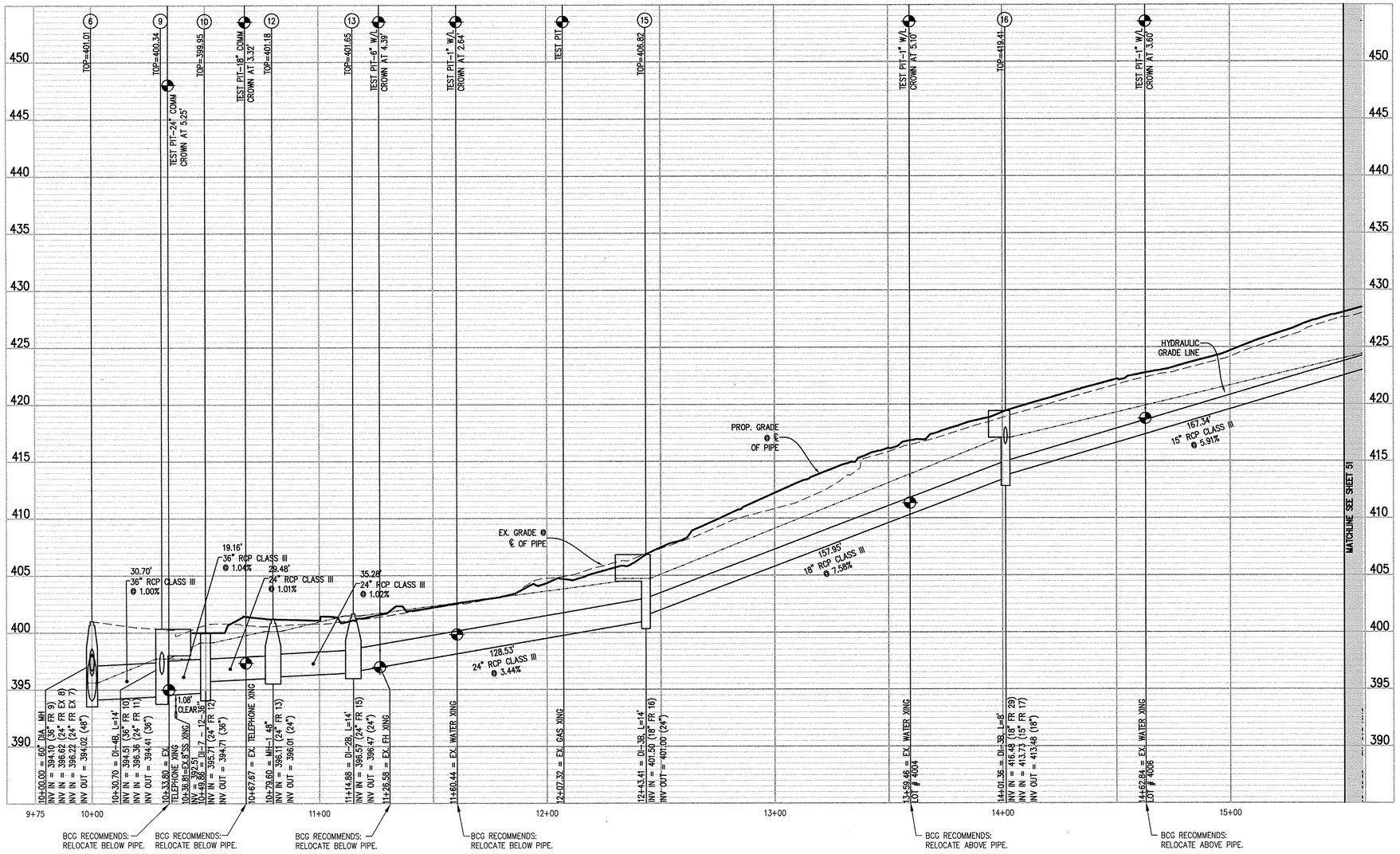

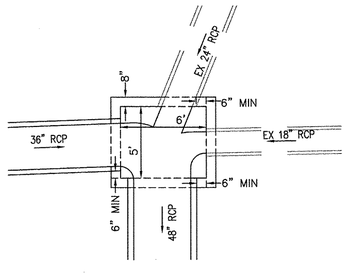

STRUCTURE 6 DETAIL
SCALE: 1"=5'

GRAPHIC SCALE
HORIZONTAL
25 0 12.5 25 50 100
(IN FEET)
1 inch= 25 ft.

Bowman CONSULTING

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STORM DRAIN PROFILES (1 OF 2)

BURKE STATION ROAD STREETSCAPE IMPROVEMENTS

CITY OF FAIRFAX VIRGINIA

PROJECT NUMBER

COMMONWEALTH OF VIRGINIA
BRADLEY GLATFELTER V
Lic. No. 50992
10/17/2016
PROFESSIONAL ENGINEER

PLAN STATUS	
04/05/16	FINAL SUBMISSION
10/17/16	CONTRACT DOCUMENT

DATE	DESCRIPTION

SB	SB	SD
DESIGN	DRAWN	CHKD

SCALE H: 1"=25' V: 1"=5'

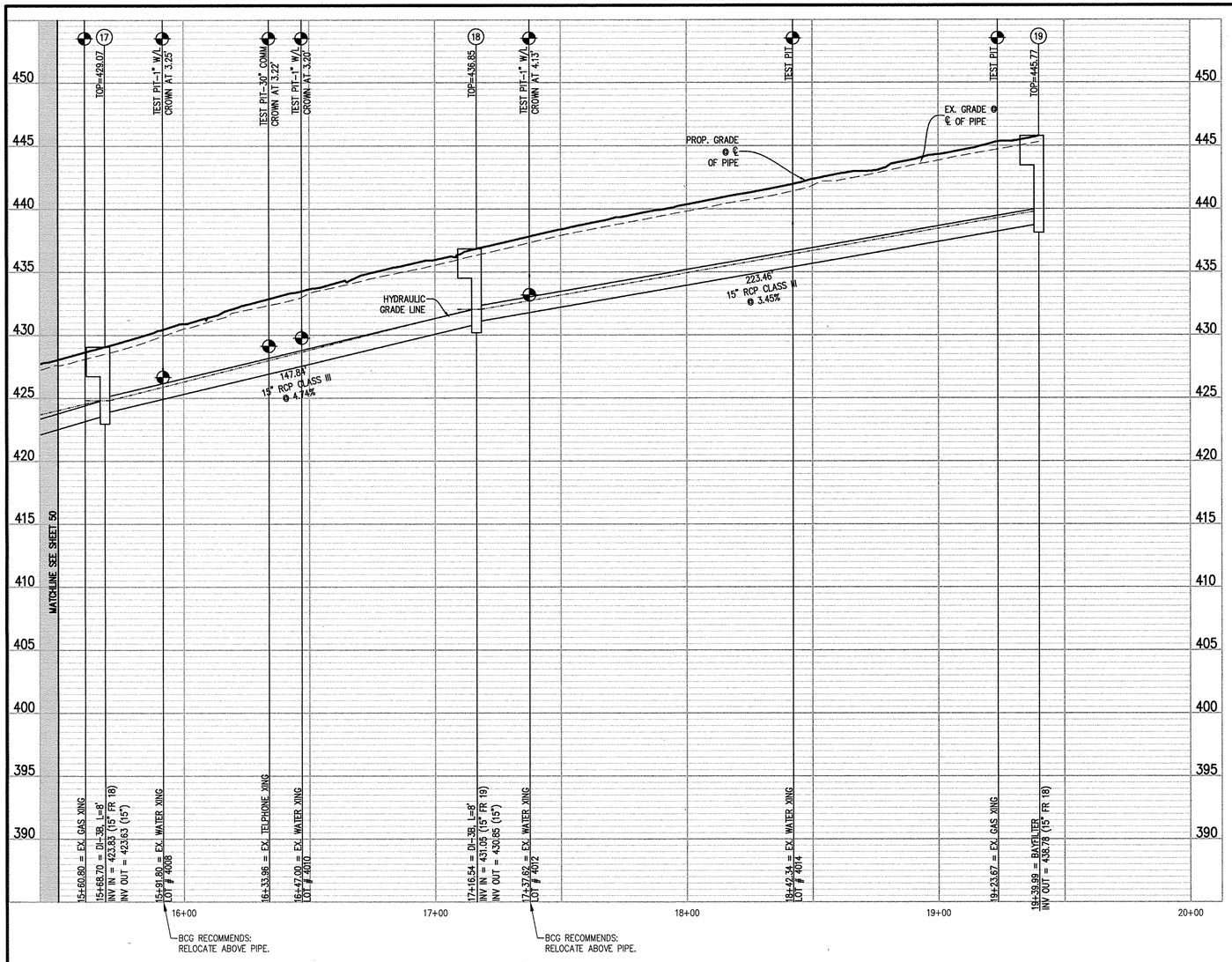
JOB No. 6916-01-002

DATE : JUNE 2015

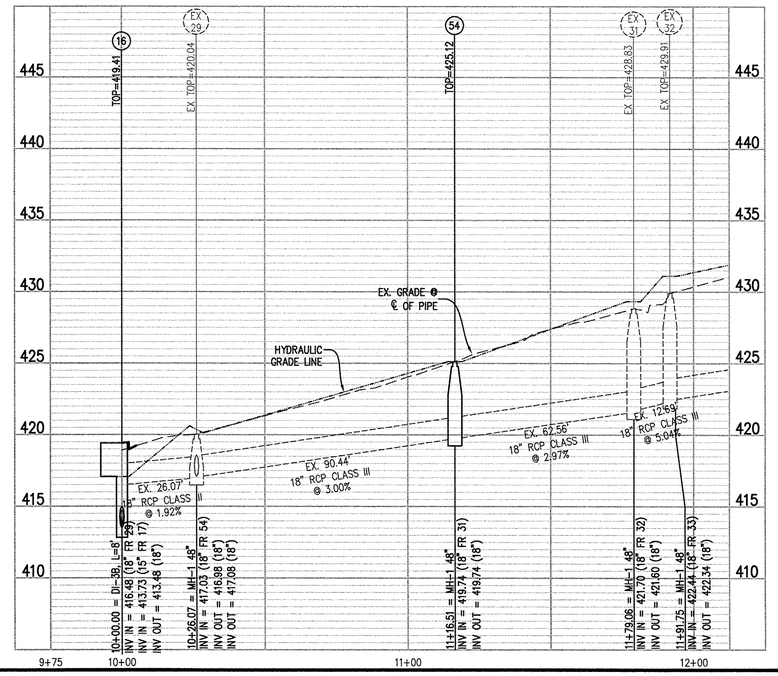
FILE No. 6916-D-CP-002

SHEET 50 OF 63

Cad file name : P:\6916 - City of Fairfax On-Call\6916-01-002 (ENG) - Burke Station Road\Engineering\Engineering Plans\6916-D-CP-002-SDP.dwg



GRAPHIC SCALE
HORIZONTAL
25 0 12.5 25 50 100
(IN FEET)
1 inch= 25 ft.



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STORM DRAIN PROFILES (2 OF 2)

BURKE STATION ROAD STREETSCAPE IMPROVEMENTS

CITY OF FAIRFAX VIRGINIA

PROJECT NUMBER

COMMONWEALTH OF VIRGINIA
BRADLEY GLATFELTER
Lic. No. 50992
10/17/2016
PROFESSIONAL ENGINEER

PLAN STATUS	
04/05/16	FINAL SUBMISSION
10/17/16	CONTRACT DOCUMENT

DATE	DESCRIPTION

SB	SB	SD
DESIGN	DRAWN	CHKD

SCALE H: 1"=25' V: 1"=5'

JOB No. 6916-01-002

DATE : JUNE 2015

FILE No. 6916-D-CP-002

SHEET 51 OF 63

Cad file name : P:\6916 - City of Fairfax On-Call\6916-01-002 (ENG) - Burke Station Road\Engineering\Engineering Plans\6916-D-CP-002-SDP.dwg

Burke Station Road
Date of site visit: May 23, 2014
Certified Arborist: Gregg D. Eberly MA-4616A

Plan Label	Botanic Name	Common Name	Caliper (DBH)	Condition Rating	Species Rating	Preserve/ Remove
1	Acer campestre	Hedge Maple	6	0.76	0.80	Remove

Notes:
1. Condition and Species Rating based on formula provided by the Guide for Plant Appraisal published by the ISA.
2. No person shall remove or destroy any tree which is five inches or greater in caliper, measured six inches above ground level, on any lot larger than one-half acre without first obtaining a tree removal permit from the zoning administrator.

TREE PRESERVATION NARRATIVE

SUPER SILT FENCE SHALL BE USED TO PROTECT TREES AND FORESTED AREAS SPECIFIED TO BE PRESERVED. PRIOR TO ANY SITE DEMOLITION, THE LIMITS OF CLEARING AND GRADING SHALL BE CLEARLY MARKED IN THE FIELD. UNDER THE SUPERVISION OF A CERTIFIED ARBORIST, A 18"–24" ROOT PRUNING TRENCH SHALL BE DUG ALONG THE LIMITS OF CLEARING AND GRADING WHERE SUPER SILT HAS BEEN SPECIFIED ON PLAN. TRENCH SHALL BE DUG USING SHARP TOOLS/MACHINERY SUCH AS A DOSKO OR VERMEER ROOT PRUNER (OR EQUAL) SO THAT EXISTING TREE ROOTS ARE NOT TORN OR CRUSHED. ANY LARGE ROOTS (GREATER THAN 1") THAT ARE FOUND WHILE TRENCHING NEAR TREES ARE TO BE CUT BY HAND TO MINIMIZE IMPACT ON TREES TO BE PRESERVED. AFTER TRENCH HAVE BEEN DUG, ALL SUPER SILT FENCE IS TO BE INSTALLED IN CONFORMANCE WITH THE DETAILS PROVIDED ON THE EROSION AND SEDIMENT CONTROL PLAN. BILINGUAL SIGNS SHALL BE POSTED AT A MINIMUM OF 50–FOOT INTERVALS ALONG SUPER SILT FENCE THAT CLEARLY STATE THAT TREES AND FORESTED AREAS MUST BE PROTECTED AND LEFT UNDISTURBED. SIGNS SHALL REMAIN POSTED THROUGHOUT ALL PHASES OF CONSTRUCTION.

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NO TREES ARE PLANNED TO BE TRANSPLANTED AND NO SPECIMEN, HERITAGE, OR MEMORIAL TREES ARE DENOTED IN THE PLANS TO BE REMOVED OR TO REMAIN. NO INVASIVE PLANTS ARE PRESENT IN TREE SAVE AREAS.

LEGEND

- T26 — EXISTING TREE/SHRUB TO BE PRESERVED
- T26 X — EXISTING TREE/SHRUB TO BE REMOVED
- EXISTING CRITICAL ROOT ZONE
- LOD — LIMITS OF DISTURBANCE
- SSF — SUPER SILT FENCE (TO BE UTILIZED AS TREE PROTECTION FENCE)
- TEMPORARY CONSTRUCTION EASEMENT

MATCHLINE–SEE SHEET 53

BURKE STATION ROAD
ROUTE 652
(VARIABLE WIDTH)

CONC. WALK

N53°41'08"E 36.64'

N89°23'39"W 9.16'

S00°36'21"W 187.19'

N00°44'57"E 127.22'

N00°40'00"E 122.65'

S14°12'23"E 44.57'

S89°15'07"E 162.11'

LAZA, LLC
D.B. 11958, PG. 2056
PID 58-3-02-004
LOT NUMBER 9909

#4000
FFE = 408.01

NAD 83

GRAPHIC SCALE
10 0 5 10 20 40
(IN FEET)
1 inch = 10 ft.

Cad file name : P:\6916 - City of Fairfax On-Call\6916-01-002 (ENG) - Burke Station Road\Engineering\Engineering Plans\6916-D-CP-002-TPP.dwg

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TREE REMOVAL PLAN (1 OF 4)

BURKE STATION ROAD
STREETSCAPE IMPROVEMENTS
CITY OF FAIRFAX VIRGINIA

PROJECT NUMBER

COMMONWEALTH OF VIRGINIA
BRADLEY GLATFELTER
Lic. No. 50992
10/17/2016
PROFESSIONAL ENGINEER

PLAN STATUS	
04/05/16	FINAL SUBMISSION
10/17/16	CONTRACT DOCUMENT

DATE	DESCRIPTION

SB	SB	SD
DESIGN	DRAWN	CHKD

SCALE H: 1"=10' V: N/A
JOB No. 6916-01-002
DATE : JUNE 2015
FILE No. 6916-D-CP-002

SHEET 52 OF 63

Burke Station Road

Date of site visit: May 23, 2014
Certified Arborist: Gregg D. Eberly MA-4616A

Plan Label	Botanic Name	Common Name	Caliper (DBH)	Condition Rating	Species Rating	Preserve/ Remove
2	Pinus virginiana	Virginia Pine	16	0.60	0.50	Remove
3	Pinus virginiana	Virginia Pine	16	0.68	0.50	Preserve
4	Thuja occidentalis	Arborvitae	4	0.80	0.60	Remove
5	Cornus florida	Flowering Dogwood	4	0.80	0.60	Preserve
6	Thuja occidentalis	Arborvitae	12	0.80	0.60	Remove
7	Prunus serrulata 'Kwanzan'	Kwanzan Cherry	12	0.68	0.50	Preserve
8	Picea pungens	Colorado Blue Spruce	8	0.80	0.70	Preserve
9	Picea pungens	Colorado Blue Spruce	10	0.80	0.70	Preserve
10	Prunus sp.	Cherry	12	0.80	0.50	Preserve
11	Quercus alba	White Oak	20	0.80	0.80	Preserve
12	Prunus subhirtella 'Pendula'	Weeping Cherry	8	0.72	0.50	Preserve
13	Cupressocyparis leylandii	Leyland Cypress	5	0.72	0.70	Preserve
14	Cupressocyparis leylandii	Leyland Cypress	10	0.72	0.70	Preserve
15	Cupressocyparis leylandii	Leyland Cypress	5	0.72	0.70	Preserve
16	Cupressocyparis leylandii	Leyland Cypress	5	0.72	0.70	Preserve
17	Cupressocyparis leylandii	Leyland Cypress	8	0.72	0.70	Preserve
18	Cupressocyparis leylandii	Leyland Cypress	6	0.72	0.70	Preserve
19	Cupressocyparis leylandii	Leyland Cypress	6	0.72	0.70	Preserve
20	Cupressocyparis leylandii	Leyland Cypress	12	0.72	0.70	Preserve
21	Cupressocyparis leylandii	Leyland Cypress	6	0.72	0.70	Preserve
22	Cupressocyparis leylandii	Leyland Cypress	5	0.72	0.70	Preserve
23	Cupressocyparis leylandii	Leyland Cypress	10	0.72	0.70	Preserve
24	Cupressocyparis leylandii	Leyland Cypress	6	0.72	0.70	Preserve
25	Cupressocyparis leylandii	Leyland Cypress	3	0.72	0.70	Preserve
26	Cupressocyparis leylandii	Leyland Cypress	7	0.72	0.70	Preserve
27	Ilex opaca	American Holly	8	0.72	0.70	Preserve
28	Castanea dentata	American Chestnut	12	0.72	0.10	Preserve
29	Ilex opaca	American Holly	14	0.72	0.70	Preserve
30	Castanea dentata	American Chestnut	12	0.72	0.10	Preserve
31	Cornus florida	Flowering Dogwood	9	0.76	0.60	Preserve
32	Lagerstroemia indica	Crape Myrtle	17	0.72	0.80	Preserve

Notes:
1. Condition and Species Rating based on formula provided by the Guide for Plant Appraisal published by the ISA.
2. No person shall remove or destroy any tree which is five inches or greater in caliper, measured six inches above ground level, on any lot larger than one-half acre without first obtaining a tree removal permit from the zoning administrator.

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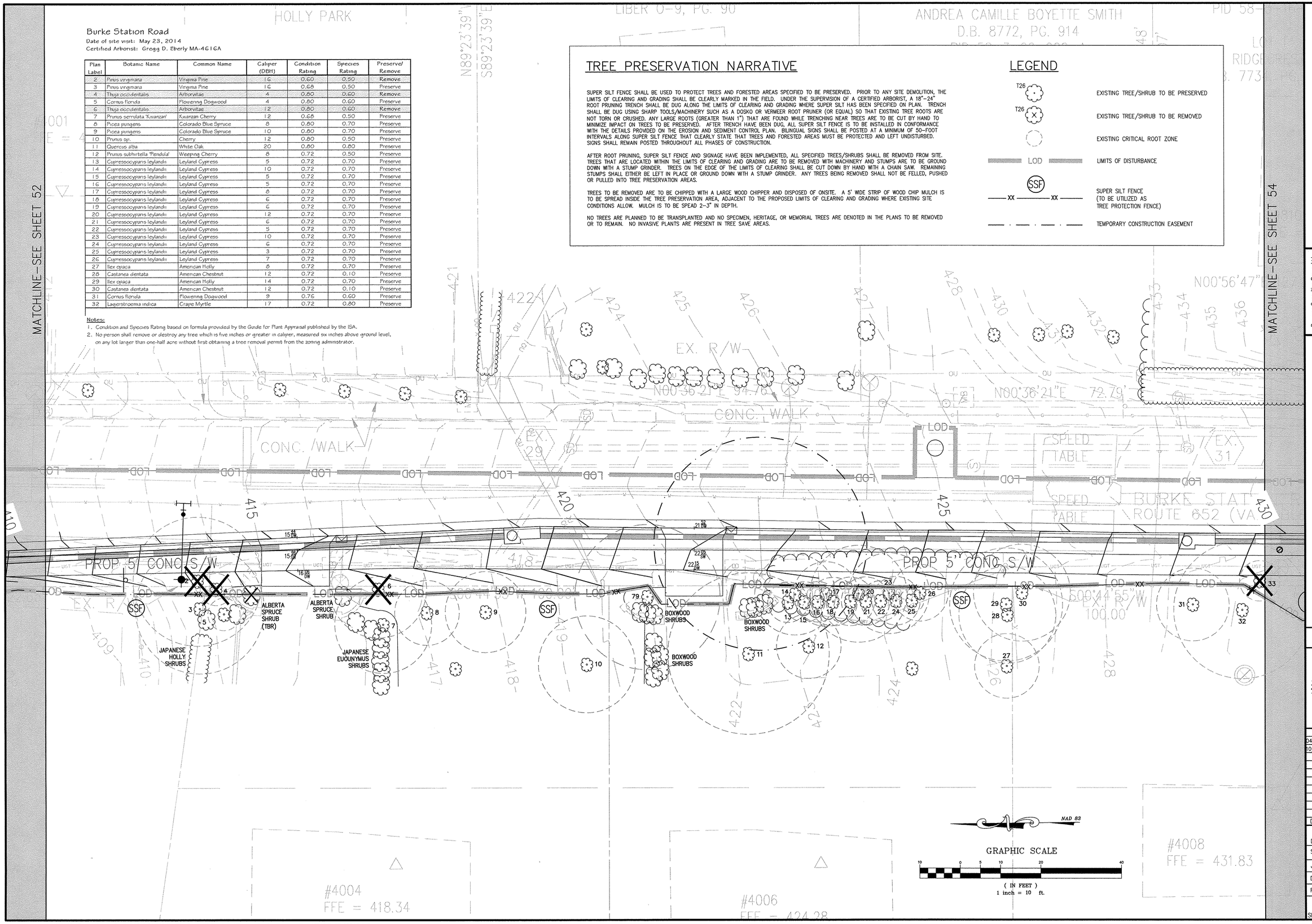
LEGEND

- T26 — EXISTING TREE/SHRUB TO BE PRESERVED
- T26 X — EXISTING TREE/SHRUB TO BE REMOVED
- EXISTING CRITICAL ROOT ZONE
- LOD — LIMITS OF DISTURBANCE
- SSF — SUPER SILT FENCE (TO BE UTILIZED AS TREE PROTECTION FENCE)
- TEMPORARY CONSTRUCTION EASEMENT



NAD 83

GRAPHIC SCALE

10 0 5 10 20 40

(IN FEET)
1 inch = 10 ft.

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TREE REMOVAL PLAN (2 OF 4)

BURKE STATION ROAD STREETSCAPE IMPROVEMENTS

CITY OF FAIRFAX VIRGINIA

PROJECT NUMBER

COMMONWEALTH OF VIRGINIA
BRADLEY GLATFELTER
Lic. No. 50992
10/17/2016
PROFESSIONAL ENGINEER

PLAN STATUS	
04/05/16	FINAL SUBMISSION
10/17/16	CONTRACT DOCUMENT

DATE	DESCRIPTION

SB DESIGN	SB DRAWN	SD CHKD
SCALE	H: 1"=10' V: N/A	
JOB No. 6916-01-002		
DATE : JUNE 2015		
FILE No. 6916-D-CP-002		
SHEET 53 OF 63		

Cad file name : P:\6916 - City of Fairfax On-Call\6916-01-002 (ENG) - Burke Station Road\Engineering\Engineering Plans\6916-D-CP-002-TPP.dwg

Burke Station Road

Date of site visit: May 23, 2014
Certified Arborist: Gregg D. Eberly MA-4616A

Plan Label	Botanic Name	Common Name	Caliper (DBH)	Condition Rating	Species Rating	Preserve/ Remove
33	Cornus florida	Flowering Dogwood	5	0.76	0.60	Remove
34	Acer rubrum	Red Maple	30	0.76	0.70	Preserve
35	Quercus prinus	Chestnut Oak	26	0.56	0.70	Remove
36	Acer rubrum	Red Maple	14	0.68	0.70	Preserve
37	Picea abies	Norway Spruce	5	0.80	0.70	Preserve
38	Acer palmatum	Japanese Maple	9	0.80	0.70	Preserve
39	Magnolia soulangiana	Saucer Magnolia	9	0.80	0.70	Remove
40	Cornus florida	Flowering Dogwood	5	0.80	0.60	Remove
41	Acer rubrum	Red Maple	8	0.68	0.70	Preserve
42	Castanea dentata	American Chestnut	3	0.68	0.10	Preserve
43	Tilia americana	Basswood	20	0.80	0.70	Preserve
44	Ilex opaca	American Holly	4	0.80	0.70	Preserve
45	Ilex x attenuata 'Foster'	Foster Holly	3	0.80	0.70	Remove
46	Ilex x attenuata 'Foster'	Foster Holly	3	0.80	0.70	Preserve
47	Ilex x attenuata 'Foster'	Foster Holly	3	0.80	0.70	Remove
48	Lagerstroemia indica	Crape Myrtle	6	0.80	0.80	Preserve
49	Betula nigra	River Birch	13	0.80	0.70	Preserve

Notes:

1. Condition and Species Rating based on formula provided by the Guide for Plant Appraisal published by the ISA.
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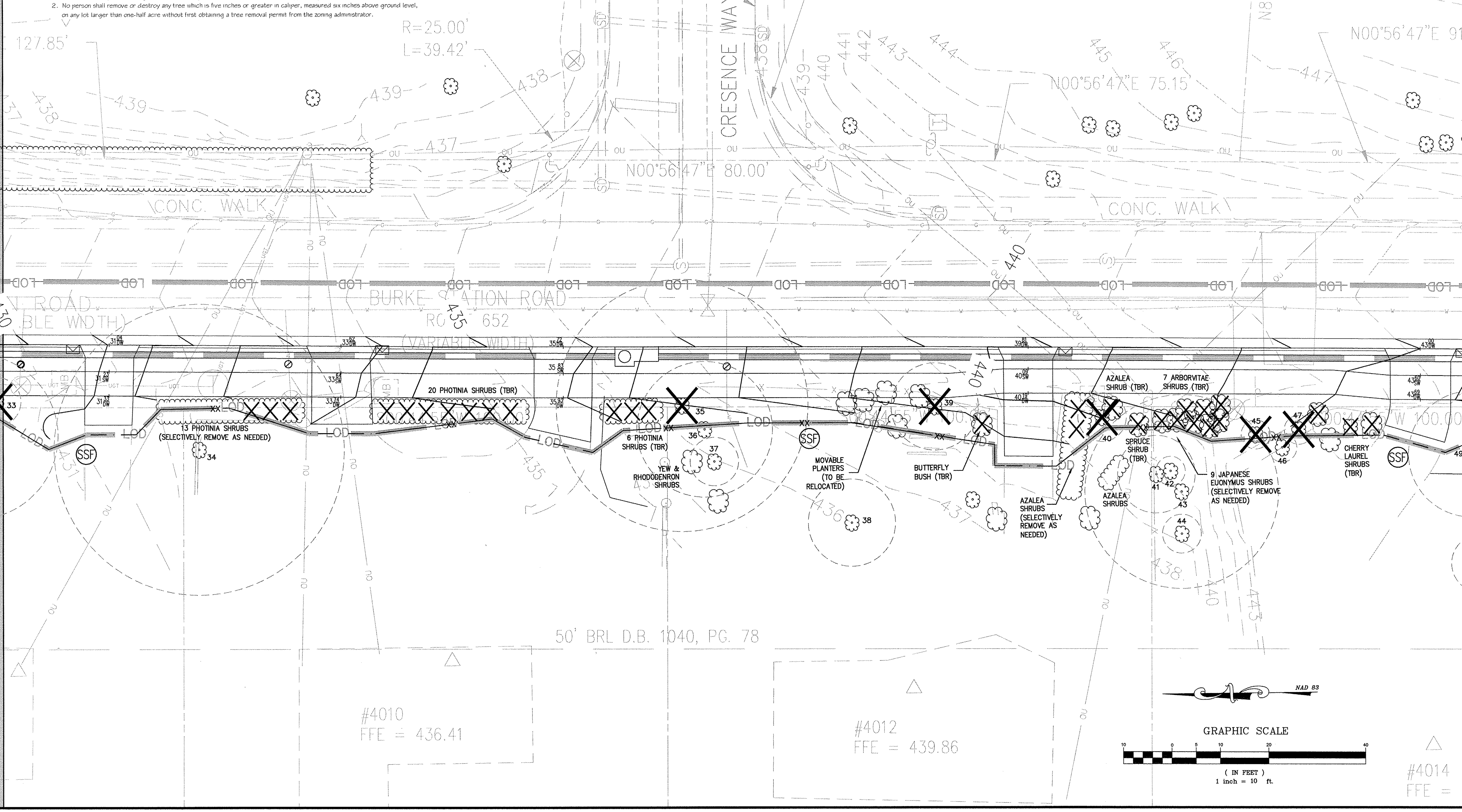
LEGEND

Symbol	Description
T26	EXISTING TREE/SHRUB TO BE PRESERVED
T26 (X)	EXISTING TREE/SHRUB TO BE REMOVED
	EXISTING CRITICAL ROOT ZONE
LOD	LIMITS OF DISTURBANCE
SSF —XX—XX—	SUPER SILT FENCE (TO BE UTILIZED AS TREE PROTECTION FENCE)
	TEMPORARY CONSTRUCTION EASEMENT



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TREE REMOVAL PLAN (3 OF 4)

BURKE STATION ROAD STREETSCAPE IMPROVEMENTS

CITY OF FAIRFAX VIRGINIA

PROJECT NUMBER

COMMONWEALTH OF VIRGINIA — BRADLEY GLATFELTER — Lic. No. 50992 — 10/17/2016 — PROFESSIONAL ENGINEER

PLAN STATUS

04/05/16	FINAL SUBMISSION
10/17/16	CONTRACT DOCUMENT
DATE	DESCRIPTION

SB DESIGN	SB DRAWN	SD CHKD

SCALE H: 1"=10' V: N/A

JOB No. 6916-01-002

DATE : JUNE 2015

FILE No. 6916-D-CP-002

SHEET 54 OF 63

MATCHLINE-SEE SHEET 54

RIDGECREST
D.B. 7734, PG. 873

PARCEL B
RIDGECREST
PG. 873

KINWOOD SUBDIVISION
D.B. 9681, PG. 553

D.B. 96
PID 58

Burke Station Road

Date of site visit: May 23, 2014
Certified Arborist: Gregg D. Eberly MA-4616A

Plan Label	Botanic Name	Common Name	Caliper (DBH)	Condition Rating	Species Rating	Preserve/ Remove
50	Picea abies	Norway Spruce	3	0.48	0.70	Preserve
51	Acer rubrum	Red Maple	8	0.60	0.70	Preserve
52	Acer rubrum	Red Maple	8	0.72	0.70	Preserve
53	Acer rubrum	Red Maple	18	0.68	0.70	Preserve
54	Picea abies	Norway Spruce	3	0.60	0.70	Preserve
55	Acer rubrum	Red Maple	12	0.72	0.70	Preserve
56	Acer rubrum	Red Maple	18	0.76	0.70	Remove
57	Acer rubrum	Red Maple	9	0.68	0.70	Preserve
58	Acer rubrum	Red Maple	4	0.68	0.70	Preserve
59	Prunus serrulata 'Kwanzan'	Kwanzan Cherry	5	0.80	0.50	Preserve
60	Magnolia grandiflora	Southern Magnolia	10	0.68	0.70	Preserve
61	Lagerstroemia indica	Crape Myrtle	8	0.80	0.80	Preserve
62	Ilex x attenuata 'Foster'	Foster Holly	3	0.80	0.70	Remove
63	Lagerstroemia indica	Crape Myrtle	10	0.80	0.80	Preserve
64	Acer palmatum	Red Maple	3	0.76	0.70	Preserve
65	Acer rubrum	Red Maple	13	0.76	0.70	Remove
66	Robinia pseudoacacia	Black Locust	18	0.48	0.50	Remove
67	Acer rubrum	Red Maple	14	0.72	0.70	Preserve
68	Liriodendron tulipifera	Tulip Poplar	16	0.68	0.70	Preserve
69	Acer rubrum	Red Maple	16	0.72	0.70	Preserve
70	Liriodendron tulipifera	Tulip Poplar	18	0.72	0.70	Preserve
71	Acer rubrum	Red Maple	6	0.04	0.70	Remove
72	Tsuga canadensis	Eastern Hemlock	6	0.80	0.60	Preserve
73	Pinus strobus	White Pine	8	0.80	0.50	Preserve
74	Quercus alba	White Oak	24	0.80	0.80	Remove
75	Quercus rubra	Red Oak	20	0.80	0.70	Preserve
76	Pinus strobus	White Pine	8	0.76	0.50	Preserve
77	Quercus falcata	Southern Red Oak	24	0.76	0.70	Preserve
78	Pinus taeda	Loblolly Pine	16	0.72	0.50	Preserve
79	Quercus alba	White Oak	18	0.76	0.80	Preserve

Notes:
1. Condition and Species Rating based on formula provided by the Guide for Plant Appraisal published by the ISA.
2. No person shall remove or destroy any tree which is five inches or greater in caliper, measured six inches above ground level, on any lot larger than one-half acre without first obtaining a tree removal permit from the zoning administrator.

