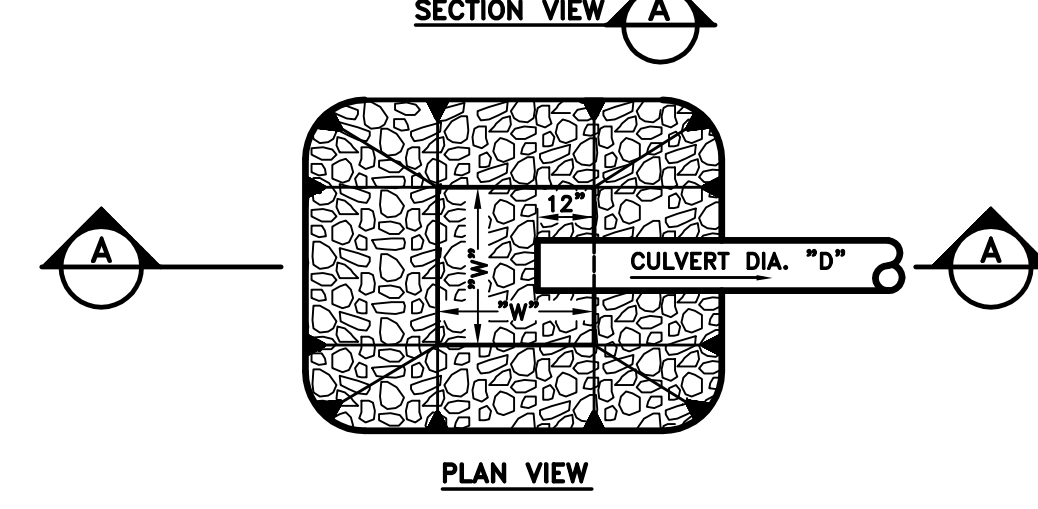
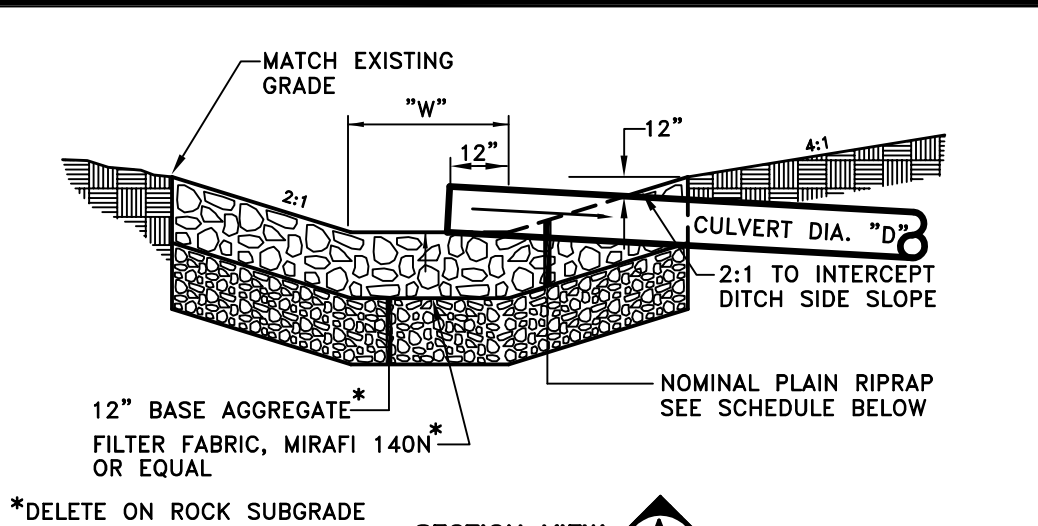


SPECIFIC APPLICATION
THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE HEAVY FLOWS ARE EXPECTED AND WHERE AN OVERFLOW CAPACITY IS NECESSARY TO PREVENT EXCESSIVE PONDING AROUND THE STRUCTURE.

- NOTES:**
- PLACE CONCRETE BLOCKS LENGTHWISE ON THEIR SIDES IN A SINGLE ROW AROUND THE PERIMETER OF THE INLET, WITH THE ENDS OF ADJACENT BLOCKS ABUTTING. THE HEIGHT OF THE BARRIER CAN BE VARYING, DEPENDING ON DESIGN NEEDS, BY STACKING COMBINATIONS OF 4", 6" AND 12" WIDE BLOCKS. THE BARRIER OF BLOCKS SHALL BE AT LEAST 12 INCHES HIGH, AND NO GREATER THAN 24" HIGH.
 - WIRE MESH SHALL BE PLACED OVER THE OUTSIDE VERTICAL FACE (WEBBING) OF THE CONCRETE BLOCKS TO PREVENT STONE FROM BEING WASHED THROUGH THE HOLES IN THE BLOCKS. HARDWARE CLOTH OR COMPARABLE WIRE MESH WITH 1/2" OPENINGS SHALL BE USED.
 - STONE SHALL BE PILED AGAINST THE WIRE TO THE TOP OF THE BLOCK BARRIER, AS SHOWN IN DETAIL. THE STONE FILTER SHALL BE 3/4" CRUSHED STONE.
 - IF THE STONE FILTER BECOMES CLOGGED WITH SEDIMENT, SO THAT IT NO LONGER ADEQUATELY PERFORMS ITS FUNCTION, THE STONE SHALL BE PULLED AWAY FROM THE BLOCKS, CLEANED AND REPLACED.

