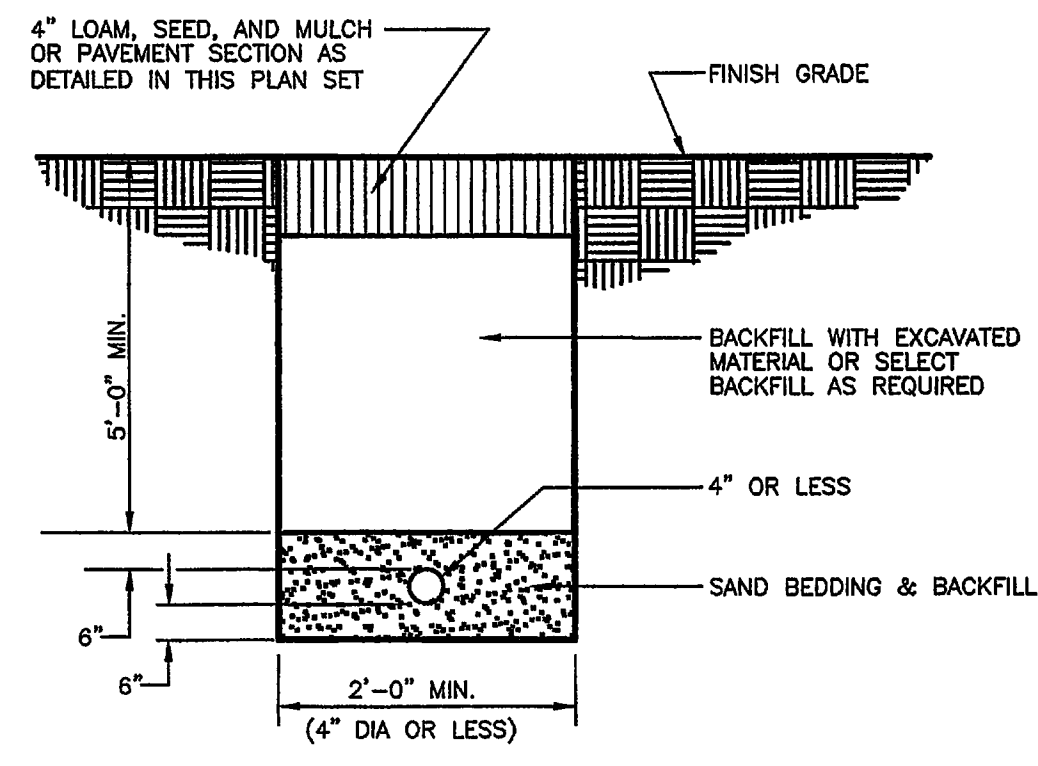


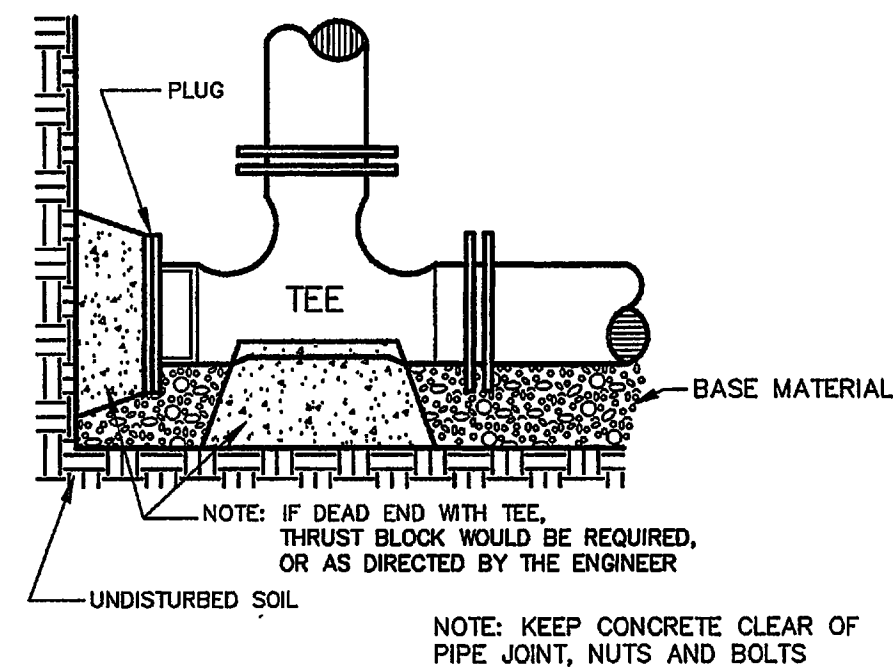
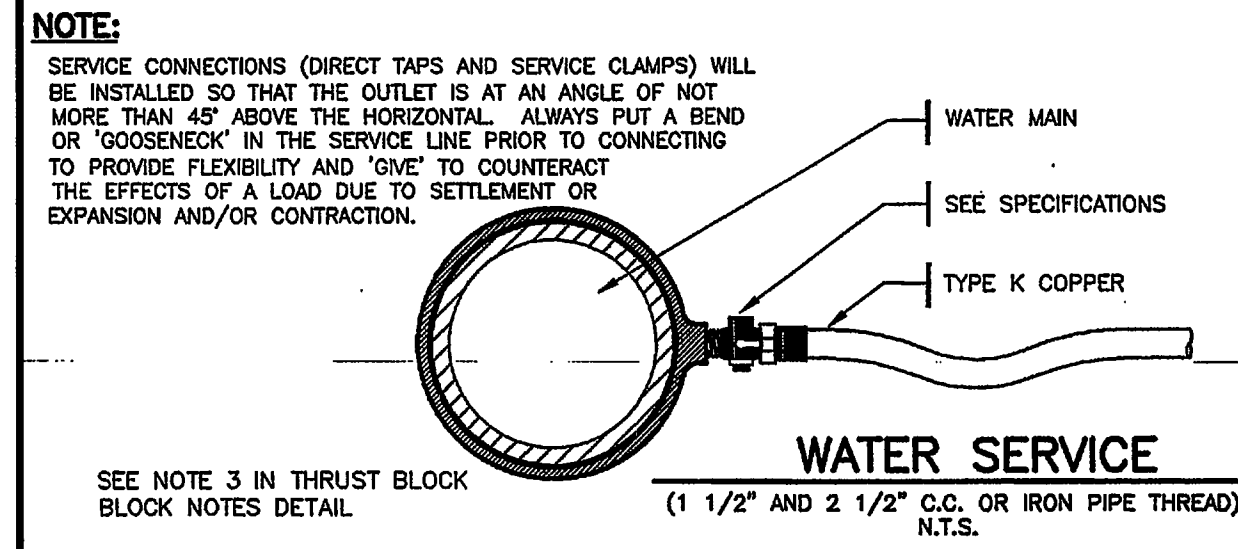
**GENERAL NOTE:**  
THIS PLAN DOES NOT DELETE ANY ITEMS REQUIRED BY THE CITY OF PORTLAND AND/OR THE MAINE DEP IN ANY AND ALL APPROVALS FOR THE MAINE YACHT CENTER PHASE 1 & 2. FOR ALL APPROVALS DATED BEFORE 12/1/03, THESE ITEMS HAVE BEEN CARRIED IN THEIR ENTIRETY TO THIS MODIFIED SUBMITTAL.

