

EROSION CONTROL NARRATIVE

1. PROJECT DESCRIPTION

THE MORRISTOWN PROJECT IS A COMBINATION OF TWO PROJECTS WHICH ARE THE BRS 0240(3)S BRIDGE PROJECT AND THE STP HES 030-2(28) VT-15 TO VT-15A INTERSECTION PROJECT. THE BRS 0240 (3)S BRIDGE PROJECT CONSISTS OF THE CONSTRUCTION OF A NEW 224 FT LONG, 3 SPAN STEEL GIRDER BRIDGE IN MORRISTOWN, VERMONT. BEGINNING AT STA. 104+75.00, ON VT ROUTE 15A, AND EXTENDING EAST/ NORTH EAST TO STA 115+0.00 AT WHICH POINT PROJECT BRS 0240 (3)S WILL END AND PROJECT STP HES 030-2(28) WILL BEGIN . THE BRS 0240 (3)S BRIDGE PROJECT WORK TO BE PERFORMED INCLUDES REMOVAL OF EXISTING BRIDGE, CONSTRUCTION OF NEW SUPERSTRUCTURE AND SUBSTRUCTURE OF NEW BRIDGE, GRADING, DRAINAGE, SUBBASE, PAVEMENT, AND LANDSCAPING. ADDITIONAL WORK INCLUDES ROADWAY WORK TO THE EXISTING TOWN HIGHWAY 22 AND RECONSTRUCTION WORK OF AN EXISTING MULTI-USE TRAIL ALONG THE FORMER RAILROAD TRACKS. WORK UNDER THIS PORTION OF THE PROJECT INCLUDES GRADING, DRAINAGE, SUBBASE, PAVEMENT, LANDSCAPING AND OTHER INCIDENTAL ITEMS. THE STP HES 030-2(28) INTERSECTION PROJECT WILL BEGIN AT STA. 115+00.00 ALONG VT-15A AND PROCEED NORTH EASTERLY TEMINATING AT THE INTERSECTION OF VT-15 STA. 118+33.00. THE PROJECT WILL ALSO START ALONG VT-15 AT STA. 204+00.00 PROCEED EAST ALONG VT-15 PROCEEDING 900 FEET AND END AT STA. 214+00.00. WORK TO BE PERFORMED INCLUDES ALL GRADING, DRAINAGE, SUBBASE, PAVEMENT, AND LANDSCAPING. ADDITIONAL WORK INCLUDES ALL DRIVES AND INCLUDES THE REPLACEMENT OF AN EXISTING CATTLE UNDERPASS UNDER VT-15, WORK UNDER THIS PORTION OF THE PROJECT INCLUDES GRADING, DRAINAGE, SUBBASE, PAVEMENT, LANDSCAPING AND OTHER INCIDENTAL ITEMS.

2. AREA OF DISTURBANCE

THE TOTAL AREA OF THIS PROJECT INSIDE OF THE PROJECT DEMARCATION FENCE IS 6.30 ACRES. SEE SECTION #5 "DRAINAGE AREAS AND DISCHARGE POINTS" AND "DRAINAGE AREAS SUMMARY" OF DISTURBANCES OF .5 ACRE OR GREATER.

3. CONSTRUCTION SEQUENCE

THE CONTRACTOR SHALL SEQUENCE CONSTRUCTION ACTIVITIES TO MINIMIZE THE EXTENT OF DISTURBED SOILS LEFT OPEN TO EROSION AT ANY GIVEN TIME. A PROPOSED GENERAL SEQUENCE FOR EACH OF THE MAJOR CONSTRUCTION ACTIVITIES IS AS FOLLOWS:

• BRIDGE OVER LAMOILLE RIVER

- 1) ESTABLISH PERIMETER CONTROLS AND MARK BOUNDARIES FOR SENSITIVE RESOURCE AREAS, SUCH AS WETLANDS AND RIPARIAN BUFFER ZONES.
- 2) INSTALL SEDIMENT CONTROL MEASURES.
- 3) CLEARING.
- 4) DETERMINE DEWATERING METHOD AND LOCATION PRIOR TO PIER COFFERDAM INSTALLATION, DEWATERING METHOD AND COFFERDAM TO BE DEVELOPED BY CONTRACTOR.
- 5) CONSTRUCT BRIDGE PIERS. DEWATER EXCAVATIONS AS NECESSARY.
- 6) PLACE AND COMPACT FILL FOR CANTILEVERED ABUTMENTS.
- 7) BACKFILL AROUND ABUTMENTS.
- 8) CONSTRUCT BRIDGE SUPERSTRUCTURE.
- 9) PLACE SUBBASE MATERIAL FOR ROADWAY APPROACHES.
- 10)PAVE ROADWAY AND SHOULDERS WITH BASE COURSE OF PAVEMENT.
- 11)FINAL GRADE SIDE SLOPES.
- 12)APPLY PERMANENT STABILIZATION MEASURES TO ALL REMAINING EXPOSED SOIL AREAS.

• TH #22

- 1) ESTABLISH PERIMETER CONTROLS AND MARK BOUNDARIES FOR SENSITIVE RESOURCE AREAS, SUCH AS WETLANDS AND RIPARIAN BUFFER ZONES.
- 2) INSTALL SEDIMENT CONTROL MEASURES.
- 3) CLEARING.
- 4) BEGIN EXCAVATION OF ROADWAY FOR NEW SUBBASE MATERIAL.
- 5) INSTALL ONE CATCH BASIN AND TWO DRAINAGE PIPES UNDER ROADWAY. PHASE PIPE INSTALLATION TO MAINTAIN ONE LANE OF TRAFFIC. INLET PROTECTION SHALL BE PROVIDED FOR THE CATCH BASIN DURING CONSTRUCTION.
- 6) PLACE SUBBASE MATERIAL FOR ROADWAY.
- 7) CONSTRUCT STONE LINED DITCH THAT RUNS PARALLEL TO TH #22. USE CHECK DAMS TO CONTROL WATER DURING A STORM EVENT.
- 8) GRADE DITCH CONVERGENCE ON THE EAST SIDE OF TH #22. SEE THE DITCH CONVERGENCE PLAN FOR GRADING DETIALS.
- 9) PAVE ROADWAY AND SHOULDERS WITH BASE COURSE OF PAVEMENT.
- 10)FINAL GRADE SIDE SLOPES.
- 11)APPLY PERMANENT STABILIZATION MEASURES TO ALL REMAINING EXPOSED SOIL AREAS.

• RAIL TRAIL

- 1) ESTABLISH PERIMETER CONTROLS AND MARK BOUNDARIES FOR SENSITIVE RESOURCE AREAS, SUCH AS WETLANDS AND RIPARIAN BUFFER ZONES.
- 2) INSTALL SEDIMENT CONTROL MEASURES.
- 3) CLEARING.
- 4) BEGIN EXCAVATION OPERATIONS FOR TRAIL AND FIELD DRIVE SUBBASE.
- 5) CONSTRUCT GRASS TREATMENT SWALE.
- 6) PLACE SUBBASE MATERIAL FOR TRAIL.

- 7) WHERE THE CONVERGENCE DITCH MEETS WITH THE TRAIL, REMOVE EXISTING PIPE AND INSTALL NEW PIPE UNDER THE TRAIL AT STA. 59+07.0 AND THIS PIPE WILL DISCHARGES INTO THE LAMOILLE RIVER. CONSTRUCT STONE OUTLET PROTECTION.
- 8) PAVE TRAIL APPROACHES AT ALL INTERSECTIONS WITH TH#22 AND VT-15 AS INDICATED IN THE TRAIL TYPICAL.
- 9) FINAL GRADE SIDE SLOPES.
- 10)APPLY PERMANENT STABILIZATION MEASURES TO ALL REMAINING EXPOSED SOIL AREAS.

