

UTILITY NOTES

- ALL INSTALLATION AND TESTING SHALL BE IN ACCORDANCE WITH THE AFFECTED UTILITY'S STANDARDS.
- INSTALL AND TEST SEWER SYSTEM IN ACCORDANCE WITH THE DISTRICT'S STANDARDS
- INVERTS FOR TIE-INS FROM FOUNDATION DRAINS ARE NOT SHOWN. MAINTAIN A POSITIVE SLOPE TO CONNECTION OR OUTLET. CONNECT OR OUTLET AS SHOWN ON PLANS.
- WATER MAIN TO HAVE A MINIMUM 5' OF COVER WHERE THE WATER MAIN CROSSES OTHER UTILITIES IT MAY NEED TO BE DEEPER.
- PRECAST MANHOLE AND CATCH BASIN COMPONENTS TO COMPLY WITH ASTM C478.
- LIMIT OF ROCK PAYMENT:

PRECAST CONCRETE STRUCTURES:
DEPTH: 12" BELOW STRUCTURE,
WIDTH: STRUCTURE O.D. + 2'

TRENCHES:
DEPTH: 6" BELOW PIPE OR CABLE INVERT,
WIDTH: PIPE O.D. OR CABLE + 12", MIN. 3' WIDE

PAVED SURFACES:
BOTTOM OF SUBBASE RELATIVE TO FINISH SURFACE

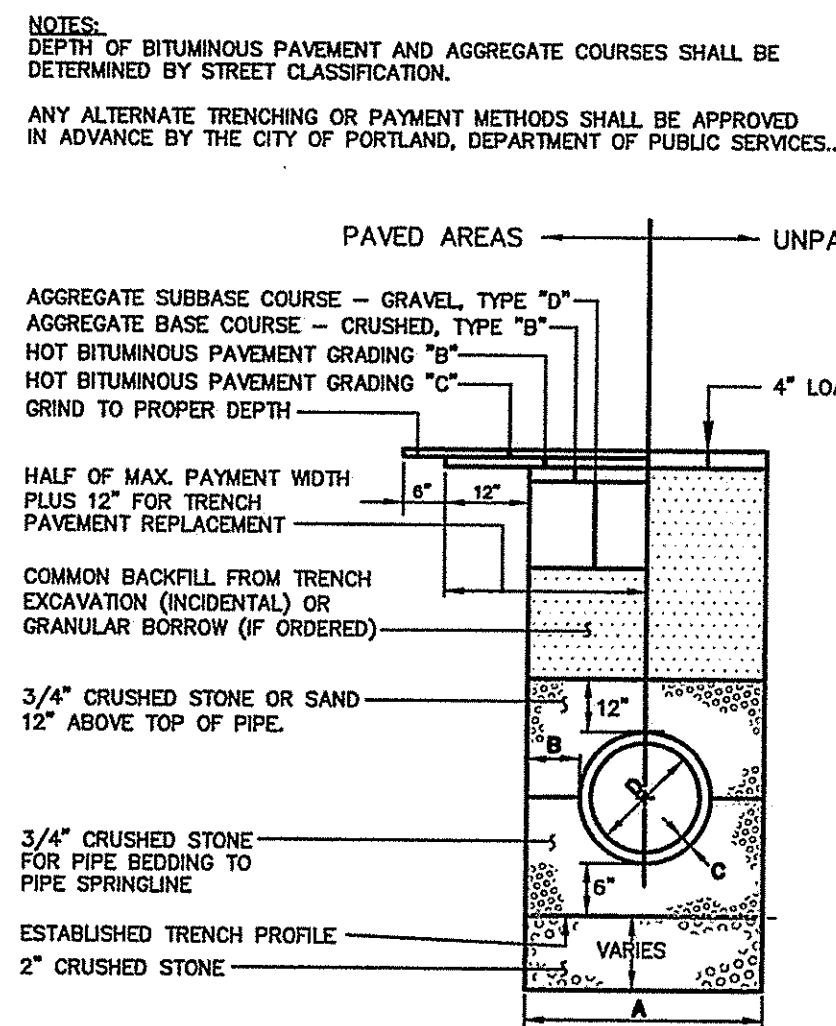
- IDENTIFICATION TAPE TO BE INSTALLED ABOVE ALL NEW UNDERGROUND UTILITIES AND ABOVE ANY EXISTING UTILITIES THAT MAY BE EXPOSED BY THIS CONSTRUCTION.

