

EPSC PLAN NARRATIVE

1.1 PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE REHABILITATION OF NORTH MAIN ST IN BARRE CITY, VT FROM THE VT 62/MAPLE AV INTERSECTION TO THE ELM ST INTERSECTION. MINOR INTERSECTION IMPROVEMENTS AT THE ELM ST/SUMMER ST INTERSECTION AND THE MAPLE AV/SUMMER ST INTERSECTION ARE ALSO PROPOSED FOR TEMPORARY TRAFFIC CONTROL PURPOSES. THE FIRST CONSTRUCTION SEASON IS PROPOSED TO INVOLVE THE UPGRADING OF THE EXISTING SEWER AND WATER LINES, AS WELL AS MODIFICATIONS TO THE NORTH MAIN/MAPLE AV/VT 62 INTERSECTION, MAPLE AV/SUMMER ST INTERSECTION, AND SUMMER ST/ELM ST INTERSECTION. THE PROPOSED WET POND TO BE LOCATED IN THE PARCEL ALONG VT 62 NEAR THE STEVENS BRANCH WILL ALSO BE CONSTRUCTED AND VEGETATED IN THE FIRST CONSTRUCTION SEASON. THE SECOND CONSTRUCTION SEASON WILL INVOLVE THE FULL DEPTH RECONSTRUCTION OF THE NORTH MAIN STREET ROADWAY AND SIDEWALK. IT WILL ALSO INCLUDE UPGRADING THE EXISTING STORM DRAIN SYSTEM LOCATED WITHIN THE PROJECT AREA. CONSTRUCTION WILL BE DONE IN PHASES TO LIMIT IMPACTS TO BUSINESS OWNERS LOCATED ALONG THE PROJECT CORRIDOR. DURING CONSTRUCTION, TRAFFIC WILL BE DIVERTED ONTO SUMMER ST TO BYPASS THE CONSTRUCTION ON NORTH MAIN ST.

THE TOTAL LENGTH OF THE ROADWAY PROJECT IS APPROXIMATELY 0.485 MILES. THE SITE IS LOCATED AT 619582.928 N, 498641.202 E BASED UPON NAD 27. TOTAL DISTURBED AREA (EXCLUDING WASTE, BORROW AND STAGING AREAS): 6.2 ACRES.

TOTAL AREA OF DISTURBANCE AS SHOWN ON THE ATTACHED EPSC PLAN IN THE AREA OF THE PROPOSED WET POND IS APPROXIMATELY 0.70 ACRES. TOTAL AREA OF DISTURBANCE FOR THE ENTIRE PROJECT, NOT INCLUDING COLD PLANING, RESURFACING, AND STAGING, IS APPROXIMATELY 6.2 ACRES. PROPOSED STAGING AND WASTE AREAS SHALL BE LIMITED TO AN AREA OF LESS THAN THREE (3) ACRES. PROPOSED AREAS WILL BE DEFINED BY THE CITY OF BARRE. IT IS ANTICIPATED THAT THIS PROJECT WILL LAST THREE CONSTRUCTION SEASONS.

1.2 SITE INVENTORY

1.2.1 TOPOGRAPHY

THE TOPOGRAPHY OF THE PROJECT AREA IS GENERALLY FLAT AND IS COVERED WITH SIGNIFICANT DEVELOPMENT, BOTH RESIDENTIAL AND COMMERCIAL. BUSINESSES LINE BOTH SIDES OF NORTH MAIN STREET THROUGHOUT THE PROJECT SITE. OVERHEAD UTILITIES HAVE BEEN MOVED OFF SITE TO IMPROVE THE AESTHETICS OF THE DOWNTOWN. UPGRADES IN THE SEWER, WATER, AND DRAINAGE LINES ARE A KEY PART OF THE PROJECT SCOPE.

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

THE STEVENS BRANCH IS THE PRIMARY WATER SOURCE NEAR THE PROJECT SITE. POTASH BROOK IS A TRIBUTARY OF THE STEVENS BRANCH THAT TRAVELS THROUGH THE PROJECT SITE UNDERGROUND. PART OF THE EXISTING STORMWATER SYSTEM WITHIN THE SITE CONNECTS TO POTASH BROOK VIA CULVERTS AND DROP INLETS. THE TRIBUTARY AREA FOR THE STEVENS BRANCH AT THE MOST DOWNSTREAM END OF THE PROJECT SITE IS APPROXIMATELY 86.2 SQUARE MILES.

1.2.3 VEGETATION

MINIMAL VEGETATION EXISTS WITHIN THE PROJECT SITE. MINOR IMPACTS TO RESIDENTIAL LAWNS WILL BE REESTABLISHED WITH STANDARD SEED MULCH PRACTICES. THE UNDEVELOPED PARCEL ALONG THE STEVENS BRANCH WILL BE USED TO CONSTRUCT A WET POND FOR WATER QUALITY TREATMENT PURPOSES. EROSION MATTING WILL BE USED TO STABILIZE THE SLOPES. ALL DISTURBED EARTH WILL BE REESTABLISHED FOLLOWING CONSTRUCTION. AS PART OF THE LANDSCAPING PLAN, NUMEROUS TREES AND SHRUBS WILL BE PLACED THROUGHOUT THE PROJECT AREA, INCLUDING AT THE PROPOSED WET POND.

