
City of Charles Town			
City of Charles Town Utility Board			
Jefferson County Planning and Zoning Department			
Jefferson County Addressing Office			
Jefferson County Board of Education			
WV Department of Environmental Protection			
WV Department of Transportation, Division of Highways			
WV State Historic Preservation Office			
WV Office of Environmental Health Services			
U.S. Army Corps of Engineers			

12. FEE CALCULATION (Per Fee Schedule) _____

_____

_____

_____

AMOUNT PAID $200.00

APPLICANT CERTIFICATION

I certify that, to the best of my knowledge, the submitted information and statements are true and correct. I also certify that I have received and read Section 1332.03 of the Charles Town S/LD Ordinance and relevant provisions of the Charles Town City Code.

Signature of Applicant

Matt _____ Date 7/17/2023

Signature of Property Owner (If different than Applicant)

_____ Date _____

Please submit an original completed Application and specified number of Plan/Plat (Three (3) copies at 24" x 36", Adobe PDF format, and Five (5) copies at 11" x 17") copies to the following:

Subdivision Administrator
City of Charles Town
101 E. Washington Street
Charles Town, WV 25414

FOR CITY USE ONLY

Application Number:_____ Date Application Received:_____

Fee: $_____ Paid:$_____ Check No._____

Receipt No._____

Subdivision Administrator Approval:_____ Date:_____

Planning Commission Approval:_____ Date:_____

Comments/Conditions:_____

_____

_____

_____

_____

_____

FLIP TO FRONT LOAD

Newbury St

Abigail St

Lord Fairfax

STATE GRID NORTH
WEST VIRGINIA
NAD 27

SEE SHEET 05 FOR MATCHLINE

SEE SHEET 06 FOR

eliminate on-street parking

storm revisions

remove alley - convert to green space, extend lot lines, create 10 ft access easement - storm should stay

storm/DW conflict - revise this storm run

remove median

move DW apron to new curb

remove on-street parking with revised street section

adjusting/relocating sidewalk per new street section and right-of-way

sidewalk/crossing needs relocated

eliminate median; shorten stub

GRAPHIC SCALE
(IN FEET)
1 inch = 30 ft.

STANDARD MINIMUM STORM DRAIN EASEMENT WIDTHS

PIPE SIZE	MINIMUM STORM DRAIN EASEMENT WIDTH
12-18 INCHES	10 FEET
21-33 INCHES	15 FEET
36-48 INCHES	20 FEET
54-72 INCHES	24 FEET

LEGEND:

- W — WATERLINE EASEMENT
- S — SANITARY EASEMENT
- E — INGRESS/EGRESS EASEMENT
- SD — STORMWATER EASEMENT
- 3.1 / 68 — STORMWATER MANHOLE
- 3.1 / T — SANITARY MANHOLE

LEGEND:

- PROPOSED STORM DRAIN
- EXISTING STORM DRAIN
- EXISTING CONTOUR
- PROPOSED CONTOUR
- EXISTING SANITARY SEWER
- PROPOSED SANITARY SEWER
- EXISTING WATER LINE
- PROPOSED WATER LINE
- EXISTING TREE LINE
- PROPOSED LIMITS OF CLEARING & GRADING (LOC)
- WATER METER CROCK
- PROPOSED FIRE HYDRANT
- WATERMAIN FITTINGS – SEE CHART ON SHEET 3

LEGEND:

- CG-6 — CURB & GUTTER
- ROLL CURB
- ALLEY PAVEMENT
- EXISTING TREE
- RIPRAP
- TRAFFIC BARRICADE
- UTILITY PREBLAST
- PROPOSED SIDEWALK
- PROPOSED HANDICAP RAMP
- STREET LIGHT
- STREET SIGN
- STOP SIGN
- WATERMAIN FITTINGS (SEE CHART ON SHEET 3)

No.	DATE	DESCRIPTION
1	11/18/05	LANE WIDTHS CHANGED TO 12'. ON-STREET PARKING WIDTH CHANGED TO 8'
2	4/10/06	LOTS 485-493 RE-GRADED

PLAN DATE
01/13/04
12/20/04
02/21/06
05/16/06

Urban Engineering & Associates, Inc.
CIVIL ENGINEERS • LANDSCAPE ARCHITECTS • LAND SURVEYORS
1856 SUN BUSINESS CENTER
600 PEGASUS COURT - SUITE 10 • WINCHESTER, VIRGINIA 22602
PHONE (540) 450-0211 FAX (540) 450-0210

Grading Plan

HUNTFIELD
Phase 3B
CHARLES TOWN CORPORATION
JEFFERSON COUNTY, WEST VIRGINIA

DATE: JANUARY 2004
C.I. = 2'
SCALE: 1"=30'

SHEET 4 OF 25

PP-20048

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

STANDARD MINIMUM STORM DRAIN EASEMENT WIDTHS

PIPE SIZE	MINIMUM EASEMENT WIDTH
12-18 INCHES	10 FEET
21-33 INCHES	15 FEET
36-48 INCHES	20 FEET
54-72 INCHES	24 FEET

STATE GRID NORTH
WEST VIRGINIA
NAD 27

LEGEND:

- PROPOSED STORM DRAIN
- EXISTING STORM DRAIN
- EXISTING CONTOUR
- PROPOSED CONTOUR
- EXISTING SANITARY SEWER
- PROPOSED SANITARY SEWER
- EXISTING WATER LINE
- PROPOSED WATER LINE
- EXISTING TREE LINE
- PROPOSED LIMITS OF CLEARING & GRADING (LOC)
- WATER METER CROCK
- PROPOSED FIRE HYDRANT
- CG-6 CURB & GUTTER
- ASPHALT MOLDED SWALE
- ALLEY PAVEMENT
- EXISTING TREE

- (W) WATERLINE EASEMENT
- (S) SANITARY EASEMENT
- (E) INGRESS/EGRESS EASEMENT
- (SD) STORMWATER EASEMENT
- 3.1 / 68 STORMWATER MANHOLE
- 3.1 / T SANITARY MANHOLE

- EXISTING TREE
- RIPRAP
- TRAFFIC BARRICADE
- UTILITY PREBLAST
- PROPOSED SIDEWALK
- PROPOSED HANDICAP RAMP
- STREET LIGHT
- STREET SIGN
- STOP SIGN
- # WATERMAIN FITTINGS – SEE CHART ON SHEET 3

Remove alleyway, convert to green space, create 5 ft access easement, extend lot lines, storm should stay

FLIP TO FRONT LOAD

PARCEL 3B-1
OPEN SPACE

PC = 14+27.68

PT = 16+71.04

PC = 39+30.42

PT = 40+94.33

PT = 58+80.76

SEE SHEET 04 FOR MATCHLINE

46+85.04

No.	DATE	REVISIONS
1	11/18/05	LANE WIDTHS CHANGED TO 12'; ON-STREET PARKING WIDTH CHANGED TO 8'
2	4/10/06	LOTS 485-493 RE-GRADED

PLAN DATE
01/13/04
12/20/04
02/21/06
05/16/06

Urban Engineering & Associates, Inc.
CIVIL ENGINEERS • LANDSCAPE ARCHITECTS • LAND SURVEYORS
PEGASUS BUSINESS CENTER
600 PEGASUS COURT - SUITE 101 WINCHESTER, VIRGINIA 22602
PHONE (540) 450-0211 FAX (540) 450-0210

DALE L. ELLIOTT
REGISTERED
#5137
STATE OF
VIRGINIA
LAND SURVEYOR
PROFESSIONAL
05/16/06

Grading Plan
HUNTFIELD
Phase 3B
CHARLES TOWN CORPORATION
JEFFERSON COUNTY, WEST VIRGINIA

SCALE: 1"=30' C.I. = 2' DATE: JANUARY 2004

SHEET 5 OF 25

PP-20048

Planning Commission
101 East Washington Street
Charles Town, WV 25414

Meeting: 09/25/23
Department: Planning Commission
Category: Report
Initiator:

SCHEDULED

AGENDA ITEM (ID #)

Public Hearing: ZMA2023-01 : Vinton-Hayes Property Rezoning

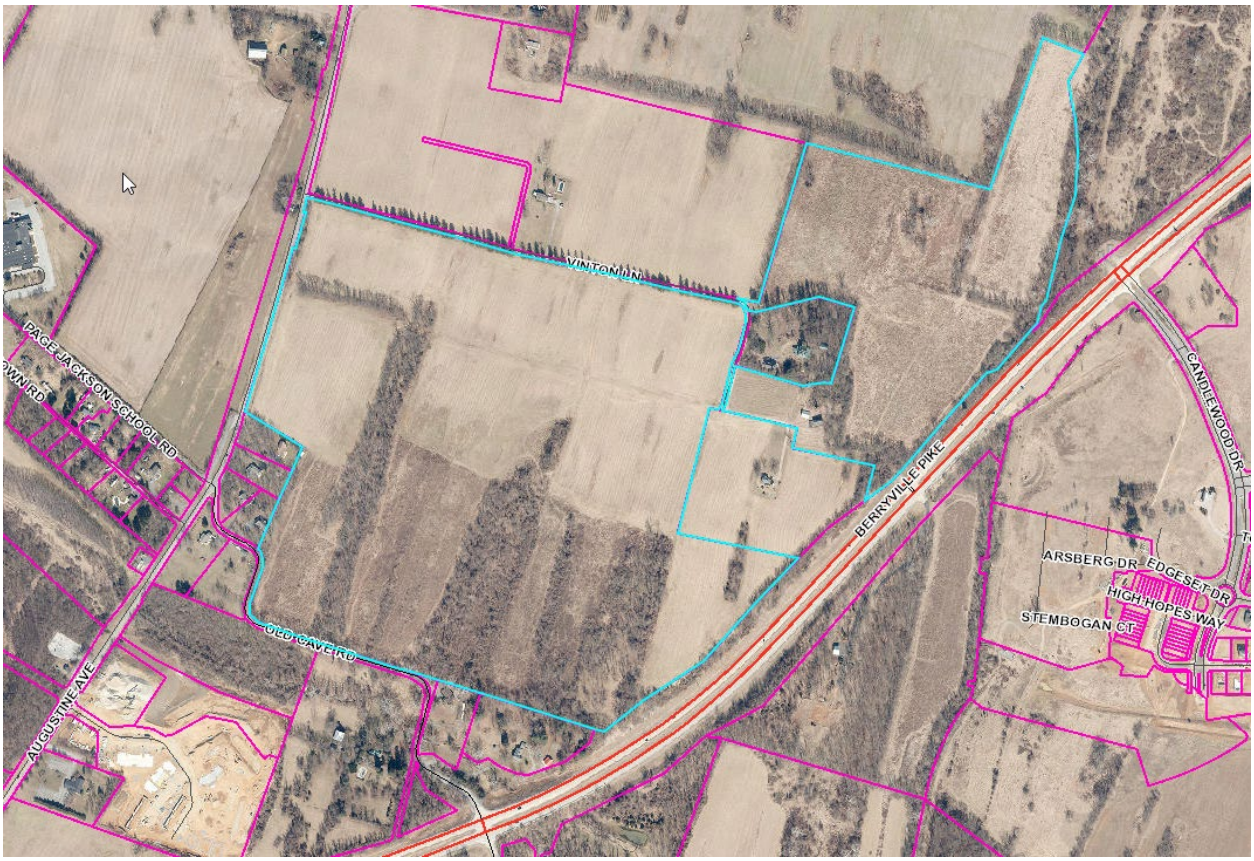
ATTACHMENTS:

- 1. Staff Report.pdf
- 2. Application.pdf
- 3. Site.pdf
- 4. Original Conditions of Annexation.pdf
- 5. Original hayes concept-drawing.pdf
- 6. COA Revised.pdf

Rezoning Review

ZMA2023-01

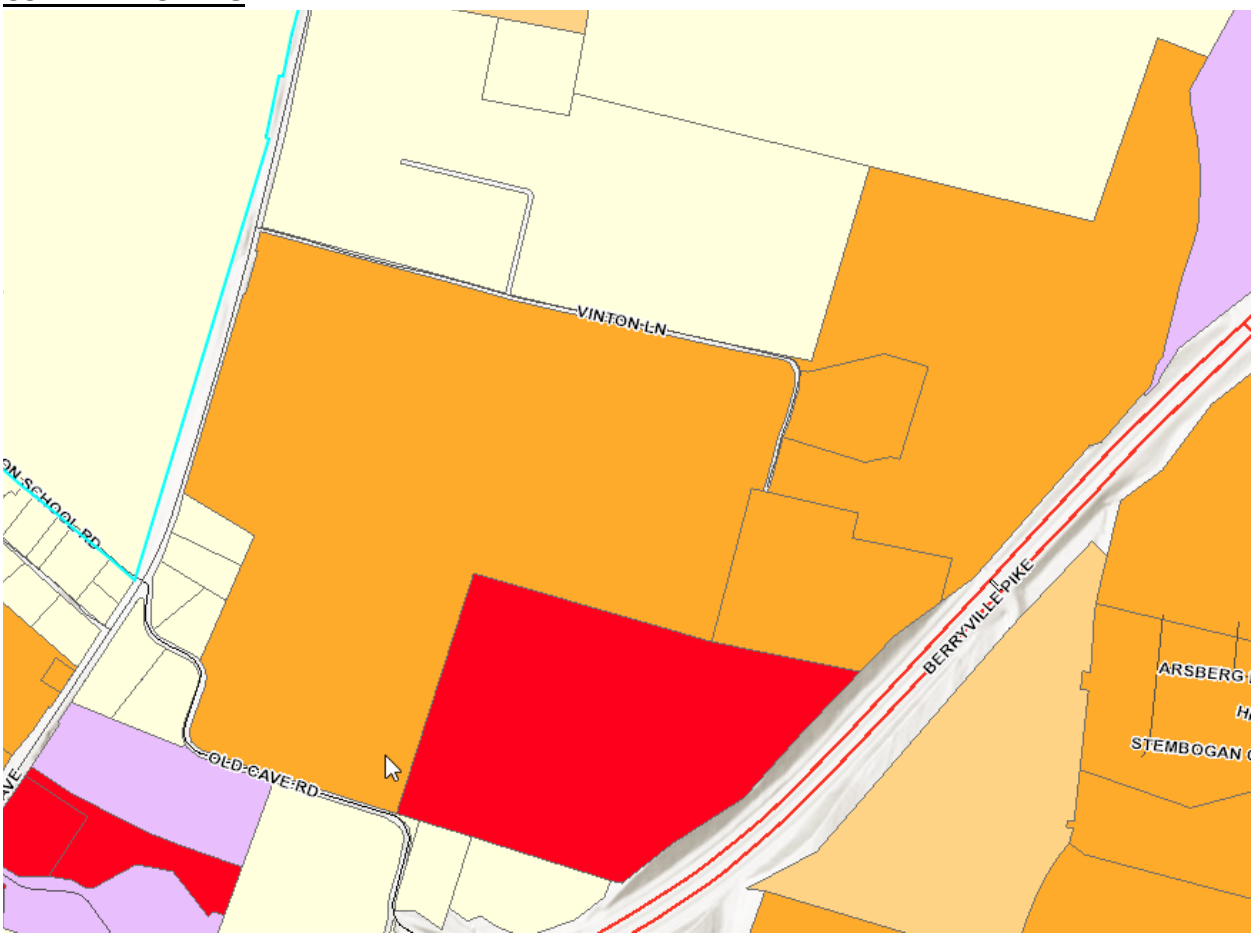
Date: For the September 25, 2023 Planning Commission meeting
Applicant: Elm Street Communities LLC
Property Owner: HAYES ROSCOE A ET AL
Report by: James Newman, City Planner, Zoning/Subdivision Administrator.
Proposal: Rezoning to Residential Medium-High Density (R-15)
Property Location: TD 03 / Map: 12 / Pcls 217 & 218.
Current Zoning: Neighborhood Residential (NR) and General Commercial



PROJECT OVERVIEW

Request by Elm Street Communities LLC to rezone approximately 180 acres of land on two parcels from Neighborhood Residential and General Commercial to Residential Medium-High Density. The application seeks to build single-family and townhome dwelling units on the property.

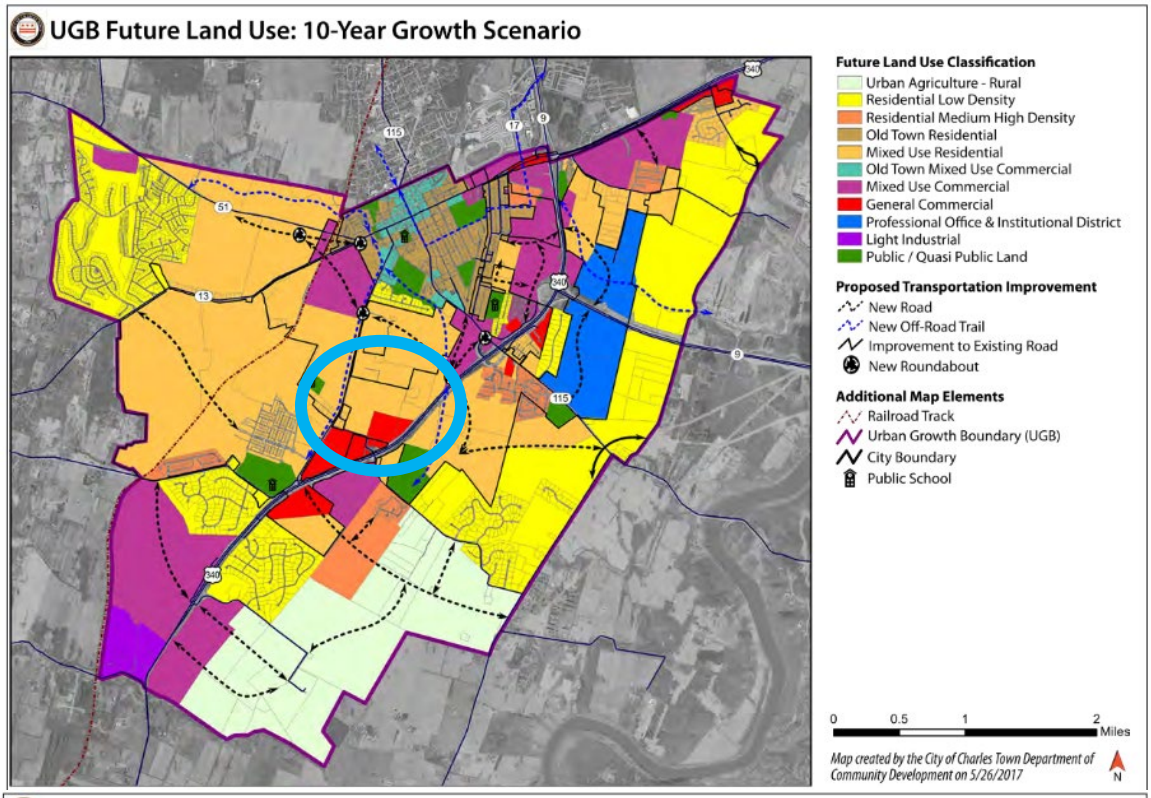
CURRENT ZONING

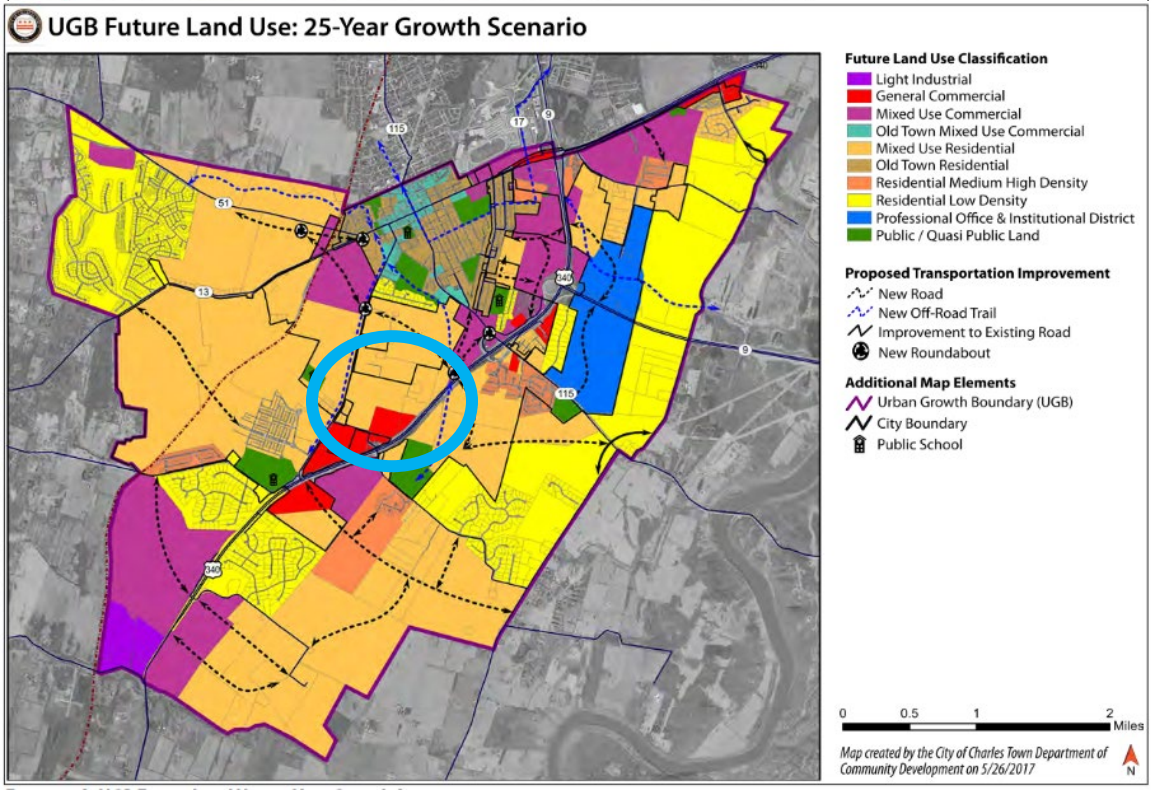


The property is split into two zoning districts. The orange is Neighborhood Residential. And the red is General Commercial. The property is approximately 180 acres in size; General Commercial zoning covers approximately 38 acres of the site.

COMPREHENSIVE PLAN

The 2040 Comprehensive Plan designates this property as Mixed-Use Residential and General Commercial. The property is circled in blue below:





The Comprehensive Plan defines Mixed-Use Residential Future Land Use as:

> Categories are intended to provide for a mix of housing types and sizes (e.g. tiny houses), as well as related services and uses, including compatible and supporting commercial uses and office services. Regarding the mixing of uses, residential uses are predominate and non-residential uses are secondary, supporting the needs of the residential uses. Areas classified as Mixed Use Residential are a continuation of Charles Town's existing zoning category of Neighborhood Residential District and by extension, the non-residential uses would be similar to that of the Neighborhood Commercial zoning category. The Future Land Use Map envisions a higher intensity and density of uses oriented near Downtown to provide for greater walkability, accessibility, and mobility between Downtown commerce and surrounding neighborhoods.
>
> *-Comprehensive Plan page 72*

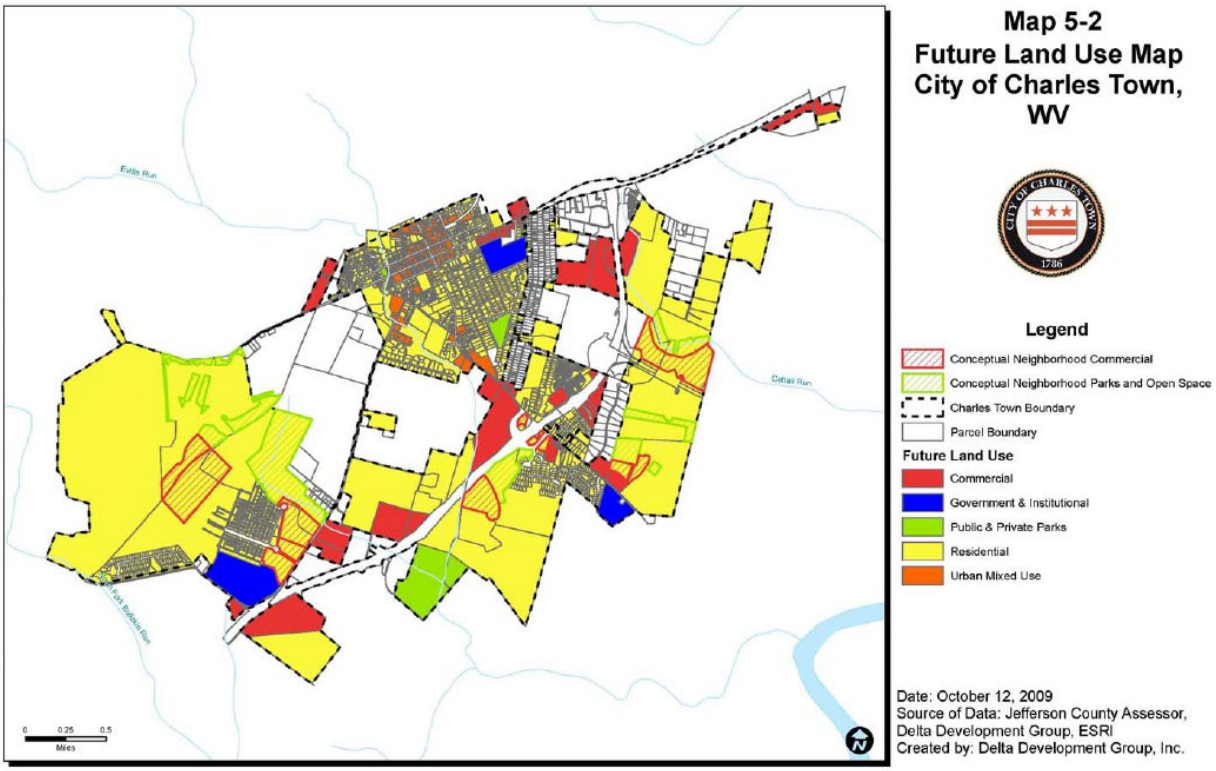
The Comprehensive Plan defines General Commercial as:

> The purpose of the General Commercial Future Land Use classification is to provide locations for businesses of a more general nature that may not be found in a neighborhood and can be served with adequate water, sewer, gas, and electric service. The businesses proposed in this Comprehensive Plan update include retail, wholesale, and some light processing operations. These uses tend to be very auto centric. It will be important for the Charles Town community (residents, visitors, and investors alike) to strongly consider the City's small town, historical significance of building and site design. New commercial development should strongly consider and be encouraged to deliver commercial products that uphold the City's small town and historical character and encourage walkable communities.
>
> *-Comprehensive Plan page 75*

The current Comprehensive Plan was adopted in 2018; the version prior to that was adopted in 2010. The 2010 future land use map for this area can be seen on the next page. The Plan prior to 2010 Plan that was adopted in 2006 and did not contain a future land use map.

The 2010 Comprehensive Plan future land use map has the same general land use designations for these properties as the current Plan. This appears to be based on the Conditions of Annexation (COA) and its attendant land use sketch.

2010 Future Land Use Map



ECONOMIC DEVELOPMENT

City Council desires to enhance economic development opportunities. This is espoused in the *Vision and Goals* of the Comprehensive Plan, text amendments to allow for additional commercial uses in the NR zoning district, tax incentives, and text amendments to commercial pad site development requirements. The property is partially zoned General Commercial; the applicant's rezoning request would not allow for any commercial uses (R15 is a residential focused zoning district)

CONDITIONS OF ANNEXATION

The property was subject to COA that anticipated a mixed-use development centered around a hospital complex. The original COA was signed off by then Mayor Smith in January 2007. In early 2023 that COA was dissolved by mutual agreement of the City and the property owners.

REZONING CRITERIA

Per Zoning Ordinance Section 1321.12, *Zoning Amendments*:

> *City Council, with the advice of the Planning Commission, finds either that the amendment is consistent with the City's Comprehensive Plan, or that the amendment is not consistent with the Comprehensive Plan but that there have been major changes of an economic, physical, or social nature within the area involved that were not anticipated when the Comprehensive Plan was adopted and that such major changes have substantially altered the basic characteristics of the area.*

1. *Is the zoning amendment consistent with the Comprehensive Plan?*

   Partially. The application is completely residential with no commercial zoning aspect. The rezoning of the properties to R15 is in keeping with the Comprehensive Plan for a mixture of housing types, but no commercial zoning is proposed. Commercial uses are generally not permitted in R15 zoning.

2. *Have been major changes of an economic, physical, or social nature within the area involved that were not anticipated when the Comprehensive Plan was adopted and that such major changes have substantially altered the basic characteristics of the area?*

   Yes. The development of this parcel as a residential periphery around a hospital/commercial subject to a set of specific conditions and development ideas was deemed unviable after 17 years of no development, and the COA was nullified.

ZONING REVIEW

The applicant is seeking R15 zoning, the purpose of which is "*to provide for locations for moderate and high density residential development through a variety of housing types*".

Density in this zoning district is set at 15 units an acre. Single-family homes must be on lots of at least 10,000 sq. ft., and townhomes must be on lots of at least 2,000 sq. ft.

DEVELOPMENT PROCESS

A major subdivision application will be required in order to develop this property. That application will entail additional staff review and public hearings sperate from the rezoning process.

ZONING DISTRICT COMPARISON

The applicant is seeking to rezone the entirety of the property to R15 to build a mixture of single-family detached and townhome units. Both of these dwelling types are permitted by-right in:

1. Residential Medium-High Density (R15)
2. Neighborhood Residential (NR)
3. Neighborhood Commercial (NC)
4. Old Town Mixed Use Commercial (OT-MUC)

Out of those districts, only two are viable for this site: R15 and NR. The NC zoning district allows townhomes but has a minimum lot size of 6,000 sq. ft. compared to 2,000 sq. ft. in the R15 and NR zoning districts. OT-MUC is intended for the City's historic core, and not suitable for this undeveloped tract outside of the core.

R15 is the applicant's proposed zoning district, but it does not allow for any commercial uses. The NR district allows for townhomes with a minimal lot size of 2,000 sq. ft., but requires that 50% of the property be used for residential, 10% be set aside as Open Space, and at least 10% be comprised of neighborhood commercial uses. The applicant is seeking a solely residential development, and the NR zoning district is not suitable for what they are seeking to build, hence their rezoning application.

ALTERNATIVE OPTIONS

Per the original COA, this area of the properties was designated for Neighborhood Residential and General Commercial Uses. If the Commission does not desire to rezone the entirety of the property to R15, the Commission can recommend that only the NR zoned portion of the property be rezoned to R15 and keep the GC zoning district intact. This will allow the developer the density they desire while saving the commercial area specifically for commercial development.

CONCLUSION

The applicant is proposing to rezone 180 acres of land to create a housing development with R15 zoning. The Comprehensive Plan designates these parcels for residential and commercial use. The commercial use aspect was based on Conditions of Annexation which are no longer applicable to the properties. The current Comprehensive Plan designation of the parcels as mixed-use residential and general commercial encourages zoning designation that provide for some measure of commercial development. City Council has expressed a desire to preserve existing commercially zoned land.

RECOMMENDATION

Partial Approval. Approval of rezoning the Neighborhood Residential zoned portion of the parcel to R15 while keeping the General Commercial zoning intact.

The Commission may vote to recommend approval, approval subject to conditions, deny, or table action on this request.

Petition No._____

RECEIVED
AUG 1 2023
BY:_____

PETITION FOR ZONING AMENDMENT

ZONING ORDINANCE SECTION 1321.12, ZONING AMENDMENTS

Zoning amendment petitions shall provide the following information:

1. Date July 26, 2023

2. APPLICANT'S NAME* Elm Street Communities, Inc.

   Address: 1355 Beverly Road, Suite 240 McLean, VA 22101

   Telephone Number (703)734-9730 Fax Number (703)734-0322

   Email Address jperry@elmstreetdev.com

3. PROPERTY OWNER'S NAME Hayes Roscoe A. et al See attachment.

   Address: 245 Vinton Lane, Charles Town, WV 25414

   Telephone Number (304)671-1078 Fax Number ( )

   Email Address roscoeahayes@yahoo.com

4. LEGAL DESCRIPTION OF THE SUBJECT PROPERTY (list all parcels that apply)

   Property Address: 245 Vinton Lane

   Tax Map # and Parcel(s): Map 12, Parcels 0217 and 0218

   Deed Book and Page: 1250/338

   Property Area in Square Feet or Acres: 180.11 Acres

   *Applicants include: Property owner(s), Engineer(s), Surveyor(s), or Consultant(s)

5. PROVIDE SCALED MAP, TO BE ATTACHED, OF THE PROPERTY CLEARLY SHOWING THE PROPERTY'S LOCATION AND PROPERTY AREA IN SQUARE FEET AND/OR ACRES:

See Attached plan

6. DESCRIPTION OF APPLICANT'S INTEREST IN THE PROPERTY:

Subdivision of the property and development into a residential subdivision under the R-15 zone.

7. DESCRIPTION OF THE EXISTING (OR FORMER) USE(S) OF THE PROPERTY AND CURRENT ZONING:

The property is currently Zoned for Neighborhood Residential (NR) and General Commercial (GC).

The property currently has one residence, farm outbuildings, fallow fields, and wooded areas. Prior use is agricultural.

8. DESCRIPTION OF THE PROPOSED USE(S) OF THE PROPERTY AND REQUESTED ZONING DISTRICT:

The property will be subdivided and developed into a residential subdivision under the Residential Medium-High Density (R-15) zone to provide a mix of single family detached and attached homes.

9. DESCRIBE HOW THE ZONING MAP AMENDMENT WILL BE CONSISTENT WITH THE OBJECTIVES AND POLICIES OF THE COMPREHENSIVE PLAN:

The Property is Bordered on the East by Route 340 and adjacent Neighborhood Residential. It is bordered on the North, South and West by residential land and an Elementary school. The property is within the Urban Growth Boundary of the Comprehensive Plan. The majority of the site is planned for Residential Medium High Density.

10. TIME SCHEDULE FOR DEVELOPMENT: (AS APPLICABLE)

Once the property is rezoned, a Sketch Plan will be submitted followed by a Preliminary Plat and Guarantee of Improvements, followed by land development. The first phase will begin in 2025. The project will be built in several phases and overall is expected to be a 5-10 year project.

11. PARCEL HISTORY (List all pending or previously approved applications on the subject parcels inventoried above, including previous site plan applications if this application is a site plan amendment)

Application No.	Project Name and Phase	Status	Approval Date
No pending applications			

12. INTERESTED PARTY ADDRESSES, FOR PUBLIC NOTICE: (including across street) (Interested parties are defined as adjacent properties within 100 feet).

Owner	# and Street	City, State, Zip
See Attached Spreadsheet		

NOTES

Additional exhibits may be required by the Zoning Administrator such as a lot location survey or site plan showing existing and if applicable, proposed structures, easements, watercourses, curb cuts and description of the uses of adjacent property that are necessary to describe existing or proposed conditions.

Any desire to amend or withdraw this petition must be submitted in writing to the Zoning Administrator. Also, if ownership of any part of or all of the real property subject to the petition shall change during the pendency of the petition, the Petitioner shall be required to immediately advise the Zoning Administrator in writing.

APPLICANT'S CERTIFICATION

I certify that, to the best of my knowledge, the submitted information and statements are true and correct. I also certify that I have received and read Section 1321.12 and relevant provisions of the Charles Town Zoning Ordinance outlining the Zoning Amendment procedures.

Signature of Applicant

_____ Date 7/26/23

Signature of Owner(s) (If different than Applicant) (See attached for additional owner signatures)

R.A. Hayes Date 7/24/23

Please submit an original completed petition to the following:

Zoning Administrator
City of Charles Town
101 E. Washington Street
Charles Town, WV 25414

FOR CITY USE ONLY

Application Number:_____ Date Petition Received:_____

Fee: $_____ Check No._____ Receipt No._____

City Council Approval:_____ Date:_____

Comments:_____

_____

_____

_____

_____

#3 Property Owners Continued

NAME:	Alice M. Spickler and Donald Spickler Co-Trustees of the Alice M. Spickler Living Trust
Address:	4041 Fairway Drive, Medina, OH 44256
Email Address:	omnirph@zoominternet.net and im4wvu@zoominternet.net
Phone:	_____
NAME:	Joseph R. Gallo
Address:	80 Ridgewood Road, Unit 205, Township of Washington, NJ 07676
Email Address:	joseph.r.gallo@gmail.com
Phone:	201-289-0387

#3 Property Owners Continued

NAME:	Alice M. Spickler and Donald Spickler Co-Trustees of the Alice M. Spickler Living Trust
Address:	4041 Fairway Drive, Medina, OH 44256
Email Address:	omnirph@zoominternet.net and im4wvu@zoominternet.net
Phone:	330-421-6476 330-421-6475
NAME:	Joseph R. Gallo
Address:	80 Ridgewood Road, Unit 205, Township of Washington, NJ 07676
Email Address:	joseph.r.gallo@gmail.com
Phone:	_____

APPLICANT'S CERTIFICATION Continued

Signature of Owners

Alice M. Spickler

Date _____

Donald Spickler

Date _____

Joseph R. Gallo Joseph R Gallo

Date July 22, 2023

APPLICANT'S CERTIFICATION Continued

Signature of Owners

Alice M. Spickler

Date 7/22/23

Donald Spickler

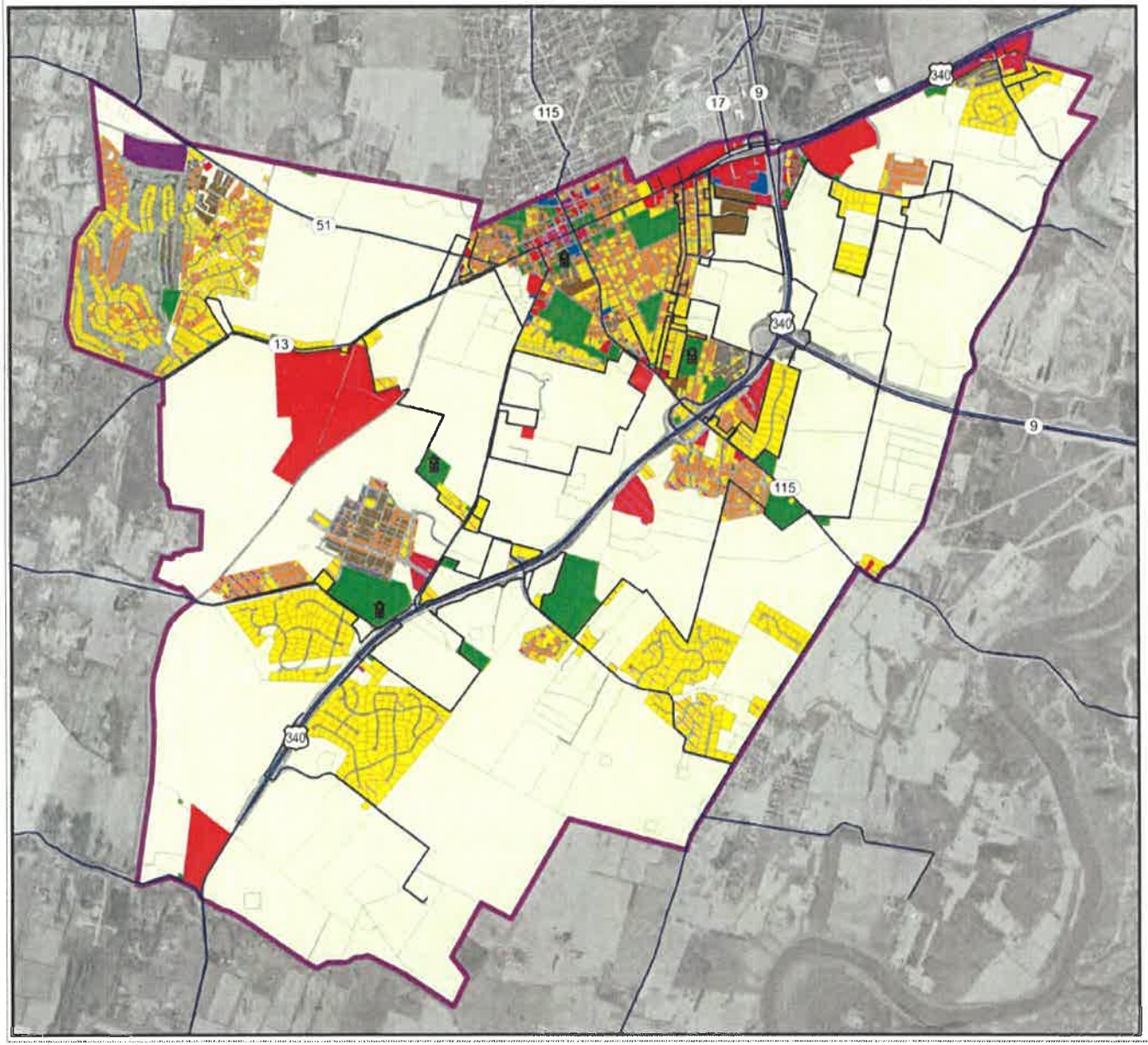
Date 7/22/23

Joseph R. Gallo

Date _____

Owner	Street	City State Zip	Owner Address	
PERRY ROGER J ET AL	1028 AUGUSTINE AVE	Charles Town WV 25414		
HAYES ROSCOE A & ROSEMARIE	245 VINTON LN	Charles Town WV 25414		
HAYES ROSCOE A ET AL	632 VINTON LN	Charles Town WV 25414		
SMITH RICHARD & ERIN	446 VINTON LN	Charles Town WV 25414		
PUSTER HARRY L ET AL	228 CASSILIS LN	Charles Town WV 25415		
ROMAN CATHOLIC DIOCESES OF WHEELING-CHARLESTON	BERRYVILLE PIKE	Charles Town WV 25416	1300 BYRON ST	WHEELING WV 26003
ARCADIA LAND INC	282 CANDLEWOOD DR.	Charles Town WV 25417		
BISHOP BRAD	BERRYVILLE PK	Charles Town WV 25418	55 FRASER CT	Charles Town WV 25414
CLINE ROBERT D JR & LISA E VIANDS-CLINE	1644 OLD CAVE RD	Charles Town WV 25419		
DAILEY ROGER H SR & EVELYN I	1854 OLD CAVE RD	Charles Town WV 25420		
FRAYSIER RICHARD H & CHARLENE A	1900 OLD CAVE RD	Charles Town WV 25421		
ATHEY GEORGE F & CATHERINE W	1865 OLD CAVE RD	Charles Town WV 25422		
WASHINGTON LANDING PARK LLC	OLD CAVE RD	Charles Town WV 25423	1821 AVON ST	CHARLOTTESVILLE VA 22902
KERNS ROBERT J JR & LISA D	2235 OLD CAVE RD	Charles Town WV 25424		
WYSONG KAREN L	2180 OLD CAVE RD	Charles Town WV 25425		
CRIM PATRICIA R & LOWELL KEITH	1445 AUGUSTINE AVE	Charles Town WV 25426		
BEAN VICTORIA & ETHAN SCHWARTZ	1441 AUGUSTINE AVE	Charles Town WV 25427		

UGB Existing Land Use



Existing Land Use Classifications

- Industrial
- Industrial Vacant
- Commercial
- Commercial Vacant
- Office Building
- Mixed Residential / Commercial
- High Density Residential
- High Density Residential Vacant
- Medium Density Residential
- Medium Density Residential Vacant
- Low Density Residential
- Low Density Residential Vacant
- Rural / Agriculture
- Golf Course
- Public / Quasi Public Land

Additional Map Elements

- Urban Growth Boundary (UGB)
- City Boundary
- Public School

0 0.5 1 2 Miles

Map created by the City of Charles Town Department of Community Development on 11/2/2016

N

Figure 18: UGB Existing Land Use
Sources: City of Charles Town, 2016 and Jefferson County GIS, 2016

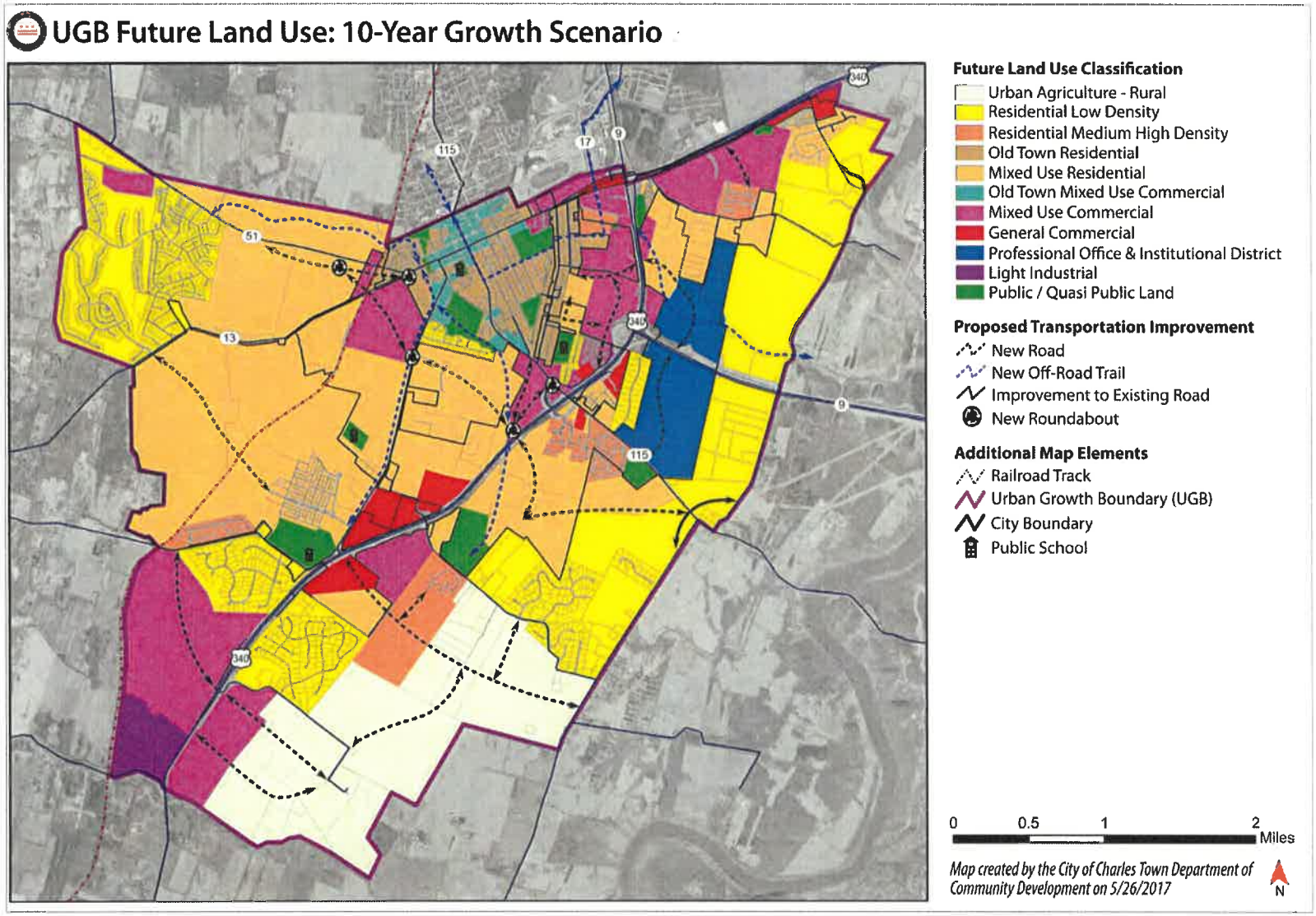


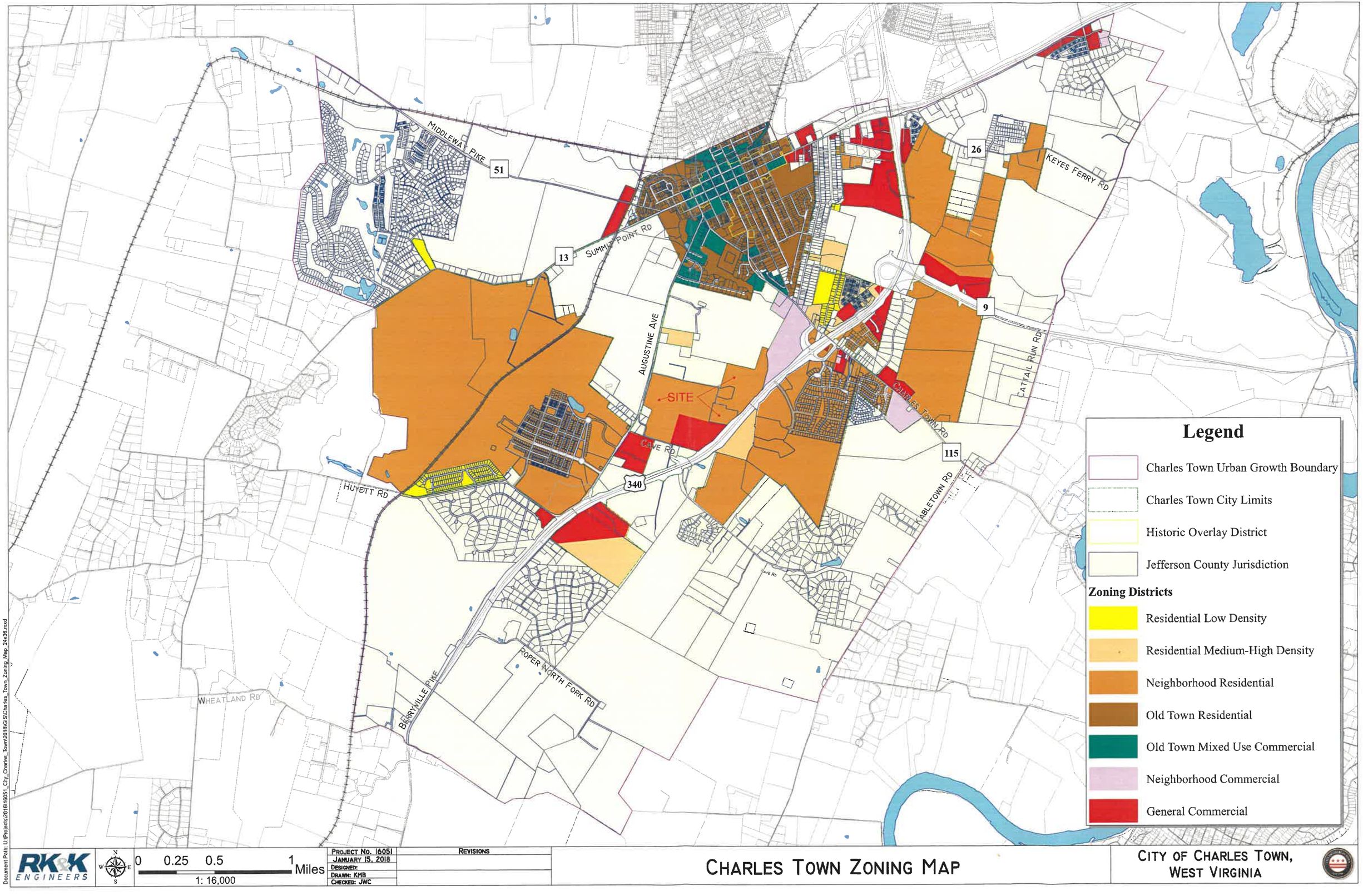
Figure 28A: UGB Future Land Use 10-Year Growth Scenario
Sources: City of Charles Town, 2016

RECEIVED
AUG 1 2023
BY:



FOR TAX PUPOSES ONLY PREPARED BY **JEFFERSON COUNTY ASSESSOR'S OFFICE** NOTE: Maps are updated constantly by the mapper. However, maps are only printed at the beginning of the fiscal year.	DIRECTIONAL N W E S	**Tax Year: 2022** **Date Printed: 1/19/2022** Assessor: Angela Banks Mapping Specialist: Victoria (Tori) Myers)	**LEGEND** PROPERTY LINE CORPORATION LINE DISTRICT LINE COUNTY LINE STREAM EASEMENT ORIGINAL LOT LINE RAILROAD LOT NUMBER (16) TAX PARCEL NUMBER 09 IMPROVEMENT PP MOBILE HOME DISTRICT NUMBER 3	**REVISIONS** REVISIONS OUTGREW THIS SPACE AND ARE NOW MAINTAINED IN A DATABASE	**KEY MAP** 10 9 12	**COUNTY OF JEFFERSON** **OFFICE OF THE ASSESSOR** **CHARLES TOWN, WV**	**CHARLES TOWN CORPORATION** **DISTRICT 3** **MAP 12** Date Aerial Photography: 12/31/1962 Photo No.: Date Map Created: 4/23/1963

ecs\2023\100\0000\00481979\Rezoning Application\248 Vroom Lane_ANX_SCALE.prvg, dhaslapar, 6/6/2023 4:58:27 PM



Document Path: U:\Projects\2016\16051_City_Charles_Town\2018\GIS\Charles_Town_Zoning_Map_24x36.mxd

RK&K ENGINEERS

0 0.25 0.5 1 Miles

1: 16,000

PROJECT No. 16051	REVISIONS
JANUARY 15, 2018	
DESIGNED:	
DRAWN: KMB	
CHECKED: JWC	

CHARLES TOWN ZONING MAP

CITY OF CHARLES TOWN, WEST VIRGINIA

HAYES PROPERTY
CONDITIONS OF ANNEXATION

Rolfe G. Hayes and Ahmad H. Abdul-Baki (collectively the "Owners"), owners of the land identified on the tax map of Jefferson County, West Virginia as Parcels 6, 6.2 and 6.3 in the Charles Town District (the "Property") hereby agree to the following conditions of annexation, contingent upon approval by the City of Charles Town (the "City") of the annexation of the Property into the municipal boundaries of the City of Charles Town. These conditions of annexation are contingent upon and shall not be binding unless and until the Property is annexed into the municipal boundaries of the City of Charles Town and the City of Charles Town approves the zoning classifications with clarifications and additions specified in paragraph I.B below.

I. PLANNING & ZONING COMPLIANCE

A. Comprehensive Plan

The final development design shall be in general conformance with Exhibit 1 - Hayes Property Annexation Concept Plan dated August 15, 2006 and prepared by EDSA (the "Annexation Concept Plan").

B. Urban Zoning

Upon annexation, the City shall zone the Property Neighborhood Residential (NR), General Commercial (GC), and Residential Multi-Family (RM), as generally depicted on Exhibit 1, in accordance with the City of Charles Town Zoning Ordinance with the clarifications and additions specified below.

To permit construction of a hospital and related uses in the General Commercial (GC) District and innovative residential units in the Residential Multi-Family (RM) and Neighborhood Residential (NR) districts, the City shall approve the following clarifications and additions to the zoning regulations as they apply to the Property:

1. **General Commercial (GC) District –**

   a. Hospital and related medical uses and professional offices shall be a permitted use.

   b. One or more hospital buildings of up to eight stories and up to one hundred twenty feet in height shall be permitted. Height shall be measured from the mid point along the main roof plane between the ridge and the gutter line (eave) to the average grade measured at the four corners of the building footprint.

c. Medical and professional office buildings of up to four stories and up to fifty-five feet in height shall be permitted. Height shall be measured from the mid point along the main roof plane between the ridge and the gutter line (eave) to the average grade measured at the four corners of the building footprint.

2. **Neighborhood Residential (NR) District –**

a. Residential units of four stories and up to fifty-five feet in height and residential units of three stories and up to forty-five feet in height shall be permitted. Height shall be measured from the mid point along the main roof plane between the ridge and the gutter line (eave) to the average grade measured at the four corners of the building footprint.

b. The minimum lot width for townhomes shall be sixteen feet.

c. The minimum lot area for townhomes shall be 1,000 square feet for rear load integral garage townhomes, provided that for each such 1,000 square foot lot there shall be 1,000 square feet of community open space provided within walking distance in excess of the minimum open space required under the zoning ordinance.

d. No more than twenty-five percent of the dwelling units constructed on the Property shall be rear load integral garage townhomes.

d. The minimum lot area for townhomes other than rear load integral garage townhomes shall be 1,600 square feet.

e. There shall be no minimum lot area for townhome blocks.

f. The minimum front yard setback shall be twenty-five feet from edge of pavement.

g. The minimum rear yard setback shall be five feet for rear load integral garage townhomes.

h. Encroachment within the front yard setback shall be permitted up to 30%.

i. The maximum impermeable site coverage per lot shall be 100% for rear load integral garage townhomes.

j. The minimum street pavement width for two travel lanes, excluding on-street parking, shall be twenty-two feet.

k. Townhome portions of the development shall be permitted to have an area of less than five acres.

l. Townhome portions of the development shall be permitted at a maximum density of sixteen dwelling units per acre.

m. Alleys may provide lot access and satisfy road frontage requirements when lots served by those alleys front on open space.

3. **Residential Multi-Family (RM) District** –

a. Residential units of four stories and up to fifty-five feet in height shall be permitted. Height shall be measured from the mid point along the main roof plane between the ridge and the gutter line (eave) to the average grade measured at the four corners of the building footprint.

b. The minimum lot width per dwelling unit shall be sixteen feet.

c. There shall be no minimum lot area for residential multi-family blocks.

d. The maximum impermeable site coverage shall be 100% for individual condominium units.

e. The minimum street pavement width for two travel lanes, excluding on-street parking, shall be twenty-two feet.

f. Alleys may provide lot access and satisfy road frontage requirements when lots served by those alleys front on open space.

g. Gross density shall be permitted up to twenty dwelling units per acre.

Any other clarifications, additions or modifications to the zoning regulations that may be required to develop the Property in accordance with the Annexation Concept Plan and to yield 950 residential units shall be reviewed by the City of Charles Town.

C. Contiguous Location

The subject property is contiguous to existing corporate limits of the City of Charles Town by the following connections:

From the North – By Augustine Avenue and Route 340
From the South – By Route 340 and Norborne Glebe
From the East – By Route 340 and Norborne Glebe
From the West – By Augustine Avenue (Old Route 340) and Huntfield

D. Transportation Planning

For the purpose of providing transportation facilities, the following dedications of right-of-way and construction of transportation improvements, which are consistent with City standards and transportation plans, shall be provided at a time approved by the City Planning Commission:

1. **U.S. Route 340/Future Route 51 (New Vinton Lane) Intersection:**

   a. Design and construct a traffic signal;

   b. Dedicate required on-site right-of-way, design and construct a northbound left turn lane;

   c. Dedicate required on-site right-of-way, design and construct a southbound right turn lane;

   d. Dedicate required on-site right-of-way, design and construct a westbound right turn lane.

2. **Augustine Avenue/Future Route 51 (New Vinton Lane) Intersection:**

   a. Dedicate required on-site right-of-way, design and construct a southbound left turn lane;

   b. Dedicate required on-site right-of-way, design and construct a right turn lane from northbound Augustine Avenue onto eastbound Future Route 51 (New Vinton Lane).

3. **Future Route 51 (New Vinton Lane) - on site:**

   a. Dedicate required on-site right-of-way, design and construct a half section (two lanes) of a 4-lane divided roadway from Augustine Avenue to the intersection of Rte. 340;

   b. Dedicate required on-site right-of-way, design and construct an additional half section (two additional lanes) of a 4-lane divided roadway from the intersection of the North-South Commercial Boulevard to the intersection of Route 340.

4. **North-South Commercial Boulevard**:

   a. Dedicate required on-site right-of-way, design and construct a half section (two lanes) of a 4-lane divided roadway system running north-south within the site.

   b. Dedicate required on-site right-of-way, design and construct an additional half-section (two additional lanes) of a 4-lane divided roadway system running north-south within the site.

   c. Design and construct a left turn lane from the northbound North-South Commercial Boulevard onto westbound Future Route 51 (New Vinton Lane).

II. ECONOMIC GROWTH

To facilitate the construction of a new hospital and medical office facility on the Property, approximately thirty (30) acres of land shall be donated to the West Virginia University Hospitals - East ("WVUH-E") for construction of a hospital and related medical uses and professional offices. This donation shall be made on April 30, 2007 or upon approval by the City of the Schematic Plan for development of the Property, which ever is later.

In addition, approximately fourteen (14) acres of land will be developed for commercial and retail uses to support the hospital and medical offices. Together, these non-residential development areas within the Property are expected to provide significant economic development benefits to the Charles Town and Jefferson County areas.

III. WORKFORCE HOUSING

The proposed development of the Property as a mixed-use community will provide for a variety of dwelling types at modest market rate prices to serve the entire community. Seven percent (7%) of the units shall sell for no more than $220,446 (measured in 2006 dollars which shall be escalated annually in accordance with changes in the Consumer Price Index), based on the City's current calculation of Workforce Housing sales prices. These units shall be made available to the Charles Town Housing Opportunity Board (the "CTHOB") or to a designated agency authorized to offer housing for sale to qualified purchasers under the following conditions: (i) the location and type of units to be made available to the CTHOB shall be determined and designated by the Owners or assigns in their sole discretion, (ii) at least seven (7) units will be designated for every ninety (90) market rate units sold subject to the following conditions, (iii) at least seven (7) units to be made available to the CTHOB will be designated prior to the 90th, 180th, 270th, 360th, 550th, 640th, 730th, and 820th occupancy permits, and six (6) units will be designated prior to the 910th occupancy permit, (iv) the Owners may designate all units to be provided at any time at their sole discretion, (v) if more than seven (7) units are designated for any ninety (90) market rate units, then the minimum number of units to be designated for each succeeding group of ninety (90) market rate units will be reduced proportionately until the total number of units designated equals sixty-seven (67), at which time this condition of annexation will have been fully performed, (vi) a construction schedule estimating the completion date of each designated unit will be provided by the builder upon the start of construction of the unit, (vii) the CTHOB shall be responsible for satisfying all requirements of its program regarding the solicitation, qualification, and financing of its qualified purchasers and the placement of a qualified purchaser at settlement upon completion of any designated unit, (viii) any designated unit that is completed and ready for settlement for which a qualified purchaser is not present for settlement will be available for unrestricted sale by the Builder, and (ix) designated units made available for unrestricted sale due to lack of a qualified purchaser present for settlement shall continue to be counted toward the seven percent (7%) of units in satisfaction of this condition of annexation. The Owners or their assigns are currently working with City staff to further clarify the process by which workforce housing will be provided and administered.

IV. PROTECTION OF RESOURCES

A. **Floodplain**. No development, other than grading and the installation of storm water management and utilities, shall occur within floodplain limits on the portion of the Property located within the 100-year floodplain along Evitts Run.

B. **Existing Dwelling**. The existing structure commonly known as the "manor house" on the portion of the Property identified as tax map Parcel 6.3 shall be retained in some location upon the Property. The ultimate use of the manor house will be decided by the Owners or their assigns in their sole discretion. The uses may be, but are not limited to, a private residence, commercial or retail.

V. MUNICIPAL INFRASTRUCTURE AND SERVICES

The Property shall be served by the Charles Town Water & Sewer Departments and shall comply with the existing rules and regulations of the City of Charles Town Utility Board and any State regulatory agencies. The prevailing water and sewer capacity improvement fees, as approved by the Public Service Commission of West Virginia, will be paid as a condition of building permit issuance.

VI. FISCAL IMPACT

The following contributions shall be paid as a condition of building permit issuance:

A. **Capital Improvement Fee** of $948 per each residential unit, to be subject to review and adjustment once every three (3) years in accordance with changes in the Consumer Price Index from the base year 2006. Workforce Housing units shall be exempt from these fees.

B. **Non-Capital Fee** of $1,500 per each residential unit during the first five years of development following approval of the first record plat for residential units, $2,650 per each residential unit during the sixth through tenth years of development following approval of the first record plat for residential units, and $4,400 per each residential unit during the eleventh through twentieth years of development following approval of the first record plat for residential units. Workforce Housing units shall be exempt from these fees.

C. **School Impact Fees** - Any legally valid and applicable Jefferson County School Impact Fee in the amount established by the Jefferson County Commission.

The Owners agree that these conditions of annexation shall be binding on the Owners and their assigns and that a breach or default on the part of the Owners or their assigns may, at the option

of the City, result in enforcement by the City of Charles Town either through injunctive relief in the Circuit Court of Jefferson County or through the denial of schematic plan approvals, site plan approvals, record plat approvals, building permits or use and occupancy permits for the Property.

For purposes of these conditions of annexation, an assignee of the Owners shall mean any person or group of persons acting in concert who, as defined in Chapter 36B of the West Virginia Code: (i) as part of a common promotional plan, offers to dispose of his or its interest in a unit not previously disposed of; or (ii) reserves or succeeds to any special declarant right.

Further, the Owners agree that if the Annexation Concept Plan is amended so as to significantly increase the demand for governmental services generated by the development of the Property, the Owners or their assigns shall provide additional conditions of annexation or altered conditions of annexation to offset the impact generated by these changes on the demand for governmental services.

Dated this 30 day of January, 2007.

CITY OF CHARLES TOWN:

Mayor

ATTEST:

City Clerk

Ahmad H. Abdul-Baki

STATE OF:
COUNTY OF Jefferson, to wit:

I, the undersigned Notary Public, in and for the jurisdiction aforesaid, do hereby certify that Ahmad H. Abdul-Baki, whose name is signed to the writing above, has appeared before me and personally acknowledged the same before me in my jurisdiction aforesaid.

GIVEN under my hand and seal this 26 day of January, 2007.

Notary Public

My commission expires: April 25, 2012

OFFICIAL SEAL
NOTARY PUBLIC - STATE OF WV
EDNA M. KING
ROUTE 2, BOX 42K
CHARLES TOWN, WV 25414
My Commission Expires April 25, 2012

OWNERS:

Rolfe G. Hayes

STATE OF:
COUNTY OF Jefferson, to wit:

I, the undersigned Notary Public, in and for the jurisdiction aforesaid, do hereby certify that Rolfe G. Hayes, whose name is signed to the writing above, has appeared before me and personally acknowledged the same before me in my jurisdiction aforesaid.

GIVEN under my hand and seal this 21 day of November, 2006.

Notary Public

My commission expires: April 25th, 2012

OFFICIAL SEAL
NOTARY PUBLIC - STATE OF WV
EDNA M. KING
ROUTE 2, BOX 42K
CHARLES TOWN, WV 25414
My Commission Expires April 25, 2012



site legend

- residential development
- retail development
- medical development (hospital & professional office)
- programmed open space
- natural open space
- zoning line
- right-of-way / parcel line

0 100' 200' 400' 600' NORTH

August 15, 2006

Exhibit 1 — Annexation/Rezoning Petition

Hayes Property

Charles Town, West Virginia

CITY OF CHARLES TOWN
WEST VIRGINIA

AN ORDINANCE AUTHORIZING AND DIRECTING THE MAYOR TO EXECUTE AN AGREEMENT RESCINDING, CANCELING, AND NULLIFYING, AS BETWEEN THE PARTIES TO SUCH AGREEMENT, THOSE CERTAIN CONDITIONS OF ANNEXATION DATED THE 30th DAY OF JANUARY, 2007, ENTERED BY AND BETWEEN ROLFE G. HAYES AND AHMAD H. ABDUL-BAKI, AS OWNERS OF THE SUBJECT REAL PROPERTY, AND THE CITY OF CHARLES TOWN, AND RELEASING THE PARTIES TO SUCH AGREEMENT FROM ANY EXECUTORY OBLIGATIONS, COVENANTS, OR DUTIES UNDER THE CONDITIONS OF ANNEXATION.

WHEREAS, pursuant to (i) an Ordinance duly approved upon second reading and adopted by the Common Council of the City of Charles Town at a regular meeting held on October 16, 2006 (the "Annexation Ordinance"), and (ii) an Order entered by the County Commission of Jefferson County, West Virginia, on November 30, 2006 (the "Annexation Order"), the City of Charles Town annexed within its corporate limits four (4) parcels of land containing an aggregate of 268.8668 acres, more or less, being two parcels then owned by Rolfe G. Hayes ("Hayes") containing, respectively, 198.1519 acres, more or less, and 10.9440 acres, more or less, a parcel then owned by Ahmad H. Abdul-Baki ("Abdul-Baki") containing 4.6209 acres, more or less, and a portion of the Route 340 Bypass containing approximately 55.15 acres, more or less (collectively, the "Annexed Property");

WHEREAS, pursuant to a Resolution duly adopted by the Common Council of the City of Charles Town at the aforesaid meeting held on October 16, 2006, the City of Charles Town accepted and approved the annexation of the Annexed Property and thereby agreed with Hayes and Abdul-Baki to the provisions of those certain Conditions of Annexation thereafter executed by Hayes, Abdul-Baki, and the then Mayor, and dated the 30th day of January (the "Conditions of Annexation");

WHEREAS, the Conditions of Annexation contemplated a specific development project that required rezoning particular portions of the Annexed Property, respectively, to General Commercial, Neighborhood Residential, and Residential Multi-Family districts, and other modifications to the zoning regulations in order to permit construction of a hospital and related medical uses and professional uses in the General Commercial district and innovative residential units in the residential districts;

WHEREAS, the Conditions of Annexation required that the final development design of the development project be in general conformance with an Annexation Concept Plan attached to the Conditions of Annexation (the "Concept Plan");

WHEREAS, the Conditions of Annexation further contemplated that, in order to facilitate the construction of a new hospital and medical office facility on the Annexed Property, approximately thirty (30) acres of land would be donated to West Virginia University Hospitals –

East for construction of a hospital and related medical uses and professional offices;

WHEREAS, subsequent to execution of the Conditions of Annexation, the intended purchaser and developer of the parcels owned by Hayes and Abdul-Baki withdrew from the contemplated transaction and development;

WHEREAS, in 2012, Abdul-Baki conveyed to third parties his parcel of 4.6209 acres, more or less;

WHEREAS, Hayes died in 2014 and his parcels containing, respectively, 198.1519 acres, more or less, and 10.9440 acres, more or less, came to be held by Roscoe A. Hayes, Alice M. Spickler and Donald L. Spickler, Co-Trustees of the Alice M. Spickler Living Trust, and Joseph R. Gallo (collectively, the "Hayes Property Owners");

WHEREAS, in 2020, the Hayes Property Owners subdivided the parcel of 198.1519 acres, more or less, and conveyed therefrom a parcel of 27.8213 acres, more or less, to a third party;

WHEREAS, the Hayes Property Owners continue to hold the parcel of 10.9440 acres, more or less, and the remainder of the parcel that originally contained 198.1519 acres, more or less (collectively, the "Hayes Property Owners' Property"), which property has not been further developed;

WHEREAS, in recognition that the Conditions of Annexation contemplated a specific development project and that it now and in the future would and will be impractical, if not impossible, to develop the specific development project contemplated, particularly in general conformance with the Concept Plan as required by the Conditions of Annexation, due to changed circumstances and for various reasons including, without limitation, that portions of the Annexed Property intended to be included in the development project are now owned by third parties and that construction of a hospital on the Annexed Property is no longer contemplated, the Hayes Property Owners have requested that the City of Charles Town agree to rescind, cancel, and nullify the Conditions of Annexation as between the Hayes Property Owners and the City of Charles Town and that the Hayes Property Owners and the City of Charles Town mutually release the other from any and all executory covenants and obligations thereunder; *provided that*, it is the intent and desire of the Hayes Property Owners that Paragraph V of the Conditions of Annexation, pertaining to provision of water and sanitary sewer service to the Annexed Property by the Charles Town Utility Board, shall remain in full effect ("Paragraph V Provision");

WHEREAS, the Hayes Property Owners have expressed that the existence of the Conditions of Annexation and the uncertainty of their effect have frustrated the efforts of the Hayes Property Owners to market and sell the Hayes Property Owners' Property, which has prevented development of such real property; and

WHEREAS, West Virginia University Hospitals – East has expressed its objection to rescission,

cancellation, and nullification of the Conditions of Annexation on the basis of an alleged right to donation of thirty (30) acres of land or the value thereof;

NOW, THE COUNCIL OF THE CITY OF CHARLES TOWN FINDS AND DECLARES, that the Conditions of Annexation contemplated a specific development project;

FURTHER FINDS AND DECLARES, that it now and in the future would and will be impractical, if not impossible, to develop the specific development project contemplated, particularly in general conformance with the Concept Plan as required by the Conditions of Annexation;

FURTHER FINDS AND DECLARES, that certain covenants and obligations of each of the Hayes Property Owners and the City of Charles Town to the other under the Conditions of Annexation remain unperformed and executory and, accordingly, the Conditions of Annexation are unenforceable by either the Hayes Property Owners or the City of Charles Town;

FURTHER FINDS AND DECLARES, that the best interests of the City of Charles Town would not be served by the City of Charles Town performing and satisfying its unperformed and executory covenants and obligations to the Hayes Property Owners under the Conditions of Annexation for the sole purpose of positioning the City of Charles Town to enforce the Conditions of Annexation against the Hayes Property Owners;

FURTHER FINDS AND DECLARES, that leaving the Conditions of Annexation in effect between the Hayes Property Owners and the City of Charles Town serves no current or contemplated future purpose of the City of Charles Town;

FURTHER FINDS AND DECLARES, that it is in the best interests of the City of Charles Town to agree to rescind, cancel, and nullify the Conditions of Annexation as between the Hayes Property Owners and the City of Charles Town, with mutual releases of their respective executory covenants and obligations thereunder, excepting only the Paragraph V Provision; and

FURTHER FINDS AND DECLARES, that, in light of the continuing applicability of the Conditions of Annexation to the 4.6209 acre, more or less, parcel and the 27.8213 acre, more or less, parcel conveyed to third parties, as discussed above, each of the current owners of such parcels should be offered the opportunity to enter a separate agreement rescinding, canceling, and nullifying the Conditions of Annexation as between such owner and the City of Charles Town, with mutual releases of their respective executory covenants and obligations thereunder;

NOW, THEREFORE BE IT ORDAINED BY THE COUNCIL OF THE CITY OF CHARLES TOWN, that the Mayor of the City of Charles Town be, and hereby is, authorized and directed to execute and enter on behalf of the City of Charles Town an agreement with the Hayes Property Owners in the form of that attached as EXHIBIT A that rescinds, cancels, and nullifies the Conditions of Annexation as between the Hayes Property Owners and the City of Charles Town, with mutual releases of their respective executory covenants and obligations thereunder, excepting only the Paragraph V Provision (the "Hayes Property Owners Nullification Agreement");

BE IT FURTHER ORDAINED BY THE COUNCIL OF THE CITY OF CHARLES TOWN, that, in the event the current owner(s) of the 4.6209 acre, more or less, parcel and/or the current owner(s) of the 27.8213 acre, more or less, parcel conveyed to third parties, as discussed above, so elect, the Mayor of the City of Charles Town be, and hereby is, authorized and directed to execute and enter on behalf of the City of Charles Town an agreement with such persons in the form of that attached as EXHIBIT A, but with such persons substituted for the Hayes Property Owners therein and with Subsections 1(a), 2(a), and 3(b)(i) deleted therefrom (each, a "Third Party Nullification Agreement");

BE IT FURTHER ORDAINED BY THE COUNCIL OF THE CITY OF CHARLES TOWN, that this Ordinance does not and shall not be deemed to, and neither the Hayes Property Owners Nullification Agreement nor any Third Party Nullification Agreement shall or shall be interpreted to, de-annex or otherwise affect the annexation of the Annexed Property, which Annexed Property shall remain annexed within the corporate limits of the City of Charles Town;

BE IT FURTHER ORDAINED BY THE COUNCIL OF THE CITY OF CHARLES TOWN, that this Ordinance does not and shall not be deemed to, and neither the Hayes Property Owners Nullification Agreement nor any Third Party Nullification Agreement shall or shall be interpreted to, undo, reverse, change, or affect the current zoning of the Annexed Property as reflected on the Charles Town Zoning Map except that, pursuant to Section 3(b)(i) of the Hayes Property Owners Nullification Agreement, the Hayes Property Owners shall seek a change in the zoning classification of the Hayes Property Owners' Property to the Urban Reserve District by zoning amendment, for which purposes the prior rezoning of the Hayes Property Owners' Property pursuant to the Conditions of Annexation shall be considered revoked, annulled, void, and of no effect for all purposes;

BE IT FURTHER ORDAINED BY THE COUNCIL OF THE CITY OF CHARLES TOWN, that this Ordinance does not and shall not be deemed to, and neither the Hayes Property Owners Nullification Agreement nor any Third Party Nullification Agreement shall or shall be interpreted to, undo, cancel, reverse, or otherwise make or render ineffective any other act heretofore performed by any party pursuant to the Conditions of Annexation;

BE IT FURTHER ORDAINED BY THE COUNCIL OF THE CITY OF CHARLES TOWN, that this Ordinance and the Hayes Property Owners Nullification Agreement to be entered hereunder are intended to, and shall be deemed to, result in only the release of the executory covenants and obligations of the Hayes Property Owners and their successors and assigns to or in favor of the City of Charles Town under the Conditions of Annexation, and this Ordinance is not intended to and shall not be deemed to, and the Hayes Property Owners Nullification Agreement shall not purport to or be interpreted to, release or otherwise affect any right that West Virginia University Hospitals – East may assert or claim; and

BE IT FURTHER ORDAINED BY THE COUNCIL OF THE CITY OF CHARLES TOWN, that this Ordinance and any Third Party Nullification Agreement to be entered hereunder are intended

to, and shall be deemed to, result in only the release of the executory covenants and obligations of the subject third parties and their successors and assigns to or in favor of the City of Charles Town under the Conditions of Annexation, and this Ordinance is not intended to and shall not be deemed to, and no Third Party Nullification Agreement shall purport to or be interpreted to, release or otherwise affect any right that West Virginia University Hospitals – East may assert or claim.

This Ordinance shall take effect upon enactment.

First Reading: _____, 20___

Public Hearing: _____, 20___

Passed on Second Reading: _____, 20___

Enacted this _____ day of _____, 20___

CITY OF CHARLES TOWN

_____
Robert M. Trainor
Mayor

Attest:

_____
John C. Barkley
City Clerk

EXHIBIT A
NULLIFICATION AGREEMENT

NULLIFICATION AGREEMENT

This **NULLIFICATION AGREEMENT** (this "Agreement"), dated the ___th day of _____, 20__, is entered into by and between the CITY OF CHARLES TOWN, a West Virginia municipal corporation, party of the first part (the "City"), and ROSCOE A. HAYES, ALICE M. SPICKLER AND DONALD L. SPICKLER, CO-TRUSTEES OF THE ALICE M. SPICKLER LIVING TRUST, AND JOSEPH R. GALLO, parties of the second part. The party of the first part and the parties of the second part are sometimes referred to herein collectively as the "Parties," or individually as a "Party."

RECITALS

WHEREAS, in 2006, the City annexed within its corporate limits four (4) parcels of land (the "Annexed Property") including two parcels then owned by Rolfe G. Hayes ("Hayes") containing, respectively, 198.1519 acres, more or less, and 10.9440 acres, more or less, and a parcel then owned by Ahmad H. Abdul-Baki ("Abdul-Baki") containing 4.6209 acres, more or less;

WHEREAS, pursuant to a Resolution duly adopted by the City's Common Council, the City accepted and approved said annexation and thereby agreed with Hayes and Abdul-Baki to the provisions of those certain Conditions of Annexation thereafter executed by Hayes, Abdul-Baki, and the then Mayor of the City, and dated the 30th day of January (the "Conditions of Annexation");

WHEREAS, the Conditions of Annexation contemplated a specific development project and required that the final development design of the development project be in general conformance with an Annexation Concept Plan attached to the Conditions of Annexation;

WHEREAS, subsequent to execution of the Conditions of Annexation, the intended purchaser and developer of the parcels owned by Hayes and Abdul-Baki withdrew from the contemplated transaction and development;

WHEREAS, in 2012, Abdul-Baki conveyed to Richard Smith and Erin Smith his parcel of 4.6209 acres, more or less;

WHEREAS, Richard Smith and Erin Smith continue to hold said parcel of 4.6209 acres, more or less;

WHEREAS, Hayes died in 2014 and his parcels containing, respectively, 198.1519 acres, more or less, and 10.9440 acres, more or less, came to be held by Roscoe A. Hayes, Alice M. Spickler and Donald L. Spickler, Co-Trustees of the Alice M. Spickler Living Trust, and Joseph R. Gallo (collectively, the "Hayes Property Owners");

WHEREAS, in 2020, the Hayes Property Owners subdivided the parcel of 198.1519 acres, more or

less, and conveyed therefrom a parcel of 27.8213 acres, more or less, to Brad Bishop;

WHEREAS, Brad Bishop continues to hold said parcel of 27.8213 acres, more or less;

WHEREAS, the Hayes Property Owners continue to hold the parcel of 10.9440 acres, more or less, and the remainder of the parcel that originally contained 198.1519 acres, more or less;

WHEREAS, various provisions of the Conditions of Annexation currently remain unperformed and executory on the part of each of the Parties, the Parties accordingly agree that the Conditions of Annexation are unenforceable by either Party, and the Hayes Property Owners dispute the enforceability of the Conditions of Annexation in any event; and

WHEREAS, the Parties mutually desire to rescind, cancel, and nullify the Conditions of Annexation as between the Parties and that the Parties mutually release the other from any and all executory covenants and obligations under the Conditions of Annexation, except as expressly provided otherwise herein;

AGREEMENT

NOW THEREFORE, in consideration of the mutual covenants and agreements set forth in this Agreement and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties agree as follows:

SECTION 1 -- NULLIFICATION

The Conditions of Annexation shall be, and hereby are, fully and completely rescinded, canceled, and nullified as between the Parties.

(a) Notwithstanding the foregoing Section 1, Paragraph V of the Conditions of Annexation, which pertains to water and sewer service to the subject property, shall remain in full force and effect such that the Hayes Property Owners' parcel of 10.9440 acres, more or less, and the remainder of the parcel that originally contained 198.1519 acres, more or less, shall be served by the Charles Town Utility Board and otherwise in accordance with said Paragraph V.

SECTION 2 -- MUTUAL RELEASE

Each of the Parties shall, and hereby does, for and on behalf of itself and its heirs, personal representatives, attorneys, successors, and assigns, fully, finally, and completely release, remise, acquit, and forever discharge the other Party, and all their respective trustees, officers, managers, employees, agents, representatives, insurers, heirs, devisees, personal representatives, successors, and assigns, if any, of and from any and all executory obligations, covenants, and duties under the provisions of the Conditions of Annexation.

(a) Notwithstanding the foregoing Section 2, the obligations of the Hayes Property Owners under Paragraph V of the Conditions of Annexation shall remain in full force and effect.

SECTION 3 -- LIMITED EFFECT OF AGREEMENT

This Agreement is not intended to, does not, and shall not be deemed or interpreted to:

(a) De-annex or otherwise affect the annexation of the Annexed Property, which Annexed Property shall remain annexed within the corporate limits of the City of Charles Town;

(b) Undo, reverse, change, or affect the current zoning of the Annexed Property as reflected on the Charles Town Zoning Map;

(i) Notwithstanding the foregoing Subsection 3(b), the Parties agree that the Hayes Property Owners shall, by petition, pursuant to the process and subject to all required actions provided in Section 1321.12 of the Charles Town Zoning Ordinance, seek a change in the zoning classification of the parcel of 10.9440 acres, more or less, and the remainder of the parcel that originally contained 198.1519 acres, more or less, now owned by the Hayes Property Owners from the Neighborhood Residential and General Commercial zoning districts to the Urban Reserve zoning district, in recognition that such land would be placed in the Urban Reserve zoning district upon annexation under the current Charles Town Zoning Ordinance;

(c) Undo, cancel, reverse, or otherwise make or render ineffective any other act heretofore performed by any Party pursuant to the Conditions of Annexation; or

(d) Release any executory covenants or obligations of the parties of the second part or their successors and assigns to any third party under the Conditions of Annexation that may subsequently be determined to be legally enforceable, if any, or release or otherwise affect rights of any such third party under the Conditions of Annexation that may subsequently be determined to be legally enforceable, if any, it being understood that this Agreement results in only the City's release of the executory covenants and obligations of the parties of the second part and their successors and assigns to or in favor of the City under the Conditions of Annexation.

SECTION 4 -- ENTIRE AGREEMENT

This Agreement contains the entire understanding of the Parties hereto in respect to the subject matter contained herein. There are no restrictions, promises, representations, warranties, covenants, or undertakings, other than those expressly set forth or referred to herein. This Agreement supersedes all prior agreements and understandings between the Parties with

respect to such subject matter.

SECTION 5 -- AMENDMENT

To the fullest extent provided by applicable Law, this Agreement may only be amended, modified, and supplemented by mutual consent of the Parties hereto with respect to any of the terms contained herein, in such manner as may be agreed upon in writing by such Parties.

SECTION 6 -- SEVERABILITY

If any provision of this Agreement is terminated or held by a court of competent jurisdiction to be invalid, illegal, or unenforceable, the remainder of this Agreement will remain in full force and effect.

SECTION 7 -- SUCCESSORS AND ASSIGNS

This Agreement shall inure to the benefit of and be binding on the Parties and their respective heirs, executors, administrators, successors, and assigns.

SECTION 8 -- COUNTERPARTS & FACSIMILES

This Agreement may be executed by the Parties hereto in any number of separate counterparts, each of which when so executed and delivered shall be an original, but all such counterparts together shall constitute but one and the same instrument. Signed counterparts of this Agreement may be delivered by facsimile or electronically transmitted image, and such facsimile or electronically transmitted image counterparts and signatures shall be deemed to be, and fully effective and enforceable as, originals for all purposes.

SECTION 9 -- CHOICE OF LAW

This Agreement shall be governed by and construed in accordance with the internal laws of the State of West Virginia, without giving effect to any choice or conflict of law provision or rule that would cause the application of laws of any jurisdiction other than those of the State of West Virginia.

[remainder of page intentionally blank – signature page follows]

IN WITNESS WHEREOF, the Parties hereto have executed this Nullification Agreement, intending it effective the day and year first above written.

CITY OF CHARLES TOWN

_____

Robert M. Trainor
Mayor

Attest:

_____

John C. Barkley
City Clerk

STATE OF WEST VIRGINIA;
COUNTY OF BERKELEY, to-wit:

The foregoing instrument was acknowledged before me this _____ day of _____, 20___, by Robert M. Trainor, in his capacity as Mayor of the City of Charles Town, a West Virginia municipal corporation.

(AFFIX NOTARIAL SEAL)

_____

NOTARY PUBLIC

My commission expires: _____.

_____
ROSCOE A. HAYES

STATE OF WEST VIRGINIA;
COUNTY OF BERKELEY, to-wit:

The foregoing instrument was acknowledged before me this _____ day of _____, 20___, by Roscoe A. Hayes.

(AFFIX NOTARIAL SEAL)

_____
NOTARY PUBLIC

My commission expires: _____.

_____
ALICE M. SPICKLER, Co-Trustee

_____
DONALD L. SPICKLER, Co-Trustee

STATE OF WEST VIRGINIA;
COUNTY OF BERKELEY, to-wit:

The foregoing instrument was acknowledged before me this _____ day of _____, 20___, by Alice M. Spickler and Donald L. Spickler, Co-Trustees of the Alice M. Spickler Living Trust.

(AFFIX NOTARIAL SEAL)

_____
NOTARY PUBLIC

My commission expires: _____.

_____
JOSEPH R. GALLO

STATE OF WEST VIRGINIA;
COUNTY OF BERKELEY, to-wit:

The foregoing instrument was acknowledged before me this _____ day of , 20___, by Joseph R. Gallo.

(AFFIX NOTARIAL SEAL)

_____
NOTARY PUBLIC

My commission expires: _____.

This document was prepared by Michael J. Funk, Esq., Steptoe & Johnson PLLC, 1250 Edwin Miller Blvd., Martinsburg, WV, 25404.

