AGENDA

Frostburg Planning Commission Meeting

7:00 PM - Wednesday, May 10, 2023

Frostburg Municipal Center Meeting Room - 37 Broadway

Page

1. CALL TO ORDER

2. ROLL CALL

Chair Conrad Best, Jayci Duncan, Karen Krogh, Ray Rase, Adam Ritchey, Jeff Snyder, and Eric Stevens

3. CHAIR'S PROCEDURAL STATEMENT; COMMENTS; ANNOUNCEMENTS

The Chair asks that anyone presenting business before the Commission, or any individuals who would like to comment on business before the Commission or other concerns, please come forward at the appropriate time and state your name and address for the record. Each meeting is recorded, so please speak clearly.

4. REVIEW AND APPROVAL OF THE MINUTES

3 - 5 4.1. January 2023 FPC Minutes

5. CITIZEN COMMENTS

From Floor; intended for topics unrelated to the current agenda items

6. PROJECT PRESENTATIONS

6 - 7 6.1. **47 Ormand Street / 18 Park Street - Lot Split**
47 Ormand - 18 Park Street - Aerial View
47 Ormand - PLAT-SUB PLAT

8 - 78 6.2. **10811 New Georges Creek Road - Preliminary Site Plan Review**
Prelminary Site Plan - O'Reilly Auto Parts
10811 New Georges Creek Road - Aerial View
Concept SWM Report - O'Reilly Auto Parts

79 - 80 6.3. **MD Department of Planning - Annual Report**
CY2022 MDP Annual Report - DRAFT

7. DISCUSSION ITEMS

By Chair and Members of the Commission

8. ADMINISTRATIVE BUSINESS AND COMMUNICATIONS RECEIVED

SAVE THE DATE:
MPCA Planning Commissioners Training
July 19, 2023, 1:00 - 4:00 PM
City Place

9. STAFF REPORTS

10. ADJOURNMENT

MINUTES
Frostburg Planning Commission Meeting

Wednesday, January 11, 2023 - 7:00 PM
Frostburg Municipal Center Meeting Room - 37 Broadway

The Frostburg Planning Commission Meeting of the City of Frostburg was called to order on Wednesday, January 11, 2023, at 7:00 PM, at the Frostburg Municipal Center, 37 Broadway, with the following members present:

PRESENT: Adam Ritchey, Commissioner of Public Works
Conrad Best, Mr.
Jeff Snyder, Mr.
Karen Krogh, Mrs.
Ray Rase, Mr.

EXCUSED: Jayci Shaw Duncan, Mrs.

1. CALL TO ORDER
Chair Best called the meeting to order at 7:00 PM.

2. ROLL CALL
Chair Conrad Best, Karen Krogh, Ray Rase, and Adam Ritchey were present. Jeff Snyder arrived at 7:09 PM. Jayci Duncan was absent.

3. Chair's Procedural Statement; Comments; Announcements
The Chair asks that anyone presenting business before the Commission, or any individuals who would like to comment on business before the Commission or other concerns, please come forward at the appropriate time and state your name and address for the record. Each meeting is recorded, so please speak clearly.

4. REVIEW AND APPROVAL OF THE MINUTES

4.1. Commissioner Krogh made a motion to approve the December 2022 meeting minutes as presented. The motion was seconded by Commissioner Ritchey, a vote was taken, and the motion passed unanimously.

5. Citizen Comments
From Floor; intended for topics unrelated to the current agenda items

6. PROJECT PRESENTATIONS

6.1. **Text Amendment: Restaurants as a Special Exception Use in the T-LI Zoning District**

The Commissioners reviewed the updated text amendment to permit restaurant as a Special Exception Use in the T-LI zoning district, so long as the front lot line abuts an arterial or collector road. The amended text was formed from existing definitions in the Zoning Ordinance and Subdivision and Land Development Regulations.

Adam Ritchey recused himself from the vote due to serving on the City Council. With no further discussion, Commissioner Rase made a motion to forward the text amendment to the Mayor and City Council. Commissioner Krogh seconded the motion, a vote was taken, and the motion was passed with a vote of four in favor and one recusal.

Moved by Mr. Ray Rase, seconded by Mrs. Karen Krogh

Public Comment
Motion

Carried

7. Discussion Items
By Chair and Members of the Commission

8. Administrative Business and Communications Received

8.1. **Update on 121 McCulloh Street BOZA Hearing**

Planner Bethany Fife informed the Commissioners that a Special Exception and Variance for the expansion of an existing family daycare home was approved by the Board of Zoning Appeals at a public hearing on January 4.

9. Staff Reports

9.1. **2022 Permit Detail Reports**

Planner Bethany Fife provided the Commissioners with detailed reports in regard to permit issuance for residential and commercial uses. Notably, 14 commercial Use & Occupancy permits were issued: four at the Frostburg Plaza, two for the Pop Up Frostburg business incubator program, and one expansion/relocation of an existing business. Residential permits included 7 building permits for single family homes and 8 residential use and occupancy permits. The first phase of development at Prichard Farms is now entirely complete, with all parcels developed and use and occupancy permits issued. Phases 2 and 3 are under construction now.

10. ADJOURNMENT

Commissioner Snyder made a motion to adjourn, Commissioner Ritchey seconded the motion, and Chair Best adjourned the meeting at 7:20 PM.

_____

L.J. Bennett, Community Development Director

47 Ormand Street / 18 Park Street

4/28/2023, 1:47:53 PM

E911 Location Address

Parcel Lines

1:600

0 0.01 0.01 0.02 mi

0 0.01 0.01 0.03 km

Allegany County GIS

OWNER'S CERTIFICATION:

THE SUBDIVISION AS SHOWN HEREON IS MADE WITH MY CONSENT AND AT MY DIRECTION. THE MONUMENTS SHOWN ARE IN PLACE. THE STREETS AS SHOWN, IF NOT PREVIOUSLY DEDICATED, ARE HEREBY TENDERED FOR DEDICATION TO PUBLIC USE. THE REQUIREMENTS GOVERNING THIS SUBDIVISION, AS SET FORTH IN THE CITY OF FROSTBURG SUBDIVISION REGULATIONS, HAVE BEEN COMPLIED WITH.

5/2/23

KENNETH W. RAFFERTY — DATE
47 ORMAND STREET
FROSTBURG MD 21532

5/2/23

SUZANNE M. RAFFERTY — DATE
47 ORMAND STREET
FROSTBURG MD 21532

APPROVED BY THE CITY OF FROSTBURG
DEPARTMENT OF PUBLIC WORKS

BY _____ DATE _____
CITY ENGINEER

APPROVED BY THE CITY OF FROSTBURG
PLANNING AND ZONING COMMISSION

BY _____ DATE _____
CHAIRMAN

APPROVED BY THE CITY OF FROSTBURG FIRE CHIEF

BY _____ DATE _____
FIRE CHIEF

SURVEYOR'S CERTIFICATION:

I HEREBY CERTIFY THIS PLAT TO BE CORRECT AND ACCURATE. THE MONUMENTS SHOWN HEREON ARE IN PLACE AND THE REQUIREMENTS OF THE CITY OF FROSTBURG SUBDIVISION REGULATIONS AND OTHER APPLICABLE LAWS RELATING TO THIS PLAT AND SETTING OF THE MONUMENTS HAVE BEEN COMPLIED WITH.

5/2/23

MATTHEW S. BREWER — DATE
MARYLAND REGISTRATION NO. 21388
(EXPIRATION 2-04-24)
23 EAST MAIN STREET, SUITE 200
FROSTBURG, MARYLAND 21532

NOTARY:
SWORN TO BEFORE ME THIS 2nd DAY OF May 23

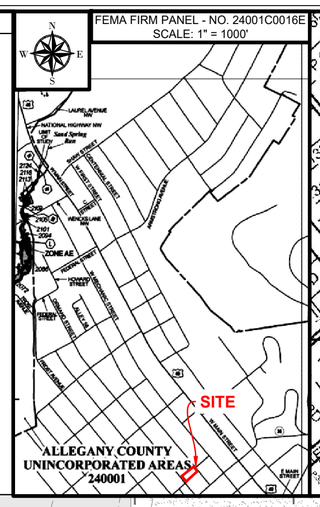
NOTARY PUBLIC

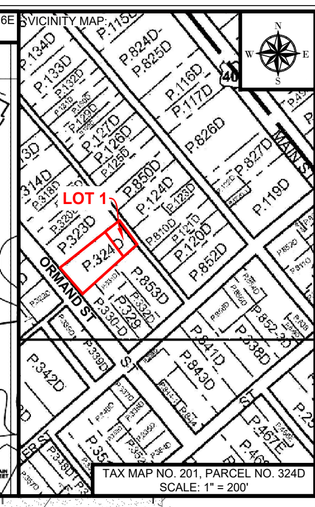
Dec 16, 2026
MY COMMISSION EXPIRES

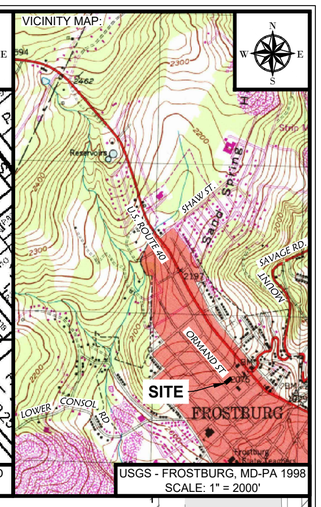
AMBRA J. HOSTETLER
NOTARY PUBLIC
GARRETT COUNTY
MARYLAND
MY COMMISSION EXPIRES DEC. 16, 2026

LEGEND

- SUBJECT PROPERTY LINES
- NEW LOT LINES
- ADJACENT PROPERTY BOUNDARY
- BRL — BUILDING RESTRICTION LINE
- CORNER FOUND OR (AS NOTED)
- CALCULATED CORNER
- 5/8" IRON PIN W/ CAP SET (UNLESS OTHERWISE NOTED)
- 2155 — INDEX CONTOUR (5' INTERVAL)
- INTERMEDIATE CONTOUR (1' INTERVAL)
- AREA OF SLOPE > 25% (NON-BUILDABLE)
- EX. BUILDING
- EX. FENCE
- EX. TREELINE
- EX. PAVED ROAD / DRIVEWAY
- EX. UNPAVED ROAD / DRIVEWAY
- EX. TREES (TYPE AS NOTED)
- EX. SIGN
- EX. SANITARY SEWER
- EX. SANITARY MANHOLE
- EX. WATER MAIN
- EX. WATER VALVE
- EX. AERIAL UTILITY
- EX. UTILITY POLE
- EX. ELECTRIC METER
- EX. GAS METER
- EX. GAS VALVE
- EX. STORM INLET
- EX. STORM MANHOLE
- UTILITY EASEMENT
- SS — PROPOSED SANITARY MAIN / SERVICE
- W — PROPOSED WATER MAIN / SERVICE
- PROPOSED CLEANOUT
- PROPOSED WATER VALVE



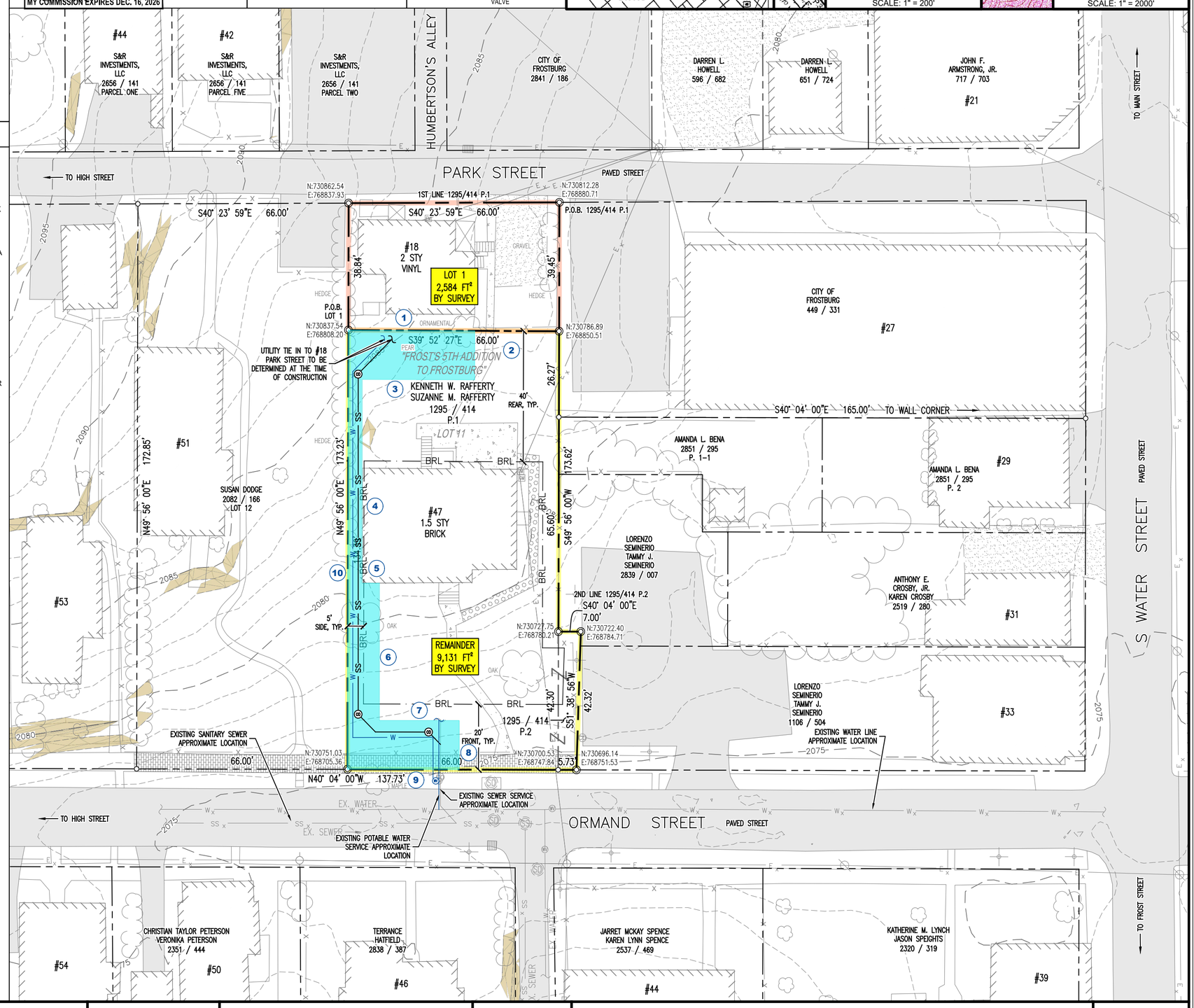




SITE NOTES

1. ZONING DISTRICT: "R2" = NEIGHBORHOOD RESIDENTIAL DISTRICT
2. BUILDING RESTRICTION LINE (BRL)
   FRONT: 20', 10' OF WHICH CAN BE AN UNENCLOSED FRONT PORCH
   REAR: 40', 20' OF WHICH MAY INCLUDE AN UNENCLOSED DECK OR PATIO
   SIDE: 5'
3. CONTOUR DATA SHOWN HEREON DERIVED FROM 2012 DEM FILES PROVIDED BY STATE OF MARYLAND MAPPING & GIS DATA PORTAL.
4. PROPERTY ADDRESSES ARE AS FOLLOWS:
   REMAINDER: 47 ORMAND ST.
   LOT NO. 1: 18 PARK ST.
5. ALL STORMWATER MANAGEMENT OR CONVEYANCE DEVICES (STRUCTURAL OR NON STRUCTURAL), INSTALLED BY THE DEVELOPER AT THE TIME OF CONSTRUCTION, CONSTITUTE PART OF THE APPROVED STORMWATER MANAGEMENT PLAN AND MAY NOT BE ALTERED OR REMOVED WITHOUT PRIOR PERMISSION OF THE CITY OF FROSTBURG. THESE DEVICES INCLUDE (BUT ARE NOT LIMITED TO) PIPES, SWALES, DRAINS, DRY WELLS, ROOF LEADER CONNECTIONS, PONDS OR SUMPS. THESE DEVICES MAY NOT BE ALTERED IN ANY CASE, WHETHER THEY EXIST ON FEE SIMPLE LOTS, COMMON OPEN SPACE, OR AREAS DEDICATED TO PUBLIC USE.
6. ALL OF THE SUBJECT PROPERTY LIES WITHIN FLOOD ZONE "X" (AREA OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN) AS SHOWN ON FEMA FIRM PANEL NO. 24001C0016E, DATED APRIL 03, 2020.
7. THIS PROPERTY IS IDENTIFIED AS PARCEL NO. 324D, TAX MAP NO. 201 OF THE CITY OF FROSTBURG.
8. WATER, SEWER, GAS, TELEPHONE, COMMUNICATION, AND ELECTRIC UTILITIES MAY EXIST ON LOT 1 AND THE REMAINDER LOT, THE EXACT LOCATIONS OF WHICH ARE NOT READILY IDENTIFIABLE, AND WHICH MAY SERVE STRUCTURES WITHIN THE BOUNDARIES OF THIS SUBDIVISION. THIS PLAT DOES HEREBY ESTABLISH A JOINT EASEMENT FOR THE PURPOSE OF ACCESS TO, AND MAINTENANCE OF, SAID UTILITIES OVER AND ACROSS LOT 1 AND THE REMAINDER LOT. THE EASEMENT SHALL BE 15 FEET WIDE, THE CENTER OF WHICH SHALL BE LOCATED ON THE CENTER OF THE ACTUAL UTILITY LINE.

UTILITY EASEMENT TABLE		
Line #	Direction	Length
L1	N39°52'27"W	39.57
L2	N49°48'08"E	15.00
L3	S39°58'52"E	35.19
L4	N49°48'08"E	62.31
L5	N40°07'47"W	5.40
L6	N49°50'10"E	42.03
L7	N40°11'52"W	24.95
L8	N49°48'08"E	15.03
L9	S40°04'00"E	35.00
L10	S49°56'00"W	134.39



0 20 40 Feet
GRAPHIC SCALE - 1 INCH = 20 FEET

PROJECT NO.:	2022109
DRAWN:	BBA
DATE:	4-26-2023
CRD FILE:	-
DWG FILE:	PLAT

bba
Surveyors | Engineers | Planners
Bennett Brewer & Associates, LLC
23 East Main Street, Suite 200
Frostburg, MD 21532
Phone 301-687-0494

AREA SUMMARY

REMAINDER - P/O 1295/414 P.1 / ALL 1295/414 P.2 = 9,131 S.F.±

LOT 1 - P/O 1295/414 P.1 = 2,584 S.F.±

TOTAL AREA BY SURVEY = 11,715 S.F.±

MARYLAND NAD83

MINOR SUBDIVISION

PREPARED FOR

KENNETH W. & SUZANNE M. RAFFERTY

SITUATED AT 47 ORMAND STREET
ELECTION DISTRICT NO. 26-000, ZONING "R2" - NEIGHBORHOOD RESIDENTIAL
FROSTBURG, ALLEGANY COUNTY, MARYLAND

SHEET NO. 1 OF 1

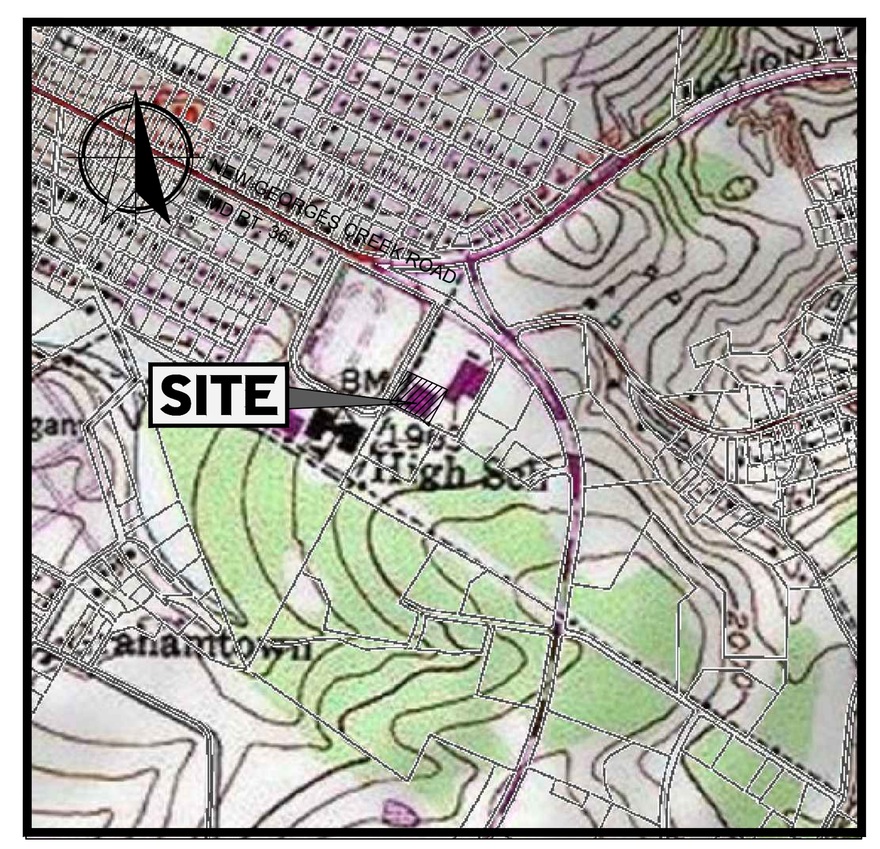
CAD FILE: P:\2022\22109 - Ken Rafferty - 47 Ormand St Frostburg\PLAT.dwg PLOT DATE/TIME: 5/2/2023 - 1:43pm LAST SAVE BY: work105

PRELIMINARY SITE DEVELOPMENT PLAN

FOR

O'Reilly AUTO PARTS

LOCATION OF SITE
LOT 1, FROSTBURG SHOPPING PLAZA
CITY OF FROSTBURG
ALLEGANY COUNTY, MARYLAND 21532
MAP 24, GRID 7, PARCEL 99



LOCATION MAP
SCALE: 1" = 500'
PLAN REFERENCE: ALLEGANY COUNTY, MD. GIS

SHEET INDEX

REFERENCES AND CONTACTS

REFERENCES

- BOUNDARY & TOPOGRAPHIC SURVEY:
  DONALDSON, GARRETT, & ASSOCIATES, INC.
  9741-L SOUTHERN PINE BOULEVARD
  CHARLOTTE, NC 28273
  DATED: 12/14/22 (REVISED 02/03/23)
  PROJECT #4539-591/DRAWING #NC-080-22-D
  ELEVATIONS: NAVD 1988
- GEOTECHNICAL INVESTIGATION REPORT:
  ATLAS TECHNICAL CONSULTANTS, LLC
  7606 WHITEHALL EXECUTIVE CENTER DRIVE
  SUITE 800
  CHARLOTTE, NC
  DATED: 02/28/23
- ARCHITECTURAL PLAN:
  THOMAS A. LUNDBERG ARCHITECT
  1736 EAST SUNSHINE
  SUITE 417
  SPRINGFIELD, MI 65804

GOVERNING AGENCIES

- PLANNING, ZONING COMMITTEE
  CITY OF FROSTBURG
  PLANNING & ZONING
  37 SOUTH BROADWAY
  FROSTBURG, MD 21532
  PHONE: (301) 914-1790
  FAX: (301) 689-2840
- BUILDING DEPARTMENT
  CITY OF FROSTBURG
  DEPARTMENT OF COMMUNITY DEVELOPMENT
  59 E. MAIN STREET
  P.O. BOX 440
  FROSTBURG, MD 21532
  PHONE: (301) 689-6000 X109
- FIRE DEPARTMENT
  FROSTBURG FIRE DEPARTMENT
  75 SOUTH WATER STREET
  FROSTBURG, MD 21532
  PHONE: (301) 689-8444

ROW JURISDICTION

- TRAFFIC
  CITY OF FROSTBURG
  PUBLIC WORKS
  STREET DEPARTMENT
  37 SOUTH BROADWAY
  FROSTBURG, MD 21532
  PHONE: (301) 689-6111

  MARYLAND DEPARTMENT OF TRANSPORTATION
  DISTRICT 6
  1251 VOCKE ROAD
  LAVALE, MD 21502
  PHONE: (301) 729-8400
  FAX: (301) 729-6968
- WATER & SEWER
  CITY OF FROSTBURG
  PUBLIC WORKS
  WATER DEPARTMENT
  37 SOUTH BROADWAY
  FROSTBURG, MD 21532
  PHONE: (301) 689-5855

  ALLEGANY COUNTY UTILITY DIVISION
  701 KELLY ROAD
  CUMBERLAND, MD 21502
  PHONE: (301) 729-3311

* THE ABOVE REFERENCED DOCUMENTS ARE INCORPORATED BY REFERENCE AS PART OF THESE PLANS, HOWEVER, BOHLER ENGINEERING DOES NOT CERTIFY THE ACCURACY OF THE WORK REFERENCED OR DERIVED FROM THESE DOCUMENTS, BY OTHERS.

DESIGN CERTIFICATION

I HEREBY CERTIFY THAT THIS PLAN OF EROSION & SEDIMENT CONTROL AND/OR POND DESIGN IS/ARE IN ACCORDANCE WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL AND ANY OTHER LOCAL OR STATE REQUIREMENTS. ANY STORMWATER STRUCTURES ARE DESIGN IN ACCORDANCE WITH THE ALLEGANY COUNTY STORMWATER MANAGEMENT ORDINANCE AND ACCEPTED STANDARDS OF ENGINEERING PRACTICE.

DATE ______ PHONE NUMBER ______ BRANDON R. ROWE P.E. ______

OWNER'S/DEVELOPER'S CERTIFICATION

"I/WE CERTIFY THAT ALL CLEARING, GRADING, CONSTRUCTION AND/OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS PLAN AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATION OF ATTENDANCE AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I HEREBY AUTHORIZE THE RIGHT OF ENTRY FOR PERIODIC ON-SITE EVALUATION BY STATE OF MARYLAND, DEPARTMENT OF THE ENVIRONMENT, COMPLIANCE INSPECTORS."

DATE ______ PHONE NUMBER ______ OWNER/DEVELOPER SIGNATURE ______

ADDRESS ______ PRINTED NAME & TITLE ______

CITY OF FROSTBURG APPROVALS

CHAIR, PLANNING COMMISSION ______ DATE

CITY ENGINEER ______ DATE

COMMUNITY DEVELOPMENT DIRECTOR ______ DATE

SOIL CONSERVATION DISTRICT ______ DATE

REQUIRED APPROVALS/PERMITS

PRELIMINARY SITE DEVELOPMENT PLAN
FINAL SITE DEVELOPMENT PLAN
CONCEPT STORMWATER MANAGMENT PLAN
SITE DEVELOPMENT STORMWATER MANAGMENT PLAN
FINAL STORMWATERMANAGMENT PLAN
EROSION & SEDIMENT CONTROL PLAN
BUILDING PERMIT
GRADING PERMIT

DEVELOPER
O'REILLY AUTOMOTIVE STORES, INC.
233 SOUTH PATTERSON AVENUE
SPRINGFIELD, MO 65802
STEVE PETERIE
SPETERIE@OREILLYAUTO.COM

OWNER
PENNMARK FROSTBURG HOLDINGS, LLC
1000 GERMAN TOWN PIKE, SUITE A2
PLYMOUTH MEETING, PA 19462

PREPARED BY

BOHLER

CONTACT: BRANDON R. ROWE P.E.

BOHLER
901 DULANEY VALLEY ROAD, SUITE 801 TOWSON, MARYLAND 21204
Phone:(410) 821-7900 Fax:(410) 821-7987
MD@BohlerEng.com

PROJECT NO:	MDA230040.00	SCALE:	AS NOTED
DRAWN BY / CHECKED BY:	JCB / MG	CAD I.D.:	MDA230040-CNDS-0

B.R. ROWE

THOMAS A. LUNDBERG
ARCHITECT
1736 East Sunshine, Suite 417
Springfield, Missouri 65804
417.862.0558
Fax: 417.862.3265
e-mail: architect@esterlyschneider.com

PROJECT:
NEW O'REILLY AUTO PARTS STORE
NEW GEORGES CREEK RD
FROSTBURG, MD

COVER SHEET

O'Reilly AUTO PARTS
CORPORATE OFFICES
233 SOUTH PATTERSON
SPRINGFIELD, MISSOURI 65802
(417) 862-2674 TELEPHONE

COMM #XXXX
DATE: 04-26-23
REVISION DATE:

CT1.0

STANDARD DRAWING LEGEND

FOR ENTIRE PLAN SET

EXISTING	TYPICAL NOTE TEXT	PROPOSED
LIMIT OF WORK		——LOW——LOW——
LIMIT OF DISTURBANCE		——LOD——LOD——
EXISTING NOTE	TYPICAL NOTE TEXT	PROPOSED NOTE
	ONSITE PROPERTY LINE / R.O.W. LINE	
	NEIGHBORING PROPERTY LINE / INTERIOR PARCEL LINE	
	EASEMENT LINE	
	SETBACK LINE	
	CONCRETE CURB & GUTTER	CURB AND GUTTER / SPILL / TRANSITION / DEPRESSED CURB AND GUTTER
	UTILITY POLE WITH LIGHT	
	POLE LIGHT	
	TRAFFIC LIGHT	
	UTILITY POLE	
	TYPICAL LIGHT	
	ACORN LIGHT	
	TYPICAL SIGN	
X	PARKING COUNTS	X
—170— / -169-	CONTOUR LINE	190 / 187
TC 516.4 OR 516.4	SPOT ELEVATIONS	TC 516.00 / TC 516.00 BC 515.55 / MATCH EX (518.02 ±)
SAN #	SANITARY LABEL	SAN #
X #	STORM LABEL	X #
SL	SANITARY SEWER LATERAL	SL
W	UNDERGROUND WATER LINE	W
E	UNDERGROUND ELECTRIC LINE	E
G	UNDERGROUND GAS LINE	G
OH	OVERHEAD WIRE	OH
T	UNDERGROUND TELEPHONE LINE	T
C	UNDERGROUND CABLE LINE	C
	STORM SEWER	
S	SANITARY SEWER MAIN	S
	HYDRANT	
S	SANITARY MANHOLE	S
D	STORM MANHOLE	D
WM	WATER METER	
WV	WATER VALVE	
	GAS VALVE	
	GAS METER	
	TYPICAL END SECTION	
OR	HEADWALL OR ENDWALL	OR
	GRATE INLET	
	CURB INLET	
	CLEAN OUT	
E	ELECTRIC MANHOLE	E
T	TELEPHONE MANHOLE	T
EB	ELECTRIC BOX	EB
EP	ELECTRIC PEDESTAL	EP
	MONITORING WELL	
	TEST PIT	
	BENCHMARK	
	BORING	

STANDARD ABBREVIATIONS

FOR ENTIRE PLAN SET	
AC	ACRES
ADA	AMERICANS WITH DISABILITY ACT
ARCH	ARCHITECTURAL
BC	BOTTOM OF CURB
BF	BASEMENT FLOOR
BK	BLOCK
BL	BASELINE
BLDG	BUILDING
BM	BUILDING BENCHMARK
BRL	BUILDING RESTRICTION LINE
CF	CUBIC FEET
CL	CENTERLINE
CMP	CORRUGATED METAL PIPE
CONN	CONNECTION
CONC	CONCRETE
CPP	CORRUGATED PLASTIC PIPE
CY	CUBIC YARDS
DEC	DECORATIVE
DEP	DEPRESSED
DIP	DUCTILE IRON PIPE
DOM	DOMESTIC
ELEC	ELECTRIC
ELEV	ELEVATION
EP	EDGE OF PAVEMENT
ES	EDGE OF SHOULDER
EW	END WALL
EX	EXISTING
FES	FLARED END SECTION
FF	FINISHED FLOOR
FH	FIRE HYDRANT
FG	FINISHED GRADE
G	GRADE
GF	GARAGE FLOOR (AT DOOR)
GH	GRADE HIGHER SIDE OF WALL
GL	GRADE LOWER SIDE OF WALL
GRT	GRATE
GV	GATE VALVE
HDPE	HIGH DENSITY POLYETHYLENE PIPE
HP	HIGH POINT
HOR	HORIZONTAL
HW	HEADWALL
INT	INTERSECTION
INV	INVERT
LF	LINEAR FOOT
LOC	LIMITS OF CLEARING
LOD	LIMITS OF DISTURBANCE
LOS	LINE OF SIGHT
LP	LOW POINT
L/S	LANDSCAPE
MAX	MAXIMUM
MIN	MINIMUM
MH	MANHOLE
MJ	MECHANICAL JOINT
OC	ON CENTER
PA	POINT OF ANALYSIS
PC	POINT OF CURVATURE
PCCR	POINT OF COMPOUND CURVATURE, CURB RETURN
PI	POINT OF INTERSECTION
POG	POINT OF GRADE
PROP	PROPOSED
PT	POINT OF TANGENCY
PTCR	POINT OF TANGENCY, CURB RETURN
PVC	POLYVINYL CHLORIDE PIPE
PVI	POINT OF VERTICAL INTERSECTION
PVT	POINT OF VERTICAL TANGENCY
R	RADIUS
RCP	REINFORCED CONCRETE PIPE
RET WALL	RETAINING WALL
R/W	RIGHT OF WAY
S	SLOPE
SAN	SANITARY SEWER
SF	SQUARE FEET
STA	STATION
STM	STORM
S/W	SIDEWALK
TBA	TO BE ABANDONED
TBR	TO BE REMOVED
TBRL	TO BE RELOCATED
TBV	TO BE VACATED
TC	TOP OF CURB
TELE	TELEPHONE
TPF	TREE PROTECTION FENCE
TW	TOP OF WALL
TYP	TYPICAL
UG	UNDERGROUND
UP	UTILITY POLE
W	WIDE
W/L	WATER LINE
W/M	WATER METER
±	PLUS OR MINUS
°	DEGREE
Ø	DIAMETER
#	NUMBER

GENERAL NOTES

(Rev. 1/2023)

1. THESE PLANS ARE SOLELY BASED ON INFORMATION THE OWNER AND OTHERS PROVIDED TO BOHLER ENGINEERING, VA, LLC (HEREIN "BOHLER") PRIOR TO THE DATE ON WHICH THE PROFESSIONAL OF RECORD AND BOHLER PREPARED THESE PLANS. THE CONTRACTOR MUST FIELD VERIFY ALL EXISTING CONDITIONS AND IMMEDIATELY NOTIFY BOHLER , IN WRITING, IF ANY ACTUAL SITE CONDITIONS DIFFER FROM THOSE SHOWN ON THESE PLANS, OR IF THE PROPOSED WORK CONFLICTS WITH ANY OTHER SITE FEATURES.
2. THE CONTRACTOR MUST STRICTLY COMPLY WITH THESE NOTES AND ALL SPECIFICATIONS/REPORTS CONTAINED HEREIN. THE CONTRACTOR MUST ENSURE THAT ALL SUBCONTRACTORS FULLY AND COMPLETELY CONFORM TO AND COMPLY WITH THESE REQUIREMENTS, THESE NOTES, AND THE REQUIREMENTS ARTICULATED IN THE NOTES CONTAINED IN ALL THE OTHER DRAWINGS THAT COMPRISE THE PLAN SET OF DRAWINGS. ADDITIONAL NOTES AND SPECIFIC PLAN NOTES MAY BE FOUND ON THE INDIVIDUAL PLANS. THESE GENERAL NOTES APPLY TO THIS ENTIRE DOCUMENT PACKAGE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO REVIEW ALL CONSTRUCTION CONTRACT DOCUMENTS INCLUDING, BUT NOT LIMITED TO, ALL OF THE DRAWINGS AND SPECIFICATIONS ASSOCIATED WITH THE PROJECT WORK SCOPE, PRIOR TO THE INITIATION AND COMMENCEMENT OF CONSTRUCTION.
3. PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, THE CONTRACTOR MUST CONFIRM WITH THE PROFESSIONAL OF RECORD AND BOHLER THAT THE LATEST EDITION OF THE DOCUMENTS AND/OR REPORTS REFERENCED WITHIN THE PLAN REFERENCES ARE BEING USED FOR CONSTRUCTION. THIS IS THE CONTRACTOR'S SOLE AND COMPLETE RESPONSIBILITY.
4. PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, THE CONTRACTOR MUST ENSURE THAT ALL REQUIRED PERMITS AND APPROVALS HAVE BEEN OBTAINED. NO CONSTRUCTION OR FABRICATION IS TO BEGIN UNTIL THE CONTRACTOR HAS RECEIVED AND THOROUGHLY REVIEWED THE CONDITIONS OF APPROVAL TO ALL PLANS AND OTHER DOCUMENTS REVIEWED AND APPROVED BY THE PERMITTING AUTHORITIES AND HAS ALSO CONFIRMED THAT ALL NECESSARY AND REQUIRED PERMITS HAVE BEEN OBTAINED. THE CONTRACTOR MUST HAVE COPIES OF ALL PERMITS AND APPROVALS ON SITE AT ALL TIMES.
5. THE CONTRACTOR MUST ENSURE THAT ALL WORK IS PERFORMED IN ACCORDANCE WITH THESE PLANS, SPECIFICATIONS/REPORTS AND CONDITIONS OF APPROVAL, AND ALL APPLICABLE REQUIREMENTS, RULES, REGULATIONS, STATUTORY REQUIREMENTS, CODES, LAWS AND STANDARDS OF ALL GOVERNMENTAL ENTITIES WITH JURISDICTION OVER THIS PROJECT, AND ALL PROVISIONS IN AND CONDITIONS OF THE CONSTRUCTION CONTRACT WITH THE OWNER/DEVELOPER INCLUDING ALL EXHIBITS, ATTACHMENTS AND ADDENDA TO SAME.
6. PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, THE CONTRACTOR MUST COORDINATE THE BUILDING LAYOUT BY CAREFULLY REVIEWING THE MOST CURRENT ARCHITECTURAL, CIVIL AND STRUCTURAL CONSTRUCTION DOCUMENTS (INCLUDING, BUT NOT LIMITED TO, MECHANICAL, ELECTRICAL, PLUMBING AND FIRE SUPPRESSION PLANS, WHERE APPLICABLE). THE CONTRACTOR MUST IMMEDIATELY NOTIFY THE OWNER, ARCHITECT AND PROFESSIONAL OF RECORD AND BOHLER, IN WRITING, OF ANY CONFLICTS, DISCREPANCIES OR AMBIGUITIES WHICH EXIST BETWEEN THESE PLANS AND ANY OTHER PLANS THAT COMPRISE THE CONSTRUCTION DOCUMENTS.
7. CONTRACTOR MUST REFER TO AND ENSURE COMPLIANCE WITH THE APPROVED ARCHITECTURAL/BUILDING PLANS OF RECORD FOR EXACT LOCATIONS AND DIMENSIONS OF ENTRY/EXIT POINTS, ELEVATIONS, PRECISE BUILDING DIMENSIONS, AND EXACT BUILDING UTILITY LOCATIONS.
8. THE CONTRACTOR MUST FIELD VERIFY ALL DIMENSIONS AND MEASUREMENTS SHOWN ON THESE PLANS, PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. THE CONTRACTOR MUST IMMEDIATELY NOTIFY THE PROFESSIONAL OF RECORD AND BOHLER, IN WRITING, IF ANY CONFLICTS, DISCREPANCIES, OR AMBIGUITIES EXIST PRIOR TO PROCEEDING WITH CONSTRUCTION. NO EXTRA COMPENSATION WILL BE PAID TO THE CONTRACTOR FOR WORK WHICH HAS TO BE RE-DONE OR REPAIRED DUE TO DIMENSIONS, MEASUREMENTS OR GRADES SHOWN INCORRECTLY ON THESE PLANS PRIOR TO BOTH (A) THE CONTRACTOR GIVING THE PROFESSIONAL OF RECORD AND BOHLER WRITTEN NOTIFICATION OF SAME AND (B) PROFESSIONAL OF RECORD AND BOHLER, THEREAFTER, PROVIDING THE CONTRACTOR WITH WRITTEN AUTHORIZATION TO PROCEED WITH SUCH ADDITIONAL WORK.
9. THE CONTRACTOR MUST VERIFY ALL DIMENSIONS AND MEASUREMENTS INCLUDED ON DESIGN DOCUMENTS HEREIN AND MUST NOT SCALE OFF THE DRAWINGS DUE TO POTENTIAL PRINTING INACCURACIES. ALL DIMENSIONS AND MEASUREMENTS ARE TO BE CHECKED AND CONFIRMED BY THE GENERAL CONTRACTOR PRIOR TO PREPARATION OF SHOP DRAWINGS, FABRICATION/ORDERING OF PARTS AND MATERIALS AND COMMENCEMENT OF SITE WORK. SITE PLAN DRAWINGS ARE NOT INTENDED AS SURVEY DOCUMENTS. DIMENSIONS SUPERSEDE GRAPHICAL REPRESENTATIONS. THE CONTRACTOR MUST MAKE CONTRACTOR'S OWN MEASUREMENTS FOR LAYOUT OF IMPROVEMENTS.
10. THE OWNER AND CONTRACTOR MUST BE FAMILIAR WITH AND RESPONSIBLE FOR THE PROCUREMENT OF ANY AND ALL CERTIFICATIONS REQUIRED FOR THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY.
11. WHEN INCLUDED AS ONE OF THE REFERENCED DOCUMENTS, THE GEOTECHNICAL REPORT, SPECIFICATIONS AND RECOMMENDATIONS SET FORTH THEREIN ARE A PART OF THE REQUIRED CONSTRUCTION DOCUMENTS AND, IN CASE OF CONFLICT, DISCREPANCY OR AMBIGUITY, THE MORE STRINGENT REQUIREMENTS AND/OR RECOMMENDATIONS CONTAINED IN: (A) THE PLANS; AND (B) THE GEOTECHNICAL REPORT AND RECOMMENDATIONS, MUST TAKE PRECEDENCE UNLESS SPECIFICALLY NOTED OTHERWISE ON THE PLANS. THE CONTRACTOR MUST NOTIFY THE PROFESSIONAL OF RECORD AND BOHLER, IN WRITING, OF ANY SUCH CONFLICT, DISCREPANCY OR AMBIGUITY BETWEEN THE GEOTECHNICAL REPORT AND PLANS AND SPECIFICATIONS, PRIOR TO PROCEEDING WITH ANY FURTHER WORK. IF A GEOTECHNICAL REPORT WAS NOT CREATED, THEN THE CONTRACTOR MUST FOLLOW AND COMPLY WITH ALL OF THE REQUIREMENTS OF ANY AND ALL MUNICIPAL, COUNTY, STATE, AND FEDERAL LAWS AND APPLICABLE SPECIFICATIONS WHICH HAVE JURISDICTION OVER THIS PROJECT.
12. THE PROFESSIONAL OF RECORD AND BOHLER ARE NEITHER LIABLE NOR RESPONSIBLE FOR ANY SUBSURFACE CONDITIONS AND FURTHER, HAS NO LIABILITY FOR ANY HAZARDOUS MATERIALS, HAZARDOUS SUBSTANCES, OR POLLUTANTS ON, ABOUT OR UNDER THE PROPERTY.
13. THE CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING WHEN AND WHERE SHORING IS REQUIRED AND FOR INSTALLING ALL SHORING REQUIRED DURING EXCAVATION (TO BE PERFORMED IN ACCORDANCE WITH CURRENT OSHA STANDARDS) AND ANY ADDITIONAL PRECAUTIONS TO BE TAKEN TO ASSURE THE STABILITY OF ADJACENT, NEARBY AND CONTIGUOUS STRUCTURES AND PROPERTIES. ALL OF THIS WORK IS TO BE PERFORMED AT CONTRACTOR'S SOLE COST AND EXPENSE.
14. THE CONTRACTOR MUST EXERCISE EXTREME CAUTION WHEN PERFORMING ANY WORK ACTIVITIES ADJACENT TO PAVEMENT, STRUCTURES, ETC. WHICH ARE TO REMAIN EITHER FOR AN INITIAL PHASE OF THE PROJECT OR AS PART OF THE FINAL CONDITION. THE CONTRACTOR IS RESPONSIBLE FOR TAKING ALL APPROPRIATE MEASURES REQUIRED TO ENSURE THE STRUCTURAL STABILITY OF SIDEWALKS AND PAVEMENT, UTILITIES, BUILDINGS, AND INFRASTRUCTURE WHICH ARE TO REMAIN, AND TO PROVIDE A SAFE WORK AREA FOR THIRD PARTIES, PEDESTRIANS AND ANYONE INVOLVED WITH THE PROJECT.
15. DEBRIS MUST NOT BE BURIED ON THE SUBJECT SITE. ALL DEMOLITION AND CONSTRUCTION WASTES, UNSUITABLE EXCAVATED MATERIAL, EXCESS SOIL AND DEBRIS (SOLID WASTE) MUST BE DISPOSED OF IN ACCORDANCE WITH THE REQUIREMENTS OF ANY AND ALL MUNICIPAL, COUNTY, STATE, AND FEDERAL LAWS AND APPLICABLE CODES WHICH HAVE JURISDICTION OVER THIS PROJECT OR OVER THE CONTRACTOR.
16. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO MAINTAIN RECORDS TO DEMONSTRATE PROPER AND FULLY COMPLIANT DISPOSAL ACTIVITIES, TO BE PROMPTLY PROVIDED TO THE OWNER UPON REQUEST.
17. THE CONTRACTOR MUST REPAIR, AT CONTRACTOR'S SOLE COST, ALL DAMAGE DONE TO ANY NEW OR EXISTING CONSTRUCTION OR PROPERTY DURING THE COURSE OF CONSTRUCTION, INCLUDING BUT NOT LIMITED TO DRAINAGE, UTILITIES, PAVEMENT, STRIPING, CURB, ETC. AND MUST BEAR ALL COSTS ASSOCIATED WITH SAME TO INCLUDE, BUT NOT BE LIMITED TO, REDESIGN, RE-SURVEY, RE-PERMITTING AND CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR AND MUST REPLACE ALL SIGNAL INTERCONNECTION CABLE, WIRING CONDUITS, AND ANY UNDERGROUND ACCESSORY EQUIPMENT DAMAGED DURING CONSTRUCTION AND MUST BEAR ALL COSTS ASSOCIATED WITH SAME. THE REPAIR OF ANY SUCH NEW OR EXISTING CONSTRUCTION OR PROPERTY MUST RESTORE SUCH CONSTRUCTION OR PROPERTY TO A CONDITION EQUIVALENT TO OR BETTER THAN THE CONDITIONS PRIOR TO COMMENCEMENT OF THE CONSTRUCTION, AND IN CONFORMANCE WITH APPLICABLE CODES, LAWS, RULES, REGULATIONS, STATUTORY REQUIREMENTS AND STATUTES. THE CONTRACTOR MUST BEAR ALL COSTS ASSOCIATED WITH SAME. THE CONTRACTOR MUST, PROMPTLY, DOCUMENT ALL EXISTING DAMAGE AND NOTIFY, IN WRITING, THE OWNER AND THE CONSTRUCTION MANAGER PRIOR TO THE START OF CONSTRUCTION.
18. THE PROFESSIONAL OF RECORD AND BOHLER ARE NOT RESPONSIBLE FOR AND HAVE NO CONTRACTUAL, LEGAL OR OTHER RESPONSIBILITIES FOR JOB SITE SAFETY JOB SITE SUPERVISION, OR ANYTHING RELATED TO SAME. THE PROFESSIONAL OF RECORD AND BOHLER HAVE NOT BEEN RETAINED TO PERFORM OR TO BE RESPONSIBLE FOR JOB SITE SAFETY, SAME BEING WHOLLY OUTSIDE OF THE PROFESSIONAL OF RECORD'S AND BOHLER SERVICES AS RELATED TO THE PROJECT. THE PROFESSIONAL OF RECORD AND BOHLER ARE NOT RESPONSIBLE TO IDENTIFY OR REPORT ANY JOB SITE SAFETY ISSUES OR ANY JOB SITE CONDITIONS, AT ANY TIME.
19. THE CONTRACTOR MUST IMMEDIATELY IDENTIFY IN WRITING, TO THE PROFESSIONAL OF RECORD AND BOHLER, ANY DISCREPANCIES THAT MAY OR COULD AFFECT THE PUBLIC SAFETY, HEALTH OR GENERAL WELFARE, OR PROJECT COST. IF THE CONTRACTOR PROCEEDS WITH CONSTRUCTION WITHOUT PROVIDING PROPER WRITTEN NOTIFICATION AS DESCRIBED ABOVE, IT WILL BE AT THE CONTRACTOR'S OWN RISK AND, FURTHER, THE CONTRACTOR MUST INDEMNIFY, DEFEND AND HOLD HARMLESS THE PROFESSIONAL OF RECORD AND BOHLER FOR ANY AND ALL DAMAGES, COSTS, INJURIES, ATTORNEY'S FEES AND THE LIKE WHICH RESULT FROM OR ARE IN ANY WAY RELATED TO SAME INCLUDING, BUT NOT LIMITED TO, ANY THIRD PARTY AND FIRST PARTY CLAIMS.
20. THE PROFESSIONAL OF RECORD AND BOHLER ARE NOT RESPONSIBLE FOR ANY INJURY OR DAMAGES RESULTING FROM THE CONTRACTOR'S FAILURE TO BUILD OR CONSTRUCT IN STRICT ACCORDANCE WITH THE APPROVED PLANS, AND CURRENT CODES, RULES, STATUTES AND THE LIKE. IF THE CONTRACTOR AND/OR OWNER FAIL TO BUILD OR CONSTRUCT IN STRICT ACCORDANCE WITH APPROVED PLANS, RULES, STATUTES, CODES AND THE LIKE, THE CONTRACTOR AND/OR OWNER AGREE TO AND MUST JOINTLY, INDEPENDENTLY, SEPARATELY, AND SEVERALLY INDEMNIFY AND HOLD THE PROFESSIONAL OF RECORD AND BOHLER HARMLESS FOR AND FROM ALL INJURIES, CLAIMS AND DAMAGES THAT THE PROFESSIONAL OF RECORD AND BOHLER SUFFER AND ANY AND ALL COSTS THAT THE PROFESSIONAL OF RECORD AND BOHLER INCUR AS RELATED TO SAME.
21. ALL CONTRACTORS MUST CARRY AT LEAST THE MINIMUM AMOUNT OF THE SPECIFIED AND COMMERCIALLY REASONABLE STATUTORY WORKER'S COMPENSATION INSURANCE, EMPLOYER'S LIABILITY INSURANCE AND COMMERCIAL GENERAL LIABILITY INSURANCE (CGL) INCLUDING ALSO ALL UMBRELLA COVERAGES. ALL CONTRACTORS MUST HAVE THEIR CGL POLICIES ENDORSED TO NAME BOHLER , AND ITS PAST, PRESENT AND FUTURE OWNERS, OFFICERS, DIRECTORS, PARTNERS, SHAREHOLDERS, MEMBERS, PRINCIPALS, COMMISSIONERS, AGENTS, SERVANTS, EMPLOYEES, AFFILIATES, SUBSIDIARIES, AND RELATED ENTITIES, AND ITS SUBCONTRACTORS AND SUBCONSULTANTS AS ADDITIONAL NAMED INSUREDS AND TO PROVIDE CONTRACTUAL LIABILITY COVERAGE SUFFICIENT TO INSURE (DEFEND, IF APPLICABLE) AND HOLD HARMLESS AND INDEMNITY OBLIGATIONS ASSUMED AND AGREED TO BY THE CONTRACTOR HEREIN. ALL CONTRACTORS MUST FURNISH BOHLER WITH CERTIFICATIONS OF INSURANCE OR CERTIFICATES OF INSURANCE AS EVIDENCE OF THE REQUIRED INSURANCE COVERAGES PRIOR TO COMMENCING ANY WORK AND UPON RENEWAL OF EACH POLICY DURING THE ENTIRE PERIOD OF CONSTRUCTION AND FOR TWO YEARS AFTER THE COMPLETION OF CONSTRUCTION AND AFTER ALL PERMITS ARE ISSUED, WHICHEVER DATE IS LATER. IN ADDITION, ALL CONTRACTORS AGREE THAT THEY WILL, TO THE FULLEST EXTENT PERMITTED UNDER THE LAW, INDEMNIFY, DEFEND AND HOLD HARMLESS BOHLER AND ITS PAST, PRESENT AND FUTURE OWNERS, OFFICERS, DIRECTORS, PARTNERS, SHAREHOLDERS, MEMBERS, PRINCIPALS, COMMISSIONERS, AGENTS, SERVANTS, EMPLOYEES, AFFILIATES, SUBSIDIARIES, AND RELATED ENTITIES, AND ITS SUBCONTRACTORS AND SUBCONSULTANTS FROM AND AGAINST ANY DAMAGES, INJURIES, CLAIMS, ACTIONS, PENALTIES, EXPENSES, PUNITIVE DAMAGES, TORT DAMAGES, STATUTORY CLAIMS, STATUTORY CAUSES OF ACTION, LOSSES, CAUSES OF ACTION, LIABILITIES OR COSTS, INCLUDING, BUT NOT LIMITED TO, REASONABLE ATTORNEYS' FEES AND DEFENSE COSTS, ARISING OUT OF OR IN ANY WAY CONNECTED WITH OR TO THE PROJECT, INCLUDING ALL CLAIMS BY EMPLOYEES OF THE CONTRACTOR(S), ALL CLAIMS BY THIRD PARTIES AND ALL CLAIMS RELATED TO THE PROJECT. THE CONTRACTOR MUST NOTIFY THE PROFESSIONAL OF RECORD, IN WRITING, AT LEAST THIRTY (30) DAYS PRIOR TO ANY TERMINATION, SUSPENSION OR CHANGE OF ITS INSURANCE HEREUNDER.
22. THE PROFESSIONAL OF RECORD AND BOHLER ARE NOT RESPONSIBLE FOR CONSTRUCTION METHODS, MEANS, TECHNIQUES OR PROCEDURES, GENERALLY OR FOR THE CONSTRUCTION MEANS, METHODS, TECHNIQUES OR PROCEDURES FOR COMPLETION OF THE WORK DEPICTED BOTH ON THESE PLANS, AND FOR ANY CONFLICTS IN SCOPE AND REVISIONS THAT RESULT FROM SAME. THE CONTRACTOR IS FULLY AND SOLELY RESPONSIBLE FOR DETERMINING THE MEANS AND METHODS FOR COMPLETION OF THE WORK, PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
23. NEITHER THE PROFESSIONAL ACTIVITIES OF BOHLER, NOR THE PRESENCE OF BOHLER AND/OR ITS PAST, PRESENT AND FUTURE OWNERS, OFFICERS, DIRECTORS, PARTNERS, SHAREHOLDERS, MEMBERS, PRINCIPALS, COMMISSIONERS, AGENTS, SERVANTS, EMPLOYEES, AFFILIATES, SUBSIDIARIES, AND RELATED ENTITIES, AND ITS SUBCONTRACTORS AND SUBCONSULTANTS AT A CONSTRUCTION/PROJECT SITE (HEREIN "BOHLER PARTIES"), RELIEVES OR WILL RELIEVE THE CONTRACTOR OF AND FROM CONSTRUCTION MEANS, METHODS, SEQUENCE, TECHNIQUES OR PROCEDURES NECESSARY FOR PERFORMING, OVERSEEING, SUPERINTENDING AND COORDINATING THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND COMPLIANCE WITH ALL HEALTH AND SAFETY PRECAUTIONS REQUIRED BY ANY REGULATORY AGENCIES WITH JURISDICTION OVER THE PROJECT AND/OR PROPERTY. BOHLER PARTIES HAVE NO AUTHORITY TO EXERCISE ANY CONTROL OVER (OR ANY RESPONSIBILITY FOR) ANY CONSTRUCTION, THE CONTRACTOR OR ITS EMPLOYEES RELATING TO THEIR WORK AND ANY AND ALL HEALTH AND SAFETY PROGRAMS OR PROCEDURES. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR JOB SITE SAFETY. THE CONTRACTOR MUST INDEMNIFY, DEFEND, PROTECT AND HOLD HARMLESS BOHLER PARTIES FOR AND FROM ANY LIABILITY TO BOHLER PARTIES RESULTING FROM THE CONTRACTOR'S WORK, SERVICES AND/OR VIOLATIONS OF THIS NOTE, THESE NOTES OR ANY NOTES IN THE PLAN SET AND, FURTHER, THE CONTRACTOR MUST NAME BOHLER AS AN ADDITIONAL INSURED UNDER THE GENERAL CONTRACTOR'S POLICIES OF GENERAL LIABILITY INSURANCE AS DESCRIBED ABOVE.
24. WHEN IT IS CLEARLY AND SPECIFICALLY WITHIN BOHLER'S SCOPE OF SERVICES CONTRACT WITH THE OWNER/DEVELOPER, BOHLER WILL REVIEW OR TAKE OTHER APPROPRIATE ACTION ON THE CONTRACTOR SUBMITTALS, SUCH AS SHOP DRAWINGS, PRODUCT DATA, SAMPLES, AND OTHER DATA, WHICH THE CONTRACTOR IS REQUIRED TO SUBMIT, BUT ONLY FOR THE LIMITED PURPOSE OF EVALUATING CONFORMANCE WITH THE DESIGN INTENT AND THE INFORMATION SHOWN IN THE CONSTRUCTION CONTRACT DOCUMENTS. CONSTRUCTION MEANS AND METHODS AND/OR TECHNIQUES OR PROCEDURES, COORDINATION OF THE WORK WITH OTHER TRADES, AND CONSTRUCTION SAFETY PRECAUTIONS ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND BOHLER HAS NO RESPONSIBILITY OR LIABILITY FOR SAME. BOHLER WILL PERFORM ITS SHOP DRAWING REVIEW WITH REASONABLE PROMPTNESS, AS CONDITIONS PERMIT. ANY DOCUMENT, DOCUMENTING BOHLER'S REVIEW OF A SPECIFIC ITEM OR LIMITED SCOPE, MUST NOT INDICATE THAT BOHLER HAS REVIEWED THE ENTIRE ASSEMBLY OF WHICH THE ITEM IS A COMPONENT. BOHLER IS NOT RESPONSIBLE FOR ANY DEVIATIONS FROM THE CONSTRUCTION DOCUMENTS. THE CONTRACTOR MUST, IN WRITING, PROMPTLY AND IMMEDIATELY BRING ANY DEVIATIONS FROM THE CONSTRUCTION DOCUMENTS TO BOHLER'S ATTENTION. BOHLER IS NOT REQUIRED TO REVIEW PARTIAL SUBMISSIONS OR THOSE FOR WHICH SUBMISSIONS OF CORRELATED ITEMS HAVE NOT BEEN RECEIVED.
25. IF THE CONTRACTOR DEVIATES FROM THESE PLANS AND/OR SPECIFICATIONS, INCLUDING THE NOTES CONTAINED HEREIN, WITHOUT FIRST OBTAINING THE PRIOR WRITTEN AUTHORIZATION OF THE PROFESSIONAL OF RECORD AND BOHLER FOR ALL DEVIATIONS WITHIN THE PROFESSIONAL OF RECORD'S AND BOHLER SCOPE, THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE PAYMENT OF ALL COSTS INCURRED IN CORRECTING ANY WORK PERFORMED WHICH DEVIATES FROM THE PLANS, ALL FINES AND/OR PENALTIES ASSESSED WITH RESPECT THERETO AND ALL COMPENSATORY OR PUNITIVE DAMAGES RESULTING THEREFROM AND, FURTHER, MUST DEFEND, INDEMNIFY, PROTECT, AND HOLD HARMLESS THE PROFESSIONAL OF RECORD AND BOHLER PARTIES TO THE FULLEST EXTENT PERMITTED UNDER THE LAW, FOR AND FROM ALL FEES, ATTORNEYS' FEES, DAMAGES, COSTS, JUDGMENTS, CLAIMS, INJURIES, PENALTIES AND THE LIKE RELATED TO SAME.
26. THE CONTRACTOR IS RESPONSIBLE FOR A MAINTAINING AND PROTECTING THE TRAFFIC CONTROL PLAN AND ELEMENTS IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL REQUIREMENTS, FOR ALL WORK THAT AFFECTS PUBLIC TRAVEL EITHER IN THE RIGHT OF WAY OR ON SITE. THE COST FOR THIS ITEM MUST BE INCLUDED IN THE CONTRACTOR'S PRICE AND IS THE CONTRACTOR'S SOLE RESPONSIBILITY.
27. OWNER MUST MAINTAIN AND PRESERVE ALL PHYSICAL SITE FEATURES AND DESIGN FEATURES DEPICTED ON THE PLANS AND RELATED DOCUMENTS IN STRICT ACCORDANCE WITH THE APPROVED PLAN(S) AND DESIGN; AND, FURTHER, THE PROFESSIONAL OF RECORD AND BOHLER ARE NOT RESPONSIBLE FOR ANY FAILURE TO SO MAINTAIN OR PRESERVE SITE AND/OR DESIGN FEATURES. IF OWNER FAILS TO MAINTAIN AND/OR PRESERVE ALL PHYSICAL SITE FEATURES AND/OR DESIGN FEATURES DEPICTED ON THE PLANS AND RELATED DOCUMENTS, OWNER AGREES TO INDEMNIFY AND HOLD THE PROFESSIONAL OF RECORD AND BOHLER PARTIES, HARMLESS FOR ALL INJURIES, DAMAGES AND COSTS THAT THE PROFESSIONAL OF RECORD AND BOHLER INCUR AS A RESULT OF SAID FAILURE OR FAILURE TO PRESERVE.
28. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR ENSURING THAT ALL CONSTRUCTION ACTIVITIES AND MATERIALS COMPLY WITH AND CONFORM TO APPLICABLE FEDERAL, STATE AND LOCAL RULES AND REGULATIONS, LAWS, ORDINANCES, AND CODES, AND ALL APPLICABLE REQUIREMENTS OF THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970, (29 U.S.C. 651 ET SEQ.) AS AMENDED, AND ANY MODIFICATIONS, AMENDMENTS OR REVISIONS TO SAME.
29. THE CONTRACTOR MUST STRICTLY COMPLY WITH THE LATEST AND CURRENT OSHA STANDARDS AND REGULATIONS, AND/OR ANY OTHER AGENCY WITH JURISDICTION OVER EXCAVATION AND TRENCHING PROCEDURES. THE PROFESSIONAL OF RECORD AND BOHLER HAS NO RESPONSIBILITY FOR OR AS RELATED TO EXCAVATION AND TRENCHING PROCEDURES AND WORK.
30. THE CONTRACTOR AND THE OWNER MUST INSTALL ALL ELEMENTS AND COMPONENTS IN STRICT COMPLIANCE WITH AND IN ACCORDANCE WITH MANUFACTURER'S STANDARDS AND RECOMMENDED INSTALLATION CRITERIA AND SPECIFICATIONS. IF THE CONTRACTOR AND/OR OWNER FAIL TO DO SO, THEY AGREE TO JOINTLY, INDEPENDENTLY, SEPARATELY, COLLECTIVELY, AND SEVERALLY INDEMNIFY, DEFEND, PROTECT AND HOLD THE PROFESSIONAL OF RECORD AND BOHLER PARTIES HARMLESS FOR ALL INJURIES AND DAMAGES THAT PROFESSIONAL OF RECORD SUFFERS AND COSTS THAT THE PROFESSIONAL OF RECORD INCURS AS A RESULT OF SAID FAILURE.
31. THE CONTRACTOR IS RESPONSIBLE TO MAINTAIN AN ON-SITE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) IN COMPLIANCE WITH THE ENVIRONMENTAL PROTECTION AGENCY (EPA) REQUIREMENTS OR LOCAL GOVERNING AGENCY FOR SITES WHERE ONE (1) ACRE OR MORE IS DISTURBED BY CONSTRUCTION ACTIVITIES (UNLESS THE LOCAL JURISDICTION REQUIRES A DIFFERENT THRESHOLD). THE CONTRACTOR MUST ENSURE THAT ALL ACTIVITIES, INCLUDING THOSE OF ALL SUBCONTRACTORS, ARE IN COMPLIANCE WITH THE SWPPP, INCLUDING BUT NOT LIMITED TO LOGGING ACTIVITIES (MINIMUM ONCE PER WEEK AND AFTER RAINFALL EVENTS) AND CORRECTIVE MEASURES, AS APPROPRIATE AND FURTHER, THE CONTRACTOR IS SOLELY AND COMPLETELY RESPONSIBLE FOR FAILING TO DO SO.
32. AS CONTAINED IN THESE DRAWINGS AND ASSOCIATED DOCUMENTS PREPARED BY THE PROFESSIONAL OF RECORD AND BOHLER, THE USE OF THE WORDS 'CERTIFY' OR 'CERTIFICATION' CONSTITUTE(S) AN EXPRESSION ONLY OF PROFESSIONAL OPINION REGARDING THE INFORMATION WHICH IS THE SUBJECT OF THE PROFESSIONAL OF RECORD'S AND BOHLER KNOWLEDGE OR BELIEF AND IN ACCORDANCE WITH COMMON AND ACCEPTED PROCEDURE CONSISTENT WITH THE APPLICABLE STANDARDS OF PRACTICE, AND DOES NOT CONSTITUTE A WARRANTY OR GUARANTEE OF ANY NATURE OR TYPE, EITHER EXPRESSED OR IMPLIED, UNDER ANY CIRCUMSTANCES.

