



(INSERT NORTH ARROW)

**EXISTING CONDITIONS & DEMOLITION NOTES**

1. THE PROPERTY SHOWN HEREON APPEARS ON ARLINGTON COUNTY REAL PROPERTY IDENTIFICATION MAP NUMBER ###, AS REAL PROPERTY CODE (RPC) NUMBER ###, AND IS ZONED ###.
2. THE PROPERTY, BEING COMPRISED OF LOT(S) ###, RECORDED IN DEED BOOK ### AT PAGE ###, UNDER THE NAME OF (INSERT PLAT TITLE) AMONG THE LAND RECORDS OF ARLINGTON COUNTY, VIRGINIA.  
OR  
THE PROPERTY, BEING COMPRISED OF LOT(S) ###, RECORDED IN INSTRUMENT NUMBER ###, UNDER THE NAME OF (INSERT PLAT TITLE) AMONG THE LAND RECORDS OF ARLINGTON COUNTY, VIRGINIA.
3. THIS BOUNDARY / TOPOGRAPHIC SURVEY WAS COMPLETED UNDER THE DIRECT AND RESPONSIBLE CHARGE OF THE COUNTY SURVEY SECTION FROM AN ACTUAL GROUND SURVEY PREPARED BY XXXX, DATED #####, LAST REVISED #####.  
OR  
THE IMAGE AND/OR ORIGINAL DATA WAS OBTAINED FROM ##### TO #####; AND THIS PLAT, MAP OR DIGITAL GEOSPATIAL DATA INCLUDING METADATA MEETS MINIMUM ACCURACY STANDARDS UNLESS OTHERWISE NOTED.
4. THE TOTAL AREA OF THE PROPERTY IS ### SF (### AC).
5. THE FEDERAL EMERGENCY MANAGEMENT AGENCY'S FLOOD INSURANCE RATE MAP FOR ARLINGTON COUNTY, VIRGINIA, MAP NUMBER ###, EFFECTIVE DATE #####, DESIGNATES THE PROPERTY AS BEING LOCATED IN ZONE ##, (ZONE DESCRIPTION).
6. THE SOIL TYPES LOCATED WITHIN THE BOUNDARY OF THE PROPERTY ARE XXXX, PER THE ARLINGTON COUNTY, VIRGINIA SOIL SURVEY. THE HYDROLOGICAL SOIL GROUP RATING IS XX.
7. IN ACCORDANCE WITH ARLINGTON COUNTY, VIRGINIA STREAMS, WATERSHEDS, AND RESOURCE PROTECTION AREAS MAP, THE PROPERTY IS / IS NOT LOCATED WITHIN A RESOURCE PROTECTION AREA.

**EXISTING CONDITIONS & DEMOLITION NOTES**

TEXT SIZE TO BE NO LESS THAN 0.10

THIS BOX IS  
BASED OFF  
ENGINEERING  
PLANS  
SUBMITTED FOR  
REVIEW.

**SURVEY NOTE**

1. THIS \_\_\_\_\_ (PROVIDE DESCRIPTION OF THE PROJECT) WAS COMPLETED UNDER THE DIRECT AND RESPONSIBLE CHARGE OF \_\_\_\_\_ (NAME OF PROFESSIONAL) FROM AN ACTUAL, GROUND OR AIRBORNE (DELTE NON-APPLICABLE) SURVEY MADE UNDER MY SUPERVISION; THAT THE IMAGERY AND/OR ORIGINAL DATA WAS OBTAINED ON \_\_\_\_\_ (DATE); AND THAT THIS PLAT, MAP, OR DIGITAL GEOSPATIAL DATA INCLUDING METADATA MEETS MINIMUM ACCURACY STANDARDS UNLESS OTHERWISE NOTED.

**ENGINEER'S NOTES**

1. TEXT SIZE TO BE NO LESS THAN 0.10

**LEGEND**

**EROSION AND SEDIMENT CONTROL LEGEND**

3.02	TEMPORARY CONSTRUCTION ENTRANCE	CE	
3.05	TEMPORARY SILT FENCE	SF	
3.38	TREE PROTECTION	TP	
3.31	TEMPORARY SEEDING	TS	
3.32	PERMANENT SEEDING	PS	
	LIMITS OF DISTURBANCE		

EXISTING	DEMO
LOD	DEMOLITION AREA
LOD	
LIMITS OF DISTURBANCE	
PROPERTY LINE	
EXISTING BUILDING	

DEMOLITION PLAN / EROSION &  
SEDIMENT CONTROL PLAN

(INSERT SCALE)



REVISED: March 2, 2022

(INSERT NORTH ARROW)

(INSERT NORTH ARROW)

**WATER METER NOTES**

1. REFER TO THE COUNTY'S CONSTRUCTION STANDARDS MANUAL.
2. THE DEPARTMENT OF ENVIRONMENTAL SERVICES SHALL APPROVE ALL WATER METER LOCATIONS. WATER METERS SHALL BE LOCATED IN THE UTILITY STRIP OR JUST BEHIND THE CURB WITHIN PUBLIC RIGHT-OF-WAY OR RECORDED EASEMENTS AND A MINIMUM OF 5 FEET HORIZONTALLY CLEAR FROM OTHER UTILITIES, APRONS, STRUCTURES, OR TREES.
3. THE LOCATION OF THE WATER SERVICES AND SANITARY SEWER LATERAL SHALL BE SHOWN AND THEIR CONNECTION TO THE VARIOUS MAINS.
4. FOR A NEW DEVELOPMENT WITH A NEW BUILDING OR FOR ADDITIONS THAT WILL UPGRADE TO MORE THAN 3 TOILETS (WCs), THE WATER METER AND SERVICE LIE SHALL HAVE AS EXISTING, OR BE UPGRADED TO A MINIMUM 3/4" AND 1", RESPECTIVELY.
5. PER 2012 IRC P2902 – A BWV (BACKFLOW PREVENTER VALVE) AND 1" WATER SERVICE WILL BE INSTALLED EITHER INSIDE THE PROPOSED BUILDING OR BETWEEN THE PROPOSED BUILDING TO THE WATER METER.
6. THE SEGMENT OF WATER SERVICE LATERAL (METER TO MAIN) TO BE INSTALLED BY ARLINGTON COUNTY DES UPON PAYMENT OF APPROPRIATE FEES.
7. THE PROPOSED WATER SERVICE LATERAL FROM THE METER TO THE BUILDING IS PRIVATELY MAINTAINED. THE METER & SERVICE FROM METER TO MAIN IS PUBLICLY MAINTAINED. THE SANITARY SERVICE LATERAL IS ALSO PRIVATELY MAINTAINED.
8. WATER METER SHALL NOT BE LOCATED ON PRIVATE PROPERTY. IN THE ABSENCE OF A SIDEWALK OR SPACE OUTSIDE THE PROPERTY, AN EASEMENT OF 5 FEET BY 5 FEET SHALL BE GRANTED TO THE COUNTY FOR METER LOCATED ON PRIVATE PROPERTY.
9. THE LOCATION OF THE PROPOSED WATER METER AND SERVICE SHALL BE STAKED OUT, CLEARLY IDENTIFIED BY MARKING. THIS INFORMATION SHALL BE PROVIDED TO WSS PRIOR TO THE INSTALLATION OF THE WATER METER AND SERVICE.
10. A MINIMUM OF 5 FEET COPPER LINE AND FITTINGS IS REQUIRED FROM THE METER TO THE DOMESTIC LINE CONNECTION. NO OTHER PIPE OR FITTING TYPES SHALL BE CONNECTED WITHIN THIS LOCATION.
11. THE OWNER OR PERMIT HOLDER OR REPRESENTATIVE THEREOF SHALL BE RESPONSIBLE TO REPAIR/RESTORE ALL STREETSCAPE ELEMENTS WITHIN THE ROW FROM THE METER TO THE PROPERTY LINE. ARLINGTON COUNTY OR ITS REPRESENTATIVE THEREOF SHALL ONLY BE RESPONSIBLE FOR FULL REPLACEMENT OF THE ROW ELEMENTS FROM THE METER TO THE MAIN.
12. THE PROPOSED/EXISTING WATER SERVICE LINE FROM THE BUILDING TO THE METER IS PRIVATELY MAINTAINED. THE WATER METER & SERVICE LINE FROM METER ARE TO BE PUBLICLY MAINTAINED.
13. *SPACE RESERVED FOR ADDITIONAL WATER METER NOTES*

**SANITARY NOTES**

1. THE PROPOSED/EXISTING SANITARY LATERALS FROM THE PROPERTY TO THE MAIN ARE PRIVATELY MAINTAINED.
2. SANITARY LATERAL AND TAP CARD REQUIREMENTS:
  - 2.1. AT THE TIME THE SANITARY SEWER LATERAL IS PHYSICALLY CONNECTED TO THE PUBLIC SEWER, IT MUST BE WITNESSED BY AN ARLINGTON COUNTY INSPECTOR.
3. REQUIREMENTS FOR THE SANITARY SEWER TAP INSPECTION:
  - 3.1. THE EXISTING SANITARY SEWER LATERAL CAN BE REUSED IF FOUND TO BE IN GOOD CONDITION UPON INSPECTION AND APPROVAL BY THE ARLINGTON COUNTY PLUMBING INSPECTOR. IF IT IS DETERMINED THAT THE EXISTING LATERAL CANNOT BE RE-USED, IT SHALL BE CAPPED OFF AT THE SEWER MAIN BY THE OWNER'S PLUMBING CONTRACTOR. A NEW LATERAL SHALL BE REQUIRE FROM THE HOUSE TO THE MAIN. THE CONTRACTOR IS RESPONSIBLE FOR CALLING THE PLUMBING INSPECTOR AT (703) 228-3800 TO SET AN APPOINTMENT FOR LATERAL INSPECTION.
  - 3.2. THE OWNER IS RESPONSIBLE TO PROVIDE PROOF OF THE EXISTING LATERAL CONDITION. THIS CAN BE VIA A CERTIFIED TV INSPECTION, TO BE PERFORMED AT THE INSPECTION. THE ALTERNATIVE IS TO REPLACE THE LATERAL FROM THE PROPERTY TO THE MAIN.
  - 3.3. IF AFTER THE APPROVAL OF THE PROPOSED DEVELOPMENT PLAN AND DURING CONSTRUCTION, THE LOCATION OF THE LATERAL IS CHANGED, A REVISION OR AS-BUILT PLAN SHALL BE REQUIRED TO BE SUBMITTED TO THE COUNTY PRIOR TO THE APPROVAL OF ADDITIONAL PERMITS TO INCLUDE THE CERTIFICATE OF OCCUPANCY.
4. REQUIREMENTS FOR THE SANITARY SEWER TAP CARD:
  - 4.1. A SEWER TAP CARD IS REQUIRED FOR THE SEWER LATERAL CONNECTING TO THE COUNTY SEWER MAIN. THE SEWER TAP CARD FORM MUST BE FILLED OUT BY THE PLUMBING CONTRACTOR AND SUBMITTED TO THE COUNTY PLUMBING INSPECTOR, SHOWING DETAILS OF THE SEWER LATERAL CONNECTION. THE INFORMATION MUST INCLUDE:
    - 4.2. A DIAGRAM SHOWING A LAYOUT/ORIENTATION OF THE CONNECTION FROM THE PROPERTY LINE TO THE SEWER MAIN.
    - 4.3. THE DISTANCE/LENGTH FROM THE CLOSEST MANHOLE TO THE LATERAL TAP LOCATION ON THE SEWER MAIN.
    - 4.4. THE INVERT OR CROWN ELEVATION AT THE SEWER MAIN AND SEWER LATERAL CONNECTION MEASURED FROM A REFERENCED SURFACE (WHERE APPLICABLE FOR NEW TAP ONLY).
    - 4.5. THE INVERT (DEPTH) AT THE PROPERTY LINE WHERE THE SEWER LATERAL CROSSES FROM THE RIGHT-OF-WAY INTO THE PROPERTY.
    - 4.6. THE INVERT (DEPTH) AT THE FIRST CLEAN OUT ON THE PROPERTY (WHERE APPLICABLE)
    - 4.7. ADD INVERT & TOP ELEVATIONS AT THE TWO SANITARY MANHOLES ASSOCIATED WITH THE TAP CARD.
    - 4.8. FOR TEMPORARY CAPOFF ONLY, THE SANITARY SEWER LATERAL SHALL BE CAPPED AT THE PROPERTY LINE.
  5. *SPACE RESERVED FOR ADDITIONAL SANITARY NOTES*

**GRADING PLAN**

(INSERT SCALE)

**GRADING PLAN GENERAL NOTES**

1. ANY WORK WITHIN THE RIGHT OF WAY REQUIRES AN EXCAVATION PERMIT.
2. THE PERMIT HOLDER OR REPRESENTATIVE THEREOF SHALL BE RESPONSIBLE TO REPAIR/RESTORE ALL STREETSCAPE ELEMENTS WITHIN THE ROW THAT ARE DAMAGED AS A RESULT OF CONSTRUCTION. RESTORATION SHALL BE REQUIRED AT THE INSPECTOR'S DISCRETION.
3. THIS PLAN WILL BE USED FOR CONSTRUCTION ONCE IT IS APPROVED. THEREFORE LOCATION OF ALL EXISTING AND PROPOSED UTILITIES NEEDS TO BE SURVEYED, TEST PITTED AND SHOWN ON THE DETAILED DESIGN PLANS FOR REVIEW/APPROVAL IN ADVANCE OF ANY CONSTRUCTION.
4. *SPACE RESERVED FOR ADDITIONAL GRADING PLAN GENERAL NOTES*

**DRY UTILITY NOTES**

1. UNDERGROUNDING OVERHEAD UTILITIES - IF THE OVERHEAD WIRES ARE TO BE UNDERGROUNDED IN THE FINAL CONDITION, DES RECOMMENDS SHOWING THE UTILITY POLES, LEAVING A PATH FOR CONDUITS AND CONTACTING A MEMBER OF THE DOMINION ENERGY DESIGN TEAM. TO ASSIST DOMINION IN OBTAINING THEIR EXCAVATION PERMIT AND PROVIDING POWER TO THE SITE, THE APPROVED LAND DISTURBING ACTIVITY (LDA) PERMIT SHOULD BE PROVIDED TO THE DOMINION DESIGN TEAM.
2. *SPACE RESERVED FOR ADDITIONAL DRY UTILITY NOTES*

**OFFSITE DRAINAGE AREA MAP**

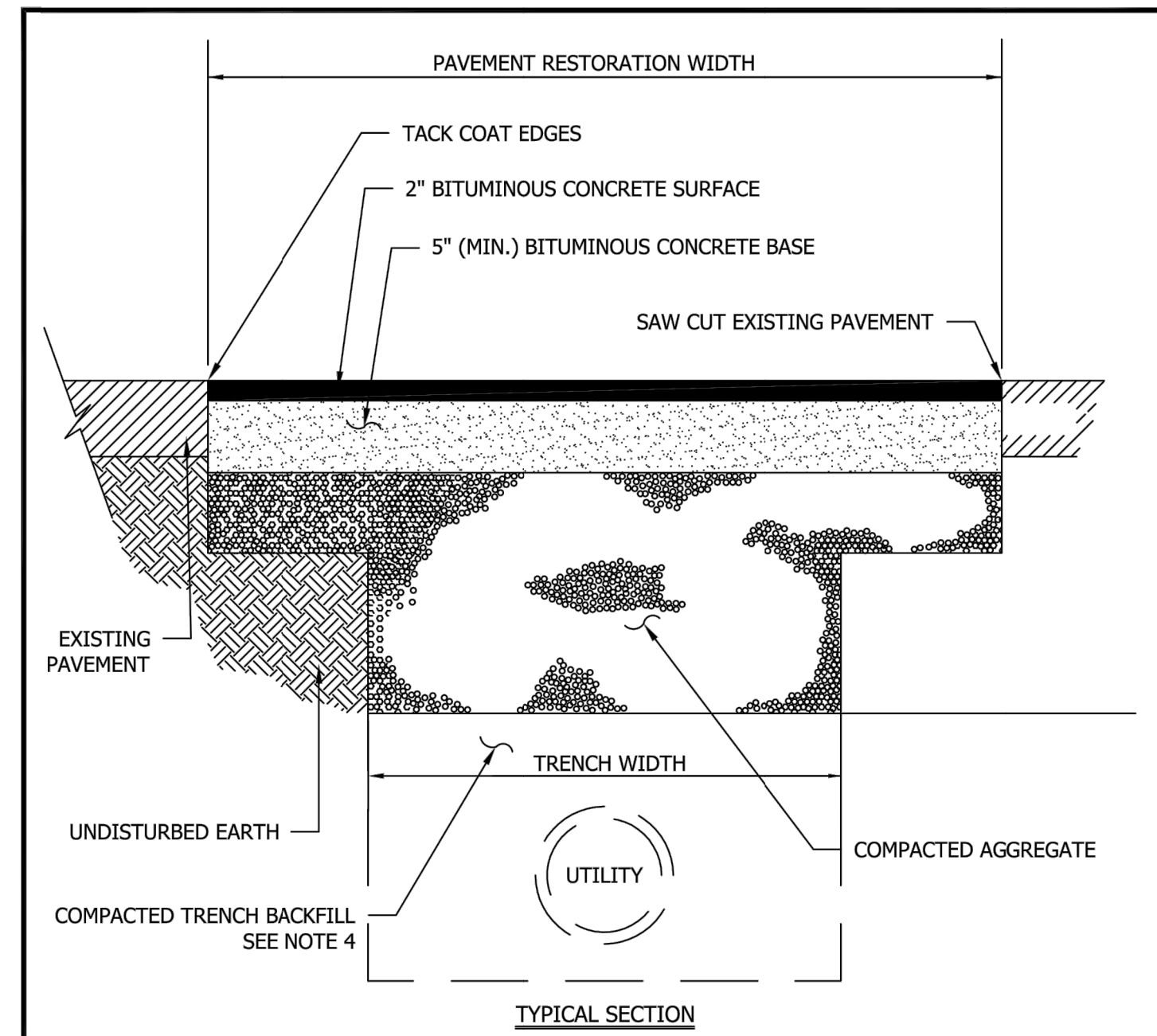
(INSERT SCALE)

**LEGEND**

EXISTING	PROPOSED

GRADING PLAN

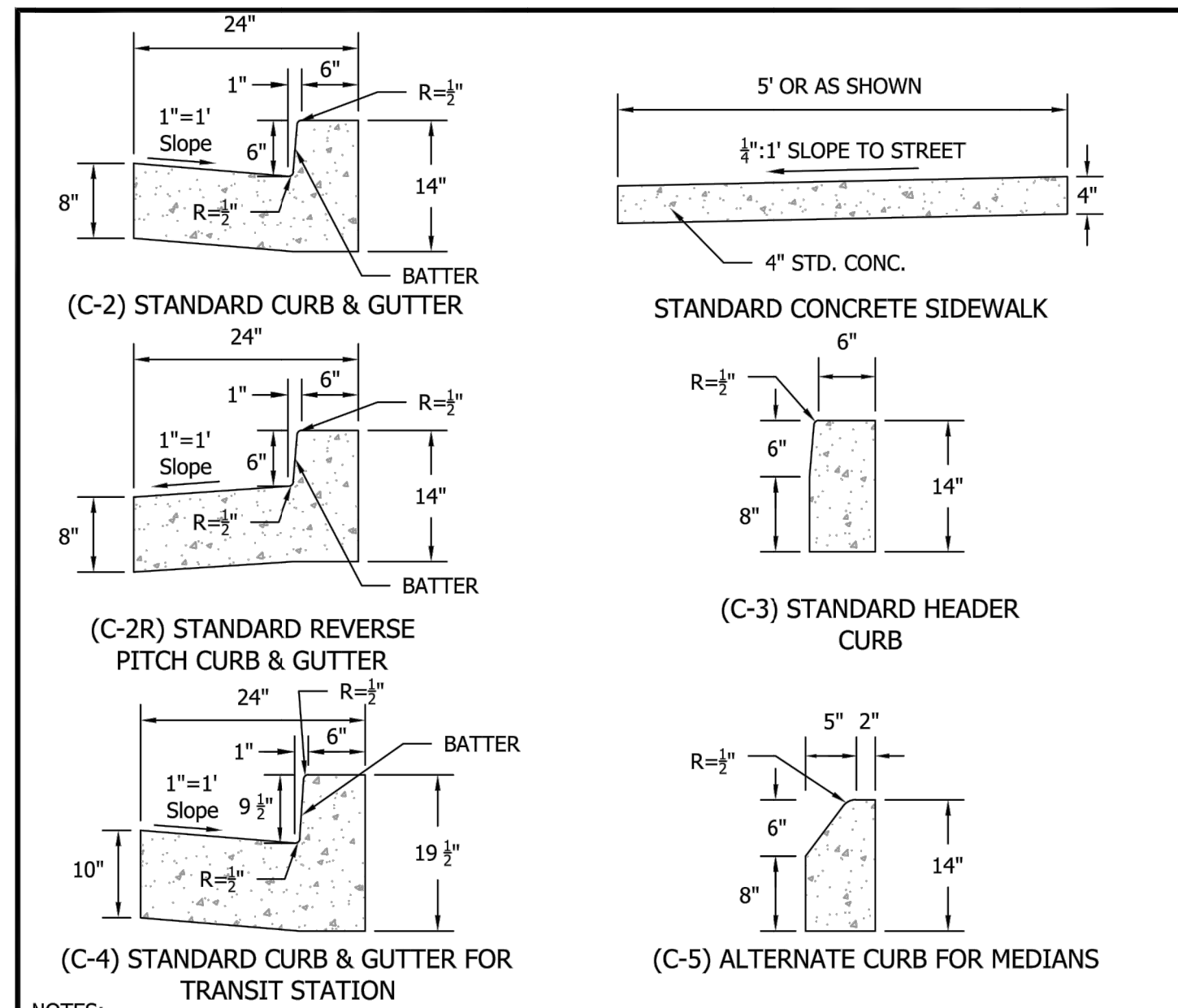
(INSERT SCALE)



NOTES:

1. WHEN THE DISTANCE FROM THE EDGE OF EXISTING PAVEMENT TO THE EDGE OF THE PAVEMENT RESTORATION PAYMENT WIDTH IS 3' OR LESS THEN THE ADDITIONAL PAVEMENT SHALL BE REMOVED AND REPLACED BACK TO THE EDGE.
2. THICKNESS OF BASE MAY BE REDUCED TO 3\"/>

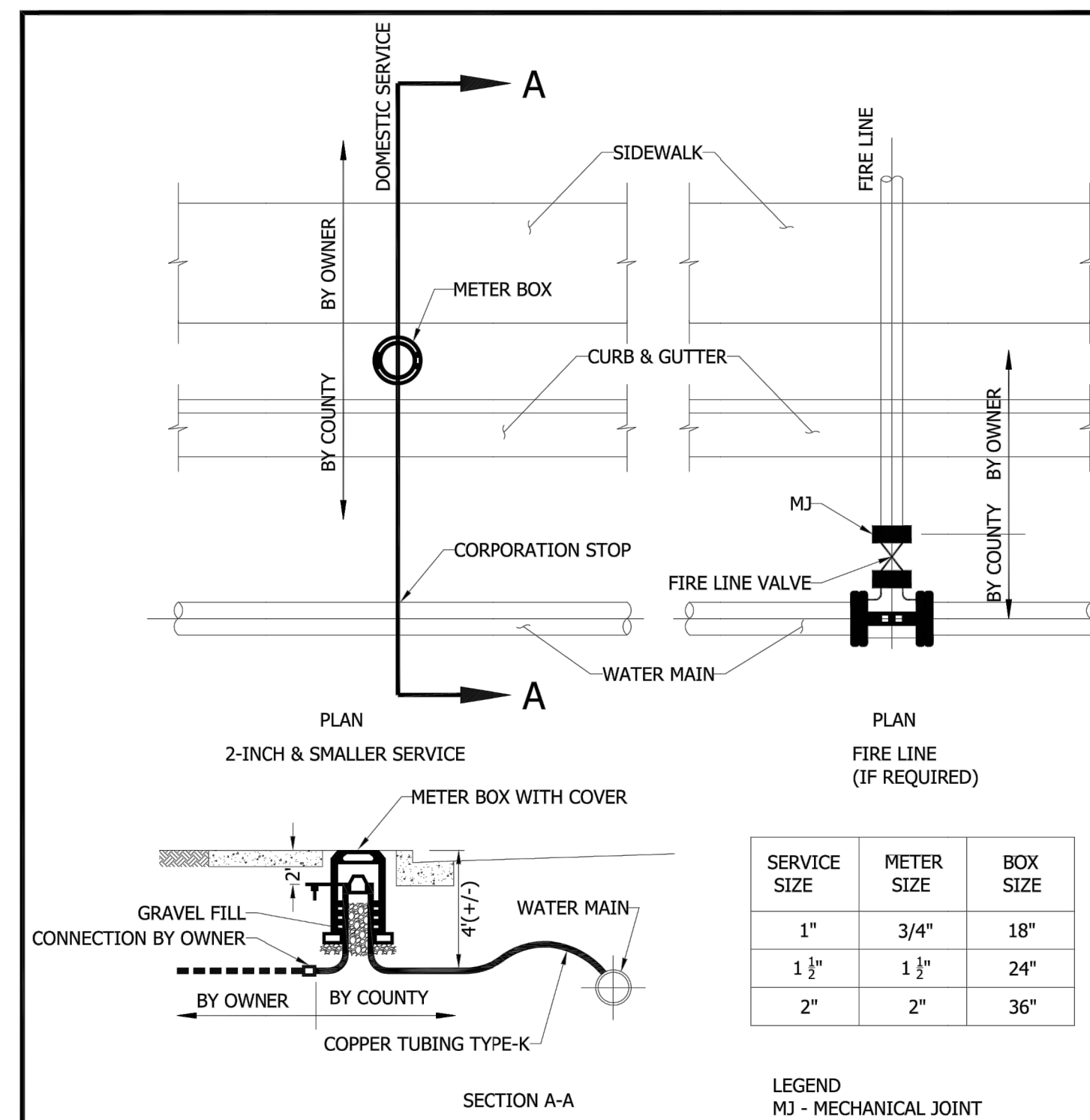
<b>STANDARD PAVEMENT RESTORATION FOR UTILITY CUTS</b>		
ARLINGTON COUNTY, VIRGINIA DEPARTMENT OF ENVIRONMENTAL SERVICES		ISSUED 9/14/2020 DRAWING NO. <b>M-6.0</b>



