



# ROANOKE COUNTY

Purchasing Division

5204 Bernard Drive, Suite 300-F, P.O. Box 29800

Roanoke, Virginia 24018-0798

TEL: (540) 772-2061 FAX: (540) 772-2074

January 20, 2022

## ADDENDUM NO. 1 TO ALL BIDDERS/OFFERORS:

Reference – IFB #2022-060

Description: Mount Pleasant Library Sewer Extension

Issue Date: January 7, 2022

Proposal Due: February 2, 2022

The above Project is hereby changed as addressed below:

1. Extension of Due Date: Please note that the due date has been extended. Sealed bids are now due to the Purchasing office no later than Wednesday, February 2, 2022 at 2:00 PM local time.
2. Clarifications to Specifications: the following information is offered in order to clarify various specifications; or to answer questions or concerns posed at the pre-bid conference.
  - a. Fire Department lot use by Contractor: Contractor may use up to 25' of the fire station parking lot adjacent to SR 116 on the south end. Contractor shall ensure that operations do not interfere with the fueling station, which must be accessible to the Fire Department at all times. See Exhibit 1 to this addendum for updated plans.
  - b. Staging locations: to be established on the roadway closest the Library. Use of the area in front of the garage door, 20 feet wide; and use of the area in back of the Library, is permitted. Staging may not block access to the gate.
  - c. Library Access: Contractor's staging and work shall not block access to the library for patrons or staff at any time during the following hours:
    - Monday, 9:00 am – 5:00 pm
    - Tuesday, 12:00 pm – 6:00 pm
    - Wednesday, 9:00 am – 5:00 pm
    - Thursday, 12:00 pm – 8:00 pm
    - Friday, 9:00 am – 5:00 pm
    - Saturday, 9:00 am – 3:00 pm
  - d. Tree Removal: Per VDOT, trees may be cut. Trees within the right of way should not be replaced. Stumps must be ground down below grade.
  - e. Traffic regulation and signaling with VDOT: VDOT has approved the traffic

management details in the IFB. The County will obtain the Land Use Permit for the project, and the Contractor will be required to abide by the conditions of that permit. Please note: this is a correction to Sheet 2 of 6 of the project drawings (Project Description, Item 1).

- f. The following changes are proposed for the sewer crossing under Rt. 116: The Contractor may, at his option, use a directional bore approach to install the 8" HDPE sewer under SR 116, and omit the steel casing (which is required for conventional bore and jack) in accordance with all applicable VDOT and WVWA requirements.
  - g. Bid Bonds: bid bonds are required for all construction projects, per the terms included in IFB 2022-060. Performance and payment bonds are required upon award for any contract exceeding \$100,000.00. See Section 7. H., p. 9 of IFB 2022-060 for full specifications.
  - h. Material Availability: There will be no liquidated damages established in the resulting contract. However, Roanoke County expects the awarded contractor to perform the work as expediently as possible. Any material delivery delays should be promptly communicated to the County; an extension of the contract completion time will be approved and processed accordingly, as needed.
- 3. Updated Project Drawings: Please see attached as Exhibit 1 to this Addendum, updated project drawings. When in conflict, these updated drawings shall supersede those previously provided with IFB 2022-060.
  - 4. Pre-Bid Conference Sign in Log: please see attached as Exhibit 2, a copy of the sign-in log from the non-mandatory pre-bid conference held on January 13, 2022.

**Note:** A signed acknowledgment of this addendum must be received at the location indicated on the original solicitation either prior to the proposal due date or attached to your proposal. Signature on this addendum does not substitute for your signature on the original proposal/bid document. The original proposal/bid document must be signed.

Thank you,

Kate Hoyt  
Phone: (540) 283-8149  
[KHoyt@roanokecountyva.gov](mailto:KHoyt@roanokecountyva.gov)

\_\_\_\_\_  
Sign Name:

\_\_\_\_\_  
Print Name:

\_\_\_\_\_  
Name of Firm:

\_\_\_\_\_  
Date:

## PRE-CONSTRUCTION MEETING AND CONSTRUCTION COMMENCEMENT

- VIRGINIA DEPARTMENT OF TRANSPORTATION

- See Sheet \_\_\_\_ for Stormwater Site Statistics Table  
See Sheet \_\_\_\_ for New BMP Information Table.

N/A

The notes on this sheet shall not be modified.



## PRIVATE UTILITIES

- Underground utilities installed on private property or in private utility easements and building related storm drains shall be designed and installed per the current edition of the Virginia Uniform Statewide Building Code (including amendments). Design and installation requirements issued by the Western Virginia Water Authority that meet or exceed the USBC requirements are acceptable for private utilities. All private utilities are to be permitted through and inspected by the Roanoke County Inspections Office. Vaults, valves and other devices installed by or under the control of the Western Virginia Water Authority may not be substituted for the code required devices.

### Revision Table

## Sheet Index

1. COUNTY COVER SHEET
2. SITE PLAN
3. WWSA DETAILS
4. TRAFFIC CONTROL PLAN & DETAILS
5. EROSION & SEDIMENT CONTROL PLAN
6. EROSION & SEDIMENT CONTROL NARRATIVE

## SURVEY INFORMATION

All vertical elevations must be referenced to the National Geodetic Vertical Datum of 1929 or 1988.  
All horizontal data must be referenced to the North American Datum of 1927 or 1983.

Horizontal Datum: 1983 NAD83 (2011) Vertical Datum: 1988 (NAVD 88)

Source of topographic mapping is dated November 2014  
VITA contract with SANBORN  
1935 Jamboree Drive, Suite 100  
Colorado Springs, Co. 80920  
Ph # (866)-726-2676

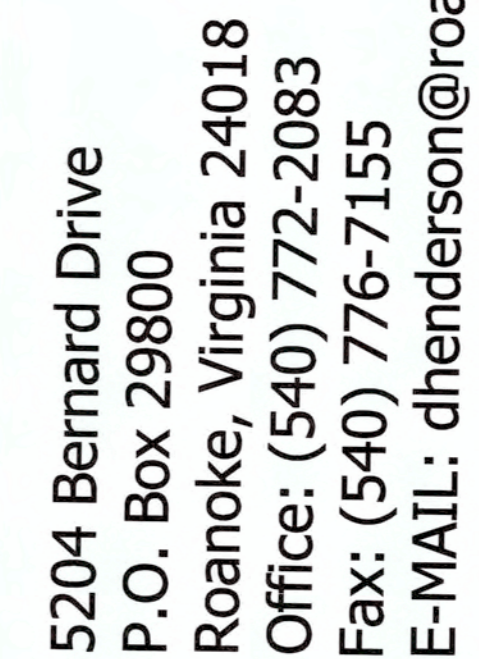
Boundary was performed by RECORDS & SURVEY dated: SPOT CHECKED AUG. 2021 BY RKE. CO

Benchmark Information: POINT #2111 & #2112. SET IN FIELD AND SHOWN ON PLANS.

The professional seal and signature certifies the boundary survey and topographic mapping to be accurate and correct.

**NOT APPLICABLE**

BY SEALING THE PLANS, THE DESIGN PROFESSIONAL HEREBY CERTIFIES THAT THE FOREGOING ESTIMATE REFLECTS THE CURRENT IMPROVEMENT COSTS OF THIS PROJECT.

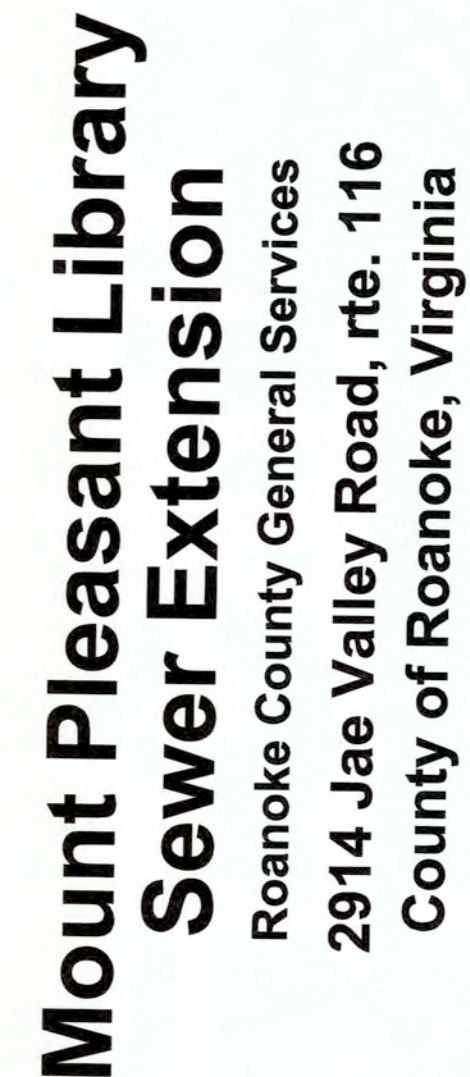


**PREPARED BY**

**ROANOKE COUNTY**

**DEPARTMENT OF  
DEVELOPMENT SERVICES**

E-MAIL: dhenderson@roanokecountyva.gov



**SHEET  
1  
OF  
6**

#

MERIDIAN BASED ON  
NAD 83 (2011)

PROPERTY OF  
ROANOKE COUNTY  
BOARD OF SUPERVISORS  
O JAE VALLEY RD  
TAX# 079.01-03-25.00

PROPERTY OF  
**ROANOKE CO BOARD OF SUPERVISORS**  
2909 JAE VALLEY RD  
TAX# 079.01-03-24.00

# 2909

MOUNT PLEASANT  
FIRE STATION

COMMONWEALTH OF VIRGINIA  
NICKIE D. MILLS  
LICENSE NO. 0402031205  
PROFESSIONAL ENGINEER  
1-19-22

PROFESSIONAL ENGINEER  
SEAL AND SIGNATURE

**ROANOKE COUNTY DEPT. OF  
COMMUNITY DEVELOPMENT**  
5204 Bernard Drive  
P.O. Box 29800  
Roanoke, Virginia 24018  
Office: (540) 772-2083  
Fax: (540) 776-7155

GENERAL NOTES:

1. PROPERTY LINES SHOWN ON THIS PAGE BASED ON RECORDS AND FIELD DATA.

SURVEY NOTES:

1. ALL SURVEY FOR THIS PROJECT WAS CONDUCTED USING COMBINATION OF TOTAL STATION AND RTK GPS EQUIPMENT. THE DATUMS USED FOR THE SURVEY ARE NAD83 (2011) & NAVD83. THE COORDINATE SYSTEM USED FOR THE SURVEY IS VIRGINIA STATE PLANE, SOUTH ZONE, US FOOT.
2. ALL SURVEY DATA'S GENERAL ACCURACY IS AS FOLLOWS:
  - HORIZONTAL ACCURACY: WITHIN 0.5' WITH EXCEPTION
  - VERTICAL ACCURACY: WITHIN 0.1' WHERE INFORMATION IS PROVIDED ON PLAN
3. CONTOUR DATA ON THIS PLAN IS GENERALLY ACCURATE TO WITHIN - 0.5' WHERE CONTOUR DATA IS PROVIDED.
4. THIS PLAN WAS PREPARED WITHOUT THE BENEFIT OF A CURRENT TITLE REPORT AND THEREFORE, THERE MAY EXIST ENCUMBRANCES NOT SHOWN HEREON.
5. WITH OCCASIONAL EXCEPTION, EDGE OF PAVEMENT, GRAVEL, CONCRETE, & BRICK ARE SHOWN BASED ON GEOREFERENCED AERIAL IMAGERY AND ARE TYPICALLY ACCURATE WITHIN 1.0'.
6. WITH OCCASIONAL EXCEPTION, EXISTING BUILDINGS SHOWN ARE BASED ON MUNICIPAL GIS DATA AND GEOREFERENCED AERIAL IMAGERY AND ARE TYPICALLY ACCURATE TO WITHIN 5.0'.
7. THIS PLAN DOES NOT GUARANTEE THE EXISTENCE, LOCATION, SIZE, MATERIAL OR TYPE OF ANY UNDERGROUND UTILITIES, ALL UNDERGROUND UTILITIES & STRUCTURES SHOWN ON THIS PLAN ARE SHOWN BASED ON SURVEYED ABOVE GROUND STRUCTURES, CCTV SURVEYS, AVAILABLE PUBLIC RECORDS AND BY UTILITY LINE LOCATION MARKINGS ESTABLISHED BY MISS UTILITY OF VIRGINIA TRUST # A118201328-004. ALL UNDERGROUND UTILITY & STRUCTURE LOCATION SHOULD BE FIELD VERIFIED PRIOR TO THE START OF ANY CONSTRUCTION.

## PROJECT DESCRIPTION

THE PROJECT CONSISTS OF:

1. CONTRACTOR WILL BE OBTAINING THE LAND USE PERMIT FROM VDOT, ESC AND VSPM PERMIT FROM ROANOKE COUNTY.
2. INSTALL EROSION AND SEDIMENT CONTROL MEASURES.
3. INSTALL 8" DI SS PIPE CONNECTING TO EXISTING MANHOLE (237 L.F TOTAL) STA. 11+55-11+83 TO BE CONCRETE ENCASED.
4. INSTALL MANHOLE AT STA. 12+37.
5. INSTALL OF 8" SDR-17 HDPE PIPE (54 L.F TOTAL) STA. 12+37-12+91 WITH 40 LF TO BE ENCASED IN 16" STEEL PIPE STA. 12+47-12+77.
6. INSTALL MANHOLE AT STA. 12+91 WITH 8", 5' LONG PVC C900 W/CAP.
7. INSTALL 6" PVC (171 L.F TOTAL) AND CLEANOUT.
8. INSTALL 4" PVC LATERAL (68 L.F TOTAL) AND CONNECT TO EXISTING CLEANOUT.
9. DEMOLISH EXISTING SEPTIC TANK AND DISTRIBUTION BOX IN PLACE, BREAKING UP TOP, SIDES, AND BOTTOM, AND ADD LIME, #57 STONE.
10. SEED AND STRAW, OR APPLY AGGREGATE BASE COURSE TO ALL DISTURBED AREAS WHEN CONSTRUCTION IS COMPLETE.

## PLAN

SCALE: 1"=20'

GRAPHIC SCALE

0	10	20	40

( IN FEET )

$$1 \text{ inch} = 20 \text{ ft.}$$

DATE: 1/19/2022

SCALE: 1" = 20'

DRAWING BY:	BWE
DESIGNED BY:	NDM/BWE

DESIGNED BY: NDM/BWE  
APPROVED BY: WVWA

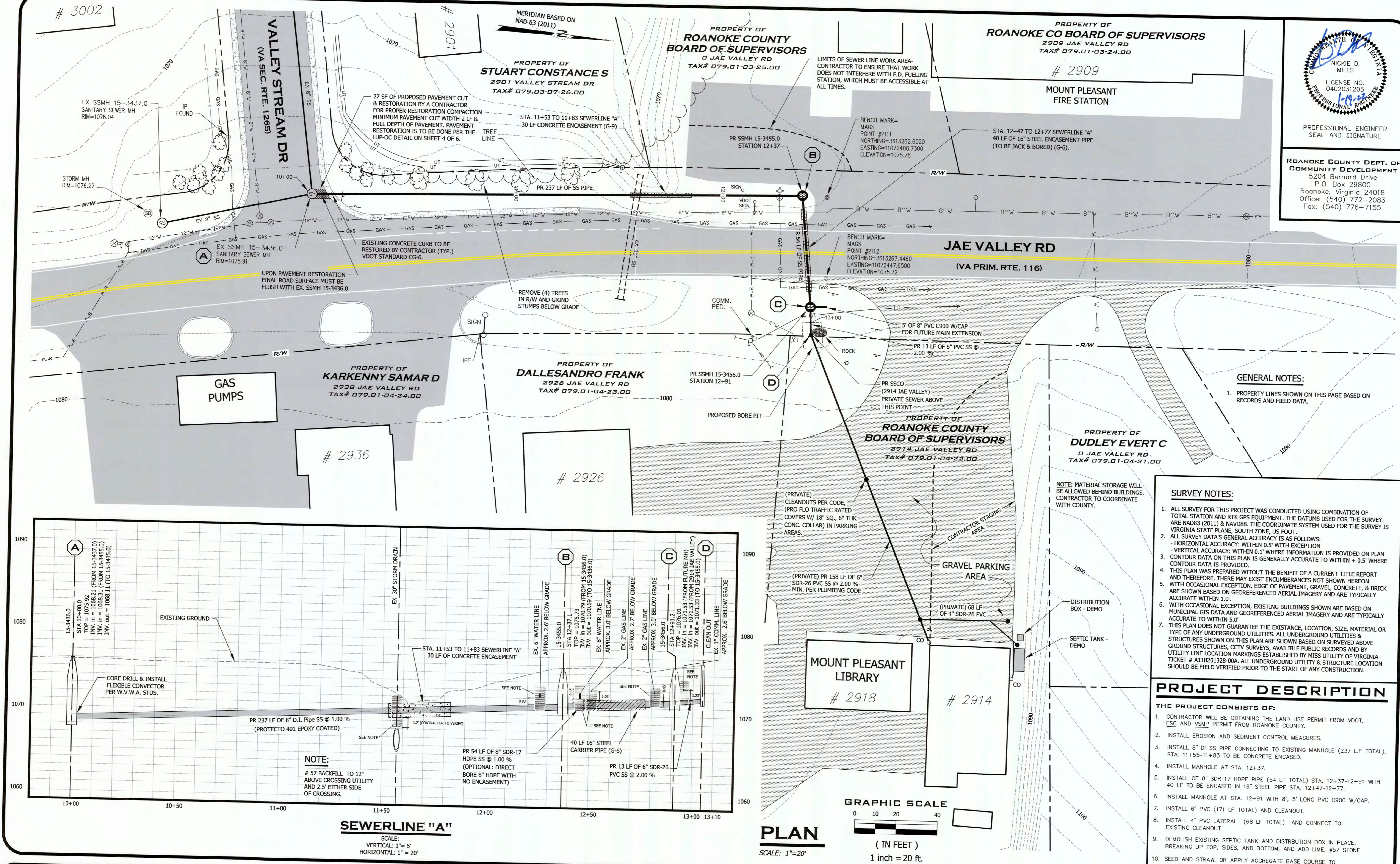
## PLAN & PROFILE

SHEET  
2  
OF  
6

# MOUNT PLEASANT LIBRARY SEWER EXTENSION

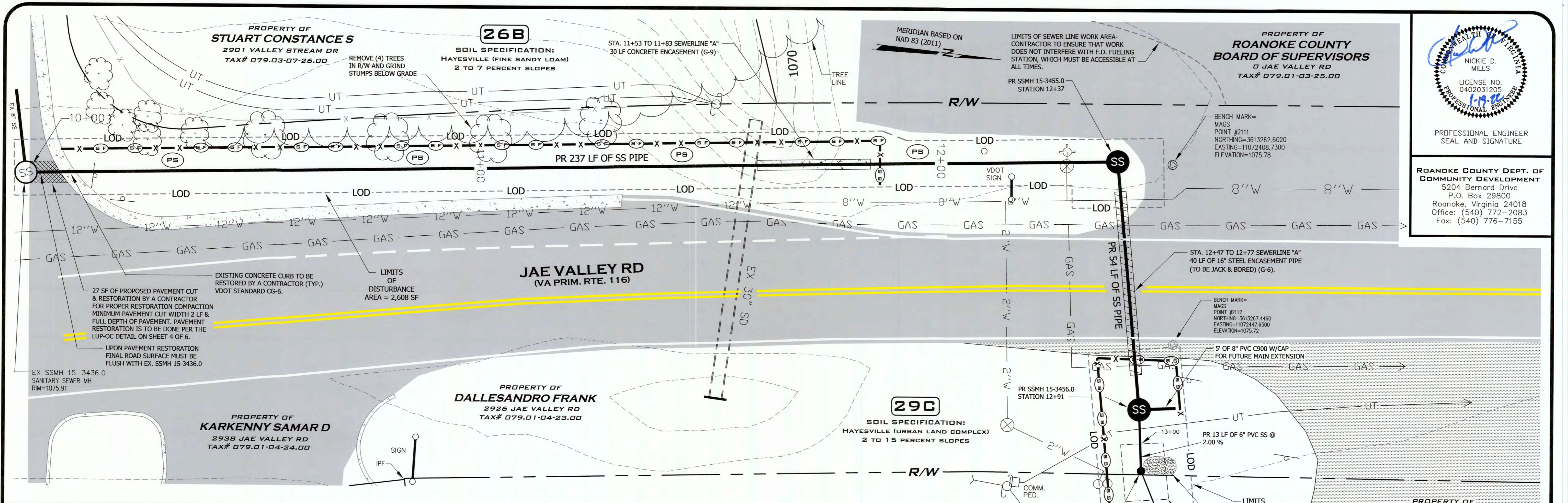
1		
2		
3		
4		
5		
6		
NO.	REVISIONS	DATE