Planning Commission
101 East Washington Street
Charles Town, WV 25414

Meeting: 09/25/23
Department: Planning Commission
Category: Report
Initiator:

SCHEDULED

AGENDA ITEM (ID #)

Public Hearing: WV2023-07: Waiver Request by Joan and Joe's Coffee

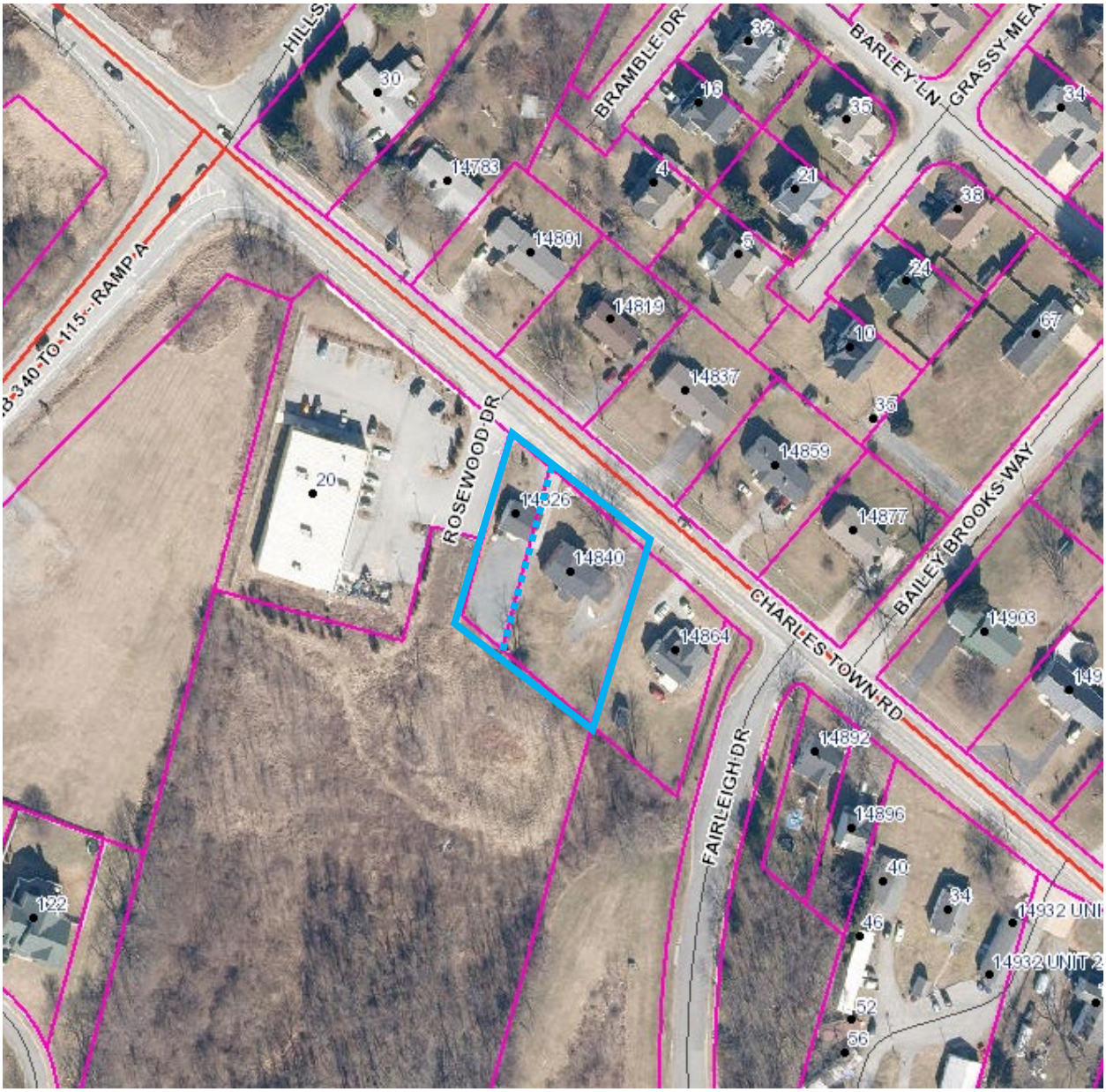
ATTACHMENTS:

- 1. Staff Report.pdf
- 2. Application.pdf
- 3. Plans.pdf

Waiver Request

WV2023-07

Date: For the September 23, 2023 Planning Commission meeting
Applicant: Joan and Joe's Coffee
Property Owner: VERITAS PROPERTIES LLC
Report by: James Newman, City Planner, Zoning/Subdivision Administrator.
Proposal: Development of a parking lot
Property Location: 14826 & 14840 Charles Town Road/ Tax District 3, Map 12, Parcel 12.0001 & Tax District 2, Map 17, Parcel 12.0003



REQUEST

The applicant is seeking to develop a parking lot and access drive on the property as an improvement over the existing lot and access drive.

PROPOSED WAIVER

Per the applicant, the project involves:

"Construction of a upgraded parking area, widening of the exit, and two stormwater management areas. New parking area will accommodate 21 available parking spaces with two of those being ADA van accessible spaces. Widening of the exit for the required minimum for 1-way traffic.

This wavier request is being made to remove the requirement of a sidewalk along the front of this property at this time. Also, this request is being made to remove the requirement of curbs and gutters to be used in parking areas."

CODE REQUIREMENTS

1. Section 1333.09 *Sidewalks* (Applicable regulations listed below)

   A. Sidewalks and on-street parking shall be provided in accordance with the requirements specified in Table 1333.09.

   B. Sidewalks shall be constructed of concrete. The minimum width shall be five (5) feet with weakened plane traverse joints at four (4) foot intervals, and no more than forty (40) feet between expansion joints. Concrete shall have a minimum depth of four (4) inches, and have a minimum PSI of 3,500.

   F. Sidewalks and curbs shall be separated by at least six (6) feet. This shall be measured from the back of curb to the closest edge of the sidewalk

Table 1333.09 – Sidewalk and Parking Requirements

Land Use	Average Lot Size	Density du/acre	Sidewalk Requirement Street Frontage	On-street Parking Requirement
Residential	> 30,000 ft²	1.46 or more	None	None
Residential	15,001 ft² – 30,000 ft²	2.90 – 1.45	One side of Street	One side of Street
Residential	12,001 – 15,000 ft²	3 – 5.5	Both sides of Street	Both sides of Street
Residential	< 12,001 ft²	> 5.51	Both sides	Both sides
Commercial	N/A	N/A	Yes	Yes

2. Section 1333.23 *Parking and Loading Standards* (Applicable regulations listed below)

   C.2. Curb and gutter is required for parking areas in the City of Charles Town. Curbing shall be in compliance with the standard details of the City of Charles Town for curb (See Standard Detail CG-1, CG-1R, CG-2). To encourage Low Impact Design principles, the Planning Commission may allow alternative curb types, or no curb, in areas of a Subdivision/Land Development determined acceptable.

The City's Engineer and Subdivision Administrator shall provide a recommendation to the Planning Commission on the proposed alternative. Reduction of curbs and gutters shall be for the benefit of Low Impact Design principles and not solely to eliminate the cost associated with curb and
gutter.

LOW IMPACT DESIGN

Subdivision Ordinance *Article 1336-Definitions*

LOW IMPACT DESIGN (LID) – A stormwater management method that is modeled after nature. LID treats Stormwater close to where it falls, which makes LID designs unique to each site.

WAIVER CRITERIA

Section 1331.12.B covers waivers, and states:

1. *Adjustments that may be made to the requirements of this Ordinance to unusual site conditions in order to achieve a better design. Waivers may not be used to circumvent the process requirements of this Ordinance. The Planning Commission shall have the authority to grant a waiver to allow a modification, change, or an alternative solution to a requirement of this Ordinance. Please note that economic hardship along is not sufficient reason to grant an exception from the requirements.*

2. *Waivers from the minimum standards in this Ordinance may be granted by the Planning Commission only when the Planning Commission finds that granting a waiver will be consistent with all of the following criteria and the exception is the minimum necessary to afford relief.* (see *Waiver Criteria Review* section below)

WAIVER CRITERIA REVIEW

While the request does not meet the 'unusual site conditions' under subsection 1 above, it is fairly debatable as to whether or not it meets the requirements of subsection 2, outlined here:

a. *That the design of the project will provide public benefit such as a reduction in City maintenance cost, greater open space, parkland consistent with the City parks plan, or benefits of a similar nature;*

Per the applicant: "*The proposed project is in the General Commercial district. The neighboring residential parcels to the southeast do not have sidewalks on their frontages. The design for this will provide a reduction in cost for city maintenance of sidewalk. This sidewalk would also require a dip or underdrain in which the dip would create a potential icing condition in winter. In absence of curb and gutter the project will provide better impervious disconnection to rain gardens.*"

Sidewalks: While the City does not have to maintain a sidewalk that doesn't exist, the minimal cost of maintaining that sidewalk is outweighed by the pedestrian quality-of-life and safety that would be enhanced by having a sidewalk in place. Having the sidewalk is of more benefit to the City as opposed to not having it. The Dollar General site adjacent to these properties has a sidewalk, and would be able to tie into this site's sidewalk.

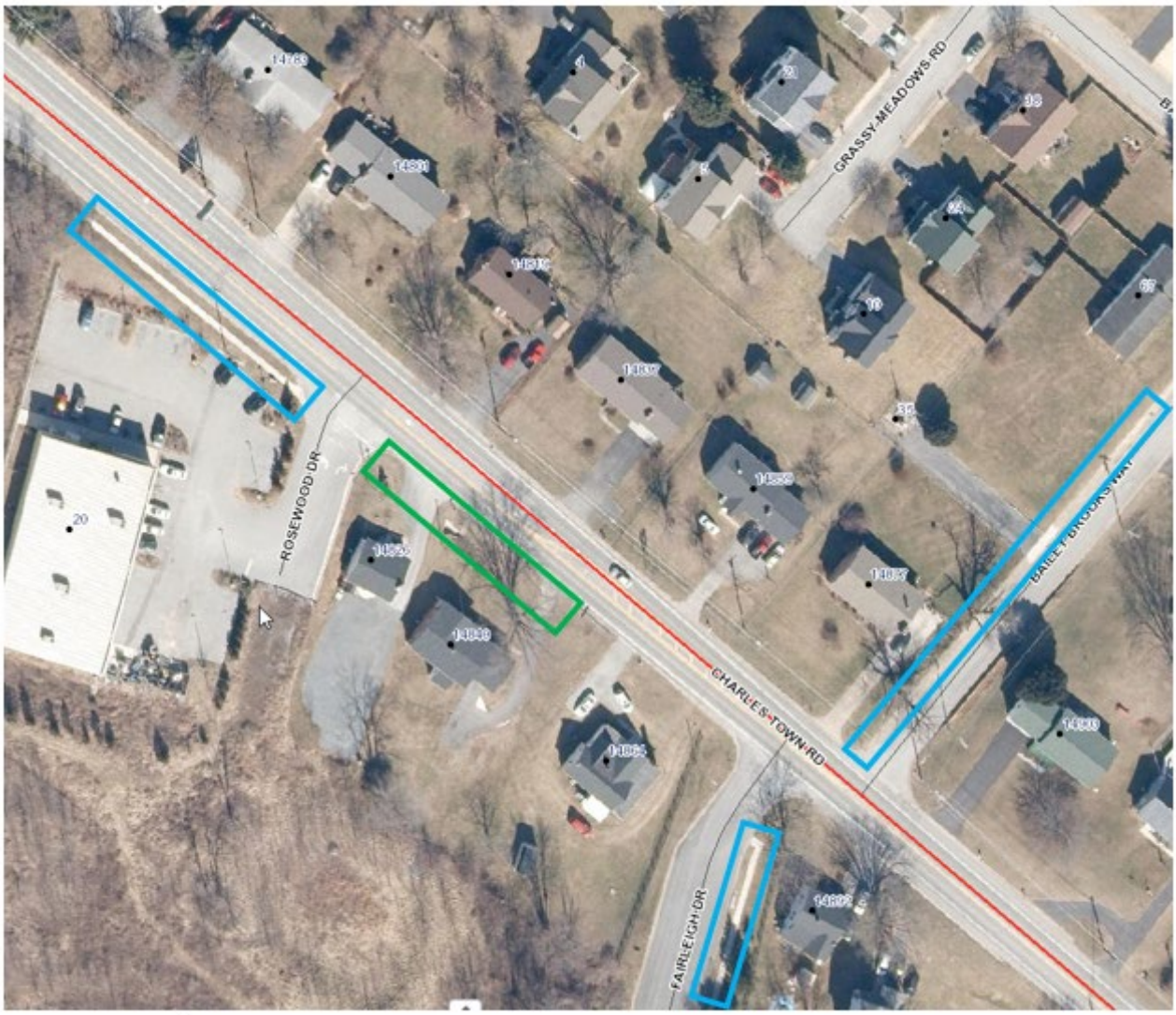
Curb and Gutter: The application is neutral on this matter.

b. *The waiver, if granted, will not adversely affect the public health, safety or welfare, or the rights of adjacent property owners or residents;*

Per the applicant: "*The granting of this wavier will not adversely affect public health, safety, welfare, or rights of adjacent property owners & residents since there is no other sidewalks on the frontages of residential areas to the southeast. There is currently no curb and gutter in these existing parking areas.*"

Sidewalks: However, the project would leave a sidewalk gap between three existing sidewalk gaps, and the lack of a sidewalk will continue to endanger pedestrians walking to this establishment or proceeding to Dollar General.

The image below shows existing sidewalks highlighted in Blue, and the required sidewalk location for this project in Green. By constructing this sidewalk, additional access is provided for pedestrians, and the neighborhood becomes closer to a more integrated sidewalk network.



Curb and Gutter: Per the City's 3rd party engineering firm Kimley-Horn, "*their plan and the storm runoff is handled through a series of BMP devices on site which will mitigate runoff*". Approval of the waiver will not adversely affect public welfare or adjacent property owners.

c. *That the waiver, if granted, will be in keeping with the intent and purpose of this Ordinance;*

Per the applicant: "*The granting of this wavier maintains more open space and encourages impervious disconnection to the rain gardens. This is noted in the ordinance and BMP manual, and thus maintaining the intent of the ordinance to minimize impervious surfaces.*"

Sidewalks: The Subdivision Ordinance is designed "*for the improvement of the health, safety, comfort, morals, and general public welfare of Charles Town citizens*". The construction of the sidewalks will enhance pedestrian safety, and therefore improve the safety, comfort, and general welfare of City residents.

Curb and Gutter: Kimley-Horn has reviewed this application and has no issues with their proposed stormwater management practices, which takes into account the lack of curb and gutter. Approval of this waiver will not harm public welfare.

d. *That the waiver, if granted, will result in a project of better quality and/or character. No process or procedural waivers will be granted.*

Per the applicant: **"***The granting of this wavier will provide more area for open space and will match characteristics of the adjacent properties to the southeast***"**

Sidewalks: Lack of sidewalks will result in a worse project, due to absence of pedestrian friendly access and connectivity to neighboring sidewalks.

Curb and Gutter: The design of the project is such that stormwater can be mitigated without requiring curb and gutter to direct water.

CONCLUSION

The applicant has requested two waivers, one from sidewalk requirements and the other from parking lot curb and gutter requirements. The request for a waiver form sidewalk requirements does not meet criteria for approval, the curb and gutter waiver does meet criteria for approval.

RECOMMENDATION

Sidewalk waiver request: **Denial**.

Parking lot curb and gutter waiver request: **Approval**.

Waiver Application No._____

WAIVER APPLICATION

SUBDIVISION AND LAND DEVELOPMENT ORDINANCE
SECTION 1331.12, (V) REQUIREMENTS

To assist staff in the review of a waiver application to the Planning Commission (PC), the applicant must supply all of the information contained in this application form. This application must be signed by all owners of the real estate which is the subject of the application. The owners may designate one or more professional agents to represent them in the application process using the spaces provided on this form.

Incomplete applications will be subject to scheduling delay. Applicants are encouraged to meet with staff prior to filing. A public hearing will be scheduled within 45 days of the receipt of a completed application.

Approval of a waiver by the Planning Commission does not relieve the applicant from other requirements including, but not limited to, signs(s), building, zoning and use permits or site plans.

As part of this application, the following must be provided:

1. $150.00 Application Fee.
2. A Completed Application.
3. As applicable, supporting documents included, but not limited to site plan or depiction of the requested Waiver.

It is the applicant's responsibility to make a good-faith effort to provide the Subdivision Administrator, as applicable, with a current list containing the accurate names and mailing addresses of all interested parties. For purposes of this provision, "interested parties" shall mean Landowners of Adjacent Property. The applicant shall provide the addresses in order to comply with Section 1331.12.B of the Subdivision Ordinance

Document Ref: MU2A8-WFX6W-6FB5K-UREFH

Legal Notices

The following shall occur at least 15 days prior to the Public Hearing: notice of the hearing shall be advertised by the Planning Commission as a Class I legal advertisement in the local newspaper, posting of a sign upon the property, and letters to adjacent and confronting land owners within 100 feet of the subject property.

Definition of a Waiver

Adjustments that may be made to the requirements of this Ordinance to unusual site conditions in order to achieve a better design. Waivers may not be used to circumvent the process requirements of this Ordinance.

The Charles Town Subdivision Ordinance

To grant a Waiver as permitted in the Subdivision Ordinance, the Planning Commission makes findings as specified in Section 1331.12(B)(2).

In order to issue a Waiver, the Commission must make the following written findings regarding the Waiver sought and all of the following can be met:

A waiver request may be granted by the Planning Commission only when it shall be determined that:

1. That the design of the project will provide public benefit such as a reduction in City maintenance cost, greater open space, parkland consistent with the City parks plan, or benefits of a similar nature;

2. The waiver, if granted, will not adversely affect the public health, safety or welfare, or the rights of adjacent property owners or residents;

3. That the waiver, if granted, will be in keeping with the intent and purpose of this Ordinance; and

4. That the waiver, if granted, will result in a project of better quality and/or character.

Note:

Additional exhibits may be required by the Subdivision Administrator or Planning Commission such as a lot location survey or site plan showing existing and proposed Structures, easements, watercourses, curb cuts and description of the uses of adjacent property that are necessary to describe existing or proposed conditions.

1. DATE August 15th, 20 23

2. APPLICANT'S NAME* Robert Mead

Address: 14826 Charles Town Road, Charles Town WV 25414

Telephone Number (681) 252-1033 Fax Number ( )

Email Address rmead@onedigital.com

3. PROPERTY OWNER'S NAME

Address:

Telephone Number ( ) Fax Number ( )

Email Address

4. LEGAL DESCRIPTION OF THE SUBJECT PROPERTY (list all parcels that apply)

Property Address: 14840 Charles Town Road, Charles Town WV 25414

Tax Map # and Parcel: Tax Map 17 Parcel 12.3, Tax Map 12 Parcel 12.1

Deed Book and Page #: Deed Book 1275 Page 458, Deed Book 1255 Page 466

Property Area in Square Feet or Acres: 0.53 Acres

5. DESCRIPTION OF THE EXISTING (OR FORMER) USE(S) OF THE PROPERTY AND CURRENT ZONING:

Currently Zoned in General Commercial (GC).

Existing use as a coffee shop and residential serviced by public water and sewer.

6. DESCRIPTION OF PROJECT AND PROPOSED USE(S) OF THE PROPERTY:

This project includes the construction of a upgraded parking area, widening of the exit, and two proposed

stormwater management areas. The coffee shop will continue to be serviced by public water and sewer.

*Applicants include: Property owner(s), Engineer(s), Surveyor(s), or Consultant(s)

7. DESCRIPTION OF ANY PROPOSED WORK TO BE DONE TO THE PROPERTY:

Construction of a upgraded parking area, widening of the exit, and two stormwater management areas.

New parking area will accommodate 21 available parking spaces with two of those being ADA van accessible

spaces. Widening of the exit for the required minimum for 1-way traffic.

8. DESCRIPTION OF THE WAIVER REQUEST:

This wavier request is being made to remove the requirement of a sidewalk along the front of this property at

this time. Also, this request is being made to remove the requirement of curbs and gutters to be used in parking

areas.

9. LIST THE APPLICABLE SECTION(S) OF THE SUBDIVISION ORDINANCE FROM WHICH THE WAIVER IS REQUESTED:

Section 1333.09 "Sidewalk & On-Street Parking Design Standards"

Section 1333.23.C.2. "Curb and Gutter"

10. JUSTIFICATION FOR THE REQUEST:

A) Explain how the design of the project will provide public benefit such as a reduction in City maintenance costs, greater open space, parkland consistent with the City Parks Plan or benefits of a similar nature;

The proposed project is in the General Commercial district. The neighboring residental parcels to the southeast

do not have sidewalks on their frontages. The design for this will provide a reduction in cost for city maintenance of sidewalk. This sidewalk would also require a dip or underdrain in which the dip would create a potential icing condition in winter. In abscence of curb and gutter the project will provide better impervious disconnection to rain gardens.

B) Explain how the waiver, if granted, will not adversely affect the public health, safety, welfare or the rights of adjacent property owners or residents;

The granting of this wavier will not adversely affect public health, safety, welfare, or rights of adjacent property

owners & residents since there is no other sidewalks on the frontages of residential areas to the southeast.

There is currenly no curb and gutter in these existing parking areas.

C) Explain how the waiver, if granted, will be in keeping with the intent and purpose of this Ordinance; and;

The granting of this wavier maintains more open space and encourages impervious disconnection to the rain gardens. This is noted in the ordinance and BMP manual, and thus maintaining the intent of the ordinance to minimize impervious surfaces.

D) Explain how the waiver, if granted, will result in a project of better quality and/or character.

The granting of this wavier will provide more area for open space and will match charcteristics of the adjacent properties to the southeast.

11. INTERESTED PARTY ADDRESSES, FOR PUBLIC NOTICE (including across street) (Interested parties are defined as adjacent properties within 100 feet).

Owner	# and Street	City, State, Zip
DGCT LLC. (Dollar General)	Charles Town Road	Edmond, OK, 730136159
Megan C. Curfman	14864 Charles Town Road	Charles Town, WV, 25414
Lyle E. & Delores O. Wilt	14801 Charles Town Road	Charles Town, WV, 25414
Laurence W. Jr. & Nancy F. Lloyd	14819 Charles Town Road	Charles Town, WV, 25414
June M. & Keith M. Ott	14837 Charles Town Road	Charles Town, WV, 25414
Joseph M. & Sandra J. Ott	14859 Charles Town Road	Charles Town, WV, 25414
Maxine E. Shadrach	PO Box 519	Charles Town, WV, 25414
Peach Tree Investments LLC	36 Bakerton Road	Harpers Ferry, WV, 25425

12. PARCEL HISTORY (List all pending or previously approved applications on the subject parcels inventoried above, including previous site plan applications if this application is a site plan amendment)

Application No.	Project Name and Phase	Status	Approval Date

13. HAS THE PROPERTY BEEN THE SUBJECT OF ANY COURT ACTION?

☐ Yes (Please specify nature of all proceedings and current status and attach any documents showing court decisions, etc.)

_____

_____

_____

_____

_____

☒ No

APPLICANT CERTIFICATION

I certify that, to the best of my knowledge, the submitted information and statements are true and correct. I also certify that I have received and read Section 1331.12 of the Charles Town S/LD Ordinance and relevant provisions of the Charles Town City Code.

Signature of Applicant

Robert Mead _____ Date 08 / 15 / 2023

Signature of Property Owner (If different than Applicant)

_____ Date _____

Please submit an original completed Application and specified number of Site Plan copies to the following:

Subdivision Administrator
City of Charles Town
101 E. Washington Street
Charles Town, WV 25414

FOR CITY USE ONLY

Application Number:_____ Date Application Received:_____

Fee: $_____ Paid:$_____ Check No._____

Receipt No._____

Subdivision Administrator Approval:_____ Date:_____

Planning Commission Approval:_____ Date:_____

Comments/Conditions:_____

_____

_____

_____

_____

_____

Signature Certificate

Reference number: MU2A8-WFX6W-6FB5K-UREFH

Signer	Timestamp	Signature
Robert Mead Email: rmead@onedigital.com Shared via link		
Sent:	15 Aug 2023 20:06:45 UTC	
Viewed:	15 Aug 2023 20:10:36 UTC	IP address: 71.206.41.194
Signed:	15 Aug 2023 20:26:40 UTC	Location: Harpers Ferry, United States

Document completed by all parties on:
15 Aug 2023 20:26:40 UTC

Page 1 of 1

Signed with PandaDoc

PandaDoc is a document workflow and certified eSignature solution trusted by 40,000+ companies worldwide.

SITE PLAN FOR

JOAN AND JOE'S COFFEE

CHARLES TOWN, JEFFERSON COUNTY
WEST VIRGINIA
TAX MAP 17 PARCEL 12.3
DEED BOOK 1275 PG 458

OWNER/DEVELOPER
ROBERT MEAD
14826 CHARLES TOWN ROAD
CHARLES TOWN, WV 25414, 681-252-1033

ENGINEER/SURVEYOR
JHA COMPANIES
362 W BURR BLVD.
SUITE 3
KEARNEYSVILLE, WV 25430

SITE DATA

TOTAL SITE AREA:	0.53 ACRES
EXISTING LAND USE:	COFFEE SHOP
ZONING:	GENERAL COMMERCIAL
WATER SUPPLY:	PUBLIC WATER
SEWAGE DISPOSAL:	PUBLIC SEWER
DEED REFERENCE:	DEED BOOK 1255, PAGE 466 & DEED BOOK 1275, PAGE 458
PLAT REFERENCE:	PLAT BOOK 25, PAGE 15
TAX PARCEL REFERENCE:	TAX MAP 12 PARCEL 12.1 & TAX MAP 17 PARCEL 12.3
FLOOD PLAIN:	ENTIRELY WITHIN ZONE X

PROPOSED LOT REQUIREMENTS

ZONING:	
GENERAL COMMERCIAL	
MINIMUM LOT SIZE	N/A
MIN. WIDTH	N/A
MAX BUILDING HEIGHT	55 FEET
BUILDING SETBACKS:	
FRONT YARD	40 FEET
SIDE YARD	10 FEET
REAR YARD	30 FEET
PARKING AND ACCESS DRIVE SETBACKS:	
FRONT YARD	15 FEET
SIDE YARD	20 FEET
REAR YARD	15 FEET
BUFFERS:	
FRONT YARD	20 FEET
SIDE YARD	20 FEET
REAR YARD	20 FEET

BOUNDARY NOTE:
BOUNDARY AND TOPOGRAPHY SHOWN HEREON IS FROM FIELD SURVEYS BY ROBERTS LAND SURVEYING.

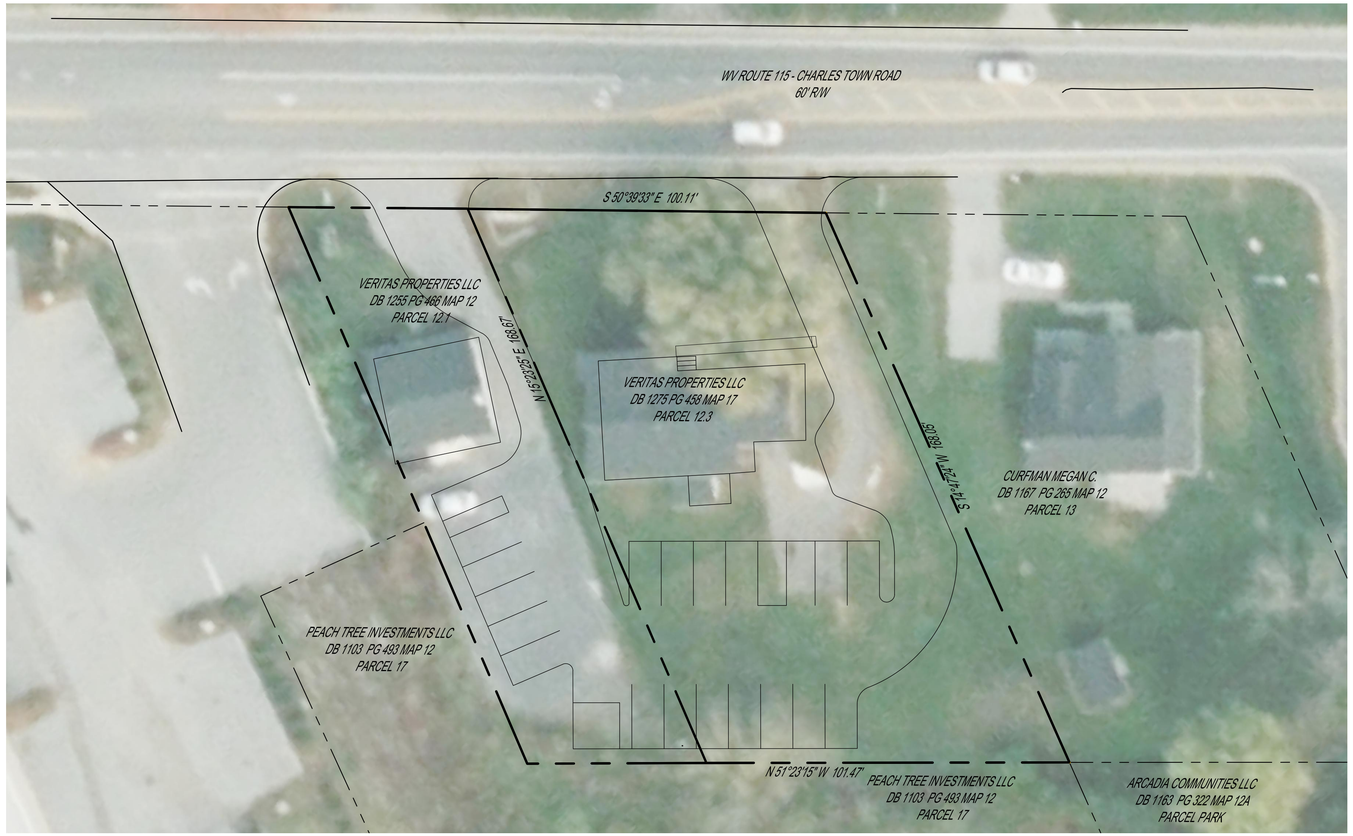
MONUMENT / MARKER NOTE:
CORNERS FOUND / SET / TO BE SET BY ROBERTS LAND SURVEYING

GENERAL NOTES:
1. NO PROPOSED ROADS, EASEMENTS, AND RIGHT-OF-WAYS.
2. THERE ARE NO FUTURE OR EXISTING EASEMENTS EXCEPT AS SHOWN.
3. PUBLIC WATER WILL BE USED TO SUPPLY THE COFFEE SHOP WITH WATER.
4. PARKING REQUIREMENTS:
   1 SPACE / 3 EVERY SEATS AVAILABLE FOR CUSTOMERS: 7 PARKING SPACES REQUIRED (21 AVAILABLE SEATS)
   TOTAL PARKING PROVIDED = 21 SPACES (INCLUDES 2 HANDICAPPED SPACES

FLOOD PLAIN
THIS SITE IS ENTIRELY LOCATED IN ZONE X - AREAS DETERMINED TO BE OUTSIDE 0.2% ANNUAL CHANCE FLOODPLAIN, AS DELINEATED ON THE NATIONAL FLOOD INSURANCE PROGRAM FLOOD INSURANCE RATE MAP COMMUNITY PANEL NUMBER 54037C0138E DATED DECEMBER 18, 2009 FOR JEFFERSON COUNTY, WEST VIRGINIA BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY.

WETLANDS
NO ACTUAL FIELD DELINEATION OF WETLANDS WAS PERFORMED ON THIS SITE, HOWEVER THERE ARE NO WETLANDS PRESENT PER THE NATIONAL WETLANDS INVENTORY MAP.

COMPUTATIONAL BREAKDOWN	
TOTAL ACRES	0.534 ACRES
OPEN SPACE	0.25 ACRES
CONSERVATION EASEMENTS OR OTHER RESTRICTIVE EASEMENTS	N/A
STORMWATER MANAGEMENT AREAS	0.39 ACRES
REMAINING ACREAGE	0.144 ACRES
TABLE OF LOT AREAS	PARCEL 12: 7,768 SF PARCEL 12.3: 15,515 SF
DENSITY	3.74 UNITS/ACRE
RIGHT-OF-WAYS & EASEMENTS	N/A



GRAPHIC SCALE: 1" = 20'
20 0 20 40

WAIVER REQUESTS / PRIOR APPROVALS			
ORDINANCE	SECTION OF ORDINANCE	DESCRIPTION OF WAVIER OR VARIANCE	DATE GRANTED
SALDO	1333.09	SIDEWALK & ON-STREET PARKING DESIGN STANDARDS	
SALDO	1333.23.C.2	CURB AND GUTTER	

THIS PLAT WAS APPROVED FOR RECORDATION BY THE CITY OF CHARLES TOWN, ON THE _____ DAY OF _____, 20_____, SUBJECT TO ANY CONDITIONS SPECIFIED HEREON.

ALL EXPENSES INCURRED WITH RESPECT TO IMPROVEMENTS FOR UTILITY SERVICES, PAVING, GRADING, LANDSCAPING, CURBS, GUTTERS, SIDEWALKS, ROAD LIGHTING, ROAD SIGNS, FLOOD PROTECTION DEVICES, DRAINAGE STRUCTURES AND ALL OTHER IMPROVEMENTS THAT MAY BE REQUIRED SHALL BE THE RESPONSIBILITY OF THE SUBDIVIDER AND NOT THE CITY.

_____ _____
SECRETARY OF THE PLANNING COMMISSION DATE

STATEMENT OF ACCURACY

THE ENGINEER AND/OR SURVEYOR, IN SIGNING THIS PLAT/PLAN, ATTESTS TO THE BEST OF HIS OR HER KNOWLEDGE, IS PLAN IS COMPLETE AND ACCURATE.

_____ 8-21-2023
ENGINEER / SURVEYOR DATE

STATEMENT OF ACCEPTANCE

THE DEVELOPER, IN SIGNING THIS PLAT, AGREES TO ABIDE BY ALL CONDITIONS, TERMS AND SPECIFICATIONS PROVIDED HEREON; AND TO COMPLETE ALL THE IMPROVEMENTS REQUIRED BY THE PRELIMINARY PLAT OR SITE PLAN

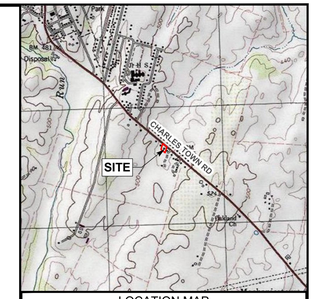
_____ _____
OWNER / DEVELOPER DATE

PLAN CERTIFICATION

THE PROFESSIONAL ENGINEER OR LAND SURVEYOR, IN SIGNING THIS PLAT REPRESENTS A SURVEY MADE BY HIM/HER; ALL MONUMENTS AND IMPROVEMENTS INDICATED THEREON ACTUALLY EXIST, AND THAT THEIR LOCATION, SIZE, AND MATERIAL ARE CORRECTLY SHOWN; HE/SHE IS FAMILIAR WITH ALL REQUIREMENTS OF THIS ORDIANACE; AND, TO HIS/HER BEST KNOWLEDGE AND BELIEF, ALL REQUIREMENTS OF THIS ORDINANCE HAVE BEEN FULLY COMPLIED THEREWITH.

_____ 8-21-2023
ENGINEER / SURVEYOR DATE

Sheet List Table	
Sheet Number	Sheet Title
C-0.01	COVER SHEET
C-1.00	EXISITING CONDITIONS PLAN
C-2.00	SITE PLAN
C-2.01	SITE DETAILS
C-3.00	STORMWATER MANAGEMENT PLAN
C-3.01	STORMWATER MANAGEMENT DETAILS
C-4.00	EROSION AND SEDIMENT CONTROL PLAN
C-4.01	EROSION AND SEDIMENT CONTROL DETAILS
C-5.00	LIGHTING PLAN



LOCATION MAP
SCALE: 1" = 2000'

NO.	DATE	DESCRIPTION	INT.
0	2023-07-07	FOR SUBMISSION	DMJ
1	2023-08-15	PER CITY ENGINEER COMMENTS	DMJ

CALL BEFORE YOU DIG!
WEST VIRGINIA LAW REQUIRES:
3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE
AND
10 WORKING DAYS IN DESIGN STATE
– STOP CALL
West Virginia One Call System, Inc
WEST VIRGINIA 811
CALL BEFORE YOU DIG! Dial 811 or 800.245.4848
www.WV811.com
SERIAL NO.

SEAL

JOSEPH J. HARRIS
REGISTERED
18809
STATE OF WEST VIRGINIA
PROFESSIONAL ENGINEER

JHA Companies
ENGINEERS
SURVEYORS
ENVIRONMENTAL
GIS MAPPING
www.jhacompanies.com
844-542-4757
362 W. BURR BLVD. STE 3
KEARNEYSVILLE, WV 25430
PA • OH • NY • WV • VA • MD

PROJECT ID: 2022-1685	DRAWN: DMJ
DATE: 2023-07-07	DESIGN: JAB
SCALE: NOTED	CHECKED: JDH

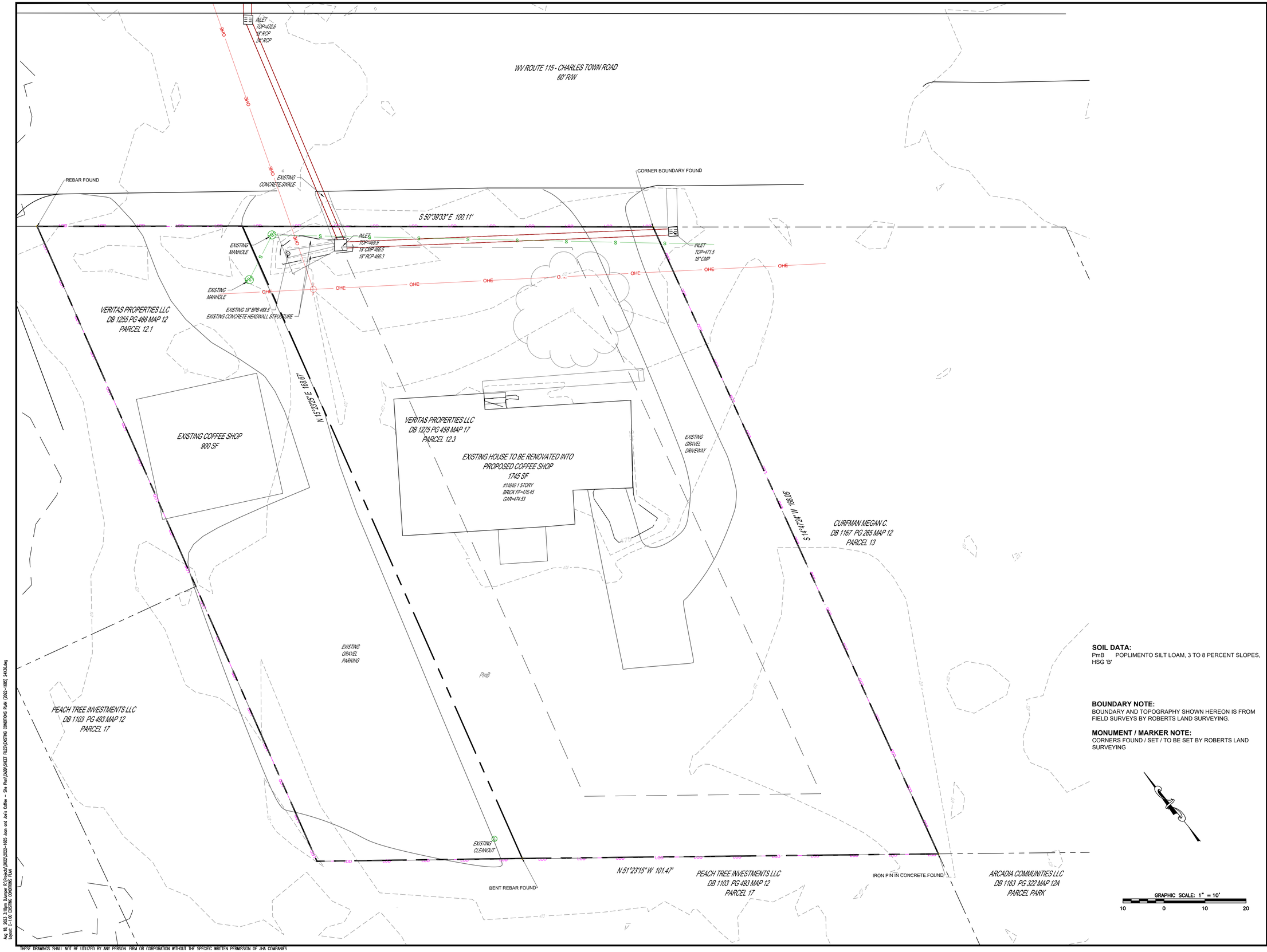
SITE PLAN
FOR
JOAN AND JOE'S COFFEE
LOCATED IN
CHARLES TOWN,
JEFFERSON COUNTY,
WEST VIRGINIA

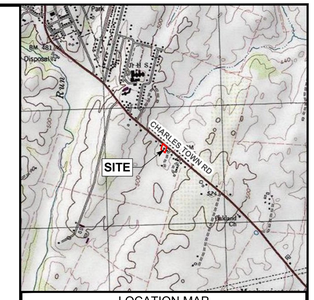
TITLE:
COVER SHEET

PLAN STATUS:	SHEET NO.
SITE PLAN	C-0.01

THESE DRAWINGS SHALL NOT BE UTILIZED BY ANY PERSON, FIRM OR CORPORATION WITHOUT THE SPECIFIC, WRITTEN PERMISSION OF JHA COMPANIES

Aug 18, 2023 3:18pm DJulmer R:\Projects\2022\2022-1685 Joan and Joe's Coffee – Site Plan\CAD\SHEET FILES\COVER SHEET (2022-1685).dwg
Layout: C-0.01 COVER SHEET





LOCATION MAP
SCALE: 1" = 2000'

NO.	DATE	DESCRIPTION	INT.
0	2023-07-07	FOR SUBMISSION	DMJ
1	2023-08-15	PER CITY ENGINEER COMMENTS	DMJ

CALL BEFORE YOU DIG!

WEST VIRGINIA LAW REQUIRES:
3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE
AND
10 WORKING DAYS IN DESIGN STATE
– STOP CALL
West Virginia One Call System, Inc

WEST VIRGINIA 811
CALL BEFORE YOU DIG! Dial 811 or 800.245.4848
www.WV811.com

SERIAL NO.

SOIL DATA:
PmB POPLIMENTO SILT LOAM, 3 TO 8 PERCENT SLOPES, HSG 'B'

BOUNDARY NOTE:
BOUNDARY AND TOPOGRAPHY SHOWN HEREON IS FROM FIELD SURVEYS BY ROBERTS LAND SURVEYING.

MONUMENT / MARKER NOTE:
CORNERS FOUND / SET / TO BE SET BY ROBERTS LAND SURVEYING

SEAL

JOSEPH H. J. HAWK II
REGISTERED
18809
STATE OF
WEST VIRGINIA
PROFESSIONAL ENGINEER

JHA Companies
ENGINEERS
SURVEYORS
ENVIRONMENTAL
GIS MAPPING
www.jhacompanies.com
844-542-4757
362 W. BURR BLVD. STE 3
KEARNEYSVILLE, WV 25430
PA • OH • NY • WV • VA • MD

PROJECT ID:	DRAWN:
2022-1685	DMJ
DATE:	DESIGN:
2023-07-07	JAB
SCALE:	CHECKED:
NOTED	JDH

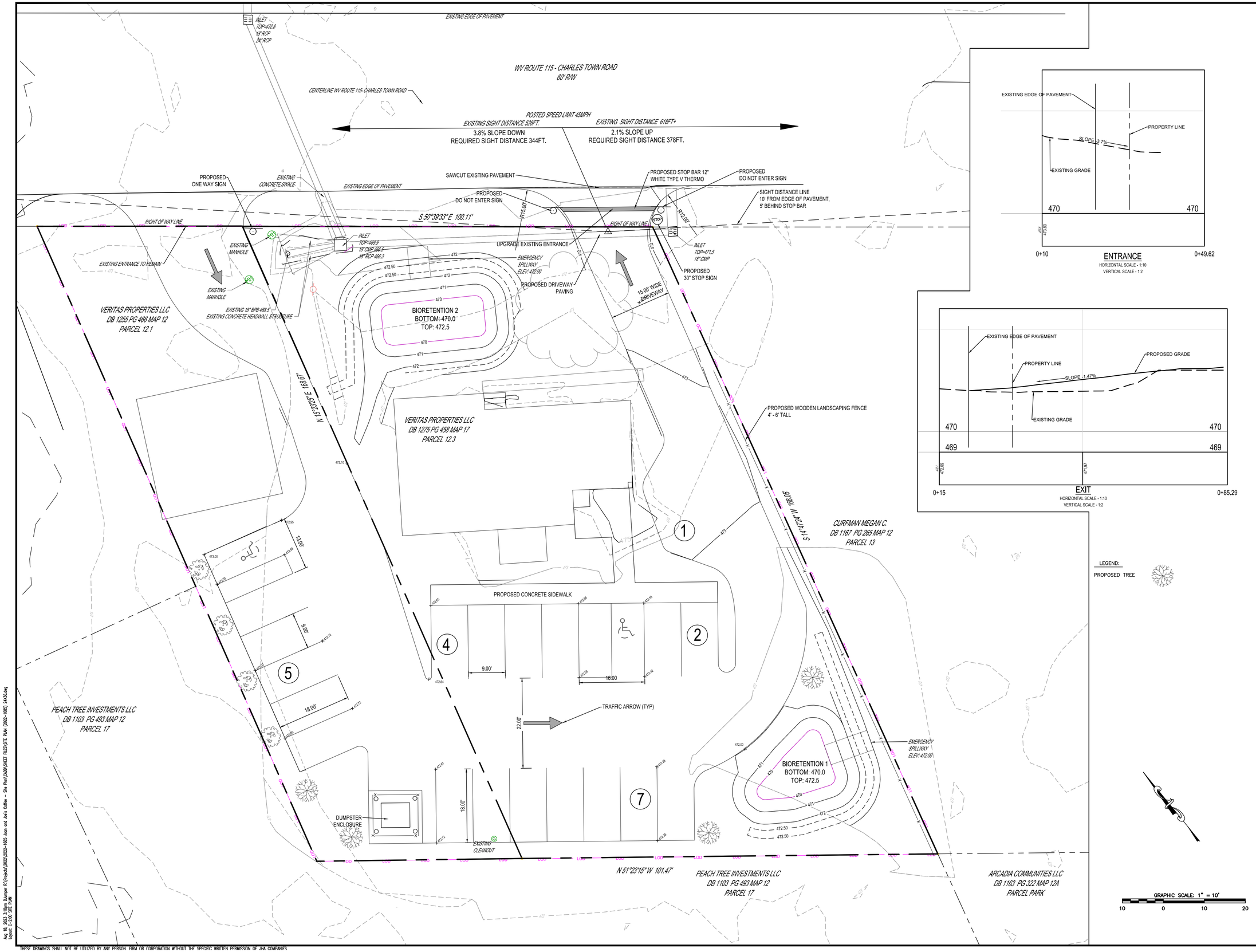
SITE PLAN
FOR
JOAN AND JOE'S COFFEE
LOCATED IN
CHARLES TOWN,
JEFFERSON COUNTY,
WEST VIRGINIA

TITLE:
EXISITING CONDITIONS PLAN

PLAN STATUS:	SHEET NO.
SITE PLAN	C-1.00

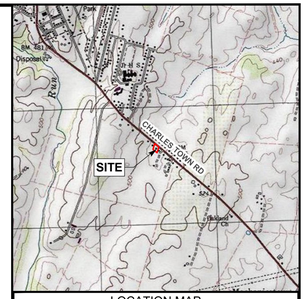
Aug 18, 2023, 3:18pm Dlampar (I:\Projects\2022\2022-1685 Joan and Joe's Coffee – Site Plan\CAD\SHEET FILES\EXISTING CONDITIONS PLAN (2022-1685) 24X36.dwg
Layout: C-1.00 EXISTING CONDITIONS PLAN

THESE DRAWINGS SHALL NOT BE UTILIZED BY ANY PERSON FIRM OR CORPORATION WITHOUT THE SPECIFIC WRITTEN PERMISSION OF JHA COMPANIES



ENTRANCE
HORIZONTAL SCALE - 1:10
VERTICAL SCALE - 1:2

EXIT
HORIZONTAL SCALE - 1:10
VERTICAL SCALE - 1:2



LOCATION MAP
SCALE: 1" = 2000'

NO.	DATE	DESCRIPTION	INT.
0	2023-07-07	FOR SUBMISSION	DMJ
1	2023-08-15	PER CITY ENGINEER COMMENTS	DMJ

CALL BEFORE YOU DIG!

WEST VIRGINIA LAW REQUIRES:
3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE
AND
10 WORKING DAYS IN DESIGN STATE
– STOP CALL
West Virginia One Call System, Inc

WEST VIRGINIA 811
CALL BEFORE YOU DIG! Dial 811 or 800.245.4848
www.WV811.com

SERIAL NO.

SEAL

JOSEPH J. DEWEY
REGISTERED
19809
STATE OF WEST VIRGINIA
PROFESSIONAL ENGINEER

JHA Companies
ENGINEERS
SURVEYORS
ENVIRONMENTAL
GIS MAPPING
www.jhacompanies.com
844-542-4757
362 W. BURR BLVD. STE 3
KEARNEYSVILLE, WV 25430
PA • OH • NY • WV • VA • MD

PROJECT ID:	DRAWN:
2022-1685	DMJ
DATE:	DESIGN:
2023-07-07	JAB
SCALE:	CHECKED:
NOTED	JDH

SITE PLAN
FOR
JOAN AND JOE'S COFFEE
LOCATED IN
CHARLES TOWN,
JEFFERSON COUNTY,
WEST VIRGINIA

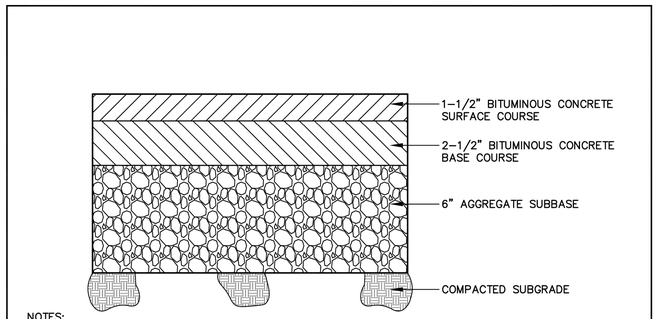
TITLE:
SITE PLAN

PLAN STATUS:
SITE PLAN

SHEET NO.
C-2.00

Aug 18, 2023, 3:18pm, DJumper, R:\Projects\2022\2022-1685 Joon and Joe's Coffee – Site Plan\CAD\SHEET FILES\SITE PLAN (2022-1685) 24X36.dwg
Layout: C-2.00 SITE PLAN

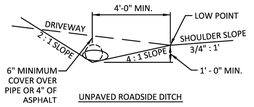
THESE DRAWINGS SHALL NOT BE UTILIZED BY ANY PERSON, FIRM OR CORPORATION WITHOUT THE SPECIFIC WRITTEN PERMISSION OF JHA COMPANIES



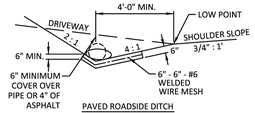
NOTES:

1. ALL BASE AND SUBGRADE MATERIAL SHALL BE COMPACTED TO 95% THEORETICAL MAXIMUM DENSITY AS DETERMINED BY AASHTO T-99 METHOD A, WITHIN A ±2% OF OPTIMUM MOISTURE.

	STANDARD DETAIL	STANDARD NUMBER
	TYPICAL DRIVEWAY/PARKING PAVING SECTION	K-1

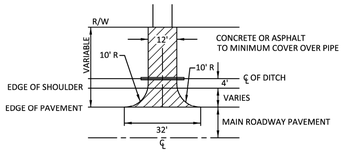


UNPAVED ROADSIDE DITCH



PAVED ROADSIDE DITCH

A PAVED DITCH IS REQUIRED WHERE SOIL CONDITIONS AND RUNOFF VELOCITIES WILL CAUSE EROSION.

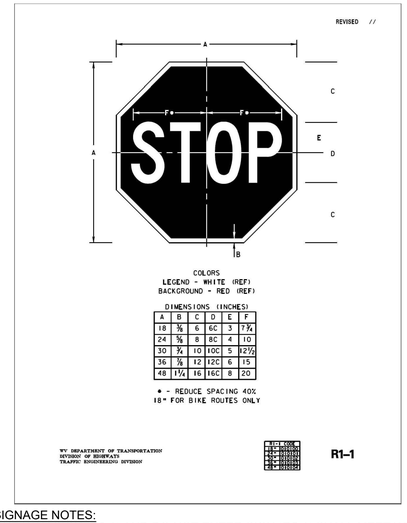


NOTES:

1. ALL CULVERTS SHALL BE SIZED IN ACCORDANCE WITH THE WVDOH DRAINAGE MANUAL - CURRENT EDITION.
2. DRIVEWAYS SHALL BE SURFACED FROM THE EDGE OF PAVEMENT TO THE PROPERTY LINE WITH THE SAME TYPE OF SURFACING USED ON THE STREET.
3. ALL DRIVEWAY GRADES SHALL START BACK OF THE SHOULDER LINE.
4. IN CUT SECTIONS, SIDES OF THE DRIVEWAY SHALL BE GRADED TO A MAXIMUM 3:1 SLOPE.
5. THE DITCH LINE MAY BE MOVED BACK TO PROVIDE REQUIRED COVER. THE TRANSITION OF THE DITCH LINE SHALL BE SMOOTH WITH A MINIMUM TRANSITION LENGTH OF 10 FEET.

NOT TO SCALE

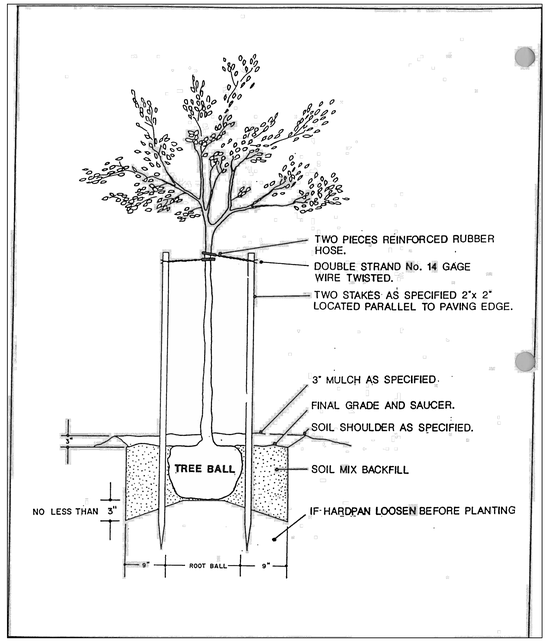
	DRIVEWAY ENTRANCE WITH NO CURB AND GUTTER City of Charles Town	DE-1



A	B	C	D	E	F
18	7/8	6	6C	3	7 7/8
24	1 1/8	8	8C	4	10
30	1 3/4	10	10C	5	12 1/2
36	2 1/8	12	12C	6	15
48	2 7/8	16	16C	8	20

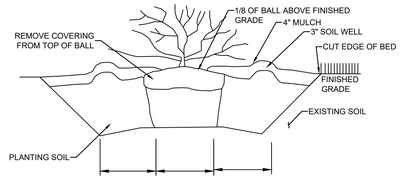
* - REDUCE SPACING 40% IB* FOR BIKE ROUTES ONLY

SIGNAGE NOTES:
ONE WAY SIGN (R6-1) AND DO NOT ENTER SIGN (R5-1) SHALL MEET WVDOH REQUIREMENTS.



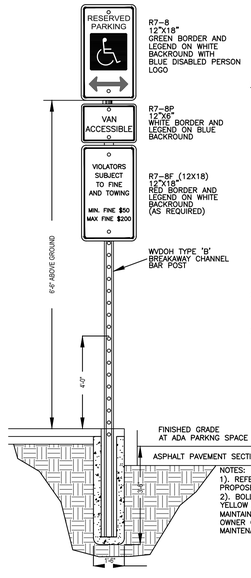
TREE PLANTING DETAIL

NOT TO SCALE
NOT FOR USE IN R.O.W.



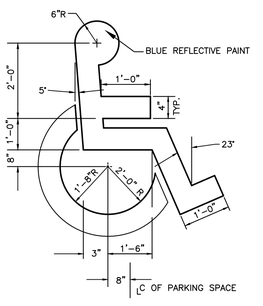
SHRUB/PERENNIAL PLANTING DETAIL

NOT TO SCALE
NOT FOR USE IN R.O.W.



HANDICAP PARKING SIGN DETAIL

NOT TO SCALE
NOT FOR USE IN R.O.W.

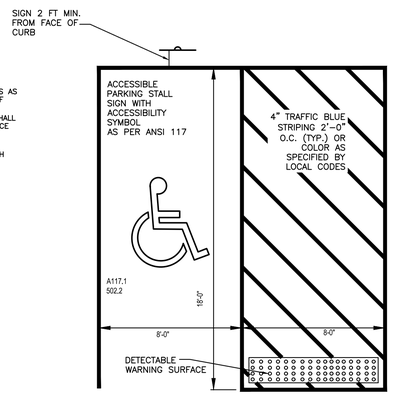


INTERNATIONAL HANDICAP SYMBOL

NOT TO SCALE
NOT FOR USE IN R.O.W.

ANSI 117.1 REQUIREMENTS--ACCESSIBLE PARKING SPACES AND PASSENGER LOADINGS ZONES

1. SIGNAGE: ACCESSIBLE PARKING SPACES SHALL BE DESIGNATED AS RESERVED BY A SIGN SHOWING THE SYMBOL OF ACCESSIBILITY. VAN ACCESSIBLE SPACES SHALL HAVE AN ADDITIONAL SIGN "VAN-ACCESSIBLE" MOUNTED BELOW THE SYMBOL OF ACCESSIBILITY. SUCH SIGNS SHALL BE LOCATED SO THEY CONNOT BE OBSCURED BY A VEHICLE IN THE SPACE.
2. ACCESSIBLE PARKING SPACES SERVING A PARTICULAR BUILDING SHALL BE LOCATED ON THE SHORTEST ACCESSIBLE OF TRAVEL FROM ADJACENT PARKING TO AN ACCESSIBLE ENTRANCE.
3. ACCESSIBLE PARKING SPACES SHALL BE AT LEAST 96 INCHES WIDE. PARKING ACCESS AISLES SHALL BE A MINIMUM OF 60 INCHES WIDE AND MUST BE PART OF AN ACCESSIBLE ROUTE TO THE BUILDING OR FACILITY ENTRANCE. TWO ACCESSIBLE PARKING SPACES MAY SHARE A COMMON ACCESS AISLE. PARKING SPACES AND ACCESS AISLES SHALL BE LEVEL SURFACE SLOPES NOT EXCEEDING 1:50 (2%) IN ALL DIRECTIONS. VAN ACCESSIBILITY SPACES MUST BE AT LEAST 96 INCHES WIDE WITH AN AISLE WIDTH OF 60 INCHES MIN. VAN PARKING SPACES SHALL BE 132" MINIMUM IN WIDTH WITH A 60" ACCESS AISLE OR 96" IN WIDTH WITH A 96" ACCESS AISLE.



STANDARD HANDICAP PARKING DETAILS

NOT TO SCALE
NOT FOR USE IN R.O.W.

LANDSCAPING PLANTING PROCEDURE:

1. ALL REQUIRED TREES AND SHRUBS SHALL BE PLANTED IN ACCORDANCE WITH THE SPECIFICATIONS OF THE ANSI (AMERICAN NATIONAL STANDARDS INSTITUTE) A300 BEST MANAGEMENT PRACTICES.
2. ALL TREES SHALL BE PLANTED NO CLOSURE THAN THREE (3) FEET TO THE EDGE OF SIDEWALKS, CURBS, OR OTHER PAVEMENT.
3. EVERGREEN TREES SHALL BE A MINIMUM OF SIX (6) FEET IN HEIGHT AT THE TIME OF PLANTING.
4. SHRUBS SHALL BE A MINIMUM THREE (3) GALLON CONTAINER AT THE TIME OF PLANTING.
5. ALL PLANTINGS SHALL MAINTAIN A MINIMUM OF 18" AT THE TIME OF PLANTING.
6. ALL SHRUB MATERIAL SHALL BE A MINIMUM OF 3' AT MATURITY.

LANDSCAPING MAINTENANCE:

1. THE OWNER, DEVELOPER, AND/OR BUILDER WHO IS RESPONSIBLE FOR PLANTING REQUIRED LANDSCAPING SHALL BE RESPONSIBLE FOR MAINTAINING THE LANDSCAPING IN A STATE OF GOOD HEALTH FOR ONE (1) YEAR AFTER A DEVELOPMENT COMPLETION PERMIT IS ISSUED OR, IF SUCH A PERMIT IS NOT APPLICABLE, ONE (1) YEAR AFTER THE INSTALLED AND COMPLETED LANDSCAPING IS APPROVED BY THE SUBDIVISION ADMINISTRATOR FOLLOWING INSPECTION.
2. LANDSCAPING WILL BE INSPECTED INSPECTED AT THE TIME OF BOND RELEASE AND, IN CASE OF MATERIALS THAT HAVE NOT BEEN PLANTED AND ESTABLISHED IN GOOD CONDITION, THE RESPONSIBLE PERSON WILL BE REQUIRED TO POST A MAINTENANCE BOND FOR ONE YEAR TO GUARANTEE THE SURVIVAL OF MATERIALS.
3. APPROVED LANDSCAPING SHALL BE MAINTAINED IN A HEALTHY CONDITION WITH ADEQUATE WATERING, FERTILIZATION, AND GROOMING IN ACCORDANCE WITH INDUSTRY STANDARDS.

PROHIBITED SPECIES:
CERTAIN PLANT MATERIAL SPECIES IS PROHIBITED DUE TO INVASIVENESS, HARDINESS, MAINTENANCE, OR OTHER NUISANCE FEATURES. PLEASE SEE THE LIST OF PROHIBITED SPECIES LISTED BELOW OR IN APPENDIX C OF THE SUBDIVISION AND LAND DEVELOPMENT ORDINANCE OF THE CITY OF CHARLES TOWN, WV.

Prohibited Species

The following plants are prohibited from being used to meet these requirements due to problems with hardiness, maintenance, or nuisance:

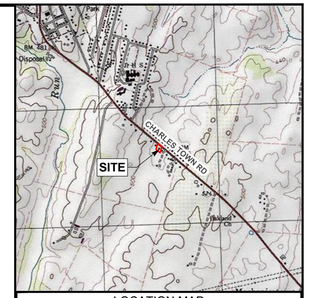
Prohibited Species	
Kudzu Vine	Garlic Mustard
Purple Loosestrife	Paulownia
Japanese Honeysuckle	Multiflora Rose
Shrub Honeysuckle	Siberian Elm
Autumn Olive	Silver Popular
Common Privet	Mimosa
Tree of Heaven	Mulberry
Lespedeza	Silver Maple
Bradford Pear	Norway Maple
Elm	Box Elder
All Varity of Ash Trees	Bamboo

Any plant material not permitted by the West Virginia Invasive Species Strategic Plan and Voluntary Guidelines 2014, or as amended.



PROPOSED LANDSCAPE FENCE

NOT TO SCALE
NOT FOR USE IN R.O.W.



LOCATION MAP
SCALE: 1" = 2000'

NO.	DATE	DESCRIPTION	INT.
0	2023-07-07	FOR SUBMISSION	DMJ
1	2023-08-15	PER CITY ENGINEER COMMENTS	DMJ

CALL BEFORE YOU DIG!
WEST VIRGINIA LAW REQUIRES:
3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE
AND
10 WORKING DAYS IN DESIGN STATE
– STOP CALL
West Virginia One Call System, Inc
WEST VIRGINIA 811
CALL BEFORE YOU DIG! Dial 811 or 800.245.4848
www.WV811.com
SERIAL NO.

SEAL



JHA Companies
ENGINEERS
SURVEYORS
ENVIRONMENTAL
GIS MAPPING
www.jhacompanies.com
844-542-4757
362 W. BURR BLVD. STE 3
KEARNEYSVILLE, WV 25430
PA • OH • NY • WV • VA • MD

PROJECT ID: 2022-1685	DRAWN: DMJ
DATE: 2023-07-07	DESIGN: JAB
SCALE: NOTED	CHECKED: JDH

SITE PLAN
FOR
JOAN AND JOE'S COFFEE
LOCATED IN
CHARLES TOWN,
JEFFERSON COUNTY,
WEST VIRGINIA

TITLE:
SITE DETAILS

PLAN STATUS: SITE PLAN	SHEET NO. C-2.01

Aug 18, 2023 3:19pm Dumper R:\Projects\2022\2022-1685 Joan and Joe's Coffee - Site Plan\CAD\SHEET FILES\DETAILS (2022-1685) 24X36.dwg
Layout: C-2.01 SITE DETAILS

THESE DRAWINGS SHALL NOT BE UTILIZED BY ANY PERSON, FIRM OR CORPORATION WITHOUT THE SPECIFIC WRITTEN PERMISSION OF JHA COMPANIES

WV ROUTE 115 - CHARLES TOWN ROAD
60' R/W

INLET
TOP=472.8
10" RCP
24" RCP

DP-B

EXISTING CONCRETE SWALE

S 50°39'33" E 100.11'

INLET
TOP=469.9
18" CMP 468.5
18" RCP 468.3

INLET
TOP=471.5
18" CMP

EXISTING ENTRANCE TO REMAIN

EXISTING MANHOLE

EXISTING MANHOLE

EXISTING 18" BPB 468.5
EXISTING CONCRETE HEADWALL STRUCTURE

EMERGENCY SPILLWAY ELEV: 472.00

VERITAS PROPERTIES LLC
DB 1255 PG 466 MAP 12
PARCEL 12.1

BIORETENTION 2
BOTTOM: 470.0
TOP: 472.5

DA-B BYPASS
0.16 ACRES
0.12 ACRES LOD

DA TO BIORETENTION 2
0.30 ACRES
0.16 ACRES LOD

N 15°23'22" E 168.67'

VERITAS PROPERTIES LLC
DB 1275 PG 458 MAP 17
PARCEL 12.3

DA TO BIORETENTION 1
0.37 ACRES
0.23 ACRES LOD

SCHOOL HOUSE LN

CURFMAN MEGAN C.
DB 1167 PG 265 MAP 12
PARCEL 13

PROPOSED CONCRETE SIDEWALK

PEACH TREE INVESTMENTS LLC
DB 1103 PG 493 MAP 12
PARCEL 17

REFUSE COLLECTION AREA

EXISTING CLEANOUT

DP-A

EMERGENCY SPILLWAY ELEV: 472.00

BIORETENTION 1
BOTTOM: 470.0
TOP: 472.5

N 51°23'15" W 101.47'

PEACH TREE INVESTMENTS LLC
DB 1103 PG 493 MAP 12
PARCEL 17

DA-A BYPASS
0.05 ACRES
0.01 ACRES LOD

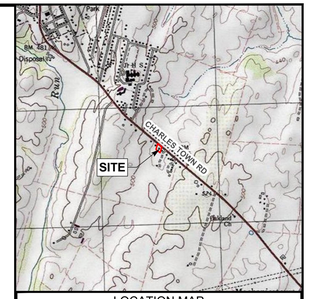
ARCADIA COMMUNITIES LLC
DB 1163 PG 322 MAP 12A
PARCEL PARK

LEGEND:
SWM TREATMENT AREA

GRAPHIC SCALE: 1" = 10'
10 0 10 20

QUANTITY COMPARISON – OVERALL		
RAINFALL EVENT	PRE–DEVELOPMENT	POST–DEVELOPMENT
1 YEAR	0.45 CFS	0.16 CFS
2 YEAR	0.78 CFS	0.26 CFS
10 YEAR	1.85 CFS	0.67 CFS
100 YEAR	4.19 CFS	4.30 CFS

QUALITY COMPARISON – OVERALL	
RAINFALL EVENT	VOLUME (CF)
BIORETENTION	909
RUNOFF REDUCTION REQUIRED	934
RUNOFF REDUCTION VOLUME ACHIEVED	944
RUNOFF REDUCTION VOLUME REMAINING	–10



LOCATION MAP
SCALE: 1" = 2000'

NO.	DATE	DESCRIPTION	INT.
0	2023-07-07	FOR SUBMISSION	DMJ
1	2023-08-15	PER CITY ENGINEER COMMENTS	DMJ

CALL BEFORE YOU DIG!
WEST VIRGINIA LAW REQUIRES:
3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE
AND
10 WORKING DAYS IN DESIGN STATE
– STOP CALL
West Virginia One Call System, Inc
WEST VIRGINIA 811
CALL BEFORE YOU DIG! Dial 811 or 800.245.4848
www.WV811.com
SERIAL NO.

SEAL
JOSEPH H. JHA II
REGISTERED
19809
STATE OF WEST VIRGINIA
PROFESSIONAL ENGINEER

JHA Companies
ENGINEERS
SURVEYORS
ENVIRONMENTAL
GIS MAPPING
www.jhacompanies.com
844-542-4757
362 W. BURR BLVD. STE 3
KEARNEYSVILLE, WV 25430
PA • OH • NY • WV • VA • MD

PROJECT ID:	DRAWN:
2022-1685	DMJ
DATE:	DESIGN:
2023-07-07	JAB
SCALE:	CHECKED:
NOTED	JDH

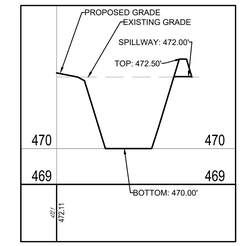
SITE PLAN
FOR
JOAN AND JOE'S COFFEE
LOCATED IN
CHARLES TOWN,
JEFFERSON COUNTY,
WEST VIRGINIA

TITLE:
STORMWATER MANAGEMENT PLAN

PLAN STATUS: SITE PLAN
SHEET NO. C-3.00

Aug 18, 2023 3:19pm DJumper R:\Projects\2022\2022-1685 Joon and Joe's Coffee – Site Plan\CAD\SHEET FILES\SWM CONCEPT PLAN (2022-1685) 24X36.dwg
Layout: C-3.00 STORMWATER MANAGEMENT PLAN

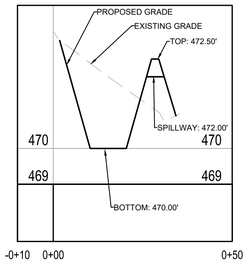
THESE DRAWINGS SHALL NOT BE UTILIZED BY ANY PERSON, FIRM OR CORPORATION WITHOUT THE SPECIFIC WRITTEN PERMISSION OF JHA COMPANIES



BIORETENTION 1

HORIZONTAL SCALE - 1:10

VERTICAL SCALE - 1:2



BIORETENTION 2

HORIZONTAL SCALE - 1:10

VERTICAL SCALE - 1:2

BIORETENTION 1 QUANTITY ANALYSIS			
STORM EVENT	INFLOW	OVERFLOW	WATER SURFACE ELEVATION
2 YEAR	0.42 CFS	0.01 CFS	472.00'
10 YEAR	0.92 CFS	0.58 CFS	472.12'
100 YEAR	1.99 CFS	1.96 CFS	472.28'

BIORETENTION 1 QUALITY ANALYSIS	
RAINFALL EVENT	VOLUME (CF)
BIORETENTION	528 CF
RUNOFF REDUCTION REQUIRED	422 CF
RUNOFF REDUCTION ACHIEVED	528 CF
RUNOFF REDUCTION VOLUME REMAINING	-106 CF

BIORETENTION 2 QUANTITY ANALYSIS			
STORM EVENT	INFLOW	OVERFLOW	WATER SURFACE ELEVATION
2 YEAR	0.37 CFS	0.00 CFS	471.63
10 YEAR	0.78 CFS	0.12 CFS	472.04
100 YEAR	1.66 CFS	1.60 CFS	472.25'

BIORETENTION 1 QUALITY ANALYSIS	
RAINFALL EVENT	VOLUME (CF)
BIORETENTION	416 CF
RUNOFF REDUCTION REQUIRED	511 CF
RUNOFF REDUCTION ACHIEVED	416 CF
RUNOFF REDUCTION VOLUME REMAINING	95 CF

SOIL MEDIA MIXTURE:

THE SOIL MEDIA IS PERHAPS THE MOST IMPORTANT ELEMENT OF A BIORETENTION FACILITY IN TERMS OF LONG-TERM PERFORMANCE. THE FOLLOWING ARE KEY FACTORS TO CONSIDER IN DETERMINING AN ACCEPTABLE SOIL MEDIA MIXTURE.

- GENERAL SOIL MEDIA COMPOSITION
1. 70% TO 88% SAND
2. 8% TO 26% TOPSOIL; AND
3. 3% TO 5% ORGANIC MATTER (AGED COMPOST)

Table BR-5. Soil Media Criteria and Testing for Bioretention

Soil Media Criterion	Description	Standard(s)		
General Composition	Soil media must have the proper proportions sand, fines, and organic matter to promote plant growth, drain at the proper rate, and filter pollutants	70% to 88% sand; 8% to 26% top soil and 3% to 5% organic matter (aged compost)		
Sand	Silica based coarse aggregate[1] Locally-approved pulverized glass may be substituted if the local authority undertakes testing to verify compliance with the specification and also lack of heavy metals	Sieve 3/8 in No. 4 No. 8 No. 16 No. 30 No. 50 No. 100	Size 9.50 mm 4.75 mm 2.36 mm 1.18 mm 0.6 mm 0.3 mm 0.15 mm	% Passing 100 95 to 100 80 to 100 45 to 85 15 to 60 3 to 15 0 to 4
		Effective Particle size (D10) > 0.3mm Uniformity Coefficient (D60/D10) < 4.0		
Top Soil	Loamy sand or Sandy Loam	USDA Textural Triangle		
Organic Matter	Well aged, clean compost	Appendix D		
P-Index or Phosphorus (P) content	Soil media with high P levels will export P through the media and potentially to downstream conveyances or receiving waters	P content = 7 to 23 mg/kg		
Cation Exchange Capacity (CEC)	The CEC is determined by the amount of humus or organic matter. Higher CEC will promote pollutant removal	CEC > 10 milliequivalents per 100 grams		
Infiltration Rate	This refers to the infiltration rate of the soil media, and not the underlying soil A minimum rate is required to allow the soil media to properly drain	Minimum Infiltration Rate = 1 – 2 inches/hour (most soil media will have much higher rates)		
Soil Media Depth	The depth of soil media for various applications	Soil media depths for Level 1 and Level 2 design are specified in Table BR-1. If trees are included in the bioretention planting plan, tree planting holes in the filter bed must be at least 4 feet deep to provide enough soil volume for the root structure of mature trees. In addition, higher proportions of topsoil (30%) and aged compost (20%) should be added to these planting holes compared to the rest of the soil media. Turf, perennials or shrubs should be used instead of trees to landscape shallower filter beds.		

[1] Many specifications for sand refer to ASTM C-33.The ASTM C-33 specification allows a particle size distribution that contains a large fraction of fines (silt and clay sized particles - < 0.05 mm).The smaller fines fill the voids between the larger sand sized particles, resulting in smaller and more convoluted pore spaces. While this condition provides a high degree of treatment, it also encourages clogging of the remaining void spaces with suspended solids and biological growth, resulting in a greater chance of a restrictive biomat forming.By limiting the fine particles allowed in the sand component, the combined media recipe of sand and the fines associated with the soil and organic material will be less prone to clogging while also providing an adequate level of filtration and retention.

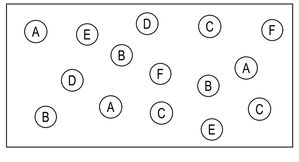
BIORETENTION INSTALLATION:

THE FOLLOWING IS A TYPICAL CONSTRUCTION SEQUENCE TO PROPERLY INSTALL A BIORETENTION BASIN. THE CONSTRUCTION SEQUENCE FOR RESIDENTIAL RAIN GARDENS (SEE SUPPLEMENT 4.2.3.C) IS MORE SIMPLIFIED. THESE STEPS MAY BE MODIFIED TO REFLECT DIFFERENT BIORETENTION APPLICATIONS OR EXPECTED SITE CONDITIONS:

1. CONSTRUCTION OF THE BIORETENTION AREA MAY ONLY BEGIN AFTER THE ENTIRE CDA HAS BEEN STABILIZED WITH VEGETATION. IT MAY BE NECESSARY TO BLOCK CERTAIN CURB OR OTHER INLETS WHILE THE BIORETENTION AREA IS BEING CONSTRUCTED. THE PROPOSED SITE SHOULD BE CHECKED FOR EXISTING UTILITIES PRIOR TO ANY EXCAVATION
2. THE DESIGNER AND THE INSTALLER SHOULD HAVE A PRECONSTRUCTION MEETING, CHECKING THE BOUNDARIES OF THE CDA AND THE ACTUAL INLET ELEVATIONS TO ENSURE THEY CONFORM TO ORIGINAL DESIGN. SINCE OTHER CONTRACTORS MAY BE RESPONSIBLE FOR CONSTRUCTING PORTIONS OF THE SITE, IT IS QUITE COMMON TO FIND SUBTLE DIFFERENCES IN SITE GRADING, DRAINAGE AND PAVING ELEVATIONS THAT CAN PRODUCE HYDRAULICALLY IMPORTANT DIFFERENCES FOR THE PROPOSED BIORETENTION AREA. THE DESIGNER SHOULD CLEARLY COMMUNICATE, IN WRITING, ANY PROJECT CHANGES DETERMINED DURING THE PRECONSTRUCTION MEETING TO THE INSTALLER AND THE PLAN REVIEW/INSPECTION AUTHORITY.
3. TEMPORARY APPROVED EROSION AND SEDIMENT CONTROLS ARE NEEDED DURING CONSTRUCTION OF THE BIORETENTION AREA TO DIVERT STORMWATER AWAY FROM THE BIORETENTION AREA UNTIL IT IS COMPLETED. SPECIAL PROTECTION MEASURES SUCH AS EROSION CONTROL FABRICS MAY BE NEEDED TO PROTECT VULNERABLE SIDE SLOPES FROM EROSION DURING THE CONSTRUCTION PROCESS. IN CASES WHERE THE BIORETENTION IS CO-LOCATED WITH EROSION AND SEDIMENT CONTROL PRACTICES (E.G., SEDIMENT TRAPS), THE CONDITIONS NOTED IN SECTION BR-7.1 MUST BE FOLLOWED.
4. ANY PRE-TREATMENT CELLS SHOULD BE EXCAVATED FIRST AND THEN SEALED TO TRAP SEDIMENTS
5. EXCAVATORS OR BACKHOES SHOULD WORK FROM THE SIDES TO EXCAVATE THE BIORETENTION AREA TO ITS APPROPRIATE DESIGN DEPTH AND DIMENSIONS. EXCAVATING EQUIPMENT SHOULD HAVE SCOOPS WITH ADEQUATE REACH SO THEY DO NOT HAVE TO SIT INSIDE THE FOOTPRINT OF THE BIORETENTION AREA. CONTRACTORS SHOULD USE A CELL CONSTRUCTION APPROACH IN LARGER BIORETENTION BASINS, WHEREBY THE BASIN IS SPLIT INTO 500 TO 1,000 SQ. FT. TEMPORARY CELLS WITH A 10-15 FOOT EARTH BRIDGE IN BETWEEN, SO THAT CELLS CAN BE EXCAVATED FROM THE SIDE.
6. IT MAY BE NECESSARY TO RIP THE BOTTOM SOILS TO A DEPTH OF 6 TO 12 INCHES TO PROMOTE GREATER INFILTRATION.
7. IF USING A FILTER FABRIC, PLACE THE FABRIC ON THE SIDES OF THE BIORETENTION AREA WITH A 6-INCH OVERLAP ON THE SIDES. IF AN UNDERDRAIN STONE STORAGE LAYER WILL BE USED, PLACE THE APPROPRIATE DEPTH OF NO.57 STONE ON THE BOTTOM, INSTALL THE PERFORATED UNDERDRAIN PIPE, PACK NO.57 STONE TO 3 INCHES ABOVE THE UNDERDRAIN PIPE. ON TOP OF THE NO.57 STONE, ADD 2 INCHES OF CHOKER STONE (NO.8 OR NO.89 STONE) AND THEN 2 TO 4 INCHES OF CONSTRUCTION SAND AS A FILTER BETWEEN THE UNDERDRAIN AND THE SOIL MEDIA LAYER. IF NO STONE STORAGE LAYER IS USED, START WITH 6 INCHES OF NO.57 STONE ON THE BOTTOM, AND PROCEED WITH THE LAYERING AS DESCRIBED ABOVE.
8. DELIVER THE SOIL MEDIA FROM AN APPROVED VENDOR, AND STORE IT ON AN ADJACENT IMPERVIOUS AREA OR PLASTIC SHEETING. APPLY THE MEDIA IN 12-INCH LIFTS UNTIL THE DESIRED TOP ELEVATION OF THE BIORETENTION AREA IS ACHIEVED. WAIT A FEW DAYS TO CHECK FOR SETTLEMENT, AND ADD ADDITIONAL MEDIA, AS NEEDED, TO ACHIEVE THE DESIGN ELEVATION.
9. PREPARE PLANTING HOLES FOR ANY TREES AND SHRUBS, INSTALL THE VEGETATION, AND WATER ACCORDINGLY. INSTALL ANY TEMPORARY IRRIGATION.
10. PLACE THE SURFACE COVER IN BOTH CELLS (MULCH, RIVER STONE OR TURF), DEPENDING ON THE DESIGN. IF COIR OR JUTE MATTING WILL BE USED IN LIEU OF MULCH, THE MATTING WILL NEED TO BE INSTALLED PRIOR TO PLANTING (STEP 9), AND HOLES OR SLITS WILL HAVE TO BE CUT IN THE MATTING TO INSTALL THE PLANTS.
11. INSTALL THE PLANT MATERIALS AS SHOWN IN THE LANDSCAPING PLAN, AND WATER THEM DURING WEEKS OF NO RAIN FOR THE FIRST TWO MONTHS.
12. IF CURB CUTS OR INLETS ARE BLOCKED DURING BIORETENTION INSTALLATION, UNBLOCK THESE AFTER THE DRAINAGE AREA AND SIDE SLOPES HAVE GOOD VEGETATIVE COVER. IT IS RECOMMENDED THAT UNBLOCKING CURB CUTS AND INLETS TAKE PLACE AFTER TWO TO THREE STORM EVENTS IF THE DRAINAGE AREA INCLUDES NEWLY INSTALLED ASPHALT, SINCE NEW ASPHALT TENDS TO PRODUCE A LOT OF FINES AND GRIT DURING THE FIRST SEVERAL STORMS.
13. CONDUCT THE FINAL CONSTRUCTION INSPECTION (SEE BELOW), THEN LOG THE GPS COORDINATES FOR EACH BIORETENTION FACILITY AND SUBMIT THEM FOR ENTRY INTO THE LOCAL MAINTENANCE TRACKING DATABASE.

LIST OF PLANTS FOR BIORETENTION AREA		
	NAME	QUANTITY
A	SWITCHGRASS - *PANICUM VIRGATUM*	3 PER 200 SF
B	HIGHBUSH BLUEBERRY - *VACCINIUM CORYMBOSUM*	3 PER 200 SF
C	INKBERRY - *ILEX GLABRA*	3 PER 200 SF
D	WINTERBERRY - *ILEX VERTICILLATA*	2 PER 200 SF
E	SPICEBUSH - *LINDERA BENZOIN*	2 PER 200 SF
F	PURPLE CONEFLOWER - *ECHINACEA PURPUREA*	2 PER 200 SF

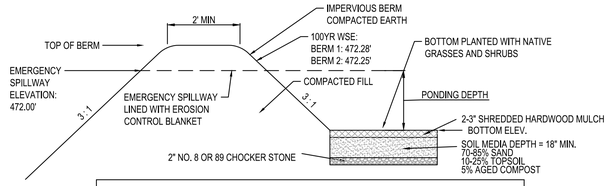
NOTE:
LOCATION AND QUANTITY OF PLANTINGS IS SHOW FOR COMPLIANCE PURPOSES.
ACTUAL ORGANIZATION AND POSITIONING MAY BE VARIED WITH THE APPROVAL OF OWNER AND ENGINEER.



PLANTING PLAN - TYPICAL
BIORETENTION BERM BOTTOM

1"=5'

GRAPHIC SCALE:



BIORETENTION BERM INFORMATION			
	BIORETENTION BERM 1		BIORETENTION BERM 2
TOP OF BERM	472.50	TOP OF BERM	472.50
BOTTOM ELEVATION	470.00	BOTTOM ELEVATION	470.00
EMERGENCY SPILLWAY	472.00	EMERGENCY SPILLWAY	472.00
PONDING DEPTH	2.00'	PONDING DEPTH	2.00'
LINING	NAG S200 STAPLE PATTERN E	LINING	NAG S200 STAPLE PATTERN E

BIORETENTION AREA MAINTENANCE NOTES

1. THE INFILTRATION AREA IS TO BE CHECKED REGULARLY FOR ANY SIGNS OF SETTLEMENT AND/OR EROSION AND TO ENSURE INFILTRATION.
2. THE INFILTRATION AREA IS TO BE CLEARED OF ANY TRASH, DEBRIS, INVASIVE SPECIES AND/OR WOODY VEGETATION.
3. THE INFILTRATION AREA IS TO BE FREE OF SILT AND HAVE PROPER VEGETATION.
4. THE INFILTRATION AREA IS TO BE INSPECTED FOR SIGNS OF FLOW CHANNELIZATION.
5. THE INFILTRATION AREA IS TO BE RESTORED TO A LEVEL GRADIENT IMMEDIATELY AFTER DEFICIENCIES ARE OBSERVED.

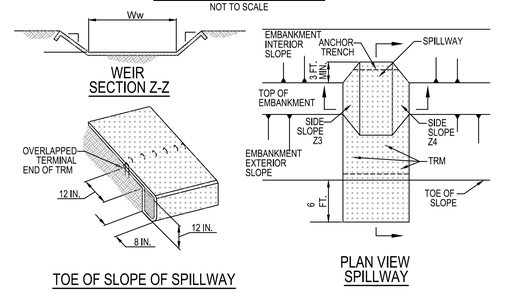
BIORETENTION AREA INSTALLATION NOTES

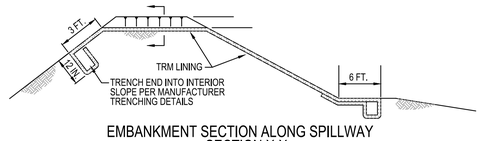
1. EXCAVATE AREA WITH TRACKED VEHICLES TO PREVENT SOIL COMPACTION.
2. SCARIFY BOTTOM OF INFILTRATION AREA.
3. IN CONDITIONS WHERE THE LIMITING ZONE IS ENCOUNTERED, THE CONTRACTOR SHALL OVER EXCAVATE THE INFILTRATION AREA AND ADD 24" OF CLEAN, NON-COMPACTED TOPSOIL UNDER THE BASIN BOTTOM.
4. SIDE SLOPES TO BE LINED WITH EROSION CONTROL BLANKET (NORTH AMERICAN GREEN S75 OR APPROVED)

NOTES:
1. BERM TO BE MECHANICALLY COMPACTED IN 8" LIFTS TO A MAXIMUM DRY WEIGHT DENSITY OF 98% OF THE FULL MATERIAL.
2. TOPSOIL SHALL BE REMOVED AND SURFACE SCARIFIED PRIOR TO PLACEMENT OF BERM FILL.
3. A SOILS EVALUATION TO DETERMINE SOIL SUITABILITY FOR THE PROPOSED INFILTRATION FACILITY SHALL BE PERFORMED DURING CONSTRUCTION MEETING TOWNSHIP ORDINANCE REQUIREMENTS. RESULTS OF THE SOIL TESTING SHALL BE SENT TO THE TOWNSHIP AND DESIGN ENGINEERS FOR REVIEW.

BIORETENTION BERM

NOT TO SCALE

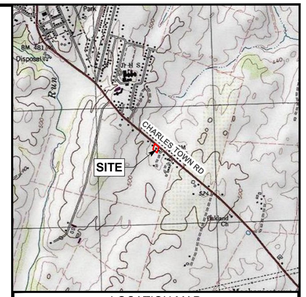




EMBANKMENT SECTION ALONG SPILLWAY
SECTION X-X

	WEIR					LINING	
	Z3 (FT)	Z4 (FT	TOP ELEV WTE (FT)	CREST ELEV WCE (FT)	WIDTH Ww (FT)	TYPE	STAPLE PATTERN
BERM 1	3	3	472.5	472.0	5	S200	E
BERM 2	3	3	472.50	472.0	5	S200	E

BIORETENTION SPILLWAY WITH TRM LINING



LOCATION MAP

SCALE: 1" = 2000'

NO.	DATE	DESCRIPTION	INT.
0	2023-07-07	FOR SUBMISSION	DMJ
1	2023-08-15	PER CITY ENGINEER COMMENTS	DMJ

CALL BEFORE YOU DIG!

WEST VIRGINIA LAW REQUIRES:
3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE
AND
10 WORKING DAYS IN DESIGN STATE
– STOP CALL
West Virginia One Call System, Inc

WEST VIRGINIA 811
CALL BEFORE YOU DIG! Dial 811 or 800.245.4848
www.WV811.com

SERIAL NO.

