

EPSC PLAN NARRATIVE

I.1 PROJECT DESCRIPTION

THIS PROJECT INCLUDES THE CONSTRUCTION OF A NEW PEDESTRIAN BRIDGE, ADJACENT TO THE VERMONT ROUTE 15 ROADWAY BRIDGE, NEW APPROACH WALKWAYS, AND A NEW RETAINING WALL. THE PROJECT BEGINS AT THE INTERSECTION OF RED MILL DRIVE AND VERMONT ROUTE 15 AND ENDS APPROXIMATELY 250 FEET TO THE EAST. THE PROJECT OCCURS AT APPROXIMATELY MILE 18.6 OF THE BROWNS RIVER. THE PROJECT ALSO INCLUDES APPROXIMATELY 70 FEET OF WORK ON RED MILL DRIVE INCLUDING INSTALLATION OF NEW CURB, GUARDRAIL AND GRADING. THE PROPOSED PEDESTRIAN BRIDGE WILL BE A ROLLED STEEL BEAM STRUCTURE SPANNING 72 FEET OVER THE BROWNS RIVER. THE BRIDGE WILL BE ADJACENT TO AND CANTILEVERED OVER THE NORTH SIDE OF THE EXISTING VERMONT ROUTE 15 ROADWAY BRIDGE. THE SUBJECT BRIDGE IS LOCATED IN THE TOWN OF JERICHO ON VERMONT ROUTE 15 APPROXIMATELY AT THE INTERSECTION OF VERMONT ROUTE 15 AND RED MILL DRIVE. VEHICULAR TRAFFIC IS TO BE MAINTAINED DURING CONSTRUCTION. PEDESTRIAN ACCESS WILL BE MAINTAINED DURING CONSTRUCTION.

NOTE: AREA OF DISTURBANCE INCLUDES LIMITS OF EARTH DISTURBANCE WITHIN THE PROJECT AREA, AS WELL AS WASTE, BORROW AND STAGING AREAS, AND OTHER EARTH DISTURBING ACTIVITIES WITHIN OR DIRECTLY ADJACENT TO THE PROJECT LIMITS AS SHOWN ON THE ATTACHED EPSC PLAN.

TOTAL AREA OF DISTURBANCE AS SHOWN ON THE ATTACHED EPSC PLANS IS APPROXIMATELY 0.08 ACRE.

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

I.2 SITE INVENTORY

I.2.1 TOPOGRAPHY

THE TOPOGRAPHY OF THE AREA IS FAIRLY FLAT, BUT IT IS CUT BY THE GORGE OF THE BROWNS RIVER. THE GORGE IS CHARACTERIZED BY A VEGETATED BUFFER INTERMIXED WITH BROKEN ROCK ABOVE THE LEDGE LINE. BELOW THE LEDGE LINE, THE GORGE WALL IS A ROCK FACE WITH MINIMAL VEGETATION. OUTSIDE THE AREAS IMMEDIATELY ADJACENT TO GORGE, THERE IS LITTLE VEGETATION WITHIN THE PROJECT AREA WITH LARGE PAVED AREAS CONSISTING OF VERMONT ROUTE 15, RED MILL DRIVE, AND A GAS STATION PARKING LOT.

I.2.2 DRAINAGE, WATERWAYS, BODIES OF WATER, AND PROXIMITY TO NATURAL OR MAN-MADE WATER FEATURES

DRAINAGE THROUGH THE PROJECT AREA INCLUDES TWO DROP INLETS ON THE WEST SIDE OF BROWNS RIVER WHICH OUTLET TO THE RIVER SOUTH OF THE EXISTING VERMONT ROUTE 15 ROADWAY BRIDGE. A DROP INLET ON THE EAST SIDE OF THE BROWNS RIVER OUTLETS ONTO THE SLOPE NORTH OF THE PROJECT AREA. VERMONT ROUTE 15 HAS OPEN DRAINAGE ON ITS SOUTHERN EDGE WITH WATER DRAINING TO BROWNS RIVER. THIS INCLUDES A PAVED GUTTER ON THE EAST SIDE OF THE BRIDGE.

THE BROWNS RIVER IS A PERENNIAL RELATIVELY PERMANENT WATER AND A TRIBUTARY OF THE LAMOILLE RIVER THAT FLOWS SOUTH THROUGH THE PROJECT AREA. THE STREAM BED APPEARS TO CONSIST OF LARGE BOULDERS AND ROCKS. THE 100-YEAR FLOODPLAIN IS ENTIRELY CONTAINED WITHIN THE GORGE. THE HYDRAULIC CAPACITY OF BROWNS RIVER WILL NOT BE LIMITED BY THIS PROJECT. THE BROWNS RIVER HAS NOT BEEN DESIGNATED AS AN OUTSTANDING RESOURCE WATER.