DETECTABLE UNDERGROUND MARKING TAPE TO BE PERMANENT, BRIGHT-COLORED, CONTINUOUS-PRINTED PLASTICIZED ALUMINUM TAPE, INTENDED FOR DIRECT-BURIAL SERVICE NOT LESS THAN 3" WIDE x 5 MILS THICK. PROVIDE TAPE WITH BLACK PRINTING IDENTIFYING THE UTILITY. DETECTABLE WARNING TAPE REQUIRED OVER ALL WATER, SEWER, DRAINAGE, OR GAS UTILITIES. TAPE TO BE TERRA TAPE BY REEF INDUSTRIES, INC., www.reefindustries.com, OR EQUAL.

APWA UNIFORM COLOR CODE:
WHITE PROPOSED EXCAVATION
PINK TEMPORARY SURVEY MARKINGS
RED ELECTRIC POWER LINES, CABLES, CONDUIT AND LIGHTING CABLES
YELLOW GAS, OIL, STEAM, PETROLEUM OR GASEOUS MATERIALS
ORANGE COMMUNICATION, ALARM OR SIGNAL LINES, CABLES OR CONDUIT
BLUE POTABLE WATER
PURPLE RECLAIMED WATER, IRRIGATION AND SLURRY LINES
GREEN SEWERS AND DRAIN LINES

- MATERIALS: SEE PLANS FOR SIZES

- STORM DRAIN:
TYPICAL: FE N12, SMOOTH WALL
WITHIN ROW OF STATE ROAD: REINFORCED CONCRETE PIPE
- UNDERDRAIN: PVC 9DR 35 MEETING AASHTO H-20 LOADING
- SANITARY SEWER: PVC 9DR 35 MEETING ASTM D3034 W/ A REMOVABLE GASKET MEETING ASTM D3212
- WATER SERVICE: CTS 200 P61, PE
- FOUNDATION DRAIN: PVC 9DR 35
- ROOF DRAIN: PVC 9DR 35



