EPSC PLAN NARRATIVE

1.1 PROJECT DESCRIPTION

HINESBURG STP 0199(2) INVOLVES THE REPLACEMENT OF BRIDGE 10 CARRYING SILVER STREET (TH 4) OVER THE LAPLATTE RIVER IN HINESBURG, VT. THE BRIDGE WILL BE REPLACED ON THE EXISITING ALIGNMENT WITH MINIMAL WIDENING AND NECESSARY APPROACH WORK TO MATCH INTO THE EXISTING ROADWAY. TWO-WAY TRAFFIC WILL BE MAINTAINED DURING CONSTRUCTION ON A TEMPORARY BRIDGE TO BE CONSTRUCTED EAST OF THE EXISTING BRIDGE.

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 0.93 ACRES.

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

1.2 SITE INVENTORY

1.2.1 TOPOGRAPHY
THE PROJECT IS LOCATED IN A DIP IN SILVER STREET AT THE NORTH EDGE OF AN OPEN FIELD. WOODED AREAS BORDER THE IMMEDIATE PROJECT SITE, WITH A RESIDENCE LOCATED TO THE NORTHWEST, AND A PAVED PARKING LOT FOR THE HINESBURG ELEMENTARY SCHOOL IN THE NORTHEAST QUADRANT. THE RESIDENTIAL PROPERTY TO THE NORTHWEST HAS A PARKING LOT IN FRONT ACCESSING SILVER STREET. THERE IS A 40-FOOT GRASS/TREED BUFFER BETWEEN THIS PARKING LOT AND THE LAPLATTE RIVER.

1.2.2 DRAINAGE, WATERWAYS, BODIES OF WATER, AND PROXIMITY TO NATURAL OR MAN-MADE WATER FEATURES
BRIDGE 10 CROSSES THE LAPLATTE RIVER. THE RIVER IS CLASSIFIED AS SINUOUS, ALLUVIAL, PROBABLY INCISED AT THE PROJECT SITE. THE STREAMBED IS A MIXTURE OF SILT, SAND, GRAVEL, COBBLES AND SOME STONES. CLASS II WETLANDS ARE LOCATED IN THE NORTHEAST, SOUTHEAST AND SOUTHWEST PROJECT AREAS.

THERE ARE TWO EXISTING IN-LINE CATCH BASINS IN THE SCHOOL PARKING LOT. THESE CATCH BASINS DISCHARGE TO A DITCH AT STATION 1+080LT, THEN OVERLAND TO THE LAPLATTE RIVER. A NEW DROP INLET WILL BE INSTALLED AND TIED INTO THE EXISTING OUTFLOW; DRAINAGE WILL BE CONVEYED VIA A NEW 450MM OPTION PIPE TO THE LAPLATTE RIVER AT STATION 1+108LT. A NEW 450MM OPTION PIPE WILL BE INSTALLED UNDER THE SCHOOL PARKING LOT ENTRANCE ALSO CONNECTED TO THE NEW DROP INLET.

DUE TO THE NATURE OF THE SURROUNDING TERRAIN THE PROJECT SITE COULD RECEIVE RUNOFF WATER FROM A FEW NEARBY AREAS.

1.2.3 VEGETATION
THE VEGETATION IN THE PROJECT AREA CONSISTS OF HARDWOOD TREES, UNDERGROWTH AND GRASSED AREAS. THE IMPACT TO VEGETATION WILL BE LIMITED TO THAT WHICH IS DIRECTLY AFFECTED BY INSTALLATION OF THE TEMPORARY BRIDGE. AS PART OF THE PROJECT, THE RIVER 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. TREES WILL BE REMOVED AND REPLACED AT STATIONS: 1+062LT, 1+089LT, 1+096LT, AND 1+103LT.

1.2.4 SOILS
SOIL DATA CAME FROM THE U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE FOR THE COUNTY OF CHITTENDEN, VERMONT. SOILS ON THE PROJECT SITE ARE: Le - LIMERICK SILT LOAM; Lh LIVINGSTON CLAY; AND MyB - MUNSON RAYNHAM SILT LOAMS. K-FACTOR = 0.49 FOR ALL SOILS, INDICATING HIGH EROSION POTENTIAL.

