EROSION & SEDIMENT CONTROL NARRATIVE

THE PURPOSE OF THIS PROJECT IS TO CONSTRUCT A PUBLIC WATERLINE EXTENSION CONNECTING TWO EXISTING 12" WATERLINES. THE PROJECT WILL UTILIZE THE EXISTING 20 WATERLINE EASEMENT ALONG PLANTATION ROAD INSTALLING APPROXIMATELY 515' OF 12" WATERLINE. THE AMOUNT OF LAND DISTURBANCE IS ESTIMATED AT 3225 SQUARE FEET (0.082 ACRES) LOCATED NORTHWEST OF THE INTERSECTION OF PLANTATION ROAD AND HERSHBERGER ROAD. THIS PLAN IS FOR THE PURPOSE OF INCREASING FIRE FLOW PROTECTION TO A NUMBER OF DEVELOPMENTS INCLUDING "THE VILLAGES AT TINKER CREEK, PHASE II". THE EROSION & SEDIMENT CONTROL MEASURES SHOWN HERE ARE DESIGNED IN ACCORDANCE WITH THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK (VA ESCH).

<u>EXISTING SITE CONDITIONS.</u>

THE DISTURBED AREA (0.075 ACRES) HAS ONE DRAINAGE AREA FLOWING TO THE NORTHWEST. THE AREA DRIANS THE NORTHERN HALF OF PLANATION ROAD AND THE SLOPE ALONG THE ROAD. CURRENTLY THE AREA IS GRASSED AND THE SURROUNDING PROPERTIES ARE DEVELOPED. EXISTING TOPOGRAPHY IS DESCRIBED AS MODERATE TERRAIN WITH SLOPES RANGING FROM 2% TO 15%. ALL RUNOFF EVENTUALLY REACHES TINKER CREEK.

THE DISTURBED AREA IS BORDERED BY PLANTATION ROAD TO THE SOUTH. A VACANT GROCERY STORE TO THE WEST. A NAURAL GAS DISTRIBUTION CENTER AND A SKATING RINK TO THE NORTH, AND HERSHBERGER ROAD TO THE EAST.

THIS PROJECT DOES NOT ANTICIPATE OFF-SITE WASTE AREAS FOR TOPSOIL STOCKPILES, OR TEMPORARY STOCKPILES. THE DEVELOPER RETAINS OWNERSHIP OF OVER THREE ACRES NOT INCLUDED WITH THE DISTURBED AREA. SHOULD THE PROJECT REQUIRE OFF-SITE WASTE AREAS OR BORROW AREAS, THE LOCATION OF THESE AREAS NEED TO BE SUBMITTED TO THE LOCAL GOVERNING AUTHORITY AND OTHER LOCAL GOVERNING AUTHORITIES WHERE WASTE/BORROW OCCURS. EROSION CONTROL PLANS OR MEASURES MAY BE REQUIRED FOR THESE OFF-SITE LOCATIONS, BASED ON CODE LIMITATIONS ON DISTURBED AREAS REQUIRING EROSION & SEDIMENT CONTROL PLANS.

AS IDENTIFIED BY THE U.S. DEPARTMENT OF AGRICULTURE, SOIL CONSERVATION SERVICE, GENERAL SOIL MAP, THE BASIC SOIL MATERIAL IS FREDERICK-SILT LOAM.

