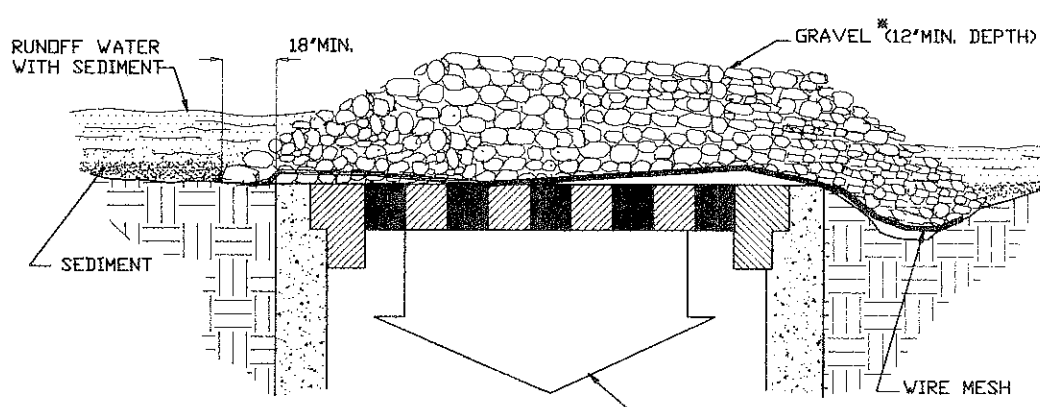
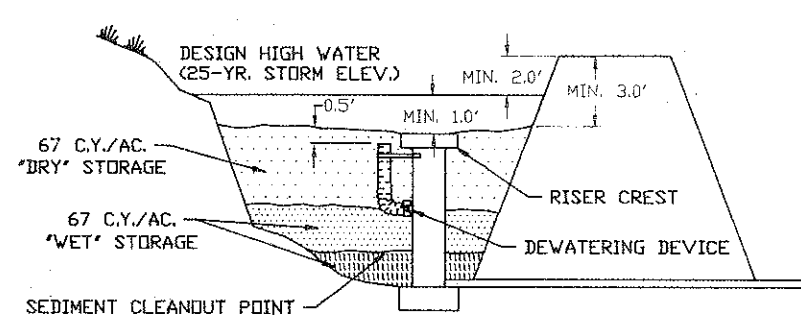
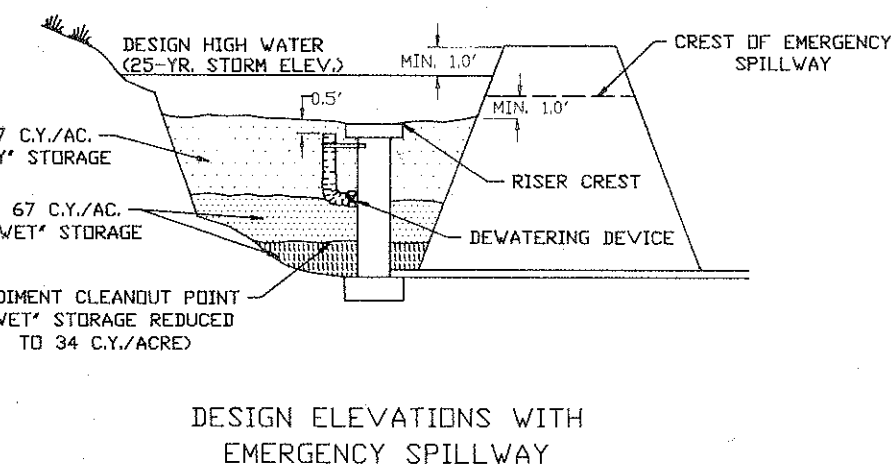


| DESCRIPTION | UNIT | QUANTITY | UNIT COST | TOTAL COST |
|---------------------|------|----------|-----------|------------|
| CLEARING & GRUBBING | LS | | \$ | \$ |
| EXCAVATION | CY | | | |
| EMBANKMENT | CY | | | |
| FENCING | LF | | | |
| STRUCTURES | | | | |
| ACCESS ROAD | | | | |
| AS-BUILTS | | | | |
| SUB-TOTAL | | | | \$ |
| 10% CONTINGENCY | | | | \$ |
| TOTAL PROJECT COST | | | | \$ |



