

II.4 EROSION CONTROL MEASURES AND SITE STABILIZATION

THE PROPOSED EROSION AND SEDIMENTATION CONTROL PLAN MEETS OR EXCEEDS THE SOIL CONSERVATION SERVICE ENVIRONMENTAL QUALITY HANDBOOK.

THE PRIMARY EMPHASES OF THE EROSION/SEDIMENTATION CONTROL PLAN TO BE IMPLEMENTED FOR THE INFRASTRUCTURE CONSTRUCTION ARE AS FOLLOWS:

- DEVELOPMENT OF A CAREFUL CONSTRUCTION SEQUENCE.
• RAPID REVEGETATION OF DENUDED AREAS TO MINIMIZE THE PERIOD OF SOIL EXPOSURE.
• RAPID STABILIZATION OF DRAINAGE PATHS TO AVOID RILL AND GULLY EROSION.
• THE USE OF ON-SITE MEASURES TO CAPTURE SEDIMENT (STONE CHECK DAMS/HAY BALES/SILT FENCE, ETC.)

THE FOLLOWING TEMPORARY AND PERMANENT EROSION AND SEDIMENT CONTROL DEVICES WILL BE IMPLEMENTED AS PART OF THE SITE DEVELOPMENT. THESE DEVICES SHALL BE INSTALLED AS INDICATED ON THE PLANS OR AS DESCRIBED WITHIN THIS REPORT. FOR FURTHER REFERENCE, SEE THE MAINE EROSION AND SEDIMENT CONTROL HANDBOOK FOR CONSTRUCTION BEST MANAGEMENT PRACTICES.

A. TEMPORARY EROSION CONTROL MEASURES

THE FOLLOWING MEASURES ARE PLANNED AS TEMPORARY EROSION/SEDIMENTATION CONTROL MEASURES DURING CONSTRUCTION:

- 1. A TEMPORARY CRUSHED STONE-STABILIZED CONSTRUCTION ENTRANCE SHALL BE PLACED AT ANY ACCESS ROUTES OUT OF THE CONSTRUCTION ZONE.
2. SILTATION FENCE OR WOOD WASTE COMPOST BERMS SHALL BE INSTALLED DOWNGRADIENT OF ANY DISTURBED AREAS TO TRAP RUNOFF BORNE SEDIMENTS UNTIL THE SITE IS FULLY STABILIZED.
3. STRAW OR HAY MULCH INCLUDING HYDROSEEDING IS INTENDED TO PROVIDE COVER FOR DENUDED OR SEEDED AREAS UNTIL REVEGETATION IS ESTABLISHED...
4. TEMPORARY STOCKPILES OF STUMPS, GRUBBINGS, OR COMMON EXCAVATION WILL BE PROTECTED AS FOLLOWS:
5. FOR WORK, WHICH IS CONDUCTED BETWEEN OCTOBER 15 AND APRIL 15 OF ANY CALENDAR YEAR, ALL DENUDED AREAS WILL BE COVERED WITH HAY MULCH...
6. CONGRESS STREET SHALL BE SWEEPED TO CONTROL MUD AND DUST AS NECESSARY.
7. DURING GRUBBING OPERATIONS, STONE CHECK DAMS SHALL BE INSTALLED AT ANY EVIDENT CONCENTRATED FLOW DISCHARGE POINTS.
8. SILT FENCING WITH A MINIMUM STAKE SPACING OF 6 FEET SHOULD BE USED...
9. WOOD WASTE COMPOST/BARK BERMS MAY BE USED IN LIEU OF SILTATION FENCING...
10. WATER AND/OR CALCIUM CHLORIDE SHALL BE FURNISHED AND APPLIED IN ACCORDANCE WITH MDOT SPECIFICATIONS - SECTION 637 - DUST CONTROL.
11. TEMPORARY CATCH BASIN INLET BARRIERS SHALL BE INSTALLED THROUGHOUT THE COURSE OF CONSTRUCTION.

B. PERMANENT EROSION CONTROL MEASURES

THE FOLLOWING PERMANENT EROSION CONTROL MEASURES HAVE BEEN DESIGNED AS PART OF THE EROSION/SEDIMENTATION CONTROL PLAN:

- 1. ALL STORM DRAIN PIPE OUTLETS SHALL HAVE RIPRAP APRONS AT THEIR OUTLET TO PROTECT THE OUTLET AND RECEIVING CHANNEL OF THE CULVERTS FROM SCOUR AND DETERIORATION.
2. ALL AREAS DISTURBED DURING CONSTRUCTION, BUT NOT SUBJECT TO OTHER RESTORATION (PAVING, RIPRAP, ETC.) WILL BE LOAMED, LIMED, FERTILIZED, MULCHED, AND SEEDED.