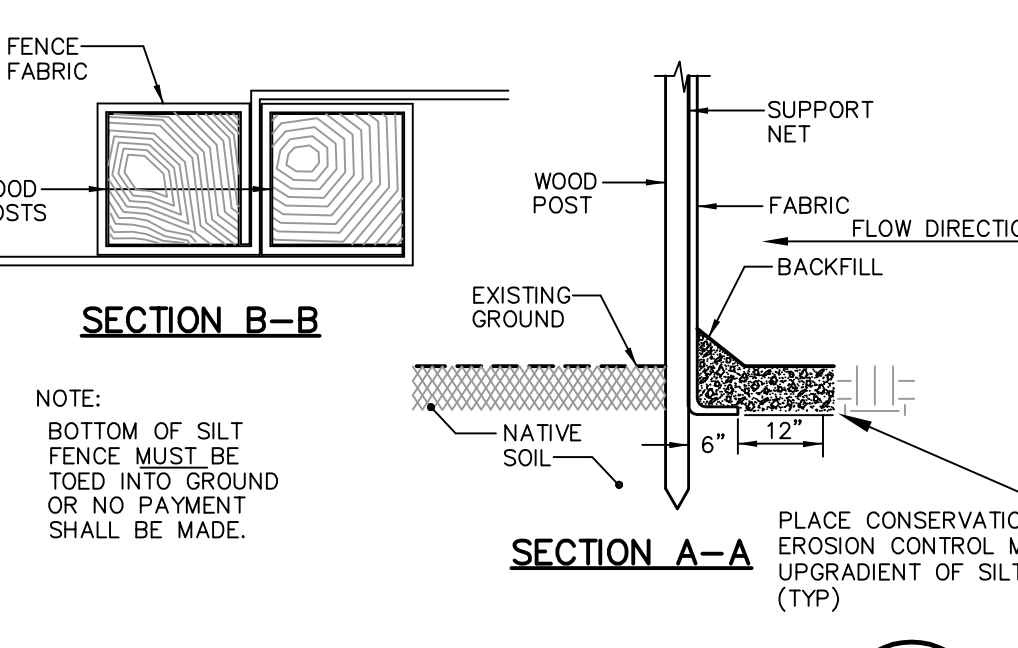
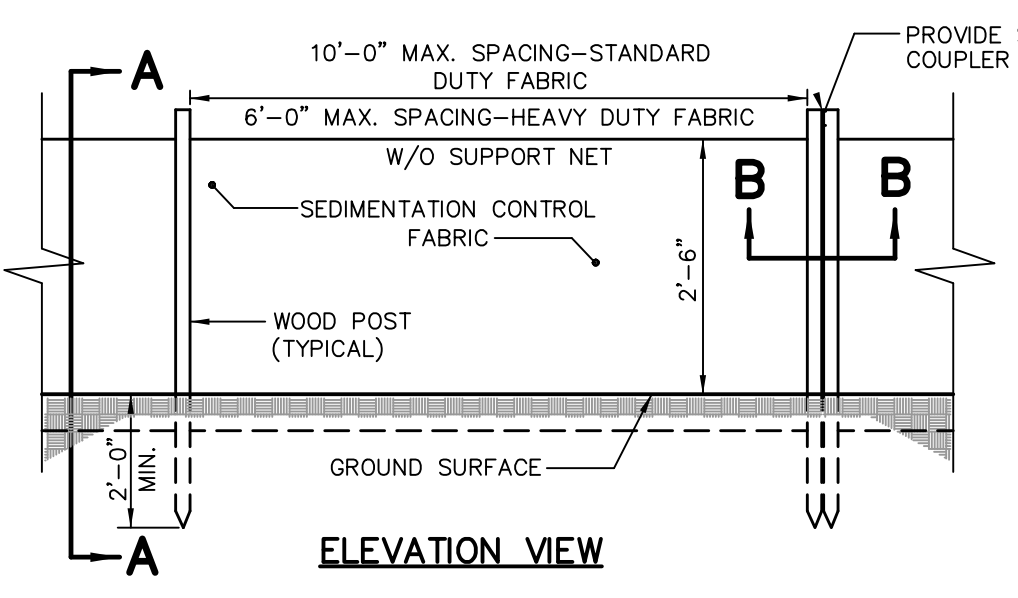
STONE SEDIMENT BARRIER (A) (C5)
N.T.S.



