EROSION CONTROL NARRATIVE

1.1 PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE REHABILITATION OF THE HISTORIC TAFTSVILLE COVERED BRIDGE ALONG ITS CURRENT ALIGNMENT, INCLUDING REPAIR OF THE EXISTING FOUNDATIONS. THE PROJECT SITE IS LOCATED IN THE HAMLET OF TAFTSVILLE, APPROXIMATELY THREE MILES EAST OF WOODSTOCK VILLAGE IN THE NORTHEAST CORNER OF THE TOWNSHIP OF WOODSTOCK. THE STRUCTURE CARRIES TAFTSVILLE COVERED BRIDGE ROAD (T.H. 02), OVER THE OTTAUQUECHEE RIVER.

THE EXISTING COVERED BRIDGE WILL BE REHABILITATED TO A LEVEL THAT ACCOMMODATES A REGULATORY POSTED WEIGHT REQUIREMENT OF 10 TONS. HOWEVER, THE TOWN WISHES TO POST THE BRIDGE FOR 8 TONS (16000 POUNDS). THE EXISTING DAMAGED WEST MASONRY ABUTMENT WILL BE REPLACED. REHABILITATION OF THE REMAINING SUBSTRUCTURES WILL INCLUDE REPOINTING OF THE MASONRY FACES, PLACEMENT OF INTERNAL CONSOLIDATION GROUT AND NEW ARCH CONNECTIONS. EXISTING PIER WORK WILL ALSO INCLUDE NEW CONCRETE CAP AND STRENGTHENING. ROADWAY WORK WILL INCLUDE NEW GUARDRAIL AT THE CORNERS OF THE BRIDGE AND PAVED APPROACHES, INCLUDING PAVED DRAINAGE SWALES AT THE WEST APPROACH.

THE BRIDGE WILL BE CLOSED DURING CONSTRUCTION AND TRAFFIC WILL BE REROUTED AROUND THE SITE VIA THE EXISTING ROADWAY NETWORK.

IT IS ANTICIPATED THIS PROJECT WILL BE COMPLETED WITHIN TWO CONSTRUCTION SEASONS.

TOTAL AREA OF DISTURBANCE, EXCLUDING WASTE, BORROW AND STAGING AREAS, AS SHOWN ON THE ATTACHED EPSC PLAN IS APPROXIMATELY 0.17 ACRES.

THE TOTAL DISTURBED AREA IS AN ESTIMATE. ALL ON-SITE AND OFF-SITE WASTE AND BORROW AREAS, STAGING AREAS, AND HAUL ROADS NEED PRIOR WRITTEN CLEARANCE BY VTRANS ENVIRONMENTAL SECTION PRIOR TO THE BEGINNING OF CONSTRUCTION.

CONSTRUCTION SHALL CONFORM TO ALL OTHER ENVIRONMENTAL PERMITS ASSOCIATED WITH THIS PROJECT.

1.2 SITE INVENTORY

1.2.1 TOPOGRAPHY

THE TOPOGRAPHY OF THE PROJECT SITE TO THE EAST IS GENERALLY SLOPING AND SCATTERED WITH VARIOUS SIZE TREES. THE NORTHEAST SIDE IS WOODED WITH MODERATELY STEEP SLOPES. TO THE WEST, THE LAND CONSISTS OF A GENERALLY OPEN AREA MOST OF WHICH IS PAVED TO ACCOMMODATE ACCESS TO THE HYDROELECTRIC POWER GENERATION STATION. THERE IS ONE RESIDENCE AND A HYDROELECTRIC POWER GENERATION STATION LOCATED NEAR THE PROJECT AREA. TAFTSVILLE COVERED BRIDGE ROAD (T.H. 2) IS A PAVED, CLASS 2 RURAL LOCAL ROAD. ON THE WEST END OF THE BRIDGE, THE ROAD SPLITS INTO TWO TRAVELWAYS, BOTH OF WHICH CONNECT TO WOODSTOCK ROAD (US ROUTE 4 & VT ROUTE 12). ON THE EAST END OF THE BRIDGE, RIVER ROAD (T.H. 107), AN UNPAVED, CLASS 3 RURAL LOCAL ROAD DEPARTS IN A NORTHWESTERLY DIRECTION. TAFTSVILLE COVERED BRIDGE ROAD TRANSITIONS INTO QUECHEE MAIN STREET AT THE INTERSECTION WITH RIVER ROAD AND CONTINUES AWAY FROM THE SITE AS A PAVED, CLASS 2 RURAL LOCAL ROAD IN A SOUTHEASTERLY DIRECTION. OVERHEAD UTILITY LINES THAT RUN ALONG THE SOUTH SIDE OF TAFTVILLE COVERED BRIDGE ROAD AND CROSS OVER AT THE EAST AND WEST ENDS OF THE BRIDGE WILL REMAIN. THERE ARE NO KNOWN UNDERGROUND UTILITIES OR DRAINAGE PIPES IN THE PROJECT AREA.

