

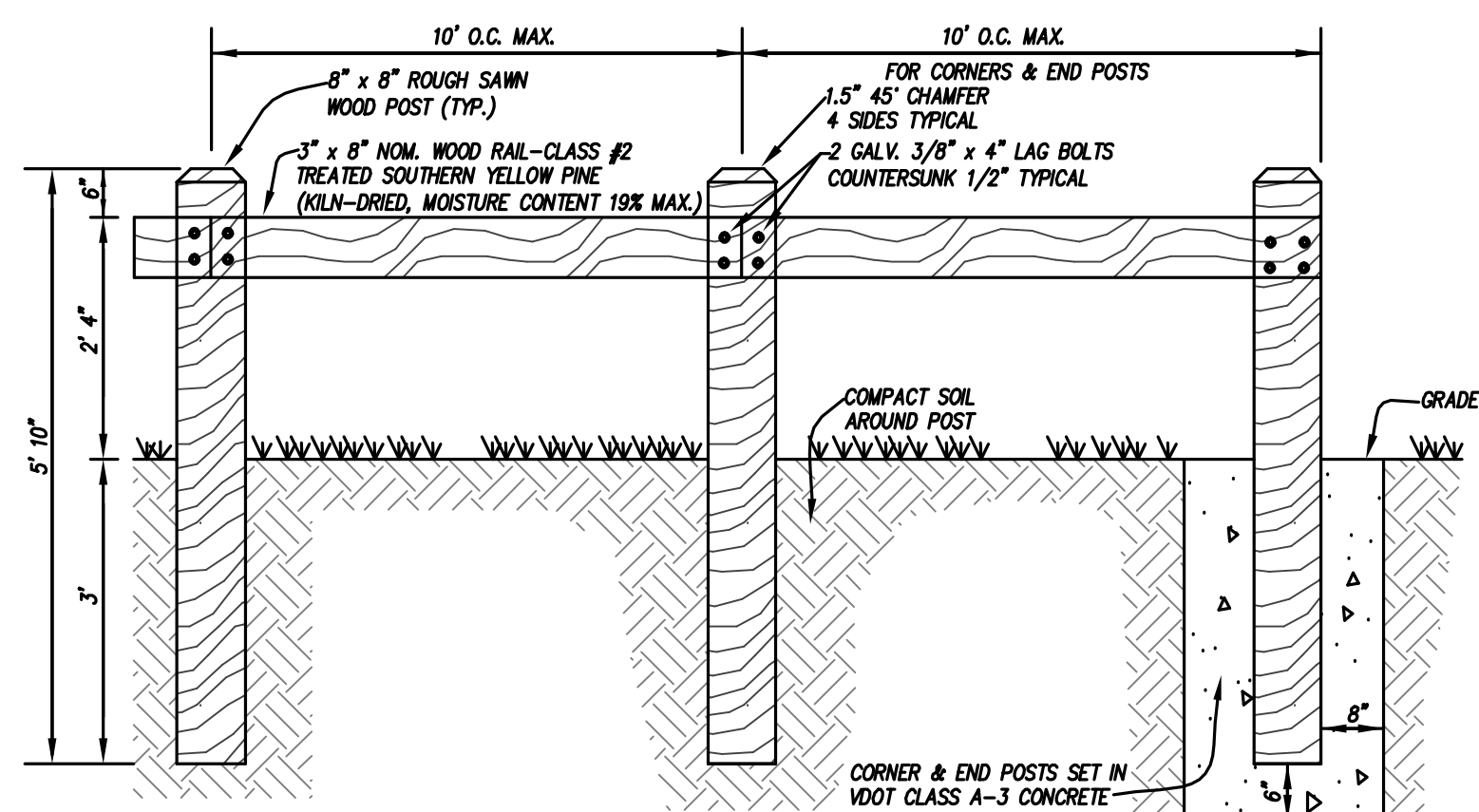
CONSTRUCTION NOTES:

1. AN ENGINEER OR MANUFACTURER REPRESENTATIVE SHALL BE ON SITE FOR THE START OF THE INSTALLATION.
2. GRADE THE SITES SO THAT WATER WILL NOT FLOW ABOVE, BELOW, OR AROUND THE OUTSIDE OF THE AREA PROTECTED WITH FLEXAMAT. ALL SUBGRADE SURFACES PREPARED FOR PLACEMENT OF MATS SHALL BE SMOOTH AND FREE OF ALL ROCKS, STICKS, ROOTS, OTHER PROTRUSIONS, OR DEBRIS OF ANY KIND.
3. APPLY SITE SPECIFIC SEED, INCLUDING NATIVE GRASSES DIRECTLY TO THE PREPARED SOIL PRIOR TO FLEXAMAT INSTALLATION.
4. FLEXAMAT ROLLS ARE AVAILABLE IN WIDTHS OF 4', 5.5', 8', 10', 12', & 16'. IT IS THE MANUFACTURER'S RECOMMENDATION TO UTILIZE THE WIDEST MATS POSSIBLE TO REDUCE AN ABUNDANCE OF SEAMS OR OVERLAPS.
 - a. TO ACHIEVE WIDER WIDTHS, INSTALL MATS ADJACENT TO ONE ANOTHER. INSTALL ADDITIONAL UNDERLAYMENT UNDER ALL ADJOINING MATS. A MINIMUM OF 12" OF UNDERLAYMENT SHALL EXTEND UNDER EACH SIDE OF THE MAT AND DIRECTLY AGAINST THE SUBGRADE.
 - b. INSTALL 18" #3 REBAR U-ANCHORS OR STAINLESS STEEL ZIP TIES IN 3' INCREMENTS THE LENGTH OF THE LONGITUDINAL SEAM.
5. AT THE BEGINNING OF THE FLEXAMAT, TRANSITION THE INITIAL LEADING EDGE PROPERLY WITH EROSION MATTING OR SOD. IF EXPOSED TO CONCENTRATED FLOWS EMBED 18" VERTICALLY INTO THE SUBGRADE TO SERVE AS AN ANCHOR TRENCH. THE TRENCH SHALL BE FILLED AND COMPACTED WITH SUITABLE FILL OR OTHER (AS SPECIFIED BY EOR).
6. FOR ADDITIONAL SECTIONS OF MAT, OVERLAP THE DOWNSTREAM SECTION 18" WITH UPSTREAM SECTION OF MAT. PRIOR TO INSTALLING OVERLAP, FLIP UPSTREAM MAT BACK 24". EXCAVATE 2.25" OF SOIL 18" FROM END OF UPSTREAM MAT. DOWNSTREAM SECTION IS LAID IN THE SHALLOW TRENCH, LIGHTLY SPREAD TOPSOIL, SEED AND FERTILIZER OVER INITIAL EDGE. FLIP END OF UPSTREAM MAT OVER THE SOIL COVERED INITIAL LEADING EDGE OF DOWNSTREAM MAT.
7. INSTALL 18" U-ANCHORS IN 3' INCREMENTS ACROSS THE OVERLAP. INSTALL ANCHORS DIRECTLY BEHIND BLOCKS. "U" ANCHORS CONSIST OF #3 REBAR "U" ANCHOR WITH 18" LEGS.
8. AT THE END OF THE ARMORED CHANNEL, EMBED THE MAT 18" IN A TERMINATION TRENCH. FILL AND COMPACT TERMINATION TRENCH WITH SOIL (DETERMINED BY EOR).

FLEXAMAT INFORMATION

Manufacturer: Motz Enterprises, Inc.
 Product Name: Flexamat
 Address: 3153 Madison Road
 Cincinnati, OH 45209
 Telephone: 513-772-6868
 Email: info@flexamat.com
 Website: www.flexamat.com

FLEXAMAT STANDARD CHANNEL DETAILS



TIMBER GUARDRAIL DETAIL

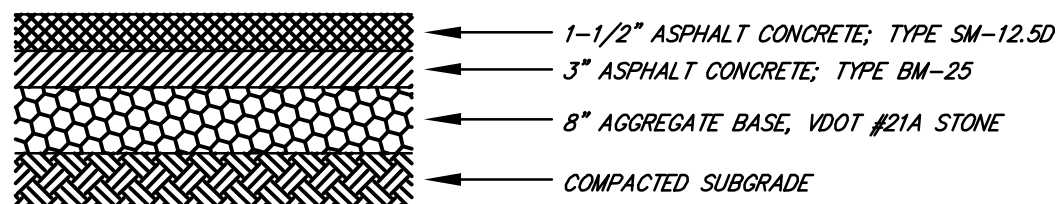
NO SCALE

Dig With CARE Keep Virginia Safe!

