STATE OF VERMONT
AGENCY OF TRANSPORTATION

EROSION CONTROL NARRATIVE

GENERAL EROSION PROVENTION & SEDIMENT CONTROL (EPSC) GUIDELINES

The Erosion Control plans are intended as a guide for preventing soil erosion and controlling sediment. The work outlined in this narrative consists of applying measures throughout the duration of the project to control erosion and minimize the sedimentation of the receiving waters.

A Temporary erosion control plan will be submitted by the contractor for approval by the Agency of Transportation.

The contractor will use other temporary or permanent erosion control devices as necessitated by the sequence of construction and as directed by the Resident Engineer. See Subsection 105.23 of the 2006 Vermont Standard Specifications for Construction.

The contractor shall coordinate the installation, use, and removal of erosion and sediment control measures with construction activities to assure economical, effective, and continuous erosion and sediment control. The contractor shall employ temporary stabilization practices in incremental stages as construction activities proceed.

The Resident Engineer may direct the installation of certain erosion control measures in order to forestall or mitigate potential or existing erosion problems, or to respond to storm events or damage by construction operations.

The contractor shall install erosion and sediment control measures as sequenced on the EPSC Plan, or as directed by the Resident Engineer. The type, size, and location of any erosion control device shall not be changed unless prior approval is obtained from the Resident Engineer. Any approved changes shall be noted on the EPSC Plans and discussed in the weekly report. The contractor shall inspect all erosion control measures daily and after each rainfall event. The contractor shall repair all damaged erosion control measures immediately. All erosion control measures that trap sediment, such as sediment basins and silt fences, shall be cleaned out when their capacity reaches 50%.

The Resident Engineer' s approval should be obtained prior to installing any erosion controls not specified in the EPSC Plans. However, in emergency situations where the Resident Engineer is not immediately available, the contractor should repair or install the erosion controls as he/she deems necessary and report the incident to the Resident Engineer as soon as it is practical.

The contractor shall control all sediment-laden runoff within the project site. Clean runoff from outside the project site shall be routed through the project site using diversion berms, diversion channels, and temporary or permanent culverts.

Construction equipment will not be allowed to operate on the outside of the perimeter control measures.

Construction equipment will not be allowed to cross a flowing stream, or disturb the existing stream banks, unless authorized by the Resident Engineer.

All in-stream construction must take place in a dry channel between June 1st and October 1st.

In general, preserve existing vegetation, shrubs, and trees whenever possible.

Silt fence shall be placed at the toes of all fill slopes and shall be constructed so that flows cannot bypass the ends. Areas directly below (downhill) of the silt fences must be un-disturbed and vegetated.

As construction progresses, implementation of additional erosion control measures may be required as deemed necessary by the On-Site Coordinator and as approved by the Resident Engineer.

INFORMATION REQUIRED FROM CONTRACTOR

Much of the erosion control information shown on the erosion control plans and described in this narrative is general in nature. More site specific information is not yet available as a contractor has not yet been selected. The following list outlines some of the specific information that is not included in the erosion control plans and described in this narrative:

1. The location of vehicle tracking pads.
2. The location of stockpiles, staging areas, and disposal areas.
3. A specific timetable of construction and earthwork activities.
4. The name, title, qualifications, and contact information for the on-site project coordinator.
5. The sequencing of construction activities and specific measures that will be implemented in conjunction with these activities.
6. The Contractor is required to submit the "EPSC Contractor Checklist" for review and approval by the VTrans Construction Environmental Engineer prior to commencement of construction.

DESCRIPTION OF PROJECT

This project involves reconstruction of bridge # 50 over Crook Brook on VT 105 in the town of Jay. Crook Brook is characterized as a moderately steep stream with some bank erosion but mostly stable. The streambed consists of Gravel and Cobbles. The total drainage area is 1.5 square miles.

Features of concern with respect to erosion control include embankments immediately adjacent to the project. A new buried precast concrete box will be constructed on the existing alignment.
Traffic will be maintained with a detour as shown on the project plans. The construction limits do not approach any buildings or any other structures outside the project limits.

It is anticipated that the project will last one construction season.

Disturbed area (excluding waste, borrow, and staging areas) = 0.20 acres. Estimated Total disturbed area (including waste, staging, and borrow) is anticipated to be less than 1 Acre.