SEAL

JOSEPH J. JUNKINS
REGISTERED
19809
STATE OF WEST VIRGINIA
PROFESSIONAL ENGINEER

JHA Companies
ENGINEERS
SURVEYORS
ENVIRONMENTAL
GIS MAPPING
www.jhacompanies.com
844-542-4757
362 W. BURR BLVD. STE 3
KEARNEYSVILLE, WV 25430
PA • OH • NY • WV • VA • MD

PROJECT ID:	DRAWN:
2022-1685	DMJ
DATE:	DESIGN:
2023-07-07	JAB
SCALE:	CHECKED:
NOTED	JDH

SITE PLAN
FOR
JOAN AND JOE'S COFFEE
LOCATED IN
CHARLES TOWN,
JEFFERSON COUNTY,
WEST VIRGINIA

TITLE:
STORMWATER MANAGEMENT DETAILS

PLAN STATUS:	SHEET NO.
SITE PLAN	C-3.01

Aug 18, 2023, 3:19pm Dlumper R:\Projects\2022\2022-1685 Joan and Joe's Coffee - Site Plan\CAD\SHEET FILES\PCSM DETAILS (2022-1685) 24X36.dwg
Layout: C-3.01 STORMWATER MANAGEMENT DETAILS

THESE DRAWINGS SHALL NOT BE UTILIZED BY ANY PERSON, FIRM OR CORPORATION WITHOUT THE SPECIFIC WRITTEN PERMISSION OF JHA COMPANIES

WV ROUTE 115 - CHARLES TOWN ROAD
60' R/W

INLET
TOP=472.8
18" RCP
24" RCP

EXISTING
CONCRETE SWALE

SAWCUT EXISTING PAVEMENT

PROPOSED STOP BAR 12"
WHITE TYPE V THERMO

SIGHT DISTANCE LINE
10' FROM EDGE OF PAVEMENT,
5' BEHIND STOP BAR

INLET PROTECTION

S 50°39'33" E 100.11'

INLET
TOP=469.9
18" CMP, 486.5
18" RCP 486.3

UPGRADE EXISTING ENTRANCE

EXISTING
MANHOLE

EXISTING ENTRANCE TO REMAIN

EMERGENCY
SPILLWAY
ELEV: 472.00

PROPOSED DRIVEWAY PAVING

INLET
TOP=471.5
18" CMP

PROPOSED
30" STOP SIGN

SSF-1

EXISTING
MANHOLE

EXISTING 18" BPB 469.5
EXISTING CONCRETE HEADWALL STRUCTURE

VERITAS PROPERTIES LLC
DB 1255 PG 466 MAP 12
PARCEL 12.1

BIORETENTION 2
BOTTOM: 470.0
TOP: 472.5

ROCK CONSTRUCTION
ENTRANCE

LIMIT OF DISTURBANCE
0.53 ACRES

N 15°32'25" E 169.89'

VERITAS PROPERTIES LLC
DB 1275 PG 458 MAP 17
PARCEL 12.3

EXISTING
GRAVEL
DRIVEWAY

EXISTING COFFEE SHOP
900 SF

EXISTING HOUSE TO BE RENOVATED INTO
PROPOSED COFFEE SHOP
1745 SF
#14840 1 STORY
BRICK FF=478.45
GAR=474.53

SF-2

S 41°27'24" W 186.05'

CURFMAN MEGAN C.
DB 1167 PG 265 MAP 12
PARCEL 13

EXISTING
GRAVEL
PARKING

PEACH TREE INVESTMENTS LLC
DB 1103 PG 493 MAP 12
PARCEL 17

ROCK CONSTRUCTION
ENTRANCE

EMERGENCY
SPILLWAY
ELEV: 472.00

BIORETENTION 1
BOTTOM: 470.0
TOP: 472.5

SF-1

REFUSE
COLLECTION
AREA

EXISTING
CLEANOUT

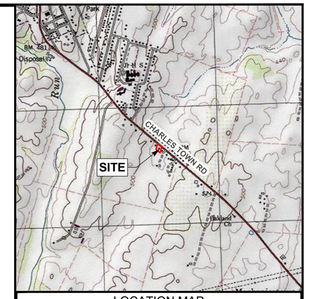
N 51°23'15" W 101.47'

PEACH TREE INVESTMENTS LLC
DB 1103 PG 493 MAP 12
PARCEL 17

SF-1

ARCADIA COMMUNITIES LLC
DB 1163 PG 322 MAP 12A
PARCEL PARK

GRAPHIC SCALE: 1" = 10'
10 0 10 20



LOCATION MAP
SCALE: 1" = 2000'

NO.	DATE	DESCRIPTION	INT.
0	2023-07-07	FOR SUBMISSION	DMJ
1	2023-08-15	PER CITY ENGINEER COMMENTS	DMJ

CALL BEFORE YOU DIG!

WEST VIRGINIA LAW REQUIRES:
3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE
AND
10 WORKING DAYS IN DESIGN STATE
– STOP CALL
West Virginia One Call System, Inc

WEST VIRGINIA 811
CALL BEFORE YOU DIG! Dial 811 or 800.245.4848
www.WV811.com

SERIAL NO.

SEAL

JOSEPH J HUNT
LICENSED
19809
STATE OF
WEST VIRGINIA
PROFESSIONAL ENGINEER

JHA Companies
ENGINEERS
SURVEYORS
ENVIRONMENTAL
GIS MAPPING
www.jhacompanies.com
844-542-4757
362 W. BURR BLVD. STE 3
KEARNEYSVILLE, WV 25430
PA • OH • NY • WV • VA • MD

PROJECT ID:	DRAWN:
2022-1685	DMJ
DATE:	DESIGN:
2023-07-07	JAB
SCALE:	CHECKED:
NOTED	JDH

SITE PLAN
FOR
JOAN AND JOE'S COFFEE
LOCATED IN
CHARLES TOWN,
JEFFERSON COUNTY,
WEST VIRGINIA

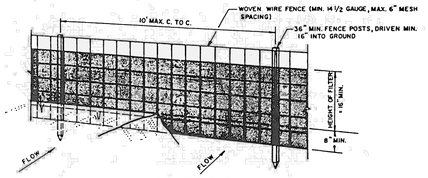
TITLE:
EROSION AND SEDIMENT CONTROL PLAN

PLAN STATUS:	SHEET NO.
SITE PLAN	C-4.00

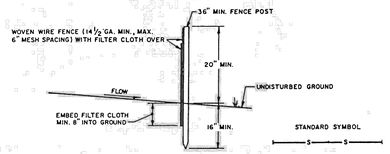
Aug 18, 2023, 3:19pm Dlampar R:\Projects\2022\2022-1685 Joes and Joe's Coffee - Site Plan\CAD\SHEET FILES\ESC PLAN (2022-1685) 24X36 - Copy.dwg
Layout: C-4.00 EROSION AND SEDIMENT CONTROL PLAN

THESE DRAWINGS SHALL NOT BE UTILIZED BY ANY PERSON FIRM OR CORPORATION WITHOUT THE SPECIFIC WRITTEN PERMISSION OF JHA COMPANIES

SILT FENCE



PERSPECTIVE VIEW



SECTION

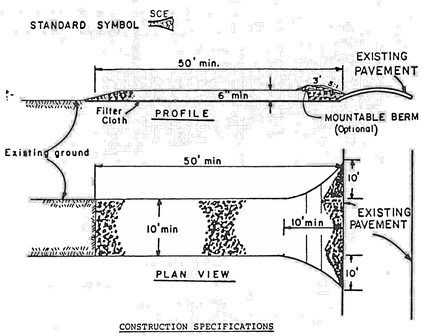
CONSTRUCTION NOTES FOR FABRICATED SILT FENCE

1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES.
2. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER-LAPPED BY SIX INCHES AND FOLDED.
4. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

POSTS: STEEL EITHER T OR U TYPE OR 2" HARDWOOD.
FENCE: WOVEN WIRE, 14 Ga., 6" Max. MESH OPENING.
FILTER CLOTH: FILTER X, MIRAFI 100X, STABI-LINKA T140N OR APPROVED EQUAL.
PREFABRICATED UNIT: GEOFAB, ENVIROFENCE, OR APPROVED EQUAL.

JEFFERSON COUNTY, WEST VIRGINIA	APPROVED: March 10, 1989 COUNTY ENGINEER	SILT FENCE	REVISIONS	DETAIL No. SC-11

STABILIZED CONSTRUCTION ENTRANCE
not to scale



CONSTRUCTION SPECIFICATIONS

1. Stone Size - Use 2" stone, or reclaimed or recycled concrete equivalent.
2. Length - As required, but not less than 50 feet (except on a single residence lot where a 30 foot minimum length would apply).
3. Thickness - Not less than six (6) inches.
4. Width - Ten (10) foot minimum, but not less than the full width at points where ingress or egress occurs.
5. Filter Cloth - Will be placed over the entire area prior to placing of stone. Filter will not be required on a single family residence lot.
6. Surface Water - All surface water flowing or diverted toward construction entrances shall be piped across the entrance. If piping is impractical, a mountable berm with 5:1 slopes will be permitted.
7. Maintenance - The entrance shall be maintained in a condition which will prevent tracking or flowing of sediment onto public rights-of-way. This may require periodic top dressing with additional stone as conditions demand and repair and/or cleanout of any measures used to trap sediment. All sediment spilled, dropped, washed or tracked onto public rights-of-way must be removed immediately.
8. Washing - Wheels shall be cleaned to remove sediment prior to entrance onto public rights-of-way. When washing is required, it shall be done on an area stabilized with stone and which drains into an approved sediment trapping device.
9. Periodic inspection and needed maintenance shall be provided after each rain.

JEFFERSON COUNTY, WEST VIRGINIA	APPROVED: March 10, 1989 COUNTY ENGINEER	STABILIZED CONSTRUCTION ENTRANCE	REVISIONS:	DETAIL No. SC-10

EROSION AND SEDIMENT CONTROL GENERAL NOTES

1. ANY AREA OF EXPOSED SOIL WHERE NO CONSTRUCTION ACTIVITY IS ANTICIPATED FOR A PERIOD OF IONGER THAN THREE WEEKS OR WHERE CONSTRUCTION ACTIVITY HAS STOPPED FOR THREE WEEKS SHALL BE TEMPORARILY STABILIZED.
2. FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT STABILIZATION SHALL BE COMPLETED WITHIN SEVEN CALENDAR DAYS AFTER COMPLETION OF ALL PERIMETER DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES GREATER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1); AND SEVEN CALENDAR DAYS AFTER REACHING FINAL GRADE FOR ALL OTHER DISTURBED OR GRADED AREAS.
   THESE PROVISIONS DO NOT APPLY TO THOSE AREAS THAT ARE SHOWN ON THE PLAN FOR MATERIAL STORAGE OR FOR THOSE AREAS ON WHICH ACTUAL CONSTRUCTION ACTIVITIES ARE CURRENTLY BEING PERFORMED.
   THESE TIME REQUIREMENTS MAY BE EXTENDED, AS DEEMED NECESSARY BY THE JEFFERSON COUNTY ENGINEER IN THE EVENT THAT ADVERSE CONDITIONS PREVENT COMPLIANCE WITH THE STATED TIME LIMITATIONS FOR THE COMPLETION OF PERMANENT OR TEMPORARY STABILIZATION.
3. STABILIZATION WILL BE CONSIDERED ADEQUATE WHEN THE FOLLOWING CONDITIONS ARE MET:
   a. WATER COURSES, STREAM BANKS, AND DRAINAGE EASEMENTS SHALL BE 100% STABILIZED AND FREE FROM EROSION AND DEPOSITION.
   b. SLOPES STEEPER THAN 10% SHALL HAVE AT LEAST 98% STABLE GROUND COVER, AS DETERMINED BY THE JEFFERSON COUNTY ENGINEER.
   c. ALL OTHER AREAS SHALL HAVE AT LEAST 85% STABLE GROUND COVER, AS DETERMINED BY THE JEFFERSON COUNTY ENGINEER.
   d. GRASS VEGETATION SHALL HAVE REACHED A MINIMUM OF 3 INCHES OF HEIGHT OR HAVE BEEN MOWED BACK TO A MINIMUM OF 2 INCHES OF HEIGHT.
4. FOR ALL PROJECTS ADJACENT TO OR WITHIN 500 FEET OF A CONTINUOUSLY FLOWING STREAM, NO GRADING, EXCAVATING, REMOVAL, OR DESTRUCTION OF TOPSOIL, TREES, OR OTHER VEGETATIVE COVER, OR CONSTRUCTION ACTIVITY SHALL RESULT IN POINT OR NON-POINT LOADING OF SUSPENDED MATTER SUCH THAT TURBIDITY STANDARDS SPELLED OUT IN THE WATER RESOURCES BOARD LEGISLATIVE RULES ARE VIOLATED. SAID STANDARDS STATE THAT TURBIDITY SHALL NOT EXCEED 10 NTUS OVER BACKGROUND TURBIDITY WHEN THE BACKGROUND IS 50 NTUS OR LESS, OR HAVE MORE THAN A 10% INCREASE IN TURBIDITY (PLUS 10 NTUS MINIMUM) WHEN THE BACKGROUND TURBIDITY IS MORE THAN 50 NTUS.
5. INDICATION WHETHER AN OFF-SITE BORROW PIT IS (OR IS NOT) PROPOSED FOR THIS PROJECT.
6. MAINTENANCE SHALL BE PERFORMED AS NECESSARY TO ENSURE THAT ALL EROSION AND SEDIMENT CONTROL MEASURES ARE PERFORMING AS DESIGNED. THE JEFFERSON COUNTY ENGINEER MAY REQUIRE MODIFICATIONS TO AN APPROVED PLAN, REQUIRE ADDITIONAL SEDIMENT AND EROSION CONTROL MEASURES, OR CAUSE NEW PLANS TO BE SUBMITTED AS A RESULT OF FIELD INSPECTION REVEALING THE APPROVED PLANS DO NOT PROVIDE ADEQUATE PROTECTION.
7. ALL RESIDENTIAL AND COMMERCIAL/INDUSTRIAL BUILDING LOTS SHALL HAVE A STABILIZED CONSTRUCTION ENTRANCE INSTALLED PRIOR TO BEGINNING CONSTRUCTION ON THE LOT.
8. THE DEVELOPMENT IS RESPONSIBLE FOR ENSURING THAT ALL CLEARING, GRADING, DRAINAGE, CONSTRUCTION, AND DEVELOPMENT IS CONDUCTED IN ACCORDANCE WITH THE EROSION AND SEDIMENT CONTROL PLAN.

LIMITS OF EARTH DISTURBANCE LINES

THE LIMITS OF EARTH DISTURBANCE LINES ON THIS PLAN ARE SHOWN TO CLEARLY INDICATE THE APPROXIMATE LIMITS OF CONSTRUCTION ON THIS SITE. HOWEVER, THE LIMITS OF EARTH DISTURBANCE LINES MAY BE SHOWN OUTSIDE OF THE OVERALL PROPERTY BOUNDARY FOR CLARITY PURPOSES ONLY. NO CONSTRUCTION SHALL TAKE PLACE OUTSIDE OF THE PROPERTY BOUNDARY AS SHOWN ON THIS PLAN.

GENERAL EROSION AND SEDIMENTATION CONTROL MEASURES

1. THE PROPER IMPLEMENTATION AND MAINTENANCE OF THE EROSION AND SEDIMENTATION CONTROL MEASURES SHOWN ON THESE PLANS AND THE SUPPORTING DOCUMENTS SHALL BE THE SOLE RESPONSIBILITY OF THE DEVELOPER/OWNER.
2. UPON COMPLETION OF AN EARTH DISTURBANCE ACTIVITY OR ANY STAGE OR PHASE OF AN ACTIVITY, THE OPERATOR SHALL STABILIZE IMMEDIATELY THE DISTURBED AREAS TO PROTECT FROM ACCELERATED EROSION.
3. IN THOSE AREAS WHERE SEEDING IS TEMPORARY IN NATURE, PRIOR TO THE NEXT PHASE OF CONSTRUCTION, ANNUAL RYE GRASS SHOULD BE USED AT AN APPLICATION RATE OF 1 LB/1,000 SQ. FT. AND FERTILIZED ACCORDING TO SOILS TESTS.
4. ALL EXPOSED AREAS NOT SEEDED PRIOR TO SEPTEMBER 15 OR EXPOSED AFTER THAT DATE WILL BE MULCHED UNTIL SEEDING CAN BE PERFORMED IN THE SPRING.
5. AN EROSION CONTROL BLANKET MUST BE INSTALLED ON ALL DISTURBED SLOPES STEEPER THAN 3:1, ALL AREAS OF CONCENTRATED FLOWS, AND DISTURBED AREAS WITHIN 50' OF STREAMS.
6. TEMPORARY "FILTER FABRIC FENCE" SHALL BE PLACED ON THE LOW SIDE OF ALL EXPOSED SOILS.
7. PERMANENT STABILIZATION IS DEFINED AS A MINIMUM UNIFORM 70% PERENNIAL VEGETATIVE COVER OR OTHER PERMANENT NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED SURFACE EROSION AND SUBSURFACE CHARACTERISTICS SUFFICIENT TO RESIST SLIDING OR OTHER MOVEMENTS.
8. IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCE POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE OPERATOR SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES TO ELIMINATE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION.
9. ALL PUMPING OF SEDIMENT LADEN WATER SHALL BE THROUGH A SEDIMENT CONTROL BMP, SUCH AS A PUMPED WATER FILTER BAG OR EQUIVALENT SEDIMENT REMOVAL FACILITY, OVER UNDISTURBED VEGETATED AREAS.
10. ANY SEDIMENT REMOVED FROM BMPS DURING CONSTRUCTION WILL BE RETURNED TO UPLAND AREAS ON SITE AND INCORPORATED INTO THE SITE GRADING.
11. BEFORE INITIATING ANY REVISIONS TO THE APPROVED EROSION AND SEDIMENT CONTROL PLAN OR REVISIONS TO OTHER PLANS WHICH MAY AFFECT THE EFFECTIVENESS OF THE APPROVED E & S CONTROL PLAN, THE OPERATOR MUST RECEIVE APPROVAL OR THE REVISIONS FROM THE APPROPRIATE EROSION AND SEDIMENT CONTROL DIRECTOR.
12. THE OPERATOR SHALL REMOVE FROM THE SITE, RECYCLE, OR DISPOSE OF ALL BUILDING MATERIALS AND WASTES. NO CONSTRUCTION MATERIAL OR WASTE OR UNUSED CONSTRUCTION MATERIAL SHALL BE BURNED, BURIED, DUMPED, OR DISCHARGED AT THE SITE.
13. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE REMOVAL OF ANY EXCESS MATERIAL AND MAKE SURE THE SITE(S) RECEIVING THE EXCESS MATERIAL HAS AN APPROVED EROSION AND SEDIMENT CONTROL PLAN THAT MEETS THE CONDITIONS OF LOCAL AND/OR OTHER STATE AND FEDERAL REGULATIONS.
14. AN EROSION AND SEDIMENT CONTROL PLAN SHALL BE PREPARED, DEVELOPED, APPROVED BY THE APPROPRIATE EROSION AND SEDIMENT CONTROL DIRECTOR AND IMPLEMENTED FOR ALL SPOIL AND BORROW AREAS, REGARDLESS OF THEIR LOCATION.

INSTALLATION AND MAINTENANCE RESPONSIBILITIES

1. THE PROPER IMPLEMENTATION AND MAINTENANCE OF THE EROSION AND SEDIMENTATION CONTROL MEASURES SHOWN ON THESE PLANS AND IN THE SUPPORTING DOCUMENTS SHALL BE THE SOLE RESPONSIBILITY OF THE DEVELOPER/OWNER.
2. ALL PERMANENT STORMWATER MANAGEMENT FACILITIES INCLUDING PIPES, CHANNELS, INLETS, AND DETENTION BASINS ON INDIVIDUAL LOTS ARE TO BE INSTALLED BY THE DEVELOPER AND MAINTAINED BY THE OWNER. THE COUNTY SHALL HAVE THE RIGHT TO ENTER PROPERTY TO INSPECT THE FACILITIES AND, IF NECESSARY, TO MAINTAIN AND REPAIR THE FACILITY. THESE FACILITIES ARE TO BE MAINTAINED AT THE GRADES AND BY THE PROCEDURES SHOWN ON THESE PLANS.

EXCESS FILL MATERIAL

ALL EXCESS FILL MATERIAL GENERATED BY CONSTRUCTION MUST BE STOCKPILED ON THIS SITE. ALSO FILTER FABRIC FENCE OR APPROVED EQUIVALENT MUST BE INSTALLED ON THE LOW SIDE OF ALL STOCKPILED MATERIALS.

INSTALLATION, OWNERSHIP, AND MAINTENANCE RESPONSIBILITIES

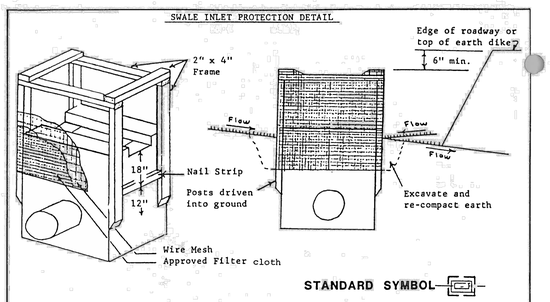
ALL PERMANENT STORMWATER MANAGEMENT FACILITIES INCLUDING STORMWATER BIORETENTION BERMS, INLETS, AND PIPES WILL BE INSTALLED BY THE OWNER / DEVELOPER. SINCE ALL FACILITIES WILL BE CONSTRUCTED ON LANDS OF THE OWNER / DEVELOPER AND THEREFORE OUTSIDE OF THE PUBLIC STREET RIGHT-OF-WAYS, THE FACILITIES SHALL BE INSTALLED, OWNED AND MAINTAINED BY THE OWNER / DEVELOPER. THE OWNER / DEVELOPER SHALL BE SOLELY RESPONSIBLE FOR KEEPING ALL STORMWATER MANAGEMENT FACILITIES FREE OF DEBRIS. THESE FACILITIES ARE TO BE MAINTAINED AT THE GRADES AND BY THE PROCEDURES SHOWN ON THESE PLANS.

1. THE PROPER IMPLEMENTATION AND MAINTENANCE OF THE EROSION AND SEDIMENTATION CONTROL MEASURES SHOWN ON THESE PLANS AND IN THE SUPPORTING DOCUMENTS SHALL BE THE SOLE RESPONSIBILITY OF THE DEVELOPER / OWNER.
2. ALL PERMANENT STORMWATER MANAGEMENT FACILITIES OUTSIDE OF PUBLIC RIGHT OF WAY (INCLUDING PIPES, CHANNELS, INLETS AND BIORETENTION BERMS) WITHIN THE DEVELOPMENT ARE TO BE INSTALLED AND MAINTAINED BY THE DEVELOPER. THESE FACILITIES ARE TO BE MAINTAINED AT THE GRADES AND BY THE PROCEDURES SHOWN ON THESE PLANS.
3. THE BIORETENTION BERMS REQUIRE THAT THE SITE BE STABILIZED ACCORDING TO THE APPROVED E&SC PLAN BEFORE INSTALLATION.

CONSTRUCTION SEQUENCE

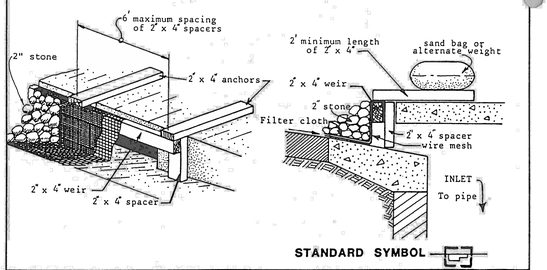
1. INSTALL SILT FENCING AS SPECIFIED ON THE PLAN.
2. INSTALL CONSTRUCTION ENTRANCE AS THE FIRST STEP IN GRADING ACTIVITIES.
3. BEGIN CLEARING AND GRUBBING AREA WITHIN THE LIMIT OF DISTURBANCE.
4. STRIP TOPSOIL AND PLACE INTO STOCKPILES AS SHOWN ON THE PLAN.
5. EXCAVATE AND GRADE THE BUILDING ADDITION AND PARKING AREA. PLACE EXCESS MATERIAL INTO STOCKPILES AS SHOWN ON THE PLAN.
6. TOPSOIL, SEED, AND MULCH ALL EXPOSED SOILS.
7. ONCE THE CONTRIBUTING DRAINAGE AREA TO BIORETENTION STABILIZES, INSTALL BIORETENTION AREAS.
   A. FOLLOW THE INSTALLATION AS SPECIFIED IN THE WEST VIRGINIA STORMWATER MANAGEMENT & DESIGN GUIDANCE MANUAL.
   B. EXCAVATE SUBSURFACE AREA. RIPPING BOTTOM IS ENCOURAGED TO PROMOTE INFILTRATION.
   C. INSTALL REQUIRED LINER STONE.
   D. INSTALL SOIL MEDIA.
   E. CONSTRUCT THE BERM WITH SUITABLE FILL.
   F. INSTALL PLANTINGS AS SPECIFIED ON PLAN IN ACCORDANCE WITH THE WVSM&DGM.
   G. APPLY MULCH ON THE SURFACE.
10. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION IN THE OPINION OF THE LOCAL EROSION AND SEDIMENT CONTROL ADMINISTRATOR.

SWALE INLET PROTECTION DETAIL



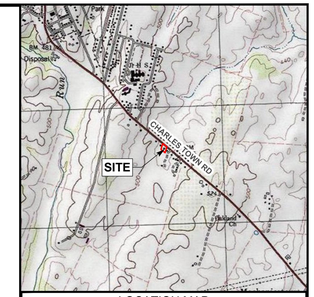
STANDARD SYMBOL

CURB INLET PROTECTION DETAIL



STANDARD SYMBOL

JEFFERSON COUNTY, WEST VIRGINIA	APPROVED: March 10, 1989 COUNTY ENGINEER	INLET PROTECTION DETAIL	REVISIONS:	DETAIL No. SC-13



LOCATION MAP
SCALE: 1" = 2000'

NO.	DATE	DESCRIPTION	INT.
0	2023-07-07	FOR SUBMISSION	DMJ
1	2023-08-15	PER CITY ENGINEER COMMENTS	DMJ

CALL BEFORE YOU DIG!
WEST VIRGINIA LAW REQUIRES:
3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE
AND
10 WORKING DAYS IN DESIGN STATE
– STOP CALL
West Virginia One Call System, Inc
WEST VIRGINIA 811
CALL BEFORE YOU DIG! Dial 811 or 800.245.4848
www.WV811.com
SERIAL NO.

SEAL



JHA Companies
ENGINEERS
SURVEYORS
ENVIRONMENTAL
GIS MAPPING
www.jhacompanies.com
844-542-4757
362 W. BURR BLVD. STE 3
KEARNEYSVILLE, WV 25430
PA • OH • NY • WV • VA • MD

PROJECT ID: 2022-1685	DRAWN: DMJ
DATE: 2023-07-07	DESIGN: JAB
SCALE: NOTED	CHECKED: JDH

SITE PLAN
FOR
JOAN AND JOE'S COFFEE
LOCATED IN
CHARLES TOWN,
JEFFERSON COUNTY,
WEST VIRGINIA

TITLE: EROSION AND SEDIMENT CONTROL DETAILS

PLAN STATUS: SITE PLAN	SHEET NO. C-4.01

Aug 18, 2023 3:19pm Dunmyer R:\Projects\2022\2022-1685 Joan and Joe's Coffee - Site Plan\LAND\SHEET FILES\ESC DETAILS (2022-1685) 24X36.dwg
Layout: C-4.01 EROSION AND SEDIMENT CONTROL DETAILS

THESE DRAWINGS SHALL NOT BE UTILIZED BY ANY PERSON, FIRM OR CORPORATION WITHOUT THE SPECIFIC WRITTEN PERMISSION OF JHA COMPANIES.

WV ROUTE 115 - CHARLES TOWN ROAD
60' R/W

Luminaire Schedule								
Symbol	Qty	Label	Description	Lum. Lumens	Lum. Watts	LLF	Filename	Mounting Height
⊠	5	B	IES 50 Watt Type 5 Plannus-L	5536	50	0.900	IES 50 Watt Type 5 Plannus-L IES FILE.ies	12
●	1	A	F914-M989-PG988 LLF 0.4 config 70MH	6370	175	0.400	ITL51066.IES	12

VERITAS PROPERTIES LLC
DB 1255 PG 466 MAP 12
PARCEL 12.1

VERITAS PROPERTIES LLC
DB 1275 PG 458 MAP 17
PARCEL 12.3

CURFMAN MEGAN C.
DB 1167 PG 265 MAP 12
PARCEL 13

PEACH TREE INVESTMENTS LLC
DB 1103 PG 493 MAP 12
PARCEL 17

PEACH TREE INVESTMENTS LLC
DB 1103 PG 493 MAP 12
PARCEL 17

ARCADIA COMMUNITIES LLC
DB 1163 PG 322 MAP 12A
PARCEL PARK

MH: 12

GRAPHIC SCALE: 1" = 10'
10 0 10 20

PENN GLOBE
LIGHTING DESIGN + MANUFACTURING

300 Shaw Road * North Branford CT 06471
Phone:203-484-7749 * Fax: 203-484-7758
www.pennglobe.com

DATE	08/15/23
DRAWING NUMBER	070-317-16933-F9B2-JX30-W541-W579
SPECIFIER	JHA COMPANIES
PROJECT NUMBER	070-317-16933
PROJECT NAME	JOAN AND JOE'S COFFEE

*** ATTENTION***
DEDICATED NEC EQUIPMENT GROUND REQUIRED FOR ALL LED LIGHT FIXTURES. IMPROPER INSTALLATION WILL RESULT IN DAMAGE AND VOIDS ALL WARRANTIES. NOT FOR USE WITH DELTA 208/480 SPLIT PHASE. CONTACT PENN GLOBE WITH QUESTIONS.

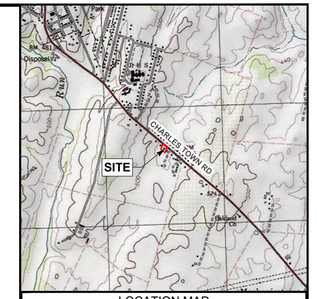
PRIMARY LIGHT SOURCE	PennSTAR® LED
CONFIGURATION	PLANNUS LED PLAFFORM
WATTAGE	50W (NOM)
DISTRIBUTION	SYMMETRIC
COLOR TEMPERATURE	4000K
VOLTAGE	120~277VAC AUTOSENSE
GLOBE	FROSTED UV STABILIZED ACRYLIC
POLE HEIGHT	9' - 0"
SHAFT	4.5" FLUTED
MATERIAL	ALUMINUM
OPTIONS	> SINGLE BANNER BRACKET SET > UPPER—FIXED -> LOWER—ADJUSTABLE > DUPLEX GFI WITH WHILE IN USE COVER
FINISH	2069X LT (RED) 1003X LT (BLACK)
QUANTITY	( )

MODEL NUMBER	DESCRIPTION
F9B2-GX920-FH925	PARKLANE 1200
P688-FH222-2110 / JX30-EZA72-0275-0400	TRADITIONAL POST / DUPEX GFI WITH COVER
W541-PVL24-P1X0-A090 / W579-PVL24-02X0-A090	SINGLE FIXED BANNER BRACKET / SINGLE ADJUSTABLE BANNER BRACKET

The information contained in this drawing is the sole property of Pennsylvania Globe Gaslight Co. Any reproduction in part or as a whole without the written permission of Pennsylvania Globe Gaslight Co. is prohibited and may be subject to legal restrictions or sanction. The information contained is privileged and confidential and may be protected from disclosure. All product, product specifications and data are subject to change without notice to improve reliability, function, design or otherwise. No representation or guarantee is made regarding the suitability of the products for any particular purpose or the continuing production of any product. Copyright© 2023 Penn Globe

Prepared by: M. Stonier

PennSMART.



LOCATION MAP
SCALE: 1" = 2000'

NO.	DATE	DESCRIPTION	INT.
0	2023-07-07	FOR SUBMISSION	DMJ
1	2023-08-15	PER CITY ENGINEER COMMENTS	DMJ

CALL BEFORE YOU DIG!
WEST VIRGINIA LAW REQUIRES:
3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE
AND
10 WORKING DAYS IN DESIGN STATE
– STOP CALL
West Virginia One Call System, Inc
WEST VIRGINIA 811
CALL BEFORE YOU DIG! Dial 811 or 800.245.4848
www.WV811.com

SERIAL NO.

SEAL
JOSEPH J. HUMMEL
REGISTERED
19809
STATE OF
WEST VIRGINIA
PROFESSIONAL ENGINEER

JHA Companies
ENGINEERS
SURVEYORS
ENVIRONMENTAL
GIS MAPPING
www.jhacompanies.com
844-542-4757
362 W. BURR BLVD. STE 3
KEARNEYSVILLE, WV 25430
PA • OH • NY • WV • VA • MD

PROJECT ID: 2022-1685	DRAWN: DMJ
DATE: 2023-07-07	DESIGN: JAB
SCALE: NOTED	CHECKED: JDH

SITE PLAN
FOR
JOAN AND JOE'S COFFEE
LOCATED IN
CHARLES TOWN,
JEFFERSON COUNTY,
WEST VIRGINIA

TITLE:
LIGHTING PLAN

PLAN STATUS:	SHEET NO.
SITE PLAN	C-5.00

Aug 18, 2023 3:19pm Dumper R:\Projects\2022\2022-1685 Joan and Joe's Coffee - Site Plan\CAD\SHEET FILES\LIGHTING PLAN (2022-1685) 24X36.dwg
Layout: C-5.00 LIGHTING PLAN

THESE DRAWINGS SHALL NOT BE UTILIZED BY ANY PERSON, FIRM OR CORPORATION WITHOUT THE SPECIFIC WRITTEN PERMISSION OF JHA COMPANIES

Planning Commission
101 East Washington Street
Charles Town, WV 25414

SCHEDULED

Meeting: 09/25/23
Department: Planning Commission
Category: Report
Initiator:

AGENDA ITEM (ID #)

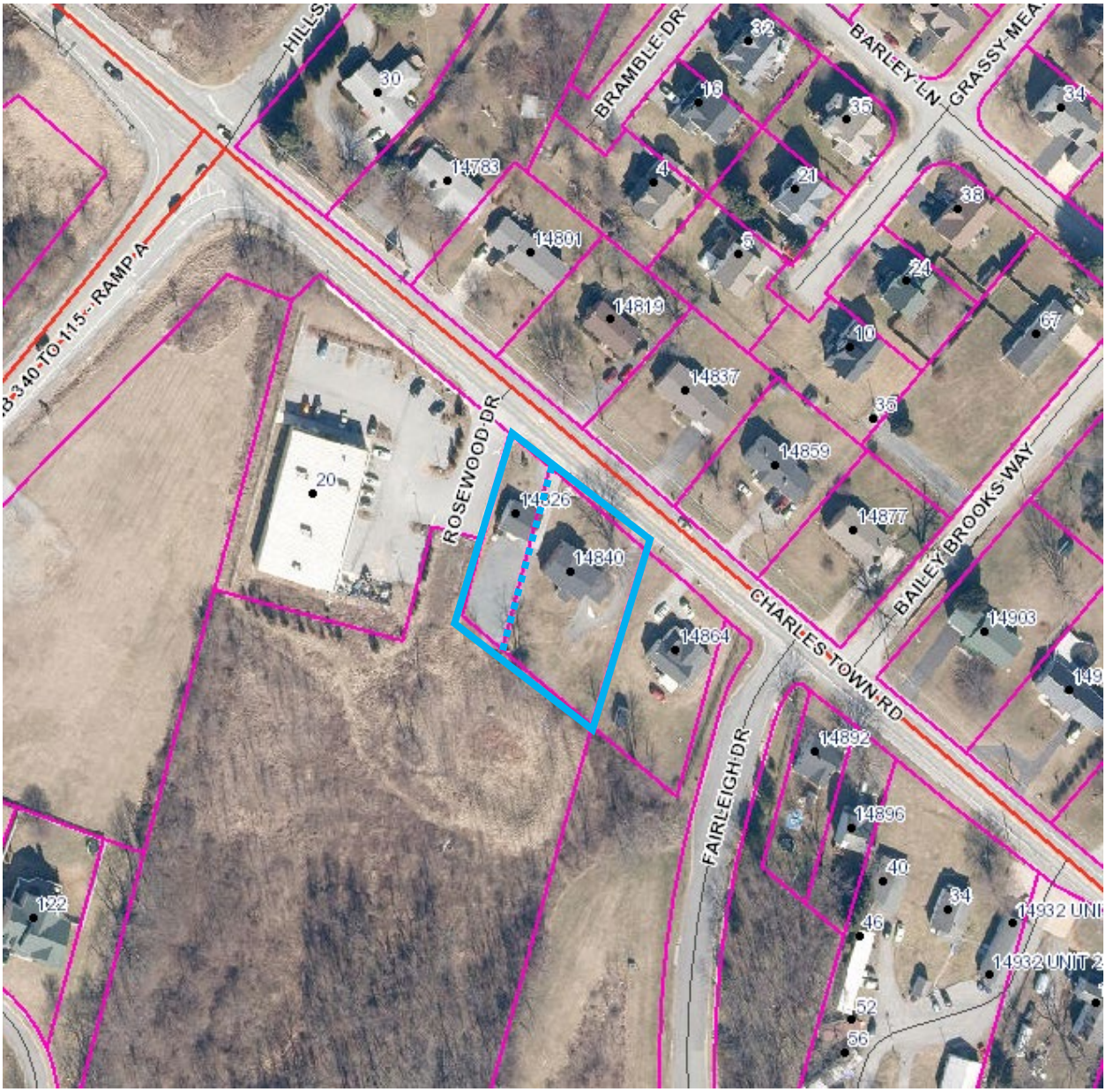
Commission Review: SLD2023-09: Joan and Joe's Coffee - Sketch Plan Completeness Review

ATTACHMENTS:

- 1. Staff Report.pdf
- 2. Application.pdf
- 3. Revised Plans.pdf
- 2023-07-25 KH Comments.pdf

Sketch Plan Completeness Review
SLD2023-09

Date: For the September 23, 2023 Planning Commission meeting
Applicant: Joan and Joe's Coffee
Property Owner: VERITAS PROPERTIES LLC
Report by: James Newman, City Planner, Zoning/Subdivision Administrator.
Proposal: Development of a parking lot
Property Location: 14826 & 14840 Charles Town Road/ Tax District 3, Map 12, Parcel 12.0001 & Tax District 2, Map 17, Parcel 12.0003



PROJECT OVERVIEW

The applicant is seeking to expand their parking lot and access drive.

ZONING ORDINANCE REVIEW

The property is zoned General Commercial. The use of the property as a Coffee Shop is permitted by-right. The applicant will move their coffee shop to the 14840 address, and the 14826 address will be used for a catering business. A catering business would be best described as a fast-food restaurant, which is a by-right use as well.

Setbacks

Setbacks for parking lot require that parking spaces be at least 5 ft. from adjacent right-of-way. That requirement is met.

Open Space/Lot Coverage

There is no open space requirement. Up to 90% of the lot can be developed.

DEFINITIONS

COFFEE/DOUGHNUT SHOP – Restaurant that focuses on providing coffee and breakfast foods. May also sell newspapers, books, and music CDs. May offer indoor seating but no indoor table service.

RESTAURANT, FAST-FOOD – An establishment whose principal business is the sale of pre-prepared or rapidly prepared food directly to the customer in a ready-to- consume state for consumption either within the Restaurant Building or off premises.

SUBDIVISION ORDINANCE REVIEW

The sketch plan meets the requirement of being a complete application as stated in Subdivision Ordinance Section 1332.03.C.2.C:

"*A complete application shall be submitted to the City's Department of Community Development. By complete, all the necessary information required from Section 1332.04 shall be in the application. Any application that does not have the minimum required information from Section 1332.04 will be considered an incomplete application, returned and unreviewed for content of the application.*"

This does not mean the subdivision application meets the criteria for approval; it merely means that the application contains information meeting the technical requirements of the Ordinance.

CONCLUSION

The sketch plan meets the requirement of being a complete application as stated in Subdivision Ordinance Section 1332.03.C.2.C.

Staff deems the application **complete**. If the Planning Commission deems the application complete, a public hearing for the sketch would be scheduled for October 23, 2023.

JHA Companies | ENGINEERS SURVEYORS ENVIRONMENTAL GIS MAPPING

transmittal

July 20, 2023

TO:	Subdivision Administrator	**FROM:**	Chris Waddell
	City of Charles Town		JHA Companies
	101 E Washington Street		362 W Burr Blvd, Ste 3
	Charles Town, WV 25414		Kearneysville, WV 25430
			681-209-7574

RE: Project Name: Joan & Joe's Coffee
JHA Project ID #: 2022-1685
Location: Charles Town, Jefferson, WV

TRANSMITTING:

No.	Date	Document
1	7/19/23	Application with check
1	7/19/23	PCSM Report
8	7/19/23	Site Plan (3: 24x36, 5: 11x17)

COMMENTS:

RECEIVED
JUL 21 2023
BY:

S/LD Application No._____

SUBDIVISION AND LAND DEVELOPMENT APPLICATION

SUBDIVISION AND LAND DEVELOPMENT ORDINANCE
ARTICLE 1332, SUBDIVISION AND LAND DEVELOPMENT APPLICATION & APPROVAL REQUIREMENTS

To assist the Subdivision Administrator in the review of a Subdivision and Land Development (S/LD) Application, the Applicant must utilize this form to supply the City with the information prescribed under Section 1332.03 of the Charles Town Subdivision Ordinance. The submission of this form, along with the prescribed information and required fees, shall serve as the Applicant's S/LD Application as required by Ordinance Section 1332.03.

1. DATE July 7, 2023

2. APPLICATION TYPE

☐ Minor Subdivision | Final S/LD Plan

☐ Major Subdivision Development*
- Preliminary S/LD Plan and Final Plat

☐ Major Land Development**
- Preliminary S/LD Plan

☒ Major Subdivision and Land Development***
- Preliminary S/LD Plan and Final Plat

*Conventional Subdivision – A Preliminary Plan and Plat Approval and a Final Plan and Plat Approval is required.

**No Division/Merger of Land – A Preliminary Plan and Plat Approval is required for the submission of a building or multiple buildings on one lot where there is no subdivision of land (commonly referred to as a site plan).

***A Preliminary Plan and Plat Approval and a Final Plan and Plat Approval is required for the submission of a building or multiple buildings that will require the merger, adjustment or subdivision of land.

3. APPLICANT'S NAME* Joan and Joe's Coffee Shop

Address: 14826 Charles Town Road

Telephone Number (681)252-1033 Fax Number ( )

Email Address

4. PROPERTY OWNER'S NAME Robert Mead

Address: 14826 Charles Town Road, Charles Town, WV 25414

Telephone Number (681)252-1033 Fax Number ( )

Email Address

5. LEGAL DESCRIPTION OF THE SUBJECT PROPERTY (list all parcels that apply)

Property Address: 14826 &14840 Charles Town Road

Tax Map # and Parcel: Map 12 - Parcel 12.1/ Map 17 - Parcel 12.3

Deed Book and Page #: 1122 pg 36 / 1243 page 647

Property Area in Square Feet or Acres: 0.14, 0.39 acres

6. DESCRIPTION OF PROJECT AND PROPOSED USE(S) OF THE PROPERTY:

The proposed use of the property will be a coffee shop.

This project will include renovation of existing home into a proposed coffee shop, upgraded exit, upgraded parking areas for the coffee shop, and stormwater facilities.

7. DESCRIPTION OF THE EXISTING (OR FORMER) USE(S) OF THE PROPERTY AND CURRENT ZONING:

Current Zoning for this property is GC-General Commerical.

*Applicants include: Property owner(s), Engineer(s), Surveyor(s), or Consultant(s)

8. ARE THERE ANY ANTICIPATED WAIVERS OR VARIANCES? IF YES, PROVIDE DETAILS.

N/A

9. PARCEL HISTORY (List all pending or previously approved applications on the subject parcels inventoried above, including previous site plan applications if this application is a site plan amendment)

Application No.	Project Name and Phase	Status	Approval Date

10. HAS THE PROPERTY BEEN THE SUBJECT OF ANY COURT ACTION?

☐ Yes (Please specify nature of all proceedings and current status and attach any documents showing court decisions, etc.)

☒ No

11. PLAN/PLAT SUBMISSION TO OTHER AGENCIES (Documentation of all required approvals must be attached to this Application or submitted prior to Preliminary S/LD Application approval)

Agency (Specify others as applicable)	Submittal Date	Approval/Permit Issued	Date of Approval/Issuance
City of Charles Town	07/07/2023		
City of Charles Town Utility Board	N/A		
Jefferson County Planning and Zoning Department	N/A		
Jefferson County Addressing Office	N/A		
Jefferson County Board of Education	N/A		
WV Department of Environmental Protection	N/A		
WV Department of Transportation, Division of Highways	07/07/2023		
WV State Historic Preservation Office	N/A		
WV Office of Environmental Health Services	N/A		
U.S. Army Corps of Engineers	N/A		

12. FEE CALCULATION (Per Fee Schedule) $200.00 Grading/Land Disturbance Permit

$200.00 filing fee plus $2,000 escrow Major Land

Land Development for Commercial

AMOUNT PAID $ $400 plus $2,000 escrow

APPLICANT CERTIFICATION

I certify that, to the best of my knowledge, the submitted information and statements are true and correct. I also certify that I have received and read Section 1332.03 of the Charles Town S/LD Ordinance and relevant provisions of the Charles Town City Code.

Signature of Applicant

Robert Mead Date 07 / 10 / 2023

Signature of Property Owner (If different than Applicant)

_____ Date _____

Please submit an original completed Application and specified number of Plan/Plat (Three (3) copies at 24" x 36", Adobe PDF format, and Five (5) copies at 11" x 17") copies to the following:

Subdivision Administrator
City of Charles Town
101 E. Washington Street
Charles Town, WV 25414

FOR CITY USE ONLY

Application Number:_____ Date Application Received:_____

Fee: $_____ Paid:$_____ Check No._____

Receipt No._____

Subdivision Administrator Approval:_____ Date:_____

Planning Commission Approval:_____ Date:_____

Comments/Conditions:_____

Signature Certificate

Reference number: V5BYL-CYKRJ-S9XUH-G7UHH

Signer	Timestamp	Signature
Robert Mead Email: rmead@onedigital.com Shared via link		Robert Mead
Sent:	10 Jul 2023 19:31:36 UTC	
Viewed:	10 Jul 2023 20:25:09 UTC	IP address: 72.83.31.207
Signed:	11 Jul 2023 13:24:51 UTC	Location: Vienna, United States

Document completed by all parties on:
11 Jul 2023 13:24:51 UTC

Page 1 of 1

Signed with PandaDoc

PandaDoc is a document workflow and certified eSignature solution trusted by 40,000+ companies worldwide.

SITE PLAN FOR

JOAN AND JOE'S COFFEE

CHARLES TOWN, JEFFERSON COUNTY
WEST VIRGINIA
TAX MAP 17 PARCEL 12.3
DEED BOOK 1275 PG 458

OWNER/DEVELOPER
ROBERT MEAD
14826 CHARLES TOWN ROAD
CHARLES TOWN, WV 25414, 681-252-1033

ENGINEER/SURVEYOR
JHA COMPANIES
362 W BURR BLVD.
SUITE 3
KEARNEYSVILLE, WV 25430

SITE DATA

TOTAL SITE AREA:	0.53 ACRES
EXISTING LAND USE:	COFFEE SHOP
ZONING:	GENERAL COMMERCIAL
WATER SUPPLY:	PUBLIC WATER
SEWAGE DISPOSAL:	PUBLIC SEWER
DEED REFERENCE:	DEED BOOK 1255, PAGE 466 & DEED BOOK 1275, PAGE 458
PLAT REFERENCE:	PLAT BOOK 25, PAGE 15
TAX PARCEL REFERENCE:	TAX MAP 12 PARCEL 12.1 & TAX MAP 17 PARCEL 12.3
FLOOD PLAIN:	ENTIRELY WITHIN ZONE X

PROPOSED LOT REQUIREMENTS

ZONING:	
GENERAL COMMERCIAL	
MINIMUM LOT SIZE	N/A
MIN. WIDTH	N/A
MAX BUILDING HEIGHT	55 FEET
BUILDING SETBACKS:	
FRONT YARD	40 FEET
SIDE YARD	10 FEET
REAR YARD	30 FEET
PARKING AND ACCESS DRIVE SETBACKS:	
FRONT YARD	15 FEET
SIDE YARD	20 FEET
REAR YARD	15 FEET
BUFFERS:	
FRONT YARD	20 FEET
SIDE YARD	20 FEET
REAR YARD	20 FEET

BOUNDARY NOTE:
BOUNDARY AND TOPOGRAPHY SHOWN HEREON IS FROM FIELD SURVEYS BY ROBERTS LAND SURVEYING.

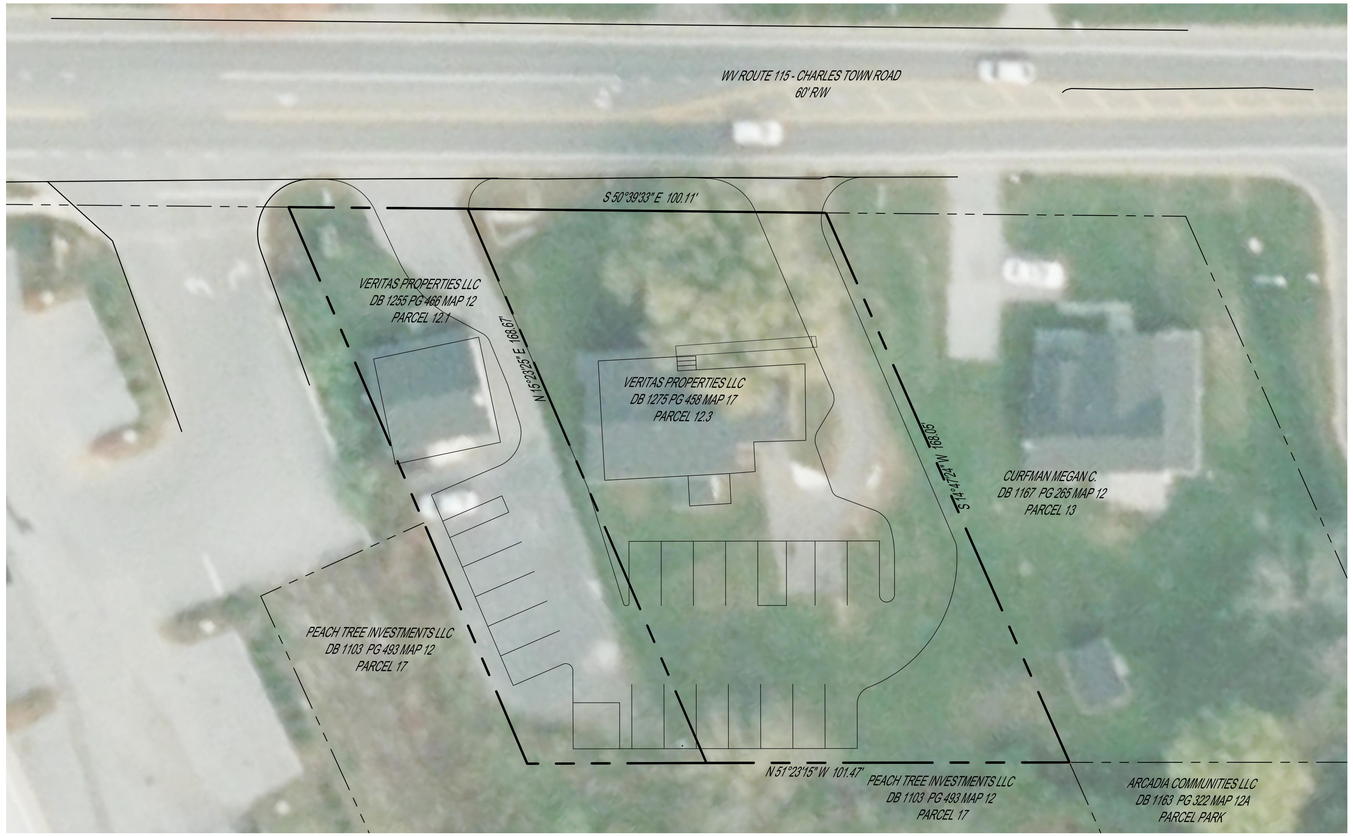
MONUMENT / MARKER NOTE:
CORNERS FOUND / SET / TO BE SET BY ROBERTS LAND SURVEYING

GENERAL NOTES:
1. NO PROPOSED ROADS, EASEMENTS, AND RIGHT-OF-WAYS.
2. THERE ARE NO FUTURE OR EXISTING EASEMENTS EXCEPT AS SHOWN.
3. PUBLIC WATER WILL BE USED TO SUPPLY THE COFFEE SHOP WITH WATER.
4. PARKING REQUIREMENTS:
   1 SPACE / 3 EVERY SEATS AVAILABLE FOR CUSTOMERS: 7 PARKING SPACES REQUIRED (21 AVAILABLE SEATS)
   TOTAL PARKING PROVIDED = 21 SPACES (INCLUDES 2 HANDICAPPED SPACES

FLOOD PLAIN
THIS SITE IS ENTIRELY LOCATED IN ZONE X - AREAS DETERMINED TO BE OUTSIDE 0.2% ANNUAL CHANCE FLOODPLAIN, AS DELINEATED ON THE NATIONAL FLOOD INSURANCE PROGRAM FLOOD INSURANCE RATE MAP COMMUNITY PANEL NUMBER 54037C0138E DATED DECEMBER 18, 2009 FOR JEFFERSON COUNTY, WEST VIRGINIA BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY.

WETLANDS
NO ACTUAL FIELD DELINEATION OF WETLANDS WAS PERFORMED ON THIS SITE, HOWEVER THERE ARE NO WETLANDS PRESENT PER THE NATIONAL WETLANDS INVENTORY MAP.

COMPUTATIONAL BREAKDOWN	
TOTAL ACRES	0.534 ACRES
OPEN SPACE	0.25 ACRES
CONSERVATION EASEMENTS OR OTHER RESTRICTIVE EASEMENTS	N/A
STORMWATER MANAGEMENT AREAS	0.39 ACRES
REMAINING ACREAGE	0.144 ACRES
TABLE OF LOT AREAS	PARCEL 12: 7,768 SF PARCEL 12.3: 15,515 SF
DENSITY	3.74 UNITS/ACRE
RIGHT-OF-WAYS & EASEMENTS	N/A



GRAPHIC SCALE: 1" = 20'
20 0 20 40

WAIVER REQUESTS / PRIOR APPROVALS			
ORDINANCE	SECTION OF ORDINANCE	DESCRIPTION OF WAVIER OR VARIANCE	DATE GRANTED
SALDO	1333.09	SIDEWALK & ON-STREET PARKING DESIGN STANDARDS	
SALDO	1333.23.C.2	CURB AND GUTTER	

THIS PLAT WAS APPROVED FOR RECORDATION BY THE CITY OF CHARLES TOWN, ON THE _____ DAY OF _____, 20_____, SUBJECT TO ANY CONDITIONS SPECIFIED HEREON.

ALL EXPENSES INCURRED WITH RESPECT TO IMPROVEMENTS FOR UTILITY SERVICES, PAVING, GRADING, LANDSCAPING, CURBS, GUTTERS, SIDEWALKS, ROAD LIGHTING, ROAD SIGNS, FLOOD PROTECTION DEVICES, DRAINAGE STRUCTURES AND ALL OTHER IMPROVEMENTS THAT MAY BE REQUIRED SHALL BE THE RESPONSIBILITY OF THE SUBDIVIDER AND NOT THE CITY.

_____ _____
SECRETARY OF THE PLANNING COMMISSION DATE

STATEMENT OF ACCURACY

THE ENGINEER AND/OR SURVEYOR, IN SIGNING THIS PLAT/PLAN, ATTESTS TO THE BEST OF HIS OR HER KNOWLEDGE, IS PLAN IS COMPLETE AND ACCURATE.

_____ 8-21-2023
ENGINEER / SURVEYOR DATE

STATEMENT OF ACCEPTANCE

THE DEVELOPER, IN SIGNING THIS PLAT, AGREES TO ABIDE BY ALL CONDITIONS, TERMS AND SPECIFICATIONS PROVIDED HEREON; AND TO COMPLETE ALL THE IMPROVEMENTS REQUIRED BY THE PRELIMINARY PLAT OR SITE PLAN

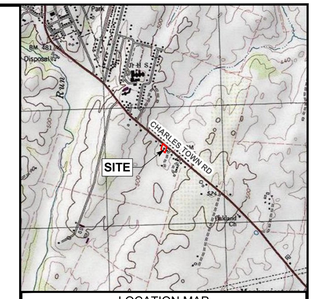
_____ _____
OWNER / DEVELOPER DATE

PLAN CERTIFICATION

THE PROFESSIONAL ENGINEER OR LAND SURVEYOR, IN SIGNING THIS PLAT REPRESENTS A SURVEY MADE BY HIM/HER; ALL MONUMENTS AND IMPROVEMENTS INDICATED THEREON ACTUALLY EXIST, AND THAT THEIR LOCATION, SIZE, AND MATERIAL ARE CORRECTLY SHOWN; HE/SHE IS FAMILIAR WITH ALL REQUIREMENTS OF THIS ORDIANACE; AND, TO HIS/HER BEST KNOWLEDGE AND BELIEF, ALL REQUIREMENTS OF THIS ORDINANCE HAVE BEEN FULLY COMPLIED THEREWITH.

_____ 8-21-2023
ENGINEER / SURVEYOR DATE

Sheet List Table	
Sheet Number	Sheet Title
C-0.01	COVER SHEET
C-1.00	EXISITING CONDITIONS PLAN
C-2.00	SITE PLAN
C-2.01	SITE DETAILS
C-3.00	STORMWATER MANAGEMENT PLAN
C-3.01	STORMWATER MANAGEMENT DETAILS
C-4.00	EROSION AND SEDIMENT CONTROL PLAN
C-4.01	EROSION AND SEDIMENT CONTROL DETAILS
C-5.00	LIGHTING PLAN



LOCATION MAP
SCALE: 1" = 2000'

NO.	DATE	DESCRIPTION	INT.
0	2023-07-07	FOR SUBMISSION	DMJ
1	2023-08-15	PER CITY ENGINEER COMMENTS	DMJ

CALL BEFORE YOU DIG!
WEST VIRGINIA LAW REQUIRES:
3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE
AND
10 WORKING DAYS IN DESIGN STATE
– STOP CALL
West Virginia One Call System, Inc
WEST VIRGINIA 811
CALL BEFORE YOU DIG! Dial 811 or 800.245.4848
www.WV811.com
SERIAL NO.

SEAL

JOSEPH J. HARRIS
REGISTERED
No. 18809
STATE OF WEST VIRGINIA
PROFESSIONAL ENGINEER

JHA Companies
ENGINEERS
SURVEYORS
ENVIRONMENTAL
GIS MAPPING
www.jhacompanies.com
844-542-4757
362 W. BURR BLVD. STE 3
KEARNEYSVILLE, WV 25430
PA • OH • NY • WV • VA • MD

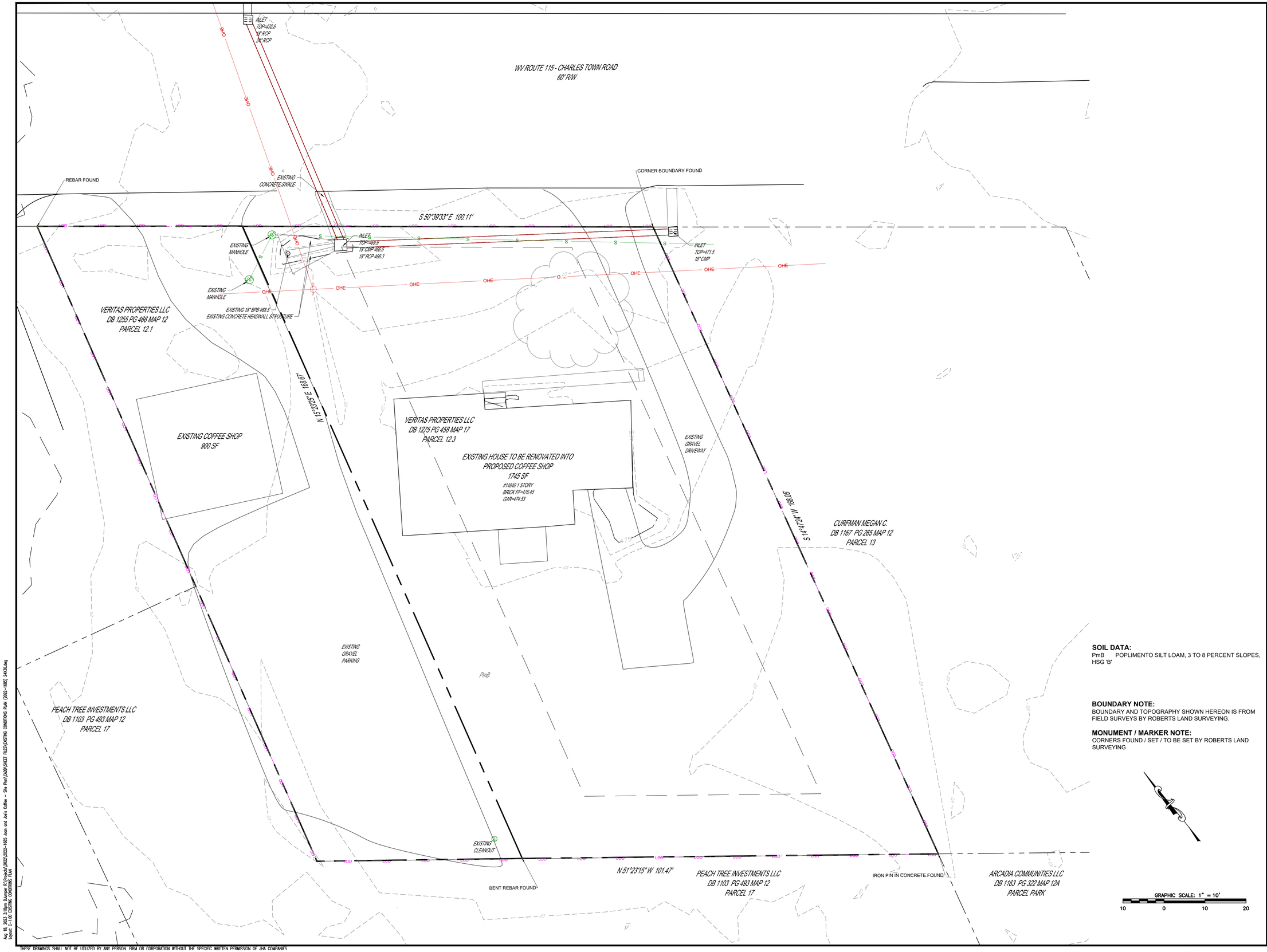
PROJECT ID: 2022-1685	DRAWN: DMJ
DATE: 2023-07-07	DESIGN: JAB
SCALE: NOTED	CHECKED: JDH

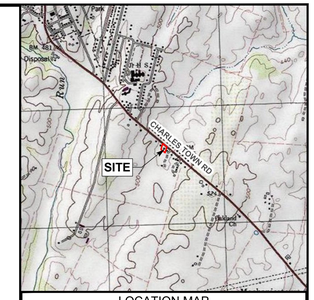
SITE PLAN
FOR
JOAN AND JOE'S COFFEE
LOCATED IN
CHARLES TOWN,
JEFFERSON COUNTY,
WEST VIRGINIA

TITLE:
COVER SHEET

PLAN STATUS:	SHEET NO.
SITE PLAN	C-0.01

Aug 18, 2023 3:18pm DJulmer R:\Projects\2022\2022-1685 Joan and Joe's Coffee – Site Plan\CAD\SHEET FILES\COVER SHEET (2022-1685) 24X36.dwg
Layout: C-0.01 COVER SHEET
THESE DRAWINGS SHALL NOT BE UTILIZED BY ANY PERSON, FIRM OR CORPORATION WITHOUT THE SPECIFIC, WRITTEN PERMISSION OF JHA COMPANIES





LOCATION MAP
SCALE: 1" = 2000'

NO.	DATE	DESCRIPTION	INT.
0	2023-07-07	FOR SUBMISSION	DMJ
1	2023-08-15	PER CITY ENGINEER COMMENTS	DMJ

CALL BEFORE YOU DIG!

WEST VIRGINIA LAW REQUIRES:
3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE
AND
10 WORKING DAYS IN DESIGN STATE
– STOP CALL
West Virginia One Call System, Inc

WEST VIRGINIA 811
CALL BEFORE YOU DIG! Dial 811 or 800.245.4848
www.WV811.com

SERIAL NO.

SOIL DATA:
PmB POPLIMENTO SILT LOAM, 3 TO 8 PERCENT SLOPES, HSG 'B'

BOUNDARY NOTE:
BOUNDARY AND TOPOGRAPHY SHOWN HEREON IS FROM FIELD SURVEYS BY ROBERTS LAND SURVEYING.

MONUMENT / MARKER NOTE:
CORNERS FOUND / SET / TO BE SET BY ROBERTS LAND SURVEYING

SEAL

JOSEPH H. J. HAWK
REGISTERED
18809
STATE OF
WEST VIRGINIA
PROFESSIONAL ENGINEER

JHA Companies
ENGINEERS
SURVEYORS
ENVIRONMENTAL
GIS MAPPING
www.jhacompanies.com
844-542-4757
362 W. BURR BLVD. STE 3
KEARNEYSVILLE, WV 25430
PA • OH • NY • WV • VA • MD

PROJECT ID:	DRAWN:
2022-1685	DMJ
DATE:	DESIGN:
2023-07-07	JAB
SCALE:	CHECKED:
NOTED	JDH

SITE PLAN
FOR
JOAN AND JOE'S COFFEE
LOCATED IN
CHARLES TOWN,
JEFFERSON COUNTY,
WEST VIRGINIA

TITLE:
EXISITING CONDITIONS PLAN

PLAN STATUS:	SHEET NO.
SITE PLAN	C-1.00

Aug 18, 2023, 3:18pm Dlampar (K:\Projects\2022\2022-1685 Joan and Joe's Coffee – Site Plan\CAD\SHEET FILES\EXISTING CONDITIONS PLAN (2022-1685) 24X36.dwg
Layout: C-1.00 EXISTING CONDITIONS PLAN

THESE DRAWINGS SHALL NOT BE UTILIZED BY ANY PERSON FIRM OR CORPORATION WITHOUT THE SPECIFIC WRITTEN PERMISSION OF JHA COMPANIES

WV ROUTE 115 - CHARLES TOWN ROAD
60' R/W

CENTERLINE WV ROUTE 115- CHARLES TOWN ROAD

EXISTING EDGE OF PAVEMENT

INLET
TOP=472.8
18" RCP
24" RCP

POSTED SPEED LIMIT 45MPH

EXISTING SIGHT DISTANCE 528FT.
3.8% SLOPE DOWN
REQUIRED SIGHT DISTANCE 344FT.

EXISTING SIGHT DISTANCE 618FT+
2.1% SLOPE UP
REQUIRED SIGHT DISTANCE 378FT.

PROPOSED ONE WAY SIGN

EXISTING CONCRETE SWALE

EXISTING EDGE OF PAVEMENT

SAWCUT EXISTING PAVEMENT

PROPOSED STOP BAR 12" WHITE TYPE V THERMO

PROPOSED DO NOT ENTER SIGN

PROPOSED DO NOT ENTER SIGN

SIGHT DISTANCE LINE
10' FROM EDGE OF PAVEMENT,
5' BEHIND STOP BAR

S 50°39'33" E 100.11'

R15.00'

R12.00'

RIGHT OF WAY LINE

RIGHT OF WAY LINE

STOP

EXISTING MANHOLE

INLET
TOP=469.9
18" CMP 466.5
18" RCP 466.3

UPGRADE EXISTING ENTRANCE

INLET
TOP=471.5
18" CMP

EXISTING ENTRANCE TO REMAIN

EMERGENCY SPILLWAY ELEV. 472.00

PROPOSED 30" STOP SIGN

PROPOSED DRIVEWAY PAVING

15.00' WIDE +DRIVEWAY

EXISTING MANHOLE

EXISTING 18" BPB 469.5
EXISTING CONCRETE HEADWALL STRUCTURE

VERITAS PROPERTIES LLC
DB 1255 PG 466 MAP 12
PARCEL 12.1

BIORETENTION 2
BOTTOM: 470.0
TOP: 472.5

N 15°32'52" E 169.69'

VERITAS PROPERTIES LLC
DB 1275 PG 458 MAP 17
PARCEL 12.3

PROPOSED WOODEN LANDSCAPING FENCE
4' - 6' TALL

S 14°42'04" W 169.76'

CURFMAN MEGAN C.
DB 1167 PG 265 MAP 12
PARCEL 13

PROPOSED CONCRETE SIDEWALK

TRAFFIC ARROW (TYP)

DUMPSTER ENCLOSURE

EXISTING CLEANOUT

BIORETENTION 1
BOTTOM: 470.0
TOP: 472.5

EMERGENCY SPILLWAY ELEV. 472.00

N 51°23'15" W 101.47'

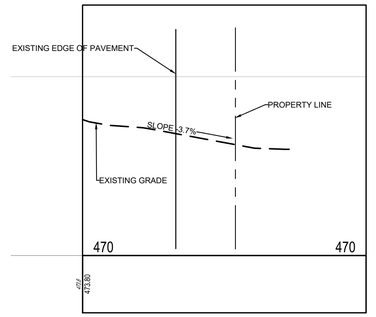
PEACH TREE INVESTMENTS LLC
DB 1103 PG 493 MAP 12
PARCEL 17

PEACH TREE INVESTMENTS LLC
DB 1103 PG 493 MAP 12
PARCEL 17

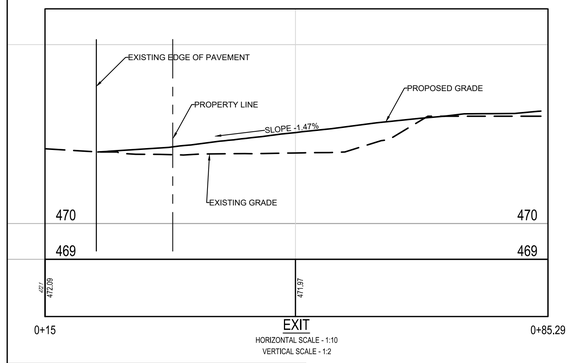
ARCADIA COMMUNITIES LLC
DB 1163 PG 322 MAP 12A
PARCEL PARK

LEGEND:
PROPOSED TREE

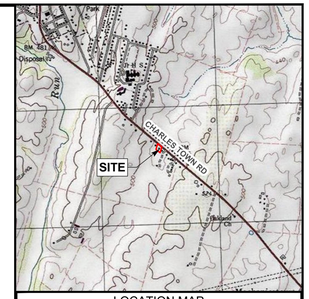
GRAPHIC SCALE: 1" = 10'
10 0 10 20



ENTRANCE
HORIZONTAL SCALE - 1:10
VERTICAL SCALE - 1:2



EXIT
HORIZONTAL SCALE - 1:10
VERTICAL SCALE - 1:2



LOCATION MAP
SCALE: 1" = 2000'

NO.	DATE	DESCRIPTION	INT.
0	2023-07-07	FOR SUBMISSION	DMJ
1	2023-08-15	PER CITY ENGINEER COMMENTS	DMJ

CALL BEFORE YOU DIG!
WEST VIRGINIA LAW REQUIRES:
3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE
AND
10 WORKING DAYS IN DESIGN STATE
– STOP CALL
West Virginia One Call System, Inc
WEST VIRGINIA 811
CALL BEFORE YOU DIG! Dial 811 or 800.245.4848
www.WV811.com
SERIAL NO.

SEAL
JOSEPH J. HUMMEL
REGISTERED
19809
STATE OF WEST VIRGINIA
PROFESSIONAL ENGINEER

JHA Companies
ENGINEERS
SURVEYORS
ENVIRONMENTAL
GIS MAPPING
www.jhacompanies.com
844-542-4757
362 W. BURR BLVD. STE 3
KEARNEYSVILLE, WV 25430
PA • OH • NY • WV • VA • MD

PROJECT ID:	DRAWN:
2022-1685	DMJ
DATE:	DESIGN:
2023-07-07	JAB
SCALE:	CHECKED:
NOTED	JDH

SITE PLAN
FOR
JOAN AND JOE'S COFFEE
LOCATED IN
CHARLES TOWN,
JEFFERSON COUNTY,
WEST VIRGINIA

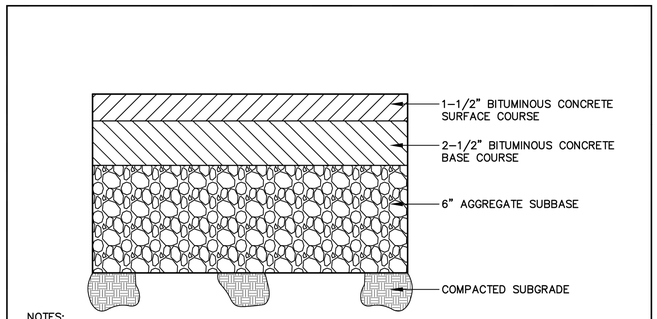
TITLE:
SITE PLAN

PLAN STATUS:
SITE PLAN

SHEET NO.
C-2.00

Aug 18, 2023, 3:18pm, DJumper, R:\Projects\2022\2022-1685 Joon and Joe's Coffee – Site Plan\CAD\SHEET FILES\SITE PLAN (2022-1685) 24X36.dwg
Layout: C-2.00 SITE PLAN

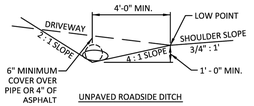
THESE DRAWINGS SHALL NOT BE UTILIZED BY ANY PERSON, FIRM OR CORPORATION WITHOUT THE SPECIFIC WRITTEN PERMISSION OF JHA COMPANIES



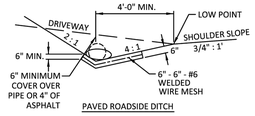
NOTES:

1. ALL BASE AND SUBGRADE MATERIAL SHALL BE COMPACTED TO 95% THEORETICAL MAXIMUM DENSITY AS DETERMINED BY AASHTO T-99 METHOD A, WITHIN A ±2% OF OPTIMUM MOISTURE.

	STANDARD DETAIL	STANDARD NUMBER
	TYPICAL DRIVEWAY/PARKING PAVING SECTION	K-1

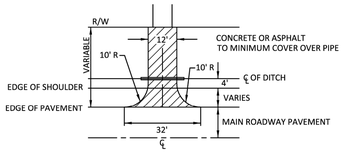


UNPAVED ROADSIDE DITCH



PAVED ROADSIDE DITCH

A PAVED DITCH IS REQUIRED WHERE SOIL CONDITIONS AND RUNOFF VELOCITIES WILL CAUSE EROSION.

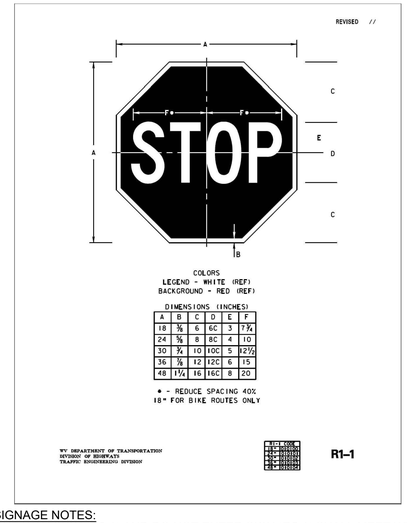


NOTES:

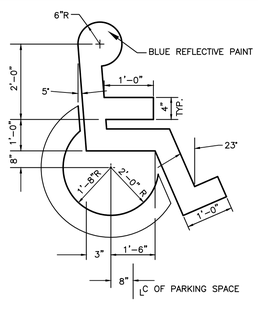
1. ALL CULVERTS SHALL BE SIZED IN ACCORDANCE WITH THE WVDOH DRAINAGE MANUAL - CURRENT EDITION.
2. DRIVEWAYS SHALL BE SURFACED FROM THE EDGE OF PAVEMENT TO THE PROPERTY LINE WITH THE SAME TYPE OF SURFACING USED ON THE STREET.
3. ALL DRIVEWAY GRADES SHALL START BACK OF THE SHOULDER LINE.
4. IN CUT SECTIONS, SIDES OF THE DRIVEWAY SHALL BE GRADED TO A MAXIMUM 3:1 SLOPE.
5. THE DITCH LINE MAY BE MOVED BACK TO PROVIDE REQUIRED COVER. THE TRANSITION OF THE DITCH LINE SHALL BE SMOOTH WITH A MINIMUM TRANSITION LENGTH OF 10 FEET.

NOT TO SCALE

	DRIVEWAY ENTRANCE WITH NO CURB AND GUTTER City of Charles Town	DE-1



SIGNAGE NOTES:
ONE WAY SIGN (R6-1) AND DO NOT ENTER SIGN (R5-1) SHALL MEET WVDOH REQUIREMENTS.

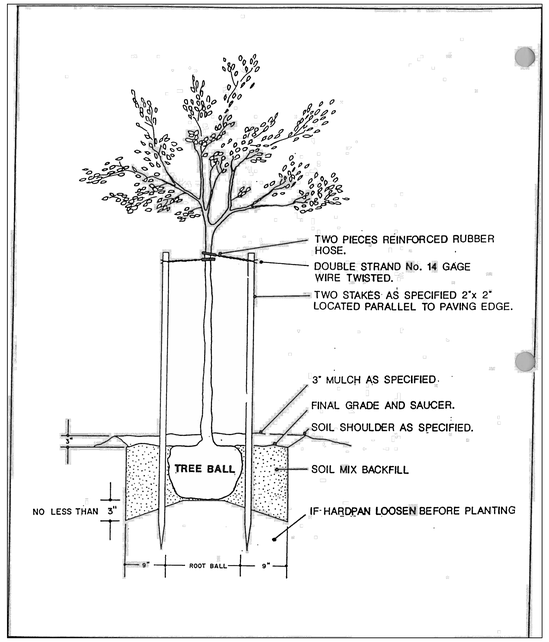


INTERNATIONAL HANDICAP SYMBOL

NOT TO SCALE
NOT FOR USE IN R.O.W.

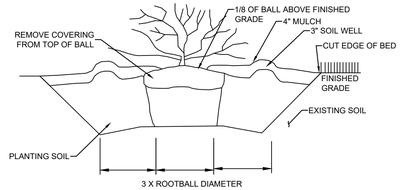
ANSI 117.1 REQUIREMENTS--ACCESSIBLE PARKING SPACES AND PASSENGER LOADINGS ZONES

1. SIGNAGE: ACCESSIBLE PARKING SPACES SHALL BE DESIGNATED AS RESERVED BY A SIGN SHOWING THE SYMBOL OF ACCESSIBILITY. VAN ACCESSIBLE SPACES SHALL HAVE AN ADDITIONAL SIGN "VAN-ACCESSIBLE" MOUNTED BELOW THE SYMBOL OF ACCESSIBILITY. SUCH SIGNS SHALL BE LOCATED SO THEY CONNOT BE OBSCURED BY A VEHICLE IN THE SPACE.
2. ACCESSIBLE PARKING SPACES SERVING A PARTICULAR BUILDING SHALL BE LOCATED ON THE SHORTEST ACCESSIBLE OF TRAVEL FROM ADJACENT PARKING TO AN ACCESSIBLE ENTRANCE.
3. ACCESSIBLE PARKING SPACES SHALL BE AT LEAST 96 INCHES WIDE. PARKING ACCESS AISLES SHALL BE A MINIMUM OF 60 INCHES WIDE AND MUST BE PART OF AN ACCESSIBLE ROUTE TO THE BUILDING OR FACILITY ENTRANCE. TWO ACCESSIBLE PARKING SPACES MAY SHARE A COMMON ACCESS AISLE. PARKING SPACES AND ACCESS AISLES SHALL BE LEVEL SURFACE SLOPES NOT EXCEEDING 1:50 (2%) IN ALL DIRECTIONS. VAN ACCESSIBILITY SPACES MUST BE AT LEAST 96 INCHES WIDE WITH AN AISLE WIDTH OF 60 INCHES MIN. VAN PARKING SPACES SHALL BE 132" MINIMUM IN WIDTH WITH A 60" ACCESS AISLE OR 96" IN WIDTH WITH A 96" ACCESS AISLE.



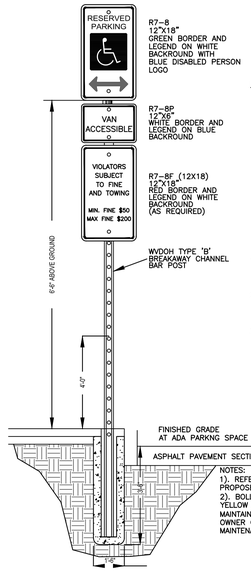
TREE PLANTING DETAIL

NOT TO SCALE
NOT FOR USE IN R.O.W.



SHRUB/PERENNIAL PLANTING DETAIL

NOT TO SCALE
NOT FOR USE IN R.O.W.



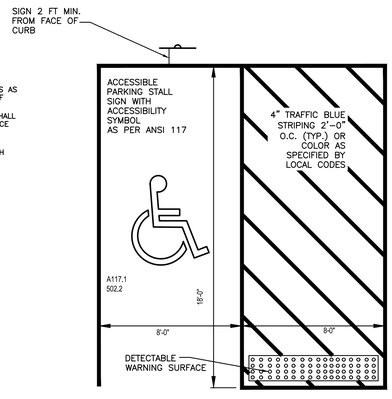
NOTES

1. SIGNS SHALL BE SETBACK 2' FROM CURBLINES OR OTHER OBSTRUCTIONS AS MEASURED FROM THE FACE/EDGE OF THE SIGN.
2. RESERVED PARKING SPACE SIGNS SHALL CONFORM TO DEPARTMENT OF JUSTICE "ADA STANDARDS FOR ACCESSIBLE DESIGN" AS AMENDED.
3. ALL SIGNS SHALL BE INSTALLED WITH ACORN NUT FASTENERS.

NOTES:
1). REFER TO PLAN SET FOR LOCATIONS OF PROPOSED BOLLARDS.
2). BOLLARDS SHALL BE PAINTED TRAFFIC YELLOW AND MUST BE PERPETUALLY MAINTAINED / REPAINTED BY PROPERTY OWNER OR PARTY RESPONSIBLE FOR SITE MAINTENANCE.

HANDICAP PARKING SIGN DETAIL

NOT TO SCALE
NOT FOR USE IN R.O.W.



STANDARD HANDICAP PARKING DETAILS

NOT TO SCALE
NOT FOR USE IN R.O.W.

LANDSCAPING PLANTING PROCEDURE:

1. ALL REQUIRED TREES AND SHRUBS SHALL BE PLANTED IN ACCORDANCE WITH THE SPECIFICATIONS OF THE ANSI (AMERICAN NATIONAL STANDARDS INSTITUTE) A300 BEST MANAGEMENT PRACTICES.
2. ALL TREES SHALL BE PLANTED NO CLOSURE THAN THREE (3) FEET TO THE EDGE OF SIDEWALKS, CURBS, OR OTHER PAVEMENT.
3. EVERGREEN TREES SHALL BE A MINIMUM OF SIX (6) FEET IN HEIGHT AT THE TIME OF PLANTING.
4. SHRUBS SHALL BE A MINIMUM THREE (3) GALLON CONTAINER AT THE TIME OF PLANTING.
5. ALL PLANTINGS SHALL MAINTAIN A MINIMUM OF 18" AT THE TIME OF PLANTING.
6. ALL SHRUB MATERIAL SHALL BE A MINIMUM OF 3' AT MATURITY.

LANDSCAPING MAINTENANCE:

1. THE OWNER, DEVELOPER, AND/OR BUILDER WHO IS RESPONSIBLE FOR PLANTING REQUIRED LANDSCAPING SHALL BE RESPONSIBLE FOR MAINTAINING THE LANDSCAPING IN A STATE OF GOOD HEALTH FOR ONE (1) YEAR AFTER A DEVELOPMENT COMPLETION PERMIT IS ISSUED OR, IF SUCH A PERMIT IS NOT APPLICABLE, ONE (1) YEAR AFTER THE INSTALLED AND COMPLETED LANDSCAPING IS APPROVED BY THE SUBDIVISION ADMINISTRATOR FOLLOWING INSPECTION.
2. LANDSCAPING WILL BE INSPECTED INSPECTED AT THE TIME OF BOND RELEASE AND, IN CASE OF MATERIALS THAT HAVE NOT BEEN PLANTED AND ESTABLISHED IN GOOD CONDITION, THE RESPONSIBLE PERSON WILL BE REQUIRED TO POST A MAINTENANCE BOND FOR ONE YEAR TO GUARANTEE THE SURVIVAL OF MATERIALS.
3. APPROVED LANDSCAPING SHALL BE MAINTAINED IN A HEALTHY CONDITION WITH ADEQUATE WATERING, FERTILIZATION, AND GROOMING IN ACCORDANCE WITH INDUSTRY STANDARDS.

PROHIBITED SPECIES:
CERTAIN PLANT MATERIAL SPECIES IS PROHIBITED DUE TO INVASIVENESS, HARDINESS, MAINTENANCE, OR OTHER NUISANCE FEATURES. PLEASE SEE THE LIST OF PROHIBITED SPECIES LISTED BELOW OR IN APPENDIX C OF THE SUBDIVISION AND LAND DEVELOPMENT ORDINANCE OF THE CITY OF CHARLES TOWN, WV.

Prohibited Species

The following plants are prohibited from being used to meet these requirements due to problems with hardiness, maintenance, or nuisance:

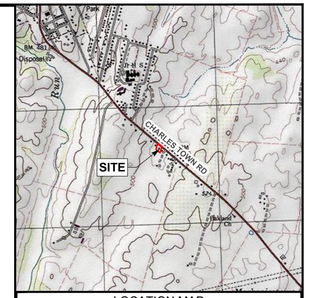
Prohibited Species	
Kudzu Vine	Garlic Mustard
Purple Loosestrife	Paulownia
Japanese Honeysuckle	Multiflora Rose
Shrub Honeysuckle	Siberian Elm
Autumn Olive	Silver Popular
Common Privet	Mimosa
Tree of Heaven	Mulberry
Lespedeza	Silver Maple
Bradford Pear	Norway Maple
Elm	Box Elder
All Varity of Ash Trees	Bamboo

Any plant material not permitted by the West Virginia Invasive Species Strategic Plan and Voluntary Guidelines 2014, or as amended.



PROPOSED LANDSCAPE FENCE

NOT TO SCALE
NOT FOR USE IN R.O.W.



LOCATION MAP
SCALE: 1" = 2000'

NO.	DATE	DESCRIPTION	INT.
0	2023-07-07	FOR SUBMISSION	DMJ
1	2023-08-15	PER CITY ENGINEER COMMENTS	DMJ

CALL BEFORE YOU DIG!
WEST VIRGINIA LAW REQUIRES:
3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE
AND
10 WORKING DAYS IN DESIGN STATE
– STOP CALL
West Virginia One Call System, Inc
WEST VIRGINIA 811
CALL BEFORE YOU DIG! Dial 811 or 800.245.4848
www.WV811.com
SERIAL NO.

SEAL

JOSEPH H. J. JOHNSON II
REGISTERED
18609
STATE OF WEST VIRGINIA
PROFESSIONAL ENGINEER

JHA Companies
ENGINEERS
SURVEYORS
ENVIRONMENTAL
GIS MAPPING
www.jhacompanies.com
844-542-4757
362 W. BURR BLVD. STE 3
KEARNEYSVILLE, WV 25430
PA • OH • NY • WV • VA • MD

PROJECT ID:	DRAWN:
2022-1685	DMJ
DATE:	DESIGN:
2023-07-07	JAB
SCALE:	CHECKED:
NOTED	JDH

SITE PLAN
FOR
JOAN AND JOE'S COFFEE
LOCATED IN
CHARLES TOWN,
JEFFERSON COUNTY,
WEST VIRGINIA

TITLE:
SITE DETAILS

PLAN STATUS:	SHEET NO.
SITE PLAN	C-2.01

Aug 18, 2023 3:19pm Dunmyer R:\Projects\2022\2022-1685 Joan and Joe's Coffee - Site Plan\CAD\SHEET FILES\DETAILS (2022-1685) 24X36.dwg
Layout: C-2.01 SITE DETAILS

THESE DRAWINGS SHALL NOT BE UTILIZED BY ANY PERSON, FIRM OR CORPORATION WITHOUT THE SPECIFIC WRITTEN PERMISSION OF JHA COMPANIES

WV ROUTE 115 - CHARLES TOWN ROAD
60' R/W

INLET
TOP=472.8
10" RCP
24" RCP

DP-B

EXISTING CONCRETE SWALE

S 50°39'33" E 100.11'

INLET
TOP=469.9
18" CMP 468.5
18" RCP 468.3

INLET
TOP=471.5
18" CMP

EXISTING ENTRANCE TO REMAIN

EXISTING MANHOLE

EXISTING MANHOLE

EXISTING 18" BPB 468.5
EXISTING CONCRETE HEADWALL STRUCTURE

EMERGENCY SPILLWAY ELEV: 472.00

VERITAS PROPERTIES LLC
DB 1255 PG 466 MAP 12
PARCEL 12.1

BIORETENTION 2
BOTTOM: 470.0
TOP: 472.5

DA-B BYPASS
0.16 ACRES
0.12 ACRES LOD

DA TO BIORETENTION 2
0.30 ACRES
0.16 ACRES LOD

N 15°23'22" E 168.67'

VERITAS PROPERTIES LLC
DB 1275 PG 458 MAP 17
PARCEL 12.3

DA TO BIORETENTION 1
0.37 ACRES
0.23 ACRES LOD

CURFMAN MEGAN C.
DB 1167 PG 265 MAP 12
PARCEL 13

PROPOSED CONCRETE SIDEWALK

PEACH TREE INVESTMENTS LLC
DB 1103 PG 493 MAP 12
PARCEL 17

REFUSE COLLECTION AREA

EXISTING CLEANOUT

BIORETENTION 1
BOTTOM: 470.0
TOP: 472.5

DP-A

EMERGENCY SPILLWAY ELEV: 472.00

N 51°23'15" W 101.47'

PEACH TREE INVESTMENTS LLC
DB 1103 PG 493 MAP 12
PARCEL 17

DA-A BYPASS
0.05 ACRES
0.01 ACRES LOD

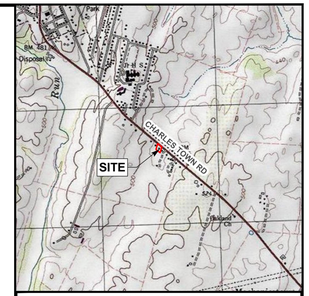
ARCADIA COMMUNITIES LLC
DB 1163 PG 322 MAP 12A
PARCEL PARK

LEGEND:
SWM TREATMENT AREA

GRAPHIC SCALE: 1" = 10'
10 0 10 20

QUANTITY COMPARISON – OVERALL		
RAINFALL EVENT	PRE–DEVELOPMENT	POST–DEVELOPMENT
1 YEAR	0.45 CFS	0.16 CFS
2 YEAR	0.78 CFS	0.26 CFS
10 YEAR	1.85 CFS	0.67 CFS
100 YEAR	4.19 CFS	4.30 CFS

QUALITY COMPARISON – OVERALL	
RAINFALL EVENT	VOLUME (CF)
BIORETENTION	909
RUNOFF REDUCTION REQUIRED	934
RUNOFF REDUCTION VOLUME ACHIEVED	944
RUNOFF REDUCTION VOLUME REMAINING	–10



LOCATION MAP
SCALE: 1" = 2000'

NO.	DATE	DESCRIPTION	INT.
0	2023-07-07	FOR SUBMISSION	DMJ
1	2023-08-15	PER CITY ENGINEER COMMENTS	DMJ

CALL BEFORE YOU DIG!
WEST VIRGINIA LAW REQUIRES:
3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE
AND
10 WORKING DAYS IN DESIGN STATE
– STOP CALL
West Virginia One Call System, Inc
WEST VIRGINIA 811
CALL BEFORE YOU DIG! Dial 811 or 800.245.4848
www.WV811.com
SERIAL NO.