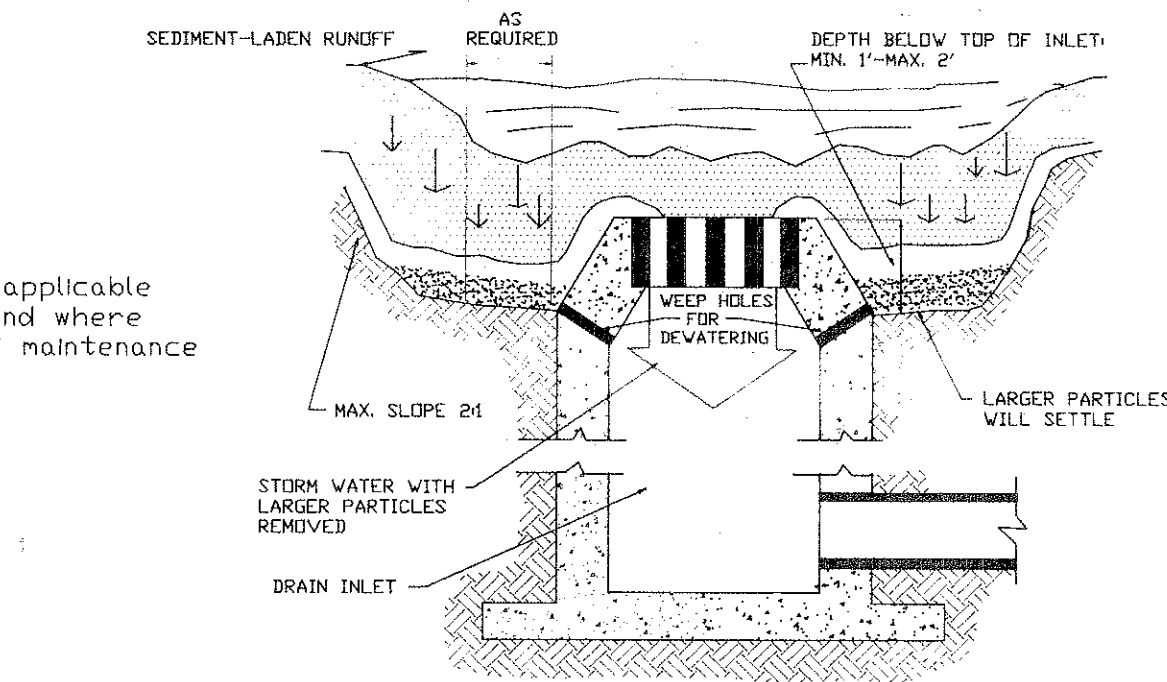
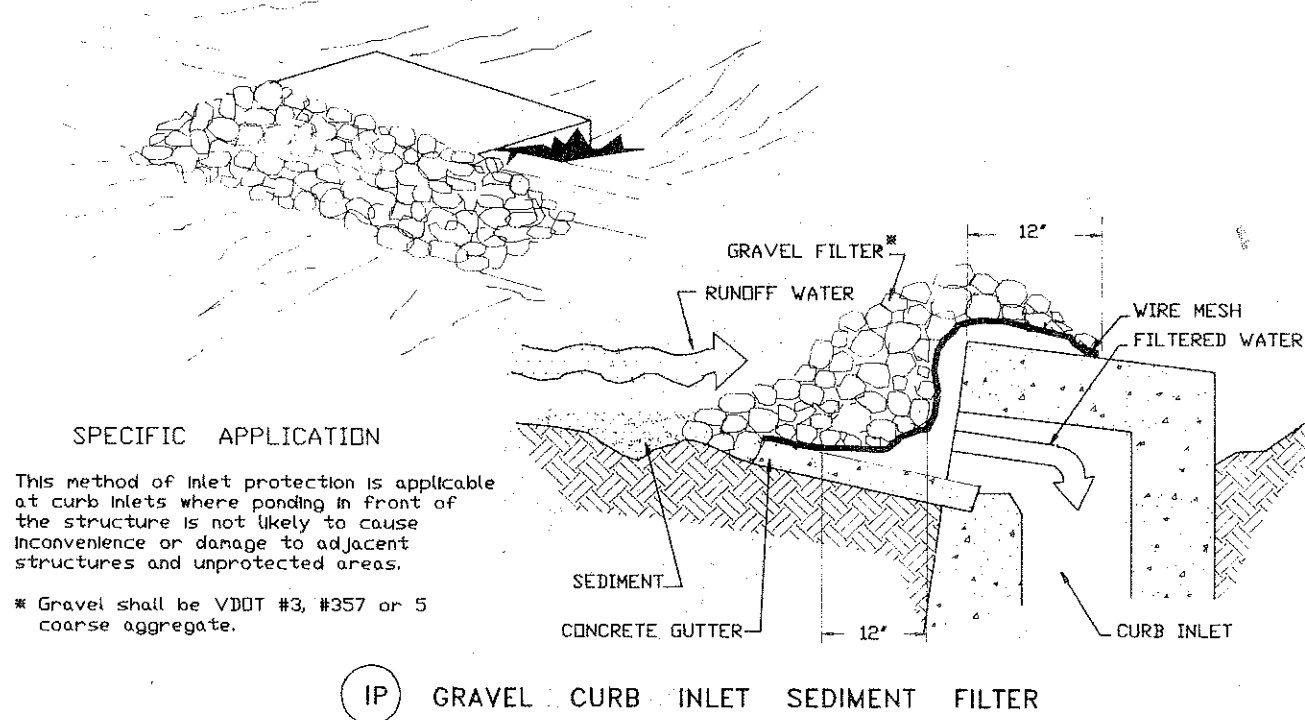
