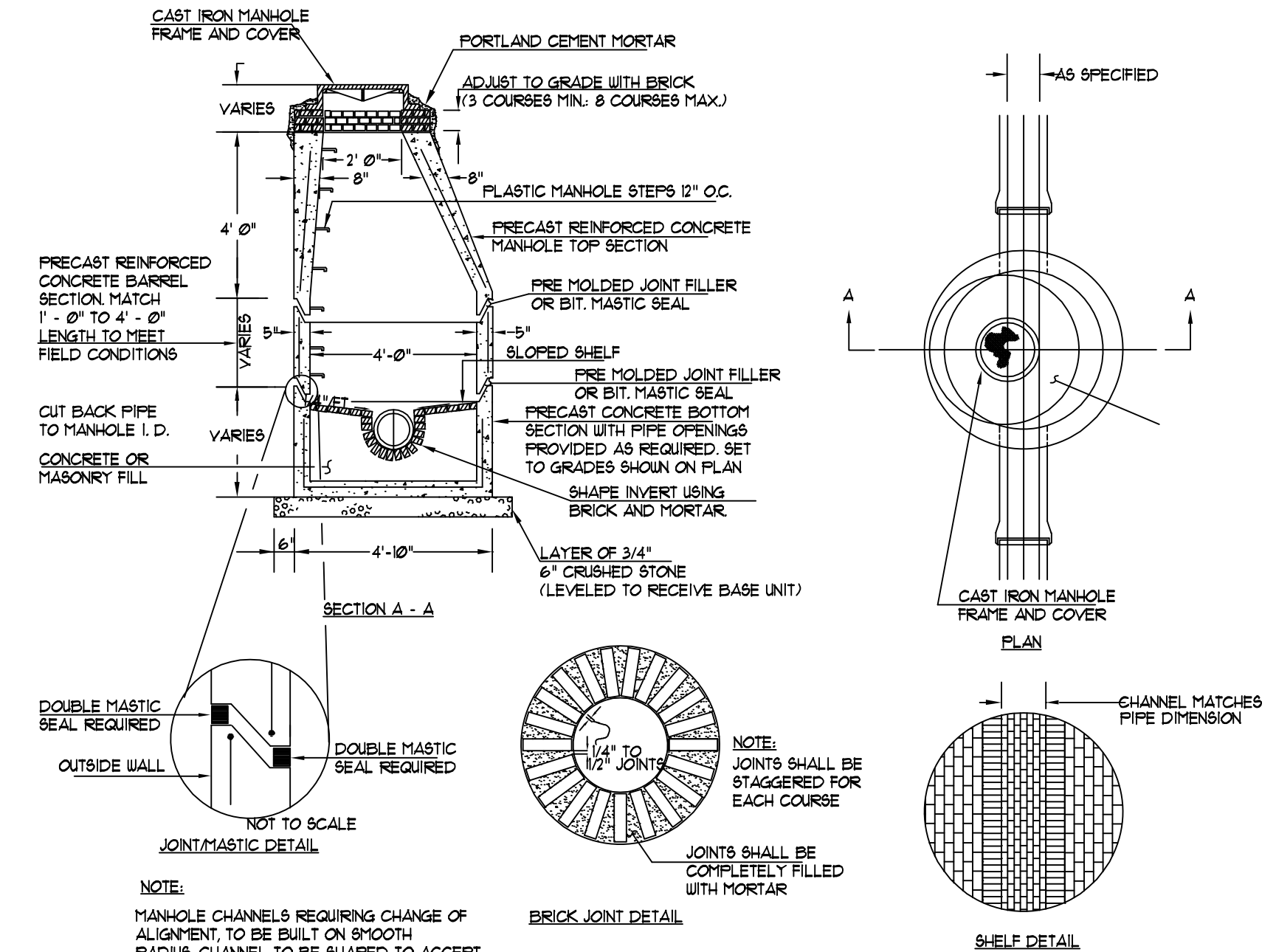
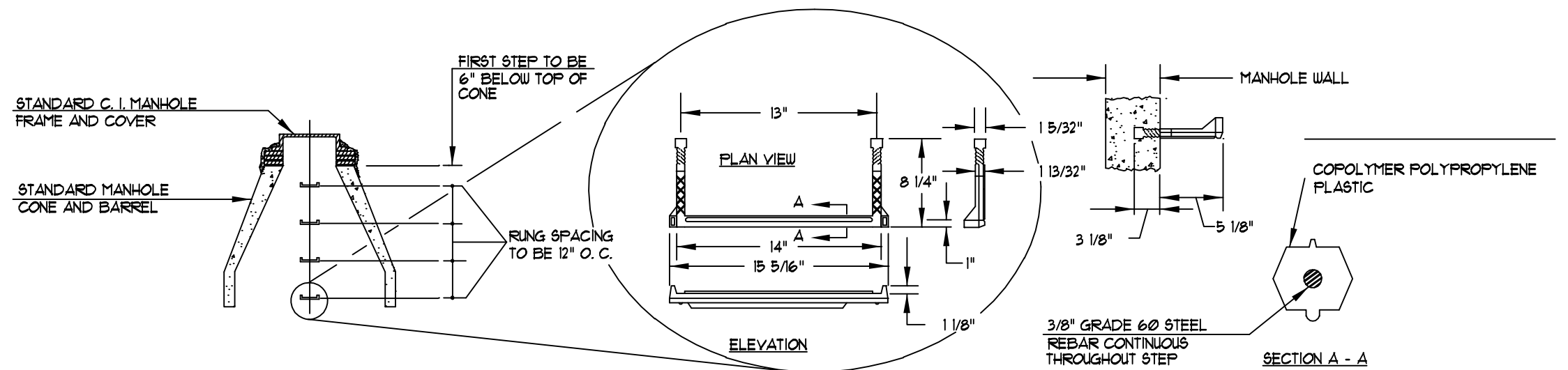


