

EROSION CONTROL NARRATIVE

PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE REPAIR AND REHABILITATION OF AN EXISTING METAL BIN WALL AND THE INSTALLATION OF NEW DRAINAGE AND SIDEWALK. THE LIMITS OF CONSTRUCTION DO NOT APPROACH ANY BUILDINGS OR OTHER STRUCTURES. NATURAL RESOURCES WITHIN THE PROJECT AREA HAVE BEEN CLEARLY IDENTIFIED AND SHOWN IN THE EXISTING CONDITIONS.

IT IS ANTICIPATED THAT THIS WORK WILL START IN THE FALL OF 2004 AND BE COMPLETED IN THE FALL OF 2005.

TOTAL DISTURBED AREA (EXCLUDING WASTE, BORROW AND STAGING AREAS): 0.98 ACRES. IT HAS BEEN DETERMINED THAT THE PROJECT WILL DISTURB UNDER 5 ACRES OF LAND INCLUDING BOTH ON & OFF-SITE WASTE, BORROW, STAGING, HAUL ROADS, ETC. SHOULD THIS CHANGE AND RESULT IN 5 ACRES OR MORE OF EARTH DISTURBANCE, THEN ADDITIONAL PERMITTING WITH THE AGENCY OF NATURAL RESOURCES VIA THE FILING OF A NOTICE OF INTENT FOR COVERAGE UNDER THE APPROPRIATE GENERAL PERMIT OR INDIVIDUAL PERMIT WILL BE REQUIRED PRIOR TO INITIATING CONSTRUCTION. ALL WASTE, BORROW AND STAGING AREAS NEED PRIOR REVIEW AND APPROVAL PURSUANT TO VAOT STANDARD SPECIFICATIONS, SECTION 105.25.

SITE INVENTORY & ANALYSIS

OFF SITE DRAINAGE CHARACTERISTICS:

THE AREA SURROUNDING THE PROJECT CONSISTS MOSTLY OF MATURE DECIDUOUS TREES ON STEEP GRADE IN THE NORTHERN HALF OF THE PROJECT. THE SOUTHERN HALF OF THE PROJECT CONSISTS OF PAVED ROADWAYS THAT ARE GENERALLY FLAT IN GRADE.

DRAINAGE, WATERWAYS, BODIES OF WATER:

THERE ARE TWO INTERMITTENT STREAMS THAT RUN THROUGH THE PROJECT. THE BANKS ARE VERY STEEP AND THERE IS SOME EROSION ALONG THE BANKS OF THE EASTERLY STREAM. THERE IS ALSO MAN MADE DRAINAGE WITHIN THE AREA THAT WILL BE PROTECTED FROM SEDIMENT TRANSPORT DURING CONSTRUCTION. THE BLACK RIVER IS WITHIN THE VICINITY OF THE CONSTRUCTION LIMITS BUT WILL NOT BE DIRECTLY AFFECTED BY THE PROJECT.

TOPOGRAPHY, EXISTING ROADS, BUILDINGS, UTILITIES:

THE TOPOGRAPHY OF THE SITE IS VERY STEEP AND HEAVILY VEGETATED. THE MAJOR RECONSTRUCTION OF THE METAL BIN WALL WILL TAKE PLACE ALONG VT 11, A PAVED HIGHWAY. A PAVED SIDE ROAD BISECTS THE PROJECT WHICH IS VEGETATED ALONG BOTH SIDES FOR THE LENGTH OF THE PROJECT.

VEGETATION:

THE VEGETATION WITHIN THE PROJECT AREA CONSISTS PRIMARILY OF MATURE DECIDUOUS TREES. THE VEGETATION RESIDES COMPLETELY WITHIN THE NORTHERN HALF OF THE PROJECT AREA.

SOILS:

THE SOIL WITHIN THE AREA IS CLASSIFIED AS WINDSOR FINE LOAMY SAND. IT OCCURS ON 25 TO 60% SLOPES AND IS CONSIDERED HIGHLY ERODIBLE. THE SOIL CONSISTS OF VERY DEEP, EXCESSIVELY DRAINED SOILS ON TERRACES ALONG ALLUVIAL STREAMS VALLEYS. THEY WERE FORMED IN SANDY GLACIOFLUVIAL DEPOSITS.