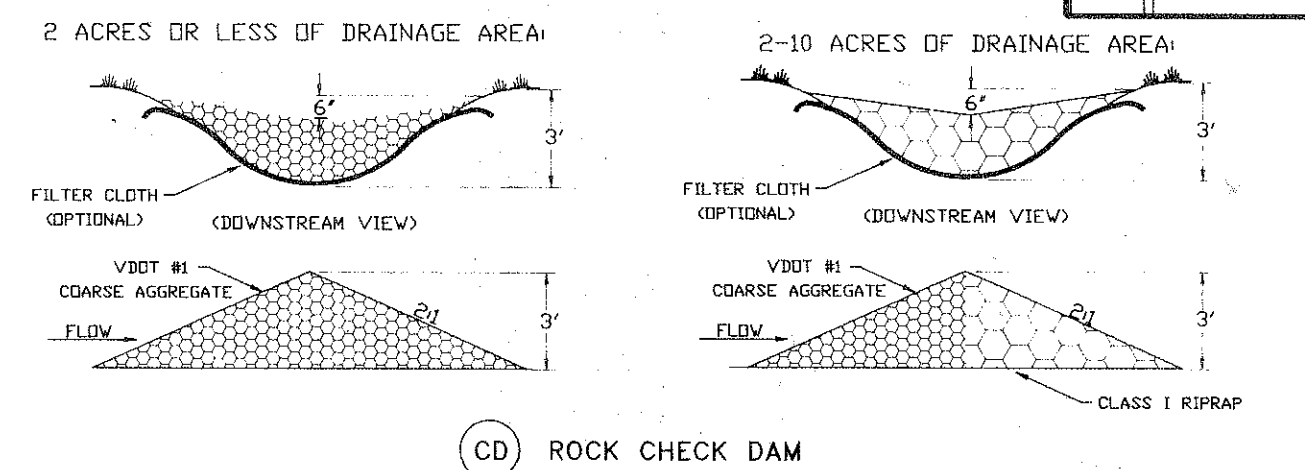
IP GRAVEL AND WIRE MESH DROP INLET SEDIMENT FILTER

