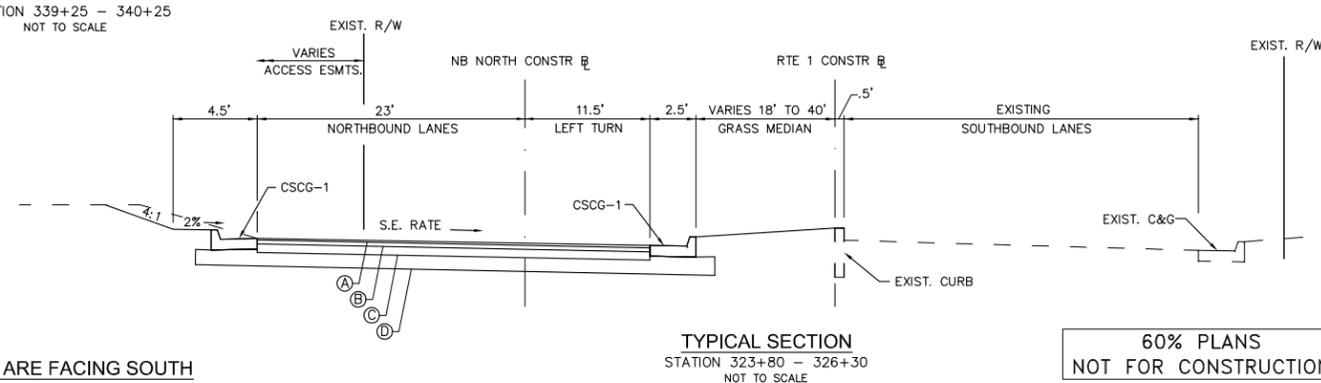
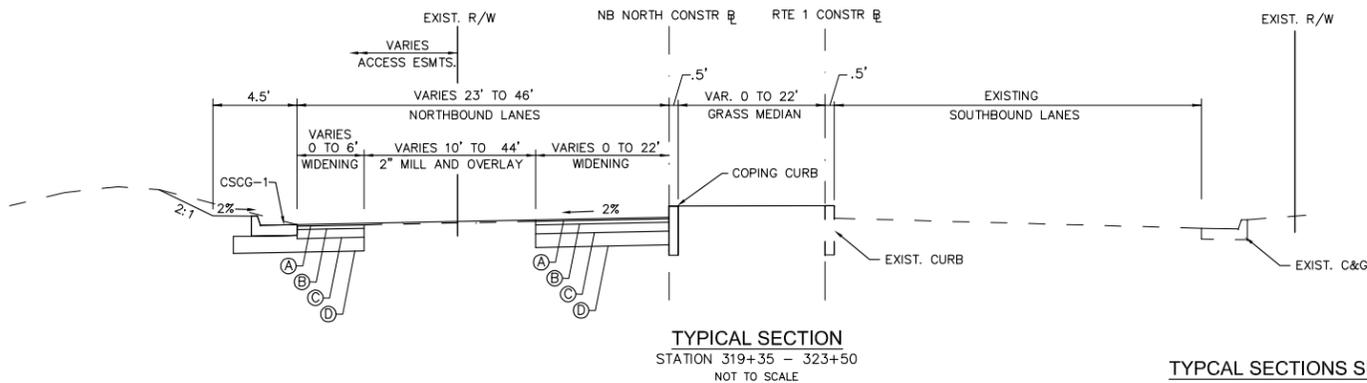
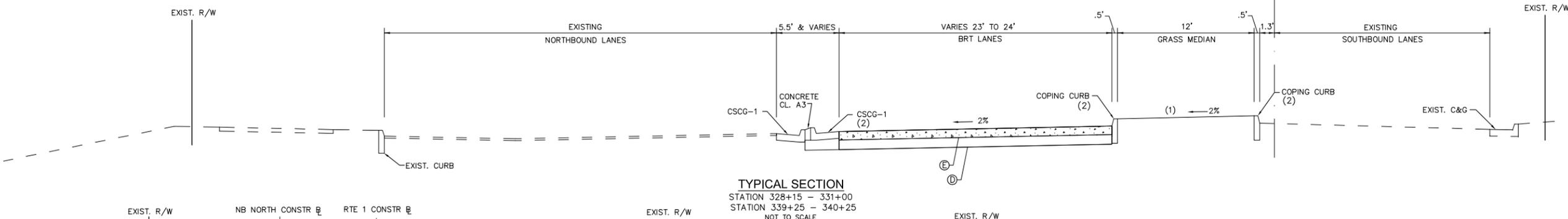
