

**EROSION CONTROL MEASURES AND SITE STABILIZATION**

THE PRIMARY EMPHASIS OF THE EROSION/SEDIMENTATION CONTROL PLAN, WHICH WILL BE IMPLEMENTED FOR THIS PROJECT, IS AS FOLLOWS:

- DEVELOPMENT OF A CAREFUL CONSTRUCTION SEQUENCE.
- RAPID REVEGETATION OF DENUDED AREAS TO MINIMIZE THE PERIOD OF SOIL EXPOSURE.
- THE USE OF ON-SITE MEASURES TO CAPTURE SEDIMENT (HAY BALES/ STONE CHECK DAMS/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:

- SILTATION FENCE, WOOD WASTE COMPOST BERMS, OR NON-WOVEN GEOTEXTILE FILLED WITH WOOD WASTE (SILT SOCKS)** SHALL BE INSTALLED DOWNSTREAM OF ANY DISTURBED AREAS TO TRAP RUNOFF OF BORNE SEDIMENTS UNTIL GRASS AREAS ARE REVEGETATED. THE SILT FENCE AND/OR WOOD WASTE COMPOST BERMS SHALL BE INSTALLED PER THE DETAILS PROVIDED IN THIS PACKAGE AND INSPECTED AT LEAST ONCE A WEEK AND BEFORE ANY IMMEDIATELY AFTER A STORM EVENT OF 0.5 INCHES OR GREATER, AND AT LEAST DAILY DURING PROLONGED RAINFALL. REPAIRS SHALL BE MADE IF THERE ARE ANY SIGNS OF EROSION OR SEDIMENTATION BELOW THE FENCE OR BERM LINE. IF THERE ARE SIGNS OF UNDERCUTTING AT THE EDGES OR IMPROVING OF LARGE VOLUMES OF WATER BEHIND THE FENCE OR BERM, THE BARRIER SHALL BE REPLACED WITH A STONE CHECK DAM. WOOD WASTE COMPOST BERMS ARE NOT TO BE USED ADJACENT TO WETLAND AREAS THAT ARE NOT TO BE DISTURBED.
- STRAW OR HAY MULCH** INCLUDING HYDROSEEDING IS INTENDED TO PROVIDE COVER FOR DENUDED OR SEEDED AREAS UNTIL REVEGETATION IS ESTABLISHED. MULCH PLACED BETWEEN APRIL 15TH AND OCTOBER 15TH ON SLOPES OF LESS THAN 15 PERCENT SHALL BE ANCHORED BY APPLYING WIRE MULCH PLACED ON SLOPES OF EQUAL TO OR STEEPER THAN 15 PERCENT SHALL BE COVERED BY A FABRIC NETTING AND ANCHORED WITH STAPLES IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATION. FABRIC NETTING AND STAPLES SHALL BE USED ON DISTURBED AREAS WITHIN 50' OF LAKES, STREAMS, AND WETLANDS REGARDLESS OF THE UPTURN SLOPE. MULCH PLACED BETWEEN OCTOBER 15TH AND APRIL 15TH ON SLOPES EQUAL TO OR STEEPER THAN 8 PERCENT SHALL BE COVERED WITH A FABRIC NETTING AND ANCHORED WITH STAPLES IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATION. SLOPES STEEPER THAN 3:1 AND EQUAL TO OR FLATTER THAN 2:1, WHICH ARE TO BE REVEGETATED, SHALL RECEIVE CURLEX BLANKETS BY AMERICAN EXCELSOR OR EQUAL. SLOPES STEEPER THAN 2:1 SHALL RECEIVE RIPRAP AS NOTED ON THE PLANS. MULCH APPLICATION RATES ARE PROVIDED IN ATTACHMENT A OF THIS SECTION. MULCH SHALL NOT BE PLACED OVER SNOW.
- TEMPORARY STOCKPILES OF STUMPS, GRUBBINGS, OR COMMON EXCAVATION** WILL BE PROTECTED AS FOLLOWS:
  - TEMPORARY STOCKPILES SHALL NOT BE LOCATED WITHIN 50 FEET OF ANY WETLANDS WHICH WILL NOT BE DISTURBED AND LOCATED AWAY FROM DRAINAGE SWALES.
  - STOCKPILES SHALL BE STABILIZED WITHIN 7 DAYS BY EITHER TEMPORARILY SEEDING THE STOCKPILE BY A HYDROSEED METHOD CONTAINING AN EMULSIFIED MULCH TACKIFIER OR BY COVERING THE STOCKPILE WITH MULCH, SUCH AS HAY, STRAW, OR EROSION CONTROL MIX.
  - STOCKPILES SHALL BE SURROUNDED BY SEDIMENTATION BARRIER AT THE TIME OF FORMATION.
- ALL DENUDED AREAS THAT ARE WITHIN 50 FEET OF AN UNDISTURBED WETLAND**, WHICH HAVE BEEN ROUGH GRADED AND ARE NOT LOCATED WITHIN A BUILDING PAD, PARKING AREA, OR ACCESS DRIVE SUBGRADE AREA, SHALL RECEIVE MULCH OR EROSION CONTROL MESH FABRIC WITHIN 48 HOURS OF INITIAL DISTURBANCE OF SOIL. ALL AREAS WITHIN 50 FEET OF AN UNDISTURBED WETLAND SHALL BE MULCHED PRIOR TO ANY PREDICTED RAIN EVENT REGARDLESS OF THE 48 HOUR WINDOW. IN OTHER AREAS, THE TIME PERIOD MAY BE EXTENDED TO 14 DAYS.
- FOR WORK, WHICH IS CONDUCTED BETWEEN OCTOBER 15TH AND APRIL 15TH OF ANY CALENDAR YEAR**, ALL DENUDED AREAS, SHALL BE COVERED WITH HAY MULCH OR EROSION CONTROL MIX APPLIED AT THE NORMAL APPLICATION RATE AND ANCHORED WITH A FABRIC NETTING. THE TIME PERIOD FOR APPLYING MULCH SHALL BE LIMITED TO 7 DAYS FOR ALL AREAS.
- DEERING AVENUE, FOREST AVENUE AND LINCOLN STREET** SHALL BE SWEEPED TO CONTROL MUD AND DUST AS NECESSARY.
- DURING GRUBBING OPERATIONS** STONE CHECK DAMS SHALL BE INSTALLED AT ANY EVIDENT CONCENTRATED FLOW DISCHARGE POINTS AND AS DIRECTED ON THE EROSION CONTROL PLANS.
- SILT FENCING WITH A MINIMUM STAKE SPACING OF 6 FEET** SHOULD BE USED, UNLESS THE FENCE IS SUPPORTED BY WIRE FENCE REINFORCEMENT WITH A MAXIMUM MESH SPACING OF 6 INCHES, IN WHICH CASE STAKES MAY BE SPACED A MAXIMUM OF 10 FEET APART. THE BOTTOM OF THE FENCE SHOULD BE ANCHORED.
- WOOD WASTE COMPOST/BARK BERMS** OR NON-WOVEN GEOTEXTILE FILLED WITH WOOD WASTE (SILT SOCKS) MAY BE USED IN LIEU OF SILTATION FENCING. BERMS SHALL BE REMOVED AND SPREAD IN A LAYER NOT TO EXCEED 3" THICK ONCE UPSTREAM AREAS ARE GRADED AND A 90% CATCH OF VEGETATION IS ATTAINED.
- STORM DRAIN CATCH BASIN INLET PROTECTION** SHALL BE PROVIDED THROUGH THE USE OF STONE SEDIMENT BARRIERS OR APPROVED SEDIMENT BAGS (SILT SOCKS). INSTALLATION DETAILS ARE PROVIDED IN THE PLAN SET. THE BARRIERS SHALL BE INSPECTED AFTER EACH RAINFALL AND REPAIRS MADE AS NECESSARY. SEDIMENT SHALL BE REMOVED AND THE BARRIER RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO 1/4 THE DESIGN DEPTH OF THE BARRIER. THE BARRIER SHALL BE REMOVED WHEN THE TRIBUTARY DRAINAGE AREA HAS BEEN STABILIZED.
- WATER AND/OR CALCIUM CHLORIDE** SHALL BE FURNISHED AND APPLIED IN ACCORDANCE WITH MDOT SPECIFICATIONS - SECTION 637 - DUST CONTROL.
- LOAM AND SEED** IS INTENDED TO SERVE, AS THE PRIMARY PERMANENT REVEGETATIVE MEASURE FOR ALL DENUDED AREAS NOT PROVIDED WITH OTHER EROSION CONTROL MEASURES, SUCH AS RIPRAP. APPLICATION RATES ARE PROVIDED IN ATTACHMENT A OF THIS SECTION. SEEDING SHALL NOT OCCUR OVER SNOW.

