#### **EROSION & SEDIMENTATION** CONTROL NOTES IN ORDER TO PROTECT THE SOIL AND WATER RESOURCES OF THIS DEVELOPMENT AND ADJACENT LANDS, THE FOLLOWING ACTIONS SHALL BE TAKEN:

(WHEN CONSTRUCTION IS INITIATED ON FROZEN GROUND, WOOD WASTE COMPOST/BARK FILTER BERM SHALL BE UTILIZED IN LIEU OF SILT FENCE. SEE DETAIL, THIS SHEET.)

#### A. EROSION CONTROL/TEMPORARY MEASURES THE FOLLOWING TEMPORARY MEASURES TO CONTROL EROSION AND SEDIMENTATION SHALL BE USED.

- 1. SEDIMENT BARRIER (SILT FENCE OR WOOD WASTE COMPOST/BARK FILTER (BERM) WILL BE INSTALLED AROUND THE LIMITS OF CLEARING ASSOCIATED WITH EACH PORTION OF THIS PROJECT. THE CONTRIBUTING DRAINAGE AREA IS LESS THAN 1/2 ACRE PER 100 ft. OF BARRIER LENGTH (THE MAXIMUM LENGTH OF SLOPE ABOVE THE BARRIER IS 100 FEET AND THE MAXIMUM GRADIENT BEHIND THE BARRIER IS 50 PERCENT (2:1). IF THE SLOPE IS GREATER, OTHER MEASURES SUCH AS DIVERSIONS MAY BE NECESSARY TO REDUCE THE SLOPE LENGTH. SEDIMENT BARRIER SHALL REMAIN IN PLACE UNTIL ALL DISTURBED AREAS HAVE BEEN STABILIZED. SEDIMENT BARRIER WILL BE INSTALLED TO SPECIFICATIONS OUTLINED IN THE MOST RECENT MAINE EROSION AND SEDIMENTATION CONTROL HANDBOOK FOR CONSTRUCTION: BEST MANAGEMENT
- GROUND AREA OPENED OR EXPOSED, WHETHER DIRECTLY OR INDIRECTLY DUE TO THE PROJECT CONSTRUCTION, SHALL BE MINIMIZED AND SHALL BE STABILIZED WITHIN 15 DAYS OF THE INITIAL DISTURBANCE OF THE MINERAL SOIL, AND SHALL BE PERMANENTLY STABILIZED WITHIN 7 DAYS OF FINAL GRADING.
- TEMPORARY SOIL STABILIZATION SHALL BE EITHER BY TEMPORARY MULCHING, TEMPORARY SEEDING, PERMANENT BASE GRAVEL, OR ASPHALT BASE COURSE AS FOLLOWS:
  - A. TEMPORARY SEEDING SEED SHALL BE AROOSTOOK RYE APPLIED AT 3.0#/1000 sf. LIME SHALL BE AGRICULTURAL GROUND LIMESTONE APPLIED AT 138#/1000 sf. FERTILIZER SHALL BE 10-10-10 CLASSIFICATION APPLIED AT 13.8#/1000 sf. MULCH SHALL CONSIST OF HAY OR STRAW MULCH AND SPREAD EVENLY AT A RATE OF 70-90#/1000 sf. TEMPORARY SEEDINGS SHALL ONLY BE MADE BETWEEN APRIL 15TH AND OCTOBER 15TH. AND SHALL NOT BE PLACED OVER SNOW. IF THE SEEDING IS NOT COMPLETED BY OCTOBER 15TH, ADDITIONAL MULCH SHALL BE ADDED TO PROVIDE ADEQUATE WINTER PROTECTION.
  - B. TEMPORARY MULCHING MULCH SHALL CONSIST OF CHOPPED HAY OR STRAW MULCH AND SPREAD BY MECHANICAL BLOWER, OR BY HAND IF ADJACENT TO WETLAND HABITAT, EVENLY AT A RATE OF 150- 200#/1000 sf. TEMPORARY MULCH SHALL BE REMOVED PRIOR TO PERMANENT SOIL STABILIZATION. MULCH MUST NOT BE PLACED
  - C. <u>PERMANENT BASE GRAVEL</u> BASE GRAVEL UNDER PAVEMENT SHALL BE SUITABLE AS TEMPORARY SOIL STABILIZATION UNDER THE FOLLOWING CONDITIONS:
  - SLOPES SHALL BE LESS THAN 5 PERCENT. GRAVEL SHALL MEET THE SPECIFICATIONS FOR BASE OR SUB-BASE GRAVEL FOR THE PROPOSED COMPLETED PAVEMENT.
  - D. ASPHALT BASE COURSE ASPHALT BASE SHALL MEET THE SPECIFICATIONS FOR THE ASPHALT BASE COURSE FOR THE PROPOSED COMPLETED PAVEMENT.
- 4. PRIOR TO TOPSOIL REMOVAL, SILT FENCING SHALL BE STAKED AS SHOWN ON THE PLAN.
- 5. STRIPPED TOPSOIL SHALL BE STOCKPILED FOR REUSE DURING FINAL GRADING. THE PILE SHALL BE HEAVILY MULCHED WITH HAY WHILE STOCKPILED.
- 6. TO REDUCE OR ELIMINATE THE TRACKING OF EARTH MATERIALS ONTO PUBLIC RIGHT-OF-WAYS, A STABILIZED PAD OF CRUSHED STONE LOCATED AT THE DESIGNATED ACCESS POINT SHALL BE ESTABLISHED.
- 7. STABILIZE AREAS WITHIN 75 FEET OF A WETLAND OR WATERBODY WITHIN 48 HOURS OF THE INITIAL DISTURBANCE OF THE SOIL OR PRIOR TO ANY STORM EVENT, WHICHEVER COMES FIRST.
- 8. BASED ON SITE AND WEATHER CONDITIONS DURING CONSTRUCTION, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES MAY BE REQUIRED TO STOP SOIL FROM LEAVING THE SITE.