SCHEDULE

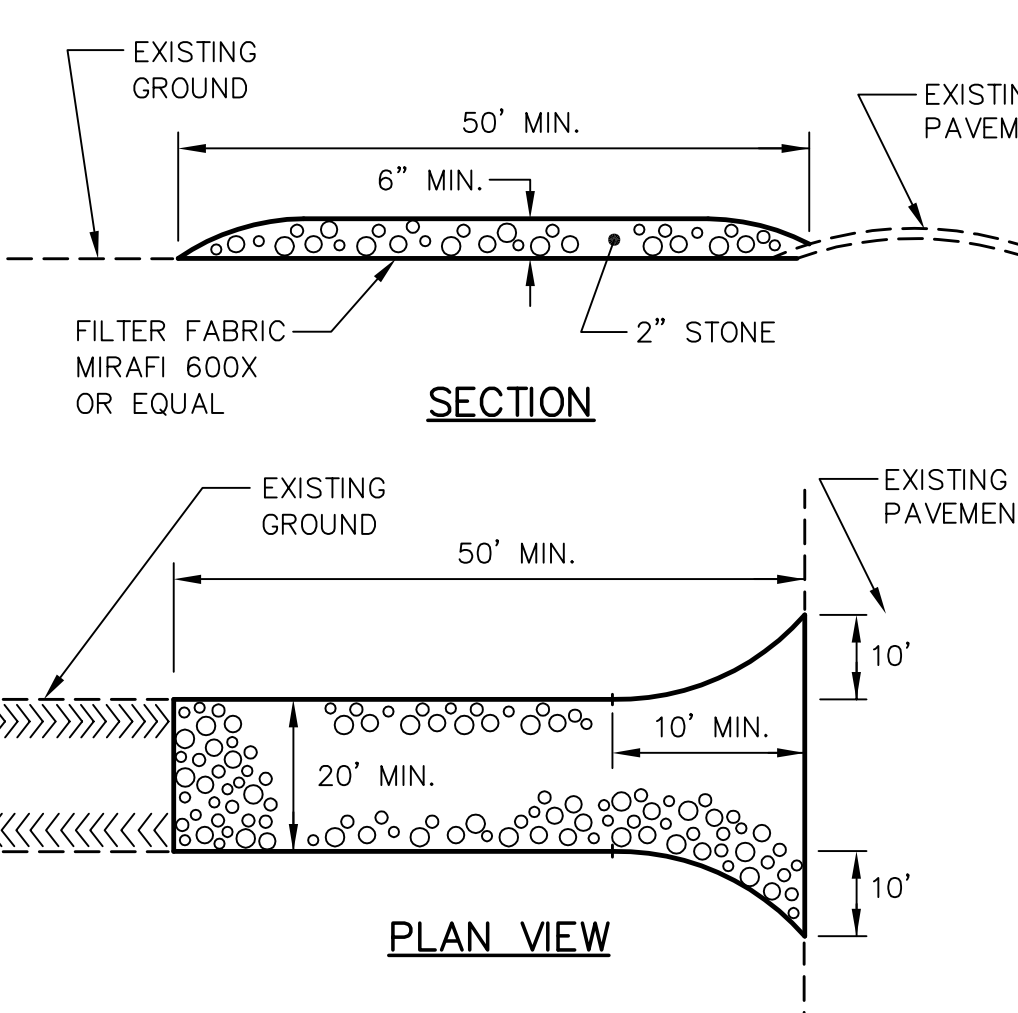
CULVERT DIAMETER (D)	WIDTH (W)	STONE #50	RIPRAP THICKNESS
12"	5'	6"	14"
24"	5'	9"	21"

CULVERT INLET APRON (D) (C5)
N.T.S.

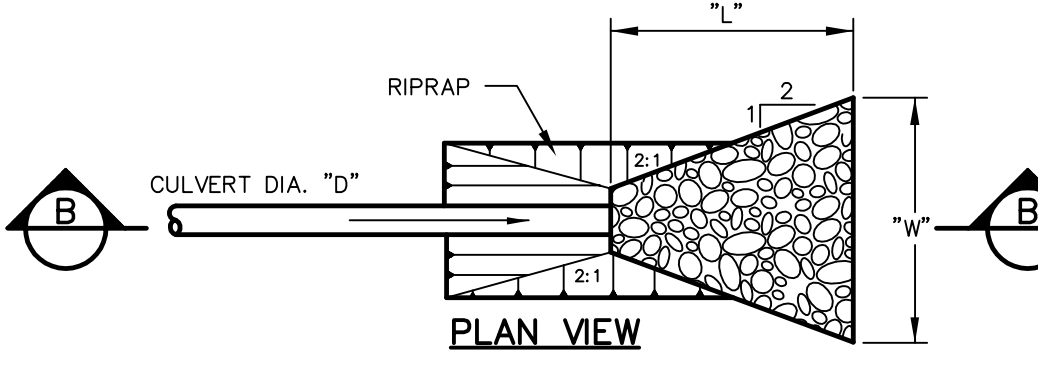
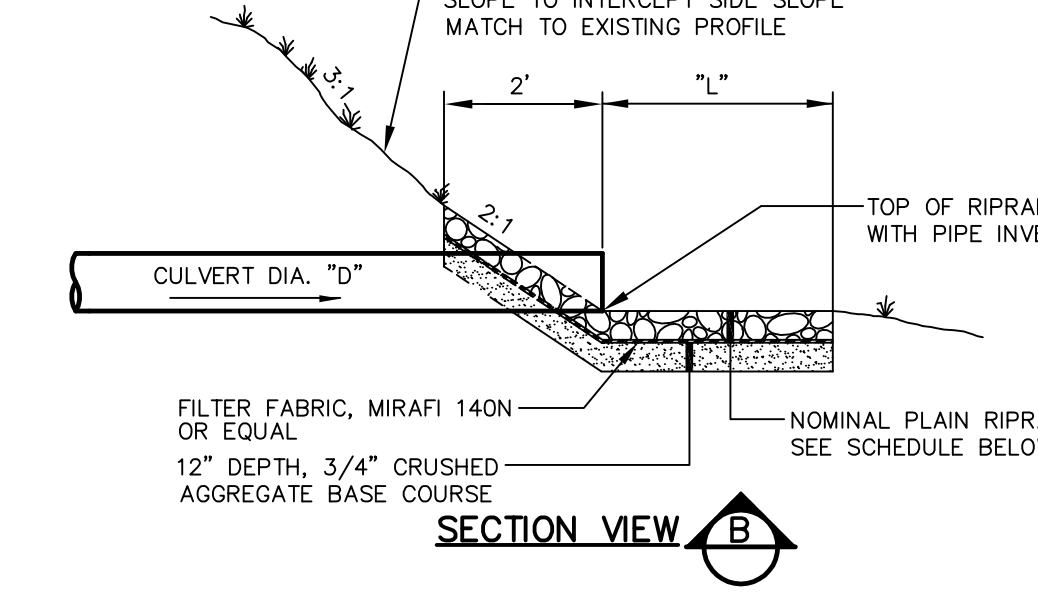