SEAL
JOSEPH H. JHA II
REGISTERED
19809
STATE OF WEST VIRGINIA
PROFESSIONAL ENGINEER

JHA Companies
ENGINEERS
SURVEYORS
ENVIRONMENTAL
GIS MAPPING
www.jhacompanies.com
844-542-4757
362 W. BURR BLVD. STE 3
KEARNEYSVILLE, WV 25430
PA • OH • NY • WV • VA • MD

PROJECT ID:	DRAWN:
2022-1685	DMJ
DATE:	DESIGN:
2023-07-07	JAB
SCALE:	CHECKED:
NOTED	JDH

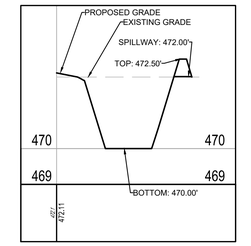
SITE PLAN
FOR
JOAN AND JOE'S COFFEE
LOCATED IN
CHARLES TOWN,
JEFFERSON COUNTY,
WEST VIRGINIA

TITLE:
STORMWATER MANAGEMENT PLAN

PLAN STATUS: SITE PLAN
SHEET NO. C-3.00

Aug 18, 2023 3:19pm DJumper R:\Projects\2022\2022-1685 Joon and Joe's Coffee – Site Plan\CAD\SHEET FILES\SWM CONCEPT PLAN (2022-1685) 24X36.dwg
Layout: C-3.00 STORMWATER MANAGEMENT PLAN

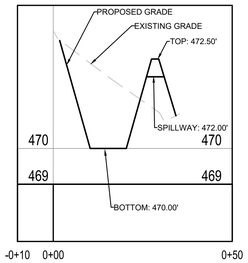
THESE DRAWINGS SHALL NOT BE UTILIZED BY ANY PERSON, FIRM OR CORPORATION WITHOUT THE SPECIFIC WRITTEN PERMISSION OF JHA COMPANIES



BIORETENTION 1

HORIZONTAL SCALE - 1:10

VERTICAL SCALE - 1:2



BIORETENTION 2

HORIZONTAL SCALE - 1:10

VERTICAL SCALE - 1:2

BIORETENTION 1 QUANTITY ANALYSIS			
STORM EVENT	INFLOW	OVERFLOW	WATER SURFACE ELEVATION
2 YEAR	0.42 CFS	0.01 CFS	472.00'
10 YEAR	0.92 CFS	0.58 CFS	472.12'
100 YEAR	1.99 CFS	1.96 CFS	472.28'

BIORETENTION 1 QUALITY ANALYSIS	
RAINFALL EVENT	VOLUME (CF)
BIORETENTION	528 CF
RUNOFF REDUCTION REQUIRED	422 CF
RUNOFF REDUCTION ACHIEVED	528 CF
RUNOFF REDUCTION VOLUME REMAINING	-106 CF

BIORETENTION 2 QUANTITY ANALYSIS			
STORM EVENT	INFLOW	OVERFLOW	WATER SURFACE ELEVATION
2 YEAR	0.37 CFS	0.00 CFS	471.63
10 YEAR	0.78 CFS	0.12 CFS	472.04
100 YEAR	1.66 CFS	1.60 CFS	472.25'

BIORETENTION 1 QUALITY ANALYSIS	
RAINFALL EVENT	VOLUME (CF)
BIORETENTION	416 CF
RUNOFF REDUCTION REQUIRED	511 CF
RUNOFF REDUCTION ACHIEVED	416 CF
RUNOFF REDUCTION VOLUME REMAINING	95 CF

SOIL MEDIA MIXTURE:

THE SOIL MEDIA IS PERHAPS THE MOST IMPORTANT ELEMENT OF A BIORETENTION FACILITY IN TERMS OF LONG-TERM PERFORMANCE. THE FOLLOWING ARE KEY FACTORS TO CONSIDER IN DETERMINING AN ACCEPTABLE SOIL MEDIA MIXTURE.

- GENERAL SOIL MEDIA COMPOSITION
1. 70% TO 88% SAND
2. 8% TO 26% TOPSOIL; AND
3. 3% TO 5% ORGANIC MATTER (AGED COMPOST)

Table BR-5. Soil Media Criteria and Testing for Bioretention

Soil Media Criterion	Description	Standard(s)		
General Composition	Soil media must have the proper proportions sand, fines, and organic matter to promote plant growth, drain at the proper rate, and filter pollutants	70% to 88% sand; 8% to 26% top soil and 3% to 5% organic matter (aged compost)		
Sand	Silica based coarse aggregate[1] Locally-approved pulverized glass may be substituted if the local authority undertakes testing to verify compliance with the specification and also lack of heavy metals	Sieve 3/8 in No. 4 No. 8 No. 16 No. 30 No. 50 No. 100	Size 9.50 mm 4.75 mm 2.36 mm 1.18 mm 0.6 mm 0.3 mm 0.15 mm	% Passing 100 95 to 100 80 to 100 45 to 85 15 to 60 3 to 15 0 to 4
		Effective Particle size (D10) > 0.3mm Uniformity Coefficient (D60/D10) < 4.0		
Top Soil	Loamy sand or Sandy Loam	USDA Textural Triangle		
Organic Matter	Well aged, clean compost	Appendix D		
P-Index or Phosphorus (P) content	Soil media with high P levels will export P through the media and potentially to downstream conveyances or receiving waters	P content = 7 to 23 mg/kg		
Cation Exchange Capacity (CEC)	The CEC is determined by the amount of humus or organic matter. Higher CEC will promote pollutant removal	CEC > 10 milliequivalents per 100 grams		
Infiltration Rate	This refers to the infiltration rate of the soil media, and not the underlying soil A minimum rate is required to allow the soil media to properly drain	Minimum Infiltration Rate = 1 – 2 inches/hour (most soil media will have much higher rates)		
Soil Media Depth	The depth of soil media for various applications	Soil media depths for Level 1 and Level 2 design are specified in Table BR-1. If trees are included in the bioretention planting plan, tree planting holes in the filter bed must be at least 4 feet deep to provide enough soil volume for the root structure of mature trees. In addition, higher proportions of topsoil (30%) and aged compost (20%) should be added to these planting holes compared to the rest of the soil media. Turf, perennials or shrubs should be used instead of trees to landscape shallower filter beds.		

[1] *Many specifications for sand refer to ASTM C-33.The ASTM C-33 specification allows a particle size distribution that contains a large fraction of fines (silt and clay sized particles - < 0.05 mm). The smaller fines fill the voids between the larger sand sized particles, resulting in smaller and more convoluted pore spaces. While this condition provides a high degree of treatment, it also encourages clogging of the remaining void spaces with suspended solids and biological growth, resulting in a greater chance of a restrictive biomat forming. By limiting the fine particles allowed in the sand component, the combined media recipe of sand and the fines associated with the soil and organic material will be less prone to clogging while also providing an adequate level of filtration and retention.*

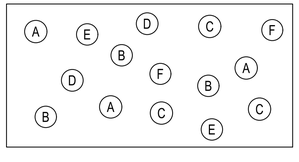
BIORETENTION INSTALLATION:

THE FOLLOWING IS A TYPICAL CONSTRUCTION SEQUENCE TO PROPERLY INSTALL A BIORETENTION BASIN. THE CONSTRUCTION SEQUENCE FOR RESIDENTIAL RAIN GARDENS (SEE SUPPLEMENT 4.2.3.C) IS MORE SIMPLIFIED. THESE STEPS MAY BE MODIFIED TO REFLECT DIFFERENT BIORETENTION APPLICATIONS OR EXPECTED SITE CONDITIONS:

1. CONSTRUCTION OF THE BIORETENTION AREA MAY ONLY BEGIN AFTER THE ENTIRE CDA HAS BEEN STABILIZED WITH VEGETATION. IT MAY BE NECESSARY TO BLOCK CERTAIN CURB OR OTHER INLETS WHILE THE BIORETENTION AREA IS BEING CONSTRUCTED. THE PROPOSED SITE SHOULD BE CHECKED FOR EXISTING UTILITIES PRIOR TO ANY EXCAVATION
2. THE DESIGNER AND THE INSTALLER SHOULD HAVE A PRECONSTRUCTION MEETING, CHECKING THE BOUNDARIES OF THE CDA AND THE ACTUAL INLET ELEVATIONS TO ENSURE THEY CONFORM TO ORIGINAL DESIGN. SINCE OTHER CONTRACTORS MAY BE RESPONSIBLE FOR CONSTRUCTING PORTIONS OF THE SITE, IT IS QUITE COMMON TO FIND SUBTLE DIFFERENCES IN SITE GRADING, DRAINAGE AND PAVING ELEVATIONS THAT CAN PRODUCE HYDRAULICALLY IMPORTANT DIFFERENCES FOR THE PROPOSED BIORETENTION AREA. THE DESIGNER SHOULD CLEARLY COMMUNICATE, IN WRITING, ANY PROJECT CHANGES DETERMINED DURING THE PRECONSTRUCTION MEETING TO THE INSTALLER AND THE PLAN REVIEW/INSPECTION AUTHORITY.
3. TEMPORARY APPROVED EROSION AND SEDIMENT CONTROLS ARE NEEDED DURING CONSTRUCTION OF THE BIORETENTION AREA TO DIVERT STORMWATER AWAY FROM THE BIORETENTION AREA UNTIL IT IS COMPLETED. SPECIAL PROTECTION MEASURES SUCH AS EROSION CONTROL FABRICS MAY BE NEEDED TO PROTECT VULNERABLE SIDE SLOPES FROM EROSION DURING THE CONSTRUCTION PROCESS. IN CASES WHERE THE BIORETENTION IS CO-LOCATED WITH EROSION AND SEDIMENT CONTROL PRACTICES (E.G., SEDIMENT TRAPS), THE CONDITIONS NOTED IN SECTION BR-7.1 MUST BE FOLLOWED.
4. ANY PRE-TREATMENT CELLS SHOULD BE EXCAVATED FIRST AND THEN SEALED TO TRAP SEDIMENTS
5. EXCAVATORS OR BACKHOES SHOULD WORK FROM THE SIDES TO EXCAVATE THE BIORETENTION AREA TO ITS APPROPRIATE DESIGN DEPTH AND DIMENSIONS. EXCAVATING EQUIPMENT SHOULD HAVE SCOOPS WITH ADEQUATE REACH SO THEY DO NOT HAVE TO SIT INSIDE THE FOOTPRINT OF THE BIORETENTION AREA. CONTRACTORS SHOULD USE A CELL CONSTRUCTION APPROACH IN LARGER BIORETENTION BASINS, WHEREBY THE BASIN IS SPLIT INTO 500 TO 1,000 SQ. FT. TEMPORARY CELLS WITH A 10-15 FOOT EARTH BRIDGE IN BETWEEN, SO THAT CELLS CAN BE EXCAVATED FROM THE SIDE.
6. IT MAY BE NECESSARY TO RIP THE BOTTOM SOILS TO A DEPTH OF 6 TO 12 INCHES TO PROMOTE GREATER INFILTRATION.
7. IF USING A FILTER FABRIC, PLACE THE FABRIC ON THE SIDES OF THE BIORETENTION AREA WITH A 6-INCH OVERLAP ON THE SIDES. IF AN UNDERDRAIN STONE STORAGE LAYER WILL BE USED, PLACE THE APPROPRIATE DEPTH OF NO.57 STONE ON THE BOTTOM, INSTALL THE PERFORATED UNDERDRAIN PIPE, PACK NO.57 STONE TO 3 INCHES ABOVE THE UNDERDRAIN PIPE. ON TOP OF THE NO.57 STONE, ADD 2 INCHES OF CHOKER STONE (NO.8 OR NO.89 STONE) AND THEN 2 TO 4 INCHES OF CONSTRUCTION SAND AS A FILTER BETWEEN THE UNDERDRAIN AND THE SOIL MEDIA LAYER. IF NO STONE STORAGE LAYER IS USED, START WITH 6 INCHES OF NO.57 STONE ON THE BOTTOM, AND PROCEED WITH THE LAYERING AS DESCRIBED ABOVE.
8. DELIVER THE SOIL MEDIA FROM AN APPROVED VENDOR, AND STORE IT ON AN ADJACENT IMPERVIOUS AREA OR PLASTIC SHEETING. APPLY THE MEDIA IN 12-INCH LIFTS UNTIL THE DESIRED TOP ELEVATION OF THE BIORETENTION AREA IS ACHIEVED. WAIT A FEW DAYS TO CHECK FOR SETTLEMENT, AND ADD ADDITIONAL MEDIA, AS NEEDED, TO ACHIEVE THE DESIGN ELEVATION.
9. PREPARE PLANTING HOLES FOR ANY TREES AND SHRUBS, INSTALL THE VEGETATION, AND WATER ACCORDINGLY. INSTALL ANY TEMPORARY IRRIGATION.
10. PLACE THE SURFACE COVER IN BOTH CELLS (MULCH, RIVER STONE OR TURF), DEPENDING ON THE DESIGN. IF COIR OR JUTE MATTING WILL BE USED IN LIEU OF MULCH, THE MATTING WILL NEED TO BE INSTALLED PRIOR TO PLANTING (STEP 9), AND HOLES OR SLITS WILL HAVE TO BE CUT IN THE MATTING TO INSTALL THE PLANTS.
11. INSTALL THE PLANT MATERIALS AS SHOWN IN THE LANDSCAPING PLAN, AND WATER THEM DURING WEEKS OF NO RAIN FOR THE FIRST TWO MONTHS.
12. IF CURB CUTS OR INLETS ARE BLOCKED DURING BIORETENTION INSTALLATION, UNBLOCK THESE AFTER THE DRAINAGE AREA AND SIDE SLOPES HAVE GOOD VEGETATIVE COVER. IT IS RECOMMENDED THAT UNBLOCKING CURB CUTS AND INLETS TAKE PLACE AFTER TWO TO THREE STORM EVENTS IF THE DRAINAGE AREA INCLUDES NEWLY INSTALLED ASPHALT, SINCE NEW ASPHALT TENDS TO PRODUCE A LOT OF FINES AND GRIT DURING THE FIRST SEVERAL STORMS.
13. CONDUCT THE FINAL CONSTRUCTION INSPECTION (SEE BELOW), THEN LOG THE GPS COORDINATES FOR EACH BIORETENTION FACILITY AND SUBMIT THEM FOR ENTRY INTO THE LOCAL MAINTENANCE TRACKING DATABASE.

LIST OF PLANTS FOR BIORETENTION AREA		
	NAME	QUANTITY
A	SWITCHGRASS - *PANICUM VIRGATUM*	3 PER 200 SF
B	HIGHBUSH BLUEBERRY - *VACCINIUM CORYMBOSUM*	3 PER 200 SF
C	INKBERRY - *ILEX GLABRA*	3 PER 200 SF
D	WINTERBERRY - *ILEX VERTICILLATA*	2 PER 200 SF
E	SPICEBUSH - *LINDERA BENZOIN*	2 PER 200 SF
F	PURPLE CONEFLOWER - *ECHINACEA PURPUREA*	2 PER 200 SF

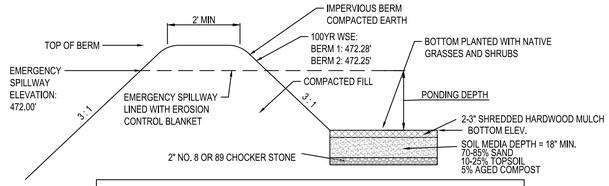
NOTE:
LOCATION AND QUANTITY OF PLANTINGS IS SHOW FOR COMPLIANCE PURPOSES.
ACTUAL ORGANIZATION AND POSITIONING MAY BE VARIED WITH THE APPROVAL OF OWNER AND ENGINEER.



PLANTING PLAN - TYPICAL
BIORETENTION BERM BOTTOM

1"=5'

GRAPHIC SCALE:



BIORETENTION BERM INFORMATION			
	BIORETENTION BERM 1		BIORETENTION BERM 2
TOP OF BERM	472.50	TOP OF BERM	472.50
BOTTOM ELEVATION	470.00	BOTTOM ELEVATION	470.00
EMERGENCY SPILLWAY	472.00	EMERGENCY SPILLWAY	472.00
PONDING DEPTH	2.00'	PONDING DEPTH	2.00'
LINING	NAG S200 STAPLE PATTERN E	LINING	NAG S200 STAPLE PATTERN E

BIORETENTION AREA MAINTENANCE NOTES

1. THE INFILTRATION AREA IS TO BE CHECKED REGULARLY FOR ANY SIGNS OF SETTLEMENT AND/OR EROSION AND TO ENSURE INFILTRATION.
2. THE INFILTRATION AREA IS TO BE CLEARED OF ANY TRASH, DEBRIS, INVASIVE SPECIES AND/OR WOODY VEGETATION.
3. THE INFILTRATION AREA IS TO BE FREE OF SILT AND HAVE PROPER VEGETATION.
4. THE INFILTRATION AREA IS TO BE INSPECTED FOR SIGNS OF FLOW CHANNELIZATION.
5. THE INFILTRATION AREA IS TO BE RESTORED TO A LEVEL GRADIENT IMMEDIATELY AFTER DEFICIENCIES ARE OBSERVED.

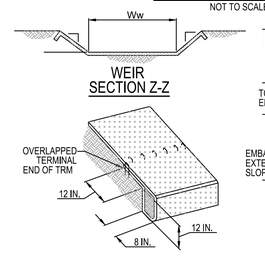
BIORETENTION AREA INSTALLATION NOTES

1. EXCAVATE AREA WITH TRACKED VEHICLES TO PREVENT SOIL COMPACTION.
2. SCARIFY BOTTOM OF INFILTRATION AREA.
3. IN CONDITIONS WHERE THE LIMITING ZONE IS ENCOUNTERED, THE CONTRACTOR SHALL OVER EXCAVATE THE INFILTRATION AREA AND ADD 24" OF CLEAN, NON-COMPACTED TOPSOIL UNDER THE BASIN BOTTOM.
4. SIDE SLOPES TO BE LINED WITH EROSION CONTROL BLANKET (NORTH AMERICAN GREEN S75 OR APPROVED)

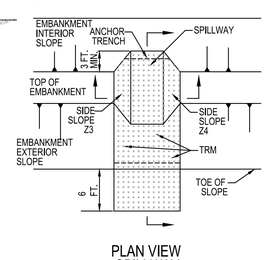
NOTES:
1. BERM TO BE MECHANICALLY COMPACTED IN 8" LIFTS TO A MAXIMUM DRY WEIGHT DENSITY OF 98% OF THE FULL MATERIAL.
2. TOPSOIL SHALL BE REMOVED AND SURFACE SCARIFIED PRIOR TO PLACEMENT OF BERM FILL.
3. A SOILS EVALUATION TO DETERMINE SOIL SUITABILITY FOR THE PROPOSED INFILTRATION FACILITY SHALL BE PERFORMED DURING CONSTRUCTION MEETING TOWNSHIP ORDINANCE REQUIREMENTS. RESULTS OF THE SOIL TESTING SHALL BE SENT TO THE TOWNSHIP AND DESIGN ENGINEERS FOR REVIEW.

BIORETENTION BERM

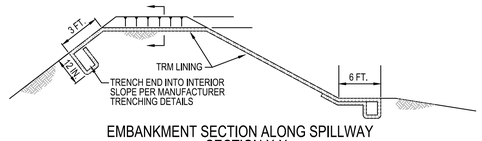
NOT TO SCALE



TOE OF SLOPE OF SPILLWAY



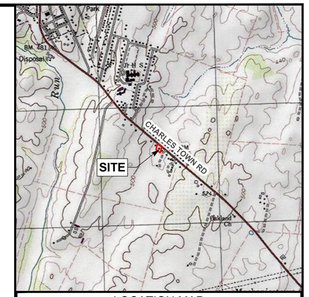
PLAN VIEW
SPILLWAY



EMBANKMENT SECTION ALONG SPILLWAY
SECTION X-X

	WEIR					LINING	
	Z3 (FT)	Z4 (FT	TOP ELEV WTE (FT)	CREST ELEV WCE (FT)	WIDTH Ww (FT)	TYPE	STAPLE PATTERN
BERM 1	3	3	472.5	472.0	5	S200	E
BERM 2	3	3	472.50	472.0	5	S200	E

BIORETENTION SPILLWAY WITH TRM LINING



LOCATION MAP

SCALE: 1" = 2000'

NO.	DATE	DESCRIPTION	INT.
0	2023-07-07	FOR SUBMISSION	DMJ
1	2023-08-15	PER CITY ENGINEER COMMENTS	DMJ

CALL BEFORE YOU DIG!

WEST VIRGINIA LAW REQUIRES:
3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE
AND
10 WORKING DAYS IN DESIGN STATE
– STOP CALL
West Virginia One Call System, Inc

WEST VIRGINIA 811
CALL BEFORE YOU DIG! Dial 811 or 800.245.4848
www.WV811.com

SERIAL NO.

SEAL

JOSEPH J. HUDAK
REGISTERED
19809
STATE OF WEST VIRGINIA
PROFESSIONAL ENGINEER

JHA Companies
ENGINEERS
SURVEYORS
ENVIRONMENTAL
GIS MAPPING
www.jhacompanies.com
844-542-4757
362 W. BURR BLVD. STE 3
KEARNEYSVILLE, WV 25430
PA • OH • NY • WV • VA • MD

PROJECT ID:	DRAWN:
2022-1685	DMJ
DATE:	DESIGN:
2023-07-07	JAB
SCALE:	CHECKED:
NOTED	JDH

SITE PLAN
FOR
JOAN AND JOE'S COFFEE
LOCATED IN
CHARLES TOWN,
JEFFERSON COUNTY,
WEST VIRGINIA

TITLE:
STORMWATER MANAGEMENT DETAILS

PLAN STATUS:	SHEET NO.
SITE PLAN	C-3.01

Aug 18, 2023, 3:19pm Dlumper R:\Projects\2022\2022-1685 Joan and Joe's Coffee – Site Plan\CAD\SHEET FILES\PCSM DETAILS (2022-1685) 24X36.dwg
Layout: C-3.01 STORMWATER MANAGEMENT DETAILS

THESE DRAWINGS SHALL NOT BE UTILIZED BY ANY PERSON, FIRM OR CORPORATION WITHOUT THE SPECIFIC WRITTEN PERMISSION OF JHA COMPANIES

WV ROUTE 115 - CHARLES TOWN ROAD
60' R/W

INLET
TOP=472.8
18" RCP
24" RCP

EXISTING
CONCRETE SWALE

SAWCUT EXISTING PAVEMENT

PROPOSED STOP BAR 12"
WHITE TYPE V THERMO

SIGHT DISTANCE LINE
10' FROM EDGE OF PAVEMENT,
5' BEHIND STOP BAR

INLET PROTECTION

S 50°39'33" E 100.11'

INLET
TOP=469.9
18" CMP, 486.5
18" RCP 486.3

UPGRADE EXISTING ENTRANCE

EXISTING
MANHOLE

EXISTING ENTRANCE TO REMAIN

EMERGENCY
SPILLWAY
ELEV 472.00

PROPOSED DRIVEWAY PAVING

INLET
TOP=471.5
18" CMP

PROPOSED
30" STOP SIGN

SSF-1

EXISTING
MANHOLE

EXISTING 18" BPB 488.5
EXISTING CONCRETE HEADWALL STRUCTURE

VERITAS PROPERTIES LLC
DB 1255 PG 466 MAP 12
PARCEL 12.1

BIORETENTION 2
BOTTOM: 470.0
TOP: 472.5

ROCK CONSTRUCTION
ENTRANCE

LIMIT OF DISTURBANCE
0.53 ACRES

N 15°32'25" E 169.89'

EXISTING COFFEE SHOP
900 SF

VERITAS PROPERTIES LLC
DB 1275 PG 458 MAP 17
PARCEL 12.3

EXISTING
GRAVEL
DRIVEWAY

EXISTING HOUSE TO BE RENOVATED INTO
PROPOSED COFFEE SHOP
1745 SF
#14840 1 STORY
BRICK FF=475.45
GAR=474.53

SF-2

N 42°24'14" W 168.05'

CURFMAN MEGAN C.
DB 1167 PG 265 MAP 12
PARCEL 13

EXISTING
GRAVEL
PARKING

ROCK CONSTRUCTION
ENTRANCE

EMERGENCY
SPILLWAY
ELEV: 472.00

BIORETENTION 1
BOTTOM: 470.0
TOP: 472.5

SF-1

REFUSE
COLLECTION
AREA

EXISTING
CLEANOUT

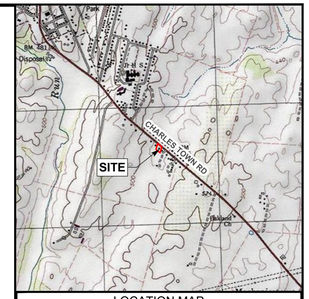
N 51°23'15" W 101.47'

PEACH TREE INVESTMENTS LLC
DB 1103 PG 493 MAP 12
PARCEL 17

PEACH TREE INVESTMENTS LLC
DB 1103 PG 493 MAP 12
PARCEL 17

ARCADIA COMMUNITIES LLC
DB 1163 PG 322 MAP 12A
PARCEL PARK

GRAPHIC SCALE: 1" = 10'
10 0 10 20



LOCATION MAP
SCALE: 1" = 2000'

NO.	DATE	DESCRIPTION	INT.
0	2023-07-07	FOR SUBMISSION	DMJ
1	2023-08-15	PER CITY ENGINEER COMMENTS	DMJ

CALL BEFORE YOU DIG!

WEST VIRGINIA LAW REQUIRES:
3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE
AND
10 WORKING DAYS IN DESIGN STATE
– STOP CALL
West Virginia One Call System, Inc

WEST VIRGINIA 811
CALL BEFORE YOU DIG! Dial 811 or 800.245.4848
www.WV811.com

SERIAL NO.

SEAL

JOSEPH J. JUNKINS
LICENSED
19809
STATE OF
WEST VIRGINIA
PROFESSIONAL ENGINEER

JHA Companies
ENGINEERS
SURVEYORS
ENVIRONMENTAL
GIS MAPPING
www.jhacompanies.com
844-542-4757
362 W. BURR BLVD. STE 3
KEARNEYSVILLE, WV 25430
PA • OH • NY • WV • VA • MD

PROJECT ID:	DRAWN:
2022-1685	DMJ
DATE:	DESIGN:
2023-07-07	JAB
SCALE:	CHECKED:
NOTED	JDH

SITE PLAN
FOR
JOAN AND JOE'S COFFEE
LOCATED IN
CHARLES TOWN,
JEFFERSON COUNTY,
WEST VIRGINIA

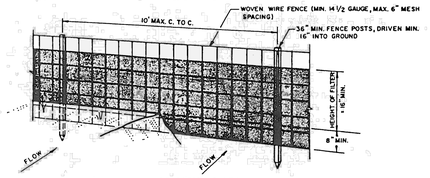
TITLE:
EROSION AND SEDIMENT CONTROL PLAN

PLAN STATUS:	SHEET NO.
SITE PLAN	C-4.00

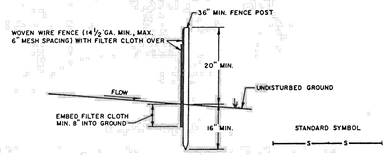
Aug 18, 2023, 3:19pm Dlumper R:\Projects\2022\2022-1685 Joes and Joe's Coffee - Site Plan\CAD\SHEET FILES\ESC PLAN (2022-1685) 24X36 - Copy.dwg
Layout: C-4.00 EROSION AND SEDIMENT CONTROL PLAN

THESE DRAWINGS SHALL NOT BE UTILIZED BY ANY PERSON FIRM OR CORPORATION WITHOUT THE SPECIFIC WRITTEN PERMISSION OF JHA COMPANIES

SILT FENCE



PERSPECTIVE VIEW



SECTION

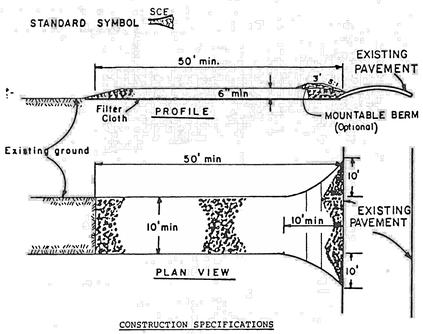
CONSTRUCTION NOTES FOR FABRICATED SILT FENCE

1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES.
2. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER-LAPPED BY SIX INCHES AND FOLDED.
4. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

POSTS: STEEL EITHER T OR U TYPE OR 2" HARDWOOD.
FENCE: WOVEN WIRE, 14 Ga., 6" Max. MESH OPENING.
FILTER CLOTH: FILTER X, MIRAFI 100X, STABI-LINKA T140N OR APPROVED EQUAL.
PREFABRICATED UNIT: GEOFAB, ENVIROFENCE, OR APPROVED EQUAL.

JEFFERSON COUNTY, WEST VIRGINIA	APPROVED: March 10, 1989 COUNTY ENGINEER	SILT FENCE	REVISIONS	DETAIL No. SC-11

STABILIZED CONSTRUCTION ENTRANCE
not to scale



CONSTRUCTION SPECIFICATIONS

1. Stone Size - Use 2" stone, or reclaimed or recycled concrete equivalent.
2. Length - As required, but not less than 50 feet (except on a single residence lot where a 30 foot minimum length would apply).
3. Thickness - Not less than six (6) inches.
4. Width - Ten (10) foot minimum, but not less than the full width at points where ingress or egress occurs.
5. Filter Cloth - Will be placed over the entire area prior to placing of stone. Filter will not be required on a single family residence lot.
6. Surface Water - All surface water flowing or diverted toward construction entrances shall be piped across the entrance. If piping is impractical, a mountable berm with 5:1 slopes will be permitted.
7. Maintenance - The entrance shall be maintained in a condition which will prevent tracking or flowing of sediment onto public rights-of-way. This may require periodic top dressing with additional stone as conditions demand and repair and/or cleanout of any measures used to trap sediment. All sediment spilled, dropped, washed or tracked onto public rights-of-way must be removed immediately.
8. Washing - Wheels shall be cleaned to remove sediment prior to entrance onto public rights-of-way. When washing is required, it shall be done on an area stabilized with stone and which drains into an approved sediment trapping device.
9. Periodic inspection and needed maintenance shall be provided after each rain.

JEFFERSON COUNTY, WEST VIRGINIA	APPROVED: March 10, 1989 COUNTY ENGINEER	STABILIZED CONSTRUCTION ENTRANCE	REVISIONS:	DETAIL No. SC-10

EROSION AND SEDIMENT CONTROL GENERAL NOTES

1. ANY AREA OF EXPOSED SOIL WHERE NO CONSTRUCTION ACTIVITY IS ANTICIPATED FOR A PERIOD OF IONGER THAN THREE WEEKS OR WHERE CONSTRUCTION ACTIVITY HAS STOPPED FOR THREE WEEKS SHALL BE TEMPORARILY STABILIZED.
2. FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT STABILIZATION SHALL BE COMPLETED WITHIN SEVEN CALENDAR DAYS AFTER COMPLETION OF ALL PERIMETER DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES GREATER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1); AND SEVEN CALENDAR DAYS AFTER REACHING FINAL GRADE FOR ALL OTHER DISTURBED OR GRADED AREAS.
   THESE PROVISIONS DO NOT APPLY TO THOSE AREAS THAT ARE SHOWN ON THE PLAN FOR MATERIAL STORAGE OR FOR THOSE AREAS ON WHICH ACTUAL CONSTRUCTION ACTIVITIES ARE CURRENTLY BEING PERFORMED.
   THESE TIME REQUIREMENTS MAY BE EXTENDED, AS DEEMED NECESSARY BY THE JEFFERSON COUNTY ENGINEER IN THE EVENT THAT ADVERSE CONDITIONS PREVENT COMPLIANCE WITH THE STATED TIME LIMITATIONS FOR THE COMPLETION OF PERMANENT OR TEMPORARY STABILIZATION.
3. STABILIZATION WILL BE CONSIDERED ADEQUATE WHEN THE FOLLOWING CONDITIONS ARE MET:
   a. WATER COURSES, STREAM BANKS, AND DRAINAGE EASEMENTS SHALL BE 100% STABILIZED AND FREE FROM EROSION AND DEPOSITION.
   b. SLOPES STEEPER THAN 10% SHALL HAVE AT LEAST 98% STABLE GROUND COVER, AS DETERMINED BY THE JEFFERSON COUNTY ENGINEER.
   c. ALL OTHER AREAS SHALL HAVE AT LEAST 85% STABLE GROUND COVER, AS DETERMINED BY THE JEFFERSON COUNTY ENGINEER.
   d. GRASS VEGETATION SHALL HAVE REACHED A MINIMUM OF 3 INCHES OF HEIGHT OR HAVE BEEN MOWED BACK TO A MINIMUM OF 2 INCHES OF HEIGHT.
4. FOR ALL PROJECTS ADJACENT TO OR WITHIN 500 FEET OF A CONTINUOUSLY FLOWING STREAM, NO GRADING, EXCAVATING, REMOVAL, OR DESTRUCTION OF TOPSOIL, TREES, OR OTHER VEGETATIVE COVER, OR CONSTRUCTION ACTIVITY SHALL RESULT IN POINT OR NON-POINT LOADING OF SUSPENDED MATTER SUCH THAT TURBIDITY STANDARDS SPELLED OUT IN THE WATER RESOURCES BOARD LEGISLATIVE RULES ARE VIOLATED. SAID STANDARDS STATE THAT TURBIDITY SHALL NOT EXCEED 10 NTUS OVER BACKGROUND TURBIDITY WHEN THE BACKGROUND IS 50 NTUS OR LESS, OR HAVE MORE THAN A 10% INCREASE IN TURBIDITY (PLUS 10 NTUS MINIMUM) WHEN THE BACKGROUND TURBIDITY IS MORE THAN 50 NTUS.
5. INDICATION WHETHER AN OFF-SITE BORROW PIT IS (OR IS NOT) PROPOSED FOR THIS PROJECT.
6. MAINTENANCE SHALL BE PERFORMED AS NECESSARY TO ENSURE THAT ALL EROSION AND SEDIMENT CONTROL MEASURES ARE PERFORMING AS DESIGNED. THE JEFFERSON COUNTY ENGINEER MAY REQUIRE MODIFICATIONS TO AN APPROVED PLAN, REQUIRE ADDITIONAL SEDIMENT AND EROSION CONTROL MEASURES, OR CAUSE NEW PLANS TO BE SUBMITTED AS A RESULT OF FIELD INSPECTION REVEALING THE APPROVED PLANS DO NOT PROVIDE ADEQUATE PROTECTION.
7. ALL RESIDENTIAL AND COMMERCIAL/INDUSTRIAL BUILDING LOTS SHALL HAVE A STABILIZED CONSTRUCTION ENTRANCE INSTALLED PRIOR TO BEGINNING CONSTRUCTION ON THE LOT.
8. THE DEVELOPMENT IS RESPONSIBLE FOR ENSURING THAT ALL CLEARING, GRADING, DRAINAGE, CONSTRUCTION, AND DEVELOPMENT IS CONDUCTED IN ACCORDANCE WITH THE EROSION AND SEDIMENT CONTROL PLAN.

LIMITS OF EARTH DISTURBANCE LINES

THE LIMITS OF EARTH DISTURBANCE LINES ON THIS PLAN ARE SHOWN TO CLEARLY INDICATE THE APPROXIMATE LIMITS OF CONSTRUCTION ON THIS SITE. HOWEVER, THE LIMITS OF EARTH DISTURBANCE LINES MAY BE SHOWN OUTSIDE OF THE OVERALL PROPERTY BOUNDARY FOR CLARITY PURPOSES ONLY. NO CONSTRUCTION SHALL TAKE PLACE OUTSIDE OF THE PROPERTY BOUNDARY AS SHOWN ON THIS PLAN.

GENERAL EROSION AND SEDIMENTATION CONTROL MEASURES

1. THE PROPER IMPLEMENTATION AND MAINTENANCE OF THE EROSION AND SEDIMENTATION CONTROL MEASURES SHOWN ON THESE PLANS AND THE SUPPORTING DOCUMENTS SHALL BE THE SOLE RESPONSIBILITY OF THE DEVELOPER/OWNER.
2. UPON COMPLETION OF AN EARTH DISTURBANCE ACTIVITY OR ANY STAGE OR PHASE OF AN ACTIVITY, THE OPERATOR SHALL STABILIZE IMMEDIATELY THE DISTURBED AREAS TO PROTECT FROM ACCELERATED EROSION.
3. IN THOSE AREAS WHERE SEEDING IS TEMPORARY IN NATURE, PRIOR TO THE NEXT PHASE OF CONSTRUCTION, ANNUAL RYE GRASS SHOULD BE USED AT AN APPLICATION RATE OF 1 LB/1,000 SQ. FT. AND FERTILIZED ACCORDING TO SOILS TESTS.
4. ALL EXPOSED AREAS NOT SEEDED PRIOR TO SEPTEMBER 15 OR EXPOSED AFTER THAT DATE WILL BE MULCHED UNTIL SEEDING CAN BE PERFORMED IN THE SPRING.
5. AN EROSION CONTROL BLANKET MUST BE INSTALLED ON ALL DISTURBED SLOPES STEEPER THAN 3:1, ALL AREAS OF CONCENTRATED FLOWS, AND DISTURBED AREAS WITHIN 50' OF STREAMS.
6. TEMPORARY "FILTER FABRIC FENCE" SHALL BE PLACED ON THE LOW SIDE OF ALL EXPOSED SOILS.
7. PERMANENT STABILIZATION IS DEFINED AS A MINIMUM UNIFORM 70% PERENNIAL VEGETATIVE COVER OR OTHER PERMANENT NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED SURFACE EROSION AND SUBSURFACE CHARACTERISTICS SUFFICIENT TO RESIST SLIDING OR OTHER MOVEMENTS.
8. IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCE POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE OPERATOR SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES TO ELIMINATE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION.
9. ALL PUMPING OF SEDIMENT LADEN WATER SHALL BE THROUGH A SEDIMENT CONTROL BMP, SUCH AS A PUMPED WATER FILTER BAG OR EQUIVALENT SEDIMENT REMOVAL FACILITY, OVER UNDISTURBED VEGETATED AREAS.
10. ANY SEDIMENT REMOVED FROM BMPS DURING CONSTRUCTION WILL BE RETURNED TO UPLAND AREAS ON SITE AND INCORPORATED INTO THE SITE GRADING.
11. BEFORE INITIATING ANY REVISIONS TO THE APPROVED EROSION AND SEDIMENT CONTROL PLAN OR REVISIONS TO OTHER PLANS WHICH MAY AFFECT THE EFFECTIVENESS OF THE APPROVED E & S CONTROL PLAN, THE OPERATOR MUST RECEIVE APPROVAL OR THE REVISIONS FROM THE APPROPRIATE EROSION AND SEDIMENT CONTROL DIRECTOR.
12. THE OPERATOR SHALL REMOVE FROM THE SITE, RECYCLE, OR DISPOSE OF ALL BUILDING MATERIALS AND WASTES. NO CONSTRUCTION MATERIAL OR WASTE OR UNUSED CONSTRUCTION MATERIAL SHALL BE BURNED, BURIED, DUMPED, OR DISCHARGED AT THE SITE.
13. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE REMOVAL OF ANY EXCESS MATERIAL AND MAKE SURE THE SITE(S) RECEIVING THE EXCESS MATERIAL HAS AN APPROVED EROSION AND SEDIMENT CONTROL PLAN THAT MEETS THE CONDITIONS OF LOCAL AND/OR OTHER STATE AND FEDERAL REGULATIONS.
14. AN EROSION AND SEDIMENT CONTROL PLAN SHALL BE PREPARED, DEVELOPED, APPROVED BY THE APPROPRIATE EROSION AND SEDIMENT CONTROL DIRECTOR AND IMPLEMENTED FOR ALL SPOIL AND BORROW AREAS, REGARDLESS OF THEIR LOCATION.

INSTALLATION AND MAINTENANCE RESPONSIBILITIES

1. THE PROPER IMPLEMENTATION AND MAINTENANCE OF THE EROSION AND SEDIMENTATION CONTROL MEASURES SHOWN ON THESE PLANS AND IN THE SUPPORTING DOCUMENTS SHALL BE THE SOLE RESPONSIBILITY OF THE DEVELOPER/OWNER.
2. ALL PERMANENT STORMWATER MANAGEMENT FACILITIES INCLUDING PIPES, CHANNELS, INLETS, AND DETENTION BASINS ON INDIVIDUAL LOTS ARE TO BE INSTALLED BY THE DEVELOPER AND MAINTAINED BY THE OWNER. THE COUNTY SHALL HAVE THE RIGHT TO ENTER PROPERTY TO INSPECT THE FACILITIES AND, IF NECESSARY, TO MAINTAIN AND REPAIR THE FACILITY. THESE FACILITIES ARE TO BE MAINTAINED AT THE GRADES AND BY THE PROCEDURES SHOWN ON THESE PLANS.

EXCESS FILL MATERIAL

ALL EXCESS FILL MATERIAL GENERATED BY CONSTRUCTION MUST BE STOCKPILED ON THIS SITE. ALSO FILTER FABRIC FENCE OR APPROVED EQUIVALENT MUST BE INSTALLED ON THE LOW SIDE OF ALL STOCKPILED MATERIALS.

INSTALLATION, OWNERSHIP, AND MAINTENANCE RESPONSIBILITIES

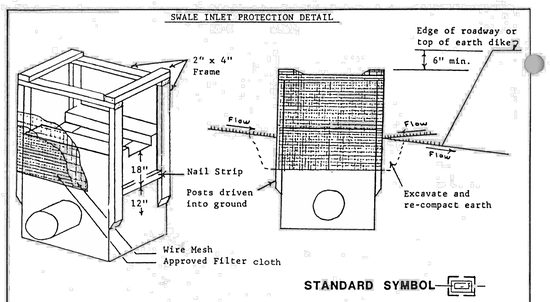
ALL PERMANENT STORMWATER MANAGEMENT FACILITIES INCLUDING STORMWATER BIORETENTION BERMS, INLETS, AND PIPES WILL BE INSTALLED BY THE OWNER / DEVELOPER. SINCE ALL FACILITIES WILL BE CONSTRUCTED ON LANDS OF THE OWNER / DEVELOPER AND THEREFORE OUTSIDE OF THE PUBLIC STREET RIGHT-OF-WAYS, THE FACILITIES SHALL BE INSTALLED, OWNED AND MAINTAINED BY THE OWNER / DEVELOPER. THE OWNER / DEVELOPER SHALL BE SOLELY RESPONSIBLE FOR KEEPING ALL STORMWATER MANAGEMENT FACILITIES FREE OF DEBRIS. THESE FACILITIES ARE TO BE MAINTAINED AT THE GRADES AND BY THE PROCEDURES SHOWN ON THESE PLANS.

1. THE PROPER IMPLEMENTATION AND MAINTENANCE OF THE EROSION AND SEDIMENTATION CONTROL MEASURES SHOWN ON THESE PLANS AND IN THE SUPPORTING DOCUMENTS SHALL BE THE SOLE RESPONSIBILITY OF THE DEVELOPER / OWNER.
2. ALL PERMANENT STORMWATER MANAGEMENT FACILITIES OUTSIDE OF PUBLIC RIGHT OF WAY (INCLUDING PIPES, CHANNELS, INLETS AND BIORETENTION BERMS) WITHIN THE DEVELOPMENT ARE TO BE INSTALLED AND MAINTAINED BY THE DEVELOPER. THESE FACILITIES ARE TO BE MAINTAINED AT THE GRADES AND BY THE PROCEDURES SHOWN ON THESE PLANS.
3. THE BIORETENTION BERMS REQUIRE THAT THE SITE BE STABILIZED ACCORDING TO THE APPROVED E&SC PLAN BEFORE INSTALLATION.

CONSTRUCTION SEQUENCE

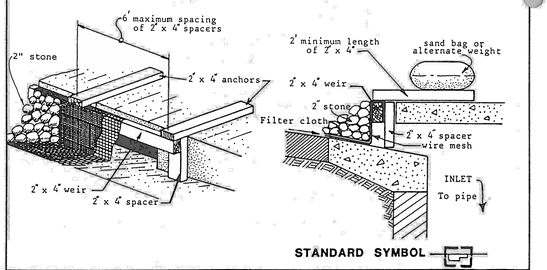
1. INSTALL SILT FENCING AS SPECIFIED ON THE PLAN.
2. INSTALL CONSTRUCTION ENTRANCE AS THE FIRST STEP IN GRADING ACTIVITIES.
3. BEGIN CLEARING AND GRUBBING AREA WITHIN THE LIMIT OF DISTURBANCE.
4. STRIP TOPSOIL AND PLACE INTO STOCKPILES AS SHOWN ON THE PLAN.
5. EXCAVATE AND GRADE THE BUILDING ADDITION AND PARKING AREA. PLACE EXCESS MATERIAL INTO STOCKPILES AS SHOWN ON THE PLAN.
6. TOPSOIL, SEED, AND MULCH ALL EXPOSED SOILS.
7. ONCE THE CONTRIBUTING DRAINAGE AREA TO BIORETENTION STABILIZES, INSTALL BIORETENTION AREAS.
   A. FOLLOW THE INSTALLATION AS SPECIFIED IN THE WEST VIRGINIA STORMWATER MANAGEMENT & DESIGN GUIDANCE MANUAL.
   B. EXCAVATE SUBSURFACE AREA. RIPPING BOTTOM IS ENCOURAGED TO PROMOTE INFILTRATION.
   C. INSTALL REQUIRED LINER STONE.
   D. INSTALL SOIL MEDIA.
   E. CONSTRUCT THE BERM WITH SUITABLE FILL.
   F. INSTALL PLANTINGS AS SPECIFIED ON PLAN IN ACCORDANCE WITH THE WVSM&DGM.
   G. APPLY MULCH ON THE SURFACE.
10. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION IN THE OPINION OF THE LOCAL EROSION AND SEDIMENT CONTROL ADMINISTRATOR.

SWALE INLET PROTECTION DETAIL



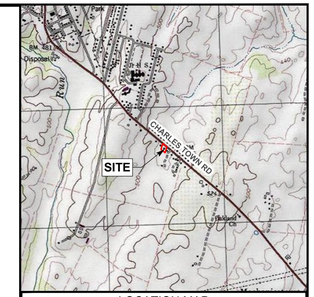
STANDARD SYMBOL

CURB INLET PROTECTION DETAIL



STANDARD SYMBOL

JEFFERSON COUNTY, WEST VIRGINIA	APPROVED: March 10, 1989 COUNTY ENGINEER	INLET PROTECTION DETAIL	REVISIONS:	DETAIL No. SC-13



LOCATION MAP
SCALE: 1" = 2000'

NO.	DATE	DESCRIPTION	INT.
0	2023-07-07	FOR SUBMISSION	DMJ
1	2023-08-15	PER CITY ENGINEER COMMENTS	DMJ

CALL BEFORE YOU DIG!
WEST VIRGINIA LAW REQUIRES:
3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE
AND
10 WORKING DAYS IN DESIGN STATE
– STOP CALL
West Virginia One Call System, Inc
WEST VIRGINIA 811
CALL BEFORE YOU DIG! Dial 811 or 800.245.4848
www.WV811.com
SERIAL NO.

SEAL



JHA Companies
ENGINEERS
SURVEYORS
ENVIRONMENTAL
GIS MAPPING
www.jhacompanies.com
844-542-4757
362 W. BURR BLVD. STE 3
KEARNEYSVILLE, WV 25430
PA • OH • NY • WV • VA • MD

PROJECT ID: 2022-1685	DRAWN: DMJ
DATE: 2023-07-07	DESIGN: JAB
SCALE: NOTED	CHECKED: JDH

SITE PLAN
FOR
JOAN AND JOE'S COFFEE
LOCATED IN
CHARLES TOWN,
JEFFERSON COUNTY,
WEST VIRGINIA

TITLE: EROSION AND SEDIMENT CONTROL DETAILS

PLAN STATUS: SITE PLAN	SHEET NO. C-4.01

Aug 18, 2023 3:19pm Dunmyer R:\Projects\2022\2022-1685 Joan and Joe's Coffee - Site Plan\LAND\SHEET FILES\ESC DETAILS (2022-1685) 24X36.dwg
Layout: C-4.01 EROSION AND SEDIMENT CONTROL DETAILS

THESE DRAWINGS SHALL NOT BE UTILIZED BY ANY PERSON, FIRM OR CORPORATION WITHOUT THE SPECIFIC WRITTEN PERMISSION OF JHA COMPANIES.

WV ROUTE 115 - CHARLES TOWN ROAD
60' R/W

Luminaire Schedule								
Symbol	Qty	Label	Description	Lum. Lumens	Lum. Watts	LLF	Filename	Mounting Height
⊠	5	B	IES 50 Watt Type 5 Plannus-L	5536	50	0.900	IES 50 Watt Type 5 Plannus-L IES FILE.ies	12
●	1	A	F914-M989-PG988 LLF 0.4 config 70MH	6370	175	0.400	ITL51066.IES	12

VERITAS PROPERTIES LLC
DB 1255 PG 466 MAP 12
PARCEL 12.1

VERITAS PROPERTIES LLC
DB 1275 PG 458 MAP 17
PARCEL 12.3

CURFMAN MEGAN C.
DB 1167 PG 265 MAP 12
PARCEL 13

PEACH TREE INVESTMENTS LLC
DB 1103 PG 493 MAP 12
PARCEL 17

PEACH TREE INVESTMENTS LLC
DB 1103 PG 493 MAP 12
PARCEL 17

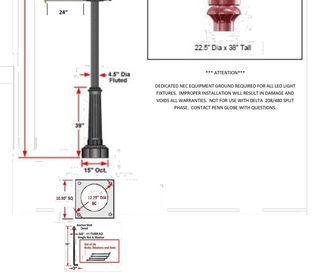
ARCADIA COMMUNITIES LLC
DB 1163 PG 322 MAP 12A
PARCEL PARK

MH: 12

GRAPHIC SCALE: 1" = 10'
10 0 10 20

PENN GLOBE
LIGHTING DESIGN + MANUFACTURING
300 Shaw Road * North Branford CT 06471
Phone:203-484-7749 * Fax: 203-484-7758
www.pennglobe.com

DATE	08/15/23
DRAWING NUMBER	070-317-16933-F9B2-JX30-W541-W579
SPECIFIER	JHA COMPANIES
PROJECT NUMBER	070-317-16933
PROJECT NAME	JOAN AND JOE'S COFFEE



*** ATTENTION***
DEDICATED NEC EQUIPMENT GROUND REQUIRED FOR ALL LED LIGHT FIXTURES. IMPROPER INSTALLATION WILL RESULT IN DAMAGE AND VOIDS ALL WARRANTIES. NOT FOR USE WITH DELTA 208/480 SPLIT PHASE. CONTACT PENN GLOBE WITH QUESTIONS.

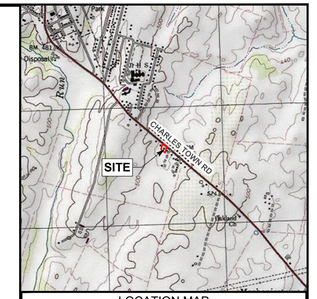
PRIMARY LIGHT SOURCE	PennSTAR® LED
CONFIGURATION	PLANNUS LED PLAFFORM
WATTAGE	50W (NOM)
DISTRIBUTION	SYMMETRIC
COLOR TEMPERATURE	4000K
VOLTAGE	120~277VAC AUTOSENSE
GLOBE	FROSTED UV STABILIZED ACRYLIC
POLE HEIGHT	9' - 0"
SHAFT	4.5" FLUTED
MATERIAL	ALUMINUM
OPTIONS	> SINGLE BANNER BRACKET SET > UPPER—FIXED -> LOWER—ADJUSTABLE > DUPLEX GFI WITH WHILE IN USE COVER
FINISH	2069X LT (RED) 1003X LT (BLACK)
QUANTITY	( )

MODEL NUMBER	DESCRIPTION
F9B2-GX920-FH925	PARKLANE 1200
P688-FH222-2110 / JX30-EZA72-0275-0400	TRADITIONAL POST / DUPEX GFI WITH COVER
W541-PVL24-P1X0-A090 / W579-PVL24-02X0-A090	SINGLE FIXED BANNER BRACKET / SINGLE ADJUSTABLE BANNER BRACKET

The information contained in this drawing is the sole property of Pennsylvania Globe Gaslight Co. Any reproduction in part or as a whole without the written permission of Pennsylvania Globe Gaslight Co. is prohibited and may be subject to legal restrictions or sanction. The information contained is privileged and confidential and may be protected from disclosure. All product, product specifications and data are subject to change without notice to improve reliability, function, design or otherwise. No representation or guarantee is made regarding the suitability of the products for any particular purpose or the continuing production of any product. Copyright© 2023 Penn Globe

Prepared by: M. Stonier

PennSMART.



LOCATION MAP
SCALE: 1" = 2000'

NO.	DATE	DESCRIPTION	INT.
0	2023-07-07	FOR SUBMISSION	DMJ
1	2023-08-15	PER CITY ENGINEER COMMENTS	DMJ

CALL BEFORE YOU DIG!
WEST VIRGINIA LAW REQUIRES:
3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE
AND
10 WORKING DAYS IN DESIGN STATE
– STOP CALL
West Virginia One Call System, Inc
WEST VIRGINIA 811
CALL BEFORE YOU DIG! Dial 811 or 800.245.4848
www.WV811.com

SERIAL NO.

SEAL

JONATHAN J. HUNT
REGISTERED
19809
STATE OF
WEST VIRGINIA
PROFESSIONAL ENGINEER

JHA Companies
ENGINEERS
SURVEYORS
ENVIRONMENTAL
GIS MAPPING
www.jhacompanies.com
844-542-4757
362 W. BURR BLVD. STE 3
KEARNEYSVILLE, WV 25430
PA • OH • NY • WV • VA • MD

PROJECT ID: 2022-1685	DRAWN: DMJ
DATE: 2023-07-07	DESIGN: JAB
SCALE: NOTED	CHECKED: JDH

SITE PLAN
FOR
JOAN AND JOE'S COFFEE
LOCATED IN
CHARLES TOWN,
JEFFERSON COUNTY,
WEST VIRGINIA

TITLE:
LIGHTING PLAN

PLAN STATUS: SITE PLAN
SHEET NO. C-5.00

Aug 18, 2023 3:19pm Dumper R:\Projects\2022\2022-1685 Joan and Joe's Coffee - Site Plan\CAD\SHEET FILES\LIGHTING PLAN (2022-1685) 24X36.dwg
Layout: C-5.00 LIGHTING PLAN

THESE DRAWINGS SHALL NOT BE UTILIZED BY ANY PERSON, FIRM OR CORPORATION WITHOUT THE SPECIFIC WRITTEN PERMISSION OF JHA COMPANIES

Kimley»Horn

Memorandum

To: Joseph Hunt, P.E.
Project Manager
JHA Companies
362 W Burr Blvd, Suite 3
Kearneysville, WV 25430

From: Mark Phillips, P.E.

Through: Mr. James Newman, AICP
City Planner, Zoning/Subdivision Administrator
City of Charles Town
101 E Washington Street
Charles Town, WV 25414

Date: July 25, 2023

Subject: Joan and Joe's Coffee Shop Site Plan Review

This memorandum summarizes our review of the Site Plan for the entrance and parking improvements to the Joan and Joe's Coffee establishment (dated July 7 2023 prepared by JHA Companies) for a proposed parking lot and ingress/egress improvement for the existing Joan and Joe's Coffee. The site is currently zoned General Commercial per the City of Charles Town Zoning Ordinance dated June 18, 2012 (Rev. July 6, 2020). This application proposes a by-right development of the approximate 0.53-acre property.

Kimley-Horn's review of this application is limited to the Site Plan Application provided. Based upon our review we have the following comments:

1. This Application is generally in conformance with the General Commercial Zoning District per the City of Charles Town Zoning Ordinance dated June 18, 2012 (Rev. July 6, 2020).
2. The Applicant is generally in conformance with the Final Plan/Plat requirements per the City of Charles Town Subdivision and Land Development Ordinance dated June 23, 2012 (Rev. July 1, 2019).
3. We request the Applicant provide further detail and information related to the stormwater management plan and routing of the proposed site runoff. Based on Sheet C-3.00 it is unclear how the sheet flow from the proposed parking lot and site is being directed into the proposed SWM facilities. Additionally, the applicant should provide drainage areas, SWM treatment areas, and all calculations necessary to depict adequate SWM facilities are provided.
4. The Applicant should provide SWM profiles and details for the design storm events to depict flow rates and elevations for each design storm including outfall analysis. We request the Applicant analyze the two outfall locations for water quality and quantity purposes.
5. The Applicant should provide sight distance plan and profiles depicting adequate sight distance from the egress portion of the proposed driveway. Additionally, as the proposed parking lot is intended to be one-way the Applicant should provide a signing plan which depicts the location and type of signage to direct traffic/vehicles appropriately through the site.
6. The Applicant should dimension the width of the proposed sidewalk and provide grading details to depict ADA compliance for cross slope and longitudinal slope. Additionally, the Applicant should confirm if handrail is needed adjacent to the steep slope near the existing drop inlet. A typical section for the sidewalk should be provided for the depth and type of concrete and subbase.

7. The Applicant should provide a consistent grass buffer strip between the edge of pavement and the proposed sidewalk. The sidewalk should also have a clear ADA compliant crossing of the proposed driveway ingress and egress. The Applicant should provide a driveway profile depicting the grades of the proposed driveway specifically in the locations where the sidewalk crosses so as to not exceed 2% cross slope.
8. Per the SL/DO Section 1333.16.3.a. "Perimeter Landscaping. The perimeter of all Impervious Areas shall be landscaped with shade trees and other Landscaping. One tree shall be provided for every 2,000 square feet of Impervious Area for the first 100,000 square feet of the total site area. Thereafter, one (1) tree shall be provided for every 5,000 square feet of Impervious Area over 100,000 square feet. The majority of these trees shall be located around parking lots. All perimeter Landscaping shall comply with the requirements of this Ordinance, including, but not limited to plant selection, planting procedure, and maintenance." The Applicant should provide conformance with this requirement. Additionally, Section 1333.16.3.a." The area between the parking lot and the street shall be planted with a continuous row of shrubs that will screen the parking from the street. Plantings shall be a minimum of 18 inches at time of planting. All shrub material shall be a minimum of 3 feet at maturity.".
9. Per the SL/DO Section 1333.23.C.2. "Curb and Gutter. Curb and gutter is required for parking areas in the City of Charles Town. Curbing shall be in compliance with the standard details of the City of Charles Town for curb (See Standard Detail CG-1, CG-1R, CG-2). To encourage Low Impact Design principles, the Planning Commission may allow alternative curb types, or no curb, in areas of a Subdivision/Land Development determined acceptable. The City's Engineer and Subdivision Administrator shall provide a recommendation to the Planning Commission on the proposed alternative. Reduction of curbs and gutters shall be for the benefit of Low Impact Design principles and not solely to eliminate the cost associated with curb and gutter."
10. Per the SL/DO Section 1333.23.F.3.c. "Outdoor Lighting. Outdoor lighting shall meet the lighting standards specified in Section 1333.14 of this Ordinance." The Applicant should provide the required lighting and subsequent lighting details and photometric calculations.
11. Per the SL/DO Section 1333.23.F.3.d. "Screening. The periphery of an off-street parking area that is within 100 feet of any Lot in a Residential District, any Lot occupied by a dwelling, school, church, or institution for human care not located on the same Lot as the parking area, or any Lot which is part of a duly recorded Subdivision/Land Development shall be adequately buffered from such Lot by either an opaque fence of a height between four (4) and six (6) feet constructed of either wood, stone, brick or similar material, or a landscaping screen of six (6) foot trees and shrubs of species and spacing which will result in an acceptable screen when plants mature. Trees used for screening may be credited towards the required landscaping standards specified in Section 1333.16 of this Ordinance." The Applicant should provide all required screening.

Kimley-Horn recommends that comments 3 through 11 above be addressed by the Applicant.

Thank you for the opportunity to review this Site Plan. In the meantime, please feel free to contact us at 703-870-3631 should you have any questions.

KIMLEY-HORN & ASSOCIATES, INC.



Mark Phillips, P.E.
Project Manager
Associate

Planning Commission
101 East Washington Street
Charles Town, WV 25414

Meeting: 09/25/23
Department: Planning Commission
Category: Report
Initiator:

SCHEDULED

AGENDA ITEM (ID #)

Commission Review: SLD2023-03: Alla Willa Dr. Casino - Preliminary Plan Review

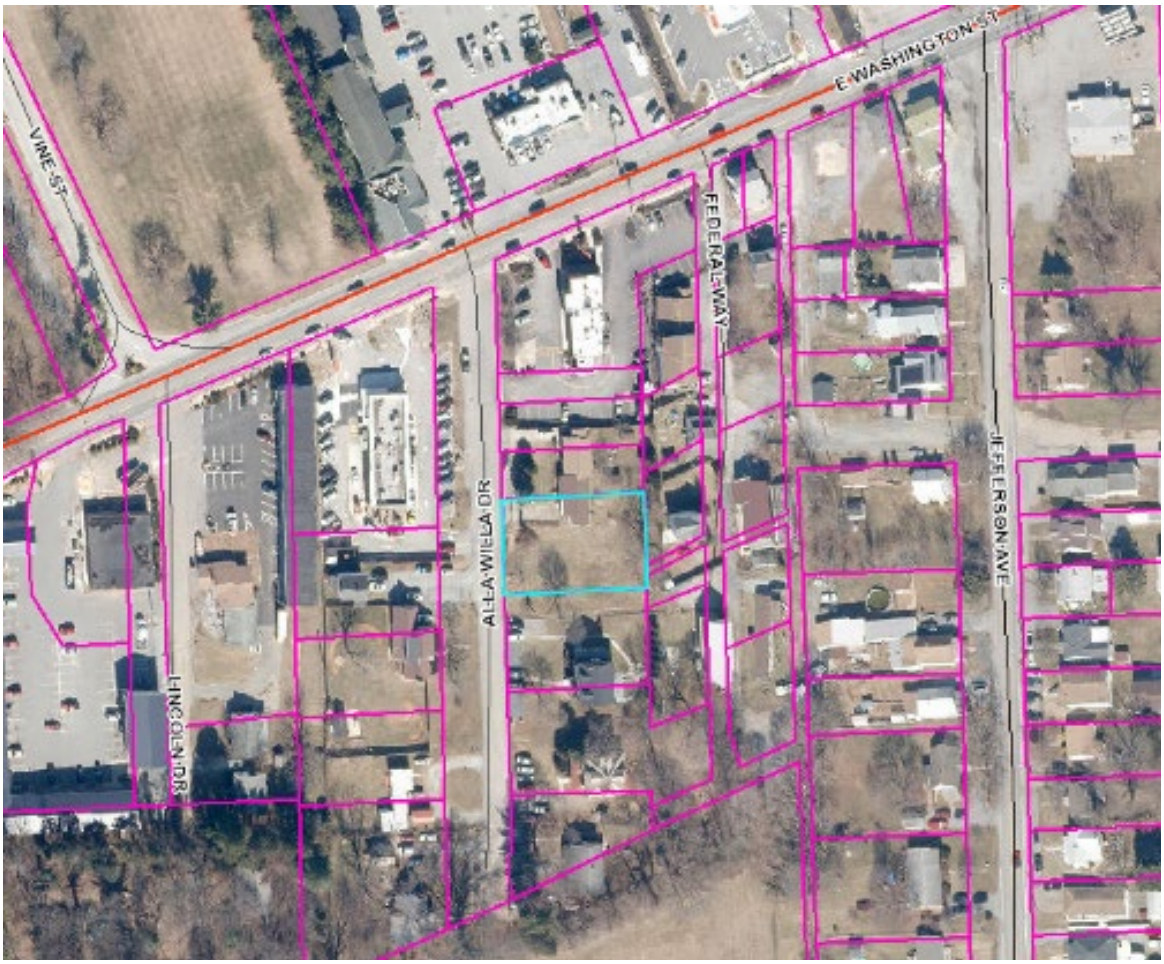
ATTACHMENTS:

- 1. Staff Report.pdf
- 2. Application.pdf
- 3. Site Plan.pdf
- 4. CTUB Availability.pdf
- 5. SWM Report.pdf
- 6. Comment Response.pdf

Preiminary Plan Report

SLD2023-03

Date: For the September 25, 2023 Planning Commission meeting
Applicant: Ali Hadavand
Property Owner: Shirley Rockwell
Report by: James Newman, City Planner, Zoning/Subdivision Administrator.
Proposal: Development of site as a casino, and merger of two parcels into one.
Property Location: TD 03 / Map: 7 / Pcl: 12, located on Alla Willa Drive.
Current Zoning: General Commercial (GC).



PROJECT OVERVIEW

Per Jefferson County Geographic Information Systems, the property is .14 acres in size. The applicant is proposing to develop the site as a Casino. The property is made of two parcels.

SKETCH PLAN COMPLETENESS

The sketch plan was deemed complete by the Planning Commission on March 27th, 2023.

BOARD OF ZONING APPEALS

The Board of Zoning Appeals held a public hearing on April 18, 2023, to decided on issuing a Special Exception Use permit for a casino. They voted to **approve** the Special Exception Use permit.

SKETCH PLAN

The Planning Commission approved the sketch plan on April 24, 2023, with the condition that a waiver form parking requirements be obtained.

WAIVER

The Planning Commission approved a parking waiver on June 26, 2023. The waiver was approved on the condition that 12 parking spaces be provided on-site.

ZONING REVIEW

The properties are zoned General Commercial. The merger must be administratively approved prior to approval of the final plan.

Density

Not applicable.

Open Space

No requirement.

Parking

Required parking for a casino is 35.3 parking spaces per every 1,000 sq. ft. of gross floor area, plus 1.42 spaces per gaming position. The structure is 1,960 sq. ft., and the applicant plans to have approximately 7-10 gaming machines. 12 parking spaces are provided, of which one is designated for handicapped use.

Parking lots are required to be 5 ft. from the nearest right-of-way. The plan meets this requirement. Parking lots are preferred to be in front or side yards, which this plan satisfies.

Street Connections

A curb cut is proposed to provide access from Alla Willa Road to the parking lot. A required sidewalk is shown between the property line and the curb cut.

Traffic Impact

From the latest version of the Trip Generation Manual by the Institute of Transportation Engineers:

Per 1,000 SF it generates the following # of trips:

- *13.49 Trips in the Weekday PM Peak Hour*

Landscaping

The applicant will plant two trees along the road frontage, one tree in the rear yard, and three trees along the northern side yard. They are required to provide a minimum of 3 trees to cover the parking lot landscaping requirements. They exceed that requirement by having 4 proposed trees. Additionally, shrubs are required between the parking lot and street. That requirement has been met.

Buffers

Buffering shall consist of a land area not less than twenty (20) feet in width for developments between all adjoining residential and non-residential uses. Buffer width may be reduced to 10 feet, provided that an opaque screening is provided, such as a fence, berm, landscaping or a combination thereof. The plans show a fence along the rear and sides of the site, which satisfies this Code requirement.

Stormwater

Stormwater control facilities are not required to be shown on a sketch plan; they are required on a preliminary and final plan. The City's Engineering firm, Kimley-Horn, had no comments at this stage about stormwater control facilities.

Utilities

The plans show utility connections. The applicant has a letter from the Charles Town Utility Board stating they have adequate water and sewer capacity to serve the site.

Dumpster

The dumpster must be fenced on three sides. The dumpster cannot be oriented towards the street. It must also have a vegetated landscape buffer around it. The proposal meets all these requirements.

CONCLUSION

This is a sketch plan for a casino located on General Commercial zoned property. The property comprises two lots, which must be merged prior to approval of the Final Plan. A waiver will needed from the parking requirements.

The plan is generally in conformance with the sketch plan requirements and approval criteria. Additional information on landscaping and further engineering details (such as the curb cut details) will need to be provided at the preliminary plan stage.

RECOMMENDATION

Approval by the Planning Commission is not a public hearing, and is for the benefit of the Planning Commission to ensure the Preliminary Plat and Plan is in substantial compliance with the sketch plan.

Due to general conformance with the sketch plan and zoning and subdivision regulations, the Planning Commission should vote to **approve** the preliminary plan.

S/LD Application No._____

SUBDIVISION AND LAND DEVELOPMENT APPLICATION

SUBDIVISION AND LAND DEVELOPMENT ORDINANCE
ARTICLE 1332, SUBDIVISION AND LAND DEVELOPMENT APPLICATION & APPROVAL REQUIREMENTS

To assist the Subdivision Administrator in the review of a Subdivision and Land Development (S/LD) Application, the Applicant must utilize this form to supply the City with the information prescribed under Section 1332.03 of the Charles Town Subdivision Ordinance. The submission of this form, along with the prescribed information and required fees, shall serve as the Applicant's S/LD Application as required by Ordinance Section 1332.03.

1. DATE _____, 20_____

2. APPLICATION TYPE

☐ Minor Subdivision | Final S/LD Plan

☐ Major Subdivision Development*
- Preliminary S/LD Plan and Final Plat

☒ Major Land Development**
- Preliminary S/LD Plan

☐ Major Subdivision and Land Development***
- Preliminary S/LD Plan and Final Plat

*Conventional Subdivision – A Preliminary Plan and Plat Approval and a Final Plan and Plat Approval is required.

**No Division/Merger of Land – A Preliminary Plan and Plat Approval is required for the submission of a building or multiple buildings on one lot where there is no subdivision of land (commonly referred to as a site plan).

***A Preliminary Plan and Plat Approval and a Final Plan and Plat Approval is required for the submission of a building or multiple buildings that will require the merger, adjustment or subdivision of land.

3. APPLICANT'S NAME* IRIS PROPERTY LLC

Address: 1927 ROCK CLIFF DR. MARTINSBURG, WV 25401

Telephone Number (304) 279-4747 Fax Number (___)

Email Address HADAVAND1979@GMAIL.COM

4. PROPERTY OWNER'S NAME SHIRLEY ROCKWELL

Address: 1927 ROCK CLIFF DR. MARTINSBURG, WV 25401

Telephone Number (304) 279-4747 Fax Number (___)

Email Address HADAVAND1979@GMAIL.COM

5. LEGAL DESCRIPTION OF THE SUBJECT PROPERTY (list all parcels that apply)

Property Address: N/A

Tax Map # and Parcel: TAX MAP #7, PARCEL 12

Deed Book and Page #: D.B. 1301, PG. 254

Property Area in Square Feet or Acres: 0.28 ACRES

6. DESCRIPTION OF PROJECT AND PROPOSED USE(S) OF THE PROPERTY:

CASINO/VIDEO LOTTERY

7. DESCRIPTION OF THE EXISTING (OR FORMER) USE(S) OF THE PROPERTY AND CURRENT ZONING:

EXISTING USE: VACANT LOT

CURRENT ZONING: GENERAL COMMERCIAL

*Applicants include: Property owner(s), Engineer(s), Surveyor(s), or Consultant(s)

8. ARE THERE ANY ANTICIPATED WAIVERS OR VARIANCES? IF YES, PROVIDE DETAILS.

NO WAIVERS ARE ANITICIPATED (PARKING VARIANCE PREVIOUSLY APPROVED)

9. PARCEL HISTORY (List all pending or previously approved applications on the subject parcels inventoried above, including previous site plan applications if this application is a site plan amendment)

Application No.	Project Name and Phase	Status	Approval Date
SLD2023-03/200403	ALLA WALL COMMERCIAL SKETCH PLAN	APPROVED	5/27/23
BA-2023-01	PARKING VARIANCE	APPROVED	4/18/23

10. HAS THE PROPERTY BEEN THE SUBJECT OF ANY COURT ACTION?

☐ Yes (Please specify nature of all proceedings and current status and attach any documents showing court decisions, etc.)

☒ No

11. PLAN/PLAT SUBMISSION TO OTHER AGENCIES (Documentation of all required approvals must be attached to this Application or submitted prior to Preliminary S/LD Application approval)

Agency (Specify others as applicable)	Submittal Date	Approval/Permit Issued	Date of Approval/Issuance
City of Charles Town			
City of Charles Town Utility Board			
Jefferson County Planning and Zoning Department			
Jefferson County Addressing Office			
Jefferson County Board of Education			
WV Department of Environmental Protection			
WV Department of Transportation, Division of Highways			
WV State Historic Preservation Office			
WV Office of Environmental Health Services			
U.S. Army Corps of Engineers			

12. FEE CALCULATION (Per Fee Schedule) $200 APPLICATION FEE

$2,000 REVIEW FEE ESCROW

AMOUNT PAID $ $2,200

APPLICANT CERTIFICATION

I certify that, to the best of my knowledge, the submitted information and statements are true and correct. I also certify that I have received and read Section 1332.03 of the Charles Town S/LD Ordinance and relevant provisions of the Charles Town City Code.

Signature of Applicant

 Date **7/31/2023**

Signature of Property Owner (If different than Applicant)

 Date **7/31/2023**

Please submit an original completed Application and specified number of Plan/Plat (Three (3) copies at 24" x 36", Adobe PDF format, and Five (5) copies at 11" x 17") copies to the following:

Subdivision Administrator
City of Charles Town
101 E. Washington Street
Charles Town, WV 25414

FOR CITY USE ONLY

Application Number:_____ Date Application Received:_____

Fee: $_____ Paid:$_____ Check No._____

Receipt No._____

Subdivision Administrator Approval:_____ Date:_____

Planning Commission Approval:_____ Date:_____

Comments/Conditions:_____

_____

_____

_____

_____

_____

PRELIMINARY SUBDIVISION/LAND DEVELOPMENT PLAT

ALLA WILLA COMMERCIAL

SITE PLAN REFERENCE NUMBER: #2023-03
CITY OF CHARLES TOWN
JEFFERSON COUNTY, WEST VIRGINIA
TAX MAP 7, PARCEL 12; D.B. 1301, PG. 254
CHARLES TOWN CORP (3) TAX DISTRICT

OWNER & APPLICANT
IRIS PROPERTY LLC
1927 ROCK CLIFF DR
MARTINSBURG, WV 25401
(304) 279-4747

INTEGRITY FEDERAL SERVICES
CIVIL ENGINEERING • LANDSCAPE ARCHITECTURE • PLANNING
148 S. Queen Street, Suite 201 • Phone: 304-725-8456
Martinsburg, WV 25401 • www.ifs-ae.com

CIVIL LEGEND:

EXISTING / PROPOSED

- BOUNDARY/RIGHT-OF-WAY LINE
- ADJACENT BOUNDARY LINE
- CONCRETE MONUMENT/IRON REBAR (EX. VDH, EX. CC, IPF, RBF; CC-TBS, TBS)
- EASEMENT LINE
- ROAD CENTERLINE
- HEADER CURB
- CURB & GUTTER (CURB, TRANS., REVERSE CURB)
- EDGE OF PAVEMENT
- EDGE OF CONCRETE
- EDGE OF GRAVEL
- SIDEWALK
- GUARDRAIL
- BOARD FENCE
- CHAIN LINK FENCE
- WIRE FENCE
- BUILDINGS (TO BE REMOVED, TO REMAIN)
- RETAINING WALL
- MISCELLANEOUS SIGNS
- MAIL BOX (MB)
- SITE LIGHT WITH POLE
- BUILDING MOUNTED LIGHT
- UTILITY POLE
- UTILITY POLE GUY WIRE
- OVERHEAD UTILITY LINE (OHE)
- UNDERGROUND UTILITY LINE (UGE)
- OVERHEAD COMMUNICATIONS LINE (OHC)
- UNDERGROUND COMMUNICATIONS LINE (UGC)
- UNDERGROUND GAS LINE (G)
- SANITARY SEWER MAIN (8" PVC SAN. SEW)
- SANITARY SEWER FORCE MAIN (FM)
- SANITARY SEWER MANHOLE
- SANITARY SEWER CLEAN-OUT AND SANITARY LATERAL (SS)
- STORM SEWER LINE (15" HDPE)
- STORM SEWER MANHOLE
- STORM SEWER DROP INLET
- STORM SEWER CURB INLET
- STORM SEWER RIP-RAP
- STORM SEWER END SECTION
- WATER MAIN (8" W/M)
- FIRE HYDRANT
- WATER VALVE
- WATER METER
- INDEX CONTOUR LINE (590)
- INTERMEDIATE CONTOUR LINE (592)
- SPOT ELEVATIONS (543.6; +45 SS, +45 TC, +45 INV)
- TREES/SHRUBS
- DRIP LINE OF TREES
- LIMITS OF CONSTRUCTION
- SOIL BOUNDARY (HbB, HgC)

Know what's **below.** **Call** before you dig.

REVISIONS:

NO.	SHEET NUMBER AND REVISION DESCRIPTION	DATE
1.	ALL SHEETS - REVISION TO UNDERGROUND SWM FACILITY	9/18/2023
2.	ALL SHEETS - REVISIONS PER CITY, AND CTUB COMMENTS	9/18/2023

Sheet List Table

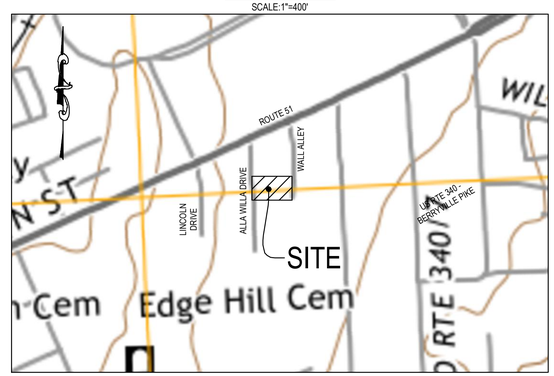
Sheet Number	Sheet Title
01	COVER SHEET
02	GENERAL NOTES
03	SITE DETAILS
04	SITE LIGHTING DETAILS
05	EROSION AND SEDIMENT CONTROL NARRATIVE
06	EROSION AND SEDIMENT CONTROL NARRATIVE
07	PHASE 1 EROSION AND SEDIMENT CONTROL PLAN
08	PHASE 2 EROSION AND SEDIMENT CONTROL PLAN
09	EROSION AND SEDIMENT CONTROL DETAILS
10	EXISTING CONDITIONS AND DEMOLITION PLAN
11	PRELIMINARY PLAT
12	SITE LAYOUT AND UTILITY PLAN
13	WATER AND SEWER DETAILS
14	GRADING AND DRAINAGE PLAN
15	STORM SEWER COMPUTATIONS AND PROFILE
16	STORM SEWER DETAILS
17	PRE-DEVELOPMENT DRAINAGE MAP
18	POST-DEVELOPMENT AND WATER QUALITY DRAINAGE MAP
19	STORMWATER MANAGEMENT DETAILS
20	STORMWATER MANAGEMENT DETAILS
21	LANDSCAPE PLAN
22	LANDSCAPE DETAILS

COMPLETE LIST OF SPECIAL EXCEPTIONS/WAIVERS

ORDINANCE	SECTION OF ORDINANCE	DESCRIPTION OF SPECIAL EXCEPTION/WAIVER	DATE GRANTED
ZONING	1321.11	PERMISSION OF SPECIAL EXCEPTION USE IN GENERAL COMMERCIAL ZONING	4/18/23
SUBDIVISION	1333.23	REDUCE REQUIRED PARKING TO 12 TOTAL SPACES	6/26/23

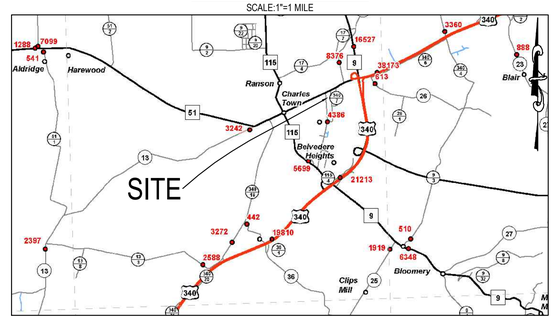
VICINITY MAP

SCALE:1"=400'



WVDOH VICINITY MAP

SCALE:1"=1 MILE



Gross Density (Acres)	0.281
Net Buildable Land Area (Acres)*	0.194
Max Density Requirement	N/A
Total Developed Area (Acres)	0.220

*Does not include ROW Entrance.

Developed Area Breakdown

Total Site Area	12,239.00	0.28
Buildings	1,300.00	0.03
Drive Aisles/Parking	4,833.00	0.11
Sidewalk	658.00	0.02
Dumpster Pad	273.00	0.01
Stormwater Management Areas*	2,210.00	0.05
Total Developed Area of Site	9,274.00	0.22
Percentage Developed	75.77%	

*SWM areas located under parking lot asphalt pavement and not within the above criteria.

ZO Table 1322.10, GC District Bulk and Area Regulations

Regulation	Required	Proposed
Maximum Density	No Requirement	N/A
Minimum Lot Size	No Requirement	N/A
Minimum Lot Width	No Requirement	N/A
Minimum Front Yard Setback	40'	40.5'
Minimum Side Yard Setback	10'	10'
Minimum Rear Yard Setback	30'	30.2'
Maximum Lot Coverage	90%	75.77%
Minimum Required Open Space	No Requirement	N/A
Maximum Buiding Height	55'	55' MAX
Maximum Stories	5 stories	1 story

SLDO Table 1333.23 Minimum Off-Street Parking Space Requirements

USE	Required	Proposed
Casino (Per #BA.2023-01, Granted on 4/18/2023)	12 Total Spaces (Per #WV2023-04, Granted on 6/26/2023)	12 Parking Spaces (1 ADA Van Space)

APPROVAL BLOCK

THIS PRELIMINARY PLAN AND PLAT WAS APPROVED BY THE CITY OF CHARLES TOWN, ON THE ____ DAY OF _____, 20____ SUBJECT TO ANY CONDITIONS SPECIFIED HEREON.

ALL EXPENSES INCURRED WITH RESPECT TO IMPROVEMENTS FOR ALL UTILITY SERVICES, PAVING, GRADING, LANDSCAPING, CURBS, GUTTERS, SIDEWALKS, ROAD LIGHTING, ROAD SIGNS, FLOOD PROTECTION DEVICES, DRAINAGE STRUCTURES AND ALL OTHER IMPROVEMENTS THAT MAY BE REQUIRED SHALL BE IN THE RESPONSIBILITY OF THE SUBDIVIDER AND NO THE CITY.

SECRETARY OF THE PLANNING COMMISSION _____ DATE _____

STATEMENT OF ACCEPTANCE:

THE OWNER/DEVELOPER, IN SIGNING THIS PLAT, AGREES TO ABIDE BY ALL CONDITIONS, TERMS, AND SPECIFICATIONS PROVIDED HEREON; AND TO COMPLETE ALL THE IMPROVEMENTS REQUIRED BY THE SITE PLAN.

IRIS PROPERTY LLC _____ DATE _____
1927 ROCK CLIFF DR
MARTINSBURG, WV 25401

STATEMENT OF ACCURACY

THE ENGINEER AND/OR SURVEYOR, IN SIGNING THIS PLAT./PLAN, ATTESTS TO THE BEST OF HIS/HER KNOWLEDGE, THAT THIS PLAN IS COMPLETE AND ACCURATE.

ENGINEER _____ DATE _____

LIST OF REQUIRED APPROVALS:

CHARLES TOWN UTILITY BOARD AVAILABILITY LETTER (WATER):
DATED: AUGUST 18, 2023

CHARLES TOWN UTILITY BOARD AVAILABILITY LETTER (SEWER):
DATED: AUGUST 18, 2023

THE PROPERTY IS NOT IN AN AREA DESIGNATED AS A SPECIAL FLOOD AREA, AS SHOWN ON F.E.M.A MAP 54037C0136E, EFFECTIVE DATE DECEMBER 18, 2009.

INTEGRITY FEDERAL SERVICES
CIVIL ENGINEERING • LANDSCAPE ARCHITECTURE • PLANNING
148 S. Queen Street, Suite 201 • Phone: 304-725-8456
Martinsburg, WV 25401 • www.ifs-ae.com

RYAN P. PERKS — REGISTERED — No. 17061 — STATE OF WEST VIRGINIA — PROFESSIONAL ENGINEER
SEAL: 9/19/23

REVISIONS

1.	09/18/2023 - REVISION TO UNDERGROUND SWM FACILITY
2.	09/18/2023 - REVISIONS PER CITY, AND CTUB COMMENTS

COVER SHEET

ALLA WILLA COMMERCIAL
CITY OF CHARLES TOWN
JEFFERSON COUNTY, WEST VIRGINIA
TAX MAP 7, PARCEL 12; D.B. 1301, PG. 254
CHARLES TOWN CORP (3) TAX DISTRICT

CITY FILE #2023-03

SCALE:	HORIZ.: N/A VERT.: N/A
DATE:	AUGUST 2023
JOB:	5051-0101
DRAWN: BJS	CHECK: DCW
CADD: C-GI-001.DWG	
NCS:	N/A
SHEET:	01 OF 22

FILE PATH: Z:\PROJECTS\2023\PRELIMINARY\001-ALLA WILLA PROPERTY\WORK\ARCH\001.DWG
COPYRIGHT 2023 - THE CONTENTS AND LAYOUT OF THIS DRAWING IS THE PROPERTY OF INTEGRITY FEDERAL SERVICES. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF INTEGRITY FEDERAL SERVICES IS PROHIBITED.

GENERAL NOTES:

1. THE PROPOSED SITE IMPROVEMENTS FOR 'ALLA WILLA COMMERCIAL' INCLUDE, BUT ARE NOT LIMITED TO, THE CONSTRUCTION OF A COMMERCIAL BUILDING, DRIVE AISLES AND PARKING AREAS WITH ASSOCIATED DRAINAGE STRUCTURES, AN UNDERGROUND SWM FACILITY, AND PRIVATE UTILITIES.
2. THE SUBJECT PROPERTY IS LOCATED IN THE CITY OF CHARLES TOWN, IDENTIFIED AS TAX MAP 7, PARCEL 12. THE PROPERTY OWNER IS IRIS PROPERTY LLC. AS RECORDED IN D.B. 1301 PG 254 AMONG THE LAND RECORDS OF THE CITY OF CHARLES TOWN, JEFFERSON COUNTY, WEST VIRGINIA.
3. THE TOTAL EXISTING SITE ACREAGE FOR PARCEL 12 IS 0.28 ACRES. DISTURBED AREA FOR THE PROJECT IS ±0.31 ACRES.
4. THE TOPOGRAPHIC CONTOUR INTERVAL IS ONE (1) FOOT. TOPOGRAPHIC AND BOUNDARY INFORMATION WAS COMPILED FROM A FIELD TOPOGRAPHIC SURVEY PREPARED BY ROBERTS LAND SURVEYING, DATED JUNE 2023. HORIZONTAL DATUM IS REFERENCED TO THE WEST VIRGINIA COORDINATE SYSTEM OF 1983, NORTH ZONE. VERTICAL DATUM IS REFERENCED TO NAVD 88.
5. THE SUBJECT PROPERTY IS LOCATED ON F.E.M.A. MAP 54037C0136E DATED DECEMBER 18, 2009. NO PORTION OF THIS PROPERTY IS LOCATED WITHIN THE 100-YEAR FLOODPLAIN AREA (ZONE A). THE PROPERTY IS OUT OF FLOOD ZONE.
6. THE CURRENT NATIONAL WETLANDS INVENTORY MAP DOES NOT SHOW WETLANDS/SENSITIVE AREAS ON THE SUBJECT PROPERTY.
7. CHANGES OR REVISIONS IN CONSTRUCTION PLANS AND SPECIFICATIONS SHALL NOT BE MADE UNLESS FIRST APPROVED BY THE CITY OF CHARLES TOWN AND/OR OTHER APPROPRIATE AGENCIES.
8. SEE COVER SHEET, SHEET 01, FOR LEGEND OF SYMBOLS USED HEREIN.
9. AVERAGE DAILY TRIPS AND PEAK HOUR TRIPS PROVIDED PURSUANT TO THE ITE TRIP GENERATION MANUAL, 7'TH EDITION BASED ON ITE LAND USE CODE 151 (CASINO).
   - 9.1. AVERAGE DAILY TRIPS ON A WEEKDAY = 9.93 TRIPS PER 1,000 SF GFA. (1,300 SF GFA/1,000 SF GFA X 9.93 TRIPS = 12.91 TRIPS)
   - 9.2. PEAK HOUR TRIPS ON A SATURDAY = 11.70 TRIPS PER 1,000 SF GFA. (1,300 SF GFA/1,000 SF GFA X 11.70 TRIPS = 15.21 TRIPS)
10. ANY LIGHTING APPROVED WITH BUILDING PERMIT SHALL BE SHIELDED AND/OR DIRECTED AWAY FROM ADJOINING USES AND STREETS TO REDUCE GLARE.

