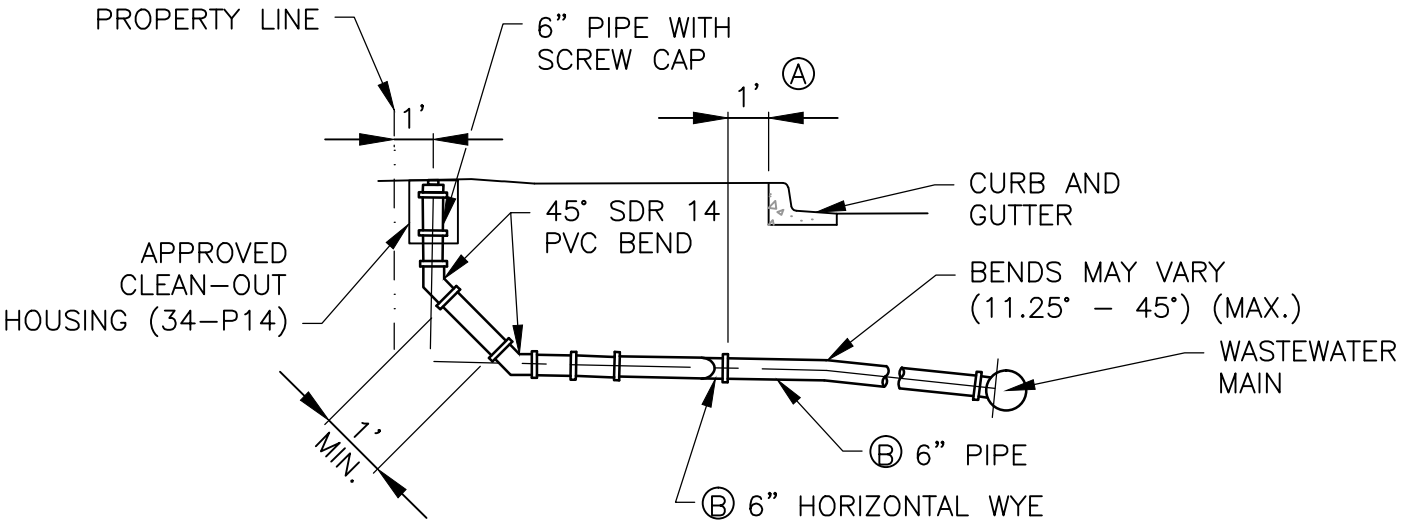
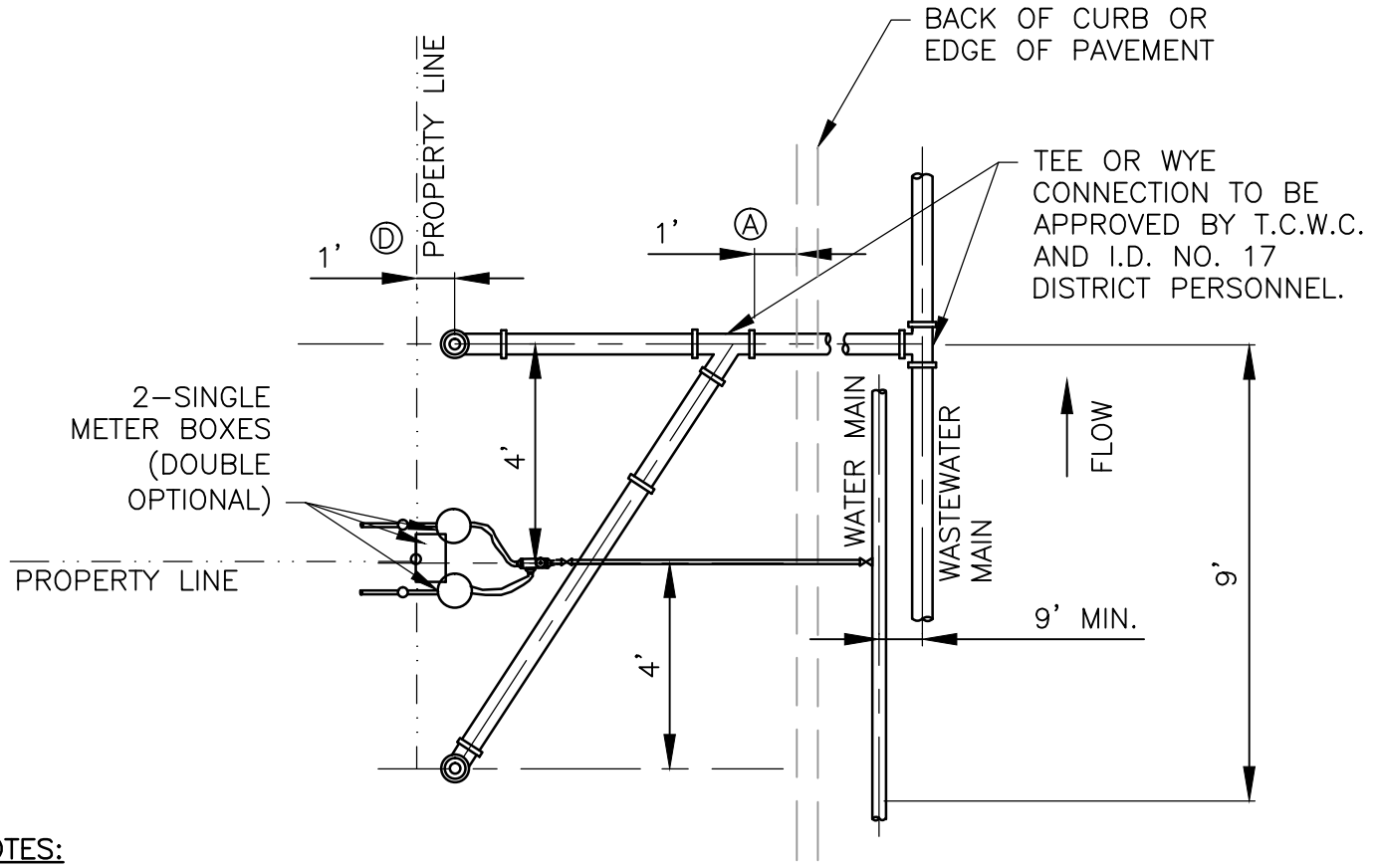




NOTES:

A. THESE DIMENSIONS MAY BE INCREASED BY WIDTH OF WALK IF WALK IS LOCATED AT CURB.

B. TO BE INSTALLED AND INSPECTED DURING SUBDIVISION CONSTRUCTION.

C. BUILDING INSPECTION DEPARTMENT SHALL INSPECT CUSTOMER'S WASTEWATER LINE, EXCEPT CONNECTION AT WYE.

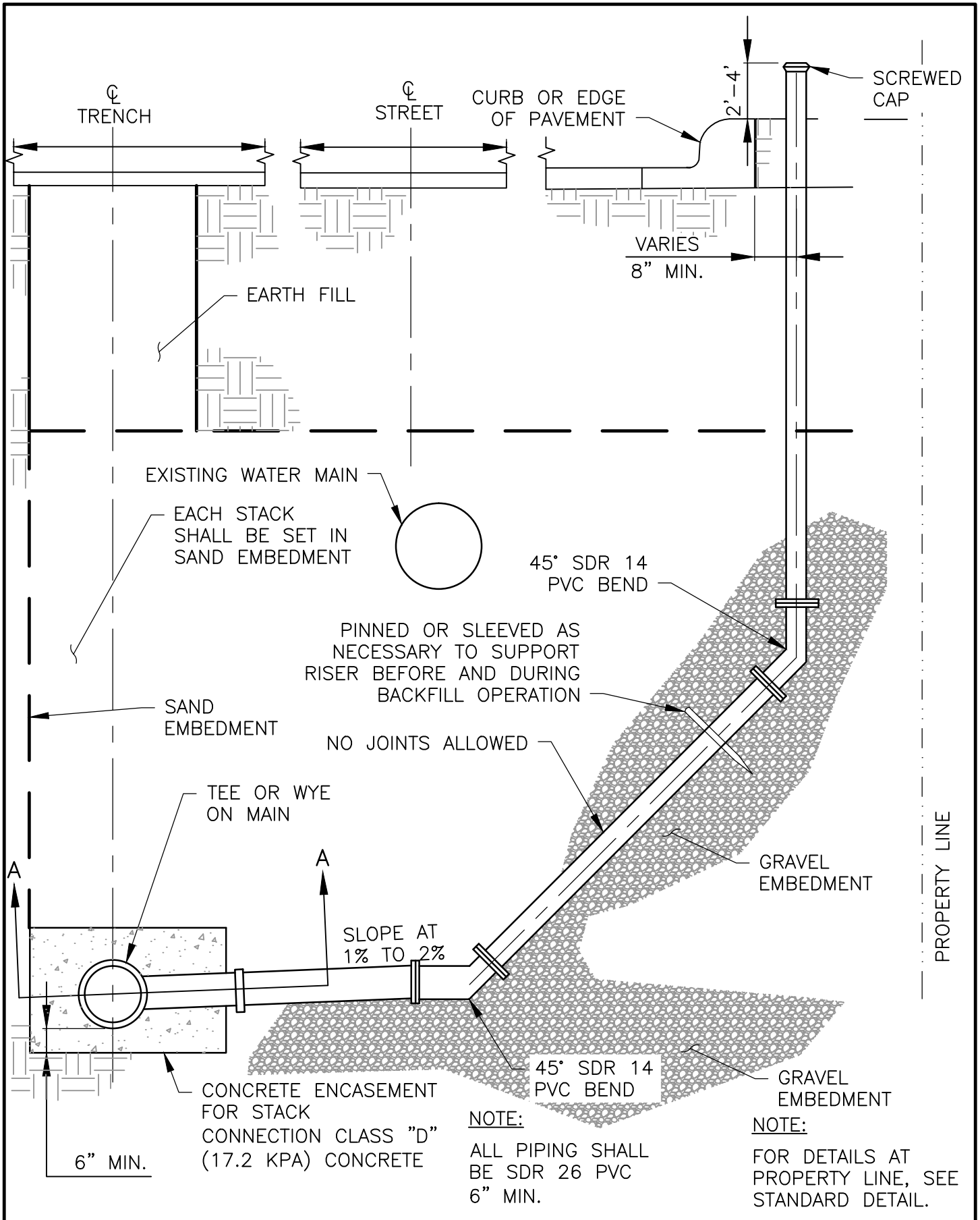
D. T.C.W.C. AND I.D. NO. 17 OFFICE INSPECT CONNECTIONS OF CUSTOMER'S WASTEWATER LINES TO T.C.W.C. AND I.D. NO. 17 SYSTEMS.

	TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT No. 17 STANDARD DETAILS	WASTEWATER SERVICE CONNECTION DETAIL (1 OF 2)	
	ADOPTED: 03/01/2016	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	DETAIL NO. WW01

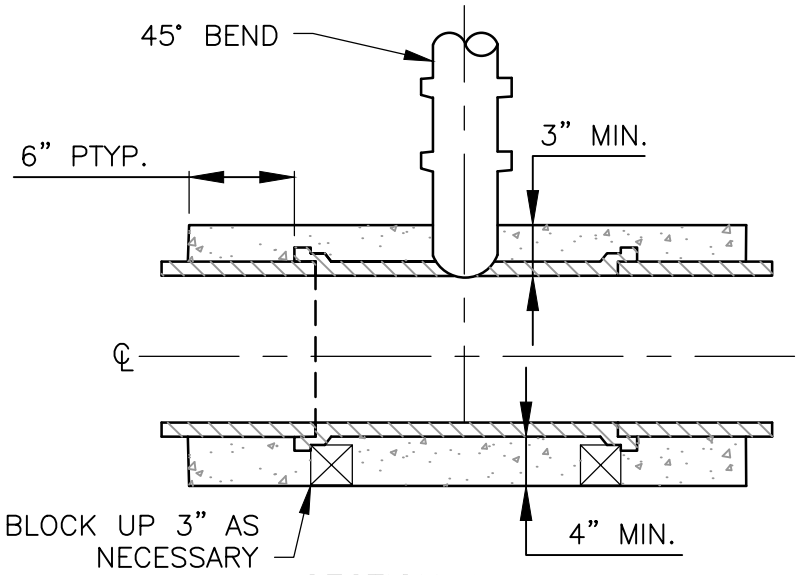
NOTES:

1. UTILITY CONTRACTOR –DURING SUBDIVISION CONSTRUCTION– INSTALLS WASTEWATER CONNECTION TO MAIN, 6'' STUB WITH HORIZONTAL WYE FOR DOUBLE SERVICE, 6" BRANCH WITH CLEAN–OUT AND RISER FOR CLEAN–OUTS (CAPPED), AND PLUGS FOR BOTH CLEAN–OUTS AT PROPERTY LINE END. ALL WASTEWATER PIPING SHALL HAVE ELASTOMERIC GASKET TYPE JOINTS AND SHALL SLOPE DOWNWARD TO MAIN 1% 1/8'' PER FOOT MINIMUM TO 45° MAXIMUM. DEPTH OF SERVICE STUB AT PROPERTY LINE WILL BE SHOWN ON PLANS BY ENGINEER IF GREATER THAN 4 FEET , OTHERWISE THE INSTALLED DEPTH WILL TYPICALLY BE 4 TO 6 FEET. IF WASTEWATER SERVICE LINE TO MAIN REQUIRES DEFLECTION EXCEEDING 45°, ALL SHALL BE MADE IN ACCORDANCE WITH INFORMATION SHOWN ON APPLICABLE STD. DRAWINGS AND WILL BE INSPECTED BY T.C.W.C. AND I.D. NO. 17 CONSTRUCTION INSPECTION PERSONNEL.
2. CUSTOMERS REMOVE PLUGS FROM CLEAN–OUT, AT PROPERTY LINE, INSTALL MINIMUM 18'' LENGTH OF 6'' PIPE. IF WASTEWATER WILL NOT SATISFACTORILY FLOW BY GRAVITY TO SEWER MAIN ADJACENT TO PROPERTY, PUMP EQUIPMENT MUST BE PROVIDED BY THE CUSTOMER AS PART OF CUSTOMER'S WASTEWATER SYSTEM.
3. CUSTOMER IS RESPONSIBLE FOR WASTEWATER PIPING SYSTEM AND SHALL GUARANTEE, FOR A PERIOD OF ONE (1) YEAR FROM DATE OF ACCEPTANCE, THAT CONNECTIONS TO T.C.W.C. AND I.D. NO. 17 SYSTEMS ARE FREE FROM DEFECTS IN WORKMANSHIP AND/OR MATERIALS. CUSTOMER ALSO HAS THE RESPONSIBILITY TO ASSURE THAT ALL CLEAN–OUTS REMAIN CLEAR OF SIDEWALK AND OTHER OBSTRUCTIONS.
4. T.C.W.C. AND I.D. NO.17 ACTIVITY IS LIMITED TO THE INSPECTION OF CONNECTIONS TO THE T.C.W.C. AND I.D. NO. 17 WASTEWATER SYSTEMS FOR MAINTENANCE PURPOSES, THE T.C.W.C. AND I.D. NO. 17 RESPONSIBILITY ENDS AT THE CUSTOMER'S WASTEWATER CONNECTION TO THE CLEANOUT.
5. PIPING IN STREET RIGHT–OF–WAY AND IN EASEMENT AREAS SHALL BE BEDDED IN GRANULAR MATERIALS AS REQUIRED BY T.C.W.C. AND I.D. NO.17 STANDARD SPECIFICATIONS; MATERIALS SHALL BE AS SPECIFIED IN STANDARD SPECIFICATIONS; BACKFILL ABOVE THE GRANULAR BEDDING SHALL BE AS REQUIRED; SERVICE LINES IN THESE AREAS SHALL HAVE A MINIMUM COVER BELOW FINAL STREET GRADE OF 42''; ANY EXCEPTION MUST BE SPECIFICALLY APPROVED BY T.C.W.C. AND I.D. NO. 17.
6. NO CLEAN–OUT SHALL BE SET IN SIDEWALK AREA WITHOUT WRITTEN APPROVAL FROM T.C.W.C. AND I.D. NO. 17.
7. T.C.E.Q. RULES AND REGULATIONS ON SEPARATION OF WASTEWATER MAINS WILL BE STRICTLY ENFORCED.
8. ALL WASTEWATER PIPING WILL BE COLORED CODED OR DESIGNATED WASTEWATER USE ONLY. NO WATER DESIGNATED PIPE WILL BE USED IN WASTEWATER SYSTEM.

	TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT No. 17 STANDARD DETAILS	WASTEWATER SERVICE CONNECTION DETAIL (2 OF 2)	
	ADOPTED: 03/01/2016	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	DETAIL NO. WW01



TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT No. 17 STANDARD DETAILS	WASTEWATER DEEP SERVICE CONNECTION DETAIL (1 OF 2)	
ADOPTED: 03/01/2016	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	DETAIL NO. WW02

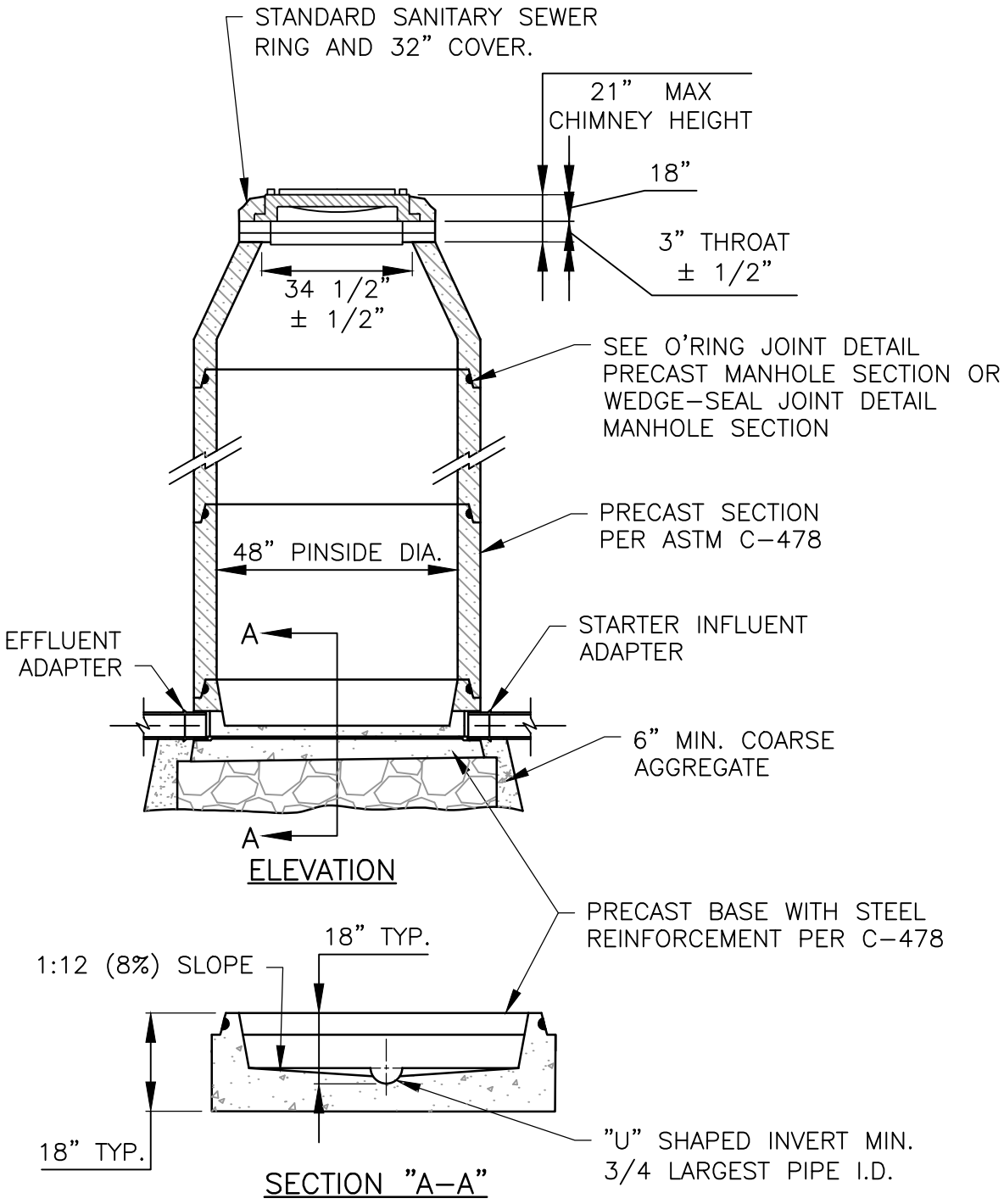


SECTION A–A

NOTES:

1. UTILITY CONTRACTOR –DURING SUBDIVISION CONSTRUCTION– INSTALLS WASTEWATER CONNECTION TO MAIN, 6'' STUB WITH HORIZONTAL WYE FOR DOUBLE SERVICE, 6" BRANCH WITH CLEAN–OUT AND RISER FOR CLEAN–OUTS (CAPPED), AND PLUGS FOR BOTH CLEAN–OUTS AT PROPERTY LINE END. ALL WASTEWATER PIPING SHALL HAVE ELASTOMERIC GASKET TYPE JOINTS AND SHALL SLOPE DOWNWARD TO MAIN 1% 1/8'' PER FOOT MINIMUM TO 45° MAXIMUM. DEPTH OF SERVICE STUB AT PROPERTY LINE WILL BE SHOWN ON PLANS BY ENGINEER IF GREATER THAN 4 FEET OTHERWISE THE INSTALLED DEPTH WILL TYPICALLY BE 4 TO 6 FEET. IF WASTEWATER SERVICE LINE TO MAIN REQUIRES DEFLECTION EXCEEDING 45°, ALL SHALL BE MADE IN ACCORDANCE WITH INFORMATION SHOWN ON APPLICABLE STD. DRAWINGS AND WILL BE INSPECTED BY T.C.W.C. AND I.D. NO. 17 CONSTRUCTION INSPECTION PERSONNEL.
2. CUSTOMERS REMOVE PLUGS FROM CLEAN–OUT, AT PROPERTY LINE, INSTALL MINIMUM 18'' LENGTH OF 6'' PIPE. IF WASTEWATER WILL NOT SATISFACTORILY FLOW BY GRAVITY TO SEWER MAIN ADJACENT TO PROPERTY, PUMP EQUIPMENT MUST BE PROVIDED BY THE CUSTOMER AS PART OF CUSTOMER'S WASTEWATER SYSTEM.
3. CUSTOMER IS RESPONSIBLE FOR WASTEWATER PIPING SYSTEM AND SHALL GUARANTEE, FOR A PERIOD OF ONE (1) YEAR FROM DATE OF ACCEPTANCE, THAT CONNECTIONS TO T.C.W.C. AND I.D. NO. 17 SYSTEMS ARE FREE FROM DEFECTS IN WORKMANSHIP AND/OR MATERIALS. CUSTOMER ALSO HAS THE RESPONSIBILITY TO ASSURE THAT ALL CLEAN–OUTS REMAIN CLEAR OF SIDEWALK AND OTHER OBSTRUCTIONS.
4. T.C.W.C. AND I.D. NO.17 ACTIVITY IS LIMITED TO THE INSPECTION OF CONNECTIONS TO THE T.C.W.C. AND I.D. NO. 17 WASTEWATER SYSTEMS FOR MAINTENANCE PURPOSES, THE T.C.W.C. AND I.D. NO. 17 RESPONSIBILITY ENDS AT THE CUSTOMER'S WASTEWATER CONNECTION TO THE CLEANOUT.
5. PIPING IN STREET RIGHT–OF–WAY AND IN EASEMENT AREAS SHALL BE BEDDED IN GRANULAR MATERIALS AS REQUIRED BY T.C.W.C. AND I.D. NO.17 STANDARD SPECIFICATIONS; MATERIALS SHALL BE AS SPECIFIED IN STANDARD SPECIFICATIONS; BACKFILL ABOVE THE GRANULAR BEDDING SHALL BE AS REQUIRED; SERVICE LINES IN THESE AREAS SHALL HAVE A MINIMUM COVER BELOW FINAL STREET GRADE OF 42''; ANY EXCEPTION MUST BE SPECIFICALLY APPROVED BY T.C.W.C. AND I.D. NO. 17.
6. NO CLEAN–OUT SHALL BE SET IN SIDEWALK AREA WITHOUT WRITTEN APPROVAL FROM T.C.W.C. AND I.D. NO. 17.
7. T.C.E.Q. RULES AND REGULATIONS ON SEPARATION OF WASTEWATER MAINS WILL BE STRICTLY ENFORCED.
8. ALL WASTEWATER PIPING WILL BE COLORED CODED OR DESIGNATED WASTEWATER USE ONLY. NO WATER DESIGNATED PIPE WILL BE USED IN WASTEWATER SYSTEM.

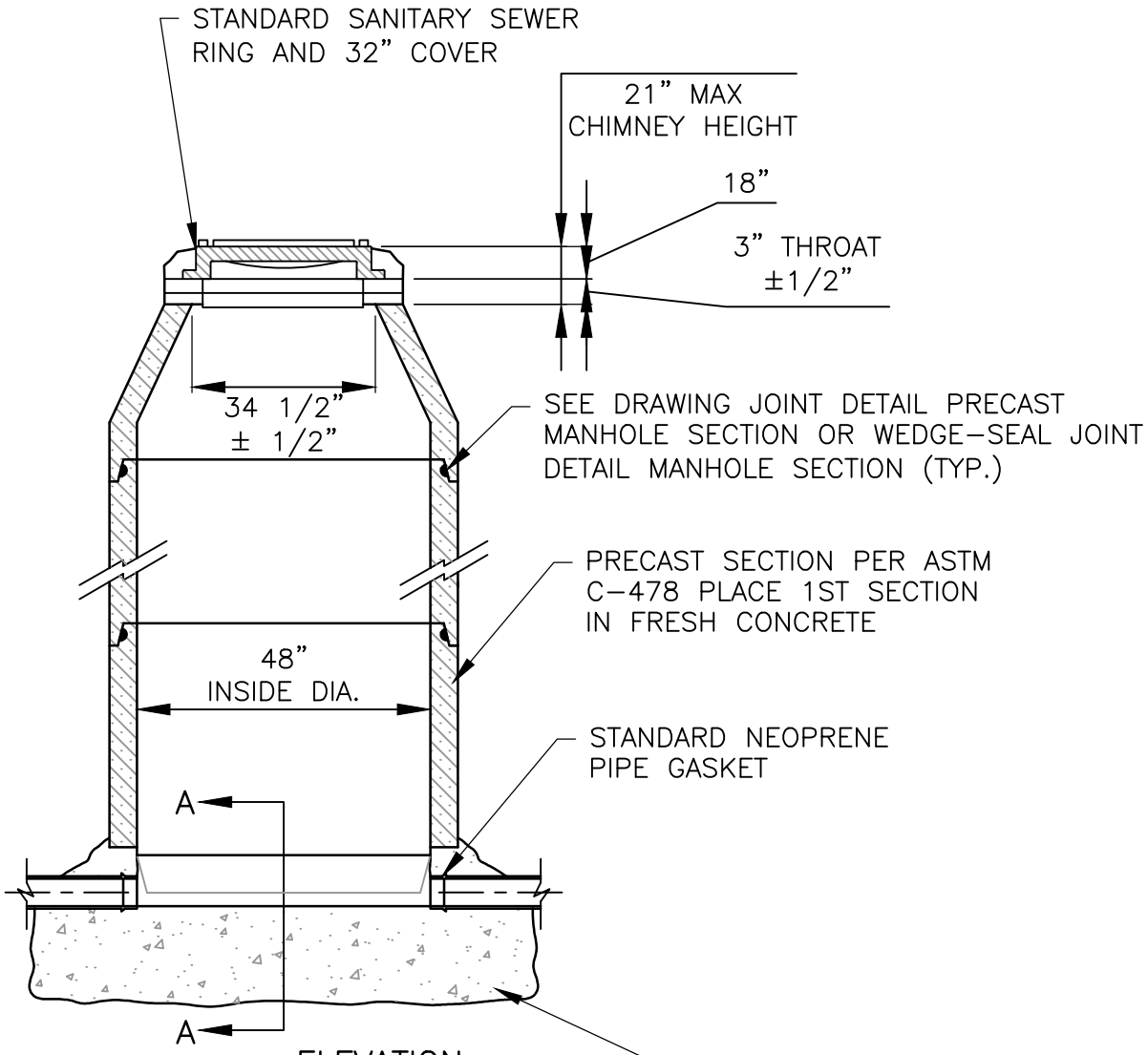
	TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT No. 17 STANDARD DETAILS	DEEP SERVICE CONNECTION DETAIL (2 OF 2)	
	ADOPTED: 03/01/2016	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	DETAIL NO. WW02



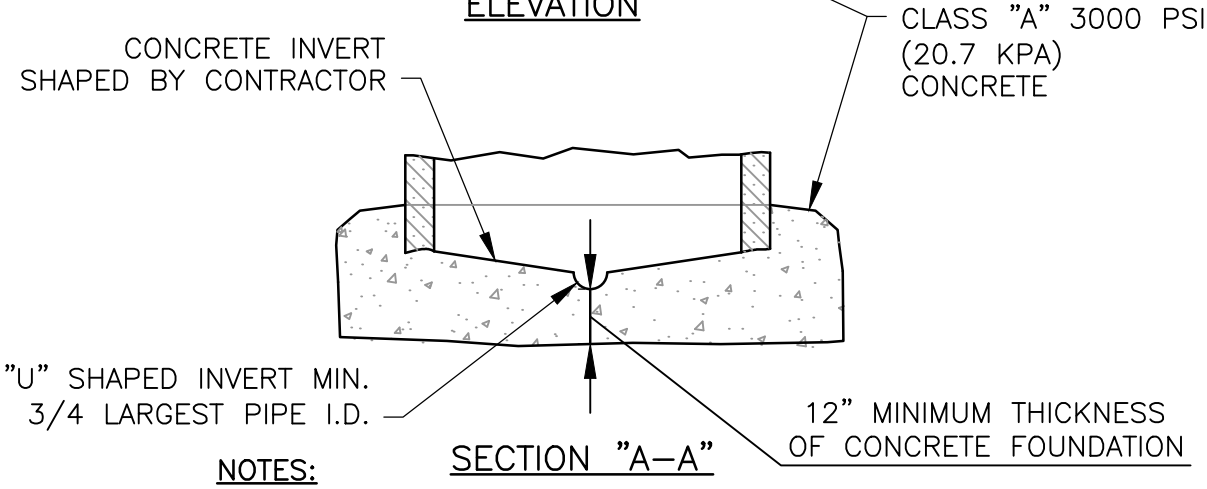
NOTES:

1. THE MANHOLE BASE SHALL BE BEDDED ON 6" COARSE AGGREGATE. THE CONTRACTOR SHALL LEVEL AND PLUMB THE BASE PRIOR TO SETTING THE PRECAST MANHOLE RISER SECTIONS ON THE PRECAST CONCRETE BASE.
2. ALL PVC PIPES SHALL BE REMOVED FROM INVERT.
3. IF FINISHED SURFACE IS OTHER THAN IMPERVIOUS COVER IT SHALL BE 12 INCHES ABOVE GRADE.
4. SEE STANDARD DETAIL FOR BACKFILL REQUIREMENTS.

	TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT No. 17 STANDARD DETAILS	PRECAST MANHOLE ON PRECAST BASE	
	ADOPTED: 03/01/2016	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	DETAIL NO. WW03



ELEVATION

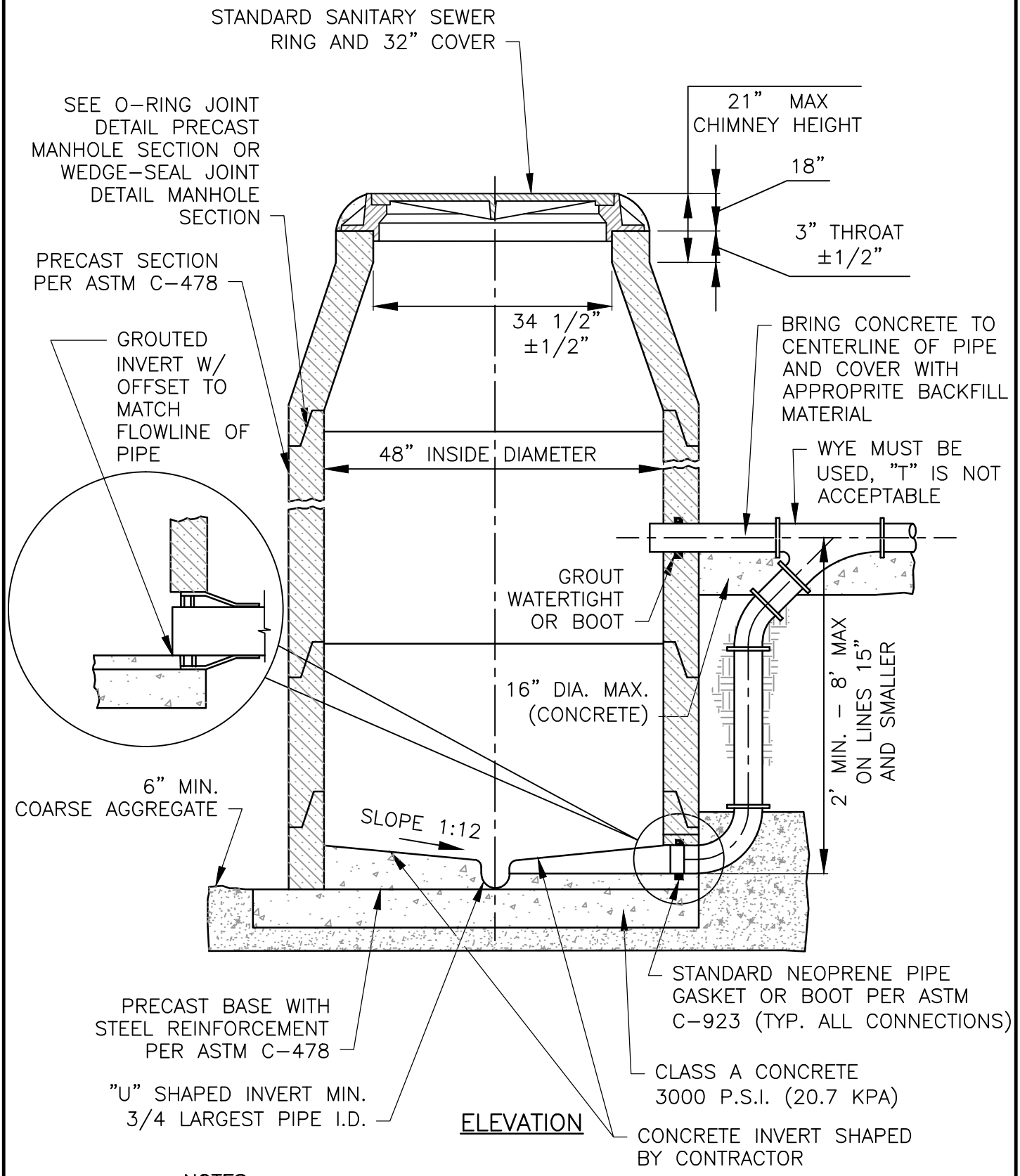


SECTION "A-A"

NOTES:

1. ALL PVC PIPE SHALL BE REMOVED FROM INVERT.
2. IF FINISHED SURFACE IS OTHER THAN IMPERVIOUS COVER IT SHALL BE 12 INCHES ABOVE GRADE.
3. SEE STANDARD DETAIL FOR BACKFILL REQUIREMENTS.

TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT No. 17 STANDARD DETAILS	PRECAST MANHOLE ON CAST-IN-PLACE FOUNDATION	
ADOPTED: 03/01/2016	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	DETAIL NO. WW04

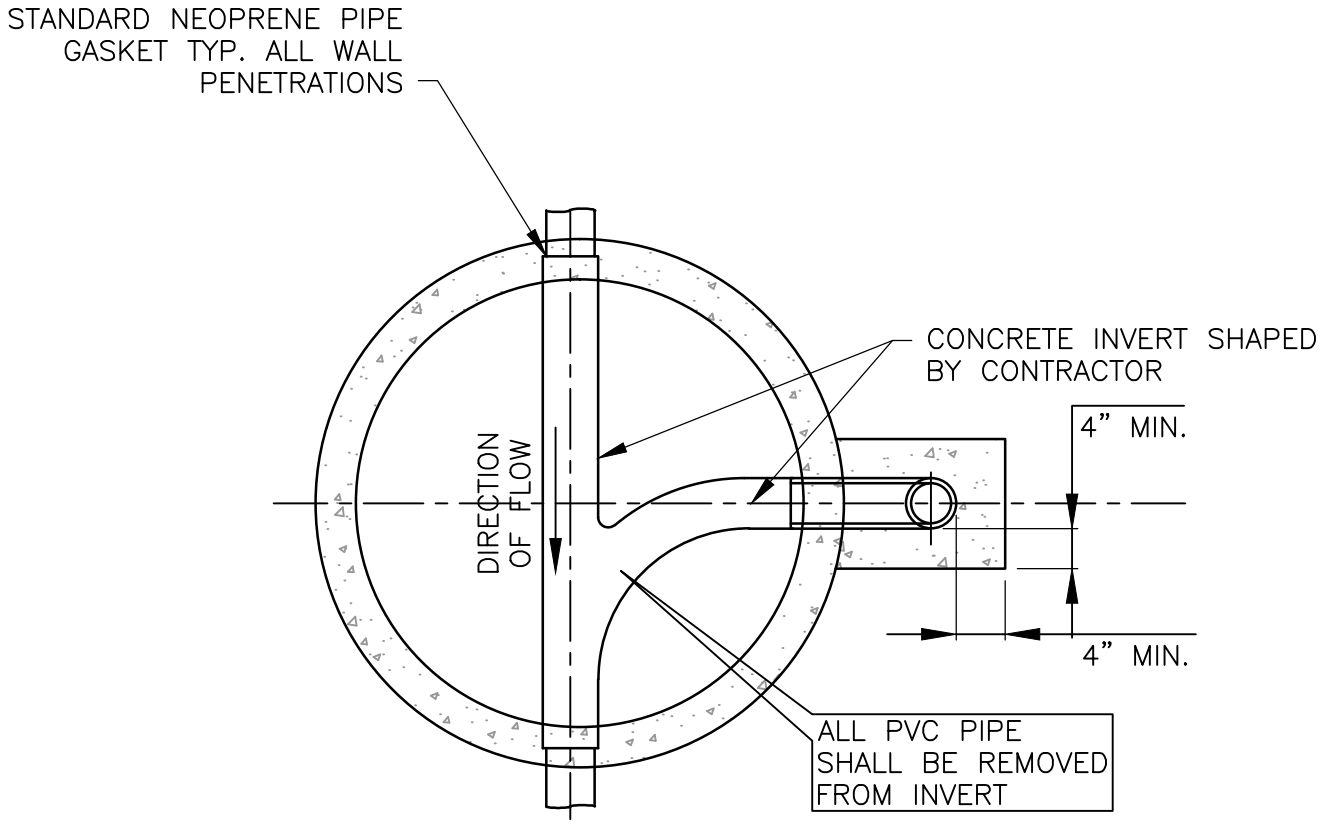


ELEVATION

NOTES:

1. SEE STANDARD DETAIL FOR BACKFILL REQUIREMENTS.

TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT No. 17 STANDARD DETAILS	PRECAST MANHOLE WITH DROP INLET ON PRECAST BASE - NEW CONSTRUCTION (1 OF 2)	
ADOPTED: 03/01/2016	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	DETAIL NO. WW05

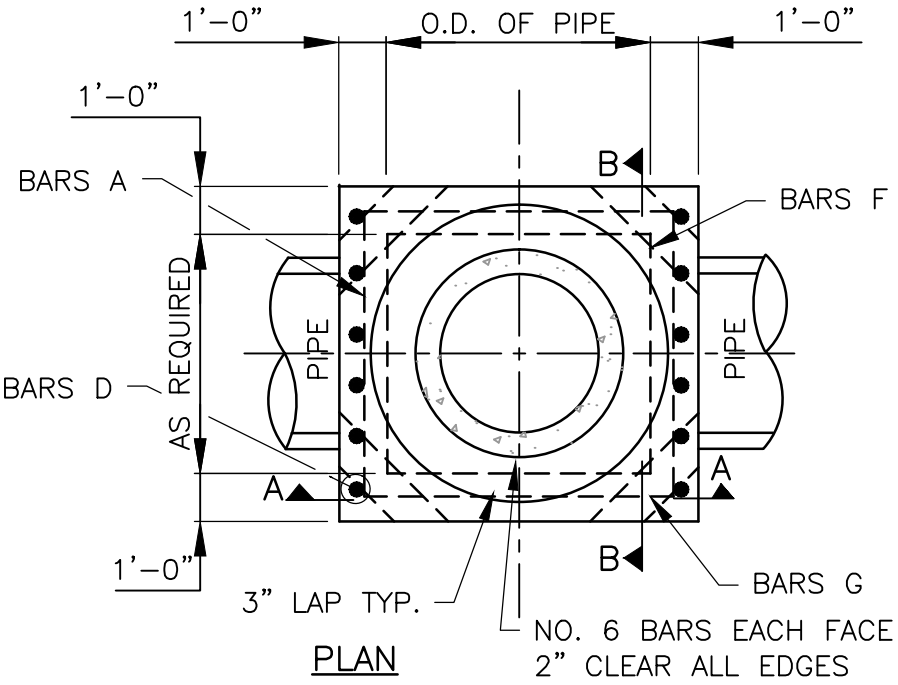


BOTTOM PLAN VIEW

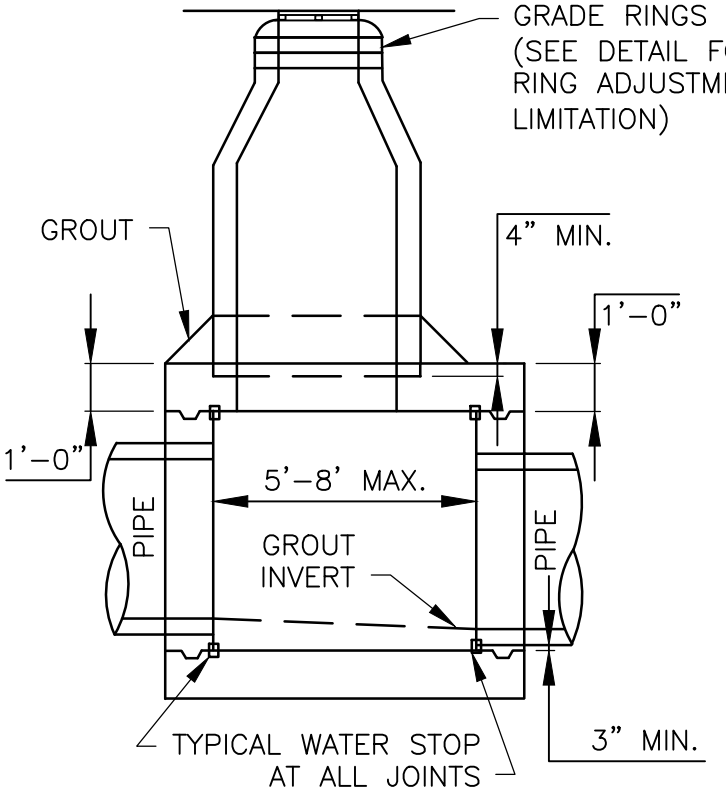
NOTE:

1. IF FINISHED SURFACE IS OTHER THAN IMPERVIOUS COVER IT SHALL BE 12 INCHES ABOVE GRADE,

TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT No. 17 STANDARD DETAILS	PRECAST MANHOLE WITH DROP INLET ON PRECAST BASE (2 OF 2)	
ADOPTED: 03/01/2016	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	DETAIL NO. WW05



PLAN



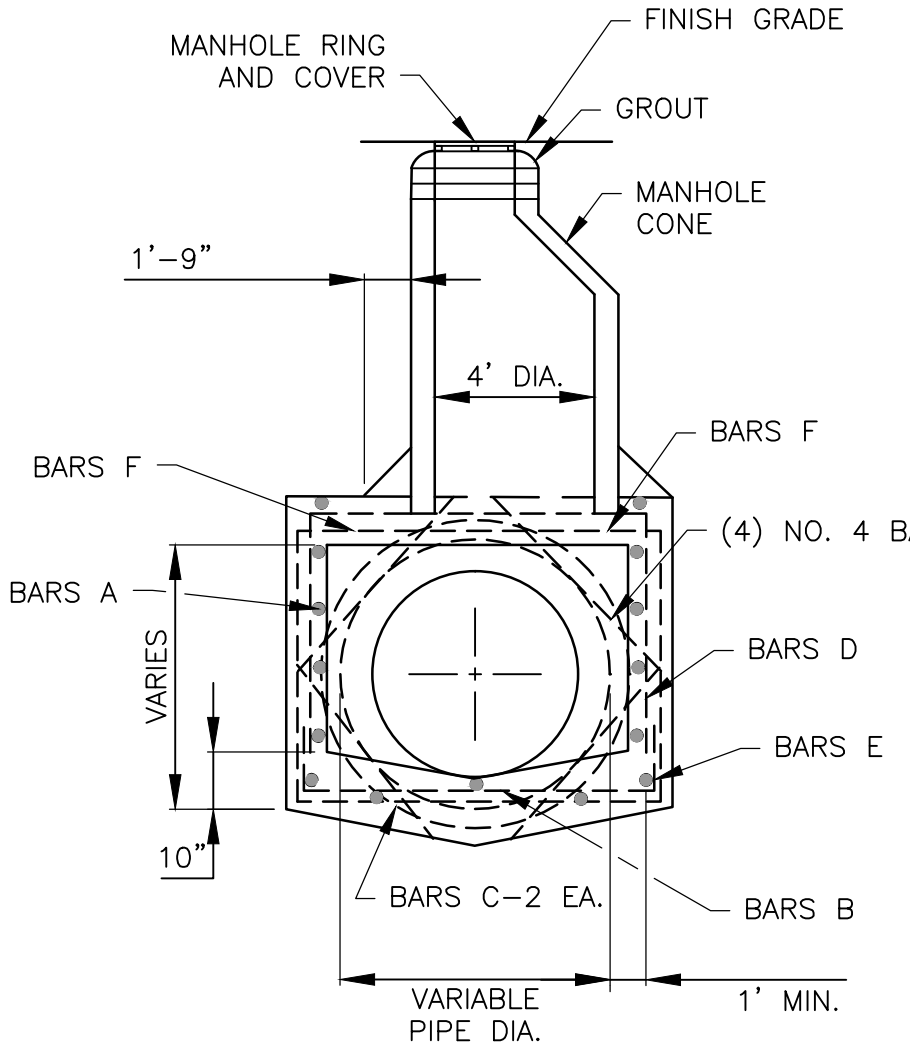
SECTION A–A

NOTES:

1. SEE STANDARD DETAIL FOR BACKFILL REQUIREMENTS.

	TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT No. 17 STANDARD DETAILS	BOX MANHOLE 30" AND LARGER PIPE (1 OF 2)	
	ADOPTED: 03/01/2016	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	DETAIL NO. WW06

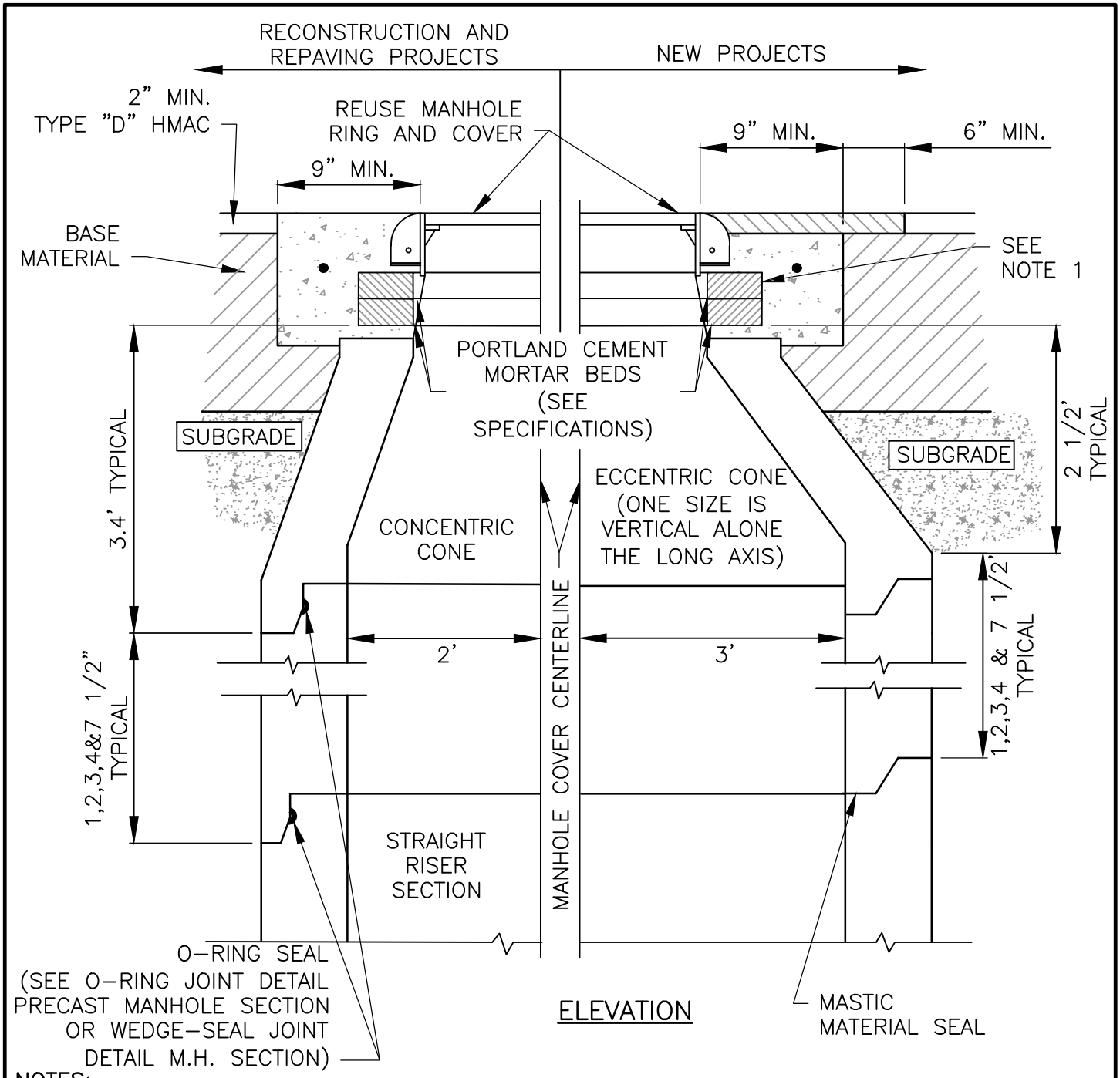
STEEL TABLE														
PIPE SIZE	BAR A		BAR B		BAR C		BAR D		BAR E		BAR F		BAR G	
	NO.	SIZE.	NO.	SIZE.	NO.	SIZE.	NO.	SIZE.	NO.	SIZE.	NO.	SIZE.	NO.	SIZE.
30	12	4	5	6	4	4	11	6	5	4	8	5	2	4
36	12	4	6	6	4	4	12	6	5	4	8	5	2	4
42	12	4	6	4	4	4	12	6	6	4	8	5	2	4
48	12	4	6	4	4	4	12	4	6	4	8	5	2	4
54	12	4	6	5	4	4	12	4	7	4	8	5	2	4
60	14	4	7	5	4	4	12	4	7	4	8	5	2	4
66	16	4	8	5	4	4	12	4	8	4	8	5	2	4
72	18	4	9	5	4	4	12	4	8	4	8	5	2	4



SECTION B–B

1. BOX WALLS MUST BE FORMED INSIDE AND OUTSIDE WITH APPROVED MATERIALS.
2. USE CLASS "A" CONCRETE.
3. TYPICAL CAST IN PLACE BOX FOR 30" OR LARGER PIPE.
4. REINFORCING STEEL SHALL MEET STANDARD DETAIL SPECIFICATION AND DETAIL FOR TOLERANCES.
5. IF FINISHED SURFACE IS OTHER THAN IMPERVIOUS COVER IT SHALL BE 12 INCHES ABOVE GRADE.

TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT No. 17 STANDARD DETAILS	BOX MANHOLE 30" AND LARGER PIPE (2 OF 2)	
ADOPTED: 03/01/2016	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	DETAIL NO. WW06

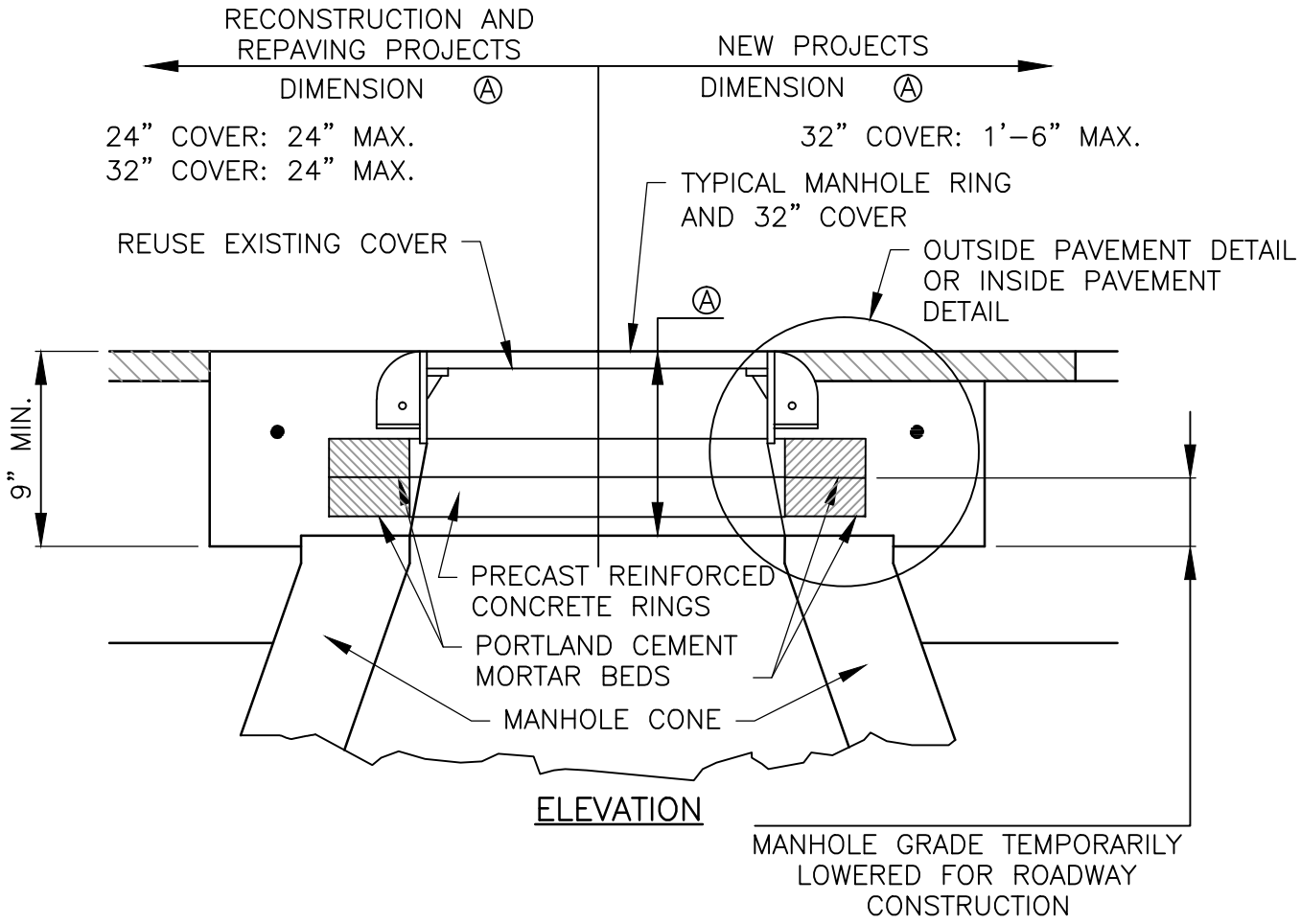


ELEVATION

NOTES:

1. MANHOLE SECTIONS TEMPORARILY REMOVED FOR ROADWAY CONSTRUCTION MAY BE REUSED ONLY WITH THE WRITTEN APPROVAL OF THE INSPECTOR. O-RINGS SHALL NOT BE REUSED.
2. ANY COMBINATION OF REMOVING THE CONCRETE RINGS, AND/OR THE MANHOLE CONE, AND/OR THE STRAIGHT RISER SECTION OF THE MANHOLE SHALL BE ACCEPTABLE TO TEMPORARILY LOWER THE MANHOLE GRADE FOR ROADWAY RECONSTRUCTION.
3. WHILE THE MANHOLE IS TEMPORARILY LOWERED, A SHEET OF STEEL SUITABLE TO SUPPORT ALL IMPOSED LOADS SHALL BE USED TO COVER THE OPENING. THE STEEL PLATE SHALL BE SET IN MORTAR TO PREVENT LEAKAGE.
4. SUBGRADE AND BASE MATERIALS SHALL BE COMPACTED TO 95% AND 100% DENSITIES, RESPECTIVELY, COMPACTION SHALL BE BY MECHANICAL TAMPING TO THE DENSITIES SPECIFIED.
5. SEE STANDARD DETAIL FOR BACKFILL REQUIREMENTS.