TREE PRESERVATION NARRATIVE

SUPER SILT FENCE SHALL BE USED TO PROTECT TREES AND FORESTED AREAS SPECIFIED TO BE PRESERVED. PRIOR TO ANY SITE DEMOLITION, THE LIMITS OF CLEARING AND GRADING SHALL BE CLEARLY MARKED IN THE FIELD. UNDER THE SUPERVISION OF A CERTIFIED ARBORIST, A 18"-24" ROOT PRUNING TRENCH SHALL BE DUG ALONG THE LIMITS OF CLEARING AND GRADING WHERE SUPER SILT HAS BEEN SPECIFIED ON PLAN. TRENCH SHALL BE DUG USING SHARP TOOLS/MACHINERY SUCH AS A DOSKO OR VERMEER ROOT PRUNER (OR EQUAL) SO THAT EXISTING TREE ROOTS ARE NOT TORN OR CRUSHED. ANY LARGE ROOTS (GREATER THAN 1") THAT ARE FOUND WHILE TRENCHING NEAR TREES ARE TO BE CUT BY HAND TO MINIMIZE IMPACT ON TREES TO BE PRESERVED. AFTER TRENCH HAVE BEEN DUG, ALL SUPER SILT FENCE IS TO BE INSTALLED IN CONFORMANCE WITH THE DETAILS PROVIDED ON THE EROSION AND SEDIMENT CONTROL PLAN. BILINGUAL SIGNS SHALL BE POSTED AT A MINIMUM OF 50-FOOT INTERVALS ALONG SUPER SILT FENCE THAT CLEARLY STATE THAT TREES AND FORESTED AREAS MUST BE PROTECTED AND LEFT UNDISTURBED. SIGNS SHALL REMAIN POSTED THROUGHOUT ALL PHASES OF CONSTRUCTION.

AFTER ROOT PRUNING, SUPER SILT FENCE AND SIGNAGE HAVE BEEN IMPLEMENTED, ALL SPECIFIED TREES/SHRUBS SHALL BE REMOVED FROM SITE. TREES THAT ARE LOCATED WITHIN THE LIMITS OF CLEARING AND GRADING ARE TO BE REMOVED WITH MACHINERY AND STUMPS ARE TO BE GROUND DOWN WITH A STUMP GRINDER. TREES ON THE EDGE OF THE LIMITS OF CLEARING SHALL BE CUT DOWN BY HAND WITH A CHAIN SAW. REMAINING STUMPS SHALL EITHER BE LEFT IN PLACE OR GROUND DOWN WITH A STUMP GRINDER. ANY TREES BEING REMOVED SHALL NOT BE FELLED, PUSHED OR PULLED INTO TREE PRESERVATION AREAS.

TREES TO BE REMOVED ARE TO BE CHIPPED WITH A LARGE WOOD CHIPPER AND DISPOSED OF ONSITE. A 5' WIDE STRIP OF WOOD CHIP MULCH IS TO BE SPREAD INSIDE THE TREE PRESERVATION AREA, ADJACENT TO THE PROPOSED LIMITS OF CLEARING AND GRADING WHERE EXISTING SITE CONDITIONS ALLOW. MULCH IS TO BE SPEAD 2-3" IN DEPTH.

NO TREES ARE PLANNED TO BE TRANSPLANTED AND NO SPECIMEN, HERITAGE, OR MEMORIAL TREES ARE DENOTED IN THE PLANS TO BE REMOVED OR TO REMAIN. NO INVASIVE PLANTS ARE PRESENT IN TREE SAVE AREAS.

LEGEND

- T26 — EXISTING TREE/SHRUB TO BE PRESERVED
- T26 X — EXISTING TREE/SHRUB TO BE REMOVED
- EXISTING CRITICAL ROOT ZONE
- LOD — LIMITS OF DISTURBANCE
- SSF — SUPER SILT FENCE (TO BE UTILIZED AS TREE PROTECTION FENCE)
- TEMPORARY CONSTRUCTION EASEMENT

S89°17'42"E 477.14'
N89°17'42"W 80.00'
S00°42'18"W 112.52'
S00°42'42"W 108.92'
N00°56'47"E 200'R/W
CONC. WALK
N00°42'18"E 76.88'
S00°42'42"W 56.90'
R=35.00'
L=10.29'
R=35.00'
L=24.11'
S66°28'29"W 26.71'
S00°42'42"
PROP 5' CONC S/W
VIBURNUM SHRUBS
CHERRY LAUREL SHRUBS
PRIVET SHRUBS (SELECTIVELY REMOVED AS NEEDED)
PRIVET SHRUBS (SELECTIVELY REMOVED AS NEEDED)
N00°44'55"W 90.00'
ADJUSTED 4' CHAIN LINK FENCE
#4016
FFE = 448.79
45.99

NAD 83

GRAPHIC SCALE
10 0 5 10 20 40
(IN FEET)
1 inch = 10 ft.

Bowman CONSULTING

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Bowman Consulting Group, Ltd.

TREE REMOVAL PLAN (4 OF 4)

BURKE STATION ROAD STREETSCAPE IMPROVEMENTS

CITY OF FAIRFAX VIRGINIA

PROJECT NUMBER

COMMONWEALTH OF VIRGINIA
BRADLEY GLATFELTER
Lic. No. 50992
10/17/2016
PROFESSIONAL ENGINEER

PLAN STATUS	
04/05/16	FINAL SUBMISSION
10/17/16	CONTRACT DOCUMENT

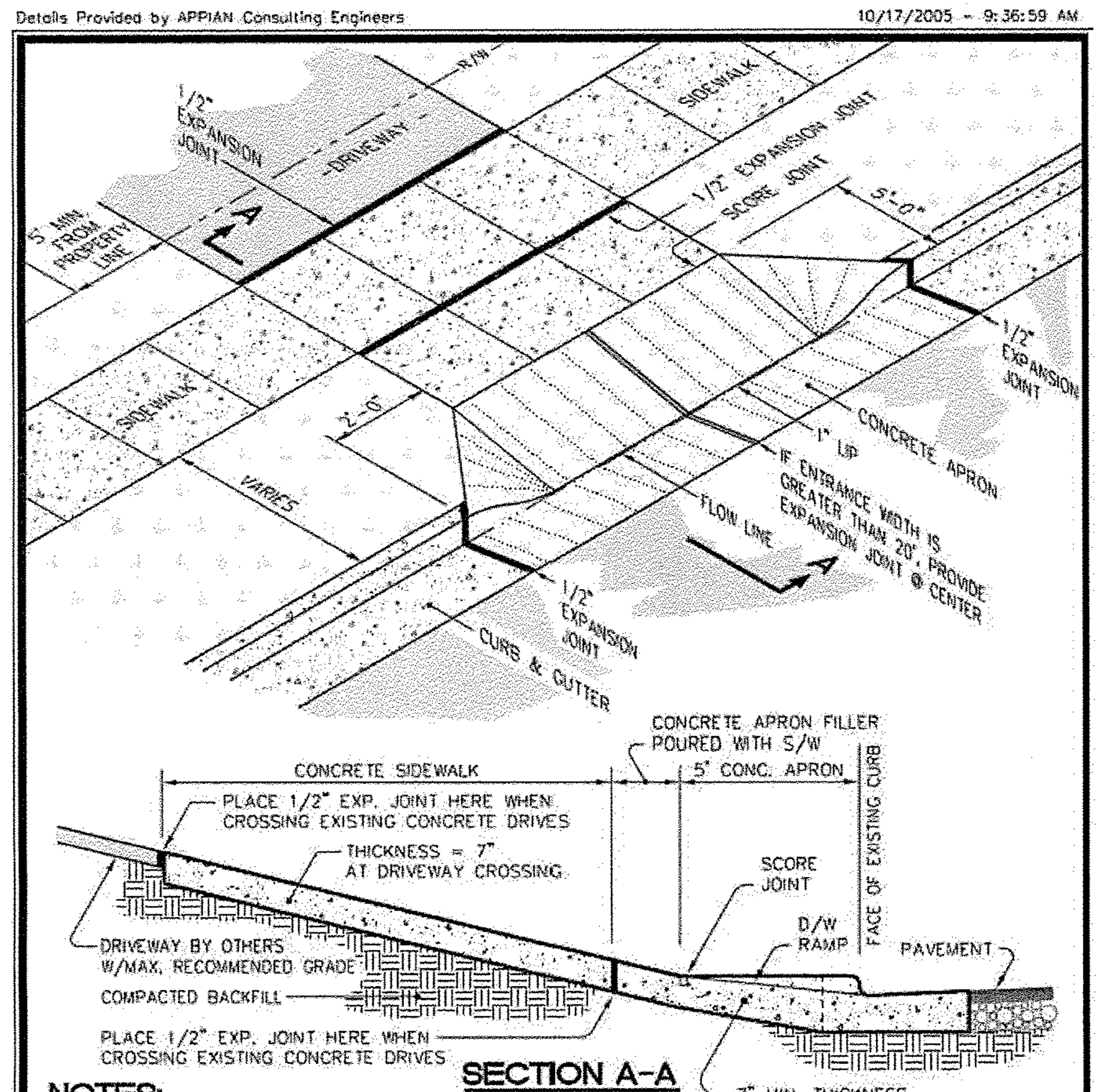
DATE	DESCRIPTION

SB	SB	SD
DESIGN	DRAWN	CHKD

SCALE H: 1"=10' V: N/A
JOB No. 6916-01-002
DATE : JUNE 2015
FILE No. 6916-D-CP-002
SHEET 55 OF 63

Cad file name : P:\6916 - City of Fairfax On-Call\6916-01-002 (ENG) - Burke Station Road\Engineering\Engineering Plans\6916-D-CP-002-TPP.dwg

Details Provided by APPIAN Consulting Engineers 10/17/2005 - 9:36:59 AM



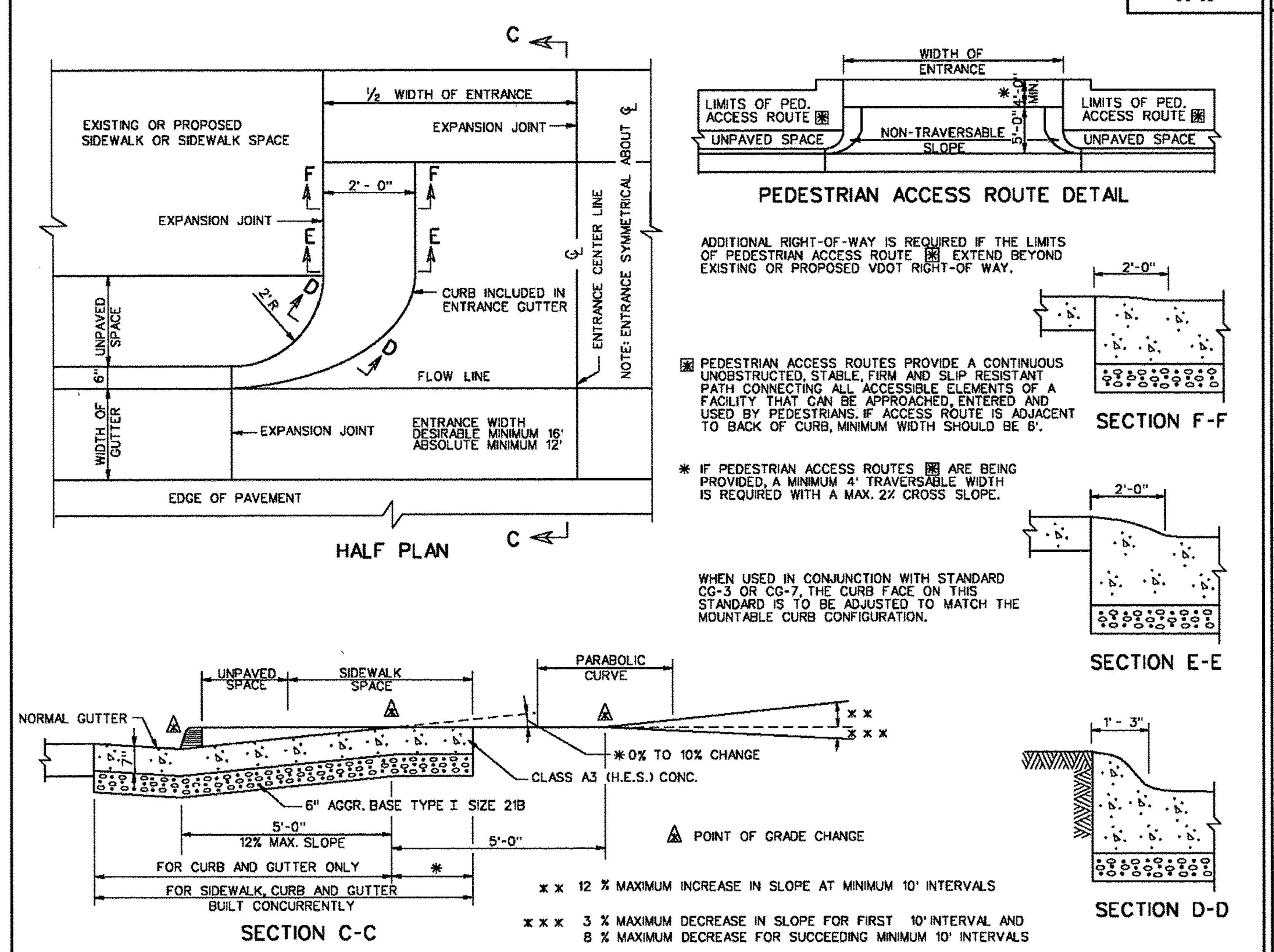
NOTES:

1. Residential driveway to be 12' minimum, 16' maximum desirable.
2. Omitted
3. All concrete shall be 3000 psi @ 28 days air entrained.
4. Curb shall be tapered to finish flush with sidewalk.
5. Beginning radius shall not encroach on adjacent properties based on a projection of property line from the right-of-way to the curb line.
6. Sidewalk section shall not be required along streets which are not planned for sidewalk.

Department of Public Works, 10455 Armstrong Street, Fairfax, VA 22030-3630 — CITY of FAIRFAX — USE WITH THE FAIRFAX STANDARD SPECIFICATIONS ONLY — Voice (703) 248-6000, FAX (703) 591-5727, www.fairfaxva.gov

STREET CURB CUT FOR DRIVEWAYS ON C&G STREETS — SCALE: Not To Scale — DETAIL #: 404.03 — REVISION DATE: July, 2005 — SHEET #: 1 of 1

CG-9B



ADDITIONAL RIGHT-OF-WAY IS REQUIRED IF THE LIMITS OF PEDESTRIAN ACCESS ROUTE EXTEND BEYOND EXISTING OR PROPOSED VDOT RIGHT-OF-WAY.

PEDESTRIAN ACCESS ROUTES PROVIDE A CONTINUOUS UNOBSTRUCTED, STABLE, FIRM AND SLIP RESISTANT PATH CONNECTING ALL ACCESSIBLE ELEMENTS OF A FACILITY THAT CAN BE APPROACHED, ENTERED AND USED BY PEDESTRIANS. IF ACCESS ROUTE IS ADJACENT TO BACK OF CURB, MINIMUM WIDTH SHOULD BE 6'.

* IF PEDESTRIAN ACCESS ROUTES ARE BEING PROVIDED, A MINIMUM 4' TRAVERSABLE WIDTH IS REQUIRED WITH A MAX. 2% CROSS SLOPE.

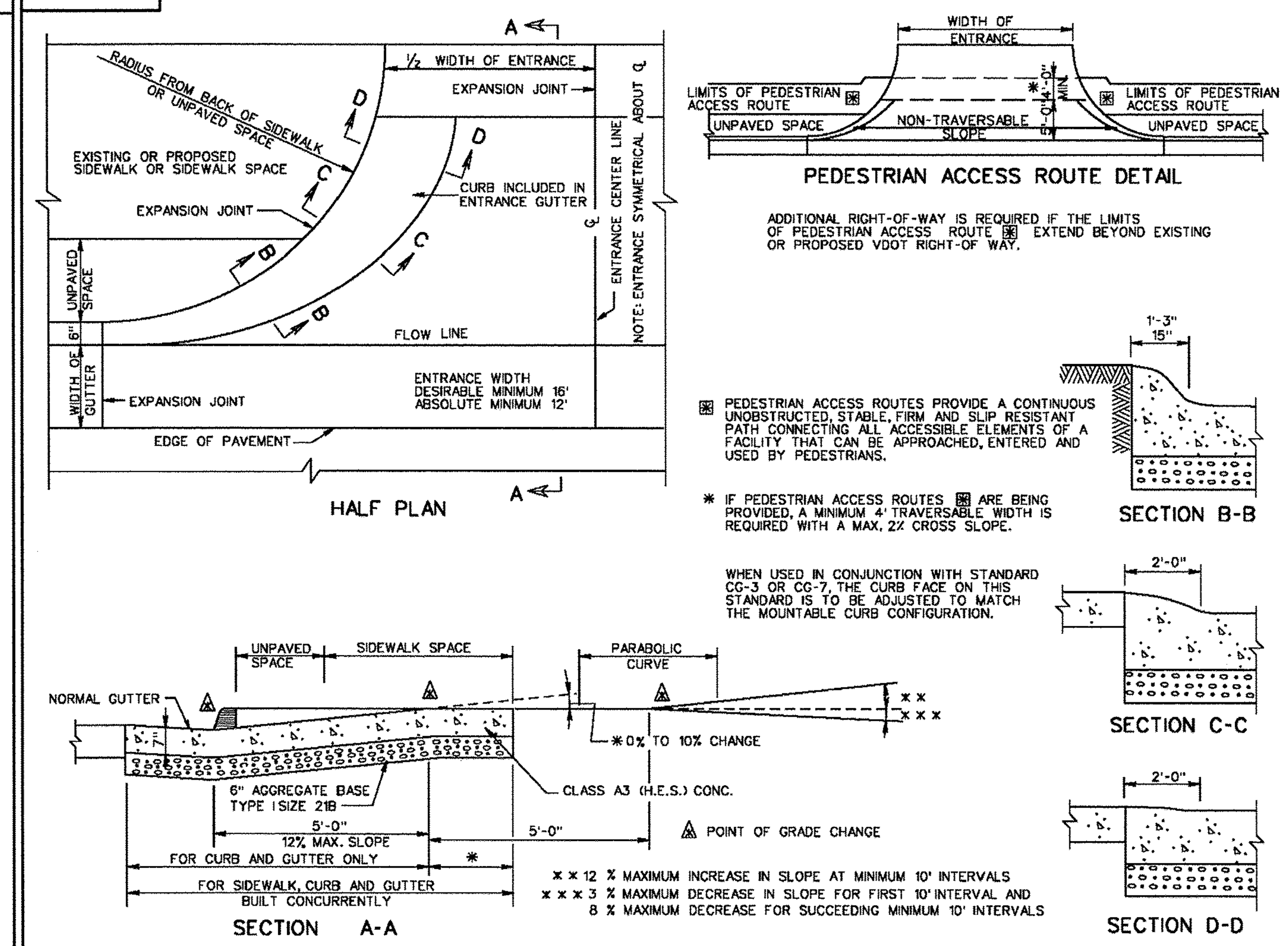
WHEN USED IN CONJUNCTION WITH STANDARD CG-3 OR CG-7, THE CURB FACE ON THIS STANDARD IS TO BE ADJUSTED TO MATCH THE MOUNTABLE CURB CONFIGURATION.

xx 12 % MAXIMUM INCREASE IN SLOPE AT MINIMUM 10' INTERVALS

xxx 3 % MAXIMUM DECREASE IN SLOPE FOR FIRST 10' INTERVAL AND 8 % MAXIMUM DECREASE FOR SUCCEEDING MINIMUM 10' INTERVALS

SPECIFICATION REFERENCE 502 — STANDARD ENTRANCE GUTTER (FOR USE WITH UNPAVED SPACE BETWEEN CURB & SIDEWALK) — VIRGINIA DEPARTMENT OF TRANSPORTATION — VDOT ROAD AND BRIDGE STANDARDS — REVISION DATE 01/13 — SHEET 1 OF 1 — 203.02

CG-9D



ADDITIONAL RIGHT-OF-WAY IS REQUIRED IF THE LIMITS OF PEDESTRIAN ACCESS ROUTE EXTEND BEYOND EXISTING OR PROPOSED VDOT RIGHT-OF-WAY.

PEDESTRIAN ACCESS ROUTES PROVIDE A CONTINUOUS UNOBSTRUCTED, STABLE, FIRM AND SLIP RESISTANT PATH CONNECTING ALL ACCESSIBLE ELEMENTS OF A FACILITY THAT CAN BE APPROACHED, ENTERED AND USED BY PEDESTRIANS.

* IF PEDESTRIAN ACCESS ROUTES ARE BEING PROVIDED, A MINIMUM 4' TRAVERSABLE WIDTH IS REQUIRED WITH A MAX. 2% CROSS SLOPE.

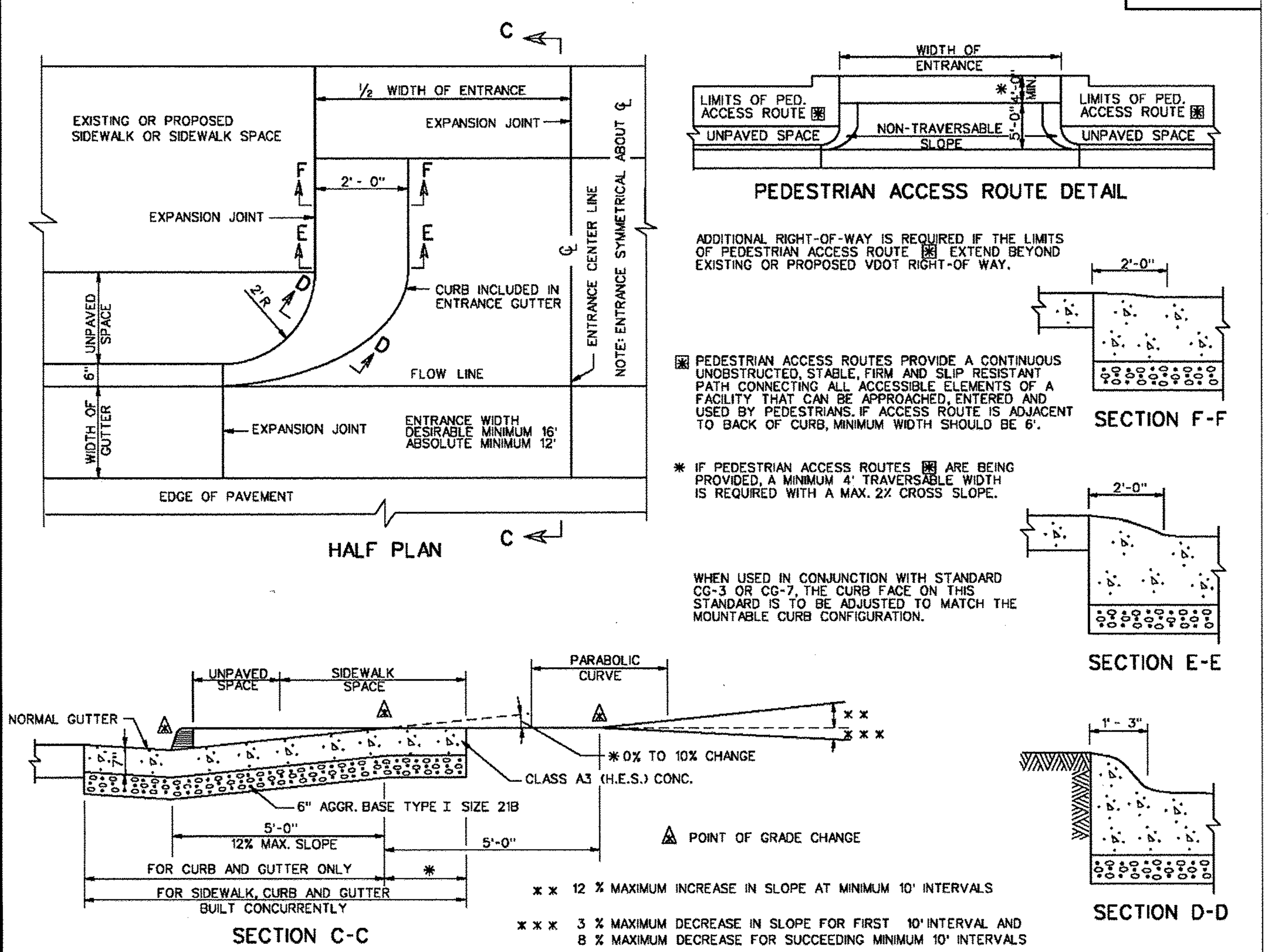
WHEN USED IN CONJUNCTION WITH STANDARD CG-3 OR CG-7, THE CURB FACE ON THIS STANDARD IS TO BE ADJUSTED TO MATCH THE MOUNTABLE CURB CONFIGURATION.

xx 12 % MAXIMUM INCREASE IN SLOPE AT MINIMUM 10' INTERVALS

xxx 3 % MAXIMUM DECREASE IN SLOPE FOR FIRST 10' INTERVAL AND 8 % MAXIMUM DECREASE FOR SUCCEEDING MINIMUM 10' INTERVALS

VDOT ROAD AND BRIDGE STANDARDS — SHEET 1 OF 1 — 203.03 — REVISION DATE 01/13 — STANDARD ENTRANCE GUTTER — VIRGINIA DEPARTMENT OF TRANSPORTATION — SPECIFICATION REFERENCE 502

CG-9B



ADDITIONAL RIGHT-OF-WAY IS REQUIRED IF THE LIMITS OF PEDESTRIAN ACCESS ROUTE EXTEND BEYOND EXISTING OR PROPOSED VDOT RIGHT-OF-WAY.

PEDESTRIAN ACCESS ROUTES PROVIDE A CONTINUOUS UNOBSTRUCTED, STABLE, FIRM AND SLIP RESISTANT PATH CONNECTING ALL ACCESSIBLE ELEMENTS OF A FACILITY THAT CAN BE APPROACHED, ENTERED AND USED BY PEDESTRIANS. IF ACCESS ROUTE IS ADJACENT TO BACK OF CURB, MINIMUM WIDTH SHOULD BE 6'.

* IF PEDESTRIAN ACCESS ROUTES ARE BEING PROVIDED, A MINIMUM 4' TRAVERSABLE WIDTH IS REQUIRED WITH A MAX. 2% CROSS SLOPE.