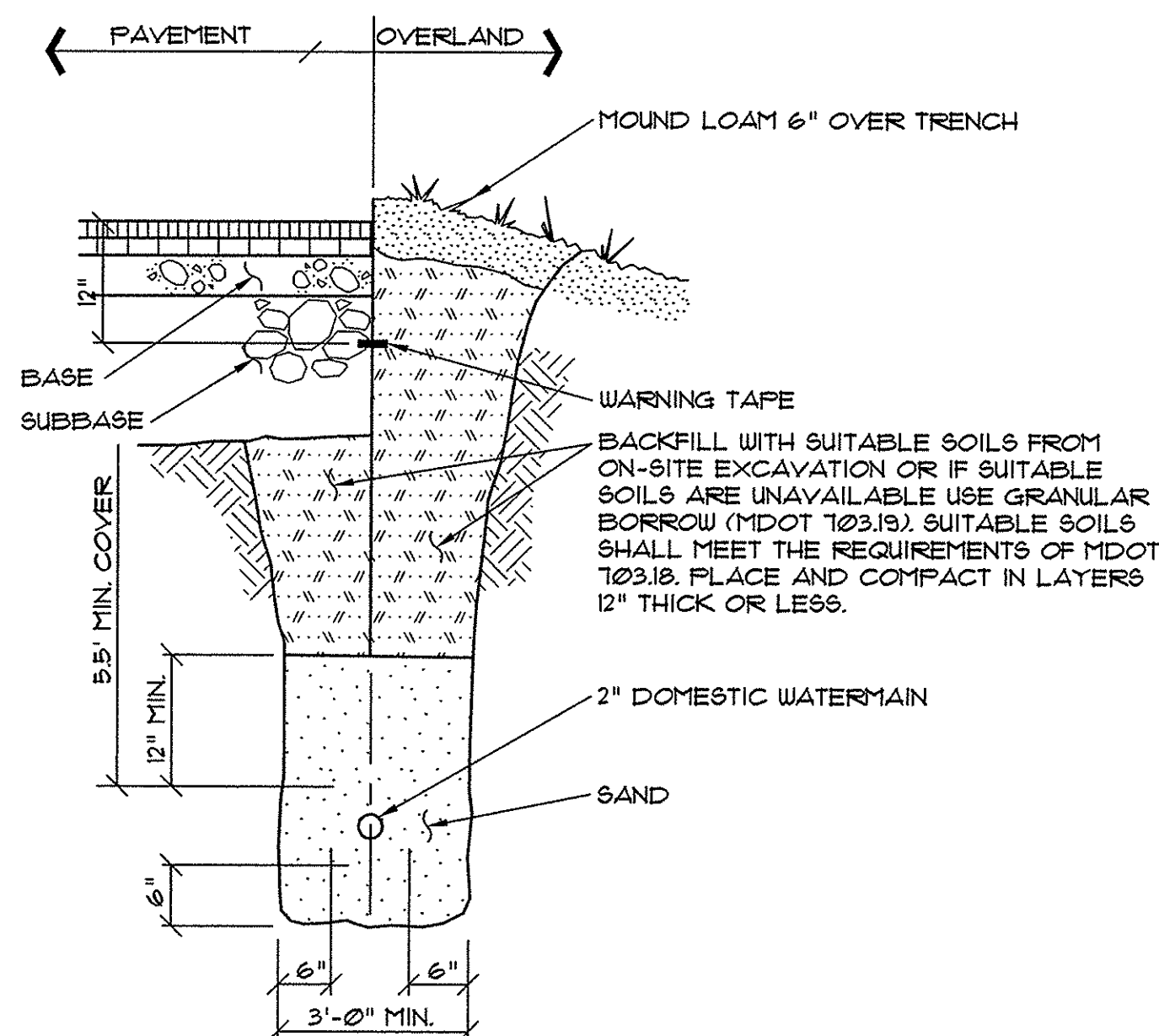
6 TYPICAL PIPE TRENCH INSTALLATION (11-12)

NOT TO SCALE

NOTES:

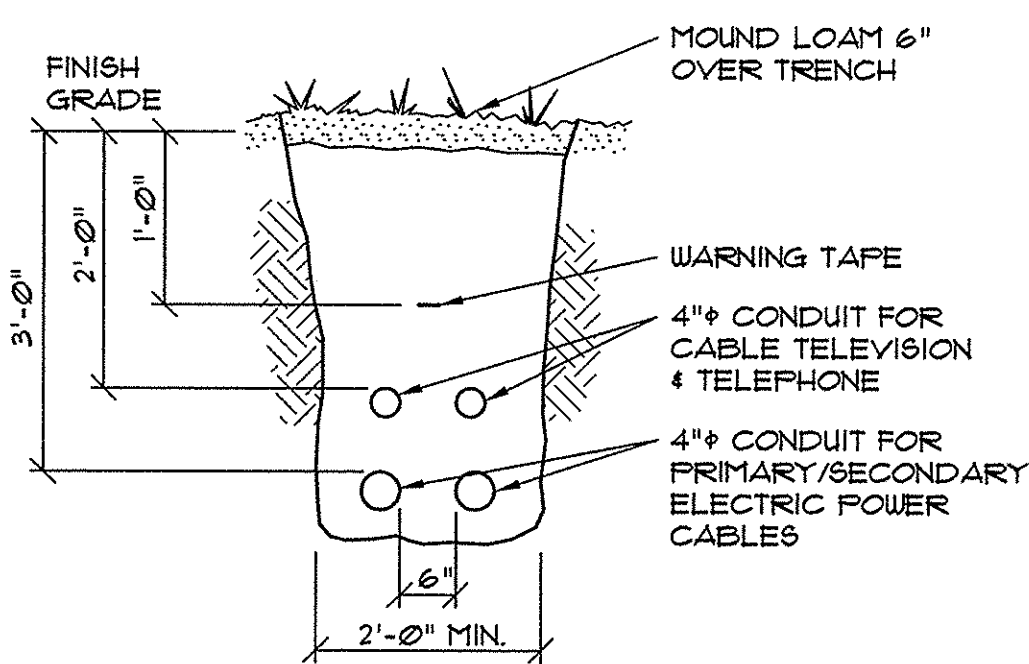
- ALTERNATIVE CONSTRUCTION METHODS OR PAYMENT METHODS SHALL BE APPROVED IN ADVANCE BY THE CITY.
- IN PAVED AREAS, DEPTHS OF GRAVEL AND HOT MIX ASPHALT PAVEMENT SHALL MATCH THE GREATER OF EXISTING CONDITIONS OR THE REQUIREMENTS FOR THE CORRESPONDING STREET CLASSIFICATION.
- DIMENSION B SHALL BE SUFFICIENT TO ALLOW CRUSHED STONE BEDDING TO BE PLACED AND COMPACTED UNDER THE HAUNCHES OF THE PIPE, BUT IN ALL CASES, DIMENSION B SHALL BE AT LEAST 9".
- DIMENSION A IS THE MAXIMUM WIDTH ALLOWED FOR CALCULATING PAY QUANTITIES UNDER GRANULAR BORROW, CRUSHED STONE, STRUCTURAL EARTH EXCAVATION, AND STRUCTURAL ROCK EXCAVATION. DIMENSION A SHALL BE BASED ON PIPE DIAMETER D, AS SET FORTH IN THE FOLLOWING TABLE.