THE CONTRACTOR SHALL INSTALL ALL INITIAL EROSION AND SEDIMENT CONTROL MEASURES TO CONTROL SEDIMENT LADEN RUNOFF FROM ENTERING ADJACENT PROPERTIES AND/OR STREAMS AND SWALES. THE CONTRACTOR SHALL INSTALL CONSTRUCTION ENTRANCE AS SHOWN ON THE PLANS. THE CONTRACTOR SHALL MAINTAIN THE CONSTRUCTION ENTRANCE TO THE MINIMUM REQUIRED STANDARDS. THE CONTRACTOR SHALL KEEP EQUIPMENT ON SITE TO REMOVE ANY DIRT OR MUD FROM PAVED AREAS. THE CONTRACTOR SHALL INSTALL SILT FENCE AS SHOWN ON THE PLANS TO CAPTURE SEDIMENT LADEN RUNOFF AND FILTER RUNOFF PRIOR TO ENTERING DOWNSTREAM AREAS AND ADJACENT PROPERTIES. ALL SILT FENCE SHALL BE INSTALLED AND CHECKED REGULARLY. IN ANY AREAS WHERE SEDIMENT LADEN WATER IS BEING PUMPED FROM A LOCATION, THE PUMPED runoff shall be filtered through a "filter bag" before being released downstream. The contractor shall install blanket MATTING/SOIL BLANKETS/HYDROMULCH IN AREAS SHOWN ON THE PLANS ALONG PROPOSED DITCHES AND ON ALL GRADED AREAS OF EXCAVATED AREAS WITH SLOPE 2:1 OR FILL AREAS WITH SLOPE 3:1 OR GREATER. THE CONTRACTOR SHALL PROVIDE TEMPORARY AND PERMANENT SEEDING WITHIN SEVEN (7) DAYS OF OBTAINING FINAL GRADES. ANY AREA TO REMAIN DORMANT FOR MORE THAN 30 DAYS SHALL BE COVERED WITH TEMPORARY SEEDING. THE CONTRACTOR SHALL HAVE EQUIPMENT ON-SITE TO KEEP SEDIMENT OFF OF EXISTING PAVED AREAS. NO MORE THAN 500 LINEAR FEET OF TRENCH MAY BE OPENED AT ONE TIME AND ALL EXCAVATED MATERIAL SHALL BE PLACED UPHILL FROM TRENCHES.

EROSION & SEDIMENT CONTROL MEASURES:

UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CONSTRUCTED AND MAINTAINED ACCORDING TO THE MINIMUM STANDARDS AND SPECIFICATIONS OF THE "VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK", THIRD EDITION. ADDITIONAL REFERENCE IS DIRECTED TO THE PLANS DESCRIBING EACH EROSION & SEDIMENT CONTROL MEASURE, AND WHETHER THAT MEASURE IS ANTICIPATED WITH THIS PROJECT.

- REGARDLESS OF FUTURE DEVELOPMENT PLANS, THE CONTRACTOR SHALL IMMEDIATELY INSTALL EROSION AND SEDIMENT CONTROL DEVICES AS SHOWN ON THE PLANS. THIS WORK SHALL BE COORDINATED IN ORDER OF THE WORK WHICH IS TO FOLLOW: CONTROL AT CENTERS OF FLOW. AND OTHER POINTS OF CONCENTRATION SHOWN SHALL BE CONSTRUCTED IN PLACE FIRST.
- 2. AFTER THE INSTALLED CONTROL DEVICES ARE FOUND TO BE FUNCTIONAL, THE CONTRACTOR SHALL IMMEDIATELY PROCEED WITH DEMOLITION CLEARING, AND PRELIMINARY GRADING OPERATIONS. ALL EXPOSED DENUDED AREAS SHALL BE SEEDED WITHIN SEVEN (7) DAYS AFTER FINAL GRADING, AND SHALL BE ACCOMPLISHED IN STRICT ACCORDANCE WITH THE "VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK", THIRD EDITION. 3. IN GENERAL, ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSPECTED WEEKLY AND AFTER EACH SIGNIFICANT RAINFALL. IN
 - A. MEASURES SHALL BE MAINTAINED TO PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHT-OF-WAYS.
- B. ALL SILT FENCE BARRIERS AND INLET PROTECTIONS SHALL BE CHECKED REGULARLY FOR UNDERMINING AND SEDIMENT BUILDUP. C. ALL SEEDED AREAS WILL BE CHECKED REGULARLY TO SEE THAT A GOOD STAND IS MAINTAINED. AREAS SHALL BE FERTILIZED AND RESEEDED
- 4. FOLLOWING THE COMPLETION OF DEVELOPMENT AND STABILIZATION OF ALL AREAS AND AFTER IT HAS BEEN DETERMINED THAT EROSION OR SEDIMENTATION IS NO LONGER OCCURRING ON THE SITE OR AT ITS BOUNDARIES AND THAT DRAINAGE FLOWS ARE FUNCTIONING ACCORDING TO DESIGN. THE CONTRACTOR MAY THEN BEGIN TO REMOVE THE TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES. THIS WORK SHALL BE DONE IN A CAREFUL, NEAT, ORGANIZED MANNER.