ALL ITEMS MODIFIED BY THIS SUBMITTAL TO THE CITY OF PORTLAND ON 5/6/04 ARE THE DESIGN RESPONSIBILITY OF THE ENGINEER WHOSE STAMP IS AFFIXED TO THE DRAWING.

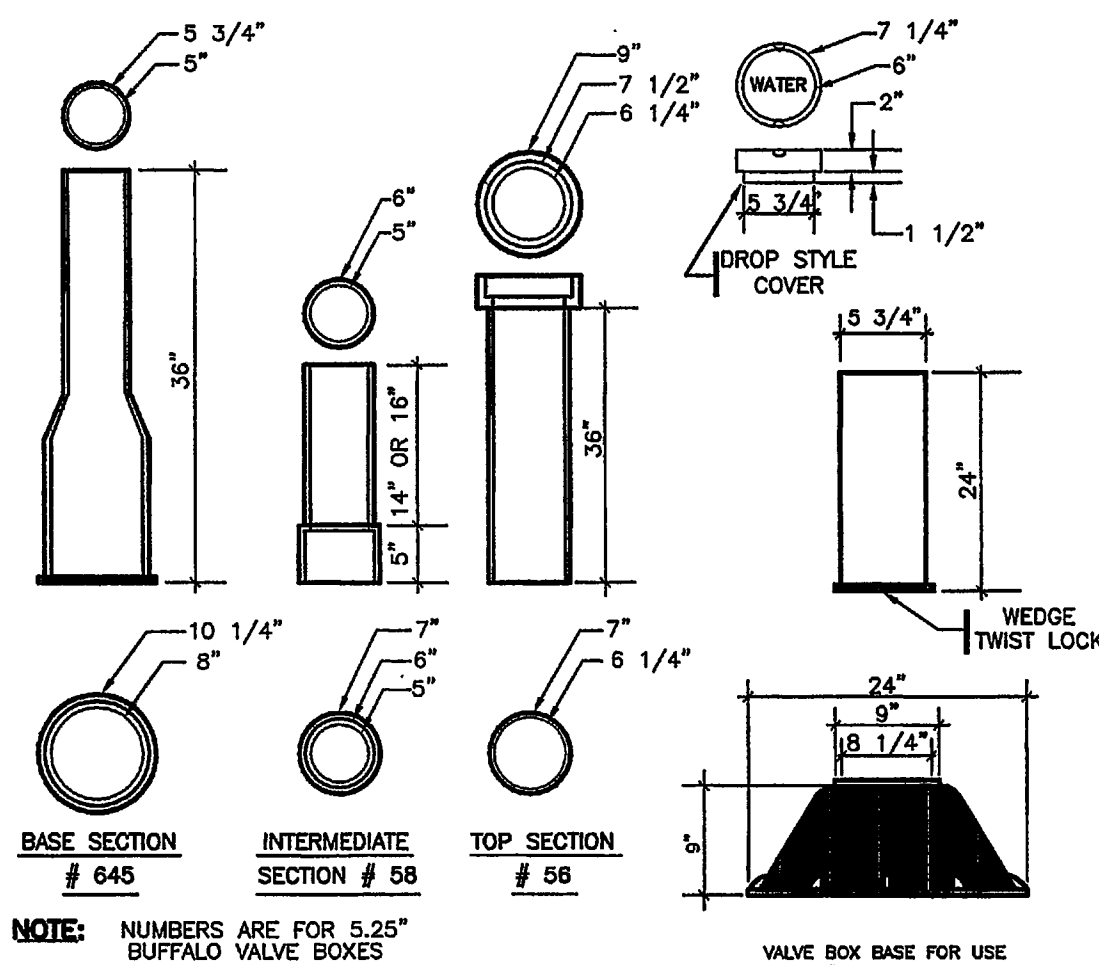
ITEMS MODIFIED ON THIS SHEET  
1. NO CHANGES.