- NOTES:
1. SECTION C-3 IS TO BE USED ONLY WITH RIGID TYPE PAVEMENT UNLESS OTHERWISE DIRECTED IN WRITING OR WHEN SHOWN ON APPROVED PLANS.
  2. EXPANSION JOINTS IN HEADER CURB AND STANDARD CURB AND GUTTER SHALL BE 40' APART OR AT EXPANSION JOINTS IN CONCRETE PAVEMENT.
  3. EXPANSION JOINTS MAY BE OMITTED IF 1/8\"/>

<b>CONCRETE CURB &amp; GUTTER AND SIDEWALK</b>		
ARLINGTON COUNTY, VIRGINIA DEPARTMENT OF ENVIRONMENTAL SERVICES		ISSUED 9/14/2020 DRAWING NO. <b>R-2.0</b>

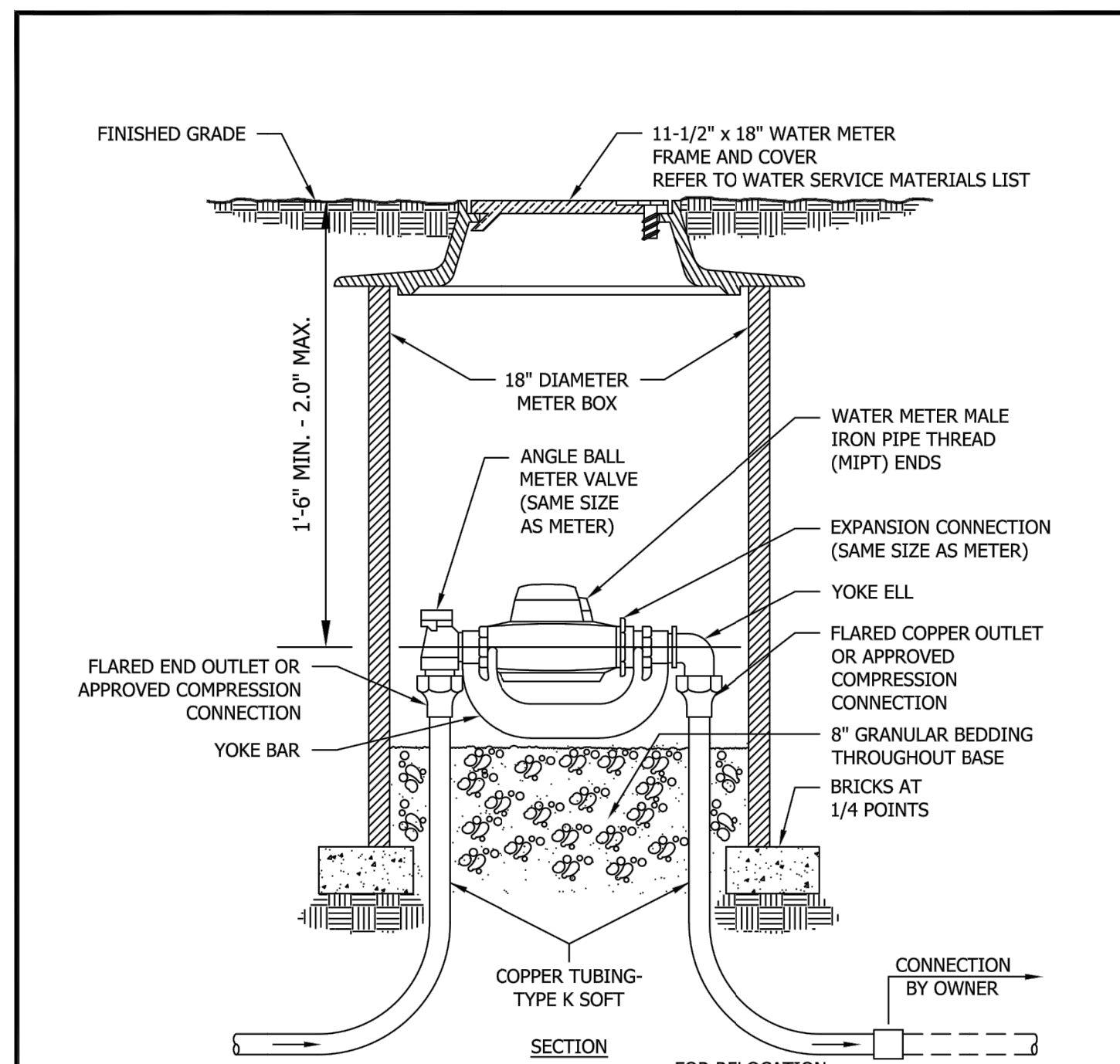
# DRIVEWAY DETAIL R-2.4 PAGE 1



NOTES:

1. SERVICES WILL BE INSTALLED AFTER ALL FEES HAVE BEEN PAID AND ALL SITE CONDITIONS FOR SETTING THE METER HAVE BEEN MET.
2. THE PROPERTY OWNER'S PLUMBER SHALL BE RESPONSIBLE FOR CONNECTING TO THE COUNTY METER INSTALLATION. PLUMBER SHALL NOT ENTER METER BOX.

<b>WATER SERVICE CONNECTIONS 2-INCH AND SMALLER</b>		
ARLINGTON COUNTY, VIRGINIA DEPARTMENT OF ENVIRONMENTAL SERVICES		REVISION & DATE 1 7/01/2020 DRAWING NO. <b>W-8.0</b>



NOTE: THE MINIMUM SIZE OF NEW WATER SERVICES SHALL BE 1-INCH.

WATER SERVICE SIZE	3/4"	1"
COPPER TUBING SIZE	3/4"	1"
METER AND YOKE SIZE	5/8"	3/4"
ANGLE VALVE (METER END x OUTLET END)	5/8"x3/4"	3/4"x1"
YOKE ELL (METER END x OUTLET END)	5/8"x3/4"	3/4"x1"

<b>WATER METER INSTALLATION 3/4-INCH AND 1-INCH SERVICE</b>		
ARLINGTON COUNTY, VIRGINIA DEPARTMENT OF ENVIRONMENTAL SERVICES		ISSUED 9/14/2020 DRAWING NO. <b>W-9.0</b>

# DRIVEWAY DETAIL R-2.4 PAGE 2

REVISED: July 8, 2021

# EROSION AND SEDIMENT CONTROL NARRATIVE

## PROJECT DESCRIPTION:

IDENTIFY THE LOCATION OF THE PROJECT, DISTURBANCE AREA, WATERSHED, GOAL OF THE PROJECT, AND ANY OTHER PROJECT RELATED INFORMATION.

## EXISTING SITE CONDITIONS:

IDENTIFY LOCATION OF THE PROJECT, FIELD CONDITIONS, ROAD INFORMATION, ETC.

## ADJACENT PROPERTIES:

IDENTIFY THE ADJACENT PROPERTY USES, FIELD CONDITIONS AND SPECIAL CONDITIONS THAT THE CONTRACTOR SHOULD BE AWARE OF.

## OFF-SITE AREAS:

IDENTIFY OFFSITE DISTURBANCE AREAS, CONTRACTOR LAYDOWN AREAS AND POTENTIAL PARKING AREAS (IF NEEDED)

## EROSION AND SEDIMENT CONTROL MEASURES:

THE EROSION AND SEDIMENT CONTROL MEASURES FOR THIS PROJECT AREA INCLUDE SAFETY FENCE, SILT FENCE AND CONSTRUCTION ENTRANCE. (REVISE AS NEEDED)

## PERMANENT STABILIZATION:

ALL AREAS DISTURBED BY CONSTRUCTION SHALL BE STABILIZED WITH GRASS, MULCH OR SOD. SEE THE PROPOSED PLANS FOR ADDITIONAL INFORMATION.

## STORMWATER RUNOFF CONSIDERATIONS:

TOTAL LAND DISTURBANCE.....= XXXXXX SF (X.XXXX ACRES)

PRE-IMPROVEMENT IMPERVIOUS AREA.....= XXXXXX SF (X.XXXX ACRES)

POST-IMPROVEMENT IMPERVIOUS AREA.....= XXXXXX SF (X.XXXX ACRES)

INCREASED IMPERVIOUS AREA.....= XXXXXX SF (X.XXXX ACRES)

## SOILS INFORMATION:

THE FOLLOWING SOILS ARE FOUND ON SITE (SEE SOILS MAP ON SHEET 1 (COVER SHEET) FOR LOCATION)

SOIL#: SOIL NAME: HYDROLOGIC GROUP: ERODABILITY:

12 URBAN LAND-UDORTHERTS VARIES N/A

## CRITICAL AREAS:

THERE ARE NO STEEP SLOPES OR CRITICAL AREAS LOCATED WITHIN THE LIMITS OF DISTURBANCE. (REVISE IF NEEDED)

FLOODPLAIN, RPA, AND STEEP SLOPE STATEMENTS			
	YES	NO	COMMENT
FLOODPLAIN			
RPA*			
STEEP SLOPES			

\*IF PROJECT IS LOCATED IN A RESOURCE PROTECTION AREA, SEE SECTION 2.b.a. AND 2.b.b. UNDER VEGETATIVE PRACTICES FOR SPECIFIC RPA PLANTING MIX GUIDANCE.

## EROSION & SEDIMENT CONTROL PROJECT PHASING

### 18. PHASE I:

- PRE-CONSTRUCTION MEETING WITH THE PROJECT OFFICER, CONTRACTOR, URBAN FORESTER, RESPONSIBLE LAND DISTURBER, AND COUNTY INSPECTOR.
- INSTALL THE TEMPORARY CONSTRUCTION ENTRANCE IN THE LOCATION SHOWN ON THE E&S PHASE I PLAN. MUD AND DEBRIS SHALL BE WASHED FROM ALL TRUCKS EXITING THE SITE. WASHWATER SHALL BE CAPTURED AND FILTERED.
- INSTALL TREE PROTECTION FENCE (TP) AS SHOWN ON E&S PHASE I PLAN.
- INSTALL PERIMETER CONTROLS AS SHOWN ON E&S PLAN

### 2. PHASE II:

- BEGIN UTILITY CONSTRUCTION, INSTALL ALL UNDERGROUND UTILITIES AND BEGIN SITE GRADING.
- ONCE THE SITE IS BOUGHT TO NEAR FINAL GRADE, AND THE UTILITY CONSTRUCTION IS COMPLETE, COMMENCE CONSTRUCTION OF CURB & GUTTER, STREET, SIDEWALKS, AND OTHER IMPROVEMENTS
- THE CONTROL MEASURES MAY NOT BE REMOVED UNTIL ALL OF THE DISTURBED AREAS HAVE BEEN STABILIZED AND ONLY AS APPROVED AND DIRECTED BY THE INSPECTOR.

## EROSION & SEDIMENT CONTROL GENERAL NOTES

SPACE TO ADD PROJECT-SPECIFIC NOTES, IF APPLICABLE

## EROSION AND SEDIMENT CONTROL MEASURES

UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE CONSTRUCTED AND MAINTAINED ACCORDING TO MINIMUM STANDARDS AND SPECIFICATIONS OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK AND THE ARLINGTON COUNTY EROSION AND SEDIMENT CONTROL ORDINANCE. THE MINIMUM STANDARDS OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK SHALL BE ADHERED TO UNLESS OTHERWISE WAIVED OR APPROVED BY A VARIANCE.

THE EROSION AND SEDIMENT CONTROL INSPECTOR SHALL HAVE THE AUTHORITY TO ADD OR DELETE EROSION AND SEDIMENT CONTROLS AS NEEDED IN THE FIELD.

### 1. STRUCTURAL PRACTICES

- TEMPORARY CONSTRUCTION ENTRANCE - VESCH 3.02
  - A TEMPORARY CONSTRUCTION ENTRANCE WITH A WASH RACK SHALL BE INSTALLED AT THE EXISTING ACCESS POINT TO THE SITE. DURING MUDDY CONDITIONS, DRIVERS OF CONSTRUCTION VEHICLES WILL BE REQUIRED TO WASH THEIR WHEELS BEFORE RE-ENTERING THE LOCAL ROADWAYS.
  - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY.
  - ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.
  - THE USE OF WATER TRUCKS TO REMOVE MATERIALS DROPPED, WASHED, OR TRACKED INTO ROADWAYS WILL NOT BE PERMITTED UNDER ANY CIRCUMSTANCES.
- SILT FENCE - VESCH 3.05
  - SILT FENCE WILL BE INSTALLED WITH THE E&S PLAN TO FILTER RUNOFF FROM DISTURBED AREAS. RUNOFF SHALL NOT BE DIRECTED PARALLEL TO THE INSTALLATION OF SILT FENCE.
  - SILT FENCES SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.
  - CLOSE ATTENTION SHALL BE PAID TO THE REPAIR OF DAMAGED SILT FENCE RESULTING FROM UNDERCUTTING.
  - SHOULD THE FABRIC ON A SILT FENCE DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE, THE FABRIC SHALL BE REPLACED IMMEDIATELY.
  - SEDIMENT DEPOSITS SHALL BE REMOVED AFTER EACH STORM EVENT. THEY MUST BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER.
  - ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE IS NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM WITH THE EXISTING GRADE, THEN PREPARED AND SEEDED.
- STORM DRAIN INLET PROTECTION - VESCH 3.07
  - ALL EXISTING & PROPOSED STORM SEWER INLETS WITHIN THE PROJECT LIMITS SHALL BE PROTECTED DURING CONSTRUCTION. SEDIMENT-LADEN WATER SHALL BE FILTERED BEFORE ENTERING THE STORM SEWER INLETS. INLETS MUST NOT CAUSE FLOODING.
  - INLET PROTECTION SHALL BE INSPECTED AFTER EACH RAIN EVENT AND REPAIRS SHALL BE MADE AS NECESSARY.
  - STRUCTURES SHALL BE REMOVED AND THE AREA STABILIZED WHEN THE REMAINING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.
- DEWATERING STRUCTURE
  - SEDIMENT LADEN OR TURBID WATER SHALL BE FILTERED, SETTLED OR SIMILARLY TREATED PRIOR TO DISCHARGE.
  - THE FILTERING DEVICES MUST BE INSPECTED AND MAINTAINED FREQUENTLY AND REPAIRED OR REPLACED ONCE THE SEDIMENT BUILD-UP PREVENTS THE STRUCTURE FROM FUNCTIONING AS DESIGNED.
  - THE ACCUMULATED SEDIMENT WHICH IS REMOVED FROM A DEWATERING DEVICE MUST BE SPREAD ON-SITE AND STABILIZED OR DISPOSED OF AT AN APPROVED DISPOSAL SITE AS PER THE APPROVED PLAN.
- TREE PROTECTION
 

TREES SHALL BE PROTECTED PER THE REQUIREMENTS OF THE CHESAPEAKE BAY PRESERVATION ORDINANCE AND THE CURRENT ANSI STANDARDS FOR MANAGEMENT OF TREES AND SHRUBS DURING SITE PLANNING, SITE DEVELOPMENT, AND CONSTRUCTION.

- ALL TREES SHOWN TO BE PROTECTED ON THE PLAN ARE TO BE PROTECTED UNLESS OTHERWISE DIRECTED BY THE FORESTER. THE COUNTY'S URBAN FORESTER BE CONTACTED AT URBANFORESTRY@ARLINGTONVA.US AND ALLOWED TO INSPECT ALL TREE PROTECTION 72 HOURS PRIOR TO THE START OF CONSTRUCTION. IN SPITE OF PRECAUTIONS, SOME DAMAGE TO PROTECTED TREES MAY OCCUR. IN SUCH CASES, THE COUNTY URBAN FORESTER SHALL DIRECT THE PROJECT TO REMEDIATE DAMAGE FOLLOWING CURRENT ANSI STANDARDS, OR WORK WITH THE PROJECT TO REPLACE TREES, IF THEY ARE DAMAGED BEYOND REPAIR.

### 2. VEGETATIVE PRACTICES

- TEMPORARY SEEDING - VESCH 3.31
  - ALL DENUDEED AREAS, WHICH WILL BE LEFT DORMANT FOR EXTENDED PERIODS OF TIME SHALL BE SEEDED WITH FAST GERMINATING TEMPORARY VEGETATION IMMEDIATELY FOLLOWING GRADING. SELECTION OF THE SEED MIXTURE WILL DEPEND ON THE TIME OF YEAR IT IS APPLIED.
  - SEE SHEET III-288 OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK (VESCH) FOR ALLOWABLE PLANTING MATERIAL, SEEDING RATES, AND DATES. THE PLANTING REQUIREMENTS OF THE "SOUTH" SHALL BE FOLLOWED. LIMING SHALL BE BASED ON TABLE 3.31-A OF VESCH. FERTILIZERS SHALL BE APPLIED AS 600 LB/ACRE. THE FERTILIZER SHALL BE INCORPORATED INTO THE TOP 2-4" OF SOIL. SEED SHALL BE EVENLY APPLIED AND SMALL GRAINS SHALL BE PLANTED NO MORE THAN 1.5" DEEP. SEEDING MADE IN FALL FOR WINTER COVER AND DURING HOT SUMMER MONTHS SHALL BE MULCHED.
- PERMANENT SEEDING - VESCH 3.32
  - SINCE THE SUBJECT SITE IS LOCATED WITHIN THE COASTAL PLAIN AREA OF VIRGINIA, SHEET III-304 OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK SHALL BE FOLLOWED FOR FINAL SEEDING MATERIAL, SEEDING RATES, AND DATES OF APPLICATION, EXCEPT IN RESOURCE PROTECTION AREAS.
  - IN RESOURCE PROTECTION AREAS, THE ARLINGTON COUNTY RESOURCE PROTECTION AREA SEED MIX, OR AN APPROVED EQUAL, SHALL BE APPLIED.

ARLINGTON COUNTY - RESOURCE PROTECTION AREA NATIVE SEED MIX		
PERCENT OF MIX (%)	LATIN NAME	COMMON NAME
20	<i>Lolium multiflorum</i>	ANNUAL RYE
30	<i>Elymus virginicus</i>	VIRGINIA WILD RYE
25	<i>Panicum clandestinum</i>	DEER-TONGUE GRASS
15	<i>Elymus riparius</i>	RIVERBANK WILD RYE
5	<i>Elymus hystrix</i>	BOTTLEBRUSH GRASS
2	<i>Chamaecrista fasciculata</i>	PARTRIDGE PEA
1	<i>Solidago rugosa</i>	ROUGH-STEMMED GOLDENROD
1	<i>Asclepias syriaca</i>	COMMON MILKWEED
1	<i>Euthamia graminifolia</i>	GRASS-LEAVED GOLDENROD

APPLY AT 50 LBS/ACRE (2 LB/1000 SF) BETWEEN AUGUST 15TH AND MAY 15TH.

- SODDING - VESCH 3.33
  - SODDED AREAS SHALL BE BROUGHT TO FINAL GRADE IN ACCORDANCE WITH THE APPROVED PLANS. SOIL TESTS SHALL BE MADE TO DETERMINE THE EXACT REQUIREMENTS FOR LIME AND FERTILIZER. PRIOR TO LAYING SOD, SOIL SURFACE SHALL BE CLEAR OF TRASH, DEBRIS AND LARGE OBJECTS. QUALITY OF SOD SHALL BE STATE CERTIFIED TO ENSURE GENETIC PURITY AND HIGH QUALITY. SOD SHALL NOT BE LAID ON FROZEN SOIL SURFACE, OR IN EXCESSIVELY WET OR DRY WEATHER. SOD SHALL BE DELIVERED AND INSTALLED WITHIN 36 HOURS, AND SHALL BE INSTALLED PER PAGE III-339 OF VESCH.

THE EROSION AND SEDIMENT CONTROL INSPECTOR SHALL HAVE THE AUTHORITY TO ADD OR DELETE EROSION AND SEDIMENT CONTROLS AS NEEDED IN THE FIELD. IN ADDITION, NO SEDIMENT TRAPS OR BASINS MAY BE REMOVED WITHOUT PRIOR APPROVAL OF THE INSPECTOR.

## EROSION AND SEDIMENT CONTROL MANAGEMENT MEASURES

### LANDSCAPE / TREE PRESERVATION NOTES

PRIOR TO ANY LAND DISTURBING ACTIVITY, THE CONTRACTOR SHALL CONTACT THE ARLINGTON COUNTY ARBORIST TO SCHEDULE AN INSPECTION.

### LAND CONSERVATION NOTES:

- NO DISTURBED AREA WILL REMAIN DENUDEED FOR MORE THAN 7 CALENDAR DAYS UNLESS OTHERWISE AUTHORIZED BY THE INSPECTOR.
- ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO OR AS THE FIRST STEP IN GRADING. FIRST AREAS TO BE CLEARED ARE TO BE THOSE REQUIRED FOR THE PERIMETER CONTROLS.
- ALL STORM AND SANITARY SEWER LINES NOT IN STREETS ARE TO BE MULCHED AND SEEDED WITHIN 5 DAYS AFTER BACKFILL. NO MORE THAN 100 FEET ARE TO BE OPEN AT ANY ONE TIME.
- ELECTRIC POWER, TELEPHONE AND GAS SUPPLY TRENCHES ARE TO BE COMPACTED, SEEDED AND MULCHED WITHIN 5 DAYS AFTER BACKFILLING.
- ALL TEMPORARY EARTH BERMS, DIVERSIONS AND SEDIMENT CONTROL DAMS ARE TO BE MULCHED AND SEEDED FOR TEMPORARY VEGETATIVE COVER IMMEDIATELY AFTER GRADING. STRAW OR HAY MULCH IS REQUIRED. THE SAME APPLIES TO ALL SOIL STOCKPILES.
- DURING CONSTRUCTION, STORM SEWER INLETS INSIDE THE LIMITS OF DISTURBANCE WILL BE PROTECTED BY INLET PROTECTION.
- ANY DISTURBED AREA NOT COVERED BY NOTE 1 ABOVE AND NOT PAVED, SODDED OR BUILT UPON BY NOV. 1, OR DISTURBED AFTER THAT DATE, SHALL BE MULCHED IMMEDIATELY WITH HAY OR STRAW MULCH AT THE RATE OF 2 TONS/ACRE AND OVER-SEEDED BY APRIL 15.
- AT THE COMPLETION OF ANY PROJECT CONSTRUCTION AND PRIOR TO BOND RELEASE, ALL TEMPORARY SEDIMENT CONTROLS SHALL BE REMOVED AND ALL DENUDEED AREAS SHALL BE STABILIZED.

