EROSION CONTROL NARRATIVE

1.1 PROJECT DESCRIPTION

THE IRASBURG VERMONT ROUTE 58 CULVERT REHABILITATION PROJECT INCLUDES WORK TO BE PERFORMED AT MILE MARKER 1.05 ON VERMONT ROUTE 58 IN THE TOWN OF IRASBURG, COUNTY OF ORLEANS.

THE PROJECT SHALL CONSIST OF INSTALLATION OF A SPIRAL RIB PIPE LINER, INSTALLATION OF CONCRETE HEADWALLS AND WINGWALLS, CHANNEL STABILIZATION, AND EMBANKMENT STABILIZATION. TOPSOIL, SEED, MULCH, OR STONE FILL SHALL BE APPLIED TO ALL DISTURBED AREAS.

THE PROJECT SHALL REHABILITATE AN EXISTING CORRUGATED GALVANIZED METAL PLATE PIPE THAT IS IN POOR CONDITION. FAILURE OF THE EXISTING HEADWALLS HAS RESULTED IN SEVERE EROSION OF THE BANKS SURROUNDING THE CULVERT OUTLET. DISTURBED EARTH ASSOCIATED WITH THIS WORK IS A RESULT OF ACCESS AND STAGING REQUIREMENTS, EXCAVATION FOR INSTALLATION OF NEW HEADWALLS AND WINGWALLS, AND STONE FILL INSTALLATION FOR INLET AND OUTLET PROTECTION AND SLOPE STABILIZATION. THE TOTAL AREA OF DISTURBANCE IS 0.31 ACRES, INCLUDING BOTH ON-SITE AND CONTIGUOUS WASTE, BORROW, STAGING, AND HAUL ROADS.

1.2 SITE INVENTORY AND ANALYSIS

1.2.1 BODIES OF WATER & ON-SITE/OFFSITE DRAINAGE CHARACTERISTICS

THE PROPERTY SURROUNDING THE PROJECT SITE IS HEAVILY FORESTED WITH STEEP SLOPES AND IS A RURAL AREA. THERE ARE ROADWAY DITCHES THAT OUTLET INTO THE PROJECT AREA. THE PROJECT SITE COULD RECEIVE RUNOFF FROM THE SURROUNDING SLOPES, ROADWAY DITCHES AND THE ROADWAY OVERTOP THE CULVERT.

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

THE WATER SOURCE ON THE PROJECT SITE IS AN UNNAMED TRIBUTARY TO BRIGHTON BROOK. THE TRIBUTARY AREA AT THE CULVERT CROSSING IS 0.49 SQUARE MILES.

1.2.3 TOPOGRAPHY, EXISTING ROADS, BUILDINGS, UTILITIES

THE TOPOGRAPHY OF THE PROJECT AREA IS MOUNTAINOUS TERRAIN THAT IS MOSTLY WOODED WITH OPEN AREAS FOR THE SURROUNDING ROADWAYS. VT ROUTE 58 IS WITHIN THE PROJECT SITE. THERE IS A RESIDENCE ON THE NORTH WEST SIDE OF THE PROJECT SITE WITH A PAVED DRIVEWAY AND A HOUSE UP THE SLOPE. THERE ARE OVERHEAD UTILITIES THAT SHOULD NOT BE IMPACTED BY THE PROJECT.

1.2.4 VEGETATION

THE VEGETATION IN THE PROJECT AREA CONSISTS OF RELATIVELY SMALL HARDWOOD TREES AND UNDERGROWTH. THE IMPACT WILL BE LIMITED TO THAT WHICH IS RELATED TO THE EXCAVATION REQUIRED FOR THE INSTALLATION OF HEADWALLS AND WINGWALLS, STONE FILL, TEMPORARY HAUL ROADS. UPON COMPLETION, THE CHANNEL AND ANY DISTURBED AREAS WITH SLOPES GREATER THAN 2:1 WILL BE ARMORED WITH STONE FILL TYPE II OR III AS SPECIFIED ON THE PLANS. DISTURBED VEGETATION WILL BE REESTABLISHED WITH STANDARD SEED AND MULCH PRACTICES.

1.2.5 SOILS

SOIL DATA CAME FROM THE U.S. DEPARTMENT OF AGRICULTURE NATIONAL RESOURCES CONSERVATION SERVICE FOR THE COUNTY OF ORLEANS, VERMONT.

THE SOIL ON THE PROJECT SITE IS DIXFIELD SANDY LOAM, 35 TO 60 PERCENT SLOPES, VERY STONY. THIS TYPE OF SOIL IS USUALLY FOUND IN MOUNTAINS AND HILLS. K FACTOR = 0.24. THE SOIL IS CONSIDERED MODERATELY ERODIBLE.

1.2.6 SENSITIVE RESOURCE AREAS

CRITICAL HABITATS: NO
HISTORICAL OR ARCHEOLOGICAL AREAS: NO
PRIME AGRICULTURAL LAND: NO
THREATENED AND ENDANGERED SPECIES: NO
WATER RESOURCE: UNNAMED TRIBUTARY TO BRIGHTON BROOK
WETLANDS: NO

1.3 RISK EVALUATION

THIS PROJECT DOES NOT FALL UNDER THE JURISDICTION OF CONSTRUCTION GENERAL PERMIT 3-9020 BASED ON THE PROJECT IMPACT AREA. 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 SELECTED CONTRACTOR WILL BE RESPONSIBLE FOR ADDITIONAL PERMITTING WITH VANR VIA FILING OF THE APPROPRIATE NOTICE OF INTENT UNDER THE CONSTRUCTION GENERAL PERMIT PROCESS.

