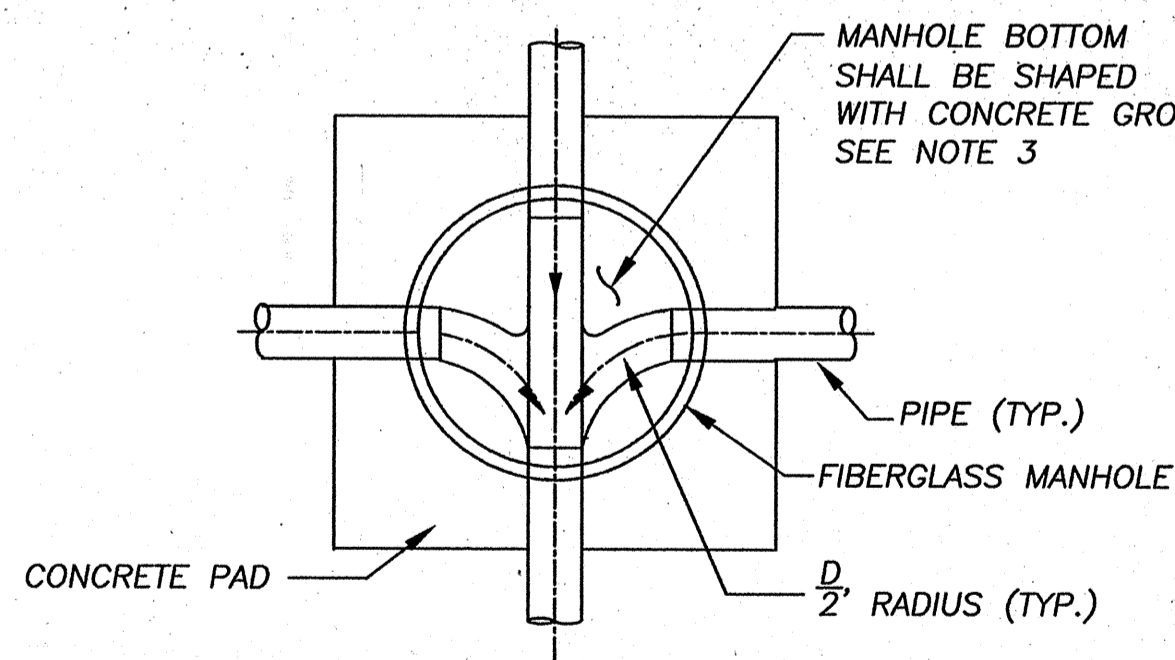


NEW FIBERGLASS MANHOLE CONSTRUCTION:

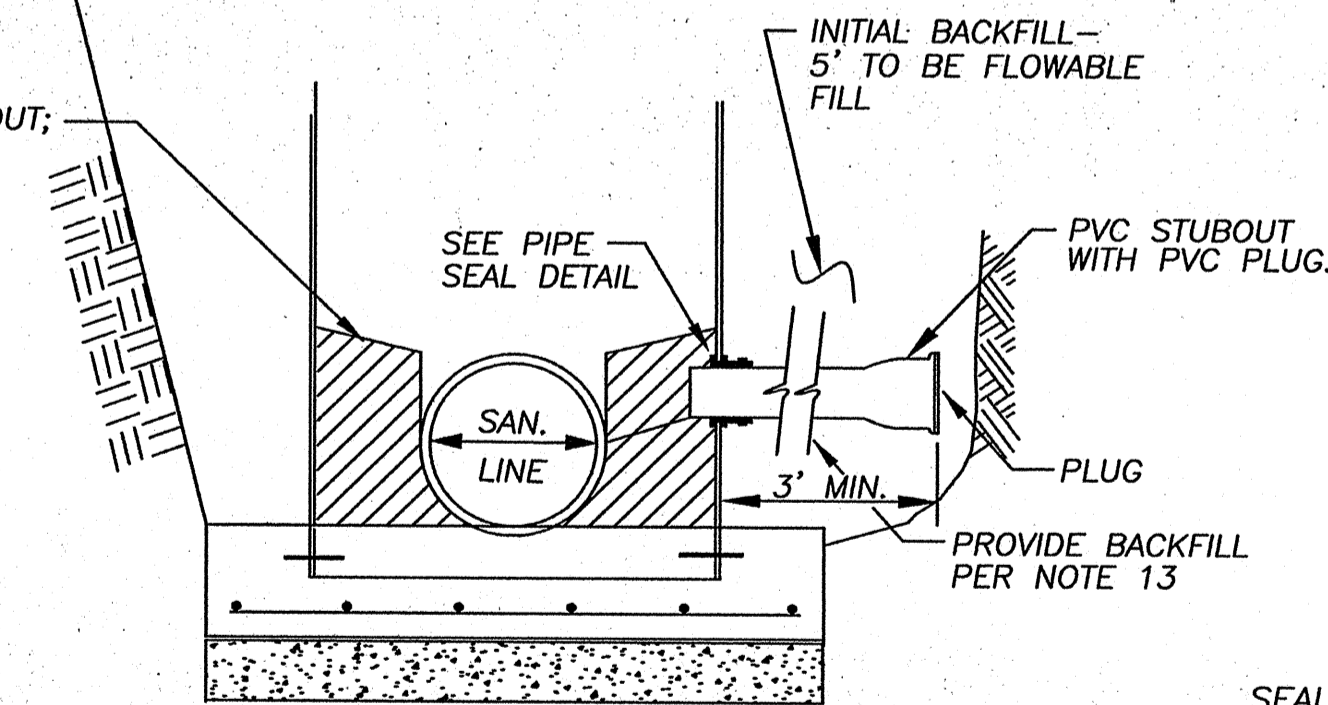
1. THE CONTRACTOR SHALL VISIT THE SITE OF THE WORK AND EXAMINE LOCAL CONDITIONS TO BE ENCOUNTERED, IMPROVEMENTS TO BE PROTECTED, PERMITS AND FEES REQUIRED, AND OTHER RESEARCH NECESSARY TO ASSURE CONTRACTOR UNDERSTANDS THE PROJECT THOROUGHLY AND IS FULLY AWARE OF ALL CONDITIONS AND CONSTRAINTS WHICH MAY BE ENCOUNTERED DURING THE COURSE OF CONSTRUCTION.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUIRING ANY NECESSARY OFF-SITE LOCATIONS FOR STORAGE OF ALL EQUIPMENT AND MATERIALS REQUIRED FOR THE CONSTRUCTION OF THE PROJECT.
3. ANY SOILS/WATER TABLE INFORMATION INCLUDED IN THE PLANS AND/OR SPECIFICATIONS IS FOR REFERENCE ONLY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PERFORMING ANY INVESTIGATION AND/OR RESEARCH NECESSARY TO IDENTIFY EXISTING CONDITIONS THAT MAY IMPACT OR INFLUENCE PROPOSED CONSTRUCTION.
4. THE PRECONSTRUCTION EXPLORATORY EXCAVATION REPORT (IF REQUIRED) SHALL BE COMPLETED PRIOR TO ANY CONSTRUCTION, TO VERIFY THE LOCATION OF EXISTING CONDITIONS OF UNDERGROUND UTILITIES AND/OR SUBSTRUCTURES.
5. CONTRACTOR SHALL CONDUCT EXCAVATION AND BACKFILL OPERATIONS IN SUCH A MANNER AS TO CAUSE NO DAMAGE TO ANY EXISTING UTILITY, NOR CREATE ANY PERIL FOR THE PUBLIC DURING AND AFTER CONSTRUCTION. UTILITIES FOUND IN CONDITION OTHER THAN AS SHOWN ON THE DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER. NOTE THAT ALL DAMAGE TO UTILITIES SHALL BE RECONSTRUCTED TO THE SATISFACTION OF THE CITY AND ENGINEER AT CONTRACTOR'S EXPENSE.
6. PRIOR TO ANY MANHOLE EXCAVATION OR OPENING OF MANHOLE COVERS IN THE ROAD WAY PROPER BARRICADING AND REROUTING SIGNS SHALL BE PLACED TO DIVERT THE TRAFFIC AND PEDESTRIANS IN ACCORDANCE WITH APPROVED TRAFFIC CONTROL PLANS.
7. ALL CUTS THROUGH EXISTING ASPHALT AND/OR CONCRETE PAVING SHALL BE SAW CUT (1" MIN.), UNLESS DIRECTED OTHERWISE BY THE ENGINEER.
8. FOR SEWER LINES ENTERING THE MANHOLE, THE INVERT SHALL BE U-SHAPED CONCRETE GROUT TO A MINIMUM DEPTH OF PIPE O.D.. THE CORNERS SHALL BE FILLETED TO PREVENT SOLIDS DEPOSITION, AS PER T.C.E.Q. REQUIREMENTS.
9. A DROP CONNECTION SHALL BE PROVIDED FOR SEWER LINES ENTERING THE MANHOLE MORE THAN 30" INCHES ABOVE THE MANHOLE INVERT.
10. MANHOLE WALL PENETRATIONS FOR PIPE ABOVE THE FLOWLINE OF THE MANHOLE SHALL BE MADE WITH AN "INSERTA-TEE" RUBBER SLEEVE SEAL OR APPROVED EQUAL.
11. PIPE LAYED ALONG AND THRU THE MANHOLE FLOWLINE MUST HAVE AN APPROVED RUBBER RING SEAL.
12. ALL EXPOSED CONCRETE/GROUT SURFACES WITHIN MANHOLES (INCLUDING MANHOLE INVERT), SHALL BE SEALED WITH 2 COATS OF 60 MILS JEFFCOAT 326 EPOXY OR APPROVED EQUAL.
13. INITIAL BACKFILL AROUND ALL MANHOLES SHALL BE FIVE FOOT MIN. FLOWABLE FILL (100 PSI MINIMUM COMPRESSIVE STRENGTH @ 28 DAYS) AND FINAL BACKFILL TO BE CEMENT STABILIZED SAND AS FILLER (OR AS NOTED OTHERWISE IN THE PLANS).
14. STAINLESS STEEL (S.S.) INFLOW INHIBITORS SHALL BE PROVIDED FOR ALL MANHOLES.
15. TESTING OF THE NEW MANHOLE SHALL BE AS PER CITY STANDARD SPECIFICATIONS.
16. CONTRACTOR MAY SET IN PLACE MANHOLE AFTER MAIN LINE IS INSTALLED PROVIDED AS FOLLOWS: WALL OPENING IS CUT OUT EXACTLY, SO THE RUBBER SEAL FITS WITH NO GAPS. FIBERGLASS IS SET INTO CONCRETE FOUNDATION BASE, AS SHOWN IN THE DETAILS. DO NOT USE FOR LINES ENTERING MANHOLE ABOVE FLOW LINE.
17. ALL MANHOLES SHALL HAVE FACTORY BONDED JOINTS WITH A LABEL CLEARLY INDICATING "FACTORY BONDED".
18. TRENCH BACKFILL/PAVEMENT REPAIRS--SEE TRENCH BACKFILL AND PAVEMENT REPAIR DETAILS (SHEET 3 OF 5)
19. ALL MANHOLE RINGS, COVERS AND APPURTENANCES SHALL BE DESIGNED TO MEET AASHTO-M-306. TRAFFIC SHALL BE RESTRICTED FROM MANHOLE FOR 48 HOURS AFTER PLACEMENT OF CONCRETE COLLAR. SEE SHT. 5 OF 5