GOVERNING AGENCY.

PRINTED NAME

SHALL BE DONE IN ACCORDANCE WITH VADOR MINIMUM STANDARD 3.32.

RESPONSIBLE LAND DISTURBER CERTIFICATION:

RESPONSIBLE LAND DISTURBER CERTIFICATE NUMBER

MAINTENANCE OF ALL EROSION AND SEDIMENT CONTROL PRACTICES.

GENERAL COMMENTS:

WRITTEN NOTIFICATION TO THE CONTRACTOR.

THE GRADING CONTRACTOR FOR THIS PROJECT SHALL NAME ONE PARTY RESPONSIBLE

PARTY NAMED SHALL HOLD A "RESPONSIBLE LAND DISTURBER CERTIFICATE" UNDER THE

REVISED JULY 1, 2001. THE PARTY NAMED WILL BE IN CHARGE OF AND RESPONSIBLE

GENERAL ASSEMBLY REVSIONS TO THE VIRGINIA EROSION & SEDIMENT CONTROL LAW AS

FOR ALL LAND DISTURBANCE ACTIVITIES AND EROSION CONTROL MEASURES. THE

FOR CARRYING OUT ALL EROSION CONTROL MEASURES. THE PARTY SHALL AFFIX

SIGNED AND PRINTED NAME TO ONE COPY OF THIS EROSION CONTROL SHEET AND

RESPONSIBLE LAND DISTURBED CERTIFICATE SHALL BE PROVIDED TO THE LOCAL

SUBMIT TO THE COUNTY OF ROANOKE. NO "LAND DISTURBING ACTIVITY" CAN OCCUR

UNTIL THIS NAME HAS BEEN PROVIDED TO THE GOVERNING AGENCY. A COPY OF THE

TEMPORARY CONSTRUCTION ENTRANCE (3.02) - A STONE PAD, LOCATED AT POINTS OF VEHICULAR INGRESS AND EGRESS ON A CONSTRUCTION SITE, TO REDUCE THE SOIL TRANSPORTED ONTO PUBLIC ROADS AND OTHER PAVED AREAS.

SILT FENCE (3.05) - A TEMPORARY SEDIMENT BARRIER CONSTRUCTED OF POSTS, FILTER FABRIC AND, IN SOME CASES, A WIRE SUPPORT FENCE. PLACED ACROSS OR AT THE TOE OF A SLOPE OR IN A MINOR DRAINAGE WAY TO INTERCEPT AND DETAIN SEDIMENT AND DECREASE FLOW

VELOCITIES FROM DRAINAGE AREAS OF LIMITED SIZE; APPLICABLE WHERE SHEET AND RILL EROSION OR SMALL CONCENTRATED FLOWS MAY BE A Problem. Maximum effective life of 6 months. TEMPORARY SEEDING (3.31) - ESTABLISHMENT OF TEMPORARY VEGETATIVE COVER ON DISTURBED AREAS THAT WILL NOT BE BROUGHT TO FINAL GRADE FOR PERIODS OF 30 DAYS TO ONE YEAR BY SEEDING WITH APPROPRIATE RAPIDLY-GROWING PANTS.

PERMANENT SEEDING (3.32) - ESTABLISHMENT OF PERENNIAL VEGETATIVE COVER BY PLANTING SEED ON ROUGH-GRADED AREAS THAT WILL NOT BE BROUGHT TO FINAL GRADE FOR A YEAR OR MORE OR WHERE PERMANENT, LONG-LIVED VEGETATIVE COVER IS NEEDED ON FINE-GRADED

ALL AREAS DISTURBED BY CONSTRUCTION SHALL BE STABILIZED WITH PERMANENT SEEDING IMMEDIATELY FOLLOWING FINISHED GRADING. SEEDING

SOIL STABILIZATION BLANKETS AND MATTING (3.36) - THE INSTALLATION OF A PROTECTIVE BLANKET (TREATMENT1) OR A SOIL STABILIZATION MAT (TREATMENT 2) ON A PREPARED PLANTING OF A STEEP SLOPE, CHANNEL OR SHORELINE.