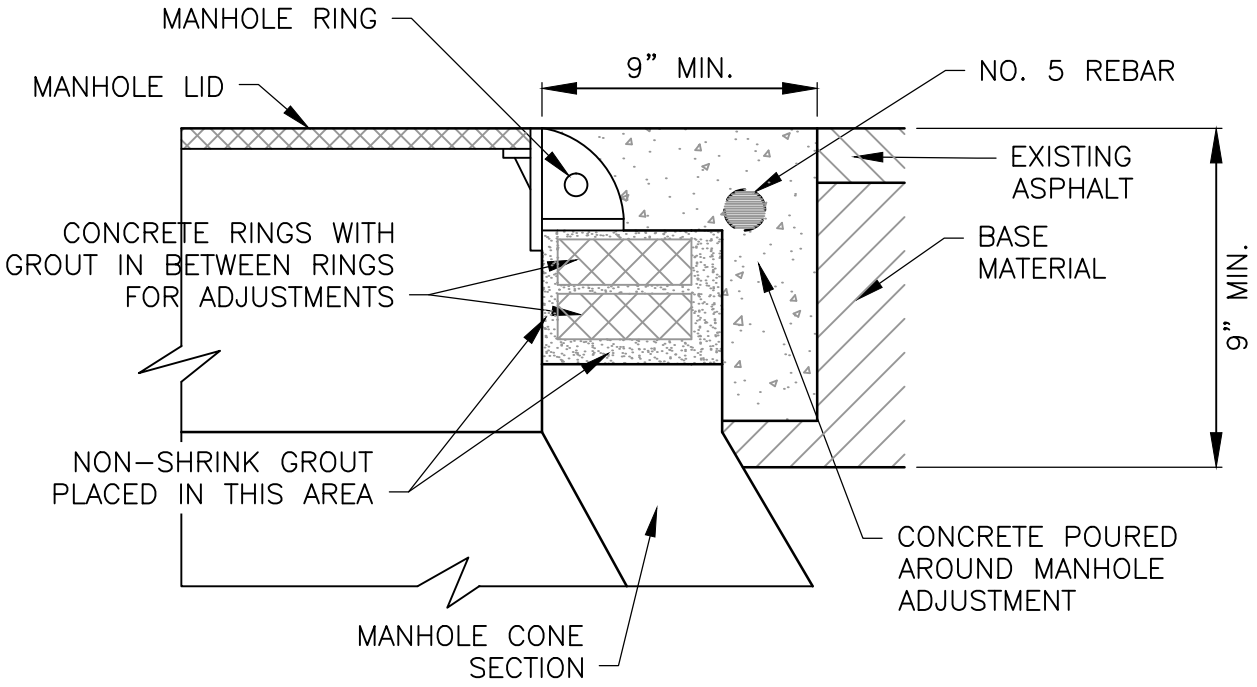
TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT No. 17 STANDARD DETAILS	MAJOR MANHOLE ADJUSTMENT	
ADOPTED: 03/01/2016	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	DETAIL NO. WW07



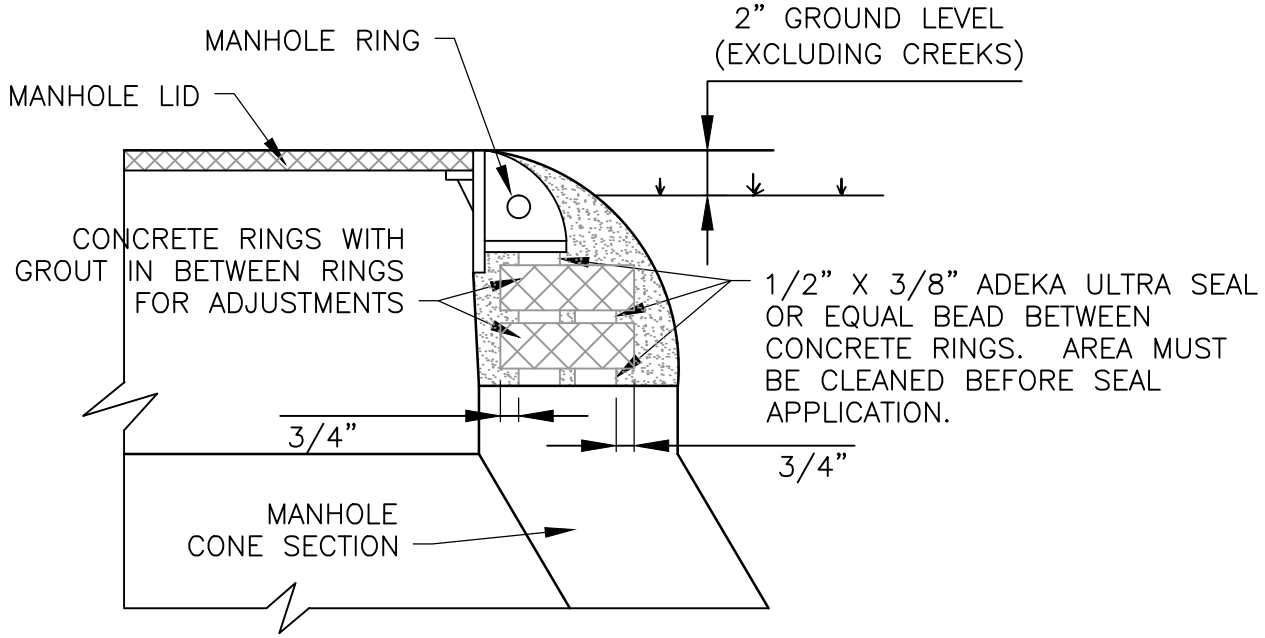
NOTES:

1. SEE STANDARD DETAIL FOR BACKFILL REQUIREMENTS.

	TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT No. 17 STANDARD DETAILS	NEW MANHOLE CONSTRUCTION AND MINOR MANHOLE ADJUSTMENT (1 OF 2)	
	ADOPTED: 03/01/2016	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	DETAIL NO. WW08



ELEVATION
INSIDE PAVEMENT DETAIL



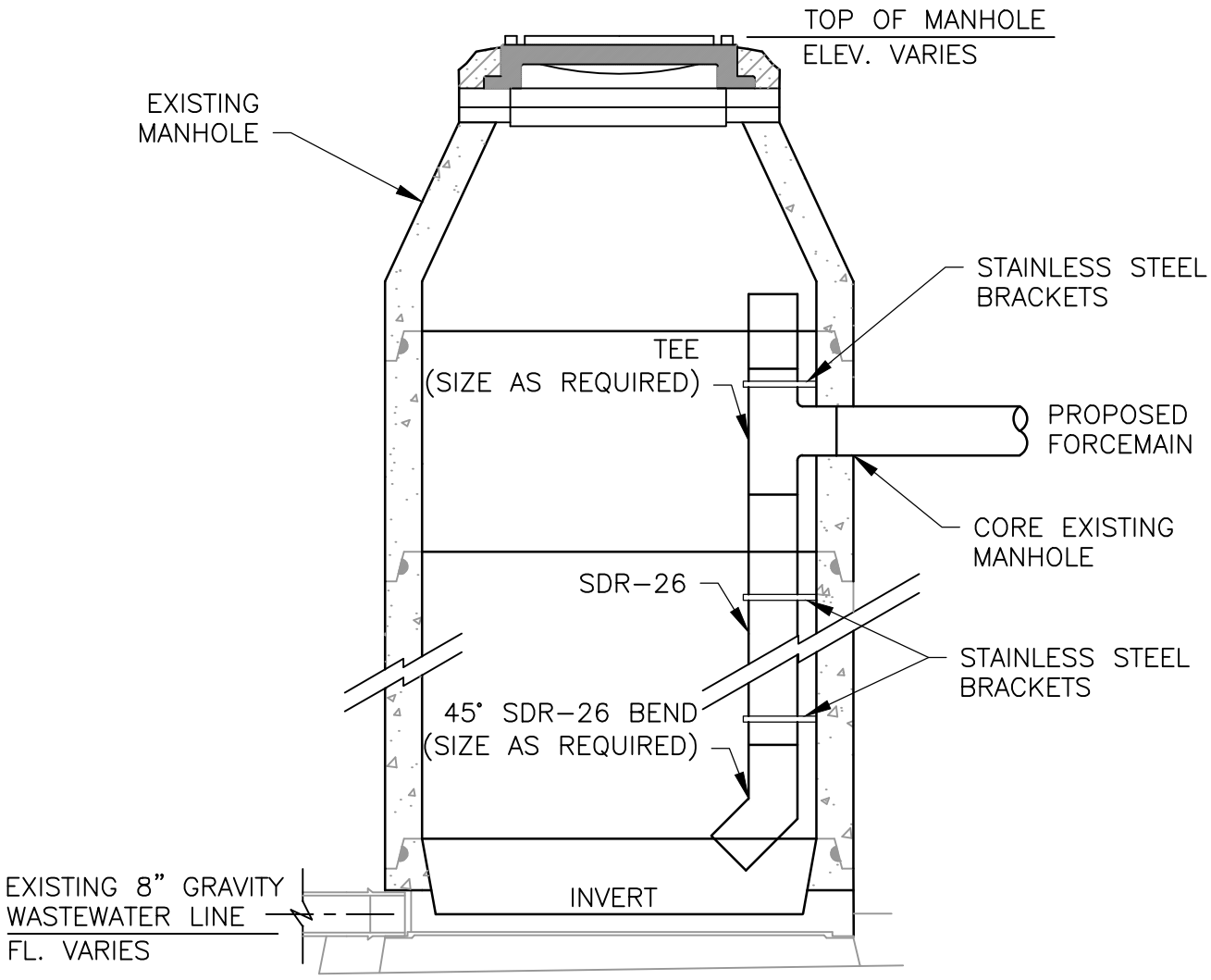
ELEVATION
OUTSIDE PAVEMENT DETAIL

NOTES:

1. MORTAR BEDS SHALL NOT EXCEED 1".
2. SUBGRADE AND BASE MATERIALS SHALL BE COMPACTED ACCORDING TO STANDARD SPECIFICATIONS.

	TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT No. 17 STANDARD DETAILS	NEW MANHOLE CONSTRUCTION AND MINOR MANHOLE ADJUSTMENT (2 OF 2)
	ADOPTED: 03/01/2016	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.
		DETAIL NO. WW08

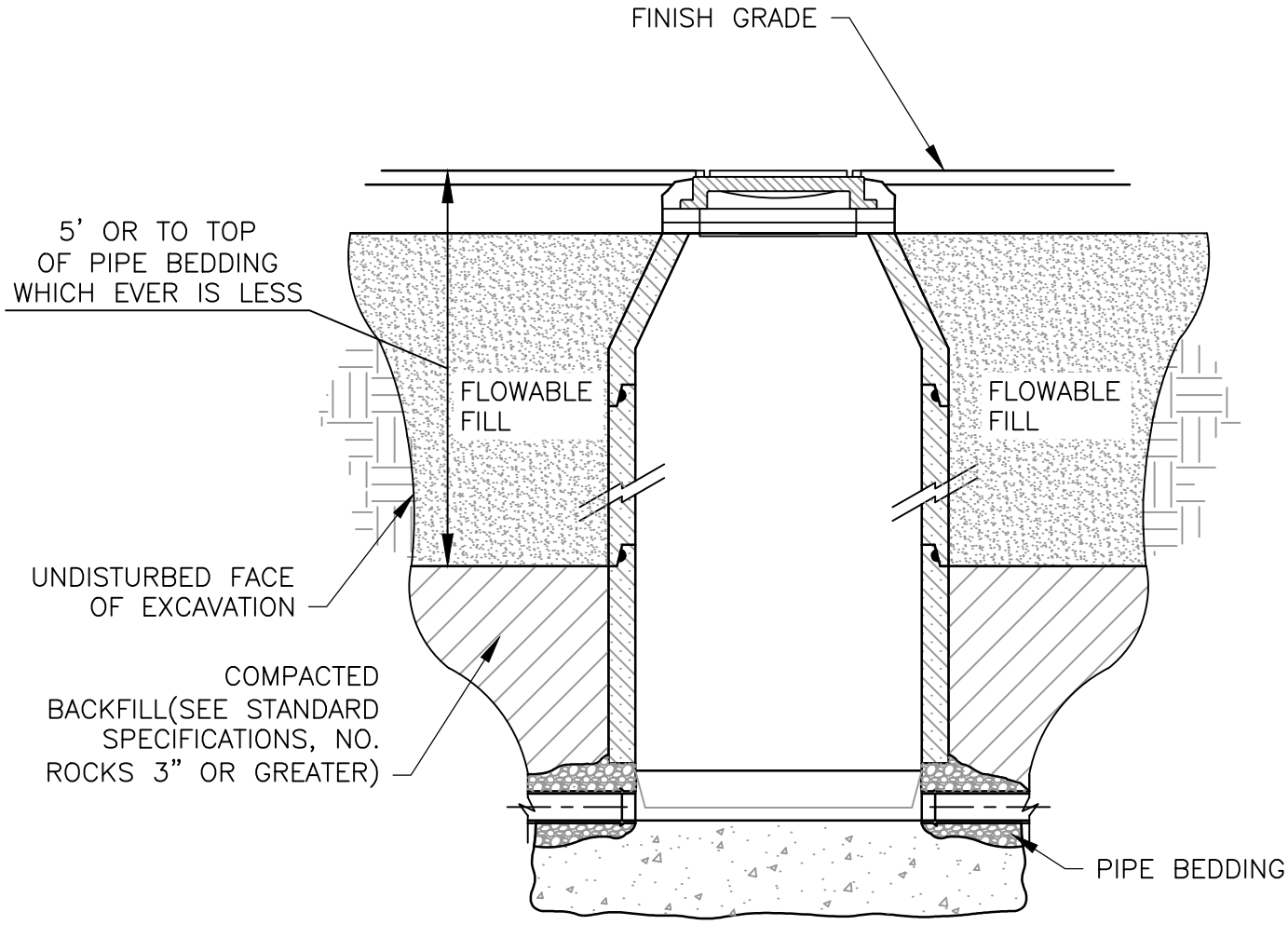
*ALL PIPES INSIDE MANHOLE
MUST BE GLUED



NOTES:

1. INTERIOR OF MANHOLE TO BE COATED WITH 1/2" THICK LAFARGE SEWER COAT.
2. SEE STANDARD DETAIL FOR BACKFILL REQUIREMENTS.

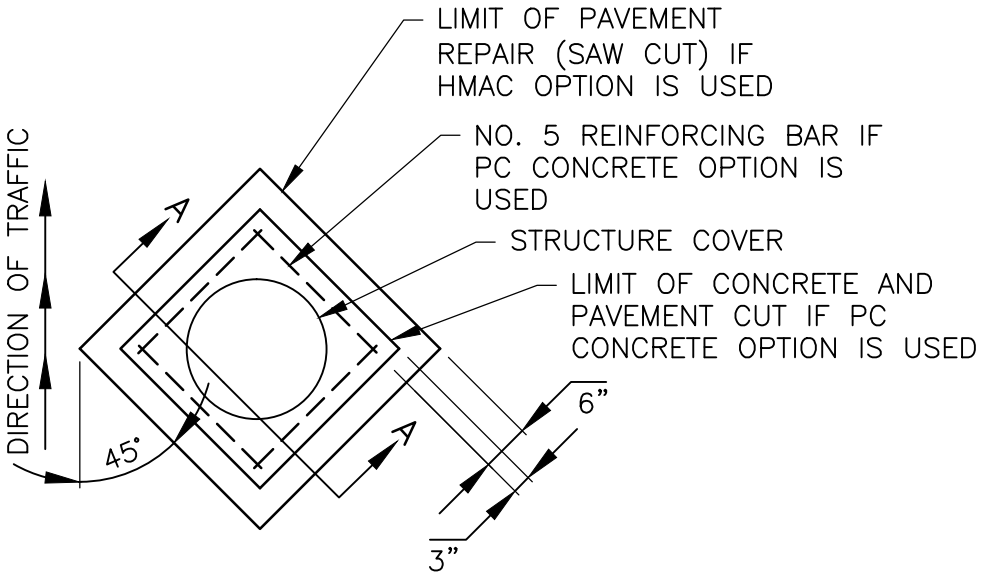
	TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT No. 17 STANDARD DETAILS	CONNECTION TO EXISTING MANHOLE WITH INLET DROP	
	ADOPTED: 03/01/2016	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	DETAIL NO. WW09



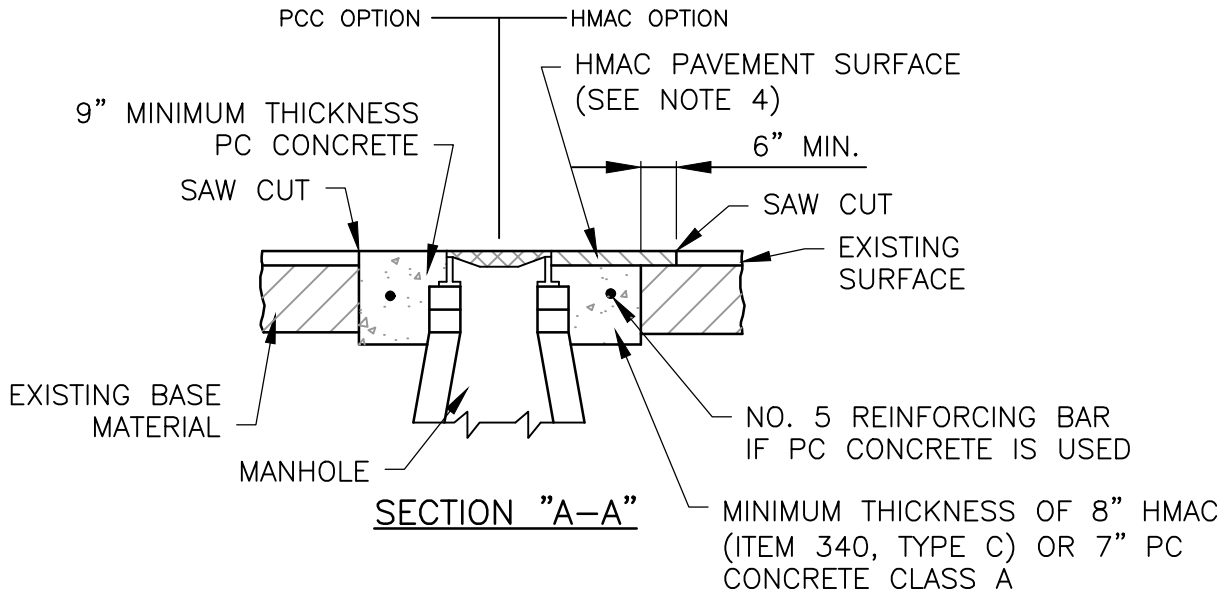
NOTES:

1. ALL MANHOLES LOCATED IN THE ROADWAY SHALL BE INSTALLED FLUSH TO MATCH ROAD SURFACE. MANHOLES LOCATED OUTSIDE OF PAVEMENT SHALL BE 12 INCHES ABOVE GRADE.

	TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT No. 17 STANDARD DETAILS	MANHOLE BACKFILL REQUIREMENTS	
	ADOPTED: 03/01/2016	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	DETAIL NO. WW10



PLAN

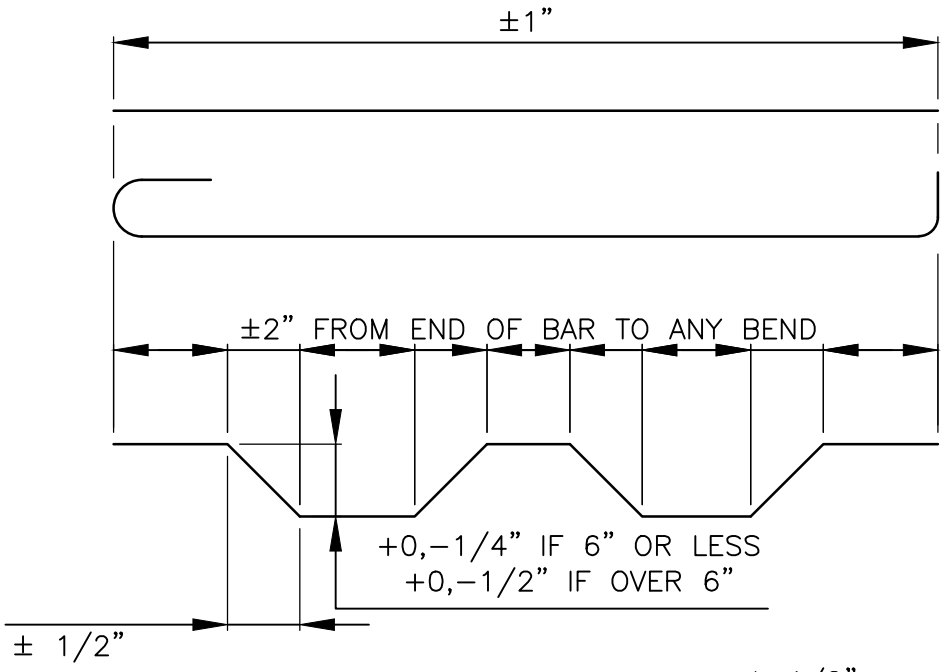


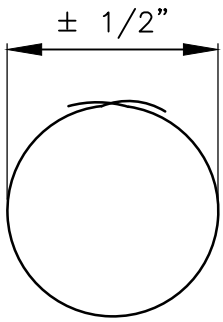
SECTION "A–A"

NOTES:

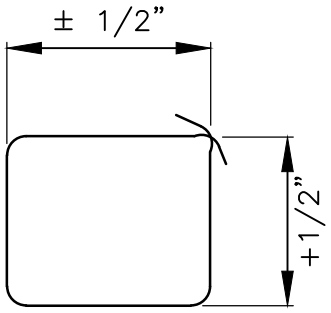
1. IF PC CONCRETE IS USED AROUND THE MANHOLE, THE CONCRETE SHALL BE REINFORCED WITH NO. 5 BARS AS SHOWN. THE CONCRETE SHALL EXTEND TO EDGE OF SAW CUT PAVEMENT EDGE.
2. REPLACEMENT AC SURFACE LAYER SHALL BE OF THE TYPE AND THICKNESS BASED ON FUNCTIONAL CLASSIFICATION;
   A. MIN. 2" HMAC TYPE "D" FOR TRENCH REPAIR IN LOCAL/RESIDENTIAL STREETS.
   B. MIN. 3" HMAC TYPE "C" FOR TRENCH REPAIR IN COLLECTOR/ARTERIAL STREETS.

	TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT No. 17 STANDARD DETAILS	CASTING ADJUSTMENT	
	ADOPTED: 03/01/2016	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	DETAIL NO. WW11





SPIRAL OR CIRCULAR TIE

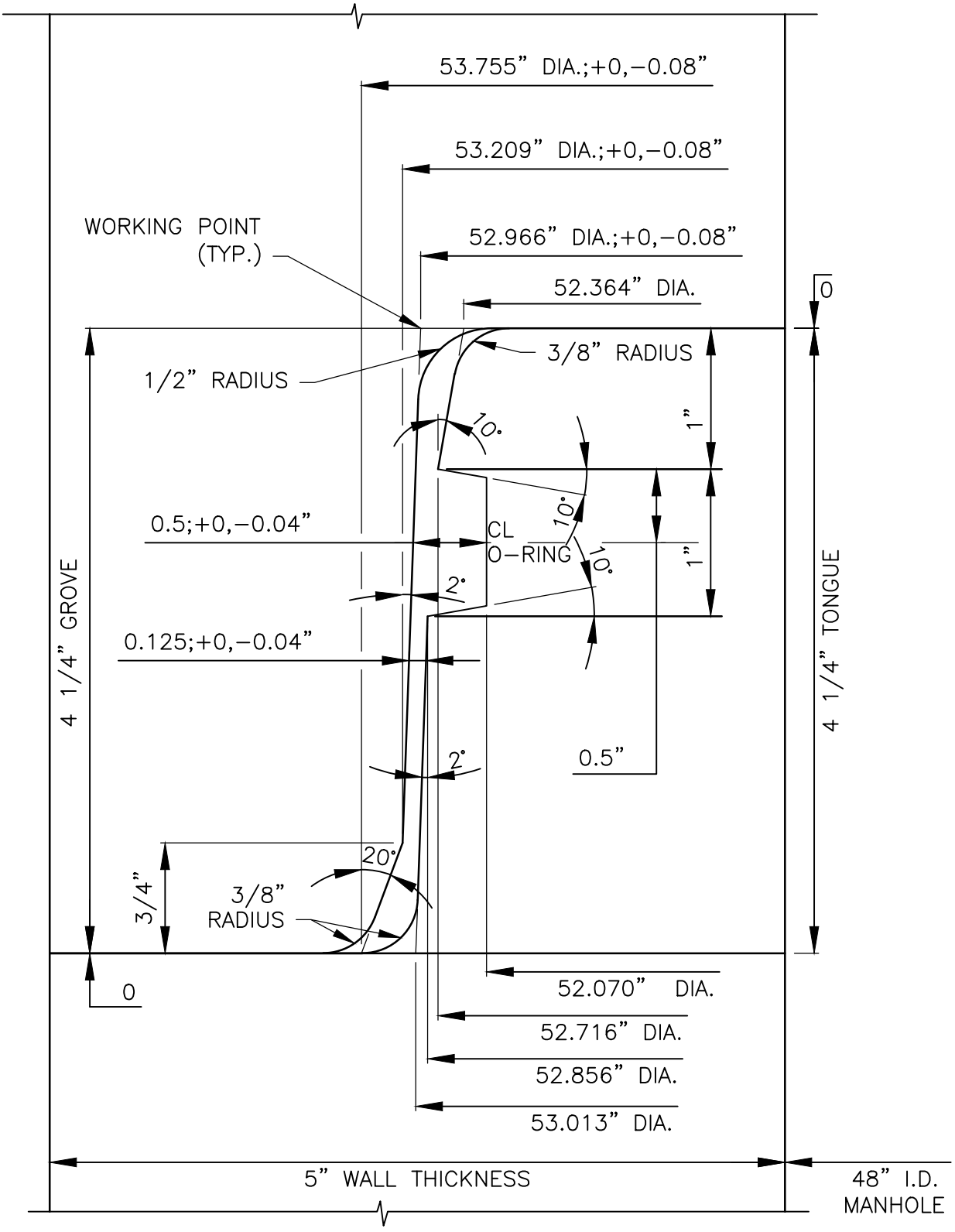


STIRRUP OR TIE

NOTE:

FABRICATING TOLERANCES FOR BARS, FROM PLAN CENTERLINE DIMENSIONS SHALL NOT BE GREATER THEN SHOWN.

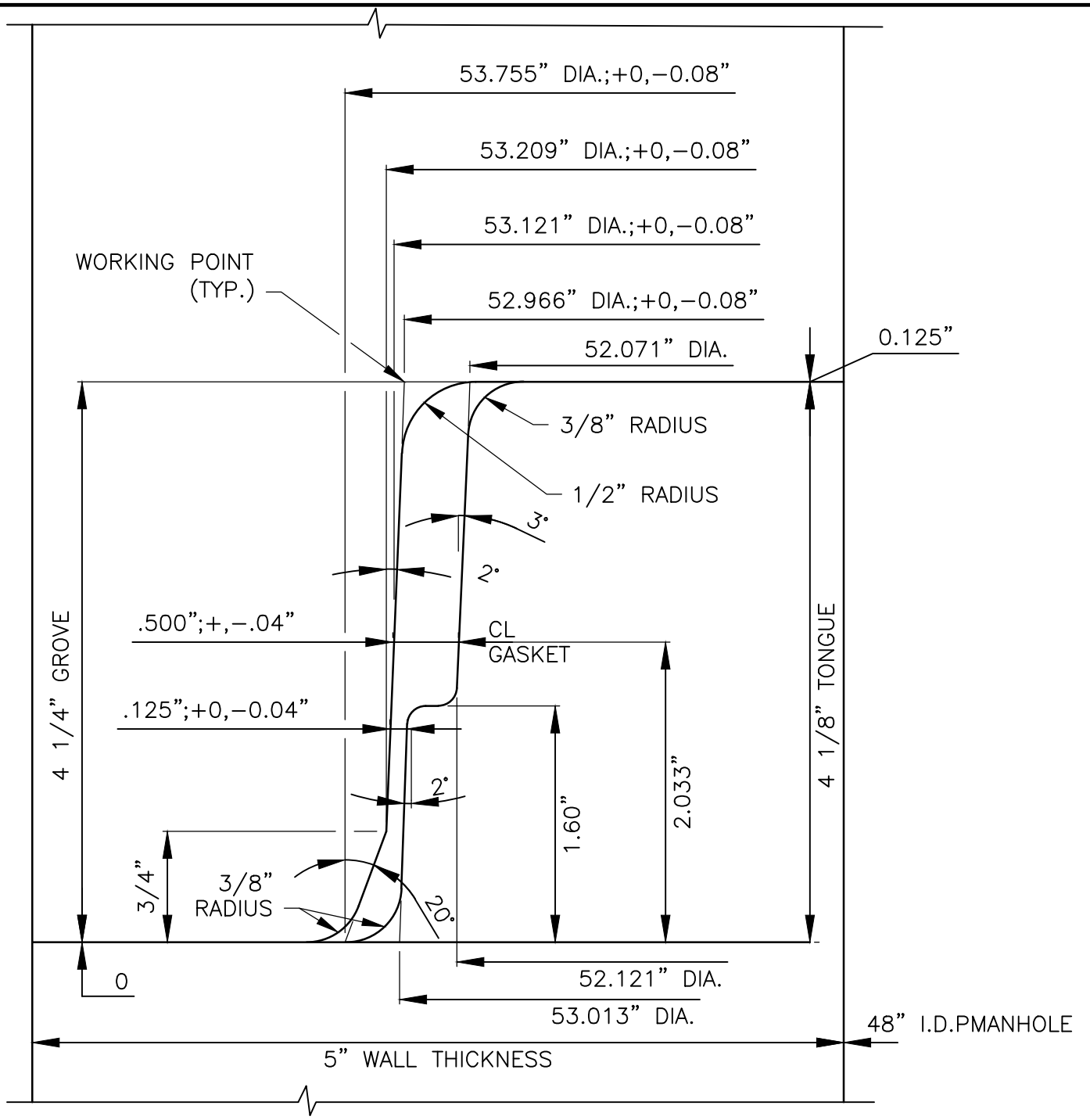
	TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT No. 17 STANDARD DETAILS	REINFORCING STEEL TOLERANCES	
	ADOPTED: 03/01/2016	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	DETAIL NO. WW12

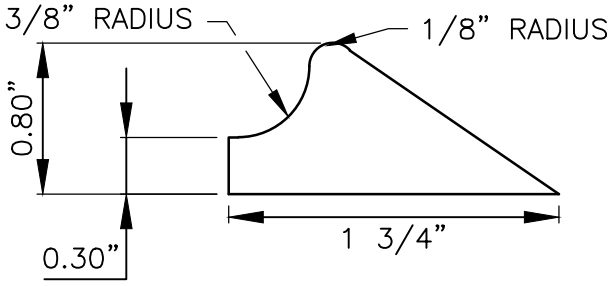


NOTES:

1. O−RING DIMENSION 25/32" DIA., 1013 cc VOLUME.

TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT No. 17 STANDARD DETAILS	O'RING JOINT DETAIL PRECAST MANHOLE SECTION	
ADOPTED: 03/01/2016	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	DETAIL NO. WW13