PIPE DIAMETER, D (INCHES)	MAX. TRENCH WIDTH, A (FEET)
4	4.0
6	4.0
8	4.0
10	4.0
12	5.0
15	5.0
18	5.0
21	5.0
24	6.0
27	6.0
30	6.0
36	6.0
42	7.0
48	7.0



7 TYPICAL WATER SERVICES

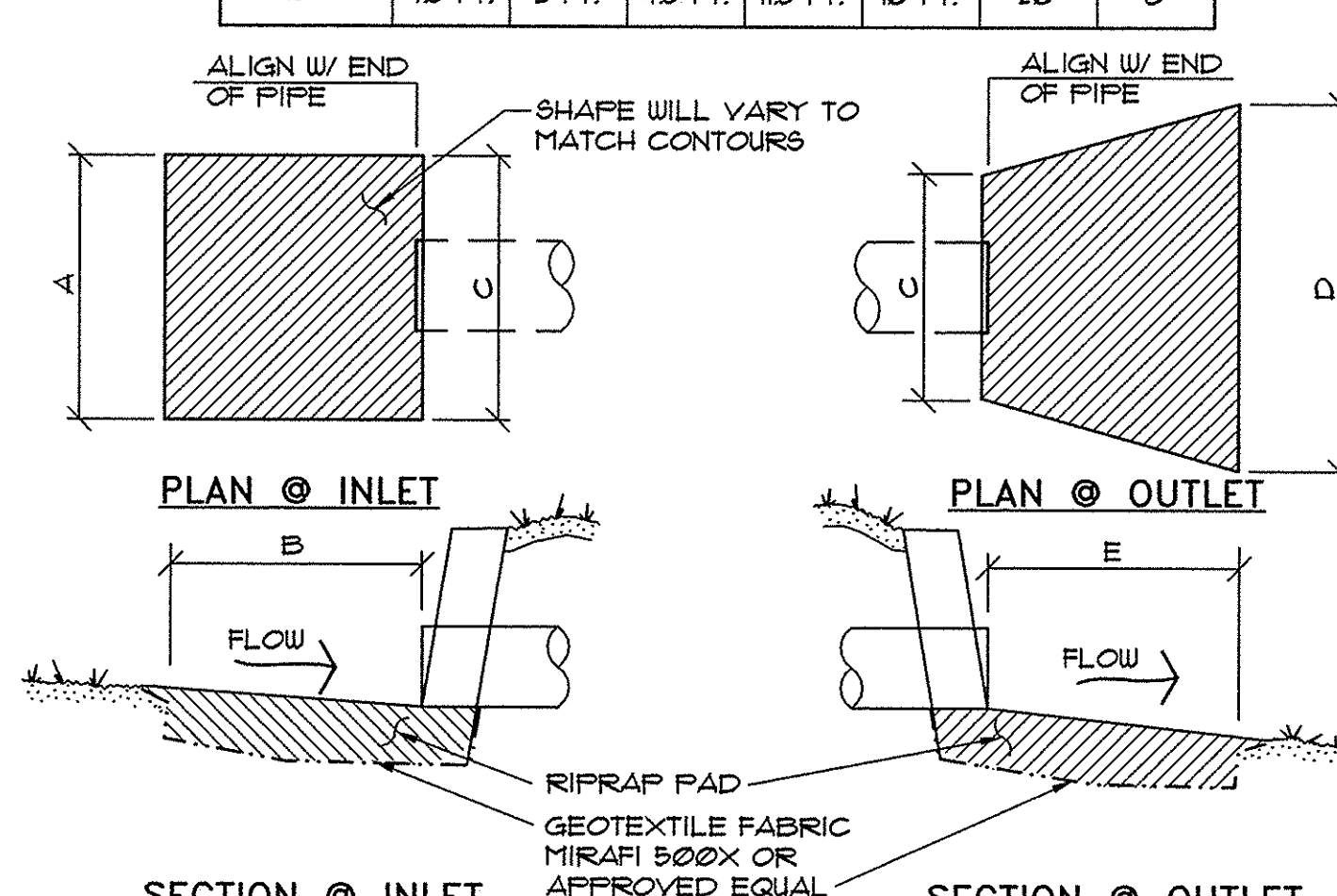
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- NOTES:
- SEE CMP CO. STANDARD TRENCH FOR BACKFILL MATERIAL REQUIREMENTS.
 - DIRECT BURY CABLES EXCEPT UNDER PAVED AREAS. PROVIDE SCH. 40 PVC CONDUIT UNDER PAVED AREAS, EXTEND CONDUIT 5'-0" BEYOND EDGE OF PAVEMENT.