1.4 EROSION PREVENTION AND SEDIMENT CONTROL

THE EROSION CONTROL PLANS ARE MEANT AS A GUIDELINE FOR PREVENTING EROSION AND CONTROLLING SEDIMENT TRANSPORT. THE WORK OUTLINED IN THIS NARRATIVE CONSISTS OF APPLYING MEASURES THROUGHOUT THE LIFE OF THE PROJECT MINIMIZING SEDIMENT TRANSPORT TO THE RECEIVING WATERS. THE MEASURES INCLUDE STABILIZATION AND STRUCTURAL PRACTICES, STORM WATER CONTROLS AND OTHER POLLUTION PREVENTION CONTROLS.

PREVENTING INITIAL SOIL EROSION IS MUCH MORE EFFECTIVE THAN TREATING ERODED SEDIMENT. 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.

ALL MEASURES SHALL BE REGULARLY MAINTAINED AND SHALL BE CHECKED FOR SEDIMENT BUILD-UP. SEDIMENT SHALL BE DISPOSED AT AN APPROVED SITE WHERE IT WILL NOT BE SUBJECT TO EROSION.

(REFER TO THE "LOW RISK SITE HANDBOOK FOR EROSION PREVENTION AND SEDIMENT CONTROL" AND APPROPRIATE DETAIL SHEETS FOR EACH PRACTICE REQUIRED ON THE PROJECT TO INCLUDE BUT NOT LIMITED TO THE FOLLOWING.)

1.4.1 MARK SITE BOUNDARIES
PROJECT DEMARCATION FENCING, DENOTED -PDF- ON THE PLANS, IS USED TO DELINEATE THE LIMITS THE CONTRACTOR CAN ACCESS WITH CONSTRUCTION EQUIPMENT. THIS MEASURE LIMITS THE AREA THAT CAN BE DISTURBED AND EXPOSED TO EROSION.

1.4.2 LIMIT DISTURBANCE AREA
EMPLOY TEMPORARY 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.

1.4.3 STABILIZE CONSTRUCTION EXIT
STABILIZED CONSTRUCTION ENTRANCE SHALL BE UTILIZED AS NECESSARY.

1.4.4 INSTALL SILT FENCE
SILT FENCE SHALL BE INSTALLED PRIOR TO ANY UP SLOPE WORK AS SHOWN ON THE PLANS OR AS NECESSARY.

1.4.5 DIVERT UPLAND RUNOFF
NOT APPLICABLE.

1.4.6 SLOW DOWN CHANNELIZED RUNOFF
CHECK DAMS SHALL BE UTILIZED AS NECESSARY.

1.4.7 CONSTRUCT PERMANENT CONTROLS
TYPE II,III STONE FOR SLOPE LINING AND CHANNEL PROTECTION
SEED AND MULCH
DRAINAGE INLETS AND PIPING
SOIL RETENTION WALLS

STREAM BANK VEGETATION WILL BE INTRODUCED IN THE GRUBBING MATERIAL THAT IS TO BE PLACED OVER THE STREAM BANK STONE FILL.

1.4.8 STABILIZE EXPOSED SOILS
SEED AND MULCH
EROSION MATTING

TRACKING OF ALL EXPOSED SLOPES, COMBINED WITH TEMPORARY MULCHING, WILL BE UTILIZED ON A REGULAR BASIS. SLOPES SHALL BE STABILIZED WITHIN 48 HOURS OF FORECASTED RAIN.
SEEDING, MULCHING AND BIODEGRADABLE EROSION CONTROL MATTING OR AN EQUIVALENT SHALL BE USED TO STABILIZE ALL SLOPES STEEPER THAN 1:3. THESE SLOPES SHALL BE STABILIZED WITHIN 48 HOURS OF REACHING INTERMITTENT PHASES OF CONSTRUCTION.

1.4.9 WINTER STABILIZATION
VARIOUS MEASURES SPECIFIC TO WINTER (SEE LOW RISK HANDBOOK)

1.4.10 STABILIZE SOIL AT FINAL GRADE
SEED AND MULCH
EROSION MATTING

SEEDING, MULCHING AND BIODEGRADABLE EROSION CONTROL MATTING OR AN EQUIVALENT SHALL BE USED TO STABILIZE ALL SLOPES STEEPER THAN 1:3. THESE SLOPES SHALL BE STABILIZED WITHIN 48 HOURS OF REACHING FINAL GRADE.

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.

SEDIMENT CONTAINMENT BAGS (FILTER BAGS) FOR HEADWALL WORK SHALL BE USED AS NECESSARY AND AS DIRECTED BY THE ENGINEER. SEE SHEET 14 FOR DETAIL.

1.4.12 INSPECT YOUR SITE
INSPECT SITE BASED ON PERMIT AUTHORIZATION OR SPECIAL PROVISION REQUIREMENTS.

EPSC NARRATIVE

PROJECT NAME:	IRASBURG
PROJECT NUMBER:	STP CULV(20)

FILE NAME: ...\drawing\z08c194eronarr.dgn	PLOT DATE: 11/16/2010
PROJECT LEADER: G. BOGUE	DRAWN BY: J. SOTER
DESIGNED BY: M. CHENETTE	CHECKED BY: T. KNIGHT
EPSC NARRATIVE	SHEET 8 OF 15

Stantec