DEPARTMENT OF  
DEVELOPMENT  
SERVICES



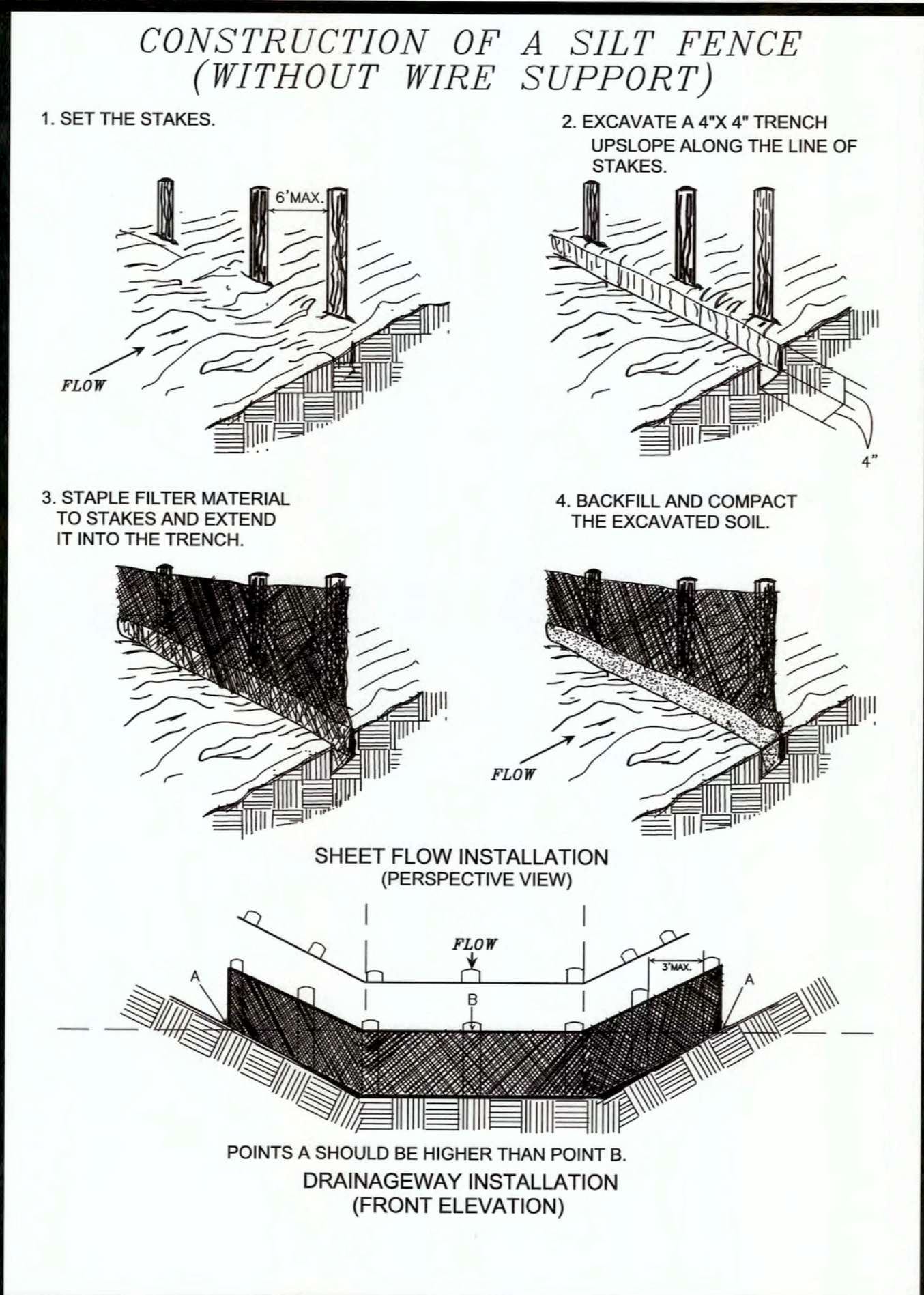
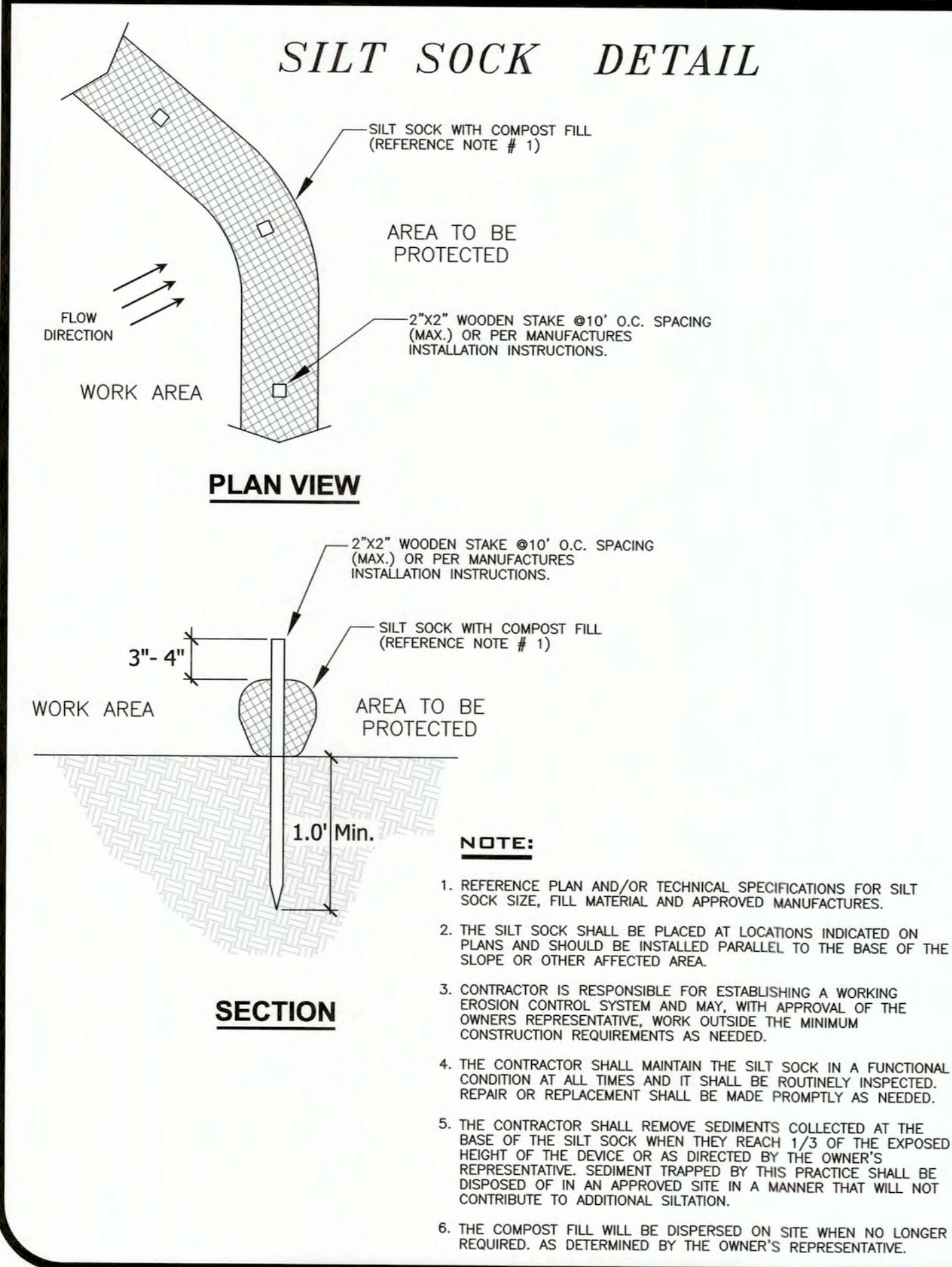






**COMMONWEALTH OF VIRGINIA**  
NICKIE D. MILLS  
LICENSE NO. 0402031205  
1-13-22  
PROFESSIONAL ENGINEER  
SEAL AND SIGNATURE

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## EROSION SEDIMENT CONTROL PLAN

SCALE: 1" = 10'

EROSION SEDIMENT CONTROL SYMBOLS		
(TC)	TURBIDITY CURTAIN	---
(CW)	CONCRETE WASHOUT	□
(B/M)	SOIL STABILIZATION MAT (EC-3 TYPE B)	▨
(TS)	TEMPORARY SEEDING	(TS)
(PS)	PERMANENT SEEDING	(PS)
(SF)	SILT FENCE	---X---SF---
(SS)	SILT SOCK	---SS---
(CE)	CONSTRUCTION ENTRANCE	▨
(CP)	CULVERT INLET PROTECTION	▨
(OP)	OUTLET PROTECTION	▨
(IP)	INLET PROTECTION	▨

PERMANENT SEEDING MIXTURE	
TYPE A	
15 OCTOBER TO 1 FEBRUARY K-31 FESCUE @ 5 LB / 1000 SF BORZY WINTER RYE @ 1/2 LB / 1000 SF	
1 FEBRUARY TO 1 JUNE K-31 FESCUE @ 5 LB / 1000 SF ANNUAL RYE @ 1/2 LB / 1000 SF	
1 JUNE TO 1 SEPTEMBER K-31 FESCUE @ 5 LB / 1000 SF GERMAN MILLET @ 1/2 LB / 1000 SF	
1 SEPTEMBER TO 15 OCTOBER K-31 FESCUE @ 5 LB / 1000 SF ANNUAL RYE @ 1/2 LB / 1000 SF	
LIME:	140 LB / 1000 SF PULVERIZED AGRICULTURAL LIMESTONE
FERTILIZER:	5-20-10 @ 25 LB / 1000 SF 38-0-0 @ 7 LB / 1000 SF
MULCH SHALL BE USED OVER ALL SEEDING AREAS AND SHALL BE APPLIED IN ACCORDANCE WITH SECTION 4.75 OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK, LATEST EDITION.	
SOIL CONDITIONING: SEED, MULCHING, MAINTENANCE OF NEW SEEDLINGS, AND RESEEDING SHALL BE IN ACCORDANCE WITH SPECIFICATIONS CONTAINED WITHIN THE VIRGINIA SOIL EROSION AND SEDIMENT CONTROL HANDBOOK, LATEST EDITION. ADDITIONAL SEEDING TO BE PERFORMED AS REQUIRED.	
INCORPORATION OF LIME AND FERTILIZER, SELECTION OF CERTIFIED BY THE INSPECTOR.	
SEED APPLICATION: CULTIPACKER SEEDER, OR HYDROSEEDER ON A FIRM, FRIABLE, SEEDBED. MAXIMUM SEEDING DEPTH SHALL BE 1/4 INCH.	
TOTAL DISTURBED AREA = <b>0.0994</b> AC. = <b>4,332</b> SQ. FT.	

NO.	REVISIONS	DATE
1		
2		
3		
4		
5		
6		

## GENERAL EROSION AND SEDIMENT CONTROL NOTES

1. ALL SOIL EROSION & SEDIMENT CONTROL MEASURES SHALL BE ACCOMPLISHED IN STRICT ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS CONTAINED IN THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK, LATEST EDITION.
2. THE APPROVING AUTHORITY MAY ADD TO, DELETE, RELOCATE, CHANGE, OR OTHERWISE MODIFY CERTAIN EROSION AND SEDIMENT CONTROL MEASURES WHERE FIELD CONDITIONS ARE ENCOUNTERED THAT WARRANT SUCH MODIFICATIONS.
3. ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES AS SHOWN ON THE PLAN SHALL BE PLACED IN ADVANCE OF THE WORK BEING PERFORMED, AS FAR AS PRACTICAL.
4. IN NO CASE DURING CONSTRUCTION SHALL WATER RUNOFF BE DIVERTED OR ALLOWED TO FLOW TO LOCATIONS WHERE ADEQUATE PROTECTION HAS NOT BEEN PROVIDED.
5. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LEAVE THE SITE ADEQUATELY PROTECTED AGAINST EROSION, SEDIMENTATION, OR ANY DAMAGE TO ANY ADJACENT PROPERTY AT THE END OF EACH DAY'S WORK.
6. FOR THE EROSION CONTROL KEY SYMBOLS SHOWN ON THE PLANS, REFER TO THE VIRGINIA UNIFORM CODING SYSTEM FOR EROSION AND SEDIMENT CONTROL PRACTICES CONTAINED IN THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK, LATEST EDITION. THESE SYMBOLS AND KEYS ARE TO BE UTILIZED ON ALL EROSION CONTROL PLANS SUBMITTED TO ROANOKE COUNTY.
7. THE LOCATION OF ALL OFF-SITE FILL OR BORROW AREAS ASSOCIATED WITH THE CONSTRUCTION PROJECT WILL BE PROVIDED TO ROANOKE COUNTY DEPARTMENT OF DEVELOPMENT SERVICES. AN EROSION CONTROL PLAN OR MEASURES MAY BE REQUIRED FOR THIS AREA.
8. THIS SHEET MAY NOT BE MODIFIED EXCEPT FOR TABLES.

TOTAL DISTURBED AREA = **0.0994** AC. = **4,332** SQ. FT.

## BMP INFORMATION TABLE

BMP TYPE	BMP #1
NAME OF AUTHORIZED NUTRIENT BANK	---
REQUIRED PHOSPHORUS TO BE REMOVED (LB/YR)	LBS
AMOUNT OF PHOSPHORUS CREDIT PURCHASED (LB/YR)	LBS
TECHNICAL REQUIREMENT MET (PART 11B OR 11C)	---
TOTAL AREA TREATED (AC)	---
IMPERVIOUS AREA TREATED BY BMP (AC)	---
MANAGED TURF AREA TREATED BY BMP (AC)	---
OPEN SPACE/FORESTED AREA TREATED BY BMP (AC)	---
SURFACE AREA OF BMP (AC)	---
STORAGE VOLUME OF BMP (AC)	---
QUALITY, QUANTITY, OR BOTH?	---
TMDL ADDRESSED? (PHOSPHORUS, BACTERIA, SEDIMENT, ETC)	---
NAME OF RECEIVING WATER (PROJECT SITE)	---
HYDROLOGIC UNIT CODE FOR PROJECT SITE (ALPHANUMERIC CODE RU14, ECT)	---
MAXIMUM AVERAGE DEPTH (FT)	---
LATITUDE (DECIMAL DEGREES XX.XXXX)	---
LONGITUDE (DECIMAL DEGREES XX.XXXX)	---

## STORMWATER SITE STATISTICS

	EXISTING	PROPOSED
TOTAL DISTURBED AREA (AC)	---	---
TOTAL SITE (AC)	---	---
IMPERVIOUS AREA (AC)	---	---
MANAGED TURF AREA (AC)	---	---
OPEN SPACE/FOREST (AC)	---	---
PUBLIC RIGHT OF WAY DISTURBANCE (SF)	---	---
KARST PRESENT (Y/N)	---	---

## MODIFIED VIRGINIA CODING SYSTEM FOR EROSION &amp; SEDIMENT CONTROL PRACTICES

REFER TO SHEET 5 FOR DETAILS OF IMPLEMENTED MEASURES

NO.	TITLE	KEY	SYMBOL	NO.	TITLE	KEY	SYMBOL
3.01	SAFETY FENCE	SAF		3.21	LEVEL SPREADER	LS	
3.02	TEMPORARY GRAVEL CONSTRUCTION ENTRANCE	CE		3.22	VEGETATIVE STREAMBANK STABILIZATION	VSS	
3.03	CONSTRUCTION ROAD STABILIZATION	CRS		3.23	STRUCTURAL STREAMBANK STABILIZATION	SSS	
3.04	STRAW BALE BARRIER	STB		3.24	TEMPORARY VEHICULAR STREAM CROSSING	VSC	
3.05	SILT FENCE	SF		3.25	UTILITY STREAM CROSSING	USC	
3.06	BRUSH BARRIER	BB		3.26	DEWATERING STRUCTURE	DS	
3.07	STORM DRAIN INLET PROTECTION	IP		3.27	TURBIDITY CURTAIN	TC	
3.08	CULVERT INLET PROTECTION	CIP		3.28	SUBSURFACE DRAIN	SD	
3.09	TEMPORARY DIVERSION DIKE	DD		3.29	SURFACE ROUGHENING	SR	
3.10	TEMPORARY FILL DIVERSION	FD		3.30	TOPSOILING	TO	
3.11	TEMPORARY RIGHT-OF-WAY DIVERSION	RWD		3.31	TEMPORARY SEEDING	TS	
3.12	DIVERSION	DV		3.32	PERMANENT SEEDING	PS	
3.13	TEMPORARY SEDIMENT TRAP	ST		3.33	SODDING	SO	
3.14	TEMPORARY SEDIMENT BASIN	SB		3.34	BERMUDA GRASS AND ZOYSIAURASS ESTABLISHMENT	B <sub>M</sub>	
3.15	TEMPORARY SLOPE DRAIN	TSD		3.35	MULCHING	MU	
3.16	PAVED FLUME	PF		3.36	SOIL STABILIZATION BLANKETS AND MATTING	BE <sub>SL</sub>	
3.17	STORMWATER CONVEYANCE CHANNEL	SCC		3.37	TREES, SHRUBS, VINES AND GROUND COVERS	VEG	
3.18	OUTLET PROTECTION	OP		3.38	TREE PRESERVATION AND PROTECTION	TP	
3.19	RIPRAP	RR		3.39	DUST CONTROL	DC	
3.20	ROCK CHECK DAMS	CD					

## EROSION AND SEDIMENT CONTROL NARRATIVE

**PROJECT DESCRIPTION:** THE PURPOSE OF THIS PROJECT IS TO EXTEND A NEW SEWER MAIN WITHIN THE ROANOKE COUNTY SERVICE AREA. THE TOTAL ESTIMATED PROJECT DISTURBANCE AREA IS 4,332 SF (0.09 AC). THE AREA CALCULATION IS BASED ON THE INSTALLATION OF 291 LF OF SEWER MAIN WITHIN A 10 FOOT WIDE DISTURBANCE. SPECIFICALLY, 1,363 SF (0.031 AC) IS WITHIN TO THE EXISTING HARD SURFACE AND 2,969 SF (0.068 AC) IS OUTSIDE THE EXISTING HARD SURFACE. THEREFORE, THE PROJECT'S LAND DISTURBING ACTIVITIES HAS BEEN DETERMINED TO BE EXEMPTED FROM THE VESCH (§ 621-44.15:51&55) AS AN EXTENSION OF AN EXISTING UNDERGROUND PUBLIC UTILITY LINE THAT IS CONFINED TO AN EXISTING HARD-SURFACE URBAN STREET.

**EXISTING SITE CONDITIONS:** THE LIMITS OF DISTURBANCE IS LOCATED WITHIN VDOT RIGHT-OF-WAY AND THE SUBJECT PROPERTY IDENTIFIED AS ROANOKE COUNTY TAX PARCEL #79.01-04-22.00 AND IS THE ROANOKE COUNTY MOUNT PLEASANT LIBRARY. THE SITE IS CURRENTLY A MIX OF GRAVEL PARKING AND GRASSED SHOULDER AREA. THE ENTIRE SITE DRAINS INTO THE ADJACENT DRAINAGE DITCH. THERE ARE CURRENTLY NO KNOWN EROSION PROBLEMS RELATED TO THE PROJECT AREA.

**ADJACENT PROPERTY:** THE PROJECT AREA IS BOUNDED BY VDOT R/W TO THE NORTH, TAX # 79.01-03-26.00 TO THE EAST, VDOT RIGHT-OF-WAY TO THE SOUTH, TAX # 79.01-04-22.00 TO THE WEST.

**OFFSITE AREAS:** THE CONTRACTOR WILL BE REQUIRED TO PROVIDE, TO THE COUNTY OF ROANOKE:

A. THE LOCATION OF ANY OFFSITE BORROW AREAS.

B. THE LOCATION OF ANY OFFSITE AREAS WHERE EXCESS EXCAVATED MATERIAL WILL BE DISPOSED.

**SOILS:** THE "WEB SOIL SURVEY" AS PREPARED BY THE UNITED STATES DEPARTMENT OF AGRICULTURE IDENTIFIES THE SOILS ON SITE AS 29C HAYESVILLE, 2 TO 15 PERCENT SLOPE, WHICH IS URBAN LAND COMPLEX SOIL GROUP B.

**CRITICAL AREAS:** CRITICAL AREAS FOR THIS PROJECT INCLUDE ALL AREAS ADJACENT TO RTE. 116. SPECIAL CARE SHALL BE TAKEN TO ENSURE THAT THESE AREAS HAVE ADEQUATE EROSION CONTROL AND THAT SEDIMENT TRANSPORT FROM THE PROPERTY IS MINIMIZED.

**EROSION AND SEDIMENT CONTROL MEASURES:** UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE CONSTRUCTED AND MAINTAINED ACCORDING TO THE MINIMUM STANDARDS AND SPECIFICATIONS OF THE "VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK", LATEST EDITION (VESCH). THE MINIMUM STANDARDS OF THE VESCH SHALL BE ADHERED TO UNLESS DIRECTED BY THE LOCAL PROGRAM ADMINISTRATOR.

## STRUCTURAL:

CONSTRUCTION ENTRANCE-Std. 3.02 ..... a stone pad, located at points of vehicular ingress and egress to the construction site, to reduce the soil transported onto public roads and other paved areas.

SILT FENCE, 3.05 ..... a temporary sediment barrier consisting of a synthetic filter fabric stretched across and attached to supporting posts and entrances to intercept and detain small amounts of sediment from disturbed areas.

CULVERT INLET PROTECTION, 3.08 ..... shall be installed as shown on the erosion and sediment control plan in conformance with vesch std. & spec. or www.ascs culvert inlet protections are provided in order to filter runoff before it enters a storm drain system.

DEWATERING STRUCTURE, 3.26 ..... a temporary settling and filter device for water which is discharged from dewatering activities, used to filter sediment-laden water prior to the water being discharged offsite.

## VEGETATIVE:

TEMPORARY SEEDING, 3.31 ..... establishment of temporary vegetative cover on disturbed areas by seeding with appropriate rapidly growing annual plants to reduce erosion by stabilizing disturbed areas that will not be brought to final grade for a period of more than 14 days.

PERMANENT SEEDING, 3.32 ..... establishment of perennial vegetative cover on disturbed areas by planting seed to reduce erosion and decrease sediment yield from disturbed areas.

MULCHING, 3.35 ..... application of plant residues or other suitable materials to the soil surface. Mulching will prevent erosion by protecting the soils surface from rainfall impact and reducing the velocity of overland flow. After seeding, mulching will foster the growth of vegetation by increasing available moisture and providing insulation against extreme heat and cold.

DUST CONTROL, 3.39 ..... the application of measures to prevent surface and air movement of dust from exposed soil surfaces and reduce the presence of airborne substances which may present health hazards, traffic safety problems or harm animal or plant life.

## MANAGEMENT STRATEGIES:

A.) CONSTRUCTION WILL BE SEQUENCED SO THAT GRADING OPERATIONS CAN BEGIN AND END AS QUICKLY AS POSSIBLE.

B.) SEDIMENT TRAPPING MEASURES WILL BE INSTALLED AS A FIRST STEP IN GRADING.

C.) THE LOCAL PROGRAM ADMINISTRATOR RESERVES THE RIGHT TO ADD TO, DELETE OR OTHERWISE CHANGE THE EROSION CONTROL MEASURES AS DEEMED NECESSARY DUE TO ACTUAL FIELD CONDITIONS BY WRITTEN NOTIFICATION TO THE CONTRACTOR.

D.) ALL FILL AND CUT SLOPES SHALL BE SEEDED WITHIN SEVEN (7) DAYS OF ACHIEVING FINAL GRADE.

E.) ONLY AFTER INSPECTION AND APPROVAL FROM THE LOCAL PROGRAM ADMINISTRATOR, EROSION AND SEDIMENT CONTROL DEVICES MAY BE REMOVED FOLLOWING THE STABILIZATION OF THE CONTRIBUTING AREAS.

