## **GENERAL:**

THE DRAWINGS DEPICT THE REQUIRED SOIL EROSION CONTROL MEASURES THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING THE CONSTRUCTION SITE IN SUCH A MANNER THAT:

- I. SOIL EROSION IS KEPT TO A MINIMUM.
- 2. NO SEDIMENT LEAVES THE CONSTRUCTION SITE PROPER
- 3. ALL POSSIBLE MEASURES ARE EMPLOYED TO PREVENT SEDIMENT FROM ENTERING DRAINAGE COURSES AND WETLANDS EVEN BEYOND THE DETAILS SHOWN ON THIS PLAN IF NECESSARY.
- 1. ALL EROSION CONTROL MEASURES SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE MAINE EROSION AND SEDIMENT CONTROL BMPS PUBLISHED BY THE BUREAU OF LAND AND WATER QUALITY, MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION, MARCH 2003.
- 2. THE CONTRACTOR IS RESPONSIBLE FOR ALL FINES RESULTING FROM EROSION OR SEDIMENTATION FROM THE SITE TO SURROUNDING PROPERTIES, WATERBODIES, OR WETLAND AS A RESULT OF THIS PROJECT.
- 3. LOAM AND SEED ALL DISTURBED AREAS AS SOON AS POSSIBLE AFTER DISTURBANCE. BUT NO LONGER THAN I DAYS. LOAM AND SEED ANY DISTURBED AREA WITHIN 15' OF WETLANDS OR WATERBODEIS WITHIN 48 HOURS OR PRIOR TO AND STORM EVENT. USE WINTER SEED RATES AND SPECIFICATIONS IF APPROPRIATE.
- 4. INSPECT SOIL EROSION MEASURES WEEKLY AND AFTER SIGNIFICANT STORM EVENTS. MAKE ALL NECESSARY REPAIRS TO FACILITIES AS SOON AS POSSIBLE, BUT NO LONGER THAN 2 DAYS. CLEAN AND RESET SILT FENCES AND STONE CHECK DAMS WHICH ACCUMULATE SEDIMENT AND DEBRIS.
- 5. PROTECT AND STABILIZE ALL AREAS NOT SCHEDULED FOR EROSION PREVENTION OR STABILIZATION BUT THAT SHOW SIGNS OF EROSION, NOTIFY OWNER OF ANY SIGNIFICANT EROSION PROBLEM.
- 6. APPLY MULCH TO BARE SOILS WITHIN I DAYS OF INITIAL DISTURBANCE OF SOILS, WITHIN 48 HOURS IF WITHIN 75' OF WETLAND OR WATERBODY, PRIOR TO ANY RAIN EVENT, OR PRIOR TO ANY WORK SHUTDOWN LASTING MORE THAN ONE DAY.
- 1. TEMPORARILY SEED WITHIN 1 DAYS ANY AREA WHICH WILL BE LEFT DISTURBED AND UNWORKED FOR MORE THAN 14 DAYS WITH THE TEMPORARY SEED MIX LISTED BELOW. IF AREA IS WITHIN 15' OF A WETLAND OR WATERBODY, SEED WITHIN 48 HOURS, PERMANENTLY SEED ANY AREA WHICH CAN BE LOAMED AS SOON AS POSSIBLE WITH THE PERMANENT SEED MIX LISTED BELOW. DO NOT USE PERMANENT SEED MIX AFTER SEPTEMBER 15.
- 8. MULCH ALL AREAS SEEDED SO THAT SOIL IS NOT VISIBLE THROUGH THE MULCH REGARDLESS OF THE APPLICATION RATE. DURING THE GROWING SEASON (APRIL 15 -SEPT. 30) USE EROSION CONTROL MESH (OR MULCH AND NETTING) ON:
  - -THE BASE OF GRASSED WATERWAYS -SLOPES STEEPER THAN 15%
  - -WITHIN 100 ft. OF STREAMS AND WETLANDS
- BETWEEN OCT. I AND APRIL 14 USE EROSION CONTROL MESH (OR MULCH AND NETTING) ON: -SIDE SLOPES OF GRASSED WATERWAYS -SLOPES STEEPER THAN 8%
- 9. FOLLOW SILT FENCE MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS FOR INSTALLATION OF SILT FENCE. SECURE ENTIRE BOTTOM OF FENCE EITHER BY BURYING BOTTOM OF FENCE IN A TRENCH OR BERMING WITH SOIL OR CHIPPED GRUBBINGS. REFER TO SILT FENCE DETAILS.
- 10. PLACE AND GRADE LOAM IN A REASONABLY UNIFORM MANNER. WORK LIME AND FERTILIZER INTO THE SOIL TO A DEPTH OF 4 INCHES WITH A DISC, SPRING TOOTH HARROW OR OTHER SUITABLE EQUIPMENT. CONTINUE TILLAGE UNTIL A REASONABLY UNIFORM SEED BED IS PREPARED. REMOVE FROM SURFACE ALL STONES LARGER THAN 2" AND ALL OTHER UNSUITABLE MATERIAL. LIME AND FERTILIZER SHOULD BE MIXED INTO SOIL PRIOR TO ROLLING EXCEPT IF INCLUDED IN HYDROSEED MIXTURE, PERMANENT STABLILIZATION OF REVEGETATED AREAS IS CONSIDERED AS 90% CATCH
- 11. ALL CATCH BASINS, NEW OR EXISTING, THAT MAY RECEIVE RUNOFF FROM DISTURBED AREAS MUST BE PROTECTED BY INSTALLING AND MAINTAINING SILT SACKS DURING CONSTRUCTION.