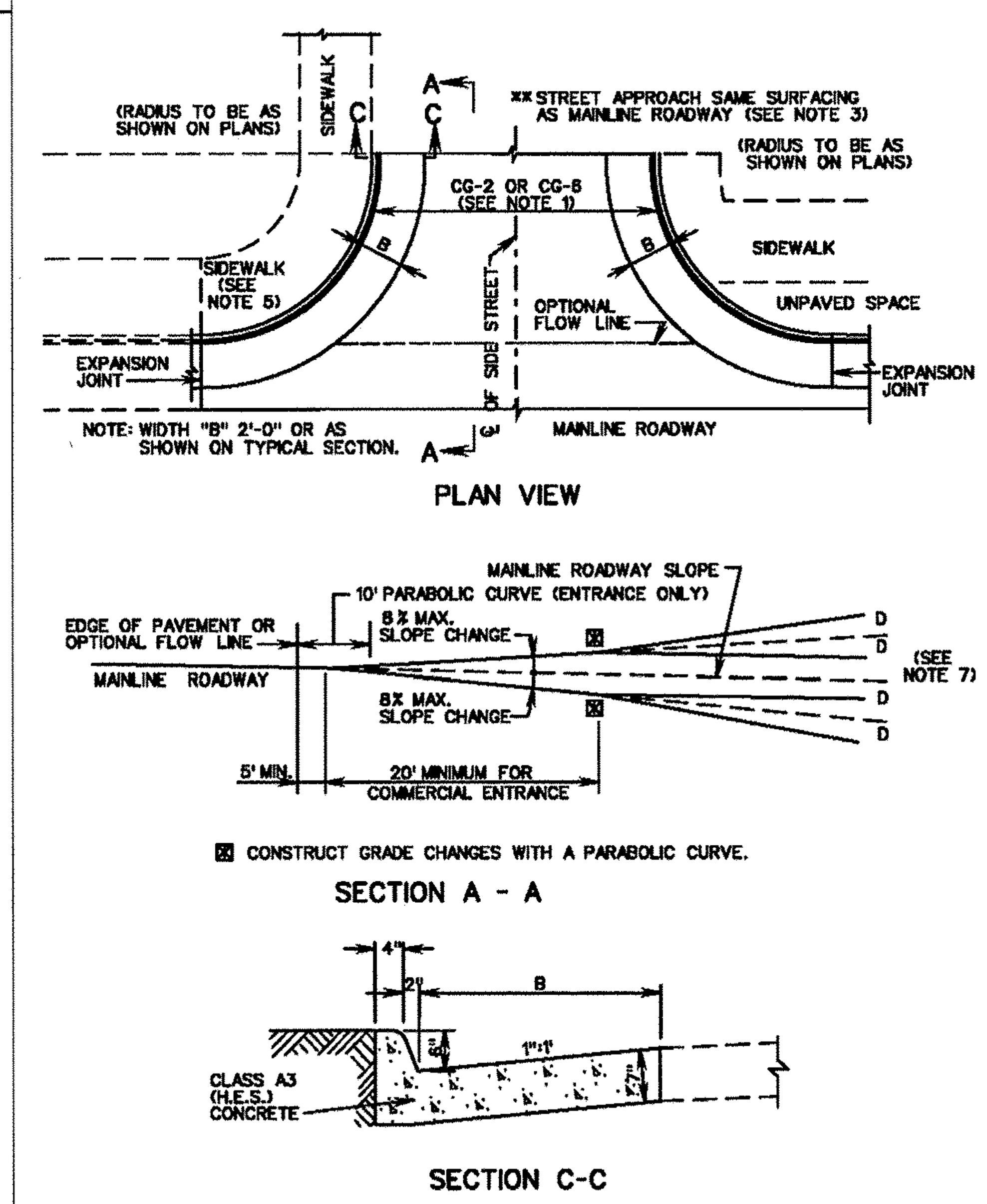
WHEN USED IN CONJUNCTION WITH STANDARD CG-3 OR CG-7, THE CURB FACE ON THIS STANDARD IS TO BE ADJUSTED TO MATCH THE MOUNTABLE CURB CONFIGURATION.

xx 12 % MAXIMUM INCREASE IN SLOPE AT MINIMUM 10' INTERVALS

xxx 3 % MAXIMUM DECREASE IN SLOPE FOR FIRST 10' INTERVAL AND 8 % MAXIMUM DECREASE FOR SUCCEEDING MINIMUM 10' INTERVALS

SPECIFICATION REFERENCE 502 — STANDARD ENTRANCE GUTTER (FOR USE WITH UNPAVED SPACE BETWEEN CURB & SIDEWALK) — VIRGINIA DEPARTMENT OF TRANSPORTATION — VDOT ROAD AND BRIDGE STANDARDS — REVISION DATE 01/13 — SHEET 1 OF 1 — 203.02

CG-11



GENERAL NOTES

1. WHEN USED IN CONJUNCTION WITH STANDARD CG-3 OR CG-7, THE CURB FACE ON THIS STANDARD IS TO BE ADJUSTED TO MATCH THE MOUNTABLE CURB CONFIGURATION.
2. SEE STANDARD CG-12 FOR CURB RAMP DESIGN TO BE USED WITH THIS STANDARD.
3. MAINLINE PAVEMENT SHALL BE CONSTRUCTED TO THE R/W LINE (EXCEPT ANY SUBGRADE STABILIZATION REQUIRED FOR MAINLINE PAVEMENT WHICH CAN BE OMITTED IN THE ENTRANCE.)
4. RADIAL CURB OR COMBINATION CURB AND GUTTER SHALL NOT BE CONSTRUCTED BEYOND THE R/W LINE EXCEPT FOR REPLACEMENT PURPOSES.

ENTRANCE NOTES

5. WHEN THE ENTRANCE RADII CANNOT ACCOMMODATE THE TURNING REQUIREMENTS OF ANTICIPATED HEAVY TRUCK TRAFFIC, THE DEPTH FOR SIDEWALK & CURB RAMPS WITHIN THE LIMITS OF THE RADII SHOULD BE INCREASED TO 7". (SEE CG-13)
6. PLANS ARE TO INDICATE WHEN CONSTRUCTION OF A FLOW LINE IS REQUIRED TO PROVIDE POSITIVE DRAINAGE ACROSS THE ENTRANCE.
7. THE DESIRABLE AND MAXIMUM ENTRANCE GRADE CHANGES "D" ARE LISTED IN THE ALLOWABLE ENTRANCE GRADE TABLE. THESE VALUES ARE NOT APPLICABLE TO STREET CONNECTIONS.

INTERSECTION NOTES

8. WHEN CG-11 IS USED FOR STREET CONNECTIONS, THE CONNECTION MUST BE DESIGNED IN ACCORDANCE WITH AASHTO POLICY AND THE APPLICABLE REQUIREMENTS OF THE VDOT ROAD DESIGN MANUAL, INCLUDING STOPPING SIGHT DISTANCE AND K VALUE REQUIREMENTS.
9. OPTIONAL FLOWLINE MAY REQUIRE WARPING OF A PORTION OF GUTTER TO PROVIDE POSITIVE DRAINAGE ACROSS THE INTERSECTION.

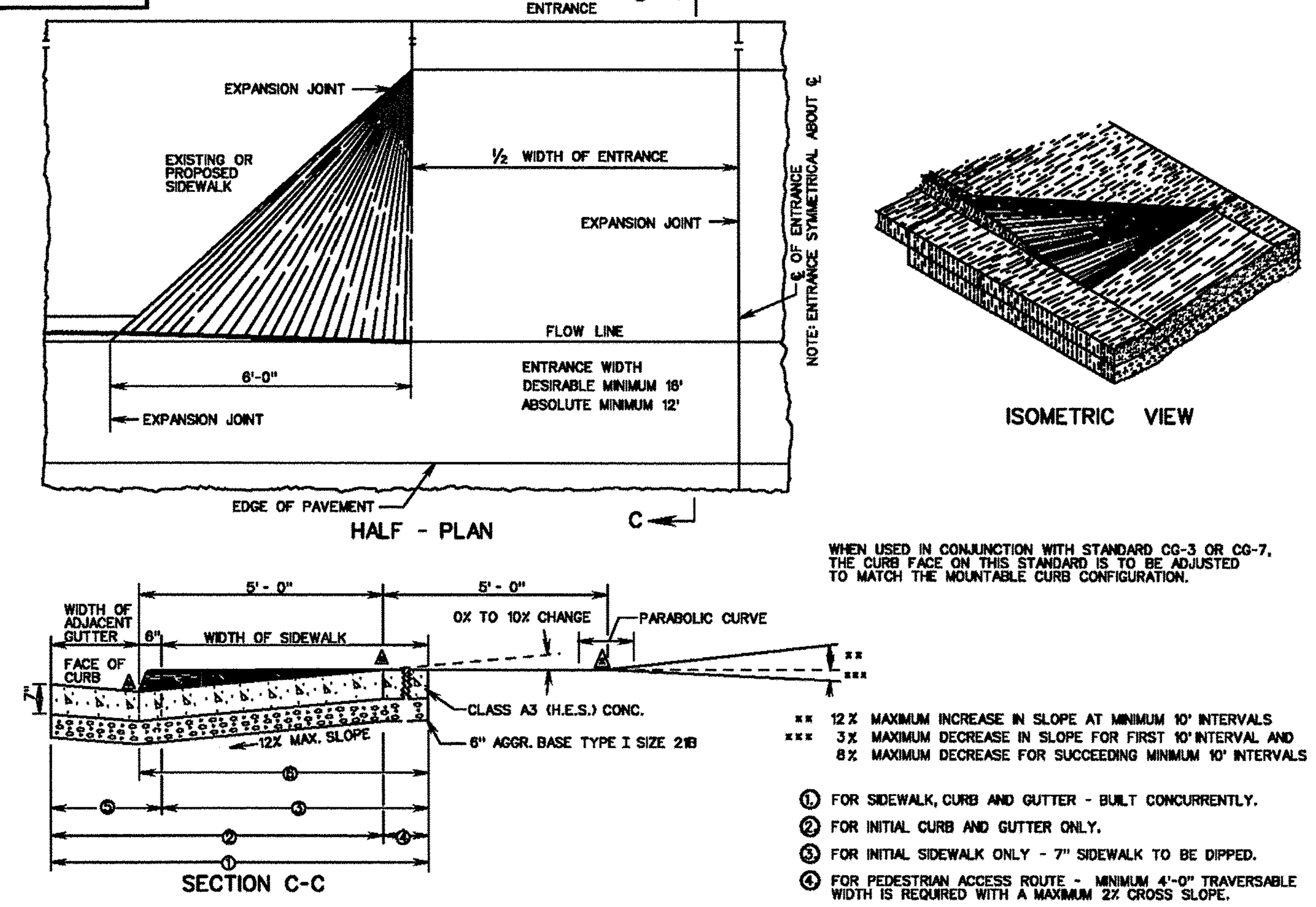
ALLOWABLE ENTRANCE GRADE CHANGES

ENTRANCE VOLUME		GRADE CHANGE "D" DESIRABLE	GRADE CHANGE "D" MAXIMUM
HIGH	MORE THAN 1500 VPD	0 %	3 %
MEDIUM	500-1500 VPD	≤3 %	6 %
LOW	LESS THAN 500 VPD	≤6 %	8 %

NOTE: ALLOWABLE ENTRANCE GRADE TABLE IS NOT APPLICABLE TO STREET CONNECTIONS

SPECIFICATION REFERENCE 502 — METHOD OF TREATMENT (CONNECTION FOR STREET INTERSECTIONS AND COMMERCIAL ENTRANCES) — VIRGINIA DEPARTMENT OF TRANSPORTATION — VDOT ROAD AND BRIDGE STANDARDS — REVISION DATE — SHEET 1 OF 1 — 203.04

CG-9A



WHEN USED IN CONJUNCTION WITH STANDARD CG-3 OR CG-7, THE CURB FACE ON THIS STANDARD IS TO BE ADJUSTED TO MATCH THE MOUNTABLE CURB CONFIGURATION.

xx 12% MAXIMUM INCREASE IN SLOPE AT MINIMUM 10' INTERVALS

xxx 3% MAXIMUM DECREASE IN SLOPE FOR FIRST 10' INTERVAL AND 8% MAXIMUM DECREASE FOR SUCCEEDING MINIMUM 10' INTERVALS

1. FOR SIDEWALK, CURB AND GUTTER - BUILT CONCURRENTLY.
2. FOR INITIAL CURB AND GUTTER ONLY.
3. FOR INITIAL SIDEWALK ONLY - 7" SIDEWALK TO BE DIPPED.
4. FOR PEDESTRIAN ACCESS ROUTE - MINIMUM 4'-0" TRAVERSABLE WIDTH IS REQUIRED WITH A MAXIMUM 2% CROSS SLOPE.
5. FOR CURB AND GUTTER ONLY - AFTER INITIAL SIDEWALK.
6. FOR CURB AND SIDEWALK ONLY - WITHOUT GUTTER.

INDICATES POINT OF GRADE CHANGE.

VDOT ROAD AND BRIDGE STANDARDS — SHEET 1 OF 1 — 203.01 — REVISION DATE — STANDARD ENTRANCE GUTTER WITH FLARED OPENING (FOR USE ACROSS SIDEWALK) — VIRGINIA DEPARTMENT OF TRANSPORTATION — SPECIFICATION REFERENCE 502

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BURKE STATION ROAD STREETSCAPE IMPROVEMENTS

SITE DETAILS (1 OF 8)

CITY OF FAIRFAX — VIRGINIA

PROJECT NUMBER

COMMONWEALTH OF VIRGINIA — BRADLEY GLATFELTER — Lic. No. 50992 — 10/17/2016 — PROFESSIONAL ENGINEER

PLAN STATUS

04/05/16	FINAL SUBMISSION
10/17/16	CONTRACT DOCUMENT

DATE	DESCRIPTION	
SB DESIGN	SB DRAWN	SD CHKD

SCALE H: N/A V: N/A

JOB No. 6916-01-002

DATE : JUNE 2015

FILE No. 6916-D-CP-002

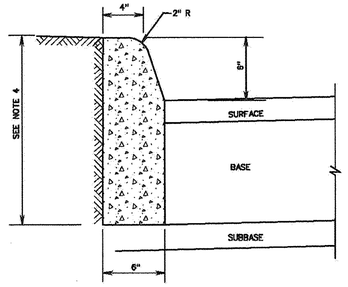
SHEET 56 OF 63

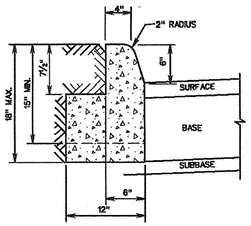
Cad file name : P:\6916 - City of Fairfax On-Call\6916-01-002 (ENG) - Burke Station Road\Engineering\Engineering Plans\6916-D-CP-002-DET.dwg

CG-2

NOTES:

1. THIS ITEM MAY BE PRECAST OR CAST IN PLACE.
2. CONCRETE TO BE CLASS A3 IF CAST IN PLACE, 4000 PSI IF PRECAST.
3. CURB HAVING A RADIUS OF 300 FEET OR LESS (ALONG FACE OF CURB) WILL BE PAID FOR AS RADIAL CURB.
4. THE DEPTH OF CURB MAY BE REDUCED AS MUCH AS 3" (12" DEPTH) OR INCREASED AS MUCH AS 3" (21" DEPTH) IN ORDER THAT THE BOTTOM OF CURB WILL COINCIDE WITH THE TOP OF A COURSE OF THE PAVEMENT SUBSTRUCTURE. OTHERWISE, THE DEPTH IS TO BE 18" AS SHOWN. NO ADJUSTMENT IN THE PRICE BID IS TO BE MADE FOR A DECREASE OR AN INCREASE IN DEPTH.
5. CG-2 IS TO BE USED ON ROADWAYS MEETING THE REQUIREMENTS FOR CG-6 AS SHOWN IN APPENDIX A OF THE VDOT ROAD DESIGN MANUAL, IN THE SECTION ON GS URBAN STANDARDS.

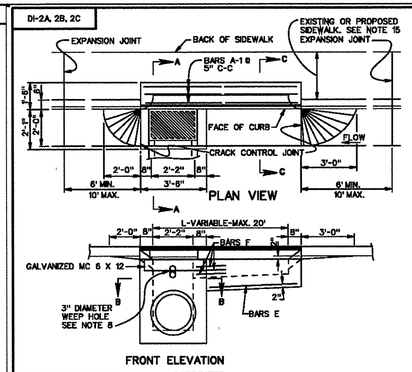


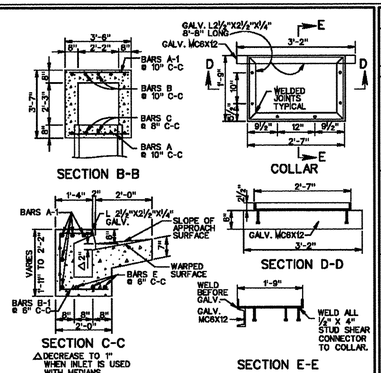


ACCEPTABLE ALTERNATIVE IF CURB IS EXTRUDED

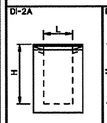
SPECIFICATION REFERENCE	STANDARD 6" CURB	VDOT ROAD AND BRIDGE STANDARDS	
105, 502	VIRGINIA DEPARTMENT OF TRANSPORTATION	REVISION DATE	SHEET 1 OF 1
			201.01

DI-2A, 2B, 2C

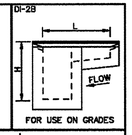




DI-2A

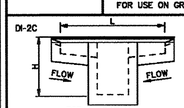


DI-2B

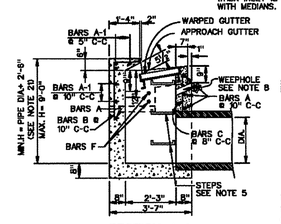


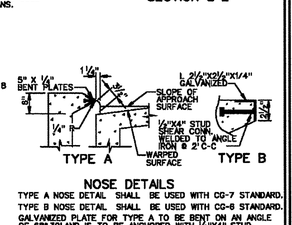
FOR USE ON GRADES

DI-2C



FOR USE IN SAGS
BOTH SIDES TO BE SYMMETRICAL.





NOSE DETAILS

TYPE A NOSE DETAIL SHALL BE USED WITH CG-7 STANDARD.
TYPE B NOSE DETAIL SHALL BE USED WITH CG-6 STANDARD.
GALVANIZED PLATE FOR TYPE A TO BE BENT ON AN ANGLE OF 68°-30' AND IS TO BE ANCHORED WITH ½"X4" STUD SHEAR CONNECTORS WELDED TO BENT PLATE AT 2'-0" C-C.

SPECIFICATION REFERENCE	STANDARD CURB DROP INLET 12" - 24" PIPE: MAXIMUM DEPTH (H) - 9'	VDOT ROAD AND BRIDGE STANDARDS	
233, 302	VIRGINIA DEPARTMENT OF TRANSPORTATION	SHEET 1 OF 2	REVISION DATE
		104.03	

TABLE OF QUANTITIES

DI-2A, 2B, 2C

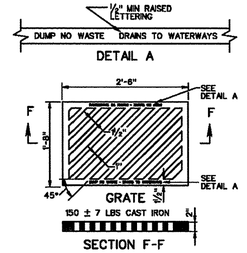
TYPE	L	REINFORCING STEEL																WEIGHT
		CONCRETE	BARS A		BARS A-1		BARS B		BARS B-1		BARS C		BARS E		BARS F			
	Ft.	Cu. Yds.	No.	Lin. Ft. ✻	No.	Lin. Ft. ✻	No.	Lin. Ft. ✻	No.	Lin. Ft. ✻	No.	Lin. Ft. ✻	No.	Lin. Ft. ✻	No.	Lin. Ft. ✻	No.	Lin. Ft. ✻	Lbs.
DI-2A	2'-2"	1.71	4	3'-2"	5	3'-2"	4	3'-6"	-	-	5	2'-0"	-	-	-	-	-	1'-6"	55
DI-2B	4'	1.95	4	3'-2"	5	5'-0"	4	3'-6"	3	4'-3" to 4'-6"	5	2'-0"	3	2'-0"	3	1'-6"	6	1'-6"	84
	6'	2.23	4	3'-2"	5	7'-0"	4	3'-6"	7	4'-3" to 4'-6"	5	2'-0"	3	4'-0"	3	1'-6"	6	1'-6"	119
	8'	2.51	4	3'-2"	5	9'-0"	4	3'-6"	11	4'-3" to 4'-6"	5	2'-0"	3	6'-0"	3	1'-6"	6	1'-6"	154
	10'	2.79	4	3'-2"	5	11'-0"	4	3'-6"	15	4'-3" to 4'-6"	5	2'-0"	3	8'-0"	3	1'-6"	6	1'-6"	189
	12'	3.05	4	3'-2"	5	13'-0"	4	3'-6"	19	4'-3" to 4'-6"	5	2'-0"	3	10'-0"	3	1'-6"	6	1'-6"	224
	14'	3.34	4	3'-2"	5	15'-0"	4	3'-6"	23	4'-3" to 4'-6"	5	2'-0"	3	12'-0"	3	1'-6"	6	1'-6"	259
	16'	3.61	4	3'-2"	5	17'-0"	4	3'-6"	27	4'-3" to 4'-6"	5	2'-0"	3	14'-0"	3	1'-6"	6	1'-6"	294
	18'	3.89	4	3'-2"	5	19'-0"	4	3'-6"	31	4'-3" to 4'-6"	5	2'-0"	3	16'-0"	3	1'-6"	6	1'-6"	329
	20'	4.17	4	3'-2"	5	21'-0"	4	3'-6"	35	4'-3" to 4'-6"	5	2'-0"	3	18'-0"	3	1'-6"	6	1'-6"	364
DI-2C	6'	2.24	4	3'-2"	5	7'-0"	4	3'-6"	6	4'-3" to 4'-6"	5	2'-0"	6	2'-1"	6	1'-6"	115		
	8'	2.55	4	3'-2"	5	9'-0"	4	3'-6"	10	4'-3" to 4'-6"	5	2'-0"	6	3'-1"	6	1'-6"	150		
	10'	2.82	4	3'-2"	5	11'-0"	4	3'-6"	14	4'-3" to 4'-6"	5	2'-0"	6	4'-1"	6	1'-6"	185		
	12'	3.09	4	3'-2"	5	13'-0"	4	3'-6"	18	4'-3" to 4'-6"	5	2'-0"	6	5'-1"	6	1'-6"	220		
	14'	3.37	4	3'-2"	5	15'-0"	4	3'-6"	22	4'-3" to 4'-6"	5	2'-0"	6	6'-1"	6	1'-6"	255		
	16'	3.65	4	3'-2"	5	17'-0"	4	3'-6"	26	4'-3" to 4'-6"	5	2'-0"	6	7'-1"	6	1'-6"	290		
	18'	3.93	4	3'-2"	5	19'-0"	4	3'-6"	30	4'-3" to 4'-6"	5	2'-0"	6	8'-1"	6	1'-6"	325		
	20'	4.20	4	3'-2"	5	21'-0"	4	3'-6"	34	4'-3" to 4'-6"	5	2'-0"	6	9'-1"	6	1'-6"	360		

NOTES

1. DEPTH OF INLET (H) TO BE SHOWN ON PLANS.
2. THE "H" DIMENSION SHOWN ON THE STANDARDS AND SPECIFIED ON THE PLANS WILL BE MEASURED FROM THE INVERT OF THE OUTFALL PIPE TO THE TOP OF THE STRUCTURE. PLAN "H" DIMENSIONS ARE APPROXIMATE ONLY FOR ESTIMATING PURPOSES AND THE ACTUAL DIMENSIONS SHALL BE DETERMINED BY THE CONTRACTOR FROM FIELD CONDITIONS. MAXIMUM DEPTH (H) TO BE 9'-0".

   WHEN SPECIFIED ON THE PLANS THE INVERT IS TO BE SHAPED IN ACCORDANCE WITH STANDARD IS-1. THE COST OF FURNISHING AND PLACING ALL MATERIALS INCIDENTAL TO THE SHAPING IS TO BE INCLUDED IN THE BID PRICE FOR THE STRUCTURE.
3. IN THE EVENT THE INVERT OF THE OUTFALL PIPE IS HIGHER THAN THE BOTTOM OF THE STRUCTURE, THE INVERT OF THE STRUCTURE SHALL BE SHAPED WITH CEMENT MORTAR TO PREVENT STANDING OR PONDING OF WATER IN THE STRUCTURE. THE COST OF FURNISHING AND PLACING ALL MATERIALS INCIDENTAL TO THE SHAPING IS TO BE INCLUDED IN THE BID PRICE FOR THE STRUCTURE.

   STEPS ARE TO BE PROVIDED WHEN H IS 4'-0" OR GREATER. FOR DETAILS SEE STANDARD ST-1.
4. THIS ITEM MAY BE PRECAST OR CAST-IN-PLACE.
5. ✻4 X 8" SMOOTH DOWELS AT APPROXIMATELY 12" C-C TO BE PLACED IN ALL AREAS ADJACENT TO ABUTTING CONCRETE TO PREVENT SETTLEMENT.
6. 3" DIAMETER WEEP HOLE TO BE LOCATED TO DRAIN SUBBASE MATERIAL. WEEP HOLE WITH 12"X12" PLASTIC HARDWARE CLOTH ½" MESH OR GALVANIZED STEEL WIRE, MINIMUM WIRE DIAMETER 0.03" NUMBER 4 MESH HARDWARE CLOTH ANCHORED FIRMLY TO THE OUTSIDE OF THE STRUCTURE.
7. ✻ DENOTES LENGTH OF ONE (1) BAR.
8. ALL REINFORCING BARS TO BE #5.
9. ALL REINFORCING STEEL SHALL HAVE A MINIMUM COVER OF 2".
10. ALL REINFORCING STEEL TO BE CUT CLEAR OF ALL OPENINGS BY 2".
11. CAST-IN PLACE CONCRETE IS TO BE CLASS A3 (3000 PSI). PRECAST CONCRETE IS TO BE 4000 PSI.
12. LENGTH OF SLOT (L) WILL, IN EVERY CASE, BE SHOWN ON PLANS.
13. THIS STANDARD IS INTENDED FOR USE IN CURB AND GUTTER SITUATIONS ONLY.
14. STANDARD INLETS MAY BE CONSTRUCTED WITH CONCRETE BLOCKS IN ACCORDANCE WITH THE DETAILS SHOWN ON STANDARD DRAWING MB-MB.
15. THIS AREA MAY BE EARTHEN, IN WHICH CASE THE EXPANSION JOINTS WILL APPLY ONLY TO CURB AND GUTTER.
16. CONCRETE QUANTITIES SHOWN ARE FOR DEPTH (H) OF 5'-0" WITHOUT PIPES. THE AMOUNT DISPLACED BY PIPES MUST BE DEDUCTED TO OBTAIN TRU QUANTITIES. FOR INLETS OF DIFFERENT DEPTHS ADD OR SUBTRACT 0.28 CUBIC YARDS OF CONCRETE FOR EACH FOOT.
17. LENGTH OF ANGLE IRON AS SHOWN ON SHEET 1 OF 2 IS TO BE L 16" AT 4.10 LBS./FT.
18. ✻ DENOTES LENGTH OF ONE (1) BAR.
19. ALL REINFORCING BARS TO BE #5.
20. GRATE TO BE INSTALLED SO SLOTS WILL DIRECT WATER TOWARD THE INLET THROAT.
21. MINIMUM HEIGHT = PIPE DIA.+ 2'-6" WHEN PIPES ARE LOCATED UNDER EXTENDED SLOT OF INLET.
22. DUMP NO WASTE DRAINS TO WATERWAYS LETTERING IS REQUIRED ON ALL DI-2 GRATES. LOCATION OF LETTERING MAY VARY BY MANUFACTURER.



SPECIFICATION REFERENCE	STANDARD CURB DROP INLET 12" - 24" PIPE: MAXIMUM DEPTH (H)=9'	VDOT ROAD AND BRIDGE STANDARDS	
233, 302	VIRGINIA DEPARTMENT OF TRANSPORTATION	REVISION DATE	SHEET 2 OF 2
			104.04

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SITE DETAILS (2 OF 8)

BURKE STATION ROAD STREETSCAPE IMPROVEMENTS

CITY OF FAIRFAX VIRGINIA

PROJECT NUMBER

COMMONWEALTH OF VIRGINIA
BRADLEY GLATFELTER IV
Lic. No. 50992
10/17/2016
PROFESSIONAL ENGINEER

PLAN STATUS

DATE	DESCRIPTION
04/05/16	FINAL SUBMISSION
10/17/16	CONTRACT DOCUMENT

SB	SB	SD
DESIGN	DRAWN	CHKD

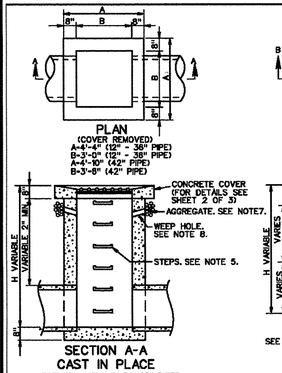
SCALE H: N/A V: N/A

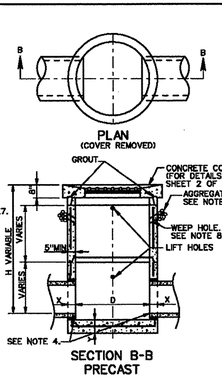
JOB No. 6916-01-002

DATE : JUNE 2015

FILE No. 6916-D-CP-002

SHEET 57 OF 63





RECOMMENDED MINIMUM HEIGHT CHART		
PIPE SIZE	H DIMENSION	
	CONC.	CORR. METAL
12"	2'-6"	2'-5"
15"	2'-9¼"	2'-8"
18"	3'-0½"	2'-11"
21"	3'-3¾"	3'-2"
24"	3'-7"	3'-5"
27"	3'-10¼"	3'-8"
30"	4'-1½"	3'-11"
33"	4'-4¾"	4'-2"
36"	4'-8"	4'-5"
42"	5'-2½"	4'-11"

NOTES (CONT.)

15. DI-7--------NO GUTTER
    DI-7A-------SINGLE GUTTER WHEN DROP INLET IS ON A GRADE.
    DI-7B------ DOUBLE GUTTER WHEN DROP INLET IS IN A SAG BETWEEN TWO GRADES.
16. FOR DETAILS OF PRECAST DI-7 NOT SHOWN HEREON SEE PRECAST UNIT ASSEMBLY DIAGRAM, PAGE 103.01. FOR PRECAST GENERAL NOTES, PAGE 103.02 AND FOR APPLICABLE PRECAST BASE, RISER AND TOP DETAILS, PAGES 103.07 THRU 103.12.
17. GRATE BARS TO BE PARALLEL TO DITCH FLOW.