1. DESIGN OF DETENTION BASINS SHALL CONFORM TO THE REQUIREMENTS OF THE COUNTY OF RIANDKE DRAINAGE STANDARDS (REF. SECTIONS 50302, 50303, AND 50502). THE DESIGN OF THE FACILITY AND PREPARATION OF AS-BUILT PLANS SHALL BE BY A CERTIFIED PROFESSIONAL ENGINEER LICENSED TO PRACTICE IN THE COMMONWEALTH OF VIRGINIA.
2. ACCESS TO THE FACILITY MUST BE PROVIDED IN ACCORDANCE WITH THE COUNTY OF RIANDKE DESIGN AND CONSTRUCTION STANDARDS FOR DETENTION PONDS, LATEST EDITION.
3. IF THE FACILITY IS OVER FOUR (4) FEET DEEP, TAKES OVER TWO (2) FEET TO DRAIN OR THE INTERIOR SLOPE EXCEEDS 3 (4) : 1 (V), PERMANENT FENCING MAY BE REQUIRED. ADDITIONALLY, IF THE FACILITY IS IN A CONGESTED AREA OR WILL IN ANY WAY POSE A HAZARD TO THE GENERAL PUBLIC, FENCING MAY BE REQUIRED. FENCING SHALL BE A MINIMUM OF SIX (6) FEET HIGH, A MINIMUM OF STANDARD NINE (9) GAUGE LINK FENCE, AND MUST HAVE ONE OR MORE LOCKING DOUBLE GATES (MINIMUM TEN FEET WIDE) FOR ACCESS.
4. DETENTION PONDS SHALL BE BONDED IN ACCORDANCE WITH THE RIANDKE COUNTY BONDING POLICY FOR SUBDIVISION AND SITE DEVELOPMENT. A SEPARATE BOND FOR THE DETENTION FACILITY WILL BE REQUIRED AND ADMINISTERED APART FROM THE SUBDIVISION DEVELOPMENT BOND. REFERENCE ESTIMATE - THIS SHEET.
5. REFERENCE THE COUNTY OF RIANDKE DESIGN AND CONSTRUCTION STANDARDS FOR DETENTION PONDS, LATEST EDITION, FOR ACCEPTANCE AND MAINTENANCE OF THE FACILITY. CERTIFIED AS-BUILTS ARE REQUIRED AND MUST INCLUDE:
 - A. DIMENSIONS OF THE FACILITY
 - B. VOLUME @ MAXIMUM DEPTH
 - C. ELEVATIONS OF STRUCTURES, SPILLWAYS, AND TOP
 - D. MATERIALS VERIFICATION INCLUDING RESULTS OF DENSITY TESTS CONDUCTED BY AN INDEPENDENT SOIL TESTING LABORATORY
 - E. LOCATION AND ELEVATION OF BENCHMARK.
6. ONE FOOT MINIMUM FREEBOARD REQUIRED FOR THE 100 YR WATER SURFACE ELEVATION.

