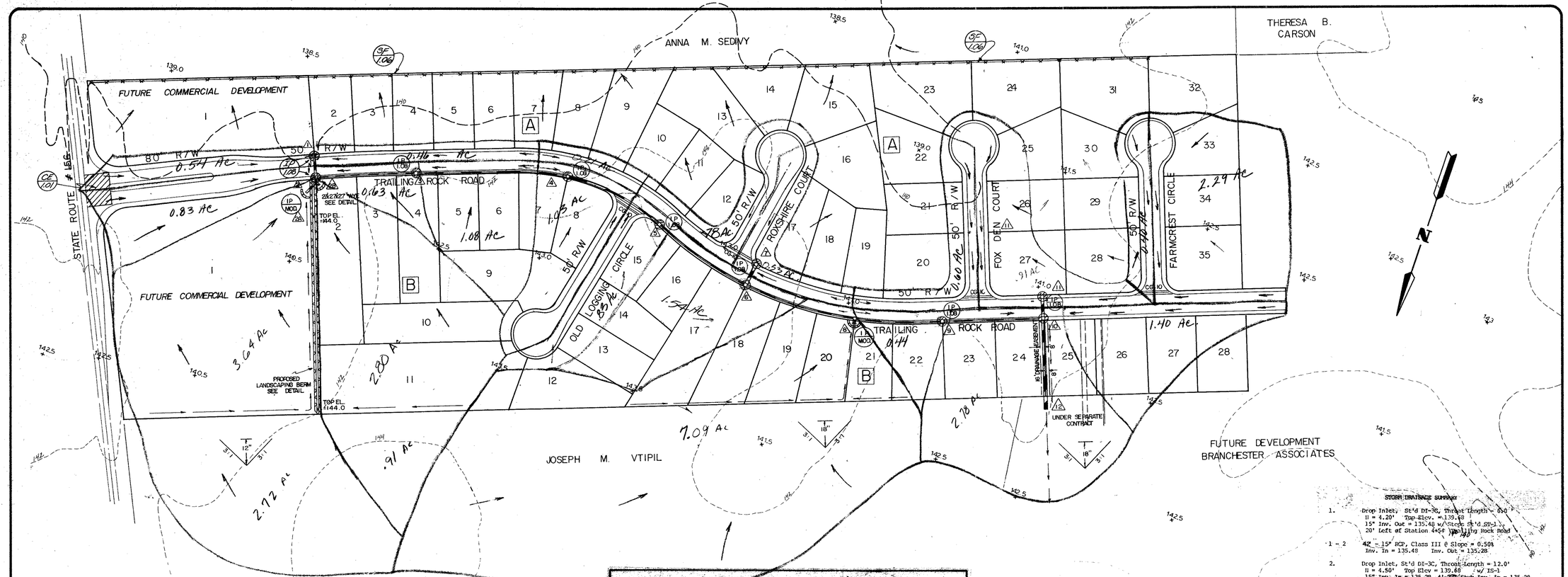
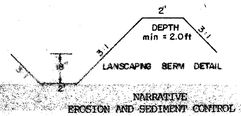
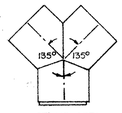
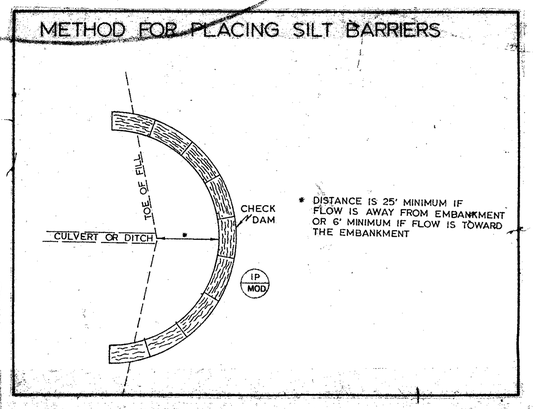