- C** Call Miss Utility at **811** before you dig.
- A** Allow the required time for marking.
- R** Respect the marks.
- E** Excavate carefully.



EXISTING SANITARY SEWER TABLE							
#	INV.IN(1)	INV.IN(2)	INV.OUT	RIM	STRUCTURE	WVWA#	
1	1043.43		1043.18	1050.06	SSMH	01A-3576.0	
2	1026.10	1025.95	1022.95	1032.06	SSMH	01A-3575.0	
3	1013.60		1013.18	1022.37	SSMH	01A-3574.0	
4	1004.10	1005.90	1002.78	1010.68	SSMH	01A-3573.0	
5	1001.18	1001.81	1000.99	1008.13	SSMH	01A-3572.0	

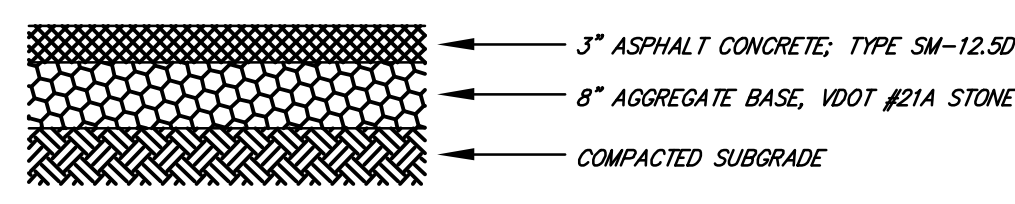


PAVEMENT SECTION TYPE I DETAIL

NO SCALE

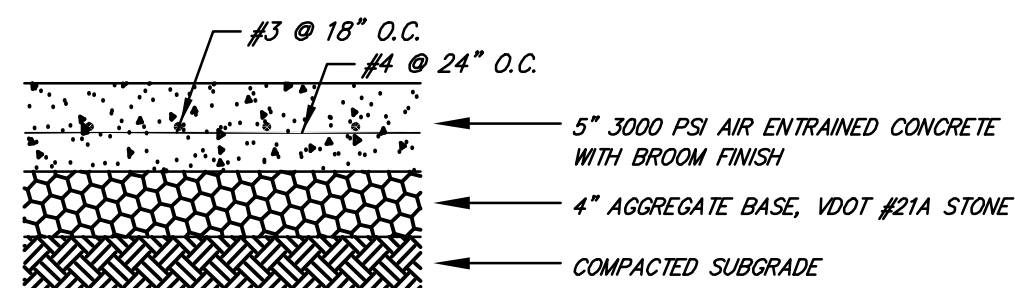
DEYERLE ROAD PAVING AND EXCAVATION NOTES:

1. EXISTING DEYERLE ROAD SURFACE MATERIAL IS GRAVEL AND SHALL BE REMOVED FROM STA. 13+20 TO WINDSOR ROAD INTERSECTION.
2. REMAINING PORTION OF DEYERLE ROAD FROM GRANDIN ROAD INTERSECTION TO STA. 13+20 SHALL BE RE-GRADED TO ACHIEVE A FINAL SURFACE AT 2.0% CROSS SLOPE.
3. DEYERLE ROAD PAVEMENT SHALL BE PER PAVEMENT SECTION TYPE I DETAIL FROM STA. 10+07 TO STA. 13+20.