SILTATION FENCE DETAIL (B) (C5)
N.T.S.

NOTE:
CONTRACTOR SHALL ADD STONE TO ENTRANCE AS MUD/SILT MATERIAL ACCUMULATES.



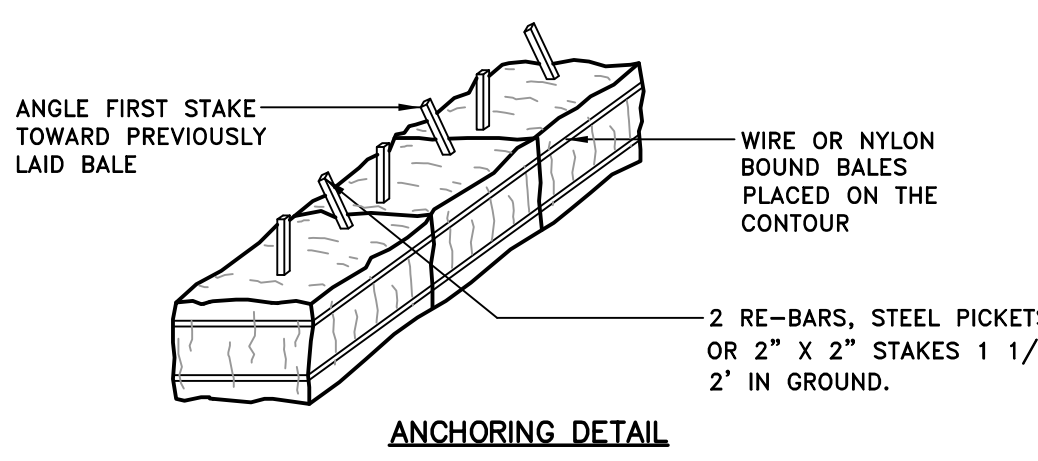
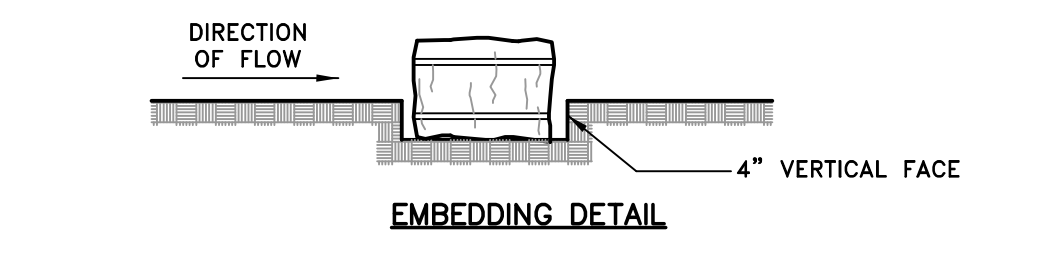
STABILIZED CONSTRUCTION ENTRANCE (C) (C5)
N.T.S.