## B. EROSION CONTROL/PERMANENT MEASURES

- 1. EXCESSIVELY STEEP SLOPES (2:1 OR GREATER) SHALL BE PROTECTED BY EROSION CONTROL EXCELSIOR BLANKET WITH BIODEGRADABLE PLASTIC OR JUTE MESH AFTER SEEDING.
- 2. PERMANENT SEEDING SHALL BE PERFORMED DURING CONSTRUCTION OPERATIONS AS EACH DISTURBED AREA HAS BEEN BROUGHT TO FINISH GRADE. ALL AREAS SHALL BE SEEDED WITH ONE OF THE FOLLOWING:
- A. CONSERVATION/WILDLIFE MIX 20% KENTUCKY BLUEGRASS 30% CREEPING RED FESCUE 15% PERENNIAL RYEGRASS
- 6% WHITE CLOVER 15% ANNUAL RYEGRASS 14% PENNFINE RYEGRASS

20% ANNUAL RYEGRASS

10% PERENNIAL RYEGRASS

B. <u>COTTAGE MIX</u> 50% CREEPING RED FESCUE 15% PERENNIAL RYEGRASS

30% CREEPING RED FESCUE

- 15% TALL FESCUE 25% KENTUCKY BLUEGRASS 20% ANNUAL RYEGRASS
- 15% CHEWING FESCUE
- THE CONTRACTOR SHALL MAINTAIN THE SEEDED AND MULCHED AREAS UNTIL FINAL ACCEPTANCE OF THE WORK. MAINTENANCE SHALL CONSIST OF PROVIDING PROTECTION AGAINST TRAFFIC AND REPAIRING ANY AREAS DAMAGED DUE TO WIND, WATER, EROSION, FIRE OR OTHER CAUSES. SUCH DAMAGED AREAS SHALL BE REPAIRED TO RE-ESTABLISH THE CONDITION AND GRADE OF THE SOIL PRIOR TO SEEDING AND SHALL THEN BE RE-FERTILIZED, RE-SEEDED AND
- PERMANENT WILDFLOWER STABILIZATION: PROVIDE 3" OF LOAM OVER DISTURBED OR NEWLY GRADED SLOPES. APPLY WILDFLOWER SEED MIX ACCORDING TO THE FOLLOWING MIX SPECIFICATIONS. ESTABLISH WILDFLOWER MIX PRIOR TO SEPTEMBER 1. MULCH SHALL BE WEED-SEED FREE STRAW MULCH, APPLIED AT THE RATE OF 4 BALES PER 1000 SQUARE FEET, AS DESCRIBED IN SECTION D. WINTER STABILIZATION. JUTE MULCH NETTING ANCHORING SHALL BE PROVIDED. APPLIED IN CONTINUOUS OVERLAPPING ROLLS WITH THE CONTOUR. NETTING SHALL BE APPLIED FROM THE BOTTOM OF SLOPES UP. 8 GAUGE, 6" PLAIN IRON WIRE STAPLES SHALL BE APPLIED PER THE MANUFACTURER'S RECOMMENDATION.