TRAFFIC CONTROL - ALL UTILITY WORK

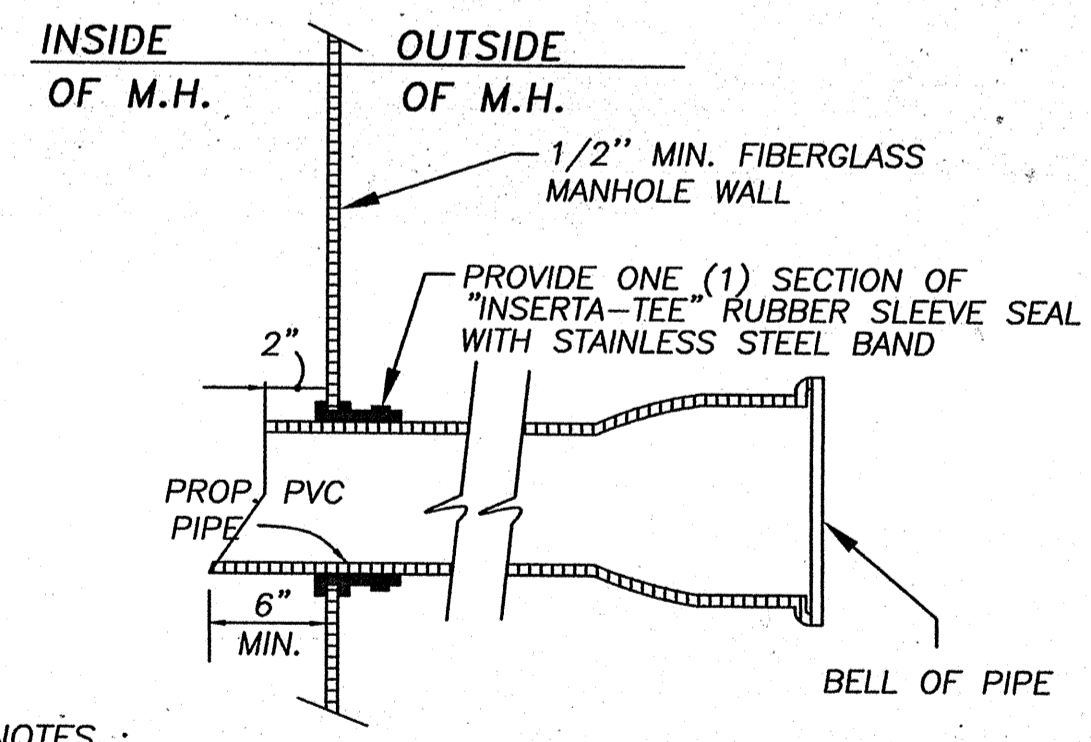
1. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN ALL TRAFFIC CONTROL DEVICES DURING THE COURSE OF CONSTRUCTION.
2. EQUIPMENT AND MATERIALS SHALL NOT BE STORED ON PUBLIC RIGHT-OF-WAY DURING THE COURSE OF CONSTRUCTION. ANY MATERIAL AND EQUIPMENT APPROVED BY THE CITY ENGINEER FOR TEMPORARY PLACEMENT ALONG THE PUBLIC RIGHT-OF-WAY SHALL BE ADEQUATELY BARRICADED AS REQUIRED FOR EACH DIRECTION OF TRAVEL.
3. CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE OF ALL SIGNS REQUIRED IN THE TRAFFIC CONTROL PLAN. DAMAGE OR LOSS OF ANY REGULATORY SIGNS OR WARNING SIGNS SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ENGINEER. CONTRACTOR SHALL REIMBURSE THE CITY FOR ALL COSTS INCURRED FOR SIGN MAINTENANCE IF THE CONTRACTOR DOES NOT PROMPTLY REPLACE SIGNS.
4. FOLLOWING CONSTRUCTION, ALL CITY OF CORPUS CHRISTI TRAFFIC SIGNS FOUND TO BE DAMAGED, MISSING, OR IMPROPERLY PLACED SHALL BE REPLACED AND RESTORED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.
5. THE CONTRACTOR SHALL PROVIDE ALL-WEATHER ACCESS TO ALL RESIDENTS AND BUSINESSES AT ALL TIMES DURING CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE TEMPORARY DRIVEWAYS AND/OR ROADS WITH APPROVED MATERIAL DURING WET WEATHER.
6. ALL SIGNS AND BARRICADES USED SHALL BE REFLECTORIZED AND SHALL BE EQUIPPED WITH FLASHING WARNING LIGHTS AS REQUIRED BY TRAFFIC CONTROL PLAN.



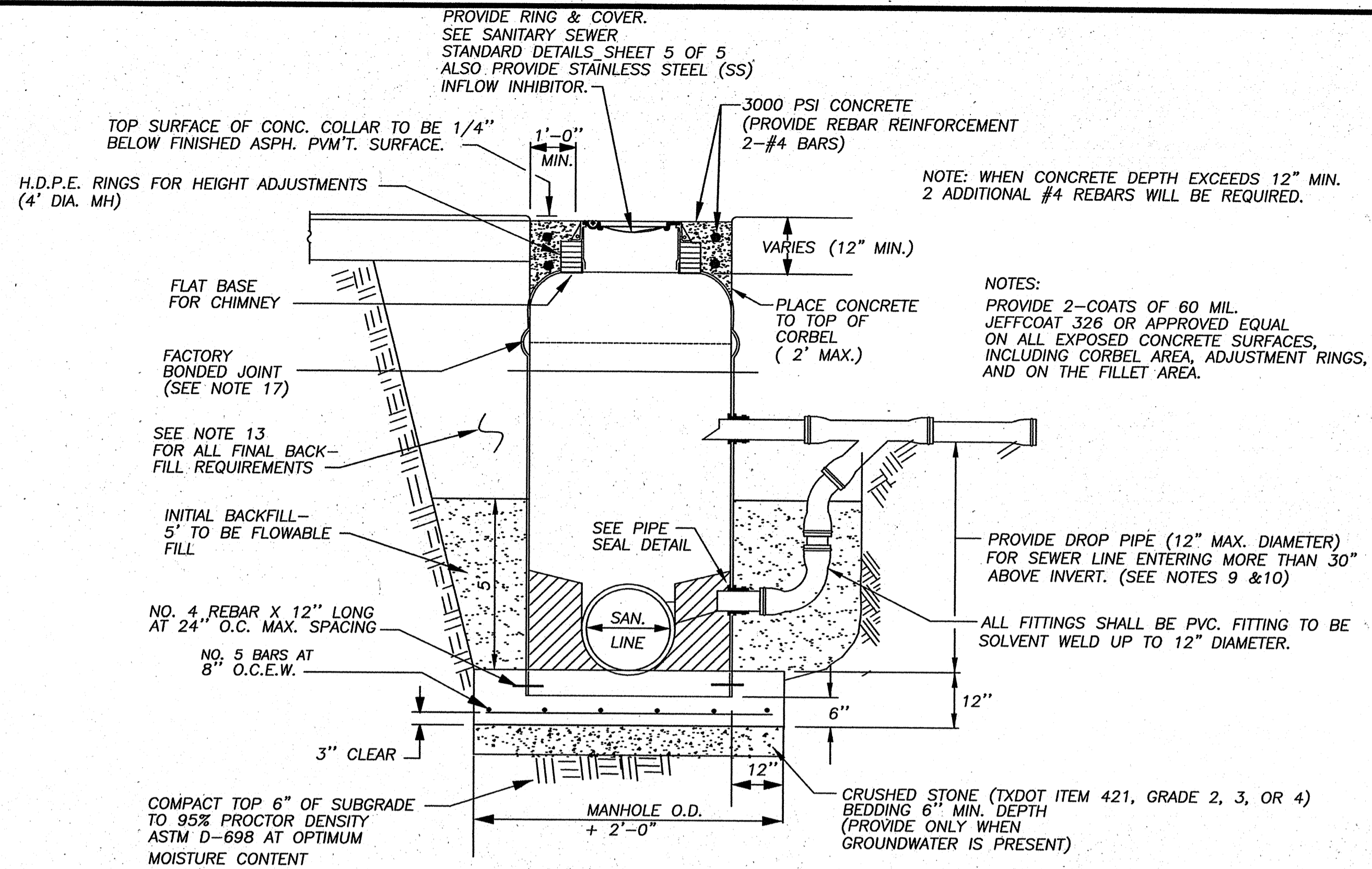
SANITARY SEWER MANHOLE BOTTOM
NOT TO SCALE



STUB-OUT DETAIL
NOT TO SCALE



PIPE SEAL DETAIL
NOT TO SCALE



SANITARY FIBERGLASS MANHOLE W/ DROP CONNECTION DETAIL
NOT TO SCALE

PIPE DIA. (Ø) / DEPTH (FT.)	MANHOLE DIA. SELECTION	MANHOLE RING/COVER NORMAL SIZE
< 30" Ø / < 14 FT. DEEP	4 FT. Ø M.H.	24"
< 30" Ø / > 14 FT. DEEP	5 FT. Ø M.H.	36"
30"-40" Ø / ANY DEPTH	5 FT. Ø M.H.	36"

NOTE: WHERE MULTIPLE PIPE CONNECTIONS OCCUR, MAX MANHOLE WALL CUT-OUT SHALL NOT EXCEED MANUFACTURER'S RECOMMENDATION, NOR SHALL BE CUT LEAVING LESS THAN 12" BETWEEN LINES.

IN CASE OF CONFLICT, DESIGN ENGINEER'S PLANS/SPECS/STDS SHALL TAKE PRECEDENCE

3-2004

FILE: /MProject/latestsids/SAN2004-1.dwg

CONSULTANT'S SHEET NO.



CITY OF CORPUS CHRISTI, TEXAS
WASTEWATER DEPARTMENT
Department of Engineering Services

MANHOLE INSTALLATION
SANITARY SEWER STANDARD DETAILS

SHEET ___ of ___
RECORD DRAWING NO. ___
CITY PROJECT # ___

REVISION NO. _____ DATE _____ DESCRIPTION _____

ROADWAY MANHOLE RING & COVER NOTES

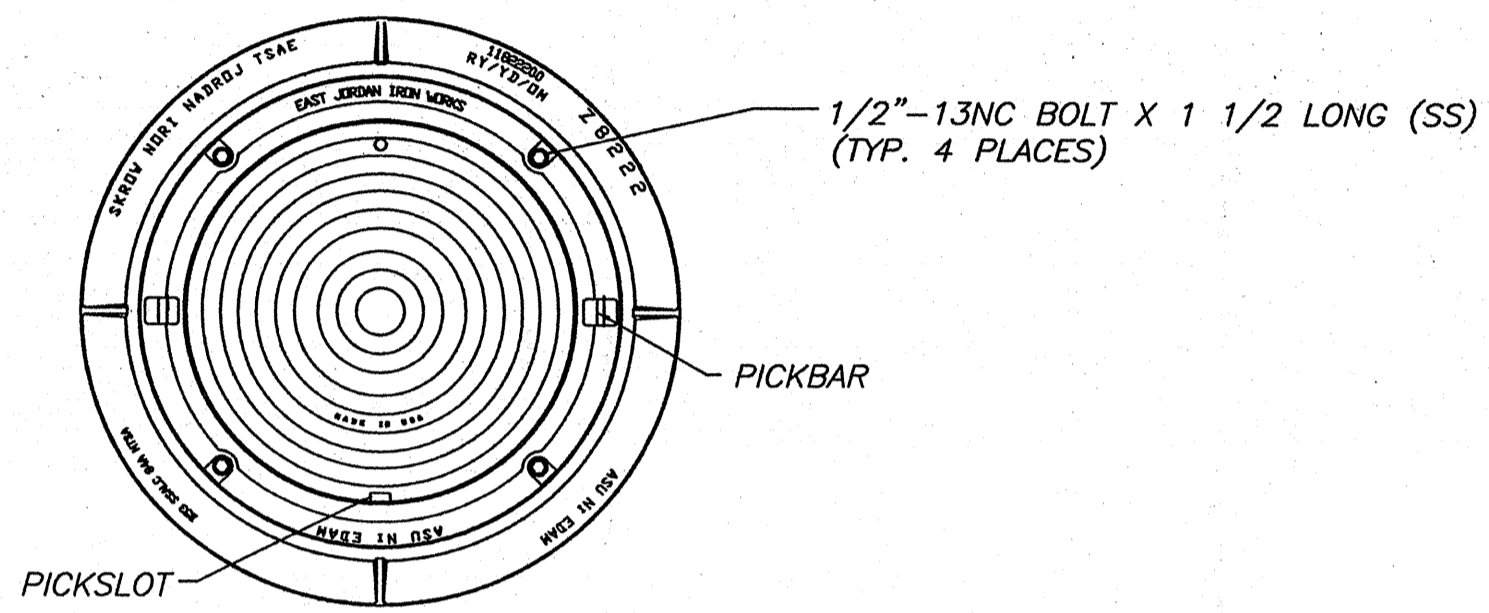
1. THESE DETAILS SHOW GREY-IRON CASTINGS, FILLETED AT ANGLES WITH SHARP AND PERFECT ARISES.
2. CASTING SHALL BE TRUE TO PATTERN, FORM, AND DIMENSIONS, FREE FROM CRACKS, SPONGINESS AND BLOWHOLES.
3. MACHINE SURFACES TO FIELD FIT WHICH WILL NOT RATTLE WITH PASSING TRAFFIC LOAD, AND ACCEPT STAINLESS STEEL (S.S.) INFLOW INHIBITOR SO THAT INNER LID IS FLUSH WITH OUTER LID.
4. TRAFFIC SHALL BE RESTRICTED FROM M.H. FOR 48 HOURS AFTER PLACEMENT OF CONCRETE.
5. H.D.P.E. MANHOLE HEIGHT ADJUSTMENT RINGS SHALL BE DESIGNED TO SUPPORT H-20 REQUIRED TRAFFIC LOADING.
6. OTHER CASTING PATTERNS FOR RING & COVERS MAY BE SUBMITTED FOR APPROVAL PROVIDED THE PLAN PATTERN OF COVER IS THE SAME AS SHOWN ON THIS SHEET AND PROVIDED OTHER CASTINGS SHALL BE COMPLETELY INTERCHANGEABLE, I.E., THE COVERS OF THIS SHEET SHALL

FIT PROPERLY, THE RINGS OF OTHER CASTING DETAILS AND THE COVERS OF OTHER CASTINGS SHALL FIT THE RINGS OF THIS SHEET.