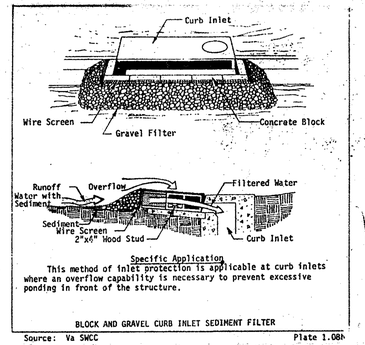




METHOD FOR PLACING SILT BARRIERS



* DISTANCE IS 25' MINIMUM IF FLOW IS AWAY FROM EMBANKMENT OR 6' MINIMUM IF FLOW IS TOWARD THE EMBANKMENT

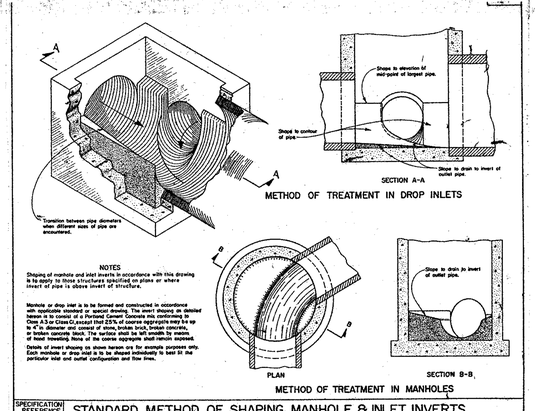


Specific Application

This method of inlet protection is applicable at curb inlets where an overflow capability is necessary to prevent excessive ponding in front of the structure.

BLOCK AND GRAVEL CURB INLET SEDIMENT FILTER

Source: Va SWCC Plate 1.08b



METHOD OF TREATMENT IN DROP INLETS

METHOD OF TREATMENT IN MANHOLES

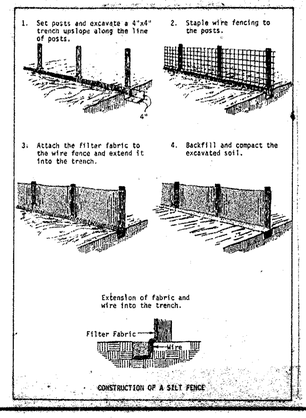
NOTES

Shaping of manhole and inlet inverts in accordance with this drawing is to apply to those structures specified on plans or where invert of pipe is above invert of structure.

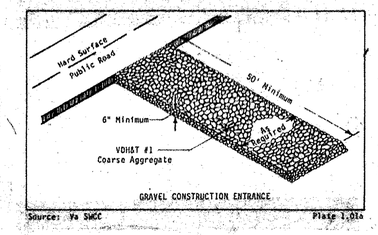
Manhole or drop inlet is to be formed and constructed in accordance with applicable standard or special drawing. The invert shaping as detailed herein is to consist of a Portland Cement Concrete mix conforming to Class A,3 or Class C,except that 25% of coarse aggregate may be up to 6" in diameter and consist of stone, broken brick, broken concrete, or broken blocks. Place the coarse aggregate in the bottom of manhole of hand troweling. Voids of the coarse aggregate shall remain exposed.

Details of invert shaping as shown herein are for example purposes only. Each manhole or drop inlet is to be shaped individually to best fit the particular inlet and outlet configuration and flow lines.

SPECIFICATION REFERENCE	STANDARD METHOD OF SHAPING MANHOLE & INLET INVERTS
NONE	VIRGINIA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION



CONSTRUCTION OF A SILT FENCE



GRAVEL CONSTRUCTION ENTRANCE

Source: Va SWCC Plate 1.01a

NARRATIVE
EROSION AND SEDIMENT CONTROL PLAN

DESCRIPTION

PROJECT IS A PROPOSED SINGLE FAMILY RESIDENTIAL SUBDIVISION, SECTION 1 WITH TWO FUTURE COMMERCIAL SITES CONSISTING OF APPROXIMATELY 34 ACRES OF LAND WITH ULTIMATELY 63 BUILDING LOTS. GROUND DISTURBANCE WILL BE LIMITED TO THE PROPOSED ROADWAYS AND WITHIN THE LIMITS OF ANY DRAINAGE AND/OR SANITARY SEWER EASEMENTS.

