Washington County MARYLAND
DEPARTMENT OF PLANNING & ZONING
PLANNING | ZONING | LAND PRESERVATION | FOREST CONSERVATION | GIS

AGENDA
WASHINGTON COUNTY PLANNING COMMISSION
100 W Washington Street, Room 2000
November 3, 2025, 6:00 PM

CALL TO ORDER AND ROLL CALL

REZONING PUBLIC MEETING

1. **RZ-25-010 Text Amendment** – Jill Baker * ***Information/Discussion/Tentative Action***
   Proposed text amendment to Article 19C, Sections 19C.2 and 19C.3 to allow light manufacturing uses to be principally permitted uses and for some heavy industrial uses to be special exception uses in the Special Economic Development (SED) zoning district

NEW BUSINESS

MINUTES

1. October 6, 2025 Planning Commission meeting minutes * ***Discussion/Action***

SITE PLANS

1. **Taylor Farm I LLC [SP-23-003]** – Misty Wagner-Grillo * ***Discussion/Action***
   Proposed 50,000 sq. ft. warehouse and parking facility on undeveloped parcel; Location: 16275 Wright Road; Zoning: IG (Industrial General)
2. **Sheetz – Smithsburg [SP-25-011]** – Misty Wagner-Grillo * ***Discussion/Action***
   Proposed 6,139 sq. ft. Sheet convenience store and gas station; Location: 11842 Mapleville Road; Zoning: BL (Business Local)

FOREST CONSERVATION

1. **Sheetz – Smithsburg [SP-25-011]** – Travis Allen * ***Discussion/Action***
   Request to establish an offsite easement to satisfy the forest mitigation requirements for a new Sheetz; Location: 11842 Mapleville Road; Zoning: BL (Business Local)
2. **Black Rock Driving Range [SP-25-026]** – Travis Allen * ***Discussion/Action***
   Request to remove one specimen tree from the Black Rock Golf Course as part of the redevelopment of the driving range; Location: 20025 Mt. Aetna Road; Zoning: RT/A(R) – Residential Transition/Agricultural Rural
3. **Donovan Carbaugh, Lots 1-4 [FP-25-007]** - Travis Allen * ***Discussion/Action***
   Request to relocate two existing onsite forest easements totaling 5.91 acres offsite to an undeveloped property; Location: 17028, 17030 and 17034 Broadfording Road

OTHER BUSINESS

1. **Update of Projects Initialized** – Jennifer Kinzer * ***Information/Discussion***
2. **Black Rock PUD Remand** – Jill Baker * ***Discussion/Action***
   Planning Commission's response to the Board of Zoning Appeals regarding the Black Rock Remand

ADJOURNMENT

UPCOMING MEETINGS

1. December 1, 2025, 6:00 p.m. – Washington County Planning Commission regular meeting

*attachments

Disclaimer: Copies of plans contained in this packet do not necessarily reflect the complete plan submission received by our office. The number of pages per plan may be reduced to accommodate size limitations of our website. Complete plans may be viewed in our offices by calling for an appointment.

The Planning Commission reserves the right to vary the order in which the cases are called. Individuals requiring special accommodations are required to contact the Washington County Planning Department at 240-313-2430 to make arrangements no later than 10 working days prior to the meeting. Notice is given that the Planning Commission agenda may be amended at any time up to and including the Planning Commission meeting.

Washington County
MARYLAND

FOR PLANNING COMMISSION USE ONLY
Rezoning No. RZ-25-0011
Date Filed: 10-9-25

WASHINGTON COUNTY PLANNING COMMISSION
ORDINANCE TEXT AMENDMENT APPLICATION

Washington County Department of Planning and Zoning

	□Property Owner □Contract Purchaser
Applicant	□Attorney □Consultant
747 Northern Ave., Hagerstown, MD 21742	■Other: Staff
Address	
Jill Baker, AICP	240-313-2430
Primary Contact	Phone Number
same	jbaker@washco-md.net
Address	E-mail Address

□ Adequate Public Facilities Ordinance
□ Forest Conservation Ordinance
□ Subdivision Ordinance
□ Solid Waste Plan
□ Water and Sewer Plan
■ Zoning Ordinance
□ Other _____

Section No. 19C.2, 19C.3

Please provide the proposed text on a separate sheet of paper as follows: strike-through should be used for deletions [~~deletions~~], unchanged wording in regular type, and new wording should be underlined [new wording].

Jill L Baker
Applicant's Signature

Subscribed and sworn before me this_____day of_____, 20_____.

My commission expires on_____

_____
Notary Public

FOR PLANNING COMMISSION USE ONLY

□ Application Form
□ Fee Worksheet
□ Application Fee
□ Proposed Text Changes
□ 30 copies of complete Application

Washington County
MARYLAND
DEPARTMENT OF PLANNING & ZONING
PLANNING | ZONING | LAND PRESERVATION | FOREST CONSERVATION | GIS

November 2025 **RZ-25-011**

APPLICATION FOR TEXT AMENDMENT
WASHINGTON COUNTY ZONING ORDINANCE
STAFF REPORT AND ANALYSIS

Proposal: Application is being made to amend Sections 19C.2 & 19C.3 of the Washington County Zoning Ordinance to include some commercial and light industrial uses as permitted or special exception uses in the Special Economic Development (SED) district.

Staff Report: The SED district was created and applied to the land associated with the former Fort Ritchie Army Base in Cascade. Upon the Fort's closure in 1998 the land was eventually conveyed to a private entity for redevelopment. A wide variety of uses were included within the district to mimic most of the activities that had occurred previously and to stimulate redevelopment of the Fort.

As with most military bases, the land associated with the Fort contained all the elements of a small town including residential, commercial, and industrial uses. To maintain the historic and cultural significance of the site and its structures, the current owners have adopted a business model that reuses significant portions of land and structures to mimic the town feel of the property first established by the military base. Significant progress in redeveloping the former Fort has been made by the current property owners by attracting multiple residential, commercial and manufacturing users to the site who are now occupying existing buildings on the land.

These amendments seek to expand the opportunities for reuse and revitalization of the site by adding some commercial and manufacturing-type uses to the list of permitted and special exception uses in the zoning district.

Analysis: To support the continued redevelopment of the former Fort, staff is proposing to amend sections 19C.2 and 19C.3 of the SED district to include some permitted and special exception uses.

The additions to the commercial uses already permitted in the district are primarily associated with new uses that have been added to the zoning ordinance over the last several years. The new uses fit into the retail sales and services already permitted within the district.

There is currently no light industrial, or manufacturing uses principally permitted in the SED district. Previous light manufacturing businesses that have been attracted to the site have been required to go through a special exception process. Because some of the buildings remaining that were used by the military were designed for light industrial and manufacturing type uses, several businesses have been attracted to the property to reuse the existing structure. These amendments seek to provide a limited number of principally permitted industrial and manufacturing uses to streamline efforts that continue to attract uses that were once deemed compatible with the overall use of the property.

The current SED district does allow for some limited special exception uses that Staff believes should be expanded to include more specific types of manufacturing and industrial uses. Uses requiring a special exception would be required to have a public hearing with the Board of Zoning Appeals where an argument must be presented that shows how the use proposed would be compatible and appropriate for the location. Less intense industrial and manufacturing uses that appear to be compatible with the existing conditions of the Fort were pulled from the Industrial Restricted (IR) and Industrial General (IG) districts of the zoning ordinance.

Proposed amendments are included separately.

Staff Recommendation: Staff recommends approval of the amendment as presented.

Respectfully submitted,

Jill Baker, AICP
Director

WASHINGTON COUNTY PLANNING COMMISSION
REZONING PUBLIC MEETING AND REGULAR MEETING
October 6, 2025

The Washington County Planning Commission held a rezoning public meeting as well as its regular monthly meeting on Monday, October 6, 2025 at 6:00 p.m. at the Washington County Administrative Complex, 100 W. Washington Street, Room 2000, Hagerstown, MD.

CALL TO ORDER AND ROLL CALL

The Chairman called rezoning public meeting to order at 6:00 p.m.

Planning Commission members present were: David Kline, Chairman; Jeff Semler, Vice-Chairman; Denny Reeder, Jay Miller, BJ Goetz, Terrie Shank, and Ex-officio County Commissioner Randy Wagner. Staff members present were: Washington County Department of Planning & Zoning: Jill Baker, Director; Jennifer Kinzer, Deputy Director; Misty Wagner-Grillo and Scott Stotelmyer, Planners; and Debra Eckard, Office Manager.

REZONING PUBLIC MEETING

Text Amendment – Low Intensity Domestic Fowl Operations [RZ-25-007]

Ms. Shingleton presented a proposed text amendment to address low intensity fowl operations that include raising or providing care for 24 or less domestic fowl raised for eggs or meat consumption. Domestic land fowl would include chickens, turkeys, pheasants, and quail and water fowl such as ducks and geese. More than 24 fowl will be considered a high-intensity operation and must meet all standards and regulations set forth by the Animal Husbandry Ordinance. No roosters or guinea fowl would be permitted. Limitations would include the following: the first ½ acre or less a maximum of six fowl would be allowed; an additional six fowl would be permitted for each ½ acre up to a total of 24 fowl. Structures for a low-intensity operation must be set back a minimum of 25 feet from any neighboring dwelling, school, religious institution or institution for human care and at no time shall a structure be located closer than 10 feet from any side or rear property lines. Structures shall not be permitted in front yards, drainage swales or mapped floodplain areas. Free range fowls will not be permitted; all structures and roaming areas must be fenced. Structures must be properly constructed, maintained and cleaned on a regular basis to prevent odors and waste from building up. Feed must be stored in contained areas and must be cleaned regularly to prevent scavengers, insects and parasites that may harm humans. Manure may be composted and added to gardens or yards if done so without creating malicious smells or other hazards. Waste that is not composted must be collected in a sealed dry container and must be stored at a minimum of 10 feet from all property lines. A Waste Management Plan and Nutrient Management Plan will only be required when housing more than 24 fowl. Outdoor slaughtering or butchering is prohibited. A zoning permit will be required for any structures housing chickens. Proof of registration from the State will be required for fowl operations. A zoning certificate will be required for all fowl operations.

Ms. Baker clarified that the number of chickens relates strictly to this specific section of the Zoning Ordinance and the enforcement of this section. This section does not regulate the number of chickens on the property; it regulates the structure for the chickens.

Public Comment

There was no one present at the meeting to provide comment; however, one written comment was submitted and distributed to the members of the Commission prior to the meeting.

Motion and Vote: Mr. Semler made a motion to recommend approval to the Board of County Commissioners of the proposed text amendment as presented. The motion was seconded by Mr. Miller and unanimously approved with Commissioner Wagner abstaining from the vote.

Text Amendment – Junk and Junk Vehicles [RZ-25-009]

Ms. Shingleton presented a proposed text amendment that will add a division to the Zoning Ordinance. This proposed division will address junk and junk vehicles, as a nuisance, on private property. The purpose of this division is to preserve the character and safety of the County's neighborhoods and citizens by eliminating, as nuisances, junk and junk vehicles from private property and to provide procedures for the removal of said nuisances. Definitions have been added that apply to this section of the Ordinance to provide clarification. This division will also address the storage of junk and junk vehicles including farm vehicles, construction materials, etc.

Ms. Baker explained our current process to address violations on private properties, when civil citations are issued, and prosecution procedures. She noted that these types of violations are complaint driven.

DRAFT

Discussion and Comments: There was a brief discussion about setting an acreage limit for the storage of junk or junk vehicles. It was noted that someone could place these types of nuisances in front yards or along the tree line where it could be seen or become a safety hazard for a neighboring property owner.

Public Comment

No public comments were received.

Motion and Vote: Mr. Goetz made a motion to recommend approval to the Board of County Commissioners of the proposed text amendment as presented. The motion was seconded by Mr. Reeder and unanimously approved with Commissioner Wagner abstaining from the vote.

The Chairman closed the rezoning public meeting at 6:32 p.m. and the regular meeting was convened.

NEW BUSINESS

MINUTES

Motion and Vote: Ms. Shank made a motion to approve the minutes of the August 4, 2025 Planning Commission meeting as presented. The motion was seconded by Mr. Semler and unanimously approved.

Motion and Vote: Mr. Miller made a motion to approve the minutes of the September 8, 2025 Planning Commission meeting as presented. The motion was seconded by Mr. Reeder and unanimously approved.

SITE PLANS

Leitersburg Cell Tower [SP-24-032]

Mr. Stotelmyer presented a site plan for a 155-foot monopole-style wireless telecommunications tower with a 50-foot by 50-foot fenced in compound. The site would be located at 21536 Leitersburg Smithsburg Road. Hours of operation will be 24 hours per day, 7 days per week. There will be no water or sewer service to the site and no lighting or signage is proposed. Forest Conservation requirements have been met using the payment-in-lieu of planting. All agency approvals have been received.

Discussion and Comments: There is space available for three additional carriers' equipment on the pad site as well as on the tower.

Motion and Vote: Mr. Semler made a motion to approve the site plan as presented. The motion was seconded by Mr. Miller and unanimously approved.

Brook Lane Gymnasium [SP-25-017]

Ms. Wagner-Grillo presented a site plan for a proposed 10,941 sq. ft. gymnasium with administrative offices on 113.57 acres. The property is currently zoned A(R)/RB – Agricultural Rural with the Rural Business overlay. The applicant is proposing to demolish the existing administrative offices and construct a gymnasium with administrative offices. Signage and lighting will be building-mounted. The hours of operation will be Monday through Friday from 8 am to 5 pm. One parking space and three handicapped spaces have been added to the existing parking lot. Total parking spaces required for the hospital and accessory uses are 265 spaces; 304 parking spaces are provided. A security fence will be constructed around the gymnasium building. Storm water management requirements are being met with an additional micro-retention area. Forest Conservation requirements are being met through the express procedure with a payment-in-lieu in the amount of $2,665.87.

Motion and Vote: Mr**.** Reeder made a motion to approve the site plan as presented. The motion was seconded by Mr. Miller and unanimously approved with Mr. Goetz abstaining from the vote.

OTHER BUSINESS

Update of Projects Initialized

Ms. Kinzer provided a written report for land development plan review projects initialized during the month of August including six site plans.

The Chairman closed the regular meeting at 6:40 p.m. to convene the Closed Session portion of the meeting.

CLOSED SESSION

DRAFT

To discuss the appointment, re-appointment, employment, assignment, promotion, discipline, demotion, compensation, removal, resignation, or performance evaluation of appointees, employees, or officials over whom this public body has jurisdiction; or any other personnel matter that affects one or more specific individuals.

The Chairman reconvened the regular meeting at 7:01 p.m.

ADJOURNMENT

Mr. Miller made a motion to adjourn the meeting at 7:01 p.m. The motion was seconded by Mr. Goetz and so ordered by the Chairman.

UPCOMING MEETINGS

1. October 6, 2025, 6:00 p.m. – Washington County Planning Commission public rezoning input meeting and regular meeting

Respectfully submitted,

_____

David Kline, Chairman

DRAFT

WASHINGTON COUNTY DEPARTMENT OF PLANNING & ZONING
747 Northern Avenue | Hagerstown, MD 21742-2723 | P:240.313.2430 | F:240.313.2431 | Hearing Impaired: 7-1-1

SITE PLAN STAFF REPORT

BASE INFORMATION

SITE NAME.....:	Taylor Farm I LLC
NUMBER.....:	SP-23-003
OWNER.....:	TAYLOR FARM I LLC
LOCATION.....:	16275 WRIGHT Road Hagerstown, MD 21740
DESCRIPTION.....:	New 50K SF warehouse and parking facilities on undeveloped parcel for proposed Cannabis Grower.
ZONING.....:	IG; RT Refer to Map
COMP PLAN LU.....:	Low Density Residential
PARCEL.....:	02066723
PLANNING SECTOR.....:	1
ELECTION DISTRICT.....:	02
TYPE.....:	Industrial
GROSS ACRES.....:	9.04
DWELLING UNITS.....:	0
TOTAL LOTS.....:	1
DENSITY.....:	0 Units Per Acre
PLANNER.....:	Misty Wagner-Grillo
ENGINEER.....:	FREDERICK SEIBERT & ASSOCIATES
RECEIVED.....:	January 24, 2023

SITE ENGINEERING

HYDROGRAPHY, SENSITIVE & ENVIRONMENTAL INFORMATION

FLOOD ZONE.....:	Yes
WETLANDS.....:	No
WATERSHED.....:	Conococheague Creek
ENDANGERED SPECIES.....:	None
STEEP SLOPES.....:	Yes
STREAM BUFFER.....:	Yes
HISTORIC INVENTORY.....:	No Resources Present
EASEMENTS PRESENT.....:	None

Staff Comments:

Not Applicable

WASHINGTON COUNTY DEPARTMENT OF PLANNING & ZONING
747 Northern Avenue | Hagerstown, MD 21742-2723 | P:240.313.2430 | F:240.313.2431 | Hearing Impaired: 7-1-1

SITE DESIGN

Impervious Area Plan	Impervious Maximum Allowed	Open Space Area Planned
39	80	0
Open Space Minimum Required	**Residential Amenity Plans**	**Solid Waste Disposal Plans**
0		
Materials Stored on Site	**Buffer Design Meets Requirements**	**Landscaping Meets Requirements**
		Yes
Lighting Plan Meets Requirements	**Pedestrian Access is Adequate**	**Bus Stop is Within Walking Distance**
Yes		
Loading Area Meets Requirements		
		Not Fast Track
Parking Spaces - Total Planned	**Parking Spaces - Per Dwelling Unit**	
79		
Parking Spaces - Minimum Required	**Recreational Parking Provided**	
26	No	

ACCESS SPACING VARIANCE NEEDED: No
NUMBER OF ACCESS POINTS: 1

SCHOOL INFORMATION

	ELEMENTARY	MIDDLE	HIGH
SCHOOL DISTRICT	Williamsport	Springfield	Williamsport
PUPIL YIELD			
CURRENT ENROLLMENT			
MAXIMUM CAPACITY			

PUBLIC FACILITIES INFORMATION

FIRE DISTRICT.....:	WILLIAMSPORT
AMBULANCE DISTRICT.....:	WILLIAMSPORT

WATER & SEWER INFORMATION

	WATER	SEWER
METHOD.....:	City	County
SERVICE AREA.....:	City	County
PRIORITY.....:	3-Programmed Service	3-Programmed Service
NEW HYDRANTS.....:		
GALLONS PER DAY SEWAGE...:		
PLANT INFO.....:		Conococheague

SITE PLAN

FOR

TAYLOR FARM LOT 3

SITUATED ALONG THE SOUTH SIDE OF WRIGHT ROAD

AND WEST OF HOPEWELL ROAD

AT 16275 WRIGHT ROAD

WASHINGTON COUNTY, MARYLAND

APPROVALS

MD-ENG-6A
1/89

USDA
SCS

UTILITY NOTIFICATION

The Soil Conservation District makes no representation as to the existence or nonexistence of any utilities at the construction site. Shown on these construction drawings are those utilities which have been identified. It is the responsibility of the landowners or operators and contractors to assure themselves that no hazard exists or damage will occur to utilities. It is suggested that Miss Utility be contacted at:
Phone No. 1-800-257-7777

DISTURBED AREA QUANTITY

THE TOTAL AREA TO BE DISTURBED SHOWN ON THESE PLANS HAS BEEN DETERMINED TO BE APPROXIMATELY 6.50 ACRES AND THE TOTAL AMOUNT OF EXCAVATION AND FILL AS SHOWN ON THESE PLANS HAS BEEN COMPUTED TO BE APPROXIMATELY 16,563 CU. YDS. OF EXCAVATION AND APPROXIMATELY 12,051 CU. YDS. OF FILL.

WASHINGTON COUNTY DEPARTMENT OF WATER QUALITY

This plan/plat has been reviewed by the Washington County Department of Water Quality for inclusion into the county capacity management plan for the system that serves this project. Allocation granted for construction shown on this plan/plat shall be in accordance with the capacity management plan developed for this system based on availability of allocation remaining in the facility.

SIGNATURE DATE

WASHINGTON COUNTY DEPARTMENT OF WATER QUALITY

This approval is for general conformance with the County's requirements for design and layout of proposed sewer and/or water system improvements or extensions. All sewer and/or water system improvements or extensions shall be constructed in strict accordance with the County's latest addition of the Standard Specifications for Construction of Sanitary Sewers and/or Water Lines. This approval does not guarantee availability of sewer and/or water service. Sewer and/or water service availability is subject to conformance with all rules, policies and regulations established by the County and in effect at the time application for service is made, and/or the availability of allocation remaining in other jurisdictions' facilities that may be granted to the County. This approval shall be valid for a period of TWO years.

SIGNATURE DATE

CITY OF HAGERSTOWN UTILITIES DEPARTMENT
WATER & WASTEWATER DIVISIONS

This approval is for the design and layout of the proposed water and wastewater system improvements. All water and wastewater system improvements shall be constructed to the standards in effect at the time of construction. This approval does not guarantee availability of water or wastewater service. Water and wastewater service is available subject to conformance with all policies and standards in effect at the time of application for service, payment of fees and approval of the water and/or wastewater service application. The Water Division does not guarantee a specific water pressure or flow at any meter or fire hydrant. This approval is valid for a period of one year.

SIGNATURE DATE

OWNER / DEVELOPERS CERTIFICATION

"I/We certify all/any parties responsible for clearing, grading, construction and/or development will; be done pursuant to this plan and responsible personnel involved in the construction project will have a Certificate of Training at a Maryland Dept. of the Environment approved training program for the control of soil erosion and sediment." -

11/8/23 SasaanShaool
Date Printed Name
Signature

OWNER / DEVELOPERS CERTIFICATION

"I/we hereby certify that all clearing, grading, construction and/or development will be done pursuant to this plan and in accordance with the Stormwater Management Ordinance of Washington County and the policy on construction of subdivision infrastructure for acceptance and ownership by Washington County (S-3)."

11/8/23 SasaanShaool
Date Printed Name
Signature

ENGINEER / ARCHITECT DESIGN CERTIFICATION

I hereby certify this plan for soil erosion and sediment control has been designed in accordance with local ordinances, COMAR 26.17.01.07, and Maryland Standards and Specifications for Soil Erosion and Sediment Control.

08/18/2025 49808
DATE REG. NO. SIGNATURE

ENGINEER'S STORMWATER MANAGEMENT CERTIFICATION

"I verify and affirm that the Construction for the Stormwater Management Facilities as performed either meets or exceeds the requirements and design intent of this plan, including all specifications and referenced standards, and has been completed in accordance with good construction practices. I also verify and affirm that I have reviewed the construction inspection documentation and the as-built information; that it has been done in accordance with Washington County requirements and at a level deemed necessary to assure the Verification made herein; and all discrepancies between the as-built information and approved plans have been noted and are considered acceptable to the Consultant."

SIGNATURE DATE SEAL

CLIENT/OWNER/DEVELOPER:
TAYLOR FARM I LLC
1741 DUAL HIGHWAY, SUITE B
HAGERSTOWN, MARYLAND 21740

ATTN: SASAAN SHAOOL
EMAIL: SSHAOOL@WASCODEVELOPMENTS.COM
PHONE: 301.573.5375

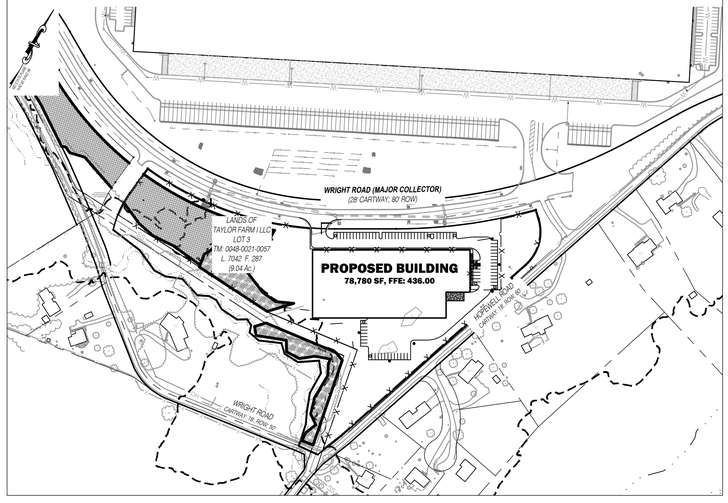
CIVIL ENGINEER / SURVEYOR:
FSA INC.
128 SOUTH POTOMAC STREET
HAGERSTOWN, MARYLAND 21740

PROJECT MANAGER: TREVOR FREDERICK
EMAIL: TFREDERICK@FSA-INC.COM
PHONE: 301.791.3650

LOCATION PLAN

SCALE: 1" = 200'

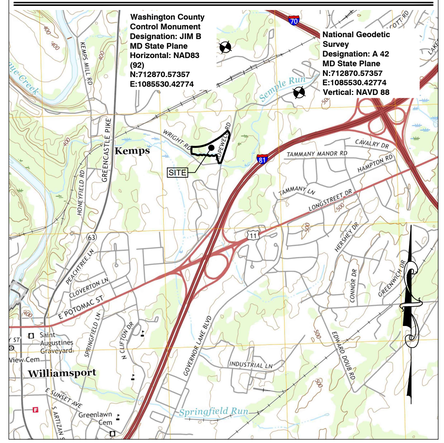
TAX MAP - GRID - PARCEL: 0048 - 0021 - 0057
PROPERTY ACCOUNT #022745



VICINITY MAP

SCALE: 1" = 2000'

ADC MAP 20-B10
USGS MAPS (WILLIAMSPORT)



SHEET INDEX

TYPE	NUMBER	TITLE
	SHEET 01	COVER SHEET
	SHEET 02	NOTES & LEGENDS
	SHEET 03	EXISTING CONDITIONS & DEMOLITION PLAN
	SHEET 04	EROSION & SEDIMENT CONTROL PLAN - INITIAL
	SHEET 05	EROSION & SEDIMENT CONTROL PLAN - FINAL
	SHEET 06	GRADING & DRAINAGE PLAN
	SHEET 07	SITE & UTILITY PLAN
	SHEET 08	PAVING & STRIPING PLAN
	SHEET 09	FORESTATION PLAN
	SHEET 10	STORMWATER MANAGEMENT PLAN
	SHEET 11	STORMWATER MANAGEMENT DETAILS & NOTES
	SHEET 12	CONSTRUCTION PROFILES
	SHEET 13	CONSTRUCTION DETAILS & NOTES - E & S CONTROLS
	SHEET 14	CONSTRUCTION DETAILS & NOTES - E & S CONTROLS
	SHEET 15	CONSTRUCTION DETAILS & NOTES - SEWER
	SHEET 16	CONSTRUCTION DETAILS & NOTES - SITE
	SHEET 17	CONSTRUCTION DETAILS & NOTES - SITE
L-101	SHEET 18	LANDSCAPE PLAN
L-501	SHEET 19	LANDSCAPE PLAN
PLANS BY OTHERS		
E-1.1	SHEET 20	PHOTOMETRIC PLAN
E-1.2	SHEET 21	PHOTOMETRIC PLAN

ESD PRACTICES SUMMARY TABLE						
CONSTRUCTION TYPE (NEW, REDEVELOPMENT, RESTORATION): **NEW**						
ESD PRACTICES (CHAPTER 5 - NON-STRUCTURAL & STRUCTURAL)						
TYPE	NO.	DA TO STRUCTURE (AC.)	IMPERVIOUS DA TO STRUCTURE (AC)	ESDv (CF)	ESDv (AC. FT)	Pe ADDRESSED (IN)
SUBMERGED GRAVEL WETLAND	A	3.74	2.57	17,740	0.41	1.95
NON-ESD PRACTICES (CHAPTER 3 - STRUCTURAL PRACTICES)						
BIORETENTION	A	2.86	1.04	8,956	0.20	2.29

SENSITIVE AREA NOTICE

TITLE

The stream buffers shown hereon are established pursuant to the requirements of the Washington County Subdivision Ordinance Article IV, Section 409. In an effort to preserve or improve water quality, the property owner is required to establish and thereafter maintain in perpetuity vegative ground cover in accordance with urban best management practices recommended by the Washington County Soil Conservation District. No permanent structures or construction are permitted within the stream buffer except those designed to improve water quality or flow as approved by the Washington County Planning Commission in accordance with all applicable regulations, laws, and policies. No septic systems shall be constructed within the buffer nor shall any reserve area be established within the buffer.

Know what's **below.** **Call** before you dig.

STATE OF MARYLAND
TREVOR M. FREDERICK
49808
PROFESSIONAL ENGINEER
08/18/2025

Professional Certification:
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional under the laws of the State of: MARYLAND License # 49808
Expiration Date 08-24-2026

FSA
FREDERICK, SEIBERT & ASSOCIATES, INC.
CIVIL ENGINEERS • SURVEYORS • LANDSCAPE ARCHITECTS • LAND PLANNERS
fsa-inc.com
@2023
15 EAST MAIN STREET
NEW BLOOMFIELD, PA 17068
717-582-8844
305 SOUTH HANOVER STREET
CARLISLE, PA 17013
717-249-9411
11142 WILLIAMSPORT PIKE
GREENCASTLE, PA 17225
717-597-3667
128 SOUTH POTOMAC STREET
HAGERSTOWN, MD 21740
301-791-3650

MARK	DESCRIPTION:	DATE:
1	REVISED PER AGENCY COMMENTS	04.08.2025
2	REVISED PER CLIENT REQUEST	05.27.2025
3	REVISED PER AGENCY COMMENTS	08.18.2025

TAYLOR FARM LOT 3
SITUATE ALONG THE SOUTH SIDE OF WRIGHT ROAD
AND WEST OF HOPEWELL ROAD
WILLIAMSPORT
WASHINGTON COUNTY, MARYLAND
SHAOOL
1741 DUAL HIGHWAY, SUITE B
HAGERSTOWN, MARYLAND 21740

PROJECT NO. 4564.3
DWN BY ABRAM MYERS
DATE 01.10.2023
PROJECT MANAGER T. FREDERICK
EMAIL: TFREDERICK@FSA-INC.COM
TAX MAP - GRID - PARCEL: 0048 - 0021 - 0057
SCALE AS SHOWN
SHEET TITLE

COVER SHEET

C-001
SHEET 01 OF 19

SP-23-003

P:\SHARED FOLDERS\PROJECTS\4000-4599\4564.3 LOT 3 WARK\DOCS\CIVIL\CONSTRUCTION SET\4564.3 01 COVER SHEET & GENERAL NOTES.DWG - 2025-08-18

GENERAL NOTES

1. Any damage to adjoining public roads, utilities, etc. during construction will be repaired in kind by the contractor.
2. No subsurface investigation has been performed by Frederick, Seibert and Associates, Inc. to determine ground water, rock, sinkholes or any other natural or man-made existing features. See geotech report by Triad Engineering for sub-surface findings.
3. FSA, Inc. assumes no liability for the location of any above ground and below ground utilities. Existing utilities are shown from the best available information. Contractor to field verify location and depth of all above and below ground utilities prior to construction.
4. The contractor shall locate existing utilities in advance of construction operations in the vicinity of proposed utilities.
5. The contractor shall take all necessary precautions to protect the existing utilities and to maintain uninterrupted service. Any damage incurred due to the contractor's operation shall be repaired immediately at the contractor's expense. Contractor to use caution in areas where low hanging wires exist.
6. All utilities shall be cleared by a minimum of 1'-0". All utility poles shall be cleared by a minimum of 2'-0" or tunneled if required.
7. The Contractor shall notify the following utilities or agencies at least five (5) days before starting work shown on these drawings:

Miss Utility	1-800-257-7777
Potomac Edison	1-800-255-3443
Columbia Gas (New Business)	1-800-440-6111
Columbia Gas (Conflicts)	(301) 964-1065
Verizon	(301) 790-7124
Antietam Cable	(240) 420-2082
City of Hagerstown Utilities Department	(301) 739-8577 Ext. 650
Washington County Soil Conservation District	(301) 797-6821
Washington County Department of Water Quality	(240) 313-2600
Washington County Engineering	(240) 313-2460

8. The contractor shall be responsible for coordination of his construction with the construction of other contractors.
9. Benchmarks shown on sheet C-101 is an existing manhole.
10. The contractor shall notify the Architect/Engineer, before construction, of any conflicts between the plans and actual field conditions.
11. The contractor shall protect all utilities and culvert pipes during construction by insuring proper cover, increasing cover, or constructing roadway and parking through base course before loading site with heavy vehicles.
12. Job site safety is the sole responsibility of the contractor. The Contractor shall perform all excavation in accordance with O.S.H.A. Regulations for trench safety.
13. The contractor shall perform his own field inspection and surveys (if necessary) to determine the limit of earthwork needed to complete this project. Any earthwork quantities that may be shown hereon are preliminary estimates only, and are intended for Soil Erosion Control plan review, if required. There has been no correction made to the earthwork quantities shown hereon due to the compaction of fill.
14. The contractor shall be aware that in the event of discrepancy between scaled and figured dimensions shown on the plan, the figured dimensions shall govern.
15. Sediment erosion control measures shall be installed per sediment erosion control plans, details and specifications.
16. Please refer to Geotechnical Report completed by Triad Engineering for load bearing fills, etc.
17. The entire area included within the proposed limits of cut and fill shall be stripped of all root material, trash and other organic and otherwise objectionable, non-complying and unsuitable soils and materials.
18. It shall be distinctly understood that failure to mention specifically any work which would naturally be required to complete the project shall not relieve the contractor of his responsibility to complete such work.
19. All handicapped parking spaces shall be designed, ramped and signed to meet the minimum requirements of the Maryland code for the handicapped.
20. The existing site contours shown hereon are LIDAR 1' contours and field checked by FSA in Septmeber 2022. (Contour accuracy is to plus or minus one half the contour interval).
21. Limit of disturbed areas are to be the limit of property ownership, unless otherwise noted.
22. Exterior lighting will consist of building mounted lights and pole mounted lights as shown on the photometrics plans and utility plan.
23. The contractor shall provide MOSH safety assistance for City Utilities Department, Water and Wastewater Division Inspectors.
24. Applicant to provide as built mylars at the completion of the project.
25. This project has a projected start date of August 2025 and a completion date of August 2026.
26. A complete set of approved plans and a copy of the grading permit must be on site and available for use by the inspector, or other representative of Washington County.
27. There are no Board of Zoning Appeals Cases for this property.
28. Proposed SWM will consist of on-site bio-retention facilities and submerged gravel wetlands.
29. There is an existing sanitary sewer line and easement that runs through the property that is shown on the plans. A portion of this easement will be abandoned.
30. All existing drainage culverts and drainage easements are to be maintained and unaltered.
31. No outdoor storage of materials except for trailer parking is allowed on the site.
32. The retaining wall shown on these plans will require a building permit through Washington County Plan and Permitting.
33. This site is not located within 1,000 feet of the Edgemont Reservoir, Smithsburg Reservoir, or Upper Beaver Creek watersheds.
34. There are no habitats of endangered species or threatened species on this site.
35. This site is not within 1,000 feet of the Appalachian Trail.
36. A Washington County Floodplain Permit is required for all development within the floodplain.
37. This site is not within 1,000 feet of the Edgemont Reservoir, Smithsburg Reservoir, or Upper Beaver Creek watersheds.
38. There are no endangered or threatened species on this site.
39. A Forest Stand Delineation for this site was approved under Washington County File Number FS-20-005.
40. Road maintenance of Wright Road will be the responsibility of Washington County.
41. A Maryland Department of the Environment joint waterway construction permit will be needed for this project. The MDE Permit number for this project is 202360186/23-NT-3036 with expiration date of March 7,2028
42. Forest conservation is addressed for this development plan using afforestation (on-site) and payment in lieu.

DIVISION OF PLAN REVIEW & PERMITTING NOTES

1. In conformance with the Stormwater Management Ordinance of Washington County, a performance security and executed maintenance agreement shall be required from the developer prior to issuance of any building or grading permit for construction per these plans."
2. This project will require a third party qualified professional to be present at the preconstruction meeting. Construction inspection will be required for this project per the "Roadway and Stormwater Management Construction Verification Procedures" dated October 17, 2008.
3. A complete set of approved plans and a copy of the grading permit must be on site and available for use by the inspector, or other representative of Washington County Division of Public Works.
4. Developer/Contractor shall contact the certifying engineer and the County at least 5 days prior to the start of construction of the stormwater management system to schedule and coordinate inspection time tables.
5. This development plan must comply with the current Washington County Stormwater Management, Grading, Soil Erosion and Sediment Control. Ordinance.
6. All grading for this project shall be the full responsibility of the property owner.
7. No permanent structures (e.g., fences, sheds, play equipment, retaining walls) shall be permitted within any stormwater or storm drainage easement on this property.

FIRE DEPARTMENT NOTES

1. Construction occurring on this site shall comply with NFPA 241, standard for safeguarding construction, alteration, and demolition operations, and chapter 16 of NFPA 1, uniformed fire code.
2. No open burning is permitted. Permits are required to perform blasting operations within the city of Hagerstown.
3. New buildings shall have approved address numbers placed in a position to be plainly legible and visible from the street or road fronting the property (NFPA 1-10.13.1).
4. A fire department access box (knox box) shall be installed. This box will be required to contain keys to the building, gates, fire protection system keys and other areas as requested by the fire department. Plans should reflect the location of box near the main entrance. Application information may be obtained from this office by the general contractor or online at www.knoxbox.com.

ZONING DATA

ZONING DISTRICT: IG - INDUSTRIAL, GENERAL DISTRICT
BUILDING HEIGHT: 100 FT.

MINIMUM YARD SETBACK:
FRONT: 50 FT.
*SIDE: 25 FT.
*REAR: 25 FT.

*EXCEPT WHERE LOT AND PROPOSED USES ABUT AND REQUIRE ACCESS TO A RAILROAD OR RAILROAD SIDING, THE SIDE OR REAR YARD SETBACK ABUTTING THE RAILROAD OR RAILROAD SIDING SHALL NOT BE REQUIRED

*EXCEPT WHERE THE PROPOSED USES OR BUILDING ABUT A LOT IN A RR, RT, RS, RU OR RW DISTRICT, OR ANY LOT OCCUPIED BY A DWELLING, THE SIDE AND REAR SETBACKS SHALL BE 100'

BOARD OF ZONING APPEALS' CASE: NONE

SITE DATA

TAX MAP - GRID - PARCEL	0048-0021-0057
ELECTION DISTRICT	02
ACCOUNT NUMBER	022745
LIBER / FOLIO	7042 / 00287
AREA SUMMARY:	
PARCEL	9.04 Ac
DISTURBED AREA	283,140 SF / 6.50 Ac
EXISTING IMPERVIOUS	0 SF / 0.00 AC
PROPOSED IMPERVIOUS	152,460 SF / 3.50 AC
BUILDING SUMMARY:	
FOOTPRINT	78,780 SF
OFFICE SPACE	2,000 SF
WAREHOUSE SPACE	76,780 SF
HEIGHT	31.5 FT
PROPOSED USE	CANNABIS GROWER (PERMITTED USE)
HOURS OF OPERATION	24 HOURS A DAY / 7 DAYS A WEEK
EXCISE TAX USE CLASSIFICATION	NON-RESIDENTIAL
EMPLOYEE SUMMARY:	
OFFICE	12
WAREHOUSE	20
WATER & SEWER USAGE:	
WATER PROVIDED	PRIVATE WELL
SEWER PROVIDED	WASHINGTON COUNTY DEPARTMENT OF WATER QUALITY
WASTE & RECYCLABLES:	
SOLID WASTE REMOVAL	PRIVATE HAULER: ROLL OFF TRASH COMPACTOR IN BAY
RECYCLE REMOVAL	PRIVATE HAULER: ROLL OFF TRASH COMPACTOR IN BAY
SITE LIGHTING:	
EXISTING	NONE
PROPOSED	POLE & BUILDING MOUNTED
SITE SIGNAGE:	
EXISTING	NONE
PROPOSED	BUILDING MOUNTED
ADDRESS ASSIGNMENT	16275 WRIGHT ROAD WILLIAMSPORT, MARYLAND 21795
WAIVER AND/OR VARIANCE	NONE
FOREST CONSERVATION	0.97 AC. (ON SITE AFFORESTATION (0.81 AC.), PAY-IN-LIEU (0.16 AC)); APPROVED PER PLAT
WATERSHED:	
NAME	CONOCOCHEAGUE CREEK (65.8 SQUARE MILES)
NUMBER	02-14-05-04
FEMA PANEL #	24043C0281D

PARKING, LOADING & BICYCLE DATA

USE	REQUIREMENT	CALCULATION	REQUIRED
MANUFACTURING/ INDUSTRIAL	1 SPACE PER EMPLOYEE ON MAIN SHIFT PLUS 1 SPACE PER 350 SF OFFICE SPACE	1 SPACE * 20 EMPLOYEES 2,000 SF / 350 SF	20 SPACES 6 SPACES
TOTAL REQUIRED SPACES			**26 SPACES**
TOTAL ADA SPACES PROVIDED			**2 SPACES**
TOTAL PROVIDED PARKING SPACES			**79 SPACES**

LEGEND

	EXISTING	PROPOSED
SUBJECT BOUNDARY		
BUILDING SETBACK LINE		
RIGHT OF WAY		
EASEMENT LINE		
ADJOINER BOUNDARY		
FENCE (METAL)		
FENCE (WOODEN)		
DITCH (STREAM)		
EDGE OF WATER		
WETLAND		
FLOODPLAIN		
SOIL BOUNDARY		
RAILWAY		
CENTERLINE		
EDGE OF PAVEMENT		
EDGE OF GRAVEL		
CURB		
WALL		
GUARD RAIL		
EDGE OF CONCRETE		
BUILDING	MB	MB
MAIL BOX		
SIGN (ROAD)		
SIGN (SITE)		
TRAFFIC SIGNAL		
TOPOGRAPHIC FEATURES		
CONTOUR (INDEX)	500	500
CONTOUR (INTERMEDIATE)	501.65	501.65
SPOTS ELEVATION	501	501
VEGETATION AREAS		
TREELINE		
DECIDUOUS TREES		SEE LANDSCAPE SHEET FOR LEGEND
EVERGREEN TREES		SEE LANDSCAPE SHEET FOR LEGEND
SANITARY SEWER		
GRAVITY LINE	SS	SS
FORCE MAIN LINE	F/M	FM
LATERAL	SS	
MANHOLE	SS	SS
CLEANOUT		
VALVE		
WATER		
COLD WATER LINE	W	W
HOT WATER LINE	HW	HW
MANHOLE	MH	MH
FIRE HYDRANT		
VALVE		
METER		
WELL		
STORM DRAINAGE		
STORM SEWER LINE		
ROOF DRAIN LINE	RD	RD
MANHOLE	SW	SW
INLETS		
CLEANOUT		
UTILITIES		
GAS LINE	G	G
ELECTRICAL LINE	UGE	UGE
FIBER OPTIC LINE	FO	FO
COMMUNICATION LINE	COMM	COMM
OVERHEAD LINES	OH	OH
MANHOLE	MH	MH
PEDS, BOX, & ETC		
POLE		
LIGHT POLE		
GAS METER		
GAS VALVE		

LEGEND - ABBREVIATIONS

AASHTO—AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS
ADS—ADVANCED DRAINAGE SYSTEM
ASTM—AMERICAN SOCIETY FOR TESTING AND MATERIAL
AWWA—AMERICAN WATER WORKS ASSOCIATION
BLDG—BUILDING
BOT—BOTTOM
CIP—CAST IRON PIPE
CL—CENTERLINE
CMP—CORRUGATED METAL PIPE
CO—SANITARY SEWER CLEAN-OUT
COMM—COMMUNICATION
CONC—CONCRETE
DA—DRAINAGE AREA
DIA—DIAMETER
EGL—EXISTING GRADE LINE
EX—EXISTING
EIP—EXISTING IRON PIN
FFE—FINISH FLOOR ELEVATION
FH—FIRE HYDRANT
GV—GATE VALVE
HGL—HYDRAULIC GRADE LINE
HDPE—HIGH DENSITY POLYETHYLENE
INV—INVERT
LF—LINEAR FEET
MAX—MAXIMUM
MB—MAIL BOX
MIN—MINIMUM
MJ—MECHANICAL JOINT
NO—NUMBER
NIC—NOT IN CONTRACT
NTS—NOT TO SCALE
OAC—OR APPROVED EQUAL
OC—ON CENTER
PC—POINT OF CURVE
PCC—POINT OF COMPOUND CURVE
PGL—PROPOSED GRADE LINE
PRC—POINT OF REVERSE CURVE
PT—POINT OF TANGENT
PVC—POINT OF VERTICAL CURVE
PVI—POINT OF VERTICAL INTERSECTION
PVT—POINT OF VERTICAL TANGENT
ROW—RIGHT-OF-WAY
SAN—SANITARY
SCE—STABILIZED CONSTRUCTION ENTRANCE
SDR—STANDARD DIMENSION RATIO
SIP—SET IRON PIN
SD—STORM DRAINAGE
SDMH—STORM DRAIN MANHOLE
SF—SQUARE FEET
SS—SANITARY SEWER
SSMH—SANITARY SEWER MANHOLE
STA—STATION
STD—STANDARD
SY—SQUARE YARDS
TAN—TYPE AS NOTED
TEMP—TEMPORARY
TS—TOP OF STRUCTURE
TG—TOP OF GRATE
TR—TOP OF RIM
TYP—TYPICAL
UP—UTILITY POLE
VIF—VERIFY IN FIELD
WL—WATERLINE
WM—WATER METER
WV—WATER VALVE

STATE OF MARYLAND
TREVOR M. FREDERICK
49610
PROFESSIONAL ENGINEER
08/18/2025

Professional Certification:
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional under the laws of the State of: MARYLAND License #: 49610
Expiration Date: 08-24-2026

fsa-inc.com
© 2023
15 EAST MAIN STREET NEW BLOOMFIELD, PA 17068 717-582-8844
305 SOUTH HANOVER STREET CARLISLE, PA 17013 717-249-8411
11142 WILLIAMSPORT PIKE GREENCASTLE, PA 17225 717-597-3667
128 SOUTH POTOMAC STREET HAGERSTOWN, MD 21740 240-313-2460
FSA
FREDERICK, SEIBERT & ASSOCIATES, INC.
CIVIL ENGINEERS • SURVEYORS • LANDSCAPE ARCHITECTS • LAND PLANNERS

MARK	DESCRIPTION:	DATE:
1	REVISED PER AGENCY COMMENTS	04.08.2023
2	REVISED PER CLIENT REQUEST	09.27.2023
3	REVISED PER AGENCY COMMENTS	06.18.2025

TAYLOR FARM LOT 3

SITUATE ALONG THE SOUTH SIDE OF WRIGHT ROAD AND WEST OF HOPEWELL ROAD
WILLIAMSPORT
WASHINGTON COUNTY, MARYLAND
SHAOOL
1741 DUAL HIGHWAY, SUITE B
HAGERSTOWN, MARYLAND 21740

PROJECT NO: 4564.3
DWN BY: ABRAM MYERS
DATE: 01.10.2023
PROJECT MANAGER: T. FREDERICK
EMAIL: TFREDERICK@FSA-INC.COM
TAX MAP - GRID - PARCEL: 0048 - 0021 - 0057
SCALE: N.T.S.
SHEET TITLE:

GENERAL NOTES

C-002
SHEET 02 OF 19

SP-23-003

P:\SHARED FOLDERS\PROJECTS\4500\4564\4564.3 (07) 3 WARE\PLANS\DESIGN\CONSTRUCTION SET\4564.3 01-C COVER SHEET & GENERAL NOTES.DWG 2025-08-18

STA 34+22.05
OFFSET RIGHT 13.48'
BEGIN CURB AND
GUTTER REMOVAL

STA 35+39.55
OFFSET RIGHT 13.08'
END CURB AND
GUTTER REMOVAL

WRIGHT ROAD (MAJOR COLLECTOR)
(28' CARTWAY, 80' ROW)

SITE BENCHMARK
CENTER MANHOLE
ELEV. = 430.08

N 710752.09
E 1085072.09

N 710715.94
E 1086684.12

N.60°41'43" E
172.82'

CONTRACTOR TO CAP
BOTH SIDES OF EXISTING
SANITARY SEWER LINE
AFTER REMOVAL OF
MANHOLE

SANITARY SEWER
MAIN TO BE ABANDONED
IN PLACE

SANITARY SEWER
MANHOLES TO BE
REMOVED

LANDS OF
TAYLOR FARM I LLC
LOT 3
TM. 0048-0021-0057
L. 7042 F. 287
(9.04 AC.)

CONTRACTOR TO REMOVE
SANITARY SEWER MAIN BETWEEN
MANHOLES MH5-200 AND MH1-29

SANITARY SEWER
MAIN TO BE ABANDONED
IN PLACE

CONTRACTOR TO REMOVE
SANITARY SEWER
MANHOLE

CONTRACTOR TO REMOVE
SANITARY SEWER LINE. CONTRACTOR
RESPONSIBLE FOR ANY SEWER
PUMP AROUND NECESSARY TO REMOVE
THIS LINE

CONTRACTOR TO REMOVE
AND REPLACE SANITARY SEWER
MANHOLE

CONTRACTOR TO REMOVE
AND REPLACE SANITARY SEWER
MANHOLE

FOREST CONSERVATION
EASEMENT AREA
PER PLAT #844

100 YEAR FLOOD PLAIN
FEMA PANEL 24043C0289D
AND STREAM BUFFER

100 YEAR FLOOD PLAIN
FEMA PANEL 24043C0281D
AND STREAM BUFFER

N 710982.09
E 1085514.62

N 709953.09
E 1085514.62

HORSHELL ROAD
(variable R/W, 60' MIN)

WRIGHT ROAD
(variable R/W, 80' MIN)

HATCH LEGEND

- EXISTING SANITARY SEWER EASEMENT TO BE ABANDONED
- EXISTING FOREST CONSERVATION AREA
- HIGHLY ERODIBLE SOILS & STEEP SLOPES (SLOPES>15% OR SLOPES>5% AND Kw>0.35)

SOIL CHART

SOILS	H.S.G.	Ratio (%)	Kw	Area (Ac.)
Fa	D	38.27%	0.37	3.46
HaC	B	1.55%	0.37	0.14
HbC	B	28.21%	0.37	2.55
SsA	C	31.97%	0.49	2.89

LINE	BEARING	DISTANCE
L1	S 46°12'57" E	26.97'
L2	S 70°53'38" E	15.14'
L3	N 45°42'28" W	30.78'
L4	N 16°55'38" W	20.96'
L5	N 64°17'06" W	20.31'
L6	S 58°36'20" W	27.49'
L7	N 60°18'30" W	30.33'
L8	S 89°11'12" W	23.41'
L9	S 69°06'00" W	25.63'
L10	S 68°38'52" W	21.56'

NOTES:
1. THIS PARCEL DOES LIE IN THE 100 YEAR FLOOD PLAIN PER FEMA FLOOD INSURANCE RATE MAP, COMMUNITY PANEL NO. 24043C0093D DATED 08-15-2017, FLOOD ZONE X.
2. THERE ARE NO WETLANDS FOUND WITHIN THIS PARCEL.
3. THERE ARE FORESTS, STEEP SLOPES AND HIGHLY ERODIBLE SOILS FOUND WITHIN THE PARCELS.

CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING	DELTA ANGLE
C1	275.00'	114.31'	113.49'	N 05°11'41" W	23°49'02"
C2	890.00'	558.18'	549.08'	N 78°39'45" E	35°56'03"
C3	1440.00'	394.99'	393.76'	N 52°50'14" E	15°42'59"
C4	125.00'	142.36'	134.79'	S 13°35'15" E	65°15'16"

SENSITIVE AREA NOTICE

The stream buffers shown hereon are established pursuant to the requirements of the Washington County Subdivision Ordinance Article IV, Section 409. In an effort to preserve or improve water quality, the property owner is required to establish and thereafter maintain in perpetuity vegative ground cover in accordance with urban best management practices recommended by the Washington County Soil Conservation District. No permanent structures or construction are permitted within the stream buffer except those designed to improve water quality or flow as approved by the Washington County Planning Commission in accordance with all applicable regulations, laws, and policies. No septic systems shall be constructed within the buffer nor shall any reserve area be established within the buffer.

WASHINGTON COUNTY DEPARTMENT OF WATER QUALITY

This plan/plat has been reviewed by the Washington County Department of Water Quality for inclusion into the county capacity management plan for the system that serves this project. Allocation granted for construction shown on this plan/plat shall be in accordance with the capacity management plan developed for this system based on availability of allocation remaining in the facility.

SIGNATURE DATE

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)
1 inch = 40 ft.

STATE OF MARYLAND
TREVOR M. FREDERICK
49809
PROFESSIONAL ENGINEER
08/18/2025

Professional Certification:
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional under the laws of the State of: MARYLAND License #: 49809
Expiration Date: 08-24-2026

FSA
FREDERICK, SEIBERT & ASSOCIATES, INC.
CIVIL ENGINEERS • SURVEYORS • LANDSCAPE ARCHITECTS • LAND PLANNERS
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15 EAST MAIN STREET
NEW BLOOMFIELD, PA 17068
717-275-7644
305 SOUTH HANOVER STREET
CARLISLE, PA 17013
717-516-9011
11142 RELLIANSPORT PIKE
GREENCASTLE, PA 17225
717-597-3667
128 SOUTH POTOMAC STREET
HAGERSTOWN, MD 21740
240-716-8666

MARK	DESCRIPTION:	DATE:
	REVISED PER AGENCY COMMENTS	04.18.2023
	REVISED PER AGENCY COMMENTS	10.24.2023
	REVISED PER AGENCY COMMENTS	05.21.2024
	REVISED PER CLIENT REQUEST	05.27.2025
	REVISED PER AGENCY COMMENTS	08.18.2025

TAYLOR FARM LOT 3

SITUATE ALONG THE SOUTH SIDE OF WRIGHT ROAD
AND WEST OF HOPEWELL ROAD
WILLIAMSPORT
WASHINGTON COUNTY, MARYLAND
SHAOOL
1741 DUAL HIGHWAY, SUITE B
HAGERSTOWN, MARYLAND 21740

PROJECT NO: 4564.3
DWN BY: ABRAM MYERS
DATE: 01.10.2023
PROJECT MANAGER: T. FREDERICK
EMAIL: TFREDERICK@FSA-INC.COM
TAX MAP - GRID - PARCEL: 0048 - 0021 - 0057
SCALE: 1" = 40'

SHEET TITLE
EXISTING CONDITIONS & DEMOLITION PLAN

C-101
SHEET 03 OF 19

SP-23-003

P:\SHARED\ FOLDERS\PROJECTS\4500\4564.01\07 FARMS\CAD\CIVIL\SHEETS\4564.01SITE ENGINEERING CONDITIONS_SITE PLAN_2025-08-18

LEGEND

- LOD -LIMIT OF DISTURBANCE (6.50 AC)
- SF42 - SMART FENCE 42
- SF -SILT FENCE
- X—X—X— -TREE PROTECTION FENCE
- -STRAW AND NET MATTING
- -STABILIZED CONSTRUCTION ENTRANCE
- -RIPRAP OUTLET PROTECTION
- -EXISTING CONTOURS
- +606.0 -EXISTING TEXT
- +589.1 -FINISHED GRADE SPOT ELEVATION
- -FINISHED GRADE INTERMEDIATE CONTOUR
- -FINISHED GRADE INDEX CONTOUR
- -SOIL BOUNDARY

General E&S Notes:

1. Contractor to only open up length of trench that can be constructed and backfilled in one working day in paved areas.
2. Contractor to remove excavated materials to an approved location to waste materials.
3. All fill material should be brought from a location with an approved and current sediment erosion control plan.
4. Contractor to backfill trench with approved materials and stabilize disturbed areas the same working day.
5. If dewatering of the trench is required, contractor to pump water to a filter bag to dewater.
6. Contractor to sweep streets immediately of any debris or sediments caused by construction operations and dispose of at an approved location.
7. Contractor to stabilize all disturbed areas with seed and mulch or appropriate street repair.
8. All slopes 3:1 or greater to be stabilized with temporary matting.
9. Place 4" minimum topsoil in all green areas before permanent seeding is performed.
10. The USDA soil survey of Washington County shows the soils on this site as being karst landscape soils. Please be alert to the possibility of sinkhole formation.
11. All sinkholes that are present or develop during construction must be remediated and certified by the site Geotechnical Engineer. Contractor to contact Geotechnical Engineer immediately after the discovery of any sinkhole.

INITIAL SEQUENCE OF CONSTRUCTION

SEQUENCE OF CONSTRUCTION

Pre-Construction Notification - Contractor shall notify the Washington Co. Soil Conservation District (301-797-6821), Washington County Engineering (240-313-2400), and the Design Engineer (301-791-3650) at least five (5) days prior to start of any work shown on these plans to schedule a pre-construction meeting. Any spoil and/or borrow material must come from and/or go to a site with an approved and current Soil Erosion and Sediment Control Plan.

Contractor to remediate any sink holes found on site prior to beginning construction.

Before beginning construction, limit of disturbance to be staked.

1. **Contractor to access site using existing paved entrance. Contractor to then use stabilized construction entrance located after paved entrance. If tracking of mud/debris occurs on the roadways, contractor to immediately stop work and clean roadways.**
2. **Contractor to install all perimeter controls as shown on plans.**
3. **With perimeter controls in place, contractor to install ES4 to SD7, installing outlet protection immediately upon completion. Contractor to install sediment basin 'A' as shown on the plans.**
4. **Contractor to install storm drain system ES3 to SD6, installing outlet protection immediately upon completion. With storm drain installed, contractor to install sediment basin 'B' as shown on the plans.**
5. **Contractor to complete demolition as shown on sheet C-101.**
6. **With demolition completed, contractor to strip topsoil in building pad location and borrow areas for building pad construction and place in designated temporary stockpile location. Place silt fence on downhill side of stockpile.**
7. **With topsoil stripped, contractor to begin building pad and retaining wall construction.**
8. **Contractor to use concrete washout as shown on plans if needed during construction.**
9. **The contractor shall prepare the building pad per Geotechnical Engineer's recommendations. Contractor to stabilize all slopes steeper than 3:1 within 3 calendar days of initial soil disturbance or re-disturbance, and all other disturbed or graded areas within 7 calendar days, with temporary seed and mulch. Contractor to implement incremental stabilization on all slopes greater than 15' in height. Stabilize with erosion control matting and seed & mulch as required.**
10. **With building pad brought to grade, contractor to move to Final Sediment and Erosion Control Plan.**

SEDIMENT BASIN 'A'

DRAINAGE AREA - FINAL:	2.58 AC.
TOTAL STORAGE REQ:	9,288 CF
TOTAL STORAGE PROV:	10,735 CF
WET STORAGE REQ:	4,644 CF
WET STORAGE PROV:	4,661 CF
WET STORAGE ELEV:	427.00
DRY STORAGE REQ:	4,644 CF
DRY STORAGE PROV:	10,735 CF
WEIR ELEV:	428.00
TRAP BOTTOM ELEV:	426.00
TRAP BOTTOM AREA:	0.09 AC.
CLEANOUT ELEV:	426.50
TOP BERM ELEV:	430.00
10 YEAR WSEL:	428.38
SIDE SLOPE:	3:1
TOP BERM WIDTH:	4 FT
DRAW DOWN DIAMETER:	6"
ORIFICE DIAMETER:	2"

SEDIMENT BASIN 'B'

DRAINAGE AREA - FINAL:	3.74 AC.
TOTAL STORAGE REQ:	13,464 CF
TOTAL STORAGE PROV:	26,385 CF
WET STORAGE REQ:	6,732 CF
WET STORAGE PROV:	8,077 CF
WET STORAGE ELEV:	427.00
DRY STORAGE REQ:	6,732 CF
DRY STORAGE PROV:	18,308 CF
WEIR ELEV:	429.00
TRAP BOTTOM ELEV:	425.75
TRAP BOTTOM AREA:	0.12 AC
CLEANOUT ELEV:	426.38
TOP BERM ELEV:	431.00
10 YEAR WSEL:	429.17
SIDE SLOPE:	3:1
TOP BERM WIDTH:	10 FT
DRAW DOWN DIAMETER:	6"
ORIFICE DIAMETER:	2"

SMART FENCE-42 TABLE

TYPE	NUMBER	LENGTH (FT)	AVERAGE SLOPE (%)	SLOPE LENGTH (FT)	MAX SLOPE LENGTH (FT)	DETAIL REFERENCE
SMART-FENCE 42	1	358'	33.33%	9'	500'	06/C-501
SMART-FENCE 42	2	343'	33.33%	22'	500'	06/C-501
SMART-FENCE 42	3	75'	33.33%	22'	500'	06/C-501

SILT FENCE-42 TABLE

TYPE	NUMBER	LENGTH (FT)	AVERAGE SLOPE (%)	SLOPE LENGTH (FT)	MAX SLOPE LENGTH (FT)	DETAIL REFERENCE
SILT FENCE	1	223	N/A	N/A	N/A	06/C-501
SILT FENCE	2	223	N/A	N/A	N/A	06/C-501

DISTURBANCE TO STREAM BUFFER: 2,601 SF

SEE SHEET L-101 FOR STREAM BUFFER IMPACT MITIGATION. MITIGATION PROVIDED: 9,295 SF

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)
1 inch = 40 ft.

STATE OF MARYLAND
TREVOR M. FREDERICK
PROFESSIONAL ENGINEER
41808
08/18/2025

Professional Certification:
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional under the laws of the State of: MARYLAND License #: 41808
Expiration Date: 08-24-2026

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555 SOUTH HANOVER STREET CARLISLE, PA 17013 717-249-9411
11142 RUSSELLMORPH PIKE GREENCASTLE, PA 17225 717-597-1647
128 SOUTH POTOMAC STREET HAGERSTOWN, MD 21740 301-739-8866

MARK	DESCRIPTION:	DATE:
	REVISED PER AGENCY COMMENTS	04.18.2023
	REVISED PER AGENCY COMMENTS	10.24.2023
	REVISED PER AGENCY COMMENTS	05.21.2024
	REVISED PER CLIENT REQUEST	05.27.2025
	REVISED PER AGENCY COMMENTS	06.18.2025

TAYLOR FARM LOT 3

SITUATE ALONG THE SOUTH SIDE OF WRIGHT ROAD AND WEST OF HOPEWELL ROAD

WILLIAMSPORT
WASHINGTON COUNTY, MARYLAND

SHAOOL
1741 DUAL HIGHWAY, SUITE B
HAGERSTOWN, MARYLAND 21740

PROJECT NO: 4564.3
DWN BY: ABRAM MYERS
DATE: 01.10.2023
PROJECT MANAGER: T. FREDERICK
EMAIL: TFREDERICK@FSA-INC.COM
TAX MAP - GRID - PARCEL: 0048 - 0021 - 0057
SCALE: 1" = 40'
SHEET TITLE

EROSION & SEDIMENT CONTROL PLAN- INITIAL

C-102
SHEET 04 OF 19

SP-23-003

P:\SHARED\ 7D\LD\SP\PLOT\7D-XXXX\4564.4\SHT\ 3 WARK\PLOT\ENGR\CIVIL\CNSTR_SITE\4564.3 H-E\ROSHN\ 4 SEDIMENT CONTROL PLAN.DWG 2025-06-18

LEGEND

- LOD -LIMIT OF DISTURBANCE (6.50 AC)
- SF42 - SMART FENCE 42
- X X X - TREE PROTECTION FENCE
- SF - SILT FENCE
- -STRAW AND NET MATTING
- -STABILIZED CONSTRUCTION ENTRANCE
- -RIPRAP OUTLET PROTECTION
- -AT GRADE INLET PROTECTION
- -EXISTING CONTOURS
- +606.0 -EXISTING TEXT
- + 589.1 -FINISHED GRADE SPOT ELEVATION
- 600 -FINISHED GRADE INTERMEDIATE CONTOUR
- 595 -FINISHED GRADE INDEX CONTOUR
- -SOIL BOUNDARY

General E&S Notes:

1. Contractor to only open up length of trench that can be constructed and backfilled in one working day in paved areas.
2. Contractor to remove excavated materials to an approved location to waste materials.
3. All fill material should be brought from a location with an approved and current sediment erosion control plan.
4. Contractor to backfill trench with approved materials and stabilize disturbed areas the same working day.
5. If dewatering of the trench is required, contractor to pump water to a filter bag to dewater.
6. Contractor to sweep streets immediately of any debris or sediments caused by construction operations and dispose of at an approved location.
7. Contractor to stabilize all disturbed areas with seed and mulch or appropriate street repair.
8. All slopes 3:1 or greater to be stabilized with temporary matting.
9. Place 4" minimum topsoil in all green areas before permanent seeding is performed.
10. The USDA soil survey of Washington County shows the soils on this site as being karst landscape soils. Please be alert to the possibility of sinkhole formation.
11. All sinkholes that are present or develop during construction must be remediated and certified by the site Geotechnical Engineer. Contractor to contact Geotechnical Engineer immediately after the discovery of any sinkhole.

FINAL SEQUENCE OF CONSTRUCTION

SEQUENCE OF CONSTRUCTION

Pre-Construction Notification - Contractor shall notify the Washington Co. Soil Conservation District (301-797-6821), Washington County Engineering (240-313-2400), and the Design Engineer (301-791-3650) at least five (5) days prior to start of any work shown on these plans to schedule a pre-construction meeting. Any spoil and/or borrow material must come from and/or go to a site with an approved and current Soil Erosion and Sediment Control Plan.

Contractor to remediate any sink holes found on site prior to beginning construction.

Before beginning construction, limit of disturbance to be staked.

1. **With Initial Erosion and Sediment Control Plan completed, contractor to ensure all perimeter controls are sufficient, repairing any as needed. Contractor to remove existing entrance and install stabilized construction entrance as shown on plans.**
2. **Contractor to begin stripping topsoil on remainder of site and stockpiling in designated temporary topsoil pile location.**
3. **As site is brought to grade, contractor to begin installing utilities as shown on plans. Contractor to only open length of trench that can be backfilled and stabilized in the same working day.**
4. **Contractor to install outlet and inlet protection immediately after storm drains have been installed.**
5. **Parking areas and access roads to be stabilized and paved and green space areas to be topsoiled, seeded and mulched with permanent seeding.**
6. **Contractor to ensure entirety of site is stabilized prior to converting SWM Facilities.**
7. **After the site has been stabilized, the contractor shall contact the Washington County Soil Conservation District (301-797-6821, ext. 3) and design engineer (301-791-3650) for an interim inspection of the submerged gravel wetland before placing the filtering medias in submerged gravel wetland facilities.**
8. **Contractor shall use light-weight equipment to avoid compaction of the filtering media during construction. No equipment shall be permitted on the BMPs after the soil layer has been installed.**
9. **Contractor to landscape site as shown on plans and seed and mulch any disturbed areas.**
10. **Contact the Washington County Soil Conservation District (301-797-6821) to verify site is adequately stabilized before removing perimeter controls.**
11. **Remove all sediment control devices and stabilize any disturbed area.**

Post-Construction Notification - Notify the Washington County Soil Conservation District and Washington Division of Construction after the site has achieved 95% overall vegetative stabilization, and at least 5 days prior to the removal of any sediment control features to schedule a final site closeout inspection and meeting. Once final approval has been granted, perimeter controls can be removed, and final stabilization in those areas shall be completed.

INLET PROTECTION TABLE

INLET ID	DRAINAGE AREA (FINAL)	PROTECTION TYPE
SD1	0.16	AT GRADE INLET PROTECTION
SD2	0.28	AT GRADE INLET PROTECTION
SD3	0.93	AT GRADE INLET PROTECTION
SD4	0.20	AT GRADE INLET PROTECTION
SD5	0.56	AT GRADE INLET PROTECTION
SD8	0.37	AT GRADE INLET PROTECTION
SD9	0.62	AT GRADE INLET PROTECTION

OUTLET PROTECTION TABLE

ID	PIPE	Q10 (CFS)	V10 (FPS)	LENGTH (FT)	WIDTH (FT)	d50 (IN)	Dmax (IN)	DEPTH (IN)	MDSHA CLASS
ES1	18"	5.51	4.86	4.00	3.00	9.50	15"	19"	I
ES2	24"	14.71	6.02	10.00	6.00	9.50	15"	19"	I
ES3	15"	7.61	6.20	7.00	8.50	9.50	15"	19"	I
ES4	15"	1.10	5.45	7.00	8.50	9.50	15"	19"	I

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)
1 inch = 40 ft.

STATE OF MARYLAND
TREVOR M. FREDERICK
49809
PROFESSIONAL ENGINEER
08/18/2025

Professional Certification:
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional under the laws of the State of: MARYLAND License #: 49809
Expiration Date: 08-24-2026

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ID #2024
15 EAST MAIN STREET, NEW BLOOMFIELD, PA 17068, 717-582-8644
555 SOUTH HANOVER STREET, CARLISLE, PA 17013, 717-218-5811
11142 RUSSELLMORCROFT PKWY, GREENCASTLE, PA 17225, 717-597-3667
126 SOUTH POTOMAC STREET, HAGERSTOWN, MD 21740, 240-313-2400

MARK	DESCRIPTION:	DATE:
	REVISED PER AGENCY COMMENTS	04.18.2023
	REVISED PER AGENCY COMMENTS	10.24.2023
	REVISED PER AGENCY COMMENTS	05.21.2024
	REVISED PER CLIENT REQUEST	05.27.2025
	REVISED PER AGENCY COMMENTS	08.18.2025

TAYLOR FARM LOT 3

SITUATE ALONG THE SOUTH SIDE OF WRIGHT ROAD AND WEST OF HOPEWELL ROAD

WILLIAMSPORT
WASHINGTON COUNTY, MARYLAND

SHADEL
1741 DUAL HIGHWAY, SUITE B
HAGERSTOWN, MARYLAND 21740

PROJECT NO. 4564.3
DWN BY ABRAM MYERS | DATE 01.10.2023
PROJECT MANAGER: T. FREDERICK
EMAIL: TFREDERICK@FSA-INC.COM
TAX MAP - GRID - PARCEL: 0048 - 0021 - 0057
SCALE 1" = 40'
SHEET TITLE

EROSION & SEDIMENT CONTROL PLAN- FINAL

C-103
SHEET 05 OF 19

SP-23-003

NOTE:
CLEANOUTS SHALL BE INSTALLED AT ALL ROOF DRAIN LOCATIONS FOR MAINTENANCE PURPOSES.

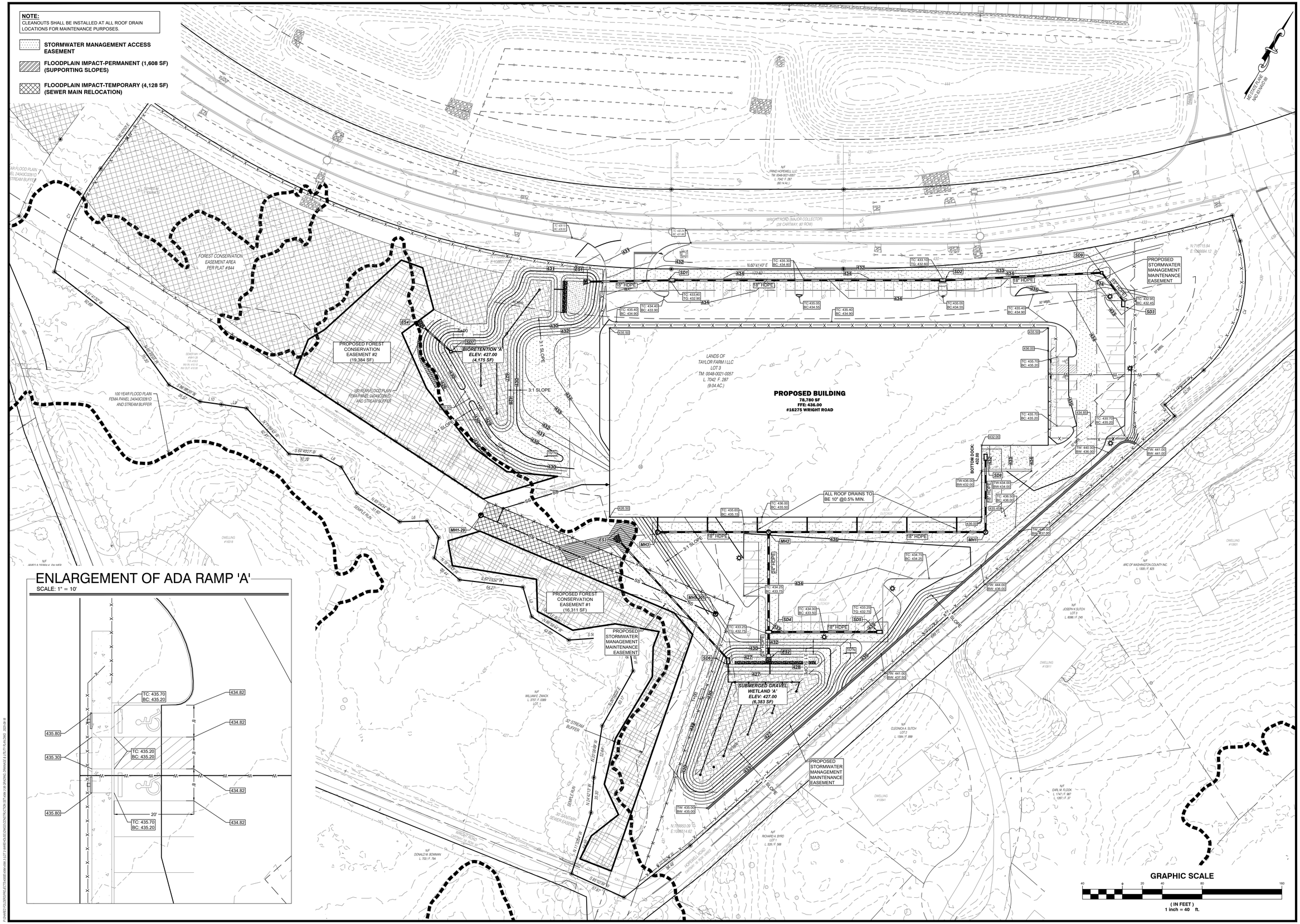
STORMWATER MANAGEMENT ACCESS EASEMENT

FLOODPLAIN IMPACT-PERMANENT (1,608 SF) (SUPPORTING SLOPES)

FLOODPLAIN IMPACT-TEMPORARY (4,128 SF) (SEWER MAIN RELOCATION)

ENLARGEMENT OF ADA RAMP 'A'

SCALE: 1" = 10'



STATE OF MARYLAND
TREVOR M. FREDERICK
49809
PROFESSIONAL ENGINEER
08/18/2025

Professional Certification:
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional under the laws of the State of: MARYLAND
License #: 49809
Expiration Date: 08-24-2026

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15 EAST MAIN STREET, NEW BLOOMFIELD, PA 17068, 717-582-2644
305 SOUTH HANOVER STREET, CARLISLE, PA 17013, 717-249-9411
11142 RELLAMSPORT PIKE, GREENCASTLE, PA 17225, 717-597-3667
126 SOUTH POTOMAC STREET, HAGERSTOWN, MD 21740, (NEW OFFICE)

MARK	DESCRIPTION:	DATE:
	REVISED PER AGENCY COMMENTS	04.18.2023
	REVISED PER AGENCY COMMENTS	10.24.2023
	REVISED PER AGENCY COMMENTS	05.21.2024
	REVISED PER CLIENT REQUEST	05.27.2025
	REVISED PER AGENCY COMMENTS	08.18.2025

TAYLOR FARM LOT 3

SITUATE ALONG THE SOUTH SIDE OF WRIGHT ROAD AND WEST OF HOPEWELL ROAD

WILLIAMSPORT

WASHINGTON COUNTY, MARYLAND

SHADY SCHOOL
1741 DUAL HIGHWAY, SUITE B
HAGERSTOWN, MARYLAND 21740

PROJECT NO:	4564.3
DWN BY:	ABRAM MYERS
DATE	01.10.2023
PROJECT MANAGER:	T. FREDERICK
EMAIL:	TFREDERICK@FSA-INC.COM
TAX MAP - GRID - PARCEL:	0048 - 0021 - 0057
SCALE	1" = 40'

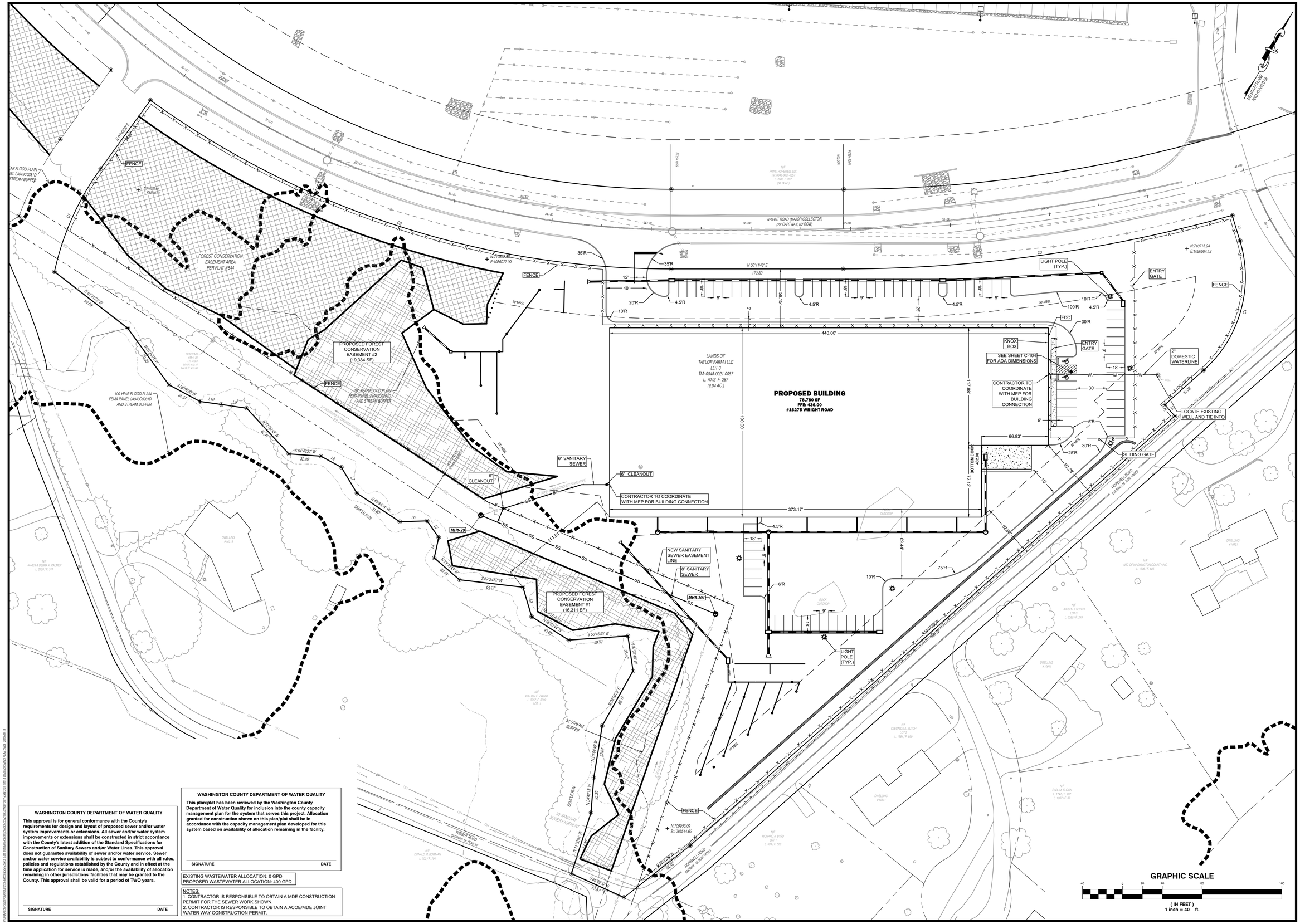
SHEET TITLE

GRADING & DRAINAGE PLAN

C-104
SHEET 06 OF 19

SP-23-003

P:\SHARED FOLDERS\PROJECTS\4500\4564.4\4564.3 WARE\PLANS\DESIGN\CIVIL\CONSTRUCTION SET\4564.3 DB GRADING_DRAINAGE & UTILITY PLAN.DWG 2025-08-18



WASHINGTON COUNTY DEPARTMENT OF WATER QUALITY

This approval is for general conformance with the County's requirements for design and layout of proposed sewer and/or water system improvements or extensions. All sewer and/or water system improvements or extensions shall be constructed in strict accordance with the County's latest addition of the Standard Specifications for Construction of Sanitary Sewers and/or Water Lines. This approval does not guarantee availability of sewer and/or water service. Sewer and/or water service availability is subject to conformance with all rules, policies and regulations established by the County and in effect at the time application for service is made, and/or the availability of allocation remaining in other jurisdictions' facilities that may be granted to the County. This approval shall be valid for a period of TWO years.

SIGNATURE DATE

WASHINGTON COUNTY DEPARTMENT OF WATER QUALITY

This plan/plat has been reviewed by the Washington County Department of Water Quality for inclusion into the county capacity management plan for the system that serves this project. Allocation granted for construction shown on this plan/plat shall be in accordance with the capacity management plan developed for this system based on availability of allocation remaining in the facility.

SIGNATURE DATE

EXISTING WASTEWATER ALLOCATION: 0 GPD
PROPOSED WASTEWATER ALLOCATION: 400 GPD

NOTES:
1. CONTRACTOR IS RESPONSIBLE TO OBTAIN A MDE CONSTRUCTION PERMIT FOR THE SEWER WORK SHOWN.
2. CONTRACTOR IS RESPONSIBLE TO OBTAIN A ACOE/MDE JOINT WATER WAY CONSTRUCTION PERMIT.

STATE OF MARYLAND
TREVOR M. FREDERICK
21910
PROFESSIONAL ENGINEER
08/18/2025

Professional Certification:
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional under the laws of the State of: MARYLAND
License #: 21910
Expiration Date: 08-24-2026

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555 SOUTH HANOVER STREET CARLISLE, PA 17013 717-249-9411
111-A2 WILLIAMSPORT PIKE GREENCASTLE, PA 17225 717-597-3647
126 SOUTH POTOMAC STREET HAGERSTOWN, MD 21740 301-739-8866

MARK	DESCRIPTION:	DATE:
	REVISED PER AGENCY COMMENTS	04.18.2023
	REVISED PER AGENCY COMMENTS	10.24.2023
	REVISED PER AGENCY COMMENTS	05.21.2024
	REVISED PER CLIENT REQUEST	05.27.2025
	REVISED PER AGENCY COMMENTS	08.18.2025

TAYLOR FARM LOT 3

SITUATE ALONG THE SOUTH SIDE OF WRIGHT ROAD AND WEST OF HOPEWELL ROAD

WILLIAMSPORT
WASHINGTON COUNTY, MARYLAND

SHADD,
1741 DUAL HIGHWAY, SUITE B
HAGERSTOWN, MARYLAND 21740

PROJECT NO.: 4564.3
DWN BY: ABRAM MYERS
DATE: 01.10.2023
PROJECT MANAGER: T. FREDERICK
EMAIL: TFREDERICK@FSA-INC.COM
TAX MAP - GRID - PARCEL: 0048 - 0021 - 0057
SCALE: 1" = 40'

SHEET TITLE

SITE & UTILITY PLAN

C-105
SHEET 07 OF 19

SP-23-003

P:\SHARED FILES\PROJFILES\TAYLOR FARM\SP-23-003\DWG\CONSTRUCTION SET\4564.3 ST SITE & UTILITY\SHEETS\SITE PLAN.DWG 2025-08-18

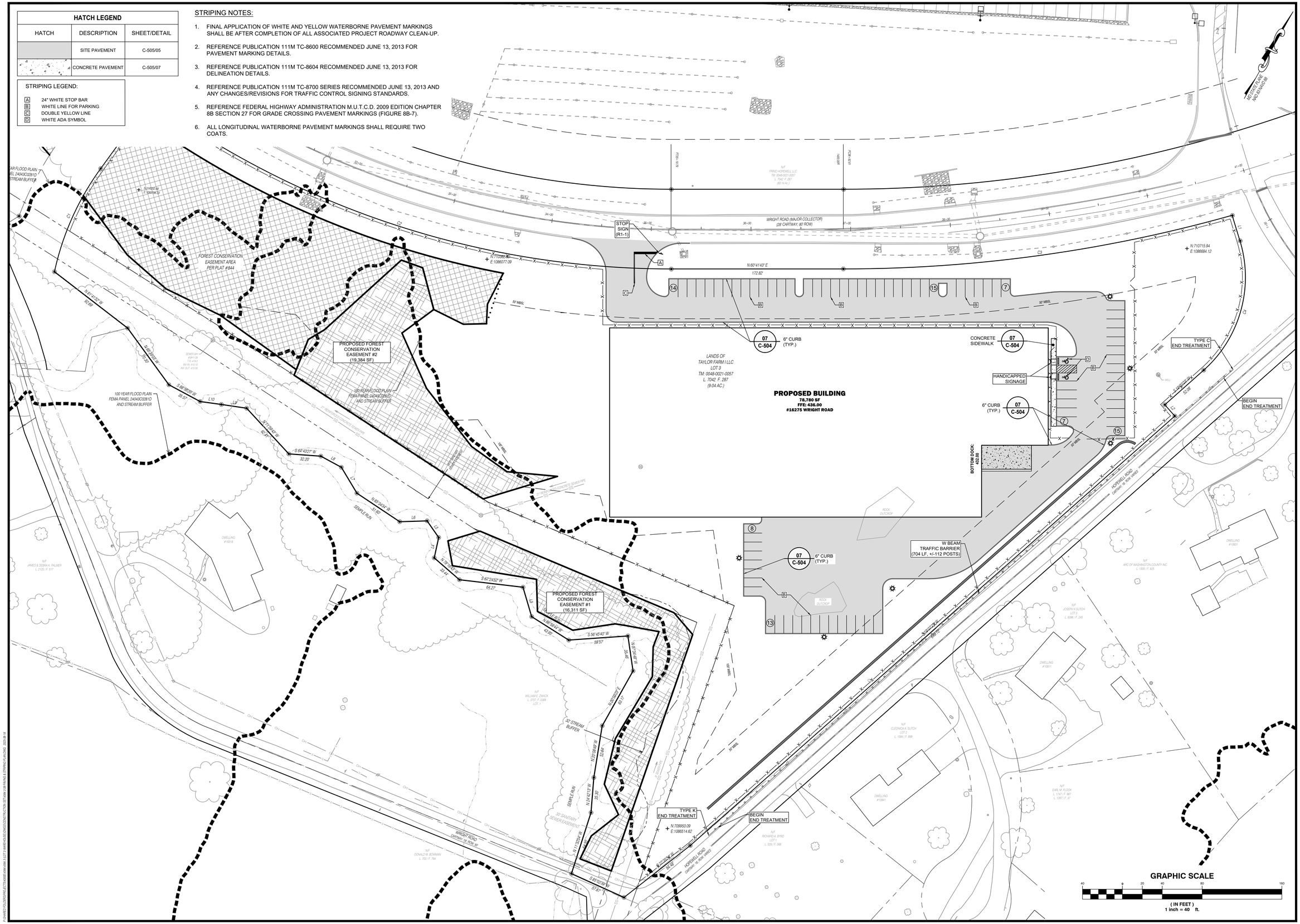
HATCH LEGEND		
HATCH	DESCRIPTION	SHEET/DETAIL
	SITE PAVEMENT	C-505/05
	CONCRETE PAVEMENT	C-505/07

STRIPING LEGEND:

- A — 24" WHITE STOP BAR
- B — WHITE LINE FOR PARKING
- C — DOUBLE YELLOW LINE
- D — WHITE ADA SYMBOL

STRIPING NOTES:

1. FINAL APPLICATION OF WHITE AND YELLOW WATERBORNE PAVEMENT MARKINGS SHALL BE AFTER COMPLETION OF ALL ASSOCIATED PROJECT ROADWAY CLEAN-UP.
2. REFERENCE PUBLICATION 111M TC-8600 RECOMMENDED JUNE 13, 2013 FOR PAVEMENT MARKING DETAILS.
3. REFERENCE PUBLICATION 111M TC-8604 RECOMMENDED JUNE 13, 2013 FOR DELINEATION DETAILS.
4. REFERENCE PUBLICATION 111M TC-8700 SERIES RECOMMENDED JUNE 13, 2013 AND ANY CHANGES/REVISIONS FOR TRAFFIC CONTROL SIGNING STANDARDS.
5. REFERENCE FEDERAL HIGHWAY ADMINISTRATION M.U.T.C.D. 2009 EDITION CHAPTER 8B SECTION 27 FOR GRADE CROSSING PAVEMENT MARKINGS (FIGURE 8B-7).
6. ALL LONGITUDINAL WATERBORNE PAVEMENT MARKINGS SHALL REQUIRE TWO COATS.



STATE OF MARYLAND
TREVOR M. FREDERICK
49806
PROFESSIONAL ENGINEER
08/18/2025

Professional Certification:
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Expiration Date: 08-24-2026

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355 SOUTH HANOVER STREET CARLISLE, PA 17013 717-249-8411
11142 WILLIAMSPORT PIKE GREENCASTLE, PA 17225 717-597-1647
128 SOUTH POTOMAC STREET HAGERSTOWN, MD 21740 301-739-8866

MARK	DESCRIPTION:	DATE:
	REVISED PER AGENCY COMMENTS	04.08.2023
	REVISED PER AGENCY COMMENTS	10.24.2023
	REVISED PER AGENCY COMMENTS	05.21.2024
	REVISED PER AGENCY COMMENTS	08.18.2025

TAYLOR FARM LOT 3

SITUATE ALONG THE SOUTH SIDE OF WRIGHT ROAD AND WEST OF HOPEWELL ROAD

WILLIAMSPORT
WASHINGTON COUNTY, MARYLAND

SHADD,
1741 DUAL HIGHWAY, SUITE B
HAGERSTOWN, MARYLAND 21740

PROJECT NO.: 4564.3
DWN BY: ABRAM MYERS
DATE: 01.10.2023
PROJECT MANAGER: T. FREDERICK
EMAIL: TFREDERICK@FSA-INC.COM
TAX MAP - GRID - PARCEL: 0048 - 0021 - 0057
SCALE: 1" = 40'

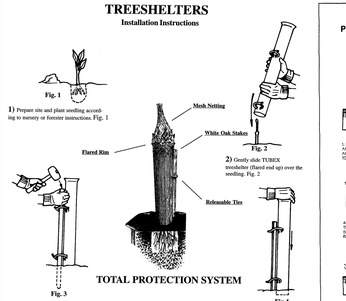
SHEET TITLE

PAVING & STRIPING PLAN

C-106
SHEET 08 OF 19

SP-23-003

TREESHELTERS
Installation Instructions



3) Insert white oak stake into the two ties and drive into the ground until the top of the stake is 2-3" above the top tie. Fig 3

4) Push base of the shelter 1" into the soil. If the ground is too hard, mound soil around the base to form a seal. Tighten ties by pulling on the tag end until the shelter is secure. Fig. 4

Important

** Seedlings will perform better with proper weed control.*
** Check stakes at least once a year.*
** Shelters are designed to photo-degrade. Do not remove.*
** In areas where songbirds nest, be sure to cover shelter top with mesh netting. (included)*
** Remove mesh netting prior to the tree emerging from the top of the shelter.*

TREE SHELTER NOTE:
Tree protection devices such as "Tubex" tree shelters or approved equal to be used with single stem trees such as ash, oaks and etc. and not to be used with a multi stem tree. Care must be taken when using these devices as not to allow grasses to grow around them. This would attract small animals and insects that would eventually kill the tree.

HATCH LEGEND

-- 100 Year Floodplain

-- Proposed forest Planting

FORESTATION TABLE

FOREST REQUIRED	**0.97 AC.±**
SP-23-003	**(42,253 S.F.)**
RELOCATED EASEMENT	**(140 S.F.)**
FOREST PROVIDED:	
EASEMENT #1	**0.37 AC.±**
EASEMENT #2	**0.44 AC.±**
TOTAL FOREST PROVIDED	**0.81 AC.±**
	(35,284 S.F.)
REMAINING REQUIRED	**0.16 AC.±**
	(6,969 S.F.)

NOTE: Remaining forest mitigation is to be paid into the Forest Conservation Fund in the amount of $2,090.70. This amount was determined by remaining forest mitigation required at the rate of 30 cents per square foot.

LONG TERM PROTECTION NOTE

Long term protection for land shown hereon as Existing Forest or Afforestation Areas shall be provided by way of a perpetual conservation easement. This deed restriction, recorded with the land records of this property, limits the use of the existing forest and afforestation areas to those activities which are consistent with the conservation of forest such as recreational activities, forest management, and wildlife management. Activities of a recreational or passive nature, as long as there is no forest disturbance, removal of forest, or inhibition of its natural growth are permitted in the forest areas. The County or its agents are authorized to inspect the Forest Conservation and Afforestation Easement Areas. A Proposed 15 foot Right-of-way to serve as access for the purpose of ingress and egress of the Existing Forest and Afforestation Areas.

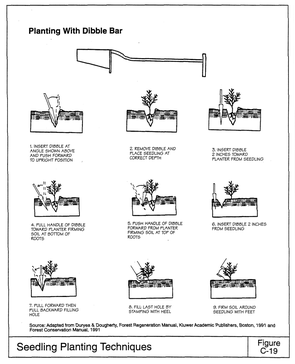
GENERAL NOTES

1. Property owners are advised that there are penalties and fines associated with the violation of these restrictions. Activities of a recreational or passive nature, as long as there is no forest disturbance, removal of the existing forest, or inhibition of its natural growth processes, are permitted in these forested areas.
2. Tree location as shown on this afforestation plan are generalized to show a random planting to give a more natural look to the forest. Actual placement of trees may vary due to field conditions.
3. The minimum number of 450 trees per acre is required with approximate 10'x10' spacing and maintaining a 65% minimum survival rate. The tree selection used for this planting are species native to this physiographic region of the State of Maryland.
4. A mix of rapid growth to slow growth trees and trees with differing height at maturity are proposed to emulate natural growth patterns. Any species substitution would be allowed as long as the quantity is met. And the species are listed on the Washington County Forest Conservation Ordinance native tree and shrub list.
5. The Forest Conservation Signs shown here do not represent the actual number of signs required but for illustration purposes only. The signs shall be install in accordance with the detail above and spaced approximately every 75 to 100 feet. The number of signs to be installed are as follows: Easement #1 - 13 signs, Easement #2 - 8 signs.
6. The contractor shall install Wire Tree Protection Fence along the Limit of Disturbance (LOD) where adjacent to the afforestation easement areas. If perimeter controls such as silt fence, filter log, or smart fence 42 is to be installed along the LOD, then Wire Tree Protection Fence is not required in those areas.

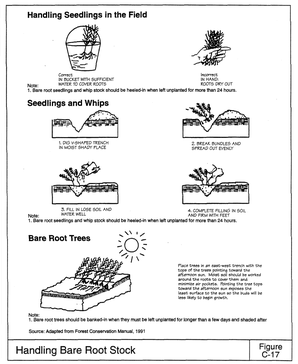
FOREST CONSERVATION WORKSHEET 2.2

NET TRACT AREA
A. Total Tract Area..... = 6.50 Ac.
B. Deductions..... = 0.05 Ac.
C. Net Tract Area..... = 6.45 Ac.
LAND USE CATEGORY CIA
D. Afforestation Threshold (Net Tract Area x 15%)..... = 0.97 Ac.
E. Conservation Threshold (Net Tract Area x 15%)..... = 0.97 Ac.
EXISTING FOREST COVER
F. Existing Forest Cover within the Net Tract Area..... = 0.00 Ac.
G. Area of Forest Above Conservation Threshold..... = 0.00 Ac.
BREAK EVEN POINT
H. Break Even Point..... = 0.00 Ac.
I. Forest Clearing Permitted Without Mitigation..... = 0.00 Ac.
PROPOSED FOREST CLEARING
J. Total Area of Forest to be Cleared..... = 0.00 Ac.
K. Total Area of Forest to be Retained..... = 0.00 Ac.
PLANTING REQUIREMENTS
L. Reforestation for Clearing Above the Conservation Threshold..... = 0.00 Ac.
M. Reforestation for Clearing Below the Conservation Threshold..... = 0.00 Ac.
N. Credit for Retention above the Conservation Threshold..... = 0.00 Ac.
P. Total Reforestation Required..... = 0.00 Ac.
Q. Total Afforestation Required..... = 0.97 Ac.
R. Total Planting Requirement..... = 0.97 Ac.
or 42,253.2 S.F.

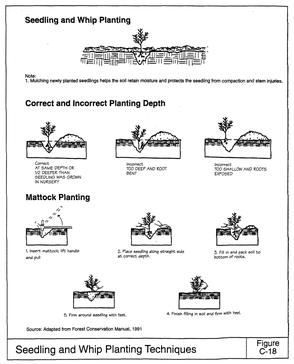
NOTE: SOIL DISTURBED DUE TO GRADING IMPACTS SHOULD BE RESTORED TO PRE-DISTURBANCE CONDITIONS PRIOR TO TREE INSTALLATION.



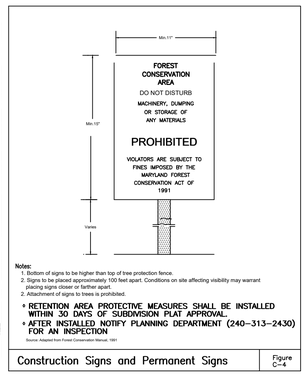
Seedling Planting Techniques — Figure C-19



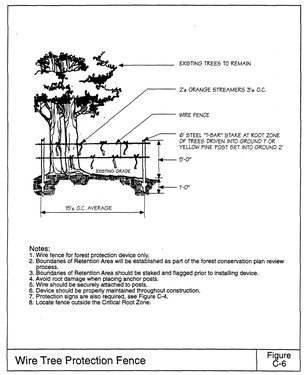
Handling Bare Root Stock — Figure C-17



Seedling and Whip Planting Techniques — Figure C-18



Construction Signs and Permanent Signs — Figure C-4



Wire Tree Protection Fence — Figure C-6

PLANTING & MAINTENANCE NOTES

1. Owner is to complete all planting work and preparation using his own resources and equipment or qualified contractor.
2. Plant material is to be purchased by the owner from a nursery within one hundred miles of the site. A list of two potential nursery sources is:
   A. East Coast Greens, 2629 McDowell Road, Saint Thomas, PA 17252, (717) 369-4995
   B. John S. Ayton State Tree Nursery, 580 Taylor Ave, Annapolis, MD 21401, 1(877)-620-8367
3. The cost estimate for bonding purposes is $7,448.76, this is based on the forest mitigation required (0.57 Ac. or 24,829.2 Sq.Ft.) at the rate of 30 cents per square foot.
4. The plantings shown hereron will be planted by the spring of 2026. If the areas to be planted with trees are overgrown with weeds or tall grasses and invasive plants, this area will need to be brush hogged and/or an herbicide shall be applied two weeks prior to planting. Note, no clearing or mowing is allowed in wetland areas.
   1. Undisturbed sites: Disturbance of soils should be limited to the planting field for each plant. As shown in Figure C-18.
5. The trees are to be protected with "Tubex" tree shelters or approved equal when planted. "Tubex" tree shelters are to be placed on every tree (See Tree Shelter Note). Note a tree shelter will necessitate more frequent watering.
6. Owner is to water trees and to prevent spread of invasive plants throughout the "forest" planting area for the three year maintenance period. Recommended type of watering is with a soaker hose to allow water to deeply irrigate the tree.
7. It is the owner or developers responsibility to notify the Washington County Planning and Zoning Department attention Travis Allen (240)313-2432 of when the planting has been completed. The Washington County Planning Department will make an inspection and issue a report to the owner or developer. The three year maintenance period will begin when the Washington County Planning and Zoning Department determines that the planting has been completed in accordnace with the Forest Conservation Ordinance requirements.
8. The owner or developer shall make an effort to maintain a 65% survival of the original planting at all times. The owner or developer can replant in order to maintain the 65% survival rate during the three year period with advance notice to the Washington County Planning Department. If the final inspection determines there is less than 65% survival it will be the owner/developer's responsibility to correct the deficiencies and possibly provide an additional maintained period.

PLANT LIST

SYMBOL	PLANT		SIZE	ROOT	*PHASE QUANITY
☐ S	Plantanus occidentalis	Sycamore	1" to 1½"	Container	50
○ BW	Juglans nigra	Black Walnut	1" to 1½"	Container	50
✓ WO	Quercus bicolor	Swamp White Oak	1" to 1½"	Container	60
▽ SM	Acer saccharinum	Silver Maple	1" to 1½"	Container	50
▽ RO	Quercus rubra	Red Oak	1" to 1½"	Container	50
				Total	260

* This afforestation is for a planting of seedlings / whips within a portion of easement #1 and the entire 0.44 acres of easement #2 to be completed by the spring of 2026.

Easement #1 already encompasses woody vegetation and will only need supplemental planting to qualify as forest. The planting list quantity listed above takes this into account.

Tree Planting and Maintenance Calendar

Tasks	Jan+	Feb+	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov+	Dec+
Transplant of 2" DBH or Greater												
Planting Seedlings, Whips												
Minimum Monitoring				*				*			*	
Fertilizer (if Needed)+												
Water++												
Pruning												

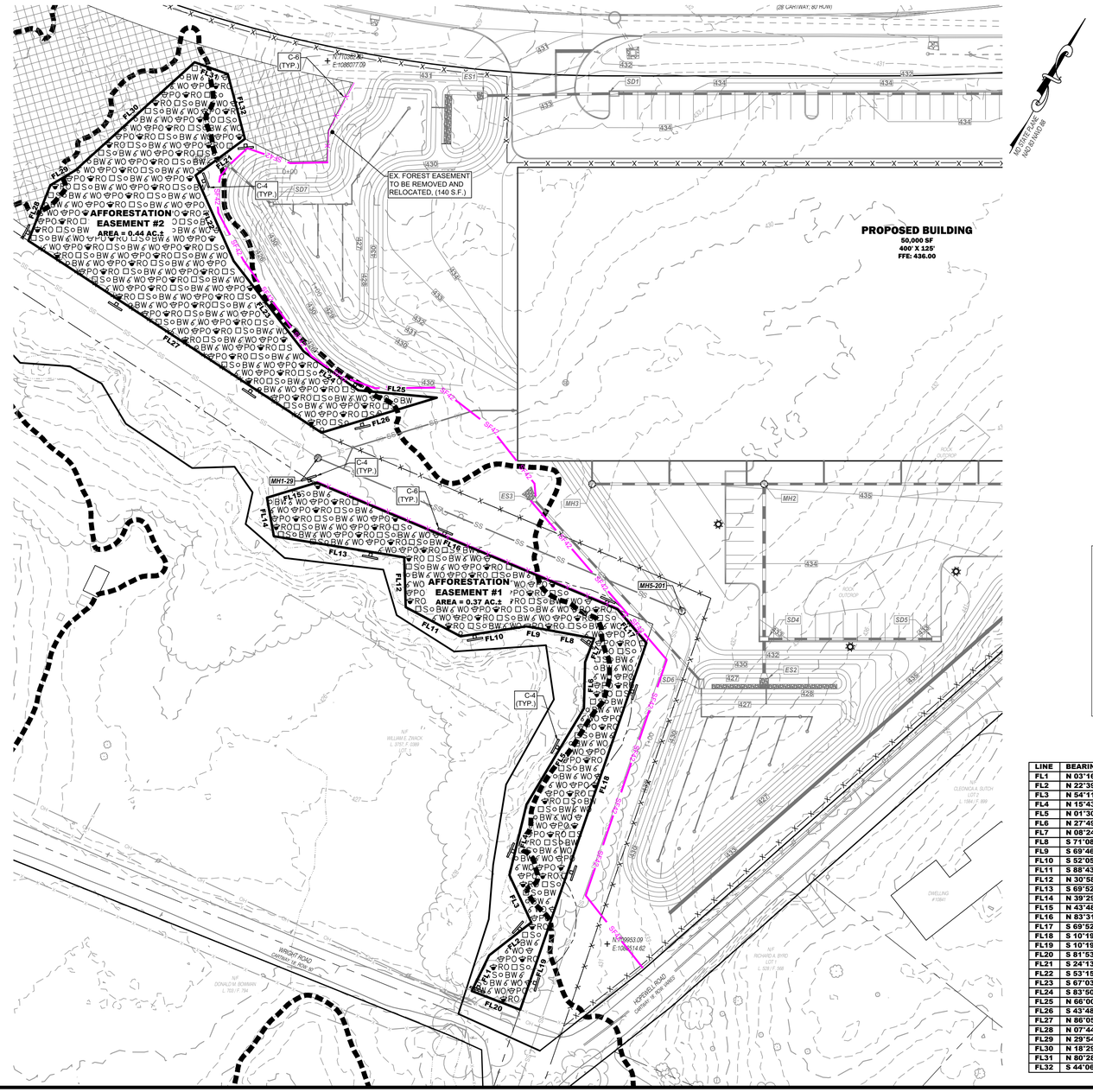
Recommended, Optimal Time
Recommended With Additional Time
Recommended

* Dependent Upon Site Conditions
** Dependent Upon Site Conditions: Weekly Watering is Strongly Recommended From May Through October Unless Weekly Rainfall Equals 1"

Notes:
1. Activities during November through February depend on ground conditions.
2. No fall planting of oaks and pines.
3. The planting and care of trees is most successful when coordinated with the local conditions. This calendar summarizes some of the recommended time frames for basic reforestation and stress reduction activities.

FOREST CONSERVATION SEQUENCE OF CONSTRUCTION

1. All temporary protection devices and/or permanent devices shall be put into place.
   - Permanent signage will be place as shown on the plan around the perimeter of the entire Forest Area within 30 days of subdivision plat approval and/or completion of construction.
   - During any building or site construction, the forest retention area(s) shall be protected by highly visible, well anchored temporary fencing.
   - All temporary fencing shall be in place prior to any grading or land clearing.
   - All temporary fencing shall be maintained throughout construction and until all graded areas have been stabilized.
   - Attachment of signs or any other objects to trees is prohibited.
   - No equipment, machinery, vehicles, materials or excessive pedestrian traffic shall be allowed within protected areas.
2. A pre-construction meeting will be required after the boundaries of the limits of disturbance have been staked and flagged, the forest protection devices have been installed, and before any disturbance has taken place on the site. It is the owner and/or developer's responsibility to arrange for the pre-construction meeting. The owner and/or developer shall contact the Washington County Planning and Zoning Department (240-313-2430) for inspection of the installed devices prior to the start of construction with at least five (5) days notice. If the inspection reveals improperly installed protection devices, corrections will have to be made and re-inspected prior to the start of construction.
3. Once approval has been granted by the Washington County Planning & Zoning Department, clearing and/or grading of the site for construction of street, utility, and building areas may commence.
4. A post-construction meeting will be required after all construction has ceased and graded areas have been stabilized, all temporary protective devices shall be removed and replaced with the appropriate permanent signage. It is the owner and/or developer's responsibility to arrange for the post-construction meeting. The owner and/or developer shall contact the Washington County Planning & Zoning Department (240-313-2430) for inspection of the final installed devices with at least five (5) days notice. If the inspection reveals improperly installed permanent protection devices, corrections will have to be made and re-inspected prior to the completion of site stabilization.



LINE	BEARING	DISTANCE
FL1	N 03°16'41" W	25.64'
FL2	N 22°39'03" E	34.63'
FL3	N 54°11'38" W	33.66'
FL4	N 15°43'08" W	47.10'
FL5	N 01°30'37" E	72.45'
FL6	N 27°49'29" W	29.91'
FL7	N 08°24'57" W	16.35'
FL8	S 71°08'25" W	33.79'
FL9	S 69°46'08" W	10.88'
FL10	S 52°05'22" W	42.96'
FL11	S 88°43'17" W	40.15'
FL12	N 30°58'13" W	32.29'
FL13	S 69°52'44" W	85.44'
FL14	N 39°29'29" W	25.34'
FL15	N 43°48'10" E	32.00'
FL16	N 83°31'26" E	211.10'
FL17	S 69°52'12" E	118.74'
FL18	S 10°19'20" E	190.94'
FL19	S 10°19'20" E	60.03'
FL20	S 81°53'00" W	33.58'
FL21	S 24°13'16" W	39.69'
FL22	S 53°15'13" E	60.70'
FL23	S 67°03'38" E	74.02'
FL24	S 83°50'45" E	43.42'
FL25	N 66°00'48" E	50.93'
FL26	S 43°48'10" W	77.91'
FL27	N 86°05'24" W	226.73'
FL28	N 07°44'16" W	38.62'
FL29	N 29°54'01" E	18.92'
FL30	N 18°29'39" E	104.12'
FL31	N 80°28'46" E	22.80'
FL32	S 44°06'42" E	43.32'

GRAPHIC SCALE
40 0 20 40 80 160
(IN FEET)
1 inch = 40 ft.

STATE OF MARYLAND
TREVOR M. FREDERICK
40810
PROFESSIONAL ENGINEER
08/18/2025

Professional Certification:
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional under the laws of the State of: MARYLAND License # 40810
Expiration Date 08-24-2026

FSA
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ID #2093
15 EAST MAIN STREET, NEW BLOOMFIELD, PA 17068, 717-582-8844
305 SOUTH HANOVER STREET, CARLISLE, PA 17013, 717-249-9411
11142 RUSSELLSPORT PIKE, GREENCASTLE, PA 17225, 717-597-3667
126 SOUTH POTOMAC STREET, HAGERSTOWN, MD 21740, (AFTER 2/26/26)

MARK	DESCRIPTION:	DATE:
	REVISED PER AGENCY COMMENTS	04.08.2025
	REVISED PER CLIENT REQUEST	05.27.2025
	REVISED PER AGENCY COMMENTS	06.18.2025

TAYLOR FARM LOT 3
SITUATE ALONG THE SOUTH SIDE OF WRIGHT ROAD AND WEST OF HOPEWELL ROAD
WILLIAMSPORT
WASHINGTON COUNTY, MARYLAND
SHADOL
1741 DUAL HIGHWAY, SUITE B
HAGERSTOWN, MARYLAND 21740

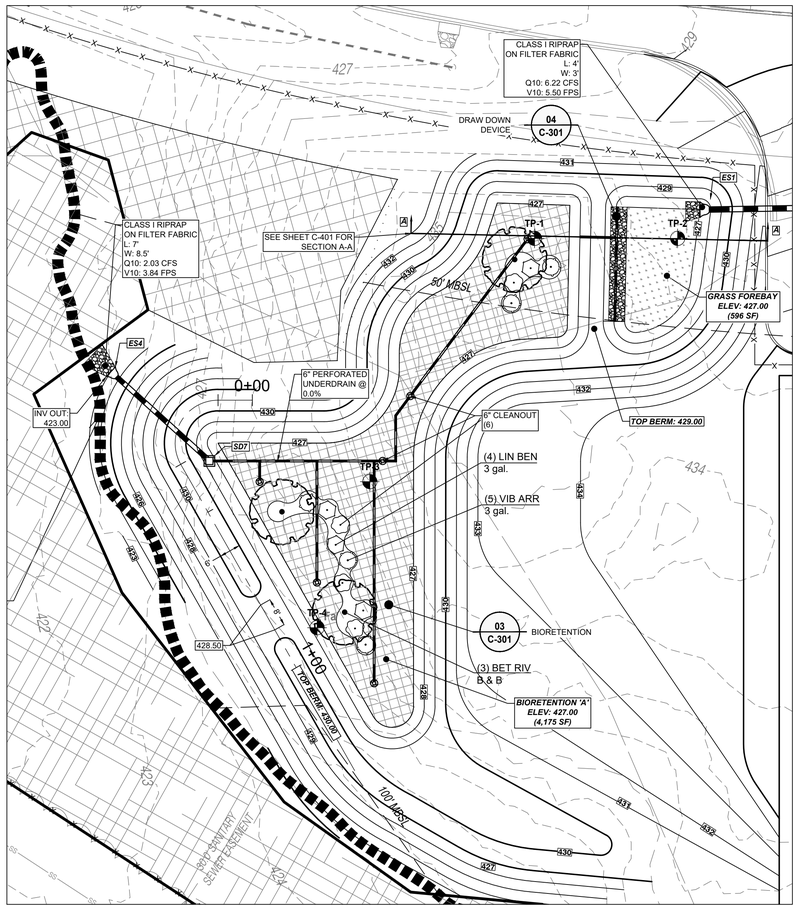
PROJECT NO. 4564.3
DWN BY ABRAM MYERS
DATE 01.10.2023
PROJECT MANAGER T. FREDERICK
EMAIL TFREDERICK@FSA-INC.COM
TAX MAP - GRID - PARCEL 0048 - 0021 - 0057
SCALE 1" = 40'
SHEET TITLE

FORESTATION PLAN

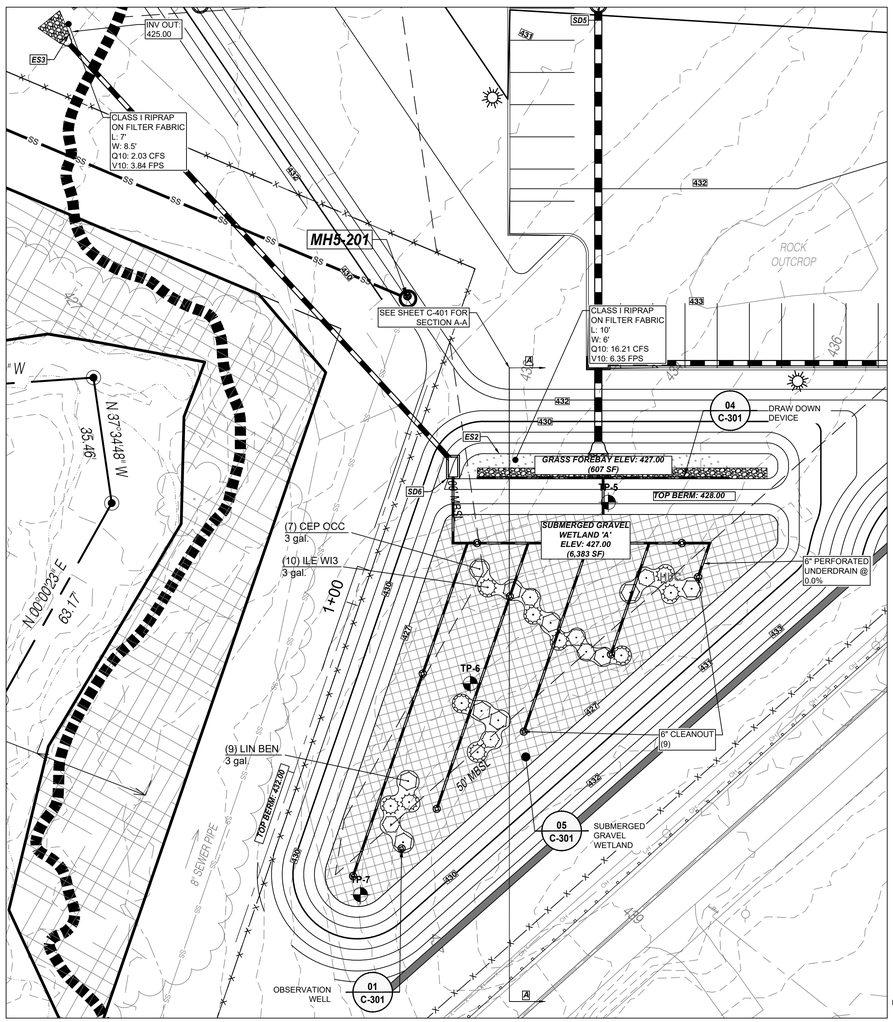
C-107
SHEET 09 OF 19

SP-23-003

P:\SHARED FILES\PROJECTS\4564\DESIGN\CIVIL\CONSTRUCTION SET\4564_F3B FORESTATION PLAN.DWG 2025-08-18



BIORETENTION 'A' ENLARGEMENT
SCALE: 1" = 20'



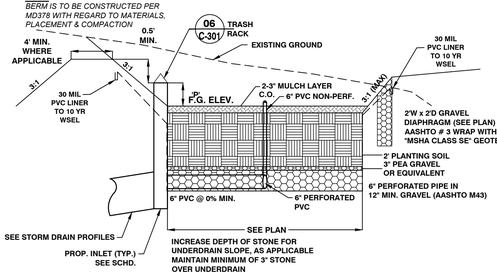
SUBMERGED GRAVEL WETLAND 'A' ENLARGEMENT
SCALE: 1" = 20'

GRAPHIC SCALE

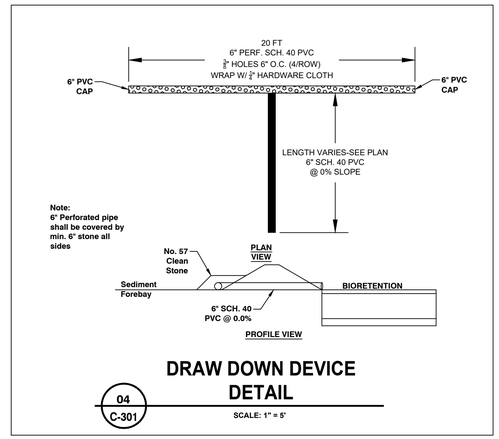
20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

NOTE:
BERM IS TO BE CONSTRUCTED PER MD378 WITH REGARD TO MATERIALS, PLACEMENT & COMPACTION



03 C-301 BIORETENTION
SCALE: 1" = 5'



DRAW DOWN DEVICE DETAIL
04 C-301
SCALE: 1" = 5'

PLANT SCHEDULE

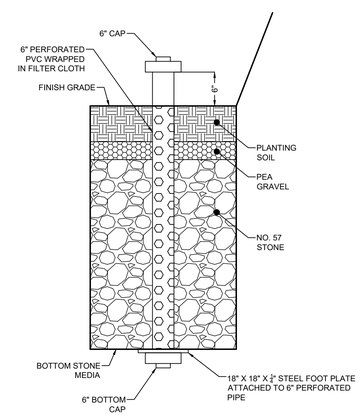
TREES	CODE	BOTANICAL / COMMON NAME	SIZE	CONTAINER	QTY	DETAIL
	BET RIV	Betula nigra / River Birch	B & B	2"Cal	3	04/L-501
SHRUBS	**CODE**	**BOTANICAL / COMMON NAME**	**SIZE**	**CONTAINER**	**QTY**	**DETAIL**
	CEP OCC	Cephalanthus occidentalis / Buttonbush	3 gal.		7	03/L-501
	ILE WI3	Ilex verticillata / Winterberry	3 gal.		10	03/L-501
	ITE VI3	Itea virginica `Virginia` / Virginia Sweetspire	3 gal.		4	02/L-501
	LIN BEN	Lindera benzoin / Spicebush	3 gal.		13	02/L-501 OR 03/L-501
	VIB ARR	Viburnum dentatum / Viburnum	3 gal.		5	02/L-501

SWM BMP MIXED GRASSES PLANTING SCHEDULE

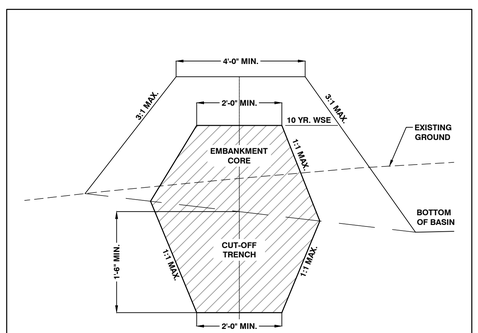
SYMBOL	QUANTITY		COMMON NAME	SIZE	REMARKS
	BIO A	WETLANDS A			
	3,712 SF	5,680 SF	MIXED GRASSES	2" PLUGS	SEE DETAIL 01/L-501

MIXED GRASSES

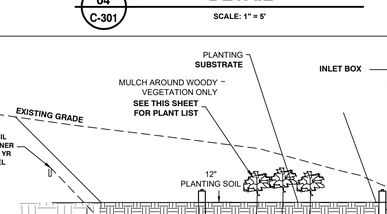
COMMON NAME	SCIENTIFIC NAME	
Rush, soft	Juncus effusus	THE MINIMUM SIZE FOR MIXED GRASSES SHALL BE 2" PLUG. GRASSES SHALL BE PLANTED 3 FOOT ON CENTER WITH A RANDOM MIX OF PLANTS. PLANTING SHOWN IS RECOMMENDED. OTHER PLANT SPECIES SPECIFIED IN THE MARYLAND STORMWATER DESIGN MANUAL ARE PERMITTED.
Sedge, broom	Carex scoparia	
Sedge, Pennslyvania	Carex pennsylvanica	
Switchgrass	Panicum virgatum	



01 C-301 OBSERVATION WELL
NOT TO SCALE

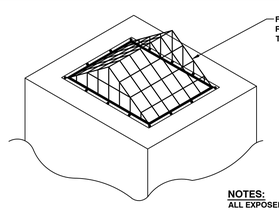


02 C-301 CUT-OFF TRENCH - BIO-RETENTION
SCALE: 1" = 5'



NOTES:
1. GRAVEL MEDIA: THE AGGREGATE SHALL BE COMPOSED OF A 33 INCH LAYER OF CLEAN WASHED, UNIFORMLY GRADED MATERIAL WITH POROSITY OF 40%.

