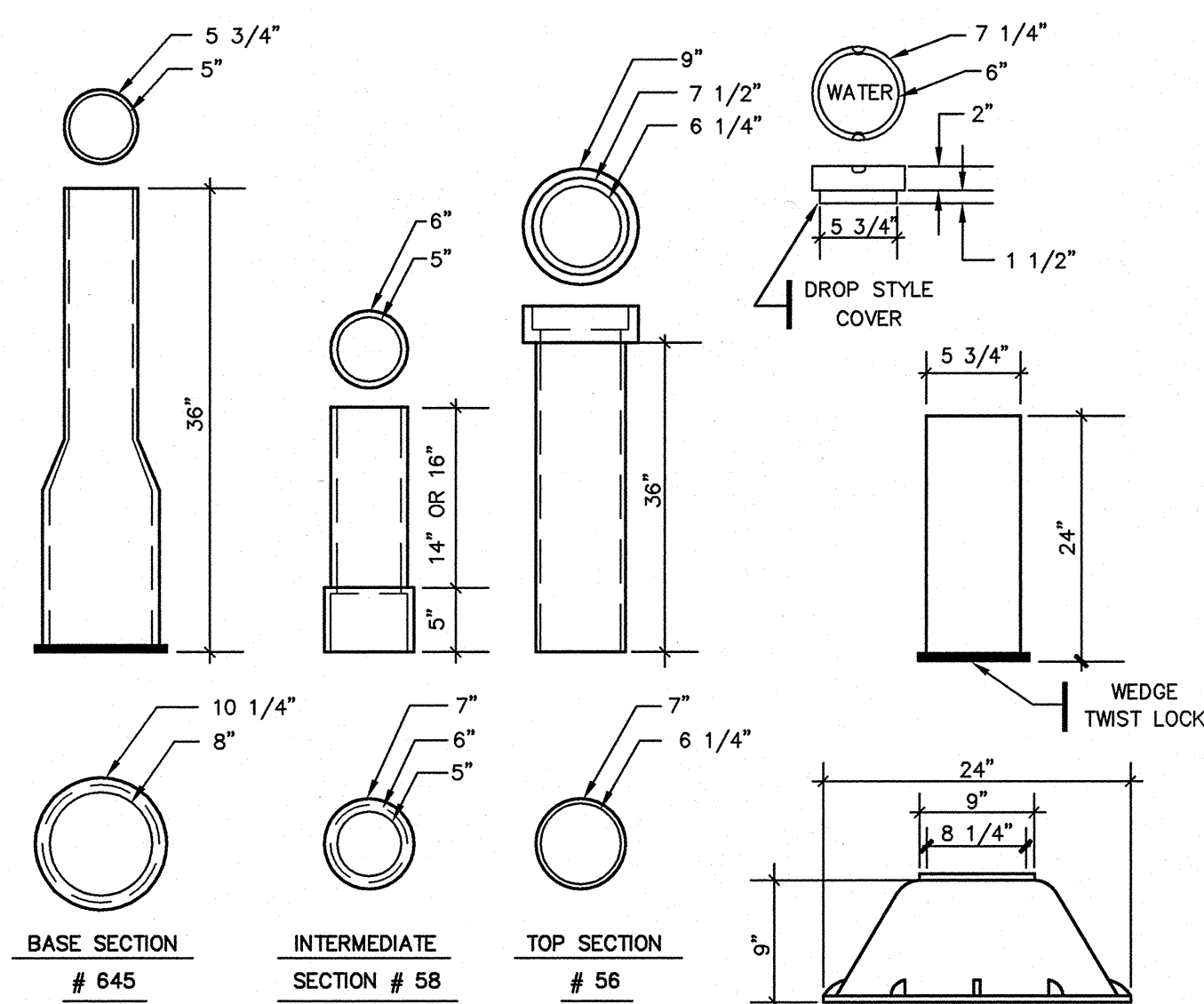


TYPE "A" MANHOLE COVER AND FRAME

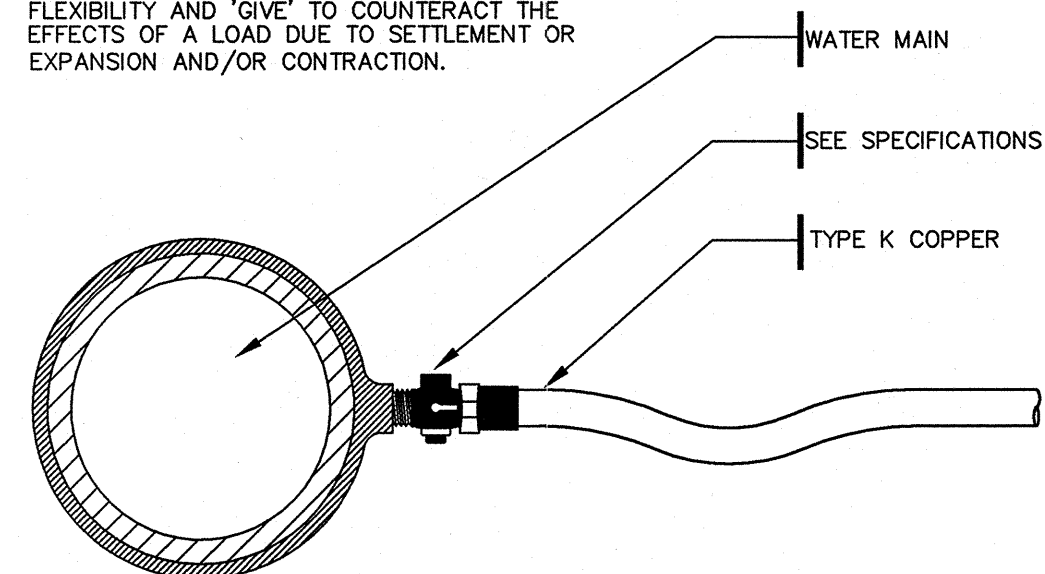
N.T.S.



TYPICAL VALVE BOXES

N.T.S.

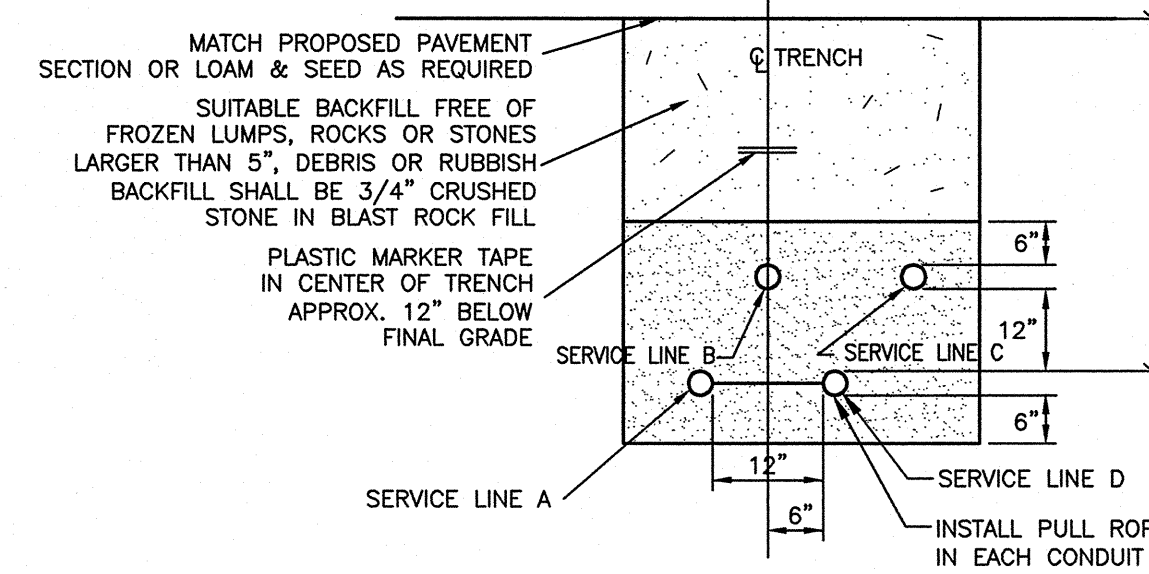
NOTE: SERVICE CONNECTIONS (DIRECT TAPS AND SERVICE CLAMPS) WILL BE INSTALLED SO THAT THE OUTLET IS AT AN ANGLE OF NOT MORE THAN 45° ABOVE THE HORIZONTAL. ALWAYS PUT A BEND OR "GOOSENECK" IN THE SERVICE LINE PRIOR TO CONNECTING TO PROVIDE FLEXIBILITY AND "GIVE" TO COUNTERACT THE EFFECTS OF A LOAD DUE TO SETTLEMENT OR EXPANSION AND/OR CONTRACTION.



