

EROSION CONTROL NARRATIVE

1.1 PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE REPLACEMENT OF THE EXISTING CONCRETE T-BEAMS, DECK, RAILING, AND ASSOCIATED APPROACH WORK FOR BRIDGE 10 LOCATED IN THE VILLAGE OF FAIRFAX. AN ADJACENT RETAINING WALL LOCATED AT STATION 280+96.5LT TO 281+31.5LT WILL BE CONSTRUCTED. DRAINAGE WORK, AS DESCRIBED IN SECTION 1.2.2 BELOW, WILL BE COMPLETED. EXISTING SIDEWALK WITHIN THE PROJECT AREA WILL BE REPLACED. NO CHANNEL WORK WILL BE COMPLETED AS PART OF THIS PROJECT. ALL WORK WILL BE COMPLETED WITHIN THE RIGHT OF WAY.

TOTAL AREA OF DISTURBANCE IS APPROXIMATELY 0.41 ACRES EXCLUDING ANY WASTE, BORROW, OR STAGING AREA TO BE IDENTIFIED BY THE CONTRACTOR.

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

1.2 SITE INVENTORY

1.2.1 OFF SITE DRAINAGE CHARACTERISTICS (UP AND DOWN-GRADIENT)

THE PROJECT IS LOCATED IN THE VILLAGE OF FAIRFAX IN AN AREA OF DENSE RESIDENTIAL AND COMMERCIAL DEVELOPMENT. THE PROJECT WILL INVOLVE MINIMAL DISTURBANCE TO VEGETATION AND PREVIOUS SURFACES IN THE PROJECT AREA. THE PROJECT INCLUDES THE AREA OF THE EXISTING BRIDGE, ADJACENT SIDEWALKS AND APPROACH ROADWAY. DRAINAGE FROM THE ROADWAY AND BRIDGE SURFACE IS COLLECTED BY DROP INLETS ON THE EAST AND WEST SIDE OF THE BRIDGE, AND DISCHARGES INTO THE MILL BROOK.

1.2.2 DRAINAGE, WATERWAYS, BODIES OF WATER, AND PROXIMITY TO NATURAL OR MAN-MADE WATER FEATURES

THE MILL BROOK RUNS THROUGH THE PROJECT SITE. THE BROOK IS SINUOUS, SEMI-ALLUVIAL, IN A LOW RELIEF VALLEY AND A STREAMBED CONSISTING OF LEDGE, COBBLES, BOULDERS, AND GRAVEL.

THERE ARE THREE (3) EXISTING DROP INLETS ON SITE DRAINING FROM BOTH SIDES OF THE BRIDGE TO THE MILL BROOK. THESE DROP INLETS WILL BE RECONFIGURED AS SHOWN ON THE PROJECT PLANS.

1.2.3 TOPOGRAPHY, EXISTING ROADS, BUILDINGS, UTILITIES

THE PROJECT IS LOCATED IN A DENSE RESIDENTIAL AND COMMERCIAL AREA IN THE VILLAGE OF FAIRFAX. THE BRIDGE CARRIES VT 104 OVER THE MILL BROOK. TOPOGRAPHY OF THE AREA SLOPED GENTLY FROM THE EAST AND WEST TOWARDS THE BROOK, WHICH FLOWS TO THE SOUTH. THE WESTERN APPROACH TO THE PROJECT IS PRIMARILY RESIDENTIAL WITH SIDEWALKS, DRIVES, LAWNS AND VEGETATED AREAS. THE AREA TO THE EAST OF THE BRIDGE HAS NUMEROUS DRIVES AND PARKING LOTS. A WOODED BUFFER EXISTS ON THE SLOPES OF THE EAST AND WEST SIDES OF THE MILL BROOK.

1.2.4 VEGETATION

VEGETATION IN THE PROJECT AREA CONSISTS OF HARDWOOD TREES AND UNDERGROWTH. THE IMPACT TO VEGETATION WILL BE LIMITED, AS WORK WILL NOT BE COMPLETED MUCH BEYOND CURRENTLY DISTURBED AREAS. DISTURBED VEGETATION WILL BE REESTABLISHED WITH STANDARD SEED AND MULCH PRACTICES.

1.2.5 SOILS

SOIL DATA FROM THE U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE FOR THE COUNTY OF FRANKLIN, VERMONT. SOILS ON THE PROJECT SITE ARE BELGRADE SILT LOAM, 8 TO 15 PERCENT SLOPES, K FACTOR = 0.49; ELDRIDGE LOAMY FINE SAND, 3 TO 8 PERCENT SLOPES, K FACTOR = 0.24.