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

THE OTTAUQUECHEE RIVER IS THE ONLY WATER SOURCE ON THE PROJECT SITE. IT IS A RURAL MEANDERING WATERWAY THAT FLOWS EASTERLY FROM ITS HEADWATERS IN THE GREEN MOUNTAINS IN SHERBURNE, WHERE IT PASSES THROUGH OR ALONG THE BOUNDARIES OF THE TOWNS OF BRIDGEWATER, WOODSTOCK, POMFRET, HARTFORD AND HARTLAND THROUGH THE QUECHEE GORGE TO ITS OUTLET AT THE CONNECTICUT RIVER IN NORTH HARTIAND. THE OTTAUQUECHEE RIVER IS REGULATED BY THE ARMY CORPS OF ENGINEERS NORTH HARTLAND DAM, THE QUECHEE DAM, AND THE TAFTSVILLE DAM LOCATED IMMEDIATELY UPSTREAM OF THE BRIDGE. THE BED MATERIAL IN THE IMMEDIATE AREA OF THE BRIDGE CONSISTS OF LEDGE, BOULDERS, AND COBBLES. THERE IS A HISTORY OF ICE JAMS THAT FORM IN THE TAFTSVILLE POND UPSTREAM OF THE TAFTSVILLE DAM.

1.2.3 VEGETATION

THE VEGETATION IN THE PROJECT AREA CONSISTS OF WOODS, GRASSY LAWNS, BRUSH AND UNDERGROWTH. THE MAJORITY OF THE WOODED AREA CAN BE FOUND IN THE NORTHEAST SIDE OF THE PROJECT. THE IMPACT TO VEGETATION WILL BE LIMITED TO THAT WHICH IS DIRECTLY AFFECTED BY APPROACH WORK.

1.2.4 SOILS

ALL SOIL DATA CAME FROM THE U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE FOR THE COUNTY OF WINDSOR, VERMONT. SOILS ON THE PROJECT SITE ARE HINCKLEY SANDY LOAM, 25 TO 50 PERCENT SLOPES. "K-FACTOR" = 0.49. 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: TAFTSVILLE COVERED BRIDGE IS ON NATIONAL REGISTER OF HISTORIC PLACES (NRHP). THE BRIDGE IS LOCATED WITHIN A HISTORIC DISTRICT.
PRIME AGRICULTURAL LAND: NO
THREATENED AND ENDANGERED SPECIES: NO
WATER RESOURCE: OTTAUQUECHEE RIVER

1.3 RISK EVALUATION

THIS PROJECT IS CONSIDERED LOW RISK AND DOES NOT FALL UNDER THE JURISDICTION OF CONSTRUCTION GENERAL PERMIT 3-9020 FOR STORMWATER BASED ON PROJECT IMPACT AREA. SHOULD CHANGES PRIOR TO OR DURING CONSTRUCTION RESULT IN ONE OF 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 FILIING THE APPROPRIATE "NOTICE OF INTENT" UNDER THE CONSTRUCTION GENERAL PERMIT PROCESS.

1.4 EROSION PREVENTION AND SEDIMENT CONTROL

THE EROSION CONTROL PLANS ARE MEANT TO BE A GUIDELINE FOR PREVENTING EROSION AND CONTROLLING SEDIMENT TRANSPORT. THE WORK OUTLINED IN THIS NARRATIVE CONSISTS 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, STORMWATER 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 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 THE SITE BOUNDARIES.

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, 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

NOT ANTICIPATED FOR THIS PROJECT.

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.

TURBIDITY CURTAIN WILL BE INSTALLED AS PROPOSED ON THE EPSC PLAN.

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 CONSTRUCITON SITE.

THE PROJECT AREA IS REALTIVELY FLAT. THERFORE IT IS NOT ANTICPIATED THAT DIVERSION MEASURES WILL BE NECESSARY.

1.4.6 SLOW DOWN CHANNELIZED RUNOFF

CHECK STRUCTURES WILL NOT LIKELY BE UTILIZED TO REDUCE THE VELOCITY, AND THUS THE EROSIVE POTENTIAL, OF CONCENTRATED FLOW IN CHANNELS.

1.4.7 CONSTRUCT PERMANENT CONTROLS

PERMANENT STORMWATER TREATMENT DEVICES SHALL BE INSTALLED AS SHOWN ON THE PLANS AND IN ACCORDANCE WITH PERMIT CONDITIONS. STORMWATER TREATMENT INCLUDES REPAVING OF WEST APPROACH DRAINAGE SWALES WHICH OUTLET INTO STONE FILL DITCHES.

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.

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.

1.4.9 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.

1.4.11 DE-WATERING ACTIVITIES

DISCHARGE FROM DE-WATERING ACTIVITIES THAT FLOWS OFF THE CONSTRUCTION SITE MUST NOT CAUSE OR CONTRIBUTE TO A VIOLATION OF THE VERMONT WATER QUALITY STANDARDS. TREATMENT OF DE-WATERING COFFERDAM IS ANTICIPATED. THE SPECIFIC MEANS AND LOCATION OF SEDIMENT BASINS 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

DETAILS TO BE DEVELOPED BY THE CONTRACTOR.