### EROSION & SEDIMENT CONTROL PROGRAM:

- THE EROSION & SEDIMENT CONTROL PLAN IS INTENDED TO ESTABLISH ENTRANCES AND PERIMETER CONTROL MEASURES WHICH INCLUDES SILT FENCE (SF), INLET PROTECTION (IP), AND OTHER CONTROLS SPECIFIED ON THE PLANS.
- WHERE CONSISTENT WITH JOB SAFETY REQUIREMENTS, ALL EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF TRENCHES. NO MATERIAL SHALL BE PLACED IN STREAMBEDS. ANY STOCKPILED MATERIAL WHICH WILL REMAIN IN PLACE LONGER THAN 7 DAYS SHALL BE SEEDED AND MULCHED. WHEN SPOIL IS PLACED ON THE DOWNHILL SIDE OF TRENCH, IT SHALL BE BACKSLOPED TO DRAIN TOWARD THE TRENCH. WHEN NECESSARY TO DEWATER THE TRENCH, THE PUMP DISCHARGE HOSE SHALL OUTLET IN A STABILIZED AREA OR A SEDIMENT TRAPPING DEVICE.
- ALL PRACTICES AND CONTROL DEVICES DESCRIBED HEREIN SHALL CONFORM TO THE CURRENT VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK (VESCH) OR ARLINGTON COUNTY STANDARDS AND SPECIFICATIONS. IN ADDITION, THE CONTRACTOR SHALL TAKE THE FOLLOWING STEPS TO MINIMIZE THE VOLUME OF SILT:
  - CONTRACTOR SHALL EVALUATE THE SITE TO DETERMINE EXTENSIVE CUT AND FILL AREAS, AND SHALL WORK THOSE AREAS TO MINIMIZE THE USE OF HEAVY EQUIPMENT. CONTRACTOR SHALL BRING DISTURBED AREAS TO GRADE (ROUGH OR FINISHED) AND STABILIZE THOSE AREAS WITH TEMPORARY OR PERMANENT VEGETATION. THESE DISTURBED AREAS SHALL BE STABILIZED PRIOR TO BEGINNING WORK IN ANOTHER AREA.
  - FILL AREAS SHALL BE COMPACTED COMPLETELY PRIOR TO THE END OF EACH WORK DAY. FILL SLOPE SURFACES SHALL BE KEPT ROUGH TO REDUCE SHEET EROSION OF THE SLOPES. CONTRACTOR SHALL RE-DIRECT CONCENTRATED RUNOFF, BY EARTH BERMS OR OTHER DEVICES, AROUND ACTIVELY DISTURBED AREAS TO STABILIZED OUTLETS.
  - CUT SLOPES SHALL BE PROTECTED FROM CONCENTRATED FLOW BY BERMS (ABOVE THE SLOPE) AND DIRECTED AROUND THE DISTURBED AREA TO STABILIZED OUTLETS.
- MEASURES TO CONTROL EROSION AND SEDIMENTATION SHALL BE PROVIDED PURSUANT TO AND IN COMPLIANCE WITH CURRENT STATE AND LOCAL REGULATIONS. THE INFORMATION CONTAINED IN THE CONSTRUCTION PLANS AND/OR THE APPROVAL OF THE PLANS SHALL IN NO WAY RELIEVE THE CONTRACTOR OR HIS AGENT OF ANY LEGAL RESPONSIBILITY WHICH MAY BE REQUIRED BY THE CODE OF VIRGINIA AND CHAPTER 57 OF THE ARLINGTON COUNTY CODE.
- ALL AREAS, ON OR OFF-SITE, THAT ARE DISTURBED BY THIS CONSTRUCTION AND WHICH ARE NOT PAVED OR BUILT UPON SHALL BE ADEQUATELY STABILIZED TO CONTROL EROSION AND SEDIMENTATION. ACCEPTABLE STABILIZATION SHALL CONSIST OF PERMANENT-GRASS-SEED-MIXTURE-OR SOD THAT IS INSTALLED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS. ALL SLOPES 3:1 AND GREATER SHALL BE RECEIVE SOIL STABILIZATION IN ACCORDANCE WITH THE SPECIFICATIONS.
- WHERE STREAM CROSSINGS ARE REQUIRED FOR EQUIPMENT, TEMPORARY CULVERTS SHALL BE PROVIDED.
- FOR FURTHER REQUIREMENTS AND DETAILS OF TREE PRESERVATION, PLANTING, EROSION AND SEDIMENT CONTROL, SEE COUNTY CONSTRUCTION STANDARDS AND SPECIFICATIONS AND/OR THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK.

### GENERAL EROSION AND SEDIMENT CONTROL NOTES

- 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 AND/OR ARLINGTON COUNTY STANDARDS AND SPECIFICATIONS.
- THE PLAN APPROVING AUTHORITY MUST BE NOTIFIED ONE WEEK PRIOR TO THE PRE-CONSTRUCTION CONFERENCE, ONE WEEK PRIOR TO THE COMMENCEMENT OF LAND DISTURBING ACTIVITY, AND ONE WEEK PRIOR TO THE FINAL INSPECTION.
- ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO OR AS THE FIRST STEP IN CLEARING.
- A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN SHALL BE MAINTAINED ON THE SITE AT ALL TIMES.
- PRIOR TO COMMENCING LAND DISTURBING ACTIVITIES IN THE AREAS OTHER THAN INDICATED ON THESE PLANS (INCLUDING, BUT NOT LIMITED TO, OFF-SITE BORROW OR WASTE AREAS), THE CONTRACTOR SHALL SUBMIT A SUPPLEMENTARY EROSION AND SEDIMENT CONTROL PLAN TO THE OWNER FOR REVIEW AND APPROVAL BY THE PLAN APPROVING AUTHORITY.
- THE CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF ANY ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES NECESSARY TO PREVENT EROSION AND SEDIMENTATION AS DETERMINED BY THE PLAN APPROVING AUTHORITY.

- ALL DISTURBED AREAS ARE TO DRAIN TO APPROVED SEDIMENT CONTROL MEASURES AT ALL TIMES DURING LAND DISTURBING ACTIVITIES AND DURING SITE DEVELOPMENT UNTIL FINAL STABILIZATION IS ACHIEVED.
- DURING DEWATERING OPERATIONS, WATER WILL BE PUMPED INTO AN APPROVED FILTERING DEVICE.
- THE CONTRACTOR SHALL INSPECT ALL EROSION AND SEDIMENT CONTROL MEASURES PERIODICALLY AND AFTER EACH RUNOFF-PRODUCING RAINFALL EVENT. ANY NECESSARY REPAIRS OR CLEANUP TO MAINTAIN THE EFFECTIVENESS OF THE EROSION CONTROL DEVICES SHALL BE MADE IMMEDIATELY.
- ALL POST-CONSTRUCTION STORMWATER MANAGEMENT FACILITIES SHALL BE KEPT OFF-LINE UNTIL CONSTRUCTION IS COMPLETED AND ALL AREAS HAVE BEEN PROPERLY STABILIZED.
- 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.

### PRE-STORM EROSION & SEDIMENTATION CHECKLIST:

PER GENERAL EROSION AND SEDIMENT CONTROL NOTE 6, THE CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF ANY ADDITIONAL EROSION AND SEDIMENT CONTROL (ESC) MEASURES NECESSARY TO PREVENT EROSION AND SEDIMENTATION AS DETERMINED BY THE COUNTY. THESE SUPPLEMENTARY PRACTICES ARE IN ADDITION TO THOSE SHOWN IN AN EROSION AND SEDIMENT CONTROL PLAN. EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE MODIFIED AS NEEDED TO ENSURE ONLY CLEAR WATER IS DISCHARGED FROM THE SITE.

THE FOLLOWING ACTIONS SHALL BE TAKEN PRIOR TO STORM EVENTS WITH PREDICTED HEAVY AND/OR LARGE VOLUME RAINFALL TO PREVENT SEDIMENT DISCHARGES FROM A CONSTRUCTION SITE. A TYPICAL SUMMER THUNDERSTORM IS AN EXAMPLE OF A STORM EVENT WITH PREDICTED HEAVY AND/OR LARGE VOLUME RAINFALL.

- PERIMETER CONTROLS
  - SILT FENCE SHALL BE CHECKED FOR UNDERMINING, HOLES, OR DETERIORATION OF THE FABRIC. FENCING SHALL BE REPLACED IMMEDIATELY IF THE FABRIC IS DAMAGED OR WON. SILT FENCE MUST BE TRENCHED INTO THE GROUND PER STATE SPECIFICATIONS (VESCH STD & SPEC 3.09).
  - WOODEN STAKES OR STEEL POSTS SHALL BE PROPERLY SECURED UPRIGHT INTO THE GROUND. DAMAGED POSTS OR STAKES MUST BE REPLACED.
  - SEDIMENT THAT HAS ACCUMULATED AGAINST THE SILT FENCE SHALL BE REMOVED. ACCUMULATED SEDIMENT MUST BE REMOVED WHEN THE LEVEL REACHES ONE-HALF THE HEIGHT OF THE FENCING.
  - HAY BALES OR A STONE BERM SHALL BE PLACED ACROSS THE CONSTRUCTION ENTRANCE TO PREVENT SEDIMENT FROM LEAVING THE CONSTRUCTION SITE.
- EXPOSED SLOPES AND SOIL
  - EXPOSED SLOPES NOT AT THE FINAL STABILIZATION PHASE SHALL BE COVERED WITH STRAW, TARPS, PLASTIC SHEETING, OR EROSION CONTROL MATTING. COVERING MATERIAL SHALL BE PROPERLY SECURED/ANCHORED.
  - CONTROLS SHALL BE INSTALLED TO PREVENT CONCENTRATED FLOW DOWN AN EXPOSED SLOPE. BERMS OR DIVERSION DIKES SHALL BE INSTALLED AT THE TOP OF CUT/EXPOSED SLOPES TO DIRECT STORM FLOW AROUND THE DISTURBED AREA.
  - EXPOSED SLOPES AT THE FINAL STABILIZATION PHASE SHALL BE STABILIZED USING SLOPE STABILIZATION PRACTICES SUCH AS SOIL STABILIZATION BLANKETS OR MATTING AS SPECIFIED IN THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK (VESCH STD & SPEC 3.36). BLANKETS OR MATS MUST BE PROPERLY SECURED AND ANCHORED TO THE SLOPE USING STAPLES, PINS, OR STAKES.
  - SEEDED AREAS SHALL BE CHECKED AND RESEEDED AS NECESSARY TO COVER EXPOSED SOIL. RECENTLY SEEDED AREAS SHALL BE PROTECTED BY STRAW OR SOIL STABILIZATION BLANKETS TO PREVENT SEEDING FROM BEING WASHED AWAY.
- STOCKPILES
  - STOCKPILED SOIL AND OTHER LOOSE MATERIALS THAT CAN BE WASHED AWAY SHALL BE COVERED WITH A TARP, PLASTIC SHEETING, OR OTHER STABILIZATION MATTING. THE COVER MUST BE PROPERLY SECURED/ANCHORED DOWN TO PREVENT IT FROM BEING BLOWN OFF AND EXPOSING MATERIALS TO RAIN. CONTROLS SUCH AS HAY BALES OR BOOMS SHALL BE PLACED ALONG THE PERIMETER OF THE STOCKPILE (DOWNHILL SIDE).

### UTILITY INSTALLATION:

UNDERGROUND UTILITY LINES SHALL BE INSTALLED IN ACCORDANCE WITH THE FOLLOWING STANDARDS IN ADDITION TO OTHER APPLICABLE CRITERIA:

- NO MORE THAN 100 LINEAR FEET OF TRENCH MAY BE OPENED AT ONE TIME.
- EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF TRENCHES.
- 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 STREAMS OR OFF-SITE PROPERTY.
- MATERIAL USED FOR BACKFILLING TRENCHES SHALL BE PROPERLY COMPACTED IN ORDER TO MINIMIZE EROSION AND PROMOTE STABILIZATION.
- STABILIZATION SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THESE REGULATIONS.
- APPLICABLE SAFETY REGULATIONS SHALL BE COMPLIED WITH.
- ANY DISTURBED AREA NOT COVERED BY NOTE #1 ABOVE AND PAVED, SODDED OR BUILT UPON BY NOVEMBER 1ST, OR DISTURBED AFTER THAT DATE, SHALL BE MULCHED WITH HAY OR STRAW AT THE RATE OF 2 TONS PER ACRE AND OVER-SEEDED NO LATER THAN MAY 15TH.
- AT THE COMPLETION OF THE CONSTRUCTION PROJECT AND PRIOR TO BOND RELEASE, ALL TEMPORARY SEDIMENT CONTROLS SHALL BE REMOVED AND ALL DENUDEED AREAS SHALL BE STABILIZED. ARLINGTON COUNTY INSPECTOR TO APPROVE REMOVAL OF ALL TEMPORARY SILTATION MEASURES.

### MAINTENANCE PROGRAM:

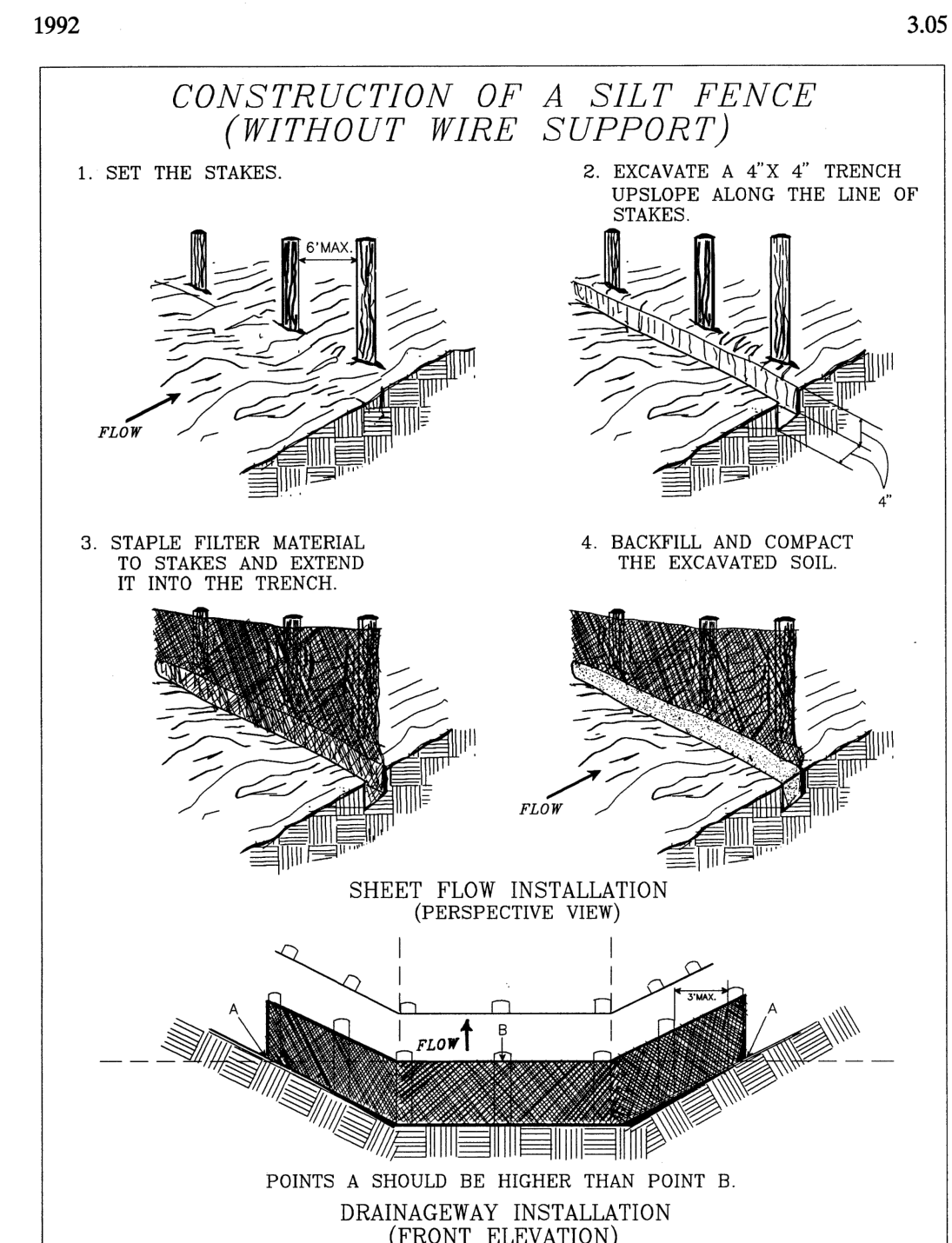
THE FOLLOWING MAINTENANCE PROGRAM WILL BE IMPLEMENTED FOR THE CONTROLS SPECIFIED IN THIS NARRATIVE AND ON THE PLAN:

- THE SITE SUPERINTENDENT OR HIS/HER REPRESENTATIVE SHALL MAKE A VISUAL INSPECTION OF ALL CONTROLS AND NEWLY STABILIZED AREA (I.E. SEEDED AND MULCHED AND/OR SODDED AREAS) ON A DAILY BASIS; ESPECIALLY AFTER A HEAVY RAINFALL EVENT TO ENSURE THAT ALL CONTROLS ARE MAINTAINED AND PROPERLY FUNCTIONING. ANY DAMAGED CONTROLS SHALL BE REPAIRED PRIOR TO THE END OF THE WORK DAY INCLUDING RE-SEEDING AND MULCHING OR RE-SODDING IF NECESSARY.
- ALL SEDIMENT TRAPPING DEVICES SHALL BE CLEARED OUT AT 50% TRAP CAPACITY AND THE SEDIMENT SHALL BE DISPOSED OF BY SPREADING ON THE SITE OR IF NOT SUITABLE FOR FILL, HAULING AWAY AND DEPOSITING AT AN ACCEPTABLE DUMP SITE.
- THE CONTRACTOR SHALL TAKE SPECIAL CARE TO PREVENT MUD AND/OR OTHER DEBRIS FROM ENTERING EXISTING SWM/BMP FACILITIES OR WATERWAYS. SHOULD OFF-SITE AREAS BECOME POLLUTED BY CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING THE AFFECTED AREAS TO THE SATISFACTION OF THE INSPECTOR.
- AT THE COMPLETION OF CONSTRUCTION AND PRIOR TO BOND RELEASE, ALL TEMPORARY SEDIMENT CONTROLS SHALL BE REMOVED AND ANY REMAINING DENUDEED AREAS SHALL BE STABILIZED. CERTAIN DEVICES MAY BE REMOVED PRIOR TO CONSTRUCTION COMPLETION BUT ONLY WITH THE APPROVAL OF THE COUNTY INSPECTOR.
- AFTER CONSTRUCTION OPERATIONS HAVE ENDED, ALL DISTURBED AREAS SHALL BE STABILIZED. UPON APPROVAL OF THE COUNTY INSPECTOR, SEDIMENT CONTROLS SHALL BE REMOVED AND THE GROUND PERMANENTLY STABILIZED WITH ESTABLISHED VEGETATION WITHIN 30 DAYS.



## ADDITIONAL E&S CONTROL DETAILS

## ADDITIONAL E&S CONTROL DETAILS



Source: Adapted from Installation of Straw and Fabric Filter Barriers for Sediment Control, Sherwood and Wyatt Plate 3.05-2