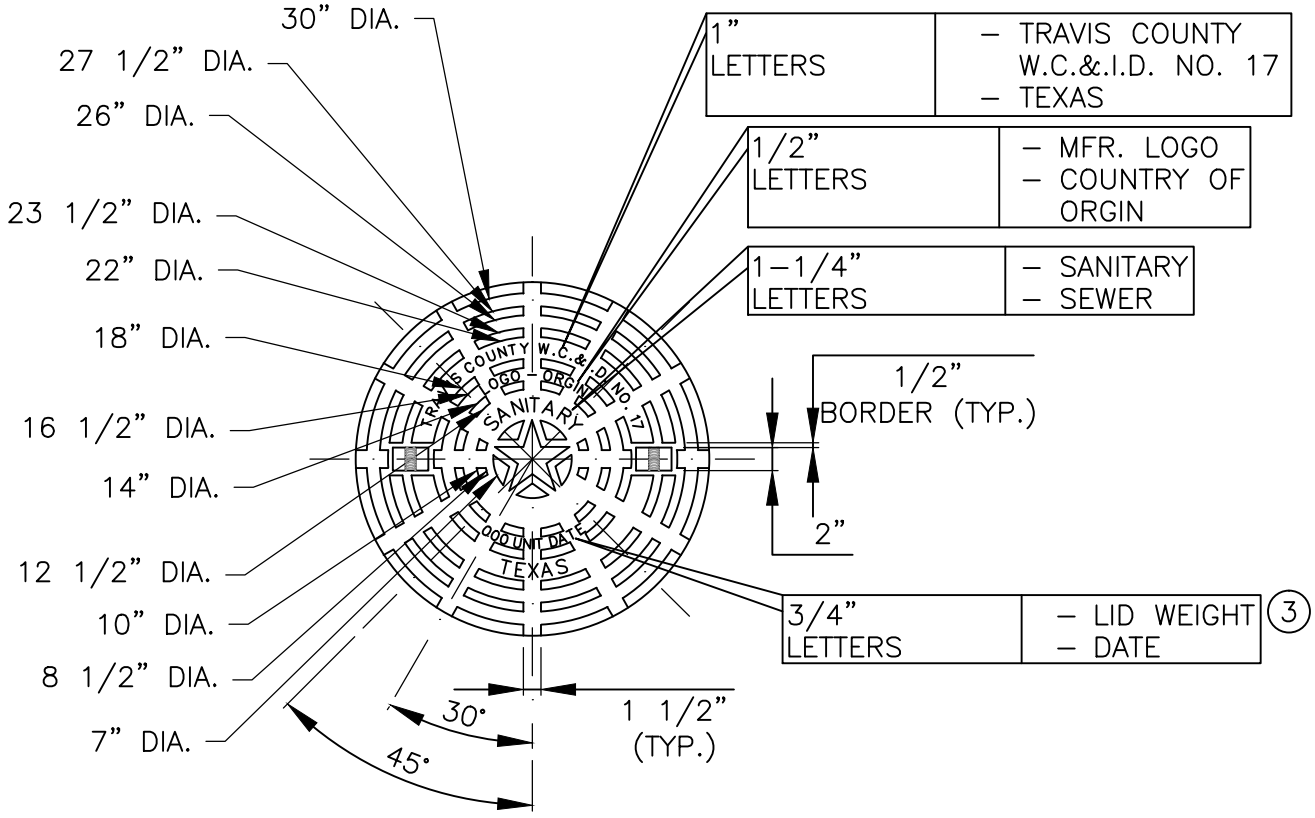


NOTES:

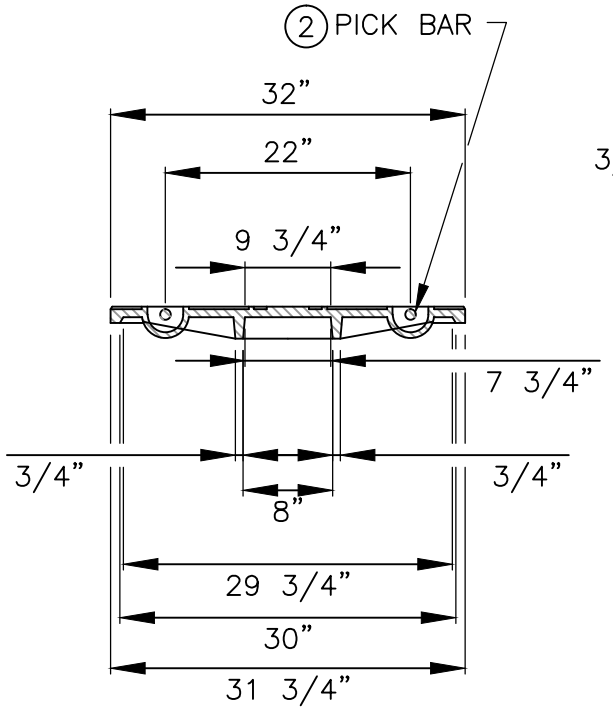
GASKET STRETCH; MIN. 10, MAX. 15%.

WEDGE TYPE GASKET TYPICAL DIMENSIONS

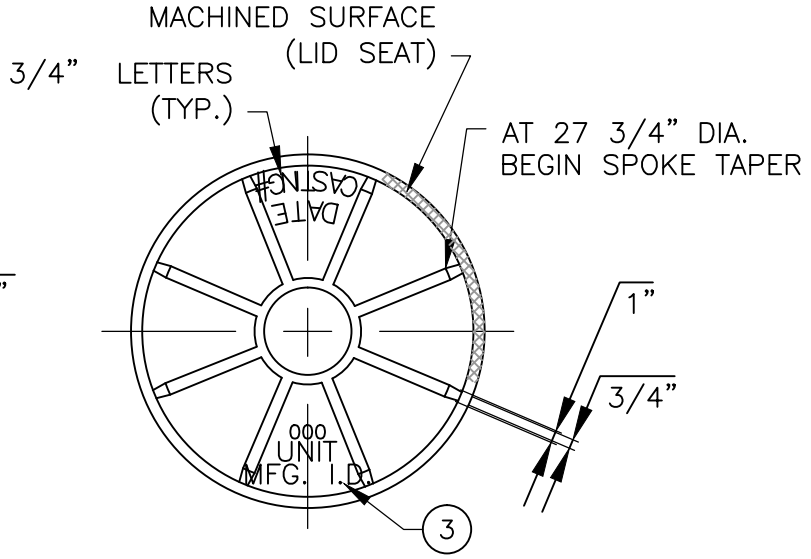
TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT No. 17 STANDARD DETAILS	WEDGE - SEAL JOINT DETAIL PRECAST MANHOLE SECTION	
ADOPTED: 03/01/2016	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	DETAIL NO. WW14



LID PLAN VIEW



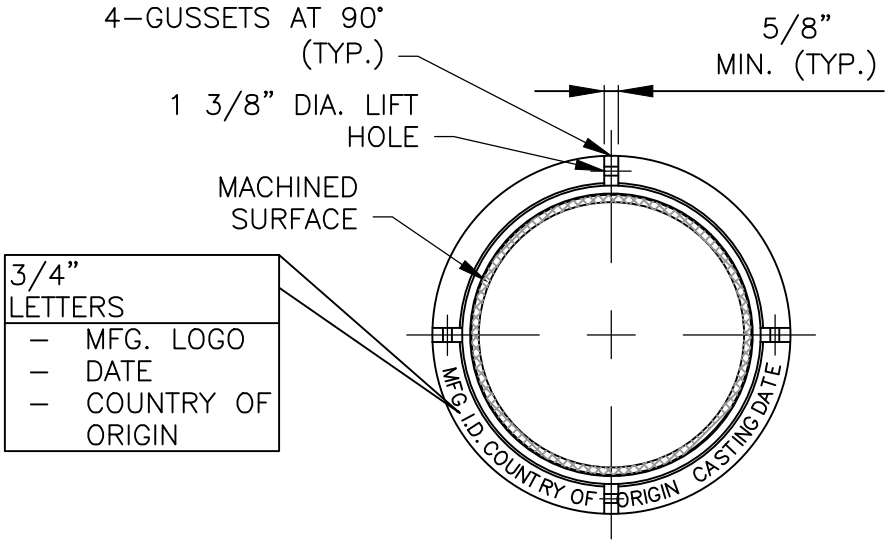
LID SECTION VIEW



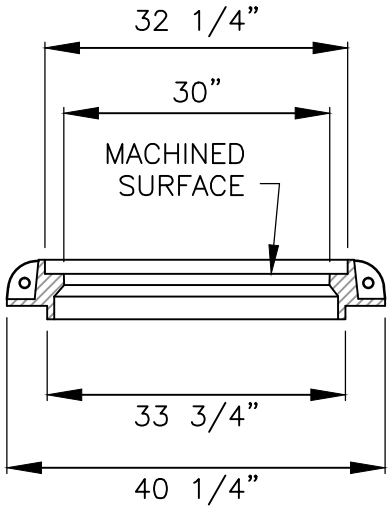
(RELIEVE SPOKE ENDS 1/8" BEYOND LID FOR SEAT MACHINING PURPOSES)

LID BOTTOM VIEW

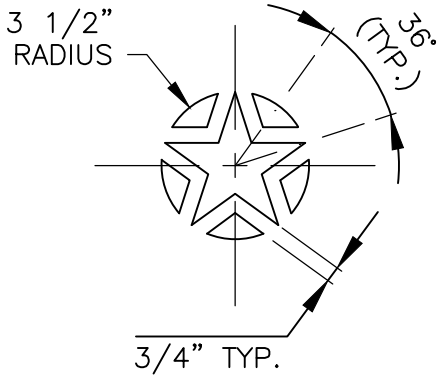
	TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT No. 17 STANDARD DETAILS	SANITARY SEWER MANHOLE RING AND 32" COVER (1 OF 3)
	ADOPTED: 03/01/2016	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.
		DETAIL NO. WW15



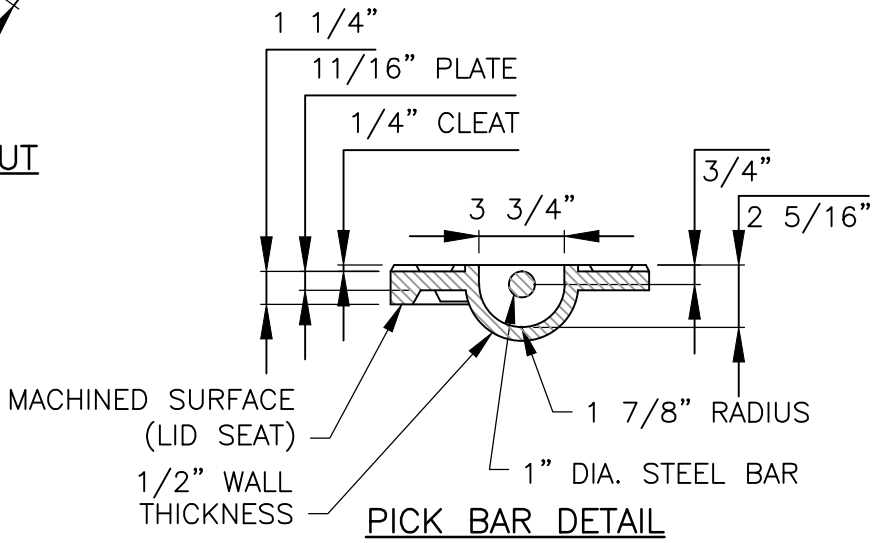
MANHOLE RING



RING SECTION

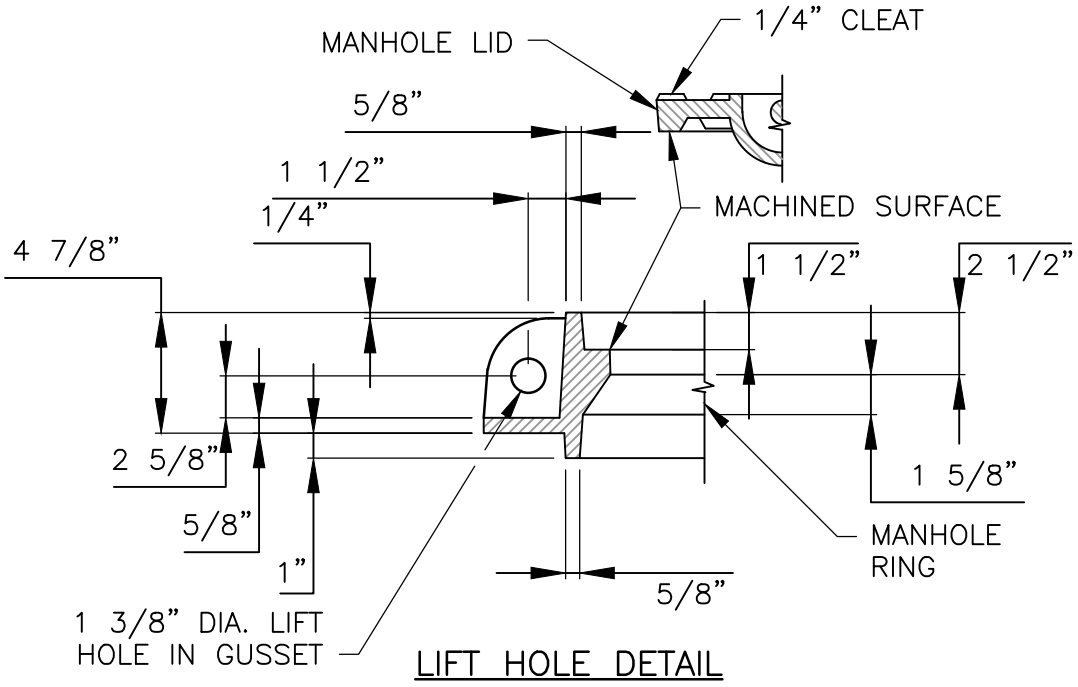


STAR LAYOUT



PICK BAR DETAIL

TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT No. 17 STANDARD DETAILS	SANITARY SEWER MANHOLE RING AND 32" COVER (2 OF 3)	
ADOPTED: 03/01/2016	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	DETAIL NO. WW15

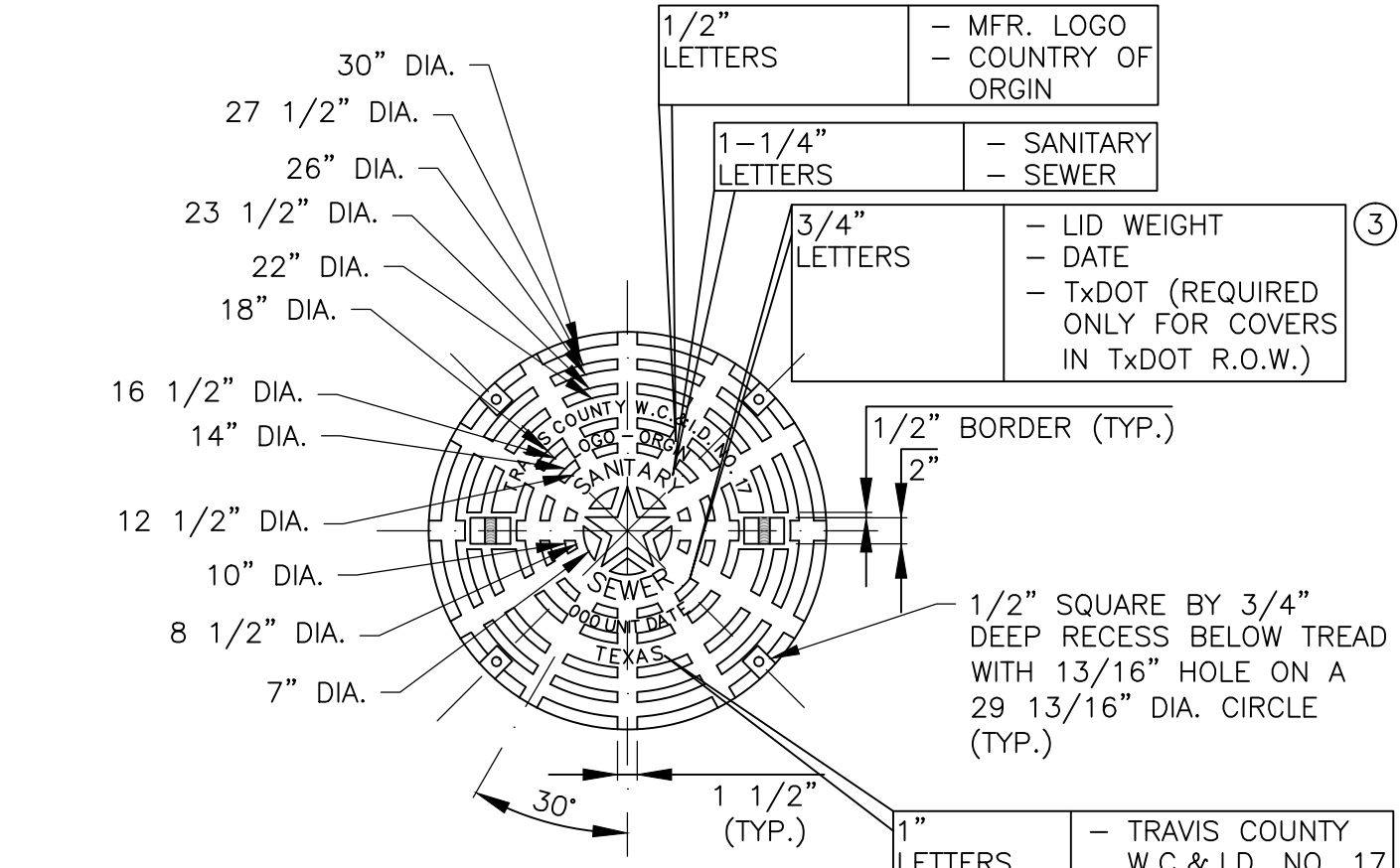


LIFT HOLE DETAIL

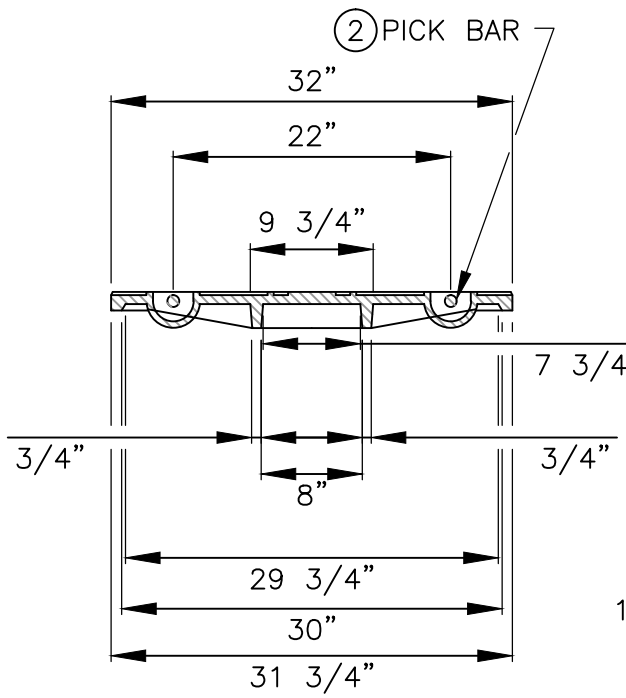
NOTES:

1. ALL CORNERS AND EDGES SHALL HAVE A 1/16" MINIMUM RADIUS.
2. LIDS SHALL BE CAST WITH TWO 1" DIA. STEEL PICK BARS.
3. LID WEIGHTS SHALL BE 210 LBS. FOR CAST IRON OR 175 LBS. FOR DUCTILE IRON. WEIGHT SHALL BE CAST ON BOTH TOP AND BOTTOM OF LID.
4. MANUFACTURER SHALL PROVIDE INDEPENDENT TESTING LABORATORY REPORT ON 25,000 POUND PROOF LOAD TEST CONDUCTED ACCORDING TO AASHTO M–306.
5. FILLETS SHALL BE 1/4" RADIUS UNLESS OTHERWISE SPECIFIED.
6. MANUFACTURER SHALL REMOVE EXCESS IRON AND MACHINE FINISH SEATING SURFACES TO NOTED DIMENSIONS.
7. BOLTS SHALL BE 5/8" X 1 3/7" X 11 N.C. STAINLESS STEEL HEX HEAD (TYPE 316).

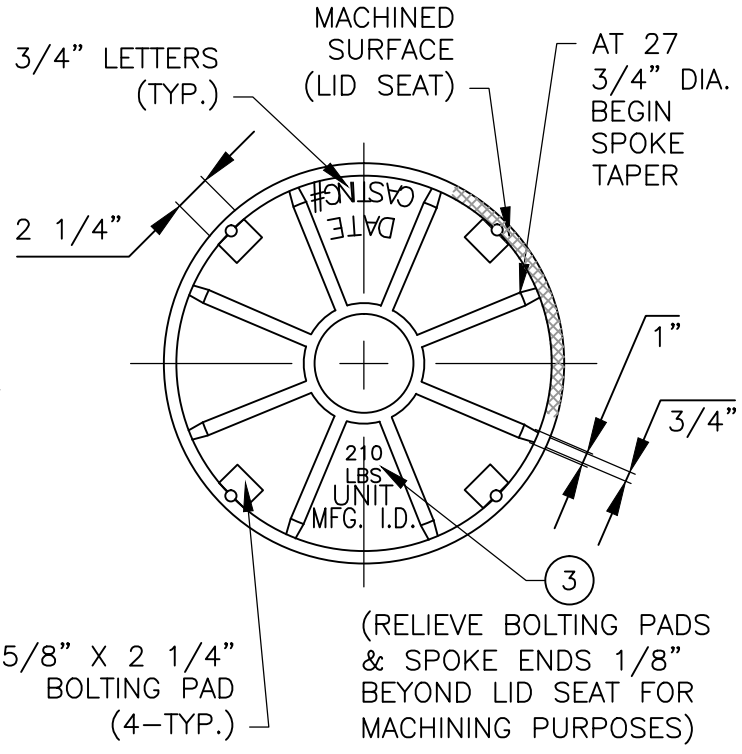
	TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT No. 17 STANDARD DETAILS	SANITARY SEWER MANHOLE RING AND 32" COVER (3 OF 3)	
	ADOPTED: 03/01/2016	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	DETAIL NO. WW15



LID PLAN VIEW

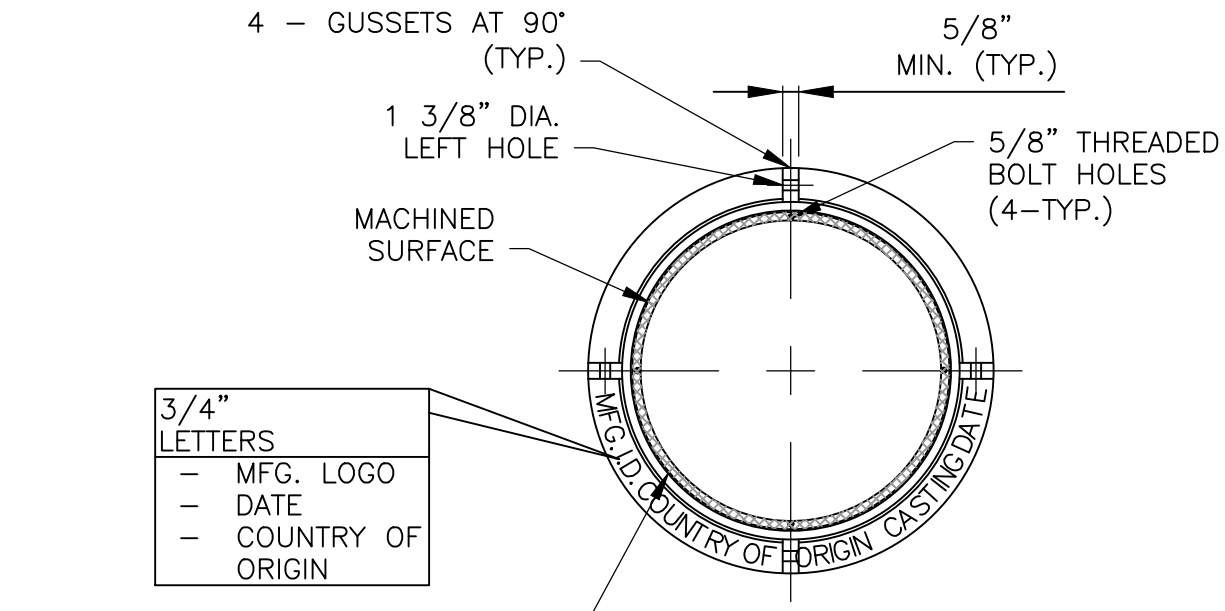


LID SECTION VIEW

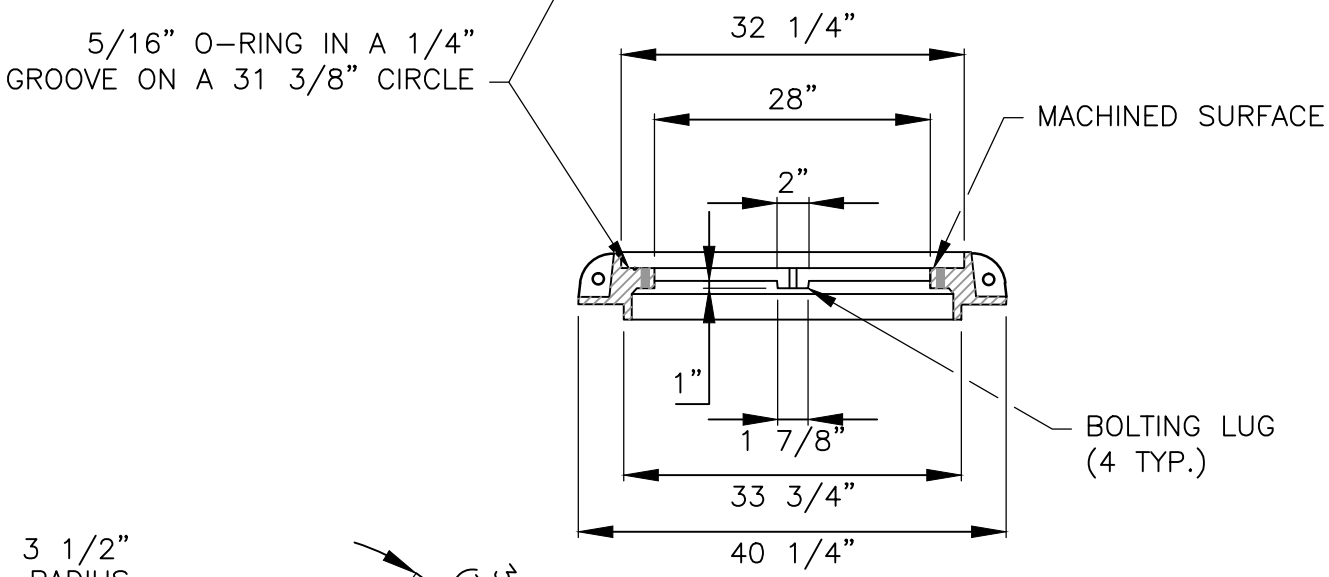


LID BOTTOM VIEW

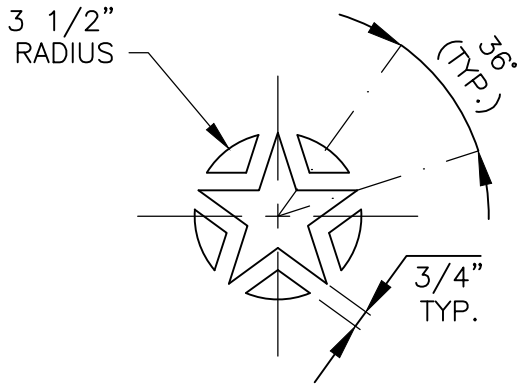
TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT No. 17 STANDARD DETAILS	WATERTIGHT MANHOLE RING AND 32" COVER (1 OF 3)	
ADOPTED: 03/01/2016	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	DETAIL NO. WW16