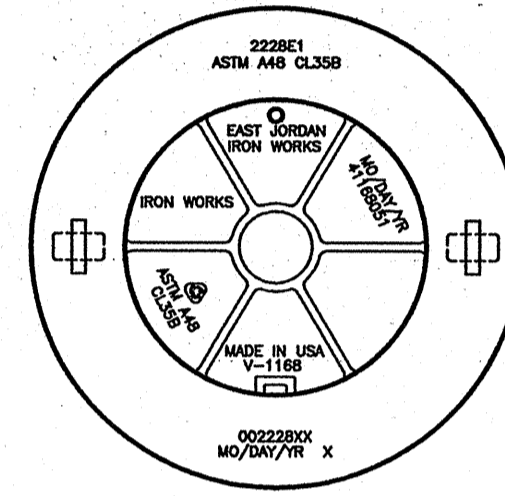
7. MINIMUM WEIGHTS OF FINISHED CASTINGS :

A. 2'-0" RING AND COVER COVER - 160 LBS. RING - 175 LBS.	B. 3'-0" RING AND COVER INNER COVER - 160 LBS. OUTER COVER - 232 LBS. FRAME - 265 LBS.
--	---
8. WHEREVER SANITARY SEWER MANHOLES ARE SUBJECT TO INUNDATION BY STORM WATER AND IF SHOWN IN THE PLANS AS A REQUIREMENT, THE MANHOLE COVERS SHALL HAVE GASKET AND BE BOLTED. WHERE GASKET MANHOLE COVERS ARE REQUIRED FOR MORE THAN THREE MANHOLES IN SEQUENCE, ALTERNATE MEANS OF VENTING SHALL BE PROVIDED. THE BOLTS SHALL BE STAINLESS STEEL, 1/2 INCH IN DIAMETER, EQUALLY SPACED, THREE (3) MINIMUM A SOLID STANDARD COVER WITH A PICK BAR SHALL BE USED. THE GASKET SHALL BE 1/8" THICK NEOPRENE RUBBER.

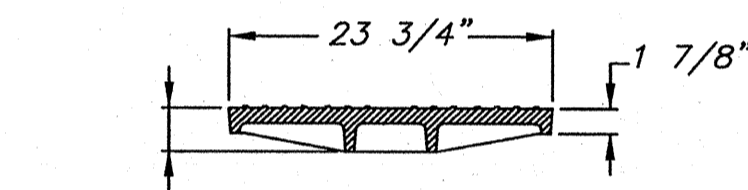
9. APPLY NON-SEIZE GRAPHITE OR APPROVED EQUAL AROUND ALL MANHOLE RING & COVER, PRIOR TO INSTALLATION.
10. AASHTO-M-306 PROOF LOAD TESTING IS REQUIRED AND SHALL BE CONDUCTED IN ACCORDANCE WITH SECTION 7.0 (40,000LBS.) AND INSPECTED IN ACCORDANCE WITH SECTION 9.1.1. RESULTS OF THE TEST SHALL BE SUBMITTED TO THE CITY PRIOR TO INSTALLATION.



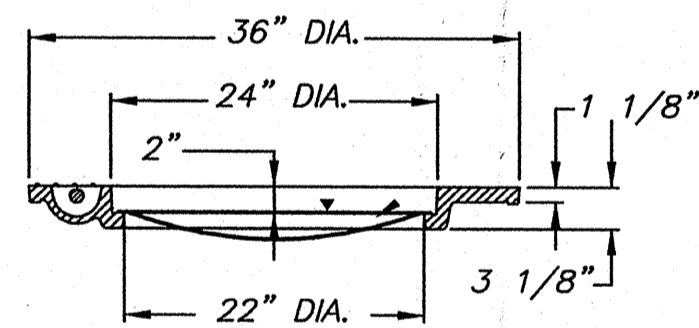
RING & COVER PLAN VIEW



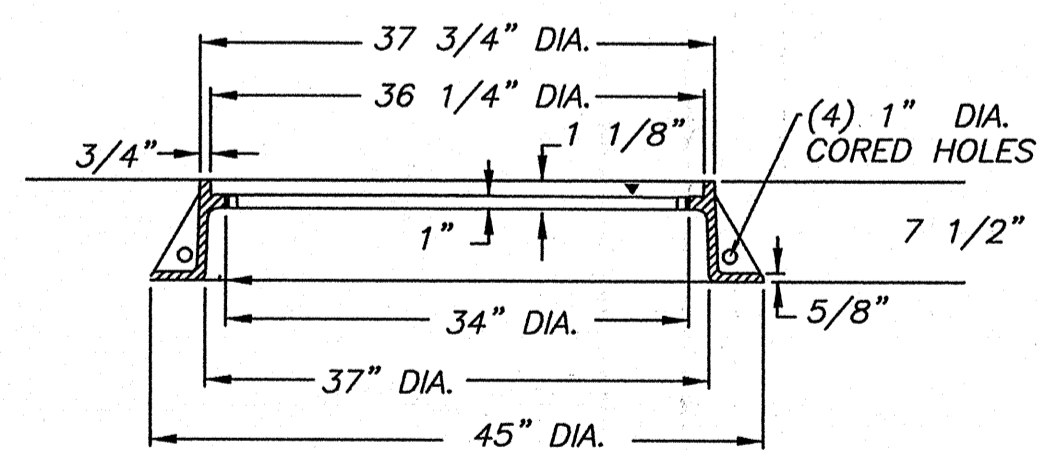
COVER BOTTOM VIEW



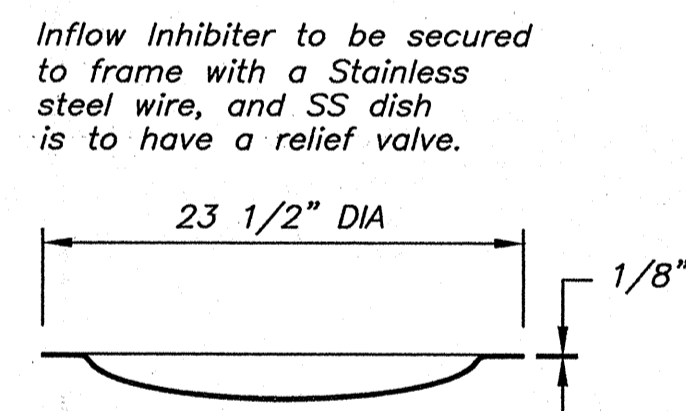
INNER COVER SECTION



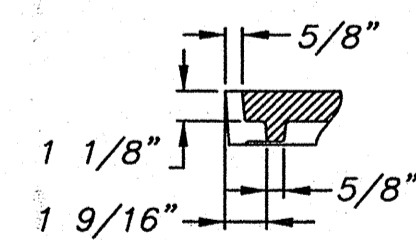
COVER SECTION VIEW



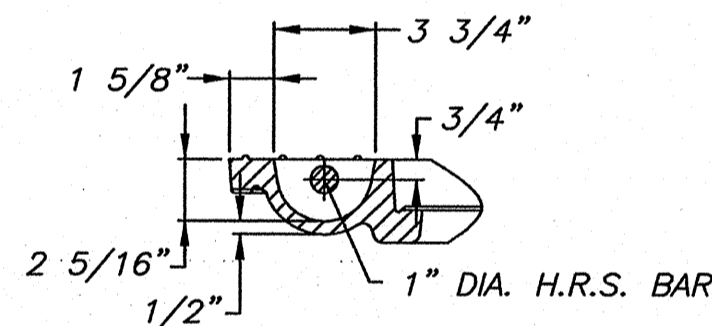
OUTER SECTION OF FRAME



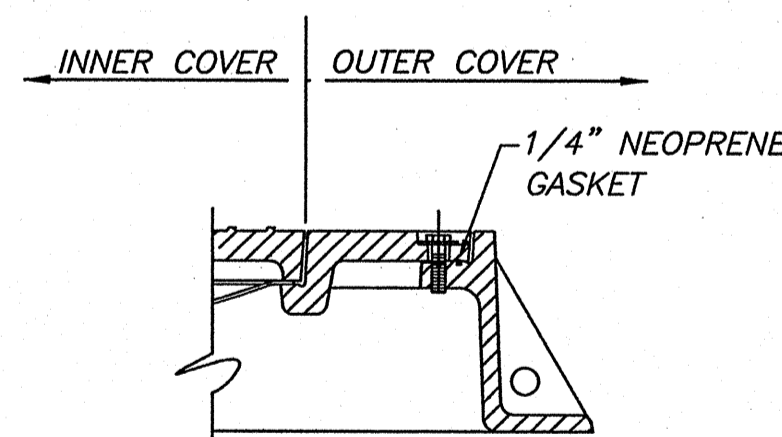
STAINLESS STEEL (S.S.) INFLOW INHIBITOR



PICKSLOT DETAIL



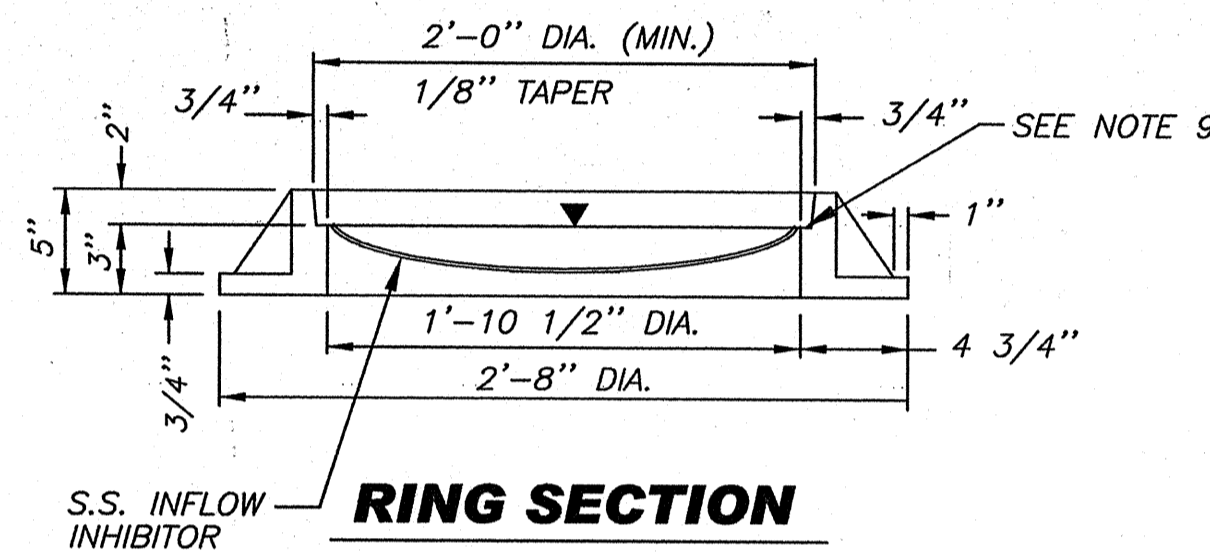
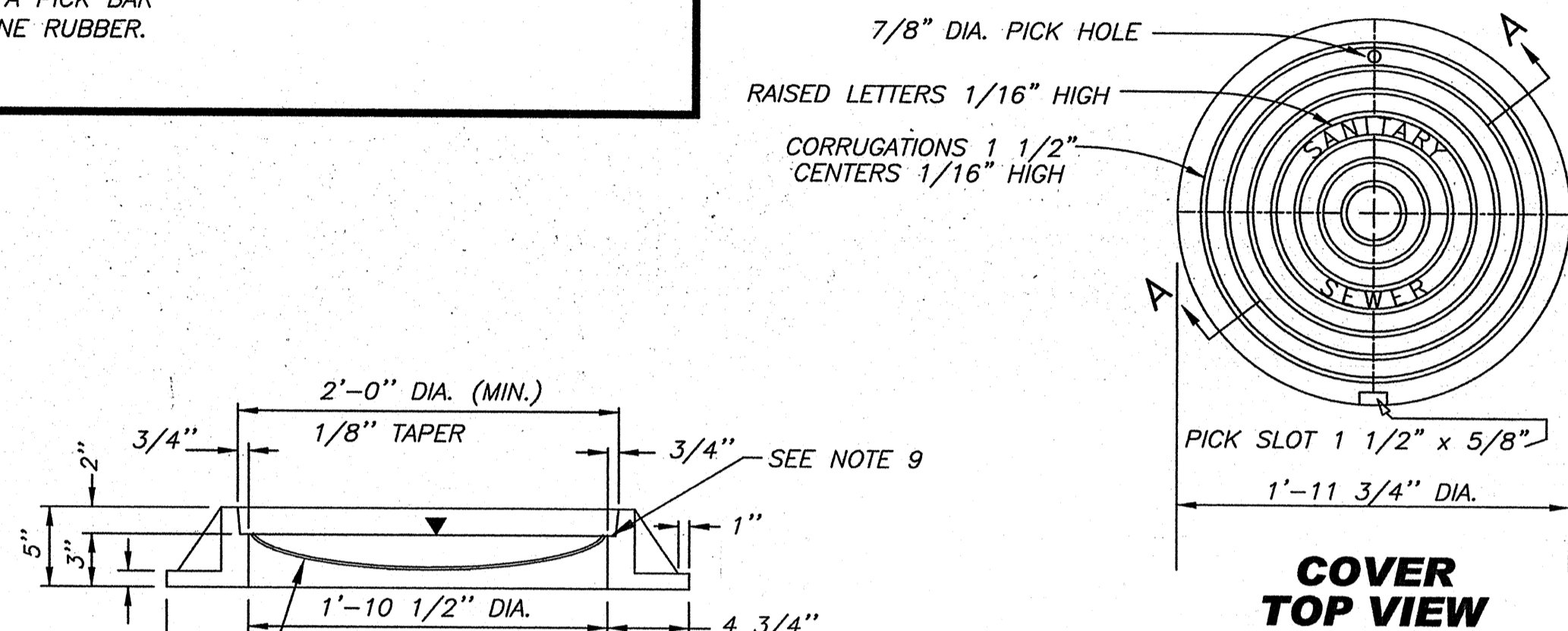
PICKBAR DETAIL