DEMOLITION NOTES

(Rev. 1/2023)

1. THE GENERAL NOTES MUST BE INCLUDED AS PART OF THIS ENTIRE DOCUMENT PACKAGE AND ARE PART OF THE CONTRACT DOCUMENTS. THE GENERAL NOTES ARE REFERENCED HEREIN, AND THE CONTRACTOR MUST REFER TO THEM AND FULLY COMPLY WITH THESE NOTES, IN THEIR ENTIRETY. THE CONTRACTOR MUST BE FAMILIAR WITH AND ACKNOWLEDGE FAMILIARITY WITH ALL OF THE GENERAL NOTES AND ALL OF THE PLANS' SPECIFIC NOTES.
2. THE CONTRACTOR MUST CONDUCT DEMOLITION/REMOVALS ACTIVITIES IN SUCH A MANNER AS TO ENSURE MINIMUM INTERFERENCE WITH ROADS, STREETS, SIDEWALKS, WALKWAYS, AND ALL OTHER ADJACENT FACILITIES. THE CONTRACTOR MUST OBTAIN ALL APPLICABLE PERMITS FROM THE APPROPRIATE GOVERNMENTAL AUTHORITY(IES) PRIOR TO THE COMMENCEMENT OF ANY ROAD OPENING OR DEMOLITION ACTIVITIES IN OR ADJACENT TO THE RIGHT-OF-WAY.
3. WHEN DEMOLITION-RELATED ACTIVITIES IMPACT ROADWAYS AND/OR ROADWAY RIGHT-OF-WAY, THE CONTRACTOR MUST PROVIDE TRAFFIC CONTROL AND GENERALLY ACCEPTED SAFE PRACTICES IN CONFORMANCE WITH THE CURRENT FEDERAL HIGHWAY ADMINISTRATION "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD), AND THE FEDERAL, STATE, AND LOCAL REGULATIONS.
4. THE DEMOLITION (AND/OR REMOVALS) PLAN IS INTENDED TO PROVIDE GENERAL INFORMATION AND TO IDENTIFY ONLY CONDITIONS REGARDING ITEMS TO BE DEMOLISHED, REMOVED, AND/OR TO REMAIN.
   A. THE CONTRACTOR MUST ALSO REVIEW ALL CONSTRUCTION DOCUMENTS AND INCLUDE WITHIN THE DEMOLITION ACTIVITIES ALL INCIDENTAL WORK NECESSARY FOR THE CONSTRUCTION OF THE NEW SITE IMPROVEMENTS.
   B. THIS PLAN IS NOT INTENDED TO AND DOES NOT PROVIDE DIRECTION REGARDING THE MEANS, METHODS, SEQUENCING, TECHNIQUES AND PROCEDURES TO BE EMPLOYED TO ACCOMPLISH THE WORK. ALL MEANS, METHODS, SEQUENCING, TECHNIQUES AND PROCEDURES TO BE USED MUST BE IN STRICT ACCORDANCE AND CONFORMANCE WITH ALL STATE, FEDERAL, LOCAL, AND JURISDICTIONAL REQUIREMENTS. THE CONTRACTOR MUST COMPLY WITH ALL OSHA AND OTHER SAFETY PRECAUTIONS NECESSARY TO PROVIDE A SAFE WORK SITE FOR THE CONTRACTOR AND THE PUBLIC.
5. THE CONTRACTOR MUST PROVIDE ALL "METHODS AND MEANS" NECESSARY TO PREVENT MOVEMENT, SETTLEMENT, OR COLLAPSE OF EXISTING STRUCTURES, AND ANY OTHER IMPROVEMENTS THAT ARE REMAINING ON OR OFF SITE. THE CONTRACTOR, AT THE CONTRACTOR'S SOLE COST, MUST REPAIR ALL DAMAGE TO ALL ITEMS AND FEATURES THAT ARE TO REMAIN. CONTRACTOR MUST USE NEW MATERIAL FOR ALL REPAIRS. CONTRACTOR'S REPAIRS MUST INCLUDE THE RESTORATION OF ALL ITEMS AND FEATURES REPAIRED TO THEIR PRE-DEMOLITION CONDITION, OR BETTER. CONTRACTOR MUST PERFORM ALL REPAIRS AT THE CONTRACTOR'S SOLE EXPENSE.
6. THE PROFESSIONAL OF RECORD AND BOHLER ARE NOT RESPONSIBLE FOR JOB SITE SAFETY OR SUPERVISION. THE CONTRACTOR MUST PROCEED WITH THE DEMOLITION IN A SYSTEMATIC AND SAFE MANNER, COMPLYING WITH ALL OSHA REQUIREMENTS, TO ENSURE PUBLIC AND CONTRACTOR SAFETY AND SAFETY TO ALL PROPERTY ON THE SITE OR ADJACENT OR NEAR TO THE SAME.
7. THE CONTRACTOR IS RESPONSIBLE FOR JOB SITE SAFETY, WHICH MUST INCLUDE, BUT IS NOT LIMITED TO, THE INSTALLATION AND MAINTENANCE OF BARRIERS, FENCING, OTHER APPROPRIATE AND/OR NECESSARY SAFETY FEATURES AND ITEMS NECESSARY TO PROTECT THE PUBLIC FROM AREAS OF CONSTRUCTION AND CONSTRUCTION ACTIVITIES. THE CONTRACTOR MUST SAFEGUARD THE SITE AS NECESSARY TO PERFORM THE DEMOLITION IN SUCH A MANNER AS TO PREVENT THE ENTRY OF ALL UNAUTHORIZED PERSONS AT ANY TIME, TO OR NEAR THE DEMOLITION AREA.
8. PRIOR TO THE COMMENCEMENT OF ANY SITE ACTIVITY AND ANY DEMOLITION ACTIVITY, THE CONTRACTOR MUST, IN WRITING, RAISE ANY QUESTIONS CONCERNING THE ACCURACY OR INTENT OF THESE PLANS AND/OR SPECIFICATIONS, ALL CONCERNS OR QUESTIONS REGARDING THE APPLICABLE SAFETY STANDARDS, AND/OR THE SAFETY OF THE CONTRACTOR AND/OR THIRD PARTIES IN PERFORMING THE WORK ON THIS PROJECT. ANY SUCH CONCERNS MUST BE CONVEYED TO THE PROFESSIONAL OF RECORD AND BOHLER, IN WRITING AND MUST ADDRESS ALL ISSUES AND ITEMS RESPONDED TO, BY THE PROFESSIONAL OF RECORD AND BY BOHLER, IN WRITING. ALL DEMOLITION ACTIVITIES MUST BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THESE PLANS AND SPECIFICATIONS AND ALL APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS, RULES, REQUIREMENTS, STATUTES, ORDINANCES AND CODES.
9. THE CONTRACTOR MUST BECOME FAMILIAR WITH THE APPLICABLE UTILITY SERVICE PROVIDER REQUIREMENTS AND IS RESPONSIBLE FOR ALL COORDINATION REGARDING UTILITY DEMOLITION AND/OR DISCONNECTION AS IDENTIFIED OR REQUIRED FOR THE PROJECT. THE CONTRACTOR MUST PROVIDE THE OWNER WITH WRITTEN NOTIFICATION THAT THE EXISTING UTILITIES AND SERVICES HAVE BEEN TERMINATED, REMOVED AND/OR ABANDONED IN ACCORDANCE WITH THE JURISDICTION AND UTILITY COMPANY REQUIREMENTS AND ALL OTHER APPLICABLE REQUIREMENTS, RULES, STATUTES, LAWS, ORDINANCES AND CODES.
10. PRIOR TO COMMENCING ANY DEMOLITION, THE CONTRACTOR MUST:
    A. OBTAIN ALL REQUIRED PERMITS AND MAINTAIN THE SAME ON SITE FOR REVIEW BY THE PROFESSIONAL OF RECORD AND ALL PUBLIC AGENCIES WITH JURISDICTION THROUGHOUT THE DURATION OF THE PROJECT, SITE WORK, AND DEMOLITION WORK.
    B. NOTIFY, AT A MINIMUM, THE MUNICIPAL ENGINEER, DESIGN ENGINEER, AND LOCAL SOIL CONSERVATION JURISDICTION, AT LEAST 72 BUSINESS HOURS PRIOR TO THE COMMENCEMENT OF WORK.
    C. INSTALL THE REQUIRED SOIL EROSION AND SEDIMENT CONTROL MEASURES PRIOR TO SITE DISTURBANCE, AND MAINTAIN SAID CONTROLS UNTIL SITE IS STABILIZED
    D. IN ACCORDANCE WITH STATE LAW, THE CONTRACTOR MUST CALL THE STATE ONE-CALL DAMAGE PROTECTION SYSTEM FOR UTILITY MARK OUT, IN ADVANCE OF ANY EXCAVATION.
    E. LOCATE AND PROTECT ALL UTILITIES AND SERVICES, INCLUDING BUT NOT LIMITED TO GAS, WATER, ELECTRIC, SANITARY AND STORM SEWER, TELEPHONE, CABLE, FIBER OPTIC CABLE, ETC. WITHIN AND ADJACENT TO THE LIMITS OF PROJECT ACTIVITIES. THE CONTRACTOR MUST USE AND COMPLY WITH THE REQUIREMENTS OF THE APPLICABLE UTILITY NOTIFICATION SYSTEM TO LOCATE ALL UNDERGROUND UTILITIES.
    F. PROTECT AND MAINTAIN IN OPERATION, ALL ACTIVE UTILITIES AND SYSTEMS THAT ARE NOT BEING REMOVED DURING ANY DEMOLITION ACTIVITIES.
    G. ARRANGE FOR AND COORDINATE WITH THE APPLICABLE UTILITY SERVICE PROVIDER(S) FOR THE TEMPORARY OR PERMANENT TERMINATION OF SERVICE REQUIRED BY THE PROJECT PLANS AND SPECIFICATIONS REGARDING THE METHODS AND MEANS TO CONSTRUCT SAME. THESE ARE NOT THE PROFESSIONAL OF RECORD'S OR BOHLER RESPONSIBILITY. IN THE EVENT OF ABANDONMENT, THE CONTRACTOR MUST PROVIDE THE UTILITY ENGINEER AND OWNER WITH IMMEDIATE WRITTEN NOTIFICATION THAT THE EXISTING UTILITIES AND SERVICES HAVE BEEN TERMINATED AND ABANDONED IN ACCORDANCE WITH JURISDICTIONAL AND UTILITY COMPANY REQUIREMENTS.
    H. ARRANGE FOR AND COORDINATE WITH THE APPLICABLE UTILITY SERVICE PROVIDER(S) REGARDING WORKING "OFF-PEAK" HOURS OR ON WEEKENDS AS NECESSARY OR AS REQUIRED TO MINIMIZE THE IMPACT ON, OF, AND TO THE AFFECTED PARTIES. WORK REQUIRED TO BE PERFORMED "OFF-PEAK" IS TO BE PERFORMED AT NO ADDITIONAL COST TO THE OWNER.
    I. IN THE EVENT THE CONTRACTOR DISCOVERS ANY HAZARDOUS MATERIAL, THE REMOVAL OF WHICH IS NOT ADDRESSED IN THE PROJECT PLANS AND SPECIFICATIONS OR THE CONTRACT WITH THE OWNER/DEVELOPER, THE CONTRACTOR MUST IMMEDIATELY CEASE ALL WORK IN THE AREA OF DISCOVERY, AND IMMEDIATELY NOTIFY, IN WRITING AND VERBALLY, THE OWNER, PROFESSIONAL OF RECORD AND BOHLER, THE DISCOVERY OF SUCH MATERIALS TO PURSUE PROPER AND COMPLIANT REMOVAL OF SAME.
11. THE CONTRACTOR MUST NOT PERFORM ANY EARTH MOVEMENT ACTIVITIES, DEMOLITION OR REMOVAL OF FOUNDATION WALLS, FOOTINGS, OR OTHER MATERIALS WITHIN THE LIMITS OF DISTURBANCE, UNLESS SAME IS IN STRICT ACCORDANCE AND CONFORMANCE WITH THE PROJECT PLANS AND SPECIFICATIONS, OR PURSUANT TO THE WRITTEN DIRECTION OF THE OWNER'S STRUCTURAL OR GEOTECHNICAL Z E
12. DEMOLITION ACTIVITIES AND EQUIPMENT MUST NOT USE OR INCLUDE AREAS OUTSIDE THE DEFINED PROJECT LIMIT LINE, WITHOUT SPECIFIC WRITTEN PERMISSION AND AUTHORITY OF AND FROM THE OWNER AND ALL GOVERNMENTAL AGENCIES WITH JURISDICTION.
13. THE CONTRACTOR MUST BACKFILL ALL EXCAVATION RESULTING FROM, OR INCIDENTAL TO, DEMOLITION ACTIVITIES. BACKFILL MUST BE ACCOMPLISHED WITH APPROVED BACKFILL MATERIALS AND MUST BE SUFFICIENTLY COMPACTED TO SUPPORT ALL NEW IMPROVEMENTS AND MUST BE PERFORMED IN COMPLIANCE WITH THE RECOMMENDATIONS AND GUIDANCE ARTICULATED IN THE GEOTECHNICAL REPORT. BACKFILLING MUST OCCUR IMMEDIATELY AFTER DEMOLITION ACTIVITIES AND MUST BE PERFORMED SO AS TO PREVENT WATER ENTERING THE EXCAVATION. FINISHED SURFACES MUST BE GRADED TO PROMOTE POSITIVE DRAINAGE. THE CONTRACTOR IS RESPONSIBLE FOR COMPACTION TESTING AND MUST SUBMIT SUCH REPORTS AND RESULTS TO THE PROFESSIONAL OF RECORD AND THE OWNER.
14. EXPLOSIVES MUST NOT BE USED WITHOUT PRIOR WRITTEN CONSENT FROM BOTH THE OWNER AND ALL APPLICABLE, NECESSARY AND REQUIRED GOVERNMENTAL AUTHORITIES. PRIOR TO COMMENCING ANY EXPLOSIVE PROGRAM AND/OR ANY DEMOLITION ACTIVITIES, THE CONTRACTOR MUST ENSURE AND OVERSEE THE INSTALLATION OF ALL OF THE REQUIRED PERMIT AND EXPLOSIVE CONTROL MEASURES THAT THE FEDERAL, STATE, AND LOCAL GOVERNMENTS REQUIRE. THE CONTRACTOR IS ALSO RESPONSIBLE TO CONDUCT AND PERFORM ALL INSPECTION AND SEISMIC VIBRATION TESTING THAT IS REQUIRED TO MONITOR THE EFFECTS ON ALL LOCAL STRUCTURES AND THE LIKE.
15. IN ACCORDANCE WITH FEDERAL, STATE, AND/OR LOCAL STANDARDS, THE CONTRACTOR MUST USE DUST CONTROL MEASURES TO LIMIT AIRBORNE DUST AND DIRT RISING AND SCATTERING IN THE AIR. AFTER THE DEMOLITION IS COMPLETE, THE CONTRACTOR MUST CLEAN ALL ADJACENT STRUCTURES AND IMPROVEMENTS TO REMOVE ALL DUST AND DEBRIS WHICH THE DEMOLITION OPERATIONS CAUSE. THE CONTRACTOR IS RESPONSIBLE FOR RETURNING ALL ADJACENT AREAS TO THEIR "PRE-DEMOLITION" CONDITION AT CONTRACTOR'S SOLE COST.
16. PAVEMENT MUST BE SAW CUT IN STRAIGHT LINES. ALL DEBRIS FROM REMOVAL OPERATIONS MUST BE REMOVED FROM THE SITE AT THE TIME OF EXCAVATION. STOCKPILING OF DEBRIS OUTSIDE OF APPROVED AREAS WILL NOT BE PERMITTED, INCLUDING BUT NOT LIMITED TO, THE PUBLIC RIGHT-OF-WAY.
17. THE CONTRACTOR MUST MAINTAIN A RECORD SET OF PLANS WHICH INDICATES THE LOCATION OF EXISTING UTILITIES THAT ARE CAPPED, ABANDONED IN PLACE, OR RELOCATED DUE TO DEMOLITION ACTIVITIES. THIS RECORD DOCUMENT MUST BE PREPARED IN A NEAT AND WORKMAN-LIKE MANNER AND TURNED OVER TO THE OWNER/DEVELOPER UPON COMPLETION OF THE WORK, ALL OF WHICH IS AT THE CONTRACTOR'S SOLE COST.
18. THE CONTRACTOR MUST EMPTY, CLEAN AND REMOVE FROM THE SITE ALL UNDERGROUND STORAGE TANKS, IF ENCOUNTERED, IN ACCORDANCE WITH FEDERAL, STATE, COUNTY AND LOCAL REQUIREMENTS, PRIOR TO CONTINUING CONSTRUCTION IN THE AREA AROUND THE TANK WHICH EMPTYING, CLEANING AND REMOVAL ARE AT THE CONTRACTOR'S SOLE COST.

SOIL EROSION & SEDIMENT CONTROL PLAN NOTES

(Rev. 1/2023)

1. THE GENERAL NOTES MUST BE INCLUDED AS PART OF THIS ENTIRE DOCUMENT PACKAGE AND ARE PART OF THE CONTRACT DOCUMENTS. THE GENERAL NOTES ARE REFERENCED HEREIN, AND THE CONTRACTOR MUST REFER TO THEM AND FULLY COMPLY WITH THESE NOTES, IN THEIR ENTIRETY. THE CONTRACTOR MUST BE FAMILIAR WITH AND ACKNOWLEDGE FAMILIARITY WITH ALL OF THE GENERAL NOTES AND ALL OF THE PLANS' SPECIFIC NOTES.
2. EROSION CONTROL MEASURES MUST CONFORM TO THE MARYLAND GUIDELINES FOR URBAN EROSION AND SEDIMENT CONTROL UNLESS OTHERWISE NOTED, OR UNLESS THE PROFESSIONAL OF RECORD CLEARLY AND SPECIFICALLY, IN WRITING, DIRECTS OTHERWISE. INSTALLATION OF EROSION CONTROL, CLEARING, AND SITE WORK MUST BE PERFORMED EXACTLY AS INDICATED IN THE EROSION CONTROL CONSTRUCTION NOTES.
3. THE DISTURBED LAND AREA OF THIS SITE IS APPROXIMATELY 1.00 ACRES.
4. THE FOLLOWING EROSION CONTROL MEASURES ARE PROPOSED FOR THIS SITE:
   A. STABILIZED CONSTRUCTION ENTRANCE/ EXIT - A TEMPORARY GRAVEL CONSTRUCTION ENTRANCE/EXIT IS TO BE INSTALLED AT THE DESIGNATED LOCATION SHOWN ON THE PLAN. THIS AREA MUST BE GRADED SO THAT RUNOFF WATER WILL BE RETAINED ON-SITE.
   B. SEDIMENT FENCE - INSTALL SILT FENCE(S) AND/OR SILT SOCK AROUND ALL OF THE DOWNSLOPE PERIMETERS OF THE SITE, TEMPORARY FILL AND SOIL STOCKPILES.
   C. INSTALL FILTER FABRIC DROP INLET PROTECTION AROUND EACH DRAINAGE INLET AS DRAINAGE STRUCTURES ARE INSTALLED TO REDUCE THE QUANTITY OF SEDIMENT. INSTALL TEMPORARY INLET PROTECTION ON INLETS DOWNSLOPE FROM DISTURBANCE, WHICH MAY BE BEYOND THE LIMITS OF DISTURBED AREA.
5. INSTALLATION OF EROSION CONTROL DEVICES MUST BE IN ACCORDANCE WITH ALL OF THE MANUFACTURER'S RECOMMENDATIONS.
6. THE CONTRACTOR MUST INSPECT EROSION CONTROL MEASURES WEEKLY. THE CONTRACTOR MUST REMOVE ANY SILT DEPOSITS GREATER THAN 6" COLLECTED ON THE FILTER FABRIC AND/OR SILT SOCK BARRIERS AND EXCAVATE AND REMOVE ANY SILT FROM DROP INLET PROTECTION.
7. THE CONTRACTOR MUST APPLY TEMPORARY SEED AND MULCH TO ALL DISTURBED AREAS THAT WILL NOT BE BROUGHT TO FINISHED GRADE AND VEGETATED WITHIN 7 DAYS. WHEN AREAS ARE DISTURBED AFTER THE GROWING SEASON, THE CONTRACTOR MUST STABILIZE SAME WITH GEOTEXTILE FABRIC AND MAINTAIN SAME IN STRICT ACCORDANCE WITH BEST MANAGEMENT PRACTICES.
8. THE CONTRACTOR MUST INSTALL ADDITIONAL EROSION CONTROL MEASURES IF THE PROFESSIONAL OF RECORD SO REQUIRES, TO PREVENT ANY, INCLUDING THE INCIDENTAL, DISCHARGE OF SILT-LADEN RUNOFF FROM EXITING THE SITE.
9. THE CONTRACTOR MUST BE RESPONSIBLE FOR INSPECTING AND MAINTAINING ALL EROSION CONTROL MEASURES ON THE SITE UNTIL PERMANENT PAVING AND TURF/LANDSCAPING IS ESTABLISHED. THE COSTS OF INSTALLING AND MAINTAINING THE EROSION CONTROL MEASURES MUST BE INCLUDED IN THE BID PRICE FOR THE SITE WORK AND THE CONTRACTOR IS RESPONSIBLE FOR ALL SUCH COSTS.
10. THE CONTRACTOR MUST CONTINUE TO MAINTAIN ALL EROSION CONTROL MEASURES UNTIL THE COMPLETION OF CONSTRUCTION AND THE ESTABLISHMENT OF VEGETATION.
11. THE CONTRACTOR MUST REMOVE EROSION CONTROL MEASURES, SILT AND DEBRIS AFTER ESTABLISHING PERMANENT VEGETATION COVER OR OTHER INSTALLING A DIFFERENT, SPECIFIED METHOD OF STABILIZATION.
12. THIS PLAN REPRESENTS THE MINIMUM LEVEL OF IMPLEMENTATION OF TEMPORARY EROSION AND SEDIMENTATION CONTROL FACILITIES, MEASURES AND STRUCTURES. ADDITIONAL FACILITIES, MEASURES AND STRUCTURES MUST BE INSTALLED WHERE NECESSARY TO COMPLY WITH ALL APPLICABLE CODES AND STANDARDS AND/OR TO PREVENT ANY, INCLUDING THE INCIDENTAL DISCHARGE OF SILT-LADEN RUNOFF FROM EXITING THE SITE.
13. THE CONTRACTOR MUST PROTECT ALL EXISTING TREES AND SHRUBS. THE CONTRACTOR MUST REFER TO THE LANDSCAPE AND/OR DEMOLITION PLAN(S) FOR TREE PROTECTION, FENCE LOCATIONS AND DETAILS.
14. THE CONTRACTOR MUST REFER TO GRADING PLANS FOR ADDITIONAL INFORMATION.
15. THE CONTRACTOR MUST CLEAN EXISTING AND PROPOSED DRAINAGE STRUCTURES AND INTERCONNECTING PIPES ON OR OFF-SITE AS THE JURISDICTIONAL AGENCY REQUIRES, BOTH AT THE TIME OF SITE STABILIZATION AND AT END OF PROJECT.
16. SOIL EROSION CONTROL MEASURES MUST BE ADJUSTED OR RELOCATED BY THE CONTRACTOR AS IDENTIFIED DURING SITE OBSERVATION IN ORDER TO MAINTAIN THE COMPLETE EFFECTIVENESS OF ALL CONTROL MEASURES.
17. THE CONTRACTOR MUST IDENTIFY, ON THE PLAN, THE LOCATION OF WASTE CONTAINERS, FUEL STORAGE TANKS, CONCRETE WASHOUT AREAS AND ANY OTHER LOCATIONS WHERE HAZARDOUS MATERIALS ARE STORED.

SITE LAYOUT NOTES

(Rev. 1/2020)

1. THE GENERAL NOTES MUST BE INCLUDED AS PART OF THIS ENTIRE DOCUMENT PACKAGE AND ARE PART OF THE CONTRACT DOCUMENTS. THE GENERAL NOTES ARE REFERENCED HEREIN, AND THE CONTRACTOR MUST REFER TO THEM AND FULLY COMPLY WITH THESE NOTES, IN THEIR ENTIRETY. THE CONTRACTOR MUST BE FAMILIAR WITH AND ACKNOWLEDGE FAMILIARITY WITH ALL OF THE GENERAL NOTES AND ALL OF THE PLANS' SPECIFIC NOTES.
2. PRIOR TO THE COMMENCEMENT OF GENERAL CONSTRUCTION, THE CONTRACTOR MUST INSTALL SOIL EROSION CONTROL AND ANY STORMWATER POLLUTION PREVENTION PLAN (SWPPP) MEASURES NECESSARY, AS INDICATED ON THE APPROVED SOIL EROSION AND SEDIMENT CONTROL PLAN AND IN ACCORDANCE WITH APPLICABLE AND/OR APPROPRIATE AGENCIES' GUIDELINES TO PREVENT SEDIMENT AND/OR LOOSE DEBRIS FROM WASHING ONTO ADJACENT PROPERTIES OR THE RIGHT OF WAY.
3. ALL DIRECTIONAL/TRAFFIC SIGNING AND PAVEMENT STRIPING MUST CONFORM TO THE LATEST STANDARDS OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND ANY APPLICABLE STATE OR LOCALLY APPROVED SUPPLEMENTS, GUIDELINES, RULES, REGULATIONS, STANDARDS AND THE LIKE.
4. THE LOCATIONS OF PROPOSED UTILITY POLES AND TRAFFIC SIGNS SHOWN ON THE PLANS ARE SCHEMATIC AND PRELIMINARY. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR FIELD-VERIFYING THEIR LOCATION. THE CONTRACTOR MUST COORDINATE THE RELOCATION OF TRAFFIC SIGNS WITH THE ENTITY WITH JURISDICTION OVER THE PROJECT.
5. ALL DIMENSIONS SHOWN ARE TO BOTTOM FACE OF CURB, EDGE OF PAVEMENT, OR EDGE OF BUILDING, EXCEPT WHEN DIMENSION IS TO A PROPERTY LINE, STAKE OUT OF LOCATIONS OF INLETS, LIGHT POLES, ETC. MUST BE PERFORMED IN STRICT ACCORDANCE WITH THE DETAILS, UNLESS NOTED CLEARLY OTHERWISE.

GRADING NOTES

(Rev. 1/2023)

1. THE GENERAL NOTES MUST BE INCLUDED AS PART OF THIS ENTIRE DOCUMENT PACKAGE AND ARE PART OF THE CONTRACT DOCUMENTS. THE GENERAL NOTES ARE REFERENCED HEREIN, AND THE CONTRACTOR MUST REFER TO THEM AND FULLY COMPLY WITH THESE NOTES, IN THEIR ENTIRETY. THE CONTRACTOR MUST BE FAMILIAR WITH AND ACKNOWLEDGE FAMILIARITY WITH ALL OF THE GENERAL NOTES AND ALL OF THE PLANS' SPECIFIC NOTES.
2. SITE GRADING MUST BE PERFORMED IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS AND THE RECOMMENDATIONS SET FORTH IN THE GEOTECHNICAL REPORT AS REFERENCED IN THIS PLAN SET. IF NO GEOTECHNICAL REPORT HAS BEEN REFERENCED, THE CONTRACTOR MUST HAVE A GEOTECHNICAL ENGINEER PROVIDE WRITTEN SPECIFICATIONS AND RECOMMENDATIONS PRIOR TO THE CONTRACTOR COMMENCING THE GRADING WORK. THE CONTRACTOR MUST FOLLOW THE REQUIREMENTS OF ALL MUNICIPAL, COUNTY, STATE, AND FEDERAL LAWS, WHICH HAVE JURISDICTION OVER THIS PROJECT.
3. THE CONTRACTOR IS REQUIRED TO SECURE ALL NECESSARY AND/OR REQUIRED PERMITS AND APPROVALS FOR ALL OFF-SITE MATERIAL SOURCES AND DISPOSAL FACILITIES. THE CONTRACTOR MUST SUPPLY A COPY OF APPROVALS TO THE PROFESSIONAL OF RECORD, BOHLER AND THE OWNER PRIOR TO THE CONTRACTOR COMMENCING ANY WORK.
4. THE CONTRACTOR IS FULLY RESPONSIBLE FOR VERIFYING EXISTING TOPOGRAPHIC INFORMATION AND UTILITY INVERT ELEVATIONS PRIOR TO COMMENCING ANY CONSTRUCTION. SHOULD DISCREPANCIES BETWEEN THE PLANS AND INFORMATION OBTAINED THROUGH FIELD VERIFICATIONS BE IDENTIFIED OR EXIST, THE CONTRACTOR MUST IMMEDIATELY NOTIFY THE PROFESSIONAL OF RECORD AND BOHLER, IN WRITING.
5. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING AND REPLACING ALL UNSUITABLE MATERIALS WITH SUITABLE MATERIALS AS SPECIFIED IN THE GEOTECHNICAL REPORT. THE CONTRACTOR MUST COMPACT ALL EXCAVATED OR FILLED AREAS IN STRICT ACCORDANCE WITH THE GEOTECHNICAL REPORT'S GUIDANCE. MOISTURE CONTENT AT TIME OF PLACEMENT MUST BE SUBMITTED IN A COMPACTION REPORT PREPARED BY A QUALIFIED GEOTECHNICAL ENGINEER, REGISTERED WITH THE STATE WHERE THE WORK IS PERFORMED. THIS REPORT MUST VERIFY THAT ALL FILLED AREAS AND SUBGRADE AREAS WITHIN THE BUILDING PAD AREA AND AREAS TO BE PAVED HAVE BEEN COMPACTED IN ACCORDANCE WITH THESE PLANS, SPECIFICATIONS AND THE RECOMMENDATIONS SET FORTH IN THE GEOTECHNICAL REPORT AND ALL APPLICABLE REQUIREMENTS, RULES, STATUTES, LAWS, ORDINANCES AND CODES WHICH ARE IN EFFECT AND WHICH ARE APPLICABLE TO THE PROJECT. SUBBASE MATERIAL FOR SIDEWALKS, CURB, OR ASPHALT MUST BE FREE OF ORGANICS AND OTHER UNSUITABLE MATERIALS. SHOULD SUBBASE BE DEEMED UNSUITABLE BY OWNER/DEVELOPER, OR OWNER/DEVELOPER'S REPRESENTATIVE, SUBBASE MUST BE REMOVED AND FILLED WITH APPROVED FILL MATERIAL, COMPACTED AS THE GEOTECHNICAL REPORT DIRECTS. EARTHWORK ACTIVITIES INCLUDING, BUT NOT LIMITED TO, EXCAVATION, BACKFILL, AND COMPACTING MUST COMPLY WITH THE RECOMMENDATIONS IN THE GEOTECHNICAL REPORT AND ALL APPLICABLE REQUIREMENTS, RULES, STATUTES, LAWS, ORDINANCES AND CODES. EARTHWORK ACTIVITIES MUST COMPLY WITH THE STANDARD STATE DOT SPECIFICATIONS FOR ROADWAY CONSTRUCTION (LATEST EDITION) AND ANY AMENDMENTS OR REVISIONS THERETO.
6. IN THE EVENT OF A DISCREPANCY(IES) AND/OR A CONFLICT(S) BETWEEN PLANS, OR RELATIVE TO OTHER PLANS, THE GRADING PLAN TAKES PRECEDENCE AND CONTROLS. THE CONTRACTOR MUST IMMEDIATELY NOTIFY THE PROFESSIONAL OF RECORD AND BOHLER, IN WRITING, OF ANY DISCREPANCY(IES) AND/OR CONFLICT(S).
7. THE CONTRACTOR IS RESPONSIBLE TO IMPORT FILL OR EXPORT EXCESS MATERIAL AS NECESSARY TO CONFORM TO THE PROPOSED GRADING, AND TO BACKFILL EXCAVATIONS FOR THE INSTALLATION OF UNDERGROUND IMPROVEMENTS.

ACCESSIBILITY DESIGN GUIDELINES

(Rev. 1/2023)

1. ALL ACCESSIBLE (A.K.A. ADA) COMPONENTS AND ACCESSIBLE ROUTES MUST BE CONSTRUCTED TO MEET, AT A MINIMUM, THE MORE STRINGENT OF: (A) THE REQUIREMENTS OF THE "AMERICANS WITH DISABILITIES ACT" (ADA) CODE (42 U.S.C. § 12101 ET SEQ. AND 42 U.S.C. § 4151 ET SEQ.); AND (B) ANY APPLICABLE LOCAL AND STATE GUIDELINES, AND ANY AND ALL AMENDMENTS TO BOTH, WHICH ARE IN EFFECT WHEN THESE PLANS WERE COMPLETED.
2. THE CONTRACTOR MUST REVIEW ALL DOCUMENTS REFERENCED IN THESE NOTES FOR ACCURACY, COMPLIANCE AND CONSISTENCY WITH INDUSTRY GUIDELINES.
3. THE CONTRACTOR MUST EXERCISE APPROPRIATE CARE AND PRECISION IN CONSTRUCTION OF ACCESSIBLE (ADA) COMPONENTS AND ACCESSIBLE ROUTES FOR THE SITE. FINISHED SURFACES ALONG THE ACCESSIBLE ROUTE OF TRAVEL FROM PARKING SPACES, PUBLIC TRANSPORTATION, PEDESTRIAN ACCESS, AND INTER-BUILDING ACCESS, TO POINTS OF ACCESSIBLE BUILDING ENTRANCE/EXIT, MUST COMPLY WITH THE ACCESSIBLE GUIDELINES AND REQUIREMENTS WHICH INCLUDE, BUT ARE NOT LIMITED TO THE FOLLOWING:
   A. ACCESSIBLE PARKING SPACES AND ACCESS AISLES SLOPES MUST NOT EXCEED 1:50 (2.0%) IN ANY DIRECTION.
   B. PATH OF TRAVEL ALONG ACCESSIBLE ROUTE MUST PROVIDE A 36-INCHES MINIMUM WIDTH (48-INCHES PREFERRED), OR AS SPECIFIED BY THE GOVERNING AGENCY. UNOBSTRUCTED WIDTH OF TRAVEL (CAR OVERHANGS AND/OR HANDRAILS) MUST NOT REDUCE THIS MINIMUM WIDTH. THE SLOPE MUST NOT EXCEED 1:20 (5.0%) IN THE DIRECTION OF TRAVEL AND MUST NOT EXCEED 1:50 (2.0%) IN CROSS SLOPE. WHERE ACCESSIBLE PATH OF TRAVEL IS GREATER THAN 1:20 (5.0%), AN ACCESSIBLE RAMP MUST BE PROVIDED. ALONG THE ACCESSIBLE PATH OF TRAVEL, OPENINGS MUST NOT EXCEED 1/2-INCH IN WIDTH. VERTICAL CHANGES OF UP TO 1/2-INCH ARE PERMITTED ONLY IF THEY INCLUDES A 1/4-INCH BEVEL AT A SLOPE NOT STEEPER THAN 1:2. NO VERTICAL CHANGES OVER 1/4-INCH ARE PERMITTED.
   C. ACCESSIBLE RAMPS MUST NOT EXCEED A SLOPE OF 1:12 (8.3%) AND A RISE OF 30-INCHES. LEVEL LANDINGS MUST BE PROVIDED AT EACH END OF ACCESSIBLE RAMPS. LANDING MUST PROVIDE POSITIVE DRAINAGE AWAY FROM STRUCTURES, AND MUST NOT EXCEED 1:50 (2.0%) SLOPE IN ANY DIRECTION. RAMPS THAT CHANGE DIRECTION BETWEEN RUNS AT LANDINGS MUST HAVE A CLEAR LANDING OF A MINIMUM OF 60-INCHES BY 60-INCHES. HAND RAILS ON BOTH SIDES OF THE RAMP MUST BE PROVIDED ON AN ACCESSIBLE RAMP WITH A RISE GREATER THAN 6-INCHES.
   D. ACCESSIBLE CURB RAMPS MUST NOT EXCEED A SLOPE OF 1:12 (8.3%). WHERE FLARED SIDES ARE PROVIDED, THEY MUST NOT EXCEED 1:10 (10%) SLOPE. LEVEL LANDING MUST BE PROVIDED AT RAMPS TOP AT A MINIMUM OF 36-INCHES LONG (48-INCHES PREFERRED). IN ALTERATIONS, WHEN THERE IS NO LANDING AT THE TOP, FLARE SIDES SLOPES MUST NOT EXCEED A SLOPE OF 1:12 (8.3%).
   E. DOORWAY LANDINGS AREAS MUST BE PROVIDED ON THE EXTERIOR SIDE OF ANY DOOR LEADING TO AN ACCESSIBLE PATH OF TRAVEL. THIS LANDING MUST BE SLOPED AWAY FROM THE DOOR NO MORE THAN 1:50 (2.0%) FOR POSITIVE DRAINAGE. THIS LANDING AREA MUST BE NO FEWER THAN 60-INCHES (5 FEET) LONG, EXCEPT WHERE OTHERWISE CLEARLY PERMITTED BY ACCESSIBLE STANDARDS FOR ALTERNATIVE DOORWAY OPENING CONDITIONS. (SEE ICC/ANSI A117.1-2009 AND OTHER REFERENCES INCORPORATED BY CODE).
   F. WHEN THE PROPOSED CONSTRUCTION INVOLVES RECONSTRUCTION, MODIFICATION, REVISION OR EXTENSION OF OR TO ACCESSIBLE COMPONENTS FROM EXISTING DOORWAYS OR SURFACES, THE CONTRACTOR MUST VERIFY ALL EXISTING ELEVATIONS SHOWN ON THE PLAN. NOTE THAT TABLE 405.2 OF THE DEPARTMENT OF JUSTICE'S ADA STANDARDS FOR ACCESSIBLE DESIGN ALLOWS FOR STEEPER RAMP SLOPES, IN RARE CIRCUMSTANCES. THE CONTRACTOR MUST IMMEDIATELY NOTIFY THE PROFESSIONAL OF RECORD AND BOHLER, IN WRITING, OF ANY DISCREPANCIES AND/OR FIELD CONDITIONS THAT DIFFER IN ANY WAY OR IN ANY RESPECT FROM WHAT IS SHOWN ON THE PLANS BEFORE COMMENCING ANY WORK. CONSTRUCTED IMPROVEMENTS MUST FALL WITHIN THE MAXIMUM AND MINIMUM LIMITATIONS IMPOSED BY THE BARRIER FREE REGULATIONS AND THE ACCESSIBLE GUIDELINES.
   G. THE CONTRACTOR MUST VERIFY ALL OF THE SLOPES OF THE CONTRACTOR'S FORMS PRIOR TO POURING CONCRETE. IF ANY NON-CONFORMANCE EXISTS OR IS OBSERVED OR DISCOVERED, THE CONTRACTOR MUST IMMEDIATELY NOTIFY THE PROFESSIONAL OF RECORD AND BOHLER, IN WRITING, PRIOR TO POURING CONCRETE. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR ALL COSTS TO REMOVE, REPAIR AND/OR REPLACE NON-CONFORMING CONCRETE AND/OR PAVEMENT SURFACES.
4. IT IS STRONGLY RECOMMENDED THAT THE CONTRACTOR REVIEW THE INTENDED CONSTRUCTION TO ENSURE SAME IS CONSISTENT WITH THE LOCAL BUILDING CODE PRIOR TO COMMENCING CONSTRUCTION.

DRAINAGE AND UTILITY NOTES

(Rev. 1/2023)

1. THE GENERAL NOTES MUST BE INCLUDED AS PART OF THIS ENTIRE DOCUMENT PACKAGE AND ARE PART OF THE CONTRACT DOCUMENTS. THE GENERAL NOTES ARE REFERENCED HEREIN, AND THE CONTRACTOR MUST REFER TO THEM AND FULLY COMPLY WITH THESE NOTES, IN THEIR ENTIRETY. THE CONTRACTOR MUST BE FAMILIAR WITH AND ACKNOWLEDGE FAMILIARITY WITH ALL OF THE GENERAL NOTES AND ALL OF THE PLANS' SPECIFIC NOTES.
2. LOCATIONS OF ALL EXISTING AND PROPOSED SERVICES ARE APPROXIMATE, AND THE CONTRACTOR MUST INDEPENDENTLY VERIFY AND CONFIRM THOSE LOCATIONS AND SERVICES WITH LOCAL UTILITY COMPANIES PRIOR TO COMMENCING ANY CONSTRUCTION OR EXCAVATION. THE CONTRACTOR MUST INDEPENDENTLY VERIFY AND CONFIRM ALL SANITARY CONNECTION POINTS AND ALL OTHER UTILITY SERVICE CONNECTION POINTS IN THE FIELD, PRIOR TO COMMENCING ANY CONSTRUCTION. THE CONTRACTOR MUST REPORT ALL DISCREPANCIES, ERRORS AND OMISSIONS IN WRITING, TO THE PROFESSIONAL OF RECORD AND BOHLER.
3. THE CONTRACTOR MUST VERTICALLY AND HORIZONTALLY LOCATE ALL UTILITIES AND SERVICES INCLUDING, BUT NOT LIMITED TO, GAS, WATER, ELECTRIC, SANITARY AND STORM, TELEPHONE, CABLE, FIBER OPTIC CABLE, ETC. WITHIN THE LIMITS OF DISTURBANCE OR WORK SPACE, WHICHEVER IS GREATER. THE CONTRACTOR MUST USE, REFER TO, AND COMPLY WITH THE REQUIREMENTS OF THE APPLICABLE UTILITY NOTIFICATION SYSTEM TO LOCATE ALL OF THE UNDERGROUND UTILITIES. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ALL DAMAGE TO ANY EXISTING UTILITIES WHICH OCCUR DURING CONSTRUCTION, AT NO COST TO THE OWNER AND AT CONTRACTOR'S SOLE COST AND EXPENSE. THE CONTRACTOR MUST BEAR ALL COSTS ASSOCIATED WITH DAMAGE TO ANY EXISTING UTILITIES WHICH OCCURS DURING CONSTRUCTION.
4. THE CONTRACTOR MUST FIELD VERIFY THE PROPOSED INTERFACE POINTS (CROSSINGS) WITH EXISTING UNDERGROUND UTILITIES BY USING A TEST PIT TO CONFIRM EXACT DEPTH, PRIOR TO COMMENCEMENT OF CONSTRUCTION.
5. STORMWATER ROOF DRAIN LOCATIONS ARE BASED ON ARCHITECTURAL PLANS. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING LOCATIONS OF SAME BASED UPON FINAL ARCHITECTURAL PLANS.
6. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING SITE PLAN DOCUMENTS AND ARCHITECTURAL PLANS FOR EXACT BUILDING UTILITY CONNECTION LOCATIONS; GREASE TRAP REQUIREMENTS; AND DETAILS, DOOR ACCESS, AND EXTERIOR GRADING. THE ARCHITECT WILL DETERMINE THE UTILITY SERVICE SIZES. THE CONTRACTOR MUST COORDINATE INSTALLATION OF UTILITY SERVICES WITH THE INDIVIDUAL COMPANIES TO AVOID CONFLICTS AND TO ENSURE THAT PROPER DEPTHS ARE ACHIEVED. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT INSTALLATION OF ALL IMPROVEMENTS COMPLIES WITH ALL UTILITY REQUIREMENTS OF THE APPLICABLE JURISDICTION AND REGULATORY AGENCIES AND ALL OTHER APPLICABLE REQUIREMENTS, RULES, STATUTES, LAWS, ORDINANCES AND CODES AND, FURTHER, IS RESPONSIBLE FOR COORDINATING THE UTILITY TIE-INS/CONNECTIONS PRIOR TO CONNECTING TO THE EXISTING UTILITY/SERVICE. WHERE A CONFLICT(S) EXISTS BETWEEN THESE DOCUMENTS AND THE ARCHITECTURAL PLANS, OR WHERE ARCHITECTURAL PLAN UTILITY CONNECTION POINTS DIFFER, THE CONTRACTOR MUST IMMEDIATELY NOTIFY THE PROFESSIONAL OF RECORD AND BOHLER, IN WRITING, AND PRIOR TO CONSTRUCTION, MUST RESOLVE SAME.
7. ALL FILL, COMPACTION, AND BACKFILL MATERIALS REQUIRED FOR UTILITY INSTALLATION MUST BE EXACTLY AS PER THE RECOMMENDATIONS PROVIDED IN THE GEOTECHNICAL REPORT AND THE CONTRACTOR MUST COORDINATE SAME WITH THE APPLICABLE UTILITY COMPANY SPECIFICATIONS. WHEN THE PROJECT DOES NOT HAVE GEOTECHNICAL RECOMMENDATIONS, FILL AND COMPACTION MUST COMPLY WITH APPLICABLE REQUIREMENTS AND SPECIFICATIONS. THE PROFESSIONAL OF RECORD AND BOHLER ARE NOT RESPONSIBLE FOR DESIGN OF TRENCH BACKFILL OR FOR COMPACTION REQUIREMENTS
8. DURING THE INSTALLATION OF SANITARY, STORM, AND ALL UTILITIES, THE CONTRACTOR MUST MAINTAIN A CONTEMPORANEOUS AND THOROUGH RECORD OF CONSTRUCTION TO IDENTIFY THE AS-INSTALLED LOCATIONS OF ALL UNDERGROUND INFRASTRUCTURE. THE CONTRACTOR MUST CAREFULLY NOTE ANY INSTALLATIONS THAT DEVIATE, IN ANY RESPECT, FROM THE INFORMATION CONTAINED IN THESE PLANS. THIS RECORD MUST BE KEPT ON A CLEAN COPY OF THE APPROPRIATE PLAN(S), WHICH THE CONTRACTOR MUST PROMPTLY PROVIDE TO THE OWNER IMMEDIATELY UPON THE COMPLETION OF WORK.
9. THE CONTRACTOR MUST ENSURE THAT ALL UTILITY TRENCHES LOCATED IN EXISTING PAVED ROADWAYS INCLUDING SANITARY, WATER AND STORM SYSTEMS, ARE REPAIRED IN ACCORDANCE WITH REFERENCED MUNICIPAL, COUNTY AND OR STATE DOT DETAILS AS APPLICABLE. THE CONTRACTOR MUST COORDINATE INSPECTION AND APPROVAL OF COMPLETED WORK WITH THE AGENCY WITH JURISDICTION OVER SAME.
10. FINAL LOCATIONS OF PROPOSED UTILITY POLES, AND/ OR POLES TO BE RELOCATED ARE AT THE SOLE DISCRETION OF THE RESPECTIVE UTILITY COMPANY, REGARDLESS OF WHAT THIS PLAN DEPICTS.
11. WATER SERVICE MATERIALS, BURIAL DEPTH, AND COVER REQUIREMENTS MUST BE SPECIFIED BY THE LOCAL UTILITY COMPANY. THE CONTRACTOR MUST CONTACT THE APPLICABLE MUNICIPALITY TO CONFIRM THE PROPER WATER METER AND VAULT, PRIOR TO COMMENCING CONSTRUCTION.
12. THE TOPS OF EXISTING MANHOLES, INLET STRUCTURES, AND SANITARY CLEANOUT MUST BE ADJUSTED, AS NECESSARY, TO MATCH PROPOSED FINISHED GRADES WITH NO TRIPPING OR SAFETY HAZARD IN ACCORDANCE WITH ALL APPLICABLE STANDARDS, REQUIREMENTS, RULES, STATUTES, LAWS, ORDINANCES AND CODES.

B.R. ROWE
PROFESSIONAL ENGINEER
PROFESSIONAL CERTIFICATION
I, BRANDON R. ROWE, 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. 40998, EXPIRATION DATE: 7/3/2023

THOMAS A. LUNDBERG
ARCHITECT
1736 East Sunshine, Suite 417
Springfield, Missouri 65804
417.862.0558
Fax: 417.862.3265
e-mail: architect@esterlyschneider.com

PROJECT:
NEW O'REILLY AUTO PARTS STORE
NEW GEORGES CREEK RD
FROSTBURG, MD

GENERAL NOTES AND LEGEND

O'Reilly AUTO PARTS
CORPORATE OFFICES
233 SOUTH PATTERSON
SPRINGFIELD, MISSOURI 65802
(417) 862-2674 TELEPHONE

COMM #XXXX

DATE: 04-26-23

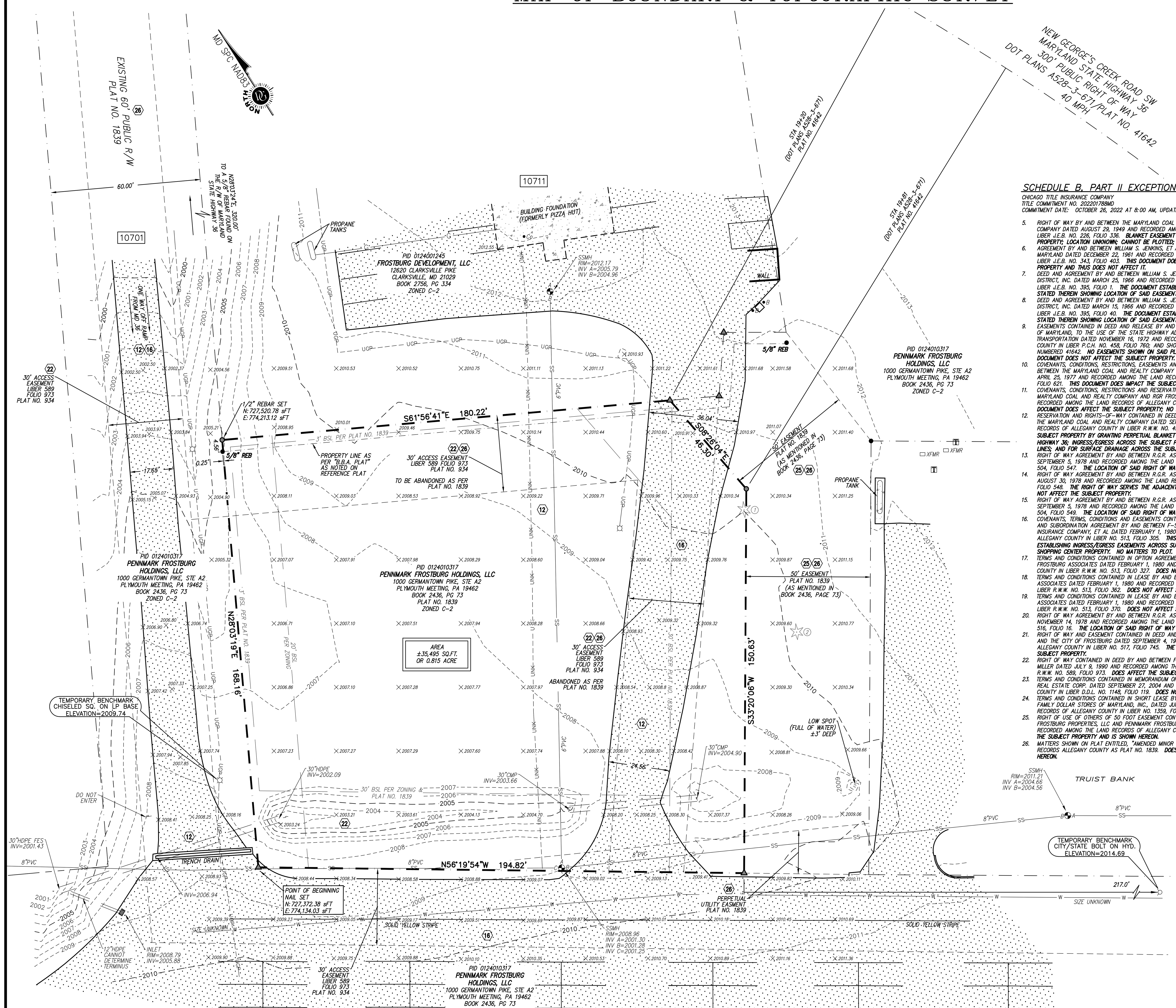
REVISION DATE:

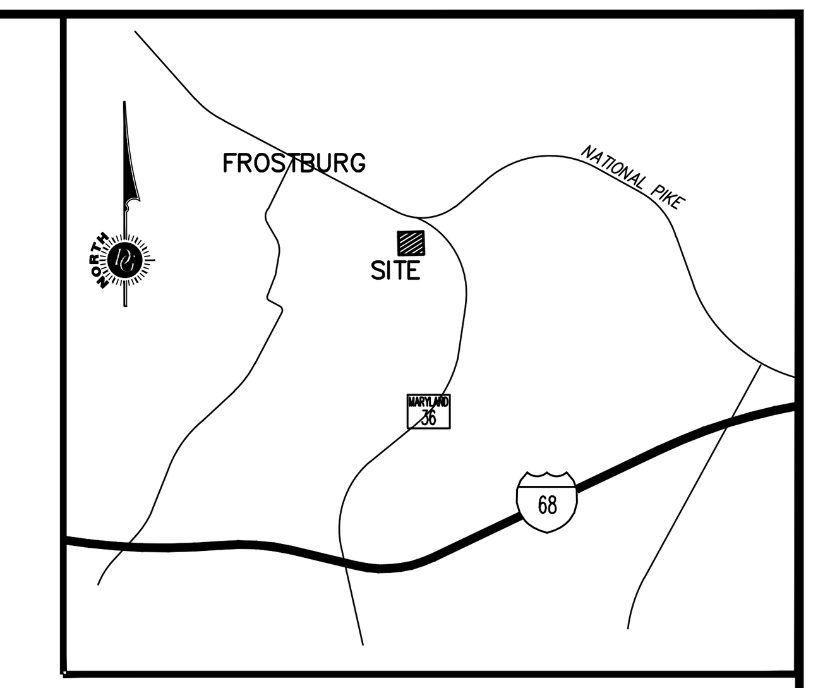
BOHLER//
901 DULANEY VALLEY ROAD, SUITE 801 TOWSON, MARYLAND 21204
Phone:(410) 821-7900 Fax:(410) 821-7987
MD@BohlerEng.com

PROJECT NO:	MDA230040.00	SCALE:	AS NOTED
DRAWN BY / CHECKED BY:	JCB / MG	CAD I.D.:	MDA230040-CNDS-0

CT2.0

MAP OF BOUNDARY & TOPOGRAPHIC SURVEY





SCHEDULE B, PART II EXCEPTIONS

CHICAGO TITLE INSURANCE COMPANY
TITLE COMMITMENT NO. 202201788MD
COMMITMENT DATE: OCTOBER 26, 2022 AT 8:00 AM, UPDATE NO. 1 – JANUARY 27, 2023

5. RIGHT OF WAY BY AND BETWEEN THE MARYLAND COAL AND REALTY COMPANY AND THE POTOMAC EDISON COMPANY DATED AUGUST 29, 1949 AND RECORDED AMONG THE LAND RECORDS OF ALLEGANY COUNTY IN LIBER J.E.B. NO. 226, FOLIO 336. **BLANKET EASEMENT ACROSS LANDS THAT NOW INCLUDE THE SUBJECT PROPERTY; LOCATION UNKNOWN; CANNOT BE PLOTTED; DOES AFFECT THE SUBJECT PROPERTY.**
6. AGREEMENT BY AND BETWEEN WILLIAM S. JENKINS, ET AL AND BOARD OF EDUCATION OF ALLEGANY COUNTY, MARYLAND DATED DECEMBER 22, 1961 AND RECORDED AMONG THE LAND RECORDS OF ALLEGANY COUNTY IN LIBER J.E.B. NO. 343, FOLIO 403. **THIS DOCUMENT DOES NOT PLACE RESTRICTIONS ON THE SUBJECT PROPERTY AND THUS DOES NOT AFFECT IT.**
7. DEED AND AGREEMENT BY AND BETWEEN WILLIAM S. JENKINS, ET AL AND THE ALLEGANY COUNTY SANITARY DISTRICT, INC. DATED MARCH 25, 1966 AND RECORDED AMONG THE LAND RECORDS OF ALLEGANY COUNTY IN LIBER J.E.B. NO. 395, FOLIO 1. **THE DOCUMENT ESTABLISHES A 10' SANITARY EASEMENT; ATTACHED MAPS STATED THEREIN SHOWING LOCATION OF SAID EASEMENT WERE NOT PROVIDED.**
8. DEED AND AGREEMENT BY AND BETWEEN WILLIAM S. JENKINS, ET AL AND THE ALLEGANY COUNTY SANITARY DISTRICT, INC. DATED MARCH 15, 1966 AND RECORDED AMONG THE LAND RECORDS OF ALLEGANY COUNTY IN LIBER J.E.B. NO. 395, FOLIO 40. **THE DOCUMENT ESTABLISHES A 10' SANITARY EASEMENT; ATTACHED MAPS STATED THEREIN SHOWING LOCATION OF SAID EASEMENT WERE NOT PROVIDED.**
9. EASEMENTS CONTAINED IN DEED AND RELEASE BY AND BETWEEN WILLIAM S. JENKINS, ET AL AND THE STATE OF MARYLAND, TO THE USE OF THE STATE HIGHWAY ADMINISTRATION OF THE DEPARTMENT OF TRANSPORTATION DATED NOVEMBER 16, 1972 AND RECORDED AMONG THE LAND RECORDS OF ALLEGANY COUNTY IN LIBER P.C.H. NO. 458, FOLIO 760; AND SHOWN ON STATE HIGHWAY ADMINISTRATION PLAT NUMBERED 41642. **NO EASEMENTS SHOWN ON SAID PLAT AND NO OTHER MATTERS TO SHOW. THIS DOCUMENT DOES NOT AFFECT THE SUBJECT PROPERTY.**
10. COVENANTS, CONDITIONS, RESTRICTIONS, EASEMENTS AND RESERVATIONS CONTAINED IN DEED BY AND BETWEEN THE MARYLAND COAL AND REALTY COMPANY AND R.G.R. ASSOCIATES LIMITED PARTNERSHIP DATED APRIL 25, 1977 AND RECORDED AMONG THE LAND RECORDS OF ALLEGANY COUNTY IN LIBER R.W.W. NO. 492, FOLIO 621. **THIS DOCUMENT DOES IMPACT THE SUBJECT PROPERTY; NO MATTERS TO SHOW.**
11. COVENANTS, CONDITIONS, RESTRICTIONS AND RESERVATIONS CONTAINED IN DEED BY AND BETWEEN THE MARYLAND COAL AND REALTY COMPANY AND RGR FROSTBURG ASSOCIATES DATED SEPTEMBER 8, 1977 AND RECORDED AMONG THE LAND RECORDS OF ALLEGANY COUNTY IN LIBER R.W.W. NO. 495, FOLIO 946. **THIS DOCUMENT DOES AFFECT THE SUBJECT PROPERTY; NO MATTERS TO SHOW.**
12. RESERVATION AND RIGHTS-OF-WAY CONTAINED IN DEED BY AND BETWEEN RGR FROSTBURG ASSOCIATES AND THE MARYLAND COAL AND REALTY COMPANY DATED SEPTEMBER 8, 1977 AND RECORDED AMONG THE LAND RECORDS OF ALLEGANY COUNTY IN LIBER R.W.W. NO. 495, FOLIO 951. **THIS DOCUMENT DOES AFFECT THE SUBJECT PROPERTY BY GRANTING PERPETUAL BLANKET EASEMENTS FOR INGRESS/EGRESS TO/FROM MARYLAND HIGHWAY 36; INGRESS/EGRESS ACROSS THE SUBJECT PROPERTY; TO TAP INTO WATER & SANITARY SEWER LINES; AND FOR SURFACE DRAINAGE ACROSS THE SUBJECT PROPERTY. NO MATTERS TO PLOT.**
13. RIGHT OF WAY AGREEMENT BY AND BETWEEN R.G.R. ASSOCIATES AND THE POTOMAC EDISON COMPANY DATED SEPTEMBER 5, 1978 AND RECORDED AMONG THE LAND RECORDS OF ALLEGANY COUNTY IN LIBER R.W.W. NO. 504, FOLIO 547. **THE LOCATION OF SAID RIGHT OF WAY DOES NOT AFFECT THE SUBJECT PROPERTY.**
14. RIGHT OF WAY AGREEMENT BY AND BETWEEN R.G.R. ASSOCIATES AND THE POTOMAC EDISON COMPANY DATED AUGUST 30, 1978 AND RECORDED AMONG THE LAND RECORDS OF ALLEGANY COUNTY IN LIBER R.W.W. NO. 504, FOLIO 548. **THE RIGHT OF WAY SERVES THE ADJACENT PROPERTY OF THE FORMER PIZZA HUT AND DOES NOT AFFECT THE SUBJECT PROPERTY.**
15. RIGHT OF WAY AGREEMENT BY AND BETWEEN R.G.R. ASSOCIATES AND THE POTOMAC EDISON COMPANY DATED SEPTEMBER 5, 1978 AND RECORDED AMONG THE LAND RECORDS OF ALLEGANY COUNTY IN LIBER R.W.W. NO. 504, FOLIO 549. **THE LOCATION OF SAID RIGHT OF WAY DOES NOT AFFECT THE SUBJECT PROPERTY.**
16. COVENANTS, TERMS, CONDITIONS AND EASEMENTS CONTAINED IN DECLARATION OF NON-EXCLUSIVE EASEMENT AND SUBORDINATION AGREEMENT BY AND BETWEEN F-S ASSOCIATES, LTD. AND CONNECTICUT GENERAL LIFE INSURANCE COMPANY, ET AL DATED FEBRUARY 1, 1980 AND RECORDED AMONG THE LAND RECORDS OF ALLEGANY COUNTY IN LIBER NO. 513, FOLIO 305. **THIS DOCUMENT DOES AFFECT THE SUBJECT PROPERTY BY ESTABLISHING INGRESS/EGRESS EASEMENTS ACROSS SUBJECT PROPERTY AND THROUGHOUT ADJACENT SHOPPING CENTER PROPERTY. NO MATTERS TO PLOT.**
17. TERMS AND CONDITIONS CONTAINED IN OPTION AGREEMENT BY AND BETWEEN F-S ASSOCIATES, LTD. AND RGR FROSTBURG ASSOCIATES DATED FEBRUARY 1, 1980 AND RECORDED AMONG THE LAND RECORDS OF ALLEGANY COUNTY IN LIBER R.W.W. NO. 513, FOLIO 327. **DOES NOT AFFECT SUBJECT PROPERTY; NO MATTERS TO SHOW.**
18. TERMS AND CONDITIONS CONTAINED IN LEASE BY AND BETWEEN F-S ASSOCIATES, LTD. AND RGR FROSTBURG ASSOCIATES DATED FEBRUARY 1, 1980 AND RECORDED AMONG THE LAND RECORDS OF ALLEGANY COUNTY IN LIBER R.W.W. NO. 513, FOLIO 362. **DOES NOT AFFECT SUBJECT PROPERTY; NO MATTERS TO SHOW.**
19. TERMS AND CONDITIONS CONTAINED IN LEASE BY AND BETWEEN F-S ASSOCIATES, LTD. AND RGR FROSTBURG ASSOCIATES DATED FEBRUARY 1, 1980 AND RECORDED AMONG THE LAND RECORDS OF ALLEGANY COUNTY IN LIBER R.W.W. NO. 513, FOLIO 370. **DOES NOT AFFECT SUBJECT PROPERTY; NO MATTERS TO SHOW.**
20. RIGHT OF WAY AGREEMENT BY AND BETWEEN R.G.R. ASSOCIATES AND THE POTOMAC EDISON COMPANY DATED NOVEMBER 14, 1978 AND RECORDED AMONG THE LAND RECORDS OF ALLEGANY COUNTY IN LIBER R.W.W. NO. 516, FOLIO 16. **THE LOCATION OF SAID RIGHT OF WAY DOES NOT AFFECT THE SUBJECT PROPERTY.**
21. RIGHT OF WAY AND EASEMENT CONTAINED IN DEED AND AGREEMENT BY AND BETWEEN F-S ASSOCIATES, LTD. AND THE CITY OF FROSTBURG DATED SEPTEMBER 4, 1980 AND RECORDED AMONG THE LAND RECORDS OF ALLEGANY COUNTY IN LIBER NO. 517, FOLIO 745. **THE LOCATION OF SAID RIGHT OF WAY DOES NOT AFFECT SUBJECT PROPERTY.**
22. RIGHT OF WAY CONTAINED IN DEED BY AND BETWEEN FROSTBURG-1 LIMITED PARTNERSHIP AND GERALD A. MILLER DATED JULY 9, 1990 AND RECORDED AMONG THE LAND RECORDS OF ALLEGANY COUNTY IN LIBER R.W.W. NO. 589, FOLIO 973. **DOES AFFECT THE SUBJECT PROPERTY AND IS SHOWN HEREON.**
23. TERMS AND CONDITIONS CONTAINED IN MEMORANDUM OF LEASE BY AND BETWEEN TRIFISH LLC AND SUBWAY REAL ESTATE CORP. DATED SEPTEMBER 27, 2004 AND RECORDED AMONG THE LAND RECORDS OF ALLEGANY COUNTY IN LIBER D.D.L. NO. 1148, FOLIO 119. **DOES NOT AFFECT SUBJECT PROPERTY.**
24. TERMS AND CONDITIONS CONTAINED IN SHORT LEASE BY AND BETWEEN FROSTBURG PROPERTIES, LLC AND FAMILY DOLLAR STORES OF MARYLAND, INC., DATED JUNE 14, 2006 AND RECORDED AMONG THE LAND RECORDS OF ALLEGANY COUNTY IN LIBER NO. 1359, FOLIO 456. **DOES NOT AFFECT SUBJECT PROPERTY.**
25. RIGHT OF USE OF OTHERS OF 50 FOOT EASEMENT CONTAINED IN SPECIAL WARRANTY DEED BY AND BETWEEN FROSTBURG PROPERTIES, LLC AND PENNMARK FROSTBURG HOLDINGS, LLC DATED DECEMBER 5, 2018 AND RECORDED AMONG THE LAND RECORDS OF ALLEGANY COUNTY IN LIBER NO. 2436, FOLIO 73. **DOES AFFECT THE SUBJECT PROPERTY AND IS SHOWN HEREON.**
26. MATTERS SHOWN ON PLAT ENTITLED, "AMENDED MINOR SUBDIVISION" AND RECORDED AMONG THE LAND RECORDS ALLEGANY COUNTY AS PLAT NO. 1839. **DOES AFFECT THE SUBJECT PROPERTY AND IS SHOWN HEREON.**