# SUGGESTED SEQUENCE OF CONSTRUCTION TO CONTROL EROSION

THIS SEQUENCE OF CONSTRUCTION IS A GENERAL GUIDE TO THE CONTRACTOR, ACTUAL CONSTRUCTION PRACTICES WILL DICTATE VARIATIONS IN THE ORDER OF MAJOR EVENTS.

- . INSTALL PERIMETER SILT FENCE,
- 2. CLEAR AND GRUB WORK AREAS. TEMPORARILY SEED AREAS NOT TO BE WORKED ON

PLACE SILTSACK IN EX

FRAME, EX. GRATE MAY

**EXISTING BASIN** 

CATCH BASIN TO BE

PROTECTED BY HAY

FILTER AND SILTSACK

BALE WITH STONE

BE REPLACED DURING

CONSTRUCTION .

- 3. BEGIN EARTHWORK FOR BUILDING FOUNDATION. 4. STABILIZE AREAS DRAINING TO STORMDRAIN SYSTEM
- 5. INSTALL NEW STRUCTURES AND CONNECT STORMORAIN SYSTEM TO EXISTING SYSTEM.
- 6. BEGIN BUILDING CONSTRUCTION.
- T. FINE GRADE STREET SIDEWALKS AND ROUGH GRADE REMAINDER OF SITE. 8. RESEED OR TEMPORARILY SEED ANY AREA WHICH WILL BE LEFT UNDISTURBED FOR
- 9. COMPLETE FINE GRADING AND INSTALLATION OF SIDEWALKS, REAR WALK AND STREET PAVEMENT REPAIRS

— SILTSACK PLACED IN

TO FRAME & GRATE

INSTALLATION.

SILTSACK BY ACF

ENVIROMENTAL (A.H.

HARRIS 4 SONS, INC.)

**NEW INSTALLATION** 

CATCH BASIN PRIOR

FINISH GRADE

TRAPPED SEDIMENT

- 10. CLEAN STORMORAIN SYSTEM OF CONSTRUCTION SEDIMENTATION. II. FINE GRADE, LOAM, SEED AND FERTILIZE REMAINDER OF SITE.
- 12. REMOVE TEMPORARY SOIL EROSION MEASURES.

- CATCH BASIN

SILTSACK

CATCH BASIN PROTECTION

## TOPSOIL:

1. SUITABLE TOPSOIL SALVAGED FROM SITE OR SCREENED, LOOSE AND FRIABLE SANDY LOAM OR LOAM AS DEFINED BY THE USDA SOIL CONSERVATION SERVICE CLASSIFICATION SYSTEM, FREE FROM ADMIXTURE OF SUBSOIL, REFUSE, LARGE STONES, CLODS, ROOTS, WEEDS, RHIZOMES OR OTHER UNDESIREABLE FOREIGN MATTER AS DETERMINED BY THE INSPECTING AUTHORITY. CONTRACTOR SHALL SUBMIT REPORTS OF LOAM TEST RESULTS PERFORMED BY AN INDEPENDENT TESTING LABORATORY FOR TOPSOIL FROM DIFFERENT SOURCES PRIOR TO PLACING. THE COST OF TESTING SHALL BE INCIDENTAL TO THE COST OF TOPSOIL TOPSOIL SHALL MEET THE FOLLOWING SPECIFICATIONS:

WINTER CONSTRUCTION:

AND WEATHER CONDITIONS.