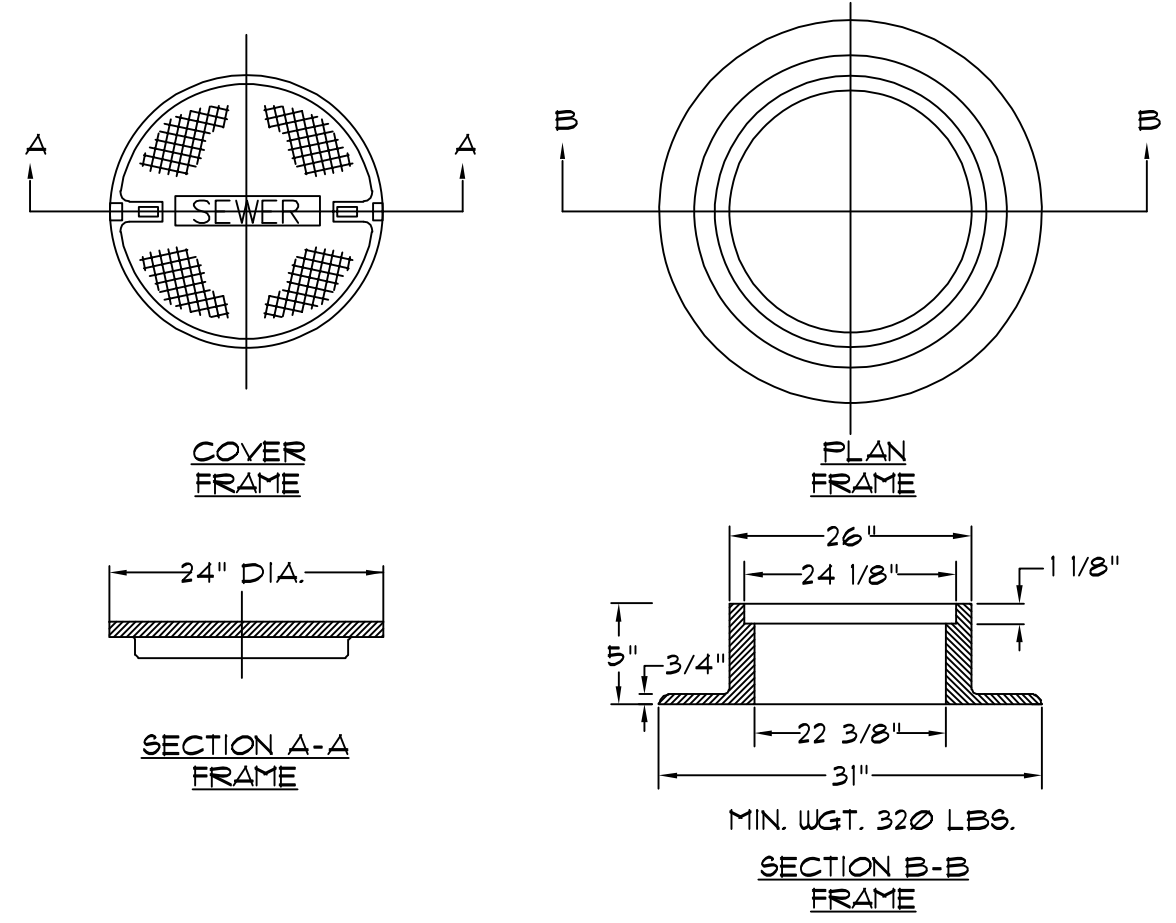
**TYPICAL PAVEMENT GRADING ON SLOPES FOR CATCH BASIN AND INLET**  
NOT TO SCALE