PIPE SIZE	12"	15"	18"	24"	30"	36"	42"
H MINIMUM DEPTH	2'-0"	2'-3¼"	2'-6½"	3'-1"	3'-7½"	4'-2"	4'-8½"
CONCRETE CUBIC YARDS	.947	1.045	1.143	1.339	1.535	1.731	1.927

INCREMENT PER FOOT OF ADDITIONAL DEPTH (H) { = 0.382 CU. YDS. (12" - 36" PIPE) = 0.410 CU. YDS. (42" PIPE)

SPECIFICATION REFERENCE	STANDARD MEDIAN DROP INLET 12" TO 42" PIPE	VDOT ROAD AND BRIDGE STANDARDS	
241, 503	VIRGINIA DEPARTMENT OF TRANSPORTATION	REVISION DATE	SHEET 1 OF 3
			104.22

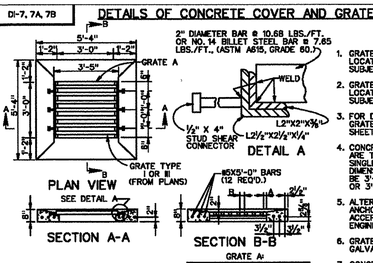
DI-7, 7A, 7B

NOTES

1. DEPTH OF INLET (H) TO BE SHOWN ON PLANS.
2. THE "H" DIMENSION SHOWN ON THE STANDARDS AND SPECIFIED ON THE PLANS WILL BE MEASURED FROM THE INVERT OF THE OUTFALL PIPE TO THE TOP OF THE STRUCTURE. PLAN "H" DIMENSIONS ARE APPROXIMATE ONLY FOR ESTIMATING PURPOSES AND THE ACTUAL DIMENSIONS SHALL BE DETERMINED BY THE CONTRACTOR FROM FIELD CONDITIONS. MAXIMUM DEPTH (H) TO BE 12'-6.
3. WHEN SPECIFIED ON THE PLANS THE INVERT IS TO BE SHAPED IN ACCORDANCE WITH STANDARD IS-1. THE COST OF FURNISHING AND PLACING ALL MATERIALS INCIDENTAL TO THE SHAPING IS TO BE INCLUDED IN THE BID PRICEIN FOR THE STRUCTURE.
4. IN THE EVENT THE INVERT OF THE OUTFALL PIPE IS HIGHER THAN THE BOTTOM OF THE STRUCTURE, THE INVERT OF THE STRUCTURE SHALL BE SHAPED WITH CEMENT MORTAR TO PREVENT STANDING OR PONDING OF WATER IN THE STRUCTURE. THE COST OF FURNISHING AND PLACING ALL MATERIALS INCIDENTAL TO THE SHAPING IS TO BE INCLUDED IN THE BID PRICE FOR THE STRUCTURE.
5. STEPS ARE TO BE PROVIDED WHEN H IS 4'-0" OR GREATER. FOR DETAILS SEE STANDARD ST-1.
6. REINFORCED CONCRETE FOOTING MAY BE PRECAST OR CAST-IN-PLACE. TWO LIFTING HOOKS OF FABRICATORS DESIGN TO BE PROVIDED IN PRECAST FOOTING
7. 4" DEPTH AGGREGATE #68,#78, OR #8 X 6" WIDTH.
8. 3" DIAMETER WEEP HOLE WITH 12"X12" PLASTIC HARDWARE CLOTH ½" MESH OR GALVANIZED STEEL WIRE, MINIMUM WIRE DIAMETER 0.03" NUMBER 4 MESH HARDWARE CLOTH ANCHORED FIRMLY TO THE OUTSIDE OF THE STRUCTURE.
9. THE TYPE OF INLET (PRECAST OR CAST IN PLACE), DETAILED HEREON, TO BE CONSTRUCTED, WILL BE AT THE OPTION OF THE CONTRACTOR.
10. FOR DETAILS OF CONCRETE COVER, COLLAR AND GRATE AND THE METHOD OF PLACING APPROACH GUTTER SEE SHEET 2 OF 3.
11. CAST-IN PLACE CONCRETE IS TO BE CLASS A3 (3000 PSI). PRECAST CONCRETE IS TO BE 4000 PSI.
12. CONCRETE QUANTITIES SHOWN ARE FOR INDICATED DEPTH (H) WITHOUT PIPES. THE AMOUNT DISPLACED BY PIPES MUST BE DEDUCTED TO OBTAIN TRUE QUANTITIES. FOR INLETS OF DIFFERENT DEPTHS ADD OR SUBTRACT THE APPROPRIATE CUBIC YARDS OF CONCRETE FOR EACH FOOT OF DEPTH.
13. PAVED DITCHES ARE TO BE TRANSITIONED TO MEET INLET GUTTER AS SHOWN IN STANDARD PG-2A.
14. PROVIDE SAFETY SLABS WHEN SPECIFIED ON THE PLANS.

DI-7, 7A, 7B

DETAILS OF CONCRETE COVER AND GRATE



APPROXIMATE QUANTITIES	
CONCRETE CLASS A3	REINFORCING STEEL
0.423 C. Y.	63 LBS.

GRATE A

BAR SPACING CHART		
GRATE TYPE	MAXIMUM DIMENSION	
	A	B
I	9¾"	3"
II	1"	1"

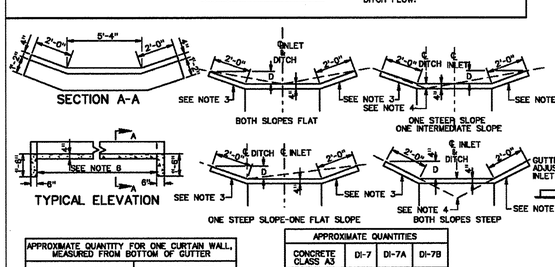
NOTES

1. GRATE A IS TO BE UTILIZED IN LOCATIONS NOT NORMALLY SUBJECT TO TRAFFIC.
2. GRATE B IS TO BE UTILIZED IN LOCATIONS NORMALLY SUBJECT TO TRAFFIC.
3. FOR DETAILS OF LOAD CARRYING GRATE (GRATE B), SEE T-DI-7, SHEET 103.08.
4. CONCRETE COVER AND GRATE ARE TO BE FURNISHED AS A SINGLE UNIT. OUTSIDE DIMENSIONS OF GRATE TO BE 3'-4" X 2'-1¾" (GRATE A) OR 3'-4" X 2'-11½" (GRATE B).
5. ALTERNATE METHODS OF ANCHORING ANGLE IRON WILL BE ACCEPTABLE IF APPROVED BY THE ENGINEER.
6. GRATE AND COLLAR ARE TO BE GALVANIZED.
7. CONCRETE COVER MAY BE PRECAST OR CAST IN PLACE.
8. CONCRETE TO BE CLASS A3 IF CAST IN PLACE. 4000 PSI IF PRECAST.
9. GRATE BARS TO BE PARALLEL TO DITCH FLOW.

DETAILS OF GUTTER AND METHOD OF PLACEMENT

NOTES

1. DI-7 NO GUTTERS.
   DI-7A NO GUTTER IN ONE DIRECTION.
   DI-7B GUTTER IN BOTH DIRECTIONS.
2. JOINTS BETWEEN GUTTERS AND CONCRETE COVER ARE TO BE DOWELED WITH #4 X 8" SMOOTH RODS @ APPROX. 18" C-C TO PREVENT SETTLEMENT, IN LIEU OF DOWELS A 2" X 4" NOTCH MAY BE PROVIDED.
   SEE STANDARD T-DI-3, 4 ALTERNATE DESIGN.
3. VARIABLE 2:1 OR FLATTER.
4. DITCH GRADE MUST BE ADJUSTED TO MEET DIFFERENCE IN ELEVATION. SEE LONGITUDINAL SECTION.
5. IF DEPTH (D) BECOMES LESS THEN 4", LENGTH OF WINGS ARE TO BE EXTENDED AS DIRECTED BY THE ENGINEER.
6. CURTAIN WALL TO BE LOCATED AT THE END OF THE PAVED DITCH SECTIONS OF THE DI-7A & DI-7B THAT ARE NOT ABUTTED BY OTHER DRAINAGE.
7. IF NORMAL DITCH GRADE IS TOO FLAT TO ALLOW FOR ADJUSTED GRADE TO INLET A SPECIAL GUTTER DETAIL WILL BE REQUIRED ON PLANS.

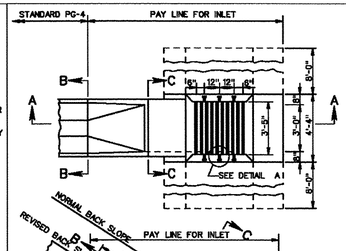


APPROXIMATE QUANTITY FOR ONE CURTAIN WALL, MEASURED FROM BOTTOM OF GUTTER	
CONCRETE CLASS A3	0.241 CU. YDS.

APPROXIMATE QUANTITIES			
CONCRETE CLASS A3	DI-7	DI-7A	DI-7B
(CU. YDS.)	NONE	1.211	2.148

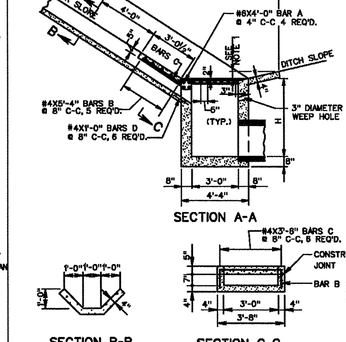
SPECIFICATION REFERENCE	STANDARD MEDIAN DROP INLET 12" TO 42" PIPE	VDOT ROAD AND BRIDGE STANDARDS	
241, 503	VIRGINIA DEPARTMENT OF TRANSPORTATION	REVISION DATE	SHEET 2 OF 3
			104.23

DI-7, 7A, 7B



APPROXIMATE QUANTITIES	
CLASS A3 CONCRETE	REINFORCING STEEL
CU. YDS.	LBS.
4.091	60

INCREMENT PER FOOT OF DEPTH (H) = 0.362 CU. YDS.
CONCRETE TO BE ADDED WHEN DOUBLE GUTTER IS REQ'D. = 1.112 CU. YDS.



NOTES

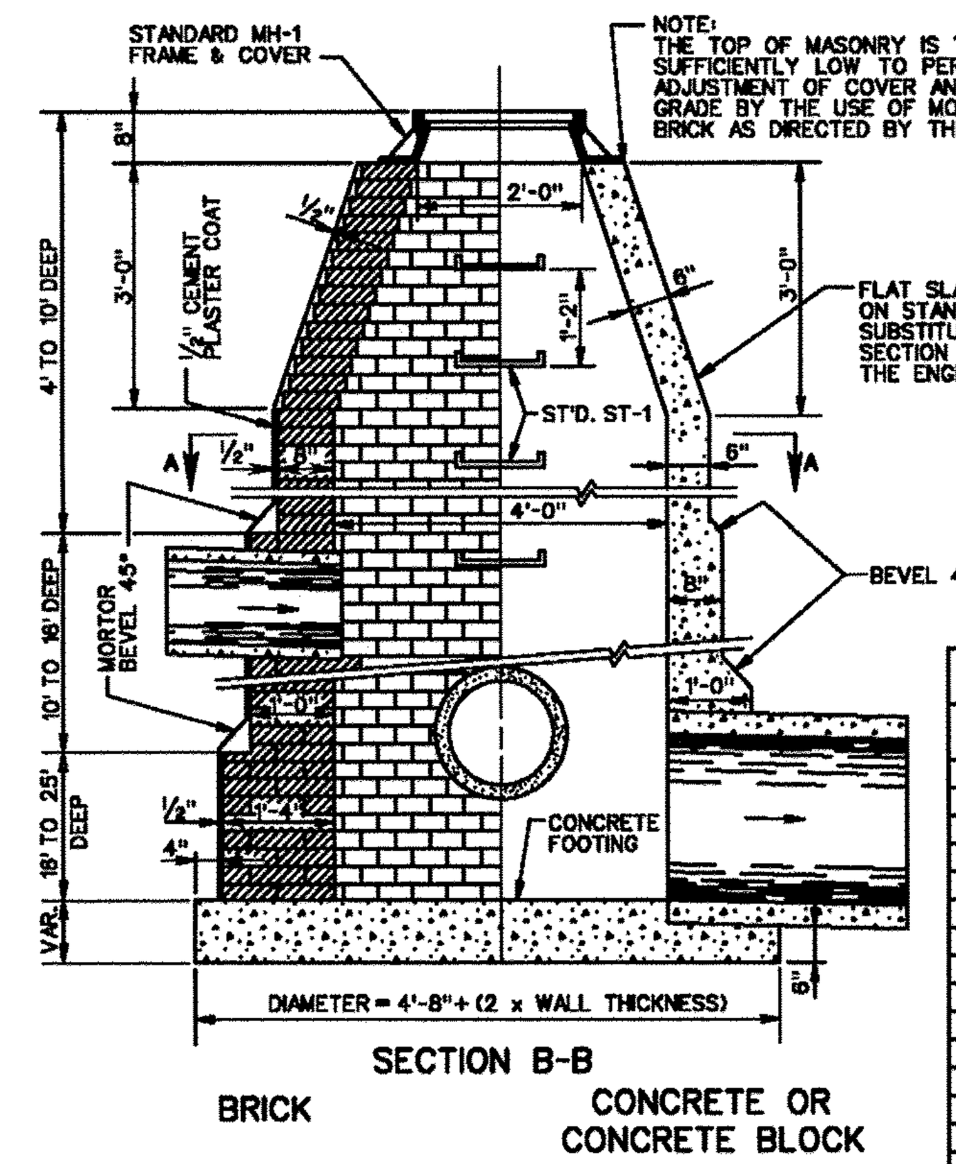
1. APRON IS TO BE CONSTRUCTED TO A DEPTH OF 1'-0" ON BACK SLOPE SIDE OF INLET (DI-7). ON ROADWAY SIDE, THE DEPTH IS TO BE 1'-0" OR TO THE SHOULDER ELEVATION, WHICHEVER IS LESSER.
2. ALTERNATE METHODS OF ANCHORING ANGLE IRON WILL BE ACCEPTABLE IF APPROVED BY THE ENGINEER.
3. COLLAR AND GRATE ARE TO BE GALVANIZED IN ACCORDANCE WITH THE SPECIFICATIONS.
4. OUTSIDE DIMENSIONS OF GRATE ARE TO BE 3'-4" X 2'-11¾".
5. ALL CONCRETE IS TO BE CLASS A3.
6. NORMAL DITCH IS TO BE TRANSITIONED TO THE SMOOTHLY INTO GUTTER. DITCH GRADE IS TO BE ADJUSTED AS NECESSARY TO MEET GRADE ELEVATION.
7. QUANTITIES SHOWN ARE BASED ON DEPTH H =5'-0".
8. THE AMOUNT OF CONCRETE DISPLACED BY PIPES MUST BE DEDUCTED TO OBTAIN TRUE QUANTITIES. FOR EACH FOOT OF DIFFERENCE IN DEPTH H ADD OR SUBTRACT INCREMENT AS SHOWN.
9. SEE STANDARD DI-7, DI-7A AND DI-7B FOR DETAILS AND DIMENSIONS NOT SHOWN HEREON.
10. GRATE BARS ARE TO BE INSTALLED SO THEY WILL BE ALIGNED PARALLEL TO THE DITCH FLOW.

SPECIFICATION REFERENCE	STANDARD DI-7, 7A OR 7B WITH FLUME CONNECTION 12" TO 36" PIPE	VDOT ROAD AND BRIDGE STANDARDS	
502	VIRGINIA DEPARTMENT OF TRANSPORTATION	REVISION DATE	SHEET 3 OF 3
			104.24

Cad file name : P:\6916 - City of Fairfax On-Call\6916-01-002 (ENG) - Burke Station Road\Engineering\Engineering Plans\6916-D-CP-002-DET.dwg

MH-1

SEE STANDARAD SL-1 FOR APPLICABILITY OF SAFETY SLABS.



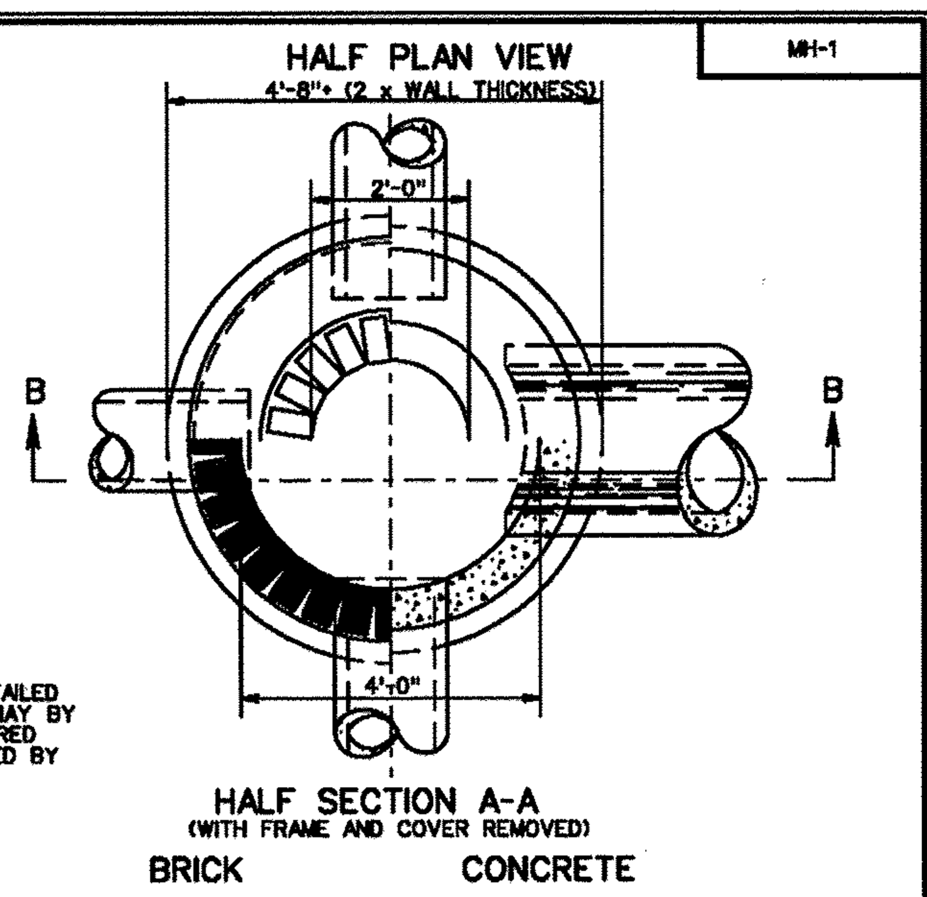


TABLE OF QUANTITIES			
DEPTH	BRICK	MANHOLE	CONCRETE MANHOLE
	BRICK	CONCRETE	CONCRETE
FEET	THOUSANDS	CU. YARDS	CU. YARDS
4	0.5	0.785	1.437
5	0.7	0.785	1.699
6	0.9	0.785	1.961
7	1.0	0.785	2.223
8	1.2	0.785	2.485
9	1.4	0.785	2.747
10	1.6	0.785	3.009
11	1.9	0.970	3.455
12	2.2	0.970	3.817
13	2.5	0.970	4.179
14	2.8	0.970	4.541
15	3.1	0.970	4.903
16	3.4	0.970	5.265
17	4.0	1.173	6.032
INCREMENT	0.45	-	0.582

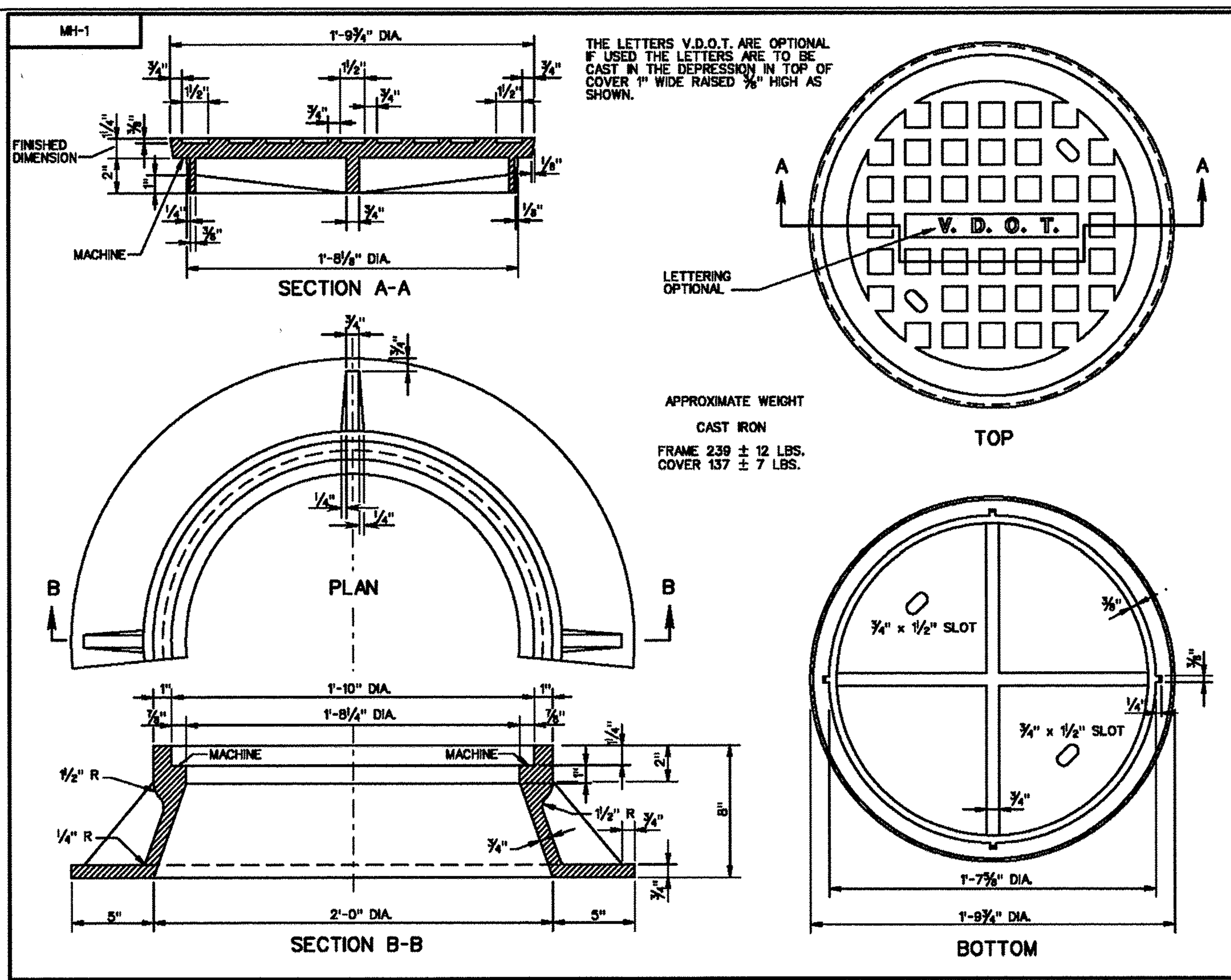
NOTES:

1. QUANTITIES SHOWN ARE FOR MANHOLE WITHOUT PIPES. THE AMOUNT DISPLACED BY PIPES MUST BE DEDUCTED TO OBTAIN TRUE QUANTITIES.
2. A BASE THICKNESS OF 9" WAS USED IN COMPUTING CONCRETE QUANTITIES.
3. INCREMENTS TO BE ADDED FOR EACH ADDITIONAL FOOT OF DEPTH.
4. MATERIALS MAY BE BRICK, CONCRETE OR APPROVED CONCRETE MANHOLE BLOCK.
5. IF BLOCKS ARE USED THE MINIMUM THICKNESS OF SAME IS TO BE 5". OTHER THICKNESSES ARE TO CONFORM TO WALL THICKNESS SHOWN FOR CONCRETE.
6. ALL CONCRETE TO BE CLASS A3.
7. WHEN SPECIFIED ON PLANS THE INVERT IS TO BE SHAPED IN ACCORDANCE WITH STANDARD IS-1. THE COST OF FURNISHING AND PLACING ALL MATERIALS INCIDENTAL TO THE SHAPING IS TO BE INCLUDED IN THE BID PRICE FOR THE STRUCTURE.

SPECIFICATION REFERENCE		VDOT ROAD AND BRIDGE STANDARDS	
302	MANHOLE FOR 12" - 48" PIPE CULVERTS VIRGINIA DEPARTMENT OF TRANSPORTATION	REVISION DATE	SHEET 1 OF 5 106.01

MH-1

THE LETTERS V.D.O.T. ARE OPTIONAL IF USED THE LETTERS ARE TO BE CAST IN THE DEPRESSION IN TOP OF COVER 1" WIDE RAISED ⅜" HIGH AS SHOWN.



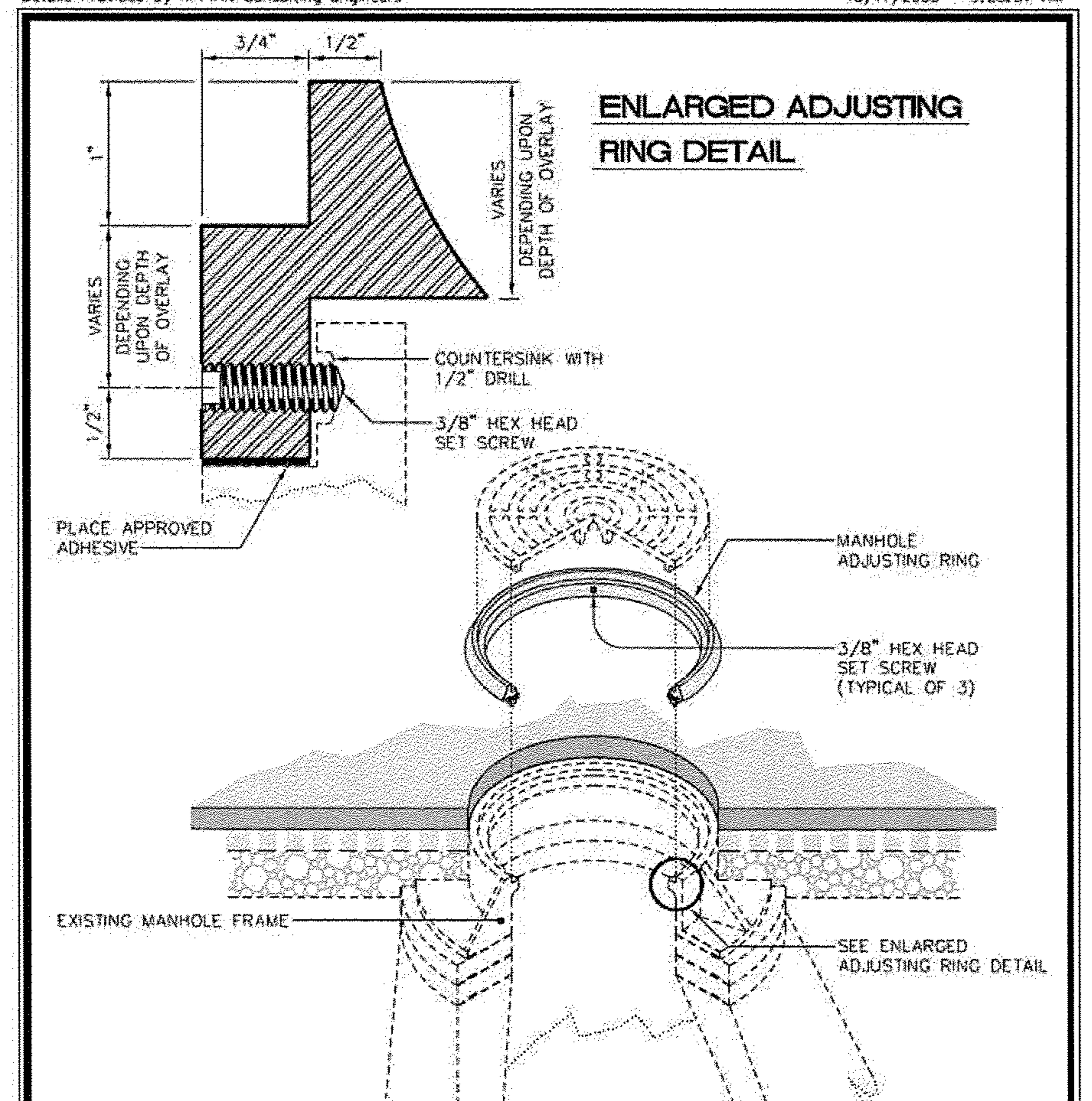
APPROXIMATE WEIGHT

CAST IRON

FRAME 239 ± 12 LBS.
COVER 137 ± 7 LBS.

VDOT ROAD AND BRIDGE STANDARDS			SPECIFICATION REFERENCE
SHEET 2 OF 5 106.02	REVISION DATE	STANDARD MANHOLE FRAME AND COVER VIRGINIA DEPARTMENT OF TRANSPORTATION	224 302

Details Provided by APPIAN Consulting Engineers 10/17/2005 - 9:28:37 AM



NOTES:

1. Style of adjusting ring may vary.
2. Field verify diameter of adjusting ring.
3. Ring style shown is to be used with standard detail 533.01 non-watertight applications.

Department of Public Works
10455 Armstrong Street
Fairfax, VA 22030-3630

CITY of FAIRFAX
USE WITH THE FAIRFAX STANDARD SPECIFICATIONS ONLY

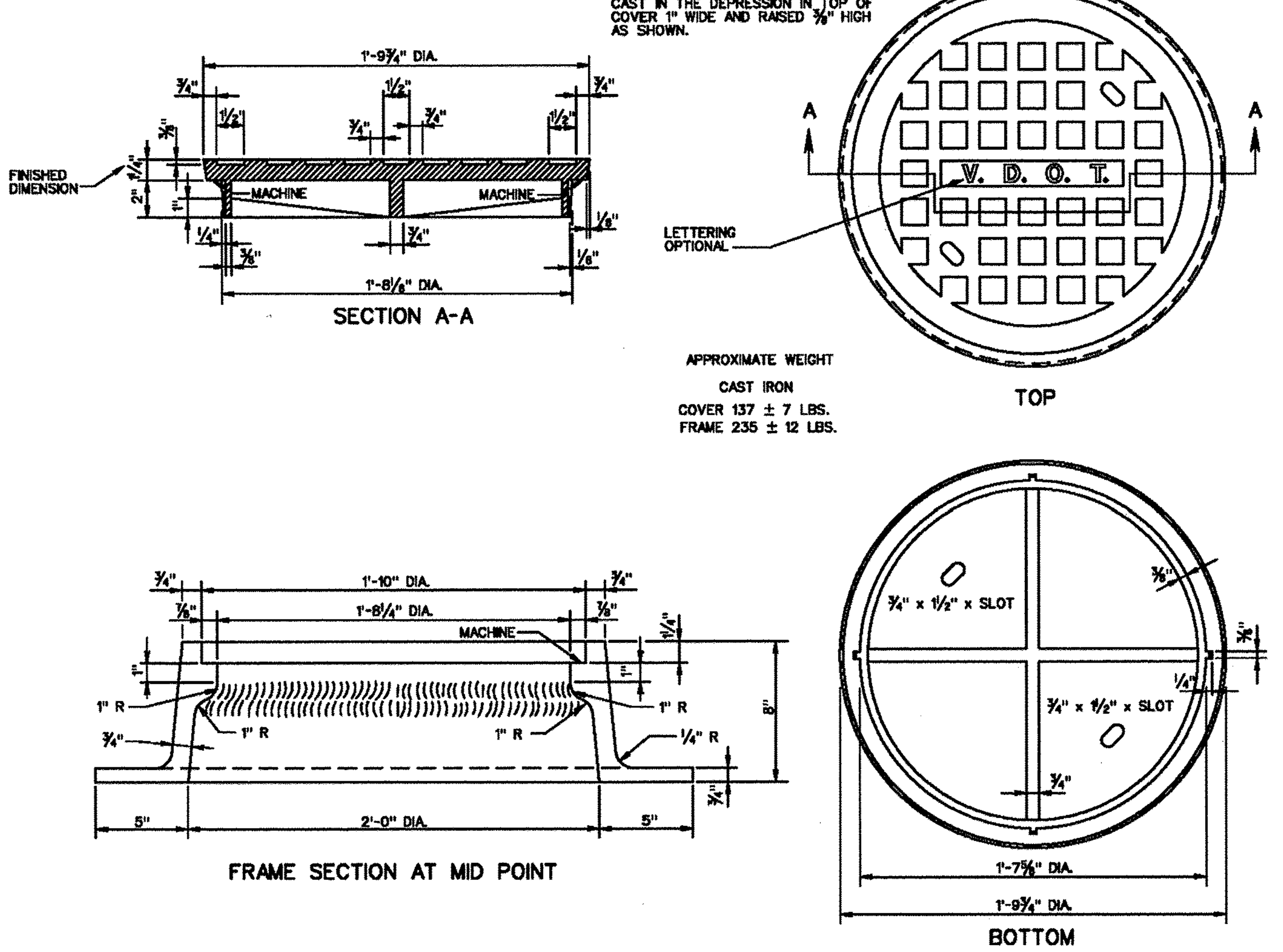
Voice (703) 246-6030
FAX (703) 591-5727
www.fairfaxva.gov

MANHOLE ADJUSTING RING

SCALE: Not To Scale | DETAIL #: 401.06 | REVISION DATE: July, 2005 | SHEET #: 1 of 1

MH-1

NOTES:
THE LETTERS V.D.O.T. ARE OPTIONAL, IF USED THE LETTERS ARE TO BE CAST IN THE DEPRESSION IN TOP OF COVER 1" WIDE AND RAISED ⅜" HIGH AS SHOWN.