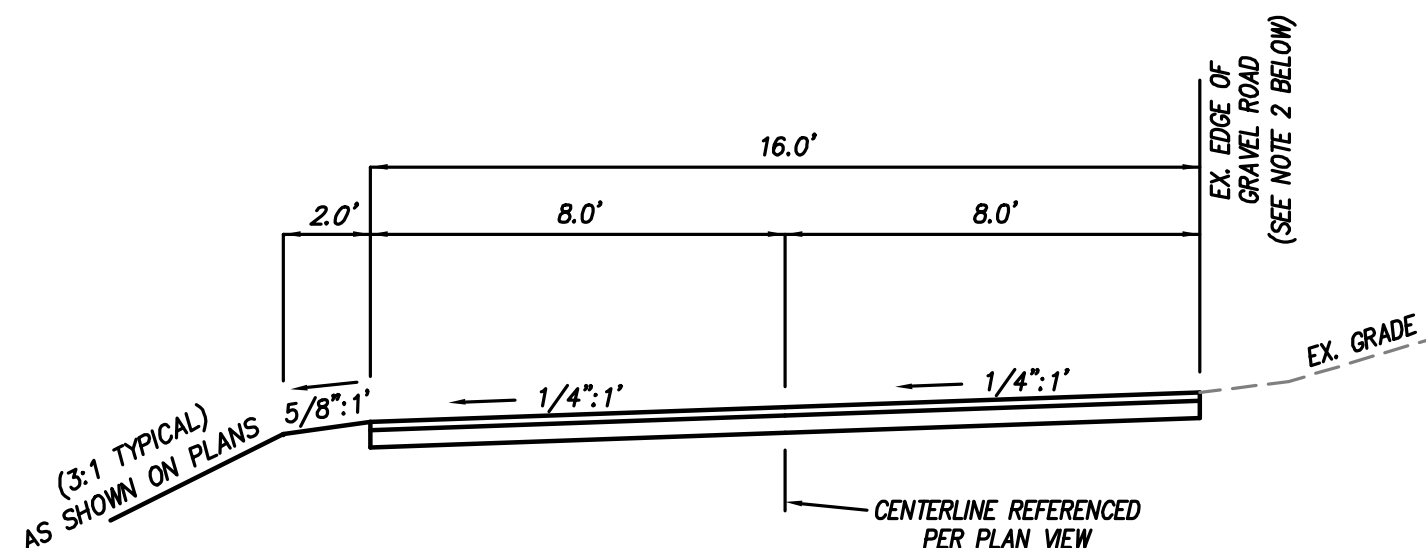
PAVEMENT SECTION TYPE II DETAIL

NO SCALE



PAVEMENT SECTION TYPE III DETAIL

NO SCALE

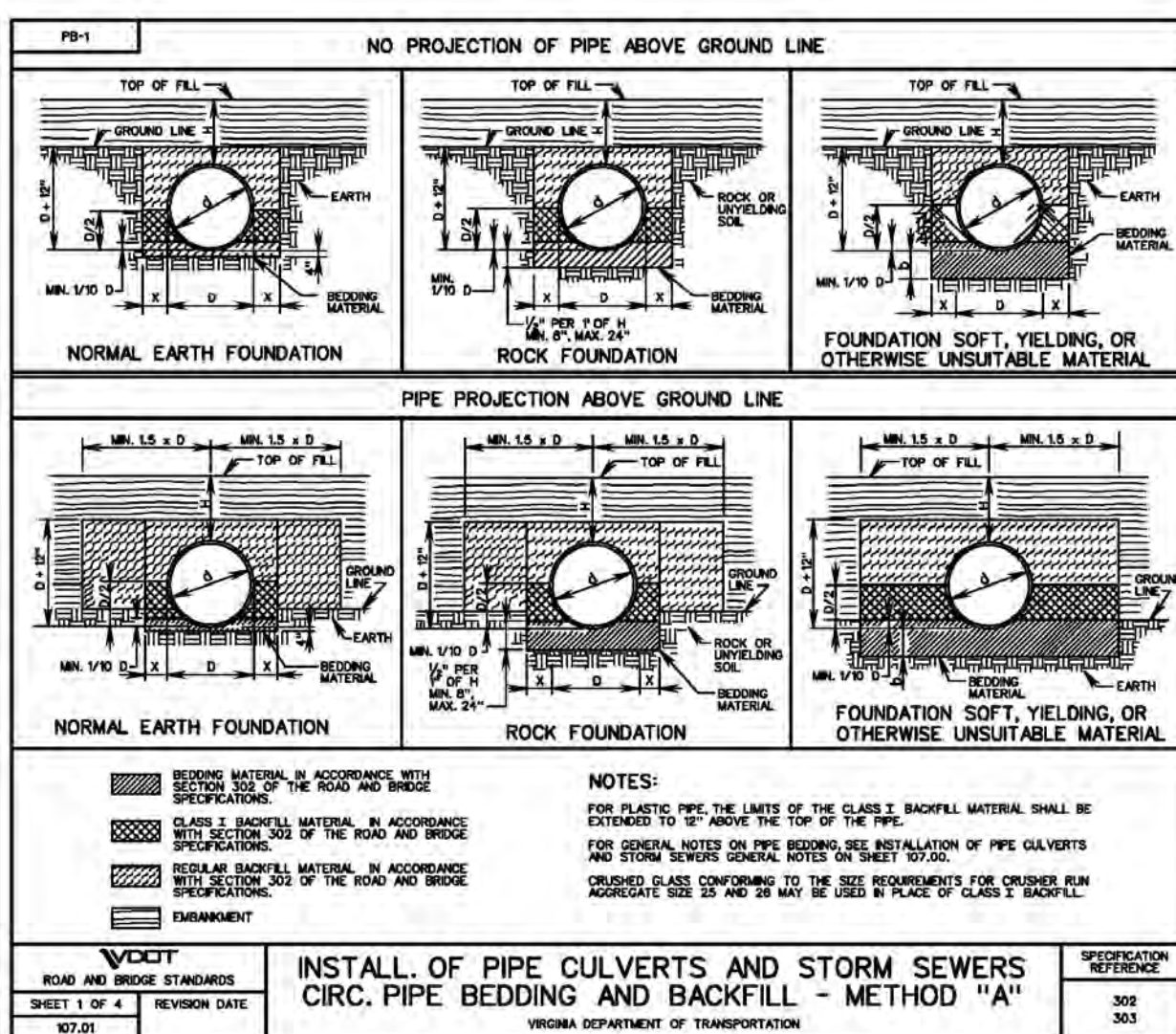


NOTES:

1. 16.0' PAVEMENT WIDTH SHALL BE PER PAVEMENT SECTION TYPE I DETAIL (THIS SHEET).
2. CONTRACTOR SHALL PROVIDE SMOOTH TRANSITION FROM NEW EDGE OF PAVEMENT TO EXISTING RESIDENTIAL ENTRANCES. ADDITIONAL PAVEMENT SECTION TYPE II OR TYPE III MAY BE REQUIRED AS CONDITIONS DICTATE.

TYPICAL DEYERLE ROAD SECTION (STA. 10+07 - 13+20)

NO SCALE



Utilities Marked per Miss Utility Ticker #B903500157

Company	Contact	Phone Number	Damage Contact Phone Number	Conflict
AEP (AEP111)	USC Location Service	800-778-9140	800-958-4237	No
Roanoke Gas (RGC540)	Zach Beckner	540-655-0280	540-777-4427	Yes
Verizon (VZN804)	Utiquest	804-286-1721	888-483-1233	No
Western Virginia Water Authority (WVW833)	Michelle Niday	540-283-2981	540-283-2981	Yes

GENERAL NOTES