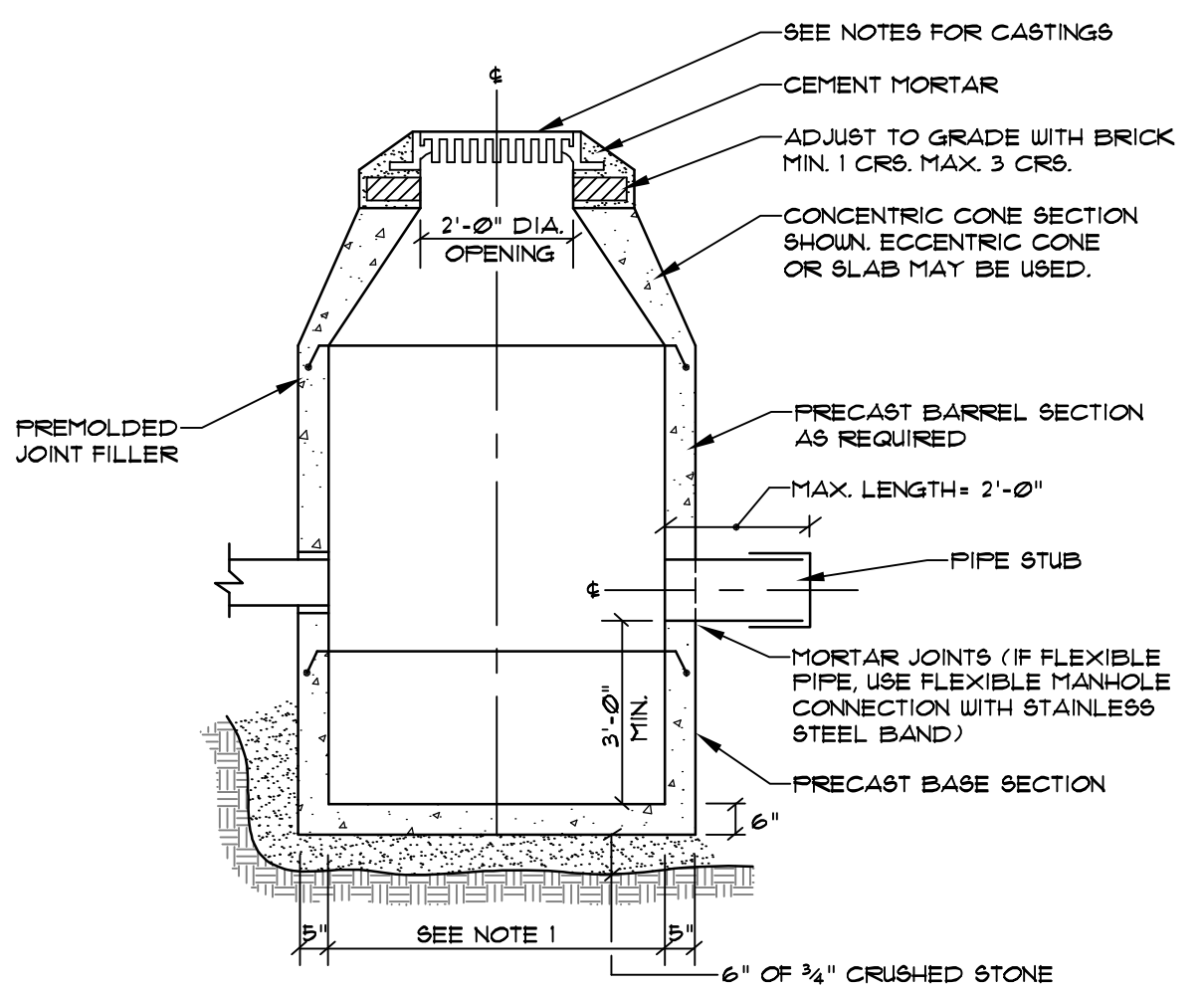
**PRECAST CONCRETE MANHOLE TYPE "A"**  
NOT TO SCALE