1. SOIL STOCKPILES

2. SEDIMENT BARRIERS

VISIBLE THOUGH THE MULCH.

END OF EACH FINAL GRADING WORK DAY.

COVER IS SUFFICIENT.

THE WINTER CONSTRUCTION PERIOD IS FROM NOVEMBER I THROUGH APRIL 15. IF THE

CONSTRUCTION SITE IS NOT STABILIZED WITH PAVEMENT, A ROAD GRAYEL BASE, 15%

MATURE VEGETATION COVER OR RIP RAP BY NOVEMBER IS THEN THE SITE NEEDS TO

MATS, RIP RAP OR GRAVEL BASE ON A ROAD. WINTER EXCAVATION AND EARTHWORK

STABILIZATION AT ANY ONE TIME. LIMIT THE EXPOSED AREA TO THOSE AREAS IN WHICH

WORK IS EXPECTED TO BE UNDER TAKEN DURING THE PROCEEDING IS DAYS AND THAT

CONSIDERED TO BE DENUDED UNTIL THE SUBBASE GRAVEL IS INSTALLED IN ROADWAY

AREAS OR THE AREAS OF FUTURE LOAM AND SEED HAVE BEEN LOAMED, SEEDED AND

MULCHED. HAY AND STRAW MULCH RATE SHALL BE A MINIMUM OF 150 LBS/1000 SF. (3

THE CONTRACTOR MUST INSTALL ANY ADDED MEASURES WHICH MAY BE NECESSARY TO

AREA NOT STABILIZED WITH PAVEMENT; VEGETATION, MULCHING, EROSION CONTROL

SHALL BE COMPLETED SUCH THAT NO MORE THAN I ACRE OF THE SITE IS WITHOUT

CAN BE MULCHED IN ONE DAY PRIOR TO ANY SNOW EVENT. ALL AREA SHALL BE

UNTIL THE EXPOSED SOIL SURFACE ON THE AREA BEING WORKED HAS BEEN

WITH HAY OR STRAW AT TWICE THE NORMAL RATE OR AT 150 LBS/1000 S.F. (3

WITH HAY OR STRAW) WITHIN 100 FEET FROM ANY NATURAL RESOURCES.

INSTALLATION OF HAY BALES AND SEDIMENT SILT FENCES.

ANCHORED HAY OR STRAW OR EROSION CONTROL MATTING.

STABILIZED, IN ORDER TO MINIMIZE AREAS WITHOUT EROSION CONTROL PROTECTION.

STOCKPILES OF SOIL OR SUBSOIL WILL BE MULCHED FOR OVER-WINTER PROTECTION

TONS/ACRE) OR WITH A FOUR INCH LAYER OF EROSION CONTROL MIX. THIS WILL BE

RAINFALL OR SNOWFALL. ANY SOIL STOCKPILE WILL NOT BE PLACED (EVEN COVERED

SEED HAVE BEEN LOAMED. SEEDED AND MULCHED. HAY AND STRAW MULCH SHALL BE

ACCEPTED RATE OF 15 LBS./1000 SF. OR 15 TONS/ACRE) AND SHALL BE PROPERLY

AFTER EACH DAY OF FINAL GRADING, THE AREA WILL BE PROPERLY STABILIZED WITH

SURFACES HAVE BEEN MULCHED WITH STRAW OR HAY AT A RATE OF 150 LBS/1000 SF.

BETWEEN THE DATES OF NOVEMBER I AND APRIL 15, ALL MULCH SHALL BE ANCHORED

CELLULOSE FIBER. WHEN GROUND SURFACE IS NOT VISIBLE THROUGH THE MULCH THEN

AFTER NOVEMBER I, MULCH AND ANCHORING OF ALL BARE SOIL SHALL OCCUR AT THE

BY EITHER PEG LINE, MULCH NETTING, ASPHALT EMULSION CHEMICAL TACK, OR WOOD

DONE WITHIN 24 HOURS OF STOCKING AND WILL BE REESTABLISHED PRIOR TO ANY

DURING FROZEN CONDITIONS, SEDIMENT BARRIERS SHALL CONSIST OF EROSION

APPLIED AT A RATE OF 150 LBS/1,000 S.F. OR 3 TONS/ACRE (TWICE THE NORMAL

ANCHORED. MULCH SHALL NOT BE SPREAD ON TOP OF SNOW. THE SNOW WILL BE

REMOVED DOWN TO A ONE INCH DEPTH OR LESS PRIOR TO APPLICATION.