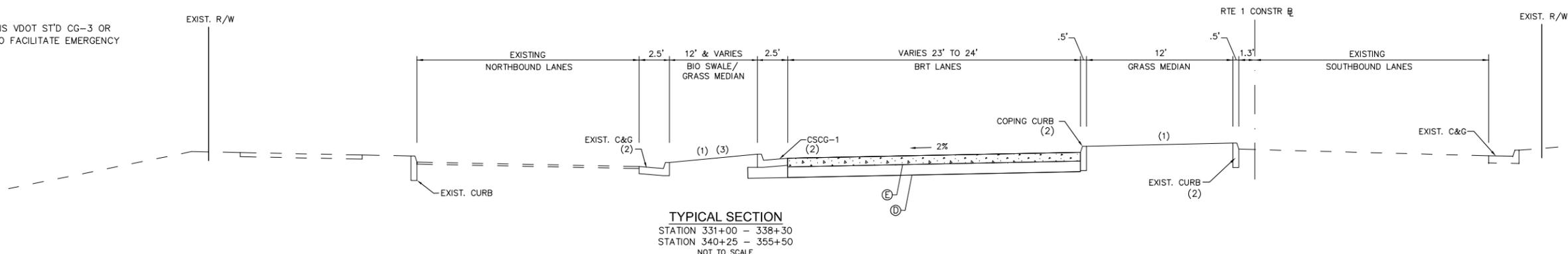
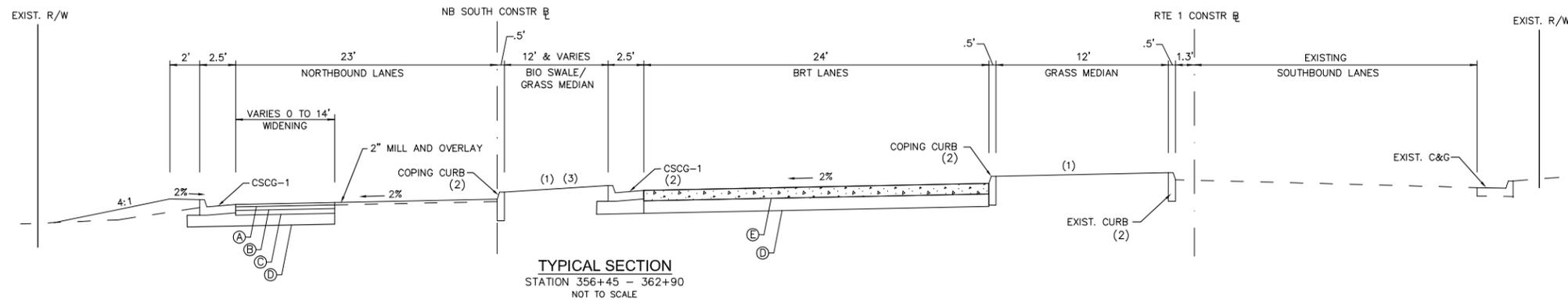
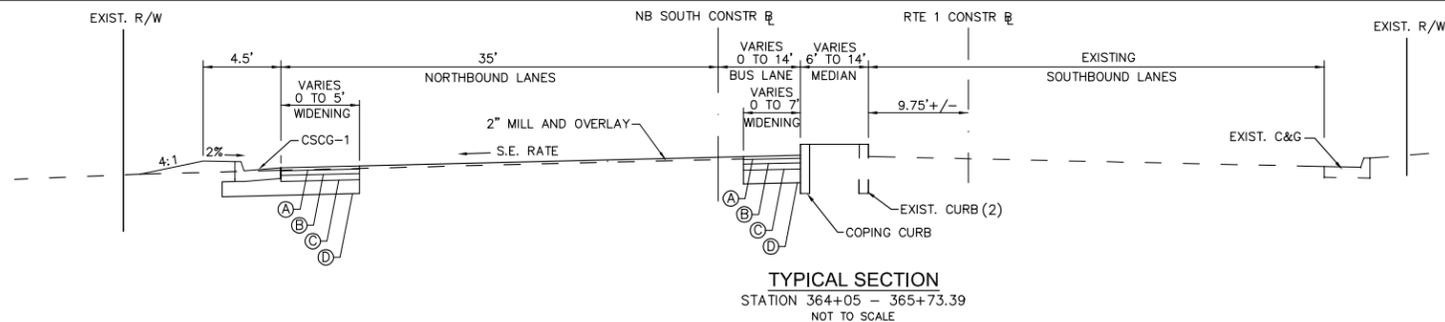