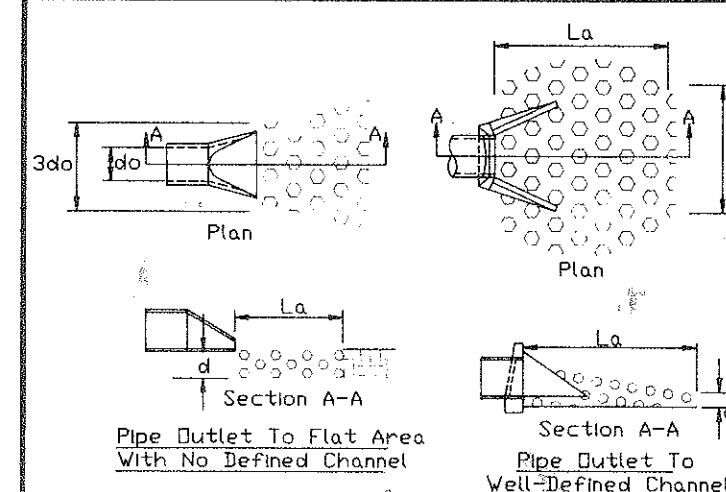
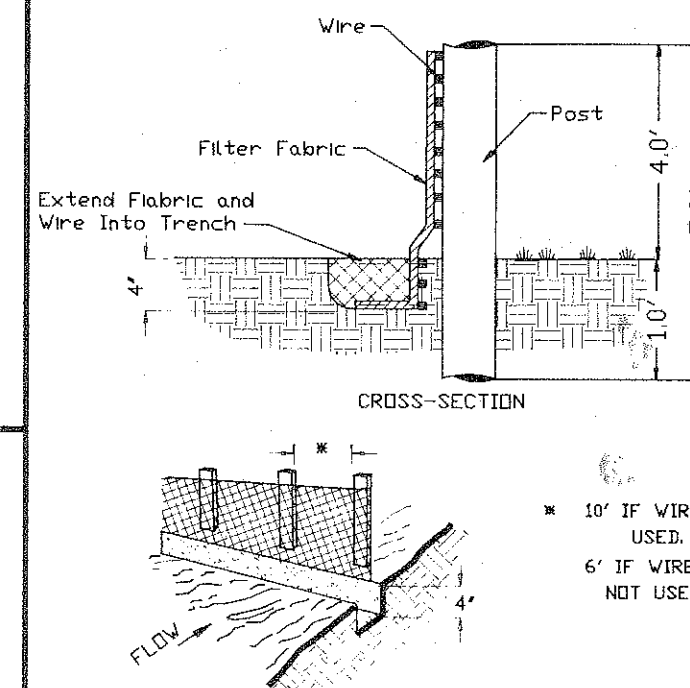
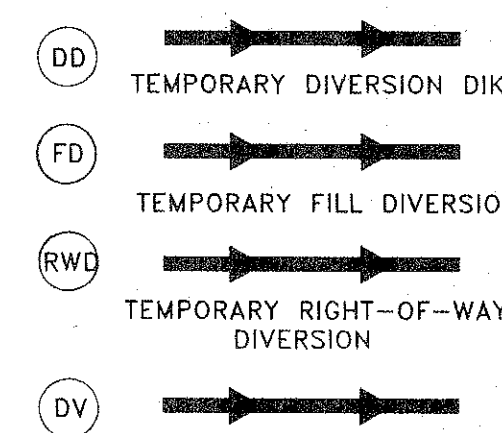
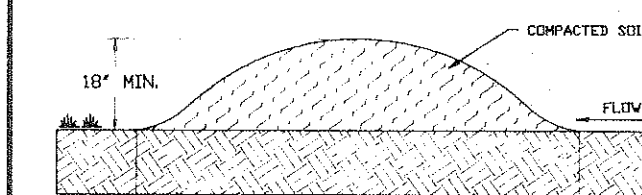
1. SITE PREPARATION SHALL BE IN ACCORDANCE WITH THE COUNTY OF RANDOLPH DESIGN AND CONSTRUCTION STANDARDS FOR DETENTION PONDS, LATEST EDITION.
2. SLOPES STEEPER THAN 3 TO 1 (HORIZONTAL TO VERTICAL) SHALL BE BENCHED OR STEPPED PRIOR TO PLACING FILL ON THEM.
3. ON-SITE FILL MATERIAL OR BORROW FILL MATERIAL MAY BE UTILIZED. FILL MATERIAL, SOILS, IN GENERAL:
 - A. SHALL BE COMPACTABLE
 - B. SHALL BE WITHIN AN ACCEPTABLE RANGE OF MOISTURE CONTENT WHICH IS READILY CONTROLLED
 - C. SHALL NOT BE HIGHLY SUSCEPTIBLE TO VOLUME CHANGE (SHRINKAGE OR SWELL) OR SETTLEMENT
4. FILL MATERIALS CONTAINING ROCKS LARGER THAN SIX (6) INCHES DIAMETER SHALL NOT BE USED. THE UPPERMOST TWO (2) FEET (61 CM) SHALL NOT HAVE ANY ROCK LARGER THAN TWO (2) INCHES (5.1 CM) IN DIAMETER.
5. THE APPROVED FILL SHALL BE PLACED IN EIGHT (8) INCH (2 CM) LOOSE LIFTS. EACH LIFT SHALL BE SPREAD IN UNIFORM LAYERS. FILL FILL SHALL BE UTILIZED ONLY WITHIN A MOISTURE RANGE OF +/- 5% OF THE OPTIMUM MOISTURE CONTENT. COMPACTION OF THE FILL SHALL BE PERFORMED WITH APPROVED EQUIPMENT. COMPACTION OF THE LAYERS SHALL BE CONTINUOUS AND UNIFORM.
6. EMBANKMENT MATERIAL IN FILL AREAS SHALL BE PLACED IN LIFTS NOT EXCEEDING EIGHT (8) INCHES AND SHALL BE COMPACTED TO A MINIMUM 95% DENSITY IN ACCORDANCE WITH SECTION 303 OF THE VIRGINIA DEPARTMENT OF TRANSPORTATION ROAD AND BRIDGE SPECIFICATIONS.
7. FIELD DENSITY TESTS ARE TO BE CONDUCTED BY AN INDEPENDENT SOILS TESTING LABORATORY UNDER THE DIRECTION OF A QUALIFIED GEOTECHNICAL ENGINEER. THE RESULTS OF THESE TESTS SHALL BE SUBMITTED TO THE COUNTY OF RANDOLPH WITH AS-BUILT PLANS AS EVIDENCE OF ACCEPTANCE. THE FACILITY BY THE COUNTY. FIELD COMPACTION TESTS, AS DIRECTED BY THE ENGINEER SHALL BE PERFORMED PERIODICALLY TO DETERMINE THE DEGREE OF COMPACTION. ANY AREAS FAILING TO MEET THE ABOVE REQUIREMENTS SHALL BE REWORKED AND/OR RECOMPACTED UNTIL THE REQUIRED DEGREE OF COMPACTION IS ACHIEVED.
8. ANTI-SEEP COLLARS SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK, LATEST EDITION.
9. ALL DISTURBED AREAS SHALL BE COVERED WITH FOUR (4) INCHES OF TOPSOIL AND SEEDS.
10. THE MINIMUM SLOPE OF THE BASIN FLOOR SHALL BE ONE (1) PERCENT GRADED TO DRAIN TO THE PRINCIPAL SPILLWAY.