SEE NOTE 3 IN THRUST BLOCK NOTES DETAIL ON SHEET 8

WATER SERVICE

(1 1/2" AND 2 1/2" C.C. OR IRON PIPE THREAD)
N.T.S.

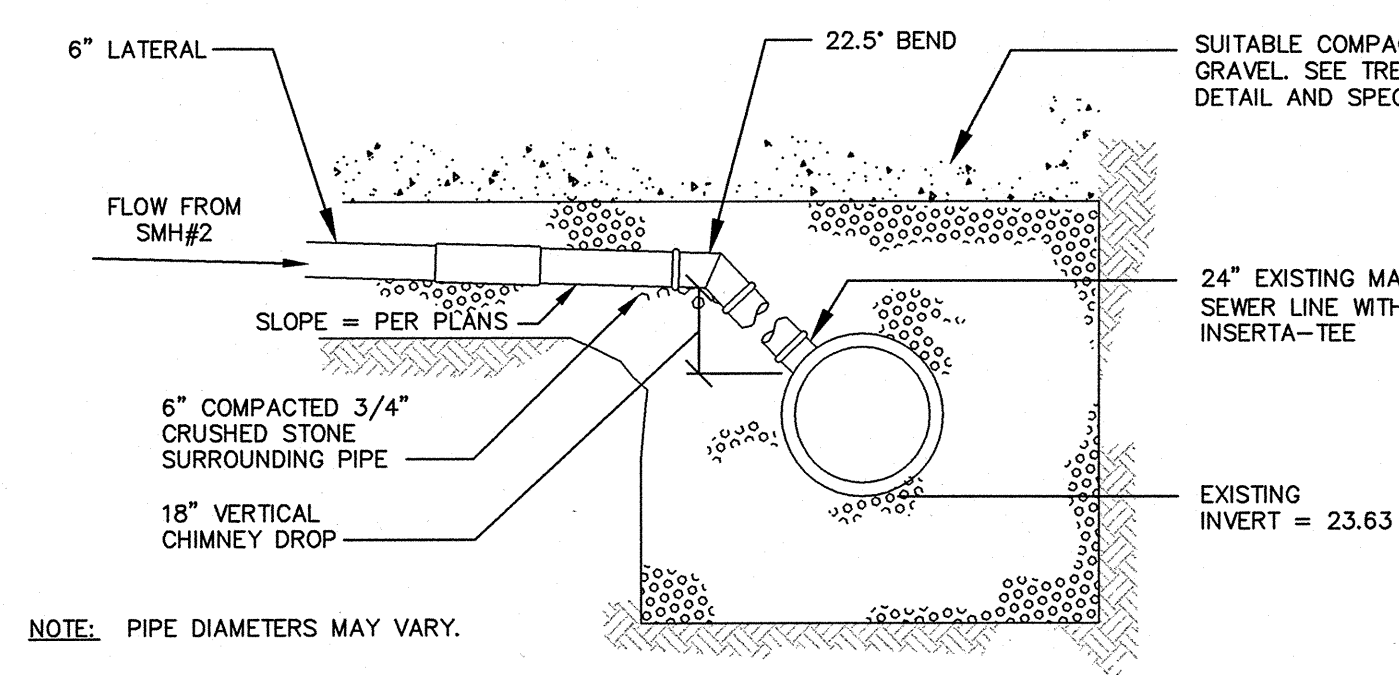


SERVICE	CONDUIT SIZE	CONDUIT TYPE	GRASS AND PAVED AREAS	UTILITY	REMARKS
A	2-5"	SCHEDULE 40 PVC ELECTRICAL GRADE		PRIMARY POWER	SEE NOTE
B	2-4"	SCHEDULE 40 PVC		TELEPHONE	SEE NOTE
C	2-4"	SCHEDULE 40 PVC		CABLE	SEE NOTE
D	2-4"	SCHEDULE 40 PVC ELECTRICAL GRADE		FIRE ALARM	SEE NOTE

NOTE: ONE CONDUIT CAPPED FOR SPARE. PROVIDE GALVANIZED STEEL LONG SWEEP AT RISER POLE AND EXTEND GALVANIZED CONDUIT TO 10" ABOVE GRADE AT POLE WITH STAND-OFF BRACKETS