REFERENCE PLAT

PLAN OF SURVEY (UNRECORDED) PREPARED BY GUARDIAN SURVEYING & ENGINEERING, LLC, DATED OCTOBER 31, 2007

UTILITY CONTACTS

WATER & SANITARY SEWER
AUTHORITY: CITY OF FROSTBURG UTILITIES
ADDRESS: 37 SOUTH BROADWAY, FROSTBURG, MD 31532
PHONE: 301-689-6000

WATER & SANITARY SEWER
AUTHORITY: ALLEGANY COUNTY UTILITY DIVISION
ADDRESS: 701 KELLY ROAD, CUMBERLAND, MD 21502
PHONE: 301-729-3311

POWER
AUTHORITY: POTOMAC EDISION
ADDRESS: 701 EAST 4TH ST, CUMBERLAND, MD 21502
PHONE: 888-544-4877

NATURAL GAS
AUTHORITY: COLUMBIA GAS OF MARYLAND
ADDRESS: 1000 WEST INDUSTRIAL BLVD, CUMBERLAND, MD 21502
PHONE: 301-268-9452

COMMUNICATIONS
AUTHORITY: ATLANTIC BROADBAND
PHONE: 301-759-4806

COMMUNICATIONS
AUTHORITY: COMCAST
PHONE: 800-778-9140

COMMUNICATIONS
AUTHORITY: MARYLAND BROADBAND CO-OP
PHONE: 410-341-6322

COMMUNICATIONS
AUTHORITY: VERIZON
PHONE: 301-210-0355

20 0 20 40 60
GRAPHIC SCALE IN FEET

LEGEND

PROPERTY LINE	
ADJACENT PROPERTY LINE	
EASEMENT LINE	
BUILDING SETBACK LINE	BSL
LANDSCAPE BUFFER LINE	LSB
EXISTING CONTOUR LINE	2077
WATER LINE	W
UNKNOWN BURIED UTILITY	UNK
UNDERGROUND POWER LINE	UGP
SANITARY SEWER LINE	SS
STORM SEWER LINE	18" RCP
IRON PIN FOUND (SIZE AND TYPE AS NOTED)	
1/2" REBAR SET	
NAIL SET	
SCHEDULE BII EXCEPTION	6
ENCROACHMENT	1
LIGHT POLE	
TELEPHONE PEDESTAL	T
TRANSFORMER PAD	XFMR
FIRE HYDRANT	
STORM INLET	
SANITARY MANHOLE	
CLEANOUT	Co
BOLLARD	B
SIGN	
TREE (SEE CHART)	1
SPOT ELEVATION	2007.77
STREET ADDRESS	10711
ASPHALT	
CONCRETE	

ABBREVIATIONS:

R/W	RIGHT OF WAY	HDPE	HIGH DENSITY POLYETHYL PIPE
PID	PARCEL IDENTIFICATION NUMBER	XFMR	POWER TRANSFORMER
N/F	NOW OR FORMERLY	REB	REBAR
PG	PAGE	INV	INVERT
SSMH	SANITARY SEWER MANHOLE	FES	FLARED END SECTION
PVC	POLY VINYL CHLORIDE	SQ FT	SQUARE FEET
CMP	CORRUGATED METAL PIPE	sFT	US SURVEY FEET

NOTES

1. THE LOT IS AN OUTPARCEL LOT IN FROSTBURG SHOPPING PLAZA, LOCATED OFF THE SOUTHEASTERLY RIGHT OF WAY OF MARYLAND STATE HIGHWAY 36. NO PUBLISHED STREET ADDRESS EXISTS FOR THE SUBJECT PROPERTY.
2. SUBJECT PROPERTY IS LOCATED IN THE CITY LIMITS OF FROSTBURG, MARYLAND.
3. THE AREA OF THIS TRACT IS ±35,495 SQUARE FEET OR ±0.815 ACRE. THIS PROPERTY AREA WAS DETERMINED BY THE COORDINATE COMPUTATION METHOD.
4. DISTANCES SHOWN HEREON ARE HORIZONTAL GROUND DISTANCES UNLESS OTHERWISE NOTED.
5. ANY UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED BY TRINITY SUBSURFACE ENGINEERING, LLC AND MARYLAND 811 TICKET# 22430317.
6. THE REFERENCE BEARING FOR THIS DRAWING IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM, NAD 83.
7. ELEVATIONS SHOWN ARE BASED ON THE NAVD 88 DATUM. ONE-FOOT CONTOUR INTERVAL SHOWN.
8. THIS SURVEY WAS MADE WITH THE BENEFIT OF CHICAGO TITLE INSURANCE COMPANY ORDER NO. 20220803MD, DATED MAY 21, 2022, REVISED JANUARY 27, 2023.
9. AS PER DAVID ROBISON, MARYLAND DOT, 301-729-8474, THERE IS NO PENDING WORK FOR WIDENING, CONSTRUCTION OR R/W ACQUISITION FOR NEW GEORGE'S CREEK ROAD SW.
10. THERE IS A 3" PLASTIC GAS LINE ON THE NORTHEAST SIDE OF NEW GEORGES CREEK ROAD.

GPS STATIC (OPUS) NETWORK SUMMARY:

I, James W. Newberry, Jr., certify that this map was drawn under my supervision from an actual GPS survey made under my supervision and the following information was used to perform the survey:

(1) Class of Survey: A
(2) Positional accuracy: HORIZONTAL 0.006' – VERTICAL 0.007'
OBS USED: 19619/21217: 98%, FIXED AMB: 110/112: 98%
(3) Type of GPS field procedure: NGS STATIC OPUS & RTK – SP85, 240 CHANNELS GPS L1/L2/L5 GLONASS, BEIDOU, GALILEO, QZSS, SBAS INTEGRATED RECEIVER/ANTENNA (DUAL FREQUENCY RECEIVERS)
(4) Dates of Survey: START: 11/29/2022 13:47 EDT
STOP: 11/29/2022 21:43 EDT
(5) Datum/ Epoch: NAD83(2011); NAVD88
Published/ Fixed-control use: "WVCV CANAAN VALLEY CORS ARP"
NAD 83 (2011, MA11,PA11) EPOCH 2010.00
(6) GEOID Model: GEOID 18
(7) Combined Grid Factor: 0.99994970
(8) Units: Survey Feet (sFT)

SURVEYOR CERTIFICATION

TO O'REILLY AUTOMOTIVE STORES, INC, A MISSOURI CORPORATION AND CHICAGO TITLE INSURANCE COMPANY:

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2021 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 1-5, 7a, 7c, 8-9, 11a, 13-14 & 17 OF TABLE A THEREOF. THE FIELD WORK WAS COMPLETED ON DECEMBER 2, 2022.

"I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, IN ACCORDANCE WITH THE STANDARDS OF PRACTICE FOR PROFESSIONAL LAND SURVEYORS AS PER THE ANNOTATED CODE OF MARYLAND, AND THAT I AM A DULY LICENSED LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 20026, EXPIRATION DATE: OCTOBER 14, 2024.

STATE OF MARYLAND – JAMES W. NEWBERRY, JR. – No. 20026 – PROFESSIONAL LAND SURVEYOR

JAMES W. NEWBERRY, JR.
MARYLAND PROFESSIONAL LAND SURVEYOR NO. 20026

FLOOD ZONE

ACCORDING TO FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) FLOOD INSURANCE RATE MAPS (FIRM), COMMUNITY PANEL NO. 24001C 0018E, EFFECTIVE DATE: APRIL 3, 2020. ENTIRE SUBJECT PROPERTY LIES WITHIN ZONE X, AREAS OF MINIMAL FLOOD HAZARD.

BENCHMARK INFORMATION

1. CHISELED SQUARE ON LIGHT POLE BASE AT THE SOUTHWEST CORNER OF SUBJECT PROPERTY.
ELEV = 2009.74
2. CITY/STATE BOLT ON FIRE HYDRANT LOCATED SOUTHEAST OF SUBJECT PROPERTY IN FRONT OF ADJACENT TRUIST BANK.
ELEV = 2014.69

ENCROACHMENTS

(NONE OBSERVED)

TREE CHART

1 8" CHERRY
2 8" PINE

ZONING INFORMATION

ZONING AUTHORITY: CITY OF FROSTBURG PLANNING & ZONING, 37 SOUTH BROADWAY, FROSTBURG, MD 21532
PHONE: 301-914-1790
CONTACT: BETHANY FIFE, PLANNER
ZONING DISTRICT: C-2, HIGHWAY COMMERCIAL
SETBACKS: FRONT 30'
REAR 20'
SIDE 0'

STREET INFORMATION

NEW GEORGE'S CREEK ROAD SW/MARYLAND 36
OPERATING AUTHORITY: MARYLAND DOT DISTRICT 6, 1251 VOCKE ROAD, LAVALE, MD 21502
CONTACT: DAVID ROBISON
PHONE: 301-729-8474
SPEED LIMIT: 40 MPH
CLASSIFICATION: MINOR ARTERIAL

(THE ROADS ADJACENT TO SUBJECT PROPERTY LIE WITHIN THE SHOPPING CENTER AND ARE PRIVATELY MANAGED BY OWNER)

DONALDSON, GARRETT, & ASSOCIATES, INC.
MACON • CHARLOTTE
9741-L SOUTHERN PINE BOULEVARD
CHARLOTTE, NORTH CAROLINA 28273
(704) 374-1955 Mobile: (704) 589-6192
http://www.dg-a.com

ALTA/NSPS LAND TITLE SURVEY
FOR
O'REILLY AUTOMOTIVE STORES, INC.
PARCEL 3, FROSTBURG SHOPPING PLAZA
CITY OF FROSTBURG, ALLEGANY COUNTY
24TH ELECTION DISTRICT, MARYLAND

O'Reilly AUTO PARTS

DATE	REVISIONS
02/01/2023	UPDATED TITLE COMMITMENT.
02/21/2023	ADDRESSED CLIENT COMMENTS.

DATE:	12/14/2022
SCALE:	1"=20'
DRAWING #:	NC-080-22-D
PROJ. #:	4539-591
DRWN:	JH
CHKD:	JMS

SV1

SHEET 1 OF 2

RECORD LEGAL DESCRIPTION

LEGAL DESCRIPTION FOR THE FROSTBURG PLAZA, ELECTION DISTRICT NO. 24, FROSTBURG, ALLEGANY COUNTY, MARYLAND

ALL those four (4) parcels of land located in the City of Frostburg, Allegany County, Maryland and known as the Frostburg Plaza and more particularly described pursuant to a resurvey and legal description prepared by Guardian Surveying & Engineering, LLC., dated October 31, 2007 as hereafter set forth (true meridian courses and horizontal measurements being used throughout) to wit:

PARCEL 1

BEGINNING for the same at a 5/8 inch iron pin and cap set on the westerly right-of-way margin of Maryland Route 36 also being at the intersection of the northeasterly right-of-way limits of Allegheny Power's transmission line and running with said Allegheny Power right-of-way limits. Said point also marks the beginning of a deed dated September 22, 2005, Trifish, LLC to Frostburg Properties, LLC recorded in Liber No. 1199, Folio No. 166, one of the land records of Allegany County, Maryland, thence with and binding on the entire first line of Deed Liber No. 1199, Folio No. 166

1. North 57° 58' 09" West 1267.51 feet to a 5/8 inch iron pin with cap set, thence with and binding on the entire second and third lines of said above referenced Deed Liber No. 1199, Folio No. 166
2. North 26° 42' 51" East 456.68 feet to a ½ inch iron pipe found, thence with and binding on the entire fourth, fifth, sixth and seventh lines of Deed Liber No. 1199, Folio No. 166
3. South 63° 16' 47" East 392.92 feet to a 5/8 inch iron bar and cap found (AES), thence with and binding along the northerly right-of-way margin of a 60 foot/40 foot right-of-way for the next two courses and distances
4. North 26° 47'13" East 497. 75 feetto a mag nail set in the pavement, thence
5. North 40° 39' 48" West 76.10 feet to an "x" chiseled in concrete, thence crossing said above referenced right-of-way
6. North 49° 20' 25" East 40.00 feet to a 5/8 inch iron pin set on the westerly right-of-way limits of State Route 36, thence with and binding along the same for the next two courses and distances and also binding along said above referenced right-of-way for the next two courses and distances and also with and binding on the entire eighth line and part of the ninth line of the above referenced Deed Liber No. 1199 Folio No. 166
7. South 40° 39' 23" East 87 .68 feet to a 5/8 inch iron pin set, thence
8. South 08° 42' 27" East 58.50 feet to a point, thence leaving the above referenced right-of-way of Maryland Route 36 and with and binding on the southeasterly margin of said above referenced 60 foot right-of-way for the next course and distance
9. South 26° 47' 13" West 488.16 feet to a mag nail set, thence
10. South 57° 36' 00" East 244.82 feet to a mag nail found on the southeasterly margin of a 50-foot easement, thence
11. South 57° 56' 00" East 180.60 feet to a 1/2 inch iron pin found on the northwesterly margin of an existing entrance road, thence with and binding along the same for the next three courses and distances
12. North 36° 19' 30" East 34.13 feet to a 60-penny nail set, thence
13. 117 .44 feet along the arc of a curve to the right to a mag nail set at a 1/2 inch iron pin found. Said curve being subtended by a chord which bears North 57° 45' 14" East 114.72 feet, thence
14. North 79° 10' 58" East 26.76 feet to a mag nail set at a 1/2 inch iron pin found on the westerly right-of-way margin of the above referenced Maryland Route 36, thence crossing said above entrance road and with and binding on the westerly right-of-way margin of Maryland Route 36 for the next two courses and distances
15. 357.37 feet along the arc of a curve to the right to a point. Said curve being subtended by a chord which bears South 02° 16' 20" East 355.65 feet, thence
16. South 07° 27' 51" West 386.09 feet to the place of beginning, containing 14.53 acres, more or less.

PARCEL 2

BEGINNING for the same at a 5/8 inch iron pin and cap found at the end of the first line of a deed dated July 9, 1990, Frostburg-I Limited Partnership to Gerald A. Miller, recorded in Deed Liber No. 589, Folio No. 973, one of the aforesaid land records, thence with and binding on the entire first line reversed of said above referenced deed

1. North 22° 25' 42" East 168.84 feet to a 5/8 inch iron pin and cap found on the southwesterly right-of-way margin of Maryland Route 36, thence with and binding along same
2. 368.21 feet along the arc of a curve to the right to a 1/2 inch iron pipe found, said curve being subtended by a chord which bears South 23° 10' 11" East 366.33 feet, thence leaving said southwesterly right-of-way margin
3. North 57° 56' 05" West 238.28 feet to a 1/2 inch iron pipe found on the northeasterly right-of-way margin of a 50-foot easement, thence with and binding along same
4. North 06° 57' 52" West. 54.62 feet to the place of beginning, containing 0.714 acres, more or less.

PARCEL 3

BEGINNING for the same at a mag nail set at the end of the ninth line of the above described Parcel 1 containing 14.53 acres, said point also being one of the property corners of the 0.815 acre parcel and also being located on the southeasterly right-of-way margin of a 60-foot wide entrance road, thence with and following along the southeasterly margin of said entrance rood and also reversing a part of said ninth line

1. North 26° 47' 13" East 168.16 feet to a 5/8 inch iron pin with cap found, thence leaving said 60-foot entrance road
2. South 63° 12' 47" East 180.22 feet to a point on the westerly margin of a 50-foot easement, thence with and binding along same for next two courses and distances
3. South 09° 42' 10" East 46.30 feet to a point, thence
4. South 32° 04' 00" West 150.63 feet to a point on the tenth line of the above described Parcel 1 containing 14 .53 acres, thence with and binding along a part of same reversed
5. North 57° 36' 00" West 194.82 feet to the place of beginning, containing 0.815 acres, more or less, all of which is further shown as Lot No.1 on the Amended Subdivision Plat recorded as Plat No.1839.

RECORD LEGAL DESCRIPTION 'continued'

PARCEL 4

That certain parcel containing 0.246 acres, more or less, and being described by the following courses and distances: BEGINNING for the same at a mag nail found, said point also being 244.82 feet along the tenth line of the above described 14.53 acre parcel and also being the southwesterly property corner of the 0. 789 acre parcel, thence with and binding along the outlines of said 50 foot easement for the next eight courses and distances:

1. North 32° 04' 00" East 170.00 feet to a 1/2 inch iron pipe found, one of the property corners of the 0.714 acre parcel (Parcel 2, included in this description), thence
2. North 06° 57' 52" West 54.62 feet to a point, thence with the property lines of the 1.235 acre parcel for the next three courses and distances
3. North 58° 25' 21" West 25.00 feet to a point, thence
4. South 36° 04' 39" West 25.00 feet to a point, thence
5. North 63° 12' 47" West 19.78 feet to a point which is one of the property corners of the 0.815 parcel, thence with and binding along same for the next two courses and distances
6. South 09° 42' 10" East 46.30 feet to a point, thence
7. South 32° 04' 00" West 150.63 feet to a point on the above referenced tenth line of the 14.53 acre parcel, thence with and binding along a part of said tenth line
8. South 57° 36' 00" East 50.00 feet to the place of beginning, containing 0.246 acres, more or less. This said Parcel 4 is subject to the right of use of others.

ALL of the above described Parcels 1, 2, 3, and 4 being the same property conveyed in a Deed dated September 22, 2005, , from Trifish, LLC, a California limited liability company, unto Frostburg Properties, LLC, a Maryland limited liability company, and recorded among the Land Records of Allegany Calility, Maryland in Liber 1199, folio 166. See further Confirmatory Deed dated November 5, 2007 and recorded among the aforesaid Land Records in Liber 1441, folio 502.

Tax ID No. 24-010317

SURVEY LEGAL DESCRIPTION

ALL THAT TRACT OR PARCEL OF LAND LYING AND BEING IN THE CITY OF FROSTBURG, 24TH ELECTION DISTRICT, ALLEGANY COUNTY, MARYLAND, AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT A NAIL SET AT THE SOUTHWEST CORNER OF PARCEL 3 AS DESCRIBED IN BOOK 2436, PAGE 73 AND SHOWN AS LOT 1 ON "AMENDED MINOR SUBDIVISON", PLAT NO. 1839, SAID NAIL BEING THE **POINT OF BEGINNING** FOR THIS TRACT OF LAND; THENCE, ALONG THE SOUTHEASTERLY LINE OF AN EXISTING 60' RIGHT OF WAY FOR FROSTBURG PLAZA NORTH 28 DEGREES 3 MINUTES 19 SECONDS EAST FOR A DISTANCE OF 168.16 FEET TO A 1/2" REBAR SET; THENCE LEAVING SAID EASEMENT LINE SOUTH 61 DEGREES 56 MINUTES 41 SECONDS EAST FOR A DISTANCE OF 180.22 FEET TO A NAIL SET AT THE CORNER OF A 50' EASEMENT SHOWN ON PLAT NO. 1839; THENCE CONTINUING ALONG SAID EASEMENT LINE SOUTH 8 DEGREES 26 MINUTES 4 SECONDS EAST FOR A DISTANCE OF 46.30 FEET TO A 1/2" REBAR SET; THENCE SOUTH 33 DEGREES 20 MINUTES 6 SECONDS WEST FOR A DISTANCE OF 150.63 FEET TO A NAIL SET ALONG THE NORTHEASTERLY LINE OF A 30' ACCESS EASEMENT SHOWN ON PLAT NO. 934; THENCE CONTINUING ALONG SAID EASEMENT LINE NORTH 56 DEGREES 19 MINUTES 54 SECONDS WEST FOR A DISTANCE OF 194.82 FEET TO A NAIL SET AND THE **POINT OF BEGINNING.**

SAID TRACT OF LAND CONTAINS 35,495 SQUARE FEET OR 0.815 ACRE MORE OR LESS.

SURVEYOR CERTIFICATION

TO O'REILLY AUTOMOTIVE STORES, INC, A MISSOURI CORPORATION AND CHICAGO TITLE INSURANCE COMPANY:

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2021 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 1-5, 7a, 7c, 8-9, 11a, 13-14 & 17 OF TABLE A THEREOF. THE FIELD WORK WAS COMPLETED ON DECEMBER 2, 2022.

"I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, IN ACCORDANCE WITH THE STANDARDS OF PRACTICE FOR PROFESSIONAL LAND SURVEYORS AS PER THE ANNOTATED CODE OF MARYLAND, AND THAT I AM A DULY LICENSED LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 20026, EXPIRATION DATE: OCTOBER 14, 2024.

STATE OF MARYLAND · JAMES W. NEWBERRY, JR. · No. 20026 · PROFESSIONAL LAND SURVEYOR

JAMES W. NEWBERRY, JR.
MARYLAND PROFESSIONAL LAND SURVEYOR NO. 20026

DONALDSON, GARRETT, & ASSOCIATES, INC.
MACON • CHARLOTTE
9741-L SOUTHERN PINE BOULEVARD
CHARLOTTE, NORTH CAROLINA 28273
(704) 374-1955 Mobile: (704) 389-6192
http://www.dga-a.com

ALTA/NSPS LAND TITLE SURVEY
FOR
O'REILLY AUTOMOTIVE STORES, INC.
PARCEL 3, FROSTBURG SHOPPING PLAZA
CITY OF FROSTBURG — 24TH ELECTION DISTRICT
ALLEGANY COUNTY — MARYLAND

O'Reilly AUTO PARTS

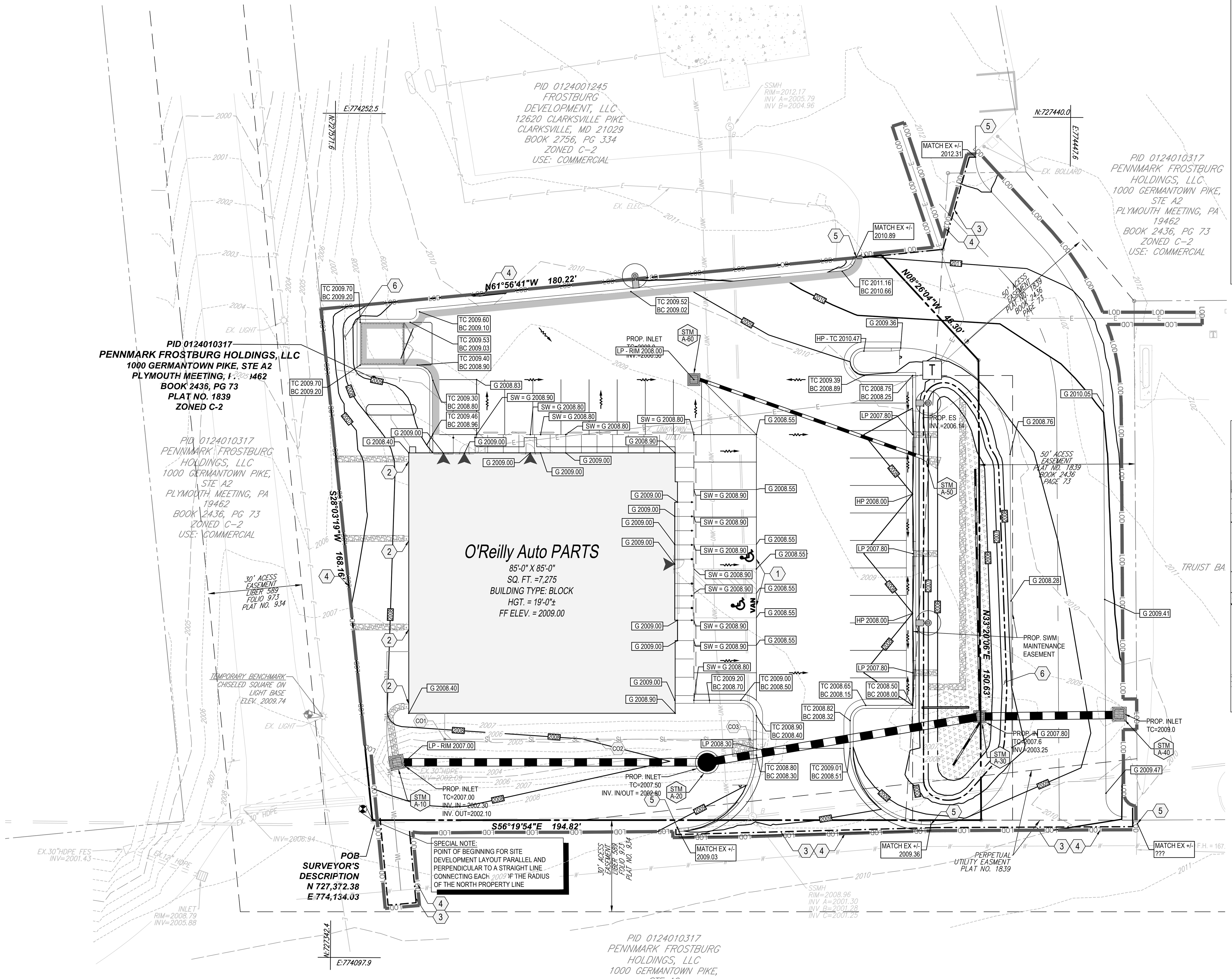
REVISIONS	
DATE	
02/01/2023	UPDATED TITLE COMMITMENT
02/27/2023	ADDRESSED CLIENT COMMENTS

DATE:	12/14/2022
SCALE:	–
DRAWING #:	NC-080-22-D
PROJ. #:	4539-591
DRWN:	JH
CHKD:	JMS

SV1

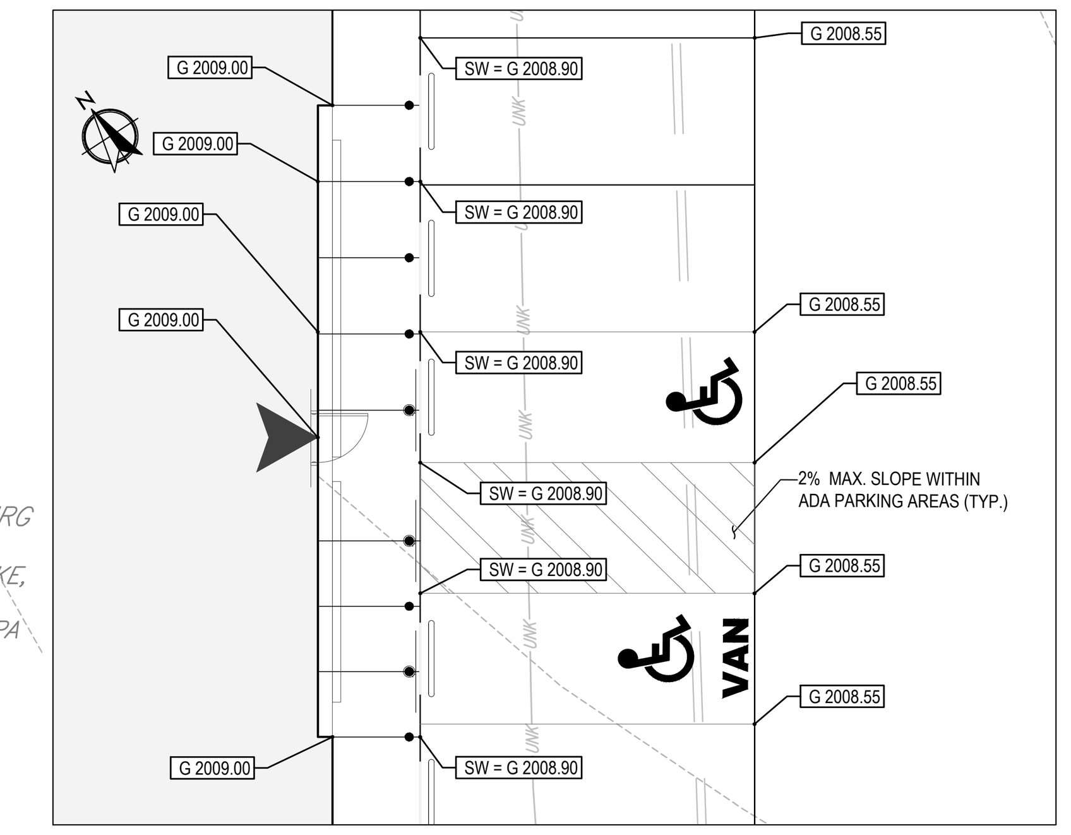
SHEET 2 OF 2

SOILS TABLE			
SOILS NAME	SOILS DESCRIPTION	HYDROLOGIC SOILS GROUP	HIGHLY ERODIBLE SOIL
UxB	URBAN LAND, 0 TO 8 PERCENT	D	NO



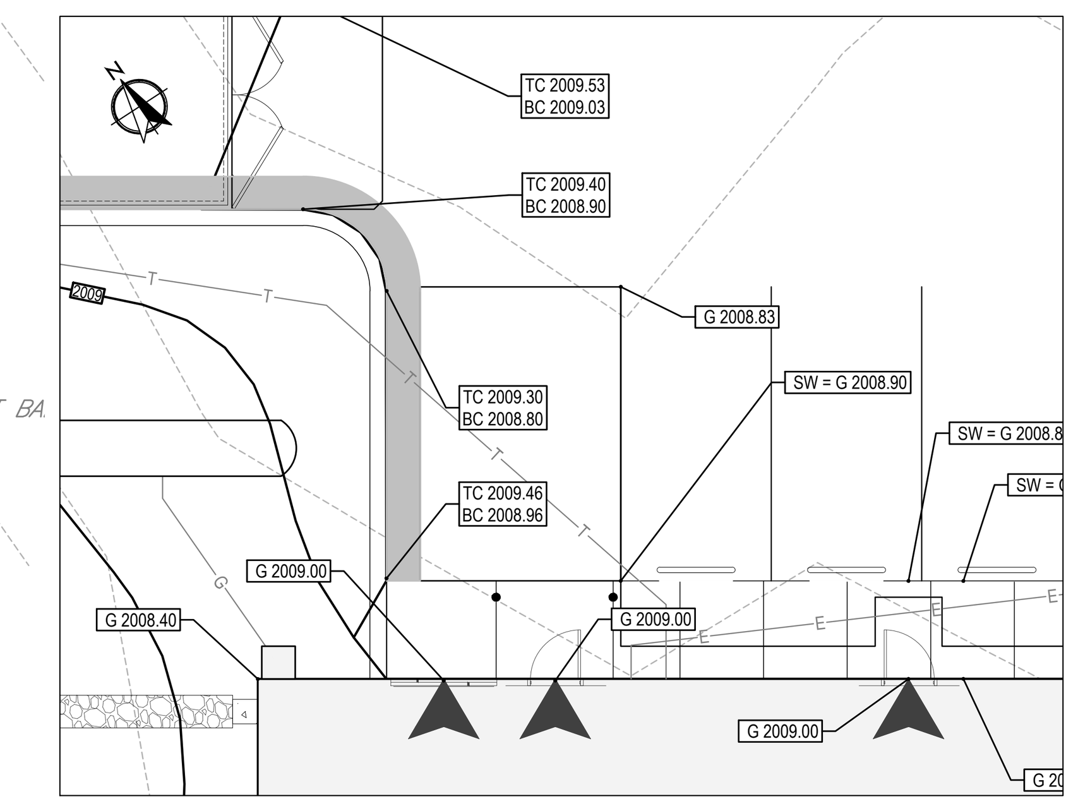
1 SITE GRADING PLAN

SCALE: 1" = 20'-0"



ADA AREA ENLARGEMENT

SCALE: 1"=10'



DEALER DOOR AREA ENLARGEMENT

SCALE: 1"=10'

CONSTRUCTION NORTH

Know what's below. Call before you dig. 811

CAUTION:
INFORMATION ON THIS DRAWING CONCERNING TYPE AND LOCATION OF UNDERGROUND AND OTHER UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO THE TYPE AND LOCATION OF UNDERGROUND AND OTHER UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO.

GENERAL NOTES

A. REFER TO PROJECT MANUAL FOR ADDITIONAL REQUIREMENTS.

B. SITE CONDITIONS BASED UPON SURVEY PROVIDED BY OWNER. FIELD VERIFY EXISTING CONDITIONS BY DETAILED INSPECTION PRIOR TO SUBMITTING BID AND BEGINNING CONSTRUCTION. NOTIFY ARCHITECT IF EXISTING CONDITIONS DEVIATE SUBSTANTIALLY FROM THOSE INDICATED HEREIN.

C. ACCESSIBLE PARKING AREAS TO SLOPE 2% MAXIMUM IN ALL DIRECTIONS. DESIGNATED ACCESSIBLE ROUTE TO SLOPE 5% MAXIMUM IN DIRECTION OF TRAVEL WITH 2% MAXIMUM CROSS SLOPE.

KEY NOTES

1. ACCESSIBLE PARKING AREA - SEE GENERAL NOTE C
2. ROOF DRAIN, REFER TO ARCH. PLANS FOR EXACT LOCATIONS.
3. APPROX. SAWCUT LINE
4. APPROX. LIMIT OF DISTURBANCE
5. CONTRACTOR TO TIE INTO EX. GRADE/CURB
6. GRADE AT 3:1 SLOPE

SITE EXCAVATION REQUIREMENTS

A. A GEOTECHNICAL ANALYSIS HAS BEEN PERFORMED ON THIS SITE. REFER TO PROJECT MANUAL.

B. FOLLOW GEOTECHNICAL ANALYSIS RECOMMENDATIONS FOR SITE EXCAVATION REQUIREMENTS.

C. REFER TO STRUCTURAL DRAWINGS FOR BUILDING EXCAVATION REQUIREMENTS.

SYMBOLS LEGEND

NOTE: REFER TO SURVEY FOR EXISTING CONDITIONS SYMBOLS LEGEND.

EXISTING CONTOUR LINE

NEW CONTOUR LINE

TC=100.00 BC=99.50 / 99.50 NEW SPOT ELEVATION

NOTE: REFER TO TYPICAL ABBREVIATIONS ON GENERAL NOTES SHEET FOR TYPICAL ABBREVIATIONS

TEMPORARY BENCH MARK SYMBOL LOCATION

PAINTED ARROW BOLT ON HYDRANT AT SOUTHEAST CORNER OF THE SUBJECT PROPERTY.
ELEV = 2428.08

1/2" REBAR, NORTHWEST CORNER OF SUBJECT PROPERTY
ELEV = 2439.26

AREA OF STORMWATER MANAGEMENT BMP (SAND FILTER)

SPECIAL NOTE

PRIOR TO CONTRACT CLOSEOUT, CONTRACTOR SHALL SECURE THE SERVICES OF A REGISTERED LAND SURVEYOR TO PROVIDE SITE SURVEY OF COMPLETED PROJECT CONDITIONS AND SUBMIT FOR REVIEW AND APPROVAL BY OWNER. REFER TO PROJECT MANUAL FOR ADDITIONAL REQUIREMENTS.

PLAN REFERENCES

- REFER TO GENERAL NOTES SHEET FOR GRADING & UTILITY NOTES
- THIS PLAN TO BE UTILIZED FOR SITE GRADING PURPOSES ONLY

BOHLER
901 DULANEY VALLEY ROAD, SUITE 801 TOWSON, MARYLAND 21204
Phone:(410) 821-7900 Fax:(410) 821-7987
MD@BohlerEng.com

PROJECT NO:	MDA230040.00	SCALE:	AS NOTED
DRAWN BY / CHECKED BY:	JCB / MG	CAD I.D.:	MDA230040-GRAD-0

B.R. ROWE

THOMAS A. LUNDBERG
ARCHITECT
1736 East Sunshine, Suite 417
Springfield, Missouri 65804
417.862.0558
Fax: 417.862.3265
e-mail: architect@esterlyschneider.com

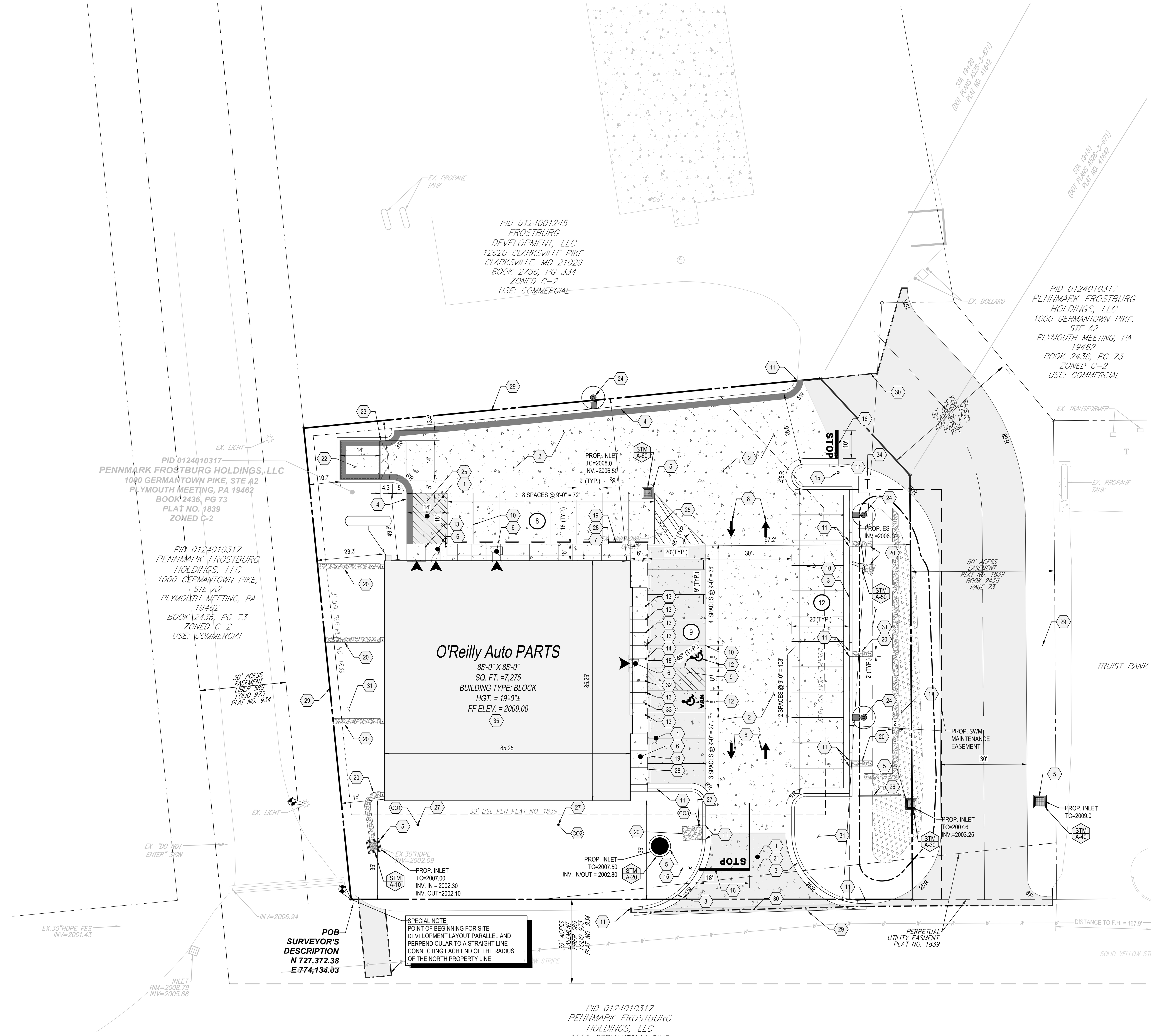
PROJECT:
NEW O'REILLY AUTO PARTS STORE
NEW GEORGES CREEK RD
FROSTBURG, MD

SITE GRADING PLAN

O'Reilly AUTO PARTS
CORPORATE OFFICES
233 SOUTH PATTERSON
SPRINGFIELD, MISSOURI 65802
(417) 862-2674 TELEPHONE

COMM #XXXX
DATE: 04-26-23
REVISION DATE:

C1.1



ZONING ANALYSIS TABLE

ZONING DISTRICT	HIGHWAY COMMERCIAL (C2) DISTRICT		
ZONE CRITERIA	REQUIRED	EXISTING	PROPOSED
MINIMUM LOT AREA	6,000 SF	35,495 SF	NO CHANGE
MAXIMUM LOT COVERAGE	80%	14.8% (5,260 SF)	65.3% (23,186 SF)
MINIMUM STREET FRONTAGE	N/A	392 FT	NO CHANGE
MINIMUM FRONT SETBACK	30 FT	N/A	35 FT
MIN. SIDE SETBACK	3 FT	N/A	15 FT
MIN. REAR SETBACK	N/A	N/A	N/A
MIN. LOT DEPTH	60 FT	195 FT	NO CHANGE
LOADING SPACE	12 X 30 [1]	N/A	18 FT x 14 FT
PARKING SPACES	29	N/A	29
FRONT PARKING / LANDSCAPING SETBACK	30 FT	N/A	N/A
REAR PARKING / LANDSCAPING SETBACK	N/A	N/A	N/A
PARKING CRITERIA (9'X18' W/ 24' DRIVE AISLE FOR 90° PARKING	COMMERCIAL BUILDING = 1 SPACE FOR EACH 250 SF OF GROSS FLOOR AREA AND 2 ACCESSIBLE SPACES [2 PROVIDED, 1 VAN]		
	30 SPACES	N/A	29 SPACES
MAX. BUILDING HEIGHT	50 FT OR 4 STORIES	N/A	19 FT +/-

(ZR)= ZONING RELIEF
N/A = NOT APPLICABLE
[1] = RECOMMENDED LOADING SPACE

SYMBOLS LEGEND

NOTE: REFER TO SURVEY FOR EXISTING CONDITIONS SYMBOLS LEGEND.

- NEW BUILDING CONSTRUCTION
- AREA OF CONCRETE (HEAVY DUTY)
- AREA OF CONCRETE (STANDARD DUTY)
- AREA OF ASPHALT (HEAVY DUTY) PAVING, SEE DETAIL 11, SHEET C2.2
- NEW WHEEL STOP
- NEW LIGHT POLE LOCATION

GENERAL NOTES

A. REFER TO PROJECT MANUAL FOR ADDITIONAL REQUIREMENTS.

B. ALL SITE DIMENSIONS TO THE GUTTER LINE OF CURB, CONCRETE OR PROPERTY LINE UNLESS OTHERWISE NOTED. CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS BY DETAILED INSPECTION PRIOR TO SUBMITTING BID AND STARTING CONSTRUCTION.

C. COORDINATE WORK WITH OTHER SITE RELATED DEVELOPMENT DRAWINGS.

D. REFER TO STRUCTURAL PLANS FOR DEVELOPMENT OF SIDEWALKS ADJACENT TO FOUNDATIONS.

E. ALL TRAFFIC CONTROL SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES 2009, INCLUDING ALL REVISIONS.

F. ACCESSIBLE PARKING AREAS TO SLOPE 2% MAXIMUM IN ALL DIRECTIONS. DESIGNATED ACCESSIBLE ROUTE TO SLOPE 5% MAXIMUM IN DIRECTION OF TRAVEL WITH 2% MAXIMUM CROSS SLOPE.

KEY NOTES

1. CONCRETE (HEAVY DUTY) PAVEMENT, REFER TO DETAIL 1/C2.2 (1)
2. CONCRETE (STANDARD DUTY) PAVEMENT: REFER TO DETAIL 2/C2.2 (1)
3. CONCRETE CURB, REFER TO DETAIL 3/C2.2
4. CONCRETE SPILL CURB, REFER TO DETAIL 18/C2.2
5. DRAINAGE STRUCTURE, REFER TO SITE GRADING PLAN
6. CONCRETE SIDEWALK OR DOOR LANDING, REFER TO DETAIL 4/C2.2
7. CONCRETE APRON, REFER TO DETAIL 5/C2.2
8. STRIPING ARROW, REFER TO DETAIL 6/C2.2
9. ACCESSIBLE PARKING STRIPING (TYP.), REFER TO DETAIL 7/C2.2
10. PARKING STALL STRIPING, REFER TO DETAIL 8/C2.2
11. ROLL DOWN CURB END TRANSITION, REFER TO DETAIL 9/C2.2
12. ACCESSIBLE PARKING PAVEMENT SYMBOL STRIPING, REFER TO DETAIL 12/C2.2
13. STEEL BOLLARD (TYP.), REFER TO DETAIL 13/C2.2 (2)
14. ACCESSIBLE PARKING SIGN IN BOLLARD (TYP.), REFER TO DETAIL 14/C2.2
15. STOP SIGN, REFER TO DETAIL 15/C2.2
16. STOP BAR, REFER TO DETAIL 16/C2.2
17. UNDERGROUND SAND FILTER, REFER TO DETAIL C3.6
18. ACCESSIBLE PARKING & SIDEWALK AREA SEE GENERAL NOTE F, REFER TO DETAIL 11/C2.2
19. CONCRETE WHEEL STOP (TYP.), REFER TO DETAIL 17/C2.2
20. PROPOSED RIP-RAP APRON (CLASS I RIP RAP) (4)
21. CONCRETE DRIVE APRON TO BE INSTALLED PER CITY AND / OR STATE DESIGN STANDARDS. IF NO STANDARDS PROVIDE CONCRETE CONSTRUCTION PER DETAIL 1/C2.2
22. POLYMER COMPOSITE MATERIAL REFUSE ENCLOSURE, REFER TO DETAIL 1/C2.3
23. SCREEN FENCE, REFER TO DETAIL 2/C2.3
24. PARKING LOT LIGHTING (REFER TO SITE PHOTOMETRIC PLANS BY OTHERS)
25. STRIPING: PROVIDE 4" WIDE PARKING LOT STRIPING ANGLED SPACING AT 45°, REFER TO DETAIL 8/C2.2
26. SIGN LOCATION (REFER TO ARCH. PLANS BY OTHERS) (3)
27. SANITARY SEWER CLEANOUT. REFER TO SITE UTILITY PLAN
28. SIDEWALK CONTROL JOINTS; MAX. 8' SPACING, MIN. 1" DEEP
29. APPROX. LIMIT OF DISTURBANCE
30. APPROX. SAWCUT
31. LANDSCAPED AREA
32. "NO PARKING IS ACCESS AISLE" SIGN IN BOLLARD (TYP.), REFER TO DETAIL 14/C2.2
33. ACCESSIBLE PARKING W/ VAN SIGN IN BOLLARD (TYP.), REFER TO DETAIL 14/C2.2
34. PROPOSED CONCRETE TRANSFORMER PAD, REFER TO STRUCTURAL PLANS.
35. REFER TO ARCHITECTURAL DRAWINGS FOR BUILDING

FOOTNOTES:
(1) REFER TO PROJECT MANUAL.
(2) PROVIDE 2 EACH AT REFUSE CONTAINER AREA, 2 EACH AT SECTIONAL OVERHEAD FREIGHT DOOR, AND 7 EACH AT FRONT ENTRY. REFER TO STRUCTURAL DRAWINGS FOR LAYOUT OF BOLLARDS ADJACENT TO BUILDING PERIMETER.
(3) SIGN OWNER FURNISHED AND INSTALLED (REFER TO SCOPE OF WORK SCHEDULE).
(4) EXACT LOCATION OF BUILDING DOWN SPOUTS TO BE COORDINATED WITH THE ARCHITECT.

SPECIAL NOTE

PRIOR TO CONTRACT CLOSEOUT, CONTRACTOR SHALL SECURE THE SERVICE OF A REGISTERED LAND SURVEYOR TO PROVIDE SITE SURVEY OF COMPLETED PROJECT CONDITIONS AND SUBMIT FOR REVIEW AND APPROVAL BY OWNER.
REFER TO PROJECT MANUAL FOR ADDITIONAL REQUIREMENTS.

PLAN REFERENCES

- REFER TO GENERAL NOTES SHEET FOR GENERAL NOTES
- THIS PLAN TO BE UTILIZED FOR SITE LAYOUT PURPOSES ONLY

BOHLER
901 DULANEY VALLEY ROAD, SUITE 801 TOWSON, MARYLAND 21204
Phone:(410) 821-7900 Fax:(410) 821-7987
MD@BohlerEng.com

PROJECT NO: MDA230040.00
DRAWN BY / CHECKED BY: JCB / MG
SCALE: AS NOTED
CAD I.D.: MDA230040-SITE-0

CAUTION:
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811 Know what's below Call before you dig.

1 SITE PLAN
C2.1
SCALE: 1" = 20'-0"

1" = 20'

CONSTRUCTION NORTH

B.R. ROWE
PROFESSIONAL ENGINEER

THOMAS A. LUNDBERG
ARCHITECT
1736 East Sunshine, Suite 417
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e-mail: architect@esterlyschneider.com

PROJECT:
NEW O'REILLY AUTO PARTS STORE
NEW GEORGES CREEK RD
FROSTBURG, MD

SITE PLAN

O'Reilly AUTO PARTS
CORPORATE OFFICES
233 SOUTH PATTERSON
SPRINGFIELD, MISSOURI 65802
(417) 862-2674 TELEPHONE

COMM #XXXX
DATE: 04-26-23
REVISION DATE:

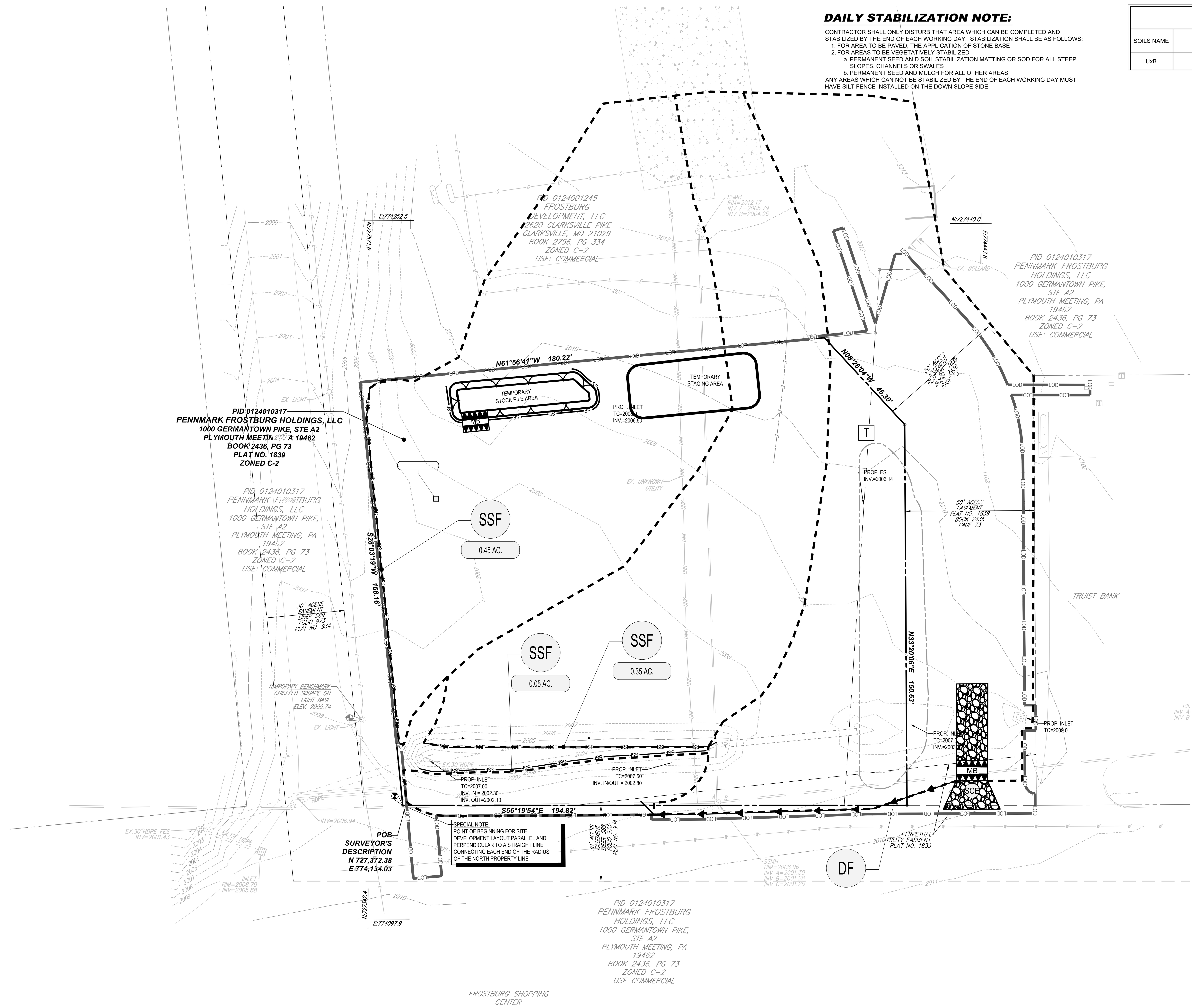
C2.1

Apr 27, 2023
H:\2023\MDA230040.00\CAD\DRAWINGS\PLAN SETS\SITE DEVELOPMENT PLAN\PRELIMINARY PLAN (CITY SUBMISSION)\MDA230040-SITE-0----LAYOUT: C2.1 - SITE PLAN

DAILY STABILIZATION NOTE:

CONTRACTOR SHALL ONLY DISTURB THAT AREA WHICH CAN BE COMPLETED AND STABILIZED BY THE END OF EACH WORKING DAY. STABILIZATION SHALL BE AS FOLLOWS:
1. FOR AREA TO BE PAVED, THE APPLICATION OF STONE BASE
2. FOR AREAS TO BE VEGETATIVELY STABILIZED
   a. PERMANENT SEED AN D SOIL STABILIZATION MATTING OR SOD FOR ALL STEEP SLOPES, CHANNELS OR SWALES
   b. PERMANENT SEED AND MULCH FOR ALL OTHER AREAS.

ANY AREAS WHICH CAN NOT BE STABILIZED BY THE END OF EACH WORKING DAY MUST HAVE SILT FENCE INSTALLED ON THE DOWN SLOPE SIDE.



SOILS TABLE

SOILS NAME	SOILS DESCRIPTION	HYDROLOGIC SOILS GROUP	HIGHLY ERODIBLE SOIL
UxB	URBAN LAND, 0 TO 8 PERCENT	D	NO

STANDARD SYMBOLS
FOR EROSION AND SEDIMENT CONTROL PRACTICES

TITLE	KEY	SYMBOL
LIMIT OF DISTURBANCE		LOD
DRAINAGE AREA		
STABILIZED STONE CONSTRUCTION ENTRANCE	CE	
SILT FENCE	SF	SF
SUPER SILT FENCE	SSF	SSF
CURB INLET PROTECTION	CIP	
STANDARD INLET PROTECTION	SIP	
RIP RAP		
MOUNTABLE BERM		MB
DIVERSION FENCE		

CAUTION:
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811 Know what's below Call before you dig.

1 C3.1 **EROSION CONTROL PLAN**
SCALE: 1" = 20'-0"

CONSTRUCTION NORTH

ESC 1 OF 5

EROSION CONTROL & MAINTENANCE PLAN NOTES

A. RETAIN FLOATABLE WIND BLOWN MATERIALS ON SITE BY STORING ALL TRASH AND BUILDING MATERIAL WASTE IN ENCLOSURES UNTIL PROPER DISPOSAL AT OFF-SITE FACILITIES. CHECK ADJACENT AREAS DAILY AND PICK UP CONSTRUCTION WASTE MATERIALS AND DEBRIS THAT HAVE BLOWN OR WASHED OFF SITE.

B. PERMANENTLY STABILIZE ALL SURFACE AREA WITHIN AND ADJACENT TO THIS SITE THAT IS DISTURBED BY VEHICLES, GRADING AND OTHER CONSTRUCTION FOR THE PROPOSED FACILITY. STABILIZATION IS OBTAINED WHEN THE DISTURBED SURFACE IS COVERED WITH STRUCTURES, PAVING AND OR PERENNIAL VEGETATION HAVING A UNIFORM COVERAGE DENSITY OF AT LEAST 70%. STABILIZATION OF ALL DISTURBED AREA IS REQUIRED BEFORE TERMINATING MAINTENANCE AND REMOVAL OF EROSION CONTROL MEASURES.

C. CONTRACTORS SHALL INSPECT POLLUTION CONTROL MEASURES AT LEAST ONCE EVERY 14 DAYS AND WITHIN 24 HOURS AFTER A STORM EVENT OF 1/2 INCH OR GREATER. DAMAGED MEASURES THAT PROVE TO BE INEFFECTIVE SHALL BE REPLACED WITH MORE EFFECTIVE MEASURES OR ADDITIONAL MEASURES WITHIN SEVEN DAYS. REPEATED FAILURE OF A CONTROL MEASURE REQUIRES INSTALLATION OF A MORE SUITABLE DEVICE TO PREVENT DISCHARGE OF POLLUTANTS FROM THE CONSTRUCTION SITE.

D. INSTALLATION OF ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED BY THE CITY OR COUNTY CODE. CONTRACTOR TO VERIFY REQUIREMENTS PRIOR TO BEGINNING ANY WORK ON PROJECT SITE.

E. CARE SHALL BE TAKEN TO MINIMIZE THE ENCROACHMENT OF SEDIMENT INTO ALL STORM DRAIN APPURTENANCES, PUBLIC STREETS, AND ONTO PRIVATE PROPERTY UNTIL IMPERVIOUS MATERIAL (ROAD/PARKING AREA SURFACE) IS APPLIED OR UNTIL PROPOSED LANDSCAPE HAS BEEN ESTABLISHED.

F. REFER TO EROSION CONTROL DETAILS FOR SILT FENCE CONSTRUCTION.

G. ALL GRASS SLOPES WHICH EXCEED 3:1 (H:V) SHALL UTILIZE CONTECH CONSTRUCTION PRODUCTS PERMANENT TURF REINFORCEMENT MATS C35 OR APPROVED EQUAL. MATS SHALL BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS AND STANDARDS. CONTRACTOR SHALL COORDINATE INSTALLATION INSPECTION WITH MANUFACTURER.

KEY NOTES

1. PROP. SUPER SILT FENCE, REFER TO DETAIL C3.5
2. PROP. CONSTRUCTION ENTRANCE / EXIT, REFER TO DETAIL C3.5
3. PROP. SOIL STOCKPILE AREA, REFER TO DETAIL C3.5
4. PROP. STAGING AREA
5. PROP. CONCRETE WASHOUT AREA, REFER TO DETAIL C3.5
6. APPROX. LIMIT OF DISTURBANCE
7. APPROX. SAWCUT
8. PROP. MOUNTABLE BERM, REFER TO DETAIL C3.5

SITE NOTES:	
TOTAL SITE AREA	0.82 AC.
LIMIT OF DISTURBANCE	0.99 AC.
EXISTING IMPERVIOUS AREA	0.15
PROPOSED IMPERVIOUS AREA	0.73
WATERSHED	WILLS & GEORGES CREEK
EXCAVATION CUT	805 C.Y.
EXCAVATION FILL	690 C.Y.
NET EXCAVATION	115 C.Y.