7% LANCE LEAF COREOPSIS 6% DAVEY'S ROCKET

12% BACHELORS BUTTONS 8% BABY'S BREATH 8% ROCKET LARKSPUR 6% PURPLE CONEFLOWER 8% SCARLET FLAX 2% CATCHELY 5% BLACK FYFD SUSAN 1% SPURRED SNAPDRAGON 5% SIBERIAN WALLFLOWER

4% CORN POPPY 4% EVENING PRIMROSE 2% BLANKET FLOWER 2% SHASTA DAISY

1% NEW ENGLAND ASTER 1% WHITE YARROW

- C. WINTER STABILIZATION 1. PROVIDE WINTER STABILIZATION IN LIEU OF PERMANENT SEEDING AFTER SEPTEMBER 1, IN LIEU OF SODDING AFTER NOVEMBER 15, AND FOR ALL WORK REQUIRING TEMPORARY STABILIZATION AFTER OCTOBER 15 AS FOLLOWS:
- 2. STRAW MULCH: PLACE STRAW MULCH AT THE APPLICATION RATE OF 150 LBS/1000 sf ON DISTURBED AREAS LESS THAN 8% SLOPE AND NOT SUBJECT TO FLOWING WATER REQUIRING STABILIZATION. ANCHOR ALL MULCH WITH MULCH NETTING AND STAPLES OR WITH STAKES AND TWINE. STAKES AND TWINE SHALL BE APPLIED AT THE RATE OF 4 TO 6 PEGS PER SQUARE YARD WITH CRISS-CROSSED TWINE STRUNG TAUT BETWEEN ALL PEGS AND SECURED AT EACH PEG WITH ONE OR MORE TURNS OF TWINE.
- EROSION CONTROL MIX MULCH: APPLY EROSION CONTROL MIX MULCH AS AN ALTERNATIVE TO STRAW MULCH OR MATS ON STEEP SLOPES ONLY AT RATES SPECIFIED IN DEP PUBLICATION "MAINE EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES" (MOST RECENT EDITION).
- 4. MATS: PLACE FABRICATED MULCH AND NETTING CONTROL MATS WITH ANCHORING AS SPECIFIED BY THE MANUFACTURER, TO STABILIZE DISTURBED AREAS AND SLOPES GREATER THAN 8%, SUBJECT TO FLOWING WATER (SUCH AS SWALE OR DITCH SECTIONS), OR CUT SLOPE SUBJECT TO WEEPING GROUNDWATER.
- 5. RIPRAP: ALL RIPRAP MINIMUM D50=2", PLACED IN 4" LIFTS AS AN ALTERNATIVE TO STRAW MATS ON STEEP SLOPES OR FLOWING WATER CONDITIONS.