SUBMERGED GRAVEL WETLAND
05 C-301
NOT TO SCALE



NOTES:
ALL EXPOSED REBAR IS TO HAVE AN EPOXY COAT.

06 C-301 TRASH RACK - SLANTED
SCALE: 1" = 5'

BIORETENTION SCHEDULE

ID	SURFACE AREA (S.F.)	PONDING DEPTH (FT.)	FINISH GRADE ELEV.	BOT. STONE ELEV.	C.O.s	LINER REQUIRED	PRINCIPLE SPILLWAY	TOP BERM	10-YEAR WSEL
A	4,175	1.00'	427.00	423.75	6	YES	MDSHA YARD INLET	430.00	428.58

SUBMERGED GRAVEL WETLAND SCHEDULE

ID	SURFACE AREA (S.F.)	PONDING DEPTH (FT.)	FINISH GRADE ELEV.	BOT. STONE ELEV.	C.O.s	LINER REQUIRED	PRINCIPLE SPILLWAY	TOP BERM	10- YEAR WSEL
A	7,596	2.00	427.00	423.00	9	YES	TYPE S DOUBLE INLET	432.00	429.21

STATE OF MARYLAND
TREVOR M. FREDERICK
40809
PROFESSIONAL ENGINEER
08/18/2025

Professional Certification:
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional under the laws of the State of: MARYLAND License # 40809
Expiration Date 08-24-2026

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1114 2 WILLIAMSPORT PIKE GREENCASTLE, PA 17225 717-597-1647
125 SOUTH POTOMAC STREET HAGERSTOWN, MD 21740 301-739-8866

MARK	DESCRIPTION:	DATE:
	REVISED PER AGENCY COMMENTS	04.18.2023
	REVISED PER AGENCY COMMENTS	10.24.2023
	REVISED PER AGENCY COMMENTS	05.21.2024
	REVISED PER CLIENT REQUEST	05.27.2025
	REVISED PER AGENCY COMMENTS	08.18.2025

TAYLOR FARM LOT 3
SITUATE ALONG THE SOUTH SIDE OF WRIGHT ROAD AND WEST OF HOPEWELL ROAD
WILLIAMSPORT
WASHINGTON COUNTY, MARYLAND
SHAOOL
1741 DUAL HIGHWAY, SUITE B
HAGERSTOWN, MARYLAND 21740

PROJECT NO: 4564.3
DWN BY: ABRAM MYERS | DATE: 01.10.2023
PROJECT MANAGER: T. FREDERICK
EMAIL: TFREDERICK@FSA-INC.COM
TAX MAP - GRID - PARCEL: 0048 - 0021 - 0057
SCALE: 1" = 20'
SHEET TITLE:

STORMWATER MANAGEMENT PLAN

C-301
SHEET 10 OF 19

SP-23-003

P:\SHARED FOLDERS\PROJECTS\4500\4564\4564.1.0\STORMWATER MANAGEMENT PLAN\4564_1.0-C-STORMWATER MANAGEMENT PLAN.DWG 2025-08-18

Pond MD-378
NRCS - MARYLAND JANUARY 2000
CONSTRUCTION SPECIFICATIONS

These specifications are appropriate to all ponds within the scope of the Standard for practice MD-378. All references to ASTM and AASHTO specifications apply to the most recent version.

Site Preparation
Areas designated for borrow areas, embankment, and structural works shall be cleared, grubbed and stripped of topsoil. All trees, vegetation, roots and other objectionable material shall be removed. Channel banks and sharp breaks shall be sloped to no steeper than 1:1. All trees shall be cleared and grubbed within 15 feet of the toe of the em-bankment.
Areas to be covered by the reservoir will be cleared of all trees, brush, logs, fences, rubbish and other objectionable material unless otherwise designated on the plans. Trees, brush, and stumps shall be cut approximately level with the ground surface. For dry stormwater management ponds, a minimum of a 25-foot radius around the inlet structure shall be cleared.
All cleared and grubbed material shall be disposed of outside and below the limits of the dam and reservoir as directed by the owner or his representative. When specified, a sufficient quantity of topsoil will be stockpiled in a suitable location for use on the embankment and other designated areas.

Earth Fill
Material - The fill material shall be taken from approved designated borrow areas. It shall be free of roots, stumps, wood, rubbish, stones greater than 6", frozen or other objectionable materials. Fill material for the center of the embankment and cut off trench shall conform to Unified Soil Classification GC, SC, CH, or CL and must have at least 30% passing the #200 sieve. Consideration may be given to the use of other materials in the embankment if design and construction are supervised by a geotechnical engineer. Such special designs must have construction supervised by a geotechnical engineer.

Placement - Areas on which fill is to be placed shall be scarified prior to placement of fill. Fill materials shall be placed in maximum 8 inch thick (before compaction) layers which are to be continuous over the entire length of the fill. The most permeable borrow material shall be placed in the downstream portions of the embankment. The principal spillway must be installed concurrently with fill placement and not excavated into the embankment.

Compaction - The movement of the hauling and spreading equipment over the fill shall be controlled so that the entire surface of each lift shall be traversed by not less than one tread track of heavy equipment or compaction shall be achieved by a minimum of four complete passes of a sheepsfoot, rubber tired or vibratory roller. Fill material shall contain sufficient moisture such that the required degree of compaction will be obtained with the equipment used. The fill material shall contain sufficient moisture so that if formed into a ball it will not crumble, yet not be so wet that water can be squeezed out. The minimum required density shall not be less than 95% of maximum dry density with a moisture content within ±2% of the optimum. Each layer of fill shall be compacted as necessary to obtain that density, and is to be certified by the Engineer at the time of construction. All compaction is to be determined by AASHTO Method T-99 (Standard Proctor).

Cut Off Trench - The cutoff trench shall be excavated into impervious material along or parallel to the centerline of the embankment as shown on the plans. The bottom width of the trench shall be wide enough to allow operation of excavation and compaction equipment but in no case less than 4 feet. The depth shall be at least four feet below existing grade or as shown on the plans. The side slopes of the trench shall be 1 to 1 or flatter. The backfill shall be compacted with construction equipment, rollers, or hand tampers to assure maximum density and minimum permeability.

Embankment Core - The core shall be parallel to the centerline of the embankment as shown on the plans. The top width of the core shall be a minimum of four feet. The height shall extend up to at least the 10 year water elevation or as shown on the plans. The side slopes shall be 1 to 1 or flatter. The core shall be compacted with construction equipment, rollers, or hand tampers to assure maximum density and minimum permeability. In addition, the core shall be placed concurrently with the outer shell of the embankment.

Structure Backfill
Backfill adjacent to pipes or structures shall be of the type and quality conforming to that specified for the adjoining fill material. The fill shall be placed in horizontal layers not to exceed four inches in thickness and compacted by hand tampers or other manually directed compaction equipment. The material needs to fill completely all spaces under and adjacent to the pipe. At no time during the backfilling operation shall driven equipment be allowed to operate closer than four feet, measured horizontally, to any part of a structure. Under no circumstances shall equipment be driven over any part of a concrete structure or pipe, unless there is a compacted fill of 24" or greater over the structure or pipe.
Structure backfill may be flowable fill meeting the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 313 as modified. The mixture shall have a 100-200 psi; 28 day unconfined compressive strength. The flowable fill shall have a minimum pH of 4.0 and a minimum resistivity of 2,000 ohm-cm. Material shall be placed such that a minimum of 6" (measured perpendicular to the outside of the pipe) of flowable fill shall be under (bedding), over and, on the sides of the pipe. It only needs to extend up to the spring line for rigid conduits. Average slump of the fill shall be 7" to assure flowability of the material. Adequate measures shall be taken (sand bags, etc.) to prevent floating the pipe. When using flowable fill, all metal pipe shall be bituminous coated. Any adjoining soil fill shall be placed in horizontal layers not to exceed four inches in thickness and compacted by hand tampers or other manually directed compaction equipment. The material shall completely fill all voids adjacent to the flowable fill zone. At no time during the backfilling operation shall driven equipment be allowed to operate closer than four feet, measured horizontally, to any part of a structure. Under no circumstances shall equipment be driven over any part of a structure or pipe unless there is a compacted fill of 24" or greater over the structure or pipe. Backfill material outside the structural backfill (flowable fill) zone shall be of the type and quality conforming to that specified for the core of the embankment or other embankment materials.

Pipe Conduits
All pipes shall be circular in cross section.

Corrugated Metal Pipe - All of the following criteria shall apply for corrugated metal pipe:

1. Materials - (Polymer Coated steel pipe) - Steel pipes with polymeric coatings shall
have a minimum coating thickness of 0.01 inch (10 mil) on both sides of the pipe. This pipe and its appurtenances shall conform to the requirements of AASHTO Specifications M-245 & M-246 with watertight coupling bands or flanges.
Materials - (Aluminum Coated Steel Pipe) - This pipe and its appurtenances shall conform to the requirements of AASHTO Specification M-274 with watertight coupling bands or flanges. Aluminum Coated Steel Pipe, when used with flowable fill or when soil and/or water conditions warrant the need for increased durability, shall be fully bituminous coated per requirements of AASHTO Specification M-190 Type A. Any aluminum coating damaged or otherwise removed shall be replaced with cold applied bituminous coating compound. Aluminum surfaces that are to be in contact with concrete shall be painted with one coat of zinc chromate primer or two coats of asphalt.
Materials - (Aluminum Pipe) - This pipe and its appurtenances shall conform to the requirements of AASHTO Specification M-196 or M-211 with watertight coupling bands or flanges. Aluminum Pipe, when used with flowable fill or when soil and/or water conditions warrant for increased durability, shall be fully bituminous coated per requirements of AASHTO Specification M-190 Type A. Aluminum surfaces that are to be in contact with concrete shall be painted with one coat of zinc chromate primer or two coats of asphalt. Hot dip galvanized bolts may be used for connections. The pH of the surrounding soils shall be between 4 and 9.

2. Coupling bands, anti-seep collars, end sections, etc., must be composed of the same material and coatings as the pipe. Metals must be insulated from dissimilar materials with use of rubber or plastic insulating materials at least 24 mils in thickness.

3. Connections - All connections with pipes must be completely watertight. The drain pipe or barrel connection to the riser shall be welded all around when the pipe and riser are metal. Anti-seep collars shall be connected to the pipe in such a manner as to be completely watertight. Dimple bands are not considered to be watertight. All connections shall use a rubber or neoprene gasket when joining pipe sections. The end of each pipe shall be re-rolled an adequate number of corrugations to accommodate the bandwidth. The following type connections are acceptable for pipes less than 24 inches in diameter: flanges on both ends of the pipe with a circular 3/8 inch closed cell neoprene gasket, pre-punched to the flange bolt circle, sandwiched between adjacent flanges; a 12-inch wide standard lap type band with 12-inch wide by 3/8-inch thick closed cell circular neoprene gasket; and a 12-inch wide hugger type band with o-ring gaskets having a minimum diameter of 1/2 inch greater than the corrugation depth. Pipes 24 inches in diameter and larger shall be connected by a 24 inch long annular corrugated band using a minimum of 4 (four) rods and lugs, 2 on each connecting pipe end. A 24-inch wide by 3/8-inch thick closed cell circular neoprene gasket will be installed with 12 inches on the end of each pipe. Flanged joints with 3/8 inch closed cell gaskets the full width of the flange is also acceptable. Helically corrugated pipe shall have either continuously welded seams or have lock seams with internal caulking or a neoprene bead.

4. Bedding - The pipe shall be firmly and uniformly bedded throughout its entire length. Where rock or soft, spongy or other unstable soil is encountered, all such material shall be removed and replaced with suitable earth compacted to provide adequate support.

5. Backfilling shall conform to "Structure Backfill".

6. Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.

Reinforced Concrete Pipe - All of the following criteria shall apply for reinforced concrete pipe:

1. Materials - Reinforced concrete pipe shall have bell and spigot joints with rubber gaskets and shall equal or exceed ASTM C-361.

2. Bedding - Reinforced concrete pipe conduits shall be laid in a concrete bedding / cradle for their entire length. This bedding / cradle shall consist of high slump concrete placed under the pipe and up the sides of the pipe at least 50% of its outside diameter with a minimum thickness of 6 inches. Where a concrete cradle is not needed for structural reasons, flowable fill may be used as described in the "Structure Backfill" section of this standard. Gravel bedding is not permitted.

3. Laying pipe - Bell and spigot pipe shall be placed with the bell end upstream. Joints shall be made in accordance with recommendations of the manufacturer of the material. After the joints are sealed for the entire line, the bedding shall be placed so that all spaces under the pipe are filled. Care shall be exercised to prevent any deviation from the original line and grade of the pipe. The first joint must be located within 4 feet from the riser.

4. Backfilling shall conform to "Structure Backfill".

5. Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.

Plastic Pipe - The following criteria shall apply for plastic pipe:

1. Materials - PVC pipe shall be PVC-1120 or PVC-1220 conforming to ASTM D-1785 or ASTM D-2241. Corrugated High Density Polyethylene (HDPE) pipe, couplings and fittings shall conform to the following: 4" - 10" inch pipe shall meet the requirements of AASHTO M252 Type S, and 12" through 24" inch shall
meet the requirements of AASHTO M294 Type S.

2. Joints and connections to anti-seep collars shall be completely watertight.

3. Bedding -The pipe shall be firmly and uniformly bedded throughout its entire length. Where rock or soft, spongy or other unstable soil is encountered, all such material shall be removed and replaced with suitable earth compacted to provide adequate support.

4. Backfilling shall conform to "Structure Backfill".

5. Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.

Drainage Diaphragms - When a drainage diaphragm is used, a registered professional engineer will supervise the design and construction inspection.

Concrete
Concrete shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 414, Mix No. 3.

Rock Riprap
Rock riprap shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 311. Geotextile shall be placed under all riprap and shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 921.09, Class C.

Care of Water during Construction
All work on permanent structures shall be carried out in areas free from water. The Contractor shall construct and maintain all temporary dikes, levees, cofferdams, drainage channels, and stream diversions necessary to protect the areas to be occupied by the permanent works. The contractor shall also furnish, install, operate, and maintain all necessary pumping and other equipment required for removal of water from various parts of the work and for maintaining the excavations, foundation, and other parts of the work free from water as required or directed by the engineer for constructing each part of the work. After having served their purpose, all temporary protective works shall be removed or leveled and graded to the extent required to prevent obstruction in any degree whatsoever of the flow of water to the spillway or outlet works and so as not to interfere in any way with the operation or maintenance of the structure. Stream diversions shall be maintained until the full flow can be passed through the permanent works. The removal of water from the required excavation and the foundation shall be accomplished in a manner and to the extent that will maintain stability of the excavated slopes and bottom required excavations and will allow satisfactory performance of all construction operations. During the placing and compacting of material in required excavations, the water level at the locations being refilled shall be maintained below the bottom of the excavation at such locations which may require draining the water sumps from which the water shall be pumped.

Stabilization
All borrow areas shall be graded to provide proper drainage and left in a sightly condition. All exposed surfaces of the embankment, spillway, spoil and borrow areas, and berms shall be stabilized by seeding, liming, fertilizing and mulching in accordance with the Natural Resources Conservation Service Standards and Specifications for Critical Area Planting (MD-342) or as shown on the accompanying drawings.

Erosion and Sediment Control
Construction operations will be carried out in such a manner that erosion will be controlled and water and air pollution minimized. State and local laws concerning pollution abatement will be followed. Construction plans shall detail erosion and sediment control measures.

P:\SHARED FOLDERS\PROJECTS\2023\04\564.3 (10-7 BAKER)\CAD\CIVIL\CONSTRUCTION DETAILS\564.3 10-7 STORMWATER MANAGEMENT PLAN.DWG 2025-08-18

MARYLAND STORMWATER DESIGN MANUAL

B.4.D Specifications for Micro-Bioretention, Rain Gardens, Landscape Infiltration & Infiltration Berms

1. Material Specifications

The allowable materials to be used in these practices are detailed in Table B.4.1.

2. Planting Soil

The soil shall be a uniform mix, free of stones, stumps, roots or other similar objects larger than two inches. No other materials or substances shall be mixed or dumped within the micro-bioretention practice that may be harmful to plant growth, or prove a hindrance to the planting or maintenance operations. The planting soil shall be free of Bermuda grass, Quackgrass, Johnson grass, or other noxious weeds as specified under COMAR 15.08.01.05.

The planting soil shall be tested and shall meet the following criteria:

- *Soil Component - Loamy Sand or Sandy Loam (USDA Soil Textural Classification)*
- *Organic Content - Minimum 10% by dry weight (ASTM D 2974). In general, this can be met with a mixture of loamy sand (60% - 65%) and compost (35% - 40%) or sandy loam (30%), coarse sand (30%), and compost (40%).*
- *Clay content - Media shall have a clay content of less than 5%.*
- *pH range - Should be between 5.5 - 7.0. Amendments (e.g., lime, iron sulfate plus sulfur may be mixed into the soil to increase or decrease pH.*

There shall be at least one soil test per project. Each test shall consist of both the standard soil test for pH, and additional tests of organic matter, and soluble salts. A textural analysis is required from the site stockpiled topsoil. If topsoil is imported, then a texture analysis shall be performed for each location where the topsoil was excavated.

3. Compaction

It is very important to minimize compaction of both the base of the bioretention practices and the required backfill. When possible, use excavation hoes to remove original soil. If practices are excavated using a loader, the contractor should use wide track or marsh track equipment, or light equipment with turf type tires. Use of equipment with narrow tracks or narrow tires, rubber tires with large lugs, or high pressure tires will cause excessive compaction resulting in reduced infiltration rates and is not acceptable. Compaction will significantly contribute to design failure.

Compaction can be alleviated at the base of the bioretention facility by using a primary tilling operation such as a chisel plow, ripper, or subsoiler. These tilling operations are to refracture the soil profile through the 12 inch compaction zone. Substitute methods must be approved by the engineer. Rototillers typically do not till deep enough to reduce the effects of compaction from heavy equipment.

Rototill 2 to 3 inches of sand into the base of the bioretention facility before backfilling the optional sand layer. Pump any ponded water before preparing (rototilling) base.

When backfilling the topsoil over the sand layer, first place 3 to 4 inches of topsoil over the sand, then rototill the sand/topsoil to create a gradation zone. Backfill the remainder of the topsoil to final grade.

When backfilling the bioretention facility, place soil in lifts 12" to 18". Do not use heavy equipment within the bioretention basin. Heavy equipment can be used around the perimeter of the basin to supply soils and sand. Grade bioretention materials with light equipment such as a compact loader or a dozer/loader with marsh tracks.

4. Plant Material

Recommended plant material for micro-bioretention practices can be found in Appendix A, Section A.2.3.

5. Plant Installation

Compost is a better organic material source, is less likely to float, and should be placed in the invert and other low areas. Mulch should be placed in surrounding to a uniform thickness of 2" to 3". Shredded or chipped hardwood mulch is the only accepted mulch. Pine mulch and wood chips will float and move to the perimeter of the bioretention area during a storm event and are not acceptable. Shredded mulch must be well aged (6 to 12 months) for acceptance.

Rootstock of the plant material shall be kept moist during transport and on-site storage. The plant root ball should be planted so 1/8th of the ball is above final grade surface. The diameter of the planting pit shall be at least six inches larger than the diameter of the planting ball. Set and maintain the plant straight during the entire planting process. Thoroughly water ground bed cover after installation.

Trees shall be braced using 2" by 2" stakes only as necessary and for the first growing season only. Stakes are to be equally spaced on the outside of the tree ball.

Grasses and legume seed should be drilled into the soil to a depth of at least one inch. Grass and legume plugs shall be planted following the non-grass ground cover planting specifications.

The topsoil specifications provide enough organic material to adequately supply nutrients from natural cycling. The primary function of the bioretention structure is to improve water quality. Adding fertilizers defeats, or at a minimum, impedes this goal. Only add fertilizer if wood chips or mulch are used to amend the soil. Rototill urea fertilizer at a rate of 2 pounds per 1000 square feet.

6. Under drains

Underdrains should meet the following criteria:

- *Pipe - Should be 4" to 6" diameter, slotted or perforated rigid plastic pipe (F 758, Type PS 28, or AASHTO-M-278) in a gravel layer. The preferred material is slotted, 4" rigid schedule 40 PVC or SDR35 pipe.*
- *Perforations - If perforated pipe is used, perforations should be $\frac{3}{8}$" diameter located 6" on center with a minimum of four holes per row. Pipe shall be wrapped with $\frac{1}{4}$" (No. 4 or 4x4) galvanized hardware cloth.*
- *Gravel - The gravel layer (No. 57 stone preferred) shall be at least 3" thick above and below the underdrain.*
- *The main collector pipe shall be at a minimum 0.5% slope.*
- *A rigid, non-perforated observation well must be provided (one per every 1,000 square feet) to provide a clean-out port and monitor performance of the filter.*
- *A 4" layer of pea gravel ($\frac{1}{8}$" to $\frac{3}{8}$" stone) shall be located between the filter media and underdrain to prevent migration of fines into the underdrain. This layer may be considered part of the filter bed when bed thickness exceeds 24".*

The main collector pipe for underdrain systems shall be constructed at a minimum slope of 0.5%. Observation wells and/or clean-out pipes must be provided (one minimum per every 1000 square feet of surface area).

7. Miscellaneous

These practices may not be constructed until all contributing drainage area has been stabilized.

Specifications for Submerged Gravel Wetland

(Reference - Maryland Stormwater Design Manual, Volume Two, Appendix B.4)

Material Specifications
The allowable materials to be used in submerged gravel wetland areas are detailed in Table B.4.1

Planting Soil
The soil shall be a uniform mix, free of stones, stumps, roots or other similar objects larger than two inches. No other materials or substances shall be mixed or dumped within the planting area that may be harmful to plant growth, or prove a hindrance to the planting or maintenance operations. The planting soil shall be free of Bermuda grass, Quackgrass, Johnson grass, or other noxious weeds as specified under COMAR 15.08.01.05..

Compaction
It is very important to minimize compaction of both the base of the planting area and the required backfill. When possible, use excavation hoes to remove original soil. If wetland areas area excavated using a loader, the contractor should use wide track or marsh track equipment, or light equipment with turf type tires. Use of equipment with narrow tracks or narrow tires, rubber tires with large lugs, or high pressure tires will cause compaction resulting in reduced infiltration rates and storage volumes and is not acceptable. Compaction will significantly contribute to design failure.

Compaction can be alleviated at the base of the wetkabd area facility by using a primary tilling operation such as a chisel plow, ripper, or subsoiler. These tilling operations are to refracture the soil profile through the 12 inch compaction zone. Substitute methods must be approved by the engineer. Rototillers typically do not till deep enough to reduce the effects of compaction from heavy equipment.

Rototill 2 to 3 inches of sand into the base of the wetland facility before backfilling the required sand layer. Pump any ponded water before preparing (rototilling) base.

When backfilling the topsoil over the sand layer, first place 3 to 4 inches of topsoil over the sand, then rototill the sand / topsoil to create a gradation zone. Backfill the remainder of the topsoil to final grade.

When backfilling the bioretention facility, place soil in lifts of 12 inches or greater. Do not use heavy equipment within the wetland area. Heavy equipment may be used around the perimeter of the basin to supply soils and sand. Grade wetland materials with light equipment such as a compact loader or a dozer/loader with marsh tracks.

Plant Installation

Rootstock of the plant material shall be kept moist during transport and on-site storage. The plant root ball should be planted so 1/8th of the ball is above final grade surface. Root stock of the plant material shall be kept moist during transport and on-site storage. Planting pits shall follow LCA planting guidelines. The diameter of the planting pit shall be at least six inches larger than the diameter of the planting ball. Set and maintain the plant straight during the entire planting process. Thoroughly water ground bed cover after installation.

Trees shall be braced using 2" by 2" stakes only as necessary and for the first growing season only. Stakes are to be equally spaced on the outside of the tree ball.

Grasses and legume seed shall be tilled into the soil to a depth of at least one inch. Grass and legume plugs shall be planted following the non-grass ground cover planting specifications.

The topsoil specifications provide enough organic material to adequately supply nutrients from natural cycling. The primary function of the submerged gravel wetland is to improve water quality. Adding fertilizers defeats, or at a minimum, impedes this goal. Only add fertilizer if wood chips or mulch is used to amend the soil. Rototill urea fertilizer at a rate of 2 pounds per 1000 square feet.

Underdrains
Underdrains should meet the following criteria:

- Pipe- Should be 4" to 6" diameter, slotted or perforated rigid plastic pipe (ASTMF 758, Type PS 28, or AASHTO-M-278) in a gravel layer. The preferred material is slotted, 4" rigid pipe (e.g., PVC or HDPE).
- Perforations - If perforated pipe is used, perforations should be ¾" diameter located 6" on center with a minimum of four holes per row. Pipe shall be wrapped with a ¼" (No. 4 or 4x4) galvanized hardware cloth.
- Gravel - The gravel layer (No. 57 stone preferred) shall be at least 3" thick above and below the underdrain.
- The main collector pipe shall be at a minimum 0.5% slope.
- A rigid, non-perforated observation well must be provided (one per every 1,000 square feet) to provide a clean-out port and monitor performance of the filter.
- A 4" layer of pea gravel (⅛" to ¾" stone) shall be located between the filter media and underdrain to prevent migration of fines into the underdrain. This layer may be considered part of the filter bed when bed thickness exceeds 24".

The main collector pipe for underdrain systems shall be constructed at a minimum slope of 0.5%. Observation wells and/or clean-out pipes must be provided (one minimum per every 1000 square feet of surface area).

Miscellaneous
These practices may not be constructed until all contributing drainage area has been stabilize.

Wetland berms are to be constructed per the MD 378 small pond standards with respect to materials, placement, and compactions.

NOTE: ANY ROCK ENCOUNTERED WITHIN THE SWM FACILITIES SHOULD BE UNDERCUT AT LEAST 12 INCHES AND COVERED WITH CONTROLLED AND COMPACTED CLAY LINER SOILS. IF A SYNTHETIC LINER IS USED, ANY ROCK ENCOUNTERED WITHIN THE SWM FACILITIES SHOULD BE UNDERCUT AT LEAST 6 INCHES (OR DEPTHS AS RECOMMENDED BY THE MANUFACTURER) AND COVERED WITH CONTROLLED FILL. A 6-INCH PROTECTIVE LAYER OF TOPSOIL OR PERMEABLE MEDIA TO BE PLACED OVER ANY CLAY OR SYNTHETIC LINER

Table B-4.1 Material Specifications for Submerged Gravel Wetland

Material	Specification	Size	Notes
Plantings	see planting list	n/a	plantings are site-specific
Planting Substrate [0" Deep]	loamy sand (60 - 65%) & compost (35 - 40%) or sandy loam (30%), coarse sand (30%) & compost (40%)	n/a	USDA soil types loamy sand or sandy loam; clay content < 5%
Organic content	Min. 10% by dry weight (ASTM D 2974)		
Pea gravel diaphragm	pea gravel: ASTM-D-448	No. 8 or No. 9 (1/8" to 3/8")	
Gravely Treatment Media	Clean Washed uniformly graded material with a porosity of 40%	No. 57 or No. 6 Aggregate	
Underdrain piping	F 758, Type PS 28 or AASHTO M-278	4"-6" rigid sch. 40 PVC or SDR35	Slotted or perforated pipe; 3/8" pert. @ 6" o/c, 4 holes/row; min. 3" of gravel over pipes; not necessary underneath pipes.
Sand	AASHTO M-6 or ASTM C-33	0.02" to 0.04"	Sand substitution such as Diabase and Graystone (AASHTO) #10 are not acceptable. No calcium carbonated or dolomitic sand substitutions are acceptable. No 'rock dust' can be used for sand.
Compost	MSHA Standard Specifications for Construction and Materials, July 2008 920.02.05 Compost	Uniform particle size of 0.5" or less	Source - Separated Compost (Type B). Type B Compost shall be tree leaf compost or non-tree leaf compost. Type B Compost produced from lawn clippings shall be tested for contaminants in conformance with Maryland law and regulations.

Submerged Gravel Wetlands Maintenance Schedule

1. Privately owned practices shall have a maintenance plan and shall be protected by easement, deed restriction, ordinance, or other legal measures preventing its neglect, adverse alteration, and removal.
2. During the first year of operation, inspections shall be conducted after every major storm and poorly established areas revegetated.
3. Sediment accumulation in the pretreatment areas should be removed as necessary.
4. Signs of uneven flow distribution within the wetland may mean that the gravel or underdrain is clogged. The gravel and/or underdrain may need to be removed, cleaned, and replaced.
5. A dense stand of wetland vegetation should be maintained through the life of the facility with plantings replaced as needed.
6. Inlet and outlets to each submerged gravel wetland cell should be free from debris to prevent clogging.
7. Erosion at inflow points should be repaired. Flow splitters should be functional to prevent bypassing of the facility.

Table B-4.1 Material Specifications for Micro-Bioretention, Rain Gardens & Landscape Infiltration

Material	Specification	Size	Notes
Plantings	see planting list	n/a	plantings are site-specific
Planting Soil [2' to 4' deep]	loamy sand (60 - 65%) & compost (35 - 40%) or sandy loam (30%), coarse sand (30%) & compost (40%)	n/a	USDA soil types loamy sand or sandy loam; clay content < 5%
Organic content	Min. 10% by dry weight (ASTM D 2974)		
Mulch	shredded hardwood	n/a	aged 6 months, minimum; no pine or wood chips
Pea gravel diaphragm	pea gravel: ASTM-D-448	No. 8 or No. 9 (1/8" to 3/8")	
Curtain drain	ornamental stone: washed cobbles	stone: 2" to 5"	
Geotextile		n/a	PE Type 1 nonwoven
Gravel (underdrains and infiltration berms)	AASHTO M-43	NO. 57 OR NO. 6 AGGREGATE (3/8" to 3/4")	
Underdrain piping	F 758, Type PS 28 or AASHTO M-278	4"-6" rigid sch. 40 PVC or SDR35	Slotted or perforated pipe; 3/8" pert. @ 6" o/c, 4 holes/row; min. 3" of gravel over pipes; not necessary underneath pipes. Perforated pipe shall be wrapped with 1/4 inch galvanized hardware cloth
Poured in place concrete (if required)	MSHA Mix No. 3; f'c = 3500 psi @ 28 days, normal weight, air-entrained; reinforcing to meet ASTM-615-60	n/a	on-site testing of poured-in-place concrete required: 28 day strength and slump test; all concrete design (cast-in-place or pre-cast) *not using previously approved State or local standards* requires design drawings sealed and approved by a professional engineer licensed in the State of Maryland - design to include meeting ACI Code 350.R/99; vertical loading [H-10 or H-20]; allowable horizontal loading (based on soil pressures); and analysis of potential cracking
Sand	AASHTO M-6 or ASTM C-33	0.02" to 0.04"	Sand substitution such as Diabase and Graystone (AASHTO) #10 are not acceptable. No calcium carbonated or dolomitic sand substitutions are acceptable. No 'rock dust' can be used for sand.
Compost	MSHA Standard Specifications for Construction and Materials, July 2008 920.02.05 Compost	Uniform particle size of 0.5" or less	Source - Separated Compost (Type B). Type B Compost shall be tree leaf compost or non-tree leaf compost. Type B Compost produced from lawn clippings shall be tested for contaminants in conformance with Maryland law and regulations.

OPERATION AND MAINTENANCE PLAN BIORETENTION

INSPECTION ITEM	INSPECTION REQUIREMENTS	REMEDIAL ACTION
Maintenance Access		
General	**Check for accessibility to facility; excessive vegetation; surface stability**	**Repair erosion and maintain access surface in good condition**
Pretreatment		
Grass filter strip or sand layer	**Check for sediment accumulation**	**Remove sediment as needed**
Optional sand layer	**Check sand for staining and sediment accumulation**	**If contaminated, replace first three inches of sand layer**
Gravel diaphragm	**Check for sediment accumulation and evidence of erosion**	**Remove sediment and replace gravel as needed**
Mulch layer	**Check for a 2-3 inch mulch layer**	**Remove mulch and replace as needed**
Filter Bed		
Dewatering	**Check for dewatering within 48 hours of rainfall; noticeable odors; water stains on the filter surface or at the outlet; presence of algae or aquatic vegetation**	**Remove mulch and the top 3-6 inches of soil/sediment and replace with suitable materials per plan specifications; follow up inspections shall confirm adequate dewatering; contact the plan approval authority if the facility does not function as intended**
Sediment	**Check for sediment accumulation**	**Remove sediment as needed**
Mulch layer	**Check for adequate cover; sediment accumulation; discoloration**	**Remove and replace mulch and excess sediment as needed**
Vegetation		
Plant composition and health	**Check for plant composition according to approved plans; invasive species, weeds, and dead or dying vegetation**	**Remove and replace plants as necessary**
Vegetative cover/erosion	**Check for erosion, runoff channelizing, or bare spots**	**Repair/grade and stabilize as needed**
Outlets		
Underdrain system	**Check outlet end to ensure that discharge is not obstructed; check for erosion**	**Remove any flow obstructions; grade and stabilize any eroded areas to provide stable conveyance**
Overflow spillway	**Check for displacement of rip-rap, stable conveyance, and erosion below the outlet**	**Repair and replace as needed**
Conveyance Systems		
General	**Check for erosion, flow blockages or bypass, and stable conveyance**	**Repair/replace and stabilize as needed**
Flow diversion	**Check flow splitter for proper functioning**	**Repair as necessary**
Trash and Debris		
	Check for trash and debris accumulation	**Trash and debris shall be disposed of in an acceptable manner**
Structural Components		
	Check for structural deterioration, spalling or cracking	**Repair according to specifications on the approved plans**

Field conditions may require a modification to the original approval in order to achieve the intended design function. The plan approval authority should be contacted for review and approval of all proposed modifications. Inspection and maintenance should occur after any major rain event (e.g., meeting or exceeding the design rainfall depth for the facility).

Notice of Required Stormwater Management Inspections
Sand Filters, Bioretention and Rain Garden Facilities

The following inspections are required to be performed by the Qualified Professional for the construction of any Sand Filter, Bioretention or Rain Garden Facility. Additional inspections may be needed based on professional engineering judgment. Each inspection is required at the start of each stage.

Inspection Item		Bio #1	Submerged Gravel Wetland #1
Excavation of Facility - Prior to excavation, verify sediment and erosion control features are in place to prevent sediment inflow. Verify all flagging required in the area for sensitive area protection. Verify grading is accurately staked-out and re-staked as needed. Facility dimensions shall be verified and soils checked for infiltration. Verify contributing area is permanently stabilized. Verify that water is not present. Ensure roughening of side walls if sheared and sealed by heavy equipment. Verify that compaction of facility base is minimized.	**Certifying Engineer**		
	Date		
	County Inspector		
	Date		
Placement of Filter Cloth (Trenches) - Ensure filter fabric is overlapping six (6) inches between strips of cloth. Ensure tree roots or other obstacles are removed from facility walls or sides and base to prevent tearing. Verify that uphill fabric roll overlaps two (2) feet over downhill roll.	**Certifying Engineer**		
	Date		
	County Inspector		
	Date		
Placement of Underdrains and Observation Wells - Location, size and material of under drain and observation wells shall be verified prior to stone placement. Verify pipe ends capped. Verify 3" gravel cover	**Certifying Engineer**		
	Date		
	County Inspector		
	Date		
Placement of Filtering Media - Verify bottom layer material and thickness. Verify sand and/or filter media layer material and thickness. Verify filter fabric or pea gravel used between sand layers. Verify top filter media layer.	**Certifying Engineer**		
	Date		
	County Inspector		
	Date		
Placement of Sand Filter Layer or Gravel Diaphragm - Verify depth and width of sand and/or diaphragm layer. Verify fill material.	**Certifying Engineer**		
	Date		
	County Inspector		
	Date		
Stabilization and Landscaping - Verify site top soiled, seeded and mulched. Verify embankment top soiled and seeded. Verify location, size, type and number of planted landscape material. Verify no more than 1/8 inch root ball exposed. Verify planting stock kept moist during on-site storage. Verify installation location, size, material type of fencing or other safety barriers.	**Certifying Engineer**		
	Date		
	County Inspector		
	Date		

The Qualified Professional may request the presence of a County Construction Standards Inspector at least 24 hours in advance by calling 240-313-2400.

CATEGORY 300 DRAINAGE PVC LINED PONDS

DESCRIPTION. This work shall consist of furnishing, placing and anchoring of a 30 mil PVC liner within designated pond area as shown in the Contract Documents and as directed by the Engineer.

MATERIALS.

Furnished Topsoil	920
Type B Soil Stabilization Matting	920
Staples	920

PVC LINER MATERIAL. The 30 mil PVC Liner shall conform to the following minimum physical properties.

PROPERTY	TEST METHOD	REQUIREMENT
Thickness	**D 1593**	**+/- 5%**
Specific Gravity (min.)	**D 792**	**1.20**
100% Modulus (psi. min.) (1 lb. force/in. width, min.)	**D 882**	**100 30**
Tensile (psi, min.) (Lb. force/ in. width, min.)	**D 882**	**2300 69**
Elongation at Break (%, min.)	**D 882**	**325**
Graves Tear (lb./in., min.) (1lb. force/in. width, min.)	**D 1004**	**325 8**
Resistance to Soil Burial (% change max.) (a) Breaking Factor (b) Elongation At Break (c) Modulus at 100% Elongation.	**D 3083 (NSF Modified)**	**5 20 20**
Impact Cold Crack (F)	**D 1790**	**-20**
Dimensional Stability (% change/max.)	**D 120 (212/6/15 min.)**	**5**
Water Extraction (%, max.)	**D 3083**	**-0.25**
Volatile Loss (%, max.)	**D 1203**	**0.70**
Hydrostatic Resistance (psi.min.)	**D 751**	**82**

PVC LINER CERTIFICATION.

The Contractor shall certify that the PVC liner material conforms to the physical properties. The PVC Liner Certification shall also include:

(a) Polymer and composition of the PVC Liner, including additive composition of any coating materials

(b) Manufacturer's Quality Control plan including properties, test methods, frequency of testing, tolerances and method of resolution for out-of-specification material.

(c) Laboratory test results documenting the physical properties.

STORAGE AND HANDLING.

The PVC liner shall remain stored in its original container in a dry area and protected from puncture, dirt, grease, water, mud, mechanical abrasions, excessive heat, extreme cold or other damage. On-site handling of the PVC liner is the responsibility of the Contractor

Any damage of the PVC liner shall be documented. If the damaged PVC liner cannot be repaired to comply with the specification it shall be removed and replaced at no additional cost to the Administration.

CONSTRUCTION.

Construction shall be in conformance with the details shown on the plans or as directed by the Engineer and the following:

Area Subgrade Preparation.

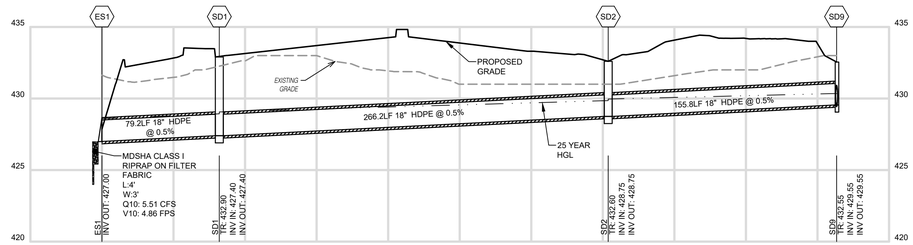
Surfaces to be lined shall be smooth and free of all rocks, stones, sticks, sharp objects, or debris of any kind. The surface shall provide a firm, unyielding foundation for the liner with no sudden sharp, or abrupt changes or break in grade. No standing water, mud, snow, or frozen subgrade that has become softened by water or overly dried until it has been properly reconditioned and recompacted. Special care shall be taken to maintain the prepared soil surfaces. The soil surface will be observed daily by the Engineer to evaluate the surface condition. Any damage to the surface caused by weather conditions shall be repaired by the contractor.

Anchor Trench.

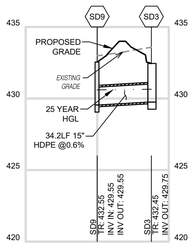
The anchor trench shall be excavated to the line, grade, and width shown on the construction drawings, prior to liner placement.

If the anchor trench is located in clay susceptible to desiccation; no more than the amount of trench required for the liner to be anchored in one day shall be excavated to minimize desiccation of the anchor trench soils.

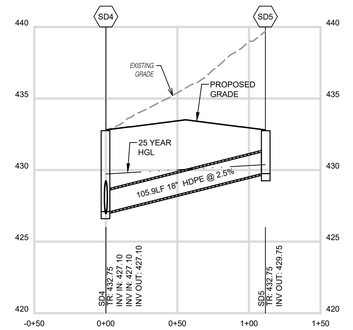
Slightly rounded corners shall be provided in the trench where the liner adjoins the trench so as to avoid sharp bends



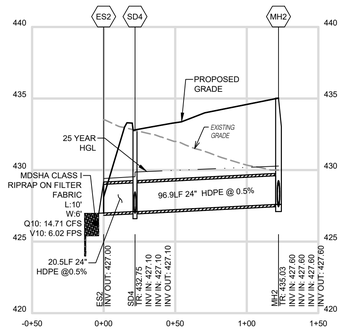
STORMDRAIN PROFILE ES1 TO SD9
SCALE- H: 1"=50', V: 1"=5'



STORMDRAIN PROFILE SD9 TO SD3
SCALE- H: 1"=50', V: 1"=5'



STORMDRAIN PROFILE SD4 TO SD5
SCALE- H: 1"=50', V: 1"=5'



STORMDRAIN PROFILE ES2 TO MH2
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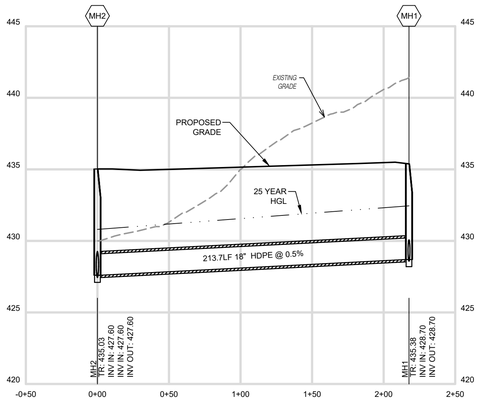
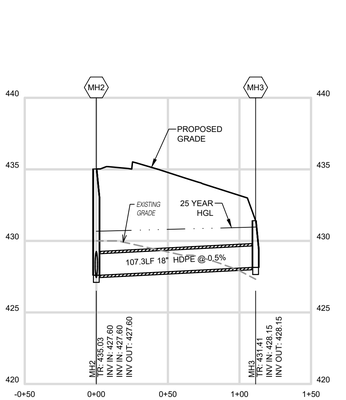
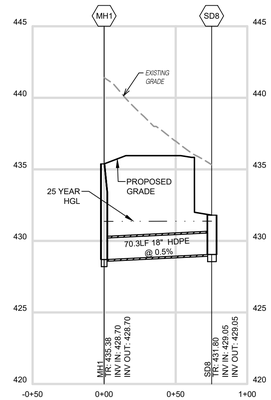


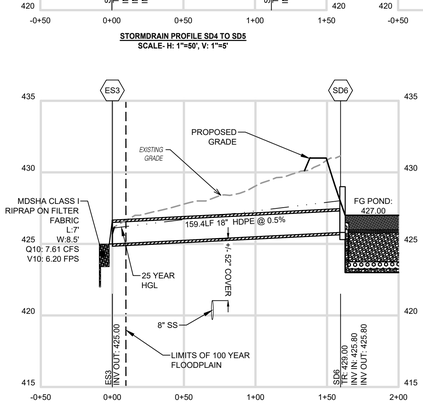
STORMDRAIN PROFILE MH2 TO MH1
SCALE- H: 1"=50', V: 1"=5'



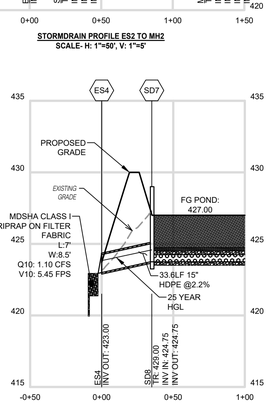
STORMDRAIN PROFILE MH2 TO MH3
SCALE- H: 1"=50', V: 1"=5'



STORMDRAIN PROFILE MH1 TO SD8
SCALE- H: 1"=50', V: 1"=5'



STORMDRAIN PROFILE ES3 TO SD6
SCALE- H: 1"=50', V: 1"=5'



STORMDRAIN PROFILE ES4 TO SD8
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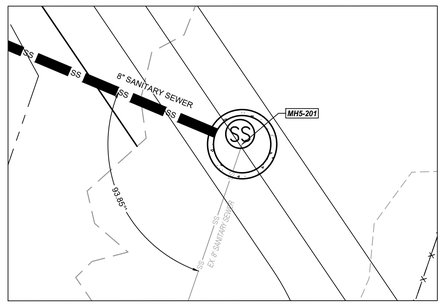
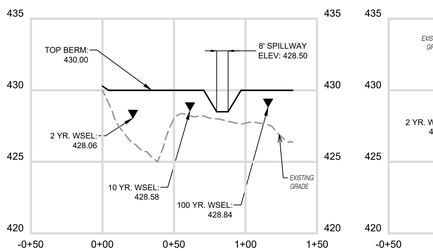
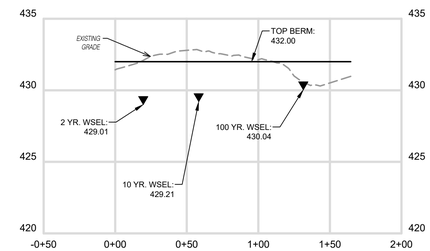
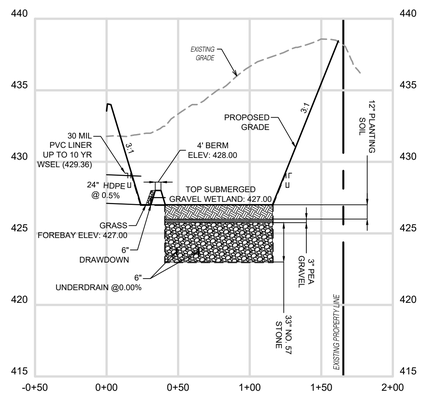




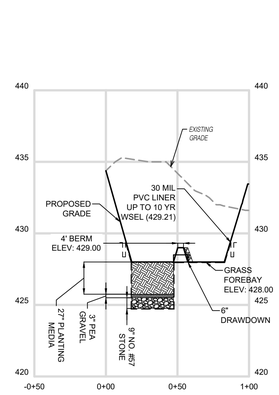
BIORETENTION 'A' BERM PROFILE
SCALE- H: 1"=50', V: 1"=5'



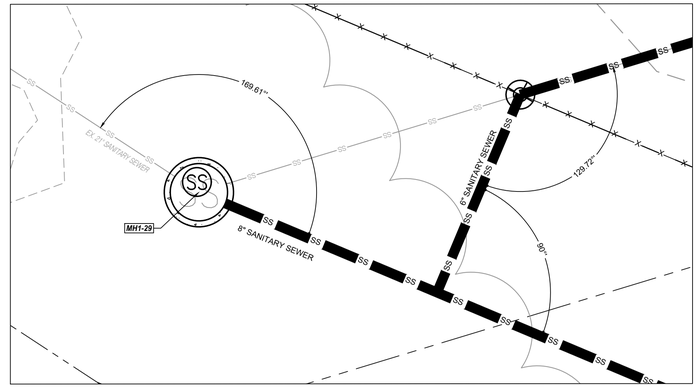
SUBMERGED GRAVEL WETLAND 'A' BERM PROFILE
SCALE- H: 1"=50', V: 1"=5'

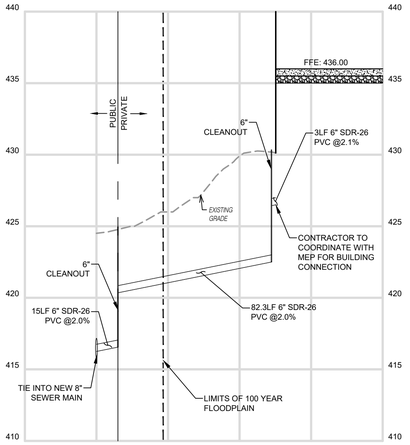


SUBMERGED GRAVEL WETLAND 'A' SECTION A-A
SCALE- H: 1"=50', V: 1"=5'

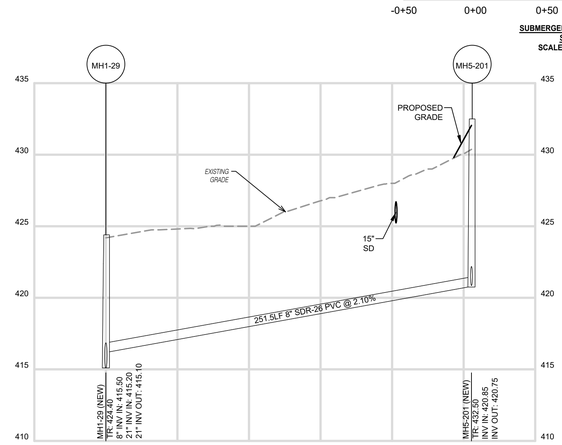


BIORETENTION 'A' SECTION A-A
SCALE- H: 1"=50', V: 1"=5'





SANITARY SEWER LATERAL PROFILE
SCALE- H: 1"=50', V: 1"=5'



SANITARY SEWER PROFILE MH5-200 TO MH5-201 (PUBLIC)
SCALE- H: 1"=50', V: 1"=5'

WASHINGTON COUNTY DEPARTMENT OF WATER QUALITY

This plan/plat has been reviewed by the Washington County Department of Water Quality for inclusion into the county capacity management plan for the system that serves this project. Allocation granted for construction shown on this plan/plat shall be in accordance with the capacity management plan developed for this system based on availability of allocation remaining in the facility.

SIGNATURE **DATE**

STATE OF MARYLAND
TREVOR M. FREDERICK
49906
PROFESSIONAL ENGINEER
08/18/2025

Professional Certification:
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional under the laws of the State of: MARYLAND License #: 49906
Expiration Date: 08-24-2026

FSA
FREDERICK, SEIBERT & ASSOCIATES, INC.
CIVIL ENGINEERS • SURVEYORS • LANDSCAPE ARCHITECTS • LAND PLANNERS
fsa-inc.com
128 SOUTH POTOMAC STREET HAGERSTOWN, MD 21740 (301) 739-8690
11142 BELLAIRPORT PINE GREENCASTLE, PA 17225 (717) 597-3647
555 SOUTH HANOVER STREET CARLISLE, PA 17013 (717) 249-9511
15 EAST MAIN STREET NEW BLOOMFIELD, PA 17068 (717) 582-2644

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MARK	DESCRIPTION:	DATE:
	REVISED PER AGENCY COMMENTS	04.08.2022
	REVISED PER AGENCY COMMENTS	10.24.2022
	REVISED PER AGENCY COMMENTS	05.21.2024
	REVISED PER CLIENT REQUEST	05.27.2025
	REVISED PER AGENCY COMMENTS	08.18.2025

TAYLOR FARM LOT 3

SITUATE ALONG THE SOUTH SIDE OF WRIGHT ROAD AND WEST OF HOPEWELL ROAD
WILLIAMSPORT
WASHINGTON COUNTY, MARYLAND
SHAOOL
1741 DUAL HIGHWAY, SUITE B
HAGERSTOWN, MARYLAND 21740

STORM DRAIN PIPE SCHEDULE							
DN STRUCTURE	UP STRUCTURE	DOWN INVERT (FT)	UP INVERT (FT)	LENGTH (FT)	SLOPE (%)	MATERIAL	SIZE (IN)
ES1	SD1	427.00	427.40	79.25	0.505	HDPE	18.0
SD1	SD2	427.40	428.75	266.19	0.507	HDPE	18.0
SD2	SD9	428.75	429.55	155.83	0.513	HDPE	18.0
SD9	SD3	429.55	429.75	34.21	0.585	HDPE	15.0
ES2	SD4	427.00	427.10	20.51	0.500	HDPE	24.0
SD4	SD5	427.10	429.75	105.92	2.502	HDPE	18.0
SD4	MH2	427.10	427.60	96.88	0.516	HDPE	24.0
MH2	MH3	427.60	428.15	107.30	0.513	HDPE	18.0
MH2	MH1	427.60	428.70	213.70	0.515	HDPE	18.0
MH1	SD8	428.70	429.05	70.35	0.500	HDPE	18.0
ES3	SD6	425.00	425.80	157.38	0.508	HDPE	15.0
ES4	SD7	423.00	423.75	33.64	2.230	HDPE	15.0

STORM DRAIN STRUCTURE SCHEDULE						
NAME	NORTHING	EASTING	RIM ELEV(FT)	INVERT-IN ELEV(FT) (1)	INVERT-IN ELEV(FT) (2)	INVERT-OUT ELEV(FT)	STRUCTURE ID
SD1	710435.16	1086249.16	432.90	427.40	N/A	427.40	MDSHA TYPE S DOUBLE
SD2	710568.16	1086486.12	432.60	428.75	N/A	428.75	MDSHA TYPE S DOUBLE
SD3	710636.34	1086655.50	432.45	N/A	N/A	429.75	MDSHA TYPE S DOUBLE
SD4	710174.86	1086506.51	432.75	427.10	427.10	427.10	MDSHA TYPE S DOUBLE
SD5	710229.42	1086603.71	432.75	N/A	N/A	429.75	MDSHA TYPE S DOUBLE
SD6	710129.66	1086485.31	429.00	N/A	N/A	425.80	MDSHA TYPE S DOUBLE
SD7	710264.24	1086090.85	428.50	N/A	N/A	423.75	MDSHA YARD INLET
SD8	710434.36	1086610.51	431.80	N/A	N/A	429.05	MDSHA TYPE S DOUBLE
SD9	710652.80	1086621.44	432.55	429.55	N/A	429.55	MDSHA YARD INLET
MH1	710368.85	1086647.28	435.38	428.70	N/A	428.70	MDSHA STANDARD 48" MANHOLE
MH2	710262.30	1086457.43	435.03	427.60	427.60	427.60	MDSHA STANDARD 48" MANHOLE
MH3	710207.82	1086360.38	431.41	N/A	N/A	428.15	MDSHA STANDARD 48" MANHOLE
ES1	710393.92	1086178.27	N/A	N/A	N/A	427.00	18" METAL END SECTION
ES2	710155.77	1086517.23	N/A	N/A	N/A	427.00	24" METAL END SECTION
ES3	710180.26	1086334.13	N/A	N/A	N/A	425.00	15" METAL END SECTION
ES4	710272.06	1086056.74	N/A	N/A	N/A	423.00	15" METAL END SECTION

SEWER STRUCTURE SCHEDULE							
NAME	NORTHING	EASTING	RIM ELEV(FT)	INVERT-IN ELEV(FT) (1)	INVERT-IN ELEV(FT) (2)	INVERT-OUT ELEV(FT)	STRUCTURE ID
MH1-29	710135.71	1086197.46	424.40	415.50	415.20	415.10	MDSHA STANDARD 48" MANHOLE
MH5-201	710164.53	1086451.29	432.50	420.85	N/A	420.75	MDSHA STANDARD 48" MANHOLE

PROJECT NO. 4564.3
DWN BY ABRAM MYERS
DATE 01.10.2023
PROJECT MANAGER T. FREDERICK
EMAIL TFREDERICK@FSA-INC.COM
TAX MAP - GRID - PARCEL: 0048 - 0021 - 0057
SCALE AS SHOWN
SHEET TITLE

CONSTRUCTION PROFILES

C-401

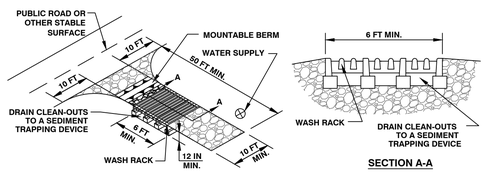
SHEET 12 OF 19

SP-23-003

P:\SHARED FILES\PROJECTS\4500\4564\04.2 SIT T.FARM\PLOTS\CONSTRUCTION\SITE\4564.3 11X17CONSTRUCTION PROFILES.DWG - 2025-08-18

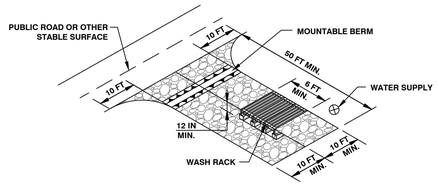
01 C-501 DETAIL B-2 WASH RACK OPTION

STANDARD SYMBOL: WR



ISOMETRIC VIEW - WASH RACK IN SCE

SECTION A-A



ISOMETRIC VIEW- WASH RACK ALONG SCE

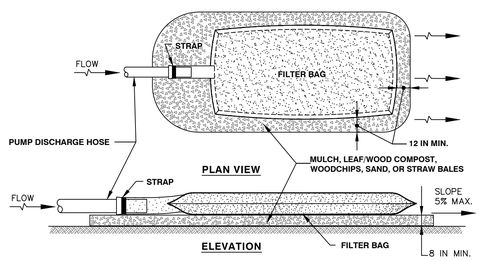
CONSTRUCTION SPECIFICATIONS

1. USE A WASH RACK DESIGNED AND CONSTRUCTED/MANUFACTURED FOR THE ANTICIPATED TRAFFIC LOADS. CONCRETE, STEEL, OR OTHER MATERIALS ARE ACCEPTABLE. PRE-FABRICATED UNITS SUCH AS CATTLE GUARDS ARE ACCEPTABLE. USE MINIMUM DIMENSION OF 6 FEET x 10 FEET. ORIENT DIRECTION OF RIBS AS SHOWN ON THE DETAIL.
2. INSTALL PRIOR TO, ALONG SIDE OF, OR AS PART OF THE SCE.
3. DIRECT WASH WATER TO AN APPROVED SEDIMENT TRAPPING DEVICE.
4. KEEP AREA UNDER WASH RACK FREE OF ACCUMULATED SEDIMENT. IF DAMAGED, REPAIR OR REPLACE WASH RACK.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL		
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

02 C-501 DETAIL F-4 FILTER BAG

STANDARD SYMBOL: FB



CONSTRUCTION SPECIFICATIONS

1. TIGHTLY SEAL SLEEVE AROUND THE PUMP DISCHARGE HOSE WITH A STRAP OR SIMILAR DEVICE.
2. PLACE FILTER BAG ON SUITABLE BASE (E.G., MULCH, LEAF/WOOD COMPOST, WOODCHIPS, SAND, OR STRAW BALES) LOCATED ON A LEVEL OR 5% MAXIMUM SLOPING SURFACE. DISCHARGE TO A STABILIZED AREA. EXTEND BASE A MINIMUM OF 12 INCHES FROM EDGES OF BAG.
3. CONTROL PUMPING RATE TO PREVENT EXCESSIVE PRESSURE WITHIN THE FILTER BAG IN ACCORDANCE WITH THE MANUFACTURER RECOMMENDATIONS. AS THE BAG FILLS WITH SEDIMENT, REDUCE PUMPING RATE.
4. REMOVE AND PROPERLY DISPOSE OF FILTER BAG UPON COMPLETION OF PUMPING OPERATIONS OR AFTER BAG HAS REACHED CAPACITY, WHICHEVER OCCURS FIRST. SPREAD THE DEWATERED SEDIMENT FROM THE BAG IN AN APPROVED UPLAND AREA AND STABILIZE WITH SEED AND MULCH BY THE END OF THE WORK DAY. RESTORE THE SURFACE AREA BENEATH THE BAG TO ORIGINAL CONDITION UPON REMOVAL OF THE DEVICE.
5. USE NONWOVEN GEOTEXTILE WITH DOUBLE STITCHED SEAMS USING HIGH STRENGTH THREAD. SIZE SLEEVE TO ACCOMMODATE A MAXIMUM 4 INCH DIAMETER PUMP DISCHARGE HOSE. THE BAG MUST BE MANUFACTURED FROM A NONWOVEN GEOTEXTILE THAT MEETS OR EXCEEDS MINIMUM AVERAGE ROLL VALUES (MARV) FOR THE FOLLOWING:

GRAB TENSILE	250 LB	ASTM D-4632
PUNCTURE	150 LB	ASTM D-4833
FLOW RATE	70 GAL/MIN/FT²	ASTM D-4491
PERMITTIVITY (SEC^{-1})	1.2 SEC^{-1}	ASTM D-4491
UV RESISTANCE	70% STRENGTH @ 500 HOURS	ASTM D-4355
APPARENT OPENING SIZE (AOS)	0.15-0.18 MM	ASTM D-4751
SEAM STRENGTH	90%	ASTM D-4632

6. REPLACE FILTER BAG IF BAG CLOGS OR HAS RIPS, TEARS, OR PUNCTURES. DURING OPERATION KEEP CONNECTION BETWEEN PUMP HOSE AND FILTER BAG WATER TIGHT. REPLACE BEDDING IF IT BECOMES DISPLACED.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL		
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

TEMPORARY SEEDING SUMMARY

HARDINESS ZONE (FIGURE B.3): 6b
SEED MIXTURE (TABLE B.1)

NO.	SPECIES	APPLICATION RATE (lb/ac)	SEEDING DATES	SEEDING DEPTHS	FERTILIZER RATE (10-20-20)	LIME RATE
1	Barley	96	Zone 6b: Mar 1-May 15/Aug 1-Oct 15	1"	436 lb/ac. (10 lb/1000 s.f.)	2 tons/ac. (90 lb/1000 s.f.)

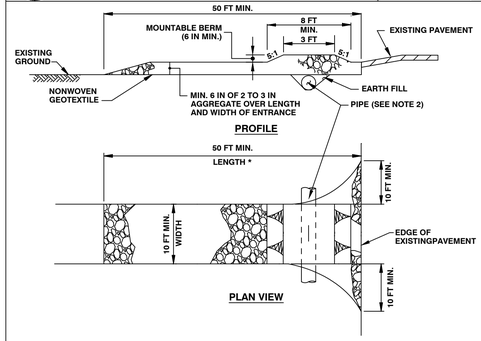
PERMANENT SEEDING SUMMARY

HARDINESS ZONE (FIGURE B.3): 6b
SEED MIXTURE (TABLE B.1)

NO.	SPECIES	APPLICATION RATE (lb/ac)	SEEDING DATES	SEEDING DEPTH	FERTILIZER RATE (10-20-20) N	P205	K20	LIME RATE
6	Tall Fescue	40	Zone 6b: Mar 1-May 15/Aug 1-Oct 15	1/4"-1/2"	45 lb/ac. (1 lb/1000 s.f.)	90 lb/ac. (2 lb/1000 s.f.)	90 lb/ac. (2 lb/1000 s.f.)	2 tons/ac. (90 lb/1000 s.f.)
	Perennial Ryegrass	25						
	White Clover	5						

03 C-501 DETAIL B-1 STABILIZED CONSTRUCTION ENTRANCE

STANDARD SYMBOL: SCE

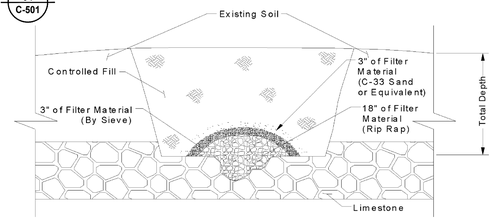


CONSTRUCTION SPECIFICATIONS

1. PLACE STABILIZED CONSTRUCTION ENTRANCE IN ACCORDANCE WITH THE APPROVED PLAN. VEHICLES MUST TRAVEL OVER THE ENTIRE LENGTH OF THE SCE. USE MINIMUM LENGTH OF 50 FEET (*30 FEET FOR SINGLE RESIDENCE LOT). USE MINIMUM WIDTH OF 10 FEET. FLARE SCE 10 FEET MINIMUM AT THE EXISTING ROAD TO PROVIDE A TURNING RADIUS.
2. PIPE ALL SURFACE WATER FLOWING TO OR DIVERTED TOWARD THE SCE UNDER THE ENTRANCE, MAINTAINING POSITIVE DRAINAGE. PROTECT PIPE INSTALLED THROUGH THE SCE WITH A MOUNTABLE BERM WITH 5:1 SLOPES AND A MINIMUM OF 12 INCHES OF STONE OVER THE PIPE. PROVIDE PIPE AS SPECIFIED ON APPROVED PLAN. WHEN THE SCE IS LOCATED AT A HIGH SPOT AND HAS NO DRAINAGE TO CONVEY, A PIPE IS NOT NECESSARY. A MOUNTABLE BERM IS REQUIRED WHEN SCE IS NOT LOCATED AT A HIGH SPOT.
3. PREPARE SUBGRADE AND PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS.
4. PLACE CRUSHED AGGREGATE (2 TO 3 INCHES IN SIZE) OR EQUIVALENT RECYCLED CONCRETE (WITHOUT REBAR) AT LEAST 6 INCHES DEEP OVER THE LENGTH AND WIDTH OF THE SCE.
5. MAINTAIN ENTRANCE IN A CONDITION THAT MINIMIZES TRACKING OF SEDIMENT. ADD STONE OR MAKE OTHER REPAIRS AS CONDITIONS DEMAND TO MAINTAIN CLEAN SURFACE, MOUNTABLE BERM, AND SPECIFIED DIMENSIONS. IMMEDIATELY REMOVE STONE AND/OR SEDIMENT SPILLED, DROPPED, OR TRACKED ONTO ADJACENT ROADWAY BY VACUUMING, SCRAPING, AND/OR SWEEPING. WASHING ROADWAY TO REMOVE MUD TRACKED ONTO PAVEMENT IS NOT ACCEPTABLE UNLESS WASH WATER IS DIRECTED TO AN APPROVED SEDIMENT CONTROL PRACTICE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL		
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

04 C-501



Sinkhole Treatment
Inverted Filter 1
Figure 1

Notes:
Inverted Filter 1
Procedure for installing inverted filter to treat sinkholes.

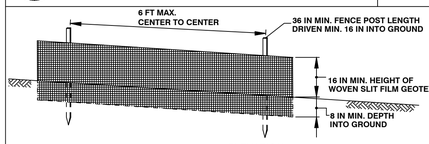
1) Remove and properly dispose of materials dumped in and around the sinkhole.
2) Excavate loose material from sinkhole and try to expose the solution void(s) in the bottom. Enlarge the sinkhole, as necessary, to allow for installation of filter materials (Figure 1).
3) Select a field stone that is about 1.5 times larger than the solution void(s). Place the stone(s) in the void(s) forming a secure "bridge". A geotextile may be needed to "lock" the stone "bridge" in place, as determined by the geotechnical engineer.
4) Place a layer of filter material over the "bridge" at a minimum thickness of 18 inches. About 30 percent of the material should be larger than the openings between the bridge and the void(s). (A well placed "bridge" should not have large openings around it.) In most cases this material could be Rip Rap.
5) Place a layer of smaller size filter material over the previous layer at a minimum thickness of 9 inches. The size should be 1/4 to 1/2 the size of the pervious layer. In most cases this material could be 57 stone.
6) Place a layer of sand size filter material over the previous layer at a minimum thickness of 9 inches. The sand has to be compatible in size with the previous layer to prevent piping. In most cases this material could be C-33 sand or equivalent.
7) (A non-woven filter cloth with a burst strength between 100 to 200 psi can be substituted for the stone and sand filter materials discussed in 5 and 6.)
8) Backfill over the last filter layer (or filter cloth) with soil material to the surface. The reuse of any soil material excavated from sinkhole should be considered. Overfill by about 5 percent to allow for settlement. The material should be soil with at least 50% clay materials and a minimum of 3 feet thick. The fill materials should be compacted to a minimum of 95% of the standard proctor (AASHTO T-99). Any available topsoil should be placed on the surface.
9) Stone used for the "bridge" and the filters should have a rock strength at least equal to moderately hard (i.e. resistant to abrasion or cutting by knife blade but can be easily dent or broken with light blows of hammer). Shale or similar soft and non-durable rock is not acceptable.

SINKHOLE REMEDIATION DETAIL

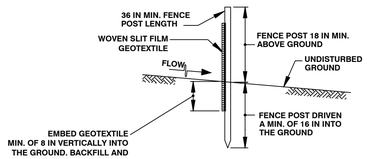
IF SINKHOLES OCCUR ON SITE DURING CONSTRUCTION A GEOTECHNICAL ENGINEER SHALL BE CONTACTED. REMEDIATION OF ANY SINKHOLES SHALL BE UNDER THE DIRECTION OF THE GEOTECHNICAL ENGINEER.

05 C-501 DETAIL E-1 SILT FENCE

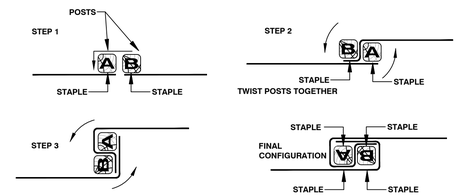
STANDARD SYMBOL: SF



ELEVATION



CROSS SECTION



JOINING TWO ADJACENT SILT FENCE SECTIONS (TOP VIEW)

CONSTRUCTION SPECIFICATIONS

1. USE WOOD POSTS 1½ X 1½ ± ¾ INCH (MINIMUM) SQUARE CUT OF SOUND QUALITY HARDWOOD, AS AN ALTERNATIVE TO WOODEN POST USE STANDARD "T" OR "U" SECTION STEEL POSTS WEIGHING NOT LESS THAN 1 POUND PER LINEAR FOOT.
2. USE 36 INCH MINIMUM POSTS DRIVEN 16 INCH MINIMUM INTO GROUND NO MORE THAN 6 FEET APART.
3. USE WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS AND FASTEN GEOTEXTILE SECURELY TO UPSLOPE SIDE OF FENCE POSTS WITH WIRE TIES OR STAPLES AT TOP AND MID-SECTION.
4. PROVIDE MANUFACTURER CERTIFICATION TO THE AUTHORIZED REPRESENTATIVE OF THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT THE GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.
5. EMBED GEOTEXTILE A MINIMUM OF 8 INCHES VERTICALLY INTO THE GROUND. BACKFILL AND COMPACT THE SOIL ON BOTH SIDES OF FABRIC.
6. WHERE TWO SECTIONS OF GEOTEXTILE ADJOIN: OVERLAP, TWIST, AND STAPLE TO POST IN ACCORDANCE WITH THIS DETAIL.
7. EXTEND BOTH ENDS OF THE SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SILT FENCE.
8. REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN SILT FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. IF UNDERMINING OCCURS, REINSTALL FENCE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL		
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

SOIL EROSION, SEDIMENT CONTROL & SEEDING NOTES

1. **All soil erosion/sediment control measures shall comply with the "2011 Maryland Standards and Specifications for Soil Erosion and Sediment Control" and the provisions of the approved plan.**
2. **All grading and stabilization shall comply with the "2011 Maryland Standards and Specifications for Soil Erosion and Sediment Control", "Section B - Grading and Stabilization" and the provisions of the approved plan.**
3. **All soil erosion and sediment control practices (BMP's) are to be constructed and/or installed prior to or at the initiation of grading in accordance with "2011 Maryland Standards and Specifications for Soil Erosion and Sediment Control", and the approved plan.**
4. **A grading unit is the maximum contiguous area allowed to be graded at a given time and is limited to 20 acres. Work may proceed to a subsequent grading unit when at least 50 percent of the disturbed area in the preceding grading unit has been stabilized and approved by the enforcement authority and/or the Washington County Soil Conservation District (approval authority). Unless otherwise specified and approved by the approval authority, no more than 30 acres cumulatively may be disturbed at a given time.**
5. **For initial soil disturbance or re-disturbance, temporary or permanent stabilization must be completed within:**
   a. **Three (3) calendar days as to the surface of all perimeter dikes, swales, ditches, perimeter slopes, and all slopes steeper than 3 horizontal to 1 vertical (3:1); and**
   b. **Seven (7) calendar days as to all other disturbed or graded areas on the project site not under active grading.**
6. **Stockpiles must be stabilized in accordance within the 7 day stabilization requirement, as well as, Standard B-4-1 Incremental Stabilization and Standard B-4-4 Temporary Stabilization (as applicable).**
7. **All constructed channels and swales shall have specified treatment installed to the design flow depth completed downstream to upstream as construction progresses. An installation detail shall be shown on the plans.**
8. **All storm drain and sanitary sewer lines not in paved areas are to be mulched and seeded within 3 days of initial backfill unless otherwise specified on plans.**
9. **Electric Power, telephone, and gas lines are to be compacted, seeded, and mulched within 3 days after initial backfill unless otherwise specified on plans.**
10. **No slope shall be greater than 2:1.**
11. **As required by Section B, of the Maryland Standards and Specifications for Soil Erosion and Sediment Control, "Adequate Vegetative Stabilization", is defined as 95 percent ground cover. The Washington County Soil Conservation District requires the project adhere to this for scheduling of the Final Site Closeout Review, and/or release of the site for soil erosion and sediment control.**
12. **All material hauled offsite or fill brought into the site shall come from a site with an approved and current soil erosion and control plan.**
13. **Filter bags are to be used to pump any sediment laden water to a stabilized outfall.**

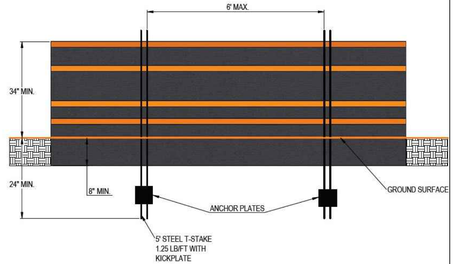
STANDARD UTILITY EROSION AND SEDIMENT CONTROL NOTES:

1. Contractor to only open up length of trench that can be constructed and backfilled in one working day in paved areas.
2. Contractor to place excavated material in a dump truck and hauled to an approved location to waste materials in paved areas.
3. Contractor to backfill trench with approved materials and stabilize disturbed areas the same working day.
4. In areas where the construction takes place outside of the existing roadbed, contractor to install silt fence along the downhill side of the trench before beginning construction and place excavated material from the trench on the uphill side.
5. If dewatering of the trench is required, contractor to pump water to a filter bag to dewater.
6. Contractor to sweep streets of any debris or sediments caused by construction operations and dispose of at an approved location.
7. Contractor to stabilize all disturbed areas with seed & mulch or appropriate street repair.

STANDARD STABILIZATION NOTES:

Following initial soil disturbance or re-disturbance, permanent or temporary stabilization must be completed within:
a. Three (3) calendar days as to the surface of all perimeter dikes, swales, ditches, perimeter slopes, and all slopes steeper than 3 horizontal to 1 vertical (3:1); and
b. Seven (7) calendar days as to all other disturbed or graded areas on the project site not under active grading.

06 C-501 SMARTfence® 42 Detail:



SMARTfence® 42 is NTPEP Compliant
GTX-2018-01-187

SMARTFENCE 42" INSTALLATION INSTRUCTIONS

SEDIMENT & PERIMETER CONTROL

STEP 1: Excavate trench a maximum of 4" wide and 6" deep. The trench shall be hand-cleaned following excavation to remove bulky debris such as rocks, sticks, and soil clods from the trench. Drive studded metal T-posts with anchor plates having a minimum weight of 1.25 lb /ft and a minimum 5 ft length. Drive post into ground a minimum of 18" depth. Post spacing must be no greater than 6 ft maximum.

STEP 2: Layout SMARTfence® 42 along proposed fence line next to anchor trench. Locate one end of the SMARTfence® 42 and position near the initial post. Position SMARTfence® 42 vertically along the initial post.

STEP 3: For the initial post, place the end of SMARTfence® 42 along the post height and rotate the post 360 degrees, maintaining tension on the fence system. Secure the fence to the post at all four (4) orange-colored band locations with steel wire or nylon ties per Step 4.

STEP 4: For fastening SMARTfence® 42 to studded, metal T-posts using one of following methods:

- Method I (T-Post): 16-gage wire- attach SMARTfence® 42 to metal T-posts using the 16-gage 304 SS wire with mitered ends, securing the fence to the post using safety pliers.
- Method II (T-Post): 8" nylon heavy-duty, UV-stabilized, cable ties (zip-ties) with minimum 120-lb tensile strength. Puncture two 0.25" openings, spaced at a width apart that is roughly equivalent to the post width, and secure the fence to the post.

STEP 5: Drive the initial post with the attached fence into the ground to a 18" depth.

STEP 6: Drive the interior t-posts of the fence system into the ground at least 18".

STEP 7: Move to the next t-post while pulling SMARTfence® 42 tightly. Position the SMARTfence® 42 in front of the adjacent t-post in preparation for fastening the fence to the post. Fasten fence to post at all four (4) orange-colored band locations as instructed in Step 4.

STEP 8: After the interior posts have been fastened to the SMARTfence® 42, secure the fence to the final post by pulling the final section of fencing taut, then rotating the post 360 degrees, maintaining tension on the fence system. Secure the fence to the post at all four (4) orange-colored band locations with the steel wire or nylon ties per Step 4. Drive the final post into the ground to a 18" depth.

STEP 9: Place bottom 8" of fabric into the trench. Backfill trench (overfill) with soil placed around fabric. Compact soil backfill with either manual tamping (or other manual means) or via mechanical equipment such as the front wheel of a tractor, skid steer, roller, or other device (per Note 5 of ASTM D 6462 Standard Practice for Silt Fence Installation). Do not damage the fabric during compaction (damaged fabric shall be replaced).

Please contact our team at 800-448-3636 or info@acfenv.com with any questions regarding the installation process.

LET'S GET IT DONE!™

SMARTfence

For more information, contact our Inside Sales team at 800.448.3636 email at info@acfenv.com

ACF ENVIRONMENTAL

For sites 1.0 acre or more, the following are required:

A. **Maryland Department of the Environment, General Permit for Stormwater Associated with a Construction Activity, NPDES Permit Number MDRC, State Discharge Permit Number 14GP, or an Individual Permit.**
B. **The Maryland Department of the Environment (General/Individual Permit - Notice of Intent- NOI) application and permit shall be posted and/or available on-site at all times.**
C. **During construction, all soil erosion and sediment control practices (BMP's) shall be inspected and recorded on the "Standard Inspection Form", "General Permit for Stormwater Associated with Construction Activity" per the Maryland Department of the Environment (General/Individual Permit - Notice of Intent - NOI).**
D. **Following construction and release of the sight for soil erosion and sediment control by the Washington County Soil Conservation District, i.e., all portions of a site have been permanently stabilized, and all stormwater discharges from construction sites that are authorized by the permit are eliminated, the authorized permittee shall submit the Maryland Department of the Environment, General/Individual Permit - Notice of Termination-NOT.**

STATE OF MARYLAND — TREVOR M. FREDERICK — 49806 — PROFESSIONAL ENGINEER
08/18/2025

Professional Certification:
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional under the laws of the State of: MARYLAND License #: 49806 Expiration Date: 08-24-2026

FSA — FREDERICK, SEIBERT & ASSOCIATES, INC.
CIVIL ENGINEERS • SURVEYORS • LANDSCAPE ARCHITECTS • LAND PLANNERS
15 EAST MAIN STREET, NEW BLOOMFIELD, PA 17068, 717-582-8974
555 SOUTH HANOVER STREET, CARLISLE, PA 17013, 717-249-8411
11142 WILLIAMSPORT PIKE, GREENCASTLE, PA 17225, 717-597-3657
128 SOUTH POTOMAC STREET, HAGERSTOWN, MD 21740, 240-420-1666
fsa-inc.com
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MARK	DESCRIPTION:	DATE:
1	REVISED PER AGENCY COMMENTS	04.08.2025
2	REVISED PER AGENCY COMMENTS	05.21.2025
3	REVISED PER CLIENT REQUEST	05.27.2025
4	REVISED PER AGENCY COMMENTS	06.18.2025

TAYLOR FARM LOT 3
SITUATE ALONG THE SOUTH SIDE OF WRIGHT ROAD AND WEST OF HOPEWELL ROAD
WILLIAMSPORT
WASHINGTON COUNTY, MARYLAND
SHAOOL
1741 DUAL HIGHWAY, SUITE B
HAGERSTOWN, MARYLAND 21740

PROJECT NO. 4564.3
DWN BY ABRAM MYERS | DATE 01.10.2023
PROJECT MANAGER T. FREDERICK
EMAIL TFREDERICK@FSA-INC.COM
TAX MAP - GRID - PARCEL 0048 - 0021 - 0057
SCALE N.T.S.
SHEET TITLE

EROSION & SEDIMENT CONTROL DETAILS

C-501
SHEET 13 OF 19

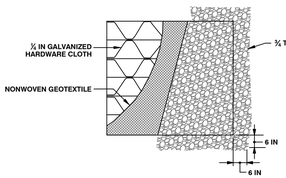
SP-23-003

P:\SHARED\TAYLOR\SRVY\PLOT\ACAD2020\DWG\CONSTRUCTION DETAILS\CONSTRUCTION DETAILS.DWG 2025-06-18

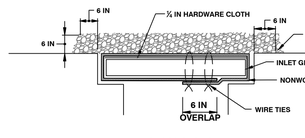
01 C-502 — DETAIL E-9-2 AT-GRADE INLET PROTECTION

STANDARD SYMBOL: AGIP

MAXIMUM DRAINAGE AREA = 1 ACRE



PLAN / CUT AWAY VIEW



CROSS SECTION

CONSTRUCTION SPECIFICATIONS

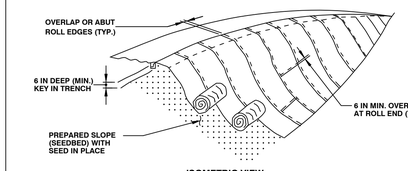
1. USE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS.
2. LIFT GRATE AND WRAP WITH NONWOVEN GEOTEXTILE TO COMPLETELY COVER ALL OPENINGS. SECURE WITH WIRE TIES AND SET GRATE BACK IN PLACE.
3. PLACE CLEAN ¾ TO 1½ INCH STONE OR EQUIVALENT RECYCLED CONCRETE 6 INCHES THICK ON THE GRATE.
4. STORM DRAIN INLET PROTECTION REQUIRES FREQUENT MAINTENANCE. REMOVE ACCUMULATED SEDIMENT AFTER EACH RAIN EVENT TO MAINTAIN FUNCTION AND AVOID PREMATURE CLOGGING. IF INLET PROTECTION DOES NOT COMPLETELY DRAIN WITHIN 24 HOURS AFTER A STORM EVENT, IT IS CLOGGED. WHEN THIS OCCURS, REMOVE ACCUMULATED SEDIMENT AND CLEAN, OR REPLACE GEOTEXTILE AND STONE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

02 C-502 — DETAIL B-4-6-B TEMPORARY SOIL STABILIZATION MATTING SLOPE APPLICATION

STANDARD SYMBOL: TSSMS — ✻5 fps lb/ft² (✻ INCLUDE SHEAR STRESS)



ISOMETRIC VIEW

CONSTRUCTION SPECIFICATIONS

1. USE MATTING THAT HAS A DESIGN VALUE FOR SHEAR STRESS EQUAL TO OR HIGHER THAN THE SHEAR STRESS DESIGNATED ON APPROVED PLANS.
2. USE TEMPORARY SOIL STABILIZATION MATTING MADE OF DEGRADABLE (LASTS 6 MONTHS MINIMUM) NATURAL OR MAN-MADE FIBERS (MOSTLY ORGANIC). MAT MUST HAVE UNIFORM THICKNESS AND DISTRIBUTION OF FIBERS THROUGHOUT AND BE SMOLDER RESISTANT. CHEMICALS USED IN THE MAT MUST BE NON-LEACHING AND NON-TOXIC TO VEGETATION AND SEED GERMINATION AND NON-INJURIOUS TO THE SKIN. IF PRESENT, NETTING MUST BE EXTRUDED PLASTIC WITH A MAXIMUM MESH OPENING OF 2x2 INCHES AND SUFFICIENTLY BONDED OR SEWN ON 2 INCH CENTERS ALONG LONGITUDINAL AXIS OF THE MATERIAL TO PREVENT SEPARATION OF THE NET FROM THE PARENT MATERIAL.
3. SECURE MATTING USING STEEL STAPLES, WOOD STAKES, OR BIODEGRADABLE EQUIVALENT. STAPLES MUST BE "U" OR "T" SHAPED STEEL WIRE HAVING A MINIMUM GAUGE OF NO. 11 AND NO. 8 RESPECTIVELY. "U" SHAPED STAPLES MUST AVERAGE 1 TO 1½ INCHES WIDE AND BE A MINIMUM OF 6 INCHES LONG. "T" SHAPED STAPLES MUST HAVE A MINIMUM 8 INCH MAIN LEG, A MINIMUM 1 INCH SECONDARY LEG, AND A MINIMUM 4 INCH HEAD. WOOD STAKES MUST BE SEASONED HARDWOOD, 12 TO 24 INCHES IN LENGTH, 1x3 INCH IN CROSS SECTION, AND WEDGE SHAPED AT THE BOTTOM.
4. PERFORM FINAL GRADING, TOPSOIL APPLICATION, SEEDBED PREPARATION, AND PERMANENT SEEDING IN ACCORDANCE WITH SPECIFICATIONS. PLACE MATTING WITHIN 48 HOURS OF COMPLETING SEEDING OPERATIONS UNLESS END OF GERMINATION STABILIZATION IS SPECIFIED ON THE APPROVED EROSION & SEDIMENT CONTROL PLAN.
5. UNROLL MATTING DOWNSLOPE. LAY MAT SMOOTHLY AND FIRMLY UPON THE SEEDED SURFACE. AVOID STRETCHING THE MATTING.
6. OVERLAP OR ABUT ROLL EDGES PER MANUFACTURER RECOMMENDATIONS. OVERLAP ROLL ENDS BY 6 INCHES (MINIMUM), WITH THE UPSLOPE MAT OVERLAPPING ON TOP OF THE DOWNSLOPE MAT.
7. KEY IN THE UPSLOPE END OF MAT 6 INCHES (MINIMUM) BY DIGGING A TRENCH, PLACING THE MATTING ROLL END IN THE TRENCH, STAPLING THE MAT IN PLACE, REPLACING THE EXCAVATED MATERIAL, AND TAMPING TO SECURE THE MAT END IN THE KEY.
8. STAPLE/STAKE MAT IN A STAGGERED PATTERN ON 4 FOOT (MAXIMUM) CENTERS THROUGHOUT AND 2 FOOT (MAXIMUM) CENTERS ALONG SEAMS, JOINTS, AND ROLL ENDS.
9. ESTABLISH AND MAINTAIN VEGETATION SO THAT REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT ARE CONTINUOUSLY MET IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION.

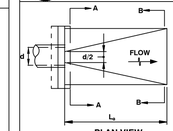
MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

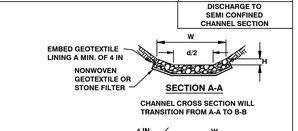
03 C-502 — DETAIL D-4-1-A ROCK OUTLET PROTECTION I

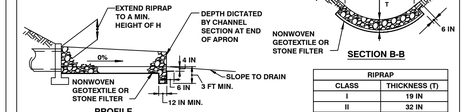
STANDARD SYMBOL: ROP1

DISCHARGE TO SEMI CONFINED CHANNEL SECTION



PLAN VIEW





PROFILE

RIPRAP	
CLASS	THICKNESS (T)
I	19 IN
II	32 IN
III	46 IN

CONSTRUCTION SPECIFICATIONS

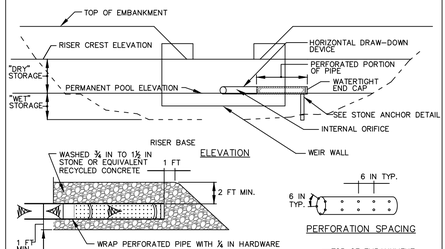
1. RIPRAP AND STONE MUST CONFORM TO THE SPECIFIED CLASS.
2. USE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS, AND PROTECT FROM PUNCTURING, CUTTING, OR TEARING. REPAIR ANY DAMAGE OTHER THAN AN OCCASIONAL SMALL HOLE BY PLACING ANOTHER PIECE OF GEOTEXTILE OVER THE DAMAGED PART OR BY COMPLETELY REPLACING THE GEOTEXTILE. PROVIDE A MINIMUM OF ONE FOOT OVERLAP FOR ALL REPAIRS AND FOR JOINING TWO PIECES OF GEOTEXTILE TOGETHER.
3. PREPARE THE SUBGRADE FOR GEOTEXTILE OR STONE FILTER (¾ TO 1½ INCH STONE FOR 6 INCH MINIMUM DEPTH) AND RIPRAP TO THE REQUIRED LINES AND GRADES. COMPACT ANY FILL REQUIRED IN THE SUBGRADE TO A DENSITY OF APPROXIMATELY THAT OF THE SURROUNDING UNDISTURBED MATERIAL.
4. EXTEND GEOTEXTILE AT LEAST 6 INCHES BEYOND EDGES OF RIPRAP AND EMBED AT LEAST 4 INCHES AT SIDES OF THE RIPRAP.
5. CONSTRUCT RIPRAP OUTLET TO FULL COURSE THICKNESS IN ONE OPERATION AND IN SUCH A MANNER AS TO AVOID DISPLACEMENT OF UNDERLYING MATERIALS. PLACE STONE FOR RIPRAP OUTLET IN A MANNER THAT WILL ENSURE THAT IT IS REASONABLY HOMOGENOUS WITH THE SMALLER STONES AND SPALLS FILLING THE VOIDS BETWEEN THE LARGER STONES. PLACE RIPRAP IN A MANNER TO PREVENT DAMAGE TO THE STONE FILTER BLANKET OR GEOTEXTILE. HAND PLACE TO THE EXTENT NECESSARY.
6. WHERE NO ENDWALL IS USED, CONSTRUCT THE UPSTREAM END OF THE APRON SO THAT THE WIDTH IS TWO TIMES THE DIAMETER OF THE OUTLET PIPE, AND EXTEND THE STONE UNDER THE OUTLET BY A MINIMUM OF 18 INCHES.
7. CONSTRUCT APRON WITH 0% SLOPE ALONG ITS LENGTH AND WITHOUT OBSTRUCTIONS. PLACE STONE SO THAT IT BLENDS IN WITH EXISTING GROUND.
8. MAINTAIN LINE, GRADE, AND CROSS SECTION. KEEP OUTLET FREE OF EROSION. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. AFTER HIGH FLOWS INSPECT FOR SCOUR AND DISLODGED RIPRAP. MAKE NECESSARY REPAIRS IMMEDIATELY.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

04 C-502 — DETAIL G-2-6 SEDIMENT BASIN SCHEMATIC HORIZONTAL DRAW-DOWN DEVICE

STANDARD SYMBOL: HDDD



CONSTRUCTION SPECIFICATIONS

1. PERFORATE PIPE WITH 1 INCH DIAMETER PERFORATIONS SPACED 6 INCHES APART LONGITUDINALLY AND RADIALLY OR IN ACCORDANCE WITH APPROVED PLAN.
2. WRAP THE PERFORATED PORTION OF THE DRAW-DOWN DEVICE FIRST WITH ¼ INCH GALVANIZED HARDWARE CLOTH, THEN WITH NONWOVEN GEOTEXTILE. USE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS. DO NOT WRAP WITH MORE THAN ONE LAYER OF GEOTEXTILE.
3. AS AN ALTERNATE TO STONE ANCHORING, SECURE DRAW-DOWN DEVICE WITH TWO 1 INCH STEEL ANGLES SET 3 FEET MINIMUM INTO THE GROUND ATTACHED TO DRAW-DOWN DEVICE BY A 1 INCH WIDE GALVANIZED STEEL STRAP OR 12 GAUGE OR HEAVIER WIRE.
4. REMOVE SEDIMENT WHEN IT ACCUMULATES TO CLEANOUT ELEVATION (50% OF THE WET STORAGE DEPTH). DEPOSIT REMOVED SEDIMENT IN AN APPROVED AREA IN A SUCH A MANNER THAT IT WILL NOT ERODE. MAINTAIN WATER TIGHT CONNECTIONS. REPLACE GEOTEXTILE AROUND PERFORATED RISER IF DRY STORAGE VOLUME DOES NOT DRAW DOWN WITHIN 10 HOURS.

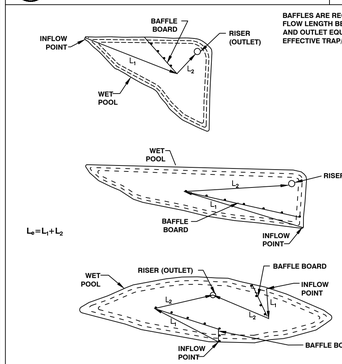
MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

05 C-502 — DETAIL G-2-4 BAFFLE BOARDS

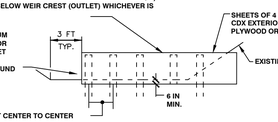
STANDARD SYMBOL: BB

BAFFLES ARE REQUIRED TO PROVIDE A FLOW LENGTH BETWEEN INFLOW POINT AND OUTLET EQUAL TO TWICE THE EFFECTIVE TRAP/BASIN WIDTH.



PLAN VIEWS

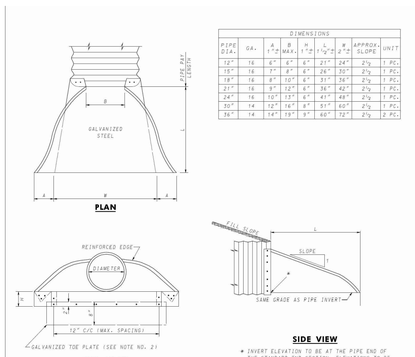
SET ELEVATION AT ½ OF THE DRY STORAGE (WET STORAGE ELEVATION + DRY STORAGE ELEVATION / 2) OR 6 IN BELOW WEIR CREST (OUTLET) WHICHEVER IS LOWER



BAFFLE DETAIL

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION



DIMENSIONS								
PIPE DIA.	GA.	A ±1/2"	B MAX.	H ±1/2"	L ±1/2"	W ±1/2"	APPROX. SLOPE	UNIT
12"	16	6"	6"	6"	21"	24"	2½	1 PC.
15"	16	7"	8"	6"	24"	30"	2½	1 PC.
18"	16	8"	10"	6"	31"	36"	2½	1 PC.
21"	16	9"	12"	6"	36"	42"	2½	1 PC.
24"	16	10"	13"	6"	41"	48"	2½	1 PC.
30"	14	12"	16"	8"	51"	60"	2½	1 PC.
36"	14	14"	19"	9"	60"	72"	2½	2 PC.

NOTES

1. METAL END SECTIONS SHALL BE GAGE 16 FOR PIPES RANGING FROM 15" THRU 24", AND GAGE 14 FOR PIPES RANGING FROM 30" THRU 36". MULTIPLE PANEL UNITS TO HAVE LAP SEAMS WHICH ARE TO BE TIGHTLY JOINED WITH DIAMETER GALVANIZED RIVETS OR BOLTS.
2. TOE PLATES SHALL BE USED WHEN SPECIFIED ON THE PLANS. THICKNESS OF END PLATE TO BE SAME AS END SECTION. COST OF TOE PLATE TO BE INCIDENTAL TO THE BID PRICE PER EACH OF METAL END SECTION.

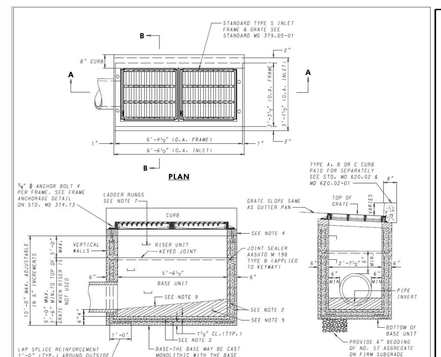
SPECIFICATION 303	CATEGORY CODE ITEMS
APPROVED Kirk G. McCall DIRECTOR - OFFICE OF HIGHWAY DEVELOPMENT	

SHA	APPROVAL • SHA REVISIONS	APPROVAL • FEDERAL HIGHWAY ADMINISTRATION
State Highway Administration	APPROVAL 8-28-84	APPROVAL 12-12-84
	REVISED 10-1-85	REVISED 7-27-89
	REVISED 7-1-09	REVISED
	REVISED	REVISED

Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES

STANDARD METAL END SECTION ROUND METAL PIPE

STANDARD NO. MD 370.01



NOTES

1. CONCRETE TO BE MIX NO. 6 (4500 PSI).
2. REINFORCING BARS = 2 LAYERS OF 4X4-W4.0 X W4.0 WELDED WIRE FABRICS BASE = 2 LAYERS OF 4X4 = W7.0 X W7.0 WELDED WIRE FABRIC
3. THREADED PLASTIC INSERTS TO BE PROVIDED FOR HANDLING.
4. GRADE AND SLOPE ADJUSTMENTS MIN. 2", MAX. 9" SHALL BE COMPLETED IN THE FIELD USING CONCRETE MIX NO. 6.
5. PIPE OPENINGS TO BE PROVIDED AS REQUIRED. FOR SIZE, LOCATION AND INVERT ELEVATIONS REFER TO THE CONSTRUCTION PLANS.
6. PLACEMENT OF SUBGRADE DRAINAGE WILL BE AS DIRECTED BY THE ENGINEER OR AS NOTED ON THE CONSTRUCTION PLANS.
7. LADDER RUNGS SHALL BE IN ACCORDANCE WITH STANDARD MD 383.93 OR 383.92. RUNGS ARE INCIDENTAL TO THE COST OF THE INLET.
8. MINIMUM DEPTH PAYMENT PER EACH SHALL BE 3'-6" MEASURED FROM THE PIPE INVERT TO THE TOP OF THE GRATE. AT ITS HIGHEST POINT. VERTICAL DEPTH PAYMENT PER LINEAR FOOT SHALL INCLUDE ALL DEPTHS IN EXCESS OF 3'-6" INCLUDING ALL APPURTENANCES.
9. CONCRETE OR BRICK INVERT TO BE PROVIDED IN THE FIELD AND SHALL SLOPE 2 IN./FT TOWARD OUTLET OR AS DIRECTED.
10. BASE WALLS UNIT MAY TAPER PER MANUFACTURER'S DESIGN.
11. FROM CURB LINE, INLET HAS BEEN DESIGNED FOR MS-25 LOADING. ACCORDING TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS.

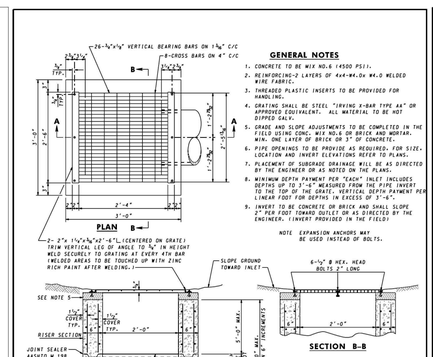
SPECIFICATION 303	CATEGORY CODE ITEMS
APPROVED Kirk G. McCall DIRECTOR - OFFICE OF HIGHWAY DEVELOPMENT	

SHA	APPROVAL • SHA REVISIONS	APPROVAL • FEDERAL HIGHWAY ADMINISTRATION
State Highway Administration	APPROVAL 2-22-91	APPROVAL 7-3-91
	REVISED 8-3-10	REVISED 7-26-10
	REVISED 10-7-14	REVISED 9-29-14
	REVISED -	REVISED

Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES

PRECAST STANDARD TYPE S INLET DOUBLE GRATE TANDEM

STANDARD NO. MD 374.70



GENERAL NOTES

1. CONCRETE TO BE MIX NO.6 (4500 PSI).
2. REINFORCING-2 LAYERS OF 4x4-W4.0x W4.0 WELDED WIRE FABRIC.
3. THREADED PLASTIC INSERTS TO BE PROVIDED FOR HANDLING.
4. GRATING SHALL BE STEEL "IRVING R-BAR TYPE AA" OR APPROVED EQUIVALENT. ALL MATERIAL TO BE HOT DIPPED GALV.
5. GRADE AND SLOPE ADJUSTMENTS TO BE COMPLETED IN THE FIELD USING CONC. MIX NO.6 OR BRICK AND MORTAR. MIN. ONE LAYER OF BRICK OR 3" OF CONCRETE.
6. PIPE OPENINGS TO BE PROVIDE AS REQUIRED. FOR SIZE, LOCATION AND INVERT ELEVATIONS REFER TO PLANS.
7. PLACEMENT OF SUBGRADE DRAINAGE WILL BE AS DIRECTED BY THE ENGINEER OR AS NOTED ON THE PLANS.
8. MINIMUM DEPTH PAYMENT PER "EACH" INLET INCLUDES DEPTHS UP TO 3'-6" MEASURED FROM THE PIPE INVERT TO THE TOP OF THE GRATE. VERTICAL DEPTH PAYMENT PER LINEAR FOOT FOR DEPTHS IN EXCESS OF 3'-6".
9. INVERT TO BE CONCRETE OR BRICK AND SHALL SLOPE 2" PER FOOT TOWARD OUTLET OR AS DIRECTED BY THE ENGINEER. (INVERT PROVIDED IN THE FIELD)

NOTE EXPANSION ANCHORS MAY BE USED INSTEAD OF BOLTS.

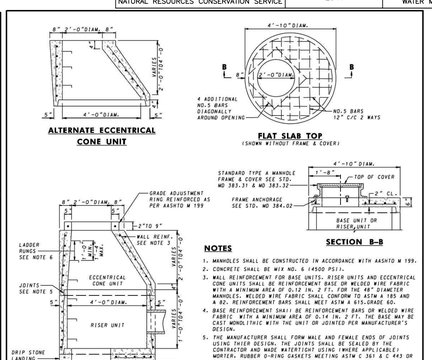
SPECIFICATION 303	CATEGORY CODE ITEMS
APPROVED Kirk G. McCall DIRECTOR - OFFICE OF HIGHWAY DEVELOPMENT	

SHA	APPROVAL • SHA REVISIONS	APPROVAL • FEDERAL HIGHWAY ADMINISTRATION
State Highway Administration	APPROVAL 4-2-97	APPROVAL 4-23-97
	REVISED 10-1-01	REVISED
	REVISED	REVISED
	REVISED	REVISED

Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES

PRECAST YARD INLET

STANDARD NO. MD 381.02



NOTES

1. MANHOLES SHALL BE CONSTRUCTED IN ACCORDANCE WITH AASHTO M 199.
2. CONCRETE SHALL BE MIX NO. 6 (4500 PSI).
3. WALL REINFORCEMENT FOR BASE UNITS, RISER UNITS AND ECCENTRICAL CONE UNITS SHALL BE REINFORCEMENT BASE OR WELDED WIRE FABRIC WITH A MINIMUM AREA OF 0.12 IN. 2 FT. FOR THE 48" DIAMETER MANHOLES. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A 185 AND A 82. REINFORCEMENT BARS SHALL MEET ASTM A 615,GRADE 60.
4. BASE REINFORCEMENT SHALL BE REINFORCEMENT BARS OR WELDED WIRE FABRIC WITH A MINIMUM AREA OF 0.14 IN. 2 FT. THE BASE MAY BE CAST MONOLITHIC WITH THE UNIT OR JOINTED PER MANUFACTURER'S DESIGN.
5. THE MANUFACTURER SHALL FORM MALE AND FEMALE ENDS OF JOINTS USING THEIR DESIGN. THE JOINTS SHALL BE SEALED BY THE CONTRACTOR AND MADE WATERTIGHT USING (WHERE APPLICABLE) MORTER, RUBBER O-RING GASKETS MEETING ASTM C 361 & C 443 OR FLEXIBLE PLASTIC GASKETS MEETING AASHTO M 198 TYPE B.
6. LADDER RUNGS SHALL BE INSTALLED IN VERTICAL ALIGNMENT AT 1'-4" MAXIMUM C/C. RUNG TYPES SHALL BE IN ACCORDANCE WITH STANDARDS NO 383.91 OR NO 383.92 LADDER RUNGS SHALL BE INCIDENTAL TO THE COST OF THE MANHOLE.
7. WHEN THE DISTANCE BETWEEN MULTIPLE OPENINGS IN THE BASE UNIT OR ANY RISER UNIT IS LESS THAN 6" ADDITIONAL NO. 3 BARS ARE REQUIRED AROUND OPENINGS.
8. LIFT HOLES OR LIFT EYES SHALL BE PROVIDED IN EACH SECTION FOR HANDLING.
9. MIN NO. 2 CONCRETE OR BRICK CHANNEL SHALL BE PROVIDED IN THE FIELD AND SHALL SLOPE 2" PER FOOT TOWARD OUTLET OR AS DIRECTED BY THE ENGINEER.
10. THE DRIP STONE LANDING SHALL BE USED ONLY WHEN THERE ARE PIPES CONNECTED TO THE RISER UNITS. SEE STD. NO 384.13 FOR DETAILS.
11. MINIMUM DEPTH PAYMENT PER EACH SHALL BE 5'-0" MEASURED FROM THE BOTTOM OF THE BASE UNIT TO THE TOP OF THE MANHOLE COVER AT ITS HIGHEST POINT. VERTICAL DEPTH PAYMENT PER LINEAR FOOT FOR DEPTHS IN EXCESS OF 5'-0". THE COST OF ALL CONCRETE, BRICK, MORTAR, NO. 57 AGGREGATE GROUT, SEALANT, AND ALL NECESSARY APPURTENANCES SHALL BE INCIDENTAL TO THE PRICE BID.

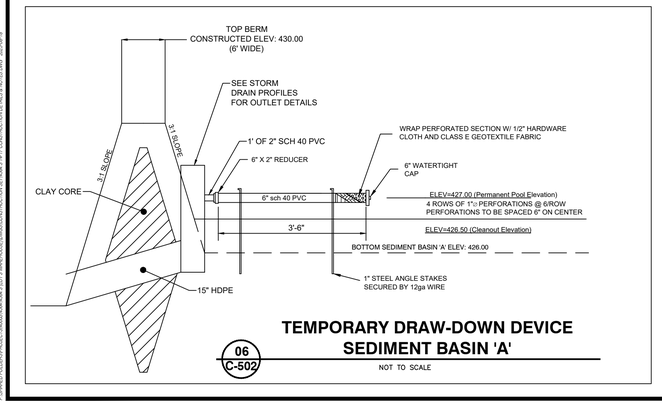
SPECIFICATION 303	CATEGORY CODE ITEMS
APPROVED Kirk G. McCall DIRECTOR - OFFICE OF HIGHWAY DEVELOPMENT	

SHA	APPROVAL • SHA REVISIONS	APPROVAL • FEDERAL HIGHWAY ADMINISTRATION
State Highway Administration	APPROVAL 3-22-91	APPROVAL 5-6-91
	REVISED 10-1-01	REVISED
	REVISED	REVISED
	REVISED	REVISED

Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES

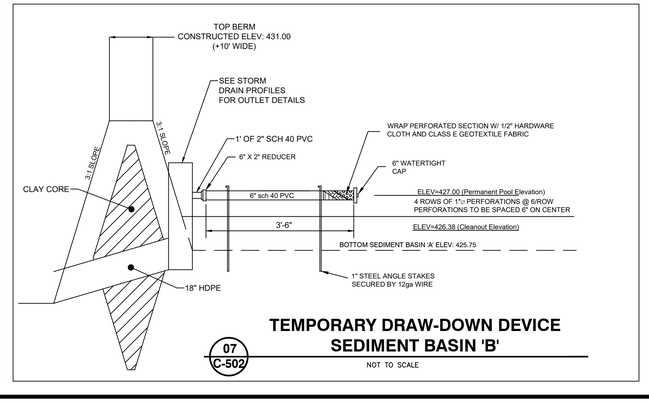
48" DIAMETER PRECAST MANHOLE FOR 12" TO 24" PIPES

STANDARD NO. MD 384.01



06 C-502 — TEMPORARY DRAW-DOWN DEVICE SEDIMENT BASIN 'A'

NOT TO SCALE



07 C-502 — TEMPORARY DRAW-DOWN DEVICE SEDIMENT BASIN 'B'

NOT TO SCALE

STATE OF MARYLAND
TREVOR M. FREDERICK
49808
PROFESSIONAL ENGINEER
08/18/2025

Professional Certification:
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional under the laws of the State of: MARYLAND License # 49808
Expiration Date: 08-24-2026

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15 EAST MAIN STREET NEW BLOOMFIELD, PA 17068 717-582-8844

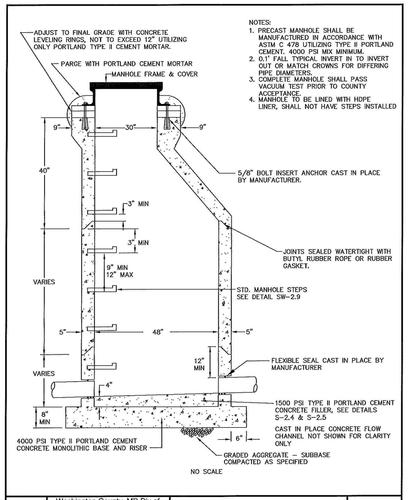
305 SOUTH HANOVER STREET CARLISLE, PA 17013 717-249-8411

11142 WILLIAMSPORT PIKE GREENCASTLE, PA 17225 717-597-3667

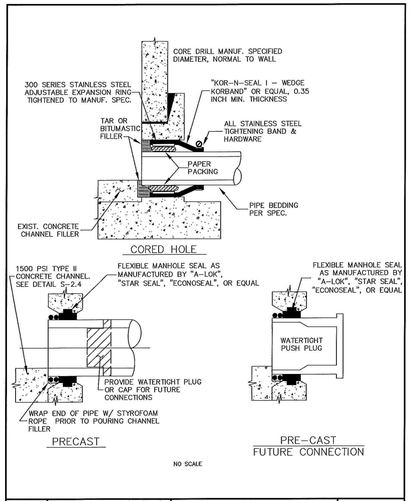
128 SOUTH POTOMAC STREET HAGERSTOWN, MD 21740 ARTP 20666

FSA
FREDERICK, SEIBERT & ASSOCIATES, INC.
CIVIL ENGINEERS • SURVEYORS • LANDSCAPE ARCHITECTS • LAND PLANNERS

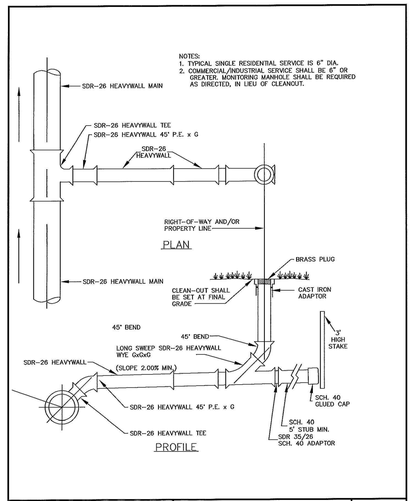
MARK	DESCRIPTION:	DATE:
	REVISED PER AGENCY COMMENTS	04.18.2023
	REVISED PER AGENCY COMMENTS	05.31.2024
	REVISED PER CLIENT REQUEST	09.27.2025
	REVISED PER AGENCY COMMENTS	09.18.2025



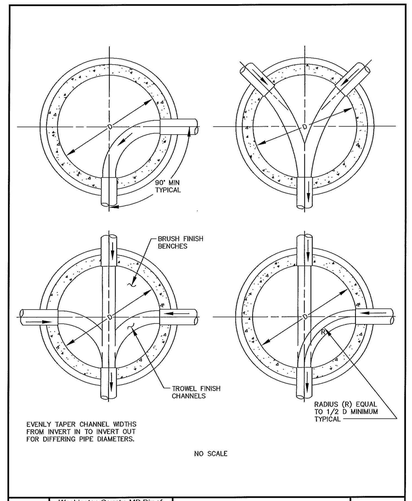
REVISED	Washington County, MD Div.of Environmental Management	Standard Through Manhole Precast Base	Detail
REVISED	Approved: Julie A. Pippel		S-2.1
APPROVED	Director of Environmental Management		



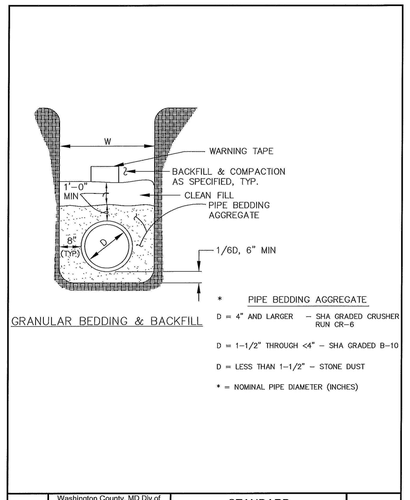
REVISED	Washington County, MD Div.of Environmental Management	Manhole Pipe Connections	Detail
REVISED	Approved: Julie A. Pippel		SW-2.10
APPROVED	Director of Environmental Management		



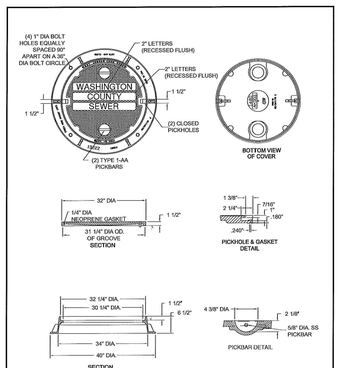
REVISED	Washington County, MD Div.of Environmental Management	Conventional Gravity Sewer Service Lateral SDR-26 Heavywall Sewer Main	Detail
REVISED	Approved: Julie A. Pippel		S-3.1
APPROVED	Director of Environmental Management		



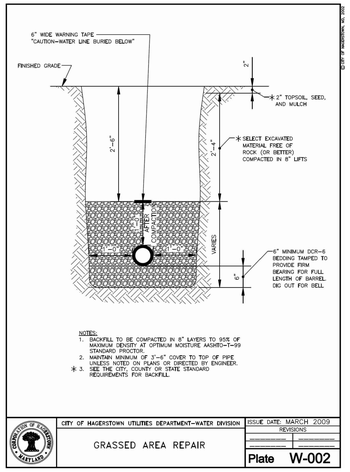
REVISED	Washington County, MD Div.of Environmental Management	Plans of Flow Channels (Typical)	Detail
REVISED	Approved: Julie A. Pippel		S-2.5
APPROVED	Director of Environmental Management		



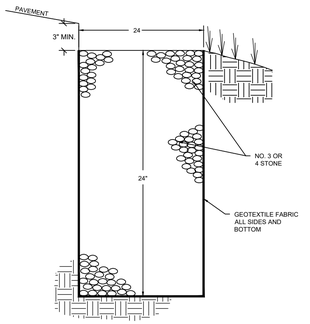
REVISED	Washington County, MD Div.of Environmental Management	STANDARD TRENCH WIDTH & STONE BEDDING	Detail
REVISED	Approved: Julie A. Pippel		SW-1.1
APPROVED	Director of Environmental Management		



	Washington County, MD Div.of Environmental Management	Standard Manhole Frame & Cover	Detail
REVISED			
REVISED	Approved: Julie A. Pippel		SW-2.6
APPROVED	Director of Environmental Management		



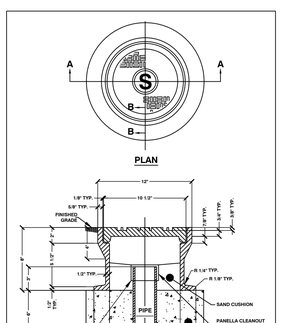
	CITY OF HAGERSTOWN UTILITIES DEPARTMENT–WATER DIVISION	ISSUE DATE: MARCH 2009 REVISIONS	
	GRASSED AREA REPAIR		Plate W-002



01 C-503

STONE TRENCH

NOT TO SCALE



TRAFFIC BEARING CLEANOUT COVER ASSEMBLY

02 C-503

SEWER HOUSE CONNECTION

NOT TO SCALE

WASHINGTON COUNTY DEPARTMENT OF WATER QUALITY

This approval is for general conformance with the County's requirements for design and layout of proposed sewer and/or water system improvements or extensions. All sewer and/or water system improvements or extensions shall be constructed in strict accordance with the County's latest addition of the Standard Specifications for Construction of Sanitary Sewers and/or Water Lines. This approval does not guarantee availability of sewer and/or water service. Sewer and/or water service availability is subject to conformance with all rules, policies and regulations established by the County and in effect at the time application for service is made, and/or the availability of allocation remaining in other jurisdictions' facilities that may be granted to the County. This approval shall be valid for a period of TWO years.