- LEGEND
- (A) - 2" ASPHALT CONCRETE SURFACE COURSE
TYPE SM-9.5D
 - (B) - 2" ASPHALT CONCRETE INTERMEDIATE COURSE
TYPE IM-19.0A
 - (C) - 6" ASPHALT CONCRETE BASE COURSE BM-25.0
 - (D) - 10" AGGREGATE BASE MATERIAL TYPE 1 SIZE 21B
 - (E) - 9" PLAIN CONCRETE PAVEMENT

- NOTES
- N1. PROPOSED PAVEMENT SECTION DEPTH(S) SHALL BE BASED ON A CBR VALUE OF 10 FOR ROUTE 1. LABORATORY TESTS OF SUBGRADE SOIL SHALL BE PERFORMED FOR ACTUAL DETERMINATION OF REQUIRED SUBGRADE THICKNESS PRIOR TO PAVING. IN THE CASE OF PAVEMENT PATCHES, PAVEMENT SECTION MUST MEET OR EXCEED EXISTING SECTION.
- N2. CONTRACTOR TO CONDUCT GEOTECHNICAL INVESTIGATION TO DETERMINE PAVEMENT THICKNESS FOR BRT LANES

- (1) SEE DETAIL SHEET 2B-1 FOR CURB HEIGHT MODIFICATIONS IN THE AREAS OF THE BRT STATION PLATFORM.
- (2) IN LOCATIONS WHERE SHOWN ON THE PLANS VDOT ST'D CG-3 OR ST'D. CG-7 MOUNTABLE CURB REQUIRED TO FACILITATE EMERGENCY VEHICLE CROSSINGS.
- (3) SEE SHEET 2B-2 FOR BIO SWALE DETAILS



TYPICAL SECTIONS SHOWN ARE FACING SOUTH

60% PLANS
NOT FOR CONSTRUCTION

NO.	REVISIONS	DATE	BY

THE LANE
CONSTRUCTION CORPORATION

STV Incorporated
Engineers / Planners / Construction Managers
222 Verano Dr. Suite 500, Fairfax, VA 22031 (571) 353-2220



PROJECT NO. 2515453	DATE 03/28/12	SCALE: AS NOTED	DESIGNED BY: G.L.M.	DRAWN BY: G.L.M.	CHECKED BY: M.W.R.
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TYPICAL SECTIONS

JEFFERSON DAVIS HIGHWAY
ROUTE 1 FROM EAST GLEBE
ROAD TO POTOMAC AVENUE
BRT IMPROVEMENTS
DESIGN/BUILD

CITY OF ALEXANDRIA VIRGINIA

SHEET NUMBER
2A

CG-12

GENERAL NOTES:

1. THE DETECTABLE WARNING SHALL BE PROVIDED BY TRUNCATED DOMES.
2. DETECTABLE WARNING TO BE CLASS A-3 CONCRETE (CLASS A-4 IF PRECAST) WITH 5/8" REINFORCING ANCHORS SURFACE COVERING THE FULL WIDTH OF THE RAMP FLOOR BY 2' (0.61) IN LENGTH IN THE DIRECTION OF PEDESTRIAN TRAVEL. OTHER TYPES OF MATERIAL WITH THE TRUNCATED DOMES DETECTABLE WARNING MAY BE USED WITH THE APPROVAL OF THE ENGINEER.
3. SLOPING SIDES OF CURB RAMP MAY BE FINISHED MONOLITHICALLY WITH RAMP FLOOR OR BY USING PERMISSIBLE CONSTRUCTION JOINT WITH REQUIRED BARS.
4. IF RAMP FLOOR IS PRECAST, BARS MUST BE PROVIDED FOR DOWN BARS SO THAT ADJOINING FLARED SIDES CAN BE CAST IN PLACE AFTER PLACEMENT OF PRECAST RAMP FLOOR. PRECAST CONCRETE SHALL BE CLASS A-4.
5. REQUIRED BARS ARE TO BE NO. 5 @ 8" PLACED POSITIVELY TO CENTER ALONG WITH BARS OF THE RAMP FLOOR, MINIMUM DEPTH OF RAMP FLOOR MINIMUM CONCRETE COVER 1/2".
6. CURB RAMP AND OUTER SLOPE TRANSITIONS ADJACENT TO CURB RAMP ARE INCLUDED IN PAYMENT FOR CURB / CURB AND OUTER.
7. CURB RAMP ARE TO BE LOCATED AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER. THEY ARE TO BE PROVIDED AT INTERSECTIONS WHEREVER AN ACCESSIBLE ROUTE WITHIN THE RIGHT OF WAY OF A HIGHWAY FACILITY CROSSES A CURB REGARDLESS OF WHETHER SIDEWALK IS EXISTING, PROPOSED, OR INDISCRIMINATE. THEY MUST BE LOCATED WITHIN TRUSSEAN CROSSWALKS AS SHOWN ON PLANS OR AS DIRECTED BY THE ENGINEER AND SHOULD NOT BE LOCATED BEHIND VEHICLE STOP LINES, EXISTING LIGHT POLES, FIRE HYDRANTS, DROP IN ETC. ACCESSIBLE ROUTES PROVIDE A CONTINUOUS UNINTERRUPTED, STABLE FIRM AND SLIP RESISTANT PATH CONNECTING ALL ACCESSIBLE ELEMENTS OF A FACILITY THAT CAN BE APPROACHED, ENTERED AND USED BY PEDESTRIANS.
8. RAMP MAY BE PLACED ON RADIAL OR TANGENTIAL SECTIONS PROVIDED THAT THE CURB DRAINAGE IS PLACED WITHIN THE LIMITS OF THE CROSSWALK AND THAT THE SLOPE AT THE CONNECTION OF THE CURB OPENING IS PERPENDICULAR TO THE CURB.
9. TYPICAL CONCRETE SIDEWALK IS 4" THICK WHEN THE ENTRANCE RAMP CANNOT ACCOMMODATE THE TURNING REQUIREMENTS OF ANTICIPATED HEAVY TRUCK TRAFFIC PER TO STANDARD CG-13 COMMERCIAL SURVIVAL DELTA.
10. WHEN CURB RAMP ARE USED IN CONJUNCTION WITH A SHARED USE PATH, THE MINIMUM WIDTH SHALL BE THE WIDTH OF THE SHARED USE PATH.
11. WHEN ONLY ONE CURB RAMP IS PROVIDED FOR TWO CROSSINGS (DIAGONAL), A 4' x 4' LANDING AREA SHALL BE PROVIDED TO MANEUVER A WHEELCHAIR INTO THE CROSSWALK WITHOUT CURB RAMP. THE WHEELCHAIR LANDING AREA MAY BE UNDER THE OUTER RAMP.
12. ALL CASES WHERE CURB RAMP INTERSECT A RADIAL SECTION OF CURB AT ENTRANCES OF STREETS CONNECTING THE DETECTABLE WARNING SURFACE SHALL HAVE A FACTORY FINISH OR BE FIELD MODIFIED AS RECOMMENDED BY THE MANUFACTURER TO MATCH THE BACK OF CURB.

CG-12 DETECTABLE WARNING SURFACE (GENERAL NOTES)

ROAD AND BRIDGE STANDARDS
SHEET 1 OF 5 REVISION DATE 7/11
203.09

SPECIFICATION REFERENCE: 805 502

VIRGINIA DEPARTMENT OF TRANSPORTATION

CG-12

TYPICAL DESIGN

SECTION A-A

SECTION B-B

TYPE A WITH BUFFER STRIP

NOTES:
FOR GENERAL NOTES ON THE DETECTABLE WARNING SURFACE, SEE SHEET 1 OF 5.
THIS DESIGN IS TO BE USED FOR CONSTRUCTION THAT INCORPORATES WIDER SIDEWALK LANDING AS NOTED AT TOP OF CURB RAMP. MINIMUM CURB RAMP LENGTH 8 FEET FOR NEW CONSTRUCTION, 6 FEET FOR RETRAINS.

CG-12 DETECTABLE WARNING SURFACE TYPE A (PERPENDICULAR) APPLICATION

ROAD AND BRIDGE STANDARDS
REVISION DATE 7/11 SHEET 2 OF 5
203.06

SPECIFICATION REFERENCE: 805 502

VIRGINIA DEPARTMENT OF TRANSPORTATION

CG-12

PLAN

SECTION A-A

B.R.T. STATION PLATFORM

CG-12 DETECTABLE WARNING SURFACE TYPE B (PARALLEL) APPLICATION

ROAD AND BRIDGE STANDARDS
REVISION DATE 7/11 SHEET 3 OF 5
203.07

SPECIFICATION REFERENCE: 805 502

VIRGINIA DEPARTMENT OF TRANSPORTATION

CG-12

WITH BUFFER STRIP

WITHOUT BUFFER STRIP

SECTION A-A

SECTION B-B

TYPE B PARALLEL APPLICATION

ROADWAY CURB IN PERCUSSION	MINIMUM RAMP LENGTH IN FEET	4" CURB	6" CURB
0	4	7	8
1	5	7	8
2	5	8	9
3	6	8	9
4	6	12	12
5	8	15	15
6	8	15	15

