

READSBORO BRF 0105(3) EPSC PLAN NARRATIVE

1.1 PROJECT DESCRIPTION

READSBORO BRF 0105(3) CONSISTS OF THE REPLACEMENT OF BRIDGE 32 ON TOWN HIGHWAY 2 OVER THE WEST BRANCH OF THE DEERFIELD RIVER, IN THE TOWN OF READSBORO IN BENNINGTON COUNTY, VERMONT. THE NEW STEEL PLATE GIRDER BRIDGE, WILL HAVE A SLIGHTLY SHORTER SPAN (32.9 m) THAN THE EXISTING BRIDGE. IT WILL BE CONSTRUCTED ON NEW ABUTMENTS ON THE EXISTING HORIZONTAL ALIGNMENT. A TWO LANE TEMPORARY BRIDGE IS PLANNED, JUST UPSTREAM (WEST) OF THE EXISTING BRIDGE.

TOTAL AREA OF DISTURBANCE FOR THE PROJECT AREA IS 0.85 ACRES. THIS INCLUDES THE 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 EXISTING CONDITIONS EPSC PLAN. IT IS ANTICIPATED THAT THIS PROJECT WILL LAST TWO CONSTRUCTION SEASONS.

1.2 SITE INVENTORY

1.2.1 TOPOGRAPHY

THE BANKS OF THE WEST BRANCH OF THE DEERFIELD RIVER IN THE PROJECT AREA ARE HILLY, ROCKY AND WOODED. TWO WIDE PAVED DRIVEWAYS IMMEDIATELY ADJOIN THE NEW BRIDGE TO THE NORTHWEST AND SOUTHWEST, AND WILL BE UTILIZED TO ACCESS THE TEMPORARY BRIDGE.

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

BRIDGE 32 SPANS OVER THE WEST BRANCH OF THE DEERFIELD RIVER. THE STREAM BED IS VERY ROCKY AND SINUOUS. THERE ARE TWO HOUSES, AND A GARAGE ADJOINING THE PROJECT LIMITS. THE WEST BRANCH OF THE DEERFIELD RIVER FLOWS INTO THE DEERFIELD RIVER, APPROX. 45 m DOWNSTREAM FROM THE PROJECT SITE.

1.2.3 VEGETATION

THE VEGETATION IN THE PROJECT AREA CONSISTS OF A COMBINATION OF SMALL TREES AND BRUSH. STONE FILL COVERED WITH GRUBBING MATERIAL WILL STABILIZE STEEPER (CHANNEL) SLOPES. SEED AND MULCH (OR BIODEGRADABLE EROSION MATTING WHERE SPECIFIED) WILL STABILIZE FLATTER SLOPES. UPON PROJECT COMPLETION, THE CHANNEL WILL BE ARMORED WITH STONE FILL TYPE IV AS SPECIFIED ON THE PLANS. DISTURBED VEGETATION WILL BE REESTABLISHED WITH STANDARD SEED AND MULCH PRACTICES.

1.2.4 SOILS

THE U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE FOR BENNINGTON COUNTY, VERMONT IS THE SOURCE OF THE SOILS INFORMATION. THE SOIL EXPECTED ON THIS PROJECT IS COLTON GRAVELLY LOAMY SAND, 3-8% SLOPES, EXTREMELY STONY (K=0.17, HYDROGROUP A)

NOTE: K-VALUES GENERALLY INDICATE THE FOLLOWING: 0.00-0.17 = LOW EROSION POTENTIAL
0.18-0.36 = MODERATE EROSION POTENTIAL
0.37 AND HIGHER = HIGH EROSION POTENTIAL

1.2.5 SENSITIVE RESOURCE AREAS

CRITICAL HABITATS: NO

HISTORICAL OR ARCHEOLOGICAL AREAS: YES, STONE FOUNDATION WALL NORTHEAST QUADRANT AND ARCH. SENSITIVE AREAS IN NW AND SW QUADRANT.
(SECTION 106 FINDINGS "NO ADVERSE Effect" 9/18/2002.)

BARRIER FENCING WILL BE REQUIRED TO PROTECT ARCH. SENSITIVE AREAS. SEE 1.4.1.

PRIME AGRICULTURAL LAND: NO

THREATENED AND ENDANGERED SPECIES: NO

WATER RESOURCE: WEST BRANCH OF THE DEERFIELD RIVER

WETLANDS: NO

1.3 RISK EVALUATION

BECAUSE TOTAL AREA OF DISTURBANCE IS LESS THAN 1 ACRE, THIS PROJECT DOES NOT FALL UNDER THE JURISDICTION OF THE GENERAL PERMIT 3-9020 FOR STORMWATER RUNOFF FROM CONSTRUCTION SITES FOR LOW RISK PROJECTS. ANY MODIFICATIONS TO THE PROJECT THAT INCREASES THE RISK TO ENVIRONMENTAL RESOURCES SHALL BE RE-EVALUATED IN ACCORDANCE WITH THE PERMIT REQUIREMENTS. THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY ADDITIONAL PERMITTING.