SEE NOTE 3 IN THRUST BLOCK NOTES DETAIL  
**WATER SERVICE TRENCH SECTION**  
N.T.S.



SEE NOTE 3 IN THRUST BLOCK NOTES DETAIL  
**STANDARD TEE BLOCKING**  
N.T.S.



SEE NOTE 3 IN THRUST BLOCK NOTES DETAIL  
**TYPICAL VALVE BOXES**  
N.T.S.

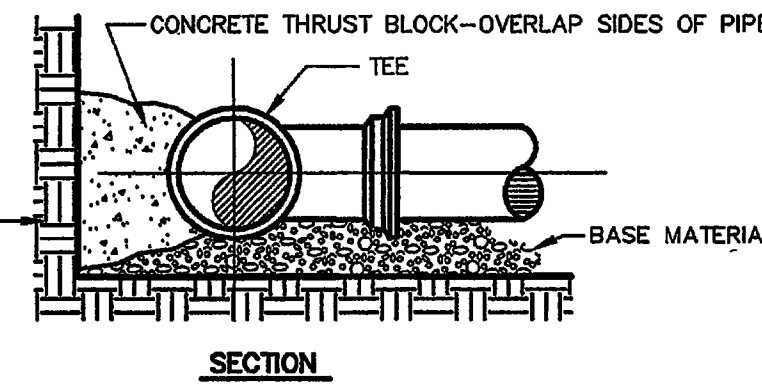
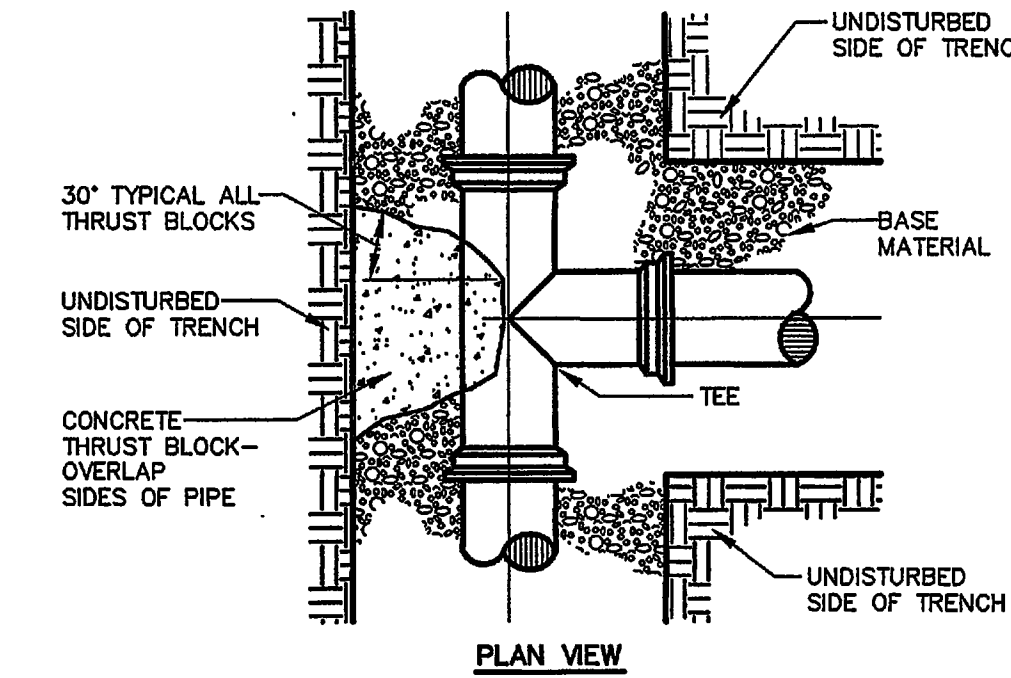
**THRUST BLOCK NOTES**

1. INSTALL POLY BARRIER BETWEEN PIPE AND ALL THRUST BLOCKS.
2. ANY MODIFICATION TO THRUST BLOCK SIZING OR PIPE RESTRAINT REVISIONS SHALL BE APPROVED IN WRITING BY THE ENGINEER PRIOR TO IMPLEMENTATION IN THE FIELD.
3. ANY WORK RELATING TO WATER PIPING OR DETAILS SHALL BE IN ACCORDANCE WITH THE PORTLAND WATER DISTRICT SPECIFICATIONS