CG-12 DETECTABLE WARNING SURFACE TYPE B (PARALLEL) APPLICATION

ROAD AND BRIDGE STANDARDS
SHEET 3 OF 5 REVISION DATE 7/11
203.07

SPECIFICATION REFERENCE: 805 502

VIRGINIA DEPARTMENT OF TRANSPORTATION

CG-12

TANGENT PLAN

SECTION A-A

TYPE C PARALLEL & PERPENDICULAR APPLICATION

ROADWAY GRADE IN PERCUSSION	MINIMUM RAMP LENGTH IN FEET	4" CURB	6" CURB
0	2	4	4
1	2	5	5
2	3	5	5
3	3	6	6
4	4	6	6
5	5	8	8
6	7	12	14
7	13	15	15
8	15	15	15

CG-12 DETECTABLE WARNING SURFACE TYPE C (PARALLEL & PERPENDICULAR) APPLICATION

ROAD AND BRIDGE STANDARDS
REVISION DATE 7/11 SHEET 4 OF 5
203.08

SPECIFICATION REFERENCE: 805 502

VIRGINIA DEPARTMENT OF TRANSPORTATION

CG-12

SECTION C-C

SECTION B-B

SECTION D-D

SECTION A-A

MEDIAN WITH CUT-THROUGH TYPE M2

MEDIAN WITH RAMP TYPE M1

REFUGE ISLAND WITH RAMPS TYPE R11

REFUGE ISLAND CUT - THROUGH TYPE R12

CG-12 DETECTABLE WARNING SURFACE MEDIAN AND REFUGE ISLAND APPLICATIONS

ROAD AND BRIDGE STANDARDS
SHEET 5 OF 5 REVISION DATE 08/10
203.08A

SPECIFICATION REFERENCE: 805 502

VIRGINIA DEPARTMENT OF TRANSPORTATION

JEFFERSON DAVIS HIGHWAY
ROUTE 1 FROM EAST GLEBE
ROAD TO POTOMAC AVENUE
BRT IMPROVEMENTS
DESIGN/BUILD

CITY OF ALEXANDRIA

PROJECT NO. 2515453
DATE 03/28/12
SCALE:
DESIGNED BY: G.L.M.
DRAWN BY: S.E.C.
CHECKED BY: M.W.R.

STV Incorporated
Architects / Planners / Construction Managers
2222 N. Glebe Rd., Suite 500, Fairfax, VA 22031 (703) 655-2200