1.4 EROSION PREVENTION AND SEDIMENT CONTROL (EPSC)

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 THAT CAN BE ACCESSED BY CONSTRUCTION EQUIPMENT SHALL BE DELINEATED. PROJECT DEMARCATION FENCING, DENOTED -PDF- ON THE PLANS, SHALL BE USED TO PHYSICALLY MARK SITE BOUNDARIES. BARRIER FENCE, DENOTED -BF- ON THE PLANS, SHALL BE USED INSTEAD OF PROJECT DEMARCATION FENCE WITHIN 100 FT OF A WATER RESOURCE (STREAM, BROOK, LAKE, POND, WETLAND, ETC) AND AT AREAS IDENTIFIED AS ARCHEOLOGICALLY SENSITIVE.

1.4.2 LIMIT DISTURBANCE AREA

PREVENTING INITIAL SOIL EROSION 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 (PHASING) AS CONSTRUCTION PROCEEDS. ADDITIONAL MEASURES MAY BE NEEDED DUE TO THE PHASING OF THE PROJECT AND AS DIRECTED BY THE ENGINEER.

MAINTAINING VEGETATED BUFFERS ALONG STREAM BANKS, WETLANDS AND OTHER SENSITIVE AREAS IS A CRUCIAL EROSION CONTROL MEASURE THAT SHALL 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. STABILIZED CONSTRUCTION ENTRANCES SHALL BE INSTALLED AS PROPOSED ON THE EPSC PLANS AND ANYWHERE EQUIPMENT WILL BE GOING FROM AREAS OF EXPOSED SOILS TO PAVED SURFACES AND AS DIRECTED BY THE ENGINEER.

INSTALLATION SHALL COINCIDE WITH THE CONTRACTOR'S PROGRESS SCHEDULE.

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.

INSTALL SILT FENCE AS PROPOSED ON THE EPSC PLAN, ACCORDING TO DETAIL PROVIDED. WOVEN WIRE REINFORCED SILT FENCE SHALL BE USED INSTEAD OF SILT FENCE WITHIN 100 FEET UPSLOPE OF RECEIVING WATERS.

FILTER CURTAIN WILL BE REQUIRED TO BE INSTALLED AND MAINTAINED FOR THE REMOVAL OF THE EXISTING PIER, AS INDICATED ON THE PLANS.

FILTER FABRIC DROP INLET PROTECTION IS REQUIRED TO BE INSTALLED AND MAINTAINED AT 6 LOCATIONS, AS INDICATED ON THE PLANS.

1.4.5 DIVERT UPLAND RUNOFF

CONSTRUCTION OF DIVERSIONARY SWALES AND OTHER MEASURES SHALL BE UTILIZED AS NEEDED TO INTERCEPT RUNOFF FROM ABOVE THE CONSTRUCTION SITE AND DIRECT IT AROUND DISTURBED AREAS, SO CLEAN WATER IS NOT MUDDIED BY TRAVELLING OVER EXPOSED SOILS ON THE CONSTRUCTION SITE.

1.4.6 SLOW DOWN CHANNELIZED RUNOFF

CONSTRUCTION OF STONE CHECK DAMS IS ANTICIPATED IN ORDER TO REDUCE THE VELOCITY OF CHANNELIZED RUNOFF IN STEEPER AREAS.

1.4.7 CONSTRUCT PERMANENT CONTROLS

THE FOLLOWING PERMANENT STORMWATER TREATMENT DEVICES SHALL BE INSTALLED, IN ACCORDANCE WITH PERMIT CONDITIONS.

1. STONE FILL, TYPE IV FOR CHANNEL PROTECTION
2. GRUBBING MATERIAL OVER STONE FILL

1.4.8 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 SHALL TRIGGER IMMEDIATE PROTECTION OF EXPOSED SOILS.

1.4.9 WINTER STABILIZATION

VARIOUS MEASURES SPECIFIC TO WINTER CONSTRUCTION MAY BE NECESSARY SHOULD THE PROJECT WORK EXTEND INTO WINTER (OCT. 15 - 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, OR SOONER IF RAIN IS FORECAST. 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 VERMONT WATER QUALITY STANDARDS.

TREATMENT OF DEWATERING OF FOUNDATION EXCAVATIONS IS ANTICIPATED. LOCATIONS FOR THE TREATMENT HAVE BEEN PROPOSED 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

THE CONTRACTOR SHALL DEVELOP A SEQUENCE AND STAGING PLAN 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: READSBORO
PROJECT NUMBER: BRF 0105 (3)

FILE NAME: 89J088/STR/s89J088forms.dgn PLOT DATE: 07-MAR-2012
PROJECT LEADER: J. LACROIX DRAWN BY: G. ROKES
DESIGNED BY: W. PELLETIER CHECKED BY: W. PELLETIER
EPSC NARRATIVE SHEET 70 OF 90