

EPSC PLAN NARRATIVE

1.1 PROJECT DESCRIPTION

THIS PROJECT INVOLVES SAFETY IMPROVEMENTS ALONG MAIN STREET (US 5) IN BRATTLEBORO. THE PROJECT INCLUDES INSTALLATION OF NEW TRAFFIC SIGNALS AND ASSOCIATED CURB WORK, SIDEWALK RECONSTRUCTION AND INSTALLATION OF NEW SIGNS. THE LENGTH OF THE PROJECT IS APPROXIMATELY 2108 FEET.

THE TOTAL PROJECT AREA AS SHOWN ON THE ATTACHED EPSC PLAN IS 10,045 S.F. (0.23 ACRES) AND THE AREA OF EARTH DISTURBANCE UNDER THIS PROJECT IS 10,045 S.F. (0.23 ACRES). DISTURBED AREAS INCLUDE AREAS OF FULL DEPTH SIDEWALK RECONSTRUCTION, CONSTRUCTIONS OF CURB EXTENSIONS AND RESTORATION OF ABUTTING SOFTSCAPED AREAS.

NOTE: AREA OF DISTURBANCE ALSO 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. IT DOES NOT INCLUDE POTENTIAL OFF-SITE WASTE, BORROW AND STAGING AREAS.

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

1.2 SITE INVENTORY

1.2.1 TOPOGRAPHY

US 5 GENERALLY PARALLELS THE CONNECTICUT RIVER AND IS LOCATED ALONG THE LOWER WESTERN EDGE OF THE VALLEY. BEGINNING AT THE SOUTHERN END OF THE PROJECT, US 5 ASCENDS 30 FEET IN ELEVATION TO HIGH STREET WHERE IT THEN FLATTENS BEFORE ASCENDING AGAIN AS IT PROGRESSES TO THE NORTH. THE TOPOGRAPHY TO THE WEST IS CHARACTERIZED BY INCREASING ELEVATION PROGRESSING UP THE VALLEY. TO THE EAST, ELEVATIONS DESCEND TO THE CONNECTICUT RIVER.

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

THE WHETSTONE BROOK IS CARRIED BELOW US 5 AT THE SOUTHERN END OF THE PROJECT WHERE IT THEN DISCHARGES TO THE CONNECTICUT RIVER. STORM WATER RUNOFF WITHIN THE PORTION OF THE PROJECT AREA NORTH OF THE WHETSTONE BROOK IS COLLECTED VIA A CLOSED DRAIN SYSTEM WHICH ULTIMATELY DISCHARGES INTO THE WHETSTONE BROOK THROUGH A 42" DIAMETER OUTFALL IN THE NORTH BRIDGE ABUTMENT. STORM WATER RUNOFF WITHIN THE PORTION OF THE PROJECT JUST SOUTH OF THE WHETSTONE BROOK IS COLLECTED VIA CLOSED DRAINAGE SYSTEMS WHICH ALSO DISCHARGE TO THE WHETSTONE BROOK.

1.2.3 VEGETATION

THE PROJECT IS WITHIN AN URBAN AREA AND AS SUCH VEGETATION IS MINIMAL AND IS COMPRISED OF LAWNS AND LANDSCAPED AREAS. DISTURBANCES TO VEGETATED AREAS IS ANTICIPATED TO BE MINIMAL AND ALL DISTURBED AREA ASSOCIATED WITH CONSTRUCTING THE PROPOSED SIDEWALKS WILL BE RESTORED IN KIND. DISTURBED VEGETATION WILL BE REESTABLISHED WITH STANDARD SEED AND MULCH PRACTICES.

1.2.4 SOILS

ALL SOIL DATA WAS OBTAINED FROM THE VERMONT CENTER FOR GEOGRAPHIC INFORMATION WEBSITE AND THE VERMONT NRCS WEBSITE. SOILS DATA WAS DOWNLOADED FOR THE PROJECT AREA AND OVERLAID ONTO THE DESIGN. THE ONLY SOILS ON THE PROJECT SITE IS QUONSET AND WARWICK SOILS, 2 TO 8 PERCENT SLOPES AND THE SITE CLOSELY BORDERS WINDSOR LOAMY FINE SAND, 25 TO 60 PERCENT SLOPES TO THE EAST. THE "K FACTOR" FOR BOTH SOILS IS REPORTED TO BE IN THE RANGE OF 0.17 TO 0.24. THE SOIL IS CONSIDERED ERODIBLE OR POTENTIALLY ERODIBLE DUE TO SIGNIFICANT SLOPES.

