

EPSC PLAN NARRATIVE

1.1 PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE REMOVAL AND REPLACEMENT OF THE EXISTING CONCRETE SUPERSTRUCTURE AND ABUTMENTS WITH RELATED APPROACH AND CHANNEL WORK. DURING CONSTRUCTION, TRAFFIC WILL BE DETOURED OVER A TEMPORARY BRIDGE PLACED UPSTREAM. THIS PROJECT IS LOCATED ON A LOCAL ROAD LOCATED NORTH OF ROUTE 9 OVER HALLADAY BROOK IN THE TOWN OF BRATTLEBORO. THE EXISTING BRIDGE IS APPROXIMATELY 25 FEET LONG AND HAS A 20 FOOT WIDE CONCRETE DECK. THE EXISTING SUBSTRUCTURE CONSISTS OF STONE ABUTMENTS AND WINGWALLS.

THE BRIDGE REPLACEMENT INCLUDES THE REMOVAL OF THE EXISTING STRUCTURE IN ITS ENTIRETY AND THE CONSTRUCTION OF A NEW 45 FOOT SINGLE SPAN BRIDGE WITH PRECAST CONCRETE NON-VOIDED SLABS TO CREATE A NEW BRIDGE WIDTH OF 26 FEET. NEW CONCRETE ABUTMENTS AND WINGWALLS WILL BE FORMED IN PLACE AND ASSOCIATED APPROACH WORK INCLUDES BRIDGE APPROACH SLABS AND NEW GUARDRAIL. ONCE THE BRIDGE IS COMPLETED, THE TEMPORARY BRIDGE AND ITS APPROACHES WILL BE REMOVED AND THE PROJECT AREA WILL BE RESTORED TO THE PREVIOUS CONDITIONS.

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 PLAN IS APPROXIMATELY 0.55 ACRES.

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

1.2 SITE INVENTORY

1.2.1 TOPOGRAPHY

THE ROAD IN THIS PROJECT AREA IS GENERALLY FLAT AND FOLLOWS THE LAY OF THE SURROUNDING TOPOGRAPHY. THERE IS A PRIVATE GRAVEL ROAD (REGINA VISTA) THAT RUNS ALONG THE SOUTHWEST SIDE OF THE RIVER. THERE ARE 2 RESIDENCES ON EITHER END OF THE BRIDGE WITH PROPERTY THAT WILL BE WITHIN THE PROJECT AREA.

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

HALLADAY BROOK IS LOCATED IN THE PROJECT AREA AND RUNS BETWEEN SUNSET LAKE AND REGINA VISTA ROAD BEFORE PASSING UNDER SUNSET LAKE ROAD. TWO MAINTAINED ORNAMENTAL PONDS ARE LOCATED WITHIN THE PROJECT INVESTIGATION AREA ON A RESIDENTIAL PROPERTY; EACH ARE MAPPED BY THE VERMONT STATE WETLAND INVENTORY AS CLASS II WETLANDS. HALLADAY BROOK GENERALLY CONSISTS OF COBBLES AND GRAVEL WITH OCCASIONAL BOULDERS. ON THE UPSTREAM SIDE OF SUNSET LAKE ROAD BRIDGE, THE EAST BANK OF THE STREAM IS VEGETATED AND RELATIVELY FLAT PROVIDING ADJACENT FLOOD STORAGE, WHILE THE WESTERN BANK IS PARTIALLY CUT AND STEEP BEFORE TRANSITIONING INTO A FORESTED BUFFER. DOWNSTREAM FROM SUNSET LAKE ROAD BRIDGE, THE EASTERN BANK IS VEGETATED FOR APPROXIMATELY 20 FEET BEFORE TRANSITIONING INTO A MAINTAINED FIELD, AND THE WESTERN BANK CONSISTS OF A MAINTAINED RESIDENTIAL LAWN WITH STRUCTURES LOCATED NEAR THE STREAM.