C. IMPLEMENTATION SCHEDULE

THE FOLLOWING CONSTRUCTION SEQUENCE SHALL BE REQUIRED FOR THE SITE DEVELOPMENT TO INSURE THE EFFECTIVENESS OF THE EROSION AND SEDIMENTATION CONTROL MEASURES ARE OPTIMIZED:

NOTE: FOR ALL GRADING ACTIVITIES, THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION NOT TO OVEREXPOSE THE SITE BY LIMITING THE DISTURBED AREA.

- 1. INSTALL STABILIZED CONSTRUCTION ENTRANCE(S) SITE ENTRY/EXIST LOCATIONS.
2. CLEAR AREA NECESSARY FOR THE PARKING AREA/BUILDING CONSTRUCTION.
3. INSTALL PERIMETER SILTATION FENCE AND/OR WOOD WASTE BERMS PRIOR TO GRUBBING RESPECTIVE AREAS.
4. GRUB WORK AREA FOR PARKING LOTS AND BUILDINGS.
5. DURING GRUBBING OPERATIONS, INSTALL STONE CHECK DAMS AT ANY EVIDENT CONCENTRATED FLOW DISCHARGE POINTS.
6. COMMENCE EARTHWORK AND GRADING TO SUBGRADE AS NECESSARY FOR THE PARKING LOTS AND WALKWAYS.
7. COMMENCE EARTHWORK AND GRADING TO SUBGRADE AS NECESSARY FOR THE BUILDING FOUNDATION.
8. COMMENCE INSTALLATION OF DRAINAGE APPURTENANCES, INCLUDING CATCH BASINS, MANHOLES, ETC.

- 9. COMMENCE INSTALLATION OF UNDERGROUND UTILITIES.
10. CONTINUE EARTHWORK AND GRADING TO SUBGRADE AS NECESSARY FOR CONSTRUCTION.
11. COMPLETE REMAINING EARTHWORK OPERATIONS.
12. COMMENCE BUILDING FOUNDATIONS.
13. INSTALL SUBBASE AND BASE COURSE GRAVELS WITHIN PARKING LOTS AND WALKWAYS.
14. COMPLETE INSTALLATION OF DRAINAGE APPURTENANCES AND UTILITY APPURTENANCES.
15. COMPLETE UNDERGROUND TANK INSTALLATION AND CONCRETE DISPENSER ISLAND.
16. INSTALL BASE COURSE PAVING FOR THE PARKING LOTS.
17. CONTINUE BUILDING CONSTRUCTION.
18. INSTALL SURFACE COURSE PAVING FOR THE PARKING, AND WALKWAY AREAS.
19. LOAM, LIME, FERTILIZE, SEED AND MULCH DISTURBED AREAS.
20. REMOVE ACCUMULATED SEDIMENT FROM AHEAD OF ANY SEDIMENT BARRIERS AS NECESSARY.
21. ONCE THE SITE IS STABILIZED AND A 90% CATCH OF VEGETATION HAS BEEN OBTAINED, REMOVE ALL TEMPORARY EROSION CONTROL MEASURES.
22. TOUCH UP LOAM AND SEED.
23. COMPLETE PAVEMENT MARKINGS AND SIGNAGE

PRIOR TO CONSTRUCTION OF THE PROJECT, THE CONTRACTOR SHALL SUBMIT TO THE OWNER A SCHEDULE FOR THE COMPLETION OF THE WORK, WHICH WILL SATISFY THE FOLLOWING CRITERIA:

- 1. THE ABOVE CONSTRUCTION SEQUENCE SHOULD GENERALLY BE COMPLETED IN THE SPECIFIED ORDER; HOWEVER, SEVERAL SEPARATE ITEMS MAY BE CONSTRUCTED SIMULTANEOUSLY.
2. THE WORK SHALL BE CONDUCTED IN SECTIONS WHICH WILL:
a. LIMIT THE AMOUNT OF EXPOSED AREA TO THOSE AREAS IN WHICH WORK IS EXPECTED TO BE UNDERTAKEN DURING THE PROCEEDING 30 DAYS.
b. REVEGETATE DISTURBED AREAS AS RAPIDLY AS POSSIBLE.
c. INCORPORATE PLANNED INLETS AND DRAINAGE SYSTEM AS EARLY AS POSSIBLE INTO THE CONSTRUCTION PHASE.

A. EROSION, SEDIMENTATION AND STABILIZATION CONTROL PLAN

THE EROSION, SEDIMENTATION AND STABILIZATION CONTROL DETAILS ARE INCLUDED IN THE PLAN SET.