MINIMUM STANDARDS CHECKLIST

(PLEASE SEE E&S NARRATIVE FOR A BRIEF DISCUSSION OF HOW EACH ITEM HAS BEEN ADDRESSED)

[X] [] [] MS-1 HAVE TEMPORARY AND PERMANENT STABILIZATION BEEN ADDRESSED IN THE NARRATIVE? ARE PRACTICES SHOWN ON THE PLAN?; TEMPORARY AND PERMANENT SEED SPECIFICATIONS?

LIME AND FERTILIZER?; MULCHING?; PAVEMENT/STONE? YES, THE CONTRACTOR SHALL PROVIDE TEMPORARY AND PERMANENT SEEDING WITHIN SEVEN (7) DAYS OF OBTAINING FINAL GRADES. ANY AREA TO REMAIN DORMANT FOR MORE THAN 30 DAYS SHALL BE COVERED WITH TEMPORARY SEEDING. THE CONTRACTOR SHALL HAVE EQUIPMENT ON—SITE TO KEEP SEDIMENT OFF OF EXISTING PAVED AREAS. [X] [] MS-2 HAS STABILIZATION OF SOIL STOCKPILES. BORROW AREAS. AND DISPOSAL AREAS BEEN ADDRESSED IN THE NARRATIVE?

ARE SEDIMENT TRAPPING MEASURES PROVIDED? YES, ALL EXCAVATED MATERIAL SHALL BE PLACED UPHILL FROM TRENCHES AND CONTAINED WITHIN THE SILT FENCE PROVIDED.

[X] [] MS-3 HAS THE ESTABLISHMENT AND MAINTENANCE OF PERMANENT VEGETATIVE STABILIZATION BEEN ADDRESSED? YES, ALL SEEDED AREAS WILL BE CHECKED REGULARLY TO SEE THAT A GOOD STAND IS MAINTAINED. AREAS SHALL BE FERTILIZED AND RESEEDED AS NEEDED. SPECIFICATIONS ARE INCLUDED ON THE PLANS.

[X] [] [] MS-4 DOES THE PLAN SPECIFICALLY STATE THAT SEDIMENT TRAPPING FACILITIES SHALL BE CONSTRUCTED AS A FIRST STEP IN LAND-DISTURBING ACTIVITIES? YES, THE CONTRACTOR SHALL IMMEDIATELY INSTALL EROSION AND SEDIMENT CONTROL DEVICES AS SHOWN

[] [] [X] MS-5 DOES THE PLAN SPECIFICALLY STATE THAT STABILIZATION OF EARTHEN STRUCTURES IS REQUIRED IMMEDIATELY AFTER INSTALLATION? NOT APPLICABLE

[X] MS-6 ARE SEDIMENT TRAPS AND SEDIMENT BASINS SPECIFIED WHERE NEEDED? NOT APPLICABLE] MS-7 HAVE TEMPORARY AND PERMANENT STABILIZATION OF CUT AND FILL SLOPES BEEN ADEQUATELY ADDRESSED? YES, THE NARRATIVE STATES THE CONTRACTOR SHALL INSTALL BLANKET MATTING/SOIL BLANKETS/HYDROMULCH IN AREAS SHOWN ON THE PLANS ALONG PROPOSED DITCHES AND ON ALL GRADED AREAS OF EXCAVATED AREAS WITH SLOPE 2:1 OR FILL AREAS WITH SLOPE 3:1 OR GREATER.