**PLASTIC MANHOLE STEPS**  
NOT TO SCALE

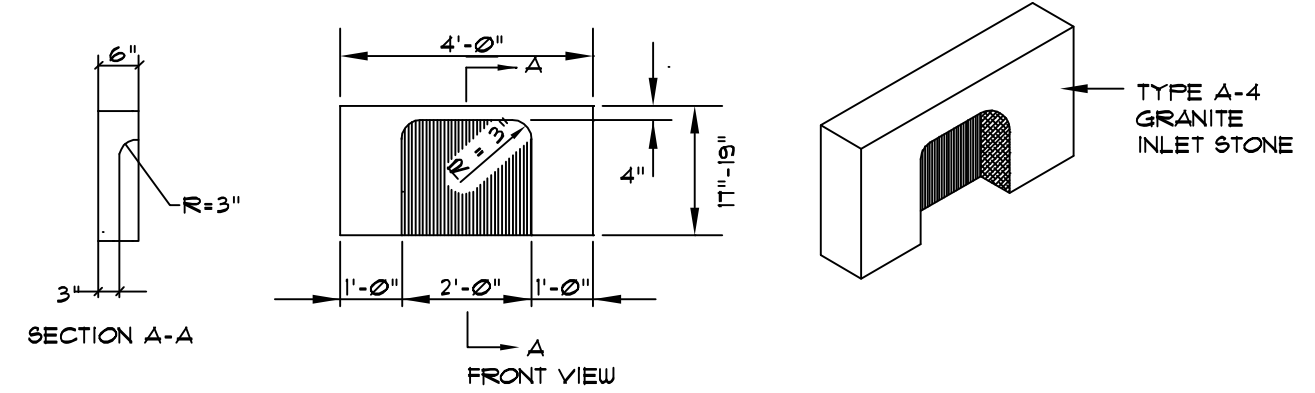


**CAST IRON MANHOLE COVER AND FRAME**  
NOT TO SCALE



- NOTES:**
- 4'-0" I.D. TYPICAL. SOME STRUCTURES MAY REQUIRE LARGER I.D. PROVIDE SHOP DRAWINGS.
  - DRAINAGE STRUCTURES TO BE DESIGNED FOR H-20 LOADING.
  - PIPE SIZES AND INVERTS AS NOTED ON PLANS.
  - CATCH BASIN FRAME AND GRATE TO BE EAST JORDAN FOUNDRY 5250, OR APPROVED EQUAL.
  - DRAINAGE MANHOLE FRAME AND COVER TO BE EAST JORDAN FOUNDRY 122, TYPE 'A', OR APPROVED EQUAL. COVER SHALL BE MARKED 'DRAIN'.
  - ALL DRAIN MANHOLES SHALL HAVE SHELVES AND CHANNELS INSTALLED.