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: YES, POPULATION OF STONECAT LOCATED DOWNSTREAM OF PROJECT.
WATER RESOURCE: LAPLATTE RIVER
WETLANDS: YES, CLASS II WETLANDS LOCATED IN THE NORTHEAST, SOUTHEAST AND SOUTHWEST PROJECT AREAS.

1.3 RISK EVALUATION

THIS PROJECT DOES NOT FALL UNDER THE JURISDICTION OF GENERAL PERMIT 3-9020 FOR STORMWATER 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, THEN THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY ADDITIONAL PERMITTING.

1.4 EROSION PREVENTION AND SEDIMENT CONTROL

THE EROSION PREVENTION AND SEDIMENT 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 POLLLUTION 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 SPECIFC 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 APPPROVED 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. DUE TO THE CLASS II WETLANDS WITHIN THE CONSTRUCTION AREA, 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 WILL 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 CGP 3-9020, 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.

1.4.3 SITE ENTRANCE/EXIT STABILIZATION
TRACKING OF SEDIMENT ONTO PUBLIC HIGHWAYS SHALL BE MNIMIZED 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.

INSTALL SILT FENCE AND FILTER CURTAIN AS PROPOSED ON THE EPSC PLAN.

CONSTRUCT DROP INLET PROTECTION DEVICE AT STATION 1+080.500 LT

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

IT IS NOT ANTICPIATED THAT DIVERSION MEASURES BEYOND THE PROPOSED DRAINAGE PIPE NORTHEAST OF THE BRIDGE WILL BE NECESSARY.

1.4.6 SLOW DOWN CHANNELIZED RUNOFF
CHECK DAMS SHALL BE UTILIZED TO REDUCE THE VELOCITY, AND THUS THE EROSIVE POTENTIAL, OF CONCENTRATED FLOW IN CHANNELS.

STONE CHECK DAMS WILL BE INSTALLED AS SHOWN ON THE EPSC PLAN FROM STATION 1+105 LT TO STATION 1+110 LT. SIZE AND SPACING OF THE CHECK DAMS SHALL BE AS INDICATED IN THE CHECK DAM DETAIL DRAWING ON SHEET 51.

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

DI STA 1+080.500 LT

NEW 450 MM OPTION PIPE STA 1+063.50 LT to STA 1+079.90 LT
NEW 450 MM OPTION PIPE STA 1+081.10 LT to STA 1+108.07 LT

STONE FILL, TYPE II AS SHOWN ALONG SIDE SLOPES
STONE FILL, TYPE III AS SHOWN ALONG CHANNEL

1.4.8 STABILIZE EXPOSED SOILS DURING CONSTRUCTION
SURFACE ROUGHENING OF ALL EXPOSED SLOPES, COMBINED WITH TEMPORARY MULCHING, SHALL BE UTILIZED ON A REGULAR BASIS. ANY SLOPES TO BE EXPOSED FOR MORE THAN 14 DAYS PRIOR TO FINAL GRADING SHALL BE TRACKED AND MULCHED. SLOPES SHALL BE STABILIZED IF RAIN IS FORECAST WITHIN THE FOLLOWING 48 HOURS.

1.4.9 WINTER STABILIZATION
ALL EARTH DISTURBANCES ASSOCIATED WITH THIS PROJECT SHALL BE STABILIZED PRIOR TO THE WINTER SEASON (OCTOBER 15 THROUGH APRIL 15). SHOULD THE PROJECT CAUSE EARTH DISTURBANCE DURING THE WINTER, THE CONTRACTOR SHALL PREPARE A WINTER-SPECIFIC EPSC. 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.

USE OF A COFFERDAM IS NOT ANTICIPATED. THE SPECIFIC MEANS FOR TREATMENT OF DISCHARGE SHALL BE PROVIDED BY THE CONTRACTOR FOR ANY DEWATERING.

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
THIS SECTION WILL BE DEVELOPED BY THE CONTRACTOR

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.

1.5.3 UPDATES

PROJECT NAME: HINESBURG	
PROJECT NUMBER: STP 0199(2)	
FILE NAME: 01J282/str/s01J282eroNotes.dgn	PLOT DATE: 02-MAR-2011
PROJECT MANAGER: C. CARLSON	DRAWN BY: C. MOONEY
DESIGNED BY: W. LAMMER	CHECKED BY: W. LAMMER
EROSION CONTROL NOTES	SHEET 46 OF 56