III - 25

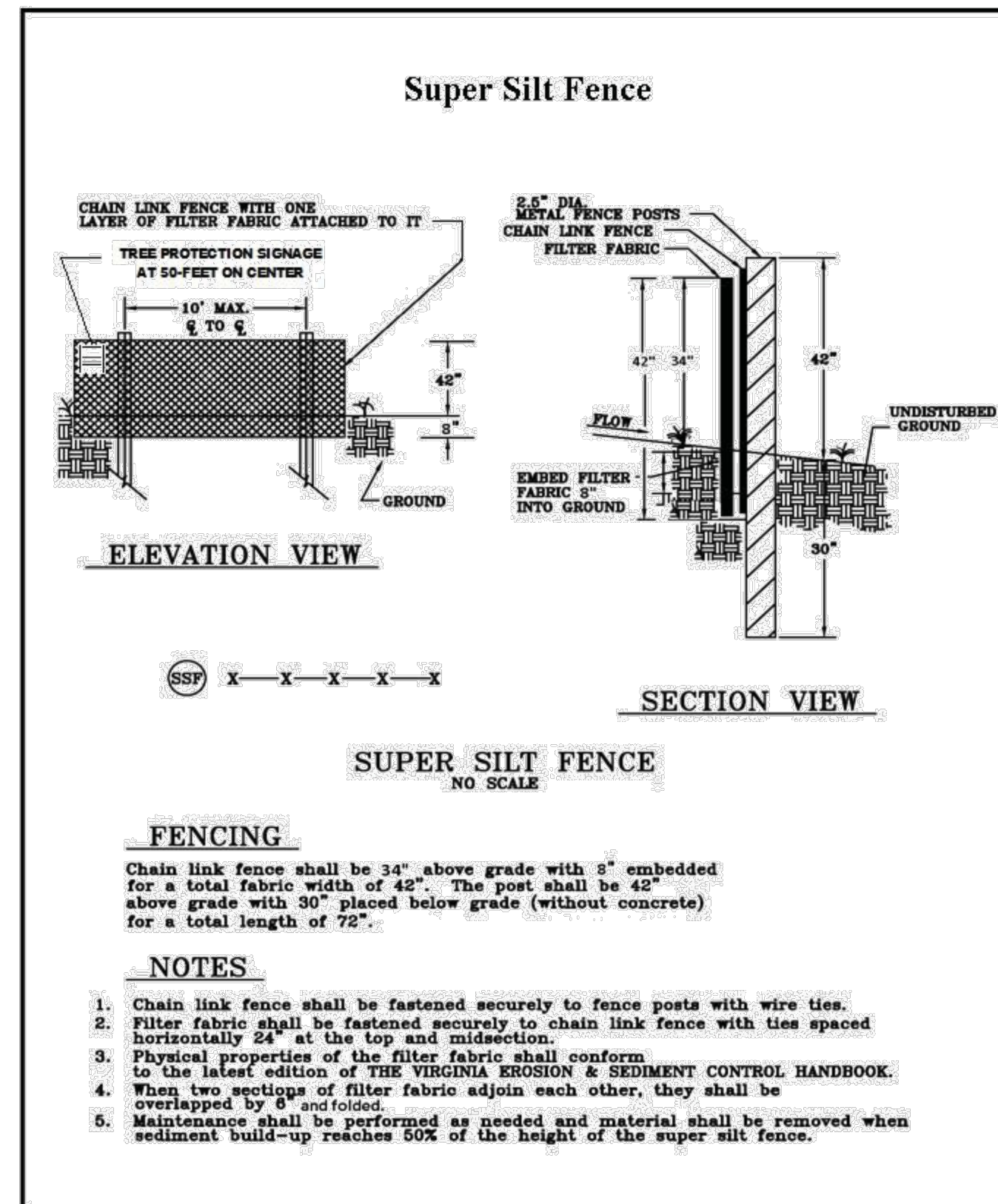


Plate 3.02-1

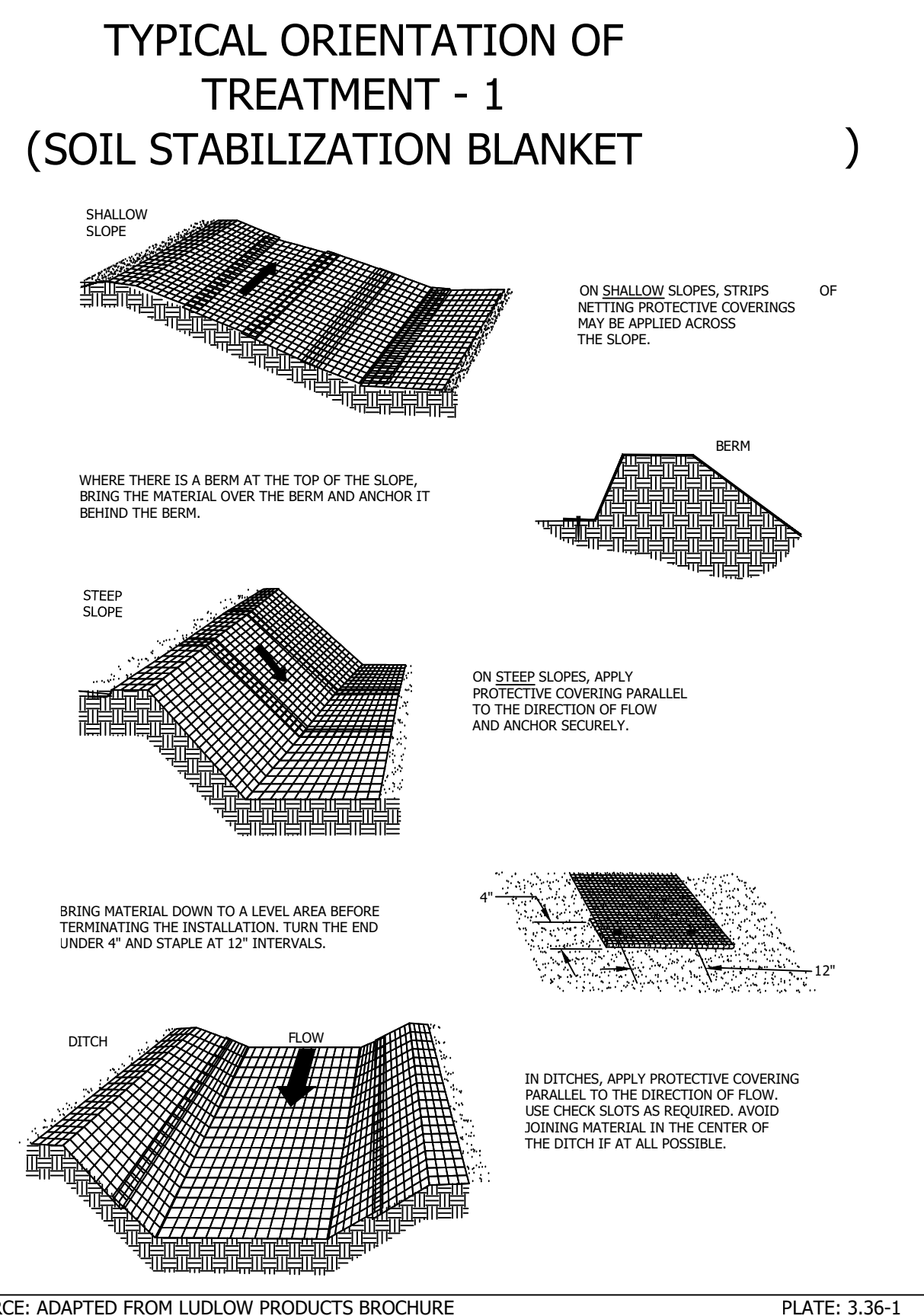
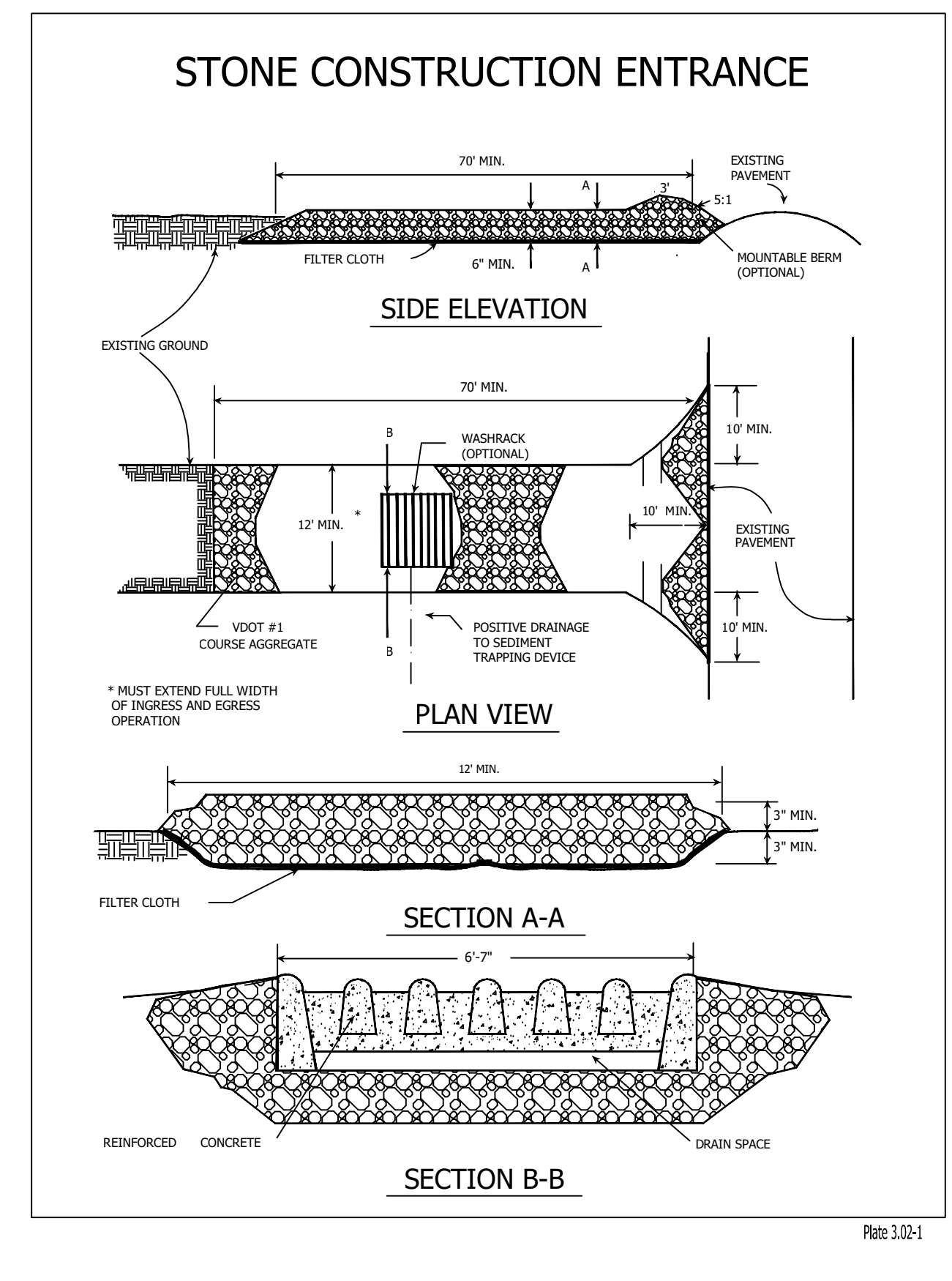
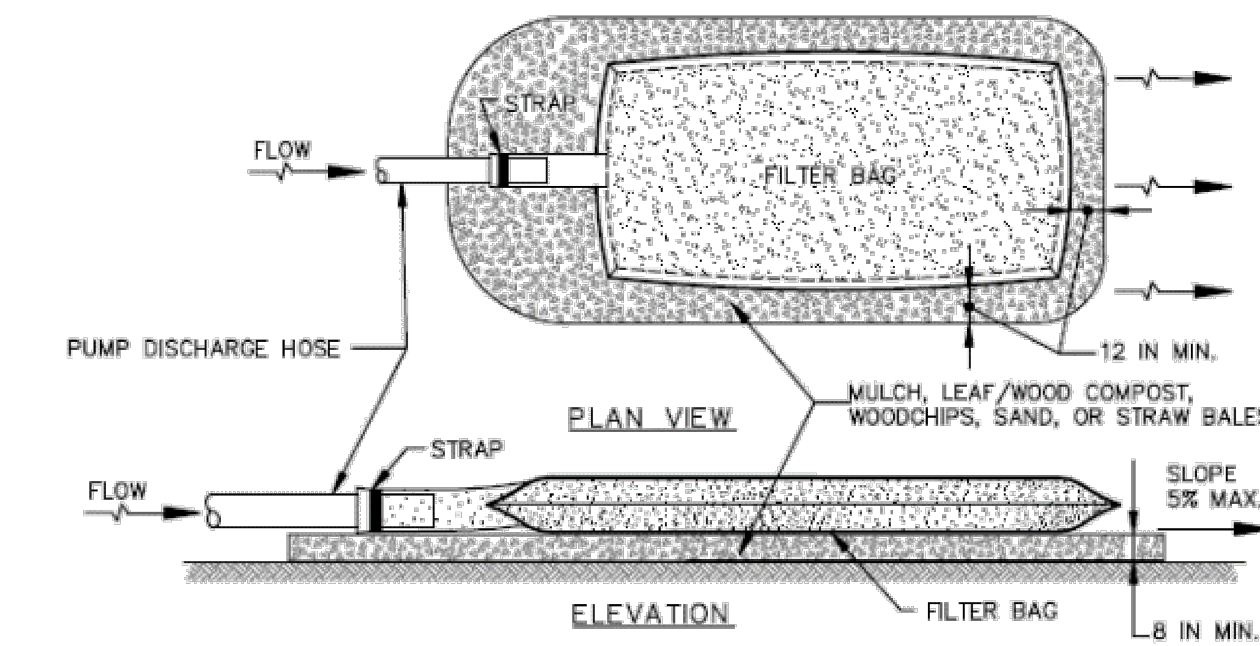


PLATE: 3.36-1



Filter Bag

The Maryland Standard F-4 for a filter bag is provided as an acceptable option for use in Arlington County if straw bales or stone are used as the layer under the filter bag. The use of mulch, leaf/wood compost, woodchips or sand is not acceptable.



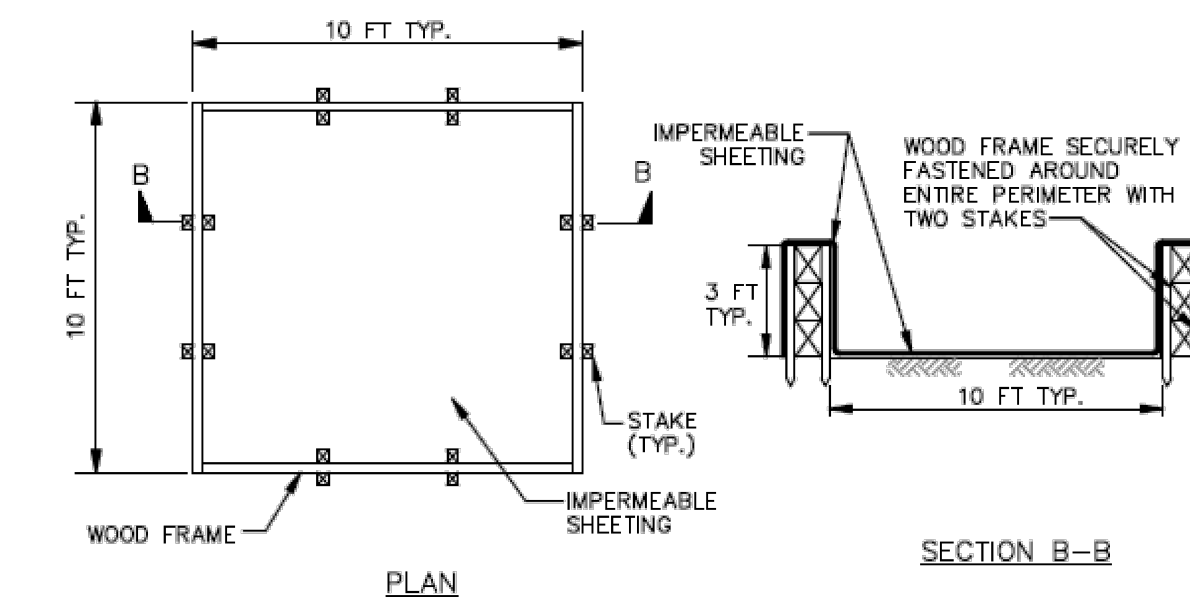
**CONSTRUCTION SPECIFICATIONS**

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

GRAB TENSILE	250 LB	ASTM D-4632
PUNCTURE	150 LB	ASTM D-4833
FLOW RATE	70 GAL/MIN/FT <sup>2</sup>	ASTM D-4491
PERMITTIVITY (SEC <sup>-1</sup> )	1.2 SEC <sup>-1</sup>	ASTM D-4491
UV RESISTANCE	70% STRENGTH @ 500 HOURS	ASTM D-4355
APPARENT OPENING SIZE (AOS)	0.15-0.18 MM	ASTM D-4751
SEAM STRENGTH	90%	ASTM D-4632
6. REPLACE FILTER BAG IF BAG CLOGS OR HAS RIPS, TEARS, OR PUNCTURES. DURING OPERATION KEEP CONNECTION BETWEEN PUMP HOSE AND FILTER BAG WATER TIGHT. REPLACE BEDDING IF IT BECOMES DISPLACED.

Washout Structure with Wood Planks

The Maryland Standard H-6 for an onsite concrete washout structure is provided as an acceptable option for use in Arlington County.





REVISED: July 8, 2021

SOIL PROFILE REBUILDING TABLE	
SOIL PROFILE REBUILDING TOTAL AREA:	
REQUIRED COMPOST VOLUME:	
REQUIRED TOPSOIL VOLUME:	

# SOIL PROFILE REBUILDING EXHIBIT

## SWM MMA SHEET 2

TEXT IS TO BE NO SMALLER THAN 0.1

## SWM MMA SHEET 4

TEXT IS TO BE NO SMALLER THAN 0.1

## SWM MMA SHEET 6

TEXT IS TO BE NO SMALLER THAN 0.1

## SWM MMA SHEET 3

TEXT IS TO BE NO SMALLER THAN 0.1

## SWM MMA SHEET 5

TEXT IS TO BE NO SMALLER THAN 0.1

### SOIL PROFILE REBUILDING STEPS:

STEP ONE: APPLY 4 INCHES OF COMPOST OVER SURFACE SPREAD MATURE, STABLE COMPOST (SEE DEFINITIONS BELOW FOR DEFINITION OF STABLE COMPOST) TO A 4 INCH DEPTH OVER COMPACTED SUBSOIL.

STEP TWO: SUBSOIL WITH BACKHOE TO 24 INCH DEPTH  
SUBSOILING SHOULD BE PERFORMED WHEN SOIL IS NEITHER WET NOR DRY. USE A BACKHOE REARBUCKET OR SIMILAR EQUIPMENT WITH A TINED BUCKET TO BREAK UP THE COMPACTED SOIL AND INCORPORATE THE COMPOST. WORK BACKWARDS AWAY FROM EXCAVATED SOILS SO THAT TREATED SOIL IS NOT TRAFFICKED BY THE EQUIPMENT. INSERT THE BUCKET THROUGH THE COMPOST LAYER AND INTO THE SUBSOIL TO A DEPTH OF 24 INCHES AND RAISE A BUCKET OF SOIL A FEW FEET ABOVE THE SOIL SURFACE. TIP THE BUCKET AND ALLOW SOIL TO FALL. REPEAT THIS PROCEDURE UNTIL NO CLUMPS OF COMPACTED SOIL LARGER THAN 12 INCHES IN DIAMETER REMAIN. THE TINES OF THE BUCKET CAN BE USED TO BREAK APART LARGER CLUMPS IF NECESSARY. CONTINUE TO BREAK UP CLUMPS UNTIL AT LEAST 50% OF THE SOIL IS IN CLUMPS 6 INCHES OR SMALLER. A PUSH TUBE SOIL SAMPLER CAN BE USED TO VERIFY COMPOST IS PRESENT AT 24 INCH DEPTH IF NEEDED. THE SUBSOILING IS NOT INTENDED TO HOMOGENIZE THE COMPOST AND SOIL, BUT RATHER LOOSEN THE SOIL TO A 24-INCH DEPTH AND CREATE VEINS OF COMPOST DOWN TO THAT DEPTH AS WELL.

STEP THREE: REPLACE OR ADD TOPSOIL  
STANDARD PROCEDURE--NO TOPSOIL WAS PRESENT DURING SUBSOILING RETURN STOCKPILED TOPSOIL, OR ADDITIONAL TOPSOIL IF NONE IS AVAILABLE FROM THE SITE, TO THE SOIL SURFACE TO A 4-INCH MINIMUM DEPTH. IF SOIL WAS SEVERELY DISTURBED (FOR EXAMPLE, THE GRADE WAS LOWERED, OR THE SITE WAS COMPACTED IN LIFTS), 6-8 INCHES SHOULD BE USED.  
MODIFIED PROCEDURE--SIGNIFICANT TOPSOIL WAS ALREADY PRESENT BEFORE SUBSOILING SOMEWHAT LESS TOPSOIL CAN BE USED IF SIGNIFICANT TOPSOIL WAS ALREADY PRESENT BEFORE SUBSOILING, BUT ALWAYS APPLY AT LEAST 3 INCHES SINCE MUCH OF THE PRE-EXISTING TOPSOIL WILL HAVE BECOME INCORPORATED IN THE SUBSOIL.

STEP FOUR: TILL THE TOPSOIL AND BREAK UP THE TOPSOIL SUBSOIL INTERFACE  
ROTOTILL TOPSOIL TO A DEPTH OF 6-8 INCHES WHEN SOIL IS NEITHER DRY NOR VERY MOIST. ROTOTILLING DEPTH SHOULD IDEALLY CROSS THE INTERFACE WITH THE SUBSOILED LAYER.

# SWPPP SECTIONS 2, 5, & 7

TEXT IS TO BE NO SMALLER THAN 0.1

# SWPPP SECTIONS 2, 5, & 7

TEXT IS TO BE NO SMALLER THAN 0.1

# RLD FORM

TEXT IS TO BE NO SMALLER THAN 0.1

### **POLLUTION PREVENTION PLAN NOTES (STORMWATER MANUAL - SECTION 2.4)**

1. ONLY THE FOLLOWING NON-STORMWATER DISCHARGES ARE AUTHORIZED BY ARLINGTON COUNTY'S MS4 PERMIT, UNLESS THE STATE WATER CONTROL BOARD OR ARLINGTON COUNTY DETERMINES THE DISCHARGE TO BE A SIGNIFICANT SOURCE OF POLLUTANTS TO SURFACE WATERS:
  - a. WATER LINE FLUSHING (MANAGED IN A MANNER TO AVOID AN INSTREAM IMPACT); LANDSCAPE IRRIGATION; DIVERTED STREAM FLOWS; RISING GROUND WATERS; UNCONTAMINATED GROUND WATER INFILTRATION (AS DEFINED AT 40 CFR 35.2005(20)); UNCONTAMINATED PUMPED GROUND WATER; DISCHARGES FROM POTABLE WATER SOURCES; FOUNDATION DRAINS; AIR CONDITIONING CONDENSATION; IRRIGATION WATER; SPRINGS; WATER FROM CRAWL SPACE PUMPS; FOOTING DRAINS; LAWN WATERING; INDIVIDUAL RESIDENTIAL CAR WASHING; FLOWS FROM RIPARIAN HABITATS AND WETLANDS; DECHLORINATED SWIMMING POOL DISCHARGES; STREET WATER WASHING; DISCHARGES OR FLOWS FROM EMERGENCY FIREFIGHTING ACTIVITIES; AND, OTHER ACTIVITIES GENERATING DISCHARGES IDENTIFIED BY THE DEPARTMENT OF ENVIRONMENTAL QUALITY AS NOT REQUIRING VPDES AUTHORIZATION.
2. APPROPRIATE CONTROLS MUST BE IMPLEMENTED TO PREVENT ANY NON-STORMWATER DISCHARGES NOT INCLUDED ON THE ABOVE LIST (E.G., CONCRETE WASH WATER, PAINT WASH WATER, VEHICLE WASH WATER, DETERGENT WASH WATER, SLURRY/WASH WATER FROM SAW CUTTING ACTIVITIES, ETC.) FROM BEING DISCHARGED INTO ARLINGTON COUNTY'S MUNICIPAL STORM SEWER SYSTEM (MS4), OR STREAM NETWORK.
3. PER CHAPTER 26.5C OF THE ARLINGTON COUNTY CODE, IT SHALL BE UNLAWFUL FOR ANY PERSON TO DISCHARGE DIRECTLY OR INDIRECTLY INTO THE STORM SEWER SYSTEM OR STATE WATERS, ANY SUBSTANCE LIKELY, IN THE OPINION OF THE COUNTY MANAGER, TO HAVE AN ADVERSE EFFECT ON THE STORM SEWER SYSTEM OR STATE WATERS.



REVISED: July 8, 2021

**TREE CONSERVATION NOTES:**

- BEFORE ANY GRADING, DEMOLITION, OR OTHER DISTURBANCE, INCLUDING TREE REMOVAL, A PRECONSTRUCTION MEETING SHALL BE HELD WITH AN ARLINGTON COUNTY URBAN FORESTER. CHANGES TO THE PLAN, BASED ON FIELD CONDITIONS, MAY BE REQUESTED BY THE URBAN FORESTER AT THE TIME OF THE PRECONSTRUCTION MEETING.
- TREE PROTECTION SHALL BE INSTALLED PER PLAN, WITH ANY CHANGES REQUESTED AT THE PRECONSTRUCTION MEETING, AND INSPECTED BY AN ARLINGTON COUNTY URBAN FORESTER. EROSION AND SEDIMENT CONTROLS ARE INSPECTED BY THE DEPARTMENT OF ENVIRONMENTAL SERVICES.
- REMOVAL OF TREES, NOTED FOR REMOVAL ON THE PLAN, INSIDE A TREE PRESERVATION AREA SHALL BE PERFORMED, BY HAND, WITHOUT GROUND DISTURBANCE, OR DISTURBANCE TO NEARBY PRESERVED TREES. TREES IN THESE AREAS SHALL BE CUT FLUSH TO THE GROUND, WITHOUT STUMP GRINDING.
- NO CHANGES SHALL BE MADE TO TREE PRESERVATION OR PROPOSED LANDSCAPE UNLESS DIRECTED BY AN ARLINGTON COUNTY URBAN FORESTER.
- DO NOT REMOVE TREES ON OTHER PROPERTIES, OR RIGHTS-OF-WAY, WITHOUT WRITTEN PERMISSION OF THE OWNER.
- TREE PROTECTION AREAS SHALL HAVE ALL NON-NATIVE INVASIVE VINES REMOVED AT THE END OF THE PROJECT. WHERE DEEMED NECESSARY BY THE COUNTY URBAN FORESTER TO ENSURE TREE SURVIVAL, THE PROTECTION AREA SHALL BE COVERED WITH SHREDDED HARDWOOD MULCH, OR OTHER ORGANIC MULCH AS APPROVED BY THE COUNTY URBAN FORESTER.
- AT THE END OF THE PROJECT, PRESERVED AND PLANTED TREES MUST BE INSPECTED AND APPROVED BY AN ARLINGTON COUNTY URBAN FORESTER.

**LANDSCAPE CONSERVATION NOTES:**

- TEXT SIZE TO BE NO LESS THAN 0.10

(INSERT NORTH ARROW)

LEGEND		
ITEM	EXISTING	PROPOSED
LIMITS OF DISTURBANCE	--- LOD --- LOD ---	--- LOD --- LOD ---
PROPERTY LINE	-----	-----
CONTOURS - MAJOR, MINOR	--- 250 --- 250 ---	--- 250 ---
CRITICAL ROOT ZONE	--- CRZ --- CRZ ---	--- CRZ --- CRZ ---
TREE CANOPY		
TREE PROTECTION FENCE	--- TP --- TP ---	--- TP --- TP ---
PROPOSED TREE REMOVAL		
TREE CANOPY CONSERVED		

**CANOPY CALCULATIONS**

CANOPY CALCULATION (SQUARE FEET)	
PARCEL SIZE	
TREE CANOPY REQUIRED (20%)	
LARGE CANOPY TREE CONSERVED (X2 BONUS)	
SMALL CANOPY TREE CANOPY CONSERVED	
TREE CANOPY REMAINING TO PLANT	
TREE CANOPY PLANTED	
TOTAL TREE CANOPY (CONSERVATION AND PLANTING)	

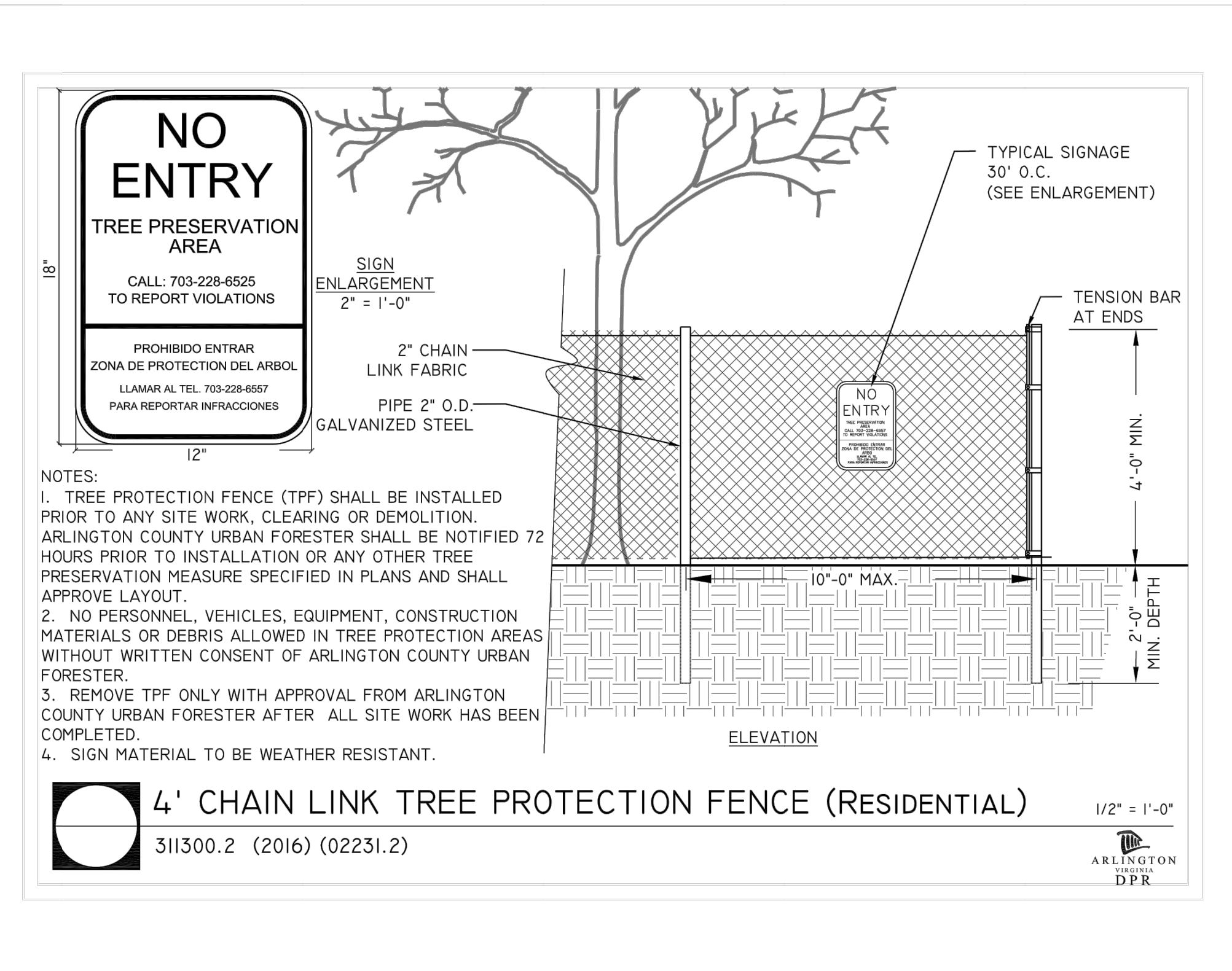
**TREE SURVEY INFORMATION**

PROPERTY ADDRESS												
TREE SURVEY INFORMATION COMPLETED BY: FAKE NAME #MA-1234A DATE												
TREE #	BOTANICAL NAME	COMMON NAME	SIZE (DBH)	SPECIES RATING	CONDITION	ACTION	REPLACEMENT CALCULATION	REPLACEMENT	CRZ IMPACTED	CANOPY CONSERVED	CONSERVATION CREDIT	NOTES
TOTAL:												