THE LANE CONSTRUCTION CORPORATION

REVISIONS

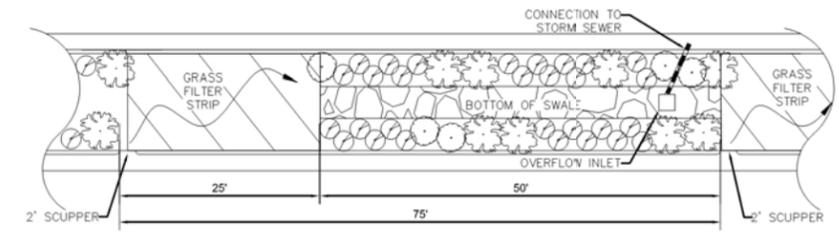
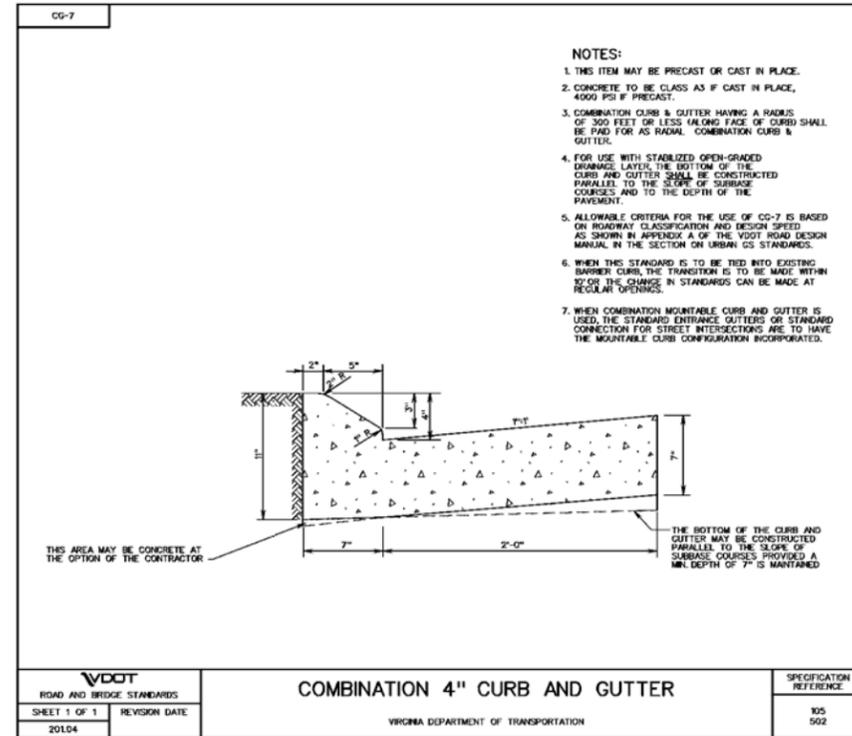
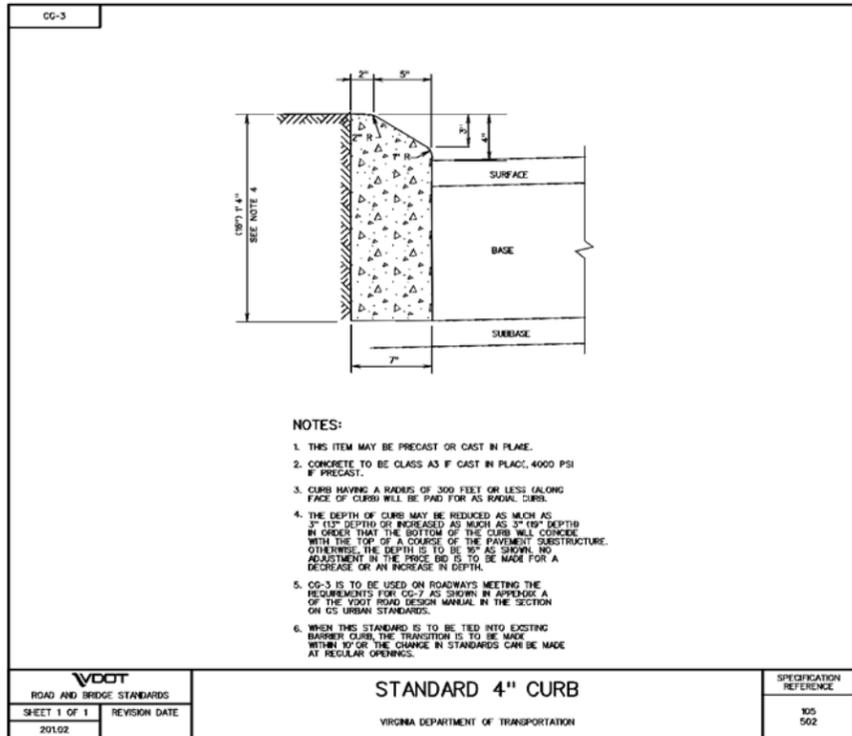
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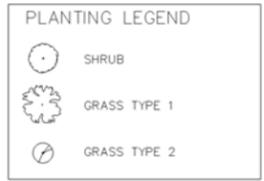
BY

60% PLANS
NOT FOR CONSTRUCTION

SHEET NUMBER
2B-1

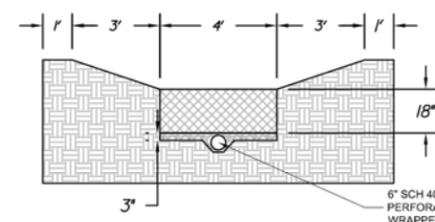


PLAN VIEW



NOTES:

- TYPICAL PLANTING SHALL BE APPROXIMATELY 85% HERBACEOUS SPECIES AND 15% SHRUB SPECIES.
- SHRUB SPECIES SHALL BE FROM TABLE 3.11-7B, RECOMMENDED PLANT SPECIES FOR USE IN BIORETENTION FROM THE VIRGINIA STORMWATER MANAGEMENT HANDBOOK, WITH A HIGH TOLERANCE TO SALT AND A SPECIES FOUND IN THE COASTAL PLAINS.
- HERBACEOUS SPECIES SHALL BE FROM TABLE 3.11-7C, RECOMMENDED PLANT SPECIES FOR USE IN BIORETENTION FROM THE VIRGINIA STORMWATER MANAGEMENT HANDBOOK, WITH A HIGH TOLERANCE TO SALT.