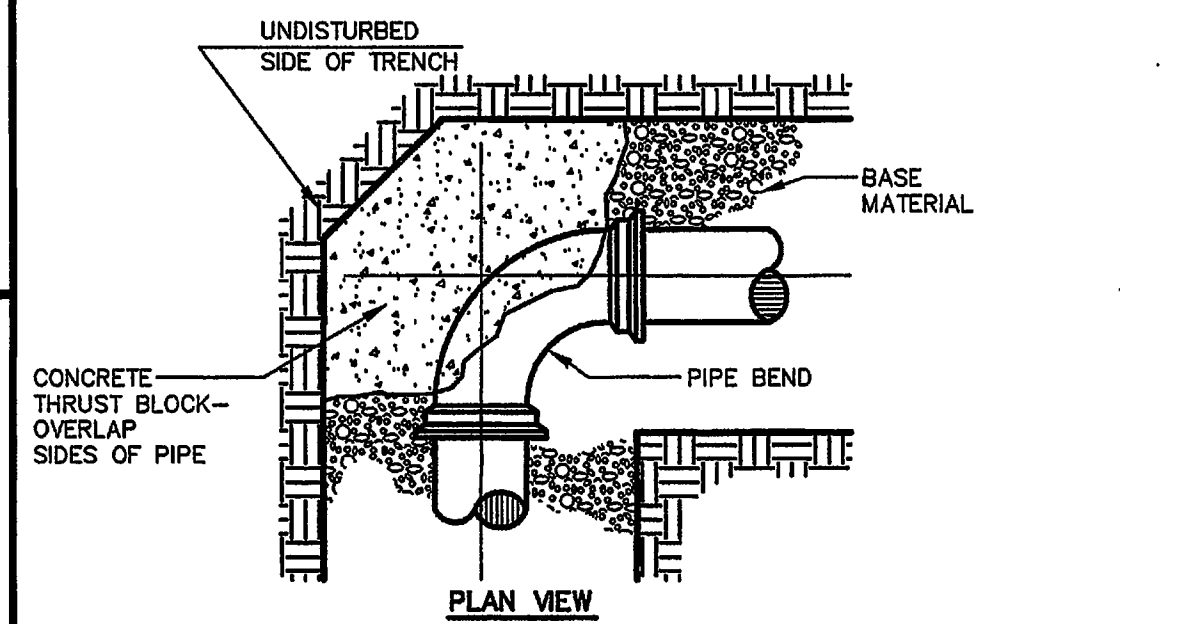
PIPE SIZE	1/32 BEND	1/16 BEND	1/8 BEND	1/4 BEND	TEES/CAPS
8"	2.9	5.7	11.1	20.5	14.5
4"	0.8	1.6	3.1	5.9	4.1

- ASSUMING TEST PRESSURE = 150 PSI, PASSIVE SOIL PRESSURE = 1000 PSF  
- BEARING SURFACE REQUIRED IN SQUARE FEET

NOTE: KEEP CONCRETE CLEAR OF PIPE JOINT, NUTS AND BOLTS



**TYPICAL THRUST BLOCK PLACEMENT ON TEES**  
N.T.S.



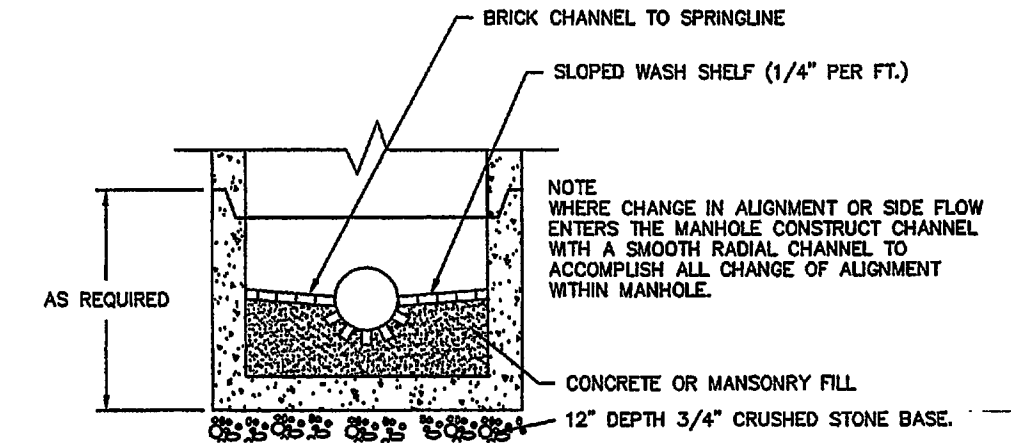
NOTE: KEEP CONCRETE CLEAR OF PIPE JOINT, NUTS AND BOLTS

THRUST/RETAINER GLAND SCHEDULE	
1/4 BEND (90°)	THRUST BLOCK w/RESTRAINED JOINT
1/8 BEND (45°)	THRUST BLOCK w/RESTRAINED JOINT
1/16 BEND (22 1/2°)	THRUST BLOCK
1/32 BEND (11 1/4°)	THRUST BLOCK

THE ABOVE SCHEDULE IS SUBJECT TO THE APPROVAL OF THE ON-SITE INSPECTOR DUE TO SOILS AND WORKING PRESSURES IN THE AREA.