EXISTING VEGETATION AND TREE PROTECTION PLAN

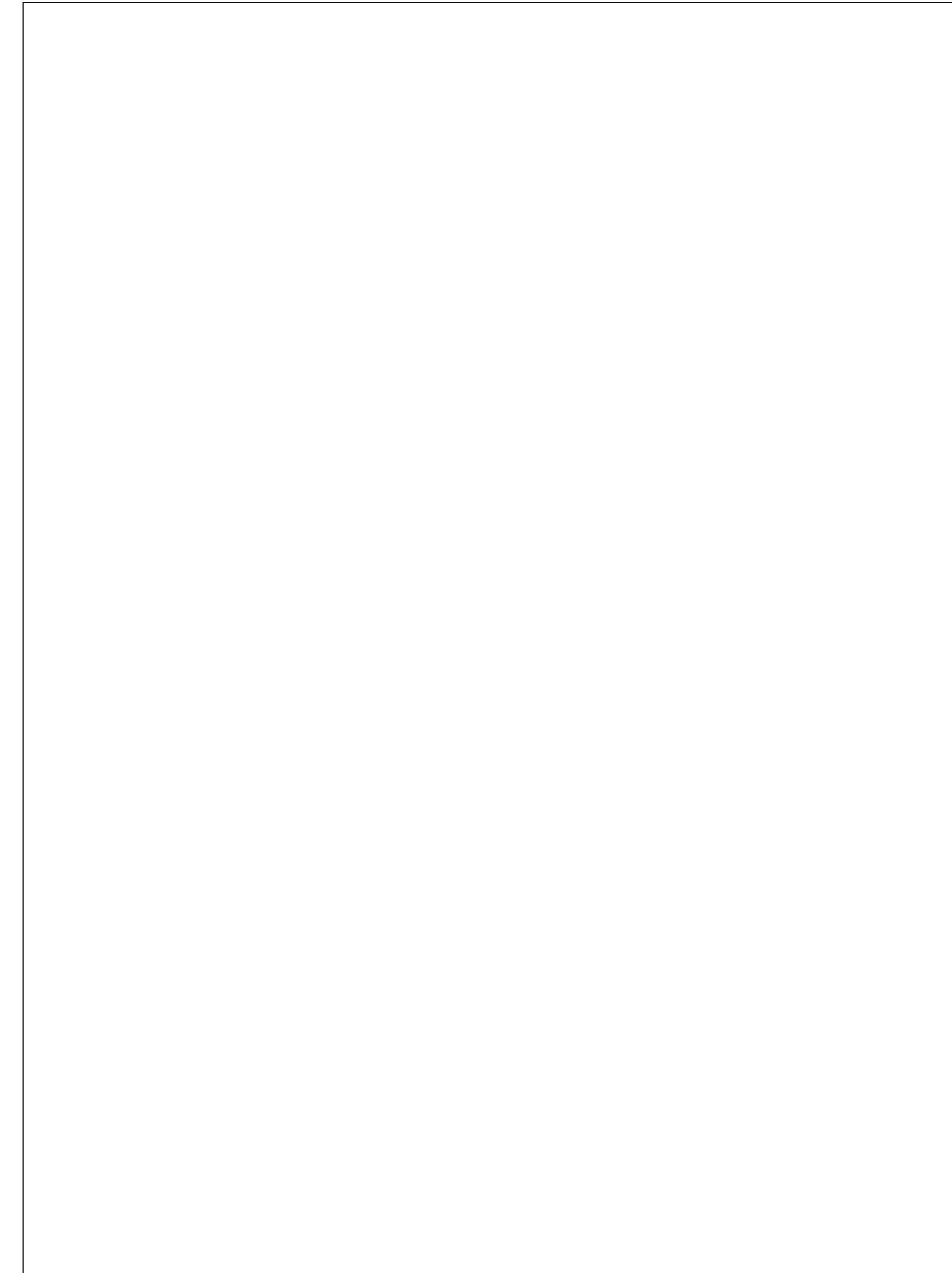
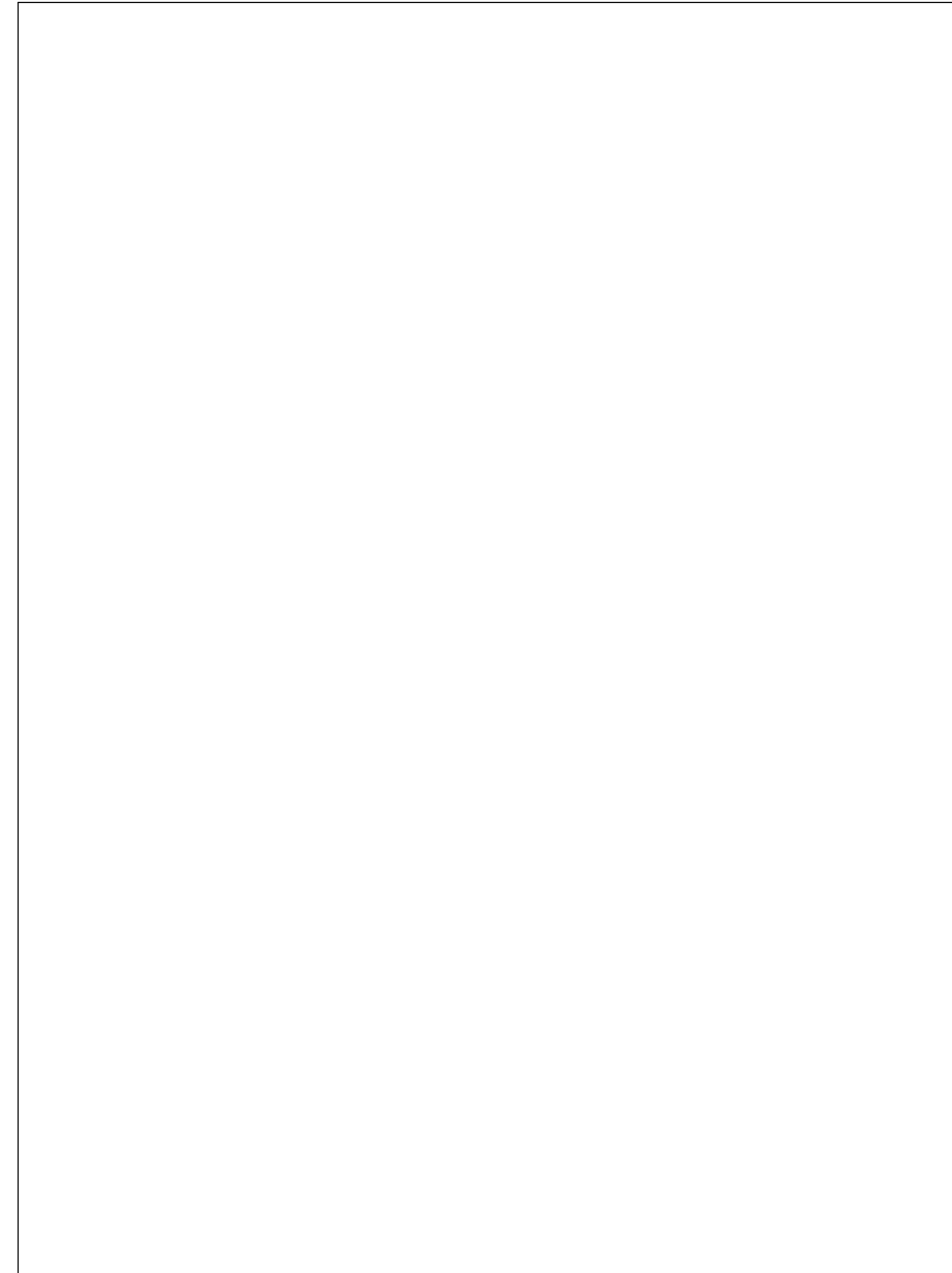
(INSERT SCALE)



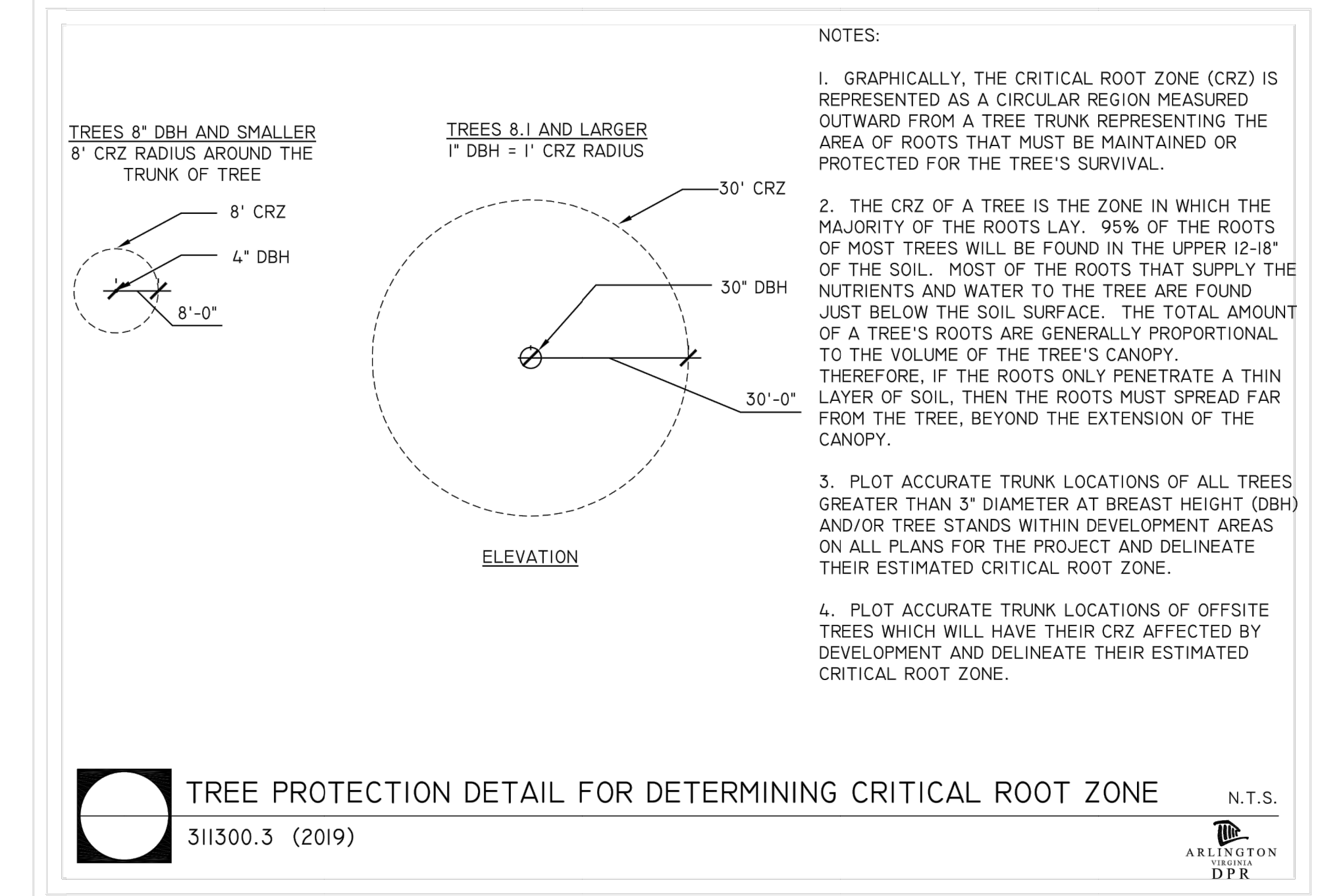
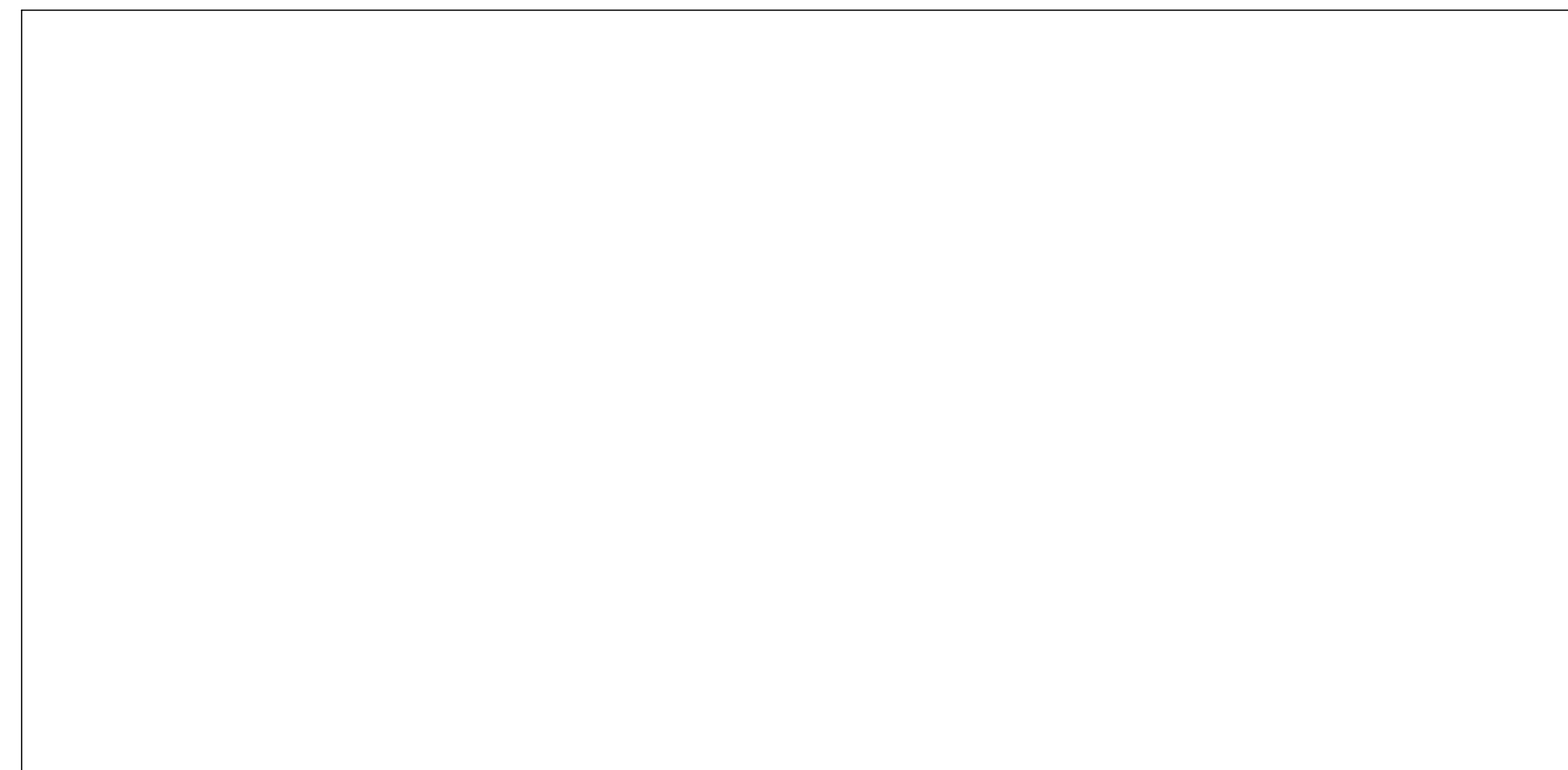


**LETTER TO NEIGHBOR**

**LETTER TO NEIGHBOR**



**CERTIFIED MAIL RECEIPTS**



(INSERT NORTH ARROW)

(INSERT NORTH ARROW)

**EXISTING CONDITIONS  
DRAINAGE AREA MAP**

**PROPOSED CONDITIONS  
DRAINAGE AREA MAP**

**DRAINAGE AREA MAP NARRATIVE**

TEXT SIZE TO BE NO LESS THAN 0.10

**DRAINAGE AREA MAP NOTES**

1. TEXT SIZE TO BE NO LESS THAN 0.10

**DRAINAGE AREA MAP LEGEND**

— LOD — LOD —	LIMITS OF DISTURBANCE
— — — — —	PROPERTY LINE
--- 250 --- 250 ---	EXISTING CONTOUR
— 250 —	PROPOSED CONTOUR
- - - - -	EXISTING DRAINAGE DIVIDE
- - - - -	PROPOSED DRAINAGE DIVIDE

IMPERVIOUS AREA CALCULATIONS				
	PRE-DEVELOPMENT		POST-DEVELOPMENT	
	TO ROW	TO ADJACENT	TO ROW	TO ADJACENT
ROOF				
DRIVEWAY				
PATIO				
WALKS				
RETAINING WALLS				
SHED				
<b>TOTAL</b>	<b>###</b>	<b>###</b>	<b>###</b>	<b>###</b>

DRAINAGE AREA MAPS

(INSERT SCALE)



DEQ Virginia Runoff Reduction Method Re-Development Compliance Spreadsheet - Version 3.0

Project Name:   
 Date:   
 Linear Development Project?  No

CLEAR ALL  
(Ctrl+Shift+R)

- data input cells
- constant values
- calculation cells
- final results

Site Information

ENTER AREAS IN DATA INPUT CELLS FOR RESULTS

Post-Development Project (Treatment Volume and Loads)

Enter Total Disturbed Area (acres) →

Maximum reduction required:	--
The site's net increase in impervious cover (acres) is:	--
Post-Development TP Load Reduction for Site (lb/yr):	--

Check:  
 BMP Design Specifications List: 2013 Draft Stds & Specs  
 Linear project? No  
 Land cover areas entered correctly? \_\_\_  
 Total disturbed area entered? \_\_\_

Pre-ReDevelopment Land Cover (acres)

	A Soils	B Soils	C Soils	D Soils	Totals
Forest/Open Space (acres) -- undisturbed forest/open space					0.0000
Managed Turf (acres) -- disturbed, graded for yards or other turf to be					0.0000
Impervious Cover (acres)					0.0000
					0.0000

Post-Development Land Cover (acres)

	A Soils	B Soils	C Soils	D Soils	Totals
Forest/Open Space (acres) -- undisturbed, protected forest/open space or reforested					0.0000
Managed Turf (acres) -- disturbed, graded for yards or other turf to be					0.0000
Impervious Cover (acres)					0.0000
Area Check	OK.	OK.	OK.	OK.	0.0000

Stormwater Management Facility Information- Revised 6/24/2020

Downhill	Facility Type**	Description	Location	LDA Permit #	Project SWM #	Building Permit #	Facility ID	BMP downstream of another BMP (in Series)?	Upstream (Primary) BMP	Chesapeake Bay Segment	Watershed	HUC6	Soils	Runoff Treated (in)	Volume Treated (ft <sup>3</sup> )	Treated Area (acres)	Forest Area (acres)	Turf Area (acres)	Impervious Area (acres)	RPC	Phosphorus Efficiency (%)	Nitrogen Efficiency (%)	Sediment Efficiency (%)	TP load removed (lbs)	TN load removed (lbs)
UPB-1	BIORETENTION #1			0	0		0A							1.00	4.2	0.0184	0.0000	0.0	0.0184		55.00	64.00	75.00		
3.a. Permeable Pavement #1 (Spec #7)	PERMEABLE PAVEMENT #1			0	0	0	0B							1.00	0.0	0.0103	0.0000	0.0	0.0103		59.00	59.00	75.00		
														#N/A	#N/A	#N/A	0.0000	#N/A	#N/A						
														#N/A	#N/A	#N/A	0.0000	#N/A	#N/A						

TOTAL SITE AREA	Areas (SF)	Detention (CF)	Rainfall volume (IN)	
Site area	8000		3.0	
Total impervious area	3200			
	40.0%			
Roof	2800			
Paving	450			
		Required	Achieved	
Impervious area increase	1200	285	359	126%
				285
DOWNHILL DRAINAGE AREA (DDA)		Required	Achieved	
Total impervious increase	1200	274	359	131% OK
Roof area increase	1000	238	246	104% OK
		Tanks	73%	OK
WATER QUALITY COMPLIANCE		75% requirement	81%	OK
		No net increase requirement	NA	

	DDA		NDDA		
	Area (sf)	Detention credit (cf)	Area (sf)	Detention credit (cf)	
Tanks	1200	174	48%	0	#DIV/0!
2.i. To Stormwater Planter	1400	72	20%	0	#DIV/0!
2.f. To Rain Garden #1, Micro-Bioretenion #1	0	0	0%	0	#DIV/0!
2.g. To Rain Garden #2, Micro-Bioretenion #2	0	0	0%	0	#DIV/0!
3.a. Permeable Pavement #1 (Spec #7)	450	86	24%	0	#DIV/0!
3.b. Permeable Pavement #2 (Spec #7)	0	0	0%	0	#DIV/0!
Trees		27	8%		#DIV/0!
		359		0	

STORMWATER MANAGEMENT NARRATIVE

WATER QUALITY

TEXT SIZE TO BE NO LESS THAN 0.10

WATER QUANTITY

TEXT SIZE TO BE NO LESS THAN 0.10

ALTERNATIVE COMPLIANCE OPTION  
 STORMWATER MANAGEMENT  
 COMPUTATIONS



**Construction Inspection Checklist: Permeable Pavement (March 2020)**

ARLINGTON VIRGINIA

Address/Location: \_\_\_\_\_ Building Permit #: \_\_\_\_\_  
 LDA Permit #: \_\_\_\_\_ SWM#: \_\_\_\_\_  
 Contractor: \_\_\_\_\_ Telephone: \_\_\_\_\_

**Installer / Contractor's Certification (Required)**

Permeable Interlocking Pavers: Name of ICPI Certified Installer or PICP Specialist: \_\_\_\_\_ Craftsman Certification Number: \_\_\_\_\_  
 Pervious Concrete: NRMCA Installer or Craftsman Certification Number: \_\_\_\_\_  
 Certifying Professional\*: \_\_\_\_\_ Telephone: \_\_\_\_\_  
 Date Started: \_\_\_\_\_ Final Inspection Date: \_\_\_\_\_

\*Certifying professional must be a licensed Professional Engineer (PE), Landscape Architect (LA), or Land Surveyor (LS).

The following checklist provides a basic outline of the anticipated items for the construction inspection of permeable pavement. This checklist does not necessarily differentiate between the types of pavement materials and the different construction requirements. Inspectors should review the plans carefully, and adjust these items and the timing of inspection verification as needed to ensure the intent of the design is met. The standard for design of this practice is based on Virginia Stormwater BMP Clearinghouse and Arlington County Stormwater Guidance Manual.

All items should be crossed off when completed. Items labeled "Certification of..." must be crossed off, dated and initialed by the certifying inspector.

PRE-CONSTRUCTION MEETING	DATE
<input type="checkbox"/> Walk through site with builder/contractor/subcontractor to review the SWPPP (erosion and sediment control plan, the stormwater management plan, and the Pollution Prevention plan)	
<input type="checkbox"/> Determine when permeable pavement is built in project construction sequence; before or after building construction and determine measures for protection and surface cleaning.	
<input type="checkbox"/> Identify the tentative schedule for construction, verify the certification of the installer (ICPI for permeable interlocking pavers or NRMCA for pervious concrete) and requirements and schedule for interim inspections.	
<input type="checkbox"/> Storage locations for aggregate material have been identified (hard surface or on geotextile).	
<input type="checkbox"/> Conduct a pre-construction meeting with the contractor designated to install the permeable pavement, the person completing this checklist, and the County DES Stormwater Specialist inspector (schedule via stormwaterreview@arlingtonva.us).	

SEDIMENT MANAGEMENT	DATE
<input type="checkbox"/> Access routes for delivery and construction vehicles identified.	
<input type="checkbox"/> Vehicle tire/track washing station location/maintenance (if specified in the erosion and sediment control plan/SWPPP).	
<input type="checkbox"/> Contributing drainage areas are stabilized and are not eroding.	

EXCAVATION	DATE
<input type="checkbox"/> Excavated area marked with paint and/or stakes.	
<input type="checkbox"/> Excavation size and location conforms to plan.	
<input type="checkbox"/> Runoff is diverted around the excavation area to a stabilized conveyance.	
<input type="checkbox"/> If excavation is used as a sediment trap, verify that the bottom elevation of the proposed stone reservoir is lower than the bottom elevation of the existing trap.	
<input type="checkbox"/> Subgrade surface is free of rocks and roots, and large voids. Any voids should be refilled with the base aggregate to create a level surface for the placement of aggregates and underdrain (if required).	
<input type="checkbox"/> For Level 2 permeable pavement, ensure the bottom of the excavation is scarified prior to placement of stone.	
<input type="checkbox"/> No groundwater seepage or standing water is present. Any standing water is dewatered to an acceptable dewatering device.	
<input type="checkbox"/> The excavation has achieved the proper elevations and grade (0% slope) as noted on the approved plans.	
<b>Certification of Excavation Inspection:</b> Inspector certifies the successful completion of the excavation steps listed above.	
<input type="checkbox"/> For Level 2, field infiltration test results at excavation bottom: Photos required include excavated subgrade prior to covering with fabric and stone, and include measurement from subgrade to reference point (i.e., top of edge restraint, top of apron, top of garage entrance, top of flow barriers and flow barrier excavation cuts, etc.).	