1. THE BOUNDARY IS THE DIRECT RESULT OF A FIELD SURVEY BY LUMSDEN ASSOCIATES, P.C.
2. TOPOGRAPHY DATA BASED ON A FIELD SURVEY BY LUMSDEN ASSOCIATES, P.C.
3. A TITLE REPORT WAS NOT FURNISHED FOR THIS PROJECT.
4. NO CONSTRUCTION/FIELD REVISIONS ARE ALLOWED WITHOUT THE APPROVAL OF THE CONSULTING ENGINEER, THE CITY OF ROANOKE, AND/OR THE WESTERN VIRGINIA WATER AUTHORITY.
5. IT SHALL BE THE RESPONSIBILITY OF THE DEVELOPER TO CLEAN OUT THE EXISTING STORM SEWER SYSTEM WITHIN EXISTING DEVELOPMENTS SHOULD THESE SYSTEMS BECOME SILTED OR BLOCKED IN ANY WAY DUE TO THE CONSTRUCTION OF THIS PROPOSED DEVELOPMENT.
6. A PORTION OF THE PROJECT AREA IS LOCATED WITHIN THE LIMITS OF A 100 YEAR FLOOD BOUNDARY AS DESIGNATED BY FEMA. THIS OPINION IS BASED ON AN INSPECTION OF THE FLOOD INSURANCE RATE MAP AND HAS NOT BEEN VERIFIED IN THE FIELD. SEE MAP NUMBER 51161C0144 G, DATED 9-28-07.
7. SEE CONTRACT DOCUMENTS AND SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