TYPICAL K-VALUE FOR THIS CLASSIFICATION: 0.32

SENSITIVE RESOURCE AREAS:

THERE ARE NO SENSITIVE RESOURCE AREAS IDENTIFIED WITHIN THE PROJECT AREA.

PROXIMITY TO NATURAL OR MAN-MADE WATER FEATURES:

THE BLACK RIVER IS WITHIN THE VICINITY OF THE PROJECT AREA BUT WILL NOT BE DIRECTLY AFFECTED BY CONSTRUCTION.

TEMPORARY EROSION PREVENTION & SEDIMENT CONTROL

TEMPORARY EROSION PREVENTION AND SEDIMENT CONTROL 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 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 GREATER THAN 1:3. THESE SLOPES SHALL BE STABILIZED WITHIN 48 HOURS OF REACHING FINAL GRADE OR DURING INTERMITTENT PHASES OF CONSTRUCTION.

SILT FENCE WILL BE INSTALLED ALONG SLOPES SO AS TO PREVENT SEDIMENT TRANSPORT TO DOWN GRADIENT AREAS. EACH LINE OF SILT FENCE WILL BE PLACED ALONG THE CONTOUR WITH THE LOWER EDGE BURIED 6 IN. TO PREVENT UNDERFLOW AND ENDS TURNED SLIGHTLY UP GRADE TO CREATE A PONDING EFFECT SHOULD WATER TRY TO RUN ALONG THE FENCING AND AROUND THE ENDS. SILT FENCE SHALL BE PLACED PRIOR TO ANY UPSLOPE EARTHWORK.

SAND BAGS FILLED WITH CLEAN, SMALL DIAMETER STONE, OR AN EQUIVALENT BARRIER WILL BE UTILIZED AROUND THE DROP INLET TO CREATE A TEMPORARY PONDING AREA FOR PARTICLES TO SETTLE OUT AS WATER DRAINS THROUGH BARRIER. INLET PROTECTION SHALL BE INSTALLED AS SOON AS THERE IS THE POSSIBILITY OF WATER FLOWING TO THE STRUCTURE. THE HEIGHT OF THE BARRIER SHALL BE LIMITED SUCH THAT THE PONDING AREA DOES NOT PRESENT A HAZARD TO THE TRAVELING PUBLIC. ALTERNATIVE INLET CONTROL MEASURES SHALL BE APPROVED BY THE ENGINEER PRIOR TO IMPLEMENTATION.

TO MINIMIZE SEDIMENT TRANSFER TO THE BLACK RIVER, THE INSTALLATION OF DRAINAGE STRUCTURES SHOULD PROCEED FROM ITS FINAL OUTLET AT MAINLINE STA.17+60 RT. TO THE INLET AT NORTH MAIN ST. STA.23+49 RT. ADDITIONAL SUMP DEPTH HAS BEEN ADDED TO EACH DROP INLET AND CATCH BASIN TO HELP COLLECT ANY SEDIMENT THAT ESCAPES SURFACE CONTROLS. THE SEQUENCE OF THE DRAINAGE INSTALLATION AND FREQUENCY OF CLEANING OF THE SUMPS SHALL BE INCORPORATED INTO THE CONTRACTOR'S EROSION PREVENTION AND SEDIMENT CONTROL PLAN.

STABILIZED CONSTRUCTION ENTRANCES TO THE PROJECT SITE, STAGING AREAS, AS WELL AS TO WASTE AND BORROW AREAS SHALL BE ESTABLISHED. THE MINIMUM SIZE OF A STABILIZED CONSTRUCTION ENTRANCE IS 12' X 50'. ALL SURFACE WATER FLOWING TO OR DIVERTED TOWARDS A CONSTRUCTION ENTRANCE SHALL BE PIPED UNDER THE STONE. PIPES SHALL BE APPROPRIATELY SIZED FOR THE CONTRIBUTING AREA, HOWEVER, NO PIPES SMALLER THAN 6 IN. DIAMETER SHALL BE USED. SEE TYPICAL DETAIL ON 'EROSION & SEDIMENT CONTROL PLAN' SHEET FOR MATERIALS AND CONSTRUCTION METHOD TO BE UTILIZED WHEN CONSTRUCTING A STABILIZED ENTRANCE.