FILTER LAYER, UNDERDRAIN, STONE RESERVOIR, AND BEDDING LAYER PLACEMENT	DATE
<input type="checkbox"/> All aggregates, including, as required, the filter layer (choker stone & sand or geotextile), the reservoir layer, and bedding layer conform to specifications as certified by quarry.	
<input type="checkbox"/> Underdrain size and perforations meet the specifications (if applicable).	
<input type="checkbox"/> Placement of filter layer and initial layer of reservoir layer aggregates (approximately 2 inches) spread (not dumped) to avoid aggregate segregation.	
<input type="checkbox"/> Placement of underdrain, observation wells, and underdrain fittings in accordance with the approved plans.	
<input type="checkbox"/> Concrete curbs or plastic/metal edge restraints are installed.	
<input type="checkbox"/> Sides of excavation covered with geotextile, prior to placing stone reservoir aggregate; no tears or holes, or excessive wrinkles are present.	
<input type="checkbox"/> Flow barriers are properly installed (if applicable).	
<input type="checkbox"/> Stone reservoir layer and bedding layer is properly installed.	
<b>Certification of Filter Layer, Underdrain, Stone Reservoir and Bedding Layer Inspection:</b> Inspector certifies the successful completion of the filter layer, underdrain, stone reservoir and bedding layer placement steps listed above. Photos and material delivery tickets for these items are attached.	
Photos required include: <input type="checkbox"/> Non-woven geotextile fabric installed on bottom and sides of excavated subgrade; <input type="checkbox"/> Perforated observation well prior to installation of stone; <input type="checkbox"/> Perforated underdrain (if applicable) and connection to storm sewer or dry well; <input type="checkbox"/> Depth of #2 or #3 stone installed (if applicable); <input type="checkbox"/> Edge restraints; <input type="checkbox"/> Depth of #57 stone installed; <input type="checkbox"/> Depth of #8 stone installed.	
Photos required of flow barrier (if applicable): <input type="checkbox"/> 12" height of berm; <input type="checkbox"/> 12" height of cut for flow barrier; <input type="checkbox"/> Impermeable liner; <input type="checkbox"/> Distance between flow barriers.	
Material delivery tickets required include: <input type="checkbox"/> Choker stone & sand or geotextile installed at subbase; <input type="checkbox"/> Geotextile installed along sides; <input type="checkbox"/> Impermeable liner on gravel flow berms (if applicable); <input type="checkbox"/> #2 or #3 stone (if applicable), #57 stone, #8 stone.	

PERMEABLE PAVERS OR PERVIOUS CONCRETE INSTALLATION	DATE
<input type="checkbox"/> Permeable paver surface is installed.	
<input type="checkbox"/> If pavers are used, the joints are full of #8 or #9 stone.	
<b>Certification of Pavement Installation:</b> Contractor and/or manufacturer certifies that permeable pavement has been placed in accordance with manufacturers specifications (ICPI Tech Spec #18 for interlocking concrete pavers or ACI#622.1-13 for pervious concrete).	
Photos required include: <input type="checkbox"/> Overall of completed installation; <input type="checkbox"/> Observation well with proper cap installed.	
For Level 2, completed facility observed infiltration rate: _____	
Material delivery tickets required for the pavers or concrete installed.	
<input type="checkbox"/> The permeable pavement is protected until the remainder of the site is stabilized.	

COMMENTS (CLARIFICATION, DEVIATIONS, ETC.)	DATE

All items checked above have been inspected by me (or by an individual under my responsible charge) and have been completed to my satisfaction and meet the approved plans (or deviations are noted here).

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

Certifying Professional's License Number (or Seal): \_\_\_\_\_

• See attached sealed final location survey with the installed stormwater management facilities appropriately labeled and certification letter

REVISED: July 8, 2021 ALTERNATIVE COMPLIANCE OPTION LDA 2.0 SPREADSHEET VERSION 1

Material	Specification	Notes
<b>Bedding Layer</b>	PC: None PICP: 2 in. depth of No. 8 stone above 4 inches of No. 57	ASTM D448 size No. 8 stone (e.g. 3/8 to 3/16 inch in size). ASTM D448 size No. 57 stone (e.g. 1 1/2 to 1/2 inch in size) Should be washed, clean and free of all fines.
<b>Reservoir Layer</b>	PC: No. 57 stone PICP: No. 2 or 3 stone	PC: ASTM D448 size No. 57 stone (e.g. 1 1/2 to 1/2 inch in size) PICP: No. 2 Stone (e.g. 3 inch to 3/4 inch in size) or No. 3 Stone. Depth is based on the pavement structural and hydraulic requirements. Should be washed, clean and free of all fines.
<b>Underdrain</b>	Use 4 to 6 inch diameter perforated schedule 40 PVC pipe, with 3/8-inch perforations at 6 inches on center; each underdrain installed at a minimum 0.5% slope located 20 feet or less from the next pipe (or equivalent corrugated HDPE may be used for non-vehicular applications). Perforated pipe installed for the full length of the permeable pavement cell, and non-perforated pipe, as needed, is used to connect with the storm drain system. T's and Y's installed as needed, depending on the underdrain configuration. Extend cleanup pipes to the surface with caps.	
<b>Filter Layer</b>	The underlying native soils should be separated from the stone reservoir by a 6 to 8 inch layer of coarse sand (e.g. ASTM C 33, gradation) or use an appropriate filter fabric for the particular application based on AASHTO M288-06. At a minimum the fabric shall have a Flow Rate greater than 125 gpm/sq. ft. (ASTM D4491), and an Apparent Opening Size (AOS) equivalent to a US # 70 or # 80 sieve (ASTM D4751). The geotextile AOS selection is based on the percent passing the No. 200 sieve in "A" Soil subgrade, using FHWA or AASHTO selection criteria.	
<b>Observation Well</b>	Use a perforated 4 to 6 inch vertical schedule 40 PVC pipe (AASHTO M 252) with a cap, installed flush with the surface. Applications in vehicular areas shall have a metal cap. All applications shall have an observation well installed.	

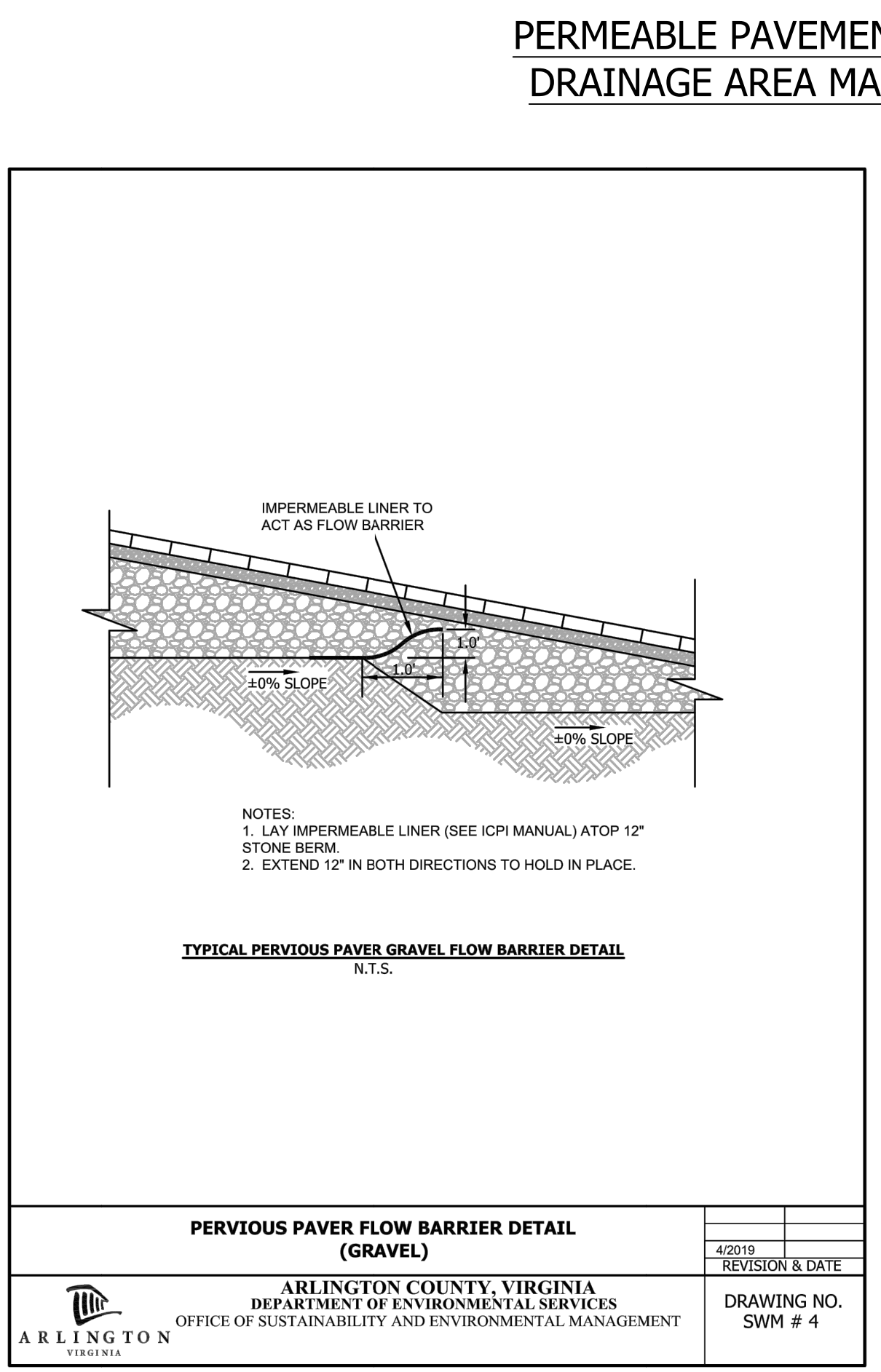
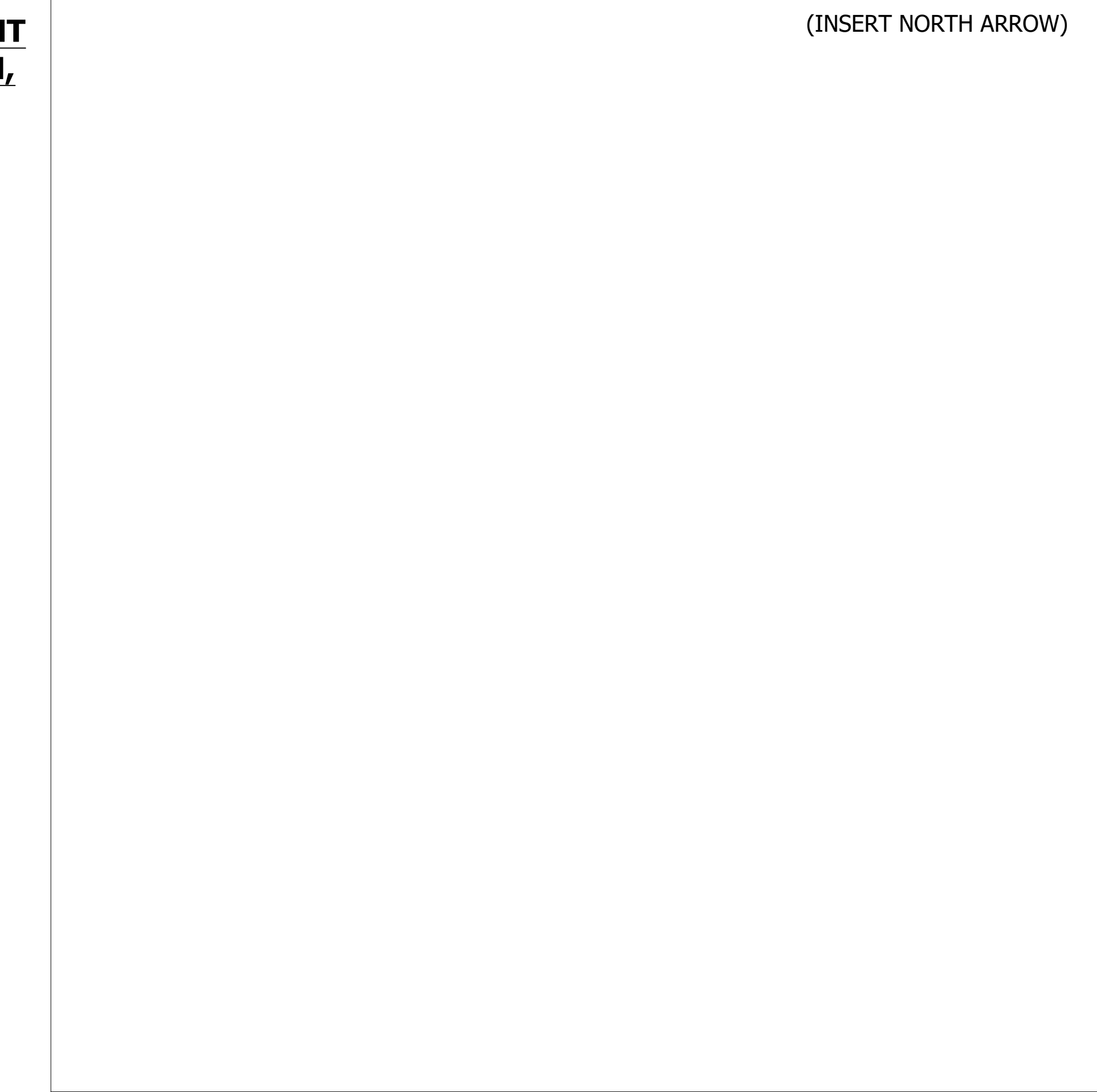
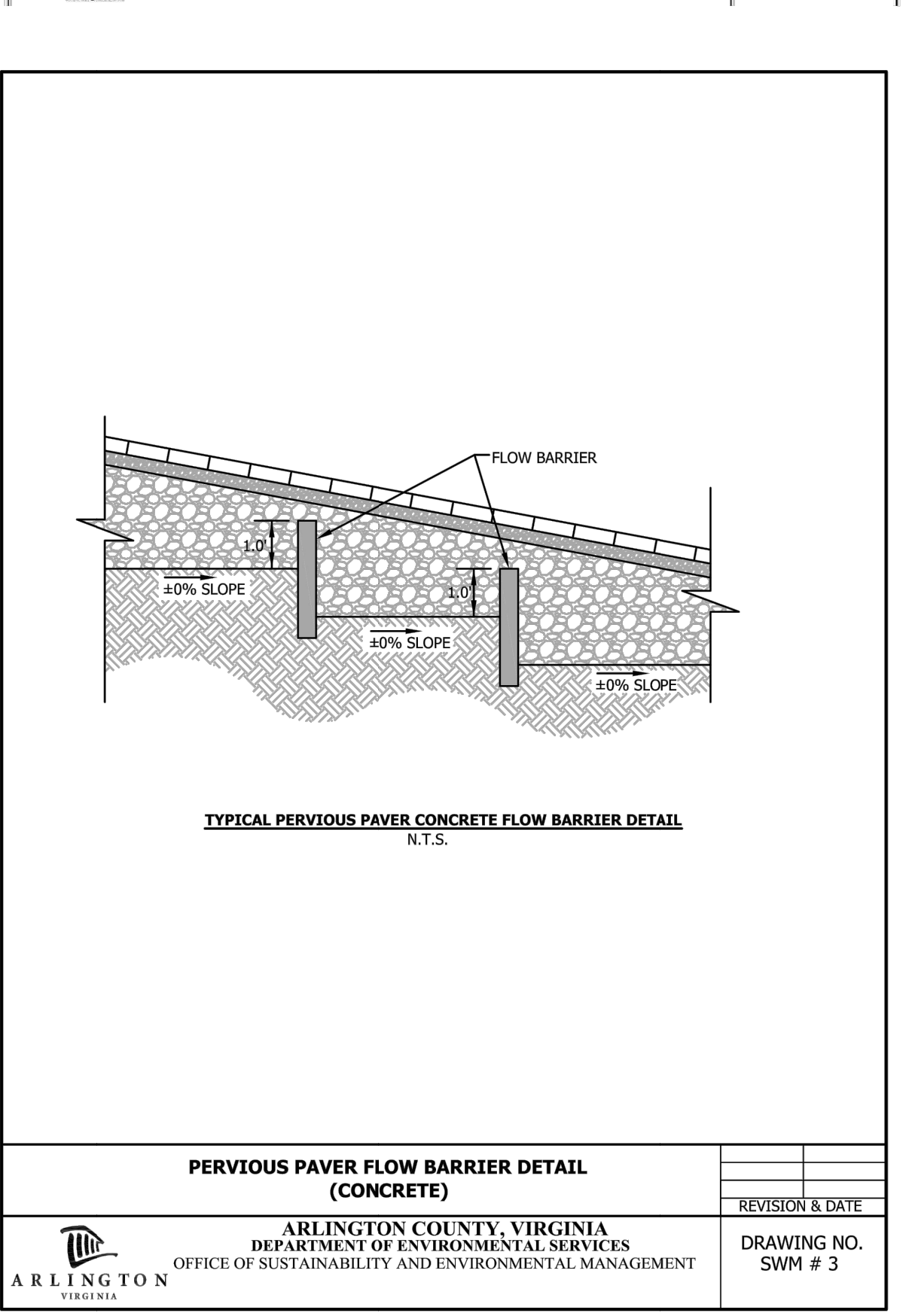
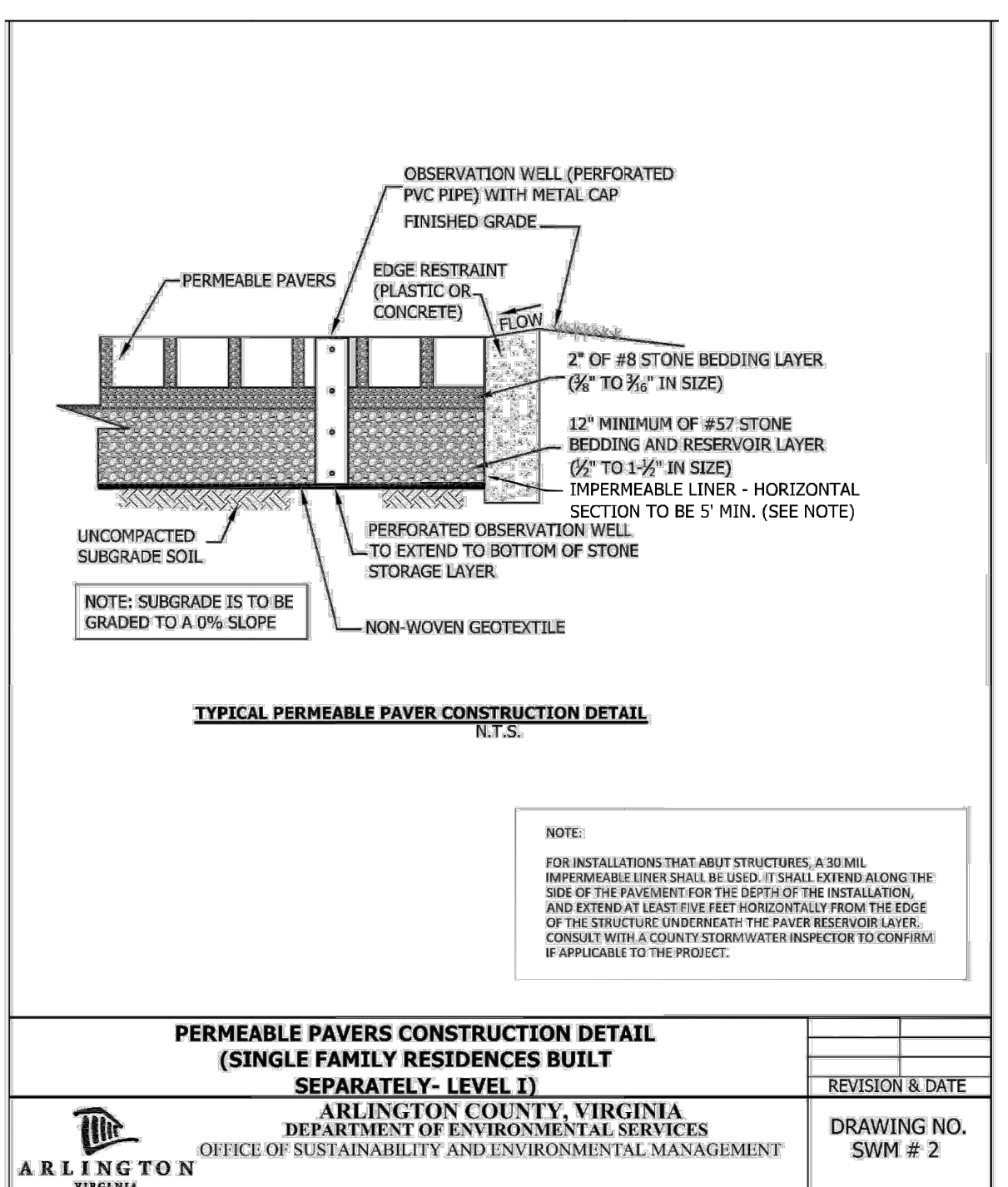
\*PC: Permeable Concrete, PICP: Permeable Interlocking Concrete Pavers with an open surface of 5-15%.

**PERMEABLE PAVEMENT MAINTENANCE SCHEDULE**

Maintenance	Schedule
<ul style="list-style-type: none"> <li>Check observation wells 3 days after a storm event in excess of 1/2 inch in depth. Standing water observed in the well after three days is a clear indication of clogging.</li> <li>Inspect the surface of the permeable pavement for evidence of sediment deposition, organic debris, staining or ponding that may indicate surface clogging. If any signs of clogging are noted, schedule a vacuum sweeper (no brooms or water spray) to remove deposited material.</li> <li>Inspect the structural integrity of the pavement surface, looking for signs of surface deterioration, such as slumping, cracking, spalling or broken pavers. Replace or repair affected areas, as necessary.</li> <li>Check inlets, pretreatment cells and any flow diversion structures for sediment buildup and structural damage. Note if any sediment needs to be removed.</li> <li>Inspect the condition of the observation well and make sure it is still capped.</li> <li>Generally, inspect any contributing drainage area for any controllable sources of sediment or erosion.</li> </ul>	Annually
<ul style="list-style-type: none"> <li>Inspected and certified by a professional licensed in the State of Virginia</li> </ul>	Once every 5 years

**STORMWATER FACILITY BMP - PERMEABLE PAVEMENT INSPECTION CHECKLIST, MATERIAL SPECIFICATION, DETAILS, AND MAINTENANCE**

**PERMEABLE PAVEMENT STANDARD DETAIL**



DDA	Impervious area (sf)	Detention credit (CF)
1	3.a. Permeable Pavement #1 (Spec #7)	450
		85.5
	3.b. Permeable Pavement #2 (Spec #7)	0.0
		0.0
<b>Subtotal</b>	<b>450</b>	<b>85.5</b>

DDA	Impervious area (sf)	Detention credit (CF)
1	3.a. Permeable Pavement #1 (Spec #7)	0.0
		0.0
	3.b. Permeable Pavement #2 (Spec #7)	0.0
		0.0
<b>Subtotal</b>	<b>0</b>	<b>0.0</b>

ALTERNATIVE COMPLIANCE OPTION STORMWATER FACILITY SHEET - PERMEABLE PAVEMENT



REVISED: February 15, 2022

# STORMWATER FACILITY BMP - DETENTION TANK MATERIAL SPECIFICATION, DETAILS, AND MAINTENANCE

(INSERT NORTH ARROW)

## Construction Inspection Checklist: Detention Tank



Address/Location: \_\_\_\_\_ Building Permit #: \_\_\_\_\_  
 LDA Permit #: \_\_\_\_\_ SWM#: \_\_\_\_\_  
 Contractor: \_\_\_\_\_ Telephone: \_\_\_\_\_  
 Certifying Professional\*: \_\_\_\_\_ Telephone: \_\_\_\_\_  
 Date Started: \_\_\_\_\_ Final Inspection Date: \_\_\_\_\_

\*Certifying professional must be a licensed Professional Engineer (PE), Landscape Architect (LA), or Land Surveyor (LS).  
 The following checklist provides a basic outline of the anticipated items for the construction inspection of above ground detention tanks. This checklist does not necessarily distinguish between all the design variations. Inspectors should review the plans carefully and adjust these items and the timing of inspection verification as needed to ensure the intent of the design is met.

All items should be crossed off when completed. Items labeled "Certification of..." must be crossed off, dated and initialed by the certifying inspector.

PRE-CONSTRUCTION MEETING	DATE
<input type="checkbox"/> Conduct a pre-construction meeting with the contractor designated to install the tank, the person completing this checklist, and the County DES Stormwater Specialist inspector (schedule via stormwaterreview@arlingtonva.us).	