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: YES. LIES IN SOUTHEAST CORNER EAST OF FENCELINE AND OUTSIDE OF PROJECT AREA.
PRIME AGRICULTURAL LAND: NO
THREATENED AND ENDANGERED SPECIES: NO
WATER RESOURCE: WHETSTONE BROOK
WETLANDS: NO

1.3 RISK EVALUATION

THIS PROJECT DOES NOT FALL UNDER THE JURISDICTION OF GENERAL PERMIT 3-9020 FOR STORMWATER RUNOFF FROM CONSTRUCTION SITES FOR LOW RISK PROJECTS. HOWEVER, ANY MODIFICATIONS TO THE PROJECT THAT INCREASES THE RISK TO ENVIRONMENTAL RESOURCES SHALL BE EVALUATED IN

ACCORDANCE WITH THE PERMIT REQUIREMENTS. 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 SUPPLEMENTED OR MODIFIED 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 AS SPECIFIED ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

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. THE LENGTH OF TIME THAT SOIL IS EXPOSED SHALL BE KEPT TO A MINIMUM AT ALL TIMES. ONCE EACH CONSTRUCTION PHASE IS COMPLETED, THE SOILS SHALL BE STABILIZED TO THE SATISFACTION OF THE ENGINEER BEFORE PROCEEDING TO THE NEXT PHASE. REFER TO THE TRAFFIC MANAGEMENT PLANS FOR SUGGESTED CONSTRUCTION PHASING.

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 CONTRACTORS PROGRESS SCHEDULE.

ALL WORK IS ANTICIPATED TO BE COMPLETED WITHIN THE EXISTING ROADWAY; THEREFORE STABILIZED CONSTRUCTIONS ARE NOT ANTICIPATED TO BE REQUIRED.

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 OR AS DIRECTED BY THE ENGINEER.

INLET PROTECTION DEVICES SHALL BE EMPLOYED WHERE SHOWN ON THE PLANS AND MAINTAINED REGULARLY.

1.4.5 DIVERT UPLAND RUNOFF

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

OFFSITE RUNOFF ANTICIPATED TO BE IN THE FORM OF CONCENTRATED GUTTER FLOW AND SHALL BE DIVERTED AROUND OPEN CONSTRUCTION AREAS OR INTERCEPTED PRIOR TO ENTERING CONSTRUCTION AREAS.

1.4.6 CONSTRUCT PERMANENT CONTROLS

PERMANENT EROSION CONTROLS ARE NOT ANTICIPATED FOR THIS PROJECT.

1.4.7 STABILIZE EXPOSED SOILS DURING CONSTRUCTION

ALL AREAS OF DISTURBANCE MUST HAVE TEMPORARY STABILIZATION IN PLACE WITHIN 48 HOURS OF DISTURBANCE.

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.

1.4.8 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.

SURFACE ROUGHENING OF ALL EXPOSED SLOPES, COMBINED WITH TEMPORARY MULCHING, SHALL BE UTILIZED ON A REGULAR BASIS.

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

1.4.9 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.

1.4.10 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.

DEWATERING IS NOT ANTICIPATED ON THIS PROJECT. IF DEWATERING IS REQUIRED TO FACILITATE THE INSTALLATION OF THE DRAINAGE THEN THE CONTRACTOR SHALL DEVELOP SPECIFIC MEANS FOR TREATMENT OF DISCHARGE FOR APPROVAL BY THE ENGINEER PRIOR TO STARTING OF THAT WORK WHICH REQUIRES DEWATERING.

1.4.11 INSPECT YOUR SITE

INSPECT THE PROJECT SITE BASED ON SPECIAL PROVISION REQUIREMENTS AND LOW RISK SITE HANDBOOK GUIDANCE.

1.5 SEQUENCE AND STAGING

THE CONTRACT DOCUMENTS INCLUDE A SUGGESTED TRAFFIC MANAGEMENT PLAN. THIS SUGGESTED PHASING SHALL INCORPORATE THE PROPOSED EPSC MEASURES. IF THE CONTRACTOR WISHES TO PROPOSE AN ALTERNATE PHASING THEN 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: STP 2000 (24)

FILE NAME: z08d044ecnar.dgn
PROJECT LEADER: KEN UPMAL
DESIGNED BY: E. ATKINS
EROSION CONTROL NARRATIVE

PLOT DATE: 4/8/2010
DRAWN BY: M. BONADIO
CHECKED BY: E. ATKINS
SHEET 112 OF 163