**B. PERMANENT EROSION CONTROL MEASURES**

- THE FOLLOWING PERMANENT EROSION CONTROL MEASURES HAVE BEEN DESIGNED AS PART OF THE EROSION/SEDIMENTATION CONTROL PLAN:
- ALL AREAS DISTURBED DURING CONSTRUCTION**, BUT NOT SUBJECT TO OTHER RESTORATION (PAVING, RIPRAP, ETC.) WILL BE LOADED, LIMED, FERTILIZED, MULCHED, AND SEEDED. FABRIC NETTING, ANCHORED WITH STAPLES, SHALL BE PLACED OVER THE MULCH IN AREAS AS NOTED IN THE TEMPORARY EROSION CONTROL MEASURES PARAGRAPH. ALL AREAS WITHIN 50 FEET OF AN UNDISTURBED WETLAND SHALL BE MULCHED PRIOR TO ANY PREDICTED RAIN EVENT REGARDLESS OF THE 48 HOUR WINDOW. NATIVE TOPSOIL SHALL BE STOCKPILED AND REUSED FOR FINAL RESTORATION WHEN IT IS OF SUFFICIENT QUALITY.
  - ALL STORM DRAIN PIPE OUTLETS** SHALL HAVE RIPRAP APRONS AT THEIR OUTLET TO PROTECT THE OUTLET AND RECEIVING CHANNEL FROM SCOUR AND DETRIORATION. INSTALLATION DETAILS ARE PROVIDED IN THE PLAN SET. THE APRONS SHALL BE INSTALLED AND STABILIZED TO THE EXTENT PRACTICABLE PRIOR TO DIRECTING RUNOFF TO THE TRIBUTARY PIPE OR CULVERT.
  - CATCH BASIN** SHALL BE PROVIDED WITH SEDIMENT SUMPS AND INLET HOODS FOR ALL OUTLET PIPES THAT ARE 18" IN DIAMETER OR LESS.