THE WWA SHALL INSPECT DISTURBED AREAS OF THE SITE THAT HAVE NOT BEEN FINALLY STABILIZED, AND AREAS USED FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION, STRUCTURAL CONTROL MEASURES, AND THE AREA OF CONSTRUCTION VEHICLE ACCESS AT LEAST EVERY FOURTEEN (14) CALENDAR DAYS, AND WITHIN 48 HOURS OF THE END OF A STORM EVENT PRODUCING 1/2" OR GREATER OF PRECIPITATION. WHERE AREAS HAVE BEEN FINALLY OR TEMPORARILY STABILIZED OR RUNOFF IS UNLIKELY DUE TO WINTER CONDITIONS (SITE IS COVERED WITH ICE, OR FROZEN GROUND EXISTS) SUCH INSPECTIONS SHALL BE CONDUCTED AT LEAST ONCE EVERY MONTH.

A.) INSPECT DISTURBED AREAS AND AREAS OF MATERIALS STORAGE THAT ARE EXPOSED TO PRECIPITATION FOR EVIDENCE OF, OR THE POTENTIAL FOR SEDIMENT ENTERING THE STORM DRAIN SYSTEM. INSPECT E&S CONTROLS IN ACCORDANCE WITH REQUIREMENTS STATED HEREIN, AND INSPECT POINTS OF STORM DRAIN DISCHARGE FOR EXCESSIVE SEDIMENTATION. CORRECT SITE CONTROLS AS AS REQUIRED TO REDUCE SEDIMENTATION OF STORM DRAINED, CULVERTS, AND RECEIVING CHANNELS.

B.) IF CONTROLS OR SEDIMENT PREVENTION AREAS ARE FOUND TO BE IN NEED OF REPAIR OR MODIFICATION, THE GENERAL CONTRACTOR SHALL PROVIDE ADDITIONAL MEASURES OR MODIFICATION TO EXISTING MEASURES AS REQUIRED. ANY ADDITIONAL MEASURES OR MODIFICATIONS TO EXISTING MEASURES SHALL BE RECORDED AS FIELD REVISIONS TO THESE PLANS. IN THE EVENT THAT ADDITIONAL CONTROLS ARE FOUND TO BE REQUIRED, THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTING THESE CONTROLS BEFORE THE NEXT ANTICIPATED STORM EVENT IS IMPRACTICAL. THEY SHALL BE IMPLEMENTED AS SOON AS PRACTICAL.

C.) A REPORT SUMMARIZING THE SCOPE OF INSPECTIONS, NAME OF INSPECTOR, INSPECTOR'S QUALIFICATIONS, DATES OF INSPECTIONS, MAJOR OBSERVATIONS PERTAINING TO THE IMPLEMENTATION OF THESE EROSION CONTROL PLANS, AND ACTIONS TAKEN SHALL BE MADE AND RETAINED AS A PART OF THESE PLANS. MAJOR OBSERVATIONS OF THESE REPORTS SHALL INCLUDE: THE LOCATIONS OF EXCESSIVE SEDIMENTATION FROM THE SITE; LOCATIONS OF CONTROLS IN NEED OF REPAIR; LOCATION OF FAILED OR INADEQUATE CONTROLS; AND LOCATIONS WHERE ADDITIONAL CONTROLS ARE NEEDED.

## STORMWATER MANAGEMENT:

STORMWATER QUANTITY REQUIREMENTS WILL BE MET BY SHEETFLOWS TO EXISTING DRAINAGE CHANNEL

STORMWATER QUALITY REQUIREMENTS WILL BE MET THROUGH NOT APPLICABLE

ROANOKE COUNTY DEPT. OF DEVELOPMENT SERVICES  
5204 Bernard Drive  
P.O. Box 29800  
Roanoke, Virginia 24018  
Office: (540) 772-2083  
Fax: (540) 776-7155



## MINIMUM STANDARDS

THE FOLLOWING STANDARDS ARE TO BE PROVIDED OR ADDRESSED ON EVERY DEVELOPMENT PROJECT EXCEEDING 10,000 S.F. IN AREA OF DISTURBANCE. THESE STANDARDS ARE CONSIDERED A MINIMUM AND MAY REQUIRE ADDITIONAL MEASURES AS DEEMED NECESSARY BY THE LOCAL PROGRAM AUTHORITY OR THE CONSULTING ENGINEER.

NO.	CRITERIA, TECHNIQUE OR METHOD	PRACTICES PROVIDED
1	PERMANENT OR TEMPORARY SOIL STABILIZATION SHALL BE APPLIED TO DENUDED AREAS WITHIN SEVEN DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE. TEMPORARY SOIL STABILIZATION SHALL BE APPLIED WITHIN SEVEN DAYS TO DENUDED AREAS THAT MAY NOT BE AT FINAL GRADE BUT WILL REMAIN DORMANT FOR LONGER THAN 14 DAYS. PERMANENT STABILIZATION SHALL BE APPLIED TO AREAS THAT ARE TO BE LEFT DORMANT FOR MORE THAN ONE YEAR.	PS
2	DURING CONSTRUCTION OF THE PROJECT, SOIL STOCK PILES AND BORROW AREAS SHALL BE STABILIZED OR PROTECTED WITH SEDIMENT TRAPPING MEASURES. THE APPLICANT IS RESPONSIBLE FOR THE TEMPORARY PROTECTION AND PERMANENT STABILIZATION OF ALL SOIL STOCKPILES ON SITE AS WELL AS BORROW AREAS AND SOIL INTENTIONALLY TRANSPORTED FROM THE PROJECT SITE.	SF TS
3	A PERMANENT VEGETATIVE COVER SHALL BE ESTABLISHED ON DENUDED AREAS NOT OTHERWISE PERMANENTLY STABILIZED. PERMANENT VEGETATION SHALL NOT BE CONSIDERED ESTABLISHED UNTIL A GROUND COVER IS ACHIEVED THAT IS UNIFORM, MATURE ENOUGH TO SURVIVE AND WILL INHIBIT EROSION.	PS
4	SEDIMENT BASINS AND TRAPS, PERIMETER DIKES, SEDIMENT BARRIERS AND OTHER MEASURES INTENDED TO TRAP SEDIMENT SHALL BE CONSTRUCTED AS A FIRST STEP IN ANY LAND-DISTURBING ACTIVITY AND SHALL BE MADE FUNCTIONAL BEFORE UPSLOPE LAND DISTURBANCE TAKES PLACE.	SF
5	STABILIZATION METHODS SHALL BE APPLIED TO EARTHEN STRUCTURES SUCH AS DAMS, DIKES AND DIVERSIONS IMMEDIATELY AFTER INSTALLATION.	NOT APPLICABLE
6	SEDIMENT TRAPS AND SEDIMENT BASINS SHALL BE DESIGNED AND CONSTRUCTED BASED UPON THE TOTAL DRAINAGE AREA TO BE SERVED BY THE TRAP OR BASIN.	NOT APPLICABLE
7	CUT AND FILL SLOPES SHALL BE DESIGNED AND CONSTRUCTED IN A MANNER THAT WILL MINIMIZE EROSION. SLOPES THAT ARE FOUND TO BE ERODING EXCESSIVELY WITHIN ONE YEAR OF PERMANENT STABILIZATION SHALL BE PROVIDED WITH ADDITIONAL SLOPE STABILIZATION MEASURES UNTIL THE PROBLEM IS CORRECTED.	RR
8	CONCENTRATED RUNOFF SHALL NOT FLOW DOWN CUT OR FILL SLOPES UNLESS CONTAINED WITHIN AN ADEQUATE TEMPORARY OR PERMANENT CHANNEL, FLUME OR SLOPE DRAIN STRUCTURE.	NOT APPLICABLE
9	WHENEVER WATER SEEPS FROM A SLOPE FACE, ADEQUATE DRAINAGE OR OTHER PROTECTION SHALL BE PROVIDED.	NOT APPLICABLE
10	ALL STORM SEWER INLETS THAT ARE MADE OPERABLE DURING CONSTRUCTION SHALL BE PROTECTED SO THAT SEDIMENT WATER CANNOT ENTER THE CONVEYANCE SYSTEM WITHOUT FIRST BEING FILTERED OR OTHERWISE TREATED TO REMOVE SEDIMENT.	NOT APPLICABLE
11	BEFORE NEWLY CONSTRUCTED STORMWATER CONVEYANCE CHANNELS OR PIPES ARE MADE OPERATIONAL, ADEQUATE OUTLET PROTECTION AND ANY REQUIRED TEMPORARY OR PERMANENT CHANNEL LINING SHALL BE INSTALLED IN BOTH THE CONVEYANCE CHANNEL AND RECEIVING CHANNEL.	NOT APPLICABLE
12	WHEN WORK IN A LIVE WATERCOURSE IS PERFORMED, PRECAUTIONS SHALL BE TAKEN TO MINIMIZE ENCROACHMENT, CONTROL SEDIMENT TRANSPORT AND STABILIZE THE WORK AREA TO THE GREATEST EXTENT POSSIBLE DURING CONSTRUCTION. NON-ERODIBLE MATERIAL SHALL BE USED FOR THE CONSTRUCTION OF CAUSEWAYS AND OFFERDAMS. EARTHEN FILL MAY BE USED FOR THESE STRUCTURES IF ARMORED BY NON-ERODIBLE COVER MATERIALS.	NOT APPLICABLE
13	WHEN A LIVE WATERCOURSE MUST BE CROSSED BY CONSTRUCTION VEHICLES MORE THAN TWICE IN ANY (6) SIX-MONTH PERIOD, A TEMPORARY VEHICULAR STREAM CROSSING CONSTRUCTED OF NON-ERODIBLE MATERIAL SHALL BE PROVIDED.	NOT APPLICABLE
14	ALL APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS PERTAINING TO WORKING IN OR CROSSING LIVE WATERCOURSES SHALL BE MET.	JOINT PERMIT
15	THE BEDS AND BANKS OF A WATERCOURSE SHALL BE STABILIZED IMMEDIATELY AFTER WORK IN THE WATERCOURSE IS COMPLETED.	NOT APPLICABLE
16	UNDERGROUND UTILITY LINES SHALL BE INSTALLED IN ACCORDANCE WITH THE FOLLOWING STANDARDS IN ADDITION TO OTHER APPLICABLE CRITERIA: 1.) NO MORE THAN 500 LINEAR FEET OF TRENCH MAY BE OPENED AT ONE TIME. 2.) EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF TRENCHES. 3.) EFFLUENT FROM DE-WATERING OPERATIONS SHALL BE FILTERED OR PASSED THROUGH AN APPROVED SEDIMENT TRAPPING DEVICE, OR BOTH, AND DISCHARGED IN A MANNER THAT DOES NOT ADVERSELY AFFECT FLOWING STREAMS OR OFFSET PROPERTY. 4.) MATERIAL USED FOR BACKFILLING TRENCHES SHALL BE PROPERLY COMPACTED IN ORDER TO MINIMIZE EROSION AND PROMOTE STABILIZATION. 5.) RE-STABILIZATION SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THIS CHAPTER. 6.) APPLICABLE SAFETY REQUIREMENTS SHALL BE COMPLIED WITH.	NOT APPLICABLE
17	WHERE CONSTRUCTION VEHICLE ACCESS ROUTES INTERSECT PAVED OR PUBLIC ROADS, PROVISIONS SHALL BE MADE TO MINIMIZE THE TRANSPORT OF SEDIMENT BY VEHICULAR TRACKING ONTO THE PAVED SURFACE. WHERE SEDIMENT IS TRANSPORTED ONTO A PAVED OR PUBLIC ROAD SURFACE, THE ROAD SURFACE SHALL BE CLEANED THOROUGHLY AT THE END OF EACH DAY. SEDIMENT SHALL BE REMOVED FROM THE ROADS BY SHOVELING OR SWEEPING AND TRANSPORTED TO A SEDIMENT CONTROL DISPOSAL AREA. STREET WASHING SHALL BE ALLOWED ONLY AFTER SEDIMENT IS REMOVED IN THIS MANNER. THIS PROVISION SHALL APPLY TO INDIVIDUAL DEVELOPMENT LOTS AS WELL AS TO LARGER LAND-DISTURBING ACTIVITIES.	NOT APPLICABLE
18	ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION OR AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED, UNLESS OTHERWISE AUTHORIZED BY THE VESCP AUTHORITY. TRAPPED SEDIMENT AND THE DISTURBED SOIL AREAS RESULTING FROM THE DISPOSITION OF TEMPORARY MEASURES SHALL BE PERMANENTLY STABILIZED TO PREVENT FURTHER EROSION AND SEDIMENTATION.	NOT APPLICABLE
19	PROPERTIES AND WATERWAYS DOWNSTREAM FROM DEVELOPMENT SITES SHALL BE PROTECTED FROM SEDIMENT DEPOSITION, EROSION AND DAMAGE DUE TO INCREASES IN VOLUME, VELOCITY AND PEAK FLOW RATE OF STORMWATER RUNOFF FOR THE STATED FREQUENCY STORM OF 24-HOUR DURATION IN ACCORDANCE WITH THE FOLLOWING STANDARDS AND CRITERIA: STREAM RESTORATION AND RELOCATION PROJECTS THAT INCORPORATE NATURAL CHANNEL DESIGN CONCEPTS ARE NOT MAN-MADE CHANNELS AND SHALL BE EXEMPT FROM ANY FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS FOR NATURAL OR MAN-MADE CHANNELS. A.) CONCENTRATED STORMWATER RUNOFF LEAVING A DEVELOPMENT SITE SHALL BE DISCHARGED DIRECTLY INTO AN ADEQUATE NATURAL OR MAN-MADE RECEIVING CHANNEL, PIPE OR STORM SEWER SYSTEM. FOR THOSE SITES WHERE RUNOFF IS DISCHARGED INTO A PIPE OR PIPE SYSTEM, DOWNSTREAM STABILITY ANALYSES AT THE OUTFALL OF THE PIPE OR PIPE SYSTEM SHALL BE PERFORMED. B.) ADEQUACY OF ALL CHANNELS AND PIPES SHALL BE VERIFIED IN THE FOLLOWING MANNER: (1) THE APPLICANT SHALL DEMONSTRATE THAT THE TOTAL DRAINAGE AREA TO THE POINT OF ANALYSIS WITHIN THE CHANNEL IS ONE HUNDRED TIMES GREATER THAN THE CONTRIBUTING DRAINAGE AREA OF THE PROJECT IN QUESTION; OR (2) (a) NATURAL CHANNELS SHALL BE ANALYZED BY THE USE OF A TWO-YEAR STORM TO VERIFY THAT STORMWATER WILL NOT OVERTOP CHANNEL BANKS NOR CAUSE EROSION OF CHANNEL BED OR BANKS. (b) ALL PREVIOUSLY CONSTRUCTED MAN-MADE CHANNELS SHALL BE ANALYZED BY THE USE OF A TEN-YEAR STORM TO VERIFY THAT STORMWATER WILL NOT OVERTOP ITS BANKS AND BY THE USE OF A TWO-YEAR STORM TO DEMONSTRATE THAT STORMWATER WILL NOT CAUSE EROSION OF CHANNEL BED OR BANKS; AND (c) PIPES AND STORM SEWER SYSTEMS SHALL BE ANALYZED BY THE USE OF A TEN-YEAR STORM TO VERIFY THAT STORMWATER WILL BE CONTAINED WITHIN THE PIPE OR SYSTEM. C.) IF EXISTING NATURAL RECEIVING CHANNELS OR PREVIOUSLY CONSTRUCTED MAN-MADE CHANNELS OR PIPES ARE NOT ADEQUATE, THE APPLICANT SHALL: (1) IMPROVE THE CHANNELS TO A CONDITION WHERE A TEN-YEAR STORM WILL NOT OVERTOP THE BANKS AND A TWO-YEAR STORM WILL NOT CAUSE EROSION TO THE CHANNEL BED OR BANKS; OR (2) IMPROVE THE PIPE OR PIPE SYSTEM TO A CONDITION WHERE THE TEN-YEAR STORM IS CONTAINED WITHIN THE APPURTENANCES; OR (3) DEVELOP A SITE DESIGN THAT WILL NOT CAUSE THE PRE-DEVELOPMENT PEAK RUNOFF RATE FROM A TWO-YEAR STORM TO INCREASE WHEN RUNOFF OUTFALLS INTO A NATURAL CHANNEL OR WILL NOT CAUSE THE PRE-DEVELOPMENT PEAK RUNOFF RATE FROM A TEN-YEAR STORM TO INCREASE WHEN RUNOFF OUTFALLS INTO A MAN-MADE CHANNEL; OR (4) PROVIDE A COMBINATION OF CHANNEL IMPROVEMENT, STORMWATER DETENTION OR OTHER MEASURES WHICH IS SATISFACTORY TO THE VESCP AUTHORITY TO PREVENT DOWNSTREAM EROSION. D.) THE APPLICANT SHALL PROVIDE EVIDENCE OF PERMISSION TO MAKE THE IMPROVEMENTS. E.) ALL HYDROLOGIC ANALYSES SHALL BE BASED ON THE EXISTING WATERSHED CHARACTERISTICS AND THE ULTIMATE DEVELOPMENT CONDITION OF THE SUBJECT PROJECT. F.) IF THE APPLICANT CHOOSES AN OPTION THAT INCLUDES STORMWATER DETENTION, HE SHALL OBTAIN APPROVAL FROM THE VESCP OF A PLAN FOR MAINTENANCE OF THE DETENTION FACILITIES. THE PLAN SHALL SET FORTH THE MAINTENANCE REQUIREMENTS OF THE FACILITY AND THE PERSON RESPONSIBLE FOR PERFORMING THE MAINTENANCE. G.) OUTFALL FROM A DETENTION FACILITY SHALL BE DISCHARGED TO A RECEIVING CHANNEL, AND ENERGY DISSIPATORS SHALL BE PLACED AT THE OUTFALL OF ALL DETENTION FACILITIES AS NECESSARY TO PROVIDE A STABILIZED TRANSITION FROM THE FACILITY TO THE RECEIVING CHANNEL. H.) ALL ON-SITE CHANNELS MUST BE VERIFIED TO BE ADEQUATE. I.) INCREASED VOLUMES OF SHEET FLOWS THAT MAY CAUSE EROSION OR SEDIMENTATION ON ADJACENT PROPERTY SHALL BE DIVERTED TO A STABLE OUTLET, ADEQUATE CHANNEL, PIPE OR PIPE SYSTEM, OR TO A DETENTION FACILITY. J.) IN APPLYING THESE STORMWATER MANAGEMENT CRITERIA, INDIVIDUAL LOTS OR PARCELS IN A RESIDENTIAL, COMMERCIAL OR INDUSTRIAL DEVELOPMENT SHALL NOT BE CONSIDERED TO BE SEPARATE DEVELOPMENT PROJECTS. INSTEAD, THE DEVELOPMENT, AS A WHOLE, SHALL BE CONSIDERED TO BE A SINGLE DEVELOPMENT PROJECT. HYDROLOGIC PARAMETERS THAT REFLECT THE ULTIMATE DEVELOPMENT CONDITION SHALL BE USED IN ALL ENGINEERING CALCULATIONS. K.) ALL MEASURES USED TO PROTECT PROPERTIES AND WATERWAYS SHALL BE EMPLOYED IN A MANNER WHICH MINIMIZES IMPACTS ON THE PHYSICAL, CHEMICAL AND BIOLOGICAL INTEGRITY OF RIVERS, STREAMS AND OTHER WATERS OF THE STATE. L.) ANY PLAN APPROVED PRIOR TO JULY 1, 2014 THAT PROVIDES FOR STORMWATER MANAGEMENT THAT ADDRESSES ANY FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS FOR NATURAL OR MAN-MADE CHANNELS SHALL SATISFY THE FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS FOR NATURAL OR MAN-MADE CHANNELS IF THE PRACTICES ARE DESIGNED TO (1) DETAIN THE WATER QUALITY VOLUME AND TO RELEASE IT OVER 48 HOURS; (2) DETAIN AND RELEASE OVER A 24-HOUR PERIOD THE EXPECTED RAINFALL RESULTING FROM THE ONE YEAR, 24-HOUR STORM; AND (3) REDUCE THE ALLOWABLE PEAK FLOW RATE RESULTING FROM THE 10, 2, AND 10-YEAR, 24-HOUR STORMS TO A LEVEL THAT IS LESS THAN OR EQUAL TO THE PEAK FLOW RATE FROM THE SITE ASSUMING IT WAS IN A GOOD FORESTED CONDITION, ACHIEVED THROUGH MULTIPLICATION OF THE FORESTED PEAK FLOW RATE BY A REDUCTION FACTOR THAT IS EQUAL TO THE RUNOFF VOLUME FROM THE SITE WHEN IT WAS IN A GOOD FORESTED CONDITION DIVIDED BY THE RUNOFF VOLUME FROM THE SITE IN ITS PROPOSED CONDITION, AND SHALL BE EXEMPT FROM ANY FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS FOR NATURAL OR MAN-MADE CHANNELS AS DEFINED IN ANY REGULATIONS PROMULGATED PURSUANT TO 10.1-562 OR 10.1-570 OF THE ACT. M.) FOR PLANS APPROVED ON AND AFTER JULY 1, 2014, THE FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS OF 10.1-561 A OF THE ACT AND THIS SUBSECTION SHALL BE SATISFIED BY COMPLIANCE WITH WATER QUALITY REQUIREMENTS IN THE STORMWATER MANAGEMENT ACT (10.1-603.2 ET SEQ. OF THE CODE OF VIRGINIA) AND ATTENDANT REGULATIONS, UNLESS SUCH LAND-DISTURBING ACTIVITIES ARE IN ACCORDANCE WITH 4VAC50-60-48 OF THE VIRGINIA STORMWATER MANAGEMENT PROGRAM (VSPM) PERMIT REGULATIONS. N.) COMPLIANCE WITH THE WATER QUANTITY MINIMUM STANDARDS SET OUT IN 4VAC50-60-68 OF THE VIRGINIA STORMWATER MANAGEMENT PROGRAM (VSPM) PERMIT REGULATIONS SHALL BE DEEMED TO SATISFY THE REQUIREMENTS OF SUBDIVISION 19 OF THIS SUBSECTION.	NOT APPLICABLE



DEPARTMENT OF  
DEVELOPMENT  
SERVICES

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NO.	REVISIONS	DATE

MOUNT PLEASANT LIBRARY  
SEWER EXTENSION

DATE: 1/19/2022  
SCALE: 1" = 20'  
DRAWING BY: BWE  
DESIGNED BY: NDM/BWE  
APPROVED BY: WWA



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OF  
6

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## PRE-CONSTRUCTION MEETING AND CONSTRUCTION COMMENCEMENT

- VIRGINIA DEPARTMENT OF TRANSPORTATION:

- See Sheet \_\_\_\_ for Stormwater Site Statistics Table.  
See Sheet \_\_\_\_ for New BMP Information Table.