SIGNATURE **DATE**

Utility Notes:

U.1. All fittings, bends, and appurtenances shall be installed with proper and required concrete buttresses. All dead end services shall be properly capped and buttressed..
U.2. All underground water lines are to be installed with 3' - 6" of cover below finished grade.
Department of the Environment standards and specifications.
1. All sewer lines to be PVC-SDR-26.
2. All bedding and embedment material and compaction shall meet Water specifications.
U.3. The owner/developer or his engineer is required to supply the Water Division with one (1) sets of mylars and three (3) sets of prints approved and signed by the Water & Sewer Department Manager after final approval and prior to the start of construction.
U.4. The owner/developer or his engineer is required to supply the Water & Sewer Department with acceptable, reproducible "as-builts" prior to final acceptance and dedication of the proposed sanitary sewer lines. Prints of "as-builts" are a requirement of the Department of the Environment.
U.5. The contractor shall verify the location and elevation of existing utilities before starting construction.
U.6. The Contractor shall supply all bends, fittings and buttresses as required to achieve the horizontal and vertical alignments as shown on the plans. Bends and fittings may not be shown on the plan and profile but are to be included in the Contractor's cost and their exact location is at the option of the Contractor to achieve the horizontal layout shown hereon.
U.7. Contractor to verify with utility companies that proposed sediment erosion control measures are located so as to avoid conflicts with their proposed utility installation before placement of sediment erosion control measures.
U.8. Tracer wire to be installed with all 3" PVC waterline.
U.9. All sewer to be constructed to current plumbing code.

STATE OF MARYLAND
TREVOR M. FREDERICK
49606
PROFESSIONAL ENGINEER
08/18/2025

Professional Certification:
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional under the laws of the State of: MARYLAND License #: 49606
Expiration Date: 08-24-2026

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11142 RUSHMORE DRIVE GREENCASTLE, PA 17225 717-597-1657
128 SOUTH POTOMAC STREET HAGERSTOWN, MD 21740 240-420-1666

MARK	DESCRIPTION:	DATE:
	REVISED PER AGENCY COMMENTS	04.08.2022
	REVISED PER AGENCY COMMENTS	05.21.2024
	REVISED PER AGENCY COMMENTS	01.20.2025
	REVISED PER AGENCY COMMENTS	08.18.2025

TAYLOR FARM LOT 3

SITUATE ALONG THE SOUTH SIDE OF WRIGHT ROAD AND WEST OF HOPEWELL ROAD
WILLIAMSPORT
WASHINGTON COUNTY, MARYLAND

SHAOOL
1741 DUAL HIGHWAY, SUITE B
HAGERSTOWN, MARYLAND 21740

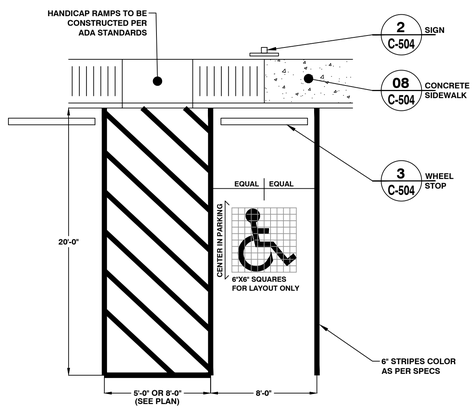
PROJECT NO.: 4564.3
DWN BY: ABRAM MYERS
DATE: 01.10.2023
PROJECT MANAGER: T. FREDERICK
EMAIL: TFREDERICK@FSA-INC.COM
TAX MAP - GRID - PARCEL: 0048 - 0021 - 0057
SCALE: N.T.S.
SHEET TITLE:

SEWER DETAILS & NOTES

C-503
SHEET 15 OF 19

SP-23-003

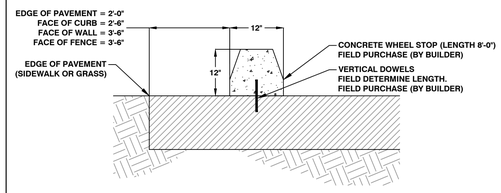
P:\SHARED FILES\PROJECTS\4500\4564.3 LOT 3 WARE\PLANS\CONSTRUCTION\SITEPLAN\4564.3 NOTES.DWG 2025-08-18



HANDICAP PARKING

1 C-504

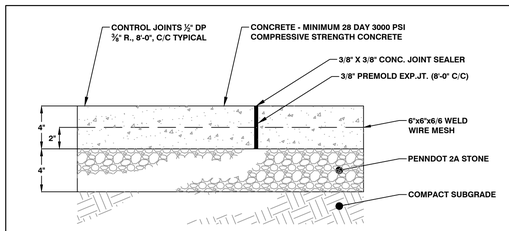
NOT TO SCALE



WHEEL STOP - CONCRETE (TRUCK)

04 C-504

NOT TO SCALE



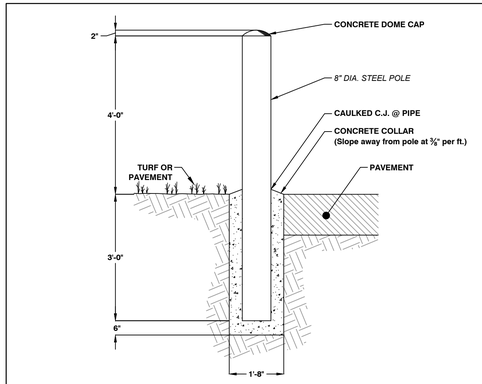
SECTION

NOTES:
1. CLASS P-I AIR ENTRAINED CONCRETE
2. SIDEWALK TO HAVE 3/8" CONTRACTION JOINTS SCORED AT 5'-0" INTERVALS.
3. CONSTRUCT 3/8" EXPANSION JOINTS SPACED EVERY 20' AND BETWEEN CURB AND SIDEWALK WHERE ADJACENT.
4. SIDEWALK TO BE BRUSH FINISHED

SIDEWALK - CONCRETE

08 C-504

NOT TO SCALE



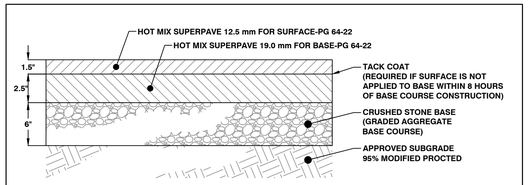
SECTION

NOTES:
1. CONTRACTOR TO PAINT BOLLARDS ACCORDING TO THE OWNER / ARCHITECT SPEC.

8" CONCRETE FILLED BOLLARD

12 C-504

NOT TO SCALE



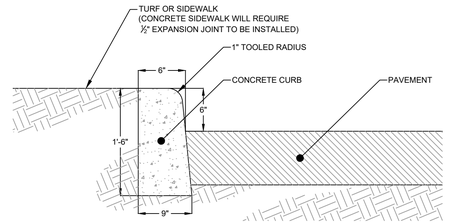
SECTION

NOTES:
The Asphalt Binder shall conform to AASHTO MP1-93 Table 1, Standard Specification for Performance Graded Asphalt Binder. Superpave mix designs shall be in conformance with AASHTO PP28-95, Standard Practice for Superpave Volumetric Design for HMA. The Performance Grading shall be achieved by the use of Neat Asphalt with polymer modification when needed.

PAVEMENT - LIGHT DUTY

05 C-504

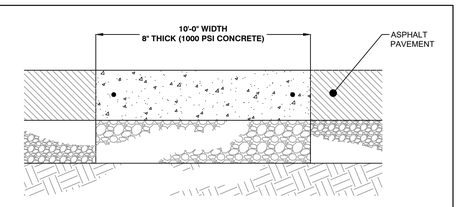
NOT TO SCALE



CURB - CONCRETE - 6"

09 C-504

NOT TO SCALE

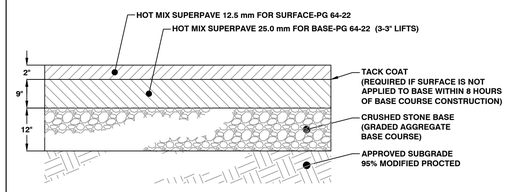


SECTION

PAVEMENT - CONCRETE DOLLY PAD

13 C-504

NOT TO SCALE



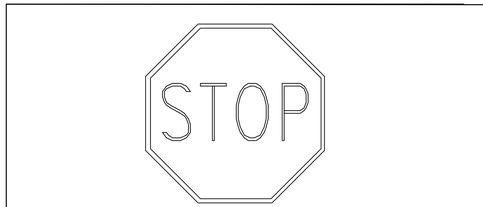
SECTION

NOTES:
The Asphalt Binder shall conform to AASHTO MP1-93 Table 1, Standard Specification for Performance Graded Asphalt Binder. Superpave mix designs shall be in conformance with AASHTO PP28-95, Standard Practice for Superpave Volumetric Design for HMA. The Performance Grading shall be achieved by the use of Neat Asphalt with polymer modification when needed.

PAVEMENT - HEAVY DUTY

06 C-504

NOT TO SCALE

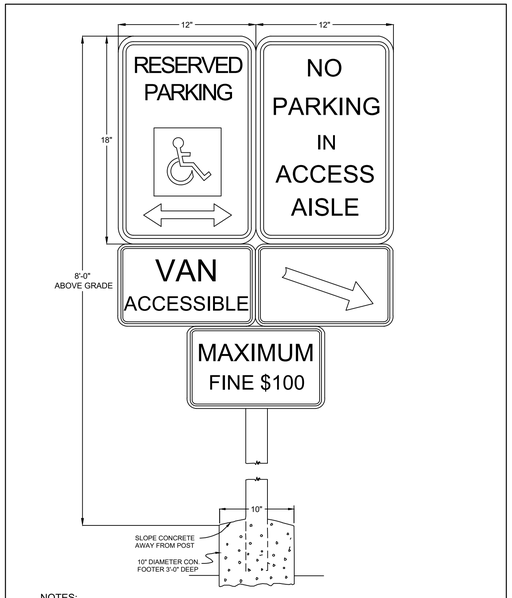


R1-1
(30"x30")

STOP SIGN DETAIL

10 C-504

NOT TO SCALE

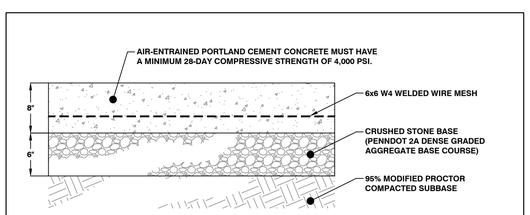


NOTES:
Use appropriate arrow plate.
Colors: Background (white), Text & Boarder (green), Symbol (white on a blue background).
Reference state of Maryland standard highway sign booklet.
Department of Transportation P.O. Box 717-707 N. Calbert St. Baltimore, Maryland 21203

HANDICAPPED - SIGNAGE - MD

02 C-504

NOT TO SCALE



SECTION

NOTES:
Geotechnical Engineer shall specify location of expansion and control joints. Detail of expansion and control joints to be specified by site Geotechnical Engineer.

PAVEMENT - CONCRETE

07 C-504

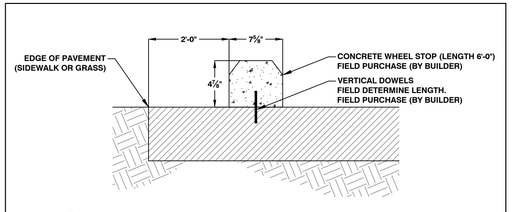
NOT TO SCALE

- Sign material and lettering shall be engineering grade/reflective
- Graphics and border shall be RED on WHITE background
- Font shall be Highwat-Style B or C indicated
- Sign shall be installed 7 ft above grade
- Arrows on the ends should point in only one direction forward the fire lane. Signage within the fire lane should show arrows pointing in both directions.
- Signs shall be placed no greater than 100' spacing

FIRE LANE SIGN

11 C-504

NOT TO SCALE



WHEEL STOP - CONCRETE

03 C-504

NOT TO SCALE

P:\SHARED FOLDERS\PROJECTS\4400\4564.3 LOT 3 WARE\PLANS\DESIGN\CONSTRUCTION DRAWINGS\4.3 x 11 CONSTRUCTION DETAILS & NOTES.DWG - 2025-08-18

STATE OF MARYLAND
TREVOR M. FREDERICK
49806
PROFESSIONAL ENGINEER
08/18/2025

Professional Certification:
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional under the laws of the State of: MARYLAND License #: 49806
Expiration Date: 08-24-2026

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555 SOUTH HANOVER STREET CARLISLE, PA 17013 717-249-8411
11142 RUSSELLMORTH PKWY GREENCASTLE, PA 17225 717-597-1807
128 SOUTH POTOMAC STREET HAGERSTOWN, MD 21740 240-707-8666

MARK	DESCRIPTION:	DATE:
	REVISED PER AGENCY COMMENTS	04.28.2003
	REVISED PER AGENCY COMMENTS	09.21.2004
	REVISED PER CLIENT REQUEST	05.27.2005
	REVISED PER AGENCY COMMENTS	09.18.2025

TAYLOR FARM LOT 3

SITUATE ALONG THE SOUTH SIDE OF WRIGHT ROAD AND WEST OF HOPEWELL ROAD
WILLIAMSPORT
WASHINGTON COUNTY, MARYLAND

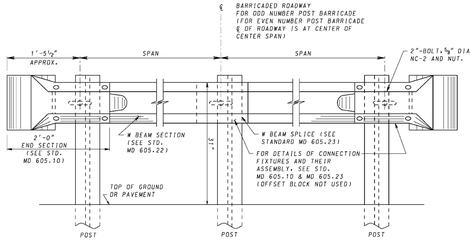
SHAOOL
1741 DUAL HIGHWAY, SUITE B
HAGERSTOWN, MARYLAND 21740

PROJECT NO.
4564.3
DWN BY: ABRAM MYERS
DATE: 01.10.2023
PROJECT MANAGER: T. FREDERICK
EMAIL: TFREDERICK@FSA-INC.COM
TAX MAP - GRID - PARCEL:
0048 - 0021 - 0057
SCALE
N.T.S.
SHEET TITLE

SITE DETAILS

C-504
SHEET 16 OF 19

SP-23-003



MINIMUM NUMBER OF SPANS = 2
MINIMUM NUMBER OF POSTS = 3
MAXIMUM SPAN: 12'-6"
LENGTH OF BARRICADE NOTED ON PLANS: CENTER TO CENTER OF END POSTS
ALL SPANS TO BE EQUAL LENGTH.
NO. OF POSTS TO BE NOTED ON PLANS.
ALL POSTS W6x8.5 (OR W6x9), 6'-0" LONG (SEE STD. MD 605.10)

NOTES

1. TRAFFIC BARRIER W BEAM BARRICADE SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE PER LINEAR FOOT. THE CONTRACT PRICE BID SHALL INCLUDE THE FURNISHING AND INSTALLATION OF ALL POSTS, W BEAM, POST AND SPLICE BOLTS WITH NUTS, END SECTIONS, GALVANIZING, THE COST OF ALL EXCAVATION, BACKFILLING AND TAMPING INCIDENTAL TO SETTING THE POSTS, OR THE COST OF DRIVING THE POSTS, THE COST OF THE REMOVAL OF EXISTING PAVEMENT WHERE NECESSARY, AS WELL AS THE COST OF ALL LABOR, APPROVED TOOLS AND EQUIPMENT INCIDENTAL TO FURNISHING AND INSTALLING THE BARRICADE AT LOCATIONS NOTED ON THE PLANS OR WHERE DIRECTED BY THE ENGINEER. FOR MATERIAL, SEE LATEST MDOT SHA SPECIFICATIONS FOR TRAFFIC BARRIER W BEAM.

SPECIFICATION	CATEGORY CODE ITEMS
605	

APPROVED — DIRECTOR - OFFICE OF HIGHWAY DEVELOPMENT

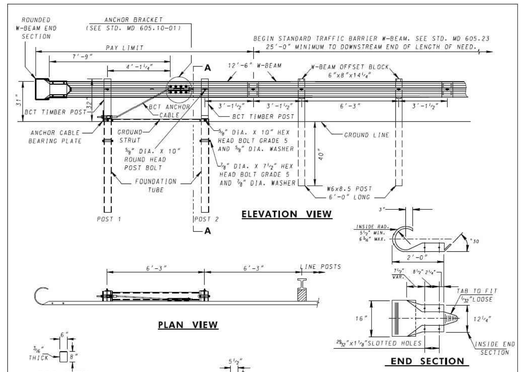
APPROVAL SHA REVISIONS	APPROVAL FEDERAL HIGHWAY ADMINISTRATION
APPROVAL 3-31-41	APPROVAL 7-7-72
REVISED 8-16-12	REVISED 8-13-13
REVISED 12-21-17	REVISED 12-20-17
REVISED 3-31-20	REVISED 3-30-20

MDOT MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES

TRAFFIC BARRIER W BEAM BARRICADE

STANDARD NO. MD 605.27



NOTES

1. ALL W-BEAM AND HARDWARE COMPONENTS ACCORDING TO AASHTO SPEC. M 180.
2. FOUNDATION TUBE SHALL BE MANUFACTURED USING ASTM A5000 STEEL AND SHALL CONFORM TO ASTM A500 GRADE B MATERIAL.
3. ONE-SIDED DOWNSTREAM END TREATMENT (TYPE K) NOT TO BE USED WHERE THERE IS OPPOSING TRAFFIC WITHIN 30 FT. OF THE END TREATMENT.

SPECIFICATION	CATEGORY CODE ITEMS
605	

APPROVED — DIRECTOR - OFFICE OF HIGHWAY DEVELOPMENT

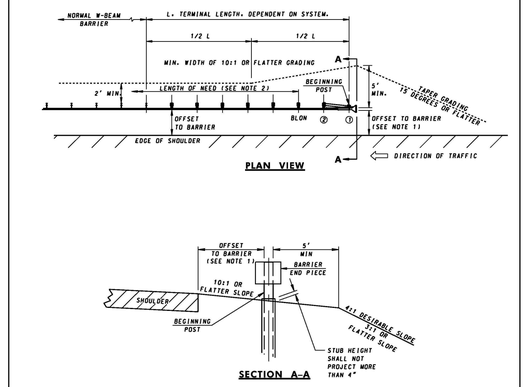
APPROVAL SHA REVISIONS	APPROVAL FEDERAL HIGHWAY ADMINISTRATION
APPROVAL 1-26-70	APPROVAL 11-5-70
REVISED 4-17-06	REVISED 4-5-06
REVISED 1-9-20	REVISED 12-23-19
REVISED 3-31-20	REVISED 3-30-20

MDOT MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES

TRAFFIC BARRIER W-BEAM ONE-SIDED DOWNSTREAM END TREATMENT (TYPE K)

STANDARD NO. MD 605.10



NOTES

1. WHEN THE TRAFFIC BARRIER POST IS PLACED LESS THAN 4' FROM THE EDGE OF SHOULDER/PAVEMENT, THE END TREATMENT SHALL BE FLARED AT A RATE OF 25:1 OVER THE FULL LENGTH AND ON A STRAIGHT LINE.
2. AN EFFECTIVE LON OF 34' SHALL BE INCLUDED IN THE END TREATMENT PAYMENT.
3. SYSTEM MUST BE INSTALLED AT A HEIGHT OF 31".
4. FOR DELINEATION, SEE STANDARD NO. 605.14.
5. THIS SCHEMATIC DRAWING IS FOR ILLUSTRATIVE PURPOSES ONLY. SEE MDOT SHA QPL FOR APPROVED SYSTEMS THAT ARE 2016 NASH COMPLIANT.

SPECIFICATION	CATEGORY CODE ITEMS
606	

APPROVED — DIRECTOR - OFFICE OF HIGHWAY DEVELOPMENT

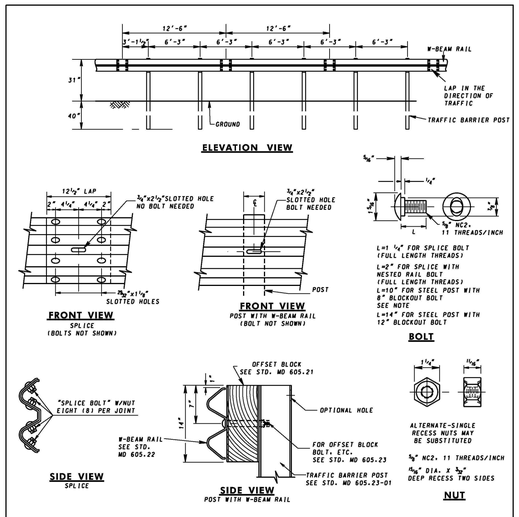
APPROVAL SHA REVISIONS	APPROVAL FEDERAL HIGHWAY ADMINISTRATION
APPROVAL 11-10-99	APPROVAL 7-2-99
REVISED 1-10-17	REVISED 12-1-16
REVISED 9-20-19	REVISED 8-15-19
REVISED 3-16-22	REVISED 2-24-22

MDOT MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES

TRAFFIC BARRIER W-BEAM ONE-SIDED END TREATMENT (TYPE C)

STANDARD NO. MD 605.03



NOTES

1. FOR COMPOSITE OFFSET BLOCKS SEE NOTE 3 ON STD. MD 605.21.
2. THE CONTRACTOR HAS THE OPTION TO USE SHORTER BOLTS WITH A MINIMUM OF ½" PROTRUSION BEYOND NUT.
3. WITH ENGINEER'S APPROVAL, ONE POST CAN BE OMITTED WITHOUT OTHER CHANGES. A MINIMUM OF EIGHT POSTS MUST BE INSTALLED BETWEEN OMITTED POSTS.

SPECIFICATION	CATEGORY CODE ITEMS
605	

APPROVED — DIRECTOR - OFFICE OF HIGHWAY DEVELOPMENT

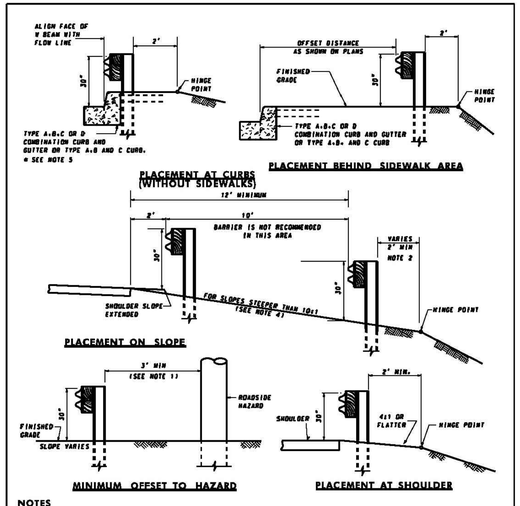
APPROVAL SHA REVISIONS	APPROVAL FEDERAL HIGHWAY ADMINISTRATION
APPROVAL 5-6-76	APPROVAL 9-30-76
REVISED 1-9-20	REVISED 12-23-19
REVISED 2-25-20	REVISED 2-24-20
REVISED 3-16-22	REVISED 2-24-22

MDOT MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES

TRAFFIC BARRIER W-BEAM, W-BEAM SPLICES AND OFFSET BLOCK

STANDARD NO. MD 605.23



NOTES

1. THE MINIMUM DIMENSION SHOWN CAN BE REDUCED BY STIFFENING THE TRAFFIC BARRIER SYSTEM.
2. 8'-0" LONG POSTS ARE TO BE USED WHEN THE DISTANCE FROM THE BACK OF THE W BEAM POST TO THE HINGE POINT IS LESS THAN 2'.
3. WHEN THE FACE OF THE TRAFFIC BARRIER IS MORE THAN 2' FROM THE SHOULDER EDGE THE HEIGHT MEASURED FROM THE EXISTING GROUND SHALL BE 30".
4. WHEN SLOPE IS STEEPER THAN 6:1, THE FACE OF THE BARRIER MUST BE ALIGNED WITH THE EDGE OF SHOULDER.
5. STIFFEN THE TRAFFIC BARRIER W BEAM WHEN TYPE 'A' OR 'B' COMBINATION CURB/GUTTER OR TYPE 'A' OR 'B' CURB IS USED AT POSTED SPEEDS 45 MPH OR GREATER.

SPECIFICATION	CATEGORY CODE ITEMS

APPROVED — DIRECTOR – OFFICE OF HIGHWAY DEVELOPMENT

APPROVAL • SHA REVISIONS	APPROVAL • FEDERAL HIGHWAY ADMINISTRATION
APPROVAL 6-4-84	APPROVAL 8-1-94
REVISED 11-08-06	REVISED 10-25-06
REVISED 11-18-19	REVISED 11-17-10
REVISED	REVISED

Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES

TRAFFIC BARRIER W BEAM PLACEMENT DETAILS

STANDARD NO. MD 605.31

STATE OF MARYLAND
TREVOR M. FREDERICK
49806
PROFESSIONAL ENGINEER
08/18/2025

Professional Certification:
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional under the laws of the State of: MARYLAND License #: 49806
Expiration Date: 08-24-2026

FSA
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CIVIL ENGINEERS • SURVEYORS • LANDSCAPE ARCHITECTS • LAND PLANNERS
fsa-inc.com
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555 SOUTH HANOVER STREET CARLISLE, PA 17013 717-249-8411
11142 RUSSELLMORE PINE GREENCASTLE, PA 17225 717-597-3667
128 SOUTH POTOMAC STREET HAGERSTOWN, MD 21740 240-713-3666

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MARK	DESCRIPTION:	DATE:
	REVISED PER AGENCY COMMENTS	04.18.2003
	REVISED PER AGENCY COMMENTS	05.21.2004
	REVISED PER CLIENT REQUEST	05.27.2005
	REVISED PER AGENCY COMMENTS	09.18.2025

TAYLOR FARM LOT 3
SITUATE ALONG THE SOUTH SIDE OF WRIGHT ROAD AND WEST OF HOPEWELL ROAD
WILLIAMSPORT
WASHINGTON COUNTY, MARYLAND
SHADDL
1741 DUAL HIGHWAY, SUITE B
HAGERSTOWN, MARYLAND 21740

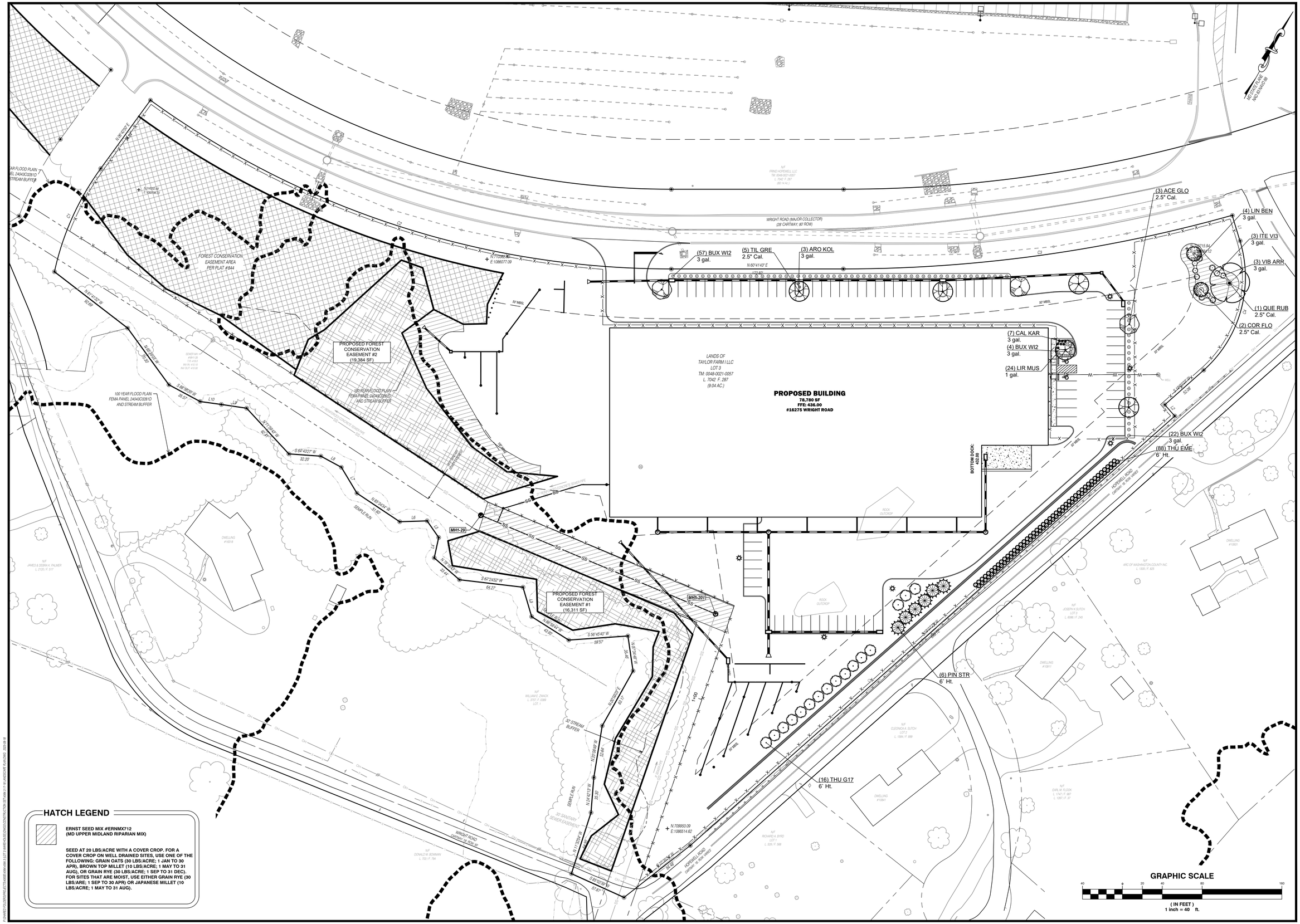
PROJECT NO. 4564.3
DWN BY ABRAM MYERS
DATE 01.10.2023
PROJECT MANAGER T. FREDERICK
EMAIL TFREDERICK@FSA-INC.COM
TAX MAP - GRID - PARCEL 0048 - 0021 - 0057
SCALE N.T.S.
SHEET TITLE

SITE DETAILS

C-505
SHEET 17 OF 19

SP-23-003

P:\SHARED FILES\PROJECTS\4500\4564\04564.3 SITE\WORKFILES\PLOTTING\CONSTRUCTION DETAILS & NOTES.DWG 2025-08-18



HATCH LEGEND

ERNST SEED MIX #ERNMX712
(MD UPPER MIDLAND RIPARIAN MIX)

SEED AT 20 LBS/ACRE WITH A COVER CROP. FOR A COVER CROP ON WELL DRAINED SITES, USE ONE OF THE FOLLOWING: GRAIN OATS (30 LBS/ACRE; 1 JAN TO 30 APR), BROWN TOP MILLET (10 LBS/ACRE; 1 MAY TO 31 AUG), OR GRAIN RYE (30 LBS/ACRE; 1 SEP TO 31 DEC). FOR SITES THAT ARE MOIST, USE EITHER GRAIN RYE (30 LBS/ARE; 1 SEP TO 30 APR) OR JAPANESE MILLET (10 LBS/ACRE; 1 MAY TO 31 AUG).

STATE OF MARYLAND
Brett Whorton
41631
LANDSCAPE ARCHITECT
07/11/2023

Professional Certification:
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional under the laws of the State of: MARYLAND
License #: 41631
Expiration Date: 10-19-2025

FSA
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CIVIL ENGINEERS • SURVEYORS • LANDSCAPE ARCHITECTS • LAND PLANNERS
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305 SOUTH HANOVER STREET, CARLISLE, PA 17013, 717-516-9011
11142 RUSSELL BRADSHAW DRIVE, GREENCASTLE, PA 17225, 717-597-3697
126 SOUTH POTOMAC STREET, HAGERSTOWN, MD 21740, 240-716-2666

MARK	DESCRIPTION:	DATE:
	REVISED PER AGENCY COMMENTS	05.21.2024
	REVISED PER CLIENT REQUEST	09.27.2023
	REVISED PER AGENCY COMMENTS	09.18.2023

TAYLOR FARM LOT 3

SITUATE ALONG THE SOUTH SIDE OF WRIGHT ROAD AND WEST OF HOPEWELL ROAD

WILLIAMSPORT

WASHINGTON COUNTY, MARYLAND

SHADD,
1741 DUAL HIGHWAY, SUITE B
HAGERSTOWN, MARYLAND 21740

PROJECT NO.	4564.3
DWN BY	ABRAM MYERS
DATE	01.10.2023
PROJECT MANAGER	T. FREDERICK
EMAIL	TFREDERICK@FSA-INC.COM
TAX MAP - GRID - PARCEL	0048 - 0021 - 0057
SCALE	1" = 40'

SHEET TITLE

LANDSCAPE PLAN

L-101
SHEET 18 OF 19

SP-23-003

PLANT SCHEDULE

SYMBOL	CODE	BOTANICAL / COMMON NAME	SIZE	CONTAINER	QTY	DETAIL
TREES						
	ACE GLO	Acer rubrum `October Glory` TM / October Glory Maple	2.5" Cal.	B&B	3	4/L-501
	COR FLO	Cornus florida / Eastern Dogwood	2.5" Cal.	B&B	2	4/L-501
	PIN STR	Pinus strobus / White Pine	6` Ht.	B&B	6	5/L-501
	QUE RUB	Quercus rubra / Red Oak	2.5" Cal.	B&B	1	4/L-501
	THU EME	Thuja occidentalis `Emerald` / Emerald Arborvitae	6` Ht.	B&B	88	5/L-501
	THU G17	Thuja occidentalis `Green Giant` / Green Giant Arborvitae	6` Ht.	B&B	16	5/L-501
	TIL GRE	Tilia cordata `Greenspire` / Greenspire Littleleaf Linden	2.5" Cal.	B&B	5	4/L-501
SHRUBS						
	ARO KOL	Aronia melanocarpa Low Scape Mound / Low Scape Mound Chokeberry	3 gal.		3	2/L-501
	BUX WI2	Buxus microphylla japonica `Winter Gem` / Winter Gem Boxwood	3 gal.		83	2/L-501
	CAL KAR	Calamagrostis x acutiflora 'Karl Foerster' / Karl Foerster Feather Reed Grass	3 gal.		7	2/L-501
	ITE VI3	Itea virginica `Virginia` / Virginia Sweetspire	3 gal.		3	2/L-501
	LIN BEN	Lindera benzoin / Spicebush	3 gal.		4	2/L-501
	LIR MUS	Liriope muscari / Lily Turf	1 gal.		24	2/L-501
	VIB ARR	Viburnum dentatum / Viburnum	3 gal.		3	2/L-501

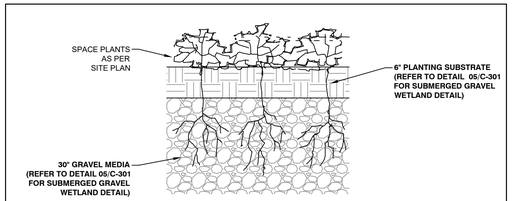
LANDSCAPE TABULATIONS		
AREA REQUIREMENT	LANDSCAPE REQUIRED	LANDSCAPE PROPOSED
PARKING AREA- 34,650 SF	34,650 * 0.05= 1,783 SF REQUIRED 1,783 / 300= 6 TREES REQUIRED	3,500 SF (10.1%) 8 SHADE TREES
IG DISTRICT- 5% OF THE SITE TO BE LANDSCAPED (9.04 ACRES)	9.04 * 0.05= 0.452 ACRES (19,689 SF) REQUIRED TO BE LANDSCAPED	(5.5%) 0.5 ACRES OR 22,000 SF CONSISTING OF TREES, SHRUBS AND BMP PLANTING AREAS

GENERAL LANDSCAPE NOTES:

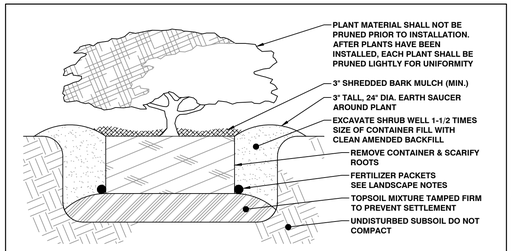
1. Landscape contractor is to call Miss Utility and have all underground utilities marked prior to any digging or planting.
2. Landscape Contractor shall install all plant material in a timely fashion.
3. Landscape Contractor shall be responsible for all watering, weeding, repairs and replacements prior to final acceptance.
4. NO Substitutions of plant material without written permission of FSA. Planting plans have been proposed with plant sizes, types, and locations as important design elements.
5. Plants shall be in accordance with the current issue of American Standards for Nursery Stock published by the American Association of Nurserymen.
6. All plants shall be watered thoroughly during installation and prior to final acceptance.
7. All bark mulched areas shall be first covered with Typar Weed Barrier or approved equal.
8. All planting bed areas on the site shall be mulched with a hardwood bark mulch at a depth of approx. 3", unless noted otherwise.
9. Plant material shall be inspected yearly in order to remove and replace dead, diseased vegetation.
10. Warranted plant material that is 25% dead or more shall be considered dead and shall be replaced at no charge.
11. All plant material shall be warranted for two years. 60 days prior to the end of the warranted period, the Engineering Department shall perform an inspection. Of which there should be an 90% survival rate of all plant material. All surviving plant material shall be found in a healthy condition. The warranty shall commune on the date of initial acceptance by the owner.
12. The landscape contractor shall conduct a final inspection with the owner or owner's representative at the end of the warranty period.
13. Fertilizer Packets are to be Nutri-Pak 16-8-8 or approved equal per manufacturer's recommendations.
14. Landscape is recommended to be installed during the two growing seasons. Spring: April 15-June 15, Fall: September 1-November 1.

MAINTENANCE:

1. All trash and debris should be removed from the top of the wetland area as necessary.
2. Areas devoid of mulch shall be re-mulched on an annual basis.

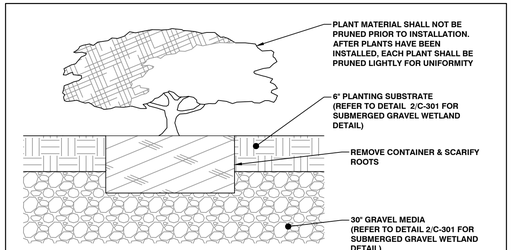


01 L-501 **PLUG PLANTING DETAIL**
NOT TO SCALE



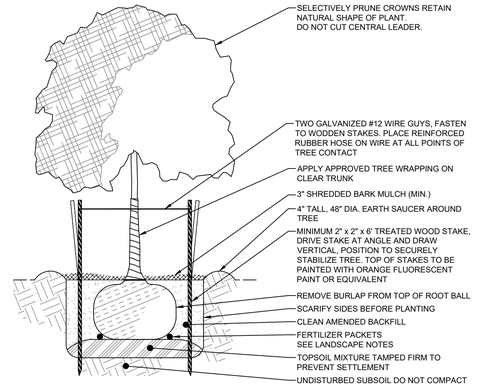
SECTION

02 L-501 **CONTAINER PLANTING - SHRUB**
NOT TO SCALE



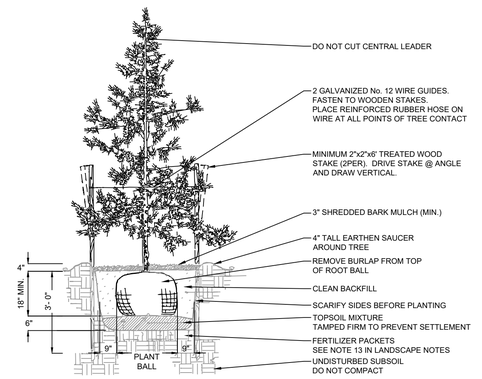
SECTION

03 L-501 **GRAVEL WETLAND - SHRUB**
NOT TO SCALE



SECTION

04 L-501 **PLANTING - TREE (Up to 2-1/2" Cal.)**
NOT TO SCALE



05 L-501 **EVERGREEN TREE PLANTING**
NOT TO SCALE

STATE OF MARYLAND — Brett Whorton — 41613 — PROFESSIONAL ENGINEER

Professional Certification:
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional under the laws of the State of: MARYLAND
License #: 41613
Expiration Date: 10-19-2026

FSA
FREDERICK, SEIBERT & ASSOCIATES, INC.
CIVIL ENGINEERS • SURVEYORS • LANDSCAPE ARCHITECTS • LAND PLANNERS
fsa-inc.com
15 EAST MAIN STREET NEW BLOOMFIELD, PA 17068 717-582-2644
305 SOUTH HANOVER STREET CARLISLE, PA 17013 717-249-9411
11142 RUSSELLBROOK DRIVE GREENCASTLE, PA 17225 717-597-3667
126 SOUTH POTOMAC STREET HAGERSTOWN, MD 21740 240-707-8666

© 2024

MARK	DESCRIPTION:	DATE:
	REVISED PER AGENCY COMMENTS	05.21.2024
	REVISED PER CLIENT REQUEST	09.27.2024
	REVISED PER AGENCY COMMENTS	06.18.2025

TAYLOR FARM LOT 3

SITUATE ALONG THE SOUTH SIDE OF WRIGHT ROAD AND WEST OF HOPEWELL ROAD
WILLIAMSPORT
WASHINGTON COUNTY, MARYLAND

SHADDL
1741 DUAL HIGHWAY, SUITE B
HAGERSTOWN, MARYLAND 21740

PROJECT NO.: 4564.3
DWN BY: ABRAM MYERS | DATE: 01.10.2023
PROJECT MANAGER: T. FREDERICK
EMAIL: TFREDERICK@FSA-INC.COM
TAX MAP - GRID - PARCEL: 0048 - 0021 - 0057
SCALE: N.T.S.

SHEET TITLE

LANDSCAPE PLAN DETAILS & NOTES

L-501
SHEET 19 OF 19

SP-23-003

P:\SHARED FOLDERS\PROJECTS\A2020\2020-4564.3 (LOT 3 WAREHOUSE)\DWGS\CONSTRUCTION SET\4564.3 01-10 LANDSCAPE PLAN.DWG - 2025-06-18

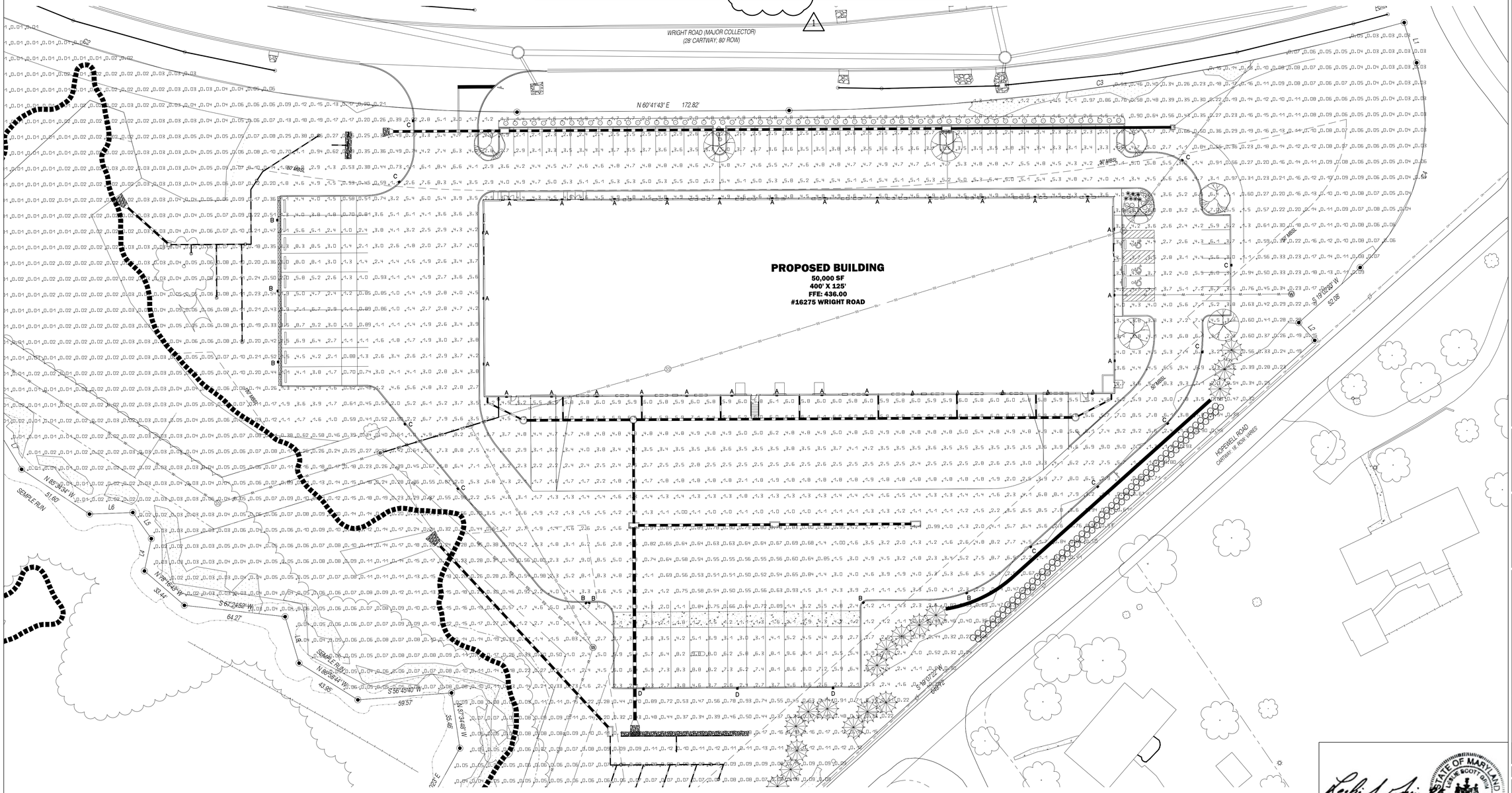
LUMINAIRE LIST									
INDEX	MANUFACTURER	ARTICLE NAME	ITEM NUMBER	FITTING	LUMINOUS FLUX	MAINTENANCE FACTOR	CONNECTED LOAD	MOUNTING HEIGHT	QUANTITY
A	EXO OUTDOOR LIGHTING	SWITCHABLE GLASS WALLPACK	WGH3-120-4K	1x	16555 lm	0.80	119.1 W	30'	32
B	EXO OUTDOOR LIGHTING	SLING MICROSTRIKE SITE LIGHT	ASL1-160L-135-4K7-4W-BC	1x B-70-CRI	10918 lm	0.80	133.3 W	20'	7
C	EXO OUTDOOR LIGHTING	SLING MICROSTRIKE LIGHT	ASL1-160L-135-4K7-3-BC	1x B-70-CRI	12245 lm	0.80	133.3 W	20'	10
D	EXO OUTDOOR LIGHTING	SLING MICROSTRIKE SITE LIGHT	ASL2-320L-235-4K7-4-BC	1x X-70-CRI	17848 lm	0.80	235 W	20'	3

#	NAME	PARAMETER	MIN	MAX	AVERAGE	MIN/AVERAGE	MIN/MAX
1	PROPERTY LINE CALCULATION	PERPENDICULAR ILLUMINANCE	0.001 fc	9.79 fc	1.36 fc	0.001	0.000
2	LOT CALCULATION	PERPENDICULAR ILLUMINANCE	0.15 fc	9.61 fc	3.07 fc	0.047	0.015

GENERAL DRAWING NOTES:

1) ALL LIGHTING SHALL BE DIRECTED SO AS TO AVOID GLARE AND LIGHT TRESPASS ON ADJACENT PROPERTIES AND ROADS.
2) HOUSE SIDE SHIELDS SHALL BE USED ON LIGHTS ADJACENT TO LOT BOUNDARIES AND STREET RIGHT-OF-WAY.

1



PHOTOMETRIC PLAN

SCALE: 1" = 30'-0"

1 REVISED PER PLAN REVIEW COMMENTS 11-1-2023

23-037

L.S. GRIM, INC.
Consulting Engineers
MAIN OFFICE
19922 JEFFERSON BLVD., HAGERSTOWN, MD 21742-4367
PHONE: 301.797.1702 FAX: 301.797.4831
PHONE TOLL FREE: 1-866-797-GRIM (4746)
DC METRO OFFICE
9711 WASHINGTONIAN BLVD., SUITE 550, GAITHERSBURG, MD 20878

©2023 L.S. GRIM, INC.& LESLIE S. GRIM, P.E.

TAYLOR FARM LOT 3
WRIGHT ROAD
WILLIAMSPORT, MD

PHOTOMETRIC PLAN

Professional Certification

I certify that these documents were prepared or approved by me, and that I am a duly licensed engineer under the laws of the State of Maryland
License Number: 14401
Expiration Date: 4/21/2023

LESLIE SCOTT GRIM, P.E.
CO PROF. ENG. NO. PE0050461
DC PROF. ENG. NO. PE901201
DE PROF. ENG. NO. 19513
GA PROF. ENG. NO. PE032582
HI PROF. ENG. NO. PE13943
MD PROF. ENG. NO. 14401
NC PROF. ENG. NO. 033364
NJ PROF. ENG. NO. 39497
NY PROF. ENG. NO. 075414
PA PROF. ENG. NO. PE032636E
VA PROF. ENG. NO. 023240
WV PROF. ENG. NO. 10764

REV.	DATE	COMMENT
1	05/26/2023	PLANNING COMMISSION SUBMITTAL
1	11/1/2023	REV. PER PLAN REVIEW COMMENTS

DRAWN BY: TMH

E-1.1
1 OF 2 SHEETS
DATE: NOV. 1, 2023

EXO
OUTDOOR LIGHTING

DATE: | LOCATION:

TYPE: | PROJECT:

CATALOG #:

WGH LED SERIES

SWITCHABLE – GLASS WALLPACK

tradeSELECT

FEATURES

- Three sizes: Small, Medium and Large
- 20–120 Watts
- Field switchable lumens in WGH1 (3000–7000 lumens)
- Field switchable lumens and LED color temperature in WGH2 and WGH3 (4000K, 4500K, & 5000K)
- Standard bronze finish
- Up to 150 lumens per watt
- Borosilicate glass refractor softens LED pixilation and provides uniform distribution

IP65

SPECIFICATIONS

CONSTRUCTION
- Die-cast Aluminum Frame holds and seals to housing with 2 stainless steel screws
- Built in button photocell with shorting cap on WGH2 and WGH3. Available with and with out photocell in WGH1
- Cast aluminum housing has three 1/2" conduit entries on top and sides
- All units have dark bronze matte textured powder coat finish (matches DBT finish)
- Operating Temp -40C to 40C

OPTICS
- High efficacies, up to 150 LPW
- Impact resistant borosilicate glass lens

INSTALLATION
- Door assembly hinges on side
- Leveling device contained inside the housing for ease of installation

ELECTRICAL
- Universal Voltage (120-277V)
- Dimmable drivers standard
- Built in 6kV surge protector
- WGH1 wattage includes 20, 30, 40, 50
- WGH2 wattage includes 30, 40, 50, 60, 70
- WGH3 wattage includes 80, 90, 100, 110, 120

CERTIFICATIONS
- Listed to UL1598 and CSA C22.2#250.0-24 for wet locations and 40°C ambient temperatures
- Wet listed
- Consortium (DLC) standard & premium qualifications, consult DLC website for more details: http://www.designlights.org/QPL
- IP65 rated housing

WARRANTY
- 5 year warranty

KEY DATA	
Lumen Range	2,959–17,142
Wattage Range	20–120
Efficacy Range (LPW)	139–152
Fixture Projected Life (Hours)	>60K

ORDERING GUIDE

	Housing	Catalog Number	Wattage	Voltage	Dist. Type	Delivered Lumens	LPW	CCT	Weight lbs. (kg)
	Small	WGH1-LS-4K	20-50W	120-277V	4	3,000-7,000	140-146	4000K	8.38 (3.8)
	Small	WGH1-LS-4K-PC	20-50W	120-277V	4	3,000-7,000	140-146	4000K	8.38 (3.8)
	Medium	WGH2-LSCS	30–70W	120-277V	4	4,600–10,000	140–150	4000K, 4500K, 5000K	10.80 (4.9)
	Large	WGH3-LSCS	80–120W	120-277V	4	9,800–17150	139–149	4000K, 4500K, 5000K	13.89 (6.3)

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EXO
OUTDOOR LIGHTING

DATE: | LOCATION:

TYPE: | PROJECT:

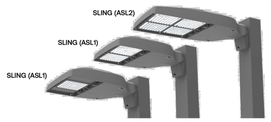
CATALOG #:

SLING Micro Strike

AREA/SITE/ROAD LIGHTER

FEATURES

- Compact sleek design with multiple LED configurations and simple installation
- The SLING includes a universal mounting block for easy pole installation or mast arm option for 2-3/8 ft OD roadway brackets
- Capable of replacing up to 1000w HID luminaires
- Micro Strike optical distributions of Type 2, 3, 4F, 4W or 5QW
- Tool-less entry option for easy installation and maintenance
- 1.5G rated for high vibration applications including bridges and overpasses



10-DAY QUICK SHIP PROGRAM

QS

SPECIFICATIONS

CONSTRUCTION
- Die-cast housing with hidden vertical heat fins that are optimal for heat dissipation while keeping a clean smooth outer surface
- Corrosion resistant, die-cast aluminum housing with powder coat paint finish
- Separate optical and electrical compartment for improved thermal management and optimum component operation
- TGIC thermoset polyester powder paint finish applied at nominal 2.5 mil thickness

OPTICS
- Entire optical aperture illuminates to create a larger luminous surface area resulting in a low glare appearance without sacrificing optical performance
- Premium engineered individual acrylic lenses deliver IES Type 2, 3, 4F, 4W and 5QW distributions
- Lens distributions are field rotatable (in 90° increments) or exchangeable for job site fine-tuning
- 3000K, 4000K, or 5000K (70 CRI) CCT
- 80, 160, or 320 midpower LEDs
- 3000K, 4000K or 5000K (70 CRI) CCT
- Zero uplight at 0 degrees of tilt
- Field rotatable optics

INSTALLATION
- Tool-less entry to wiring/driver compartment optional
- Arm mounting works with S2 drill pattern
- Fixture ships with slotted mounting block to accommodate wide range of drill patterns for easy retrofit opportunities
- Mast arm fitter accessory or option available for 2-3/8" OD brackets with vertical tilt of +3°, 0° or -3°

ELECTRICAL
- Universal 120-277 VAC or 347-480 VAC input voltage, 50/60 Hz
- Ambient operating temperature -40° C to 40° C
- Drivers have greater than 90% power factor and less than 20% THD
- LED drivers have output power over-voltage, over-current protection and short circuit protection with auto recovery
- Field replaceable surge protection device provides 20KA and 10KV protection meeting ANSI/IEEE C62.41.2 Category C High and Surge Location Category C3. Automatically takes fixture off-line for protection when device is consumed

CONTROLS
- Photo control, occupancy sensor and Zigbee wireless available for complete on/off and dimming control
- 7-pin ANSI C136.41-2013 photocontrol receptacle option available for twist lock photocontrols or wireless control modules (control accessories sold separately)
- Dimming Drivers are standard and dimming leads are extended out of the luminaire unless control options require connection to the dimming leads. Must specify if wiring leads are to be greater than the 6
- Please consult brand or sales representative when combining control and electrical options as some combinations may not operate as anticipated depending on your application

CERTIFICATIONS
- Listed to UL1598 and CSA C22.2#2500-24 for wet locations and 40°C ambient temperatures

CERTIFICATIONS (CONTINUED)
- DLC® (DesignLights Consortium Qualified), with some Premium Qualified configurations. Not all product variations on this page are DLC Qualified. Refer to http://www.designlights.org/ for the most up-to-date list.
- 1.5G rated for ANSI C136.31 high vibration applications
- IP65 optical assembly
- Meets IDA recommendations using 3K CCT configuration at 0 degrees of tilt
- This product qualifies as a "designated country construction material" per FAR 52.225-11 Buy American-Construction Materials under Trade Agreements effective 04/23/2020.

WARRANTY
- 5 Year warranty

KEY DATA	
Lumen Range	3,200–36,000
Wattage Range	25–255
Efficacy Range (LPW)	118–148
Weight lbs. (kg)	14.5–17.5 (6.6–8.0)

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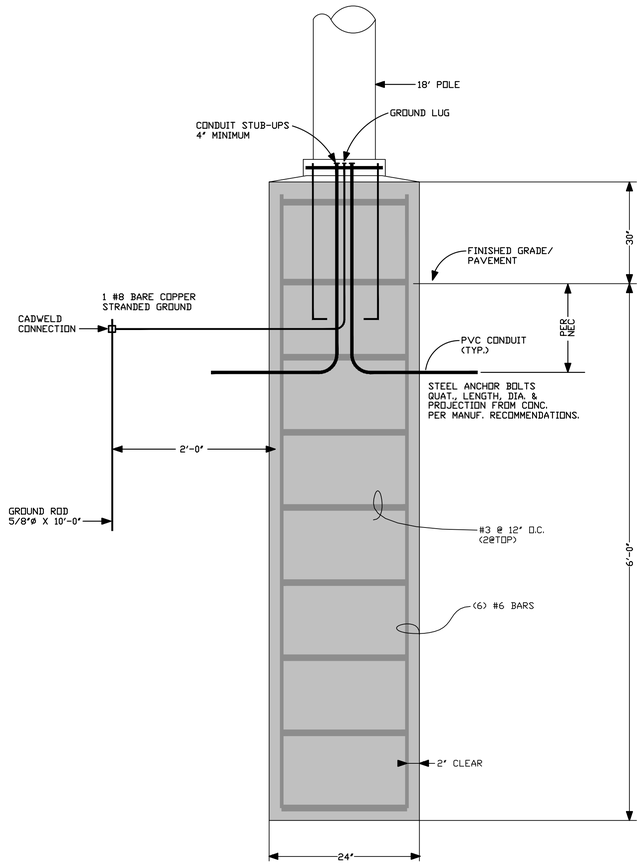

SITE LIGHT POLE BASE

NOT TO SCALE

Leslie S. Grim, P.E.

STATE OF MARYLAND
LESLIE SCOTT GRIM
REGISTERED
PROFESSIONAL ENGINEER

23-037

L.S. GRIM, INC.
Consulting Engineers
MAIN OFFICE
19922 JEFFERSON BLVD., HAGERSTOWN, MD 21742-4367
PHONE: 301.797.1702 FAX: 301.797.4831
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DC METRO OFFICE
9711 WASHINGTONIAN BLVD., SUITE 550, GAITHERSBURG, MD 20878
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TAYLOR FARM LOT 3
WRIGHT ROAD
WILLIAMSPORT, MD

LIGHTING SPECS + POLE BASE DETAIL

Professional Certification
I certify that these documents were prepared or approved by me, and that I am a duly licensed engineer under the laws of the State of Maryland
License Number: 14401
Expiration Date: 4/21/2023

LESLIE SCOTT GRIM, P.E.
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DE PROF. ENG. NO. 19513
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PA PROF. ENG. NO. PE032636E
VA PROF. ENG. NO. 023240
WV PROF. ENG. NO. 10764

REV.	DATE	COMMENT
	05/26/2023	PLANNING COMMISSION SUBMITTAL
1	11/1/2023	REV. PER PLAN REVIEW COMMENTS

DRAWN BY: TMH

E-1.2
2 OF 2 SHEETS
DATE: NOV. 1, 2023

WASHINGTON COUNTY DEPARTMENT OF PLANNING & ZONING
747 Northern Avenue | Hagerstown, MD 21742-2723 | P:240.313.2430 | F:240.313.2431 | Hearing Impaired: 7-1-1

SITE PLAN STAFF REPORT

BASE INFORMATION

SITE NAME.....:	Sheetz - Smithsburg
NUMBER.....:	SP-25-011
OWNER.....:	BOWMAN CAVETOWN LLC
LOCATION.....:	11842 MAPLEVILLE Road Smithsburg, MD 21783
DESCRIPTION.....:	This site plan is for the construction of a 6,139 square foot Sheetz Convenience Store and Gas Station with associated drive aisles, parking spaces, and MDSHA roadway improvements. The proposed site disturbed area is 3.8 acres, and the proposed impervious area is 2.2 acres. The project is located west of Mapleville Road (MD 66) at its intersection with Jefferson Boulevard (MD 64) in Smithsburg, Washington County, Maryland.
ZONING.....:	Business, Local
COMP PLAN LU.....:	Commercial
PARCEL.....:	07004230
PLANNING SECTOR.....:	4
ELECTION DISTRICT.....:	07
TYPE.....:	Commercial
GROSS ACRES.....:	1.90
DWELLING UNITS.....:	
TOTAL LOTS.....:	1
DENSITY.....:	0 Units Per Acre
PLANNER.....:	Misty Wagner-Grillo
ENGINEER.....:	FREDERICK SEIBERT & ASSOCIATES
RECEIVED.....:	April 15, 2025

SITE ENGINEERING

HYDROGRAPHY, SENSITIVE & ENVIRONMENTAL INFORMATION

FLOOD ZONE.....:	No
WETLANDS.....:	No
WATERSHED.....:	Antietam Creek
ENDANGERED SPECIES.....:	None
STEEP SLOPES.....:	No
STREAM BUFFER.....:	No
HISTORIC INVENTORY.....:	No Resources Present
EASEMENTS PRESENT.....:	None

Staff Comments:

Not Applicable

WASHINGTON COUNTY DEPARTMENT OF PLANNING & ZONING
747 Northern Avenue | Hagerstown, MD 21742-2723 | P:240.313.2430 | F:240.313.2431 | Hearing Impaired: 7-1-1

SITE DESIGN

Impervious Area Plan	Impervious Maximum Allowed	Open Space Area Planned
60	80	
Open Space Minimum Required	**Residential Amenity Plans**	**Solid Waste Disposal Plans**
		Onsite Dumpter
Materials Stored on Site	**Buffer Design Meets Requirements**	**Landscaping Meets Requirements**
	Yes	Yes
Lighting Plan Meets Requirements	**Pedestrian Access is Adequate**	**Bus Stop is Within Walking Distance**
Yes		
Loading Area Meets Requirements		
		Not Fast Track
Parking Spaces - Total Planned	**Parking Spaces - Per Dwelling Unit**	
45		
Parking Spaces - Minimum Required	**Recreational Parking Provided**	
31	No	

ACCESS SPACING VARIANCE NEEDED: No

SCHOOL INFORMATION

	ELEMENTARY	MIDDLE	HIGH
SCHOOL DISTRICT	Old Forge	Smithsburg	Smithsburg
PUPIL YIELD			
CURRENT ENROLLMENT			
MAXIMUM CAPACITY			

PUBLIC FACILITIES INFORMATION

FIRE DISTRICT.....:	Smithsburg
AMBULANCE DISTRICT.....:	Smithsburg

WATER & SEWER INFORMATION

	WATER	SEWER
METHOD.....:	City	County
SERVICE AREA.....:	City	County
PRIORITY.....:	3-Programmed Service	5-Long Term Planned Service
NEW HYDRANTS.....:		
GALLONS PER DAY SEWAGE...:		
PLANT INFO.....:		Smithsburg

SITE PLAN

FOR

SHEETZ - SMITHSBURG

SITUATED AT 11842 MAPLEVILLE ROAD

SMITHSBURG, MD 21783

WASHINGTON COUNTY, MARYLAND

APPROVALS

MD-ENG-6A
1/89

USDA
SCS

UTILITY NOTIFICATION

The Soil Conservation District makes no representation as to the existence or nonexistence of any utilities at the construction site. Shown on these construction drawings are those utilities which have been identified. It is the responsibility of the landowners or operators and contractors to assure themselves that no hazard exists or damage will occur to utilities. It is suggested that Miss Utility be contacted at:
Phone No. 1-800-257-7777

DISTURBED AREA QUANTITY

THE TOTAL AREA TO BE DISTURBED SHOWN ON THESE PLANS HAS BEEN DETERMINED TO BE APPROXIMATELY
3.8 ACRES AND THE TOTAL AMOUNT OF EXCAVATION AND FILL AS SHOWN ON THESE PLANS HAS BEEN COMPUTED TO BE APPROXIMATELY
3,214 CU. YDS. OF EXCAVATION AND APPROXIMATELY
10,109 CU. YDS. OF FILL.

ENGINEER'S STORMWATER MANAGEMENT CERTIFICATION

"I verify and affirm that the Construction for the Stormwater Management Facilities as performed either meets or exceeds the requirements and design intent of this plan, including all specifications and referenced standards, and has been completed in accordance with good construction practices. I also verify and affirm that I have reviewed the construction inspection documentation and the as-built information; that it has been done in accordance with Washington County requirements and at a level deemed necessary to assure the Verification made herein; and all discrepancies between the as-built information and approved plans have been noted and are considered acceptable to the Consultant."

SIGNATURE DATE SEAL

WASHINGTON COUNTY DEPARTMENT OF WATER QUALITY

This approval is for general conformance with the County's requirements for design and layout of proposed sewer and/or water system improvements or extensions. All sewer and/or water system improvements or extensions shall be constructed in strict accordance with the County's latest addition of the Standard Specifications for Construction of Sanitary Sewers and/or Water Lines. This approval does not guarantee availability of sewer and/or water service. Sewer and/or water service availability is subject to conformance with all rules, policies and regulations established by the County and in effect at the time application for service is made, and/or the availability of allocation remaining in other jurisdictions' facilities that may be granted to the County. This approval shall be valid for a period of TWO years.

SIGNATURE DATE

**WASHINGTON COUNTY
DIVISION OF ENGINEERING**

APPROVED BY: _____

DATE: _____

CITY OF HAGERSTOWN UTILITIES DEPARTMENT WATER DIVISION

This approval is for the design and layout of the proposed water system improvements. All water system improvements shall be constructed to the standards in effect at the time of construction. This approval does not guarantee availability of water service. Water service is available subject to conformance with all policies and standards in effect at the time of application for service, payment of fees and approval of the water service application. The Water Division does not guarantee a specific water pressure or flow at any meter or fire hydrant. This approval is valid for a period of one year.

SIGNATURE DATE

OWNER / DEVELOPERS CERTIFICATION

"I/We certify all/any parties responsible for clearing, grading, construction and/or development will; be done pursuant to this plan and responsible personnel involved in the construction project will have a Certificate of Training at a Maryland Dept. of the Environment approved training program for the control of soil erosion and sediment."

Gary Kilfeather — 10-1-25
PRINTED NAME — DATE
SIGNATURE

OWNER / DEVELOPERS CERTIFICATION

"I/we hereby certify that all clearing, grading, construction and/or development will be done pursuant to this plan and in accordance with the Stormwater Management Ordinance of Washington County and the policy on construction of subdivision infrastructure for acceptance and ownership by Washington County (S-3)."

Gary Kilfeather — 10-1-25
PRINTED NAME — DATE
SIGNATURE

ENGINEER / ARCHITECT DESIGN CERTIFICATION

I hereby certify this plan for soil erosion and sediment control has been designed in accordance with local ordinances, COMAR 26.17.01.07, and Maryland Standards and Specification for Soil Erosion and Sediment Control.

10/01/2025 — 20945
DATE — REG. NO. — SIGNATURE

STORMWATER MANAGEMENT (SWM) FACILITY
AS-BUILT CERTIFICATION

I HEREBY CERTIFY THAT THE STORMWATER MANAGEMENT (SWM) FACILITIES AND PRACTICES SHOWN IN THE CONTRACT DOCUMENTS AND INDIVIDUALLY IDENTIFIED BELOW BY UNIQUE SWM FACILITY NUMBERS HAVE BEEN CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS APPROVED UNDER THE MDOT SHA PLAN REVIEW DIVISION NUMBER ____ - PR- ____. EXCEPT AS NOTED ON THE GREENLINE "AS-BUILT" DRAWINGS. FURTHERMORE, DEVIATION FROM THE CONTRACT DOCUMENT DO NOT ADVERSELY AFFECT THE DESIGN OR INTENDED PERFORMANCE OF THE SWM FACILITIES AND PRACTICES.

Name (Printed) — Signature
Maryland P.E. License Number — Date

PROFESSIONAL CERTIFICATION. "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 MARYLAND, LICENSE NO. _____, EXPIRATION DATE _____."

"CERTIFY" MEANS TO STATE OR DECLARE A PROFESSIONAL OPINION BASED ON SUFFICIENT AND APPROPRIATE ONSITE INSPECTIONS, DOCUMENTATION, AND TESTING CONDUCTED DURING CONSTRUCTION, INCLUDING COMPILATION OF THE AS-BUILT DATA TABLES CONTAINED IN THE CONTRACT DOCUMENTS.

Community Water Supply and Community Sewerage Systems (Proposed systems)

This proposed subdivision of land as represented hereon and on the approved preliminary plan has been found to be in compliance with the Code of Maryland Regulations 26.04.03 allowing for the subdivision of land utilizing community water supply and community sewerage systems that are under contract and will be available to the property at time of sale. This subdivision is in conformance with the current approved County Comprehensive Water and Sewer Plan therefore complies with Environment Article §9-512. The Washington County Health Officer is the delegated authority per Environment Article §1-301 therefore the Health Officer's signature on the plat certifies that the parcels shown hereon are in compliance with the pertinent laws and regulations as of the approval date.

Approving Authority — Date

Note - Subdivisions to be served by Community Water or Community Sewerage must include on the plat the owner statement below:

As the owner of this property, I hereby certify that community water supply and sewerage facilities will be available to all lots offered for sale and that the plans to develop the community water supply and community sewerage facilities, including all necessary points of discharge, have been approved by the Department of the Environment. Further, I certify that the facilities will be maintained and operated so as to provide for a continuous and acceptable water supply or sewage disposal service to the properties served.

Approving Authority — Date

SWM NARRATIVE

Introduction
This site plan is for the construction of a 6,139 square foot Sheetz Convenience Store and Gas Station with associated drive aisles, parking spaces, and MDSHA roadway improvements. The proposed site disturbed area is 3.8 acres, and the proposed impervious area is 2.2 acres. The project is located west of Mapleville Road (MD 66) at its intersection with Jefferson Boulevard (MD 64) in Smithsburg, Washington County, Maryland. The project will take place on two (2) different parcels that are both zoned Business Local (BL) as determined by Washington County. The first parcel is 1.67 acres and is identified as Parcel 91 within Tax Map 51 of Washington County. The second parcel is 1.90 acres and is identified as Parcel 86 within Tax Map 51 of Washington County. The parcels will be combined as part of the development of the site.

Past, Present and Proposed Land Use
The site currently consists of two (2) residential rental properties consisting of 2 houses, detached garages, and gravel and asphalt driveways. The current land cover is predominantly meadow, grass, and the existing improvements. An intermittent stream (as shown on the Washington County Soil Survey) is located along the edge of Jefferson Pike within the MDSHA right-of-way. There is one small area of steep slopes and highly erodible soils within the site, but all the existing steep slopes are man-made. There are no mapped floodplains and related buffers on the property.

Site Drainage Description
The site currently has four (4) main watersheds. Watershed #1 drains from south to north along Mapleville Road (MD 66) and currently discharges to an existing 24" RCP that passes under Jefferson Boulevard (MD 66) that is then conveyed in a roadside swale along the north side of MD 66. Watershed #2 is the largest watershed on the site, and it drains in a northeasterly direction, currently discharging to an existing 12" x 18" CMP that passes under Paden Avenue (County Road) that is then conveyed in a roadside swale along the south side of MD 66. Watershed #3 drains from west to east and flows across Paden Avenue. Watershed #4 drains from north to south, and outlets along MD 64.

Post-Construction Stormwater Management
The post-construction stormwater management requirements were modeled as (1) watershed, and include the MDSHA requirements. The water quality (WQv) and Environmental Site Design (ESD) requirements for the site are shown on page 5 of the SWM report. One (1) Bioretention, one (1) Submerged Gravel Wetland, and an underground SWM system (ADS Landmax w/ Bayfilter outlet structure) will provide **20,163 cf ESDv for the site, which is more than the required 15,754 cf ESDv.**

Downstream Impact
There will be no adverse impacts to downstream properties, as the flow leaving the property will be controlled for the required design-storm events. See the tables in the SWM report for a breakdown of the flows leaving each watershed for the 2, 10, 25, and 50-year design-storm events.

OWNER:
BOWMAN CAVETOWN LLC.
10228 GOVERNOR LANE BOULEVARD - SUITE 3002
WILLIAMSPORT, MARYLAND 21795

ATTN: JEFF TEDRICK
EMAIL: JTEDRICK@DMBOWMAN.COM
PHONE: 301.582.1555

DEVELOPER:
SHEETZ, INC.
243 SHEETZ WAY
CLAYSBURG, PA 16625

ATTN: GARY KILFEATHER
EMAIL: GKILFEAT@SHEETZ.COM
PHONE: 703.615.8864

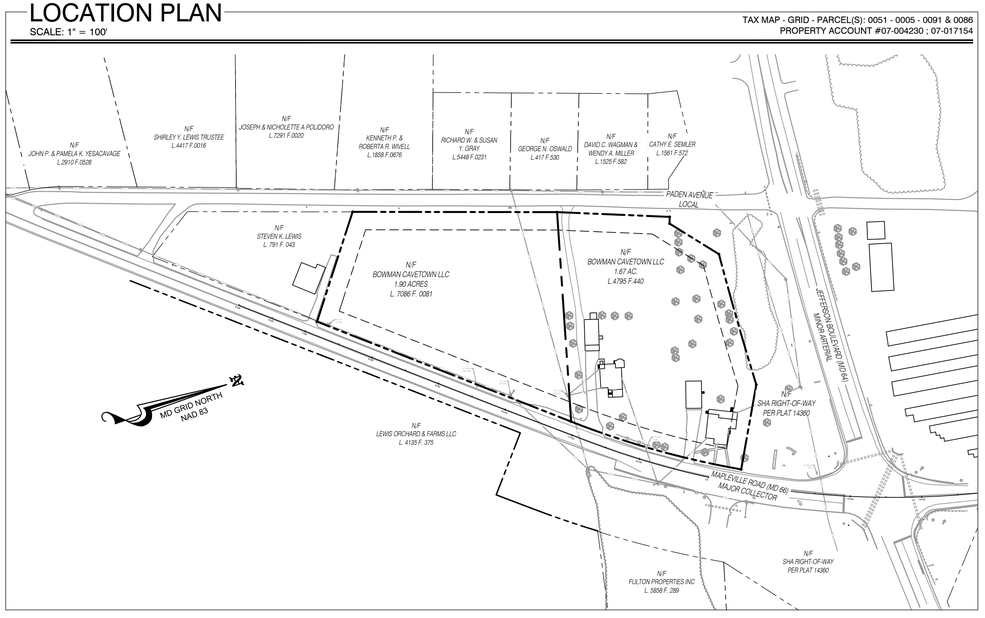
CIVIL ENGINEER / SURVEYOR:
FSA INC.
128 SOUTH POTOMAC STREET
HAGERSTOWN, MARYLAND 21740

PROJECT MANAGER: DAVE TROSTLE
EMAIL: DTROSTLE@FSA-INC.COM
PHONE: 301.791.3650

LOCATION PLAN

SCALE: 1" = 100'

TAX MAP - GRID - PARCEL(S): 0051 - 0005 - 0091 & 0086
PROPERTY ACCOUNT #07-004230 ; 07-017154



ESD PRACTICES SUMMARY TABLE

CONSTRUCTION TYPE (NEW, REDEVELOPMENT, RESTORATION): **NEW**

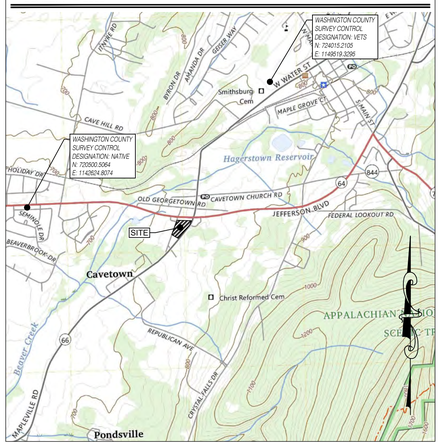
ESD PRACTICES (CHAPTER 5 - NON-STRUCTURAL & STRUCTURAL)

TYPE	DA TO STRUCTURE (AC.)	IMPERVIOUS DA TO STRUCTURE (DA)	ESDv (CF)	Pe ADDRESSED (IN)
SUBMERGED GRAVEL WETLAND #1	1.04	0.70	4,971	2.30
UNDERGROUND SWM / ADS BAYFILTER	1.11	1.06	9,453	2.41
NON-ESD PRACTICES (CHAPTER 3 - STRUCTURAL PRACTICES)				
BIORETENTION #1 (MDSHA)	0.82	0.58	5,739	2.90

VICINITY MAP

SCALE: 1" = 2000'

ADC MAP 23, D5
USGS MAPS (SMITHSBURG)



SHEET INDEX

TYPE	NUMBER	TITLE
C-001	SHEET 01	COVER SHEET
C-002	SHEET 02	GENERAL NOTES
C-101	SHEET 03	EXISTING CONDITIONS
C-102	SHEET 04	DEMOLITION PLAN
C-103	SHEET 05	EROSION & SEDIMENT CONTROL PLAN
C-104	SHEET 06	SITE PLAN
C-105	SHEET 07	GRADING & DRAINAGE PLAN
C-106	SHEET 08	GRADING & DRAINAGE PLAN - BLOWUP
C-107	SHEET 09	UTILITY PLAN
C-108	SHEET 10	UTILITY PLAN - BLOWUP
C-301	SHEET 11	STORMWATER MANAGEMENT PLAN & PROFILES
C-302	SHEET 12	STORMWATER MANAGEMENT DETAILS & NOTES
C-401	SHEET 13	CONSTRUCTION PROFILES - WATER & SEWER
C-402	SHEET 14	CONSTRUCTION PROFILES - STORM DRAINAGE
C-403	SHEET 15	CONSTRUCTION PROFILES - STORM DRAINAGE
C-501	SHEET 16	CONSTRUCTION DETAILS - SITE
C-502	SHEET 17	CONSTRUCTION DETAILS - SHEETZ
C-503	SHEET 18	CONSTRUCTION DETAILS - SHEETZ
C-504	SHEET 19	CONSTRUCTION DETAILS - SHEETZ
C-505	SHEET 20	CONSTRUCTION DETAILS - SHEETZ
C-506	SHEET 21	CONSTRUCTION DETAILS - SHEETZ
C-507	SHEET 22	CONSTRUCTION DETAILS - SHEETZ
C-508	SHEET 23	CONSTRUCTION DETAILS - SHEETZ
C-509	SHEET 24	CONSTRUCTION DETAILS - EROSION & SEDIMENT CONTROL
C-510	SHEET 25	CONSTRUCTION DETAILS - EROSION & SEDIMENT CONTROL
C-511	SHEET 26	CONSTRUCTION DETAILS - WATER & SEWER
C-512	SHEET 27	CONSTRUCTION DETAILS - STORM DRAINAGE
C-513	SHEET 28	CONSTRUCTION DETAILS - STORM DRAINAGE
L-101	SHEET 29	LANDSCAPE PLAN
L-501	SHEET 30	LANDSCAPE DETAILS & NOTES
C-109	SHEET 31	MDSHA ENTRANCE PLAN
C-110	SHEET 32	MDSHA STRIPING & SIGNAGE PLAN
C-111	SHEET 33	MDSHA GRADING PLAN & STORM DRAINAGE PROFILES
C-303	SHEET 34	MDSHA STORMWATER MANAGEMENT PLAN & PROFILES
C-304	SHEET 35	MDSHA STORMWATER MANAGEMENT DETAILS & NOTES
C-305	SHEET 36	MDSHA AS-BUILT TABLES
C-404	SHEET 37	MD 66 MDSHA CROSS SECTIONS
C-405	SHEET 38	MD 66 MDSHA CROSS SECTIONS
By Others		
P-101	SHEET 39	LIGHTING PLAN (BY OTHERS)
P-501	SHEET 40	LIGHTING DETAILS (BY OTHERS)
P-502	SHEET 41	LIGHTING DETAILS (BY OTHERS)
P-102	SHEET 42	LIGHTING PLAN - ISOMETRIC (BY OTHERS)

⚠ *MDSHA ACCESS PERMIT NUMBER: 24APWA003XX*

The following standards (construction and temporary traffic control) are required for this project:

a. **MD - 104.00-01 - MD-104.00-18 - General Notes**
b. **MD - 104.01-01- MD- 104.01-88 - TTCT Applications**
c. **MD - 104.02-01- Shoulder work/ 2-lane, 2-way, greater than 40 MPH**
d. **MD - 104.02-09 - Flagging Operation/ 2-Lane, 2-way greater than 40 MPH**
e. **MD - 104.02-13 - Intersection Flagging Operation 2-lane, 2-way greater than 40 MPH**
f. **MD - 368.01- Standard Concrete End Section Round Concrete Pipe**
g. **MD - 374.51 - Precast or Cast in Place Square and Rectangular COG Inlets 5', 10', 15' & 20'**
h. **MD - 374.68 - Precast or Cast in Place COG/COS Opening for 8" Curb 5' or 10' Only**
i. **MD - 374.73 - Precast Standard Type S Inlet Single Grate**
j. **MD - 384.01 - 48" Diameter Precast Manhole for 12" to 24" Pipes**
k. **MD - 620.02 - Standard Type A&B Concrete Curb and Combination Concrete Curb & Gutter**
l. **THMSHA307-308 - Type "A-10" Inlet For Use as Shallow COG & COS Inlet**

For all standards referred to on the plans the contractor must go to the Book of Standards which will have the most current version. The Book of Standards can be accessed at:

http://apps.roads.maryland.gov/BusinessWithSHA/bizStdsSpecs/desManualStdPub/publicationsonline/ohd/bookstd/index.asp

All items are to be constructed in accordance with the current version of the referenced standard at the time of construction.

Know what's **below.** **Call** before you dig.

10/01/2025

Professional Certification:
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional under the laws of the State of: MARYLAND
License # 20945
Expiration Date 06.23.2027

FSA DRIVEN
FREDERICK SEIBERT & ASSOCIATES, INC.
CIVIL ENGINEERS • SURVEYORS • LANDSCAPE ARCHITECTS • LAND PLANNERS
fsa-inc.com

MARK	DESCRIPTION:	DATE:
1	REVISED PER AGENCY COMMENTS	09.30.25
2	REVISED PER AGENCY COMMENTS	08.26.25

NOT APPROVED FOR CONSTRUCTION

SHEETZ - SMITHSBURG
SITUATED ALONG THE WEST SIDE OF MD 66 (MAPLEVILLE ROAD) AT ITS INTERSECTION WITH MD 64 (JEFFERSON BLVD)
SMITHSBURG
WASHINGTON COUNTY, MARYLAND
SHEETZ, INC.
243 SHEETZ WAY CLAYSBURG, PA 16625

PROJECT NO. 6086.1
DRAWN BY: KODY WARD
DATE: 03.17.2025
PROJECT MANAGER: DAVID TROSTLE
EMAIL: dtrostle@fsa-inc.com
TAX MAP - GRID - PARCEL(S): 0051 - 0005 - 0086 & 0091
SCALE: AS SHOWN
SHEET TITLE: COVER SHEET

C-001
SHEET 01 OF 38

SP-25-011

P:\SHEETZ\SITE\SMITHSBURG\CAD\SHEETZ SMITHSBURG.DWG - 10:47 - COVER SHEET & GENERAL NOTES.DWG - 2025 10.02

GENERAL NOTES

1. Any damage to adjoining public roads, utilities, etc. during construction will be repaired in kind by the contractor.
2. No subsurface investigation has been performed by Frederick, Seibert and Associates, Inc. to determine ground water, rock, sinkholes or any other natural or man-made existing features. See geotech report by Hillis-Carnes Engineering Associates for sub-surface findings.
3. FSA, Inc. assumes no liability for the location of any above ground and below ground utilities. Existing utilities are shown from the best available information. Contractor to field verify location and depth of all above and below ground utilities prior to construction.
4. The contractor shall locate existing utilities in advance of construction operations in the vicinity of proposed utilities.
5. The contractor shall take all necessary precautions to protect the existing utilities and to maintain uninterrupted service. Any damage incurred due to the contractor's operation shall be repaired immediately at the contractor's expense. Contractor to use caution in areas where low hanging wires exist.
6. All utilities shall be cleared by a minimum of 1'-0". All utility poles shall be cleared by a minimum of 2'-0" or tunneled if required.
7. The Contractor shall notify the following utilities or agencies at least five (5) days before starting work shown on these drawings:

Miss Utility	1-800-257-7777
Potomac Edison	1-800-255-3443
Columbia Gas (New Buisness)	1-800-440-6111
Columbia Gas (Conflicts)	(301) 964-1065
Verizon	(301) 790-7124
Antietam Cable	(240) 420-2082
Washington County Soil Conservation District	(301) 797-6821
Washington County Department of Water Quality	(240) 313-2600
City of Hagerstown Utilities Department	(301) 739-8577 Ext. 650

8. The contractor shall be responsible for coordination of his construction with the construction of other contractors.
9. Benchmarks to be established by FSA prior to the start of construction.
10. The contractor shall notify the Architect/Engineer, before construction, of any conflicts between the plans and actual field conditions.
11. The contractor shall protect all utilities and culvert pipes during construction by insuring proper cover, increasing cover, or constructing roadway and parking through base course before loading site with heavy vehicles.
12. Job site safety is the sole responsibility of the contractor. The Contractor shall perform all excavation in accordance with O.S.H.A. Regulations for trench safety.
13. The contractor shall perform his own field inspection and surveys (if necessary) to determine the limit of earthwork needed to complete this project. Any earthwork quantities that may be shown hereon are preliminary estimates only, and are intended for Soil Erosion Control plan review, if required. There has been no correction made to the earthwork quantities shown hereon due to the compaction of fill.
14. The contractor shall be aware that in the event of discrepancy between scaled and figured dimensions shown on the plan, the figured dimensions shall govern.
15. Sediment erosion control measures shall be installed per sediment erosion control plans, details and specifications.
16. Please refer to Geotechnical Report completed by Hillis-Carnes Engineering Associates dated 01-14-2025 for load bearing fills, etc.
17. The entire area included within the proposed limits of cut and fill shall be stripped of all root material, trash and other organic and otherwise objectionable, non-complying and unsuitable soils and materials.
18. It shall be distinctly understood that failure to mention specifically any work which would naturally be required to complete the project shall not relieve the contractor of his responsibility to complete such work.
19. All handicapped parking spaces shall be designed, ramped and signed to meet the minimum requirements of the Maryland Accessibility Code & ADA Standards for Accessible Design.
20. The existing site contours shown hereon are LIDAR 1' contours and field checked by FSA in October 2023. (Contour accuracy is to plus or minus one half the contour interval).
21. Limit of disturbed areas are to be the limit of property ownership, unless otherwise noted.
22. Exterior lighting will consist of building mounted lights and pole mounted lights as shown on the photometrics plans and utility plan.
23. The contractor shall provide MOSH safety assistance for City Utilities Department, Water and Wastewater Division Inspectors.
24. This project has a projected start date of October 2025 and a completion date of November 2026.
25. A complete set of approved plans and a copy of the grading permit must be on site and available for use by the inspector, or other representative of Washington County, MD.
26. Proposed SWM will consist of an on-site submerged gravel wetland & underground SWM, and two (2) micro-bioretentions within the MDSHA right-of-way.
27. There are no parks, open space within or adjoining the tract.
28. All existing drainage culverts and drainage easements are to be maintained and unaltered.
29. There are no floodplains, wetlands, steep slopes and related buffers, or habitat of threatened or endangered species identified by the U.S. Fish and Wildlife Service per 50 CFR 17 as required to be shown by section 314 of the subdivision ordinance and section 4.21 of the Zoning Ordinance.

DIVISION OF PLAN REVIEW & PERMITTING NOTES

1. In conformance with the Stormwater Management Ordinance of Washington County, a performance security and executed maintenance agreement shall be required from the developer prior to issuance of any building or grading permit for construction per these plans."
2. This project will require a third party qualified professional to be present at the preconstruction meeting. Construction inspection will be required for this project per the "Roadway and Stormwater Management Construction Verification Procedures" dated October 17, 2008.
3. A complete set of approved plans and a copy of the grading permit must be on site and available for use by the inspector, or other representative of Washington County Division of Public Works.
4. Developer/Contractor shall contact the certifying engineer and the County at least 5 days prior to the start of construction of the stormwater management system to schedule and coordinate inspection time tables.
5. This development plan must comply with the current Washington County Stormwater Management, Grading, Soil Erosion and Sediment Control. Ordinance.
6. All grading for this project shall be the full responsibility of the property owner.
7. No permanent structures (e.g., fences, sheds, play equipment, retaining walls) shall be permitted within any stormwater or storm drainage easement on this property.

SHA SPECIFICATIONS FOR TEMPORARY & PERMANENT STABILIZATION

1. Refer to the Table of SHA Landscape Notes in this plan set for requirements related to topsoil, seed, fertilizer, plants, and other materials. SHA Standard Specifications for Construction and Materials shall supersede all other specifications for landscape construction within property of the Maryland State Highway Administration (SHA), and all landscape construction of SHA property shall conform to the requirements of the SHA Landscape Notes and current SHA Standards and Specifications.

ZONING DATA

ZONING DISTRICT	BL - BUSINESS LOCAL
MAXIMUM BUILDING HEIGHT	25 FT.
MINIMUM YARD SETBACK:	
FRONT	25 FT.
*SIDE	10 FT.
*REAR	10 FT.

*WHERE ADJOINING ANY RR, RT, RS, RU, OR RM DISTRICT, NOT LESS THAN 25'

SITE DATA

EXISTING LOT 1	
TAX MAP - GRID - PARCEL	0051-0005-0091
ELECTION DISTRICT	07
ACCOUNT NUMBER	004230
LIBER / FOLIO	04795 / 00440
PARCEL AREA	1.67 Acres
EXISTING LOT 2	
TAX MAP - GRID - PARCEL	0051-0005-0086
ELECTION DISTRICT	07
ACCOUNT NUMBER	017154
LIBER / FOLIO	07086 / 00081
PARCEL AREA	1.90 Acres
AREA SUMMARY:	
DISTURBED AREA	165,528 SF / 3.8 Ac
EXISTING IMPERVIOUS	9,584 SF / 0.22 AC (5.8%)
PROPOSED TOTAL IMPERVIOUS	95,832 SF / 2.20 AC (57.9%)
FUNCTIONAL DESCRIPTION	CONVENIENCE STORE
STRUCTURE SUMMARY	
BUILDING FOOTPRINT	6,139 SF
BUILDING HEIGHT	25'
CANOPY FOOTPRINT	4,787 SF
CANOPY HEIGHT	21'-7"
EMPLOYEE SUMMARY	8 MAIN SHIFT EMPLOYEES; 3 SHIFTS
PROPOSED VEHICULAR PARKING	46 SPACES
PROPOSED VEHICULAR FUELING POSITIONS	12 SPACES
HOURS OF OPERATION	24 HOURS PER DAY; 7 DAYS PER WEEK
DELIVERIES	FUEL TRUCK 3-4 TIMES PER WEEK; BOX TRUCK DAILY
WATER AND SEWER USAGE:	
WATER PROVIDED	EXTENSION OF PUBLIC UTILITIES
WASTEWATER PROVIDED	EXTENSION OF PUBLIC UTILITIES
EXISTING WATER ALLOCATION	400 GPD
PROPOSED WATER ALLOCATION	2500 GPD
EXISTING WASTEWATER ALLOCATION	400 GPD
PROPOSED WASTEWATER ALLOCATION	1800 GPD
WASTE & RECYCLABLES:	
SOLID WASTE REMOVAL	ONSITE DUMPSTER
RECYCLE REMOVAL	ONSITE DUMPSTER
SITE LIGHTING:	
EXISTING	NONE
PROPOSED	POLE AND BUILDING MOUNTED, TO BE DESIGNED PER WASHINGTON COUNTY (W.C.) REGULATIONS
SITE SIGNAGE:	
EXISTING	NONE
PROPOSED	ONSITE, TO BE DESIGNED PER W.C. REGULATIONS
ADDRESS ASSIGNMENT	11842 MAPLEVILLE RD.
PREVIOUS SITE PLAN(S)	SP-15-001
FOREST CONSERVATION	OFFSITE
WATERSHED:	
NAME	ANTIETAM CREEK
NUMBER	02-14-05-02
FEMA PANEL #	24043C0165D

PARKING, LOADING & BICYCLE DATA

USE	REQUIREMENT	CALCULATION	REQUIRED
COMMERCIAL RETAIL	5 SPACE PER 1,000 SF GFA	(6,139 SF / 1,000 SF) X 5	31 SPACES

TOTAL REQUIRED PARKING SPACES	**31 SPACES TOTAL: 29 REG & 2 HC**
TOTAL PROVIDED PARKING SPACES	**45 VEHICULAR SPACES: 43 REG & 2 HC**
TOTAL PROVIDED FUELING POSITIONS	**12 VEHICULAR**
TOTAL REQUIRED HANDICAP SPACES	**2 SPACES**

WASHINGTON COUNTY DEPARTMENT OF WATER QUALITY

This plan/plat has been reviewed by the Washington County Department of Water Quality for inclusion into the county capacity management plan for the system that serves this project. Allocation granted for construction shown on this plan/plat shall be in accordance with the capacity management plan developed for this system based on availability of allocation remaining in the facility.

SIGNATURE DATE

CITY OF HAGERSTOWN UTILITIES DEPARTMENT WATER DIVISION

This approval is for the design and layout of the proposed water system improvements. All water system improvements shall be constructed to the standards in effect at the time of construction. This approval does not guarantee availability of water service. Water service is available subject to conformance with all policies and standards in effect at the time of application for service, payment of fees and approval of the water service application. The Water Division does not guarantee a specific water pressure or flow at any meter or fire hydrant. This approval is valid for a period of one year.

SIGNATURE DATE

LEGEND

	EXISTING	PROPOSED
SUBJECT BOUNDARY		
BUILDING SETBACK LINE		
RIGHT OF WAY		
EASEMENT LINE		
ADJOINER BOUNDARY		
FENCE (METAL)		
FENCE (WOODEN)		
DITCH (STREAM)		
EDGE OF WATER		
WETLAND		
FLOODPLAIN		
SOIL BOUNDARY		
RAILWAY		
CENTERLINE		
EDGE OF PAVEMENT		
EDGE OF GRAVEL		
CURB		
WALL		
GUARD RAIL		
EDGE OF CONCRETE		
BUILDING		
MAIL BOX	MB	MB
SIGN (ROAD)		
SIGN (SITE)		
TRAFFIC SIGNAL		
TOPOGRAPHIC FEATURES		
CONTOUR (INDEX)	500	500
CONTOUR (INTERMEDIATE)	501.65	501.65
SPOTS ELEVATION		
VEGETATION AREAS		
TREELINE		
DECIDUOUS TREES		SEE LANDSCAPE SHEET FOR LEGEND
EVERGREEN TREES		SEE LANDSCAPE SHEET FOR LEGEND
SANITARY SEWER		
GRAVITY LINE		
FORCE MAIN LINE	FM	FM
LATERAL		
MANHOLE	SS	SS
CLEANOUT		
VALVE		
WATER		
COLD WATER LINE		
HOT WATER LINE		
MANHOLE	MH	MH
FIRE HYDRANT		
VALVE		
METER		
WELL		
STORM DRAINAGE		
STORM SEWER LINE		
ROOF DRAIN LINE		
MANHOLE	SW	
INLETS		
CLEANOUT		
UTILITIES		
GAS LINE		
ELECTRICAL LINE		
FIBER OPTIC LINE		
COMMUNICATION LINE	COM	COM
OVERHEAD LINES		
MANHOLE	MH	MH
PEDS, BOX, & ETC		
POLE		
LIGHT POLE		
GAS METER		
GAS VALVE		

LEGEND - ABBREVIATIONS

AASHTO — AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS	OC — ON CENTER
ADS — ADVANCED DRAINAGE SYSTEM	PC — POINT OF CURVE
ASTM — AMERICAN SOCIETY FOR TESTING AND MATERIAL	PCC — POINT OF COMPOUND CURVE
AWWA — AMERICAN WATER WORKS ASSOCIATION	PGL — PROPOSED GRADE LINE
BLDG — BUILDING	PRC — POINT OF REVERSE CURVE
BOT — BOTTOM	PT — POINT OF TANGENT
CIP — CAST IRON PIPE	PVC — POINT OF VERTICAL CURVE
CL — CENTERLINE	PVI — POINT OF VERTICAL INTERSECTION
CMP — CORRUGATED METAL PIPE	PVT — POINT OF VERTICAL TANGENT
CO — SANITARY SEWER CLEAN-OUT	ROW — RIGHT-OF-WAY
COMM — COMMUNICATION	SAN — SANITARY
CONC — CONCRETE	SCE — STABILIZED CONSTRUCTION ENTRANCE
DA — DRAINAGE AREA	SDR — STANDARD DIMENSION RATIO
DIA — DIAMETER	SIP — SET IRON PIN
EGL — EXISTING GRADE LINE	SD — STORM DRAINAGE
EX — EXISTING	SDMH — STORM DRAIN MANHOLE
EIP — EXISTING IRON PIN	SF — SQUARE FEET
FFE — FINISH FLOOR ELEVATION	SS — SANITARY SEWER
FH — FIRE HYDRANT	SSMH — SANITARY SEWER MANHOLE
GV — GATE VALVE	STA — STATION
HGL — HYDRAULIC GRADE LINE	STD — STANDARD
HDPE — HIGH DENSITY POLYETHYLENE	SY — SQUARE YARDS
INV — INVERT	TAN — TYPE AS NOTED
LF — LINEAR FEET	TEMP — TEMPORARY
MAX — MAXIMUM	TS — TOP OF STRUCTURE
MB — MAIL BOX	TG — TOP OF GRATE
MIN — MINIMUM	TR — TOP OF RIM
MJ — MECHANICAL JOINT	TYP — TYPICAL
NO — NUMBER	U/P — UTILITY POLE
NIC — NOT IN CONTRACT	VIF — VERIFY IN FIELD
NTS — NOT TO SCALE	WL — WATERLINE
OAC — OR APPROVED EQUAL	WM — WATER METER
	WV — WATER VALVE

STATE OF MARYLAND — DAVID TROSTLE — 21677 — REGISTERED PROFESSIONAL ENGINEER

10/01/2025

Professional Certification:
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional under the laws of the State of MARYLAND License # 21677
Expiration Date 06.23.2027

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LEAD MAINTENANCE OFFICE: 1 EAST MAIN STREET NEW BLOOMFIELD, PA 17068 717.275.7537
SUITE 300 HIGHLAND CROSSING I 570 GETTYSBURG PIKE CARLISLE, PA 17013 717.791.9111
SUITE 1 WEST MAIN STREET GREENCASTLE, PA 17225 717.597.1007
DULANEY CORPORATE CENTRE I 43645 ELMENTAITA DRIVE HAGERSTOWN, MD 21740 301.797.3800

MARK	DESCRIPTION	DATE

NOT APPROVED FOR CONSTRUCTION

SHEETZ - SMITHSBURG

SITUATED ALONG THE WEST SIDE OF MD. RT. 64 (MAPLEVILLE ROAD) AT ITS INTERSECTION WITH MD. RT. 66 (JEFFERSON BLVD)

SMITHSBURG
WASHINGTON COUNTY, MARYLAND

SHEETZ INC.
243 SHEETZ WAY CLAYSBURG, PA 16625

PROJECT NO. 6086.1
DWN BY: KODY WARD
DATE: 03.17.2025
PROJECT MANAGER: DAVID TROSTLE
EMAIL: dtrostle@fsa-inc.com
TAX MAP - GRID - PARCEL(S): 0051 - 0005 - 0086 & 0091
SCALE: N.T.S.
SHEET TITLE:

GENERAL NOTES

C-002
SHEET 02 OF 38

SP-25-011

P:\SHARED DRIVE\PROJECTS\6086\SHEET\6086SHEET - SHEETZ\SHEETS\SHEET 2\6086SHEET 2 - GENERAL NOTES.DWG, 2025-10-01

LINE	BEARING	DISTANCE
L1	S 69°55'32" E	19.42'

CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING	DELTA ANGLE
C1	4651.00'	189.73'	189.72'	S 86°35'17" E	2°20'14"
C2	1230.42'	247.20'	246.79'	S 35°04'46" W	11°30'40"

SOIL CHART

SOILS	H.S.G.	Ratio (%)	Kw
DrA	C	4.4%	0.15
DrB	C	43.2%	0.15
MsB	B	52.4%	0.10

Highly Erodible Soils & Steep Slopes (Slopes≥25% or Slopes>15% and K_w≥0.35)

NONE — Wetlands

NONE — Wetlands Buffer

NONE — Qualified Forest

Soils

NOTES:

1. THIS PARCEL DOES NOT LIE IN THE 100 YEAR FLOOD PLAIN PER FEMA FLOOD INSURANCE RATE MAP, COMMUNITY PANEL NO. 24043C0165D DATED 08-15-2017, FLOOD ZONE X
2. THERE ARE NO WETLANDS WITHIN THIS PARCEL.
3. THERE ARE STEEP SLOPES AND HIGHLY ERODIBLE SOILS FOUND WITHIN THE PARCELS, HOWEVER THEY ARE ALL MAN-MADE.
4. THERE ARE NO STREAMS LOCATED ON THIS SITE.
5. THIS SUBDIVISION IS LOCATED WITHIN THE UPPER BEAVER CREEK BASIN SPECIAL PLANNING AREA. THE PROTECTION OF WATER FROM POLLUTION IS THE UPPER BEAVER CREEK BASIN IS NECESSARY TO MAINTAIN THE QUALITY OF THE BEAVER CREEK TROUT HATCHERY SPRINGS. PRIOR TO ANY DEVELOPMENT ON THIS LOT, LOT OWNER SHALL NOTIFY THE WASHINGTON COUNTY SOIL CONSERVATION DISTRICT TO OBTAIN INFORMATION AND ASSISTANCE ON REDUCING SOURCE ON ON-POINT SOURCE POLLUTION THROUGH THE USE OF URBAN BEST MANAGEMENT PRACTICES.

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

STATE OF MARYLAND — PROFESSIONAL ENGINEER — 21966 — CHRISTIE S. [illegible]

10/01/2025

Professional Certification:
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Expiration Date: 06.23.2027

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ADMIN. OFFICE: 4520 SOUTH HANOVER STREET, CARLISLE, PA 17013, 717.791.8111
HAGERSTOWN OFFICE: 1125 DUAL HIGHWAY, SUITE 204, HAGERSTOWN, MD 21740, 301.791.3000
GREENCASTLE OFFICE: 14121 MOUNTAIN VIEW DRIVE, GREENCASTLE, PA 17225, 717.597.1007

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MARK	DESCRIPTION:	DATE:
2	REVISIONS PER AGENCY COMMENTS	09.30.25

NOT APPROVED FOR CONSTRUCTION

SHEETZ - SMITHSBURG
SITUATED ALONG THE WEST SIDE OF MD 66 (MAPLEVILLE ROAD) AT ITS INTERSECTION WITH MD 64 (JEFFERSON BLVD)
SMITHSBURG
WASHINGTON COUNTY, MARYLAND

SHEETZ, INC.
245 SHEETZ WAY CLAYSBURG, PA 16625

PROJECT NO.	6086.1
DWN BY	KODY WARD
DATE	03.17.2025
PROJECT MANAGER	DAVID TROSTLE
EMAIL:	dtrostle@fsa-inc.com
TAX MAP - GRID - PARCEL(S)	0051 - 0005 - 0086 & 0091
SCALE	1" = 30'

SHEET TITLE

EXISTING CONDITIONS

C-101
SHEET 03 OF 38

SP-25-011

P:\SHEETZ CLOSURE\PLECTOS\6086SMK64 - 1 SHEETZ\6086SDP-EXISTING CONDITIONS.DWG 2025-10-01

STATE OF MARYLAND
FREDERICK SEIBERT
PROFESSIONAL ENGINEER
10/01/2025

Professional Certification:
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional under the laws of the State of: MARYLAND
License # 20945
Expiration Date: 06.23.2027

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MAIN OFFICE
100 SOUTH MARKET STREET
MIDDLETOWN, MD 21769
301.791.3000

EAST MAIN STREET
NEW BLOOMFIELD, PA 17068
717.275.7531

EAST SOUTH STREET
CARLISLE, PA 17013
717.701.8111

142 NORTH ANDREW AVENUE
GREENCASTLE, PA 17225
717.597.1007

NO. | DESCRIPTION | DATE

NOT APPROVED FOR CONSTRUCTION

SHEETZ - SMITHSBURG
SITUATED ALONG THE WEST SIDE OF MD 66 (MAPLEVILLE ROAD) AT ITS INTERSECTION WITH MD 64 (JEFFERSON BLVD)
SMITHSBURG
WASHINGTON COUNTY, MARYLAND
SHEETZ INC.
243 SHEETZ WAY CLAYSBURG, PA 16625

PROJECT NO. 6086.1
DWN BY: KODY WARD
DATE: 03.17.2025
PROJECT MANAGER: DAVID TROSTLE
EMAIL: dtrostle@fsa-inc.com
TAX MAP - GRID - PARCEL(S): 0051 - 0005 - 0086 & 0091
SCALE: 1" = 30'

SHEET TITLE
DEMOLITION PLAN

C-102
SHEET 04 OF 38

SP-25-011

HATCH LEGEND
- EX. GRAVEL TO BE REMOVED
- EX. ASPHALT TO BE REMOVED

DEMOLITION NOTES:
1. Existing conditions as depicted on these plans are general and illustrative in nature and do not include mechanical, electrical and miscellaneous structures. It is the responsibility of the contractor to examine the site and be familiar with existing conditions prior to bidding on the demolition work for this project. If conditions encountered during examination are significantly different than those shown, the contractor shall notify the engineer immediately.
2. The Contractor is responsible for obtaining and/or verifying all local and state permits required for demolition work have been obtained.
3. The contractor shall indemnify and hold harmless the owner and/or engineer for any and all injuries and/or damages to personnel, equipment and/or existing facilities in the demolition and construction described in the plans and specifications.
4. All existing above and below ground structures within the limits of new construction shall be razed unless noted otherwise within this construction set, architectural plans and/or project specifications. This includes foundation slabs, walls, and footings.
5. All demolition waste and construction debris shall be removed by the contractor and disposed of in a state approved waste site and in accordance with all local and state codes and permit requirements.
6. All utility removal, relocation, cutting, capping and/or abandonment shall be coordinated with the appropriate utility company.
7. The burning of cleared material and debris shall not be allowed unless contractor gets written authorization from the local authorities.
8. Utility contacts are listed on the Sheet 2.
9. Erosion and Sedimentation (E&S) control measures around areas of demolition shall be installed prior to initiation of demolition activities. Refer to the E&S plan for details.
10. Asbestos or hazardous materials, if found on site, shall be removed by a licensed hazardous materials contractor. Contractor shall notify Sheetz immediately if hazardous materials are encountered.
11. Contractor shall protect all corner pins, monuments, property corners, and benchmarks during demolition activities. If disturbed, contractor shall have disturbed items reset by a licensed surveyor at no additional cost to the owner.
12. Contractor shall adhere to all local, state, federal, and OSHA regulations when operating demolition equipment around utilities.

GRAPHIC SCALE
30 0 15 30 60 120
(IN FEET)
1 inch = 30 ft.

P:\SHEETZ CO_OPS\PROJECTS\SMITHSBURG\WORK\ - 04 - DRAWINGS\C-102 DEMO.DWG 9:40 AM BY KODY WARD

INLET PROTECTION TABLE		
INLET ID	DRAINAGE AREA (FINAL)	PROTECTION TYPE
SD 1	0.17 AC.	AT GRADE INLET PROTECTION
SD 2	0.13 AC.	AT GRADE INLET PROTECTION
SD 3	0.12 AC.	AT GRADE INLET PROTECTION
SD 4	0.03 AC.	AT GRADE INLET PROTECTION
SD 5	0.18 AC.	AT GRADE INLET PROTECTION
SD 6	0.13 AC.	AT GRADE INLET PROTECTION
SD 7	0.04 AC.	AT GRADE INLET PROTECTION
SD 8	0.08 AC.	AT GRADE INLET PROTECTION
SD 9	0.09 AC.	AT GRADE INLET PROTECTION
SD 10	0.10 AC.	AT GRADE INLET PROTECTION
SD 11	0.09 AC.	AT GRADE INLET PROTECTION
SD 12	0.09 AC.	AT GRADE INLET PROTECTION
SD 13	0.18 AC.	AT GRADE INLET PROTECTION
SD 14	0.12 AC.	AT GRADE INLET PROTECTION
SD 15	0.12 AC.	AT GRADE INLET PROTECTION
SD 16	0.53 AC.	CURB INLET PROTECTION
SD 17	0.22 AC.	CURB INLET PROTECTION
TD 1	0.21 AC.	CURB INLET PROTECTION

OUTLET PROTECTION TABLE								
ID	PIPE	Q10 (CFS)	V10 (FPS)	LENGTH (FT)	WIDTH (FT)	d50 (IN)	DEPTH (IN)	MDSHA CLASS
ES 1	18"	2.60	5.89	4.00	6.00	9.50	19.00	I
ES 3	18"	1.67	3.52	4.00	6.00	9.50	19.00	I
ES 4	15"	2.70	6.50	4.00	6.00	9.50	19.00	I
ES 6	18"	0.59	1.34	4.00	6.00	9.50	19.00	I
HW 1	18"	4.97	2.81	4.00	6.00	9.50	19.00	I

SILT FENCE TABLE				
NUMBER	LENGTH (FT)	AVERAGE SLOPE (%)	SLOPE LENGTH (FT)	MAX SLOPE LENGTH (FT)
1	297	N/A	N/A	N/A

SMART-FENCE 42 TABLE				
NUMBER	LENGTH (FT)	AVERAGE SLOPE (%)	SLOPE LENGTH (FT)	MAX SLOPE LENGTH (FT)
1	259	33.33	12	100
2	42	33.33	6	100
3	412	33.33	28	100
4	153	33.33	10	100

SEQUENCE OF CONSTRUCTION

1. Contractor to contact FSA, Inc. (301) 791-3650, the WCDPW Engineering & Construction (240) 313-2400, and WCSCD (301) 797-6821 at least five (5) days prior to the start of any earthwork to schedule a pre construction meeting.
2. Before any construction activity begins the contractor is to contact Frederick Seibert & Associates, Inc. at 301-791-3650 to verify site benchmarks.
3. Contractor to relocate necessary utility poles and overhead utility lines.
4. Contractor to install stabilized construction entrance. If any tracking of mud or dirt occurs on a public road the contractor must immediately clean the roadway.
5. All perimeter controls (i.e. Smart Fence 42 & orange protective fence) to be installed. Contractor to install filter dike above existing SD headwall at intersection of MD 66 and MD 64 as shown on the plans. There are no known sinkholes on site, but if there are any discovered they should be remediated prior to beginning any earth disturbance. All sinkholes that are present or develop during construction must be remediated and certified by the Geotechnical Engineer. Contractor to contact Geotechnical Engineer immediately after discovery of any sinkhole.
6. Contractor to begin grading by stripping topsoil and organic material. The volume of topsoil needed on-site once grading is completed shall be kept in temporary stockpile, excess material shall be taken off-site to a site with an approved and current erosion and sediment control plan. Install silt fence on the downgrade side of the stockpile as shown on the plans.
7. The contractor shall stabilize all disturbed areas with seed and mulch and temporary erosion control matting where needed after excavating operations are complete. Use temporary seeding for areas left exposed for more than seven (7) consecutive days. Areas of highly erodible soils and steep slopes to be stabilized immediately after grading with temporary matting.
8. Once topsoil is stripped, contractor to begin mass grading of the site. Once Swale #1 is graded & stabilized, the contractor shall extend Smart Fence 42 #3 as shown on the plan to prevent sediment from entering the swale.
9. The contractor may excavate borrow pits (excavated SWM areas) for fill material if needed. If dewatering of the borrow pits is required, contractor is to pump water to a filter bag to dewater. Contractor to follow dewatering procedure as described in detail 4-C-512.
10. Contractor to begin utilities construction as the site is brought to grade.
11. The stormdrain system is to be installed starting at the downstream end with riprap outlet protection (or the underground SWM system), continuing upstream. As inlets are brought to grade, contractor shall install inlet protection. Break Smart Fence 42 where necessary for utility installation, replacing and repairing immediately after pipe installation is complete underneath the Smart Fence. Smart Fence must be repaired and replaced at the end of each working day in these areas. The contractor shall regularly check and maintain all inlet protection, making repairs as-needed during the duration of construction activities until the site has been sufficiently stabilized and approval has been granted by the Washington County Soil Conservation District.
12. Once the site is to grade the contractor shall begin building parking area construction, and begin grading within the Maryland State Highway Right-of-Way (MD SHA R/W).
13. Contractor shall continue working within the MD SHA R/W starting with the construction of riprap outlet protection, stormdrain pipes and curb inlets, curb and gutter and full depth pavement.
14. Once the site is stabilized, the contractor is to contact FSA, Inc. (301) 791-3650, WCSCD (301) 797-6821, and the Washington Co. DPW - Engineering and Construction (240) 313-2400 for approval 5 days prior to the construction of bioretention & sumberged gravel wetland areas, installation of the liner,media, and prior to the placement of the temporary matting and/or riprap, and to schedule the required inspections. All storm drains that outlet to bioretention facilities must be flushed of sediment prior to installation of the media.
15. Construct SWM areas and stabilize with seed, mulch and plantings upon completion. Note that construction vehicles are prohibited from traveling within SWM areas. Install temporary orange fencing to restrict traffic and thereby compaction to area.
16. Contractor shall finalize grading then seed and mulch.
17. Contractor to install landscaping per the Landscape Plan(s).
18. All excess debris or construction material to be taken offsite to approved site with an approved and current sediment & erosion control plan.
19. Contractor to contact FSA, Inc. (301) 791-3650 and WCSCD (301) 797-6821 at least 5 days prior to the removal of any sediment control features to schedule a final site close out review and meeting. Vegetation must meet the 95% overall stabilization requirement per the 2011 Maryland Standards and Specifications for Soil Erosion and Sediment Control prior to scheduling said meeting.
20. Once approval is granted and temporary sediment and erosion controls are removed, complete further stabilization in those areas.

Standard E&S Utility Notes:

1. Contractor to only open up length of trench that can be constructed and backfilled in one working day in paved areas.
2. Contractor to place excavated materials in a dump truck and hauled to an approved location to wasted materials to paved areas.
3. Contractor to backfill trench with approved materials and stabilize disturbed areas in the same working day.
4. In areas where the construction takes places outside of the perimeter controls (i.e Smart Fence 42), contractor to install silt fence along the downhill side of the trench before beginning construction and place excavated material from the trench on the uphill side.
5. If dewatering of the trench is required, contractor to pump water to a filter bag to dewater.
6. Contractor to sweep streets of any debris caused by construction operations and dispose of at an approved location.
7. Contractor to stabilize all disturbed areas with seed & mulch or appropriate street repair.

General E&S Notes:

1. Contractor to only open up length of trench that can be constructed and backfilled in one working day in paved areas.
2. Contractor to remove excavated materials to an approved location to waste materials.
3. All fill material should be brought from a location with an approved and current sediment erosion control plan.
4. Contractor to backfill trench with approved materials and stabilize disturbed areas the same working day.
5. If dewatering of the trench is required, contractor to pump water to a filter bag to dewater.
6. Contractor to sweep streets immediately of any debris or sediments caused by construction operations and dispose of at an approved location.
7. Contractor to stabilize all disturbed areas with seed and mulch or appropriate street repair.
8. All slopes 4:1 or greater to be stabilized with temporary matting immediately.
9. Place 4" minimum topsoil in all green areas before permanent seeding is performed.
10. The USDA soil survey of Washington County shows the soils on this site as being karst landscape soils. Please be alert to the possibility of sinkhole formation.
11. All sinkholes that are present or develop during construction must be remediated and certified by the site Geotechnical Engineer. Contractor to contact Geotechnical Engineer immediately after the discovery of any sinkhole.
12. Maryland Department of the Environment, General Permit for Stormwater Associated with a Construction Activity, NPDES Permit Number MDRC, State Discharge Permit Number 20CP, or an Individual Permit.
13. The Maryland Department of the Environment (General/Individual Permit – Notice of Intent- NOI) application and permit shall be posted and/or available on-site at all times.
14. During construction, all soil erosion and sediment control practices (BMP's) shall be inspected and recorded on the "Standard Inspection Form", "General Permit for Stormwater Associated with Construction Activity" per the Maryland Department of the Environment (General/Individual Permit – Notice of Intent – NOI).
15. Following construction and release of the site for soil erosion and sediment control by the Washington County Soil Conservation District, i.e., all portions of a site have been permanently stabilized, and all stormwater discharges from construction sites that are authorized by the permit are eliminated, the authorized permittee shall submit the Maryland Department of the Environment, General/Individual Permit – Notice of Termination-NOT.