NOTE: K-VALUES GENERALLY INDICATE THE FOLLOWING: 0.0-0.23 = LOW EROSION POTENTIAL; 0.24-0.36 = MODERATE EROSION POTENTIAL; 0.37 AND HIGHER = HIGH EROSION POTENTIAL.

1.2.6 SENSITIVE RESOURCE AREAS

CRITICAL HABITATS: NO
HISTORICAL OR ARCHEOLOGICAL AREAS: YES, SEE EPSC LAYOUT SHEET 56
PRIME AGRICULTURAL LAND: NO
THREATENED AND ENDANGERED SPECIES: NO
WATER RESOURCE: MILL BROOK
WETLANDS: NO

1.3 RISK EVALUATION

RISK DETERMINATION
THIS PROJECT HAS BEEN DETERMINED TO BE NON-JURISDICTIONAL, AS THE AREA OF DISTURBANCE IS LESS THAN 1 ACRE. THE FOLLOWING REQUIREMENTS SHALL BE MET:

1. IMPLEMENT THE EROSION PREVENTION AND SEDIMENT CONTROL (EPSC) FIELD GUIDE.
2. ALL AREAS MUST HAVE TEMPORARY OR FINAL STABILIZATION WITHIN 14 DAYS OF THE INITIAL DISTURBANCE AND STABILIZED THEREAFTER ON A DAILY BASIS. THE FOLLOWING EXCEPTIONS APPLY:
 - A. STABILIZATION IS NOT REQUIRED IF WORK IS TO CONTINUE IN THE AREA WITHIN 24 HOURS AND NO PRECIPITATION IS FORECASTED FOR THE NEXT 24 HOURS.
 - B. STABILIZATION IS NOT REQUIRED IF THE WORK IS OCCURRING IN A SELF-CONTAINED EXCAVATION WITH A DEPTH OF 2 FEET OR GREATER.

RISK RE-EVALUATION

SHOULD CHANGES PRIOR TO OR DURING CONSTRUCTION RESULTING IN A POTENTIAL CHANGE IN THE RISK, THEN THE SELECTED CONTRACTOR WILL BE RESPONSIBLE FOR ADDITIONAL PERMITTING WITH THE DEC VIA FILING OF THE APPROPRIATE NOTICE OF INTENT UNDER THE CONSTRUCTION PERMIT PROCESS.

1.4 EROSION PREVENTION AND SEDIMENT CONTROL

THE EROSION CONTROL PLANS ARE MEANT AS A GUIDELINE FOR PREVENTING EROSION AND CONTROLLING SEDIMENT TRANSPORT. THE WORK OUTLINED IN THIS NARRATIVE CONSISTS OF APPLYING MEASURES THROUGHOUT THE LIFE OF THE PROJECT MINIMIZING SEDIMENT TRANSPORT TO THE RECEIVING WATERS. THE MEASURES INCLUDE STABILIZATION AND STRUCTURAL PRACTICES, STORMWATER CONTROLS AND OTHER POLLUTION PREVENTION CONTROLS.

PREVENTING INITIAL SOIL EROSION IS MUCH MORE EFFECTIVE THAN TREATING ERODED SEDIMENT. MAINTAINING VEGETATED BUFFERS ALONG STREAM BANKS, WETLANDS OR OTHER SENSITIVE AREAS IS A CRUCIAL EROSION AND SEDIMENT CONTROL MEASURE THAT SHOULD BE ESTABLISHED WHEREVER POSSIBLE.

ALL MEASURES SHALL BE REGULARLY MAINTAINED AND SHALL BE CHECKED FOR SEDIMENT BUILD-UP. SEDIMENT SHALL BE REMOVED FROM THE UPHILL SIDE OF SILT FENCE PRIOR TO REACHING 50% OF THE HEIGHT OF THE SILT FENCE. SEDIMENT SHALL BE DISPOSED AT AN APPROVED SITE WHERE IT WILL NOT BE SUBJECT TO EROSION.

(REFER TO THE LOW RISK SITE HANDBOOK AND APPROPRIATE DETAIL SHEETS FOR EACH PRACTICE REQUIRED ON THE PROJECT TO INCLUDE BUT NOT LIMITED TO THE FOLLOWING.)

