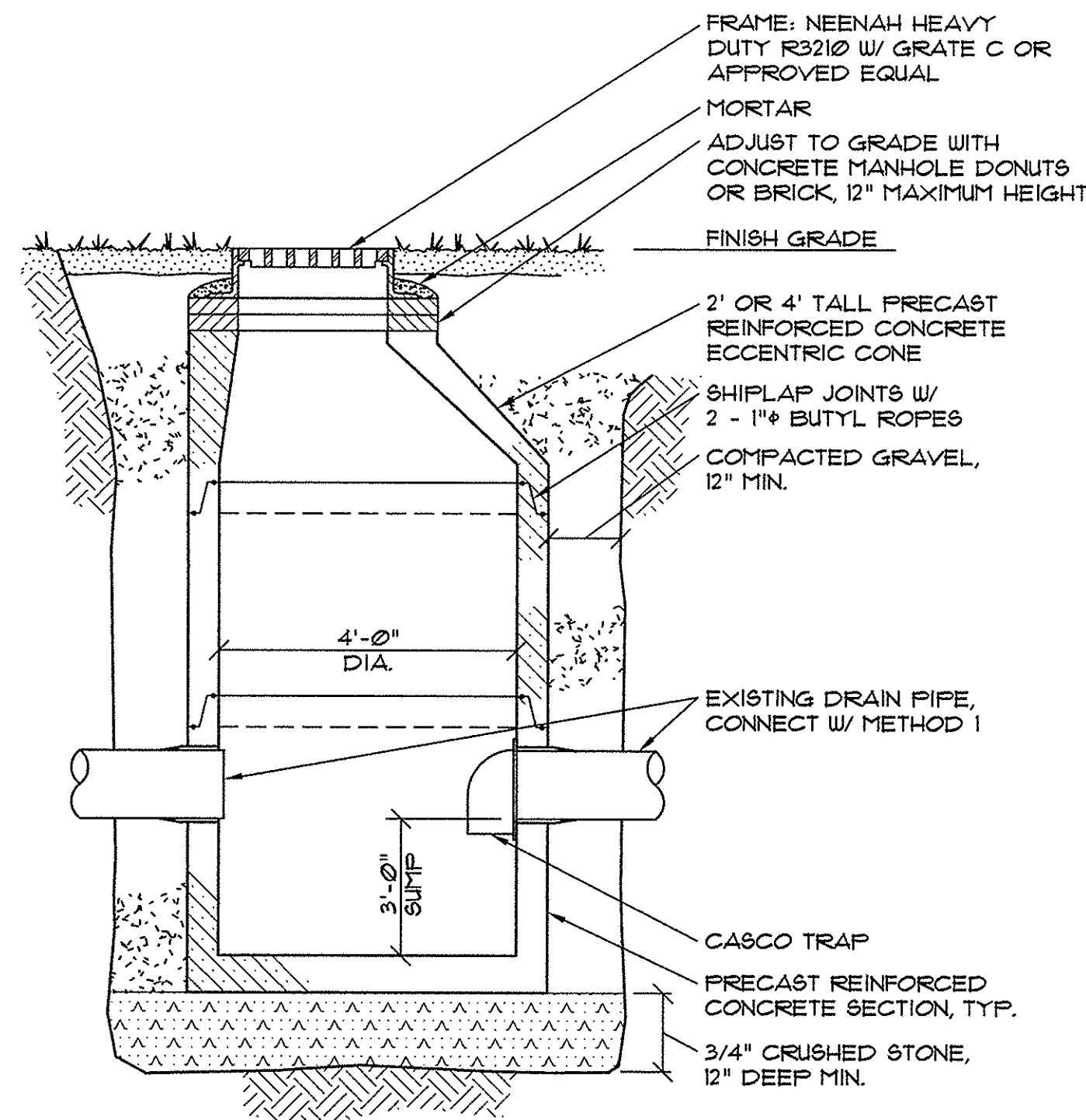


4 TYPICAL WATER MAIN SECTION  
NOT TO SCALE



3 CATCHBASIN #2 SECTION  
NOT TO SCALE

UNDERGROUND UTILITIES WARNING TAPE

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\"/>

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                                    |