E&S LEGEND

- INLET PROTECTION
- SMART FENCE-42
- SILT FENCE
- LOD -LIMIT OF DISTURBANCE
- OPF OPF -ORANGE PROTECTIVE FENCE
- -MATERIAL STOCKPILE
- -STABILIZED CONSTRUCTION ENTRANCE
- -RIPRAP INFLOW/ OUTLET PROTECTION

GENERAL NOTES:

1. AREAS OF EXCAVATION IN STEEP SLOPES OR HIGHLY ERODIBLE SOILS SHALL BE STABILIZED IMMEDIATELY AFTER BROUGHT TO FINAL GRADE. SEED/MULCH AND MATTING SHALL BE APPLIED TO PROTECT THESE SLOPES FROM EROSION.
2. ANY SPOIL AND/OR BORROW, MUST COME FROM AND/OR GO TO, A SITE WITH AN APPROVED AND CURRENT SOIL EROSION AND SEDIMENT CONTROL PLAN.

GRAPHIC SCALE
30 0 15 30 60 120
(IN FEET)
1 inch = 30 ft.

STATE OF MARYLAND — TIMOTHY E. SEMLER — No. 21601 — PROFESSIONAL ENGINEER
10/01/2025

Professional Certification:
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional under the laws of the State of MARYLAND License #: 21601
Expiration Date: 06.23.2027

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GREENCASTLE, PA 17225 — 717.597.1007
HAGERSTOWN, MD 21740 — 301.791.3800

MARK	DESCRIPTION:	DATE
1	REVISED PER AGENCY COMMENTS	09.30.25
2	REVISED PER AGENCY COMMENTS	08.08.25

NOT APPROVED FOR CONSTRUCTION

SHEETZ - SMITHSBURG
SITUATED ALONG THE WEST SIDE OF MD 66 (MAPLEVILLE ROAD) AT ITS INTERSECTION WITH MD 64 (JEFFERSON BLVD)
SMITHSBURG
WASHINGTON COUNTY, MARYLAND
SHEETZ INC.
243 SHEETZ WAY CLAYSBURG, PA 16625

PROJECT NO.	6086.1
DRAWN BY	KODY WARD
DATE	03.17.2025
PROJECT MANAGER	DAVID TROSTLE
EMAIL:	dtrostle@fsa-inc.com
TAX MAP - GRID - PARCEL(S)	0051 - 0005 - 0086 & 0091
SCALE	1" = 30'

SHEET TITLE

EROSION & SEDIMENT CONTROL PLAN

C-103
SHEET 05 OF 38

SP-25-011

P:\Sheetz\DOCS\PROJECTS\6000\6086\Civil\1 - ENGT\CNS\SGS\TE\6086_1 - ESC PLAN.DWG - 2025 10:57

PADEN AVENUE
LOCAL
30' R/W

EX. WASH. CO. RIGHT OF WAY

WASHINGTON COUNTY ENTRANCE PERMIT REQUIRED FOR ENTRANCE ON PADEN AVENUE

NOSE DOWN CURB

'ONE-WAY' SIGN

MILL & OVERLAY 2' INTO EXISTING PAVEMENT

CURB OPENING

(3) EX. MAILBOXES

'DO NOT ENTER' SIGN

'ONE-WAY' SIGN

'STOP' SIGN

25' MBSL

CHAMFER CONCRETE / PAVEMENT (TYP.)

'DO NOT ENTER' SIGN

6" CURB & GUTTER

RETAINING WALL (BY OTHERS)

FLUSH CURB

DRIVE THRU PICK-UP ZONE TO BE STRIPED RED

6" CURB

PICKUP WINDOW

DOUBLE RAIL W/ BEAM GUARDRAIL

PROPANE TANK STORAGE

PROP. SHEETZ STORE
11842 MAPLEVILLE RD.
6,139 SQ. FT.

AUTOMATIC DOOR OPENER

EMERGENCY PUMP SHUTOFF SWITCH (ESTOPS) (SEE ARCHITECTURAL PLANS)

CONCRETE BOLLARD (TYP.)

BIKE RACK

ICE COOLERS

AUTOMOTIVE PRODUCTS

ADDITIONAL INFORMATION MENU BOARD

ORDER BOARD

DUMPSTER ENCLOSURE

CLEARANCE BAR

N/F
BOWMAN CAVETOWN LLC
1.90 ACRES
L. 7086 F. 0081

PROPOSED LEASE BOUNDARY

MD GRID NORTH
NAD 83

N:719689.89
E:1146704.38

N:720095.46
E:1146866.97

N:720085.13
E:1147042.05

LOADING ZONE (NOT TO BE STRIPED - FOR PLAN APPROVAL ILLUSTRATION ONLY)

6" CURB & GUTTER

TRANSITION MDSHA TYPE 'A' CURB & GUTTER TO 6" CURB

PROPOSED MDSHA R/W

'STOP' SIGN

PYLON SIGN

MDSHA ACCESS PERMIT REQUIRED FOR ENTRANCE(S) ON MAPLEVILLE ROAD (MD66)

TRANSITION MDSHA TYPE 'A' CURB & GUTTER TO 6" CURB & GUTTER

N/F
BOWMAN CAVETOWN LLC
1.67 AC.
L 4795 F 440

CONCRETE BOLLARD (TYP.)

AIR MACHINE

FUEL UNLOADING ZONE

STANDARD UST FIELD

6" CURB & GUTTER

FLAG POLE

FLAG POLE LIGHT

VENT PAD

N/F
LEWIS ORCHARD & FARMS LLC
L 4135 F. 375

ONLY

SEE SHEETS 31-38 FOR ALL WORK WITHIN MDSHA R/W

EX. MD SHA RIGHT OF WAY

N/F
SHA RIGHT-OF-WAY
PER PLAT 14360

JEFFERSON BOULEVARD (MD 64)
MINOR ARTERIAL

EX. HANDHOLE

EX. SIGNAL POLE

SGW #1
(SEE C-301 FOR SWM PLAN)

BIORETENTION #1
(SEE C-303 FOR MDSHA SWM PLAN)

GRASS FOREBAY
(SEE C-301 FOR SWM PLAN)

MAPLEVILLE ROAD (MD 66)
MAJOR COLLECTOR
R/W VARIES

10+00
11+00
12+00
13+00
14+00

GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)
1 inch = 20 ft.

HATCH LEGEND

- PAVEMENT - ASPHALT
- PAVEMENT - CONCRETE
- MILL & OVERLAY
- CONCRETE PAVERS (SEE ARCHITECTURAL PLANS)
- PROPOSED SWM BMP

STRIPING LEGEND

A	4" SOLID YELLOW LINE
B	45° GORE HATCH (4" WIDE, 2' O.C.)
C	24" SOLID WHITE STOP BAR
D	PREFORMED PAVEMENT MARKING
E	4" SOLID DOUBLE YELLOW LINE

LAYOUT NOTES:

1. Contractor shall refer to the Sheetz architectural plans for the exact location of utility entrances, building dimensions, roof leaders, exit doors, exit ramps, and porches.
2. All dimensions shown on this plan shall be verified by the contractor prior to construction. Contractor shall notify Sheetz representative and design engineer of any discrepancies between the plan and field conditions. Contractor is responsible for all dimensions at the project site.
3. All dimensions are to building face, face of curb, or edge of sidewalk unless noted otherwise. All angles are 90 degrees unless otherwise noted.
4. See Detail Sheets for any additional construction information.
5. Contractor shall refer to other plans within this construction set for other pertinent information.
6. Contractor shall provide all labor and materials for the installation of traffic signage and pavement markings shown on the construction plans.
7. All non-landscaped islands shall be painted with stripes 4" wide, at 45° and 2 feet o.c.
8. All striping shall be 4" wide unless noted otherwise.
9. Contractor shall neatly saw-cut all joints where the proposed construction meet existing pavement and concrete.
10. Contractor shall coordinate final location of the Sheetz main freestanding sign with the Sheetz Construction Manager.
11. Sheetz reserves the right to substitute concrete for asphalt pavement.

P:\SHEETZ CULVERS\PROJECTS\SMITHSBURG\MD66 (MAPLEVILLE) & MD64 (JEFFERSON)\CAD\PLOT\SMITHSBURG_MD66_SITE PLAN.DWG 2025.10.07

10/01/2025

Professional Certification:
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional under the laws of the State of: MARYLAND
License #: 20944
Expiration Date: 06.23.2027

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717.597.1001

SATELLITE OFFICE
129 E. PATRICK MACE STREET
HAGERSTOWN, MD 21740
301.791.3800

MARK	DESCRIPTION:	DATE:
1	REVISED PER AGENCY COMMENTS	09.30.25
2	REVISED PER AGENCY COMMENTS	08.18.25

FOR CONSTRUCTION

NOT APPROVED

SHEETZ - SMITHSBURG
SITUATED ALONG THE WEST SIDE OF MD 66 (MAPLEVILLE ROAD) AT ITS INTERSECTION WITH MD 64 (JEFFERSON BLVD)
SMITHSBURG
WASHINGTON COUNTY, MARYLAND
SHEETZ, INC.
243 SHEETZ WAY CLAYSBURG, PA 16625

PROJECT NO.: 6086.1
DWN BY: KODY WARD
DATE: 03.17.2025
PROJECT MANAGER: DAVID TROSTLE
EMAIL: dtrostle@fsa-inc.com
TAX MAP - GRID - PARCEL(S): 0051 - 0005 - 0086 & 0091
SCALE: 1" = 20'

SHEET TITLE
SITE PLAN

C-104
SHEET 06 OF 38

SP-25-011

PADEN AVENUE
LOCAL
50' R/W

EX. WASH. CO. RIGHT OF WAY

PADEN AV

INV: 715.05

EX. HANDHOLE

25' MBSL

N:719689.89
E:1146704.38

N/F
BOWMAN CAVETOWN LLC
1.90 ACRES
L. 7086 F. 0081

TC: 736.43
TG: 735.93

736.34

TC: 738.30
BC: 737.80

TC: 738.67
BC: 738.17

736.91

TC: 737.58
TG: 737.08

TC: 737.42
TG: 736.92

TC: 737.95
BC: 737.45

739.51

TC: 739.69
BC: 739.19

TC: 739.71
BC: 739.21

738.85

738.24

TC: 738.78
BC: 738.28

TC: 738.25
BC: 737.75

TC: 737.78
BC: 737.28

TC: 741.00
BC: 740.50

PROPOSED MDSHA R/W

SEE SHEETS 31-38 FOR ALL WORK WITHIN MDSHA R/W

9+00

10+00

11+00

12+00

13+00

14+00

MD GRID NORTH
NAD 83

TC: 739.00
BC: 738.50

TC: 738.56
TG: 738.06

TC: 738.95
BC: 738.45

TC: 738.85
BC: 738.35

TC: 738.88
BC: 738.38

TC: 738.82
BC: 738.82

TC: 738.92
BC: 738.42

738.42

738.68

738.32

738.82

738.60

738.54

738.52

738.49

738.31

738.04

738.02

738.20

738.22

738.85

738.88

738.82

738.68

738.32

738.49

738.85

738.82

738.82

738.20

738.22

738.02

738.38

738.82

738.68

738.32

738.49

738.85

738.82

738.82

738.20

738.22

738.02

738.38

FF: 739.00

FF: 739.00

FF: 739.00

FG: 739.00

PROP. SHEETZ STORE
11842 MAPLEVILLE RD.
F.F. = 739.00

SEE C-106 FOR GAS CANOPY BLOWUP

TC: 737.76
TS: 737.26

TC: 738.06
TG: 737.56

TC: 738.20
BC: 737.70

TC: 738.81
BC: 738.31

TC: 738.88
BC: 738.38

TC: 738.15
BC: 737.65

TC: 737.68
TG: 737.18

TC: 738.15
BC: 737.65

TC: 736.97
BC: 736.47

TC: 737.48
TG: 736.98

737.15

736.75

TC: 735.50
TG: 735.00

736.35

736.75

TC: 735.46
BC: 734.96

736.15

736.69

735.72

TC: 736.52
TG: 736.02

TC: 737.25
BC: 736.75

TC: 738.80
BC: 738.30

N:720095.46
E:1146866.97

EX. U/P
#C&P 53

EX. 8" S.S.

EX. MD SHA RIGHT-OF-WAY

N/F
SHA RIGHT-OF-WAY
PER PLAT 14360

TC: 735.78
BC: 735.28

N:720079.45
E:1146978.06

SGW #1
FG = 724.25
(SEE C-301 FOR SWM PLAN)

EX. 4" F.M.

EX. HANDHOLE

SS MH:
TR:722.83
INV:716.64

JEFFERSON BOULEVARD (MD 64)
MINOR ARTERIAL

N/F
BOWMAN CAVETOWN LLC
1.67 AC.
L.4795 F.440

STANDARD
OST field

735.97

735.14

TC: 736.30
BC: 735.80

TC: 736.00
BC: 735.50

735.52

734.75

TC: 734.65
BC: 734.15

TC: 733.85
BC: 733.35

TS: 735.10
BC: 734.60

TC: 733.54
TG: 733.04

EX. MD SHA RIGHT-OF-WAY

BIORETENTION #1
(SEE C-303 FOR MDSHA SWM PLAN)

GRASS FOREBAY
FG = 730.50
(SEE C-301 FOR SWM PLAN)

TC: 732.66
BC: 732.16

TC: 732.22
TG: 731.72

EX. MD SHA RIGHT-OF-WAY

EX. HANDHOLE

EX. SIGNAL POLE

EX. 24"
INV: 72.

MAPLEVILLE ROAD (MD 66)
MAJOR COLLECTOR
R/W VARIES

EX. U/P
#H17344

EX. 18"CMP

EX. U/P
#117343

N/F
LEWIS ORCHARD &
FARMS LLC
L. 4135 F. 375

GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)
1 inch = 20 ft.

General Grading Notes:

1. **All site work shall be done in accordance with the plans prepared by FSA Inc., the current requirements of the** Stormwater Management Ordinance of Washington County, the applicable sections of the MDSHA standard specifications for roadway construction, and all other pertinent federal and state laws.
2. The contractor shall comply at all times with applicable federal, state and local laws, provisions, and policies governing safety and health.
3. The contractor shall be responsible for examining the areas and conditions under which the project is to be constructed prior to the submission of a bid. Submission of a bid shall be construed to mean the contractor has reviewed the site and is familiar with conditions and constraints of the site. If discrepancies between field conditions and design plans are discovered, contractor shall notify owner and engineer immediately.
4. Contractor shall refer to the geotechnical report prepared by Hillis-Carnes Engineering Associates prior to initiation of any earthwork activity.
5. Before excavation, all underground utilities shall be located in the field by the proper authorities. The contractor shall notify Miss Utility at (1-800-257-7777). The location of all utilities and underground structures are approximate and may not all be shown. It is the responsibility of the contractor to determine the existence and exact location of all utilities and underground structures.
6. All existing trees, vegetation, pavements, concrete foundations, structures and organic topsoil shall be stripped and removed from new construction areas unless noted otherwise.
7. The USDA soil survey of Washington County shows the soils on this site as being karst landscape soils. Please be alert to the possibility of sinkhole formation.
8. All sinkholes that are present or develop during construction must be remediated and certified by the site Geotechnical Engineer. Contractor to contact Geotechnical Engineer immediately after the discovery of any sinkhole.
9. Contractor to remove excavated materials to an approved location to waste materials.
10. All fill brought to the site must come from a location with an approved and current sediment erosion control plan.
11. If dewatering of the trench is required, contractor to pump water to a filter bag to dewater.
12. Contractor to sweep streets immediately of any debris or sediments caused by construction operations and dispose of at an approved location.
13. Contractor to stabilize all disturbed areas with seed and mulch or appropriate street repair.
14. All slopes shall be 2:1 (horizontal: vertical) maximum unless noted otherwise. All slopes 3:1 or greater shall be permanently stabilized with vegetation.
15. Contractor to only open up length of trench that can be constructed and backfilled in one working day in paved areas.
16. Contractor to backfill trench with approved materials and stabilize disturbed areas the same working day.
17. Place 4" minimum topsoil in all green areas before permanent seeding is performed. This includes HOA property.
18. An as-built drawing of new utility services must be prepared by the contractor and submitted to the owner upon completion of the project.
19. All areas not paved shall be top soiled, seeded, sodded, mulched and/or landscaped unless otherwise noted in the construction drawings, site specifications or instructed by the owner.
20. All elevations shown are referenced to benchmarks on the project survey and shall be field verified by the contractor at groundbreaking.
21. All spot elevations are referenced to the finished ground surface unless noted otherwise.
22. Contractor shall reference detailed building plans for exact building dimensions, elevations, and utility connection points.
23. Contractor shall refer to other plans within this construction set for other pertinent information.

HATCH LEGEND

- PROPOSED SWM BMP
- PROPOSED GRASS FOREBAY
- PROPOSED RIP RAP

Subgrade Preparation:
Prior to the construction of foundations, floor slabs, or pavements, or the placement of fill in any structural or pavement areas, all organic materials, frozen, wet, soft or loose soils, and other deleterious materials should be removed and wasted. If rock is encountered in the subgrade, remove an additional 6 inches below subgrade and backfill with compacted CR-6 crushed stone cushion.

After the subgrade in cuts and fills has been finally shaped to the specified cross section, it shall be carefully and thoroughly proof rolled with a 20 ton roller or equivalent to determine soft or unsuitable areas. Prior to paving soft or unsuitable areas shall be removed and backfilled with suitable material to the specified density. (Over-excavation to be monitored and approved by owner's geotechnical engineer prior to removal).

Fill in structural and pavement areas should be placed in lifts which are eight inches or less in loose thickness. Material 1 ft. below the top of subgrade shall be compacted to not less than 92% of the maximum dry density as specified in T 180. Material in the top 1 ft. shall be compacted to not less than 97% of the maximum dry density. In building areas, the fill should extend a minimum of ten feet beyond building lines where floor slabs are constructed on fill.

Notes:

- **All proposed storm drain pipes must be placed on 95% compacted fill according to AASHTO T180A standards.**
- **Due to karst soils on the site, there is increased risk of sinkhole development within the swm facility. if encountered, contact a Geotechnical Engineer to prepare remediation plan.**
- **Retaining walls greater than 3'-0" in height will require a building permit. It is also required that design details and calculations (signed and sealed by a Professional Engineer licensed in the State of Maryland) be submitted for review and approval at the time of building permit application.**

STATE OF MARYLAND
ENGINEER
10/01/2025

Professional Certification:
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional under the laws of the State of MARYLAND, License # 20984, Expiration Date: 08.23.2027

FSA
FREDERICK SEIBERT & ASSOCIATES, INC.
CIVIL ENGINEERS • SURVEYORS • LANDSCAPE ARCHITECTS • LAND PLANNERS
fsa-inc.com
109 SOUTH MAIN STREET, HAGERSTOWN, MD 21740, 301.790.3800
42 WEST MAIN STREET, NEW BLOOMFIELD, PA 17068, 717.725.7581
4581 SOUTH HANOVER STREET, CARLISLE, PA 17013, 717.701.8111
142 NORTH ANDREWS DRIVE, GREENCASTLE, PA 17225, 717.597.1007
243 SHEETZ WAY CLAYSBURG, PA 16625

©2025

NO. | DESCRIPTION | DATE

NOT APPROVED FOR CONSTRUCTION

SHEETZ - SMITHSBURG
SITUATED ALONG THE WEST SIDE OF MD 66 (MAPLEVILLE ROAD) AT ITS INTERSECTION WITH MD 64 (JEFFERSON BLVD)
SMITHSBURG
WASHINGTON COUNTY, MARYLAND

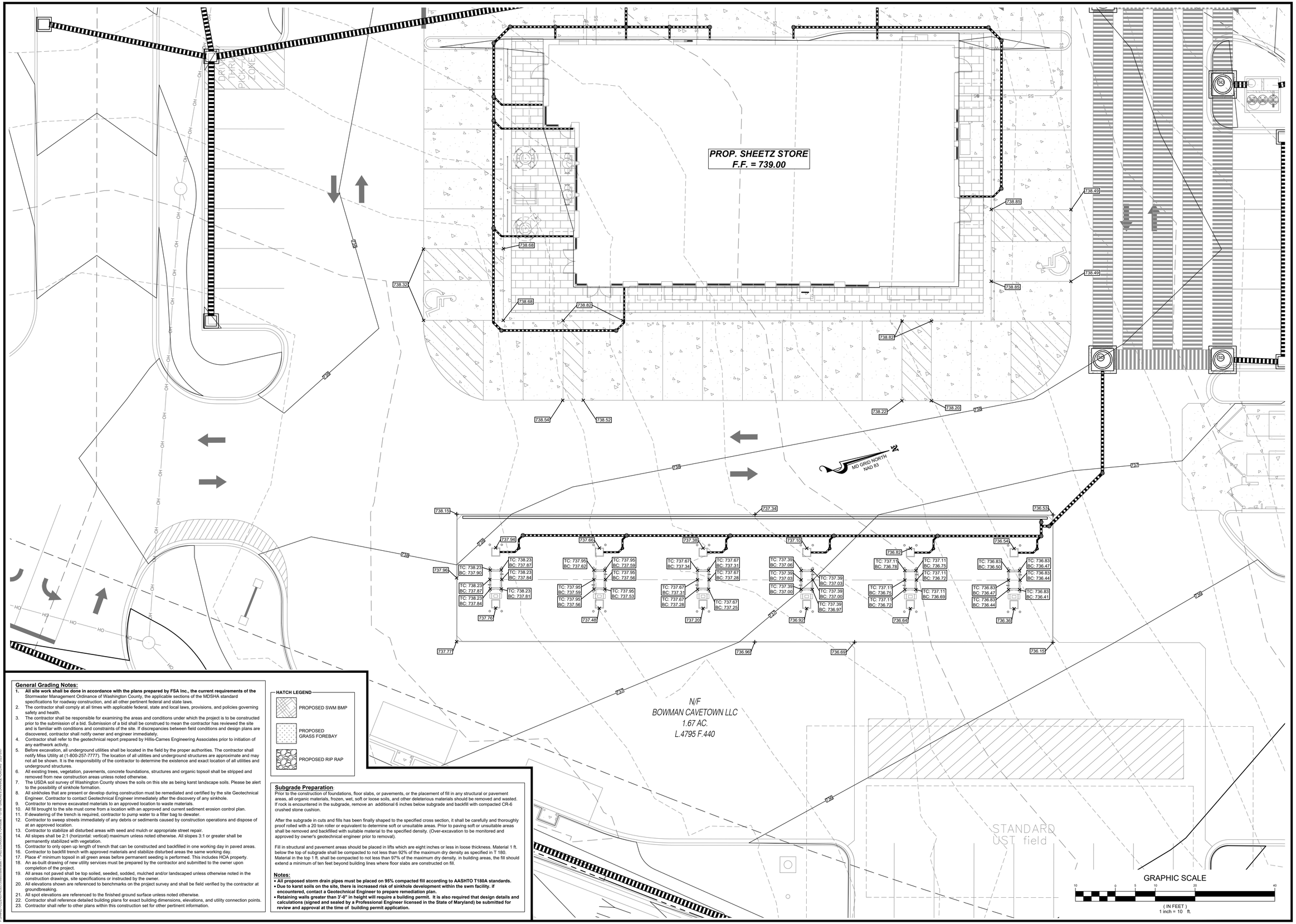
PROJECT NO. 6086.1
DWN BY: KODY WARD
DATE: 03.17.2025
PROJECT MANAGER: DAVID TROSTLE
EMAIL: dtrostle@fsa-inc.com
TAX MAP - GRID - PARCEL(S): 0051 - 0005 - 0086 & 0091
SCALE: 1" = 20'

SHEET TITLE
GRADING AND DRAINAGE PLAN

C-105
SHEET 07 OF 38

SP-25-011

P:\SHEETZ COLFER\PLOT\SHEETZ-SMITHSBURG.DWG, 3/17/2025 8:31:39 AM, KODY WARD, 1:1, 20.00, 0.00, 0.00, 0



General Grading Notes:

1. **All site work shall be done in accordance with the plans prepared by FSA Inc., the current requirements of the** Stormwater Management Ordinance of Washington County, the applicable sections of the MDSHA standard specifications for roadway construction, and all other pertinent federal and state laws.
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7. The USDA soil survey of Washington County shows the soils on this site as being karst landscape soils. Please be alert to the possibility of sinkhole formation.
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9. Contractor to remove excavated materials to an approved location to waste materials.
10. All fill brought to the site must come from a location with an approved and current sediment erosion control plan.
11. If dewatering of the trench is required, contractor to pump water to a filter bag to dewater.
12. Contractor to sweep streets immediately of any debris or sediments caused by construction operations and dispose of at an approved location.
13. Contractor to stabilize all disturbed areas with seed and mulch or appropriate street repair.
14. All slopes shall be 2:1 (horizontal: vertical) maximum unless noted otherwise. All slopes 3:1 or greater shall be permanently stabilized with vegetation.
15. Contractor to only open up length of trench that can be constructed and backfilled in one working day in paved areas.
16. Contractor to backfill trench with approved materials and stabilize disturbed areas the same working day.
17. Place 4" minimum topsoil in all green areas before permanent seeding is performed. This includes HOA property.
18. An as-built drawing of new utility services must be prepared by the contractor and submitted to the owner upon completion of the project.
19. All areas not paved shall be top soiled, seeded, sodded, mulched and/or landscaped unless otherwise noted in the construction drawings, site specifications or instructed by the owner.
20. All elevations shown are referenced to benchmarks on the project survey and shall be field verified by the contractor at groundbreaking.
21. All spot elevations are referenced to the finished ground surface unless noted otherwise.
22. Contractor shall reference detailed building plans for exact building dimensions, elevations, and utility connection points.
23. Contractor shall refer to other plans within this construction set for other pertinent information.

HATCH LEGEND

- PROPOSED SWM BMP
- PROPOSED GRASS FOREBAY
- PROPOSED RIP RAP

Subgrade Preparation:

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After the subgrade in cuts and fills has been finally shaped to the specified cross section, it shall be carefully and thoroughly proof rolled with a 20 ton roller or equivalent to determine soft or unsuitable areas. Prior to paving soft or unsuitable areas shall be removed and backfilled with suitable material to the specified density. (Over-excavation to be monitored and approved by owner's geotechnical engineer prior to removal).

Fill in structural and pavement areas should be placed in lifts which are eight inches or less in loose thickness. Material 1 ft. below the top of subgrade shall be compacted to not less than 92% of the maximum dry density as specified in T 180. Material in the top 1 ft. shall be compacted to not less than 97% of the maximum dry density. in building areas, the fill should extend a minimum of ten feet beyond building lines where floor slabs are constructed on fill.

Notes:

- **All proposed storm drain pipes must be placed on 95% compacted fill according to AASHTO T180A standards.**
- **Due to karst soils on the site, there is increased risk of sinkhole development within the swm facility. if encountered, contact a Geotechnical Engineer to prepare remediation plan.**
- **Retaining walls greater than 3'-0" in height will require a building permit. It is also required that design details and calculations (signed and sealed by a Professional Engineer licensed in the State of Maryland) be submitted for review and approval at the time of building permit application.**

P:\Sheetz Cl\2025\PC\ACTIVE\6086\6086.1 - SHEETZ\DWGS\SITE PLANS\6086.1 - SITE - GRADING, DRAINAGE PLAN.DWG, 10/1/2025 8:51:51 AM, Kody Ward

STATE OF MARYLAND — KODY WARD — No. 22080 — REGISTERED PROFESSIONAL ENGINEER

10/01/2025

Professional Certification:
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional under the laws of the State of MARYLAND License # 22080
Expiration Date: 06.23.2027

FSA
FREDERICK SEIBERT & ASSOCIATES, INC.
CIVIL ENGINEERS • SURVEYORS • LANDSCAPE ARCHITECTS • LAND PLANNERS
fsa-inc.com
135 Thomas Johnson Drive, Suite 202, FREDERICK, MD 21702 301.695.1081
HAGERSTOWN, MD 21740 301.791.3800
GREENCASTLE, PA 17225 717.597.1007
CARLISLE, PA 17013 717.701.8111
NEW BLOOMFIELD, PA 17068 717.275.7537

© 2025

MARK	DESCRIPTION	DATE

NOT FOR CONSTRUCTION
APPROVED PLAN

SHEETZ - SMITHSBURG
SITUATED ALONG THE WEST SIDE OF MD 66 (TAPPS VILLE ROAD) AT ITS INTERSECTION WITH MD 64 (JEFFERSON BLVD)
SMITHSBURG
WASHINGTON COUNTY, MARYLAND
SHEETZ INC
243 SHEETZ WAY CLAYSBURG, PA 16625

PROJECT NO.	6086.1
DWN BY	KODY WARD
DATE	03.17.2025
PROJECT MANAGER	DAVID TROSTLE
EMAIL	dtrostle@fsa-inc.com
TAX MAP - GRID - PARCEL(S)	0051 - 0005 - 0086 & 0091
SCALE	1" = 10'
SHEET TITLE	GRADING & DRAINAGE PLAN (BLOWUP)

C-106
SHEET 08 OF 38

SP-25-011

PADEN AVENUE
LOCAL
30' R/W

PADEN AVE

EX. WASH. CO. RIGHT OF WAY

EX. U/P #H24877

(3) EX. MAILBOXES

EX. SPEED LIMIT SIGN

EX. 12" x 18" CMP

INV: 715.05

EX. 'NO TRESPASSING' SIGN

EX. 'STOP' SIGN

EX. HANDHOLE

6" WATER MAIN (BY OTHERS)

2" HDPE WATER LATERAL (MUST MEET REQUIREMENTS OF PLUMBING CODE)

6" SDR-26 PVC (PRIVATE)

eONE GRINDER PUMP

1.25" FORCE MAIN (PRIVATE)

1.25" BALL VALVE

4" BALL VALVE

1.25" FORCE MAIN (PUBLIC)

CONTRACTOR SHALL BE RESPONSIBLE FOR CONNECTION INTO THE EX. FORCE MAIN AND FOR ALL BY-PASS PUMPING.

CONTRACTOR TO FIELD VERIFY DEPTH & LOCATION OF EX. SANITARY SEWER FORCEMAIN

SSCO4 SSCO3 SSCO2 SSCO1

25' MBSL

NEW OVERHEAD LINE LOCATION

SD14 SD15 SD12 SD13 SD11 SD10 SD8 SD9 SD7 SD6 SDJB1 SDJB4 SDJB3 SDJB2

SEE C-108 FOR BLOWUP

PROP. SHEETZ STORE
11842 MAPLEVILLE RD.
F.F. = 739.00

SEE C-108 FOR BLOWUP

SEE C-108 FOR BLOWUP

N:719689.89
E:1146704.38

N:720095.46
E:1146866.97

N/F
BOWMAN CAVETOWN LLC
1.90 ACRES
L. 7086 F. 0081

MD GRID NORTH
NAD 83

EX. OVERHEAD LINE TO BE RELOCATED

NEW U/P

ADS BAYFILTER

UNDERGROUND SWM
(SEE C-301 FOR SWM PLAN)

TRENCH DRAIN #1
(ZURN 8612N)

SEE C-108 FOR BLOWUP

EX. MD SHA RIGHT-OF-WAY

6" SOLID PVC

RETAINING WALL (BY OTHERS)

CO36 CO37 CO38

EX. 8" S.S.

EX. 4" F.M.

EX. U/P #C&P 53

N/F
SHA RIGHT-OF-WAY
PER PLAT 14360

JEFFERSON BOULEVARD (MD 64)
MINOR ARTERIAL

SGW #1
(SEE C-301 FOR SWM PLAN)

EX. SHA 'NO TRESPASSING' SIGN

SS MH
TR:722.83
INV:716.84

EX. U/P #C&P 2

(3) EX. ROAD SIGNS

EX. HANDHOLE

25' MBSL

PROPOSED MDSHA R/W

NEW OVERHEAD LINE LOCATION

EX. OVERHEAD LINE TO BE RELOCATED

NEW U/P

EX. U/P #H21884

N/F
BOWMAN CAVETOWN LLC
1.67 AC.
L.4795 F.440

9+00

NEW OVERHEAD LINE LOCATION

EX. U/P TO BE REMOVED

EX. U/P #H22388

SERVICE LINES TO EX. HOUSE TO BE REMOVED

Unloading Zone

SERVICE LINE TO EX. HOUSE TO BE REMOVED

TANK FIELD
(SEE PETROLEUM PLANS FOR DETAILS)

N/F
LEWIS ORCHARD &
FARMS LLC
L. 4135 F. 375

EX. U/P TO BE RELOCATED

10+00

EX. OVERHEAD LINE TO BE RELOCATED

EX. OVERHEAD LINE TO BE RELOCATED

SD3

SD16
(SNOUT REQ'D)

25' MBSL

ES6 ES3 ES2 ES4

SDMH2

SD5
(SNOUT REQ'D)

SD4
(SNOUT REQ'D)

SD2

GRASS FOREBAY
(SEE C-301 FOR SWM PLAN)

ES1

BIORETENTION #1
(SEE C-303 FOR MDSHA SWM PLAN)

SERVICE LINE TO EX. HOUSE TO BE REMOVED

EX. MD SHA RIGHT-OF-WAY

PROPOSED MDSHA R/W

SD18

SD1

EX. SHA 'NO TRESPASSING' SIGN

EX. HANDHOLE

EX. SIGNAL POLE

SDMH1

EX. 24" RCP
INV: 723.00

SEE SHEETS 31-38 FOR ALL WORK WITHIN MDSHA R/W

11+00

12+00

SERVICE LINE TO EX. HOUSE TO BE REMOVED

13+00

MAPLEVILLE ROAD (MD 66)
MAJOR COLLECTOR
R/W VARIES

14+00

EX. U/P #17344

EX. 18"CMP

EX. U/P #117343

GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)
1 inch = 20 ft.

HATCH LEGEND

PROPOSED SWM BMP

GENERAL UTILITY NOTES:

1. Before excavation, all underground utilities shall be located in the field by the proper authorities. The contractor shall notify Miss Utility at (1-800-257-7777). The location of all utilities and underground structures are approximate and may not all be shown. It is the responsibility of the contractor to determine the existence and exact location of all utilities and underground structures.
2. The contractor shall be responsible for examining the areas and conditions under which the project is to be constructed prior to the submission of a bid.
3. It is the responsibility of the contractor to bid and perform all utility work in compliance to all applicable local and state codes and regulations.
4. Contractor shall coordinate with the appropriate utility company on the addition, removal, and/or relocation of utilities and utility poles and the extension of all proposed utilities to the Sheetz project structures.
5. Utility companies and contacts are listed on Sheet 2.
6. All offsite work shall be done in accordance with the plans prepared by FSA Inc., the current requirements of the City of Hagerstown Utilities Department, Washington County Department of Water Quality, and the applicable sections of the MDSHA standard specifications for roadway construction, and all other pertinent federal and state laws.
7. The contractor shall comply at all times with applicable federal, state, and local laws, provisions, and policies governing safety and health.
8. The contractor shall be responsible for all fees associated with the installation, inspecting, testing, and final acceptance of all proposed utility construction unless otherwise coordinated beforehand with Sheetz.
9. All utilities shall be installed in accordance with the specifications of the respective utility company. It is the responsibility of the contractor to ensure all utilities are installed correctly to meet project requirements whether installed by the contractor or not.
10. Conduit locations to freestanding signs and site light poles to be coordinated with Sheetz Construction Manager.
11. Contractor shall coordinate and verify with Sheetz Construction Manager on location and size of the store grease trap. Grease trap shall be provided with "t" pipe in outflow chamber. All sanitary sewer pipe shall be SDR-26 PVC unless otherwise noted.
12. Contractor shall coordinate with Sheetz Construction Manager and Sheetz IT Department on the conduit route for tele/communication services.
13. Contractor shall refer to other plans within this construction set for other pertinent information.
14. An as-built drawing of new utility services shall be prepared by the contractor and submitted to the owner upon completion of the project.
15. A concrete collar shall be cast around all inlets, manholes, and cleanouts that are located within asphalt areas as shown on Detail 6-C-505.

EXISTING WATER ALLOCATION_____400 GPD
PROPOSED WATER ALLOCATION_____2500 GPD
EXISTING WASTEWATER ALLOCATION_____400 GPD
PROPOSED WASTEWATER ALLOCATION____1800 GPD

A CONSTRUCTION PERMIT SHALL BE OBTAINED FROM THE CITY OF HAGERSTOWN UTILITIES DEPARTMENT PRIOR TO BEGINNING CONSTRUCTION OF THE WATERLINE. CONTACT THE UTILITIES ENGINEERING DEPARTMENT AT 301-739-8577, EXT 653 FOR THE PERMIT APPLICATION

WATER & SEWER UTILITY NOTES:

U.1 All water facilities shall be constructed in conformance with City of Hagerstown Utilities Department and State of Maryland Department of the Environment standards and specifications.
a. All fittings, bends, and appurtenances shall be installed with proper and required concrete buttresses. All dead end services shall be properly capped and buttressed.
b. All pipe joints shall be left open until water line has been hydrostatically tested unless directed otherwise by the City of Hagerstown Utilities Department.
c. All underground water lines are to be installed with a cover of 3.5' below finished grade.

U.2 All sanitary sewer facilities shall be constructed in conformance with the Washington County Water Quality Department and State of Maryland Department of the Environment standards and specifications.
a. All sewer lines to be PVC-SDR-26 (Gravity), or SDR-11 (Forcemain).
b. All bedding and embedment material and compaction shall meet Hagerstown Utilities Department specifications.

U.3 The contractor shall verify the location and elevation of existing utilities before starting construction.

U.4 The Contractor shall supply all bends, fittings and buttresses as required to achieve the horizontal and vertical alignments as shown on the plans. Bends and fittings may not be shown on the plan and profile but are to be included in the Contractor's cost and their exact location is at the option of the Contractor to achieve the horizontal layout shown hereon.

U.5 Contractor to verify with utility companies that proposed sediment erosion control measures are located so as to avoid conflicts with their proposed utility installation before placement of sediment erosion control measures.

U.6 Washington County is not responsible for the maintenance/care of the proposed grinder pump that services the building.

WASHINGTON COUNTY DEPARTMENT OF WATER QUALITY

This approval is for general conformance with the County's requirements for design and layout of proposed sewer and/or water system improvements or extensions. All sewer and/or water system improvements or extensions shall be constructed in strict accordance with the County's latest addition of the Standard Specifications for Construction of Sanitary Sewers and/or Water Lines. This approval does not guarantee availability of sewer and/or water service. Sewer and/or water service availability is subject to conformance with all rules, policies and regulations established by the County and in effect at the time application for service is made, and/or the availability of allocation remaining in other jurisdictions' facilities that may be granted to the County. This approval shall be valid for a period of TWO years.

SIGNATURE DATE

CITY OF HAGERSTOWN UTILITIES DEPARTMENT WATER DIVISION

This approval is for the design and layout of the proposed water system improvements. All water system improvements shall be constructed to the standards in effect at the time of construction. This approval does not guarantee availability of water service. Water service is available subject to conformance with all policies and standards in effect at the time of application for service, payment of fees and approval of the water service application. The Water Division does not guarantee a specific water pressure or flow at any meter or fire hydrant. This approval is valid for a period of one year.

SIGNATURE DATE

STATE OF MARYLAND
JOSEPH S. SIEBERT
No. 20601
PROFESSIONAL ENGINEER
10/01/2025

Professional Certification:
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional under the laws of the State of MARYLAND License # 20601
Expiration Date: 06.23.2027

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400 SOUTH HANOVER STREET CARLISLE, PA 17013 717.791.8111
142 MONUMENT DRIVE GREENCASTLE, PA 17225 717.597.1007
135 SHOWALTER ROAD, SUITE 7 HAGERSTOWN, MD 21740 301.791.3800

MARK	DESCRIPTION	DATE
1	REVISED PER AGENCY COMMENTS	09.30.25
2	REVISED PER AGENCY COMMENTS	06.05.26

NOT APPROVED FOR CONSTRUCTION

SHEETZ - SMITHSBURG
SITUATED ALONG THE WEST SIDE OF MD 66 (MAPLEVILLE ROAD) AT ITS INTERSECTION WITH MD 64 (JEFFERSON BLVD)
SMITHSBURG WASHINGTON COUNTY, MARYLAND
SHEETZ, INC.
243 SHEETZ WAY CLAYSBURG, PA 16625

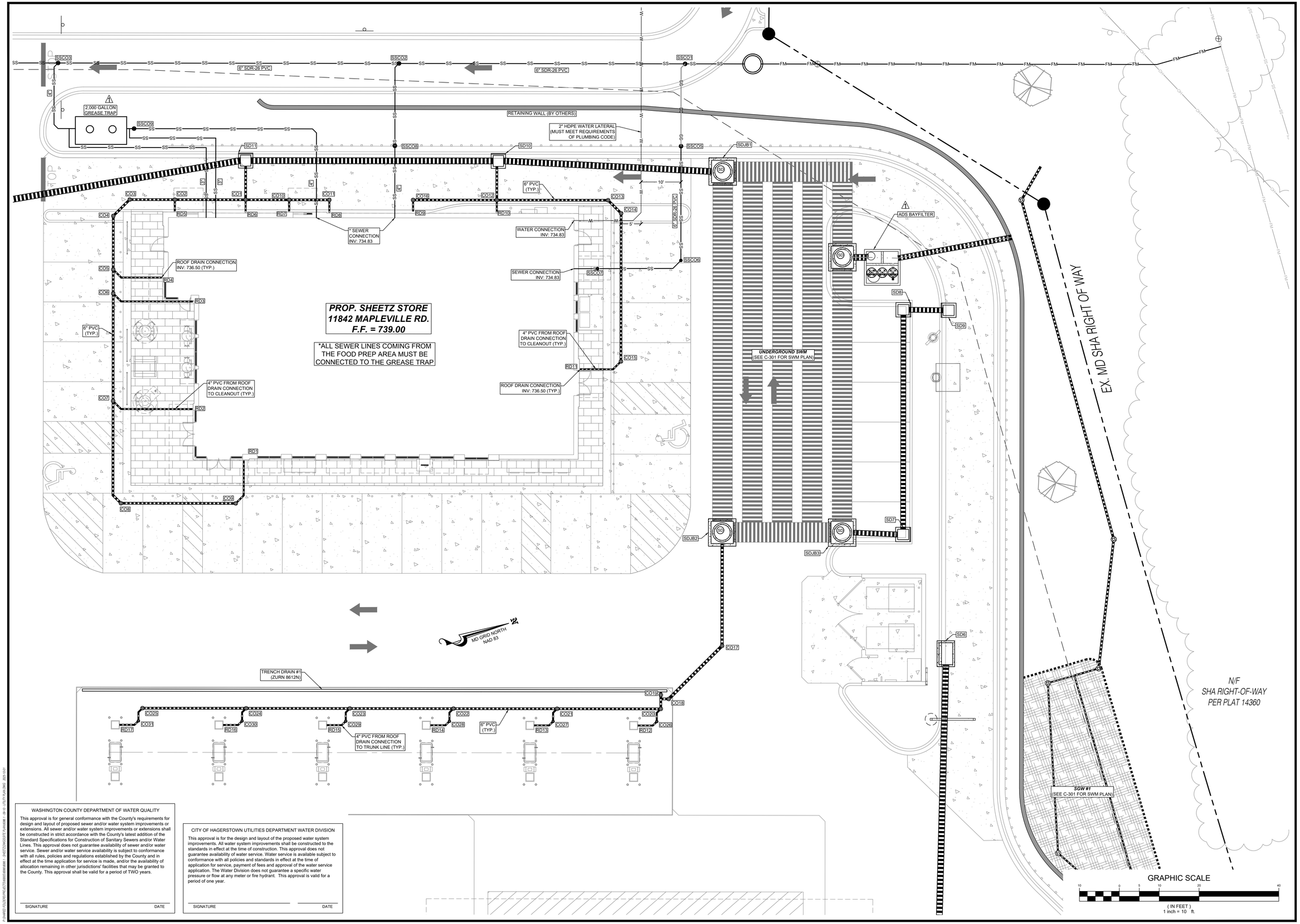
PROJECT NO. 6086.1
OWN BY KODY WARD
DATE 03.17.2025
PROJECT MANAGER DAVID TROSTLE
EMAIL: dtrostle@fsa-inc.com
TAX MAP - GRID - PARCEL(S) 0051 - 0005 - 0086 & 0091
SCALE 1" = 20'
SHEET TITLE

UTILITY PLAN

C-107
SHEET 09 OF 38

SP-25-011

P:\SHEETZ CLOUD\PROJECTS\6086\DWG\6086 | SHEETZ\6086SDT PLAN.DWG | 06.05 - UTILITY PLAN.DWG 2025.10.01



WASHINGTON COUNTY DEPARTMENT OF WATER QUALITY

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SIGNATURE DATE

CITY OF HAGERSTOWN UTILITIES DEPARTMENT WATER DIVISION

This approval is for the design and layout of the proposed water system improvements. All water system improvements shall be constructed to the standards in effect at the time of construction. This approval does not guarantee availability of water service. Water service is available subject to conformance with all policies and standards in effect at the time of application for service, payment of fees and approval of the water service application. The Water Division does not guarantee a specific water pressure or flow at any meter or fire hydrant. This approval is valid for a period of one year.

SIGNATURE DATE

P:\SHEETZ CO_CENTER\PROJECTS\6086\SMITHSBURG\6086 - SMITHSBURG - UTILITY PLAN.DWG 2025-10-01

STATE OF MARYLAND
DAVID M. TROSTLE
No. 21661
PROFESSIONAL ENGINEER
10/01/2025

Professional Certification:
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional under the laws of the State of: MARYLAND License #: 21661
Expiration Date: 06.23.2027

FSA
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GREENCASTLE, PA 17225 717.597.1007
NEW BLOOMFIELD, PA 17068 717.275.7537
EAST MANCHESTER 400 SOUTH QUEEN STREET

MARK	DESCRIPTION:	DATE:
1	REVISED PER AGENCY COMMENTS	09.05.25

NOT APPROVED FOR CONSTRUCTION

SHEETZ - SMITHSBURG
SITUATED ALONG THE WEST SIDE OF MD 66 (MAPLEVILLE ROAD) AT ITS INTERSECTION WITH MD 64 (JEFFERSON BLVD)
SMITHSBURG
WASHINGTON COUNTY, MARYLAND
SHEETZ, INC.
243 SHEETZ WAY CLAYSBURG, PA 16625

PROJECT NO.	6086.1
DWN BY	KODY WARD
DATE	03.17.2025
PROJECT MANAGER	DAVID TROSTLE
EMAIL:	dtrostle@fsa-inc.com
TAX MAP - GRID - PARCEL(S)	0051 - 0005 - 0086 & 0091
SCALE	1" = 10'

SHEET TITLE

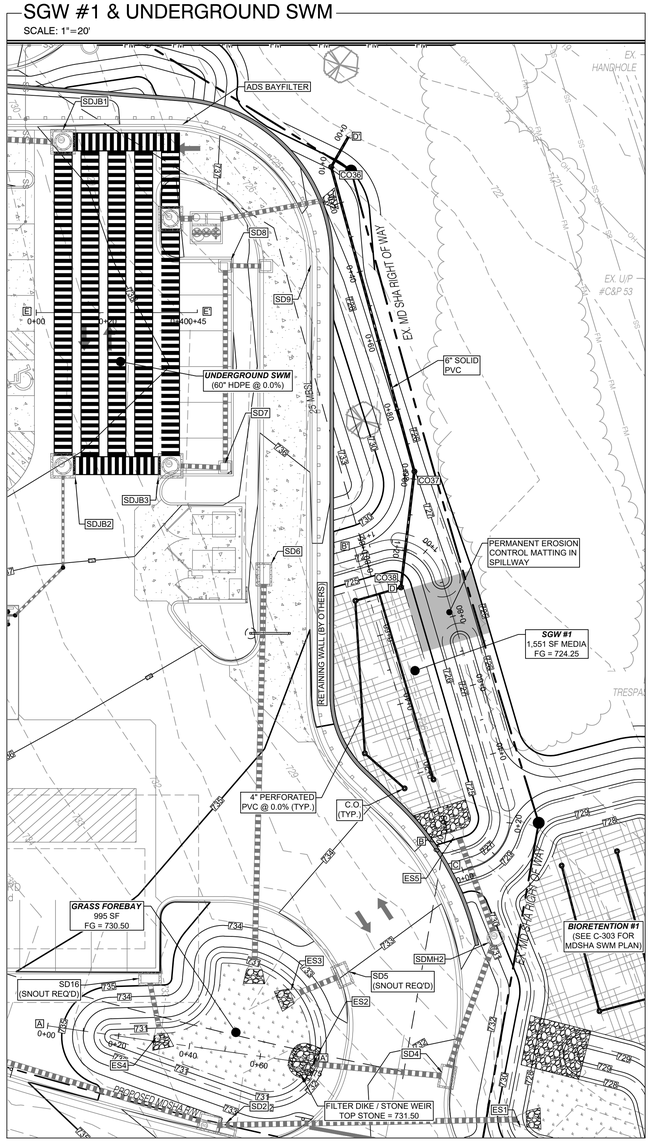
UTILITY PLAN (BLOWUP)

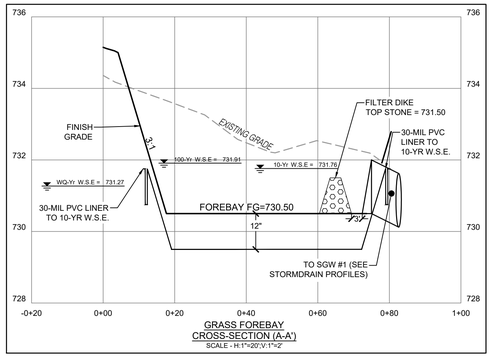
C-108
SHEET 10 OF 38

SP-25-011

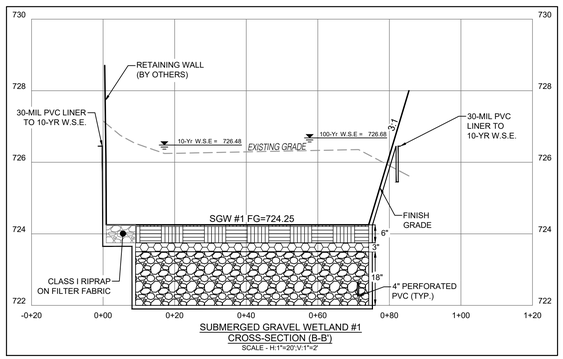
SGW #1 & UNDERGROUND SWM

SCALE: 1"=20'

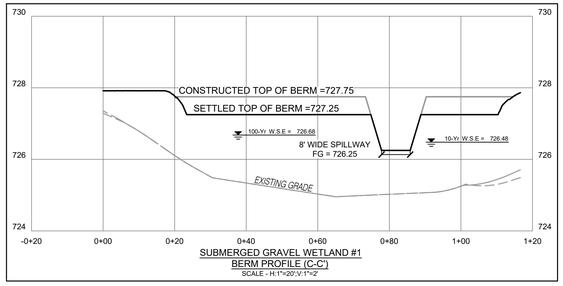




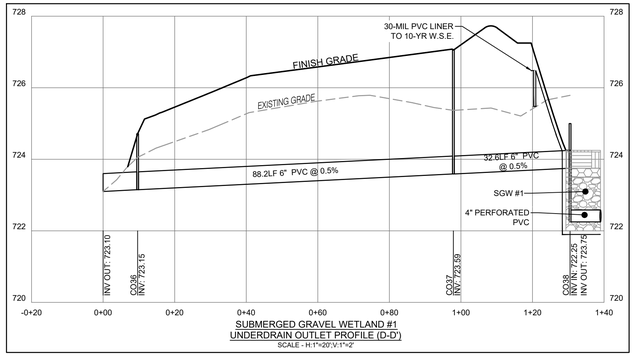
GRASS FOREBAY
CROSS-SECTION (A-A')
SCALE - H:1"=20';V:1"=2'



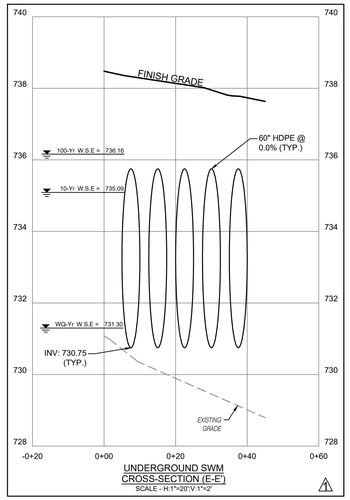
SUBMERGED GRAVEL WETLAND #1
CROSS-SECTION (B-B')
SCALE - H:1"=20';V:1"=2'



SUBMERGED GRAVEL WETLAND #1
BERM PROFILE (C-C')
SCALE - H:1"=20';V:1"=2'



SUBMERGED GRAVEL WETLAND #1
UNDERDRAIN OUTLET PROFILE (D-D')
SCALE - H:1"=20';V:1"=2'

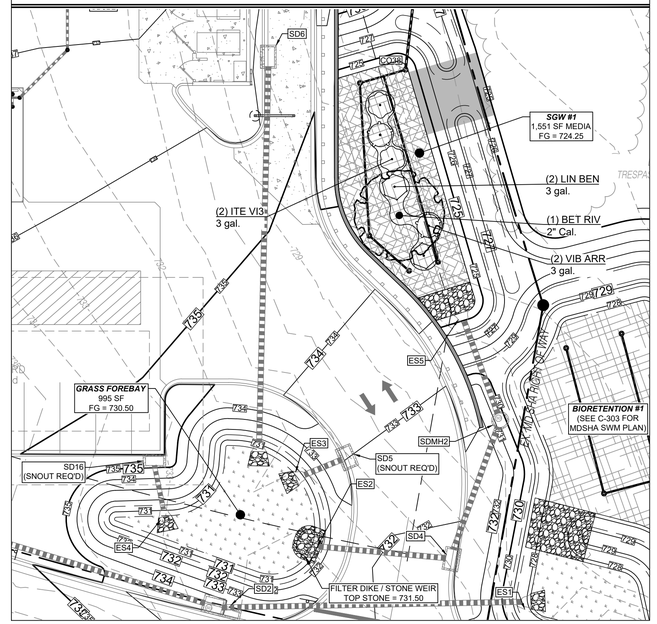


UNDERGROUND SWM
CROSS-SECTION (E-E')
SCALE - H:1"=20';V:1"=2'

Note: See detail 4-C-302 for additional information

SGW #1 LANDSCAPE PLAN

SCALE: 1"=20'



SHEETZ STORMWATER MANAGEMENT NOTES:

1. All site work shall be done in accordance with the plans prepared by FSA, the current requirements of Washington County, MD, the applicable sections of the MDSHA standard specifications for roadway construction, and all other pertinent federal and state laws.
2. The contractor shall comply at all times with applicable federal, state and local laws, provisions, and policies governing safety and health.
3. The contractor shall be responsible for examining the areas and conditions under which the project is to be constructed prior to the submission of a bid. Submission of a bid shall be construed to mean the contractor has reviewed the site and is familiar with conditions and constraints of the site.
4. Before excavation, all underground utilities shall be located in the field by proper authorities. The contractor shall notify Miss Utility at 1-800-257-7777. The location of all utilities and underground structures are approximate and may not all be shown. It is the responsibility of the contractor to determine the existence and exact location of all utilities and underground structures.
5. Contractor shall coordinate Fuel Island Canopy drains connection to the main collector pipe with the Sheetz Construction Manager and provide all necessary fittings to make the connection to the main collector pipe.
6. Contractor to provide shop drawings on all storm sewer pipe, manholes, and inlets to the Sheetz Construction Manager for approval.
7. An as-built drawing of the new utility services shall be prepared by the contractor and submitted to the owner upon completion of the project.
8. All storm pipe shall be as specified. All joints shall be watertight.
9. All storm structures adjacent to curbs shall be ____.
10. All storm structures directly down gradient of the fuel pump pad or underground storage tanks shall have a sump and BMP feature (for example 'Snout') installed on the outflow pipe.
11. Contractor shall refer to other plans within this construction set for other pertinent information.

PLANT SCHEDULE

SYMBOL	CODE	BOTANICAL / COMMON NAME	SIZE	CONTAINER	QTY	DETAIL
TREES						
	BET RIV	Betula nigra / River Birch	2" Cal.	B&B	1	6/L-501
SHRUBS						
	ITE VI3	Itea virginica `Virginia` / Virginia Sweetspire	3 gal.		2	2/L-501
	LIN BEN	Lindera benzoin / Spicebush	3 gal.		2	2/L-501
	VIB ARR	Viburnum dentatum / Viburnum	3 gal.		2	2/L-501

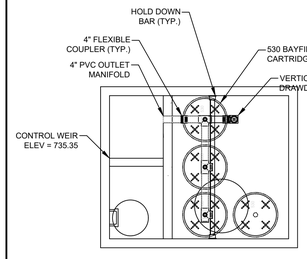
SUBMERGED GRAVEL WETLAND MIXED GRASSES PLANTING SCHEDULE

SYMBOL	QUANTITY (SF)		SPECIES TYPE	SIZE	REMARKS
	SGW #1				
	1,205 SF		MIXED GRASSES	2" PLUGS	PLANT 36" O.C. (SEE DETAIL 5/L-501)

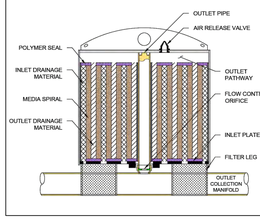
MIXED GRASSES

COMMON NAME	SCIENTIFIC NAME	
Rush, soft	Juncus effusus	THE MINIMUM SIZE FOR MIXED GRASSES SHALL BE 2" PLUG. GRASSES SHALL BE PLANTED 3 FOOT ON CENTER WITH A RANDOM MIX OF PLANTS. PLANTING SHOWN IS RECOMMENDED. OTHER PLANT SPECIES SPECIFIED IN THE MARYLAND STORMWATER DESIGN MANUAL ARE PERMITTED.
Sedge, broom	Carex scoparia	
Sedge, Pennslyvania	Carex pennsylvanica	
Switchgrass	Panicum virgatum	

1 C-301 ADS BAYFILTER (BY OTHERS)



NOTE: THIS DETAIL SHOWS A FUNCTIONAL FILTER DESIGN PER SITE SPECIFIC INFORMATION PROVIDED. THE FINAL APPROVED PRECAST DRAWINGS WILL DETERMINE THE FINAL SIZE, INCLUDING BUT NOT LIMITED TO; OVERALL DIMENSIONS, RISER SIZE, RISER TYPE & HEIGHT AND FRAMES & COVERS BEING PROVIDED.



530 BAYFILTER 8-8-3	BF-1
WATER QUALITY VOLUME	**8062 CF**
DRAINAGE AREA	—
CARTRIDGE DESIGN VOLUME	2500 CF
# BAYFILTER CARTRIDGES	4
CAPTURED SEDIMENT CAPACITY*	393 LBS

THE BAYFILTER STORMWATER MANAGEMENT SYSTEM IS A STORMWATER FILTRATION DEVICE DESIGNED TO REMOVE FINE SEDIMENTS, HEAVY METALS, AND PHOSPORUS. THE BAYFILTER SYSTEM RELIES ON A SPIRAL WOUND MEDIA FILTER CARTRIDGE WITH APPROXIMATELY 90 SQUARE FEET OF FILTRATION AREA. THE FILTER CARTRIDGES ARE HOUSED IN A CONCRETE STRUCTURE THAT EVENLY DISTRIBUTES THE FLOW BETWEEN CARTRIDGES. THE SYSTEM IS INLINE WITH AN INTERNAL BYPASS THAT ROUTES HIGH INTENSITY STORMS AROUND THE CARTRIDGES. THE FILTER CARTRIDGES REMOVE POLLUTANTS FROM RUNOFF BY FILTRATION (INTERCEPTION/ATTACHMENT) AND ADSORPTION.
*SEDIMENT CAPTURE PER CURRENT NJDEP APPROVAL

PLAN VIEW HATCH LEGEND

- Grass Forebay
- Planting Media
- Stone Weir / Riprap
- Permanent Erosion Control Matting

PROFILE HATCH LEGEND

- Topsoil
- Planting Media
- Pea Gravel
- #57 Stone
- Stone Weir

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

Submerged Gravel Wetland Schedule

No.	Total Surface Area (SF)	Media Area (sf)	Ponding Depth (FT.)	Finish Grade Elev.	Bot. Stone Elev.	Bio Media	Top Berm	Berm Width	C.O.'s	Liner Required	10-Yr WSEL	100-Yr WSEL
SGW #1	1,653	1,651	2.0	724.25	722.00	2.25'	727.25	4'	5	YES	726.48	726.68

P:\SHEETZ CO\DESIGN\CIVIL\ACTIVE\SWM\SGW#1\SWM #1.DWG - SHEETZ\MISSOURI PLAN\SWM - 1:1 (1) - SWM PLAN.DWG - 2025-10-01

STATE OF MARYLAND
JOSEPH A. WOLFE
No. 21401
REGISTERED PROFESSIONAL ENGINEER
10/01/2025

Professional Certification:
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional under the laws of the State of: MARYLAND
License #: 21401
Expiration Date: 06.23.2027

FSA
FREDERICK SEIBERT & ASSOCIATES, INC
CIVIL ENGINEERS • SURVEYORS • LANDSCAPE ARCHITECTS • LAND PLANNERS
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GREENCASTLE, PA 17225 — 717.597.1007
HAGERSTOWN, MD 21740 — 301.791.3800
400 SOUTH HANOVER STREET
142 E. MAIN STREET
126 SOUTH MAIN STREET
243 SHEETZ WAY CLAYSBURG, PA 16625

MARK	DESCRIPTION:	DATE:
1	REVISED PER AGENCY COMMENTS	09.30.25

NOT APPROVED FOR CONSTRUCTION

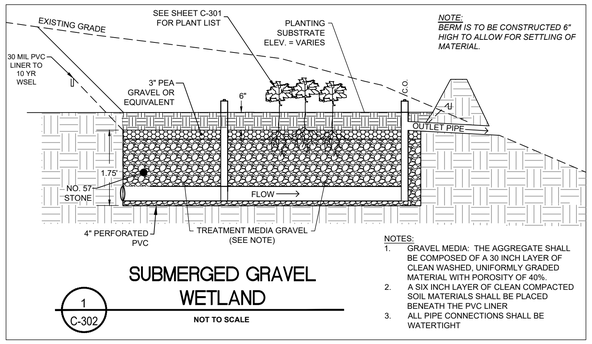
SHEETZ - SMITHSBURG
SITUATED ALONG THE WEST SIDE OF MD RTE 66 (TASNEYVILLE ROAD) AT ITS INTERSECTION WITH MD RTE 64 (JEFFERSON BLVD)
SMITHSBURG
WASHINGTON COUNTY, MARYLAND
SHEETZ, INC.
243 SHEETZ WAY CLAYSBURG, PA 16625

PROJECT NO.: 6086.1
DWN BY: KODY WARD
DATE: 03.17.2025
PROJECT MANAGER: DAVID TROSTLE
EMAIL: dtrostle@fsa-inc.com
TAX MAP - GRID - PARCEL(S): 0051 - 0005 - 0086 & 0091
SCALE: AS SHOWN
SHEET TITLE

SWM PLAN AND PROFILES

C-301
SHEET 11 OF 38

SP-25-011



SUBMERGED GRAVEL WETLAND

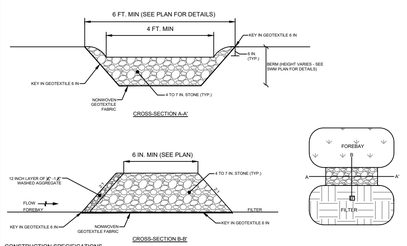
1 / C-302

NOT TO SCALE

NOTES:
1. GRAVEL MEDIA: THE AGGREGATE SHALL BE COMPOSED OF A 30 INCH LAYER OF CLEAN WASHED, UNIFORMLY GRADED MATERIAL WITH POROSITY OF 40%.
2. A SIX INCH LAYER OF CLEAN COMPACTED SOIL MATERIALS SHALL BE PLACED BENEATH THE PVC LINER
3. ALL PIPE CONNECTIONS SHALL BE WATERTIGHT

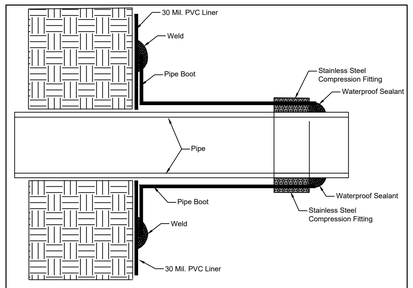
2 / C-302 STONE WEIR (FOREBAY STONE WINDOW)

PLAN VIEW HATCH LEGEND



CONSTRUCTION SPECIFICATIONS

1. PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS, UNDER THE BOTTOM AND SIDES OF THE WEIR PRIOR TO PLACEMENT OF STONE. CONSTRUCT THE WEIR WITH WASHED 4 TO 7 INCH STONE OR EQUIVALENT RECYCLED CONCRETE (WITHOUT REBAR) WITH SIDE SLOPES OF 2:1 OR FLATTER AND A MINIMUM TOP WIDTH OF 6 INCHES. PLACE THE STONE SO THAT IT COMPLETELY COVERS THE WIDTH OF THE CHANNEL AND CHANNEL BANKS. FORM THE WEIR SO THAT TOP OF THE OUTLET CREST IS APPROXIMATELY 6 INCHES LOWER THAN THE OUTER EDGES. LINE THE UPSTREAM FACE OF THE DAM WITH A 1 FOOT THICK LAYER OF WASHED AGGREGATE (¾ TO 1½ INCH).
2. STONE WEIR TO BE USED ON EVERY SEDIMENT FOREBAY SPILLWAY.



Connection of 30 Mil. PVC Liner to Pipe Penetration

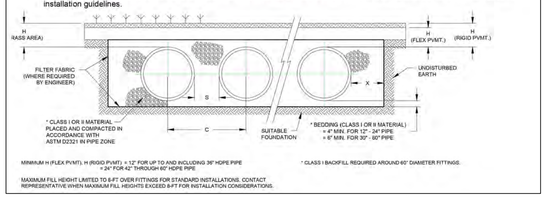
3 / C-302

NOT TO SCALE

ADS, Inc. Drainage Handbook — *Retention/Detention ♦ 6-7*

Figure 6-2
Typical Retention/Detention Cross Section

Note: This is a typical cross section only. See Structures, Section 2, or Installation, Section 5, of the *Drainage Handbook* for specific installation guidelines.



NOMINAL I.D.	APPROX O.D.	MIN. DISTANCE TO SIDE WALL "X"	"S" SPACING	"C" SPACING	MIN. COVER "H"
60"	67"	18"	23"	90"	24"

NOTES:

1. RETENTION AND DETENTION SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST EDITION OF ASTM D2321 AND THE MANUFACTURER'S INSTALLATION GUIDELINES.
2. A NON-WOVEN GEOTEXTILE FILTER FABRIC OR OTHER MEASURES SHOULD BE TAKEN TO PREVENT NATIVE SOIL FROM MIGRATING INTO THE INITIAL BACKFILL MATERIAL, WHEN REQUIRED.
3. **SUB-GRADE:** TRENCH BOTTOMS WITH UNSTABLE OR UNYIELDING MATERIAL SHALL BE EXCAVATED TO A DEPTH DIRECTED BY THE ENGINEER AND REPLACED WITH SUITABLE MATERIAL. FOR UNSTABLE MATERIALS, GEOTEXTILE MAY BE USED TO STABILIZE THE TRENCH BOTTOM, IF DIRECTED BY THE ENGINEER.
4. **FOUNDATION:** SUITABLE MATERIAL SHALL BE CLASS I OR II, AS SPECIFIED BY ASTM D2321. MINIMUM FOUNDATION BEDDING THICKNESS SHALL BE 6" FOR 60" DIAMETER.
5. **INITIAL BACKFILL:** SUITABLE MATERIAL SHALL BE CLASS I OR II, AS SPECIFIED BY ASTM D2321. COMPACTION AND BACKFILL LIFTS SHALL BE IN ACCORDANCE WITH ASTM D2321.
6. **MINIMUM COVER:** FOR UP TO H-25 TRAFFIC APPLICATIONS A MINIMUM OF 24" FOR 60" DIAMETER. MINIMUM COVER, H, SHALL BE MEASURED FROM THE TOP OF THE PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TO THE TOP OF RIGID PAVEMENT. ADDITIONAL COVER MAY BE REQUIRED FOR CONSTRUCTION LOADS, VEHICLES OVER 25T [22MT], OR TO PREVENT FLOATATION.
7. **FINAL BACKFILL:** SUITABLE MATERIALS DIRECTED BY THE ENGINEER SHALL BE USED IN LANDSCAPE OR NON-TRAFFIC APPLICATIONS. FOR AREAS SUBJECTED TO TRAFFIC A HIGHER DEGREE OF COMPACTION IS REQUIRED AND A SEPARATION LAYER OF NON-WOVEN GEOTEXTILE MAY BE REQUIRED. COMPACTION LEVELS AND/OR GEOTEXTILE MAY BE SPECIFIED AT THE DISCRETION OF THE DESIGN ENGINEER.

4 / C-302 ADS TYPICAL UNDERGROUND CROSS SECTION

NOT TO SCALE

P:\SHEETZ CO_DESIGN\LCT\WSSGWB.MDB | - | 04/27/25\WSSGWB.DWG | 10/1/25 | DAVID A. ROSE | 2025.10.01

CATEGORY 300 DRAINAGE PVC LINED PONDS

DESCRIPTION. This work shall consist of furnishing, placing and anchoring of a 30 mil PVC liner within designated pond area as shown in the Contract Documents and as directed by the Engineer.

MATERIALS.

Furnished Topsoil	920
Type B Soil Stabilization Matting	920
Staples	920

PVC LINER MATERIAL. The 30 mil PVC Liner shall conform to the following minimum physical properties.

PROPERTY	TEST METHOD	REQUIREMENT
Thickness	D 1593	+/- 5%
Specific Gravity (min.)	D 792	1.20
100% Modulus (psi. min.) (1 lb. force/in. width, min.)	D 882	100 30
Tensile (psi, min.) (Lb. force/ in. width, min.)	D 882	2300 69
Elongation at Break (%, min.)	D 882	325
Graves Tear (lb./in., min.) (1lb. force/in. width, min.)	D 1004	325 8
Resistance to Soil Burial (% change max.) (a) Breaking Factor (b) Elongation At Break (c) Modulus at 100% Elongation	D 3083 (NSF Modified)	5 20 20
Impact Cold Crack (IF)	D 1790	-20
Dimensional Stability (% change/max.)	D 120 (212/615 min.)	5
Water Extraction (%, max.)	D 3083	-0.25
Volatile Loss (%, max.)	D 1203	0.70
Hydrostatic Resistance (psi,min.)	D 751	82

PVC LINER CERTIFICATION.

The Contractor shall certify that the PVC liner material conforms to the physical properties. The PVC Liner Certification shall also include:

(a) Polymer and composition of the PVC Liner, including additive composition of any coating materials

(b) Manufacturer's Quality Control plan including properties, test methods, frequency of testing, tolerances and methods of resolution for out-of-specification material.

(c) Laboratory test results documenting the physical properties.

STORAGE AND HANDLING.

The PVC liner shall remain stored in its original container in a dry area and protected from puncture, dirt, grease, water, mud, mechanical abrasions, excessive heat, extreme cold or other damage. On-site handling of the PVC liner is the responsibility of the Contractor

Any damage of the PVC liner shall be documented. If the damaged PVC liner cannot be repaired to comply with the specification it shall be removed and replaced at no additional cost to the Administration.

CONSTRUCTION.

Construction shall be in conformance with the details shown on the plans or as directed by the Engineer and the following:

Area Subgrade Preparation.

Surfaces to be lined shall be smooth and free of all rocks, stones, sticks, sharp objects, or debris of any kind. The surface shall provide a firm, unyielding foundation for the liner with no sudden sharp, or abrupt changes or break in grade. No standing water, mud, snow, or frozen subgrade that has become softened by water or overly dried until it has been properly reconditioned and recompacted. Special care shall be taken to maintain the prepared soil surfaces. The soil surface will be observed daily by the Engineer to evaluate the surface condition. Any damage to the surface caused by weather conditions shall be repaired by the contractor.

Anchor Trench.

The anchor trench shall be excavated to the line, grade, and width shown on the construction drawings, prior to liner placement.

If the anchor trench is located in clay susceptible to desiccation; no more than the amount of trench required for the liner to be anchored in one day shall be excavated to minimize desiccation of the anchor trench soils.

Slightly rounded corners shall be provided in the trench where the liner adjoins the trench so as to avoid sharp bends in the liner. No loose soil or rocks shall be allowed to underlie the liner in the anchor trench. Leading edges of the anchor trench shall be smooth and even.

Placement of Liner.

(a) The liner shall be placed down gradient (upstream to downstream) to facilitate over lapping and prevent run off from entering under the placed liner.

(b) The method used to place the liner panels shall minimize wrinkles (especially differential wrinkles between adjacent panels). Minimum wrinkles shall be allowed to insure the liner is installed in a relaxed condition. Excessive wrinkles which overlap themselves shall not be allowed. Stretching of the liner is not allowed.

(c) All panels may be repositioned after deployment to conform to the overlap requirements, however, deployment and repositioning measures may eliminate dragging or elongating the PVC liner panels.

(d) The seam overlap shall be a minimum of 3 ft. and a maximum of 4 ft.

(e) Adequate ballast (e.g., cover soil, or similar measures that will not damage the liner) shall be placed to prevent uplift by wind. In case of high winds, continuous loading is recommended along edges of panels to minimize risk of wind flow under the panels.

(g) Only equipment necessary for installation and testing of the liner shall be permitted to come in contact with the liner. This equipment shall be rubber tired with a ground pressure not exceeding 5 psi, and a total weight not exceeding 750 lb.

Weather conditions.

PVC liner deployment shall proceed when ambient temperature and material sheet temperature is between 60 and 105 F. Sheet temperature shall be measured on the liner surface by an infrared thermometer or surface contact thermometer.

Liner placement shall not be done during any precipitation, in the presence of excessive moisture, (e.g., snow, fog, rain, dew, mud) or in the presence of excessive winds, as determined by the engineer.

If liner placement is required at ambient temperatures below 60 F, a means of storing the liner in an area that maintains the liner temperature above 60 F shall be provided. This liner temperature shall be maintained until the time of deployment.

Unpacking the panels.

The contractor shall notify the Engineer, before the liner is unpacked. Damaged or suspect areas shall be marked for testing and/or repair. Liner that is damaged during deployment (i.e. that cannot be adequately repaired) shall be replaced at no additional cost to the Administration.

Backfilling of the Anchor Trench.

The anchor trench shall be backfilled and compacted by the contractor to the satisfaction of the Engineer. Trench backfill material shall be placed in 8 in. thick loose lifts and compacted by wheel rolling with light, rubber-tired or other light compaction equipment.

Care shall be taken when backfilling the trenches to prevent any damage to the PVC liner. At no time shall construction equipment come in direct contact with the liner. If damage occurs, it shall be repaired at no additional cost to the Administration.

Backfilling of PVC Liner.

The liner shall be covered with a 2 ft. layer of soil; the first 1.8 ft. shall conform to Common Borrow specifications and the top 4 in. shall be a layer of furnished topsoil. The backfill shall be tamped in place. Permanent type B soil stabilization matting shall be placed over the topsoil.

At no time shall construction equipment come into direct contact with the liner or traverse the backfilled trench. When damage occurs, it shall be repaired by the contractor at no additional cost to the Administration. Compaction shall be to the satisfaction of the Engineer.

Measurement and Payment.

Measurement and payment for the PVC ditch liner will be measured and paid for at the contract unit price per square yard accepted in place. The payment will be full compensation for all excavation, PVC liner, furnished topsoil, backfill, and for all overlap shall not be measured and paid for as separate item. All PVC liner overlap shall be incidental to the cost of PVC liner installation.

Excavation will be measured and paid for at the contract unit price per cubic yard for class 2 excavation for incidental construction.

Specifications for Submerged Gravel Wetland

(Reference - Maryland Stormwater Design Manual, Volume Two, Appendix B.4)

Material Specifications
The allowable materials to be used in submerged gravel wetland areas are detailed in Table B.4.1

Planting Soil
The soil shall be a uniform mix, free of stones, stumps, roots or other similar objects larger than two inches. No other materials or substances shall be mixed or dumped within the planting area that may be harmful to plant growth, or prove a hindrance to the planting or maintenance operations. The planting soil shall be free of Bermuda grass, Quackgrass, Johnson grass, or other noxious weeds as specified under COMAR 15.08.01.05..

Compaction
It is very important to minimize compaction of both the base of the planting area and the required backfill. When possible, use excavation hoes to remove original soil. If wetland areas area excavated using a loader, the contractor should use wide track or marsh track equipment, or light equipment with turf type tires. Use of equipment with narrow tracks or narrow tires, rubber tires with large lugs, or high pressure tires will cause compaction resulting in reduced infiltration rates and storage volumes and is not acceptable. Compaction will significantly contribute to design failure.

Compaction can be alleviated at the base of the wetkabd area facility by using a primary tilling operation such as a chisel plow, ripper, or subsoiler. These tilling operations are to refracture the soil profile through the 12 inch compaction zone. Substitute methods must be approved by the engineer. Rototillers typically do not till deep enough to reduce the effects of compaction from heavy equipment.

Rototill 2 to 3 inches of sand into the base of the wetland facility before backfilling the required sand layer. Pump any ponded water before preparing (rototilling) base.

When backfilling the topsoil over the sand layer, first place 3 to 4 inches of topsoil over the sand, then rototill the sand / topsoil to create a gradation zone. Backfill the remainder of the topsoil to final grade.

When backfilling the bioretention facility, place soil in lifts of 12 inches or greater. Do not use heavy equipment within the wetland area. Heavy equipment may be used around the perimeter of the basin to supply soils and sand. Grade wetland materials with light equipment such as a compact loader or a dozer/loader with marsh tracks

Plant Installation

Rootstock of the plant material shall be kept moist during transport and on-site storage. The plant root ball should be planted so 1/8th of the ball is above final grade surface. Root stock of the plant material shall be kept moist during transport and on-site storage. Planting pits shall follow LCA planting guidelines. The diameter of the planting pit shall be at least six inches larger than the diameter of the planting ball. Set and maintain the plant straight during the entire planting process. Thoroughly water ground bed cover after installation.

Trees shall be braced using 2" by 2" stakes only as necessary and for the first growing season only. Stakes are to be equally spaced on the outside of the tree ball.

Grasses and legume seed shall be tilled into the soil to a depth of at least one inch. Grass and legume plugs shall be planted following the non-grass ground cover planting specifications.

The topsoil specifications provide enough organic material to adequately supply nutrients from natural cycling. The primary function of the submerged gravel wetland is to improve water quality. Adding fertilizers defeats, or at a minimum, impedes this goal. Only add fertilizer if wood chips or mulch is used to amend the soil. Rototill urea fertilizer at a rate of 2 pounds per 1000 square feet.

Underdrains
Underdrains should meet the following criteria:

- Pipe- Should be 4" to 6" diameter, slotted or perforated rigid plastic pipe (ASTMF 758, Type PS 28, or AASHTO-M-278) in a gravel layer. The preferred material is slotted 4" rigid pipe (e.g., PVC or HDPE).
- Perforations - If perforated pipe is used, perforations should be ¾" diameter located 6" on center with a minimum of four holes per row. Pipe shall be wrapped with a ¼" (No. 4 or 4x4) galvanized hardware cloth.
- Gravel - The gravel layer (No. 57 stone preferred) shall be at least 3" thick above and below the underdrain.
- The main collector pipe shall be at a minimum 0.5% slope.
- A rigid, non-perforated observation well must be provided (one per every 1,000 square feet) to provide a clean-out port and monitor performance of the filter.
- A 4" layer of pea gravel (⅛" to ¾" stone) shall be located between the filter media and underdrain to prevent migration of fines into the underdrain. This layer may be considered part of the filter bed when bed thickness exceeds 24".

The main collector pipe for underdrain systems shall be constructed at a minimum slope of 0.5%. Observation wells and/or clean-out pipes must be provided (one minimum per every 1000 square feet of surface area).

Miscellaneous
These practices may not be constructed until all contributing drainage area has been stabilize.

Wetland berms are to be constructed per the MD 378 small pond standards with respect to materials, placement, and compactions.

Submerged Gravel Wetlands Maintenance Schedule

1. Privately owned practices shall have a maintenance plan and shall be protected by easement, deed restriction, ordinance, or other legal measures preventing its neglect, adverse alteration, and removal.
2. During the first year of operation, inspections shall be conducted after every major storm and poorly established areas revegetated.
3. Sediment accumulation in the pretreatment areas should be removed as necessary.
4. Signs of uneven flow distribution within the wetland may mean that the gravel or underdrain is clogged. The gravel and/or underdrain may need to be removed, cleaned, and replaced.
5. A dense stand of wetland vegetation should be maintained through the life of the facility with plantings replaced as needed.
6. Inlet and outlets to each submerged gravel wetland cell should be free from debris to prevent clogging.
7. Erosion at inflow points should be repaired. Flow splitters should be functional to prevent bypassing of the facility.

Table B-4.1 Material Specifications for Submerged Gravel Wetland

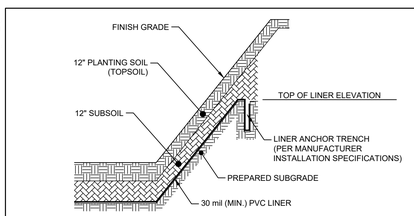
Material	Specification	Size	Notes
Plantings	see planting list	n/a	plantings are site-specific
Planting Substrate [6" Deep]	loamy sand (60 - 65%) & compost (35 - 40%) or sandy loam (30%), coarse sand (30%) & compost (40%)	n/a	USDA soil types loamy sand or sandy loam; clay content < 5%
Organic content	Min. 10% by dry weight (ASTM D 2974)		
Pea gravel diaphragm	pea gravel; ASTM-D-448	No. 8 or No. 9 (⅛" to 3/8")	
Gravelly Treatment Media	Clean Washed uniformly graded material with a porosity of 40%	No. 57 or No. 6 Aggregate	
Underdrain piping	F 758, Type PS 28 or AASHTO M-278	4"-6" rigid sch. 40 PVC or SDR35	Slotted or perforated pipe; 3/8" perf. @ 6" o/c, 4 holes/row; min. 3' of gravel over pipes; not necessary underneath pipes.
Sand	AASHTO M-6 or ASTM C-33	0.02" to 0.04"	Sand substitution such as Diabase and Graystone (AASHTO) #10 are not acceptable. No calcium carbonated or dolomitic sand substitutions are acceptable. No "rock dust" can be used for sand.
Compost	MSHA Standard Specifications for Construction and Materials, July 2008 920.02.05 Compost	Uniform particle size of 0.5" or less	Source - Separated Compost (Type B). Type B Compost shall be tree leaf compost or non-tree leaf compost. Type B Compost produced from lawn clippings shall be tested for contaminants in conformance with Maryland law and regulations.

CLAY LINER NOTES (MAY BE USED IN PLACE OF SYNTHETIC LINER IF APPROVED BY SITE GEOTECHNICAL ENGINEER):

1. Remove 24 inches of the SWM facilities subgrade.
2. Place soil materials that meet the minimum requirements, site specific requirement per Geotechnical Report supersede.
   2.1. The materials shall have a maximum dry density of at least 100 PCF as per ASTM D-698
   2.2. Acceptable materials shall be ml, cl, mh, ch with no rock greater than 1-icnh in diameter and constituting no more than 15% of the matrix
   2.3. Materials are to be placed in 6-inch lifts and properly compacted to at least 98% of the maximum dry density value as determined by ASTM D-698 (Standard Proctor) at a moisture content in the range of optimum to 3 percent above optimum moisture as determined by the same standard. A sufficient number of in-place density tests should be performed by an experienced engineering technician to verify that the proper degree of compaction is being obtained.
3. Any rock encountered within the SWM ponds shall be undercut at least 12 inches and covered and controlled and compacted clay liner soils.

NOTES:

1. Developer/contractor must contact the certifying engineer and Washington County at least 5 days prior to the start of construction of the stormwater management system to schedule and coordinate inspection time tables.
2. Due to karst soils on the site, there is increases risk of sinkhole development within the swm facility. If encountered, contact a geotechnical engineer to prepare remediation plan.
3. If rock is encountered, undercut 12" s.w.m. facility and backfill with CL type soil.
4. Core trench and earth dams shall be compacted to a minimum 95% dry density.
5. No trees or shrubs are permitted on the embankment.
6. Pond embankment shall be planted with grass only.
7. All pipe joints shall be watertight. (HDPE pipe joints shall meet the 10.8 psi water-tight requirements of ASTM D3212.)
8. All proposed storm drain pipes must be placed on 95% compacted fill according to AASHTO T180A standards.
9. The contractor is to contact miss utility a minimum of 2 days prior to any digging on the site. (1-800-257-7777)



LINER ANCHOR TRENCH

5 / C-302

NOT TO SCALE

Notice of Required Stormwater Management Inspections
Submerged Gravel Wetland

The following inspections are required to be performed by the Qualified Professional for the construction of any Submerged Gravel Wetland. Additional inspections may be needed based on professional engineering judgment. Each inspection is required at the start of each stage.

Inspection Item		SGW #1
Excavation of Facility - Prior to excavation, verify sediment and erosion control features are in place to prevent sediment inflow. Verify all flagging required in the area for sensitive area protection. Verify grading is accurately staked-out and re-staked as needed. Facility dimensions shall be verified and soils checked for infiltration. Verify contributing area is permanently stabilized. Verify that water is not present. Ensure roughening of side walls if sheared and sealed by heavy equipment. Verify that compaction of facility base is minimized.	Certifying Engineer	
	Date	
	County Inspector	
	Date	
Placement of Filter Cloth (Trenches) - Ensure filter fabric is overlapping six (6) inches between strips of cloth. Ensure tree roots or other obstacles are removed from facility walls or sides and base to prevent tearing. Verify that uphill fabric roll overlaps two (2) feet over downhill roll.	Certifying Engineer	
	Date	
	County Inspector	
	Date	
Placement of Underdrains and Observation Wells - Location, size and material of under drain and observation wells shall be verified prior to stone placement. Verify pipe ends capped. Verify 3" gravel cover	Certifying Engineer	
	Date	
	County Inspector	
	Date	
Placement of Filtering Media - Verify bottom layer material and thickness. Verify sand and/or filter media layer material and thickness. Verify filter fabric or pea gravel used between sand layers. Verify top filter media layer.	Certifying Engineer	
	Date	
	County Inspector	
	Date	
Placement of Sand Filter Layer or Gravel Diaphragm - Verify depth and width of sand and/or diaphragm layer. Verify fill material.	Certifying Engineer	
	Date	
	County Inspector	
	Date	
Stabilization and Landscaping - Verify site top soiled, seeded and mulched. Verify embankment top soiled and seeded. Verify location, size, type and number of planted landscape material. Verify no more than 1/8 inch root ball exposed. Verify planting stock kept moist during on-site storage. Verify installation location, size, material type of fencing or other safety barriers.	Certifying Engineer	
	Date	
	County Inspector	
	Date	

The Qualified Professional may request the presence of a County Construction Standards Inspector at least 24 hours in advance by calling 240-313-2400.

STORMWATER MANAGEMENT SEED MIX NOTES

SITE PREPARATION

Invasive species, particularly those that will adapt to wet conditions, should be removed or sprayed before they become incorporated into the site. Spot spray or hand pull problem weeds. Perennial weeds not addressed before establishment will be difficult to remove later.

SEEDING AND PLANTING METHODS

Seeding and planting should begin immediately upon completion of the structure while the soil is still friable and before invasive weeds emerge. Plan seeding and planting before the basin is flooded or allow the basin to drain to a few inches before seeding. Broadcast seed evenly over each unit by hand seeding or hydroseeding. The use of native species can provide temporary vegetation to protect the soil in SWM facilities until permanent vegetation can become established. Straw mulch, or straw coconut mats are frequently used to control erosion and protect emerging seedlings from extreme temperatures and drying out. Mulch should be sparse in order to allow sunlight to reach the ground. Irrigating seeded areas is beneficial until seedlings become established.

FIRST GROWING SEASON MAINTENANCE

Whenever canopy (overall vegetation) reaches a height of 18"-24", use a string trimmer to trim the meadow to a height of 8". This will reduce competition by fast-growing weeds for sunlight, water and nutrients needed by slower growing, perennial natives. Mowing should not be done with a lawn mower as the mower height will be too low and native seedlings will be killed. Mowing should cease by mid-September.

SECOND AND SUBSEQUENT GROWING SEASON MAINTENANCE

Prior to new spring growth reaching a height of 2" trim any material standing from the previous year close to the ground (approximately 2"). This will allow the soil to warm more quickly which will stimulate emergence and growth of native seedlings.

SPECIAL CIRCUMSTANCES SECOND GROWING SEASON

If you notice a heavy infestation of ragweed or foxtail in the second growing season, trim the meadow to a height of 8". Trimming should cease after mid-September.

Stormwater Management Facilities Construction Inspection Requirements

1. The developer/contractor shall notify the Division of Public Works ("DPW") at least five (5) days before commencing any work in conjunction with the approved final stormwater management plan and upon completion of the project when a final inspection will be conducted.
2. Regular inspections shall be made and documented for each structural ESD planning technique and practice and structural stormwater measures every 2 weeks and at the required critical inspection stages identified in the attached checklists and the Washington County SWM, Grading, Soil Erosion and Sediment Control Ordinance.
3. All non-structural practices shall be inspected, at a minimum, upon completion of final grading, the establishment of permanent stabilization, and before issuance of use and occupancy permit.
4. Inspections shall be conducted by DPW, the MDE (as applicable), and by the Verifying Professional. Inspections performed by the DPW are not to be considered a substitute for those inspections required by the Verifying Professional. Written inspection reports shall be prepared by the Verifying Professional during construction of ESD planning techniques and practices plans. Copies of all inspection reports shall be provided to DPW by the person performing the inspection and kept on file with DPW.
5. Written inspection reports are required and shall be submitted in a manner consistent with the Public Works Agreement and this Article and in a format approved by DPW, and shall include, at a minimum:
   5.a. The date and location of the inspection;
   5.b. Work observed;
   5.c. Photos;
   5.d. Tests performed;
   5.e. Whether construction was in compliance with the approved stormwater management plan;
   5.f. Any variations from the approved construction specifications;
   5.g. Any violations that exist;
   5.h. Signature and date of Verifying Professional.
6. Failure to comply with these inspection requirements and/or obtain approval from the Verifying Professional or DPW at the required construction stages will result in disapproval of the facility, delays of final acceptance and permit release.
7. The developer, DPW, the MDE, Verifying Professional, and on-site personnel shall be notified in writing when violations are observed. Written notification shall be made by the person discovering the violation and shall describe the nature of the violation and the required corrective action. No further work affected by the violation shall proceed until the corrective action is inspected and approved in writing by the Verifying Professional, the Division, MDE (as applicable), and the District (as applicable).
8. DPW may require adjustments to address items overlooked or inappropriately addressed by the plans. Such adjustments may be required during construction or at the final inspection.
9. The County may require a revision to the approved construction drawings or site plans be submitted and approved by the DPW, the Division of Planning and Community Development (as applicable), the MDE (as applicable) and the District prior to continuation of construction activity.
10. No work shall proceed beyond the construction stages specified in attached Checklists and the Washington County SWM, Grading, Soil Erosion and Sediment Control Ordinance until DPW and the Verifying Professional inspect and approve the work previously completed and the Verifying Professional furnishes the DPW and developer with the results of the inspection reports as soon as possible after completion of each required inspection.

Pond MD-378
NRCS - MARYLAND JANUARY 2000
CONSTRUCTION SPECIFICATIONS

These specifications are appropriate to all ponds within the scope of the Standard for practice MD-378. All references to ASTM and AASHTO specifications apply to the most recent version.

Site Preparation
Areas designated for borrow areas, embankment, and structural works shall be cleared, grubbed and stripped of topsoil. All trees, vegetation, roots and other objectionable material shall be removed. Channel banks and sharp breaks shall be sloped to no steeper than 1:1. All trees shall be cleared and grubbed within 15 feet of the toe of the em-bankment.
Areas to be covered by the reservoir will be cleared of all trees, brush, logs, fences, rubbish and other objectionable material unless otherwise designated on the plans. Trees, brush, and stumps shall be cut approximately level with the ground surface. For dry stormwater management ponds, a minimum of a 25-foot radius around the inlet structure shall be cleared.
All cleared and grubbed material shall be disposed of outside and below the limits of the dam and reservoir as directed by the owner or his representative. When specified, a sufficient quantity of topsoil will be stockpiled in a suitable location for use on the embankment and other designated areas.

Earth Fill
Material - The fill material shall be taken from approved designated borrow areas. It shall be free of roots, stumps, wood, rubbish, stones greater than 6", frozen or other objectionable materials. Fill material for the center of the embankment, and cut off trench shall conform to Unified Soil Classification GC, SC, CH, or CL and must have at least 30% passing the #200 sieve. Consideration may be given to the use of other materials in the embankment if designed by a geotechnical engineer. Such special designs must have construction supervised by a geotechnical engineer. Materials used in the outer shell of the embankment must have the capability to support vegetation of the quality required to prevent erosion of the embankment.

Placement - Areas on which fill is to be placed shall be scarified prior to placement of fill. Fill materials shall be placed in maximum 8 inch thick (before compaction) layers which are to be continuous over the entire length of the fill. The most permeable borrow material shall be placed in the downstream portions of the embankment. The principal spillway must be installed concurrently with fill placement and not excavated into the embankment.

Compaction - The movement of the hauling and spreading equipment over the fill shall be controlled so that the entire surface of each lift shall be traversed by not less than one tread track of heavy equipment or compaction shall be achieved by a minimum of four complete passes of a sheepsfoot, rubber tired or vibratory roller. Fill material shall contain sufficient moisture such that the required degree of compaction will be obtained with the equipment used. The fill material shall contain sufficient moisture so that if formed into a ball it will not crumble, yet not be so wet that water can be squeezed out. When required by the reviewing agency the minimum required density shall not be less than 95% of maximum dry density with a moisture content within ±2% of the optimum. Each layer of fill shall be compacted as necessary to obtain that density, and is to be certified by the Engineer at the time of construction. All compaction is to be determined by AASHTO Method T-99 (Standard Proctor).

NOTICE OF REQUIRED STORMWATER MANAGEMENT INSPECTIONS
UNDERGROUND SWM STRUCTURE

The following inspections are required to be performed by the Qualified Professional for the construction of any Public Road. Additional inspections may be needed based on professional engineering judgment. Each inspection is required at the start of each stage.

*** MANDATORY NOTIFICATION: Inspection and approval by the parties indicated is required at these points prior to proceeding with construction. The permittee is required to give the required inspection parties twenty-four (24) hours notice. The county inspector may waive an inspection, provided the design engineer and/or geotechnical engineer makes the required inspection per a prior scheduled arrangement which has been confirmed with the county inspector. Work completed without the necessary party's approval may result in the permittee having to remove and reconstruct the unapproved work. The permittee must maintain a "record set" of approved SEC/SWM plans on-site.**

Inspection Item	Certifying Engineer / Date	UG1
Sediment control installation		
Excavation for stormwater management structure (GEO)		
Install stormwater management control structure/storage structure and associated storm drainage; a. Footing subgrade, prior to pouring (GEO)		
Forms set and rebar placed for walls/slabs prior to pouring (DE)		
Pipe assembled in place (DE) on acceptable subgrade (GEO)		
Any required storm drain pipe installed to structure and temporarily plugged shut (DE)		
Internal components installed, if any (DE)		
Backfilling of drainage structure (GEO)		
Installation of storm drain inlet protection or blocking on all inlets draining to structure which may receive silt-laden runoff		
Installation of final compacted cover and grade - Lifts, compaction, soil material (GEO) - Location, dimensions (DE)		
Stabilize drainage area to stormwater management structure		
Removal of sediment and construction debris from structure		
Remove temporary blocking (DE) and (GEO)		
Submit record drawing and documentation (DE)		
Final Inspection		

FREDERICK SEIBERT & ASSOCIATES, INC.
CIVIL ENGINEERS • SURVEYORS • LANDSCAPE ARCHITECTS • LAND PLANNERS
MUNCY, PENNSYLVANIA 17756 — 570.546.8202 — fsa-inc.com
NEW BLOOMFIELD, PA 17068 — 717.275.7537 — 2 EAST MAIN STREET
CARLISLE, PA 17013 — 717.701.8111 — 490 SOUTH HANOVER STREET
GREENCASTLE, PA 17225 — 717.597.1007 — 142 LEMAY DRIVE, SUITE C
HAGERSTOWN, MD 21740 — 301.790.3800 — 135 TOWNPARK CIRCLE

10/01/2025

Professional Certification:
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 MARYLAND License # 20984
Expiration Date: 08.29.2027

NOT APPROVED FOR CONSTRUCTION

MARK	DESCRIPTION	DATE

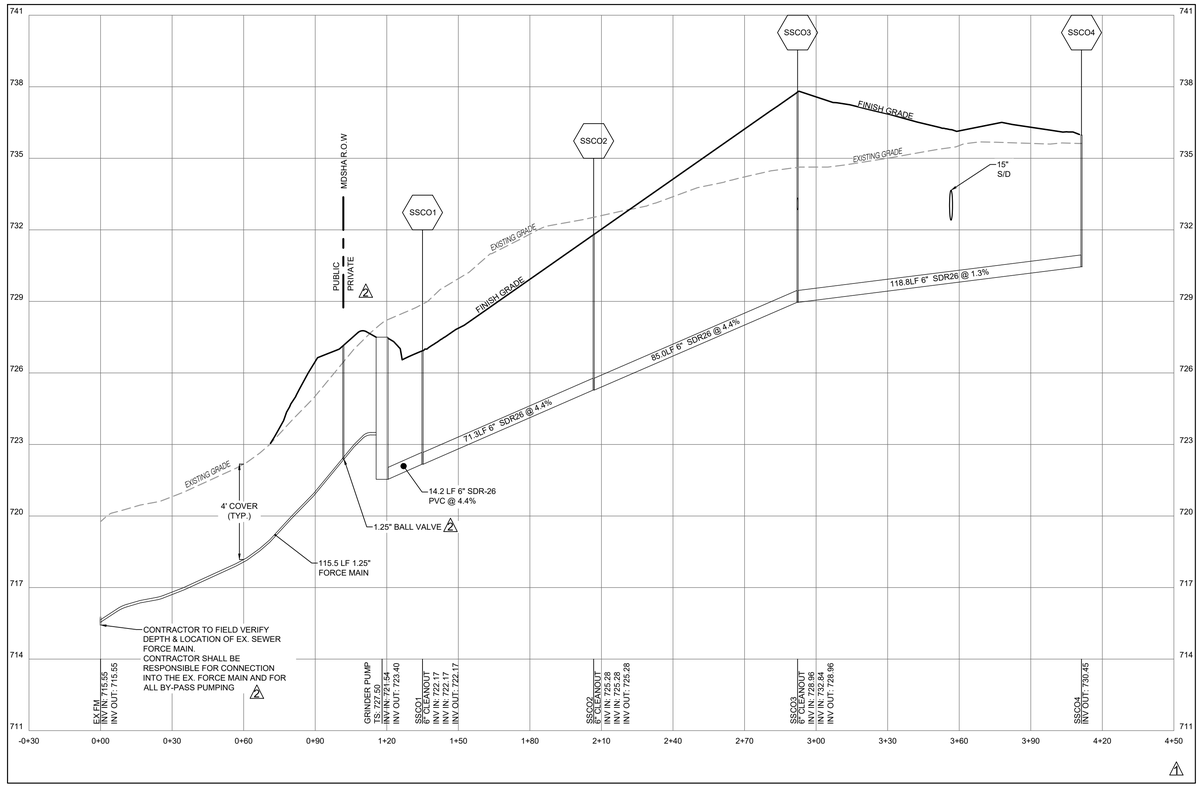
SHEETZ - SMITHSBURG
SITUATED ALONG THE WEST SIDE OF MD 66 (MARYLAND ROUTE 66) AT ITS INTERSECTION WITH MD 64 (JEFFERSON BLVD)
SMITHSBURG
WASHINGTON COUNTY, MARYLAND
SHEETZ, INC.
243 SHEETZ WAY CLAYSBURG, PA 16625

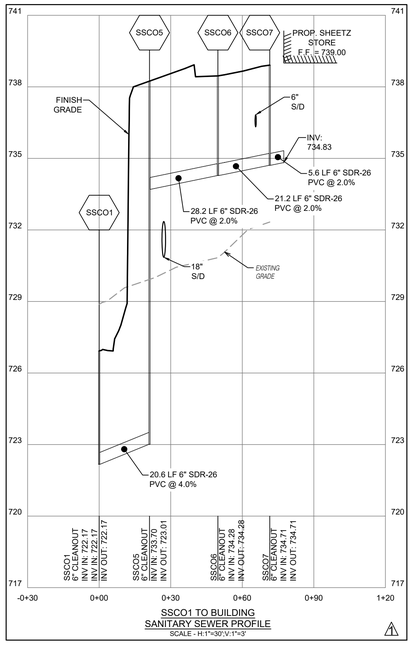
PROJECT NO. 6086.1
DRAWN BY: KODY WARD — DATE: 03.17.2025
PROJECT MANAGER: DAVID TROSTLE
EMAIL: dtrostle@fsa-inc.com
TAX MAP - GRID - PARCEL(S): 0051 - 0005 - 0086 & 0091
SCALE: NOT TO SCALE
SHEET TITLE

SWM DETAILS AND NOTES

C-302
SHEET 12 OF 38

SP-25-011





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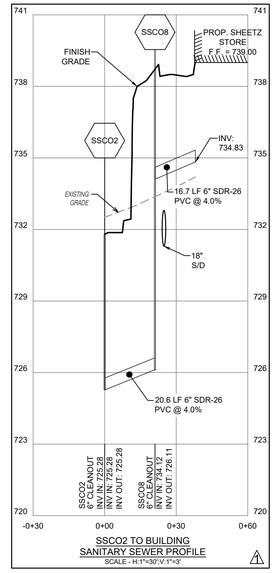

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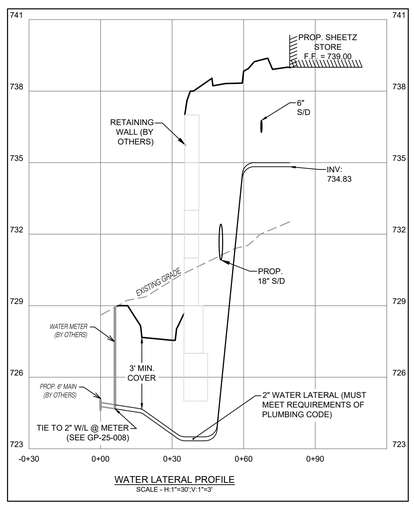

WATER LATERAL PROFILE
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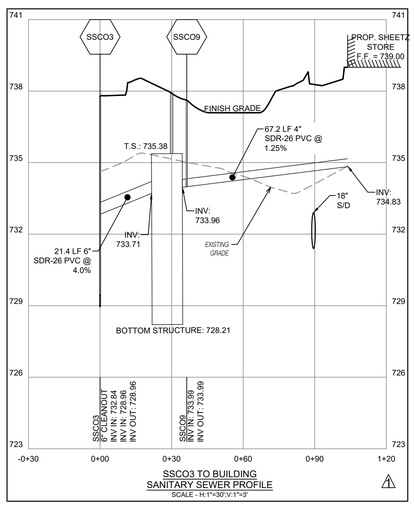

SSCO3 TO BUILDING
SANITARY SEWER PROFILE
SCALE - H:1"=30',V:1"=3'

WASHINGTON COUNTY DEPARTMENT OF WATER QUALITY

This approval is for general conformance with the County's requirements for design and layout of proposed sewer and/or water system improvements or extensions. All sewer and/or water system improvements or extensions shall be constructed in strict accordance with the County's latest addition of the Standard Specifications for Construction of Sanitary Sewers and/or Water Lines. This approval does not guarantee availability of sewer and/or water service. Sewer and/or water service availability is subject to conformance with all rules, policies and regulations established by the County and in effect at the time application for service is made, and/or the availability of allocation remaining in other jurisdictions' facilities that may be granted to the County. This approval shall be valid for a period of TWO years.

SIGNATURE DATE

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

10/01/2025

Professional Certification:
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional under the laws of the State of: MARYLAND License # 22984
Expiration Date: 08.23.2027

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MARYLAND OFFICE
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717.597.1007
MARYLAND OFFICE
HAGERSTOWN, MD 21740
301.791.3800
SHEETZ, INC.
243 SHEETZ WAY CLAYSBURG, PA 16625

MARK	DESCRIPTION:	DATE:
1	REVISED PER AGENCY COMMENTS	09.30.25
2	REVISED PER AGENCY COMMENTS	06.05.26

NOT APPROVED FOR CONSTRUCTION

SHEETZ - SMITHSBURG
SITUATED ALONG THE WEST SIDE OF MD 66 (MARSH BILLER ROAD) AT ITS INTERSECTION WITH MD 64 (JEFFERSON BLVD)
SMITHSBURG
WASHINGTON COUNTY, MARYLAND

PROJECT NO.: 6086.1
OWN BY: KODY WARD
DATE: 03.17.2025
PROJECT MANAGER: DAVID TROSTLE
EMAIL: dtrostle@fsa-inc.com
TAX MAP - GRID - PARCEL(S): 0051 - 0005 - 0086 & 0091
SCALE: AS SHOWN
SHEET TITLE:

CONSTRUCTION PROFILES
WATER & SEWER

C-401
SHEET 13 OF 38

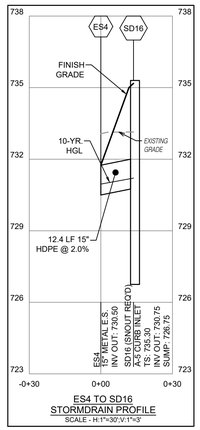
SP-25-011

P:\PROJECTS\6086\PRJ\ACTIVE\6086\6086.DWG | SHEETZ\6086SSTP.ZA.MAXIM | 1:1 | 03.17.2026 | CONSTRUCTION PROFILES.DWG | 2025.10.01

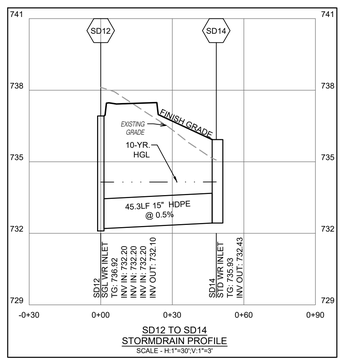
GRAPHIC SCALE

30 0 15 30 60 120

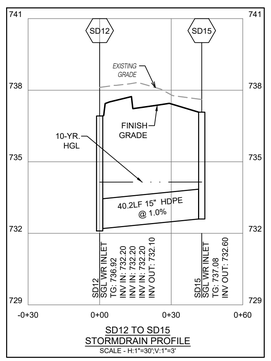
(IN FEET)
1 inch = 30 ft.



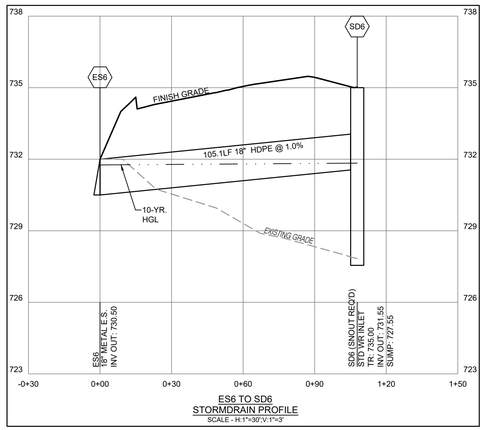
ES4 TO SD16
STORMDRAIN PROFILE
SCALE - H:1"=30';V:1"=3'



SD12 TO SD14
STORMDRAIN PROFILE
SCALE - H:1"=30';V:1"=3'



SD12 TO SD15
STORMDRAIN PROFILE
SCALE - H:1"=30';V:1"=3'



ES6 TO SD6
STORMDRAIN PROFILE
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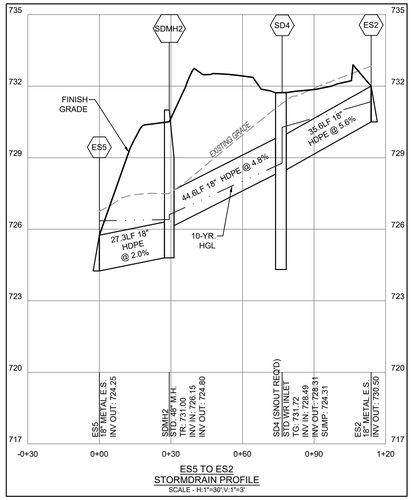
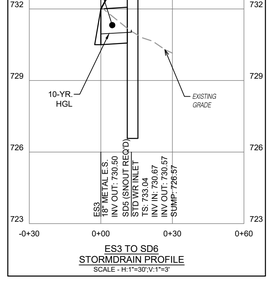
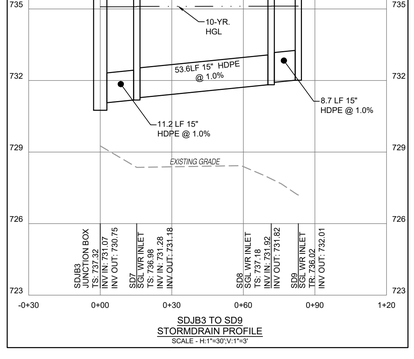


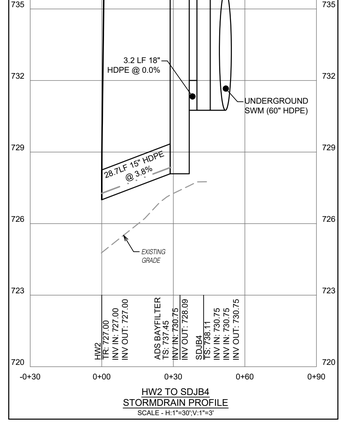
ES5 TO ES2
STORMDRAIN PROFILE
SCALE - H:1"=30';V:1"=3'



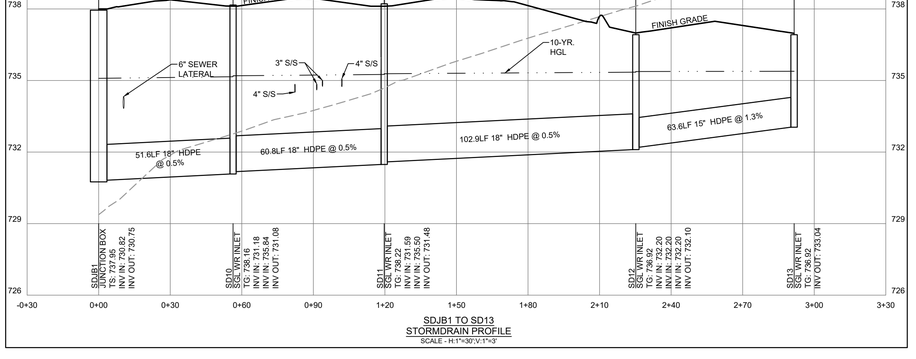
ES3 TO SD6
STORMDRAIN PROFILE
SCALE - H:1"=30';V:1"=3'



SDJB3 TO SD9
STORMDRAIN PROFILE
SCALE - H:1"=30';V:1"=3'



HW2 TO SDJB4
STORMDRAIN PROFILE
SCALE - H:1"=30';V:1"=3'



SDJB1 TO SD13
STORMDRAIN PROFILE
SCALE - H:1"=30';V:1"=3'

P:\SHEETZ\CIVIL\CONSTRUCTION\MISCELLANEOUS\MB\SHEET1 - 13 1/2 - CONSTRUCTION PROFILES.DWG 2025-10-01

STATE OF MARYLAND
MATTHEW J. BOWMAN
No. 21708
REGISTERED PROFESSIONAL ENGINEER
10/01/2025

Professional Certification:
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional under the laws of the State of MARYLAND License # 21708
Expiration Date: 06.23.2027

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NEW BLOOMFIELD, PA 17068
717.275.7591

ASP SQUARE/HACKS CROSSING
CARLISLE, PA 17013
717.701.6111

142 NORTH ANDREWS DRIVE
GREENCASTLE, PA 17225
717.597.1007

129 THOMAS JOHNSON DRIVE
FREDERICK, MD 21702
301.791.3800

HAGERSTOWN, MD 21740
SHEETZ, INC.
243 SHEETZ WAY CLAYSBURG, PA 16625

MARK	DESCRIPTION	DATE
1	REVISED PER AGENCY COMMENTS	09.05.25

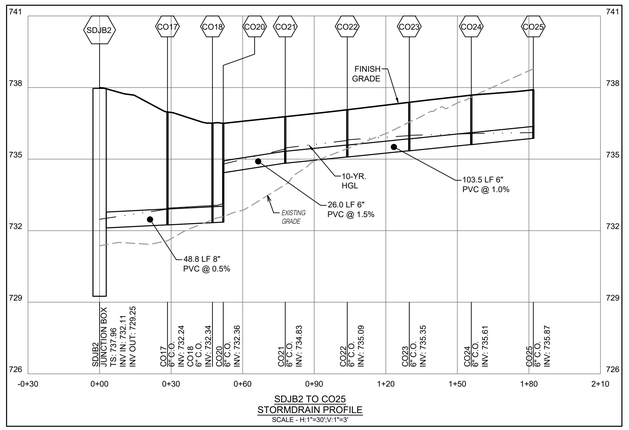
NO FOR APPROVED

SHEETZ - SMITHSBURG
SITUATED ALONG THE WEST SIDE OF MD 36 (MAPLEVILLE ROAD) AT ITS INTERSECTION WITH MD 40 (JEFFERSON BLVD)
SMITHSBURG
WASHINGTON COUNTY, MARYLAND

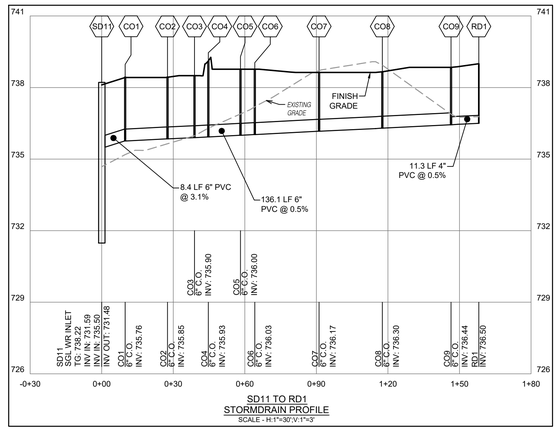
PROJECT NO.	6086.1
DWN BY: KODY WARD	DATE: 03.17.2025
PROJECT MANAGER:	DAVID TROSTLE
EMAIL:	dtrostle@fsa-inc.com
TAX MAP - GRID - PARCEL(S)	0051 - 0005 - 0086 & 0091
SCALE	AS SHOWN
SHEET TITLE	CONSTRUCTION PROFILES STORM DRAINAGE

C-402
SHEET 14 OF 38

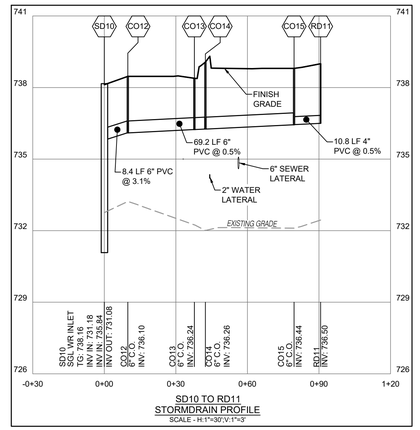
SP-25-011



SDJB2 TO CO25
STORMDRAIN PROFILE
SCALE - H:1"=30';V:1"=3'



SD11 TO RD1
STORMDRAIN PROFILE
SCALE - H:1"=30';V:1"=3'



SD10 TO RD11
STORMDRAIN PROFILE
SCALE - H:1"=30';V:1"=3'

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

STATE OF MARYLAND
TIMOTHY M. MACEYKA
No. 21708
REGISTERED PROFESSIONAL ENGINEER
10/01/2025

Professional Certification:
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional under the laws of the State of MARYLAND License # 21708
Expiration Date: 06.23.2027

NOT APPROVED FOR CONSTRUCTION

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CIVIL ENGINEERS • SURVEYORS • LANDSCAPE ARCHITECTS • LAND PLANNERS
fsa-inc.com
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SUSQUEHANNA OFFICE
401 SOUTH HANOVER STREET
CARLISLE, PA 17013
717.701.8111
HARRISBURG OFFICE
1421 MULBERRY DRIVE
GREENCASTLE, PA 17225
717.597.1007
FREDERICK OFFICE
129 THOMAS JOHNSON DRIVE
FREDERICK, MD 21702
301.791.3600

MARK	DESCRIPTION	DATE

SHEETZ - SMITHSBURG
SITUATED ALONG THE WEST SIDE OF MD 66 (MARYSVILLE ROAD) AT ITS INTERSECTION WITH MD 64 (JEFFERSON BLVD)
SMITHSBURG
WASHINGTON COUNTY, MARYLAND
SHEETZ, INC.
243 SHEETZ WAY CLAYSBURG, PA 16625

PROJECT NO.	6086.1
DWN BY: KODY WARD	DATE: 03.17.2025
PROJECT MANAGER:	DAVID TROSTLE
EMAIL:	dtrostle@fsa-inc.com
TAX MAP - GRID - PARCEL(S)	0051 - 0005 - 0086 & 0091
SCALE	AS SHOWN

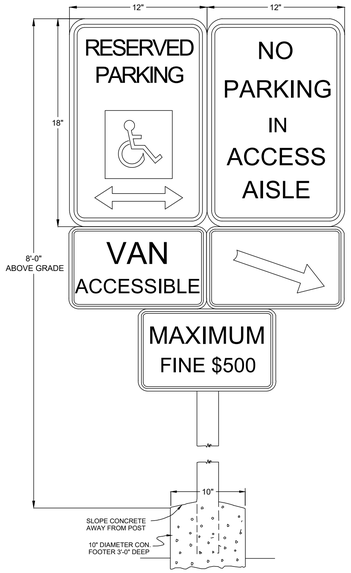
SHEET TITLE

CONSTRUCTION PROFILES
STORM DRAINAGE

C-403
SHEET 15 OF 38

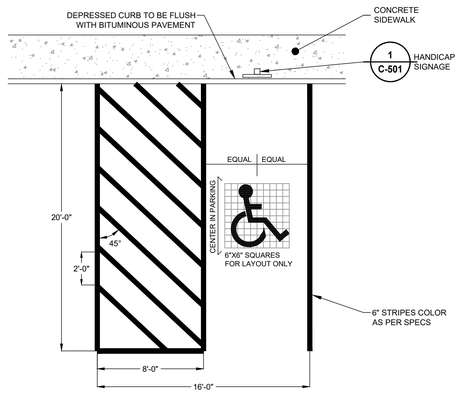
SP-25-011

P:\SHEETZ\DWGS\CIVIL\CONSTRUCTION PROFILES.DWG, 2025-10-01

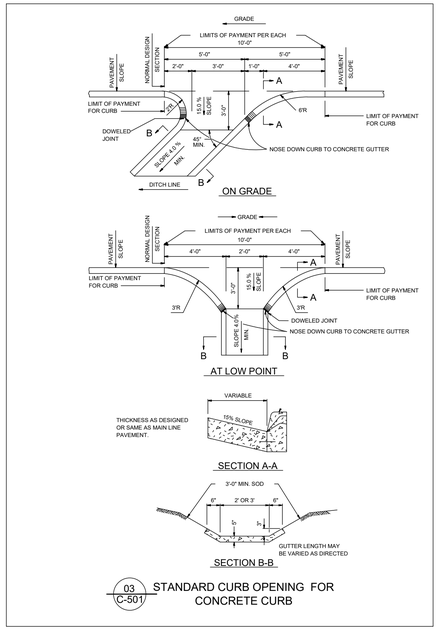


NOTES:
Use appropriate arrow plate.
Colors: Background (white), Text & Boarder (green), Symbol (white on a blue background).
Reference state of Maryland standard highway sign booklet.
Department of Transportation P.O. Box 717-707 N. Calbert St. Baltimore, Maryland 21203

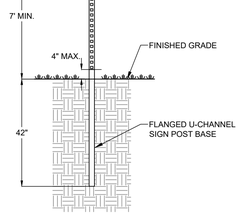
01 C-501 **HANDICAPPED - SIGNAGE - MD**
NOT TO SCALE



02 C-501 **HANDICAPPED PARKING LAYOUT**
NOT TO SCALE



03 C-501 **STANDARD CURB OPENING FOR CONCRETE CURB**



NOTES:
1. Mount sign at right angle to direction of traffic flow.