This method of inlet protection is applicable where heavy flows are expected and where an overflow capability and ease of maintenance are desirable.

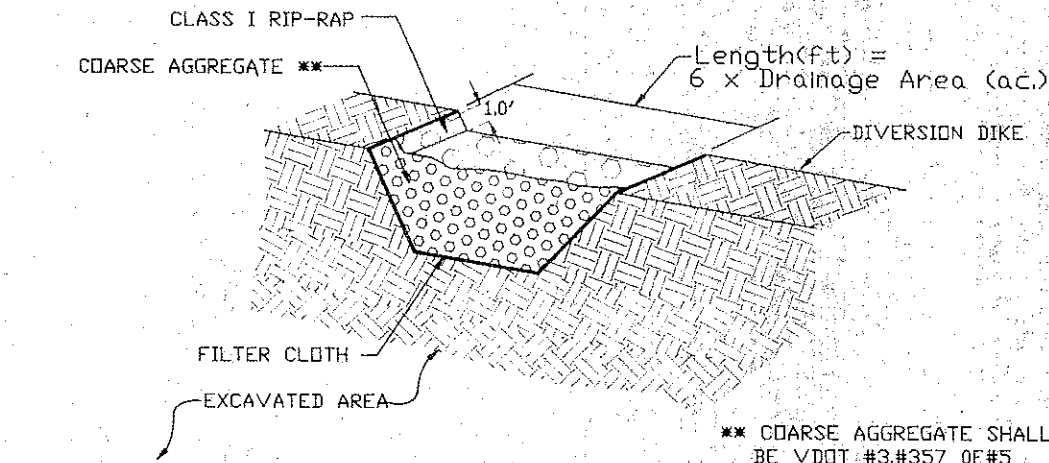
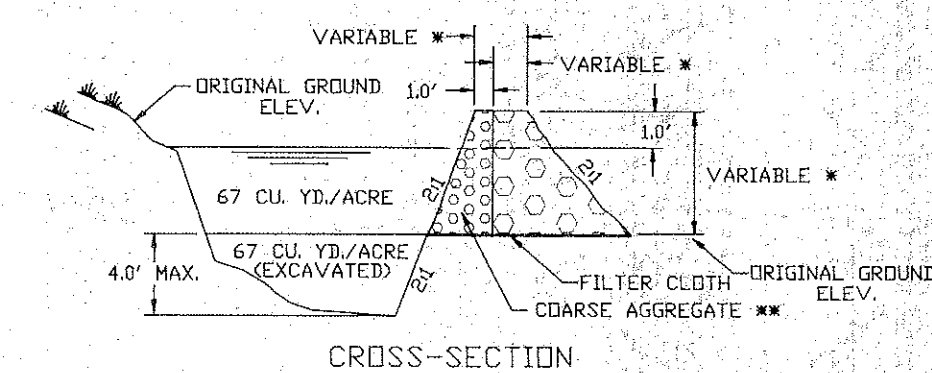
| NO. | TITLE | KEY | SYMBOL | NO. | TITLE | KEY | SYMBOL |
|------|--|-------|--------|------|--|-------|--------|
| 3.01 | SAFETY FENCE | (SAF) | | 3.20 | ROCK CHECK DAMS | (CD) | |
| 3.02 | TEMPORARY GRAVEL CONSTRUCTION ENTRANCE | (CE) | | 3.21 | LEVEL SPREADER | (LS) | |
| 3.03 | CONSTRUCTION ROAD STABILIZATION | (CRS) | | 3.22 | VEGETATIVE STREAMBANK STABILIZATION | (VSS) | |
| 3.04 | STRAW BALE BARRIER | (STB) | | 3.23 | STRUCTURAL STREAMBANK STABILIZATION | (SSS) | |
| 3.05 | SILT FENCE | (SF) | | 3.24 | TEMPORARY VEHICULAR STREAM CROSSING | (VSC) | |
| 3.06 | BRUSH BARRIER | (BB) | | 3.25 | UTILITY STREAM CROSSING | (USC) | |
| 3.07 | STORM DRAIN INLET PROTECTION | (IP) | | 3.26 | DEWATERING STRUCTURE | (DS) | |
| 3.08 | CULVERT INLET PROTECTION | (CIP) | | 3.27 | TURBIDITY CURTAIN | (TC) | |
| 3.09 | TEMPORARY DIVERSION DIKE | (DD) | | 3.28 | SUBSURFACE DRAIN | (SD) | |
| 3.10 | TEMPORARY FILL DIVERSION | (FD) | | 3.29 | SURFACE ROUGHENING | (SR) | |
| 3.11 | TEMPORARY RIGHT-OF-WAY DIVERSION | (RWI) | | 3.30 | TOPSOILING | (TD) | |
| 3.12 | DIVERSION | (DV) | | 3.31 | TEMPORARY SEEDING | (TS) | |
| 3.13 | TEMPORARY SEDIMENT TRAP | (ST) | | 3.32 | PERMANENT SEEDING | (PS) | |
| 3.14 | TEMPORARY SEDIMENT BASIN | (SB) | | 3.33 | SODDING | (SD) | |
| 3.15 | TEMPORARY SLOPE DRAIN | (TSD) | | 3.34 | BERMUDA GRASS AND ZOYSIA GRASS ESTABLISHMENT | (B+Z) | |
| 3.16 | PAVED FLUME | (PF) | | 3.35 | MULCHING | (MU) | |
| 3.17 | STORMWATER CONVEYANCE CHANNEL | (SCC) | | 3.36 | SOIL STABILIZATION BLANKETS AND MATTING | (S+M) | |
| 3.18 | OUTLET PROTECTION | (OP) | | 3.37 | TREES, SHRUBS, VINES AND GROUND COVERS | (VEG) | |
| 3.19 | RIPRAP | (RR) | | 3.38 | TREE PRESERVATION AND PROTECTION | (TP) | |
| | | | | 3.39 | DUST CONTROL | (DC) | |