X] MS-8 ARE PAVED FLUMES, CHANNELS, OR SLOPE DRAINS REQUIRED ON CUT AND FILL SLOPES WHERE NECESSARY? NOT APPLICABLE [X] MS-9 HAS WATER SEEPING FROM A SLOPE FACE BEEN ADDRESSED (E.G., SURFACE ROUGHENING, SUBSURFACE DRAINS)? NOT APPLICABLE [X] MS-10 IS ADEQUATE INLET PROTECTION REQUIRED ON ALL OPERATIONAL STORM SEWER INLETS? NOT APPLICABLE

[X] MS-11 ARE OUTLET PROTECTION AND/OR CHANNEL LINING REQUIRED ON STORMWATER CONVEYANCE AND RECEIVING CHANNELS? NOT

[X] MS-12 ARE IN-STREAM PROTECTION MEASURES REQUIRED SO THAT CHANNEL IMPACTS ARE MINIMIZED? NOT APPLICABLE [] [] [X] MS-13 ARE TEMPORARY STREAM CROSSINGS OF NON-ERODIBLE MATERIAL REQUIRED WHERE APPLICABLE? NOT APPLICABLE [] [X] MS-14 (NOTE: THIS REGULATION REQUIRES THAT ALL APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS PERTAINING TO WORKING IN OR CROSSING LIVE WATERCOURSES BE FOLLOWED.) NOT APPLICABLE

[X] MS-15 HAS IMMEDIATE RESTABILIZATION OF AREAS SUBJECT TO IN-STREAM CONSTRUCTION BEEN ADEQUATELY ADDRESSED? NOT APPLICABLE [X] [] MS-16 HAVE STABILIZATION OF UTILITY TRENCHES AND DEWATERING OPERATIONS BEEN ADDRESSED? YES, NO MORE THAN 500 LINEAR FEET OF TRENCH MAY BE OPENED AT ONE TIME AND ALL EXCAVATED MATERIAL SHALL BE PLACED UPHILL FROM TRENCHES. IN ANY AREAS WHERE SEDIMENT LADEN WATER IS BEING PUMPED FROM A LOCATION, THE PUMPED RUNOFF SHALL BE FILTERED THROUGH A "FILTER BAG" BEFORE BEING RELEASED DOWNSTREAM. (SEE ADDITIONAL NOTES BELOW)

[X] [] MS-17 IS THE TRANSPORT OF SOIL AND MUD ONTO PUBLIC ROADWAYS PROPERLY CONTROLLED? (I.E., CONSTRUCTION ENTRANCES, WASH RACKS, DAILY CLEANING OF ROADWAYS, TRANSPORT OF SEDIMENT TO A TRAPPING FACILITY) YES, THE CONTRACTOR SHALL INSTALL CONSTRUCTION ENTRANCE(S) AS SHOWN ON THE PLANS. THE CONTRACTOR SHALL MAINTAIN THE CONSTRUCTION ENTRANCE TO THE MINIMUM REQUIRED STANDARDS. THE CONTRACTOR SHALL KEEP EQUIPMENT ON SITE TO REMOVE ANY DIRT OR MUD FROM PAVED AREAS.

[X] [] [] MS-18 HAS THE REMOVAL OF TEMPORARY PRACTICES BEEN ADDRESSED? HAS THE REMOVAL OF ACCUMULATED SEDIMENT AND THE FINAL STABILIZATION OF THE RESULTING DISTURBED AREAS BEEN ADDRESSED? YES, FOLLOWING THE COMPLETION OF DEVELOPMENT AND STABILIZATION OF ALL AREAS AND AFTER IT HAS BEEN DETERMINED THAT EROSION OR SEDIMENTATION IS NO LONGER OCCURRING ON THE SITE OR AT ITS BOUNDARIES AND THAT DRAINAGE FLOWS ARE FUNCTIONING ACCORDING TO DESIGN, THE CONTRACTOR MAY THEN BEGIN TO REMOVE THE TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES. THIS WORK SHALL BE DONE IN A CAREFUL, NEAT, ORGANIZED MANNER.

[X] [] MS-19 ARE PROPERTIES AND WATERWAYS DOWNSTREAM FROM DEVELOPMENT ADEQUATELY PROTECTED FROM EROSION AND SEDIMENT DEPOSITION DUE TO INCREASES IN PEAK STORMWATER RUNOFF? YES, FOLLOWING THE COMPLETION OF DEVELOPMENT AND STABILIZATION OF ALL AREAS AND AFTER IT HAS BEEN DETERMINED THAT EROSION OR SEDIMENTATION IS NO LONGER OCCURRING ON THE SITE OR AT ITS BOUNDARIES AND THAT DRAINAGE FLOWS ARE FUNCTIONING ACCORDING TO DESIGN.

