

EROSION CONTROL NARRATIVE

1.1 PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE REMOVAL OF CULVERT 98F AND ITS HEADWALLS. CULVERT 98F WILL BE REPLACED WITH A PRECAST ARCH WITH AN 8 FOOT RISE, SPANNING 24 FEET OVER JEWELL BROOK, ON NEW FOOTINGS ALONG THE SAME ALIGNMENT. CULVERT 98F IS LOCATED IN THE TOWN OF LUDLOW, ON VT ROUTE 100, APPROXIMATELY AT THE INTERSECTIONS OF VT ROUTE 100, BROOKS ROAD(TH 41), AND TUCKERVILLE PARKWAY. THE LENGTH OF THE CULVERT WILL BE SLIGHTLY INCREASED TO 117 FEET.

NOTE: AREA OF DISTURBANCE SHALL INCLUDE LIMITS OF EARTH DISTURBANCE WITHIN THE PROJECT AREA, INCLUDING ANY WASTE, STAGING AND BORROW AREAS WITHIN OR DIRECTLY ADJACENT TO THE PROJECT LIMITS.

TOTAL AREA OF DISTURBANCE IS APPROXIMATELY 0.90 ACRES.

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

1.2 SITE INVENTORY

1.2.1 OFF SITE DRAINAGE CHARACTERISTICS (UP AND DOWN-GRADIENT)

THE PROPERTY SURROUNDING THE PROJECT SITE CONSISTS OF WELL ESTABLISHED FOREST WITH MODERATE SLOPES AT THE PROJECT SITE. THERE ARE A FEW HOUSES UP SLOPE WITH GRASS AND TREE BUFFERS. DUE TO THE NATURE OF THE SURROUNDING TERRAIN THE PROJECT SITE COULD RECEIVE RUNOFF WATER FROM A FEW NEARBY SLOPES. IF THIS IS THE CASE, IT SHOULD BE MINIMAL.

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

THE JEWELL BROOK IS THE ONLY WATER SOURCE ON THE PROJECT SITE. THE BROOK IS CLASSIFIED AS STEEP, SINUOUS, NARROW, WITH A CONFINED AND ARMORED CHANNEL AT THE SITE. THE STREAM BED CONSISTS OF GRAVEL, COBBLES AND BOULDERS. THE TRIBUTARY AREA AT THE CULVERT CROSSING IS 4.6 SQUARE MILES. THERE ARE A NUMBER OF DROP INLETS ON SITE DRAINING FROM THE ROADWAY TO THE BROOK.

1.2.3 TOPOGRAPHY, EXISTING ROADS, BUILDINGS, UTILITIES

THE TOPOGRAPHY OF THE AREA IS A SADDLE THAT IS MOSTLY WOODED WITH OCCASIONAL OPEN AREAS. VT ROUTE 100, BROOKS ROAD (TH 41), TUCKERVILLE PARKWAY, AND A PAVED DRIVEWAY ARE WITHIN THE PROJECT SITE. THERE IS A RESIDENCE ON THE EAST SIDE OF THE PROJECT, AND A FEW HOUSES UP SLOPE TO THE WEST. THERE ARE OVERHEAD UTILITIES WHICH WILL BE RELOCATED PRIOR TO CONSTRUCTION.

1.2.4 VEGETATION

THE VEGETATION IN THE PROJECT AREA CONSISTS OF HARDWOOD TREES AND UNDERGROWTH. THE IMPACT TO VEGETATION WILL BE LIMITED TO THAT WHICH IS DIRECTLY AFFECTED BY REPLACEMENT OF THE EXISTING CULVERT. 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.

1.2.5 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 BERKSHIRE AND MANADNOCK, FINE SANDY LOAM, 35% TO 65% SLOPES, "K FACTOR" = 0.28. THE SOIL IS COSIDERED HIGHLY ERODIBLE DUE TO SIGNIFICANT SLOPES.