EXCAVATION AND TANK CONSTRUCTION	DATE
<input type="checkbox"/> Area is marked and the size, location conforms to plan, and tank placed on level, acceptable foundation.	
<input type="checkbox"/> Tank is constructed using the material specified and to the required dimensions and volume as shown on the approved plans. Length (ft): _____ Width (ft): _____ OR Diameter (ft): _____ AND Height from orifice to overflow (ft) A: _____ Constructed volume between orifice and overflow (cf): _____ > or = to 'Storage volume provided' cell in compliance spreadsheet Tank inflow diameter (ft) B: _____ Orifice diameter (in) C: _____ (minimum 3/8") Overflow pipe diameter (in) D: _____ (minimum 4") Release orifice elevation (ft) E: _____	

**Certification of Tank Construction Inspection:** Inspector certifies the successful completion of the steps listed above and any necessary photos are attached.  
 Photos required of: entire exterior (top and side view) with all fittings attached, along with measurements documenting dimensions A, B, C, and D above.  
 Material ticket required of tank specifications and dimensions

PRETREATMENT AND OVERFLOW/OUTFLOW	DATE
<input type="checkbox"/> Inflow and gutter screens installed to specifications on approved plans.	
<input type="checkbox"/> Overflow and outflow daylight to downstream practice shown on approved plans (dry well, microbioretention, or urban planter box). Dry well and microbioretention located at least 10' from foundation.	
<input type="checkbox"/> Downspouts are installed in accordance with the approved plans providing the correct drainage area.	
<b>Certification of Pretreatment and Overflow/Outflow Inspection:</b> Inspector certifies the successful completion of the pretreatment, overflow and outflow as listed above. Photos and copies of material delivery tickets are attached. Photos required for this step for each tank include: <input type="checkbox"/> Gutter screens <input type="checkbox"/> Location of downspout/inflow pipe with inflow screen <input type="checkbox"/> Location and diameter of release outlet (minimum 2") and control valve (minimum 3/8") <input type="checkbox"/> Location of drain plug <input type="checkbox"/> Distance from overflow/outflow daylight location to foundation <input type="checkbox"/> Diameter of overflow pipe Material delivery tickets required for this step include: <input type="checkbox"/> Gutter screens <input type="checkbox"/> Inflow screen (stainless steel, fiberglass, or aluminum) maximum 0.04 inch mesh; minimum 9-inch diameter	

DRY WELL <sup>1</sup>	DATE
<input type="checkbox"/> Dry well is constructed to the correct dimensions and proper materials including the proper geotextile, stone, and overflow mechanism (pop-up emitter) per the plan (if applicable).	
<b>Certification of Dry Well:</b> Inspector certifies the successful completion of the dry well. Photos and material delivery tickets for these items are attached. Photos required for dry well include: <input type="checkbox"/> Excavated dry well with fabric installed on sides (no fabric on bottom); <input type="checkbox"/> Dimensions of dry well (L x W x D); <input type="checkbox"/> Perforated pipe installed inside of dry well; <input type="checkbox"/> Solid pipe for any pipe located outside of dry well (above gravel to grade); <input type="checkbox"/> Depth of #57 stone; <input type="checkbox"/> Fabric installed on top of gravel; <input type="checkbox"/> Completed dry well with turf cover and pop-up emitter installed. Material Tickets required: <input type="checkbox"/> Geotextile used; <input type="checkbox"/> #57 stone.	

COMMENTS (CLARIFICATION, DEVIATIONS, ETC.)	DATE

<sup>1</sup> If connection is to microbioretention or urban bioretention, submit relevant construction inspection checklist and as-built certification form.

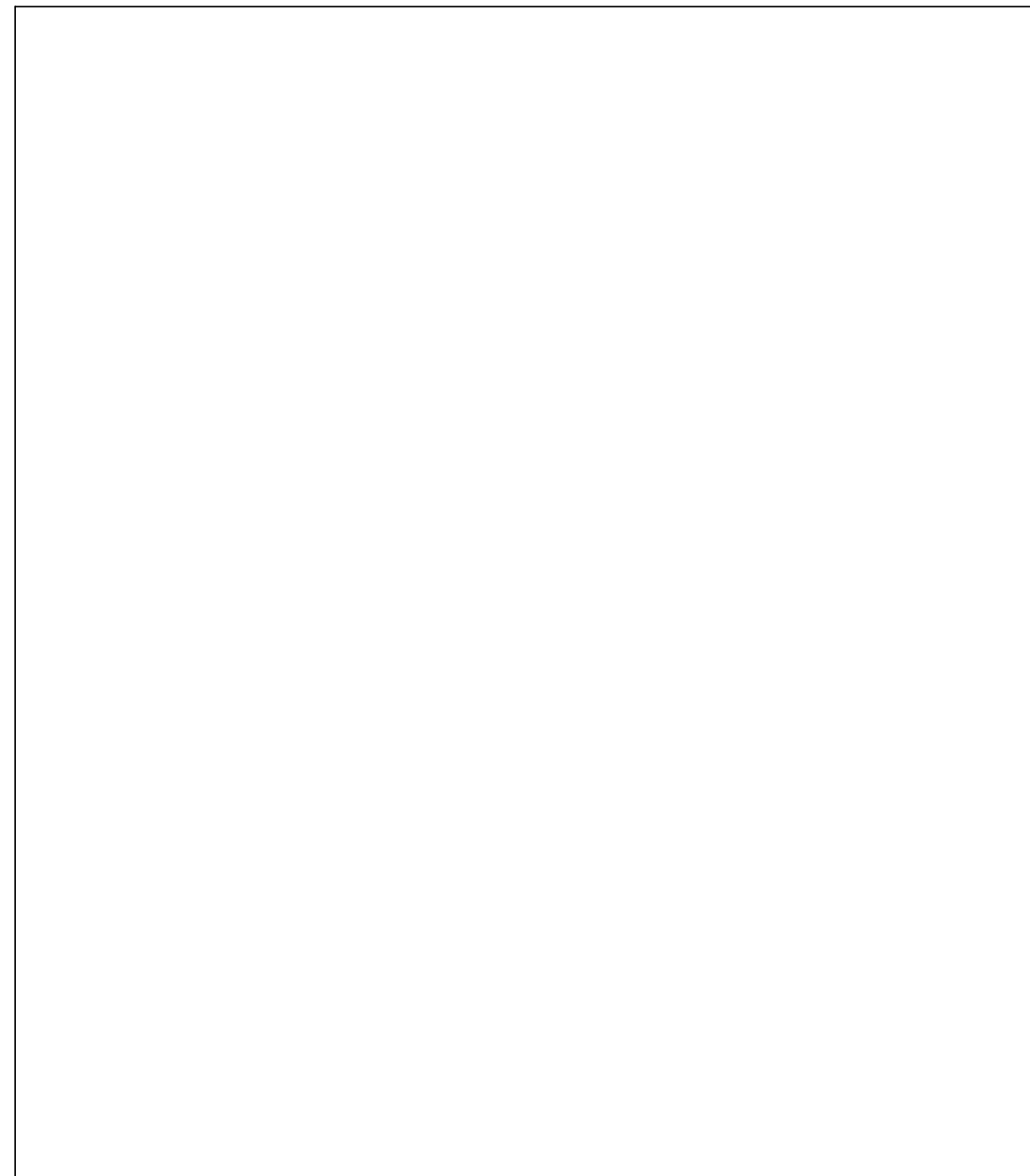
All items checked above have been inspected by me (or by an individual under my responsible charge) and have been completed to my satisfaction and meet the approved plans (or deviations are noted here).

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

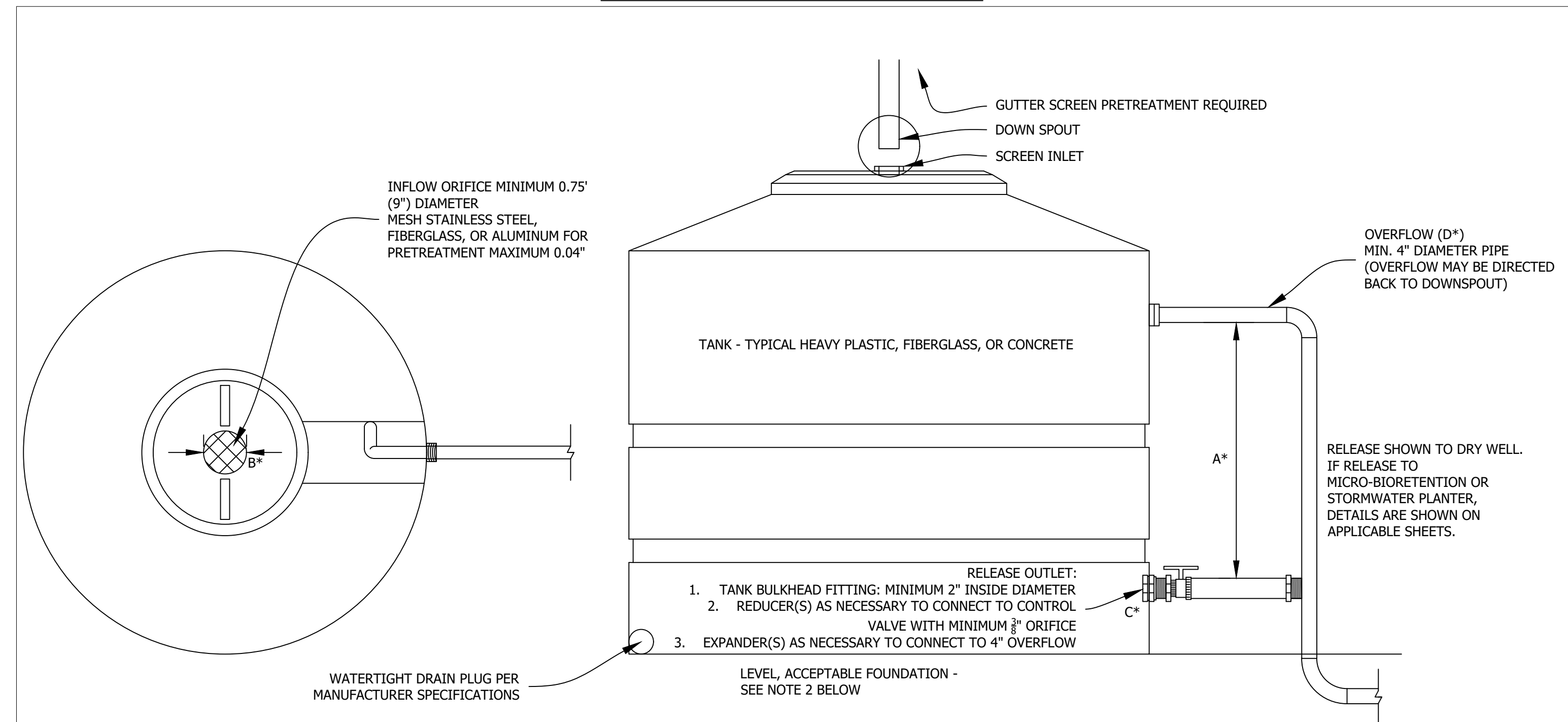
Certifying Professional's License Number (or Seal): \_\_\_\_\_

- See attached sealed final location survey with the installed stormwater management facilities appropriately labeled and certification letter

INSERT MANUFACTURER DETAIL AND SPECIFICATIONS HERE:



### DETENTION TANK STANDARD DETAIL



### DETENTION TANK NOTES:

- ENTER TANK DIMENSIONS IN COMPUTATIONAL SPREADSHEET.
- PROVIDE LEVEL FOUNDATION ON CONCRETE PAD OR DECKING. TANK MAY ALSO BE CONSTRUCTED ON-SITE AND CONNECTED TO FOUNDATION. SEE ARCHITECTURAL PLANS FOR STRUCTURAL DETAILS/REQUIREMENTS.
- FOR MANUFACTURED TANKS, FOLLOW MANUFACTURER'S SPECIFICATIONS FOR ALL CONNECTIONS AND FITTINGS INCLUDING INLET, OVERFLOW, AND CLEAN OUT.
- MULTIPLE TANKS CAN BE CONNECTED.
- TANK DESIGN MAY PROVIDE FOR THE STORAGE OF IRRIGATION WATER BELOW OUTLET ELEVATION AND/OR CONNECTION TO A SEPARATE TANK TO STORE IRRIGATION WATER. WHERE EXTRA STORAGE FOR IRRIGATION PURPOSES IS PROPOSED, INCLUDE AN O&M PLAN TO PREVENT FREEZING OF STORED WATER FROM DAMAGING TANK (E.G., DRAIN IN WINTER, ADD A HEATING ELEMENT, ETC.).
- TEST TANK BY FILLING WITH WATER AND TESTING ALL COMPONENTS.

### DETENTION TANK MAINTENANCE SCHEDULE

MAINTENANCE ACTIVITY	SCHEDULE
INSPECT AND CLEAN GUTTER SCREENS/GUTTERS	ANNUALLY
INSPECT AND CLEAN INFLOW SCREEN	MONTHLY AND AFTER HEAVY RAINFALL
OBSERVE PIPE CONNECTIONS FOR LEAKS	ANNUALLY
INSPECT SUMP AND REMOVE DRAIN PLUG TO REMOVE ANY DEBRIS, IF NECESSARY	ANNUALLY
INSPECT OUTFLOW FOR EROSION AND/OR CLOGGING	ANNUALLY
INSPECT TANK STRUCTURAL INTEGRITY AND PIPEWORK BY QUALIFIED PROFESSIONALS	ONCE EVERY 5 YEARS

### DETENTION TANK DRAINAGE AREA MAP

(INSERT SCALE)



ALTERNATIVE COMPLIANCE OPTION  
 STORMWATER FACILITY SHEET -  
 DETENTION TANK

Tanks				
DDA		Impervious area (sf)		Detention credit (cf)
1	D-Tank 1	600		86.9
2	D-Tank 2	600		86.9
	D-Tank 3			
	D-Tank 4			
Subtotal		1200		173.9

Tank Sizing													
Tank Volume (CF)	Tank Height (ft)	Tank Geometry	Uniform Tank Average Surface Area (sf)	Nonuniform Tank Average Surface Area (sf)	Height from orifice to overflow (ft) - A	Tank inflow diameter (ft) - B	Volume provided (cf)	Inches	Storage Validation	Orifice diameter (in) - C	Maximum release rate (cfs)	Release rate validation	Overflow pipe diameter (in) - D
86.9	5.8	Uniform	15.1		5.8	0.75	86.9	1.8	Pass	0.3750	0.009	Pass	3.0
86.9	5.8	Uniform	15.1		5.8	0.75	86.9	1.8	Pass	0.3750	0.009	Pass	3.0

Release				Release							Elevations		
Drywell ID	Drywell unit volume (gal)	Number of drywells required	Drywell Validation	Drywell ID	Length	Width	Area Validation	Depth	Volume	Drywell Validation	F - top of drywell pop-up	G - bottom of dry well	H - invert in to drywell
T1-DW1	50	2	Pass	OR									
T2-DW2	50	2	Pass	OR									
				OR									
				OR									

Tanks				
NDDA		Impervious area (sf)		Detention credit (cf)
1	N-Tank 1			
2	N-Tank 2			
	N-Tank 3			
	N-Tank 4			
Subtotal		0		0.0

Tank Sizing													
Tank Volume (CF)	Tank Height (ft)	Tank Geometry	Uniform Tank Average Surface Area (sf)	Nonuniform Tank Average Surface Area (sf)	Height from orifice to overflow (ft) - A	Tank inflow diameter (ft) - B	Volume provided (cf)	Inches	Storage Validation	Orifice diameter (in) - C	Maximum release rate (cfs)	Release rate validation	Overflow pipe diameter (in) - D

Release				Release							Elevations		
Drywell ID	Drywell unit volume (gal)	Number of drywells required	Drywell Validation	Drywell ID	Length	Width	Area Validation	Depth	Volume	Drywell Validation	F - top of drywell pop-up	G - bottom of dry well	H - invert in to drywell
		#REF!		OR									
		#REF!		OR									
		#REF!		OR									
		#REF!		OR									





Construction Inspection Checklist: Urban Bioretention - Planter Box (July 2019)

Address/Location: \_\_\_\_\_ Building Permit #: \_\_\_\_\_  
LDA Permit #: \_\_\_\_\_ SWM#: \_\_\_\_\_  
Contractor: \_\_\_\_\_ Telephone: \_\_\_\_\_  
Certifying Professional: \_\_\_\_\_ Telephone: \_\_\_\_\_  
Date Started: \_\_\_\_\_ Final Inspection Date: \_\_\_\_\_

\*Certifying professional must be a licensed Professional Engineer (PE), Landscape Architect (LA), or Land Surveyor (LS).

The following checklist provides a basic outline of the anticipated items for the construction inspection of urban bioretention facilities. This checklist does not necessarily distinguish between all the design variations. Inspectors should review the plans carefully, and adjust these items and the timing of inspection verification as needed to ensure the intent of the design is met. The standard for design of this practice is based on Virginia Stormwater BMP Clearinghouse and Arlington County Stormwater Guidance Manual.

All items should be crossed off when completed. Items labeled "Certification of..." must be crossed off, dated and initialed by the certifying inspector.

**PRE-CONSTRUCTION MEETING** DATE

Conduct a pre-construction meeting with the contractor designated to install the planter box, the person completing this checklist, and the County DES Stormwater Specialist Inspector (schedule via stormwaterreview@arlingtonva.us).

Stormwater has been diverted around the area of the bioretention practice and perimeter erosion control measures to protect the facility during construction have been installed.

**EXCAVATION AND BOX CONSTRUCTION** DATE

Area is marked and the size and location conforms to plan.

Excavation has achieved proper grades and the required geometry and elevations.

Box is constructed using the material specified and to the required dimensions as shown on the approved plans. **Constructed interior dimensions:**

Waterproofing is installed on sides and bottom of interior of the box as specified.

**Certification of Excavation and Box Construction Inspection:** Inspector certifies the successful completion of the steps listed above and any necessary photos are attached.

Photo required of: entire interior (sides and bottom) of planter box waterproofed.

Material ticket required of waterproofing membrane if plastic membrane is used (no receipt required for liquid membrane).

**FILTER LAYER, UNDERDRAIN, AND STONE RESERVOIR PLACEMENT** DATE

All aggregates conform to specifications as certified by quarry.

Underdrain size and perforations meet the specifications (holes should be spaced 6" apart, maximum of 3 rows of holes). Placement of underdrain, observation wells, and underdrain fittings are in accordance with the approved plans.

Elevations of underdrain and outlet structure are in accordance with approved plans, or as adjusted to meet field conditions and denoted in Comments section below. Any planter boxes that are in series (drain from one to another), requires the submission of invert elevations.

Placement of remaining lift of stone reservoir layer as needed to achieve the required reservoir depth.

**Certification of Filter Layer and Underdrain Placement Inspection:** Inspector certifies the successful completion of the filter layer and underdrain placement steps listed above. Photos and material delivery tickets for these items are attached.

Photos required include:  
o Perforated underdrain pipe with a solid vertical overflow pipe;  
o Depth of #57 stone;  
o Depth of choker stone (pea gravel or #8).

Material delivery tickets required:  
o #57 stone and choker stone (pea gravel or #8)

**BIORETENTION SOIL MEDIA PLACEMENT** DATE

Soil media is certified by supplier or contractor as meeting the project specifications and comes from an approved soil media vendor.

No filter fabric is to be used between the stone layer and the soil layer. Soil media is placed in 12-inch lifts to the design top elevation of the bioretention area, and lifts have been lightly watered. Elevation has been verified after settlement (2 to 4 days after initial placement).

**Certification of Soil Media Placement Inspection:** Inspector certifies the successful completion of the soil media steps listed above. Photos and material delivery tickets for these items are attached.

Photo required includes a measurement of the soil media installed.

Material delivery ticket required from an approved soil media vendor.

**PRETREATMENT AND PLANT INSTALLATION** DATE

Placement of energy dissipaters and pretreatment practices (splash block/rocks, gutter guards, etc.) are installed in accordance with the approved plans.

Overflow has atrium grate installed.

Downspouts are installed in accordance with the approved plans providing the correct drainage area.

The number and spacing of plants are installed in accordance with the approved plans. If there is no approved landscape plan for the planter boxes, the plants are to be chosen from VA DEQ Stormwater Design Specification No. 9: Table 9.6 Popular Native Plant Materials for Bioretention.

A 2-3 inch layer of shredded hardwood mulch has been installed.

**Certification of Pretreatment and Plant Installation Inspection:** Inspector certifies the successful completion of the pretreatment, energy dissipaters, plants, overflow grates and mulch as listed above. Photos and copies of material delivery tickets are attached.

Photos required for this step for each planter include:  
o Overall photo showing the number of plants installed;  
o Location of downspout/inflow pipe with the appropriate splash block/rocks;  
o Distance from the top of mulch to the top of the overflow pipe;  
o Distance from the top of mulch to the top of the planter box.

Material delivery tickets required for this step include:  
o Approved plants listing number and species;  
o Shredded hardwood mulch.

**DRY WELL OR CONNECTION TO STORM SEWER** DATE

Dry well is constructed to the correct dimensions and proper materials including the proper geotextile, stone, and overflow mechanism (pop-up emitter) per the plan (if applicable).

Underdrain is directly tied into the public storm sewer system and the connection has been witnessed by DES inspector (if applicable).

**Certification of Dry Well or Connection to Storm Sewer:** Inspector certifies the successful completion of the dry well or connection to the storm sewer. Photos and material delivery tickets for these items are attached.

Photos required for dry well include:  
o Excavated dry well with fabric installed on sides (no fabric on bottom);  
o Dimensions of dry well (L x W x D);  
o Perforated pipe installed inside of dry well;  
o Solid pipe for any pipe located outside of dry well (above gravel to grade);  
o Depth of #57 stone;  
o Fabric installed on top of gravel;  
o Completed dry well with turf cover and pop-up emitter installed.

Material Tickets required:  
o Geotextile used;  
o #57 stone.

**COMMENTS (CLARIFICATION, DEVIATIONS, ETC.)** DATE

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

All items checked above have been inspected by me (or by an individual under my responsible charge) and have been completed to my satisfaction and meet the approved plans (or deviations are noted here).

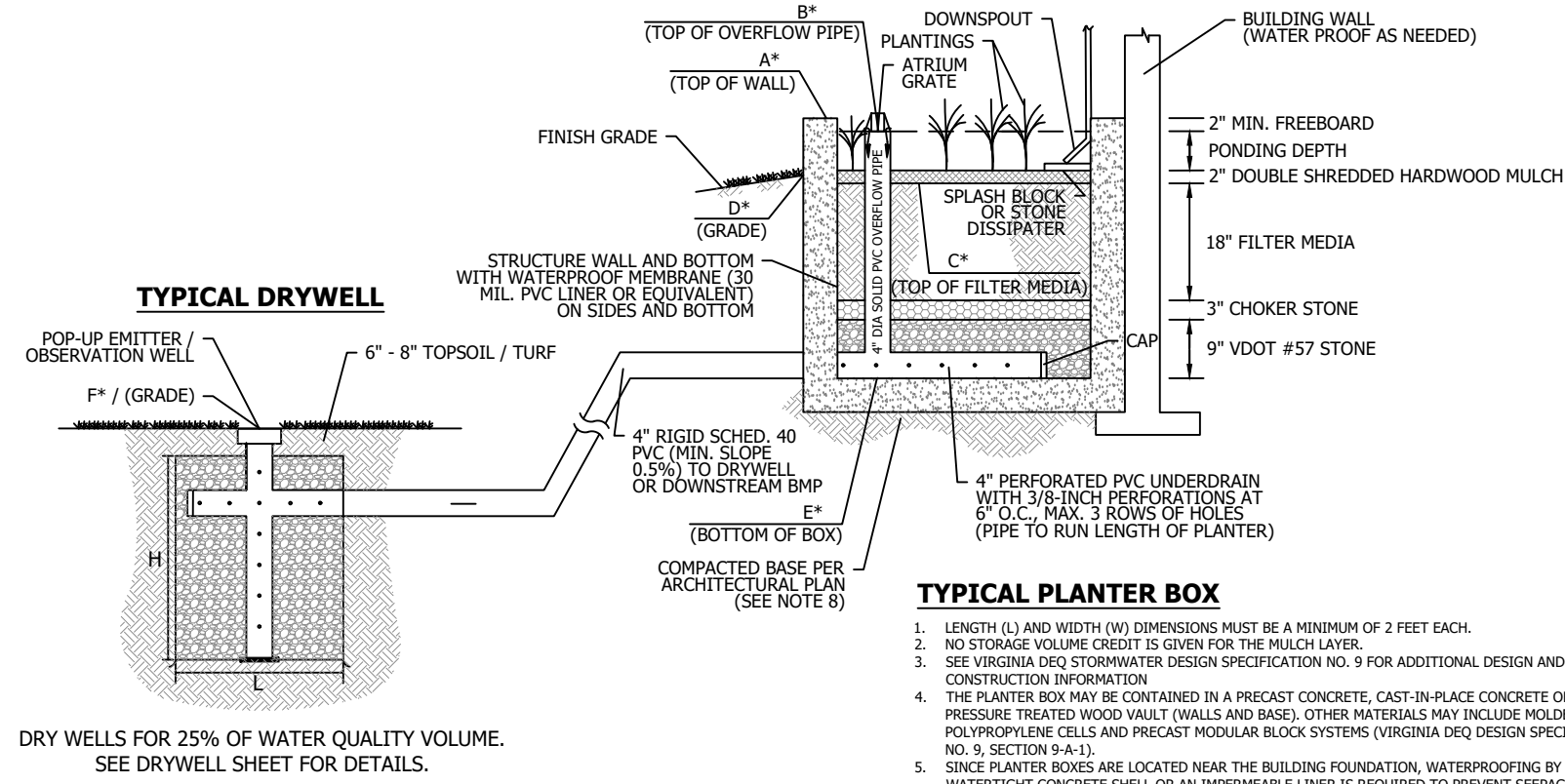
Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Certifying Professional's License Number (or Seal): \_\_\_\_\_

• See attached sealed final location survey with the installed stormwater management facilities appropriately labeled and certification letter

# STORMWATER FACILITY BMP - URBAN BIORETENTION PLANTER BOX INSPECTION CHECKLIST, MATERIAL SPECIFICATION, DETAILS, AND MAINTENANCE