B. WINTER STABILIZATION PLAN

THE WINTER CONSTRUCTION PERIOD IS FROM NOVEMBER 1 THROUGH APRIL 15. IF THE CONSTRUCTION SITE IS NOT STABILIZED WITH PAVEMENT, A ROAD GRAVEL BASE, 75% MATURE VEGETATION COVER OR RIPRAP BY NOVEMBER 15 THEN THE SITE NEEDS TO BE PROTECTED WITH OVER-WINTER STABILIZATION.

WINTER EXCAVATION AND EARTHWORK SHALL BE COMPLETED SUCH THAT NO MORE THAN 1 ACRE OF THE SITE IS WITHOUT STABILIZATION AT ANY ONE TIME.

ALL AREAS SHALL BE CONSIDERED TO BE DENUDED UNTIL THE SUBBASE GRAVEL IS INSTALLED IN PARKING AREAS OR THE AREAS OF FUTURE LOAM AND SEED HAVE BEEN LOAMED, SEEDED AND MULCHED.

THE CONTRACTOR SHALL INSTALL ANY ADDED MEASURES, WHICH MAY BE NECESSARY TO CONTROL EROSION/SEDIMENTATION FROM THE SITE DEPENDENT UPON THE ACTUAL SITE AND WEATHER CONDITIONS.

1. SOIL STOCKPILES

STOCKPILES OF SOIL OR SUBSOIL SHALL BE MULCHED FOR OVER WINTER PROTECTION WITH HAY OR STRAW AT TWICE THE NORMAL RATE OR AT 150 LBS/1,000 S.F.

2. NATURAL RESOURCE PROTECTION

ANY AREAS WITHIN 50 FEET FROM ANY NATURAL RESOURCES, IF NOT STABILIZED WITH A MINIMUM OF 75% MATURE VEGETATION CATCH, SHALL BE MULCHED BY DECEMBER 1 AND ANCHORED WITH PLASTIC NETTING OR PROTECTED WITH EROSION CONTROL MATS.

3. SEDIMENT BARRIERS

DURING FROZEN CONDITIONS, SEDIMENT BARRIERS SHALL CONSIST OF WOODWASTE FILTER BERMS AS FROZEN SOIL PREVENTS THE PROPER INSTALLATION OF HAY BALES AND SEDIMENT SILT FENCES.

4. MULCHING

AN AREA SHALL BE CONSIDERED DENUDED UNTIL AREAS OF FUTURE LOAM AND SEED HAVE BEEN LOAMED, SEEDED AND MULCHED. HAY AND STRAW MULCH SHALL BE APPLIED AT A RATE OF 150 LB. PER 1,000 SQUARE FEET OR 3 TONS/ACRE.

BETWEEN THE DATES OF NOVEMBER 1 AND APRIL 15, ALL MULCH SHALL BE ANCHORED BY EITHER PEG LINE, MULCH NETTING, ASPHALT EMULSION CHEMICAL, TRACK OR WOOD CELLULOSE FIBER.

5. MULCHING ON SLOPES AND DITCHES

SLOPES SHALL NOT BE LEFT EXPOSED FOR ANY EXTENDED TIME OF WORK SUSPENSION UNLESS FULLY MULCHED AND ANCHORED WITH PEG AND NETTING OR WITH EROSION CONTROL BLANKETS.

MULCH NETTING SHALL BE USED TO ANCHOR MULCH IN ALL DRAINAGE WAYS WITH A SLOPE GREATER THAT 3% FOR SLOPES EXPOSED TO DIRECT WINDS AND FOR ALL OTHER SLOPES GREATER THAT 8%.

6. SEEDING

BETWEEN THE DATES OF OCTOBER 15 AND APRIL 1ST, LOAM OR SEED WILL NOT BE REQUIRED. DURING PERIODS OF ABOVE FREEZING TEMPERATURES FINISHED AREAS SHALL BE FINE GRADED AND EITHER PROTECTED WITH MULCH OR TEMPORARILY SEEDED AND MULCHED UNTIL SUCH TIME AS THE FINAL TREATMENT CAN BE APPLIED.

7. DEWATERING

WATER FROM CONSTRUCTION TRENCH DEWATERING SHALL PASS FIRST THROUGH A FILTER BAG OR SECONDARY CONTAINMENT STRUCTURE (E.G. HAY BALE LINED POOL) PRIOR TO DISCHARGE.

8. INSPECTION AND MONITORING

MAINTENANCE MEASURES SHALL BE APPLIED AS NEEDED DURING THE ENTIRE CONSTRUCTION SEASON. AFTER EACH RAINFALL, SNOW STORM OR PERIOD OF THAWING AND RUNOFF, THE SITE CONTRACTOR SHALL PERFORM A VISUAL INSPECTION OF ALL INSTALLED EROSION CONTROL MEASURES AND PERFORM REPAIRS AS NEEDED TO INSURE THEIR CONTINUOUS FUNCTION.