#### D. STABILIZATION PERFORMANCE CRITERIA 1. PERMANENT STABILIZATION IS DEFINED AS FOLLOWS:

- 2. SEEDED AREAS. FOR SEEDED AREAS, PERMANENT STABILIZATION MEANS A 90% COVER OF THE DISTURBED AREA WITH MATURE, HEALTHY PLANTS WITH NO EVIDENCE OF WASHING OR RILLING OF THE TOPSOIL.
- 3. SODDED AREAS, FOR SODDED AREAS, PERMANENT STABILIZATION MEANS THE COMPLETE BINDING OF THE SOD ROOTS INTO THE UNDERLYING SOIL WITH NO SLUMPING OF THE SOD OR DIE-OFF.
- 4. NEWLY SEEDED OR SODDED AREAS MUST BE PROTECTED FROM VEHICLE TRAFFIC, EXCESSIVE PEDESTRIAN TRAFFIC, AND CONCENTRATED RUNOFF UNTIL THE VEGETATION IS WELL-ESTABLISHED WITH 90% COVER BY HEALTHY VEGETATION. IF NECESSARY. AREAS MUST BE REWORKED AND RESTABILIZED IF GERMINATION IS SPARSE. PLANT COVERAGE IS SPOTTY. OR TOPSOIL EROSION IS EVIDENT. FOR MULCHED AREAS, PERMANENT MULCHING MEANS TOTAL COVERAGE OF THE EXPOSED AREA WITH AN APPROVED MULCH MATERIAL. EROSION CONTROL MIX MAY BE USED AS MULCH FOR PERMANENT STABILIZATION ACCORDING TO THE APPROVED APPLICATION RATES AND LIMITATIONS.
- RIPRAP. FOR AREAS STABILIZED WITH RIPRAP. PERMANENT STABILIZATION MEANS THAT SLOPES STABILIZED WITH RIPRAP. HAVE AN APPROPRIATE BACKING OF A WELL-GRADED GRAVEL OR APPROVED GEOTEXTILE TO PREVENT SOIL MOVEMENT FROM BEHIND THE RIPRAP. STONE MUST BE SIZED APPROPRIATELY. IT IS RECOMMENDED THAT ANGULAR STONE BE USED.
- 6. PAVED AREAS. FOR PAVED AREAS, PERMANENT STABILIZATION MEANS THE PLACEMENT OF THE COMPACTED GRAVEL SUBBASE IS COMPLETED, PROVIDED IT IS FREE OF FINE MATERIALS THAT MAY RUNOFF WITH A RAIN EVENT
- 7. DITCHES, CHANNELS, AND SWALES. FOR OPEN CHANNELS, PERMANENT STABILIZATION MEANS THE CHANNEL IS STABILIZED WITH A 90% COVER OF HEALTHY VEGETATION, WITH A WELL-GRADED RIPRAP LINING, TURF REINFORCEMENT MAT, OR WITH ANOTHER NON-EROSIVE LINING SUCH AS CONCRETE OR ASPHALT PAVEMENT. THERE MUST BE NO EVIDENCE OF SLUMPING OF THE CHANNEL LINING, UNDERCUTTING OF THE CHANNEL BANKS, OR DOWN-CUTTING OF THE CHANNEL.

### GENERAL NOTES

AGGREGATE FOR GRAVEL BASE & SUBBASE AGGREGATE FOR GRAVEL BASE FOR TYPE A, B & C SHALL BE CRUSHED LEDGE OR GRAVEL OF HARD DURABLE PARTICLES FREE FROM VEGETABLE MATTER, LUMPS OR BALLS OF CLAY AND OTHER DELETERIOUS SUBSTANCES. AGGREGATE FOR GRAVEL BASE FOR TYPE D SHALL BE SAND OR GRAVEL OF HARD DURABLE PARTICLES FREE FROM VEGETABLE MATTER, LUMPS OR BALLS OF CLAY AND OTHER DELETERIOUS SUBSTANCES.

THE GRADATION OF THE PART THAT PASSES A 3 INCH SIEVE SHALL MEET THE GRADING REQUIREMENTS OF THE FOLLOWING

SIEVE DESIGNATION	PERCENTAGE BY WEIGHT PASSING SQUARE MESH SIEVES			
	TYPE A AGGREGATE	TYPE B AGGREGATE	TYPE C AGGREGATE	TYPE D AGGREGATE
4 INCH			100	
3 INCH			90-100	
2 INCH			75-100	
1 INCH			50-80	
1/2 INCH	45-70	35-75	30-60	35-80
1/4 INCH	30-55	25-60		25-65
No. 4			15-40	
No. 40	0-20	0-25		0-30
No. 200	0-6.0	0-6.0	0_6.0	0_7.0

TYPE A AGGREGATE SHALL NOT CONTAIN PARTICLES WHICH WILL NOT PASS THE 2 INCH SQUARE MESH SIEVE.

TYPE D AGGREGATE SHALL NOT CONTAIN PARTICLES WHICH WILL NOT PASS THE 6 INCH SQUARE MESH SIEVE.