1 UNDERGROUND UTILITIES WARNING TAPE

GENERAL NOTES FOR MANHOLES AND CATCH BASINS

- ALL CONCRETE SHALL HAVE A MINIMUM ULTIMATE COMPRESSIVE STRENGTH OF 4000 LBS. PER SQ. INCH AT THE END OF 28 DAYS, UNLESS OTHERWISE NOTED.
- MANHOLES MAY BE CONSTRUCTED OF PRECAST REINFORCED CONCRETE, OR CAST IN PLACE.
- PRECAST REINFORCED CONE BARREL MANUFACTURED PER ASTM SPEC. C-478.
- ALL STORM AND SEWER MANHOLE COVERS SHALL BE SOLID AND SHALL HAVE ONE 7/8\"/>

2 GENERAL NOTES FOR MANHOLES AND CATCH BASINS (II-4)

NOTES:  
DEPTH OF BITUMINOUS PAVEMENT AND AGGREGATE COURSES SHALL BE DETERMINED BY STREET CLASSIFICATION.  
ANY ALTERNATE TRENCHING OR PAYMENT METHODS SHALL BE APPROVED IN ADVANCE BY THE CITY OF PORTLAND, DEPARTMENT OF PUBLIC SERVICES.

AGGREGATE SUBBASE COURSE - GRAVEL TYPE "D"  
AGGREGATE BASE COURSE - CRUSHED TYPE "B"  
HOT BITUMINOUS PAVEMENT GRADING "C"  
HOT BITUMINOUS PAVEMENT GRADING "C"  
GRIND TO PROPER DEPTH

HALF OF MAX. PAYMENT WIDTH PLUS 12\"/>

COMMON BACKFILL FROM TRENCH EXCAVATION (INCIDENTAL) OR GRANULAR BORROW (IF ORDERED)