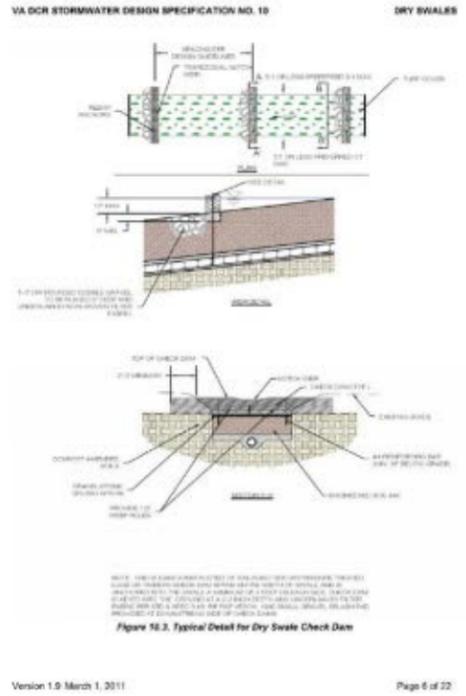
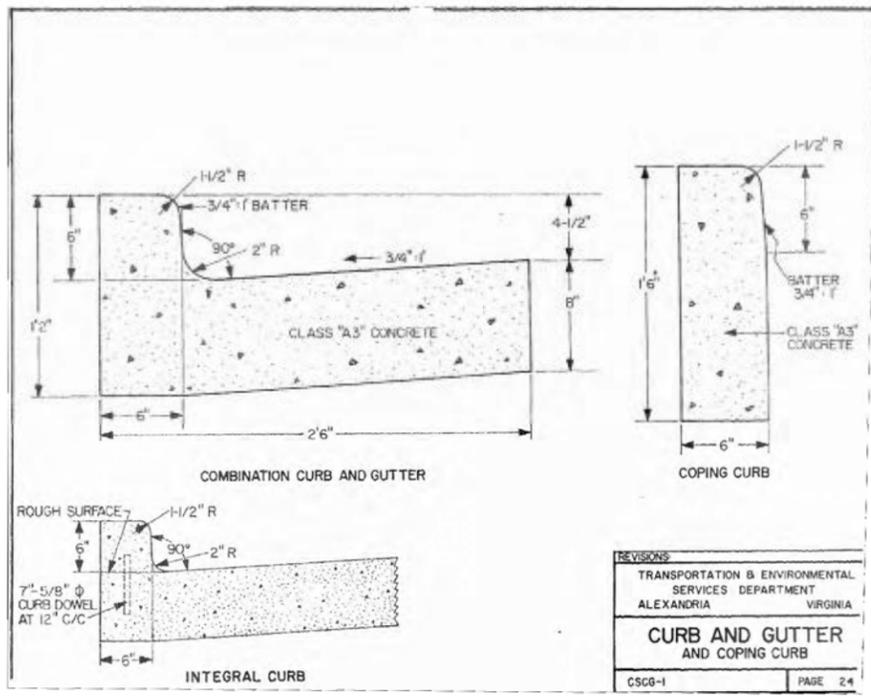
SECTION VIEW

- #57 STONE
- 6" SCH 40 PVC PERFORATED SOCK WRAPPED PIPE
- PLANTING SOIL
- FILTER MEDIA (85-88% SAND, 8-12% SOIL FINES, 3-5% ORGANIC MATTER IN FORM OF LEAF COMPOST)

NOTES:

1. SUBGRADE PREPARATION
 - A. EXISTING SUB-GRADE IN BIO-SWALE AREAS SHALL NOT BE COMPACTED OR SUBJECT TO EXCESSIVE CONSTRUCTION EQUIPMENT TRAFFIC.
 - B. INITIAL EXCAVATION CAN BE PERFORMED DURING ROUGH SITE GRADING BUT SHALL NOT BE CARRIED TO WITHIN ONE FOOT OF THE FINAL BOTTOM ELEVATION. FINAL EXCAVATION SHALL NOT TAKE PLACE UNTIL ALL DISTURBED AREAS IN THE DRAINAGE AREA HAVE BEEN STABILIZED.
 - C. WHERE EROSION OF SUB-GRADE HAS CAUSED ACCUMULATION OF FINE MATERIALS AND/OR SURFACE PONDING IN THE GRADED BOTTOM, THIS MATERIAL SHALL BE REMOVED WITH LIGHT EQUIPMENT AND THE UNDERLYING SOILS SCARIFIED TO A MINIMUM DEPTH OF 6 INCHES WITH A YORK RAKE OR EQUIVALENT LIGHT TRACTOR.
 - D. BRING SUB-GRADE OF BIO-SWALE AREA TO LINE, GRADE, AND ELEVATIONS INDICATED. FILL AND LIGHTLY REGRADE ANY AREAS DAMAGED BY EROSION, PONDING, OR TRAFFIC COMPACTION. ALL BIO-SWALE AREAS SHALL BE LEVEL GRADE ON THE BOTTOM.
2. INSTALLATION
 - A. INSTALL CLEAN WASHED STONE FOR THE RECHARGE ZONE AS INDICATED.
 - B. FOR THE SUBSURFACE FILTRATION ZONE INSTALLATION, BIO-SWALE SOIL MIX SHALL BE PLACED TO THE SPECIFIED DEPTH.
 - C. BIO-SWALE SOIL MIX SHALL BE PLACED IMMEDIATELY AFTER APPROVAL OF SUB-GRADE PREPARATION / BED INSTALLATION. ANY ACCUMULATION OF DEBRIS OR SEDIMENT THAT TAKES PLACE AFTER APPROVAL OF SUB-GRADE SHALL BE REMOVED PRIOR TO INSTALLATION OF PLANTING SOIL AT NO EXTRA COST TO THE OWNER.
 - D. INSTALL BIO-SWALE SOIL MIX IN 12 INCH MAXIMUM LIFTS AND LIGHTLY COMPACT (TAMP WITH BACKHOE BUCKET OR BY HAND). KEEP EQUIPMENT MOVEMENT OVER PLANTING SOIL TO A MINIMUM. DO NOT OVER COMPACT. INSTALL PLANTING SOIL MIX AND TOPSOIL TO FINAL GRADES INDICATED ON THE GRADING AND DRAINAGE PLANS, ALLOWING FOR INITIAL SETTLEMENT.
 - E. PLANT TREES AND SHRUBS ACCORDING TO INSTALLATION DETAILS AND ONLY FROM APRIL 1 THROUGH JUNE 1 OR FROM SEPTEMBER 1 THROUGH OCTOBER 30. HERBACEOUS PLANTS SHALL BE INSTALLED WHEN THERE IS NO DANGER OF FROST.
 - F. INSTALL 2-3 INCHES OF SHREDDED HARDWOOD MULCH (MINIMUM AGE 6 MONTHS) AS INDICATED BY PLANTING DETAILS. DO NOT APPLY MULCH IN AREAS WHERE GROUND COVER IS TO BE GRASS OR WHERE COVER WILL BE ESTABLISHED BY SEEDING.
 - G. PROTECT BIO-SWALES FROM SEDIMENT AT ALL TIMES DURING CONSTRUCTION. SILT SOX, DIVERSION BERMS AND/OR OTHER APPROPRIATE MEASURES SHALL BE USED AT THE TOE OF SLOPES THAT ARE ADJACENT TO BIO-SWALES TO PREVENT SEDIMENT FROM WASHING INTO THESE AREAS DURING SITE DEVELOPMENT.
 - H. WATER VEGETATION AT THE END OF EACH DAY FOR TWO WEEKS AFTER PLANTING IS COMPLETED.

BIORETENTION DETAIL
N.T.S.



PROJECT NO. 2515453	DATE 03/28/12	DESIGNED BY: G.L.M.	CHECKED BY: M.W.R.
SCALE:		DRAWN BY: S.E.C.	
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STV Incorporated Construction Management Architects / Planners / Engineers 2722 Nantux Dr., Suite 300, Fairfax, VA 22031 (703)633-2200			
JEFFERSON DAVIS HIGHWAY ROUTE 1 FROM EAST GLEBE ROAD TO POTOMAC AVENUE BRT IMPROVEMENTS DESIGN/BUILD			
CITY OF ALEXANDRIA VIRGINIA			

60% PLANS
NOT FOR CONSTRUCTION

SHEET NUMBER
2B-2