CONSTRUCTION EGRESS NOTES

1. CONSTRUCTION EGRESS SHALL BE 25' MINIMUM WIDTH AND 50' MIN. LENGTH AND 6" MIN THICKNESS OF STONE (1.5"-3.5") COARSE AGGREGATE WITH GEOTEXTILE UNDERLINER. REFER TO CITY OR STATE FOR ANY ADDITIONAL REQUIREMENTS.
2. THE EXIT SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHT-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH 1.5-3.5 INCH STONE, AS CONDITIONS DEMAND, AND REPAIR AND/OR CLEAN OUT OF ANY STRUCTURE USED TO TRAP SEDIMENT. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES OR SITE ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.
3. WHEELS MUST BE CLEANED TO REMOVE MUD PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA WITH CRUSHED STONE WHICH DRAINS INTO AN APPROVED SEDIMENT FILTERING DEVICE LOCATED PER CITY, COUNTY OR STATE REQUIREMENTS.

PLAN REFERENCES

- REFER TO EROSION CONTROL DETAILS FOR ADD'T EROSION NOTES & DETAILS
- THIS PLAN TO BE UTILIZED FOR EROSION PURPOSES ONLY

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PROJECT NO: MDA230040.00 | SCALE: AS NOTED
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PROJECT:
NEW O'REILLY AUTO PARTS STORE
NEW GEORGES CREEK RD
FROSTBURG, MD
EROSION CONTROL PLAN - PHASE I

O'Reilly AUTO PARTS
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(417) 862-2674 TELEPHONE

COMM #XXXX
DATE: 04-26-23
REVISION DATE:

C3.1

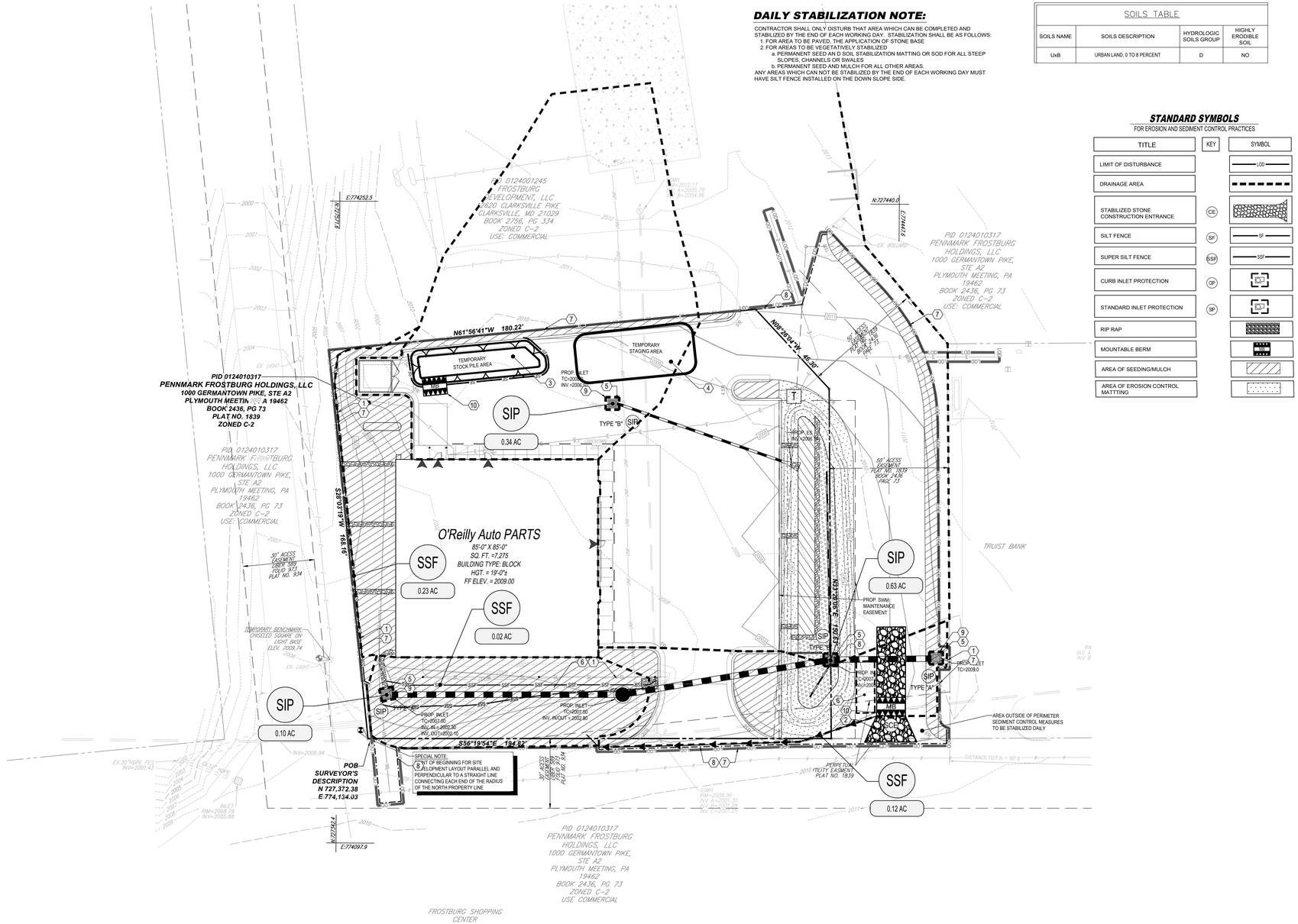
DAILY STABILIZATION NOTE:

CONTRACTOR SHALL ONLY DISTURB THAT AREA WHICH CAN BE COMPLETED AND STABILIZED BY THE END OF EACH WORKING DAY. STABILIZATION SHALL BE AS FOLLOWS:

1. FOR AREA TO BE PAVED, THE APPLICATION OF STONE BASE
2. FOR AREAS TO BE VEGETATIVELY STABILIZED
   a. PERMANENT SEED AN D SOIL STABILIZATION MATTING OR SOD FOR ALL STEEP SLOPES, CHANNELS OR SWALES
   b. PERMANENT SEED AND MULCH FOR ALL OTHER AREAS.

ANY AREAS WHICH CAN NOT BE STABILIZED BY THE END OF EACH WORKING DAY MUST HAVE SILT FENCE INSTALLED ON THE DOWN SLOPE SIDE.

SOILS TABLE			
SOILS NAME	SOILS DESCRIPTION	HYDROLOGIC SOILS GROUP	HIGHLY ERODIBLE SOIL
UxB	URBAN LAND, 0 TO 8 PERCENT	D	NO



STANDARD SYMBOLS

FOR EROSION AND SEDIMENT CONTROL PRACTICES

TITLE	KEY	SYMBOL
LIMIT OF DISTURBANCE		LOD
DRAINAGE AREA		
STABILIZED STONE CONSTRUCTION ENTRANCE	CE	
SILT FENCE	SF	SF
SUPER SILT FENCE	SSF	SSF
CURB INLET PROTECTION	CP	
STANDARD INLET PROTECTION	SP	
RIP RAP		
MOUNTABLE BERM		
AREA OF SEEDING/MULCH		
AREA OF EROSION CONTROL MATTTING		

EROSION CONTROL & MAINTENANCE PLAN NOTES

A. RETAIN FLOATABLE WIND BLOWN MATERIALS ON SITE BY STORING ALL TRASH AND BUILDING MATERIAL WASTE IN ENCLOSURES UNTIL PROPER DISPOSAL AT OFF-SITE FACILITIES. CHECK ADJACENT AREAS DAILY AND PICK UP CONSTRUCTION WASTE MATERIALS AND DEBRIS THAT HAVE BLOWN OR WASHED OFF SITE.

B. PERMANENTLY STABILIZE ALL SURFACE AREA WITHIN AND ADJACENT TO THIS SITE THAT IS DISTURBED BY VEHICLES, GRADING AND OTHER CONSTRUCTION FOR THE PROPOSED FACILITY. STABILIZATION IS OBTAINED WHEN THE DISTURBED SURFACE IS COVERED WITH STRUCTURES, PAVING AND OR PERENNIAL VEGETATION HAVING A UNIFORM COVERAGE DENSITY OF AT LEAST 70%. STABILIZATION OF ALL DISTURBED AREA IS REQUIRED BEFORE TERMINATING MAINTENANCE AND REMOVAL OF EROSION CONTROL MEASURES.

C. CONTRACTORS SHALL INSPECT POLLUTION CONTROL MEASURES AT LEAST ONCE EVERY 14 DAYS AND WITHIN 24 HOURS AFTER A STORM EVENT OF 1/2 INCH OR GREATER. DAMAGED MEASURES THAT PROVE TO BE INEFFECTIVE SHALL BE REPLACED WITH MORE EFFECTIVE MEASURES OR ADDITIONAL MEASURES WITHIN SEVEN DAYS. REPEATED FAILURE OF A CONTROL MEASURE REQUIRES INSTALLATION OF A MORE SUITABLE DEVICE TO PREVENT DISCHARGE OF POLLUTANTS FROM THE CONSTRUCTION SITE.

D. INSTALLATION OF ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED BY THE CITY CODE. CONTRACTOR TO VERIFY REQUIREMENTS PRIOR TO BEGINNING ANY WORK ON PROJECT SITE.

E. CARE SHALL BE TAKEN TO MINIMIZE THE ENCROACHMENT OF SEDIMENT INTO ALL STORM DRAIN APPURTENANCES, PUBLIC STREETS, AND ONTO PRIVATE PROPERTY UNTIL IMPERVIOUS MATERIAL (ROAD/PARKING AREA SURFACE) IS APPLIED OR UNTIL PROPOSED LANDSCAPE HAS BEEN ESTABLISHED.

F. REFER TO EROSION CONTROL DETAILS FOR SILT FENCE CONSTRUCTION.

G. ALL GRASS SLOPES WHICH EXCEED 3:1 (H:V) SHALL UTILIZE CONTECH CONSTRUCTION PRODUCTS PERMANENT TURF REINFORCEMENT MATS C36 OR APPROVED EQUAL. MATS SHALL BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS AND STANDARDS. CONTRACTOR SHALL COORDINATE INSTALLATION INSPECTION WITH MANUFACTURER.

KEY NOTES

1. PROP. SUPER SILT FENCE, REFER TO DETAIL C3.5
2. PROP. CONSTRUCTION ENTRANCE / EXIT, REFER TO DETAIL C3.5
3. PROP. SOIL STOCK PILE AREA, REFER TO DETAIL C3.5
4. PROP. TEMP. STAGING AREA
5. PROP. INLET STRUCTURE, REFER TO DETAIL SHEET C3.6
6. PROP. CONCRETE WASHOUT AREA, REFER TO DETAIL C3.5
7. APPROX. LIMIT OF DISTURBANCE
8. APPROX. SAWCUT
9. PROP. STANDARD INLET PROTECTION, REFER TO DETAIL C3.5
10. PROP. MOUNTABLE BERM, REFER TO DETAIL C3.5

SITE NOTES:

TOTAL SITE AREA	0.82 AC.
LIMIT OF DISTURBANCE	0.99 AC.
EXISTING IMPERVIOUS AREA	0.15
PROPOSED IMPERVIOUS AREA	0.73
WATERSHED	WILLS & GEORGES CREEK
EXCAVATION CUT	805 C.Y.
EXCAVATION FILL	690 C.Y.
NET EXCAVATION	115 C.Y.

CONSTRUCTION EGRESS NOTES

1. CONSTRUCTION EGRESS SHALL BE 25' MINIMUM WIDTH AND 50' MIN. LENGTH AND 6" MIN THICKNESS OF STONE (1.5"-3.5") COARSE AGGREGATE WITH GEOTEXTILE UNDERLINER. REFER TO CITY OR STATE FOR ANY ADDITIONAL REQUIREMENTS.
2. THE EXIT SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHT-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH 1.5-3.5 INCH STONE, AS CONDITIONS DEMAND, AND REPAIR AND/OR CLEAN OUT OF ANY STRUCTURE USED TO TRAP SEDIMENT. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES OR SITE ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.
3. WHEELS MUST BE CLEANED TO REMOVE MUD PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA WITH CRUSHED STONE WHICH DRAINS INTO AN APPROVED SEDIMENT FILTERING DEVICE LOCATED PER CITY, COUNTY OR STATE REQUIREMENTS.

PLAN REFERENCES

- REFER TO EROSION CONTROL DETAILS FOR ADD'T EROSION NOTES & DETAILS
- THIS PLAN TO BE UTILIZED FOR EROSION PURPOSES ONLY

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PROJECT:
NEW O'REILLY AUTO PARTS STORE
NEW GEORGES CREEK RD
FROSTBURG, MD

EROSION CONTROL PLAN - PHASE II

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COMM #XXXX	
DATE:	04-26-23
REVISION DATE:	

C3.2

811 Know what's below Call before you dig.

CAUTION: INFORMATION ON THIS DRAWING CONCERNING TYPE AND LOCATION OF UNDERGROUND AND OTHER UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO THE TYPE AND LOCATION OF UNDERGROUND AND OTHER UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO.

1 C3.2 **EROSION CONTROL PLAN**
SCALE: 1" = 20'-0"

20 10 5 0 20
1"= 20'

CONSTRUCTION NORTH

ESC 2 OF 5

Apr 27, 2023
H:\2023\MDA230040.00\CAD\DRAWINGS\PLAN SET\SITE DEVELOPMENT PLAN\PRELIMINARY PLAN (CITY SUBMISSION)\MDA230040-EROS-0----LAYOUT: C3.2 - EROS-2 PLAN

B-4 STANDARDS AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION

DEFINITION
USING VEGETATION AS COVER TO PROTECT EXPOSED SOIL FROM EROSION.

PURPOSE
TO PROMOTE THE ESTABLISHMENT OF VEGETATION ON EXPOSED SOIL.

CONDITIONS WHERE PRACTICE APPLIES
ON ALL DISTURBED AREAS NOT STABILIZED BY OTHER METHODS. THIS SPECIFICATION IS DIVIDED INTO SECTIONS ON INCREMENTAL STABILIZATION; SOIL PREPARATION, SOIL AMENDMENTS AND TOPSOILING; SEEDING AND MULCHING; TEMPORARY STABILIZATION; AND PERMANENT STABILIZATION.

EFFECTS ON WATER QUALITY AND QUANTITY
STABILIZATION PRACTICES ARE USED TO PROMOTE THE ESTABLISHMENT OF VEGETATION ON EXPOSED SOIL. WHEN SOIL IS STABILIZED WITH VEGETATION, THE SOIL IS LESS LIKELY TO ERODE AND MORE LIKELY TO ALLOW INFILTRATION OF RAINFALL, THEREBY REDUCING SEDIMENT LOADS AND RUNOFF TO DOWNSTREAM AREAS.
PLANTING VEGETATION IN DISTURBED AREAS WILL HAVE AN EFFECT ON THE WATER BUDGET, ESPECIALLY ON VOLUMES AND RATES OF RUNOFF, INFILTRATION, EVAPORATION, TRANSPIRATION, PERCOLATION, AND GROUNDWATER RECHARGE. OVER TIME, VEGETATION WILL INCREASE ORGANIC MATTER CONTENT AND IMPROVE THE WATER HOLDING CAPACITY OF THE SOIL AND SUBSEQUENT PLANT GROWTH.
VEGETATION WILL HELP REDUCE THE MOVEMENT OF SEDIMENT, NUTRIENTS, AND OTHER CHEMICALS CARRIED BY RUNOFF TO RECEIVING WATERS. PLANTS WILL ALSO HELP PROTECT GROUNDWATER SUPPLIES BY ASSIMILATING THOSE SUBSTANCES PRESENT WITHIN THE ROOT ZONE.
SEDIMENT CONTROL PRACTICES MUST REMAIN IN PLACE DURING GRADING, SEEDBED PREPARATION, SEEDING, MULCHING, AND VEGETATIVE ESTABLISHMENT.

ADEQUATE VEGETATIVE ESTABLISHMENT
INSPECT SEEDED AREAS FOR VEGETATIVE ESTABLISHMENT AND MAKE NECESSARY REPAIRS, REPLACEMENTS, AND RESEEDINGS WITHIN THE PLANTING SEASON.
1. ADEQUATE VEGETATIVE STABILIZATION REQUIRES 95 PERCENT GROUNDCOVER.
2. IF AN AREA HAS LESS THAN 40 PERCENT GROUNDCOVER, RESTABILIZE FOLLOWING THE ORIGINAL RECOMMENDATIONS FOR LIME, FERTILIZER, SEEDBED PREPARATION, AND SEEDING.
3. IF AN AREA HAS BETWEEN 40 AND 94 PERCENT GROUNDCOVER, OVER-SEED AND FERTILIZE USING HALF OF THE RATES ORIGINALLY SPECIFIED.
4. MAINTENANCE FERTILIZER RATES FOR PERMANENT SEEDING ARE SHOWN IN TABLE B.6.

B-4-1 STANDARDS AND SPECIFICATIONS FOR INCREMENTAL STABILIZATION

DEFINITION
ESTABLISHMENT OF VEGETATIVE COVER ON CUT AND FILL SLOPES.

PURPOSE
TO PROVIDE TIMELY VEGETATIVE COVER ON CUT AND FILL SLOPES AS WORK PROGRESSES.

CONDITIONS WHERE PRACTICE APPLIES
ANY CUT OR FILL SLOPE GREATER THAN 15 FEET IN HEIGHT. THIS PRACTICE ALSO APPLIES TO STOCKPILES.

CRITERIA
A. INCREMENTAL STABILIZATION - CUT SLOPES
1. EXCAVATE AND STABILIZE CUT SLOPES IN INCREMENTS NOT TO EXCEED 15 FEET IN HEIGHT. PREPARE SEEDBED AND APPLY SEED AND MULCH ON ALL CUT SLOPES AS THE WORK PROGRESSES.
2. CONSTRUCTION SEQUENCE EXAMPLE (REFER TO FIGURE B.1):
a. CONSTRUCT AND STABILIZE ALL TEMPORARY SWALES OR DIKES THAT WILL BE USED TO CONVEY RUNOFF AROUND THE EXCAVATION.
b. PERFORM PHASE 1 EXCAVATION, PREPARE SEEDBED, AND STABILIZE.
c. PERFORM PHASE 2 EXCAVATION, PREPARE SEEDBED, AND STABILIZE. OVERSEED PHASE 1 AREAS AS NECESSARY.
d. PERFORM FINAL PHASE EXCAVATION, PREPARE SEEDBED, AND STABILIZE. OVERSEED PREVIOUSLY SEEDED AREAS AS NECESSARY.

NOTE: ONCE EXCAVATION HAS BEGUN THE OPERATION SHOULD BE CONTINUOUS FROM GRUBBING THROUGH THE COMPLETION OF GRADING AND PLACEMENT OF TOPSOIL (IF REQUIRED) AND PERMANENT SEED AND MULCH. ANY INTERRUPTIONS IN THE OPERATION OR COMPLETING THE OPERATION OUT OF THE SEEDING SEASON WILL NECESSITATE THE APPLICATION OF TEMPORARY STABILIZATION.

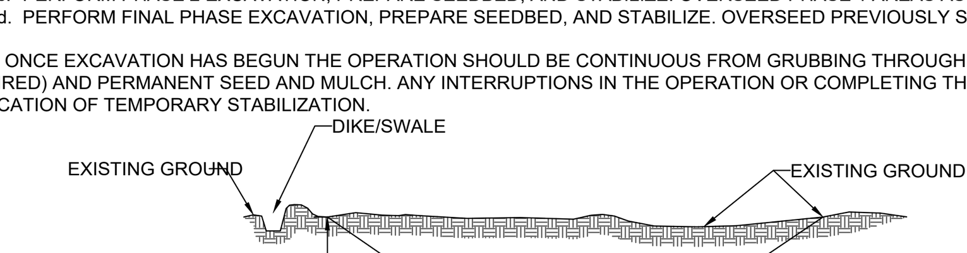

FIGURE B.1: INCREMENTAL STABILIZATION - CUT

B. INCREMENTAL STABILIZATION - FILL SLOPES
1. CONSTRUCT AND STABILIZE FILL SLOPES IN INCREMENTS NOT TO EXCEED 15 FEET IN HEIGHT. PREPARE SEEDBED AND APPLY SEED AND MULCH ON ALL SLOPES AS THE WORK PROGRESSES.
2. STABILIZE SLOPES IMMEDIATELY WHEN THE VERTICAL HEIGHT OF A LIFT REACHES 15 FEET, OR WHEN THE GRADING OPERATION CEASES AS PRESCRIBED IN THE PLANS.
3. AT THE END OF EACH DAY, INSTALL TEMPORARY WATER CONVEYANCE PRACTICE(S), AS NECESSARY, TO INTERCEPT SURFACE RUNOFF AND CONVEY IT DOWN THE SLOPE IN A NON-EROSIVE MANNER.
4. CONSTRUCTION SEQUENCE EXAMPLE (REFER TO FIGURE B.2):
a. CONSTRUCT AND STABILIZE ALL TEMPORARY SWALES OR DIKES THAT WILL BE USED TO DIVERT RUNOFF AROUND THE FILL. CONSTRUCT SILT FENCE ON LOW SIDE OF FILL UNLESS OTHER METHODS SHOWN ON THE PLANS ADDRESS THIS AREA.
b. AT THE END OF EACH DAY, INSTALL TEMPORARY WATER CONVEYANCE PRACTICE(S), AS NECESSARY, TO INTERCEPT SURFACE RUNOFF AND CONVEY IT DOWN THE SLOPE IN A NON-EROSIVE MANNER.
c PLACE PHASE 1 FILL, PREPARE SEEDBED, AND STABILIZE.
d. PLACE PHASE 2 FILL, PREPARE SEEDBED, AND STABILIZE.
e. PLACE FINAL PHASE FILL, PREPARE SEEDBED, AND STABILIZE. OVERSEED PREVIOUSLY SEEDED AREAS AS NECESSARY.

NOTE: ONCE THE PLACEMENT OF FILL HAS BEGUN THE OPERATION SHOULD BE CONTINUOUS FROM GRUBBING THROUGH THE COMPLETION OF GRADING AND PLACEMENT OF TOPSOIL (IF REQUIRED) AND PERMANENT SEED AND MULCH. ANY INTERRUPTIONS IN THE OPERATION OR COMPLETING THE OPERATION OUT OF THE SEEDING SEASON WILL NECESSITATE THE APPLICATION OF TEMPORARY STABILIZATION.

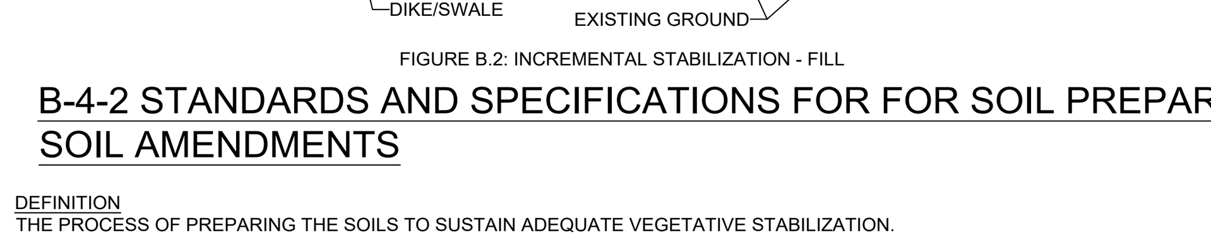

FIGURE B.2: INCREMENTAL STABILIZATION - FILL

B-4-2 STANDARDS AND SPECIFICATIONS FOR FOR SOIL PREPARATION, TOPSOILING, AND SOIL AMENDMENTS

DEFINITION
THE PROCESS OF PREPARING THE SOILS TO SUSTAIN ADEQUATE VEGETATIVE STABILIZATION.

PURPOSE
TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH.

CONDITIONS WHERE PRACTICE APPLIES
WHERE VEGETATIVE STABILIZATION IS TO BE ESTABLISHED.

CRITERIA
A. SOIL PREPARATION
1. TEMPORARY STABILIZATION
a. SEEDBED PREPARATION CONSISTS OF LOOSENING SOIL TO A DEPTH OF 3 TO 5 INCHES BY MEANS OF SUITABLE AGRICULTURAL OR CONSTRUCTION EQUIPMENT, SUCH AS DISC HARROWS OR CHISEL PLOWS OR RIPPERS MOUNTED ON CONSTRUCTION EQUIPMENT. AFTER THE SOIL IS LOOSENED, IT MUST NOT BE ROLLED OR DRAGGED SMOOTH BUT LEFT IN THE ROUGHENED CONDITION. SLOPES 3:1 OR FLATTER ARE TO BE TRACKED WITH RIDGES RUNNING PARALLEL TO THE CONTOUR OF THE SLOPE.
b. APPLY FERTILIZER AND LIME AS PRESCRIBED ON THE PLANS.
c. INCORPORATE LIME AND FERTILIZER INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS.
2. PERMANENT STABILIZATION
a. A SOIL TEST IS REQUIRED FOR ANY EARTH DISTURBANCE OF 5 ACRES OR MORE. THE MINIMUM SOIL CONDITIONS REQUIRED FOR PERMANENT VEGETATIVE ESTABLISHMENT ARE:
i. SOIL PH BETWEEN 6.0 AND 7.0.
ii. SOLUBLE SALTS LESS THAN 500 PARTS PER MILLION (PPM).
iii. SOIL CONTAINS LESS THAN 40 PERCENT CLAY BUT ENOUGH FINE GRAINED MATERIAL (GREATER THAN 30 PERCENT SILT PLUS CLAY) TO PROVIDE THE CAPACITY TO HOLD A MODERATE AMOUNT OF MOISTURE. AN EXCEPTION: IF LOVEGRASS WILL BE PLANTED, THEN A SANDY SOIL (LESS THAN 30 PERCENT SILT PLUS CLAY) WOULD BE ACCEPTABLE.
iv. SOIL CONTAINS 1.5 PERCENT MINIMUM ORGANIC MATTER BY WEIGHT.
v. SOIL CONTAINS SUFFICIENT PORE SPACE TO PERMIT ADEQUATE ROOT PENETRATION.
b. APPLICATION OF AMENDMENTS OR TOPSOIL IS REQUIRED IF ON-SITE SOILS DO NOT MEET THE ABOVE CONDITIONS.
c. GRADED AREAS MUST BE MAINTAINED IN A TRUE AND EVEN GRADE AS SPECIFIED ON THE APPROVED PLAN, THEN SCARIFIED OR OTHERWISE LOOSENED TO A DEPTH OF 3 TO 5 INCHES.
d. APPLY SOIL AMENDMENTS AS SPECIFIED ON THE APPROVED PLAN OR AS INDICATED BY THE RESULTS OF A SOIL TEST.
e. MIX SOIL AMENDMENTS INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS. RAKE LAWN AREAS TO SMOOTH THE SURFACE, REMOVE LARGE OBJECTS LIKE STONES AND BRANCHES, AND READY THE AREA FOR SEED APPLICATION. LOOSEN SURFACE SOIL BY DRAGGING WITH A HEAVY CHAIN OR OTHER EQUIPMENT TO ROUGHEN THE SURFACE WHERE SITE CONDITIONS WILL NOT PERMIT NORMAL SEEDBED PREPARATION. TRACK SLOPES 3:1 OR FLATTER WITH TRACKED EQUIPMENT LEAVING THE SOIL IN AN IRREGULAR CONDITION WITH RIDGES RUNNING PARALLEL TO THE CONTOUR OF THE SLOPE. LEAVE THE TOP 1 TO 3 INCHES OF SOIL LOOSE AND FRIABLE. SEEDBED LOOSENING MAY BE UNNECESSARY ON NEWLY DISTURBED AREAS.

B. TOPSOILING
1. TOPSOIL IS PLACED OVER PREPARED SUBSOIL PRIOR TO ESTABLISHMENT OF PERMANENT VEGETATION. THE PURPOSE IS TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH. SOILS OF CONCERN HAVE LOW MOISTURE CONTENT, LOW NUTRIENT LEVELS, LOW PH, MATERIALS TOXIC TO PLANTS, AND/OR UNACCEPTABLE SOIL GRADATION.
2. TOPSOIL SALVAGED FROM AN EXISTING SITE MAY BE USED PROVIDED IT MEETS THE STANDARDS AS SET FORTH IN THESE SPECIFICATIONS. TYPICALLY, THE DEPTH OF TOPSOIL TO BE SALVAGED FOR A GIVEN SOIL TYPE CAN BE FOUND IN THE REPRESENTATIVE SOIL PROFILE SECTION IN THE SOIL SURVEY PUBLISHED BY USDA-NRCS.
3. TOPSOILING IS LIMITED TO AREAS HAVING 2:1 OR FLATTER SLOPES WHERE:
a. THE TEXTURE OF THE EXPOSED SUBSOIL/PARENT MATERIAL IS NOT ADEQUATE TO PRODUCE VEGETATIVE GROWTH.
b. THE SOIL MATERIAL IS SO SHALLOW THAT THE ROOTING ZONE IS NOT DEEP ENOUGH TO SUPPORT PLANTS OR FURNISH CONTINUING SUPPLIES OF MOISTURE AND PLANT NUTRIENTS.
c. THE ORIGINAL SOIL TO BE VEGETATED CONTAINS MATERIAL TOXIC TO PLANT GROWTH.
d. THE SOIL IS SO ACIDIC THAT TREATMENT WITH LIMESTONE IS NOT FEASIBLE.
4. AREAS HAVING SLOPES STEEPER THAN 2:1 REQUIRE SPECIAL CONSIDERATION AND DESIGN.
5. TOPSOIL SPECIFICATIONS: SOIL TO BE USED AS TOPSOIL MUST MEET THE FOLLOWING CRITERIA:
a. TOPSOIL MUST BE A LOAM, SANDY LOAM, CLAY LOAM, SILT LOAM, SANDY CLAY LOAM, OR LOAMY SAND. OTHER SOILS MAY BE USED IF RECOMMENDED BY AN AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY. TOPSOIL MUST NOT BE A MIXTURE OF CONTRASTING TEXTURED SUBSOILS AND MUST CONTAIN LESS THAN 5 PERCENT BY VOLUME OF CINDERS, STONES, SLAG, COARSE FRAGMENTS, GRAVEL, STICKS, ROOTS, TRASH, OR OTHER MATERIALS LARGER THAN 1½ INCHES IN DIAMETER.
b. TOPSOIL MUST BE FREE OF NOXIOUS PLANTS OR PLANT PARTS SUCH AS BERMUDA GRASS, QUACK GRASS, JOHNSON GRASS, NUT SEDGE, POISON IVY, THISTLE, OR OTHERS AS SPECIFIED.
c. TOPSOIL SUBSTITUTES OR AMENDMENTS, AS RECOMMENDED BY A QUALIFIED AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY, MAY BE USED IN LIEU OF NATURAL
6. TOPSOIL APPLICATION
a. EROSION AND SEDIMENT CONTROL PRACTICES MUST BE MAINTAINED WHEN APPLYING TOPSOIL.
b. UNIFORMLY DISTRIBUTE TOPSOIL IN A 5 TO 8 INCH LAYER AND LIGHTLY COMPACT TO A MINIMUM THICKNESS OF 4 INCHES. SPREADING IS TO BE PERFORMED IN SUCH A MANNER THAT SODDING OR SEEDING CAN PROCEED WITH A MINIMUM OF ADDITIONAL SOIL PREPARATION AND TILLAGE. ANY IRREGULARITIES IN THE SURFACE RESULTING FROM TOPSOILING OR OTHER OPERATIONS MUST BE CORRECTED IN ORDER TO PREVENT THE FORMATION OF DEPRESSIONS OR WATER POCKETS.
c. TOPSOIL MUST NOT BE PLACED IF THE TOPSOIL OR SUBSOIL IS IN A FROZEN OR MUDDY CONDITION, WHEN THE SUBSOIL IS EXCESSIVELY WET OR IN A CONDITION THAT MAY OTHERWISE BE DETRIMENTAL TO PROPER GRADING AND SEEDBED PREPARATION.

A. SOIL AMENDMENTS (FERTILIZER AND LIME SPECIFICATIONS)
1. SOIL TESTS MUST BE PERFORMED TO DETERMINE THE EXACT RATIOS AND APPLICATION RATES FOR BOTH LIME AND FERTILIZER ON SITES HAVING DISTURBED AREAS OF 5 ACRES OR MORE. SOIL ANALYSIS MAY BE PERFORMED BY A RECOGNIZED PRIVATE OR COMMERCIAL LABORATORY. SOIL SAMPLES TAKEN FOR ENGINEERING PURPOSES MAY ALSO BE USED FOR CHEMICAL ANALYSES.
2. FERTILIZERS MUST BE UNIFORM IN COMPOSITION, FREE FLOWING AND SUITABLE FOR ACCURATE APPLICATION BY APPROPRIATE EQUIPMENT. MANURE MAY BE SUBSTITUTED FOR FERTILIZER WITH PRIOR APPROVAL FROM THE APPROPRIATE APPROVAL AUTHORITY. FERTILIZERS MUST ALL BE DELIVERED TO THE SITE FULLY LABELED ACCORDING TO THE APPLICABLE LAWS AND MUST BEAR THE NAME, TRADE NAME OR TRADEMARK AND WARRANTY OF THE PRODUCER.
3. LIME MATERIALS MUST BE GROUND LIMESTONE (HYDRATED OR BURNT LIME MAY BE SUBSTITUTED EXCEPT WHEN HYDROSEEDING) WHICH CONTAINS AT LEAST 50 PERCENT TOTAL OXIDES (CALCIUM OXIDE PLUS MAGNESIUM OXIDE). LIMESTONE MUST BE GROUND TO SUCH FINENESS THAT AT LEAST 50 PERCENT WILL PASS THROUGH A #100 MESH SIEVE AND 98 TO 100 PERCENT WILL PASS THROUGH A #20 MESH SIEVE.
4. LIME AND FERTILIZER ARE TO BE EVENLY DISTRIBUTED AND INCORPORATED INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS.
5. WHERE THE SUBSOIL IS EITHER HIGHLY ACIDIC OR COMPOSED OF HEAVY CLAYS, SPREAD GROUND LIMESTONE AT THE RATE OF 4 TO 8 TONS/ACRE (200-400 POUNDS PER 1,000 SQUARE FEET) PRIOR TO THE PLACEMENT OF TOPSOIL.

B-4-3 STANDARDS AND SPECIFICATIONS FOR SEEDING AND MULCHING

DEFINITION
THE APPLICATION OF SEED AND MULCH TO ESTABLISH VEGETATIVE COVER.

PURPOSE
TO PROTECT DISTURBED SOILS FROM EROSION DURING AND AT THE END OF CONSTRUCTION.

CONDITIONS WHERE PRACTICE APPLIES
TO THE SURFACE OF ALL PERIMETER CONTROLS, SLOPES, AND ANY DISTURBED AREA NOT UNDER ACTIVE GRADING.

CRITERIA
A. SEEDING
1. SPECIFICATIONS
a. ALL SEED MUST MEET THE REQUIREMENTS OF THE MARYLAND STATE SEED LAW. ALL SEED MUST BE SUBJECT TO RE-TESTING BY A RECOGNIZED SEED LABORATORY. ALL SEED USED MUST HAVE BEEN TESTED WITHIN THE 6 MONTHS IMMEDIATELY PRECEDING THE DATE OF SOWING SUCH MATERIAL ON ANY PROJECT. REFER TO TABLE B.4 REGARDING THE QUALITY OF SEED. SEED TAGS MUST BE AVAILABLE UPON REQUEST TO THE INSPECTOR TO VERIFY TYPE OF SEED AND SEEDING RATE.
b. MULCH ALONE MAY BE APPLIED BETWEEN THE FALL AND SPRING SEEDING DATES ONLY IF THE GROUND IS FROZEN. THE APPROPRIATE SEEDING MIXTURE MUST BE APPLIED WHEN THE GROUND THAWS.
c. INOCULANTS: THE INOCULANT FOR TREATING LEGUME SEED IN THE SEED MIXTURES MUST BE A PURE CULTURE OF NITROGEN FIXING BACTERIA PREPARED SPECIFICALLY FOR THE SPECIES. INOCULANTS MUST NOT BE USED LATER THAN THE DATE INDICATED ON THE CONTAINER. ADD FRESH INOCULANTS AS DIRECTED ON THE PACKAGE. USE FOUR TIMES THE RECOMMENDED RATE WHEN HYDROSEEDING. NOTE: IT IS VERY IMPORTANT TO KEEP INOCULANT AS COOL AS POSSIBLE UNTIL USED. TEMPERATURES ABOVE 75 TO 80 DEGREES FAHRENHEIT CAN WEAKEN BACTERIA AND MAKE THE INOCULANT LESS EFFECTIVE.
d. SOD OR SEED MUST NOT BE PLACED ON SOIL WHICH HAS BEEN TREATED WITH SOIL STERILANTS OR CHEMICALS USED FOR WEED CONTROL UNTIL SUFFICIENT TIME HAS ELAPSED (14 DAYS MIN.) TO PERMIT DISSIPATION OF PHYTO-TOXIC MATERIALS.
2. APPLICATION
a. DRY SEEDING: THIS INCLUDES USE OF CONVENTIONAL DROP OR BROADCAST SPREADERS.
i. INCORPORATE SEED INTO THE SUBSOIL AT THE RATES PRESCRIBED ON TEMPORARY SEEDING TABLE B.1, PERMANENT SEEDING TABLE B.3, OR SITE-SPECIFIC SEEDING SUMMARIES.
ii. APPLY SEED IN TWO DIRECTIONS, PERPENDICULAR TO EACH OTHER. APPLY HALF THE SEEDING RATE IN EACH DIRECTION. ROLL THE SEEDED AREA WITH A WEIGHTED ROLLER TO PROVIDE GOOD SEED TO SOIL CONTACT.
b. DRILL OR CULTIPACKER SEEDING: MECHANIZED SEEDERS THAT APPLY AND COVER SEED WITH SOIL.
i. CULTIPACKING SEEDERS ARE REQUIRED TO BURY THE SEED IN SUCH A FASHION AS TO PROVIDE AT LEAST 1/4 INCH OF SOIL COVERING. SEEDBED MUST BE FIRM AFTER PLANTING.
ii. APPLY SEED IN TWO DIRECTIONS, PERPENDICULAR TO EACH OTHER. APPLY HALF THE SEEDING RATE IN EACH DIRECTION.
c. HYDROSEEDING: APPLY SEED UNIFORMLY WITH HYDROSEEDER (SLURRY INCLUDES SEED AND FERTILIZER).
i. IF FERTILIZER IS BEING APPLIED AT THE TIME OF SEEDING, THE APPLICATION RATES SHOULD NOT EXCEED THE FOLLOWING: NITROGEN, 100 POUNDS PER ACRE TOTAL OF SOLUBLE NITROGEN; P2O5 (PHOSPHOROUS), 200 POUNDS PER ACRE; K2O (POTASSIUM), 200 POUNDS PER ACRE.
ii. LIME: USE ONLY GROUND AGRICULTURAL LIMESTONE (UP TO 3 TONS PER ACRE MAY BE APPLIED BY HYDROSEEDING). NORMALLY, NOT MORE THAN 2 TONS ARE APPLIED BY HYDROSEEDING AT ANY ONE TIME. DO NOT USE BURNT OR HYDRATED LIME WHEN HYDROSEEDING.
iii. MIX SEED AND FERTILIZER ON SITE AND SEED IMMEDIATELY AND WITHOUT INTERRUPTION.
iv. WHEN HYDROSEEDING DO NOT INCORPORATE SEED INTO THE SOIL.

B. MULCHING
1. MULCH MATERIALS (IN ORDER OF PREFERENCE)
a. STRAW CONSISTING OF THOROUGHLY THRESHED WHEAT, RYE, OAT, OR BARLEY AND REASONABLY BRIGHT IN COLOR. STRAW IS TO BE FREE OF NOXIOUS WEED SEEDS AS SPECIFIED IN THE MARYLAND SEED LAW AND NOT MUSTY, MOLDY, CAKED, DECAYED, OR EXCESSIVELY DUSTY. NOTE: USE ONLY STERILE STRAW MULCH IN AREAS WHERE ONE SPECIES OF GRASS IS DESIRED.
b. WOOD CELLULOSE FIBER MULCH (WFCM) CONSISTING OF SPECIALLY PREPARED WOOD CELLULOSE PROCESSED INTO A UNIFORM FIBROUS PHYSICAL STATE.
i. WCFM IS TO BE DYED GREEN OR CONTAIN A GREEN DYE IN THE PACKAGE THAT WILL PROVIDE AN APPROPRIATE COLOR TO FACILITATE VISUAL INSPECTION OF THE UNIFORMLY SPREAD SLURRY.
ii. WCFM, INCLUDING DYE, MUST CONTAIN NO GERMINATION OR GROWTH INHIBITING FACTORS.
iii. WCFM MATERIALS ARE TO BE MANUFACTURED AND PROCESSED IN SUCH A MANNER THAT THE WOOD CELLULOSE FIBER MULCH WILL REMAIN IN UNIFORM SUSPENSION IN WATER UNDER AGITATION AND WILL BLEND WITH SEED, FERTILIZER AND OTHER ADDITIVES TO FORM A HOMOGENEOUS SLURRY. THE MULCH MATERIAL MUST FORM A BLOTTER-LIKE GROUND COVER, ON APPLICATION, HAVING MOISTURE ABSORPTION AND PERCOLATION PROPERTIES AND MUST COVER AND HOLD GRASS SEED IN CONTACT WITH THE SOIL WITHOUT INHIBITING THE GROWTH OF THE GRASS SEEDLINGS.
iv. WCFM MATERIAL MUST NOT CONTAIN ELEMENTS OR COMPOUNDS AT CONCENTRATION LEVELS THAT WILL BE PHYTO-TOXIC.
v. WCFM MUST CONFORM TO THE FOLLOWING PHYSICAL REQUIREMENTS: FIBER LENGTH OF APPROXIMATELY 10 MILLIMETERS, DIAMETER APPROXIMATELY 1 MILLIMETER, PH RANGE OF 4.0 TO 8.5, ASH CONTENT OF 1.6 PERCENT MAXIMUM AND WATER HOLDING CAPACITY OF 90 PERCENT MINIMUM.
2. APPLICATION
a. APPLY MULCH TO ALL SEEDED AREAS IMMEDIATELY AFTER SEEDING.
b. WHEN STRAW MULCH IS USED, SPREAD IT OVER ALL SEEDED AREAS AT THE RATE OF 2 TONS PER ACRE TO A UNIFORM LOOSE DEPTH OF 1 TO 2 INCHES. APPLY MULCH TO ACHIEVE A UNIFORM DISTRIBUTION AND DEPTH SO THAT THE SOIL SURFACE IS NOT EXPOSED. WHEN USING A MULCH ANCHORING TOOL, INCREASE THE APPLICATION RATE TO 2.5 TONS PER ACRE.
c. WOOD CELLULOSE FIBER USED AS MULCH MUST BE APPLIED AT A NET DRY WEIGHT OF 1500 POUNDS PER ACRE. MIX THE WOOD CELLULOSE FIBER WITH WATER TO ATTAIN A MIXTURE WITH A MAXIMUM OF 50 POUNDS OF WOOD CELLULOSE FIBER PER 100 GALLONS OF WATER.
3. ANCHORING
a. PERFORM MULCH ANCHORING IMMEDIATELY FOLLOWING APPLICATION OF MULCH TO MINIMIZE LOSS BY WIND OR WATER. THIS MAY BE DONE BY ONE OF THE FOLLOWING METHODS (LISTED BY PREFERENCE), DEPENDING UPON THE SIZE OF THE AREA AND EROSION HAZARD:
i. A MULCH ANCHORING TOOL IS A TRACTOR DRAWN IMPLEMENT DESIGNED TO PUNCH AND ANCHOR MULCH INTO THE SOIL SURFACE A MINIMUM OF 2 INCHES. THIS PRACTICE IS MOST EFFECTIVE ON LARGE AREAS, BUT IS LIMITED TO FLATTER SLOPES WHERE EQUIPMENT CAN OPERATE SAFELY. IF USED ON SLOPING LAND, THIS PRACTICE SHOULD FOLLOW THE CONTOUR.
ii. WOOD CELLULOSE FIBER MAY BE USED FOR ANCHORING STRAW. APPLY THE FIBER BINDER AT A NET DRY WEIGHT OF 750 POUNDS PER ACRE. MIX THE WOOD CELLULOSE FIBER WITH WATER AT A MAXIMUM OF 50 POUNDS OF WOOD CELLULOSE FIBER PER 100 GALLONS OF WATER.
iii. SYNTHETIC BINDERS SUCH AS ACRYLIC DLR (AGRO-TACK), DCA-70, PETROSET, TERRA TAX II, TERRA TACK AR OR OTHER APPROVED EQUAL MAY BE USED. FOLLOW APPLICATION RATES AS SPECIFIED BY THE MANUFACTURER. APPLICATION OF LIQUID BINDERS NEEDS TO BE HEAVIER AT THE EDGES WHERE WIND CATCHES MULCH, SUCH AS IN VALLEYS AND ON CRESTS OF BANKS. USE OF ASPHALT BINDERS IS STRICTLY PROHIBITED.
iv. LIGHTWEIGHT PLASTIC NETTING MAY BE STAPLED OVER THE MULCH ACCORDING TO MANUFACTURER RECOMMENDATIONS. NETTING IS USUALLY AVAILABLE IN ROLLS 4 TO 15 FEET WIDE AND 300 TO 3,000 FEET LONG.

TEMPORARY SEEDING SUMMARY

HARDINESS ZONE (from Figure B.3): ZONE 6B SEED MIXTURE (from Table B.1)					FERTILIZER RATE (10-20-20)	LIME RATE
NO.	SPECIES	APPLICATION RATE (LB/AC)	SEEDING DATES	SEEDING DEPTHS		
COOL SEASON GRASSES						
1	ANNUAL RYEGRASS	40	3/1 - 5/15 8/1 - 10/15	0.5"	436 LB/AC (10 LB/1000 SF)	2 TONS/AC (90 LB/1000 SF)
2	BARLEY	96	3/1 - 5/15 8/1 - 10/15	1"		
3	OATS	72	3/1 - 5/15 8/1 - 10/15	1"		
4	WHEAT	120	3/1 - 5/15 8/1 - 10/15	1"		
5	CEREAL RYE	112	3/1 - 5/15 8/1 - 11/15	1"		
WARM SEASON GRASSES						
6	FOXTAIL MILLET	30	5/16 - 7/31	0.5"	436 LB/AC (10 LB/1000 SF)	2 TONS/AC (90 LB/1000 SF)
7	PEARL MILLET	20	5/16 - 7/31	0.5"		

1. SEEDING RATES FOR THE WARM-SEASON GRASSES ARE IN POUNDS OF PURE LIVE SEED (PLS). ACTUAL PLANTING RATES SHALL BE ADJUSTED TO REFLECT PERCENT SEED GERMINATION AND PURITY, AS TESTED. ADJUSTMENTS ARE USUALLY NOT NEEDED FOR THE COOL-SEASON GRASSES.
SEEDING RATES LISTED ABOVE ARE FOR TEMPORARY SEEDINGS, WHEN PLANTED ALONE. WHEN PLANTED AS A NURSE CROP WITH PERMANENT SEED MIXES, USE 1/3 OF THE SEEDING RATE LISTED ABOVE FOR BARLEY, OATS, AND WHEAT. FOR SMALLER-SEEDED GRASSES (ANNUAL RYEGRASS, PEARL MILLET, FOXTAIL MILLET), DO NOT EXCEED MORE THAN 5% (BY WEIGHT) OF THE OVERALL PERMANENT SEEDING MIX. CEREAL RYE GENERALLY SHOULD NOT BE USED AS A NURSE CROP, UNLESS PLANTING WILL OCCUR IN VERY LATE FALL BEYOND THE SEEDING DATES FOR OTHER TEMPORARY SEEDINGS. CEREAL RYE HAS ALLELOPATHIC PROPERTIES THAT INHIBIT THE GERMINATION AND GROWTH OF OTHER PLANTS. IF IT MUST BE USED AS A NURSE CROP, SEED AT 1/3 OF THE RATE LISTED ABOVE.
OATS ARE THE RECOMMENDED NURSE CROP FOR WARM-SEASON GRASSES.
2. FOR SANDY SOILS, PLANT SEEDS AT TWICE THE DEPTH LISTED ABOVE.
3. THE PLANTING DATES LISTED ARE AVERAGES FOR EACH ZONE AND MAY REQUIRE ADJUSTMENT TO REFLECT LOCAL CONDITIONS, ESPECIALLY NEAR THE BOUNDARIES OF THE ZONE.

NOTE:
LAWN GRASS MIXTURES WITH MULCH AND LANDSCAPE PLANTINGS WITH MULCH MAY BE SUBSTITUTED FOR THE MIXTURES SPECIFIED PROVIDED THERE IS 95% GROUNDCOVER.

B-4-4 STANDARDS AND SPECIFICATIONS FOR TEMPORARY STABILIZATION

DEFINITION
TO STABILIZE DISTURBED SOILS WITH VEGETATION FOR UP TO 6 MONTHS.

PURPOSE
TO USE FAST GROWING VEGETATION THAT PROVIDES COVER ON DISTURBED SOILS.

CONDITIONS WHERE PRACTICE APPLIES
EXPOSED SOILS WHERE GROUND COVER IS NEEDED FOR A PERIOD OF 6 MONTHS OR LESS. FOR LONGER DURATION OF TIME, PERMANENT STABILIZATION PRACTICES ARE REQUIRED.

CRITERIA
1. SELECT ONE OR MORE OF THE SPECIES OR SEED MIXTURES LISTED IN TABLE B.1 FOR THE APPROPRIATE PLANT HARDINESS ZONE (FROM FIGURE B.3), AND ENTER THEM IN THE TEMPORARY SEEDING SUMMARY BELOW ALONG WITH APPLICATION RATES, SEEDING DATES AND SEEDING DEPTHS. IF THIS SUMMARY IS NOT PUT ON THE PLAN AND COMPLETED, THEN TABLE B.1 PLUS FERTILIZER AND LIME RATES MUST BE PUT ON THE PLAN.
2. FOR SITES HAVING SOIL TESTS PERFORMED, USE AND SHOW THE RECOMMENDED RATES BY THE TESTING AGENCY. SOIL TESTS ARE NOT REQUIRED FOR TEMPORARY SEEDING.
3. WHEN STABILIZATION IS REQUIRED OUTSIDE OF A SEEDING SEASON, APPLY SEED AND MULCH OR STRAW MULCH ALONE AS PRESCRIBED IN SECTION B-4-3.A.1.B AND MAINTAIN UNTIL THE NEXT SEEDING SEASON.

B-4-5 STANDARDS AND SPECIFICATIONS FOR PERMANENT STABILIZATION

DEFINITION
TO STABILIZE DISTURBED SOILS WITH PERMANENT VEGETATION.

PURPOSE
TO USE LONG-LIVED PERENNIAL GRASSES AND LEGUMES TO ESTABLISH PERMANENT GROUND COVER ON DISTURBED SOILS.

CONDITIONS WHERE PRACTICE APPLIES
EXPOSED SOILS WHERE GROUND COVER IS NEEDED FOR 6 MONTHS OR MORE.

CRITERIA
A. SEED MIXTURES
1. GENERAL USE
a. SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED IN TABLE B.3 FOR THE APPROPRIATE PLANT HARDINESS ZONE (FROM FIGURE B.3) AND BASED ON THE SITE CONDITION OR PURPOSE FOUND ON TABLE B.2. ENTER SELECTED MIXTURE(S), APPLICATION RATES, AND SEEDING DATES IN THE PERMANENT SEEDING SUMMARY. THE SUMMARY IS TO BE PLACED ON THE PLAN.
b. ADDITIONAL PLANTING SPECIFICATIONS FOR EXCEPTIONAL SITES SUCH AS SHORELINES, STREAM BANKS, OR DUNES OR FOR SPECIAL PURPOSES SUCH AS WILDLIFE OR AESTHETIC TREATMENT MAY BE FOUND IN USDA-NRCS TECHNICAL FIELD OFFICE GUIDE, SECTION 342 - CRITICAL AREA PLANTING.
c. FOR SITES HAVING DISTURBED AREA OVER 5 ACRES, USE AND SHOW THE RATES RECOMMENDED BY THE SOIL TESTING AGENCY.
d. FOR AREAS RECEIVING LOW MAINTENANCE, APPLY UREA FORM FERTILIZER (46-0-0) AT 3 ½ POUNDS PER 1000 SQUARE FEET (150 POUNDS PER ACRE) AT THE TIME OF SEEDING IN ADDITION TO THE SOIL AMENDMENTS SHOWN IN THE PERMANENT SEEDING SUMMARY .
2. TURFGRASS MIXTURES
a. AREAS WHERE TURFGRASS MAY BE DESIRED INCLUDE LAWNS, PARKS, PLAYGROUNDS, AND COMMERCIAL SITES WHICH WILL RECEIVE A MEDIUM TO HIGH LEVEL OF MAINTENANCE.
b. SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED BELOW BASED ON THE SITE CONDITIONS OR PURPOSE. ENTER SELECTED MIXTURE(S), APPLICATION RATES, AND SEEDING DATES IN THE PERMANENT SEEDING SUMMARY. THE SUMMARY IS TO BE PLACED ON THE PLAN.
i. KENTUCKY BLUEGRASS: FULL SUN MIXTURE: FOR USE IN AREAS THAT RECEIVE INTENSIVE MANAGEMENT. IRRIGATION REQUIRED IN THE AREAS OF CENTRAL MARYLAND AND EASTERN SHORE. RECOMMENDED CERTIFIED KENTUCKY BLUEGRASS CULTIVARS SEEDING RATE: 1.5 TO 2.0 POUNDS PER 1000 SQUARE FEET. CHOOSE A MINIMUM OF THREE KENTUCKY BLUEGRASS CULTIVARS WITH EACH RANGING FROM 10 TO 35 PERCENT OF THE TOTAL MIXTURE BY WEIGHT.
ii. KENTUCKY BLUEGRASS/PERENNIAL RYE: FULL SUN MIXTURE: FOR USE IN FULL SUN AREAS WHERE RAPID ESTABLISHMENT IS NECESSARY AND WHEN TURF WILL RECEIVE MEDIUM TO INTENSIVE MANAGEMENT. CERTIFIED PERENNIAL RYEGRASS CULTIVARS/CERTIFIED KENTUCKY BLUEGRASS SEEDING RATE: 2 POUNDS MIXTURE PER 1000 SQUARE FEET. CHOOSE A MINIMUM OF THREE KENTUCKY BLUEGRASS CULTIVARS WITH EACH RANGING FROM 10 TO 35 PERCENT OF THE TOTAL MIXTURE BY WEIGHT.
iii. TALL FESCUE/KENTUCKY BLUEGRASS: FULL SUN MIXTURE: FOR USE IN DROUGHT PRONE AREAS AND/OR FOR AREAS RECEIVING LOW TO MEDIUM MANAGEMENT IN FULL SUN TO MEDIUM SHADE. RECOMMENDED MIXTURE INCLUDES; CERTIFIED TALL FESCUE CULTIVARS 95 TO 100 PERCENT, CERTIFIED KENTUCKY BLUEGRASS CULTIVARS 0 TO 5 PERCENT. SEEDING RATE: 5 TO 8 POUNDS PER 1000 SQUARE FEET. ONE OR MORE CULTIVARS MAY BE BLENDED.
iv. KENTUCKY BLUEGRASS/FINE FESCUE: SHADE MIXTURE: FOR USE IN AREAS WITH SHADE IN BLUEGRASS LAWNS. FOR ESTABLISHMENT IN HIGH QUALITY, INTENSIVELY MANAGED TURF AREA. MIXTURE INCLUDES; CERTIFIED KENTUCKY BLUEGRASS CULTIVARS 30 TO 40 PERCENT AND CERTIFIED FINE FESCUE AND 60 TO 70 PERCENT. SEEDING RATE: 1½ TO 3 POUNDS PER 1000 SQUARE FEET.
NOTES:
SELECT TURFGRASS VARIETIES FROM THOSE LISTED IN THE MOST CURRENT UNIVERSITY OF MARYLAND PUBLICATION, AGRONOMY MEMO #77, "TURFGRASS CULTIVAR RECOMMENDATIONS FOR MARYLAND"
CHOOSE CERTIFIED MATERIAL. CERTIFIED MATERIAL IS THE BEST GUARANTEE OF CULTIVAR PURITY. THE CERTIFICATION PROGRAM OF THE MARYLAND DEPARTMENT OF AGRICULTURE, TURF AND SEED SECTION, PROVIDES A RELIABLE MEANS OF CONSUMER PROTECTION AND ASSURES A PURE GENETIC LINE
c. IDEAL TIMES OF SEEDING FOR TURF GRASS MIXTURES
WESTERN MD: MARCH 15 TO JUNE 1, AUGUST 1 TO OCTOBER 1 (HARDINESS ZONES: 5B, 6A)
CENTRAL MD: MARCH 1 TO MAY 15, AUGUST 15 TO OCTOBER 15 (HARDINESS ZONE: 6B)
SOUTHERN MD, EASTERN SHORE: MARCH 1 TO MAY 15, AUGUST 15 TO OCTOBER 15 (HARDINESS ZONES: 7A, 7B)
d. TILL AREAS TO RECEIVE SEED BY DISKING OR OTHER APPROVED METHODS TO A DEPTH OF 2 TO 4 INCHES, LEVEL AND RAKE THE AREAS TO PREPARE A PROPER SEEDBED. REMOVE STONES AND DEBRIS OVER 1½ INCHES IN DIAMETER. THE RESULTING SEEDBED MUST BE IN SUCH CONDITION THAT FUTURE MOWING OF GRASSES WILL POSE NO DIFFICULTY.
e. IF SOIL MOISTURE IS DEFICIENT, SUPPLY NEW SEEDINGS WITH ADEQUATE WATER FOR PLANT GROWTH (½ TO 1 INCH EVERY 3 TO 4 DAYS DEPENDING ON SOIL TEXTURE) UNTIL THEY ARE FIRMLY ESTABLISHED. THIS IS ESPECIALLY TRUE WHEN SEEDINGS ARE MADE LATE IN THE PLANTING SEASON, IN ABNORMALLY DRY OR HOT SEASONS, OR ON ADVERSE SITES.

PERMANENT SEEDING SUMMARY

HARDINESS ZONE (from Figure B.3): ZONE 6B SEED MIXTURE (from Table B.3)					FERTILIZER RATE (10-20-20)			LIME RATE
NO.	SPECIES	APPLICATION RATE (LB/AC)	*SEEDING DATES	SEEDING DEPTHS	N	P2O5	K2O	
9	TALL FESCUE KENTUCKY BLUEGRASS PERENNIAL RYE GRASS	60 40 20	3/15 - 5/31 8/1 - 9/30	1/4" - 1/2"	45 LB/AC (1.0 LB/1000 SF)	90 LB/AC (2 LB/1000 SF)	90 LB/AC (2 LB/1000 SF)	2 TONS/AC (90 LB/1000 SF)
5	HARD FESCUE PERENNIAL RYE GRASS FLAT PEA	20 10 15	3/15 - 5/31 8/1 - 9/30	1/4" - 1/2"				
1	SWITCH GRASS CREEPING RED FESCUE PARTRIDGE PEA	10 15 4	6/1 - 7/31	1/4" - 1/2"				

NOTES:
1. THE PLANTING DATES LISTED ARE AVERAGES FOR EACH ZONE. THESE DATES MAY REQUIRE ADJUSTMENT TO REFLECT LOCAL CONDITIONS, ESPECIALLY NEAR THE BOUNDARIES OF THE ZONES. WHEN SEEDING TOWARD THE END OF THE LISTED PLANTING DATES, OR WHEN CONDITIONS ARE EXPECTED TO BE LESS THAN OPTIMAL, SELECT AN APPROPRIATE NURSE CROP FROM TABLE B.1 TEMPORARY SEEDING FOR SITE STABILIZATION AND PLANT TOGETHER WITH THE PERMANENT SEEDING MIX.
2. WHEN PLANTED DURING THE GROWING SEASON, MOST OF THESE MATERIALS MUST BE PURCHASED AND KEPT IN A DORMANT CONDITION UNTIL PLANTING. BARE-ROOT GRASSES ARE THE EXCEPTION—THEY MAY BE SUPPLIED AS GROWING (NON-DORMANT) PLANTS.
♦ ADDITIONAL PLANTING DATES FOR THE LOWER COASTAL PLAIN, DEPENDENT ON ANNUAL RAINFALL AND TEMPERATURE TRENDS. RECOMMEND ADDING A NURSE CROP, AS NOTED ABOVE, IF PLANTING DURING THIS PERIOD.
♦♦WARM-SEASON GRASSES NEED A SOIL TEMPERATURE OF AT LEAST 50 DEGREES F IN ORDER TO GERMINATE. IF SOIL TEMPERATURES ARE COLDER THAN 50 DEGREES, OR MOISTURE IS NOT ADEQUATE, THE SEEDS WILL REMAIN DORMANT UNTIL CONDITIONS ARE FAVORABLE. IN GENERAL, PLANTING DURING THE LATTER PORTION OF THIS PERIOD ALLOWS MORE TIME FOR WEED EMERGENCE AND WEED CONTROL PRIOR TO PLANTING. WHEN SELECTING A PLANTING DATE, CONSIDER THE NEED FOR WEED CONTROL VS. THE LIKELIHOOD OF HAVING SUFFICIENT MOISTURE FOR LATER PLANTINGS, ESPECIALLY ON DROUGHTY SITES.
* ADDITIONAL PLANTING DATES DURING WHICH SUPPLEMENTAL WATERING MAY BE NEEDED TO ENSURE PLANT ESTABLISHMENT.
FREQUENT FREEZING AND THAWING OF WET SOILS MAY RESULT IN FROST-HEAVING OF MATERIALS PLANTED IN LATE FALL, IF PLANTS HAVE NOT SUFFICIENTLY ROOTED IN PLACE.
SOD USUALLY NEEDS 4 TO 6 WEEKS TO BECOME SUFFICIENTLY ROOTED. LARGE CONTAINERIZED AND BALLED-AND-BURLAPPED STOCK MAY BE PLANTED INTO THE WINTER MONTHS AS LONG AS THE GROUND IS NOT FROZEN AND SOIL MOISTURE IS ADEQUATE.
** FOR THE PERIOD 5/1 - 8/14 ADD EITHER FOXTAIL OR PEARL MILLET - 6 LBS/AC. TO MIX NO. 9, 2.25 LBS/AC. TO MIX NO. 5

B. SOD: TO PROVIDE QUICK COVER ON DISTURBED AREAS (2:1 GRADE OR FLATTER).
1. GENERAL SPECIFICATIONS
a. CLASS OF TURFGRASS SOD MUST BE MARYLAND STATE CERTIFIED. SOD LABELS MUST BE MADE AVAILABLE TO THE JOB FOREMAN AND INSPECTOR.
b. SOD MUST BE MACHINE CUT AT A UNIFORM SOIL THICKNESS OF ¾ INCH, PLUS OR MINUS ¼ INCH, AT THE TIME OF CUTTING. MEASUREMENT FOR THICKNESS MUST EXCLUDE TOP GROWTH AND THATCH. BROKEN PADS AND TORN OR UNEVEN ENDS WILL NOT BE ACCEPTABLE.
c. STANDARD SIZE SECTIONS OF SOD MUST BE STRONG ENOUGH TO SUPPORT THEIR OWN WEIGHT AND RETAIN THEIR SIZE AND SHAPE WHEN SUSPENDED VERTICALLY WITH A FIRM GRASP ON THE UPPER 10 PERCENT OF THE SECTION.
d. SOD MUST NOT BE HARVESTED OR TRANSPLANTED WHEN MOISTURE CONTENT (EXCESSIVELY DRY OR WET) MAY ADVERSELY AFFECT ITS SURVIVAL.
e. SOD MUST BE HARVESTED, DELIVERED, AND INSTALLED WITHIN A PERIOD OF 36 HOURS. SOD NOT TRANSPLANTED WITHIN THIS PERIOD MUST BE APPROVED BY AN AGRONOMIST OR SOIL SCIENTIST PRIOR TO ITS INSTALLATION.
2. SOD INSTALLATION
a. DURING PERIODS OF EXCESSIVELY HIGH TEMPERATURE OR IN AREAS HAVING DRY SUBSOIL, LIGHTLY IRRIGATE THE SUBSOIL IMMEDIATELY PRIOR TO LAYING THE SOD.
b. LAY THE FIRST ROW OF SOD IN A STRAIGHT LINE WITH SUBSEQUENT ROWS PLACED PARALLEL TO IT AND TIGHTLY WEDGED AGAINST EACH OTHER. STAGGER LATERAL JOINTS TO PROMOTE MORE UNIFORM GROWTH AND STRENGTH. ENSURE THAT SOD IS NOT STRETCHED OR OVERLAPPED AND THAT ALL JOINTS ARE BUTTED TIGHT IN ORDER TO PREVENT VOIDS WHICH WOULD CAUSE AIR DRYING OF THE ROOTS.
c. WHEREVER POSSIBLE, LAY SOD WITH THE LONG EDGES PARALLEL TO THE CONTOUR AND WITH STAGGERING JOINTS. ROLL AND TAMP, PEG OR OTHERWISE SECURE THE SOD TO PREVENT SLIPPAGE ON SLOPES. ENSURE SOLID CONTACT EXISTS BETWEEN SOD ROOTS AND THE UNDERLYING SOIL SURFACE.
d. WATER THE SOD IMMEDIATELY FOLLOWING ROLLING AND TAMPING UNTIL THE UNDERSIDE OF THE NEW SOD PAD AND SOIL SURFACE BELOW THE SOD ARE THOROUGHLY WET. COMPLETE THE OPERATIONS OF LAYING, TAMPING AND IRRIGATING FOR ANY PIECE OF SOD WITHIN EIGHT HOURS.
3. SOD MAINTENANCE
a. IN THE ABSENCE OF ADEQUATE RAINFALL, WATER DAILY DURING THE FIRST WEEK OR AS OFTEN AND SUFFICIENTLY AS NECESSARY TO MAINTAIN MOIST SOIL TO A DEPTH OF 4 INCHES. WATER SOD DURING THE HEAT OF THE DAY TO PREVENT WILTING.
b. AFTER THE FIRST WEEK, SOD WATERING IS REQUIRED AS NECESSARY TO MAINTAIN ADEQUATE MOISTURE CONTENT.
c. DO NOT MOW UNTIL THE SOD IS FIRMLY ROOTED. NO MORE THAN ⅓ OF THE GRASS LEAF MUST BE REMOVED BY THE INITIAL CUTTING OR SUBSEQUENT CUTTINGS. MAINTAIN A GRASS HEIGHT OF AT LEAST 3 INCHES UNLESS OTHERWISE SPECIFIED.