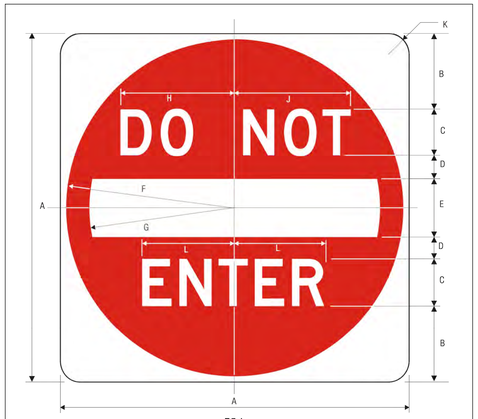
04 C-501 **ROADWAY SIGN POST DETAIL**
NOT TO SCALE

R5-1
(30"x30")

06 C-501 **DO NOT ENTER SIGN**
NOT TO SCALE

R1-1
(30"x30")

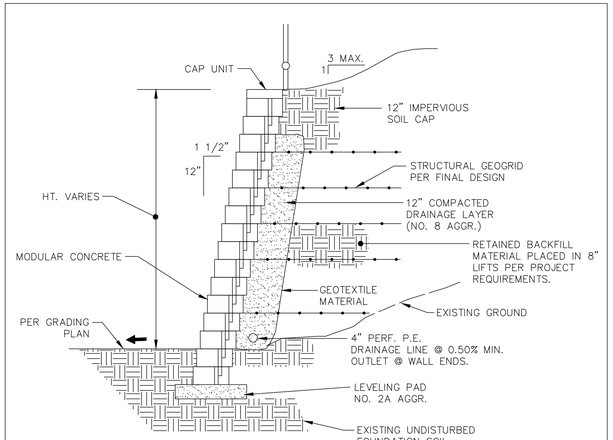
07 C-501 **STOP SIGN DETAIL**
NOT TO SCALE



R5-1
DO NOT ENTER

	A	B	C	D	E	F	G	H	J	K	L
C	30	6.5	4 D	2	5	14.5	12.5	9.75	10	1.875	7.875
	36	7.5	5 D	2.5	6	17.5	15	12	12.375	2.25	9.813
	48	11	6 D	3	8	23.5	20	14.5	15	3	11.75

09 C-501 COLORS: SYMBOL – RED (RETROREFLECTIVE)
LEGEND & BACKGROUND – WHITE (RETROREFLECTIVE)
SHA REFERENCES
MdMUTCD SECTION - 2B.10, 2B.34, 2B.35, 5B.04, 10C.12, 2E.50



1. THE CONTRACTOR SHALL PROVIDE STRUCTURAL DESIGN CALCULATIONS FOR THE WALL, SEALED BY A REGISTERED PROFESSIONAL ENGINEER FOR THE OWNER'S REVIEW AND APPROVAL.
2. A BUILDING PERMIT IS REQUIRED IF RETAINING WALL IS GREATER THAN 3 FEET IN HEIGHT. A GLOBAL STABILITY ANALYSIS IS REQUIRED IF RETAINING WALL IS GREATER THAN 10 FEET IN HEIGHT.
3. ALL PROPOSED RETAINING WALLS OVER THREE FEET HIGH SHALL BE DESIGNED ACCORDING TO THE APPLICABLE BUILDING CODE AND/OR AASHTO STANDARD, AND SHALL BE APPROVED PRIOR TO CONSTRUCTION.

08 C-501 **RETAINING WALL- BY OTHERS**
NOT TO SCALE

R6-2R
(24"x30")

05 C-501 **ONE WAY DIRECTIONAL SIGN**
NOT TO SCALE

STATE OF MARYLAND
JOSEPH MARK WEIMER
No. 21601
REGISTERED PROFESSIONAL ENGINEER
10/01/2025

Professional Certification:
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional under the laws of the State of MARYLAND License # 21601
Expiration Date: 06.23.2027

FSA
FREDERICK SEIBERT & ASSOCIATES, INC.
CIVIL ENGINEERS • SURVEYORS • LANDSCAPE ARCHITECTS • LAND PLANNERS
fsa-inc.com
100 SOUTH MARKET STREET, SUITE 420, P.O. BOX 280, WEST MANCHESTER, PA 17404, 717.225.7531
NEW BLOOMFIELD, PA 17068
CARLISLE, PA 17013
717.701.8111
GREENCASTLE, PA 17225
717.597.1001
HAGERSTOWN, MD 21740
301.791.3800

MARK	DESCRIPTION:	DATE:
1	REVISED PER AGENCY COMMENTS	09.30.25
2	REVISED PER AGENCY COMMENTS	08.08.25

NOT APPROVED FOR CONSTRUCTION

SHEETZ - SMITHSBURG
SITUATED ALONG THE WEST SIDE OF MD 66 (MARYLAND ROUTE) AT ITS INTERSECTION WITH MD 64 (JEFFERSON BLVD)
SMITHSBURG
WASHINGTON COUNTY, MARYLAND
SHEETZ, INC.
243 SHEETZ WAY CLAYSBURG, PA 16625

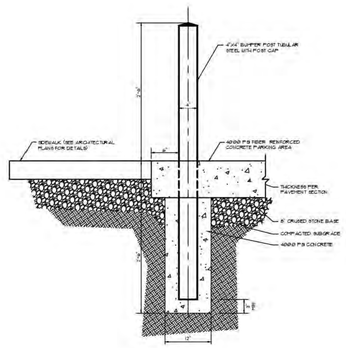
PROJECT NO. 6086.1
DWN BY KODY WARD | DATE 03.17.2025
PROJECT MANAGER DAVID TROSTLE
EMAIL: dtrostle@fsa-inc.com
TAX MAP - GRID - PARCEL(S) 0051 - 0005 - 0086 & 0091
SCALE NOT TO SCALE
SHEET TITLE

CONSTRUCTION DETAILS - SITE

C-501
SHEET 16 OF 38

SP-25-011

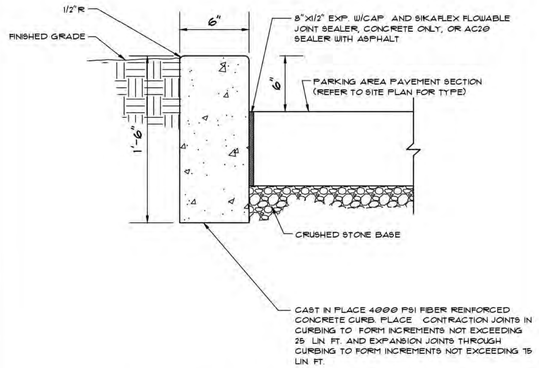
P:\SHARED CLOUD\PROJECTS\6000\6086\6086 I - SHEETZ\SHEETZ PLANS\6086 I - 10-01 - CONSTRUCTION DETAILS - SITE.DWG - 2025-10-01



STOREFRONT BUMPER POST FLUSH SIDEWALK
SCALE: NO SCALE

01
C-502

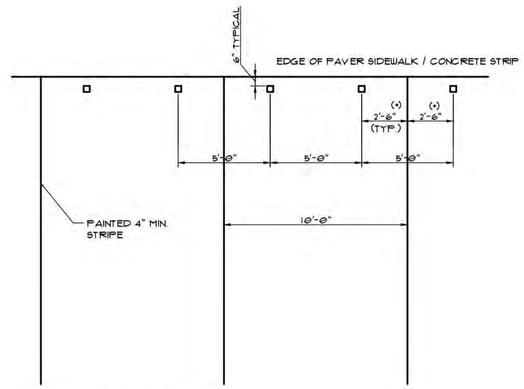
DATE | BY | DESCRIPTION REVISIONS	SHEETZ	STOREFRONT BUMPER POST DETAIL	SCALE: DATE: 11/10/2023 DRAWN BY: DAH 01



SITE AND STORE PERIMETER CURBING
SCALE: NO SCALE

03
C-502

DATE | BY | DESCRIPTION REVISIONS	SHEETZ	SITE AND STORE PERIMETER CURBING	SCALE: DATE: 11/10/2023 DRAWN BY: DAH 03



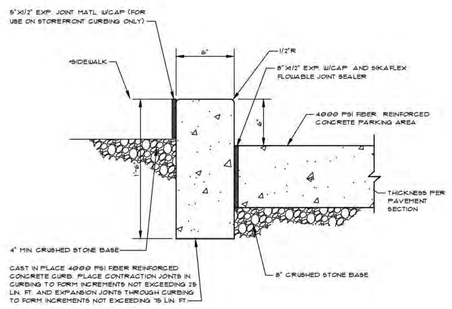
BUMPER POST DETAIL
SCALE: NO SCALE

- 2'-3" FOR 9.5' WIDE PARKING SPACE
  2'-0" FOR 9.0' WIDE PARKING SPACE

USE THIS DETAIL IF PAVEMENT IS PAVED UP TO TOP OF SIDEWALK.

05
C-502

DATE | BY | DESCRIPTION REVISIONS	SHEETZ	BUMPERPOST LAYOUT DETAIL AT PAVER SIDEWALK	SCALE: DRAWN BY: DAH 08



STOREFRONT CONCRETE CURBING
SCALE: NO SCALE

(+) SEE ARCHITECTURAL PLANS FOR ADDITIONAL DETAILS ON BRICK PAVER/ CONCRETE CURB CONNECTION

02
C-502

DATE | BY | DESCRIPTION REVISIONS	SHEETZ	STOREFRONT CONCRETE CURBING DETAIL	SCALE: DATE: 11/10/2023 DRAWN BY: DAH 02

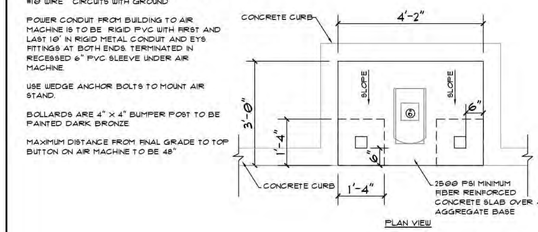
AIR MACHINE PAD NOTES:
ELECTRICAL NEEDS ARE A 120-VAC 30-AMP #10 WIRE CIRCUITS WITH GROUND

POWER CONDUIT FROM BUILDING TO AIR MACHINE IS TO BE RIGID PVC WITH FIRST AND LAST 10' IN RIGID METAL CONDUIT AND EYS FITTINGS AT BOTH ENDS. TERMINATED IN RECESSED 6" PVC SLEEVE UNDER AIR MACHINE.

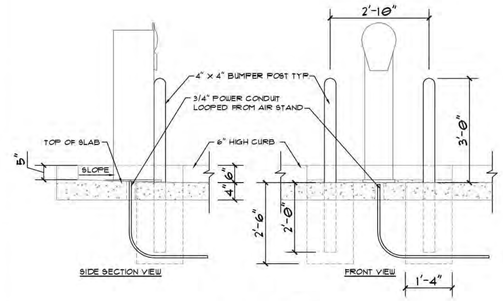
USE WEDGE ANCHOR BOLTS TO MOUNT AIR STAND.

BOLLARDS ARE 4" X 4" BUMPER POST TO BE PAINTED DARK BRONZE

MAXIMUM DISTANCE FROM FINAL GRADE TO TOP BUTTON ON AIR MACHINE TO BE 48"



PLAN VIEW

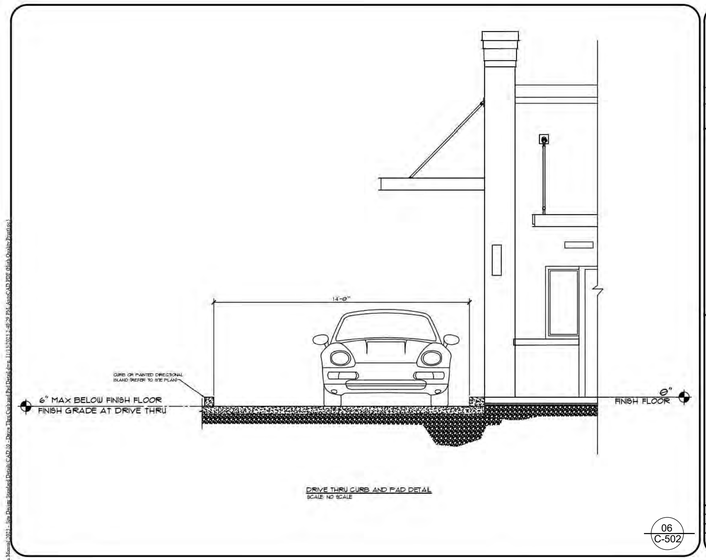


AIR MACHINE PAD
SCALE: NO SCALE

04
C-502

DATE | BY | DESCRIPTION REVISIONS	SHEETZ	AIR MACHINE PAD DETAILS	SCALE: DATE: 11/10/2023 DRAWN BY: DAH 05

Note:
1. The details shown on this sheet were provided by the project developer for informational purposes. Frederick, Seibert & Associates, Inc. has not conducted any review or evaluation of the details for site-specific conditions and is not liable for their content. It is recommended that the details be reviewed by a structural or geotechnical engineer for site-specific conditions. The contractor shall contact the project developer for site-specific requirements.



DRIVE THRU CURB AND PAD DETAIL
SCALE: NO SCALE

06
C-502

DATE | BY | DESCRIPTION REVISIONS	SHEETZ	DRIVE THRU CURB AND PAD DETAIL	SCALE: N.T.S. DATE: 11/10/2023 DRAWN BY: DAH 10

NOT APPROVED FOR CONSTRUCTION

Professional Certification:
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional under the laws of the State of: MARYLAND License # 20969
Expiration Date: 06.23.2027

FSA
FREDERICK SEIBERT & ASSOCIATES, INC.
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OHIO OFFICE: 450 SOUTH MAIN STREET, CRUISE, PA 17013, 717.701.8111
WEST VIRGINIA OFFICE: 1 EAST MAIN STREET, NEW BLOOMFIELD, PA 17068, 717.275.7537

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MARK	DESCRIPTION	DATE

SHEETZ - SMITHSBURG
SITUATED ALONG THE WEST SIDE OF MD 66 (MARYLAND ROUTE 66) AT ITS INTERSECTION WITH MD 64 (JEFFERSON BLVD)
SMITHSBURG
WASHINGTON COUNTY, MARYLAND
SHEETZ INC.
243 SHEETZ WAY CLAYSBURG, PA 16625

PROJECT NO. 6086.1
DWN BY: KODY WARD
DATE: 03.17.2025
PROJECT MANAGER: DAVID TROSTLE
EMAIL: dtrostle@fsa-inc.com
TAX MAP - GRID - PARCEL(S): 0051 - 0005 - 0086 & 0091
SCALE: NOT TO SCALE
SHEET TITLE

CONSTRUCTION DETAILS - SHEETZ

C-502
SHEET 17 OF 38

SP-25-011

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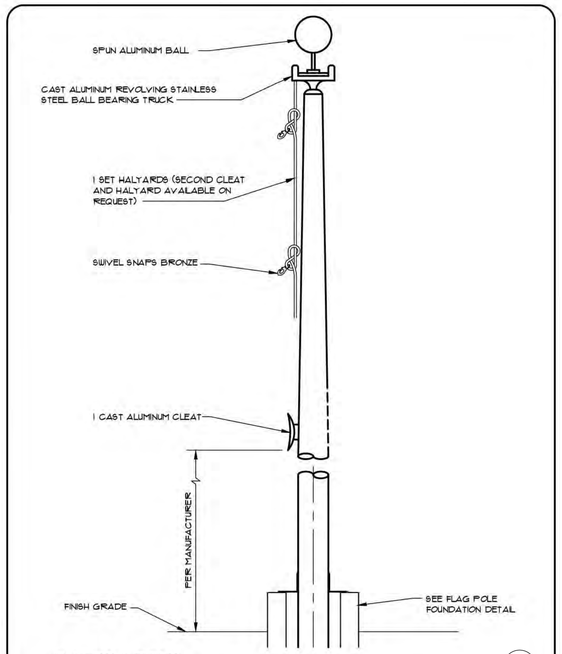


FLAGPOLE DETAIL
SCALE: NO SCALE

01
C-503

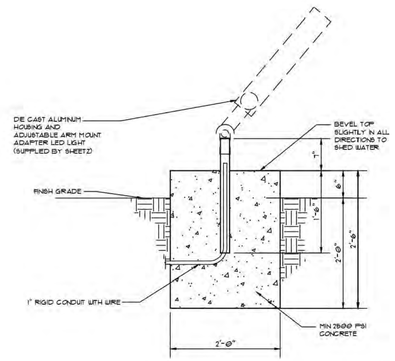
DATE	BY	DESCRIPTION	REVISIONS

SHEETZ

FLAGPOLE DETAIL

SCALE:
DATE: 11/10/2023
DRAWN BY: DAH

11



FLAGPOLE LIGHT FOUNDATION
SCALE: NO SCALE

03
C-503

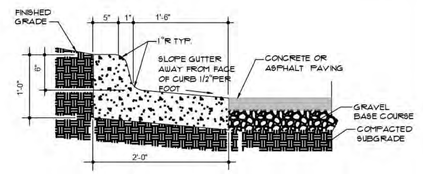
DATE	BY	DESCRIPTION	REVISIONS

SHEETZ

FLAGPOLE LIGHT FOUNDATION

SCALE:
DATE: 11/10/2023
DRAWN BY: DAH

13



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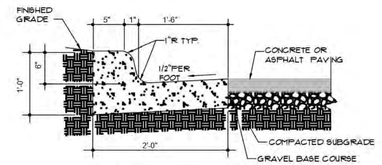


CATCH TYPE

CURB AND GUTTER
SCALE: NO SCALE

NOTE
- CONTRACTION JOINTS TO BE PLACED 10'-0" O.C.
- EXPANSION JOINTS TO BE PLACED 15' O.C. TYP.
- 1/4" PRE-MOLDED BITUMINOUS EXPANSION JOINT WHEN ADJACENT TO CONCRETE PAVING
- CONCRETE SHALL BE 4,000 PSI FIBER MESH CONCRETE UNLESS OTHERWISE REQUIRED BY LOCAL JURISDICTION
- AT CONTRACTOR OPTION, GUTTER THICKNESS MAY BE INCREASED AT END OF GUTTER TO MATCH THICKNESS OF ASPHALT/CONCRETE PAVEMENT SECTION
- GUTTER PAN SLOPE TO BE ADJUSTED WITHIN ACCESSIBLE PARKING SPACES TO MATCH SLOPE BETWEEN SPOT ELEVATIONS

05
C-503

DATE	BY	DESCRIPTION	REVISIONS

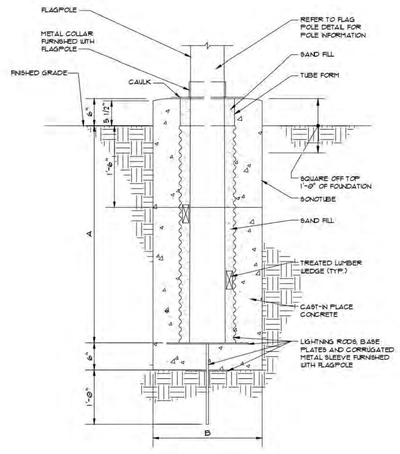
SHEETZ

CURB AND GUTTER DETAIL

SCALE:
DATE: 11/10/2023
DRAWN BY: DAH

15

LEGEND				
POLE HEIGHT	SLEEVE SIZE	A	B	COLLAR BASE SIZE
40'	12" DIA.	48"	24" DIA.	16" DIA.
35'	10" DIA.	42"	22" DIA.	12" DIA.



FLAGPOLE FOUNDATION
SCALE: NO SCALE

02
C-503

DATE	BY	DESCRIPTION	REVISIONS

SHEETZ

FLAGPOLE FOUNDATION

SCALE:
DATE: 11/10/2023
DRAWN BY: DAH

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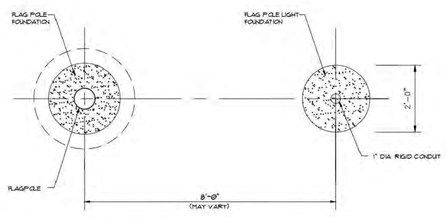


NOTE: CONTRACTOR/INSTALLER SHALL LOCATE LIGHT FIXTURE SO AS TO SHINE AWAY FROM ADJACENT ROADS AND/OR PROPERTIES

FLAGPOLE LIGHT FOUNDATION PLAN
SCALE: NO SCALE

04
C-503

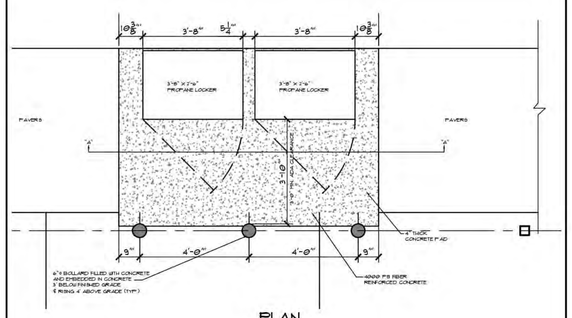
DATE	BY	DESCRIPTION	REVISIONS

SHEETZ

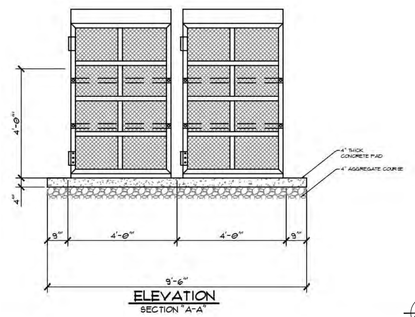
FLAGPOLE AND LIGHT FOUNDATION LAYOUT PLAN

SCALE:
DATE: 11/10/2023
DRAWN BY: DAH

14



PLAN



ELEVATION
SECTION "A-A"

06
C-503

DATE	BY	DESCRIPTION	REVISIONS

SHEETZ

PROPANE LOCKER (AT BUILDING)

SCALE:
DATE: 11/10/2023
DRAWN BY: DAH

19

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P:\SHEETZ\SITE\SITE DETAILS\6086.1 - SHEETZ\WASHINGTON\6086.1 - WASH - CONSTRUCTION DETAILS - SHEETZ.DWG, 2025-10-01

NOT APPROVED FOR CONSTRUCTION

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MARK	DESCRIPTION	DATE

SHEETZ - SMITHSBURG
SITUATED ALONG THE WEST SIDE OF MD RT. 10A (MAPLEVILLE ROAD) AT ITS INTERSECTION WITH MD RT. 64 (JEFFERSON BLVD)
SMITHSBURG
WASHINGTON COUNTY, MARYLAND
SHEETZ INC.
243 SHEETZ WAY CLAYSBURG, PA 16625

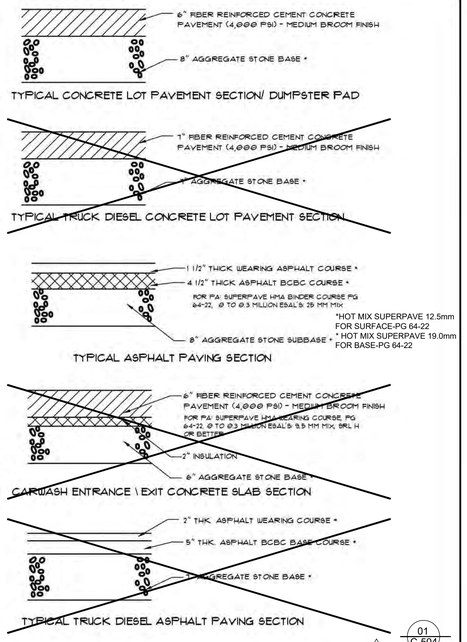
PROJECT NO.	6086.1
DWN BY:	KODY WARD
DATE:	03.17.2025
PROJECT MANAGER:	DAVID TROSTLE
EMAIL:	dtrostle@fsa-inc.com
TAX MAP - GRID - PARCEL(S)	0051 - 0005 - 0086 & 0091
SCALE	NOT TO SCALE

SHEET TITLE

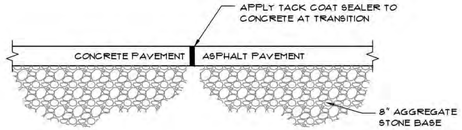
CONSTRUCTION DETAILS - SHEETZ

C-503
SHEET 18 OF 38

SP-25-011



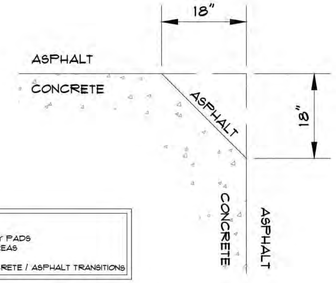
DATE | BY | DESCRIPTION REVISIONS	SHEETZ	SITE PAVEMENT DETAILS	SCALE: DATE: 12/12/2023 DRAWN BY: DAH 20



CONCRETE / ASPHALT PAVEMENT TRANSITION DETAIL
N.T.S.

03
C-504

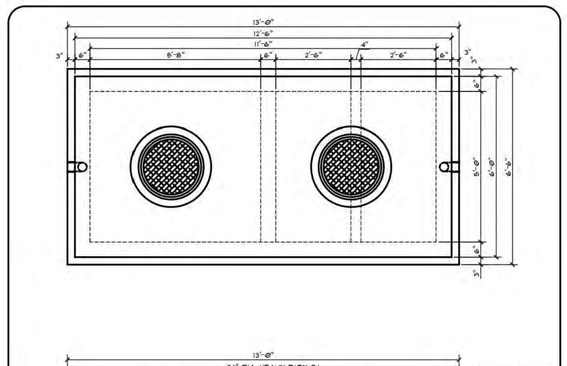
DATE | BY | DESCRIPTION REVISIONS	SHEETZ	ASPHALT PAVING DETAILS	SCALE: DATE: 11/10/2023 DRAWN BY: DAH 27



CONCRETE / ASPHALT CHAMFER
SCALE: NO SCALE

05
C-504

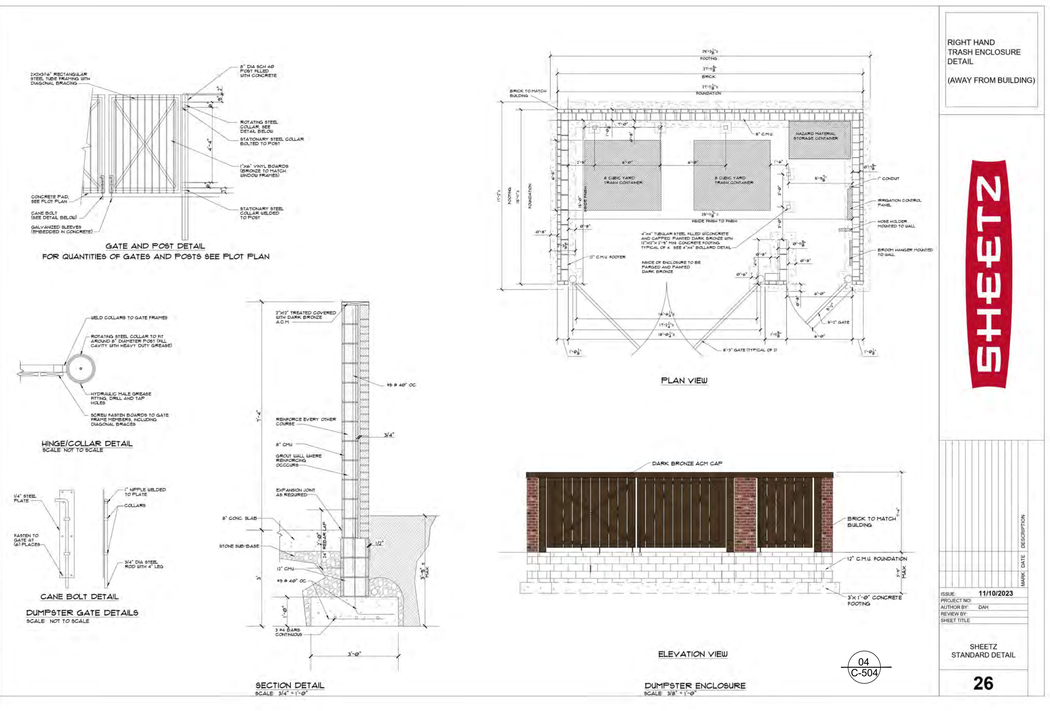
DATE | BY | DESCRIPTION REVISIONS	SHEETZ	CONCRETE/ASPHALT CHAMFER DETAIL	SCALE: DATE: 11/10/2023 DRAWN BY: DAH 28



PRECAST CONCRETE 2000 GALLON GREASE INTERCEPTOR
SCALE: NO SCALE

02
C-504

DATE | BY | DESCRIPTION REVISIONS	SHEETZ	2000 GALLON GREASE INTERCEPTOR	SCALE: DATE: 11/10/2023 DRAWN BY: DAH 21



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Expiration Date: 06.23.2027

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CARLISLE, PA 17013 717.701.8111
GREENCASTLE, PA 17225 717.597.1007
HAGERSTOWN, MD 21740 301.791.3800

MARK	DESCRIPTION	DATE

SHEETZ - SMITHSBURG
SITUATED ALONG THE WEST SIDE OF MD RTE. 77 (MAPLEVILLE ROAD) AT ITS INTERSECTION WITH MD RTE. 64 (JEFFERSON BLVD)
SMITHSBURG
WASHINGTON COUNTY, MARYLAND
SHEETZ INC.
243 SHEETZ WAY CLAYSBURG, PA 16625

PROJECT NO.	6086.1
DWN BY	KODY WARD
DATE	03.17.2025
PROJECT MANAGER	DAVID TROSTLE
EMAIL	dtrostle@fsa-inc.com
TAX MAP - GRID - PARCEL(S)	0051 - 0005 - 0086 & 0091
SCALE	NOT TO SCALE
SHEET TITLE	CONSTRUCTION DETAILS - SHEETZ

C-504
SHEET 19 OF 38

SP-25-011

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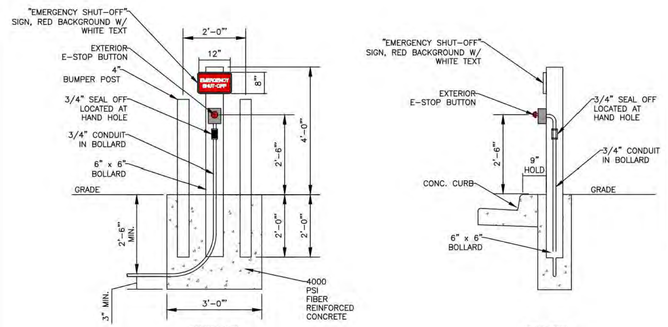


E-STOP STANDARD DETAIL

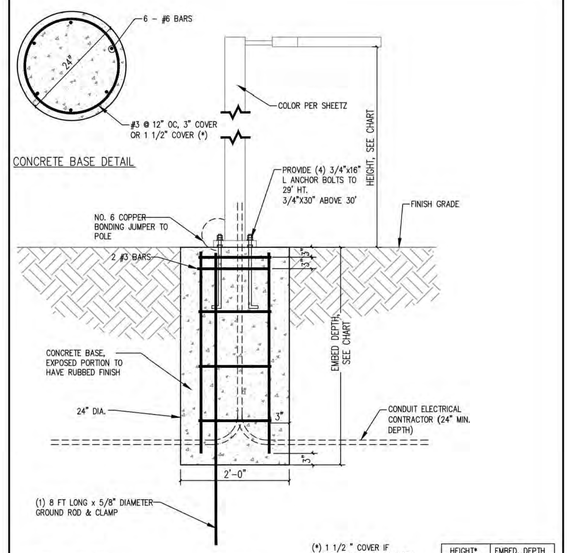
E-STOP STANDARD DETAIL

SHEETZ

DATE: 11/10/2023
DRAWN BY: BW
DESIGN BY:
SHEET TITLE: SHEETZ STANDARD DETAIL

01 C-505

SHEETZ STANDARD DETAIL 29



CONCRETE BASE DETAIL

SECTION

DESIGN CRITERIA

CONCRETE f'c = 4,000 PSI
REINFORCING Fy = 60 KSI
WIND = 120 MPH
WIND FORCE = 40 PSF
LUMINAIRE EPA = 2.75 MAX COMBINED
SOIL BEARING = 2,000 PSF
SOIL LATERAL PRESSURE = 250 PSF/FT

(*) 1 1/2 " COVER IF FOUNDATION INSTALLED WITH SONATUBE. 3" COVER IF FOUNDATION CAST-IN-PLACE.

HEIGHT*	EMBED. DEPTH
UP TO 20'	3'-9"
21 TO 25'	4'-3"
26 TO 30'	4'-6"
31 TO 35'	5'-0"

HEIGHT* IS ABOVE GRADE

03 C-505

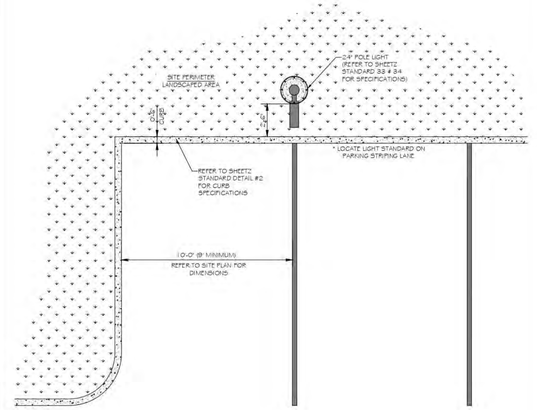
DATE | BY | DESCRIPTION — REVISIONS

SHEETZ

FLUSH LIGHT POLE DETAIL

SCALE:
DATE: 08/22/2024
DRAWN BY: DAH

34



LIGHTING STANDARD PLACEMENT
SCALE: 3/4" = 1'-0"

05 C-505

DATE | BY | DESCRIPTION — REVISIONS

SHEETZ

STANDARD POLE LIGHT PLACEMENT DETAIL

SCALE:
DATE: 08/13/2024
DRAWN BY: DAH

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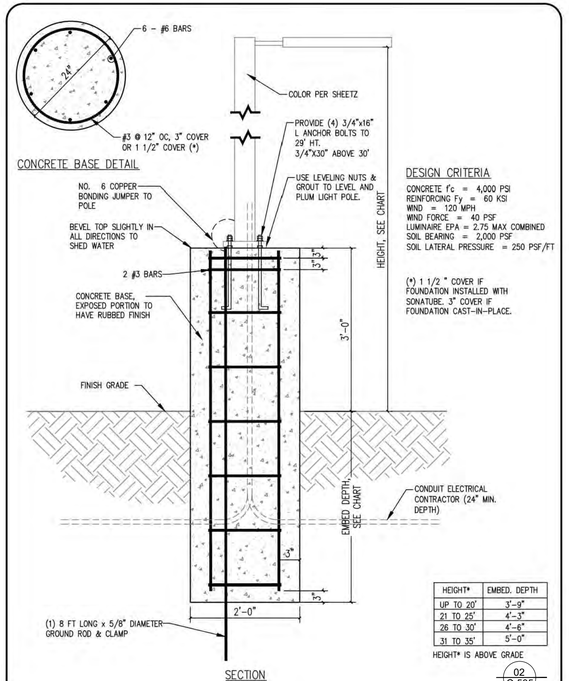


DESIGN CRITERIA

CONCRETE f'c = 4,000 PSI
REINFORCING Fy = 60 KSI
WIND = 120 MPH
WIND FORCE = 40 PSF
LUMINAIRE EPA = 2.75 MAX COMBINED
SOIL BEARING = 2,000 PSF
SOIL LATERAL PRESSURE = 250 PSF/FT

(*) 1 1/2 " COVER IF FOUNDATION INSTALLED WITH SONATUBE. 3" COVER IF FOUNDATION CAST-IN-PLACE.

HEIGHT*	EMBED. DEPTH
UP TO 20'	3'-9"
21 TO 25'	4'-3"
26 TO 30'	4'-6"
31 TO 35'	5'-0"

HEIGHT* IS ABOVE GRADE

SECTION

02 C-505

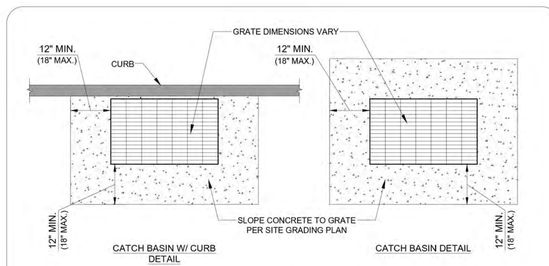
DATE | BY | DESCRIPTION — REVISIONS

SHEETZ

POLE LIGHT DETAIL

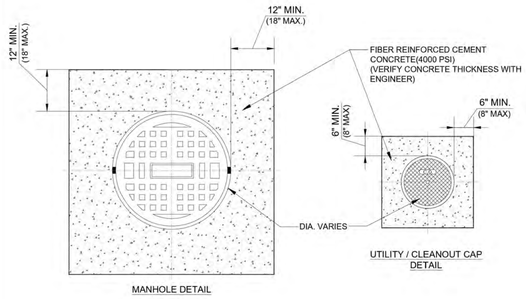
SCALE:
DATE: 08/22/2024
DRAWN BY: DAH

33



CATCH BASIN W/ CURB DETAIL

CATCH BASIN DETAIL



MANHOLE DETAIL

UTILITY / CLEANOUT CAP DETAIL

CONCRETE COLLAR DETAILS
N.T.S.

04 C-505

DATE | BY | DESCRIPTION — REVISIONS

SHEETZ

CONCRETE COLLAR DETAIL

SCALE:
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Expiration Date: 06.23.2027
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MARK | DESCRIPTION

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SHEETZ - SMITHSBURG
SITUATED ALONG THE WEST SIDE OF MD RT. 70 (MAPLEVILLE ROAD) AT ITS INTERSECTION WITH MD RT. 64 (JEFFERSON BLVD)
SMITHSBURG
WASHINGTON COUNTY, MARYLAND
SHEETZ INC.
243 SHEETZ WAY CLAYSBURG, PA 16625

PROJECT NO.: 6086.1
DWN BY: KODY WARD
DATE: 03.17.2025
PROJECT MANAGER: DAVID TROSTLE
EMAIL: dtrostle@fsa-inc.com
TAX MAP - GRID - PARCEL(S): 0051 - 0005 - 0086 & 0091
SCALE: NOT TO SCALE
SHEET TITLE:

CONSTRUCTION DETAILS - SHEETZ

C-505
SHEET 20 OF 38

SP-25-011

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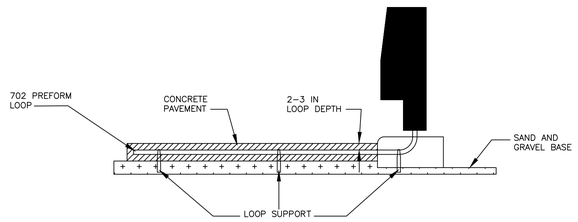
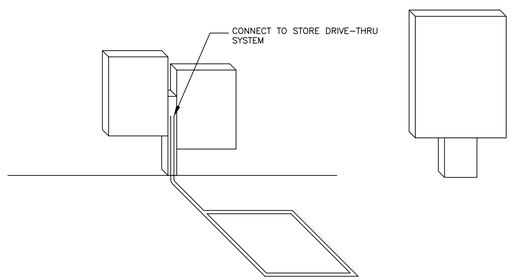
INSTRUCTIONS

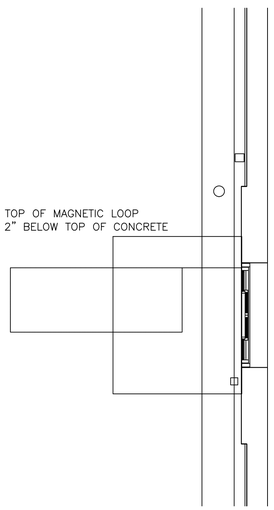
1. POSITION PREFORM LOOP APPROXIMATELY 1'-3' FROM CURB, CENTERED IN FRONT OF THE MENUBOARD OR SPEAKER POST.
2. LOOP SHOULD BE INSTALLED 2" – 3" BELOW THE SURFACE OF THE PAVEMENT. (5" MAX. DEPTH)
3. IF INSTALLED IN ASPHALT, COVER LOOP WITH 1" MIN. SOIL OR SAND TO PROTECT FROM HOT ASPHALT.
4. CONNECT LOOP TO 1/2" CONDUIT STUBBING UP IN MENUBOARD/SPEAKER POST.
5. WIRE MESH OR REINFORCEMENT IN CONCRETE SHOULD BE CUT AWAY IN MIN. OF 6" FROM PERIMETER OF LOOP.
6. ALL CONNECTIONS AND SPLICES TO LOOP WIRES MUST BE SOLDERED.



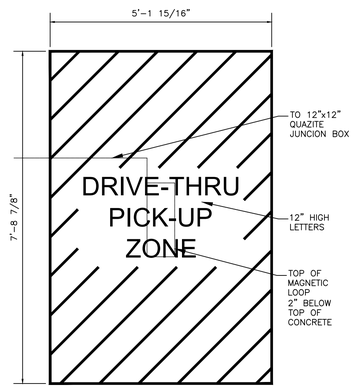
SIDE VIEW CONCRETE INSTALLATION
NO SCALE



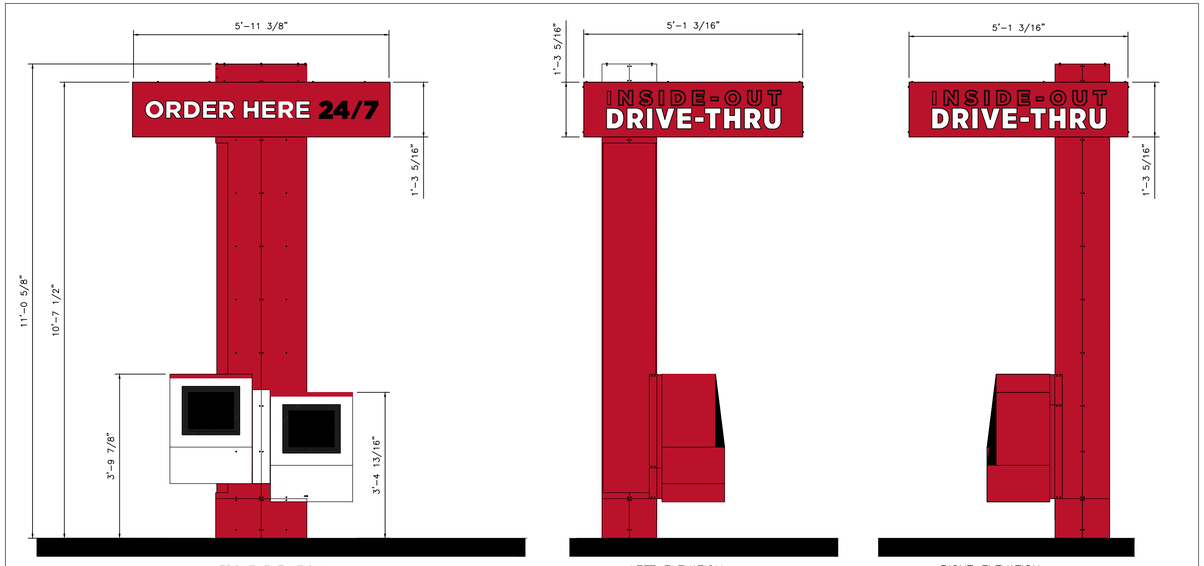
MENUBOARD W/ SPEAKER POST INSTALLATION
NOT TO SCALE
01 C-506



DRIVE THRU WINDOW DETAIL
SCALE: 1"=20'
02 C-506

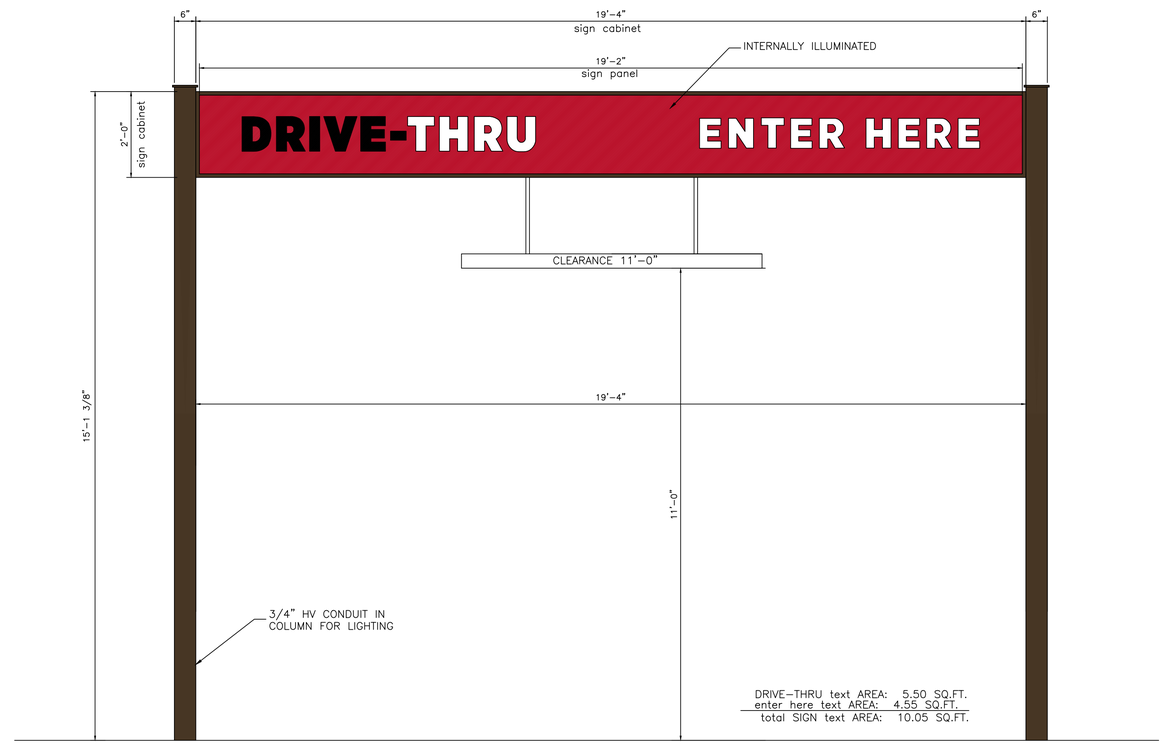


PARKING SPACE PAINTING DIAGRAM
NOT TO SCALE
03 C-506



ORDER POINT ELEVATIONS
NOT TO SCALE
04 C-506

Note:
1. The details shown on this sheet were provided by the project developer for informational purposes. Frederick, Seibert & Associates, Inc. has not conducted any review or evaluation of the details for site-specific conditions and is not liable for their content. It is recommended that the details be reviewed by a structural or geotechnical engineer for site-specific conditions. The contractor shall contact the project developer for site-specific requirements.



DRIVE THRU CLEARANCE SIGN ELEVATION
NOT TO SCALE
05 C-506

NOT APPROVED FOR CONSTRUCTION

Professional Certification:
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional under the laws of the State of: MARYLAND License # 20981
Expiration Date: 06.23.2027

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FREDERICK SEIBERT & ASSOCIATES, INC.
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CARLISLE, PA 17013 (717) 701-9111
GREENCASTLE, PA 17225 (717) 597-1007
HAGERSTOWN, MD 21740 (301) 791-3800
CLEARFIELD, PA 16830 (814) 765-1601

MARK	DESCRIPTION	DATE

SHEETZ - SMITHSBURG
SITUATED ALONG THE WEST SIDE OF MD 66 (MARYLAND ROAD) AT ITS INTERSECTION WITH MD 64 (JEFFERSON BLVD)
SMITHSBURG
WASHINGTON COUNTY, MARYLAND
SHEETZ INC.
243 SHEETZ WAY CLAYSBURG, PA 16625

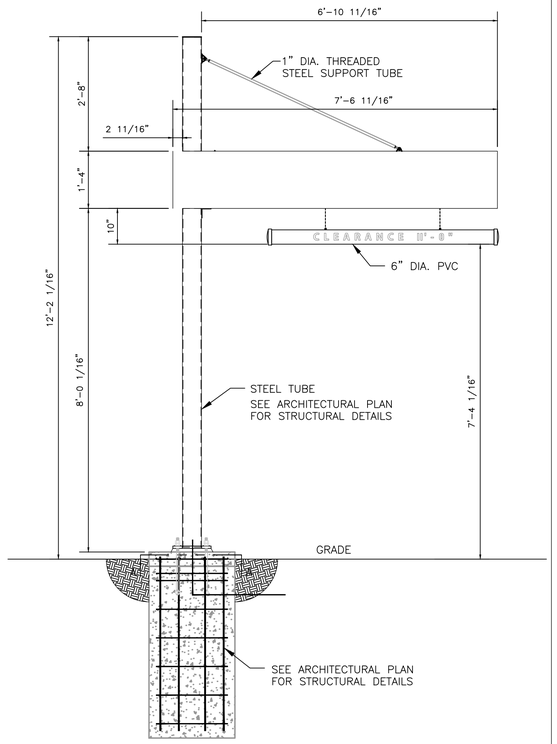
PROJECT NO. 6086.1
DRAWN BY: KODY WARD
DATE: 03.17.2025
PROJECT MANAGER: DAVID TROSTLE
EMAIL: dtrostle@fsa-inc.com
TAX MAP - GRID - PARCEL(S): 0051 - 0005 - 0086 & 0091
SCALE: NOT TO SCALE
SHEET TITLE

CONSTRUCTION DETAILS - SHEETZ

C-506
SHEET 21 OF 38

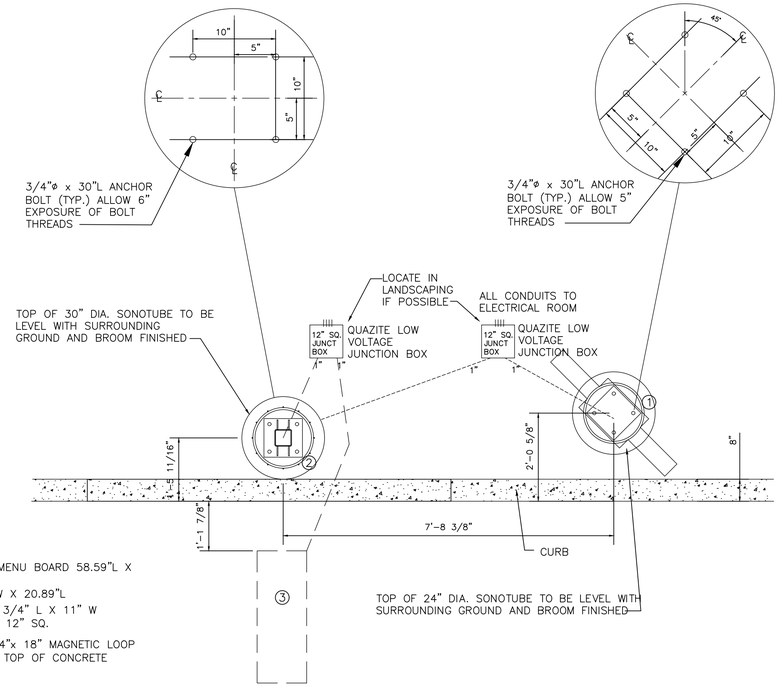
SP-25-011

PLOTTED ON: 3/25/2025 2:47:17 PM BY: KWARD
FILE NAME: I:\FSA\SHEETZ\SMITHSBURG\SMITHSBURG.DWG
XREF: I:\FSA\SHEETZ\SMITHSBURG\XREF\C-506 - CONSTRUCTION DETAILS - SITE.DWG, 2025-03-01



CLEARANCE SIGN DETAIL
NOT TO SCALE

01
C-507



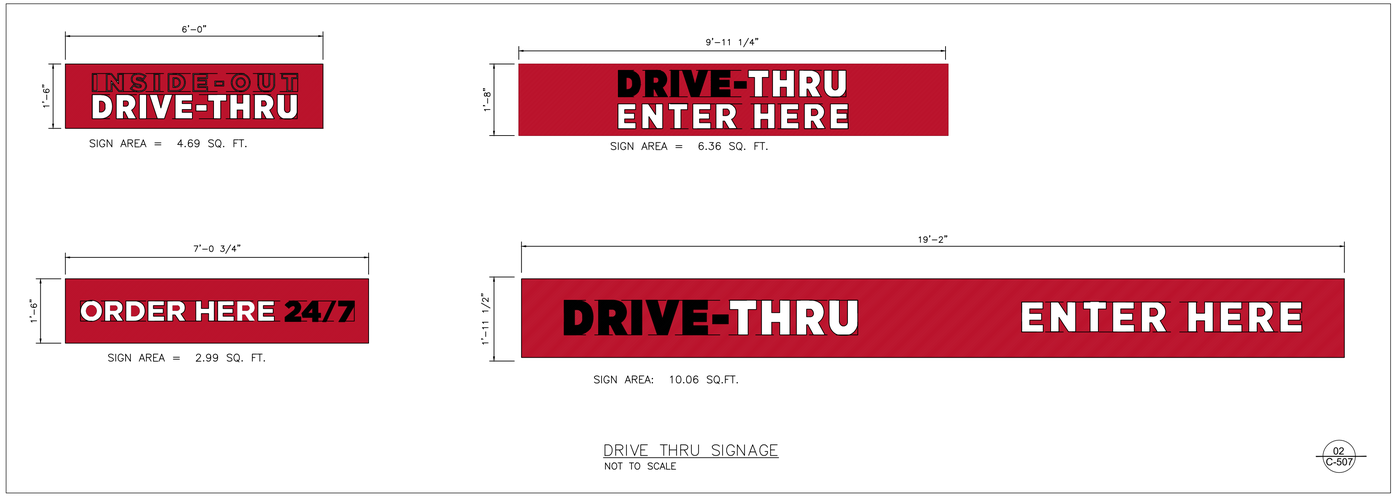
LEGEND

1. 3 PANEL MENU BOARD 58.59"L X 6.28"W
   BASE 15"W X 20.89"L
2. ODK'S 50 3/4" L X 11" W
   ODK BASE 12" SQ.
3. TOP OF 54"x 18" MAGNETIC LOOP 2" BELOW TOP OF CONCRETE

DRIVE THRU ORDER POINT LAYOUT
NOT TO SCALE

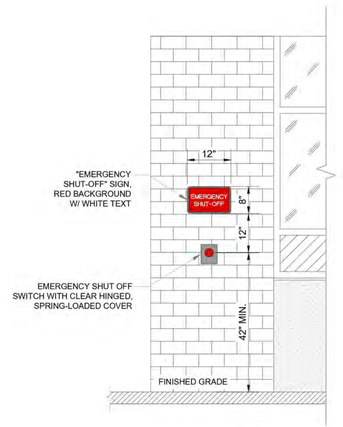
03
C-507

Note:
1. The details shown on this sheet were provided by the project developer for informational purposes. Frederick, Seibert & Associates, Inc. has not conducted any review or evaluation of the details for site-specific conditions and is not liable for their content. It is recommended that the details be reviewed by a structural or geotechnical engineer for site-specific conditions. The contractor shall contact the project developer for site-specific requirements.



DRIVE THRU SIGNAGE
NOT TO SCALE

02
C-507



BUILDING MOUNTED E-STOP DETAIL
N.T.S.

04
C-507

DATE	BY	DESCRIPTION
REVISIONS		

SHEETZ

BUILDING MOUNTED E-STOP DETAIL

SCALE:
DATE: 02/27/2025
DRAWN BY: DAH

55

NOT APPROVED FOR CONSTRUCTION

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4581 SOUTH HANOVER STREET CARLISLE, PA 17013 717.701.8111
1 EAST MAIN STREET NEW BLOOMFIELD, PA 17068 717.275.7531

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Professional Certification:
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional under the laws of the State of: MARYLAND License # 20984
Expiration Date: 06.23.2027

MARK	DESCRIPTION	DATE

SHEETZ - SMITHSBURG
SITUATED ALONG THE WEST SIDE OF MD 66 (MARSH VILLE ROAD) AT ITS INTERSECTION WITH MD 64 (JEFFERSON BLVD)
SMITHSBURG
WASHINGTON COUNTY, MARYLAND
SHEETZ INC.
243 SHEETZ WAY CLAYSBURG, PA 16625

PROJECT NO. 6086.1
DWN BY: KODY WARD
DATE: 03.17.2025
PROJECT MANAGER: DAVID TROSTLE
EMAIL: dtrostle@fsa-inc.com
TAX MAP - GRID - PARCEL(S): 0051 - 0005 - 0086 & 0091
SCALE: NOT TO SCALE
SHEET TITLE:

CONSTRUCTION DETAILS - SHEETZ

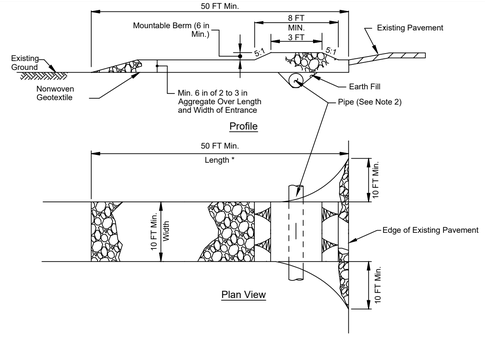
C-507
SHEET 22 OF 38

SP-25-011

P:\SHEETZ PROJECTS\SMITHSBURG, MD\6086.1 - SHEETZ SMITHSBURG, MD\3 - CONSTRUCTION\CAD FILES\C-507 DETAILS - SITE.DWG 2025.10.01

1 C-509 Detail B-1 Stabilized Construction Entrance

Standard Symbol: SCE



Construction Specifications

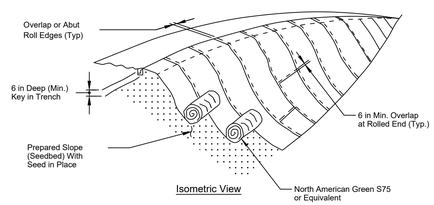
1. Place stabilized construction entrance in accordance with the approved plan. Vehicles must travel over the entire length of the SCE.Use minimum length of 50 feet (*30 feet for single residence lot). Use minimum width of 10 feet. Flare SCE 10 feet minimum at the existing road to provide a turning radius.
2. Pipe all surface water flowing to or diverted toward the SCE under the entrance, maintaining positive drainage. Protect pipe installed through the SCE with a mountable berm with 5:1 slopes and a minimum of 12 inches of stone over the pipe. Provide pipe as specified on approved plan. When the SCE is located at a high spot and has no drainage to convey, a pipe is not necessary. A mountable berm is required when SCE is not located at a high spot.
3. Prepare subgrade and place nonwoven geotextile, as specified in Section H-1 materials.
4. Place crushed aggregate (2 to 3 inches in size) or equivalent recycled concrete (without rebar) at least 6 inches deep over the length and width of the SCE.
5. Maintain entrance in a condition that minimizes tracking of sediment. add stone or make other repairs as conditions demand to maintain clean surface, mountable berm, and specified dimensions. Immediately remove stone and/or sediment spilled, dropped, or tracked onto adjacent roadway by vacuuming, scraping, and/or sweeping. Washing roadway to remove mud tracked onto pavement is not acceptable unless wash water is directed to an approved sediment control practice.

Maryland Standards AND Specifications For Soil Erosion and Sediment Control

U.S. Department of Agriculture Natural Resources Conservation Service	2011	Maryland Department of Environment Water Management Administration

2 C-509 Detail B-4-6-B Temporary Soil Stabilization Matting Slope Application

Standard Symbol: TSSMS – * lb/ft² (* Include Shear Stress)



Construction Specifications

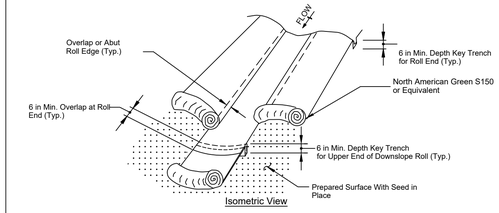
1. Use matting that has a design value for shear stress equal to or higher than the shear stress designated on approved plans.
2. Use temporary soil stabilization matting made of degradable (lasts 6 months minimum) natural or man-made fibers (mostly organic). Mat must have uniform thickness and distribution of fibers throughout and be smolder resistant. Chemicals used in the mat must be non-leaching and non-toxic to vegetation and seed germination and non-injurious to the skin. If present, netting must be extruded plastic with a maximum mesh opening of 2x2 inches and sufficiently bonded or sewn on 2 inch centers along longitudinal axis of the material to prevent separation of the net from the parent material.
3. Secure matting using steel staples, wood stakes, or biodegradable equivalent. staples must be "u" or "t" shaped steel wire having a minimum gauge of no. 11 and no. 8 respectively, "u" shaped staples must average 1 to 1½ inches wide and be a minimum of 6 inches long, "t" shaped staples must have a minimum 8 inch main leg, a minimum 1 inch secondary leg, and a minimum 4 inch head. Wood stakes must be rough-sawn hardwood, 12 to 24 inches in length, 1x3 inch in cross section, and wedge shaped at the bottom.
4. Perform final grading, topsoil application, seedbed preparation, and permanent seeding in accordance with specifications. Place matting within 48 hours of completing seeding operations unless end of workday stabilization is specified on the approved erosion and sediment control plan.
5. Unroll matting in direction of water flow, centering the first roll on the channel centerline. Work from center of channel outward when placing rolls. Lay mat smoothly and firmly on the seeded surface. Avoid stretching the matting.
6. Key-in upstream end of each mat roll by digging a 6 inch (minimum) trench at the upstream end of the matting, placing the roll end in the trench, stapling the mat in place, replacing the excavated material, and tamping to secure the mat end.
7. Overlap or abut the roll edges per manufacturer recommendations. Overlap roll ends by 6 inches (minimum), with the upstream mat overlapping on top of the next downstream mat.
8. Staple/stake mat in a staggered pattern on 4 foot (maximum) centers throughout and 2 foot (maximum) centers along seams, joints, and roll ends.
9. Establish and maintain vegetation so that requirements for adequate vegetative establishment are continuously met in accordance with section b-4 vegetative stabilization.

Maryland Standards and Specifications for Soil Erosion and Sediment Control

U.S. Department of Agriculture Natural Resources Conservation Service	2011	Maryland Department of Environment Water Management Administration

3 C-509 Detail B-4-6-A Temporary Soil Stabilization Matting Channel Application

Standard Symbol: TSSMC - * lb/ft² (* Include Shear Stress)



Construction Specifications

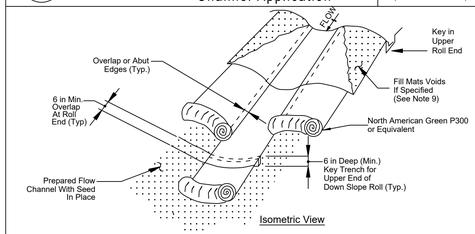
1. Use matting that has a design value for shear stress equal to or higher than the shear stress designated on approved plans.
2. Use temporary soil stabilization matting made of degradable (lasts 6 months minimum) natural or man-made fibers (mostly organic). Mat must have uniform thickness and distribution of fibers throughout and be smolder resistant. Chemicals used in the mat must be non-leaching and non-toxic to vegetation and seed germination and non-injurious to the skin. If present, netting must be extruded plastic with a maximum mesh opening of 2x2 inches and sufficiently bonded or sewn on 2 inch centers along longitudinal axis of the material to prevent separation of the net from the parent material.
3. Secure matting using steel staples, wood stakes, or biodegradable equivalent. staples must be "U" or "T" shaped steel wire having a minimum gauge of no. 11 and no. 8 respectively, "U" shaped staples must average 1 to 1½ inches wide and be a minimum of 6 inches long, "T" shaped staples must have a minimum 8 inch main leg, a minimum 1 inch secondary leg, and a minimum 4 inch head. Wood stakes must be rough-sawn hardwood, 12 to 24 inches in length, 1x3 inch in cross section, and wedge shaped at the bottom.
4. Perform final grading, topsoil application, seedbed preparation, and permanent seeding in accordance with specifications. Place matting within 48 hours of completing seeding operations unless end of workday stabilization is specified on the approved erosion and sediment control plan.
5. Unroll matting in direction of water flow, centering the first roll on the channel centerline. Work from center of channel outward when placing rolls. Lay matting smoothly and firmly upon the seeded surface. Avoid stretching the matting.
6. Key-in upstream end of each mat roll by digging a 6 inch (minimum) trench at the upstream end of the matting, placing the roll end in the trench, stapling the mat in place, replacing the excavated material, and tamping to secure the mat end.
7. Overlap or abut the roll edges per manufacturer recommendations. Overlap roll ends by 6 inches (minimum), with the upstream mat overlapping on top of the next downstream mat.
8. Staple/stake mat in a staggered pattern on 4 foot (maximum) centers throughout and 2 foot (maximum) centers along seams, joints, and roll ends.
9. Establish and maintain vegetation so that requirements for adequate vegetative establishment are continuously met in accordance with section b-4 vegetative stabilization.

Maryland Standards and Specifications for Soil Erosion and Sediment Control

U.S. Department of Agriculture Natural Resources Conservation Service	2011	Maryland Department of Environment Water Management Administration

4 C-509 Detail B-4-6-C Permanent Soil Stabilization Matting Channel Application

Standard Symbol: PSSMC - * lb/ft² (* Include Shear Stress)



Construction Specifications

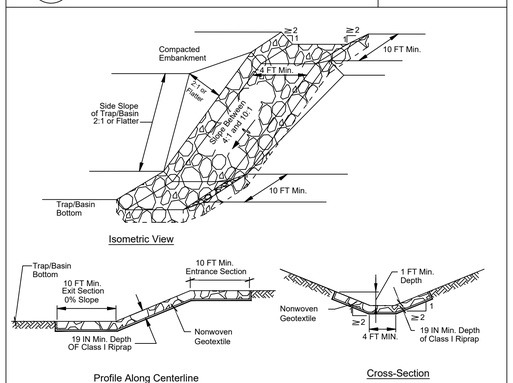
1. Use matting that has a design value for shear stress equal to or higher than the shear stress designated on approved plans.
2. Use permanent soil stabilization matting made of open weave synthetic, non-degradable fibers or elements of uniform thickness and distribution throughout. Chemicals used in the mat must be non-leaching and non-toxic to vegetation and seed germination and non-injurious to the skin. If present, netting must be extruded plastic with a maximum mesh opening of 2x2 inches and sufficiently bonded or sewn on 2 inch centers along longitudinal axis of the material to prevent separation of the net from the parent material.
3. Secure matting using steel staples or wood stakes. Staples must be "U" or "T" shaped steel wire having a minimum gauge of no. 11 and no. 8 respectively, "U" shaped staples must average 1 to 1½ inches wide and be a minimum of 6 inches long, "T" shaped staples must have a minimum 8 inch main leg, a minimum 1 inch secondary leg, and minimum 4 inch head. Wood stakes must be rough-sawn hardwood, 12 to 24 inches in length, 1x3 inch in cross section, and wedge shape at the bottom.
4. Perform final grading, topsoil application, seedbed preparation, and permanent seeding in accordance with specifications. Place matting within 48 hours of completing seeding operations, unless end of workday stabilization is specified on the approved erosion and sediment control plan.
5. Unroll matting in direction of water flow, centering the first roll on the channel center line. Work from center of channel outward when placing rolls. Lay matting smoothly and firmly upon the seeded surface. Avoid stretching the matting.
6. Overlap or abut edges of matting rolls per manufacturer recommendations. Overlap roll ends by 6 inches (minimum), with the upstream mat overlapping on top of the next downstream mat.
7. Key in the top of slope end of mat 6 inches (minimum) by digging a trench, placing the matting roll end in the trench, stapling the mat in place, replacing the excavated material, and tamping to secure the mat end in the key.
8. Staple/stake mat in a staggered pattern on 4 foot (maximum) centers throughout and 2 foot (maximum) centers along seams, joints, and roll ends.
9. If specified by the designer or manufacturer and depending on the type of mat being installed, once the matting is keyed and stapled in place, fill the mat voids with top soil or granular material and lightly compact or roll to maximize soil/mat contact without crushing mat.
10. Establish and maintain vegetation so that requirements for adequate vegetative establishment are continuously met in accordance with section b-4 vegetative stabilization.

Maryland Standards and Specifications for Soil Erosion and Sediment Control

U.S. Department of Agriculture Natural Resources Conservation Service	2011	Maryland Department of Environment Water Management Administration

5 C-509 Detail D-3-1 RipRap Inflow Protection

Standard Symbol: RRP



Construction Specifications

1. Provide nonwoven geotextile, as specified in Section H-1 materials, under the bottom and along sides of all riprap.
2. Construct inflow channel with class i riprap or equivalent recycled concrete lining to a minimum depth of 19 inches (2 x d_{50}) and a 1 foot deep flow channel. Inflow riprap protection channel must have a trapezoidal cross section with 2:1 or flatter side slopes and a 4 foot minimum bottom width.
3. Install entrance and exit sections as shown on the profile.
4. Blend riprap into existing ground.
5. Maintain line, grade, and cross section. remove accumulated sediment and debris. Keep points of inflow and outflow free of erosion.

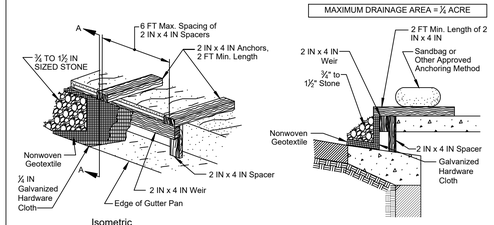
Maryland Standards and Specifications for Soil Erosion and Sediment Control

U.S. Department of Agriculture Natural Resources Conservation Service	2011	Maryland Department of Environment Water Management Administration

6 C-509 Detail E-9-3 Curb Inlet Protection

Standard Symbol: CIP

MAXIMUM DRAINAGE AREA = ¼ ACRE



Construction Specifications

1. Use nominal 2 inch x 4 inch lumber.
2. Use nonwoven geotextile as specified in Section H-1 materials.
3. Nail the 2x4 weir to 9 inch long vertical spacers (maximum 6 feet apart).
4. Attach a continuous piece of ½ inch galvanized hardware cloth, with a minimum width of 30 inches and a minimum length of 4 feet longer than the throat opening, to the 2x4 weir, extending it 2 feet beyond throat on each side.
5. Place a continuous piece of nonwoven geotextile of the same dimensions as the hardware cloth over the hardware cloth and securely attach to the 2x4 weir.
6. Place the assembly against the inlet throat and nail to 2x4 anchors (minimum 2 feet length). Extend the anchors across the inlet top and hold in place by sandbags or other approved anchoring method.
7. Install end spacers a minimum of 1 foot beyond the ends of the throat opening.
8. Form the hardware cloth and the geotextile to the concrete gutter and face of curb to span the inlet opening. Cover the hardware cloth and geotextile with clean ¾ to 1½ inch stone or equivalent recycled concrete.
9. At non-sump locations, install a temporary sandbag or asphalt berm to prevent inlet bypass.
10. Storm drain inlet protection requires frequent maintenance. Remove accumulated sediment after each rain event to maintain function and avoid premature clogging. If inlet protection does not completely drain within 24 hours after a storm event, it is clogged. When this occurs, remove accumulated sediment and clean, or replace geotextile and stone.

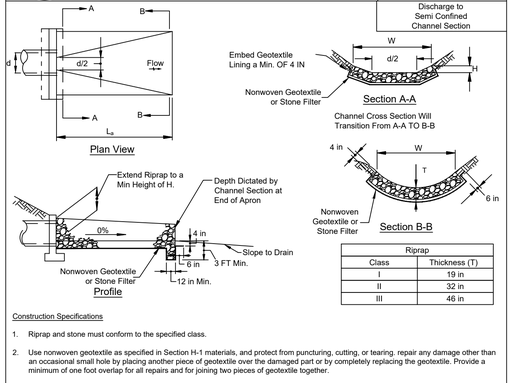
Maryland Standards and Specifications for Soil Erosion and Sediment Control

U.S. Department of Agriculture Natural Resources Conservation Service	2011	Maryland Department of Environmental Water Management Administration

7 C-509 Detail D-4-1-A Rock Outlet Protection I

Standard Symbol: ROP1

Discharge to Semi Confined Channel Section



Riprap	
Class	Thickness (T)
I	19 in
II	32 in
III	46 in

Construction Specifications

1. Riprap and stone must conform to the specified class.
2. Use nonwoven geotextile as specified in Section H-1 materials, and protect from puncturing, cutting, or tearing. repair any damage other than an occasional small hole by placing another piece of geotextile over the damaged part or by completely replacing the geotextile. Provide a minimum of one foot overlap for all repairs and for joining two pieces of geotextile together.
3. Prepare the subgrade for geotextile or stone filter (½ to 1½ inch stone for 6 inch minimum depth) and riprap to the required lines and grades. Compact any fill required in the subgrade to a density of approximately that of the surrounding undisturbed material.
4. Extend geotextile at least 6 inches beyond edges of riprap and embed at least 4 inches at sides of the riprap.
5. Construct riprap outlet to full course thickness in one operation and in such a manner as to avoid displacement of underlying materials. Place stone for riprap outlet in a manner that will ensure that it is reasonably homogenous with the smaller stones and spalls filling the voids between the larger stones. Place riprap in a manner to prevent damage to the stone filter blanket or geotextile. Hand place to the extent necessary.
6. Where no endwall is used, construct the upstream end of the apron so that the width is two times the diameter of the outlet pipe, and extend the stone under the outlet by a minimum of 18 inches.
7. Construct apron with 0% slope along its length and without obstructions. Place stone so that it blends in with existing ground.
8. Maintain line, grade, and cross section. keep outlet free of erosion. Remove accumulated sediment and debris. After high flows inspect for scour and dislodged riprap. Make necessary repairs immediately.

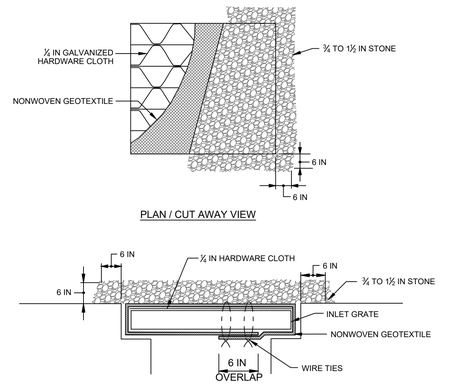
Maryland Standards and Specifications for Soil Erosion and Sediment Control

U.S. Department of Agriculture Natural Resources Conservation Service	2011	Maryland Department OF Environmental Water Management Administration

8 C-509 DETAIL E-9-2 AT-GRADE INLET PROTECTION

STANDARD SYMBOL: AGIP

MAXIMUM DRAINAGE AREA = 1 ACRE



CONSTRUCTION SPECIFICATIONS

1. USE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS.
2. LIFT GRATE AND WRAP WITH NONWOVEN GEOTEXTILE TO COMPLETELY COVER ALL OPENINGS. SECURE WITH WIRE TIES AND SET GRATE BACK IN PLACE.
3. PLACE CLEAN ¾ TO 1½ INCH STONE OR EQUIVALENT RECYCLED CONCRETE 6 INCHES THICK ON THE GRATE.
4. STORM DRAIN INLET PROTECTION REQUIRES FREQUENT MAINTENANCE. REMOVE ACCUMULATED SEDIMENT AFTER EACH RAIN EVENT TO MAINTAIN FUNCTION AND AVOID PREMATURE CLOGGING. IF INLET PROTECTION DOES NOT COMPLETELY DRAIN WITHIN 24 HOURS AFTER A STORM EVENT, IT IS CLOGGED. WHEN THIS OCCURS, REMOVE ACCUMULATED SEDIMENT AND CLEAN, OR REPLACE GEOTEXTILE AND STONE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

STATE OF MARYLAND — PROFESSIONAL ENGINEER — 10/01/2025

Professional Certification:
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional under the laws of the State of Maryland, License # 20984, Expiration Date: 06.23.2027

FSA ENGINEERS
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SATELLITE OFFICE: 1 WEST MAIN STREET, GREENCASTLE, PA 17225, 717.597.1007
SATELLITE OFFICE: 129 EAST MAIN STREET, HAGERSTOWN, MD 21740, 301.791.3800
SATELLITE OFFICE: 1591 MID-ATLANTIC DRIVE, CARLISLE, PA 17013, 717.701.8111
SATELLITE OFFICE: 1 EAST MAIN STREET, NEW BLOOMFIELD, PA 17068, 717.275.7537

NOT APPROVED FOR CONSTRUCTION

MARK	DESCRIPTION	DATE

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SITUATED ALONG THE WEST SIDE OF MD 66 (MAPLEVILLE ROAD) AT ITS INTERSECTION WITH MD 64 (JEFFERSON BLVD)
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WASHINGTON COUNTY, MARYLAND
SHEETZ INC.
243 SHEETZ WAY CLAYSBURG, PA 16625

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PROJECT MANAGER: DAVID TROSTLE
EMAIL: dtrostle@fsa-inc.com
TAX MAP - GRID - PARCEL(S): 0051 - 0005 - 0086 & 0091
SCALE: NOT TO SCALE
SHEET TITLE:

CONSTRUCTION DETAILS - ESC

C-509
SHEET 24 OF 38

SP-25-011

P:\SHEETZ CLOSEOUTS\6086.1 SHEETZ SMITHSBURG\CAD\PLANS\C-509.DWG 2025-10-01

SMARTFENCE 42”

SEDIMENT & PERIMETER CONTROL

INSTALLATION INSTRUCTIONS

STEP 1: Excavate trench a maximum of 4” wide and 6” deep. The trench shall be hand-cleaned following excavation to remove bulky debris such as rocks, sticks, and soil clods from the trench. Drive studded metal T-posts with anchor plates having a minimum weight of 1.25 lb /ft and a minimum 5 ft length. Drive post into ground a minimum of 18” depth. Post spacing must be no greater than 6 ft maximum.

STEP 2: Layout SMARTfence® 42 along proposed fence line next to anchor trench. Locate one end of the SMARTfence® 42 and position near the initial post. Position SMARTfence® 42 vertically along the initial post.

STEP 3: For the initial post, place the end of SMARTfence® 42 along the post height and rotate the post 360 degrees, maintaining tension on the fence system. Secure the fence to the post at all four (4) orange-colored band locations with steel wire or nylon ties.

STEP 4: For fastening SMARTfence® 42 to studded, metal T-posts using one of following methods:

- Method I (T-Post): 16-gage wire- attach SMARTfence® 42 to metal T-posts using the 16-gage 304 SS wire with mitered ends, securing the fence to the post using safety pliers.
- Method II (T-Post): 8” nylon heavy-duty, UV-stabilized, cable ties (zip-ties) with minimum 120-lb tensile strength. Puncture two 0.25” openings, spaced at a width apart that is roughly equivalent to the post width, and secure the fence to the post.

STEP 5: Drive the initial post with the attached fence into the ground to a 18” depth.

STEP 6: Drive the interior t-posts of the fence system into the ground at least 18”.

STEP 7: Move to the next t-post while pulling SMARTfence® 42 tightly. Position the SMARTfence® 42 in front of the adjacent t-post in preparation for fastening the fence to the post. Fasten fence to post at all four (4) orange-colored band locations as instructed in Step 4.

STEP 8: After the interior posts have been fastened to the SMARTfence® 42, secure the fence to the final post by pulling the final section of fencing taut, then rotating the post 360 degrees, maintaining tension on the fence system. Secure the fence to the post at all four (4) orange-colored band locations with the steel wire or nylon ties per Step 4. Drive the final post into the ground to a 18” depth.

STEP 9: Place bottom 8” of fabric into the trench. Backfill trench (overfill) with soil placed around fabric. Compact soil backfill with either manual tamping (or other manual means) or via mechanical equipment such as the front wheel of a tractor, skid steer, roller, or other device (per Note 5 of ASTM D 6462 Standard Practice for Silt Fence Installation). Do not damage the fabric during compaction (damaged fabric shall be replaced).

Please contact our team at 800-448-3636 or info@acfenv.com with any questions regarding the installation process.

LET’S GET IT DONE!™

SMARTfence

For more information, contact our Inside Sales team at 800.448.3636 email at info@acfenv.com

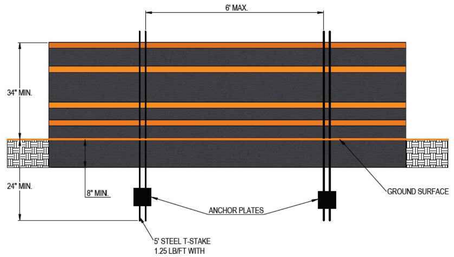
ACF ENVIRONMENTAL

1 C-510 — SMARTfence 42 Installation Detail

NOT TO SCALE

LET’S GET IT DONE

SMARTfence® 42 Detail:



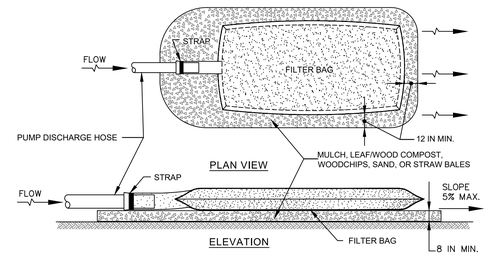
SMARTfence® 42 is NTPEP Compliant

GTX-2018-01-187

ACF ENVIRONMENTAL
LET’S GET IT DONE®
800.448.3636
acfenvironmental.com

4 C-510 — DETAIL F-4 FILTER BAG

STANDARD SYMBOL: ☒FB



CONSTRUCTION SPECIFICATIONS

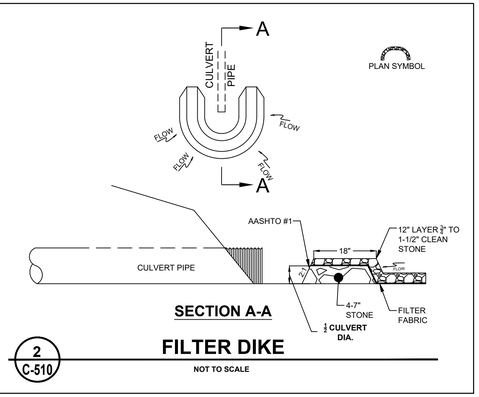
1. TIGHTLY SEAL SLEEVE AROUND THE PUMP DISCHARGE HOSE WITH A STRAP OR SIMILAR DEVICE.
2. PLACE FILTER BAG ON SUITABLE BASE (E.G., MULCH, LEAF/WOOD COMPOST, WOODCHIPS, SAND, OR STRAW BALES) LOCATED ON A LEVEL OR 5% MAXIMUM SLOPING SURFACE. DISCHARGE TO A STABILIZED AREA. EXTEND BASE A MINIMUM OF 12 INCHES FROM EDGES OF BAG.
3. CONTROL PUMPING RATE TO PREVENT EXCESSIVE PRESSURE WITHIN THE FILTER BAG IN ACCORDANCE WITH THE MANUFACTURER RECOMMENDATIONS. AS THE BAG FILLS WITH SEDIMENT, REDUCE PUMPING RATE.
4. REMOVE AND PROPERLY DISPOSE OF FILTER BAG UPON COMPLETION OF PUMPING OPERATIONS OR AFTER BAG HAS REACHED CAPACITY, WHICHEVER OCCURS FIRST. SPREAD THE DEWATERED SEDIMENT FROM THE BAG IN AN APPROVED UPLAND AREA AND STABILIZE WITH SEED AND MULCH BY THE END OF THE WORK DAY. RESTORE THE SURFACE AREA BENEATH THE BAG TO ORIGINAL CONDITION UPON REMOVAL OF THE DEVICE.
5. USE NONWOVEN GEOTEXTILE WITH DOUBLE STITCHED SEAMS USING HIGH STRENGTH THREAD. SIZE SLEEVE TO ACCOMMODATE A MAXIMUM 4 INCH DIAMETER PUMP DISCHARGE HOSE. THE BAG MUST BE MANUFACTURED FROM A NONWOVEN GEOTEXTILE THAT MEETS OR EXCEEDS MINIMUM AVERAGE ROLL VALUES (MARV) FOR THE FOLLOWING:

GRAB TENSILE	250 LB	ASTM D-4632
PUNCTURE	150 LB	ASTM D-4833
FLOW RATE	70 GAL/MIN/FT²	ASTM D-4491
PERMITTIVITY (SEC^{-1})	1.2 SEC^{-1}	ASTM D-4491
UV RESISTANCE	70% STRENGTH @ 500 HOURS	ASTM D-4355
APPARENT OPENING SIZE (AOS)	0.15-0.18 MM	ASTM D-4751
SEAM STRENGTH	90%	ASTM D-4632

6. REPLACE FILTER BAG IF BAG CLOGS OR HAS RIPS, TEARS, OR PUNCTURES. DURING OPERATION KEEP CONNECTION BETWEEN PUMP HOSE AND FILTER BAG WATER TIGHT. REPLACE BEDDING IF IT BECOMES DISPLACED.

AS NEEDED

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL		
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

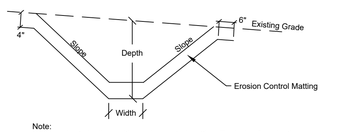


SECTION A-A

2 C-510 — FILTER DIKE

NOT TO SCALE

Swale #	Q10 (cfs)	V10 (fps)	D10 (ft)	Depth	Width	Slope	Matting
1	0.56	2.47	0.10	Varies	2.0'	3:1	Temp.



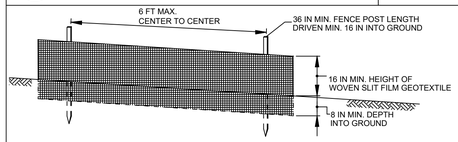
Note:
1. All swales to be lined with erosion control matting. To design flow depth
2. All dimensions labeled as min. on this detail may be superseded by greater dimensions which would be noted directly on plan, if necessary.

3 C-510 — Swale Detail

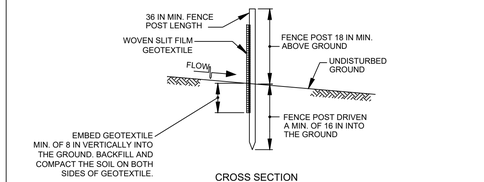
Not to Scale

5 C-510 — DETAIL E-1 SILT FENCE

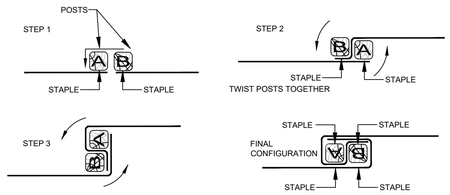
STANDARD SYMBOL: SF



ELEVATION



CROSS SECTION



JOINING TWO ADJACENT SILT FENCE SECTIONS (TOP VIEW)

CONSTRUCTION SPECIFICATIONS

1. USE WOOD POSTS 1½ X 1½ ± 1/8 INCH (MINIMUM) SQUARE CUT OF SOUND QUALITY HARDWOOD. AS AN ALTERNATIVE TO WOODEN POST USE STANDARD "T" OR "U" SECTION STEEL POSTS WEIGHING NOT LESS THAN 1 POUND PER LINEAR FOOT.
2. USE 36 INCH MINIMUM POSTS DRIVEN 16 INCH MINIMUM INTO GROUND NO MORE THAN 6 FEET APART.
3. USE WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS AND FASTEN GEOTEXTILE SECURELY TO UPSLOPE SIDE OF FENCE POSTS WITH WIRE TIES OR STAPLES AT TOP AND MID-SECTION.
4. PROVIDE MANUFACTURER CERTIFICATION TO THE AUTHORIZED REPRESENTATIVE OF THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT THE GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.
5. EMBED GEOTEXTILE A MINIMUM OF 8 INCHES VERTICALLY INTO THE GROUND. BACKFILL AND COMPACT THE SOIL ON BOTH SIDES OF FABRIC.
6. WHERE TWO SECTIONS OF GEOTEXTILE ADJOIN: OVERLAP, TWIST, AND STAPLE TO POST IN ACCORDANCE WITH THIS DETAIL.
7. EXTEND BOTH ENDS OF THE SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SILT FENCE.
8. REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN SILT FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. IF UNDERMINING OCCURS, REINSTALL FENCE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL		
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

SHA Specifications for Temporary & Permanent Stabilization. Refer to the Table of SHA Landscape Notes in this plan set for requirements related to topsoil, seed, fertilizer, plants, and other materials. SHA Standard Specifications for Construction and Materials shall supersede all other specifications for landscape construction within property of the Maryland State Highway Administration (SHA), and all landscape construction of SHA property shall conform to the requirements of the SHA Landscape Notes and current SHA Standards and Specifications.

Temporary Seeding Summary

Hardiness Zone (Figure B.3): 6a &6b
Seed Mixture (TABLE B.1)

No.	Species	Application Rate (lb/ac)	Seeding Dates	Seeding Depths	Fertilizer Rate (10-20-20)	Lime Rate
1	Barley	96	Zone 6a: Mar 15-May 31/ Aug 1-Sept 30 Zone 6b: Mar 1-May 15/ Aug 1-Oct 15	1"	436 lb/ac. (10 lb/1000 s.f.)	2 tons/ac. (90 lb/1000 s.f.)

Permanent Seeding Summary

Hardiness Zone (Figure B.3): 6a &6b
Seed Mixture (Table B.1)

No.	Species	Application Rate (lb/ac)	Seeding Dates	Seeding Depth	Fertilizer Rate (10-20-20) N	P205	K20	Lime Rate
6	Tall Fescue	40	Zone 6a: Mar 15-May 31/Aug 1-Sep 30 Zone 6b: Mar 1-May 15/Aug 1-Oct 15	1/4"-1/2"	45 lb/ac. (1 lb/1000 s.f.)	90 lb/ac. (2 lb/1000 s.f.)	90 lb/ac. (2 lb/1000 s.f.)	2 tons/ac. (90 lb/1000 s.f.)
	Perennial Ryegrass	25						
	White Clover	5						

SOIL EROSION, SEDIMENT CONTROL & SEEDING NOTES

1. All soil erosion/sediment control measures shall comply with the “2011 Maryland Standards and Specifications for Soil Erosion and Sediment Control” and the provisions of the approved plan.
2. All grading and stabilization shall comply with the “2011 Maryland Standards and Specifications for Soil Erosion and Sediment Control”, “Section B - Grading and Stabilization” and the provisions of the approved plan.
3. All soil erosion and sediment control practices (BMP’s) are to be constructed and/or installed prior to or at the initiation of grading in accordance with “2011 Maryland Standards and Specifications for Soil Erosion and Sediment Control”, and the approved plan.
4. A grading unit is the maximum contiguous area allowed to be graded at a given time and is limited to 20 acres. Work may proceed to a subsequent grading unit when at least 50 percent of the disturbed area in the preceding grading unit has been stabilized and approved by the enforcement authority and/or the Washington County Soil Conservation District (approval authority). Unless otherwise specified and approved by the approval authority, no more than 30 acres cumulatively may be disturbed at a given time.
5. For initial soil disturbance or re-disturbance, temporary or permanent stabilization must be completed within:
   a) Three (3) calendar days as to the surface of all perimeter dikes, swales, ditches, perimeter slopes, and all slopes steeper than 3 horizontal to 1 vertical (3:1); and
   b) Seven (7) calendar days as to all other disturbed or graded areas on the project site not under active grading.
6. Stockpiles must be stabilized in accordance within the 7 day stabilization requirement, as well as, Standard B-4-1 Incremental Stabilization and Standard B-4-4 Temporary Stabilization (as applicable).
7. All constructed channels and swales shall have specified treatment installed to the design flow depth completed downstream to upstream as construction progresses. An installation detail shall be shown on the plans.
8. All storm drain and sanitary sewer lines not in paved areas are to be mulched and seeded within 3 days of initial backfill unless otherwise specified on plans.
9. Electric Power, telephone, and gas lines are to be compacted, seeded, and mulched within 3 days after initial backfill unless otherwise specified on plans.
10. No slope shall be greater than 2:1.
11. As required by Section B, of the Maryland Standards and Specifications for Soil Erosion and Sediment Control, “Adequate Vegetative Stabilization”, is defined as 95 percent ground cover. The Washington County Soil Conservation District requires the project adhere to this for scheduling of the Final Site Closeout Review, and/or release of the site for soil erosion and sediment control.

For sites 1.0 acre or more, the following are required:

A. Maryland Department of the Environment, General Permit for Stormwater Associated with a Construction Activity, NPDES Permit Number MDRC, State Discharge Permit Number 20CP, or an Individual Permit.

B. The Maryland Department of the Environment (General/Individual Permit - Notice of Intent- NOI) application and permit shall be posted and/or available on-site at all times.

C. During construction, all soil erosion and sediment control practices (BMP’s) shall be inspected and recorded on the “Standard Inspection Form”, “General Permit for Stormwater Associated with Construction Activity” per the Maryland Department of the Environment (General/Individual Permit - Notice of Intent - NOI).

D. Following construction and release of the site for soil erosion and sediment control by the Washington County Soil Conservation District, i.e., all portions of a site have been permanently stabilized, and all stormwater discharges from construction sites that are authorized by the permit are eliminated, the authorized permittee shall submit the Maryland Department of the Environment, General/Individual Permit - Notice of Termination-NOT.

STATE OF MARYLAND — ANTHONY G. BROWN — LIEUTENANT GOVERNOR — 2025 — PROFESSIONAL ENGINEER

10/01/2025

Professional Certification:
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional under the laws of the State of MARYLAND License # 20981
Expiration Date: 08.23.2027

FSA — FREDERICK SEIBERT & ASSOCIATES, INC. — CIVIL ENGINEERS • SURVEYORS • LANDSCAPE ARCHITECTS • LAND PLANNERS

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129 Thomas Johnson Drive, Suite 201 FREDERICK, MARYLAND 21702 — 301.695.1950

MARK	DESCRIPTION	DATE
1	REVISED PER AGENCY COMMENTS	09.30.25
2	REVISED PER AGENCY COMMENTS	08.08.25

NOT APPROVED FOR CONSTRUCTION

SHEETZ - SMITHSBURG

SITUATED ALONG THE WEST SIDE OF MD 65 (MARYLAND ROAD) AT ITS INTERSECTION WITH MD 64 (JEFFERSON BLVD)

SMITHSBURG

WASHINGTON COUNTY, MARYLAND

SHEET INC.
243 SHEETZ WAY CLAYSBURG, PA 16625

PROJECT NO. 6086.1

DWN BY	DATE
KODY WARD	03.17.2025

PROJECT MANAGER: DAVID TROSTLE
EMAIL: dtrostle@fsa-inc.com

TAX MAP - GRID - PARCEL(S)
0051 - 0005 - 0086 & 0091

SCALE: NOT TO SCALE

SHEET TITLE

CONSTRUCTION DETAILS - ESC

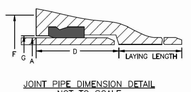
C-510
SHEET 25 OF 38

SP-25-011

P:\SHEETZ COLLEGEVILLE\CAD\PLANS\SWM\SWM 1 - SHEETZ\SHEETZ SWM 1 - ESC.DWG, 9/25/2025 7:57:41 AM, KODY WARD

DUCTILE IRON TYTON PUSH-ON JOINTS PIPE STANDARD DIMENSIONS					
SIZE IN INCHES	LAYING IN LENGTH	"A" OUTSIDE DIAMETER Ø	"D"DEPTH OF SOCKET	"T" BELL OUTSIDE DIAMETER O.D.	"G" BELL INSIDE DIAMETER I.D.
		DIMENSIONS IN INCHES			
4	20'-1"	4.80	3.31	7.00	4.91
6	20'-1"	6.90	3.38	9.13	7.01
8	20'-1"	9.05	3.75	11.50	9.16
10	20'-1"	11.10	3.75	13.63	11.21
12	20'-1"	13.20	3.75	15.75	13.31
14	20'-0 1/2"	15.30	4.50	18.00	15.44
16	20'-0 1/2"	17.40	4.50	20.00	17.54
18	20'-0 1/2"	19.50	4.50	23.94	19.64
20	20'-0"	21.60	4.75	25.88	21.74
24	20'-0"	25.80	4.75	29.94	25.94
30	20'-0"	32.00	6.00	35.75	32.17
36	20'-0"	38.30	6.00	42.25	38.47
42	20'-0 1/2"	44.50	5.25	48.00	44.67
48	20'-0 1/2"	50.80	5.25	54.66	50.97
54	20'-0 1/2"	57.10	5.25	61.44	57.27

DUCTILE IRON TYTON PUSH-ON JOINT PIPE ALLOWABLE JOINT DEFLECTION			
MAXIMUM RECOMMENDED DEFLECTION			
SIZE IN INCHES	NORMAL LAYING LENGTH FEET	"X" OFFSET PER LENGTH IN INCHES	"Y" DEFLECTION ANGLE
4	20	21	0'-5"
6	20	21	0'-5"
8	20	21	0'-5"
10	20	21	0'-5"
12	20	21	0'-5"
14	20	17	0'-4"
16	20	17	0'-4"
18	20	12	0'-3"
20	20	12	0'-3"
24	20	12	0'-3"
30	20	12	0'-3"
36	20	12	0'-3"
42	20	8	0'-2"
48	20	8	0'-2"
54	20	6	0'-1 1/2"



JOINT PIPE DIMENSION DETAIL
NOT TO SCALE

PIPE DEFLECTION DETAIL
NOT TO SCALE

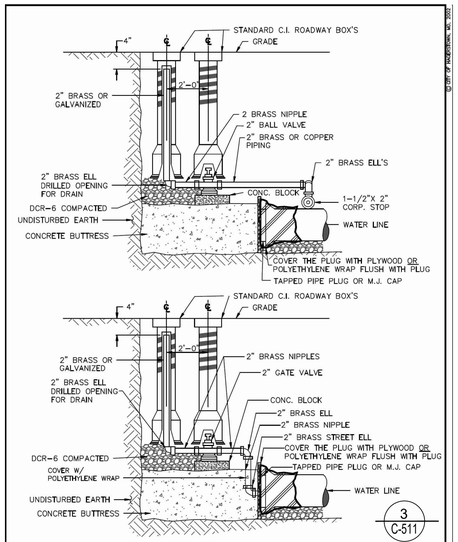
1 C-511

CITY OF HAGERSTOWN UTILITIES DEPARTMENT-WATER DIVISION

DUCTILE IRON TYTON JOINT PIPE AND PIPE DEFLECTION DETAILS

ISSUE DATE: MARCH 2009
REVISIONS

Plate W-003



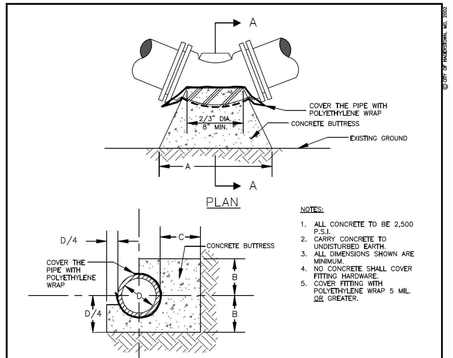
3 C-511

CITY OF HAGERSTOWN UTILITIES DEPARTMENT-WATER DIVISION

2 INCH BLOW OFF

ISSUE DATE: MARCH 2009
REVISIONS

Plate W-006



NOTES:
1. ALL CONCRETE TO BE 2,500 P.S.I.
2. CARRY CONCRETE TO UNDISTURBED EARTH.
3. ALL DIMENSIONS SHOWN ARE MINIMUM.
4. NO CONCRETE SHALL COVER FITTING HARDWARE.
5. COVER FITTING WITH POLYETHYLENE WRAP 5 MIL OR GREATER.

	45°			22-1/2°			11-1/4°		
DIA.	A	B	C	A	B	C	A	B	C
4"	1'-0"	0'-6"	0'-9"	0'-8"	0'-6"	0'-9"	0'-8"	0'-6"	0'-9"
6"	1'-3"	0'-7"	0'-9"	0'-9"	0'-7"	0'-9"	0'-8"	0'-7"	0'-9"
8"	2'-0"	0'-8"	0'-9"	1'-0"	0'-8"	0'-9"	0'-8"	0'-8"	0'-9"
10"	2'-6"	0'-9"	0'-11"	1'-6"	0'-9"	0'-10"	0'-10"	0'-9"	0'-9"
12"	2'-11"	0'-11"	1'-2"	1'-9"	0'-10"	0'-11"	1'-0"	0'-10"	0'-9"
16"	3'-8"	1'-3"	1'-5"	2'-4"	1'-0"	1'-2"	1'-4"	1'-0"	0'-9"
20"	4'-9"	1'-6"	1'-10"	3'-2"	1'-2"	1'-4"	1'-8"	1'-2"	0'-10"
24"	6'-1"	1'-8"	1'-11"	4'-0"	1'-4"	1'-6"	2'-0"	1'-4"	1'-0"
30"	7'-9"	2'-0"	3'-1"	5'-0"	1'-7"	1'-9"	2'-6"	1'-7"	1'-1"
36"	8'-11"	2'-6"	3'-4"	5'-9"	2'-0"	2'-0"	3'-0"	1'-11"	1'-2"

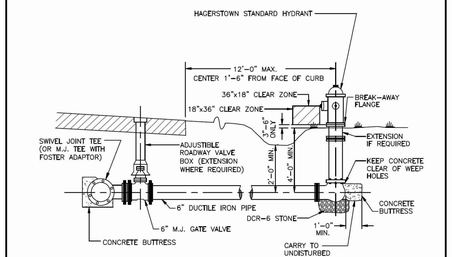
5 C-511

CITY OF HAGERSTOWN UTILITIES DEPARTMENT-WATER DIVISION

BUTTRESS FOR HORIZONTAL MECHANICAL JOINT BENDS LESS THAN 90°

ISSUE DATE: MARCH 2009
REVISIONS

Plate W-011



NOTE:
1. ALL PIPE MUST BE RESTRAINED FROM MAIN TO FIRE HYDRANT TO ELIMINATE CONCRETE BUTTRESS.
2. COVER FITTING WITH POLYETHYLENE WRAP 5 MIL OR GREATER.

7 C-511

CITY OF HAGERSTOWN UTILITIES DEPARTMENT-WATER DIVISION

FIRE HYDRANT SETTING

ISSUE DATE: MARCH 2009
REVISIONS

Plate W-005

UTILITY NOTES

U.1 All water shall be constructed in conformance with City of Hagerstown Utilities Department and State of Maryland Department of the Environment standards and specifications.
a. All fittings, bends, and appurtenances shall be installed with proper and required concrete buttresses. All dead end services shall be properly capped and buttressed.
b. All pipe joints shall be left open until water line has been hydrostatically tested unless directed otherwise by the City of Hagerstown Utilities Department.
c. All underground water lines are to be installed with a cover of 3.5' below finished grade.

U.2 All sanitary sewer facilities shall be constructed in conformance with the Washington County Utilities Department and State of Maryland Department of the Environment standards and specifications.
a. All private sewer lines to be PVC-SDR-35, or Sch. 40.
b. All bedding and embedment material and compaction shall meet Hagerstown Utilities Department specifications.

U.3 The contractor shall verify the location and elevation of existing utilities before starting construction.

U.4 The Contractor shall supply all bends, fittings and buttresses as required to achieve the horizontal and vertical alignments as shown on the plans. Bends and fittings may not be shown on the plan and profile but are to be included in the Contractor's cost and their exact location is at the option of the Contractor to achieve the horizontal layout shown hereon.

U.5 Contractor to verify with utility companies that proposed sediment erosion control measures are located so as to avoid conflicts with their proposed utility installation before placement of sediment erosion control measures.

U.6 Private water service fire hydrants and equipment shall be designed, installed, and tested in accordance NFPA 24, *Standard for the Installation of Private Fire Service Mains and Their Appurtenances*, 2010 edition. These Fire Hydrants shall be painted in accordance with the requirements of City of Hagerstown Fire Department (Fire hydrant- red, with bonnet painted according to the fire hydrant flow)

U.7 Inspections and testing of the private fire service main are required and shall be coordinated with the Maryland State Fire Marshall.

U.8 Construction occurring on this site shall comply with NFPA 241, *Standard for Safeguarding Construction Alteration, and Demolition Operations, and Chapter 16 of NFPA 1, Uniformed Fire Code*
-No open air burning is permitted
-A permit is required from this office before perorming blasting operations.
-FIRE DEPARTMENT ACCESS SHALL BE MAINTAINED TO ANY BUILDING

U.9 New and existing buildings shall have the approved address numbers placed in a position to be plainly legible and visible from the street or road fronting the property.

U.10 Fire Hydrants shall meet the requirements of the Hagerstown Water Department.

CITY OF HAGERSTOWN UTILITIES DEPARTMENT WATER DIVISION

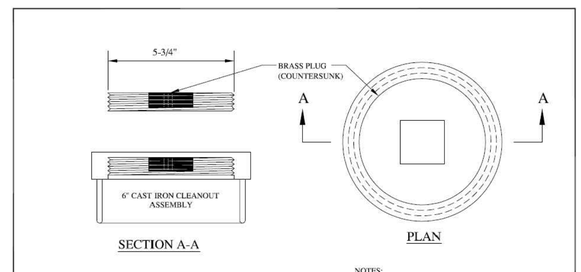
This approval is for the design and layout of the proposed water system improvements. All water system improvements shall be constructed to the standards in effect at the time of construction. This approval does not guarantee availability of water service. Water service is available subject to conformance with all policies and standards in effect at the time of application for service, payment of fees and approval of the water service application. The Water Division does not guarantee a specific water pressure or flow at any meter or fire hydrant. This approval is valid for a period of one year.

SIGNATURE DATE

WASHINGTON COUNTY DEPARTMENT OF WATER QUALITY

This approval is for general conformance with the County's requirements for design and layout of proposed sewer and/or water system improvements or extensions. All sewer and/or water system improvements or extensions shall be constructed in strict accordance with the County's latest addition of the Standard Specifications for Construction of Sanitary Sewers and/or Water Lines. This approval does not guarantee availability of sewer and/or water service. Sewer and/or water service availability is subject to conformance with all rules, policies and regulations established by the County and in effect at the time application for service is made, and/or the availability of allocation remaining in other jurisdictions' facilities that may be granted to the County. This approval shall be valid for a period of TWO years.

SIGNATURE DATE



NOTES:
1. FOR DRIVEWAY, ROADWAY, GRASS STRIP, OR SIDEWALK LOCATIONS, A H-20 TRAFFIC LOADING COVER ASSEMBLY SHALL BE UTILIZED.
2. MEETS ASTM A74-98 AND ASME A112.36
CUT PIPE TO DESIRED LEVEL, LUBE GASKET AND PUSH ON PIPE, TAP WITH LEAD HAMMER TO SEAT, THEN INSTALL BRASS PLUG.

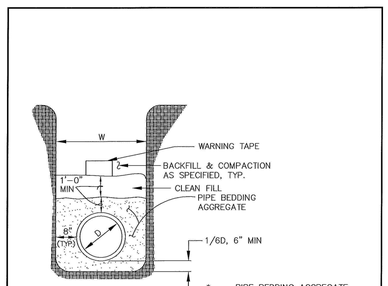
2 C-511 SEWER CLEANOUT
NOT TO SCALE

CITY OF HAGERSTOWN, MARYLAND - UTILITIES DEPARTMENT, WASTEWATER DIVISION

CLEANOUT DETAIL

ISSUE DATE: MARCH 2009
REVISIONS

DETAIL WW116



GRANULAR BEDDING & BACKFILL

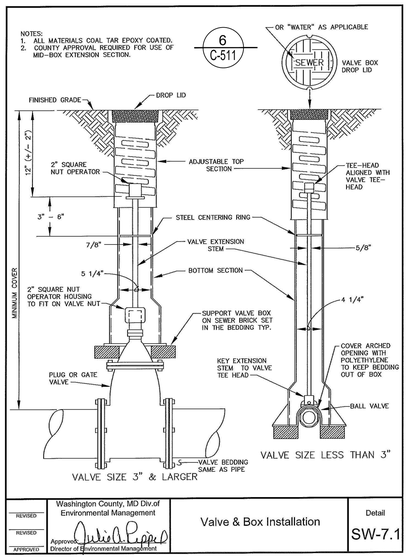
* PIPE BEDDING AGGREGATE
D = 4" AND LARGER – SHA GRADED CRUSHER RUN CR-6
D = 1-1/2" THROUGH <4" – SHA GRADED B-10
D = LESS THAN 1-1/2" – STONE DUST
* = NOMINAL PIPE DIAMETER (INCHES)

4 C-511

Washington County, MD Div.of Environmental Management
Approved: Director of Environmental Management

STANDARD TRENCH WIDTH & STONE BEDDING

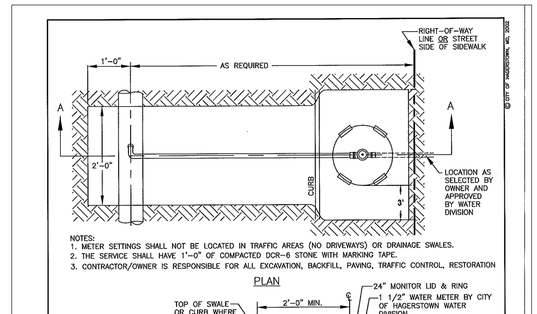
Detail SW-1.1



Washington County, MD Div.of Environmental Management
Approved: Director of Environmental Management

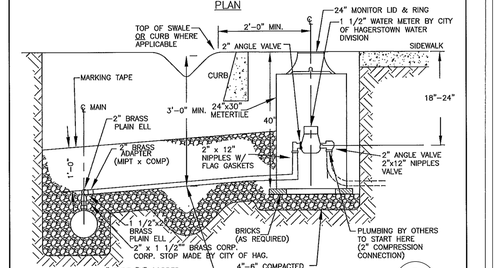
Valve & Box Installation

Detail SW-7.1



NOTES:
1. METER SETTINGS SHALL NOT BE LOCATED IN TRAFFIC AREAS (NO DRIVEWAYS) OR DRAINAGE SWALES.
2. THE SERVICE SHALL HAVE 1'-0" OF COMPACTED DCR-6 STONE WITH MARKING TAPE.
3. CONTRACTOR/OWNER IS RESPONSIBLE FOR ALL EXCAVATION, BACKFILL, PAVING, TRAFFIC CONTROL, RESTORATION

PLAN



SECTION A-A

8 C-511

CITY OF HAGERSTOWN UTILITIES DEPARTMENT-WATER DIVISION

2 INCH SINGLE SERVICE WATER CONNECTION

ISSUE DATE: APRIL2015
REVISIONS
4/17/15

Plate W-020

© 2025 CITY OF HAGERSTOWN, MD.

FSA ENGINEERING
FREDERICK SEIBERT & ASSOCIATES, INC.
CIVIL ENGINEERS • SURVEYORS • LANDSCAPE ARCHITECTS • LAND PLANNERS
fsa-inc.com
EAST MAIN STREET, SUITE 1
NEW BLOOMFIELD, PA 17068
717.275.7537
400 SOUTH HANOVER STREET
CARLISLE, PA 17013
717.701.8111
77 WEST PATRICK STREET
FREDERICK, MD 21701
301.695.1001
129 EAST ANTIETAM STREET
HAGERSTOWN, MD 21740
301.791.3800

STATE OF MARYLAND
JAMES WILLIAM HOOVER
PROFESSIONAL ENGINEER
10/01/2025

Professional Certification:
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional under the laws of the State of MARYLAND License # 20984
Expiration Date: 06.23.2027

NOT APPROVED FOR CONSTRUCTION

MARK	DESCRIPTION	DATE

SHEETZ - SMITHSBURG
SITUATED ALONG THE WEST SIDE OF MD 66 (MARYSVILLE ROAD) AT ITS INTERSECTION WITH MD 64 (JEFFERSON BLVD)
SMITHSBURG
WASHINGTON COUNTY, MARYLAND
SHEETZ INC.
243 SHEETZ WAY CLAYSBURG, PA 16625

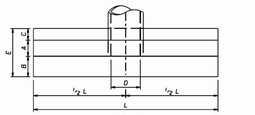
PROJECT NO. 6086.1
DWN.BY KODY WARD
DATE 03.17.2025
PROJECT MANAGER DAVID TROSTLE
EMAIL: dtrostle@fsa-inc.com
TAX MAP - GRID - PARCEL(S) 0051 - 0005 - 0086 & 0091
SCALE NOT TO SCALE
SHEET TITLE

CONSTRUCTION DETAILS - WTR. & SWR.

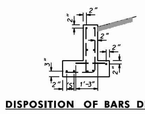
C-511
SHEET 26 OF 38

SP-25-011

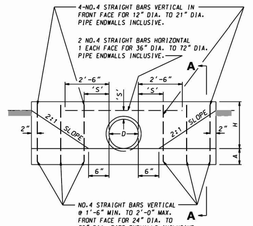
P:\SHEETZ COLLECTION\CLAYSBURG\MAINLINE - 2\ACTIVE\CIVIL\SHEETS\MAINLINE - 2 - CONSTRUCTION DETAILS WATER & SEWER.DWG, 3/25/2025 9:50:01 AM, KODY WARD



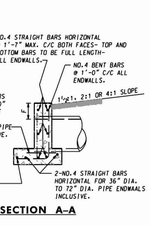
PLAN



DISPOSITION OF BARS DETAIL



ELEVATION



SECTION A–A

QUANTITIES FOR ESTIMATING PURPOSES ONLY

OPENING		DIMENSIONS							QUANTITIES	
D	AREA	A	B	C	E	F	H	L	CONC.	STEEL
INCHES	SQ.FT.								C.Y.	LBS.
12	0.79	9"	6"	6"	1'-9"	9"	1'-9"	6'-6"	0.61	41
15	1.23	9"	6"	6"	1'-9"	9"	2'-0"	7'-3"	0.77	47
18	1.77	9"	6"	6"	1'-9"	9"	2'-3"	9'-0"	0.95	54
21	2.40	9"	6"	6"	1'-9"	9"	2'-6"	10'-3"	1.14	70
24	3.14	9"	14"	6"	2'-5"	9"	2'-9"	11'-6"	1.56	80
27	3.98	9"	14"	6"	2'-5"	9"	3'-0"	12'-0"	1.82	88
30	4.91	9"	14"	6"	2'-5"	12"	3'-3"	14'-3"	2.22	98
33	5.94	9"	14"	6"	2'-5"	12"	3'-9"	15'-5"	2.48	105
36	7.07	12"	16"	10"	3'-2"	12"	4'-0"	16'-8"	4.16	182
42	9.62	12"	16"	10"	3'-2"	12"	4'-6"	19'-2"	5.01	206
48	12.57	12"	16"	10"	3'-2"	12"	5'-0"	21'-8"	6.09	244
54	15.90	12"	20"	12"	3'-8"	12"	5'-6"	24'-2"	7.62	275
60	19.64	12"	20"	12"	3'-8"	12"	6'-0"	26'-8"	8.82	304
72	28.27	12"	20"	12"	3'-8"	12"	7'-0"	31'-8"	11.46	377

'S' DISTANCES

4" FOR 12" DIA. TO 21" DIA. PIPES INCLUSIVE.
6" FOR 24" DIA. TO 36" DIA. PIPES INCUSIVE.
8" FOR 42" DIA. TO 72" DIA. PIPES INCLUSIVE.

