

EROSION CONTROL NARRATIVE

DESCRIPTION OF PROJECT

LOCATED ON TOWN HIGHWAY # 3 (EAST STREET) 0.2 MILES EAST OF THE INTERSECTION WITH TOWN HIGHWAY # 1. THE PROJECT CONTINUES EAST FOR A DISTANCE OF 200 FEET ALONG TOWN HIGHWAY # 3.

WORK TO BE PERFORMED UNDER THIS CONTRACT INCLUDES REPLACEMENT OF BRIDGE #61 ON EXISTING ALIGNMENT, NEW GUARDRAIL, PAVEMENT AND ASSOCIATED ROADWAY ITEMS.

IT IS ANTICIPATED THAT THIS PROJECT WILL LAST ONE CONSTRUCTION SEASON.

TOTAL DISTURBED AREA (EXCLUDING WASTE, BORROW AND STAGING AREAS): 0.39 ACRES. FOR REQUIREMENTS, SEE EPSC ACCEPTANCE MEMO DATED NOV. 13, 2006.

SITE INVENTORY & ANALYSIS

OFF SITE DRAINAGE CHARACTERISTICS:

THE PROPERTY SURROUNDING THE PROJECT SITE CONSISTS OF WELL ESTABLISHED VEGETATION, WITH STEEP SLOPES OF VARIOUS GRASSES, SHRUBS AND TREES WITH EXPOSED LEDGE. THE DRAINAGE WAYS ARE WELL DEFINED AND RUNOFF WATER ENTERING THE PROJECT SITE WILL BE PRIMARILY LIMITED TO THAT WHICH IS CONVEYED ALONG ROADWAY DITCHES, AND CULVERTS.

DRAINAGE, WATERWAYS, BODIES OF WATER:

THE WILLOUGHBY RIVER IS LOCATED IN THE PROJECT AREA. THE WILLOUGHBY RIVER HAS A LEDGE WITH SCATTERED COBBLES STREAMBED. UPSTREAM OF THE BRIDGE THE STREAM IS STEEP BUT IS NEARLY LEVEL DOWNSTREAM OF THE BRIDGE. THE STREAM BANKS REMAIN STEEP THROUGHOUT THE PROJECT. THE WILLOUGHBY RIVER HAS A DRAINAGE AREA OF 61.4 SQ. MI.

TOPOGRAPHY, EXISTING ROADS, BUILDINGS, UTILITIES:

THE TOPOGRAPHY OF THE PROJECT SITE IS HILLY TO MOUNTAINOUS, WITH A MIXTURE OF FORESTED AND OPEN AREAS. THERE ARE SOME RESIDENCES AND BUSINESSES FOUND WITHIN THE PROJECT. OVERHEAD UTILITIES SERVICE FOLLOWS ALONG TOWN HIGHWAY # 3 WITH THE NEED FOR RELOCATION OF THE UTILITY POLES LIKELY. THE WATERLINE THAT IS CURRENTLY HANGING FROM THE BRIDGE WILL BE REPLACED ON THE NEW BRIDGE. IT SHOULD BE NOTED THAT A FISH AND GAME ACCESS IS LOCATED ADJACENT TO THE PROJECT.

VEGETATION:

THE VEGETATION SURROUNDING THE PROJECT SITE CONSISTS OF VARIOUS GRASSES, SHRUBS AND WOODED AREAS. THERE ARE NO AGRICULTURAL FIELDS NEAR THE PROJECT LIMITS. IMPACTS TO VEGETATION WILL BE LIMITED TO THAT EFFECTED BY THE CONSTRUCTION OF THE NEW BRIDGE ON THE EXISTING ALIGNMENT.

FOLLOWING THE CONSTRUCTION OF THE NEW BRIDGE, THE SLOPES WILL BE STABILIZED WITH STONE FILL AND VEGETATION WILL BE REESTABLISHED WITH STANDARD SEED AND MULCH PRACTICES.