**IMPLEMENTATION SCHEDULE**

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

IT IS ANTICIPATED THAT CONSTRUCTION OF THE WALGREENS AND RELATED INFRASTRUCTURE WILL COMMENCE IN SUMMER/FALL OF 2008 AND BE COMPLETED BY SPRING/SUMMER OF 2009.

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

- INSTALL PERIMETER SILT FENCE, WOOD WASTE BERMS, AND/OR NON-WOVEN GEOTEXTILE FILLED WITH WOOD WASTE (SILT SOCKS) PRIOR TO GRUBBING RESPECTIVE AREAS.
- CLEAR SITE AS NECESSARY. INSTALL STONE CHECK DAMS AT ANY EVIDENT CONCENTRATED FLOW DISCHARGE POINTS.
- FOUNDATION PREPARATION AREA SHALL BE EXCAVATED FOR INSTALLATION OF THE BUILDING ADDITION FOOTINGS. BUILDING WORK WILL BE ON GOING THROUGH THE REMAINDER OF THE PROJECT.
- COMMENCE INSTALLATION OF DRAINAGE APURTANCES.
- COMMENCE EARTHWORK AND GRADING TO SUBGRADE AS NECESSARY.
- COMMENCE CONNECTION TO EXISTING ELECTRICAL SERVICE.
- COMMENCE CONNECTION TO EXISTING WATER AND SEWER LINES.
- COMMENCE CONNECTION TO EXISTING GAS SERVICE.
- CONTINUE EARTHWORK AND GRADING TO SUBGRADE AS NECESSARY FOR CONSTRUCTION.
- COMPLETE INSTALLATION OF UNDERGROUND UTILITIES TO WITHIN 5' OF THE BUILDINGS. REROUTE EXISTING UTILITIES AS NECESSARY.
- INSTALL LIGHT POLE FOUNDATIONS AND UTILITY POLES.
- COMPLETE REMAINING EARTHWORK OPERATIONS.
- INSTALL SUB-BASE AND BASE GRAVEL WITHIN PARKING FIELDS, WALKWAYS, AND ALL DRIVEWAYS AS NECESSARY.
- INSTALL CURBING IN PARKING FIELDS, DRIVEWAYS, AND ALONG THE STREETS AS NEEDED.
- INSTALL BASE COURSE PAVING FOR ACCESS DRIVE AND PARKING AREA AS WELL AS CONCRETE SURFACES AS NECESSARY.
- LOAM, LIME, FERTILIZE, SEED AND MULCH DISTURBED AREAS AND COMPLETE ALL LANDSCAPING.
- INSTALL SURFACE COURSE PAVING FOR ACCESS DRIVE AND PARKING AREAS AS NECESSARY. STRIPE PER PLAN.
- ONCE THE SITE IS STABILIZED AND A 90% CATCH OF VEGETATION HAS BEEN OBTAINED, REMOVE ALL TEMPORARY EROSION CONTROL MEASURES.
- TOUCH UP LOAM AND SEED.

NOTE: ALL DENUDED AREAS NOT SUBJECT TO FINAL PAVING, RIPRAP, OR GRAVEL; SHALL BE REVEGETATED.

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:

- THE ABOVE CONSTRUCTION SEQUENCE SHOULD GENERALLY BE COMPLETED IN THE SPECIFIED ORDER; HOWEVER, SEVERAL SEPARATE ITEMS MAY BE CONSTRUCTED SIMULTANEOUSLY. WORK MUST ALSO BE SCHEDULED OR PHASED TO REDUCE THE EXTENT OF THE EXPOSED AREAS AS SPECIFIED BELOW. THE INTENT OF THIS SEQUENCE IS TO PROVIDE FOR EROSION CONTROL AND TO HAVE STRUCTURAL MEASURES SUCH AS SILT FENCE AND CONSTRUCTION ENTRANCES IN PLACE BEFORE LARGE AREAS OF LAND ARE DENUDED.
- THE WORK SHALL BE CONDUCTED IN SECTIONS WHICH SHALL:
  - LIMIT THE AMOUNT OF EXPOSED AREA TO THOSE AREAS IN WHICH WORK IS EXPECTED TO BE UNDERTAKEN DURING THE PROCEEDING 30 DAYS.
  - REVEGETATE DISTURBED AREAS AS RAPIDLY AS POSSIBLE. ALL AREAS SHALL BE PERMANENTLY STABILIZED WITHIN 7 DAYS OF FINAL GRADING OR BEFORE A STORM EVENT, OR TEMPORARILY STABILIZED WITHIN 48 HOURS OF INITIAL DISTURBANCE OF SOIL FOR AREAS WITHIN 50 FEET OF AN UNDISTURBED WETLAND AND 14 DAYS FOR ALL OTHER AREAS. AREAS WITHIN 50 FEET OF AN UNDISTURBED WETLAND SHALL BE MULCHED PRIOR TO ANY PREDICTED RAIN EVENT REGARDLESS OF THE 48 HOUR WINDOW.
  - INCORPORATE PLANNED INLETS AND DRAINAGE SYSTEM AS EARLY AS POSSIBLE INTO THE CONSTRUCTION PHASE. THE DITCHES SHALL BE IMMEDIATELY LINED OR REVEGETATED AS SOON AS THEIR INSTALLATION IS COMPLETE.