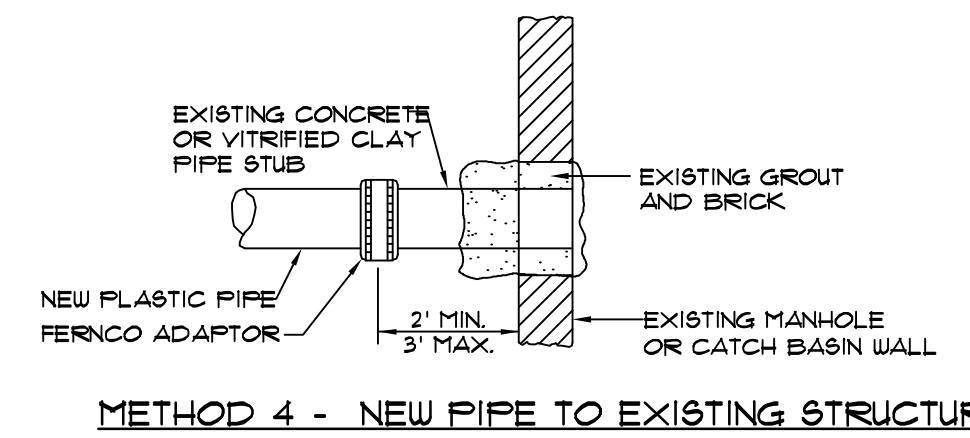
**TYPICAL DRAINAGE MANHOLE/CATCH BASIN**  
NOT TO SCALE



**TYPE A-4 GRANITE CATCH BASIN INLET STONE DETAIL**  
(FOR EXISTING BASIN AT HANCOCK STREET)  
NOT TO SCALE

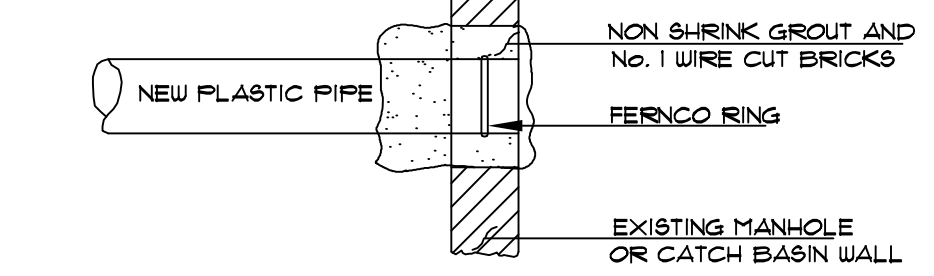
**GENERAL NOTES FOR MANHOLES AND CATCH BASINS**