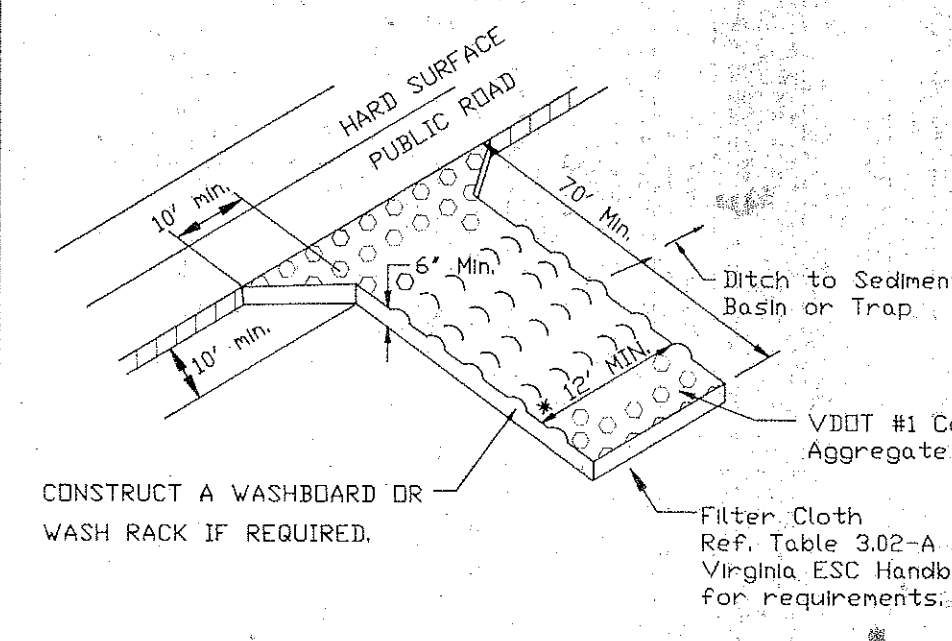
IP EXCAVATED DROP INLET SEDIMENT TRAP



- NOTES
1. Apron lining may be rip-rap, grouted rip-rap, or concrete.
 2. La is the length of the rip-rap apron as calculated using plates 1.36d and 1.36e.
 3. d = 1.5 times the maximum stone diameter, but not less than 6'.



NOTE:
FOR AREAS LESS THAN 3.0 ACRES. FOR AREAS
LARGER THAN 3.0 ACRES A SEDIMENT BASIN
IS REQUIRED. SEE DETAIL THIS SHEET.

[illegible]

12" MIN.

3" MIN.

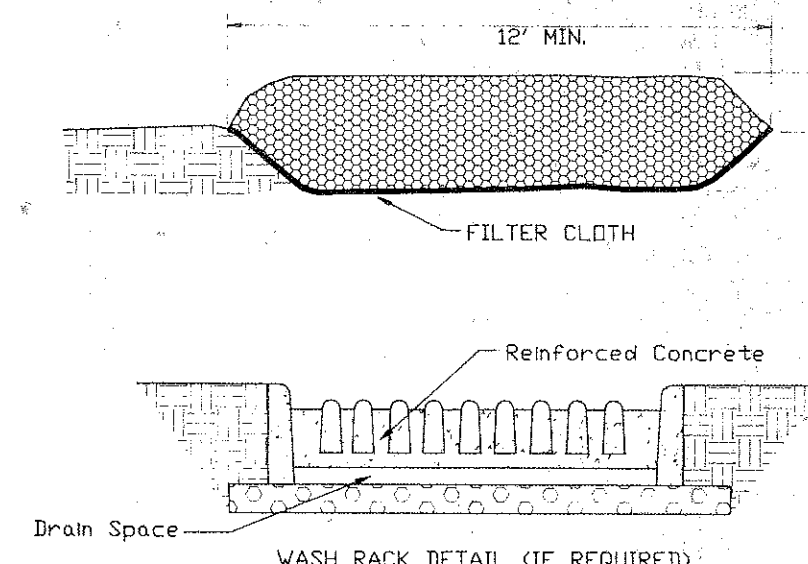
3" MIN.

LIME: 140 LB / 1000 SF PULVERIZED AGRICULTURAL LIMESTONE

FERTILIZER: 5-20-10 @ 25 LB / 1000 SF
38-0-0 @ 7 LB / 1000 SF

MULCH: IF REQUIRED, SHALL BE USED OVER ALL SEEDED AREAS APPLIED IN ACCORDANCE WITH SECTION 1.75 OF THE VIRGINIA SEDIMENT CONTROL HANDBOOK, LATEST EDITION.

FIG. 10-1



CE TEMPORARY GRAVEL
CONSTRUCTION ENTRANCE

| DESCRIPTION | UNIT | QUANTITY | UNIT COST | TOTAL COST |
|--------------------------|-----------|----------|-----------|-------------|
| CONSTRUCTION ENTRANCE | EA | | | \$ |
| SILT FENCE | LF | 2400 | 3.00 | 7,200.00 |
| CULVERT INLET PROTECTION | EA | 1 | 50.00 | 50.00 |
| TEMPORARY DIVERSION DIKE | | | | |
| TEMPORARY FILL DIVERSION | LF | | | |
| SEDIMENT TRAP | EA | | | |
| CHECK DAM | EA | | | |
| PERMANENT SEEDING | 1000/S.F. | 49 | 16.00 | 784.00 |
| OUTLET PROTECTION | EA | 1 | 75.00 | 75.00 |
| SEDIMENT BASIN | EA | | | |
| CLASS I RIP RAP | S.Y. | 5 | 10.00 | 50.00 |
| | | | | |
| SUB-TOTAL | | | | 8,159.00 |
| 10% CONTINGENCY | | | | \$ 815.90 |
| TOTAL PROJECT COST | | | | \$ 8,974.90 |