**EROSION, SEDIMENTATION AND STABILIZATION CONTROL PLAN**

THE EROSION CONTROL PLAN IS INCLUDED IN THE PLAN SET.

**DETAILS AND SPECIFICATIONS**

THE EROSION CONTROL DETAILS AND SPECIFICATIONS ARE INCLUDED IN THE PLAN SET.

**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% MATTER VEGETATION COVER OR RIPRAP BY NOVEMBER 15, THE CONSTRUCTION SITE NEEDS TO BE PROTECTED WITH OVER-WINTER STABILIZATION. AN AREA CONSIDERED OPEN IS ANY AREA NOT STABILIZED WITH PAVEMENT; VEGETATION; MULCHING; EROSION CONTROL MATS; RIPRAP OR GRAVEL BASE ON A ROAD.

WINTER EXCAVATION AND EARTHWORK SHALL BE COMPLETED SUCH THAT ANY AREA LEFT EXPOSED CAN BE CONTROLLED BY THE CONTRACTOR. LIMIT THE EXPOSED AREA TO THOSE AREAS IN WHICH WORK IS EXPECTED TO BE UNDER TAKEN DURING THE PROCEEDING 15 DAYS AND THAT CAN BE MULCHED IN ONE DAY PRIOR TO ANY SNOW EVENT.

ALL AREAS SHALL BE CONSIDERED TO BE DENUDED UNTIL THE SUBGRADE GRAVEL IS INSTALLED IN ROADWAY/PARKING AREAS OR THE AREAS OF FUTURE LOAM AND SEED HAVE BEEN LOADED, SEEDED AND MULCHED. HAY AND STRAW MULCH RATE SHALL BE A MINIMUM OF 150 LBS./1,000 S.F. (3 TONS/ACRE) AND SHALL BE PROPERLY ANCHORED.

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.

CONTINUATION OF EARTHWORK OPERATIONS ON ADDITIONAL AREAS SHALL NOT BEGIN UNTIL THE EXPOSED SOIL SURFACE ON THE AREA BEING WORKED HAS BEEN STABILIZED, IN ORDER TO MINIMIZE AREAS WITHOUT EROSION CONTROL PROTECTION.

**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. (3 TONS PER ACRE) OR WITH A FOUR-INCH LAYER OF WOODWASTE EROSION CONTROL MIX. THIS SHALL BE DONE WITHIN 24 HOURS OF STRAW) WITHIN 50 FEET FROM ANY NATURAL RESOURCES.

**2. NATURAL RESOURCE PROTECTION**

ANY AREAS WITHIN 50 FEET FROM ANY NATURAL RESOURCES, IF NOT STABILIZED WITH A MINIMUM OF 75% NATURAL VEGETATION CATCH, SHALL BE MULCHED BY DECEMBER 1 AND ANCHORED WITH PLASTIC NETTING OR PROTECTED WITH EROSION CONTROL MATS. DURING WINTER CONSTRUCTION, A DOUBLE LINE OF SEDIMENT BARRIERS (E.G. SILT FENCE BACKED WITH HAY BALES OR EROSION CONTROL MIX) SHALL BE PLACED BETWEEN ANY NATURAL RESOURCE AND THE DISTURBED AREA. PROJECTS CROSSING THE NATURAL RESOURCE SHALL BE PROTECTED A MINIMUM DISTANCE OF 50 FEET ON EITHER SIDE FROM THE RESOURCES. EXISTING PROJECTS NOT STABILIZED BY DECEMBER 1 SHALL BE PROTECTED WITH THE SECOND LINE OF SEDIMENT BARRIER TO ENSURE FUNCTIONALITY DURING THE SPRING THAW AND RAINS.