GENERAL NOTES

SPECIFICATIONS: LATEST S.H.A.
CONCRETE SHALL BE MIX NO.2
REINFORCING: DEFORMED STEEL BARS-NO.4
CHAMFER: ALL EXPOSED EDGES 1"x1" OR AS DIRECTED

1
C-512

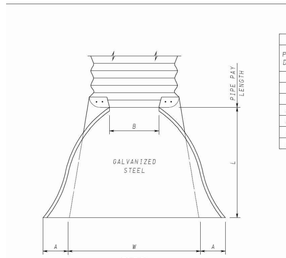
SPECIFICATION	CATEGORY CODE ITEMS
305	
APPROVED	Kirk G. McCall, DIRECTOR – OFFICE OF HIGHWAY DEVELOPMENT

SHA	APPROVAL • SHA REVISIONS	APPROVAL • FEDERAL HIGHWAY ADMINISTRATION
	APPROVAL 8-28-86	APPROVAL 12-12-86
	REVISED 10-1-01	REVISED
	REVISED	REVISED
	REVISED	REVISED

Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES

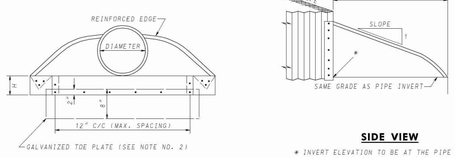
STANDARD TYPE C ENDWALL
METAL OR CONCRETE ROUND PIPE

STANDARD NO. MD 354.01

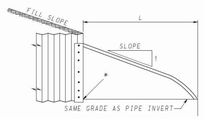


PLAN

DIMENSIONS								
PIPE DIA.	GA.	A 1"±" MAX.	B 1"±"	H 1"±"	L 1½"±"	W 2"±"	APPROX. SLOPE	UNIT
12"	16	6"	6"	6"	21"	24"	2½	1 PC.
15"	16	7"	8"	6"	26"	30"	2½	1 PC.
18"	16	8"	10"	6"	31"	36"	2½	1 PC.
21"	16	9"	12"	6"	36"	42"	2½	1 PC.
24"	16	10"	13"	6"	41"	48"	2½	1 PC.
30"	14	12"	16"	8"	51"	60"	2½	1 PC.
36"	14	14"	19"	9"	60"	72"	2½	2 PC.



END VIEW



SIDE VIEW

★ INVERT ELEVATION TO BE AT THE PIPE END OF THE STANDARD END SECTION. ELEVATIONS TO BE NOTED ON THE CONSTRUCTION PLANS.

NOTES

1. METAL END SECTIONS SHALL BE GAGE 16 FOR PIPES RANGING FROM 15" THRU 24", AND GAGE 14 FOR PIPES RANGING FROM 30" THRU 36" . MULTIPLE PANEL UNITS TO HAVE LAP SEAMS WHICH ARE TO BE TIGHTLY JOINED BY ¾" DIAMETER GALVANIZED RIVETS OR BOLTS.
2. TOE PLATES SHALL BE USED WHEN SPECIFIED ON THE PLANS. THICKNESS OF END PLATE TO BE SAME AS END SECTION. COST OF TOE PLATE TO BE INCIDENTAL TO THE BID PRICE PER EACH OF METAL END SECTION.

3
C-512

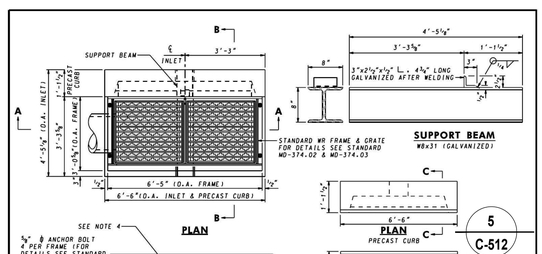
SPECIFICATION	CATEGORY CODE ITEMS
303	
APPROVED	Kirk G. McCall, DIRECTOR – OFFICE OF HIGHWAY DEVELOPMENT

SHA	APPROVAL • SHA REVISIONS	APPROVAL • FEDERAL HIGHWAY ADMINISTRATION
	APPROVAL 8-28-86	APPROVAL 12-12-86
	REVISED 10-1-01	REVISED 7-27-09
	REVISED 7-1-09	REVISED
	REVISED	REVISED

Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES

STANDARD METAL END SECTION
ROUND METAL PIPE

STANDARD NO. MD 370.01


B
SUPPORT BEAM
3'-3"
INLET
A
1'-1½"
PRECAST CURB
3'-1¾"
4'-5¾" (O.A. INLET)
3'-1¾"
4'-5¾" (O.A. FRAME)
½"
6'-5" (O.A. FRAME)
6'-6" (O.A. INLET & PRECAST CURB)
½"
STANDARD WR FRAME & GRATE FOR DETAILS SEE STANDARD MD-374.02 & MD-374.03
4'-5½"
3'-3½"
1'-1½"
3" x 2½" x ½" L, 4¾" LONG. GALVANIZED AFTER WELDING
3"
3"
8"
8"
SUPPORT BEAM
W8x31 (GALVANIZED)
C
1'-1½"
6'-6"
PLAN
PRECAST CURB
C
5
C-512
SEE NOTE 4
¾" ϕ ANCHOR BOLT 4 PER FRAME (FOR DETAILS SEE STANDARD MD-374.02)
JOINT SEALER AASHTO M 198 TYPE B (APPLIED TO INSIDE EDGE ONLY)
6"
10"
5'-6"
6"
MIN. DEPTH PAVEMENT
LADDER RUNGS (IF USED) SEE NOTE 7
1½" COVER
6"
6"
1½" COVER
3'-0"
INVERT TO BE CONCRETE OR BRICK. SLOPE 2" PER FOOT TOWARD OUTLET OR AS DIRECTED. (TO BE PROVIDED IN FIELD)
SECTION A–A
PRECAST CURB
2½" x 2½" x ½" 6'-6" LONG. GALVANIZED
1½" COVER
#3 ANCHOR BARS WELDED TO ⊥ ϕ 18" C/C
FRONT ELEVATION
1'-1½"
4-#3 BARS EQ. SPACED
1½" COVER
1'-4¾"
8"
7½"
6"
LAP SPLICE TO MAKE REINFORCING CONTINUOUS AROUND OUTSIDE CORNER.
SECTION C–C
PRECAST CURB
SEE DETAILS THIS SHEET
NORMAL PAVEMENT SLOPE
SEE NOTE 4
SEE NOTE 2
6"
RISER UNIT (VERTICAL WALLS)
3'-5¾"
6"
5'-0" MAX. TO TOP OF GRATE MAX. RISER IS NOT USED
5'-0" MIN. ADJUSTABLE IN 6" INCREMENTS
BASE UNIT (WALLS MAY TAPER ½" PER FOOT)
KEYED JOINT
SEE NOTE 2
PROVIDE 6" MIN. BEDDING OF NO.57 AGGREGATE ON FIRM SUBGRADE.
SECTION B–B
SEE NOTE 2

GENERAL NOTES

1. CONCRETE TO BE MIX NO.6 (4500PSI).
2. REINFORCING-2 LAYERS OF 4X4-W4.0 X 4.0 WELDED WIRE FABRIC.
3. THREADED PLASTIC INSERTS TO BE PROVIDED FOR HANDLING.
4. GRADE AND SLOPE ADJUSTMENTS COMPLETED IN THE FIELD USING CONCRETE MIX NO.6.
5. PIPE OPENINGS TO BE PROVIDED AS REQUIRED. FOR SIZE, LOCATION, AND INVERT ELEVATIONS REFER TO CONSTRUCTION PLANS.
6. PLACEMENT OF SUBGRADE DRAINAGE WILL BE AS DIRECTED BY THE ENGINEER OR AS NOTED ON THE CONSTRUCTION PLANS.
7. LADDER RUNGS SHALL BE IN ACCORDANCE WITH STD MD 383.91 AND MD 383.92 OR AS DIRECTED BY THE ENGINEER.
8. MINIMUM DEPTH PAVEMENT PER "EACH" INLET INCLUDES DEPTHS UP TO 3'-6". VERTICAL DEPTH PAVEMENT PER LINEAR FOOT FOR DEPTHS IN EXCESS OF 3'-6".

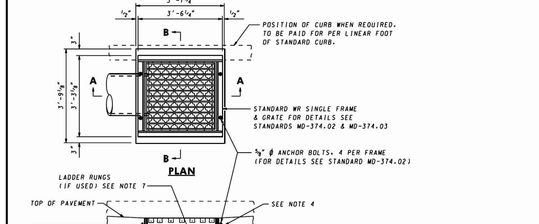
SPECIFICATION	CATEGORY CODE ITEMS
305	
APPROVED	Kirk G. McCall, DIRECTOR – OFFICE OF HIGHWAY DEVELOPMENT

SHA	APPROVAL • SHA REVISIONS	APPROVAL • FEDERAL HIGHWAY ADMINISTRATION
	APPROVAL 6-4-84	APPROVAL 8-1-84
	REVISED 10-1-01	REVISED 3-30-87
	REVISED	REVISED
	REVISED	REVISED

Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES

PRECAST WR INLET

STANDARD NO. MD 374.21



NOTES

1. CONCRETE TO BE MIX NO. 6 (4500 PSI).
2. REINFORCING-2 LAYERS OF 4x4-W4.0xW4.0 WELDED WIRE FABRIC.
3. THREADED PLASTIC INSERTS TO BE PROVIDED FOR HANDLING.
4. GRADE AND SLOPE ADJUSTMENTS COMPLETED IN THE FIELD USING CONCRETE MIX NO.6.
5. PIPE OPENINGS TO BE PROVIDED AS REQUIRED. FOR SIZE, LOCATION, AND INVERT ELEVATIONS REFER TO CONSTRUCTION PLANS.
6. PLACEMENT OF SUBGRADE DRAINAGE WILL BE AS DIRECTED BY THE ENGINEER OR AS NOTED ON THE CONSTRUCTION PLANS.
7. LADDER RUNGS SHALL BE IN ACCORDANCE WITH STANDARD MD 383.91 AND MD 383.92 OR AS DIRECTED BY THE ENGINEER.
8. MINIMUM DEPTH PAVEMENT PER "EACH" INLET INCLUDES DEPTHS UP TO 3'-6". VERTICAL DEPTH PAVEMENT PER LINEAR FOOT FOR DEPTHS IN EXCESS OF 3'-6".

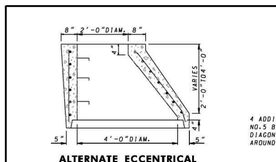
SPECIFICATION	CATEGORY CODE ITEMS
305	
APPROVED	Kirk G. McCall, DIRECTOR – OFFICE OF HIGHWAY DEVELOPMENT

SHA	APPROVAL • SHA REVISIONS	APPROVAL • FEDERAL HIGHWAY ADMINISTRATION
	APPROVAL 6-4-84	APPROVAL 8-1-84
	REVISED 10-1-01	REVISED 3-30-87
	REVISED	REVISED
	REVISED	REVISED

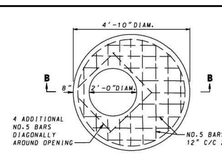
Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES

PRECAST SINGLE WR INLET

STANDARD NO. MD 374.23

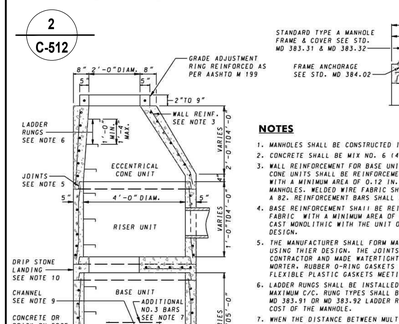


ALTERNATE ECCENTRICAL CONE UNIT

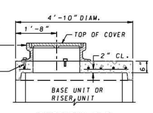


FLAT SLAB TOP
(SHOWN WITHOUT FRAME & COVER)

2
C-512



SECTION VIEW
(SHOWN WITHOUT FRAME & COVER)



SECTION B–B

NOTES

1. MANHOLES SHALL BE CONSTRUCTED IN ACCORDANCE WITH AASHTO M 199.
2. CONCRETE SHALL BE MIX NO. 6 (4500 PSI).
3. WALL REINFORCEMENT FOR BASE UNITS, RISER UNITS AND ECCENTRICAL CONE UNITS SHALL BE REINFORCEMENT BASE OR WELDED WIRE FABRIC WITH A MINIMUM AREA OF 0.12 IN. 2 FT. FOR THE 48" DIAMETER MANHOLES. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A 185 AND A 82. REINFORCEMENT BARS SHALL MEET ASTM A 615, GRADE 60.
4. BASE REINFORCEMENT SHALL BE REINFORCEMENT BARS OR WELDED WIRE FABRIC WITH A MINIMUM AREA OF 0.14 IN. 2 FT. THE BASE MAY BE CAST MONOLITHIC WITH THE UNIT OR JOINTED PER MANUFACTURER'S DESIGN.
5. THE MANUFACTURER SHALL FORM MALE AND FEMALE ENDS OF JOINTS USING THIER DESIGN. THE JOINTS SHALL BE SEALED BY THE CONTRACTOR AND MADE WATERTIGHT USING (WHERE APPLICABLE) MORTER, RUBBER O-RING GASKETS MEETING ASTM C 361 & C 443 OR FLEXIBLE PLASTIC GASKETS MEETING AASHTO M 198 TYPE B.
6. LADDER RUNGS SHALL BE INSTALLED IN VERTICAL ALIGNMENT AT 1'-4" MAXIMUM C/C. RUNG TYPES SHALL BE IN ACCORDANCE WITH STANDARDS MD 383.91 OR MD 383.92 LADDER RUNGS SHALL BE INCIDENTAL TO THE COST OF THE MANHOLE.
7. WHEN THE DISTANCE BETWEEN MULTIPLE OPENINGS IN THE BASE UNIT OR ANY RISOR UNIT IS LESS THAN 6" ADDITIONAL NO. 3 BARS ARE REQUIRED AROUND OPENINGS.
8. LIFT HOLES OR LIFT EYES SHALL BE PROVIDED IN EACH SECTION FOR HANDLING.
9. MIX NO. 2 CONCRETE OR BRICK CHANNEL SHALL BE PROVIDED IN THE FIELD AND SHALL SLOPE 2" PER FOOT TOWARD OUTLET OR AS DIRECTED BY THE ENGINEER.
10. THE DRIP STONE LANDING SHALL BE USED ONLY WHEN THERE ARE PIPES CONNECTED TO THE RISER UNITS. SEE STD. NO 384.13 FOR DETAILS.
11. MINIMUM DEPTH PAYMENT PER EACH SHALL BE 9'-0" MEASURED FROM THE BOTOM OF THE BASE UNIT TO THE TOP OF THE MANHOLE COVER VERTICAL DEPTH PAYMENT PER LINEAR FOOT SHALL INCLUDE ALL DEPTHS IN EXCESS OF 9'-0". THE COST OF THE DRIP STONE LANDING, NO. 57 AGGREGATE GROUT, SEALANT, AND ALL NECESSARY APPURTENANCES SHALL BE INCIDENTAL TO THE PRICE BID.

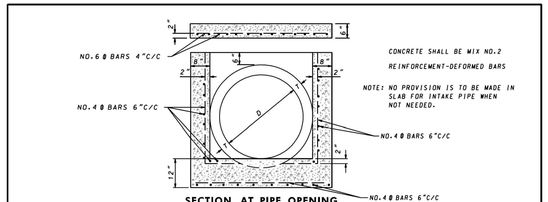
SPECIFICATION	CATEGORY CODE ITEMS
305	
APPROVED	Kirk G. McCall, DIRECTOR – OFFICE OF HIGHWAY DEVELOPMENT

SHA	APPROVAL • SHA REVISIONS	APPROVAL • FEDERAL HIGHWAY ADMINISTRATION
	APPROVAL 2-23-91	APPROVAL 1-2-91
	REVISED 10-1-01	REVISED
	REVISED	REVISED
	REVISED	REVISED

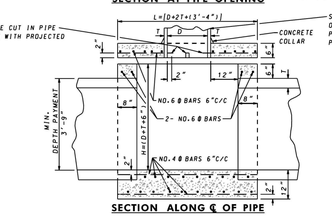
Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES

48" DIAMETER PRECAST MANHOLE
FOR 12" TO 24" PIPES

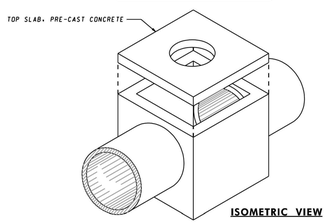
STANDARD NO. MD 384.01



SECTION AT PIPE OPENING



SECTION ALONG ℄ OF PIPE



ISOMETRIC VIEW

4
C-512

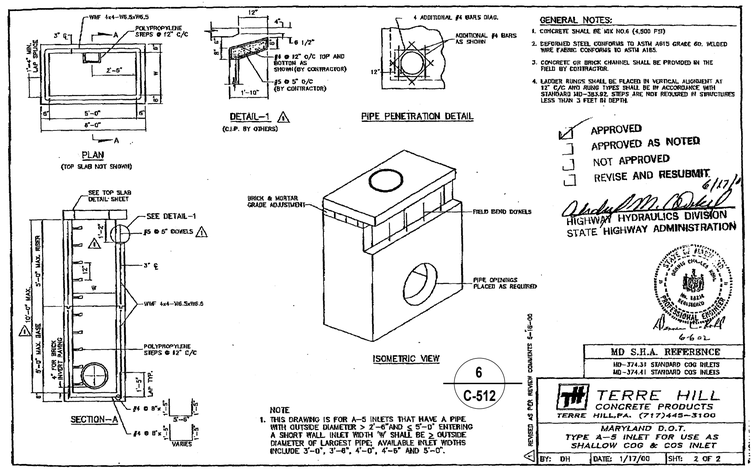
SPECIFICATION	CATEGORY CODE ITEMS
305	
APPROVED	Kirk G. McCall, DIRECTOR – OFFICE OF HIGHWAY DEVELOPMENT

SHA	APPROVAL • SHA REVISIONS	APPROVAL • FEDERAL HIGHWAY ADMINISTRATION
	APPROVAL 2-7-51	APPROVAL 3-23-56
	REVISED 10-1-01	REVISED
	REVISED	REVISED
	REVISED	REVISED

Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES

STANDARD JUNCTION BOX

STANDARD NO. MD 386.11



GENERAL NOTES:

1. CONCRETE SHALL BE MIX NO.6 (4,500 PSI)
2. REINFORCING STEEL CONFORMS TO ASTM A615 GRADE 60. WELDED WIRE FABRIC CONFORMS TO ASTM A185.
3. CONCRETE OR BRICK CHANNEL SHALL BE PROVIDED IN THE FIELD BY CONTRACTOR.
4. LADDER RUNGS SHALL BE PLACED IN VERTICAL ALIGNMENT AT 12" C/C AND RUNG TYPES SHALL BE IN ACCORDANCE WITH STANDARD MD-383.92. STEPS ARE NOT REQUIRED IN STRUCTURES LESS THAN 3 FEET IN DEPTH.

APPROVED
APPROVED AS NOTED
NOT APPROVED
REVISE AND RESUBMIT
6/17/25
HIGHWAY HYDRAULICS DIVISION
STATE HIGHWAY ADMINISTRATION

NOTE
1. THIS DRAWING IS FOR A-5 INLETS THAT HAVE A PIPE WITH OUTSIDE DIAMETER > 2'-6" AND ≤ 5'-0" ENTERING A SHORT WALL INLET WIDTH "W" SHALL BE ⌀ OUTSIDE DIAMETER OF LARGEST PIPE; AVAILABLE INLET WIDTHS INCLUDE 3'-0", 3'-6", 4'-0", 4'-5" AND 5'-0".

6
C-512

MD S.H.A. REFERENCE
MD-374.31 STANDARD COG INLETS
MD-374.41 STANDARD COG INLETS

TERRE HILL CONCRETE PRODUCTS
TERRE HILL, PA. (717)445-3100

MARYLAND D.O.T.
TYPE A-5 INLET FOR USE AS SHALLOW COG & COS INLET

REVISED AS PER REVIEW COMMENTS 6-16-25

BY: DH DATE: 1/17/00 SHT: 2 OF 2

FREDERICK SEIBERT & ASSOCIATES, INC.
CIVIL ENGINEERS • SURVEYORS • LANDSCAPE ARCHITECTS • LAND PLANNERS
www.fsa-inc.com
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4307 SOUTH HANOVER STREET CARLISLE, PA 17013 717.701.8111
9 WEST KING STREET SHIPPENSBURG, PA 17257 717.532.7463
1924 GREENCASTLE PIKE HAGERSTOWN, MD 21740 301.797.1007
129 THOMAS JOHNSON DRIVE FREDERICK, MD 21702 301.695.1500

DATE | MARK | DESCRIPTION

NOT APPROVED

SHEETZ - SMITHSBURG
SITUATED ALONG THE WEST SIDE OF MD 66 (MARYLAND ROAD) AT ITS INTERSECTION WITH MD 64 (JEFFERSON BLVD)
SMITHSBURG
WASHINGTON COUNTY, MARYLAND
SHEETZ INC.
245 SHEETZ WAY CLAYSBURG, PA 16625

PROJECT NO. 6086.1
DWN.BY KODY WARD | DATE 03.17.2025
PROJECT MANAGER DAVID TROSTLE
EMAIL: dtrostle@fsa-inc.com
TAX MAP - GRID - PARCEL(S) 0051 - 0005 - 0086 & 0091
SCALE NOT TO SCALE
SHEET TITLE

CONSTRUCTION DETAILS - STORM

C-512
SHEET 27 OF 38

SP-25-011

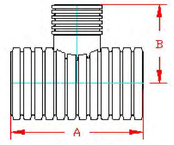
Professional Certification:
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional under the laws of the State of MARYLAND License # 20961
Expiration Date 08.23.2027

STATE OF MARYLAND — KODY MICHAEL WARD — 20961 — REGISTERED PROFESSIONAL ENGINEER
10/01/2025

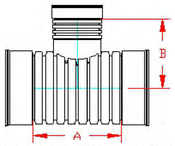
P:\SHARED DOCS\PROJECTS\6086\MKWM | 2/3/26 - CONSTRUCTION DETAILS - STORM.DWG - 305.501

DUAL WALL FABRICATED REDUCING TEES
60"×12" - 60"×24" DIAMETER

PART #	PIPE SIZE	A	B	JOINT
6064AN	60 x 12 in (1500 x 300 mm)	54.0 in (1372 mm)	42.5 in (1080 mm)	*
6064AN85B	60 x 12 in (1500 x 300 mm)	30.0 in (762 mm)	36.8 in (934 mm)	ST
6064AN65B	60 x 12 in (1500 x 300 mm)	30.0 in (762 mm)	36.8 in (934 mm)	WT
6065AN	60 x 15 in (1500 x 375 mm)	54.0 in (1372 mm)	46.0 in (1168 mm)	*
6065AN85B	60 x 15 in (1500 x 375mm)	30.0 in (762 mm)	38.2 in (971 mm)	ST
6065AN65B	60 x 15 in (1500 x 375 mm)	30.0 in (762 mm)	38.2 in (971 mm)	WT
6066AN	60 x 18 in (1500 x 450 mm)	60.0 in (1524 mm)	46.0 in (1168 mm)	*
6066AN85B	60 x 18 in (1500 x 450mm)	36.0 in (914 mm)	37.9 in (964 mm)	ST
6066AN65B	60 x 18 in (1500 x 450 mm)	36.0 in (914 mm)	37.9 in (964 mm)	WT
6067AN	60 x 24 in (1500 x 600 mm)	66.0 in (1676 mm)	48.9 in (1242 mm)	*
6067AN85B	60 x 24 in (1500 x 600mm)	42.0 in (1067 mm)	39.4 in (1002 mm)	ST
6067AN65B	60 x 24 in (1500 x 600 mm)	42.0 in (1067 mm)	39.4 in (1002 mm)	WT



PLAIN END



ST & WT (INCLUDES 3 GASKETS)

* = PLAIN END
ST = SOIL TIGHT
WT = WATER TIGHT

NOTE: ALL FITTINGS DIMENSIONS ARE FOR REFERENCE ONLY

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1
C-513

DRAWING #:	2445A	
DRAWN BY:	JCB	05.01.06
APPROVED BY:	JCB	06.26.07
REVISIONS:	NJP	06.14.07

RECOMMENDED MINIMUM TRENCH WIDTHS

PIPE DIAM.	MIN. TRENCH WIDTH
4" (100mm)	21" (533mm)
6" (150mm)	23" (584mm)
8" (200mm)	26" (660mm)
10" (250mm)	28" (711mm)
12" (300mm)	30" (762mm)
15" (375mm)	34" (864mm)
18" (450mm)	39" (991mm)
24" (600mm)	48" (1219mm)
30" (750mm)	56" (1422mm)
36" (900mm)	64" (1626mm)
42" (1050mm)	72" (1829mm)
48" (1200mm)	80" (2032mm)
60" (1500mm)	96" (2438mm)

MINIMUM RECOMMENDED COVER BASED ON VEHICLE LOADING CONDITIONS**

PIPE DIAM.	SURFACE LIVE LOADING CONDITION H-25	HEAVY CONSTRUCTION (75T AXLE LAOD) *
12" - 48" (300mm - 1200mm)	12" (305mm)	48" (1219mm)
60" (1500mm)	24" (610mm)	60" (1524mm)

* VEHICLES IN EXCESS OF 75T MAY REQUIRE ADDITIONAL COVER
**SEE BACKFILL REQUIREMENTS IN NOTE 6.

MAXIMUM RECOMMENDED COVER BASED ON VECHICLE LOADING CONDITIONS

PIPE DIAM.	CLASS I COMPACTED	CLASS I DUMPED	CLASS II 95%	CLASS II 90%	CLASS III 95%
4" (100mm)	37 (11.3m)	18 (5.5m)	25 (7.6m)	18 (5.5m)	18 (5.5m)
6" (150mm)	44 (13.4m)	20 (6.1m)	29 (8.8m)	20 (6.1m)	21 (6.4m)
8" (200mm)	32 (9.8m)	15 (4.6m)	22 (6.7m)	15 (4.6m)	16 (4.9m)
10" (250mm)	38 (11.6m)	18 (5.5m)	26 (7.9m)	18 (5.5m)	18 (5.5m)
12" (300mm)	35 (10.7m)	17 (5.2m)	24 (7.3m)	17 (5.2m)	17 (5.2m)
15" (375mm)	38 (11.6m)	17 (5.2m)	25 (7.6m)	17 (5.2m)	18 (5.5m)
18" (450mm)	36 (11.0m)	17 (5.2m)	24 (7.3m)	17 (5.2m)	17 (5.2m)
24" (600mm)	28 (8.5m)	13 (4.0m)	20 (6.1m)	13 (4.0m)	14 (4.3m)
30" (750mm)	28 (8.5m)	13 (4.0m)	20 (6.1m)	13 (4.0m)	14 (4.3m)
36" (900mm)	26 (7.9m)	12 (3.7m)	18 (5.5m)	13 (4.0m)	13 (4.0m)
42" (1050mm)	23 (7.0m)	11 (3.4m)	16 (4.9m)	11 (3.4m)	11 (3.4m)
48" (1200mm)	25 (7.6m)	11 (3.4m)	17 (5.2m)	11 (3.4m)	12 (3.7m)
60" (1500mm)	25 (7.6m)	11 (3.4m)	17 (5.2m)	11 (3.4m)	12 (3.7m)

NOTES:

1. ALL PIPE SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321, "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS", LATEST ADDITION

2. MEASURES SHOULD BE TAKEN TO PREVENT MIGRATION OF NATIVE FINES INTO BACKFILL MATERIAL, WHEN REQUIRED.

3. FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH SUITABLE MATERIAL AS SPECIFIED BY THE ENGINEER. AS AN ALTERNATIVE AND AT THE DISCRETION OF THE DESIGN ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A GEOTEXTILE MATERIAL.

4. BEDDING: SUITABLE MATERIAL SHALL BE CLASS I, II OR III. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. UNLESS OTHERWISE NOTED BY THE ENGINEER, MINIMUM BEDDING THICKNESS SHALL BE 4" (100mm) FOR 4"-24" (100mm-600mm); 6" (150mm) FOR 30"-60" (750mm-1500mm).

5. INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE CLASS I, II OR III IN THE PIPE ZONE EXTENDING TO THE CROWN OF PIPE. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.

6. MINIMUM COVER: MINIMUM COVER, H, IN NON-TRAFFIC APPLICATIONS (GRASS OR LANDSCAPE AREAS) IS 12" FROM THE TOP OF PIPE TO GROUND SURFACE. ADDITIONAL COVER MAY BE REQUIRED TO PREVENT FLOTATION. FOR TRAFFIC APPLICATIONS, MINIMUM COVER, H, IS 12" UP TO 48" DIAMETER PIPE AND 24" OF COVER FOR 60" DIAMETER PIPE, MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TO TOP OF RIGID PAVEMENT. FOR TRAFFIC APPLICATIONS WITH LESS THAN FOUR FEET OF COVER, EMBEDMENT OF THE PIPE SHALL BE USING ONLY A CLASS I OR CLASS II BACKFILL.

FILL HEIGHT TABLE GENERATED USING AASHTO SECTION 12, LOAD RESISTANCE FACTOR DESIGN (LRFD) PROCEDURE WITH THE FOLLOWING ASSUMPTIONS:
NO HYDROSTATIC PRESSURE,
UNIT WEIGHT OF SOIL (Ys) = 120 PCF

2
C-513

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ADVANCED DRAINAGE SYSTEMS, INC. ("ADS") HAS PREPARED THIS DETAIL BASED ON INFORMATION PROVIDED TO ADS. THIS DRAWING IS INTENDED TO DEPICT THE COMPONENTS AS REQUESTED. ADS HAS NOT PERFORMED ANY ENGINEERING OR DESIGN SERVICES FOR THIS PROJECT, NOR HAS ADS INDEPENDENTLY VERIFIED THE INFORMATION SUPPLIED. THE INSTALLATION DETAILS PROVIDED HEREIN ARE GENERAL RECOMMENDATIONS AND ARE NOT SPECIFIC FOR THIS PROJECT. THE DESIGN ENGINEER SHALL REVIEW THESE DETAILS PRIOR TO CONSTRUCTION. IT IS THE DESIGN ENGINEERS RESPONSIBILITY TO ENSURE THE DETAILS PROVIDED HEREIN MEETS OR EXCEEDS THE APPLICABLE NATIONAL, STATE, OR LOCAL REQUIREMENTS AND TO ENSURE THAT THE DETAILS PROVIDED HEREIN ARE ACCEPTABLE FOR THIS PROJECT.

REV.	DESCRIPTION	BY	MM/DD/YY	CHK'D
6	INITIAL BACKFILL	JAB	04/02/20	

TRENCH INSTALLATION DETAIL (N-12 PER AASHTO)

DRAWING NUMBER: STD-101

4640 TRUEMAN BLVD
HILLIARD, OHIO 43026

DRAWN BY:	TJR
DATE:	12/29/16
SCALE:	NTS
SHEET:	1 OF 1

P:\SHEETZ\DESIGN\PLOTTING\BRIDGE\ | SHEETZ\DWG\SITE PLAN\SWM | J:*.tif - CONSTRUCTION DETAILS - STORM.DWG - 2025-10-01

10/01/2025

Professional Certification:
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional under the laws of the State of: MARYLAND License #: 20984
Expiration Date: 06.23.2027

FSA
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CIVIL ENGINEERS • SURVEYORS • LANDSCAPE ARCHITECTS • LAND PLANNERS
fsa-inc.com
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100 SOUTH MARKET STREET
HAGERSTOWN, MD 21740
301.797.3800
EAST MAIN STREET
NEW BLOOMFIELD, PA 17068
717.275.7581
400 SOUTH HANOVER STREET
CARLISLE, PA 17013
717.701.8111

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NOT APPROVED FOR CONSTRUCTION

MARK	DESCRIPTION	DATE

SHEETZ - SMITHSBURG
SITUATED ALONG THE WEST SIDE OF MD. RTE. 64 (MAPLEVILLE ROAD) AT ITS INTERSECTION WITH MD. RT. 491 (JEFFERSON BLVD)
SMITHSBURG
WASHINGTON COUNTY, MARYLAND

SHEETZ, INC.
243 SHEETZ WAY CLAYSBURG, PA 16625

PROJECT NO.	6086.1
DWN BY	KODY WARD
DATE	03.17.2025
PROJECT MANAGER	DAVID TROSTLE
EMAIL	dtrostle@fsa-inc.com
TAX MAP - GRID - PARCEL(S)	0051 - 0005 - 0086 & 0091
SCALE	NOT TO SCALE

SHEET TITLE

CONSTRUCTION DETAILS - STORM

C-513
SHEET 28 OF 38

SP-25-011

(3) PIN STR
6" Ht.

(13) THU G17
6" Ht.

PADEN AVENUE
LOCAL
30' R/W

PADEN AV

EX. WASH. CO. RIGHT OF WAY

(3) EX. MAILBOXES

25' MBSL

STOP

(2) AME GRA
2" Cal.

SEE SHEET L-501
SEE SHEET L-101

N/F
BOWMAN CAVETOWN LLC
1.90 ACRES
L. 7086 F. 0081

PROP. SHEETZ STORE
6,139 SQ. FT.

INV. 734.83

(1) TIL GRE
2.5" Cal.

EX. HANDHOLE

MD GRID NORTH
NAD 83

ORANGE CONSTRUCTION FENCE
- 37 LF (TREE ROOT & BRANCH
PRUNING TO FOLLOW THE TOCF)

MEADOW ESTABLISHMENT
(8,218 SF)

ORANGE CONSTRUCTION FENCE - 129
LF (TREE ROOT & BRANCH PRUNING
TO FOLLOW THE TOCF)

(9) BUX WI2
3 gal.

(2) TIL GRE
2.5" Cal.

(3) ILE SHA
3 gal.

(8) BUX WI2
3 gal.

(4) ILE SHA
3 gal.

EX. MD SHA RIGHT OF WAY

OFF

N/F
BOWMAN CAVETOWN LLC
1.67 AC.
L.4795 F.440

(4) THU EME
8' Ht.

(3) ITE CCW
3 gal

(8) LIR MUS
1 gal.

(3) CLE ALN
3 gal

(4) CAL KAR
3 gal

PROPOSED MDSHA R/W

(4) LIR MUS
1 gal.

(4) ARO KOL
3 gal.

(4) SCH LI2
1 gal.

(6) BUD DAV
3 gal.

(5) ILE SHA
3 gal.

(6) BUX WI2
3 gal.

UNLOADING ZONE

STANDARD
UST field

N/F
SHA RIGHT-OF-WAY
PER PLAT 14360

JEFFERSON BOULEVARD (MD 64)
MINOR ARTERIAL

N/F
LEWIS ORCHARD &
FARMS LLC
L. 4135 F. 375

ONLY

9+00
10+00
11+00
12+00
13+00
14+00

PROPOSED MDSHA R/W

EX. MD SHA RIGHT OF WAY

TURFGRASS
ESTABLISHMENT
(689 SF)

MAPLEVILLE ROAD (MD 66)
MAJOR COLLECTOR
R/W VARIES

GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)
1 inch = 20 ft.

LEGEND	
HATCH	DESCRIPTION
	HARDWOOD BARK MULCH AREA
	BIO-RETENTION AREAS (SEE SHEETS C-301 & C-304 FOR LANDSCAPE PLANS)

NOTE:
1. Place "Dewitt 15 year weed barrier" woven polypropylene or approved equal in all planted beds and at each tree ring.
2. Mulch shall be 3 inches thick double shredded hardwood dyed brown or black.

P:\SHEETZ FOLDER\PROJECTS\6000\6086\6086.1 - SHEETZ\DWGS\SITE PLANS\6086.1 - SLSP - LANDSCAPE PLAN - DETAILS - ADC MAPS.DWG 2025-10-01

STATE OF MARYLAND
Scott Whipple
4161
LANDSCAPE ARCHITECT

Professional Certification:
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional under the laws of the State of MARYLAND License # 4161
Expiration Date: 10-19-2026

FSA
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NEW BLOOMFIELD, PA 17068
717.275.7591
CARLISLE, PA 17013
717.701.8111
GREENCASTLE, PA 17225
717.597.1007

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MARK	DESCRIPTION	DATE
1	REVISED PER AGENCY COMMENTS	09.05.25

FOR GOVERNMENT REVIEW

NOT APPROVED FOR CONSTRUCTION

SHEETZ - SMITHSBURG
SITUATED ALONG THE WEST SIDE OF MD 66 (MAPLEVILLE ROAD) AT ITS INTERSECTION WITH MD 64 (JEFFERSON BLVD)
SMITHSBURG
WASHINGTON COUNTY, MARYLAND
SHEETZ INC.
243 SHEETZ WAY CLAYSBURG, PA 16625

PROJECT NO. 6086.1
DWN BY: KODY WARD
DATE: 03.17.2025
PROJECT MANAGER: DAVID TROSTLE
EMAIL: dtrostle@fsa-inc.com
TAX MAP - GRID - PARCEL(S): 0051 - 0005 - 0086 & 0091
SCALE: 1" = 20'
SHEET TITLE

LANDSCAPE PLAN

L-101
SHEET 29 OF 38

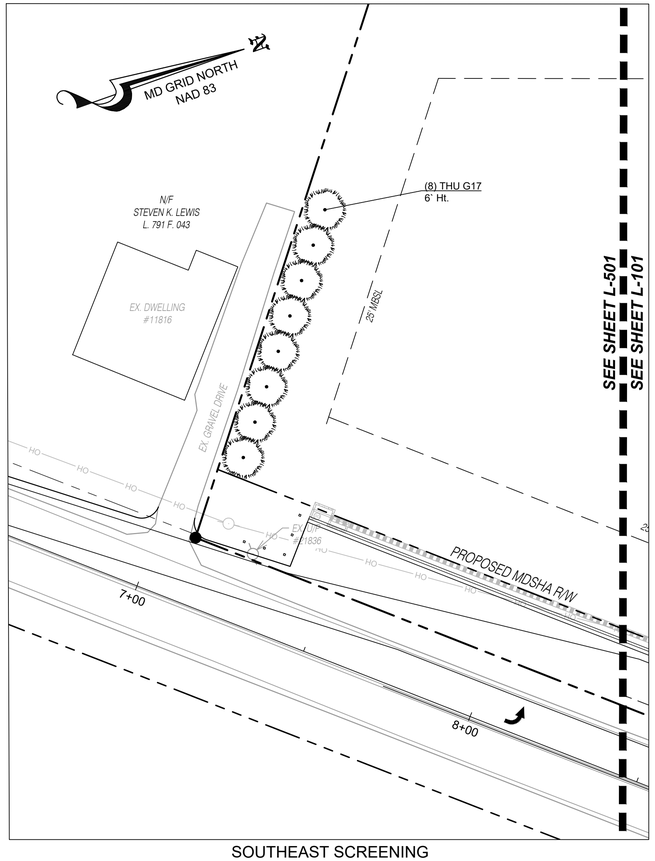
SP-25-011

PLANT SCHEDULE

SYMBOL	CODE	BOTANICAL / COMMON NAME	SIZE	CONTAINER	QTY	DETAIL
TREES						
	AME GRA	Amelanchier x grandiflora `Autumn Brilliance` / `Autumn Brilliance` Serviceberry	2" Cal.	B&B	2	3/L-501
	PIN STR	Pinus strobus / White Pine	6` Ht.	B&B	3	4/L-501
	THU EME	Thuja occidentalis `Emerald` / Emerald Arborvitae	8` Ht.	B&B	4	4/L-501
	THU G17	Thuja occidentalis `Green Giant` / Green Giant Arborvitae	6` Ht.	B&B	21	4/L-501
	TIL GRE	Tilia cordata `Greenspire` / Greenspire Littleleaf Linden	2.5" Cal.	B&B	3	3/L-501
SHRUBS						
	ARO KOL	Aronia melanocarpa Low Scape Mound / Low Scape Mound Chokeberry	3 gal.		4	2/L-501
	BUD DAV	Buddleja davidii / Butterfly Bush	3 gal.		6	2/L-501
	BUX WI2	Buxus microphylla japonica `Winter Gem` / Winter Gem Boxwood	3 gal.		23	2/L-501
	CAL KAR	Calamagrostis x acutiflora 'Karl Foerster' / Karl Foerster Feather Reed Grass	3 gal		4	2/L-501
	CLE ALN	Clethra alnifolia / Summersweet Clethra	3 gal		3	2/L-501
	ILE SHA	Ilex glabra `Shamrock` / Inkberry	3 gal.		12	2/L-501
	ITE CCW	Itea virginica `Little Henry` / Little Henry Virginia Sweetspire	3 gal		3	2/L-501
	LIR MUS	Liriope muscari / Lily Turf	1 gal.		12	1/L-501
	SCH LI2	Schizachyrium scoparium / Little Bluestem Grass	1 gal.		4	2/L-501

LANDSCAPE TABULATIONS

LANDSCAPE REQUIREMENT	LANDSCAPE REQUIRED	LANDSCAPE PROPOSED	
PARKING AREA- 25,340 SF	25,340 * 0.5= 1,267 SF REQUIRED 1,267 / 300= 4 TREES REQUIRED	2,700 SF (10.7%)	5 SHADE TREES



SOUTHEAST SCREENING
SCALE: 1" = 20'

General Landscape Notes:

1. Landscape contractor is to call Miss Utility and have all underground utilities marked prior to any digging or planting.
2. Landscape Contractor shall install all plant material in a timely fashion.
3. Landscape Contractor shall be responsible for all watering, weeding, repairs and replacements prior to final acceptance.
4. NO Substitutions of plant material without written permission of FSA. Planting plans have been proposed with plant sizes, types, and locations as important design elements.
5. Plants shall be in accordance with the current issue of American Standards for Nursery Stock published by the American Association of Nurserymen.
6. All plants shall be watered thoroughly during installation and prior to final acceptance.
7. All bark mulched areas shall be first covered with Typar Weed Barrier or approved equal.
8. All planting bed areas on the site shall be mulched with a 3 inches of double shredded hardwood mulch, dye colored black or brown.
9. Plant material shall be inspected yearly in order to remove and replace dead, diseased vegetation.
10. Warranted plant material that is 25% dead or more shall be considered dead and shall be replaced at no charge.
11. All plant material shall be warranted for two years. 60 days prior to the end of the warranted period, the Engineering Department shall perform an inspection. Of which there should be an 90% survival rate of all plant material. All surviving plant material shall be found in a healthy condition. The warranty shall commune on the date of initial acceptance by the owner.
12. The landscape contractor shall conduct a final inspection with the owner or owner's representative at the end of the warranty period.
13. Fertilizer Packets are to be Nutri-Pak 16-8-8 or approved equal per manufacturer's recommendations.
14. Landscape is recommended to be installed during the two growing seasons. Spring: April 15-June 15, Fall: September 1-November 1.
15. Hose bibs and irrigation system for landscaping will be included with architecture plan submittal to Washington County Plan and Review Department.

Maintenance:

1. Owner to remove silt/sediment if the accumulation of sediment exceeds one inch over the biorentention area.
2. All trash and debris should be removed from the top of the bioretention area as necessary.
3. Areas devoid of mulch shall be re-mulched on an annual basis.

7.1 Title for SHA Landscape Notes.
SHA LANDSCAPE NOTES. *Landscape construction within SHA property, including right-of-ways, easement areas and lands to be conveyed to SHA shall conform to these Notes. For guidance regarding design modifications during construction, refer to SHA Landscape Estimating Manual, and SHA Environmental Guide for District, Access, and Utility Permit Applicants at https://roads.maryland.gov/mdotsha/pages/index.aspx? PageId=25 .*

7.2 SHA Standard Specifications.
SHA Standard Specifications. *Landscape construction shall conform to Category 700 - Landscaping, and landscape materials shall conform to Section 920, of the most recent revision of SHA Standard Specifications for Construction and Materials, including all revisions and supplements, and as specified in these Notes. The requirements of SHA Specifications shall supersede all other specifications for work on SHA property or property to be conveyed to SHA except as specifically indicated in the plans. Refer to https://roads.maryland.gov/mdotsha/ pages/sscm.aspx?PageId=835&Iid=SSP .*

7.3 Erosion and Sediment Control Manager (ESCM).
Erosion and Sediment Control Manager (ESCM). *Soil disturbance such as grading, excavation, soil placement or other activities that involve soil disturbance shall be supervised by an ESCM Manager with a valid "SHA Yellow Card" in conformance with SHA Standard Specifications and any applicable Erosion and Sediment Control Permit.*

7.4 SHA Standard Details for Trees, Shrubs and Planting Beds.
SHA Standard Details for Trees, Shrubs and Planting Beds. *The installation of trees, shrubs, planting beds and other landscape construction related to Section 710 of the SHA Standard Specifications shall conform to the SHA Book of Standards for Highway & Incidental Structures - Category 7 at https://apps.roads.maryland.gov/BusinessWithSHA/bizStdsSpecs/desManualStd Pub/publicationsonline/ohd/bookstd/toccat7.asp .*

7.5 Temporary Stabilization.
Temporary Stabilization *shall be installed in conformance with Section 704 to ensure that areas of soil disturbance are protected from wind, rainfall and flowing water until permanent stabilization is installed.*
1. Temporary Mulch, either as temporary straw mulch or temporary matting mulch, shall be installed at the end of each working day to provide "same day stabilization" unless other approved stabilization is installed.
2. Temporary straw mulch shall be installed on areas and slopes flatter than 4:1; temporary matting mulch shall be applied on slopes 4:1 and steeper, and to areas within channels.

7.6 Pavement Removal and Restoration.
Pavement Removal and Restoration. *Areas of pavement removal shall be excavated to remove pavements, aggregate base, compacted soil and other unsuitable materials before placing soils in conformance with Section 701 of the SHA Standard Specifications.*
1. Roadways shall be excavated to a depth of 16 inches below final grade before Placing Furnished Subsoil 12 in. Depth and Placing Furnished Topsoil 4 in. Depth in conformance with Note 7.8.
2. Sidewalks and driveways shall be excavated to a depth of 6 inches below final grade before Placing Furnished Topsoil 6 in. Depth in conformance with Note 7.8.

7.7 Excavation and Debris Removal.
Excavation and Debris Removal. *Debris related to the demolition of sidewalks, driveways, curbs, trees, stumps, roots, fencing, pipes, and other materials that may interfere with landscape installation or future maintenance shall be excavated as necessary for their complete removal and disposal.*

7.8 Soil Restoration.
Soil Restoration. *Areas of pavement removal, excavation or drilling in landscaped areas shall remove excavated debris and restore topsoil placed in conformance with Section 701 of the SHA Standard Specifications.*
1. A layer of approved topsoil at least 4-inch depth shall be placed on all disturbed areas flatter than 2:1 and in all channels before seeding, sodding or other landscaping, unless otherwise specified on the plans as when required for pavement removal and restoration.
2. A layer of approved topsoil at least 2-inch depth shall be placed on all disturbed areas 2:1 and steeper before seeding, sodding or other landscaping, unless otherwise specified.
3. Bioretention Soil Mix (BSM) and other materials installed in conjunction with Section 316 - Stormwater Filtration Facilities and SHA stormwater details shall be installed in conformance with SHA Landscape Notes and landscape plans. Plant materials and mulch shall be installed in BSM in conformance with stormwater details, Section 710 or other SHA Specifications.

7.9 Turfgrass Sod Establishment.
Turfgrass Sod Establishment *shall be performed in all disturbed areas, or within the areas indicated in the plans, in conformance with Section 708 of the SHA Standard Specifications. The required application rate of 20-16-12 fertilizer shall be 200 pounds per acre, or shall be equivalent fertilizer and application rate as specified in Section 708. No fertilizer shall be applied from November 15 to March 1.*

7.10 Turfgrass Establishment.
Turfgrass Establishment *shall be performed in all disturbed areas, or within the areas indicated in the plans, in conformance with Section 705 of the SHA Standard Specifications. The required application rate of 20-16-12 fertilizer shall be 200 pounds per acre, or shall be equivalent fertilizer and application rate as specified in Section 705. No fertilizer shall be applied from November 15 to March 1.*

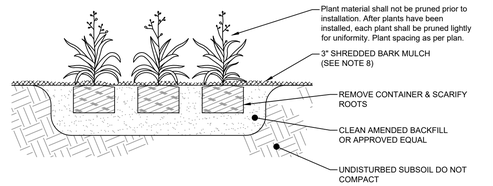
7.11 Soil Stabilization Matting.
Soil Stabilization Matting *shall be installed in conformance with Section 709 of the SHA Standard Specifications, in conjunction with Turfgrass Establishment per Section 705 or Meadow Establishment per Section 707 as follows:*
1. Areas Flatter than 6:1. Type A or Type E matting may be installed in lieu of straw mulch and hydromulch binder in conjunction with Turfgrass Establishment.
2. Areas Steeper than 6:1 and Flatter than 4:1. Type A or Type E matting shall be installed in lieu of straw mulch and hydromulch binder in conjunction with Turfgrass Establishment, unless delineated and noted otherwise.
3. Channels, Stormwater Management Facilities, and Slopes 4:1 and Steeper Type A Soil Stabilization Matting shall be installed in lieu of straw mulch and hydromulch binder in conjunction with Turfgrass Establishment, unless delineated and noted otherwise.
4. In areas of Meadow Establishment with Type D Soil Stabilization Matting, the matting shall be installed in lieu of straw mulch and hydromulch binder within the delineated areas.
5. In high velocity channels with Turfgrass Establishment, Type B Soil Stabilization Matting shall be installed in lieu of straw mulch and hydromulch binder within the delineated areas.

7.13 Tree Preservation Areas.
Tree Preservation Areas. *Temporary Orange Construction Fence (TOCF) shall be installed in locations delineated on the plans as Tree Preservation Areas (TPA) in conformance with Section 120 of the SHA Standard Specification to protect existing trees and other vegetation during construction. Areas within TOCF shall be protected from all prohibited and restricted activities, per Section 120.*

7.14 Roadside Tree Individual Permit (RTIP).
Roadside Tree Permit. *Tree removal, tree installation, tree root and branch pruning, and other regulated impacts to trees in the SHA right-of-way shall conform to the requirements of the Roadside Tree Individual Permit (RTIP) issued by the Maryland Department of Natural Resources, or the approved Forest Conservation Plan (FCP) of the local authority.*
1. A copy of the RTIP or FCP shall be submitted to the SHA Landscape Programs Division before work is performed, and a copy of the RTIP or FCP shall be reproduced in the plans or be in possession of the applicant at the project site when the permitted work is performed.
2. A Maryland Licensed Tree Expert shall perform the specified tree operations in conformance with the SHA Standard Specifications and ANSI A300 Standards for Tree Care Operations.

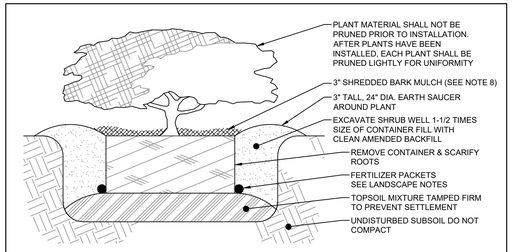
7.15 Installation of Trees, Shrubs, other Landscape Plantings.
Trees and Other Plant Material Installation. *Trees, shrubs, perennials, annuals, bulbs, landscape beds, bark mulch and similar materials shall be installed in conformance with Section 710 and 711 of the SHA Standard Specifications. The SHA Landscape Programs Division will approve materials and layout, and perform other approvals and inspections in conformance with Standard Specifications. Trees and shrubs shall be pruned at the time of installation to ensure sidewalk clearance for pedestrians is maintained to a height of 8 feet. No tree or shrub shall be installed within 3 feet of curbs, sidewalks, or pavement edges.*

7.23 Tree Fertilizing.
Tree Fertilizing *shall be performed in conformance with Operation 3 - Broadcast Fertilizing per Section 716. 20-16-12 fertilizer shall be applied to the soil surface under the dripline of trees at the rate of 200 pounds per acre.*



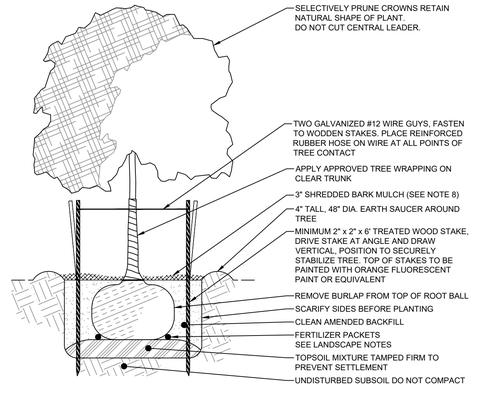
SECTION

1 / L-501 — CONTAINER PLANTING - GROUNDCOVER
NOT TO SCALE



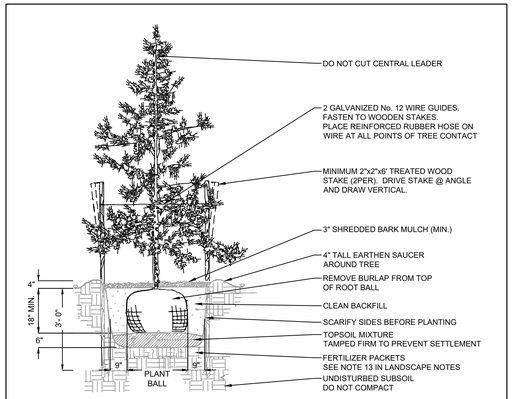
SECTION

2 / L-501 — CONTAINER PLANTING - SHRUB
NOT TO SCALE

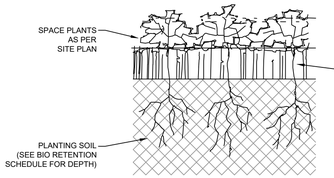


SECTION

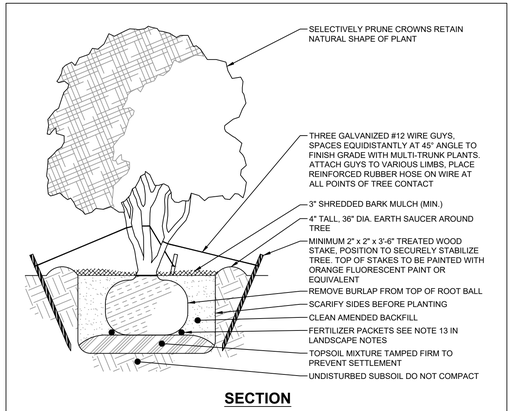
3 / L-501 — PLANTING - TREE (Up to 2-1/2" Cal.)
NOT TO SCALE



4 / L-501 — EVERGREEN TREE PLANTING
NOT TO SCALE



5 / L-501 — BIO RETENTION PLUG PLANTING DETAIL
NOT TO SCALE



SECTION

6 / L-501 — MULTI-TRUNK TREE PLANTING
NOT TO SCALE

STATE OF MARYLAND — Brett Wheeler — 4163 — LICENSED LANDSCAPE ARCHITECT

Professional Certification:
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional under the laws of the State of: MARYLAND License # 4163
Expiration Date: 10-19-2026

FSA — FREDERICK SEIBERT & ASSOCIATES, INC.
CIVIL ENGINEERS • SURVEYORS • LANDSCAPE ARCHITECTS • LAND PLANNERS
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CARLISLE, PA 17013 — 1 EAST MAIN STREET — 717.701.8111
GREENCASTLE, PA 17225 — 14212 BUCHANAN TRAIL EAST — 717.597.1007
HAGERSTOWN, MD 21740 — 135 SUMMIT AVENUE, SUITE C — 301.791.3800

MARK	DESCRIPTION	DATE
1	REVISED PER AGENCY COMMENTS	09.30.25

NOT APPROVED FOR CONSTRUCTION

SHEETZ - SMITHSBURG
SITUATED ALONG THE WEST SIDE OF MD 64 (MAPLEVILLE ROAD) AT ITS INTERSECTION WITH MD 34 (JEFFERSON BLVD)
SMITHSBURG
WASHINGTON COUNTY, MARYLAND
SHEETZ INC
243 SHEETZ WAY CLAYSBURG, PA 16625

PROJECT NO.	6086.1
DWN BY	KODY WARD
DATE	03.17.2025
PROJECT MANAGER	DAVID TROSTLE
EMAIL	dtrostle@fsa-inc.com
TAX MAP - GRID - PARCEL(S)	0051 - 0005 - 0086 & 0091
SCALE	NOT TO SCALE

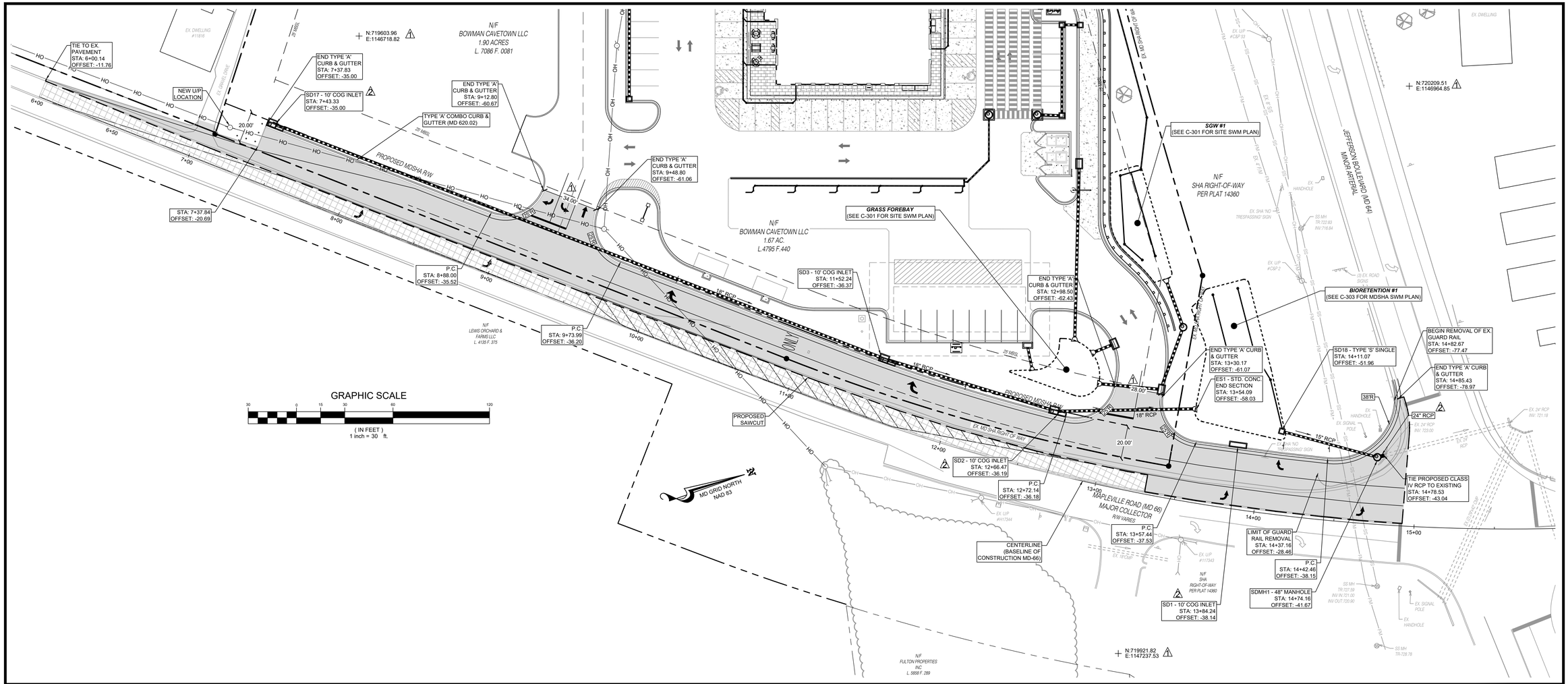
SHEET TITLE

LANDSCAPE DETAILS & NOTES

L-501
SHEET 30 OF 38

SP-25-011

P:\SHEETZ\SITE\SMITHSBURG\PLOTTING\SMITHSBURG - SHEETZ\CONSULDOT PLAN\SMITHSBURG - SHEETZ CONSULDOT PLAN.DWG, 3/25/2025 10:57:37 AM, KODY WARD, 1 - LANDSCAPE PLAN, DETAILS, AND NOTES.DWG



MDSHA STORM DRAIN PIPE SCHEDULE

UPSTREAM STRUCTURE	DOWNSTREAM STRUCTURE	LENGTH (FT)	SLOPE (%)	SIZE (IN.)	MATERIAL
SD 2	ES 1	83.7	1.7	18	RCP IV
SD 3	SD 2	105.5	1.1	18	RCP IV
SD 17	SD 3	402.6	0.5	18	RCP IV
SD 18	SD MH1	58.2	0.5	15	RCP IV

MDHSA STORM DRAIN STRUCTURE SCHEDULE

ID	RIM ELEV(FT)	INVERT-IN ELEV(FT)	INVERT-OUT ELEV(FT)	STATION	OFFSET	STRUCTURE ID	MDSHA STD. DETAIL REFERENCE
SD 1	730.97	N/A	N/A	13+84.24	-38.14	10' COG Opening	MD 374.68
SD 2	734.00	729.34	729.14	12+66.47	-36.19	10' Precast COG Inlet	MD 374.51
SD 3	736.91	730.74	730.54	11+52.24	-36.37	10' Precast COG Inlet	MD 374.51
SD 17	737.24	N/A	732.75	7+43.33	-58.03	10' Precast COG Inlet	MD 374.51
SD 18	728.25	723.34	723.34	14+11.07	-51.96	Type 'S' Single Inlet w/ Trash Rack	MD 374.73
SD MH1	727.35	723.05	723.05	14+74.16	-41.67	Standard 48" Mahole	MD 384.01
ES 1	N/A	N/A	727.75	13+54.09	-58.03	18" Concrete End Section	MD 368.02

Construction Note:

1. The MDSHA improvements proposed on this project will be completed in conjunction with the MD64-66 MDSHA improvements (by others). Final striping and paving of the Sheetz MDSHA improvements will be completed as part of the MD64-66 MDSHA improvements. Temporary striping may be required during construction.

Hatch Legend

MD S.H.A. Pavement Section:
2" Superpave Asphalt Mix 12.5 mm for Surface, PG 64S-22, Level 2
7" Superpave Asphalt Mix 19.0mm For Base, PG 64S-22, Level 2 (2-3.5" lifts)
6" Graded Aggregate Base or 12" Capping Borrow

Mill & Overlay:
Superpave Asphalt Mix 12.5 mm - PG64S-22, Level 2 for 2"

Proposed Right-of-Way Dedication

Construction Notes:

1. The Contractor shall be responsible for all coordination with all utility companies.
2. All line striping and sign modification will be done by the Developer/Contractor's expense.
3. Posted performance security will not be released until all work is completed to the satisfaction of the State Highway Administration.
4. HMA shall be milled into all adjoining existing paved sections a minimum 2" depth. Feathering of HMA will not be allowed.
5. All material incorporated into the work (ie, HMA, aggregate, seed, etc.) shall meet all applicable SHA specifications.
6. Contractor shall contact SHA according to access permit general provisions.
7. Contractor must get SHA approval before making any changes to approved plans.
8. The Contractor shall contact Miss Utility a minimum of 72 hours before starting work.
9. Contractor shall notify all adjoining property owners at least 2 business days before starting work.
10. Any damage to adjoining roads, utilities, private property, etc, caused by the Contractor will be repaired or replaced in kind by the Contractor to the satisfaction of the State Highway Administration.
11. Anything that needs to be removed or relocated to complete the work as shown will be the Contractor's responsibility.
12. Traffic control shall be the responsibility of the Contractor and shall be done in accordance with the approved plans and the latest MdMUTCD. Use MD -104.03-05 for traffic control.
13. All saw cuts shall be painted in the field by the Contractor and approved by SHA before any cutting is permitted.
14. All pavement markings shall be spotted by the permittee and approved by A.D.E. Traffic for district 6 S.H.A. engineer prior to actual placement of markings. SHA shall be notified 3 work days in advance of the permanent striping to review spotting.
15. All proposed signs are to be no less than the 'standard' size according to the S.H.A. sign book. No signs are to be placed using the minimum size. The permittee or contracting representative shall meet with the S.H.A. inspector prior to ordering and placing signs to ensure the proper size is used for the permit.
16. The S.H.A. permit inspector needs to be notified 3 work days in advance of the line striping to be placed.
17. Signs are to be ground mounted in 4"x4" posts at a minimum height of 7 feet measured from the bottom of the sign.
18. Work Zone Traffic Control shall conform to the latest version of the Maryland Manual on Uniform Traffic Control Devices (MdMUTCD) and the MDOT SHA Book of Standards for Highway and Incidental Structures - Temporary Typical Traffic Control Applications.
19. Work within and adjacent to the traveled way once initiated, shall be completed in successive days. No lane closures will be allowed during weekend days unless approved prior to permit issuance by the MDOT SHA Assistant District Engineer - Traffic.
20. A Lane Closure Permit must be submitted for all temporary lane or shoulder closures at least 48 hours before anticipated start of work.
21. All temporary warnings signs shall be completely covered and/or removed when not applicable.

P:\Sheetz_COLLEGEVILLE\Traffic\MDSHA\MDSHA - 11 - MDSHA ENTRANCE PLAN.DWG, 2025.10.01

STATE OF MARYLAND — FREDERICK SEIBERT — 21677 — REGISTERED PROFESSIONAL ENGINEER

10/01/2025

Professional Certification:
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional under the laws of the State of: MARYLAND License #: 21677
Expiration Date: 06.23.2027

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FREDERICK SEIBERT & ASSOCIATES, INC.
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LANCASTER: 1121 MANHEIM PIKE, GREENCASTLE, PA 17225, 717.597.1001
YORK: 135 TOWNSHIP LINE ROAD, HANOVER, PA 17331, 717.632.8900
HAGERSTOWN: 44 WEST MAIN STREET, HAGERSTOWN, MD 21740, 301.791.3800
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MARK	DESCRIPTION	DATE
1	REVISED PER AGENCY COMMENTS	09.18.25
2	REVISED PER AGENCY COMMENTS	08.11.25

NOT APPROVED FOR CONSTRUCTION

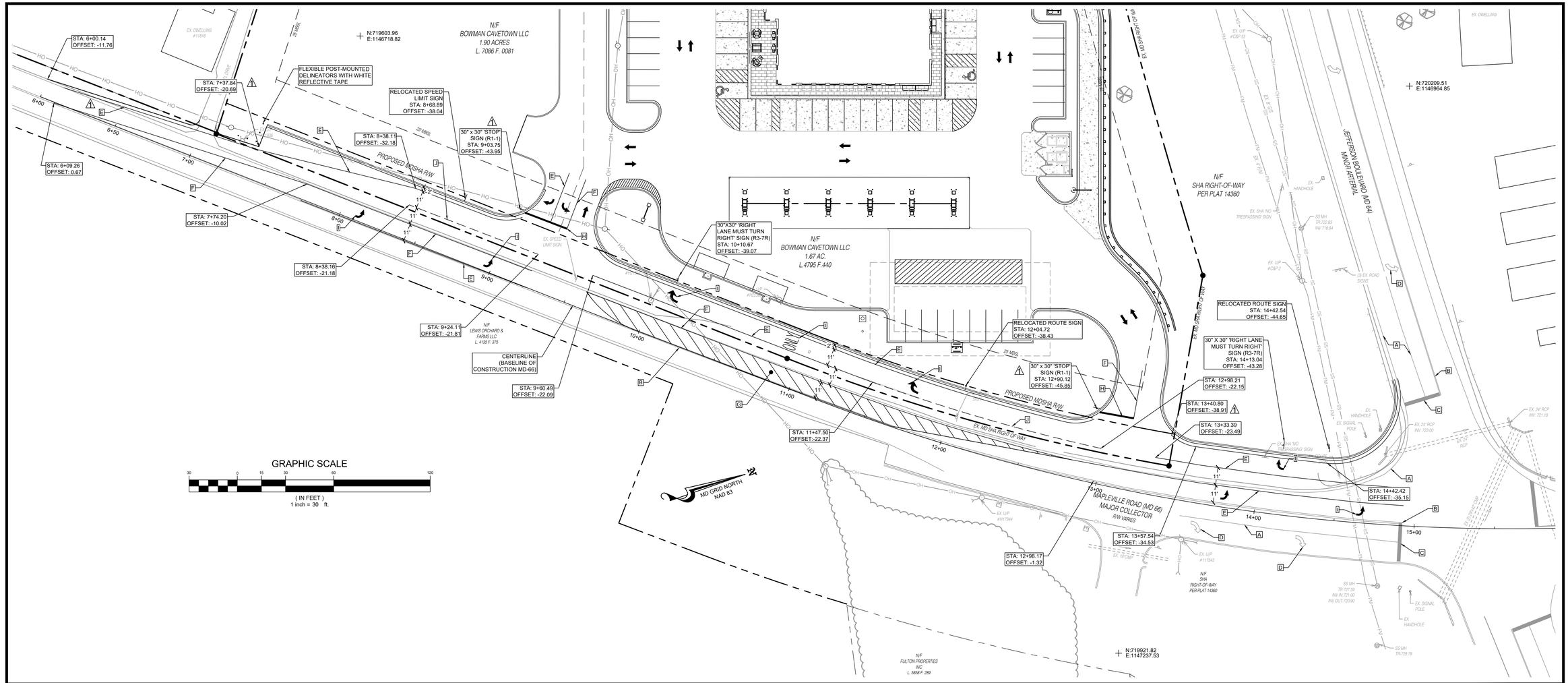
SHEETZ - SMITHSBURG
SITUATED ALONG THE WEST SIDE OF MD 66 (MAPLEVILLE ROAD) AT ITS INTERSECTION WITH MD 64 (JEFFERSON BLVD)
SMITHSBURG
WASHINGTON COUNTY, MARYLAND
SHEETZ INC.
243 SHEETZ WAY CLAYSBURG, PA 16625

PROJECT NO. 6086.1
DWN BY KODY WARD | DATE 03.17.2025
PROJECT MANAGER DAVID TROSTLE
EMAIL: dtrostle@fsa-inc.com
TAX MAP - GRID - PARCEL(S) 0051 - 0005 - 0086 & 0091
SCALE 1" = 30'
SHEET TITLE

MDSHA ENTRANCE PLAN

C-109
SHEET 31 OF 38

SP-25-011



Construction Note:

1. The MDSHA improvements proposed on this project will be completed in conjunction with the MD64-66 MDSHA improvements (by others). Final striping and paving of the Sheetz MDSHA improvements will be completed as part of the MD64-66 MDSHA improvements. Temporary striping may be required during construction. ⚠2

STRIPING LEGEND

A	EXISTING 5" SOLD WHITE LINE
B	EXISTING 5" SOLID DOUBLE YELLOW LINE
C	EXISTING 24" WIDE SOLID WHITE STOP BAR
D	EXISTING WHITE DIRECTIONAL ARROW
E	PROPOSED 5" SOLID WHITE LINE - 40 MIL THERMOPLASTIC
F	PROPOSED 5" SOLID DOUBLE YELLOW LINE - 40 MIL THERMOPLASTIC
G	PROPOSED 15" SOLID YELLOW GORE HATCH @ 45° - 40 MIL THERMOPLASTIC
H	PROPOSED 24" SOLID WHITE STOP BAR - 40 MIL THERMOPLASTIC
I	PROPOSED WHITE DIRECTIONAL ARROW - PREFORMED THERMOPLASTIC
J	PROPOSED 5" DASHED WHITE LINE (3' LINE, 9' SPACING) - 40 MIL THERMOPLASTIC

Signage and Striping Notes: ⚠2

1. All pavement markings shall be spotted by the permittee and approved by A.D.E. Traffic for district 6 S.H.A. engineer prior to actual placement of markings. SHA shall be notified 3 work days in advance of the permanent striping to review spotting.
2. All proposed signs are to be no less than the 'standard' size according to the S.H.A. sign book. No signs are to be placed using the minimum size. The permittee or contracting representative shall meet with the S.H.A. inspector prior to ordering and placing signs to ensure the proper size is used for the permit.
3. The S.H.A. permit inspector needs to be notified 3 work days in advance of the line striping to be placed.
4. Signs are to be ground mounted in 2"x2" posts at a minimum height of 7 feet measured from the bottom of the sign.
5. All pavement markings shall be removed by grind and overlay or by hydroblasting.
6. All pavement marking shall be 40-mil thermoplastic and all symbols shall be preformed thermoplastic unless otherwise indicated.
7. All striping and signage is to be provided and installed in accordance with MDSHA Standards and Specifications and the MD MUTCD Guidelines unless otherwise specified.
8. Worn and faded signs are to be replaced with new ones.

General Notes: ⚠2

1. Lane closures will only be permitted during the hours of 9am to 3pm MONDAY-FRIDAY or 9pm to 5am MONDAY-THURSDAY.
2. No weekend lane closures will be permitted.
3. During certain holidays, and the days before and after, SHA will restrict lane closure hours as determined by the SHA D6 Traffic Department. During these days, no lane closures will be allowed.
4. No long-term lane closures will be permitted. Any long-term closures, including shoulder closures, must be requested and approved through SHA D6 Traffic Department.
5. All shoulder drop-offs must be protected. Any drop-off not graded with safety slope per 104 standards must be protected by barrier wall. All drop-offs must be protected at the end of each shift.
6. Maintenance of traffic plans shall be submitted and approved by the SHA PE and SHA D6 traffic department.
7. All MOT must be per Maryland Standards for Highway and Incidental Structures 104 Standards.

P:\SHEETZ\CIVIL\CROSSROADS\CTS\MASTER\MASTER.DWG, 10/1/2025 8:59:54 AM, KODY WARD

10/01/2025

Professional Certification:
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional under the laws of the State of: MARYLAND License #: 20984
Expiration Date: 08.23.2027

FSA
FREDERICK SEIBERT & ASSOCIATES, INC.
CIVIL ENGINEERS • SURVEYORS • LANDSCAPE ARCHITECTS • LAND PLANNERS
fsa-inc.com
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CARLISLE, PA 17013 717.701.8111
GREENCASTLE, PA 17225 717.597.1007
HAGERSTOWN, MD 21740 301.791.3800

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MARK	DESCRIPTION	DATE
1	REVISED PER AGENCY COMMENTS	09.30.25
2	INCLUDED PER AGENCY COMMENTS	08.18.25

NOT APPROVED FOR CONSTRUCTION

SHEETZ - SMITHSBURG
SITUATED ALONG THE WEST SIDE OF MD 66 (MAPLEVILLE ROAD) AT ITS INTERSECTION WITH MD 64 (JEFFERSON BLVD)
SMITHSBURG
WASHINGTON COUNTY, MARYLAND
SHEETZ, INC.
243 SHEETZ WAY CLAYSBURG, PA 16625

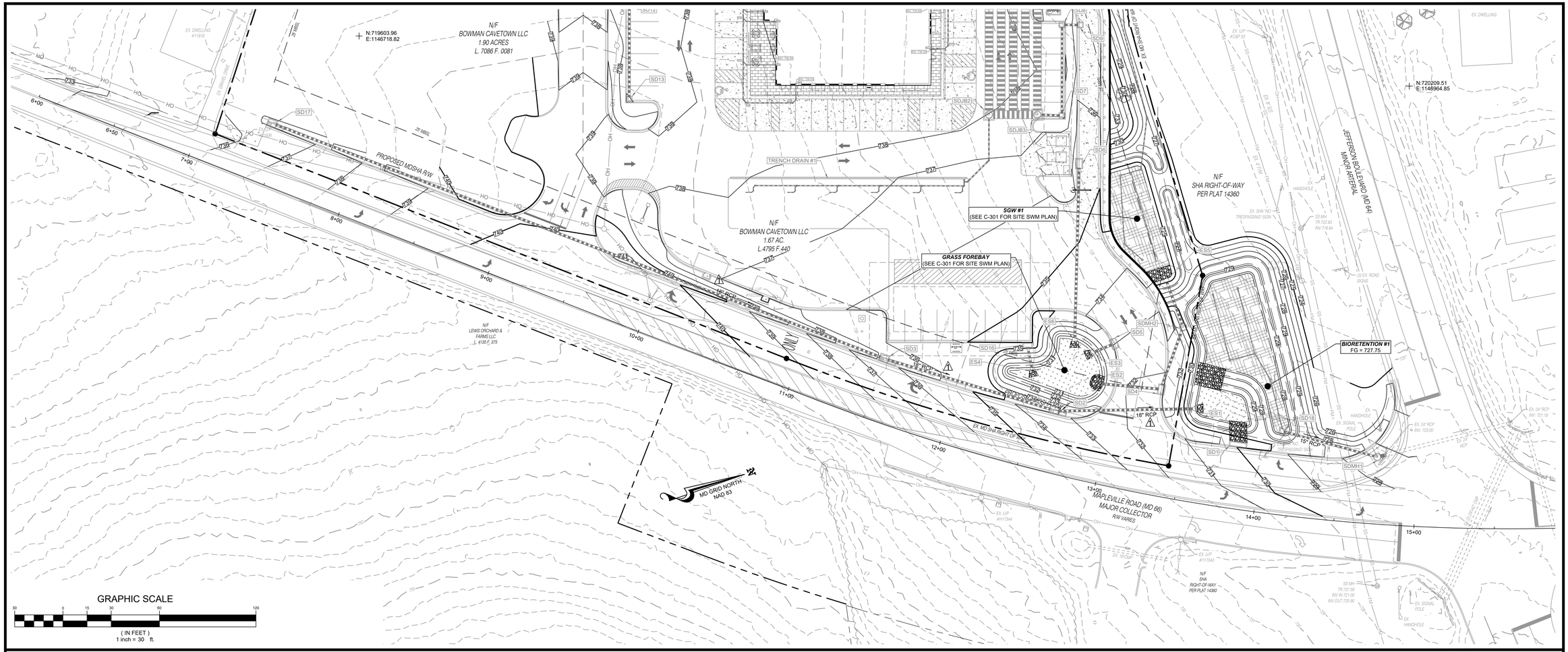
PROJECT NO.	6086.1
DWN BY: KODY WARD	DATE: 03.17.2025
PROJECT MANAGER:	DAVID TROSTLE
EMAIL:	dtrostle@fsa-inc.com
TAX MAP - GRID - PARCEL(S)	0051 - 0005 - 0086 & 0091
SCALE	1" = 30'

SHEET TITLE

MDSHA STRIPING AND SIGNAGE PLAN

C-110
SHEET 32 OF 38

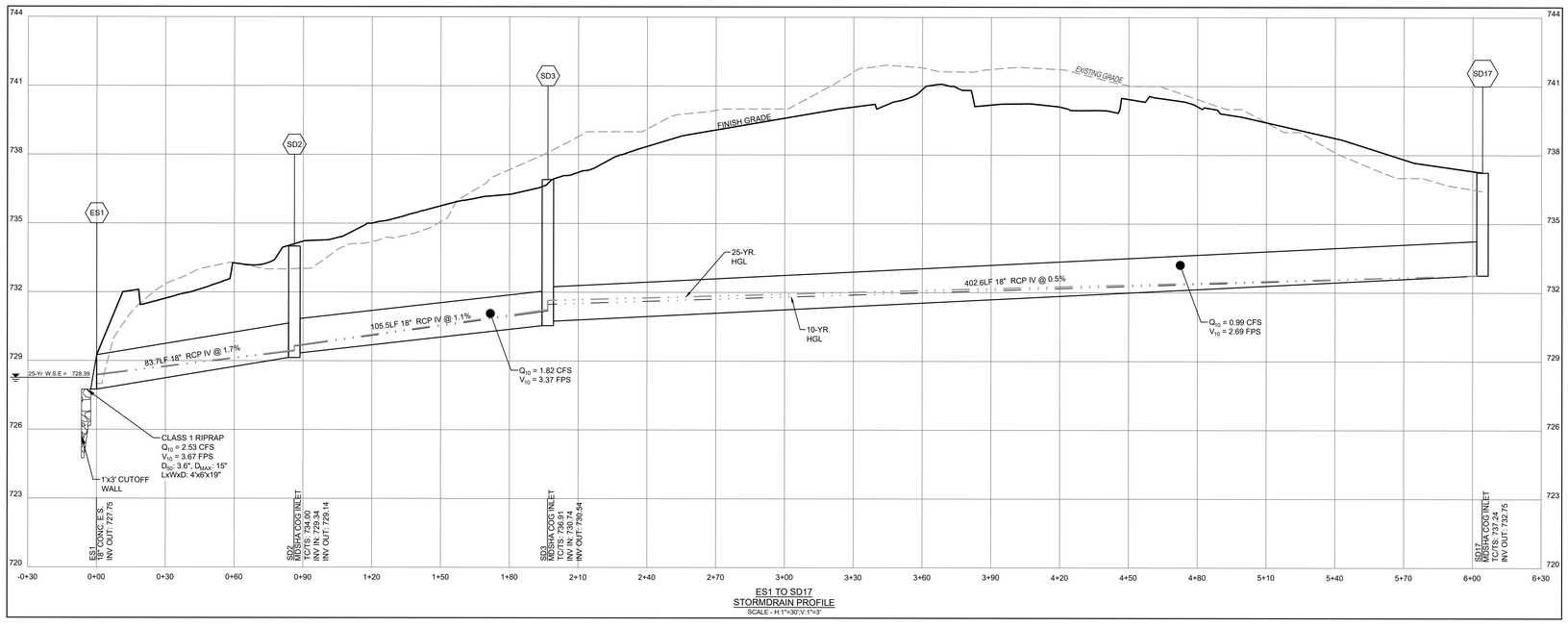
SP-25-011

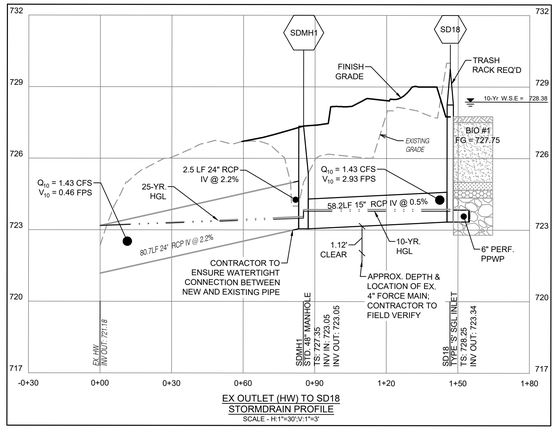


GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.





General Notes

1. The Contractor shall be responsible for all coordination with all utility companies.
2. Posted performance security will not be released until all work is completed to the satisfaction of the State Highway Administration.
3. All material incorporated into the work (ie, HMA, aggregate, seed, etc.) shall meet all applicable SHA specifications.
4. Contractor must get SHA approval before making any changes to approved plans.
5. The Contractor shall contact Miss Utility a minimum of 72 hours before starting work.
6. Contractor shall notify all adjoining property owners at least 2 business days before starting work.
7. Any damage to adjoining roads, utilities, private property, etc. caused by the Contractor will be repaired or replaced in kind by the Contractor to the satisfaction of the State Highway Administration.
8. Anything that needs to be removed or relocated to complete the work as shown will be the Contractor's responsibility.
9. Traffic control shall be the responsibility of the Contractor and shall be done in accordance with the approved plans and the latest MdMUTCD. Use MD -104.02-01 AND MD 104.02-03 for traffic control.
10. All saw cuts shall be painted in the field by the Contractor and approved by SHA before any cutting is permitted.
11. At the end of each work shift, contractor to place safety wedge (MD 104.01-28).
12. Proposed slope grading and traffic barriers will need to be completed prior to removing existing guardrail.

STATE OF MARYLAND
JOSEPH A. SEIBERT
No. 21708
PROFESSIONAL ENGINEER
10/01/2025

Professional Certification:
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional under the laws of the State of MARYLAND License # 21708
Expiration Date: 06.23.2027

FSA
FREDERICK SEIBERT & ASSOCIATES, INC.
CIVIL ENGINEERS • SURVEYORS • LANDSCAPE ARCHITECTS • LAND PLANNERS
fsa-inc.com
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NEW BLOOMFIELD OFFICE
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NEW BLOOMFIELD, PA 17068
717.275.7591
CARLISLE OFFICE
490 SOUTH HANOVER STREET
CARLISLE, PA 17013
717.701.8111
GREENCASTLE OFFICE
142 LEITERS WAY
GREENCASTLE, PA 17225
717.597.1007

MARK	DESCRIPTION	DATE
1	REVISED PER AGENCY COMMENTS	09.18.25

NOT APPROVED FOR CONSTRUCTION

SHEETZ - SMITHSBURG

SITUATED ALONG THE WEST SIDE OF MD 66 (MAPLEVILLE ROAD) AT ITS INTERSECTION WITH MD 64 (JEFFERSON BLVD)
SMITHSBURG
WASHINGTON COUNTY, MARYLAND

SHEETZ INC.
243 SHEETZ WAY CLAYSBURG, PA 16625

PROJECT NO.	6086.1
DWN BY	KODY WARD
DATE	03.17.2025
PROJECT MANAGER	DAVID TROSTLE
EMAIL	dtrostle@fsa-inc.com
TAX MAP - GRID - PARCEL(S)	0051 - 0005 - 0086 & 0091
SCALE	1" = 30'

SHEET TITLE

MDSHA GRADING PLAN & STORM PROFILES

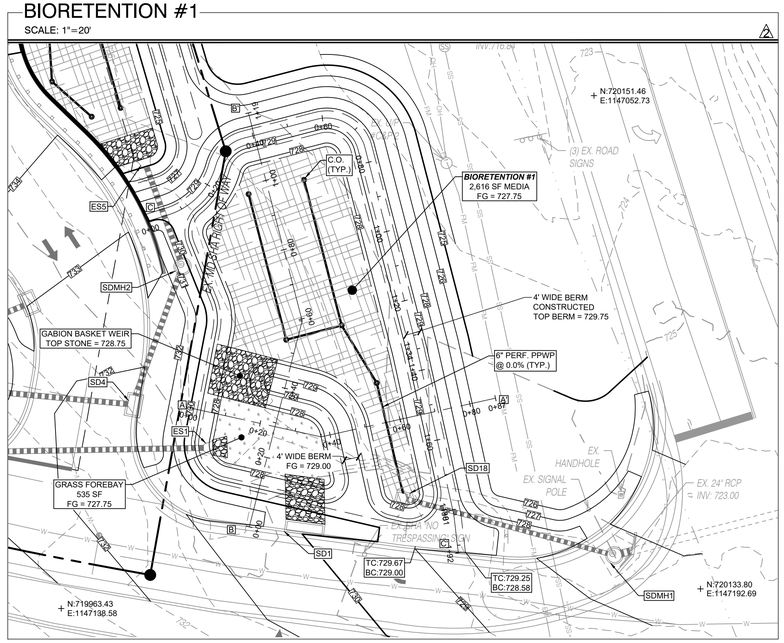
C-111
SHEET 33 OF 38

SP-25-011

P:\SHEETZ COLLEGE\PROJECTS\SMITHSBURG\SMITHSBURG - SHEETZ\CIVIL\SGST_SUNVIEW - 3_SITE - MDSHA GRADING PLAN.DWG, 2025.09.01

BIORETENTION #1

SCALE: 1"=20'



BIORETENTION #1 STORMWATER FACILITY INFORMATION
MDSHA TREATED PAVED AREA: 0.57 AC.
TOTAL DRAINAGE TO FACILITY: 0.84 AC.

SGW #1 STORMWATER FACILITY INFORMATION
MDSHA TREATED PAVED AREA: 0.05 AC.
TOTAL DRAINAGE TO FACILITY: 1.04 AC.

EXISTING MDSHA IMPERVIOUS AREAS WITHIN SITE IMPROVEMENTS: 0.33 AC.
PROPOSED MDSHA IMPERVIOUS AREAS WITHIN SITE IMPROVEMENTS: 0.70 AC.
NEW MDSHA IMPERVIOUS AREAS WITHIN SITE IMPROVEMENTS: 0.37 AC.

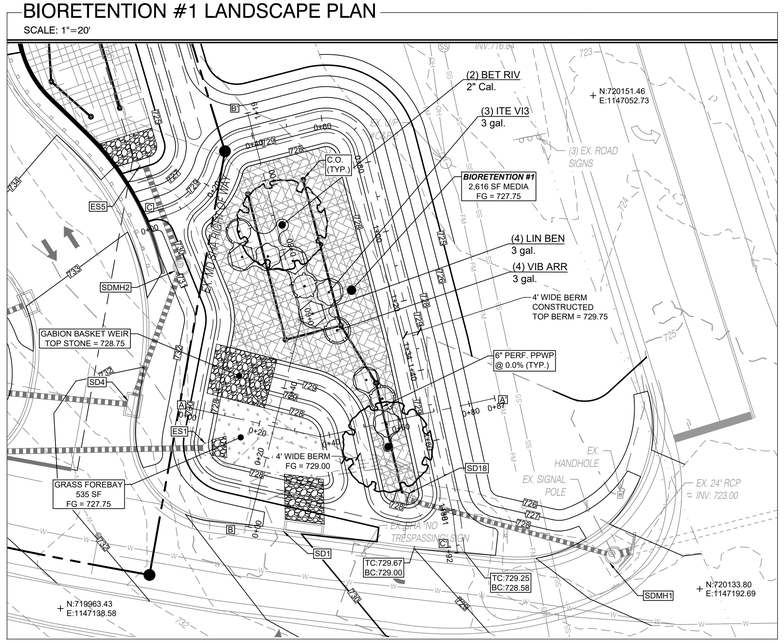
PLAN VIEW HATCH LEGEND

- Grass Forebay
- Planting Media
- Stone Weir / Riprap
- Permanent Erosion Control Matting

NOTE: NO HEAVY EQUIPMENT SHALL BE PERMITTED IN THE CONSTRUCTED SWM BMP'S DURING AND AFTER THEY HAVE BEEN INSTALLED. THESE AREAS CANNOT BE COMPACTED BY HEAVY EQUIPMENT ONCE THE LINER IS INSTALLED.

BIORETENTION #1 LANDSCAPE PLAN

SCALE: 1"=20'



PLANT SCHEDULE

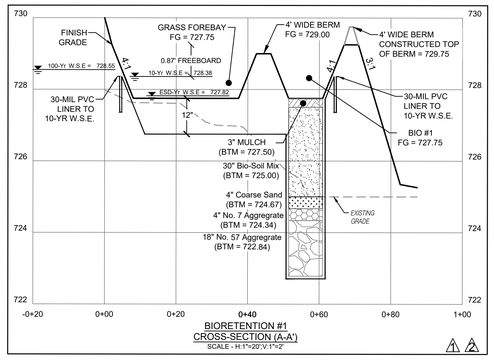
SYMBOL	CODE	BOTANICAL / COMMON NAME	SIZE	CONTAINER	QTY	DETAIL
TREES						
	BET RIV	Betula nigra / River Birch	2" Cal.	B&B	2	5/C-304
SHRUBS						
	ITE VI3	Itea virginica `Virginia` / Virginia Sweetspire	3 gal.		3	4/C-304
	LIN BEN	Lindera benzoin / Spicebush	3 gal.		4	4/C-304
	VIB ARR	Viburnum dentatum / Viburnum	3 gal.		4	4/C-304

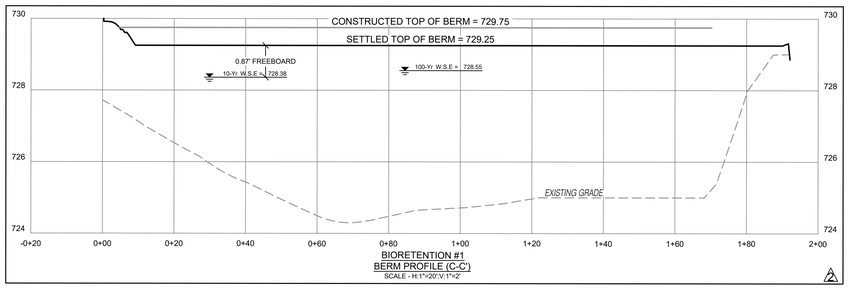
BIORETENTION MIXED GRASSES PLANTING SCHEDULE

SYMBOL	QUANTITY (SF)		SPECIES TYPE	SIZE	REMARKS
	BIOR #1				
	2,035 SF		MIXED GRASSES	2" PLUGS	PLANT 36" O.C. (SEE DETAIL 3/C-304)

MIXED GRASSES

COMMON NAME	SCIENTIFIC NAME	
Rush, soft	Juncus effusus	THE MINIMUM SIZE FOR MIXED GRASSES SHALL BE 2" PLUG. GRASSES SHALL BE PLANTED 3 FOOT ON CENTER WITH A RANDOM MIX OF PLANTS. PLANTING SHOWN IS RECOMMENDED. OTHER PLANT SPECIES SPECIFIED IN THE MARYLAND STORMWATER DESIGN MANUAL ARE PERMITTED.
Sedge, broom	Carex scoparia	
Sedge, Pennslyvania	Carex pennsylvanica	
Switchgrass	Panicum virgatum	





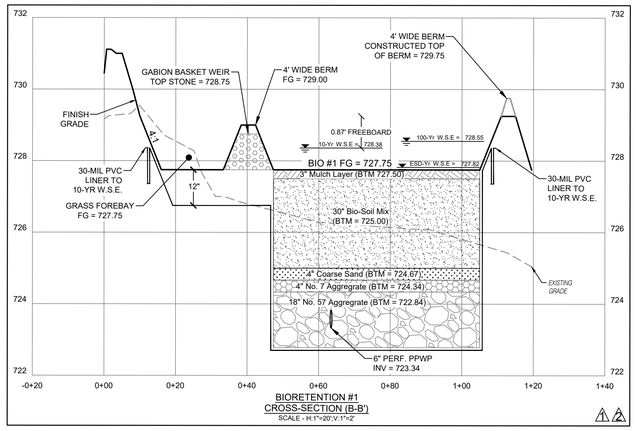
PROFILE HATCH LEGEND

- Mulch
- Planting Media
- Coarse Sand
- No. 7 Aggregate
- No. 57 Aggregate
- Stone Weir

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.



Notice of Required Stormwater Management Inspections
Bioretention Facilities

The following inspections are required to be performed by the Qualified Professional for the construction of any Sand Filter, Bioretention or Rain Garden Facility. Additional inspections may be needed based on professional engineering judgment. Each inspection is required at the start of each stage.

Inspection Item		BIO #1
Excavation of Facility - Prior to excavation, verify sediment and erosion control features are in place to prevent sediment inflow. Verify all flagging required in the area for sensitive area protection. Verify grading is accurately staked-out and re-staked as needed. Facility dimensions shall be verified and soils checked for infiltration. Verify contributing area is permanently stabilized. Verify that water is not present. Ensure roughening of side walls if sheared and sealed by heavy equipment. Verify that compaction of facility base is minimized.	**Certifying Engineer**	
	Date	
	County Inspector	
	Date	
Placement of Filter Cloth (Trenches) - Ensure filter fabric is overlapping six (6) inches between strips of cloth. Ensure tree roots or other obstacles are removed from facility walls or sides and base to prevent tearing. Verify that uphill fabric roll overlaps two (2) feet over downhill roll.	**Certifying Engineer**	
	Date	
	County Inspector	
	Date	
Placement of Underdrains and Observation Wells - Location, size and material of under drain and observation wells shall be verified prior to stone placement. Verify pipe ends capped. Verify 3" gravel cover	**Certifying Engineer**	
	Date	
	County Inspector	
	Date	
Placement of Filtering Media - Verify bottom layer material and thickness. Verify sand and/or filter media layer material and thickness. Verify filter fabric or pea gravel used between sand layers. Verify top filter media layer.	**Certifying Engineer**	
	Date	
	County Inspector	
	Date	
Placement of Sand Filter Layer or Gravel Diaphragm - Verify depth and width of sand and/or diaphragm layer. Verify fill material.	**Certifying Engineer**	
	Date	
	County Inspector	
	Date	
Stabilization and Landscaping - Verify site top soiled, seeded and mulched. Verify embankment top soiled and seeded. Verify location, size, type and number of planted landscape material. Verify no more than 1/8 inch root ball exposed. Verify planting stock kept moist during on-site storage. Verify installation location, size, material type of fencing or other safety barriers.	**Certifying Engineer**	
	Date	
	County Inspector	
	Date	
The Qualified Professional may request the presence of a County Construction Standards Inspector at least 24 hours in advance by calling 240-313-2400.		

BIO-RETENTION MAINTENANCE NOTES:

1. BIORETENTION AREAS SHALL BE INSPECTED AT A MINIMUM, BI-ANNUALLY.
2. OWNER SHALL REMOVE SILT/SEDIMENT IF THE ACCUMULATION OF SEDIMENT EXCEEDS ONE INCH WITHIN THE BIORETENTION AREA.
3. THE TOP FEW INCHES OF FILTER MEDIA SHALL BE REMOVED AND REPLACED WHEN WATER PONDS FOR MORE THAN 48 HOURS.
4. TRASH AND DEBRIS SHALL BE REMOVED AS NECESSARY.
5. MULCH SHALL BE REPLACED ON AN ANNUAL BASIS.
6. PLANT MATERIAL SHALL BE INSPECTED YEARLY AND DEAD AND/OR DISEASED VEGETATION SHALL BE REPLACED, AS NECESSARY. WATERING MAY BE REQUIRED DURING PROLONGED DRY SPELLS.

SHA Specifications for Temporary & Permanent Stabilization. Refer to the Table of SHA Landscape Notes in this plan set for requirements related to topsoil, seed, fertilizer, plants, and other materials. SHA Standard Specifications for Construction and Materials shall supersede all other specifications for landscape construction within property of the Maryland State Highway Administration (SHA), and all landscape construction of SHA property shall conform to the requirements of the SHA Landscape Notes and current SHA Standards and Specifications.

Stormwater Management Seed Mix Notes

Site Preparation
Invasive species, particularly those that will adapt to wet conditions, should be removed or sprayed before they become incorporated into the site. Spot spray or hand pull problem weeds. Perennial weeds not addressed before establishment will be difficult to remove later.

Seeding and Planting Methods
Seeding and planting should begin immediately upon completion of the structure while the soil is still friable and before invasive weeds emerge. Plan seeding and planting before the basin is flooded or allow the basin to drain to a few inches before seeding. Broadcast seed evenly over each unit by hand seeding or hydroseeding. The use of native species can provide temporary vegetation to protect the soil in SWM facilities until permanent vegetation can become established. Straw mulch, or straw coconut mats are frequently used to control erosion and protect emerging seedlings from extreme temperatures and drying out. Mulch should be sparse in order to allow sunlight to reach the ground. Irrigating seeded areas is beneficial until seedlings become established.

First Growing Season Maintenance
Whenever canopy (overall vegetation) reaches a height of 18"-24", use a string trimmer to trim the meadow to a height of 8". This will reduce competition by fast-growing weeds for sunlight, water and nutrients needed by slower growing, perennial natives. Mowing should not be done with a lawn mower as the mower height will be too low and native seedlings will be killed. Mowing should cease by mid-September.

Second and Subsequent Growing Season Maintenance
Prior to new spring growth reaching a height of 2" trim any material standing from the previous year close to the ground (approximately 2"). This will allow the soil to warm more quickly which will stimulate emergence and growth of native seedlings.

Special Circumstances Second Growing Season
If you notice a heavy infestation of ragweed or foxtail in the second growing season, trim the meadow to a height of 8". Trimming should cease after mid-September.

STATE OF MARYLAND — PROFESSIONAL ENGINEER — 10/01/2025

Professional Certification:
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional under the laws of the State of: MARYLAND License # 19440
Expiration Date: 06.23.2027

FSA — FREDERICK SEIBERT & ASSOCIATES, INC.
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EAST MAIN STREET, SUITE 201, NEW BLOOMFIELD, PA 17068, 717.275.7537
401 SOUTH HANOVER STREET, CARLISLE, PA 17013, 717.701.8111
1142 MANHEIM PIKE, LANCASTER, PA 17601, 717.397.1007
129 BALTIMORE MACADAM COURT, HAGERSTOWN, MD 21740, 301.791.3800

MARK	DESCRIPTION	DATE
1	REVISED PER AGENCY COMMENTS	09.30.25
2	PC SUBMISSION	06.06.25

NOT APPROVED FOR CONSTRUCTION

SHEETZ - SMITHSBURG
SITUATED ALONG THE WEST SIDE OF MD 66 (MAPLEVILLE ROAD) AT ITS INTERSECTION WITH MD 40 (JEFFERSON BLVD)
SMITHSBURG
WASHINGTON COUNTY, MARYLAND
SHEETZ, INC.
243 SHEETZ WAY CLAYSBURG, PA 16625

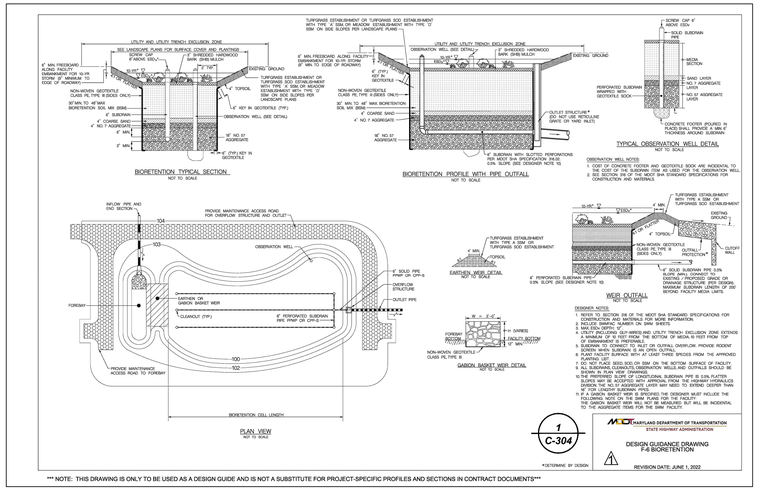
PROJECT NO. 6086.1
DWN BY: KODY WARD
DATE: 03.17.2025
PROJECT MANAGER: DAVID TROSTLE
EMAIL: dtrostle@fsa-inc.com
TAX MAP - GRID - PARCEL(S): 0051 - 0005 - 0086 & 0091
SCALE: AS SHOWN
SHEET TITLE:

MDSHA SWM PLAN

C-303
SHEET 34 OF 38

SP-25-011

P:\SHEETZ\CLOSED\PHILADELPHIA\6086\SWM\1 - SHEETZ\SHEETS\SHEETZ SWM.DWG, 3/26/2025 11:54:51 AM, JAMES SMITH, 1:1



*** NOTE: THIS DRAWING IS ONLY TO BE USED AS A DESIGN GUIDE AND IS NOT A SUBSTITUTE FOR PROJECT-SPECIFIC PROFILES AND SECTIONS IN CONTRACT DOCUMENTS***

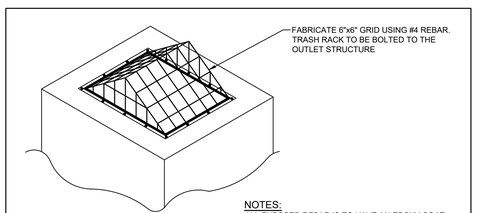
Stormwater Management Facilities Construction Inspection Requirements

1. The developer/contractor shall notify the Division of Public Works ("DPW") at least five (5) days before commencing any work in conjunction with the approved final stormwater management plan and upon completion of the project when a final inspection will be conducted.
2. Regular inspections shall be made and documented for each structural ESD planning technique and practice and structural stormwater measures every 2 weeks and at the required critical inspection stages identified in the attached checklists and the Washington County SWM, Grading, Soil Erosion and Sediment Control Ordinance.
3. All non-structural practices shall be inspected, at a minimum, upon completion of final grading, the establishment of permanent stabilization, and before issuance of use and occupancy permit.
4. Inspections shall be conducted by DPW, the MDE (as applicable), and by the Verifying Professional. Inspections performed by the DPW are not to be considered a substitute for those inspections required by the Verifying Professional. Written inspection reports shall be prepared by the Verifying Professional during construction of ESD planning techniques and practices plans. Copies of all inspection reports shall be provided to DPW by the person performing the inspection and kept on file with DPW.
5. Written inspection reports are required and shall be submitted in a manner consistent with the Public Works Agreement and this Article and in a format approved by DPW, and shall include, at a minimum:
   5.a. The date and location of the inspection;
   5.b. Work observed;
   5.c. Photos;
   5.d. Tests performed;
   5.e. Whether construction was in compliance with the approved stormwater management plan;
   5.f. Any variations from the approved construction specifications;
   5.g. Any violations that exist;
   5.h. Signature and date of Verifying Professional.
6. Failure to comply with these inspection requirements and/or obtain approval from the Verifying Professional or DPW at the required construction stages will result in disapproval of the facility, delays of final acceptance and permit release.
7. The developer, DPW, the MDE, Verifying Professional, and on-site personnel shall be notified in writing when violations are observed. Written notification shall be made by the person discovering the violation and shall describe the nature of the violation and the required corrective action. No further work affected by the violation shall proceed until the corrective action is inspected and approved in writing by the Verifying Professional, the Division, MDE (as applicable), and the District (as applicable).
8. DPW may require adjustments to address items overlooked or inappropriately addressed by the plans. Such adjustments may be required during construction or at the final inspection.
9. The County may require a revision to the approved construction drawings or site plans be submitted and approved by the DPW, the Division of Planning and Community Development (as applicable), the MDE (as applicable) and the District prior to continuation of construction activity.
10. No work shall proceed beyond the construction stages specified in attached Checklists and the Washington County SWM, Grading, Soil Erosion and Sediment Control Ordinance until DPW and the Verifying Professional inspect and approve the work previously completed and the Verifying Professional furnishes the DPW and developer with the results of the inspection reports as soon as possible after completion of each required inspection.

Operation and Maintenance Plan
Bioretention

Inspection Item	Inspection Requirements	Remedial Action
Maintenance Access		
General	Check for accessibility to facility; excessive vegetation; surface stability	Repair erosion and maintain access surface in good condition
Pretreatment		
Grass filter strip or sand layer	Check for sediment accumulation	Remove sediment as needed
Optional sand layer	Check sand for staining and sediment accumulation	If contaminated, replace first three inches of sand layer
Gravel diaphragm	Check for sediment accumulation and evidence of erosion	Remove sediment and replace gravel as needed
Mulch layer	Check for a 2-3 inch mulch layer	Remove mulch and replace as needed
Filter Bed		
Dewatering	Check for dewatering within 48 hours of rainfall; noticeable odors; water stains on the filter surface or at the outlet; presence of algae or aquatic vegetation	Remove mulch and the top 3-6 inches of soil/sediment and replace with suitable materials per plan specifications; follow up inspections shall confirm adequate dewatering; contact the plan approval authority if the facility does not function as intended
Sediment	Check for sediment accumulation	Remove sediment as needed
Mulch layer	Check for adequate cover; sediment accumulation; discoloration	Remove and replace mulch and excess sediment as needed
Vegetation		
Plant composition and health	Check for plant composition according to approved plans; invasive species, weeds, and dead or dying vegetation	Remove and replace plants as necessary
Vegetative cover/erosion	Check for erosion, runoff channelizing, or bare spots	Repair/grade and stabilize as needed
Outlets		
Underdrain system	Check outlet end to ensure that discharge is not obstructed; check for erosion	Remove any flow obstructions; grade and stabilize any eroded areas to provide stable conveyance
Overflow spillway	Check for displacement of rip-rap, stable conveyance, and erosion below the outlet	Repair and replace as needed
Conveyance Systems		
General	Check for erosion, flow blockages or bypass, and stable conveyance	Repair/replace and stabilize as needed
Flow diversion	Check flow splitter for proper functioning	Repair as necessary
Trash and Debris		
	Check for trash and debris accumulation	Trash and debris shall be disposed of in an acceptable manner
Structural Components		
	Check for structural deterioration, spalling or cracking	Repair according to specifications on the approved plans

Field conditions may require a modification to the original approval in order to achieve the intended design function. The plan approval authority should be contacted for review and approval of all proposed modifications. Inspection and maintenance should occur after any major rain event (e.g., meeting or exceeding the design rainfall depth for the facility).



Category 300
Drainage

Section 316 - Stormwater Filtration Facilities

316.01 Description - Construct stormwater filtration facilities including bioretention, micro-bioretention, organic filters, surface sand filters, submerged gravel wetlands, landscape infiltration, rain gardens, infiltration berms, wet swales, dry swales, and bio-swales.

Stormwater Filtration Facilities use vegetation, specific soil mixtures, and aggregate layers to filter stormwater and are highly susceptible to contamination by sediment. Therefore installation of vegetation immediately following the construction of each facility is essential.

316.02 Materials:

No. 57 Aggregate	901.01
No. 7 Aggregate	901.01
No. 2 Aggregate	M-43, No. 2
Topsoil	920.01.01 or .02
Bioretention Soil Mix (BSM)	920.01.05
Coarse Sand	920.01.05(a)(1)
Shredded Hardwood Bark (SHB) Mulch	920.04.03
Soil Stabilization Matting	920.05
Turfgrass	920.06
Turfgrass Sod	920.06
Plant Materials	920.07
Water	920.09.01
Geotextile, Class PE, Type III	921.09

Subdrain Pipe, Fittings and Geotextile Sock - 6 in. diameter thermoplastic pipe. Polyvinyl chloride Profile Wall Drain Pipe (PPWP) meeting F 949 or Corrugated Polyethylene Drainage Pipe (CPP-S) meeting M 252, Type S and Type SP. Perforated pipe shall have slotted perforations with an opening area of 1 in2/ft to 1.5 in2/ft. Pipe used for observation wells requires an appropriate geotextile sock as recommended and supplied by the pipe manufacturer.

316.03 Construction - Construct stormwater filtration facilities only after all contributing drainage areas are permanently stabilized and vegetation including turfgrass and turfgrass sod are established according to Sections 705 and 708. Do not construct stormwater filtration facilities in areas previously used as erosion and sediment control facilities. Do not stockpile materials nor store equipment in these areas.

Use methods of excavation that minimize the compaction of the underlying soil. Use excavators and backhoes operating on the adjacent ground. If the bottom width of the excavated area is greater than 15 ft, wide-track or marsh-track equipment, or light equipment with turf-type tires may be used to excavate, grade, and place fill materials. Do not use equipment with narrow tracks or narrow tires, rubber tires with large lugs, or high-pressure tires.

Rototill the excavation pit bottom to a minimum depth of 6 in. to alleviate compaction from excavation activities. Remove any standing water from the excavation pit prior to rototilling. Only rototill soil that is friable. Do not rototill soil while in a muddy or frozen condition.

Geotextile - Place tightly against the vertical sides of the excavation pit, pull tight to eliminate wrinkles and folds, and pin securely. Eliminate any voids between the geotextile and the soil and avoid wrinkling and folding the geotextile. Maintain a minimum 6 in. overlap at the geotextile joint ends or breaks and pin joints and overlaps securely. Do not place geotextile on the bottom of the excavation pit.

Aggregate - Use aggregate that is clean and free of soil and fines. Prevent soil, fines, and other debris from intermixing with the aggregate. If aggregate become contaminated with soil or fines, remove and replace it with uncontaminated aggregate.

Subdrain - Cap the ends of all pipes not terminating in a cleanout, vent, or drainage structure unless otherwise specified.

Cleanouts - Install solid-wall pipe vertically and connect to horizontal subdrain with the appropriate manufactured connections. Provide a screw cap on the exposed ends.

Vents - Install solid wall pipe vertically and connect to the horizontal subdrain with the appropriate manufactured connections. Provide a ventilated screw cap on the exposed ends. Ventilation holes or slots shall be no larger than 1/4 in. in diameter or width. The sum total area of the openings shall be no less than 1 in2. Ensure that the ventilation openings are above the maximum specified water surface elevation.

Observation Wells - Place vertically using perforated and solid-wall pipe. Place an appropriate geotextile sock over the perforated pipe portion and secure on both ends. Provide a screw cap on the exposed end extending 2 in. above the surface. If a concrete collar is specified, trim the top of the well flush with the surface.

Coarse Sand - Place coarse sand in horizontal layers not to exceed 12 in. in thickness. After each lift, apply water by spraying or sprinkling to saturate the entire area of coarse sand until water flows from the subdrain. Use an appropriate sediment control device to capture any discharged sediment-laden water. Prevent soil, fines and other debris from intermixing with the coarse sand. Remove and replace any contaminated coarse sand.

Bioretention Soil Mixture (BSM) - Place BSM in horizontal layers not to exceed 12 in. in thickness. After each lift, apply water by spraying or sprinkling to saturate the entire area of BSM until water flows from the subdrain.

Use an appropriate sediment control device to capture any discharged. Prevent soil, fines, and other debris from intermixing with the BSM. Remove and replace any contaminated BSM.

Plant Materials - Install plant materials immediately after final grading according to Sections 710 and 711.

Shredded Hardwood Bark (SHB) Mulch - Place immediately after BSM placement according to 710.03.13.

Soil Stabilization Matting - Place according to Section 709.

Topsoil - Place according to Section 701.

Turfgrass - Install and maintain according to Section 705. Mow by hand cutting only.

Turfgrass Sod - Install and maintain according to Section 708. Prevent damage to check dams, observations wells, vents and other features.

Check Dams - Construct check dams using No. 7 aggregate.

Final Acceptance - Complete and submit a Stormwater Management (SWM) Facility As-Built Certification Package for each stormwater filtration facility. Approval of the SWM As-Built Certification Package will be included in the Punch List requirements for the project.

316.04 Measurement and Payment - The payment will be full compensation for all applicable excavation, sheeting, shoring, dewatering, hauling, storing, rehandling of material, removal and disposal of excess and unsuitable material, rototilling, grading and slope adjustments, and for all material, labor, equipment, tools, and incidentals necessary to complete the work.

Excavation - Excavation will be measured and paid for at the Contact unit price per cubic yard for the pertinent Class of Excavation.

Aggregate - Aggregate, including aggregate for check dams, will be measured and paid for at the Contract unit price for one or more of the following.

(a) No. 2 Aggregate for Stormwater Management Facilities per cubic yard.

(b) No. 7 Aggregate for Stormwater Management Facilities per cubic yard.

(c) No. 57 Aggregate for Stormwater Management Facilities per cubic yard.

Removal of contaminated aggregate and replacement with uncontaminated aggregate will be at no additional cost to the Administration.

Geotextile - Geotextile, Class PE, Type III will not be measured but the cost will be incidental to the Excavation.

Subdrain, Cleanouts, Vents, and Observation Wells - Slotted-perforated and solid-wall pipe will be measured and paid for at the Contract unit price per linear foot for 6 Inch Subdrain Pipe. Fittings, caps, geotextile sock, and other incidentals will not be measured, but the cost will be incidental to the Subdrain Pipe.

Coarse Sand - Coarse Sand will be measured and paid for at the Contract unit price per cubic yard for Coarse Sand for Stormwater Management Facilities.

Removal of contaminated coarse sand and replacement with uncontaminated coarse sand will be at no additional cost to the Administration.

Bioretention Soil Mixture (BSM) - BSM will be measured and paid for at the Contract unit price per cubic yard for Bioretention Soil Mixture.

Removal of contaminated BSM and replacement with uncontaminated BSM will be at no additional cost to the Administration.

Water - Water used for saturation of course sand and BSM will not be measured but the cost will be incidental to the pertinent item.

Shredded Hardwood Bark (SHB) Mulch - SHB Mulch will be measured and paid for at the Contract unit price per square yard for Shredded Hardwood Bark Mulching, 3 in. Depth.

Discharge from Subdrain - Capture and treatment of any sediment laden water discharged from the subdrain will not be measured but will be incidental to the pertinent Erosion and Sediment Control items specified in the Contract Documents.

Plant Materials - Refer to 710.04 and 711.04.

Soil Stabilization Matting - Refer to 709.04.

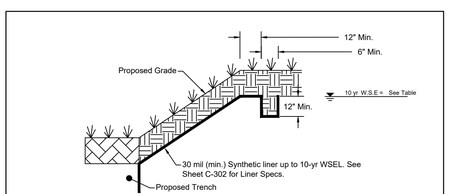
Turfgrass - Refer to 705.04.

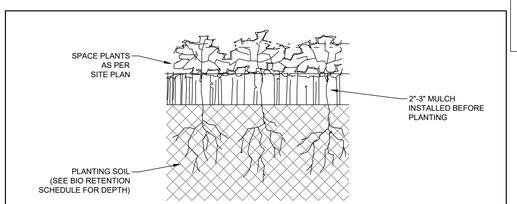
Turfgrass Sod - Refer to 708.04.

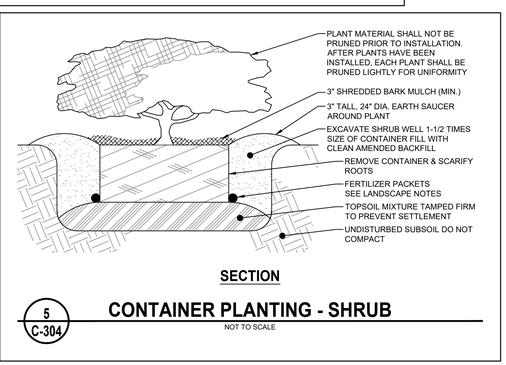
Topsoil - Refer to 701.04.

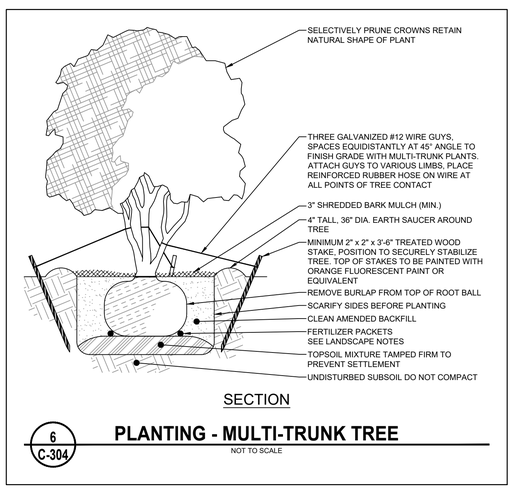
Table B-3.2 Material Specifications for Bioretention

Material	Specification	Size	Notes
Plantings	see planting list	n/a	plantings are site-specific
Planting Soil [2.5' to 4' deep]	sand 35 - 60% silt 30 - 55% clay 10 - 25%	n/a	USDA soil types loamy sand, sandy loam or loam
Mulch	shredded hardwood	n/a	aged 6 months, minimum
pea gravel diaphragm and curtain drain	pea gravel: ASTM-D-448 ornamental stone: washed cobbles	pea gravel: No. 6 stone: 2" to 5"	
geotextile	Class "C" apparent opening size (ASTM-D-4751), grab tensile strength (ASTM-D-4632), puncture resistance (ASTM-D-4833)	n/a	for use as necessary beneath underdrains only
underdrain gravel	AASHTO M-43	0.375" to 0.75"	
underdrain piping	F 758, Type PS 28 or AASHTO M-278	4-6" rigid sch. 40 PVC or SDR35	3/8" perf. @ 6" o/c, 4 holes/row; min. 3" of gravel over pipes; not necessary underneath pipes
poured in place concrete (if required)	MSHA Mix No. 3; f'c = 3500 psi @ 28 days, normal weight, air-entrained; reinforcing to meet ASTM-615-60	n/a	on-site testing of poured-in-place concrete required: 28 day strength and slump test; all concrete design (cast-in-place or pre-cast) *not using previously approved State or local standards* requires design drawings sealed and approved by a professional engineer licensed in the State of Maryland - design to include meeting ACI Code 350 R/89; vertical loading [H-10 or H-20]; allowable horizontal loading (based on soil pressures); and analysis of potential cracking
sand [1' deep]	AASHTO M-6 or ASTM C-33	0.02" to 0.04"	Sand substitution such as Diabase and Graystone #10 are not acceptable. No calcium carbonated or dolomitic sand substitutions are acceptable. No "rock dust" can be used for sand.