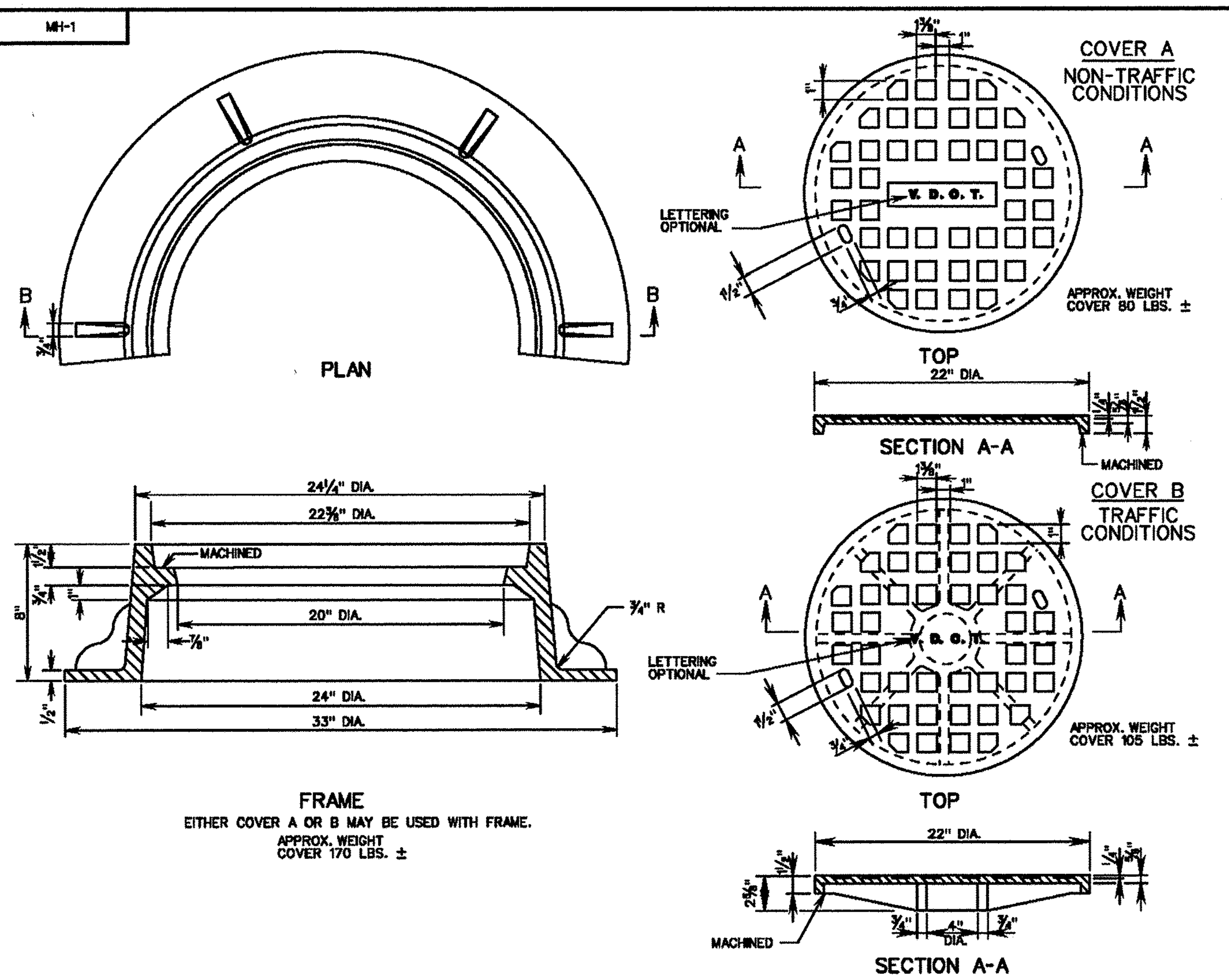
APPROXIMATE WEIGHT

CAST IRON

COVER 137 ± 7 LBS.
FRAME 239 ± 12 LBS.

SPECIFICATION REFERENCE		VDOT ROAD AND BRIDGE STANDARDS	
224 302	STANDARD MANHOLE FRAME AND COVER VIRGINIA DEPARTMENT OF TRANSPORTATION	REVISION DATE	SHEET 3 OF 5 106.03

MH-1



APPROX. WEIGHT
COVER 80 LBS. ±

APPROX. WEIGHT
COVER 105 LBS. ±

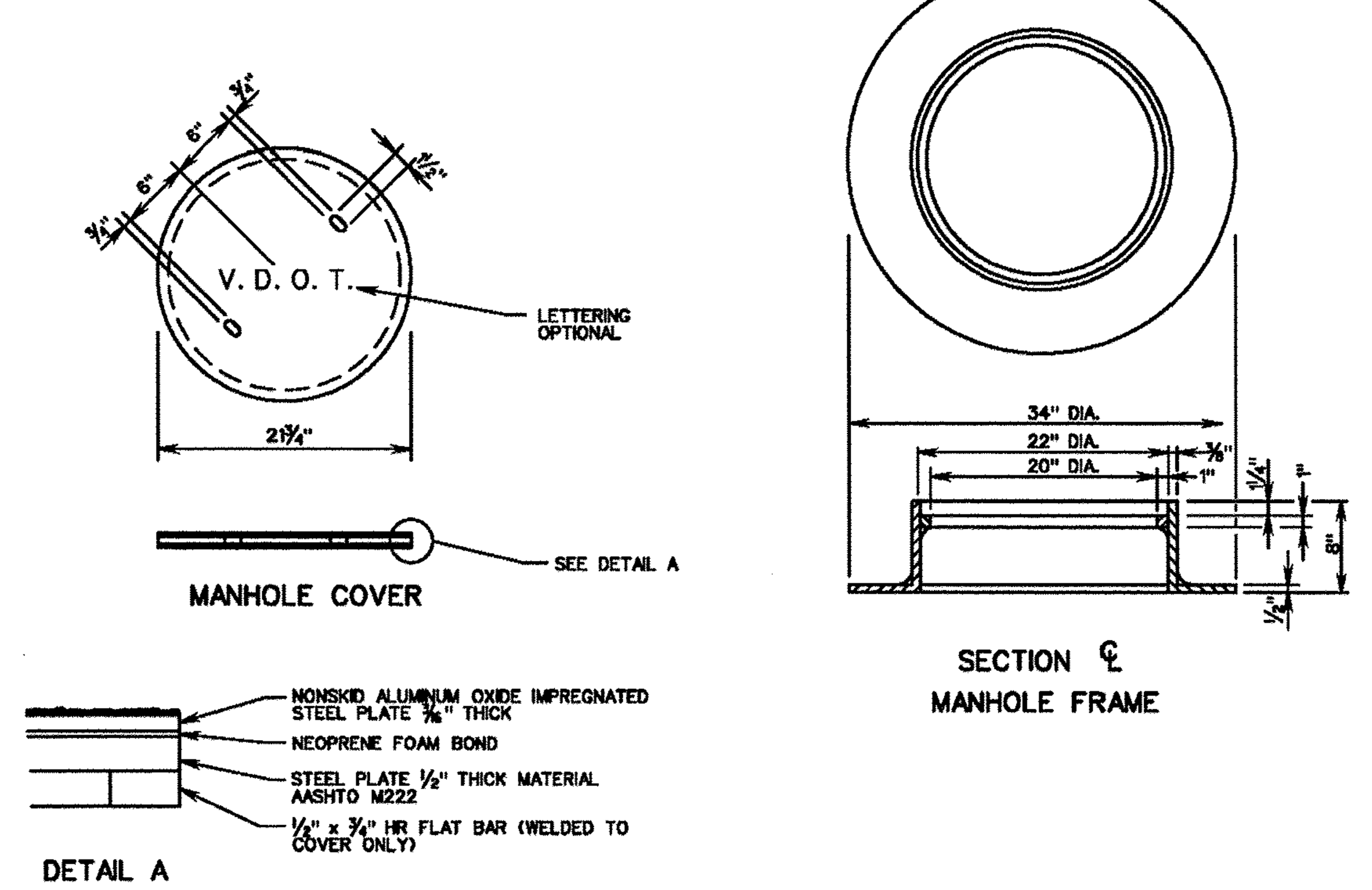
FRAME

EITHER COVER A OR B MAY BE USED WITH FRAME.

APPROX. WEIGHT
COVER 170 LBS. ±

VDOT ROAD AND BRIDGE STANDARDS			SPECIFICATION REFERENCE
SHEET 4 OF 5 106.04	REVISION DATE	STANDARD MANHOLE FRAME AND COVER VIRGINIA DEPARTMENT OF TRANSPORTATION	224 302

MH-1



NOTES:
STRUCTURAL COMPONENTS SHALL CONFORM TO AASHTO M222.

FRAME AND COVER SHALL HAVE A CONTINUOUS FLUSH FIT.

SPECIFICATION REFERENCE		VDOT ROAD AND BRIDGE STANDARDS	
302	STANDARD MANHOLE AND COVER VIRGINIA DEPARTMENT OF TRANSPORTATION	REVISION DATE	SHEET 5 OF 5 106.05

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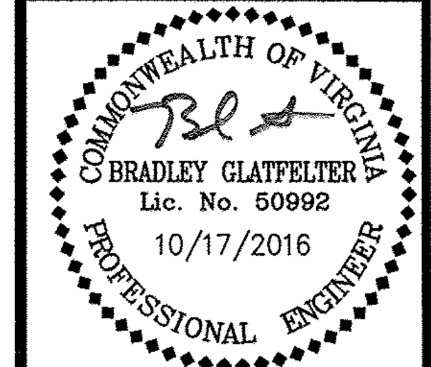
SITE DETAILS (3 OF 8)
BURKE STATION ROAD STREETSCAPE IMPROVEMENTS

CITY OF FAIRFAX VIRGINIA

PROJECT NUMBER



PLAN STATUS	
04/05/16	FINAL SUBMISSION
10/17/16	CONTRACT DOCUMENT
DATE	DESCRIPTION

SB	SB	SD
DESIGN	DRAWN	CHKD

SCALE H: N/A V: N/A

JOB No. 6916-01-002

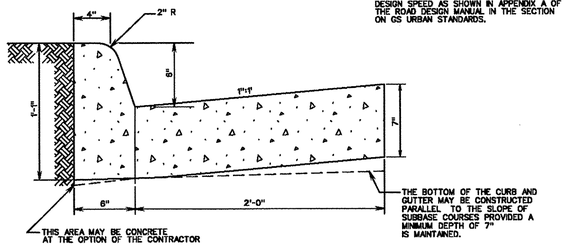
DATE : JUNE 2015

FILE No. 6916-D-CP-002

SHEET 58 OF 63

Cad file name : P:\6916 - City of Fairfax On-Call\6916-01-002 (ENG) - Burke Station Road\Engineering\Engineering Plans\6916-D-CP-002-DET.dwg

CG-6

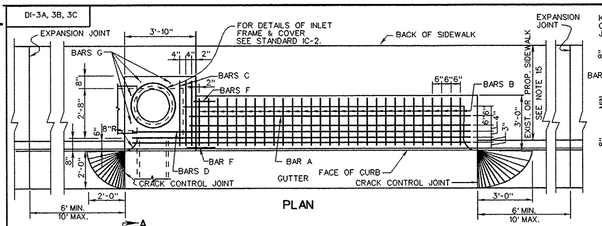


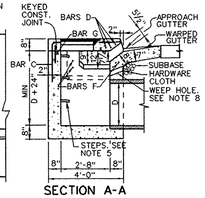
NOTES:

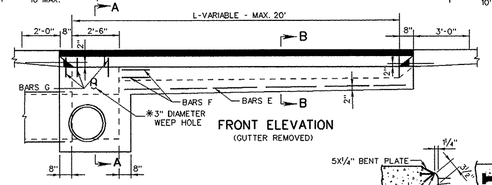
1. THIS ITEM MAY BE PRECAST OR CAST IN PLACE.
2. CONCRETE TO BE CLASS A3 IF CAST IN PLACE, 4000 PSI IF PRECAST.
3. COMBINATION CURB & GUTTER HAVING A RADIUS OF 300 FEET OR LESS (ALONG FACE OF CURB) SHALL BE USED FOR AS RADIAL COMBINATION CURB & GUTTER.
4. FOR USE WITH STABILIZED OPEN-GRADED DRAINAGE LAYER, THE BOTTOM OF THE CURB & GUTTER SHALL BE CONSTRUCTED PARALLEL TO THE SLOPE OF SUBBASE COURSES AND TO THE DEPTH OF THE PAVEMENT.
5. ALLOWABLE CRITERIA FOR THE USE OF CG-6 IS BASED ON ROADWAY CLASSIFICATION AND DESIGN SPEED AS SHOWN IN APPENDIX A OF THE ROAD DESIGN MANUAL IN THE SECTION ON GS URBAN STANDARDS.

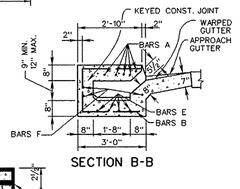
SPECIFICATION REFERENCE	COMBINATION 6" CURB AND GUTTER	VDOT ROAD AND BRIDGE STANDARDS
105 502	VIRGINIA DEPARTMENT OF TRANSPORTATION	REVISION DATE: — SHEET 1 OF 1 201.03

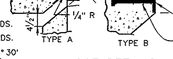
DI-3A, 3B, 3C











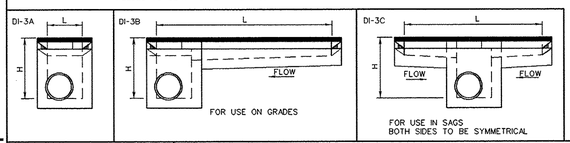
TYPE A NOSE DETAIL SHALL BE USED WITH CG-3 & CG-7 STANDARDS.

TYPE B NOSE DETAIL SHALL BE USED WITH CG-2 & CG-6 STANDARDS.

GALVANIZED PLATE FOR TYPE A TO BE BENT ON AN ANGLE OF 68° 30' CONNECTORS AND IS TO BE ANCHORED WITH ½" X 4" STUD SHEAR WELDED TO BENT PLATE AT 2'-C-C.

½" X 4" STUD SHEAR CONNECTOR WELDED TO ANGLE IRON AT 2'-C-C.

NOSE DETAILS



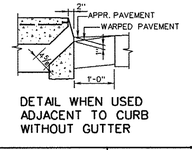


TABLE OF QUANTITIES

DI-3A, 3B, 3C

TYPE	L	AREA OF SLOT	REINFORCING STEEL: Concrete	BARS A		BARS B		BARS C		BARS D		BARS E		BARS F		BARS G		WEIGHT
	Ft.	Sq. Ft.	Cu. Yds.	No.	Lin. Ft. ✱	No.	Lin. Ft. ✱	No.	Lin. Ft. ✱	No.	Lin. Ft.✱	No.	Lin. Ft.✱	No.	Lin. Ft.✱	No.	Lin. Ft.✱	Lbs.
DI-3A	2'-6"	1.15	2.26	-	-	-	-	1	5'-7"	3	3'-2"	-	-	-	-	6	1'-0"	22
	4'	1.83	2.59	5	1'-6"	2	6'-7" to 6'-10"	3	5'-7"	3	3'-2"	4	1'-6"	3	1'-6"	4	1'-0"	54
	6'	2.75	3.02	5	3'-6"	6	6'-7" to 6'-10"	3	5'-7"	3	3'-2"	4	3'-6"	3	1'-6"	4	1'-0"	111
	8'	3.67	3.46	5	5'-6"	10	6'-7" to 6'-10"	3	5'-7"	3	3'-2"	4	5'-6"	3	1'-6"	4	1'-0"	168
DI-3B	10'	4.58	3.89	5	7'-6"	14	6'-7" to 6'-10"	3	5'-7"	3	3'-2"	4	7'-6"	3	1'-6"	4	1'-0"	204
	12'	5.50	4.34	5	9'-6"	18	6'-7" to 6'-10"	3	5'-7"	3	3'-2"	4	9'-6"	3	1'-6"	4	1'-0"	251
	14'	6.42	4.78	5	11'-6"	22	6'-7" to 6'-10"	3	5'-7"	3	3'-2"	4	11'-6"	3	1'-6"	4	1'-0"	298
	16'	7.33	5.22	5	13'-6"	26	6'-7" to 6'-10"	3	5'-7"	3	3'-2"	4	13'-6"	3	1'-6"	4	1'-0"	345
	18'	8.25	5.66	5	15'-6"	30	6'-7" to 6'-10"	3	5'-7"	3	3'-2"	4	15'-6"	3	1'-6"	4	1'-0"	391
	20'	9.17	6.09	5	17'-6"	34	6'-7" to 6'-10"	3	5'-7"	3	3'-2"	4	17'-6"	3	1'-6"	4	1'-0"	438
	6'	2.75	3.01	10	1'-9"	4	6'-7" to 6'-10"	5	5'-7"	3	3'-2"	8	1'-9"	6	1'-6"	2	1'-0"	111
	8'	3.67	3.45	10	2'-9"	8	6'-7" to 6'-10"	5	5'-7"	3	3'-2"	8	2'-9"	6	1'-6"	2	1'-0"	168
	10'	4.58	3.89	10	3'-9"	12	6'-7" to 6'-10"	5	5'-7"	3	3'-2"	8	3'-9"	6	1'-6"	2	1'-0"	205
DI-3C	12'	5.50	4.33	10	4'-9"	16	6'-7" to 6'-10"	5	5'-7"	3	3'-2"	8	4'-9"	6	1'-6"	2	1'-0"	252
	14'	6.42	4.77	10	5'-9"	20	6'-7" to 6'-10"	5	5'-7"	3	3'-2"	8	5'-9"	6	1'-6"	2	1'-0"	298
	16'	7.33	5.21	10	6'-9"	24	6'-7" to 6'-10"	5	5'-7"	3	3'-2"	8	6'-9"	6	1'-6"	2	1'-0"	345
	18'	8.25	5.65	10	7'-9"	28	6'-7" to 6'-10"	5	5'-7"	3	3'-2"	8	7'-9"	6	1'-6"	2	1'-0"	392
	20'	9.17	6.09	10	8'-9"	32	6'-7" to 6'-10"	5	5'-7"	3	3'-2"	8	8'-9"	6	1'-6"	2	1'-0"	439

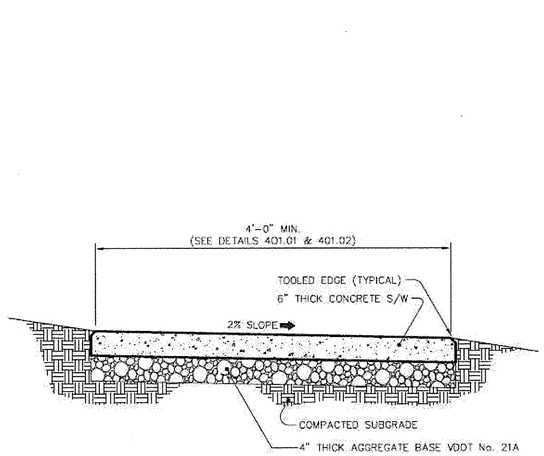
NOTES

1. DEPTH OF INLET (H) TO BE SHOWN ON PLANS.
2. THE "H" DIMENSION SHOWN ON THE STANDARDS AND SPECIFIED ON THE PLANS WILL BE MEASURED FROM THE INVERT OF THE OUTFALL PIPE TO THE TOP OF THE STRUCTURE. PLAN "H" DIMENSIONS ARE APPROXIMATE ONLY FOR ESTIMATING PURPOSES AND THE ACTUAL DIMENSIONS SHALL BE DETERMINED BY THE CONTRACTOR FROM FIELD CONDITIONS.
3. WHEN SPECIFIED ON THE PLANS THE INVERT IS TO BE SHAPED IN ACCORDANCE WITH STANDARD IS-1. THE COST OF FURNISHING AND PLACING ALL MATERIALS INCIDENTAL TO THE SHAPING IS TO BE INCLUDED IN THE BID PRICE FOR THE STRUCTURE.
4. IN THE EVENT THE INVERT OF THE OUTFALL PIPE IS HIGHER THAN THE BOTTOM OF THE STRUCTURE, THE INVERT OF THE STRUCTURE SHALL BE SHAPED WITH CEMENT MORTAR TO PREVENT STANDING OR PONDING OF WATER IN THE STRUCTURE. THE COST OF FURNISHING AND PLACING ALL MATERIALS INCIDENTAL TO THE SHAPING IS TO BE INCLUDED IN THE BID PRICE FOR THE STRUCTURE.
5. STEPS ARE TO BE PROVIDED WHEN H IS 4'-0" OR GREATER. FOR DETAILS SEE STANDARD ST-1.
6. THIS ITEM MAY BE PRECAST OR CAST-IN-PLACE.
7. ✱ 4 X 8" SMOOTH DOWELS AT APPROXIMATELY 12" C-C TO BE PLACED IN ALL AREAS ADJACENT TO ABUTTING CONCRETE TO PREVENT SETTLEMENT.
8. 3" DIAMETER WEEP HOLE TO BE LOCATED TO DRAIN SUBBASE MATERIAL. WEEP HOLE WITH 12"X12" PLASTIC HARDWARE CLOTH ¼" MESH OR GALVANIZED STEEL WIRE, MINIMUM WIRE DIAMETER 0.03", NUMBER 4 MESH HARDWARE CLOTH ANCHORED FIRMLY TO THE OUTSIDE OF THE STRUCTURE.
9. ALL REINFORCING STEEL SHALL HAVE A MIN. COVER OF 2".
10. ALL REINFORCING STEEL TO BE CUT CLEAR OF ALL OPENINGS BY 2".
11. CAST-IN PLACE CONCRETE IS TO BE CLASS A3 (3000 PSI). PRECAST CONCRETE IS TO BE 4000 PSI.
12. LENGTH OF SLOT (L) WILL, IN EVERY CASE, BE SHOWN ON PLANS.
13. IF INLET IS CONSTRUCTED IN MEDIAN CURB OR WITH INTEGRAL CURB, GUTTER IS TO BE OMITTED (SEE DETAIL).
14. STANDARD INLETS MAY BE CONSTRUCTED WITH CONCRETE BLOCKS IN ACCORDANCE WITH THE DETAILS SHOWN ON STANDARD DRAWING DI-MB.
15. THIS AREA MAY BE EARTHEN, IN WHICH CASE THE EXPANSION JOINTS WILL APPLY ONLY TO CURB AND GUTTER.
16. CONCRETE QUANTITIES SHOWN ARE FOR DEPTH (H) OF 5'-2" WITHOUT PIPES. THE AMOUNT DISPLACED BY PIPES MUST BE DEDUCTED TO OBTAIN TRUE QUANTITIES. FOR INLETS OF DIFFERENT DEPTHS ADD OR SUBTRACT 0.32 CUBIC YARDS OF CONCRETE FOR EACH FOOT OF DEPTH.
17. LENGTH OF ANGLE IRON AS SHOWN ON SHEET 1 OF 2 IS TO BE L 4-16" AT 4.10 LBS./FT..
18. ✱ DENOTES LENGTH OF ONE (1) BAR.
19. ALL REINFORCING BARS TO BE ✱5.

VDOT ROAD AND BRIDGE STANDARDS	STANDARD CURB DROP INLET	SPECIFICATION REFERENCE
SHEET 1 OF 2 — REVISION DATE: 08/10 104.09	12" - 30" PIPE: MAXIMUM DEPTH (H) = 8' VIRGINIA DEPARTMENT OF TRANSPORTATION	233 302

SPECIFICATION REFERENCE	STANDARD CURB DROP INLET	VDOT ROAD AND BRIDGE STANDARDS
233 302	12" - 30" PIPE: MAXIMUM DEPTH (H) = 8' VIRGINIA DEPARTMENT OF TRANSPORTATION	REVISION DATE: — SHEET 2 OF 2 104.10

Details Provided by APPIAN Consulting Engineers 10/17/2005 - 9:37:38 AM

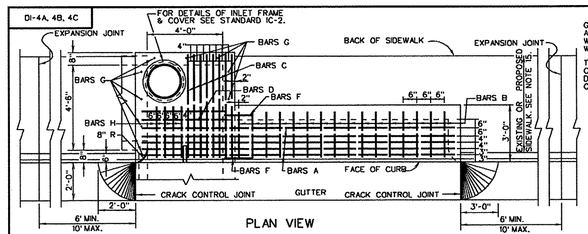


NOTES:

1. Concrete to be Class A3 or better.
2. Longitudinal expansion joint not to exceed 80 feet.

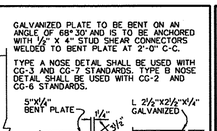
Department of Public Works 10455 Armstrong Street Fairfax, VA 22030-3630	CITY of FAIRFAX USE WITH THE FAIRFAX STANDARD SPECIFICATIONS ONLY	Voice (703) 246-6330 FAX (703) 591-5227 www.fairfaxva.gov
STANDARD SIDEWALK DETAIL	SCALE: Not To Scale — DETAIL #: 2-404.01 REVISION DATE: July, 2005 — SHEET #: 1 of 1	

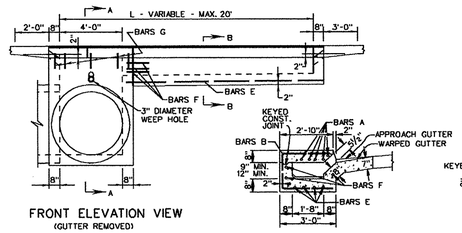
DI-4A, 4B, 4C

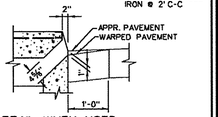


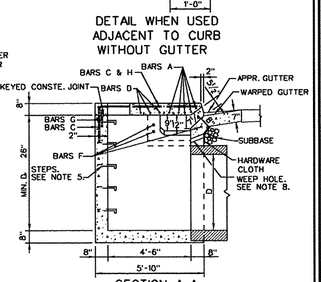
GALVANIZED PLATE TO BE BENT ON AN ANGLE OF 68° 30' AND IS TO BE ANCHORED WITH ½" X 4" STUD SHEAR CONNECTORS WELDED TO BENT PLATE AT 2'-0" C-C.

TYPE A NOSE DETAIL SHALL BE USED WITH CG-3 AND CG-7 STANDARDS. TYPE B NOSE DETAIL SHALL BE USED WITH CG-2 AND CG-6 STANDARDS.