1.2.3 VEGETATION

THE VEGETATION IN THE PROJECT AREA CONSISTS OF SPECKLED ALDER, YELLOW BIRCH, REED CANARY GRASS, AND GRASSED LAWN AREAS. UPON PROJECT COMPLETION, THE CHANNEL WILL BE ARMORED WITH STONE FILL TYPE III AS SPECIFIED ON THE PLANS. DISTURBED VEGETATION WILL BE REESTABLISHED WITH STANDARD SEED AND MULCH PRACTICES.

1.2.4 SOILS

ALL SOIL DATA CAME FROM THE U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE FOR THE COUNTY OF WINDSOR, VERMONT. SOILS ON THE PROJECT SITE ARE PODUNK FINE SANDY LOAM AND DEERFIELD FINE SANDY LOAM, 2% TO 8% SLOPES, "K FACTOR" = 0.24. THE SOIL IS CONSIDERED MODERATELY ERODIBLE.

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

1.2.5 SENSITIVE RESOURCE AREAS

CRITICAL HABITATS: NO
HISTORICAL OR ARCHEOLOGICAL AREAS: NO
PRIME AGRICULTURAL LAND: NO
THREATENED AND ENDANGERED SPECIES: NO
WATER RESOURCE: HALLADAY BROOK
WETLANDS: THERE ARE TWO CLASS II WETLAND FEATURES MAPPED BY THE VERMONT STATE WETLAND INVENTORY WITHIN THE PROJECT INVESTIGATION AREA. A FIELD INVESTIGATION DETERMINED THAT THESE WERE ORNAMENTAL PONDS.

1.3 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.

1.4 EROSION PREVENTION AND SEDIMENT CONTROL

THE EROSION CONTROL 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.

1.4.1 MARK SITE BOUNDARIES

SITE BOUNDARIES AND AREAS CONSTRUCTION EQUIPMENT CAN ACCESS SHALL BE DELINEATED.

PROJECT DEMARCATION FENCING (PDF) SHALL BE USED TO PHYSICALLY MARK SITE BOUNDARIES.

1.4.2 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 AND SEDIMENT CONTROL MEASURE THAT SHOULD BE ESTABLISHED WHEREVER POSSIBLE.

1.4.3 SITE ENTRANCE/EXIT STABILIZATION

TRACKING OF SEDIMENT ONTO PUBLIC HIGHWAYS SHALL BE MINIMIZED TO REDUCE THE POTENTIAL FOR RUNOFF ENTERING RECEIVING WATERS. INSTALLATION SHALL COINCIDE WITH THE PROGRESS SCHEDULE.

STABILIZED CONSTRUCTION ENTRANCES SHALL BE INSTALLED AS PROPOSED ON THE EPSC PLAN AND ANYWHERE EQUIPMENT WILL BE GOING FROM AREAS OF EXPOSED SOILS TO PAVED SURFACES.

1.4.4 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.

SILT FENCE SHALL BE INSTALLED AS PROPOSED ON THE EPSC PLAN.

FILTER CURTAIN SHALL BE INSTALLED WHERE WORK MUST TAKE PLACE WITHIN THE LIMITS OF HALLADAY BROOK AS PROPOSED ON THE EPSC PLAN.

1.4.5 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.

THE PROJECT AREA IS RELATIVELY FLAT. THEREFORE IT IS NOT ANTICIPATED THAT DIVERSION MEASURES WILL BE NECESSARY.

1.4.6 SLOW DOWN CHANNELIZED RUNOFF

CHECK STRUCTURES SHALL BE UTILIZED TO REDUCE THE VELOCITY, AND THUS THE EROSION POTENTIAL, OF CONCENTRATED FLOW IN CHANNELS.

CHECK STRUCTURES SHALL BE INSTALLED AS SHOWN ON THE PLANS.

1.4.7 CONSTRUCT PERMANENT CONTROLS

PERMANENT STORM-WATER TREATMENT DEVICES SHALL BE INSTALLED AS SHOWN ON THE PLANS AND IN ACCORDANCE WITH PERMIT CONDITIONS.