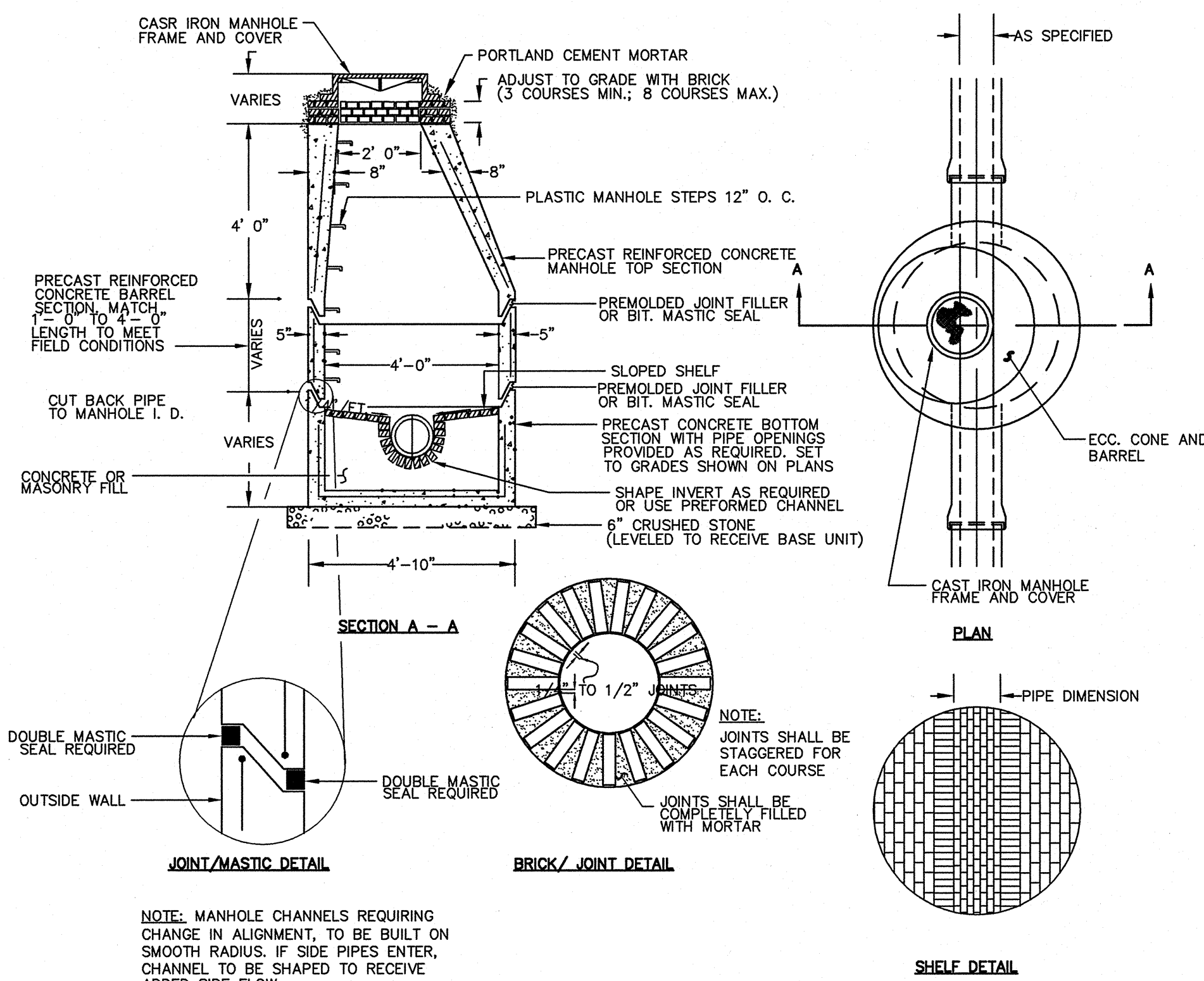
UTILITY TRENCH - PRIMARY AND SECONDARY POWER, TELEPHONE, AND CABLE

N.T.S.



SANITARY LATERAL CONNECTION

N.T.S.