SEE NOTE 3 IN THRUST BLOCK NOTES DETAIL

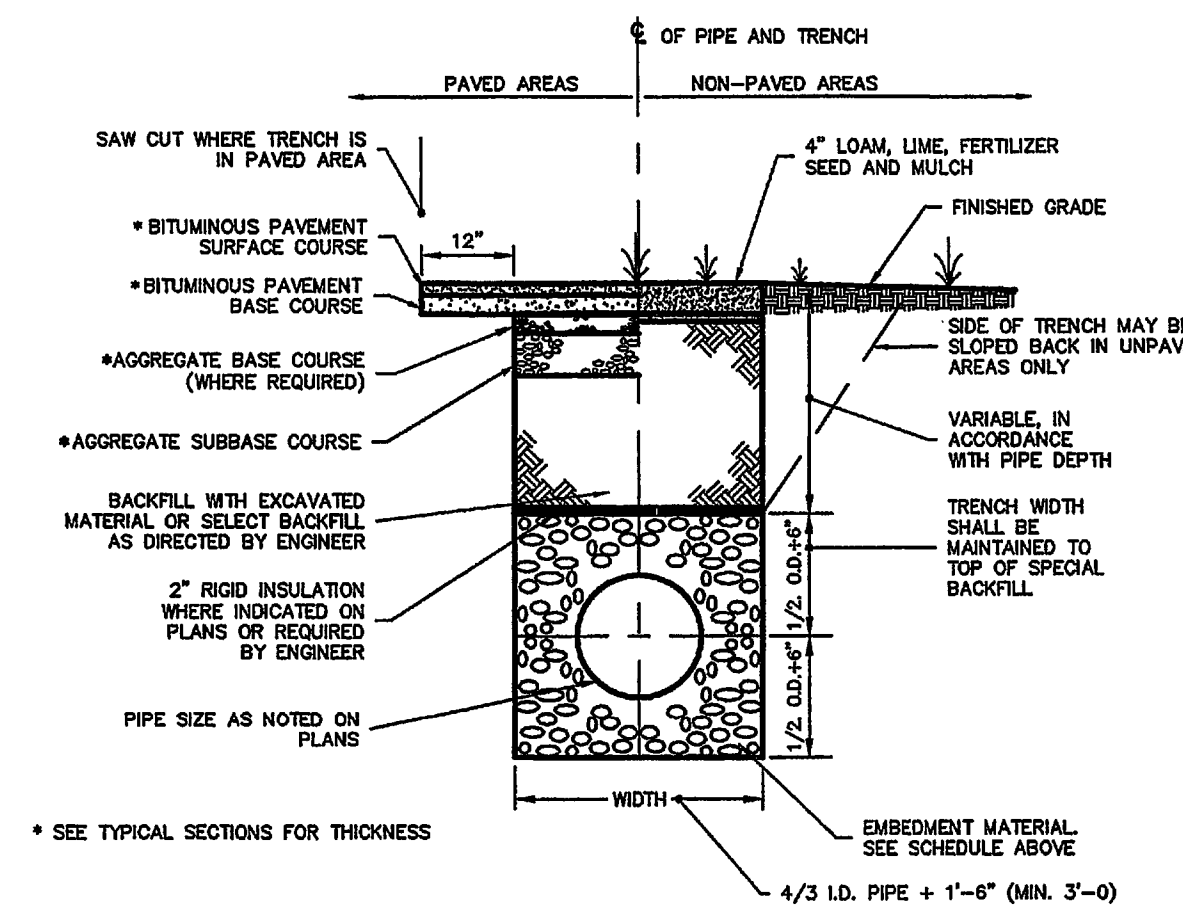
**TYPICAL THRUST BLOCK PLACEMENT ON BENDS**  
N.T.S.