MANHOLE RING

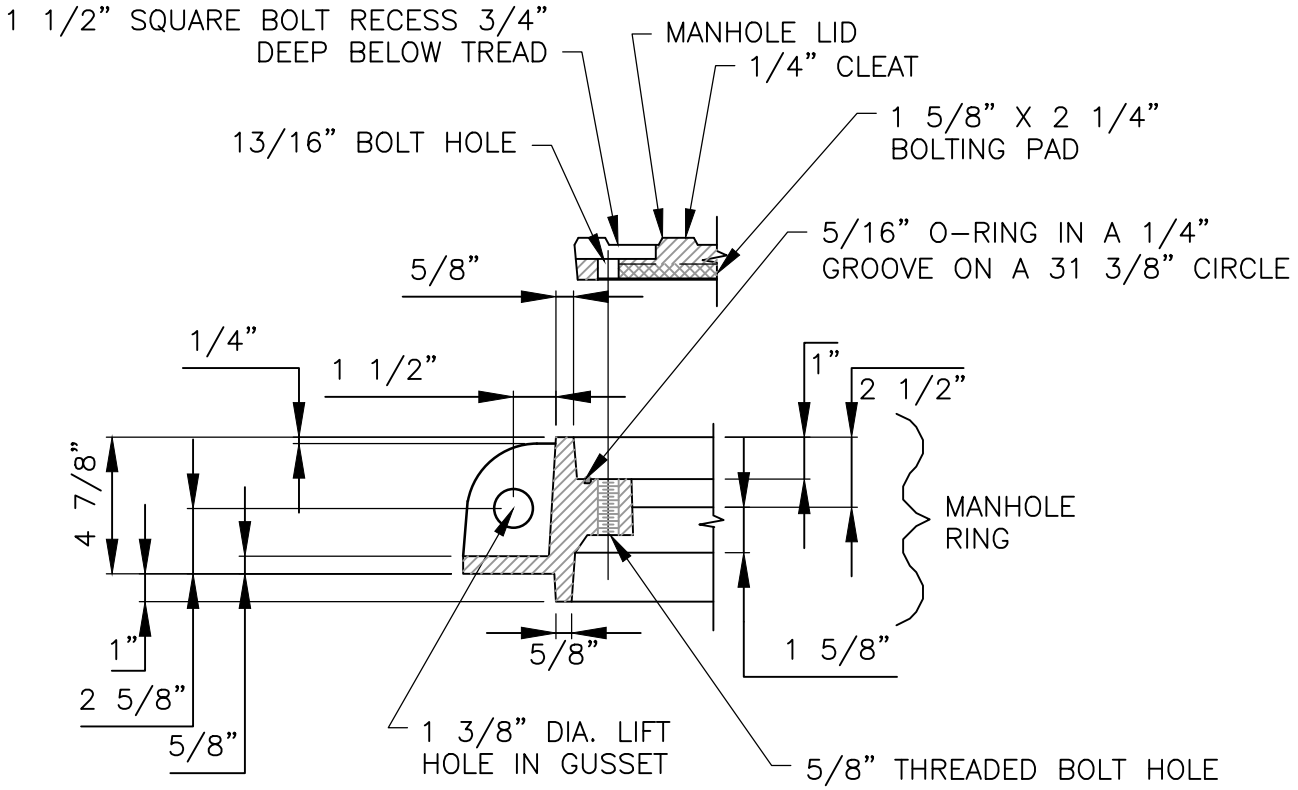


RING SECTION



STAR LAYOUT

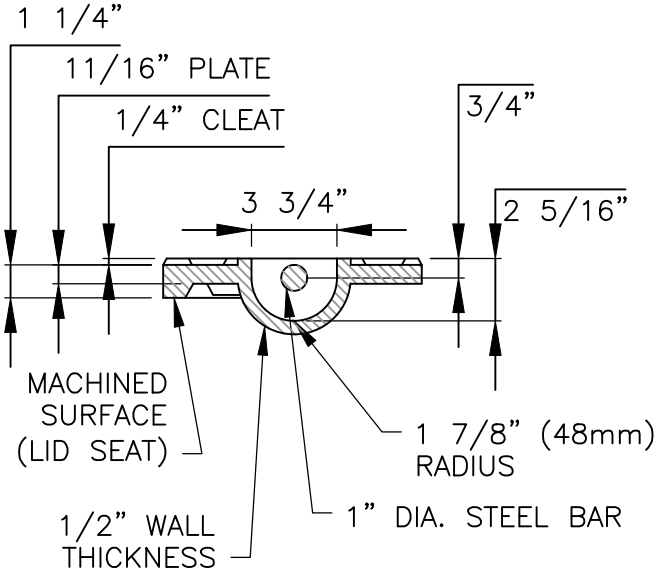
	TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT No. 17 STANDARD DETAILS	WATERTIGHT MANHOLE RING AND 32" COVER (2 OF 3)	
	ADOPTED: 03/01/2016	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	DETAIL NO. WW16



LIFT HOLE DETAIL

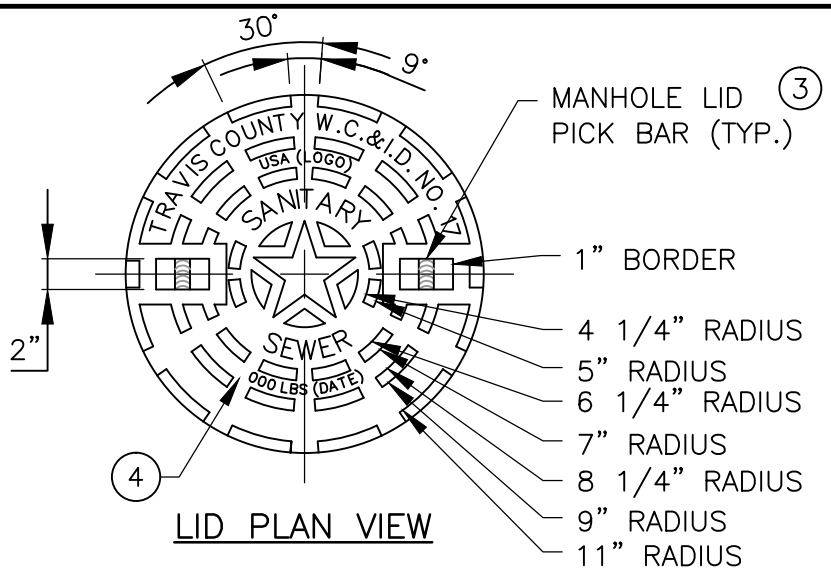
NOTES:

1. ALL CORNERS AND EDGES SHALL HAVE A 1/16" MINIMUM RADIUS.
2. LIDS SHALL BE CAST WITH TWO 1" DIA. STEEL PICK BARS.
3. LID WEIGHTS SHALL BE 210 LBS. FOR CAST IRON OR 175 LBS. FOR DUCTILE IRON. WEIGHT SHALL BE CAST ON BOTH TOP AND BOTTOM OF LID.
4. MANUFACTURER SHALL PROVIDE INDEPENDENT TESTING LABORATORY REPORT ON 25,000 POUND PROOF LOAD TEST CONDUCTED ACCORDING TO AASHTO M-306. (40,000 POUND FOR TxDOT RIGHT-OF-WAY).
5. FILLETS SHALL BE 1/4" RADIUS UNLESS OTHERWISE SPECIFIED.
6. MANUFACTURER SHALL REMOVE EXCESS IRON AND MACHINE FINISH SEATING SURFACES TO NOTED DIMENSIONS.
7. BOLTS SHALL BE 5/8" X 1 3/7" X 11 N.C. STAINLESS STEEL HEX HEAD (TYPE 316).

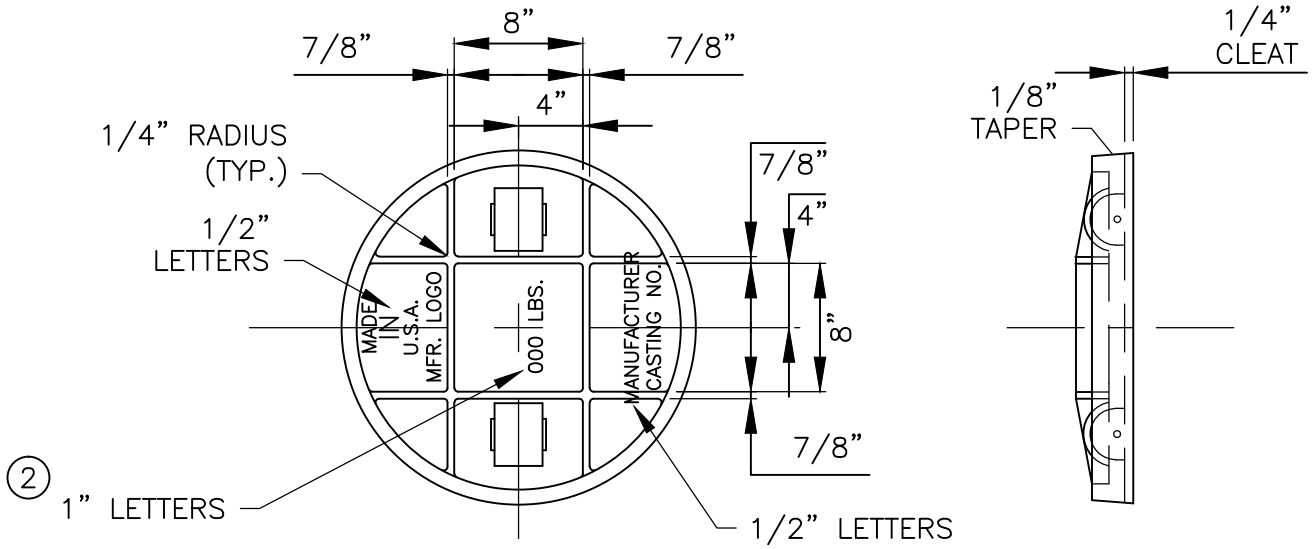


PICK BAR DETAIL

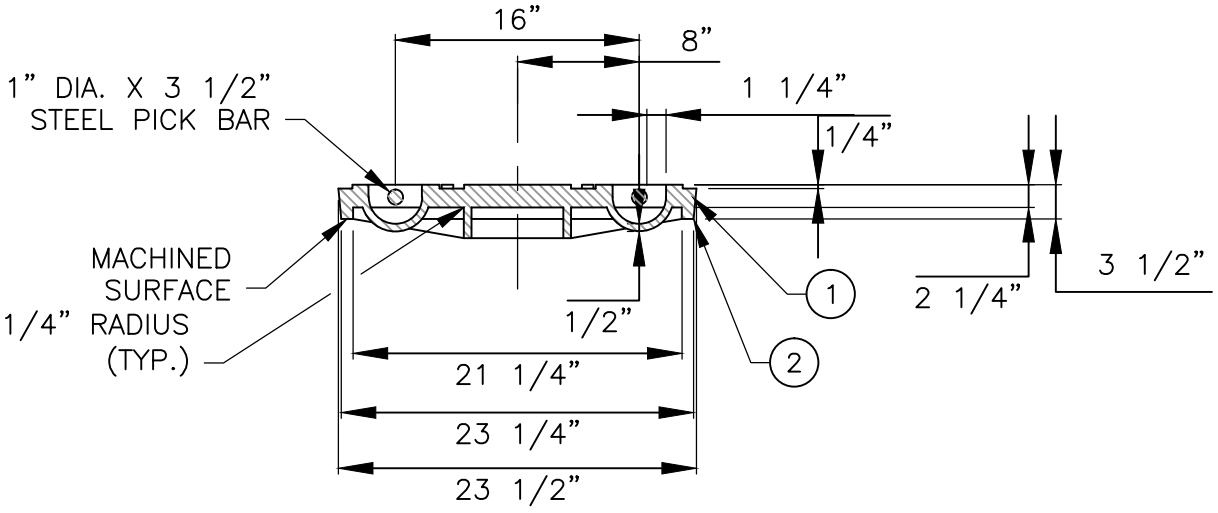
TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT No. 17 STANDARD DETAILS	WATERTIGHT MANHOLE RING AND 32" COVER (3 OF 3)	
ADOPTED: 03/01/2016	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	DETAIL NO. WW16



LID PLAN VIEW

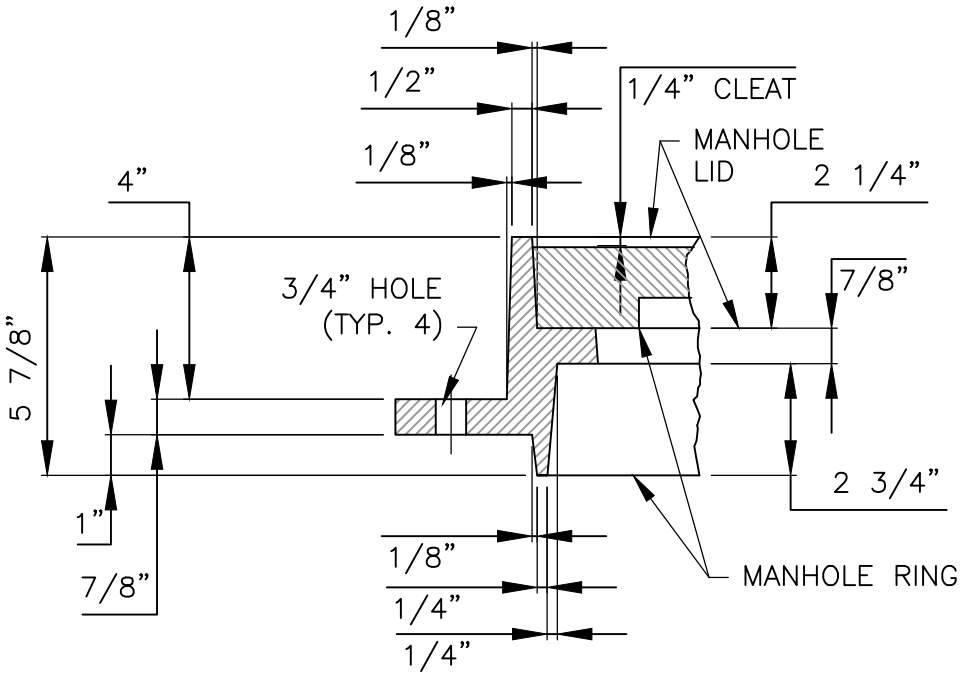


LID BOTTOM VIEW

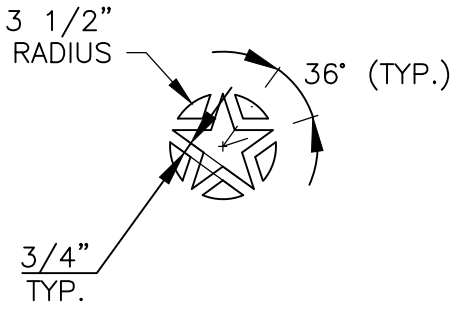


LID SECTION VIEW

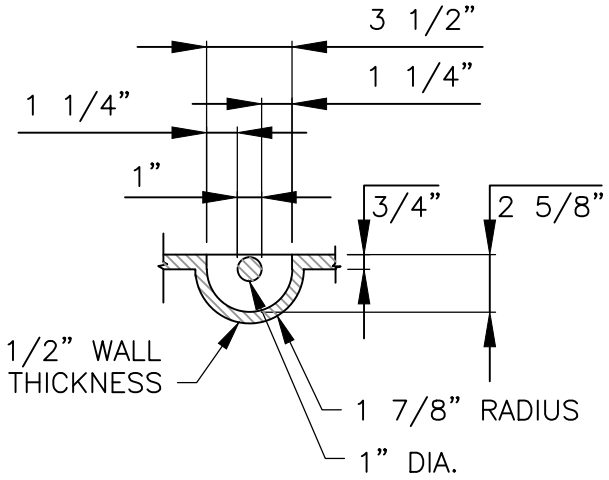
TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT No. 17 STANDARD DETAILS	SANITARY SEWER MANHOLE RING AND 24" COVER (1 OF 3)	
ADOPTED: 03/01/2016	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	DETAIL NO. WW17



BOLT HOLE DETAIL



STAR LAYOUT



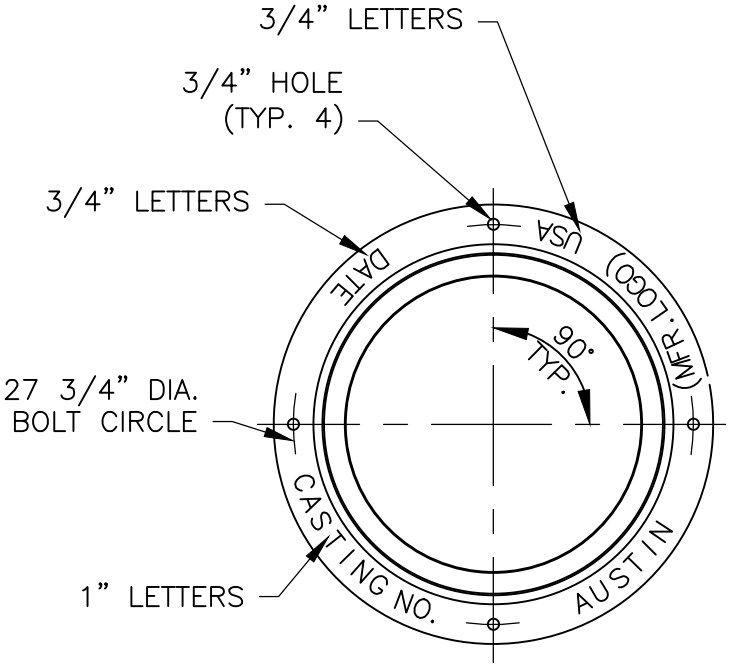
PICK BAR DETAIL

NOTES:

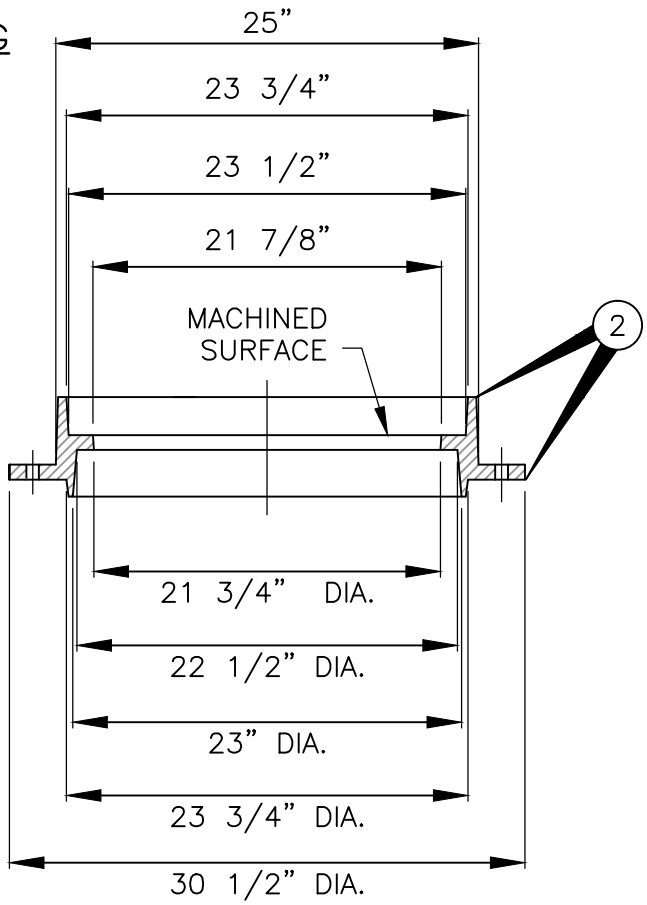
1. 3/4" x 1/4" CLEAT PER CITY SPECIFICATION, OR 1" x 1/4" CLEAT IN STATE MAINTAINED R.O.W.
2. BREAK ALL SHARP CORNERS 0.06" X 45° MIN.
3. LID IS CAST WITH TWO 1" X 3 1/2" STEEL PICK BARS.
4. LID WEIGHT 150 OR 170 LBS. CAST TOP & BOTTOM.

TYP. WEIGHT	LID	RING	SET
CITY/STATE	150/175 LBS	150 IBS	300/325 LBS

TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT No. 17 STANDARD DETAILS	SANITARY SEWER MANHOLE RING AND 24" COVER (2 OF 3)	
ADOPTED: 03/01/2016	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	DETAIL NO. WW17

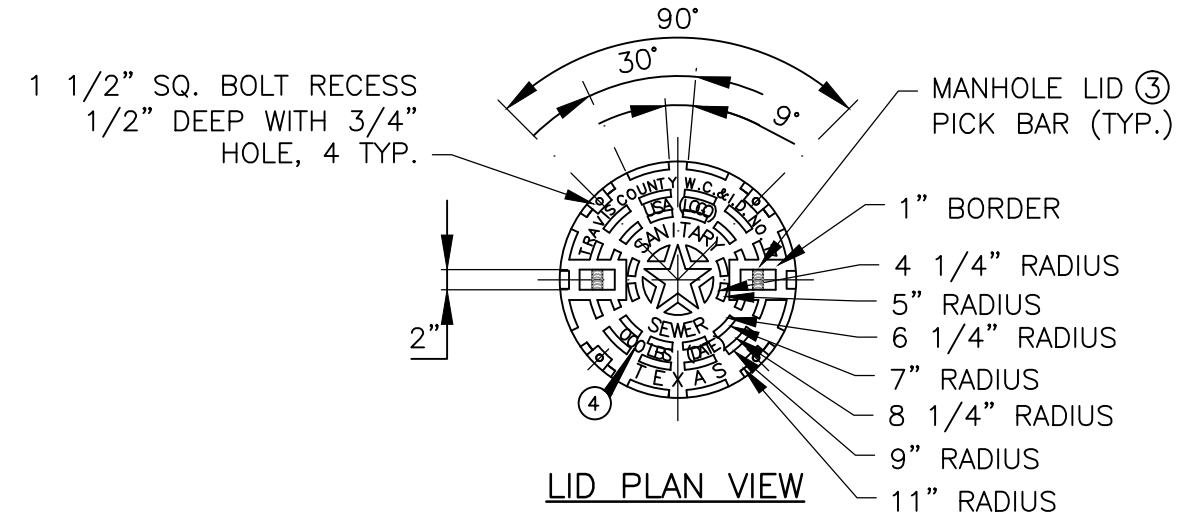


MANHOLE RING

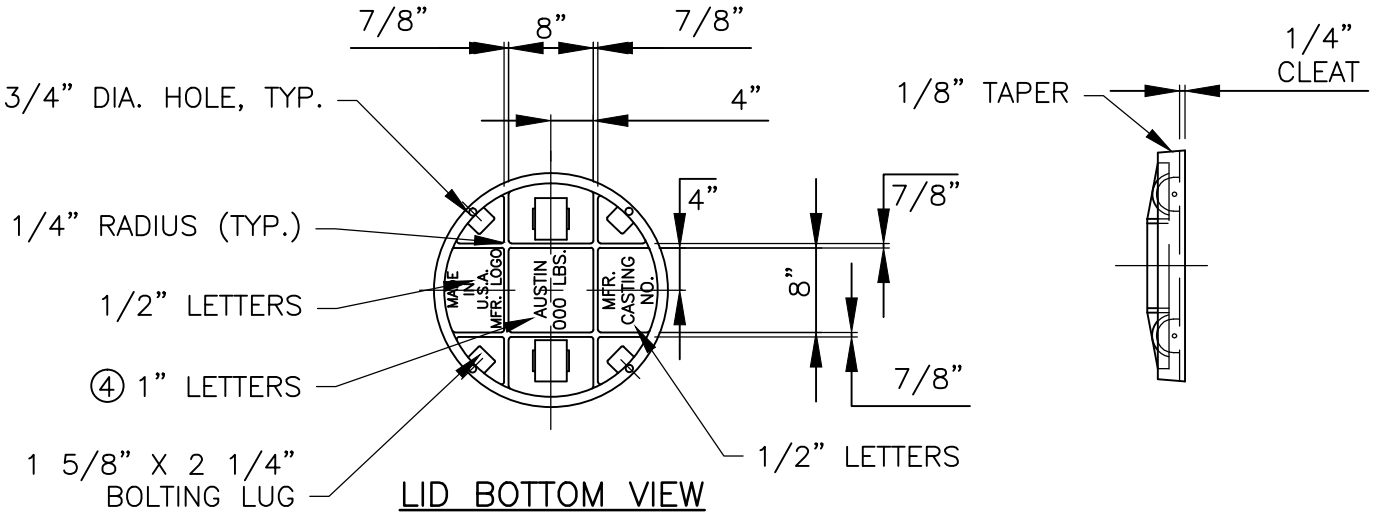


RING SECTION

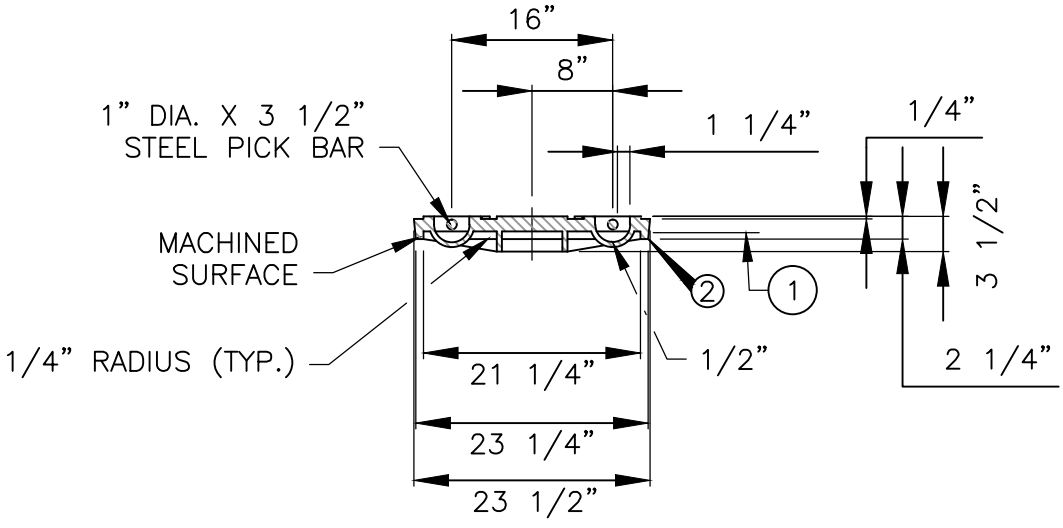
TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT No. 17 STANDARD DETAILS	SANITARY SEWER MANHOLE RING AND 24" COVER (3 OF 3)	
ADOPTED: 03/01/2016	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	DETAIL NO. WW17



LID PLAN VIEW

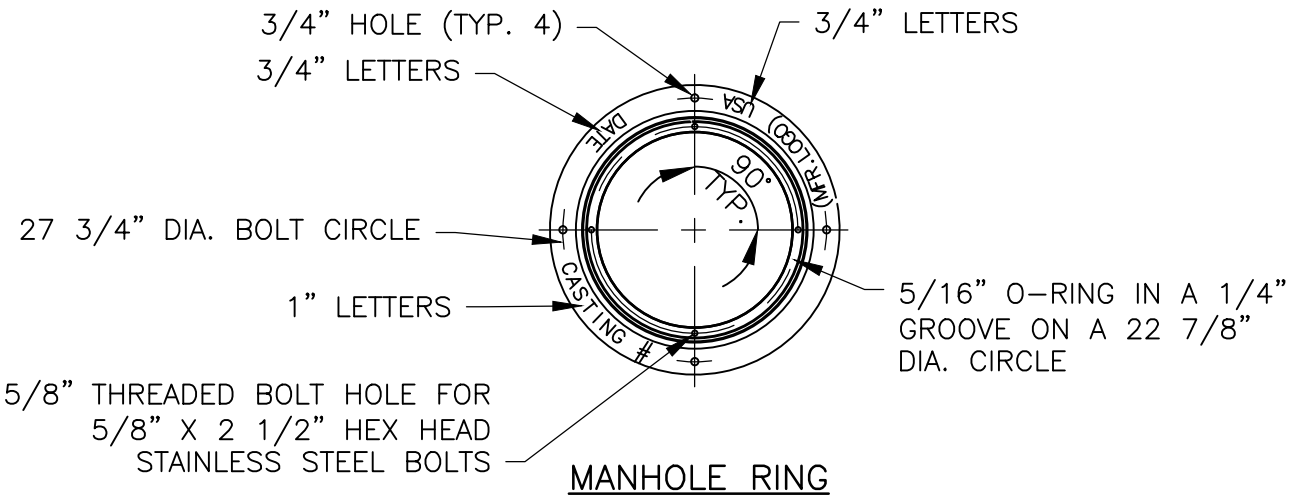


LID BOTTOM VIEW

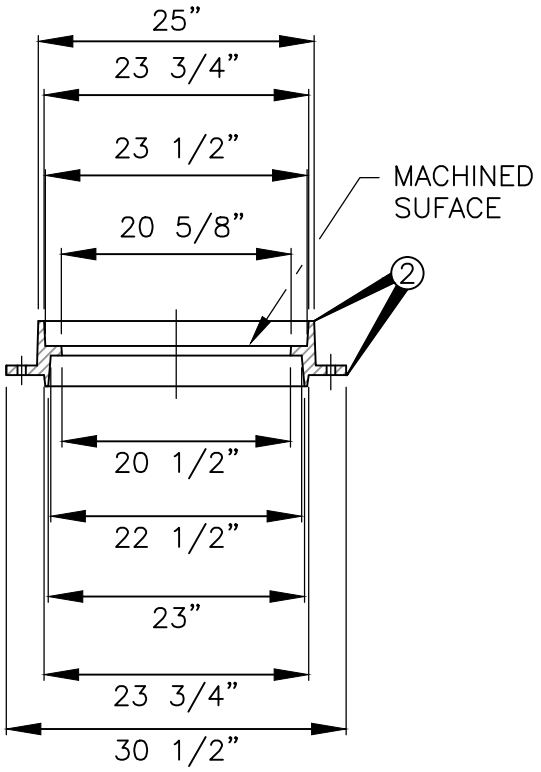


LID SECTION VIEW

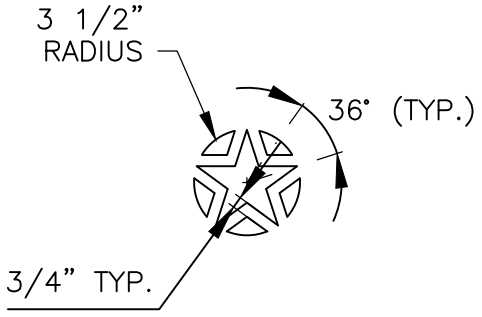
TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT No. 17 STANDARD DETAILS	BOLTED SANITARY SEWER MANHOLE RING AND 24" COVER (1 OF 3)	
ADOPTED: 03/01/2016	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	DETAIL NO. WW18



MANHOLE RING

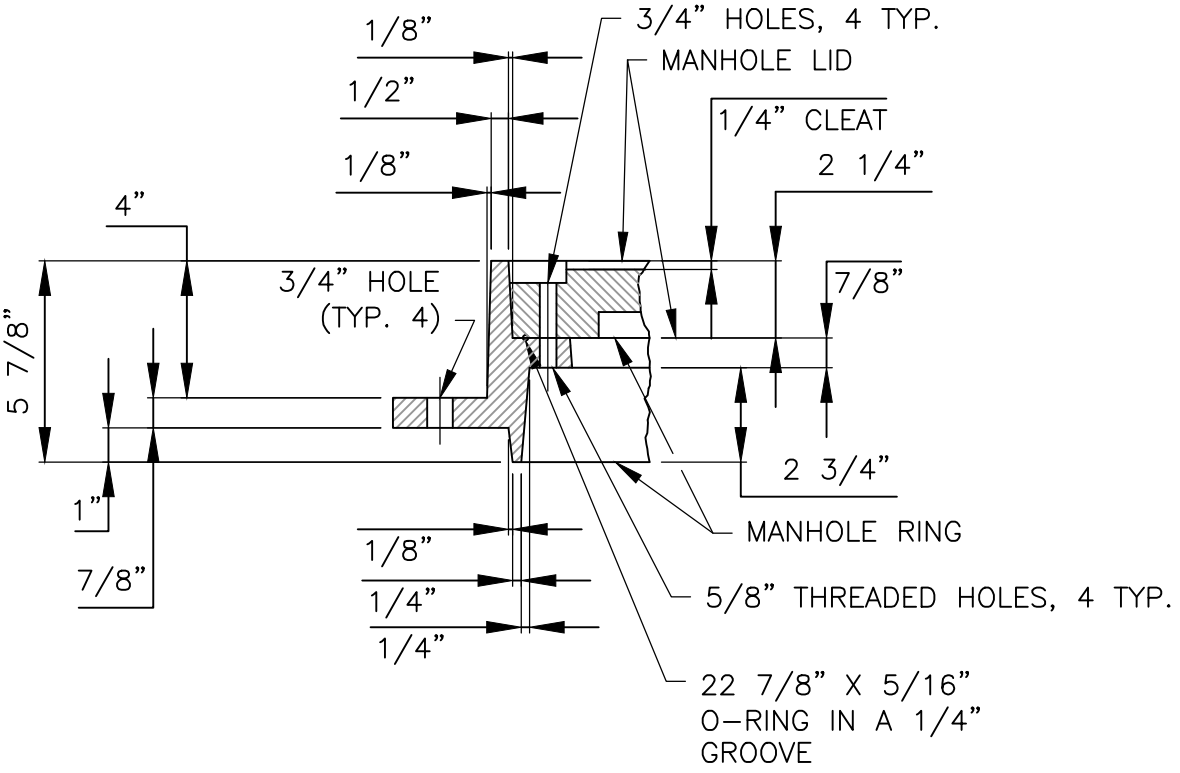


RING SECTION



STAR LAYOUT

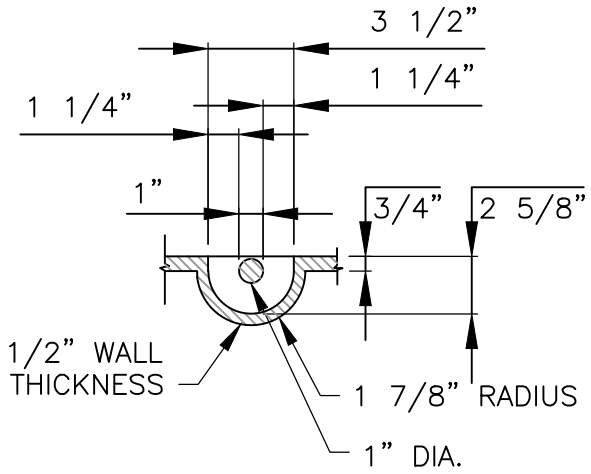
	TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT No. 17 STANDARD DETAILS	BOLTED SANITARY SEWER MANHOLE RING AND 24" COVER (2 OF 3)	
	ADOPTED: 03/01/2016	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	DETAIL NO. WW18



BOLT HOLE AND WATER-TIGHT DETAIL

NOTES:

1. 3/4" ℄ + 1/4" CLEAT PER CITY SPECIFICATION, OR 1" ℄ + 1/4" CLEAT IN STATE MAINTAINED R.O.W.
2. BREAK ALL SHARP CORNERS 0.06" X 45° MIN.
3. LID IS CAST WITH TWO 1" X 3 1/2" STEEL PICK BARS.
4. LID WEIGHT 150 OR 170 LBS. CAST TOP & BOTTOM.
5. BOLTS SHALL BE 5/8" X 13/7" X 11 N.C. STAINLESS STEEL HEX HEAD (TYPE 316).