1. ALL SOIL EROSION & SEDIMENT CONTROL MEASURES SHALL BE ACCOMPLISHED IN STRICT ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS CONTAINED IN THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK, LATEST EDITION.
2. THE APPROVING AUTHORITY MAY ADD TO, DELETE, RELOCATE, CHANGE, OR OTHERWISE MODIFY CERTAIN EROSION AND SEDIMENT CONTROL MEASURES WHERE FIELD CONDITIONS ARE ENCOUNTERED THAT WARRANT SUCH MODIFICATIONS.
3. ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES AS SHOWN ON THE PLAN SHALL BE PLACED IN ADVANCE OF THE WORK BEING PERFORMED, AS FAR AS PRACTICAL.
4. IN NO CASE DURING CONSTRUCTION SHALL WATER RUNOFF BE DIVERTED OR ALLOWED TO FLOW TO LOCATIONS WHERE ADEQUATE PROTECTION HAS NOT BEEN PROVIDED.
5. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LEAVE THE SITE ADEQUATELY PROTECTED AGAINST EROSION, SEDIMENTATION, OR ANY DAMAGE TO ANY ADJACENT PROPERTY AT THE END OF EACH DAY'S WORK.
6. FOR THE EROSION CONTROL KEY SYMBOLS SHOWN ON THE PLANS, REFER TO THE VIRGINIA UNIFORM CODING SYSTEM FOR EROSION AND SEDIMENT CONTROL PRACTICES CONTAINED IN THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK, LATEST EDITION. THESE SYMBOLS AND THE UNIFORM CODING KEY SHALL BE UTILIZED ON ALL EROSION CONTROL PLANS SUBMITTED TO RANDOLPH COUNTY.

| TYPE A | TYPE B (SLOPES 34 OR STEEPER) |
|---|---|
| FEBRUARY TO 1 FEBRUARY CROWN VETCH @ 5 LB / 1000 SF 1/3 WINTER RYE @ 1/2 LB / 1000 SF | 15 MARCH TO 1 MAY CROWN VETCH @ 1/2 LB / 1000 SF PERENNIAL RYEGRASS @ 1/2 LB / 1000 SF RED TOP @ 1/8 LB / 1000 SF |
| FEBRUARY TO 1 JUNE CROWN VETCH @ 5 LB / 1000 SF CROWN RYE @ 1/2 LB / 1000 SF | 15 AUGUST TO 1 OCTOBER CROWN VETCH @ 1/2 LB / 1000 SF PERENNIAL RYEGRASS @ 1/2 LB / 1000 SF RED TOP @ 1/8 LB / 1000 SF |
| FEBRUARY TO 1 SEPTEMBER CROWN VETCH @ 5 LB / 1000 SF WINTER RYE @ 1/2 LB / 1000 SF | |
| FEBRUARY TO 15 OCTOBER CROWN VETCH @ 5 LB / 1000 SF CROWN RYE @ 1/2 LB / 1000 SF | |

LIME: 140 LB / 1000 SF PULVERIZED AGRICULTURAL LIMESTONE
FERTILIZER: 5-20-10 @ 25 LB / 1000 SF
38-0-0 @ 7 LB / 1000 SF
MULCH: IF REQUIRED, SHALL BE USED OVER ALL SEEDING AREAS AND SHALL BE
APPLIED IN ACCORDANCE WITH SECTION 1.25 OF THE VIRGINIA EROSION
AND SEDIMENT CONTROL HANDBOOK, LATEST EDITION.
SOIL CONDITIONING:
INCORPORATION OF LIME AND FERTILIZER, SELECTION OF CERTIFIED
SEED, MULCHING, MAINTENANCE OF NEW SEEDLINGS, AND RESEEDING
SHALL BE IN ACCORDANCE WITH SPECIFICATIONS CONTAINED WITHIN
THE VIRGINIA SOIL EROSION AND SEDIMENT CONTROL HANDBOOK,
LATEST EDITION. ADDITIONAL SEEDING TO BE PERFORMED AS REQUIRED
BY THE INSPECTOR.
SEED APPLICATION: APPLY SEED UNIFORMLY WITH A CYCLONE SEEDER, SEED-
BULKTAKER SEEDER, OR HYDRASEEDER ON A FIRM FRIABLE, DRILLED,
MAXIMUM SEEDING DEPTH SHALL BE 1/4 INCH.

TOTAL DISTURBED AREA = 2.34 AC. = 102,000 SQ. FT.