TYPE B & C AGGREGATE SHALL NOT CONTAIN PARTICLES WHICH WILL NOT PASS THE 4 INCH SQUARE MESH SIEVE.

EACH LAYER AS APPLIED SHALL BE ROLLED WITH A 20 TON ROLLER. THE MATERIAL AS SPREAD SHALL BE WELL MIXED WITH NO POCKETS OF EITHER FINE OR COARSE MATERIAL. OVERSIZED STONES SHALL BE REMOVED FROM THE AGGREGATE.

EACH LAYER OF AGGREGATE SHALL BE PLACED IN 12" MAX. LIFTS OVER THE FULL WIDTH OF THE SECTION. AGGREGATE BASE AND SUB-BASE COURSES MAY BE PLACED UPON FROZEN SURFACES WHEN SUCH SURFACES HAVE BEEN PROPERLY CONSTRUCTED.

THE SURFACE OF EACH LAYER SHALL BE MAINTAINED DURING COMPACTION OPERATIONS IN SUCH A MANNER THAT A UNIFORM TEXTURE IS PRODUCED AND THE AGGREGATE IS FIRMLY KEYED. THE MOISTURE CONTENT OF THE MATERIAL SHALL BE MAINTAINED AT THE PROPER PERCENTAGE TO ATTAIN THE REQUIRED COMPACTION AND STABILITY. COMPACTION OF EACH LAYER SHALL BE CONTINUED UNTIL DENSITY OF NOT LESS THAN 95 PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D-1557 "MODIFIED PROCTOR DENSITY" HAS BEEN ACHIEVED FOR THE FULL WIDTH AND DEPTH OF

THE SURFACE TOLERANCE OF EACH BASE COURSE AS APPLIED SHALL BE 3/8 INCHES ABOVE OR BELOW THE REQUIRED TEMPLATE LINES.

### COMMON BORROW

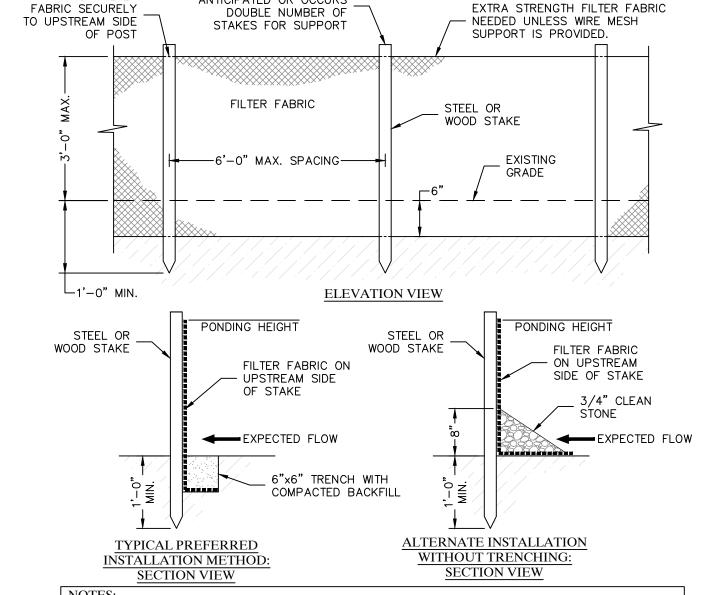
EACH LAYER AS APPLIED.

COMMON BORROW SHALL CONSIST OF EARTH, SUITABLE FOR EMBANKMENT CONSTRUCTION. IT SHALL BE FREE FROM FROZEN MATERIAL, PERISHABLE RUBBISH, PEAT AND OTHER UNSUITABLE MATERIAL.

THE MOISTURE CONTENT SHALL BE SUFFICIENT TO PROVIDE THE REQUIRED COMPACTION AND STABLE EMBANKMENT. IN NO CASE SHALL THE MOISTURE CONTENT EXCEED 4 PERCENT ABOVE OPTIMUM.