CONSTRUCTION NOTES

1. GRADES AND LOCATIONS OF EXISTING SANITARY SEWER LATERALS ARE UNKNOWN. GRADES AND LOCATIONS SHOWN ARE ASSUMED. THE CONTRACTOR SHALL VERIFY THE DEPTH AND LOCATIONS OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
2. THE DEPTH OF WATER LINES, GAS LINES, AND TELEPHONE DUCTS ARE UNKNOWN. THEIR DEPTH HAS BEEN ASSUMED WHERE SHOWN IN PROFILE. THE CONTRACTOR SHALL VERIFY THE DEPTH AND LOCATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
3. ALL EXISTING UTILITIES MAY NOT BE SHOWN OR MAY NOT BE SHOWN IN THEIR EXACT LOCATION. THE CONTRACTOR SHALL CONTACT PUBLIC UTILITIES COMPANIES THROUGH MISS UTILITY (1-800-552-7001) TO HAVE EXISTING UTILITIES LOCATED. THE CONTRACTOR SHALL VERIFY THE DEPTH AND LOCATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
4. FOR THE RELOCATION OR REPLACEMENT OF ANY EXISTING WATER OR SANITARY SEWER FACILITIES, CONTACT CHRIS CAREY AT THE WESTERN VIRGINIA WATER AUTHORITY (540-283-2936) A MINIMUM OF 48 HOURS PRIOR TO CONSTRUCTION.
5. ALL STREETS TO BE MAINTAINED FOR ONE WAY TRAFFIC AND OPENED TO TWO WAY TRAFFIC DURING PEAK TRAFFIC HOURS. FOR ANY CLOSINGS REQUIRED, CONTACT ROANOKE CITY TRAFFIC ENGINEERING (540-853-2873) A MINIMUM OF TWO WEEKS PRIOR TO CLOSING.
6. ACCESS TO ADJOINING PROPERTIES SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION. COORDINATE ACCESS WITH EACH PROPERTY OWNER.
7. THE CONTRACTOR SHALL VISIT AND VERIFY EXISTING CONDITIONS PRIOR TO STARTING CONSTRUCTION. CONTACT OWNER AND ENGINEER WITH ANY VARIATIONS.
8. ALL CONSTRUCTION SHALL CONFORM TO THE CURRENT CITY OF ROANOKE STANDARDS AND SPECIFICATIONS AND THE CURRENT EDITION OF VDOT'S ROAD AND BRIDGE STANDARDS.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING THE OWNER AND THE ENGINEER OF ANY CHANGES OR CONDITIONS ATTACHED TO PERMITS OBTAINED FROM ANY AUTHORITY ISSUING PERMITS.
10. ALL WATER CONNECTIONS TO EXISTING LINES SHALL BE PERFORMED BY THE CONTRACTOR WITH A WESTERN VIRGINIA WATER AUTHORITY INSPECTOR ON SITE.
11. ALL SANITARY SEWER CONNECTIONS TO EXISTING LINES SHALL BE PERFORMED BY THE CONTRACTOR WITH A WESTERN VIRGINIA WATER AUTHORITY INSPECTOR ON SITE.
12. SEE VDOT ROAD AND BRIDGE STANDARDS FOR CONCRETE CURB AND STORM DRAINAGE DETAILS.
13. THE CONTRACTOR AND OR OWNER SHALL PROVIDE A STORAGE CONTAINER FOR TEMPORARY STORAGE AND DISPOSAL OF LAND CLEARANCE DEBRIS AND BUILDING MATERIALS. ON-SITE BURIAL OF MATERIAL SHALL NOT BE PERMITTED.