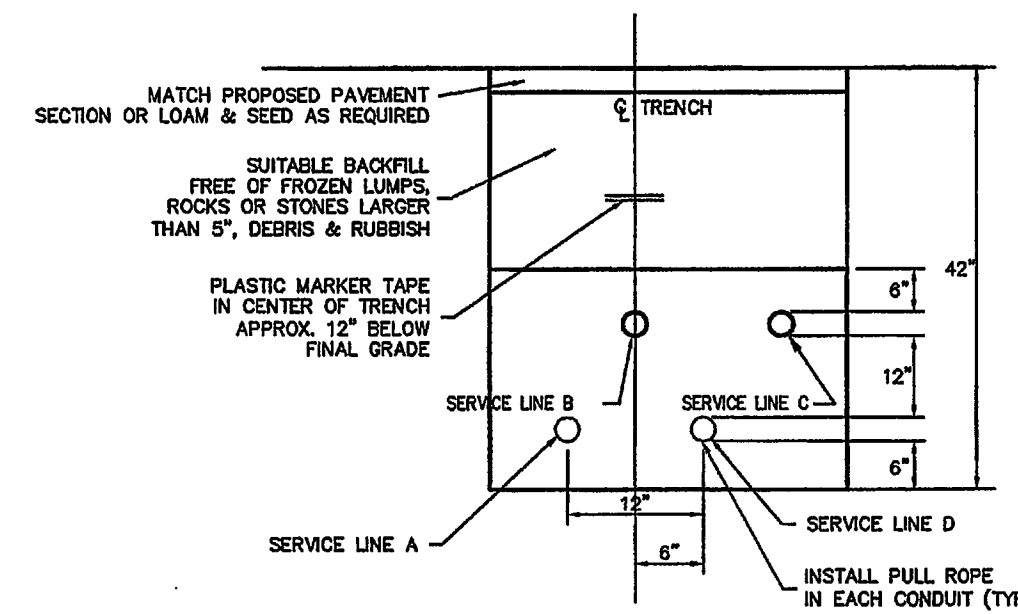
**STORM DRAIN & SEWER MANHOLE BRICK CHANNEL DETAIL**  
N.T.S.

SCHEDULE OF TRENCH BACKFILL		
TYPE OF PIPE	EMBEDMENT MATERIAL	SELECT BACKFILL
CMP DUCTILE IRON PIPE	MDOT 703.22 TYPE B UD BACKFILL	MDOT 703.22 TYPE B UD BACKFILL
PVC-SDR 35 PIPE	MDOT 703.22 TYPE C 3/4\"/>	

NOTE:  
1. BRACING AND SHEETING OR OTHER TRENCH PROTECTION TO BE PROVIDED TO MEET APPLICABLE STATE AND O.S.H.A. SAFETY STANDARDS. ALL SUCH TRENCH PROTECTION TO BE THE RESPONSIBILITY OF THE CONTRACTOR



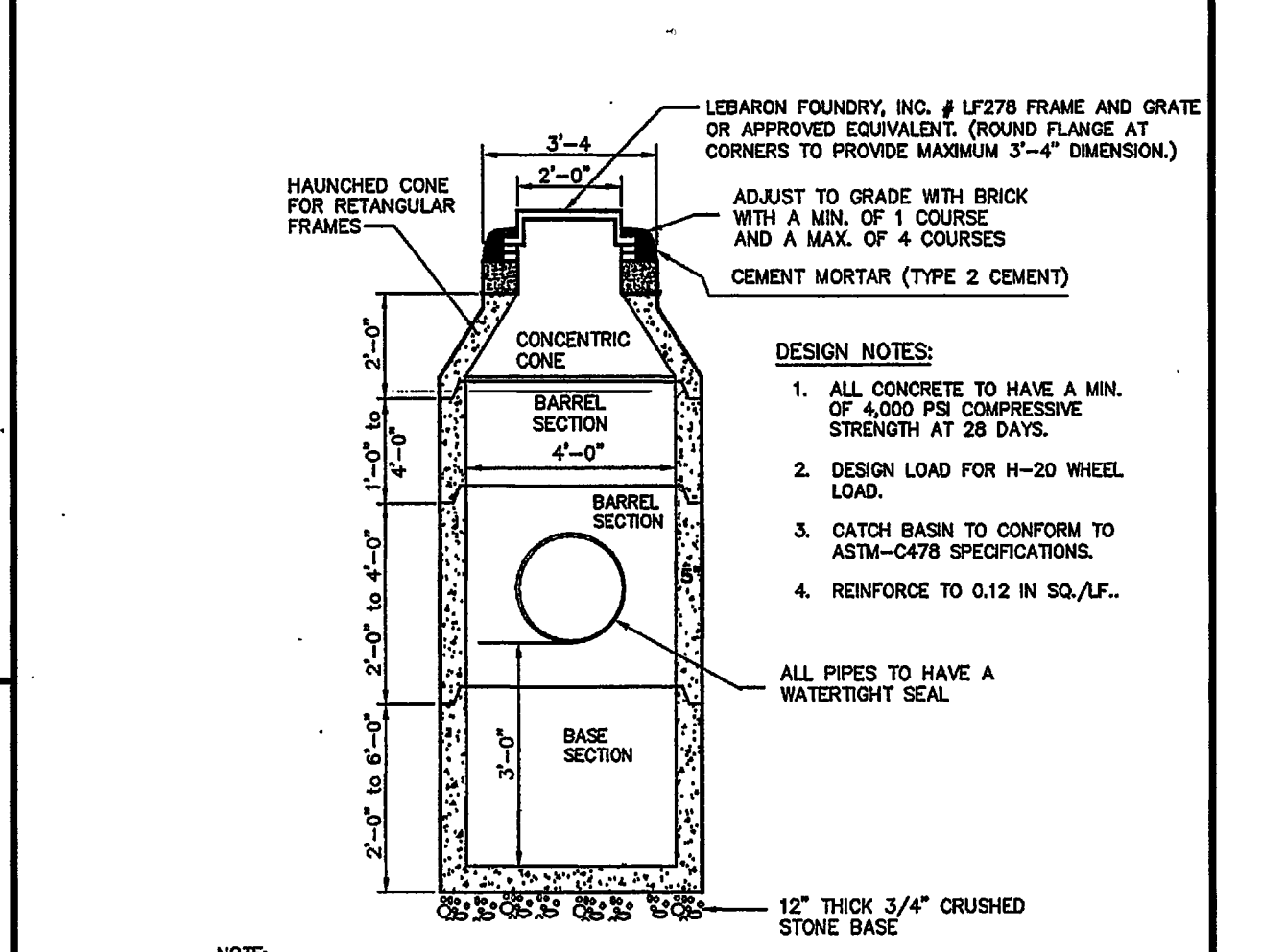
**TYPICAL TRENCH SECTION**  
N.T.S.