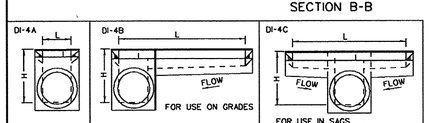


TABLE OF QUANTITIES

DI-4A, 4B, 4C

TYPE	L	AREA OF SLOT	REINFORCING STEEL: Concrete	BARS A		BARS B		BARS C		BARS D		BARS E		BARS F		BARS G		BARS H		WEIGHT
	Ft.	Sq. Ft.	Cu. Yds.	No.	Lin. Ft. ✱	No.	Lin. Ft. ✱	No.	Lin. Ft. ✱	No.	Lin. Ft. ✱	No.	Lin. Ft. ✱	No.	Lin. Ft. ✱	No.	Lin. Ft. ✱	No.	Lin. Ft. ✱	Lbs.
DI-4A	4'	1.83	4.65	5	4'-8"	-	-	6	7'-6"	2	4'-8"	-	-	-	-	11	1'-0"	4	2'-8"	104
	6'	2.75	5.07	5	6'-8"	3	5'-7" to 6'-10"	8	7'-6"	2	4'-8"	4	2'-0"	3	1'-6"	9	1'-0"	4	2'-8"	162
	8'	3.67	5.51	5	8'-8"	7	5'-7" to 6'-10"	8	7'-6"	2	4'-8"	4	4'-0"	3	1'-6"	9	1'-0"	4	2'-8"	209
	10'	4.58	5.98	5	10'-8"	11	5'-7" to 6'-10"	8	7'-6"	2	4'-8"	4	6'-0"	3	1'-6"	9	1'-0"	4	2'-8"	256
DI-4B	12'	5.50	6.40	5	12'-8"	15	5'-7" to 6'-10"	8	7'-6"	2	4'-8"	4	8'-0"	3	1'-6"	9	1'-0"	4	2'-8"	302
	14'	6.42	6.85	5	14'-8"	19	5'-7" to 6'-10"	8	7'-6"	2	4'-8"	4	10'-0"	3	1'-6"	9	1'-0"	4	2'-8"	349
	16'	7.33	7.30	5	16'-8"	23	5'-7" to 6'-10"	8	7'-6"	2	4'-8"	4	12'-0"	3	1'-6"	9	1'-0"	4	2'-8"	395
	18'	8.25	7.74	5	18'-8"	27	5'-7" to 6'-10"	8	7'-6"	2	4'-8"	4	14'-0"	3	1'-6"	9	1'-0"	4	2'-8"	443
	20'	9.17	8.19	5	20'-8"	31	5'-7" to 6'-10"	8	7'-6"	2	4'-8"	4	16'-0"	3	1'-6"	9	1'-0"	4	2'-8"	489
	8'	3.67	5.48	5	8'-8"	6	5'-7" to 6'-10"	10	7'-6"	2	4'-8"	8	2'-0"	6	1'-6"	7	1'-0"	4	2'-8"	220
	10'	4.58	5.92	5	10'-8"	10	5'-7" to 6'-10"	10	7'-6"	2	4'-8"	8	3'-0"	6	1'-6"	7	1'-0"	4	2'-8"	267
	12'	5.50	6.37	5	12'-8"	14	5'-7" to 6'-10"	10	7'-6"	2	4'-8"	8	4'-0"	6	1'-6"	7	1'-0"	4	2'-8"	314
	14'	6.42	6.81	5	14'-8"	18	5'-7" to 6'-10"	10	7'-6"	2	4'-8"	8	5'-0"	6	1'-6"	7	1'-0"	4	2'-8"	360
DI-4C	16'	7.33	7.26	5	16'-8"	22	5'-7" to 6'-10"	10	7'-6"	2	4'-8"	8	6'-0"	6	1'-6"	7	1'-0"	4	2'-8"	407
	18'	8.25	7.70	5	18'-8"	26	5'-7" to 6'-10"	10	7'-6"	2	4'-8"	8	7'-0"	6	1'-6"	7	1'-0"	4	2'-8"	454
	20'	9.17	8.19	5	20'-8"	30	5'-7" to 6'-10"	10	7'-6"	2	4'-8"	8	8'-0"	6	1'-6"	7	1'-0"	4	2'-8"	501

NOTES

1. DEPTH OF INLET (H) TO BE SHOWN ON PLANS.
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9. ALL REINFORCING STEEL SHALL HAVE A MIN. COVER OF 2".
10. ALL REINFORCING STEEL TO BE CUT CLEAR OF ALL OPENINGS BY 2".
11. CAST-IN PLACE CONCRETE IS TO BE CLASS A3 (3000 PSI). PRECAST CONCRETE IS TO BE 4000 PSI.
12. LENGTH OF SLOT (L) WILL IN EVERY CASE, BE SHOWN ON PLANS.
13. IF INLET IS CONSTRUCTED IN MEDIAN CURB OR WITH INTEGRAL CURB, GUTTER IS TO BE OMITTED (SEE DETAIL).
14. STANDARD INLETS MAY BE CONSTRUCTED WITH CONCRETE BLOCKS IN ACCORDANCE WITH THE DETAILS SHOWN ON STANDARD DRAWING DI-MB.
15. THIS AREA MAY BE EARTHEN, IN WHICH CASE THE EXPANSION JOINTS WILL APPLY ONLY TO CURB AND GUTTER.
16. CONCRETE QUANTITIES SHOWN ARE FOR DEPTH (H) OF 6'-10" WITHOUT PIPES. THE AMOUNT DISPLACED BY PIPES MUST BE DEDUCTED TO OBTAIN TRUE QUANTITIES. FOR INLETS OF DIFFERENT DEPTHS ADD OR SUBTRACT 0.49 CUBIC YARDS OF CONCRETE FOR EACH FOOT OF DEPTH.
17. LENGTH OF ANGLE IRON AS SHOWN ON SHEET 1 OF 2 IS TO BE L 4-16" AT 4.10 LBS./FT..
18. ✱ DENOTES LENGTH OF ONE (1) BAR.
19. ALL REINFORCING BARS TO BE ✱5.

VDOT ROAD AND BRIDGE STANDARDS	STANDARD CURB DROP INLET	SPECIFICATION REFERENCE
SHEET 1 OF 2 — REVISION DATE: 10/09 104.15	36" - 48" PIPE: MAXIMUM DEPTH (H) = 8' VIRGINIA DEPARTMENT OF TRANSPORTATION	233 302

SPECIFICATION REFERENCE	STANDARD CURB DROP INLET	VDOT ROAD AND BRIDGE STANDARDS
233 302	36" - 48" PIPE: MAXIMUM DEPTH (H) = 8' VIRGINIA DEPARTMENT OF TRANSPORTATION	REVISION DATE: — SHEET 2 OF 2 104.16

Bowman

CONSULTING

Bowman Consulting Group, Ltd.
14020 Thunderbolt Place
Suite 300
Chantilly, Virginia 20151

Phone: (703) 464-1000
Fax: (703) 481-9720

www.bowmanconsulting.com

SITE DETAILS (4 OF 8)

BURKE STATION ROAD
STREETSCAPE IMPROVEMENTS

CITY OF FAIRFAX VIRGINIA

PROJECT NUMBER

COMMONWEALTH OF VIRGINIA
BRADLEY GLATFELTER
Lic. No. 50992
10/17/2016
PROFESSIONAL ENGINEER

PLAN STATUS

04/05/16	FINAL SUBMISSION
10/17/16	CONTRACT DOCUMENT

DATE	DESCRIPTION

SB	SB	SD
DESIGN	DRAWN	CHKD

SCALE H: N/A V: N/A

JOB No. 6916-01-002

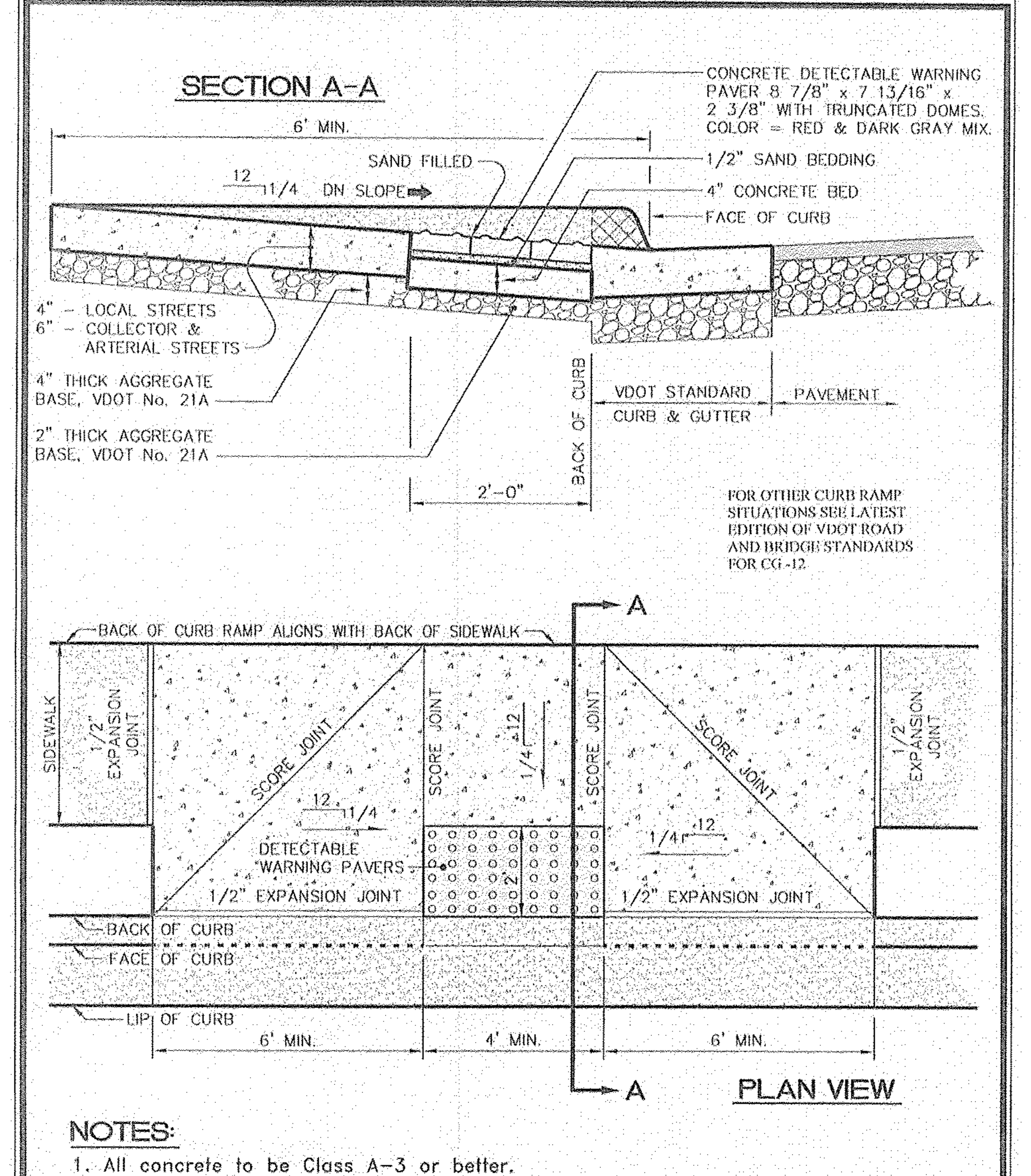
DATE : JUNE 2015

FILE No. 6916-D-CP-002

SHEET 59 OF 63

Cad file name : P:\6916 - City of Fairfax On-Call\6916-01-002 (ENG) - Burke Station Road\Engineering\Engineering Plans\6916-D-CP-002-DET.dwg

Details Provided by APPIAN Consulting Engineers 10/17/2005 - 9:36:15 AM



NOTES:

1. All concrete to be Class A-3 or better.

Department of Public Works
10455 Armstrong Street
Fairfax, VA 22030-3630

CITY of FAIRFAX

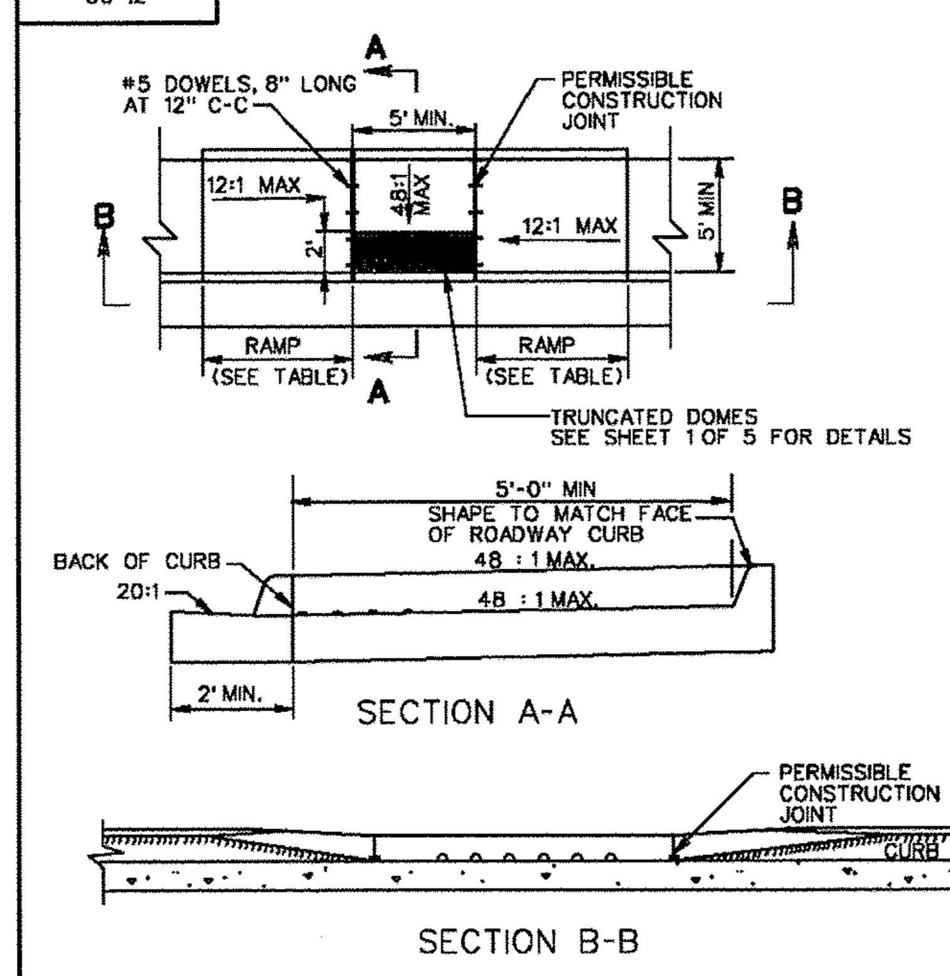
USE WITH THE FAIRFAX STANDARD SPECIFICATIONS ONLY

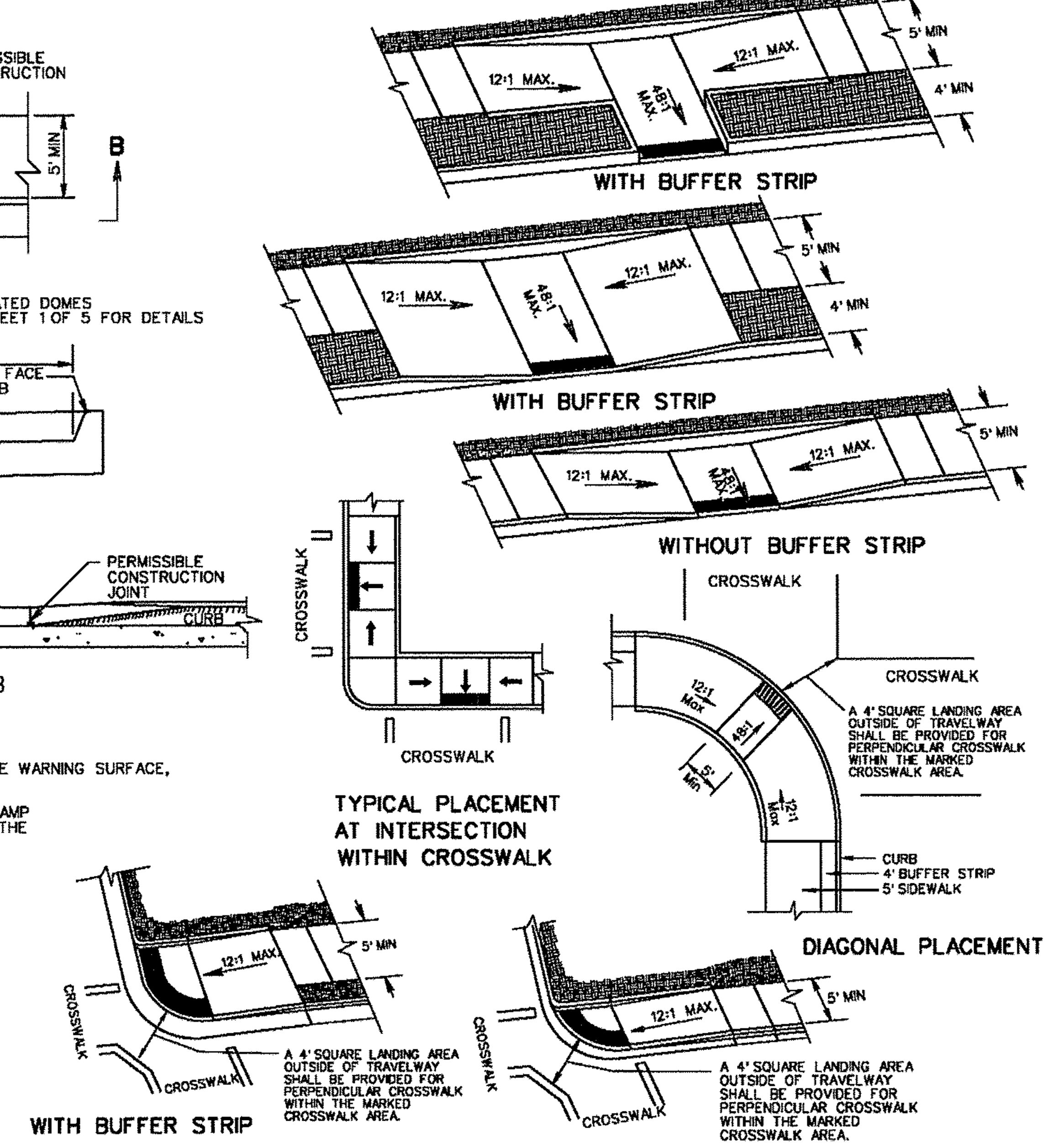
Voice (703) 246-6330
FAX (703) 591-5727
www.fairfaxva.gov

CURB RAMP

SCALE: Not To Scale | DETAIL #: 404.04
REVISION DATE: July, 2005 | SHEET #: 1 of 1

CG-12





NOTES: FOR GENERAL NOTES ON THE DETECTABLE WARNING SURFACE, SEE SHEET 1 OF 5.

THE REQUIRED LENGTH OF A PARALLEL RAMP IS LIMITED TO 15 FEET, REGARDLESS OF THE SLOPE.

TYPE B PARALLEL APPLICATION		
ROADWAY GRADE IN PERCENT	MINIMUM RAMP LENGTH IN FEET	
	4" CURB	6" CURB
0	4	6
1	5	7
2	5	8
3	6	9
4	8	12
5	10	15
6	14	15

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

CG-12 DETECTABLE WARNING SURFACE

TYPE B (PARALLEL) APPLICATION

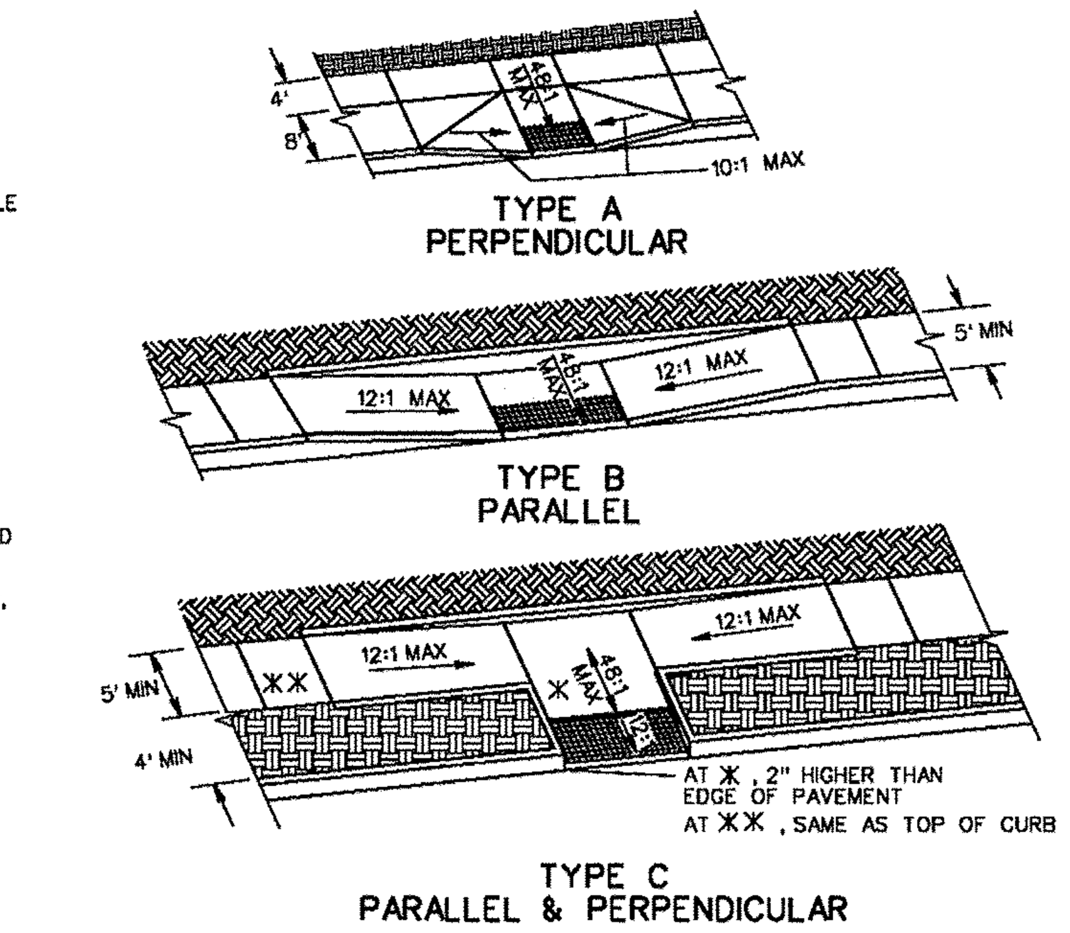
VIRGINIA DEPARTMENT OF TRANSPORTATION

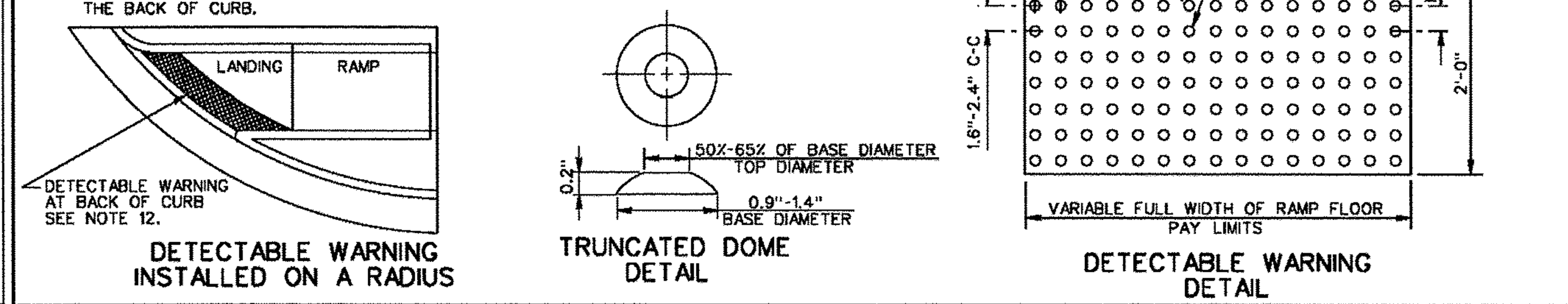
SPECIFICATION REFERENCE 105 502

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 SLIP RESISTANT INTEGRAL SURFACE COVERING THE FULL WIDTH OF THE RAMP FLOOR BY 2 FOOT 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 POURED MONOLITHICALLY WITH RAMP FLOOR OR BY USING PERMISSIBLE CONSTRUCTION JOINT WITH REQUIRED BARS.
4. IF RAMP FLOOR IS PRECAST, HOLES MUST BE PROVIDED FOR DOWEL 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 X 8" PLACED 1' CENTER TO CENTER ALONG BOTH SIDES OF THE RAMP FLOOR, MID-DEPTH OF RAMP FLOOR. MINIMUM CONCRETE COVER 1½".
6. CURB / CURB AND GUTTER SLOPE TRANSITIONS ADJACENT TO CURB RAMPS ARE INCLUDED IN PAYMENT FOR CURB / CURB AND GUTTER.
7. CURB RAMPS 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 NONEXISTENT. THEY MUST BE LOCATED WITHIN PEDESTRIAN 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 INLETS, ETC. ACCESSIBLE ROUTES PROVIDE A CONTINUOUS UNOBSTRUCTED, STABLE, FIRM AND SLIP RESISTANT PATH CONNECTING ALL ACCESSIBLE ELEMENTS OF A FACILITY THAT CAN BE APPROACHED, ENTERED AND USED BY PEDESTRIANS.
8. RAMPS MAY BE PLACED ON RADIAL OR TANGENTIAL SECTIONS PROVIDED THAT THE CURB OPENING 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 RADII CANNOT ACCOMMODATE THE TURNING REQUIREMENTS OF ANTICIPATED HEAVY TRUCK TRAFFIC, REFER TO STANDARD CG-13, COMMERCIAL ENTRANCE (HEAVY TRUCK TRAFFIC) FOR CONCRETE DEPTH.
10. WHEN CURB RAMPS 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 GOING INTO THE TRAVELWAY. THIS 4' x 4' LANDING AREA MAY INCLUDE THE GUTTER PAN.
12. ALL CASES WHERE CURB RAMPS INTERSECT A RADIAL SECTION OF CURB AT ENTRANCES OR STREET CONNECTIONS THE DETECTABLE WARNING SURFACE SHALL HAVE A FACTORY RADIUS OR BE FIELD -MODIFIED AS RECOMMENDED BY THE MANUFACTURER TO MATCH THE BACK OF CURB.





VDOT ROAD AND BRIDGE STANDARDS | SHEET 1 OF 5 | 203.05 | REVISION DATE 7/11

CG-12 DETECTABLE WARNING SURFACE

(GENERAL NOTES)

VIRGINIA DEPARTMENT OF TRANSPORTATION

SPECIFICATION REFERENCE 105 502

Bowman CONSULTING

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14020 Thunderbolt Place
Suite 300
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SITE DETAILS (5 of 8)

BURKE STATION ROAD STREETSCAPE IMPROVEMENTS

CITY OF FAIRFAX VIRGINIA

PROJECT NUMBER

COMMONWEALTH OF VIRGINIA
BRADLEY GLATFELTER
Lic. No. 50992
10/17/2016
PROFESSIONAL ENGINEER

PLAN STATUS	
04/05/16	FINAL SUBMISSION
10/17/16	CONTRACT DOCUMENT
DATE	DESCRIPTION

SB	SB	SD
DESIGN	DRAWN	CHKD

SCALE H: N/A V: N/A

JOB No. 6916-01-002

DATE : JUNE 2015

FILE No. 6916-D-CP-002

SHEET 60 OF 63

Cad file name : P:\6916 - City of Fairfax On-Call\6916-01-002 (ENG) - Burke Station Road\Engineering\Engineering Plans\6916-D-CP-002-DET.dwg

PROJECT INFORMATION	
ENGINEERED PRODUCT MANAGER:	CHUCK LACEY 301-875-8535 CHUCK.LACEY@ADS-PIPE.COM
ADS SALES REP:	JAMES CLARK 240-463-0124 JAMESCLARK@ADS-PIPE.COM
PROJECT NO:	91970

ADVANCED DRAINAGE SYSTEMS, INC.

BURKE STATION ROAD IMPROVEMENTS

FAIRFAX, VA

BAYSAVER BAYFILTER SPECIFICATIONS

PRODUCTS

A. INTERNAL COMPONENTS: ALL COMPONENTS INCLUDING CONCRETE STRUCTURE(S), PVC MANIFOLD PIPING AND FILTER CARTRIDGES, SHALL BE PROVIDED BY BAYSAVER TECHNOLOGIES LLC, 1030 DEER HOLLOW DRIVE, MOUNT AIRY, MD (800.229.7283).

B. PVC MANIFOLD PIPING: ALL INTERNAL PVC PIPE AND FITTINGS SHALL MEET ASTM D1785. MANIFOLD PIPING SHALL BE PROVIDED TO THE CONTRACTOR PARTIALLY PRE-CUT AND PRE-ASSEMBLED.

C. FILTER CARTRIDGES: EXTERNAL SHELL OF THE FILTER CARTRIDGES SHALL BE SUBSTANTIALLY CONSTRUCTED OF POLYETHYLENE OR EQUIVALENT MATERIAL ACCEPTABLE TO THE MANUFACTURER. FILTRATION MEDIA SHALL BE ARRANGED IN A SPIRAL LAYERED FASHION TO MAXIMIZE AVAILABLE FILTRATION AREA. AN ORIFICE PLATE SHALL BE SUPPLIED WITH EACH CARTRIDGE TO RESTRICT THE FLOW RATE TO A MAXIMUM OF 45 GPM.

D. FILTER MEDIA: FILTER MEDIA SHALL BE BY BAYSAVER TECHNOLOGIES LLC AND SHALL CONSIST OF THE FOLLOWING MIX: A BLEND OF ZEOLITE, PERLITE AND ACTIVATED ALUMINA.

E. PRECAST CONCRETE VAULT: CONCRETE STRUCTURES SHALL BE PROVIDED ACCORDING TO ASTM C. THE MATERIALS AND STRUCTURAL DESIGN OF THE DEVICES SHALL BE PER ASTM C478, C857 AND C858. PRECAST CONCRETE SHALL BE PROVIDED BY BAYSAVER TECHNOLOGIES, LLC.

PERFORMANCE

A. THE STORMWATER FILTER SYSTEM SHALL BE AN OFFLINE DESIGN CAPABLE OF TREATING 100% OF THE REQUIRED TREATMENT FLOW AT FULL SEDIMENT LOAD CONDITIONS.
B. THE STORMWATER FILTER SYSTEM'S CARTRIDGES SHALL HAVE NO MOVING PARTS.
C. THE STORMWATER TREATMENT UNIT SHALL BE DESIGNED TO REMOVE AT LEAST 85% OF SUSPENDED SOLIDS, 65% OF TOTAL PHOSPHORUS, 65% OF TURBIDITY, 60% OF TOTAL COPPER, AND 60% OF TOTAL ZINC BASED ON FIELD DATA COLLECTED IN COMPLIANCE WITH THE TECHNOLOGY ACCEPTANCE RECIPROCITY PARTNERSHIP TIER II TEST PROTOCOL.
D. THE STORMWATER FILTRATION SYSTEM SHALL REDUCE INCOMING TURBIDITY (MEASURED AS NTUs) BY 50% OR MORE AND SHALL NOT HAVE ANY COMPONENTS THAT LEACH NITRATES OR PHOSPHATES.
E. THE STORMWATER FILTRATION CARTRIDGE SHALL BE EQUIPPED WITH A HYDRODYNAMIC BACKWASH MECHANISM TO EXTEND THE FILTER'S LIFE AND OPTIMIZE ITS PERFORMANCE.
F. THE STORMWATER FILTRATION SYSTEM SHALL BE DESIGNED TO REMOVE A MINIMUM OF 65% OF THE INCOMING TOTAL PHOSPHORUS (TP) LOAD.
G. THE STORMWATER FILTRATION SYSTEM'S CARTRIDGES SHALL HAVE A TREATED SEDIMENT CAPACITY FOR 80% TSS REMOVAL BETWEEN 150-350 LBS.

BAYFILTER MAINTENANCE

THE BAYFILTER SYSTEM REQUIRES PERIODIC MAINTENANCE TO CONTINUE OPERATING AT ITS PEAK EFFICIENCY DESIGN. THE MAINTENANCE PROCESS COMPRISES THE REMOVAL AND REPLACEMENT OF EACH BAYFILTER CARTRIDGE AND THE CLEANING OF THE VAULT OR MANHOLE WITH A VACUUM TRUCK. FOR BEST RESULTS, BAYFILTER MAINTENANCE SHOULD BE PERFORMED BY A CERTIFIED MAINTENANCE CONTRACTOR. A QUICK CALL TO AN ADS ENGINEER OR CUSTOMER SERVICE REPRESENTATIVE WILL PROVIDE YOU WITH A LIST OF RELIABLE CONTRACTORS IN YOUR AREA.

WHEN BAYFILTER IS INITIALLY INSTALLED, WE RECOMMEND THAT AN INSPECTION BE PERFORMED ON THE SYSTEM IN THE FIRST SIX (6) MONTHS. AFTER THAT, THE INSPECTION CYCLE TYPICALLY FALLS INTO A BIANNUAL PATTERN GIVEN NORMAL STORM OCCURRENCE AND ACTUAL SOLIDS LOADS.