SCHEDULE

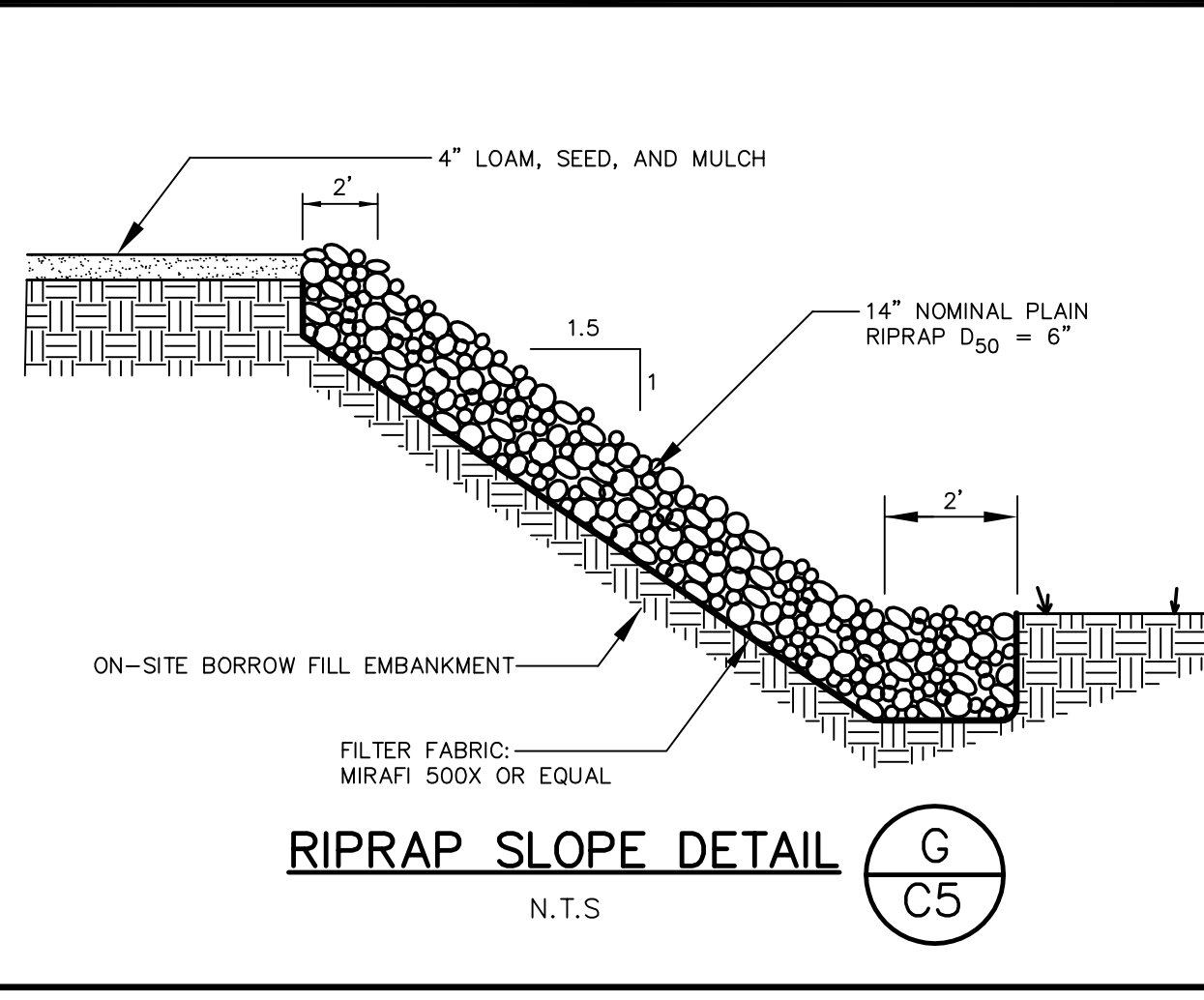
CULVERT DIAMETER (D)	LENGTH (L)	WIDTH (W)	STONE #50	RIPRAP THICKNESS
12"	10'	12'	6"	14"
24"	12'	18'	9"	21"

CULVERT OUTLET APRON (E) (C5)
N.T.S.



- CONSTRUCTION SPECIFICATIONS**
- Bales shall be placed in a row with ends tightly abutting the adjacent bales.
 - Each bale shall be embedded in the soil a minimum of 4".
 - Bales shall be securely anchored in place by stakes or re-bars driven through the bales. The first stake in each bale shall be angled toward previously laid bale to force bales together.
 - Inspection will be frequent and repair or replacement shall be made promptly as needed.
 - Bales shall be removed when they have served their usefulness so as not to block or impede storm flow or drainage.

STRAW OR HAY BALE BARRIER (F) (C5)
N.T.S.



RIPRAP SLOPE DETAIL (G) (C5)
N.T.S.

EROSION/SEDIMENTATION CONTROL REPORT

8.3 Overview of Soil Erosion and Sedimentation Concerns
The susceptibility of soils to erosion is indicated on a relative "K" scale of values over a range of 0.02 to 0.69. The higher values are indicative of the more erodible soils. The Medium Intensity Soils Map, which is included in Exhibit 1 as Figure 3, shows the types of soils on the parcel. The following table lists the soils and their K values:

SOIL TYPE	GENERAL DESCRIPTION	SURFACE	SUBSURFACE	SUBSTRATUM
BIDDEFORD	SILT LOAM	0.32	0.49	0.49
BUXTON	SILT LOAM	0.32	0.49	0.49
SCANTIC	SILT LOAM	0.32	0.49	0.49

Based on a review of the K values, the onsite soils are moderately susceptible to erosion. The primary emphasis of the erosion/sedimentation control plan for this project is as follows:

- Development of a careful construction sequence.
- Rapid revegetation, paving, or riprap stabilization of denuded areas to minimize the period of soil exposure.
- Rapid stabilization of drainage paths to avoid fill and gully erosion.
- The use of onsite measures to capture sediment (silt fence, check dams, etc.)