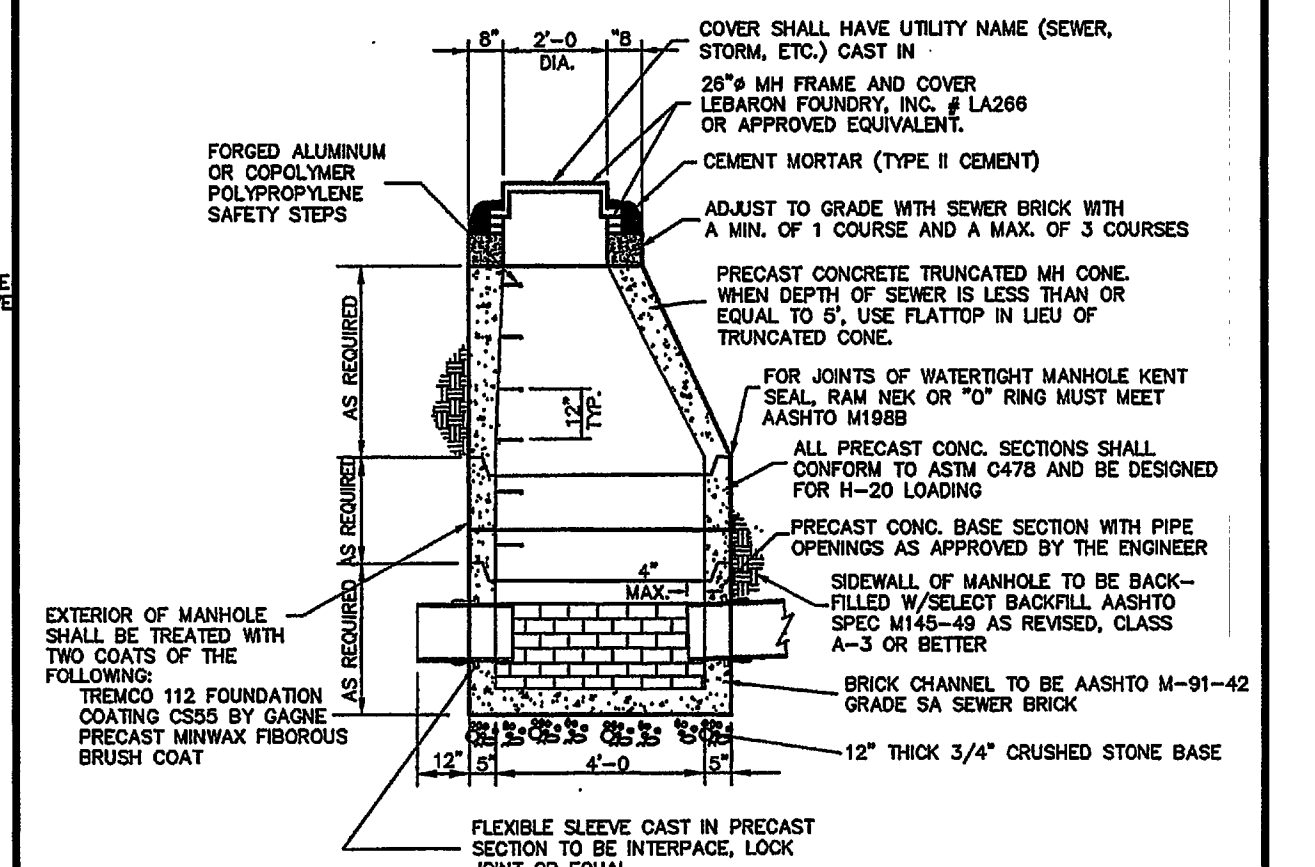
SERVICE	CONDUIT SIZE	GRASS AND PAVED AREAS	UTILITY	REMARKS
A	5"	SCHEDULE 40 PVC ELECTRICAL GRADE	PRIMARY POWER	SEE NOTE 1
B	4"	SCHEDULE 40 PVC	TELEPHONE	SEE NOTE 1
C	2"	SCHEDULE 40 PVC	CABLE	SEE NOTE 1
D	2"	SCHEDULE 40 PVC ELECTRICAL GRADE	SECONDARY POWER	SEE NOTE 1

NOTE:  
1. PROVIDE GALVANIZED STEEL LONG SNEEP AT RISER POLE AND EXTEND GALVANIZED CONDUIT TO 10' ABOVE GRADE AT POLE WITH STAND-OFF BRACKETS  
2. ALL DIMENSIONS, SIZES, NUMBER OF CONDUITS AND MATERIALS TO BE VERIFIED WITH SERVING UTILITIES.