CONSTRUCTION NOTES:

1. CONTRACTOR SHALL CONTACT "MISS UTILITY" AT 811 OR 1-800-245-4848 A MINIMUM OF SEVENTY-TWO (72) HOURS PRIOR TO ANY EXCAVATION, DEMOLITION OR OTHER EARTH DISTURBING ACTIVITIES WITHIN PUBLIC RIGHT-OF-WAYS OR WITHIN AREAS SERVED BY UNDERGROUND UTILITIES. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING THE PRESENCE OF ANY UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION.
2. TO THE BEST OF OUR KNOWLEDGE AND BELIEF, THERE IS NO EVIDENCE OF ANY GRAVE, OBJECT OR STRUCTURE MARKING A PLACE OF BURIAL ON THIS PROPERTY. THERE ARE NO KNOWN CEMETERIES, ARCHEOLOGICAL SITES, NATURAL FEATURES, NOR HISTORIC SITES LISTED, OR DETERMINED TO BE ELIGIBLE, OR WHICH THE OWNER HAS REASON TO BELIEVE MAY BE ELIGIBLE FOR LISTING ON THE NATIONAL REGISTER OF HISTORIC PLACES WITHIN THE CONSTRUCTION LIMITS.
3. INTEGRITY FEDERAL SERVICES DOES NOT CERTIFY TO THE LOCATION OF OR THE EXISTENCE OF ANY EXISTING UNDERGROUND UTILITIES. THE EXISTING UNDERGROUND UTILITIES SHOWN HEREON ARE BASED UPON AVAILABLE INFORMATION. THIS DOES NOT CONSTITUTE A GUARANTEE OF THEIR ACTUAL LOCATIONS OR THAT THEY HAVE ALL BEEN SHOWN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATION OF ALL UTILITIES BEFORE COMMENCING WORK AND FOR ANY DAMAGES WHICH OCCUR BY THEIR FAILURE TO LOCATE OR PRESERVE THESE UNDERGROUND UTILITIES. IF DURING CONSTRUCTION OPERATIONS THE CONTRACTOR SHOULD ENCOUNTER UTILITIES OTHER THAN THOSE SHOWN ON THE PLAN, THEY SHALL IMMEDIATELY NOTIFY THE ENGINEER AND TAKE NECESSARY AND PROPER STEPS TO PROTECT THE FACILITY AND INSURE THE CONTINUANCE OF SERVICE. IF NECESSARY, THE SITE PLAN WILL BE MODIFIED TO ELIMINATE THE CONFLICT AT THE DEVELOPER'S EXPENSE.
4. INTEGRITY FEDERAL SERVICES DOES NOT CERTIFY TO THE SUB-SURFACE CONDITIONS OF THE SITE, THE LOCATION OF UNDERLYING ROCK, OR THE LOCATION OF POTENTIAL SINKHOLES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DIGGING OF TEST HOLES TO VERIFY SUB-SURFACE CONDITIONS PRIOR TO BEGINNING ANY CONSTRUCTION. IF SINKHOLES ARE FOUND IN THE FIELD, REMEDIATION WILL BE REQUIRED AS SPECIFIED BY THE WVDEP AND/OR A QUALIFIED GEOTECHNICAL ENGINEERING FIRM.
5. EROSION AND SEDIMENT CONTROL DEVICES ARE TO BE IN PLACE PRIOR TO ANY CONSTRUCTION. REFER TO EROSION AND SEDIMENT CONTROL PLAN FOR PHASING AND DETAILS.
6. ALL LAND, ON OR OFF SITE, WHICH IS DISTURBED BY THIS DEVELOPMENT, AND WHICH IS NOT BUILT UPON OR SURFACED, SHALL BE ADEQUATELY STABILIZED TO CONTROL EROSION AND SEDIMENTATION.
7. DEVELOPMENT OF THE SITE INCLUDING CONSTRUCTION AND MATERIALS SHALL BE IN CONFORMANCE TO CURRENT CITY OF CHARLES TOWN AND THE WEST VIRGINIA DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS STANDARDS AND SPECIFICATIONS.
8. ALL TESTS, STUDIES, ETC., REQUIRED DURING CONSTRUCTION WILL BE CARRIED OUT BY A THIRD PARTY ENGINEERING FIRM AND PAID FOR BY THE CONTRACTOR.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING THE OWNER AND THE ENGINEER OF ANY CHANGES OR CONDITIONS ATTACHED TO PERMITS REQUIRED FOR CONSTRUCTION.
10. THE CONTRACTOR SHALL PROVIDE ADEQUATE MEANS OF CLEANING TRUCKS AND/OR OTHER EQUIPMENT OF MUD PRIOR TO ENTERING THE RIGHT-OF-WAY, AND IT IS THE CONTRACTORS RESPONSIBILITY TO CLEAN STREETS OF MUD AND/OR ALLAY DUST AND TO TAKE WHATEVER MEASURES NECESSARY TO ENSURE THAT THE STREETS ARE KEPT IN A CLEAN AND DUST FREE CONDITION AT ALL TIMES.
11. THE CONTRACTOR SHALL NOTIFY OPERATORS WHO MAINTAIN EXISTING UNDERGROUND UTILITY LINES IN THE AREA OF PROPOSED EXCAVATION OR BLASTING AT LEAST TWO (2) WORKING DAYS, BUT NOT MORE THAN TEN (10) WORKING DAYS, PRIOR TO COMMENCEMENT OF EXCAVATION OR DEMOLITION.
12. THE CLIENT, CONTRACTOR, AND/OR SURVEYOR SHALL BE RESPONSIBLE FOR NOTIFYING INTEGRITY FEDERAL SERVICES OF ANY CONDITIONS FOUND IN THE FIELD THAT VARY FROM WHAT IS SHOWN ON THE APPROVED PLANS. OBSERVATIONS REGARDING APPARENT INCONSISTENCIES IN THE PLANS SHALL BE BROUGHT TO INTEGRITY FEDERAL SERVICES ATTENTION FOR VERIFICATION PRIOR TO STAKEOUT.
13. THE CLIENT AND CONTRACTOR ARE RESPONSIBLE FOR REVIEWING THE PLANS PRIOR TO CONSTRUCTION AND NOTIFYING INTEGRITY FEDERAL SERVICES OF ANY CIRCUMSTANCES FOUND WITHIN THESE PLANS IN NEED OF VERIFICATION SO THAT APPROPRIATE REVISIONS CAN BE MADE, IF WARRANTED.
14. ALL HANDICAPPED PARKING SPACES SHALL CONFORM TO THE REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT. (ADA - CURRENT VERSION). ALL TRAILS & SIDEWALKS SHALL COMPLY WITH ADA REQUIREMENTS.
15. CONTRACTOR SHALL BE RESPONSIBLE FOR INITIATING, MAINTAINING AND SUPERVISING ALL SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH PERFORMANCE OF ITS WORK AND THE WORK OF ITS SUBCONTRACTORS. INTEGRITY FEDERAL SERVICES SHALL NOT HAVE CONTROL OVER, CHARGE OF, OR RESPONSIBILITY FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES OR FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK.
16. THE CONTRACTOR SHALL VISIT THE SITE AND FIELD VERIFY EXISTING CONDITIONS AND GRADES PRIOR TO STARTING CONSTRUCTION.
17. THE CONTRACTOR SHALL CLEAR THE SITE OF ALL APPLICABLE VEGETATION, BUILDINGS, FOUNDATIONS, ETC. WITHIN THE LIMITS OF CONSTRUCTION AND SHALL BE RESPONSIBLE FOR COORDINATING ANY DISCONNECTION AND/OR ABANDONMENT OF EXISTING UTILITIES AND STRUCTURES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND ABANDONING ALL EXISTING WELLS AND/OR SEPTIC DRAIN FIELDS AND COORDINATING THEIR ABANDONMENT WITH THE HEALTH DEPARTMENT
18. ALL PROPOSED GRADES AS SHOWN HEREIN ARE FINISHED GRADE UNLESS OTHERWISE NOTED ON THE PLAN.
19. MAINTAIN A MINIMUM VERTICAL CLEARANCE OF ONE (1) FOOT SIX (6) INCHES BETWEEN CROSSINGS OF ALL UTILITY LINES UNLESS OTHERWISE NOTED.
20. THE APPROVAL OF THESE PLANS SHALL IN NO WAY GRANT PERMISSION BY THE APPROVING JURISDICTION FOR THE CONTRACTOR TO TRESPASS ON OFF-SITE PROPERTIES. THE APPROVAL OF THESE PLANS SHALL IN NO WAY RELIEVE THE OWNER OF COMPLYING WITH OTHER APPLICABLE LOCAL, STATE AND FEDERAL REQUIREMENTS.
21. WHERE THE ORDINANCES DIFFER BETWEEN LOCAL, STATE, AND FEDERAL REQUIREMENTS, THE MOST RESTRICTIVE SHALL APPLY.
22. CONTRACTOR TO REFERENCE GEOTECHNICAL REPORT OR A PROFESSIONAL ENGINEER OR CERTIFIED TECHNICIAN FOR SUITABLE BACKFILL MATERIAL REQUIREMENTS AND COMPACTION REQUIREMENTS. CBR TESTS SHALL BE PERFORMED PRIOR TO DETERMINATION OF FINAL SUBGRADE ELEVATION FOR PAVEMENT AREAS. SOILS TESTS OF SUBGRADE MUST BE SUBMITTED FOR ACTUAL DETERMINATION OF REQUIRED PAVEMENT SECTION THICKNESS PRIOR TO CONSTRUCTION. ALL SUBGRADE SHALL BE COMPACTED TO THE PERCENTAGES OF MAXIMUM DRY DENSITY (AASHTO T99C) UNLESS OTHERWISE DIRECTED BY AN APPROVED GEOTECHNICAL REPORT.
23. BUILDING FOOTPRINTS AS SHOWN ARE APPROXIMATE IN BUILDING SIZE AND DO NOT REPRESENT FINAL ARCHITECTURALS.
24. ALL GRADING SHALL PROVIDE PROPER DRAINAGE & DISPOSAL OF STORM WATER WITHOUT PONDING.
25. ALL FILL SHALL BE COMPACTED TO PREVENT EROSION.
26. GRADING SHALL NOT BE DONE IN SUCH A WAY TO DIVERT WATER ONTO THE PROPERTY OF ANOTHER LAND OWNER.
27. LOTS SHALL BE GRADED TO SECURE PROPER DRAINAGE AWAY FROM BUILDINGS AND TO PREVENT POOLING OR COLLECTION OF STORM WATER.
28. EXCAVATION OR FILL SHALL NOT ENDANGER AN ADJOINING PROPERTY.
29. ALL CLEARING, GRADING, DRAINAGE, CONSTRUCTION, AND DEVELOPMENT SHALL BE CONDUCTED IN STRICT ACCORDANCE WITH THE APPROVED PLAN.
30. FIELD VERIFY EXISTING GRADES PRIOR TO CONSTRUCTION.
31. CONTRACTOR TO ENSURE POSITIVE DRAINAGE THROUGHOUT CONSTRUCTION.

CITY OF CHARLES TOWN ORDINANCE NOTES:

1. STORM WATER MANAGEMENT SHALL BE PROVIDED BY AN UNDERGROUND STORMWATER MANAGEMENT INFILTRATION FACILITY THAT PROVIDES BOTH WATER QUALITY AND QUANTITY CONTROL COMPLIANCE.
2. ALL CONSTRUCTION SHALL CONFORM TO THE CITY OF CHARLES TOWN ZONING ORDINANCE AND ARTICLE 1333 OF THE CITY OF CHARLES TOWN SUBDIVISION AND LAND DEVELOPMENT ORDINANCE. CHANGES OR REVISIONS IN CONSTRUCTION PLANS AND SPECIFICATIONS SHALL NOT BE MADE UNLESS FIRST APPROVED BY THE CITY OF CHARLES TOWN AND OTHER APPROPRIATE AGENCIES
3. ALL STREET AND TRAFFIC CONTROL SIGNS SHALL CONFORM TO THE STANDARDS SET FORTH IN SECTION ARTICLE 1333.04 OF THE CITY OF CHARLES TOWN SUBDIVISION AND LAND DEVELOPMENT ORDINANCE. IN ADDITION, ALL SIGNS SHALL BE INSTALLED IN THE PUBLIC RIGHT-OF-WAY AND LOCATED IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, 2009 EDITION AND THE CITY MANAGER.
4. ARCHITECTURALS SHALL BE PROVIDED UNDER SEPARATE COVER.
5. ALL SITE IMPROVEMENTS SHOWN SHALL BE BONDED TO THE SATISFACTION OF THE PLANNING COMMISSION PRIOR TO ISSUANCE OF ANY BUILDING PERMITS.
6. RETAINING WALLS 18 INCHES OR GREATER IN HEIGHT REQUIRE A BUILDING PERMIT THAT MUST BE OBTAINED BY THE OWNER/DEVELOPER. THESES WALLS MUST BE DESIGNED AND CERTIFIED BY A LICENSED WEST VIRGINIA ENGINEER AND SHALL BE SUBMITTED UNDER SEPARATE COVER.
7. ALL ENTRANCE SIGNS, BUILDING SIGNS AND FREESTANDING PYLON SIGN SHALL REQUIRE A SIGN PERMIT TO ENSURE CONFORMANCE WITH THE CITY OF CHARLES TOWN'S SIGN REGULATIONS.
8. ALL FREESTANDING SIGNS SHALL BE ERECTED AT A MAXIMUM HEIGHT OF 30 FEET AND SHALL CONTAIN A MAXIMUM SQUARE FOOTAGE OF 100 SQUARE FEET, EXCLUDING STRUCTURE COMPONENTS FOR THE SIGN. ALL FREESTANDING SIGNS PERMITTED SHALL COMPLY WITH THE CITY OF CHARLES TOWN ZONING ORDINANCE SIGN REQUIREMENTS.
9. ALL BUILDING MOUNTED SIGNS OR BUSINESS SIGNS LOCATED ON INDIVIDUAL LOTS SHALL HAVE A MAXIMUM SQUARE FOOTAGE OF 50 SQUARE FEET, EXCLUDING STRUCTURAL COMPONENTS FOR THE SIGN AND EACH LOT IS TO BE ALLOWED ONE SIGN.
10. AS REQUIRED BY THE ZONING ORDINANCE, STRUCTURES SHALL BE LIMITED TO A MAXIMUM HEIGHT OF 55 FEET WITHIN THE GENERAL COMMERCIAL DISTRICT.

CITY OF CHARLES TOWN ENGINEERING NOTES:

1. EXISTING TREES ARE TO REMAIN IN THEIR NATURAL CONDITION THROUGHOUT THE DEVELOPMENT WHEREVER PRACTICAL.
2. AT THIS TIME, NO OFF-SITE BORROW PITS ARE ANTICIPATED FOR THIS PROJECT.
3. PROPERTY CORNERS ARE TO BE SET WITH ⅝" x 30" REBARS WITH I.D. CAPS UNLESS OTHERWISE NOTED.
4. ALL PROPOSED UTILITIES (E.G. ELECTRIC, CABLE, TELEPHONE) SHALL BE LOCATED UNDERGROUND.
5. CUT AND FILL ACTIVITY/MATERIAL SHALL NOT ENCROACH ON ADJOINING PROPERTIES.
6. SOLID WASTE REMOVAL HAS BEEN PROVIDED BY 1 REFUSE DUMPSTER LOCATION ON SITE. THE PROPERTY MANAGER WILL DETERMINE THE TYPE OF DUMPSTER AND THE FREQUENCY OF COLLECTION.
7. SITE LIGHTING IS NOT PROPOSED FOR THIS SITE. ANY ADDITIONAL LIGHTING SHALL MEET THE CITY OF CHARLES TOWN REQUIREMENTS.
8. WATER AND SEWER SERVICE TO BE PROVIDED BY THE CHARLES TOWN UTILITY BOARD (CTUB).
9. PERMEABLE AREAS OF THE SITE SHALL BE PLANTED WITH GROUND COVER, SHRUBS, AND TREES AS REQUIRED BY THE SUBDIVISION AND LAND DEVELOPMENT ORDINANCE.

GOV'T. AGENCIES/UTILITIES:

- CITY OF CHARLES TOWN DEPARTMENT OF COMMUNITY DEVELOPMENT
  101 E. WASHINGTON STREET
  CHARLES TOWN, WV 25414
  (304) 725-2311
- WATER
  CITY OF CHARLES TOWN UTILITY BOARD
  108 W. CONGRESS STREET
  CHARLES TOWN, WV 25414
  (304) 725-2316
- SANITARY SEWER
  CITY OF CHARLES TOWN UTILITY BOARD
  108 W. CONGRESS STREET
  CHARLES TOWN, WV 25414
  (304) 725-2316
- ELECTRIC
  THE POTOMAC EDISON COMPANY
  18444 NORTHWESTERN TURNPIKE
  AUGUSTA, WV 26704
  (800) 686-0011
- TELECOMMUNICATIONS
  FRONTIER COMMUNICATIONS
  1108 N. MILDRED STREET
  RANSON, WV 25438
  (304) 728-8500
- TRANSPORTATION
  WEST VIRGINIA DIVISION OF HIGHWAYS,
  DISTRICT FIVE
  2120 NORTHWESTERN TURNPIKE
  BURLINGTON, WV 26710
  (304) 289-2208
- OTHER
  MISS UTILITY
  5608 MACCORKLE AVE, SW
  SOUTH CHARLESTON, WV 25309
  (800) 245-4848 OR 811

NOTES:
THE CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES PRIOR TO CONSTRUCTION.

INTEGRITY FEDERAL SERVICES
CIVIL ENGINEERING • LANDSCAPE ARCHITECTURE • PLANNING
148 S. Queen Street, Suite 201 • Martinsburg, WV 25401
Phone: 304-725-8456 • www.ifs-se.com

RYAN P. PERRY — REGISTERED — STATE OF WEST VIRGINIA — PROFESSIONAL ENGINEER
SEAL: 9/19/23

REVISIONS

1.	09/18/2023 - REVISION TO UNDERGROUND SWM FACILITY
2.	09/18/2023 - REVISIONS PER CITY, AND CTUB COMMENTS

GENERAL NOTES

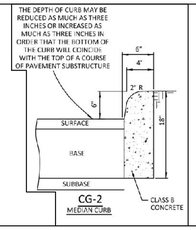
ALLA WILLA COMMERCIAL

CITY OF CHARLES TOWN
JEFFERSON COUNTY, WEST VIRGINIA
TAX MAP 7, PARCEL 12; D.B. 1301, PG. 254
CHARLES TOWN CORP (3) TAX DISTRICT

CITY FILE #2023-03

SCALE:	HORIZ.: N/A VERT.: N/A
DATE:	AUGUST 2023
JOB:	5051-0101
DRAWN: BJS	CHECK: DCW
CADD: C-GI-002.DWG	
NCS:	N/A
SHEET:	02 OF 22

FILE PATH: Q:\PROJECTS\2023\5051-0101 ALLA WILLA PROPERTY\DWG\ARCH\ C-GI-002.DWG
COPYRIGHT 2023. ALL DRAWINGS CONTAINED HEREIN ARE THE PROPERTY OF INTEGRITY FEDERAL SERVICES AND ARE NOT TO BE USED IN WHOLE OR IN PART, OR ALTERED IN ANY FORM WITHOUT THE WRITTEN AUTHORIZATION FROM INTEGRITY FEDERAL SERVICES (IFS) ©2023



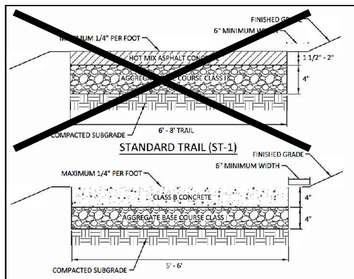
NOTES:

1. THE USE OF CG-1R SHALL NOT BE UTILIZED WITHIN THE LIMITS OF PUBLIC RIGHT OF WAY.
2. A MAXIMUM OF A 2" RADIUS IS ACCEPTABLE WITH CURB AND GUTTER.
3. SUBGRADE FOR ALL CURB AND GUTTER SHALL BE COMPACTED TO 95 PERCENT DENSITY AT OPTIMUM MOISTURE TO THE FULL WIDTH OF RIGHT OF WAY IN ACCORDANCE WITH AASHTO, T99.

CG-2
MEDIAN CURB

NOT TO SCALE

	TYPICAL COMBINATION CURB AND GUTTER City of Charles Town	CG-1 CG-1R CG-2



NOTES:

1. ALL PEDESTRIAN AND BIKE TRAILS LOCATED OUTSIDE OF CITY OF CHARLESTOWN RIGHT OF WAY SHALL BE A MINIMUM OF 5' IN WIDTH FOR SIDEWALKS, 6' FOR ALL PEDESTRIAN TRAILS, AND 8' FOR ALL BIKE TRAILS.
2. A PRIVATE ACCESS EASEMENT SHALL BE PROVIDED FOR ALL SIDEWALKS AND TRAILS OUTSIDE OF CITY OF CHARLES TOWN RIGHT OF WAY AND SHALL INCLUDE A MINIMUM OF 3' OF WIDTH ON BOTH SIDES OF THE TRAIL OR SIDEWALK.
3. THE MAXIMUM GRADE FOR ALL PEDESTRIAN TRAILS SHALL BE 10%.
4. THE MAXIMUM GRADE FOR ALL BIKE TRAILS SHALL BE 8%, EXCEPT UP TO 15% IS ALLOWED FOR DISTANCES OF LESS THAN 150 FEET.
5. APPROPRIATE LIGHTING AND SIGNAGE, LANDSCAPING, BUFFERING AND DRAINAGE MEASURES, ALONG WITH CONSIDERATIONS FOR SECURITY SHALL BE INCORPORATED IN THE DESIGN OF THESE FACILITIES.

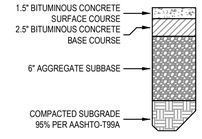
NOT TO SCALE

	TRAIL AND TYPICAL SIDEWALK City of Charles Town	ST-1 SW-1

MINIMUM TYPICAL PAVEMENT SECTIONS:

NOT TO SCALE

K-1 ASPHALT PAVEMENT

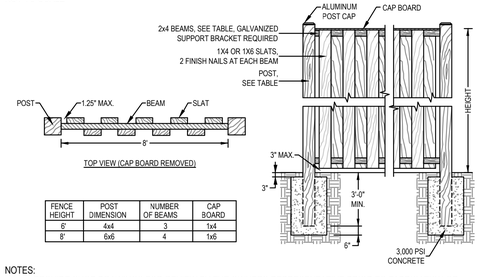


NOTES:

1. SOILS TESTS OF SUBGRADE MUST BE SUBMITTED FOR ACTUAL DETERMINATION BASED ON CBR OF REQUIRED PAVEMENT SECTION THICKNESS PRIOR TO CONSTRUCTION.
2. FOR K-1 ASPHALT PAVEMENT TYPICAL, ALL BASE AND SUBGRADE MATERIAL SHALL BE COMPACTED TO 95% THEORETICAL MAXIMUM DRY DENSITY AS DETERMINED BY AASHTO T99 METHOD A, WITHIN 2% OF OPTIMUM MOISTURE CONTENT.

DUMPSTER AREA FENCE DETAIL:

NOT TO SCALE



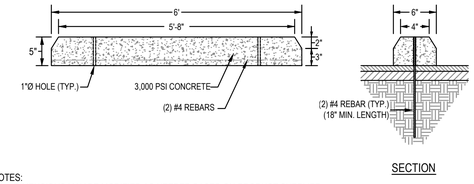
FENCE HEIGHT	POST DIMENSION	NUMBER OF BEAMS	CAP BOARD
6'	4x4	3	1x4
8'	6x6	4	1x6

NOTES:

1. PROVIDE SHOP DRAWINGS FOR REVIEW BY THE OWNERS REPRESENTATIVE PRIOR TO FABRICATION OR INSTALLATION. INCLUDE GATES, CONNECTION DETAILS, AND ANY OTHER NON-STANDARD DETAILS.
2. INSTALLATION AND ALIGNMENT OF THE FENCE TO BE IN ACCORDANCE WITH THE CONTRACT DRAWINGS.
3. ALL LUMBER SHALL BE PRESSURE TREATED SOUTHERN YELLOW PINE.
4. OWNER/CONTRACTOR MAY OPT TO USE THE BOARD FENCE SCREENING AS SHOWN HEREIN OR APPROVED ALTERNATE SCREENING FENCE.

WHEEL STOP DETAIL:

NOT TO SCALE

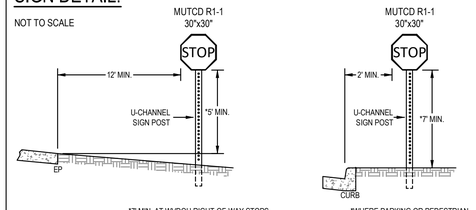


NOTES:

1. DIMENSIONS MAY BE MODIFIED AS NEEDED BASED ON PRODUCT SUPPLIER.

SIGN DETAIL:

NOT TO SCALE

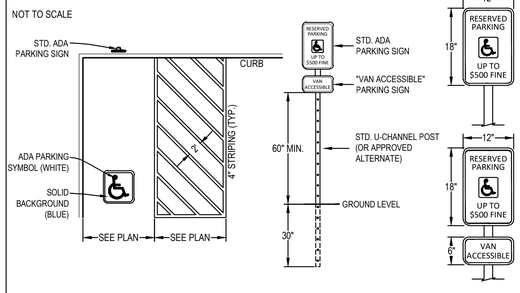


NOTES:

1. FOR MORE EXTENSIVE STANDARDS REFER TO THE CURRENT EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS 2009 EDITION (WITH UPDATES) AND THE STANDARDS OF THE WEST VIRGINIA DEPARTMENT OF TRANSPORTATION.
2. U-CHANNEL SIGN POST SHALL BE PER WVDOH STANDARD DETAIL SHEET TE1-7A.
3. ALL STOP BARS SHALL BE TYPE V, WHITE, 12" WIDTH, SOLID STOP LINES (PER WVDOH SPECIFICATIONS).

ADA ACCESSIBLE PARKING & SIGN DETAILS:

NOT TO SCALE

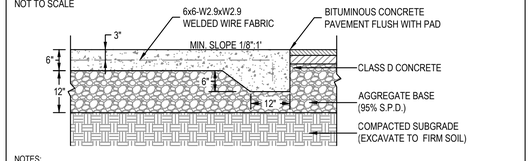


NOTES:

1. ALL CONSTRUCTION AND MATERIALS SHALL CONFORM TO THE AMERICANS WITH DISABILITIES ACT (ADA-CURRENT VERSION) ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES AND APPLICABLE LOCAL AND STATE CODES.
2. FOR MORE EXTENSIVE STANDARDS REFER TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) FOR STREETS AND HIGHWAYS 2009 EDITION (WITH UPDATES).

DUMPSTER PAD DETAIL:

NOT TO SCALE



NOTES:

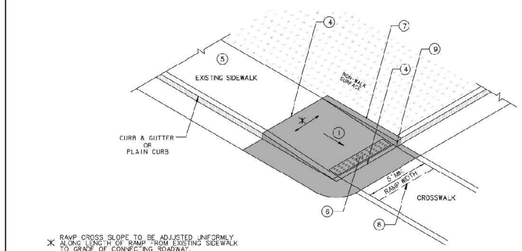
1. ALL BASE AND SUBGRADE MATERIAL SHALL BE COMPACTED TO 95% MAXIMUM DRY DENSITY AS DETERMINED BY AASHTO T99 METHOD C.
2. CONCRETE SHALL BE MINIMUM 4,000 PSI FIBERGLASS REINFORCED CONCRETE.

ADA SIDEWALK RAMPS:

NOT TO SCALE

NOTES:

1. ALL PROPOSED ADA RAMPS ARE TYPE IB RAMPS.
2. ALL SIDEWALK RAMPS SHALL BE CONSTRUCTED TO MEET CURRENT ADA STANDARDS.



NOTES

THE TYPE OF RAMP TO BE USED SHALL BE AS SPECIFIED ON THE PLANS. THESE STANDARDS CAN BE CONSIDERED GUIDELINES IN SELECTING RAMP TYPES, HOWEVER THEY CAN BE DEVIATED FROM WITH A SPECIAL DETAIL AS NOTED IN PLANS.

RAMP CONCRETE SHALL MEET THE REQUIREMENTS OF SECTION 609 OF THE CURRENT WVDOT, DOH STANDARD SPECIFICATIONS ROADS AND BRIDGES AND ANY SUBSEQUENT DOH SUPPLEMENTAL SPECIFICATIONS, AND THE PUBLIC RIGHTS OF WAY ACCESSIBILITY GUIDELINES (PROWAG) DATED JULY 26, 2011. RAMP SURFACE SHALL INCLUDE A "DETECTABLE WARNING SURFACE" (SEE PVT7 SHT. 11 OF 13) AS SHOWN FOR EACH RAMP TYPE. A COARSE BROOM FINISH, TRANSVERSE TO FLARE SLOPES, OR EQUAL NON-SKID FINISH SHALL BE PROVIDED ON CONCRETE SURFACES.

NORMAL GUTTER FLOW LINE AND PROFILE SHALL BE MAINTAINED THROUGH THE RAMP AREA, UNLESS OTHERWISE SHOWN OR SPECIFIED. POSITIVE DRAINAGE MUST BE MAINTAINED SO THAT NO PONDING OCCURS WITHIN THE RAMP OR CLEAR SPACE AREA.

1/4" MINIMUM, 1/2" MAXIMUM PREFORMED EXPANSION JOINT FILLER, MEETING THE REQUIREMENTS OF SECTION 609 OF THE SPECIFICATIONS, AS NOTED ABOVE, SHALL BE PLACED AT ALL LOCATIONS WHERE RAMP CONTACTS CURB, GUTTER, CONCRETE PAVEMENT, OR OTHER RIGID OBJECTS.

WHERE EXISTING SIDEWALK CONNECTS TO PROPOSED SIDEWALK OR RAMPS, EXPANSION JOINTS ALONG WITH DOWEL BARS WILL BE PLACED. DOWEL BARS WILL BE UTILIZED BETWEEN EXISTING AND PROPOSED TO REDUCE VERTICAL CHANGE, SEE SHEET 1 FOR ADDITIONAL INFORMATION.

SAWCUTS WILL BE UTILIZED DURING DEMOLITION OF EXISTING SIDEWALKS. SIMILAR METHODS MAY BE USED UPON APPROVAL BY FIELD ENGINEER.

RAMPS SHALL NOT BE PLACED IN LINE WITH DRAINAGE STRUCTURES. LOCATION OF THE RAMP SHALL TAKE PRECEDENCE OVER LOCATION OF THE DRAINAGE STRUCTURE, EXCEPT WHERE EXISTING STRUCTURES SHALL BEING UTILIZED FOR CONSTRUCTION OF NEW RAMPS.

ANY GRATE IN PEDESTRIAN AREAS SHALL HAVE OPENINGS NOT GREATER THAN 1/2" AND SHALL BE PLACED WITH LONG DIMENSION OF OPENING PERPENDICULAR TO THE DIRECTION OF PEDESTRIAN TRAVEL.

IF THE 8.33% (12:1) SLOPE CANNOT BE OBTAINED DUE TO GRADE OF THE ADJACENT ROADWAY, THE SLOPED PORTION OF THE RAMP SHALL BE EXTENDED TO A MINIMUM LENGTH OF 15'-0".

EXISTING CROSS WALK AND STOP BAR MARKINGS TO BE ERADICATED AND RELOCATED AS DICTATED BY PROPOSED RAMP LOCATIONS. COST NOT INCIDENTAL TO COST OF PROPOSED RAMP.

CURB RAMP WIDTH SHALL MATCH SIDEWALK WIDTH PLUS CLEARANCE. TYPICAL SIDEWALK WIDTH IS 5' MINIMUM. RAMP WIDTH'S LESS THAN 5' REQUIRE DIVISION/DISTRICT ENGINEER APPROVAL. WIDTHS LESS THAN 4' REQUIRE AN EXCEPTION JUSTIFICATION REPORT. SEE SHEET 11 FOR INFORMATION REGARDING RAMP THICKNESS.

GRADE BREAKS SHALL BE PERPENDICULAR TO THE DIRECTION OF THE RAMP RUN. SURFACE SLOPES THAT MEET AT GRADE BREAKS SHALL BE FLUSH.

CLEAR SPACE- BEYOND THE BOTTOM GRADE BREAK, A CLEAR SPACE THE WIDTH OF THE CURB RAMP AND EXTENDING 4' MINIMUM INTO THE ABUTTING ROADWAY SHALL BE PROVIDED WITHIN THE WIDTH OF THE PEDESTRIAN STREET CROSSING AND WHOLLY OUTSIDE THE PARALLEL TRAVEL LANE. SURFACE TO MATCH EXISTING. ANY CLEAR SPACE WORK TO BE COMPLETED WILL BE INCIDENTAL TO THE COST OF THE RAMP.

ALL CURB RAMPS SHALL BE CONSTRUCTED TO PROVIDE ACCESS TO EXISTING OPERABLE PARTS. AN EXAMPLE OF THIS WOULD BE PEDESTRIAN PUSH BUTTONS.

TYPE IB RAMP

LEGEND

1. 8.33% (12:1) MAXIMUM RAMP SLOPE INCLUDING CONSTRUCTION TOLERANCE SLOPE OF RAMP SHALL CARRY THROUGH TO FACE OF CURB
2. CROSS SLOPE: 2.00% MAXIMUM INCLUDING CONSTRUCTION TOLERANCE
3. CURB RAMPS REQUIRE A (5'-0") MINIMUM TURNING SPACE WHERE PEDESTRIANS PERFORM TURNING MANEUVERS WITH A MAXIMUM CROSS SLOPE OF 2% AND LONGITUDINAL SLOPE MATCHING ROADWAY
4. GRADE BREAK REQUIRED TO BE FLUSH (0") AND PERPENDICULAR TO PEDESTRIAN PATH OF TRAVEL
5. IF SIDEWALK IS EXISTING AND NON-COMPLIANT SEE "TRANSITION TO EXISTING NON-COMPLIANT SIDEWALK" DETAIL SHEET 12
6. DETECTABLE WARNING SURFACE SEE "DETECTABLE WARNING SURFACE (DWS)" DETAIL SHEET 11
7. CURB WALL OR CHEEK WALL AS DICTATED BY FIELD CONDITIONS. SEE "EXISTING ADJACENT SURFACE TRANSITION" DETAIL SHEET 13
8. CLEAR SPACE - WIDTH OF CURB RAMP AND EXTENDING 4' MINIMUM
9. 3/4" CHAMFER EDGE

PAY LIMITS FOR CURB RAMPS INCLUDING DWS

NOT TO SCALE

WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
STANDARD DETAIL

PREPARED 1-1-1999

REVISED DATE
7/05/05
01/30/12
10/05/20

SIDEWALK RAMPS
(Sheet 3 of 13)
TYPE IB RAMP

STANDARD SHEET PVT 7

ADA SIDEWALK RAMPS:

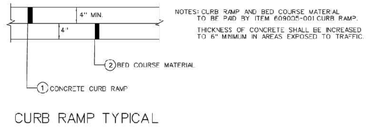
NOT TO SCALE

NOTES:

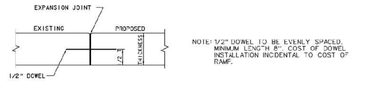
1. ALL PROPOSED ADA RAMPS ARE TYPE IB RAMPS.
2. ALL SIDEWALK RAMPS SHALL BE CONSTRUCTED TO MEET CURRENT ADA STANDARDS.



DETECTABLE WARNING SURFACE (DWS)



CURB RAMP TYPICAL



CURB RAMP TYPICAL

NOTES

DETECTABLE WARNING SURFACES (DWS'S) SHALL ONLY BE PURCHASED FROM VENDORS ON THE WEST VIRGINIA DIVISION OF HIGHWAYS APPROVED VENDOR LIST 609.2 - DETECTABLE WARNING SURFACES.

DESIGN AND PLACEMENT OF DETECTABLE WARNING SURFACE (DWS) SHALL BE IN ACCORDANCE WITH SECTION 609 OF THE CURRENT WVDOT, DOH STANDARD SPECIFICATIONS ROADS AND BRIDGES AND AND SUBSEQUENT DOH SUPPLEMENTAL SPECIFICATIONS AND THE PUBLIC RIGHTS OF WAY ACCESSIBILITY GUIDELINES (PROWAG) DATED JULY 26, 2011.

DETECTABLE WARNING SURFACES SHALL EXTEND ACROSS THE FULL WIDTH OF THE CURB RAMP (TRANSITIONS) WHERE THE CURB IS FLUSH WITH THE ROADWAY AND SHALL BE PLACED AT THE BACK OF THE CURB WITH A 0" MINIMUM, 2" MAXIMUM BORDER DIMENSION FROM JOINTS ON EACH SIDE OF THE DWS. WHERE THE BACK OF THE CURB EDGE IS TOOLED TO PROVIDE A RADIUS, THE BORDER DIMENSION SHOULD BE MEASURED FROM THE END OF THE RADIUS.

DETECTABLE WARNING SURFACES SHALL CONTRAST VISUALLY WITH ADJACENT GUTTER, STREET, OR HIGHWAY, EITHER LIGHT ON DARK OR DARK ON LIGHT.

A WET OR PLASTIC SET-IN-PLACE DETECTABLE WARNING SURFACE (DWS) SHALL BE INSTALLED AT THE TIME OF THE PLACEMENT OF THE CURB RAMP, WHILE THE CONCRETE IS STILL PLASTIC.

MOLD-IN-PLACE CONCRETE DOMES, BRICK PAVERS, OR IRON OR STEEL WARNING SYSTEMS SHALL NOT BE USED.

SET-IN-PLACE DWS SHALL BE USED IN NEW CONSTRUCTION. SURFACE MOUNTED DWS ARE NOT PERMITTED.

CONCRETE SHALL BE FORMED AROUND THE DWS AT TIME OF PLACEMENT.

A SINGLE DWS PANEL SHALL BE USED WITH CURB RAMP WIDTHS OF 5' OR LESS.

ANY CUTTING OF DWS DURING INSTALLATION SHALL BE APPROVED BY PROJECT ENGINEER.

IF DWS IS CUT TO CONFORM TO A SPECIFIC SHAPE OF RAMP AND ANCHORING DEVICES BECOME PART OF THE WASTE, THEN ANCHOR WILL BE REMOVED AND REATTACHED INTO THE DWS AT THE ORIGINAL EDGE OFFSET AS PER MANUFACTURER.

ALL DOWEL BARS SHALL BE EPOXY COATED IN ACCORDANCE WITH SECTION 709.1 OF THE CURRENT WVDOH STANDARD SPECIFICATIONS ROADS AND BRIDGES.

NOT TO SCALE

WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
STANDARD DETAIL

PREPARED 1-1-1999

REVISED DATE
7/05/05
01/30/12
10/05/20

SIDEWALK RAMPS
(Sheet 11 of 13)
DETECTABLE WARNING SURFACES & TYPICALS

STANDARD SHEET PVT 7

INTEGRITY
FEDERAL SERVICES
CIVIL ENGINEERING • LANDSCAPE ARCHITECTURE • PLANNING
148 S. Queen Street, Suite 201 • Martinsburg, WV 25401
Phone: 304-725-8456 • www.ifs-se.com

RYAN P. PERRY
REGISTERED
No. 17061
STATE OF WEST VIRGINIA
PROFESSIONAL ENGINEER
SEAL: 9/19/23

REVISIONS

1. 09/18/2023 - REVISION TO UNDERGROUND SWM FACILITY
2. 09/18/2023 - REVISIONS PER CITY, AND CTUB COMMENTS

SITE DETAILS

ALLA WILLA COMMERCIAL

CITY OF CHARLES TOWN
JEFFERSON COUNTY, WEST VIRGINIA
TAX MAP 7, PARCEL 12; D.B. 1301, PG. 254
CHARLES TOWN CORP (3) TAX DISTRICT

CITY FILE #2023-03

SCALE:	HORIZ.: N/A VERT.: N/A
DATE:	AUGUST 2023
JOB:	5051-0101
DRAWN: BJS	CHECK: DCW
CADD: C-GI-501.DWG	
NCS:	N/A
SHEET:	03 OF 22

F:\ALPHA\1-PROJECTS\2005\05051-0101 ALLA WILLA PROPERTY\WORK\ACAD\C-GI-501.DWG
Plotted: Jul 20, 2023 - 10:12:09am by Brian Sheets
THESE PLANS ARE THE PROPERTY OF INTEGRITY FEDERAL SERVICES AND SHALL NOT BE USED IN ANY PROJECTS WITHOUT PRIOR WRITTEN AUTHORIZATION FROM INTEGRITY FEDERAL SERVICES (IFS) ©2023

Konlite



The Konlite multi-use LED AREA LIGHT for Pole or Flood series combines advanced optics and modern profile design to deliver enhanced performance to any area lighting application. Reduce energy consumption up to 65% compared to HPS or HID. Rugged die-cast housing provides advanced thermal management for durability and weather-proof compartment to withstand outdoor environments. Attractive ROI; designed for low maintenance, long life and low cost of ownership while increasing security and safety.

Features:

Construction:
Rugged 3G Vibration bronze die-cast housing with advanced thermal management system ensures durability. Easy installation with reduced weight and size. Weather-proof, gasketed driver compartment protects against environmental elements.

Optics:
Designed at 145 LM/W, Precision-formed optical lens system reduces glare and improves safety and security by delivering even illumination with precise optical distribution. Type III distribution comes standard.

Certifications:
IP66 rated, UL, DLC Premium, 5 Yr Warranty

Electrical:
Universal voltage120- 277V. Call for 480V availbility.

Mounting:
Mounting options include: Extrusion Arm plus Slipfitter (fits both square or round pole), SlipFitter, Trunnion

Controls/Dimming:
0-10V Dimming standard. All units ship with Shorting Cap. Increase energy savings with optional Dusk to Dawn photocell.

Applications:
General commercial and outdoor spaces, Building facades, Parking lots, walkways, auto dealerships, outdoor retail shopping centers, recreational spaces, campuses, receiving docks and roadways.

PART #:	Wattage	Lumens	CCT	Voltage	Dimensions	Weight	Beam	DIM	DLC Model #
RKAL0301100W5KDNYYLD	100W	14,500	5000K	120-277	13.92 x 10.65 x 2.36	11.68 lb	Type III	0-10V	P68QD9PP
RKAL0301150W5KDNYYLD	150W	21,750	5000K	120-277	13.92 x 10.65 x 2.36	11.68 lb	Type III	0-10V	P3AX1OXL
RKAL0301200W5KDNYYLD	200W	29,000	5000K	120-277	16.54 x 12.6 x 2.46	15.46 lb	Type III	0-10V	P8CIAOBN
RKAL0301250W5KDNYYLD	250W	36,250	5000K	120-277	20.49 x 12.6 x 2.46	20.26 lb	Type III	0-10V	PG1FJ5C1
RKAL0301320W5KDNYYLD	320W	46,400	5000K	120-277	20.49 x 12.6 x 2.46	20.26 lb	Type III	0-10V	P29ZHBRH

YY= EX: Extrusion Arm + SlipFitter SF: SlipFitter TR: Trunnion

DLC ±10% based on installed environment.

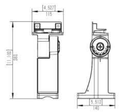
Performance:

Input Voltage	120V-277V
Input Frequency	50/60 Hz
Rated Wattage	See Wattage
Delivered Lumens	See Wattage
Efficacy	145 LM/W
CRI	> 70
Available CCT	5000K
Rated Life	> 50,000 hrs.
Power Factor	> 0.9
THD	< 18%
Control	Dusk to Dawn, Motion Sensor
IP Rating	IP66
Operating Temp.	-40° F to122° F
Surge Protection	10KV



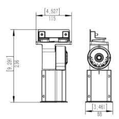


EX:
Extrusion Arm plus SlipFitter
(for both square or round pole)



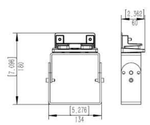


SF:
SlipFitter





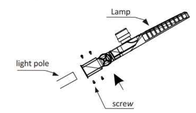
TR:
Trunnion
(U-Bracket)



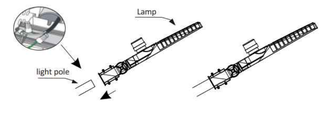
RevolveLED Toll Free: 877-718-0808 | Web: www.revolveled.com | E-mail: info@revolveled.com

MOUNTING:

SF: Slip Fitter



1. Attach the lamp arm to the lamp first

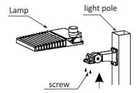


2. Connect the input wire and install the lamp on the lamp post
the light pole and connect the wire at the bottom of the light pole.
Note: after lengthening the input wire, meet the height requirement of

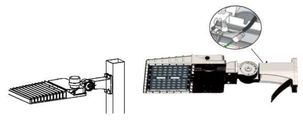
EX: Extrusion Arm + SlipFitter



1. First install the lamp arm in the proper position of the lamp pole.

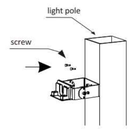


2.Install the light fixture on the lamp arm

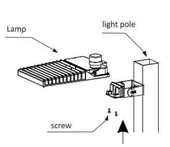


3. Lower cover of the lamp arm is opened and complete wiring at handpole on pole. Use suitable UL listed cord bushin gand outlet box cover.

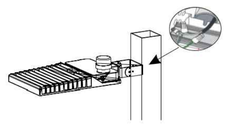
TR: Trunnion (U-Bracket / Pole or Wall Mount)



1. Install the lamp arm in the proper position of the lamp pole.



2.Install the light fixture on the lamp arm



3. Complete wiring at handhole on pole.After the power cord is connected,put it inside the lamp post to prevent rain .
Use suitable Listed water proof cord bushing and outlet box cover.

RevolveLED Toll Free: 877-718-0808 | Web: www.revolveled.com | E-mail: info@revolveled.com

INTEGRITY
FEDERAL SERVICES
CIVIL ENGINEERING • LANDSCAPE ARCHITECTURE • PLANNING
148 S. Queen Street, Suite 201 • Martinsburg, WV 25401 • Phone: 304-725-8456 • www.ifs-se.com

RYAN P. PERKS
REGISTERED
17061
STATE OF
WEST VIRGINIA
PROFESSIONAL ENGINEER
SEAL: 9/19/23

REVISIONS

1. 09/18/2023 - REVISION TO UNDERGROUND SWM FACILITY
2. 09/18/2023 - REVISIONS PER CITY, AND CTUB COMMENTS

SITE LIGHTING DETAILS

ALLA WILLA COMMERCIAL

CITY OF CHARLES TOWN
JEFFERSON COUNTY, WEST VIRGINIA
TAX MAP 7, PARCEL 12; D.B. 1301, PG. 254
CHARLES TOWN CORP (3) TAX DISTRICT

CITY FILE #2023-03

SCALE:	HORIZ.: N/A VERT.: N/A
DATE:	AUGUST 2023
JOB:	5051-0101
DRAWN: BJS	CHECK: DCW
CADD: C-GI-501.DWG	
NCS:	N/A
SHEET:	04 OF 22

FILEPATH:G:\PROJECTS\2023\5051-0101 ALLA WILLA PROPERTY\WORK\DWG\GI-501.DWG
Copyright 2023 - NO REPRODUCTION IN ANY OF THIS DRAWING IS PERMITTED IN ANY FORM OR MEDIUM WITHOUT PRIOR WRITTEN AUTHORIZATION FROM INTEGRITY FEDERAL SERVICES, INC.

EROSION AND SEDIMENT CONTROL NARRATIVE:

I. PROJECT DESCRIPTION:

THIS PROJECT IS FOR THE CONSTRUCTION OF A COMMERCIAL BUILDING WITH ASSOCIATED DRIVE AISLES PARKING AREAS AND SIDEWALKS. IN ADDITION, THERE WILL BE THE CONSTRUCTION OF UNDERGROUND UTILITIES SERVING THE PROPERTY, AN UNDERGROUND STORMWATER MANAGEMENT FACILITY WILL BE LOCATED UNDER THE PAVED PARKING/DRIVE-AISLE AREAS. THE TOTAL PROJECT AREA IS APPROXIMATELY ±0.24 ACRES. THE TOTAL IMPERVIOUS AREA CREATED BY THE DEVELOPMENT OF THE SITE IS APPROXIMATELY 0.22 ACRES.

II. EXISTING SITE CONDITIONS:

THE SITE IS LOCATED ALONG THE EASTERN SIDE OF ALLA WILLA DRIVE. THE SUBJECT PROPERTY CONSISTS OF UNDEVELOPED OPEN SPACE COVERED WITH FIELD GRASS AND VEGETATED AREAS. THE SITE CONSISTS OF MODERATELY STEEP AND FLAT SLOPES RANGING FROM APPROXIMATELY 1%-12%. THE SURFACE RUNOFF DRAINS TO A LOW POINT AT THE EASTERN PORTION OF THE SITE.

III. ADJACENT AREAS:

THE SITE IS BOUNDED BY ALLA WILLA DRIVE TO THE WEST, COMMERCIALLY ZONED PROPERTIES TO THE NORTH, SOUTH, AND EAST. THERE IS LITTLE POTENTIAL FOR OFFSITE EROSION AND SEDIMENT DAMAGE BY THIS PROJECT AS TEMPORARY EROSION AND SEDIMENT CONTROLS WILL BE USED DURING CONSTRUCTION AND PERMANENT STORMWATER MANAGEMENT CONTROLS WILL BE INSTALLED PRIOR TO THE SITE BEING FULLY DEVELOPED.

IV. CRITICAL AREAS:

THERE ARE NO CRITICAL AREAS ON THIS SITE. DISTURBED AREAS WILL BE PROTECTED WITH SILT FENCE, DIVERSION DIKES AND/OR OTHER CONTROL MEASURES.

V. SOILS:

SOIL NAME	MAPPING UNIT	DEPTH TO RESTRICTIVE FEATURE	DRAINAGE CLASS	PERMEABILITY (IN/HR)	DEPTH TO WATER TABLE	HSG
URBAN LAND-HAGERSTOWN COMPLEX, 0-15% SLOPES	UwC	MORE THAN 80"	WELL DRAINED	MODERATELY HIGH TO HIGH- 0.60-2.0	MORE THAN 80"	B

NOTES:
- SOILS INFORMATION PROVIDED BY THE USDA SOIL SURVEY OF JEFFERSON COUNTY, WEST VIRGINIA.

VI. POTENTIAL EROSION PROBLEM AREAS:

PER THE SOILS DATA SHOWN ABOVE, THE EXISTING SOILS LOCATED ONSITE HAVE A MODERATE-SLIGHT ERODABILITY POTENTIAL.

VII. EROSION AND SEDIMENT CONTROL ELEMENTS:

UNLESS OTHERWISE NOTED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE CONSTRUCTED AND MAINTAINED IN STRICT COMPLIANCE WITH THE LATEST EDITION OF THE WEST VIRGINIA EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICE MANUAL AND APPLICABLE FEDERAL, STATE, AND LOCAL REGULATIONS.

1. MARK CLEARING LIMITS:

PRIOR TO BEGINNING LAND DISTURBING ACTIVITIES, CLEARLY MARK ALL CLEARING LIMITS, SENSITIVE AREAS AND THEIR BUFFERS, AND TREES THAT ARE TO BE PRESERVED WITHIN THE CONSTRUCTION AREA. PLASTIC, METAL, OR STAKE WIRE FENCE MAY BE USED TO MARK CLEARING LIMITS. SAFETY FENCE SHOULD BE INSTALLED TO PREVENT PUBLIC ACCESS TO POTENTIALLY HAZARDOUS AREAS OF THE SITE AND TO PREVENT ACCESS TO EROSION AND SEDIMENT CONTROL MEASURES.

2. ESTABLISH CONSTRUCTION ACCESS:

ALL CONSTRUCTION ACCESS SHALL ENTER AND EXIT THE SITE THROUGH THE STABILIZED CONSTRUCTION ENTRANCE AS SHOWN ON THE PLANS LOCATED ON THE WESTERN SIDE OF THE PROPERTY OFF OF ALLA WILLA DRIVE. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. IF WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE. CONTRACTOR SHALL SUPPLY A WATER SOURCE BY PROVIDING A WATER TRUCK/WATER TANK ON SITE OR BY USE OF EXISTING ON SITE WATER SERVICE. THE CONSTRUCTION ENTRANCE LOCATION MAY BE SHIFTED TO ACCOMMODATE CONSTRUCTION PHASING. ANY SHIFT IN THE LOCATION SHALL BE APPROVED BY THE CITY OF CHARLES TOWN.

3. INSTALL SEDIMENT CONTROLS:

THE DUFF LAYER, NATIVE TOPSOIL, AND NATURAL VEGETATION SHALL REMAIN IN AN UNDISTURBED STATE TO THE MAXIMUM EXTENT PRACTICABLE. PRIOR TO LEAVING THE CONSTRUCTION SITE, SURFACE RUNOFF FROM DISTURBED AREAS SHALL PASS THROUGH AN APPROPRIATE SEDIMENT CONTROL MEASURE. BMP'S INTENDED TO TRAP SEDIMENT ON SITE SHALL BE CONSTRUCTED AS ONE OF THE FIRST STEPS IN GRADING. THESE BMP'S SHALL BE FUNCTIONAL PRIOR TO LAND DISTURBING ACTIVITIES TAKING PLACE. EARTHEN STRUCTURES SUCH AS DAMS, DIKES, AND DIVERSIONS SHALL BE SEEDED AND MULCHED AS PER TEMPORARY AND PERMANENT SOIL STABILIZATION MEASURES.

SEDIMENT TRAP:

SEDIMENT TRAPS SHALL BE INSTALLED PRIOR TO INITIATING ROUGH GRADING (DURING THE FIRST PHASE OF CONSTRUCTION) TO DETAIN SEDIMENT-LADEN RUNOFF FROM SMALL DRAINAGE AREAS OF FIVE ACRES OR LESS. SEDIMENT TRAPS SHALL BE INSTALLED AT THE OUTLET OF DITCHES AND OTHER PERIMETER CONTROLS INSTALLED DURING THE FIRST STAGE OF CONSTRUCTION. SEDIMENT TRAPS MAY ALSO BE INSTALLED AT THE OUTLET OF ANY STRUCTURE WHICH CONCENTRATES SEDIMENT-LADEN RUNOFF (I.E. DISCHARGE POINT OF DIVERSIONS, CHANNELS, SLOPE DRAINS OR OTHER RUNOFF CONVEYANCES).

SUPER SILT FENCE:

SUPER SILT FENCE SHALL BE INSTALLED TO REDUCE RUNOFF VELOCITY AND ALLOW SEDIMENT TO BECOME TRAPPED BEHIND OR UP-SLOPE OF THE SUPER SILT FENCE. SUPER SILT FENCE PROVIDES A BARRIER THAT CAN COLLECT AND HOLD DEBRIS AND SOIL, PREVENTING THE MATERIAL FROM ENTERING CRITICAL AREAS, STREAMS, STREETS, ETC. SUPER SILT FENCE ALSO HELPS TO DECREASE THE VELOCITY OF SHEET FLOWS AND LOW-TO-MODERATE LEVEL CHANNEL FLOWS.

TEMPORARY DIVERSIONS:

TEMPORARY DIVERSIONS SHALL BE INSTALLED TO DIVERT UP-SLOPE CLEAN WATER AROUND A PROJECT SITE TO REDUCE THE QUANTITY OF WATER WITHIN THE SEDIMENT CONTROL SYSTEM; TO DIVERT UP-SLOPE WATER FROM DISTURBED AREAS TO AN APPROPRIATE SEDIMENT TRAPPING FACILITY SUCH AS A SEDIMENT TRAP OR SEDIMENT BASIN; TO DIVERT INTERNAL SEDIMENT-LADEN WATER TO A SEDIMENT-TRAPPING STRUCTURE; TO PREVENT EROSION AND MAINTAIN ACCEPTABLE WORKING CONDITIONS ABOVE CRITICAL DISTURBED AREAS PRIOR TO STABILIZATION. TEMPORARY DIVERSIONS ALSO HELP TO INTERCEPT AND DIVERT WATER AWAY FROM FOOTERS, WALLS & OTHER STRUCTURES. ANY PERIMETER DIVERSION BERM/DITCH USED MUST BE STABILIZED PRIOR TO IMPLEMENTING IT.

DIVERSIONS THAT ARE TO SERVE LONGER THAN 14 WORKING DAYS SHALL BE STABILIZED IMMEDIATELY WITH SEED AND MULCH WITH OR WITHOUT A ROLLED EROSION CONTROL PRODUCT MEETING THE REQUIREMENTS FOUND IN THE WEST VIRGINIA EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICE MANUAL TO PRESERVE DIKE HEIGHT, PREVENT EROSION AND REDUCE MAINTENANCE.

INLET PROTECTION:

INLET PROTECTION SHALL BE BE PLACED ON ALL STORM DRAIN DROP INLETS OR CURB INLETS TO TRAP SEDIMENT BEFORE CONTAMINATED RUNOFF ENTERS A STORM DRAINAGE SYSTEM. STORM DRAIN INLET PROTECTION SHALL BE INSTALLED IMMEDIATELY FOLLOWING INSTALLATION OF STORMWATER CONTROLS OR PRIOR TO CONSTRUCTION ACTIVITIES FOR EXISTING STORM DRAINS OR WHERE STORM DRAIN INLETS ARE TO BE MADE OPERATIONAL BEFORE PERMANENT STABILIZATION OF THE CORRESPONDING DISTURBED DRAINAGE AREA.

4. STABILIZE SOILS:

THE GENERAL PERMIT REQUIRES THAT:

- STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN FOUR (4) DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS PERMANENTLY CEASED.
- APPLICABLE PRACTICES INCLUDE, BUT ARE NOT LIMITED TO, TEMPORARY AND PERMANENT SEEDING, SODDING, MULCHING, EROSION CONTROL FABRICS AND MATTING, SURFACE ROUGHENING, SURFACE WATER CONTROL, AND DUST CONTROL.
- SELECTED SOIL STABILIZATION MEASURES SHALL BE APPROPRIATE FOR THE TIME OF YEAR, SITE CONDITIONS, AND ESTIMATED DURATION OF USE.
- ALL SOIL STOCKPILES MUST BE STABILIZED AND PROTECTED WITH SEDIMENT TRAPPING MEASURES.
- LINEAR CONSTRUCTION ACTIVITIES SUCH AS RIGHT-OF-WAY AND EASEMENT CLEARING, ROADWAY DEVELOPMENT, PIPELINES, AND TRENCHING FOR UTILITIES, SHALL BE CONDUCTED TO MEET THE SOIL STABILIZATION TIMEFRAME REQUIREMENTS. CONTRACTORS SHALL INSTALL THE BEDDING MATERIALS, ROADBEDS, STRUCTURES, PIPELINES, OR UTILITIES AND RE-STABILIZE THE DISTURBED SOILS SO THAT THE FOUR (4) DAY REQUIREMENTS ARE MET.

TEMPORARY SEEDING:

TEMPORARY STABILIZATION SHALL BE INITIATED WITHIN FOUR (4) DAYS TO AREAS THAT WILL NOT BE RE-DISTURBED FOR MORE THAN FOURTEEN (14) DAYS. AREAS INCLUDE DENUDED AREAS, SOIL STOCKPILES, DIKES, DAMS, SIDES OF SEDIMENT BASINS, TEMPORARY ROAD BANKS, ETC.

PERMANENT SEEDING:

PERMANENT STABILIZATION SHALL BE INITIATED WITHIN FOUR (4) DAYS OF REACHING FINAL GRADE AND WITHIN FOUR (4) DAYS AFTER CONSTRUCTION HAS BEEN COMPLETED. AREAS INCLUDE DISTURBED AREAS WHERE PERMANENT, LONG-LIVED VEGETATIVE COVER IS NEEDED TO STABILIZE THE SOIL AND ROUGH-GRADED AREAS THAT WILL NOT BE BROUGHT TO FINAL GRADE FOR SIX MONTHS OR MORE. ANY AREAS THAT ARE NOT BROUGHT TO FINAL GRADE FOR SIX (6) MONTHS OR MORE SHOULD INCLUDE TEMPORARY SEEDING.

MULCHING:

THE APPLICATION OF STRAW, HAY OR OTHER SUITABLE MATERIALS TO THE SOIL SURFACE TO PREVENT EROSION BY PROTECTING THE SOIL SURFACE FROM RAINDROP IMPACT AND REDUCING THE VELOCITY OF OVERLAND FLOW. AREAS THAT HAVE BEEN TEMPORARILY OR PERMANENTLY SEEDED SHOULD BE MULCHED IMMEDIATELY FOLLOWING SEEDING. AREAS THAT CANNOT BE SEEDED BECAUSE OF THE SEASON SHOULD BE MULCHED TO PROVIDE SOME PROTECTION TO THE SOIL SURFACE.

TOPSOILING:

TOPSOILING IS THE SPREADING OF TOPSOIL OF A SUITABLE QUALITY OVER AN AREA TO BE STABILIZED BY ESTABLISHING VEGETATION. IF TOPSOIL IS TO BE STOCKPILED AT SITE, IT SHALL BE IN A LOCATION THAT WILL NOTE ERODE, BLOCK DRAINAGE, OR INTERFERE WITH WORK ON THE SITE. ALL SOIL STOCKPILES SHALL BE STABILIZED BY TEMPORARY SEEDING AND MULCHING AND PROTECTED WITH SEDIMENT TRAPPING MEASURES SUCH AS SILT FENCE. TOPSOIL SHALL BE SPREAD AT A LIGHTLY COMPACTED DEPTH OF 2 TO 4 INCHES. 4 INCHES OR GREATER IS RECOMMENDED FOR AREAS WHERE FINE-TEXTURED (CLAYEY) SUBSOIL OR OTHER ROOT LIMITING FACTORS ARE PRESENT.

ROLLED EROSION CONTROL PRODUCTS (RECP):

TEMPORARY OR PERMANENT EROSION CONTROL NETS, BLANKETS AND THREE-DIMENSIONAL MATRIXES MADE FROM A WIDE VARIETY OF NATURAL (SUCH AS JUTE, COIR AND STRAW) AND MAN-MADE MATERIALS ALONE OR IN COMBINATION THAT HELP PREVENT EROSION IN SEVERAL WAYS. PREFABRICATED BLANKETS OR NETTING SHALL BE USED AS A TEMPORARY SURFACE STABILIZING MEASURE AND TO AID IN THE ESTABLISHMENT OF VEGETATION. THEY ARE TYPICALLY USED ON STEEP SLOPES AND TO HELP ESTABLISH GRASS IN LOW VELOCITY VEGETATED CHANNELS.

5. PROTECT SLOPES:

THE GENERAL PERMIT PROHIBITS UP-SLOPE RUNOFF FROM FLOWING DOWN FILL SLOPES. ALL FILL SURFACE RUNOFF SHALL BE CONTAINED WITH TEMPORARY BERMS AND IN PIPES, SLOPE DRAINS, OR STABILIZED CHANNELS. DRAINAGE SHALL BE PROVIDED TO REMOVE GROUND WATER INTERSECTING THE SLOPE SURFACE OF EXPOSED SOIL AREAS. EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF TRENCHES, CONSISTENT WITH SAFETY AND SPACE CONSIDERATIONS. SOILS ON SLOPES SHALL BE STABILIZED AS SPECIFIED IN TEMPORARY AND PERMANENT SOIL STABILIZATION MEASURES.

6. PROTECT STORM DRAIN INLETS:

STORM DRAIN INLETS OPERABLE DURING CONSTRUCTION SHALL BE PROTECTED SO THAT SURFACE WATER RUNOFF DOES NOT ENTER THE CONVEYANCE SYSTEM WITHOUT FIRST BEING FILTERED OR TREATED TO REMOVE SEDIMENT. INLET PROTECTION SHALL BE PLACED ON ALL STORM INLETS TO PROTECT AGAINST SEDIMENT-LADEN RUNOFF ENTERING THE SYSTEM AT THE INLETS.

INLET PROTECTION:

INLET PROTECTION SHALL BE BE PLACED ON ALL STORM DRAIN DROP INLETS AND/OR CURB INLETS TO TRAP SEDIMENT BEFORE CONTAMINATED RUNOFF ENTERS A STORM DRAINAGE SYSTEM. INLET PROTECTION SHALL BE INSTALLED IMMEDIATELY FOLLOWING INSTALLATION OF STORMWATER CONTROLS, PRIOR TO CONSTRUCTION ACTIVITIES FOR EXISTING STORM DRAINS, AND/OR WHERE STORM DRAIN INLETS ARE TO BE MADE OPERATIONAL BEFORE PERMANENT STABILIZATION OF THE DISTURBED DRAINAGE AREA HAVE OCCURRED.

CULVERT INLET PROTECTION:

CULVERT INLET PROTECTION SHALL BE BE PLACED ON ALL STORM CULVERT INLETS TO PREVENT SEDIMENT FROM ENTERING, ACCUMULATING IN, AND BEING TRANSFERRED BY THE CULVERT AND ASSOCIATED DRAINAGE SYSTEM. CULVERT INLET PROTECTION MAY ALSO PROVIDE EROSION CONTROL AT STORM CULVERT INLETS DURING THE PHASE OF A PROJECT WHERE ELEVATION AND DRAINAGE PATTERNS CHANGE, CAUSING ORIGINAL CONTROL MEASURES TO BE INEFFECTIVE OR IN NEED OF REMOVAL.

7. CONVEY STORMWATER IN A NON-EROSIVE MANNER:

POINTS OF DISCHARGE AND RECEIVING STREAMS SHALL BE PROTECTED FROM EROSION DUE TO INCREASES IN THE VOLUME, VELOCITY, AND PEAK FLOW RATE OF SURFACE WATER RUNOFF FROM THE PROJECT SITE. ALL STORMWATER CONVEYANCE CHANNELS SHALL BE STABILIZED FOR EXPECTED FLOWS.

OUTLET PROTECTION:

OUTLET PROTECTION SHALL BE INSTALLED AT ALL CULVERT OUTLETS OF ALL TYPES, PIPE CONDUITS FROM ALL SEDIMENT BASINS, SWM PONDS, AND NEW CHANNELS CONSTRUCTED AS OUTLETS FOR CULVERTS AND CONDUITS. OUTLET PROTECTION SHALL BE PROVIDED IN THE FORM OF A RIP-RAP-LINED APRON CONSTRUCTED AT A ZERO OR MINIMUM SLOPE TO SLOW THE OUTLET VELOCITY AND ADEQUATELY PROTECT SOILS FROM SCOUR BY REDUCING FLOW.

8. CONTROL OTHER POLLUTANTS:

ALL POLLUTANTS, INCLUDING WASTE MATERIALS AND DEMOLITION DEBRIS, THAT OCCUR ON SITE DURING CONSTRUCTION SHALL BE HANDLED AND DISPOSED OF IN A MANNER THAT DOES NOT CAUSE CONTAMINATION OF SURFACE OR GROUND WATER. WOODY DEBRIS MAY BE CHOPPED AND SPREAD ON SITE. COVER, CONTAINMENT, AND PROTECTION FROM VANDALISM SHALL BE PROVIDED FOR ALL CHEMICALS, LIQUID PRODUCTS, PETROLEUM PRODUCTS, AND NON-INERT WASTES PRESENT ON SITE. ALL MATERIALS USED ON THE SITE SHALL BE PROPERLY STORED, HANDLED, DISPENSED AND DISPOSED OF FOLLOWING ALL APPLICABLE LABEL DIRECTIONS. FLAMMABLE AND COMBUSTIBLE LIQUIDS SHALL BE STORED AND HANDLED ACCORDING TO APPLICABLE REGULATIONS, AND, AT A MINIMUM, ACCORDING TO OSHA STANDARDS 29 CFR 1926 192. ONLY APPROVED CONTAINERS AND PORTABLE TANKS SHALL BE USED FOR STORAGE AND HANDLING OF FLAMMABLE AND COMBUSTIBLE LIQUIDS.

- MAINTENANCE AND REPAIR OF HEAVY EQUIPMENT AND VEHICLES INVOLVING OIL CHANGES, HYDRAULIC SYSTEM DRAIN DOWN, SOLVENT AND DE-GREASING CLEANING OPERATIONS, FUEL TANK DRAIN DOWN AND REMOVAL, AND OTHER ACTIVITIES WHICH MAY RESULT IN DISCHARGE OR SPILLAGE OF POLLUTANTS TO THE GROUND OR INTO SURFACE WATER RUNOFF MUST BE CONDUCTED USING SPILL PREVENTION MEASURES, SUCH AS DRIP PANS. CONTAMINATED SURFACES SHALL BE CLEANED IMMEDIATELY FOLLOWING ANY DISCHARGE OR SPILL INCIDENT.
- WHEEL WASH OR TIRE BATH WASTEWATER SHALL BE DISCHARGED TO A SEPARATE ON-SITE TREATMENT SYSTEM OR TO THE SANITARY SEWER.
- APPLICATION OF AGRICULTURAL CHEMICALS INCLUDING FERTILIZERS AND PESTICIDES SHALL BE CONDUCTED IN A MANNER AND AT APPLICATION RATES THAT WILL NOT RESULT IN LOSS OF CHEMICAL TO SURFACE WATER RUNOFF. MANUFACTURERS RECOMMENDATIONS FOR APPLICATION RATES AND PROCEDURES SHALL BE FOLLOWED.
- IN THE EVENT OF AN ACCIDENTAL SPILL, IMMEDIATE ACTION SHALL BE TAKEN BY THE CONTRACTOR TO CONTAIN AND REMOVE THE SPILLED MATERIAL. THE SPILL SHALL BE REPORTED TO THE APPROPRIATE AGENCIES IN THE REQUIRED TIME FRAMES. AS REQUIRED UNDER PROVISIONS OF THE CLEAN WATER ACT, ANY SPILL OR DISCHARGE ENTERING WATERS OF THE UNITED STATES SHALL BE PROPERLY REPORTED.

9. CONTROL DEWATERING:

FOUNDATION, VAULT, AND UTILITY TRENCH DEWATERING WATER SHALL BE DISCHARGED INTO A CONTROLLED CONVEYANCE SYSTEM PRIOR TO DISCHARGE TO A SEDIMENT POND. CHANNELS RECEIVING THE DISCHARGED WATER MUST BE STABILIZED. HIGHLY TURBID OR CONTAMINATED WATER FROM CONSTRUCTION EQUIPMENT OPERATIONS, WORK INSIDE A COFFERDAM, SHALL BE HANDLED SEPARATELY FROM SURFACE WATER. IF DEWATERING IS REQUIRED FOR SMALL VOLUMES OF LOCALIZED DEWATERING ON THIS SITE, A PUMP AND DEWATERING FILTER BAG SHALL BE UTILIZED. THE FILTER BAG SHALL DISCHARGE TO A DITCH OR SWALE WITH A WELL ESTABLISHED VEGETATIVE AREA.

10. MAINTAIN BMP'S:

TEMPORARY AND PERMANENT EROSION AND SEDIMENT CONTROL BMP'S SHALL BE MAINTAINED AND REPAIRED AS NEEDED TO ASSURE CONTINUED PERFORMANCE OF THEIR INTENDED FUNCTION. MAINTENANCE AND REPAIR SHALL BE CONDUCTED IN ACCORDANCE WITH THE BMPS. AT A MINIMUM, ALL SEDIMENT CONTROL BMP'S SHALL BE INSPECTED AT LEAST ONCE EVERY FOUR (4) CALENDAR DAYS AND WITHIN 24 HOURS OF THE OCCURRENCE OF A PRECIPITATION EVENT OF 0.25 INCHES OR GREATER, OR THE OCCURRENCE OF RUNOFF FROM SNOWMELT SUFFICIENT TO CAUSE A DISCHARGE. TEMPORARY EROSION AND SEDIMENT CONTROL BMP'S SHOULD BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION IS ACHIEVED OR AFTER THE TEMPORARY BMP'S ARE NO LONGER NEEDED. TRAPPED SEDIMENT SHALL BE REMOVED OR STABILIZED ON SITE. DISTURBED SOIL RESULTING FROM THE REMOVAL OF BMP'S OR VEGETATION SHALL BE PERMANENTLY STABILIZED.

11. MANAGE THE PROJECT:

A SEQUENCE OF CONSTRUCTION HAS BEEN PROVIDED ON THIS SHEET TO DESCRIBE AN OVERALL CONSTRUCTION SEQUENCE AS IT RELATES TO EROSION AND SEDIMENT CONTROL BMP'S AND CONSTRUCTION OF VARIOUS ELEMENTS OF THE PROJECT. IN GENERAL, THE PROJECT IS TO BEGIN CONSTRUCTION IN OCTOBER 2023 AND END APPROXIMATELY IN OCTOBER 2024. THE CONTRACTOR IS RESPONSIBLE FOR THE DETAILS OF THE DAY TO DAY OPERATIONS.

- THE PRIMARY PROJECT MANAGER SHALL EVALUATE, WITH INPUT FROM UTILITIES AND OTHER CONTRACTORS, THE SURFACE WATER MANAGEMENT REQUIREMENTS FOR THE ENTIRE PROJECT, INCLUDING THE UTILITIES. WHEN PREPARING THE SEDIMENT CONTROL PLAN. ALL BMP'S SHALL BE INSPECTED, MAINTAINED, AND REPAIRED AS NEEDED TO ASSURE CONTINUED PERFORMANCE OF THEIR INTENDED FUNCTION. WHENEVER INSPECTION AND/OR MONITORING REVEALS THAT THE BMP'S IDENTIFIED IN THE SEDIMENT CONTROL PLAN ARE INADEQUATE, THE SEDIMENT CONTROL PLAN SHALL BE MODIFIED, AS APPROPRIATE, IN A TIMELY MANNER.
- CONTRACTOR SHALL REPORT SPILLAGE OR DISCHARGE OF POLLUTANTS WITHIN 24-HOURS. THE SEDIMENT CONTROL PLAN SHALL BE RETAINED ON SITE. THE SEDIMENT CONTROL PLAN SHALL BE MODIFIED WHENEVER THERE IS A SIGNIFICANT CHANGE IN THE DESIGN, CONSTRUCTION, OPERATION, OR MAINTENANCE OF ANY BMP. THE WVDEP MUST BE NOTIFIED OF ANY CHANGES TO THE CONSTRUCTION SWPP.

12. STABILIZATION:

THE CONSTRUCTION SITE SHOULD BE STABILIZED AS SOON AS POSSIBLE AFTER COMPLETION. ESTABLISHMENT OF FINAL COVER MUST BE INITIATED WITHIN FOUR (4) DAYS AFTER REACHING FINAL GRADE. A NOTICE OF TERMINATION MUST BE FILED WITH THE WVDEP WHEN THE SITE REACHES FINAL STABILIZATION. FINAL STABILIZATION MEANS THAT ALL SOIL-DISTURBING ACTIVITIES ARE COMPLETED, AND THAT EITHER A PERMANENT VEGETATIVE COVER OF 70% OR GREATER HAS BEEN ESTABLISHED OR THAT THE SURFACE HAS BEEN STABILIZED BY HARD COVER SUCH AS PAVEMENT OR BUILDINGS. (THE 70% REQUIREMENT REFERS TO THE TOTAL VEGETATED AREA AND NOT JUST A PERCENT OF THE SITE).

VIII. EROSION AND SEDIMENT CONTROL NOTES:

1. ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE CONSTRUCTED AND MAINTAINED IN STRICT COMPLIANCE WITH THE LATEST EDITION OF THE WEST VIRGINIA EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICE MANUAL AND APPLICABLE FEDERAL, STATE, AND LOCAL REGULATIONS.
2. AREAS OF DEVELOPMENT SHALL BE PLANNED IN PHASES AND STAGES IN ORDER TO PREVENT THE TRANSPORT OF SEDIMENT FROM THE DEVELOPMENT SITE DURING CONSTRUCTION AND MINIMIZE EXPOSURE TO DISTURBED GROUND. RE-VEGETATION OF EXPOSED AREAS AND THE MAINTENANCE OF THAT VEGETATION SHALL BE AN INTEGRAL PART OF THE CLEARING ACTIVITIES FOR ANY PHASE.
3. NO DISTURBED AREA IS TO REMAIN DENUDED FOR MORE THAN FOUR (4) DAYS EXCEPT FOR MATERIAL STORAGE AREAS OR FOR THOSE AREAS ON WHICH ACTUAL CONSTRUCTION ACTIVITIES ARE CURRENTLY BEING PERFORMED UNLESS AUTHORIZED BY THE CITY OF CHARLES TOWN AND/OR THE EASTERN PANHANDLE CONSERVATION DISTRICT.
4. ALL SOIL STOCKPILES SHALL BE STABILIZED BY TEMPORARY SEEDING AND MULCHING AND PROTECTED WITH PERIMETER SEDIMENT CONTROLS SUCH AS SILT FENCE TO PREVENT CONTACT WITH STORMWATER RUNOFF. ALL STOCKPILES MUST BE LOCATED OUTSIDE OF ANY VEGETATED BUFFER AREAS AND SHOULD BE LOCATED AS FAR AS PRACTICABLE FROM STORMWATER CONVEYANCE SYSTEMS AND WATER BODIES.
5. ALL SLOPES SHALL BE LEFT IN A ROUGHENED CONDITION DURING SITE GRADING OPERATIONS TO REDUCE RUNOFF VELOCITIES AND EROSION. TEMPORARY AND/OR PERMANENT STABILIZATION MEASURES SHALL BE APPLIED TO ALL SLOPES AS SPECIFIED IN THE SOIL STABILIZATION MEASURES.
6. DURING CONSTRUCTION, PROTECT ALL FILLS SO THAT RUNOFF DOES NOT GO DOWN THE FACE OF THE HILL. UTILIZE BERMS, TEMPORARY SLOPE DRAINS, OR OTHER METHODS TO DIVERT RUNOFF AWAY FROM THE FILL AND INTO A SEDIMENT TRAPPING STRUCTURE. AS MORE FILL IS ADDED, SLOPE THE TOP (OR BERM IT) TO DIRECT WATER AWAY FROM THE SLOPE AND TO A STABLE CONVEYANCE SYSTEM. SEED & MULCH EVERY FOUR (4) DAYS OR 15' OF FILL.
7. NO OFF-SITE SOURCE OF BORROW MATERIALS IS ANTICIPATED FOR THIS PROJECT. IN THE EVENT THAT AN OFF-SITE SOURCE OF BORROW MATERIALS IS USED, AN EROSION AND SEDIMENT CONTROL PLAN SHALL BE PROVIDED FOR THE BORROW PIT AND THE BORROW PIT SHALL MEET ALL APPLICABLE REQUIREMENTS AND PERMITS OF THE WVDEP.
8. DUE TO GRADE CHANGES DURING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING THE EROSION AND SEDIMENT CONTROL MEASURES (i.e. SILT FENCES, ETC.) TO PREVENT EROSION AND POLLUTANT DISCHARGE OFF-SITE.

IX. SOIL STABILIZATION:

EXCEPT AS NOTED BELOW, STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN FOUR (4) DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS PERMANENTLY CEASED OR FOUR (4) DAYS FOR SITES REQUIRED TO USE ENHANCED BMP'S.

- WHERE THE INITIATION OF STABILIZATION MEASURES BY THE 4TH DAY, AS APPLICABLE AFTER CONSTRUCTION ACTIVITY TEMPORARILY OR PERMANENTLY CEASES IS PRECLUDED BY NATURAL CAUSES, STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS CONDITIONS ALLOW.
- WHERE CONSTRUCTION ACTIVITY WILL RESUME ON A PORTION OF THE SITE WITHIN 14 DAYS FROM WHEN ACTIVITIES CEASED, (E.G. THE TOTAL TIME PERIOD THAT CONSTRUCTION ACTIVITY IS TEMPORARILY HALTED IS LESS THAN 14 DAYS) THEN STABILIZATION MEASURES DO NOT HAVE TO BE INITIATED ON THAT PORTION OF THE SITE BY THE 4TH DAY AFTER CONSTRUCTION ACTIVITIES HAVE TEMPORARILY CEASED.
- AREAS WHERE SEED HAS FAILED TO GERMINATE ADEQUATELY (UNIFORM PERENNIAL VEGETATIVE COVER OF 70% OR GREATER) WITHIN 30 DAYS AFTER SEEDING AND MULCHING MUST BE RE-SEEDED IMMEDIATELY, OR AS SOON AS WEATHER CONDITIONS ALLOW.

TEMPORARY STABILIZATION:

- SELECTION OF TEMPORARY SEED MIXTURE SHALL DEPEND ON THE TIME OF YEAR DURING APPLICATION. SELECT PLANTS APPROPRIATE TO THE SEASON AND SITE CONDITIONS. REFER TO TABLE 3.10.1 TEMPORARY SEEDING OF THE WEST VIRGINIA EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICE MANUAL FOR A LIST OF COVER PLANTS, APPROVED PLANTING DATES, AND APPLICATION RATES.

PERMANENT STABILIZATION:

SEED MIXTURES INCLUDE THE FOLLOWING:

COMMON NAME	APPLICATION RATE	PREFERRED PLANTING DATES
KENTUCKY 31 FESCUE	45 LBS./ACRE	3/1-6/15 & 8/15-9/15
RED FESCUE	20 LBS./ACRE	3/1-6/15 & 8/15-9/15
KENTUCKY BLUEGRASS	25 LBS./ACRE	3/1-6/15 & 8/15-9/15
WHITE DUTCH CLOVER	5 LBS./ACRE	3/1-6/15 & 8/15-9/15

- FERTILIZER: DETERMINED BY SOIL TEST
- LIME: 90 LBS./1,000 SQ. FT. PULVERIZED AGRICULTURAL GRADE LIMESTONE
- MULCH: 70-90 LBS./1,000 SQ. FT. STRAW OR HAY MULCH

ALTERNATIVE SEED MIXTURES MAY BE SUBSTITUTED AS APPROVED BY INTEGRITY FEDERAL SERVICES. SELECT PLANTS APPROPRIATE TO THE SEASON AND SITE CONDITIONS. REFER TO TABLE 3.11.1 PERMANENT SEEDING OF THE WEST VIRGINIA EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICE MANUAL FOR A LIST OF COVER PLANTS APPROVED PLANTING DATES, AND APPLICATION RATES.

X. UNDERGROUND UTILITY LINE INSTALLATION:

1. NO MORE THAN 500 LINEAR FEET OF TRENCH MAY BE OPENED AT ONE TIME.
2. EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF TRENCHES, CONSISTENT WITH SAFETY AND SPACE CONSIDERATIONS.
3. EFFLUENT FROM DEWATERING OPERATIONS SHALL BE FILTERED OR PASSED THROUGH AN APPROVED SEDIMENT TRAPPING DEVICE, OR BOTH, AND DISCHARGED IN A MANNER THAT DOES NOT ADVERSELY AFFECT FLOWING STREAMS OR OFF-SITE PROPERTY.
4. MATERIAL USED FOR BACKFILLING TRENCHES SHALL BE PROPERLY COMPACTED IN ORDER TO MINIMIZE EROSION AND PROMOTE STABILIZATION.
5. ALL TRENCHES SHALL BE SEEDED AND MULCHED WITHIN 7 DAYS AFTER BACKFILLING.
6. APPLICABLE SAFETY REGULATIONS SHALL BE COMPLIED WITH.

XI. SEQUENCE OF CONSTRUCTION:

- PHASE I:

PHASE I OPERATIONS SHALL INCLUDE EROSION CONTROL MEASURES NEEDED TO DIVERT MAJOR OFF-SITE CLEAN WATER AND ON-SITE DRAINAGE FLOWS AROUND THE WORK AREAS AND CONTROL EROSION AND SEDIMENTATION ASSOCIATED WITH INITIAL CLEARING AND GRADING OP

EROSION & SEDIMENT CONTROL NOTES:

1. ANY AREA OF EXPOSED SOIL WHERE NO CONSTRUCTION IS ANTICIPATED FOR A PERIOD OF LONGER THAN 14 DAYS OR WHERE CONSTRUCTION ACTIVITY HAS STOPPED FOR 4 DAYS SHALL BE TEMPORARILY STABILIZED.
2. FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT STABILIZATION SHALL BE COMPLETED WITHIN FOUR (4) CALENDAR DAYS AFTER COMPLETION OF ALL PERIMETER DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES GREATER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1); AND FOUR (4) CALENDAR DAYS AFTER REACHING FINAL GRADE FOR ALL OTHER DISTURBED OR GRADED AREAS.
   - THESE PROVISIONS DO NOT APPLY TO THOSE AREAS THAT ARE SHOWN ON THE PLAN FOR MATERIAL STORAGE OR FOR THOSE AREAS ON WHICH ACTUAL CONSTRUCTION ACTIVITIES ARE CURRENTLY BEING PERFORMED.
   - THESE TIME REQUIREMENTS MAY BE EXTENDED, AS DEEMED NECESSARY BY THE JEFFERSON COUNTY ENGINEER IN THE EVENT THAT ADVERSE CONDITIONS PREVENT COMPLIANCE WITH THE STATED TIME LIMITATIONS FOR THE COMPLETION OF PERMANENT OR TEMPORARY STABILIZATION.
3. STABILIZATION WILL BE CONSIDERED ADEQUATE WHEN THE FOLLOWING CONDITIONS ARE MET:
   A) WATER COURSES, STREAM BANKS, AND DRAINAGE EASEMENTS SHALL BE 100% STABILIZED AND FREE FROM EROSION AND DEPOSITION.
   B) SLOPES STEEPER THAN 10% SHALL HAVE AT LEAST 98% STABLE GROUND COVER, AS DETERMINED BY THE JEFFERSON COUNTY ENGINEER.
   C) ALL OTHER AREAS SHALL HAVE AT LEAST 85% STABLE GROUND COVER, AS DETERMINED BY THE JEFFERSON COUNTY ENGINEER.
   D) GRASS VEGETATION SHALL HAVE REACHED A MINIMUM OF 3 INCHES OF HEIGHT OR HAVE BEEN MOWED BACK TO A MINIMUM OF 2 INCHES IN HEIGHT.
4. FOR ALL PROJECTS ADJACENT TO OR WITHIN 500 FEET OF A CONTINUOUSLY FLOWING STREAM, NO GRADING, EXCAVATING, REMOVAL, OR DESTRUCTION OF TOPSOIL, TREES, OR OTHER VEGETATIVE COVER, OR CONSTRUCTION ACTIVITY SHALL RESULT IN POINT OR NON-POINT LOADING OF SUSPENDED MATTER SUCH THAT TURBIDITY STANDARDS SPELLED OUT IN THE WATER RESOURCES BOARD LEGISLATIVE RULES ARE VIOLATED. SAID STANDARDS STATE THAT TURBIDITY SHALL NOT EXCEED 10 NTU'S OVER BACKGROUND TURBIDITY WHEN THE BACKGROUND IS 50 NTU'S OR LESS, OR HAVE MORE THAN A 10% INCREASE IN TURBIDITY (PLUS 10 NTU'S MINIMUM) WHEN THE BACKGROUND TURBIDITY IS MORE THAN 50 NTU'S.
5. NO OFF-SITE SOURCE OF BORROW MATERIALS IS ANTICIPATED FOR THIS PROJECT. IN THE EVENT THAT AN OFF-SITE SOURCE OF BORROW MATERIALS IS USED, AN EROSION AND SEDIMENT CONTROL PLAN SHALL BE PROVIDED FOR THE BORROW PIT AND THE BORROW PIT SHALL MEET ALL APPLICABLE REQUIREMENTS AND PERMITS OF THE WVDEP
6. MAINTENANCE SHALL BE PERFORMED AS NECESSARY TO ENSURE THAT ALL EROSION AND SEDIMENT CONTROL MEASURES ARE PERFORMING AS DESIGNED. THE JEFFERSON COUNTY ENGINEER MAY REQUIRE MODIFICATIONS TO AN APPROVED PLAN, REQUIRE ADDITIONAL SEDIMENT AND EROSION CONTROL MEASURES, OR CAUSE NEW PLANS TO BE SUBMITTED AS A RESULT OF FIELD INSPECTION REVEALING THE APPROVED PLANS DO NOT PROVIDE ADEQUATE PROTECTION. MODIFICATIONS MAY ALSO BE REQUESTED BY THE OWNER OR DEVELOPER DUE TO UNFORESEEN FIELD CONDITIONS.
7. ALL RESIDENTIAL AND COMMERCIAL/INDUSTRIAL BUILDING LOTS SHALL HAVE A STABILIZED CONSTRUCTION ENTRANCE INSTALLED PRIOR TO BEGINNING CONSTRUCTION ON THE LOT.