8.4 Description and Location of Limits of All Proposed Earth Movements
Construction of the project will require the following onsite improvements:

- Construction of a site access/haul road from Johnson Road.
- Placement of the site fill for the building and parking areas.
- Construction of the building and completion of peripheral site work.

8.5 Existing and Proposed Drainage Features
As described above, the site consists of wetlands surrounded by roads and road construction. A drainage swale transects the site northeast to southwest, from a newly installed culvert on the MTA turnpike interchange access road. Just below the site, this swale intersects a drainage swale from the northeast that is mapped as a stream on the USGS 7.5 minute series Portland West quadrangle. No streams exist on the project parcel.

8.6 Erosion/Sedimentation Control Devices
The following erosion and sediment control devices will be implemented as part of the site development. These devices shall be installed as indicated on the plans or as described within this report. For further reference, see the Maine Erosion and Sediment Control Handbook for Construction: Best Management Practices.

- Siltation fence shall be installed downstream of any disturbed areas to trap runoff-borne sediments until the site is stabilized by paving, riprap, or revegetation. The silt fence shall be installed per the detail provided in the plan set and inspected immediately after each rainfall and at least daily during prolonged rainfall. Repairs shall be made if there are any signs of erosion or sedimentation below the fence line. If there are signs of undercutting at the center or the edges, or impounding of large volumes of water behind the fence, the barrier shall be replaced with a stone check dam.
- Straw or hay mulch is intended to provide cover for denuded or seeded areas until revegetation is established. Mulch placed on slopes of less than 10 percent shall be anchored by applying water; mulch placed on slopes steeper than 10 percent shall be covered with a fabric netting and anchored with staples in accordance with the manufacturer's recommendations. Mulch application rates are provided in the attachments to this section.
- Riprap slopes are intended to stabilize the steep embankments used to reduce the wetland fill area. Installation details and stone sizes are provided in the plan set on the erosion and sedimentation control detail sheet.
- Riprap culvert inlet and outlet aprons are intended to reduce stormwater flow velocities and protect the underlying soil surfaces from concentrated flows. Installation details and stone sizes are provided in the construction plan set on the erosion control detail sheet.
- A construction entrance will be constructed at the site access points to prevent tracking of soil onto Johnson Road.
- Sediment traps will be installed at catch basin inlets to reduce the amount of silt entering the storm drain system. Installation details are provided in the plan set on the erosion control detail sheet.
- Loam and seed is intended to serve as the primary permanent vegetative measure for all denuded areas not provided with other erosion control measures, such as riprap. Application rates are provided in the attachments to this section for temporary and permanent seeding in non-wetland areas as well as for temporarily disturbed wetlands.

8.7 Temporary Erosion/Sedimentation Control Measures
The following are planned as temporary erosion/sedimentation control measures during construction:

- A crushed stone stabilized construction entrance shall be placed at the site access onto Johnson Road.
- Siltation fence shall be installed along the down gradient side of all construction disturbance. Siltation fence will be maintained in place until the tributary area served by the fence is revegetated or stabilized by paving or riprap. Silt fencing with a minimum stake spacing of 6 feet should be used, unless the fence is supported by wire fence reinforcement of minimum 14 gauge and with a maximum mesh spacing of 8 inches, in which case stakes may be spaced a maximum of 10 feet apart. The bottom of the fence shall be anchored.
- Temporary stockpiles of stumps, grubbing, or common excavation will be protected as follows:
 - Temporary stockpiles shall be located away from drainage swales and shall be surrounded by siltation fence, in addition to that provided at the site perimeter.
 - Stockpiles shall be stabilized within 7 days by either temporary seeding the stockpile with a hydrosed method containing an emulsified mulch tackifier or by covering the stockpile with mulch.
 - All rough graded areas that are not located within the building pad or parking and roadway subbase areas, shall receive mulch or erosion control mesh fabric within 7 days of initial disturbance of soil.
 - For work which is conducted between November 1 and April 15 of any calendar year, all denuded areas will be covered with hay mulch, applied at twice the normal application rate and anchored with a fabric netting. The time period for applying mulch as noted in Paragraph 8.7.4 shall be limited to 7 days for all areas.
 - Johnson Road shall be swept to control mud and dust as necessary.
 - During grubbing operations stone check dams will be installed at any evident concentrated flow discharge points.
 - Storm drain catch basin inlet protection shall be provided through the use of stone sediment barriers. Installation details are provided in the plan set. The barriers shall be inspected after each rainfall and repairs made as necessary. Sediment shall be removed and the barrier restored to its original dimensions when the sediment has accumulated to < the design depth of the barrier. The barrier shall be removed when the tributary drainage area has been stabilized.