1.4.1 MARK SITE BOUNDARIES

PROJECT DEMARCATION FENCING, DENOTED -PDF- ON THE PLANS, IS USED TO DELINEATE THE LIMITS THE CONTRACTOR CAN ACCESS WITH CONSTRUCTION EQUIPMENT. THIS MEASURE LIMITS THE AREA THAT CAN BE DISTURBED AND EXPOSED TO EROSION.

1.4.2 LIMIT DISTURBANCE AREA

EMPLOY TEMPORARY STABILIZATION PRACTICES IN INCREMENTAL STAGES (PHASING) AS CONSTRUCTION PROCEEDS. ADDITIONAL MEASURES MAY BE NEEDED DUE TO THE PHASING OF THE PROJECT OR AS DIRECTED BY THE RESIDENT ENGINEER. LIMIT DISTURBANCE TO EXISTING VEGETATION, SHRUBS AND TREES WHEREVER POSSIBLE.

1.4.3 INSTALL SILT FENCE

SILT FENCE SHALL BE INSTALLED PRIOR TO ANY UP SLOPE WORK AS DIRECTED BY THE RESIDENT ENGINEER.

1.4.4 DIVERT UPLAND RUNOFF

CLEAN RUNOFF FROM OUTSIDE THE PROJECT SITE SHALL BE ROUTED AROUND THE PROJECT SITE USING UPSLOPE DIVERSION BERMS, DIVERSION CHANNELS AND TEMPORARY OR PERMANENT CULVERTS WHERE PRACTICAL.

1.4.5 CONSTRUCT INLET PROTECTION DEVICES

SEE ATTACHED PLANS. INLET PROTECTION DEVICES SHALL BE CONSTRUCTED AROUND DRAINAGE INLETS UNTIL THE AREA DRAINING TO THAT INLET HAS BEEN STABILIZED.

1.4.6 CONSTRUCT PERMANENT CONTROLS

SEED AND MULCH – UTILIZE URBAN SEEDING FORMULA
DRAINAGE INLETS AND PIPING – SEE ATTACHED PLANS.

1.4.7 STABILIZE EXPOSED SOILS

TEMPORARY MULCHING WILL BE UTILIZED ON A REGULAR BASIS. SLOPES SHALL BE STABILIZED WITHIN 48 HOURS OF FORECASTED RAIN. SEEDING, MULCHING AND BIODEGRADABLE EROSION CONTROL MATTING OR AN EQUIVALENT SHALL BE USED TO STABILIZE ALL SLOPES STEEPER THAN 1V:3H. THESE SLOPES SHALL BE STABILIZED WITHIN 48 HOURS OF REACHING INTERMITTENT PHASES OF CONSTRUCTION.

1.4.8 WINTER STABILIZATION

THE CONTRACTOR SHALL PREPARE AND SUBMIT FOR REVIEW A WINTER EPSC PLAN IF SOILS ARE NOT TO BE STABILIZED PRIOR TO OCTOBER 15TH AND BEFORE APRIL 15TH.

1.4.9 STABILIZE SOIL AT FINAL GRADE

SEEDING, MULCHING AND BIODEGRADABLE EROSION CONTROL MATTING OR AN EQUIVALENT SHALL BE USED TO STABILIZE ALL SLOPES STEEPER THAN 1V:3H. THESE SLOPES SHALL BE STABILIZED WITHIN 48 HOURS OF REACHING FINAL GRADE. UTILIZE URBAN SEEDING FORMULA.

1.4.10 INSPECT YOUR SITE

INSPECT SITE TO ENSURE PROPER FUNCTION OF EPSC MEASURES.

ADDITIONAL NOTES

A TEMPORARY EROSION CONTROL PLAN MUST BE SUBMITTED BY THE CONTRACTOR FOR APPROVAL BY THE RESIDENT ENGINEER.

THE CONTRACTOR WILL USE OTHER TEMPORARY OR PERMANENT EROSION CONTROL MEASURES AS NECESSITATED BY THE SEQUENCE OF CONSTRUCTION AND AS DIRECTED BY THE RESIDENT ENGINEER. SEE SUBSECTION 105.23 FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

PROJECT NAME:	FAIRFAX
PROJECT NUMBER:	BHF 023-(15)
FILE NAME:	s86e064ern.dgn
PROJECT LEADER:	C. CARLSON
DESIGNED BY:	W. LAMMER
PLOT DATE:	20-JUL-2009
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