I.2.3 VEGETATION

THE VEGETATION IN THE PROJECT AREA CONSISTS OF SHRUBS AND GROUND COVER WITH SOME SMALL TREES ON THE EAST SIDE OF THE BROWNS RIVER. UPON PROJECT COMPLETION, STEEP SLOPES (1-2 OR STEEPER) WILL BE PROTECTED WITH TYPE II STONE FILL AND COVERED WITH GRUBBING MATERIAL. DISTURBED VEGETATION WILL BE REESTABLISHED WITH STANDARD SEED AND MULCH PRACTICES WITH PERMANENT EROSION CONTROL MATTING PROVIDED IN AREAS WHERE THE SLOPE IS BETWEEN 1-2 AND 1-3. SLOPES FLATTER THAN 1-3 WILL BE TOPSOILED AND SEEDED.

I.2.4 SOILS

BORINGS WERE TAKEN AT THREE LOCATIONS, AS SHOWN ON THE BORING INFORMATION SHEET, SHEET 2I. GENERALLY SANDY FILL MATERIALS WERE FOUND ABOVE SHALLOW BEDROCK LYING BETWEEN 18.5 AND 22.5 FEET. SEE BORING LOGS, SHEETS 22-24.

ALL SOIL DATA CAME FROM THE U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE FOR THE COUNTY OF CHITTENDEN, VERMONT. SEE THE BELOW TABLE FOR SOIL TYPES LOCATED WITHIN THE PROJECT AREA.

MAP UNIT TYPE	DESCRIPTION	SLOPES (%)	ERODIBILITY	ERODIBILITY FACTOR (K)
HID	HARTLAND VERY FINE SANDY LOAM	12-25	MODERATELY ERODIBLE	.17
BIC	BELGRADE AND ELDRIDGE SOILS	8-15	SLIGHTLY ERODIBLE	.49
C&D	COLTON AND STETSON SOILS	20-30	MODERATELY ERODIBLE	.15
W	WATER	-	-	-

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

I.2.5 SENSITIVE RESOURCE AREAS

CRITICAL HABITATS: NONE
 HISTORICAL OR ARCHAEOLOGICAL AREAS: THE ENTIRE AREA IS WITHIN THE NATIONAL REGISTER-LISTED JERICHO VILLAGE HISTORIC DISTRICT. CHITTENDEN MILL (AND ASSOCIATED STONE WALLS, ETC.) IS HISTORIC. ARCHAEOLOGICAL REMAINS EXIST IN THE SOUTH AND NORTHEAST OF THE PROJECT AREA.
 HAZARDOUS MATERIALS: HAZARDOUS MATERIALS HAVE BEEN DETECTED ON THE PROPERTY OF CHAMPLAIN OIL COMPANY, INC. CONTRACTOR SHALL TAKE ALL APPROPRIATE PRECAUTIONS TO AVOID HAZARDOUS MATERIALS. IF HAZARDOUS MATERIALS ARE ENCOUNTERED, CONTACT ENGINEER IMMEDIATELY. SEE STANDARD SPECIFICATION SECTIONS 105 & 108.
 PRIME AGRICULTURAL LAND: NONE
 THREATENED AND ENDANGERED SPECIES: NONE
 WATER RESOURCE: BROWNS RIVER
 WETLANDS: NONE

I.3 RISK EVALUATION

THIS PROJECT DOES NOT FALL UNDER THE JURISDICTION OF GENERAL PERMIT 3-9020 FOR STORM WATER RUNOFF FROM CONSTRUCTION SITES. SHOULD CHANGES PRIOR TO OR DURING CONSTRUCTION RESULT IN ONE OR MORE ACRES OF EARTH DISTURBANCE OR SHOULD THE PROJECT BECOME PART OF A LARGER PLAN OF DEVELOPMENT, THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY ADDITIONAL PERMITTING.

I.4 EROSION PREVENTION AND SEDIMENT CONTROL (EPSC)

THE EPSC PLANS ARE MEANT AS A GUIDELINE FOR PREVENTING EROSION AND CONTROLLING SEDIMENT TRANSPORT. THE PRINCIPLES OUTLINED IN THIS NARRATIVE CONSIST OF APPLYING MEASURES THROUGHOUT CONSTRUCTION OF THE PROJECT IN ORDER TO MINIMIZE SEDIMENT TRANSPORT TO THE RECEIVING WATERS. THE MEASURES INCLUDE STABILIZATION AND STRUCTURAL PRACTICES, STORM WATER CONTROLS AND OTHER POLLUTION PREVENTION PRACTICES. THEY HAVE BEEN PROPOSED BY THE DESIGNER AS A BASIS FOR PROTECTING RESOURCES AND WILL NEED TO BE BUILT UPON BASED ON THE SPECIFIC MEANS AND METHODS OF THE CONTRACTOR. REFER TO THE LOW RISK SITE HANDBOOK AND APPROPRIATE DETAIL SHEETS FOR SPECIFIC GUIDANCE AND CONSTRUCTION DETAILING.

ALL MEASURES SHALL BE REGULARLY MAINTAINED AND SHALL BE CHECKED FOR SEDIMENT BUILD-UP. SEDIMENT SHALL BE DISPOSED OF AT AN APPROVED SITE WHERE IT WILL NOT BE SUBJECT TO EROSION.