3/4\"/>

3/4\"/>

ESTABLISHED TRENCH PROFILE

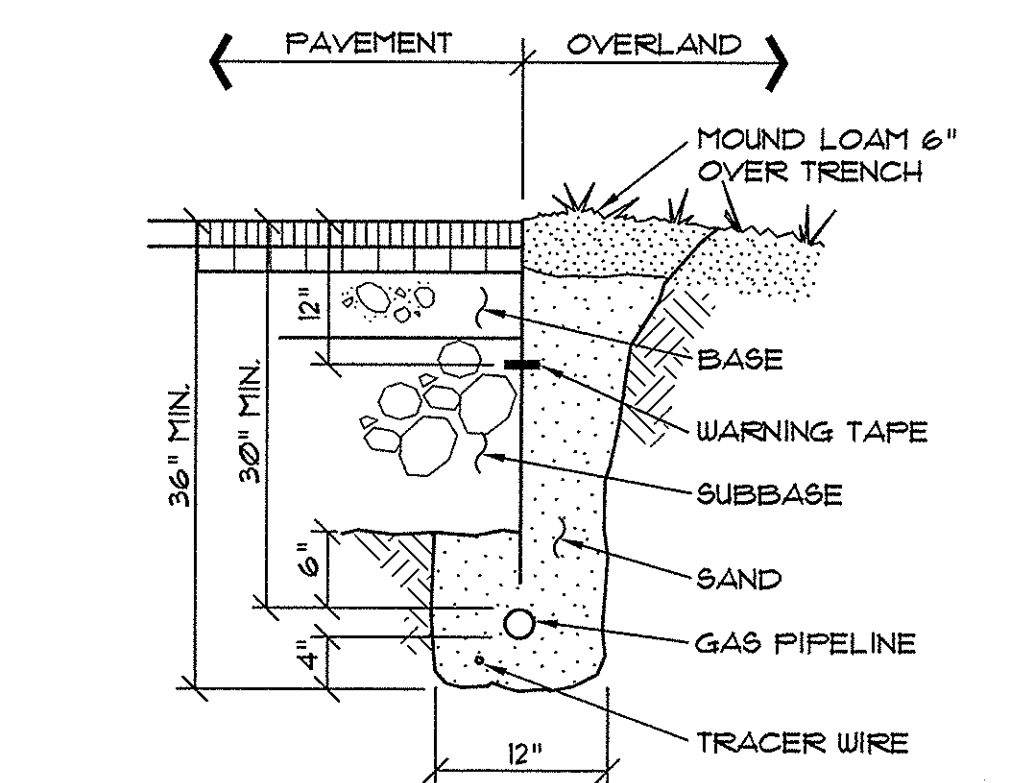
2\"/>

NOT TO SCALE

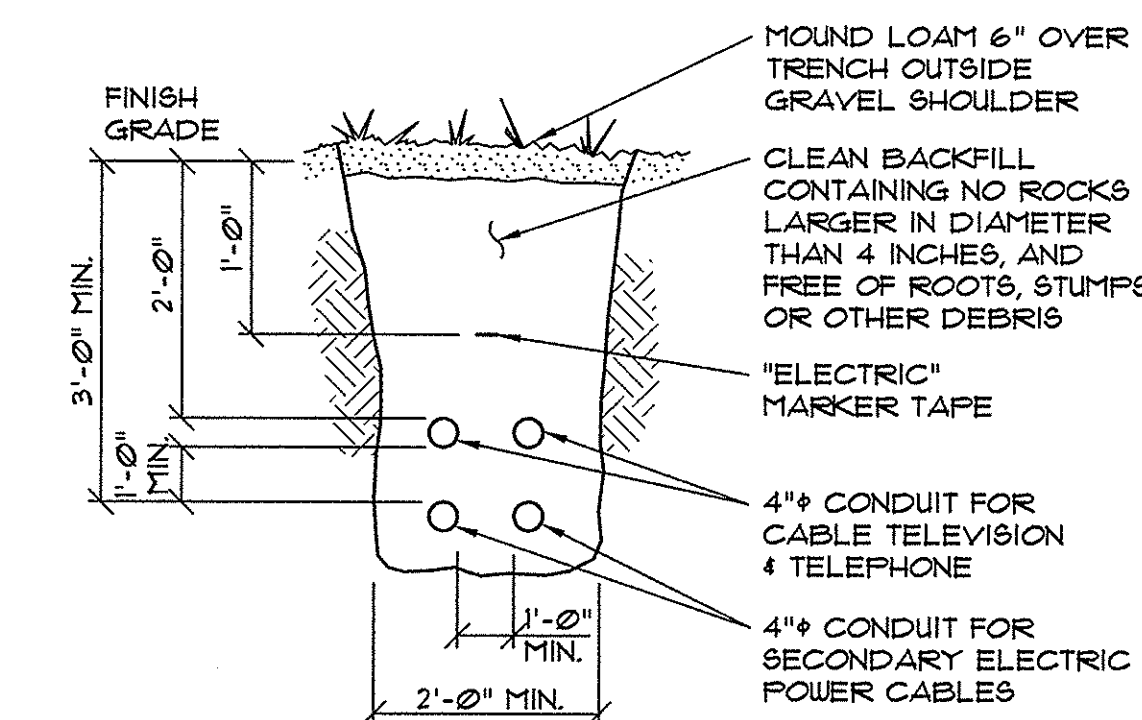
NOTES:

- 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 DEPTHS 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 MANHOLES OF THE PIPE, BUT IN ALL CASES DIMENSION B SHALL BE AT LEAST 6\"/>

PIPE DIAMETER, D (INCHES)	MAX. TRENCH WDG., A (FEET)
4	4.0
6	4.0
8	4.0
10	4.0
12	5.0
14	5.0
16	5.0
18	5.0
20	5.0
22	6.0
24	6.0
26	6.0
28	6.0
30	7.0
32	7.0
34	7.0
36	7.0
38	7.0
40	7.0
42	7.0
44	7.0
46	7.0
48	7.0



6 GAS PIPING TRENCH SECTION  
NOT TO SCALE



- NOTES:
- INSTALLATION SHALL NOT ALLOW INTER-TWILING OF CABLES.
  - DIRECT BURY ELECTRICAL CABLES MAY BE USED IF ALLOWED BY CENTRAL MAINE POWER.
  - CONFIRM CONDUIT SIZES WITH INDIVIDUAL UTILITY COMPANIES PRIOR TO INSTALLATION.
  - COORDINATE FINAL LAYOUT WITH INDIVIDUAL UTILITY COMPANIES.