B-4-6 STANDARDS AND SPECIFICATIONS FOR SOIL STABILIZATION MATTING

DEFINITION
MATERIAL USED TO TEMPORARILY OR PERMANENTLY STABILIZE CHANNELS OR STEEP SLOPES UNTIL GROUNDCOVER IS ESTABLISHED.

PURPOSE
TO PROTECT THE SOILS UNTIL VEGETATION IS ESTABLISHED.

CONDITIONS WHERE PRACTICE APPLIES
ON NEWLY SEEDED SURFACES TO PREVENT THE APPLIED SEED FROM WASHING OUT; IN CHANNELS AND ON STEEP SLOPES WHERE THE FLOW HAS EROSIVE VELOCITIES OR CONVEYS CLEAR WATER; ON TEMPORARY SWALES, EARTH DIKES, AND PERIMETER DIKE SWALES AS REQUIRED BY THE RESPECTIVE DESIGN STANDARD; AND, ON STREAM BANKS WHERE MOVING WATER IS LIKELY TO WASH OUT NEW VEGETATIVE PLANTINGS.

MAINTENANCE
VEGETATION MUST BE ESTABLISHED AND MAINTAINED SO THAT THE REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT ARE CONTINUOUSLY MET IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION.

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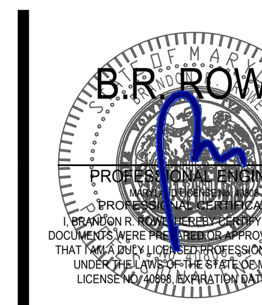

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REVISION DATE:

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PROJECT NO: MDA230040.00
SCALE: AS NOTED
DRAWN BY / CHECKED BY: JCB / MG
CAD I.D.: MDA230040-CNDS-0

C3.3

SEQUENCE OF CONSTRUCTION

1. NOTIFY THE CITY OF FROSTBURG'S INSPECTOR AT 310-304-5942 AT LEAST 48 HOURS PRIOR TO THE START OF CONSTRUCTION. (1 DAY)
2. THE GENERAL CONTRACTOR SHALL NOT COMMENCE ANY LAND DISTURBING ACTIVITIES PRIOR TO OBTAINING A GRADING PERMIT. (1 DAY)
3. THE CONTRACTOR SHALL HOLD A PRE-CONSTRUCTION MEETING WITH THE CONSTRUCTION MANAGER AND THE CITY OF FROSTBURG'S SEDIMENT CONTROL INSPECTOR PRIOR TO COMMENCING ANY LAND DISTURBING ACTIVITIES. NO CONSTRUCTION TO BEGIN UNTIL ALL MATERIALS ARE ON SITE (1 DAY)
4. ALL AREAS WHICH ARE TO BE DISTURBED SHALL BE CLEARLY MARKED IN THE FIELD PRIOR TO CONSTRUCTION. DISTURBED AREAS WITHIN THE SITE WHERE CONSTRUCTION ACTIVITY HAS CEASED SHALL BE PERMANENTLY OR TEMPORARILY STABILIZED WITHIN:
   a. THREE (3) CALENDAR DAYS ON SLOPES GREATER THAN 3:1, ALL WATERWAYS AND TO THE SURFACE OF ALL PERIMETER CONTROLS.
   b. SEVEN (7) CALENDAR DAYS ON ALL OTHER DISTURBED OR GRADED AREAS OF THE PROJECT.
5. INSTALL STABILIZED CONSTRUCTION ENTRANCE, CLEAR FOR AND INSTALL CONTRACTOR STAGING AREA, PERIMETER SUPER SILT FENCE AND TEMPORARY STOCKPILE AREAS AS SHOWN ON THE PHASE I PLANS PLANS. ALL HARD SURFACE PUBLIC ROADS SHALL BE CLEANED AT THE END OF EACH WORK DAY. (1 WEEK)
6. BASED ON FIELD CONDITIONS AND AT THE SEDIMENT INSPECTOR'S DISCRETION THE FOLLOWING STEPS CAN BE COMPLETED IN ANY ORDER DEEMED NECESSARY.
   A. CLEAR AND GRUB AREAS TO BE GRADED. COMPLETE DEMOLITION AS IDENTIFIED ON THE PHASE I PLANS.
   B. BEGIN ROUGH GRADING THE SITE TO PROPOSED SUBGRADE AS IDENTIFIED ON THE PHASE II PLANS. ADJUST SUPER SILT FENCES, STOCKPILE AREAS, AND GRADING TO TIE INTO EXISTING SEDIMENT CONTROL. (1 MONTH)
   C. BEGIN INSTALLING UTILITIES AS SHOWN ON THE PHASE II PLANS. INSTALL INLET PROTECTIONS ON ALL PROPOSED INLETS IMMEDIATELY AFTER INSTALLATION. (2 MONTHS)
   D. BEGIN BUILDING CONSTRUCTION. (4 MONTHS)
   E. BEGIN INSTALLATION OF PROPOSED ROAD BASE COURSE AND CURB AND GUTTER FOR ROADS AS SHOWN ON THE PHASE II PLANS (1 MONTH)
   F. WITH PERMISSION FROM THE SEDIMENT CONTROL INSPECTOR, COMPLETE PHASE II GRADING.
   G. AS THE SITE IS BROUGHT UP TO FINAL GRADES, PERMANENTLY STABILIZE ALL DISTURBED AREAS EXCEPT FOR THE FUTURE UNDERGROUND SAND FILTER FACILITY AREAS WITHIN SEVEN (7) CALENDAR DAYS.
7. AS UPSTREAM DRAINAGE AREAS ARE STABILIZED, FLUSH STORM DRAIN PIPES . INSTALL SWM FACILITIES (UNDERDRAINS, STONE , MEDIA, LANDSCAPING). FLUSH STORM DRAIN SYSTEMS. STABILIZE ALL PROPOSED SLOPES. (1 MONTH)
8. INSTALL PERMANENT LANDSCAPING. (1 WEEKS)
9. AFTER ALL CONSTRUCTION HAS BEEN COMPLETED AND UPON APPROVAL FROM THE CITY OF FROSTBURG'S SEDIMENT CONTROL INSPECTOR, REMOVE SEDIMENT CONTROL MEASURES.
10. NOTIFY CITY OF FROSTBURG'S INSPECTOR AND PERMITS OFFICE FOR FINAL INSPECTION OF THE COMPLETED PROJECT.

NOTES:

1. THE CONTRACTOR SHALL INSPECT AND PROVIDE NECESSARY MAINTENANCE ON ALL SEDIMENT AND EROSION CONTROL STRUCTURES SHOWN HEREON, AFTER EACH RAINFALL AND ON A DAILY BASIS.
2. ALL OF THE PRIVATE ON-LOT FACILITIES WILL BE CONSTRUCTED AT THE SITE DEVELOPMENT PLAN STAGE.
3. THE CONTRACTOR/DEVELOPER OR THEIR AUTHORIZED REPRESENTATIVE SHALL CONTACT THE GARRETT COUNTY SOIL CONSERVATION DISTRICT AT THE FOLLOWING STAGES OF CONSTRUCTION:
   3.1. PRIOR TO THE START OF EARTH DISTURBANCE;
   3.2. UPON COMPLETION OF THE INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING;
   3.3. PRIOR TO THE START OF ANOTHER PHASE OF CONSTRUCTION OR OPENING OF ANOTHER GRADING UNIT; AND
   3.4. PRIOR TO THE REMOVAL OF SEDIMENT CONTROL PRACTICES.

EROSION & SEDIMENT CONTROL NOTES

1. ALL SEDIMENT AND EROSION CONTROL MEASURES SHALL BE DONE AS SET FORTH IN THE MOST CURRENT STATE SEDIMENT AND EROSION CONTROL MANUAL.
2. THOSE AREAS UNDERGOING ACTUAL CONSTRUCTION WILL BE LEFT IN AN UNTREATED OR UNVEGETATED CONDITION FOR A MINIMUM TIME. AREAS SHALL BE PERMANENTLY STABILIZED WITHIN 15 DAYS OF FINAL GRADING AND TEMPORARILY STABILIZED WITHIN 30 DAYS OF INITIAL DISTURBANCE OF THE SOIL. IF THE DISTURBANCE IS WITHIN 100 FEET OF A STREAM OR POND, THE AREA SHALL BE STABILIZED WITHIN 7 DAYS OR PRIOR TO ANY STORM EVENT (THIS WOULD INCLUDE WETLANDS).
3. SEDIMENT BARRIERS (SILT FENCE, STRAW BARRIERS, ETC.) SHOULD BE INSTALLED PRIOR TO ANY SOIL DISTURBANCE OF THE CONTRIBUTING DRAINAGE AREA ABOVE THEM. MULCH NETTING SHALL BE USED TO ANCHOR MULCH IN ALL AREAS WITH SLOPES GREATER THAN 15% AFTER OCTOBER 1ST THE SAME APPLIES FOR ALL SLOPES GREATER THAN 8%.
4. INSTALL SILTATION BARRIER AT TOE OF SLOPE TO FILTER SILT FROM RUNOFF. SEE SILTATION BARRIER DETAILS FOR PROPER INSTALLATION. SILTATION BARRIER WILL REMAIN IN PLACE PER NOTE #5.
5. ALL EROSION CONTROL STRUCTURES WILL BE INSPECTED, REPLACED AND/OR REPAIRED EVERY 7 DAYS AND IMMEDIATELY FOLLOWING ANY SIGNIFICANT RAINFALL OR SNOW MELT OR WHEN NO LONGER SERVICEABLE DUE TO SEDIMENT ACCUMULATION OR DECOMPOSITION. SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH STORM EVENT. THEY MUST BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE HALF THE HEIGHT OF THE BARRIER. SEDIMENT CONTROL DEVICES SHALL REMAIN IN PLACE AND BE MAINTAINED BY THE CONTRACTOR UNTIL AREAS UPSLOPE ARE STABILIZED BY TURF.
6. NO SLOPES, EITHER PERMANENT OR TEMPORARY, SHALL BE STEEPER THAN TWO TO ONE (2:1).
7. IF FINAL SEEDING OF THE DISTURBED AREAS IS NOT COMPLETED 45 DAYS PRIOR TO THE FIRST KILLING FROST, USE TEMPORARY MULCH (DORMANT SEEDING MAY BE ATTEMPTED AS WELL) TO PROTECT THE SITE AND DELAY SEEDING UNTIL THE NEXT RECOMMENDED SEEDING PERIOD.
8. TEMPORARY SEEDING OF DISTURBED AREAS THAT HAVE NOT BEEN FINAL GRADED SHALL BE COMPLETED 45 DAYS PRIOR TO THE FIRST KILLING FROST TO PROTECT FROM SPRING RUNOFF PROBLEMS.
9. DURING THE CONSTRUCTION PHASE, INTERCEPTED SEDIMENT WILL BE RETURNED TO THE SITE AND REGRADED ONTO OPEN AREAS.
10. REVEGETATION MEASURES WILL COMMENCE UPON COMPLETION OF CONSTRUCTION EXCEPT AS NOTED ABOVE. ALL DISTURBED AREAS NOT OTHERWISE STABILIZED WILL BE GRADED, SMOOTHED, AND PREPARED FOR FINAL SEEDING AS FOLLOWS:
   10.1. SIX INCHES OF LOAM WILL BE SPREAD OVER DISTURBED AREAS AND SMOOTHED TO A UNIFORM SURFACE.
   10.2. APPLY LIMESTONE AND FERTILIZER ACCORDING TO SOIL TEST. IF SOIL TESTING IS NOT FEASIBLE ON SMALL OR VARIABLE SITES, OR WHERE TIMING IS CRITICAL, FERTILIZER MAY BE APPLIED AT THE RATE OF 800 LB PER ACRE OR 18.4 LB PER 1,000 SF USING 10-20-20 OR EQUIVALENT. APPLY GROUND LIMESTONE (EQUIVALENT TO 50% CALCIUM PLUS MAGNESIUM OXIDE) AT A RATE OF 3 TONS PER ACRE (138 LB PER1,000 SF).
   10.3. FOLLOWING SEED BED PREPARATION, DITCHES AND BACK SLOPES WILL BE SEEDED TO A MIXTURE OF 47% CREEPING RED FESCUE, 5% REDTOP, AND 48% TALL FESCUE. THE LAWN AREAS WILL BE SEEDED TO A PREMIUM TURF MIXTURE OF 44% KENTUCKY BLUE-GRASS, 44% CREEPING RED FESCUE, AND 12% PERENNIAL RYEGRASS: SEEDING RATE IS 1.03 LBS PER 1,000 SF LAWN QUALITY SOD MAY BE SUBSTITUTED FOR SEED.
   10.4. STRAW MULCH AT THE RATE OF 70-90 LBS PER 1,000 SF. A HYDRO-APPLICATION OF WOOD OR PAPER FIBER SHALL BE APPLIED FOLLOWING SEEDING. A SUITABLE BINDER SUCH AS CURASOL OR RMB PLUS WILL BE USED ON STRAW MULCH FOR WIND CONTROL.
11. ALL TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED ONCE THE SITE IS STABILIZED.
12. WETLANDS WILL BE PROTECTED W/strawBALES AND/OR SILT FENCE INSTALLED AT THE EDGE OF THE WETLAND OR THE BOUNDARY OF WETLAND DISTURBANCE.
13. ALL AREAS WITHIN 100 FEET OF A FLAGGED WETLAND OR STREAM SHALL HAVE AN EXPOSURE WINDOW OF NOT MORE THAN 7 DAYS.
14. ALL AREAS WITHIN 100 FEET OF A FLAGGED WETLAND OR STREAM SHALL FOLLOW APPROPRIATE EROSION CONTROL MEASURES PRIOR TO EACH STORM IF NOT BEING ACTIVELY WORKED,

MULCH

LOCATION	MULCH	RATE (1000 SF)
PROTECT AREA	STRAW	100 POUNDS
WINDY AREA	SHREDDED OR CHOPPED CORNSTALKS STRAW (ANCHORED)*	185-275 POUNDS 100 POUNDS
MODERATE TO HIGH VELOCITY AREAS OR STEEP SLOPES GREATER THAN 3:1	JUTE MESH OR EXCELSIOR MAT	AS REQUIRED
GREATER THAN 3:1	(REFER TO GEOTECHNICAL REPORT FOR FINAL DESIGN REQUIREMENT)	

* A HYDRO-APPLICATION OF WOOD, OR PAPER FIBER MAY BE APPLIED FOLLOWING SEEDING. A SUITABLE BINDER SUCH AS CURASOL OR RMB
PLUS SHALL BE USED ON STRAW MULCH FOR WIND CONTROL.

MULCH ANCHORING

ANCHOR MULCH WITH PEG AND TWINE (1 SQ. YD/BLOCK); MULCH NETTING (AS PER MANUFACTURER); WOOD CELLULOSE FIBER (750 LBS/ACRE); CHEMICAL TACK (AS PER MANUFACTURER'S SPECIFICATIONS); USE OF A SERRATED STRAIGHT DISK. WETTING FOR SMALL AREAS AND ROAD DITCHES MAY BE PERMITTED.

EROSION CONTROL NOTES DURING WINTER CONSTRUCTION

1. WINTER CONSTRUCTION PERIOD: NOVEMBER 1 THROUGH APRIL 15.
2. WINTER EXCAVATION AND EARTHWORK SHALL BE DONE SUCH THAT NO MORE THAN 1 ACRE OF THE SITE IS WITHOUT STABILIZATION AT ANY ONE TIME.
3. EXPOSED AREA SHOULD BE LIMITED TO THAT WHICH CAN BE MULCHED IN ONE DAY PRIOR TO ANY SNOW EVENT.
4. CONTINUATION OF EARTHWORK OPERATION ON ADDITIONAL AREAS SHALL NOT BEGIN UNTIL THE EXPOSED SOIL SURFACE ON THE AREA BEING WORKED HAS BEEN STABILIZED SUCH THAT NO LARGER AREA OF THE SITE IS WITHOUT EROSION CONTROL PROTECTION AS LISTED IN ITEM 2 ABOVE.
5. AN AREA SHALL BE CONSIDERED TO HAVE BEEN STABILIZED WHEN EXPOSED SURFACES HAVE BEEN EITHER MULCHED WITH STRAW OR STRAW AT A RATE OF 100 LB. PER 1,000 SQUARE FEET (WITH OR WITHOUT SEEDING) OR DORMANT SEEDED, MULCHED AND ADEQUATELY ANCHORED BY AN APPROVED ANCHORING TECHNIQUE.
6. BETWEEN THE DATES OF OCTOBER 15 AND APRIL 1ST, LOAM OR SEED WILL NOT BE REQUIRED. DURING PERIODS OF ABOVE FREEZING TEMPERATURES THE SLOPES SHALL BE FINE GRADED AND EITHER PROTECTED WITH MULCH OR TEMPORARILY SEEDED AND MULCHED UNTIL SUCH TIME AS THE FINAL TREATMENT CAN BE APPLIED. IF THE DATE IS AFTER NOVEMBER 1ST AND IF THE EXPOSED AREA HAS BEEN LOAMED, FINAL GRADED AND IS SMOOTH, THEN THE AREA MAY BE DORMANT SEEDED AT A RATE OF 200 - 300% HIGHER THAN SPECIFIED FOR PERMANENT SEED AND THEN MULCHED. IF CONSTRUCTION CONTINUES DURING FREEZING WEATHER, ALL EXPOSED AREAS SHALL BE CONTINUOUSLY GRADED BEFORE FREEZING AND THE SURFACE TEMPORARILY PROTECTED FROM EROSION BY THE APPLICATION OF MULCH. SLOPES SHALL NOT BE LEFT UNEXPOSED OVER THE WINTER OR ANY OTHER EXTENDED TIME OF WORK SUSPENSION UNLESS TREATED IN THE ABOVE MANNER. UNTIL SUCH TIME AS WEATHER CONDITIONS ALLOW DITCHES TO BE FINISHED WITH THE PERMANENT SURFACE TREATMENT, EROSION SHALL BE CONTROLLED BY THE INSTALLATION OF BALES OF straw OR STONE CHECK DAMS IN ACCORDANCE WITH THE STANDARD DETAILS.
7. MULCHING REQUIREMENTS:
8. BETWEEN THE DATES OF NOVEMBER 1ST AND APRIL 15TH ALL MULCH SHALL BE ANCHORED BY EITHER PEG LINE, MULCH NETTING OR WOOD CELLULOSE FIBER.
9. MULCH NETTING SHALL BE USED TO ANCHOR MULCH IN ALL DRAINAGE WAYS WITH A SLOPE GREATER THAN 3% FOR SLOPE EXPOSED TO DIRECT WINDS AND FOR ALL OTHER SLOPES GREATER THAN 8%.
10. MULCH NETTING SHALL BE USED TO ANCHOR MULCH IN ALL AREAS WITH SLOPES GREATER THAN 15% AFTER OCTOBER 1ST THE SAME APPLIES FOR ALL SLOPES GREATER THAN 8%.
11. AFTER NOVEMBER 1ST THE CONTRACTOR SHALL APPLY DORMANT SEEDING OR MULCH AND ANCHORING ON ALL BARE EARTH AT THE END OF EACH WORKING DAY.
12. DURING THE WINTER CONSTRUCTION PERIOD ALL SNOW SHALL BE REMOVED FROM AREAS OF SEEDING AND MULCHING PRIOR TO PLACEMENT.
13. STOCKPILING OF MATERIALS (DIRT, WOOD, CONSTRUCTION MATERIALS, ETC.) MUST REMAIN COVERED AT ALL TIMES TO MINIMIZE ANY DUST PROBLEMS THAT MAY OCCUR WITH ADJACENT PROPERTIES AND TO PROVIDE MAXIMUM PROTECTION AGAINST EROSION RUNOFF.
14. EXISTING CATCH BASIN STRUCTURES SHALL BE PROTECTED UNTIL SUCH TIME AS THEY ARE REMOVED.

B-4-7 STANDARDS AND SPECIFICATIONS FOR HEAVY USE AREA PROTECTION

DEFINITION

THE STABILIZATION OF AREAS FREQUENTLY AND INTENSIVELY USED BY SURFACING WITH SUITABLE MATERIALS (E.G., MULCH AND AGGREGATE).

PURPOSE

TO PROVIDE A STABLE, NON-ERODING SURFACE FOR AREAS FREQUENTLY USED AND TO IMPROVE THE WATER QUALITY FROM THE RUNOFF OF THESE AREAS.

CONDITIONS WHERE PRACTICE APPLIES

THIS PRACTICE APPLIES TO INTENSIVELY USED AREAS (E.G., EQUIPMENT AND MATERIAL STORAGE, STAGING AREAS, HEAVILY USED TRAVEL LANES).

CRITERIA

1. A MINIMUM 4-INCH BASE COURSE OF CRUSHED STONE OR OTHER SUITABLE MATERIALS INCLUDING WOOD CHIPS OVER NONWOVEN GEOTEXTILE SHOULD BE PROVIDED AS SPECIFIED IN SECTION H-1 MATERIALS.
2. SELECT THE STABILIZING MATERIAL BASED ON THE INTENDED USE, DESIRED MAINTENANCE FREQUENCY, AND RUNOFF CONTROL.
3. THE TRANSPORT OF SEDIMENTS, NUTRIENTS, OILS, CHEMICALS, PARTICULATE MATTER ASSOCIATED WITH VEHICULAR TRAFFIC AND EQUIPMENT, AND MATERIAL STORAGE NEEDS TO BE CONSIDERED IN THE SELECTION OF MATERIAL. ADDITIONAL CONTROL MEASURES MAY BE NECESSARY TO CONTROL SOME OF THESE POTENTIAL POLLUTANTS.
4. SURFACE EROSION CAN BE A PROBLEM ON LARGE HEAVY USE AREAS. IN THESE SITUATIONS, MEASURES TO REDUCE THE FLOW LENGTH OF RUNOFF OR EROSIVE VELOCITIES NEED TO BE CONSIDERED.

MAINTENANCE

THE HEAVY USE AREAS MUST BE MAINTAINED IN A CONDITION THAT MINIMIZES EROSION. THIS MAY REQUIRE ADDING SUITABLE MATERIAL AS SPECIFIED ON THE APPROVED PLANS, TO MAINTAIN A CLEAN SURFACE.

B-4-8 STANDARDS AND SPECIFICATIONS FOR STOCKPILE AREA

DEFINITION

A MOUND OR PILE OF SOIL PROTECTED BY APPROPRIATELY DESIGNED EROSION AND SEDIMENT CONTROL MEASURES.

PURPOSE

TO PROVIDE A DESIGNATED LOCATION FOR THE TEMPORARY STORAGE OF SOIL THAT CONTROLS THE POTENTIAL FOR EROSION, SEDIMENTATION, AND CHANGES TO DRAINAGE PATTERNS.

CONDITIONS WHERE PRACTICE APPLIES

STOCKPILE AREAS ARE UTILIZED WHEN IT IS NECESSARY TO SALVAGE AND STORE SOIL FOR LATER USE.

CRITERIA

1. THE STOCKPILE LOCATION AND ALL RELATED SEDIMENT CONTROL PRACTICES MUST BE CLEARLY INDICATED ON THE EROSION AND SEDIMENT CONTROL PLAN.
2. THE FOOTPRINT OF THE STOCKPILE MUST BE SIZED TO ACCOMMODATE THE ANTICIPATED VOLUME OF MATERIAL AND BASED ON A SIDE SLOPE RATIO NO STEEPER THAN 2:1. BENCHING MUST BE PROVIDED IN ACCORDANCE WITH SECTION B-3 LAND GRADING.
3. RUNOFF FROM THE STOCKPILE AREA MUST DRAIN TO A SUITABLE SEDIMENT CONTROL PRACTICE.
4. ACCESS THE STOCKPILE AREA FROM THE UPGRADE SIDE.
5. CLEAR WATER RUNOFF INTO THE STOCKPILE AREA MUST BE MINIMIZED BY USE OF A DIVERSION DEVICE SUCH AS AN EARTH DIKE, TEMPORARY SWALE OR DIVERSION FENCE. PROVISIONS MUST BE MADE FOR DISCHARGING CONCENTRATED FLOW IN A NON-EROSIVE MANNER.
6. WHERE RUNOFF CONCENTRATES ALONG THE TOE OF THE STOCKPILE FILL, AN APPROPRIATE EROSION/SEDIMENT CONTROL PRACTICE MUST BE USED TO INTERCEPT THE DISCHARGE.
7. STOCKPILES MUST BE STABILIZED IN ACCORDANCE WITH THE 3/7 DAY STABILIZATION REQUIREMENT AS WELL AS STANDARD B-4-1 INCREMENTAL STABILIZATION AND STANDARD B-4-4 TEMPORARY STABILIZATION.
8. IF THE STOCKPILE IS LOCATED ON AN IMPERVIOUS SURFACE, A LINER SHOULD BE PROVIDED BELOW THE STOCKPILE TO FACILITATE CLEANUP. STOCKPILES CONTAINING CONTAMINATED MATERIAL MUST BE COVERED WITH IMPERMEABLE SHEETING.

MAINTENANCE

THE STOCKPILE AREA MUST CONTINUOUSLY MEET THE REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION. SIDE SLOPES MUST BE MAINTAINED AT NO STEEPER THAN A 2:1 RATIO. THE STOCKPILE AREA MUST BE KEPT FREE OF EROSION. IF THE VERTICAL HEIGHT OF A STOCKPILE EXCEEDS 20 FEET FOR 2:1 SLOPES, 30 FEET FOR 3:1 SLOPES, OR 40 FEET FOR 4:1 SLOPES, BENCHING MUST BE PROVIDED IN ACCORDANCE WITH SECTION B-3 LAND GRADING.

ALLEGANY COUNTY STANDARD EROSION & SEDIMENT CONTROL NOTES

1. THE CONTRACTOR SHALL PROTECT ALL POINTS OF CONSTRUCTION INGRESS AND EGRESS TO PREVENT THE DEPOSITION OF MATERIALS ONTO PUBLIC ROADS. ALL MATERIALS DEPOSITED ONTO PUBLIC ROADS SHALL BE REMOVED IMMEDIATELY.
2. THE CONTRACTOR SHALL INSPECT DAILY AND MAINTAIN CONTINUOUSLY IN ALL EFFECTIVE OPERATING CONDITION ALL EROSION AND SEDIMENT CONTROL MEASURES UNTIL SUCH TIME AS PERMANENT STABILIZATION OF EXPOSED SOIL OCCURS.
3. WHEN PROPERTY IS BROUGHT TO FINISHED GRADE DURING THE MONTHS OF NOVEMBER THROUGH FEBRUARY, AND PERMANENT STABILIZATION IS FOUND TO BE IMPRACTICAL, TEMPORARY SEED AND ANCHORED STRAW MULCH SHALL BE APPLIED TO DISTURBED AREAS. THE FINAL PERMANENT STABILIZATION OF SUCH PROPERTY SHALL BE APPLIED BY APRIL 15 OR EARLIER IF GROUND AND WEATHER CONDITIONS ALLOW.
4. THE SITE'S APPROVED EROSION AND SEDIMENT CONTROL PLANS SHALL BE AVAILABLE AT THE SITE.
5. THE APPLICANT IS RESPONSIBLE FOR OBTAINING ANY OTHER FEDERAL, STATE, OR LOCAL AUTHORIZATIONS WHICH MAY BE REQUIRED.
6. FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER CONTROLS, DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES GREATER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1); AND SEVEN (7) DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
7. THE APPROVAL OF THIS PLAN MAKES NO REPRESENTATION AS TO THE EXISTENCE OR NONEXISTENCE OF ANY UTILITIES AT THIS SITE. IT IS THE RESPONSIBILITY OF THE LANDOWNERS OR OPERATORS AND CONTRACTORS TO ASSURE THAT NO HAZARD EXISTS OR DAMAGE WILL OCCUR TO UTILITIES. IT IS SUGGESTED THAT MISS UTILITY BE CONTACTED AT: PHONE 1-800-257-7777.

ESC 4 OF 5

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NEW O'REILLY AUTO PARTS STORE
NEW GEORGES CREEK RD
FROSTBURG, MD
EROSION AND SEDIMENT CONTROL NOTES

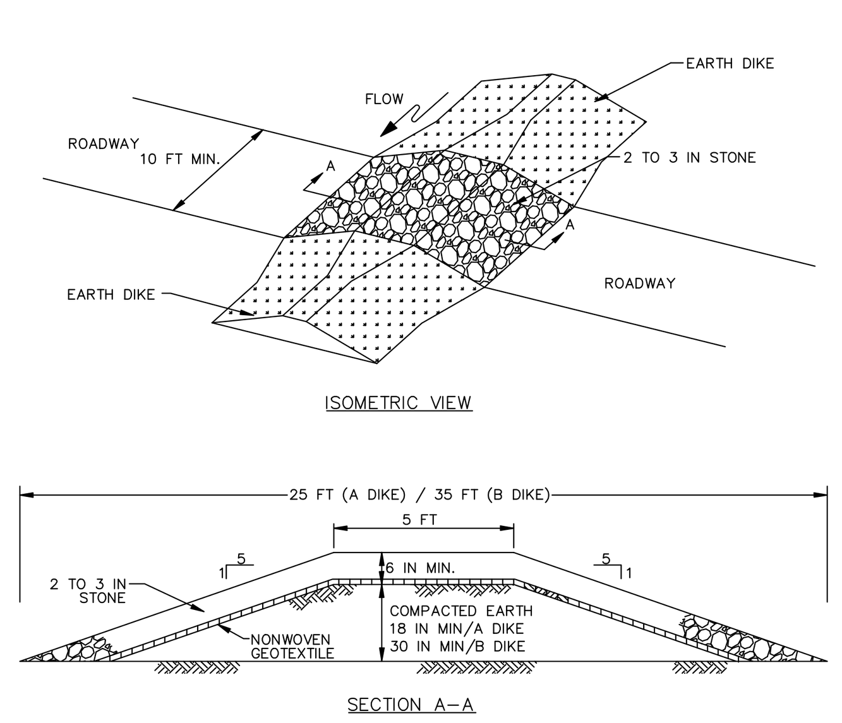
O'Reilly AUTO PARTS
CORPORATE OFFICES
233 SOUTH PATTERSON
SPRINGFIELD, MISSOURI 65802
(417) 862-2674 TELEPHONE

COMM #XXXX
DATE: 04-26-23
REVISION DATE:

C3.4

DETAIL C-8 MOUNTABLE BERM

STANDARD SYMBOL: MB



CONSTRUCTION SPECIFICATIONS

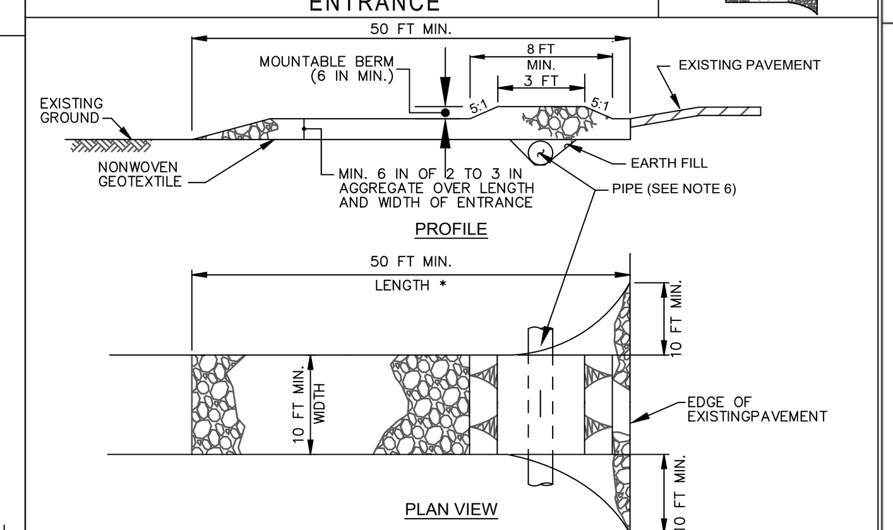
1. USE MINIMUM WIDTH OF 10 FEET TO ALLOW FOR VEHICULAR PASSAGE.
2. PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H–1 MATERIALS, OVER THE EARTH MOUND PRIOR TO PLACING STONE.
3. PLACE 2 TO 3 INCH STONE OR EQUIVALENT RECYCLED CONCRETE AT LEAST 6 INCHES DEEP OVER THE LENGTH AND WIDTH OF THE MOUNTABLE BERM.
4. MAINTAIN LINE, GRADE, AND CROSS SECTION. ADD STONE OR MAKE OTHER REPAIRS AS CONDITIONS DEMAND TO MAINTAIN SPECIFIED DIMENSIONS. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. MAINTAIN POSITIVE DRAINAGE.

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

DETAIL B-1 STABILIZED CONSTRUCTION ENTRANCE

STANDARD SYMBOL: SCE



CONSTRUCTION SPECIFICATIONS

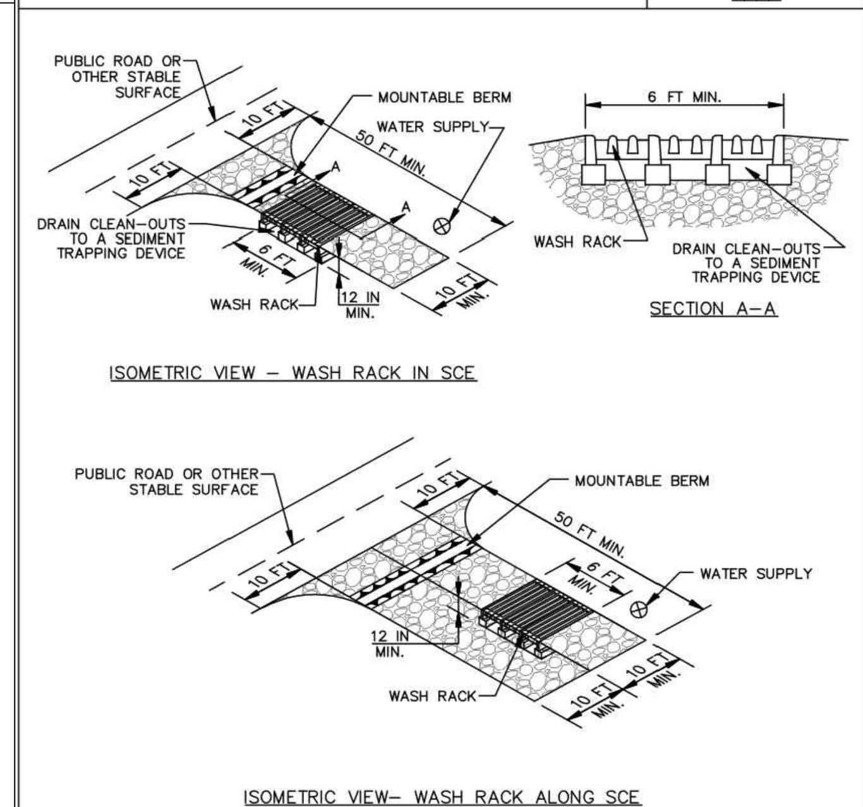
1. PLACE STABILIZED CONSTRUCTION ENTRANCE IN ACCORDANCE WITH THE APPROVED PLAN. VEHICLES MUST TRAVEL OVER THE ENTIRE LENGTH OF THE SCE. USE MINIMUM LENGTH OF 50 FEET (*30 FEET FOR SINGLE RESIDENCE LOT). USE MINIMUM WIDTH OF 10 FEET. FLARE SCE 10 FEET MINIMUM AT THE EXISTING ROAD TO PROVIDE A TURNING 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

DETAIL B-2 WASH RACK OPTION

STANDARD SYMBOL: WR



CONSTRUCTION SPECIFICATIONS

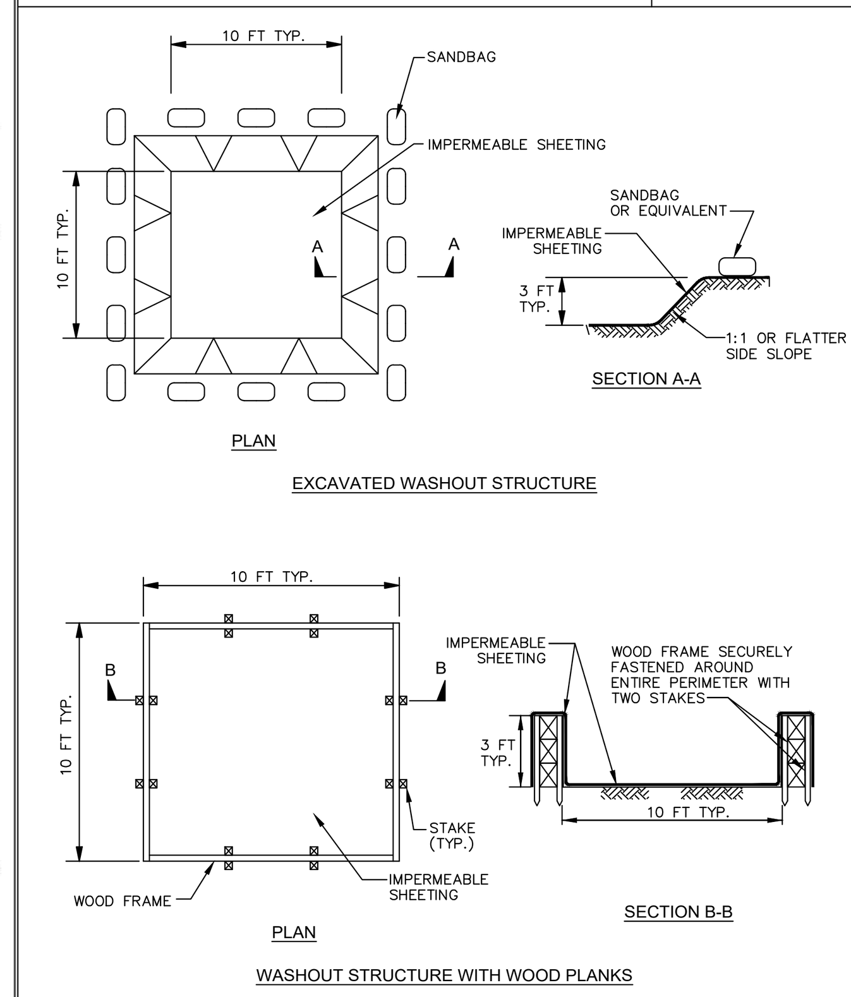
1. USE A WASH RACK DESIGNED AND CONSTRUCTED/MANUFACTURED FOR THE ANTICIPATED TRAFFIC LOADS. CONCRETE, STEEL, OR OTHER MATERIALS ARE ACCEPTABLE. PRE–FABRICATED UNITS SUCH AS CATTLE GUARDS ARE ACCEPTABLE. USE MINIMUM DIMENSION OF 6 FEET x 10 FEET. ORIENT DIRECTION OF RIBS AS SHOWN ON THE DETAIL.
2. INSTALL 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

DETAIL H-6 ONSITE CONCRETE WASHOUT STRUCTURE

STANDARD SYMBOL: CWS



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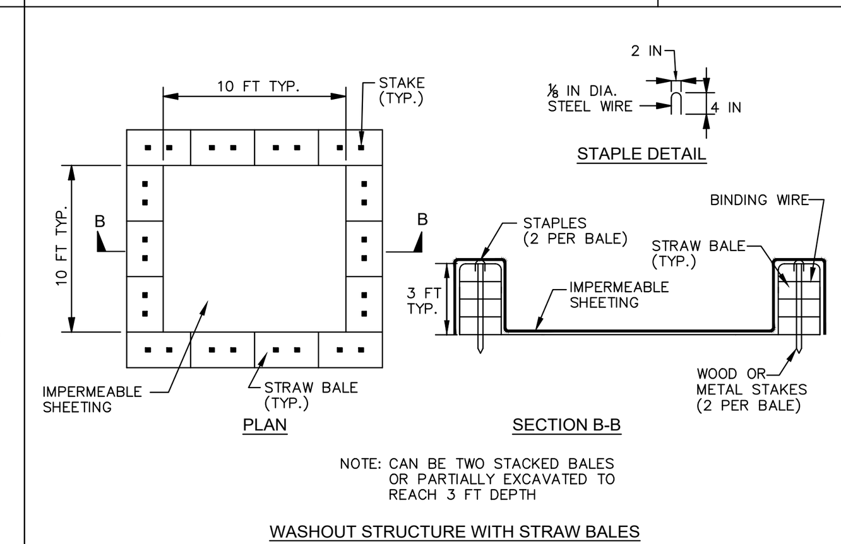
MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

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

DETAIL H-6 ONSITE CONCRETE WASHOUT STRUCTURE

STANDARD SYMBOL: CWS



CONSTRUCTION SPECIFICATIONS

1. LOCATE WASHOUT STRUCTURE A MINIMUM OF 50 FEET AWAY FROM OPEN CHANNELS, STORM DRAIN INLETS, SENSITIVE AREAS, WETLANDS, BUFFERS AND WATER COURSES AND AWAY FROM CONSTRUCTION TRAFFIC.
2. SIZE WASHOUT STRUCTURE FOR VOLUME NECESSARY TO CONTAIN WASH WATER AND SOLIDS AND MAINTAIN AT LEAST 4 INCHES OF FREEBOARD. TYPICAL DIMENSIONS ARE 10 FEET X 10 FEET X 3 FEET DEEP.
3. PREPARE SOIL BASE FREE OF ROCKS OR OTHER DEBRIS THAT MAY CAUSE TEARS OR HOLES IN THE LINER. FOR LINER, USE 10 MIL OR THICKER UV RESISTANT, IMPERMEABLE SHEETING, FREE OF HOLES AND TEARS OR OTHER DEFECTS THAT COMPROMISE IMPERMEABILITY OF THE MATERIAL.
4. PROVIDE A SIGN FOR THE WASHOUT IN CLOSE PROXIMITY TO THE FACILITY.
5. KEEP CONCRETE WASHOUT STRUCTURE WATER TIGHT. REPLACE IMPERMEABLE LINER IF DAMAGED (E.G., RIPPED OR PUNCTURED). EMPTY OR REPLACE WASHOUT STRUCTURE THAT IS 75 PERCENT FULL, AND DISPOSE OF ACCUMULATED MATERIAL PROPERLY. DO NOT REUSE PLASTIC LINER. WET-VACUUM STORED LIQUIDS THAT HAVE NOT EVAPORATED AND DISPOSE OF IN AN APPROVED MANNER. PRIOR TO FORECASTED RAINSTORMS, REMOVE LIQUIDS OR COVER STRUCTURE TO PREVENT OVERFLOWS. REMOVE HARDENED SOLIDS, WHOLE OR BROKEN UP, FOR DISPOSAL OR RECYCLING. MAINTAIN RUNOFF DIVERSION AROUND EXCAVATED WASHOUT STRUCTURE UNTIL STRUCTURE IS REMOVED.

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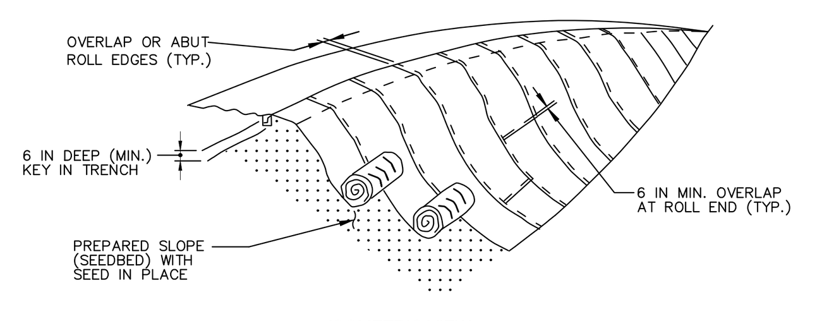
MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

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

DETAIL B-4-6-B TEMPORARY SOIL STABILIZATION MATTING SLOPE APPLICATION

STANDARD SYMBOL: TSSMS – * lb/ft² (* INCLUDE SHEAR STRESS)



CONSTRUCTION SPECIFICATIONS

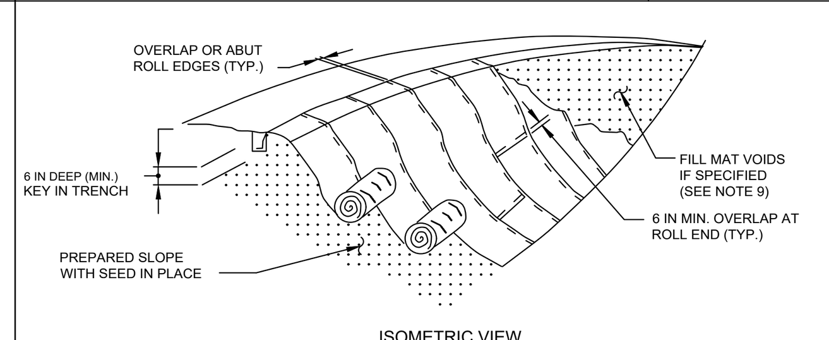
1. USE MATTING THAT HAS A DESIGN VALUE FOR SHEAR STRESS EQUAL TO OR HIGHER THAN THE SHEAR STRESS DESIGNATED ON APPROVED PLANS.
2. USE TEMPORARY SOIL STABILIZATION MATTING MADE OF DEGRADABLE (LASTS 6 MONTHS MINIMUM) NATURAL OR MAN-MADE FIBERS (MOSTLY ORGANIC). MAT MUST HAVE UNIFORM THICKNESS AND DISTRIBUTION 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 & 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

DETAIL B-4-6-D PERMANENT SOIL STABILIZATION MATTING SLOPE APPLICATION

STANDARD SYMBOL: PSSMS – * lb/ft² (* INCLUDE SHEAR STRESS)



CONSTRUCTION SPECIFICATIONS

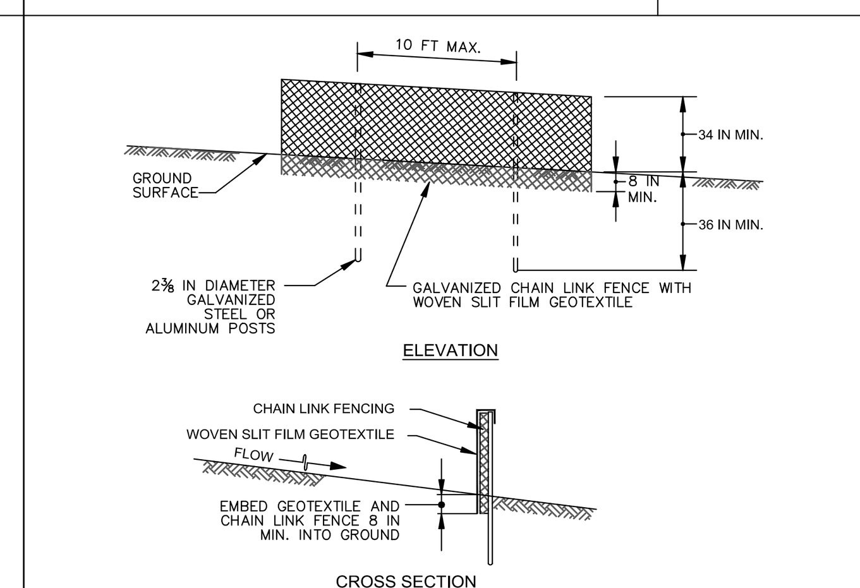
1. USE MATTING THAT HAS A DESIGN VALUE FOR SHEAR STRESS EQUAL TO OR HIGHER THAN THE SHEAR STRESS DESIGNATED ON APPROVED PLANS.
2. USE PERMANENT SOIL STABILIZATION MATTING MADE OF OPEN WEAVE SYNTHETIC, NON-DEGRADABLE FIBERS OR ELEMENTS OF UNIFORM THICKNESS AND DISTRIBUTION THROUGHOUT. CHEMICALS USED IN 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 DOWN SLOPE. 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 DOWNSLOPE 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

DETAIL E-3 SUPER SILT FENCE

STANDARD SYMBOL: SSF



CONSTRUCTION SPECIFICATIONS

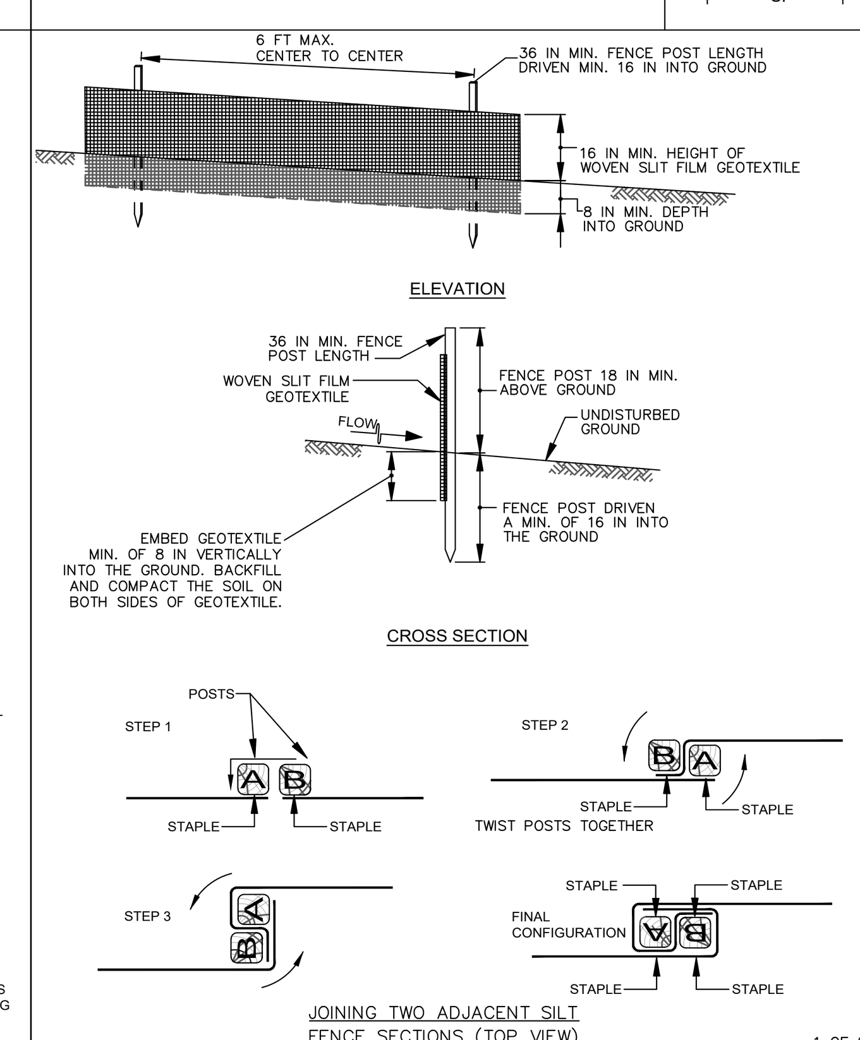
1. INSTALL 2⅜ INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND SIX FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. DRIVE THE POSTS A MINIMUM OF 36 INCHES INTO THE GROUND.
2. FASTEN 9 GAUGE OR HEAVIER GALVANIZED CHAIN LINK FENCE (2⅜ INCH MAXIMUM OPENING) 42 INCHES IN HEIGHT SECURELY TO THE FENCE POSTS WITH WIRE TIES OR HUG RINGS.
3. FASTEN WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS, SECURELY TO THE UPSLOPE SIDE OF CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND CHAIN LINK FENCE A MINIMUM OF 8 INCHES INTO THE GROUND.
4. WHERE ENDS OF THE GEOTEXTILE COME TOGETHER, THE ENDS SHALL BE OVERLAPPED BY 6 INCHES, FOLDED, AND STAPLED TO PREVENT SEDIMENT BY PASS.
5. EXTEND BOTH ENDS OF THE SUPER 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 SUPER SILT FENCE.
6. PROVIDE MANUFACTURER CERTIFICATION TO THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.
7. REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. IF UNDERMINING OCCURS, REINSTALL CHAIN LINK FENCING AND GEOTEXTILE.

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

DETAIL E-1 SILT FENCE

STANDARD SYMBOL: SF



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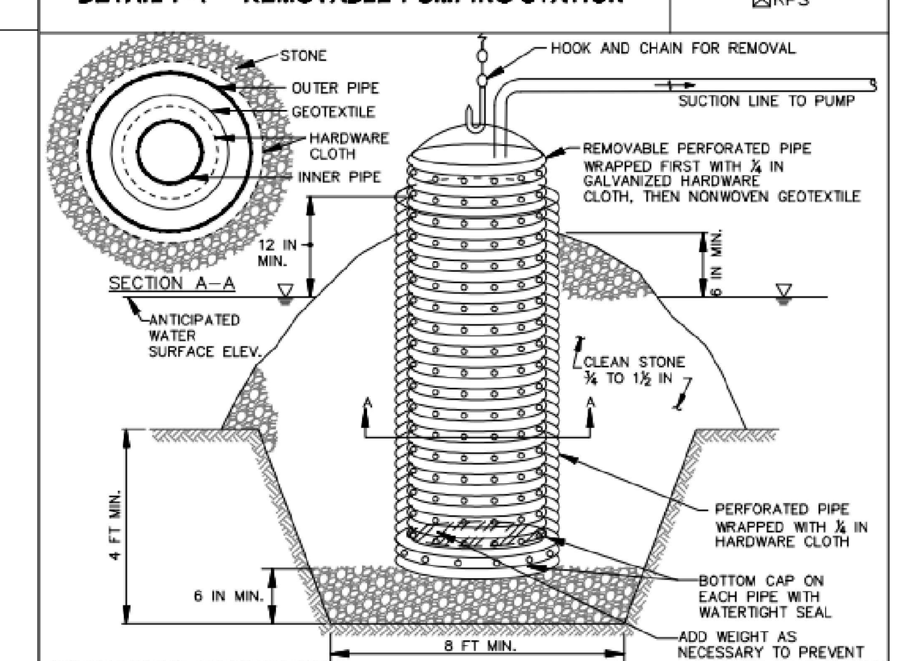
MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

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

DETAIL F-1 REMOVABLE PUMPING STATION

STANDARD SYMBOL: RPS



CONSTRUCTION SPECIFICATIONS

1. USE CORRUGATED METAL OR PLASTIC PIPE WITH 1 INCH DIAMETER PERFORATIONS 6 INCHES ON CENTER.
2. USE A MINIMUM 12 INCH DIAMETER INNER PIPE WITH AN OUTER PIPE A MINIMUM 6 INCHES LARGER IN DIAMETER. BOTTOM OF EACH PIPE MUST BE CAPPED WITH WATERTIGHT SEAL.
3. WRAP EACH PIPE WITH ¼ INCH GALVANIZED HARDWARE CLOTH. ON INNER PIPE WRAP NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H–1 MATERIALS, OVER THE HARDWARE CLOTH.
4. EXCAVATE 8 FEET X 8 FEET X 4 FEET DEEP PIT FOR PIPE PLACEMENT. PLACE CLEAN ¾ TO 1½ INCH STONE OR EQUIVALENT RECYCLED CONCRETE, 6 INCHES IN DEPTH PRIOR TO PIPE PLACEMENT.
5. SET TOP OF INNER AND OUTER PIPES MINIMUM 12 INCHES ABOVE ANTICIPATED WATER SURFACE ELEVATION (OR RISER CREST ELEVATION WHEN DEWATERING A BASIN).
6. BACKFILL PIT AROUND THE OUTER PIPE WITH ¾ TO 1½ INCH CLEAN STONE OR EQUIVALENT RECYCLED CONCRETE AND EXTEND STONE A MINIMUM OF 6 INCHES ABOVE ANTICIPATED WATER SURFACE ELEVATION.
7. DISCHARGE TO A STABLE AREA AT A NONEROSIVE RATE.
8. A REMOVABLE PUMPING STATION REQUIRES FREQUENT MAINTENANCE. IF SYSTEM CLOGS, PULL OUT INNER PIPE AND REPLACE GEOTEXTILE. KEEP POINT OF DISCHARGE FREE OF EROSION.

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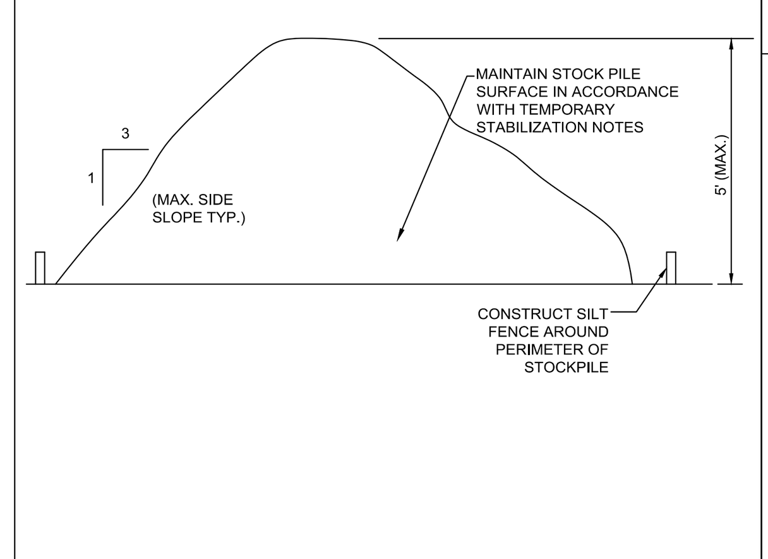
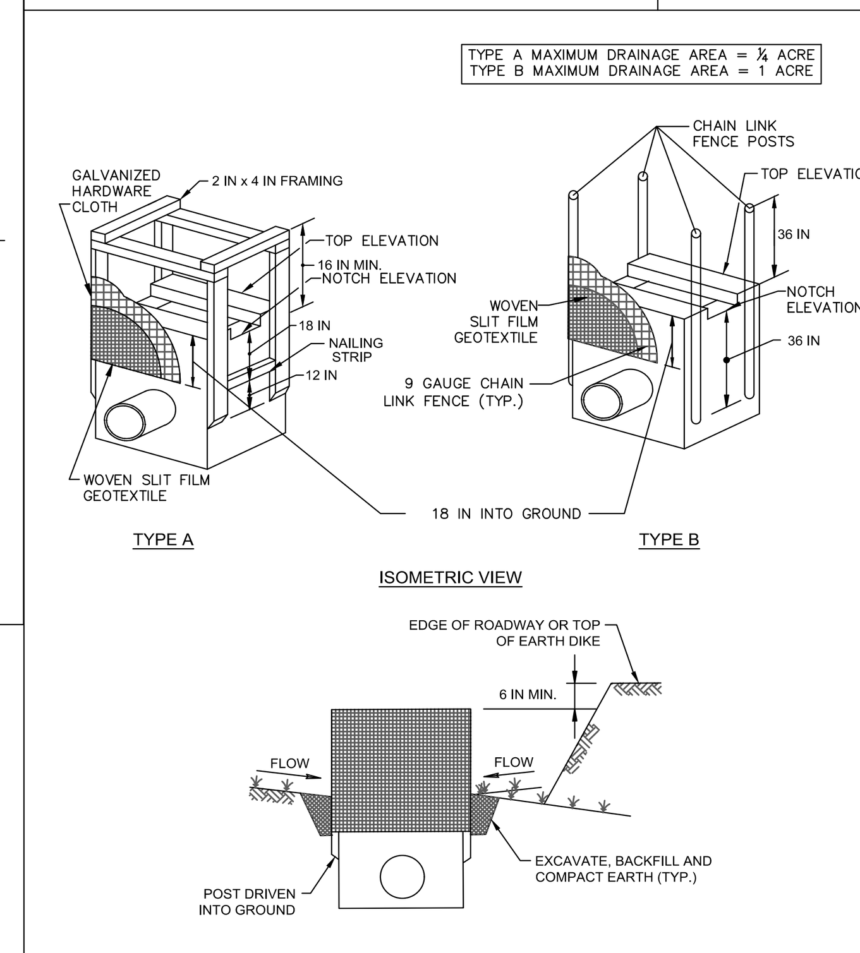


TEMPORARY STOCKPILE DETAIL

NOT TO SCALE

DETAIL E-9-1 STANDARD INLET PROTECTION

STANDARD SYMBOL: SIP



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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

DETAIL E-1 SILT FENCE

STANDARD SYMBOL: SF

CONSTRUCTION SPECIFICATIONS

1. USE WOOD POSTS 1 ¾ X 1 ¾ ± ⅙ 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.

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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

DETAIL E-9-1 STANDARD INLET PROTECTION

STANDARD SYMBOL: SIP

CONSTRUCTION SPECIFICATIONS

1. USE WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS.
2. EXCAVATE COMPLETELY AROUND THE INLET TO A DEPTH OF 18 INCHES BELOW THE NOTCH ELEVATION.
3. FOR TYPE A, USE NOMINAL 2 INCH X 4 INCH CONSTRUCTION GRADE LUMBER POSTS, DRIVEN 1 FOOT INTO THE GROUND AT EACH CORNER OF THE INLET. PLACE NAIL STRIPS BETWEEN THE POSTS ON THE ENDS OF THE INLET. ASSEMBLE THE TOP PORTION OF THE 2X4 FRAME AS SHOWN. STRETCH ½ INCH GALVANIZED HARDWARE CLOTH TIGHTLY AROUND THE FRAME AND FASTEN SECURELY. FASTEN GEOTEXTILE SECURELY TO THE HARDWARE CLOTH WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND HARDWARE CLOTH A MINIMUM OF 18 INCHES BELOW THE WEIR CREST. THE ENDS OF THE GEOTEXTILE MUST MEET AT A POST, BE OVERLAPPED AND FOLDED, THEN FASTENED TO THE POST.