SPECIFIC ISSUES TO MS-16:

NO MORE THAN 500 LINEAR FEET OF TRENCH MAY BE OPEN AT ONE TIME. THE ENTIRE PROJECT IS 545 LF OF TRENCH. THE CONTRACTOR SHALL PROVIDE OSHA MINIMUM REQUIREMENTS PERTAINING TO OPEN TRENCHES ADJACENT TO ACTIVE AREAS AT THE END OF EACH DAY.

EXCAVATED MATERIALS SHALL BE PLACED ON THE UPHILL SIDE OF TRENCHES WHEN POSSIBLE.

EFFLUENT FROM DEWATERING OPERATIONS SHALL BE FILTERED OR PASSED THROUGH AN APPROVED SEDIMENT TRAPPING DEVICE, OR BOTH, AND DISCHARGED IN A MANNER THAT DOES NOT ADVERSELY AFFECT FLOWING STREAMS OR OFF-SITE PROPERTY.

UB-1

DESIGNED BY ENGINEER.

REVISION DATE

1401.01

2. FOR VERT, BEND UPWARD, BLOCKING TO

BE SIMILAR TO THAT FOR HORIZ. BEND.

3. GLANDS & BOLTS SHALL BE PROTECTED

WESTERN VIRGINIA WATER AUTHORITY - CONSTRUCTION STANDARDS

THRUST BLOCK

CONSTRUCTION

FROM CONC. BY PLASTIC SHEETING

WHEN POURING THRUST BLOCKS.

MATERIAL USED FOR BACKFILLING TRENCHES SHALL BE PROPERLY COMPACTED IN ORDER TO MINIMIZE EROSION & PROMOTE STABILIZATION. APPLICABLE SAFETY REGULATIONS SHALL BE COMPLIED WITH.

COMPACTED BACKFILL

- INITIAL BACKFELL SEE SECTION 520.03 VDOT SPECIFICATION

GENERAL EROSION & SEDIMENT CONTROL NOTES

1. ALL SOIL EROSION & SEDIMENT CONTROL MEASURES AS SHOWN ON THE PLAN SHALL BE ACCOMPLISHED IN STRICT ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS CONTAINED IN THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK, LATEST

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.

1. BEDDING, HAUNCHING AND INITIAL BACKFILL CONSTRUCTION SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATION.
2. ALL PVC PIPE SHALL BE BEDDED IN COMPACTED VDOT #57 OR #68 STONE.

ASTM D 698.

BEDDING CRITERIA.

BACKFILL ONLY WITH APPROVED MATERIAL PER APPLICABLE LOCALITY OR VDOT STANDARDS

NORMAL SOIL

CONDITIONS ·

(6" IN ROCK

CONDITIONS)

L@CATION OF TRACER

WIRE WITH NON-METALLIC

PRESSURE PIPE - 12 GAUGE

WESTERN VIRGINIA WATER AUTHORITY - CONSTRUCTION STANDARDS

BEDDING AND BACKFILL OUTSIDE OF PAVED AREAS

3. IN AREAS NOT SUBJECTED TO VEHICULAR TRAFFIC, BEDDING STONE AND FILL SHALL BE PLACED IN 6"

LIFTS FROM BOTTOM OF TRENCH TO 1' ABOVE THE PIPE AND THE REMAINING SHALL BE PLACED IN 10" LIFTS AND SHALL BE COMPACTED TO AT LEAST 90% OF MAXIMUM DENSITY AS DETERMINED BY

I. BEDDING REQUIREMENTS FOR DUCTILE IRON WATER LINE ARE DEPENDENT ON MANUFACTURER'S

EXCAVATION

NON-DETECTABLE

TO 5 MILS IN

HICKNESS, TO BE

INSTALLED APPROX 24" ABOVE PIPE ANI

AT A MINIMUM OF

FOR WATERLINES,

BEDDING STONE TO

MANUFACTURER'S RECOMMENDATION.