SHA Specifications for Temporary & Permanent Stabilization. Refer to the Table of SHA Landscape Notes in this plan set for requirements related to topsoil, seed, fertilizer, plants, and other materials. SHA Standard Specifications for Construction and Materials shall supersede all other specifications for landscape construction within property of the Maryland State Highway Administration (SHA), and all landscape construction of SHA property shall conform to the requirements of the SHA Landscape Notes and current SHA Standards and Specifications.

Category 300
Drainage

PVC Lined Ditches

Description - Furnish, place, and anchor a 30-mil PVC liner along designated ditch or swale areas, and in SWM facilities as shown and as directed.

Materials:

Furnished Topsoil	920.01.02
Furnished Subsoil	920.01.04
Type B Soil Stabilization Matting	920.05.01
Staples	920.05.02
Select Borrow	916.01
PVC Liner Material	As below

The minimum physical properties for the PVC liner are as follows:

PROPERTY	TEST METHOD	REQUIREMENT
Thickness	D 1593	+/-.5%
Specific Gravity (min.)	D 792	1.20
100% Modulus (psi, min.) (1b. force/in. width, min.)	D 882	1000 30
Tensile (psi, min.) (Lb. force/in. width, min.)	D 882	2300 69
Elongation at Break (%, min.)	D 882	325
Graves Tear (lb./in., min.) (1lb. force/in. width, min.)	D 1004	325 8
Resistance to Soil Burial (% change max.) (a) Breaking Factor (b) Elongation At Break (c) Modulus at 100% Elongation	D 3083 (NSF Modified)	 5 20 20
Impact Cold Crack (IF)	D 1790	-20
Dimensional Stability (% change/max.)	D 120 (212/15 min.)	5
Water Extraction (%, max.)	D 3083	-0.25
Volatile Loss (%, max.)	D 1203	0.70
Hydrostatic Resistance (psi, min.)	D 751	82

PVC Liner Certification - Submit certification per TC 1.03 that the PVC liner material conforms to the physical properties. Include the following:

(a) Polymer and composition of the PVC Liner; include additive composition of any coating materials.

(b) Manufacturer's Quality Control plan; include properties, test methods, testing frequency, tolerances, and resolution methods for non-compliant material.

(c) Laboratory test results.

Storage and Handling - Store the PVC liner in a dry area in its original container. Protect the liner from puncture, dirt, grease, water, mud, mechanical abuses, or other damage. Document any damage to the PVC liner. Remove and replaced damaged PVC liners that cannot be repaired to comply with the specification at no additional cost.

Construction - Construct PVC Lined Ditches in conformance with the details as shown, as directed, and as follows:

Subgrade Preparation - Ensure subgrades to be lined are smooth and free of rocks, stones, sticks, sharp objects, or other debris. Prepare the subgrade to provide a firm, unyielding foundation for the liner; with no sudden or abrupt changes or break in grade. Completely remove standing water, mud, snow, or excess moisture prior to placement. Do not place the liner on frozen subgrade; or on subgrade that has been softened by water or overly dried until it has been properly reconditioned and compacted.

Take special care in maintaining the prepared soil surfaces. The soil surface will be monitored daily to evaluate the surface condition. Repair any damage to the surface caused by weather conditions, as directed.

Anchor Trench - Excavate the anchor trench to the line, grade, and width shown.

(a) Excavate the anchor trench to a minimum of 1.5 ft wide and 2.5 ft high.

(b) Excavate trench located in clay susceptible to desiccation to no more than the amount of trench required for anchoring the liner in one day.

(c) Provide slightly rounded corners in the trench to avoid introducing sharp bends in the liner. Ensure the leading edges of the trench are smooth and even.

Liner Placement:

(a) Place the liner down gradient (upstream to downstream) to facilitate overlapping and prevent run-off from entering under the placed liner.

(b) Use methods to place the liner panels that avoid excessive wrinkling (especially differential wrinkles between adjacent panels). Minimum wrinkling is allowed to insure the liner is installed in a relaxed condition. Stretching the liner is not allowed.

(c) Panels may be repositioned after placement to conform to the overlap requirements. Use repositioning methods that prevent dragging or elongating the panels.

(d) Provide a seam overlap of a minimum of 3 ft. and a maximum of 4 ft.

(e) Place adequate ballast (e.g., cover soil, or similar measures that will not damage the liner) on the liner to prevent uplift by wind. Continuous loading is recommended along the edges of panels (if high winds are anticipated) to prevent wind flow under the panels.

(f) Only equipment necessary for installation and testing of the liner is permitted to come in contact with the liner. Use rubber-tired equipment with a ground pressure not exceeding 5 psi; and a total weight not exceeding 750 lb.

Weather Conditions - Proceed with liner placement when the ambient temperature and material sheet temperature are between 60 and 105 F. Measure the sheet temperature of the liner surface with an infrared thermometer or a surface thermometer.

(a) Do not place the liner during periods of precipitation, in the presence of excessive moisture (i.e., fog, dew, mud), or during excessive winds, as determined.

(b) Provide a means of storing the liner in an area that maintains the liner temperature above 60 F, if liner placement is required at ambient temperatures below 60 F.

Unpacking the Liner - Notify the Engineer to witness the liner unpacking. Mark liners that are damaged or have suspect areas for testing and/or repair. Replace liners that are damaged when unpacked and that cannot be adequately repaired at no additional cost.

Backfilling the Anchor Trench - Backfill the anchor trench and compact as directed. Place backfill in 8 in. thick loose lifts and compact by wheel rolling with light, rubber_tired or other light compaction equipment.

Take care to prevent damage to the liner while backfilling the trench. Construction equipment is not allowed to come into direct contact with the liner at any time. Repair any damage to the liner that occurs while backfilling at no additional cost.

Backfilling the PVC Liner - Cover the liner with a 1 foot layer of soil. Use soil conforming to 920.01.04 as backfill for the first 8 inches. Use soil conforming to 920.01.02 as backfill for the top 4 inches. Tamp the backfill in place as directed. Place Type B Soil Stabilization Matting conforming to 920.05 over the topsoil in conjunction with permanent vegetation, as specified.

Do not allow heavy construction equipment to come into contact with the liner or to traverse the trench until adequately backfilled. Repair equipment damage as directed and at no additional cost.

Measurement and Payment - PVC Ditch Liner will be measured and paid for at the Contract unit price per square yard. Payment will be full compensation for the PVC liner, backfill, furnished subsoil and topsoil, and for all other material, labor, equipment, tools and incidentals necessary to complete the work.

(a) Type B Soil Stabilization Matting and Turfgrass Establishment will be measured and paid for at the Contract unit price per square yard.

(b) PVC liner overlap shall not be measured and paid for as a separate item. PVC liner overlap shall be incidental to the cost of PVC liner installation.

(c) Excavation will be measured and paid for at the Contract unit price per cubic yard for Class 2 Excavation.

FREDERICK SEIBERT & ASSOCIATES, INC.
CIVIL ENGINEERS • SURVEYORS • LANDSCAPE ARCHITECTS • LAND PLANNERS
MDSHA No. 21-0086
10 SOUTH MARKET STREET
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NEW BLOOMFIELD, PA 17068
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EAST MAIN STREET
CARLISLE, PA 17013
717.701.8111
400 SOUTH HANOVER STREET
GREENCASTLE, PA 17225
717.597.1007
142 NORTH ANDREWS STREET
LANCASTER, PA 17603
717.715.1396

MARK	DESCRIPTION	DATE
1	REVISED PER AGENCY COMMENTS	09.25.25
2	REVISED PER AGENCY COMMENTS	08.08.25

10/01/2025

Professional Certification:
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 MARYLAND License # 20984 Expiration Date: 06.23.2027

NO APPROVED

SHEETZ - SMITHSBURG
SITUATED ALONG THE WEST SIDE OF MD 66 (MAPLE AVE/ ELLER ROAD) AT ITS INTERSECTION WITH MD 64 (JEFFERSON BLVD)
SMITHSBURG
WASHINGTON COUNTY, MARYLAND
SHEETZ INC
243 SHEETZ WAY CLAYSBURG, PA 16625

PROJECT NO. 6086.1
DWN BY KODY WARD
DATE 03.17.2025
PROJECT MANAGER DAVID TROSTLE
EMAIL: dtrostle@fsa-inc.com
TAX MAP - GRID - PARCEL(S) 0051 - 0005 - 0086 & 0091
SCALE NOT TO SCALE
SHEET TITLE

MDSHA
SWM DETAILS & NOTES

C-304
SHEET 35 OF 38

SP-25-011

P:\SHARED CLOUD\PROJECTS\6000\6086\DWG\ - SHEETZ\6086SWM.DWG - 10.08.2025 10:51

SWM FACILITY AS-BUILT CERTIFICATION DATA TABLE
FOR F-6 BIORETENTION

BIORETENTION #1

1 2

MAY ONLY BE COMPLETED AND/OR CERTIFIED BY THE AS-BUILT (AB) INSPECTOR AS REQUIRED BY COMAR 26.17.02.10.

SWM FACILITY NUMBER	PRD NUMBER	SHA CONTRACT NUMBER

ACTIVITY	ADDITIONAL SUPPORTING DOCUMENTATION (SUBMIT ALL OF THE FOLLOWING WITH SWM FACILITY AS-BUILT CERTIFICATION PACKAGE.)	DATE(S) OF INSPECTION
PRIOR TO SWM FACILITY EXCAVATION, OBSERVED ESC MEASURES ARE INSTALLED AROUND THE SWM FACILITY OR CONFIRMED SURROUNDING AREA IS STABILIZED	☐ INSPECTION REPORT ☐ PHOTOGRAPHS	
OBSERVED EXCAVATION OF SWM FACILITY	☐ INSPECTION REPORT ☐ PHOTOGRAPHS	
OBSERVED INSTALLATION OF GEOTEXTILE AND VERIFIED INSTALLATION PERFORMED AS SPECIFIED	☐ INSPECTION REPORT ☐ PHOTOGRAPHS	
OBSERVED INSTALLATION OF NO. 57 AGGREGATE BEDDING FOR SUB-DRAIN	☐ INSPECTION REPORT ☐ PHOTOGRAPHS ☐ NOT APPLICABLE	
OBSERVED INSTALLATION OF SUB-DRAIN, VERIFIED MATERIAL, AND HAS SLOTTED PERFORATIONS	☐ INSPECTION REPORT ☐ PHOTOGRAPHS ☐ NOT APPLICABLE PIPE MATERIAL: ☐ PPWP ☐ CPP-S	
OBSERVED INSTALLATION OF OBSERVATION WELL, VERIFIED MATERIAL, HAS SLOTTED PERFORATIONS, AND OBSERVED USE OF GEOTEXTILE SOCK	☐ INSPECTION REPORT ☐ PHOTOGRAPHS PIPE MATERIAL: ☐ PPWP ☐ CPP-S ☐ GEOTEXTILE SOCK	
OBSERVED INSTALLATION OF NO. 57 AGGREGATE AROUND AND ABOVE SUB-DRAIN	☐ INSPECTION REPORT ☐ PHOTOGRAPHS ☐ NOT APPLICABLE	
OBSERVED INSTALLATION OF NO. 7 AGGREGATE	☐ INSPECTION REPORT ☐ PHOTOGRAPHS ☐ NOT APPLICABLE	
OBSERVED INSTALLATION OF COARSE SAND	☐ INSPECTION REPORT ☐ PHOTOGRAPHS ☐ NOT APPLICABLE	
OBSERVED INSTALLATION OF BIORETENTION SOIL MIX (BSM) AND VERIFIED MATERIAL IS APPROVED	☐ INSPECTION REPORT ☐ PHOTOGRAPHS ☐ SHA OMT SOIL TEST REPORT FOR BSM	
OBSERVED FINAL GRADING OF SWM FACILITY	☐ INSPECTION REPORT ☐ PHOTOGRAPHS	
OBSERVED INSTALLATION OF RELEASE STRUCTURE	☐ INSPECTION REPORT ☐ PHOTOGRAPHS RELEASE STRUCTURE: ☐ INLET ☐ WEIR ☐ RISER ☐ OTHER (WRITE IN):_____	
OBSERVED INSTALLATION OF SPECIFIED VEGETATION AND OBSERVED HARDWOOD BARK MULCH PLACEMENT IN SWM FACILITY. VERIFIED LOCATIONS AND SPECIES INSTALLED IN SWM FACILITY.	☐ INSPECTION REPORT ☐ PHOTOGRAPHS ☐ AS-BUILT LANDSCAPE PLANS	
OBSERVED ESTABLISHED VEGETATION ONE YEAR FOLLOWING INITIAL INSTALLATION IN SWM FACILITY AND OBSERVED REPLACEMENT OF FAILED VEGETATION.	☐ INSPECTION REPORT ☐ PHOTOGRAPHS ☐ SHA LPD LANDSCAPE ACCEPTANCE LETTER(S)	

FEATURE	DESIGN	AS-BUILT	DIFFERENCE
BOTTOM WIDTH (FT)	40		
BOTTOM LENGTH (FT)	65		
SIDE SLOPES (H:V) – MAY NOT BE STEEPER THAN 3:1 (TYP. 4:1)	4:1		
OBSERVATION WELL PIPE DIAMETER (IN.) – MAY NOT DIFFER FROM VALUE SPECIFIED	6		
TOTAL THICKNESS OF NO. 57 AGGREGATE (IN.) – MAY NOT BE LESS THAN 18 IN.	18		
THICKNESS OF NO. 7 AGGREGATE (IN.) – MAY NOT BE LESS THAN 4 IN.	4		
THICKNESS OF COARSE SAND (IN.) – MAY NOT BE LESS THAN 4 IN.	4		
THICKNESS OF BSM (IN.) – MAY NOT BE LESS THAN SPECIFIED (TYP. 48 IN.; MIN. 30 IN.)	30		
SUB-DRAIN PIPE DIAMETER (IN.) – MAY NOT DIFFER FROM VALUE SPECIFIED	6		
SUB-DRAIN OUTLET INVERT ELEVATION (FT)	723.34		
THICKNESS OF SHREDDED HARDWOOD BARK MULCH (IN.) – MAY NOT DIFFER FROM VALUE SPECIFIED	3		

ONLY COMPLETE THE PORTION BELOW WHEN TOLERANCES ARE NOT MET. ALSO PROVIDE COMPUTATIONS AND SWM REPORT REVISIONS.

FEATURE	DESIGN	AS-BUILT	DIFFERENCE
ESDv WATER SURFACE ELEVATION (FT)			
ESDv PONDING DEPTH (IN.) – MAY NOT EXCEED 12 IN.			
WQv WATER SURFACE ELEVATION (FT)			
WQv DEPTH (IN.) – CANNOT EXCEED 12 IN.			
Cpv WATER SURFACE ELEVATION (FT)			
1-YR FREEBOARD (IN.)			
2-YR WATER SURFACE ELEVATION (FT)			
2-YR FREEBOARD (IN.)			
10-YR WATER SURFACE ELEVATION (FT)			
10-YR FREEBOARD (IN.)			
100-YR WATER SURFACE ELEVATION (FT)			
100-YR FREEBOARD (IN.)			

REVISED 10/22/2021

SWM FACILITY AS-BUILT CERTIFICATION DATA TABLE
FOR M-2 SUBMERGED GRAVEL WETLAND

SGW #1

2

MAY ONLY BE CERTIFIED BY THE AS-BUILT ENGINEER (ABE) PER COMAR 26.17.02.10.

SWM FACILITY NUMBER	PRD NUMBER	SHA CONTRACT NUMBER

ACTIVITY	ADDITIONAL SUPPORTING DOCUMENTATION (SUBMIT WITH SWM FACILITY AS-BUILT CERTIFICATION PACKAGE)	DATE(S) OF INSPECTION
PRIOR TO SWM FACILITY EXCAVATION, OBSERVED ESC MEASURES ARE INSTALLED AROUND THE FACILITY OR CONFIRMED SURROUNDING AREA IS STABILIZED	☐ INSPECTION REPORT ☐ PHOTOGRAPHS	
OBSERVED EXCAVATION OF SWM FACILITY	☐ INSPECTION REPORT ☐ PHOTOGRAPHS	
OBSERVED INSTALLATION OF GEOTEXTILE AND VERIFIED INSTALLATION PERFORMED AS SPECIFIED	☐ INSPECTION REPORT ☐ PHOTOGRAPHS	
OBSERVED INSTALLATION OF NO. 57 AGGREGATE	☐ INSPECTION REPORT ☐ PHOTOGRAPHS	
OBSERVED INSTALLATION OF SUB-DRAIN, VERIFIED MATERIAL HAS SLOTTED PERFORATIONS, AND OBSERVED USE OF GEOTEXTILE SOCK	☐ INSPECTION REPORT ☐ PHOTOGRAPHS PIPE MATERIAL: ☐ PPWP ☐ CPP-S ☐ GEOTEXTILE SOCK	
OBSERVED INSTALLATION OF NO. 7 AGGREGATE	☐ INSPECTION REPORT ☐ PHOTOGRAPHS	
OBSERVED INSTALLATION OF COARSE SAND	☐ INSPECTION REPORT ☐ PHOTOGRAPHS	
OBSERVED INSTALLATION OF BIORETENTION SOIL MIX (BSM) AND VERIFIED MATERIAL IS APPROVED	☐ INSPECTION REPORT ☐ PHOTOGRAPHS ☐ SHA OMT SOIL TEST REPORT FOR BSM	
OBSERVED INSTALLATION OF RELEASE STRUCTURE	☐ INSPECTION REPORT ☐ PHOTOGRAPHS RELEASE STRUCTURE: ☐ RISER ☐ WEIR	
OBSERVED FINAL GRADING OF SWM FACILITY	☐ INSPECTION REPORT ☐ PHOTOGRAPHS	
OBSERVED CONSTRUCTION OF MAINTENANCE ACCESS ROAD	☐ PHOTOGRAPHS ☐ INSPECTION REPORT	
OBSERVED INSTALLATION OF SPECIFIED VEGETATION. OBSERVED AND VERIFIED INSTALLATION OF LOCATIONS, SPECIES, AND QUANTITIES SPECIFIED.	☐ INSPECTION REPORT ☐ PHOTOGRAPHS ☐ AS-BUILT LANDSCAPE PLANS	
OBSERVED ESTABLISHED VEGETATION ONE YEAR FOLLOWING INITIAL INSTALLATION IN SWM FACILITY AND OBSERVED REPLACEMENT OF FAILED VEGETATION.	☐ INSPECTION REPORT ☐ PHOTOGRAPHS ☐ SHA LPD LANDSCAPE ACCEPTANCE LETTER(S)	
OBSERVED ESTABLISHED VEGETATION TWO YEARS FOLLOWING INITIAL INSTALLATION AND VERIFIED AT LEAST A 50% SURVIVAL RATE OF VEGETATION WITHIN SWM FACILITY AND OBSERVED REPLACEMENT OF FAILED VEGETATION	☐ INSPECTION REPORT ☐ PHOTOGRAPHS	

FEATURE	DESIGN	AS-BUILT	DIFFERENCE
CELL 1 BOTTOM WIDTH (FT)	30		
CELL 1 BOTTOM LENGTH (FT)	65		
CELL 1 LEFT SIDE SLOPE (H:V) – MAY NOT BE STEEPER THAN 3:1	3:1		
CELL 1 RIGHT SIDE SLOPE (H:V) – MAY NOT BE STEEPER THAN 3:1	WALL		
CELL 2 BOTTOM WIDTH (FT)	N/A		
CELL 2 BOTTOM LENGTH (FT)	N/A		
CELL 2 LEFT SIDE SLOPE (H:V) –MAY NOT BE STEEPER THAN 3:1	N/A		
CELL 2 RIGHT SIDE SLOPE (H:V) – MAY NOT BE STEEPER THAN 3:1	N/A		
SUB-DRAIN PIPE DIAMETER (IN.) – MAY NOT DIFFER FROM VALUE SPECIFIED	12		
SUB-DRAIN INVERT OUT ELEVATION (FT)	723.75		
INVERTED J-HOOK OUTLET ELEVATION (FT) – MAY NOT BE MORE THAN 4 IN. BELOW CELL BOTTOM ELEVATION AND NOT HIGHER THAN THE CELL BOTTOM ELEVATION	N/A		
THICKNESS OF NO. 57 AGGREGATE (IN.)	18		
THICKNESS OF NO. 7 AGGREGATE (IN.) – MAY NOT BE LESS THAN 4 IN.	4		
THICKNESS OF COARSE SAND (IN.) – MAY NOT BE LESS THAN 4 IN.	4		
THICKNESS OF BSM (IN.) – MAY NOT BE LESS THAN 8 IN.	8		

ONLY COMPLETE THE PORTION BELOW WHEN TOLERANCES ARE NOT MET. ALSO PROVIDE COMPUTATIONS AND SWM REPORT REVISIONS.

FEATURE	DESIGN	AS-BUILT	DIFFERENCE
ESDv WATER SURFACE ELEVATION (FT)			
ESDv PONDING DEPTH (IN.) – MAY NOT EXCEED 12 IN.			
2-YR WATER SURFACE ELEVATION (FT)			
2-YR FREEBOARD (IN.)			
10-YR WATER SURFACE ELEVATION (FT)			
10-YR FREEBOARD (IN.)			
100-YR WATER SURFACE ELEVATION (FT)			
100-YR FREEBOARD (IN.)			

REVISED 12/6/2021

SWM FACILITY AS-BUILT CERTIFICATION DATA TABLE
FOR RELEASE STRUCTURES - INLETS

BIO #1

2

MAY ONLY BE CERTIFIED BY THE AS-BUILT ENGINEER (ABE) AS REQUIRED BY COMAR 26.17.02.10.

SWM FACILITY NUMBER	PRD NUMBER	SHA CONTRACT NUMBER

ACTIVITY	SUPPORTING DOCUMENTATION AND INFORMATION (SUBMIT ALL OF THE FOLLOWING WITH SWM FACILITY AS-BUILT CERTIFICATION PACKAGE.)	DATE(S) OF INSPECTION
OBSERVED EXCAVATION FOR INLET, OUTFALL PIPE, AND OUTFALL STRUCTURE	☐ INSPECTION REPORT ☐ PHOTOGRAPHS OUTFALL STRUCTURE (CHECK ALL THAT APPLIES) ☐ HEADWALL ☐ END SECTION ☐ END SECTION ☐ OTHER (SPECIFY):_____	
OBSERVED PLACEMENT AND COMPACTION OF BEDDING FOR INLET, OUTFALL PIPE, AND OUTFALL STRUCTURE	☐ INSPECTION REPORT ☐ PHOTOGRAPHS	
OBSERVED INSTALLATION OF INLET, OUTFALL PIPE, AND OUTFALL STRUCTURE	☐ INSPECTION REPORT ☐ PHOTOGRAPHS	
OBSERVED PLACEMENT AND COMPACTION OF BACKFILL FOR INLET, OUTFALL PIPE, AND OUTFALL STRUCTURE INCLUDING AGGREGATE APRON AND PERMANENT STABILIZATION	☐ INSPECTION REPORT ☐ PHOTOGRAPHS	

FEATURES FOR INLETS	DESIGN	AS-BUILT	DIFFERENCE
TOP ELEVATION (FT)	728.25		
INVERT IN ELEVATION (FT)	N/A		
INVERT OUT ELEVATION (FT)	723.34		
SUB-DRAIN INVERT IN ELEVATION (FT)	723.34		
OUTFALL PIPE DIAMETER (IN.)	15		
OUTFALL PIPE SLOPE (FT/FT)	0.005		
OUTFALL STRUCTURE INVERT (FT)	723.05		
OUTFALL APRON LENGTH (FT)	N/A		
OUTFALL APRON WIDTH (FT)	N/A		
OUTFALL APRON CUT OFF WALL LENGTH (FT)	N/A		
OUTFALL APRON CUT OFF WALL DEPTH (FT)	N/A		

ONLY COMPLETE THE PORTION BELOW WHEN TOLERANCES ARE NOT MET. ALSO PROVIDE COMPUTATIONS AND SWM REPORT REVISIONS.

FEATURE	DESIGN	AS-BUILT	DIFFERENCE

SWM FACILITY AS-BUILT CERTIFICATION DATA TABLE
FOR RELEASE STRUCTURES - WEIRS

SGW #1

2

MAY ONLY BE CERTIFIED BY THE AS-BUILT ENGINEER (ABE) AS REQUIRED BY COMAR 26.17.02.10.

SWM FACILITY NUMBER	PRD NUMBER	SHA CONTRACT NUMBER

ACTIVITY	SUPPORTING DOCUMENTATION AND INFORMATION (SUBMIT ALL OF THE FOLLOWING WITH SWM FACILITY AS-BUILT CERTIFICATION PACKAGE.)	DATE(S) OF INSPECTION
OBSERVED EXCAVATION FOR WEIR	☐ INSPECTION REPORT ☐ PHOTOGRAPHS	
OBSERVED PLACEMENT AND COMPACTION OF BEDDING FOR WEIR	☐ INSPECTION REPORT ☐ PHOTOGRAPHS	
OBSERVED INSTALLATION OF CUT OFF WALL AND WEIR	☐ INSPECTION REPORT ☐ PHOTOGRAPHS	
OBSERVED PLACEMENT AND COMPACTION OF BACKFILL FOR WEIR	☐ INSPECTION REPORT ☐ PHOTOGRAPHS	
OBSERVED INSTALLATION OF OUTFALL AGGREGATE APRON AND PERMANENT STABILIZATION	☐ INSPECTION REPORT ☐ PHOTOGRAPHS	

FEATURES FOR WEIRS	DESIGN	AS-BUILT	DIFFERENCE
STRUCTURE TOP ELEVATION (FT)	724.25		
CUT OFF WALL DEPTH (FT)	N/A		
CUT OFF WALL LENGTH (FT)	N/A		
LOW FLOW ORIFICE INVERT ELEVATION (FT)	N/A		
LOW FLOW ORIFICE DIAMETER (IN.) – MAY NOT BE SMALLER THAN 2 INCHES	N/A		
CREST ELEVATION (FT)	726.25		
CREST LENGTH (FT)	8		

ONLY COMPLETE THE PORTION BELOW WHEN TOLERANCES ARE NOT MET. ALSO PROVIDE COMPUTATIONS AND SWM REPORT REVISIONS.

FEATURE	DESIGN	AS-BUILT	DIFFERENCE
ESDv WATER SURFACE ELEVATION (FT)			
2-YR WATER SURFACE ELEVATION (FT)			
10-YR WATER SURFACE ELEVATION (FT)			
10-YR FREEBOARD (IN.) – MAY NOT BE LESS THAN 9 IN. WHEN APPLICABLE FOR ROADSIDE DITCHES AND SWALES – MEASURED VERTICALLY FROM 10-YR WATER SURFACE ELEVATION TO PAVEMENT EDGE/SHOULDER	9		
100-YR WATER SURFACE ELEVATION (FT)			

REVISED 06/16/2021

STATE OF MARYLAND — DAVID M. TROSTLE — No. 20583 — REGISTERED PROFESSIONAL ENGINEER
10/01/2025

Professional Certification:
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional under the laws of the State of MARYLAND License #: 20583
Expiration Date: 06.23.2027

FSA TRUSS
FREDERICK SEIBERT & ASSOCIATES, INC
CIVIL ENGINEERS • SURVEYORS • LANDSCAPE ARCHITECTS • LAND PLANNERS
fsa-inc.com
100 SOUTH MARKET STREET, SUITE 420, WEST MANCHESTER TOWNE CENTRE, YORK, PA 17401 (717) 854-3731
NEW BLOOMFIELD, PA 17068 (717) 582-2636
CARLISLE, PA 17013 (717) 249-0049
GREENCASTLE, PA 17225 (717) 597-1777
HAGERSTOWN, MD 21740 (301) 797-4470

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NOT APPROVED FOR CONSTRUCTION

MARK	DESCRIPTION:	DATE:
1	REVISED PER AGENCY COMMENTS	09.25.25
2	REVISED PER AGENCY COMMENTS	06.06.25

SHEETZ - SMITHSBURG
SITUATED ALONG THE WEST SIDE OF MD RT. 17 (APPLE PIE RIDGE ROAD) AT ITS INTERSECTION WITH MD RT. 64 (JEFFERSON BLVD)
SMITHSBURG
WASHINGTON COUNTY, MARYLAND
SHEETZ INC.
243 SHEETZ WAY CLAYSBURG, PA 16625

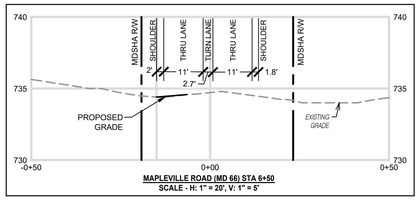
PROJECT NO.: 6086.1
DWN BY: KODY WARD
DATE: 03.17.2025
PROJECT MANAGER: DAVID TROSTLE
EMAIL: dtrostle@fsa-inc.com
TAX MAP - GRID - PARCEL(S): 0051 - 0005 - 0086 & 0091
SCALE: NOT TO SCALE
SHEET TITLE:

MDSHA
AS-BUILT TABLES

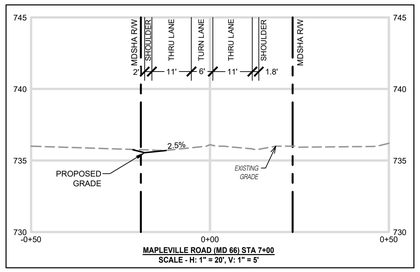
C-305
SHEET 36 OF 38

SP-25-011

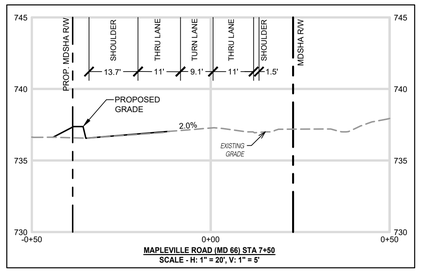
P:\SHEETZ CO\JOBS\PHILA\TOWNSEND\PLOTTING\SWM\SWM1 - SHEETZ\SHEETZ SWM1.DWG, 10/1/2025 8:49:41 AM, KODY WARD



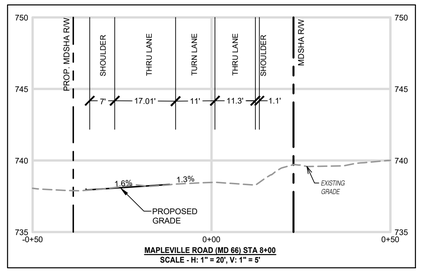
MAPLEVILLE ROAD (MD 66) STA 6+50
SCALE - H: 1" = 20', V: 1" = 5'



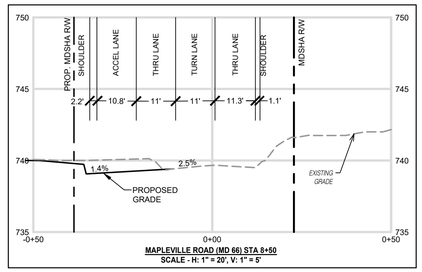
MAPLEVILLE ROAD (MD 66) STA 7+00
SCALE - H: 1" = 20', V: 1" = 5'



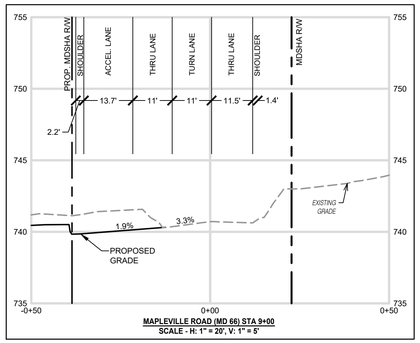
MAPLEVILLE ROAD (MD 66) STA 7+50
SCALE - H: 1" = 20', V: 1" = 5'



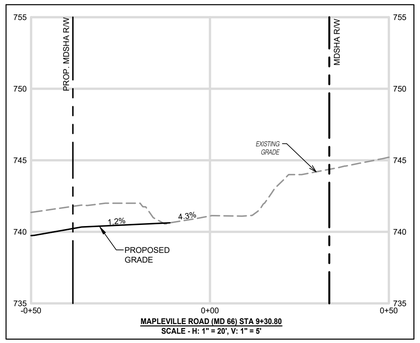
MAPLEVILLE ROAD (MD 66) STA 8+00
SCALE - H: 1" = 20', V: 1" = 5'



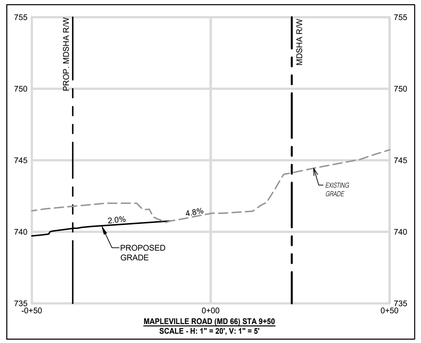
MAPLEVILLE ROAD (MD 66) STA 8+50
SCALE - H: 1" = 20', V: 1" = 5'



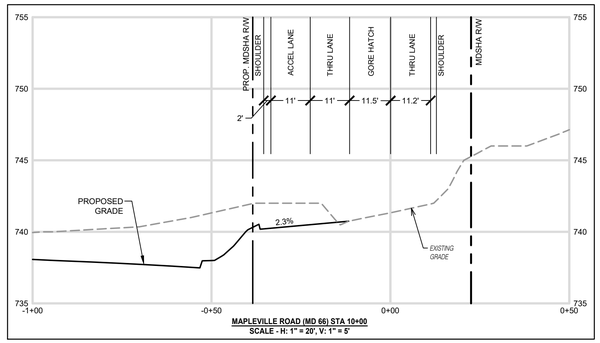
MAPLEVILLE ROAD (MD 66) STA 9+00
SCALE - H: 1" = 20', V: 1" = 5'



MAPLEVILLE ROAD (MD 66) STA 9+30.80
SCALE - H: 1" = 20', V: 1" = 5'



MAPLEVILLE ROAD (MD 66) STA 9+50
SCALE - H: 1" = 20', V: 1" = 5'

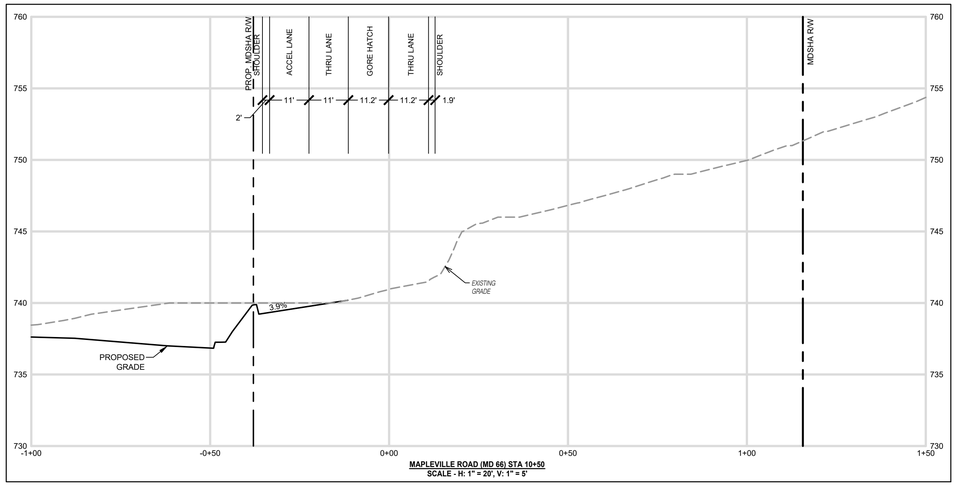


MAPLEVILLE ROAD (MD 66) STA 10+00
SCALE - H: 1" = 20', V: 1" = 5'

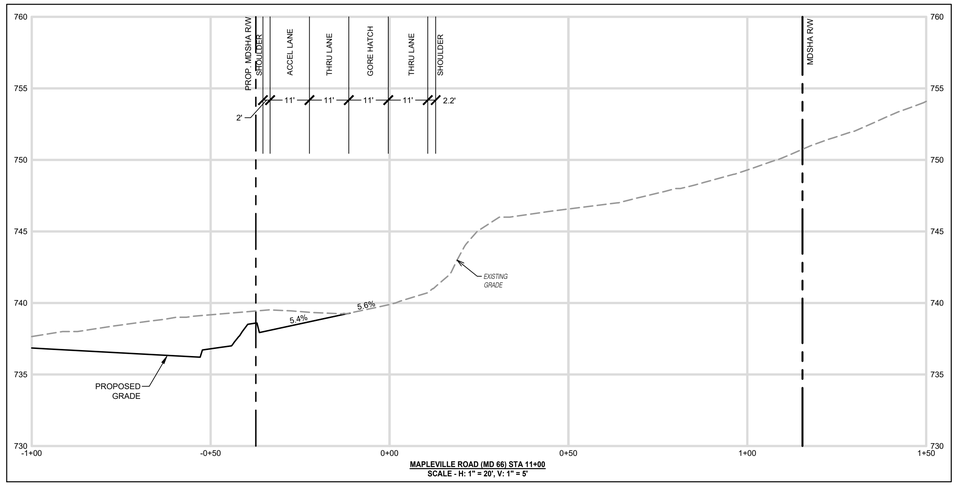
GRAPHIC SCALE

20 0 10 20 40 60

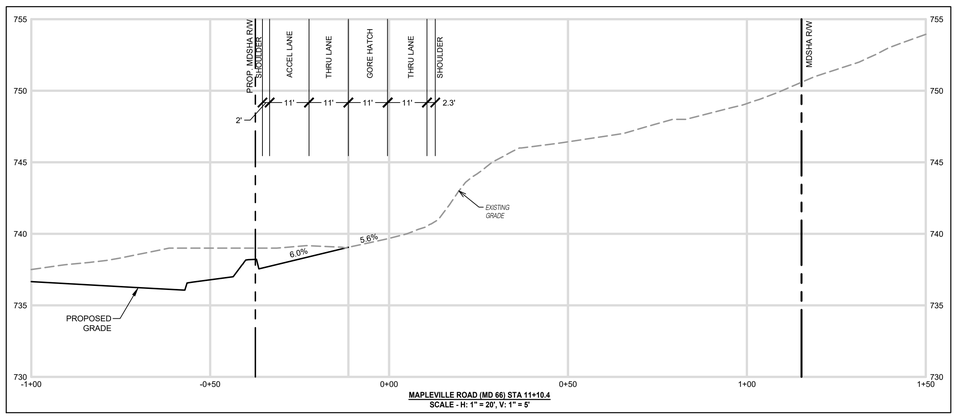
(IN FEET)
1 inch = 20 ft.



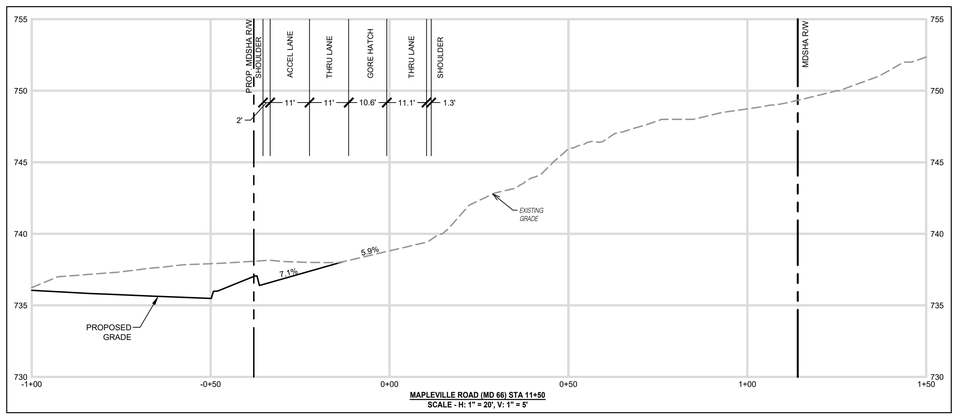
MAPLEVILLE ROAD (MD 66) STA 10+50
SCALE - H: 1" = 20', V: 1" = 5'



MAPLEVILLE ROAD (MD 66) STA 11+00
SCALE - H: 1" = 20', V: 1" = 5'



MAPLEVILLE ROAD (MD 66) STA 11+10.4
SCALE - H: 1" = 20', V: 1" = 5'



MAPLEVILLE ROAD (MD 66) STA 11+50
SCALE - H: 1" = 20', V: 1" = 5'

P:\SHEETZ\SOLUTIONS\LATEST\SMITHSBURG\SHEET\C-404 MDSHA CROSS-SECTIONS.DWG 2025-10-01

STATE OF MARYLAND
DAVID MICHAEL TROSTLE
No. 21708
PROFESSIONAL ENGINEER
10/01/2025

Professional Certification:
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional under the laws of the State of MARYLAND License # 21708
Expiration Date: 06.23.2027

FSA
FREDERICK SEIBERT & ASSOCIATES, INC.
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717.275.7537
MID SOUTH OFFICE
400 SOUTH HANOVER STREET
CARLISLE, PA 17013
717.701.8111
SOUTHERN CHESTER COUNTY OFFICE
142 LANMAR DRIVE
GREENCASTLE, PA 17225
717.597.1007
WESTERN MARYLAND OFFICE
135 SUMMIT AVENUE, SUITE C
HAGERSTOWN, MD 21740
301.791.3800

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MARK	DESCRIPTION	DATE

NOT APPROVED FOR CONSTRUCTION

SHEETZ - SMITHSBURG
SITUATED ALONG THE WEST SIDE OF MD 66 (MAPLEVILLE ROAD) AT ITS INTERSECTION WITH MD 64 (JEFFERSON BLVD)
SMITHSBURG
WASHINGTON COUNTY, MARYLAND
SHEETZ, INC.
243 SHEETZ WAY CLAYSBURG, PA 16625

PROJECT NO.
6086.1

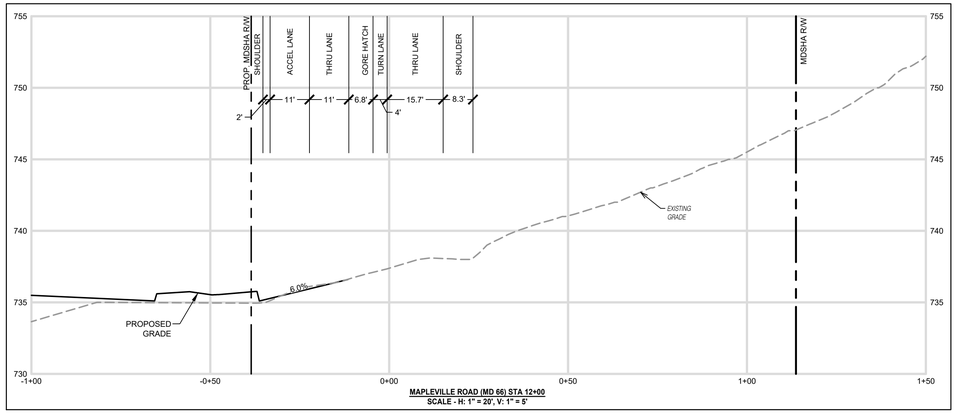
DWN BY	DATE
KODY WARD	03.17.2025

PROJECT MANAGER: DAVID TROSTLE
EMAIL: dtrostle@fsa-inc.com
TAX MAP - GRID - PARCEL(S)
0051 - 0005 - 0086 & 0091
SCALE
AS SHOWN
SHEET TITLE

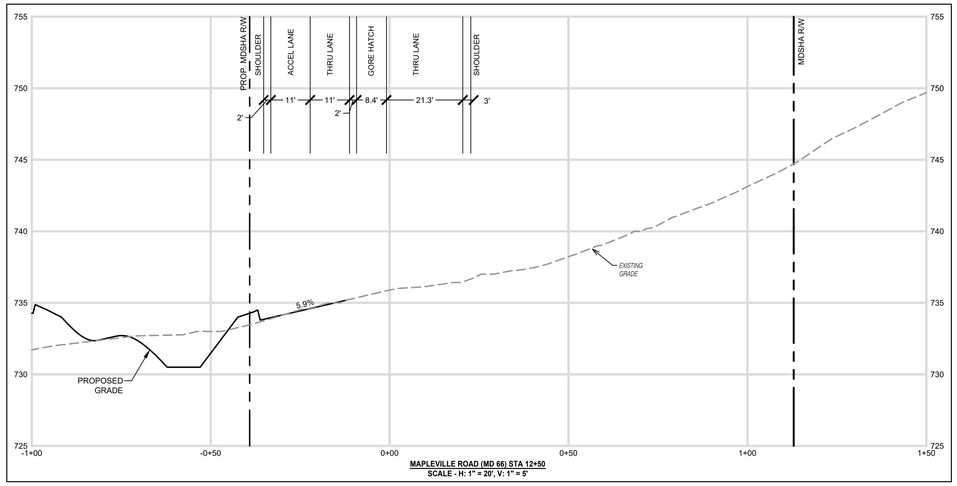
MD 66 MDSHA
CROSS-SECTIONS

C-404
SHEET 37 OF 38

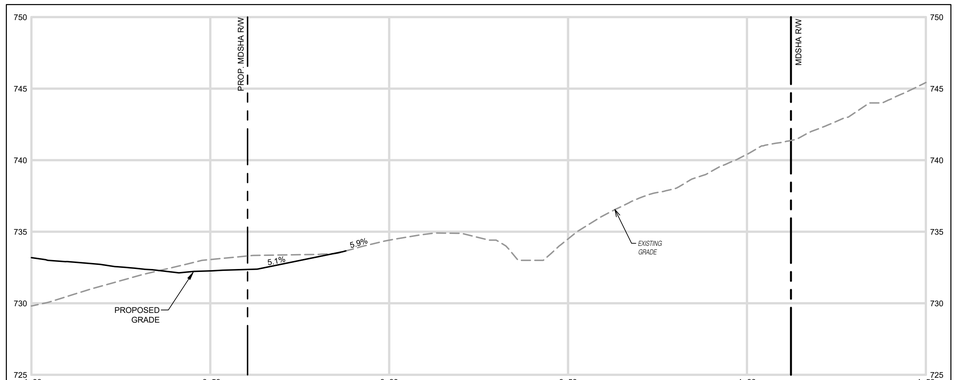
SP-25-011



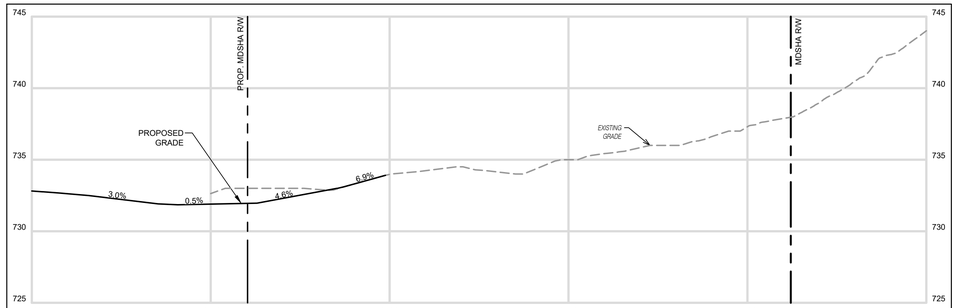
MAPLEVILLE ROAD (MD 66) STA 12+00
SCALE - H: 1" = 20', V: 1" = 5'



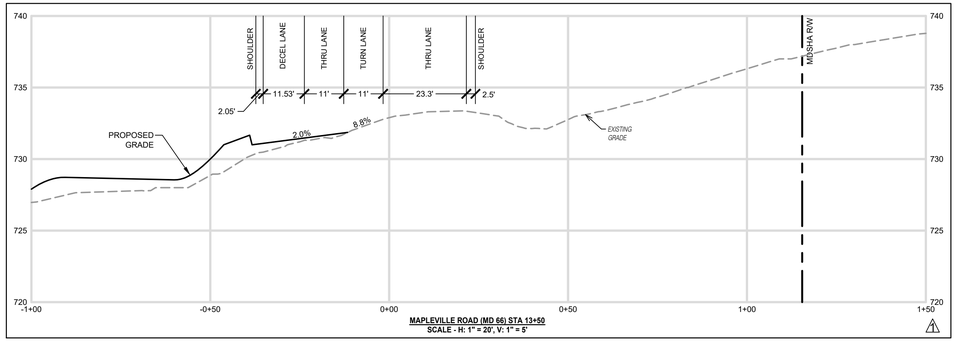
MAPLEVILLE ROAD (MD 66) STA 12+50
SCALE - H: 1" = 20', V: 1" = 5'



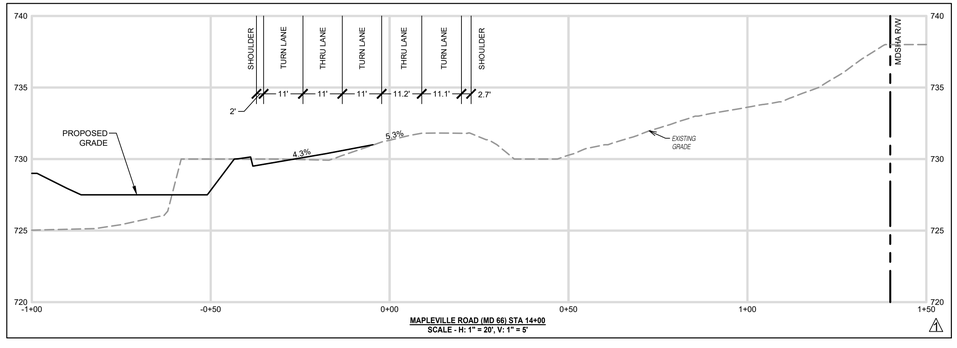
MAPLEVILLE ROAD (MD 66) STA 13+00
SCALE - H: 1" = 20', V: 1" = 5'



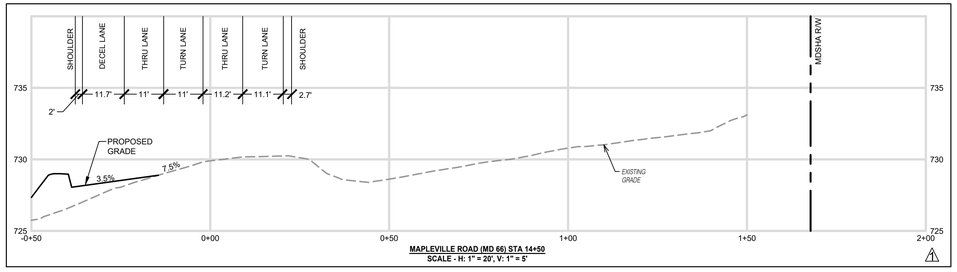
MAPLEVILLE ROAD (MD 66) STA 13+14.34
SCALE - H: 1" = 20', V: 1" = 5'



MAPLEVILLE ROAD (MD 66) STA 13+50
SCALE - H: 1" = 20', V: 1" = 5'



MAPLEVILLE ROAD (MD 66) STA 14+00
SCALE - H: 1" = 20', V: 1" = 5'



MAPLEVILLE ROAD (MD 66) STA 14+50
SCALE - H: 1" = 20', V: 1" = 5'

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

10/01/2025

Professional Certification:
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional under the laws of the State of: MARYLAND License # 20984
Expiration Date: 06.23.2027

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CARLISLE OFFICE
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CARLISLE, PA 17013
717.701.8111
NEW BLOOMFIELD OFFICE
EAST MAIN STREET
NEW BLOOMFIELD, PA 17068
717.275.7537
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NOT APPROVED FOR CONSTRUCTION

MARK	DESCRIPTION	DATE
1	REVISED PER AGENCY COMMENTS	09.05.25

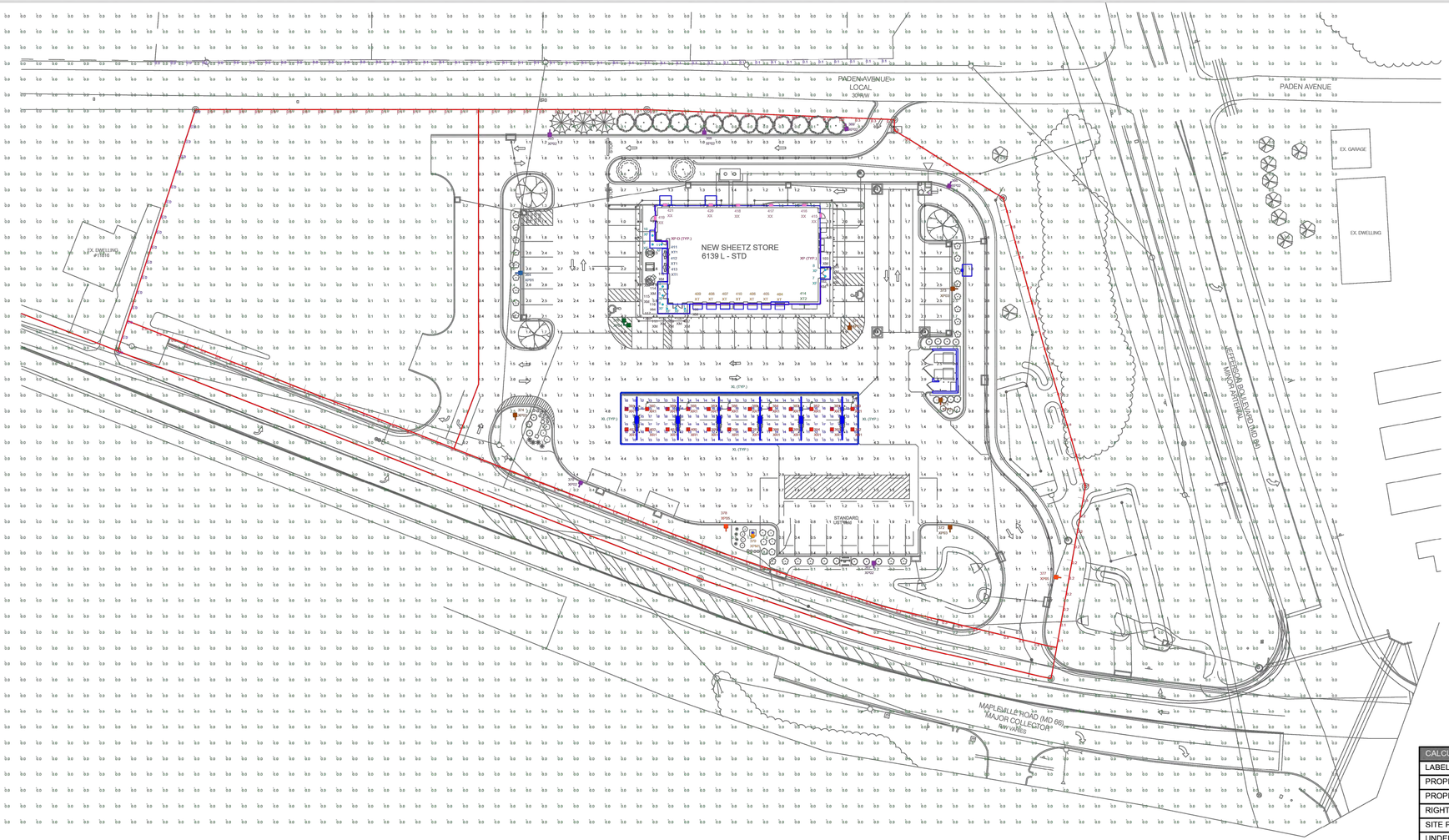
SHEETZ - SMITHSBURG
SITUATED ALONG THE WEST SIDE OF MD 66 (MAPLEVILLE ROAD) AT ITS INTERSECTION WITH MD 64 (JEFFERSON BLVD)
SMITHSBURG
WASHINGTON COUNTY, MARYLAND
SHEETZ INC.
243 SHEETZ WAY CLAYSBURG, PA 16625

PROJECT NO.	6086.1
DWN BY	KODY WARD
DATE	03.17.2025
PROJECT MANAGER	DAVID TROSTLE
EMAIL	dtrostle@fsa-inc.com
TAX MAP - GRID - PARCEL(S)	0051 - 0005 - 0086 & 0091
SCALE	AS SHOWN
SHEET TITLE	MD 66 MDSHA CROSS-SECTIONS

C-405
SHEET 38 OF 38

SP-25-011

P:\SHEETZ\CLOSED\PHILA\CTS\6600\6086\REV 1 - SHEETZ\SHEETS\SHEETS FILES\6086_1_ST.dwt - MDSHA CROSS SECTIONS.DWG - 2025.09.01



LUMINAIRE LOCATION SUMMARY			
LUM NO.	LABEL	MTG. HT.	TILT
1 - 11	XF	11.33	0
12 - 48	XL	20.875	0
49 - 85	XL	18.06	0
86	XL	18.25	5
87	XL	18.599	5
88	XL	18.948	5
89	XL	19.297	5
90	XL	19.646	5
91	XL	19.995	5
92	XL	20.344	5
93	XL	20.693	5
94	XL	18.25	5
95	XL	18.599	5
96	XL	18.948	5
97	XL	19.297	5
98	XL	19.646	5
99	XL	19.995	5
100	XL	20.344	5
101	XL	20.693	5
102 - 117	XM	12	0
118 - 201	XP	18	0
202 - 212	XP	19	0
213 - 281	XP	18	0
282 - 313	XP-D	18	0
314 - 316	XP-D	19	0
317 - 363	XP-D	18	0
364	XP01	20	0
365 - 370	XP02	20	0
371 - 375	XP03	20	0
376	XP04	20	0
377, 378	XP05	20	0
379	XPM1	35	0
380 - 391	XR1	17.71	0
392 - 403	XR1	18.83	0
404 - 410	XT	13.5	50
411 - 413	XT1	13.5	50
414	XT2	15	0
415 - 418	XX	15.42	0
419	XX	11.33	0
420, 421	XX	9.33	0

NOTES:
- ALL AREA LIGHTS ON NEW 17 FT. POLE MOUNTED ON 3 FT. CONCRETE BASE
- FOOTCANDLE LEVELS CALCULATED AT GRADE USING INITIAL LUMEN VALUES UNLESS NOTED OTHERWISE.

THIS SITE IS LOCATED IN A REGION WHERE LIGHTING IS REGULATED BY LOCAL ORDINANCES

CALCULATION SUMMARY					
LABEL	AVG	MAX	MIN	AVG/MIN	MAX/MIN
PROPERTY LINE_ADJACENT TO RESIDENTIAL_VERTICAL, AT 5 FT. ABOVE GRADE	0.00	0.0	0.0	N.A.	N.A.
PROPERTY LINE_RESIDENTIAL_ACROSS PADEN AVENUE_VERTICAL, AT 5 FT. ABOVE GRADE	0.07	0.1	0.0	N.A.	N.A.
RIGHT OF WAY LINES_VERTICAL, AT 5 FT. ABOVE GRADE	0.35	1.0	0.0	N.A.	N.A.
SITE PAVED AREA	2.08	8.6	0.2	10.40	43.00
UNDEFINED	0.05	2.7	0.0	N.A.	N.A.
UNDER CANOPY	14.22	18	8	1.78	2.25

LUMINAIRE SCHEDULE												
SYMBOL	QTY	LABEL	ARRANGEMENT	LUMENS	DIMMING (LUMEN MULTIPLIER)	LATF	LLF	BUG RATING	WATTS/LUMINAIRE	TOTAL WATTS	MANUFACTURER	CATALOG LOGIC
	11	XF	Single	1037	0.200	1.000	0.200	N.A.	10	110	Amerlux, LLC	ORDX4-10-409-M-CSTM-RB-UDM (DIM TO 20 PERCENT LUMEN OUTPUT)
	90	XL	SINGLE	136	1.000	1.000	1.000	N.A.	4.12	370.8	BLAIR COMPANIES	4 FT. LINEAR STRIP LIGHT (BY OTHERS, SHOWN FOR CONTRIBUTION)
	16	XM	SINGLE	136	0.700	1.000	0.700	N.A.	4.12	65.92	Blair Companies	LB-110-00-XX-025-RD[1]FR4-15
	164	XP	Single	305	1.000	1.000	1.000	N.A.	3.66	600.24	P-LED	STREET WRAP FLEX BACK BEND 4000K
	82	XP-D	Single	25	1.000	1.000	1.000	N.A.	0.305	25.01	P-LED	STREET WRAP FLEX BACK BEND 4000K
	1	XP01	Single	8795	1.000	1.030	1.030	B2-U0-G3	69	69	Lithonia Lighting	DSX0 LED P3 40K 70CRI T3M MVOLT SPA FAO DXXXX
	6	XP02	Single	3484	1.000	1.030	1.030	B0-U0-G1	33	198	Lithonia Lighting	DSX0 LED P1 40K 70CRI BLC3 MVOLT SPA FAO DXXXX
	5	XP03	Single	8926	1.000	1.030	1.030	B2-U0-G3	69	345	Lithonia Lighting	DSX0 LED P3 40K 70CRI T4M MVOLT SPA FAO DXXXX
	1	XP04	2 @ 90 degrees	8926	1.000	1.030	1.030	B2-U0-G3	69	138	Lithonia Lighting	DSX0 LED P3 40K 70CRI T4M MVOLT SPA FAO DXXXX
	2	XP05	Single	3599	1.000	1.030	1.030	B0-U0-G2	33	66	Lithonia Lighting	DSX0 LED P1 40K 70CRI BLC4 MVOLT SPA FAO DXXXX
	1	XPM1	SINGLE	500	1.000	1.000	1.000	B4-U0-G0	TBD	TBD	American Beacon	American Beacon (lumen output and mounting TBD - 500 LUMENS MODELED)
	24	XR1	Single	4322	1.000	1.000	1.000	B2-U0-G1	32	768	Lithonia Lighting	RCNY LED AL01 50K 90CRI SYMF MVOLT BZS DWHXD SETTING 3
	7	XT	Single	1840	0.500	1.000	0.500	N.A.	20	140	SPI Lighting Inc.	SEW12146 5FT L20W AN08 120-277V 4000K PSE SMA OAP (6.00 IN.) FIXT. HEAD FACTORY SET TO 50 DEGREE TILT AWAY FROM BLDG. DIM TO 50 PERCENT LUMEN OUTPUT.
	3	XT1	Single	1472	0.300	1.000	0.300	N.A.	16	48	SPI Lighting Inc.	SEW12146 4FT L16W AN08 120-277V 4000K PSE SMA OAP (6.00 IN.) FIXT. HEAD FACTORY SET TO 50 DEGREE TILT AWAY FROM BLDG. DIM TO 30 PERCENT LUMEN OUTPUT.
	1	XT2	Single	2208	0.500	1.000	0.500	N.A.	24	24	SPI Lighting Inc.	SEW12146 6FT L24W AN08 120-277V 4000K SMA PSE OAP12. DIM TO 50 PERCENT LUMEN OUTPUT.
	7	XX	Single	1921	0.300	1.000	0.300	B1-U0-G0	16	112	WILLIAMS OUTDOOR	VWM-H-L17/840-TL-DBZ-CGL-DIM-UNV (BRONZE COLOR 80CRI). DIM TO 30 PERCENT LUMEN OUTPUT.

ILLUMINATION LEVELS ARE THE RESULT OF CONDITIONS OR REQUESTS BY OTHERS
RED LEONARD ASSOCIATES IS NOT RESPONSIBLE
FOR INCIDENTS CAUSED BY INSUFFICIENT LIGHTING
AND DOES NOT RECOMMEND THESE LEVELS FOR
SECURITY AND SAFETY REASONS

NORTH

GRAPHIC SCALE

0 40 80 120 160

REDLEONARD ASSOCIATES
1340 Kemper Meadow Dr, Forest Park, OH 45240
513-574-9500 | redleonard.com

REV.	BY	DATE	DESCRIPTION
R1	DAR	6/17/25	CHANGED FLAGPOLE LIGHT AND NEARBY AREA LIGHT TO REDUCE LIGHT TRESPASS AT MAPLEVILLE RD. RIGHT OF WAY LINE TO COMPLY WITH 1.0 FC MAX. REQUIREMENT
.	.	.	.
.	.	.	.
.	.	.	.

DISCLAIMER
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SCALE: 1" = 40'
LAYOUT BY: DAR
DWG SIZE: D
DATE: 6/11/25

PROJECT NAME:
SHEETZ
SMITHSBURG, MD
DRAWING NUMBER:
RL-10316-S1-R1

DOWNLIGHT	QTY	LABEL	DESCRIPTION
	11	XF	ORDX4-10-409-M-CSTM-RB-UDM (DIM TO 20 PERCENT LUMEN OUTPUT)

STREET WRAP	QTY	LABEL	DESCRIPTION
	164	XP	STREET WRAP FLEX BACK BEND 4000K
	82	XP-D	STREET WRAP FLEX BACK BEND 4000K

AREA	QTY	LABEL	DESCRIPTION
	1	XP01	DSX0 LED P3 40K 70CRI T3M MVOLT SPA FAO DXXXX
	6	XP02	DSX0 LED P1 40K 70CRI BLC3 MVOLT SPA FAO DXXXX
	5	XP03	DSX0 LED P3 40K 70CRI T4M MVOLT SPA FAO DXXXX
	1	XP04	DSX0 LED P3 40K 70CRI T4M MVOLT SPA FAO DXXXX
	2	XP05	DSX0 LED P1 40K 70CRI BLC4 MVOLT SPA FAO DXXXX

FLAGPOLE	QTY	LABEL	DESCRIPTION
	1	XPM1	AMERICAN BEACON (LUMEN OUTPUT AND MOUNTING TBD - 500 LUMENS MODELED)

CANOPY	QTY	LABEL	DESCRIPTION
	24	XR1	RCNY LED AL01 50K 90CRI SYMF MVOLT BZS DWHXD SETTING 3

ORDX4

Open Rated Exterior Downlight

Project:

Features and Specs

Construction:
- Cast aluminum top housing with integral driver.
- Dust and water tight (IP66) sealed optical chamber.
- Die-cast aluminum trim and faceplate.
- Stainless steel hardware.

Finish:
- Architectural Grade Polyester Powder Coat.

Optics:
- Beam Spread: 15°, 24°, 39°
- CCT: 2700K, 3000K, 4000K
- CRI: 80 or 90+ typ
- Polycarbonate TIR optic with white backing for maximum efficacy.

Electrical:
- Integral LED driver included, 120-277V.
- Primary wiring compartment with power supply.
- Standard driver supports (4) different dimming protocols - TRIAC/ELV/0-10V/PWM.
- Dimming percentage less than 1% - All dimming methods.

Mounting:
- Swing out pressure fit stainless steel mounting clips.
- Adjustable from 0.07" to 1.25" ceiling thickness.
- Ceiling cutout: 4.05" dia.

Lifespan:
- Estimated 50,000+ hour LED lifespan based on IES LM-80 results and TM-21 calculations.

Listings:
- UL listed for wet locations (suitable for use in open or uncovered applications)

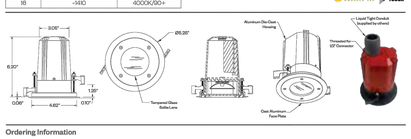
Performance Data (with Medium beam)

Wattage	Delivered Lumens	Color Temp/CRI
10	>1040	4000K/80+
16	>1410	4000K/80+

Assembled in the USA

5 year limited warranty

POWER CLASS 2 DIMMING



Ordering Information

ORDX4	-		-		-		-		-	UDM
1		2		3		4		5		6

1 Model	2 Wattage	3 CCT/CRI	4 Beam Spread	5 Finish	6 Driver
ORDX4	10 10W 16 16W	27 2700K/80 CRI 30 3000K/80 CRI 40 4000K/80 CRI 27P 2700K/90+ CRI 30P 3000K/90+ CRI 40P 4000K/90+ CRI	BP spot 15° N narrow 24° M medium 39°	BLK black BLKW silver BRZ bronze CSTM-RB custom red/black	UDM universal 4 in 1 dimming TRIAC/ELV/0-10V/PWM

Amerlux reserves the right to change details that do not affect overall function and performance.

Amerlux® LLC • 178 Bauer Drive, Oakland, NJ 07436 • P: 973-883-8000 F: 973-883-8008 • amerlux.com

LIT-ED2020 • 03/14/20 • Page 1 of 1

amerlux
A Delta Group Company

Shimstone Design Studio
LIGHTING DESIGN

SHEETZ 2.0

STREET WRAP™ FLEX **BACK-BEND**

Our border solution is perfect for adding an extra punch of color to your building! No pricey customization or set-up fee. Enjoy wrapping your building quickly and easily.

SPECIFICATIONS

Certifications	UL 94 V-0, UL & cUL Recognized (SAM Manual), CE, RoHs
Dimensions	24' and Custom Lengths Available
Input	24V
Operating Temp	-40° to +65°C
Power	3.66 W per foot
Power Supply	PLED 24V
Protection Grade	IP67
Run Footage	Max. 24'

FEATURES
- Bends front to back
- 2.36" minimum bending radius
- Dual extrusion, diffused silicone lens and thermal conductive base
- Easy installation
- Applications: neon tube light source, building and sign outline lighting, and cove lighting, indoor/outdoor
- UV resistant
- Evenly illuminates
- Standard colors cuttable every 1.81/97 (100mm), RGB cuttable every 1.81/69" (72mm)

PRODUCT OPTIONS

24 SERIES						
Color	Wavelength/CCT	Jacket Color	Lm./ft	Cut Section Length	Max Length/96 W PS	W/Max Length	SKU
Sign White	6500K	White	305	3.937/9" (100mm)	287.4016"	87.7	M-SX024-65
Natural White	5000K	White	305	3.937/9" (100mm)	287.4016"	87.7	M-SX024-50
Medium White	4000K	White	305	3.937/9" (100mm)	287.4016"	87.7	M-SX024-40
Red	625 nm	Red	82	3.937/9" (100mm)	287.4016"	87.7	M-SX024-RD
Blue	468 nm	Blue	20	3.937/9" (100mm)	287.4016"	87.7	M-SX024-BL
Green	525 nm	Green	180	3.937/9" (100mm)	287.4016"	87.7	M-SX024-GR
Yellow	590 nm	Yellow	158	3.937/9" (100mm)	287.4016"	87.7	M-SX024-YL
Orange	609 nm	Orange	116	3.937/9" (100mm)	287.4016"	87.7	M-SX024-OR
Cyan	N/A	White	36	2.8719" (71.6mm)	287.7244"	87.5	M-SX024-CN
Purple	N/A	White	45	2.8719" (71.6mm)	287.7244"	87.5	M-SX024-AM
Pink	N/A	White	17	2.8719" (71.6mm)	287.7244"	87.5	M-SX024-PK
RGB	N/A	White	N/A	2.8719" (71.6mm)	287.7244"	87.5	M-SX024-3C

Custom colors will utilize white LEDs behind a color matched silicone over molding and the MOQ is 656.168ft. (200 meters).

IMPORTANT WARRANTY INFO

This warranty is void if any cuts are made in the field. Any cuts must be made by Principal LED to maintain warranty.

NOTE: The LED neon itself and all its components may not be mechanically stressed. Please ensure that the power supply is adequate to operate the total load. Only qualified personnel should be allowed to perform installations. The design of the housing should be according to the IP standards in the application. If surge protection structure not within the power supply, additional surge protection device is required. Please read the instructions carefully before using the product and keep the user manual, and please ensure you have read and fully understood it. Please do not twist the product and do not bend it in wrong direction, see Figure 1 for a correct demonstration.

SDS PROJECT #: 0609.0 | MODEL #: REFER TO LIGHTING FIXTURE SCHEDULE FOR MODEL NUMBER AND DESCRIPTION | TYPE: XL1

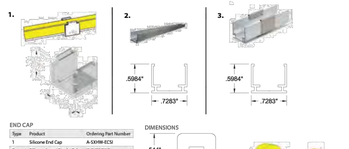
Shimstone Design Studio LLC, 7400 1st Avenue, North Bergen, NJ 07047, Tel: 201.861.5390

Shimstone Design Studio
LIGHTING DESIGN

SHEETZ 2.0

INSTALLATION ACCESSORIES

Type	Description	Part Number
1	Transparent PC clips	A-SIMH-CLPL
2	3.28 ft. and 8 ft. aluminum mill finish extrusions for outdoor application	A-SIMH-EXAL
3	Aluminum mill finish clips for outdoor applications - 1.96687/pcs	A-SIMH-CLAL



END CAP

Type	Product	Ordering Part Number
1	Silicone End Cap	A-SXHW-ECSI
2a	Silicone Insert Single Color	X-C-SX-SICC
2b	Silicone Insert RGB	X-C-SX-SIRC
3	Silicone Glue	A-SWT-S-EA

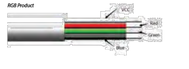
End cap quantities are available upon request.

DIMENSIONS

WIRING

Single Color Product

RGB Product



SDS PROJECT #: 0609.0 | MODEL #: REFER TO LIGHTING FIXTURE SCHEDULE FOR MODEL NUMBER AND DESCRIPTION | TYPE: XL1

Shimstone Design Studio LLC, 7400 1st Avenue, North Bergen, NJ 07047, Tel: 201.861.5390

ADDITIONAL FIXTURE INFO

d-series

D-Series Size 0

LED Area Luminaire

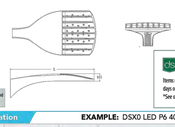
Catalog Number
Notes
Type

Hit the Tab key or mouse over the page boxes at left to see this information.

Specifications

EPA:	0.46 ft² (0.04 m²)
Length:	26.18" (66.5 cm)
Width:	14.06" (35.7 cm)
Height H1:	2.26" (5.7 cm)
Height H2:	7.46" (18.9 cm)
Weight:	23 lbs (10.4 kg)

Design Series options indicated by this color background.



Introduction

The modern styling of the D-Series features a highly refined aesthetic that blends seamlessly with its environment. The D-Series offers the benefits of the latest in LED technology into a high performance, high efficacy, long-life luminaire.

The photometric performance results in sites with excellent uniformity, greater pole spacing and lower power density. D-Series outstanding photometry aids in reducing the number of poles required in area lighting applications, with typical energy savings of 70% and expected service life of over 100,000 hours.

design select

Items marked by a shaded background qualify for the Design Select program and ship in 15 days or less. To learn more about Design Select, visit www.acuitybrands.com/designselect. *See ordering tree for details.

Ordering Information

EXAMPLE: DSX0 LED P6 40K 70CRI T3M MVOLT SPA NLTAIR2 PIRHN DDBXD

DSX0 LED												
Series	LEDs	Color Temperature *	Color Rendering Index *	Distribution					Voltage		Mounting	
DSX0 LED	Forward optics P1 P5 P2 P6 P3 P7 P4 Rotated optics P10* P12* P11* P13*	(this section 70CRI only) 30K 3000K 40K 4000K 50K 5000K (this section 80CRI only, extended lead times apply) 27K 2700K 30K 3000K 35K 3500K 40K 4000K 50K 5000K	70CRI 7OCRI 70CRI 80CRI 80CRI 80CRI 80CRI 80CRI	AFR Automotive front row TFTX Type I short T2M Type II medium T3M Type III medium T3LG Type III low glare† T4M Type IV medium T4LG Type IV low glare† TFTFM Forward throw medium T5M Type V medium T5LG Type V low glare T5W Type V wide BLC3 Type III backlight control* BLC4 Type IV backlight control* LCCO Left corner cutoff* RCCO Right corner cutoff*		MVOLT (120V-277V)* HVOLT (347V-480V)* XVOLT (277V-480V)* 120 * † 208 * † 240 * † 277 * † 347 * † 480 * †		Shipped included SPA Square pole mounting (#5 drilling, 1.7" min. SQ pole)* RPA Round pole mounting (#5 drilling, 2" min. RND pole)* SPAS Square pole mounting (#5 drilling, 3" min. SQ pole)* RPAS Round pole mounting (#5 drilling, 3" min. RND pole)* SPABN Square narrow pole mounting (#8 drilling, 3" min. SQ pole)* WBA Wall bracket * MA Mast arm adapter (mounts on 2 3/8" OD horizontal tenon)

Control Options	Other Options	Finish
Shipped installed NLTAIR2 PIRHN nLight AIR gen 2 enabled with bi-level motion + ambient sensor, 8-40' mounting height, ambient sensor enabled at 25 fc *,**,*** PIR High/low, motion/ambient sensor, 8-40' mounting height, ambient sensor enabled at 25 fc *,**,*** PIRH NEMA twist-lock receptacle only (controls ordered separately) *,** PIRHS Five-pin receptacle only (controls ordered separately) *,**	PE10" Seven-pin receptacle only (controls ordered separately) *,**	Shipped installed HS Houseside shield (black finish standard) * LSD Left rotated optics* RSO Right rotated optics* CCO Coastal Construction * HA 50°C ambient operation * BAA Buy American Act Compliant SF Single fuse (120, 277, 347V) * DF Double fuse (208, 240, 480V) * Shipped separately EGSA External Gear Shield (reversible, field install required, matches housing finish) RSSH Roof Spikes (field install required)	Field Adjustable DDBXD Dark Bronze DBLXD Black DNAXD Natural Aluminum DWHXD White DDBTXD Textured dark bronze DBLBXD Textured black DNATXD Textured natural aluminum DWHGXD Textured white

Accessories	
Ordered and shipped separately	
DLT25 1.5 JU	Photocell - SSL twist-lock (120-277V) *
DLH07 1.5 JU	Photocell - SSL twist-lock (347V) *
DLH480 1.5 JU	Photocell - SSL twist-lock (480V) *
DSHS01 SW	Shield - single unit
DSHS01 IW	Shield - single unit (inter-optic version - quantity of 4 required)
DSHS01 (P6DS)	Round pole adapter kit (drilling specific finish)
DSHS01 (P5DS)	Round pole adapter kit (drilling specific finish)
DSHS01 (P8DS)	Square pole adapter kit (drilling specific finish)
DSHS01 (P9DS)	External gear shield (specify finish)
DSHS02 (P8DS)	Wall spike deterrent bracket (specify finish)

NOTES
1. Round pole option available with packages P1S, P1T, P1D and P1E. Must be combined with option LSO or RSO.
2. 350, 400, and 500 available in 70CRI and 80CRI. 27K and 30K only available with 80CRI. Contact Technical Support for other possible combinations.
3. T2M, T4LG, BLC3, BLC4, LCCO, RCCO not available with option HS.
4. HVOLT driver operates on any line voltage from 347-480V (50/60 Hz).
5. XVOLT driver operates on any line voltage from 277-480V (50/60 Hz).
6. Not available with any voltage between 277V and 480V (50/60 Hz).
7. XVOLT not available in packages P1, P2 or P10. XVOLT not available with fusing (DF or DF).
8. Not available with PIR, PIRH, PIRHN, PIRHS, PE10", PE7", PE7D, PE7T.
9. HSBA cannot be combined with Type 5 distributions (any distribution with 5 in the middle).
10. NLTAIR2 and PIRHN must be ordered together. For more information on nLight AIR 2.0.
11. PIR and PIRH not available with NLTAIR2 PIRHN, PIR, PIRH, PIR1FC3V, PIRH1FC3V, PIRHS, PIRHNS, PIRHNS, PIRHN

	QTY	LABEL	DESCRIPTION
WALL MOUNTED	7	XT	SEW12146 5FT L20W AN08 120-277V 4000K PSE SMA OAP (6.00 IN.) FIXT. HEAD FACTORY SET TO 50 DEGREE TILT AWAY FROM BLDG. DIM TO 50 PERCENT LUMEN OUTPUT.

Styk Exterior Wall - Stem

SEW12146 2.20 in

SPI LIGHTING
PROJECT DETAILS

JOB NAME: SHEETZ
TYPE: 5' Awning Light
NOTES: Fixture head to be fixed at a 5o degree angle down away from the building.

ORDERING CODE: SEW12146 | 5FT-L20W[AN08] | 120-277V | 4000K | PSE | SMA | OAP[6.00in.]
*Please Note: Default specifications " **DF_XXX** " will not appear in the ordering code.*

DESCRIPTION

Styk was built to provide the most lumens with the smallest luminaire package, while optimizing life. Not limited to decorative lighting, effective functional lighting is provided through the optimal light control in this minimal package. It's three optical offerings enable tremendous flexibility including wall washing, wall grazing, and asymmetric lighting solutions. It is excellent at lighting signs and facades. The family features wall, ceiling, and pendant models in a variety of stylish, clean mounting options. Available in 1' to 8' lengths, Styk can be mounted individually or configured in runs.

FEATURES & BENEFITS

- Sleek 1.5" diameter housing
- A forward throw optic, for even wall wash illumination, is standard
- Symmetrical optic options are available for more volumetric illumination
- Lamp body can be rotated up to 330° and locks into position for precise fixture alignment
- Up to 1,450 lumens per foot delivered (with Forward Throw distribution)
- Up to 18" projection with no vertical support needed
- Anodized finish provides durable corrosion protection
- All visible fasteners are flush mounted, providing a clean design
- Handcrafted in USA, BABA Compliant

SPECIFICATIONS

- **LIGHT SOURCE:** IP66 white LED light engine
- **CRI:** 80+ or 90+
- **LUMEN MAINTENANCE:** L70 = >50,000 Hrs.
- **EFFICACY:** 102 lm/W delivered (with Forward Throw distribution)
- **CCT:** 2700K, 3000K, 3500K, 4000K, 5000K
- **VOLTAGE:** 120-277V standard
- **DRIVER:** Includes one remote damp listed Class 2 power supply and either a damp location or wet location enclosure, except 8FT-L113W which has two. Black power cord standard unless otherwise specified. Max distance to the driver (including OAP) is: #18 AWG = 50', #16 AWG = 75', #14 AWG = 100'. For extended distances, contact factory.
- **DIMMING:** 0-10V controls standard to 1%
- **CONTROLS:** Contact factory for control options (e.g., Lutron Athena, Current NX, nLight, Enlighted, Encelium, Wattstopper, WaveLinx, or Casambi).
- **EMERGENCY:** Remote battery option is provided with 10W Constant Power Battery back-up, providing 90 Minutes of Emergency operation. Contact factory for other Emergency options.
- **INTEGRATED SURGE PROTECTION:** LED components are protected against minor surge events
- **CONSTRUCTION:** Extruded aluminum construction provides durable protection for internal components and is recyclable
- **FINISH:** Housing available in anodized finishes only. End caps and mounting components painted to match.
- **MODIFICATIONS:** Consult factory for all modification requests, including RGB and static LED colors
- **APPROVALS:** ETL listed to UL standards (US and Canada) for use in wet locations

	QTY	LABEL	DESCRIPTION
WALL MOUNTED	3	XT1	SEW12146 4FT L16W AN08 120-277V 4000K PSE SMA OAP (6.00 IN.) FIXT. HEAD FACTORY SET TO 50 DEGREE TILT AWAY FROM BLDG. DIM TO 30 PERCENT LUMEN OUTPUT.

Styk Exterior Wall - Stem

SEW12146 2.20 in

SPI LIGHTING
PROJECT DETAILS

JOB NAME: SHEETZ
TYPE: 4' Awning Light
NOTES: Fixture head to be fixed at a 5o degree angle down away from the building.

ORDERING CODE: SEW12146 | 4FT-L16W[AN08] | 120-277V | 4000K | PSE | SMA | OAP[6.00in.]
*Please Note: Default specifications " **DF_XXX** " will not appear in the ordering code.*

DESCRIPTION

Styk was built to provide the most lumens with the smallest luminaire package, while optimizing life. Not limited to decorative lighting, effective functional lighting is provided through the optimal light control in this minimal package. It's three optical offerings enable tremendous flexibility including wall washing, wall grazing, and asymmetric lighting solutions. It is excellent at lighting signs and facades. The family features wall, ceiling, and pendant models in a variety of stylish, clean mounting options. Available in 1' to 8' lengths, Styk can be mounted individually or configured in runs.

FEATURES & BENEFITS

- Sleek 1.5" diameter housing
- A forward throw optic, for even wall wash illumination, is standard
- Symmetrical optic options are available for more volumetric illumination
- Lamp body can be rotated up to 330° and locks into position for precise fixture alignment
- Up to 1,450 lumens per foot delivered (with Forward Throw distribution)
- Up to 18" projection with no vertical support needed
- Anodized finish provides durable corrosion protection
- All visible fasteners are flush mounted, providing a clean design
- Handcrafted in USA, BABA Compliant

SPECIFICATIONS

- **LIGHT SOURCE:** IP66 white LED light engine
- **CRI:** 80+ or 90+
- **LUMEN MAINTENANCE:** L70 = >50,000 Hrs.
- **EFFICACY:** 102 lm/W delivered (with Forward Throw distribution)
- **CCT:** 2700K, 3000K, 3500K, 4000K, 5000K
- **VOLTAGE:** 120-277V standard
- **DRIVER:** Includes one remote damp listed Class 2 power supply and either a damp location or wet location enclosure, except 8FT-L113W which has two. Black power cord standard unless otherwise specified. Max distance to the driver (including OAP) is: #18 AWG = 50', #16 AWG = 75', #14 AWG = 100'. For extended distances, contact factory.
- **DIMMING:** 0-10V controls standard to 1%
- **CONTROLS:** Contact factory for control options (e.g., Lutron Athena, Current NX, nLight, Enlighted, Encelium, Wattstopper, WaveLinx, or Casambi).
- **EMERGENCY:** Remote battery option is provided with 10W Constant Power Battery back-up, providing 90 Minutes of Emergency operation. Contact factory for other Emergency options.
- **INTEGRATED SURGE PROTECTION:** LED components are protected against minor surge events
- **CONSTRUCTION:** Extruded aluminum construction provides durable protection for internal components and is recyclable
- **FINISH:** Housing available in anodized finishes only. End caps and mounting components painted to match.
- **MODIFICATIONS:** Consult factory for all modification requests, including RGB and static LED colors
- **APPROVALS:** ETL listed to UL standards (US and Canada) for use in wet locations

	QTY	LABEL	DESCRIPTION
WALL MOUNTED	1	XT2	SEW12146 6FT L24W AN08 120-277V 4000K SMA PSE OAP12. DIM TO 50 PERCENT LUMEN OUTPUT.

Styk Exterior Wall - Stem

SEW12146 2 in

SPI LIGHTING
PROJECT DETAILS

JOB NAME: SHEETZ
TYPE:
NOTES:

ORDERING CODE: SEW12146 | 5FT-L20W[AN08] | 120-277V | 4000K | SMA
*Please Note: Default specifications " **DF_XXX** " will not appear in the ordering code.*

DESCRIPTION

Styk was built to provide the most lumens with the smallest luminaire package, while optimizing life. Not limited to decorative lighting, effective functional lighting is provided through the optimal light control in this minimal package. It's three optical offerings enable tremendous flexibility including wall washing, wall grazing, and asymmetric lighting solutions. It is excellent at lighting signs and facades. The family features wall, ceiling, and pendant models in a variety of stylish, clean mounting options. Available in 1' to 8' lengths, Styk can be mounted individually or configured in runs.

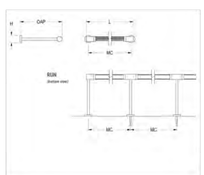
FEATURES & BENEFITS

- Sleek 1.5" diameter housing
- A forward throw optic, for even wall wash illumination, is standard
- Symmetrical optic options are available for more volumetric illumination
- Lamp body can be rotated up to 330° and locks into position for precise fixture alignment
- Up to 1,450 lumens per foot delivered (with Forward Throw distribution)
- Up to 18" projection with no vertical support needed
- Anodized finish provides durable corrosion protection
- All visible fasteners are flush mounted, providing a clean design
- Handcrafted in USA

SPECIFICATIONS

- **LIGHT SOURCE:** IP66 white LED light engine
- **CRI:** 80+ (contact factory for 90+)
- **LUMEN MAINTENANCE:** L70 = >50,000 Hrs.
- **EFFICACY:** 102 lm/W delivered (with Forward Throw distribution)
- **CCT:** 3000K, 3500K, or 4000K
- **VOLTAGE:** 120-277V standard
- **DRIVER:** Includes one remote damp listed Class 2 power supply and wet location enclosure, except 8FT-L113W which has two. Black power cord standard unless otherwise specified. Max distance to the driver (including OAP) is: #18 AWG = 50', #16 AWG = 75', #14 AWG = 100'. For extended distances, contact factory.
- **DIMMING:** 0-10V controls standard to 1%
- **EMERGENCY:** Emergency battery remote optional
- **INTEGRATED SURGE PROTECTION:** LED components are protected against minor surge events
- **CONSTRUCTION:** Extruded aluminum construction provides durable protection for internal components and is recyclable
- **FINISH:** Housing available in anodized finishes only. End caps and mounting components painted to match.
- **MODIFICATIONS:** Consult factory for all modification requests, including RGB and static LED colors
- **APPROVALS:** ETL listed to UL standards (US and Canada) for use in wet locations

DIMENSIONS



1FT	L 17.5 in 44.4 cm	H 2.2 in 5.6 cm	OAP 12 in 30.5 cm	MC 16.2 in 41.1 cm
Mounting Weight: Approximate: 5 lb (3 kg)				
2FT	L 29.2 in 74.2 cm	H 2.2 in 5.6 cm	OAP 12 in 30.5 cm	MC 28 in 71.1 cm
Mounting Weight: Approximate: 5 lb (3 kg)				
3FT	L 41 in 104.1 cm	H 2.2 in 5.6 cm	OAP 12 in 30.5 cm	MC 39.7 in 100.8 cm
Mounting Weight: Approximate: 5 lb (3 kg)				
4FT	L 52.5 in 133.4 cm	H 2.2 in 5.6 cm	OAP 12 in 30.5 cm	MC 51.2 in 130 cm
Mounting Weight: Approximate: 5 lb (3 kg)				
5FT	L 64.5 in 163.8 cm	H 2.2 in 5.6 cm	OAP 12 in 30.5 cm	MC 63.2 in 160.5 cm
Mounting Weight: Approximate: 10 lb (5 kg)				
6FT	L 78.2 in 198.6 cm	H 2.2 in 5.6 cm	OAP 12 in 30.5 cm	MC 77 in 195.6 cm
Mounting Weight: Approximate: 10 lb (5 kg)				
8FT	L 102.2 in 259.6 cm	H 2.2 in 5.6 cm	OAP 12 in 30.5 cm	MC 101 in 256.5 cm
Mounting Weight: Approximate: 10 lb (5 kg)				

	QTY	LABEL	DESCRIPTION
WALL MOUNTED	7	XX	VWM-H-L17/840-TL-DBZ-CGL-DIM-UNV (BRONZE COLOR 80CRI). DIM TO 30 PERCENT LUMEN OUTPUT.

Shimstone Design Studio
LIGHTING DESIGN

SHEETZ 2.0

VWM LED
Voltaire Mini Architectural Wall Pack

Williams

CATALOG #:
TYPE:
PROJECT:

FEATURES

- Designed to illuminate sidewalks, entrances, and building facades
- Intended for use in both uplight and downlight applications
- Fixtures are up to 80% energy-conpared to HID systems
- Blends seamlessly with a variety of architectural styles
- Available on QuickShip
- Made-Right-Here® in the USA

ORDERING EXAMPLE: VWM H – L20/740 – T3 – DBZ – SCGL – OPTIONS – DIM – UNV

ORDERING INFO

SERIES	TYPE [1]	LUMENS [2]	CRI/CCT	DISTRIBUTION [3]
VWM	H Vertical	L17 1,700lm [4]	740 70CRI/4000K	TL Lumen-Iten-Distribution [3]
	V Vertical	L17 1,700lm [4]	830 80CRI/3000K	T3 Type III [3]
		L20 2,000lm	840 80CRI/4000K	
		80 CRI	850 80CRI/5000K	
		L17 1,700lm	930 90CRI/3000K	
		L17 1,700lm	940 90CRI/4000K	

SPECIFICATIONS

- **HOUSING** – Die-cast aluminum enclosure.
- **THERMAL MANAGEMENT** – Integral die-cast aluminum housing and heat sink provide passive thermal management. Rated ambient operating temperature: -30°C to 50°C (-22 °F to 122°F). Tc 70°C.
- **OPTICAL SYSTEM** – General output distribution.
- **LED SOURCE** – 4000-5000K, 4000K, or 5000K CCT, 70 or 80 CRI LEDs. L20 standard (lower) delays ~3% 6 L70 (Tq) or more.
- **LED DRIVER** – 0-10V dimming. Suitable for use on a 20A circuit (max) per NEC. Sound rating per UL 1782 <22DB, at full load. FCC Class A compliant. Quick-connect terminals. Standard: Calculated L70 >50,000 hours per IES TM-21.
- **FINISH** – Super durable polyester powder coat finish, 2.5 mil average, matte texture, multi-stage pretreated metal, meets and exceeds AAMA 2604 specifications for UV and chalk resistance.
- **MOUNTING** – Surface mounts directly over a 4" maximum outlet box. Must be mounted to a minimum 3/4" plywood or unitized support fixture weight (6.9 Lbs).
- **LISTINGS** –
  - Wet location certified as luminaire suitable for roof locations.
  - IDA Dark-Sky-approved (lowest/zero uplight).
  - RoHS compliant.
  - IP65-rated
  - Fixture is compliant with PC option.
- **WARRANTY** – 5-year limited warranty, see website for detail.

FINISH OPTIONS [7]

BLK	Black (RAL #9004)
DBZ	Dark bronze
MBR	Medium bronze
SCP	Copper vein
SLV	Satin aluminum (RAL #9006)
WHT	White (RAL #9003)

SHIELDING

SGCL	Micro-prismatic tempered glass lens
CGL	Clear tempered glass lens

OPTIONS

PC	Button-style photocell [8]
SP	10kA/5kV surge protection
TP	Tamper-resistant Torx head screws [9]

CONTROL

DIM	Dimming driver powered for 0-10V (see voltage restrictions)

VOLTAGE

120	120V
208	208V
277	277V
UNV	120-277V

ACCESSORIES

TPTX-25 TOOL Tamper-resistant tool for Torx head screws. [9]

QUICKSHIP

VWMH-L20/840-TL-DBZ-CGL-DIM-UNV
VWMH-L17/840-TL-DBZ-CGL-GS-DIM-UNV

NOTES

- Reference 2 for FIXTURE DETAILS.
- Lumens value based on 5000 CCT. Actual lumens may vary +/-5%, see page 2 for FIXTURE PERFORMANCE DATA.
- Not available with THERMOSHIELD.
- Available with TRI-CRICCT only.
- 120 & 277 only.
- 3 & 4 only.
- See page 3 for FINISH OPTIONS.

* Factory-installed. 120V, 208V, or 277V only; must specify voltage. See page 3 for FIXTURE DETAILS. Left stub refers viewed from behind fixture.
** Tamper-resistant Torx head only. Safety screws providing added support to the lens are not tamper-resistant (lens is sealed to the fixture via adhesive). Requires a tamper-resistant tool, see accessories.
*** Tamper-resistant tool must be ordered separately. Please specify quantity required per project.

SDS PROJECT #: 0609.0 | MODEL #: REFER TO LIGHTING FIXTURE SCHEDULE FOR MODEL NUMBER AND DESCRIPTION | TYPE: XS2

Shimstone Design Studio
LIGHTING DESIGN

SHEETZ 2.0

VWM LED
Voltaire Mini Architectural Wall Pack

FIXTURE PERFORMANCE DATA

	LED PACKAGE	DISTRIBUTION	WATTAGE	CCT	CLEAR GLASS (CGL) DELIVERED LUMENS	CLEAR GLASS (CGL) EFFICACY (lm/W)	SOLITE GLASS (SGCL) DELIVERED LUMENS	SOLITE GLASS (SGCL) EFFICACY (lm/W)	BUG RATINGS
VWM	L10	TL	10	3000	1081	102	1000	94	B1-U0-G0
				4000	1122	106	1038	98	
				5000	1084	116	1072	103	
	L17		16	3000	1625	112	1515	11	
				4000	1521	116	1507	12	
				5000	1469	112	1457	111	
	L20	T3	20	3000	2064	100	2012	107	B1-U0-G1
				4000	2088	105	2034	107	
				5000	2020	115	2014	114	
VWM-L	L10	TL	10	3000	1081	102	1000	94	B1-U0-G0
				4000	1122	106	1038	98	
				5000	1084	116	1072	103	
	L17		16	3000	1625	112	1515	11	
				4000	1521	116	1507	12	
				5000	1469	112	1457	111	
	L20	T3	20	3000	2064	100	2012	107	B1-U0-G1
				4000	2088	105	2034	107	
				5000	2020	115	2014	114	

- Wattage shown is average for 120V through 277V input.
- Efficacy/lumen output shown is average based on wattage input of 120V through 277V.
- Photometrics tested in accordance with IESNA LM-79. Results shown are based on 25°C ambient temperature.

LUMEN MAINTENANCE

	AMBIENT TEMP.	EXPECTED LTD HOURS (TM-21)
VWM-L	25°C	>50,000
	30°C	>50,000
	40°C	>50,000
VWM	25°C	>50,000
	30°C	>50,000
	40°C	>50,000

- Predicted lumen maintenance calculated from LED manufacturer IES LM-80 data and in situ temperature measurement.
- Reported L70 hours in accordance with IES TM-21

DISTRIBUTION DETAILS

SDS PROJECT #: 0609.0 | MODEL #: REFER TO LIGHTING FIXTURE SCHEDULE FOR MODEL NUMBER AND DESCRIPTION | TYPE: XS2

RED LEONARD ASSOCIATES
1340 Kemper Meadow Dr, Forest Park, OH 45240
513-574-9500 | redleonard.com

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PROJECT NAME:
SHEETZ
SMITHSBURG, MD
DRAWING NUMBER:
RL-10316-S1-R1

SHEETZ

DOWNLIGHT

STREET WRAP

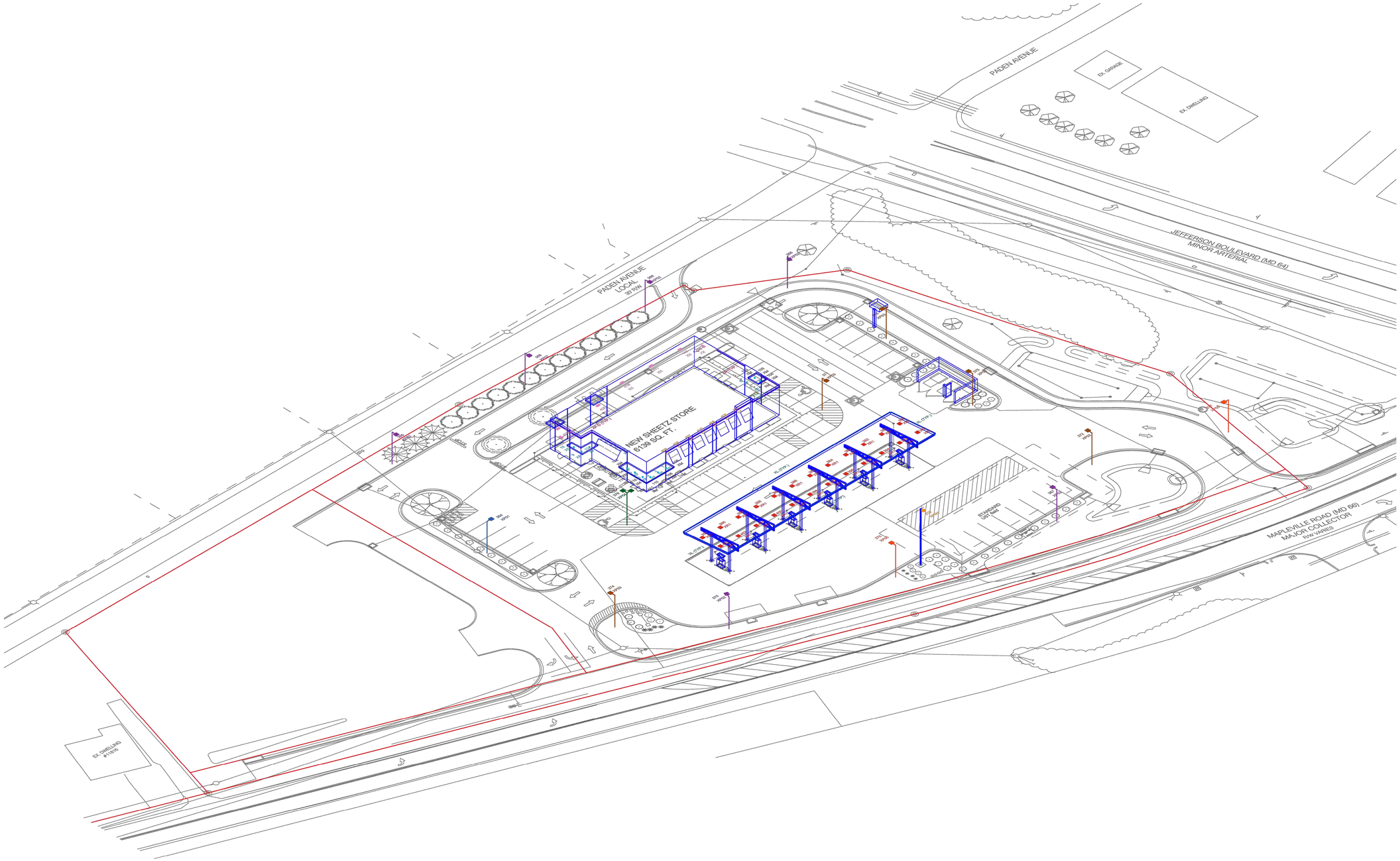
AREA

FLAGPOLE

CANOPY

WALL MOUNTED

WALL MOUNTED



REDLEONARD ASSOCIATES

1340 Kemper Meadow Dr, Forest Park, OH 45240
513-574-9500 | redleonard.com

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PROJECT NAME:
SHEETZ
SMITHSBURG, MD
DRAWING NUMBER:
RL-10316-S1-R1

SHEETZ

Washington County MARYLAND
DEPARTMENT OF PLANNING & ZONING
COMPREHENSIVE PLANNING | LAND PRESERVATION | FOREST CONSERVATION | GIS

MEMORANDUM

TO: Washington County Planning Commission

FROM: Travis Allen, Senior Planner

DATE: November 3, 2025

RE: Forest Conservation Mitigation Approval for Sheetz - Smithsburg (SP-25-011)

Attached you will find supporting documentation for a request to meet forest conservation requirements for this project. The applicant is requesting to establish an offsite easement to satisfy the forest mitigation requirement for a new Sheetz at 11842 Mapleville Road.

Enclosed for your review are two documents in support of the applicant's request. These include the easement plat; which shows the intended onsite easement location; and the justification letter from Qualified Professional Dustin Horst that make their case for this request.

Article 10.1 of the Washington County Forest Conservation Ordinance (FCO) describes the Preferred Sequence of Techniques for Mitigation for forest conservation plans. This list describes a hierarchy of mitigation techniques ranging from those most preferred (onsite retention or planting) to those least preferred (the payment of fee in lieu). The overall intent of the FCO is to preserve or create as much forest onsite as is feasible within the constraints of each development project before meeting mitigation obligations offsite.

If you have questions or comments regarding this request, please contact me using the information provided below.

Travis Allen
Senior Planner
(240) 313-2432
tallen@washco-md.net

FREDERICK, SEIBERT & ASSOCIATES, INC.
128 South Potomac Street, Hagerstown, MD 21740
301-791-3650 fsa-md.com
CIVIL ENGINEERING | SURVEYING | LANDSCAPE ARCHITECTURE

MEMO — Offsite Mitigation **SUBJECT** — Sheetz Smithsburg (SP-25-011)

TO — Washington County Planning Commission

CC — Travis Allen

FROM — Dustin Horst

REMARKS:

To meet the necessary requirements for forestation for the Site Plan for Sheetz Smithsburg, the owner is requesting to provide forest mitigation with off-site retention. There is no qualified forest on site and it is getting disturbed and developed by the proposed construction of a gas station and associated stormwater management.

By using the Preferred Sequence of Techniques for Mitigation in the Washington County Forest Conservation Ordinance per Article 10.1, all techniques such as selective clearing and supplemental planting, onsite & offsite afforestation and reforestation, and natural regeneration have been exhausted. The proposed site does not allow the minimum requirements for any kind of forest area on site.

The owner has existing off-site forest that is already in a priority retention area (100-year floodplain) to use and would not have to go out and plant, post bonds and maintain the area for three years. Please consider these items and allow the owner to move forward with off-site retention at a 2:1 ratio.

Respectfully submitted,

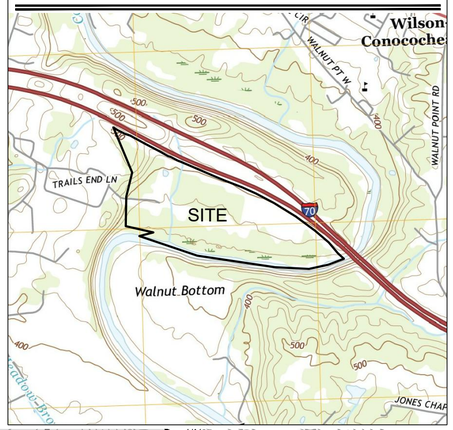
Dustin Horst
Qualified Professional

4/11/2025 2:25 PM

VICINITY MAP

SCALE: 1" = 2,000'

ADC MAP 19, G5
MASON DIXON, PENNSYLVANIA



FOREST CONSERVATION SEQUENCE OF CONSTRUCTION

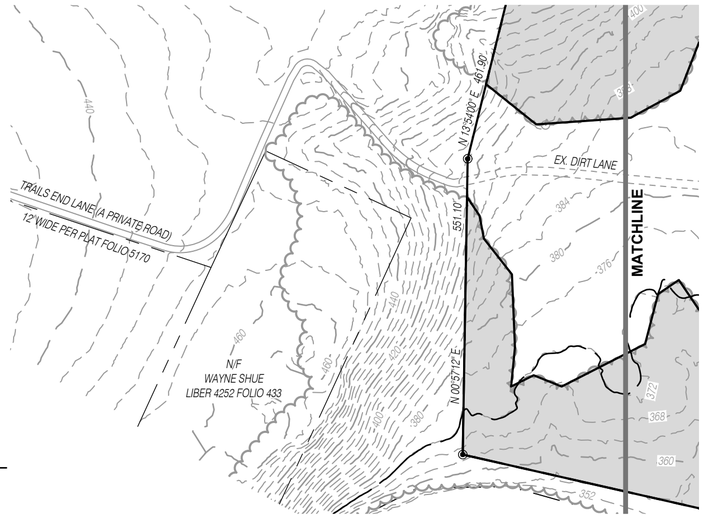
1. All temporary protection devices and/or permanent devices shall be put into place.
   - Permanent signage will be place as shown on the plan around the perimeter of the entire Forest Area within 30 days of subdivision plat approval and/or completion of construction.
   - During any building or site construction, the forest retention area(s) shall be protected by highly visible, well anchored temporary fencing.
   - All temporary fencing shall be in place prior to any grading or land clearing.
   - All temporary fencing shall be maintained throughout construction and until all graded areas have been stabilized.
   - Attachment of signs or any other objects to trees is prohibited.
   - No equipment, machinery, vehicles, materials or excessive pedestrian traffic shall be allowed within protected areas.

2. A pre-construction meeting will be required after the boundaries of the limits of disturbance have been staked and flagged, the forest protection devices have been installed, and before any disturbance has taken place on the site. It is the owner and/or developer's responsibility to arrange for the pre-construction meeting. The owner and/or developer shall contact the Washington County Planning and Zoning Department (240-313-2430) for inspection of the installed devices prior to the start of construction with at least five (5) days notice. If the inspection reveals improperly installed protection devices, corrections will have to be made and re-inspected prior to the start of construction.

3. Once approval has been granted by the Washington County Plan Review & Permitting Department, clearing and/or grading of the site for construction of street, utility, and building areas may commence.

4. A post-construction meeting will be required after all construction has ceased and graded areas have been stabilized, all temporary protective devices shall be removed and replaced with the appropriate permanent signage. It is the owner and/or developer's responsibility to arrange for the post-construction meeting. The owner and/or developer shall contact the Washington County Department of Plan Review and Permitting (240-313-2430) for inspection of the final installed devices with at least five (5) days notice. If the inspection reveals improperly installed permanent protection devices, corrections will have to be made and re-inspected prior to the completion of site stabilization.

LINE	BEARING	DISTANCE
FL1	N 10°49'05" E	84.97'
FL2	S 60°23'12" E	78.34'
FL3	N 57°54'55" E	89.84'
FL4	S 75°21'06" E	120.08'
FL5	S 58°07'38" E	49.93'
FL6	S 86°01'29" E	213.38'
FL7	N 71°41'25" E	70.46'
FL8	S 72°18'58" E	81.29'
FL9	S 04°55'53" W	71.89'
FL10	N 85°27'20" W	671.88'

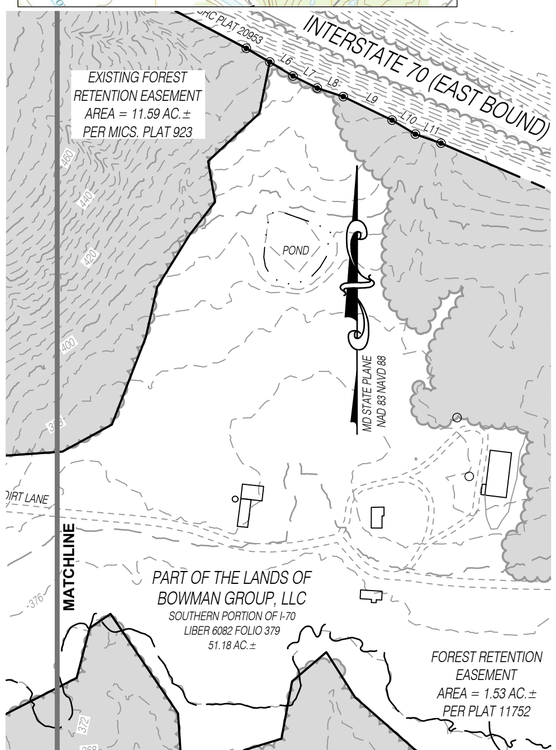


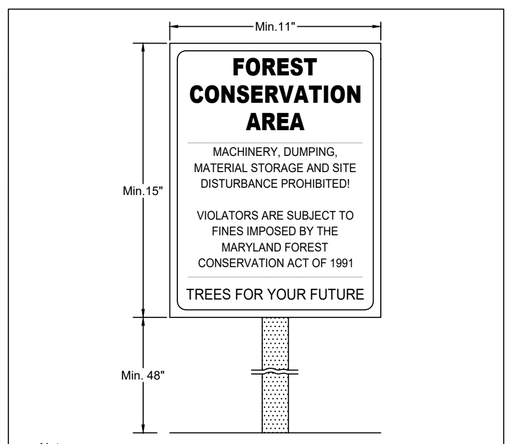
QUALIFIED PROFESSIONAL

I certify that I am a qualified professional per requirements of COMAR 08.19.06.01 for qualified professional status and, therefore, am qualified to prepare the attached Forest Conservation Plan. I further certify that this plan was prepared by me or under my supervision using the methods provided by the Washington County Forest Conservation Ordinance and Forest Conservation Manual. I certify that this Forest Retention Easement Plat is accurate and complete.

Dustin Horst — Date 4/11/2025

MISC PLAT NO _____
DATE
WASHINGTON COUNTY





Notes:
1. Bottom of signs to be higher than top of tree protection fence.
2. Signs to be placed approximately 100 feet apart. Conditions on site affecting visibility may warrant placing signs closer or farther apart.
3. Attachment of signs to trees is prohibited.

◊ RETENTION AREA PROTECTIVE MEASURES SHALL BE INSTALLED WITHIN 30 DAYS OF SUBDIVISION PLAT APPROVAL
◊ AFTER INSTALLED NOTIFY PLANNING DEPARTMENT (240-313-2430) FOR AN INSPECTION

Source: Adapted from Forest Conservation Manual, 1991

Construction Signs and Permanent Signs | Figure C-4

FOREST CONSERVATION WORKSHEET 2.2

NET TRACT AREA
A. Total Tract Area ..... = 3.80 Ac.
B. Deductions ..... = 0.00 Ac.
C. Net Tract Area ..... = 3.80 Ac.

LAND USE CATEGORY CIA
D. Afforestation Threshold (Net Tract Area x 15%) ..... = 0.57 Ac.
E. Conservation Threshold (Net Tract Area x 15%) ..... = 0.57 Ac.

EXISTING FOREST COVER
F. Existing Forest Cover within the Net Tract Area ..... = 0.00 Ac.
G. Area of Forest Above Conservation Threshold ..... = 0.00 Ac.

BREAK EVEN POINT
H. Break Even Point ..... = 0.00 Ac.
I. Forest Clearing Permitted Without Mitigation ..... = 0.00 Ac.

PROPOSED FOREST CLEARING
J. Total Area of Forest to be Cleared ..... = 0.00 Ac.
K. Total Area of Forest to be Retained ..... = 0.00 Ac.

PLANTING REQUIREMENTS
L. Reforestation for Clearing Above the Conservation Threshold ..... = 0.00 Ac.
M. Reforestation for Clearing Below the Conservation Threshold ..... = 0.00 Ac.
N. Credit for Retention above the Conservation Threshold ..... = 0.00 Ac.
P. Total Reforestation Required ..... = 0.00 Ac.
Q. Total Afforestation Required ..... = 0.57 Ac.
R. Total Planting Requirement ..... = 0.57 Ac.
or 24,829.2 S.F.

NOTE: This Forest Conservation Plan is for the purpose of addressing the forestation requirements for the site plans SP-25-011. As this is being addressed offsite, a 2:1 ratio is required. The Washington County Planning Commission has granted the variance of off-site forest easements to satisfy forest mitigation requirements for the Site Plans, SP-25-011 at the meeting on _____.

FORESTATION TABLE

FOREST REQUIRED:
SP-25-011 _____ 0.57 AC.±
OFFSITE RATIO 2:1 _____ 1.14 AC.±

FORESTATION NOTES

1. Forest areas shown hereon [ ] have been reviewed and approved by the Washington County Planning Commission and are in compliance with the requirements of the Washington County Forest Conservation Ordinance. Clearing of forested areas have not been approved. Those areas noted as "Forest Retention Areas" are not to be disturbed by a regulated activity as defined in the Forest Conservation Ordinance until that regulated activity and its associated forest disturbance is reviewed and approved by the Washington County Planning Commission according to the requirements and standards of the Forest Conservation Ordinance in effect at the time.
2. Property owners are advised that there are penalties and fines associated with violation of these restrictions. Activities of a recreational or passive mature, as long as there is no forest disturbance, removal of the existing forest, or inhibition of its natural growth processes are permitted in these forest areas.
3. This note or reference to its existence on this plat shall be included in each and every deed of conveyance for any lot shown on this plat.
4. The Retention Area shown [ ] on this plat is to be retained by the respective property owners in a natural forested condition, pursuant to the Washington County Forest Conservation Ordinance of 1993. Furthermore, the use of the Retention and Planting Area shall be limited to forest conservation practices activities which are consistent with the preservation of the Retention Area as natural forest land, as stipulated by the same Ordinance.

LONG TERM PROTECTION NOTES

Long term protection for land shown hereon as Existing Forest or Afforestation Areas shall be provided by way of a perpetual conservation easement. This deed restriction, recorded with the land records of this property, limits the use of the existing forest and afforestation areas to those activities which are consistent with the conservation of forest such as recreational activities, forest management, and wildlife management. Activities of a recreational or passive nature, as long as there is no forest disturbance, removal of forest, or inhibition of its natural growth are permitted in the forest areas. The County or its agents are authorized to inspect the Forest Conservation and Afforestation Easement Areas. A Proposed 15 foot Right-of-way to serve as access for the purpose of ingress and egress of the Existing Forest and Afforestation Areas.

CERTIFICATE OF APPROVAL

FINAL APPROVAL GRANTED

DATE:_____

BY:_____
WASHINGTON COUNTY PLANNING COMMISSION
FINAL APPROVAL GOOD FOR ONE HUNDRED EIGHTY (180) DAYS FROM ABOVE DATE

OWNER:
BOWMAN GROUP, LLC
10228 GOVERNOR LANE BLVD. SUITE 3002
WILLIAMSPORT, MD 21795

GRAPHIC SCALE
200 0 100 200 400 800
(IN FEET)
1 inch = 200 ft.

P:\SHARED FOLDERS\PROJECTS\6000S\6207\DWG\6207 FCP SHEET2 SMITHSBURG.DWG 2025-04-11

FSA
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fsa-inc.com
15 EAST MAIN STREET, NEW BLOOMFIELD, PA 17068, 717.275.7531
505 SOUTH HANOVER STREET, CARLISLE, PA 17013, 717.701.8111
20 WEST BALTIMORE STREET, GREENCASTLE, PA 17225, 717.597.1007
128 SOUTH POTOMAC STREET, HAGERSTOWN, MD 21740, 301.791.3650

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SHEETZ - SMITHSBURG

SITUATE AT THE END OF TRAILS END LANE
SOUTH OF INTERSTATE 70, NORTH OF CONOCOCHEAGUE CREEK

WASHINGTON COUNTY, MARYLAND

THE BOWMAN GROUP, LLC
10228 GOVERNOR LN. BLVD. SUITE 3002, WILLIAMSPORT, MD 21795
ATTN: JEFF TEDRICK (301)-582-1555

PROJECT NO. 6207
DWN BY: DWH | DATE: 04-11-2025
PROJECT MANAGER: DAVE TROSTLE
EMAIL: DTROSTLE@FSA-INC.COM
TAX MAP-GRID-PARCEL: 0035-0024-0034
SCALE: 1" = 200'
SHEET TITLE

OFFSITE FOREST CONSERVATION PLAN

C-101
SHEET 01 OF 01

Washington County
MARYLAND

DEPARTMENT OF PLANNING & ZONING
COMPREHENSIVE PLANNING | LAND PRESERVATION | FOREST CONSERVATION | GIS

MEMORANDUM

TO: Washington County Planning Commission

FROM: Travis Allen, Senior Planner

DATE: November 3, 2025

RE: Specimen Tree Variance Request for Black Rock Golf Course Driving Range (SP-25-026)

Attached you will find supporting documentation for a request to meet forest conservation requirements for this project. The applicant is requesting is to remove 1 specimen tree from the Black Rock Golf Course as a part of the redevelopment of the driving range.