SITE INVENTORY ANALYSIS

1. OFF SITE DRAINAGE CHARACTERISTICS AND TOPGRAPHY

The area outside the immediate vicinity of this project is primarily Mixed dense woods, and is hilly to mountainous. VT Route 105 is a paved state highway, and is in excess of 6% gradient. There is very limited development, consisting mainly of farms which are located approximately 3000 feet westerly of the project. There is a gravel drive approximately 150 feet westerly of the outlet end of the culvert. A drive culvert beneath the drive drains roadside and drainage from a mown field into the wetland area near the outlet end of the culvert.

2. DRAINAGE, WATERWAYS, AND BODIES OF WATER.

There is a manmade pond and a large mown field northwesterly of the project, approximately 100 feet distance from the nearest disturbed soils, and at a higher elevation than the project. The Pond eventually drains into Crook Brook further downstream of the project. A Wetland area has been identified and is located along the northwestern streambank, just outside the project limits. It is shown on the project plans.

3. DESCRIPTION OF EXISTING VEGETATIVE COVER

In the immediate vicinity of the project, the existing ground cover is mostly grassy with intermittent deciduous shrubs and small trees, as depicted on the plans by the area survey.

4. DESCRIPTION OF EXISTING SOILS

A detailed description of the soil types expected to be encountered in the project area is unavailable at this time. For the purpose of this narrative we are using engineering judgment to classify the soils expected to be encountered.

The soils are mostly engineered fills from a previous project. This soil exhibits a high percolation rate that results in low erodability.

5. SENSITIVE RESOURCE AREAS

In the immediate vicinity of the project, only identified area are Crook Brook, and the Riparian Buffer.

DESCRIPTION OF SLOPES

The existing shape of the project area can be seen by looking at the erosion control existing conditions sheet where the existing contours are shown. The contours are shown in dashed and depict the half foot interval. Major contours are shown at 5 foot intervals, and are labeled.

EXISTING SLOPES

Generally speaking, the project impacts steep but short slopes.

PROPOSED SLOPES

Fill slopes that are 1-2 (50%) or flatter will be seeded and mulched, 1-1.5 slopes will be sodded or lined with stone fill. These slopes will be protected until they are fully vegetated. The slopes along the channel banks will be lined with heavy stone and are at 1-1.5 (67%) slope.

MAINTENANCE PLAN FOR EROSION AND SEDIMENT CONTROLS

The following maintenance schedule will be followed throughout the duration of the project.

1. An assigned individual who can be associated with the day-to-day operations of the project shall do monitoring of the construction site. The inspector will be familiar with this plan and with erosion & sediment control procedures and with road and bridge construction techniques. Site reviews will be performed at least once every seven calendar days, and within 24 hours of a storm event great enough to cause water to leave the construction site.
2. A copy of the Erosion Prevention and Sediment Control Weekly Plan Review prepared by the site reviewer shall be given to the Resident Engineer each week. The report will be filled out in accordance with the item 652.20 MONITORING EPSC Plan.
3. The plan preparer will be available for on-site consultations with the Resident Engineer within twenty four hours of the request.
4. All silt fences and stone check dams will be inspected each site visit by the designated inspector, as described below:
   - i. These controls will be maintained in good condition. Any silt fence or stone check dam that is ineffective will be repaired or replaced immediately.
   - ii. Sediment deposits will be removed when they reach one-half the height of the sediment control device.
   - iii. All sediments removed will be deposited in an upland portion of the project site, or disposed off-site in the designated project waste site.
5. All slopes will be checked each site visit and any eroded areas will be immediately repaired. Temporary stabilization methods will be used as necessary until final stabilization measures are in place.
6. Both temporary & permanent seeding & mulching will be checked each site visit for vegetative growth. Any areas requiring re-vegetation will be repaired immediately.
7. Drainage structures will be cleaned as necessary to remove any sediment buildup in the sump of the structures or at the inlet of the structure.
   - i. Any inlet control found to be ineffective will be replaced as necessary and will be done immediately.
   - ii. All sediments removed will be deposited in an upland portion of the project site, or disposed off-site in the designated project waste site.
8. Temporary construction accesses will be monitored each site visit. Any control found to be ineffective will be promptly replaced.
9. All temporary erosion control devices will stay in place until final grass growth has been established and complete stabilization of the areas has occurred.
10. Once stabilization has occurred, all temporary erosion control measures will be removed and all disturbed areas will be stabilized with erosion matting and/or seed & mulch.

PROJECT NAME:	JAY
PROJECT NUMBER:	ST STP CULV(2)
FILE NAME: 04b140\s04b140xc1.dgn	PLOT DATE: 23-OCT-2006
PROJECT LEADER: W. SYMONDS	DRAWN BY: T. FILLBACH
DESIGNED BY: T. FILLBACH	CHECKED BY: C. DIGIAMMARINO
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