SPRING LINE OF PIPE

AT A MINIMUM, OR PER

W-24

LIMITS

12" PIPE DIA.

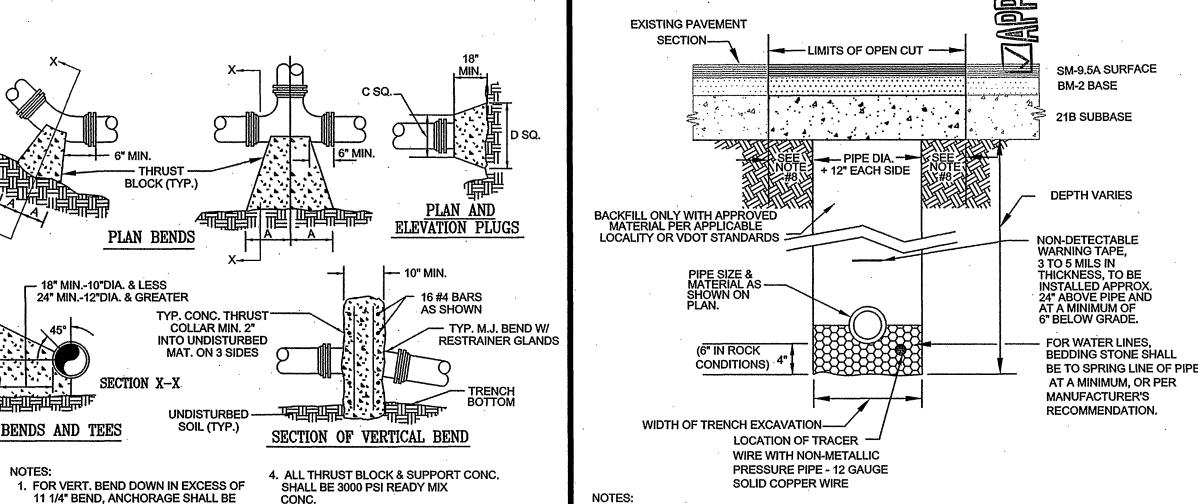
5. ALL EXCAVATIONS SHALL COMPLY WITH OSHA TECHNICAL MANUAL, CHAPTER 2, TITLED

"EXCAVATIONS:HAZARD RECOGNITION IN TRENCHING AND SHORING."

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 7. REFERENCE IS DIRECTED TO "EROSION & SEDIMENT CONTROL PLAN" FOR SITE DEPICTING EROSION AND SEDIMENT CONTROL



MEASURES.

5. THRUST BLOCKS WITH "B" DIMENSION

GREATER THAN 30" SHALL HAVE THE

MINIMUM OF 4' OF COVER.

RESTRAINED PIPE INSTALLED WITH A

PRESSURE = 200 psi

FACTOR OF SAFETY = 1.5

BEARING = 2000 psf

W-19

BEDDING, HAUNCHING AND INITIAL BACKFILL CONSTRUCTION SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATION.

2. ALL PVC PIPE SHALL BE BEDDED IN COMPACTED VDOT #57 OR #68 STONE. 3. IN ROANOKE COUNTY, THE CONTRACTOR SHALL REPLACE THE OPEN CUT WITH A MINIMUM TOP COURSE OF 1.5" (MINIMUM) VDOT SM-9.5A, BASE COURSE OF 6" VDOT BM-25d, AND SUBBASE OF 10" VDOT 21E OR AS REQUIRED BY VDOT. IN ROANOKE CITY, CONTRACTOR SHALL REPLACE PAVEMENT AS REQUIRED

BY CITY OF ROANOKE RIGHT OF WAY EXCAVATION AND RESTORATION STANDARDS ALL CONSTRUCTION WITHIN THE PUBLIC RIGHT-OF-WAY SHALL BE AS SPECIFIED BY VDOT OR APPLICABLE LOCALITY.