BOLTING DETAIL

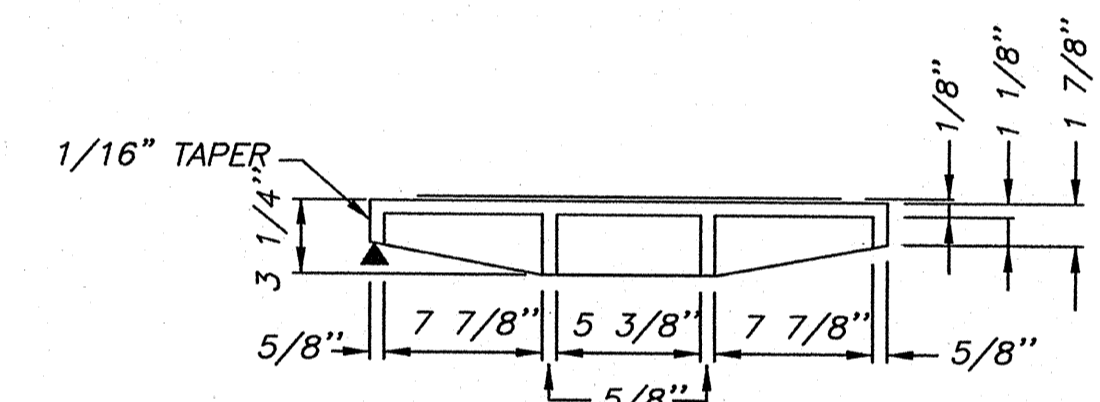
(WHERE REQUIRED)
(Bolt to completely penetrate bolt tab on frame)

NOTE: MACHINE THIS SURFACE = ▽

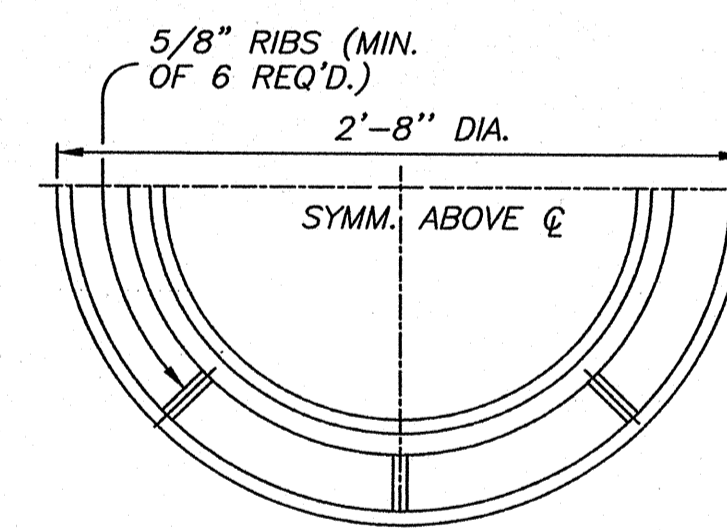


RING SECTION

DENOTES 304 STAINLESS STEEL

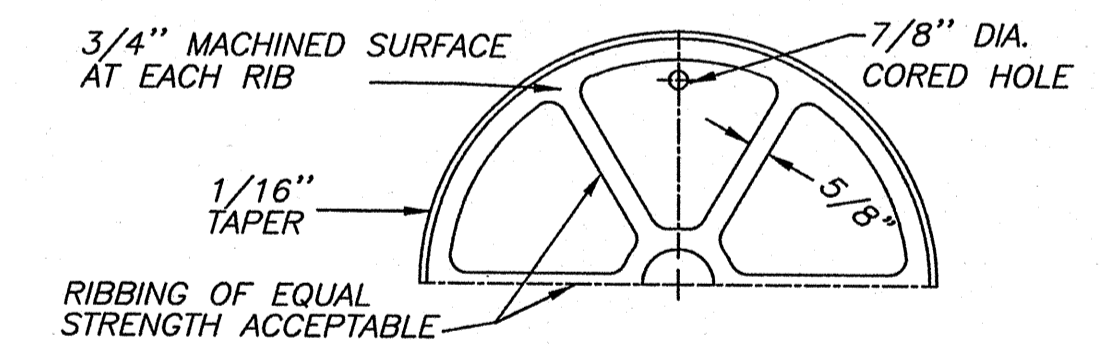


SECTION 'A-A' ON CENTERLINE



RING HALF-PLAN

NOTE: MACHINE THIS SURFACE = ▽



COVER HALF BOTTOM VIEW

MANHOLE	RING & COVER	INHIBITOR	COMMENTS
4' - 0"	EAST JORDAN IRON WORKS, INC. V-1168, PRODUCT NO. 41168051 OR APPROVED EQUAL WITH MILLED COVER FOR INHIBITOR	• PER CITY STANDARD SPECIFICATION	• NO BOLTS ASSEMBLY

RING & COVER DETAIL FOR 4' DIA. MANHOLE INSTALLATION

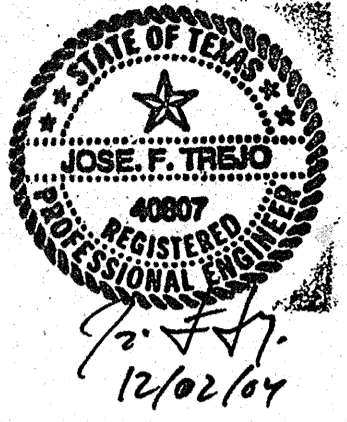
NOT TO SCALE

IN CASE OF CONFLICT, DESIGN ENGINEER'S PLANS/SPECS/STDS SHALL TAKE PRECEDENCE

MANHOLE	RING & COVER	INHIBITOR	COMMENTS
5' - 0" OR LARGER	EAST JORDAN IRON WORKS, INC. PRODUCT NO. 22801 OR APPROVED EQUAL (MILLED COVER FOR S.S. INFLOW INHIBITOR)	• PER CITY SPECIFICATION • FOR INNER LID ONLY	• NO STACKING LUGS • OUTER LID TO HAVE PICK BARS, GASKET

RING & COVER DETAIL FOR 5' DIA. MANHOLE INSTALLATION

NOT TO SCALE



DESCRIPTION

BY

DATE

REVISION NO.

CITY OF

CORPUS CHRISTI,

TEXAS

WASTEWATER

DEPARTMENT

Department of Engineering Services

5 of 5

RING AND COVER DETAILS FOR

4' AND 5' MANHOLES

SANITARY SEWER

STANDARD DETAILS

SHEET 5 of 5

RECORD DRAWING NO.

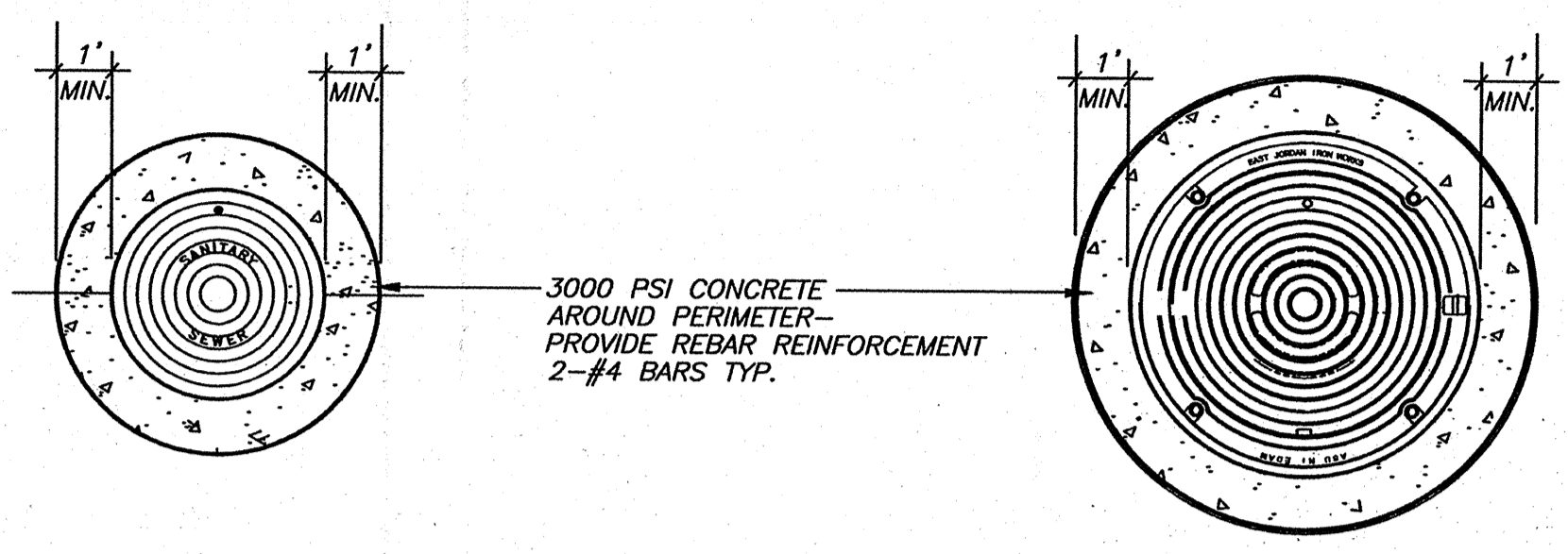
CITY PROJECT #



CITY OF
CORPUS CHRISTI
TEXAS
WASTEWATER
DEPARTMENT
Department of Engineering Services