Table 3.10.1 Temporary seed chart

PLANT NAMES		PLANTING DATES	APPLICATION RATE LBS/ACRE
COMMON	SCIENTIFIC		
Annual Ryegrass	*Lolium multiflorum*	2/16 – 5/15 8/1 – 11/1	40
Field Bromegrass	*Bromus ciliatus*	3/1 – 6/15 8/1 – 9/15	40
Spring Oats	*Avena sativa*	3/1 –6/15	100
Winter Rye	*Secale cereale*	8/15 –2/28	170
Winter Wheat	*Triticum aestivum*	8/15 – 2/28	180
Japanese Millet	*Echinochloa crusgalli*	5/15 – 8/15	30
Redtop	*Agrostis alba*	3/1 – 6/15	10
Annual Ryegrass and Spring Oats	*Lolium multiflorum* *Avena sativa*	3/1 – 6/15	30 70
German/Foxtail Millet	*Setaria italica*	5/1 – 8/1	40
Hairy Vetch	*Vicia villosa*	8/15 – 4/1	60

*Inoculation is required. If a hydroseeder is utilized, the application rate is 5 times the recommended rate.

Table 3.11.1 Permanent seeding

SEED MIX	PLANT NAMES		APPLICATION RATE LBS/ACRE
	COMMON	SCIENTIFIC	
A	Kentucky 31 Fescue Red Fescue Birdsfoot Trefoil	*Festuca arundinacea* *Festuca rubra* *Lotus corniculatus*	65 20 5
B	Switchgrass Perennial Ryegrass Redtop Birdsfoot Trefoil	*Panicum virgatum* *Lolium perenne* *Agrostis alba* *Lotus corniculatus*	15 20 5 15
C	Red Fescue Kentucky Bluegrass Marion Bluegrass	*Festuca rubra* *Poa pratensis* *Poa pratensis*	20 40 30
D	Kentucky 31 Fescue Red Fescue Kentucky Bluegrass White Dutch Clover	*Festuca arundinacea* *Festuca rubra* *Poa pratensis* *Trifolium repens*	45 20 25 5
E	Perennial Ryegrass Switchgrass Crownvetch or Perennial Pea	*Lolium perenne* *Panicum virgatum* *Coronilla varia* *Lathyrus latifolius*	30 15 20 30
F	Orchardgrass Ladino Clover Redtop	*Dactylis glomerata* *Trifolium repens* *Agrostis alba*	20 5 5
G	Birdsfoot Trefoil Weeping Lovegrass Perennial Ryegrass	*Lotus corniculatus* *Eragrostis curvula* *Lolium perenne*	15 45 10
H	Crownvetch Orchardgrass	*Coronilla varia* *Dactylis glomerata*	25 40
I	Crownvetch Perennial Ryegrass	*Coronilla varia* *Lolium perenne*	25 30
J	Perennial Pea Orchardgrass	*Lathyrus latifolius* *Dactylis glomerata*	30 30
K	Deertongue Birdsfoot Trefoil Weeping Lovegrass	*Panicum clandestinum* *Lotus corniculatus* *Eragrostis curvula*	30 15 5
L	Orchardgrass Sericia Lespedeza Ladino Clover	*Dactylis glomerata* *Lespedeza cuneata* *Trifolium repens*	30 40 5
M	Perennial Ryegrass Ladino Clover Redtop	*Lolium perenne* *Trifolium repens* *Agrostis alba*	50 5 5
N	Crownvetch Orchardgrass Redtop	*Coronilla varia* *Dactylis glomerata* *Agrostis alba*	15 30 5

Table 3.11.1 Permanent seeding Cont'd.

SEED MIX	PLANT NAMES		APPLICATION RATE LBS/ACRE
	COMMON	SCIENTIFIC	
O	Perennial Ryegrass Birdsfoot Trefoil Redtop	*Lolium perenne* *Lotus corniculatus* *Agrostis alba*	40 15 5
P	Sericia Lespedeza Orchardgrass Redtop	*Lespedeza cuneata* *Dactylis glomerata* *Agrostis alba*	40 30 5
Q	Orchardgrass Reed Canarygrass[1] Redtop Ladino Clover	*Dactylis glomerata* *Phalaris arundinacea* *Agrostis alba* *Trifolium repens*	25 30 5 5
R	Kentucky Bluegrass Redtop White Clover or Birdsfoot Trefoil	*Poa pratensis* *Agrostis alba* *Trifolium repens* *Lotus corniculatus*	30 5 5 15
S	Reed Canarygrass[1] Weeping Lovegrass	*Phalaris arundinacea* *Eragrostis curvula*	40 5
T	Perennial Ryegrass Reed Canarygrass[1] Birdsfoot Trefoil	*Lolium perenne* *Phalaris arundinacea* *Lotus corniculatus*	30 15 5
U	Timothy Alfalfa	*Phleum pratense* *Medicago sativa*	10 18
V	Timothy Birdsfoot Trefoil	*Phleum pratense* *Lotus corniculatus*	10 15
W	Redtop Perennial Ryegrass Orchardgrass	*Agrostis alba* *Lolium perenne* *Dactylis glomerata*	5 30 25
X	Reed Canarygrass[1] Birdsfoot Trefoil Redtop	*Phalaris arundinacea* *Lotus corniculatus* *Agrostis alba*	30 20 5
Y	Switchgrass Birdsfoot Trefoil	*Panicum virgatum* *Lotus corniculatus*	30 20
Z	Switchgrass Sericia Lespedeza	*Panicum virgatum* *Lespedeza cuneata*	15 30
A-1	Orchardgrass Red Clover	*Dactylis glomerata* *Trifolium pratense*	30 10
A-2	Switchgrass Big Bluestem Indiangrass Little Bluestem Sideoats Grama[2]	*Panicum virgatum* *Andropogon gerardi* *Sorghastrum nutans* *Andropogon scoparius* *Bouteloua curtipendula*	15 5 5 5 5
A-3	Switchgrass Eastern Gamagrass[3]	*Panicum virgatum* *Tripsacum dactyloides*	20 15

NOTE: When utilizing a properly prepared seedbed, the rates of application can be reduced by 30 percent except for seed mixes A-2 & A-3.

[1] Reed Canarygrass shall not be used east of I-79 and/or south of Charleston.
[2] Use north and east of I-64 and I-79.
[3] Use south and west of I-64 and I-79.

Table 3.11.2 Nurse crops

PLANT NAMES		PLANTING DATES	APPLICATION RATE LBS/ACRE
COMMON	SCIENTIFIC		
Annual Ryegrass	*Lolium multiflorum*	2/16 – 5/15 8/1 – 11/1	25
Field Bromegrass	*Bromus ciliatus*	3/1 – 6/15 8/1 – 9/15	20
Spring Oats	*Avena sativa*	3/1 –6/15	50
Winter Rye	*Secale cereale*	8/15 –2/28	85
Winter Wheat	*Triticum aestivum*	8/15 – 2/28	90
Japanese Millet	*Echinochloa crusgalli*	5/15 – 8/15	15
Redtop	*Agrostis alba*	3/1 – 6/15	10
Annual Ryegrass and Spring Oats	*Lolium multiflorum* *Avena sativa*	3/1 – 6/15	15 35
German/Foxtail Millet	*Setaria italica*	5/1 – 8/1	25
Hairy Vetch*	*Vicia villosa*	8/15 – 4/1	30

* Inoculation is required. If a hydroseeder is utilized, the application rate is five times the recommended rate.

Table 3.12.1 Organic mulch materials and application rates

Mulchs:	Rates:		Notes:
	Per acre	Per 1,000 ft²	
Straw or hay	1½ - 2 tons (minimum 2 tons for winter cover)	70 - 90 lbs.	Free from weeds and coarse matter. Must be anchored. Spread with mulch blower or by hand.
Fiber mulch	Minimum 1,500 lbs.	35 lbs.	Do not use as mulch for winter cover or during hot, dry periods.* Apply as slurry.
Cornstalks	4 - 6 tons	185 - 275 lbs.	Cut or shredded in 4-6" lengths. Air-dried. Do not use in fine turf areas. Apply with mulch blower or by hand.
Wood chips	4 - 6 tons	185 - 275 lbs.	Free of coarse matter. Air-dried. Treat with 12 lbs. nitrogen per ton. Do not use in fine turf areas. Apply with mulch blower, chip handler, or by hand.
Bark chips or Shredded bark	50 - 70 cu. yds.	1-2 cu. yds.	Free of coarse matter. Air-dried. Do not use in fine turf areas. Apply with mulch blower, chip handler, or by hand.

* When fiber mulch is the only available mulch during periods when straw should be used, apply at a minimum rate of 2,000 lbs./ac. or 45 lbs./1,000 sq. ft.

From VA DSWC

Table 3.11.3 Permanent seeding requirements

SEED MIX	FINE LAWN	COARSE LAWN	LOW MAINT.	NO MAINT.	PASTURE	SENSITIVE NATURAL AREAS	pH RANGE	DRAINAGE	SHADE TOLERANCE	PREFERRED PLANTING DATES			
										3/1 -6/15	6/16 -8/14	8/15 - 9/15	9/16 - 2/28
A			✓ 1				6.0 – 7.5	MOD. – WELL	FULL SUN	✓	♦	✓	♦
B				✓			5.0 – 7.5	MOD. – WELL	FULL SUN	✓	♦	✓	♦
C	✓ 1						6.0 – 7.5	MOD. – WELL	FULL SUN	✓		✓	
D		✓ 1					6.0 – 7.5	MOD. – WELL	FULL SUN	✓		✓	
E				✓ 1			6.0 – 7.5	MOD. – WELL	FULL SUN	✓	♦	✓	♦
F			✓	✓	✓		5.5 – 7.5	MOD. – WELL	TOLERANT	✓	♦	✓	♦
G				✓	✓		5.0 – 7.5	MOD. – WELL	FULL SUN	✓	♦	✓	♦
H			✓	✓ 1	✓		5.0 – 7.5	MOD. – WELL	TOLERANT	✓	♦	✓	♦
I			✓	✓ 1	✓		5.0 – 7.5	MOD. – WELL	FULL SUN	✓	♦	✓	♦
J			✓	✓ 1	✓		4.0 – 8.0	MOD. – WELL	TOLERANT	✓	♦	✓	♦
K				✓			4.0 – 7.0	MOD. – WELL	FULL SUN	✓	♦	✓	♦
L				✓	✓		4.5 – 7.5	MOD. – WELL	TOLERANT	✓	♦	✓	♦
M			✓	✓	✓		5.0 – 7.5	MOD. – WELL	TOLERANT	✓	♦	✓	♦
N			✓	✓ 1	✓		5.0 – 7.5	MOD. – WELL	TOLERANT	✓	♦	✓	♦
O			✓	✓	✓		5.0 – 7.5	MOD. – WELL	FULL SUN	✓	♦	✓	♦
P			✓	✓	✓		4.5 – 7.5	MOD. – WELL	TOLERANT	✓	♦	✓	♦
Q			✓	✓	✓		4.5 – 7.5	POOR – WELL	TOLERANT	✓	♦	✓	♦
R			✓	✓	✓		5.5 – 7.5	MOD. – WELL	FULL SUN	✓	♦	✓	♦
S			✓	✓	✓		4.5 – 7.5	POOR – WELL	FULL SUN	✓	♦	✓	♦
T					✓		5.5 – 7.5	POOR – WELL	FULL SUN	✓	♦	✓	♦
U					✓		6.5 – 8.0	MOD. – WELL	FULL SUN	✓	♦	✓	♦
V					✓		5.5 – 7.5	POOR – WELL	FULL SUN	✓	♦	✓	♦
W			✓	✓	✓		5.0 – 7.5	MOD. – WELL	TOLERANT	✓	♦	✓	♦
X					✓		5.5 – 7.5	POOR – WELL	FULL SUN	✓	♦	✓	♦
Y			✓	✓	✓		5.0 – 7.5	MOD. – WELL	FULL SUN	✓	♦	✓	♦
Z			✓	✓	✓		5.0 – 7.5	MOD. – WELL	FULL SUN	✓	♦	✓	♦
A-1					✓		4.5 – 7.5	MOD. – WELL	TOLERANT	✓	♦	✓	♦
A-2				✓	✓	✓	5.0 – 7.5	MOD. – WELL	FULL SUN	✓	♦	✓	♦
A-3				✓		✓	5.0 – 7.5	POOR – WELL	FULL SUN	✓	♦	✓	♦

♦ Nurse crop required – See Table B
1 Urban areas only

INTEGRITY
FEDERAL SERVICES
CIVIL ENGINEERING • LANDSCAPE ARCHITECTURE • PLANNING
148 S. Queen Street, Suite 201 • Martinsburg, WV 25401
Phone: 304-725-8456 • www.ifs-se.com

RYAN P. PERRY — REGISTERED — 17061 — STATE OF WEST VIRGINIA — PROFESSIONAL ENGINEER
9/19/23
SEAL:

REVISIONS
1. 09/18/2023 - REVISION TO UNDERGROUND SWM FACILITY
2. 09/18/2023 - REVISIONS PER CITY, AND CTUB COMMENTS

EROSION AND SEDIMENT CONTROL NARRATIVE

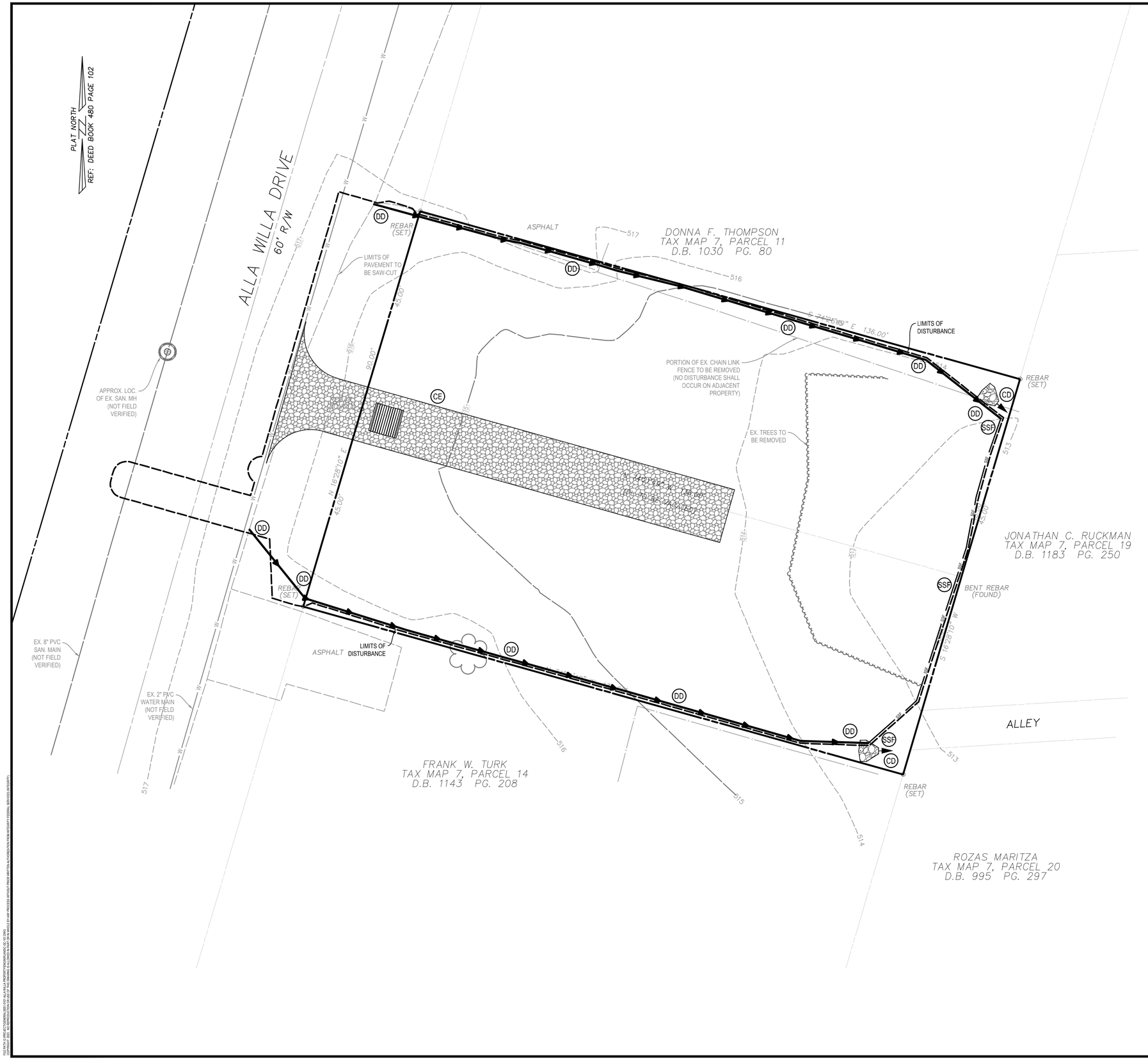
ALLA WILLA COMMERCIAL

CITY OF CHARLES TOWN
JEFFERSON COUNTY, WEST VIRGINIA
TAX MAP 7, PARCEL 12; D.B. 1301, PG. 254
CHARLES TOWN CORP (3) TAX DISTRICT

CITY FILE #2023-03

SCALE: HORIZ.: N/A VERT.: N/A
DATE: AUGUST 2023
JOB: 5051-0101
DRAWN: BJS CHECK: DCW
CADD: C-GC-001.DWG
NCS: N/A
SHEET: 06 OF 22

FILE PATH: Z:\PROJECTS\2023\5051-0101 ALLA WILLA PROPERTY\DWG\ARCH\C-GC-001.DWG
COPYRIGHT 2023, INTEGRITY FEDERAL SERVICES, INC. ALL DRAWINGS & DOCUMENTS ARE THE PROPERTY OF INTEGRITY FEDERAL SERVICES, INC. AND SHALL NOT BE REPRODUCED, CHANGED OR COPIED IN ANY FORM OR MANNER WHATSOEVER NOR ARE THEY TO BE ASSIGNED TO ANY THIRD PARTY WITHOUT FIRST OBTAINING THE EXPRESS WRITTEN PERMISSION AND ADAPTATION OF INTEGRITY FEDERAL SERVICES, INC.



INTEGRITY
FEDERAL SERVICES
CIVIL ENGINEERING • LANDSCAPE ARCHITECTURE • PLANNING
148 S. Queen Street, Suite 201 • Phone: 304-725-8456
Martinsburg, WV 25401 • www.ifs-se.com

RYAN P. PERKS
REGISTERED
17061
STATE OF WEST VIRGINIA
PROFESSIONAL ENGINEER
SEAL: 9/19/23

REVISIONS

1. 09/18/2023 - REVISION TO UNDERGROUND SWM FACILITY
2. 09/18/2023 - REVISIONS PER CITY, AND CTUB COMMENTS

PHASE 1 EROSION AND SEDIMENT CONTROL PLAN

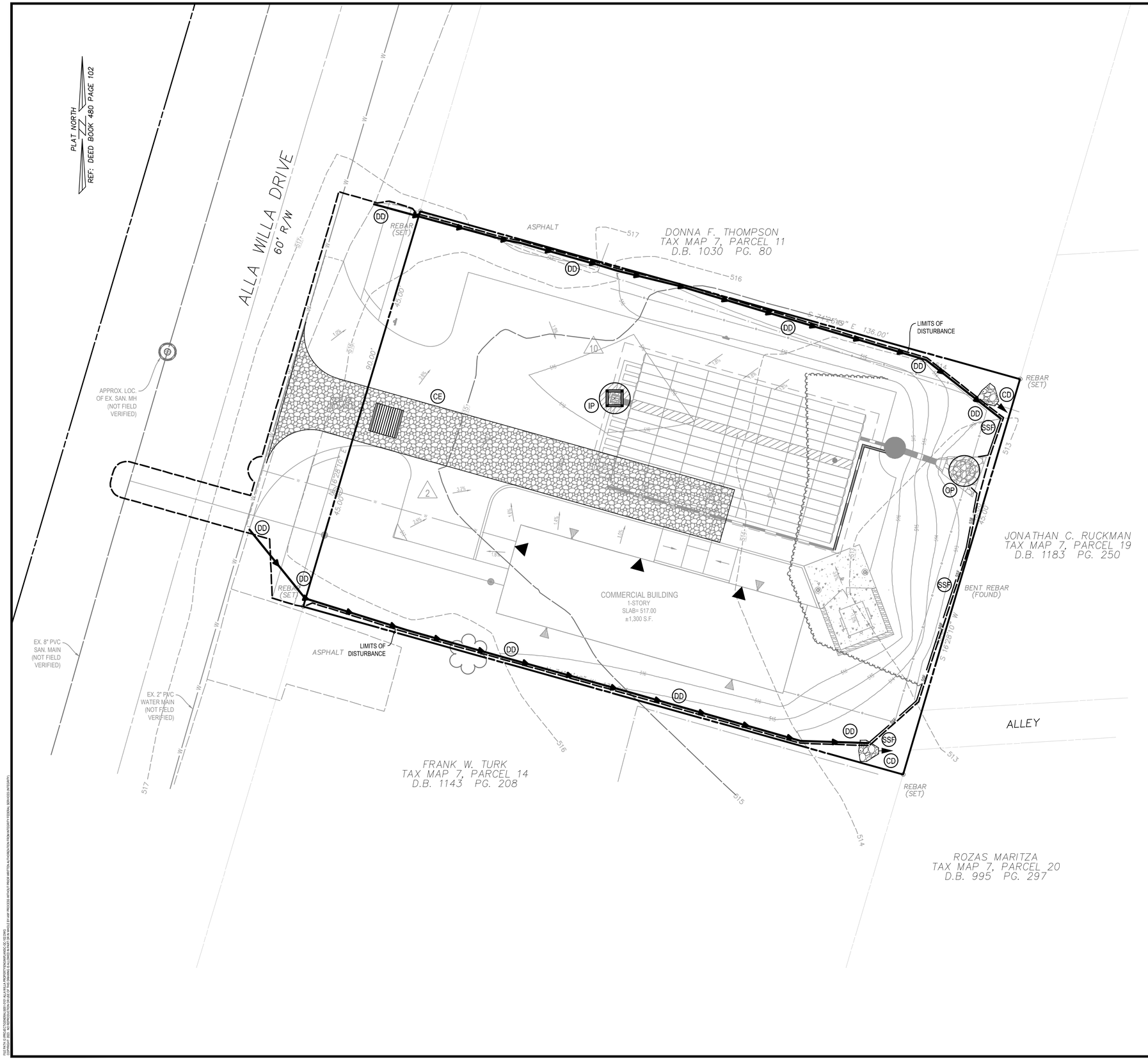
ALLA WILLA COMMERCIAL

CITY OF CHARLES TOWN
JEFFERSON COUNTY, WEST VIRGINIA
TAX MAP 7, PARCEL 12; D.B. 1301, PG. 254
CHARLES TOWN CORP (3) TAX DISTRICT

CITY FILE #2023-03

SCALE:	HORIZ.: 1" = 10' VERT.: N/A
DATE:	AUGUST 2023
JOB:	5051-0101
DRAWN: BJS	CHECK: DCW
CADD: C-GC-101.DWG	
NCS:	N/A
SHEET:	07 OF 22

FILE PATH: Z:\PROJECTS\2023\5051-0101 ALLA WILLA PROPERTY\DWG\ARCH\C-GC-101.DWG
Copyright 2023, INTEGRITY FEDERAL SERVICES, LLC. All of the materials contained herein are protected by United States copyright law and may not be reproduced, distributed, displayed, modified or used in any way without the express written consent of INTEGRITY FEDERAL SERVICES, LLC.



EROSION & SEDIMENT CONTROL LEGEND

KEY	SYMBOL	DESCRIPTION
CE		TEMPORARY STONE CONSTRUCTION ENTRANCE WITH WASH RACK, WATER SOURCE FROM TANK TRUCK, OR EXISTING ON-SITE WATER SERVICE.
SSF	SSF	SUPER SILT FENCE
DD		TEMPORARY DIVERSION DIKE
CD		ROCK CHECK DAM
OP		OUTLET PROTECTION
IP		INLET PROTECTION

INTEGRITY
FEDERAL SERVICES
CIVIL ENGINEERING • LANDSCAPE ARCHITECTURE • PLANNING
148 S. Queen Street, Suite 201 • Martinsburg, WV 25401 • Phone: 304-725-8456 • www.ifs-se.com

RYAN P. PERKS
REGISTERED
17061
STATE OF WEST VIRGINIA
PROFESSIONAL ENGINEER
SEAL: 9/19/23

REVISIONS

1. 09/19/2023 - REVISION TO UNDERGROUND SWM FACILITY	
2. 09/19/2023 - REVISIONS PER CITY, AND CTUB COMMENTS	

PHASE 2 EROSION AND SEDIMENT CONTROL PLAN

ALLA WILLA COMMERCIAL

CITY OF CHARLES TOWN
JEFFERSON COUNTY, WEST VIRGINIA
TAX MAP 7, PARCEL 12; D.B. 1301, PG. 254
CHARLES TOWN CORP (3) TAX DISTRICT

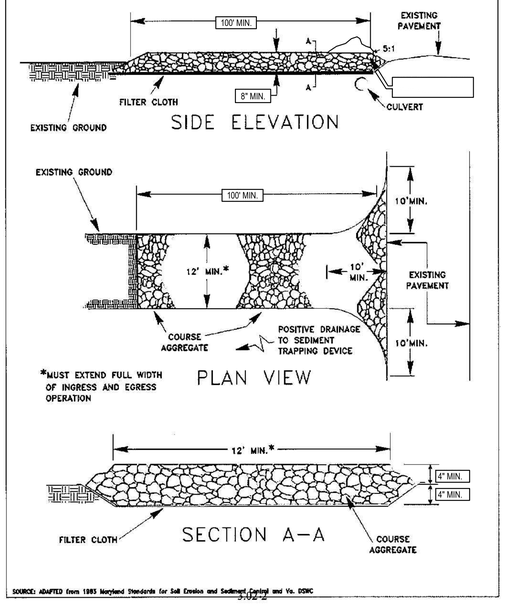
CITY FILE #2023-03

SCALE:	HORIZ.: 1" = 10' VERT.: N/A
DATE:	AUGUST 2023
JOB:	5051-0101
DRAWN: BJS	CHECK: DCW
CADD: C-GC-102.DWG	
NCS:	N/A
SHEET:	08 OF 22

FILE PATH: G:\PROJECTS\2023\5051-0101 ALLA WILLA PROPERTY\DWG\PLANS\C-GC-102.DWG
COPYRIGHT 2023 - THE INFORMATION CONTAINED ON THIS SHEET IS THE PROPERTY OF INTEGRITY FEDERAL SERVICES AND SHALL NOT BE DISCLOSED OR USED IN WHOLE OR IN PART FOR ANY PURPOSE WITHOUT THE WRITTEN PERMISSION OF INTEGRITY FEDERAL SERVICES, LLC.

FIGURE 3.02.1

STONE CONSTRUCTION ENTRANCE

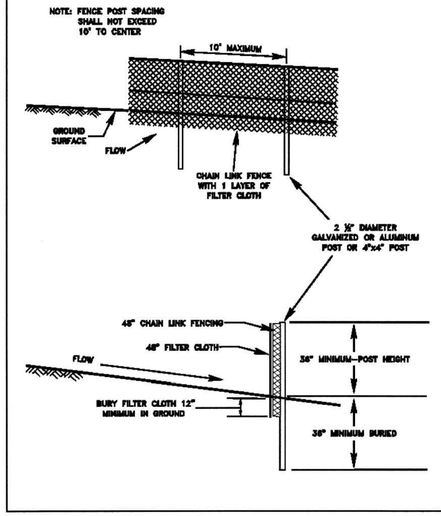


SOURCE: ADAPTED from 1985 Maryland Standards for Soil Erosion and Sediment Control and Va. DSWC

CE

FIGURE 3.28.1

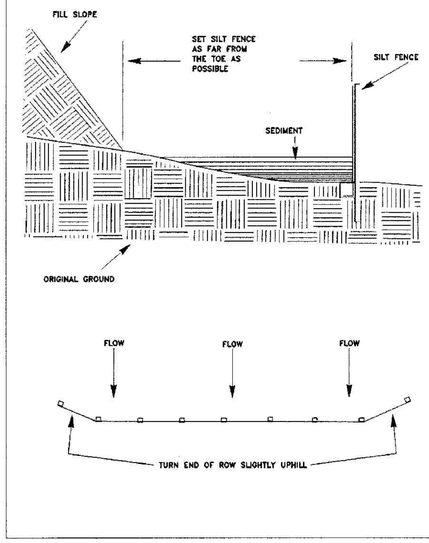
SUPER SILT FENCE



SSF

FIGURE 3.27.1

PLACEMENT OF SILT FENCE

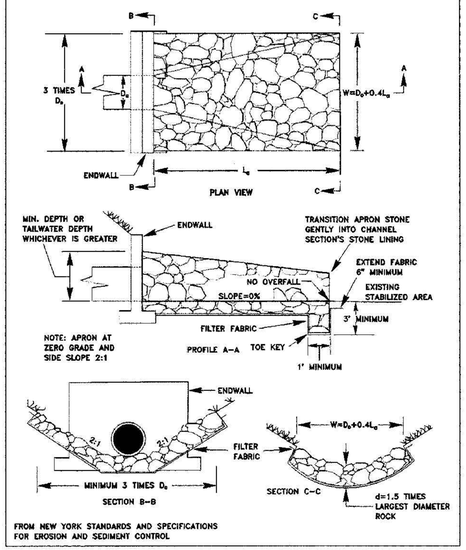


SF

FIGURE 3.17.5

OUTLET PROTECTION

DISCHARGE TO SEMI–CONFINED SECTION
(MAXIMUM TAILWATER)

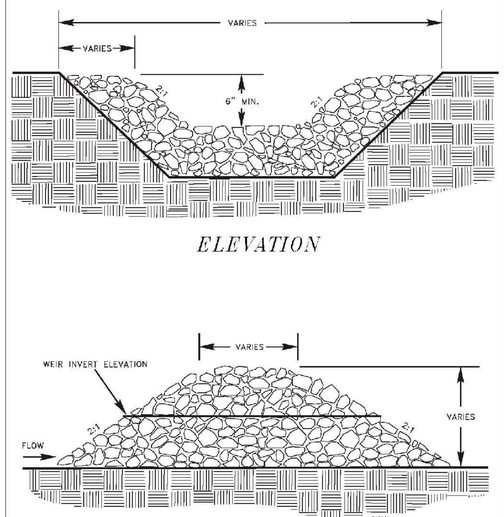


FROM NEW YORK STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL

OP

FIGURE 3.05.1

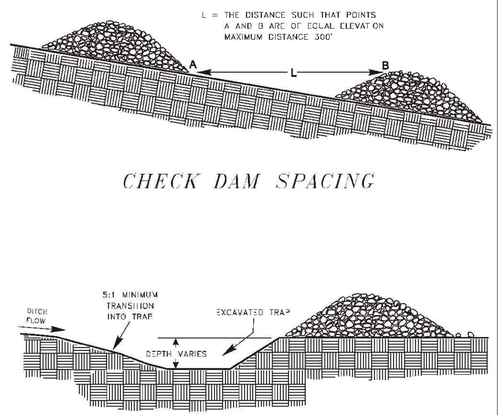
ROCK CHECK DAM



CD

FIGURE 3.05.2

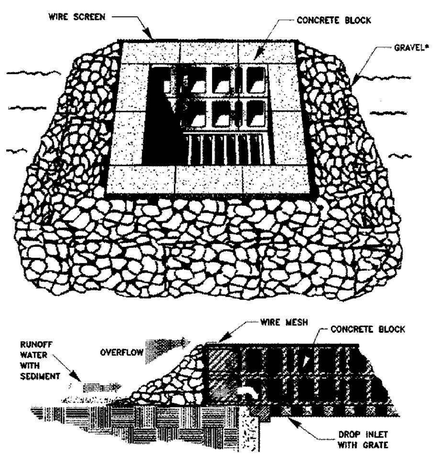
ROCK CHECK DAM



CD

FIGURE 3.33.3

BLOCK AND GRAVEL DROP INLET SEDIMENT FILTER

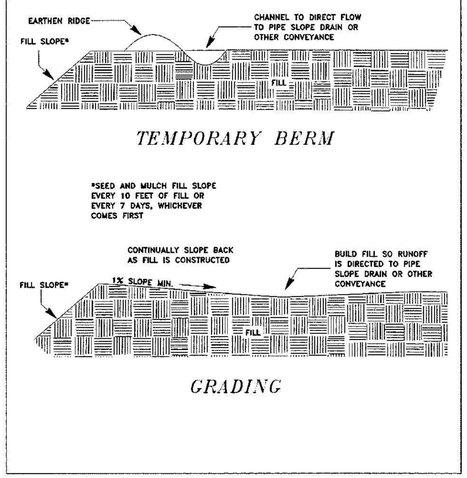


* GRAVEL SHALL BE CLEAN 3/4" TO 2" COARSE AGGREGATE

IP

FIGURE 3.15.2

TEMPORARY FILL DIVERSIONS



NOTES:
• MINIMUM CONSTRUCTED DEPTH SHALL BE 1.5' (2:1 SIDE SLOPES)

DD

INTEGRITY
FEDERAL SERVICES
CIVIL ENGINEERING • LANDSCAPE ARCHITECTURE • PLANNING
148 S. Queen Street, Suite 201 • Martinsburg, WV 25401 • Phone: 304-725-8456 • www.ifs-se.com

RYAN P. PERKS REGISTERED PROFESSIONAL ENGINEER STATE OF WEST VIRGINIA 17061
SEAL: 9/19/23

REVISIONS

1. 09/18/2023 - REVISION TO UNDERGROUND SWM FACILITY
2. 09/18/2023 - REVISIONS PER CITY AND CTUB COMMENTS

EROSION AND SEDIMENT CONTROL DETAILS

ALLA WILLA COMMERCIAL

CITY OF CHARLES TOWN
JEFFERSON COUNTY, WEST VIRGINIA
TAX MAP 7, PARCEL 12; D.B. 1301, PG. 254
CHARLES TOWN CORP (3) TAX DISTRICT

CITY FILE #2023-03

SCALE:	HORIZ.: N/A VERT.: N/A
DATE:	AUGUST 2023
JOB:	5051-0101
DRAWN: BJS	CHECK: DCW
CADD: C-GC-501.DWG	
NCS:	N/A
SHEET:	09 OF 22

FILE PATH: S:\PROJECTS\5051\5051-0101 ALLA WILLA PROPERTY\DWG\5051-GC-501.DWG
ALL DRAWINGS, DESIGNS, AND PLANS PREPARED BY INTEGRITY FEDERAL SERVICES, INC. ARE INSTRUMENTS OF SERVICE AND SHALL REMAIN THE PROPERTY OF INTEGRITY FEDERAL SERVICES, INC. NO UNAUTHORIZED USE OF THESE DRAWINGS IS PERMITTED WITHOUT THE WRITTEN CONSENT OF INTEGRITY FEDERAL SERVICES, INC.

PLAT NORTH
REF: DEED BOOK 480 PAGE 102

ALLA WILLA DRIVE
60' R/W

DONNA F. THOMPSON
TAX MAP 7, PARCEL 11
D.B. 1030 PG. 80

JONATHAN C. RUCKMAN
TAX MAP 7, PARCEL 19
D.B. 1183 PG. 250

FRANK W. TURK
TAX MAP 7, PARCEL 14
D.B. 1143 PG. 208

ROZAS MARITZA
TAX MAP 7, PARCEL 20
D.B. 995 PG. 297

ALLEY

REBAR (SET)
REBAR (FOUND)
BENT REBAR (FOUND)
ASPHALT
LIMITS OF PAVEMENT TO BE SAW-CUT
EXISTING PAVEMENT TO BE REMOVED
LIMITS OF DISTURBANCE
PORTION OF EX. CHAIN LINK FENCE TO BE REMOVED (NO DISTURBANCE SHALL OCCUR ON ADJACENT PROPERTY)
EX. TREES TO BE REMOVED
APPROX. LOC. OF EX. SAN. MH (NOT FIELD VERIFIED)
EX. 8" PVC SAN. MAIN (NOT FIELD VERIFIED)
EX. 2" PVC WATER MAIN (NOT FIELD VERIFIED)

N 74°21'49" W 136.00'
(PL TO BE VACATED)
N 16°28'10" E 45.00'
S 16°28'10" W 45.00'
20.00'
25.00'

GRAPHICAL SCALE: 1"=10'

INTEGRITY
FEDERAL SERVICES
CIVIL ENGINEERING • LANDSCAPE ARCHITECTURE • PLANNING
148 S. Queen Street, Suite 201 • Phone: 304-725-8456
Martinsburg, WV 25401 • www.ifs-se.com

RYAN P. PERKS
REGISTERED
17061
STATE OF WEST VIRGINIA
PROFESSIONAL ENGINEER
SEAL: 9/19/23

REVISIONS
1. 09/18/2023 - REVISION TO UNDERGROUND SWM FACILITY
2. 09/18/2023 - REVISIONS PER CITY, AND CTUB COMMENTS

EXISTING CONDITIONS AND DEMOLITION PLAN

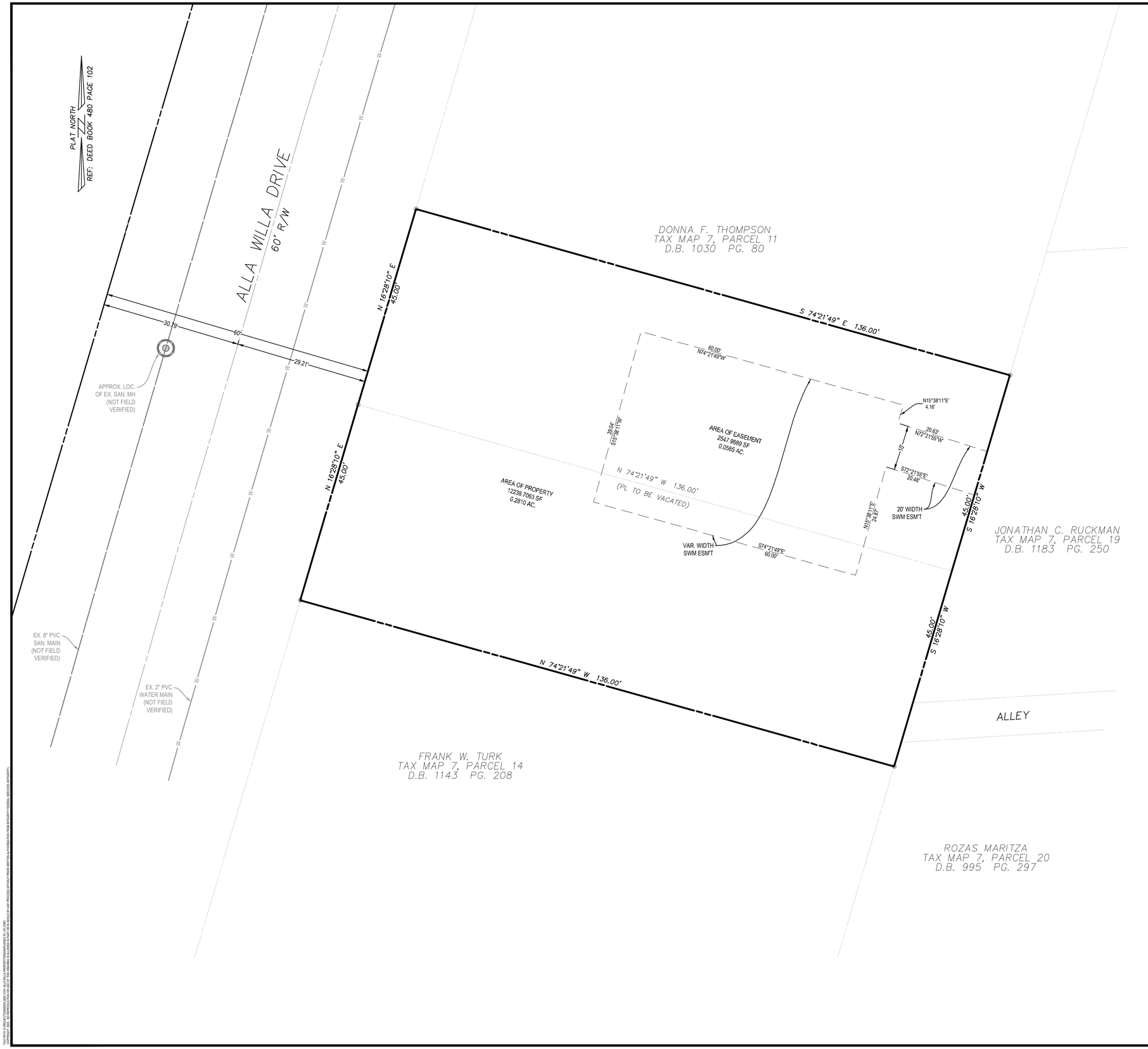
ALLA WILLA COMMERCIAL

CITY OF CHARLES TOWN
JEFFERSON COUNTY, WEST VIRGINIA
TAX MAP 7, PARCEL 12; D.B. 1301, PG. 254
CHARLES TOWN CORP (3) TAX DISTRICT

CITY FILE #2023-03

SCALE:	HORIZ.: 1" = 10' VERT.: N/A
DATE:	AUGUST 2023
JOB:	5051-0101
DRAWN: BJS	CHECK: DCW
CADD: C-XP-101.DWG	
NCS:	N/A
SHEET:	10 OF 22

FILE PATH: G:\PROJECTS\2005\5051-0101 ALLA WILLA PROPERTY\WORK\ARCH\ 10.DWG
LAYOUT: C-XP-101 - 09/18/2023 - 10:10:37 AM - BJS
THE INFORMATION CONTAINED ON THIS DRAWING IS THE PROPERTY OF INTEGRITY FEDERAL SERVICES AND IS NOT TO BE USED FOR ANY PURPOSE WHATSOEVER WITHOUT THE WRITTEN CONSENT OF INTEGRITY FEDERAL SERVICES, INC.



INTEGRITY
FEDERAL SERVICES
CIVIL ENGINEERING • LANDSCAPE ARCHITECTURE • PLANNING
148 S. Queen Street, Suite 201 • Phone: 304-725-8456
Martinsburg, WV 25401 • www.ifs-se.com

RYAN P. PERKS
REGISTERED
17061
STATE OF WEST VIRGINIA
PROFESSIONAL ENGINEER
SEAL:
9/19/23

REVISIONS

1. 09/18/2023 - REVISION TO UNDERGROUND SWM FACILITY	
2. 09/18/2023 - REVISIONS PER CITY, AND CTUB COMMENTS	

PRELIMINARY PLAT

ALLA WILLA COMMERCIAL

CITY OF CHARLES TOWN
JEFFERSON COUNTY, WEST VIRGINIA
TAX MAP 7, PARCEL 12; D.B. 1301, PG. 254
CHARLES TOWN CORP (3) TAX DISTRICT

CITY FILE #2023-03

SCALE:	HORIZ.: 1" = 10' VERT.: N/A
DATE:	AUGUST 2023
JOB:	5051-0101
DRAWN: BJS	CHECK: DCW
CADD: C-PL-101.DWG	
NCS:	N/A
SHEET:	11 OF 22

FILE PATH: Z:\PROJECTS\CHARLES\5051-0101 ALLA WILLA PROPERTY\DWG\ARCH\C-PL-101.DWG
COPYRIGHT 2023, INTEGRITY FEDERAL SERVICES, INC. ALL RIGHTS RESERVED. THESE DRAWINGS ARE THE PROPERTY OF INTEGRITY FEDERAL SERVICES, INC. AND ARE NOT TO BE USED IN WHOLE OR IN PART WITHOUT THE WRITTEN AUTHORIZATION FROM INTEGRITY FEDERAL SERVICES, INC.

PLAT NORTH
REF: DEED BOOK 480 PAGE 102

ALLA WILLA DRIVE
60' R/W

ASPHALT

DONNA F. THOMPSON
TAX MAP 7, PARCEL 11
D.B. 1030 PG. 80

REBAR (SET)

5' LANDSCAPE PARKING BUFFER

"STOP" SIGN

CONC. WHEEL STOP (TYP.)

10' BUFFER WITH OPAQUE FENCE

ADA PARKING SIGN

UNDERGROUND SWM FACILITY SEE DETAILS ON SHEETS 19-20

S 74°21'49" E 136.00'

LIMITS OF DISTURBANCE

SAW-CUT LINE

DETECTABLE WARNING SURFACE (TYP.)

EDGE OF PAVEMENT (TYP.)

TYPE V, WHITE, 12" WIDTH, SOLID STOP LINE

4-INCH WIDE SOLID YELLOW PVMT MKG (TYP.)

STD. PAINTED ADA SYMBOL

EDGE OF PAVEMENT (TYP.)

SWM OUTFALL STRUCTURE

6' TALL OPAQUE FENCE

15" HDPE

INV. 512.54

CLASS I RIP-RAP OUTFALL PROTECTION

APPROX. LOC. OF EX. SAN. MH (NOT FIELD VERIFIED)

CONN. TO EX. WATER MAIN (CONTRACTOR TO COORD. LOC. OF EX. W/M CONN. WITH CTUB)

EDGE OF PAVEMENT (TYP.)

DETECTABLE WARNING SURFACE (TYP.)

3/4" CTS-PE WATER TUBING WATER SERVICE LATERAL

3/4" WATER METER

BUILDING MOUNTED LIGHT (SEE LIGHTING NOTE THIS SHEET) (TYP.)

WV TYPE 'B' INLET INV. OUT 513.25
15" HDPE
INV. IN 513.20

40' BUILDING SETBACK

U.G. SWM FACILITY

CONC. BOLLARD (TYP. OF 2)

JONATHAN C. RUCKMAN
TAX MAP 7, PARCEL 19
D.B. 1183 PG. 250

EDGE OF PAVEMENT (TYP.)

BENT REBAR (FOUND)

CONN. TO EX. 8" SAN. MAIN (CONTRACTOR TO COORD. LOC. OF EX. SAN. CONN. WITH CTUB)

CONTRACTOR SHALL TRENCH AND REPAIR ASPHALT AFTER INSTALLATION. CONTRACTOR IS RESPONSIBLE FOR COORDINATING MAINTENANCE OF TRAFFIC WITH LOCALITY WITHIN ALLA WILLA RIGHT-OF-WAY.

TEST-PIT REQ'D AT W/L CROSSING

SAN. CLEANOUT INV. 512.18
6" PVC SAN. LAT @2% MIN.

SAN. CLEANOUT INV. 512.94

INV. 513.00

6" PVC SAN LAT @2%

COMMERCIAL BUILDING
1-STORY
SLAB= 517.00
±1,300 S.F.

ADA RAMP WITH DETECTABLE WARNING SURFACE

SCREENED DUMPSTER PAD

10' BUFFER WITH OPAQUE FENCE

30' BUILDING SETBACK

6' TALL OPAQUE FENCE

S 16°28'10" W

EX. 8" PVC SAN. MAIN (NOT FIELD VERIFIED)

EX. 2" PVC WATER MAIN (NOT FIELD VERIFIED)

LIMITS OF DISTURBANCE

ASPHALT

N 74°21'49" W 136.00'

ALLEY

FRANK W. TURK
TAX MAP 7, PARCEL 14
D.B. 1143 PG. 208

BUILDING MOUNTED LIGHT (SEE LIGHTING NOTE THIS SHEET) (TYP.)

REBAR (SET)

ROZAS MARITZA
TAX MAP 7, PARCEL 20
D.B. 995 PG. 297

10 5 0 10 20 30
GRAPHICAL SCALE: 1"=10'

UTILITY PLAN LEGEND:

- SANITARY LATERAL & CLEANOUT
- STORM SEWER
- STORM GRATE INLET
- STORM SEWER OUTFALL & END SECTION W/ OUTLET PROTECTION
- UNDERGROUND SWM FACILITY AND OUTFALL STRUCTURE
- DOMESTIC WATERLINE
- DOMESTIC WATER METER

SITE PLAN LEGEND:

- K-1 ASPHALT PAVEMENT
- CONCRETE SIDEWALK

NOTES:
1. ALL DIMENSIONS SHOWN ARE MEASURED TO FACE OF CURB UNLESS OTHERWISE NOTED.
2. ALL RADII SHOWN ARE 5' UNLESS OTHERWISE NOTED.

BUILDING MOUNTED LIGHTING NOTE:
1. ALL FIXTURES SHALL BE NON-ADJUSTABLE AND SHALL HAVE A CUTOFF THAT SHIELDS THE LIGHT SOURCE AT AN ANGLE OF 90 DEGREES FROM VERTICAL. FLOODLIGHTS ARE NOT PERMITTED. SEE DETAILS, SHEET 04.

INTEGRITY FEDERAL SERVICES
CIVIL ENGINEERING • LANDSCAPE ARCHITECTURE • PLANNING
148 S. Queen Street, Suite 201 • Martinsburg, WV 25401 • Phone: 304-725-8456 • www.ifs-se.com

RYAN P. PERRY
REGISTERED
No. 17061
STATE OF WEST VIRGINIA
PROFESSIONAL ENGINEER
SEAL: 9/19/23

REVISIONS
1. 09/18/2023 - REVISION TO UNDERGROUND SWM FACILITY
2. 09/18/2023 - REVISIONS PER CITY, AND CTUB COMMENTS

SITE LAYOUT AND UTILITY PLAN

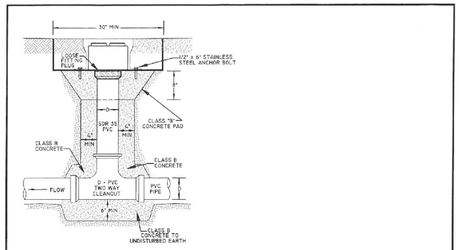
ALLA WILLA COMMERCIAL

CITY OF CHARLES TOWN
JEFFERSON COUNTY, WEST VIRGINIA
TAX MAP 7, PARCEL 12; D.B. 1301, PG. 254
CHARLES TOWN CORP (3) TAX DISTRICT

CITY FILE #2023-03

SCALE:	HORIZ.: 1" = 10' VERT.: N/A
DATE:	AUGUST 2023
JOB:	5051-0101
DRAWN: BJS	CHECK: DCW
CADD: C-CS-101.DWG	
NCS:	N/A
SHEET:	12 OF 22

FILEPATH: G:\PROJECTS\2023\05\5051-101 ALLA WILLA PROPERTY\WORK\CAD\C-CS-101.DWG
Copyright 2023 - NO REPRODUCTION OR USE OF THIS DRAWING IN ANY FORM OR MEDIUM WHATSOEVER WITHOUT PRIOR WRITTEN AUTHORIZATION FROM INTEGRITY FEDERAL SERVICES, INC.

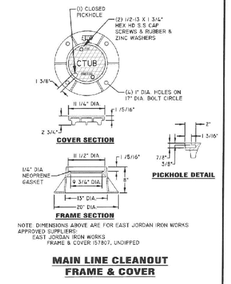


MAIN LINE CLEANOUT

(FOR D ≤ 6")

NOTES:

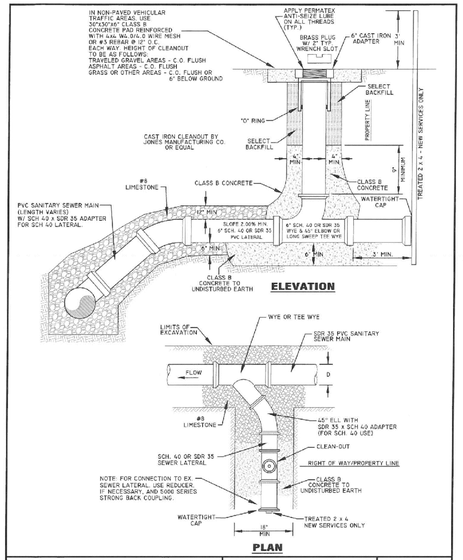
1. CLEANOUT FRAME AND COVER SHALL BE INSTALLED SUCH THAT IT IS LEVEL TO 2" BELOW SURROUNDING SURFACE. CLEANOUTS PROJECTING ABOVE SURFACE ARE UNACCEPTABLE.
2. FOR CLEANOUTS SUBJECT TO VEHICULAR TRAVEL, CONSTRUCT 30"x30"x9" CLASS B CONCRETE PAD. REINFORCE WITH 6.6G W6.6/6.0 WIRE MESH OR #3 REBAR @ 12" C.C EACH DIRECTION.
3. FOR NON-VEHICULAR TRAFFIC AREAS CONCRETE PAD CAN BE ELIMINATED AT DIRECTION OF ENGINEER. BACKFILL TO MATCH SURROUNDING AREA.
4. USE TEE AND PLUG FOR CLEANOUT AT END OF LINE.
5. FOR MAINLINE DIAMETER OF 8" OR GREATER, USE STRAIGHT TEE



NOTE: DIMENSIONS ABOVE ARE FOR EAST JORDAN IRON WORKS APPROVED SUPPLIERS:
EAST JORDAN IRON WORKS
FRAME & COVER 157807, UNDRIPPED

MAIN LINE CLEANOUT FRAME & COVER

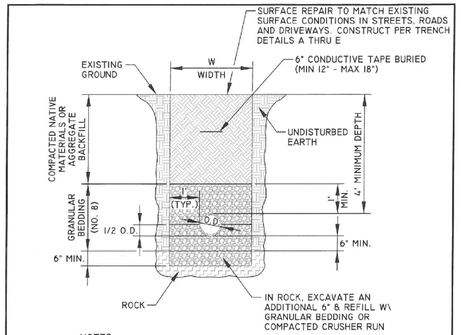
Charles Town Utility Board 832 S. George Street, P.O. Box 359, Charles Town, WV 25414 Phone: (304) 725-2516 • Fax: (304) 725-4313	**MAINLINE CLEANOUT & FRAME & COVER DETAIL**	Standard Detail No. **S-12** NOT TO SCALE SEPTEMBER 2015



ELEVATION

PLAN

Charles Town Utility Board 832 S. George Street, P.O. Box 359, Charles Town, WV 25414 Phone: (304) 725-2516 • Fax: (304) 725-4313	**NEW LATERAL CONNECTION DETAIL**	Standard Detail No. **S-13** NOT TO SCALE SEPTEMBER 2015



NOTES:

1. W = MAXIMUM PERMISSIBLE TRENCH WIDTH, BASED UPON, W = O.D. + 24", UNLESS APPROVED BY THE ENGINEER.
2. TRENCHES TO BE SHEETED AND BRACED AS REQUIRED.
3. PROVIDE BEARING FOR FULL LENGTH OF BARREL, DIG HOLES FOR THE BELL.
4. BACKFILL ON SIDES TO 1/2 O.D. OF PIPE TO HOLD PIPE IN PLACE PRIOR TO PLACING ADDITIONAL BEDDING.
5. BACKFILL TO BE COMPACTED IN 6" LAYERS TO 95% OF MAXIMUM DENSITY AT OPTIMUM MOISTURE (+2%) IN ROADS AND STREETS. COMPACT TO MATCH EXISTING GROUND IN OTHER AREAS.
6. MAINTAIN MINIMUM OF 4' OF COVER TO THE TOP OF PIPE.
7. A CASING PIPE SHALL BE REQUIRED IN ROAD CROSSINGS WHERE SHOWN ON PLANS
8. ALL WATER LINES REQUIRE PERMIT FROM APPLICABLE REGULATORY ENTITIES. PERMIT REQUIREMENTS SUPERCEDE WHAT IS SHOWN ON THIS DETAIL.

Charles Town Utility Board 832 S. George Street, P.O. Box 359, Charles Town, WV 25414 Phone: (304) 725-2516 • Fax: (304) 725-4313	**SEWER LINE TRENCH DETAIL**	Standard Detail No. **S-1** NOT TO SCALE SEPTEMBER 2015

PLAN VIEW

ELEVATION

NOTES:

1. ALL BOLTS TO BE STAINLESS STEEL.
2. CONNECT NEW METER SETTER TO EXISTING SERVICE LINES FOR LOCATIONS REQUIRING ONLY METER REPLACEMENT
3. PRESSURE REDUCING VALVE REQUIRED IF STATIC SYSTEM PRESSURES EXCEED 100 PSI
4. ALL METERS TO BE SENSUS RADIO READ PLACED AT PROPERTY LINE

Charles Town Utility Board 832 S. George Street, P.O. Box 359, Charles Town, WV 25414 Phone: (304) 725-2516 • Fax: (304) 725-4313	**METERED CONNECTION DETAIL**	Standard Detail No. **W-1** NOT TO SCALE APRIL 2015

WATER LINE TRENCH

NOTES:

1. W = MAXIMUM PERMISSIBLE TRENCH WIDTH, BASED UPON, W = O.D. + 24", UNLESS APPROVED BY THE ENGINEER.
2. TRENCHES TO BE SHEETED AND BRACED AS REQUIRED.
3. PROVIDE BEARING FOR FULL LENGTH OF BARREL, DIG HOLES FOR THE BELL.
4. BACKFILL TO BE COMPACTED IN 6" LAYERS TO 95% OF MAXIMUM DENSITY AT OPTIMUM MOISTURE (+2%) IN ROADS AND STREETS. COMPACT TO MATCH EXISTING GROUND IN OTHER AREAS.
5. MAINTAIN MINIMUM OF 4' OF COVER TO THE TOP OF PIPE.
6. A CASING PIPE SHALL BE REQUIRED IN ROAD CROSSINGS WHERE SHOWN ON PLANS
7. ALL WATER LINES REQUIRE PERMIT FROM APPLICABLE REGULATORY ENTITIES. PERMIT REQUIREMENTS SUPERCEDE WHAT IS SHOWN ON THIS DETAIL.

Charles Town Utility Board 832 S. George Street, P.O. Box 359, Charles Town, WV 25414 Phone: (304) 725-2516 • Fax: (304) 725-4313	**WATER LINE TRENCH DETAIL**	Standard Detail No. **W-9** NOT TO SCALE APRIL 2015

INTEGRITY
FEDERAL SERVICES
CIVIL ENGINEERING • LANDSCAPE ARCHITECTURE • PLANNING
148 S. Queen Street, Suite 201 • Martinsburg, WV 25401
Phone: 304-725-8456 • www.ifs-se.com

RYAN P. PERKS
REGISTERED
STATE OF WEST VIRGINIA
PROFESSIONAL ENGINEER
9/19/23
SEAL:

REVISIONS

1. 09/18/2023 - REVISION TO UNDERGROUND SWM FACILITY
2. 09/18/2023 - REVISIONS PER CITY AND CTUB COMMENTS

WATER AND SEWER DETAILS

ALLA WILLA COMMERCIAL

CITY OF CHARLES TOWN
JEFFERSON COUNTY, WEST VIRGINIA
TAX MAP 7, PARCEL 12; D.B. 1301, PG. 254
CHARLES TOWN CORP (3) TAX DISTRICT

CITY FILE #2023-03

SCALE:	HORIZ.: N/A VERT.: N/A
DATE:	AUGUST 2023
JOB:	5051-0101
DRAWN: BJS	CHECK: DCW
CADD: C-CU-501.DWG	
NCS:	N/A
SHEET:	13 OF 22

FILEPATH: Z:\PROJECTS\ENGINEERING\2021 ALLA WILLA PROPERTY\ENGINEER\ARCHICAD\01 DWG
COPYRIGHT 2023, THE CONTENTS CONTAINED ON SHEET OR SHEETS ARE THE PROPERTY OF INTEGRITY FEDERAL SERVICES AND ARE NOT TO BE USED IN WHOLE OR IN PART WITHOUT THE EXPRESS WRITTEN AUTHORIZATION FROM INTEGRITY FEDERAL SERVICES (INTEGRITY)

PLAT NORTH
REF: DEED BOOK 480 PAGE 102

ALLA WILLA DRIVE
60' R/W

APPROX. LOC. OF EX. SAN. MH (NOT FIELD VERIFIED)

REBAR (SET)

ASPHALT

DONNA F. THOMPSON
TAX MAP 7, PARCEL 11
D.B. 1030 PG. 80

UNDERGROUND SWM FACILITY
SEE DETAILS ON SHEETS 19-20

LIMITS OF DISTURBANCE

SWM OUTFALL STRUCTURE

REBAR (SET)

WV TYPE 'B' INLET
INV. OUT 513.25
15" HDPE
INV. IN 513.20

15" HDPE

INV. 512.54

CLASS I RIP-RAP OUTFALL PROTECTION

REBAR (FOUND)

U.G. SWM FACILITY

JONATHAN C. RUCKMAN
TAX MAP 7, PARCEL 19
D.B. 1183 PG. 250

TRANSITION FROM 0" TO FULL HT. CURB

TRANSITION FROM 0" TO FULL HT. CURB

COMMERCIAL BUILDING
1-STORY
SLAB= 517.00
±1,300 S.F.

BENT REBAR (FOUND)

REBAR (SET)

LIMITS OF DISTURBANCE

ASPHALT

EX. 8" PVC SAN. MAIN (NOT FIELD VERIFIED)

EX. 2" PVC WATER MAIN (NOT FIELD VERIFIED)

ALLEY

FRANK W. TURK
TAX MAP 7, PARCEL 14
D.B. 1143 PG. 208

REBAR (SET)

ROZAS MARITZA
TAX MAP 7, PARCEL 20
D.B. 995 PG. 297

10 5 0 10 20 30
GRAPHICAL SCALE: 1"=10'

UTILITY PLAN LEGEND:

- SANITARY LATERAL & CLEANOUT
- STORM SEWER
- STORM GRATE INLET
- STORM SEWER OUTFALL & END SECTION W/ OUTLET PROTECTION
- UNDERGROUND SWM FACILITY AND OUTFALL STRUCTURE
- DOMESTIC WATERLINE
- DOMESTIC WATER METER

INTEGRITY
FEDERAL SERVICES
CIVIL ENGINEERING • LANDSCAPE ARCHITECTURE • PLANNING
148 S. Queen Street, Suite 201 • Phone: 304-725-8456
Martinsburg, WV 25401 • www.ifs-se.com

RYAN P. PERKS
REGISTERED
17061
STATE OF WEST VIRGINIA
PROFESSIONAL ENGINEER
SEAL: 9/19/23

REVISIONS
1. 09/18/2023 - REVISION TO UNDERGROUND SWM FACILITY
2. 09/18/2023 - REVISIONS PER CITY, AND CTUB COMMENTS

GRADING AND DRAINAGE PLAN

ALLA WILLA COMMERCIAL

CITY OF CHARLES TOWN
JEFFERSON COUNTY, WEST VIRGINIA
TAX MAP 7, PARCEL 12; D.B. 1301, PG. 254
CHARLES TOWN CORP (3) TAX DISTRICT

CITY FILE #2023-03

SCALE:	HORIZ.: 1" = 10' VERT.: N/A
DATE:	AUGUST 2023
JOB:	5051-0101
DRAWN: BJS	CHECK: DCW
CADD: C-GP-101.DWG	
NCS:	N/A
SHEET:	14 OF 22

FILEPATH: O:\PROJECTS\ENGINEERING\2023\ALLA WILLA PROPERTY\WORKING\GP-101.DWG
COPYRIGHT 2023 - ALL RIGHTS RESERVED. THE USE OF THESE DRAWINGS IS LIMITED SOLELY TO THE PURPOSES SHOWN THROUGH WRITTEN AUTHORIZATION BY INTEGRITY FEDERAL SERVICES (IFS).

NOTES:
SEE SHEETS 19-20 FOR UNDERGROUND SWM FACILITY DETAILS, AND OUTFALL STRUCTURE DETAILS.

10-YEAR INLET COMPUTATIONS

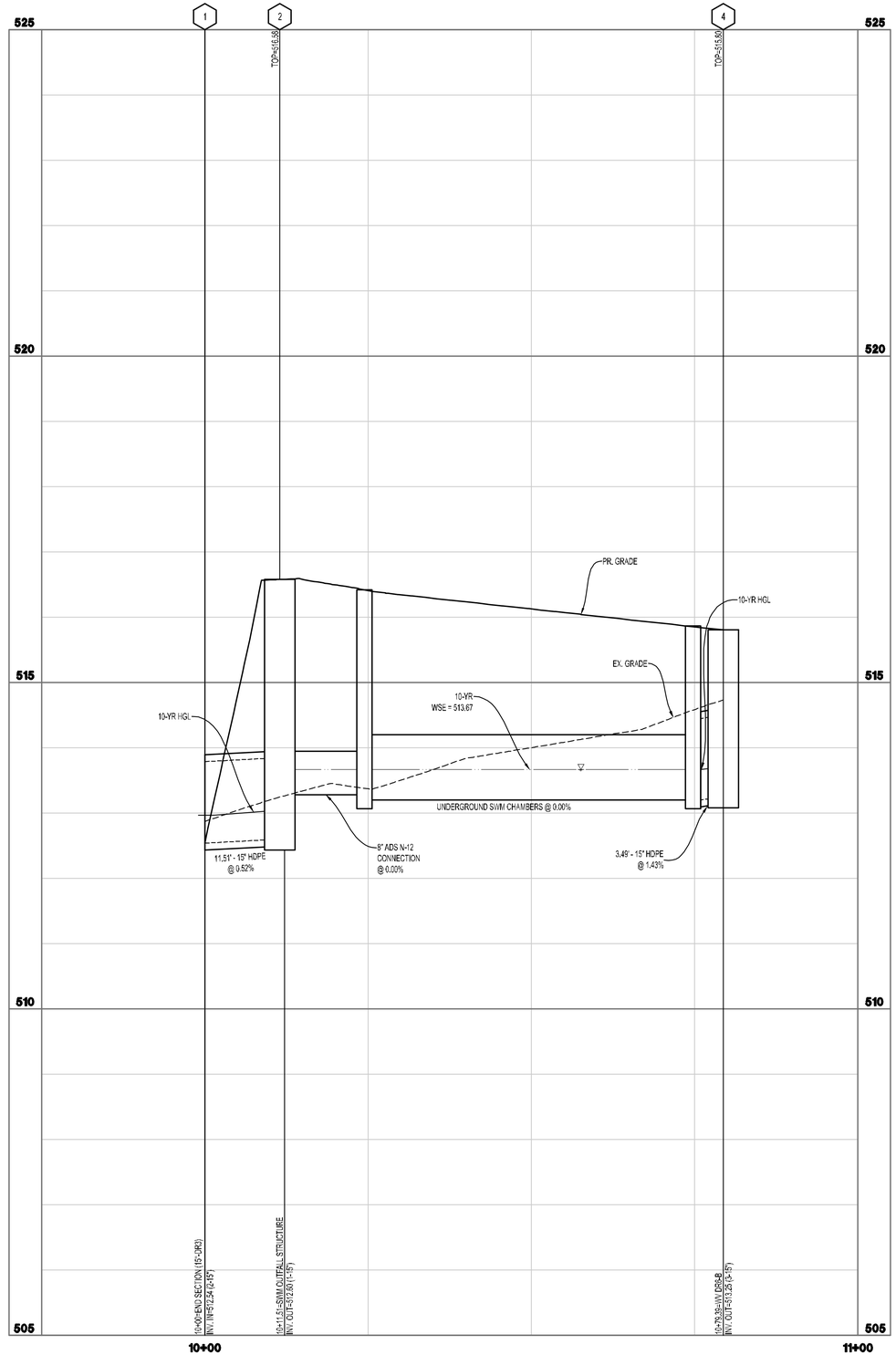
InletID	JunctType	CurbLength	DrainageArea	RunoffCoeff	iInlet	IncrQ	QCarryover	QCaptured	GutterSlope	CrossSlope, Sx	CrossSlope, Sw	QCaptured	QBypass	InletLocation	InletDepth	BypassSpread	GrateArea	GutterSpread	KnownQ
		(ft)	(ac)	(C)	(in/hr)	(cfs)	(cfs)	(cfs)	(ft/ft)	(ft/ft)	(ft/ft)	(cfs)	(cfs)		(ft)	(ft)	(sqft)	(ft)	(cfs)
4	Dp-Grate	....	0.32	0.56	6.52	1.17	0.00	1.17	Sag	0.02	0.02	1.17	0.00	Sag	0.15	n/a	0.70	16.69	0.00

10-YR PIPE COMPUTATIONS

LineID	DrainageArea	RunoffCoeff	IncrCxA	TotalCxA	iSys	Total Runoff	KnownQ	FlowRate	InvertUp	InvertDn	LineLength	LineSlope	LineSize	CapacityFu	Vel Ave	Tc	PipeTravel	Grnd/RimElev Up
	(ac)	(C)			(in/hr)	(cfs)	(cfs)	(cfs)	(ft)	(ft)	(ft)	(%)	(in)	(cfs)	(ft/s)	(min)	(min)	(ft)
4-3	0.32	0.56	0.18	0.18	6.52	1.17	0.00	1.17	513.25	513.20	3.49	1.43	15.00	8.37	2.97	5.00	0.06	515.80
2-1	0.00	0.00	0.00	0.00	0.00	0.00	1.17	1.17	512.60	512.54	11.51	0.52	15.00	5.05	3.17	0.00	0.20	516.58

10-YEAR HGL COMPUTATIONS

LineID	LineSize	FlowRate	InvertDn	HGLDn	DepthDn	VelAve	VelHd Dn	FlowRate	Grnd/RimElev Dn	LineLength	InvertUp	HGLUp	DepthUp	VelHd Up	Grnd/RimElev Up	EnergyLoss	J-LossCoeff	MinorLoss
	(in)	(cfs)	(ft)	(ft)	(ft)	(ft/s)	(ft)	(cfs)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)		(ft)
4-3	15	1.17	513.20	513.67	0.47	2.97	0.16	1.17	514.63	3.49	513.25	513.68	0.43**	0.16	515.80	0.00	1.00	n/a
2-1	15	1.17	512.54	512.97	0.43	3.17	0.16	1.17	513.89	11.51	512.60	513.03	0.43**	0.16	516.58	0.00	1.00	n/a



STORM PROFILE

HORIZ. SCALE: 1"=10'
VERT. SCALE: 1"=1'

INTEGRITY FEDERAL SERVICES
CIVIL ENGINEERING • LANDSCAPE ARCHITECTURE • PLANNING
148 S. Queen Street, Suite 201 • Martinsburg, WV 25401 • Phone: 304-725-8456 • www.ifs-se.com

RYAN P. PERRY — REGISTERED — 17061 — STATE OF WEST VIRGINIA — PROFESSIONAL ENGINEER — 9/19/23
SEAL:

REVISIONS
1. 09/18/2023 - REVISION TO UNDERGROUND SWM FACILITY
2. 09/18/2023 - REVISIONS PER CITY, AND CTUB COMMENTS

STORM SEWER COMPUTATIONS AND PROFILE

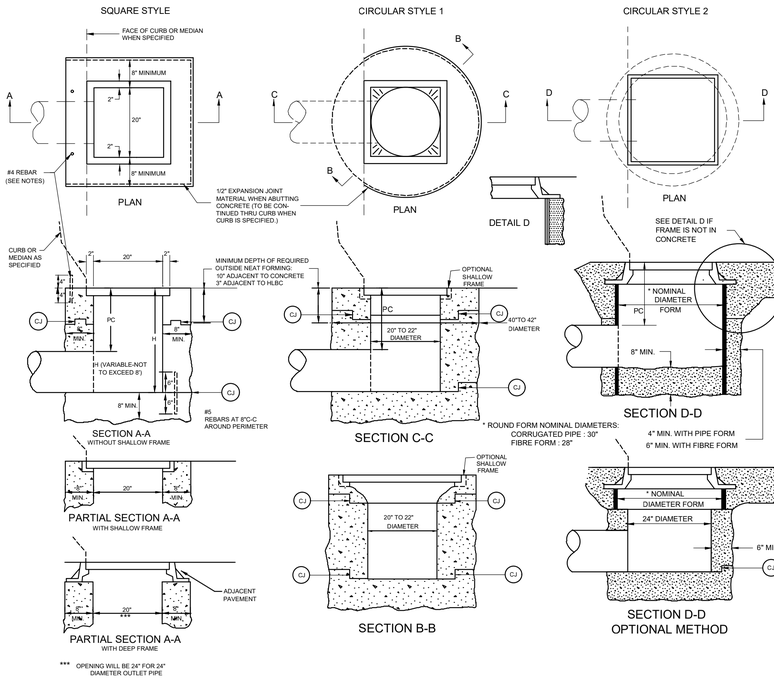
ALLA WILLA COMMERCIAL

CITY OF CHARLES TOWN
JEFFERSON COUNTY, WEST VIRGINIA
TAX MAP 7, PARCEL 12; D.B. 1301, PG. 254
CHARLES TOWN CORP (3) TAX DISTRICT

CITY FILE #2023-03

SCALE:	HORIZ.: 1" = 10' VERT.: 1" = 1'
DATE:	AUGUST 2023
JOB:	5051-0101
DRAWN: BJS	CHECK: DCW
CADD: C-CU-261.DWG	
NCS:	N/A
SHEET:	15 OF 22

FILE PATH: C:\PROJECTS\2005\05A1-001\ALLA WILLA PROPERTY\WORK\ARCCAD\C-CU-261.DWG
COPYRIGHT 2023 - THE INFORMATION CONTAINED ON THIS DRAWING IS INTENDED FOR USE ONLY ON THE PROJECT & LOCATION SPECIFICALLY REFERENCED HEREIN. ANY OTHER USE, MODIFICATION, OR REPRODUCTION IS STRICTLY PROHIBITED WITHOUT THE WRITTEN CONSENT OF INTEGRITY FEDERAL SERVICES, LLC.



NOTES

UNLESS OTHERWISE SPECIFIED ON THE PLANS, TYPE B INLETS MAY BE CONSTRUCTED IN ANY OF THE SHAPES SHOWN WHEN THE OUTLET PIPE DIAMETERS IS 21" OR LESS AND THE ADJACENT PAVEMENT IS CONCRETE.
IF THE OUTLET PIPE DIAMETER IS 24" OR THE ADJACENT PAVEMENT IS HOT MIX ASPHALT, ONLY THE SQUARE STYLE WITH THE DEEP FRAME WILL BE USED. THE INSIDE OPENING OF THE INLET WILL BE ADJUSTED TO ACCOMODATE THE 24" PIPE.

CONSTRUCTION MAY BE CAST-IN-PLACE, PRECAST IN ONE OR MULTIPLE SECTIONS, OR ANY COMBINATION OF CAST-IN-PLACE AND PRECAST.

OPTIONAL CONSTRUCTION JOINTS LABELED "C.J" MAY BE ROUGHENED CONCRETE, KEYED OR DOWELED AS PER THE TYPICAL DETAILS SHOWN HEREIN, OR AS APPROVED BY THE ENGINEER. NON SHRINK GROUT MEETING THE REQUIREMENTS OF SUBSECTION 715.5 OF THE SPECIFICATIONS MAY BE USED TO A DEPTH OF 1/2" FOR LEVELING BETWEEN PRECAST SECTIONS. THICKER DEPTHS WILL BE ALLOWED AS PER THE MANUFACTURER'S RECOMMENDATIONS.

THE FINAL INSTALLED TOP SURFACE OF INLET AND GRATE SHALL BE FLUSH WITH ADJACENT FINISHED SURFACES SUCH AS PAVEMENT, GUTTERS, CURBS, AND SIDEWALKS. TOP OF GRATE ELEVATION, IF SHOWN ON THE PLANS, IS FOR INFORMATION ONLY.

REBARS ARE TO BE INSTALLED AT THE QUARTER POINTS TO CONNECT CURB TO INLET. REBARS ARE NOT REQUIRED IF CURB IS POURED MONOLITHICALLY WITH THE INLET OR IF TYPE V OR VI MEDIAN IS SPECIFIED ON THE PLANS.
FOR DETAILS OF GRATES AND FRAMES, SEE INLET CASTING STANDARD SHEET DR6-X.

THE CONTRACTOR MAY, AT HIS OPTION, OMIT USE OF THE SHALLOW FRAME BY FORMING A LEDGE IN THE CONCRETE. SPECIAL CARE SHALL BE EXERCISED IN FORMING THE 2" WIDE CONCRETE LEDGE TO PROVIDE A SMOOTH, EVEN SURFACE FOR SUPPORTING THE GRATE IF A FRAME IS NOT USED. NO PROJECTIONS SHALL EXIST ON THE GRATE AND THE GRATE SHALL SEAT ON THE LEDGE WITHOUT ROCKING.

FIBRE FORM SHALL BE REMOVED PRIOR TO COMPLETION OF THE PROJECT.
PC (MINIMUM PIPE COVER) SHALL BE 12" BELOW INLET TOP FOR PIPES PLACED UNDER SIDEWALK OR GRASSED AREA OR 24" BELOW INLET TOP FOR PIPES PLACED UNDER PAVEMENT OR SHOULDER.

CURB, IF SPECIFIED, MAY BE EITHER CONCRETE PLACED ON THE INLET BACKWALL AS DETAILED HEREIN OR AN APPROVED CURB BOX AS MANUFACTURED WITH THE GRATE AND FRAME. DIMENSIONS OF THE CURB BOX SHOULD REASONABLY CONFORM TO THE STANDARD CURB AS SPECIFIED ON THE PLANS. THE CURB WILL BE PAID FOR PER SECTION 610, IN EITHER CASE.

THIS INLET SHALL NOT BE PLACED IN A PEDESTRIAN CROSS WALK.

THE MINIMUM DISTANCE FROM THE TOP OF ANY PIPE OPENING TO ANY CONSTRUCTION JOINT ABOVE THE OPENING SHALL BE FOUR (4) INCHES.

THE NUMBER AND LOCATION OF PIPE OPENINGS SHALL BE AS SHOWN IN THE PLANS. THE CONTRACTOR AT NO ADDITIONAL COST, SHALL BE RESPONSIBLE FOR ANY TEMPORARY BRACING REQUIRED TO TRANSPORT PRECAST INLET SECTIONS DUE TO MULTIPLE OPENINGS.

WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
STANDARD DETAIL

TYPE B INLET

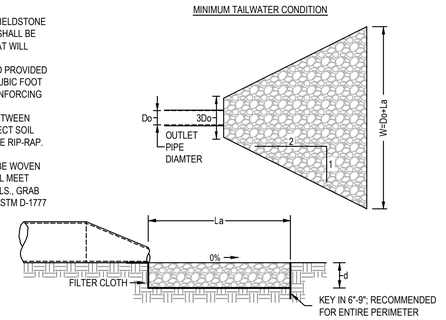
PREPARED 7-1-99
REVISED (6/17)

STANDARD SHEET DR6-B

OUTLET PROTECTION COMPUTATIONS

NOT TO SCALE

NOTES:
1. STONE QUALITY FOR RIP-RAP SHALL CONSIST OF FIELDSTONE OR ROUGH UNHEWN QUARRY STONE. THE STONE SHALL BE HARD, OF AN ANGULAR END AND OF A QUALITY THAT WILL NOT DISINTEGRATE ON EXPOSURE TO WATER OR WEATHERING. RECYCLED CONCRETE MAY BE USED PROVIDED IT HAS A DENSITY OF AT LEAST 150 POUNDS PER CUBIC FOOT AND DOES NOT HAVE ANY EXPOSED STEEL OR REINFORCING BARS.
2. IN ALL CASES, FILTER FABRIC SHALL BE PLACED BETWEEN THE RIP-RAP AND THE UNDERLYING SOIL TO PROTECT SOIL MOVEMENT INTO, THROUGH, AND UNDERNEATH THE RIP-RAP. THE MATERIAL MUST MEET OR EXCEED THESE REQUIREMENTS: THE PLASTIC FILTER CLOTH CAN BE WOVEN OR NON-WOVEN MONOFILAMENT YARNS AND SHALL MEET THESE BASE REQUIREMENTS: THICKNESS=20-60 MILS., GRAB STRENGTH=90-120 LBS. AND SHALL CONFORM TO ASTM D-1777 AND ASTM D-1682.



STR. NO.	PIPE DIAMETER (IN.)	DISCHARGE Q_{10} (CFS)	VELOCITY (FPS)	TW DEPTH > 1/2 DIA. PIPE	TAILWATER CONDITION	STONE QUALITY			BLANKET THICKNESS (d) (IN.)	APRON LENGTH (La) MINIMUM (FT.)	APRON WIDTH (W) MINIMUM (FT.)	3 Do (FT)
						CLASS	D_{50} (IN.)	D_{MAX} (IN.)				
ES	15"	0.12	2.24	NO	MIN.	I	D_{50}=6"	D_{MAX}=9"	14.00	8.00	9.25	3.75

INTEGRITY
FEDERAL SERVICES
CIVIL ENGINEERING • LANDSCAPE ARCHITECTURE • PLANNING
148 S. Queen Street, Suite 201 • Martinsburg, WV 25401
Phone: 304-725-8456 • www.ifs-se.com

RYAN P. PERRY REGISTERED PROFESSIONAL ENGINEER STATE OF WEST VIRGINIA
SEAL:

REVISIONS
1. 09/18/2023 - REVISION TO UNDERGROUND SWM FACILITY
2. 09/18/2023 - REVISIONS PER CITY, AND CTUB COMMENTS

DIMENSIONS OF GALVANIZED STEEL END SECTION FOR ROUND PIPE								
PIPE DIAM. (INCHES)	METAL THK. (INCHES)	DIMENSIONS (INCHES) A ±1"	B MAX.	H ±1"	L ±1 1/2"	W ±2"	APPROX. SLOPE	BODY
12	.064	6	6	6	21	24	2:12	1 PC.
15	.064	7	8	6	26	30	2:12	1 PC.
18	.064	8	10	6	31	36	2:12	1 PC.
21	.064	9	12	6	36	42	2:12	1 PC.
24	.064	10	13	6	41	48	2:12	1 PC.
30	.079	12	16	8	51	60	2:12	1 PC.
36	.079	14	19	9	60	72	2:12	2 PC.
42	.109	16	22	11	69	84	2:12	2 PC.
48	.109	18	27	12	78	90	2:18	2 PC.
54	.109	18	30	12	84	102	2	2 PC.
60	.109	18	33	12	87	114	9°	3 PC.
66	.109	18	36	12	87	120	1:12	3 PC.
72	.109	18	39	12	87	126	1:9	3 PC.
78	.109	18	42	12	87	132	1:14	3 PC.
84	.109	18	45	12	87	138	1:16	3 PC.

DIMENSIONS OF GALVANIZED STEEL END SECTION FOR PIPE ARCH								
PIPE ARCH SPAN X RISE (INCHES)	EQUIV. DIAM. (INCHES)	METAL THK. (INCHES)	DIMENSIONS (INCHES) A ±1"	B MAX.	H ±1"	L ±1 1/2"	W ±2"	APPROX SLOPE	BODY
17X13	15	.064	7	9	6	19	30	2:12	1 PC.
21X15	18	.064	7	10	6	23	36	2:12	1 PC.
24X18	21	.064	8	12	6	28	42	2:12	1 PC.
28X20	24	.064	9	14	6	32	48	2:12	1 PC.
35X24	30	.079	10	16	6	39	60	2:12	1 PC.
42X29 (40X31)	36	.079	12	18	8	46	75	2:10	1 PC.
49X33 (48X36)	42	.109	13	21	9	53	85	2:12	2 PC.
57X38 (53X41)	48	.109	18	26	12	63	90	2:12	2 PC.
64X43 (60X46)	54	.109	18	30	12	70	102	2:14	2 PC.
71X47 (68X51)	60	.109	18	33	12	77	114	2:11	3 PC.
77X52 (73X55)	66	.109	18	36	12	77	126	2	3 PC.
83X57 (811X59)	72	.109	18	39	12	77	138	2	3 PC.

NOTE: SPAN AND RISE DIMENSIONS IN PARENTHESES ARE FOR 2 2/3" CORRUGATED PIPE ARCHES; ALL OTHER SPAN AND RISE VALUES ARE FOR 2 1/2"X1/2" CORRUGATED PIPE ARCHES.

NOTES

TYPICAL END SECTIONS FOR PIPES AND PIPE ARCHES ARE DETAILED HEREIN. OTHER SIMILAR DESIGNS MAY BE USED IF ACCEPTABLE TO THE ENGINEER.

GALVANIZED STEEL END SECTIONS SHALL BE USED ON THE ENDS OF CORRUGATED STEEL PIPES AND/OR PIPE ARCHES AT THOSE LOCATIONS SPECIFIED ON THE PLANS. END SECTIONS SHALL BE MEASURED AS THE NUMBER OF UNITS INSTALLED OF EACH SIZE AND TYPE AND SHALL BE PAID FOR IN ACCORDANCE WITH 604 OF THE SPECIFICATIONS.

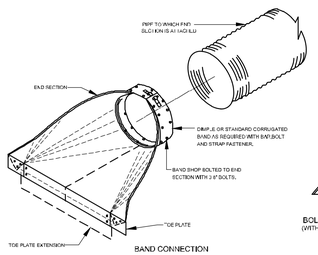
TWO-PIECE AND THREE-PIECE END SECTIONS SHALL BE OF LAP SEAM CONSTRUCTION TIGHTLY JOINED WITH 3/8 " DIAMETER GALVANIZED RIVETS OR BOLTS.

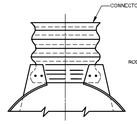
FOR 60" THRU 84" PIPES, THE REINFORCED EDGES OF THE END SECTIONS SHALL BE SUPPLEMENTED WITH GALVANIZED STIFFENER ANGLES FASTENED BY 5/8" DIAMETER GALVANIZED BOLTS AND NUTS. THIS REQUIREMENT SHALL ALSO BE APPLICABLE TO THE END SECTIONS FOR 77"X52", 73"X 55", 83"X 57", AND 81"X 59" PIPE ARCH SIZES. IN ADDITION, FOR THOSE PIPE ARCH SIZES, ANGLE REINFORCEMENT SHALL BE USED UNDER THE CENTER PANEL SEAMS.

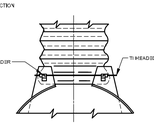
THE END SECTION CONNECTION DETAILS SHALL BE AS SHOWN ON THIS PLAN SHEET OR OF A SIMILAR DESIGN AS RECOMMENED BY THE MANUFACTURER. ALL SIMILAR DESIGNS SHALL PROVIDE A SECURE ATTACHMENT OF THE END SECTION TO THE PIPE OR PIPE ARCH.

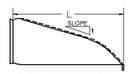
ALTHOUGH A PIPE OR PIPE ARCH MAY HAVE A BITUMINOUS COATING AND/OR PAVED INVERT, IT WILL NOT BE NECESSARY TO BITUMINOUS COAT OR PAVE THE END SECTION, CONNECTORS, OR CONNECTOR SECTION.

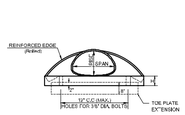
TOE PLATE EXTENSIONS SHALL BE THE SAME THICKNESS AS THE END SECTIONS AND SHALL BE FASTENED TO TOE PLATES WITH 3/8 " DIAMETER GALVANIZED BOLTS. LENGTH OF TOE PLATE EXTENSION SHALL BE W+10"(APPROX.) FOR 12" THRU 30" DIAMETER PIPES AND FOR PIPE ARCHES WITH RISE VALUES UP TO AND INCLUDING 29", THE LENGTH SHALL BE W+22"(APPROX.) FOR LARGER PIPE SIZES AND W+16" (APPROX.) FOR LARGER PIPE ARCHES.

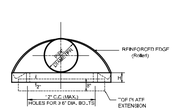


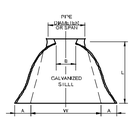










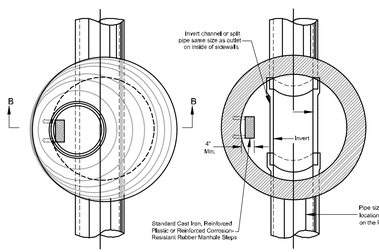


WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
STANDARD DETAIL

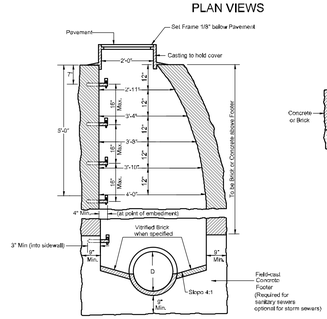
END SECTIONS FOR CORRUGATED STEEL PIPES AND PIPE ARCHES

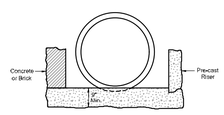
PREPARED 7-1-99
REVISED (6/17)

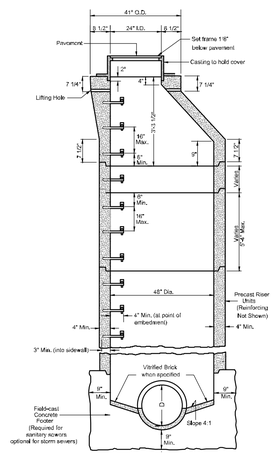
STANDARD SHEET DR3



PLAN VIEWS







NOTES

TYPE A MANHOLES, WHEN SPECIFIED ON THE PLANS, MAY BE CONSTRUCTED IN EITHER METHOD (CAST-IN-PLACE OR PRE-CAST OPTION) AS SHOWN HEREIN.

STEPS, FRAMES, AND COVERS SHALL BE AS SHOWN ON STANDARD SHEET DR7-X.

"KEYED" OR "DOWELED" TYPE CONSTRUCTION JOINTS, ACCEPTABLE TO THE ENGINEER, MAY BE USED IN THE CONSTRUCTION OF CONCRETE MANHOLES.

IF THE CAST-IN-PLACE MANHOLE IS OVER TWELVE FEET (12') IN DEPTH, THE SIDEWALLS BELOW THAT DEPTH WILL BE DOUBLE THICKNESS.