### STRUCTURAL BACKFILL

STRUCTURAL BACKFILL CONFORMING TO MaineDOT 703.20 SHALL BE UTILIZED IN THE ABSENCE OF GEOTECHNICAL REPORT RECOMMENDATIONS FOR FILL BELOW AND AJACENT TO FOUNDATIONS, FOOTINGS AND SLABS. PROVIDE DEWATERING AND PERMANENT DRAINS WHERE INDICATED. COMPACT ALL STRUCTURAL BACKFILL TO 95% MODIFIED PROCTOR DENSITY. PLACE STRUCTURAL BACKFILL IN LIFTS OF 10"-12" MAXIMUM DEPTH.



IF WATER PONDING IS

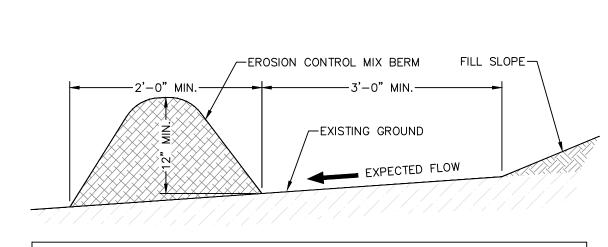
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ATTACH FILTER

. SILT FENCE SHALL BE PLACED ON SLOPE CONTOURS TO MAXIMIZE PONDING EFFICIENCY. 2. THE FENCE SHALL BE ANCHORED TO RESIST PULL-OUT, AND BE STRETCHED TIGHTLY BETWEEN STAKES TO PREVENT SAGGING.

- . PREFABRICATED SILT FENCE IS ACCEPTABLE IF INSTALLED PER MANUFACTURER'S 4. A 6" WIDE BY 6" DEEP TRENCH SHALL BE EXCAVATED UPGRADIENT OF THE FENCE POSTS TO
- KEY THE FLAP OF FILTER FABRIC INTO THE GROUND. THE TRENCH SHALL BE BACKFILLED AND COMPACTED. IN AREAS WHERE THE FLAP OF FILTER FABRIC CAN NOT BE KEYED PROPERLY (DUE TO FROZEN GROUND, BEDROCK, STONE SOIL, ROOTS, NEAR PROTECTED NATURAL RESOURCES, ETC.) THE SILT FENCE SHOULD BE ANCHORED WITH AGGREGATE, CRUSHED STONE. EROSION CONTROL MIX OR OTHER MATERIAL.
- WHEN JOINTS ARE NECESSARY, FILTER FABRIC SHALL BE SPLICED BY WRAPPING END STAKES . INSPECT AND REPAIR FENCE AFTER EACH STORM EVENT AND REMOVE SEDIMENT WHEN
- NECESSARY. . MAXIMUM SEDIMENT STORAGE HEIGHT IS 9".
- 3. REMOVED SEDIMENT SHALL BE DEPOSITED IN AN AREA THAT WILL NOT CONTRIBUTE SEDIMENT
- OFF-SITE AND CAN BE PERMANENTLY STABILIZED. 9. SHOULD THE SILT FENCE FABRIC DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF
- THE EXPECTED USABLE LIFE, AND THE BARRIER IS STILL NECESSARY, THE FABRIC SHALL BE REPLACED PROMPTLY. 10. DO NOT PLACE SILT FENCE IN STREAMS OR CONCENTRATED FLOW CONDITIONS.
- II. SILT FENCES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFUL PURPOSE, BUT NOT BEFORE THE UP SLOPE AREA HAS BEEN PERMANENTLY STABILIZED.