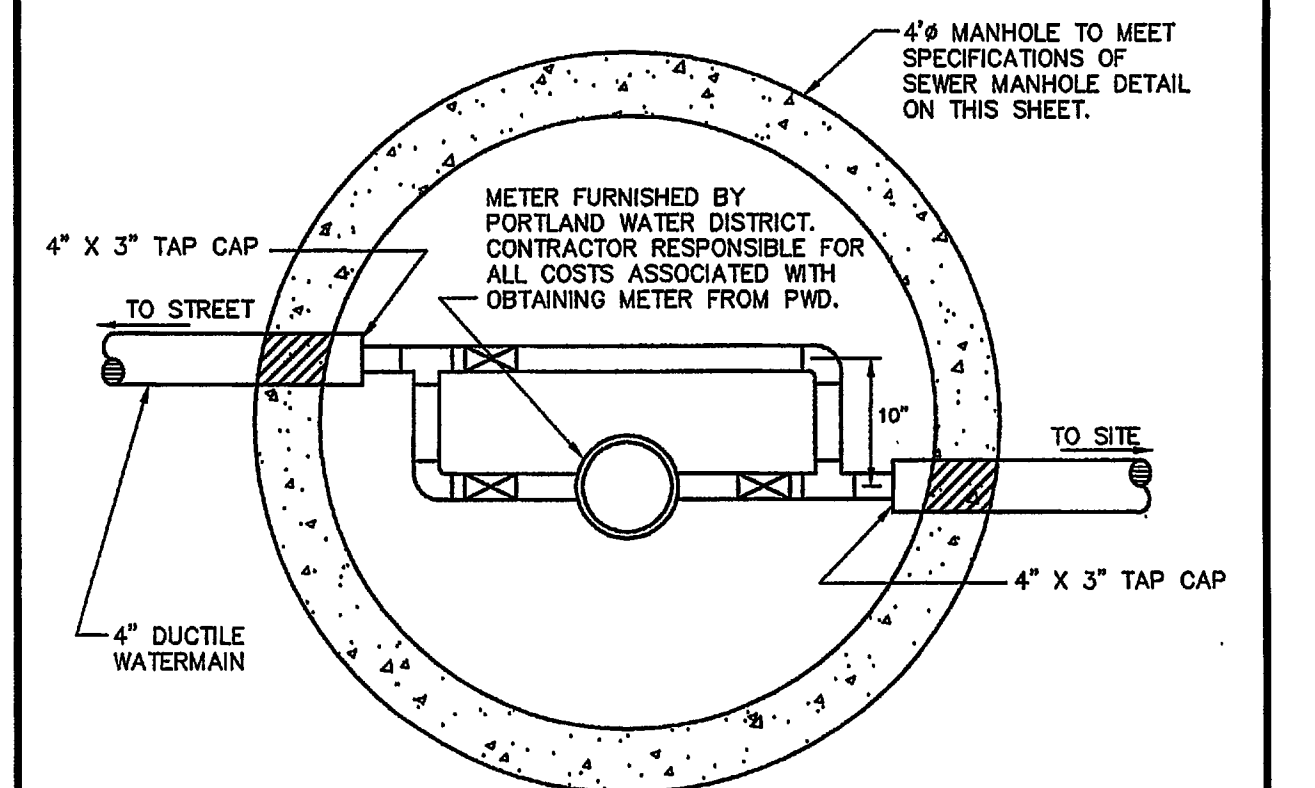
**UTILITY TRENCH - PRIMARY AND SECONDARY POWER, TELEPHONE, AND CABLE**  
N.T.S.



**4'-0" PRECAST CATCH BASIN**  
N.T.S.



**4'-0" PRECAST STORM DRAIN & SEWER MANHOLE**  
N.T.S.



NOTE:  
1. METER FLANGES AND A SPACER ARE AVAILABLE ON REQUEST, BY THE PLUMBER, AT THE PORTLAND WATER DISTRICT.  
2. ALL PIPING WITHIN METER PIT SHALL BE 2" COPPER TUBING WITH BRASS GATE VALVES.  
3. WHEN REQUESTING THE METER FROM PWD, INDICATE THAT THIS METER WILL REQUIRE A RADIO READ METER RATHER THAN A TOUCH PAD.

**3" WATER METER PIT AND VALVE**  
SCALE: 1" = 1'

**Released For Construction**  
6-2-04

FAIRFIELD MAINE PORTLAND MAINE  
 Sheridan  
 ENGINEERING  
 65 KENSINGTON STREET  
 PORTLAND, MAINE  
 MAINE YACHT CENTER FACILITY  
 100 KENSINGTON ST., PORTLAND ME.  
 DESIGN BUILDER  
 ENGINEERING  
 030017  
 ENGINEERING  
 C-202