   FOR TYPE B, USE 2⅜ INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND 6 FOOT LENGTH, DRIVEN A MINIMUM OF 36 INCHES BELOW THE WEIR CREST AT EACH CORNER OF THE STRUCTURE. FASTEN 9 GAUGE OR HEAVIER CHAIN LINK FENCE, 42 INCHES IN HEIGHT, SECURELY TO THE FENCE POSTS WITH WIRE TIES. FASTEN GEOTEXTILE SECURELY TO THE CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND CHAIN LINK FENCE A MINIMUM OF 18 INCHES BELOW THE WEIR CREST.
4. BACKFILL AROUND THE INLET IN LOOSE 4 INCH LIFTS AND COMPACT UNTIL SOIL IS LEVEL WITH THE NOTCH ELEVATION ON THE ENDS AND TOP ELEVATION ON THE SIDES.
5. 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.

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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

ESC 5 OF 5

BOHLER//
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PROJECT NO:	MDA230040.00	SCALE:	AS NOTED
DRAWN BY / CHECKED BY:	JCB / MG	CAD I.D.:	MDA230040-CNDS-0

B.R. ROWE
PROFESSIONAL ENGINEER
PROFESSIONAL CERTIFICATION
I, BRANDON R. ROWE, 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. 40998, EXPIRATION DATE: 7/3/2023

THOMAS A. LUNDBERG
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417.862.0558
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e-mail: architect@esterlyschneider.com

PROJECT:
NEW O'REILLY AUTO PARTS STORE
NEW GEORGES CREEK RD
FROSTBURG, MD

EROSION AND SEDIMENT CONTROL DETAILS

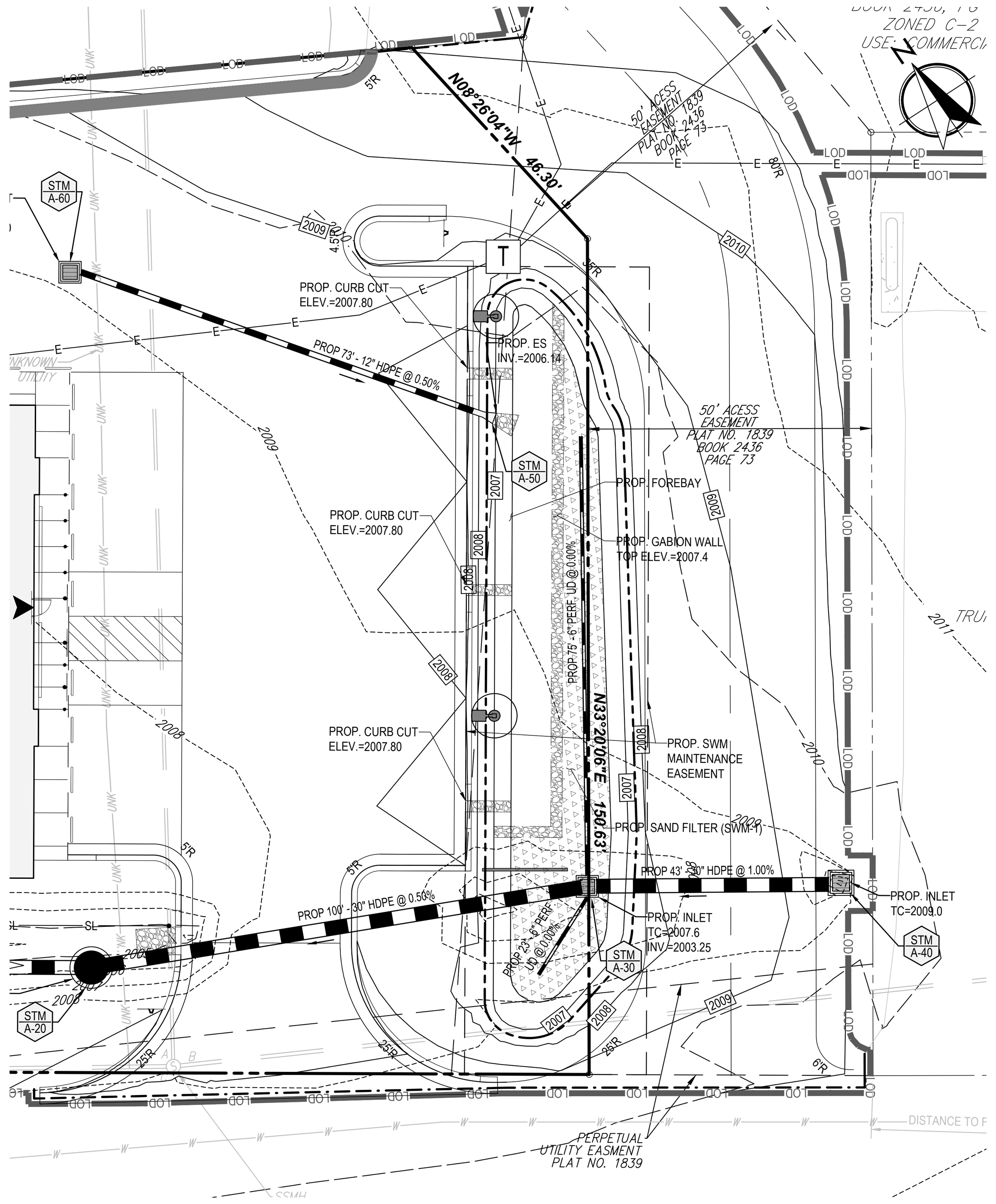
O'Reilly AUTO PARTS
CORPORATE OFFICES
233 SOUTH PATTERSON
SPRINGFIELD, MISSOURI 65802
(417) 862-2674 TELEPHONE

COMM #XXXX

DATE: 04-26-23

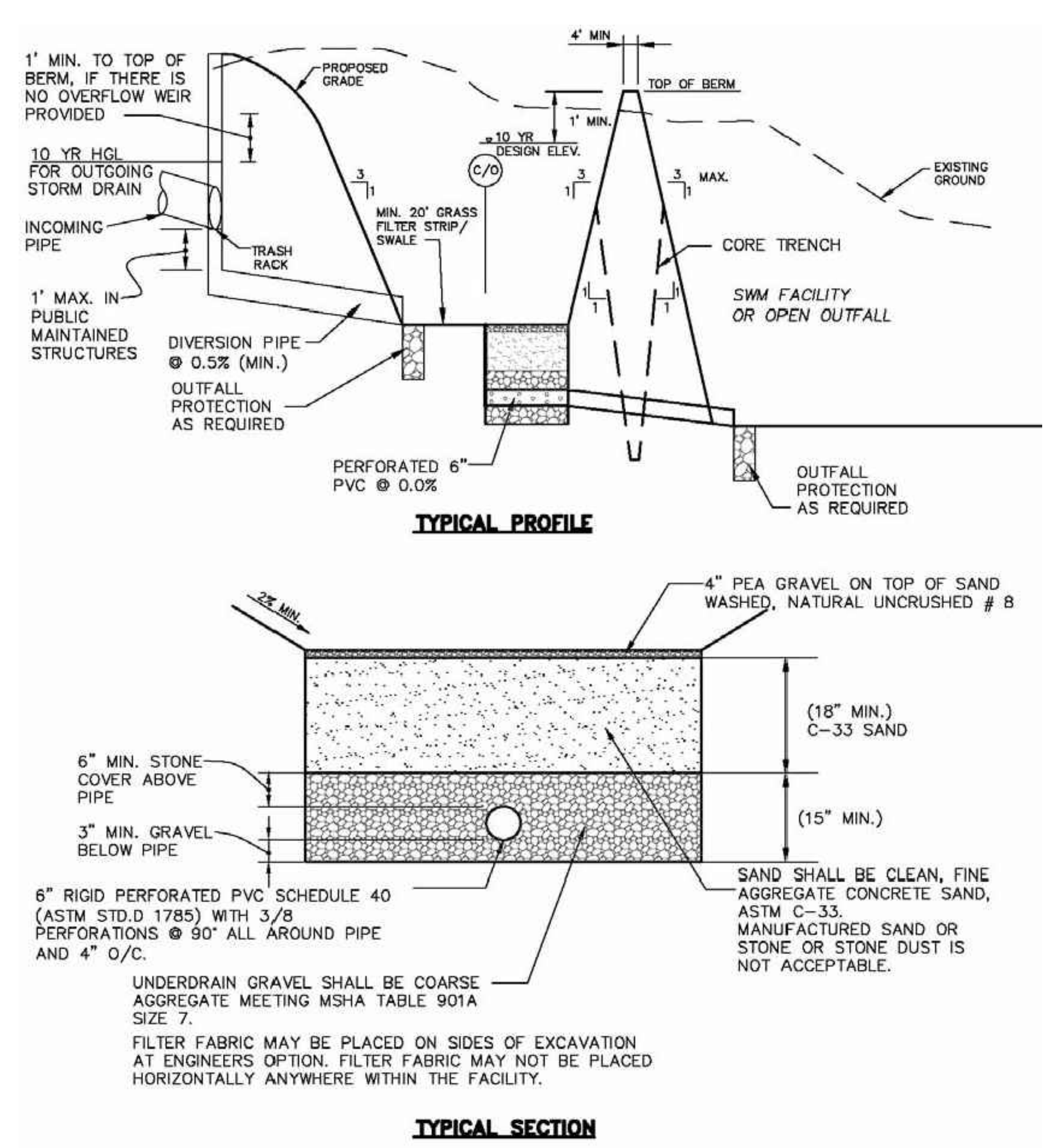
REVISION DATE:

C3.5



1 SWM / BMP PLAN AND DETAILS

C3.6 SCALE: 1" = 20'-0"



2 SWM / BMP TYPICAL SAND FILTER DETAIL

C3.6 SCALE: NONE

B.3.A SAND FILTER SPECIFICATIONS

1. MATERIAL SPECIFICATIONS FOR SAND FILTERS

THE ALLOWABLE MATERIALS FOR SAND FILTER CONSTRUCTION ARE DETAILED IN TABLE B.3.1.

2. SAND FILTER TESTING SPECIFICATIONS

UNDERGROUND SAND FILTERS, FACILITIES WITHIN SENSITIVE GROUNDWATER AQUIFERS, AND FILTERS DESIGNED TO SERVE URBAN HOT SPOTS ARE TO BE TESTED FOR WATER TIGHTNESS PRIOR TO PLACEMENT OF FILTER MEDIA. ENTRANCES AND EXITS SHOULD BE PLUGGED AND THE SYSTEM COMPLETELY FILLED WITH WATER TO DEMONSTRATE WATER TIGHTNESS. WATER TIGHTNESS MEANS NO LEAKAGE FOR A PERIOD OF 8 HOURS.

ALL OVERFLOW WEIRS, MULTIPLE ORIFICES AND FLOW DISTRIBUTION SLOTS ARE TO BE FIELD-TESTED TO VERIFY ADEQUATE DISTRIBUTION OF FLOWS.

3. SAND FILTER CONSTRUCTION SPECIFICATIONS

PROVIDE SUFFICIENT MAINTENANCE ACCESS (I.E., 12-FOOT-WIDE ROAD WITH LEGALLY RECORDED EASEMENT). VEGETATED ACCESS SLOPES ARE TO BE A MAXIMUM OF 10%; GRAVEL SLOPES TO 15%; PAVED SLOPES TO 25%.

ABSOLUTELY NO RUNOFF IS TO ENTER THE FILTER UNTIL ALL CONTRIBUTING DRAINAGE AREAS HAVE BEEN STABILIZED.

SURFACE OF FILTER BED IS TO BE LEVEL.

ALL UNDERGROUND SAND FILTERS SHOULD BE CLEARLY DELINEATED WITH SIGNS SO THAT THEY MAY BE LOCATED WHEN MAINTENANCE IS DUE.

SURFACE SAND FILTERS MAY BE PLANTED WITH APPROPRIATE GRASSES; SEE APPENDIX A.

"POCKET" SAND FILTERS (AND RESIDENTIAL BIORETENTION FACILITIES TREATING AREAS LARGER THAN AN ACRE) SHALL BE SIZED WITH A STONE "WINDOW" THAT COVERS APPROXIMATELY 10% OF THE FILTER AREA. THIS "WINDOW" SHALL BE FILLED PEA GRAVEL (3/4 INCH STONE).

4. SPECIFICATIONS PERTAINING TO UNDERGROUND SAND FILTERS (F-2)

PROVIDE MANHOLE AND/OR GRATES TO ALL UNDERGROUND AND BELOW GRADE STRUCTURES. MANHOLES SHALL BE IN COMPLIANCE WITH STANDARD SPECIFICATIONS FOR EACH COUNTY BUT DIAMETERS SHOULD BE 30" MINIMUM (TO COMPLY WITH OSHA CONFINED SPACE REQUIREMENTS). ALUMINUM AND STEEL LOUVERED DOORS ARE ALSO ACCEPTABLE. TEN INCH WIDE (MINIMUM) MANHOLE STEPS (12" O.C.) SHALL BE CAST IN PLACE OR DRILLED AND MORTARED INTO THE WALL BELOW EACH MANHOLE. A 5' MINIMUM HEIGHT CLEARANCE (FROM THE TOP OF THE SAND LAYER TO THE BOTTOM OF THE UPPER/SURFACE SLAB) IS REQUIRED FOR ALL PERMANENT UNDERGROUND STRUCTURES. LIFT RINGS ARE TO BE SUPPLIED TO REMOVE/REPLACE TOP SLABS ON PRE-FABRICATED STRUCTURES. MANHOLE COVERS SHOULD ALLOW FOR PROPER VENTILATION.

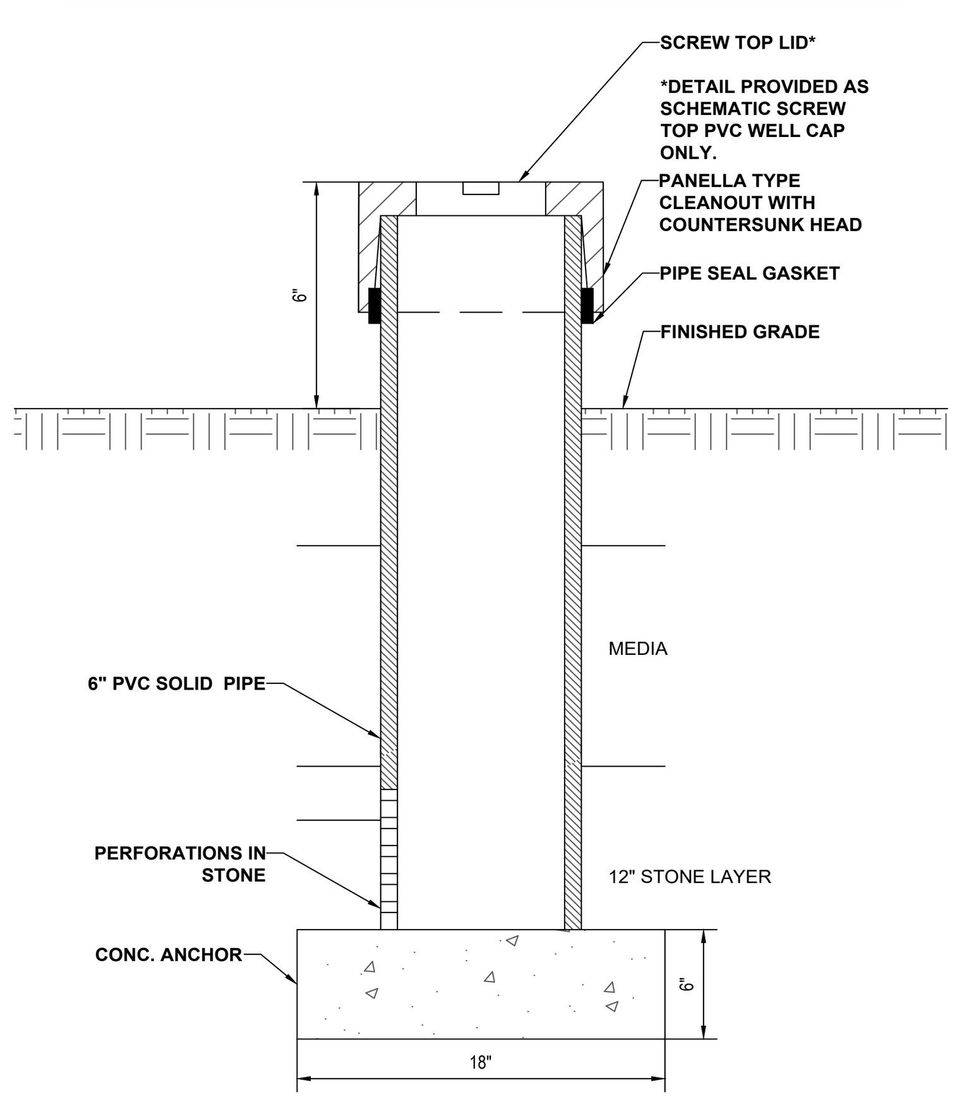
UNDERGROUND SAND FILTERS SHOULD BE CONSTRUCTED WITH A GATE VALVE LOCATED JUST ABOVE THE TOP OF THE FILTER BED FOR DEWATERING IN THE EVENT THAT CLOGGING OCCURS.

UNDERGROUND SAND BEDS SHALL BE PROTECTED FROM TRASH ACCUMULATION BY A WIDE MESH GEOTEXTILE SCREEN TO BE PLACED ON THE SURFACE OF THE SAND BED; SCREEN IS TO BE ROLLED UP, REMOVED, CLEANED AND RE-INSTALLED DURING MAINTENANCE OPERATIONS.

TABLE B.3.1 MATERIAL SPECIFICATIONS FOR SAND FILTERS

MATERIAL	SPECIFICATION/TEST METHOD	SIZE	NOTES
SAND	CLEAN AASHTO-M-6 OR ASTM-C-33 CONCRETE SAND	0.02" TO 0.04"	SAND SUBSTITUTIONS 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.
PEAT	ASH CONTENT: < 15% PH RANGE: 5.2 TO 4.9 LOOSE BULK DENSITY 0.12 TO 0.15 G/CC	N/A	THE MATERIAL MUST BE REED-SEDGE HEMIC PEAT, SHREDDED, UNCOMPACTED, UNIFORM, AND CLEAN.
LEAF COMPOST		N/A	
UNDERDRAIN GRAVEL	AASHTO-M-43	0.375" TO 0.75"	
GEOTEXTILE FABRIC (IF REQUIRED)	ASTM-D-4833 (PUNCTURE STRENGTH - 125 LB.) ASTM-D-4632 (TENSILE STRENGTH - 300 LB.)	0.08" THICK EQUIVALENT OPENING SIZE OF #80 SIEVE	MUST MAINTAIN 125 GPM PER SQ. FT. FLOW RATE. NOTE: A 4" PEA GRAVEL LAYER MAY BE SUBSTITUTED FOR GEOTEXTILES MEANT TO "SEPARATE" SAND FILTER LAYER
IMPERMEABLE LINER (IF REQUIRED)	ASTM-D-4833 (PUNCTURE STRENGTH -125 LB.) ASTM-D-4632 (TENSILE STRENGTH - 300 LB.)	30 MIL THICKNESS	LINER TO BE ULTRAVIOLET RESISTANT. A GEOTEXTILE FABRIC SHOULD BE USED TO PROTECT THE LINER FROM PUNCTURE
UNDERDRAIN PIPING	F 758, TYPE PS 28 OR AASHTO-M-278	4" - 6" RIGID SCHEDULE 40 PVC OR SDR35	3/8" PERF. @ 6" ON CENTER, 4 HOLES PER ROW; MINIMUM OF 3" OF GRAVEL OVER PIPES; NOT NECESSARY UNDERNEATH PIPES
CONCRETE (CAST-IN-PLACE)	MSHA STANDARDS AND SPECS. SECTION 902, MIX NO. 3, F'C = 3500 PSI, 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 PRECAST) NOT USING PREVIOUSLY APPROVED STATE OR LOCAL STANDARDS REQUIRES DESIGN DRAWINGS SEALED AND APPROVED BY A PROFESSIONAL STRUCTURAL ENGINEER LICENSED IN THE STATE OF MARYLAND
CONCRETE (PRE-CAST)	PER PRE-CAST MANUFACTURER	N/A	SEE ABOVE NOTE
NON-REBAR STEEL	ASTM A-36	N/A	STRUCTURAL STEEL TO BE HOT-DIPPED GALVANIZED ASTM-A-123

APPENDIX D.8 MISCELLANEOUS DETAILS FOR COMPLIANCE WITH PERFORMANCE CRITERIA



OBSERVATION WELL DETAIL

EACH OBSERVATION WELL/CLEANOUT MUST INCLUDE THE FOLLOWING:

1. FOR AN UNDERGROUND FLUSH MOUNTED OBSERVATION WELL/CLEANOUT, PROVIDE A TUBE MADE OF NON-CORROSIVE MATERIAL, SCHEDULE 40 OR EQUAL, AT LEAST THREE FEET LONG WITH AN INSIDE DIAMETER OF AT LEAST 6 INCHES.

2. THE TUBE SHALL HAVE A FACTORY ATTACHED CAST IRON OR HIGH IMPACT PLASTIC COLLAR WITH RIBS TO PREVENT ROTATION WHEN REMOVING SCREW TOP LID. THE SCREW TOP SHALL BE CAST IRON OR HIGH IMPACT PLASTIC THAT WILL WITHSTAND ULTRA-VIOLET RAYS.

3. OBSERVATION WELL TO EXTEND 6" ABOVE THE TOP OF MULCH. THE 6" PVC PIPE IS TO BE PERFORATED WITH 3/8" PERFORATIONS AT 6" ON CENTER, 4 PER ROW WITHIN THE STONE LAYER.

NOTE: WELL CAP MUST BE PERMANENTLY MARKED WITH AS-BUILT DEPTH TO INVERT.

D.8.5

INFILTRATION AND FILTER SYSTEM CONSTRUCTION SPECIFICATIONS

INFILTRATION AND FILTER SYSTEMS EITHER TAKE ADVANTAGE OF EXISTING PERMEABLE SOILS OR CREATE A PERMEABLE MEDIUM SUCH AS SAND FOR WC1. AND RE V. IN SOME INSTANCES WHERE PERMEABILITY IS GREAT, THESE FACILITIES MAY BE USED FOR QP AS WELL. THE MOST COMMON SYSTEMS INCLUDE INFILTRATION TRENCHES, INFILTRATION BASINS, SAND FILTERS, AND ORGANIC FILTERS.

WHEN PROPERLY PLANTED VEGETATION WILL THRIVE AND ENHANCE THE FUNCTIONING OF THESE SYSTEMS. FOR EXAMPLE, PRE-TREATMENT BUFFERS WILL TRAP SEDIMENTS THAT OFTEN ARE BOUND WITH PHOSPHOROUS AND METALS. VEGETATION PLANTED IN THE FACILITY WILL AID IN NUTRIENT UPTAKE AND WATER STORAGE. ADDITIONALLY, PLANT ROOTS WILL PROVIDE ARTERIES FOR STORMWATER TO PERMEATE SOIL FOR GROUNDWATER RECHARGE. FINALLY, SUCCESSFUL PLANTINGS PROVIDE AESTHETIC VALUE AND WILDLIFE HABITAT MAKING THESE FACILITIES MORE DESIRABLE TO THE PUBLIC.

DESIGN CONSTRAINTS:

- PLANTING BUFFER STRIPS OF AT LEAST 20 FEET WILL CAUSE SEDIMENTS TO SETTLE OUT BEFORE REACHING THE FACILITY, THEREBY REDUCING THE POSSIBILITY OF CLOGGING.
- DETERMINE AREAS THAT WILL BE SATURATED WITH WATER AND WATER TABLE DEPTH SO THAT APPROPRIATE PLANTS MAY BE SELECTED (HYDROLOGY WILL BE SIMILAR TO BIORETENTION FACILITIES. SEE FIGURE A5 AND TABLE A4 FOR PLANTING MATERIAL GUIDANCE).
- PLANTS KNOWN TO SEND DOWN DEEP TAPROOTS SHOULD BE AVOIDED IN SYSTEMS WHERE FILTER FABRIC IS USED AS PART OF FACILITY DESIGN.
- TEST SOIL CONDITIONS TO DETERMINE IF SOIL AMENDMENTS ARE NECESSARY.
- PLANTS SHALL BE LOCATED SO THAT ACCESS IS POSSIBLE FOR STRUCTURE MAINTENANCE.
- STABILIZE HEAVY FLOW AREAS WITH EROSION CONTROL MATS OR SOD.
- TEMPORARILY DIVERT FLOWS FROM SEEDED AREAS UNTIL VEGETATION IS ESTABLISHED.
- SEE TABLE A5 FOR ADDITIONAL DESIGN CONSIDERATIONS.

BIO-RETENTION

SOIL BED CHARACTERISTICS

THE CHARACTERISTICS OF THE SOIL FOR THE BIORETENTION FACILITY ARE PERHAPS AS IMPORTANT AS THE FACILITY LOCATION, SIZE, AND TREATMENT VOLUME. THE SOIL MUST BE PERMEABLE ENOUGH TO ALLOW RUNOFF TO FILTER THROUGH THE MEDIA, WHILE HAVING CHARACTERISTICS SUITABLE TO PROMOTE AND SUSTAIN A ROBUST VEGETATIVE COVER CROP. IN ADDITION, MUCH OF THE NUTRIENT POLLUTANT UPTAKE (NITROGEN AND PHOSPHORUS) IS ACCOMPLISHED THROUGH ABSORPTION AND MICROBIAL ACTIVITY WITHIN THE SOIL PROFILE. THEREFORE, SOILS MUST BALANCE THEIR CHEMICAL AND PHYSICAL PROPERTIES TO SUPPORT BIOTIC COMMUNITIES ABOVE AND BELOW GROUND.

THE PLANTING SOIL SHOULD BE A SANDY LOAM, LOAMY SAND, LOAM (USDA), OR A LOAM/SAND MIX (SHOULD CONTAIN A MINIMUM 35 TO 60% SAND, BY VOLUME). THE CLAY CONTENT FOR THESE SOILS SHOULD BE LESS THAN 25% BY VOLUME [ENVIRONMENTAL QUALITY RESOURCES (EQR), 1996; ENGINEERING TECHNOLOGY INC. AND BIOHABITATS, INC. (ETAB), 19931. SOILS SHOULD FALL WITHIN THE SM, ML, SC CLASSIFICATIONS OR THE UNIFIED SOIL CLASSIFICATION SYSTEM (USCS). A PERMEABILITY OF AT LEAST 1.0 FEET PER DAY (.5"/HR) IS REQUIRED (A CONSERVATIVE VALUE OF 0.5 FEET PER DAY IS USED FOR DESIGN). THE SOIL SHOULD BE FREE OF STONES, STUMPS, ROOTS, OR OTHER WOODY MATERIAL OVER 1" IN DIAMETER. BRUSH OR SEEDS FROM NOXIOUS WEEDS (E.G., JOHNSON GRASS, MUGWORT, NUTSEDGE, AND CANADA THISTLE OR OTHER NOXIOUS WEEDS AS SPECIFIED UNDER COMAR 15.08.01.05.) SHOULD NOT BE PRESENT IN THE SOILS. PLACEMENT OF THE PLANTING SOIL SHOULD BE IN 12 TO 18 LIFTS THAT ARE LOOSELY COMPACTED (TAMPED LIGHTLY WITH A BACKHOE BUCKET OR TRAVERSED BY DOZER TRACKS). THE SPECIFIC CHARACTERISTICS ARE PRESENTED IN TABLE A.3.

TABLE A.3 PLANTING SOIL CHARACTERISTICS

PARAMETER	VALUE
PH RANGE	5.2 TO 7.00
ORGANIC MATTER	1.5 TO 4.0% (BY WEIGHT)
MAGNESIUM	35 LBS. PER ACRE. MINIMUM
PHOSPHORUS (PHOSPHATE - P205)	75 LBS. PER ACRE. MINIMUM
POTASSIUM (POTASH - 1(K20)	85 LBS. PER ACRE. MINIMUM
SOLUBLE SALTS	500 PPM
CLAY	10 TO 25%
SILT	30 TO 55%
SAND	35 TO 60%

MULCH LAYER

THE MULCH LAYER PLAYS AN IMPORTANT ROLE IN THE PERFORMANCE OF THE BIORETENTION SYSTEM. THE MULCH LAYER HELPS MAINTAIN SOIL MOISTURE AND AVOIDS SURFACE SEALING, WHICH REDUCES PERMEABILITY. MULCH HELPS PREVENT EROSION, AND PROVIDES A MICROENVIRONMENT SUITABLE FOR SOIL BIOTA AT THE MULCH/SOIL INTERFACE. IT ALSO SERVES AS A PRETREATMENT LAYER, TRAPPING THE FINER SEDIMENTS, WHICH REMAIN SUSPENDED AFTER THE PRIMARY PRETREATMENT.

THE MULCH LAYER SHOULD BE STANDARD LANDSCAPE STYLE, SINGLE OR DOUBLE SHREDDED HARDWOOD MULCH OR CHIPS. THE MULCH LAYER SHOULD BE WELL AGED (STOCKPILED OR STORED FOR AT LEAST 12 MONTHS), UNIFORM IN COLOR, AND FREE OF OTHER MATERIALS, SUCH AS WEED SEEDS, SOIL, ROOTS, ETC. THE MULCH SHOULD BE APPLIED TO A MAXIMUM DEPTH OF THREE INCHES. GRASS CLIPPINGS SHOULD NOT BE USED AS A MULCH MATERIAL.

PLANTING GUIDANCE

PLANT MATERIAL SELECTION SHOULD BE BASED ON THE GOAL OF SIMULATING A TERRESTRIAL FORESTED COMMUNITY OF NATIVE SPECIES. BIORETENTION SIMULATES AN UPLAND-SPECIES ECOSYSTEM. THE COMMUNITY SHOULD BE DOMINATED BY TREES, BUT HAVE A DISTINCT COMMUNITY OF UNDERSTORY TREES, SHRUBS AND HERBACEOUS MATERIALS. BY CREATING A DIVERSE, DENSE PLANT COVER, A BIORETENTION FACILITY WILL BE ABLE TO TREAT STORMWATER RUNOFF AND WITHSTAND URBAN STRESSES FROM INSECTS, DISEASE, DROUGHT, TEMPERATURE, WIND AND EXPOSURE.

THE PROPER SELECTION AND INSTALLATION OF PLANT MATERIALS IS KEY TO A SUCCESSFUL SYSTEM. THERE ARE ESSENTIALLY THREE ZONES WITHIN A BIORETENTION FACILITY (FIGURE A5). THE LOWEST ELEVATION SUPPORTS PLANT SPECIES ADAPTED TO STANDING AND FLUCTUATING WATER LEVELS. THE MIDDLE ELEVATION SUPPORTS PLANTS THAT LIKE DRIER SOIL CONDITIONS, BUT CAN STILL TOLERATE OCCASIONAL INUNDATION BY WATER. THE OUTER EDGE IS THE HIGHEST ELEVATION AND GENERALLY SUPPORTS PLANTS ADAPTED TO DRYER CONDITIONS. A SAMPLE OF APPROPRIATE PLANT MATERIALS FOR BIORETENTION FACILITIES ARE INCLUDED IN TABLE A4. THE LAYOUT OF PLANT MATERIAL SHOULD BE FLEXIBLE, BUT SHOULD FOLLOW THE GENERAL PRINCIPALS DESCRIBED IN TABLE A5. THE OBJECTIVE IS TO HAVE A SYSTEM, WHICH RESEMBLES A RANDOM, AND NATURAL PLANT LAYOUT, WHILE MAINTAINING OPTIMAL CONDITIONS FOR PLANT ESTABLISHMENT AND GROWTH. FOR A MORE EXTENSIVE BIORETENTION PLAN, CONSULT ETAB, 1993 OR CLAYTOR AND SCHUELER, 1997.

OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED SURFACE STORMWATER FILTRATION SYSTEMS (F-1, F-4, AND F-5)

1. The stormwater wetland facility shall be inspected annually and after major storms. Inspections shall be performed during wet weather to determine if the facility is functioning properly.
2. The top and side slopes of the embankment shall be mowed a minimum of once per year, when vegetation reaches 18" in height or as needed.
3. Filters that have a grass cover shall be mowed a minimum of three (3) times per growing season to maintain a maximum grass height of less than 12 inches.
4. Debris and litter shall be removed during regular mowing operations and as needed.
5. Visible signs of erosion in the facility shall be repaired as soon as it is noticed.
6. Remove silt when it exceeds four (4) inches deep in the forebay.
7. When water ponds on the surface of the filter bed for more than 72 hours, the top few inches of discolored material shall be replaced with fresh material. Proper cleaning and disposal of the removed materials and liquid must be followed by the owner.
8. A logbook shall be maintained to determine the rate at which the facility drains.
9. The maintenance logbook shall be available to Howard County for inspection to insure compliance with operation and maintenance criteria.
10. Once the performance characteristics of the infiltration system have been verified, the monitoring schedule can be reduced to an annual basis unless the performance data indicates that a more frequent schedule is required.

1"= 20'

CONSTRUCTION NORTH

SWM 1 OF 3

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NEW GEORGES CREEK RD
FROSTBURG, MD

SWM / BMP PLAN AND DETAILS

O'Reilly AUTO PARTS
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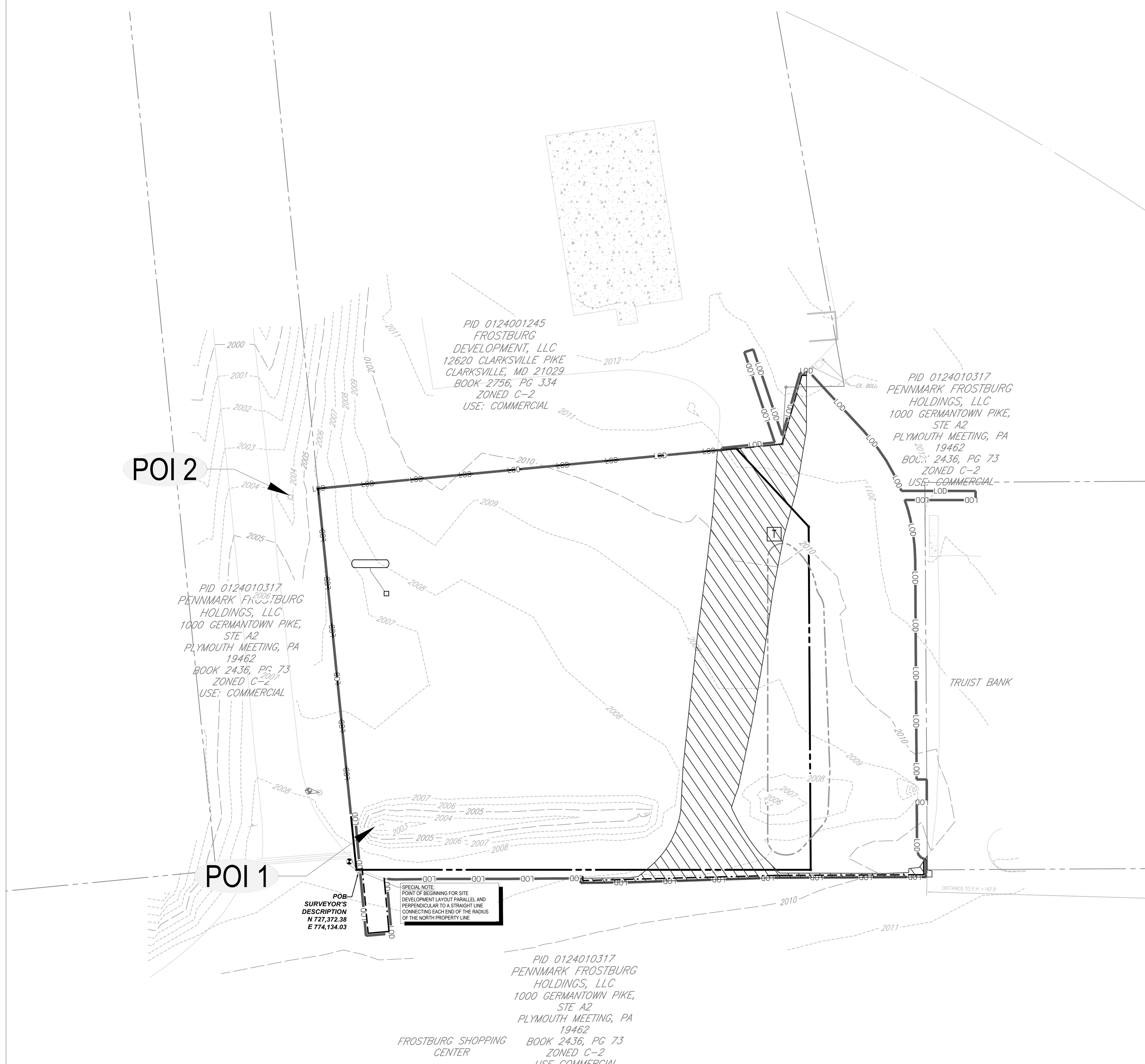
COMM #XXXX

DATE: 04-26-23

REVISION DATE:

C3.6

ESD DESIGN SUMMARY TABLE	
LIMIT OF DISTURBANCE	0.993 AC.
EXISTING IMPERVIOUS AREA	0.145 AC.
PROPOSED IMPERVIOUS AREA	0.725 AC.
IMPERVIOUS AREA REQUIRING TREATMENT	0.725 AC.
IMPERVIOUS AREA TREATED	0.713 AC.
REQUIRED ESDv	4,587 CF
PROVIDED ESDv	5,221 CF
REQUIRED Pe	1.80 IN
PROVIDED Pe	2.12 IN
POI 1	
PRE-DEVELOPMENT 10-YR FLOW (TOTAL)	3.61 CFS
POST DEVELOPMENT 10-YR FLOW (TOTAL)	3.60 CFS
PRE-DEVELOPMENT 100-YR FLOW (TOTAL)	6.97 CFS
POST DEVELOPMENT 100-YR FLOW (TOTAL)	4.75 CFS
POI 2	
PRE-DEVELOPMENT 10-YR FLOW (TOTAL)	1.96 CFS
POST DEVELOPMENT 10-YR FLOW (TOTAL)	1.51 CFS
PRE-DEVELOPMENT 100-YR FLOW (TOTAL)	3.85 CFS
POST DEVELOPMENT 100-YR FLOW (TOTAL)	2.68 CFS
WATERSHED	WILLS & GEORGES CREEK

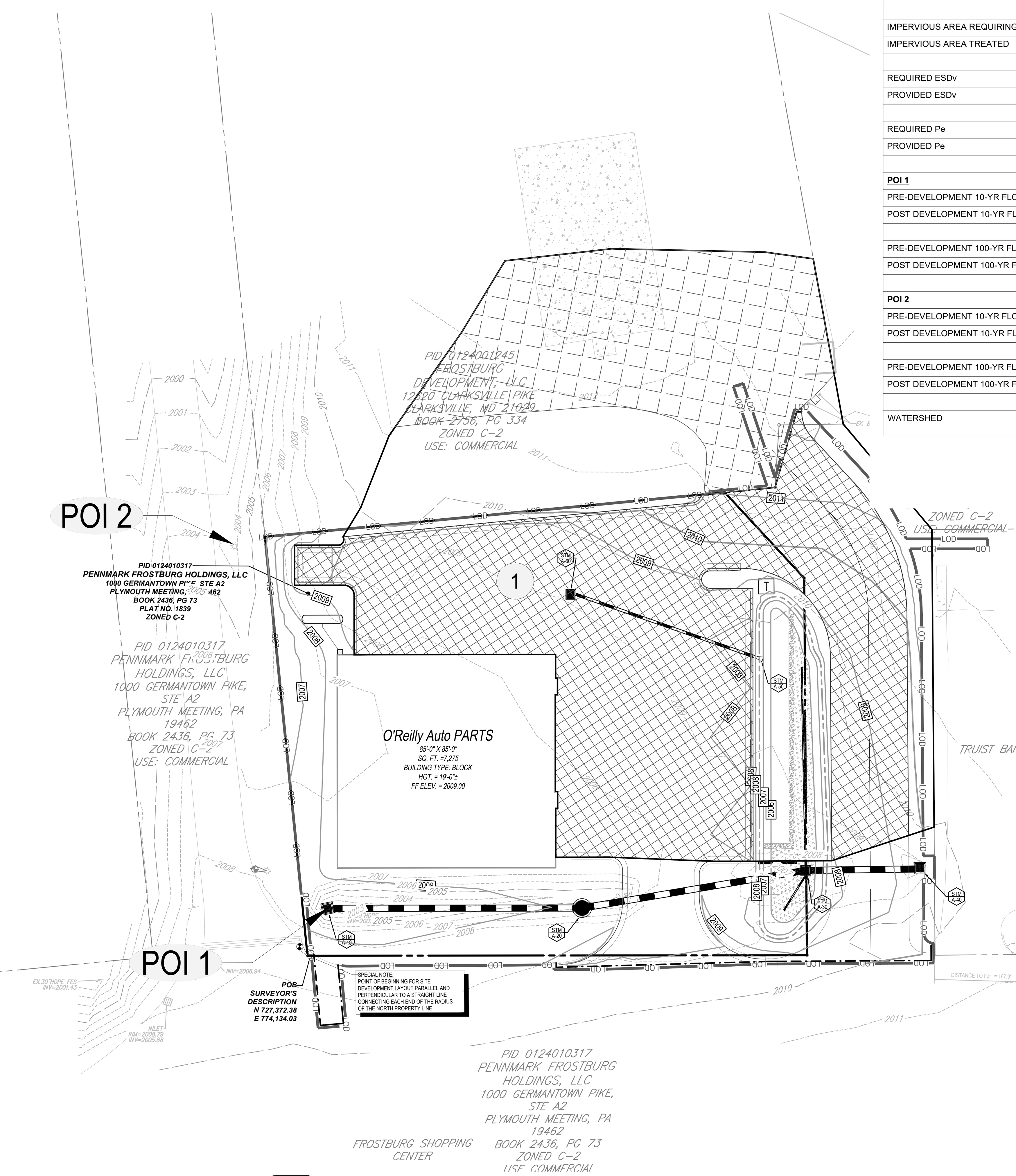


1 PRE DEVELOPMENT COVERAGE MAP

C3.7 SCALE: 1" = 30'-0"

PRE DEVELOPMENT COVERAGE AREA

IMPERVIOUS AREA: 0.145AC.
PERVIOUS AREA: 0.848 AC.
TOTAL AREA: 0.993 AC.



2 POST DEVELOPMENT COVERAGE MAP

C3.7 SCALE: 1" = 30'-0"

POST DEVELOPMENT COVERAGE AREA

IMPERVIOUS AREA: 0.725 AC.
PERVIOUS AREA: 0.268 AC.
TOTAL AREA: 0.993 AC.

ESD DRAINAGE AREA TO UNDERGROUND SAND FILTER (FACILITY #1)

1
IMPERVIOUS AREA = 31,037 S.F. OR 0.713 AC.
PERVIOUS AREA = 10,860 S.F. OR 0.249 AC.
TOTAL AREA = 41,897 S.F. OR 0.962 AC.

LEGEND

- PROPERTY LINE
- ADJACENT PROPERTY LINE
- SETBACK LINE
- EASEMENT LINE
- FUTURE EASEMENT LINE
- LIMIT OF DISTURBANCE
- EXISTING CONTOURS
- PROPOSED CONTOURS
- EX. TREELINE
- EX. TREELINE (TBR)
- SOIL BOUNDARY LINE
- SOIL LABEL
- DRAINAGE AREA BOUNDARY
- TIME OF CONCENTRATION FLOW PATH
- POINT OF INVESTIGATION
- PRE DEVELOPMENT IMPERVIOUS AREA
- POST DEVELOPMENT IMPERVIOUS AREA TO BMP/ESD FACILITY
- POST DEVELOPMENT OFF SITE IMPERVIOUS AREA TO BMP/ESD FACILITY

CONSTRUCTION NORTH

SWM 2 OF 3

Know what's below. Call before you dig.

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SWM QUALITY (COVERAGE) MAPS

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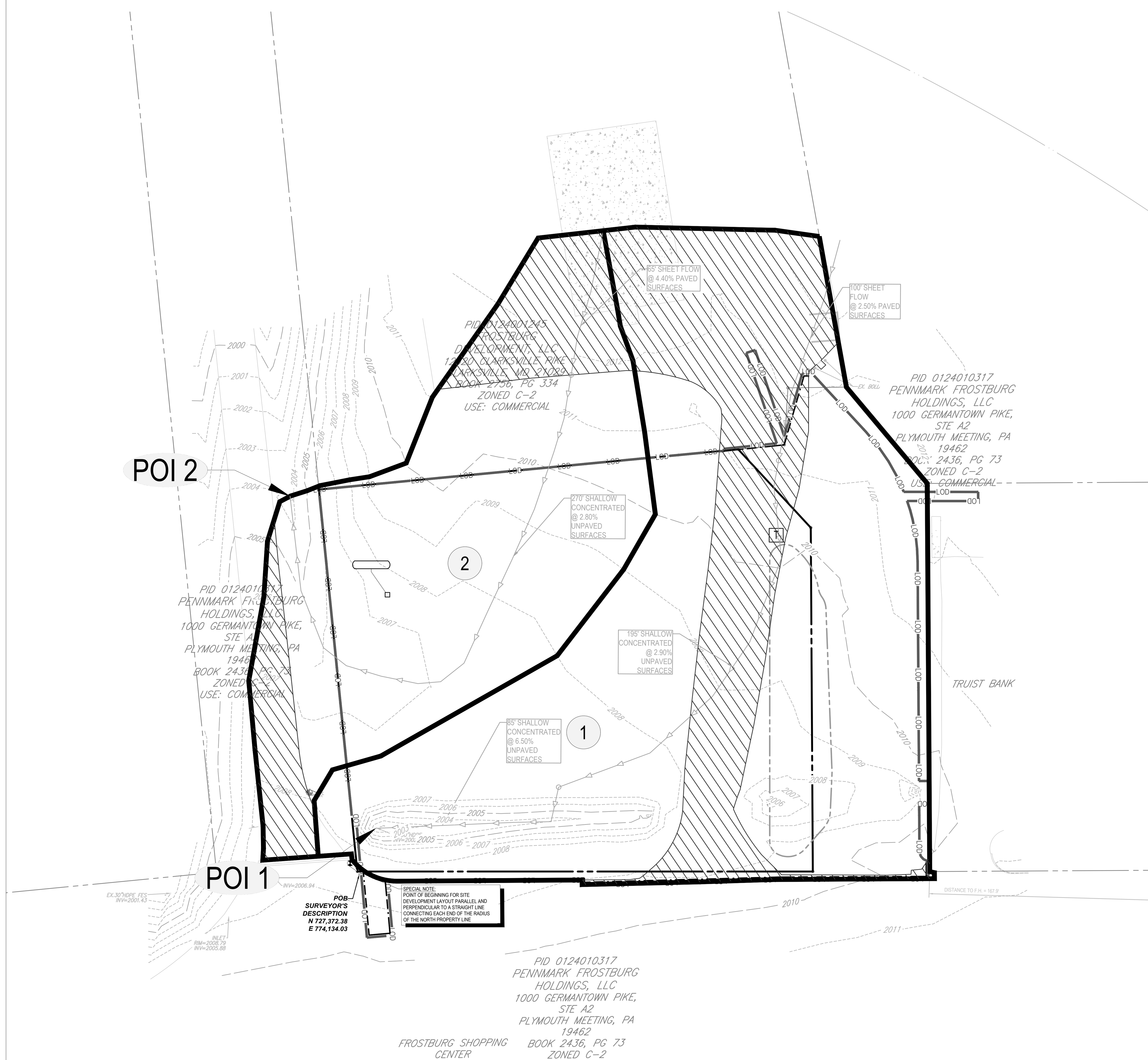
COMM #XXXX
DATE: 04-26-23
REVISION DATE:

C3.7

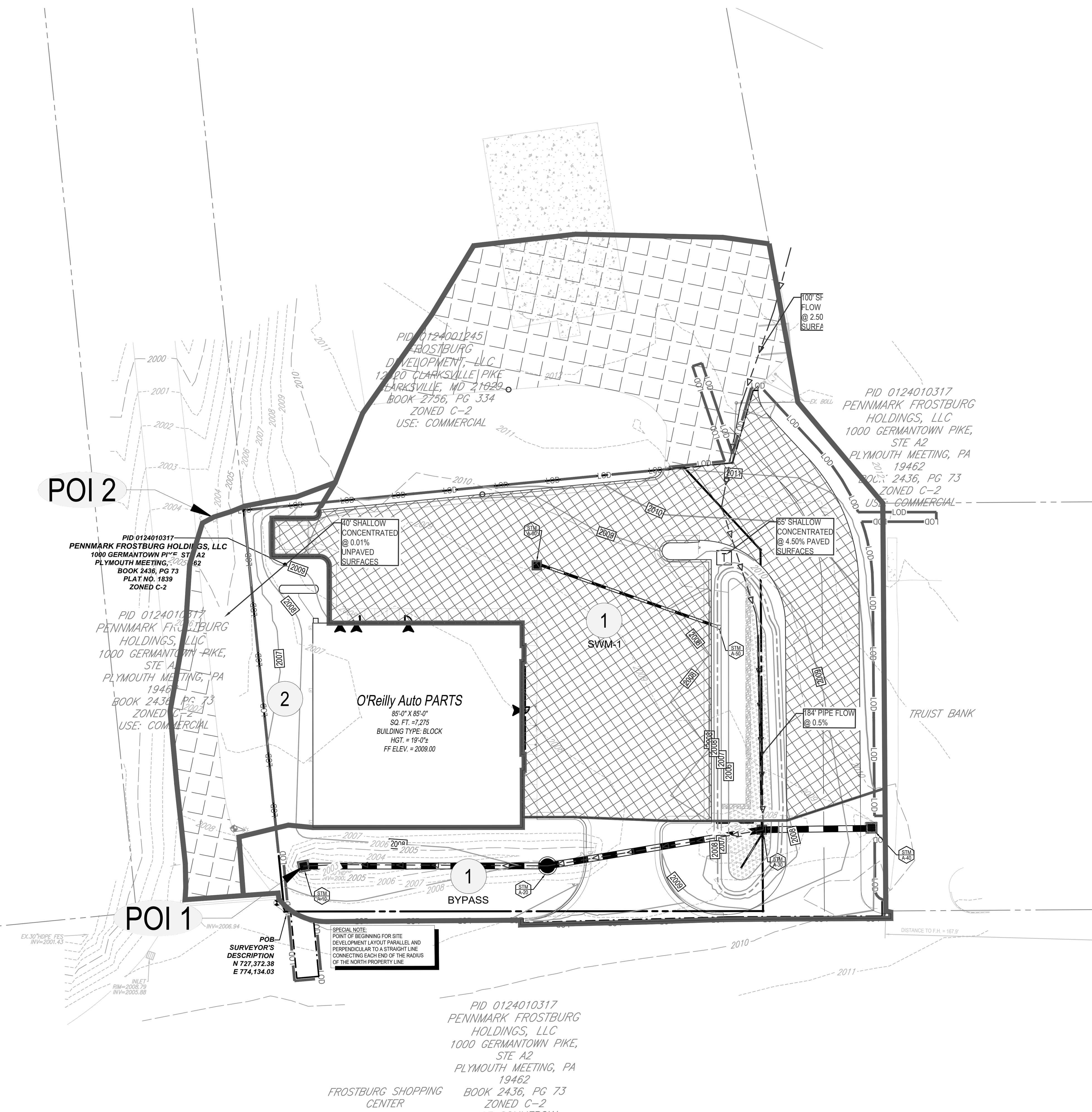
SOILS TABLE			
SOILS NAME	SOILS DESCRIPTION	HYDROLOGIC SOILS GROUP	HIGHLY ERODIBLE SOIL
UxB	URBAN LAND, 0 TO 8 PERCENT	D	NO



1 PRE DEVELOPMENT DRAINAGE PLAN
C3.8 SCALE: 1" = 30'-0"

PRE-DEVELOPMENT DRAINAGE AREA

POI 1	IMPERVIOUS AREA:	0.301 AC.
	PERVIOUS AREA:	0.623 AC.
	TOTAL AREA:	0.994 AC.
POI 2	IMPERVIOUS AREA:	0.128 AC.
	PERVIOUS AREA:	0.433 AC.
	TOTAL AREA:	0.561 AC.



2 POST DEVELOPMENT DRAINAGE PLAN
C3.8 SCALE: 1" = 30'-0"

POST-DEVELOPMENT DRAINAGE AREA

	AREA TO SWM 1:		DRAINAGE AREA BYPASSING SITE:	
POI 1	IMPERVIOUS AREA:	0.713AC.	IMPERVIOUS AREA:	0.078 AC.
	PERVIOUS AREA:	0.249 AC.	PERVIOUS AREA:	0.168 AC.
	TOTAL AREA:	0.962 AC.	TOTAL AREA:	0.246 AC.
POI 2	IMPERVIOUS AREA:	0.218 AC.		
	PERVIOUS AREA:	0.128 AC.		
	TOTAL AREA:	0.346 AC.		

LEGEND

- PROPERTY LINE
- ADJACENT PROPERTY LINE
- SETBACK LINE
- EASEMENT LINE
- FUTURE EASEMENT LINE
- LIMIT OF DISTURBANCE
- EXISTING CONTOURS
- PROPOSED CONTOURS
- EX. TREELINE
- EX. TREELINE (TBR)
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- PRE DEVELOPMENT IMPERVIOUS AREA
- POST DEVELOPMENT IMPERVIOUS AREA TO BMP/ESD FACILITY
- POST DEVELOPMENT OFF SITEIMPERVIOUS AREA TO BMP/ESD FACILITY

1"= 20'

CONSTRUCTION NORTH

SWM 3 OF 3

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SWM QUANTITY DRAINAGE AREA MAPS

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COMM #XXXX
DATE: 04-26-23
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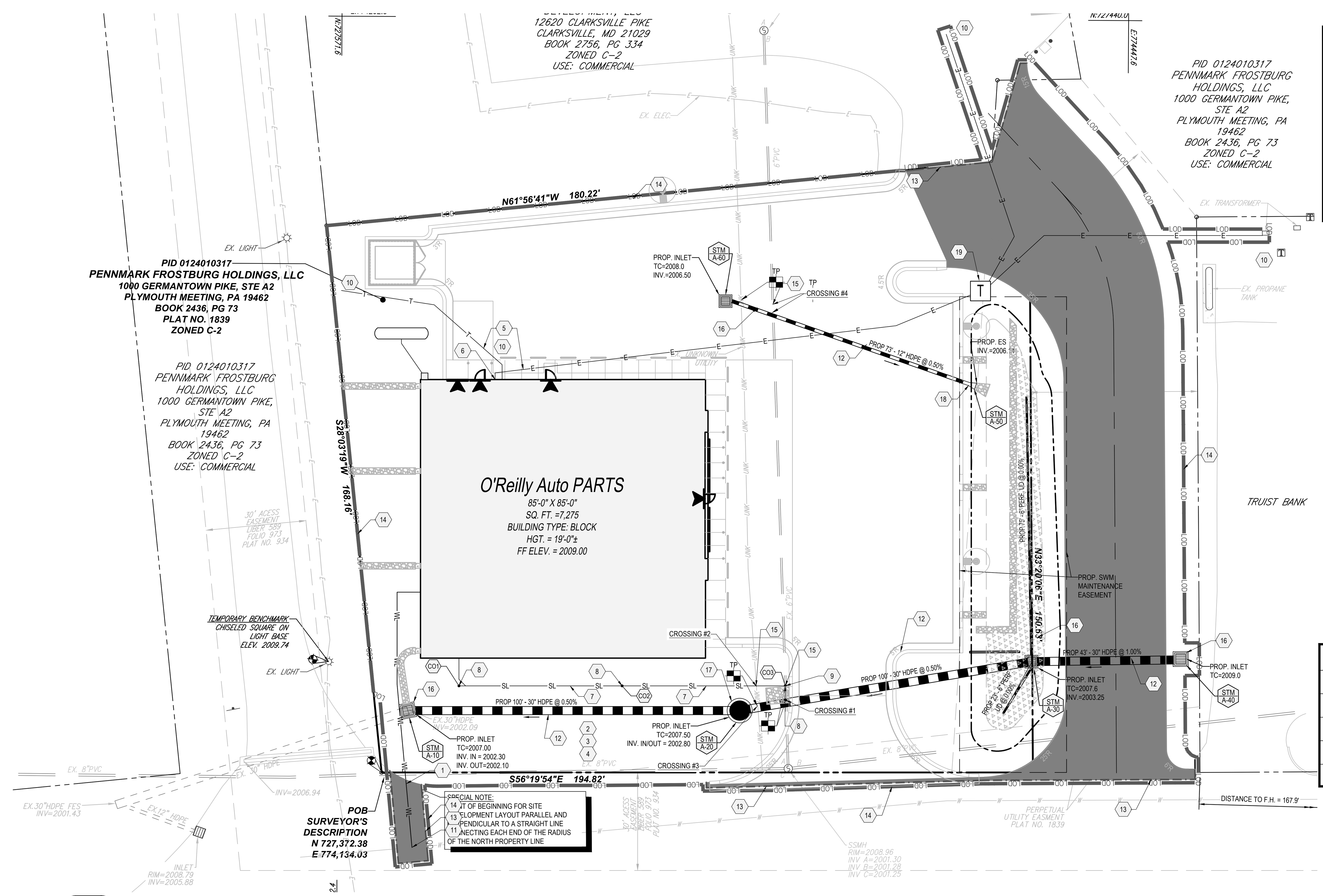
C3.8



1 SITE UTILITY PLAN

C4.1

SCALE: 1" = 20'-0"

20 10 5 0 20

1"= 20'

STORM STRUCTURE SCHEDULE

NAME	TYPE	RIM ELEV. (FT.)	INVERTS
A-10	SHA STD. SINGLE WR INLET STD. NO. MD-374.04 (MODIFIED FOR 30" PIPE)	2007.00	INV. IN = 2002.30 (30") INV. OUT = 2002.10 (30")
A-20	SHA STD. MANHOLE STD. NO. MD-383.01	2007.50	INV. IN = 2002.80 (30") INV. OUT = 2002.80 (30")
A-30	SHA STD. SINGLE WR INLET STD. NO. MD-374.04 (MODIFIED FOR 30" PIPE)	2007.60	INV. IN = 2003.42 (6") INV. IN = 2003.42 (6") INV. IN = 2003.52 (30") INV. OUT = 2003.25 (30")
A-40	SHA STD. SINGLE WR INLET STD. NO. MD-374.04 (MODIFIED FOR 30" PIPE)	2009.00	INV. OUT = 2005.00 (30")
A-50	12" STD. ADS FLARED END SECTION		INV. OUT = 2006.14 (12")
A-60	SHA STD. SINGLE WR INLET STD. NO. MD-374.04	2008.00	INV. OUT = 2006.5 (12")

SANITARY STRUCTURE SCHEDULE

NAME	TYPE	RIM ELEV. (FT.)	INVERTS
	BUILDING CONNECTION		2004.60
CO-1	CLEANOUT	2007.00	2004.44
CO-2	CLEANOUT	2007.00	2003.64
CO-3	CLEANOUT	2007.80	PROP. 2002.50 EX. 2001.75 +/-

UTILITY CROSSING TABLE

CROSSING #	UTILITY	INVERT	TOP ELEV.
1	PROP. 30" STORM DRAIN	2002.85	2005.35
	EX. 6" SANITARY	2001.80	2002.30
2	PROP. 4" SAN. SERVICE	2002.80	2003.13
	UNKNOWN UTILITY	TBD	TBD
3	PROP. 30" STORM DRAIN	2002.82	2005.32
	UNKNOWN UTILITY	TBD	TBD
4	PROP. 12" STORM DRAIN	2006.50	2007.50
	EX. 6" SANITARY	2003.60	2004.10

SANITARY PIPE SCHEDULE

FROM	FROM INV.	TO	TO INV.	PIPE LENGTH	SLOPE (%)	DIAMETER (IN.)	MATERIAL
BLDG	2004.60	CO-1	2004.43	8.5'	2.0%	4"	SDR-35
CO-1	2004.43	CO-2	2003.47	48'	2.0%	4"	SDR-35
CO-2	2003.47	CO-3	2002.51	48'	2.0%	4"	SDR-35
CO-3	2002.51	EX.	EX. 2001.75 +/-		2.0%	4"	SDR-35

TEST PIT NOTE

TP CONTRACTOR TO TEST PIT 2 FEET BELOW PROPOSED UTILITY OR UNTIL EXACT LOCATION OF EXISTING UTILITY IS IDENTIFIED AND SUBMIT ANY DISCREPANCIES TO BOHLER IN WRITING.

811 Know what's below Call before you dig.

CONSTRUCTION NORTH

N

GENERAL NOTES

A. REFER TO PROJECT MANUAL FOR ADDITIONAL REQUIREMENTS.

B. SITE CONDITIONS BASED UPON SURVEY PROVIDED BY OWNER. FIELD VERIFY EXISTING CONDITIONS BY DETAILED INSPECTION PRIOR TO SUBMITTING BID AND BEGINNING CONSTRUCTION. NOTIFY ARCHITECT IF EXISTING CONDITIONS DEVIATE SUBSTANTIALLY FROM THOSE INDICATED HEREIN.

C. ALL UTILITY WORK MUST BE APPLIED FOR VIA UTILITY PERMIT APPLICATIONS WITH THE MARYLAND DEPARTMENT OF TRANSPORTATION (MDOT).