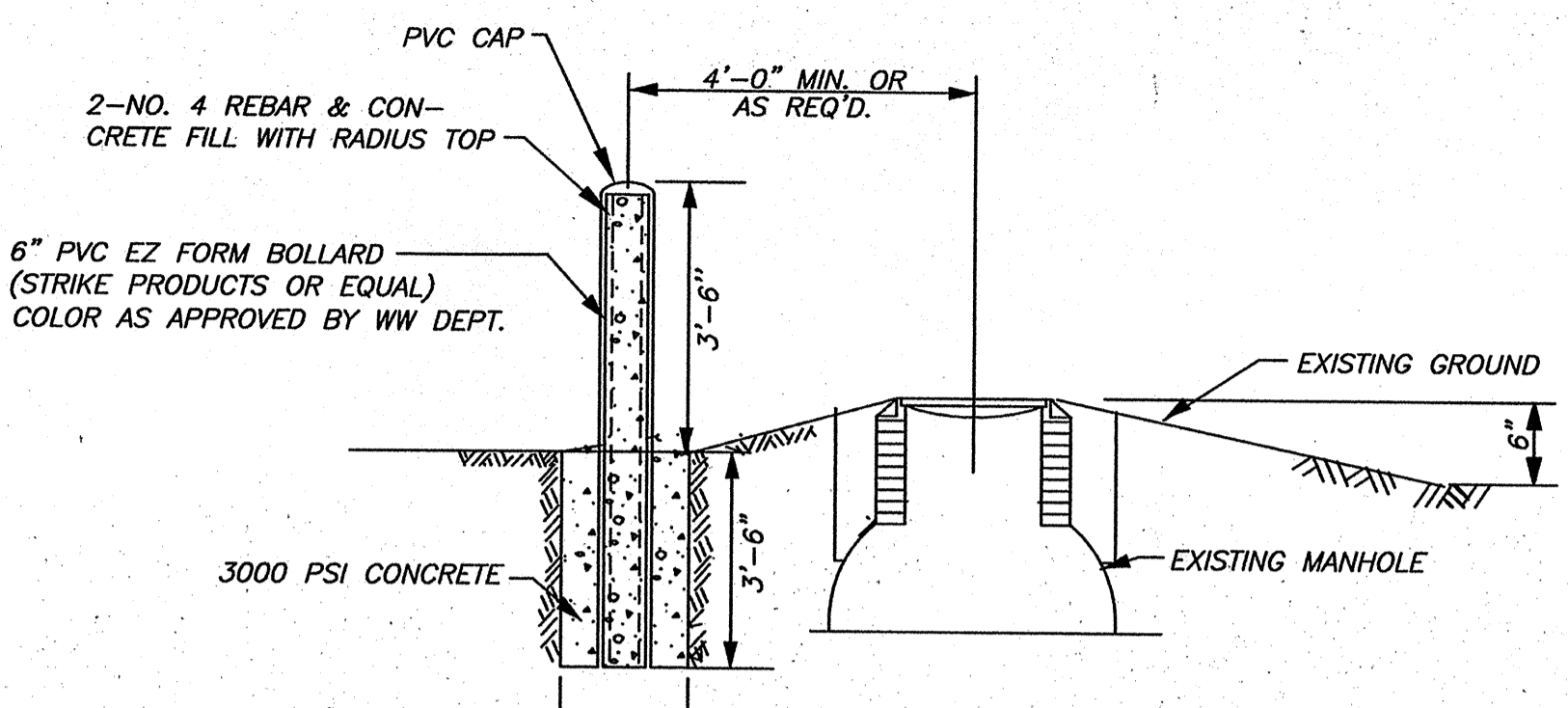
MANHOLE SURFACE PROTECTION
AND CONCRETE DETAILS
SANITARY SEWER
STANDARD DETAILS

REVISION NO. _____ DATE _____ DESCRIPTION _____
BY _____
SHEET 4 of 5
RECORD DRAWING NO. _____
CITY PROJECT # _____

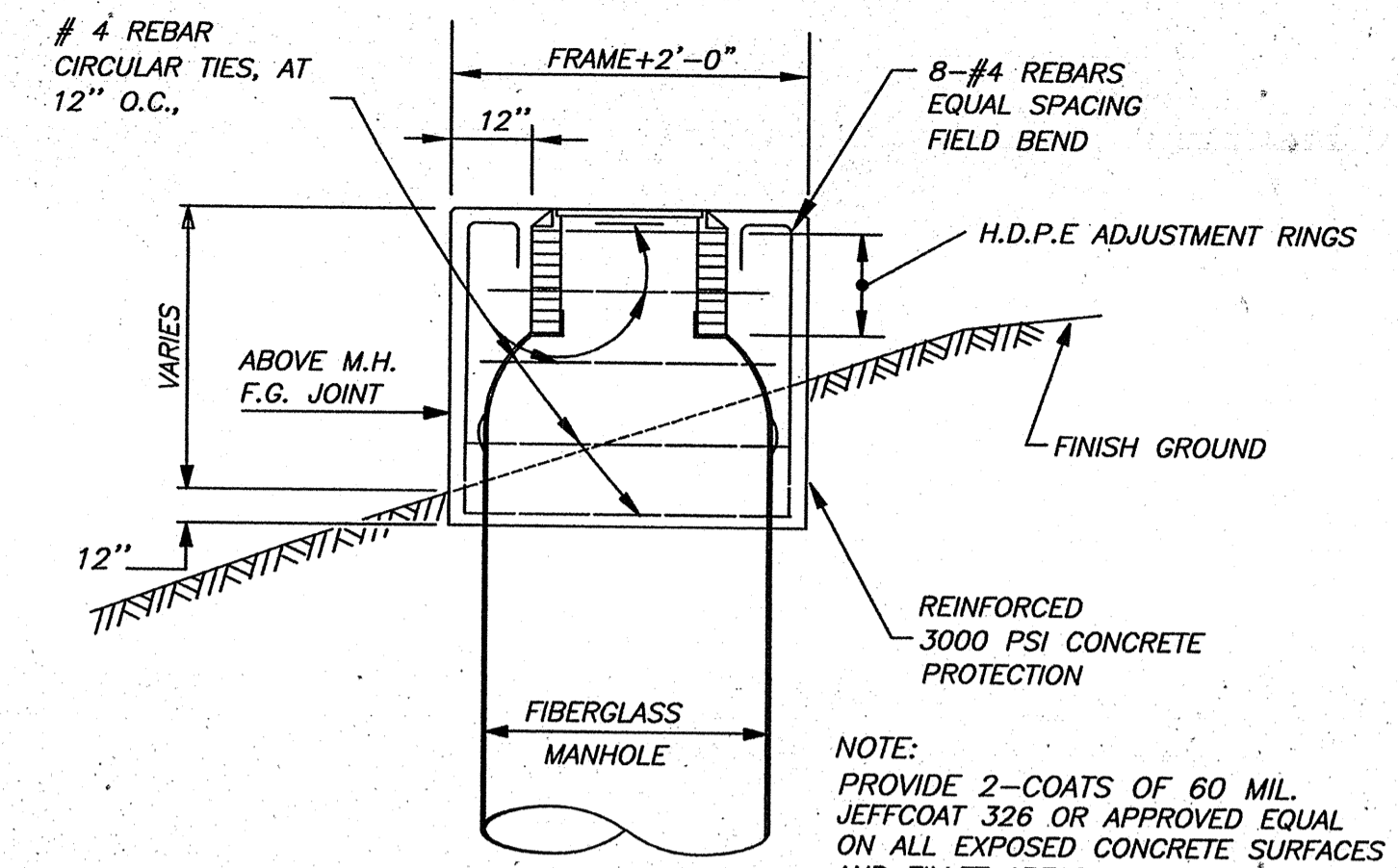


2'-0" DIA. ROUND MANHOLE RING & COVER COLLAR DETAIL
N.T.S.

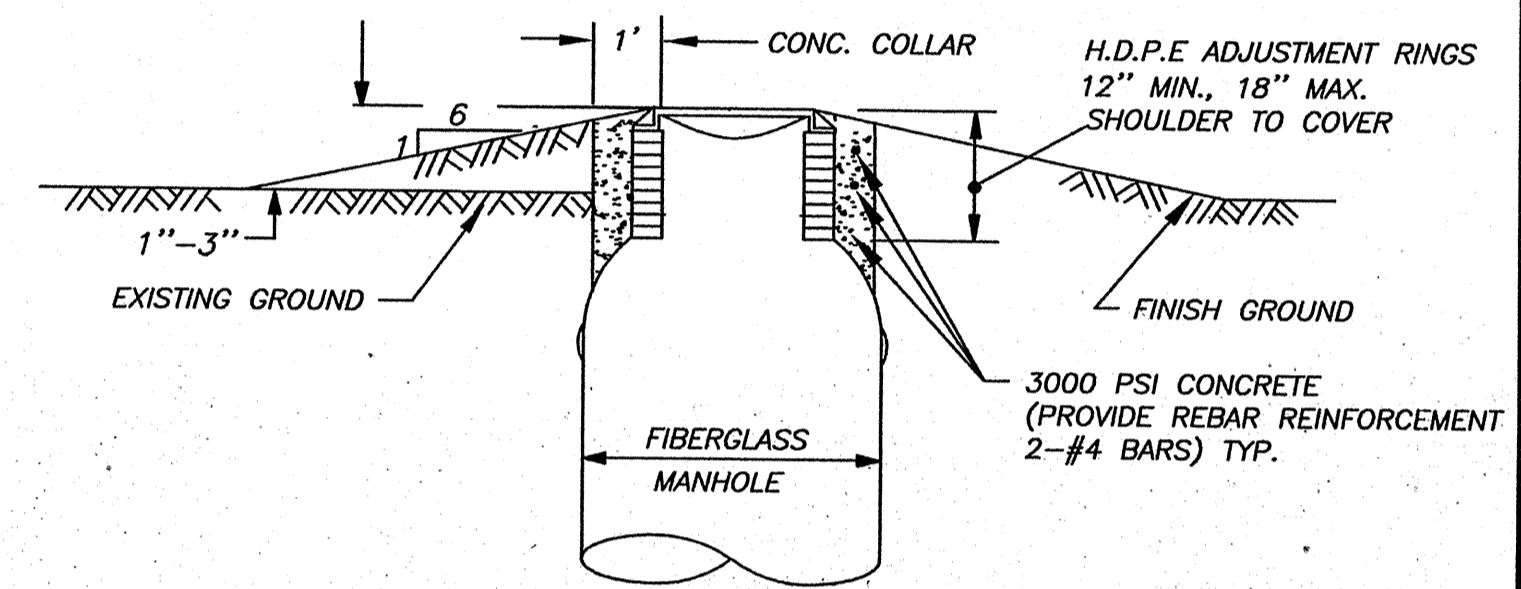
3'-0" DIA. ROUND MANHOLE RING & COVER COLLAR DETAIL
N.T.S.