PIPE AT ELEVATIONS OTHER THAN SHOWN MAY BE JOINED TO THE MANHOLE BY CUTTING A HOLE THE SIZE OF THE CONNECTING PIPE IN THE MANHOLE, INSERTING THE PIPE THE THICKNESS OF THE MANHOLE SHELL AND CLOSING ALL OPENINGS AROUND THE CONNECTING PIPE WITH JOINT MORTAR.

DRAWING SHOWS PIPE ENTERING AND LEAVING MANHOLE IN A STRAIGHT LINE, HOWEVER, THE PIPES MAY ENTER OR LEAVE AT AN ANGLE OR PLACE AS CALLED FOR OR SHOWN ON THE PLANS.

MINIMUM HEIGHT OF BENCH WALL ABOVE FLOWLINE OF PIPE IS 25% OF THE DIAMETER OF THE PIPES.

THE USE OF BRICK FOR MANHOLE CONSTRUCTION WILL NOT BE ALLOWED WHEN A MANHOLE IS LOCATED IN THE ROADWAY.

THE FOLLOWING ADDITIONAL NOTES ARE APPLICABLE FOR PRE-CAST MANHOLES:

MANHOLE STEPS SHALL BE PLACED INTO PLASTIC CONCRETE WALL DURING MANUFACTURE OR MORTARED INTO HOLES AFTER THE CONCRETE HAS SET.

SIDEWALL SECTIONS MAY BE USED IN ANY COMBINATION TO PRODUCE A MANHOLE OF DESIRED DEPTH. EXCEPT THE TAPERED TOP SECTION SHALL BE RETAINED AS SHOWN.

THE TAPERED TOP SECTION SHALL BE MANUFACTURED AND MEET THE SAME REQUIREMENTS AS THE MANHOLE'S SIDEWALLS, BUT SHALL CONFORM TO THE DIMENSIONS DETAILED HEREIN.

LIFTING HOLES IN THE TAPERED TOP SECTION AND THE CIRCUMFERENTIAL NOTCHES IN THE MANHOLE COVER ARE FOR HANDLING PURPOSES ONLY.

THE PRE-CAST SIDEWALL UNITS SHALL BE SET IN JOINT MORTAR OR SEALED WITH O-RING GASKETS.

WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
STANDARD DETAIL

TYPE A MANHOLE

PREPARED 10/2/23
REVISED (MM/YY)

STANDARD SHEET DR7-A

STORM SEWER DETAILS

ALLA WILLA COMMERCIAL
CITY OF CHARLES TOWN
JEFFERSON COUNTY, WEST VIRGINIA
TAX MAP 7, PARCEL 12; D.B. 1301, PG. 254
CHARLES TOWN CORP. (3) TAX DISTRICT

CITY FILE #2023-03

SCALE:	HORIZ.: N/A VERT.: N/A
DATE:	AUGUST 2023
JOB:	5051-0101
DRAWN: BJS	CHECK: DCW
CADD: C-CU-561.DWG	
NCS:	N/A
SHEET:	16 OF 22

FILEPATH: G:\PROJECTS\ENGINEERING\2023\ALLA WILLA PROPERTY\DWG\ARCH\C-CU-561.DWG
COPYRIGHT 2023 - ALL RIGHTS RESERVED. THE USE OF THESE DRAWINGS BY ANYONE OTHER THAN INTEGRITY FEDERAL SERVICES IS PROHIBITED AND WITHOUT PERMISSION FROM INTEGRITY FEDERAL SERVICES IS PROHIBITED.

PLAT NORTH
REF: DEED BOOK 480 PAGE 102

ALLA WILLA DRIVE
60' R/W

DONNA F. THOMPSON
TAX MAP 7, PARCEL 11
D.B. 1030 PG. 80

PRE-DEVELOPMENT
DRAINAGE AREA
AREA = 0.32 AC.

REBAR (SET)
REBAR (FOUND)
REBAR (SET)
REBAR (SET)
BENT REBAR (FOUND)

ASPHALT
ASPHALT

LIMITS OF PAVEMENT TO BE SAW-CUT

PORTION OF EX. CHAIN LINK FENCE TO BE REMOVED (NO DISTURBANCE SHALL OCCUR ON ADJACENT PROPERTY)

EX. TREES TO BE REMOVED

APPROX. LOC. OF EX. SAN. MH (NOT FIELD VERIFIED)

EX. 8" PVC SAN. MAIN (NOT FIELD VERIFIED)

EX. 2" PVC WATER MAIN (NOT FIELD VERIFIED)

N 16°28'10" E 45.00'

S 16°28'10" W 45.00'

S 73°31'49" E 136.00'

N 73°31'49" W 136.00'

JONATHAN C. RUCKMAN
TAX MAP 7, PARCEL 19
D.B. 1183 PG. 250

FRANK W. TURK
TAX MAP 7, PARCEL 14
D.B. 1143 PG. 208

ROZAS MARITZA
TAX MAP 7, PARCEL 20
D.B. 995 PG. 297

ALLEY

GRAPHICAL SCALE: 1"=10'

FILE PATH: G:\PROJECTS\RENTAL\005 CITY, ALLA WILLA PROPERTY\WORK\ARCH\C-CJ-101.DWG
Last Modified: 2023 - 09:18:09 AM by Ryan P. Perks (rperks) - Xref(s): G:\PROJECTS\RENTAL\005 CITY, ALLA WILLA PROPERTY\WORK\ARCH\XREF\C-CJ-101-EXISTING_SERVICES.DWG(rperks)

INTEGRITY
FEDERAL SERVICES
CIVIL ENGINEERING • LANDSCAPE ARCHITECTURE • PLANNING
148 S. Queen Street, Suite 201 • Phone: 304-725-8456
Martinsburg, WV 25401 • www.ifs-ae.com

RYAN P. PERKS
REGISTERED
17061
STATE OF WEST VIRGINIA
PROFESSIONAL ENGINEER
SEAL: 9/19/23

REVISIONS

1.	09/18/2023 - REVISION TO UNDERGROUND SWM FACILITY
2.	09/18/2023 - REVISIONS PER CITY, AND CTUB COMMENTS

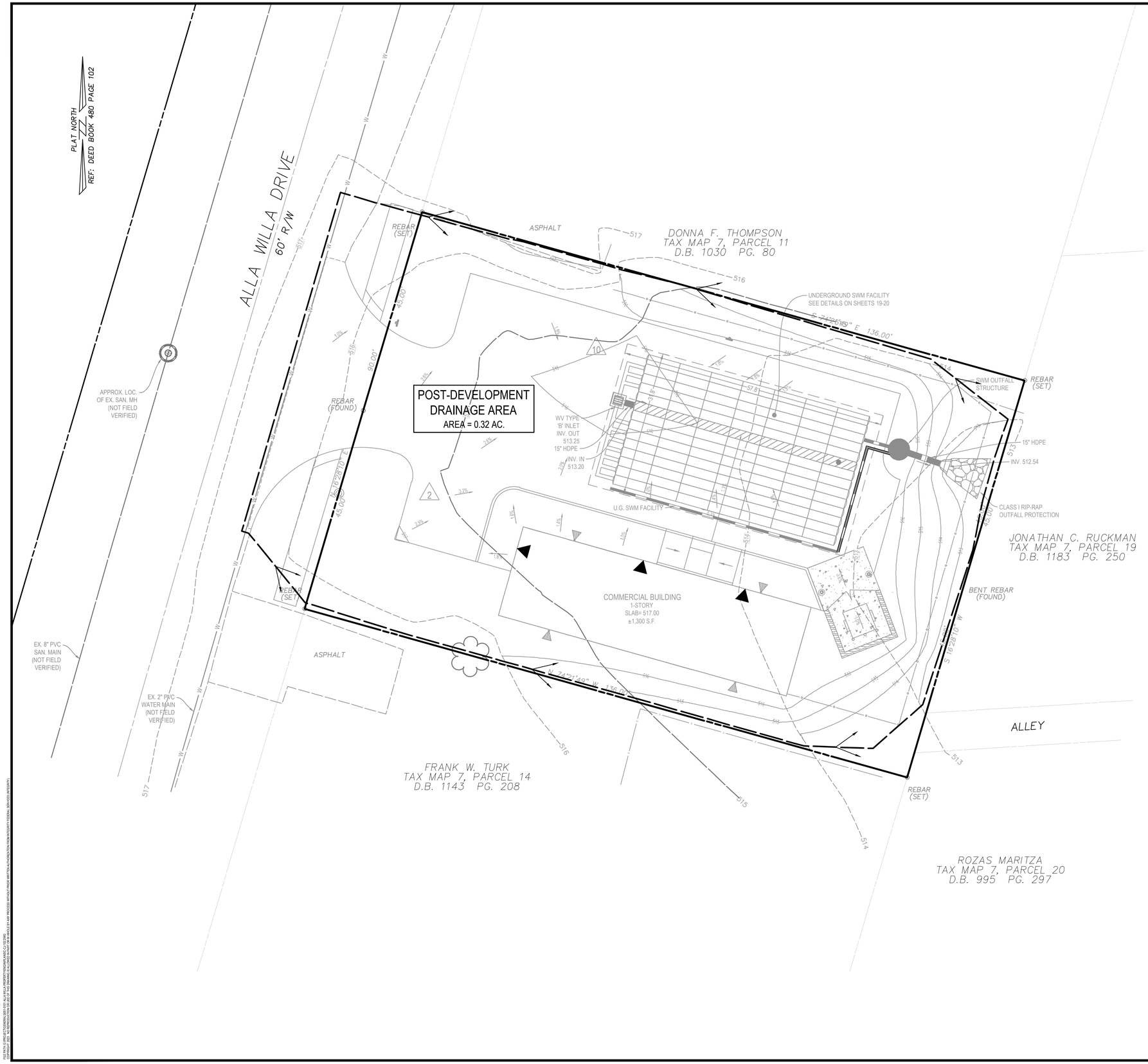
PRE-DEVELOPMENT DRAINAGE MAP

ALLA WILLA COMMERCIAL

CITY OF CHARLES TOWN
JEFFERSON COUNTY, WEST VIRGINIA
TAX MAP 7, PARCEL 12; D.B. 1301, PG. 254
CHARLES TOWN CORP (3) TAX DISTRICT

CITY FILE #2023-03

SCALE:	HORIZ.: 1" = 10' VERT.: N/A
DATE:	AUGUST 2023
JOB:	5051-0101
DRAWN: BJS	CHECK: DCW
CADD: C-CJ-101.DWG	
NCS:	N/A
SHEET:	17 OF 22



INTEGRITY
FEDERAL SERVICES
CIVIL ENGINEERING • LANDSCAPE ARCHITECTURE • PLANNING
148 S. Queen Street, Suite 201 • Martinsburg, WV 25401 • Phone: 304-725-8456 • www.ifs-ae.com

RYAN P. PERKS
REGISTERED
17061
STATE OF WEST VIRGINIA
PROFESSIONAL ENGINEER
SEAL: 9/19/23

REVISIONS

1. 09/19/2023 - REVISION TO UNDERGROUND SWM FACILITY	
2. 09/19/2023 - REVISIONS PER CITY, AND CTUB COMMENTS	

POST-DEVELOPMENT AND WATER QUALITY DRAINAGE MAP

ALLA WILLA COMMERCIAL

CITY OF CHARLES TOWN
JEFFERSON COUNTY, WEST VIRGINIA
TAX MAP 7, PARCEL 12; D.B. 1301, PG. 254
CHARLES TOWN CORP (3) TAX DISTRICT

CITY FILE #2023-03

SCALE:	HORIZ.: 1" = 10' VERT.: N/A
DATE:	AUGUST 2023
JOB:	5051-0101
DRAWN: BJS	CHECK: DCW
CADD: C-CJ-102.DWG	
NCS:	N/A
SHEET:	18 OF 22

FILE PATH: G:\PROJECTS\2023\5051-0101 ALLA WILLA PROPERTY\DWG\ARCH\C-CJ-102.DWG
COPYRIGHT 2023 - THE INFORMATION CONTAINED ON THIS SHEET IS THE PROPERTY OF INTEGRITY FEDERAL SERVICES, INC. AND SHALL NOT BE USED IN WHOLE OR IN PART OR REVISED IN ANY WAY WITHOUT THE EXPRESSED WRITTEN PERMISSION OF INTEGRITY FEDERAL SERVICES, INC.

PROJECT INFORMATION	
ENGINEERED PRODUCT MANAGER	JIM CLARK 240-463-0124 JAMES.CLARK@ADSPIPE.COM
ADS SALES REP	MIKE GREEN 304-240-0082 MICHAEL.GREEN@ADS-PIPE.COM
PROJECT NO.	S368927

Advanced Drainage Systems, Inc.

SiteAssist™ FOR STORMTECH INSTALLATION INSTRUCTIONS VISIT OUR APP

ALLA WILLA COMMERCIAL

CHARLES TOWN, WV, USA

SC-160LP STORMTECH CHAMBER SPECIFICATIONS

1. CHAMBERS SHALL BE STORMTECH SC-160LP.
2. CHAMBERS SHALL BE ARCH-SHAPED AND SHALL BE MANUFACTURED FROM VIRGIN, IMPACT-MODIFIED POLYPROPYLENE COPOLYMERS.
3. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
4. CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORTS THAT WOULD IMPEDE FLOW OR LIMIT ACCESS FOR INSPECTION.
5. THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL, AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET FOR: 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.
6. CHAMBERS SHALL BE DESIGNED, TESTED AND ALLOWABLE LOAD CONFIGURATIONS DETERMINED IN ACCORDANCE WITH ASTM F2787, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS". LOAD CONFIGURATIONS SHALL INCLUDE: 1) INSTANTANEOUS (<1 MIN) AASHTO DESIGN TRUCK LIVE LOAD ON MINIMUM COVER 2) MAXIMUM PERMANENT (75-YR) COVER LOAD AND 3) ALLOWABLE COVER WITH PARKED (1-WEEK) AASHTO DESIGN TRUCK.
7. REQUIREMENTS FOR HANDLING AND INSTALLATION:
   - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
   - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 1.5".
   - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT SHALL BE GREATER THAN OR EQUAL TO 400 LBS/FT/%. THE ASC IS DEFINED IN SECTION 6.2.8 OF ASTM F2418. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.
8. ONLY CHAMBERS THAT ARE APPROVED BY THE SITE DESIGN ENGINEER WILL BE ALLOWED. UPON REQUEST BY THE SITE DESIGN ENGINEER OR OWNER, THE CHAMBER MANUFACTURER SHALL SUBMIT A STRUCTURAL EVALUATION FOR APPROVAL BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE AS FOLLOWS:
   - THE STRUCTURAL EVALUATION SHALL BE SEALED BY A REGISTERED PROFESSIONAL ENGINEER.
   - THE STRUCTURAL EVALUATION SHALL DEMONSTRATE THAT THE SAFETY FACTORS ARE GREATER THAN OR EQUAL TO 1.95 FOR DEAD LOAD AND 1.75 FOR LIVE LOAD, THE MINIMUM REQUIRED BY ASTM F2787 AND BY SECTIONS 3 AND 12.12 OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS FOR THERMOPLASTIC PIPE.
   - THE TEST DERIVED CREEP MODULUS AS SPECIFIED IN ASTM F2418 SHALL BE USED FOR PERMANENT DEAD LOAD DESIGN EXCEPT THAT IT SHALL BE THE 75-YEAR MODULUS USED FOR DESIGN.
9. CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.

IMPORTANT - NOTES FOR THE BIDDING AND INSTALLATION OF THE SC-160LP SYSTEM

1. STORMTECH SC-160LP CHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED A PRE-CONSTRUCTION MEETING WITH THE INSTALLERS.
2. STORMTECH SC-160LP CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-160LP CONSTRUCTION GUIDE".
3. FOUNDATION STONE AND EMBEDMENT STONE SURROUNDING CHAMBERS MUST BE A CLEAN, CRUSHED, ANGULAR STONE; AASHTO M43 #3,357, 4, 467, 5, 56, OR 57.
4. THE FOUNDATION STONE SHALL BE LEVELED AND COMPACTED PRIOR TO PLACING CHAMBERS.
5. THE DEPTH OF FOUNDATION STONE SHALL BE DETERMINED BASED ON THE SUBGRADE BEARING CAPACITY PROVIDED BY THE SITE DESIGN ENGINEER.
6. THE CONTRACTOR MUST REPORT ANY DISCREPANCIES CONCERNING CHAMBER FOUNDATION DESIGN AND SUBGRADE BEARING CAPACITIES TO THE SITE DESIGN ENGINEER.
7. JOINTS BETWEEN CHAMBERS SHALL BE PROPERLY SEATED PRIOR TO PLACING STONE.
8. CHAMBERS SHALL BE INSTALLED "TOE TO TOE". NO ADDITIONAL SPACING BETWEEN ROWS IS REQUIRED.
9. STORMTECH RECOMMENDS 3 BACKFILL METHODS:
   - STONESHOOTER LOCATED OFF THE CHAMBER BED.
   - BACKFILL AS ROWS ARE BUILT USING AN EXCAVATOR ON THE FOUNDATION STONE OR SUBGRADE.
   - BACKFILL FROM OUTSIDE THE EXCAVATION USING A LONG BOOM HOE OR EXCAVATOR.
10. ADS RECOMMENDS THE USE OF "FLEXSTORM CATCH IT" INSERTS DURING CONSTRUCTION FOR ALL INLETS TO PROTECT THE SUBSURFACE STORMWATER MANAGEMENT SYSTEM FROM CONSTRUCTION SITE RUNOFF.

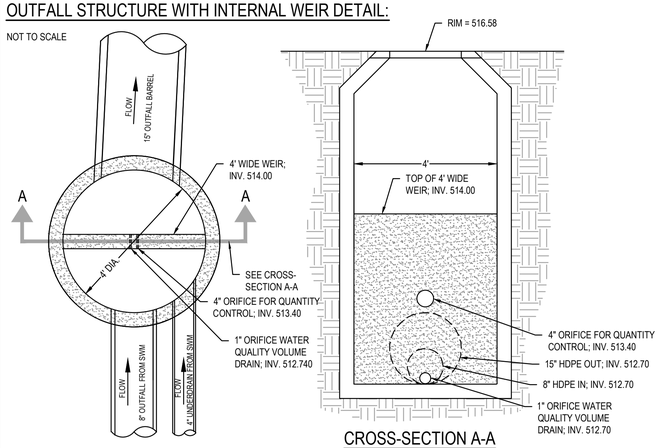
NOTES FOR CONSTRUCTION EQUIPMENT

1. THE USE OF CONSTRUCTION EQUIPMENT OVER SC-160LP CHAMBERS IS LIMITED:
   - NO EQUIPMENT IS ALLOWED ON BARE CHAMBERS.
   - NO RUBBER TIRED LOADERS, DUMP TRUCKS, OR EXCAVATORS ARE ALLOWED UNTIL PROPER FILL DEPTHS ARE REACHED IN ACCORDANCE WITH THE "STORMTECH SC-160LP CONSTRUCTION GUIDE".
   - WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "STORMTECH SC-106LP CONSTRUCTION GUIDE".
2. FULL 36" (900 mm) OF STABILIZED COVER MATERIALS OVER THE CHAMBERS IS REQUIRED FOR DUMP TRUCK TRAVEL OR DUMPING.

CONTACT STORMTECH AT 1-888-892-2694 WITH ANY QUESTIONS ON INSTALLATION REQUIREMENTS OR WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT.

OUTFALL STRUCTURE WITH INTERNAL WEIR DETAIL:

NOT TO SCALE



PLAN VIEW

CROSS-SECTION A-A

NOTES:
1. CONTRACTOR TO USE STANDARD WVDOH TYPE A MANHOLE AND INSTALL WEIR AND ORIFICE INSIDE STRUCTURE AS DETAILED ABOVE. REFER TO SHEET 16 FOR STANDARD WVDOH TYPE A MANHOLE DETAIL.

2. FINAL DESIGN TO BE PROVIDED BY STRUCTURAL ENGINEER.

STORM CHAMBER LINER NOTES:

1. THE STORM CHAMBER STORM ENVELOPE SHALL BE LINED IN ONE OF THE FOLLOWING TWO WAYS:
   - 1.1. A 12" CLAY LINER WITH THE FOLLOWING PROPERTIES CONFIRMED BY LABORATORY TESTING:
     - 1.1.1. MAXIMUM PERMEABILITY OF 1 x 10-6 CM/SEC PER ASTM D-2434
     - 1.1.2. PLASTICITY INDEX NOT LESS THAN 15% PER ASTM D-423 & D-424
     - 1.1.3. LIQUID LIMIT NOT LESS THAN 30% PER ASTM D-2216
     - 1.1.4. CLAY PARTICLES PASSING NOT LESS THAN 30% PER ASTM D-422
     - 1.1.5. CLAY COMPACTION AT 95% OF STANDARD PROCTOR DENSITY PER ASTM D-698
   - 1.2. A 30 MIL PVC LINER.
2. FOR CLAY LINER, ALL MATERIAL GREATER THAN OR EQUAL TO 3-INCHES SHOULD BE REMOVED FROM THE LINER SUBGRADE PRIOR TO COMPACTION. CLAY LINER MATERIAL SHOULD BE AT OR ABOVE OPTIMUM MOISTURE CONTENT AS DETERMINED USING ASTM D-698 DURING COMPACTION. COMPACTION OF LINER SHALL BE MONITORED FULL-TIME AND CERTIFIED BY A GEOTECHNICAL ENGINEER.
3. LINER SHALL BE INSPECTED AND TESTED PRIOR TO PLACEMENT OF STONE TO ENSURE LINER MATERIALS MEET THE SPECIFICATIONS OUTLINED IN ITEM 1.1 ABOVE. THIRD PARTY CERTIFICATION TO THIS EFFECT SHALL BE PROVIDED AS PART OF THE AS-BUILT RECORDS.

INTEGRITY
FEDERAL SERVICES
CIVIL ENGINEERING • LANDSCAPE ARCHITECTURE • PLANNING
148 S. Queen Street, Suite 201 • Martinsburg, WV 25401
Phone: 304-725-8456 • www.ifs-se.com

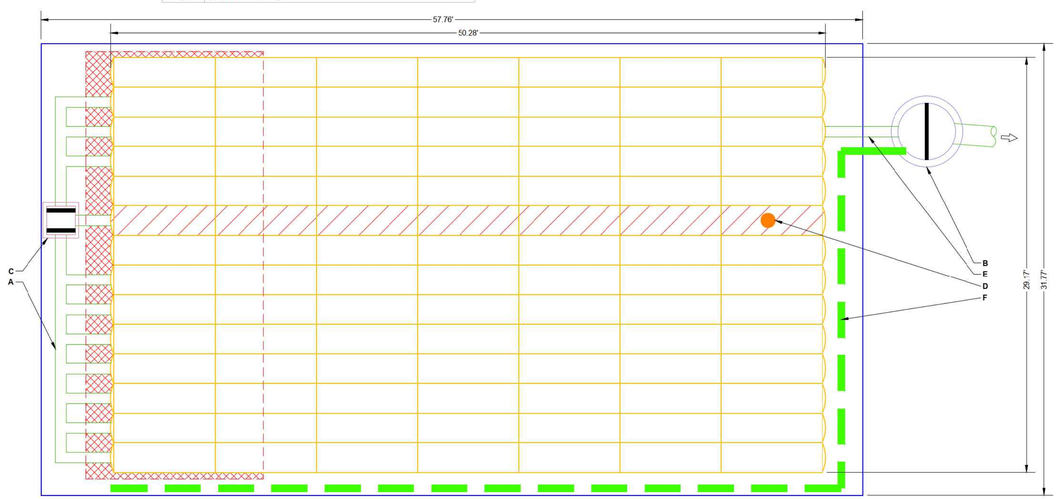
RYAN P. PERRY — REGISTERED — 17061 — STATE OF WEST VIRGINIA — PROFESSIONAL ENGINEER
SEAL: 9/19/23

REVISIONS
1. 09/18/2023 - REVISION TO UNDERGROUND SWM FACILITY
2. 09/18/2023 - REVISIONS PER CITY, AND CTUB COMMENTS

PROPOSED LAYOUT		PROPOSED ELEVATIONS	
98	STORMTECH SC-160LP CHAMBERS	524.20	MAXIMUM ALLOWABLE GRADE (TOP OF PAVEMENT/UNPAVED)
28	STORMTECH SC-160LP END CAPS	515.87	MINIMUM ALLOWABLE GRADE (UNPAVED WITH TRAFFIC)
6	STONE ABOVE (in)	515.37	MINIMUM ALLOWABLE GRADE (UNPAVED NO TRAFFIC)
6	STONE BELOW (in)	515.37	MINIMUM ALLOWABLE GRADE (BASE OF FLEXIBLE PAVEMENT)
40	% STONE VOID	515.37	MINIMUM ALLOWABLE GRADE (TOP OF RIGID PAVEMENT)
1,871	INSTALLED SYSTEM VOLUME (CF) (PERIMETER STONE INCLUDED)	514.70	TOP OF STONE
		514.20	TOP OF SC-160LP CHAMBER
1,835	SYSTEM AREA (ft²)	513.28	8" ISOLATOR ROW PLUS CONNECTION INVERT
179	SYSTEM PERIMETER (ft)	513.28	8" X 8" MANIFOLD INVERT
		513.20	BOTTOM OF SC-160LP CHAMBER
		512.70	UNDERDRAIN INVERT
		512.70	BOTTOM OF STONE

*INVERT ABOVE BASE OF CHAMBER

PART TYPE	ITEM ON LAYOUT	DESCRIPTION	INVERT*	MAX FLOW
MANIFOLD	A	8" x 8" BOTTOM MANIFOLD, MOLDED FITTINGS (TYP 2 PLACES)	0.96"	
CONCRETE STRUCTURE W/WEIR	B	OCS (DESIGN BY ENGINEER / PROVIDED BY OTHERS)		0.7 CFS OUT
CONCRETE STRUCTURE W/WEIR & DRIP PLATE	C	(DESIGN BY ENGINEER / PROVIDED BY OTHERS) ;TOP OF WIER(S) = 513.40		4.4 CFS IN
INSPECTION PORT	D	8" SEE DETAIL		
CONNECTION	E	8" ADS N-12, BOTTOM CONNECTION (TYP 2 PLACES)	0.96"	
UNDERDRAIN	F	4" ADS N-12 DUAL WALL PERFORATED HDPE UNDERDRAIN (SOLID WALL OUTSIDE BED LIMITS)		



ISOLATOR ROW PLUS (SEE DETAIL)

PLACE MINIMUM 12.50' OF ADSPLUS125 WOVEN GEOTEXTILE OVER BEDDING STONE AND UNDERNEATH CHAMBER FEET FOR SCOUR PROTECTION AT ALL CHAMBER INLET ROWS

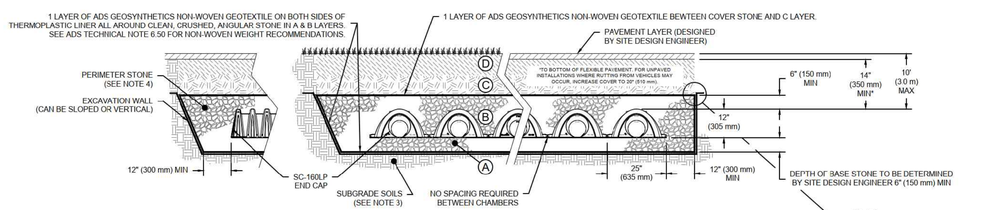
LINER

NOTES
- MANIFOLD SIZE TO BE DETERMINED BY SITE DESIGN ENGINEER. SEE TECH NOTE #6.32 FOR MANIFOLD SIZING GUIDANCE.
- DUE TO THE ADAPTATION OF THIS CHAMBER SYSTEM TO SPECIFIC SITE AND DESIGN CONSTRAINTS, IT MAY BE NECESSARY TO CUT AND COUPLE ADDITIONAL PIPE TO STANDARD MANIFOLD COMPONENTS IN THE FIELD.
- THE SITE DESIGN ENGINEER MUST REVIEW ELEVATIONS AND IF NECESSARY ADJUST GRADING TO ENSURE THE CHAMBER COVER REQUIREMENTS ARE MET.
- THIS CHAMBER SYSTEM WAS DESIGNED WITHOUT SITE-SPECIFIC INFORMATION ON SOIL CONDITIONS OR BEARING CAPACITY. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR DETERMINING THE SUITABILITY OF THE SOIL AND PROVIDING THE BEARING CAPACITY OF THE INSITU SOILS. THE BASE STONE DEPTH MAY BE INCREASED OR DECREASED ONCE THIS INFORMATION IS PROVIDED.

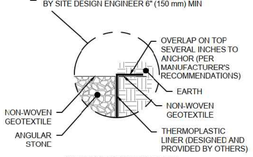
ACCEPTABLE FILL MATERIALS: STORMTECH SC-160LP CHAMBER SYSTEMS

	MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	**FINAL FILL:** FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER	ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	**INITIAL FILL:** FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 14" (355 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR PROCESSED AGGREGATE. MOST PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU OF THIS LAYER.	AASHTO M145* A-1, A-2-4, A-3 OR AASHTO M43¹ 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 12" (300 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 6" (150 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS. ROLLER GROSS VEHICLE WEIGHT NOT TO EXCEED 12,000 lbs (53 kN). DYNAMIC FORCE NOT TO EXCEED 20,000 lbs (89 kN).
B	**EMBEDMENT STONE:** FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	CLEAN, CRUSHED, ANGULAR STONE	AASHTO M43¹ 3, 357, 4, 467, 5, 56, 57	NO COMPACTION REQUIRED.
A	**FOUNDATION STONE:** FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	CLEAN, CRUSHED, ANGULAR STONE	AASHTO M43¹ 3, 357, 4, 467, 5, 56, 57	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE.[2,3]

PLEASE NOTE:
1. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
2. STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 6" (150 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
3. WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.
4. ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.



NOTES:
1. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
2. CHAMBERS SHALL BE DESIGNED, TESTED AND ALLOWABLE LOAD CONFIGURATIONS DETERMINED IN ACCORDANCE WITH ASTM F2787, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS". LOAD CONFIGURATIONS SHALL INCLUDE: 1) INSTANTANEOUS (<1 MIN) AASHTO DESIGN TRUCK LIVE LOAD ON MINIMUM COVER 2) MAXIMUM PERMANENT (75-YR) COVER LOAD AND 3) ALLOWABLE COVER WITH PARKED (1-WEEK) AASHTO DESIGN TRUCK.
3. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
4. PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
5. REQUIREMENTS FOR HANDLING AND INSTALLATION:
   - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS
   - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 1.5"
   - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 6.2.8 OF ASTM F2418 SHALL BE GREATER THAN OR EQUAL TO 400 LBS/FT/%. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.



THERMOPLASTIC LINER DETAIL

STORMWATER MANAGEMENT DETAILS

ALLA WILLA COMMERCIAL
CITY OF CHARLES TOWN
JEFFERSON COUNTY, WEST VIRGINIA
TAX MAP 7, PARCEL 12; D.B. 1301, PG. 254
CHARLES TOWN CORP (3) TAX DISTRICT

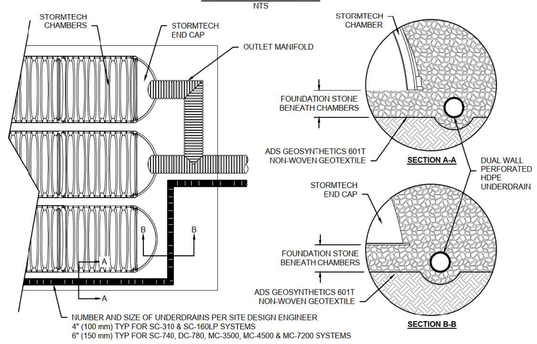
CITY FILE #2023-03

SCALE:	HORIZ.: N/A VERT.: N/A
DATE:	AUGUST 2023
JOB:	5051-0101
DRAWN:	BJS
CHECK:	DCW
CADD:	C-CU-601.DWG
NCS:	N/A
SHEET:	19 OF 22

FILEPATH: C:\PROJECTS\ENGINEERING\5051 ALLA WILLA PROPERTY\ENGINEERING\CAD\601.DWG
LOGIN ID: DCW - ALL DRAWINGS AND MODELS ARE THE PROPERTY OF INTEGRITY FEDERAL SERVICES AND SHALL NOT BE REPRODUCED OR USED FOR ANY PURPOSE WITHOUT WRITTEN AUTHORIZATION FROM INTEGRITY FEDERAL SERVICES (IFS) ©2023

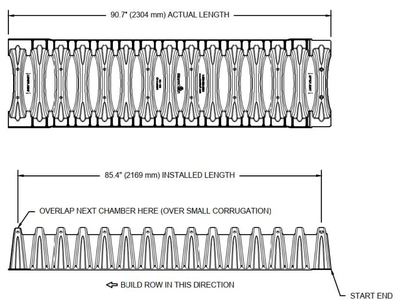
UNDERDRAIN DETAIL

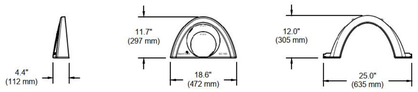
NTS



SC-160LP TECHNICAL SPECIFICATION

NTS





NOMINAL CHAMBER SPECIFICATIONS

SIZE (W X H X INSTALLED LENGTH)	25.0" X 12.0" X 85.4"	(635 mm X 305 mm X 2169 mm)
CHAMBER STORAGE	6.85 CUBIC FEET	(0.19 m³)
MINIMUM INSTALLED STORAGE*	16.0 CUBIC FEET	(0.45 m³)
WEIGHT	24.0 lbs.	(10.9 kg)

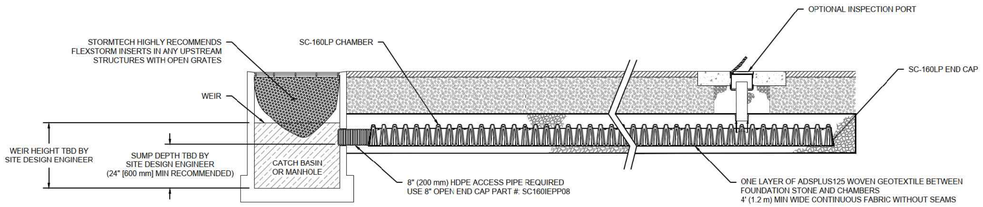
*ASSUMES 9" (152 mm) ABOVE, 6" (152 mm) BELOW, AND STONE BETWEEN CHAMBERS WITH 40% STONE POROSITY.

PART #	STUB	A
SC160EPP	6" (150 mm)	0.66" (16 mm)
	8" (200 mm)	0.80" (20 mm)
SC160EPP08	8" (200 mm)	0.90" (24 mm)



ALL STUBS ARE PLACED AT BOTTOM OF END CAP SUCH THAT THE OUTSIDE DIAMETER OF THE STUB IS FLUSH WITH THE BOTTOM OF THE END CAP. FOR ADDITIONAL INFORMATION CONTACT STORMTECH AT 1-888-892-2694.

NOTE: ALL DIMENSIONS ARE NOMINAL



SC-160LP ISOLATOR ROW PLUS DETAIL

NTS

INSPECTION & MAINTENANCE

STEP 1) INSPECT ISOLATOR ROW PLUS FOR SEDIMENT
- A. INSPECTION PORTS (IF PRESENT)
  - A.1. REMOVE/OPEN LID ON NYLOPLAST INLINE DRAIN
  - A.2. REMOVE AND CLEAN FLEXSTORM FILTER IF INSTALLED
  - A.3. USING A FLASHLIGHT AND STADIA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG
  - A.4. LOWER A CAMERA INTO ISOLATOR ROW PLUS FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL)
  - A.5. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- B. ALL ISOLATOR PLUS ROWS
  - B.1. REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW PLUS
  - B.2. USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW PLUS THROUGH OUTLET PIPE
    - i) MIRRORS ON POLES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY
    - ii) FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE
  - B.3. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.

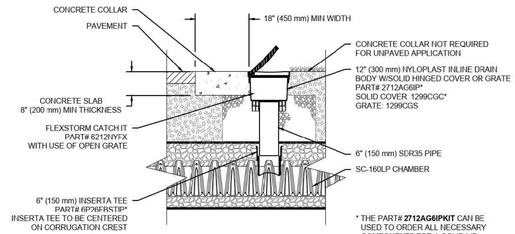
STEP 2) CLEAN OUT ISOLATOR ROW PLUS USING THE JETVAC PROCESS
- A. A FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 45° (1.1 m) OR MORE IS PREFERRED
- B. APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN
- C. VACUUM STRUCTURE SUMP AS REQUIRED

STEP 3) REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS; RECORD OBSERVATIONS AND ACTIONS.

STEP 4) INSPECT AND CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM.

NOTES

1. INSPECT EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION. ADJUST THE INSPECTION INTERVAL BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS.
2. CONDUCT JETTING AND VACTORING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.



SC-160LP 6" INSPECTION PORT DETAIL

NTS

INTEGRITY FEDERAL SERVICES
CIVIL ENGINEERING • LANDSCAPE ARCHITECTURE • PLANNING
148 S. Queen Street, Suite 201 • Martinsburg, WV 25401
Phone: 304-725-8456 • www.ifs-se.com

RYAN P. PERRY — REGISTERED — 17061 — STATE OF WEST VIRGINIA — PROFESSIONAL ENGINEER
SEAL: 9/19/23

REVISIONS

1. 09/18/2023 - REVISION TO UNDERGROUND SWM FACILITY
2. 09/18/2023 - REVISIONS PER CITY, AND CTUB COMMENTS

STORMWATER MANAGEMENT DETAILS

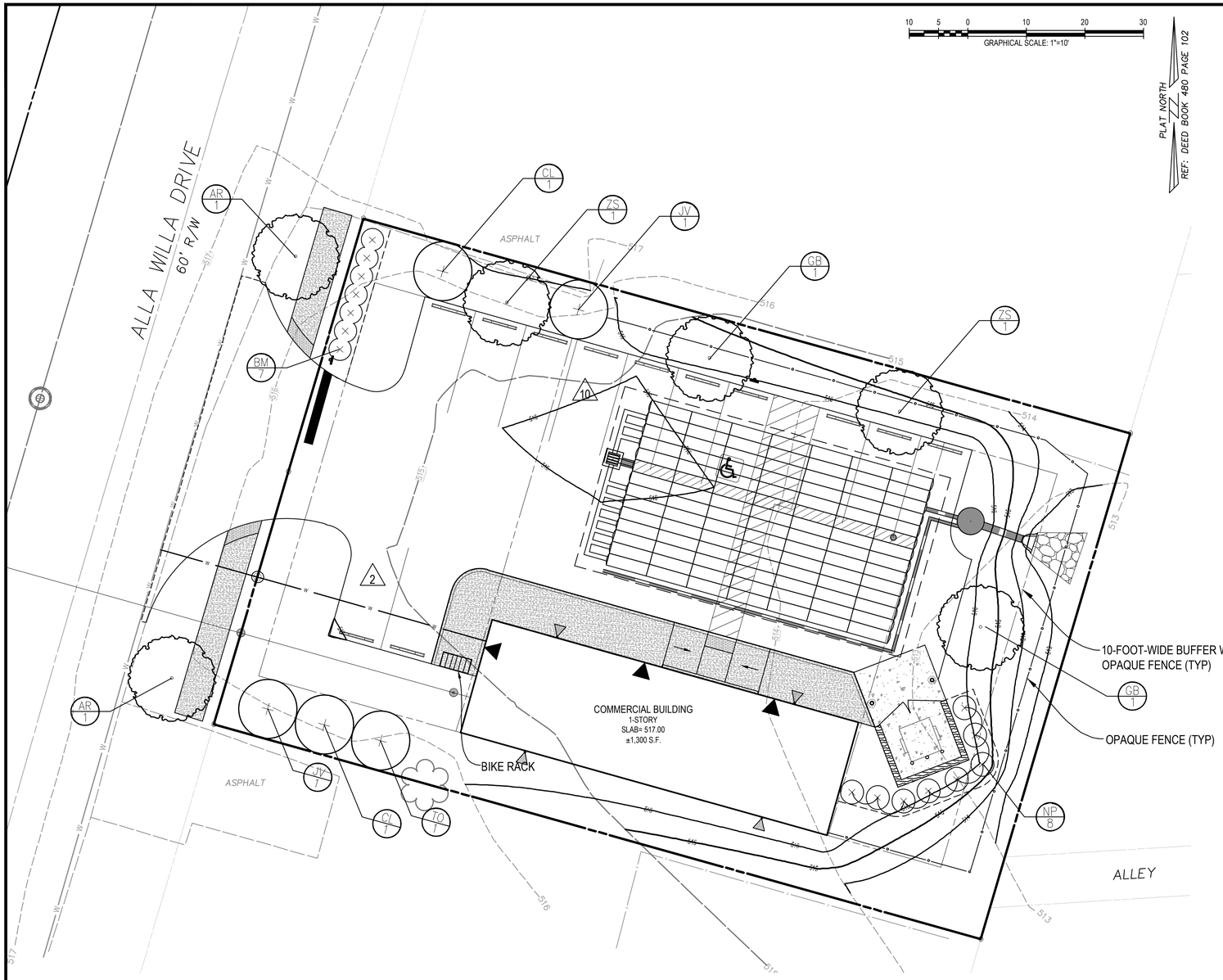
ALLA WILLA COMMERCIAL

CITY OF CHARLES TOWN
JEFFERSON COUNTY, WEST VIRGINIA
TAX MAP 7, PARCEL 12; D.B. 1301, PG. 254
CHARLES TOWN CORP (3) TAX DISTRICT

CITY FILE #2023-03

SCALE:	HORIZ.: N/A VERT.: N/A
DATE:	AUGUST 2023
JOB:	5051-0101
DRAWN: BJS	CHECK: DCW
CADD:	C-CU-601.DWG
NCS:	N/A
SHEET:	20 OF 22

FILE PATH: Z:\PROJECTS\2023\5051-0101 ALLA WILLA PROPERTY\DWG\ARCH\C-CU-601.DWG
Copyright 2023, INTEGRITY FEDERAL SERVICES, LLC. All rights reserved. This drawing is the property of INTEGRITY FEDERAL SERVICES, LLC. It is not to be reproduced, published or used in any way without the prior written permission of INTEGRITY FEDERAL SERVICES, LLC.



PLANT SCHEDULE					
TREES					
Key	**Botanical Name**	**Common Name**	**Container**	**Size (Min.)**	**Quantity**
AR	Acer rubrum 'October Glory'	Red Maple	B&B	2" Caliper	2
GB	Ginkgo biloba 'Autumn Gold'	Maidenhair Tree	B&B	2" Caliper	2
ZS	Zelkova serrata 'Green Vase'	Japanese Zelkova	B&B	2" Caliper	2
CL	x Cuprocyparis leylandii	Leyland Cypress	B&B	6' Height	2
JV	Juniperus virginiana	Eastern Red Cedar	B&B	6' Height	2
TO	Thuja occidentalis 'Nigra'	Nigra American Arborvitae	B&B	6' Height	1
Shrubs					
BM	Buxus microphylla 'Wintergreen'	Wintergreen Boxwood	Container	3 Gallon	7
NP	Thuja occidentalis 'North Pole'	North Pole Arborvitae	Container	3 Gallon	8

SECTION 1333.16(A)2.a.	
STREET TREES	
REQUIREMENT: ONE TREE ALONG EVERY 50' OF STREET FRANTAGE	
STREET FRONTAGE	90'
TREES REQUIRED	2
TREES PROVIDED	2

SECTION 1333.16(A)3.a.	
PERIMETER PARKING LOT LANDSCAPING	
REQUIREMENT: ONE TREE SHALL BE PROVIDED FOR EVERY 2,000 SQUARE FEET OF IMPERVIOUS AREA FOR THE FIRST 100,000 SQUARE FEET. THEREAFTER, ONE TREE FOR EVERY 5,000 SQUARE FEET OF IMPERVIOUS AREA OVER 100,000 SQUARE FEET.	
IMPERVIOUS AREA	7,064 SF
TREES REQUIRED	4
TREES PROVIDED	4

NOTES:

1. PURSUANT TO LAND DEVELOPMENT ORDINANCE OF THE CITY OF CHARLES TOWN, WV SUBDIVISION ORDINANCE, LANDSCAPING, BUFFERING, AND SCREENING IS REQUIRED FOR MAJOR LAND DEVELOPMENTS.
2. SPECIES LISTED ARE PRELIMINARY AND MAY CHANGE WITH AVAILABILITY.
3. ALL NON-IMPERVIOUS AREAS WITHIN THE LIMITS OF CONSTRUCTION THAT ARE NOT SHOWN AS PLANTING BEDS SHALL BE SEEDED.
4. ALL LANDSCAPE PLANT MATERIALS SHALL CONFORM TO THE LATEST VERSION OF THE AMERICAN STANDARD OF NURSERY STOCK (ANSI Z60.1). PLANT MATERIALS SHALL BE OF STANDARD QUALITY OR BETTER, TRUE TO NAME AND TYPE OF THEIR SPECIES OR VARIETY.
5. THE CONTRACTOR SHALL COMPLY WITH THE LANDSCAPE SPECIFICATIONS GUIDELINES - 5th EDITION ADOPTED BY THE LANDSCAPE CONTRACTORS ASSOCIATION FOR PLANTING BED PREPARATION AND SOIL MIX GUIDELINES AND PROCEDURES.
6. THE EXISTING UNDERGROUND UTILITIES SHOWN HEREON ARE BASED UPON AVAILABLE INFORMATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CALLING WV 811 TO DETERMINE THE EXACT LOCATION OF ALL UTILITIES BEFORE COMMENCING WORK AND IS RESPONSIBLE FOR ANY DAMAGES WHICH OCCUR BY HIS FAILURE TO LOCATE OR PRESERVE THESE UNDERGROUND UTILITIES.
7. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY FIELD CONDITIONS PRIOR TO CONSTRUCTION AND TO NOTIFY INTEGRITY FEDERAL SERVICES IF THE FIELD CONDITIONS ARE NOT IN CONFORMANCE WITH THE APPROVED PLANS.
8. IT SHALL BE THE RESPONSIBILITY OF THE LANDSCAPE CONTRACTOR TO ENSURE THAT ALL TREES ARE NOT PLANTED WITHIN 5' OF ANY UNDERGROUND UTILITY.
9. THE LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR EVALUATING INDIVIDUAL TREES FOR STABILITY AT THE TIME OF PLANTING. BASED ON THIS EVALUATION, TREES SHALL BE STAKED AND GUYED AS NECESSARY TO ENSURE THAT THEY REMAIN IN AN UPRIGHT POSITION. STAKES ARE TO BE REMOVED BY OWNER AFTER ONE GROWING SEASON.
10. ALL PLANT MATERIAL TO BE INSPECTED BY OWNER OR OWNERS REPRESENTATIVE PRIOR TO INSTALLATION. PLANTS THAT ARE DAMAGED OR DO NOT CONFORM TO THE REQUIRED SPECIFICATION SHALL BE REJECTED.
11. ALL PLANTING BEDS ADJACENT TO TURF AREAS SHALL HAVE A 6" SPADE EDGE.

INTEGRITY
FEDERAL SERVICES
CIVIL ENGINEERING • LANDSCAPE ARCHITECTURE • PLANNING
148 S. Queen Street, Suite 201 • Phone: 304-725-8456
Martinsburg, WV 25401 • www.ifs-se.com

RYAN P. PERRY
REGISTERED
No. 17061
STATE OF WEST VIRGINIA
PROFESSIONAL ENGINEER
SEAL: 9/19/23

REVISIONS
1. 09/19/2023 - REVISION TO UNDERGROUND SWM FACILITY
2. 09/19/2023 - REVISIONS PER CITY AND CTUB COMMENTS

LANDSCAPE PLAN

ALLA WILLA COMMERCIAL

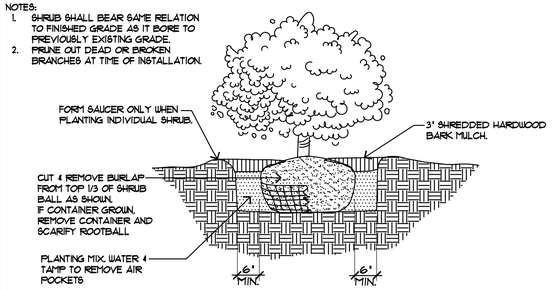
CITY OF CHARLES TOWN
JEFFERSON COUNTY, WEST VIRGINIA
TAX MAP 7, PARCEL 12; D.B. 1301, PG. 254
CHARLES TOWN CORP (3) TAX DISTRICT

CITY FILE #2023-03

SCALE:	HORIZ.: 1" = 10' VERT.: N/A
DATE:	AUGUST 2023
JOB:	5051-0101
DRAWN: BJS	CHECK: DCW
CADD: C-LP-101.DWG	
NCS:	N/A
SHEET:	21 OF 22

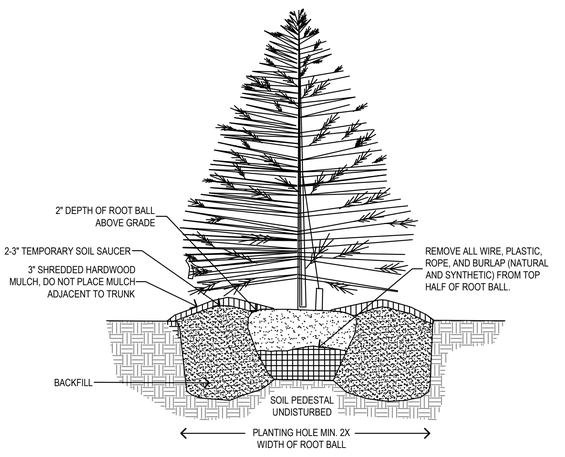
FILE PATH: G:\PROJECTS\2023\5051-0101 ALLA WILLA PROPERTY\WORK\ARCH\ATF\101.DWG
COPYRIGHT 2023 - ALL INFORMATION CONTAINED HEREON IS THE PROPERTY OF INTEGRITY FEDERAL SERVICES AND SHALL NOT BE USED IN WHOLE OR IN PART, OR REVISED OR ALTERED IN ANY WAY, WITHOUT THE EXPRESSED WRITTEN PERMISSION OF INTEGRITY FEDERAL SERVICES (IFS) ENGINEERING

NOTES:
1. SHRUB SHALL BEAR SAME RELATION TO FINISHED GRADE AS IT BORE TO PREVIOUSLY EXISTING GRADE.
2. PRUNE OUT DEAD OR BROKEN BRANCHES AT TIME OF INSTALLATION.

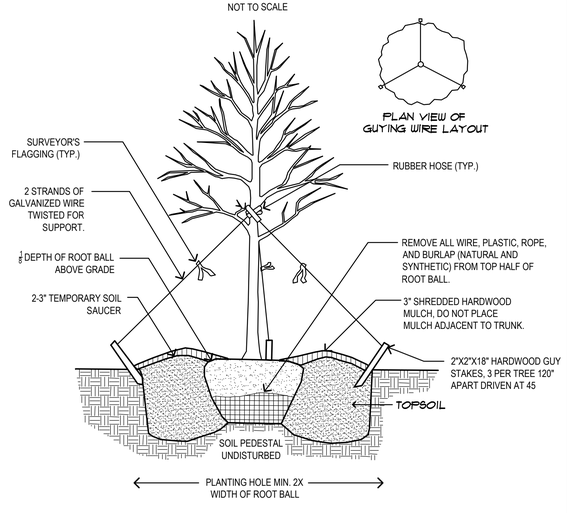


SHRUB PLANTING DETAIL
NOT TO SCALE

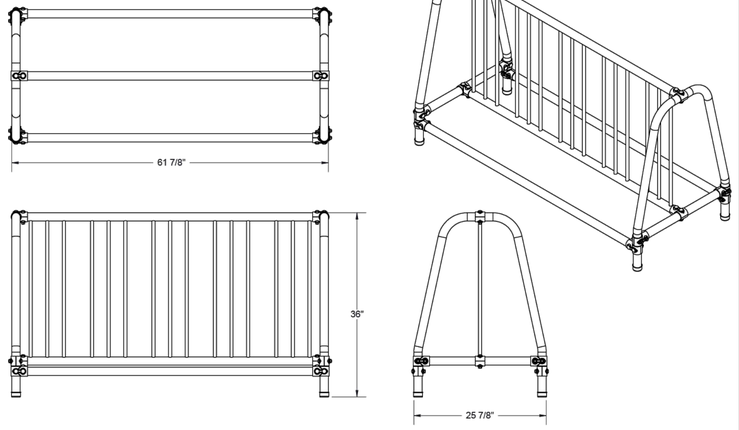
EVERGREEN TREE PLANTING DETAIL
NOT TO SCALE



DECIDUOUS TREE PLANTING DETAIL
NOT TO SCALE



BIKE RACK DETAIL
OVERALL DIMENSIONS — NOT TO SCALE



ultrasite — 800-45-ULTRA — www.ultraplay.com

INTEGRITY FEDERAL SERVICES
CIVIL ENGINEERING • LANDSCAPE ARCHITECTURE • PLANNING
148 S. Queen Street, Suite 201 • Martinsburg, WV 25401 • Phone: 304-725-8456 • www.ifs-se.com

RYAN P. PERRY — REGISTERED — No. 17061 — STATE OF WEST VIRGINIA — PROFESSIONAL ENGINEER — 9/19/23
SEAL:

REVISIONS
1. 09/18/2023 - REVISION TO UNDERGROUND SWM FACILITY
2. 09/18/2023 - REVISIONS PER CITY, AND CTUB COMMENTS

LANDSCAPE DETAILS

ALLA WILLA COMMERCIAL
CITY OF CHARLES TOWN
JEFFERSON COUNTY, WEST VIRGINIA
TAX MAP 7, PARCEL 12; D.B. 1301, PG. 254
CHARLES TOWN CORP (3) TAX DISTRICT

CITY FILE #2023-03

SCALE:	HORIZ.: N/A VERT.: N/A
DATE:	AUGUST 2023
JOB:	5051-0101
DRAWN: BJS	CHECK: DCW
CADD: C-LP-101.DWG	
NCS:	N/A
SHEET:	22 OF 22

FILE PATH: C:\PROJECTS\2005\ALLA WILLA PROPERTY\DWG\PLANS\C-LP-101.DWG
COPYRIGHT 2023 - THE CONTENTS OF THIS SET OF DRAWINGS, INCLUDING BUT NOT LIMITED TO THE DESIGN, LAYOUT, AND PROCESS, ARE PROTECTED UNDER COPYRIGHT LAW AND ARE THE EXCLUSIVE PROPERTY OF INTEGRITY FEDERAL SERVICES, LLC.

Charles Town
Utility Board

661 S. George Street, Suite 101 Charles Town, WV 25414
Phone: (304) 725-2316 ♦ Fax: (304) 725-7150 ♦ Web: www.ctubwv.com

UTILITY BOARD

INTERIM CHAIRMAN
City of Charles Town Mayor Bob Trainor

VICE CHAIRMAN
City of Ranson Mayor Duke Pierson

TREASURER
Thomas Stocks

SECRETARY
Ashley Stottlemyer

Board Member Jefferson Whitten

Board Member Heidi Parker

UTILITY MANAGER
Kristen Stolipher

Date: August 18, 2023

Re: Alla Willa Commercial Site – (10 Slot Machines)
Water/Sewer Availability

Dear Mr. Hadavanad:

The Charles Town Utility Board (CTUB) has received your request for water and sewer availability for the subject property located on Alla Willa Drive in Charles Town and offer the following:

Water Service:

(CTUB) has available water service capacity to serve your project at this time. Please note that CTUB's Water Tariff does not allow for reservation of capacity. Therefore, water system capacity is provided on a first come, first serve basis. A Water Capacity Improvement Fee (CIF) at the time of building permit will apply. The current water CIF is $4,399.00 per equivalent dwelling unit (EDU). CTUB utilizes the Residential Usage Equivalent Chart provided by the WVPSC to calculate usage for commercial establishments. It is the understanding that this business will have up to 10 slot machines. The Water CIF is calculated as follows:

10 Slots X 20 Gallons per Day/ Slot = 200 Gallons per Day

1 EDU = 150 Gallons per Day

200 Gallons per Day ÷ 150 Gallons per Day/ EDU = 1.33 EDU

1.33 EDU X $4,399.00/EDU = **$5,850.67**

Sewer Service:

(CTUB) has available sewer service capacity to serve your project at this time. Please note that CTUB's Sewer Tariff does not allow for reservation of capacity. Therefore, sewer system capacity is provided on a first come, first serve basis. A Sewer Capacity Improvement Fee (CIF) at the time of building permit will apply. The current sewer CIF is $2,930.00 per equivalent dwelling unit (EDU). CTUB utilizes the Residential Usage Equivalent Chart provided by the WVPSC to calculate usage for commercial establishments. It is the understanding that this business will have up to 10 slot machines. The Sewer CIF is calculated as follows:

10 Slots X 20 Gallons per Day/ Slot = 200 Gallons per Day

1 EDU = 150 Gallons per Day

200 Gallons per Day ÷ 150 Gallons per Day/ EDU = 1.33 EDU

1.33 EDU X $2,930.00/EDU = **$3,896.90**

A copy of the CTUB Rates, Rules and Regulations as well as the Public Service Commission of West Virginia Water Rules and Regulations can be found at: www.ctubwv.com.

If you have any questions, please contact me at (304) 725-2316.

Sincerely,



Travis Markley
Engineering Technician

INTEGRITY
FEDERAL SERVICES

Storm Water Management Report

Alla Willa Commercial

Charles Town Corp District
Jefferson County, West Virginia
File No.: TBD



Prepared For:
IRIS Property LLC
1927 Rock Cliff Drive
Martinsburg, WV 25401
(304) 279-4747

Prepared By:
Integrity Federal Services
148 S. Queen Street, Suite 201
Martinsburg, WV 25401
(304) 725-8456

Prepared: August 2023

TABLE OF CONTENTS & APPENDICES

Project Overview ..... Page 2
Site Characteristics ..... Page 2
Stormwater Management Control ..... Pages 2-3
Summary ..... Pages 3-4

APPENDICES

Water Quality Calculations: **Appendix A**
- Infiltration Sizing/Stage Storage
- Performance Based Water Quality Calculations

Existing Runoff Calculations: **Appendix B**
- Runoff Curve Number Calculations
- 2-Year Hydrographs
- 10-Year Hydrographs
- 25-Year Hydrographs

Proposed Runoff Calculations: **Appendix C**
- Runoff Curve Number Calculations
- 2-Year Hydrographs
- 10-Year Hydrographs
- 25-Year Hydrographs

PROJECT OVERVIEW

The Alla Willa Commercial project is a +/- 0.28-acre commercial development. The proposed site includes but is not limited to the construction of a commercial building, drive aisles and parking areas with associated drainage structures, an underground stormwater management facility, and private utilities. These improvements have been designed to meet the requirements set forth by the current Virginia Stormwater Management Handbook, West Virginia Erosion & Sediment Control Best Management Practices Manual, and the West Virginia Stormwater Management and Design Guidance Manual.

Stormwater Management Control requirements for this site are being provided through the construction of an underground infiltration facility, a bioretention basin and the use of an existing offsite extended detention facility.

SITE CHARACTERISTICS

The development is located in the Charles Town Corp District of Jefferson County, West Virginia, bounded by Alla Willa Drive to the west, commercially zoned properties to the North, South, and East. The subject property consists of undeveloped open space.

This overall drainage area contains the following soils pursuant to the USDA *Natural Resources Conservation Service (NRCS), Web Soil Survey*.

Soil Type	Name	Hydrologic Soil Groups
UwC	Urban Land-Hagerstown Complex	C

QUALITY CONTROL

The project includes impervious areas for buildings, sidewalks, and asphalt aisles/parking. The remaining areas are modeled as pervious managed turf. The water quality control volume was determined using Performance Based BMP Water Quality Calculations per the Virginia Stormwater Management Handbook, 1999.

The proposed stormwater quality control measures for the site consists of an infiltration facility which also provides water quantity control. Water quality facilities are provided to treat the disturbed area to meet the target pollutant load. There is a portion of disturbed area being used to bypass offsite flow to its original outfall.

QUANTITY CONTROL

Stormwater quantity control is being provided through a combination underground infiltration and detention facility. The underground stormwater management facility is designed to include the improvements proposed. The proposed development does not change any adjacent flow patterns and maintains the natural existing drainage pattern. Karst factors have been applied to existing.

Stormwater Quantity Summary Table

Storm Event	Pre-Development (CFS)	Post-Development (cfs)	W.S.E
2 YR	0.021	0.015	513.48
10 YR	0.159	0.139	513.68
25 YR	0.278	0.261	513.95

STORMWATER CONEYANCE & DRAINAGE DESIGN

Storm Sewers

No conveyance pipes are proposed to direct flows to the underground stormwater management facility. One inlet is proposed and has been designed for the 10-year storm event. Storm event flows were computed using the Rational Method. Storm Sewers software was used to model the storm sewer system. Calculations are provided in the plan set.

Culverts

No culverts are proposed for this development.

SUMMARY

In conclusion, the proposed site meets release rate requirements for water quantity. The overall site plan promotes pollutant reduction, and water quality enhancement. Water quality control is provided by removing the target pollutant load utilizing an underground infiltration facility. The stormwater management facility will minimize any impact to the water resources of the area.

Appendix A

Pond Report

Pond No. 1 - UG SWM

Pond Data

UG Chambers -Invert elev. = 513.20 ft, Rise x Span = 1.00 x 2.08 ft, Barrel Len = 50.00 ft, No. Barrels = 13, Slope = 0.00%, Headers = Yes
Encasement -Invert elev. = 512.70 ft, Width = 2.08 ft, Height = 2.00 ft, Voids = 40.00%

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	512.70	n/a	0	0
0.20	512.90	n/a	117	117
0.40	513.10	n/a	117	234
0.60	513.30	n/a	205	439
0.80	513.50	n/a	289	728
1.00	513.70	n/a	278	1,006
1.20	513.90	n/a	257	1,263
1.40	514.10	n/a	221	1,485
1.60	514.30	n/a	143	1,628
1.80	514.50	n/a	117	1,745
2.00	514.70	n/a	117	1,862

WATER QUALITY VOLUME

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 15.00	4.00	0.00	0.00
Span (in)	= 15.00	4.00	0.00	0.00
No. Barrels	= 1	1	0	0
Invert El. (ft)	= 512.70	513.40	0.00	0.00
Length (ft)	= 12.00	0.00	0.00	0.00
Slope (%)	= 1.33	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	Yes	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 4.00	0.00	0.00	0.00
Crest El. (ft)	= 514.00	0.00	0.00	0.00
Weir Coeff.	= 3.33	3.33	3.33	3.33
Weir Type	= Rect	---	---	---
Multi-Stage	= Yes	No	No	No

Exfil.(in/hr) = 0.000 (by Contour)
TW Elev. (ft) = 0.00

Note: Culvert/Orifice outflows are analyzed under inlet (ic) and outlet (oc) control. Weir risers checked for orifice conditions (ic) and submergence (s).

Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
0.00	0	512.70	0.00	0.00	---	---	0.00	---	---	---	---	---	0.000
0.02	12	512.72	0.00	0.00	---	---	0.00	---	---	---	---	---	0.000
0.04	23	512.74	0.00	0.00	---	---	0.00	---	---	---	---	---	0.000
0.06	35	512.76	0.00	0.00	---	---	0.00	---	---	---	---	---	0.000
0.08	47	512.78	0.00	0.00	---	---	0.00	---	---	---	---	---	0.000
0.10	59	512.80	0.00	0.00	---	---	0.00	---	---	---	---	---	0.000
0.12	70	512.82	0.00	0.00	---	---	0.00	---	---	---	---	---	0.000
0.14	82	512.84	0.00	0.00	---	---	0.00	---	---	---	---	---	0.000
0.16	94	512.86	0.00	0.00	---	---	0.00	---	---	---	---	---	0.000
0.18	105	512.88	0.00	0.00	---	---	0.00	---	---	---	---	---	0.000
0.20	117	512.90	0.00	0.00	---	---	0.00	---	---	---	---	---	0.000
0.22	129	512.92	0.00	0.00	---	---	0.00	---	---	---	---	---	0.000
0.24	141	512.94	0.00	0.00	---	---	0.00	---	---	---	---	---	0.000
0.26	152	512.96	0.00	0.00	---	---	0.00	---	---	---	---	---	0.000
0.28	164	512.98	0.00	0.00	---	---	0.00	---	---	---	---	---	0.000
0.30	176	513.00	0.00	0.00	---	---	0.00	---	---	---	---	---	0.000
0.32	187	513.02	0.00	0.00	---	---	0.00	---	---	---	---	---	0.000
0.34	199	513.04	0.00	0.00	---	---	0.00	---	---	---	---	---	0.000
0.36	211	513.06	0.00	0.00	---	---	0.00	---	---	---	---	---	0.000
0.38	223	513.08	0.00	0.00	---	---	0.00	---	---	---	---	---	0.000
0.40	234	513.10	0.00	0.00	---	---	0.00	---	---	---	---	---	0.000
0.42	255	513.12	0.00	0.00	---	---	0.00	---	---	---	---	---	0.000
0.44	275	513.14	0.00	0.00	---	---	0.00	---	---	---	---	---	0.000
0.46	296	513.16	0.00	0.00	---	---	0.00	---	---	---	---	---	0.000
0.48	316	513.18	0.00	0.00	---	---	0.00	---	---	---	---	---	0.000
0.50	337	513.20	0.00	0.00	---	---	0.00	---	---	---	---	---	0.000
0.52	357	513.22	0.00	0.00	---	---	0.00	---	---	---	---	---	0.000
0.54	378	513.24	0.00	0.00	---	---	0.00	---	---	---	---	---	0.000
0.56	398	513.26	0.00	0.00	---	---	0.00	---	---	---	---	---	0.000
0.58	419	513.28	0.00	0.00	---	---	0.00	---	---	---	---	---	0.000
0.60	439	513.30	0.00	0.00	---	---	0.00	---	---	---	---	---	0.000
0.62	468	513.32	0.00	0.00	---	---	0.00	---	---	---	---	---	0.000

Continues on next page...

Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
0.64	497	513.34	0.00	0.00	---	---	0.00	---	---	---	---	---	0.000
0.66	526	513.36	0.00	0.00	---	---	0.00	---	---	---	---	---	0.000
0.68	555	513.38	0.00	0.00	---	---	0.00	---	---	---	---	---	0.000
0.70	584	513.40	0.00 ic	0.00 ic	---	---	0.00	---	---	---	---	---	0.000
0.72	613	513.42	0.00 ic	0.00 ic	---	---	0.00	---	---	---	---	---	0.001
0.74	642	513.44	0.00 ic	0.00 ic	---	---	0.00	---	---	---	---	---	0.004
0.76	671	513.46	0.01 ic	0.01 ic	---	---	0.00	---	---	---	---	---	0.009
0.78	699	513.48	0.02 ic	0.02 ic	---	---	0.00	---	---	---	---	---	0.016
0.80	728	513.50	0.03 ic	0.02 ic	---	---	0.00	---	---	---	---	---	0.024
0.82	756	513.52	0.03 ic	0.03 ic	---	---	0.00	---	---	---	---	---	0.033
0.84	784	513.54	0.05 ic	0.04 ic	---	---	0.00	---	---	---	---	---	0.045
0.86	812	513.56	0.06 ic	0.06 ic	---	---	0.00	---	---	---	---	---	0.057
0.88	840	513.58	0.08 ic	0.07 ic	---	---	0.00	---	---	---	---	---	0.071
0.90	867	513.60	0.08 ic	0.08 ic	---	---	0.00	---	---	---	---	---	0.083
0.92	895	513.62	0.10 ic	0.10 ic	---	---	0.00	---	---	---	---	---	0.098
0.94	923	513.64	0.12 ic	0.11 ic	---	---	0.00	---	---	---	---	---	0.113
0.96	951	513.66	0.13 ic	0.13 ic	---	---	0.00	---	---	---	---	---	0.127
0.98	978	513.68	0.15 ic	0.14 ic	---	---	0.00	---	---	---	---	---	0.141
1.00	1,006	513.70	0.16 ic	0.15 ic	---	---	0.00	---	---	---	---	---	0.155
1.02	1,032	513.72	0.17 ic	0.17 ic	---	---	0.00	---	---	---	---	---	0.166
1.04	1,058	513.74	0.18 ic	0.17 ic	---	---	0.00	---	---	---	---	---	0.175
1.06	1,083	513.76	0.18 ic	0.18 ic	---	---	0.00	---	---	---	---	---	0.185
1.08	1,109	513.78	0.20 ic	0.19 ic	---	---	0.00	---	---	---	---	---	0.194
1.10	1,135	513.80	0.21 ic	0.20 ic	---	---	0.00	---	---	---	---	---	0.203
1.12	1,161	513.82	0.21 ic	0.21 ic	---	---	0.00	---	---	---	---	---	0.212
1.14	1,186	513.84	0.23 ic	0.22 ic	---	---	0.00	---	---	---	---	---	0.220
1.16	1,212	513.86	0.23 ic	0.23 ic	---	---	0.00	---	---	---	---	---	0.228
1.18	1,238	513.88	0.24 ic	0.24 ic	---	---	0.00	---	---	---	---	---	0.235
1.20	1,263	513.90	0.24 ic	0.24 ic	---	---	0.00	---	---	---	---	---	0.243
1.22	1,286	513.92	0.26 ic	0.25 ic	---	---	0.00	---	---	---	---	---	0.250
1.24	1,308	513.94	0.26 ic	0.26 ic	---	---	0.00	---	---	---	---	---	0.257
1.26	1,330	513.96	0.27 ic	0.26 ic	---	---	0.00	---	---	---	---	---	0.264
1.28	1,352	513.98	0.27 ic	0.27 ic	---	---	0.00	---	---	---	---	---	0.270
1.30	1,374	514.00	0.28 ic	0.28 ic	---	---	0.00	---	---	---	---	---	0.277
1.32	1,396	514.02	0.33 ic	0.28 ic	---	---	0.04	---	---	---	---	---	0.321
1.34	1,418	514.04	0.41 ic	0.29 ic	---	---	0.11	---	---	---	---	---	0.396
1.36	1,440	514.06	0.51 ic	0.30 ic	---	---	0.20	---	---	---	---	---	0.492
1.38	1,463	514.08	0.61 ic	0.30 ic	---	---	0.30	---	---	---	---	---	0.604
1.40	1,485	514.10	0.73 ic	0.31 ic	---	---	0.42	---	---	---	---	---	0.728
1.42	1,499	514.12	0.87 ic	0.31 ic	---	---	0.55	---	---	---	---	---	0.867
1.44	1,513	514.14	1.02 ic	0.32 ic	---	---	0.70	---	---	---	---	---	1.016
1.46	1,528	514.16	1.20 oc	0.32 ic	---	---	0.85	---	---	---	---	---	1.177
1.48	1,542	514.18	1.35 oc	0.33 ic	---	---	1.02	---	---	---	---	---	1.347
1.50	1,556	514.20	1.54 oc	0.33 ic	---	---	1.19	---	---	---	---	---	1.527
1.52	1,571	514.22	1.72 oc	0.34 ic	---	---	1.38	---	---	---	---	---	1.716
1.54	1,585	514.24	1.93 oc	0.34 ic	---	---	1.57	---	---	---	---	---	1.913
1.56	1,599	514.26	2.13 oc	0.35 ic	---	---	1.77	---	---	---	---	---	2.118
1.58	1,613	514.28	2.34 oc	0.35 ic	---	---	1.98	---	---	---	---	---	2.322
1.60	1,628	514.30	2.54 oc	0.33 ic	---	---	2.19	---	---	---	---	---	2.520
1.62	1,639	514.32	2.73 oc	0.31 ic	---	---	2.41	---	---	---	---	---	2.726
1.64	1,651	514.34	2.93 oc	0.29 ic	---	---	2.64	---	---	---	---	---	2.927
1.66	1,663	514.36	3.14 oc	0.26 ic	---	---	2.88	---	---	---	---	---	3.140
1.68	1,675	514.38	3.38 oc	0.26 ic	---	---	3.12	---	---	---	---	---	3.380
1.70	1,686	514.40	3.60 oc	0.26 ic	---	---	3.35 s	---	---	---	---	---	3.603
1.72	1,698	514.42	3.81 oc	0.25 ic	---	---	3.56 s	---	---	---	---	---	3.810
1.74	1,710	514.44	4.01 oc	0.25 ic	---	---	3.76 s	---	---	---	---	---	4.009
1.76	1,721	514.46	4.20 oc	0.25 ic	---	---	3.95 s	---	---	---	---	---	4.200
1.78	1,733	514.48	4.39 oc	0.24 ic	---	---	4.14 s	---	---	---	---	---	4.384
1.80	1,745	514.50	4.56 oc	0.24 ic	---	---	4.32 s	---	---	---	---	---	4.560
1.82	1,757	514.52	4.73 oc	0.24 ic	---	---	4.49 s	---	---	---	---	---	4.732
1.84	1,768	514.54	4.90 oc	0.23 ic	---	---	4.66 s	---	---	---	---	---	4.897
1.86	1,780	514.56	5.06 oc	0.23 ic	---	---	4.83 s	---	---	---	---	---	5.057
1.88	1,792	514.58	5.21 oc	0.23 ic	---	---	4.99 s	---	---	---	---	---	5.212
1.90	1,803	514.60	5.36 oc	0.22 ic	---	---	5.14 s	---	---	---	---	---	5.361
1.92	1,815	514.62	5.51 oc	0.22 ic	---	---	5.29 s	---	---	---	---	---	5.506
1.94	1,827	514.64	5.65 oc	0.22 ic	---	---	5.43 s	---	---	---	---	---	5.645
1.96	1,839	514.66	5.78 oc	0.21 ic	---	---	5.57 s	---	---	---	---	---	5.781
1.98	1,850	514.68	5.91 oc	0.21 ic	---	---	5.70 s	---	---	---	---	---	5.913
2.00	1,862	514.70	6.04 oc	0.21 ic	---	---	5.83 s	---	---	---	---	---	6.039

...End

Performance Based Water Quality Calculations

STEP 1 **Determine the applicable area (A) and the post-developed impervious cover (I_{post}).**

Applicable area (**A**)= 0.28 Acres

Pre-development impervious cover:

Total Ex Impervious Area = 0.00

$I_{existing}$ = (total pre-development impervious cover ÷ A) × 100 = 0.00% utilized average land cover condition

Post-development impervious cover:

Total Proposed Impervious Area = **0.16**

I_{post} = (total post-development impervious cover ÷ A) × 100 = 57.1%

STEP 2 **Determine the average land cover conditions ($I_{watershed}$) or the existing impervious cover ($I_{existing}$).**

$I_{watershed}$ = 16.0%

STEP 3 **Determine the appropriate Development Situation.**

I_{post} 57.1% > $I_{existing}$ 16.0%

Situation 2 exists. The existing percent impervious cover is less than the average land cover condition and the proposed improvements will create a total percent impervious cover which is greater than the average land cover condition.

STEP 4 **Determine the relative pre-development pollutant load (L_{pre}).**

$L_{pre(watershed)}$ = [0.05 + 0.009 × $I_{watershed}$)] × A × 2.28 **VSMH (Equation 5-16)**

= 0.12 pounds per year

STEP 5 **Determine the relative post-development pollutant load (L_{post}).**

L_{post} = [0.05 + 0.009 × I_{post})] × A × 2.28 **VSMH (Equation 5-21)**

= 0.36 pounds per year

STEP 6 **Determine the relative pollutant removal requirement (RR).**

RR = L_{post} - $L_{pre(watershed)}$

=0.24 pounds per year

STEP 7 **Identify the best management practice (BMP) for the site.**

1 Determine the required pollutant removal efficiency for the site:

EFF = (RR ÷ Lpost) × 100

= 65.62%

2 Select BMP(s)

	Area	I_{BMP}	Eff_{BMP}	Description	Impervious Area
Infiltration Facility	0.32	56.25%	65%	Infiltration (2xWQV)	0.18

3 Determine the pollutant load entering the proposed BMP(s).

L_{post} = [0.05 + 0.009 × I_{BMP})] × A × 2.28 **VSMH (Equation 5-24)**

L_{BMP1} = 0.41 pounds per year

4 Calculate the pollutant load removed by the proposed BMP(s).

$L_{removed}$ = Eff_{BMP} × L_{BMP} **VSMH (Equation 5-24)**

$L_{removed/BMP1}$ = 0.26 pounds per year

5 Calculate the total pollutant load removed by the BMP(s)

$L_{removed/total}$ = $L_{removed/BMP1}$ + $L_{removed/BMP2}$ + $L_{removed\ BMP3}$ + ….. **VSMH (Equation 5-25)**

$L_{removed/total}$ = 0.26 pounds per year

6 Verify compliance:

$L_{removed/total}$ 0.26 > 0.24 **OKAY**

Appendix B

Runoff Curve Number and Runoff Worksheet (TR-55)

Project:	Alla Walla Commercial		Created by: BJS	Date:	7/21/2023
Location:	Jefferson County, West Virginia		Checked by: RPP	Date:	7/21/2023
Check One:	X Present		Developed		

1. Runoff Curve Number

Soil name and hydrologic group (appendix A)		Cover description	CN Table 2-2	Area (acres)	Product of CN x A
Name	HSG				
	B	Meadow	58	0.32	19
			Totals =	0.32	19

CN (weighted)= $\frac{\text{total product}}{\text{total area}} = \frac{19}{0.32} =$ 58 Use CN = **58**

2. Runoff

	Storm #1	Storm #2	Storm #3	Storm #4	Storm #5
Frequency (year)	1	2	10	25	100
Rainfall, P (24-hour) (inches)	2.50	3.10	4.95	5.70	7.00
Runoff, Q (inches)	0.13	0.31	1.14	1.57	2.41

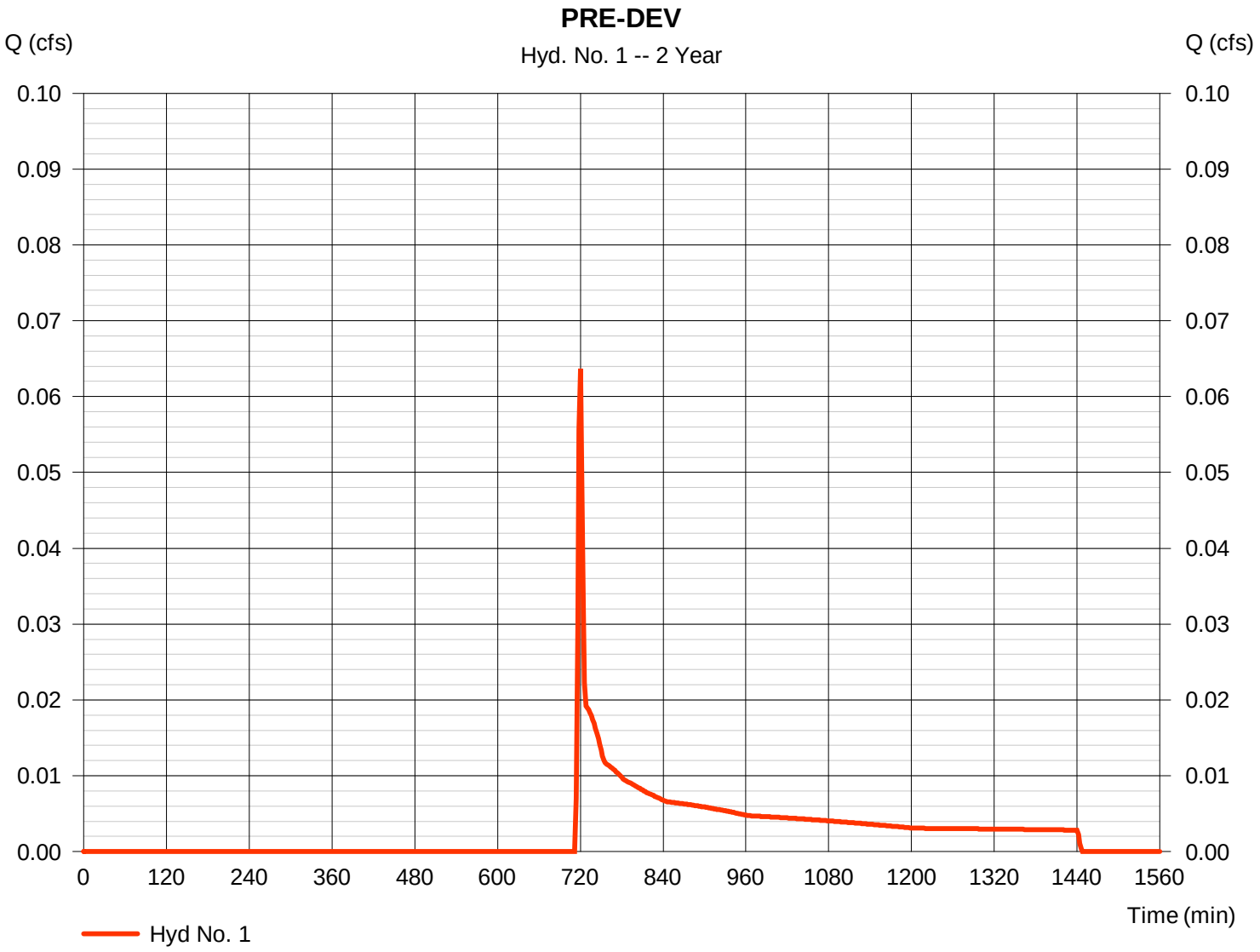
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Tuesday, 08 / 8 / 2023

Hyd. No. 1

PRE-DEV

Hydrograph type	= SCS Runoff	Peak discharge	= 0.064 cfs
Storm frequency	= 2 yrs	Time to peak	= 720 min
Time interval	= 2 min	Hyd. volume	= 248 cuft
Drainage area	= 0.320 ac	Curve number	= 58
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 6.00 min
Total precip.	= 2.85 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

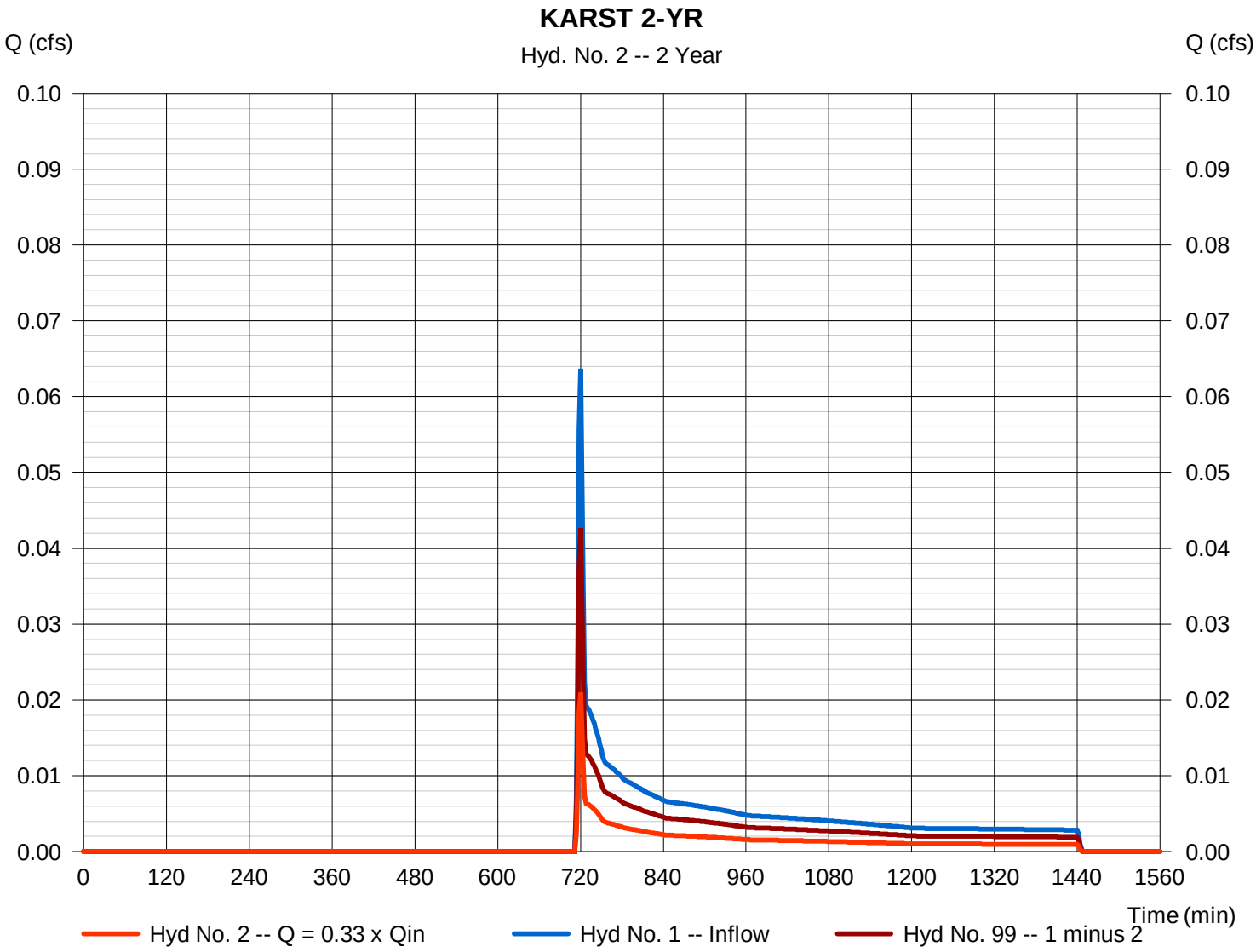


Hydrograph Report

Hyd. No. 2

KARST 2-YR

Hydrograph type	= Diversion1	Peak discharge	= 0.021 cfs
Storm frequency	= 2 yrs	Time to peak	= 720 min
Time interval	= 2 min	Hyd. volume	= 82 cuft
Inflow hydrograph	= 1 - PRE-DEV	2nd diverted hyd.	= 99
Diversion method	= Flow Ratio	Flow ratio	= 0.33



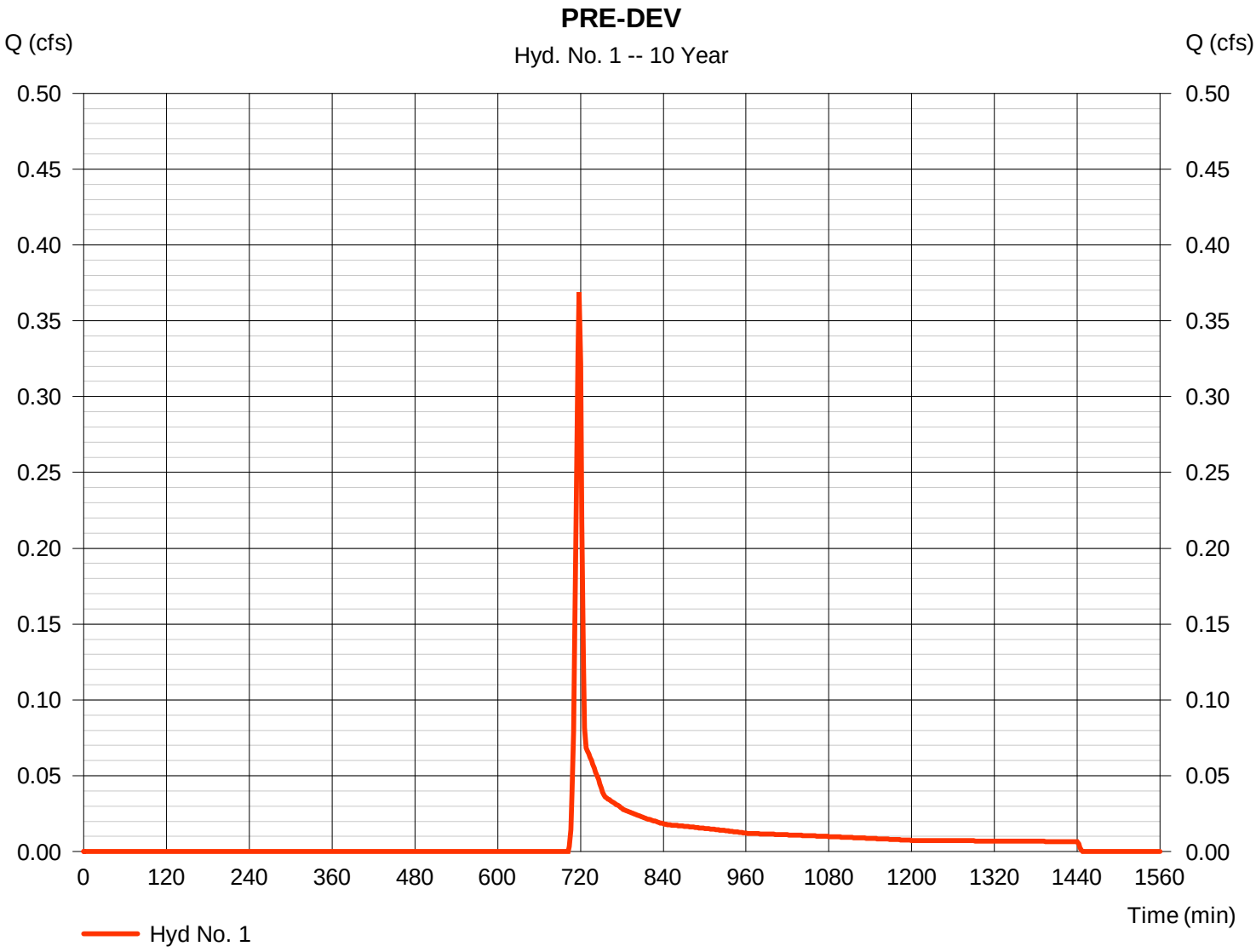
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Tuesday, 08 / 8 / 2023