**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 LOADED, 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 TWICE THE NORMAL ACCEPTED RATE OF 75 LBS./1,000 S.F. OR 1.5 TONS/ACRE) AND SHALL BE PROPERLY ANCHORED. MULCH SHALL NOT BE SPREAD ON TOP OF SNOW. THE SNOW SHALL BE REMOVED DOWN TO A ONE-INCH DEPTH OR LESS PRIOR TO APPLICATION. AFTER EACH DAY OF FRESH GRADING, THE AREA SHALL BE PROPERLY STABILIZED WITH HAY OR STRAW OR EROSION CONTROL MATTING. AN AREA SHALL BE CONSIDERED TO HAVE BEEN STABILIZED WHEN EXPOSED SURFACES HAVE BEEN EITHER MULCHED WITH STRAW OR HAY AT A RATE OF 150 LB. PER 1,000 SQUARE FEET (3 TONS/ACRE) AND ADEQUATELY ANCHORED THAT GROUND SURFACE IS NOT VISIBLE THROUGH THE MULCH.

**5. MULCHING ON SLOPES AND DITCHES**

SLOPES SHALL NOT BE LEFT EXPOSED FOR ANY EXTENDED TIME OF SOIL SUSPENSION UNLESS FULLY MULCHED AND ANCHORED WITH PEG AND NETTING OR WITH EROSION CONTROL BLANKETS. MULCHING SHALL BE APPLIED AT A RATE OF 230 LBS./1,000 S.F. ON ALL SLOPES GREATER THAN 8%.

**6. SEEDING**

BETWEEN THE DATES OF OCTOBER 15 AND APRIL 15, 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 SURFACE TREATMENT CAN BE APPLIED. IF THE DATE IS AFTER NOVEMBER 15TH AND IF THE EXPOSED AREA HAS BEEN LOADED, FINE GRADED WITH A UNIFORM DORMANT THEN THE AREA MAY BE DORMANT SEEDING AT A RATE OF 3 TIMES HIGHER THAN SPECIFIED FOR PERMANENT SEED AND THEN MULCHED. DORMANT SEEDING IS USED FOR THE SITE. ALL DISTURBED AREAS SHALL RECEIVE 4" OF LOAM AND SEED AT AN APPLICATION RATE OF 5 LBS./1,000 S.F. ALL AREAS SEEDING DURING THE WINTER SHALL BE PLACED IN THE SPRING FOR ASSOCIATE CATCH. ALL AREAS INSTANTLY VEGETATED (LESS THAN 75% CATCH) SHALL BE REVEGETATED BY REPLACING LOAM, SEED AND MULCH. IF DORMANT SEEDING IS NOT USED FOR THE SITE, ALL DISTURBED AREAS SHALL BE REVEGETATED IN THE SPRING.

**7. Dewatering and Temporary Stream Diversion**

WATER FROM CONSTRUCTION (TRENCH DEWATERING OR TEMPORARY STREAM DIVERSION) SHALL PASS FIRST THROUGH A FILTER BAG OR SECONDARY CONTAINMENT STRUCTURE (E.G. SAND AND SOIL) PRIOR TO DISCHARGE. THE DISCHARGE SITE SHALL BE SELECTED TO AVOID FLOODING, LOGS, AND SEDIMENT DISCHARGES TO A PROTECTED RESOURCE. IN NO CASE SHALL THE FILTER BAG OR CONTAINMENT STRUCTURE BE LOCATED WITHIN 50 FEET OF A PROTECTED RESOURCE.

**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 REPAIRS AS NEEDED TO INSURE THEIR CONTINUOUS FUNCTION. FOLLOWING THE TEMPORARY AND/OR FINAL SEEDING AND MULCHING, THE CONTRACTOR SHALL, IN THE SPRING, INSPECT AND REPAIR ANY DAMAGES AND/OR UNESTABLISHED CATCH. ALL AREAS INSTANTLY VEGETATED SHALL BE A MINIMUM OF 85% TO 90% OF AREAS VEGETATED WITH VIGOROUS GROWTH.

**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. THE APPLICANT SHALL CONSTRUCT AND STABILIZE ALL GRASS-LINED DITCHES AND CHANNELS ON THE SITE BY SEPTEMBER 15. IF THE APPLICANT FAILS TO STABILIZE A DITCH OR CHANNEL, TO BE GRASS-LINED BY SEPTEMBER 15, THEN THE APPLICANT WILL TAKE ONE OF THE FOLLOWING ACTIONS TO STABILIZE THE DITCH OR CHANNEL FOR LATE FALL AND WINTER.

INSTALL A SOIL LINING IN THE DITCH -- THE APPLICANT SHALL LINE THE DITCH WITH PROPERLY INSTALLED SOG BY OCTOBER 1. PROPER INSTALLATION INCLUDES THE APPLICANT PINNING THE SOG ONTO THE SOIL WITH WIRE PINS, ROLLING THE SOG TO GUARANTEE CONTACT BETWEEN THE SOG AND UNDERLYING SOIL, WATERING THE SOG TO PROMOTE ROOT GROWTH INTO THE DISTURBED SOIL, AND ANCHORING THE SOG WITH JUTE OR PLASTIC NET TO PREVENT THE WIND FROM REMOVING THE SOG DURING FLOW CONDITIONS.