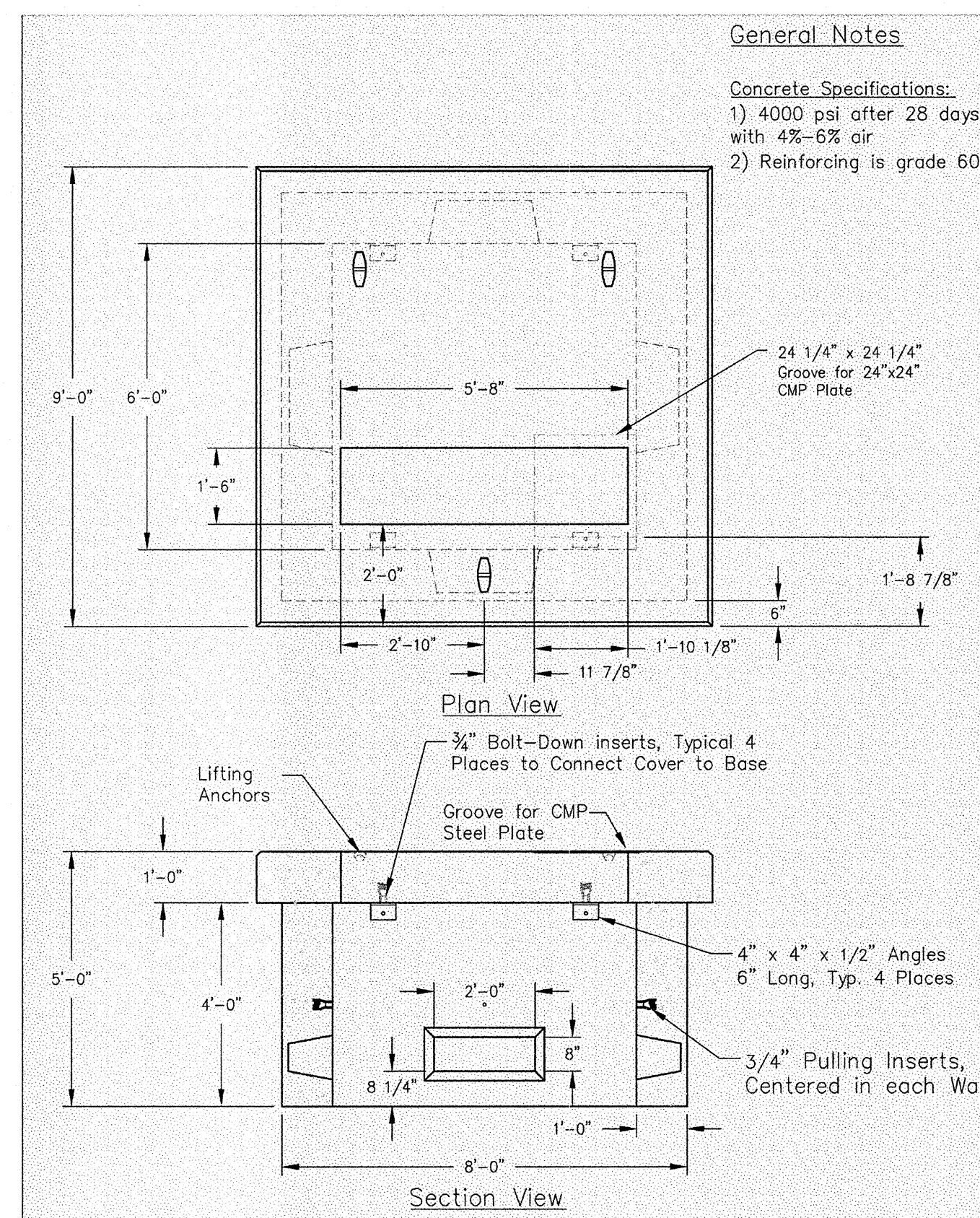


PRECAST CONCRETE MANHOLE TYPE "A"

N.T.S.

- GENERAL NOTES**
- ALL CONCRETE SHALL BE A CLASS "A" AND HAVE A MINIMUM ULTIMATE STRENGTH OF 4000 LBS. PER SQ. INCH AT THE END OF 28 DAYS, UNLESS OTHERWISE NOTED.
 - PRECAST REINFORCED CONE BARREL MANUFACTURE PER ASTM SPEC. C-478-67
 - SEWER BRICK TO 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 CONSTRUCTION OF BRICK MASONRY, THE SMOOTH MORTAR 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 PITCH 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.
 - STORM AND SEWER MANHOLES SHALL HAVE SOLID COVERS WITH ONE DRILLED HOLE.
 - EXISTING MANHOLE AND CATCH BASIN FRAMES AND COVERS SHALL BE SALVAGED BY THE CONTRACTOR, AND REMAIN THE PROPERTY OF THE CITY OF PORTLAND.
 - CASCO TRAPS SHALL BE PROVIDED WITHIN ALL CATCH BASINS WITH 12" OUTLETS.