PERMANENT EROSION CONTROL MEASURES

PERMANENT EROSION CONTROL MEASURES TO BE UTILIZED:

STONE LINING OF DITCHES WITH CLEAN, ANGULAR, STONE FILL, TYPE II WILL BE USED TO PREVENT EROSION DURING STORM EVENTS. STONE LINED DITCHES WILL BE CONSTRUCTED IMMEDIATELY FOLLOWING REMOVAL OF THE EXISTING WALL AND PRIOR TO ANY OTHER EXCAVATION OR CONSTRUCTION. SEE 'EROSION CONTROL DETAILS' SHEET FOR TYPICAL DITCH SECTION.

STONE FILL, TYPE I WILL BE UTILIZED AT THE EXISTING HEADWALL TO REDUCE FLOW VELOCITIES THEREFORE REDUCING EROSION POTENTIAL.

ALL DISTURBED AREAS WILL BE SEEDED AND MULCHED. SLOPES GREATER THAN 1:3 WILL UTILIZE EROSION CONTROL MATTING TO ALLOW VEGETATION TO BE ESTABLISHED.

GENERAL EROSION & SEDIMENT CONTROL GUIDELINES

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 TO CONTROL EROSION AND MINIMIZE THE SEDIMENTATION OF RECEIVING WATERS. THE MEASURES INCLUDE STABILIZATION AND STRUCTURAL PRACTICES, STORM WATER CONTROLS AND OTHER POLLUTION PREVENTION CONTROLS.

COORDINATE THE INSTALLATION, USE, AND REMOVAL OF EROSION AND SEDIMENT CONTROL MEASURES WITH CONSTRUCTION ACTIVITIES TO ENSURE ECONOMICAL, EFFECTIVE AND CONTINUOUS EROSION AND SEDIMENT CONTROL. EMPLOY TEMPORARY STABILIZATION PRACTICES IN INCREMENTAL STAGES AS CONSTRUCTION PROCEEDS. THE CONTRACTOR WILL USE ADDITIONAL EROSION CONTROL MEASURES AS NECESSITATED BY THE SEQUENCE OF CONSTRUCTION AND AS DIRECTED BY THE ENGINEER. SEE SECTION 105.23 OF THE VERMONT AOT STANDARD SPECIFICATIONS FOR CONSTRUCTION, DATED 2001.

INSTALL ALL EROSION AND SEDIMENT CONTROL MEASURES AS SHOWN IN THE EROSION CONTROL PLAN OR AS DIRECTED BY THE ENGINEER. DO NOT

MODIFY THE TYPE, SIZE OR LOCATION OF ANY CONTROL OR PRACTICE WITHOUT APPROVAL OF THE ENGINEER. ANY CHANGES SHALL BE NOTED ON THE PLANS, IN THE WEEKLY INSPECTION REPORT, AND REPORTED TO THE APPROPRIATE AUTHORITY IN A TIMELY MANNER. INSPECT ALL CONTROL MEASURES WEEKLY AND AFTER EACH RAINFALL EVENT. REPAIR MEASURES PROMPTLY ONCE DAMAGE IS DISCOVERED.

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. TEMPORARY VEGETATION SHALL BE ESTABLISHED IF THE AREA TO BE WITHOUT CONSTRUCTION ACTIVITY FOR A PERIOD OF 14 DAYS. PERIMETER CONTROL MEASURES SHALL BE INSTALLED FOLLOWING CLEARING, BUT PRIOR TO THE START OF ANY GRUBBING OR GRADING ACTIVITY. INSTALL OTHER TEMPORARY CONTROLS IN INCREMENTAL STAGES AS CONSTRUCTION PROCEEDS.

MAINTAINING VEGETATED BUFFERS ALONG THE STREAM BANKS, WETLANDS OR OTHER SENSITIVE AREAS IS A CRUCIAL EROSION AND SEDIMENT CONTROL MEASURE THAT SHOULD BE ESTABLISHED WHEREVER POSSIBLE.

CONTROL ONLY SEDIMENT-LADEN RUNOFF GENERATED BY THE PROJECT SITE. COLLECT AND ROUTE CLEAN OFFSITE RUNOFF AROUND OR THROUGH THE PROJECT SITE USING DIVERSION BERMS, DIVERSION CHANNELS, CULVERTS AND/OR TEMPORARY PIPES.

DO NOT ALLOW CONSTRUCTION EQUIPMENT TO OPERATE ON THE DOWN SLOPE SIDE OF PERIMETER CONTROL MEASURES.

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