SOILS:

A SOIL PROFILE IS NOT AVAILABLE AT THIS TIME. THE AGENCY HAS PERFORMED BORINGS AT THIS SITE AND FOUND THE SOIL TO CONSIST MOSTLY OF SAND. SAND HAS A HIGH PERCOLATION RATE WHICH EXHIBITS LOW ERODIBILITY PROPERTIES. THE SHALLOW SAND LAYER, (< 10 FEET DEEP) SITS ON LEDGE THROUGHOUT THE PROJECT. THE MAJORITY OF THIS PROJECT IS CONSIDERED TO BE "IN A FILL TYPICAL", MEANING THE ROADWAY IS HIGHER THAN THE SURROUNDING MEAN GROUND ELEVATION. DUE TO ENGINEERING REQUIREMENTS FOR SELECTIVE FILL MATERIAL DEPTHS, MUCH OF THIS FILL MATERIAL WILL NEED TO BE BROUGHT IN FROM AN OUTSIDE SOURCE. SINCE WE DO NOT KNOW WHERE THIS SOURCE PIT WILL BE, WE CAN NOT PROVIDE ITS ERODABILITY PROPERTIES.

SENSITIVE RESOURCE AREAS:

NO "THREATENED & ENDANGERED SPECIES" HAVE BEEN IDENTIFIED WITHIN THE PROJECT LIMITS AND THERE WILL BE NO ADVERSE EFFECT TO HISTORIC OR ARCHEOLOGICAL FEATURES. THE WILLOUGHBY RIVER IS A KNOWN SPAWNING WATER FOR THE RAINBOW TROUT.

PROXIMITY TO NATURAL OR MAN-MADE WATER FEATURES:

DISTURBANCE OF SOILS NEAR NATURAL OR MAN-MADE WATERWAYS CONSISTS OF THAT WHICH IS NECESSARY TO REMOVE TWO CONCRETE ABUTMENTS. STABILIZATION OF DISTURBANCES TO STREAM BANKS WILL BE ACCOMPLISHED WITH STONE FILL, TYPE IV, UNDERTLAID WITH GEOTEXTILE FABRIC.

DESCRIPTION OF SLOPES

THE EXISTING SHAPE OF THE PROJECT AREA CAN BE SEEN BY LOOKING AT THE "EXISTING EROSION CONTROL" SHEET, WHERE THE EXISTING CONTOURS ARE SHOWN.

EXISTING SLOPES

THE PROJECT IMPACTS STEEP SLOPES. THE SLOPES ARE EITHER WELL VEGETATED OR HAVE EXPOSED LEDGE.

THE PROPOSED SLOPES REMAIN STEEP, AT 1-1.5 FOR THE MAJORITY OF THE PROJECT. THE SLOPE FROM THE FRONT FACE OF ABUTMENT #1 DOWN TO THE RIVER WILL BE DETERMINED BY THE LEDGE PROFILE. THIS WILL BE EXPOSED LEDGE IN IT'S FINAL CONDITION.

THE SLOPES AFTER THE BRIDGE ON THE RIGHT WILL MATCH THE EXISTING SLOPES THE SLOPE ON THE LEFT WILL BE FLATTENED WITH THE USE OF A RETAINING WALL THAT WILL BE INSTALLED TO AID IN THE CONSTRUCTION OF A PEDESTRIAN PATH. THE RESULTING SLOPES WILL BE SEEDED AND MULCHED. THE SLOPES ALONG CHANNEL BANKS ARE LINED WITH HEAVY STONE AND ARE AT 1:-1.5 (67%).

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GENERAL EROSION & SEDIMENT CONTROL GUIDELINES

GENERAL 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.