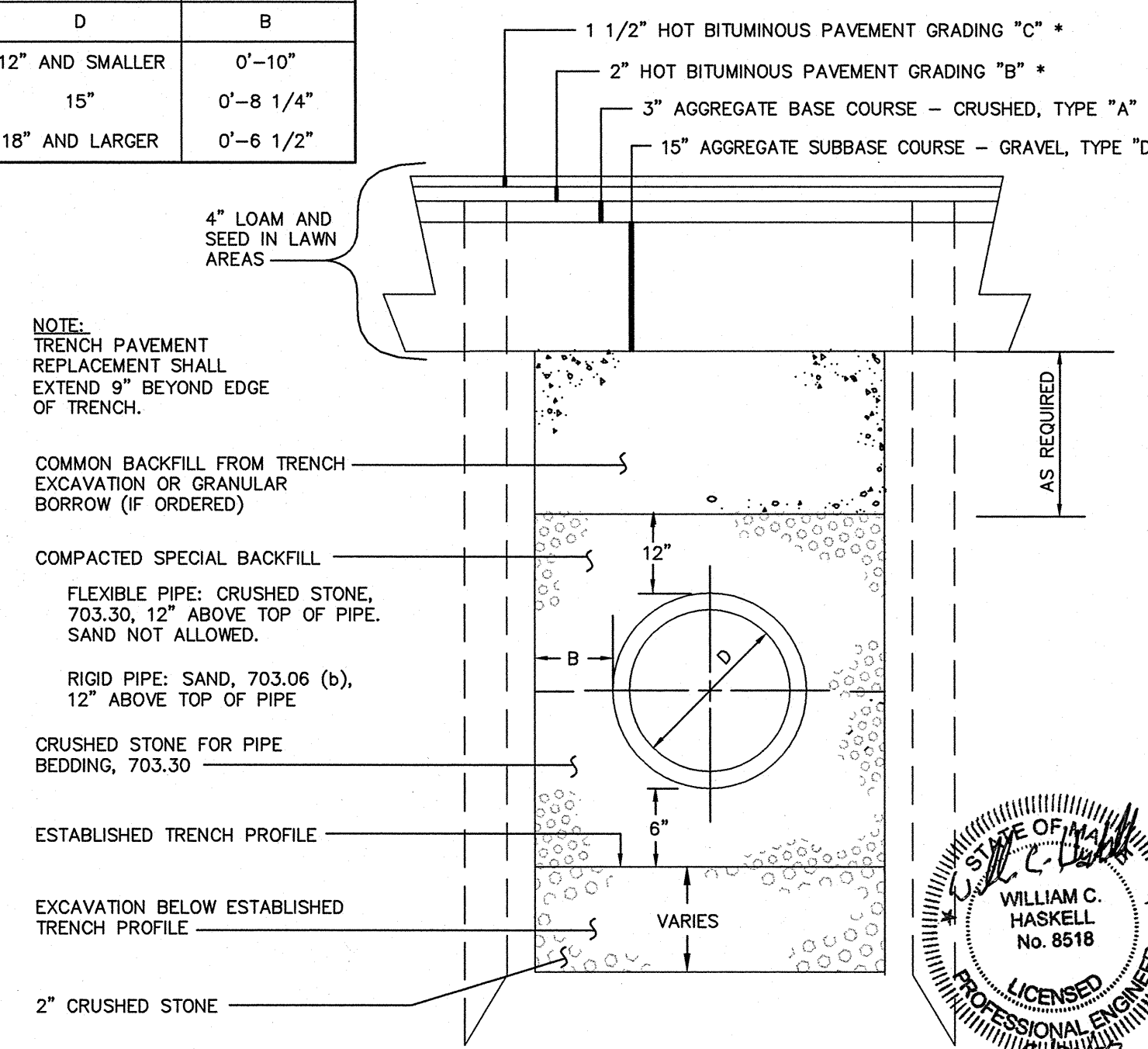
NOTE: MANHOLE CHANNELS REQUIRING CHANGE IN ALIGNMENT, TO BE BUILT ON SMOOTH RADIUS. IF SIDE PIPES ENTER, CHANNEL TO BE SHAPED TO RECEIVE ADDED SIDE FLOW



3 PHASE TRANSFORMER PAD 9'X9' - CMP

N.T.S.

PIPE DIAMETER	D	B
12" AND SMALLER	0'-10"	
15"	0'-8 1/4"	
18" AND LARGER	0'-6 1/2"	



TYPICAL PIPE INSTALLATION DETAIL

N.T.S.

NOTE: TRENCH PAVEMENT REPLACEMENT SHALL EXTEND 9" BEYOND EDGE OF TRENCH.

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

COMPACTED SPECIAL BACKFILL FLEXIBLE PIPE: CRUSHED STONE, 703.30, 12" ABOVE TOP OF PIPE. SAND NOT ALLOWED.

RIGID PIPE: SAND, 703.06 (b), 12" ABOVE TOP OF PIPE

CRUSHED STONE FOR PIPE BEDDING, 703.30

ESTABLISHED TRENCH PROFILE

EXCAVATION BELOW ESTABLISHED TRENCH PROFILE

2" CRUSHED STONE

* PAVEMENT THICKNESSES NOTED ARE A MINIMUM. CONTRACTOR SHALL MATCH THICKNESS OF EXISTING PAVEMENT IN ST. JOHN STREET AND VALLEY STREET.

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AVESTA HOUSING

FLORENCE HOUSE
190 VALLEY STREET
PORTLAND, MAINE

Preble Street

REVISIONS

#	DATE	DESCRIPTION
1	12.7.07	MAINE HOUSING 50% REVIEW SET
2	5.2.08	90% MAINE HOUSING REVIEW SET
3	7.31.08	100% MAINE HOUSING REVIEW SET
4	9.2.08	100% BID DOCUMENTS

DATE:	12.7.07
PROJECT #	100405
DRAWN BY:	CAP
CHECKED BY:	WH
DRAWING SCALE	N.T.S.

SHEET TITLE
UTILITY AND DRAINAGE DETAILS

C 304

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