F. STANDARDS FOR TIMELY STABILIZATION OF CONSTRUCTION SITES DURING WINTER

1. STANDARD FOR THE TIMELY STABILIZATION OF DITCHES AND CHANNELS - THE APPLICANT SHALL CONSTRUCT AND STABILIZE ALL STONE-LINED DITCHES AND CHANNELS ON THE SITE BY NOVEMBER 15.

- a. INSTALL A SOD LINING IN THE DITCH -- THE APPLICANT SHALL LINE THE DITCH WITH PROPERLY INSTALLED SOD BY OCTOBER 1.
b. INSTALL A STONE LINING IN THE DITCH --THE APPLICANT SHALL LINE THE DITCH WITH STONE RIPRAP BY NOVEMBER 15.

2. STANDARD FOR THE TIMELY STABILIZATION OF DISTURBED SLOPES -- THE APPLICANT SHALL CONSTRUCT AND STABILIZE STONE-COVERED SLOPES BY NOVEMBER 15.

- a. STABILIZE THE SOIL WITH TEMPORARY VEGETATION AND EROSION CONTROL MATS -- BY OCTOBER 1 THE APPLICANT SHALL SEED THE DISTURBED SLOPE WITH WINTER RYE AT A SEEDING RATE OF 3 POUNDS PER 1,000 SQUARE FEET.

- b. STABILIZE THE SLOPE WITH SOD -- THE APPLICANT SHALL STABILIZE THE DISTURBED SLOPE WITH PROPERLY INSTALLED SOD BY OCTOBER 1.
c. STABILIZE THE SLOPE WITH WOODWASTE COMPOST -- THE APPLICANT SHALL PLACE A SIX-INCH LAYER OF WOODWASTE COMPOST ON THE SLOPE BY NOVEMBER 15.

- d. STABILIZE THE SLOPE WITH STONE RIPRAP -- THE APPLICANT SHALL PLACE A LAYER OF STONE RIPRAP ON THE SLOPE BY NOVEMBER 15.

3. STANDARD FOR THE TIMELY STABILIZATION OF DISTURBED SOILS -- BY SEPTEMBER 15 THE APPLICANT SHALL SEED AND MULCH ALL DISTURBED SOILS ON AREAS HAVING A SLOPE LESS THAN 15%.

- a. STABILIZE THE SOIL WITH TEMPORARY VEGETATION -- BY OCTOBER 1 THE APPLICANT SHALL SEED THE DISTURBED SOIL WITH WINTER RYE AT A SEEDING RATE OF 3 POUNDS PER 1000 SQUARE FEET.
b. STABILIZE THE SOIL WITH SOD -- THE APPLICANT SHALL STABILIZE THE DISTURBED SOIL WITH PROPERLY INSTALLED SOD BY OCTOBER 1.
c. STABILIZE THE SOIL WITH MULCH -- BY NOVEMBER 15 THE APPLICANT SHALL MULCH THE DISTURBED SOIL BY SPREADING HAY OR STRAW AT A RATE OF AT LEAST 150 POUNDS PER 1000 SQUARE FEET.

G. MAINTENANCE OF FACILITIES

THE STORMWATER FACILITIES WILL BE MAINTAINED BY THE APPLICANT, OR THEIR ASSIGNED HEIRS. THE CONTRACT DOCUMENTS WILL REQUIRE THE CONTRACTOR TO DESIGNATE A PERSON, WHO HAS KNOWLEDGE OF EROSION AND STORMWATER CONTROL INCLUDING THE STANDARDS AND CONDITIONS IN THE PERMIT.

LONG-TERM OPERATION/MAINTENANCE RECOMMENDED FOR THE STORMWATER FACILITY IS PRESENTED BELOW.

THE RESPONSIBLE PARTY MAY CONTRACT WITH SUCH PROFESSIONALS, AS MAY BE NECESSARY IN ORDER TO COMPLY WITH THIS PROVISION AND MAY RELY ON THE ADVICE OF SUCH PROFESSIONALS IN CARRYING OUT ITS DUTY HEREUNDER.

- PARKING LOTS - CLEAR ACCUMULATIONS OF WINTER SAND AT LEAST FOUR TIMES A YEAR, PREFERABLY IN THE SPRING.
• CATCH BASINS - REMOVE SEDIMENT FROM CATCH BASINS WHEN SEDIMENT HAS ACCUMULATED TO WITHIN 6 INCHES OF THE OUTLET INVERT BUT NO LESS THAN ANNUALLY.

PROJECT MULTI-USE DEVELOPMENT 2282 CONGRESS ST., PORTLAND, ME
EROSION CONTROL NOTES
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