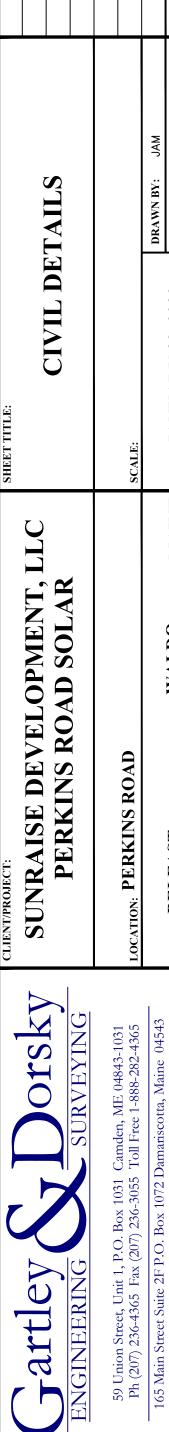
# SILT FENCE DETAIL

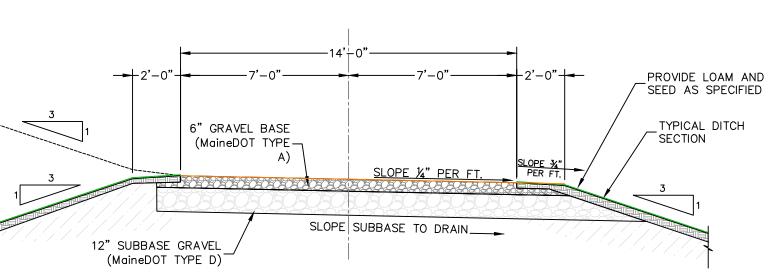


. THE EROSION CONTROL MIX BERM SHALL CONSIST PRIMARILY OF ORGANIC MATERIAL INCLUDING SHREDDED BARK, STUMP GRINDINGS, COMPOSTED BARK, OR ACCEPTABLE MANUFACTURED PRODUCTS. WOOD OR BARK CHIPS, GROUND CONSTRUCTION DEBRIS, REPROCESSED WOOD PRODUCTS, REFUSE, PHYSICAL CONTAMINANTS, OR MATERIALS TOXIC TO PLANT GROWTH ARE NOT ACCEPTABLE.

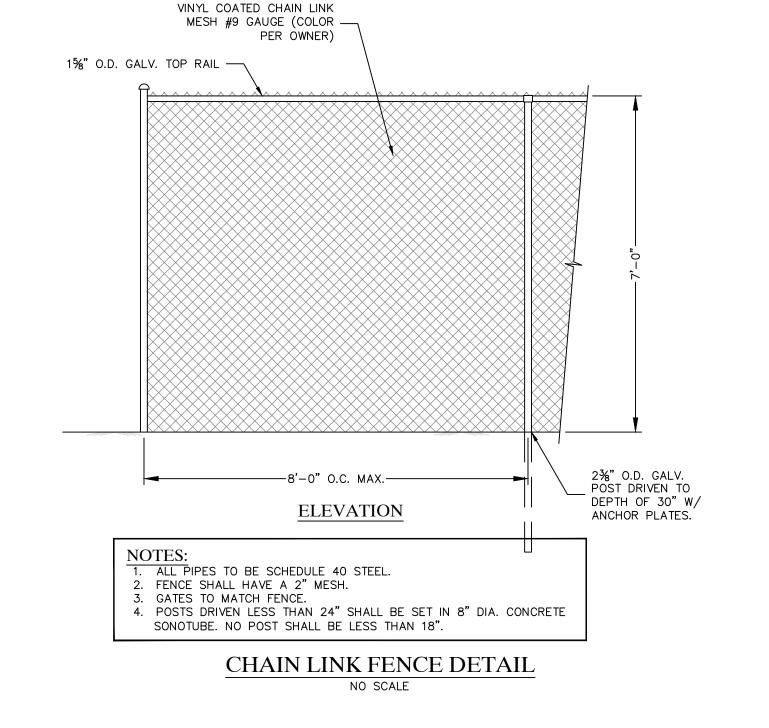
- 2. THE MIX SHALL CONFORM TO THE FOLLOWING STANDARDS: A. ORGANIC CONTENT: 80% TO 100% (DRY WEIGHT)
  - B. PARTICLE SIZE BY WEIGHT: 100% PASSING 6" SCREEN. 70%-85% PASSING 34" SCRFFN
- C. ORGANIC CONTENT SHALL BE FIBROUS AND ELONGATED NO STONES LARGER THAN 4" IN DIAMETER
- NO LARGE PORTIONS OF SILTS, CLAYS, OR FINE SANDS F. SOLUBLE SALTS CONTENT SHALL BE LESS THAN 4.0 mmhos/cm
- . pH SHALL BE BETWEEN 5.0 AND 8.0 3. THE COMPOSTED BERM SHALL BE PLACED, UNCOMPACTED, ALONG A RELATIVELY LEVEL

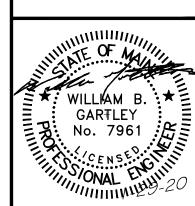
# **EROSION CONTROL MIX BERM**











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