AN AREA SHALL BE CONSIDERED TO HAVE BEEN STABILIZED WHEN EXPOSED

(3 TONS/ACRE) AND ADEQUATELY ANCHORED SO THAT GROUND SURFACE IS NOT

CONTROL MIX SEDIMENT BARRIERS AS FROZEN SOIL PREVENTS THE PROPER

TONS/ACRE) AND SHALL BE PROPERLY ANCHORED.

#### 2. MATERIAL

SAND - 0.08 IN. TO 0.002 IN. DIAMETER (% BY VOLUME)	45 - 75
SILT - 0.002 IN. TO 0.00008 IN. DIAMETER (% BY VOLUME).	20 - 40
CLAY - LESS THAN 0.00008 IN. DIAMETER (% BY VOLUME).	5 - 15

ORGANICS (SHALL MEET THE REQUIREMENTS OF MOOT STANDARD SPECIFICATION 117.09 PEAT HUMUS) (% BY VOLUME). 10 - 20

#### NUTRIENTS: CALCIUM (CA) (% SATURATION)......60 - 80 MAGNESIUM (MG) (% SATURATION) . . . . . . 10 - 25 POTASSIUM (K) (% SATURATION) ..... 2.1 - 3.0 PHOSPHORUS (P) (POUNDS/ACRE)..... 10 - 40

PH .....60 - 65

PERMEABILITY (INCHES PER HOUR)....3 - 10 MAXIMUM STONE SIZE (INCHES)............3/4

#### SEEDING:

USE PERMANENT SEED MIXES AND RATES BETWEEN 5/15 AND 9/30. USE TEMPORARY SEED MIXES FOR PERIODS LESS THAN 12 MONTHS. IF USING TEMPORARY SEED MIXES AND RATES BETWEEN 10/1 AND 5/14, RE-SEED WITH PERMANENT SEED MIX AFTER 5/15.

#### PERMANENT SEED:

MDOT 717.03(a) METHOD NUMBER 3

#### TEMPORARY SEED:

OATS		4/01 - 5/14
ANNUAL RYEGRASS	4000 LBS/ACRE	
SUDANGRASS	40.00 LBS/ACRE	5/15 - 8/14
ANNUAL RYEGRASS	80.00 LBS/ACRE	5/15 - 9/14
WINTER RYE	112.00 LBS/ACRE	9/15 - 9/30
WINTER RYE (W/ MULCH COVER)	. 112.00 LBS/ACRE	10/01 - 3/31

# LIME AND FERTILIZER:

APPLY GROUND LIMESTONE (EQUIVALENT TO 50% CALCIUM PLUS MAGNESIUM OXIDE) AT A RATE OF 3 TONS PER ACRE (138 POUNDS PER 1000 SQUARE FEET). APPLY FERTILIZER (10-20-20) AT A RATE OF 800 POUNDS PER ACRE (18.4 POUNDS PER 1000 SQUARE FEET).

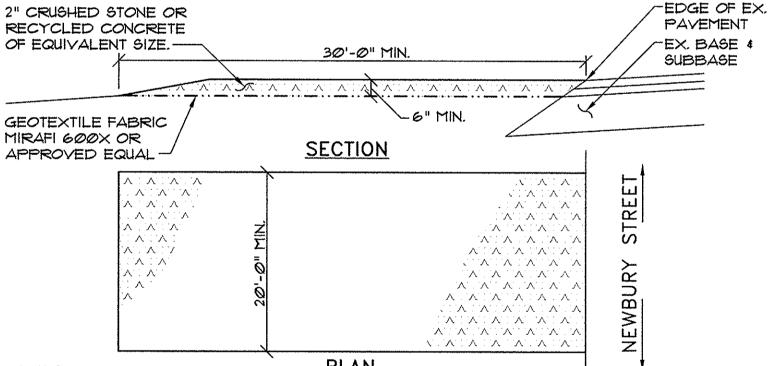
# MULCH:

STRAW OR HAY (ANCHORED) 10 - 90 LBS STRAW OR HAY (ANCHORED) 185 - 275 LBS	PROTECTED AREAS WINDY AREAS
SHREDDED OR CHOPPED 185 - 275 LBS JUTE MESH	MODERATE TO HIGH
EXCELSIOR MAT AS REQUIRED	VELOCITY AREAS & STEEP SLOPES

# MULCH ANCHORING

PEG AND TWINE	LIQUID	ASPHALT	
MULCH NETTING	WOOD	CELLULOSE	FIBE
ASPUALT EMILL SION	CHEMIC	CAL TACK	

ASPHALI EMULSION ...... CHEMICAL TACK



<u>PLAN</u> NOTES: 1. MAINTAIN ENTRANCE IN A CONDITION THAT WILL PREVENT TRACKING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAY. IF WASHING IS REQUIRED PREVENT SEDIMENT FROM ENTERING WATERWAYS, DITCHES OR STORM DRAINS.

2. REMOVE STABILIZED CONSTRUCTION ENTRANCE AFTER EXCAVATION OS COMPLETE.

# STABILIZED CONSTRUCTION ENTRANCE DETAIL

NOT TO SCALE -SILT FENCE FABRIC HARDWOOD STAKES SPACED AT 6'-0" MAX. O.C. ON DOWNSTREAM 

LOAM AND SEED

-SILT FENCE

NOT TO SCALE

NOTE: SILT FENCE TO BE USED TO

CONTROL SHEET FLOW IN

AREAS LESS THAN 1/2 ACRE.



-1 1/2" CLEAN STONE

HAY BALE DAM

<u>PLAN</u>

STAKE AS REQ'D

CATCH BASI

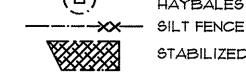
HAY BALE

NOT TO SCALE

FLOW **OVERLAP JOINTS** 

SILT FENCE DETAIL

EROSION CONTROL LEGEND CATCH BASIN PROTECTION WITH HAYBALES AND SILTSACK



STABILIZED ENTRANCE

FOR PLAN LEGEND SEE SHEET C1.4

NOTE: RIGHT-OF-WAYS SHALL BE KEP

CLEAN FROM DUST, TRACKED SOIL OR MUD

AND CONSTRUCTION DEBRIS AND SWEPT AS NECESSARY OR AS REQUESTED BY THE

CITY OF PORTLAND TO MINIMIZE DUST AND

SEDIMENT ORIGINATING FROM THE SITE.

4. MULCHING ON SLOPES AND DITCHES SLOPES SHALL NOT BE LEFT EXPOSED FOR ANY

EXTENDED TIME OF WORK SUSPENSION UNLESS FULLY BE PROTECTED WITH OVER-WINTER STABILIZATION. AN AREA CONSIDERED OPEN IS ANY MULCHED AND ANCHORED WITH PEG AND NETTING OR WITH EROSION CONTROL BLANKETS. MULCHING SHALL BE APPLIED AT A RATE OF 230 LBS/1000 SF. ON ALL SLOPES GREATER THAN 8%. 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 THAN 8%. EROSION CONTROL BLANKETS SHALL BE USED IN LIEU

OF MULCH IN ALL DRAINAGE WAYS WITH SLOPE GREATER THAN 8%. EROSION CONTROL MIX CAN BE USED AS A SUBSTITUTE FOR

CONTROL EROSION/SEDIMENTATION FROM THE SITE DEPENDENT UPON THE ACTUAL SITE EROSION CONTROL BLANKETS ON ALL SLOPES EXCEPT DITCHES. CONTINUATION OF EARTHWORK OPERATIONS ON ADDITIONAL AREAS SHALL NOT BEGIN 5. SEEDING

BETWEEN THE DATES OF OCTOBER 15 AND APRIL 1, 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. AFTER NOVEMBER ! IF THE EXPOSED AREA HAS BEEN LOAMED AND FINAL GRADED WITH A UNIFORM SURFACE, THEN THE AREA MAY BE DORMANT SEEDED AT A RATE OF 3 TIMES HIGHER THAN SPECIFIED FOR PERMANENT SEED AND THEN MULCHED. DORMANT SEEDING MAY BE PLACED PRIOR TO THE PLACEMENT OF MULCH AND FABRIC NETTING ANCHORED WITH STAPLES.