N/A

The notes on this sheet shall not be modified.



## PRIVATE UTILITIES

- Western Virginia Water Authority  
Availability letter number: N/A

[illegible]

## Sheet Index

- ## SURVEY INFORMATION

The professional seal and signature certifies the boundary survey and topographic mapping to be accurate and correct.

**NOT APPLICABLE**

BY SEALING THE PLANS, THE DESIGN PROFESSIONAL HEREBY CERTIFIES THAT THE FOREGOING ESTIMATE REFLECTS THE CURRENT IMPROVEMENT COSTS OF THIS PROJECT.



**PREPARED BY**  
**ROANOKE COUNTY**  
**DEPARTMENT OF**  
**DEVELOPMENT SERVICES**

**SHEET  
1  
OF  
6**

# 3002

# 2901

# 2909

# 2936

# 2926

# 2918

# 2914

PROFESSIONAL ENGINEER  
SEAL AND SIGNATURE

ROANOKE COUNTY DEPT. OF  
COMMUNITY DEVELOPMENT  
5204 Bernard Drive  
P.O. Box 29800  
Roanoke, Virginia 24018  
Office: (540) 772-2083  
Fax: (540) 776-7155

PROPERTY OF  
ROANOKE COUNTY  
BOARD OF SUPERVISORS  
0 JAE VALLEY RD  
TAX# 079.01-03-25.00

PROPERTY OF  
ROANOKE CO BOARD OF SUPERVISORS  
2909 JAE VALLEY RD  
TAX# 079.01-03-24.00

PROPERTY OF  
STUART CONSTANCE S  
2901 VALLEY STREAM DR  
TAX# 079.03-07-26.00

PROPERTY OF  
KARKENNY SAMAR D  
2938 JAE VALLEY RD  
TAX# 079.01-04-24.00

PROPERTY OF  
DALLESANDRO FRANK  
2926 JAE VALLEY RD  
TAX# 079.01-04-23.00

PROPERTY OF  
ROANOKE COUNTY  
BOARD OF SUPERVISORS  
2914 JAE VALLEY RD  
TAX# 079.01-04-22.00

PROPERTY OF  
DUDLEY EVERT C  
0 JAE VALLEY RD  
TAX# 079.01-04-21.00

## GENERAL NOTES:

1. PROPERTY LINES SHOWN ON THIS PAGE BASED ON RECORDS AND FIELD DATA.

## SURVEY NOTES:

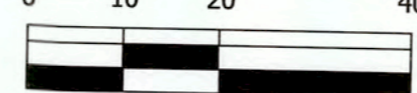
1. ALL SURVEY FOR THIS PROJECT WAS CONDUCTED USING COMBINATION OF TOTAL STATION AND RTK GPS EQUIPMENT. THE DATUMS USED FOR THE SURVEY ARE NAD83 (2011) & NAVD88. THE COORDINATE SYSTEM USED FOR THE SURVEY IS VIRGINIA STATE PLANE, SOUTH ZONE, US FOOT.
2. ALL SURVEY DATA'S GENERAL ACCURACY IS AS FOLLOWS:  
- HORIZONTAL ACCURACY: WITHIN 0.5' WITH EXCEPTION  
- VERTICAL ACCURACY: WITHIN 0.1' WHERE INFORMATION IS PROVIDED ON PLAN  
- CONTOUR DATA ON THIS PLAN IS GENERALLY ACCURATE TO WITHIN + 0.5' WHERE CONTOUR DATA IS PROVIDED
3. THIS PLAN WAS PREPARED WITHOUT THE BENEFIT OF A CURRENT TITLE REPORT AND THEREFORE, THERE MAY EXIST ENCUMBRANCES NOT SHOWN HEREON.
4. WITH OCCASIONAL EXCEPTION, EDGE OF PAVEMENT, GRAVEL, CONCRETE, & BRICK ARE SHOWN BASED ON GEOREFERENCED AERIAL IMAGERY AND ARE TYPICALLY ACCURATE WITHIN 1.0'.
5. WITH OCCASIONAL EXCEPTION, EXISTING BUILDINGS SHOWN ARE BASED ON ACCURATE TO WITHIN 5.0'
6. THIS PLAN DOES NOT GUARANTEE THE EXISTENCE, LOCATION, SIZE, MATERIAL OR TYPE OF ANY UNDERGROUND UTILITIES. ALL UNDERGROUND UTILITIES & STRUCTURES SHOWN ON THIS PLAN ARE SHOWN BASED ON SURVEYED ABOVE GROUND STRUCTURES, CCTV SURVEYS, AVAILABLE PUBLIC RECORDS AND BY UTILITY LINE LOCATION MARKINGS ESTABLISHED BY MISS UTILITY OF VIRGINIA TICKET # A118201328-00A. ALL UNDERGROUND UTILITY & STRUCTURE LOCATION SHOULD BE FIELD VERIFIED PRIOR TO THE START OF ANY CONSTRUCTION.

## PROJECT DESCRIPTION

## THE PROJECT CONSISTS OF:

1. CONTRACTOR WILL BE OBTAINING THE LAND USE PERMIT FROM VDOT, ESC AND VSPM PERMIT FROM ROANOKE COUNTY.
2. INSTALL EROSION AND SEDIMENT CONTROL MEASURES.
3. INSTALL 8" DI SS PIPE CONNECTING TO EXISTING MANHOLE (237 L.F. TOTAL), STA. 11+55-11+83 TO BE CONCRETE ENCASED.
4. INSTALL MANHOLE AT STA. 12+37.
5. INSTALL OF 8" SDR-17 HDPE PIPE (54 LF TOTAL) STA. 12+37-12+91 WITH 40 LF TO BE ENCASED IN 16" STEEL PIPE STA. 12+47-12+77.
6. INSTALL MANHOLE AT STA. 12+91 WITH 8", 5' LONG PVC C900 W/CAP.
7. INSTALL 6" PVC (171 LF TOTAL) AND CLEANOUT.
8. INSTALL 4" PVC LATERAL (68 LF TOTAL) AND CONNECT TO EXISTING CLEANOUT.
9. DEMOLISH EXISTING SEPTIC TANK AND DISTRIBUTION BOX IN PLACE, BREAKING UP TOP, SIDES, AND BOTTOM, AND ADD LINE, #57 STONE.
10. SEED AND STRAW, OR APPLY AGGREGATE BASE COURSE TO ALL DISTURBED AREAS WHEN CONSTRUCTION IS COMPLETE.

## GRAPHIC SCALE

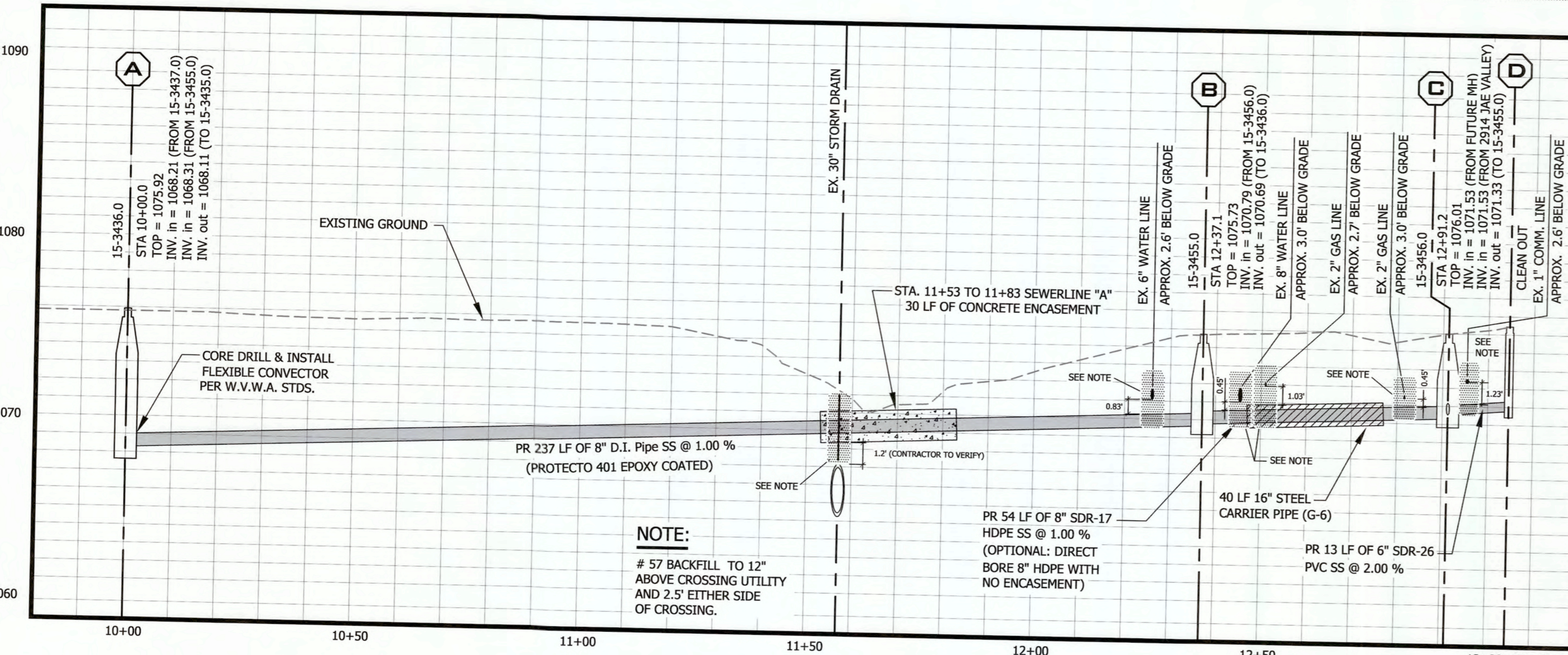


## PLAN

SCALE: 1"=20'

( IN FEET )  
1 inch = 20 ft.

## SEWERLINE "A"

SCALE:  
VERTICAL: 1"= 5'  
HORIZONTAL: 1"= 20'

## NOTE:

# 57 BACKFILL TO 12" ABOVE CROSSING UTILITY AND 2.5' EITHER SIDE OF CROSSING.

PR 54 LF OF 8" SDR-17 HDPE SS @ 1.00 % (OPTIONAL: DIRECT BORE 8" HDPE WITH NO ENCASEMENT)

40 LF 16" STEEL CARRIER PIPE (G-6)

PR 13 LF OF 6" SDR-26 PVC SS @ 2.00 %

DEPARTMENT OF  
DEVELOPMENT  
SERVICES

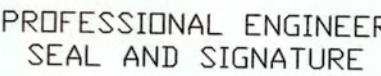
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MOUNT PLEASANT LIBRARY  
SEWER EXTENSION

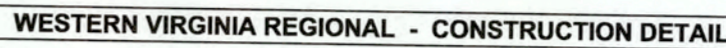
DATE: 1/19/2022  
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DESIGNED BY: NDM/BWE  
APPROVED BY: WVWA

PLAN  
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OF  
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Drawing name: T:\Transportation\Projects\Special Projects\Mt Pleasant Library Sewer\Mount Pleasant Sewer Ext\_10\_28\_21.dwg



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## JOINING DISSIMILAR PIPE FOR USE WITH EXISTING PIPE

9

W.V.W.A. GENERAL NOTES:


3. ALL CONSTRUCTION METHODS AND MATERIALS SHALL COMPLY TO THE LATEST EDITION OF THE DESIGN AND CONSTRUCTION SPECIFICATIONS AND REQUIREMENTS OF THE WESTERN VIRGINIA WATER AUTHORITY (WVWA) AVAILABLE AT WWW.WESTERNVAWATER.ORG OR BY CONTACTING THE AUTHORITY AT 540-853-5700. THE PROJECT SHALL ALSO COMPLY WITH THE GOVERNING JURISDICTION'S STANDARDS AND OTHER AGENCY STANDARDS (E.G. VDOT, DEQ, DCR, VDH, ETC.) WERE AVAILABLE.
2. WHILE NOT REQUIRED ON ALL WVWA PROJECTS, WATER SERVICE AND METER REPLACEMENT SHOULD BE DISCUSSED PRIOR TO CONSTRUCTION, THE AUTHORITY WILL INSTALL ALL NEW WATER METERS AND REMOVE ALL EXISTING WATER METERS. THE CONTRACTOR SHALL INSTALL COMPLETE NEW WATER SERVICE INCLUDING THE METER SETTER AND BOX IN CONFORMANCE WITH THE AUTHORITY'S STANDARDS. FOLLOWING METER REPLACEMENT BY THE AUTHORITY, THE CONTRACTOR SHALL DEMOLISH THE EXISTING WATER METER SETTER BOX. THE CONTRACTOR SHALL COORDINATE EXISTING METER REMOVAL AND NEW METER INSTALLATION DIRECTLY WITH THE AUTHORITY. THE CONTRACTOR SHALL PROVIDE AT LEAST (3) BUSINESS DAYS ADVANCE NOTICE TO THE AUTHORITY PRIOR TO NEEDING METER INSTALLATIONS. THE CONTRACTOR SHALL SEQUENCE CONSTRUCTION ACTIVITY TO RECEIVE NEW METERS BEFORE CONTACTING THE AUTHORITY FOR WATER METER REPLACEMENT.
3. ALL CONNECTIONS TO EXISTING WATERLINES SHALL BE PERFORMED BY THE AUTHORITY. THE CONTRACTOR SHALL PROVIDE FULL STAINLESS STEEL TAPPING SLEEVE(S) AND VALVE(S). THE CONTRACTOR SHALL EXCAVATE TO THE EXISTING WATERLINE, SHORE THE TRENCH PER OSHA REQUIREMENTS, CLEAN THE EXISTING WATERLINE, AND INSTALL THE TAPPING SLEEVE AND VALVE PRIOR TO THE AUTHORITY PERFORMING THE TAP. THE CONTRACTOR SHALL NOTIFY THE W.V.W.A. INSPECTOR AT LEAST SEVENTY-TWO (72) HOURS PRIOR TO REQUIREING THE CONNECTION.
4. ALL CONNECTIONS TO EXISTING SANITARY SEWER LINES SHALL BE PERFORMED BY THE AUTHORITY. THE CONTRACTOR SHALL EXCAVATE TO THE EXISTING SEWER LINE, SHORE THE TRENCH PER OSHA REQUIREMENTS, AND CLEAN THE EXISTING SEWER LINE PRIOR TO THE AUTHORITY PERFORMING THE TAP. THE CONTRACTOR SHALL NOTIFY THE W.V.W.A. INSPECTOR SEVENTY TWO (72) HOURS PRIOR TO REQUIREING CONNECTION.
5. THE CONTRACTOR SHALL PERFORM ALL MANHOLE CONNECTIONS. THE CORING AND BOOT INSTALLATION SHALL BE INSPECTED AND APPROVED BY AN AUTHORITY INSPECTOR PRIOR TO ACTIVATING SARGER SERVICE. THE CONTRACTOR SHALL CONTACT THE AUTHORITY CONSTRUCTION INSPECTOR RESPONSIBLE FOR THE PROJECT AT LEAST ONE (1) DAY PRIOR TO INITIATING THE MANHOLE CONNECTION.
6. PRIOR TO CONSTRUCTION IN THE RIGHT-OF-WAY, ALL APPLICABLE PERMIT(S) FROM THE GOVERNING BODY AND/OR AGENCY MUST BE OBTAINED AND A COPY KEPT ON PROJECT SITE.
7. FOR PROJECTS REQUIRING TRAFFIC CONTROL IN THE CITY OF ROANOKE, NOTIFY MANAGER OF TRANSPORTATION, DWYANE D'ARDENNE, AT 853-2676 AT LEAST TWO WEEKS IN ADVANCE OF REQUIRING TRAFFIC CONTROL. FOR A LANE CLOSURE PERMIT IN THE CITY OF ROANOKE, CONTACT TRAFFIC ENGINEER HONG LIU, AT 853-2686. IN ROANOKE, BOTETOURT OR FRANKLIN COUNTIES, TRAFFIC CONTROL REQUIREMENTS ARE APPROVED BY VDOT, PLEASE CONTACT YOUR LOCAL VDOT OFFICE FOR ADDITIONAL REQUIREMENTS. TRAFFIC CONTROL SHALL BE PROVIDED IN ACCORDANCE WITH THE MOST RECENT MUTCD MANUAL AND VDOT WORK AREA PROTECTION MANUAL UNLESS OTHERWISE SPECIFIED BY THE CITY.
8. THE CONTRACTOR SHALL NOTIFY THE W.V.W.A. ENGINEERING COORDINATOR, MARK SINK, AT 540-537-3460 AT LEAST THREE (3) DAYS PRIOR TO CONSTRUCTION
9. A PRE-CONSTRUCTION CONFERENCE SHALL BE SCHEDULED AT LEAST ONE (1) DAY PRIOR TO CONSTRUCTION.
10. THE CONTRACTOR SHALL HAVE A VALID MISS UTILITY TICKET PRIOR TO EXCAVATION, CONTACT MISS UTILITY AT 1-800-552-7001.
11. ALL EXISTING UTILITIES MAY NOT BE SHOWN OR MAY NOT BE SHOWN IN THEIR EXACT LOCATION. CONTRACTOR SHALL LOCATE ALL UTILITIES AND DETERMINE ALL INVERTS PRIOR TO CONSTRUCTION TO ALLOW FOR ADJUSTMENTS DUE TO CONFLICTS WITH OTHER UTILITIES. THE CONTRACTOR SHALL COMPLY WITH THE VIRGINIA STATE WATER WORKS REGULATIONS, SECTION 12VAC5-590-1150, AND THE VIRGINIA STATE SEWAGE COLLECTION AND TREATMENT REGULATIONS WHERE LINES CROSS.
12. AN APPROVED SET OF PLANS AND PERMITS MUST BE AVAILABLE AT THE CONSTRUCTION SITE AT ALL TIMES.
13. CONSTRUCTION DEBRIS SHALL BE CONTAINED IN ACCORDANCE WITH THE VIRGINIA LITTER CONTROL ACT.
14. THE CONTRACTOR'S CERTIFIED RESPONSIBLE LAND DISTURBER SHALL BE RESPONSIBLE TO IMPLEMENT EROSION & SEDIMENT CONTROLS REQUIRED. ALL EROSION AND SEDIMENT CONTROL MEASURES MUST BE IN ACCORDANCE WITH THE LATEST ADDITION OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK AND SHALL BE INSTALLED PRIOR TO CONSTRUCTION. THE W.V.W.A. MAY REQUIRE CHANGES TO AN APPROVED PLAN IN THE FOLLOWING CASES WHERE INSPECTION HAS REVEALED THAT THE PLAN IS INADEQUATE TO SATISFY APPLICABLE REGULATIONS.
15. THE CONTRACTOR SHALL PROVIDE ADEQUATE MEANS OF CLEANING ALL VEHICLES AND EQUIPMENT PRIOR TO ENTERING PUBLIC STREETS. IT IS THE CONTRACTOR RESPONSIBILITY TO ENSURE THAT THE STREETS ARE KEPT IN A CLEAN, MUD- AND DUST-FREE CONDITION AT ALL TIMES.
16. FIELD CHANGES SHALL BE APPROVED BY THE AUTHORITY'S ENGINEERING DIVISION PRIOR TO SUCH CONSTRUCTION. NO NO ADDITIONAL PAYMENTS SHALL BE MADE TO CONTRACTOR FOR WORK PERFORMED WITHOUT PRIOR APPROVAL FROM AUTHORITY'S PROJECT MANAGER.
7. THE CONTRACTOR SHALL MAKE PROVISIONS TO PROVIDE ACCESS TO ALL PROPERTIES DURING CONSTRUCTION AND SHALL MAINTAIN SAFE ACCESSIBILITY TO FIRE HYDRANTS AT ALL TIMES.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND UNCOVERING ALL MANHOLES AFTER PAVING. MANHOLE RIMS SHALL BE INSTALLED TO GRADE AND FLUSH WITH FINAL PAVEMENT.
9. UNREPAIRED ROADWAYS OPENED TO TRAFFIC SHALL HAVE, AT A MINIMUM, COMPACTED AGGREGATE MATERIAL VDOT 21A OR 21-B FLUSH WITH THE ROADWAY SURFACE AND SHALL BE INSPECTED AND REPAIRED ON A DAILY BASIS. SOME AREAS MAY REQUIRE A TEMPORARY PATCH UNTIL FINAL PAVING CAN BE COMPLETED.
10. THE CONTRACTOR SHALL NOT EXCAVATE MORE TRENCH LENGTH THAN CAN BE RESTORED WITHIN THE SAME WORK DAY. ALL TRENCHES SHALL BE BACKFILLED OR PLATED AT THE END OF EACH WORK DAY OR WHEN THE CONTRACTOR IS NOT ON SITE.
1. THE CONTRACTOR SHALL SUPPLY THE AUTHORITY WITH CORRECT AS-BUILT PLANS BEFORE SUBSTANTIAL COMPLETION WILL BE GRANTED.
2. HORIZONTAL & VERTICAL BENDS SHOWN IN THE PLANS ARE APPROXIMATE. CONTRACTOR TO BE AWARE THAT ALL HORIZONTAL AND/OR VERTICAL BENDS FITTINGS MAY NOT BE SHOWN ON PLANS.
3. ANY PROJECTS WITHIN VDOT JURISDICTION WILL REQUIRE COMPACTION TESTS EVERY 500 LINEAR FEET WHERE PAVEMENT (ROADWAY) IS CUT AND REPLACED.
4. CONTRACTOR SHALL RECORD VERTICAL AS-BUILT DATA TO INCLUDE DEPTH OF WATER MAIN, WATER MAIN FEATURES & ALL UTILITY CROSSINGS.

Technical drawing showing a cross-section of a pipe joint. Dimensions include: 3 13/16", Ø 25", 3/8", 13/16", 1 1/2", 1/8", 3 1/8", Ø 22 13/16", Ø 25", 1/2", 1/4" Ø, and 1/4" DIA. Labels include: "O.D. OF GKT GROOVE", "1/4" Ø NEOPRENE GASKET", and "1/4" DIA. NEOPRENE GASKET".