I.4.1 MARK SITE BOUNDARIES

SITE BOUNDARIES AND AREAS CONSTRUCTION EQUIPMENT CAN ACCESS SHALL BE DELINEATED. BARRIER FENCE SHALL BE USED TO PHYSICALLY MARK SITE BOUNDARIES, DUE TO THE PROJECT'S PROXIMITY TO A WATER RESOURCE AND SENSITIVE AREAS.

I.4.2 LIMIT DISTURBANCE AREA

PREVENTING INITIAL SOIL EROSION BY MINIMIZING THE EXPOSED AREA IS MUCH MORE EFFECTIVE THAN TREATING ERODED SEDIMENT. EARTH DISTURBANCE CAN BE MINIMIZED THROUGH CONSTRUCTION PHASING BY ONLY OPENING UP EARTH AS NECESSARY, THIS CAN LIMIT THE AREA THAT WILL BE DISTURBED AND EXPOSED TO EROSION. EMPLOY TEMPORARY CONSTRUCTION STABILIZATION PRACTICES IN INCREMENTAL STAGES AS PHASES CHANGE. FOR PROJECTS WHICH FALL UNDER THE CONSTRUCTION GENERAL PERMIT, ONLY THE ACREAGE LISTED ON THE PERMIT AUTHORIZATION MAY BE EXPOSED AT ANY GIVEN TIME.

MAINTAINING VEGETATED BUFFERS ALONG STREAM BANKS, WETLANDS, OR OTHER SENSITIVE AREAS IS A CRUCIAL EROSION PREVENTION AND SEDIMENT CONTROL MEASURE THAT SHOULD BE ESTABLISHED WHEREVER POSSIBLE.

I.4.3 SITE ENTRANCE/EXIT STABILIZATION

TRACKING OF SEDIMENT ONTO PUBLIC HIGHWAYS SHALL BE MINIMIZED TO REDUCE THE POTENTIAL FOR RUNOFF ENTERING RECEIVING WATERS.

IT IS NOT ANTICIPATED THAT STABILIZED CONSTRUCTION ENTRANCES WILL BE REQUIRED TO CONSTRUCT THE PROPOSED PROJECT DUE TO ITS LIMITED SIZE AND LOCATION.

I.4.4 INSTALL SEDIMENT BARRIERS

SEDIMENT BARRIERS SHALL BE UTILIZED TO INTERCEPT RUNOFF AND ALLOW SUSPENDED SEDIMENT TO SETTLE OUT. THEY SHALL BE INSTALLED PRIOR TO ANY UP SLOPE WORK.

DUE TO THE PROJECT'S PROXIMITY TO A WATER RESOURCE, ALL SILT FENCE SHALL BE WOVEN WIRE REINFORCED. SILT FENCE WILL BE INSTALLED AS PROPOSED ON THE EPSC PLAN.

DUE TO THE ROCK FACE BENEATH THE FOOTING OF THE PROPOSED STONE MASONRY WALL, THERE IS NO SEDIMENT BARRIER PROPOSED IN THIS AREA. SEE TYPICAL STONE MASONRY WALL SECTION, SHEET 6, FOR DETAILS OF THE EXCAVATION OF THE EXISTING OVERBURDEN SOIL. SILT FENCE SHALL BE INSTALLED AS SHOWN ON THE EROSION CONTROL CONSTRUCTION SITE PLAN, SHEET 57, ON THE UP-SLOPE SIDE OF THE PROPOSED FOOTING UPON REMOVAL OF THE OVERBURDEN UNTIL BACKFILLING OPERATIONS BEGIN.

STONE AND BLOCK DROP INLET PROTECTION SHALL BE USED TO FILTER SEDIMENT FROM INCOMING STORMWATER FOR PROPOSED DROP INLETS WITHIN THE PROJECT AREA.

I.4.5 DIVERT UPLAND RUNOFF

DIVERSIONARY MEASURES SHALL BE USED TO INTERCEPT RUNOFF FROM ABOVE THE CONSTRUCTION AND DIRECT IT AROUND THE DISTURBED AREA SO THAT CLEAN WATER DOES NOT BECOME MUDDIED WHILE TRAVELING OVER EXPOSED SOILS ON THE CONSTRUCTION SITE.

IT IS NOT ANTICIPATED THAT TEMPORARY PROTECTION MEASURES WILL BE REQUIRED TO DIVERT UPLAND RUNOFF. HOWEVER, IF SITE CONDITIONS CHANGE, THE CONTRACTOR SHALL CONSTRUCT TEMPORARY DIVERSION DIKES OR SWALES PER THE LOW RISK SITE HANDBOOK AS DIRECTED BY THE ON-SITE PLAN COORDINATOR. ANY WORK REQUIRED SHALL BE INCIDENTAL TO THE PROJECT.



EROSION PREVENTION AND SEDIMENT CONTROL NOTES #1	PROJECT NAME: JERICHO	PLOT DATE: 4/7/2014
	PROJECT NUMBER: STP FTBR (3)	
	PROJECT LEADER: M.D.S.	DRAWN BY: C.R.H.
	DESIGNED BY: C.R.H.	CHECKED BY: D.E.G.
	DWG. NO.: ERONAR-1	SHEET 54 OF 62