EXISTING CONDITIONS

THE SITE IS MODERATELY TO DENSELY WOODED WITH A MIXTURE OF HARDWOOD AND PINE. SLOPES RANGE FROM 0-2%.

SURROUNDING AREAS

THE PROPERTY TO THE SOUTHWEST WILL BE RECEIVING SHEET FLOW RUNOFF FROM BUILDING, CONSTRUCTION, THEREFORE IT IS IMPERATIVE THAT THE PROPOSED SILT FENCE BE INSTALLED TO THE EXTENT SHOWN ON THIS PLAN. THE REMAINDER OF THE SITE WILL BE INTERCEPTED AND CONVEYED VIA STORM SEWER TO BRANCHESTER LAKE WHICH IS PRESENTLY UNDER CONSTRUCTION AND NEAR COMPLETION.

SOILS

THE SOILS ON THIS SITE CONSIST OF THE FOLLOWING U.S.D.A. SOIL CLASSIFICATIONS: 18A-MONTROSS SILTLOAM, 0 TO 2 PERCENT SLOPES, SURFACE RUNOFF IS SLOW. THE EROSION HAZARD IS MODERATE. 24-RAINS LOAM, 0 TO 2% SURFACE RUN OFF IS VERY SLOW. THE EROSION HAZARD IS SLIGHT.

CRITICAL AREAS

THE PRIMARY AREAS OF CONCERN ARE THE POINTS OF INTERCEPTION ALONG THE PROPOSED STORM SEWER, THE TERMINUS OF THE PROPOSED STORM SEWER AT THE LAKE, AND THE AREA ADJACENT TO THE SEDIVY PROPERTY. THE PROPOSED INLET PROTECTION BARRIERS ARE TO BE PLACED SIMULTANEOUSLY WITH THE INSTALLATION OF THE STORM SEWER PIPES.

PLAN OF OPERATION

1. INSTALL TEMPORARY CONSTRUCTION ENTRANCE OFF HARRONGATE ROAD
2. CLEAR AND GRUB A 10' WIDE PATH ALONG THE SOUTH SIDE OF THIS PROPERTY ADJACENT TO THE SEDIVY TRACT.
3. INSTALL TEMPORARY SILT FENCE
4. CLEAR & GRUB R/W, EASEMENTS AND AREAS TO BE REGRADED
5. BRING ROADWAYS TO SUBGRADE
6. INSTALL STORM SEWER
7. INSTALL INLET PROTECTION DEVICES
8. INSTALL SANITARY SEWER AND SERVICES
9. INSTALL WATERLINE AND SERVICES
10. REDRESS ROADWAYS
11. INSTALL DROP INLETS AND CURB AND GUTTER
12. INSTALL BASE MATERIAL
13. INSTALL PAVEMENT
14. SEED AND MULCH ALL DISTURBED AREAS
15. REMOVE INLET PROTECTION DEVICES
16. REMOVE SILT AND DEBRIS FROM STORM SEWER
17. RESEED AND MULCH ALL AREAS SHOWING SPARCE COVER

NOTE: ALL WORK SHALL CONFORM TO THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK STANDARDS.

EROSION AND SEDIMENT CONTROL MEASURES

IT IS PREFERRED TO CONTROL SEDIMENTATION AT ITS SOURCE. INLET PROTECTION DEVICES ARE TO BE PLACED AT THE POINTS SHOWN ON THE PLAN TO FACILITATE THIS CONCEPT.