PERMANENT EROSION CONTROL STRUCTURES ARE NOT ANTICIPATED FOR THIS PROJECT.

1.4.8 STABILIZE EXPOSED SOILS DURING CONSTRUCTION

ALL AREAS OF DISTURBANCE MUST HAVE TEMPORARY STABILIZATION IN PLACE WITHIN 48 HOURS OF DISTURBANCE OR IN ACCORDANCE WITH THE CONSTRUCTION GENERAL PERMIT 3-9020 AUTHORIZATION.

SURFACE ROUGHENING OF ALL EXPOSED SLOPES, COMBINED WITH TEMPORARY MULCHING, SHALL BE UTILIZED ON A REGULAR BASIS. BIODEGRADABLE EROSION CONTROL MATTING OR AN EQUIVALENT SHALL BE USED TO STABILIZE ALL SLOPES STEEPER THAN 1:3.

THE FORECAST OF RAINFALL EVENTS SHALL TRIGGER IMMEDIATE PROTECTION OF EXPOSED SOILS.

1.4.9 WINTER STABILIZATION

VARIOUS MEASURES SPECIFIC TO WINTER MAY BE NECESSARY SHOULD THE PROJECT EXTEND INTO WINTER (OCTOBER 15 THROUGH APRIL 15). REFER TO THE LOW RISK SITE HANDBOOK FOR GUIDANCE.

1.4.10 STABILIZE SOIL AT FINAL GRADE

EXPOSED SOIL MUST BE STABILIZED WITHIN 48 HOURS OF REACHING FINAL GRADE.

SEED, MULCH, FERTILIZER AND LIME SHALL BE USED TO ESTABLISH PERMANENT VEGETATION. FOR SLOPES STEEPER THAN 1:3, BIODEGRADABLE EROSION CONTROL MATTING OR AN EQUIVALENT SHALL BE USED INSTEAD OF MULCH.

1.4.11 DE-WATERING ACTIVITIES

DISCHARGE FROM DEWATERING ACTIVITIES THAT FLOWS OFF OF THE CONSTRUCTION SITE MUST NOT CAUSE OR CONTRIBUTE TO A VIOLATION OF THE VERMONT WATER QUALITY STANDARDS.

TREATMENT OF DEWATERING COFFERDAM IS ANTICIPATED. A LOCATION FOR TREATMENT HAS BEEN PROPOSED AND IS SHOWN ON THE PLANS. HOWEVER THE SPECIFIC MEANS FOR TREATMENT OF DISCHARGE SHALL BE PROVIDED BY THE CONTRACTOR.

1.4.12 INSPECT YOUR SITE

INSPECT THE PROJECT SITE BASED ON SPECIAL PROVISION REQUIREMENTS OR CONSTRUCTION GENERAL PERMIT AUTHORIZATION STIPULATIONS.

1.5 SEQUENCE AND STAGING

THIS SECTION WILL BE DEVELOPED BY THE CONTRACTOR USING THE GUIDANCE OUTLINED IN THE VTRANS EPSC PLAN CONTRACTOR CHECKLIST.

1.5.1 CONSTRUCTION SEQUENCE

1.5.2 OFF-SITE ACTIVITIES

IN ADDITION TO THE CONTRACTOR CHECKLIST ANY ACTIVITIES OUTSIDE THE CONSTRUCTION LIMITS SHALL FOLLOW SUBSECTIONS 105.25- 105.29 OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION.

PROJECT NAME: BRATTLEBORO

PROJECT NUMBER: BRO 1442(35)

FILE NAME: z10j062ero_narrative.dgn

PROJECT LEADER: S.E. BURBANK

DESIGNED BY: E.A. FIALA

EPSC NARRATIVE

PLOT DATE: 10/14/2013

DRAWN BY: E.A. FIALA

CHECKED BY: S.E. BURBANK

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