D. ALL WATER PIPES AND VALVES SHALL HAVE A MINIMUM DEPTH OF 5 FT PER THE WARWICK WATER DIVISION.

KEY NOTES

1. PROP.1" TYPE K COPPER WATER SERVICE MIN. 4' COVER, REFER TO DETAILS 4 AND 8//C4.2 AND ARCH./MEP PLANS. GC TO COORDINATE WITH WATER DEPT. PRIOR TO CONSTRUCTION (1)
2. GAS LINE PER GAS COMPANY REQUIREMENTS (2)
3. GAS METER, REFER TO MEP PLANS BY OTHERS (2)
4. GC TO CONNECT TO EXIST. GAS SERVICE PER GAS COMPANY REGULATIONS. GC SHALL VERIFY THE SIZE, LOCATION AND CONDITION OF EXIST. SERVICE WITHIN THE R.O.W. PRIOR TO CONSTRUCTION. (2)
5. UNDERGROUND ELECTRIC AND TELEPHONE CONDUITS. (2)
6. ELECTRIC METER, REFER TO MEP PLANS. (2)
7. 4" SDR-35 PVC SEWER LINE, REFER TO DETAIL 1/C4.2
8. SANITARY CLEANOUT TO GRADE, REFER TO DETAIL 2/C4.2
9. SEWER CONNECTION. ANTICIPATED INVERT 2001.75+/- AND AN EXISTING 6" SANITARY SEWER SERVICE (GC TO VERIFY LOCATION AND INVERT OF SEWER CLEAN OUT & NOTIFY ENGINEER IF ANY CONFLICTS OCCUR PRIOR TO CONSTRUCTION). (2)
10. GC TO COORDINATE NEW UNDERGROUND ELECTRIC AND TELEPHONE SERVICE CONNECTION TO EXISTING UTILITY. (2)
11. GC TO CONNECT TO EXIST. WATER LINE W/ 1" CORP. STOP AND WATER METER PER WATER DEPARTMENT REGULATIONS. GC SHALL VERIFY THE SIZE, LOCATION AND CONDITION OF EXIST. WATER LINE CONNECTION POINT PRIOR TO CONSTRUCTION. (1)
12. STORM DRAIN, REFER TO SITE GRADING PLAN
13. APPROX. SAWCUT LINE
14. APPROX. LIMIT OF DISTURBANCE
15. UTILITY CROSSING. GC TO VERIFY INV. OF EXISTING UTILITY AND NOTIFY ENGINEER OF ANY CONFLICTS PRIOR TO CONSTRUCTION.
16. PRECAST STORM INLET, REFER TO DETAIL 9/C4.2
17. CONCRETE STORM MANHOLE, REFER TO DETAIL 11/C4.2
18. STANDARD FLARED END SECTION, REFER TO DETAIL 10/C4.2
19. PROPOSED ELECTRIC TRANSFORMER LOCATION, REFER TO MEP PLANS.

(1) PER WATER DEPARTMENT REQS'

(2) GC TO COORDINATE WITH UTILITY COMPANY PRIOR TO CONSTRUCTION

RIPRAP:

ALL END SECTION RIPRAP SHALL BE AS FOLLOWS:

CLASS I
LENGTH = 5'
WIDTH = 6.5'
THICKNESS = 19"
D50 = 15"

ALL ROOF DRAIN AND CURB CUT RIPRAP SHALL BE AS FOLLOWS:

3-4" STONE
LENGTH = AS PER PLAN
WIDTH = 2'
THICKNESS = 12"

ENVIRONMENTAL GENERAL NOTES

A. AN ENVIRONMENTAL ANALYSIS HAS BEEN PERFORMED ON THE EXISTING SITE. REFER TO PROJECT MANUAL.

B. IF THIS PROJECT CONTAINS HAZARDOUS MATERIALS, CONTRACTOR TO DISPOSAL PER ENVIRONMENTAL ANALYSIS RECOMMENDATIONS.

PLAN REFERENCES

- REFER TO GENERAL NOTES SHEET FOR UTILITY NOTES
- THIS PLAN TO BE UTILIZED FOR UTILITY PURPOSES ONLY

BOHLER//
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Phone:(410) 821-7900 Fax:(410) 821-7987
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PROJECT NO: MDA230040.00
DRAWN BY / CHECKED BY: JCB / MG
SCALE: AS NOTED
CAD I.D.: MDA230040-UTIL-0

B.R. ROWE
PROFESSIONAL ENGINEER

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PROJECT:
NEW O'REILLY AUTO PARTS STORE
NEW GEORGES CREEK RD
FROSTBURG, MD

SITE UTILITY PLAN

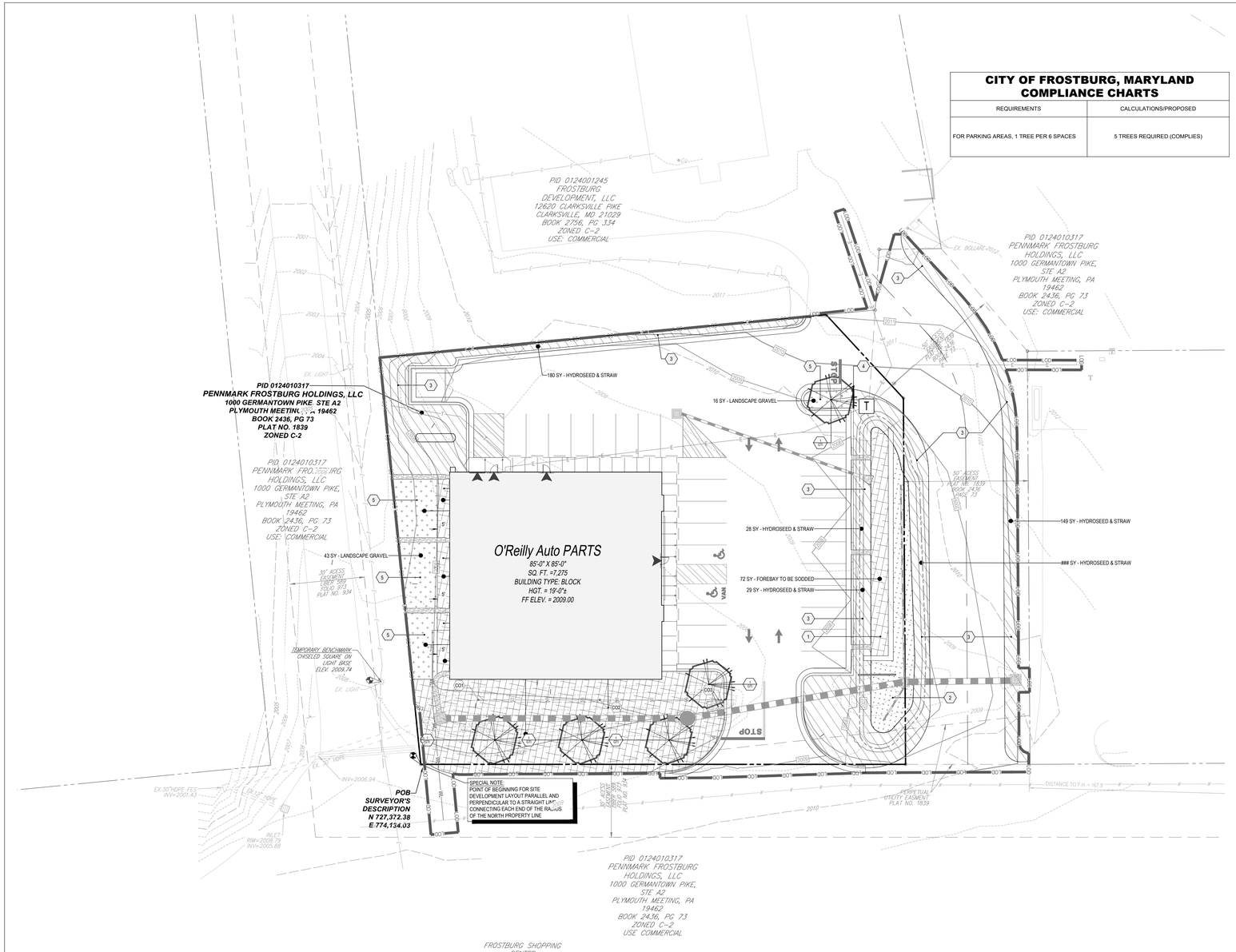
O'Reilly AUTO PARTS
CORPORATE OFFICES
233 SOUTH PATTERSON
SPRINGFIELD, MISSOURI 65802
(417) 862-2674 TELEPHONE

COMM #XXXX

DATE: 04-26-23

REVISION DATE:

C4.1



GENERAL NOTES

A. REFER TO PROJECT MANUAL FOR ADDITIONAL REQUIREMENTS.

B. SITE CONDITIONS BASED UPON SURVEY PROVIDED BY OWNER. CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS BY DETAILED INSPECTION PRIOR TO SUBMITTING BID AND BEGINNING CONSTRUCTION.
NOTIFY ARCHITECT IF EXISTING CONDITIONS DEVIATE SUBSTANTIALLY FROM THOSE INDICATED HEREIN.

C. REFER TO CIVIL DRAWINGS FOR ADDITIONAL REQUIREMENTS. COORDINATE WORK WITH OTHER SITE RELATED DEVELOPMENT DRAWINGS.

D. ALL PLANTING TYPES SHALL COMPLY WITH LOCAL GOVERNING CODES AND REGULATIONS. CONFORM TO REQUIREMENTS OF PLANT LIST AND TO THE AMERICAN ASSOCIATION OF NURSERYMEN "AMERICAN STANDARD OF NURSERY STOCK" AND "HORTICULTURAL STANDARDS" AS TO SPECIES, AGE, SIZE, AND PLANTING RECOMMENDATIONS.

E. NO MATERIAL SUBSTITUTIONS SHALL BE MADE WITHOUT THE ARCHITECT'S PRIOR WRITTEN APPROVAL. ALTERNATE MATERIALS OF SIMILAR SIZE AND CHARACTER MAY BE CONSIDERED IF SPECIFIED PLANT MATERIALS CANNOT BE OBTAINED.

F. PLANT LOCATIONS ARE APPROXIMATE. ADJUST AS NECESSARY TO AVOID CONFLICTS.

G. QUANTITIES OF MATERIALS SHOWN ON LANDSCAPING PLAN TAKE PRECEDENCE OVER QUANTITIES SHOWN ON PLANTING SCHEDULE. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL QUANTITIES ON LANDSCAPING PLAN.

H. PROVIDE 4" TOPSOIL AT ALL SOD, SEED AND PLANTING AREAS. GRADE SHALL BE ADJUSTED FOR SOD THICKNESS. REFER TO CIVIL SITE GRADING PLAN FOR SLOPE REQUIREMENTS.

I. WHEN CLAY SOIL IS ENCOUNTERED IN THE ESTABLISHED OF THE LAWN OR THE INSTALLATION OF PLANT MATERIAL IT SHALL BE IMPROVED IN ACCORDANCE WITH STANDARD TRADE PRACTICE.

J. RE-ESTABLISH TURF IN AREAS DISTURBED BY GRADING OR UTILITY TRENCHING IN THE RIGHT-OF-WAY.

K. PRIOR TO INSTALLATION, GENERAL CONTRACTOR TO CONFIRM THAT LIGHT POLES, LANDSCAPING AND UTILITIES DO NOT CONFLICT WITH SIGN LOCATION SHOWN. IF ANY POTENTIAL CONFLICT IS DISCOVERED, GENERAL CONTRACTOR IS TO CONTACT OWNER'S REPRESENTATIVE BEFORE PROCEEDING WITH THE WORK.

KEY NOTES

1. AREA OF SOD, REFER TO DETAIL 3/L1.2.
2. AREA OF SWM PLUG PLANTINGS, REFER TO DETAIL 1/L1.2 AND 2/L1.2.
3. AREA OF HYDROSEED AND STRAW. UNLESS NOTED OTHERWISE, ALL AREAS DISTURBED BY CONSTRUCTION ARE FIRST TO BE FINE GRADED AND THEN FOLLOWED BY HYDROSEED AND STRAW OVER MIN. 4" TOPSOIL STOCKPILED FROM SITE OR HAULED IN AS REQUIRED.
4. 4" BLACK POLYVINYL LANDSCAPE EDGING
5. AREA OF LANDSCAPE GRAVEL

SYMBOLS LEGEND

NOTE: REFER TO SURVEY SHEET FOR SYMBOLS LEGEND OF EXISTING CONDITIONS.

- AREA OF SODDING
- SWM SAND FILTER AREA
- AREA OF HYDROSEED
- AREA OF LANDSCAPE GRAVEL

PLAN REFERENCES

- REFER TO GENERAL NOTES SHEET FOR DEMOLITION NOTES
- THIS PLAN TO BE UTILIZED FOR DEMOLITION / REMOVAL PURPOSES ONLY

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MD@BohlerEng.com

PROJECT NO: MDA230040.00 | SCALE: AS NOTED
DRAWN BY / CHECKED BY: JCB / MG | CAD I.D.: MDA230040-LSCP-0

E.R. McWILLIAMS
04/28/2023
PROFESSIONAL LANDSCAPE ARCHITECT
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 3901, EXPIRATION DATE: 9/30/24

THOMAS A. LUNDBERG
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PROJECT:
NEW O'REILLY AUTO PARTS STORE
NEW GEORGES CREEK RD
FROSTBURG, MD

LANDSCAPE PLAN

O'Reilly AUTO PARTS
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SPRINGFIELD, MISSOURI 65802
(417) 862-2674 TELEPHONE

COMM #XXXX
DATE: 04-26-23
REVISION DATE:

L1.1

1 LANDSCAPE PLAN
L1.1 SCALE: 1" = 20'-0"

Know what's below Call before you dig.

Apr 27, 2023
H:\2023\MDA230040.00\CAD\DRAWINGS\PLAN SET\SITE DEVELOPMENT PLAN\PRELIMINARY PLAN (CITY SUBMISSION)\MDA230040-LSCP-0----LAYOUT: L1.1 - LANDSCAP PLAN

LANDSCAPE SPECIFICATIONS

1. SCOPE OF WORK:
THE LANDSCAPE CONTRACTOR SHALL BE REQUIRED TO PERFORM ALL CLEARING, FINISHED GRADING, SOIL PREPARATION, PERMANENT SEEDING OR SODDING, PLANTING AND MULCHING INCLUDING ALL LABOR, MATERIALS, TOOLS AND EQUIPMENT NECESSARY FOR THE COMPLETION OF THIS PROJECT, UNLESS OTHERWISE CONTRACTED BY THE GENERAL CONTRACTOR.

2. MATERIALS
A. GENERAL - ALL HARDSCAPE MATERIALS SHALL MEET OR EXCEED SPECIFICATIONS AS OUTLINED IN THE STATE DEPARTMENT OF TRANSPORTATION'S SPECIFICATIONS.

B. TOPSOIL - NATURAL, FRIABLE, LOAMY SILT SOIL HAVING AN ORGANIC CONTENT NOT LESS THAN 5%, A PH RANGE BETWEEN 4.5-7.0. IT SHALL BE FREE OF DEBRIS, ROCKS LARGER THAN ONE INCH (1"), WOOD, ROOTS, VEGETABLE MATTER AND CLAY CLODS.

C. LAWN - ALL DISTURBED AREAS ARE TO BE TREATED WITH A MINIMUM SIX INCH (6") THICK LAYER OF TOPSOIL, OR AS DIRECTED BY THE LOCAL ORDINANCE OR CLIENT, AND SEEDED OR SODDED IN ACCORDANCE WITH THE PERMANENT STABILIZATION METHODS INDICATED WITHIN THE SOIL EROSION AND SEDIMENT CONTROL NOTES.
1.1. LAWN SEED MIXTURE SHALL BE FRESH, CLEAN NEW CROP SEED.
1.2. SOD SHALL BE STRONGLY ROOTED, WEED AND DISEASE/PEST FREE WITH A UNIFORM THICKNESS.
1.3. SOD INSTALLED ON SLOPES GREATER THAN 4:1 SHALL BE PEGGED TO HOLD SOD IN PLACE.

D. MULCH - THE MULCH AROUND THE PERIMETER OF THE BUILDING SHALL BE A 3" LAYER OF DOUBLE SHREDDED BLACK CEDAR MULCH ONLY. ALL OTHER AREAS SHALL BE MULCHED WITH A 3" LAYER OF DOUBLE SHREDDED DARK BROWN HARDWOOD BARK MULCH, UNLESS OTHERWISE STATED ON THE LANDSCAPE PLAN.

E. FERTILIZER
1.1. FERTILIZER SHALL BE DELIVERED TO THE SITE MIXED AS SPECIFIED IN THE ORIGINAL UNOPENED STANDARD BAGS SHOWING WEIGHT, ANALYSIS AND NAME OF MANUFACTURER. FERTILIZER SHALL BE STORED IN A WEATHERPROOF PLACE SO THAT IT CAN BE KEPT DRY PRIOR TO USE.
1.2. FOR THE PURPOSE OF BIDDING, ASSUME THAT FERTILIZER SHALL BE 10% NITROGEN, 6% PHOSPHORUS AND 4% POTASSIUM BY WEIGHT. A FERTILIZER SHOULD NOT BE SELECTED WITHOUT A SOIL TEST PERFORMED BY A CERTIFIED SOIL LABORATORY.

F. PLANT MATERIAL
1.1. ALL PLANTS SHALL IN ALL CASES CONFORM TO THE REQUIREMENTS OF THE "AMERICAN STANDARD FOR NURSERY STOCK" (ANSI Z60.1), LATEST EDITION, AS PUBLISHED BY THE AMERICAN NURSERY & LANDSCAPE ASSOCIATION.
1.2. IN ALL CASES, BOTANICAL NAMES SHALL TAKE PRECEDENCE OVER COMMON NAMES FOR ANY AND ALL PLANT MATERIAL.
1.3. PLANTS SHALL BE LEGIBLY TAGGED WITH THE PROPER NAME AND SIZE. TAGS ARE TO REMAIN ON AT LEAST ONE PLANT OF EACH SPECIES FOR VERIFICATION PURPOSES DURING THE FINAL INSPECTION.
1.4. TREES WITH ABRASION OF THE BARK, SUN SCALDS, DISFIGURATION OR FRESH CUTS OF LIMBS OVER 1¼", WHICH HAVE NOT BEEN COMPLETELY CALLUSED, SHALL BE REJECTED.PLANTS SHALL NOT BE BOUND WITH WIRE OR ROPE AT ANY TIME SO AS TO DAMAGE THE BARK OR BREAK BRANCHES.
1.5. ALL PLANTS SHALL BE TYPICAL OF THEIR SPECIES OR VARIETY AND SHALL HAVE A NORMAL HABIT OF GROWTH: WELL DEVELOPED BRANCHES, DENSELY FOLIATED, VIGOROUS ROOT SYSTEMS AND BE FREE OF DISEASE, INSECTS, PESTS, EGGS OR LARVAE.
1.6. CALIPER MEASUREMENTS OF NURSERY GROWN TREES SHALL BE TAKEN AT A POINT ON THE TRUNK SIX INCHES (6") ABOVE THE NATURAL GRADE FOR TREES UP TO AND INCLUDING A FOUR INCH (4") CALIPER SIZE. IF THE CALIPER AT SIX INCHES (6") ABOVE THE GROUND EXCEEDS FOUR INCHES (4") IN CALIPER, THE CALIPER SHOULD BE MEASURED AT A POINT 12" ABOVE THE NATURAL GRADE.
1.7. SHRUBS SHALL BE MEASURED TO THE AVERAGE HEIGHT OR SPREAD OF THE SHRUB, AND NOT TO THE LONGEST BRANCH.
1.8. TREES AND SHRUBS SHALL BE HANDLED WITH CARE BY THE ROOT BALL.

3. GENERAL WORK PROCEDURES
A. CONTRACTOR TO UTILIZE WORKMANLIKE INDUSTRY STANDARDS IN PERFORMING ALL LANDSCAPE CONSTRUCTION. THE SITE IS TO BE LEFT IN A CLEAN STATE AT THE END OF EACH WORKDAY. ALL DEBRIS, MATERIALS AND TOOLS SHALL BE PROPERLY STORED, STOCKPILED OR DISPOSED OF.

B. WASTE MATERIALS AND DEBRIS SHALL BE COMPLETELY DISPOSED OF AT THE CONTRACTOR'S EXPENSE. DEBRIS SHALL NOT BE BURIED, INCLUDING ORGANIC MATERIALS, BUT SHALL BE REMOVED COMPLETELY FROM THE SITE.

4. SITE PREPARATIONS
A. BEFORE AND DURING PRELIMINARY GRADING AND FINISHED GRADING, ALL WEEDS AND GRASSES SHALL BE DUG OUT BY THE ROOTS AND DISPOSED OF IN ACCORDANCE WITH GENERAL WORK PROCEDURES OUTLINED HEREIN.

B. ALL EXISTING TREES TO REMAIN SHALL BE PRUNED TO REMOVE ANY DAMAGED BRANCHES. THE ENTIRE LIMB OF ANY DAMAGED BRANCH SHALL BE CUT OFF AT THE TRUNK. CONTRACTOR SHALL ENSURE THAT CUTS ARE SMOOTH AND STRAIGHT. ANY EXPOSED ROOTS SHALL BE CUT BACK WITH CLEAN, SHARP TOOLS AND TOPSOIL SHALL BE PLACED AROUND THE REMAINDER OF THE ROOTS. EXISTING TREES SHALL BE MONITORED ON A REGULAR BASIS FOR ADDITIONAL ROOT OR BRANCH DAMAGE AS A RESULT OF CONSTRUCTION. ROOTS SHALL NOT BE LEFT EXPOSED FOR MORE THAN ONE (1) DAY. CONTRACTOR SHALL WATER EXISTING TREES AS NEEDED TO PREVENT SHOCK OR DECLINE.

C. CONTRACTOR SHALL ARRANGE TO HAVE A UTILITY STAKE-OUT TO LOCATE ALL UNDERGROUND UTILITIES PRIOR TO INSTALLATION OF ANY LANDSCAPE MATERIAL. UTILITY COMPANIES SHALL BE CONTACTED THREE (3) DAYS PRIOR TO THE BEGINNING OF WORK.

5. TREE PROTECTION
A. CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING TREES TO REMAIN. A TREE PROTECTION ZONE SHALL BE ESTABLISHED AT THE DRIP LINE OR 15 FEET FROM THE TRUNK OR AT THE LIMIT OF CONSTRUCTION DISTURBANCE, WHICHEVER IS GREATER. LOCAL STANDARDS THAT MAY REQUIRE A MORE STRICT TREE PROTECTION ZONE SHALL BE HONORED.

B. A FORTY-EIGHT INCH (48") HIGH WOODEN SNOW FENCE OR ORANGE COLORED HIGH-DENSITY 'VISI-FENCE', OR APPROVED EQUAL, MOUNTED ON STEEL POSTS SHALL BE PLACED ALONG THE BOUNDARY OF THE TREE PROTECTION ZONE. POSTS SHALL BE LOCATED AT A MAXIMUM OF EIGHT FEET (8') ON CENTER OR AS INDICATED WITHIN THE TREE PROTECTION DETAIL.

C. WHEN THE TREE PROTECTION FENCING HAS BEEN INSTALLED, IT SHALL BE INSPECTED BY THE APPROVING AGENCY PRIOR TO DEMOLITION, GRADING, TREE CLEARING OR ANY OTHER CONSTRUCTION. THE FENCING ALONG THE TREE PROTECTION ZONE SHALL BE REGULARLY INSPECTED BY THE LANDSCAPE CONTRACTOR AND MAINTAINED UNTIL ALL CONSTRUCTION ACTIVITY HAS BEEN COMPLETED.

D. AT NO TIME SHALL MACHINERY, DEBRIS, FALLEN TREES OR OTHER MATERIALS BE PLACED, STOCKPILED OR LEFT STANDING IN THE TREE PROTECTION ZONE.

6. SOIL MODIFICATIONS
A. CONTRACTOR SHALL ATTAIN A SOIL TEST FOR ALL AREAS OF THE SITE PRIOR TO CONDUCTING ANY PLANTING. SOIL TESTS SHALL BE PERFORMED BY A CERTIFIED SOIL LABORATORY.

B. LANDSCAPE CONTRACTOR SHALL REPORT ANY SOIL OR DRAINAGE CONDITIONS CONSIDERED DETRIMENTAL TO THE GROWTH OF PLANT MATERIAL. SOIL MODIFICATIONS, AS SPECIFIED HEREIN, MAY NEED TO BE CONDUCTED BY THE LANDSCAPE CONTRACTOR DEPENDING ON SITE CONDITIONS.

C. THE FOLLOWING AMENDMENTS AND QUANTITIES ARE APPROXIMATE AND ARE FOR BIDDING PURPOSES ONLY. COMPOSITION OF AMENDMENTS SHOULD BE REVISED DEPENDING ON THE OUTCOME OF A TOPSOIL ANALYSIS PERFORMED BY A CERTIFIED SOIL LABORATORY.
1.1. TO INCREASE A SANDY SOIL'S ABILITY TO RETAIN WATER AND NUTRIENTS, THOROUGHLY TILL ORGANIC MATTER INTO THE TOP 6-12". USE COMPOSTED BARK, COMPOSTED LEAF MULCH OR PEAT MOSS. ALL PRODUCTS SHOULD BE COMPOSTED TO A DARK COLOR AND BE FREE OF PIECES WITH IDENTIFIABLE LEAF OR WOOD STRUCTURE. AVOID MATERIAL WITH A PH HIGHER THAN 7.5.
1.2. TO INCREASE DRAINAGE, MODIFY HEAVY CLAY OR SILT (MORE THAN 40% CLAY OR SILT) BY ADDING COMPOSTED PINE BARK (UP TO 30% BY VOLUME) AND/OR AGRICULTURAL GYPSUM. COARSE SAND MAY BE USED IF ENOUGH IS ADDED TO BRING THE SAND CONTENT TO MORE THAN 60% OF THE TOTAL MIX. SUBSURFACE DRAINAGE LINES MAY NEED TO BE ADDED TO INCREASE DRAINAGE.
1.3. MODIFY EXTREMELY SANDY SOILS (MORE THAN 85%) BY ADDING ORGANIC MATTER AND/OR DRY, SHREDDED CLAY LOAM UP TO 30% OF THE TOTAL MIX.

7. FINISHED GRADING
A. UNLESS OTHERWISE CONTRACTED, THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION OF TOPSOIL AND THE ESTABLISHMENT OF FINE-GRADING WITHIN THE DISTURBANCE AREA OF THE SITE.

B. LANDSCAPE CONTRACTOR SHALL VERIFY THAT SUBGRADE FOR INSTALLATION OF TOPSOIL HAS BEEN ESTABLISHED. THE SUBGRADE OF THE SITE MUST MEET THE FINISHED GRADE LESS THE REQUIRED TOPSOIL THICKNESS (1"±).

C. ALL LAWN AND PLANTING AREAS SHALL BE GRADED TO A SMOOTH, EVEN AND UNIFORM PLANE WITH NO ABRUPT CHANGE OF SURFACE AS DEPICTED WITHIN THIS SET OF CONSTRUCTION PLANS, UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER OR LANDSCAPE ARCHITECT.

D. ALL PLANTING AREAS SHALL BE GRADED AND MAINTAINED TO ALLOW FREE FLOW OF SURFACE WATER IN AND AROUND THE PLANTING BEDS. STANDING WATER SHALL NOT BE PERMITTED IN PLANTING BEDS.

8. TOPSOILING
A. CONTRACTOR SHALL PROVIDE A SIX INCH (6") THICK MINIMUM LAYER OF TOPSOIL, OR AS DIRECTED BY THE LOCAL ORDINANCE OR CLIENT, IN ALL PLANTING AREAS. TOPSOIL SHOULD BE SPREAD OVER A PREPARED SURFACE IN A UNIFORM LAYER TO ACHIEVE THE DESIRED COMPACTED THICKNESS.

B. ON-SITE TOPSOIL MAY BE USED TO SUPPLEMENT THE TOTAL AMOUNT REQUIRED. TOPSOIL FROM THE SITE MAY BE REJECTED IF IT HAS NOT BEEN PROPERLY REMOVED, STORED AND PROTECTED PRIOR TO CONSTRUCTION.

C. CONTRACTOR SHALL FURNISH TO THE APPROVING AGENCY AN ANALYSIS OF BOTH IMPORTED AND ON-SITE TOPSOIL TO BE UTILIZED IN ALL PLANTING AREAS. THE PH AND NUTRIENT LEVELS MAY NEED TO BE ADJUSTED THROUGH SOIL MODIFICATIONS AS NEEDED TO ACHIEVE THE REQUIRED LEVELS AS SPECIFIED IN THE MATERIALS SECTION ABOVE.

D. ALL PLANTING AND LAWN AREAS ARE TO BE CULTIVATED TO A DEPTH OF SIX INCHES (6"). ALL DEBRIS EXPOSED FROM EXCAVATION AND CULTIVATION SHALL BE DISPOSED OF IN ACCORDANCE WITH GENERAL WORK PROCEDURES SECTION ABOVE. THE FOLLOWING SHALL BE TILLED INTO THE TOP FOUR INCHES (4") IN TWO DIRECTIONS (QUANTITIES BASED ON A 1,000 SQUARE FOOT AREA):
1.1. 20 POUNDS 'GROW POWER' OR APPROVED EQUAL
1.2. 20 POUNDS NITRO-FORM (COURSE) 38-0-0 BLUE CHIP

E. THE SPREADING OF TOPSOIL SHALL NOT BE CONDUCTED UNDER MUDDY OR FROZEN CONDITIONS.

9. PLANTING
A. INSOFAR THAT IT IS FEASIBLE, PLANT MATERIAL SHALL BE PLANTED ON THE DAY OF DELIVERY. IN THE EVENT THAT THIS IS NOT POSSIBLE, LANDSCAPE CONTRACTOR SHALL PROTECT UNINSTALLED PLANT MATERIAL. PLANTS SHALL NOT REMAIN UNPLANTED FOR LONGER THAN A THREE DAY PERIOD AFTER DELIVERY. PLANTS THAT WILL NOT BE PLANTED FOR A PERIOD OF TIME GREATER THAN THREE DAYS SHALL BE HEALED IN WITH TOPSOIL OR MULCH TO HELP PRESERVE ROOT MOISTURE.

B. PLANTING OPERATIONS SHALL BE PERFORMED DURING PERIODS WITHIN THE PLANTING SEASON WHEN WEATHER AND SOIL CONDITIONS ARE SUITABLE AND IN ACCORDANCE WITH ACCEPTED LOCAL PRACTICE. PLANTS SHALL NOT BE INSTALLED IN TOPSOIL THAT IS IN A MUDDY OR FROZEN CONDITION.

C. ANY INJURED ROOTS OR BRANCHES SHALL BE PRUNED TO MAKE CLEAN-CUT ENDS PRIOR TO PLANTING UTILIZING CLEAN, SHARP TOOLS. ONLY INJURED OR DISEASED BRANCHING SHALL BE REMOVED.

D. ALL PLANTING CONTAINERS AND NON-BIODEGRADABLE MATERIALS SHALL BE REMOVED FROM ROOT BALLS DURING PLANTING. NATURAL FIBER BURLAP MUST BE CUT FROM AROUND THE TRUNK OF THE TREE AND FOLDED DOWN AGAINST THE ROOT BALL PRIOR TO BACKFILLING.

E. POSITION TREES AND SHRUBS AT THEIR INTENDED LOCATIONS AS PER THE PLANS AND SECURE THE APPROVAL OF THE LANDSCAPE ARCHITECT PRIOR TO EXCAVATING PITS, MAKING NECESSARY ADJUSTMENTS AS DIRECTED.

F. PRIOR TO THE ISSUANCE OF ANY CERTIFICATE OF OCCUPANCY, THE PROPOSED LANDSCAPE, AS SHOWN ON THE APPROVED LANDSCAPE PLAN, MUST BE INSTALLED, INSPECTED AND APPROVED BY THE APPROVING AGENCY. THE APPROVING AGENCY SHALL TAKE INTO ACCOUNT SEASONAL CONSIDERATIONS IN THIS REGARD AS FOLLOWS. THE PLANTING OF TREES, SHRUBS, VINES OR GROUND COVER SHALL OCCUR ONLY DURING THE FOLLOWING PLANTING SEASONS:
1.1. PLANTS: MARCH 15 TO DECEMBER 15
1.2. LAWN: MARCH 15 TO JUNE 15 OR SEPT. 1 TO DECEMBER 1

G. PLANTINGS REQUIRED FOR A CERTIFICATE OF OCCUPANCY SHALL BE PROVIDED DURING THE NEXT APPROPRIATE SEASON AT THE MUNICIPALITY'S DISCRETION. CONTRACTOR SHOULD CONTACT APPROVING AGENCY FOR POTENTIAL SUBSTITUTIONS.

H. FURTHERMORE, THE FOLLOWING TREE VARIETIES ARE UNUSUALLY SUSCEPTIBLE TO WINTER DAMAGE. WITH TRANSPLANT SHOCK AND THE SEASONAL LACK OF NITROGEN AVAILABILITY, THE RISK OF PLANT DEATH IS GREATLY INCREASED. IT IS NOT RECOMMENDED THAT THESE SPECIES BE PLANTED DURING THE FALL PLANTING SEASON:

ACER RUBRUM	PLATANUS X ACERIFOLIA
BETULA VARIETIES	POPULOUS VARIETIES
CARPINUS VARIETIES	PRUNUS VARIETIES
CRATAEGUS VARIETIES	PYRUS VARIETIES
KOELREUTERIA	QUERCUS VARIETIES
LIQUIDAMBER STYRACIFLUA	TILIA TOMENTOSA
LIRIODENDRON TULIPIFERA	ZELKOVA VARIETIES

I. PLANTING PITS SHALL BE DUG WITH LEVEL BOTTOMS, WITH THE WIDTH TWICE THE DIAMETER OF ROOT BALL. THE ROOT BALL SHALL REST ON UNDISTURBED GRADE. EACH PLANT PIT SHALL BE BACKFILLED IN LAYERS WITH THE FOLLOWING PREPARED SOIL MIXED THOROUGHLY:
- 1 PART PEAT MOSS
- 1 PART COMPOSTED COW MANURE BY VOLUME
- 3 PARTS TOPSOIL BY VOLUME
- 21 GRAMS 'AGRIFORM' PLANTING TABLETS (OR APPROVED EQUAL) AS FOLLOWS:
  - A) 2 TABLETS PER 1 GALLON PLANT
  - B) 3 TABLETS PER 5 GALLON PLANT
  - C) 4 TABLETS PER 15 GALLON PLANT
  - D) LARGER PLANTS: 2 TABLETS PER ½" CALIPER OF TRUNK

J. FILL PREPARED SOIL AROUND BALL OF PLANT HALF-WAY AND INSERT PLANT TABLETS. COMPLETE BACKFILL AND WATER THOROUGHLY.

K. ALL PLANTS SHALL BE PLANTED SO THAT THE TOP OF THE ROOT BALL, THE POINT AT WHICH THE ROOT FLARE BEGINS, IS SET AT GROUND LEVEL AND IN THE CENTER OF THE PIT. NO SOIL IS TO BE PLACED DIRECTLY ON TOP OF THE ROOT BALL.

L. ALL PROPOSED TREES DIRECTLY ADJACENT TO WALKWAYS OR DRIVEWAYS SHALL BE PRUNED AND MAINTAINED TO A MINIMUM BRANCHING HEIGHT OF 7' FROM GRADE.

M. GROUND COVER AREAS SHALL RECEIVE A ¼" LAYER OF HUMUS RAKED INTO THE TOP 1" OF PREPARED SOIL PRIOR TO PLANTING. ALL GROUND COVER AREAS SHALL BE WEEDED AND TREATED WITH A PRE-EMERGENT CHEMICAL AS PER MANUFACTURER'S RECOMMENDATION.

N. NO PLANT, EXCEPT GROUND COVERS, GRASSES OR VINES, SHALL BE PLANTED LESS THAN TWO FEET (2') FROM EXISTING STRUCTURES AND SIDEWALKS.

O. ALL PLANTING AREAS AND PLANTING PITS SHALL BE MULCHED AS SPECIFIED HEREIN TO FILL THE ENTIRE BED AREA OR SAUCER. NO MULCH IS TO TOUCH THE TRUNK OF THE TREE OR SHRUB.

P. ALL PLANTING AREAS SHALL BE WATERED IMMEDIATELY UPON INSTALLATION IN ACCORDANCE WITH THE WATERING SPECIFICATIONS AS LISTED HEREIN.

10. TRANSPLANTING (WHEN REQUIRED)
A. ALL TRANSPLANTS SHALL BE DUG WITH INTACT ROOT BALLS CAPABLE OF SUSTAINING THE PLANT.

B. IF PLANTS ARE TO BE STOCKPILED BEFORE REPLANTING, THEY SHALL BE HEALED IN WITH MULCH OR SOIL, ADEQUATELY WATERED AND PROTECTED FROM EXTREME HEAT, SUN AND WIND.

C. PLANTS SHALL NOT BE DUG FOR TRANSPLANTING BETWEEN APRIL 10 AND JUNE 30.

D. UPON REPLANTING, BACKFILL SOIL SHALL BE AMENDED WITH FERTILIZER AND ROOT GROWTH HORMONE.

E. TRANSPLANTS SHALL BE GUARANTEED FOR THE LENGTH OF THE GUARANTEE PERIOD SPECIFIED HEREIN.

F. IF TRANSPLANTS DIE, SHRUBS AND TREES LESS THAN SIX INCHES (6") DBH SHALL BE REPLACED IN KIND. TREES GREATER THAN SIX INCHES (6") DBH MAY BE REQUIRED TO BE REPLACED IN ACCORDANCE WITH THE MUNICIPALITY'S TREE REPLACEMENT GUIDELINES.

11. WATERING
A. NEW PLANTINGS OR LAWN AREAS SHALL BE ADEQUATELY IRRIGATED BEGINNING IMMEDIATELY AFTER PLANTING. WATER SHALL BE APPLIED TO EACH TREE AND SHRUB IN SUCH MANNER AS NOT TO DISTURB BACKFILL AND TO THE EXTENT THAT ALL MATERIALS IN THE PLANTING HOLE ARE THOROUGHLY SATURATED. WATERING SHALL CONTINUE AT LEAST UNTIL PLANTS ARE ESTABLISHED.

B. SITE OWNER SHALL PROVIDE WATER IF AVAILABLE ON SITE AT TIME OF PLANTING. IF WATER IS NOT AVAILABLE ON SITE, CONTRACTOR SHALL SUPPLY ALL NECESSARY WATER. THE USE OF WATERING BAGS IS RECOMMENDED FOR ALL NEWLY PLANTED TREES.

C. IF AN IRRIGATION SYSTEM HAS BEEN INSTALLED ON THE SITE, IT SHALL BE USED TO WATER PROPOSED PLANT MATERIAL, BUT ANY FAILURE OF THE SYSTEM DOES NOT ELIMINATE THE CONTRACTOR'S RESPONSIBILITY OF MAINTAINING THE DESIRED MOISTURE LEVEL FOR VIGOROUS, HEALTHY GROWTH.

12. GUARANTEE
A. THE LANDSCAPE CONTRACTOR SHALL GUARANTEE ALL PLANTS FOR A PERIOD OF ONE (1) YEAR FROM APPROVAL OF LANDSCAPE INSTALLATION BY THE APPROVING AGENCY. CONTRACTOR SHALL SUPPLY THE OWNER WITH A MAINTENANCE BOND FOR TEN PERCENT (10%) OF THE VALUE OF THE LANDSCAPE INSTALLATION WHICH WILL BE RELEASED AT THE CONCLUSION OF THE GUARANTEE PERIOD AND WHEN A FINAL INSPECTION HAS BEEN COMPLETED AND APPROVED BY THE OWNER OR AUTHORIZED REPRESENTATIVE.

B. ANY DEAD OR DYING PLANT MATERIAL SHALL BE REPLACED FOR THE LENGTH OF THE GUARANTEE PERIOD. REPLACEMENT OF PLANT MATERIAL SHALL BE CONDUCTED AT THE FIRST SUCCEEDING PLANTING SEASON. ANY DEBRIS SHALL BE DISPOSED OF OFF-SITE, WITHOUT EXCEPTION.

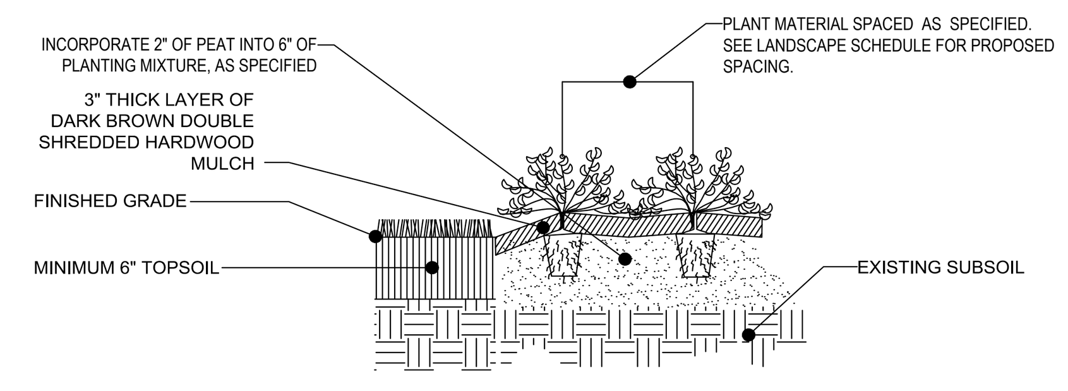
C. TREES AND SHRUBS SHALL BE MAINTAINED BY THE CONTRACTOR DURING CONSTRUCTION AND THROUGHOUT THE 90 DAY MAINTENANCE PERIOD AS SPECIFIED HEREIN. CULTIVATION, WEEDING, WATERING AND THE PREVENTATIVE TREATMENTS SHALL BE PERFORMED AS NECESSARY TO KEEP PLANT MATERIAL IN GOOD CONDITION AND FREE OF INSECTS AND DISEASE.

D. LAWNS SHALL BE MAINTAINED THROUGH WATERING, FERTILIZING, WEEDING, MOWING, TRIMMING AND OTHER OPERATIONS SUCH AS ROLLING, REGARDING AND REPLANTING AS REQUIRED TO ESTABLISH A SMOOTH, ACCEPTABLE LAWN, FREE OF ERODED OR BARE AREAS.

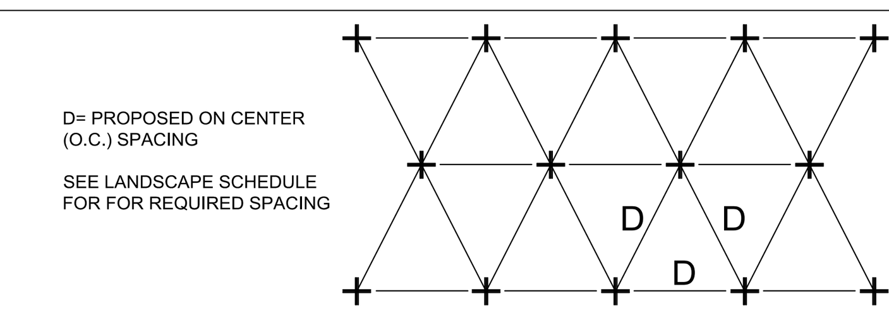
13. CLEANUP
A. UPON THE COMPLETION OF ALL LANDSCAPE INSTALLATION AND BEFORE THE FINAL ACCEPTANCE, THE CONTRACTOR SHALL REMOVE ALL UNUSED MATERIALS, EQUIPMENT AND DEBRIS FROM THE SITE. ALL PAVED AREAS ARE TO BE CLEANED.

B. THE SITE SHALL BE CLEANED AND LEFT IN A NEAT AND ACCEPTABLE CONDITION AS APPROVED BY THE OWNER OR AUTHORIZED REPRESENTATIVE.

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

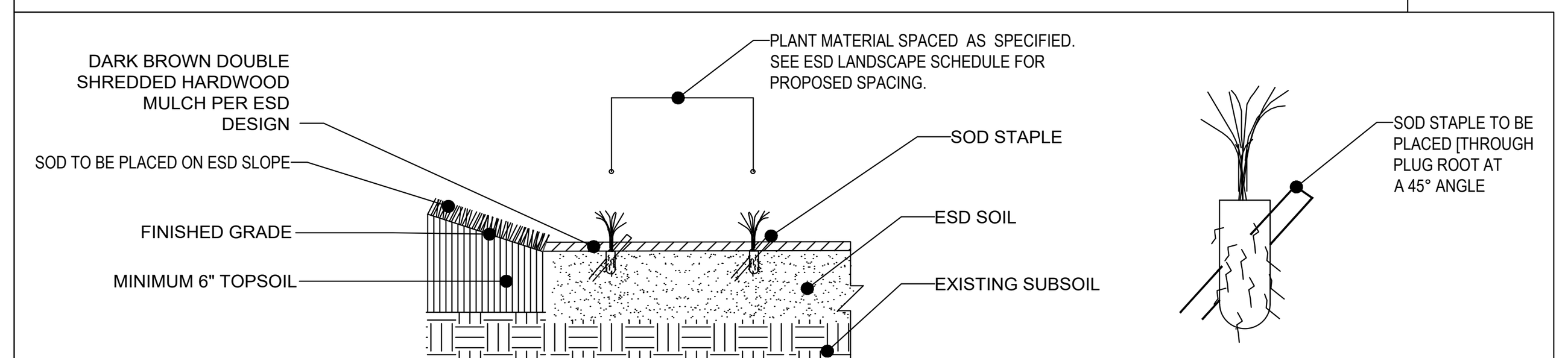


TYPICAL PERENNIAL AND GROUND COVER PLANTING

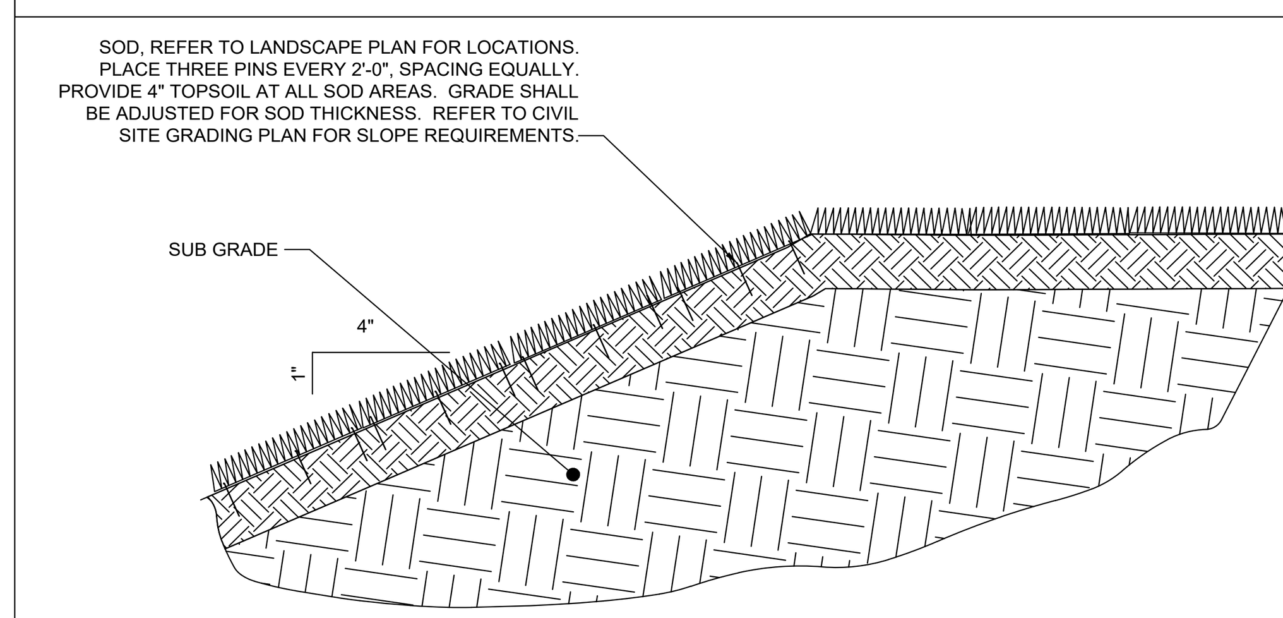


TYPICAL PERENNIAL AND GROUND COVER SPACING & LAYOUT

1 / L1.2 PERENNIAL/GROUND COVER PLANTING DETAIL
SCALE: NTS



2 / L1.2 TYPICAL PERENNIAL PLUG DETAIL FOR ESD FACILITY
SCALE: NTS



3 / L1.2 SOD DETAIL
SCALE: NTS

SEEDING SPECIFICATIONS

1. PRIOR TO SEEDING, AREA IS TO BE TOPSOILED, FINE GRADED, AND RAKED OF ALL DEBRIS LARGER THAN 2" DIAMETER.
2. PRIOR TO SEEDING, CONSULT MANUFACTURER'S RECOMMENDATIONS AND INSTRUCTIONS.
3. SEEDING RATES:

PERENNIAL RYEGRASS	1/2 LB/1,000 SQ FT
KENTUCKY BLUEGRASS	1 LB/1,000 SQ FT
RED FESCUE	1 1/2 LBS/1,000 SQ FT
SPREADING FESCUE	1 1/2 LBS/1,000 SQ FT
FERTILIZER (20:10:10)	14 LBS/1,000 SQ FT
MULCH	90 LBS/1,000 SQ FT

4. GERMINATION RATES WILL VARY AS TO TIME OF YEAR FOR SOWING. CONTRACTOR TO IRRIGATE SEEDED AREA UNTIL AN ACCEPTABLE STAND OF COVER IS ESTABLISHED BY OWNER.

OWNER MAINTENANCE RESPONSIBILITIES

UPON OWNER'S (OR OWNER CONTRACTOR'S) COMPLETION OF LANDSCAPING WORK, THE OWNER IS FULLY RESPONSIBLE FOR ALL FUTURE MAINTENANCE, CARE, UPKEEP, WATERING, AND TRIMMING OF ALL INSTALLED VEGETATION, PLANTS, TREE, BUSHES, SHRUBS, GRASSES, GRASS, ORNAMENTAL PLANTS AND FLOWERS, FLOWERS, GROUND COVER, AND LANDSCAPING, INCLUDING ALL LANDSCAPE ISLANDS AND AREAS ADJACENT OR PART OF THE LANDSCAPED AREAS. THIS RESPONSIBILITY INCLUDES, BUT IS NOT LIMITED TO, THE FOLLOWING:

- TREES ADJACENT TO WALKWAYS AND AREAS OF PEDESTRIAN TRAFFIC MUST BE MAINTAINED TO ASSURE THAT ANY BRANCHES MUST BE LIMBED UP TO A CLEARANCE HEIGHT OF 7 FT. (FROM ALL PEDESTRIAN SURFACES) OR PRUNED BACK TO AVOID ANY INTERFERENCE WITH THE TYPICAL PATH OF TRAVEL.
- TREES WITHIN VEHICULAR SIGHT LINES, AS ILLUSTRATED ON THE LANDSCAPE PLAN, ARE TO BE TRIMMED TO A CLEARANCE HEIGHT OF 7 FT. (FROM ALL PAVED, TRAVELED SURFACES), OR AS OTHERWISE INDICATED ON THE PLANS.
- VEGETATIVE GROUND COVER, SHRUBS AND ORNAMENTAL PLANTS AND GRASSES MUST BE TRIMMED SO THAT NO PORTION OF THE PLANT EXCEEDS 30 INCHES ABOVE GRADE (OF ALL PAVED, TRAVEL SURFACES) ALONG AND WITHIN THE SIGHT LINES OF PARKING LOTS AND INGRESS-EGRESS WAYS.
- FALLEN PLANT FLOWERS, FRUIT, SEEDS AND DEBRIS DROPPINGS ARE TO BE REMOVED IMMEDIATELY FROM VEHICULAR AND PEDESTRIAN TRAFFIC AREAS TO PREVENT TRIPPING, SLIPPING OR ANY OTHER HAZARDS.

THESE REQUIREMENTS DO NOT AFFECT THE PLANT LIFE GUARANTEES THE LANDSCAPE CONTRACTOR IS REQUIRED TO PROVIDE.

20 10 5 0 20
1"= 20'

BOHLER
901 DULANEY VALLEY ROAD, SUITE 801 TOWSON, MARYLAND 21204
Phone:(410) 821-7900 Fax:(410) 821-7987
MD@BohlerEng.com

PROJECT NO:	MDA230040.00	SCALE:	AS NOTED
DRAWN BY / CHECKED BY:	JCB / MG	CAD I.D.:	MDA230040-LSCP-0

E.R. McWILLIAMS
04/28/2023
REGISTERED LANDSCAPE ARCHITECT

THOMAS A. LUNDBERG
ARCHITECT
1736 East Sunshine, Suite 417
Springfield, Missouri 65804
417.862.0558
Fax: 417.862.3265
e-mail: architect@esterlyschneider.com

PROJECT:
NEW O'REILLY AUTO PARTS STORE
NEW GEORGES CREEK RD
FROSTBURG, MD

LANDSCAPE DETAILS

O'Reilly AUTO PARTS
CORPORATE OFFICES
233 SOUTH PATTERSON
SPRINGFIELD, MISSOURI 65802
(417) 862-2674 TELEPHONE

COMM #XXXX
DATE: 04-26-23
REVISION DATE:

L1.2

Apr 27, 2023

Vacant Lot - Frostburg Plaza

2/23/2023, 3:06:01 PM

1:1,200

0 0.01 0.02 0.04 mi

0 0.01 0.03 0.06 km

○ Location Address

Parcel Lines

Allegany County GIS

Concept Stormwater Management Report

SUBMIT TO:
City of Frostburg Planning and Zoning
Department of Community Development

PROJECT:
O'Reilly Auto Parts
Frostburg

PROJECT LOCATION:
Frostburg Shopping Plaza
Parcel 3
Frostburg, Maryland 21532
Allegany County

DEVELOPER:
O'Reilly Auto Parts
233 South Patterson
Springfield, MO 65802

Bohler
901 Dulaney Valley Road
Suite 801
Towson, MD 21204
Contact: Brandon R. Rowe
Email: browe@bohlereng.com
Phone: 410-821-7900
Fax : 410-821-7987

I, Brandon R. Rowe, P.E., 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. 40808, Expiration Date: 7/2/23.

Table of Contents

Narrative

Narrative

Introduction:
The subject site is within the Frostburg Shopping Plaza, located to the south of New George's Creek Road SW (Maryland State Highway 36) in the City of Frostburg, Allegany County Maryland. The site is within the Commercial, C-2, District. The LOD is approximately 0.99 acres and made up of approximately 15% impervious cover in existing conditions. Per MDE Stormwater Manual Chapter 5, since the site is comprised of less than 40% impervious cover, the site will be considered new development. The site is located within the Wills and Georges Creek Watersheds. The soils on-site are UxB (Urban Land, 0 to 8 Percent Slopes), Hydrologic Group D and not highly erodible.

Existing Conditions:
The site consists of an open grass field with existing pavement; there is one (1) existing entrance from the adjoining parking lot to the south, an access road for the shopping center existing to the west of the site and an existing bank operates on the property to east. The property to the north is a former Pizza Hut restaurant. In the pre-development condition, the site coverage is comprised of 0.15 acres of impervious cover and 0.84 acres of pervious area within the limits of disturbance.

Proposed Conditions:
O'Reilly Auto Parts proposes to construct a 7,275 S.F. (1-story) auto parts retail store. The improvements include parking areas, landscaping, a trash enclosure, access improvements (to provide access to the property to the north of site) and a sand filter for SWM quality treatment. Though calculated and shown as met within the site, quantity management for the site is accounted for by an existing regional facility previously constructed for the shopping center. Post-development site coverage is comprised of 0.73 acres of impervious cover and 0.25 acres of pervious cover within the limits of disturbance.

Evaluation of ESD Requirements:
The required ESD volume is 4,587 CF, with a Pe requirement of 1.80 inches for new development. This requires 0.73 acres of impervious area to be treated. This project proposes an underground sand filter within the landscape areas along the east side of the property. This facility will treat 0.71 acres of impervious area and 0.25 acres of pervious area. The total ESD volume treated is 5,221 CF and the Pe treatment provided is 2.12 inches, thereby meeting all ESD requirements.

Evaluation of Quantity Management Requirements:
The site is located within the Wills and Georges Creek Watersheds. There are two (2) Points of Investigation (POI's) on the site. See below for a description of the POI's. Refer to the included HydroCAD report for calculations for the Pre- and Post-Development design storm determinations.

POI 1 is located at the existing culvert under the existing access to the shopping center at the southwest corner of the property. POI 2 is located at the northwest corner of the property and outfalls to the existing swale along the access road to the shopping center.

The shopping plaza has a regional storm water management facility which accommodates development within this area. As such, the development will maintain existing drainage patterns to this regional facility and post development runoff will be directed to this facility via the existing

30” pipe located at the southwest corner of the property. Drainage out falling from the property other than to this facility will manage the 10-year storm runoff to predevelopment conditions.

Sediment Control Design:
Sediment control will be provided with a combination of super silt fence, and inlet protection. A stabilized construction entrance will be constructed to control sediment runoff into the existing rights-of-way.

Conclusion:
In conclusion, the ESD volume is treated by the underground sand filter. The Pe established for the project is 1.80 inches and the total required ESD volume is 4,587 cubic feet and 5,221 cubic feet will be provided. The ESD measure proposed for the site accounts for the total required treatment volume. Every effort was made to minimize disturbance. All areas where stormwater is leaving the proposed site have a decrease in flow rate from the pre-developed site.

Outline of Acceptable Practices:
The following is an outline of how each environmental site design (ESD) measure was implemented to the maximum extent practicable (MEP) or reasons why the ESD could not be used for the subject site.

- A-1 Green Roofs:
  This ESD measure was not utilized on this site as the proposed building is would not provide the required treatment volume and other approved measures can be used to meet the treatment requirement.

- A-2 Permeable Pavements:
  This ESD measure was not utilized on this project as the site is located in an area of ‘D’ soils and permeable pavement is not recommended in ‘D’ soils.

- A-3 Reinforced Turf:
  This ESD measure was not utilized on this project because these systems are typically used for light traffic loads and are more commonly used for emergency vehicle access roads and overflow parking. Since the site does not propose any areas that will receive light traffic loads this ESD measure was not proposed to treat the stormwater runoff.

- N-1 Disconnection of Rooftop Runoff:
  This ESD measure was not utilized on this project because there is not adequate room downstream of the rooftop runoff to meet the requirements for this treatment measure.

- N-2 Disconnection of Non-Rooftop Runoff:
  This ESD measure was not utilized on this project because there is not adequate room downstream of the non-rooftop runoff to meet the requirements for this treatment measure.

- N-3 Sheetflow to Conservation Area:
  This ESD measure was not utilized on this project because there are no conservation areas adjacent to the site that meet the requirements as outlined in Chapter 5 of the 2007 Maryland Stormwater Design Manual.

- M-1 Rainwater Harvesting:
  This ESD measure was not utilized on this project because there is very little demand on this project to re-use harvested rainwater.

- M-2 Submerged Gravel Wetlands:
  This ESD measure was not utilized on this project because the required volume was able to be treated with other practices.

- M-3 Landscape Infiltration:
  This ESD measure was not utilized on this project because the required volume was able to be treated with other practices.

- M-4 Infiltration Berms:
  This measure was considered impractical for the subject site, as the drainage areas would be too large for this practice.

- M-5 Drywells:
  This ESD measure was not utilized on this project because the required volume was able to be treated with other practices.

- M-6 Micro-Bioretention:
  This ESD measure was not utilized on this project because the required volume was able to be treated with other practices.

- M-7 Rain Gardens:
  This ESD measure was not utilized on this project site because they are typically used to treat small areas of 2,000 S.F. or less. Since the required area to be treated is greater than 2,000 S.F. it was decided that other measures would better treat the runoff from the proposed development.

- M-8 Swales:
  This ESD measure was not utilized on this project because there is not adequate slope or room across the site to implement this practice.

- M-9 Enhanced Filters:
  This ESD measure was not utilized on this project because the required volume was able to be treated with other practices.

ESD Volume Required

Maryland ESD Calculations

Project Name:	**O'Reilly - Frostburg**
Date:	**3/31/2023**

data input cells

calculation cells

Step 1: Complete ESD Implementation Checklist

Check all of the Following ESD Practices That Were Implemented at Site	*Yes - No - N/A*
Environmental Mapping Was Conducted at Site Prior to Layout	*Yes*
Natural Areas Were Conserved (e.g., forests, wetlands, steep slopes, floodplains)	*Yes*
Stream, Wetland and Shoreline Buffers Were Reserved	*Yes*
Disturbance of Permeable Soils Was Minimized	*Yes*
Natural Flow Paths Were Maintained Across the Site	*Yes*
Building Layout Was Fingerprinted to Reduce Clearing and Grading at Site	*Yes*
Site Grading Promoted Sheetflow From Impervious Areas to Pervious Ones	*Yes*
Site Design Was Evaluated to Reduce Creation of Needless Impervious Cover	*Yes*
Site Design Was Evaluated to Maximize Disconnection of Impervious Cover	*Yes*
Site Design Was Evaluated to Identify Potential Hotspot Generating Area for Stormwater Treatment	*Yes*
Erosion and Sediment Control Practices and Post Construction Stormwater Management Practices Were Integrated into a Comprehensive Plan	*Yes*
Tree PlantingWas Used at the Site to Convert Turf Areas into Forest	*Yes*

Step 2: Calculate Site Imperviousness and Water Quality Volume, WQv

Site Area, A (acres)	0.993	Limt of Disturbance				
Existing Impervious Surface Area (acres), A_{pre}	0.145					
Proposed Impervious Surface Area (acres), A_{post}	0.725					
Rainfall Depth, P (in)	0.9					
Existing Imperviousness, I_{pre}	14.6%					
Proposed Imperviousness, I_{post}	73.0%					
Development Category	**New Development**					
New Development			*Redevelopment*	(if I_{pre} >40%)		
Req. Treatment Area (acres) = A_{post}	0.99	if I_{pre} is <40%	Req. Treatment Area (acres) = $(0.5xA_{pre})-(A_{post}-A_{pre})$		0.00	if $A_{post}<A_{pre}$
Or Req. Treatment Area (acres) = A_{post} - A_{pre}	0.00	(Redev&$A_{post}>A_{pre}$)	Or Req. Treatment Area (acres) = $0.5xA_{pre}$		0.00	if $A_{post}>A_{pre}$
Fee-in-lieu acres	0.00		Fee-in-lieu acres		0.00	
Remaining Acres to be treated	0.99		Remaining area to be treated		0.00	
Runoff Coefficient, Rv	0.71		Runoff Coefficient, Rv		0.95	
Water Quality Volume, WQv (ac-in)	0.053		Water Quality Volume, WQv (ac-in)		0.000	
Water Quality Volume, WQv (cf)	**2,293**		**Water Quality Volume, WQv (cf)**		**0**	

Step 3: Calculate Environmental Site Design (ESD) Rainfall Target, P_E

% Soil Type A	0.0%					
% Soil Type B	0.0%					
% Soil Type C	0.0%					
% Soil Type D	100.0%					
Pre-Developed Condition, RCN_{woods}	77.00					
Soil Type A ESD Rainfall Target, P_E (in)	0.00					
Soil Type B ESD Rainfall Target, P_E (in)	0.00					
Soil Type C ESD Rainfall Target, P_E (in)	0.00					
Soil Type D ESD Rainfall Target, P_E (in)	1.80					
Site ESD Rainfall Target, P_E (in)		1.80	For New Development	0.00	For Re-Development	
ESD Runoff Depth, Q_E (in)		1.27		1.80	Combined Target P_E	
ESD Runoff Volume, ESDv (cf)		**4,587**		0.72	Total Required Impervious Treatment Area	
Required Recharge Volume, Re_v (ac-ft)		0.00				
Required Recharge Volume, Re_v (cf)		**178**				

ESD Volume Design

BOHLER

Project	O'Reilly - Frostburg	**By**	JCB
	Frostburg Shopping Plaza	**Checked By**	
Location	Allegany County	**Date**	3/2/2023
Condition	Sand filter calculations	**Job#**	MDA230040

Facility # 1 (Underground Sand Filter)

Impervious	0.7125	ac.
Pervious	0.2493	ac.
Total	0.9618	ac.