WHEN BAYFILTER EXHIBITS FLOWS BELOW DESIGN LEVELS, THE SYSTEM SHOULD BE INSPECTED AND MAINTAINED AS SOON AS PRACTICAL. REPLACING A BAYFILTER CARTRIDGE SHOULD BE CONSIDERED AT OR ABOVE THE LEVEL OF THE MANIFOLD.

MAINTENANCE PROCEDURES

1. REMOVE THE MANHOLE COVERS AND OPEN ALL ACCESS HATCHES.
2. BEFORE ENTERING THE SYSTEM MAKE SURE THE AIR IS SAFE PER OSHA STANDARDS OR USE A BREATHING APPARATUS. USE LOW O2, HIGH CO, OR OTHER APPLICABLE WARNING DEVICES PER REGULATORY REQUIREMENTS.
3. USING A VACUUM TRUCK, REMOVE ANY LIQUID AND SEDIMENTS THAT CAN BE REMOVED PRIOR TO ENTRY.
4. USING A SMALL LIFT OR THE BOOM OF THE VACUUM TRUCK, REMOVE THE USED CARTRIDGES BY LIFTING THEM OUT.
5. ANY CARTRIDGES THAT CANNOT BE READILY LIFTED CAN BE EASILY SLID ALONG THE FLOOR TO A LOCATION THEY CAN BE LIFTED VIA A BOOM LIFT.
6. WHEN ALL THE CARTRIDGES HAVE BEEN REMOVED, IT IS NOW PRACTICAL TO REMOVE THE BALANCE OF THE SOLIDS AND WATER. LOOSEN THE STAINLESS CLAMPS ON THE FERNCO COUPLINGS FOR THE MANIFOLD AND REMOVE THE DRAINPIPES AS WELL. CAREFULLY CAP THE MANIFOLD AND THE FERNCO'S AND RINSE THE FLOOR, WASHING AWAY THE BALANCE OF ANY REMAINING COLLECTED SOLIDS.
7. CLEAN THE MANIFOLD PIPES, INSPECT, AND REINSTALL.
8. INSTALL THE EXCHANGE CARTRIDGES AND CLOSE ALL COVERS.
9. THE USED CARTRIDGES MUST BE SENT BACK TO ADS FOR EXCHANGE/RECYCLING AND CREDIT ON UNDAMAGED UNITS.

BAYFILTER INSTALLATION NOTES

1. CONTACT UTILITY LOCATOR TO MARK ANY NEARBY UNDERGROUND UTILITIES AND MAKE SURE IT IS SAFE TO EXCAVATE.
2. REFERENCE THE SITE PLAN AND STAKE OUT THE LOCATION OF THE BAYFILTER VAULT.
3. EXCAVATE THE HOLE, PROVIDING ANY SHEETING AND SHORING NECESSARY TO COMPLY WITH ALL FEDERAL, STATE AND LOCAL SAFETY REGULATIONS.
4. LEVEL THE SUB–GRADE TO THE PROPER ELEVATION. VERIFY THE ELEVATION AGAINST THE MANHOLE DIMENSIONS, THE INVERT ELEVATIONS, AND THE SITE PLANS. ADJUST THE BASE AGGREGATE, IF NECESSARY.
5. HAVE THE SOIL BEARING CAPACITY VERIFIED BY A LICENSED/ENGINEER FOR THE REQUIRED LOAD BEARING CAPACITY. ON SOLID SUB–GRADE, SET THE FIRST SECTION OF THE BAYFILTER PRE–CAST VAULT.
6. CHECK THE LEVEL AND ELEVATION OF THE FIRST SECTION TO ENSURE IT IS CORRECT BEFORE ADDING ANY RISER SECTIONS.
7. IF ADDITIONAL SECTION(S) ARE REQUIRED, ADD A WATERTIGHT SEAL TO THE FIRST SECTION OF THE BAYFILTER VAULT. SET ADDITIONAL SECTION(S) OF THE VAULT, ADDING A WATERTIGHT SEAL TO EACH JOINT.
8. INSTALL THE PVC OUTLET MANIFOLD.
9. INSTALL THE PVC OUTLET PIPE IN BAYFILTER VAULT.
10. INSTALL THE INLET PIPE TO THE BAYFILTER VAULT.
11. AFTER THE SITE IS STABILIZED, REMOVE ANY ACCUMULATED SEDIMENT OR DEBRIS FROM THE VAULT AND INSTALL THE FLOW DISKS, DRAINDOWN MODULES (IF APPLICABLE), AND THE BAYFILTER CARTRIDGES.
12. PLACE FULL SET OF HOLD DOWN BARS AND BRACKETS INTO PLACE.

Bowman CONSULTING

Bowman Consulting Group, Ltd.
14020 Thunderbolt Place
Suite 300
Chantilly, Virginia 20151

Phone: (703) 464-1000
Fax: (703) 481-9720
www.bowmanconsulting.com
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SITE DETAILS (6 OF 8)

BURKE STATION ROAD STREETSCAPE IMPROVEMENTS

CITY OF FAIRFAX VIRGINIA

PROJECT NUMBER

COMMONWEALTH OF VIRGINIA
BRADLEY GLATFELTER
Lic. No. 50992
10/17/2016
PROFESSIONAL ENGINEER

PLAN STATUS	
04/05/16	FINAL SUBMISSION
10/17/16	CONTRACT DOCUMENT

DATE	DESCRIPTION

SB	SB	SD
DESIGN	DRAWN	CHKD

SCALE H: N/A V: N/A

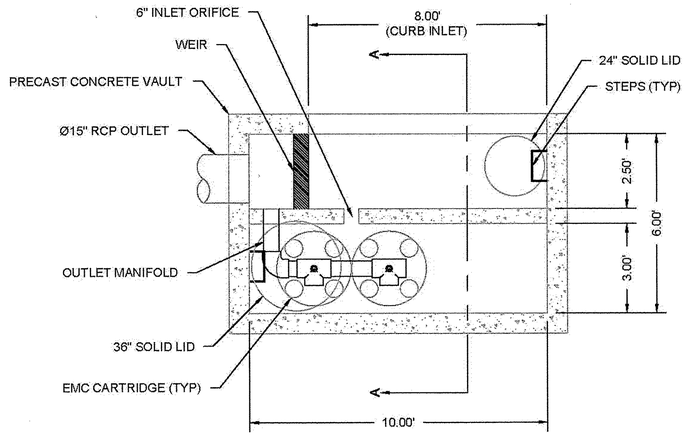
JOB No. 6916-01-002

DATE : JUNE 2015

FILE No. 6916-D-CP-002

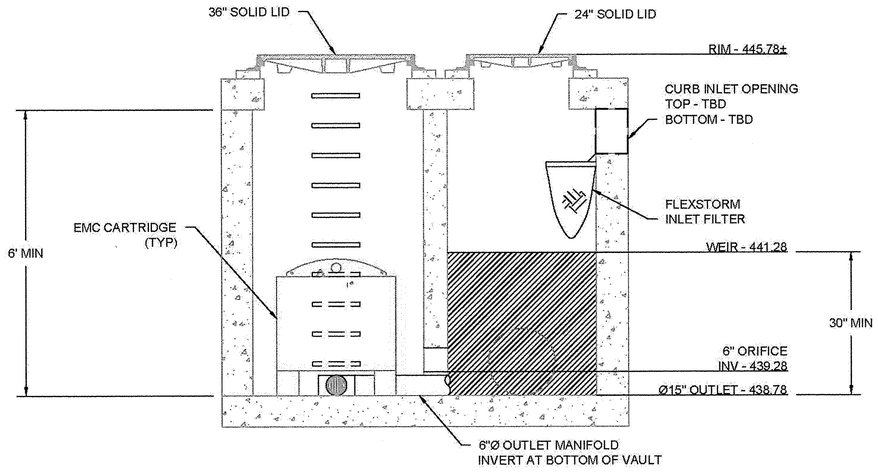
SHEET 61 OF 63

Cad file name : P:\6916 - City of Fairfax On-Call\6916-01-002 (ENG) - Burke Station Road\Engineering\Engineering Plans\6916-D-CP-002-DET.dwg



PRELIMINARY SIZING SUMMARY BAYFILTER TREATMENT SYSTEM	
WATER QUALITY FLOW	0.105 CFS
DRAINAGE AREA	0.17 ACRES
CARTRIDGE DESIGN FLOW RATE	45 GPM
# BAYFILTER CARTRIDGES	2

THE BAYFILTER STORMWATER MANAGEMENT SYSTEM IS A STORMWATER FILTRATION DEVICE DESIGNED TO REMOVE FINE SEDIMENTS, HEAVY METALS, AND PHOSPORUS. THE BAYFILTER SYSTEM RELIES ON A SPIRAL WOUND MEDIA FILTER CARTRIDGE WITH APPROXIMATELY 43 SQUARE FEET OF FILTRATION AREA. THE FILTER CARTRIDGES ARE HOUSED IN A CONCRETE STRUCTURE THAT EVENLY DISTRIBUTES THE FLOW BETWEEN CARTRIDGES. THE SYSTEM IS OFFLINE WITH AN EXTERNAL BYPASS THAT ROUTES HIGH INTENSITY STORMS AROUND THE SYSTEM. THE FILTER CARTRIDGES REMOVE POLLUTANTS FROM RUNOFF BY FILTRATION (INCEPTION/ATTACHMENT) AND ABSORPTION.



SECTION A-A

REV	DRW	CHK	DESCRIPTION
3/20/15	KLJ	KMS	REMOVED BOOTS, UPSIZED ORIFICE
3/30/15	KLJ	KMS	REV PER NEW LOCATION

BAYSAVER TECHNOLOGIES
1030 Deer Hollow Drive 1-800-BAYSAVER
Mount Airy, MD 21771 1-800-229-7283

ADVANCED DRAINAGE SYSTEMS, INC.
4640 TRUEMAN BLVD
HILLIARD, OH 43026
1-800-733-7473

BURKE STATION ROAD
IMPROVEMENTS - FAIRFAX, VA

DATE: 3/16/15 DRAWN: KLJ
PROJECT #: 91970 CHECKED: KMS

THIS DRAWING HAS BEEN PREPARED BASED ON INFORMATION PROVIDED TO ADS UNDER THE DIRECTION OF THE SITE DESIGN ENGINEER OR OTHER PROJECT REPRESENTATIVE. THE SITE DESIGN ENGINEER SHALL REVIEW THIS DRAWING PRIOR TO CONSTRUCTION. IT IS THE ULTIMATE RESPONSIBILITY OF THE SITE DESIGN ENGINEER TO ENSURE THAT THE PRODUCT(S) DEPICTED AND ALL ASSOCIATED DETAILS MEET ALL APPLICABLE LAWS, REGULATIONS, AND PROJECT REQUIREMENTS.

SHEET
2 OF 2

Bowman CONSULTING

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SITE DETAILS (7 OF 8)

BURKE STATION ROAD
STREETSCAPE IMPROVEMENTS

CITY OF FAIRFAX
VIRGINIA

PROJECT NUMBER

COMMONWEALTH OF VIRGINIA
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SHEET 62 OF 63

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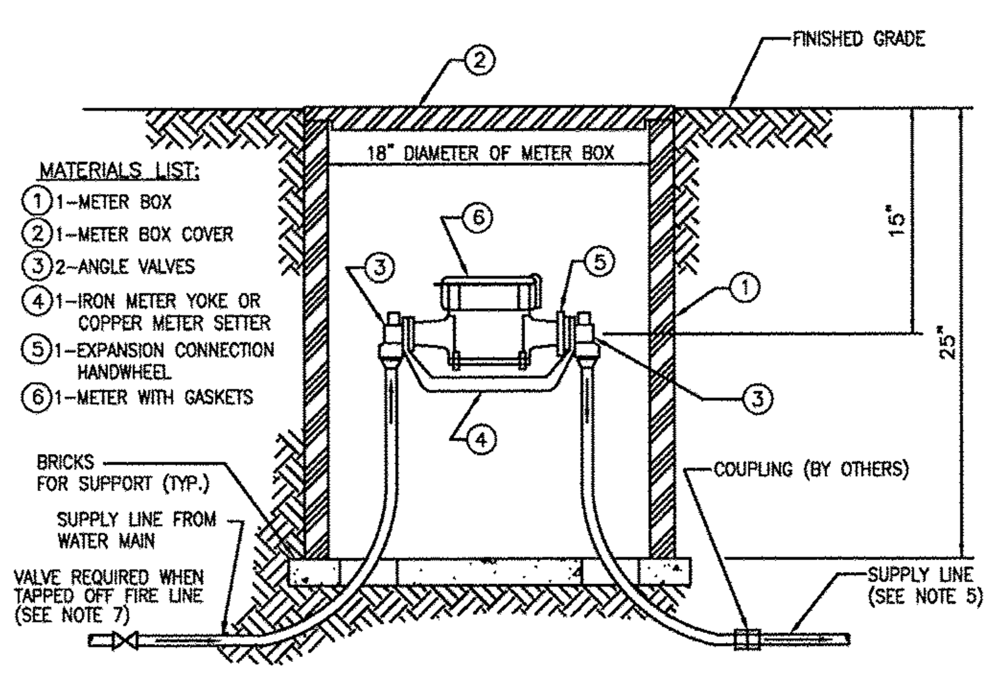
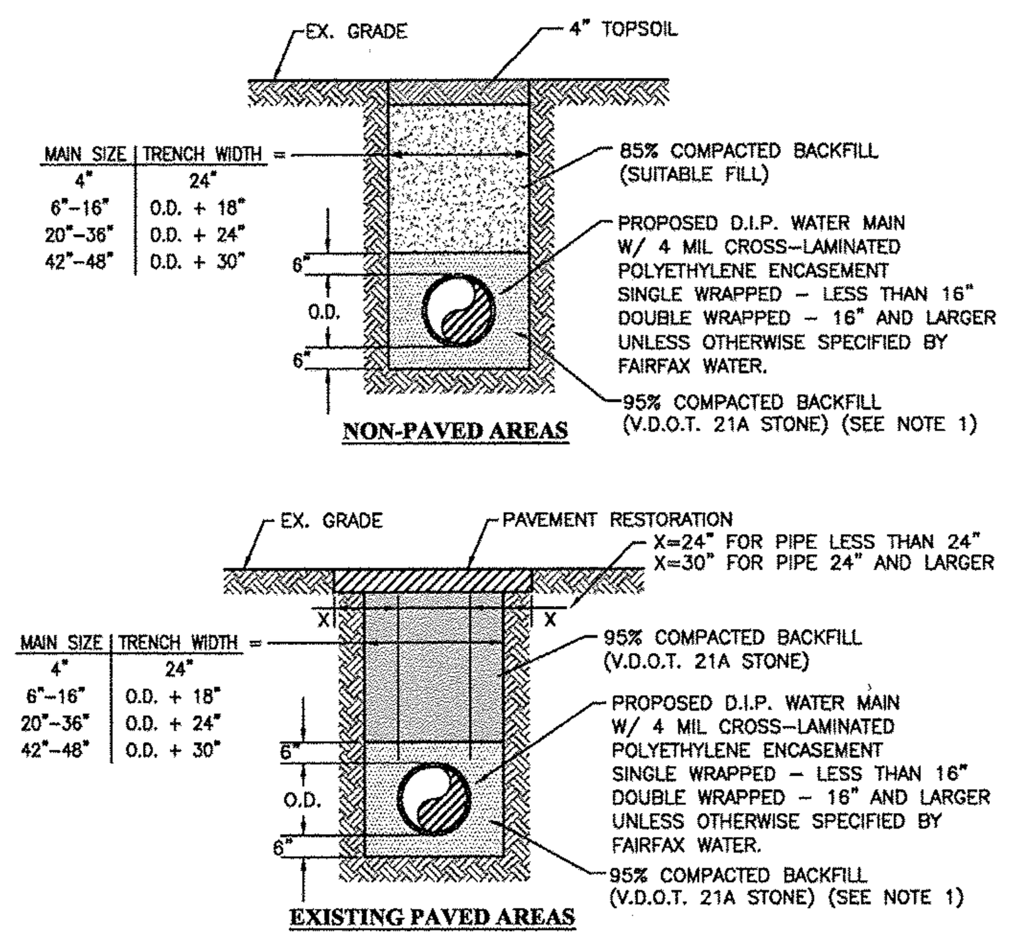


NOTES:
1. THE WATER METER BOX SHALL BE INSTALLED IN AN ACCESSIBLE LOCATION IN A GREEN SPACE AND SO AS NOT TO BE A TRIP HAZARD.
2. WATER METER TO BE INSTALLED BY FAIRFAX WATER AS SHOWN IN THE DIAGRAM ABOVE. METER TO BE INSTALLED BY CUSTOMER WHEN TAPPED OFF FIRE LINE.
3. THE METER INSTALLATION WILL BE INSPECTED AND APPROVED BY FAIRFAX WATER. CALL 703–289–6402 FOR INSPECTION PRIOR TO PLACING LINE IN SERVICE.
4. FAIRFAX WATER TO SUPPLY ITEMS SHOWN IN MATERIALS LIST. ALL OTHER MATERIALS TO BE SUPPLIED BY THE CUSTOMER.
5. BACKFLOW PREVENTION WILL BE REQUIRED IN ACCORDANCE WITH FAIRFAX COUNTY REGULATIONS.
6. FAIRFAX WATER MAINTAINS THE SUPPLY LINE BETWEEN THE METER AND THE MAIN, METER, METER BOX, AND METER BOX COVER ONLY. FAIRFAX WATER WILL NOT MAINTAIN SUPPLY LINE WHEN TAPPED OFF FIRE LINE.
7. A 3" MINIMUM GATE VALVE WITH A 2" OPERATING NUT MUST BE INSTALLED ON THE SERVICE LINE WHEN TAPPED OFF THE FIRE LINE.
8. NO STRUCTURES, POLES, SIGN POSTS, TREES OR SHRUBS TO BE INSTALLED WITHIN FOUR FEET OF METER CROCK.

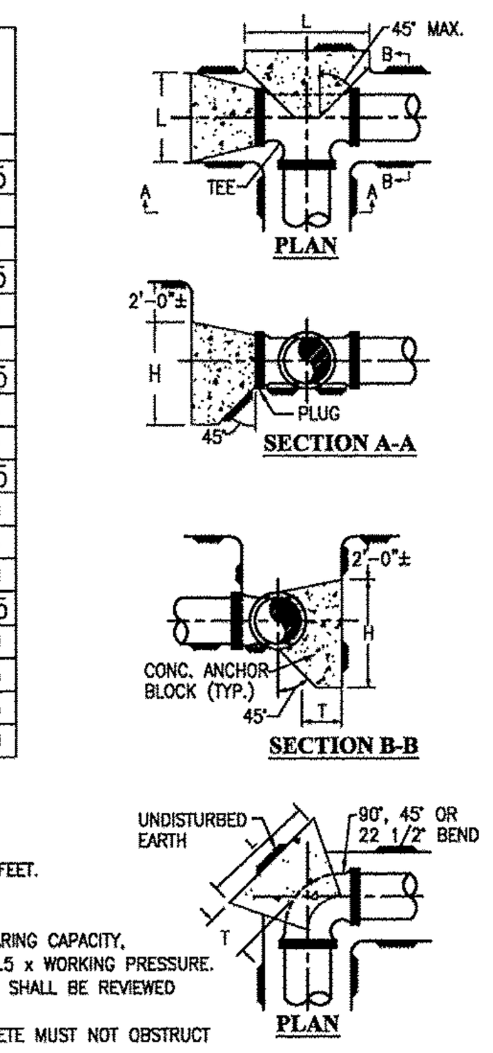
FAIRFAX WATER STANDARD DETAILS — SCALE: NOT TO SCALE
EXTERIOR METER INSTALLATION 5/8" THRU 1" METER SIZES — DRAWING NO.: 6
DATE: 12/15



NOTES:
1. V.D.O.T. NO. 57 STONE SHALL BE USED AT CREEK CROSSINGS OR IN AREAS WHERE TRENCH CONTAINS GROUND WATER.
2. ALL PAVEMENT RESTORATION AND COMPACTED BACKFILL WITHIN VDOT ROW SHALL ADHERE TO ALL APPLICABLE V.D.O.T. SPECIFICATIONS.
3. RESTRAINED JOINT PIPE SHALL BE IDENTIFIED WITH MARKING TAPE PLACED 2 FEET ABOVE PIPE.
4. ALL WATER MAIN INSTALLATION IN AREAS WITH PROPOSED PAVING SHALL ADHERE TO APPROVED DEVELOPMENT PLAN.

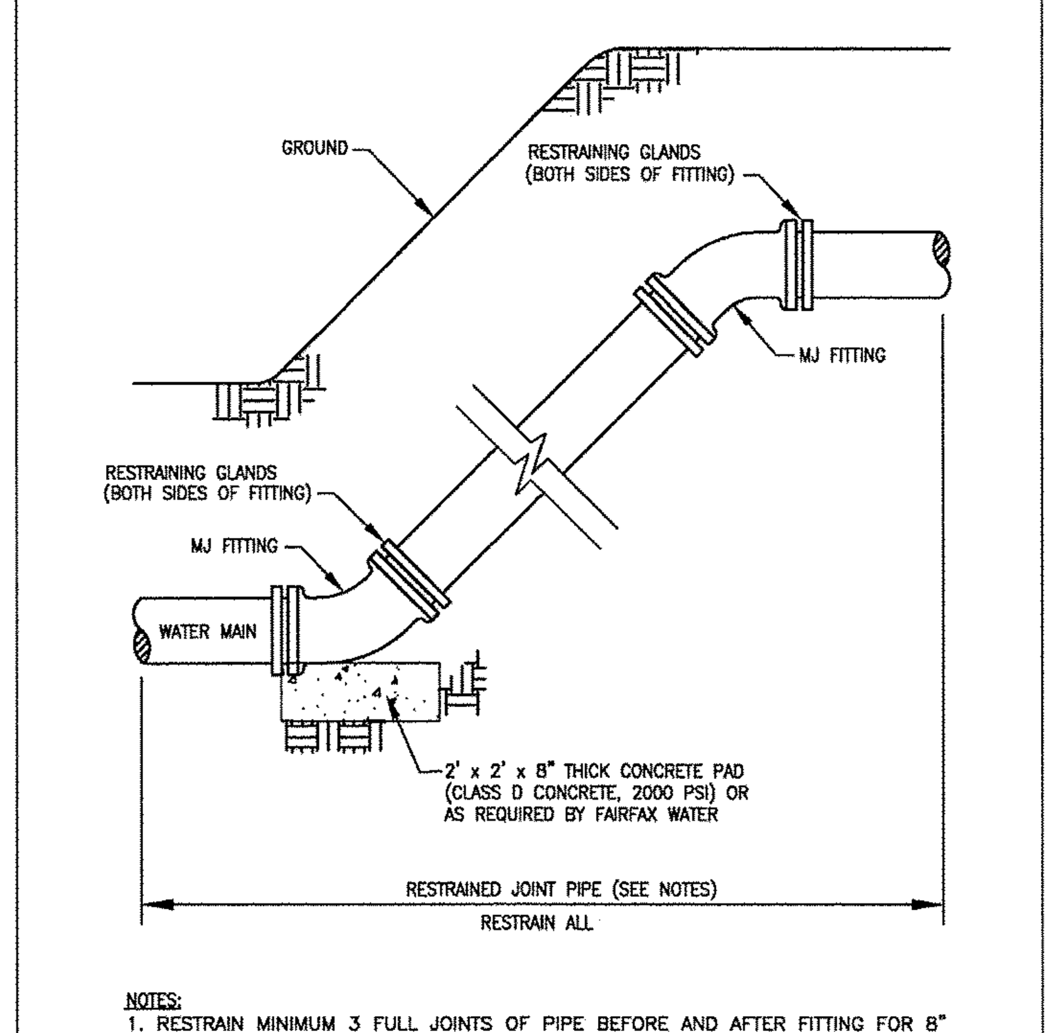
FAIRFAX WATER STANDARD DETAILS — SCALE: NOT TO SCALE
TRENCH – DUCTILE IRON PIPE — DRAWING NO.: 12
DATE: 12/15

PIPE SIZE INCHES	DEGREE OF BEND (ø)	(1) WORKING PRESSURE 175 PSI L	H	T
6	90	3.0	2.0	1.25
	45	2.0	1.5	1.0
	22.5	1.5	1.0	1.0
8	90	4.0	2.5	1.75
	45	2.5	2.0	1.0
	22.5	2.0	1.5	1.0
12	90	5.5	4.0	2.25
	45	4.0	3.0	1.5
	22.5	3.0	2.0	1.0
16	90	7.5	5.0	3.25
	45	5.0	4.5	2.0
	11.25/22.5	4.0	3.0	1.5
20	90	9.5	6.0	4.0
	45	7.0	4.5	2.75
	11.25/22.5	5.5	3.0	2.0
24	90	13.0	6.5	5.5
	45	9.0	5.0	3.5
	11.25/22.5	6.0	4.0	2.0



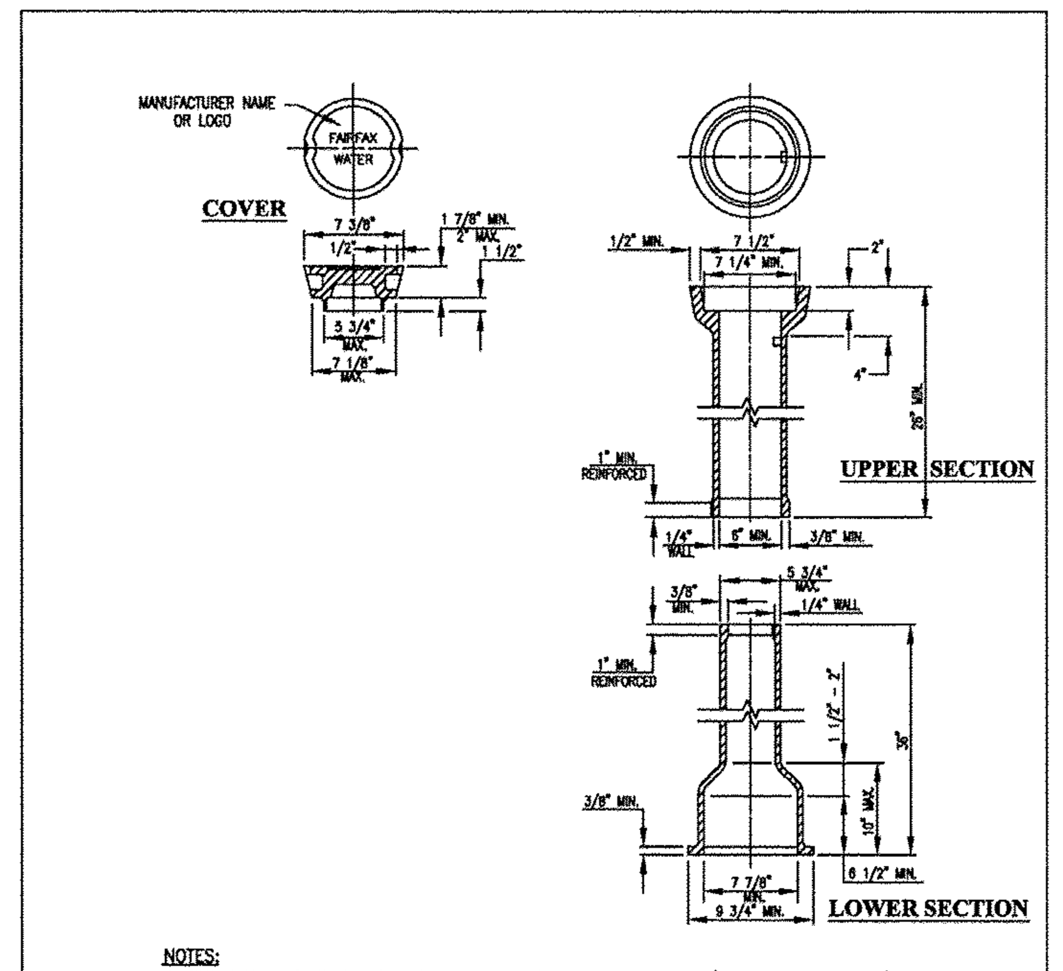
NOTES:
1. MINIMUM CONCRETE ANCHOR BLOCK DIMENSIONS IN FEET.
2. PROVIDE FORM WORK FOR ALL CONCRETE.
3. CONCRETE SHALL BE CLASS D 2000 PSI.
4. THE ABOVE TABLE IS BASED ON 2000 PSF SOIL BEARING CAPACITY, R=2PA SIN (ø/2) AND FOR A TEST PRESSURE = 1.5 x WORKING PRESSURE.
5. ANCHOR BLOCK DESIGN FOR PIPE LARGER THAN 24" SHALL BE REVIEWED ON AN INDIVIDUAL BASIS BY FAIRFAX WATER.
6. WRAP FITTING WITH POLYETHYLENE SHEETING. CONCRETE MUST NOT OBSTRUCT ACCESS TO MECHANICAL JOINT ASSEMBLY.
7. CONCRETE ANCHOR BLOCK DIMENSIONS FOR TEES TO BE SAME AS FOR 90° BENDS.
8. HEIGHT OF CONCRETE ANCHOR BLOCK ABOVE PIPE CENTERLINE IS 1/3 THE H DIMENSION.
9. BLOCKING SHALL BACK TO UNDISTURBED EARTH.