Diagram illustrating the connection of a sewer main to a building sewer. The diagram shows a cross-section of the ground with a sewer main (labeled "SEWER MAIN") and a building sewer (labeled "BUILDING SEWER"). The building sewer is shown with a "CLEAN-OUT STACK" and a "PLUMBER SHALL CUT STACK TO FINISHED GRADE AS SHOWN WHEN BUILDING SEWER IS CONNECTED TO LATERAL". The connection is made using a "45° WYE (TEE NOT ACCEPTABLE)" and a "45° MAX." fitting. The building sewer is shown with a "ASTIC BODY CLEAN-OUT & CAP" and a "CLEAN-OUT STACK (SEE NOTES #2 & #8)". The connection is made using a "45° OR 22.5° BELL & SPIGOT BEND (IF NEEDED)". The diagram also shows a "0° GRADE" line and a "MIN. OF 3 FEET DURING INSTALLATION OF MAIN LINE. PLUMBER SHALL CUT STACK TO FINISHED GRADE AS SHOWN WHEN BUILDING SEWER IS CONNECTED TO LATERAL".

Diagram illustrating the construction details of a stone base and riser section. The diagram shows a cross-section of a wall or structure with the following dimensions and components:

- STONE BASE (6" MIN. DEPTH) #57 OR EQUIVALENT**: The base layer at the bottom.
- WITH INVERT**: Indicated at the bottom of the stone base.
- BASE HEIGHT VARIES 6" Min.**: The height of the stone base.
- RISER SECTIONS HEIGHT VARIES**: The height of the riser section above the base.
- ECCENTRIC CONE HEIGHT VARIES**: The height of the eccentric cone section above the riser.
- 5" Min. (Typ.)**: A dimension indicating the typical height of a section.
- Max.**: Indicated at the top of the section.



TECHNICAL DRAWING OF A BOLT-DOWN MANHOLE COVER. THE DRAWING SHOWS A TOP-DOWN VIEW OF A RECTANGULAR COVER WITH A CENTRAL CIRCULAR HOLE. DIMENSIONS INCLUDE A TOTAL WIDTH OF 9'10", A CENTRAL HOLE DIAMETER OF 3'0", AND A DISTANCE OF 8'3" FROM THE CENTER TO THE EDGE. A NOTE INDICATES "8'3" OF STAINLESS STEEL ROD".

**PICKBARS DETAIL**

MANHOLE COVER MODEL (BIDDABLES BY EAST JORDAN IR WORKS, EQUIVALENT).

1. BOLT-DOWN MANHOLE COVER MODEL (BIDDABLES BY EAST JORDAN IR WORK INC OR EQUIVALENT).
2. HEX HEAD BOLTS (6-SIDED) SHALL BE USED.
3. BOLT-DOWN MANHOLE COVERS SHALL BE USED WHEN SHOWN ON PLANS OR AS DIRECTED BY THE PARTICIPATING UTILITY.

**STANDARD MANHOLE COVER**

**BOLT-DOWN MANHOLE COVER**

MINIMUM OF 5' OR  
DIRECTED BY THE  
DISPATCH UTILITY

(SEE NOTE #6)

4" MINIMUM  
GRAVEL BEDDING  
#57 OR EQUIVALENT

SAME AS  
ABOVE

TEE, WYE, TEE/WYE OR  
COMBINATION OF WYE & 45°  
BEND FITTINGS SHALL BE  
SIZED AS REQUIRED

2'-0" MIN.

2'-0" MIN.

11.25° OR 22.5°  
BEND

45° MAX.

SANITARY SEWER LATERAL  
FOR DEEP SEWER

10

4

2.5

- ING PIPE.  
AINLESS STEEL SPACERS MAY BE  
L BAND SHALL BE LINED WITH EPDM  
ER MATERIAL WITH EACH END  
ING PIPE.  
WITH REGIONAL STANDARDS.  
ARD DETAIL EP-1 OR HDPE AS  
ATING UTILITY.  
BELOW UNLESS OTHERWISE

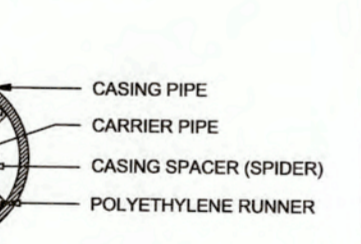
- WHEN STORM DRAIN OR OTHER PIPES CROSSES OVER THE OTHER UTILITY WITH A  
SPACE OF LESS THAN 18".  
ON UNDISTURBED EARTH.  
READY MIX, CLASS A3.

1. LAUNCHING AND INITIAL BACKFILL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE  
AND MANUFACTURER'S RECOMMENDATION.  
2. PIPE SHALL BE BEDDED IN COMPACTED VDOT #57 OR #58 STONE, OR CRUSHED RUN.  
3. THE BEDDING STONE SHALL BE PLACED IN 6" LAYERS. THE BEDDING STONE AND FILL SHALL BE PLACED IN 6" LAYERS  
FROM BOTTOM OF TRENCH TO 1' ABOVE THE PIPE. THE REMAINING SHALL BE PLACED  
AND SHALL BE COMPACTED TO AT LEAST 90% OF MAXIMUM DENSITY AS DETERMINED BY  
4. REQUIREMENTS FOR DUCTILE IRON WATER LINE ARE: DEPENDENT ON MANUFACTURER'S  
5. CRITERIA.  
6. INSTALLATION SHALL COMPLY WITH OSHA TECHNICAL MANUAL, CHAPTER 2, TITLED  
7. "SAFETY: HAZARD RECOGNITION IN TRENCHING AND SHORING."  
8. THE PIPE SHALL BE PLACED ALONG THE LOWER QUADRANT OF THE PIPE. THE WIRE SHALL  
BE PLACED ALONG THE UPPER QUADRANT OF THE PIPE. NON-METALLIC SPACERS  
SHALL BE USED TO MAINTAIN A SET DISTANCE FROM THE UTILITY.

- [illegible]

A technical diagram of a restrained joint in a casing pipe assembly. The diagram shows a horizontal cross-section of a pipe with several components labeled. At the left end, two spacers are shown, with a label pointing to them: "TWO SPACERS PLACED AT EACH END OF CASING (TYP)". The main pipe is labeled "CASING PIPE". A section of the pipe is labeled "RESTRAINED JOINTS". A dimension line indicates a distance of "6.5' BETWEEN SPACERS". Another dimension line indicates a distance of "2' FROM BELL END". The pipe is supported by a "CARRIER PIPE" at the bottom. A label at the bottom states: "CASING SPACERS SHALL BE SPACED A MAXIMUM OF 1' FROM EACH SIDE OF THE PIPE JOINT".

\* ADDITIONAL SPACING ALLOWED AS RECOMMENDED BY PIPE MANUFACTURER

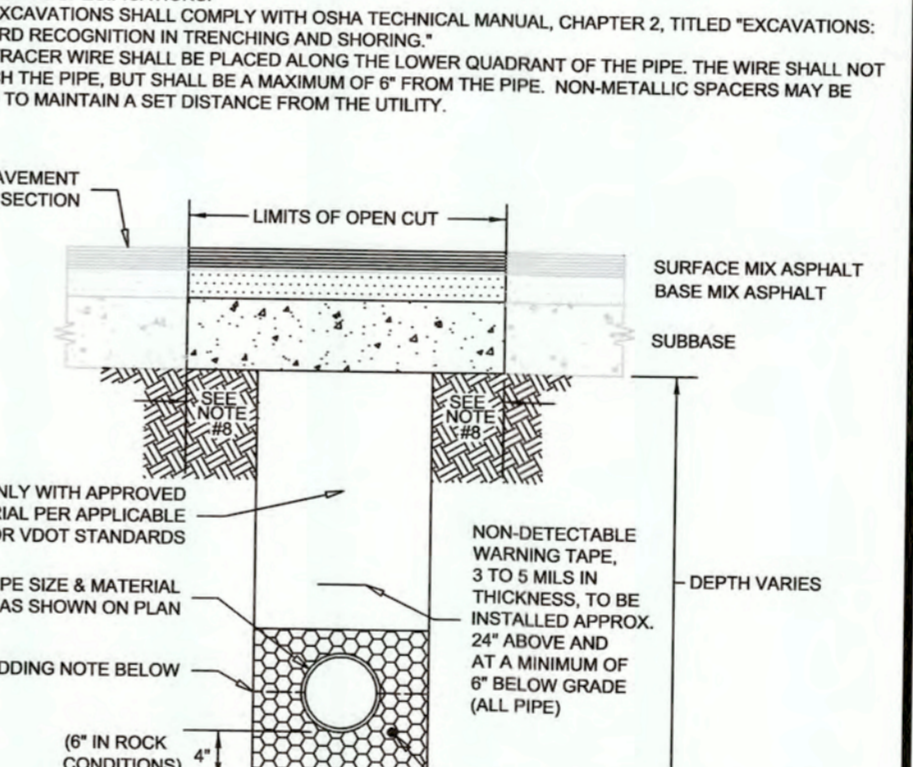
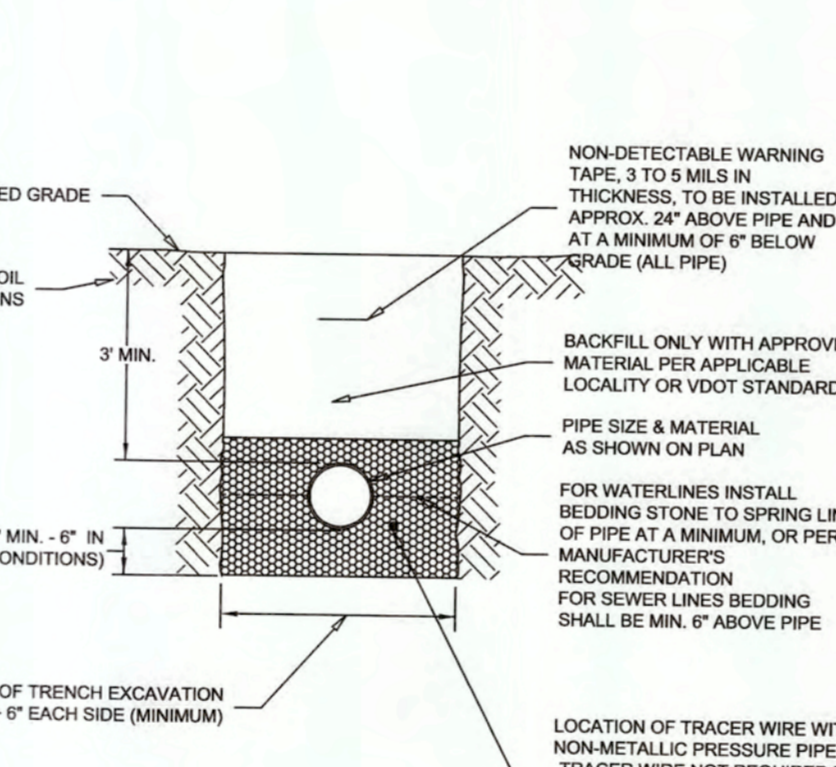
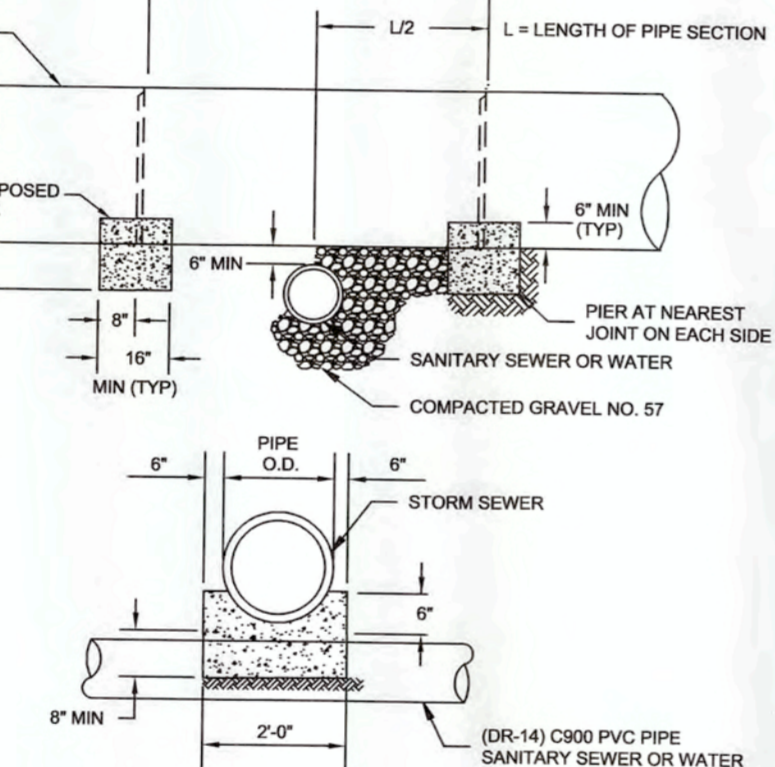


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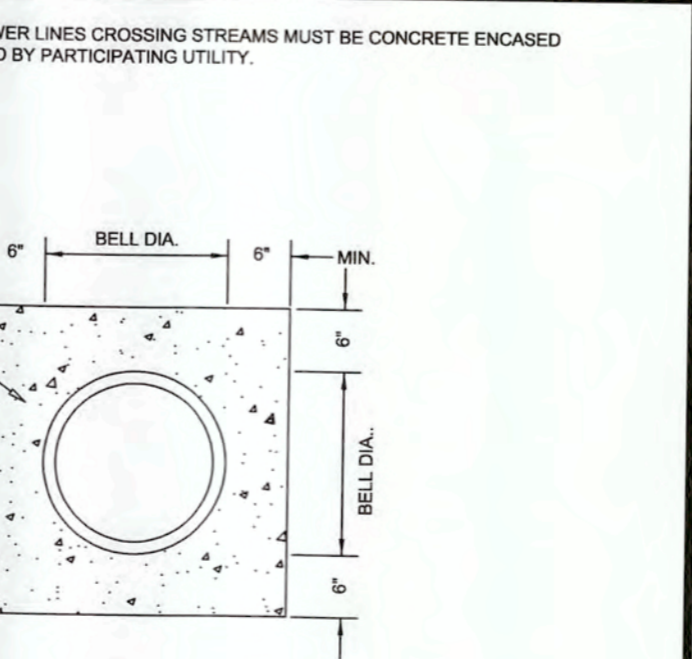
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MISC. CONSTRUCTION NOTES:

1. ALL DRIVEWAY, SIDEWALKS, CURBING, FENCING, CULVERTS & MAILBOXES MUST BE RESTORED TO EXISTING CONDITIONS AFTER CONSTRUCTION IS COMPLETE. ANY CHANGES TO EXISTING CONDITIONS MUST BE APPROVED BY WWWA.
2. CONTRACTOR SHALL PROTECT SHRUBS & LANDSCAPING DURING CONSTRUCTION. CONTRACTOR SHALL RELOCATE/REESTABLISH SHRUBS AS NEEDED.
3. CONTRACTOR SHALL PROTECT CURBING FROM DAMAGE.
4. CONTRACTOR SHALL PROTECT PROPERTY PINS. PROPERTY PINS SHALL NOT BE DISTURBED DURING CONSTRUCTION.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING POLE/GUY WIRE PROTECTION AS NEEDED DURING CONSTRUCTION.
6. ALL EXISTING UTILITIES MAY NOT BE SHOWN IN EXACT LOCATION.
7. ALL PAVEMENT CUTS SHALL BE SAW CUT AND EDGES TACK COATED PRIOR TO PAVING.



WESTERN VIRGINIA REGIONAL - CONSTRUCTION DETAIL

# MOUNT PLEASANT LIBRARY SEWER EXTENSION



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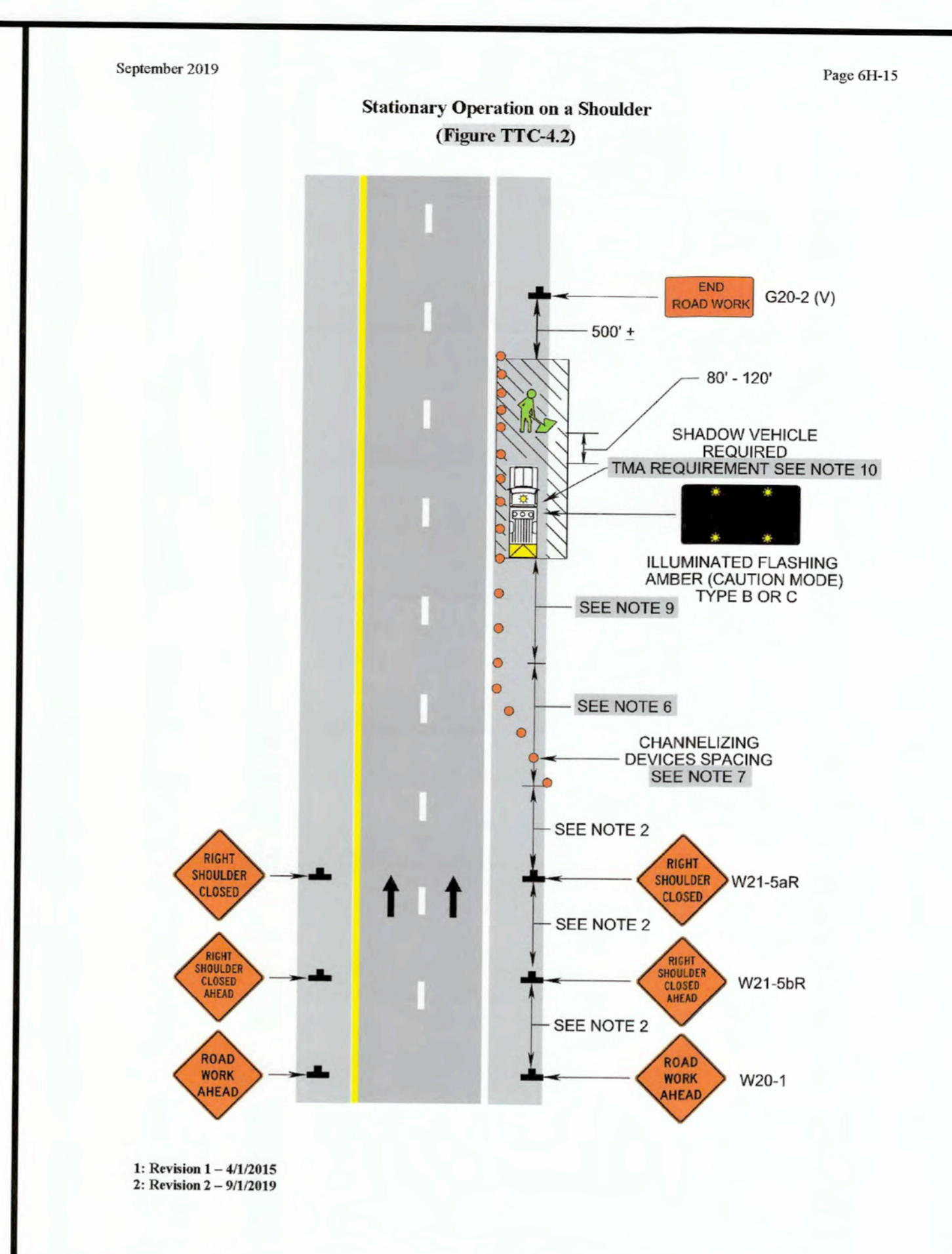
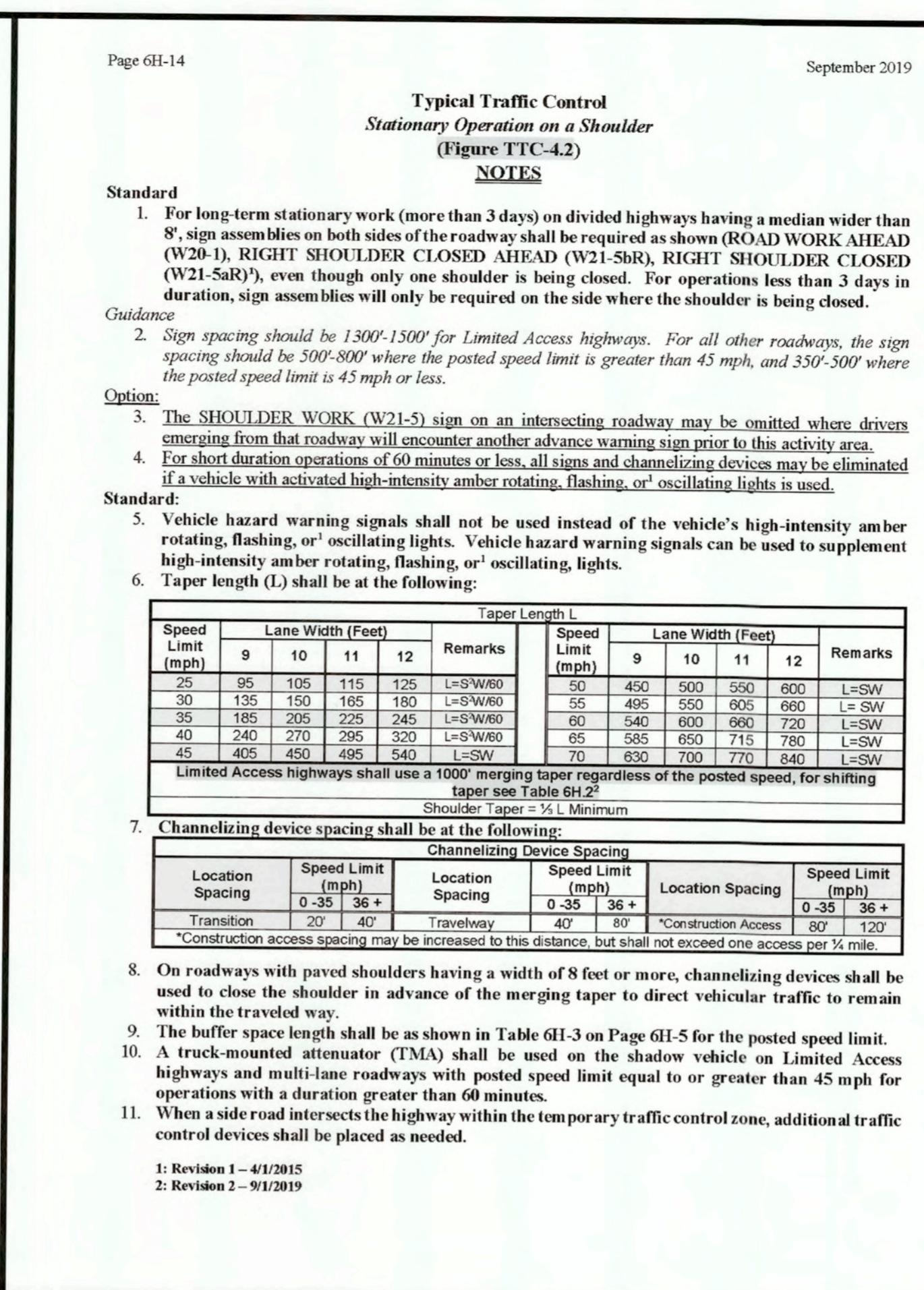
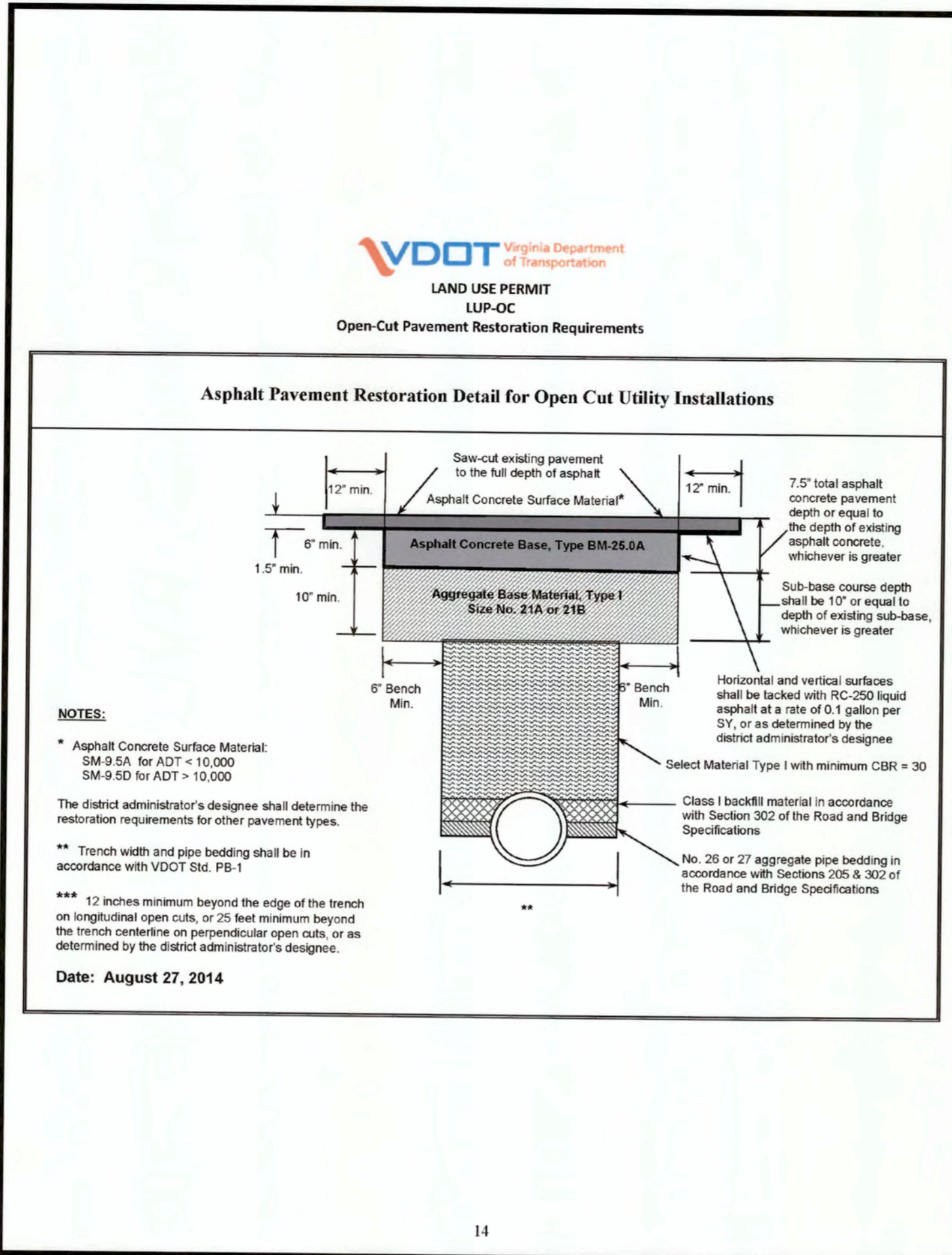
VIRGINIA REGIONAL - CONSTRUCTION DETAIL