INSTALL A STONE LINING IN THE DITCH -- THE APPLICANT SHALL LINE THE DITCH WITH STONE RIPRAP BY NOVEMBER 15. THE APPLICANT SHALL HIRE A REGISTERED PROFESSIONAL ENGINEER TO DETERMINE THE STONE SIZE AND LINING THICKNESS NEEDED TO WITHSTAND THE ANTICIPATED FLOW VELOCITIES AND FLOW DEPTHS WITHIN THE DITCH. IF NECESSARY, THE APPLICANT SHALL REGRADE THE DITCH PRIOR TO PLACING THE STONE LINING SO TO PREVENT THE STONE LINING FROM REDUCING THE DITCH'S CROSS-SECTIONAL AREA.

2. STANDARD FOR THE TIMELY STABILIZATION OF DISTURBED SLOPES -- THE APPLICANT SHALL CONSTRUCT AND STABILIZE STONE-COVERED SLOPES BY NOVEMBER 15. THE APPLICANT SHALL SEED AND MULCH ALL SLOPES TO BE VEGETATED BY SEPTEMBER 15. THE DEPARTMENT SHALL CONSIDER ANY AREA HAVING A GRADE GREATER THAN 15% TO BE A SLOPE. IF THE APPLICANT FAILS TO STABILIZE ANY SLOPE TO BE VEGETATED BY SEPTEMBER 15, THEN THE APPLICANT SHALL TAKE ONE OF THE FOLLOWING ACTIONS TO STABILIZE THE SLOPE FOR LATE FALL AND WINTER.

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 1000 SQUARE FEET AND APPLY EROSION CONTROL MATS OVER THE MULCHED SLOPE. THE APPLICANT SHALL MONITOR GROWTH OF THE RYE OVER THE NEXT 30 DAYS. IF THE RYE FAILS TO GROW AT LEAST THREE INCHES OR COVER AT LEAST 75% OF THE DISTURBED SLOPE BY NOVEMBER 1, THEN THE APPLICANT SHALL COVER WITH A LAYER OF WOODWASTE COMPOST AS DESCRIBED IN ITEM II OF THIS STANDARD OR WITH STONE RIPRAP AS DESCRIBED IN ITEM IV OF THIS STANDARD.

STABILIZE THE SLOPE WITH SOG -- THE APPLICANT SHALL STABILIZE THE DISTURBED SLOPE WITH PROPERLY INSTALLED SOG BY OCTOBER 1. PROPER INSTALLATION INCLUDES THE APPLICANT PINNING THE SOG ONTO THE SLOPE WITH WIRE PINS, ROLLING THE SOG TO GUARANTEE CONTACT BETWEEN THE SOG AND UNDERLYING SOIL, WATERING THE SOG TO PROMOTE ROOT GROWTH INTO THE DISTURBED SOIL. THE APPLICANT SHALL NOT USE LATE-SEASON SOG INSTALLATION TO STABILIZE SLOPES HAVING A GRADE GREATER THAN 33% (3R-1V).

STABILIZE THE SLOPE WITH WOODWASTE COMPOST -- THE APPLICANT SHALL PLACE A SIX-INCH LAYER OF WOODWASTE COMPOST ON THE SLOPE BY NOVEMBER 15. PRIOR TO PLACING THE WOODWASTE COMPOST, THE APPLICANT SHALL REMOVE ANY SNOW ACCUMULATION ON THE DISTURBED SLOPE. THE APPLICANT SHALL NOT USE WOODWASTE COMPOST TO STABILIZE SLOPES HAVING GRADES GREATER THAN 20% (2R-1V) OR HAVING GROUNDWATER SEEPS ON THE SLOPE FACE.

STABILIZE THE SLOPE WITH STONE RIPRAP -- THE APPLICANT SHALL PLACE A LAYER OF STONE RIPRAP ON THE SLOPE BY NOVEMBER 15. THE APPLICANT SHALL HIRE A REGISTERED PROFESSIONAL ENGINEER TO DETERMINE THE STONE SIZE NEEDED FOR STABILITY AND TO DESIGN A FILTER LAYER FOR UNDERNEATH THE RIPRAP.

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%. IF THE APPLICANT FAILS TO STABILIZE THESE SOILS BY THIS DATE, THEN THE APPLICANT SHALL TAKE ONE OF THE FOLLOWING ACTIONS TO STABILIZE THE SOIL FOR LATE FALL AND WINTER.

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. LIGHTLY MULCH THE SEEDING SOIL WITH HAY OR STRAW AT 75 POUNDS PER 1000 SQUARE FEET, AND ANCHOR THE MULCH WITH PLASTIC NETTING. THE APPLICANT SHALL MONITOR GROWTH OF THE RYE OVER THE NEXT 30 DAYS. IF THE RYE FAILS TO GROW AT LEAST THREE INCHES OR COVER AT LEAST 75% OF THE DISTURBED SOIL BEFORE NOVEMBER 15, THEN THE APPLICANT SHALL MULCH THE AREA FOR OVER-WINTER PROTECTION AS DESCRIBED IN ITEM III OF THIS STANDARD.