• VT-15 AND INTERSECTION AT VT-15A

- 1) ESTABLISH PERIMETER CONTROLS AND MARK BOUNDARIES FOR SENSITIVE RESOURCE AREAS, SUCH AS WETLANDS AND RIPARIAN BUFFER ZONES.
- 2) INSTALL SEDIMENT CONTROL MEASURES.
- 3) CLEARING.
- 4) PLACE PRECAST CONCRETE CATTLE PASS.
- 5) PLACE SUBBASE MATERIAL FOR ROADWAY APPROACHES.
- 6) PAVE ROADWAY AND SHOULDERS WITH BASE COURSE OF PAVEMENT.
- 7) FINAL GRADE SIDE SLOPES.
- 8) APPLY PERMANENT STABILIZATION MEASURES TO ALL REMAINING EXPOSED SOIL AREAS.

4. STABILIZATION OF EXPOSED SOILS

- SEED AND MULCH WILL BE USED FOR BOTH PERMANENT AND TEMPORARY STABILIZATION MEASURES. ROLLED EROSION CONTROL PRODUCT (RECP) WILL BE USED IN PLACE OF MULCH FOR SLOPES GREATER THAN 1V:3H. MULCH IS TO BE APPLIED AT A MINIMUM APPLICATION RATE SHOWN ON EROSION CONTROL DETAIL SHEET 3, UNLESS DIRECTED OTHERWISE BY THE ENGINEER.
- DISTURBED AREAS AND SOIL STOCKPILES THAT WILL NOT BE WORKED FOR MORE THAN 7 DAYS SHALL BE TEMPORARILY STABILIZED WITH MULCH/RECP WITHIN 48 HOURS.
- DISTURBED AREAS AND SOIL STOCKPILES THAT WILL NOT BE WORKED FOR MORE THAN 30 DAYS SHALL BE TEMPORARILY STABILIZED WITH SEED AND MULCH/RECP WITHIN 48 HOURS.
- EXPOSED AREAS THAT HAVE ACHIEVED FINAL GRADE SHALL BE PERMANENTLY STABILIZED WITHIN 48 HOURS.
- IN AREAS WHERE VEGETATIVE COVER WILL PROVIDE PERMANENT STABILIZATION, SEEDING TO BE COMPLETED BETWEEN APRIL 15 AND SEPTEMBER 15.

5. DRAINAGE AREAS AND DISCAHRGE POINTS

THE NEW BRIDGE IS BEING CONSTRUCTED ON NEW ALIGNMENT DOWNSTREAM OF THE EXISTING BRIDGE; TO INCLUDE THE REALINGMENT OF VT-15 AND THE INTERSECTION OF VT-15 / VT-15A.

THE PROJECT HAS THREE DISCRETE DISCHARGE POINT TO THE RECEIVING WATER, THE LAMOILLE RIVER AND TWO NON-DISCRETE DISCHARGE POINTS TO THE LAMOILLE RIVER. EACH DISCHARGE CORRESPONDS TO A DRAINAGE AREA IN WHICH THE PROJECT HAS BEEN DIVIDED.

1) DRAINAGE AREA 001

LOCATED ON VT-15A STARTING AT STA. 102+00 (CENTER OF VT-15A) TO STA. 107+40 (EDGE OF RIGHT SHOULDER). DRAINAGE FROM THIS SITE INCLUDES THE ROAD SIDE SLOPE AND A TREATMENT SWALE FOUND TO THE LEFT. HERE IS AN ADDITIONAL DRAINAGE FROM THIS AREA THAT IS ALSO PART OF THE SITE. THIS AREA IS STARTING FROM THE TRAIL STA. 52+00 (EDGE OF FEFT SHOULDER) TO STA. 55+40 (EDGE OF LEFT SHOULDER). THE TRAIL SURFACE SLOPES TO THE TREATMENT SWALE. BOTH FLOWS WILL BE CHANNELIZED IN THE TREATMENT SWALE. THE WATER WILL TRAVEL OFF THE PROJECT SITE INTO A SWALE WHICH PARALLELS THE TRAIL AND CROSSES UNDER THE TRAIL TO A PIPE.ONCE THE WATER LEAVES THE PIPE IT WILL TRAVEL UTILIZING THE EXISTING GROUND TOPOGRAPHY, THERE IS NO CHANNELIZED FLOW WITH A DISCRETE DISCHARGE POINT INTO THE LAMOILLE RIVER.