SHEET  
**3**  
OF  
**6**

DATE:	1/19/2022
SCALE:	1" = 20'
DRAWING BY:	BWE
DESIGNED BY:	NDM/BWE
APPROVED BY:	WVWA

Drawing name: T:\Transportation\Projects\Special Projects\Mt Pleasant Library Sewer\Mount Pleasant Sewer Ext 10 28 21.dwg



PROFESSIONAL ENGINEER  
SEAL AND SIGNATURE

ROANOKE COUNTY DEPT. OF COMMUNITY DEVELOPMENT  
5204 Bernard Drive  
P.O. Box 29800  
Roanoke, Virginia 24018  
Office: (540) 772-2083  
Fax: (540) 776-7155

VDOT NOTES:

- SIGN AND SPACING SHALL BE ADJUSTED TO FIT FIELD CONDITIONS.
- SAFE ACCESS TO ALL PUBLIC ROADWAYS SHALL BE MAINTAINED AT ALL TIMES.
- ALL FLAGGERS SHALL BE CERTIFIED.
- CHANNELIZING DEVICES, SUCH AS CONES OR BARRELS, SHALL BE UTILIZED WHERE REQUIRED AND FOLLOW THE WAPM.
- WORK ZONE HOURS SHALL BE FROM 9:00 AM TO 3:00 PM.

MAINTENANCE OF TRAFFIC NOTES:

- IT IS NOT THE INTENT OF THIS PLAN TO ENUMERATE EVERY DETAIL WHICH MUST BE CONSIDERED IN THE CONSTRUCTION OF EACH WORK ZONE, BUT ONLY TO SHOW THE GENERAL FEATURES NECESSARY TO PROVIDE FOR PROPER HANDLING OF TRAFFIC. THE CONSTRUCTION TECHNIQUES ULTIMATELY EMPLOYED BY THE CONTRACTOR ARE TO BE APPROVED BY VDOT. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE FOR SAFE TRAVEL AROUND THE WORK ZONE.
- THE CONTRACTOR SHALL COORDINATE THE SEQUENCE OF CONSTRUCTION WITH VDOT.
- WHEN WORK IS NOT BEING PERFORMED, THE CLEAR ZONE OF THE ROADWAY SHALL BE FREE OF STORED MATERIALS AND/OR PARKED EQUIPMENT.
- ALL WORK IS TO BE PERFORMED IN ACCORDANCE WITH MUTCD (LATEST EDITION), THE VIRGINIA WORK AREA PROTECTION MANUAL (LATEST EDITION), AND AS DIRECTED BY VDOT AND SHALL COMPLY WITH ALL REGULATIONS PROVIDED IN THE LAND USE PERMIT.
- NO WORK ZONE SHALL OCCUR ON-SITE UNTIL A LAND USE PERMIT HAS BEEN ISSUED FOR THE SUBJECT PROPERTY.
- G.C. SHALL MAINTAIN ALL EXISTING ROADWAY SIGNAGE DURING ALL PHASES OF THIS PROJECT.
- WORK WILL NEED TO BE COORDINATED WITH PROPERTY OWNERS ON THESE STREETS TO ENSURE ACCESS.
- TWO (2) MAIN WORK ZONES ARE SHOWN ON THIS PLAN. THEY CONSIST OF WORK ZONE #1: SHOULDER CLOSURE ON A TWO-LANE ROADWAY ON JAY VALLEY ROAD TO BE PERFORMED IN ACCORDANCE WITH TTC-4.1 OF THE VIRGINIA WORK AREA PROTECTION MANUAL (WAPM) AND WORK ZONE #2: LANE CLOSURE IN THE INTERSECTION OF JAY VALLEY ROAD & VALLEY STREAM DRIVE TO BE PERFORMED IN ACCORDANCE WITH TTC-28.1 OF WAPM. SIGN SPACING SHALL BE ADJUSTED TO FIT FIELD CONDITIONS.
- THE POSTED SPEED LIMIT OF JAY VALLEY ROAD IS 45 MPH AND THE POSTED SPEED LIMIT OF VALLEY STREAM DRIVE IS 25 MPH. ALL TAPER LENGTHS, BUFFER LENGTHS AND CHANNELIZING SHALL BE BASED ON THESE SPEEDS.
- SAFE ACCESS TO ALL PUBLIC ROADWAYS SHALL BE MAINTAINED AT ALL TIMES.
- ALL FLAGGERS SHALL BE STATE CERTIFIED.
- CHANNELIZING DEVICES SUCH AS CONES OR BARRELS SHALL BE UTILIZED WHERE REQUIRED AND FOLLOW THE WAPM.

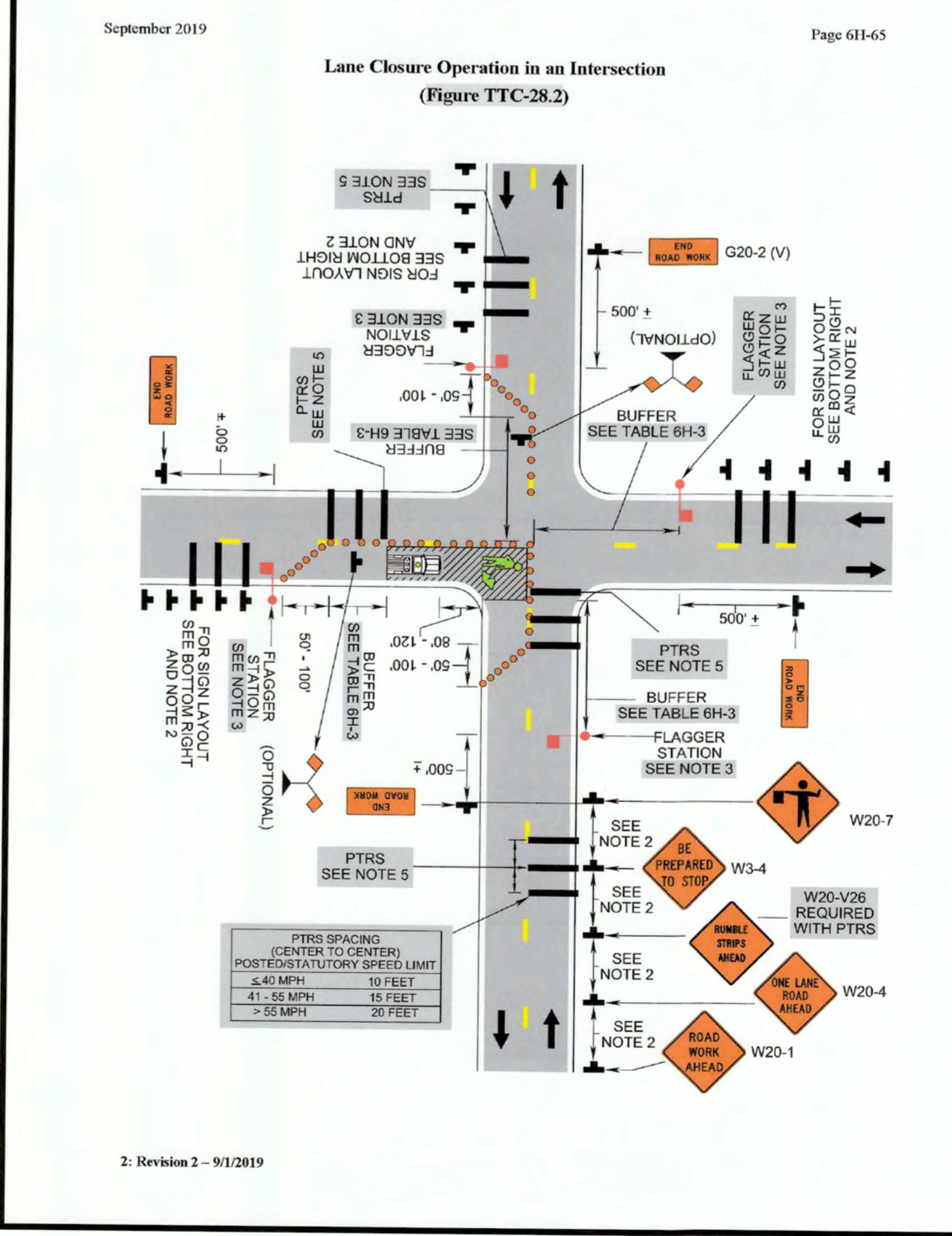
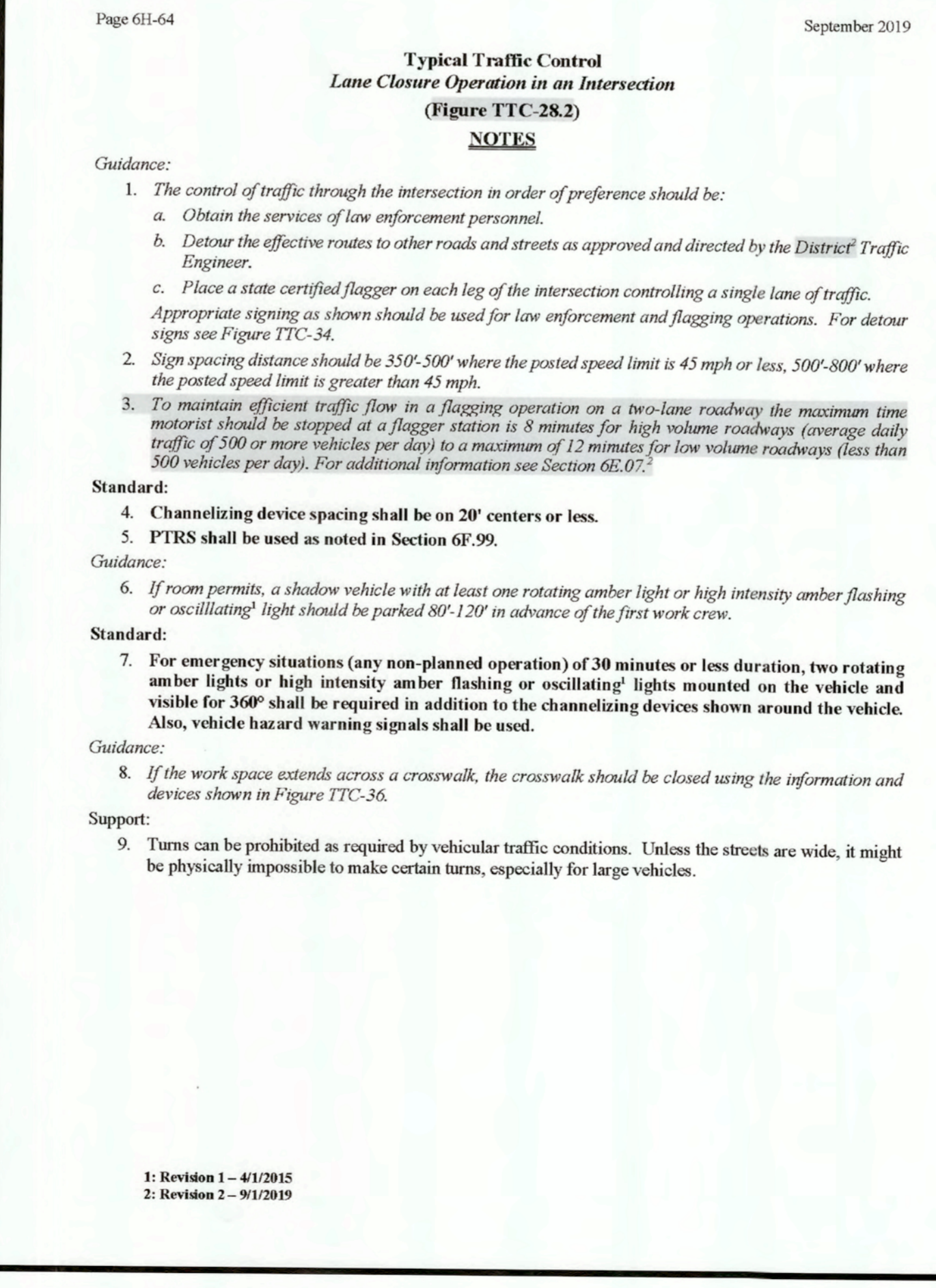
GENERAL NOTES:

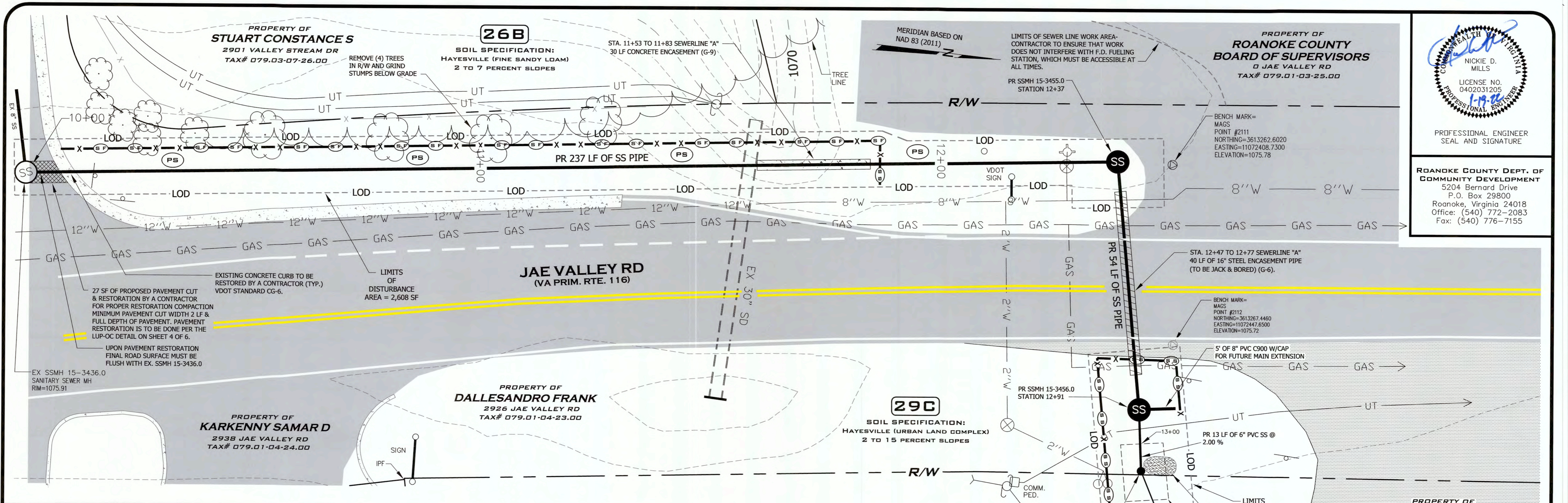
- TEMPORARY TRAFFIC PLAN:
  - THE MAJOR COMPONENTS WILL CONSIST OF GENERAL NOTES, TYPICAL SECTIONS AND SPECIAL DETAILS AS NECESSARY.
  - TRAFFIC CONTROL DEVICES SHALL BE USED AS SHOWN ON PLAN.
  - ALL SIGNS, STRIPING AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH THE VIRGINIA WORK AREA PROTECTION MANUAL AND MUTCD STANDARDS.
- PUBLIC COMMUNICATION PLAN:

VDOT SALEM TRAFFIC OPERATIONS CENTER (TOC) (540) 375-0170\*

\*THE TOC SHOULD BE NOTIFIED OF PROPOSED LANE CLOSURES AT THE BEGINNING AND END OF EACH WORKDAY.