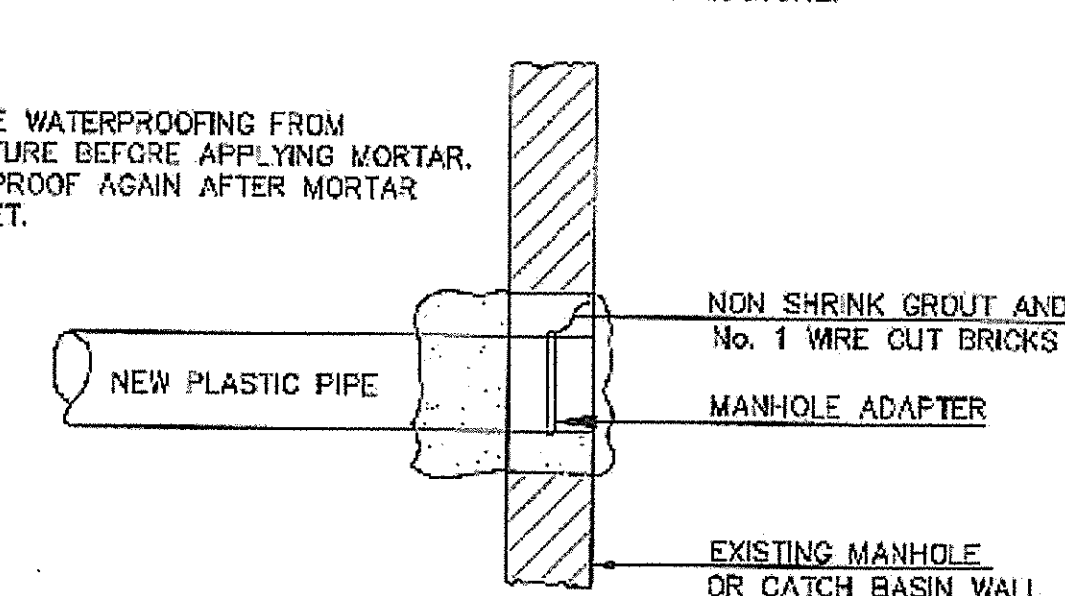
5 CABLE TRENCH SECTION  
NOT TO SCALE

3 TYPICAL PIPE TRENCH INSTALLATION (11-12)

NOT TO SCALE

NOTE: EXISTING MANHOLE OR CATCH BASIN SHALL BE CORE DRILLED FOR PIPE INSTALLATION. IF PIPE DIAMETER IS SO LARGE THAT CORE DRILLING IS PROHIBITED, THE CONTRACTOR MAY SAW CUT THE STRUCTURE TO CREATE PIPE OPENING. THE NEW OPENING MUST THEN BE SEALED AND WATERTIGHT BOTH INSIDE AND OUTSIDE THE STRUCTURE.

NOTE: REMOVE WATERPROOFING FROM STRUCTURE BEFORE APPLYING MORTAR. WATERPROOF AGAIN AFTER MORTAR HAS SET.

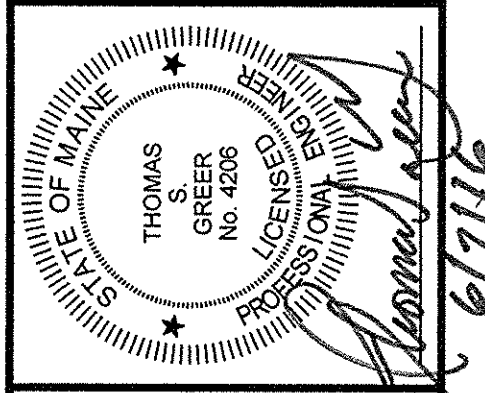


METHOD 3 - NEW PIPE INTO EXISTING STRUCTURE

METHOD 2 - NEW CONSTRUCTION

7 PLASTIC PIPE CONNECTION METHODS (II-13 & II-14)

NOT TO SCALE



NO.	DATE	REVISED UTILITIES	DESCRIPTION
1	6/7/16		

APPLICANT: DENOVO, LLC 47 WAITES LANDING ROAD FALMOUTH, MAINE	DRN BY: JDC	DESIGN BY: TSG	CHK BY: TSG
SCALE: AS SHOWN	DATE: JANUARY 22, 2016	PROJECT: 15178	

749 CONGRESS STREET  
749 CONGRESS STREET  
PORTLAND, MAINE