2) DRAINAGE AREA 002

LOCATED ON VT-15A FROM STA. 102+00 (EDGE OF RIGHT SHOULDER) TO STA. 108+00 (EGDGE OF RIGHT SHOULDER) INCLUDING THE STONE LINED DITCH THAT PARALLELS VT-15A (RIGHT), DITCH BACK SLOPE TO PROJECT LIMITS.THIS COLLECTED WATER IS CHANNLED INTO A PIPE 1 AT STA.107+25.0 RT. THIS DRAINAGE AREA HAS ONE NON DISCRETE DISCHARGE POINT TO THE LAMOILLE RIVER.

3) DRAINAGE AREA 003

LOCATED ON VT-15A STARTING AT STA. 113+42 (RIGHT FACE OF RAIL) TO STA. 118+27 (LEFT EDGE OF SHOULDER) THE ROAD SUPER ELEVATION TRANSITIONS IN THIS AREA. THE AREA OF DRAINAGE IS FROM THE ABOVE STATIONS TO THIER PROJECT LIMITS TO THE LEFT. UTILIZING THE EXISTING GROUND TOPOGRAPHY TO TREAT THE WATER, THERE IS NO CHANNELIZED FLOW WITH A DISCRETE DISCHARGE POINT INTO THE LAMOILLE RIVER. THIS DRAINAGE AREA ALSO INCLUDES A SECTION OF VT-15 STARTING FROM STA. 207+60 (RIGHT EDGE OF RIGHT SHOULDER) TO STA. 210+00 (RIGHT EDGE OF RIGHT SHOULDER) THIS AREA DRAINS FROM THE EDGE OF THE ROAD TO THE FIELD LOCATED BETWEEN VT-15 AND LAMOILLE THIS AREA WILL BE USING THE EXISTING GROUND TOPOGRAPHY TO TREAT THE WATER, THERE IS NO CHANNELIZED FLOW WITH A DISCRETE DISCHARGE POINT INTO THE LAMOILLE RIVER.

4) DRAINAGE AREA 004

LOCATED ON VT-15A STARTING AT STA. 113+50 (RIGHT FACE OF RAIL) TO STA. 118+27 (LEFT EDGE OF SHOULDER). THE LIMITS OF THIS AREA ARE FROM THE ABOVE STATIONS TO THE PROJECT LIMITS TO THE RIGHT. THIS AREA WILL BE UTILIZING THE EXISTING GROUND TOPOGRAPHY TO TREAT THE WATER; THERE IS NO CHANNELIZED FLOW WITH A DISCRETE DISCHARGE POINT INTO THE LAMOILLE RIVER. THIS DRAINAGE AREA ALSO INCLUDES A SECTION OF VT-15 STARTING FROM STA. 211+00 (CENTERLINE OF ROAD) TO STA. 212+50 (CENTERLINE OF ROAD); THE AREA OF DRAINAGE IS FROM THE ABOVE STATIONS TO THE PROJECT LIMITS TO THE RIGHT. THIS AREA DRAINS FROM THE EDGE OF THE ROAD TO THE FIELD LOCATED BETWEEN VT-15 AND LAMOILLE RIVER THIS AREA WILL BE USING THE EXISTING GROUND TOPOGRAPHY TO TREAT THE WATER, THERE IS NO CHANNELIZED FLOW WITH A DISCRETE DISCHARGE POINT INTO THE LAMOILLE RIVER.