GRADING NOTES

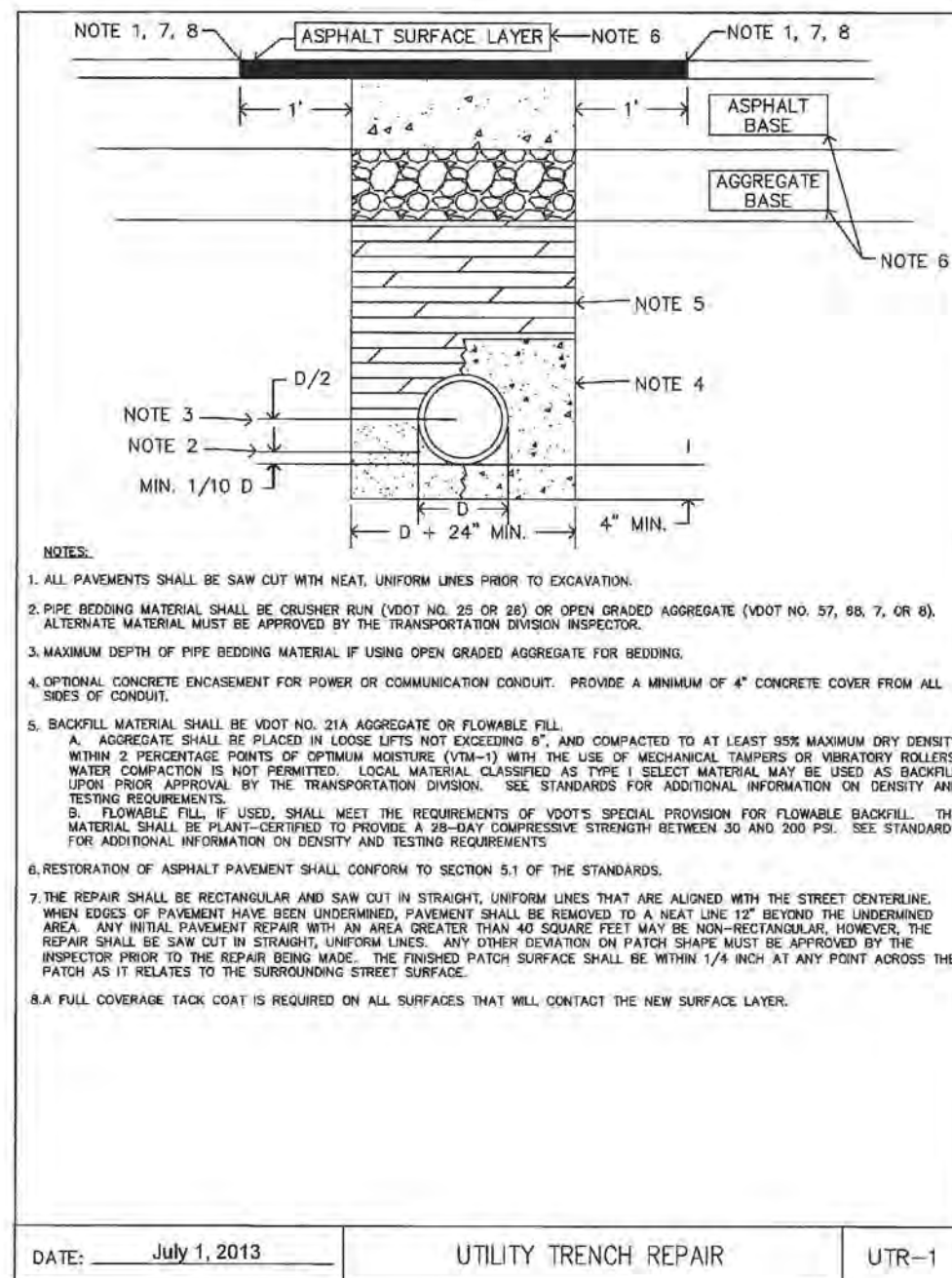
1. AREAS TO BE GRADED SHALL BE CLEARED OF ALL VEGETATION, STRUCTURES, AND OTHER PHYSICAL FEATURES IN PREPARATION OF GRADING.
2. TOPSOIL SHALL BE REMOVED FROM THE CLEARED AREA AND STOCKPILED FOR FUTURE USE. A SEPARATE E & S PLAN MAY BE REQUIRED FOR OFFSITE STOCKPILES.
3. FILL MATERIAL SHALL BE FREE FROM ORGANIC MATTER AND ROCKS LARGER THAN 6 INCHES IN DIAMETER.
4. FILL MATERIAL SHALL BE PLACED AND COMPACTED IN EIGHT (8) INCH LOOSE LIFTS AND COMPACTED TO AT LEAST NINETY-FIVE (95) PERCENT OF THE MATERIAL'S MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D698, STANDARD PROCTOR. MAINTAIN MOISTURE CONTENT OF FILL MATERIAL WITHIN THREE (3) PERCENT OF OPTIMUM TO ATTAIN REQUIRED COMPACTION DENSITY.
5. A QUALIFIED GEOTECHNICAL ENGINEER LICENSED IN THE STATE OF VIRGINIA, SHOULD BE CONSULTED CONCERNING SOIL STABILITY, SLOPE STABILIZATION, SOIL COMPACTION, TESTING, AND OTHER SOIL CHARACTERISTICS. LUMSDEN ASSOCIATES ASSUMES NO RESPONSIBILITY OR LIABILITY RELATING TO FAILURES RESULTING FROM SAME.