- ALL CONCRETE SHALL BE CLASS 'A' AND HAVE A MINIMUM ULTIMATE COMPRESSIVE STRENGTH OF 4000-PSI, PER 60 INCH AT THE END OF 28 DAYS, UNLESS OTHERWISE NOTED.
- PRECAST REINFORCED CONE BARREL MANUFACTURED PER ASTM SPEC. C-418-67.
- SEWER BRICK SHALL CONFORM TO ASTM SPEC. DESIGNATE ON C-32-63, GRADE MA AND SA.
- ALL MANHOLES SHALL HAVE A BITUMINOUS WATERPROOFING APPLIED TO THE EXTERIOR SURFACE. IF CONSTRUCTED OF BRICK MASONRY, SURFACE SHALL BE PLASTERED WITH A SMOOTH MORTAR FINISH 3/8" THICK. AFTER THE MORTAR HAS SET, THE SURFACE SHALL BE WATERPROOFED AS REQUIRED BY SUPPLEMENTAL SPECIFICATIONS SECTION 604.
- CASTINGS SHALL CONFORM TO ASTM DESIGNATION A48-CLASS 35. ALL PARTS OF CASTINGS, EXCEPT FINISHED SURFACE, SHALL RECEIVE A COAT OF COAL TAR FITCH VARNISH OR ASPHALTUM PAINT WHICH SHALL BE SMOOTH AND TOUGH BUT NOT BRITTLE.
- MANHOLES MAY BE CONSTRUCTED OF MASONRY, PRECAST REINFORCED CONCRETE, OR CAST IN PLACE.
- ALL PRECAST MANHOLES AND CATCH BASINS SHALL BE IDENTIFIED BY STATION AND OFFSET, PAINTED ON THE SIDE OF THE STRUCTURE BY THE MANUFACTURER.
- EXISTING MANHOLES, CATCH BASINS, FRAMES, AND COVERS SHALL BE SALVAGED BY THE CONTRACTOR AND SHALL REMAIN THE PROPERTY OF THE CITY OF PORTLAND.
- ALL WORK WITHIN THE STREET RIGHT-OF-WAY SHALL CONFORM TO THE CITY OF PORTLAND TECHNICAL MANUAL STANDARDS.
- ALL CATCH BASIN OUTLET PIPES SHALL BE INSTALLED WITH AN OIL AND FLOATABLES SEPARATOR. THE SEPARATOR SHALL BE THE 'BNGUT' OR AN APPROVED EQUAL AND INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- MANHOLE FRAME, GRATE AND COVERS SHALL COMPLY WITH CITY OF PORTLAND TECHNICAL STANDARDS AND REQUIREMENTS.