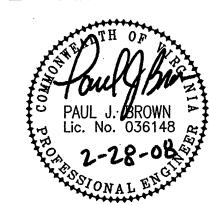
- PRIOR TO CONSTRUCTION, CONTRACTOR IS RESPONSIBLE FOR SECURING ALL REQUIRED PERMITS FROM VDOT AND/OR APPLICABLE LOCALITY.
- IN AREAS SUBJECTED TO VEHICULAR TRAFFIC. BEDDING STONE AND FILL SHALL BE PLACED IN 6" LIFTS AND SHALL BE COMPACTED TO AT LEAST 95% OF MAXIMUM DENSITY AS DETERMINED BY
- ALL EXCAVATIONS SHALL COMPLY WITH OSHA TECHNICAL MANUAL, CHAPTER 2, TITLED "EXCAVATIONS: HAZARD RECOGNITION IN TRENCHING AND SHORING."

BEDDING AND BACKFILL UNDER PAVEMENT AND RIGHT-OF-WAY

WESTERN VIRGINIA WATER AUTHORITY - CONSTRUCTION STANDARDS REVISION DATE

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REVISIONS: DESIGNED BY: AAS. DRAWN BY: PJB. **CHECKED BY:** 1"=30" 2-4-08

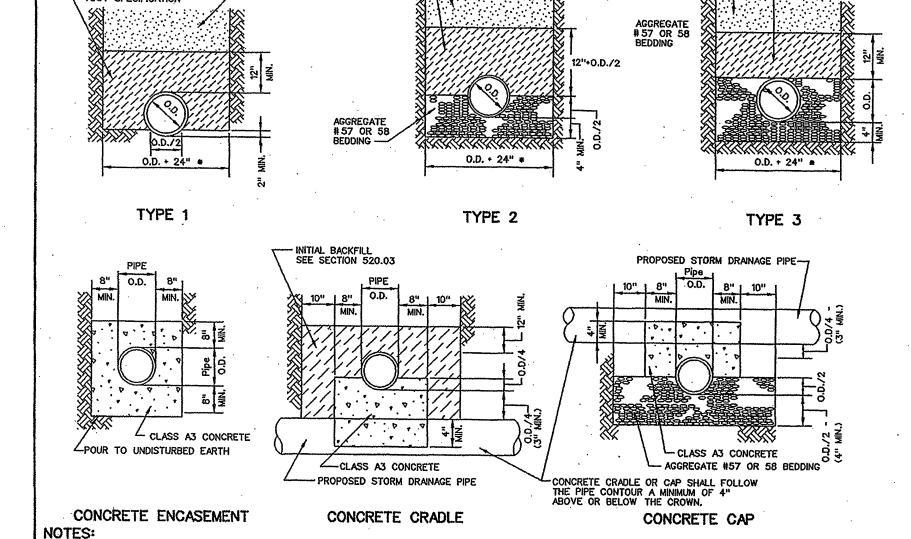
SHEET TITLE: **Erosion & Sediment Control Narrative &**

Details

PROJECT NUMBER:

06-0402-06

W-25



. WHERE THE TRENCH BOTTOM IS IN ROCK, IT SHALL BE EXCAVATED TO A MINIMUM OF 8" BELOW THE BOTTOM OF THE PIPE AND BACKFILLED WITH BEDDING MATERIAL. * FOR PIPE LESS THAN 12" THE TRENCH WIDTH MAY BE 36" MAXIMUM.

COMPACTED BACKFILL

UTILITY BEDDING AND PROTECTION

PERMIT HAS BEEN OBTAINED FROM THE APPROVING AUTHORITY. 4. THE ENGINEER, PARKER DESIGN GROUP, ASSUMES NO RESPONSIBILITY FOR ANY WORK BEING PERFORMED.

OTHERWISE CHANGE EROSION CONTROL DEVICES AS MAY BE DEEMED NECESSARY BY

3. NO WORK SHALL PROCEED ON THE SITE UNTIL THE PROPER AUTHORIZATION OR

1. THE JOB SUPERINTENDENT SHALL BE RESPONSIBLE FOR THE INSTALLATION AND

2. THE APPROVING AUTHORITY RESERVES THE RIGHT TO ADD TO, DELETE. OR

WATER AND SANITARY SEWER FACILITIES VIRGINIA DEPARTMENT OF TRANSPORTATION