## URBAN BIORETENTION PLANTER BOX STANDARD DETAIL ARLINGTON COUNTY SWM DETAIL #7



VA DCR STORMWATER DESIGN SPECIFICATION NO. 9 BIORETENTION

Table 9.6. Popular Native Plant Materials for Bioretention

Perennials/Herbaceous	Shrubs	Trees
Virginia Wild Rye ( <i>Elymus virginicus</i> )	Common Winterberry ( <i>Ilex verticillata</i> )	River Birch ( <i>Betula nigra</i> )
Redtop Grass ( <i>Agrostis alba</i> )	Inkberry ( <i>Ilex glabra</i> )	Red Maple ( <i>Acer rubrum</i> )
Swamp Milkweed ( <i>Asclepias incarnata</i> )	Sweet Pepperbush ( <i>Clethra alnifolia</i> )	Pink Oak ( <i>Quercus palustris</i> )
Switchgrass ( <i>Panicum virgatum</i> )	Wax Myrtle ( <i>Myrica cerifera</i> )	Willow Oak ( <i>Quercus phellos</i> )
Cardinal Flower ( <i>Lobelia cardinalis</i> )	Virginia Sweetpire ( <i>Itea virginica</i> )	Sweetgum ( <i>Liquidambar styraciflua</i> )
Common Three Square ( <i>Scirpus americanus</i> )	Swamp Azalea ( <i>Azalea viscosum</i> )	Black Willow ( <i>Salix nigra</i> )
Sensitive Fern ( <i>Onoclea sensibilis</i> )	Button Bush ( <i>Cephalanthus occidentalis</i> )	Grey Birch ( <i>Betula populifolia</i> )
Blue Flag ( <i>Iris versicolor</i> )	Black Gum ( <i>Nyssa sylvatica</i> )	Black Gum ( <i>Nyssa sylvatica</i> )
Woolgrass ( <i>Scirpus cypripinus</i> )	Indigo Bush ( <i>Ampelopsis</i> )	Sycamore ( <i>Platanus occidentalis</i> )
Indian Grass ( <i>Sorghastrum nutans</i> )	Arrowwood ( <i>Viburnum dentatum</i> )	Green Ash ( <i>Fraxinus pennsylvanica</i> )
Marsh Marigold ( <i>Caltha palustris</i> )		Sweetbay Magnolia* ( <i>Magnolia virginiana</i> )
Joe Pye Weed ( <i>Eupatorium purpureum</i> )		Atlantic White Cedar* ( <i>Chamaecyparis thyoides</i> )
Turk's cap lily ( <i>Lilium superbum</i> )		Bald Cypress* ( <i>Taxodium distichum</i> )
Bee Balm ( <i>Momarda didyma</i> )		Grey Dogwood ( <i>Cornus racemosa</i> )
Northern Sea Oats ( <i>Chasmanthium latifolium</i> )		Smooth Alder ( <i>Alnus serrulata</i> )
		Servilletto ( <i>Amblyopogon canadensis</i> )
		Redbud ( <i>Cercis canadensis</i> )
		Box Elder ( <i>Acer negundo</i> )
		Fringe Tree ( <i>Chionanthus virginicus</i> )

Note: Prior to selection, please consult bioretention plant lists for more detailed information regarding inundation, drought and salt tolerance for each species.  
\*most applicable to the coastal plain

### Planter Box Material Specifications

Material	Specification	Notes
Waterproofing	Watertight shell or impermeable liner	Use a thirty mil (minimum) PVC Geomembrane liner or equivalent.
Filter Media Composition	Filter Media to contain: • 80%-90% sand with >75% being coarse to very coarse • 10%-20% soil fines • 3%-5% organic matter in the form of plant based compost meeting Clearinghouse Design Specification #4, Section 6.5	The volume of filter media based on 110% of the plan volume, to account for settling or compaction.
Filter Media Testing	Plant available P within Low+ (L+) to Medium (M) per DCR 2014 Nutrient Management Criteria (18-40 mg/kg P for the Mehlich III procedure) and CEC >5	The media must be procured from approved filter media vendors.
Mulch Layer	Use aged, shredded hardwood bark mulch	Lay a 2 to 3 inch layer on the surface of the filter bed.
Choking Layer	3 inch layer of pea gravel or VDOT #8 stone which is laid over the underdrain stone.	
Stone Jacket for Underdrain and/or Storage Layer	1 inch stone should be double-washed and clean and free of all fines (e.g., VDOT #57 stone).	12 inches for the underdrain
Underdrains and Overflows	Use 4 inch rigid schedule 40 PVC pipe with 3/8-inch perforations at 6 inches on center, maximum of 3 rows of perforations; position each underdrain on a 1% or 2% slope.	Lay the perforated pipe under the length of the planter box, and install non-perforated pipe as needed to connect with the storm drain system. Install T's and Y's as needed, depending on the underdrain configuration. Extend overflow pipes to the surface with vented caps.
Plant Materials	1 quart-sized perennial installed per 1-2 sf and/or 1.3-gallon shrub installed per 7.5 sf over entire ponding area from DEQ Specification 9: Table 9.5	Choose either herbaceous and/or shrubs

DDA	2.1. To Stormwater Planter, Urban Bioretention (Spec #9, Appendix A)	Impervious area (sf)	Pervious area (sf)	Detention credit (df)	Downstream from tank?	WQV (cf)
1	UPB-1	800		42.0	No	63.3
	UPB-2	600		30.0	No	47.5
	UPB-3					
	UPB-4					
	Subtotal	1400	0	72.0		

Sizing						
Length (ft)	Width (ft)	Ponding depth (in)	Filter depth (in)	Gravel depth (in)	Surface Area (sf)	Ponding Volume (cf)
10.0	4.2	12.0	18.0	12.0	42.0	42.0
7.5	4.0	12.0	18.0	12.0	30.0	30.0

Planter Box Maintenance Schedule						
Maintenance	Frequency					
• Spot weeding, erosion repair, trash removal, and mulch raking	Twice during growing season					
• Add reinforcement planting to maintain the desired vegetation density	As needed					
• Stabilize the contributing drainage area to prevent erosion	Annually					
• Supplement mulch to maintain a 2-3 inch layer						
• Prune trees and shrubs						
• Examine for the ponding depth and adjust accordingly						
• Inspect inflows and overflow for erosion						
• Inspect for structural deficiencies and repair						
• Remove sediment in pre-treatment cells and inflow points	Once every 2 to 3 years					
• Replace the mulch layer	Every 3 years					
• Inspected and certified by a professional licensed in the State of Virginia	Once every 5 years					

Release				Release			
Drywell ID	Drywell unit volume (gal)	Number of drywells required	Drywell Validation	Drywell ID	Length	Width	Area Validation
DW-UPB-1	50	3	OR	DW-UPB-1	5.0	4.0	Pass
DW-UPB-2			OR	DW-UPB-2			
DW-UPB-3			OR	DW-UPB-3			
DW-UPB-4			OR	DW-UPB-4			

Elevations						
A - top of planter wall	B - top of overflow pipe	C - top of filter media	D - finish grade	E - bottom of facility	F - top of drywell pop-up	G - bottom of dry well
	3.7	2.5				
	3.7	2.5				
	0.2	0.0				
	0.2	0.0				

DDA	2.1. To Stormwater Planter, Urban Bioretention (Spec #9, Appendix A)	Impervious area (sf)	Pervious area (sf)	Detention credit (df)	Downstream from tank?	WQV (cf)
1	UPB-1				No	
	UPB-2					
	UPB-3					
	UPB-4					
	Subtotal	0	0	0.0		

Sizing						
Length (ft)	Width (ft)	Ponding depth (in)	Filter depth (in)	Gravel depth (in)	Surface Area (sf)	Ponding Volume (cf)

Release				Release			
Drywell ID	Drywell unit volume (gal)	Number of drywells required	Drywell Validation	Drywell ID	Length	Width	Area Validation
			OR	DW-UPB-1			
			OR	DW-UPB-2			
			OR	DW-UPB-3			
			OR	DW-UPB-4			

Elevations						
A - top of planter wall	B - top of overflow pipe	C - top of filter media	D - finish grade	E - bottom of facility	F - top of drywell pop-up	G - bottom of dry well
	0.2	0.0				
	0.2	0.0				
	0.2	0.0				
	0.2	0.0				

(INSERT NORTH ARROW)

### PLANTER BOX DRAINAGE AREA MAP

(INSERT SCALE)

ALTERNATIVE COMPLIANCE OPTION  
STORMWATER FACILITY SHEET - URBAN  
BIORETENTION PLANTER BOX









Construction Inspection Checklist: Dry Well (September 2017)

Address/ Location: \_\_\_\_\_ Building Permit #: \_\_\_\_\_  
 LDA Permit #: \_\_\_\_\_ SWM#: \_\_\_\_\_  
 Contractor: \_\_\_\_\_ Telephone: \_\_\_\_\_  
 Date Started: \_\_\_\_\_ Final Inspection Date: \_\_\_\_\_

This construction inspection checklist is to be used only for dry wells that are not connected to another stormwater management facilities like a planter box.

All items should be checked and dated when completed by the contractor.

PRE-CONSTRUCTION MEETING	DATE
<input type="checkbox"/> Conduct a pre-construction meeting with the contractor designated to install the dry well, the person completing this checklist, and the County DES Stormwater Specialist Inspector (schedule via stormwaterreview@arlingtonva.us).	
<input type="checkbox"/> All pervious areas of the contributing drainage areas have been adequately stabilized with a thick layer of vegetation or erosion control measures are still in place and stormwater has been diverted around the area.	
<input type="checkbox"/> Area of dry well has not been impacted during construction.	

EXCAVATION	DATE
<input type="checkbox"/> Excavation of the dry well has achieved proper grades and the required geometry without compacting the bottom of the excavation. <b>Constructed dimensions:</b> _____	
<input type="checkbox"/> Placement of filter fabric, as required.	
<b>Submittals Required:</b>	
Photos: <ul style="list-style-type: none"> <li>Excavated area prior to installation of stone, including measurements (L x W x D);</li> <li>Non-woven geotextile fabric installed on sides of excavated subgrade;</li> </ul>	
Material delivery tickets: <ul style="list-style-type: none"> <li>Geotextile</li> </ul>	

FILTER LAYER AND UNDERDRAIN PLACEMENT	DATE
<input type="checkbox"/> All aggregates conform to specifications.	
<input type="checkbox"/> Inflow pipe placed. The pipe is solid until it enters the well, once inside the stone reservoir it is perforated.	
<input type="checkbox"/> Perforated pipe for observation well connected to inflow pipe.	
<b>Submittals Required:</b>	
Photos: <ul style="list-style-type: none"> <li>Inflow pipe,</li> <li>Observation well.</li> </ul>	

STONE RESERVOIR AGGREGATE PLACEMENT	DATE
<input type="checkbox"/> Remaining stone aggregate placed (not dumped) in 6-inch lifts.	
<input type="checkbox"/> Top surface of dry well in accordance with approved plans.	
<b>Submittals Required:</b>	
Photos: <ul style="list-style-type: none"> <li>Depth of stone;</li> <li>Fabric installed on top of gravel;</li> <li>Completed facility with appropriate surface cover and pop-up emitter.</li> </ul>	
Material delivery tickets: <ul style="list-style-type: none"> <li>Stone,</li> <li>Fabric.</li> </ul>	

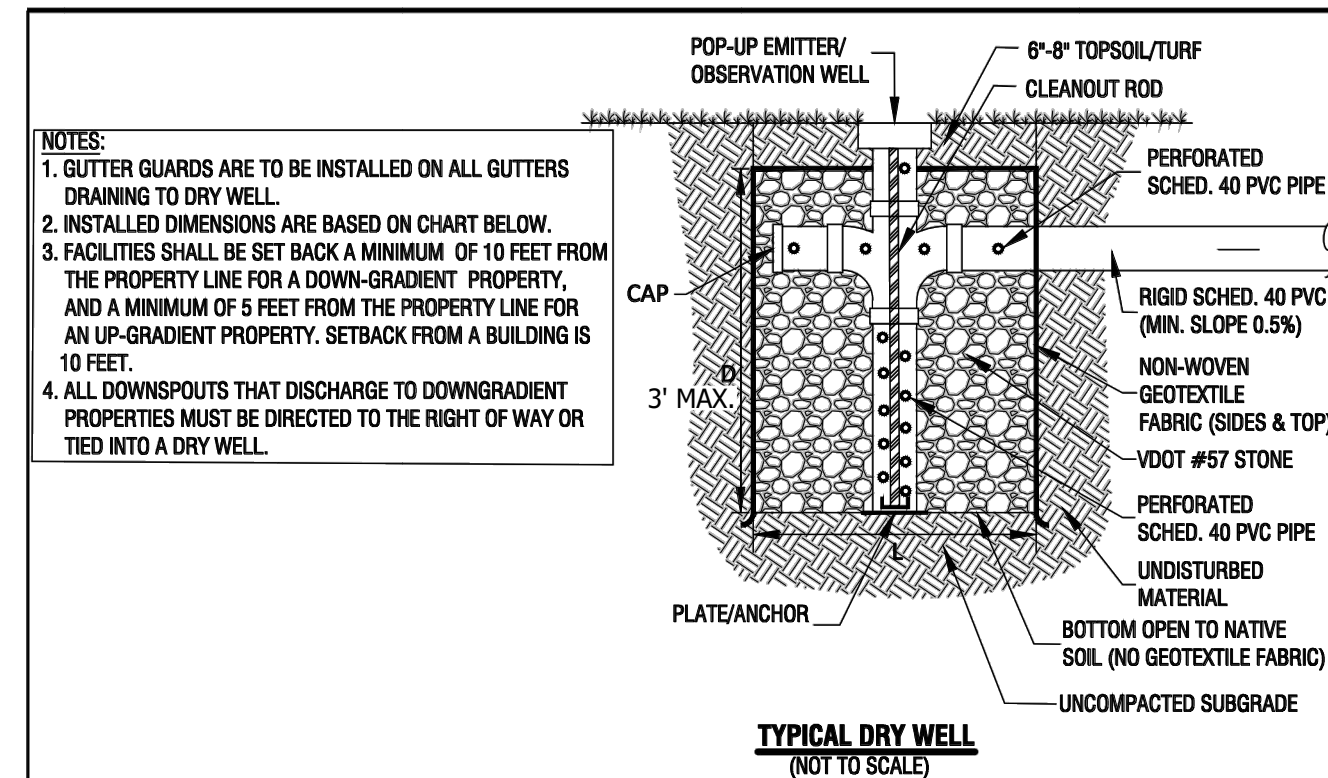
LOCATION	DATE
<input type="checkbox"/> <b>Submittals Required:</b> <ul style="list-style-type: none"> <li>Markup of plat or approved plan with the dry well locations and the downspout that each dry well is connected to</li> </ul>	

COMMENTS (CLARIFICATION, DEVIATIONS, ETC.)	DATE

**STORMWATER FACILITY BMP - DRY WELL  
INSPECTION CHECKLIST, MATERIAL SPECIFICATION,  
DETAILS, AND MAINTENANCE**

**NOTE:**  
 DRY WELL RELEASE OPTIONS: **STONE OR 100% VOID**  
 STONE: MAXIMUM PER EXCAVATION IS 20 SF, 3 FT DEEP  
 100% VOID: MAXIMUM OF FOUR-50 GALLON DRY WELLS

**DRY WELL STANDARD DETAIL, MATERIAL SPECIFICATIONS, AND MAINTENANCE SCHEDULE**



**MATERIAL SPECIFICATIONS FOR DRY WELLS**

MATERIAL	SPECIFICATION
STONE	VDOT NO. 57
OBSERVATION WELL / OVERFLOW	INSTALL A VERTICAL 4 OR 6-INCH SCHEDULE 40 PVC PERFORATED PIPE, WITH A POP-UP EMITTER AND ANCHOR PLATE. PIPE PERFORATIONS ARE 3/8 INCHES AT 6 INCHES ON CENTER.
ANCHOR PLATE	INSTALL 6" SQUARE METAL PLATE FOR INSTALLATION WITH 4" PVC PIPE. INSTALL 8" SQUARE PLATE FOR INSTALLATIONS WITH 6" PVC PIPE.
SURFACE COVER	INSTALL 6 - 8" OF TOPSOIL AND TURF.
FILTER FABRIC	MUST BE INSTALLED ON THE DRY WELL SIDES. WHEN TURF IS USED AS A SURFACE COVER, FABRIC SHALL BE INSTALLED ALONG THE TOP BETWEEN THE STONE LAYER AND THE SURFACE COVER. USE NON-WOVEN POLYPROPYLENE GEOTEXTILE WITH A FLOW RATE OF > 110 GALLONS/MIN./SQ. FT. (E.G., GEOTEX 351 OR EQUIVALENT).
CLEANOUT	THREADED METAL ROD WITH PLATE AT THE END INSTALLED IN THE OBSERVATION WELL TO FACILITATE CLEANOUT.

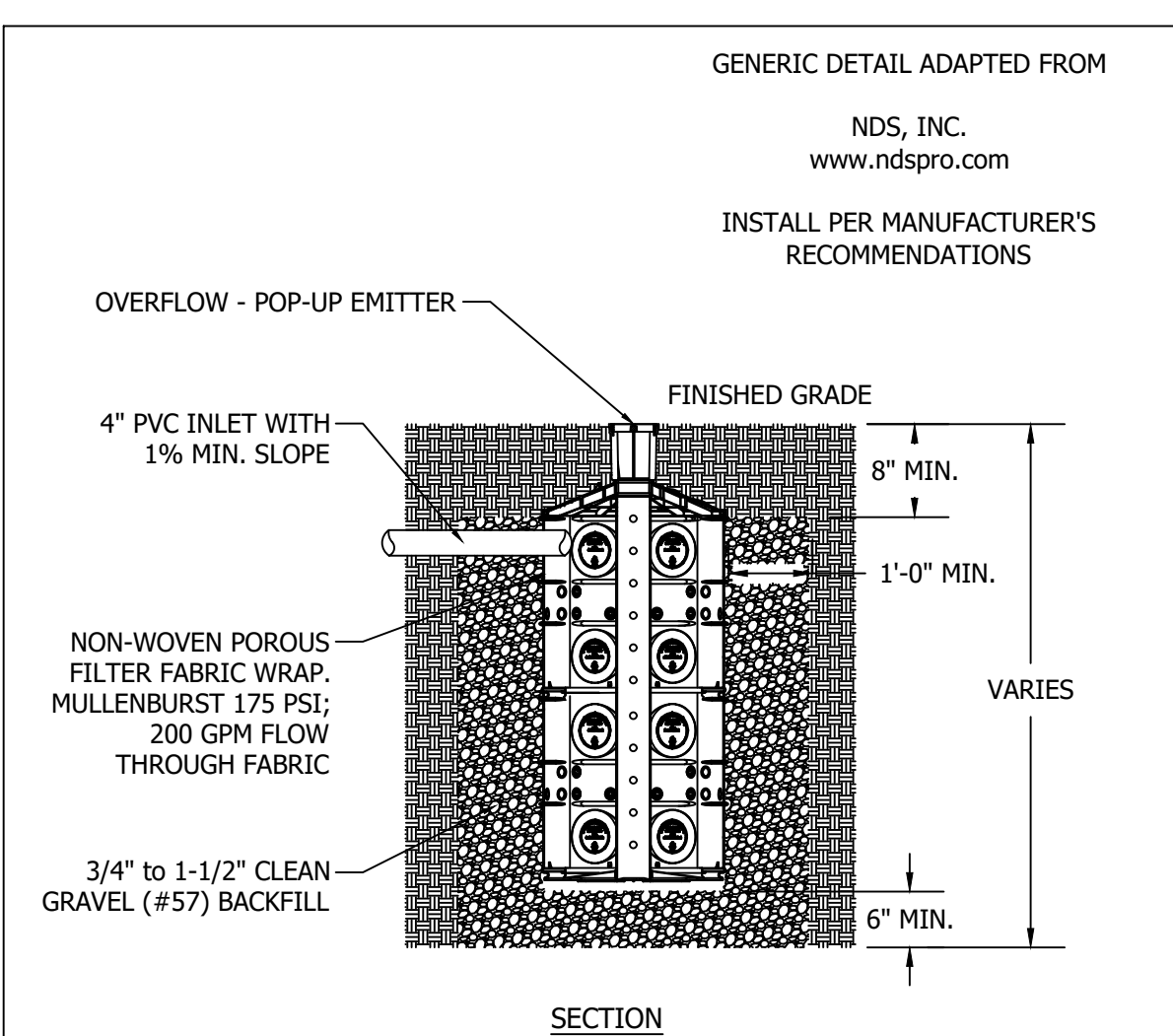
**DRY WELL MAINTENANCE SCHEDULE**

MAINTENANCE ACTIVITIES	SCHEDULE
<ul style="list-style-type: none"> <li>REMOVE LEAVES AND DEBRIS IN GUTTER AT LEAF GUARD.</li> <li>REMOVE LEAVES AND DEBRIS FROM OBSERVATION WELL / OVERFLOW.</li> <li>INSPECT THE CONDITION OF THE OVERFLOW OR POP-UP EMITTER AND MAKE SURE IT IS STILL CAPPED AND FUNCTIONING</li> </ul>	ANNUALLY
<ul style="list-style-type: none"> <li>INSPECTED AND CERTIFIED BY A PROFESSIONAL LICENSED IN THE STATE OF VIRGINIA</li> </ul>	ONCE EVERY 5 YEARS

DRY WELL DETAIL	REVISION & DATE
ARLINGTON COUNTY, VIRGINIA DEPARTMENT OF ENVIRONMENTAL SERVICES OFFICE OF SUSTAINABILITY AND ENVIRONMENTAL MANAGEMENT	DRAWING NO. SWM # 7

(FOR 100% VOID STYLE DRY WELL, SEE DETAIL AND SPECIFICATIONS ADJACENT TO THIS DETAIL.)

**MANUFACTURED DRY WELL DETAIL, MATERIAL SPECIFICATIONS, AND MAINTENANCE SCHEDULE**



- NOTES:**
- MUST BE INSTALLED 10' AWAY FROM STRUCTURE OR FOUNDATION.
  - GUTTER GUARDS ARE TO BE INSTALLED ON ALL GUTTERS DRAINING TO DRY WELL.
  - INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
  - THIS DRAWING IS INTENDED FOR USE BY ARCHITECTS, ENGINEERS, CONTRACTORS, CONSULTANTS AND DESIGN PROFESSIONALS FOR PLANNING PURPOSES ONLY.

**MAINTENANCE SCHEDULE:**

MAINTENANCE ACTIVITIES	SCHEDULE
<ul style="list-style-type: none"> <li>REMOVE LEAVES AND DEBRIS IN GUTTER AT LEAF GUARD.</li> <li>REMOVE LEAVES AND DEBRIS FROM OBSERVATION WELL / OVERFLOW.</li> <li>INSPECT THE CONDITION OF THE OVERFLOW OR POP-UP EMITTER AND MAKE SURE IT IS STILL CAPPED AND FUNCTIONING.</li> </ul>	ANNUALLY
<ul style="list-style-type: none"> <li>INSPECTED AND CERTIFIED BY A PROFESSIONAL LICENSED IN THE STATE OF VIRGINIA.</li> </ul>	ONCE EVERY 5 YEARS

100% VOID DRY WELL SYSTEM REVISION DATE 07/01/2021

**NOTE:**  
 IF USING A MANUFACTURED DRY WELL THAT DIFFERS FROM THE DETAIL ABOVE, PLEASE PROVIDE THE MANUFACTURER'S DETAIL AND SPECIFICATIONS ON PLAN.

(INSERT NORTH ARROW)

**DRY WELL DRAINAGE AREA MAP**

(INSERT SCALE)

DDA	Detention only Dry Wells	Impervious area (sf)	Detention credit (cf)
	D-DW-1		0.0
	D-DW-2		0.0
	D-DW-3		0.0
	D-DW-4		0.0
	<b>Subtotal</b>	<b>0</b>	<b>0.0</b>

Sizing						Elevations		
Rainfall depth (in)	Storage volume (cf)	Soil type	Drywell unit volume (gal)	Number of drywells	Drywell Validation	F - top of drywell pop-up	G - bottom of dry well	H - invert in to drywell
0.0	0.0	A/B	50	0				
0.0	0.0							
0.0	0.0							
0.0	0.0							

NDDA	Detention only Dry Wells	Impervious area (sf)	Detention credit (cf)
	D-DW-1		0.0
	D-DW-2		0.0
	D-DW-3		0.0
	D-DW-4		0.0
	<b>Subtotal</b>	<b>0</b>	<b>0.0</b>

Sizing						Elevations		
Rainfall depth (in)	Storage volume (cf)	Soil type	Drywell unit volume (gal)	Number of drywells	Drywell Validation	F - top of drywell pop-up	G - bottom of dry well	H - invert in to drywell
0.0	0.0	A/B	50	0				
0.0	0.0							
0.0	0.0							
0.0	0.0							

DDA Trees	Number	Detention credit (cf)	Credits (cf)
New	4	12.0	3
6-12"		0.0	6
13-24"	1	20.0	20
>24"		0.0	30
<b>Subtotal</b>	<b>5</b>	<b>28.5</b>	

NDDA Trees	Number	Detention credit (cf)	Credits (cf)
New		0.0	3
6-12"		0.0	6
13-24"		0.0	20
>24"	1	30.0	30
<b>Subtotal</b>	<b>1</b>	<b>0.0</b>	