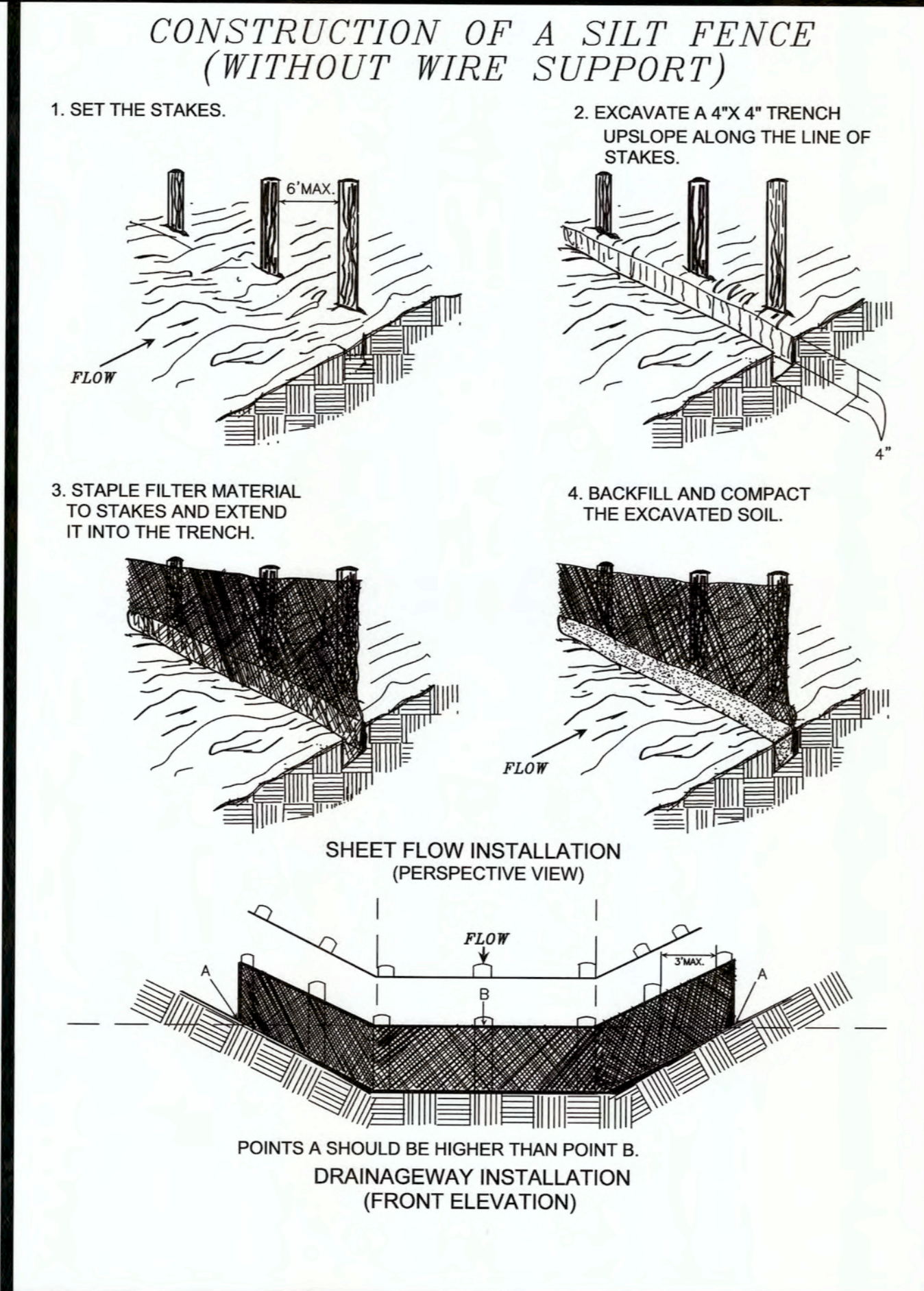
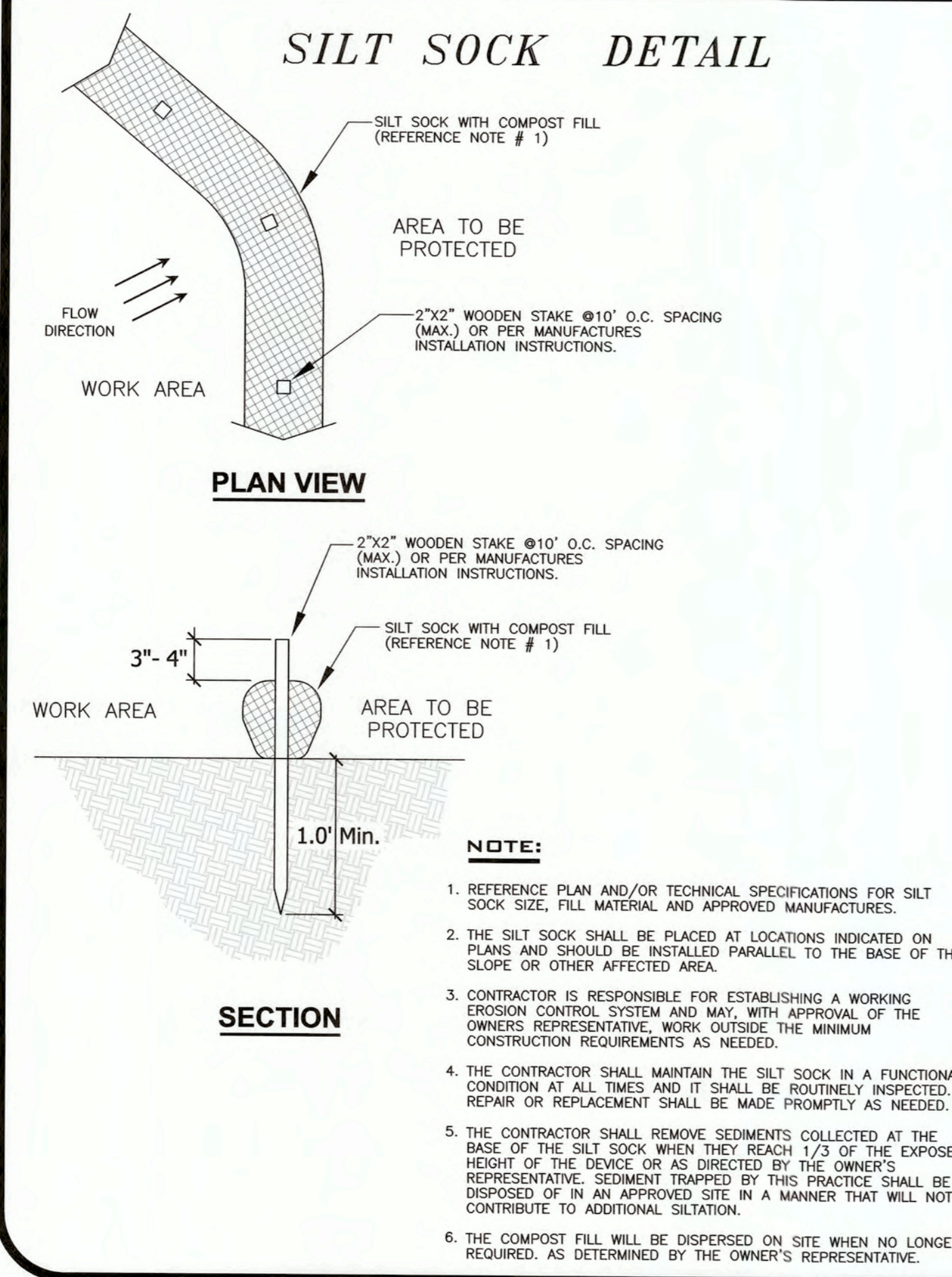
COUNTY OF ROANOKE  
ROANOKE COUNTY COMMUNICATION CENTER (540) 562-3265  
ROANOKE COUNTY POLICE: (540) 562-3265 OR 911  
ROANOKE COUNTY FIRE AND RESCUE: (540) 777-8701 OR 911  
ROANOKE COUNTY SCHOOLS: (540) 562-3700  
ROANOKE COUNTY BOARD OF SUPERVISORS: (DEBBIE JACKS): (540) 772-2005  
VIRGINIA STATE POLICE: (DIVISION SIX HEADQUARTERS): (540) 375-9500





NICKIE D. MILLS  
 LICENSE NO. 0402031205  
 PROFESSIONAL ENGINEER  
 SEAL AND SIGNATURE

**ROANOKE COUNTY DEPT. OF COMMUNITY DEVELOPMENT**  
 5204 Bernard Drive  
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## EROSION SEDIMENT CONTROL PLAN

SCALE: 1" = 10'

**EROSION SEDIMENT CONTROL SYMBOLS**

(TC)	TURBIDITY CURTAIN	
(CW)	CONCRETE WASHOUT	
(B/M)	SOIL STABILIZATION MAT (EC-3 TYPE B)	
(TS)	TEMPORARY SEEDING	(TS)
(PS)	PERMANENT SEEDING	(PS)
(SF)	SILT FENCE	
(SS)	SILT SOCK	
(CE)	CONSTRUCTION ENTRANCE	
(CP)	CULVERT INLET PROTECTION	
(OP)	OUTLET PROTECTION	
(IP)	INLET PROTECTION	

**(PS) PERMANENT SEEDING MIXTURE**

TYPE A

15 OCTOBER TO 1 FEBRUARY  
 K-31 FESCUE @ 5 LB / 1000 SF  
 BORZY WINTER RYE @ 1/2 LB / 1000 SF

1 FEBRUARY TO 1 JUNE  
 K-31 FESCUE @ 5 LB / 1000 SF  
 ANNUAL RYE @ 1/2 LB / 1000 SF

1 JUNE TO 1 SEPTEMBER  
 K-31 FESCUE @ 5 LB / 1000 SF  
 GERMAN MILLET @ 1/2 LB / 1000 SF

1 SEPTEMBER TO 15 OCTOBER  
 K-31 FESCUE @ 5 LB / 1000 SF  
 ANNUAL RYE @ 1/2 LB / 1000 SF

LIME: 140 LB / 1000 SF PULVERIZED AGRICULTURAL LIMESTONE

FERTILIZER: 5-20-10 @ 25 LB / 1000 SF  
 38-0-0 @ 7 LB / 1000 SF

MULCH: SHALL BE USED OVER ALL SEEDING AREAS AND SHALL BE APPLIED IN ACCORDANCE WITH SECTION 4.75 OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK, LATEST EDITION.

SOIL CONDITIONING: SEED, MULCHING, MAINTENANCE OF NEW SEEDLINGS, AND RESEEDING SHALL BE IN ACCORDANCE WITH SPECIFICATIONS CONTAINED WITHIN THE VIRGINIA SOIL EROSION AND SEDIMENT CONTROL HANDBOOK, LATEST EDITION. ADDITIONAL SEEDING TO BE PERFORMED AS REQUIRED.

INCORPORATION OF LIME AND FERTILIZER, SELECTION OF CERTIFIED BY THE INSPECTOR.

SEED APPLICATION: CULTIPACKER SEEDER, OR HYDROSEEDER ON A FIRM, FRIABLE, SEEDBED. MAXIMUM SEEDING DEPTH SHALL BE 1/4 INCH.

TOTAL DISTURBED AREA = **0.0994** AC. = **4,332** SQ. FT.

**DEPARTMENT OF DEVELOPMENT SERVICES**

1		
2		
3		
4		
5		
6		
NO.	REVISIONS	DATE

# MOUNT PLEASANT LIBRARY SEWER EXTENSION

DATE: 1/19/2022  
 SCALE: 1" = 10'  
 DRAWING BY: BWE  
 DESIGNED BY: NDM/BWE  
 APPROVED BY: WVWA

**EROSION & SEDIMENT CONTROL PLAN**

SHEET  
 5  
 OF  
 6

## GENERAL EROSION AND SEDIMENT CONTROL NOTES

- ALL SOIL EROSION & SEDIMENT CONTROL MEASURES SHALL BE ACCOMPLISHED IN STRICT ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS CONTAINED IN THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK, LATEST EDITION.
- THE APPROVING AUTHORITY MAY ADD TO, DELETE, RELOCATE, CHANGE, OR OTHERWISE MODIFY CERTAIN EROSION AND SEDIMENT CONTROL MEASURES WHERE FIELD CONDITIONS ARE ENCOUNTERED THAT WARRANT SUCH MODIFICATIONS.
- ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES AS SHOWN ON THE PLAN SHALL BE PLACED IN ADVANCE OF THE WORK BEING PERFORMED, AS FAR AS PRACTICAL.
- IN NO CASE DURING CONSTRUCTION SHALL WATER RUNOFF BE DIVERTED OR ALLOWED TO FLOW TO LOCATIONS WHERE ADEQUATE PROTECTION HAS NOT BEEN PROVIDED.
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LEAVE THE SITE ADEQUATELY PROTECTED AGAINST EROSION, SEDIMENTATION, OR ANY DAMAGE TO ANY ADJACENT PROPERTY AT THE END OF EACH DAY'S WORK.
- FOR THE EROSION CONTROL KEY SYMBOLS SHOWN ON THE PLANS, REFER TO THE VIRGINIA UNIFORM CODING SYSTEM FOR EROSION AND SEDIMENT CONTROL PRACTICES CONTAINED IN THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK, LATEST EDITION. THESE SYMBOLS AND KEYS ARE TO BE UTILIZED ON ALL EROSION CONTROL PLANS SUBMITTED TO ROANOKE COUNTY.
- THE LOCATION OF ALL OFF-SITE FILL OR BORROW AREAS ASSOCIATED WITH THE CONSTRUCTION PROJECT WILL BE PROVIDED TO ROANOKE COUNTY DEPARTMENT OF DEVELOPMENT SERVICES. AN EROSION CONTROL PLAN OR MEASURES MAY BE REQUIRED FOR THIS AREA.
- THIS SHEET MAY NOT BE MODIFIED EXCEPT FOR TABLES.

TOTAL DISTURBED AREA = **0.0994** AC. = **4,332** SQ. FT.

## BMP INFORMATION TABLE

BMP TYPE	BMP #1
NAME OF AUTHORIZED NUTRIENT BANK	---
REQUIRED PHOSPHORUS TO BE REMOVED (LB/YR)	LBS
AMOUNT OF PHOSPHORUS CREDIT PURCHASED (LB/YR)	LBS
TECHNICAL REQUIREMENT MET (PART 11B OR 11C)	---
TOTAL AREA TREATED (AC)	---
IMPERVIOUS AREA TREATED BY BMP (AC)	---
MANAGED TURF AREA TREATED BY BMP (AC)	---
OPEN SPACE/FORESTED AREA TREATED BY BMP (AC)	---
SURFACE AREA OF BMP (AC)	---
STORAGE VOLUME OF BMP (AC)	---
QUALITY, QUANTITY, OR BOTH?	---
TMDL ADDRESSED? (PHOSPHORUS, BACTERIA, SEDIMENT, ETC)	---
NAME OF RECEIVING WATER (PROJECT SITE)	---
HYDROLOGIC UNIT CODE FOR PROJECT SITE (ALPHANUMERIC CODE RU14, ECT)	---
MAXIMUM AVERAGE DEPTH (FT)	---
LATITUDE (DECIMAL DEGREES XX.XXXX)	---
LONGITUDE (DECIMAL DEGREES XX.XXXX)	---

## STORMWATER SITE STATISTICS

	EXISTING	PROPOSED
TOTAL DISTURBED AREA (AC)	---	---
TOTAL SITE (AC)	---	---
IMPERVIOUS AREA (AC)	---	---
MANAGED TURF AREA (AC)	---	---
OPEN SPACE/FOREST (AC)	---	---
PUBLIC RIGHT OF WAY DISTURBANCE (SF)	---	---
KARST PRESENT (Y/N)	---	---

## MODIFIED VIRGINIA CODING SYSTEM FOR EROSION &amp; SEDIMENT CONTROL PRACTICES

REFER TO SHEET 5 FOR DETAILS OF IMPLEMENTED MEASURES

NO.	TITLE	KEY	SYMBOL	NO.	TITLE	KEY	SYMBOL
3.01	SAFETY FENCE	SAF		3.21	LEVEL SPREADER	LS	
3.02	TEMPORARY GRAVEL CONSTRUCTION ENTRANCE	CE		3.22	VEGETATIVE STREAMBANK STABILIZATION	VSS	
3.03	CONSTRUCTION ROAD STABILIZATION	CRS		3.23	STRUCTURAL STREAMBANK STABILIZATION	SSS	
3.04	STRAW BALE BARRIER	STB		3.24	TEMPORARY VEHICULAR STREAM CROSSING	VSC	
3.05	SILT FENCE	SF		3.25	UTILITY STREAM CROSSING	USC	
3.06	BRUSH BARRIER	BB		3.26	DEWATERING STRUCTURE	DS	
3.07	STORM DRAIN INLET PROTECTION	IP		3.27	TURBIDITY CURTAIN	TC	
3.08	CULVERT INLET PROTECTION	CIP		3.28	SUBSURFACE DRAIN	SD	
3.09	TEMPORARY DIVERSION DIKE	DD		3.29	SURFACE ROUGHENING	SR	
3.10	TEMPORARY FILL DIVERSION	FD		3.30	TOPSOILING	TO	
3.11	TEMPORARY RIGHT-OF-WAY DIVERSION	RWD		3.31	TEMPORARY SEEDING	TS	
3.12	DIVERSION	DV		3.32	PERMANENT SEEDING	PS	
3.13	TEMPORARY SEDIMENT TRAP	ST		3.33	SODDING	SO	
3.14	TEMPORARY SEDIMENT BASIN	SB		3.34	BERMUDA GRASS AND ZOYSIAURASS ESTABLISHMENT	B <sub>M</sub>	
3.15	TEMPORARY SLOPE DRAIN	TSD		3.35	MULCHING	MU	
3.16	PAVED FLUME	PF		3.36	SOIL STABILIZATION BLANKETS AND MATTING	BS <sub>ZE</sub>	
3.17	STORMWATER CONVEYANCE CHANNEL	SCC		3.37	TREES, SHRUBS, VINES AND GROUND COVERS	VEG	
3.18	OUTLET PROTECTION	OP		3.38	TREE PRESERVATION AND PROTECTION	TP	
3.19	RIPRAP	RR		3.39	DUST CONTROL	DC	
3.20	ROCK CHECK DAMS	CD					

## EROSION AND SEDIMENT CONTROL NARRATIVE

**PROJECT DESCRIPTION:** THE PURPOSE OF THIS PROJECT IS TO EXTEND A NEW SEWER MAIN WITHIN THE ROANOKE COUNTY SERVICE AREA. THE TOTAL ESTIMATED PROJECT DISTURBANCE AREA IS 4,332 SF (0.09 AC). THE AREA CALCULATION IS BASED ON THE INSTALLATION OF 291 LF OF SEWER MAIN WITHIN A 10 FOOT WIDE DISTURBANCE. SPECIFICALLY, 1,363 SF (0.031 AC) IS WITHIN TO THE EXISTING HARD SURFACE AND 2,969 SF (0.068 AC) IS OUTSIDE THE EXISTING HARD SURFACE. THEREFORE, THE PROJECT'S LAND DISTURBING ACTIVITIES HAS BEEN DETERMINED TO BE EXEMPTED FROM THE VESCH (§ 621-44.15:51&55) AS AN EXTENSION OF AN EXISTING UNDERGROUND PUBLIC UTILITY LINE THAT IS CONFINED TO AN EXISTING HARD-SURFACE URBAN STREET.

**EXISTING SITE CONDITIONS:** THE LIMITS OF DISTURBANCE IS LOCATED WITHIN VDOT RIGHT-OF-WAY AND THE SUBJECT PROPERTY IDENTIFIED AS ROANOKE COUNTY TAX PARCEL #79.01-04-22.00 AND IS THE ROANOKE COUNTY MOUNT PLEASANT LIBRARY. THE SITE IS CURRENTLY A MIX OF GRAVEL PARKING AND GRASSED SHOULDER AREA. THE ENTIRE SITE DRAINS INTO THE ADJACENT DRAINAGE DITCH. THERE ARE CURRENTLY NO KNOWN EROSION PROBLEMS RELATED TO THE PROJECT AREA.

**ADJACENT PROPERTY:** THE PROJECT AREA IS BOUNDED BY VDOT R/W TO THE NORTH, TAX # 79.01-03-26.00 TO THE EAST, VDOT RIGHT-OF-WAY TO THE SOUTH, TAX # 79.01-04-22.00 TO THE WEST.

**OFFSITE AREAS:** THE CONTRACTOR WILL BE REQUIRED TO PROVIDE, TO THE COUNTY OF ROANOKE:

A. THE LOCATION OF ANY OFFSITE BORROW AREAS.

B. THE LOCATION OF ANY OFFSITE AREAS WHERE EXCESS EXCAVATED MATERIAL WILL BE DISPOSED.

**SOILS:** THE "WEB SOIL SURVEY" AS PREPARED BY THE UNITED STATES DEPARTMENT OF AGRICULTURE IDENTIFIES THE SOILS ON SITE AS 29C HAYESVILLE, 2 TO 15 PERCENT SLOPE, WHICH IS URBAN LAND COMPLEX SOIL GROUP B.

**CRITICAL AREAS:** CRITICAL AREAS FOR THIS PROJECT INCLUDE ALL AREAS ADJACENT TO RTE. 116. SPECIAL CARE SHALL BE TAKEN TO ENSURE THAT THESE AREAS HAVE ADEQUATE EROSION CONTROL AND THAT SEDIMENT TRANSPORT FROM THE PROPERTY IS MINIMIZED.

**EROSION AND SEDIMENT CONTROL MEASURES:** UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE CONSTRUCTED AND MAINTAINED ACCORDING TO THE MINIMUM STANDARDS AND SPECIFICATIONS OF THE "VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK", LATEST EDITION (VESCH). THE MINIMUM STANDARDS OF THE VESCH SHALL BE ADHERED TO UNLESS DIRECTED BY THE LOCAL PROGRAM ADMINISTRATOR.

## STRUCTURAL:

CONSTRUCTION ENTRANCE—Std. 3.02 ..... a stone pad, located at points of vehicular ingress and egress to the construction site, to reduce the soil transported onto public roads and other paved areas.

SILT FENCE, 3.05 ..... a temporary sediment barrier consisting of a synthetic filter fabric stretched across and attached to supporting posts and entrances to intercept and detain small amounts of sediment from disturbed areas.

CULVERT INLET PROTECTION, 3.08 ..... shall be installed as shown on the erosion and sediment control plan in conformance with vesch std. & spec. or www.ascs culvert inlet protections are provided in order to filter runoff before it enters a storm drain system.

DEWATERING STRUCTURE, 3.26 ..... a temporary settling and filter device for water which is discharged from dewatering activities, used to filter sediment-laden water prior to the water being discharged offsite.

## VEGETATIVE:

TEMPORARY SEEDING, 3.31 ..... establishment of temporary vegetative cover on disturbed areas by seeding with appropriate rapidly growing annual plants to reduce erosion by stabilizing disturbed areas that will not be brought to final grade for a period of more than 14 days.

PERMANENT SEEDING, 3.32 ..... establishment of perennial vegetative cover on disturbed areas by planting seed to reduce erosion and decrease sediment yield from disturbed areas.

MULCHING, 3.35 ..... application of plant residues or other suitable materials to the soil surface. Mulching will prevent erosion by protecting the soils surface from rainfall impact and reducing the velocity of overland flow. After seeding, mulching will foster the growth of vegetation by increasing available moisture and providing insulation against extreme heat and cold.

DUST CONTROL, 3.39 ..... the application of measures to prevent surface and air movement of dust from exposed soil surfaces and reduce the presence of airborne substances which may present health hazards, traffic safety problems or harm animal or plant life.

## MANAGEMENT STRATEGIES:

A.) CONSTRUCTION WILL BE SEQUENCED SO THAT GRADING OPERATIONS CAN BEGIN AND END AS QUICKLY AS POSSIBLE.

B.) SEDIMENT TRAPPING MEASURES WILL BE INSTALLED AS A FIRST STEP IN GRADING.

C.) THE LOCAL PROGRAM ADMINISTRATOR RESERVES THE RIGHT TO ADD TO, DELETE OR OTHERWISE CHANGE THE EROSION CONTROL MEASURES AS DEEMED NECESSARY DUE TO ACTUAL FIELD CONDITIONS BY WRITTEN NOTIFICATION TO THE CONTRACTOR.

D.) ALL FILL AND CUT SLOPES SHALL BE SEEDED WITHIN SEVEN (7) DAYS OF ACHIEVING FINAL GRADE.

E.) ONLY AFTER INSPECTION AND APPROVAL FROM THE LOCAL PROGRAM ADMINISTRATOR, EROSION AND SEDIMENT CONTROL DEVICES MAY BE REMOVED FOLLOWING THE STABILIZATION OF THE CONTRIBUTING AREAS.