AN ALTERNATE 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 SECTION 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 IN THE "SPECIFIC GUIDELINES", OR AS DIRECTED BY THE RESIDENT ENGINEER. THE TYPE, SIZE, AND LOCATION OF ANY EROSION CONTROL DEVICES SHALL NOT BE CHANGED UNLESS PRIOR APPROVAL IS OBTAINED FROM THE RESIDENT ENGINEER. ANY APPROVED CHANGES SHALL BE NOTED ON THE EROSION CONTROL 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 SHALL BE OBTAINED PRIOR TO INSTALLING ANY EROSION CONTROL NOT SPECIFIED IN THE EROSION CONTROL PLANS. HOWEVER, IN EMERGENCY SITUATIONS WHERE THE RESIDENT ENGINEER IS NOT IMMEDIATELY AVAILABLE, THE CONTRACTOR SHOULD REPAIR OR INSTALL THE EROSION CONTROLS AS THEY DEEM NECESSARY AND REPORT THE INCIDENT TO THE RESIDENT ENGINEER AS SOON AS PRACTICAL.

THE CONTRACTOR SHALL CONTROL ALL SEDIMENT-LADEN RUNOFF GENERATED WITHIN THE PROJECT SITE. CLEAN RUNOFF FROM OUTSIDE THE PROJECT SITE SHALL BE ROUTED THROUGH THE PROJECT USING DIVERSION BERMS, DIVERSION CHANNELS, AND TEMPORARY OR PERMANENT CULVERTS.

CONSTRUCTION EQUIPMENT WILL NOT BE ALLOWED TO OPERATE ON THE DOWNHILL SIDE 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 JULY 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 UNDISTURBED 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 BY THE CONTRACTOR

MUCH OF THE 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 STOCK PILES, STAGING AREAS, AND DISPOSAL AREAS.
3. THE NAME, TITLE, QUALIFICATIONS, AND CONTACT INFORMATION FOR THE ON-SITE COORDINATOR.

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 AFTER EACH RAIN EVENT OF MORE THAN 0.5" IN A TWENTY-FOUR HOUR PERIOD.
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 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:
 - a. THESE CONTROLS WILL BE MAINTAINED IN GOOD CONDITION. ANY SILT FENCE OR STONE CHECK DAMS THAT ARE INEFFECTIVE WILL BE REPAIRED OR REPLACED IMMEDIATELY.
 - b. SEDIMENT DEPOSITS WILL BE REMOVED WHEN THEY REACH ONE-HALF THE HEIGHT OF THE SEDIMENT CONTROL DEVICE.
 - c. 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.
 - a. ANY INLET CONTROL FOUND TO BE INEFFECTIVE WILL BE REPLACED AS NECESSARY AND WILL BE DONE IMMEDIATELY.
 - b. 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 INSPECTED EACH SITE VISIT.
9. ALL TEMPORARY EROSION CONTROL DEVICES WILL STAY IN PLACE UNTIL FINAL 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 TEMPORARY EROSION AND/OR SEED & MULCH.

SPECIFIC GUIDELINES

PERIMETER EROSION CONTROLS

PRIOR TO ANY CONSTRUCTION ACTIVITIES, THE PROJECT DEMARCATION FENCING SHALL BE PLACED ALONG THE PERIMETER OF THE PROJECT AS SHOWN ON THE EROSION CONTROL PLANS. THE INSTALLATION OF THE DEMARCATION FENCING WILL BE PERFORMED SUCH THAT NO VEGETATION ON THE OUTSIDE OF THE FENCING IS DISTURBED.

PRIOR TO ANY CONSTRUCTION OR STAGING, THE CONTRACTOR WILL INSTALL STABILIZED CONSTRUCTION ENTRANCES LEADING TO STAGING AREAS AND THE PROJECT

EROSION CONTROL NARRATIVE #1

PROJECT NAME:	BARTON	PLOT DATE:	3/29/2007
PROJECT NUMBER:	BRO 1449 (29)	DRAWN BY:	J. GILMORE
FILE NAME:	/str5/01j168/sj168ecn.xls	CHECKED BY:	T. SUMNER
PROJECT LEADER:	W. SYMONDS	SHEET	19 OF 84
DESIGNED BY:	J. REED		
EROSION CONTROL NARRATIVE #1			