STABILIZE THE SOIL WITH SOG -- THE APPLICANT SHALL STABILIZE THE DISTURBED SOIL WITH PROPERLY INSTALLED SOG BY OCTOBER 1. PROPER INSTALLATION INCLUDES THE APPLICANT PINNING THE SOG ONTO THE SOIL WITH WIRE PINS, ROLLING THE SOG TO GUARANTEE CONTACT BETWEEN THE SOG AND UNDERLYING SOIL, AND WATERING THE SOG TO PROMOTE ROOT GROWTH INTO THE DISTURBED SOIL.

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 ON THE AREA SO THAT NO SOIL IS VISIBLE THROUGH THE MULCH. PRIOR TO APPLYING THE MULCH, THE APPLICANT SHALL REMOVE ANY SNOW ACCUMULATION ON THE DISTURBED AREA. IMMEDIATELY AFTER APPLYING THE MULCH, THE APPLICANT WILL ANCHOR THE MULCH WITH PLASTIC NETTING TO PREVENT WIND FROM MOVING THE MULCH OFF THE DISTURBED SOIL.

**MAINTENANCE OF FACILITIES**

THE STORMWATER FACILITIES WILL BE MAINTAINED BY THE APPLICANT. THE CONTRACT DOCUMENTS WILL REQUIRE THE CONTRACTOR TO DESIGNATE A PERSON RESPONSIBLE FOR MAINTENANCE OF THE SEWERS DURING CONSTRUCTION AS REQUIRED BY THE EROSION CONTROL REPORT. LONG-TERM OPERATION/MAINTENANCE RECOMMENDED FOR THE STORMWATER FACILITIES 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, PROVIDED, THAT THE FOLLOWING OPERATION AND MAINTENANCE PROCEDURES ARE HEREBY ESTABLISHED AS A MINIMUM FOR COMPLIANCE WITH THIS SECTION.

INSPECTION AND MAINTENANCE FREQUENCY AND CORRECTIVE MEASURES:

THE FOLLOWING AREAS, FACILITIES, AND MEASURES WILL BE INSPECTED AND THE IDENTIFIED DEFICIENCIES WILL BE CORRECTED. CLEAN-OUT MUST INCLUDE THE REMOVAL AND LEGAL DISPOSAL OF ANY ACCUMULATED SEDIMENTS AND DEBRIS.

**CATCH BASINS:**

INSPECT CATCH BASINS 2 TIMES PER YEAR (PREFERABLY IN SPRING AND FALL) TO ENSURE THAT THE CATCH BASINS ARE WORKING IN THEIR INTENDED FASHION AND THAT THEY ARE FREE OF DEBRIS. CLEAN STRUCTURES WHEN SEDIMENT DEPTHS REACH 12" FROM INVERT OF OUTLET. IF THE BASIN OUTLET IS OBSTRUCTED WITH A HOOD TO TRAP FLOATABLE MATERIALS (E.G. SNOUT), CATCH BASINS MUST ALSO BE REMOVED. REPAIR ANY SLUMPING SIDE SLOPES AS SOON AS PRACTICABLE. IF THE DITCH HAS A RIPRAP LINING, REPLACE RIPRAP ON AREAS WHERE ANY UNDERLYING FILTER FABRIC OR UNDERDRAIN GRAVEL IS SHOWING THROUGH THE STONE OR WHERE STONES HAVE DISLOADED. CORRECT ANY EROSION OF THE CHANNEL'S BOTTOM OR SIDESLOPES. THE FACILITIES WILL BE INSPECTED AFTER MAJOR STORMS AND ANY IDENTIFIED DEFICIENCIES WILL BE CORRECTED.