STORM DRAIN CONSTRUCTION NOTES

1. ALL WATER AND SANITARY SEWER LINES SHALL HAVE A MINIMUM OF 3.0 FEET OF COVER.
2. MAINTAIN A MINIMUM OF 18" CLEARANCE FROM OUTSIDE OF PIPE TO OUTSIDE OF PIPE AT ALL STORM DRAIN CROSSINGS. WHERE THIS CLEARANCE CAN NOT BE ACHIEVED, CONCRETE PIERS SHALL BE UTILIZED IN ACCORDANCE WITH THE WESTERN VIRGINIA WATER AUTHORITY'S WATER AND SANITARY SEWER STANDARDS.
3. ALL NEW DROP INLETS AND STORM DRAIN MANHOLES SHALL HAVE VDOT STD. 15-1, INLET SHAPING.
4. ALL DRAINAGE STRUCTURES DEEPER THAN 4.0 FEET SHALL HAVE STEPS (VDOT STD. 5T-1) INSTALLED.
5. SAFETY SLABS (VDOT STD. 5L-1) ARE REQUIRED IN ALL DRAINAGE STRUCTURES WITH A DEPTH OF 12.0 FEET OR GREATER. THE SPACING OF THE SLABS SHOULD BE 8 TO 12 FEET WITH NO SAFETY SLAB LOCATED WITHIN 6 FEET FROM THE TOP OR BOTTOM OF THE STRUCTURE.

STORM DRAIN STRUCTURE
COORDINATE CHART

STRUCTURE	NORTHING	EASTING
A	3618496.3943	11044656.2242
B	3618500.5562	11044624.2174
C	3618504.8811	11044591.4605
D	3618202.7349	11045289.3609
E	3618285.8387	11045240.3672
F	3618338.4295	11045089.2573



LEGEND

ITEM	EXISTING	PROPOSED
Pavement	---	---
Curb and Gutter	---	---
Curb	---	---
Storm Drain Line	---	---
Sanitary Sewer Manhole	---	---
Sanitary Sewer Line	---	---
Waterline	---	---
Hydrant	---	---
Overhead Utility Line	---	---
Underground Comm. Line	---	---
Underground Gas Line	---	---
Underground Telephone Line	---	---
Utility Pole	---	---
Fence	---	---
Water Meter	---	---
Gas Valve	---	---
Water Valve	---	---
Contours	---	---
Gravel	---	---
Concrete	---	---

REVISIONS		DESCRIPTION				
NO.	DATE	1	2	3	4	5
DATE: June 12, 2019						
SCALE: NONE						
COMMISSION NO: 19-007						
SHEET 2 OF 9						