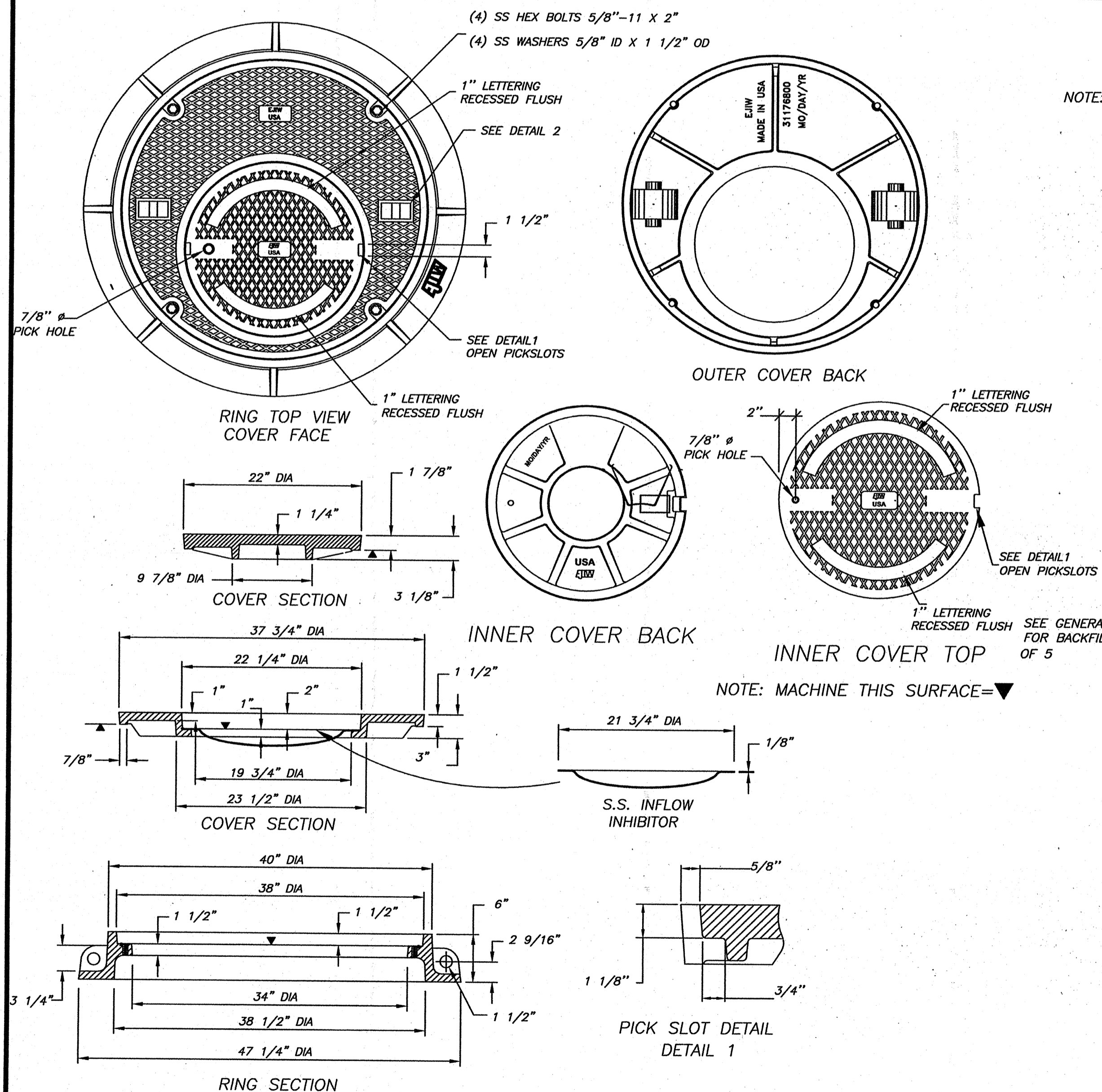
EZ FORM BOLLARD DETAIL
NOT TO SCALE



PROTECTION FOR FIBERGLASS MANHOLE IN UNPAVED AREAS (CULTIVATED/SPECIAL)
NOT TO SCALE



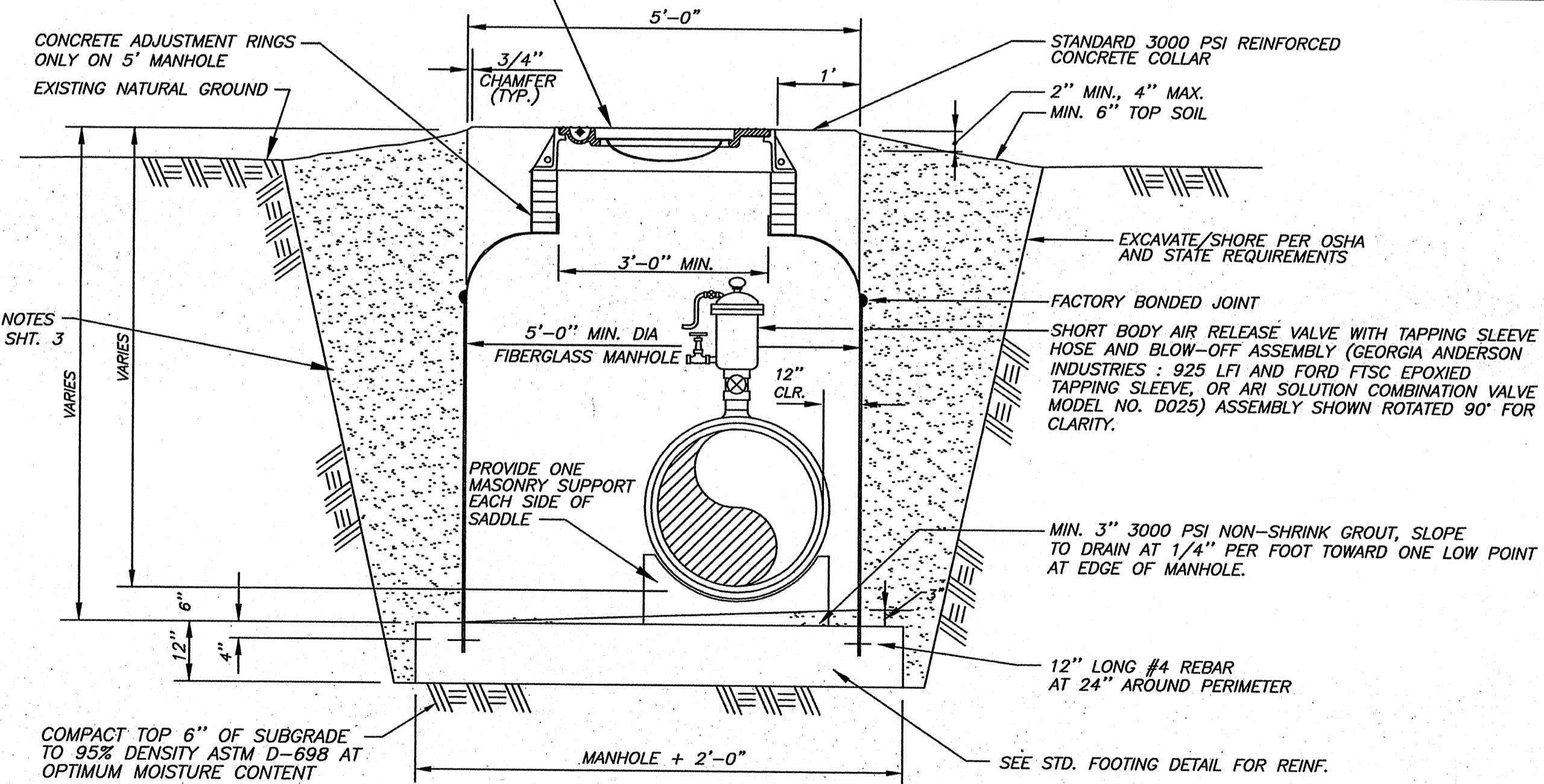
PROTECTION FOR FIBERGLASS MANHOLE IN UNPAVED AREAS (RESIDENTIAL)
NOT TO SCALE



3'-0" DIA. ROADWAY MANHOLE RING & COVER DETAIL (650-36)
NOT TO SCALE

NOTE: AASHTO-M-306 PROOF LOAD TESTING IS REQUIRED AND SHALL BE CONDUCTED IN ACCORDANCE WITH SECTION 7.0 (40,000LBS.) AND INSPECTED IN ACCORDANCE WITH SECTION 9.1.1. RESULTS OF THE TEST SHALL BE SUBMITTED TO THE CITY PRIOR TO INSTALLATION.

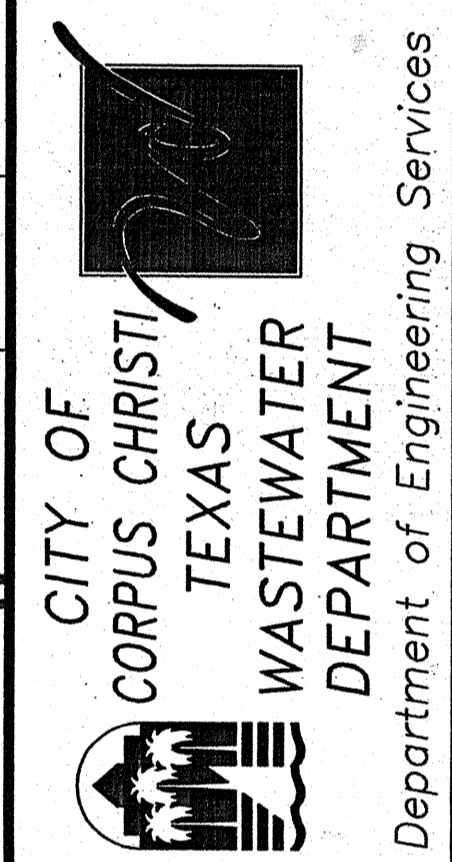
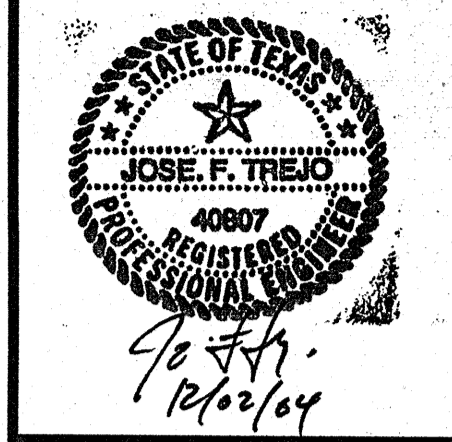
PROVIDE RING & COVER. SEE SANITARY SEWER STANDARD DETAILS THIS SAME SHEET ALSO INSTALL TETHERED STAINLESS STEEL (SS) INFLOW INHIBITOR.