**VEGETATED AREAS:**

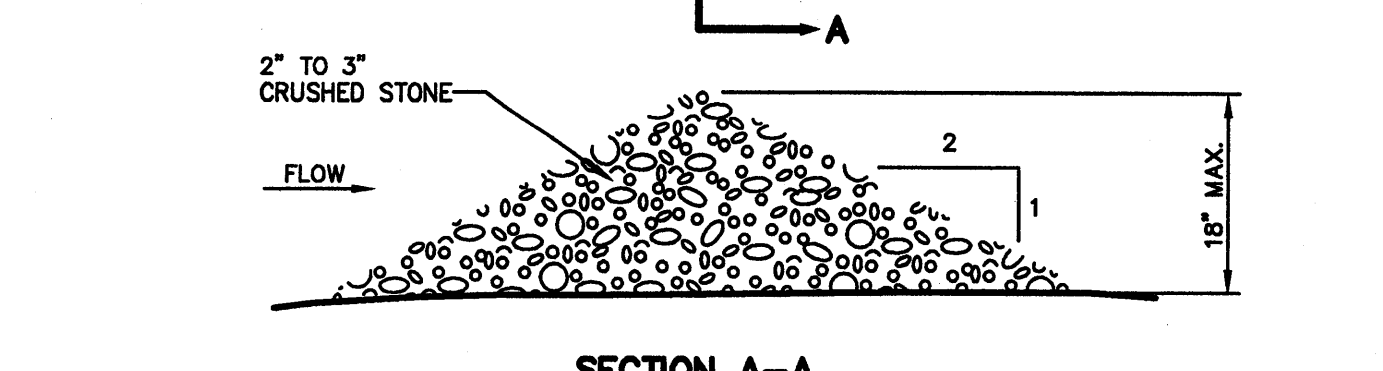
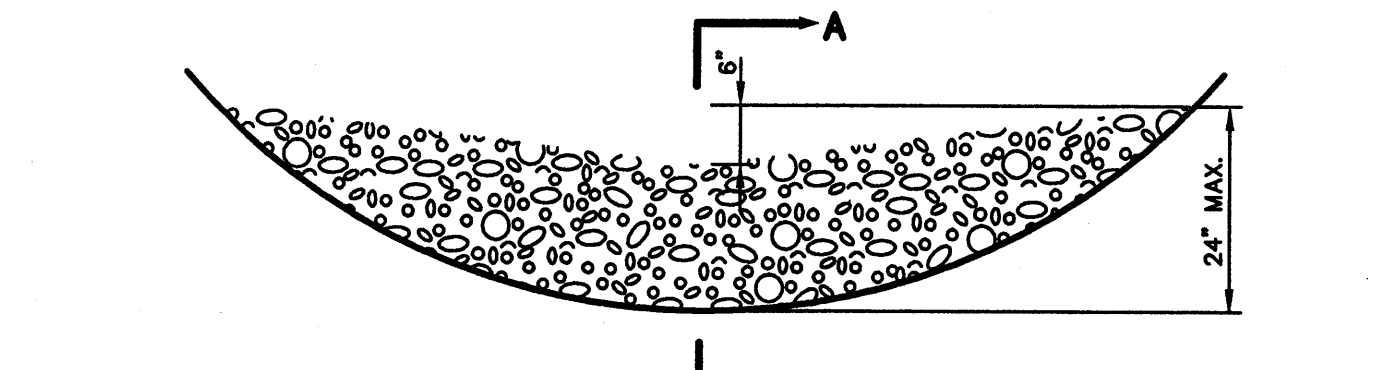
INSPECT SLOPES AND EMBANKMENTS EARLY IN THE GROWING SEASON TO IDENTIFY ACTIVE OR POTENTIAL EROSION PROBLEMS. REPLANT BARE AREAS OR AREAS WITH SPARSE GROWTH. WHERE BIL EROSION IS EVIDENT, ANCHOR THE AREA WITH AN APPROPRIATE EROSION CONTROL MEASURE. FLOWS TO ON-SITE AREAS ABLE TO WITHSTAND THE CONCENTRATED FLOWS. THE FACILITIES WILL BE INSPECTED AFTER MAJOR STORMS AND ANY IDENTIFIED DEFICIENCIES WILL BE CORRECTED.

**DITCHES, SWALES AND OTHER OPEN STORMWATER CHANNELS:**

INSPECT 2 TIMES PER YEAR (PREFERABLY IN SPRING AND FALL) TO ENSURE THEY ARE WORKING IN THEIR INTENDED FASHION AND THAT THEY ARE FREE OF SEDIMENT AND DEBRIS. REMOVE ANY OBSTRUCTIONS TO FLOW, INCLUDING ACCUMULATED SEDIMENTS AND DEBRIS AND VEGETATED GROWTH. REPAIR ANY EROSION OF THE DITCH LINING. VEGETATED DITCHES WILL BE MOWED AT LEAST ANNUALLY OR OTHERWISE MAINTAINED TO CONTROL THE GROWTH OF WOODY VEGETATION AND MAINTAIN FLOW CAPACITY. ANY WOODY VEGETATION GROWING THROUGH RIPRAP LININGS MUST ALSO BE REMOVED. REPAIR ANY SLUMPING SIDE SLOPES AS SOON AS PRACTICABLE. IF THE DITCH HAS A RIPRAP LINING, REPLACE RIPRAP ON AREAS WHERE ANY UNDERLYING FILTER FABRIC OR UNDERDRAIN GRAVEL IS SHOWING THROUGH THE STONE OR WHERE STONES HAVE DISLOADED. CORRECT ANY EROSION OF THE CHANNEL'S BOTTOM OR SIDESLOPES. THE FACILITIES WILL BE INSPECTED AFTER MAJOR STORMS AND ANY IDENTIFIED DEFICIENCIES WILL BE CORRECTED.

**ROADWAYS AND PARKING SURFACES:**

CLEAR ACCUMULATIONS OF WINTER SAND IN PARKING LOTS AND ALONG ROADWAYS AT LEAST ONCE A YEAR, PREFERABLY IN THE SPRING. ACCUMULATIONS OF PAVEMENT BY PAVEMENT SWEEPING ACCUMULATIONS OF SAND ALONG ROADWAYS SHOULD BE REMOVED BY GRADING EXCESS SAND TO THE PAVEMENT EDGE AND REMOVING IT MANUALLY OR BY A FRONT-END LOADER.



**SPACING BETWEEN CHECK DAMS**

S <sub>0</sub> (FT./FT.)	L (FT.)
0.020	75
0.030	50
0.040	40
0.050	30
0.080	20
0.100	10