8.8 Permanent Erosion Control Measures

The following permanent erosion control measures have been designed as part of the Erosion/Sedimentation Control Plan:

- Any storm drain pipe shall have a riprap apron or plunge pool at its outlet to protect the outlet and receiving channel from scour and deterioration. Installation details are provided in the plan set. The aprons and plunge pools shall be installed and stabilized prior to directing runoff to the tributary pipe or culvert.
- Riprap slopes will control erosion of the steep slopes around the site perimeter that are included to reduce the extent of wetland filling.
- The vegetated channel along the southeastern side of the site will convey off-site runoff around the site while protecting the site side slopes and wetlands from the concentrated flow. This channel is to be constructed and stabilized prior to site filling and diversion of stormwater from the existing wetland swale.
- All areas disturbed during construction, but not subject to other restoration (paving, riprap, sod, etc.) will be loamed, limed, fertilized, mulched, and seeded. Fabric netting, anchored with staples, shall be placed over the mulch in areas where the finish grade slope is greater than 10 percent. All areas shall receive protection within 7 days. Native topsoil shall be stockpiled and reused for final restoration when it is of sufficient quality.
- Catch basins will be provided with sediment sumps, and inlet hoods for all outlet pipes that are 12" in diameter.

8.9 Timing and Sequence of Erosion/Sedimentation Control Measures

The following construction sequence shall be required to insure the effectiveness of the erosion and sedimentation control measures are optimized:

- For all grading activities, the contractor shall limit the area disturbed at any time, and exercise extreme caution not to overexpose the site.
- Provide perimeter siltation fence and check dams.
- Clear and grub area required, and construct the vegetated channel at the southeast site perimeter, and the riprap outlet aprons.
- Clear and grub the site.
- Regrade the site, using imported office borrow material.
- Install the storm drain system as grading and filling proceeds, and direct construction site runoff to the inlet sediment barriers and catch basins for sediment retention.
- Stabilize the sideslopes with riprap as the filling proceeds. Place fill in a manner to direct building pad runoff away from the exterior slopes and into the storm drains.
- Commence construction of the sanitary sewer structures and piping.
- Commence construction of the building water services.
- Commence foundation preparation for the building.
- Complete building foundations; commence superstructure construction.
- Complete underground utility installation to within 5 feet of the building.
- Complete earthwork to subgrade. Stabilize with gravel base in areas to be paved, and with loam, seed, and mulch or riprap, as indicated for non-paved areas.
- Construct curbing.
- Construct base course paving.
- Complete building.
- Install surface course paving and stripe per plans.
- Remove accumulated sediment from ahead of any sediment barriers as necessary.
- Once the site is stabilized and a 75% catch of vegetation has been obtained, remove all temporary erosion control measures.
- Touch up loam and seed.

Note: All denuded areas not subject to final paving, riprap or gravel shall be revegetated with loam and seed. The Contractor shall submit a schedule for the completion of the work which will satisfy the following criteria:

- The above construction sequence should generally be completed in the specified order; however, several separate items may be constructed simultaneously. Work must also be scheduled or phased to limit the extent of the exposed areas as specified below. The intent of this sequence is to provide for erosion control and to have structural measures such as silt fence and construction entrances in place before large areas of land are denuded.
- The work shall be conducted in sections which will:
 - Limit the amount of exposed area to those areas in which work is expected to be undertaken during the preceding 30 days.
 - Revegetate disturbed areas as rapidly as possible. All areas shall be permanently stabilized within 7 days of final grading or before a storm event; or temporarily stabilized within 7 days of initial disturbance of soil.
 - Incorporate planned inlets and drainage system as early as possible into the construction phase. The ditch shall be lined with riprap immediately following subgrade preparation.

For all work which will be conducted between November 1 and April 15 of the calendar year, the Contractor shall submit a schedule which will satisfy the following criteria:

- Limit the amount of exposed area to those areas in which work is expected to be undertaken during the preceding 15 days.
- During the construction process, all disturbed areas shall be covered with mulch within 7 days of final grading.
- Once final grade has been established, the contractor may choose to dormant seed the disturbed areas prior to placement of mulch and placement of fabric netting anchored with staples.
- If dormant seeding is used for the site, all disturbed areas shall receive 4" of loam, and seed at an application rate of 5#/1000 s.f.

All areas seeded during the winter months will be inspected in the spring for an adequate catch of grass. All areas insufficiently vegetated (less than 75 percent catch) shall be revegetated by replacing loam, seed and mulch.

8.10 Preconstruction Conference
Prior to any construction at the site, representatives of the Contractor and the site design engineer shall arrange for and meet with the Owner's Representative to discuss the scheduling of the site construction. On or before that meeting, the Contractor will prepare a detailed schedule and a marked-up site plan indicating areas and components of the work and key dates showing date of disturbance and completion of the work. If disturbed areas are not to be finished (loamed, seeded, and mulched) within seven (7) days, the scheduling shall indicate those areas to be protected with temporary seeding/mulch. Three copies of the schedule and marked-up site plan shall be provided to the Owner.

PERMANENT SEEDING PLAN NON-WETLAND AREAS

Project: Pine Tree Council of the Boy Scouts of America
Site Location: Johnson Road, Portland, Maine
X Permanent Seeding Temporary Seeding

- Area to be seeded: ___ acre, OR ___ M Sq. Ft.
- Instructions on preparation of soil: Prepare a good seed bed for planting method used.
- Apply lime as follows: ___ #/acres, OR ___ #/M Sq. Ft.
- Fertilize with ___ pounds of ___ N-P-K/ac. OR ___ pounds of ___ N-P-K/M Sq. Ft.
- Method of applying lime and fertilizer: Spread and work into the soil before seeding.
- Seed with the following mixture:
 - 40% SR 3000 Fineleaf Fescue
 - 30% A-34 Kentucky Bluegrass
 - 20% Pennant Perennial Rye Grass
 - 10% Baron Kentucky Bluegrass
 When using small grain as nurse crop seed it at one-half the normal seeding rate.
- Mulching instructions: Apply at the rate of ___ tons per acre. OR ___ pounds per M. Sq. Ft.