8 CABLE TRENCH SECTION

NOT TO SCALE



4 SECTION @ INLET RIPRAP PADS & HEADWALLS DETAILS SECTION @ OUTLET

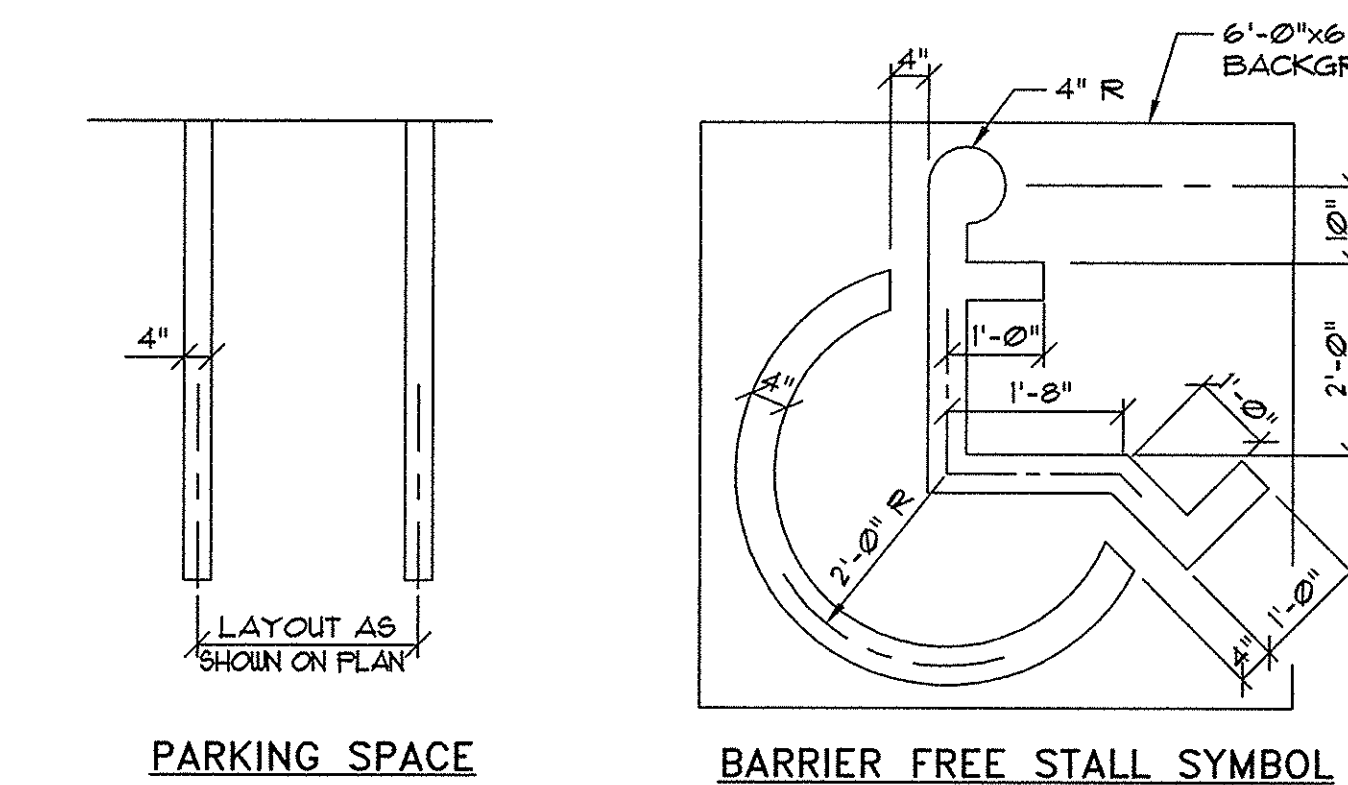
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CONSTRUCTION	USE
<ul style="list-style-type: none"> 1 1/2" HMA MDOT 9.5mm 3 1/2" HMA MDOT 19.0mm 3" COMPACTED AGGREGATE BASE, MDOT 103.06(a) TYPE A 18" COMPACTED AGGREGATE SUBBASE, MDOT 103.06(b) TYPE D COMPACTED SUBGRADE 	<p>BITUMINOUS</p> <p>ACCESS ROAD PARKING LOT</p>
<ul style="list-style-type: none"> 4" TOPSOIL, NO STONES OVER 3/4" DIA. GRANULAR MATERIAL IN FILL AREAS COMPACTED SUBGRADE 	<p>GRASS</p> <p>ALL DISTURBED AREAS</p>
<ul style="list-style-type: none"> 3" BARKMULCH PREPARED SUBGRADE 	<p>PLANT BED</p> <p>BARKMULCH</p>

- NOTES:
- HMA = HOT MIX ASPHALT, MDOT = MAINE DEPARTMENT OF TRANSPORTATION.
 - ALL COURSE THICKNESS AFTER FINAL COMPACTION.