FAIRFAX WATER STANDARD DETAILS — SCALE: NOT TO SCALE
CONCRETE THRUST ANCHORS — DRAWING NO.: 23
DATE: 12/15



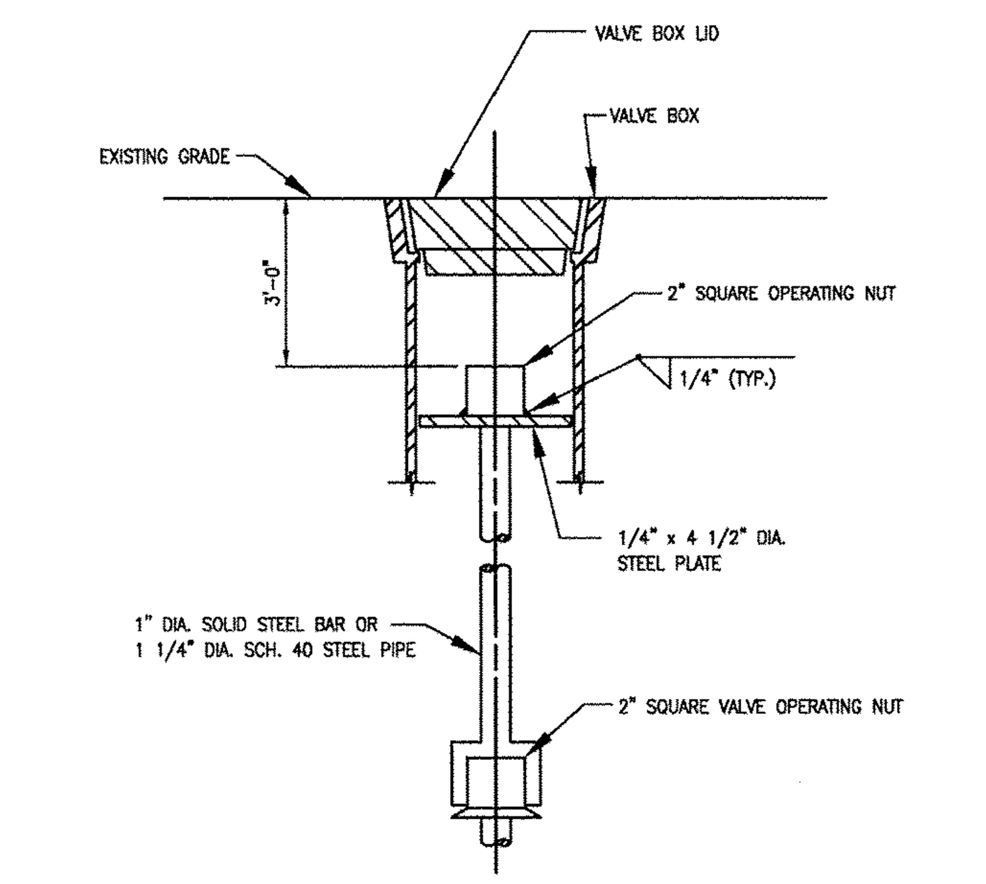
NOTES:
1. RESTRAIN MINIMUM 3 FULL JOINTS OF PIPE BEFORE AND AFTER FITTING FOR 8" DIAMETER WATER MAIN OR SMALLER, 4 FULL JOINTS OF PIPE FOR 12" DIAMETER WATER MAIN, OR AS REQUIRED BY FAIRFAX WATER (DUCTILE IRON ONLY).
2. OFFSET BENDS REQUIRE SIMILAR BLOCKING AND PIPE RESTRAINT.

FAIRFAX WATER STANDARD DETAILS — SCALE: NOT TO SCALE
CONCRETE VERTICAL BLOCKING WATER MAINS LESS THAN OR EQUAL TO 12" — DRAWING NO.: 24
DATE: 12/15



NOTES:
1. THE MANUFACTURER IDENTIFICATION AND COUNTRY OF ORIGIN (IF OTHER THAN U.S.) SHALL BE CAST INTO ALL PARTS.
2. GUARD POSTS ARE NOT TO BE INSTALLED AT VALVES UNLESS INDICATED ON DRAWINGS, OR AS SPECIFIED BY FAIRFAX WATER.
3. VALVE BOX MUST MEET SPECIFICATIONS CONTAINED IN FAIRFAX WATER'S APPROVED PRODUCTS LIST.
4. FOR VALVE BOXES DEEPER THAN SIX FEET, USE 5–INCH DIAMETER GRAY CAST IRON (SOIL) PIPE TO EXTEND STANDARD TOP AND BOTTOM SECTIONS.
5. STACKING OF VALVE BOX SECTIONS IS NOT ACCEPTABLE.

FAIRFAX WATER STANDARD DETAILS — SCALE: NOT TO SCALE
VALVE BOX — DRAWING NO.: 27
DATE: 12/15



NOTES:
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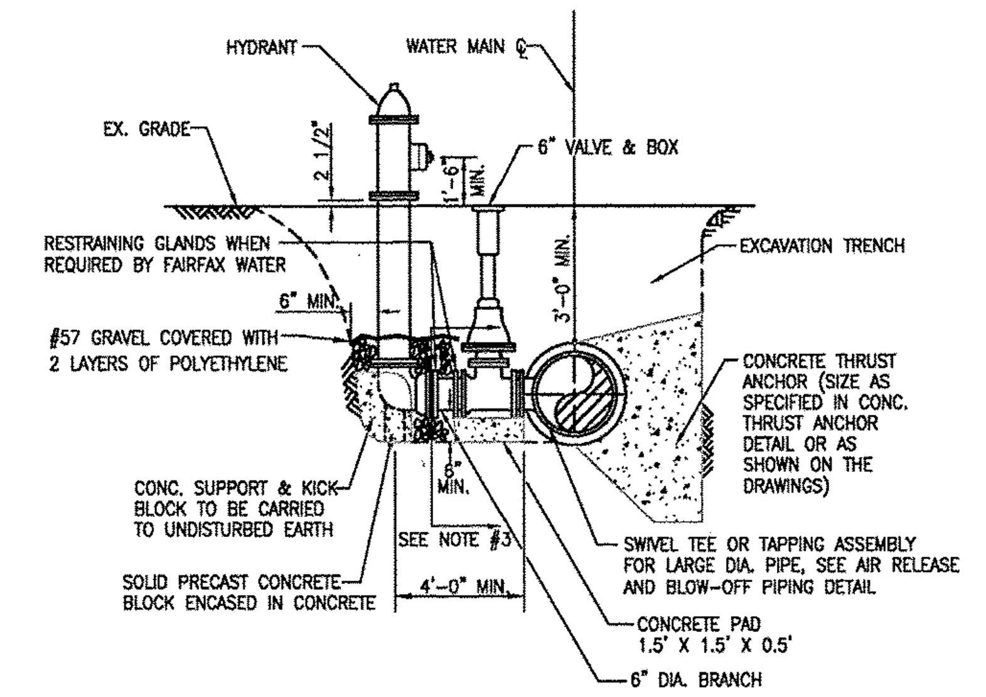
2. STACKING OF VALVE BOX SECTIONS IS NOT ACCEPTABLE.

FAIRFAX WATER STANDARD DETAILS — SCALE: NOT TO SCALE
VALVE STEM AND BOX EXTENSION — DRAWING NO.: 29
DATE: 12/15



NOTES:
1. IF SWIVEL TEE IS NOT USED, VALVE MUST BE RESTRAINED TO TEE WITH RESTRAINING GLANDS BY CONTRACTOR.
2. HYDRANTS SHALL BE PAINTED AS FOLLOWS:
   - HYDRANT BARREL: SHERWIN–WILLIAMS SHER–CRYL HPA – SAFETY RED, GLOSS (#B66R300)
   - TOPS AND CAPS: SHERWIN–WILLIAMS BOND PLEX WB ACRYLIC – ALUMINUM, GLOSS (#B71S200)
   - WHERE INDICATED BY FAIRFAX WATER, THE TOP SHALL BE PAINTED IN THE SAFETY RED AND THE BARREL AND CAPS SHALL BE PAINTED ALUMINUM IN LIEU OF THE ABOVE.
3. POLYETHYLENE ENCASEMENT TO BE INSTALLED UP TO 6–INCHES BELOW PROPOSED GRADE. ENCASEMENT SHALL BE INSTALLED SO AS NOT TO PREVENT DISCHARGE OF WATER THROUGH HYDRANT DRAIN HOLES.
4. FOR HYDRANT LOCATION IN REGARD TO FACE OF CURB, SEE FAIRFAX COUNTY PUBLIC FACILITIES MANUAL.

FAIRFAX WATER STANDARD DETAILS — SCALE: NOT TO SCALE
STANDARD HYDRANT INSTALLATION — DRAWING NO.: 30
DATE: 12/15

WATER MAIN CONSTRUCTION NOTES:

1. AT LEAST 2 WEEKS IN ADVANCE TO BEGINNING ANY WATER MAIN CONSTRUCTION, THE WATER MAIN INSTALLATION CONTRACTOR SHALL SUBMIT TO FAIRFAX WATER, FOR REVIEW AND APPROVAL THE FOLLOWING:

A. EVIDENCE OF SATISFACTORY COMPLETION OF AT LEAST FIVE WATER MAIN INSTALLATION CONTRACTS SIMILAR IN QUANTITY AND COMPLEXITY, INCLUDING SUPERINTENDENT'S EXPERIENCE IN INSTALLING THE PIPE MATERIAL AND JOINT TYPES TO BE USED, PROJECT TITLES, PIPE DIAMETER AND LENGTH, LOCATIONS, REFERENCE CONTACTS, AND TELEPHONE NUMBERS. THE SUPERINTENDENT SHALL HAVE AT LEAST 5 YEARS EXPERIENCE IN THE INSTALLATION OF WATER MAINS, AND SHALL HAVE BEEN IN CHARGE OF INSTALLING AT LEAST 10,000 LINEAR FEET OF DUCTILE PIPE.

B. DATA SHALL BE SUPPLIED TO SHOW THAT STAFFING SCHEDULED FOR THE PROJECT POSSESS THE REQUIRED EXPERIENCE. SUCH DATA SHALL CONSIST OF A HISTORY OF THE EMPLOYMENT EXPERIENCE OF THE JOB SUPERINTENDENT, WHO WILL BE IN CHARGE OF THE WATER MAIN INSTALLATION WORK ON THE CONSTRUCTION SITE, TOGETHER WITH A DESCRIPTION OF ANY PARTICULAR CERTIFICATIONS OR SPECIAL CREDENTIALS HE MAY POSSESS.

2. DURING THE CONSTRUCTION OF THE WATER MAIN, FAIRFAX WATER, UPON NOTICE TO THE CONTRACTOR, AND IN FAIRFAX WATER'S SOLE DISCRETION, WILL HAVE THE RIGHT TO DIRECT THE CONTRACTOR TO REMOVE AN EMPLOYEE PERMANENTLY FROM THE SITE FOR ANY REASON. IN ADDITION, IF ANY OF THE CONTRACTOR'S PERSONNEL ARE NOT SATISFACTORY TO FAIRFAX WATER THE CONTRACTOR SHALL REPLACE SAME WITH SATISFACTORY PERSONNEL.

3. NOTICE OR COMMUNICATION TO THE SUPERINTENDENT SHALL BE EQUIVALENT TO NOTICE OR COMMUNICATION TO THE CONTRACTOR. THE SUPERINTENDENT SHALL FOLLOW WITHOUT DELAY ALL INSTRUCTIONS OF FAIRFAX WATER IN THE CONSTRUCTION AND COMPLETION OF THE WATER MAIN OR ANY WORK ASSOCIATED WITH OR IMPACTING FAIRFAX WATER INFRASTRUCTURE.

4. FAIRFAX WATER SHALL HAVE THE RIGHT TO SUSPEND ANY PART OF THE WATER MAIN INSTALLATION WHENEVER IN THEIR JUDGMENT, SUCH SUSPENSION IS REQUIRED IN THE BEST INTEREST OF FAIRFAX WATER; OR TO TAKE OVER, USE, OCCUPY, OR OPERATE ANY PART OF THE COMPLETED OR PARTLY COMPLETED WATER MAIN INSTALLATION IF, BEFORE THE FINAL ACCEPTANCE OF THE WATER MAIN INSTALLATION, FAIRFAX WATER DEEMS IT NECESSARY.

5. THE EXISTING UTILITIES, STRUCTURES, PROPERTY LINES, AND EASEMENTS SHOWN ARE BASED ON DATA AND CONSTRUCTION PLANS PROVIDED BY CITY OF FAIRFAX. THE WATER MAIN DESIGN HAS BEEN BASED ON THIS PROVIDED INFORMATION. THE CONTRACTOR SHALL VERIFY ALL INFORMATION TO HIS SATISFACTION AND SHALL DIG TEST PITS AS CALLED FOR IN THE CONSTRUCTION NOTES OR AS DEEMED NECESSARY BY THE ENGINEER.

6. THE CONTRACTOR IS RESPONSIBLE FOR ENFORCING THE REQUIREMENTS OF CHAPTER 6-B, FAIRFAX COUNTY CODE-EXCAVATION AND UTILITY LINE INSTALLATION. IN PARTICULAR, THE CONTRACTOR IS DIRECTED TO SECTION 10, DEMOLITION OR EXCAVATION-PRIOR NOTICE OF THE AFORESAID CODE. THE CONTRACTOR SHALL CONTACT "MISS UTILITY" AT 1-800-257-7777 SUFFICIENTLY IN ADVANCE OF THE START OF CONSTRUCTION TO COMPLY WITH THIS REQUIREMENT.

7. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED SHALL BE REPAIRED IMMEDIATELY TO THE SATISFACTION OF THE ENGINEER AND UTILITY OWNER AT NO EXPENSE TO THE DEPARTMENT.

8. ALL PIPE ELEVATIONS SHOWN ARE TOP OF PIPE UNLESS OTHERWISE SPECIFIED ON THE PLAN.

9. THE CONTRACTOR IS REFERRED TO THE CITY OF FAIRFAX DRAWINGS AND STANDARDS FOR THE LATEST ROAD AND DRAINAGE DESIGN INFORMATION.

10. NOTIFICATION OF PENDING WATER MAIN PRESSURE TESTS, DISINFECTION AND/OR CONNECTIONS; THE DESIRE TO HAVE AN EXISTING WATER SYSTEM VALVE OPENED OR CLOSED; AN EMERGENCY; ETC. SHALL BE DIRECTED TO:

A. 8:00 A.M. TO 4:00 P.M. MONDAY THROUGH FRIDAY
MR. DAVE LAMBERT, SUPERVISOR, ENGINEERING INSPECTION
8560 ARLINGTON BOULEVARD FAIRFAX, VA 22031
TELEPHONE NO. (703) 289-6399
CELL PHONE NO. (571) 722-7643

B. NIGHT, WEEKENDS AND HOLIDAYS
DISPATCHER
TELEPHONE NO. (703) 289-6395 OR (703) 289-6323

11. THE CONTRACTOR SHALL NOT OPEN OR CLOSE ANY EXISTING WATER SYSTEM VALVES WITHOUT A FAIRFAX WATER INSPECTOR OVERSEEING THE WORK.

12. THE WORKING PRESSURE OF THE EXISTING WATER SYSTEM IS APPROXIMATELY 65 PSI.

13. FAIRFAX WATER INSPECTOR WILL RECORD "AS BUILT" CONDITIONS FOR THE GENERAL WATER MAIN CONSTRUCTION.

14. FAIRFAX WATER PUBLISHES AN "APPROVED PRODUCTS LIST" WHICH LISTS, BY CATEGORY, MANUFACTURER'S PRODUCTS APPROVED FOR USE IN FAIRFAX WATER'S SYSTEM. MANUFACTURER'S PRODUCTS COVERED BY THE CATEGORIES INCLUDED IN THIS DOCUMENT WHICH ARE NOT SPECIFICALLY LISTED ARE NOT APPROVED FOR USE. COPIES OF THIS DOCUMENT ARE AVAILABLE AT WWW.FAIRFAXWATER.ORG.

15. ALL WATER MAIN INSTALLATION SHALL BE IN CONFORMANCE WITH FAIRFAX WATER'S STANDARD DETAILS INCLUDED HEREIN AND FOUND AT FAIRFAX WATER'S WEBSITE AT WWW.FAIRFAXWATER.ORG.

16. FAIRFAX WATER WILL REVIEW AND APPROVE WATER MAIN LAYING SCHEDULES (FOR 24-INCH AND GREATER) AND WATER MAIN RELATED SHOP DRAWINGS FOR THIS PROJECT AS TRANSMITTED TO FAIRFAX WATER BY THE CONTRACTOR. SUBMITTALS TO FAIRFAX WATER SHALL CONSIST OF CATALOG CUTS, SUPPLIER CERTIFICATIONS AND ANY OTHER INFORMATION PERTINENT TO THE MATERIAL ITEM. ALL SUBMITTALS SHALL BE OF CLEAR AND READABLE QUALITY AND THE ITEM BEING SUBMITTED FOR REVIEW SHALL BE CLEARLY HIGHLIGHTED OR DEFINED SO THAT THE REVIEWER CAN READILY IDENTIFY IT. FAIRFAX WATER REQUIRES A MINIMUM OF FOUR (4) SETS OF SUBMITTALS FOR IN-HOUSE DISTRIBUTION. ADDITIONAL SETS OF SUBMITTALS TO BE RETURNED TO THE CONTRACTOR SHOULD BE PROVIDED AT THIS TIME. THE SUBMITTALS WILL BE PROVIDED TO FAIRFAX WATER WITH A TRANSMITTAL LETTER CLEARLY IDENTIFYING THE CONTENTS OF THE DOCUMENTS AND FAIRFAX WATER PROJECT NUMBER. SUBMITTALS SHALL BE REVIEWED AND RETURNED WITHIN TWENTY (20) WORKING DAYS OF THE DATE THE SUBMITTALS ARE RECEIVED BY FAIRFAX WATER. INFORMATION THAT IS MAILED OR DELIVERED BY COURIER SHOULD BE DIRECTED TO:

FAIRFAX WATER
8560 ARLINGTON BOULEVARD
FAIRFAX, VA. 22031
MR. JERRY SCOTT, P.E.
CHIEF CONSTRUCTION ENGINEER

17. THE CONTRACTOR SHALL NOT BE RELEASED FROM THE PROJECT UNTIL THE WATER MAIN INSTALLATION WORK AND FINAL WATER MAIN INSPECTION ARE COMPLETED TO THE SATISFACTION OF FAIRFAX WATER. A FAIRFAX WATER REPRESENTATIVE SHALL PROVIDE WRITTEN APPROVAL VERIFYING THAT THE WATER MAIN INSTALLATION WORK IS COMPLETE.

18. AT EACH LOCATION WHERE A NEW WATER MAIN IS TO BE CONNECTED TO THE EXISTING WATER MAIN, THE CONTRACTOR SHALL NOT ORDER MATERIAL FOR THE CONNECTION UNTIL HE HAS DUG A TEST PIT AND VERIFIED THE EXACT LOCATION, SIZE, OUTSIDE DIAMETER, ROUNDNESS, ELEVATION, MATERIAL, JOINT LOCATION, AND TYPE AND DIRECTION OF THE EXISTING WATER MAIN. DIG TEST PITS ONLY IN THE PRESENCE OF AN AUTHORIZED REPRESENTATIVE OF FAIRFAX WATER.

19. IF TEST PIT DATA OR FIELD CONDITIONS SHOW THERE IS A CONFLICT WITH AN EXISTING UTILITY OR THE WATER MAIN DESIGN HAS TO BE MODIFIED, SUBMIT THE TEST PIT DATA OR FIELD INFORMATION TO FAIRFAX WATER. FAIRFAX WATER WILL REVIEW AND MODIFY THE DRAWINGS AS REQUIRED.

20. INSTALL EACH REPLACEMENT WATER MAIN UP TO BUT EXCLUDING THE CONNECTION(S) TO THE EXISTING WATER MAIN(S) TO THE LINES AND GRADES SHOWN ON THE DRAWINGS, INSTALL TEMPORARY PLUGS OR CAPS, AND SUCCESSFULLY PRESSURE TEST AND DISINFECT THE WATER MAIN. LEAKAGE LOSS (L) AS MEASURED IN GALLONS/HOUR, SHALL NOT EXCEED SD(P^0.5)/148,000 FOR TWO HOURS WHERE "S" IS THE LENGTH IN FEET OF WATER MAIN TESTED , "D" IS THE NOMINAL INSIDE DIAMETER OF THE PIPE IN INCHES, AND "P" IS THE TEST PRESSURE OF 150 PSI OR 125% (PIPE LESS THAN 20") 150% (PIPE EQUAL TO OR GREATER THAN 20") OF THE MAXIMUM EXPECTED WORKING PRESSURE, WHICHEVER IS GREATER, AT THE HIGH POINT OF THE WATER MAIN UNLESS OTHERWISE SHOWN OR DIRECTED BY FAIRFAX WATER. PRESSURE TESTS SHALL BE LIMITED TO 2,500 FEET FOR ANY INDIVIDUAL TEST. NO ADDITIONAL PAYMENT FOR TEMPORARY BLOW OFFS OR AIR RELEASES.

21. AT LEAST SEVEN WORKING DAYS PRIOR TO THE DATE THE CONTRACTOR ANTICIPATES INSTALLING THE CONNECTION(S) TO THE EXISTING WATER SYSTEM, THE CONTRACTOR SHALL MEET WITH A FAIRFAX WATER REPRESENTATIVE AND REVIEW HIS PROPOSED SCHEDULING AND CONSTRUCTION PROCEDURES FOR THE CONNECTION(S). SYSTEM DEMANDS AND OPERATING CONDITIONS AT THE TIME CONNECTION(S) ARE SCHEDULED MAY REQUIRE A NIGHT (9:00 P.M. TO 6:00 A.M.) CONNECTION TIME. NO ADDITIONAL PAYMENT WILL BE MADE TO THE CONTRACTOR FOR WORK WHICH MUST BE PERFORMED AT NIGHT. APPROVAL OF THE CONTRACTOR'S CONNECTION(S) SCHEDULE AND CONSTRUCTION PROCEDURES BY FAIRFAX WATER DOES NOT RELIEVE THE CONTRACTOR OF HIS TOTAL RESPONSIBILITY TO SEE THAT THE CONNECTION IS SUCCESSFULLY COMPLETED WITHIN THE DESIGNATED TIME FRAME.

22. BASED ON THE APPROVED CONSTRUCTION SCHEDULE, FAIRFAX WATER WILL GIVE AT LEAST 48 HOURS WRITTEN NOTICE TO AFFECTED CUSTOMERS FOR WATER MAIN CONSTRUCTION THAT WILL REQUIRE THE INTERRUPTION OF WATER SERVICE TO THESE CUSTOMERS.

23. PRIOR TO THE COMMENCEMENT OF ANY CONNECTION WORK, THE FAIRFAX WATER INSPECTOR WILL CONFIRM THAT THE CONTRACTOR HAS ALL NECESSARY MATERIALS, TOOLS AND EQUIPMENT AT THE WORK SITE. PIPE, FITTINGS AND VALVES SHALL BE PREASSEMBLED AS MUCH AS POSSIBLE TO REDUCE THE TIME OF WATER SERVICE INTERRUPTION. WORK WILL NOT COMMENCE UNTIL THIS IS CONFIRMED. ALSO, THE GEOMETRY OF THE CONNECTION SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO STARTING THE CONNECTION.

24. THE CONTRACTOR SHALL WORK CONTINUOUSLY AND EXPEDITIOUSLY AROUND THE CLOCK USING MULTIPLE CREWS UNTIL THE CONNECTIONS ARE SUCCESSFULLY INSTALLED AND WATER SERVICE IS RESTORED. WHERE THE NEW WATER MAIN IS TO BE CONNECTED AT MORE THAN ONE POINT TO THE EXISTING WATER SYSTEM, CONNECTIONS SHALL PROCEED SIMULTANEOUSLY. ALL CONNECTION WORK MUST BE SUCCESSFULLY COMPLETED WITHIN TEN HOURS UNLESS NOTED DIFFERENTLY IN WRITING BY THE ENGINEER OR FAIRFAX WATER. THE CONTRACTOR SHALL COMMIT THE NECESSARY PERSONNEL AND EQUIPMENT REQUIRED TO PERFORM THE SIMULTANEOUS CONNECTIONS WITHIN THE ABOVE TIME CONSTRAINTS.

25. ONLY NON-TOXIC LUBRICANTS RECOMMENDED BY THE PIPE MANUFACTURER AND APPROVED BY THE VIRGINIA DEPARTMENT OF HEALTH SHALL BE USED ON GASKETS. A SOAP SOLUTION WILL NOT BE ALLOWED.

26. ANY WATER MAIN TO BE INSTALLED IN A FILL AREA SHALL HAVE THE FILL PLACED AND COMPACTED TO A MINIMUM OF 2 FEET ABOVE THE TOP OF THE PROPOSED PIPE PRIOR TO EXCAVATION FOR AND INSTALLATION OF THE PIPE.

27. FIELD APPLIED DIELECTRIC COATING OR PETROLATUM TAPE TO BE APPLIED TO:
A. BURIED MECHANICAL JOINTS, BOLTS, NUTS, COUPLINGS, HARNESS TIE RODS, SADDLES, IRON AND STEEL ANCHORS, AND OTHER BURIED CONNECTING HARDWARE.
B. PIPE EMBEDDED IN CONCRETE ANCHOR BLOCKS OR OTHERWISE IN CONTACT WITH CONCRETE, EXTENDING THROUGH CONCRETE AND ADJACENT 6 INCHES IN BOTH DIRECTIONS.
C. SERVICE CLAMPS, NON-MOVING PARTS OF CORPORATION STOPS AND OTHER TRANSITION FITTINGS BETWEEN COPPER SERVICES AND DUCTILE IRON PIPE.

28. NO BLASTING SHALL OCCUR WITHIN 25 FEET OF EXISTING WATER MAINS. A MAXIMUM PARTICLE VELOCITY OF 1 1/2 INCHES PER SECOND AT THE CLOSEST POINT TO THE WATER MAIN FOR ANY BLASTING THAT OCCURS BEYOND THE 25 FEET LIMIT SHALL BE ADHERED TO.

29. ANY SOUND BARRIER CONSTRUCTION, INCLUDING FOOTINGS, WITHIN 15 FEET OF THE EXISTING OR PROPOSED WATER MAINS SHALL BE REVIEWED FOR APPROVAL BY FAIRFAX WATER.

30. INSTALL IDENTIFICATION TAPE DURING BACKFILL OPERATIONS ONE FOOT ABOVE WATER MAIN PIPING FOR ALL RESTRAINED PIPE JOINTS.

31. WATER METERS WITHIN PROJECT LIMITS SHALL BE RELOCATED BY THE CONTRACTOR TO A LOCATION BEHIND THE PROPOSED CURB AND GUTTER. ALL WATER SERVICE RELOCATIONS AND RETAPS SHALL BE INSTALLED BY THE CONTRACTOR. ALL EXISTING SERVICES SHALL BE RECONNECTED BY THE CONTRACTOR AFTER ALL APPROVALS HAVE BEEN OBTAINED. WATER METER ASSEMBLIES SHALL INCLUDE ALL MATERIALS AS SHOWN IN FAIRFAX WATER'S STANDARD DETAILS.

32. PROPOSED WATER MAINS AND SERVICES MUST BE IN SERVICE BEFORE EXISTING WATER MAINS AND SERVICES ARE ABANDONED.

33. UPON COMPLETION OF PROJECT, INSPECTOR WILL CHECK THAT ALL METER BOXES ARE SET TO GRADE AND IN CORRECT LOCATIONS BEFORE THE CONTRACTOR MOVES OFF JOBSITE.

34. IN INSTANCES WHERE CITY OF FAIRFAX AND FAIRFAX WATER SPECIFICATIONS OVERLAP OR ADDRESS THE SAME ISSUES, THE MORE STRINGENT SPECIFICATIONS SHALL BE ADHERED TO.

35. ALL ABANDONED VALVES AND APPURTENANCES SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND DISPOSAL/REMOVAL OF SUCH SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

36. IF THE PROJECT REQUIRES CUTTING OF ASBESTOS CEMENT PIPE (ACP) WATER MAINS, THE CONTRACTOR SHALL COMPLY WITH ALL STATE, FEDERAL AND LOCAL REGULATIONS INCLUDING, BUT NOT LIMITED TO, OSHA REQUIREMENTS AND VIRGINIA DEPARTMENT OF WASTE MANAGEMENT REGULATIONS IN WORKING WITH AND DISPOSAL OF ASBESTOS CEMENT PIPE.

37. THE CONTRACTOR SHALL INSTALL 1 LAYER OF 4-MIL CROSS-LAMINATED POLYETHYLENE ENCASEMENT FOR WATER MAINS LESS THAN 24-INCH IN DIAMETER (2 LAYERS FOR WATER MAINS 24-INCH AND GREATER IN DIAMETER) AS SHOWN ON THE DRAWINGS AND STANDARD DETAILS.

38. ALL EXISTING AND NEW VALVE BOXES MUST BE FULLY ADJUSTED TO CONFORM TO FINAL ASPHALT GRADE. NO PAVING ADJUSTERS WILL BE PERMITTED.

39. IN AREAS WHERE PETROLEUM-CONTAMINATED SOILS ARE ENCOUNTERED ALONG THE PROPOSED WATER MAIN ALIGNMENT, THE CONTRACTOR, AS DIRECTED BY FAIRFAX WATER, SHALL REMOVE AND DISPOSE OF ALL CONTAMINATED SOILS WITHIN THE PIPELINE TRENCH WHERE THE TOTAL PETROLEUM HYDROCARBON (TPH) CONCENTRATION EXCEEDS 50 MG/KG. THE CONTRACTOR SHALL REMOVE THE SUBJECT SOILS AS DIRECTED BY FAIRFAX WATER IN ACCORDANCE WITH APPLICABLE REGULATIONS OF THE VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY (VDEQ), THE U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA), OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA), AND INDUSTRY-RECOGNIZED REMOVAL PROCEDURES. THE CONTAMINATED SOILS SHALL BE DISPOSED OF AT A CERTIFIED LAND FILL SITE FOR THE CONCENTRATION LEVELS ENCOUNTERED. THE CONTRACTOR SHALL INSTALL VITON GASKETS IN ACCORDANCE WITH THE PIPELINE MANUFACTURER'S INSTALLATION REQUIREMENTS IN ALL AREAS WHERE EXCAVATED SOILS EXCEED 10 MG/KG TPH OR TO THE EXTENT DIRECTED BY FAIRFAX WATER. SUITABLE CLEAN FILL MATERIAL WILL BE PUT IN PLACE ABOVE THE NEWLY INSTALLED WATER MAIN, IF NON-PAVED AREA, IN ACCORDANCE WITH FAIRFAX WATER'S STANDARD TRENCH DETAILS.

40. THE CONTRACTOR SHALL NOT INSTALL ANY EARTHWORK OVER EXISTING OR PROPOSED FAIRFAX WATER UTILITIES BEYOND THAT WHICH IS SHOWN IN THE APPROVED CITY OF FAIRFAX DRAWINGS WITHOUT THE APPROVAL OF FAIRFAX WATER.

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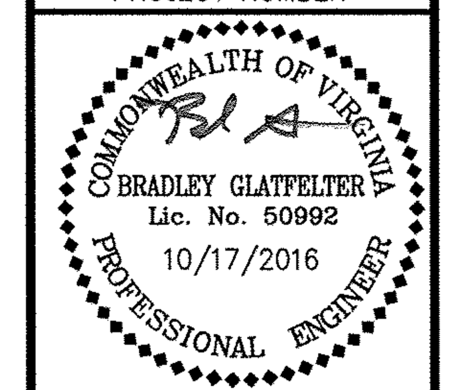
SITE DETAILS (8 OF 8)
BURKE STATION ROAD STREETSCAPE IMPROVEMENTS
CITY OF FAIRFAX — VIRGINIA

PROJECT NUMBER



PLAN STATUS

DATE	DESCRIPTION
04/05/16	FINAL SUBMISSION
10/17/16	CONTRACT DOCUMENT

SB	SB	SD
DESIGN	DRAWN	CHKD

SCALE H: N/A V: N/A
JOB No. 6916-01-002
DATE : JUNE 2015
FILE No. 6916-D-CP-002
SHEET 63 OF 63

Cad file name : P:\6916 - City of Fairfax On-Call\6916-01-002 (ENG) - Burke Station Road\Engineering\Engineering Plans\6916-D-CP-002-DET.dwg