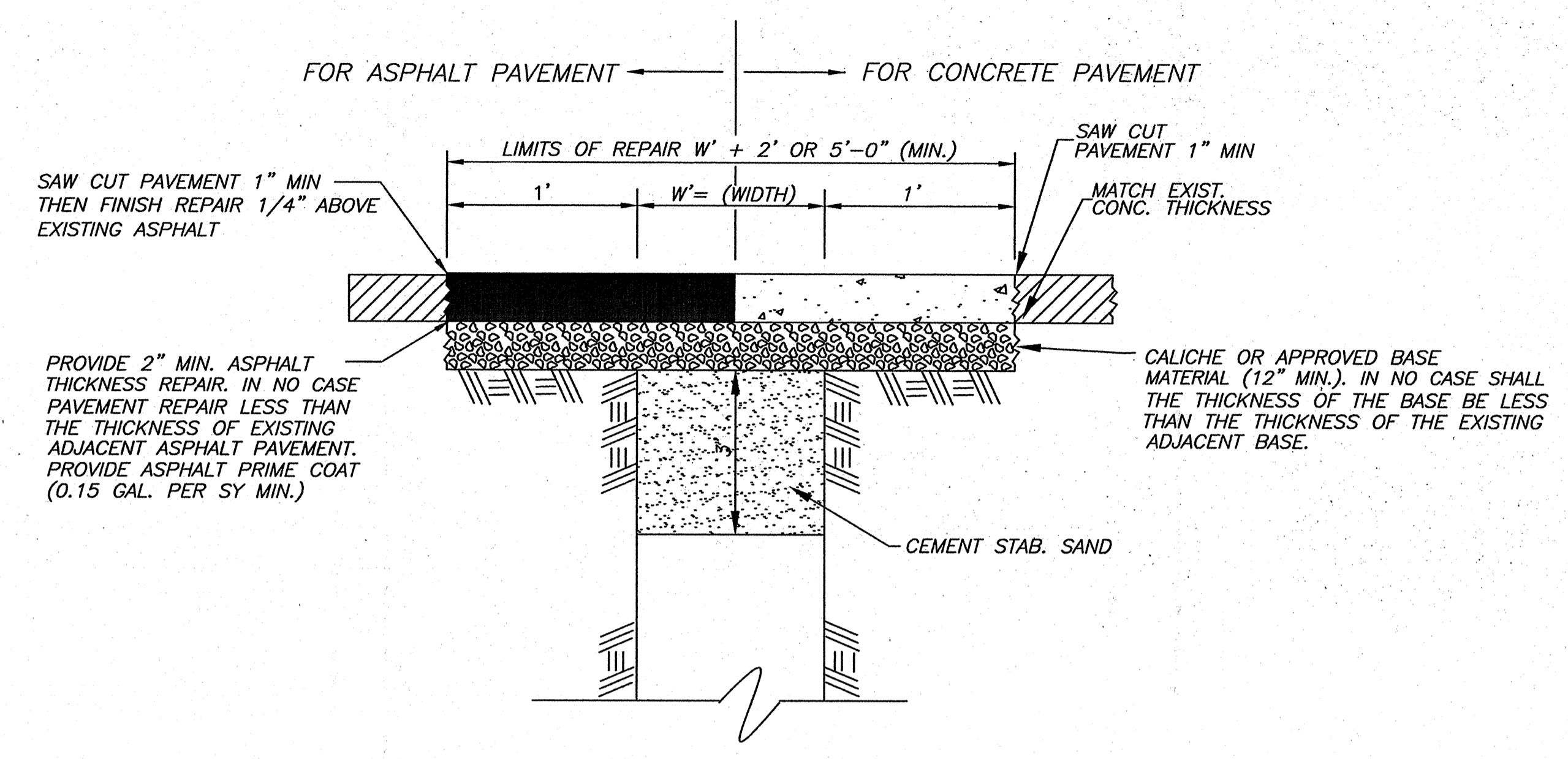
AIR RELEASE VALVE ON 5' FIBERGLASS MANHOLE
NOT TO SCALE

IN CASE OF CONFLICT, DESIGN ENGINEER'S PLANS/SPECS/STDS SHALL TAKE PRECEDENCE

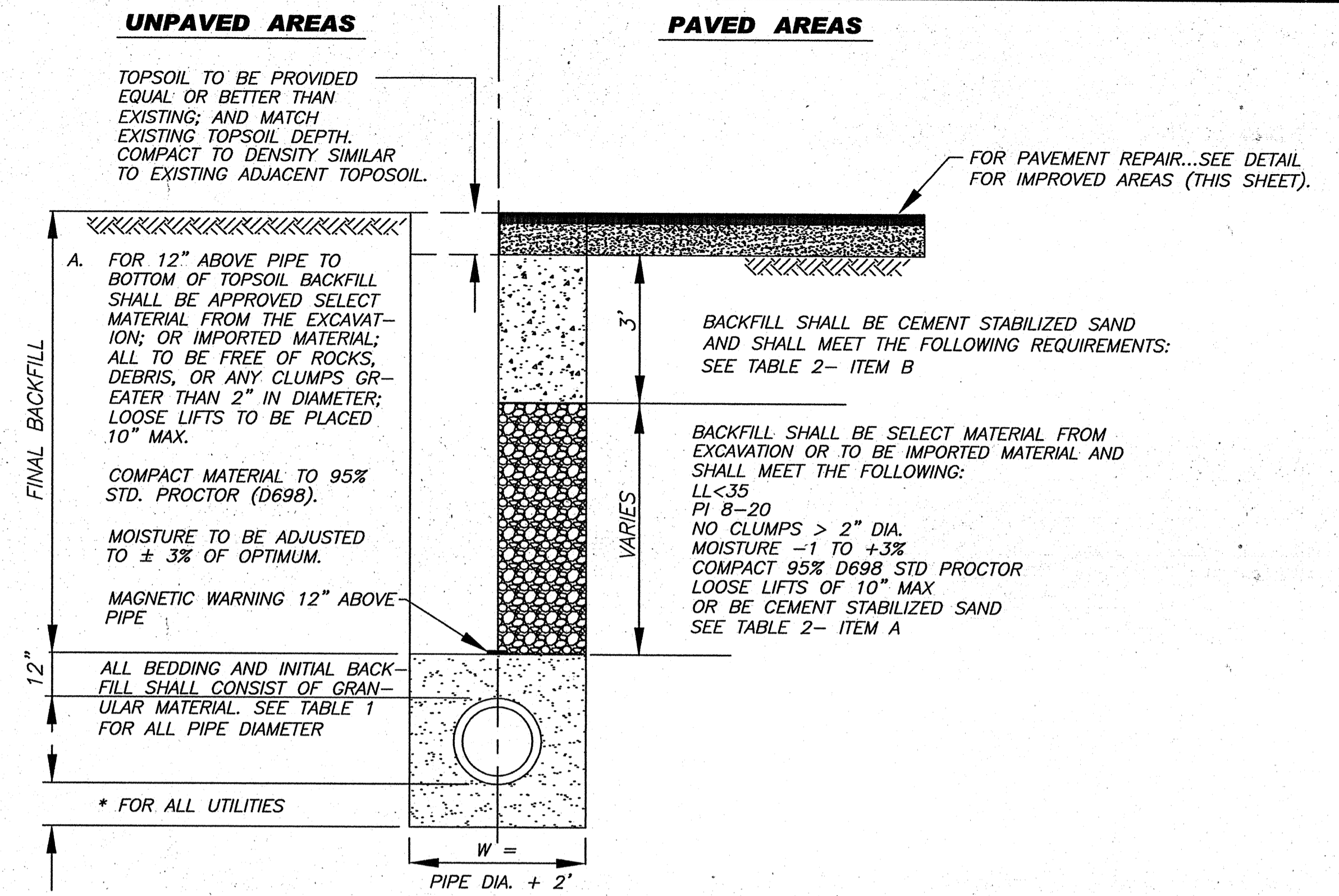
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PAVEMENT REPAIR/BACKFILL/
GENERAL NOTES/CASING DETAILS
SANITARY SEWER
STANDARD DETAILS



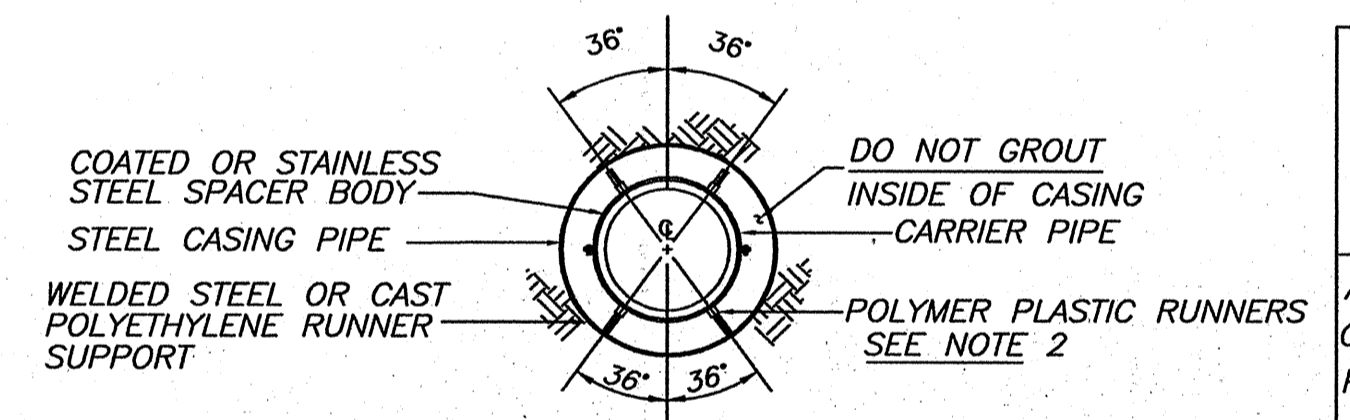
**IMPROVED AREAS
(EXISTING OR PROPOSED PAVEMENT)**
NOT TO SCALE



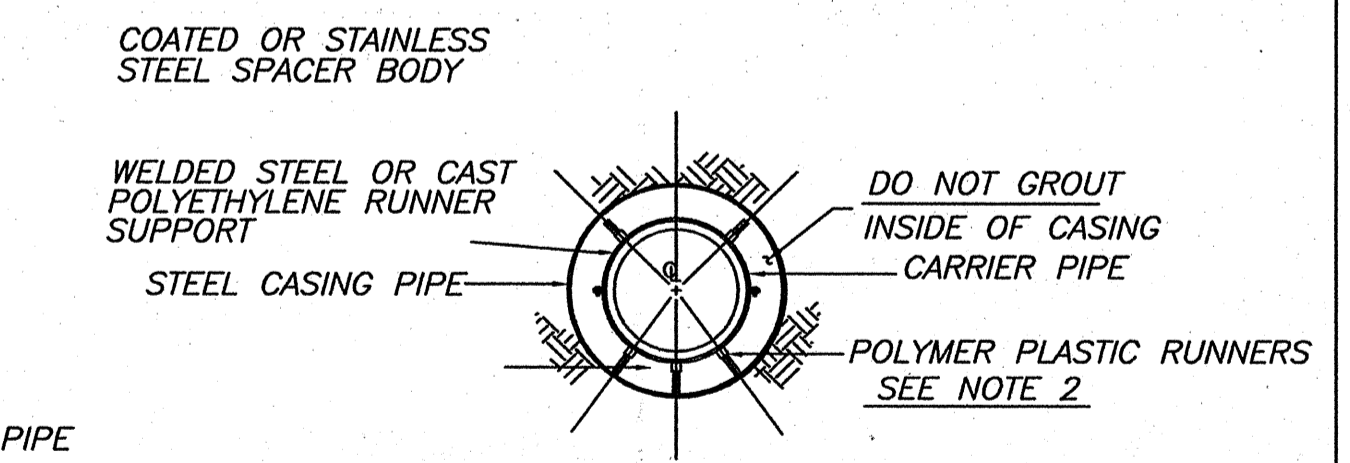
* FOR PIPE DIAMETER EQUAL TO OR SMALLER THAN 16", USE 4" MINIMUM BEDDING UNDER PIPE.
FOR PIPE DIAMETER GREATER THAN 16", USE 6" MINIMUM BEDDING UNDER PIPE.

**TRENCH BACKFILL AND PAVEMENT REPAIR
FOR WASTEWATER LINES**
NOT TO SCALE

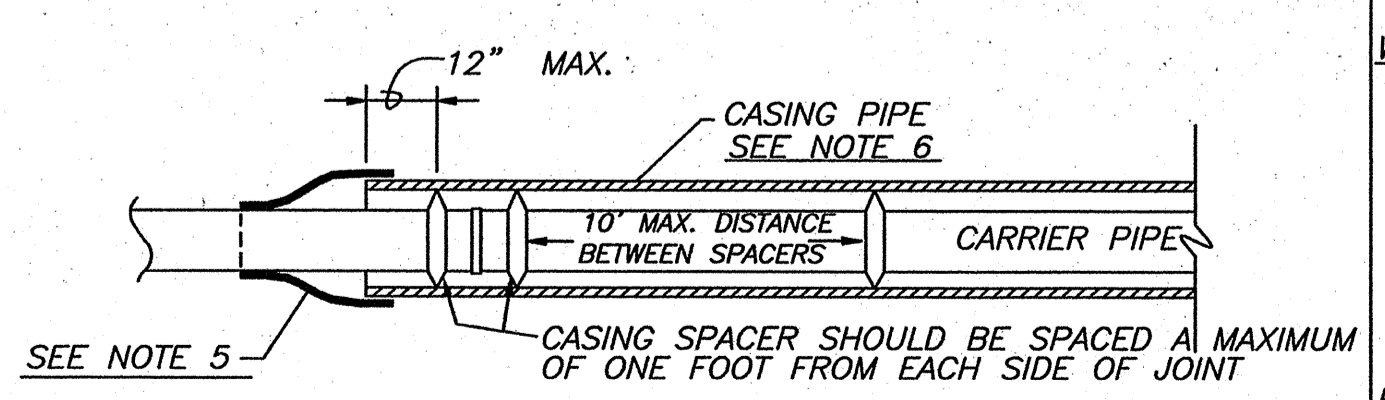
GENERAL NOTES FOR BACKFILL



4" TO 10" CASING DETAIL
NOT TO SCALE



12" TO 36" CASING DETAIL
NOT TO SCALE



CASING DETAIL
NOT TO SCALE

GENERAL NOTES - CASINGS

- CASING DIAMETER, LENGTH, LOCATION AND WALL THICKNESS SHALL BE PER PROJECT SPECIFIC REQUIREMENTS.
- ALL CARRIER PIPE IN CASINGS INSTALLED SHALL BE SUPPORTED BY BOLT-ON STYLE CASING SPACERS ("ADVANCED PRODUCTS" OR APPROVED EQUAL).
- PROVIDE MECHANICALLY RESTRAINED JOINTS FOR FORCE MAINS ONLY ON CARRIER PIPE USE "MEGALUG" TYPE JOINT RESTRAINTS OR APPROVED EQUAL.
- CASING SPACERS SHALL BE SIZED TO SECURELY FASTEN TO THE CARRIER PIPE O.D. AND SHALL BE FURNISHED WITH A MINIMUM RUNNER HEIGHT TO MAINTAIN SEPARATION BETWEEN CARRIER PIPE MAX O.D. & CASING WALL.
 - POSITIONING OF SPACERS SHALL ENSURE THAT THE CARRIER PIPE IS ADEQUATELY SUPPORTED THROUGHOUT ITS LENGTH.
 - SPACERS AT EACH END SHALL NOT BE FURTHER THAN 12" FROM THE END OF THE CASING.
 - CASING SPACERS SHALL BE INSTALLED IN THE CENTER OF THE PIPE SECTION. MAXIMUM SPACER SPACING IS 10 FEET.
- THE TWO ENDS OF THE CASING PIPE SHALL BE SEALED WATERTIGHT WITH AN "ADVANCE PRODUCTS SYSTEM, INC., MODEL AZ - ZIPPER" OR "PSI MODEL C END SEAL" OR ENGINEER APPROVED EQUAL.
- CASING PIPE SHALL BE PAINTED OUTSIDE WITH 2 COATS OF COAL TAR EPOXY. (10 MIL. DRY FILM THICKNESS, MIN.)