$WQv = \frac{(Pe)(Rv)(A)}{12}$

Target Pe (in) = 1.80

Rv = 0.717

Total Required Water Quality Volume (WQ_V) =	4504 cf

Pretreatment Area

Required Pretreatment Volume shall be at least 25% of the computed WQv:

$Vp = (0.25)(WQ_V)$ = **1126 cf**

The minimum required surface area as computes by the Camp-Hazen equations:

$Asp = (Q_o/W)*E'$

= **36 sf**

E' = Sediment Trapping Efficiency (90% = 2.3)

W= Water Quality Settling Velocity

If I> 75% use 0.0033 ft/s

If I< 75% use 0.0004 ft/s

Qo = Peak Outflow Discharge = WQ_V/24hrs(3,600 sec/hr)

Surface Area Provided:	**177 sf**

WATER QUALITY FACILITY - PRETREATMENT AREA - STORAGE - ELEVATION

CONTOUR (FT)	AREA (FT^2)	AVG. AREA (FT^2)	INTERVAL (FT)	VOLUME (FT^3)	∑ VOLUME (FT^3)	STORAGE (AC. FT.)
2006	649				0	0
		798	1	798		
2007	947				798	0.01832
		1018.5	0.4	407.4		
2007.4	1090				1205.4	0.02767

Pretreatment Volume Provided:	**1205 cf**

Treatment Area

The entire treatment system (including pretreatment) shall temporarily hold at least 75% of the WQv prior to filtration:

Vtemp = (0.75) (WQ_V) = 3378 cf

WATER QUALITY FACILITY - STORAGE - ELEVATION

CONTOUR (FT)	AREA (FT^2)	AVG. AREA (FT^2)	INTERVAL (FT)	VOLUME (FT^3)	∑ VOLUME (FT^3)	STORAGE (AC. FT.)
2006	1031				0	0
		1293.5	1	1293.5		
2007	1556				1293.5	0.02969
		2361.5	0.6	1416.9		
2007.6	3167				2710.4	0.06222

Treatment Volume Provided: 2710 cf

Vtemp Provided =(Pretretment Area + Treatment Area) = 3916 cf

Total WQv Provided = Vtemp / 0.75 = 5221 cf

The required filter bed area is computed using the following equation:
The minimum filter depth (df) for a pocket sand filter is 18". use df = 1.5 ft

$$A_f = \frac{(WQv)(df)}{[k * (hf + df) * tf]}$$

k= coefficient of permeability for sand = 3.5 ft/day

Af = 334.97 sf

t_f = Filter Bed drain time = 1.67 days

h_f = Average head above filter 2.5 ft

Sand Filter Bed Area Provided : 714 sf

ESD Volume Summary

BOHLER

Project	O'Reilly - Frostburg	**By**	JCB
		Checked By	
Location	City of Frostburg	**Date**	3/2/2023
Condition	ESD Volume	**Job#**	MDA230040

ESD Facility Summary

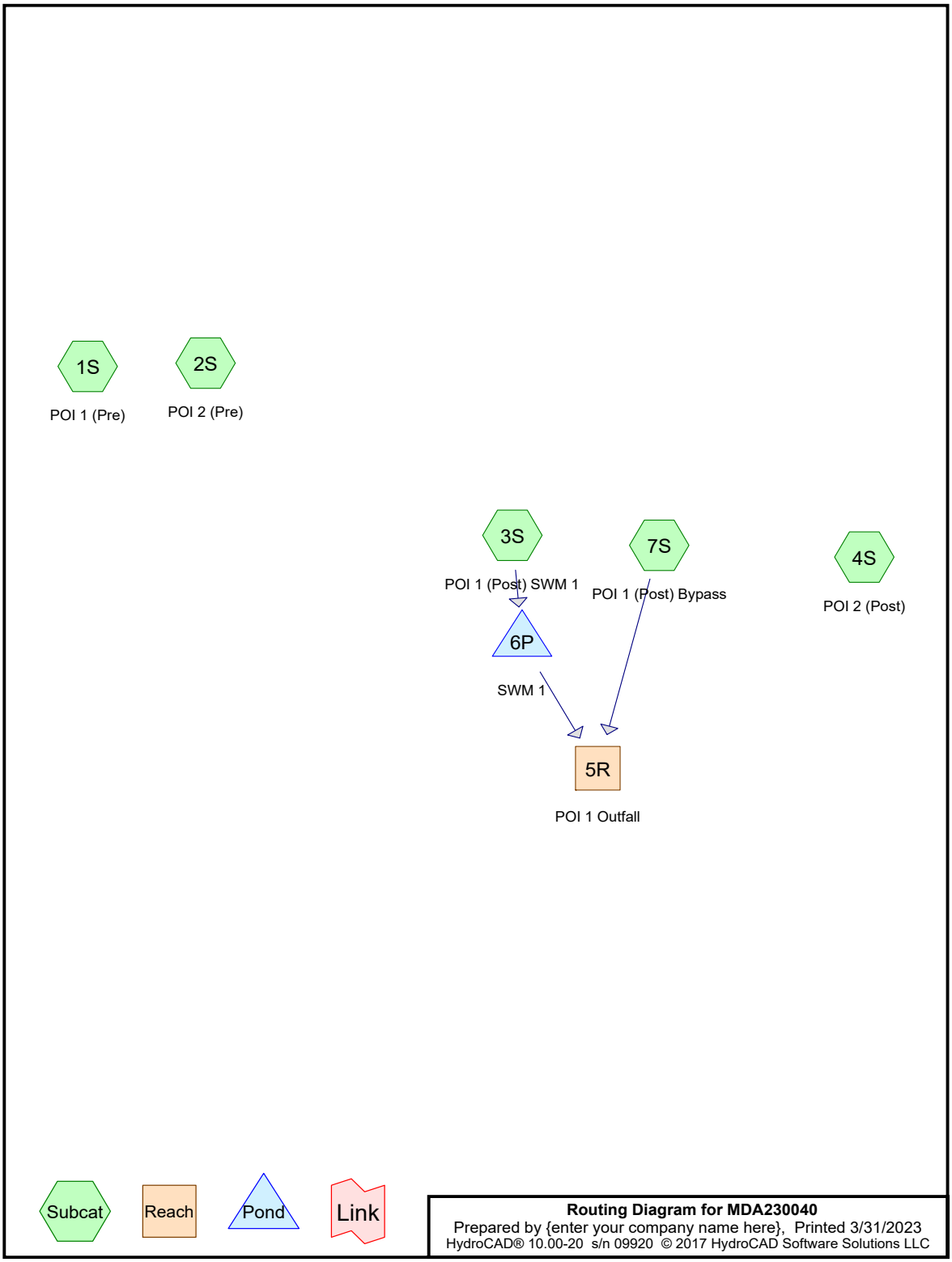
ESD Volume Required =	**4586.54 CF**
Imp Area to be Treated=	**0.72 acres**
Target PE=	**1.80 inches**

Facility #	Practice	Surface Area	Max Volume	Impervious Area	Pervious Area	Treatment Volume
1	Underground Sand Filter	714 SF		0.713 Acres	0.249 Acres	5221 CF

Total ESD Treatment Volume Provided =	**5221 CF**
Total Impervious Area Treated=	**0.71 acres**
PE Treatment Provided=	**2.12 inches**

ESD Req Met

HydroCAD Routings


1S
POI 1 (Pre)
2S
POI 2 (Pre)
3S
POI 1 (Post) SWM 1
7S
POI 1 (Post) Bypass
4S
POI 2 (Post)
6P
SWM 1
5R
POI 1 Outfall
Subcat
Reach
Pond
Link
Routing Diagram for MDA230040
Prepared by {enter your company name here}, Printed 3/31/2023
HydroCAD® 10.00-20 s/n 09920 © 2017 HydroCAD Software Solutions LLC

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
1.671	80	>75% Grass cover, Good, HSG D (1S, 2S, 3S, 4S, 7S)
1.437	98	Paved parking, HSG D (1S, 2S, 3S, 4S, 7S)
3.108	**88**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
0.000	HSG C	
3.108	HSG D	1S, 2S, 3S, 4S, 7S
0.000	Other	
3.108		**TOTAL AREA**

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.000	0.000	1.671	0.000	1.671	>75% Grass cover, Good	1S, 2S, 3S, 4S, 7S
0.000	0.000	0.000	1.437	0.000	1.437	Paved parking	1S, 2S, 3S, 4S, 7S
0.000	**0.000**	**0.000**	**3.108**	**0.000**	**3.108**	**TOTAL AREA**	

Pipe Listing (all nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Diam/Width (inches)	Height (inches)	Inside-Fill (inches)
1	3S	0.00	0.00	184.0	0.0050	0.013	12.0	0.0	0.0
2	7S	0.00	0.00	184.0	0.0050	0.013	12.0	0.0	0.0
3	6P	2,003.43	2,002.55	181.0	0.0049	0.013	12.0	0.0	0.0

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: POI 1 (Pre) Runoff Area=43,290 sf 30.31% Impervious Runoff Depth>1.98"
Flow Length=380' Tc=6.0 min CN=85 Runoff=3.61 cfs 0.164 af

Subcatchment 2S: POI 2 (Pre) Runoff Area=24,406 sf 22.78% Impervious Runoff Depth>1.90"
Tc=6.0 min CN=84 Runoff=1.96 cfs 0.089 af

Subcatchment 3S: POI 1 (Post) SWM 1 Runoff Area=41,893 sf 74.08% Impervious Runoff Depth>2.68"
Flow Length=349' Tc=6.0 min CN=93 Runoff=4.42 cfs 0.215 af

Subcatchment 4S: POI 2 (Post) Runoff Area=15,071 sf 62.96% Impervious Runoff Depth>2.50"
Tc=6.0 min CN=91 Runoff=1.51 cfs 0.072 af

Subcatchment 7S: POI 1 (Post) Bypass Runoff Area=10,731 sf 31.78% Impervious Runoff Depth>2.06"
Flow Length=349' Tc=6.0 min CN=86 Runoff=0.93 cfs 0.042 af

Reach 5R: POI 1 Outfall Inflow=3.60 cfs 0.259 af
Outflow=3.60 cfs 0.259 af

Pond 6P: SWM 1 Peak Elev=2,006.41' Storage=749 cf Inflow=4.42 cfs 0.215 af
Outflow=2.73 cfs 0.216 af

Total Runoff Area = 3.108 ac Runoff Volume = 0.581 af Average Runoff Depth = 2.24"
53.75% Pervious = 1.671 ac 46.25% Impervious = 1.437 ac

Summary for Subcatchment 1S: POI 1 (Pre)

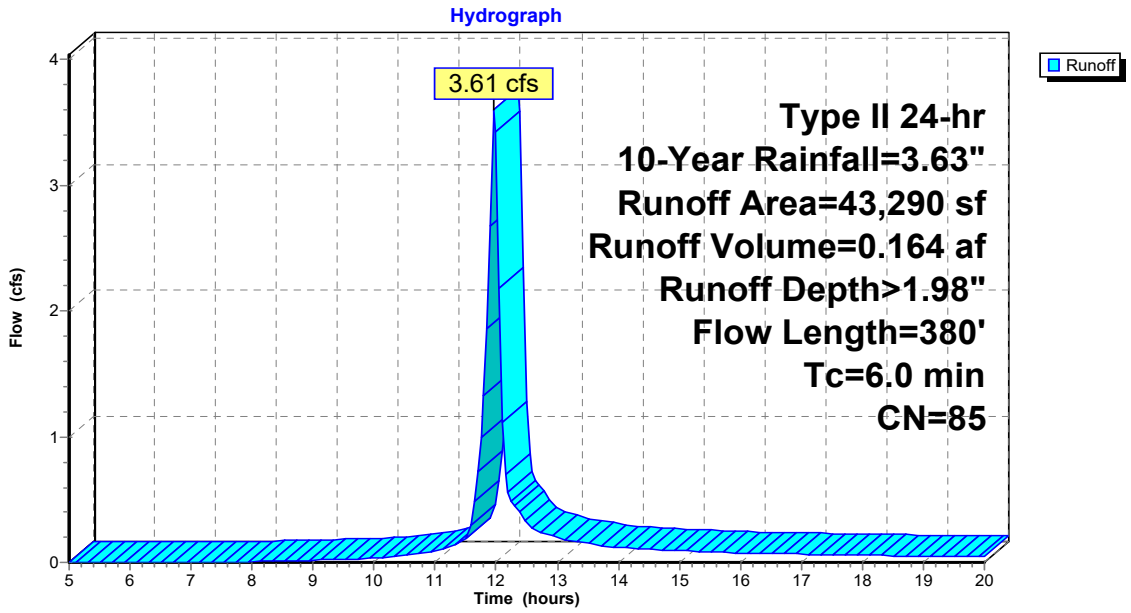
Runoff = 3.61 cfs @ 11.97 hrs, Volume= 0.164 af, Depth> 1.98"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-Year Rainfall=3.63"

Area (sf)	CN	Description
13,122	98	Paved parking, HSG D
30,168	80	>75% Grass cover, Good, HSG D
43,290	85	Weighted Average
30,168		69.69% Pervious Area
13,122		30.31% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.3	100	0.0250	1.32		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.47"
1.2	195	0.0290	2.74		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
0.3	85	0.0650	4.10		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
3.2					**Direct Entry, 6 Minutes Min.**
6.0	380	Total			

Subcatchment 1S: POI 1 (Pre)



Summary for Subcatchment 2S: POI 2 (Pre)

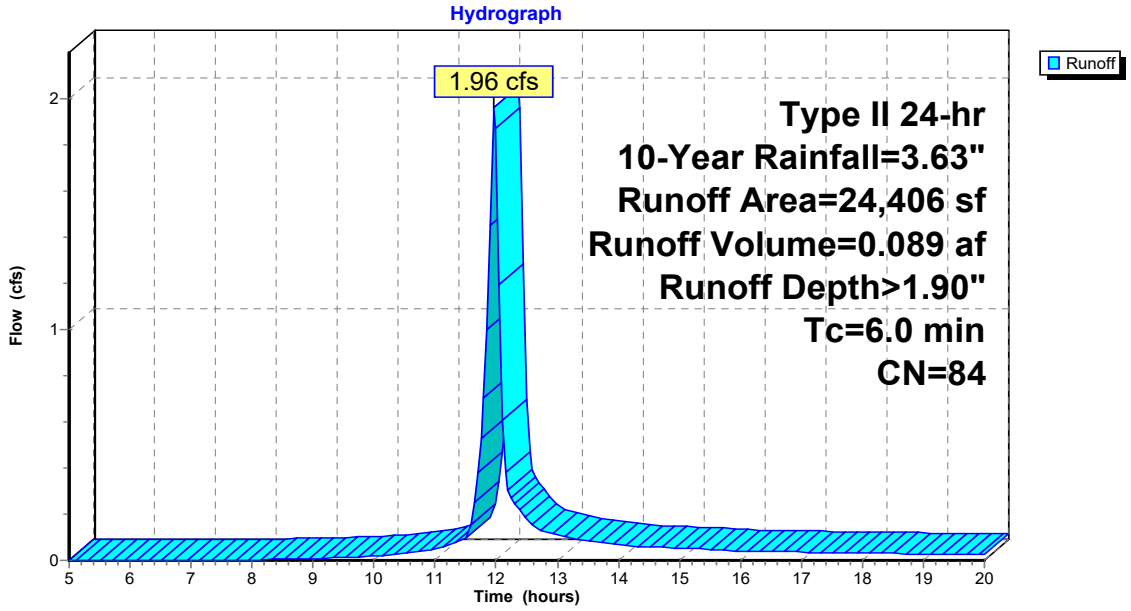
Runoff = 1.96 cfs @ 11.97 hrs, Volume= 0.089 af, Depth> 1.90"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-Year Rainfall=3.63"

Area (sf)	CN	Description
5,559	98	Paved parking, HSG D
18,847	80	>75% Grass cover, Good, HSG D
24,406	84	Weighted Average
18,847		77.22% Pervious Area
5,559		22.78% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, 6 Minutes Min.**

Subcatchment 2S: POI 2 (Pre)



Summary for Subcatchment 3S: POI 1 (Post) SWM 1

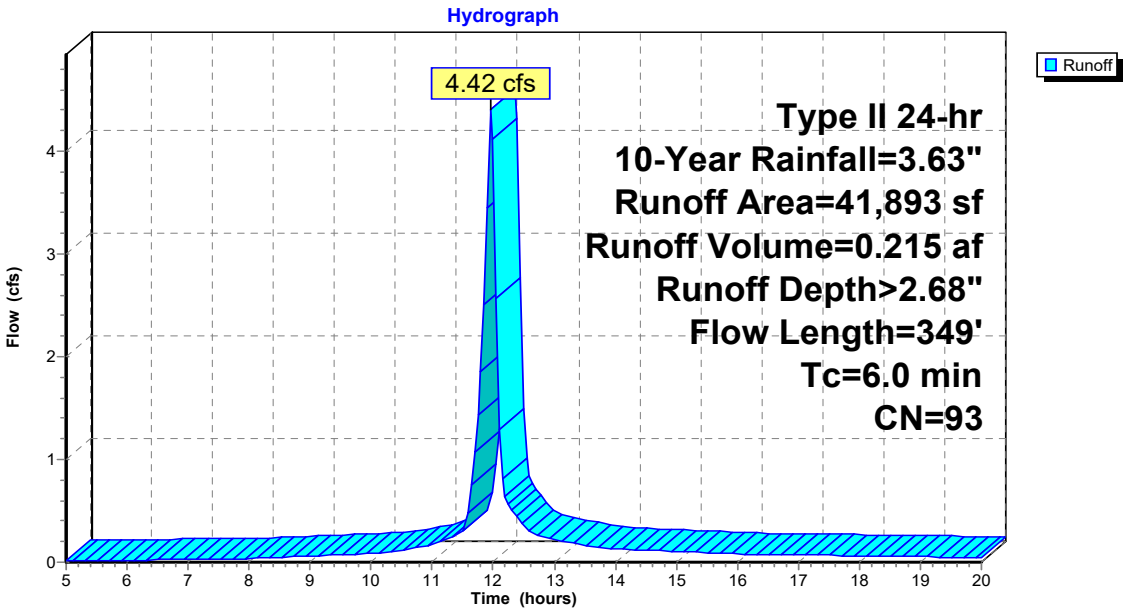
Runoff = 4.42 cfs @ 11.96 hrs, Volume= 0.215 af, Depth> 2.68"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-Year Rainfall=3.63"

Area (sf)	CN	Description
31,034	98	Paved parking, HSG D
10,859	80	>75% Grass cover, Good, HSG D
41,893	93	Weighted Average
10,859		25.92% Pervious Area
31,034		74.08% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.3	100	0.0250	1.32		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.47"
0.3	65	0.0450	4.31		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
1.0	184	0.0050	3.21	2.52	**Pipe Channel,** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
3.4					**Direct Entry, 6 Minutes Min.**
6.0	349	Total			

Subcatchment 3S: POI 1 (Post) SWM 1



Summary for Subcatchment 4S: POI 2 (Post)

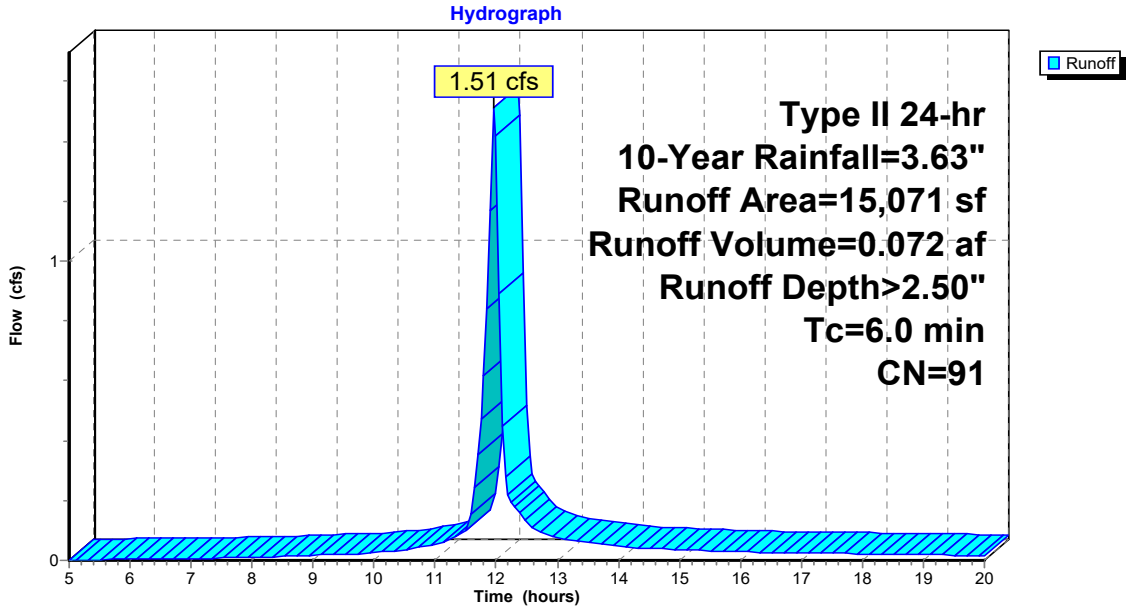
Runoff = 1.51 cfs @ 11.97 hrs, Volume= 0.072 af, Depth> 2.50"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-Year Rainfall=3.63"

Area (sf)	CN	Description
9,488	98	Paved parking, HSG D
5,583	80	>75% Grass cover, Good, HSG D
15,071	91	Weighted Average
5,583		37.04% Pervious Area
9,488		62.96% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, 6 Minutes Min.**

Subcatchment 4S: POI 2 (Post)



Summary for Subcatchment 7S: POI 1 (Post) Bypass

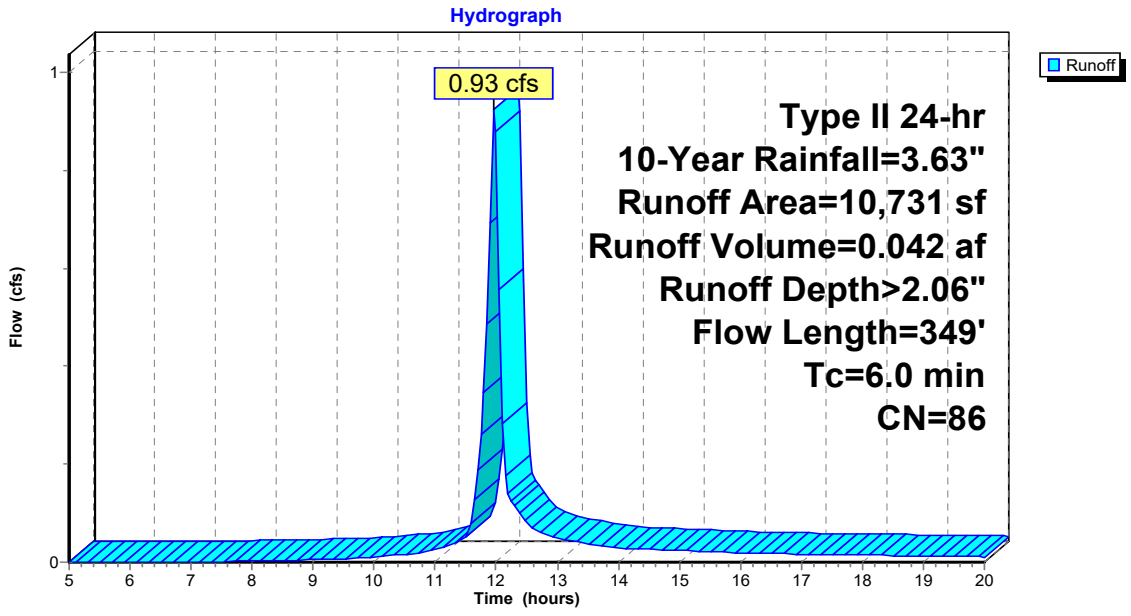
Runoff = 0.93 cfs @ 11.97 hrs, Volume= 0.042 af, Depth> 2.06"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-Year Rainfall=3.63"

Area (sf)	CN	Description
3,410	98	Paved parking, HSG D
7,321	80	>75% Grass cover, Good, HSG D
10,731	86	Weighted Average
7,321		68.22% Pervious Area
3,410		31.78% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.3	100	0.0250	1.32		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.47"
0.3	65	0.0450	4.31		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
1.0	184	0.0050	3.21	2.52	**Pipe Channel,** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
3.4					**Direct Entry, 6 Minutes Min.**
6.0	349	Total			

Subcatchment 7S: POI 1 (Post) Bypass



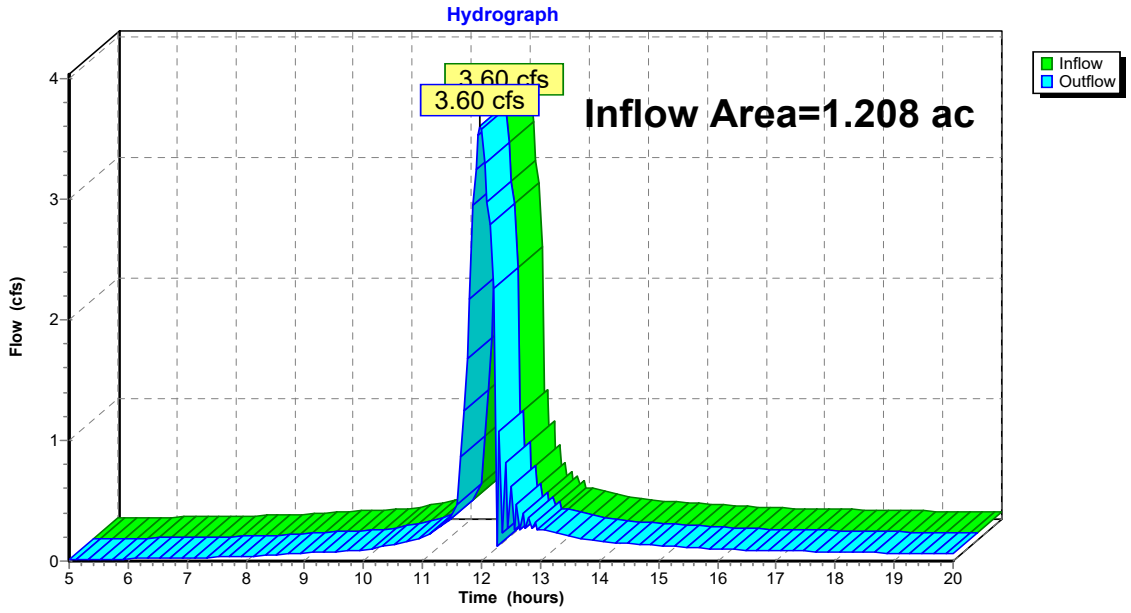
Summary for Reach 5R: POI 1 Outfall

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 1.208 ac, 65.45% Impervious, Inflow Depth > 2.57" for 10-Year event
Inflow = 3.60 cfs @ 11.98 hrs, Volume= 0.259 af
Outflow = 3.60 cfs @ 11.98 hrs, Volume= 0.259 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Reach 5R: POI 1 Outfall



Summary for Pond 6P: SWM 1

[82] Warning: Early inflow requires earlier time span
[85] Warning: Oscillations may require smaller dt or Finer Routing (severity=7)

Inflow Area = 0.962 ac, 74.08% Impervious, Inflow Depth > 2.68" for 10-Year event
Inflow = 4.42 cfs @ 11.96 hrs, Volume= 0.215 af
Outflow = 2.73 cfs @ 12.05 hrs, Volume= 0.216 af, Atten= 38%, Lag= 5.0 min
Primary = 2.73 cfs @ 12.05 hrs, Volume= 0.216 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 2,006.41' @ 12.05 hrs Surf.Area= 2,014 sf Storage= 749 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 0.9 min (753.0 - 752.1)

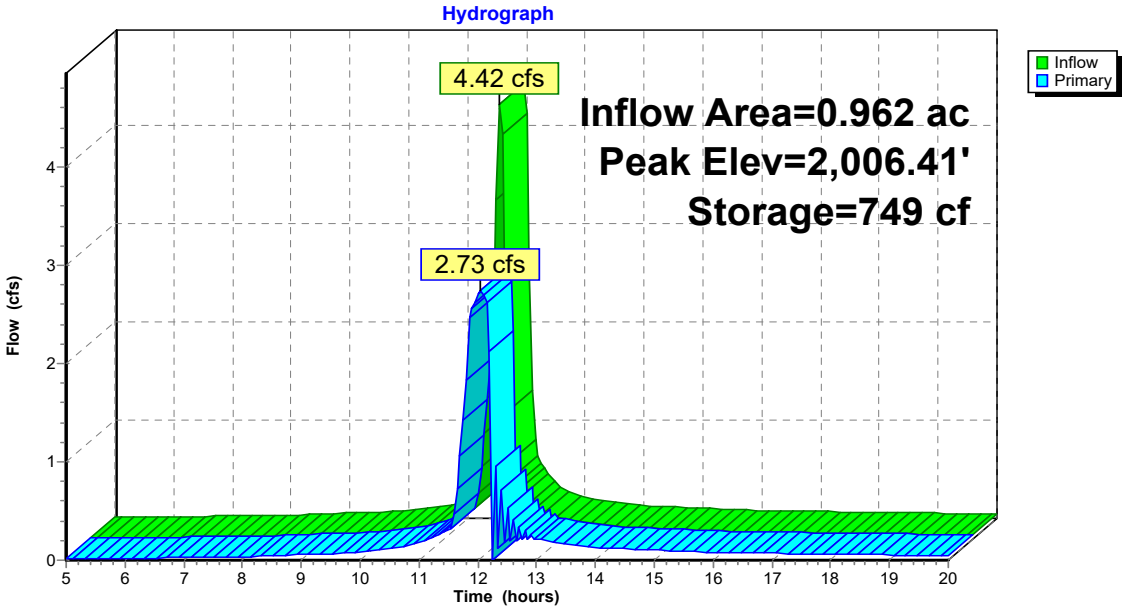
Volume	Invert	Avail.Storage	Storage Description
#1	2,006.00'	3,792 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
2,006.00	1,680	0	0
2,007.00	2,503	2,092	2,092
2,007.60	3,167	1,701	3,792

Device	Routing	Invert	Outlet Devices
#1	Primary	2,003.43'	**12.0" Round Culvert** L= 181.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 2,003.43' / 2,002.55' S= 0.0049 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Device 1	2,003.43'	**8.0" Vert. Orifice/Grate** C= 0.600
#3	Device 1	2,007.60'	**2.0" x 2.0" Horiz. Orifice/Grate** X 2 rows C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=2.73 cfs @ 12.05 hrs HW=2,006.40' (Free Discharge)
└**1=Culvert** (Passes 2.73 cfs of 3.97 cfs potential flow)
  ├**2=Orifice/Grate** (Orifice Controls 2.73 cfs @ 7.82 fps)
  └**3=Orifice/Grate** (Controls 0.00 cfs)

Pond 6P: SWM 1


Hydrograph
4.42 cfs
2.73 cfs
Inflow Area=0.962 ac
Peak Elev=2,006.41'
Storage=749 cf
Inflow
Primary
Flow (cfs)
Time (hours)
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: POI 1 (Pre) Runoff Area=43,290 sf 30.31% Impervious Runoff Depth>3.97"
Flow Length=380' Tc=6.0 min CN=85 Runoff=6.97 cfs 0.329 af

Subcatchment 2S: POI 2 (Pre) Runoff Area=24,406 sf 22.78% Impervious Runoff Depth>3.87"
Tc=6.0 min CN=84 Runoff=3.85 cfs 0.181 af

Subcatchment 3S: POI 1 (Post) SWM 1 Runoff Area=41,893 sf 74.08% Impervious Runoff Depth>4.79"
Flow Length=349' Tc=6.0 min CN=93 Runoff=7.62 cfs 0.384 af

Subcatchment 4S: POI 2 (Post) Runoff Area=15,071 sf 62.96% Impervious Runoff Depth>4.59"
Tc=6.0 min CN=91 Runoff=2.68 cfs 0.132 af

Subcatchment 7S: POI 1 (Post) Bypass Runoff Area=10,731 sf 31.78% Impervious Runoff Depth>4.08"
Flow Length=349' Tc=6.0 min CN=86 Runoff=1.76 cfs 0.084 af

Reach 5R: POI 1 Outfall Inflow=4.75 cfs 0.469 af
Outflow=4.75 cfs 0.469 af

Pond 6P: SWM 1 Peak Elev=2,007.27' Storage=2,814 cf Inflow=7.62 cfs 0.384 af
Outflow=3.15 cfs 0.385 af

Total Runoff Area = 3.108 ac Runoff Volume = 1.110 af Average Runoff Depth = 4.28"
53.75% Pervious = 1.671 ac 46.25% Impervious = 1.437 ac

Summary for Subcatchment 1S: POI 1 (Pre)

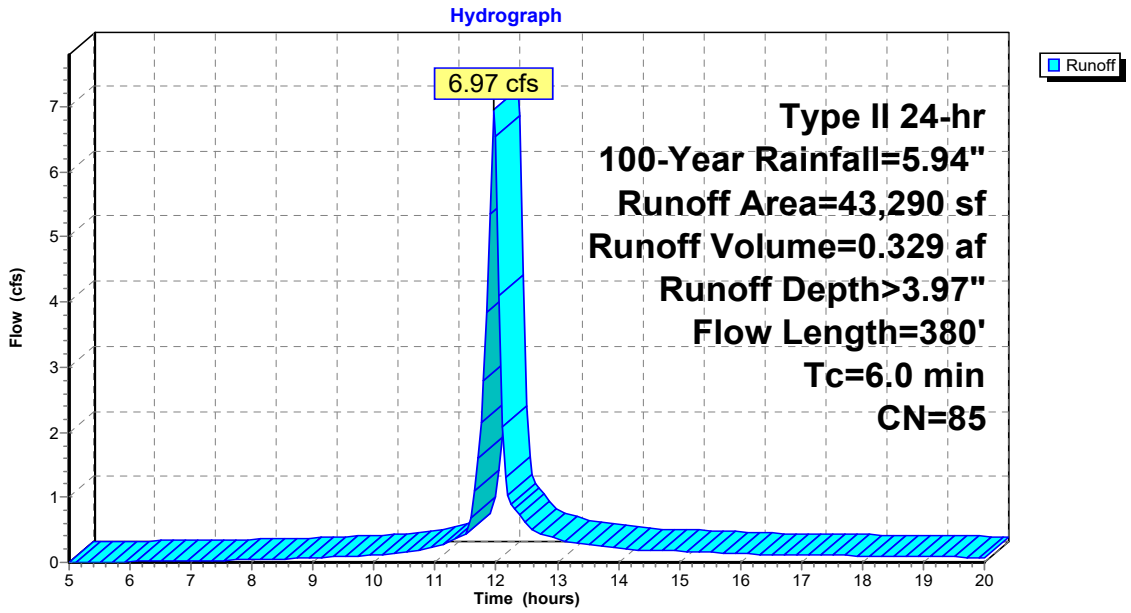
Runoff = 6.97 cfs @ 11.97 hrs, Volume= 0.329 af, Depth> 3.97"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-Year Rainfall=5.94"

Area (sf)	CN	Description
13,122	98	Paved parking, HSG D
30,168	80	>75% Grass cover, Good, HSG D
43,290	85	Weighted Average
30,168		69.69% Pervious Area
13,122		30.31% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.3	100	0.0250	1.32		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.47"
1.2	195	0.0290	2.74		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
0.3	85	0.0650	4.10		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
3.2					**Direct Entry, 6 Minutes Min.**
6.0	380	Total			

Subcatchment 1S: POI 1 (Pre)



Summary for Subcatchment 2S: POI 2 (Pre)

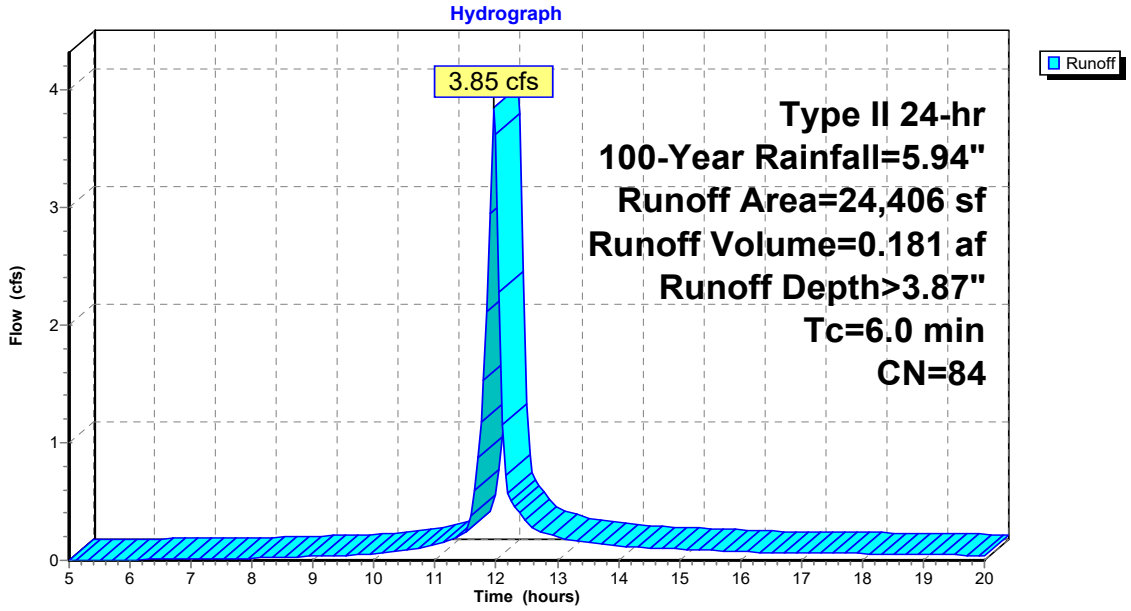
Runoff = 3.85 cfs @ 11.97 hrs, Volume= 0.181 af, Depth> 3.87"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-Year Rainfall=5.94"

Area (sf)	CN	Description
5,559	98	Paved parking, HSG D
18,847	80	>75% Grass cover, Good, HSG D
24,406	84	Weighted Average
18,847		77.22% Pervious Area
5,559		22.78% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, 6 Minutes Min.**

Subcatchment 2S: POI 2 (Pre)



Summary for Subcatchment 3S: POI 1 (Post) SWM 1

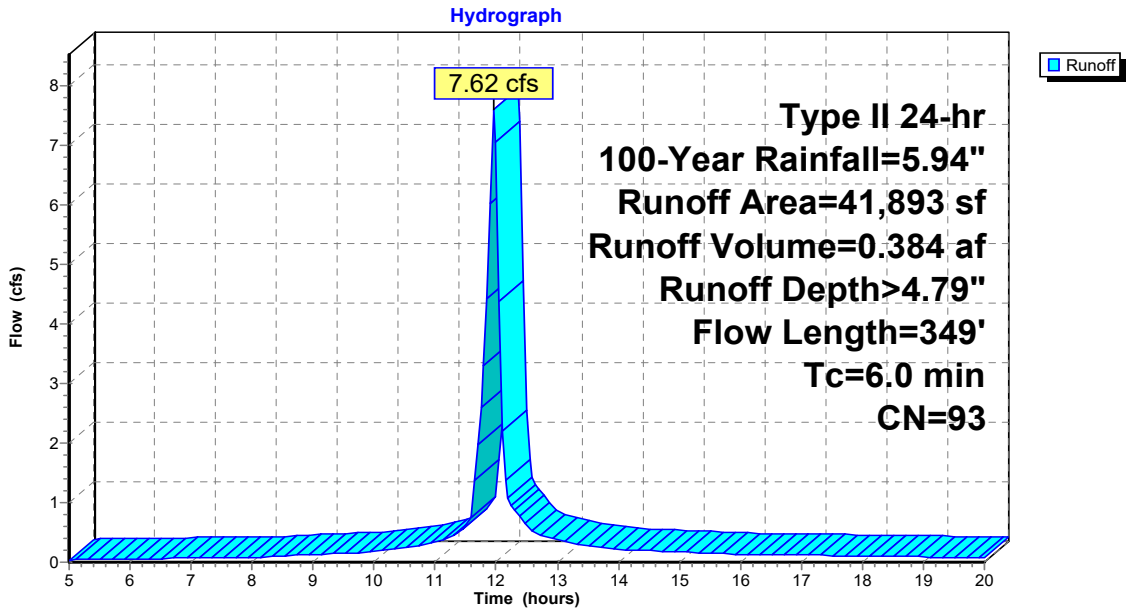
Runoff = 7.62 cfs @ 11.96 hrs, Volume= 0.384 af, Depth> 4.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-Year Rainfall=5.94"

Area (sf)	CN	Description
31,034	98	Paved parking, HSG D
10,859	80	>75% Grass cover, Good, HSG D
41,893	93	Weighted Average
10,859		25.92% Pervious Area
31,034		74.08% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.3	100	0.0250	1.32		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.47"
0.3	65	0.0450	4.31		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
1.0	184	0.0050	3.21	2.52	**Pipe Channel,** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
3.4					**Direct Entry, 6 Minutes Min.**
6.0	349	Total			

Subcatchment 3S: POI 1 (Post) SWM 1



Summary for Subcatchment 4S: POI 2 (Post)

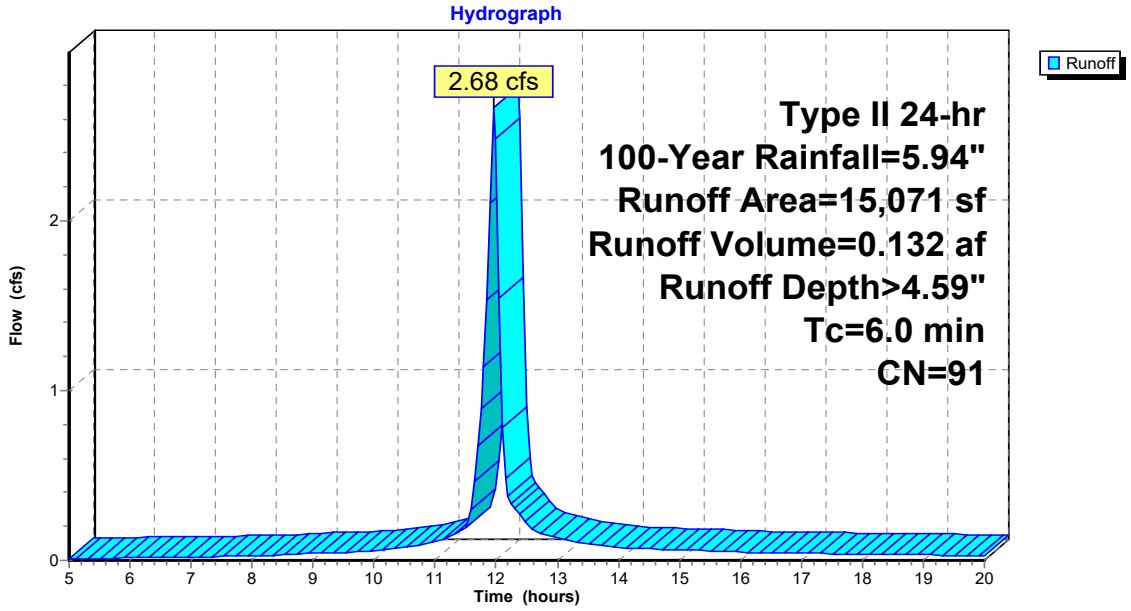
Runoff = 2.68 cfs @ 11.96 hrs, Volume= 0.132 af, Depth> 4.59"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-Year Rainfall=5.94"

Area (sf)	CN	Description
9,488	98	Paved parking, HSG D
5,583	80	>75% Grass cover, Good, HSG D
15,071	91	Weighted Average
5,583		37.04% Pervious Area
9,488		62.96% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, 6 Minutes Min.**

Subcatchment 4S: POI 2 (Post)



Summary for Subcatchment 7S: POI 1 (Post) Bypass

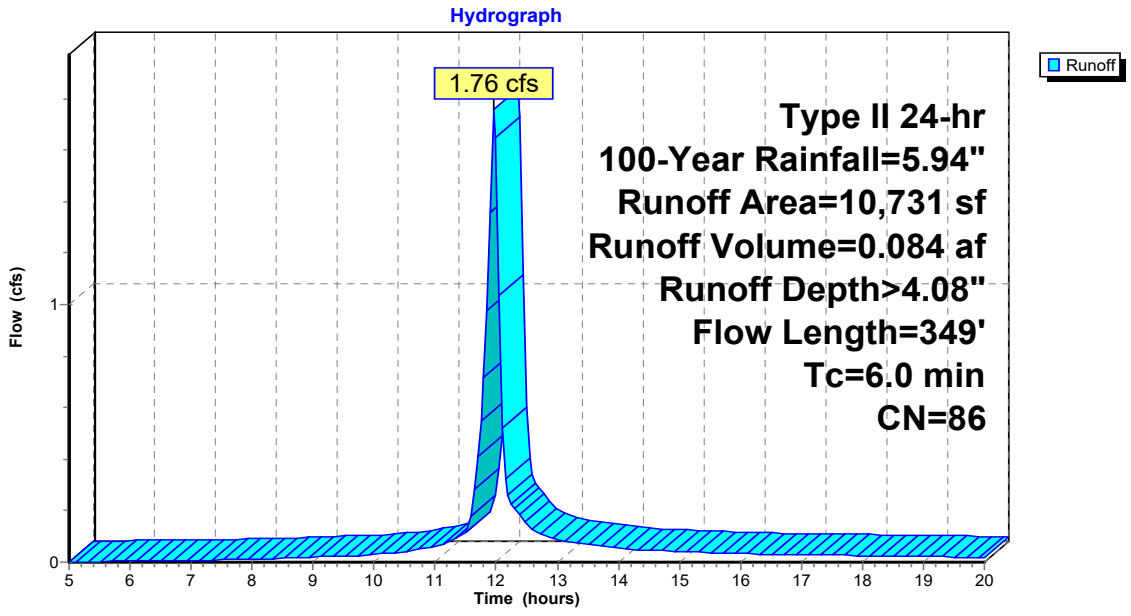
Runoff = 1.76 cfs @ 11.97 hrs, Volume= 0.084 af, Depth> 4.08"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-Year Rainfall=5.94"

Area (sf)	CN	Description
3,410	98	Paved parking, HSG D
7,321	80	>75% Grass cover, Good, HSG D
10,731	86	Weighted Average
7,321		68.22% Pervious Area
3,410		31.78% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.3	100	0.0250	1.32		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.47"
0.3	65	0.0450	4.31		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
1.0	184	0.0050	3.21	2.52	**Pipe Channel,** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
3.4					**Direct Entry, 6 Minutes Min.**
6.0	349	Total			

Subcatchment 7S: POI 1 (Post) Bypass



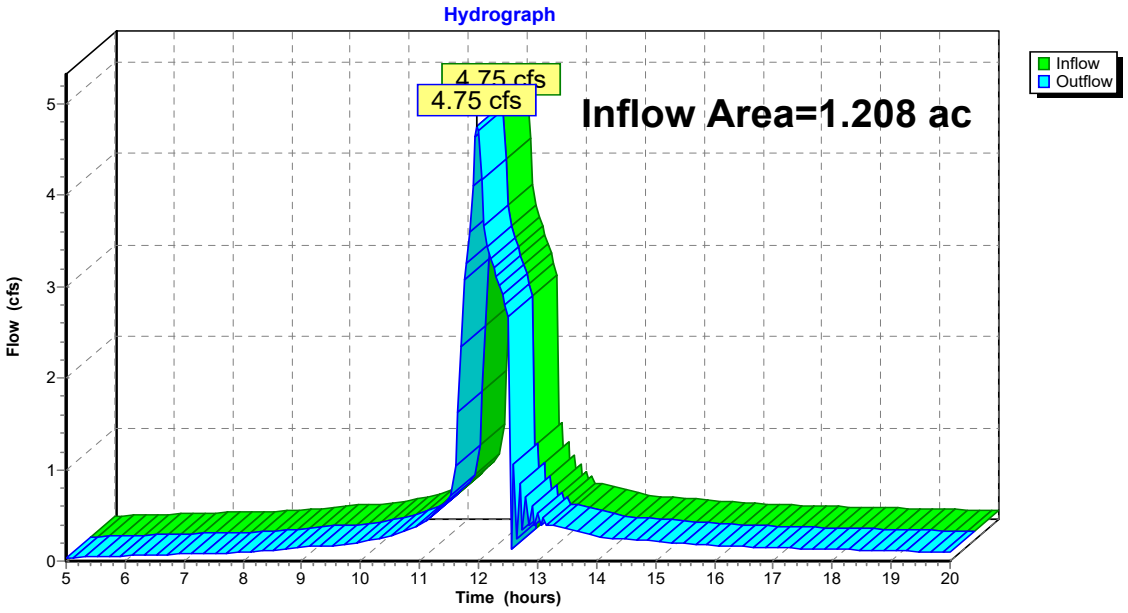
Summary for Reach 5R: POI 1 Outfall

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 1.208 ac, 65.45% Impervious, Inflow Depth > 4.66" for 100-Year event
Inflow = 4.75 cfs @ 11.98 hrs, Volume= 0.469 af
Outflow = 4.75 cfs @ 11.98 hrs, Volume= 0.469 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Reach 5R: POI 1 Outfall



Summary for Pond 6P: SWM 1

[82] Warning: Early inflow requires earlier time span
[85] Warning: Oscillations may require smaller dt or Finer Routing (severity=6)

Inflow Area = 0.962 ac, 74.08% Impervious, Inflow Depth > 4.79" for 100-Year event
Inflow = 7.62 cfs @ 11.96 hrs, Volume= 0.384 af
Outflow = 3.15 cfs @ 12.08 hrs, Volume= 0.385 af, Atten= 59%, Lag= 7.0 min
Primary = 3.15 cfs @ 12.08 hrs, Volume= 0.385 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 2,007.27' @ 12.08 hrs Surf.Area= 2,804 sf Storage= 2,814 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 3.9 min (745.9 - 742.0)

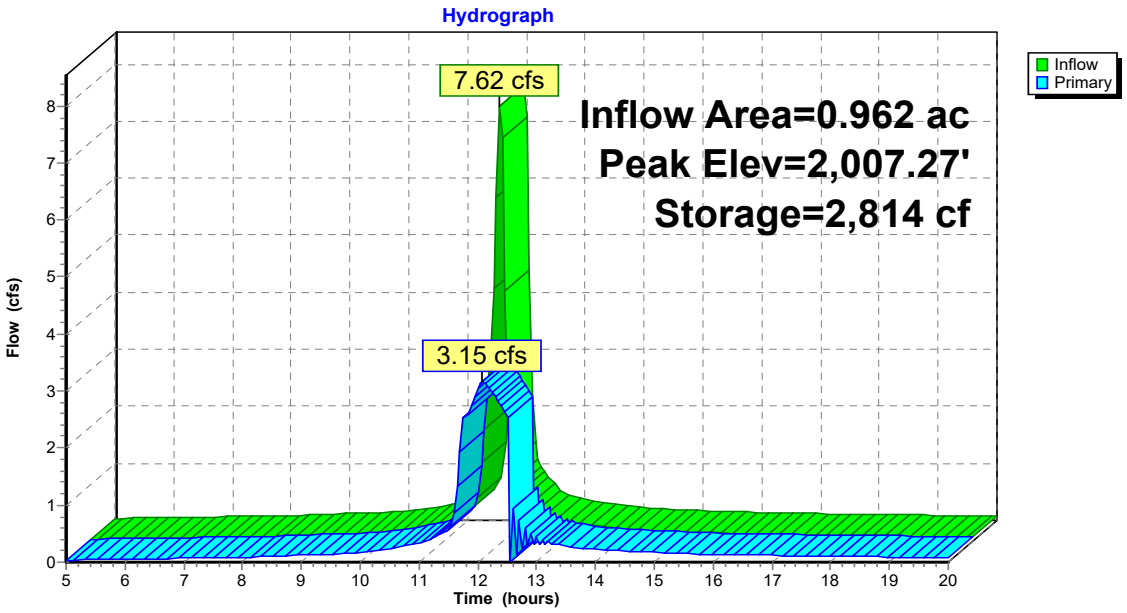
Volume	Invert	Avail.Storage	Storage Description
#1	2,006.00'	3,792 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
2,006.00	1,680	0	0
2,007.00	2,503	2,092	2,092
2,007.60	3,167	1,701	3,792

Device	Routing	Invert	Outlet Devices
#1	Primary	2,003.43'	**12.0" Round Culvert** L= 181.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 2,003.43' / 2,002.55' S= 0.0049 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Device 1	2,003.43'	**8.0" Vert. Orifice/Grate** C= 0.600
#3	Device 1	2,007.60'	**2.0" x 2.0" Horiz. Orifice/Grate** X 2 rows C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=3.14 cfs @ 12.08 hrs HW=2,007.26' (Free Discharge)
↑**1=Culvert** (Passes 3.14 cfs of 4.53 cfs potential flow)
↑**2=Orifice/Grate** (Orifice Controls 3.14 cfs @ 9.00 fps)
3=Orifice/Grate (Controls 0.00 cfs)

Pond 6P: SWM 1


Hydrograph
7.62 cfs
3.15 cfs
Inflow Area=0.962 ac
Peak Elev=2,007.27'
Storage=2,814 cf
Inflow
Primary
Flow (cfs)
Time (hours)
0
1
2
3
4
5
6
7
8
5
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Soils Report

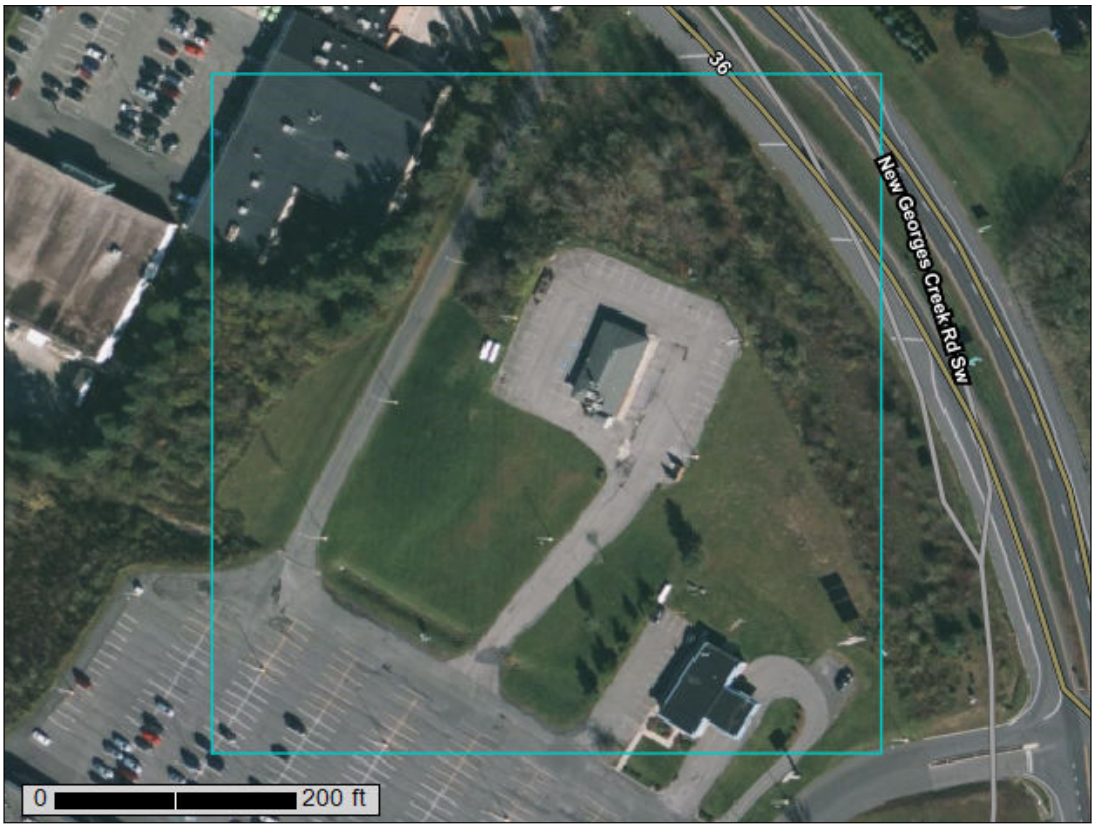
United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Allegany County, Maryland



October 26, 2022

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

Contents

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

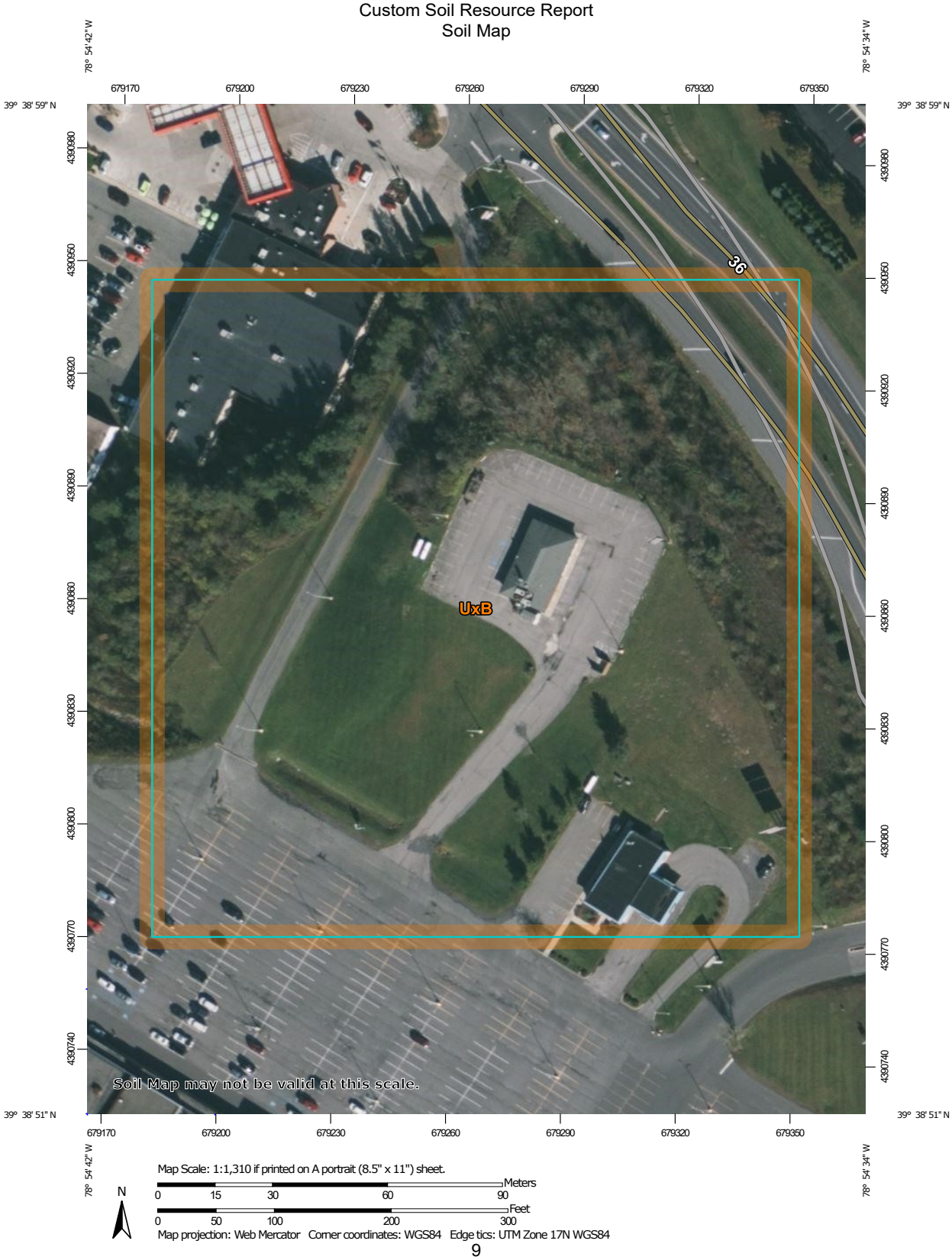
After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map



MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Allegany County, Maryland
Survey Area Data: Version 16, Sep 14, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Sep 23, 2020—Nov 3, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
UxB	Urban land, 0 to 8 percent slopes	7.3	100.0%
Totals for Area of Interest		**7.3**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Allegany County, Maryland

UxB—Urban land, 0 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2llhb
Elevation: 560 to 2,850 feet
Mean annual precipitation: 32 to 68 inches
Mean annual air temperature: 41 to 65 degrees F
Frost-free period: 147 to 199 days
Farmland classification: Not prime farmland

Map Unit Composition

Urban land: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Urban Land

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8s
Hydrologic Soil Group: D
Other vegetative classification: Not Suited (NS)
Hydric soil rating: No

Minor Components

Udorthents

Percent of map unit: 10 percent
Down-slope shape: Linear
Across-slope shape: Linear
Other vegetative classification: Not Suited (NS)
Hydric soil rating: No

Buchanan

Percent of map unit: 5 percent
Landform: Hillslopes
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Concave
Other vegetative classification: Acid Loams (AL2)
Hydric soil rating: No

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Office of the Secretary
Maryland Department of Planning
Attn: David Dahlstrom, AICP
301 W. Preston St.
Baltimore, Maryland 21201-2305

Re: Annual Report Calendar Year 2022

Dear Mr. Dahlstrom:

The Frostburg Planning and Zoning Commission approved the following annual report for the reporting year 2022 as required under §1-207(b) and §1-208(c)(1)(i) and (c)(3)(ii)of the Land Use Article on ___Date___. In addition, this report has been filed with the local legislative body.

1. Number of new Residential Permits Issued inside and outside of the Priority Funding Area (PFA):

Table 1: New Residential Permits Issued
Inside and Outside the Priority Funding Area (PFA)

Residential – Calendar Year 2022	PFA	Non - PFA	Total
# New Residential Permits Issued	7	0	7

2. Is your jurisdiction scheduled to complete and submit to Planning a 5-Year Mid-Cycle comprehensive plan implementation review report this year? If yes, please submit the 5-Year Report as an attachment. **No.**

   Note: To find out if your jurisdiction is scheduled to submit this report, please consult the Transition Schedule section located at: https://planning.maryland.gov/pages/OurWork/compPlans/ten-year.aspx

3. Were there any growth-related changes, including land use changes, zoning ordinance changes, rezonings, new schools, changes in water or sewer service, or municipal annexations that changed municipal and unincorporated boundaries? If yes, please list the annexation resolution(s), describe or attach a map of the changes, and provide a description of consistency of internal, state or adjoining local jurisdiction plans.
   No.

4. Did your jurisdiction identify and/or implement any recommendations for improving the planning and development process within the jurisdiction? If yes, please describe.
   No.

5. Are there any issues that MDP can assist you with in 2023? If yes, please describe. **Yes, Technical assistance with the comprehensive planning process would be greatly appreciated.**

6. Have all members of the Planning (Commission/Board) and Board of Appeals completed an educational training course?
   Yes.

Sincerely,

Bethany Fife
Planner / Interim Community Development Director
City of Frostburg
bfife@frostburgcity.org
301-914-1790