OF LOAM AND BE SEEDED AT AN APPLICATION RATE OF 5 LBS/1000 S.F. ALL AREAS SEEDED DURING THE WINTER WILL BE INSPECTED IN THE SPRING FOR ADEQUATE CATCH. ALL AREAS INSUFFICIENTLY VEGETATED (LESS THAN 75 % CATCH) SHALL BE REVEGETATED BY REPLACING LOAM, SEED AND MULCH.

IF DORMANT SEEDING IS USED FOR THE SITE, ALL DISTURBED AREAS SHALL RECEIVE 4"

IF DORMANT SEEDING IS NOT USED FOR THE SITE, ALL AREAS DISTURBED IN THE WINTER SHALL BE VEGETATED IN THE SPRING.

ALL AREA SHALL BE CONSIDERED TO BE DENUDED UNTIL AREAS OF FUTURE LOAM AND 6. TRENCH DEWATERING AND TEMPORARY STREAM DIVERSION

WATER FROM CONSTRUCTION TRENCH DEWATERING OR TEMPORARY STREAM DIVERSION WILL PASS FIRST THROUGH A FILTER BAG OR SECONDARY CONTAINMENT STRUCTURE (E.G. HAY BALE OR EROSION CONTROL MIX LINED POOL) PRIOR TO DISCHARGE. THE DISCHARGE SITE SHALL BE SELECTED TO AVOID FLOODING, ICING, AND SEDIMENT DISCHARGES TO A PROTECTED RESOURCE. IN NO CASE SHALL THE FILTER BAG OR CONTAINMENT STRUCTURE BE LOCATED WITHIN 100 FEET OF A PROTECTED NATURAL RESOURCE.

T. INSPECTION AND MONITORING

HAMPSHIRE STREET

FEDERAL STREET

FIN. FLR. EL. 48.0

EROSION CONTROL PLAN

NEWBURY STREET

ENTRANCE FIN FLR EL. 395

SCALE: 1"=20"

BILT FENCE ALONG BOTTOM OF

SLOPE ADJACENT TO SIDEWALK

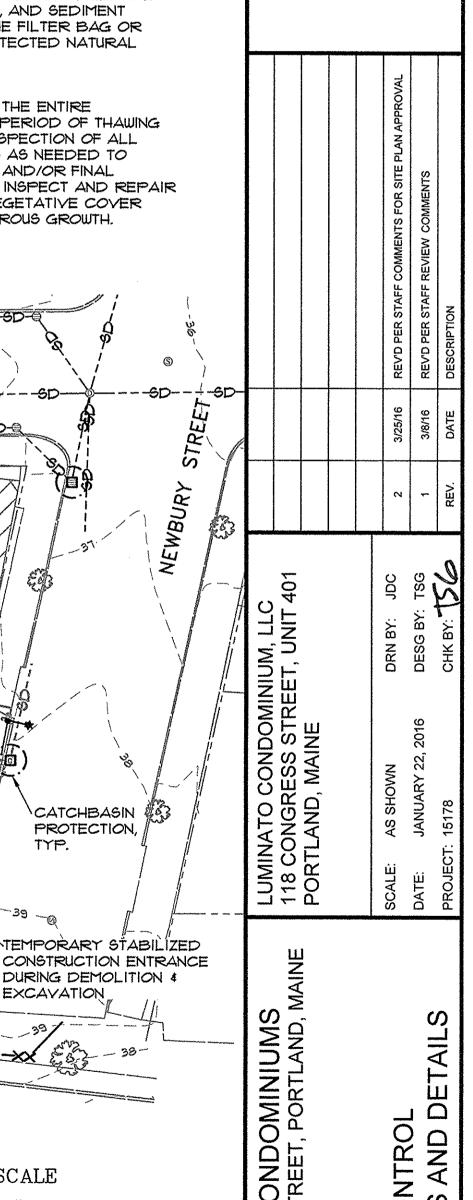
GRAPHIC SCALE

( IN FEET )

1 inch = 20 ft.

ENTRANCE

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. FOLLOWING THE TEMPORARY AND/OR FINAL SEEDING AND MULCHING, THE CONTRACTOR SHALL, IN THE SPRING, INSPECT AND REPAIR ANY DAMAGED AND/OR UNESTABLISHED SPOTS. ESTABLISHED VEGETATIVE COVER MEANS A MINIMUM OF 85 TO 90% OF AREAS VEGETATED WITH VIGOROUS GROWTH.



GREER ENGINEERS

PINKHAM & (

LUMINAT 169 NEWBL

MAP/LOT 28/1/4, 6, 9 & 10