Enclosed for your review are two documents in support of the applicant's request. These include the site plan; which shows the location of the specimen tree proposed for removal within the project limits of disturbance, and the justification letter from Qualified Professional Dustin Horst that make their case for the tree removal request.

The removal of specimen trees requires that approval of a variance under Article 15 of the FCO. The applicant must demonstrate the conditions of hardship that exist to warrant the removal of the specimen trees and show that their removal would not adversely affect water quality.

If you have questions or comments regarding this request, please contact me using the information provided below.

Travis Allen
Senior Planner
(240) 313-2432
tallen@washco-md.net

FREDERICK, SEIBERT & ASSOCIATES, INC.
128 South Potomac Street, Hagerstown, MD 21740
301-791-3650 fsa-md.com
CIVIL ENGINEERING | SURVEYING | LANDSCAPE ARCHITECTURE

MEMO — Specimen Tree Removal Request

SUBJECT — Black Rock Driving Range
SP-25-026

TO — Washington County Planning Commission

DATE — October 1, 2025

FROM — Dustin Horst

REMARKS:

This site consists of approximately 0.9 acres within the 244 acres of the Black Rock Golf Course. The property is a recreational golf course with a mix of open meadows and several pockets of forest scattered along the perimeter of the property. The site of concern is the existing driving range with no forest within the disturbed area/site, however there is one specimen tree (33.8" Pin Oak) proposed for removal.

If said specimen tree were to remain, the proposed development on this property would be severely limited and could not occur due to the space and location needed for the proposed canopy to maximize the distance of the driving range. Water Quality will not be negatively affected by the removal of specimen trees due to the site being developed and treated by ways of environmental site design practices and stormwater management facilities.

On behalf of the property owner, I request a variance for the removal of one (1) specimen tree due to the hardship as stated above.

Sincerely,

Dustin Horst

Washington County
MARYLAND
DEPARTMENT OF PLANNING & ZONING
COMPREHENSIVE PLANNING | LAND PRESERVATION | FOREST CONSERVATION | GIS

MEMORANDUM

TO: Washington County Planning Commission

FROM: Travis Allen, Senior Planner

DATE: November 3, 2025

RE: Donovan Carbaugh Lots 1-4 and Forest Conservation Easement Relocation Request (FP-25-007)

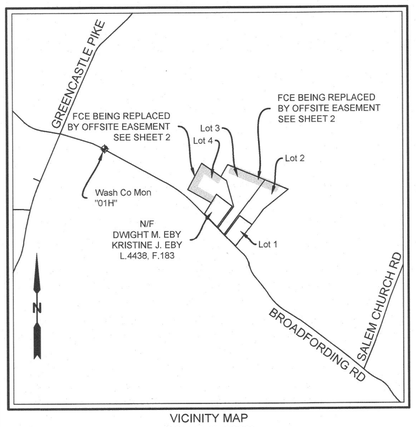
Attached you will find documentation for a request to relocate two existing onsite forest easements totaling 5.91-acres located at 17028, 17030, and 17034 Broadfording Road offsite onto an undeveloped property on Galilee Road.

Enclosed for your review is the revised subdivision plat which shows the requested removal and relocation of the existing forest easements.

Forest easements are intended to be permanent in the location that they were originally established unless special circumstances require reevaluation. Offsite mitigation is a less preferred mitigation technique in the County's Forest Conservation Ordinance.

If you have questions or comments regarding this request, please contact me using the information provided below.

Travis Allen
Senior Planner
(240) 313-2432
tallen@washco-md.net



VICINITY MAP
SCALE 1"=2000'

LEGEND

- = PROPERTY LINE
- = PROPOSED PROPERTY LINE
- = PROPERTY LINE TO BE VACATED
- = RIGHT OF WAY
- = PROPERTY CORNER
- H O = TEST PIT; PERC

SHEET INDEX

1. REVISED FOREST CONSERVATION EASEMENT PLAT
2. OFFSITE FOREST CONSERVATION PLAN

ADDRESS ASSIGNMENTS:

Lot 1 17038 Broadfording Road
Lot 2 17034 Broadfording Road
Lot 3 17030 Broadfording Road
Lot 4 17028 Broadfording Road

Note: Each address is based on the entrance as shown on this plat. If the driveway is constructed at a different location from that shown hereon, the address listed above may VOID and the owner/developer of the lot must reapply to the Planning Commission for a new address assignment.

Owner's Statement

I/we do hereby certify, for ourselves and our personal representatives, heirs and assigns, that I/we are the legal and true owner(s) of the property shown and described on this plat and that I/we hereby adopt the plan as shown hereon, hereby establish the minimum building restriction lines shown hereon, hereby dedicate to public use all utility and drainage easement areas and all alley, street, and road rights of way designated on this plat, hereby agree to keep open all spaces and recreation areas shown hereon and hereby agree that said dedication shall not impose any responsibility on the Board of County Commissioners of Washington County regarding the subjects of such dedications until legal acceptance thereof by said Board, and I/we hereby reserve the fee simple title to the land underlying said easements, rights of way, open spaces and recreation areas and with regard to said easements and rights of way, hereby agree to convey the same to said Board for the use of said Washington County, without consideration, upon the legal acceptance of said easements and/or rights of way by said Board.
This deed and agreement of dedication shall be binding upon my/our grantees, assigns, successors, heirs, and personal representatives.

The purpose of this plat is to remove the Forest Conservation Easement as previously plated and replace it with an offsite easement.

There are no suits, actions at law, leases, liens, mortgages, trusts, easements, or rights of way affecting the property included on this plan of subdivision except the following:

and all parties having an interest therein have here unto affixed their signatures, indicating their assent to this plan of subdivision.
I/We do hereby assent to this plan of subdivision.

Witness our hands and seals this date 01-02-2025.

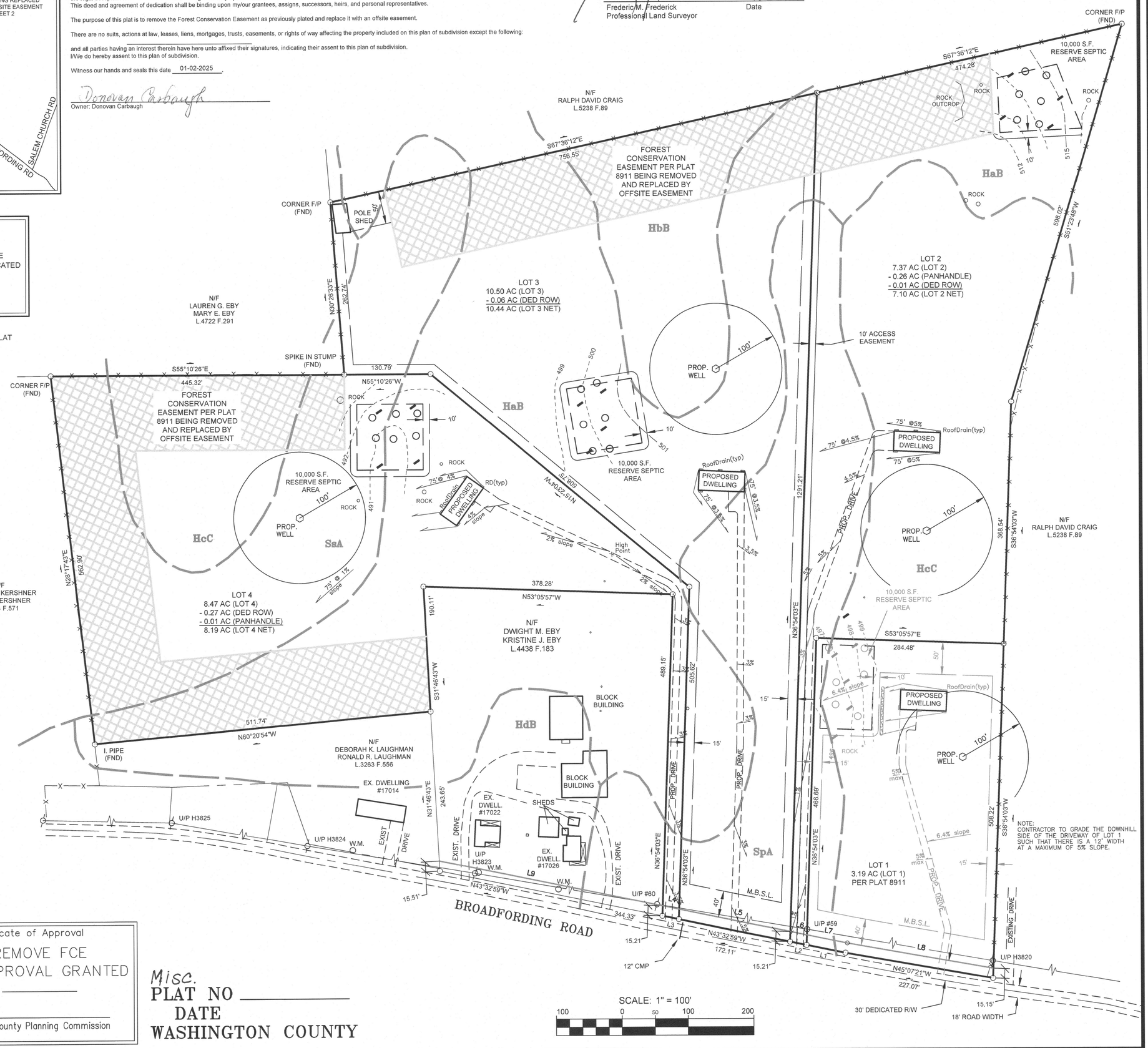
Donovan Carbaugh
Owner: Donovan Carbaugh

Professional Certification

I hereby certify that these documents were prepared by me or under my responsible charge, and that I am a duly licensed Professional Land Surveyor under the Laws of the State of Maryland, License No. 10731, Expiration Date 1/16/2026.

10-2-2025
Frederic M. Frederick Date
Professional Land Surveyor

NOTE: THE PURPOSE OF THIS PLAT IS TO REMOVE THE FOREST CONSERVATION EASEMENT (FCE) AS SHOWN ON RECORDED PLATS 8911-8913 AND REPLACE IT AT 2:1 WITH OFFSITE FCE. ALL OTHER CONDITIONS AND RESTRICTIONS OF PLATS 8911-8913 STILL APPLY TO THESE LOTS.



PLAT NORTH PER 8911-8913

Certificate of Approval

TO REMOVE FCE
FINAL APPROVAL GRANTED

DATE: _____

By: _____
Washington County Planning Commission

OWNERS:
Donovan C. Carbaugh
49 Marsh Woods Lane
Wilmington DE 19810
302-290-4658

Misc.
PLAT NO _____
DATE
WASHINGTON COUNTY

SCALE: 1" = 100'
100 0 50 100 200

STATE OF MARYLAND
FREDERIC MARK FREDERICK
No. 10731
REGISTERED
PROFESSIONAL LAND SURVEYOR

10-2-2025

FSA
FREDERICK, SEIBERT & ASSOCIATES, INC.
CIVIL ENGINEERS • SURVEYORS • LANDSCAPE ARCHITECTS • LAND PLANNERS
fsa-inc.com
15 EAST MAIN STREET NEW BLOOMFIELD, PA 17068 717.275.7531
505 SOUTH HANOVER STREET CARLISLE, PA 17013 717.701.8111
1140 WILLIAMSPORT PIKE GREENCASTLE, PA 17225 717.597.1007
129 SOUTH POTOMAC STREET HAGERSTOWN, MD 21740 301.791.3650

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REVISED FOREST CONSERVATION EASEMENT PLAT : LOTS 1-4

17038, 17034, 17030, 17028 BROAD FORDING ROAD, HAGERSTOWN MD 21740
SITUATED ALONG THE NORTH SIDE OF BROADFORDING ROAD
WASHINGTON COUNTY, MARYLAND
FOR
DONOVAN C. CARBAUGH
49 MARSH WOODS LANE, WILMINGTON DE, 19810
302-290-4658

PROJECT NO.	4976
DWN BY	MTJ
DATE	10-01-2025
PROJECT MANAGER:	FFrederick
EMAIL:	FFrederick@fsa-inc.com
PROPERTY INFORMATION / ACCT#	
	23-23-568 / 13-036055
	23-23-568 / 13-036063
	23-23-568 / 13-036071
	23-23-568 / 13-036098
SCALE	1" = 100'

SHEET TITLE

REVISED
FCE PLAT

SHEET 01 OF 02

P:\SHARED FOLDERS\PROJECTS\4900S\4976 REPLAT - 2025.DWG 2025.10.02

CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING	DELTA ANGLE
C1	534.77'	25.20'	25.20'	N 07°21'47" W	2°41'59"
C2	331.93'	163.30'	161.65'	N 52°39'10" W	28°11'14"
C3	501.06'	252.16'	249.51'	N 84°41'38" W	28°50'02"
C4	174.85'	170.94'	164.21'	S 56°24'18" W	56°00'44"

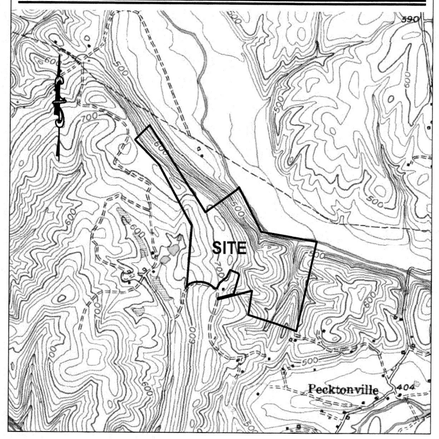
LINE	BEARING	DISTANCE
L1	S 24°59'33" E	37.79'
L2	S 68°30'39" E	169.23'
L3	N 25°30'16" E	153.56'
L4	N 50°47'09" E	166.85'
L5	N 25°51'43" E	89.42'
L6	N 29°45'33" E	22.01'
L7	N 79°17'14" E	50.65'
L8	S 75°29'33" W	669.54'
L9	S 75°29'33" E	316.16'

LINE	BEARING	DISTANCE
FL1	N 28°42'40" W	1109.22'
FL2	N 53°09'21" E	50.69'
FL3	N 41°02'48" W	218.52'
FL4	N 46°43'41" W	238.43'
FL5	N 35°39'42" W	228.11'
FL6	N 45°24'39" E	308.43'
FL7	S 32°59'26" E	1853.19'
FL8	S 57°59'37" W	337.65'

VICINITY MAP

SCALE: 1" = 2000'

ADC MAP 5, E12
USGS MAPS (CHERRY RUN, WV)



CERTIFICATE OF APPROVAL

FINAL APPROVAL GRANTED

DATE:_____

BY:_____

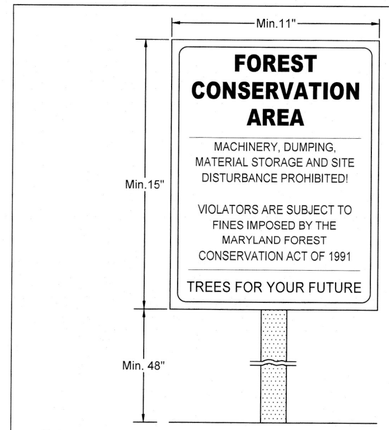
WASHINGTON COUNTY PLANNING COMMISSION
FINAL APPROVAL GOOD FOR ONE HUNDRED
EIGHTY (180) DAYS FROM ABOVE DATE

QUALIFIED PROFESSIONAL

I certify that I am a qualified professional per requirements of COMAR 08.19.06.01 for qualified professional status and, therefore, am qualified to prepare the attached Forest Conservation Plan. I further certify that this plan was prepared by me or under my supervision using the methods provided by the Washington County Forest Conservation Ordinance and Forest Conservation Manual. I certify that this Forest Conservation Easement Plat is accurate and complete.

Dustin Horst — 10-02-2025

Dustin Horst — Date



Notes:
1. Bottom of signs to be higher than top of tree protection fence.
2. Signs to be placed approximately 100 feet apart. Conditions on site affecting visibility may warrant placing signs closer or farther apart.
3. Attachment of signs to trees is prohibited.

◇ RETENTION AREA PROTECTIVE MEASURES SHALL BE INSTALLED WITHIN 30 DAYS OF SUBDIVISION PLAT APPROVAL
◇ AFTER INSTALLED NOTIFY PLANNING DEPARTMENT (240-313-2430) FOR AN INSPECTION

Source: Adapted from Forest Conservation Manual, 1991

Construction Signs and Permanent Signs | Figure C-4

FOREST CONSERVATION SEQUENCE OF CONSTRUCTION

1. All temporary protection devices and/or permanent devices shall be put into place.
   - Permanent signage will be place as shown on the plan around the perimeter of the entire Forest Area within 30 days of subdivision plat approval and/or completion of construction.
   - During any building or site construction, the forest retention area(s) shall be protected by highly visible, well anchored temporary fencing.
   - All temporary fencing shall be in place prior to any grading or land clearing.
   - All temporary fencing shall be maintained throughout construction and until all graded areas have been stabilized.
   - Attachment of signs or any other objects to trees is prohibited.
   - No equipment, machinery, vehicles, materials or excessive pedestrian traffic shall be allowed within protected areas.

2. A pre-construction meeting will be required after the boundaries of the limits of disturbance have been staked and flagged, the forest protection devices have been installed, and before any disturbance has taken place on the site. It is the owner and/or developer's responsibility to arrange for the pre-construction meeting. The owner and/or developer shall contact the Washington County Planning and Zoning Department (240-313-2430) for inspection of the installed devices prior to the start of construction with at least five (5) days notice. If the inspection reveals improperly installed protection devices, corrections will have to be made and re-inspected prior to the start of construction.

3. Once approval has been granted by the Washington County Plan Review & Permitting Department, clearing and/or grading of the site for construction of street, utility, and building areas may commence.

4. A post-construction meeting will be required after all construction has ceased and graded areas have been stabilized, all temporary protective devices shall be removed and replaced with the appropriate permanent signage. It is the owner and/or developer's responsibility to arrange for the post-construction meeting. The owner and/or developer shall contact the Washington County Department of Plan Review and Permitting (240-313-2430) for inspection of the final installed devices with at least five (5) days notice. If the inspection reveals improperly installed permanent protection devices, corrections will have to be made and re-inspected prior to the completion of site stabilization.

MISC PLAT NO_____
DATE
WASHINGTON COUNTY

NOTE: This Offsite Forest Conservation Plan is for the purpose of reallocating previously recorded afforestation easements for Donovan Carbaugh, Lots 1-4 per plat 8913. As this is being addressed offsite, a 2:1 ratio is required.

FORESTATION NOTES

1. Forest areas shown hereon ▨ have be reviewed and approved by the Washington County Planning Commission and are in compliance with the requirements of the Washington County Forest Conservation Ordinance. Clearing of forested areas have not been approved. Those areas noted as "Forest Retention Areas" are not to be disturbed by a regulated activity as defined in the Forest Conservation Ordinance until that regulated activity and its associated forest disturbance is reviewed and approved by the Washington County Planning Commission according to the requirements and standards of the Forest Conservation Ordinance in effect at the time.
2. Property owners are advised that there are penalties and fines associated with violation of these restrictions. Activities of a recreational or passive mature, as long as there is no forest disturbance, removal of the existing forest, or inhibition of its natural growth processes are permitted in these forest areas.
3. This note or reference to its existence on this plat shall be included in each and every deed of conveyance for any lot shown on this plat.
4. The Retention Area shown ▩ on this plat is to be retained by the respective property owners in a natural forested condition, pursuant to the Washington County Forest Conservation Ordinance of 1993. Furthermore, the use of the Retention and Planting Area shall be limited to forest conservation practices activities which are consistent with the preservation of the Retention Area as natural forest land, as stipulated by the same Ordinance.

OWNER:
FIDELITY 2004, LLC &
T & TF INVESTMENTS, LLC
128 S. POTOMAC ST.
HAGERSTOWN, MD 21740

GRAPHIC SCALE

200 0 100 200 400 800

(IN FEET)
1 inch = 200 ft.

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505 SOUTH HANOVER STREET CARLISLE, PA 17013 717.701.8111
20 WEST BALTIMORE STREET GREENCASTLE, PA 17225 717.597.1007
128 SOUTH POTOMAC STREET HAGERSTOWN, MD 21740 301.791.3650

DONOVAN CARBAUGH, LOTS 1-4

SITUATE ALONG THE NORTHERN SIDE OF GALILEE ROAD
SOUTHWEST OF LICKING CREEK, AND WEST OF PECKTONVILLE ROAD

WASHINGTON COUNTY, MARYLAND

FIDELITY 2004, LLC & T & TF INVESTMENTS, LLC
128 S. POTOMAC ST. HAGERSTOWN, MD 21740
(301)-791-3650

PROJECT NO.	4999
DWN BY	DWH
DATE	10-01-2025
PROJECT MANAGER:	Trevor Frederick
EMAIL:	tfrederick@fsa-inc.com
TAX MAP-GRID-PARCEL	0019-0021-0034
SCALE	1" = 200'

SHEET TITLE

OFFSITE FOREST CONSERVATION PLAN

C-101
SHEET 02 OF 02

P:\SHARED FOLDERS\PROJECTS\4000S-4999\DWG\4999 OFFSITE FCP DONOVAN CARBAUGH.DWG 2025-10-02

Plan Review Projects Initialized - September 01, 2025 - September 30, 2025

Land Development Reviews								
Record #	**Type**	**Status**	**Opened Date**	**Accepted Date**	**Title**	**Location**	**Consultant**	**Owner**
S-25-031	Final Plat	In Review	09/29/2025	10/6/2025	THE RUN AT ELIZABETHTOWNE FINAL PLAT		FOX & ASSOCIATES INC	KREYKENBOHM HELEN Z
FS-25-022	Forest Stand Delineation	In Review	09/24/2025	9/24/2025	FSD FOR ALLEN RESIDENCE	17848 BAKERSVILLE ROAD BOONSBORO, MD 21713	FOX & ASSOCIATES INC	ALLEN WILLIAM ERIK
SIM25-056	IMA	Active	09/04/2025		7606 SHADY LANE BO	7606 SHADY LANE BOONSBORO, MD 21713	R LEE ROYER & ASSOCIATES	RODKEY THOMAS E
SIM25-060	IMA	Active	09/23/2025		HIGHS DAIRY STORE - BOONSBORO	6810 OSTERTAG PASS BOONSBORO, MD 21713	MESSICK & ASSOCIATES	OLD NATIONAL PIKE (BOONSBORO) LLC
SIM25-057	IMA	Active	09/12/2025		15712 NATIONAL PIKE HN	15712 NATIONAL PIKE HAGERSTOWN, MD 21740	COREY'S CONSTRUCTION	MILLER NANCY LERU
SIM25-059	IMA	Active	09/18/2025		7257 MILLSTONE ROAD HK	7257 MILLSTONE ROAD HANCOCK, MD 21750	RYAN JOLINE	LEVEL 3 COMMUNICATIONS LLC
SIM25-058	IMA	Active	09/16/2025		14557 INDUSTRY DRIVE HN	14557 INDUSTRY DRIVE HAGERSTOWN, MD 21742	FREDERICK SEIBERT & ASSOCIATES	FULTON PROPERTIES INC
SIM25-061	IMA	Active	09/25/2025		6720 REMSBURG ROAD SH	6720 REMSBURG ROAD SHARPSBURG, MD 21782	HARMON BUILDERS LLC	COHEN SCOTT FAMILY TRUST DATED JAN COHEN MARK TRUSTEE
TWN-25-008	Improvement Plan	Revisions Required	09/03/2025	9/4/2025	REVISED FLETCHER'S GROVE SOUTH CONSTRUCTION PLANS			DEAN 8486 LLC
TWN-25-009	Improvement Plan	In Review	09/26/2025	9/30/2025	TAYLOR PARK MULTI-SPORT COURT INSTALLATION (KEEDYSVILLE)	22 TAYLOR DRIVE KEEDYSVILLE, MD 21756		KEEDYSVILLE TOWN OF
TWN-25-010	Improvement Plan	In Review	09/30/2025	10/1/2025	FULTON - WILLIAMSPORT			BF12 IRREVOCABLE TRUST THE SF12 IRREVOCABLE TRUST THE
PSP-25-004	Preliminary Plat Site Plan	In Review	09/09/2025	9/10/2025	SHOWALTER COMMERCIAL PARK LOTS 1-3	18225 SHOWALTER ROAD HAGERSTOWN, MD 21742	FREDERICK SEIBERT & ASSOCIATES	SHOWALTER FARM LLC
S-25-025	Preliminary-Final Plat	In Review	09/04/2025	9/8/2025	CRAIG PAVING P/F PLAT	118 HUMP ROAD HAGERSTOWN, MD 21740	FOX & ASSOCIATES INC	CRAIG BLACKTOP & PAVING INC
S-25-026	Preliminary-Final Plat	Revisions Required	09/17/2025	9/20/2025	JOHN R OLIVER CO INC LOTS 1-7	7914 DAM NUMBER 4 ROAD WILLIAMSPORT, MD 21795	FREDERICK SEIBERT & ASSOCIATES	JOHN R OLIVER COMPANY INC THE
S-25-030	Preliminary-Final Plat	Revisions Required	09/22/2025	9/22/2025	WASHINGTON SPRINGS FARM LOTS 6-8	20810 MOUNT AETNA ROAD HAGERSTOWN, MD 21742	FREDERICK SEIBERT & ASSOCIATES	WASHINGTON SPRINGS FARMS LLC
SP-24-010.R01	Redline Revision	Approved	09/02/2025	9/2/2025	REDLINE TO REVISE PARKING STRIPING	225 MCRAND COURT HAGERSTOWN, MD 21740	FREDERICK SEIBERT & ASSOCIATES	ROWLAND ON HOLDINGS LLC
SI-25-018	Simplified Plat	Approval Letter Issued	09/12/2025	9/15/2025	FKHV SIMPLIFIED PLAT		FOX & ASSOCIATES INC	MCKENZIE BRITTANY LEE MCKENZIE JOSHUA C
SP-25-040	Site Plan	In Review	09/27/2025	9/30/2025	MERITUS MEDICAL CENTER SOLAR	19513 INNOVATION DRIVE HAGERSTOWN, MD 21742	UNGER SURVEYING & CONSTRUCTION (PE)	MERITUS MEDICAL CENTER INC
SP-25-031	Site Plan	In Review	09/15/2025	9/16/2025	SUNNY MEADOWS GARDEN CENTER - POLE BARN STORAGE BUILDING	7437 SHARPSBURG PIKE BOONSBORO, MD 21713	TRIAD ENGINEERING	J L LLC

Plan Review Projects Initialized - September 01, 2025 - September 30, 2025

Land Development Reviews								
Record #	**Type**	**Status**	**Opened Date**	**Accepted Date**	**Title**	**Location**	**Consultant**	**Owner**
GP-25-026	Site Specific Grading Plan	In Review	09/11/2025	9/15/2025	HAGER MEADOWS - OFFSITE WATER	12900 SALEM AVENUE HAGERSTOWN, MD 21740	FREDERICK SEIBERT & ASSOCIATES	TEMPLON RICHARD M JR TEMPLON WAYNE A
GP-25-029	Site Specific Grading Plan	In Review	09/24/2025	9/26/2025	ALLEN RESIDENCE	17848 BAKERSVILLE ROAD BOONSBORO, MD 21713		ALLEN WILLIAM ERIK
GP-25-025	Site Specific Grading Plan	In Review	09/08/2025	9/12/2025	GRADING PLAN FOR VINNY'S TOWIG & RECOVERY	19530 BEAVER CREEK ROAD HAGERSTOWN, MD 21740		BEAVER CREEK INVESTMENTS LLC
GP-25-028	Site Specific Grading Plan	In Review	09/24/2025	9/25/2025	PARADISE HEIGHTS SECT C BUILDERS GRADING PLAN	13806 DELIGHT DRIVE HAGERSTOWN, MD 21742		PARADISE HEIGHTS LAND
SGP-25-068	Standard Grading Plan	Pending Payment	09/29/2025		SMITH RESIDENCE	11416 HANGING ROCK ROAD CLEAR SPRING, MD 21722	DUNN DESIGN & BUILD LLC	SMITH ROBERT A
SGP-25-062	Standard Grading Plan	Approved	09/04/2025	9/5/2025	COHEN / SCOTT SHOP	6720 REMSBURG ROAD SHARPSBURG, MD 21782	HARMON BUILDERS LLC	COHEN SCOTT FAMILY TRUST DATED JAN COHEN MARK TRUSTEE
SGP-25-066	Standard Grading Plan	In Review	09/15/2025	9/17/2025	CLINE - 11711 ASHTON RD	11711 ASHTON ROAD CLEAR SPRING, MD 21722		OLIVER HOMES INC
SGP-25-064	Standard Grading Plan	Approved	09/07/2025	9/18/2025	KELSEY RENEE THRUSH	20409 BEAVER CREEK ROAD HAGERSTOWN, MD 21740	FREDERICK SEIBERT & ASSOCIATES	THRUSH KELSEY RENEE
SGP-25-067	Standard Grading Plan	Approved	09/17/2025	9/17/2025	INGRID ROSENCRANTZ	1112 WILLIAM WAY KNOXVILLE, MD 21758	FREDERICK SEIBERT & ASSOCIATES	ROSENCRANTZ INGRID TRAINOR SUSAN
SGP-25-065	Standard Grading Plan	In Review	09/10/2025	10/7/2025	WYATT BINKLEY	7809 DAM NUMBER 4 ROAD WILLIAMSPORT, MD 21795	FREDERICK SEIBERT & ASSOCIATES	BINKLEY WYATT D
SWCP25-016	Stormwater Concept Plan	In Review	09/23/2025	9/26/2025	FIX N' GO NURSERY ROAD, PHASE II	16925 BENTWOOD DRIVE HAGERSTOWN, MD 21740		AKHMEDOV IZMIR A ET AL AKHMEDOV AKHMAD
SWCP25-017	Stormwater Concept Plan	In Review	09/30/2025	10/1/2025	HALFWAY LLC - STOTLER ROAD			HALFWAY LLC
SSWP25-060	Stormwater Standard Plan	Approved	09/17/2025	9/17/2025	INGRID ROSENCRANTZ	1112 WILLIAM WAY KNOXVILLE, MD 21758	FREDERICK SEIBERT & ASSOCIATES	ROSENCRANTZ INGRID TRAINOR SUSAN
SSWP25-058	Stormwater Standard Plan	In Review	09/12/2025	10/7/2025	WYATT BINKLEY	7809 DAM NUMBER 4 ROAD WILLIAMSPORT, MD 21795	FREDERICK SEIBERT & ASSOCIATES	BINKLEY WYATT D
SSWP25-056	Stormwater Standard Plan	Approved	09/04/2025	9/5/2025	COHEN / SCOTT SHOP	6720 REMSBURG ROAD SHARPSBURG, MD 21782	HARMON BUILDERS LLC	COHEN SCOTT FAMILY TRUST DATED JAN COHEN MARK TRUSTEE
SSWP25-062	Stormwater Standard Plan	Pending Payment	09/30/2025		SMITH RESIDENCE	11416 HANGING ROCK ROAD CLEAR SPRING, MD 21722	DUNN DESIGN & BUILD LLC	SMITH ROBERT A
SSWP25-059	Stormwater Standard Plan	In Review	09/15/2025	9/17/2025	CLINE - 11711 ASHTON RD	11711 ASHTON ROAD CLEAR SPRING, MD 21722		Oliver Homes INC
SSWP25-057	Stormwater Standard Plan	Approved	09/07/2025	9/18/2025	KELSEY RENEE THRUSH	20409 BEAVER CREEK ROAD HAGERSTOWN, MD 21740	FREDERICK SEIBERT & ASSOCIATES	THRUSH KELSEY RENEE
TYU-25-017	Two Year Update	In Review	09/29/2025	9/29/2025	2021 DOWNSVILLE PIKE LLC	SOUTHSIDE OF THE DOWNSVILLE PIKE	FREDERICK SEIBERT & ASSOCIATES	2021 DOWNSVILLE PIKE LLC
TYU-25-018	Two Year Update	Approved	09/30/2025	9/30/2025	PITTSBURGH INSTITUTE OF AERONAUTICS	14516 PENNSYLVANIA AVE HAGERSTOWN MD 21742	FOX & ASSOCIATES INC	WASH CO COMMISSIONERS C/O PITTSBURG INSTITUTE OF AERONAU

Plan Review Projects Initialized - September 01, 2025 - September 30, 2025

Land Development Reviews								
Record #	**Type**	**Status**	**Opened Date**	**Accepted Date**	**Title**	**Location**	**Consultant**	**Owner**
TYU-25-016	Two Year Update	In Review	09/25/2025	10/1/2025	COLONIAL DRIVE GAS LINE REPLACEMENT	46 SO COLONIAL DRIVE HAGERSTOWN, MD 21740	C.S. DAVIDSON, INC.	MURRAY WAYSON SR
GPT-25-058	Type 2 Grading Plan	In Review	09/05/2025	9/21/2025	FLETCHERS GROVE PH IV, SEC 1, LOT 5 AND 6	313 WYATT PLACE BOONSBORO, MD 21713	RICHMOND AMERICAN HOMES OF MARYLAND, INC	RICHMOND AMERICAN HOMES OF MARYLAN
GPT-25-059	Type 2 Grading Plan	In Review	09/05/2025	9/21/2025	FLETCHERS GROVE PH IV, SEC 1, LOT 7 AND 8	319 WYATT PLACE BOONSBORO, MD 21713	RICHMOND AMERICAN HOMES OF MARYLAND, INC	RICHMOND AMERICAN HOMES OF MARYLAN
GPT-25-056	Type 2 Grading Plan	In Review	09/05/2025	9/15/2025	FLETCHERS GROVE PH IV SEC 1, LOTS 1 AND 2	301 WYATT PLACE BOONSBORO, MD 21713	RICHMOND AMERICAN HOMES OF MARYLAND, INC	RICHMOND AMERICAN HOMES OF MARYLAN
GPT-25-057	Type 2 Grading Plan	In Review	09/05/2025	9/18/2025	FLETCHERS GROVE PH IV SEC 1 LOTS 3 AND 4	307 WYATT PLACE BOONSBORO, MD 21713	RICHMOND AMERICAN HOMES OF MARYLAND, INC	RICHMOND AMERICAN HOMES OF MARYLAN

Plan Review Projects Initialized - September 01, 2025 - September 30, 2025

Permits Reviews							
Record #	**Type**	**Status**	**Opened Date**	**Title**	**Location**	**Consultant**	**Owner**
2025-04462	Entrance Permit	In Progress	09/16/2025	PH 69	S-22-012 13819 PULASKI DRIVE, LOT 69		PARADISE HEIGHTS LAND
2025-04190	Entrance Permit	Approved	09/01/2025	STICK BUILT HOME	S-99-098 20050 ROSEBANK WAY, LOT 23		DAVID C LYLES DEVELOPERS LLC
2025-04371	Entrance Permit	Approved	09/11/2025	SEMI-DETACHED HOME	S-99-098 20055 ROSEBANK WAY, LOT 19		DAVID C LYLES DEVELOPERS LLC
2025-04270	Entrance Permit	In Progress	09/05/2025	STICK BUILT HOME	S-25-023 16110 RIVER BEND COURT, LOT 6	PRECISE CONSTRUCTION SERVICES LLC	BINKLEY WYATT D
2025-04398	Entrance Permit	In Progress	09/12/2025	STICK BUILT HOME	S-17-025 20311 BEAVER CREEK ROAD, LOT 1		MBO PROPERTIES LLC 1110 OPAL CT
2025-04377	Entrance Permit	Approved	09/11/2025	SEMI-DETACHED HOME	S-99-098 20057 ROSEBANK WAY, LOT 20		DAVID C LYLES DEVELOPERS LLC
2025-04687	Entrance Permit	In Progress	09/30/2025	SMITH RESIDENCE	LOR 11416 HANGING ROCK ROAD		SMITH ROBERT A
2025-04619	Entrance Permit	Review	09/25/2025		LOR 8805 REICHARD ROAD	GUY BEITZEL	STAUB JOHN T & CAROL J
2025-04283	Entrance Permit	In Progress	09/07/2025	STICK BUILT HOME	S-17-025 20409 BEAVER CREEK ROAD, LOT 3		THRUSH KELSEY RENEE
2025-04433	Entrance Permit	In Progress	09/15/2025	STICK BUILT HOME	S-10-040 11711 ASHTON ROAD, LOT 9	OLIVER HOMES INC	ABL MANAGEMENT LLC
2025-04274	Floodplain Permit	Review	09/05/2025	UTILITY	TWN-25-003 6819 MONROE ROAD		BOONSBORO MAYOR & COUNCIL
2025-04463	Grading Permit	In Progress	09/16/2025	PH 69	S-22-012 13819 PULASKI DRIVE, LOT 69		PARADISE HEIGHTS LAND
2025-04272	Grading Permit	In Progress	09/05/2025	FLETCHERS GROVE. 313 WYATT PLACE. LOT D05	TWN-25-008 313 & 315 WYATT PLACE, LOTS 5 & 6		RICHMOND AMERICAN HOMES OF MARYLAN
2025-04688	Grading Permit	In Progress	09/30/2025	SMITH RESIDENCE	LOR 11416 HANGING ROCK ROAD		SMITH ROBERT A
2025-04373	Grading Permit	Approved	09/11/2025	ROSEBANK LOT 19 - POPLAR GRADING	S-99-098 20055 & 20057 ROSEBANK WAY, LOT 19 & 20		DAVID C LYLES DEVELOPERS LLC
2025-04268	Grading Permit	In Progress	09/05/2025	FLETCHERS GROVE. 301 WYATT PLACE. LOT 1	TWN-25-008 301 & 303 WYATT PLACE, LOTS 1 & 2		RICHMOND AMERICAN HOMES OF MARYLAN
2025-04271	Grading Permit	In Progress	09/05/2025	STICK BUILT HOME	S-25-023 16110 RIVER BEND COURT, LOT 6	PRECISE CONSTRUCTION SERVICES LLC	BINKLEY WYATT D
2025-04399	Grading Permit	In Progress	09/12/2025	STICK BUILT HOME	S-17-025 20311 BEAVER CREEK ROAD, LOT 1		MBO PROPERTIES LLC 1110 OPAL CT
2025-04284	Grading Permit	In Progress	09/07/2025	KELSEY RENEE THRUSH	S-17-025 20409 BEAVER CREEK ROAD, LOT 3		THRUSH KELSEY RENEE
2025-04309	Grading Permit	Approved	09/08/2025	STORAGE BUILDING	S-22-024 6720 REMSBURG ROAD, LOT 1		COHEN SCOTT FAMILY TRUST DATED JAN COHEN MARK TRUSTEE
2025-04191	Grading Permit	Approved	09/01/2025	ROSEBANK LOT 23 GRADING	S-99-098 20050 ROSEBANK WAY, LOT 23		DAVID C LYLES DEVELOPERS LLC
2025-04221	Grading Permit	Approved	09/03/2025	COMMERCIAL	11535 HOPEWELL ROAD		FAST GAS CO
2025-04269	Grading Permit	In Progress	09/05/2025	FLETCHERS GROVE. 307 WYATT PLACE. LOT D03	TWN-25-008 307 WYATT PLACE, LOT 3 & 4		RICHMOND AMERICAN HOMES OF MARYLAN
2025-04275	Grading Permit	Pending Information	09/05/2025	FLETCHERS GROVE. 205 GAGE COURT. LOT S01	TWN-25-008 205 GAGE COURT, LOT 1		RICHMOND AMERICAN HOMES OF MARYLAN
2025-04245	Grading Permit	Review	09/04/2025	ONELIFE FITNESS PICKLEBALL COURTS	SP-25-018 17301 VALLEY MALL ROAD, ONELIFE FITNESS		PR VALLEY LIMITED PARTNERSHIP
2025-04598	Grading Permit	Review	09/24/2025	EMERALD POINTE PUD COMMERCIAL BLDG B SITE PREP	S-25-008 19404 EMERALD SQUARE		EMERALD POINTE INC
2025-04431	Grading Permit	In Progress	09/15/2025	STICK BUILT HOME	S-10-040 11711 ASHTON ROAD, LOT 9	OLIVER HOMES INC	ABL MANAGEMENT LLC

Plan Review Projects Initialized - September 01, 2025 - September 30, 2025

Permits Reviews							
Record #	**Type**	**Status**	**Opened Date**	**Title**	**Location**	**Consultant**	**Owner**
2025-04273	Grading Permit	In Progress	09/05/2025	FLETCHERS GROVE. 319 WYATT PLACE. LOT D07 AND D08	TWN-25-008 319 & 320 WYATT PLACE, LOTS 7 & 8		RICHMOND AMERICAN HOMES OF MARYLAN
2025-04529	Grading Permit	Approved	09/19/2025	ROSEHILL MANOR LOT #139 - REVISION	S-25-003 19501 COSMOS STREET, LOT 139 & 19503 COSMOS STREET, LOT 140		DAN RYAN BUILDERS MID ATLANTIC INC
2025-04676	Grading Permit	Review	09/29/2025		S-25-059 1034 HOFFMASTER ROAD, LOT 6		COLEMAN GLENN, GRIMM LINDA
2025-04423	Grading Permit	Review	09/15/2025	FULTON PROPERTIES INC	SP-24-023 14557 INDUSTRY DRIVE		FULTON PROPERTIES INC
2025-04222	Utility Permit	Approved	09/03/2025	COMCAST	16438 KENDLE ROAD	COMCAST	EBERSOLE CLYDE FRANKLIN
2025-04200	Utility Permit	Approved	09/02/2025	POTOMAC EDISON	3730 CHESTNUT GROVE ROAD	POTOMAC EDISON	MOTSCO CHRISTINE REEN MATTHEW E
2025-04241	Utility Permit	Approved	09/04/2025	COLUMBIA GAS	12304 HUYETT LANE	COLUMBIA GAS OF MD	HUYETT CROSSROADS DEVELOPMENT LLC
2025-04609	Utility Permit	Approved	09/24/2025	ANTIETAM BROADBAND	12461 HARVEY ROAD	ANTIETAM CABLE TELEVISION INC	BENNETT RAYMOND SYLVESTER JR BENNETT STEPHANIE CARRESS
2025-04485	Utility Permit	Approved	09/17/2025	COMCAST	12035 ITNYRE ROAD AND CAVE HILL ROAD	COMCAST	QUINN MARTIN RICHARD
2025-04510	Utility Permit	Approved	09/18/2025	COMCAST	12814 BIKLE ROAD	COMCAST	WINTERS ETHAN SCOTT
2025-04343	Utility Permit	Approved	09/10/2025	COMCAST	14014 MARSH PIKE	COMCAST	HAGERSTOWN MD PROPCO LLC
2025-04498	Utility Permit	Approved	09/18/2025	COMCAST	12012 CRYSTAL FALLS DRIVE	COMCAST	BAKER RICHARD L/E
2025-04440	Utility Permit	Approved	09/15/2025	COMCAST	11926 LITTLE ANTIETAM ROAD	COMCAST	KUHN TIMOTHY L ANDERSON LORI SUE
2025-04393	Utility Permit	Approved	09/12/2025	COMCAST	10106 SAINT GEORGE CIRCLE AND LYLES DRIVE	COMCAST	ST JOHN & ANTHONY REAL ESTATE LLC
2025-04347	Utility Permit	Review	09/10/2025	COMCAST	12821 LAURAN ROAD. FOUNTAINHEAD AREA - SEE LIST OF ROADS UNDER DOCUMENTS.	COMCAST	MACDONALD GEORGE G JOINER RAYMOND E
2025-04351	Utility Permit	Approved	09/10/2025	COMCAST	18129 OAK RIDGE DRIVE	COMCAST	LOWERY MARILYNDA KRISETTE L/E LOWERY JAMES PATRICK L/E

Plan Review Projects Initialized - September 01, 2025 - September 30, 2025

	Type	Total
LandDev Total by Group: 44	**Final Plat**	1
	Forest Stand Delineation	1
	IMA	6
	Improvement Plan	3
	Preliminary Plat Site Plan	1
	Preliminary-Final Plat	3
	Redline Revision	1
	Simplified Plat	1
	Site Plan	2
	Site Specific Grading Plan	4
	Standard Grading Plan	6
	Stormwater Concept Plan	2
	Stormwater Standard Plan	6
	Two Year Update	3
	Type 2 Grading Plan	4
Permits Total by Group: 43	**Entrance Permit**	10
	Floodplain Permit	1
	Grading Permit	20
	Utility Permit	12
Total		**87**

Planning Commission Findings on Board of Zoning Appeals Remand

The Mt. Aetna Advocacy Group, et. al. Petition for Judicial Review of BZA Decision (AP2022-021)

Circuit Court Case No. C-21-CV-22-00424

This correspondence is in response to the remand by the Washington County Board of Zoning Appeals ("BZA") to the Washington County Planning Commission related to the referenced Court case. In accordance with the instructions of the BZA, the Planning Commission held a public hearing on Monday, August 4, 2025, to accept further comments on the Planning Commission's original decision and the opinions of the Circuit Court decision.

After discussion of the public comments and review of the Court opinion, Staff presented a report to the Planning Commission with an analysis of each of the arguments made (Attachment 1). The Planning Commission generally supports the analysis conducted but does not share the same opinions with some of the staff recommendations.

As a result of our analysis and deliberations, the Planning Commission offers the following response to the BZA.

There were four (4) distinct arguments brought forth by the Petitioner of the Court case, Mt. Aetna Advocacy Group et. al. (Mt. Aetna). The Planning Commission evaluated each of these questions and the Court's opinion to come to the conclusions outlined below.

Argument #1: *Has the Black Rock PUD expired because the March 2, 2020 Planning Commission Development Plan approval was expressly "effective for a period of two years," thereby expiring on March 2, 2022?*

Planning Commission Response: The judgement of the Court is that the BZA did not err in their findings that the PUD development plan approval does not expire. This decision was affirmed by the Court, and no further analysis was carried out by the Planning Commission.

Argument #2: *Is the Black Rock PUD valid or invalid? Did Black Rock fail to comply with the Washington County Zoning Ordinance sections:*

a. *Section 16A. says that a PUD [such as Black Rock PUD] "shall maintain validity in accordance with this Article."* (Emphasis added).

b. *Section 16A.6.e. says that "Submission and Approval Timeframes" must be followed for the PUD to maintain [its] validity.*
c. *Section 16A.6.e.3. requires that "[f]ollowing approval of the Final Development Plan, the applicant shall submit a Site Plan or Subdivision within six (6) months for the entire PUD or for any phase for Planning Commission review*." (Emphasis added).
d. *Section 16A.6.e.3. also requires that after the submission of the site plan or subdivision within 6 months of approval for Planning Commission review that "construction shall begin within one (1) year of Site Plan or Subdivision Approval."* (Emphasis added).
e. *Section 16A.6.e.3. conditions extensions of the specified time frames by stating that "[r]equests for extension may be granted by the Planning Commission for good cause."*

Is the Black Rock PUD invalid such that the Board of Appeals erred as a matter of law in affirming the Planning Commission's approval of Black Rock's 2022 Third Proposed Amendment to the previously approved PUD?

Planning Commission Response: While the Petitioner referenced language found in the currently adopted Zoning Ordinance (Article 16**A**)(emphasis added), the Planning Commission, after further review find the evaluation should be done under the zoning ordinance in effect at the time the review process was being followed. At that time, the PUD floating zone was enforced through Article 16 (See Attachment 2).

The following timeline of events in the development planning process for the Black Rock PUD was used to analyze the argument presented against the ordinance in effect at the time of each action.

- November 19, 2002, the Board of County Commissioners ("BOCC") approved the PUD floating zone for Black Rock 'starting the clock' under the 2002 ordinance Section 16.5.a.
- A Preliminary Development Plan was submitted on May 16, 2003, thereby meeting the six (6) month deadline stated in Section 16.5.a.3. The plan was approved on February 24, 2005.
- A Final Development Plan was submitted on March 10, 2005, thereby meeting the six (6) month deadline stated in Section 16.5.a.4.
- A Preliminary/Final Subdivision Plat and a Site Plan for the PUD Community Center were submitted on May 24, 2005, thereby meeting the six (6) month deadline stated in Section 16.5.a.5. Both the subdivision plat and site plan were approved on February 27, 2008.

- Construction proposed on the site plan never commenced. No requests for extensions were applied for, nor were any extensions granted, thereby failing to meet the one (1) year deadline imposed in Section 16.5.a.5

It is the consensus of the Planning Commission that because construction did not commence within one (1) year of the site plan or subdivision plat approval, and because no extensions were requested or granted as required by Section 16.5 of the zoning ordinance in effect at the time, the PUD floating zone on the property should have been deemed invalid on February 27, 2009 and the zoning should have automatically reverted to its previous classification.

Argument #3: *Was there a violation of Zoning Ordinance Section 24.4(b) which says "[a]n application for site and/or development plan approval for [a PUD district] shall not be accepted for filing by the Commission if the application is for approval of the whole or part of any land, the approval of which has been denied by the Commission, within twelve (12) months from the date of the Commission's decision."?*

Was there a violation of 24.4(b) when the Planning Commission accepted/addressed the following:

i. *A February 16, 2021 First Proposed Amendment to the concept plan [which was deemed a major change and denied after a public hearing];*

ii. *a December 30, 2021 Second Proposed Amendment [which was deemed a major change and then withdrawn by Black Rock before the public hearing]; and*

iii. *the March 7, 2022 Third Proposed Amendment [deemed a minor change and the subject of this appeal]?*

The Court also included in its opinion that, *"The issue is remanded for specific findings of fact, and analysis under Section 24.4(b) including:*

a. *Whether the March 7, 2022, Third Proposed Amendment was "An application for site and/or development plan approval for [PUD] districts and, if so*
b. *Whether the March 7, 2022, Third Proposal Amendment application "was accepted for filing by the Commission" and*
c. *Whether "the application is for approval of the whole or part of any land, the approval of which has been denied by the Commission, within twelve (12) months from the date of the Commission's decision"."*

Planning Commission Analysis and Response: The Third Proposed Amendment was contemplated by the Planning Commission under Policy #25 (Attachment 2) allowing for citizens to seek preliminary or 'initial' advice on a project before significant investment is made that may or may not be permitted. No formal application was made to the Planning Department or to the Planning Commission for site and/or development plan approval. No fees were paid, no records were initialized, and plans were not sent out for agency review.

Therefore, no official approval was granted by the Planning Commission that would conflict with the regulations in Section 24.4(b).

It is the consensus of the Planning Commission that the BZA correctly affirmed the decision of the Planning Commission as it relates to this issue brought forth by the Petitioner.

Argument #4: *Is the Black Rock March 7, 2022, Third Proposed Amendment to the 2002 approved PUD a minor change as found by the Planning Commission and affirmed by the Board of Appeals or is it a major change such that there was error in affirming the Planning Commission's determination that the Third Proposed Amendment was a minor change?*

Planning Commission Analysis and Response: In the Court's analysis comparisons were made between the approved 2002 Development Plan with the 2022 Third Proposed Amendment. However, both the Petitioner and the Court failed to recognize that a subsequent development plan was submitted and approved in 2020 that replaced the original 2002 development plan. Therefore, it is the contention of the Planning Commission that the issues brought forth by the Petitioner should have been made regarding the 2020 Plan rather than the 2002 Plan. The following analysis is based upon that conclusion.

The Petitioner submitted several points countering the Planning Commission's determination that the changes proposed in the Third Proposed Amendment were minor in nature. As stated above, Staff provided a detailed summary in the form of a Staff Report (Attachment 2) that is included within this response. The Planning Commission generally supports the analysis done by Staff and provides the following analysis and response.

Analysis of potential impacts to public infrastructure: The Court found that, *"The Planning Commission did not make the required findings of fact or perform the required analysis as to adequacy of public facilities/infrastructure as required under 16A.5 and 16A.4. Upon remand the Planning Commission must make those findings of fact and perform the analysis under the Ordinance*." The Court also points out that the express language of the ordinance in Section 16A.4.a states, *"In determining the specific density for a particular PUD or for any particular phase of a PUD, the Planning Commission shall give consideration to and shall make findings of fact concerning, at a minimum, the impact of the proposed development on adjacent properties, the availability of public facilities, the impact of the proposed development on public roadways, the impact on public schools, fire and police protection, and the availability of adequate open space."* The Planning Commission offers the following analysis and opinion.

Public Water and Fire Suppression:

1. One of the direct questions posed by the Petitioner suggested that the reduction of estimated water usage per EDU from 300 gallons per day ("gpd") to 200 gpd should be considered a major change. In summary, Washington County recognizes the unit of measure that one (1) equivalent dwelling unit (EDU) is equal to 200 gpd. There is

no documented reason why the previous developer used 300 gpd as their estimated EDU and there was no evidence provided by the Petitioner as to why it would be a more accurate depiction of daily usage. Therefore, the Planning Commission determines that absent any evidence provided by the Petitioner that 300 gpd is a more appropriate measurement and that the reduction of the estimated EDU from 300 to 200 gpd is a logical and reasonable change that matches existing county policy, this issue does not contribute to the argument that the changes proposed in the Third Proposed Amendment are major.

2. The city had acknowledged in review of previous development plans that there is water service in the area and that extension would be possible. It was noted that water capacity was available, however, as with all development in the city and county, allocation is on a first-come, first-served basis. Therefore, the Planning Commission contends that there was public knowledge of the potential service and capacity of this project and that the issue was contemplated as part of the review for the development.
3. At the Planning Commission April 4, 2022 meeting there was discussion related to water and fire suppression issues. The developer stated during that meeting that they had talked with the City about the water issues in the area and that they had set aside land for a potential water tower to address the pressure issue for both homes in the area and the fire suppression system. It was also acknowledged by the developer that they would have to pay for the construction of the tower. This discussion was included within the minutes of the meeting showing that the issue was contemplated.

Public Sewer: The City of Hagerstown indicated in previous development plan reviews that public sewer was available and that extension would be possible. This provides the evidence that the issue has been discussed publicly and that the issue was contemplated.

Roads/Traffic: Several traffic impact studies have been completed by both the previous and current developers. The first traffic impact study was done as part of the rezoning case in 2002. The results of that study led the Commissioners to believe that the traffic generated from the proposed 595 units would not overburden the road network provided improvements outlined within the study were made by the developer.

Another traffic impact study was completed in 2021 when the developer had proposed changing the development plan of the PUD to allow for 1,148 units. That information was presented to, and reviewed by, the Planning Commission as part of their Public Information meeting held on June 14, 2021. It was the consensus of the planning commission that the traffic generated by a development of this size would overburden the road network in the area and was a factor in their recommendation to deny the request.

The Third Proposed Amendment showed development consisting of 585 units, ten (10) less than what was originally approved. The Planning Commission concluded that 1) the traffic study completed in 2021 was already reviewed by the Planning Commission and provided a baseline of existing traffic for review, and 2) the proposed dwelling units reduced to levels

previously contemplated and approved in the 2020 development plan, make it reasonable to deduce that traffic generated by previously approved plans when compared to the Third Proposed Amendment would not significantly change.

Schools: The Planning Commission supports the analysis included within the Staff Report. In summary, there is no question that the build-out of this development will have an impact on the school system. That was also true in 2020 when the Planning Commission approved the most recent version of the PUD Development Plan.

The analysis provided in the staff report is a simplistic view of the potential changes that may occur in capacity in each of the schools that would serve this development. This analysis shows a snapshot in time based on enrollment figures at the time the Third Proposed Amendment was reviewed and assumes full build-out all at one time. This analysis does not include evaluation of pipeline development or estimate potential changes in variables such as pupil yield, background enrollment, or redistricting.

The largest variable in analyzing impacts on capacity is time. Large developments such as PUDs take a considerable amount of time to build-out. In some cases, it has taken a decade or more for other PUDs in the county to fully develop. So, in analyzing this issue, some deference is given to the amount of time it will take for a large development to fully build-out.

As shown in the analysis, the schools that would likely see the heaviest capacity impacts from the development would be Ruth Ann Monroe and Greenbrier Elementary schools. One known variable at the time was that a line item project to replace Greenbrier and Old Forge Elementary schools and add capacity to the district was included within the Capital Improvement Program (CIP).

The Planning Commission has determined that the anticipated longevity of the project along with the potential capital improvements provide sufficient evidence that schools serving the development would have reasonable time to absorb the new capacity created by this development.

Stormwater Management:

The Planning Commission discussed the argument made by the Petitioner that the reduction in stormwater management areas constitutes reasoning for a major change. The Planning Commission has determined that this cannot be used as reasoning because the rules and regulations implementing stormwater strategies are continuously reviewed and updated to meet the evolving technology, practices and standards set by State law. Furthermore, stormwater management areas cannot be correctly sized and located until the parcels are formally laid out and engineered drawings are produced to determine the final product. For concept plans, stormwater management areas are meant to provide a rudimentary analysis of grade and water flow to predict generalized locations and sizes.

Availability of Open Space/Amenities:

The Petitioner asserted in their complaint that the reduction in recreational amenities should be evidence that there was a major change in the PUD Development Plan. As part of the Court's analysis, reference was again made between the 2002 Plan and the Third Proposed Amendment. The Planning Commission references back to its contention that the 2020 approved development plan was the document in effect at the time and have based their analysis on this belief. On the 2020 plan all amenities were removed except for open space areas and tot lots in the multi-family areas. The 2022 Plan proposes reinstating some of the recreational uses previously removed. Therefore, it is the belief of the Planning Commission that the Third Proposed Amendment reinstates several of the amenities that were stripped out of the original plan when the 2020 plan was approved. Therefore, the Planning Commission finds that this argument does not contribute to the decision of major vs. minor change.

Planning Commission Response: The Court repeatedly states in their opinion that the determination of minor vs. major changes cannot be viewed through the lens of individual standards. Rather it should be viewed comprehensively to determine how the individual standards support or don't support the premise of major vs. minor changes to a PUD Development Plan. The Planning Commission, as part of this analysis, did not come to the same conclusions as the Court on many of the individual standards and how they were interpreted. Therefore, after a comprehensive review of the various issues brought up by the Petitioner and the Court, the Planning Commission comprehensively disagree with the Court's holdings that the Third Proposed Amendments should be deemed major.

In conclusion, it is the consensus of the Planning Commission that there is evidence that the PUD zoning district should be deemed invalid effective February 27, 2009, and therefore the opinion of whether the cumulative changes constitute a major or minor change in the previous development plan should be rendered moot. If the BZA decides that the PUD has followed the regulations to deem the zoning valid, the Planning Commission, through the analysis provided, has determined that their decision that the changes are minor should be re-affirmed.

Respectfully Submitted,

David Kline, Chairperson
Washington County Planning Commission

Washington County MARYLAND
DEPARTMENT OF PLANNING & ZONING
PLANNING | ZONING | LAND PRESERVATION | FOREST CONSERVATION | GIS

August 2025

STAFF REPORT AND ANALYSIS OF REMAND
BLACK ROCK PUD MAJOR VS. MINOR CHANGE
Circuit Court Case No. C-21-CV-22-00424

Background: Starting in early 2021, Dan Ryan Builders (DRB) showed interest in purchasing land owned by Black Rock Holding II, LLC (Black Rock) for the purpose of developing a Planned Unit Development (PUD). Between February 2021 and March 2022 DRB submitted three (3) different amended versions of a development plan that was approved for the Black Rock PUD. The third revised plan, referred to as the "Third Proposed Amendment" was presented to the Washington County Planning Commission (Commission) at their regular meeting on April 4, 2022. The Commission decided that the changes proposed would be considered a minor change to the approved development plan and would therefore not require a new public hearing.

The Commission's decision was appealed to the Washington County Board of Zoning Appeals (BZA) by Mt. Aetna Advocacy Group, et. al (Mt. Aetna). The BZA held two (2) public hearings to take testimony on the appeal. At the end of the 2nd hearing on August 18, 2022, the BZA deliberated and determined that the Commission did not err in their interpretation that the proposed changes to the PUD development plan were minor and affirmed the Commission's decision.

Mr. Aetna then appealed the BZA opinion to the Circuit Court of Washington County, Maryland. After a hearing and deliberation, the court issued its opinion on April 1, 2024, and found that the decision of the BZA lacked sufficient evidence to support their conclusions and remanded the issue for further review. The Circuit Court decision was appealed by the DRB group to the Appellate Court of Maryland, but the case was voluntarily dismissed in October 2024.

With the Circuit Court opinion remaining in force, the BZA held a public hearing on March 19, 2025, to review and deliberate upon the remand. They determined that the evidence noted by the court opinion as insufficient related to findings that were initially made by the Commission. The BZA therefore has remanded the issue to the Commission for further evaluation.

Staff Report: There were four (4) distinct issues that were presented by Mt. Aetna to the court for judicial review. The issues deliberated by the Circuit Court are as follows:

1. *Has the Black Rock PUD expired because the March 2, 2020 Planning Commission Development Plan approval was expressly "effective for a period of two years," thereby expiring on March 2, 2022?*

2. *Is the Black Rock PUD valid or invalid?; did Black Rock fail to comply with the Washington County Zoning Ordinance sections:*
    a. *Section 16A. says that a PUD [such as Black Rock PUD] "shall maintain validity in accordance with this Article." [emphasis added].*
    b. *Section 16A.6.e. says that "Submission and Approval Timeframes" must be followed for the PUD "to maintain [it's] validity."*
    c. *Section 16A.6.e.3. requires that "[f]ollowing approval of the Final Development Plan, the applicant shall submit a Site Plan or Subdivision within six (6) months for the entire PUD or for any phase for Planning Commission review." [emphasis added].*
    d. *Section 16A.6.e.3. also requires that after the submission of the site plan or subdivision within 6 months of approval for Planning Commission review that "construction shall begin within one (1) year of Site Plan or Subdivision Approval." [emphasis added].*
    e. *Section 16A.6.e.3. conditions extensions of the specified time frames by stating that "[r]equests for extension may be granted by the Planning Commission for good cause."*

    Is the Black Rock PUD invalid such that the Board of Appeals erred as a matter of law in affirming the Planning Commission's approval of Black Rock's 2022 Third Proposed Amendment to the previously approved PUD?
3. *Was there a violation of Zoning Ordinance Section 24.4(b) which says "[a]n application for site and/or development plan approval for [a PUD district] shall not be accepted for filing by the Commission if the application is for approval of the whole or part of any land, the approval of which has been denied by the Commission, within twelve (12) months from the date of the Commission's decision."?*
    a. *Was there a violation of 24.4(b) when the Planning Commission accepted/addressed the following:*
        i. *A February 16, 2021 First Proposed Amendment to the concept plan [which was deemed a major change and denied after a public hearing];*
        ii. *a December 30, 2021 Second Proposed Amendment [which was deemed a major change and then withdrawn by Black Rock before the public hearing]; and*
        iii. *the March 7, 2022 Third Proposed Amendment [deemed a minor change and the subject of this appeal]?*
4. *Is the Black Rock March 7, 2022, Third Proposed Amendment to the 2002 approved PUD a minor change as found by the Planning Commission and affirmed by the Board of Appeals or is it a major change such that there was error in affirming the Planning Commission's determination that the Third Proposed Amendment was a minor change?*

Analysis: Staff offer the following information and analysis related to court opinion and remand instructions. It is strongly recommended that Commission members review the Circuit Court Opinion for Case No. C-21-CV-22-00424 in its entirety to gain further context on each issue discussed.

<u>Issue 1:</u> Has the Black Rock PUD expired? And thus, did the BZA err in affirming the Commission finding that the changes proposed in the 3rd revision to the approved development plan were minor?

As part of the court's opinion the court opined that " Even the 'effective for a period of two (2) years' does not expressly purport to create an expiration of the 2002 PUD existence, it instead expressly states that the DP-20-001 "Development Plan approval" "is effective for a period of two (2) years. This does not create an expiration of the PUD which was approved in 2002 by the County Commissioners." (Page 20 of 87)

Furthermore, the court found that "As to this specific issue, the Board of Appeals decision is affirmed." (Page 21 of 87)

Staff recommendation: Because the court has affirmed the BZA on this issue, no further analysis or deliberation is required for this issue by the Commission.

Issue 2: Is the Black Rock PUD invalid? And thus, did the BZA err in affirming the Commission finding that the changes proposed in the Third Proposed Amendment to the approved development plan were minor?

While the zoning ordinance does not expressly state that a Development Plan can expire, it does clearly state that there are criteria that must be met for the PUD Floating Zone to maintain its validity. Specifically, Mt. Aetna referred to the criteria listed in Section 16A6.e that identify submission and approval time frames. They are as follows:

1. *Preliminary Development Plan Review and Approval:* The applicant shall submit the Preliminary Development Plan within six (6) months of the decision by the Board of County Commissioners to approve the major change to the Concept Plan.
2. *Final Development Plan Review and Approval:* Following approval of the Preliminary Development Plan, the applicant shall submit the Final Development Plan within six (6) months for Planning Commission review.
3. *Site Plan and/or Subdivision Review and Approval:* Following approval of the Final Development Plan, the applicant shall submit a Site Plan or Subdivision within six (6) months for the entire PUD or for any phase for Planning Commission review and construction shall begin within one (1) year of Site Plan or Subdivision Approval.

   Below is a timeline of applications that show the milestones/criteria met by the Black Rock PUD project.
   - November 19, 2002 the Board of County Commissioners (BoCC) approved the PUD zoning for Black Rock.
   - A Preliminary Development Plan was submitted on May 16, 2003 (met 6 mo. requirements). The plan approved on February 24, 2005.
   - A Final Development Plan was submitted on March 10, 2005 (met 6 mo. requirement). The plan was approved on May 1, 2006.
   - A Preliminary Subdivision Plat for Phase I was submitted on May 24, 2006 (met 6 mo. requirement). The plat was later voided.
   - A Site Plan was submitted for the PUD Community Center on May 24, 2006 (met 6 mo. requirement). The plan was approved on February 27, 2009.
   - Construction never commenced and no extensions were granted.

- Several other plats and a revised development plans were submitted and some approved between 2009 and 2020. None of the projects commenced construction activities.

Staff Recommendation: In light of the court's conclusion that the PUD Development Plan expiration is separate and apart from determining the validity of the zoning; and after review of the Black Rock PUD project timeline, Staff believe that the PUD floating zone should be found invalid. As such, the Planning Commission could present this evidence to the BoCC and request that the PUD floating zone be removed and that the underlying zoning district of Residential Transition (RT) be reinstated.

Issue 3: Was there a violation of the Zoning Ordinance as it pertains to the amount of time required between applications when denial occurs?

The court opinion found the staff explanation of the development plan approval process to be confusing. It was interpreted by the court that the findings presented as part of the testimony insinuated that "…Black Rock could file unlimited requests for amendments…". The court remanded the issue back for specific findings of fact and analysis under Section 24.4(b) including:

a) Whether the March 7, 2022, Third Proposed Amendment was "An application for site and/or development plan approval for [PUD] Districts" and, if so
b) Whether the March 7, 2022, Third Proposed Amendment application "was accepted for filing by the Commission"
c) Whether "the application is for approval of the whole or part of any land, the approval of which has been denied by the Commission, within twelve (12) months from the date of the Commission's decision."

Staff acknowledge that the use of the term 'applicant' has been used several times to describe the request being made by DRB. Staff drafted a memo to the Planning Commission that was included within the April 4, 2022 agenda packet that gave a brief history of events that had led up to the current request. DRB is referred to as the applicant several times. As part of the meeting, and included within the minutes (excerpt below), DRB is again referred to as the applicant. It's reasonable to assume that this description of the developer would lead someone to believe that an actual application was made.

OTHER BUSINESS

Black Rock PUD Revision

Ms. Baker presented for review a request for a determination of a minor vs. major amendment to the approved Black Rock PUD development. In February, the developer proposed a revision to the existing approved development plan of 595 units. At that time, the developer wanted to cluster the units in a different configuration. The Planning Commission reviewed this request and determined this was a major change to the approved plan and advised the applicant that a new public hearing process would be

necessary to evaluate the proposed revision. The applicant has taken the Planning Commission's comments into consideration and has submitted a new revision to the approved plan. Staff has reviewed the new revision and notes that the applicant has spread the development over the entire parcel rather than clustering. The number (595) and types of residential units and amenities are similar to the approved development plan but in a different configuration.

Discussion and Comments: Mr. Wiley asked if the proposed changes have been dictated by the current market trends. Ms. Baker stated that is the case.

There was a brief discussion regarding the location of the various types of housing and it was noted there is more open space on the revised plan. There was discussion regarding the need for a water tower. Mr. Sassan Shaool was present at the meeting. He stated that land has been set aside for a water tower if the need arises; however, the County has not asked for a water tower to be constructed.

Motion and Vote: Mr. Semler made a motion to deem the revised plan as a minor change to the approved development plan. The motion was seconded by Mr. Goetz and unanimously approved.

However, no formal application was submitted by DRB as part of the request. The plans submitted by DRB were concept in nature; no application was submitted, no fees were paid, no records were initialized, and plans were not sent out for agency review. The action sought by DRB was to determine if the concept plan presented was put forward as a formal submittal to amend the approved development plan would the changes be considered major or minor change. No approval action was asked for or taken to formally change the approved development plan. Section 24.4 of the Zoning Ordinance applies to formal approval or denial decisions. Since no formal approval or denial action was taken, the review of the Third Proposed Amendment was not in violation of Section 24.4.

To further support this finding, we point to the fact that there is a defined process for this type of review by the Planning Commission. There is an adopted policy that allows developers to submit concept plans for cursory review by the Planning Commission prior to significant investment in engineered plans. This process is called 'Initial Advice'. An excerpt from the policy is shown below. The full content of the policy can be viewed on Planning and Zoning's website at https://www.washco-md.net/wp-content/uploads/commiss_pol_res.pdf.

> *Policy #25*
> *In order to provide improved service and guidance to the citizens of Washington County, streamline the development review process, improve the outcome of future land use and*

development projects, and accommodate requests of the development community for preliminary input during early stages of the design process, the Planning Commission adopts this policy to govern an additional category of Planning Commission meeting agenda items to be known as INITIAL ADVICE.

The purpose of the designated agenda time will be to provide a limited opportunity for those who expect to seek future Planning Commission approval, an opportunity to seek early advice on certain aspects of a design proposal or on proposed methods of complying with regulations. The intention of this policy is to provide preliminary advice about subdivision plats, site plans, and other plans specified by ordinances that govern land development prior to a significant investment in detailed final designs.

This was the policy being used to process DRB's different requests for potential changes to the approved Development Plan. Admittedly, the request was not specifically listed under an agenda title of 'Initial Advise', however, it was listed under 'Other Business' and specifically delineated as a 'determination' not an approval or denial of formal amendment to the adopted development plan.

OTHER BUSINESS

1. **Black Rock PUD -** Determination of a minor vs. major amendment to the approved concept plan; Planner: Jill Baker * ***Discussion/Action***
2. **Update of Staff Approvals –** Jennifer Kinzer * ***Information/Discussion***

Excerpt of April 4, 2022 Planning Commission agenda

Staff Recommendation: Staff does not believe that the Planning Commission violated Section 24.4 of the Zoning Ordinance in reviewing the 3 amendments (February 21, 2021; December 30, 2021; March 7, 2022) to the Black Rock PUD Development Plan. Actions taken by the Planning Commission were for guidance only and did not approve or deny any changes to the existing approved development plan. Because each of these submittals requested guidance in determining next steps for the development, there is no violation of this section.

Issue 4: Are the proposed changes in fact minor as determined by the Planning Commission and affirmed by the BZA?

As part of the Circuit Court appeal, Mt. Aetna challenged the Planning Commission's determination and the BZA affirmation that the proposed changes to the approved Black Rock PUD Development Plan were in fact minor. They argued that the following changes, individually and collectively, are major changes to the existing approved PUD Development Plan. The court agreed and remanded this issue back to the BZA for further analysis, who in turn have remanded the issue back to the Planning Commission.

Argument 1: Differences in the configuration, including "concentrating all zero-lot line/townhomes and semi-detached/duplex houses in the southeastern corner of the Property, as opposed to throughout the entire Property."

Argument 2: Clustering 485 dwellings on less than half of the Property as opposed to spreading throughout.

The court combined arguments #1 and #2 in their findings but also referred to discussions in other sections that relate to Mt. Aetna's arguments. This initial evaluation from the court was a statement that basically associated denser development creating a more crowded experience for PUD residents. It noted that more concentrated residences would equate to more cars, more people, more infrastructure impacts and potential increases in petty crime.

The arguments made by Mt. Aetna related to these two questions have a broad range of issues that can contribute cumulatively to the argument. Analysis of these issues will be found in various sections later in this report.

Argument 3: Reducing estimated average daily water/sewer use from 300 gallons to 200 gallons per dwelling with no rationale is a major change.

The court agreed with Mt. Aetna's argument that a change from 300 to 200 gallons per unit is a significant change and that further analysis is needed to justify why this is not a significant change.

When analyzing wastewater usage, Washington County, like most jurisdictions, use a standardized unit of measure known as an Equivalent Dwelling Unit (EDU). It represents an estimate of the wastewater produced by one single family dwelling unit. Washington County defines one EDU to be equivalent to 200 gallons per day/per unit. As shown in the excerpt below, this standardized measure is defined as part of the adopted rate schedule for utility services. The full document may be viewed online at https://www.washco-md.net/wp-content/uploads/RS-2025-21.pdf.

Commercial II - Commercial customers (3 or more EDU's)
Deduct Meter Fee - Metered water that does not enter the sewer system and is not conveyed to the treatment plant. For example, fountain soda machines at a convenience stores. The meter is read quarterly and deducted from the sewer bill.
EDU - The Equivalent Dwelling Unit is a unit of measure used to equate flow demand to an equivalent of one single family home. An Equivalent Dwelling Unit is assumed to be equal to 200 gallons each per day of water use and sanitary sewage production.
Infrastructure Management Program Fee - This fee provides for upgrades to the wireless communications infrastructure on Washington County owned sewer systems (Emergency Alarms & Communications).
Joint Sewer Service Connection Fee - Sewer service connection fee for areas jointly served by the City of Hagerstown and the Wash. Co. Dept. of Water Quality. For Example, Maugansville, Fountainhead & Pangborn. This fee helps offset the capital costs of upgrading the sewer system and for

There is no record of why the previous developer used 300 gallons daily usage per day. As stated, this is not the standard by which Washington County defines average daily utility usage.

Staff Recommendation: Without reasoning behind the 300 gallon per day estimate made by the previous developer, it is impossible to know why they chose this figure. Based upon the Third Proposed Amendment changes, Staff has no reason to assume that the rate of 200 gallons per day would not be appropriate based on long established county policies for standardized measures of EDUs. We do not believe that this would equate to a major change.

Argument 4: Reduction stormwater management areas;

The court concluded that "not much evidence [was] presented on this issue, and on sufficiency of the stormwater management plan. These details will likely be dealt with at a later stage of the development process.".

Staff Recommendation: The court doesn't seem to accept this point as a reason for determining whether the change was major or minor. No further analysis is needed.

Argument 5: An over 50% reduction in space for recreational amenities [the 2002 Phase 1 amenities construction of almost 8 acres of recreational amenities, is reduced to 3.5 acres of recreational amenities to be built at an unspecified later time, with only the "public park" scheduled to be built in Phase 2];

Mt. Aetna argued that the amenities shown on the 2002 Preliminary Development Plan for Black Rock PUD created "a country club atmosphere" by including amenities such as tennis courts, a club house, a swimming pool, a gazebo, 6 tot lots, a basketball court and landscaping. They state in their argument that the Third Proposed Amendments calls for amenities that would include flexible open play areas, playground with equipment, multipurpose courts and a pool with restrooms. As part of the 2002 plan, a total of 8 +/- acres were proposed to be dedicated to amenities while the Third Proposed amendments on show 3.64 acres. A reduction of over 50%.

What the Mt. Aetna and court failed to consider is that the 2002 Development Plan for the Black Rock PUD was amended in 2020 to convert the community center lot containing 7.37 acres to an 8-lot residential subdivision. This conversion left only small tot lots scattered among the development as amenities. So, in fact, the Third Proposed Amendment reinstated many of the lost amenities that occurred as part of a previous decision.

Not discussed, but relevant to the conversation, is the existence of a regional county park directly across the road from this development. Washington County Regional Park includes amenities such as softball fields, a modular playground, specialized playground equipment for the disabled and handicapped, tennis courts, basketball courts, and a 36-hole disc golf course. While the amenities of the park should not supplant any need for amenities within the development, but it does offer other opportunities not even planned for in the 2002 plan.

They also argue that DRB proposed to move the construction of amenities to Phase 2 of the project thereby delaying implementation for an unspecified period of time. This is not an uncommon occurrence in the development of larger subdivisions. The initial phase of the development is what builds the demand for the amenities. It can also have an affect on the types of amenities that are constructed, and in what order. Building amenities before housing units are constructed and lived in is impractical.

Staff Recommendation: Since the Third Proposed Amendment showed potential reinstatement of amenities lost to a previous decision made in 2020, Staff does not believe that there was a reduction or delay of amenities that would contribute to the reasoning that changes in amenities would result in a major change.

Argument 6: Changes in the heights of townhomes [17% increase in height] and multi-family buildings [27% percent increase in height].

The court opinion focuses its deliberation on Section 16A.4(g) of the Zoning Ordinance. This section discusses basic design standards that should be evaluated when reviewing development plans for a PUD

including building height. Two specific statements are made in this section that the court focused on as reasoning for its opinion.

First, the opening sentence of Section 16A.4 says, "These standards are intended to ensure that the PUD is compatible with neighboring properties and **that it provides a quality living environment for its residents**." [Emphasis added by the court] The court supplied significant discussion on this general statement. The deliberations were very generalized in nature in discussing how different types of homes can create a different aesthetic, feel and or atmosphere.

The second part of this section that the court focused on was the statement that **"In review of a Planned Unit Development, the Planning Commission may waive or modify the area, yard, height and other design requirements for the different types of development only if such modification will increase the amenities of the development."** [Emphasis added by court].

There is some level of agreement by Staff that residential density does have inherent qualities that people can feel attracted to or not. We disagree that building height correlates directly and absolutely to the concept of 'feel'. The opinion of the court assumes a worst-case scenario situation where the developers would try to 'maximize their profit'. If this is the position from which to compare building heights, then we must also apply the same assumptions to the properties that adjoin the proposed development.

Regarding the townhouse portion of the development, the developer has requested a maximum building height of 42 ft. Per the judicial notice used by the court in this opinion, assuming that one-story is generally 11 ft., this means that the townhouse, even with a flat roof, could not exceed 3 full stories. In comparison, a single-family home in an adjacent RT zoning district would have a maximum height limit of 35 ft. Using the same assumptions, the single-family home would also be limited to 3 full stories. So, the difference in height would likely be offset by the type of roof that was installed on the home. More than likely, the homes will be built the same way with the same story heights so that the façades would match but the roof of the townhouse have a peak whereas the single-family home would have a flat roof.

Another factor that can play a significant role in the comparison of building height is topography. Depending on the location of the different types of dwelling units, they may have the appearance to be the same height even though they aren't. This was not considered as part of the court analysis.

Regarding the apartment/condo comparison of the two plans. The developer requested a change in building height from 40 ft to 55 ft. Using the same analysis as the townhouse portion of the development, this request could increase the number of stories from 3 full stories (with a 40 ft. height limit) to 5 full stories (with a 55 ft. height limit). In addition, after further evaluation, Staff found that within the Residential Multi-family zoning district, apartments have a maximum height limitation of 50 ft. Based on the language above associating height modifications to amenities provided, further discussion should be held by the Commission evaluating the request for more height compared to the amenities provided.

Staff Recommendation: While Staff does not agree with the court's opinion that the request to add 7 ft to the maximum building height for townhouses would equate to a major change, we do agree that the

modification proposed for the maximum building height for apartment buildings may be seen as a major change. Staff recommend that the Planning Commission discuss this issue in further detail and provide an explanation of their determination.

> *Argument 7: The difference in the phase implementation from 2002 to 2022, which Petitioners assert significantly exceeds the dwelling units per acre in the first two phases.*

As part of the court's analysis, focus was put on Section 16A.4(j) that states, "In order to ensure that the PUD develops uniformly, each phase shall independently conform to the density established by the Planning Commission for the PUD tract". A Black Rock representative argued that the approved 2002 PUD development plan also showed that individual phases would not meet the standard set in the ordinance so the assumption would be that the Planning Commission would defer enforcement of the density requirements in the plan review stages.

The court did not agree with the arguments posed by Black Rock and found that the plain language of the law is unambiguous. Section 16.4(j) is very clear that each phase of the development must develop at or lower than the overall residential density of the entire PUD.

Staff Recommendation: Staff agree that there appears to be a violation of Section 16.4(j) because the Third Proposed Amendment clearly showed residential densities in some sections of the plan that would exceed the density proposed for the entire development. Whether this should be considered a 'change' in the plan is debatable. It would be more accurate to state that this was a violation that should have been addressed upon submission. Regardless, an error seems to have occurred that needs to be addressed by the Commission.

In addition to the 7 arguments made by Mt. Aetna, the court went into further discussion about other aspects of the Third Proposed Amendment that brought them to the conclusion that the project should be considered a major subdivision. The following issues were discussed.

> *Court Argument 1: Should the adequacy, or lack of adequacy, of public facilities/infrastructure be considered, including adequacy of: schools, water generally, water for fire suppression, sewer, roads and emergency services?*

Mt. Aetna argues that the adequacy of public facilities is an important factor in the deliberation of whether the change is major or minor. Black Rock argued that public facilities/infrastructure cannot be considered at this stage in the development process. The court found that, "The Planning Commission did not make the required findings of fact or perform the required analysis as to adequacy of public facilities/infrastructure as required under 16A.5 and 16A.4." Analysis and findings of fact must take place as part of this remand.

PUD Development Plans are intended to be conceptual in nature. The complexity of a large residential project requires sequential steps that provide the developer with continual information and feedback so that they can determine the physical and/or financial repercussions of a project. By getting this feedback, developers can begin estimating development costs without significant investment in studies and engineering costs. This is not to say that a concept/development plan should not provide some analysis of infrastructure impacts.

The court also found that it didn't seem 'fair' to have a developer invest resources into a concept plan that has the potential to be stopped later down the road due to a lack of adequate facilities. While this statement has some validity, there is an inherent risk in any investment made in a project. Staff agree that an analysis of infrastructure should be done early in the process to determine potential impacts and costs to the developer. However, it is important to note that PUDs tend to be long-term projects and that conditions/adequacy are constantly changing. So, even if the developer sufficiently addresses adequacy concerns at the earliest stages of the development, conditions could change to the point that later in the development process, they could be stopped anyway.

Maryland is a late vesting State, meaning that development rights are not vested until final approvals and recordation are complete. This provides assurances to local governmental agencies that appropriate measures are taken to ensure that impacts from development on local resources are adequately addressed at the time the development occurs.

As part of Staff's analysis, previous development plans, site plans and subdivision plats associated with this PUD were taken under consideration. All the information related to review comments, meeting minutes, approvals and recorded plans are publicly available for anyone to review. It is assumed that the developer conducted proper due diligence on the development that would have revealed this information.

Staff would also like to point out that the court references concerns expressed by the Board of County Commissioners (BoCC) as part of their deliberations on a rezoning case held in 2021. Staff suggest that this is not a fair comparison. The development plan provided to the BoCC proposed an increase of dwelling units from 595 to over 1100. The Third Proposed Amendment of the Black Rock PUD only proposes 585 units. Obviously, the significant increase in units would more severely impact infrastructure in the area. The Third Proposed Amendment mimics the number of units proposed under the initial development plan that was approved by the BoCC.

Staff offer the following analysis for consideration by the Planning Commission.

Public water infrastructure and capacity including fire suppression.

Public water service in this area is supplied by the City of Hagerstown. As part of the April 4, 2022 Planning Commission meeting there was discussion about water supply in that area. Significant discussion was held regarding known issues related to water pressure both in individual homes and in the fire suppression system. The city acknowledged that there is water service in the area and that extension would be possible. It was noted that water capacity was available, however, as with all development in the city and county, allocation is on a first-come, first-served basis.

Regarding the water pressure issue, the developer stated that they had talked with the City about the water issues in the area and that they had set aside land for a potential water tower to address the pressure issue for both homes in the area and the fire suppression system. (see excerpt of

Planning Commission minutes from April 4, 2022, below). It was also acknowledged that they would have to pay for the construction of the tower.

Discussion and Comments: Mr. Wiley asked if the proposed changes have been dictated by the current market trends. Ms. Baker stated that is the case.

There was a brief discussion regarding the location of the various types of housing and it was noted there is more open space on the revised plan. There was discussion regarding the need for a water tower. Mr. Sassan Shaool was present at the meeting. He stated that land has been set aside for a water tower if the need arises; however, the County has not asked for a water tower to be constructed.

Excerpt from April 4, 2022 Planning Commission Minutes

Staff Recommendation: Staff believe that the level of research and collaboration done with the water service provider (i.e. setting aside land for the construction of a water tower) could reasonably address impacts on public water and fire suppression systems.

Road Networks

A traffic impact study was completed by DRB in 2022 as part of the rezoning request to increase density. This study provided a more current analysis of existing traffic than the one completed in 2002. It also included an analysis of future impacts on infrastructure once the development has been built out. The analysis was done as though the PUD would be expanded to 1,148 units. The result of the study indicated that significant improvements would need to be made by the developer along Mt. Aetna Road and at the intersection of Mt. Aetna and Robinwood Drive.

Even with the improvements that would be required, the BoCC found that the traffic would be overwhelming to the system and denied the application for 1,148 units. As a result, the developer reduced the total number of units back down to 585 units. It is unclear if there has been a new traffic study for lot reduction but it's logical to assume that improvements will still be needed but potentially less extensively. Therefore, the developer would already have an estimate of cost that factored into their decision to amend the plan back down to 585 units.

Staff Recommendation: Because the Third Proposed Amendment asked for fewer units at the same residential density as the original approved development plan, it is logical to deduce that traffic impacts would be the very similar between the two developments. Therefore, we believe that the developer has adequately addressed issues related to road networks through a traffic study analysis.

School Adequacy

The Black Rock PUD is split between multiple school districts. This bifurcation is because the PUD was proposed across two separate parcels. The parcel located adjacent to the existing Black Rock PUD (parcel 1) is in the Greenbrier Elementary and Boonsboro Middle and High attendance districts. The parcel immediately adjacent to the north (parcel 2) is in the Ruth Ann Monroe Primary, Eastern Elementary and Smithsburg Middle and High school attendance areas.

A breakdown of units by dwelling type and number of students produced per school district is shown below.

Estimated Number of Units per School District				
	Single Family	2 Family	Townhouse	Multi-family
Greenbriar/Boonsboro	80	68	17	0
RAM/EE/Smithsburg	75	0	143	160
Total	155	68	160	160

Estimated Number of Students Produced by School District					
Ruth Ann/Eastern	Smithsburg Middle	Smithsburg High	Greenbrier	Boonsboro Middle	Boonsboro High
128	51	52	84	42	42

In June of 2022 the Washington County Public School system reported school enrollment figures for each attendance zone for this development as shown in the chart below. Each school had some level of available capacity at that time. The new students produced from the PUD were added to the June 2022 enrollment to show what would happen if all the new students entered the school system at that specific moment in time.

In the chart below, Staff has put together a very rudimentary and simplistic analysis that provides a general idea of potential impacts that may happen with the build-out of the PUD. There are several factors that can cause fluctuations in these calculations. Issues like birth rates, death rates, in-migration, out-migration, other pipeline development, pupil generation rates, and redistricting are a few examples.

Analysis of Changes to Capacity with New Students from PUD						
	Enrollment	State Rated Capacity	% of Capacity	Students Produced by the PUD	Enrollment + New Students	% of Capacity
Ruth Ann Monroe	629	692	90.9%	64	693	100.1%
Eastern Elementary	436	572	76.2%	64	500	87.4%
Greenbrier Elementary	243	274	88.7%	84	327	119.3%
Smithsburg Middle	529	839	63.1%	51	580	69.1%
Smithsburg High	722	897	80.5%	52	774	86.3%
Boonsboro Middle	596	870	68.5%	42	638	73.3%
Boonsboro High	824	1098	75.0%	42	866	78.9%

While these numbers give a starting point for determining adequacy, it should be assumed that there is other pipeline development existing within these school districts that would contribute to an increase the overall capacity figure.

Generally, we can see that the inclusion of students from the PUD would likely have the most impact at the elementary school level with Greenbrier being the most impacted. Adequacy at the middle and high school levels would likely remain adequate.

The APFO states that any new residential development that causes school capacity to exceed 100% (90% for elementary school) shall not be approved unless a mitigation plan is reviewed and approved by the BoCC. To streamline the mitigation process, there is a mitigation method included within the APFO that allows a development to move forward without an individualized mitigation plan so long as the development does not cause the school districts to exceed 120%. This mitigation method is known as the Alternate Mitigation Contribution (AMC). It allows developers to pay a fee toward school construction and maintenance costs that could assist the county in building the revenue needed to support school infrastructure.

As previously noted, these figures assume that all the development within the PUD would build-out and enter the school immediately. Some amount of leniency should be given knowing that the PUD is a long-term development that is estimated to take at least 10 years to build out. Each phase of the development will be tested at the time of subdivision/site plan application to ensure that the number of students produced will meet school adequacy standards.

In addition, at the time the Third Amended Proposal was submitted, the adopted Capital Improvement Program (CIP) included within the document funds allocated for a project to build a new elementary school that would replace Greenbrier and Old Forge Elementary Schools and add new capacity. So, some assumptions could be made that by the time the development reached full build-out there is the potential that a new school could be built.

Staff Recommendation: Due to the longevity of the project, many variables can change the school adequacy calculations over time. The introduction of a new replacement school for Greenbrier Elementary provides an example of how conditions can change over time. The APFO states that development will be tested at concept plan, preliminary plat, and at final plat stage. That gives the developer advanced notice of school adequacy so that they can appropriately plan for mitigation if needed. We have sufficient confidence that the development will adhere to the regulations in the APFO and take appropriate measures to address any issues so that they can obtain development approvals.

Court Argument 2: Black Rock's 2022 Third Proposed Amendment frontloads most of the high-density building into Phases 1 and 2. In other words, the 2022 Amendment includes a significant increase in the dwelling units per acre for Phases 1 and 2 from the 2002 approved plan.

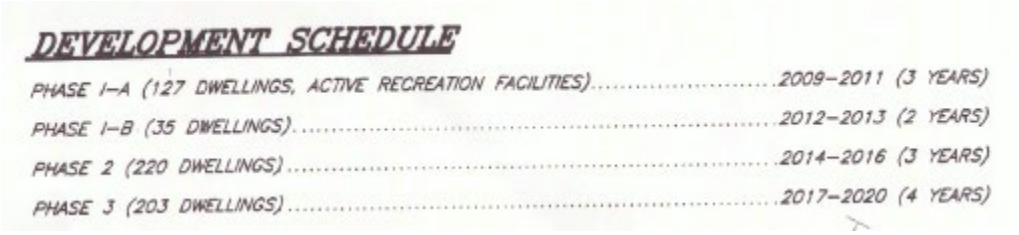
As part of the opinion the court compared the number of units from the 2002 plan vs. the 2022 plan (see chart below).

	Phase 1	Phase 2	TOTAL[1&2] Units	CumDUA	Phase 3	TOTAL
2002	155 Units	210 Units	365 Units	2.4 DUA	230 Units	595 Units
2022	183 Units	302 Units	485 Units	5.5 DUA	100 Units	585 Units

Staff Recommendation: It can be seen from the chart that significant differences are proposed in Phases 2 and 3. In addition, the dwelling units per acre highlight previous analysis in this report noting that the proposed dwelling units per acre are in violation of Section 16.4(j). Based on the analysis shown on the chart, it does appear that the 2022 plan does create a 'frontloading' situation.

Court Argument 3: The change from a 10-year build-out plan in the 2002 plan to a 6 year build-out plan is significant in its concentrated impact on public facilities/infrastructure.

As stated in previous analyses in this report, this is another instance of Mt. Aetna and the court failing to recognize that the 2002 plan was amended in 2020. As part of that amendment, the developer changed the build out period for each phase that added up to a proposed buildout of 12 years.



DEVELOPMENT SCHEDULE

PHASE I–A (127 DWELLINGS, ACTIVE RECREATION FACILITIES)..... 2009–2011 (3 YEARS)
PHASE I–B (35 DWELLINGS)..... 2012–2013 (2 YEARS)
PHASE 2 (220 DWELLINGS)..... 2014–2016 (3 YEARS)
PHASE 3 (203 DWELLINGS)..... 2017–2020 (4 YEARS)

Staff Recommendation: Regardless of the stated build-out periods, it should be acknowledged that these are estimates. Build-out of a long-term development is subject to numerous variables that impact the amount of time for build-out of each phase. Examples of variables that can impact the build out timelines include market conditions, housing demand, weather, and unforeseen field conditions. Past projects similar to the PUD have consistently varied from original timeframes due to unforeseen issues. Staff do not believe that a change in phasing timelines rises to the level of a major change.

Court Argument 4: The change from the 2002 condominiums and townhomes as a "gated community" to a community that is not gated is a major concept plan change.

The court analyzed the characteristics and advantages of a gated community regarding safety, privacy, amenities, and property values. They found that the change from a gated community to a non-gated residential area would be a major change in the plan.

While gated communities do provide certain advantages, they are not required by the zoning ordinance. In addition, the functionality of housing within gated communities is identical to those that are not. The units will produce the same number of vehicle trips per day, the same number of students, and need the same level of services.

Developers are granted a certain level of discretion in the design of their projects. It is reasonable to assume that a developer would conduct an analysis to determine the types of housing that would be appealing and marketable before planning the development.

Therefore, it would be illogical to assume that a developer would produce units that weren't competitive in property value to other similar types of development in the community.

While there is a certain amount of discretion for the developer, good planning practices state that there should also be some level of compatibility. Both the 2002 plan and the 2022 plan show the multi-family units in the same location that create separation from the single-family homes located in Black Rock Estates. Both plans also show single-family lots adjacent to the existing single-family lots in Black Rock Estates. Staff believe that amending the plan to show the multi-family area from being gated to un-gated does not equate a major change.

Court Argument 5: The change from the 2002 "condominiums" to the 2022 "multi-family" is a major change.

Analysis by the court in its opinion focused on the issue of homeownership vs. rental units. It also noted that apartments tend to attract "… a more economically challenged group of residents", that could negatively impact property values.

The assertions made by the court that apartments are generally rental units while condominiums are individually owned are accurate. However, the assumption that condominiums would be owner-occupied is not necessarily the case. There is always the possibility that they can be rented (unless expressly prohibited by the condominium association).

There has been a nationally recognized housing crisis in the United States. Housing has not only become less available, but it has also become less affordable. These factors have created a need in the market to build at a higher density to lower the cost of individual homes. This has also increased the need for additional rental units to help address issues of affordability. The argument is further supported in the analysis of Court Argument #6 below.

Staff Recommendation: Staff believe that the demand for housing affordability and housing demand in general dictate the need for a mixture of housing types including apartments. In addition, we find concern in the court's comments that multi-family rentals can attract "economically challenged" residents. While this may or may not be true, the inference that people in rental units are not socially engaged and need lower housing costs (thereby potentially lowering property values in the area) seems to be prejudicial. It contradicts the principles of the Federal Fair Housing Act that prohibits discrimination against certain classes of people.

Court Argument 6: The Ordinance dictates that changes to the approved PUD be in response to community needs and conditions. There is no evidence in the record that the proposed changes are responsive to community needs or conditions.

The court stated that the significant problem with this issue is that the BZA provided no evidence, data or information to conclude that the proposed changes are responsive to community needs or conditions. Instead, the BZA focused on the issue of accommodating a shift in market demand and community trends.

In the chart below is a comparison of some housing characteristics in Washington County between 2000 and 2022. The data has been compiled from Census data. The data shows that housing costs have significantly outpaced household income over the 20-year period. This has created an additional need for affordable housing which typically takes the form of smaller homes/dwelling units. Thus, creating a need for more multi-family housing typically in the form of townhouses and apartments.

Changes in Housing Characteristics between 2000 and 2022			
	2000	2022	
Total Housing Units	52,972	64,112	18.6% increase
Housing Vacancy Rates	6.10%	7.10%	1% increase
Annual Median Houshold Income	$40,167	$69,244	72.4% increase
Median Owner-Occupied Home Value	$115,000	$283,600	146% increase
Median Rent	$412	$985	139% increase

Regarding changing conditions within the community, this phrase typically refers to the social, economic, and physical environments in terms of where people live, work and recreate. The court in their argument, relies heavily upon the potential negative impacts of the multi-family residential area, noting that the builder will save money by degrading the living experience and property values of the PUD residents and surrounding neighborhoods. Specific examples given to support this argument included stripping away "luxurious" PUD amenities, increasing building heights (thus creating additional residents), turning condominiums into apartments, increasing density and eliminating the gated aspect of the multi-family section.

Staff Recommendation: All these issues brought up by the court have been previously analyzed in this report. To summarize these cumulative arguments Staff disagrees with the majority of the assertions that some of the changes add up to a major change in the development plan. Furthermore, the court noted that the BZA did not do enough research to support the affirmation of the Planning Commission decision related to the changing conditions within the community. We argue that the same is true of the court's opinion. Assumptions were made that change to the multi-family residential area would equate to a degradation of the community socially and financially, but no analytical data was provided to support those assertions. Staff believe that upon further analysis, the amended PUD still responds to the changing needs and conditions of our community.

Summary of Staff Recommendations:

Questions for the Court:

Issue #1: Because the court has affirmed the BZA on this issue, no further analysis or deliberation is required for this issue by the Commission.

Issue #2: In light of the court's conclusion that the PUD Development Plan expiration is separate and apart from determining the validity of the zoning; and after review of the Black Rock PUD project timeline, Staff believe that the PUD floating zone should be found invalid. As such, the Planning Commission could present this evidence to the BoCC and request that the PUD floating zone be removed and that the underlying zoning district of Residential Transition (RT) be reinstated.

Issue #3: Staff does not believe that the Planning Commission violated Section 24.4 of the Zoning Ordinance in reviewing the 3 amendments (February 21, 2021; December 30, 2021; March 7, 2022) to the Black Rock PUD Development Plan. As instructed in Section 24.4(b) "An application for site and/or development plan **approval** [emphasis added]… shall not be accepted … within twelve (12) months from the date of the decision. Actions taken by the Planning Commission were for guidance only and did not approve or deny any changes to the approved development plan. Because each of these submittals requested guidance in determining next steps for the development, there is no violation of this section.

Issue #4: Staff believe that after additional research and analysis that there are a few arguments made by Mt. Aetna and by the court that would be considered major changes between the Third Proposed Amendment and the 2002 approved PUD Development Plan. The final determination of major or minor change will need to be made by the Commission upon cumulative review of this report, acceptance of public testimony and deliberation of all of the evidence.

<u>Mt. Aetna's arguments</u>:

Arguments 1 and 2: The arguments made by the Mt. Aetna related to these two questions have a broad range of issues that can contribute cumulatively to the argument. Analysis of these issues will be found in various sections later in this report.

Argument 3: Without reasoning behind the 300 gallon per day estimate made by the previous developer, it is impossible to know why they chose this figure. Based upon the Third Proposed Amendment changes, Staff has no reason to assume that the rate of 200 gallons per day would not be appropriate based on long established county policies for standardized measures of EDUs. We do not believe that this would equate to a major change.

Argument 4: The court doesn't seem to accept this point as a reason for determining whether the change was major or minor. No further analysis is needed.

Argument 5: Since the Third Proposed Amendment showed potential reinstatement of amenities lost to a previous decision made in 2020, Staff does not believe that there was a reduction or delay of amenities that would contribute to the reasoning that changes in amenities would result in a major change.

Argument 6: While Staff does not agree with the court's opinion that the request to add 7 ft to the maximum building height would equate to a major change, but we do agree that the modification proposed for the maximum building height for apartment buildings may be seen as

a major change. Staff recommend that the Planning Commission discuss this issue in further detail and provide an explanation of their determination.

Argument 7: Staff agree that there appears to be a violation of Section 16.4(j) because the Third Proposed Amendment clearly showed residential densities in some sections of the plan that would exceed the density proposed for the entire development. Whether this should be considered a 'change' in the plan is debatable. It would be more accurate to state that this was a violation that should have been addressed upon submission. Regardless, an error seems to have occurred that needs to be addressed by the Commission.

Court Arguments:

The analysis and questions posed by the court seem to go beyond the formal arguments made by Mt. Aetna. However, they do correlate and add context to the points made by Mt. Aetna. These issues were remanded by the court for further review and deliberation. Staff have provided analysis and recommendations, however, each point should be reviewed and deliberated as part of the hearing process. Finally, the Planning Commission should affirm or overturn their previous decision based upon the information provided in this report.

Argument 1: As part of Staff's analysis, previous development plans, site plans and subdivision plats associated with this PUD were taken into consideration. All the information related to review comments, meeting minutes, approvals and recorded plans are publicly available for anyone to review. It is assumed that the developer conducted proper due diligence on the development that would have revealed this information. Staff offer the following analysis for consideration by the Planning Commission.

a. *Public water infrastructure and capacity including fire suppression.* Staff believe that the level of research and collaboration with the water service provider (i.e. setting aside land for the construction of a water tower) since the last amendment request could reasonably address impacts on public water and fire suppression systems.
b. *Road Networks.* Because the Third Proposed Amendment asked for fewer units at the same residential density as the original approved development plan, it is logical to deduce that traffic impacts would be the same between the two developments. Therefore, we believe that the developer has adequately addressed issues related to road networks.
c. *School Adequacy.* Due to the longevity of the project, many variables can change school adequacy calculations over time. The introduction of a new replacement school for Greenbrier Elementary provides an example of how conditions can change over time. The APFO states the developments will be tested at concept plan, preliminary plat, and at final plat stage, the developer will have advanced notice of school adequacy and can appropriately plan for mitigation if needed. We have sufficient confidence that the development will adhere to the regulations in the APFO and take appropriate measures to address any issues so that they can obtain development approvals.

Argument 2: It can be seen from the chart that significant differences are proposed in Phases 2 and 3. In addition, the dwelling units per acre highlight previous analysis in this report noting that the proposed dwelling units per acre are in violation of Section 16.4(j). Based on the analysis shown on the chart, it does appear that the 2022 plan does create a 'frontloading' situation.

Argument 3: Regardless of the stated build-out periods, it should be acknowledged that these are estimates. Build-out of a long-term development is subject to numerous variables that impact the amount of time for build-out of each phase. Examples of variables that can impact the build out timelines include market conditions, housing demand, weather, and unforeseen field conditions. Past projects similar to the PUD have consistently varied from original timeframes due to unforeseen issues. Staff do not believe that a change in phasing timelines rises to the level of a major change.

Argument 4: While there is a certain amount of discretion for the developer, good planning practices state that there should also be some level of compatibility. Both the 2002 plan and the 2022 plan show the multi-family units in the same location that create separation from the single-family homes located in Black Rock Estates. Both plans also show single-family lots adjacent to the existing single-family lots in Black Rock Estates. Staff believe that amending the plan to show the multi-family area from being gated to un-gated does not equate a major change.

Argument 5: Staff believe that the demand for housing affordability and housing demand in general dictate the need for a mixture of housing types including apartments. In addition, we find concern in the court's comments that multi-family rentals can attract "economically challenged" residents. While this may or may not be true, the inference that people in rental units are not socially engaged and need lower housing costs (thereby potentially lowering property values in the area) seems to be prejudicial. It contradicts the principles of the Federal Fair Housing Act that prohibits discrimination against certain classes of people.

Argument 6: All these issues brought up by the court have been previously analyzed in this report. To summarize these cumulative arguments Staff disagrees with the majority of the assertions that some of the changes add up to a major change in the development plan. Furthermore, the court noted that the BZA did not do enough research to support the affirmation of the Planning Commission decision related to the changing conditions within the community. We argue that the same is true of the court's opinion. Assumptions were made that change to the multi-family residential area would equate to a degradation of the community socially and financially, but no analytical data was provided to support those assertions. Staff believe that upon further analysis, the amended PUD still responds to the changing needs and conditions of our community.

Respectfully submitted,

Jill Baker, AICP
Director

ARTICLE 16 "PUD" PLANNED UNIT DEVELOPMENT

Section 16.0 Purpose

The intent of these PUD regulations is to permit a greater degree of flexibility and more creativity in the design and development of residential areas than is possible under conventional zoning standards. The purpose is also to promote a more economical and efficient use of the land while providing for a harmonious variety of housing choices, a more varied level of community amenities, and the promotion of adequate open space and scenic attractiveness.

The PUD is a floating zone that may be established in any of the Districts specified in Section 16.4. The change or mistake rule does not apply to the PUD process, but the Planning Commission and the Board of County Commissioners, in the deliberation of a PUD application, shall establish findings of fact that consider, at a minimum, the purpose of the PUD District, the applicable policies of the adopted Comprehensive Plan for the County, the compatibility of the proposed PUD with neighboring properties, and the effect of the PUD on community infrastructure.

Section 16.1 Principal Permitted Uses

The following uses are permitted in a PUD District subject to the limitations specified in this Ordinance.

(a) All residential uses permitted in the RR, RS, RU and RM Districts.

(b) Commercial uses permitted in the BL District.

(c) Civic, cultural and educational uses.

(d) Churches.

(e) Public utilities.

Section 16.2 Special Exception Uses

There are no special exception uses in the PUD District that may be granted by the Board of Zoning Appeals. The PUD itself is analogous to a special exception and is granted through the review process described in this Article.

Section 16.3 Accessory Uses

Uses and structures customarily accessory and incidental to any principal permitted use.

Section 16.4 General Requirements

(a) Ownership: The tract of land to be approved for development as a PUD must be in single ownership with proof of that ownership submitted to the Planning Commission by no later than review and approval of the Final Development Plan. Application for a PUD may be filed either by the owner or by a person having a substantial contractual interest in the land.

(b) Location: PUDs shall be located within the Urban Growth Area or the Town Growth Areas in the A, RR, RS, RU, RM and HI-2 Districts. The specific site shall be located adjacent to adequate roadway facilities capable of serving existing traffic and the future traffic generated by the uses in the PUD.[96]

(c) Utilities: All PUDs shall be served with public water and public sewer.

(d) Concept plans previously approved by the Planning Commission for planned residential development under the PR Article of this Ordinance shall be considered valid and shall not be constrained by time periods as specified in subsequent paragraphs. A public hearing is not required unless a major change is made by the developer to the Concept Plan; minor changes may be approved by the Planning Commission. Where there is a question about the degree of change being major or minor, the Planning Commission shall make that determination. All other provisions of Sections 16.5(a)3, 4 and 5 shall apply.

Section 16.5 Review and Approval Process[97]

Flexibility in site design is inherent in the PUD process. The Planning Commission may modify specific requirements and may establish other requirements deemed necessary to satisfy the purpose of this Article.

The review and approval of PUDs is a multi-step process. Those steps are: Concept Plan Review, Zoning Approval, Preliminary Development Plan Review and Approval, and Final Development Plan Review and Approval. Following zoning approval, the review and approval of the development plans may be combined when appropriate for smaller developments.

The Concept Plan, the Preliminary Development Plan, and the Final Development Plan shall be prepared by a licensed architect, a professional engineer, or a licensed surveyor. All plans shall meet the applicable requirements of the Forest Conservation Ordinance.

(a) Design and Development Schedule: It is the intent of this Ordinance that the PUD not be a speculative device. The Concept Plan as submitted by the applicant shall reflect the actual development to be designed and constructed

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96 **Revision 12, Section 16.4(b) amended 2/3/04 (RZ-03-003)**

97 **Revision 6, Section 16.5 amended 2/9/93 (RZ-92-16)**

within a reasonable time frame. Each phase of the design and development review process must occur within specified periods. If the applicant fails to submit his plans, or if construction does not commence, as specified by this Ordinance, the zoning of the site shall automatically revert to its previous classification.

If the applicant abandons the plans for the PUD at any time prior to the start of construction before the automatic reversion date and desires to proceed with development permitted under the previous zoning, he may do so by submitting notification to the Planning Commission. Such notification shall constitute official withdrawal of the applicant's plans for the PUD and shall permit reversion of the previous zoning classification without the necessity of the rezoning process.

1. Concept Plan Review: The purpose of the Concept Plan Review is to provide an exchange of information between the developer and the Planning Commission. The intent is that the developer provide the Commission with general information for the layout, density, specific uses and the like. The Commission, in turn, will provide the developer with corresponding response.

2. Zoning Approval: Following the Concept Plan Review, a joint public hearing with the Board of County Commissioners and the Planning Commission will be scheduled. Within 120 days after the public hearing, the Board of County Commissioners, after receiving a recommendation from the Planning Commission, shall render a decision on the PUD application. Zoning approval constitutes tentative approval of density and design features as shown on the Concept Plan. Minor changes in concept design may subsequently be approved by the Planning Commission without an additional public hearing.[98]

3. Preliminary Development Plan Review and Approval: The applicant shall submit the Preliminary Development Plan within 6 months of the rezoning. Requests for extension may be granted by the Commission for good cause. The Planning Commission shall approve or disapprove the Plan within 60 days except that extensions as requested by the applicant may be granted by the Commission for good cause.

4. Final Development Plan Review and Approval: Following approval of the Preliminary Development Plan, the applicant shall submit the Final Development Plan within 6 months for Commission review. Requests for extension may be granted by the Commission for good cause. The Final Development Plan shall be approved or disapproved by the Commission within 30 days except that extensions as requested by the applicant may be granted by the Commission.

5. Site Plan Review and Approval: Following approval of the Final Development Plan, the applicant shall submit a Site Plan within 6 months for the entire PUD or for any phase for Commission review and construction shall begin within 1

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98 **Revision 12, Section 16.5(a)2. amended 2/3/04 (RZ-03-003)**

year of Site Plan Approval. Requests for extension may be granted by the Commission for good cause.

Section 16.6 Content and Format of Application[99]

(a) Concept Plan: The Concept Plan shall include:

1. A vicinity map at 1"=2,000 ft. showing the location of the proposed PUD in relation to its surroundings and to the applicable growth area of the County Comprehensive Plan.

1.1 An approved Forest Stand Delineation and a preliminary Forest Conservation Plan.

2. The boundary, acreage and current zoning of the tract.

3. Minimum topographic information sufficient to determine surface drainage patterns and principal drainage areas.

4. Adjacent land uses and zoning and the location of adjacent dwellings within 100 ft. of the common property line.

5. Buffer yards required by Section 16.7(e) and the general location of fencing or screen planting as required by Section 16.7(e)4.

6. The location of areas within the tract proposed for single-family, two-family, and multi-family residential uses; commercial and other non-residential uses, tabulation for each area of the number of dwelling units, the maximum building heights, the gross acreage, the gross residential density, and the gross area devoted to commercial uses; and a summary of the total dwelling units and the gross residential density for the tract.

7. General alignment of principal streets and highways within the development, including major points of access; their relationship to proposed streets within adjacent approved subdivisions and to proposed highways in the Washington County Highway Plan; and the estimated average daily traffic volumes and the traffic circulation patterns from the development onto existing and proposed public streets and highways.

8. The estimated average daily water consumption and sewage flow.

9. The applicant shall submit 12 copies of the Concept Plan and accompanying data to the Planning Commission unless an alternative number of copies is specified by the Commission.

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99 **Revision 6, Section 16.6(a), (b) and (d) amended 2/9/93 (RZ-92-16)**

(b) Preliminary Development Plan: The Preliminary Development Plan shall include the same minimum information as the Concept Plan, plus:

1. Existing topography at contour intervals of not more than 5 feet where the slope is 10 percent or greater and not more than 2 feet where the slope is less than 10 percent, and the source of contour information.

1.1 A Forest Conservation Plan.

2. The surface conditions of the tract, including water courses, marshes, rock outcrops, woodlands, limits of the 100-Year Flood plain and other significant features. Existing vegetation and landscape features to be preserved shall be identified as well as new landscaping in accordance with Section 4.16.

3. The location of all individual lots and structures and the maximum heights of the structures.

4. The location, boundary and area of common open space to serve multi-family residential units; the designated area of useable open space in accordance with the standards of Section 16.7(c); the means of access to useable open space from the dwelling units; and the arrangement of play lots.

5. The location of all off-street parking, loading zones, and private access roads.

6. The location of pedestrian walkways and bus waiting areas.

7. The location of major water and sewerage facilities such as pumping stations, storage tanks, water transmission mains, and sewage interceptors.

8. Drainage patterns and stormwater management areas.

9. Easements and rights-of-way, existing and proposed.

10. The phasing schedule. The time schedule for each phase shall be shown on the Preliminary Development Plan.

11. Where the intent of the developer is to subdivide, the Preliminary Development Plan shall include the requirements for a Preliminary Plat.

(c) The applicant shall submit 12 copies of the Preliminary Development Plan and accompanying data to the Planning Commission unless an alternative number of copies is specified by the Commission.

(d) Final Development Plan: The Final Development Plan shall serve as the master plan for all subsequent site plans and subdivision plats and is the official record

of agreement between the developer and Planning Commission for development of the tract.

The Final Development Plan shall include:

1. Information required for the Preliminary Development Plan.

1.1 An approved Forest Conservation Plan.

2. Specific terms and conditions agreed to by the developer and the Planning Commission, or references to such terms and conditions when more appropriately submitted as part of accompanying documentation. Such terms and conditions may include:

   i. Provisions for the ownership and perpetual maintenance of common open space, recreation facilities, private roadways and parking areas.

   ii. Agreements for responsibilities between County and developer for providing on-site and off-site improvements.

3. Certificate of approval signed by the Planning Commission Chairman.

4. Certificate of willingness to abide by terms and conditions of the Final Development Plan signed by the developer.

(e) The applicant shall submit 6 copies of the signed Final Development Plan and accompanying data to the Planning Commission, unless an alternative number of copies is specified by the Commission.

Section 16.7 Design Standards[100]

These standards are intended to ensure that the PUD is compatible with neighboring properties and that it provides a quality living environment for its residents. The standards established for any PUD are considered prima facie to be acceptable to the developer and may not be the subject of appeal for a variance to the Board of Zoning Appeals.

(a) Density: The maximum gross density for a PUD is 12 DU/A. In determining the specific density for a particular PUD or for any particular phase of a PUD, the Planning Commission shall give consideration to and shall make findings of fact concerning, at a minimum, the impact of the proposed development on adjacent properties, the availability of public facilities, the impact of the proposed development on public roadways, the impact on public schools, fire and police protection, and the availability of adequate open space.

[100] **Revision 6, Section 16.7(c) amended 2/9/93 (RZ-92-16)**

(b) Tract Size: There shall be no minimum tract size for a PUD. However, the tract size and shape shall be appropriate for the development proposed as determined by the Planning Commission.

(c) Open Space: Common open space shall comprise not less than 25 percent of the gross area. The 15% minimum forest cover required by the Forest Conservation Ordinance shall be a part of the minimum 25% open space.

(d) Landscaping: All Development Plans shall contain a detailed schedule for landscaping. Trees, shrubs and other ground cover is expected to be so designed as to provide maximum enhancement of the overall layout. Landscaping shall be considered a necessary integral part of the PUD rather than an optional amenity.

(e) Buffer Requirements: Buffer requirements are intended to protect existing or future development adjacent to a proposed PUD from potentially adverse effects.

1. Non-residential uses in the PUD shall have a 50-foot buffer yard along the common boundary with any adjacent lot either within or without the PUD that is zoned for or is occupied by a residence.

2. Any multi-family residential use shall be provided by a 50-foot buffer yard along its common boundary with any lot zoned for or occupied by a single-family dwelling.

3. No structure, materials storage, or vehicular parking may be permitted in the buffer yard.

4. Buffer yards shall include adequate screening as deemed necessary by the Commission.

(f) Walkways

1. Walkways shall connect residential uses with off-street parking areas, transit and school bus waiting areas, and recreational facilities and commercial facilities on the site. Walkways shall also connect the development with any contiguous school or park.

2. When a proposed multi-family residential development is located adjacent to an existing public transit route or where students require school bus transportation, a bus waiting area consisting of an impervious surface shall be provided at such location as determined by the Planning Commission and the applicable transportation or education agencies.

(g) Building Spacing and Height Requirements: Building spacing and height requirements shall be the same as those for the different types of development provided for in the districts where PUDs are permitted.

In review of a Planned Unit Development, the Planning Commission may waive or modify the area, yard, height and other design requirements for the different types of development only if such modification will increase the amenities of the development.

(h) Non-Residential Development

1. In general, non-residential development proposed as part of a PUD shall be integral to the overall development and shall relate well to residential areas in terms of pedestrian and vehicular circulation. Buffer requirements between non-residential and residential uses within a PUD shall be as provided in this Article.

2. Commercial uses listed in the Business, Local District are permitted. The gross area for commercial uses shall not exceed 10 percent of the gross tract area. Commercial use shall not be built or established prior to the residential development except that they may be built in phases consistent with phasing of the residential construction within the 10 percent limitation.

3. Commercial uses shall primarily be designed and intended as a service to the residents of the PUD; however, it is recognized by this Ordinance that strict limitation of the commercial development to the PUD may not be practical. For that reason, the Commission shall consider the policies of the Comprehensive Plan relating to the establishment of commercial development in reviewing a proposal for the commercial portion of the PUD.

4. The Planning Commission may approve innovative and well-designed proposals for the sharing of buildings or parking areas by compatible residential and non-residential uses whenever it can be demonstrated to the satisfaction of the Planning Commission that such sharing is a logical and efficient use of buildings and land, and that the peak operating hours for the respective uses will not be in conflict.

(i) Traffic Circulation and Parking

1. Existing and planned streets and highways shall be of sufficient capacity to serve existing traffic and all new traffic when fully developed.

2. The capacity of existing streets and highways serving a PUD shall be considered by the Commission in determining density. Density resulting in traffic capacity being exceeded on streets and highways shall not be permitted.

(j) Phasing: In order to ensure that the PUD develops uniformly, each phase shall independently conform to the density established by the Commission for the PUD tract.