THE WWA SHALL INSPECT DISTURBED AREAS OF THE SITE THAT HAVE NOT BEEN FINALLY STABILIZED, AND AREAS USED FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION, STRUCTURAL CONTROL MEASURES, AND THE AREA OF CONSTRUCTION VEHICLE ACCESS AT LEAST EVERY FOURTEEN (14) CALENDAR DAYS, AND WITHIN 48 HOURS OF THE END OF A STORM EVENT PRODUCING 1/2" OR GREATER OF PRECIPITATION. WHERE AREAS HAVE BEEN FINALLY OR TEMPORARILY STABILIZED OR RUNOFF IS UNLIKELY DUE TO WINTER CONDITIONS (SITE IS COVERED WITH ICE, OR FROZEN GROUND EXISTS) SUCH INSPECTIONS SHALL BE CONDUCTED AT LEAST ONCE EVERY MONTH.

A.) INSPECT DISTURBED AREAS AND AREAS OF MATERIALS STORAGE THAT ARE EXPOSED TO PRECIPITATION FOR EVIDENCE OF, OR THE POTENTIAL FOR SEDIMENT ENTERING THE STORM DRAIN SYSTEM. INSPECT E&S CONTROLS IN ACCORDANCE WITH REQUIREMENTS STATED HEREIN, AND INSPECT POINTS OF STORM DRAIN DISCHARGE FOR EXCESSIVE SEDIMENTATION. CORRECT SITE CONTROLS AS AS REQUIRED TO REDUCE SEDIMENTATION OF STORM DRAINED, CULVERTS, AND RECEIVING CHANNELS.

B.) IF CONTROLS OR SEDIMENT PREVENTION AREAS ARE FOUND TO BE IN NEED OF REPAIR OR MODIFICATION, THE GENERAL CONTRACTOR SHALL PROVIDE ADDITIONAL MEASURES OR MODIFICATION TO EXISTING MEASURES AS REQUIRED. ANY ADDITIONAL MEASURES OR MODIFICATIONS TO EXISTING MEASURES SHALL BE RECORDED AS FIELD REVISIONS TO THESE PLANS. IN THE EVENT THAT ADDITIONAL CONTROLS ARE FOUND TO BE REQUIRED, THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTING THESE CONTROLS BEFORE THE NEXT ANTICIPATED STORM EVENT IS IMPRACTICAL. THEY SHALL BE IMPLEMENTED AS SOON AS PRACTICAL.

C.) A REPORT SUMMARIZING THE SCOPE OF INSPECTIONS, NAME OF INSPECTOR, INSPECTOR'S QUALIFICATIONS, DATES OF INSPECTIONS, MAJOR OBSERVATIONS PERTAINING TO THE IMPLEMENTATION OF THESE EROSION CONTROL PLANS, AND ACTIONS TAKEN SHALL BE MADE AND RETAINED AS A PART OF THESE PLANS. MAJOR OBSERVATIONS OF THESE REPORTS SHALL INCLUDE: THE LOCATIONS OF EXCESSIVE SEDIMENTATION FROM THE SITE; LOCATIONS OF CONTROLS IN NEED OF REPAIR; LOCATION OF FAILED OR INADEQUATE CONTROLS; AND LOCATIONS WHERE ADDITIONAL CONTROLS ARE NEEDED.

## STORMWATER MANAGEMENT:

STORMWATER QUANTITY REQUIREMENTS WILL BE MET BY SHEETFLOWS TO EXISTING DRAINAGE CHANNEL

STORMWATER QUALITY REQUIREMENTS WILL BE MET THROUGH NOT APPLICABLE

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## MINIMUM STANDARDS

THE FOLLOWING STANDARDS ARE TO BE PROVIDED OR ADDRESSED ON EVERY DEVELOPMENT PROJECT EXCEEDING 10,000 S.F. IN AREA OF DISTURBANCE. THESE STANDARDS ARE CONSIDERED A MINIMUM AND MAY REQUIRE ADDITIONAL MEASURES AS DEEMED NECESSARY BY THE LOCAL PROGRAM AUTHORITY OR THE CONSULTING ENGINEER.

NO.	CRITERIA, TECHNIQUE OR METHOD	PRACTICES PROVIDED
1	PERMANENT OR TEMPORARY SOIL STABILIZATION SHALL BE APPLIED TO DENUDED AREAS WITHIN SEVEN DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE. TEMPORARY SOIL STABILIZATION SHALL BE APPLIED WITHIN SEVEN DAYS TO DENUDED AREAS THAT MAY NOT BE AT FINAL GRADE BUT WILL REMAIN DORMANT FOR LONGER THAN 14 DAYS. PERMANENT STABILIZATION SHALL BE APPLIED TO AREAS THAT ARE TO BE LEFT DORMANT FOR MORE THAN ONE YEAR.	PS
2	DURING CONSTRUCTION OF THE PROJECT, SOIL STOCK PILES AND BORROW AREAS SHALL BE STABILIZED OR PROTECTED WITH SEDIMENT TRAPPING MEASURES. THE APPLICANT IS RESPONSIBLE FOR THE TEMPORARY PROTECTION AND PERMANENT STABILIZATION OF ALL SOIL STOCKPILES ON SITE AS WELL AS BORROW AREAS AND SOIL INTENTIONALLY TRANSPORTED FROM THE PROJECT SITE.	SF TS
3	A PERMANENT VEGETATIVE COVER SHALL BE ESTABLISHED ON DENUDED AREAS NOT OTHERWISE PERMANENTLY STABILIZED. PERMANENT VEGETATION SHALL NOT BE CONSIDERED ESTABLISHED UNTIL A GROUND COVER IS ACHIEVED THAT IS UNIFORM, MATURE ENOUGH TO SURVIVE AND WILL INHIBIT EROSION.	PS
4	SEDIMENT BASINS AND TRAPS, PERIMETER DIKES, SEDIMENT BARRIERS AND OTHER MEASURES INTENDED TO TRAP SEDIMENT SHALL BE CONSTRUCTED AS A FIRST STEP IN ANY LAND-DISTURBING ACTIVITY AND SHALL BE MADE FUNCTIONAL BEFORE UPSLOPE LAND DISTURBANCE TAKES PLACE.	SF
5	STABILIZATION METHODS SHALL BE APPLIED TO EARTHEN STRUCTURES SUCH AS DAMS, DIKES AND DIVERSIONS IMMEDIATELY AFTER INSTALLATION.	NOT APPLICABLE
6	SEDIMENT TRAPS AND SEDIMENT BASINS SHALL BE DESIGNED AND CONSTRUCTED BASED UPON THE TOTAL DRAINAGE AREA TO BE SERVED BY THE TRAP OR BASIN.	NOT APPLICABLE
7	CUT AND FILL SLOPES SHALL BE DESIGNED AND CONSTRUCTED IN A MANNER THAT WILL MINIMIZE EROSION. SLOPES THAT ARE FOUND TO BE ERODING EXCESSIVELY WITHIN ONE YEAR OF PERMANENT STABILIZATION SHALL BE PROVIDED WITH ADDITIONAL SLOPE STABILIZATION MEASURES UNTIL THE PROBLEM IS CORRECTED.	RR
8	CONCENTRATED RUNOFF SHALL NOT FLOW DOWN CUT OR FILL SLOPES UNLESS CONTAINED WITHIN AN ADEQUATE TEMPORARY OR PERMANENT CHANNEL, FLUME OR SLOPE DRAIN STRUCTURE.	NOT APPLICABLE
9	WHENEVER WATER SEEPS FROM A SLOPE FACE, ADEQUATE DRAINAGE OR OTHER PROTECTION SHALL BE PROVIDED.	NOT APPLICABLE
10	ALL STORM SEWER INLETS THAT ARE MADE OPERABLE DURING CONSTRUCTION SHALL BE PROTECTED SO THAT SEDIMENT WATER CANNOT ENTER THE CONVEYANCE SYSTEM WITHOUT FIRST BEING FILTERED OR OTHERWISE TREATED TO REMOVE SEDIMENT.	NOT APPLICABLE
11	BEFORE NEWLY CONSTRUCTED STORMWATER CONVEYANCE CHANNELS OR PIPES ARE MADE OPERATIONAL, ADEQUATE OUTLET PROTECTION AND ANY REQUIRED TEMPORARY OR PERMANENT CHANNEL LINING SHALL BE INSTALLED IN BOTH THE CONVEYANCE CHANNEL AND RECEIVING CHANNEL.	NOT APPLICABLE
12	WHEN WORK IN A LIVE WATERCOURSE IS PERFORMED, PRECAUTIONS SHALL BE TAKEN TO MINIMIZE ENCROACHMENT, CONTROL SEDIMENT TRANSPORT AND STABILIZE THE WORK AREA TO THE GREATEST EXTENT POSSIBLE DURING CONSTRUCTION. NON-ERODIBLE MATERIAL SHALL BE USED FOR THE CONSTRUCTION OF CAUSEWAYS AND OFFERDAMS. EARTHEN FILL MAY BE USED FOR THESE STRUCTURES IF ARMORED BY NON-ERODIBLE COVER MATERIALS.	NOT APPLICABLE
13	WHEN A LIVE WATERCOURSE MUST BE CROSSED BY CONSTRUCTION VEHICLES MORE THAN TWICE IN ANY (6) SIX-MONTH PERIOD, A TEMPORARY VEHICULAR STREAM CROSSING CONSTRUCTED OF NON-ERODIBLE MATERIAL SHALL BE PROVIDED.	NOT APPLICABLE
14	ALL APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS PERTAINING TO WORKING IN OR CROSSING LIVE WATERCOURSES SHALL BE MET.	JOINT PERMIT
15	THE BEDS AND BANKS OF A WATERCOURSE SHALL BE STABILIZED IMMEDIATELY AFTER WORK IN THE WATERCOURSE IS COMPLETED.	NOT APPLICABLE
16	UNDERGROUND UTILITY LINES SHALL BE INSTALLED IN ACCORDANCE WITH THE FOLLOWING STANDARDS IN ADDITION TO OTHER APPLICABLE CRITERIA: 1.) NO MORE THAN 500 LINEAR FEET OF TRENCH MAY BE OPENED AT ONE TIME. 2.) EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF TRENCHES. 3.) EFFLUENT FROM DE-WATERING OPERATIONS SHALL BE FILTERED OR PASSED THROUGH AN APPROVED SEDIMENT TRAPPING DEVICE, OR BOTH, AND DISCHARGED IN A MANNER THAT DOES NOT ADVERSELY AFFECT FLOWING STREAMS OR OFFSET PROPERTY. 4.) MATERIAL USED FOR BACKFILLING TRENCHES SHALL BE PROPERLY COMPACTED IN ORDER TO MINIMIZE EROSION AND PROMOTE STABILIZATION. 5.) RE-STABILIZATION SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THIS CHAPTER. 6.) APPLICABLE SAFETY REQUIREMENTS SHALL BE COMPLIED WITH.	NOT APPLICABLE
17	WHERE CONSTRUCTION VEHICLE ACCESS ROUTES INTERSECT PAVED OR PUBLIC ROADS, PROVISIONS SHALL BE MADE TO MINIMIZE THE TRANSPORT OF SEDIMENT BY VEHICULAR TRACKING ONTO THE PAVED SURFACE. WHERE SEDIMENT IS TRANSPORTED ONTO A PAVED OR PUBLIC ROAD SURFACE, THE ROAD SURFACE SHALL BE CLEANED THOROUGHLY AT THE END OF EACH DAY. SEDIMENT SHALL BE REMOVED FROM THE ROADS BY SHOVELING OR SWEEPING AND TRANSPORTED TO A SEDIMENT CONTROL DISPOSAL AREA. STREET WASHING SHALL BE ALLOWED ONLY AFTER SEDIMENT IS REMOVED IN THIS MANNER. THIS PROVISION SHALL APPLY TO INDIVIDUAL DEVELOPMENT LOTS AS WELL AS TO LARGER LAND-DISTURBING ACTIVITIES.	NOT APPLICABLE
18	ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION OR AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED, UNLESS OTHERWISE AUTHORIZED BY THE VESCP AUTHORITY. TRAPPED SEDIMENT AND THE DISTURBED SOIL AREAS RESULTING FROM THE DISPOSITION OF TEMPORARY MEASURES SHALL BE PERMANENTLY STABILIZED TO PREVENT FURTHER EROSION AND SEDIMENTATION.	NOT APPLICABLE
19	PROPERTIES AND WATERWAYS DOWNSTREAM FROM DEVELOPMENT SITES SHALL BE PROTECTED FROM SEDIMENT DEPOSITION, EROSION AND DAMAGE DUE TO INCREASES IN VOLUME, VELOCITY AND PEAK FLOW RATE OF STORMWATER RUNOFF FOR THE STATED FREQUENCY STORM OF 24-HOUR DURATION IN ACCORDANCE WITH THE FOLLOWING STANDARDS AND CRITERIA: STREAM RESTORATION AND RELOCATION PROJECTS THAT INCORPORATE NATURAL CHANNEL DESIGN CONCEPTS ARE NOT MAN-MADE CHANNELS AND SHALL BE EXEMPT FROM ANY FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS FOR NATURAL OR MAN-MADE CHANNELS. A.) CONCENTRATED STORMWATER RUNOFF LEAVING A DEVELOPMENT SITE SHALL BE DISCHARGED DIRECTLY INTO AN ADEQUATE NATURAL OR MAN-MADE RECEIVING CHANNEL, PIPE OR STORM SEWER SYSTEM. FOR THOSE SITES WHERE RUNOFF IS DISCHARGED INTO A PIPE OR PIPE SYSTEM, DOWNSTREAM STABILITY ANALYSES AT THE OUTFALL OF THE PIPE OR PIPE SYSTEM SHALL BE PERFORMED. B.) ADEQUACY OF ALL CHANNELS AND PIPES SHALL BE VERIFIED IN THE FOLLOWING MANNER: (1) THE APPLICANT SHALL DEMONSTRATE THAT THE TOTAL DRAINAGE AREA TO THE POINT OF ANALYSIS WITHIN THE CHANNEL IS ONE HUNDRED TIMES GREATER THAN THE CONTRIBUTING DRAINAGE AREA OF THE PROJECT IN QUESTION; OR (2) (a) NATURAL CHANNELS SHALL BE ANALYZED BY THE USE OF A TWO-YEAR STORM TO VERIFY THAT STORMWATER WILL NOT OVERTOP CHANNEL BANKS NOR CAUSE EROSION OF CHANNEL BED OR BANKS. (b) ALL PREVIOUSLY CONSTRUCTED MAN-MADE CHANNELS SHALL BE ANALYZED BY THE USE OF A TEN-YEAR STORM TO VERIFY THAT STORMWATER WILL NOT OVERTOP ITS BANKS AND BY THE USE OF A TWO-YEAR STORM TO DEMONSTRATE THAT STORMWATER WILL NOT CAUSE EROSION OF CHANNEL BED OR BANKS; AND (c) PIPES AND STORM SEWER SYSTEMS SHALL BE ANALYZED BY THE USE OF A TEN-YEAR STORM TO VERIFY THAT STORMWATER WILL BE CONTAINED WITHIN THE PIPE OR SYSTEM. C.) IF EXISTING NATURAL RECEIVING CHANNELS OR PREVIOUSLY CONSTRUCTED MAN-MADE CHANNELS OR PIPES ARE NOT ADEQUATE, THE APPLICANT SHALL: (1) IMPROVE THE CHANNELS TO A CONDITION WHERE A TEN-YEAR STORM WILL NOT OVERTOP THE BANKS AND A TWO-YEAR STORM WILL NOT CAUSE EROSION TO THE CHANNEL BED OR BANKS; OR (2) IMPROVE THE PIPE OR PIPE SYSTEM TO A CONDITION WHERE THE TEN-YEAR STORM IS CONTAINED WITHIN THE APPURTENANCES; OR (3) DEVELOP A SITE DESIGN THAT WILL NOT CAUSE THE PRE-DEVELOPMENT PEAK RUNOFF RATE FROM A TWO-YEAR STORM TO INCREASE WHEN RUNOFF OUTFALLS INTO A NATURAL CHANNEL OR WILL NOT CAUSE THE PRE-DEVELOPMENT PEAK RUNOFF RATE FROM A TEN-YEAR STORM TO INCREASE WHEN RUNOFF OUTFALLS INTO A MAN-MADE CHANNEL; OR (4) PROVIDE A COMBINATION OF CHANNEL IMPROVEMENT, STORMWATER DETENTION OR OTHER MEASURES WHICH IS SATISFACTORY TO THE VESCP AUTHORITY TO PREVENT DOWNSTREAM EROSION. D.) THE APPLICANT SHALL PROVIDE EVIDENCE OF PERMISSION TO MAKE THE IMPROVEMENTS. E.) ALL HYDROLOGIC ANALYSES SHALL BE BASED ON THE EXISTING WATERSHED CHARACTERISTICS AND THE ULTIMATE DEVELOPMENT CONDITION OF THE SUBJECT PROJECT. F.) IF THE APPLICANT CHOOSES AN OPTION THAT INCLUDES STORMWATER DETENTION, HE SHALL OBTAIN APPROVAL FROM THE VESCP OF A PLAN FOR MAINTENANCE OF THE DETENTION FACILITIES. THE PLAN SHALL SET FORTH THE MAINTENANCE REQUIREMENTS OF THE FACILITY AND THE PERSON RESPONSIBLE FOR PERFORMING THE MAINTENANCE. G.) OUTFALL FROM A DETENTION FACILITY SHALL BE DISCHARGED TO A RECEIVING CHANNEL, AND ENERGY DISSIPATORS SHALL BE PLACED AT THE OUTFALL OF ALL DETENTION FACILITIES AS NECESSARY TO PROVIDE A STABILIZED TRANSITION FROM THE FACILITY TO THE RECEIVING CHANNEL. H.) ALL ON-SITE CHANNELS MUST BE VERIFIED TO BE ADEQUATE. I.) INCREASED VOLUMES OF SHEET FLOWS THAT MAY CAUSE EROSION OR SEDIMENTATION ON ADJACENT PROPERTY SHALL BE DIVERTED TO A STABLE OUTLET, ADEQUATE CHANNEL, PIPE OR PIPE SYSTEM, OR TO A DETENTION FACILITY. J.) IN APPLYING THESE STORMWATER MANAGEMENT CRITERIA, INDIVIDUAL LOTS OR PARCELS IN A RESIDENTIAL, COMMERCIAL OR INDUSTRIAL DEVELOPMENT SHALL NOT BE CONSIDERED TO BE SEPARATE DEVELOPMENT PROJECTS. INSTEAD, THE DEVELOPMENT, AS A WHOLE, SHALL BE CONSIDERED TO BE A SINGLE DEVELOPMENT PROJECT. HYDROLOGIC PARAMETERS THAT REFLECT THE ULTIMATE DEVELOPMENT CONDITION SHALL BE USED IN ALL ENGINEERING CALCULATIONS. K.) ALL MEASURES USED TO PROTECT PROPERTIES AND WATERWAYS SHALL BE EMPLOYED IN A MANNER WHICH MINIMIZES IMPACTS ON THE PHYSICAL, CHEMICAL AND BIOLOGICAL INTEGRITY OF RIVERS, STREAMS AND OTHER WATERS OF THE STATE. L.) ANY PLAN APPROVED PRIOR TO JULY 1, 2014 THAT PROVIDES FOR STORMWATER MANAGEMENT THAT ADDRESSES ANY FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS FOR NATURAL OR MAN-MADE CHANNELS SHALL SATISFY THE FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS FOR NATURAL OR MAN-MADE CHANNELS IF THE PRACTICES ARE DESIGNED TO (1) DETAIN THE WATER QUALITY VOLUME AND TO RELEASE IT OVER 48 HOURS; (2) DETAIN AND RELEASE OVER A 24-HOUR PERIOD THE EXPECTED RAINFALL RESULTING FROM THE ONE YEAR, 24-HOUR STORM; AND (3) REDUCE THE ALLOWABLE PEAK FLOW RATE RESULTING FROM THE 10, 2, AND 10-YEAR, 24-HOUR STORMS TO A LEVEL THAT IS LESS THAN OR EQUAL TO THE PEAK FLOW RATE FROM THE SITE ASSUMING IT WAS IN A GOOD FORESTED CONDITION, ACHIEVED THROUGH MULTIPLICATION OF THE FORESTED PEAK FLOW RATE BY A REDUCTION FACTOR THAT IS EQUAL TO THE RUNOFF VOLUME FROM THE SITE WHEN IT WAS IN A GOOD FORESTED CONDITION DIVIDED BY THE RUNOFF VOLUME FROM THE SITE IN ITS PROPOSED CONDITION, AND SHALL BE EXEMPT FROM ANY FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS FOR NATURAL OR MAN-MADE CHANNELS AS DEFINED IN ANY REGULATIONS PROMULGATED PURSUANT TO 10.1-562 OR 10.1-570 OF THE ACT. M.) FOR PLANS APPROVED ON AND AFTER JULY 1, 2014, THE FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS OF 10.1-561 A OF THE ACT AND THIS SUBSECTION SHALL BE SATISFIED BY COMPLIANCE WITH WATER QUALITY REQUIREMENTS IN THE STORMWATER MANAGEMENT ACT (10.1-603.2 ET SEQ. OF THE CODE OF VIRGINIA) AND ATTENDANT REGULATIONS, UNLESS SUCH LAND-DISTURBING ACTIVITIES ARE IN ACCORDANCE WITH 4VAC50-60-48 OF THE VIRGINIA STORMWATER MANAGEMENT PROGRAM (VSPM) PERMIT REGULATIONS. N.) COMPLIANCE WITH THE WATER QUANTITY MINIMUM STANDARDS SET OUT IN 4VAC50-60-68 OF THE VIRGINIA STORMWATER MANAGEMENT PROGRAM (VSPM) PERMIT REGULATIONS SHALL BE DEEMED TO SATISFY THE REQUIREMENTS OF SUBDIVISION 19 OF THIS SUBSECTION.	NOT APPLICABLE



DEPARTMENT OF  
DEVELOPMENT  
SERVICES

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2		
3		
4		
5		
6		
NO.	REVISIONS	DATE

MOUNT PLEASANT LIBRARY  
SEWER EXTENSION

DATE: 1/19/2022  
SCALE: 1" = 20'  
DRAWING BY: BWE  
DESIGNED BY: NDM/BWE  
APPROVED BY: WWA



EROSION &  
SEDIMENT CONTROL  
NARRATIVE

SHEET  
6  
OF  
6

Drawing name: T:\Transportation\Projects\Special Projects\Mt Pleasant Library Sewer\Mount Pleasant Sewer Ext\_10\_28\_21.dwg

IFB #2022-060 MT. PLEASANT LIBRARY SEWER CONNECTION  
PRE-BID MEETING SIGN-IN LOG

January 13, 2022

1:30 PM

(PLEASE PRINT)

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