Hyd. No. 1

PRE-DEV

Hydrograph type	= SCS Runoff	Peak discharge	= 0.369 cfs
Storm frequency	= 10 yrs	Time to peak	= 718 min
Time interval	= 2 min	Hyd. volume	= 810 cuft
Drainage area	= 0.320 ac	Curve number	= 58
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 6.00 min
Total precip.	= 4.17 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



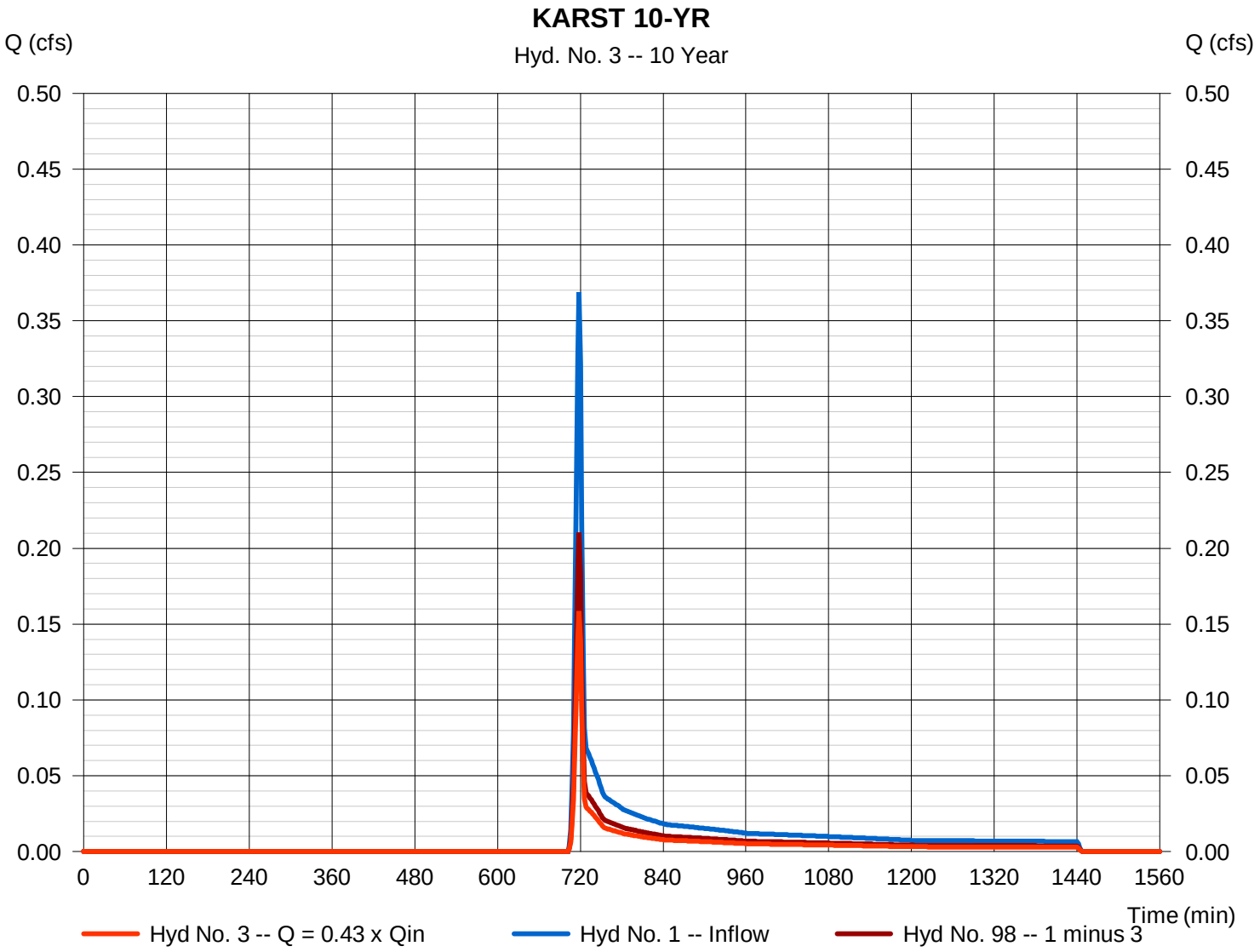
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Tuesday, 08 / 8 / 2023

Hyd. No. 3

KARST 10-YR

Hydrograph type	= Diversion1	Peak discharge	= 0.159 cfs
Storm frequency	= 10 yrs	Time to peak	= 718 min
Time interval	= 2 min	Hyd. volume	= 348 cuft
Inflow hydrograph	= 1 - PRE-DEV	2nd diverted hyd.	= 98
Diversion method	= Flow Ratio	Flow ratio	= 0.43



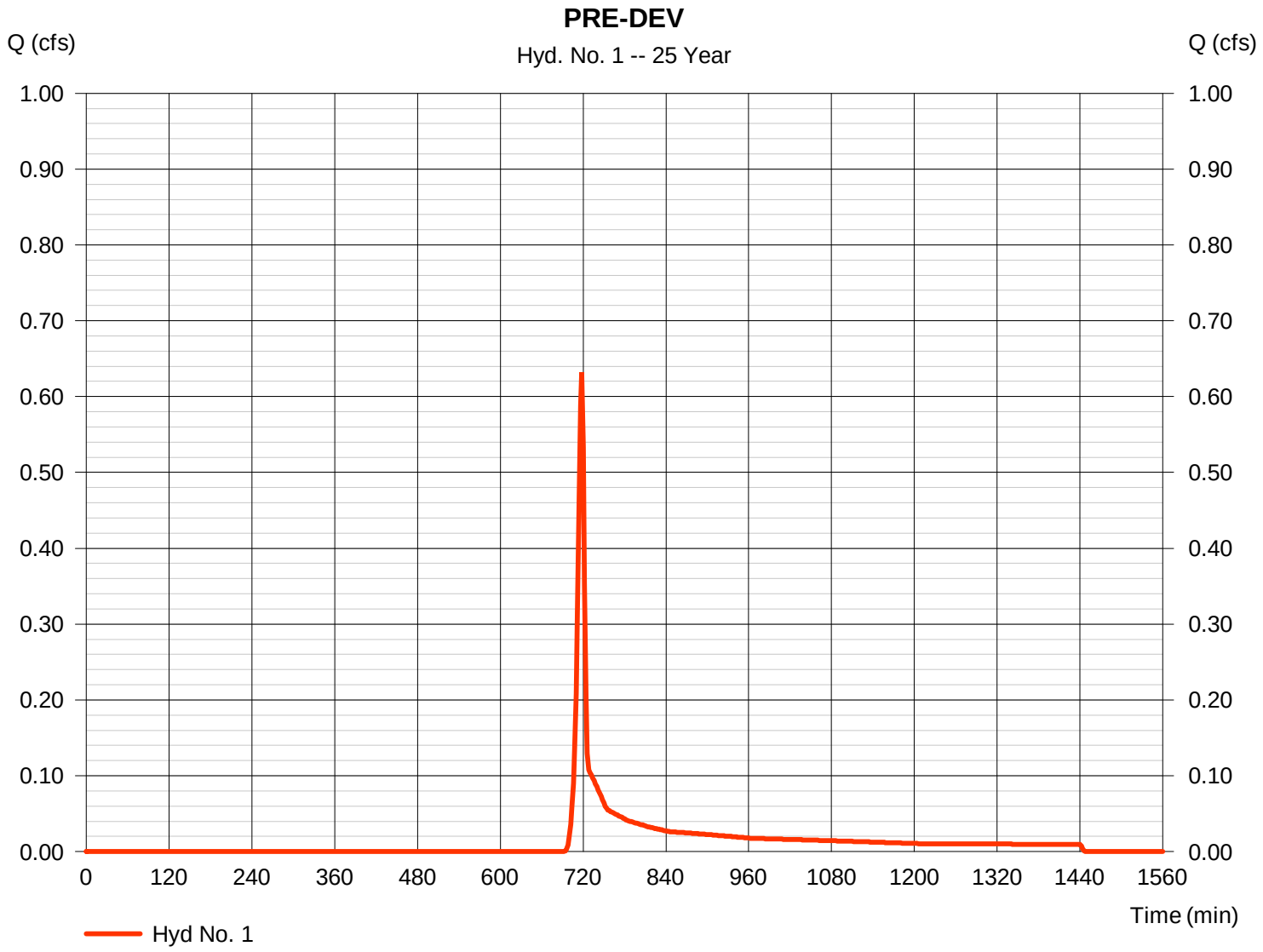
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Tuesday, 08 / 8 / 2023

Hyd. No. 1

PRE-DEV

Hydrograph type	=	SCS Runoff	Peak discharge	=	0.632 cfs
Storm frequency	=	25 yrs	Time to peak	=	718 min
Time interval	=	2 min	Hyd. volume	=	1,303 cuft
Drainage area	=	0.320 ac	Curve number	=	58
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	6.00 min
Total precip.	=	5.05 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484



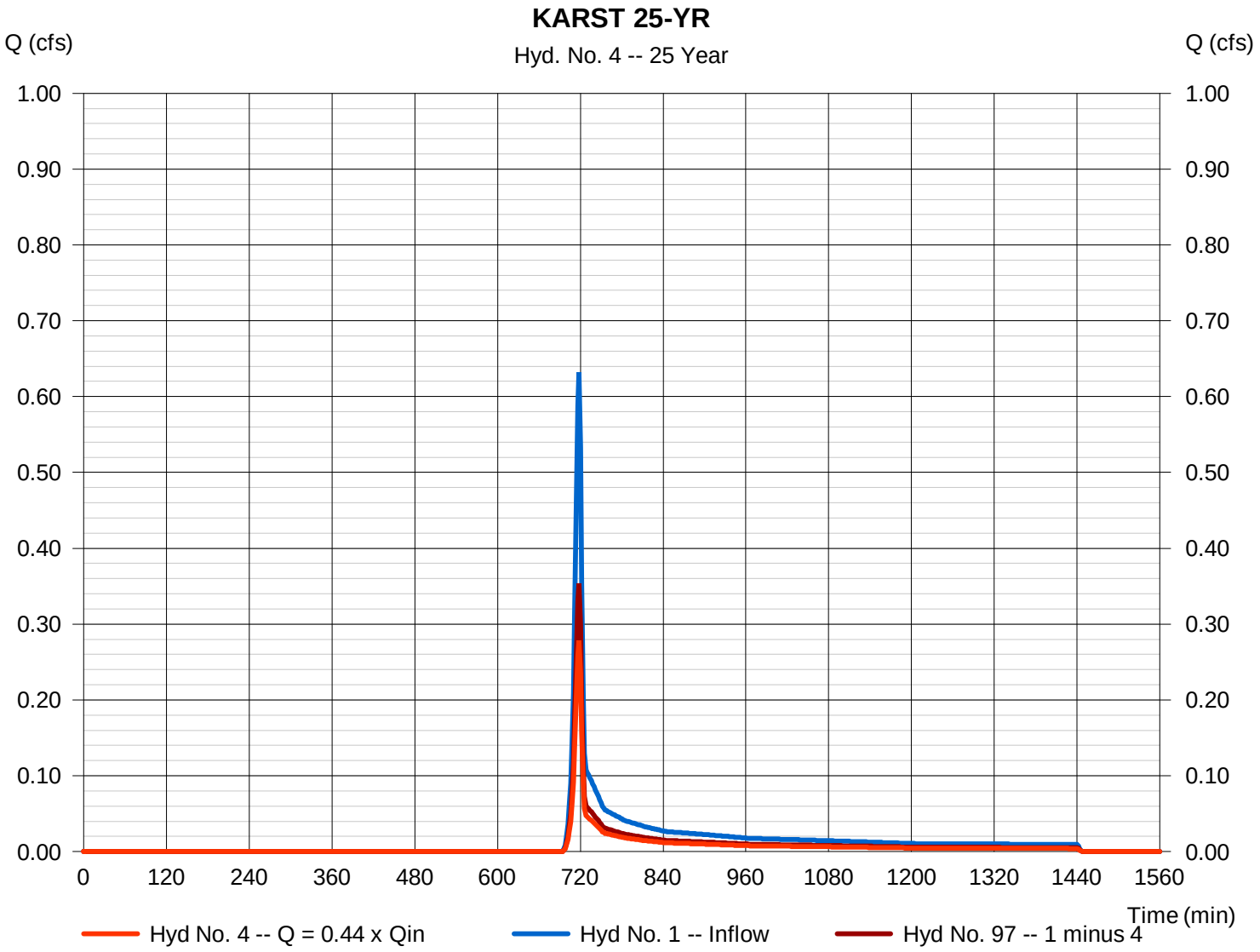
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Tuesday, 08 / 8 / 2023

Hyd. No. 4

KARST 25-YR

Hydrograph type	= Diversion1	Peak discharge	= 0.278 cfs
Storm frequency	= 25 yrs	Time to peak	= 718 min
Time interval	= 2 min	Hyd. volume	= 573 cuft
Inflow hydrograph	= 1 - PRE-DEV	2nd diverted hyd.	= 97
Diversion method	= Flow Ratio	Flow ratio	= 0.44



Appendix C

Runoff Curve Number and Runoff Worksheet (TR-55)

Project:	Alla Walla Commercial		Created by: BJS	Date:	7/21/2023
Location:	Jefferson County, West Virginia		Checked by: RPP	Date:	7/21/2023
Check One:		Present	X	Developed	

1. Runoff Curve Number

Soil name and hydrologic group (appendix A)		Cover description	CN Table 2-2	Area (acres)	Product of CN x A
Name	HSG				
	B	Open space, Good condition	61	0.18	11
	B	Impervious Areas	98	0.14	14
			Totals =	0.32	25

CN (weighted)= $\frac{\text{total product}}{\text{total area}} = \frac{25}{0.32} =$ 77 Use CN = **77**

2. Runoff

	Storm #1	Storm #2	Storm #3	Storm #4	Storm #5
Frequency (year)	1	2	10	25	100
Rainfall, P (24-hour) (inches)	2.50	3.10	4.95	5.70	7.00
Runoff, Q (inches)	0.75	1.15	2.60	3.24	4.39

Pond Report

Pond No. 1 - UG SWM

Pond Data

UG Chambers -Invert elev. = 513.20 ft, Rise x Span = 1.00 x 2.08 ft, Barrel Len = 50.00 ft, No. Barrels = 13, Slope = 0.00%, Headers = Yes
Encasement -Invert elev. = 512.70 ft, Width = 2.08 ft, Height = 2.00 ft, Voids = 40.00%

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	512.70	n/a	0	0
0.20	512.90	n/a	117	117
0.40	513.10	n/a	117	234
0.60	513.30	n/a	205	439
0.80	513.50	n/a	289	728
1.00	513.70	n/a	278	1,006
1.20	513.90	n/a	257	1,263
1.40	514.10	n/a	221	1,485
1.60	514.30	n/a	143	1,628
1.80	514.50	n/a	117	1,745
2.00	514.70	n/a	117	1,862

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 15.00	4.00	0.00	0.00
Span (in)	= 15.00	4.00	0.00	0.00
No. Barrels	= 1	1	0	0
Invert El. (ft)	= 512.70	513.40	0.00	0.00
Length (ft)	= 12.00	0.00	0.00	0.00
Slope (%)	= 1.33	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	Yes	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 4.00	0.00	0.00	0.00
Crest El. (ft)	= 514.00	0.00	0.00	0.00
Weir Coeff.	= 3.33	3.33	3.33	3.33
Weir Type	= Rect	---	---	---
Multi-Stage	= Yes	No	No	No

Exfil.(in/hr) = 0.000 (by Contour)
TW Elev. (ft) = 0.00

Note: Culvert/Orifice outflows are analyzed under inlet (ic) and outlet (oc) control. Weir risers checked for orifice conditions (ic) and submergence (s).

Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
0.00	0	512.70	0.00	0.00	---	---	0.00	---	---	---	---	---	0.000
0.02	12	512.72	0.00	0.00	---	---	0.00	---	---	---	---	---	0.000
0.04	23	512.74	0.00	0.00	---	---	0.00	---	---	---	---	---	0.000
0.06	35	512.76	0.00	0.00	---	---	0.00	---	---	---	---	---	0.000
0.08	47	512.78	0.00	0.00	---	---	0.00	---	---	---	---	---	0.000
0.10	59	512.80	0.00	0.00	---	---	0.00	---	---	---	---	---	0.000
0.12	70	512.82	0.00	0.00	---	---	0.00	---	---	---	---	---	0.000
0.14	82	512.84	0.00	0.00	---	---	0.00	---	---	---	---	---	0.000
0.16	94	512.86	0.00	0.00	---	---	0.00	---	---	---	---	---	0.000
0.18	105	512.88	0.00	0.00	---	---	0.00	---	---	---	---	---	0.000
0.20	117	512.90	0.00	0.00	---	---	0.00	---	---	---	---	---	0.000
0.22	129	512.92	0.00	0.00	---	---	0.00	---	---	---	---	---	0.000
0.24	141	512.94	0.00	0.00	---	---	0.00	---	---	---	---	---	0.000
0.26	152	512.96	0.00	0.00	---	---	0.00	---	---	---	---	---	0.000
0.28	164	512.98	0.00	0.00	---	---	0.00	---	---	---	---	---	0.000
0.30	176	513.00	0.00	0.00	---	---	0.00	---	---	---	---	---	0.000
0.32	187	513.02	0.00	0.00	---	---	0.00	---	---	---	---	---	0.000
0.34	199	513.04	0.00	0.00	---	---	0.00	---	---	---	---	---	0.000
0.36	211	513.06	0.00	0.00	---	---	0.00	---	---	---	---	---	0.000
0.38	223	513.08	0.00	0.00	---	---	0.00	---	---	---	---	---	0.000
0.40	234	513.10	0.00	0.00	---	---	0.00	---	---	---	---	---	0.000
0.42	255	513.12	0.00	0.00	---	---	0.00	---	---	---	---	---	0.000
0.44	275	513.14	0.00	0.00	---	---	0.00	---	---	---	---	---	0.000
0.46	296	513.16	0.00	0.00	---	---	0.00	---	---	---	---	---	0.000
0.48	316	513.18	0.00	0.00	---	---	0.00	---	---	---	---	---	0.000
0.50	337	513.20	0.00	0.00	---	---	0.00	---	---	---	---	---	0.000
0.52	357	513.22	0.00	0.00	---	---	0.00	---	---	---	---	---	0.000
0.54	378	513.24	0.00	0.00	---	---	0.00	---	---	---	---	---	0.000
0.56	398	513.26	0.00	0.00	---	---	0.00	---	---	---	---	---	0.000
0.58	419	513.28	0.00	0.00	---	---	0.00	---	---	---	---	---	0.000
0.60	439	513.30	0.00	0.00	---	---	0.00	---	---	---	---	---	0.000
0.62	468	513.32	0.00	0.00	---	---	0.00	---	---	---	---	---	0.000

Continues on next page...

Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
0.64	497	513.34	0.00	0.00	---	---	0.00	---	---	---	---	---	0.000
0.66	526	513.36	0.00	0.00	---	---	0.00	---	---	---	---	---	0.000
0.68	555	513.38	0.00	0.00	---	---	0.00	---	---	---	---	---	0.000
0.70	584	513.40	0.00 ic	0.00 ic	---	---	0.00	---	---	---	---	---	0.000
0.72	613	513.42	0.00 ic	0.00 ic	---	---	0.00	---	---	---	---	---	0.001
0.74	642	513.44	0.00 ic	0.00 ic	---	---	0.00	---	---	---	---	---	0.004
0.76	671	513.46	0.01 ic	0.01 ic	---	---	0.00	---	---	---	---	---	0.009
0.78	699	513.48	0.02 ic	0.02 ic	---	---	0.00	---	---	---	---	---	0.016
0.80	728	513.50	0.03 ic	0.02 ic	---	---	0.00	---	---	---	---	---	0.024
0.82	756	513.52	0.03 ic	0.03 ic	---	---	0.00	---	---	---	---	---	0.033
0.84	784	513.54	0.05 ic	0.04 ic	---	---	0.00	---	---	---	---	---	0.045
0.86	812	513.56	0.06 ic	0.06 ic	---	---	0.00	---	---	---	---	---	0.057
0.88	840	513.58	0.08 ic	0.07 ic	---	---	0.00	---	---	---	---	---	0.071
0.90	867	513.60	0.08 ic	0.08 ic	---	---	0.00	---	---	---	---	---	0.083
0.92	895	513.62	0.10 ic	0.10 ic	---	---	0.00	---	---	---	---	---	0.098
0.94	923	513.64	0.12 ic	0.11 ic	---	---	0.00	---	---	---	---	---	0.113
0.96	951	513.66	0.13 ic	0.13 ic	---	---	0.00	---	---	---	---	---	0.127
0.98	978	513.68	0.15 ic	0.14 ic	---	---	0.00	---	---	---	---	---	0.141
1.00	1,006	513.70	0.16 ic	0.15 ic	---	---	0.00	---	---	---	---	---	0.155
1.02	1,032	513.72	0.17 ic	0.17 ic	---	---	0.00	---	---	---	---	---	0.166
1.04	1,058	513.74	0.18 ic	0.17 ic	---	---	0.00	---	---	---	---	---	0.175
1.06	1,083	513.76	0.18 ic	0.18 ic	---	---	0.00	---	---	---	---	---	0.185
1.08	1,109	513.78	0.20 ic	0.19 ic	---	---	0.00	---	---	---	---	---	0.194
1.10	1,135	513.80	0.21 ic	0.20 ic	---	---	0.00	---	---	---	---	---	0.203
1.12	1,161	513.82	0.21 ic	0.21 ic	---	---	0.00	---	---	---	---	---	0.212
1.14	1,186	513.84	0.23 ic	0.22 ic	---	---	0.00	---	---	---	---	---	0.220
1.16	1,212	513.86	0.23 ic	0.23 ic	---	---	0.00	---	---	---	---	---	0.228
1.18	1,238	513.88	0.24 ic	0.24 ic	---	---	0.00	---	---	---	---	---	0.235
1.20	1,263	513.90	0.24 ic	0.24 ic	---	---	0.00	---	---	---	---	---	0.243
1.22	1,286	513.92	0.26 ic	0.25 ic	---	---	0.00	---	---	---	---	---	0.250
1.24	1,308	513.94	0.26 ic	0.26 ic	---	---	0.00	---	---	---	---	---	0.257
1.26	1,330	513.96	0.27 ic	0.26 ic	---	---	0.00	---	---	---	---	---	0.264
1.28	1,352	513.98	0.27 ic	0.27 ic	---	---	0.00	---	---	---	---	---	0.270
1.30	1,374	514.00	0.28 ic	0.28 ic	---	---	0.00	---	---	---	---	---	0.277
1.32	1,396	514.02	0.33 ic	0.28 ic	---	---	0.04	---	---	---	---	---	0.321
1.34	1,418	514.04	0.41 ic	0.29 ic	---	---	0.11	---	---	---	---	---	0.396
1.36	1,440	514.06	0.51 ic	0.30 ic	---	---	0.20	---	---	---	---	---	0.492
1.38	1,463	514.08	0.61 ic	0.30 ic	---	---	0.30	---	---	---	---	---	0.604
1.40	1,485	514.10	0.73 ic	0.31 ic	---	---	0.42	---	---	---	---	---	0.728
1.42	1,499	514.12	0.87 ic	0.31 ic	---	---	0.55	---	---	---	---	---	0.867
1.44	1,513	514.14	1.02 ic	0.32 ic	---	---	0.70	---	---	---	---	---	1.016
1.46	1,528	514.16	1.20 oc	0.32 ic	---	---	0.85	---	---	---	---	---	1.177
1.48	1,542	514.18	1.35 oc	0.33 ic	---	---	1.02	---	---	---	---	---	1.347
1.50	1,556	514.20	1.54 oc	0.33 ic	---	---	1.19	---	---	---	---	---	1.527
1.52	1,571	514.22	1.72 oc	0.34 ic	---	---	1.38	---	---	---	---	---	1.716
1.54	1,585	514.24	1.93 oc	0.34 ic	---	---	1.57	---	---	---	---	---	1.913
1.56	1,599	514.26	2.13 oc	0.35 ic	---	---	1.77	---	---	---	---	---	2.118
1.58	1,613	514.28	2.34 oc	0.35 ic	---	---	1.98	---	---	---	---	---	2.322
1.60	1,628	514.30	2.54 oc	0.33 ic	---	---	2.19	---	---	---	---	---	2.520
1.62	1,639	514.32	2.73 oc	0.31 ic	---	---	2.41	---	---	---	---	---	2.726
1.64	1,651	514.34	2.93 oc	0.29 ic	---	---	2.64	---	---	---	---	---	2.927
1.66	1,663	514.36	3.14 oc	0.26 ic	---	---	2.88	---	---	---	---	---	3.140
1.68	1,675	514.38	3.38 oc	0.26 ic	---	---	3.12	---	---	---	---	---	3.380
1.70	1,686	514.40	3.60 oc	0.26 ic	---	---	3.35 s	---	---	---	---	---	3.603
1.72	1,698	514.42	3.81 oc	0.25 ic	---	---	3.56 s	---	---	---	---	---	3.810
1.74	1,710	514.44	4.01 oc	0.25 ic	---	---	3.76 s	---	---	---	---	---	4.009
1.76	1,721	514.46	4.20 oc	0.25 ic	---	---	3.95 s	---	---	---	---	---	4.200
1.78	1,733	514.48	4.39 oc	0.24 ic	---	---	4.14 s	---	---	---	---	---	4.384
1.80	1,745	514.50	4.56 oc	0.24 ic	---	---	4.32 s	---	---	---	---	---	4.560
1.82	1,757	514.52	4.73 oc	0.24 ic	---	---	4.49 s	---	---	---	---	---	4.732
1.84	1,768	514.54	4.90 oc	0.23 ic	---	---	4.66 s	---	---	---	---	---	4.897
1.86	1,780	514.56	5.06 oc	0.23 ic	---	---	4.83 s	---	---	---	---	---	5.057
1.88	1,792	514.58	5.21 oc	0.23 ic	---	---	4.99 s	---	---	---	---	---	5.212
1.90	1,803	514.60	5.36 oc	0.22 ic	---	---	5.14 s	---	---	---	---	---	5.361
1.92	1,815	514.62	5.51 oc	0.22 ic	---	---	5.29 s	---	---	---	---	---	5.506
1.94	1,827	514.64	5.65 oc	0.22 ic	---	---	5.43 s	---	---	---	---	---	5.645
1.96	1,839	514.66	5.78 oc	0.21 ic	---	---	5.57 s	---	---	---	---	---	5.781
1.98	1,850	514.68	5.91 oc	0.21 ic	---	---	5.70 s	---	---	---	---	---	5.913
2.00	1,862	514.70	6.04 oc	0.21 ic	---	---	5.83 s	---	---	---	---	---	6.039

...End

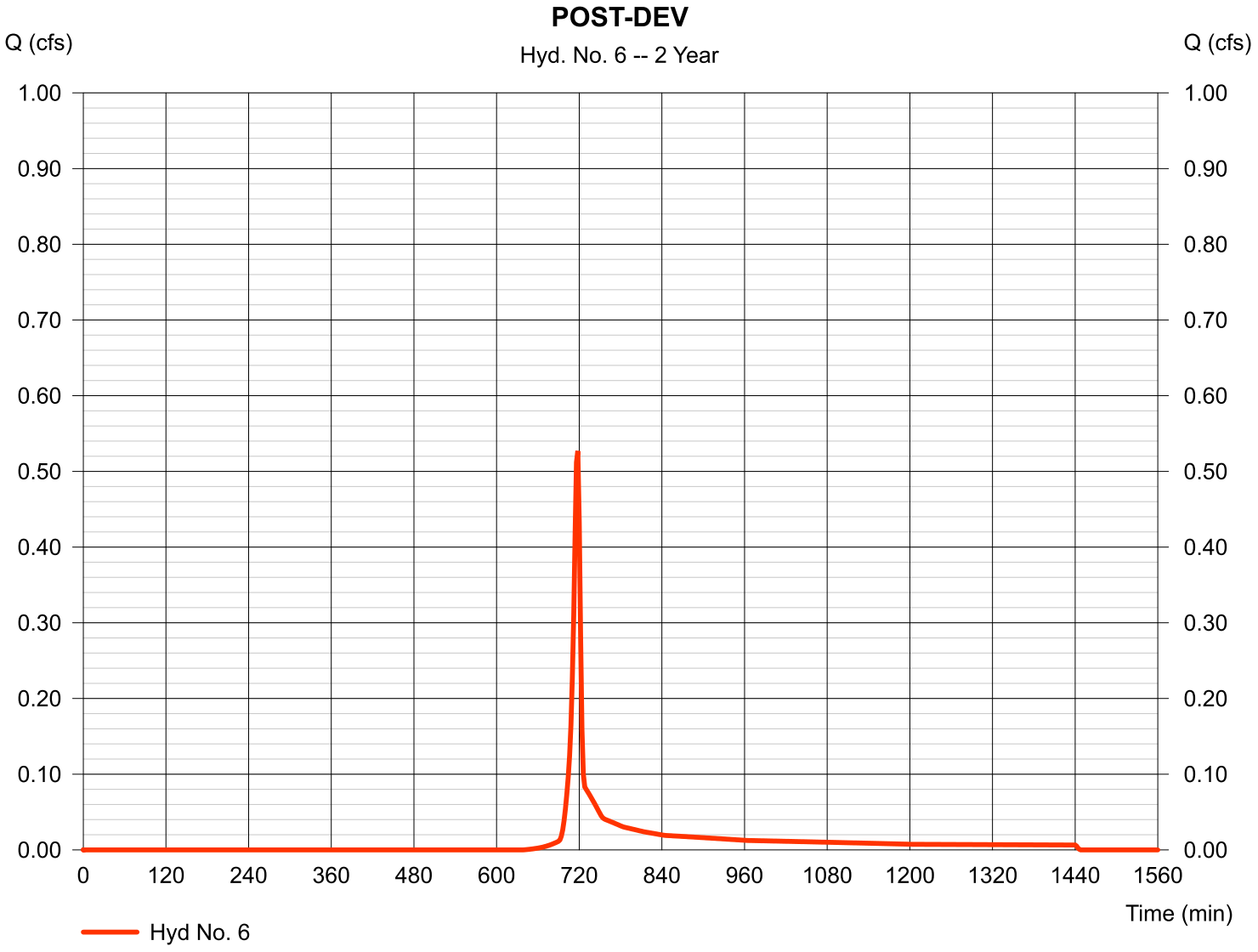
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Tuesday, 08 / 8 / 2023

Hyd. No. 6

POST-DEV

Hydrograph type	=	SCS Runoff	Peak discharge	=	0.527 cfs
Storm frequency	=	2 yrs	Time to peak	=	718 min
Time interval	=	2 min	Hyd. volume	=	1,055 cuft
Drainage area	=	0.320 ac	Curve number	=	77
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	6.00 min
Total precip.	=	2.85 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484



Hydrograph Report

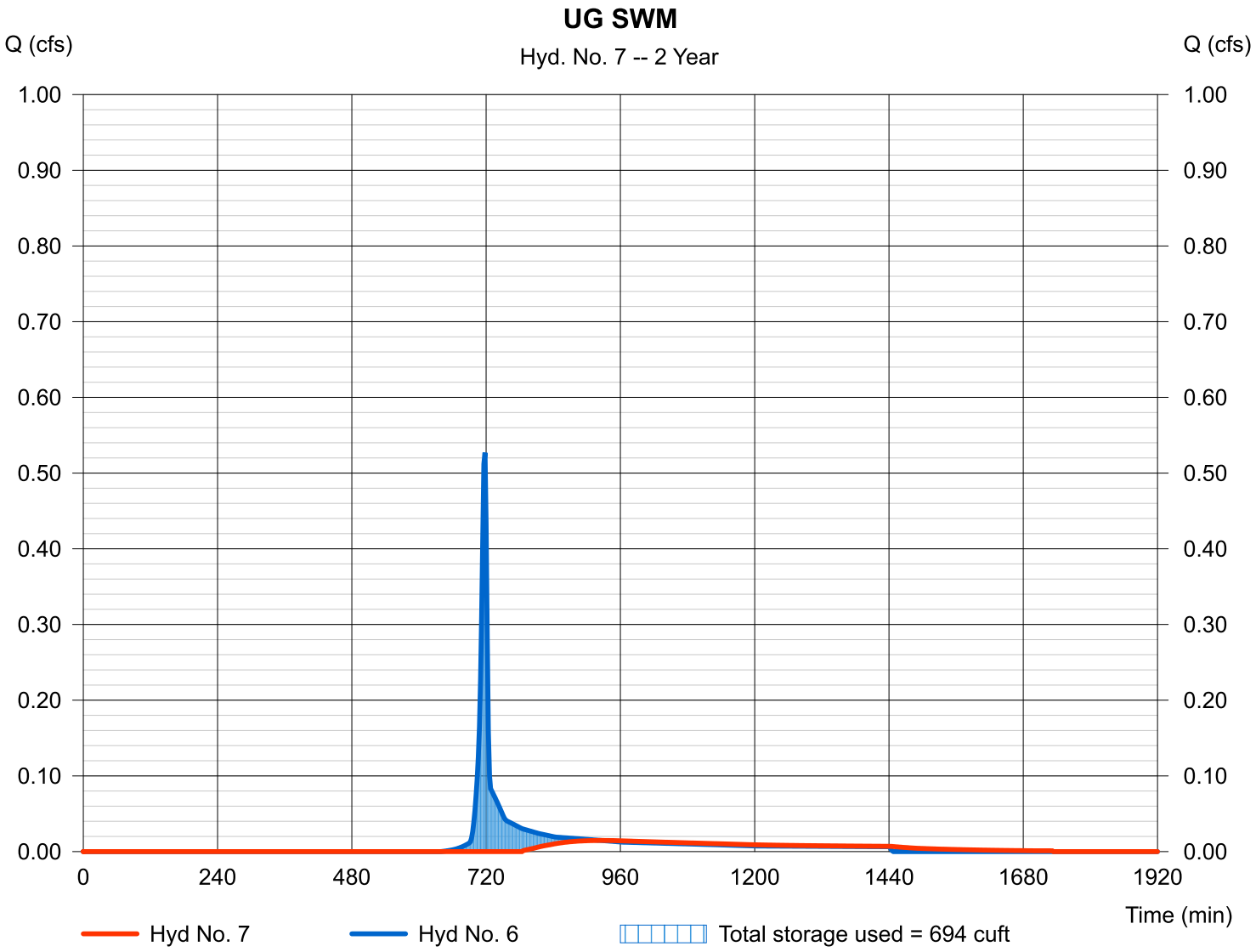
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Tuesday, 08 / 8 / 2023

Hyd. No. 7

UG SWM

Hydrograph type	=	Reservoir	Peak discharge	=	0.015 cfs
Storm frequency	=	2 yrs	Time to peak	=	926 min
Time interval	=	2 min	Hyd. volume	=	444 cuft
Inflow hyd. No.	=	6 - POST-DEV	Max. Elevation	=	513.48 ft
Reservoir name	=	UG SWM	Max. Storage	=	694 cuft

Storage Indication method used.



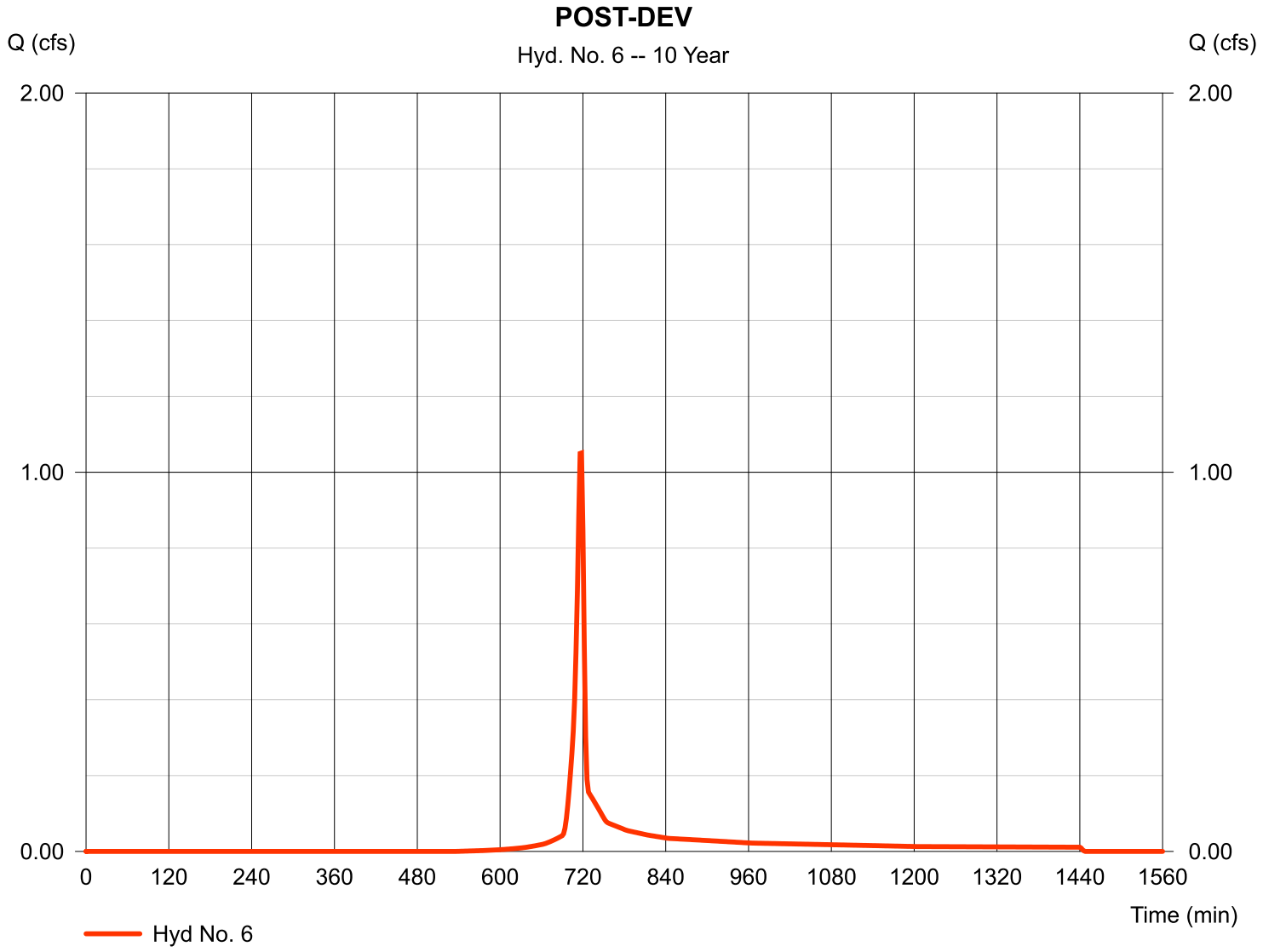
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Tuesday, 08 / 8 / 2023

Hyd. No. 6

POST-DEV

Hydrograph type	=	SCS Runoff	Peak discharge	=	1.051 cfs
Storm frequency	=	10 yrs	Time to peak	=	718 min
Time interval	=	2 min	Hyd. volume	=	2,119 cuft
Drainage area	=	0.320 ac	Curve number	=	77
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	6.00 min
Total precip.	=	4.17 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484



Hydrograph Report

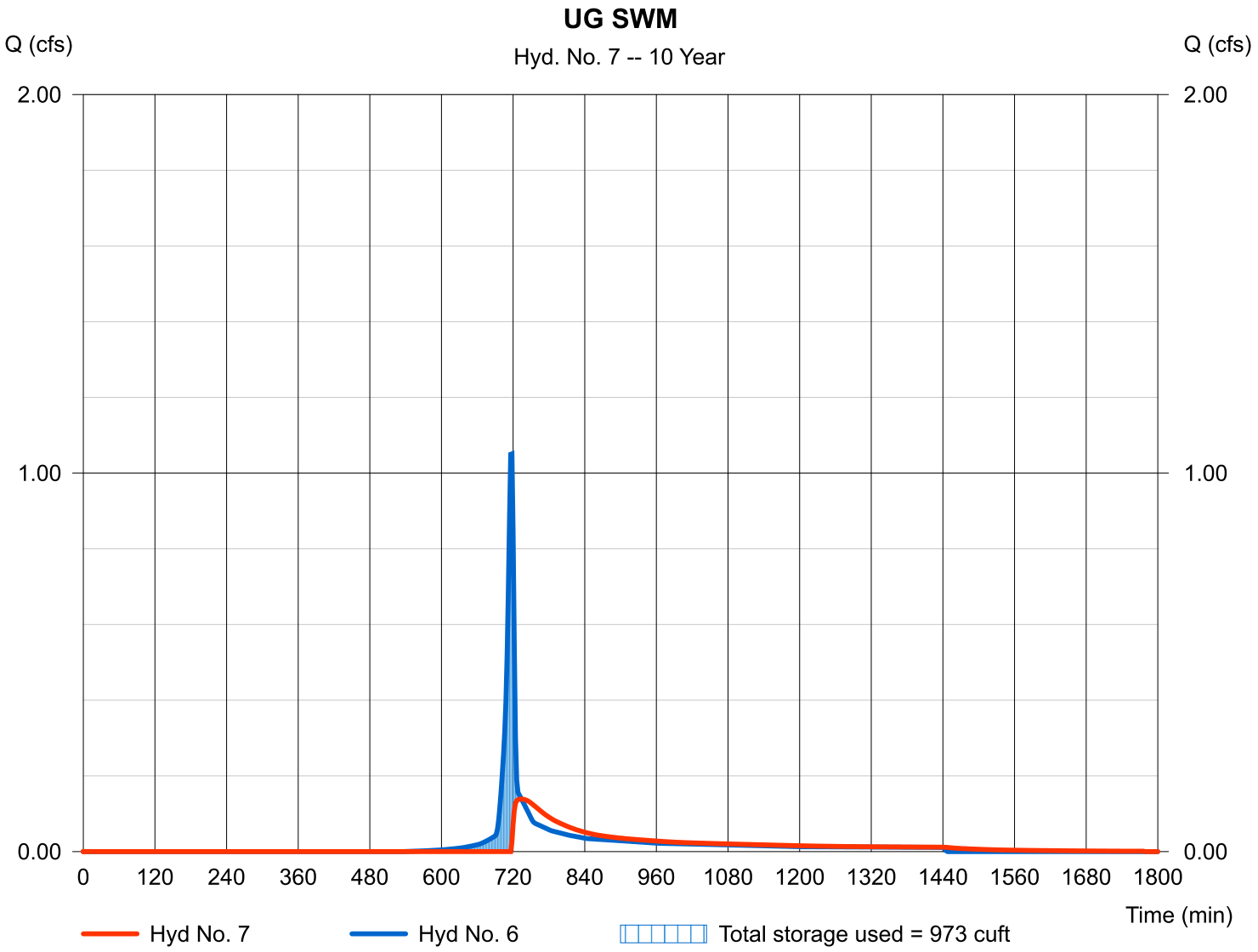
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Tuesday, 08 / 8 / 2023

Hyd. No. 7

UG SWM

Hydrograph type	=	Reservoir	Peak discharge	=	0.139 cfs
Storm frequency	=	10 yrs	Time to peak	=	734 min
Time interval	=	2 min	Hyd. volume	=	1,508 cuft
Inflow hyd. No.	=	6 - POST-DEV	Max. Elevation	=	513.68 ft
Reservoir name	=	UG SWM	Max. Storage	=	973 cuft

Storage Indication method used.



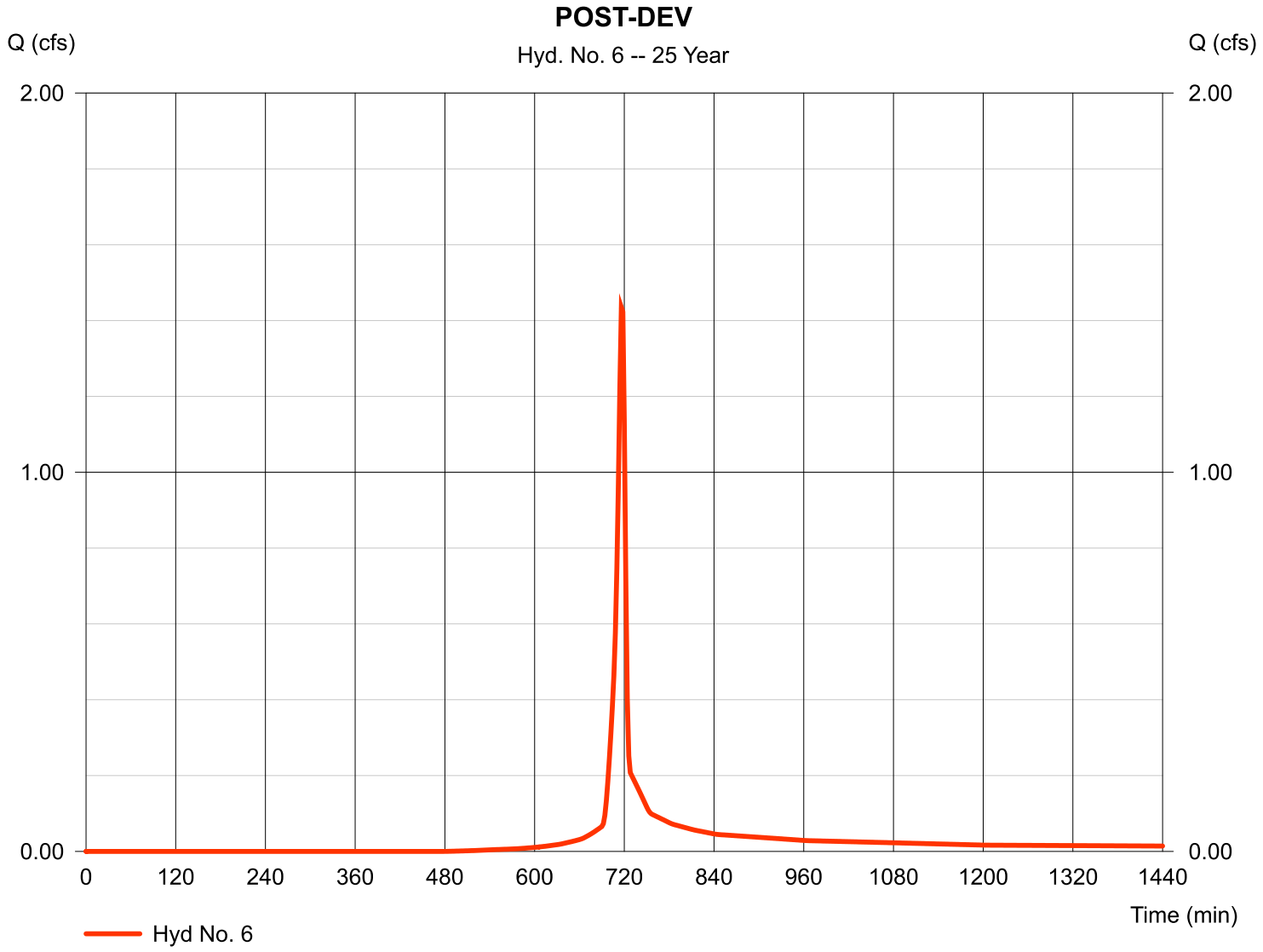
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Tuesday, 08 / 8 / 2023

Hyd. No. 6

POST-DEV

Hydrograph type	=	SCS Runoff	Peak discharge	=	1.435 cfs
Storm frequency	=	25 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	2,902 cuft
Drainage area	=	0.320 ac	Curve number	=	77
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	6.00 min
Total precip.	=	5.05 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484



Hydrograph Report

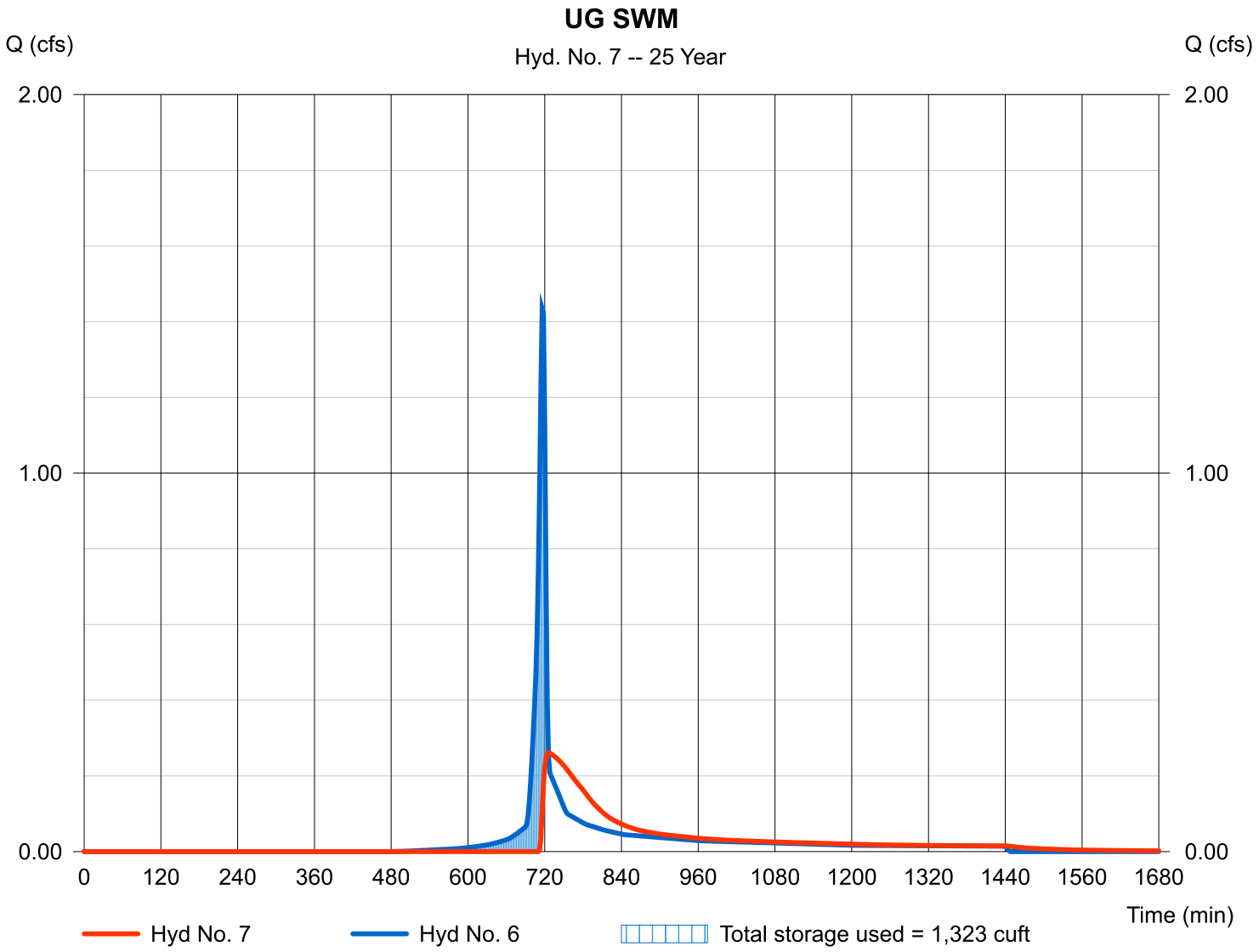
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Tuesday, 08 / 8 / 2023

Hyd. No. 7

UG SWM

Hydrograph type	=	Reservoir	Peak discharge	=	0.261 cfs
Storm frequency	=	25 yrs	Time to peak	=	726 min
Time interval	=	2 min	Hyd. volume	=	2,291 cuft
Inflow hyd. No.	=	6 - POST-DEV	Max. Elevation	=	513.95 ft
Reservoir name	=	UG SWM	Max. Storage	=	1,323 cuft

Storage Indication method used.



INTEGRITY
FEDERAL SERVICES

August 21, 2023

Mark Phillips, P.E.
Project Manager
Kimley-Horn & Associates, Inc.
11400 Commerce Park Drive, Suite 400
Reston, VA 20191

Re: Project Name: Alla Willa Commercial Preliminary Plan
INTEGRITY Project: 5051-0101
County/Town File Number: 2023-03

Dear Mr. Phillips:

The following is in response to your letter dated August 18, 2023:

Comment 1: This application is generally in conformance with the Preliminary Plan and Plat requirements per City of Charles Town Subdivision and Land Development Ordinance dated June 23, 2012 (Rev. June 21, 2023).

Response: Comment Acknowledged.

Comment 2: We request the Applicant revise the language in the title to "Preliminary Sudivision/Land Development Plat" per Section 1332.05 B4a1 of the Subdivision and Land Development Ordinance. Once the preliminary plan is approved, then the title can be changed to "Final".

Response: The plan title has been updated as requested. See the title on the cover sheet and the updated title block on all plan sheets.

Comment 3: We request the Applicant revise the language in the approval block to "Preliminary Sudivision/Land Development Plat" per Section 1332.05 B4a11 of the Subdivision and Land Development Ordinance. Once the preliminary plan is approved, then the title can be changed to "Final".

Response: The approval block has been updated as requested. Sheet 1.

Comment 4: We request the Applicant to add the floodplain statement on the cover sheet per Section 1332.B4a14 of the Subdivision and Land Ordinance. Currently, it appears the note is provided on Sheet 02 under General Note 5.

Response: The requested statement has been added. See sheet 1, bottom right.

Comment 5: We request the Applicant provide the WVDOH entrance permit number per Section 1332.B4a15 of the Subdivision and Land Ordinance if applicable.

Response: Alla Willa Drive is a municipal non-state route and not a WVDOH roadway. As a result, no WVDOH permit is applicable.

Comment 6: We request the Applicant provide the WV DEP permit number per Section 1332.B4a16 of the Subdivision and Land Ordinance if applicable.

Response: As discussed with James Newman on 8/18/2023, the land disturbance is less than 1-acre, as a result, no WV DEP NPDES permit is required.

Comment 7: We request the Applicant provide the area (square footage and acreage) of the property on Sheet 10, dimension of Alla Willa Drive (to centerline and 60' ROW) as well as the area and location (by lines and bearings) and widths (or other relevant dimensions) of the proposed easements per Section 1332.B4b7 of the Subdivision and Land Ordinance.

Response: The requested area information of the property and dimensions of the Alla Willa Drive right-of-way have been provided. Applicable bearing, distance, and dimensions have been provided for the proposed easement. See Sheet 11.

Comment 8: We request the Applicant provide the required setbacks in either a table of by illustration on the preliminary plat per Section 1332.D6 of the Subdivision and Land Ordinance.

Response: As discussed with James Newman on 8/18/2023, the table on the cover sheet is adequate and no additional setback information is required. See Sheet 1.

Comment 9: We request the Applicant provide the applicable agency review(s) per Section 1332.D7 of the Subdivision and Land Ordinance if applicable.

Response: The only applicable agency approval is the Charles Town Utility Board. The CTUB availability letter has been provided with this submission.

Comment 10: We request the Applicant provide a traffic impact study per Section 1332.D8 of the Subdivision and Land Ordinance.

Response: As discussed with James Newman on 8/18/2023, per Section 1333.06(B), since the site will not generate 100 or more trips per hour during peak generating time, and the development does not meet the criteria outlined under section 1333.06(B)(1)(b), a traffic study is not required.

Comment 11: We request the Applicant provide a lighting plan per Section 1332.D10 of the Subdivision and Land Ordinance.

Response: As discussed with James Newman, building mounted light locations and associated notes per City requirements have been added to the site layout, see Sheet 12. Lighting details have also been added, see Sheet 04.

Comment 12: We request the Applicant provide the City's Engineer and Subdivision Administrator's approval that wheel stops can be used as an approved alternative in lieu of providing curb and gutter per Section 1333.23C2.

Response: Confirmed use of wheel stops is acceptable with James Newman on 8/18/2023.

Comment 13: We recommend the Applicant review the required line types for the descriptive lines inside and outside especially the proposed easement line-type inside the tract boundary per Section 1332.06B410 & 11 of the Subdivision and Land Ordinance.

Response: The line types, specifically the proposed easement line type, has been updated to be consistent with the Ordinance. See sheet 11.

Comment 14: We request the Applicant provide the proposed storm sewer calculation and storm sewer profiles plotting the 10-HGL for the proposed inlet pipe and outfall pipe.

Response: Storm sewer calculations for the pipe that connects to the underground stormwater management facility and inlet have been provided. No conveyance calculations have been provided for the outfall barrel since it is modeled within the stormwater management report. A profile has been provided for the storm sewer and 10-Year HGL's have been plotted onto the profile. See sheet 15.

Comment 15: We suggest the Applicant provide a sidewalk connection from the building to the public sidewalk in Alla Willa Drive.

Response: Comment acknowledged. The developers preference is to not provide a sidewalk connection from the building to the public sidewalk in Alla Willa Drive.

Please feel free to contact me at 304-725-8456 or by email at bsvedlow@ifs-ae.com if you should have any further questions.

Sincerely,

Integrity Federal Services, Inc. (INTEGRITY)

Benjamin J. Svedlow
Project Manager
g:\project\general\5051-0101 alla willa property\admin\3-correspondence\sent\2023-08-21 2nd submission to city\2023-08-21 kh comment response letter.docx

Planning Commission
101 East Washington Street
Charles Town, WV 25414

SCHEDULED

Meeting: 09/25/23
Department: Planning Commission
Category: Report
Initiator:

AGENDA ITEM (ID #)

Commission Review: SLD2023-02 Westover Dental - Sketch Plan Completeness Review

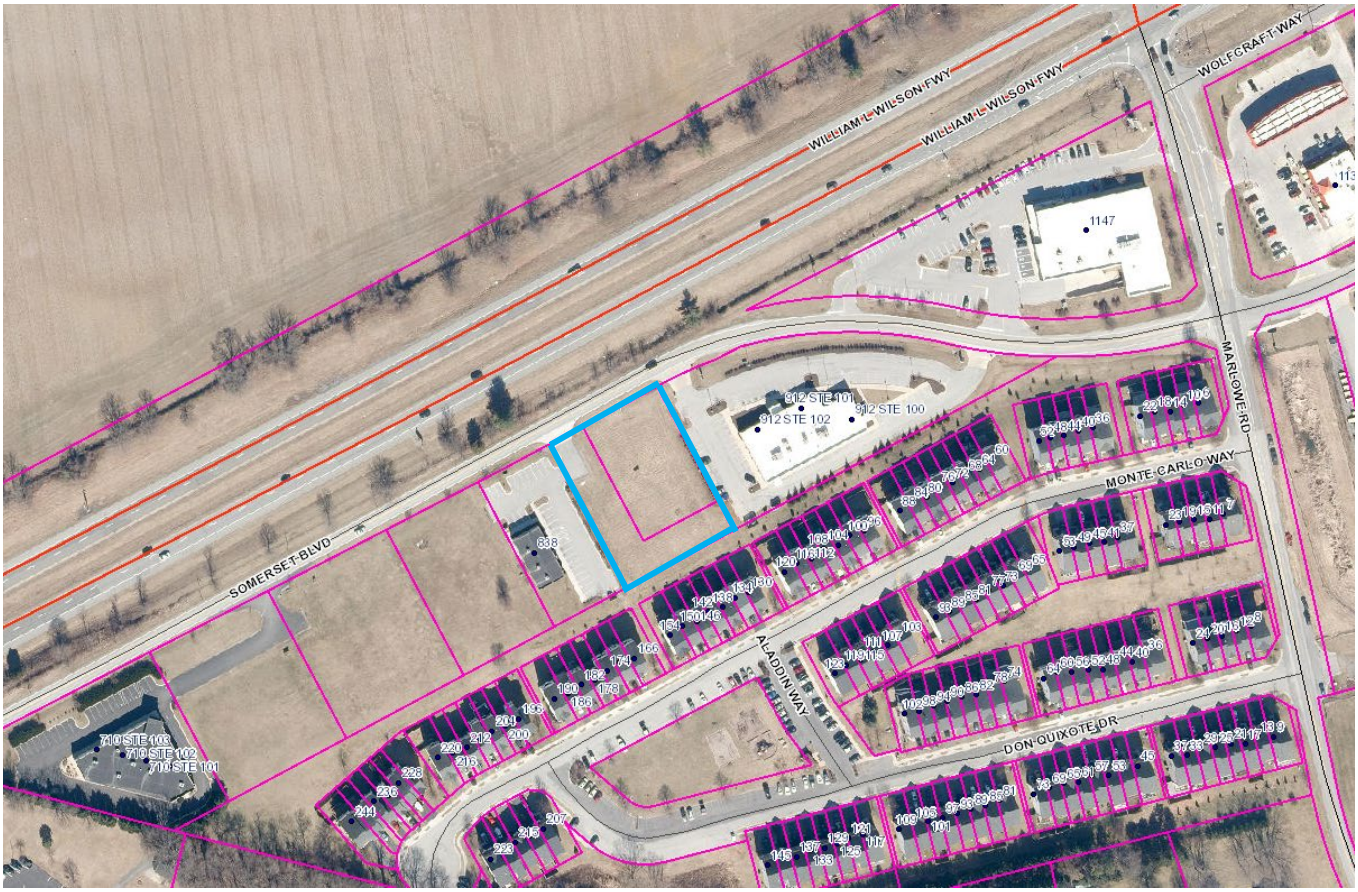
ATTACHMENTS:

- 1. Staff Report.pdf
- 2. Application.pdf
- 3. Revised Sketch.pdf

Sketch Plan Completeness Review

SLD2023-02

Date: For the September 25, 2023 Planning Commission meeting
Applicant: Westover Holdings LLC
Property Owner: Grasso and Sons Development Corp. (Lot 6); Somerset LLC (Lot 5.0001)
Report by: James Newman, City Planner, Zoning/Subdivision Administrator.
Proposal: Major land development
Property Location: TD: 03 / Map: 16A / Pcl: 0005.0001 & TD: 03 / Map: 16A / Pcl: 0006.0000, located on Somerset Blvd. Parcel is outlined in **blue** below.
Current Zoning: General Commercial (GC).



PROJECT OVERVIEW

The development of the property as a dental lab.

The parcels in question are TD 3 Map 16A Parcel 6, and TD 3 Map 16A Parcel 5.0001. the merger of these parcels was approved by the City Planner on November 28, 2011, but the owners at the time failed to finish the process. The property was merged on March 15, 2023 but has yet to appear on Jefferson County Geographic Information Systems (GIS) as merged.

HISTORY

This item was previously approved by the Planning Commission. The Commission approved the sketch plan on April 24, 2023. Since then, the applicant has worked on modifying easements and other legal encumbrances on the property, and has changed the design of the project substantially, and the applicant has made major revision to their sketch plan; the applicant has shifted the location of the structure, and removed an interconnection parking lot that was located between the front and rear access drives.

CHANGES FROM PRIOR PLANS

Changes from the prior approved sketch plan include:

1. Removal of the parking lot which connected the front and rear access drives. Those drives no longer connect on this parcel.
2. The parking lot has been removed. All parking is directly reached from the access drives.
3. The building location has changed. It is now in the center of the parcel in a horizontal layout, whereas the previous plan had it shifted further left and in a more vertical alignment.
4. Additional fencing around the structure is proposed.
5. The dumpster location has been changed.
6. Landscaping has been changed. The previous plans showed 11 trees, and the revised plans show 8 trees.

ZONING REVIEW

The property is zoned General Commercial.

Table 1322.10, GC District Bulk and Area Regulations

Maximum Density	No Requirement
Minimum Lot Size	No Requirement
Minimum Lot Width	No Requirement
Minimum Front Yard Setback	40 feet
Minimum Side Yard Setback	10 feet (25 feet where adjoining a residential district)
Minimum Rear Yard Setback	30 feet
Maximum Lot Coverage	90 percent
Minimum Required Open Space	No Requirement
Maximum Building Height	55 feet[1]
Maximum Stories	5 stories[1]

[1] Hotels shall have a maximum height of 78 feet and maximum number of six (6) stories.

Site Development

Up to 70% of the site may be developed with impervious surface. The proposed development will cover 66.2% of the site.

Parking
Required parking for a dental lab is 3.53 spaces per 1,000 sq. ft. Based on a 5,472 sq. ft. structure, the required parking is 20 spaces. 39 spaces are being provided, of which three are handicap spaces.

Open Space
There is no open space requirement.

Setbacks
All required setbacks have been met.

CONCLUSION

The sketch plan meets the requirement of being a complete application as stated in Subdivision Ordinance Section 1332.03.C.2.C. This does not mean the subdivision application meets the criteria for approval; it merely means that the application is deemed complete by staff.

Staff deems the application **complete**; the Planning Commission should vote to determine the application is complete. If deemed complete, a public hearing will be scheduled for October 23, 2023.

Authentisign ID: 430C744B-89B7-ED11-BA77-14CB652F4F5B

Sketch Plan Application No._____

RECEIVED
SEP 6 2023
BY:_____

SKETCH PLAN APPLICATION

SUBDIVISION AND LAND DEVELOPMENT ORDINANCE
ARTICLE 1332, SUBDIVISION AND LAND DEVELOPMENT APPLICATION & APPROVAL REQUIREMENTS

To assist the Subdivision Administrator in the review of a Sketch Plan Application, the Applicant must utilize this form to supply the City with the information prescribed under Section 1332.03 of the Charles Town S/LD Ordinance. The submission of this form, along with the prescribed information and required fees, shall serve as the Applicant's Sketch Plan Application as required by Ordinance Section 1332.03. Applicant is responsible to ensure the standards of Ordinance Section 1332.04, Sketch Plan Requirements, are met and provided herein is a checklist of the Sketch Plan requirements.

1. DATE February 24th, 2023

2. APPLICATION TYPE*

Zoning Use Permit, Special Exception Use and Sketch Plan requirements found in the Supplemental Regulations of the Zoning Ordinance

- Submit Three (3) 11" x 17" copies of the Sketch Plan shall be submitted and in Adobe PDF format

X Major S/LD Development

- Submit Three (3) 18" x 24" copies of the Sketch Plan shall be submitted and in Adobe PDF format

*There are two types of Sketch Plan submissions:

1. For Zoning Use Permit, Special Exception Use and Sketch Plan requirements found in the Supplemental Regulations of the Zoning Ordinance. Submission standards are found in Section 1332.04(D).
2. For a Sketch Plan for a Major S/LD application, submission standards are found in Section 1332.04(E)

Authentisign ID: 430C744B-89B7-ED11-BA77-14CB652F4F5B

3. APPLICANT'S NAME* Westover Holdings LLC

Address: 11 Meadow Branch Ave, Winchester VA 22601

Telephone Number (804) 405-9873 Fax Number ( )

Email Address austinwestover@gmail.com

4. PROPERTY OWNER'S NAME Grasso & Sons Development Corp. 45omerset LLC

Address: 34047 Soaring Bamboo Path Wesley Chapel, FL 33543 175 John Thomas Way Charlestown WV 25414

Telephone Number (703) 303-9170 Fax Number ( ) 304-283-2601

Email Address PGrasso@USAid.gov JThomas@Jeffersonasphalt.net

5. LEGAL DESCRIPTION OF THE SUBJECT PROPERTY (list all parcels that apply)

Property Address: Lot 6B Somerset Blvd Charles Town WV 25414

Tax Map # and Parcel: 16A / 6 16A/5.1

Deed Book and Page #: 1046/264 1130/249

Property Area in Square Feet or Acres: .83ac Total | .46ac This Parcel

6. DESCRIPTION OF PROJECT AND PROPOSED USE(S) OF THE PROPERTY:

Stand alone, single level dental office

7. DESCRIPTION OF THE EXISTING (OR FORMER) USE(S) OF THE PROPERTY AND CURRENT ZONING:

Undeveloped land Zoned appropriately.

*Applicants include: Property owner(s), Engineer(s), Surveyor(s), or Consultant(s)

Authentisign ID 430C744B-89B7-ED11-BA77-14CB652F4F5B

8. ARE THERE ANY ANTICIPATED WAIVERS OR VARIANCES? IF YES, PROVIDE DETAILS.

NO

9. HAS THE PROPERTY BEEN THE SUBJECT OF ANY COURT ACTION?

☐ Yes (Please specify nature of all proceedings and current status and attach any documents showing court decisions, etc.)

X No

10. PARCEL HISTORY (List all pending or previously approved applications on the subject parcels inventoried above, including previous site plan applications if this application is a site plan amendment)

Application No.	Project Name and Phase	Status	Approval Date

Authentisign ID: 430C744B-89B7-ED11-8A77-14CB652F4F5B

11. INTERESTED PARTY ADDRESSES, FOR PUBLIC NOTICE (including across street) (Interested parties are defined as adjacent properties within 100 feet).

Owner	# and Street	City, State, Zip
AO Charles Town LLC	149 Linwood Way	Martinsburg, WV 25403
University Healthcare Physicians INC	2500 Foundation Way	Martinsburg, WV 25401
Anthony Shockney	130 Monte Carlo Way	Charles Town WV 25414
Frank & Coral Monteh	14502 Hazelmoor Ct	Silver Spring, MD 20906
Robert Miller	138 Monte Carlo Ct	Charles Town WV 25414
Tamilyn & Chris Troxell	142 Monte Carlo Ct	Charles Town WV 25414
Sean Gordon	146 Monte Carlo Ct	Charles Town WV 25414
Maria Montero Hans Saavedra	150 Monte Carlo Ct	Charles Town WV 25414
James & Carolyn Bryant	154 Monte Carlo Ct	Charles Town WV 2544

APPLICANT CERTIFICATION

I certify that, to the best of my knowledge, the submitted information and statements are true and correct. I also certify that I have received and read Section 1332.02 of the Charles Town S/LD Ordinance and relevant provisions of the Charles Town City Code.

Signature of Applicant

_____ Date 2/24/23

Signature of Property Owner (If different than Applicant)

Authent. Peter Grasso Date 02/28/23

Signature of Property Owner (If different than Applicant)

John J. Thomas, Jr. Date 02/28/23

AuthentiSign ID 430C7448-89B7-ED11-BA77-14CB652F4F5B

Please submit an original completed Application and specified number of Site Plan copies to the following:

Subdivision Administrator
City of Charles Town
101 E. Washington Street
Charles Town, WV 25414

FOR CITY USE ONLY

Application Number:_____ Date Application Received:_____

Fee: $_____ Paid:$_____ Check No._____

Receipt No._____

Subdivision Administrator Approval:_____ Date:_____

Planning Commission Approval:_____ Date:_____

Comments:_____

_____

_____

_____

_____

_____

CHARLES TOWN, WEST VIRGINIA
Department of Community Development
Division of Planning and Zoning
101 East Washington Street, P.O. Box 14
Charles Town, West Virginia 25414

Phone: (304) 725-2311

Fax (304) 725-1014

File Number: _____
Staff Initials: _____
Fees Paid: _____

https://goo.gl/KGzDMZ

Sketch Plan Review Checklist
Amended 2017 Subdivsion Ordinance

(please check one) X **Major S/LD Application** or
_____ **Zoning Use Permit, Special Exception Use, or Sketch Plan (requirements found in the Supplemental Regulations of the Zoning Ordinance)**

Project Name: Westover Dental Office

Property Owner Information

Property Owner: Westover Holdings, LLC
Mailing Address: 11 Meadow Branch Ave
City: Winchester State: VA Zip Code: 22601
Phone Number: 804-405-9873 Email: austinwestover@gmail.com
Signature: gnature of Applicant Date: 03/01/2023

Applicant's Registered Engineer or Surveyor or Design Consultant

Name: Triad Engineering, Inc
Mailing Address: 1075-D Sherman Ave.
City: Hagerstown State: MD Zip Code: 21740
Phone Number: 301-797-6400 Email: eiser@triadeng.com

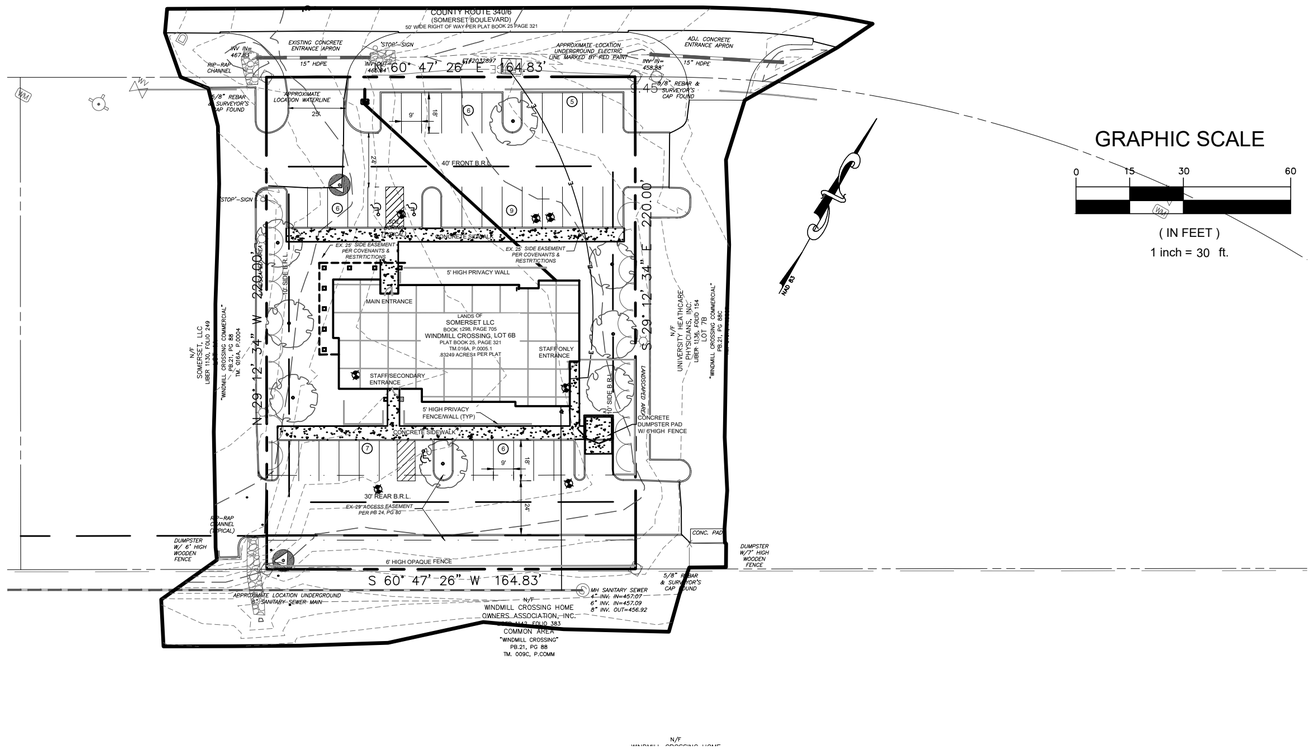
Physical Property Details

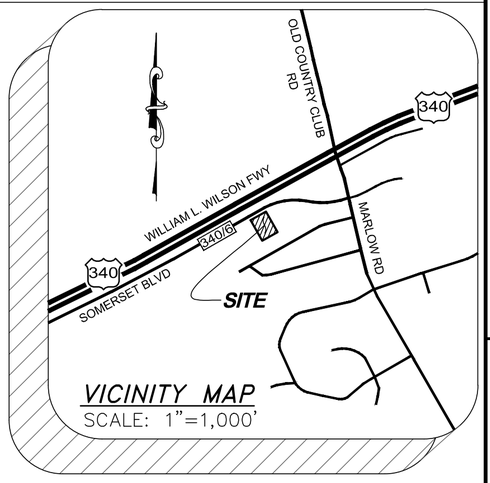
Physical Address: Lot 6B Somerset Blvd.
City: Charles Town State: WV Zip Code: 25414
Tax District: 3 Map No: 016A Parcel No: 0005.0001 & 0006.0000
Parcel Size: 0.86 AC total Deed Book: 25 & 24 Page No: 321 & 81

Zoning of Subject Property			Is the Project to Be:	Is Property In:
Urban Reserve (UR)	Residential Medium-High Density (R-15)	Neighborhood Commercial (NC)	Planned Unit Development (PUD)	Historic Overlay District (HOD)
General Commercial (GC)	Old Town Residential (OT-R)			Floodplain Overlay District (FOD)
Old Town Mixed Use Commercial (OT-MUC)	Neighborhood Residential (NR)			

City Use Only	1st Review	2nd Review	3rd Review	4th Review
Submittal Date				
Zoning Administrator				
City Planner				
GIS/Addressing				
Return Date				

SKETCH PLAN - WESTOVER DENTAL OFFICE





GRAPHIC SCALE

0 15 30 60

(IN FEET)

1 inch = 30 ft.

GENERAL NOTES:

1. SITE IS SITUATED IN WINDMILL CROSSING SUBDIVISION, APPROXIMATELY 800' SOUTH OF THE INTERSECTION OF SOMERSET BLVD. AND MARLOW RD.
2. THE SURVEYED PROPERTY SHOWN HEREON IS THE SAME LAND DESCRIBED IN SCHEDULE "A" OF TITLE COMMITMENT No. _____, PREPARED BY OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY WITH A COMMITMENT DATE OF OCTOBER 20, 2022 AT 9:00 A.M.
3. SITE CONSISTS OF 3 MERGED PARCELS, BEING PLATTED AT PB 25, PG 321. LANDS OF SOMERSET LLC. LIBER 1298, FOLIO 705; TM 016A, PCL 0005.0001
4. HORIZONTAL DATUM IS NAD83 WEST VIRGINIA NORTH STATE PLANE COORDINATE SYSTEM, VERTICAL DATUM IS NAVD 88, BOTH DERIVED FROM GPS RTK OBSERVATIONS.
5. NO EVIDENCE OF CEMETERIES, GRAVE SITES, OR BURIAL GROUNDS WERE OBSERVED AS OF THE DATE OF FIELD WORK COMPLETION.
6. CURRENT LAND USE - NOT DEVELOPED
   PROPOSED LAND - DENTIST OFFICE
7. ZONED - GENERAL COMMERCIAL (GC)
8. PROPERTY AREA - 36,268 SF (0.833 AC)
9. MAXIMUM ALLOWABLE 70% IMPERVIOUS. PROPOSED 24010 SF / 36268 SF = 66.2%
10. WATER & SEWER PROVIDED ON SITE BY CHARLES TOWN UTILITY BOARD. LETTER OF AVAILABILITY DATED DECEMBER 6, 2022 OBTAINED.
11. WINDMILL CROSSING WAS ANNEXED INTO THE CITY OF CHARLES TOWN IN 2007. IN 2011 THE CITY OF CHARLES TOWN AMENDED AND RESTATED CONDITIONS OF THE ANNEXATION IN RESOLUTION 2011-05 AND FURTHER AMENDED THE SIGNAGE CRITERIA IN RESOLUTION 2012-04.
12. BUILDING SETBACKS:
    FRONT - 40'
    REAR - 30'
    SIDE - 10'
13. 10' SCREENING BUFFER IN REAR ADJACENT TO RESIDENTIAL
14. PARKING REQUIREMENTS - MEDICAL/DENTAL OFFICE = 3.53 SPACES/1000SF GFA
    5,472 SF * 3.53 SP/1000 SF = 19.31 SP = 20 SPACES REQUIRED
    36 SPACES + 3 ADA SPACES PROVIDED
15. 25' SIDE YARD EASEMENTS WERE ESTABLISHED IN THE COVENANTS & RESTRICTIONS - DECLARATION OF WINDMILL CROSSING BUSINESS COMMUNITY, 1020-178.

LINETYPE LEGEND	
	SUBJECT PROPERTY LINE
	ADJOINING PROPERTY LINE
	MINIMUM BUILDING RESTRICTION LINE
	EDGE OF CONCRETE
	CONTOUR, MAJOR 5'
	CONTOUR, MINOR 1'
	CURB
X X	FENCE, AS NOTED
	LANDSCAPED AREAS
	ROAD, CENTER LINE
	ROAD, EDGE OF PAVEMENT
	UNDERGROUND SANITARY SEWER
	UNDERGROUND STORM DRAIN
UGE	UNDERGROUND ELECTRIC LINE

SYMBOLS LEGEND	
	ELECTRIC TRANSFORMER
	LIGHT POST
	REBAR & SURVEYOR'S CAP FOUND (AS NOTED)
S	SANITARY SEWER MANHOLE
	SIGN (AS NOTED)
	SOIL BORING

OWNER/DEVELOPER:
WESTOVER HOLDINGS, LLC
11 MEADOW BRANCH AVE
WINCHESTER, VA 22601

Austin Westover
austinwestover@gmail.com
(804)405-9873

ARCHITECT:
FAZIO ARCHITECTS
308-B CONGRESS AVE
AUSTIN, TX 78701

KEITH GREGG
keith@fazioarchitects.com
(512)494-1680

ENGINEERING/SURVEYING:
TRIAD ENGINEERING, INC
1075 SHERMAN AVE
HAGERSTOWN, MD 21790

ERIC ISER, PE
eiser@triadeng.com
(301)797-6400

Rev	Date	Agency
1	03-15-23	City of Charles Town Planning (Kimley-Horn)
2	04-03-23	Merger Deed Recorded
3	09/01/23	Layout Change per Client

TRIAD ENGINEERING, INC.
1075-D SHERMAN AVENUE
HAGERSTOWN, MD 21740
PH: 301.797.6400 FAX: 301.797.2424
OFFICE LOCATIONS
MARYLAND ○ PENNSYLVANIA ○ VIRGINIA ○ WEST VIRGINIA

CADD FILE:

DRAWN BY: Staff | CHECKED BY: E.H.I. | DATE: 09/01/2023 | SCALE: 1"=30'

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF WEST VIRGINIA, LICENSE NO. 15067 EXPIRATION DATE: 12-31-2024

ERIC ISER REGISTERED 15067 STATE OF WEST VIRGINIA PROFESSIONAL ENGINEER 09/01/23

SKETCH PLAN OF WESTOVER DENTAL

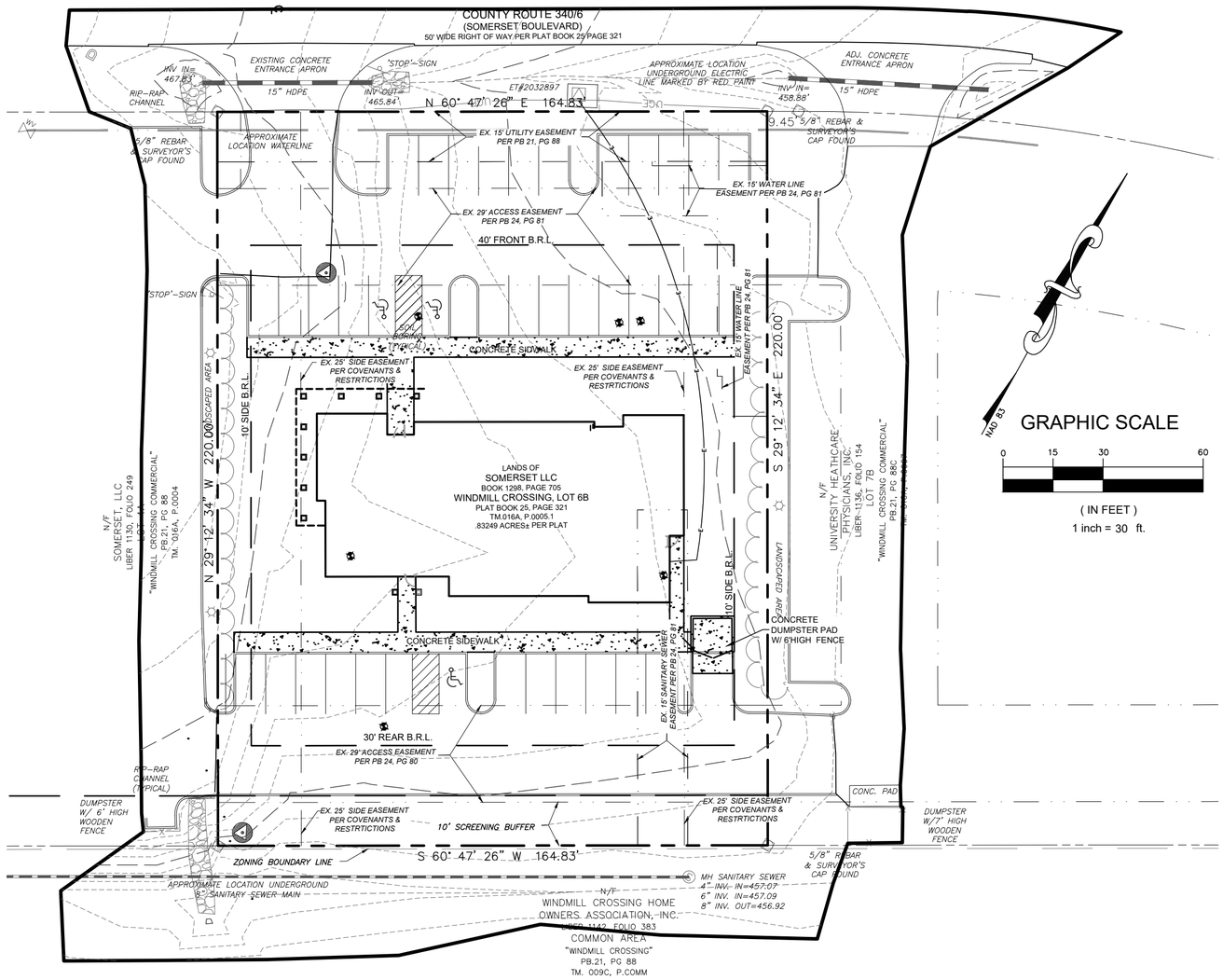
WESTOVER HOLDINGS, LLC
PART OF LIBER 1130, FOLIO 249 AND LIBER 1046, FOLIO 264

SITUATED IN WINDMILL CROSSING APPROXIMATELY 880' WEST OF THE INTERSECTION OF SOMERSET BOULEVARD AND MARLOW ROAD IN CHARLES TOWN JEFFERSON COUNTY, WEST VIRGINIA

TRIAD ENGINEERING, INC.
www.triadeng.com

SHEET NUMBER: C-1.0
FILE NO.: 03-22-0965
JOB NO.: 03-22-0965

SKETCH PLAN - WESTOVER DENTAL OFFICE



LINETYPE LEGEND

	SUBJECT PROPERTY LINE
	ADJOINING PROPERTY LINE
	MINIMUM BUILDING RESTRICTION LINE
	EDGE OF CONCRETE
	CONTOUR, MAJOR 5'
	CONTOUR, MINOR 1'
	CURB
X X	FENCE, AS NOTED
	LANDSCAPED AREAS
	ROAD, CENTER LINE
	ROAD, EDGE OF PAVEMENT
	UNDERGROUND SANITARY SEWER
	UNDERGROUND STORM DRAIN
UGE	UNDERGROUND ELECTRIC LINE

SYMBOLS LEGEND

	ELECTRIC TRANSFORMER
	LIGHT POST
	REBAR & SURVEYOR'S CAP FOUND (AS NOTED)
S	SANITARY SEWER MANHOLE
	SIGN (AS NOTED)
	SOIL BORING

OWNER/DEVELOPER:
WESTOVER HOLDINGS, LLC
11 MEADOW BRANCH AVE
WINCHESTER, VA 22601

Austin Westover
austinwestover@gmail.com
(804)405-9873

ARCHITECT:
FAZIO ARCHITECTS
308-B CONGRESS AVE
AUSTIN, TX 78701

KEITH GREGG
keith@fazioarchitects.com
(512)494-1680

ENGINEERING/SURVEYING:
TRIAD ENGINEERING, INC
1075 SHERMAN AVE
HAGERSTOWN, MD 21790

ERIC ISER, PE
eiser@triadeng.com
(301)797-6400

Rev	Date	Agency
1	03-15-23	City of Charles Town Planning (Kimley-Horn)
2	04-03-23	Merger Deed Recorded
3	09/01/23	Layout Change per Client

TRIAD ENGINEERING, INC.
1075-D SHERMAN AVENUE
HAGERSTOWN, MD 21740
PH: 301.797.6400 FAX: 301.797.2424
OFFICE LOCATIONS
MARYLAND ○ PENNSYLVANIA ○ VIRGINIA ○ WEST VIRGINIA

CADD FILE:	DRAWN BY: Staff	CHECKED BY: E.H.I.	SCALE: 1"=30'
		DATE: 09/01/2023	

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF WEST VIRGINIA, LICENSE NO. 15067 EXPIRATION DATE: 12-31-2024

ERIC ISER REGISTERED 15067 STATE OF WEST VIRGINIA PROFESSIONAL ENGINEER 09/01/23

SKETCH PLAN
OF
WESTOVER DENTAL

WESTOVER HOLDINGS, LLC
PART OF LIBER 1130, FOLIO 249 AND LIBER 1046, FOLIO 264

SITUATED IN WINDMILL CROSSING APPROXIMATELY 880' WEST OF THE INTERSECTION OF SOMERSET BOULEVARD AND MARLOW ROAD IN CHARLES TOWN
JEFFERSON COUNTY, WEST VIRGINIA

TRIAD ENGINEERING, INC.
www.triadeng.com

SHEET NUMBER:
C-1.1
FILE NO.: 03-22-0965
JOB NO.: 03-22-0965