5) DRAINAGE AREA 005

THIS SITE IS LOCATED BETWEEN STA. 203+00 (RIGHT FACE OF RAIL) TO STA. 208+10.00 (RIGHT EDGE OF SHOULDER), THIS AREA INCLUDES THE ENTIRE TREATMENT SWALE TO THE LEFT. WATER LEAVING THIS DRAINAGE AREA WILL PASS UNDER VT-15 THROUGH A OFF PROJECT EXISTIG PIPE; THE WATER WILL EXIT THE PIPE UP SLOPE OF THE LAMOILLE RIVER WITH A SHORT TRAVEL DISTANCE TO A NON DISCRETE DISCHARGE POINT INTO THE LAMOILLE RIVER.

DRAINAGE AREA SUMMARY

DRAINAGE AREA	TOTAL DISTURB. (ACRES)	LIMIT OF CONCURRENT DISTURBANCE	RECEIVING WATER
001	0.73	0.50	LAMOILLE RIVER
002	0.62	0.30	LAMOILLE RIVER
003	0.99	0.70	LAMOILLE RIVER
004	0.67	0.30	LAMOILLE RIVER
005	0.57	0.20	LAMOILLE RIVER

6. WASTE, BORROW, AND STAGING AREAS

- OFF-SITE WASTE AND BORROW AREAS HAVE NOT BEEN IDENTIFIED FOR THIS PROJECT. LARGE QUANTITIES OF WASTE AND BORROW ARE NOT ANTICIPATED, HOWEVER, AS THIS PROJECT HAS CUT AND FILL OPERATIONS THAT ARE ROUGHLY BALANCED IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO IDENTIFY AND PERMIT, AS NECESSARY, ANY OFF-SITE WASTE AND BORROW AREAS THAT ARE NEEDED. ALL EROSION PREVENTION AND SEDIMENT CONTROL MEASURES NECESSARY FOR WASTE, BORROW, AND STAGING AREAS OUTSIDE THE PROJECT LIMITS SHALL BE PAID FOR PER 105.29 OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION.
- LOCATE ADDITIONAL AREAS FOR DISPOSAL OF STUMPS, EXCESS SOILS AND COLLECTED SEDIMENT, IF NECESSARY. DISPOSE OF THESE MATERIALS IN A MANNER THAT WILL NOT RESULT IN SEDIMENTS ENTERING WATERS OF THE STATE.
- DISPOSAL SITES REQUIRE RELATIVELY LEVEL TERRAIN WITH AN ISOLATION DISTANCE OF AT LEAST 100 FT FROM ANY SURFACE WATERS, INCLUDING WETLANDS.
- VEHICLE AND EQUIPMENT STORAGE AREAS OR AREAS ADJACENT TO CONSTRUCTION TRAILERS OR OTHER HIGH TRAFFIC AREAS SHALL BE COVERED WITH GEOTEXTILE FABRIC AND 300MM OF GRAVEL. FOLLOWING COMPLETION OF CONSTRUCTION, ALL NON-NATIVE MATERIALS SHALL BE REMOVED FROM THE STAGING AREA. COMPACTED, RUTTED, OR OTHERWISE DISTURBED SOILS SHALL BE TILLED, RAKED, SEEDED AND MULCHED.
- ERODIBLE MATERIALS STOCKPILED WITHIN THE MATERIAL STORAGE AREAS SHALL BE ISOLATED WITH SILT FENCE OR OTHER ACCEPTABLE SEDIMENT BARRIER. SOIL STOCKPILED ON THE SITE SHALL BE SEEDED AND MULCHED.

PROJECT NAME:	MORRISTOWN
PROJECT NUMBER:	BRS 0240(3)S/STP HES 030-2(28)
FILE NAME: s78f329er_o_na.dgn	PLOT DATE: 12-APR-2017
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EROSION CONTROL NARRATIVE SHEET 1	SHEET 148 OF 175