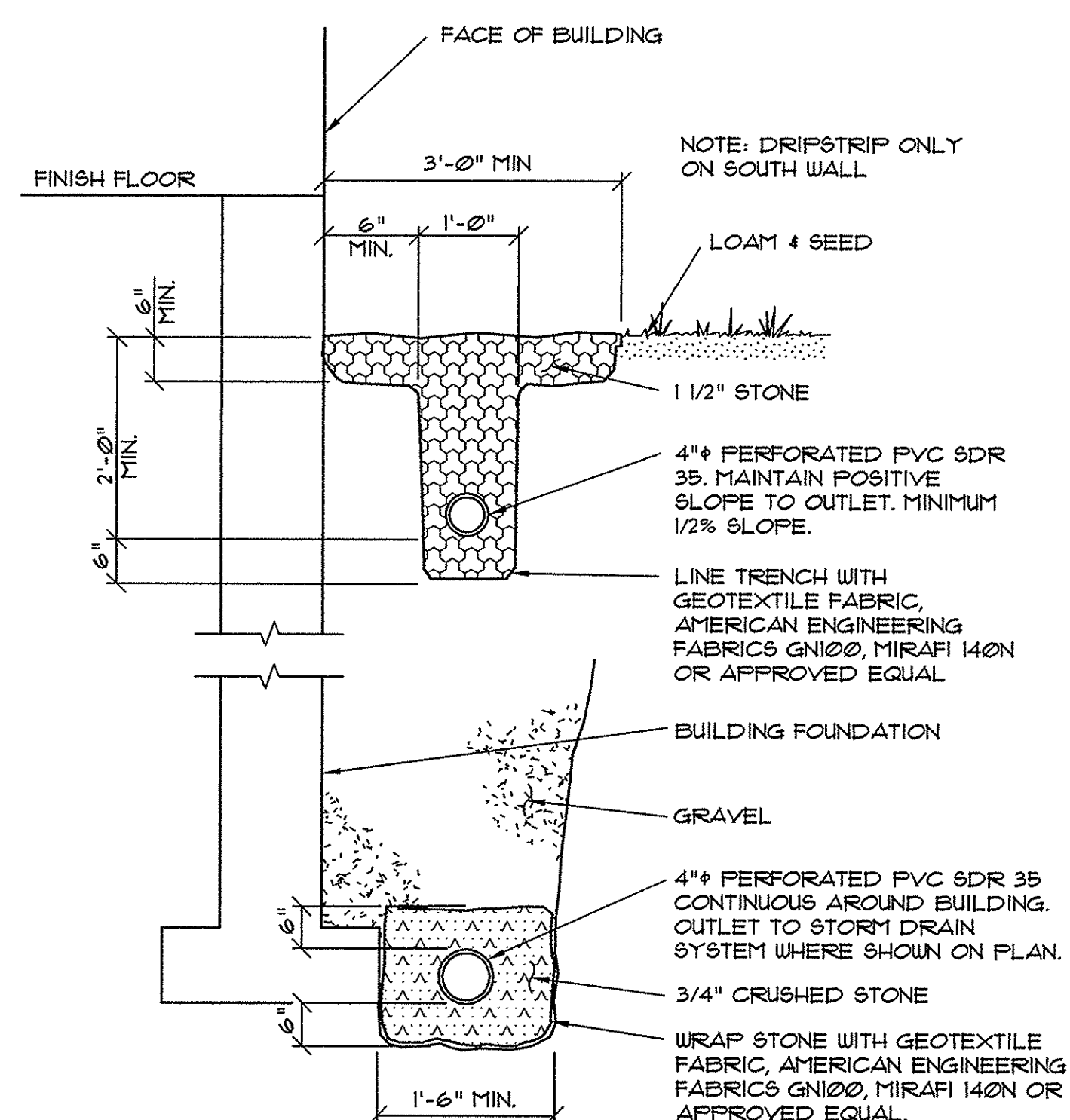
1 SCHEDULE OF SURFACE FINISHES

NOT TO SCALE



2 STRIPING DETAILS

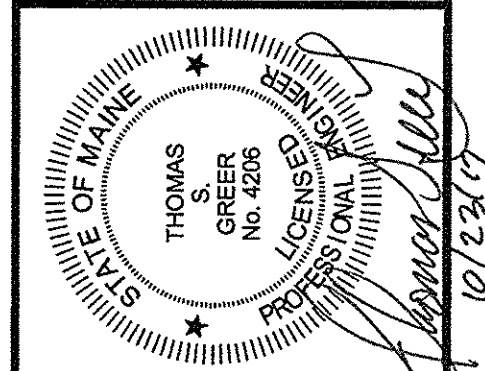
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3 DRIPSTRIP & FOUNDATION DRAIN SECTION

NOT TO SCALE

PINKHAM & GREER CIVIL ENGINEERS
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OCEAN DEVELOPMENT LLC
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PORTLAND, ME 04104-1798

SCALE: AS SHOWN
DATE: OCTOBER 24, 2017
PROJECT: 15188

DRN BY: JMG
DESIGN BY: TSG
CHK BY: JMG

RAINMAKER BUSINESS PARK - PHASE 4
RAINMAKER DRIVE
PORTLAND, MAINE

C3.1

MAP/LOT 306/B/6