THE ENTRANCE TO THE SITE SHALL HAVE A TEMPORARY GRAVEL ENTRANCE INSTALLED BEFORE ON-SITE WORK BEGINS.

PERMANENT STABILIZATION

ALL DENUDED AREAS SHALL BE SEEDED AND MULCHED WITH 15 DAYS OF ATTAINING FINISHED GRADE IN ACCORDANCE WITH THE SEEDING SCHEDULE IN THE GENERAL NOTES. THIS DOES NOT APPLY TO AREAS THAT WILL BE COVERED BY STONE, I.E. ROADWAYS, ETC.

MAINTENANCE

ALL EROSION AND SEDIMENT CONTROL ITEMS SHALL BE CHECKED DAILY BY THE SITE FOREMAN TO ASCERTAIN THEIR CURRENT EFFECTIVENESS. ANY STRUCTURE THAT IS NOT PERFORMING ADEQUATELY SHALL BE RECONSTRUCTED OR REPLACED AS REQUIRED.

THE PRINCE GEORGE COUNTY ENGINEERING DEPARTMENT AND ALL OTHER INTERESTED COUNTY AGENCIES SHALL MAKE A CONTINUING REVIEW AND EVALUATION OF THE METHOD USED AND THE OVERALL EFFECTIVENESS OF THE EROSION AND SEDIMENT CONTROL PLAN. THE APPROVED EROSION AND SEDIMENT CONTROL PLAN MAY BE AMENDED BY THE PLAN APPROVING AUTHORITY IF ON-SITE INSPECTION INDICATES THAT THE APPROVED CONTROL MEASURES ARE NOT EFFECTIVE IN CONTROLLING EROSION AND SEDIMENTATION OR BECAUSE OF CHANGED CIRCUMSTANCES THE PLAN CAN NOT BE CARRIED OUT.

STORM DRAINAGE SUMMARY

1. Drop Inlet, St'd DI-3C, Throat Length = 6.0'
   H = 4.20' Top Elev. = 139.60
   15" Inv. Out = 135.40 w/ Steps St'd ST-1
   20' Left of Station 4+54 Trailing Rock Road

1 - 2 42' - 15" RCP, Class III @ Slope = 0.50%
   Inv. In = 135.40 Inv. Out = 135.28

2. Drop Inlet, St'd DI-3C, Throat Length = 12.0'
   H = 4.50' Top Elev = 139.60 w/ IS-1
   15" Inv. In = 135.20, 4'-27" Stub Inv. In = 135.28
   27" Inv. Out = 135.10 w/ St'd Steps ST-1
   20' Rt Station 4+54.00 Trailing Rock Road

2A Wye - 20' - 27" RCP Class III @ Slope = 0.50%
   Inv In = 135.47 Inv Out = 135.41

2B Wye - 4' - 27" RCP Class III @ Slope = 0.40%
   Inv In = 135.43 Inv Out = 135.41
   Wye - 2 , 4'-27" RCP Class III @ Slope = 0.60%
   Inv. In = 135.31 Inv Out = 135.28

2 - 3 200' - 27" RCP Class III, Slope = 0.20%
   Inv. In = 135.10, Inv. Out = 134.78

3. Drop Inlet, St'd DI-3B, Throat Length = 6.0'
   H = 5.82' Top Elev. = 140.50 w/ Steps St'd ST-1
   27" Inv. In = 134.78, 27" Inv. Out = 134.68
   20' Rt. Station 6+54 Trailing Rock Road

3 - 4 300' - 27" RCP Class III, Slope = 0.30%
   Inv. In = 134.68, Inv. Out = 133.78

4. Manhole, St'd MH-2 w/ Steps St'd ST-1
   H = 7.94', Top Elev. = 141.62
   27" Inv. In = 133.78, 27" Inv. Out = 133.68
   20' Rt of Station 9+54 Trailing Rock Road

4 - 5 190' - 27" RCP Class III, Slope = 0.30%
   Inv. In = 133.68, Inv. Out = 133.11