1.2.4 SOILS

SOIL DATA CAME FROM THE U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE FOR THE COUNTY OF WASHINGTON, VERMONT. THE SOIL ON THE PROJECT SITE HAS BEEN CLASSIFIED AS “URBAN LAND-UDIPSAMMENTS, OCCASIONALLY FLOODED” WITH AN APPROXIMATE “K” FACTOR OF 0.1. THIS SOIL TYPE IS GENERALLY LOCATED IN BARRE AND MONTPELIER, AND CAN GENERALLY BE FOUND WITHIN FLOOD PLAINS AND TERRACES. IT IS MADE UP OF 50% URBAN LAND, 25% UDIPSAMMENTS, 15% DUMPS, AND 10% OTHER SOILS. ONSITE INVESTIGATION IS REQUIRED TO DETERMINE THE EXACT NATURE OF THE SOIL MAKEUP.

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: STEVENS BRANCH & POTASH BROOK
WETLANDS: NO

1.3 RISK EVALUATION

THIS PROJECT FALLS UNDER THE JURISDICTION OF GENERAL PERMIT 3-9020 FOR STORMWATER RUNOFF FROM CONSTRUCTION SITES FOR LOW RISK PROJECTS. ANY MODIFICATIONS TO THE PROJECT THAT INCREASE 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 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. BECAUSE THIS PROJECT FALLS UNDER THE CGP 3-9020, BARRIER FENCE SHALL BE USED INSTEAD OF PROJECT DEMARCATION FENCE WITHIN 100 FEET OF A WATER RESOURCE (STREAM, BROOK, LAKE, POND, WETLAND, ETC).

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 CONTRACTOR’S 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 WILL BE INSTALLED AS PROPOSED ON THE EPSC PLAN. BECAUSE THIS PROJECT FALLS UNDER THE CGP 3-9020, WOVEN WIRE REINFORCED SILT FENCE SHALL BE USED INSTEAD OF SILT FENCE WITHIN 100 FEET UPSLOPE OF RECEIVING WATERS.

INLET PROTECTION DEVICES WILL BE INSTALLED THROUGHOUT THE PROJECT SITE TO MINIMIZE CONSTRUCTION RUNOFF FROM DIRECTLY ENTERING THE SURROUNDING RECEIVING WATER BODIES VIA THE EXISTING STORMWATER COLLECTION SYSTEM.

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.

DUE TO THE MAKEUP OF THE PROJECT SITE AND THE SURROUNDING FACILITIES, CONCENTRATED FLOW IN CHANNELS IS NOT ANTICIPATED. THUS CHECK STRUCTURES ARE NOT ANTICIPATED TO BE NEEDED.

1.4.7 CONSTRUCT PERMANENT CONTROLS

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

A NEW WET POND AND PARTICLE SEPARATOR ARE PROPOSED FOR THE PURPOSE OF TREATING THE REQUIRED WATER QUALITY VOLUME OF STORMWATER GENERATED THROUGHOUT THE PROJECT SITE. THE PROPOSED POND AND PARTICLE SEPARATOR WILL BE LOCATED ALONG VT ROUTE 62 SOUTH OF THE NORTH MAIN STREET INTERSECTION. THE WET POND WILL HAVE A DIRECT DISCHARGE INTO STEVENS BRANCH VIA A PIPE AND OVERFLOW WEIR.

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.

TEMPORARY MULCHING AND SEEDING OF ALL EXPOSED SLOPES 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.

DE-WATERING ACTIVITIES INCLUDE BUT ARE NOT LIMITED TO OPEN PUMPING FROM SHALLOW SUMPS, TEMPORARY DITCHES, AND TRENCHES WITHIN AND AROUND THE EXCAVATION LIMITS. SUMPS SHALL BE PROVIDED WITH FILTERS SUITABLE TO PREVENT PUMPING OF FINE-GRAINED SOIL PARTICLES. TRAPPED WATER DURING DEWATERING CONTROLS SHOULD BE DISCHARGED TO SETTLING BASINS AND/OR APPROVED FILTER SOCKS. ALL EFFLUENT OR DISCHARGE SHOULD COMPLY WITH ALL APPLICABLE PERMITS AND REGULATIONS.

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.

EPSC NARRATIVE

PROJECT NAME: BARRE CITY	
PROJECT NUMBER: FEGC F 026-I(34) C/2	
FILE NAME: 85b010.ERO_NAR_C2	PLOT DATE: 3/9/2011
PROJECT LEADER: G. BAKOS	DRAWN BY: DMP / JAR
DESIGNED BY: DMP / MDS	CHECKED BY:
EPSC NARRATIVE	SHEET 159 OF 339