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.

1.2.6 SENSITIVE RESOURCE AREAS

CRITICAL HABITATS: NO
HISTORICAL OR ARCHEOLOGICAL AREAS: NO
PRIME AGRICULTURAL LAND: NO
THREATENED AND ENDANGERED SPECIES: NO
WATER RESOURCE: JEWELL 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.

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.

PREVENTING INITIAL SOIL EROSION IS MUCH MORE EFFECTIVE THAN TREATING ERODED SEDIMENT. THEREFORE, STABILIZE ALL DISTURBED AREAS PROMPTLY AFTER CONSTRUCTION ACTIVITY HAS TEMPORARILY OR PERMANENTLY CEASED. 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.

(REFER TO THE LOW RISK SITE HANDBOOK AND APPROPRIATE DETAIL SHEETS FOR EACH PRACTICE REQUIRED ON THE PROJECT, WHICH MAY INCLUDE BUT IS NOT LIMITED TO THE FOLLOWING.)

1.4.1 MARK SITE BOUNDARIES PROJECT DEMARCATION FENCE

1.4.2 LIMIT DISTURBANCE AREA PHASING PLAN

1.4.3 STABILIZE CONSTRUCTION EXIT STABILIZED CONSTRUCTION ENTRANCE

1.4.4 INSTALL SILT FENCE SILT FENCE

1.4.5 DIVERT UPLAND RUNOFF SWALE (STORM WATER FROM STREET COLLECTIONS DRAINAGE SYSTEM)

1.4.8 STABILIZE EXPOSED SOILS SEED AND MULCH EROSION MATTING

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 MATTTING

TEMPORARY EROSION PREVENTION MEASURES TO BE UTILIZED INCLUDE:

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

TRACKING OF ALL EXPOSED SLOPES, COMBINED WITH TEMPORARY MULCHING, WILL ALSO BE UTILIZED ON A REGULAR BASIS. ANY SLOPES TO BE EXPOSED FOR SEVERAL DAYS PRIOR TO FINAL GRADING SHALL BE TRACKED AND MULCHED. 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 FINAL GRADE OR DURING INTERMITTENT PHASES OF CONSTRUCTION.

SILT FENCE SHALL BE INSTALLED PRIOR TO ANY UP SLOPE WORK. INSTALLATION SHALL BE PERFORMED PER INCLUDED DETAIL SHEET.

MEASURES SUCH AS SILT FENCE SHALL BE REGULARLY MAINTAINED AND SHALL BE CHECKED FOR SEDIMENT BUILD-UP. SEDIMENT BUILD-UP SHALL BE REMOVED WHEN THE LEVEL OF SEDIMENT REACHES ONE-HALF THE HEIGHT OF THE CONTROL MEASURE. SEDIMENT SHALL BE DISPOSED AT AN APPROVED SITE WHERE IT WILL NOT BE SUBJECT TO EROSION.

PERMANENT EROSION CONTROL

SEVERAL PERMANENT EROSION CONTROL MEASURES WILL BE UTILIZED

STREAM BANKS WILL BE ARMORED WITH STONE FILL TYPE IV AS SPECIFIED BY VTRANS ON THE PROJECT PLANS. THE STONE FILL WILL STABILIZE THE EXISTING BANK IN ORDER TO PROTECT FROM EROSION DURING STORM AND HIGH WATER EVENTS.

ALL DISTURBED AREAS WILL BE SEEDED AND MULCHED. AREAS WITH SLOPES STEEPER THAN 1:3 SHALL UTILIZE BIODEGRADABLE EROSION CONTROL MATTING.

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

PROJECT NAME: LUDLOW
PROJECT NUMBER: STP ST CULV(7)

FILE NAME: 00b258\St+r\s00b258e.odet.dgn PLOT DATE: 11-SEP-2008
PROJECT LEADER: C.P.WILLIAMS DRAWN BY: M.FESSEL
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