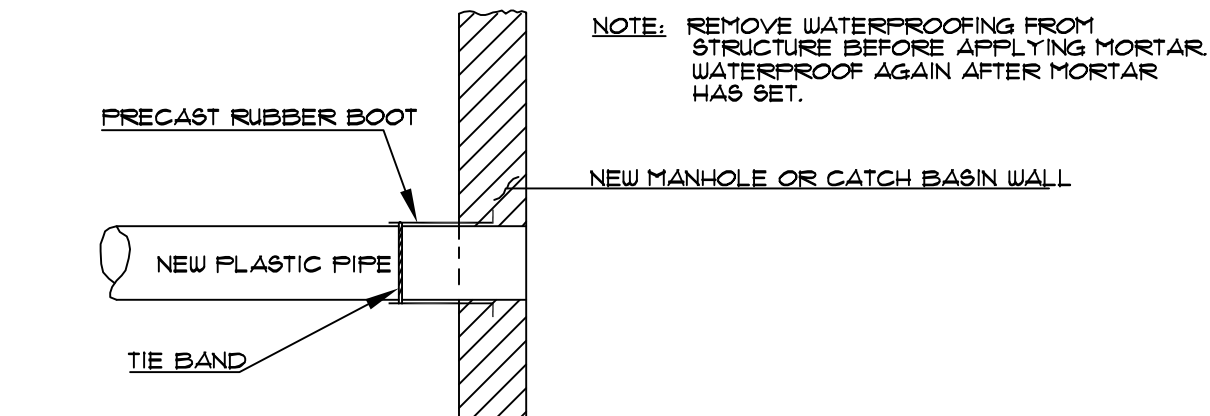


**METHOD 4 - NEW PIPE TO EXISTING STRUCTURE STUB**

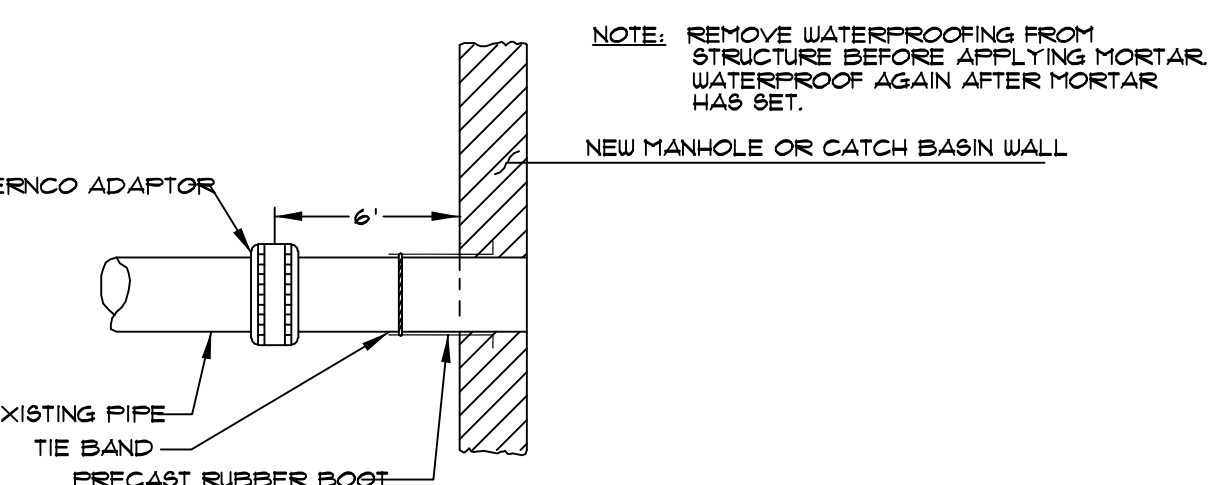
**NOTE:** EXISTING MANHOLE OR CATCH BASIN SHALL BE CORE DRILLED FOR PIPE INSTALLATION IF PIPE DIAMETER IS SO LARGE THAT CORE DRILLING IS PROHIBITED, THE CONTRACTOR MAY USE ANY COMBINATION OF JACK HAMMERS AND SAW CUTTING THE STRUCTURE TO CREATE PIPE OPENING. THE NEW OPENING MUST THEN BE SEALED AND WATERTIGHT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



**METHOD 3 - NEW PIPE INTO EXISTING STRUCTURE**



**METHOD 2 - NEW CONSTRUCTION**



**METHOD 1 - EXISTING PIPE INTO NEW STRUCTURE**

**PLASTIC PIPE CONNECTION DETAIL**  
NOT TO SCALE

| WTC  | 12-31-14 | MISCELLANEOUS REVISIONS                                   |
|------|----------|---|
| WTC  | 12-08-14 | MISCELLANEOUS REVISIONS                                   |
| WTC  | 11-18-14 | REVISED SITE LIGHTING / ISSUE CK-02                       |
| WTC  | 09-10-14 | ISSUE CK-01   |
| WTC  | 08-06-14 | PRICING SET 1 AUGUST 6, 2014                              |
| WTC  | 07-22-14 | ADDRESS COMMENTS PER WILLIAM CLARKE E-MAIL DATED 07-10-14 |
| WTC  | 06-20-14 | CITY SUBMITTAL 8  |
| REV: | BY:      | DATE:   |
|      |          |   |

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM SEBAGO TECHNICS, INC. ANY ALTERATIONS, AUTHORIZED OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO SEBAGO TECHNICS, INC.

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Fax: 207-783-5868

PROJECT NO. 13251  
FIELD BOOK  
DESIGN  
CHKD  
DRAWN  
WTC  
WTC  
MAL

**DETAILS**  
OF:  
**SEAPORT LOFTS**  
NEWBURY/HANCOCK STREET  
PORTLAND, MAINE  
FOR:  
**113 NEWBURY STREET, LLC**  
35 FAY STREET, SUITE 107B  
BOSTON, MA 02118-4320

DATE: 07-26-13  
SCALE: AS SHOWN

**SHEET 10 OF 12**

13251D.dwg, TAB: D3