Amount Unit# Tons, Etc.

8. TOTAL LIME.....	138#/1000 sq. ft.
9. TOTAL FERTILIZER.....	18.4#/1000 sq. ft.
10. TOTAL SEED.....	2.30#/1000 sq. ft.
11. TOTAL MULCH.....	115#/1000 sq. ft.
12. TOTAL other materials, seeds, etc.....	

REMARKS
Spring seeding is recommended, however, late summer (prior to September 1) seeding can be made. Permanent seeding should be made prior to August 5 or as a dormant seeding after the first killing frost and before the first snowfall. If seeding cannot be done within these seeding dates, temporary seeding and mulching shall be used to protect the site. Permanent seeding shall be delayed until the next recommended seeding period.

TEMPORARY SEEDING PLAN NON-WETLAND AREAS

Project: Pine Tree Council of the Boy Scouts of America
Site Location: Johnson Road, Portland, Maine
X Permanent Seeding Temporary Seeding

- Area to be seeded: ___ acre, OR ___ M Sq. Ft.
- Instructions on preparation of soil: Prepare a good seed bed for planting method used.
- Apply lime as follows: ___ #/acres, OR ___ #/M Sq. Ft.
- Fertilize with ___ pounds of ___ N-P-K/ac. OR ___ pounds of ___ N-P-K/M Sq. Ft.
- Method of applying lime and fertilizer: Spread and work into the soil before seeding.
- Seed with the following mixture:
 - 100% Winter Rye (Fall)
 - 100% Oats (Spring)
 When using small grain as nurse crop seed it at one-half the normal seeding rate.
- Mulching instructions: Apply at the rate of ___ tons per acre. OR ___ pounds per M. Sq. Ft.

Amount Unit# Tons, Etc.

8. TOTAL LIME.....	138#/1000 sq. ft.
9. TOTAL FERTILIZER.....	18.4#/1000 sq. ft.
10. TOTAL SEED.....	2.6 Rye, 1.8 Oats #/1000 sq. ft.
11. TOTAL MULCH.....	115#/1000 sq. ft.
12. TOTAL other materials, seeds, etc.....	

REMARKS
- Recommended seeding dates after August 15.
- For areas with slopes >10%, waterways, areas within 100 feet of the stream, and fall and winter erosion control areas, mulch netting shall be used per manufacturer's specifications.
- For seeding between November 1 and April 15 the mulching application rate should be doubled.

SEEDING PLAN WETLAND AREAS

Project: Pine Tree Council of the Boy Scouts of America
Site Location: Johnson Road, Portland, Maine
X Permanent Seeding Temporary Seeding

- Area to be seeded: ___ acre, OR ___ M Sq. Ft.
- Instructions on preparation of soil: Prepare a good seed bed for planting method used.
- Apply lime as follows: ___ #/acres, OR ___ #/M Sq. Ft.
- Fertilize with ___ pounds of ___ N-P-K/ac. OR ___ pounds of ___ N-P-K/M Sq. Ft.
- Method of applying lime and fertilizer: Spread and work into the soil before seeding.
- Seed with the following mixture:
 - 15% Annual Rye
 - 15% Red Top
 - 15% Blue Joint Grass
 - 40% Reed Canary Grass
 - 15% Wool Grass
 When using small grain as nurse crop seed it at one-half the normal seeding rate.
- Mulching instructions: Apply at the rate of ___ tons per acre. OR ___ pounds per M. Sq. Ft.

Amount Unit# Tons, Etc.

8. TOTAL LIME.....	138#/1000 sq. ft.
9. TOTAL FERTILIZER.....	18.4#/1000 sq. ft.
10. TOTAL SEED.....	3.0#/1000 sq. ft.
11. TOTAL MULCH.....	180#/1000 sq. ft.
12. TOTAL other materials, seeds, etc.....	

REMARKS
The above seed mix is required in all temporarily disturbed wetland areas.

PINE TREE COUNCIL HEADQUARTERS PROJECT			DRAWN: CDD DESIGNED: DDA DATE: MAY 2001 SCALE: AS SHOWN JOB NO. 1097 SHEET C10
REV	DATE	DESCRIPTION	
5	02/10/04	ISSUED TO DANBRO FOR PRICING	
4	06/26/01	REVISED PER CITY COMMENTS & RESUBMITTED TO CITY AND M&DEP	
3	05/04/01	SUBMITTED TO CITY & TO M&DEP WITH TIER 2 NRP APPLICATION	
2	02/19/99	SUBMITTED TO M&DEP WITH ALTERNATIVE ANALYSIS	
1	01/19/99	SUBMITTED TO BSA FOR REVIEW	
P.E. DWIGHT D. ANDERSON LIC. #9275			