5. Drop Inlet, St'd DI-3B, Throat Length = 8.0'
   H = 7.57', Top Elev. = 140.58 w/ Steps St'd ST-1
   27" Inv. In = 133.11, 27" Inv. Out = 133.01
   20' Rt of Station 11+61.36 Trailing Rock Road

5 - 6 226' - 27" RCP Class III @ Slope = 0.30%
   Inv. In = 133.01, Inv. Out = 132.33

7. Drop Inlet, St'd DI-3C, Throat Length = 6.0'
   H = 3.37' Top Elev. = 139.60
   15" Inv. Out = 136.23
   23' Lt. Station 13+81.90 Trailing Rock Road

7 - 6 45' - 15" RCP Class III @ Slope = 0.40%
   Inv. In = 136.23, Inv. Out = 136.06

6. Drop Inlet, St'd DI-3C, Throat Length = 8.0'
   H = 7.37' Top Elev. = 139.60
   15" Inv. In = 136.06, 27" Inv. In = 132.33
   27" Inv. Out = 132.23 w/ Steps St'd ST-1
   20' Rt Station 13+81.90 Trailing Rock Road

6 - 8 228' - 27" RCP Class III @ Slope = 0.40%
   Inv. In = 132.23, Inv. Out = 131.32

8. Manhole, St'd MH-2, w/ Steps St'd ST-1
   H = 9.72' Top Elev. = 140.94
   27" Inv. In = 131.32, 4' - 27" RCP Stub
   Inv. In = 137.94, 33" Inv. Out = 131.22
   20' Rt. Station 16+02.29 Trailing Rock Road

8 - 9 174' 33" RCP Class III @ Slope = 0.40%
   Inv. In = 131.22 Inv. Out = 130.52

9. Drop Inlet, St'd DI-4DB, Throat Length = 6.0'
   H = 9.97' Top Elev. = 140.39 w/ Steps St'd ST-1
   33" Inv. Out = 130.52, 33" Inv. Out = 130.42
   20' Rt Station 17+72.87 Trailing Rock Road

9 - 10 200' 33" RCP Class III @ Slope = 0.40%
   Inv. In = 130.42 Inv. Out = 129.62

11. Drop Inlet, St'd DI-3C , Throat Length = 16'
   H = 6.15' Top Elev. = 139.39
   18" Inv. Out = 133.29 w/ Steps St'd ST-1
   20' Lt Station 19+72.87 Trailing Rock Road

11 - 10 42' - 18" RCP Class III @ Slope = 0.70%
   Inv. In = 133.29, Inv. Out = 133.00

10. Drop Inlet, St'd DI-4CC, Throat Length = 16'
   H = 9.87' Top Elev. = 139.39 w/ IS-1
   18" Inv. In = 133.00, 33" Inv. In = 129.62
   33" Inv. Out = 129.52 w/ Steps St'd ST-1
   20' Rt Station 19+72.87 Trailing Rock Road

10 - 12 176' 33" RCP Class III @ Slope = 0.60%
   Inv. In = 129.52 Inv. Out = 128.47

CHARLES C. TOWNES & ASSOCIATES
Engineers, Planners, Land Surveyors
110 Norfolk Ave., P.O. Box 97
Colonial Heights, Va. 23834
804-526-6766

BRANCHESTER LAKES
SECTION I
BLAND DISTRICT
PRINCE GEORGE COUNTY, VIRGINIA

HYDRAULIC ANALYSIS

REVISIONS	
DATE	ITEM
7/2/87	
7/8/87	
July 21, 1987	

DATE	01 / 04 / 87
SCALE	1" = 100'
DRAWN BY	CET / HJH
CHECKED BY	CET
F.B. #	87 17 P1
SHEET #	10 of 10

ALL WORK SUBJECT TO INSPECTION BY COUNTY ENGINEER

FINAL