PICK BAR DETAIL

TYP. WEIGHT	LID	RING	SET
CITY/STATE	150/175 LBS	150 IBS	300/325 LBS

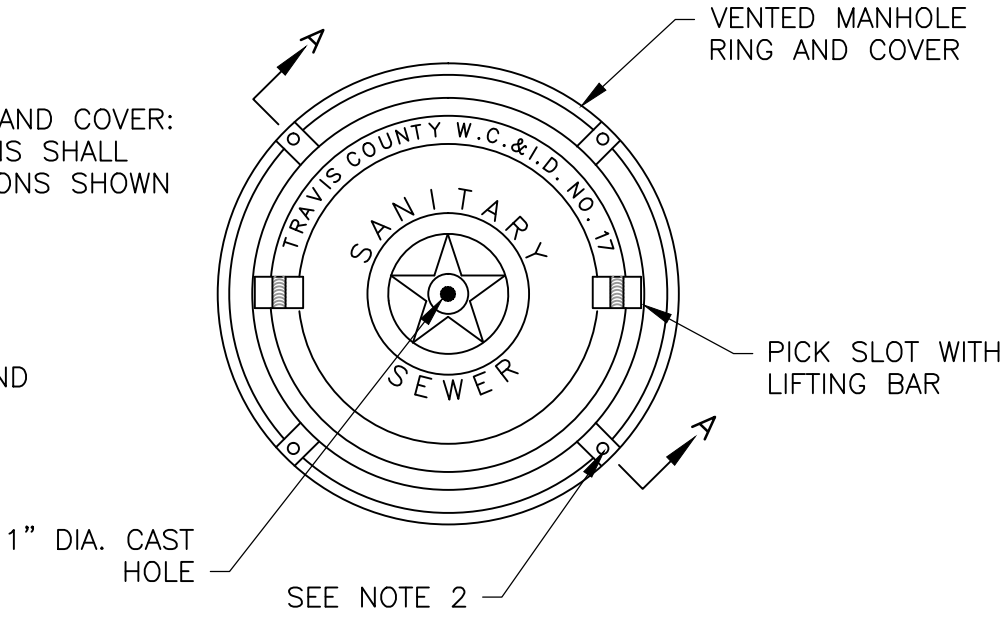
	TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT No. 17 STANDARD DETAILS	BOLTED SANITARY SEWER MANHOLE RING AND 24" COVER (3 OF 3)	
	ADOPTED: 03/01/2016	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	DETAIL NO. WW18

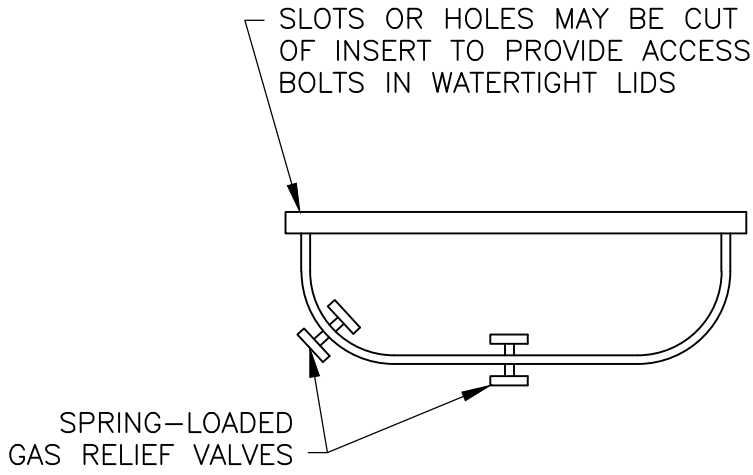
NOTES:

STANDARD MANHOLE RING AND COVER: ALL APPLICABLE DIMENSIONS SHALL CONFORM TO THE DIMENSIONS SHOWN HERE

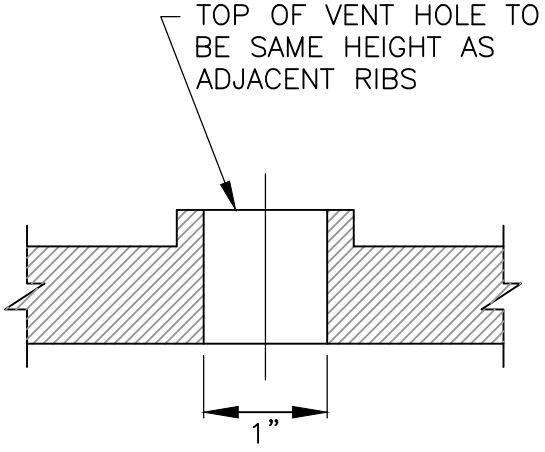
NOTES:

THE BEARING SURFACES AND O–GROOVE SHALL BE MACHINE GROUND





WATERTIGHT MANHOLE INSERT DETAIL



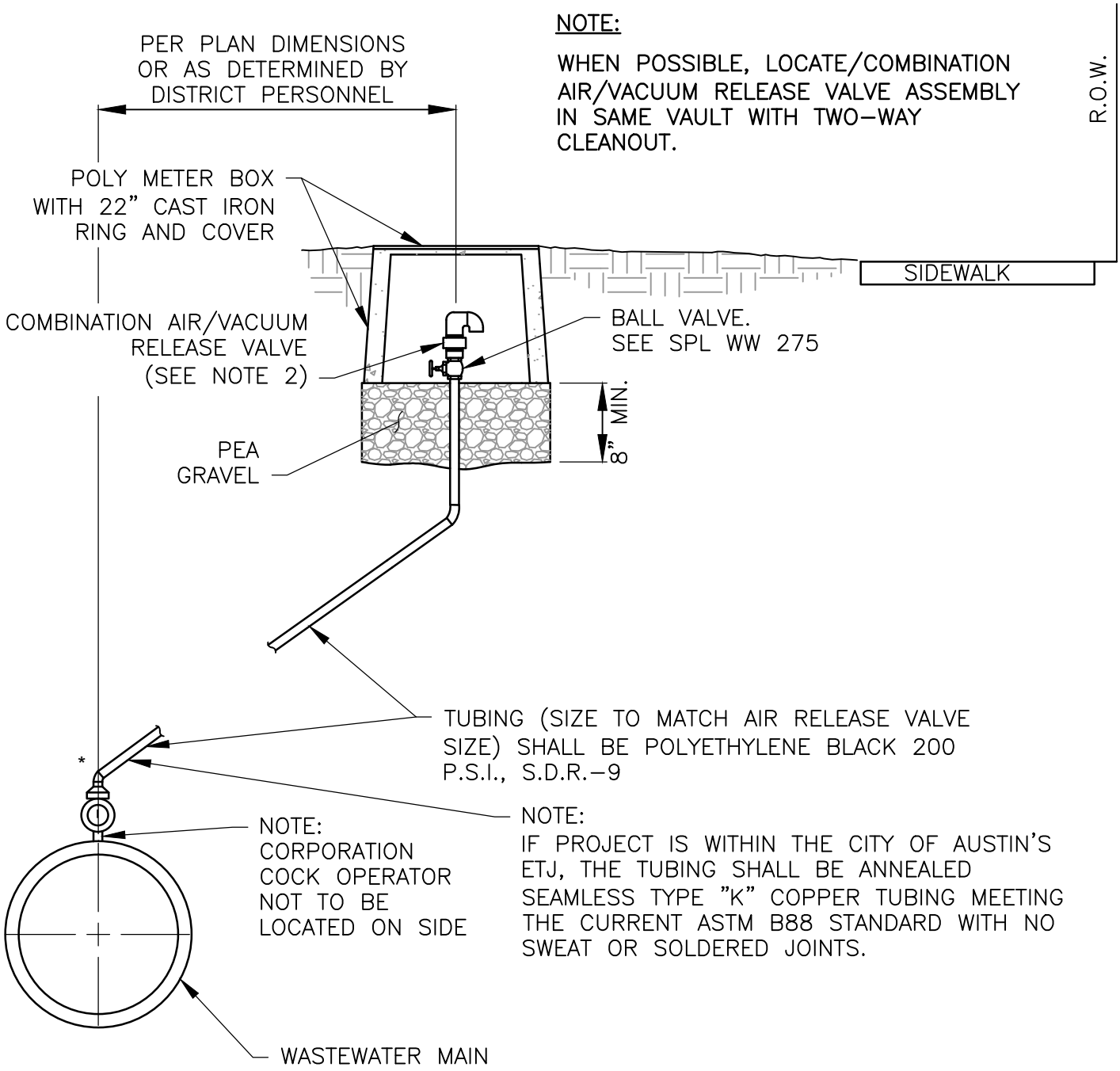
VENTED HOLE DETAIL SECTION A–A

NOTE:

1. MANHOLE COVER INSERTS SHALL BE FRW INDUSTRIE, INC., "INFLOW PROTECTOR–COVER', PRECO INDUSTRIES, LTD., "SEWER GUARD", OR APPROVED EQUAL, AND SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING THE NECESSARY FIELD MEASUREMENTS FOR THE MANUFACTURER PRIOR TO PRODUCTION.

2. BOLTS SHALL BE 5/8" X 1 3/7" X 11 N.C. STAINLESS STEEL HEX HEAD (TYPE 316).

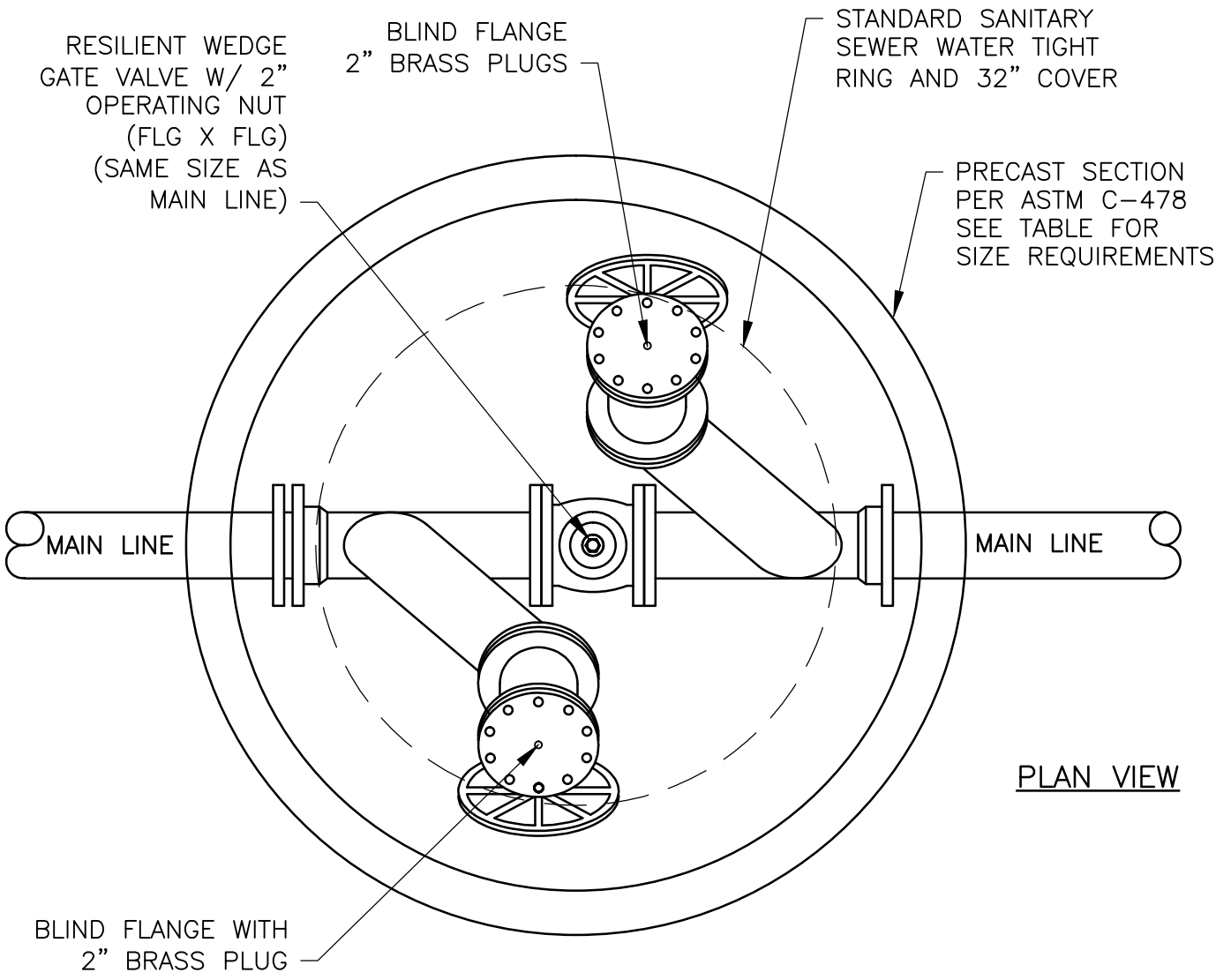
	TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT No. 17 STANDARD DETAILS	VENTED MANHOLE RING AND COVER DETAIL
	ADOPTED: 03/01/2016	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.
		DETAIL NO. WW19



NOTES:

1. AUTOMATIC COMBINATION AIR/VACUUM VALVE SHALL BE INSTALLED IN A MANNER WHICH WILL ALLOW REMOVAL OF ASSEMBLY WITHOUT REMOVAL OF THE CONCRETE METER BOX.
2. AUTOMATIC COMBINATION AIR/VACUUM VALVE SHALL BE A MINIMUM SIZE OF 2" (SEE PLANS FOR SIZE) AND SHALL BE MANUFACTURED BY A.R.I. FLOW CONTROL ACCESSORIES, MODEL D-025.

TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT No. 17 STANDARD DETAILS	NON-VENTED COMBINATION AUTOMATIC AIR/VACUUM RELEASE VALVE INSTALLATION (FORCE MAIN)	
ADOPTED: 03/01/2016	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	DETAIL NO. WW20



PLAN VIEW

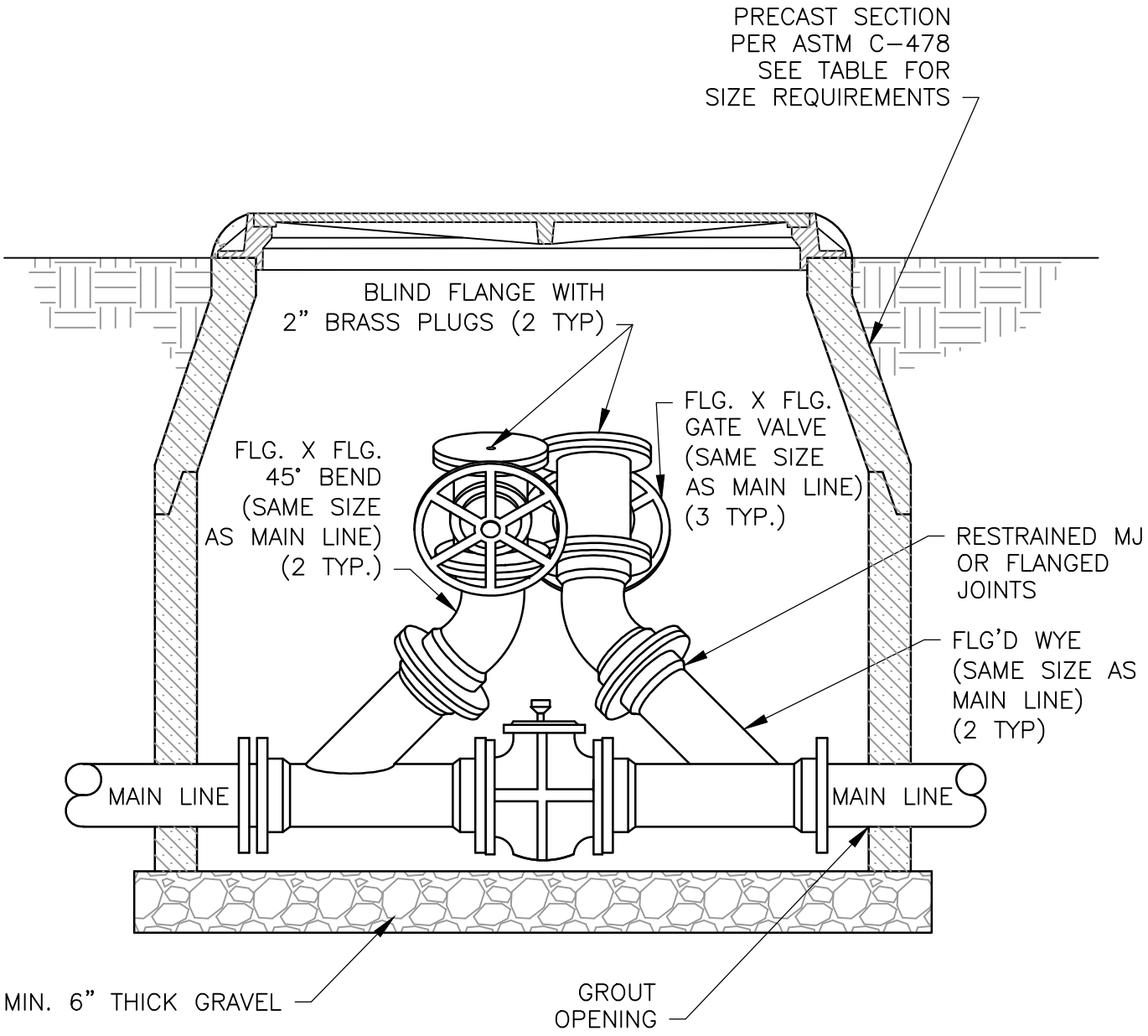
VAULT SIZE REQUIREMENTS

FORCEMAIN SIZE (IN)	MIN. VAULT DIAM. (FT)
≤4	6'
6	8'
8	10'
12	12'
>12	VERIFY WITH W.C.I.D.17

NOTES:

1. ALL CLEAN-OUT VAULTS IN ROADWAY SHALL BE INSTALLED FLUSH TO MATCH ROAD SURFACE. VAULTS LOCATED OUTSIDE OF PAVEMENT SHALL BE 12 INCHES ABOVE GRADE.
2. ALL PIPE SHALL BE DUCTILE IRON A MINIMUM OF 12" PAST MANHOLE OR VAULT.
3. VALVES AND FITTINGS TO BE SAME SIZE AS MAIN LINE.

TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT No. 17 STANDARD DETAILS	FORCE MAIN CLEANOUT SECTION (1 OF 2)	
ADOPTED: 03/01/2016	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	DETAIL NO. WW21



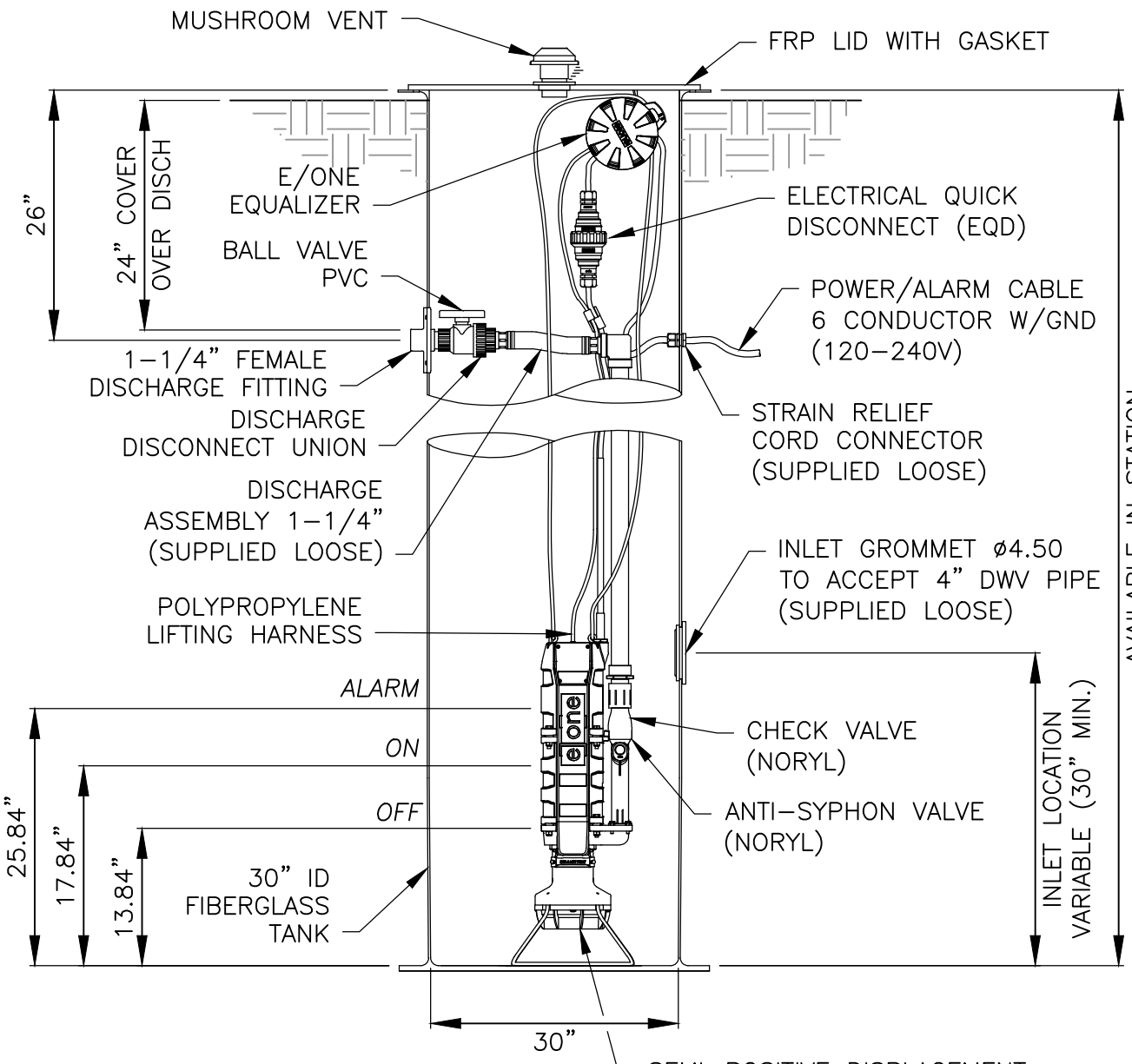
VAULT SIZE REQUIREMENTS

FORCEMAIN SIZE (IN)	MIN. VAULT DIAM. (FT)
≤4	6'
6	8'
8	10'
12	12'
>12	VERIFY WITH W.C.I.D.17

NOTES:

1. ALL CLEAN-OUT VAULTS IN ROADWAY SHALL BE INSTALLED FLUSH TO MATCH ROAD SURFACE. VAULTS LOCATED OUTSIDE OF PAVEMENT SHALL BE 12 INCHES ABOVE GRADE.
2. VALVES AND FITTINGS TO BE SAME SIZE AS MAIN LINE.

TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT No. 17 STANDARD DETAILS	FORCE MAIN CLEANOUT SECTION (2 OF 2)	
ADOPTED: 03/01/2016	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	DETAIL NO. WW21

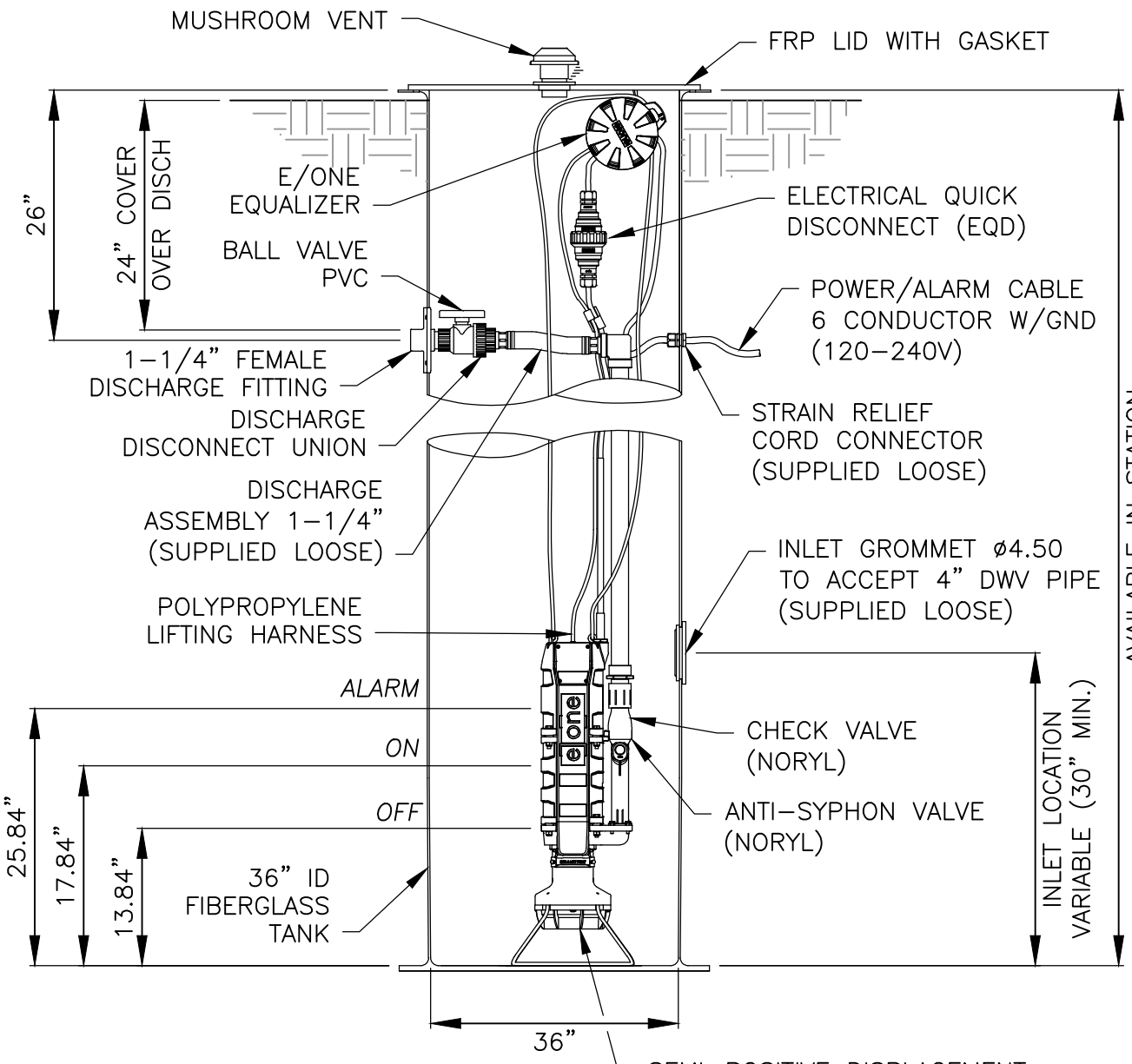


E–ONE GATORGRINDER GH30X60

NOTES:

1. DETAIL IS FOR INFORMATION ONLY. LOT OWNER WILL BE RESPONSIBLE FOR FURNISHING AND INSTALLATION OF RESIDENTIAL GRINDER PUMPS IN UTILITY EASEMENTS.
2. ALL GRINDER PUMP STATIONS SHALL BE SEMI–POSITIVE DISPLACEMENTS TYPE, GATOR GRINDER, AS MANUFACTURED BY E/ONE SEWERS, OR EQUAL AS APPROVED BY W.C.I.D. NO. 17, CONFORMING TO APPROVED W.C.I.D. NO. 17 DESIGN STANDARD FOR THIS PROJECT.
3. INSTALL RESIDENTIAL GRINDER PUMPS IN STRICT ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS AND RECOMMENDATIONS.
4. LOT OWNER SHALL EXECUTE ALL REQUIRED EASEMENTS AND AGREEMENTS TO ALLOW ACCESS TO PRIVATE CONTRACTORS AS REQUIRED BY W.C.I.D. NO. 17 FOR EMERGENCY MAINTENANCE OF GRINDER PUMP STATION.

TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT No. 17 STANDARD DETAILS	SIMPLEX GRINDER PUMP STATION - TYPE I	
ADOPTED: 03/01/2016	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	DETAIL NO. WW22

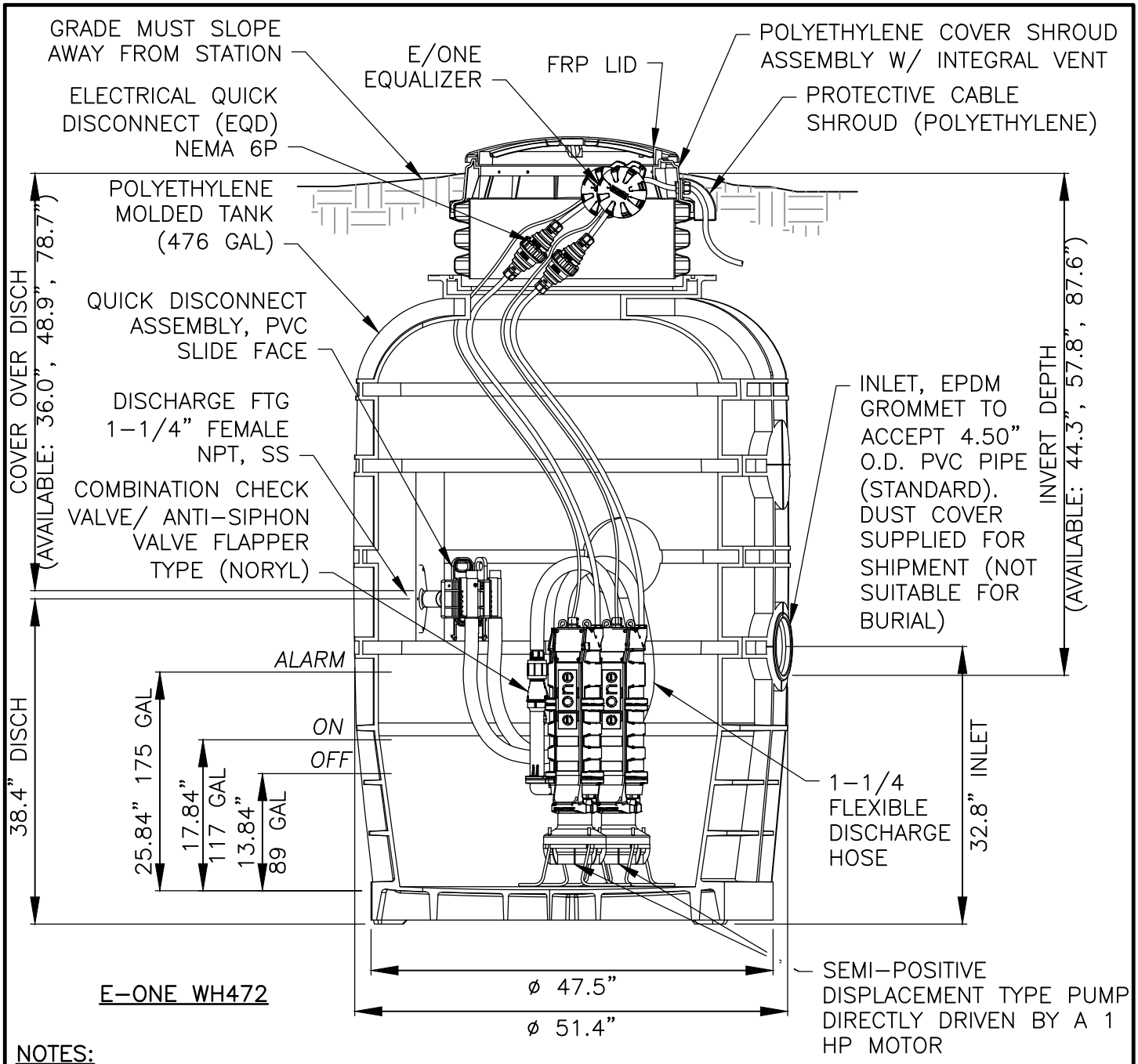


E–ONE GATORGRINDER GH36X60

NOTES:

1. DETAIL IS FOR INFORMATION ONLY. LOT OWNER WILL BE RESPONSIBLE FOR FURNISHING AND INSTALLATION OF RESIDENTIAL GRINDER PUMPS IN UTILITY EASEMENTS.
2. ALL GRINDER PUMP STATIONS SHALL BE SEMI–POSITIVE DISPLACEMENTS TYPE, GATOR GRINDER, AS MANUFACTURED BY E/ONE SEWERS, OR EQUAL AS APPROVED BY W.C.I.D. NO. 17, CONFORMING TO APPROVED W.C.I.D. NO. 17 DESIGN STANDARD FOR THIS PROJECT.
3. INSTALL RESIDENTIAL GRINDER PUMPS IN STRICT ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS AND RECOMMENDATIONS.
4. LOT OWNER SHALL EXECUTE ALL REQUIRED EASEMENTS AND AGREEMENTS TO ALLOW ACCESS TO PRIVATE CONTRACTORS AS REQUIRED BY W.C.I.D. NO. 17 FOR EMERGENCY MAINTENANCE OF GRINDER PUMP STATION.

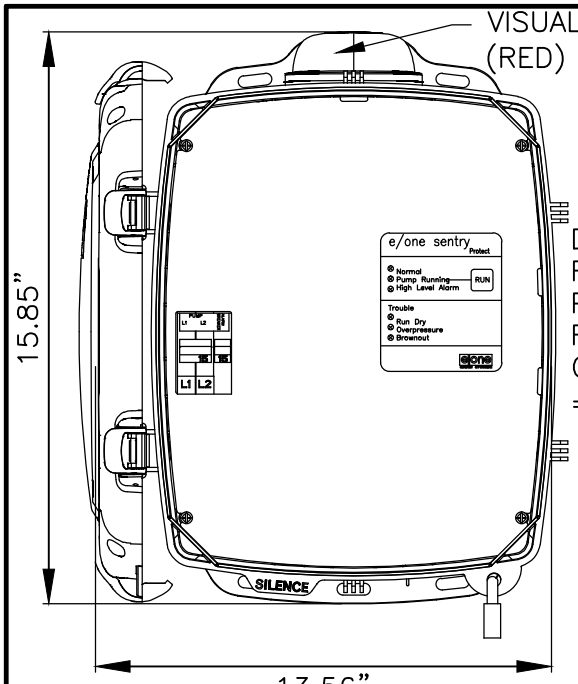
TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT No. 17 STANDARD DETAILS	SIMPLEX GRINDER PUMP STATION - TYPE II	
ADOPTED: 03/01/2016	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	DETAIL NO. WW23



NOTES:

1. DETAIL IS FOR INFORMATION ONLY. LOT OWNER WILL BE RESPONSIBLE FOR FURNISHING AND INSTALLATION OF RESIDENTIAL GRINDER PUMPS IN UTILITY EASEMENTS.
2. ALL GRINDER PUMP STATIONS SHALL BE SEMI–POSITIVE DISPLACEMENTS TYPE, AS MANUFACTURED BY E/ONE SEWERS, OR EQUAL AS APPROVED BY W.C.I.D. NO. 17, CONFORMING TO APPROVED W.C.I.D. NO. 17 DESIGN STANDARD FOR THIS PROJECT.
3. INSTALL RESIDENTIAL GRINDER PUMPS IN STRICT ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS AND RECOMMENDATIONS.
4. LOT OWNER SHALL EXECUTE ALL REQUIRED EASEMENTS AND AGREEMENTS TO ALLOW ACCESS TO PRIVATE CONTRACTORS AS REQUIRED BY W.C.I.D. NO. 17 FOR EMERGENCY MAINTENANCE OF GRINDER PUMP STATION.

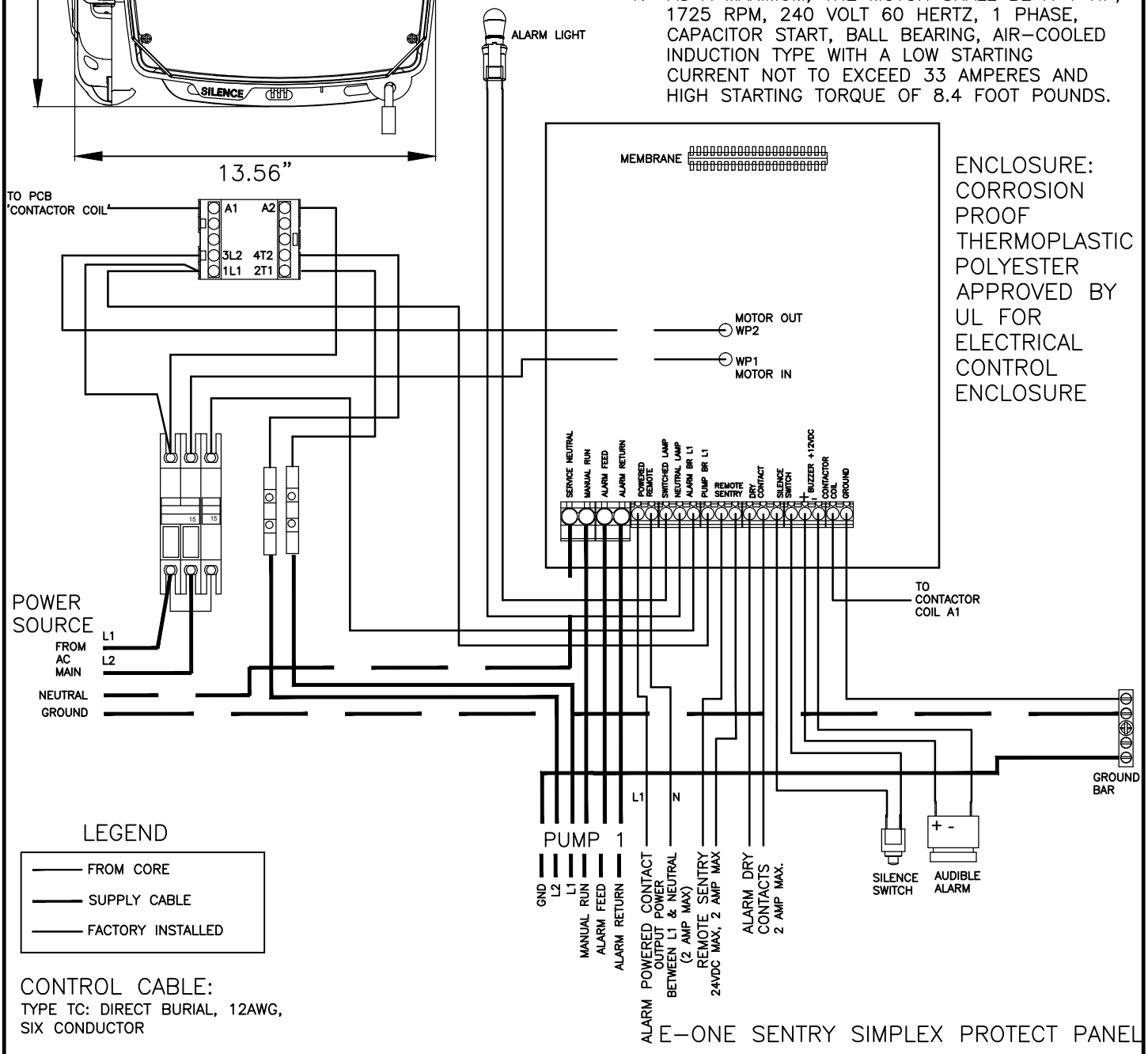
TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT No. 17 STANDARD DETAILS	DUPLEX GRINDER PUMP STATION	
ADOPTED: 03/01/2016	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	DETAIL NO. WW24



REDUNDANT RUN (HIGH LEVEL)
EXTERNAL VISUAL & AUDIBLE ALARM
REMOTE SENTRY DRY CONTACTS FOR OPTIONAL POWER LOSS HIGH LEVEL ALARM (POWER LOSS ALARM FOR WIRELESS)
MANUAL ALARM SILENCE
MANUAL RUN
STATUS LED'S: NORMAL, PUMP RUNNING, HIGH LEVEL
TROUBLE LED'S: RUN DRY, OVERPRESSURE, BROWNOUT
POWERED AND DRY CONTACTS
CONFORMAL COATED CIRCUIT BOARD (BOTH SIDES)
PADLOCK
DEAD FRONT
NEMA 4X ENCLOSURE ASSEMBLY

NOTES:

1. AS A MAXIMUM, THE MOTOR SHALL BE A 1 HP, 1725 RPM, 240 VOLT 60 HERTZ, 1 PHASE, CAPACITOR START, BALL BEARING, AIR-COOLED INDUCTION TYPE WITH A LOW STARTING CURRENT NOT TO EXCEED 33 AMPERES AND HIGH STARTING TORQUE OF 8.4 FOOT POUNDS.



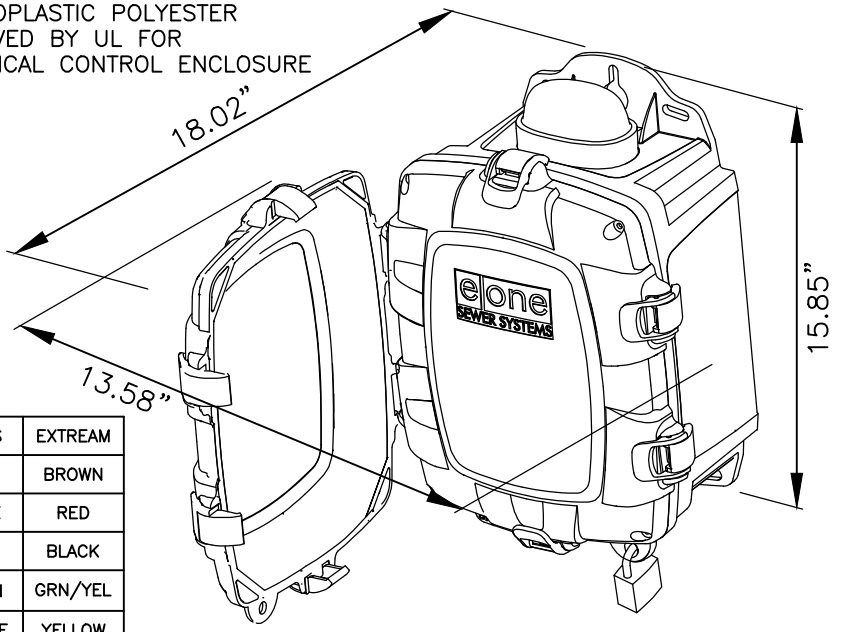
CONTROL CABLE:
TYPE TC: DIRECT BURIAL, 12AWG, SIX CONDUCTOR

E-ONE SENTRY SIMPLEX PROTECT PANEL

TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT No. 17 STANDARD DETAILS		GRINDER PUMP STATION SIMPLEX CONTROL PANEL
ADOPTED: 03/01/2016	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	DETAIL NO. WW25

EXTERNAL VISUAL & AUDIBLE ALARM
EXTERNAL LATCHING MANUAL SILENCE
MANUAL RUN
PUMP RUN INDICATORS
CONFORMAL COATED CIRCUIT BOARD
PADLOCK
ALARM DRY CONTACT
NEMA 4X ENCLOSURE ASSEMBLY

CORROSION PROOF
THERMOPLASTIC POLYESTER
APPROVED BY UL FOR
ELECTRICAL CONTROL ENCLOSURE

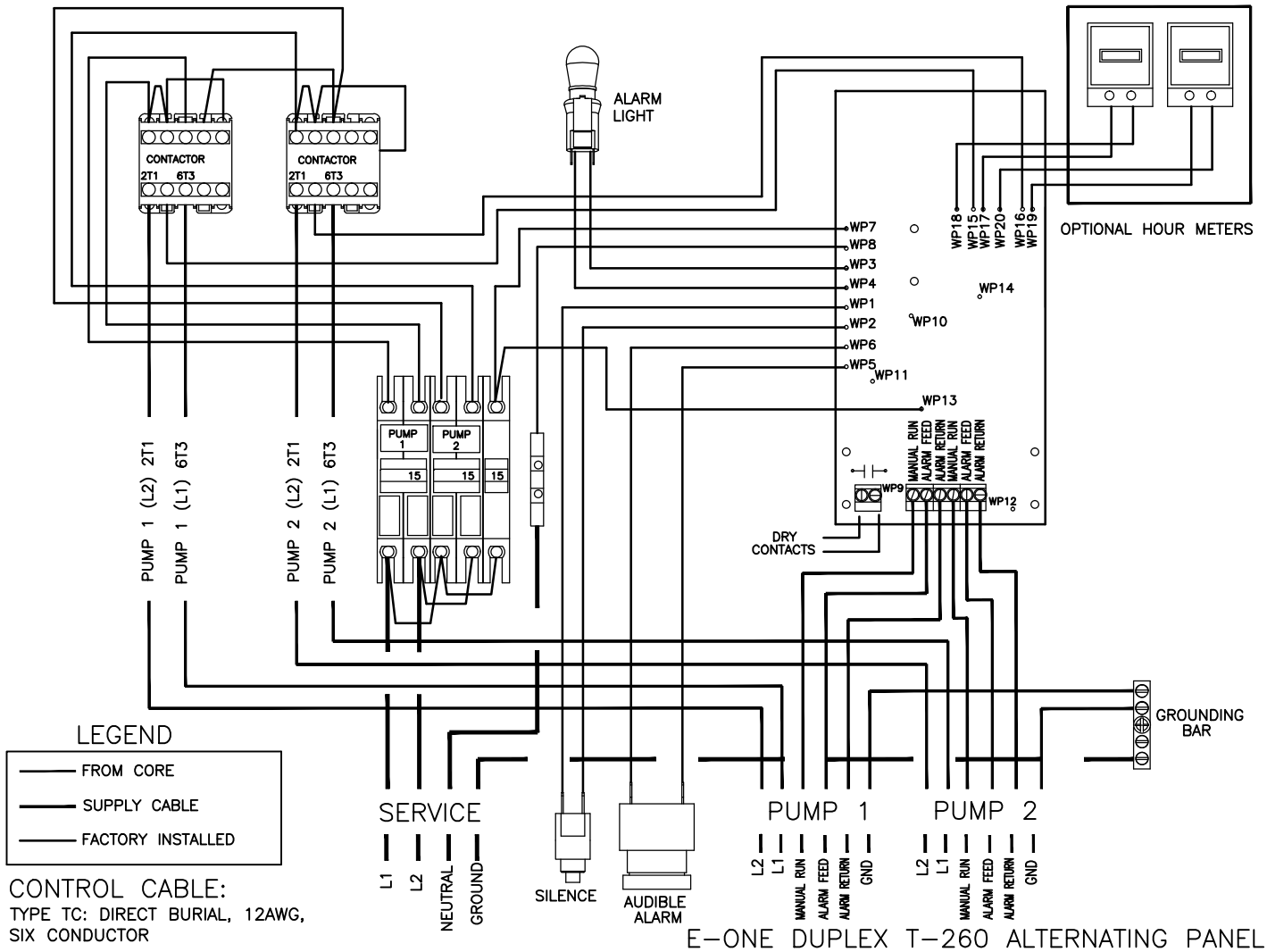


NOTES:

1. AS A MAXIMUM, EACH MOTOR SHALL BE A 1 HP, 1725 RPM, 240 VOLT 60 HERTZ, 1 PHASE, CAPACITOR START, BALL BEARING, AIR-COOLED INDUCTION TYPE WITH A LOW STARTING CURRENT NOT TO EXCEED 33 AMPERES AND HIGH STARTING TORQUE OF 8.4 FOOT POUNDS.

PIN	FUNCTION	2000S	EXTREAM
1	MANUAL RUN	RED	BROWN
2	L1	BLACK	RED
3	L2	WHITE	BLACK
4	GND	GREEN	GRN/YEL
5	ALARM FEED	ORANGE	YELLOW
6	ALARM RETURN	BLUE	BLUE

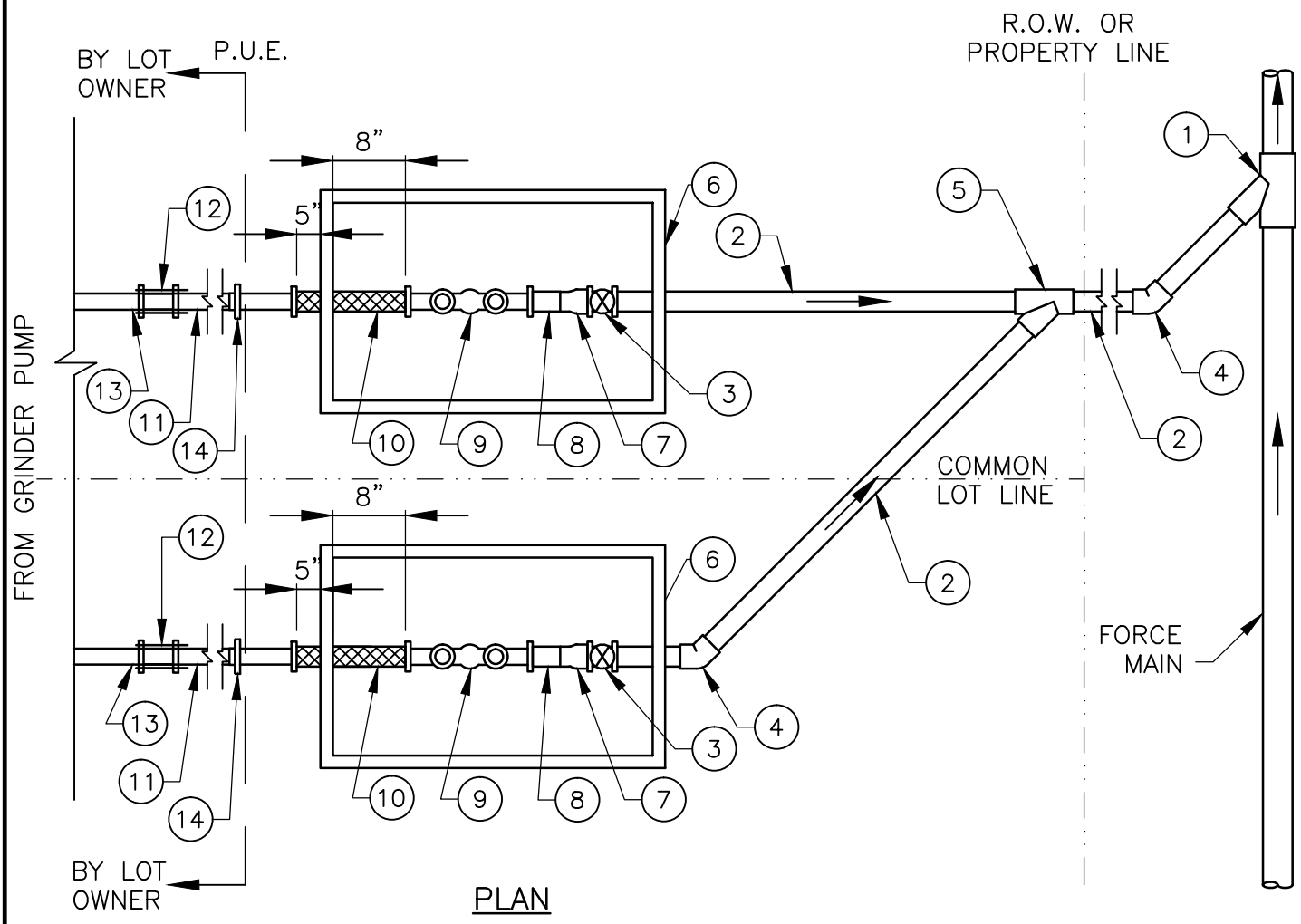
OPTIONS:
☐ HOUR METER



CONTROL CABLE:
TYPE TC: DIRECT BURIAL, 12AWG, SIX CONDUCTOR

E-ONE DUPLEX T-260 ALTERNATING PANEL

TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT No. 17 STANDARD DETAILS		GRINDER PUMP STATION DUPLEX CONTROL PANEL
ADOPTED: 03/01/2016	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	DETAIL NO. WW26

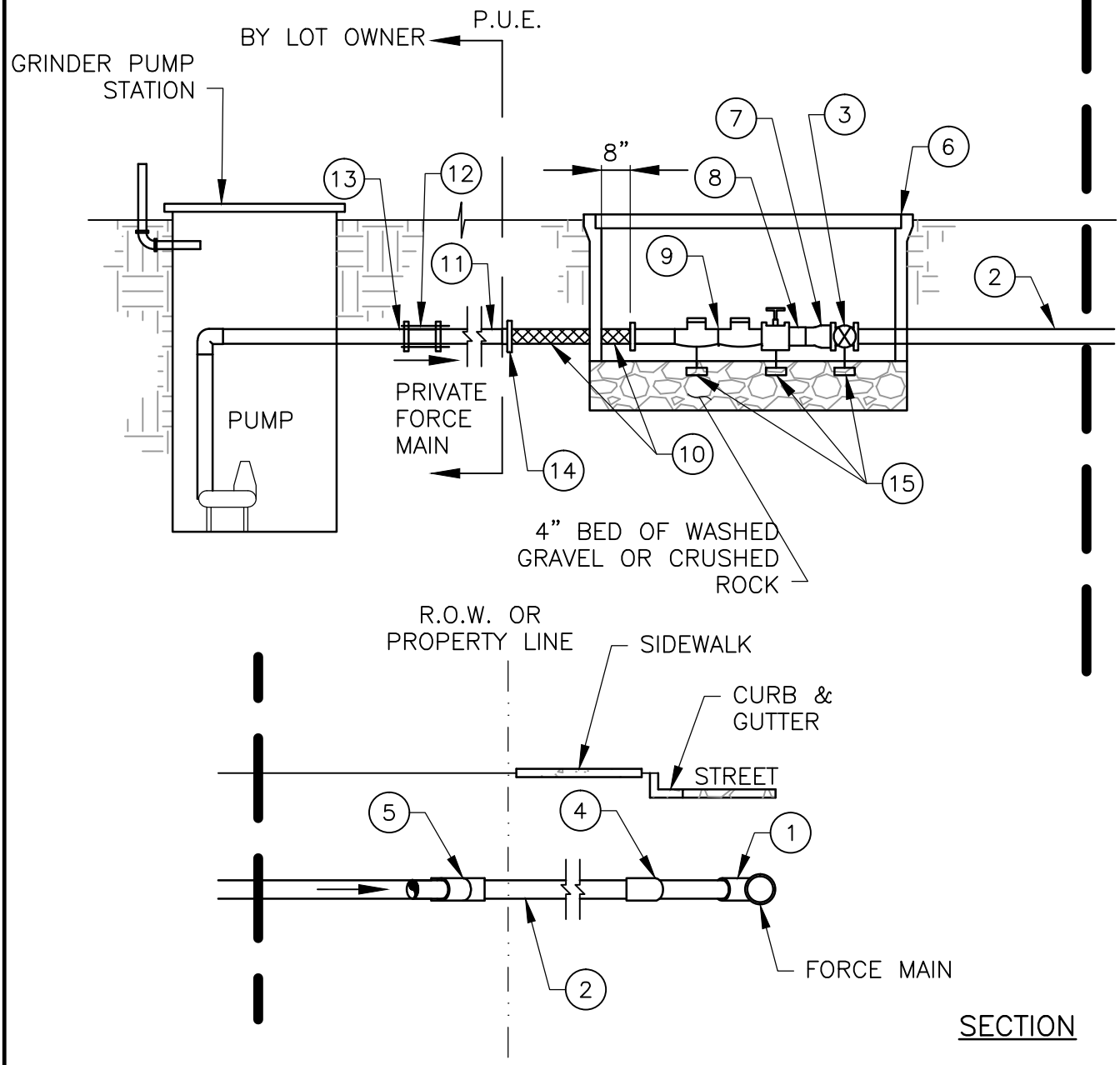


PLAN

MATERIALS LIST:

1. WYE – SIZE AS REQUIRED
2. 2" PVC SCH 80 PIPE
3. 2" RESILIENT WEDGE GATE VALVE
4. 2" PVC SCH 80 45° BEND
5. 2" PVC SCH 80 WYE (OMIT FOR SINGLE SERVICE)
6. PLASTIC METER BOX WITH CAST IRON LID
7. 2"x1 1/4" PVC SCH 80 REDUCER
8. 1 1/4" PVC SCH 80 THREADED
9. 1 1/4" STAINLESS STEEL CHECK VALVE ASSEMBLY (UNI–LATERAL AS MANUFACTURED BY E–ONE)
10. 1 1/4"x13" THREADED STAINLESS STEEL HOSE (TT5–6201 SERIES AS MANUFACTURED BY PROCO)
11. 1 1/4" PVC SCH 80 PIPE
12. 1 1/4" DRESSER COUPLING
13. 1 1/4" x 1 1/4" PLAIN END, 6" LONG, THREAD
14. 1 1/4" PVC SCH 80 PLUG (TO BE REMOVED BY OWNER UPON SERVICE LINE EXTENSION AND INSTALLATION OF GRINDER PUMP STATION)
15. PIPE SUPPORTS

TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT No. 17 STANDARD DETAILS	TYPICAL RESIDENTIAL WASTEWATER PRESSURE SEWER SERVICE DETAIL (1 OF 2)	
ADOPTED: 03/01/2016	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	DETAIL NO. WW27

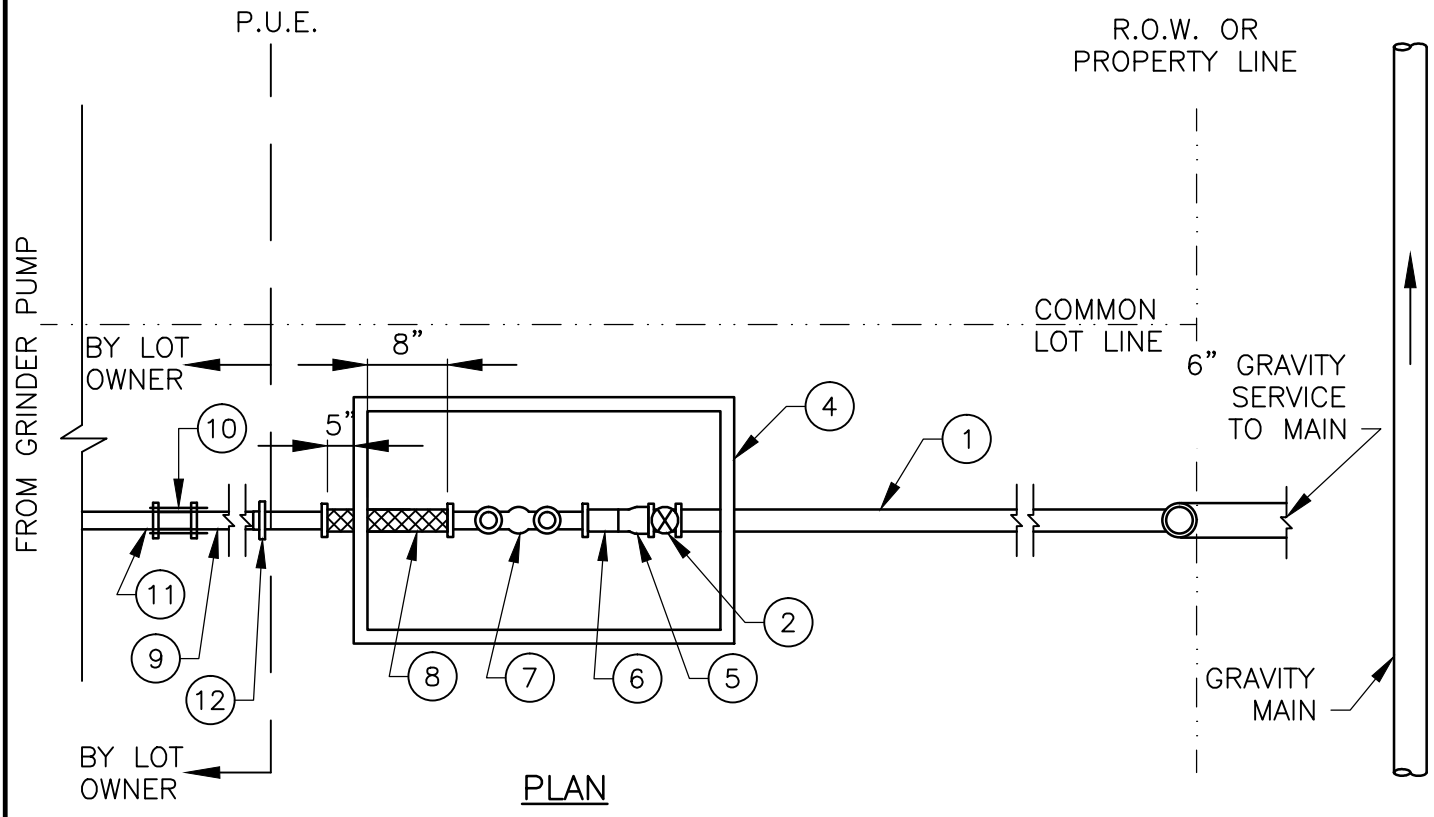


SECTION

NOTES:

1. LOCATE VALVE BOXES WITHIN 10' P.U.E. AND WITHIN 5' OF LOT CORNER PIN, WHERE FEASIBLE.
2. INSTALL PLASTIC VALVE VAULTS ON 3/8" CRUSHED ROCK OR PEA GRAVEL PAD–MINIMUM 4" DEPTH BELOW VAULT, EXTENDING UPWARD TO PIPE SPRING LINE, AND COMPACTED TO 95% STD PROCTOR.
3. MINIMUM DEPTH OF COVER FOR SERVICES = 24". (TYPICAL DEPTH AT VALVES)
4. EXTENSION OF 1 1/4" SERVICE LINE AND INSTALLATION OF GRINDER PUMP SHALL BE FURNISHED BY LOT OWNERS.
5. LOT OWNERS SHALL GRANT ACCESS TO PRIVATE CONTRACTORS AS REQUIRED BY WCID NO. 17 FOR EMERGENCY MAINTENANCE OF GRINDER PUMP STATION.

TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT No. 17 STANDARD DETAILS	TYPICAL RESIDENTIAL WASTEWATER PRESSURE SEWER SERVICE DETAIL (2 OF 2)	
ADOPTED: 03/01/2016	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	DETAIL NO. WW27

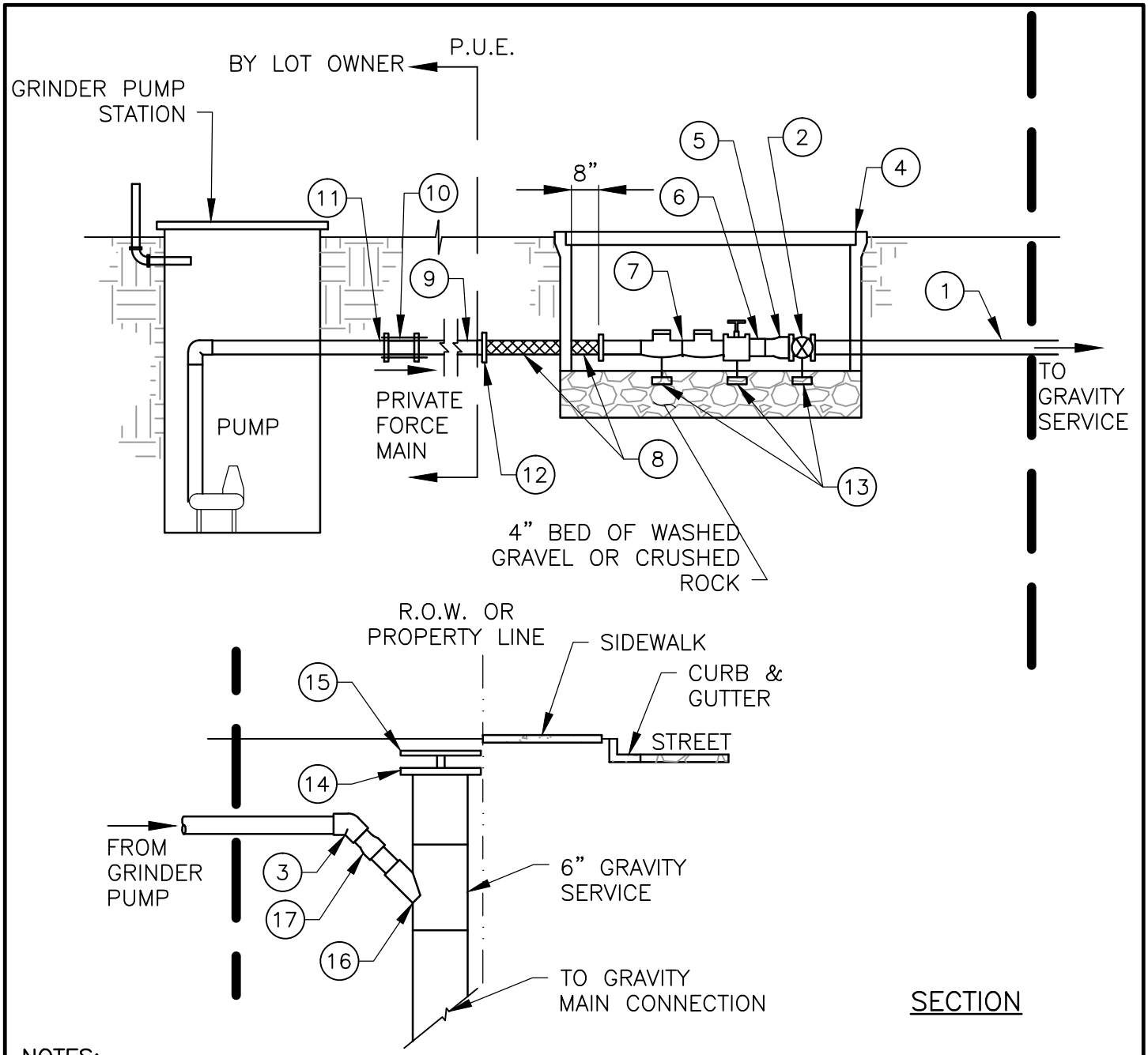


PLAN

MATERIALS LIST:

1. 2" PVC SCH 80 PIPE
2. 2" RESILIENT WEDGE GATE VALVE
3. 2" PVC SCH 80 45° BEND
4. PLASTIC METER BOX WITH CAST IRON LID
5. 2"x1 1/4" PVC SCH 80 REDUCER
6. 1 1/4" PVC SCH 80 THREADED
7. 1 1/4" STAINLESS STEEL CHECK VALVE ASSEMBLY (UNI-LATERAL AS MANUFACTURED BY E-ONE)
8. 1 1/4"x13" THREADED STAINLESS STEEL HOSE (TT5-6201 SERIES AS MANUFACTURED BY PROCO)
9. 1 1/4" PVC SCH 80 PIPE
10. 1 1/4" DRESSER COUPLING
11. 1 1/4" x 1 1/4" PLAIN END, 6" LONG, THREAD
12. 1 1/4" PVC SCH 80 PLUG (TO BE REMOVED BY OWNER UPON SERVICE LINE EXTENSION AND INSTALLATION OF GRINDER PUMP STATION)
13. PIPE SUPPORTS
14. 6" SCREW CAP
15. METAL PLATE OVER SCREW CAP 18" BELOW FINISHED GRADE
16. 6"X4" WYE
17. 4"X2" REDUCER

	TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT No. 17 STANDARD DETAILS	TYPICAL RESIDENTIAL WASTEWATER PRESSURE SEWER TO GRAVITY MAIN CONNECTION (1 OF 2)	
	ADOPTED: 03/01/2016	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	DETAIL NO. WW28

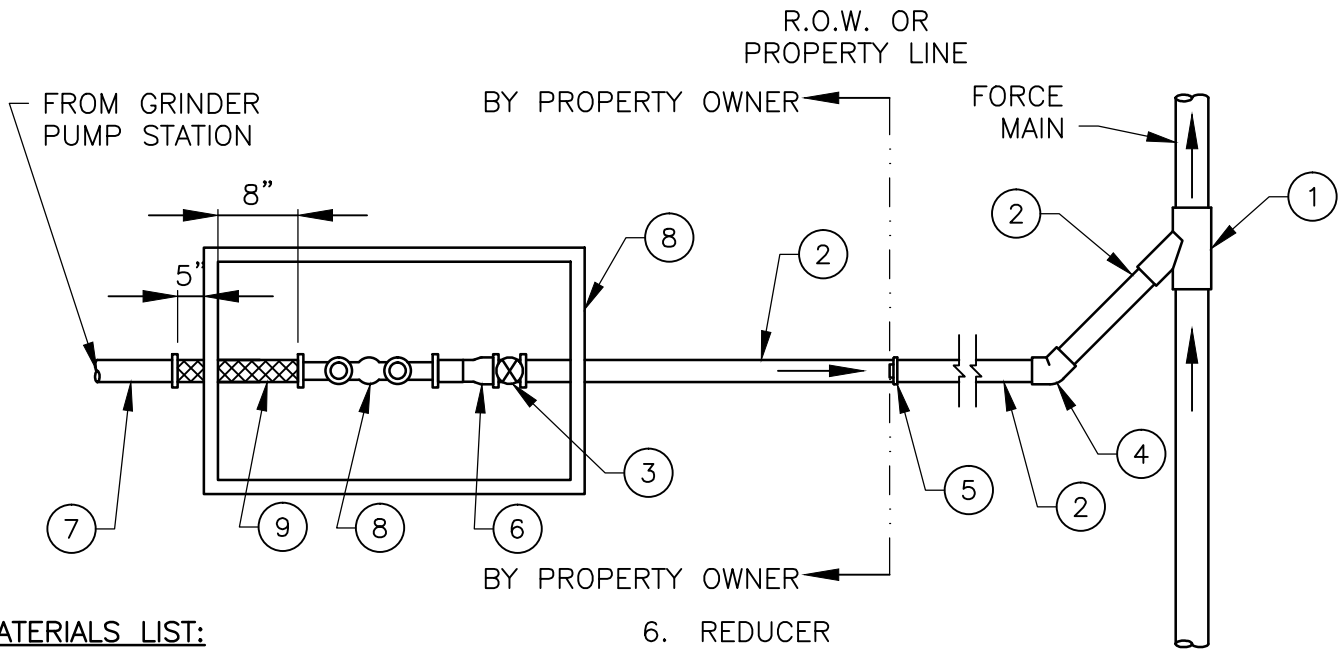


SECTION

NOTES:

1. LOCATE VALVE BOXES WITHIN 10' P.U.E. AND WITHIN 5' OF LOT CORNER PIN, WHERE FEASIBLE.
2. INSTALL PLASTIC VALVE VAULTS ON 3/8" CRUSHED ROCK OR PEA GRAVEL PAD–MINIMUM 4" DEPTH BELOW VAULT, EXTENDING UPWARD TO PIPE SPRING LINE, AND COMPACTED TO 95% STD PROCTOR.
3. MINIMUM DEPTH OF COVER FOR SERVICES = 24". (TYPICAL DEPTH AT VALVES)
4. EXTENSION OF 1 1/4" SERVICE LINE AND INSTALLATION OF GRINDER PUMP SHALL BE FURNISHED BY LOT OWNERS.
5. LOT OWNERS SHALL GRANT ACCESS TO PRIVATE CONTRACTORS AS REQUIRED BY WCID NO. 17 FOR EMERGENCY MAINTENANCE OF GRINDER PUMP STATION.

TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT No. 17 STANDARD DETAILS	TYPICAL RESIDENTIAL WASTEWATER PRESSURE SEWER TO GRAVITY MAIN CONNECTION (2 OF 2)	
ADOPTED: 03/01/2016	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	DETAIL NO. WW28



MATERIALS LIST:

1. WYE – SIZE AS REQUIRED
2. SERVICE LATERAL, SEE NOTE 2
3. RESILIENT WEDGE GATE VALVE
4. 45° BEND
5. PLUG (TO BE REMOVED BY PROPERTY OWNER UPON SERVICE LINE EXTENSION AND INSTALLATION OF CLEAN OUT AND GRINDER PUMP STATION)
6. REDUCER
7. SCH 80 PVC

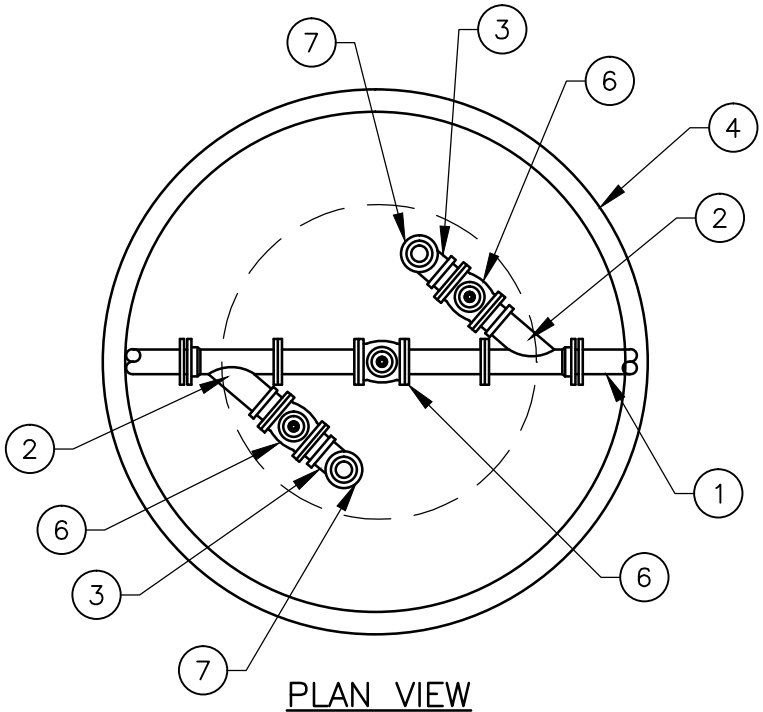
FOR 1 1/4" SERVICE LINES (FITTINGS FOR OTHER SIZES DETERMINED ON INDIVIDUAL BASIS)

8. 1 1/4" STAINLESS STEEL CHECK VALVE ASSEMBLY (UNI–LATERAL AS MANUFACTURED BY E–ONE)
9. 1 1/4"x13" THREADED STAINLESS STEEL HOSE (TT5–6201 SERIES AS MANUFACTURED BY PROCO)

NOTES:

1. SIZE OF SERVICE PIPE, VALVES AND FITTINGS SHALL BE DETERMINED ON AN INDIVIDUAL BASIS BY A REGISTERED PROFESSIONAL ENGINEER OR LICENSED PLUMBER TO MEET THE DEMANDS OF THE PARTICULAR PROJECT/PROPERTY AND TO SUIT THE PARTICULAR GRINDER PUMP STATION NEEDED.
2. ALL PIPING SMALLER THAN 4" SHALL BE PVC SCHEDULE 80 WITH PVC SCHEDULE 80 FITTINGS. ALL PIPING 4" AND LARGER SHALL BE C900 PVC WITH DUCTILE IRON FITTINGS. PIPING SHALL BE GREEN, WHITE, OR SHALL BE ENCASED WITH BROWN POLYWRAP.
3. LOCATE VALVE BOXES WITHIN 10' P.U.E. AND WITHIN 5' OF LOT CORNER PIN, WHERE FEASIBLE.
4. INSTALL VALVE VAULTS ON 3/8" CRUSHED ROCK OR PEA GRAVEL PAD–MINIMUM 4" DEPTH BELOW VAULT, EXTENDING UPWARD TO PIPE SPRING LINE, AND COMPACTED TO 95% STD PROCTOR.
5. MINIMUM DEPTH OF COVER FOR SERVICES = 24". (TYPICAL DEPTH AT VALVES)
6. EXTENSION OF SERVICE LINE AND INSTALLATION OF CLEAN OUT AND GRINDER PUMP SHALL BE FURNISHED BY PROPERTY OWNERS.
7. LOT OWNERS SHALL GRANT ACCESS TO PRIVATE CONTRACTORS AS REQUIRED BY WCID NO. 17 FOR EMERGENCY MAINTENANCE OF GRINDER PUMP STATION.

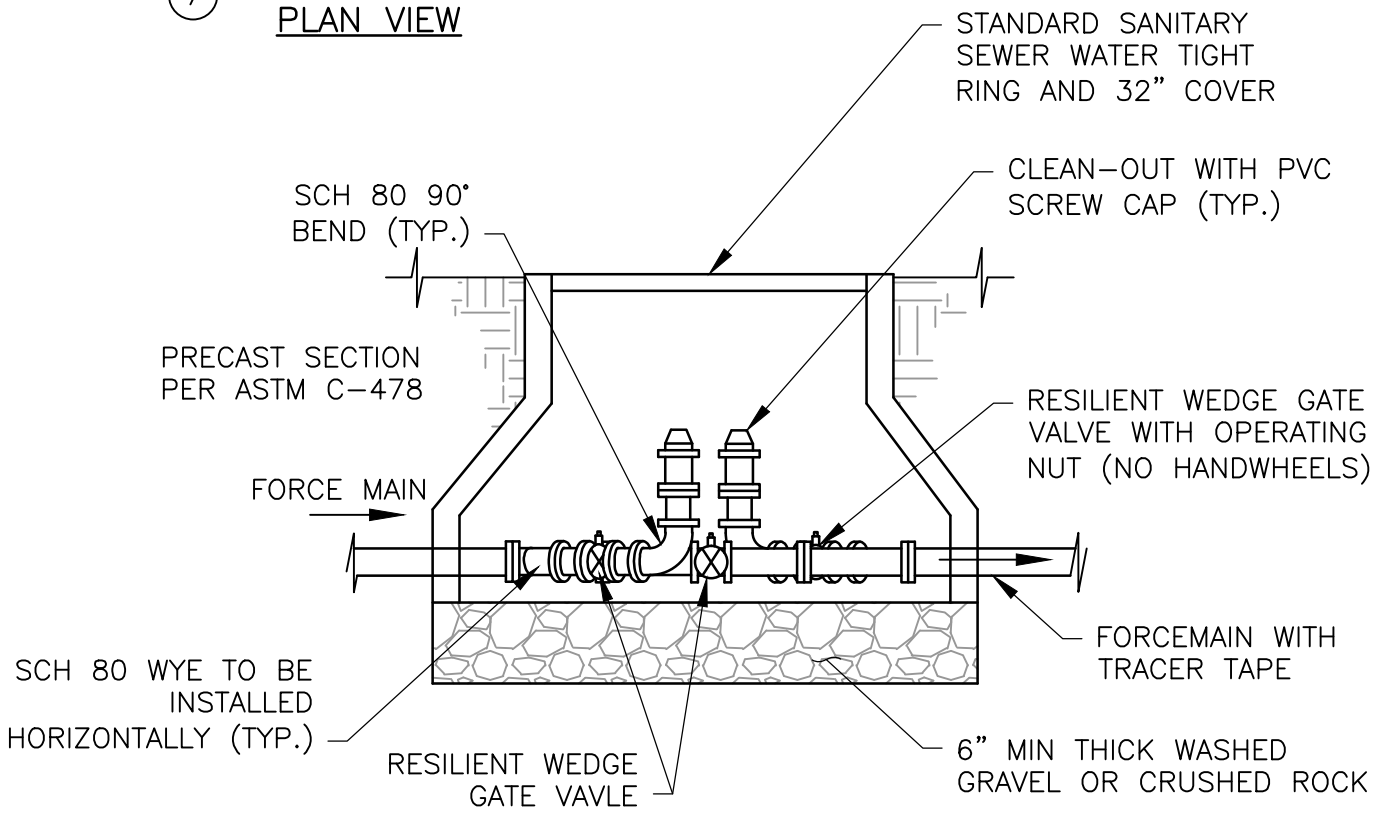
TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT No. 17 STANDARD DETAILS	TYPICAL COMMERCIAL WASTEWATER PRESSURE SEWER OR LARGE RESIDENTIAL SERVICE DETAIL	
ADOPTED: 03/01/2016	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	DETAIL NO. WW29



PLAN VIEW

MATERIALS LIST:

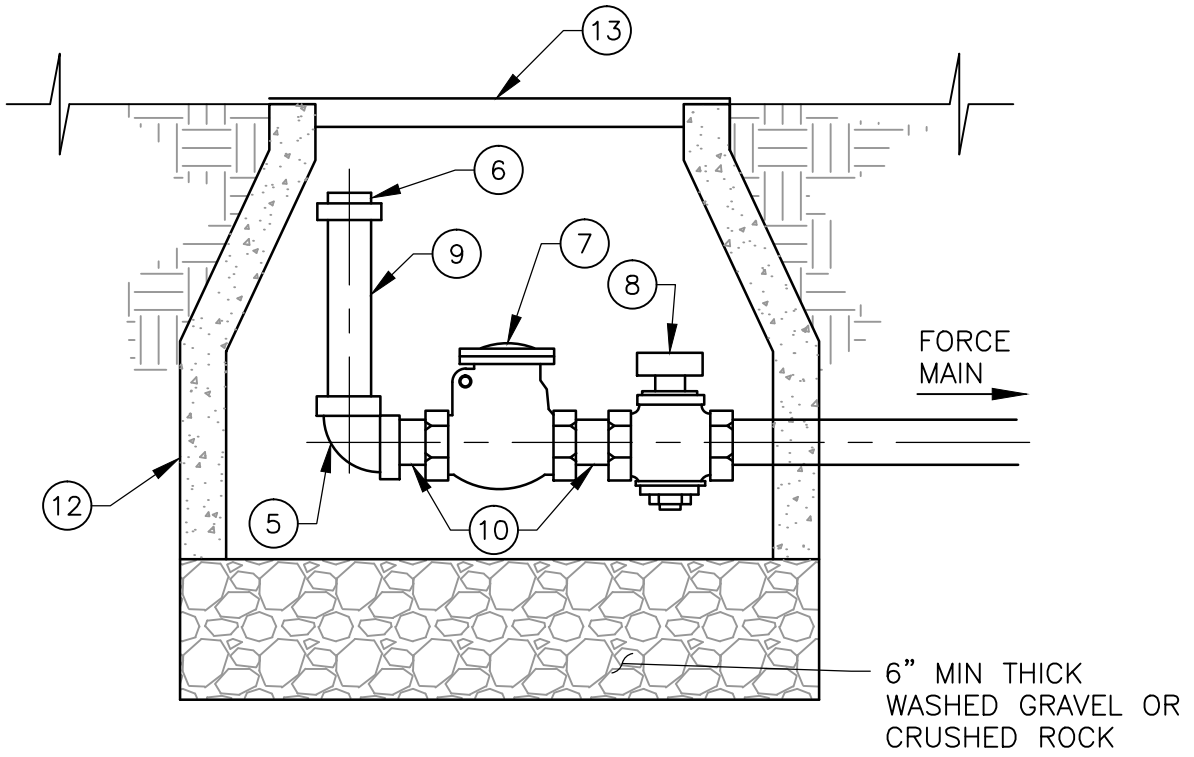
1. SCH 80 PVC PRESSURE LINE
2. WYE
3. PVC SCH 80 90° BEND
4. STANDARD SANITARY SEWER WATER TIGHT RING & 32" COVER
5. PRECAST SECTION PER ASTM C-478
6. RESILIENT WEDGE GATE VAVLE
7. PVC SCREW CAP



NOTE:

1. ALL CLEAN-OUT VAULTS IN ROADWAY SHALL BE INSTALLED FLUSH TO MATCH ROAD SURFACE. VAULTS LOCATED OUTSIDE OF PAVEMENT SHALL BE 12 INCHES ABOVE GRADE.

TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT No. 17 STANDARD DETAILS	PRESSURE MAIN FLUSHING ASSEMBLY (MAIN LINE)	
ADOPTED: 03/01/2016	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	DETAIL NO. WW30



ITEM NO	NO. REQ'D	SIZE AND DESCRIPTION	MATERIAL SPEC'S
1	1	MAIN SIZE X 2" REDUCER (WHEN REQ'D)	PVC SLIP JOINT
2	1	2" – 90° ELBOW	PVC SLIP JOINT
3	1	2" X SLIP & THREAD ADAPTOR	SCH. 80 PVC
4	1	2" X REQ'D LENGTH RISER	SCH. 80 PVC
5	2	2" – 90° SCRD. ELL	SCH. 80 PVC
6	1	2" SCRD. CAP	SCH. 80 PVC
7	1	2" SCRD. SWING CHECK VALVE	M & H NO. 59
8	1	2" RES. WEDGE GATE VLV.	MUELLER H–10203
9	1	2" X 10" NIPPLE	SCH. 80 PVC
10	3	2" SHORT NIPPLES	SCH. 80 PVC
11	1	METER BOX	BROOK SERIES 66 OR APPROVED EQUAL
12	1	PRECAST SECTION	ASTM C–478 OR APPROVED EQUAL
13	1	WATER TIGHT RING & 32" COVER	PER CITY OF AUSTIN STANDARD

NOTE:

FLUSHING ASSEMBLY SHALL NOT BE INSTALLED IN PAVEMENT.

	TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT No. 17 STANDARD DETAILS	PRESSURE MAIN FLUSHING ASSEMBLY (END OF LINE)	
	ADOPTED: 03/01/2016	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	DETAIL NO. WW31