**TABLE 1
BEDDING AND INITIAL BACKFILL
(BELOW PIPE TO 12" ABOVE PIPE)**

ALL BEDDING AND INITIAL BACKFILL SHALL CONSIST OF GRANULAR MATERIAL CONSISTING OF EITHER NATURAL SAND OR SANDY GRAVEL, OR MATERIAL PRODUCED BY CRUSHING OF NATURAL STONE OR GRAVEL.

SEWER LINES:
1. EXCAVATIONS <20FT. DEEP AND ABOVE WATER TABLE, USE MATERIAL MEETING THE FOLLOWING CRITERIA.

MEETING REQUIREMENTS OF ASTM D2487 FOR:

SP	GP
SW	GW
SP-SM	GP-GM
SW-SM	GW-GM

AND IN ADDITION:
PASSING 1/2" SIEVE - 100%
PASSING #4 SIEVE - 30% MINIMUM
PLASTICITY INDEX (PI) - NP TO 10 MAX.

2. IN DEEP EXCAVATIONS (>20') OR BELOW WATER TABLE, USE CRUSHED STONE OR CRUSHED GRAVEL MEETING GRADATION OF:
A. CONCRETE COARSE AGGREGATE; TXDOT ITEM 421; GRADE 2, 3, OR 4.

WATER LINES:
3. FOR WATER PIPE EMBEDMENT, USE THE FOLLOWING:
SP OR SW, (SAND WITH UP TO 12% ALLOWABLE PASSING #200 SIEVE).

AND IN ADDITION:
PASSING #8 SIEVE - 100%
PASSING #16 SIEVE - 70%

FOR ALL UTILITIES:
1. FOR PIPE DIAMETER EQUAL TO OR SMALLER THAN 16", USE 4" MINIMUM BEDDING UNDER PIPE.
2. FOR PIPE DIAMETER GREATER THAN 16", USE 6" MINIMUM BEDDING UNDER PIPE.

**TABLE 2
FINAL BACKFILL
(GREATER THAN 12" ABOVE PIPE)**

UNPAVED AREAS PAVED AREAS

A. FOR 12" ABOVE PIPE TO BOTTOM OF TOPSOIL BACKFILL SHALL BE APPROVED SELECT MATERIAL FROM THE EXCAVATION; OR IMPORTED MATERIAL; ALL TO BE FREE OF ROCKS, DEBRIS, OR ANY CLUMPS GREATER THAN 2" IN DIAMETER; LOOSE LIFTS TO BE PLACED 10" MAX.

COMPACT MATERIAL TO 95% STD. PROCTOR (D698).
MOISTURE TO BE ADJUSTED TO ± 3% OF OPTIMUM.

B. TOPSOIL TO BE PROVIDED EQUAL OR BETTER THAN EXISTING; AND MATCH EXISTING TOPSOIL DEPTH. COMPACT TO FIX CONFLICT TO EXISTING ADJACENT TOPSOIL. (CONSTRUCTION TO BE PERFORMED BY "DOUBLE DITCH" METHOD-TOP SOIL SALVAGED TO BE PLACED ON TOP)

SAND GRADATION:
% PASSING

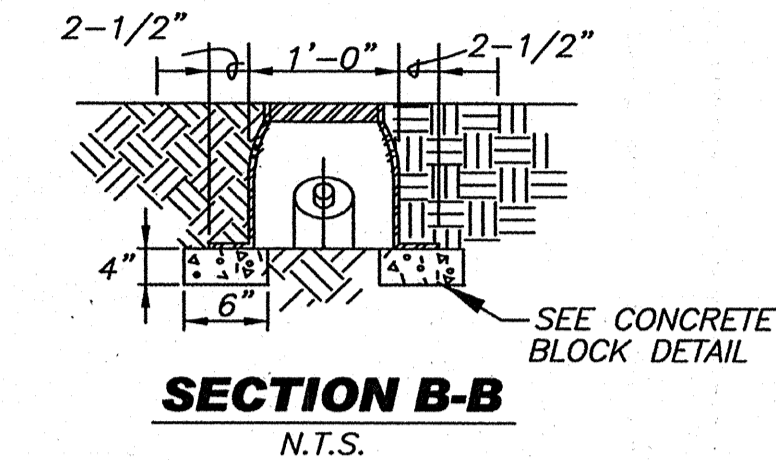
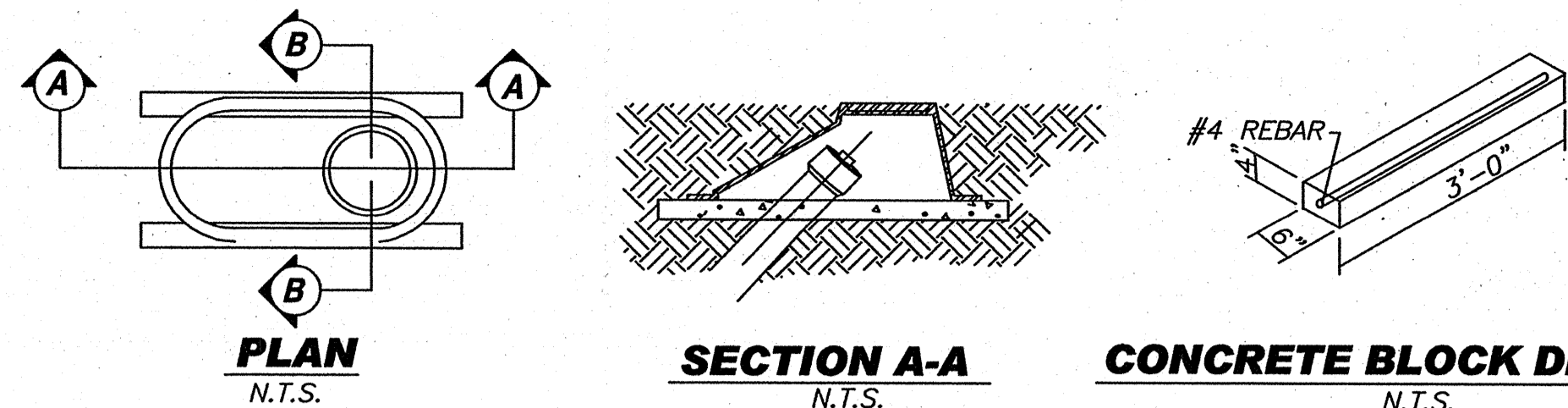
1/2"	100%
#4	55-100
#10	40-100
#40	25-100
#200	10-20
PI	NP-10

CEMENT = 6-7% BY WEIGHT; MINIMUM 100 PSI @ 48 HOURS.

COMPACT TO 95% OF D588. MOISTURE TO BE ADJUSTED TO (+/-2%) OF OPTIMUM.

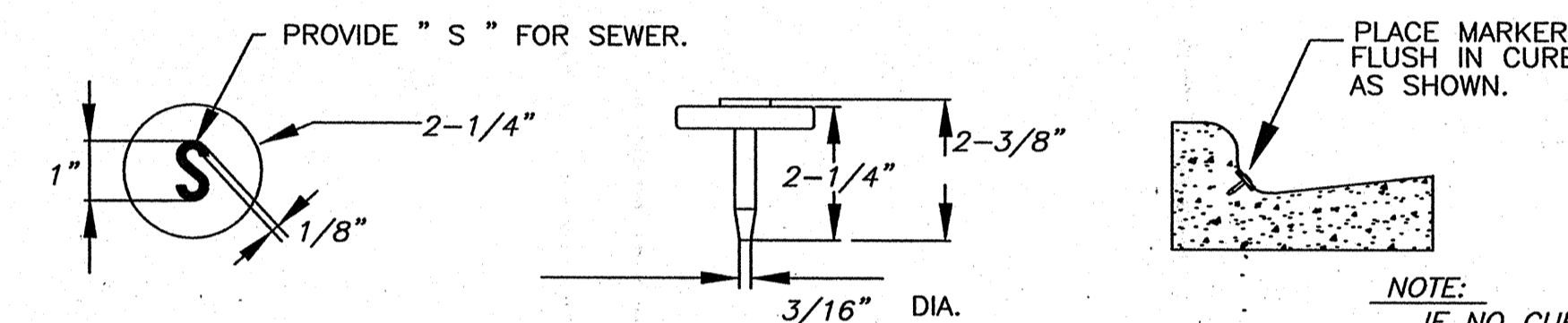
H:\HOME\project\latest\stds\SAN2004-3.dwg 3/2004

REVISION NO. DATE BY DESCRIPTION



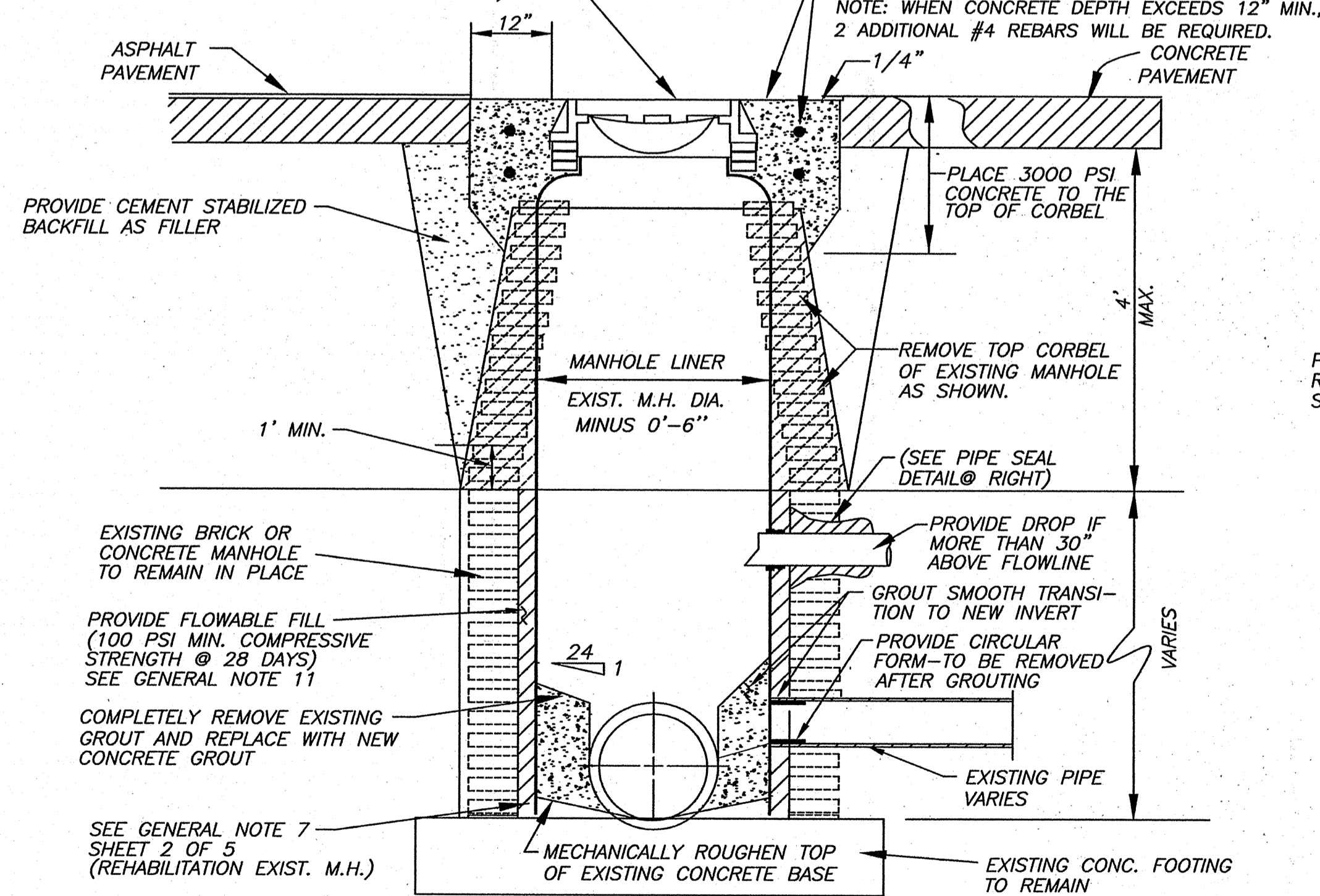
NOTE:
CLEAN-OUT BOOT, FRAME AND COVER
EAST JORDAN IRON WORKS, INC.
NO. V-8505 OR EQUAL

TYPICAL CLEAN-OUT BOOT
N.T.S.



STANDARD SERVICE MARKER
BRASS - ONE REQUIRED EACH STREET TAP
N.T.S.

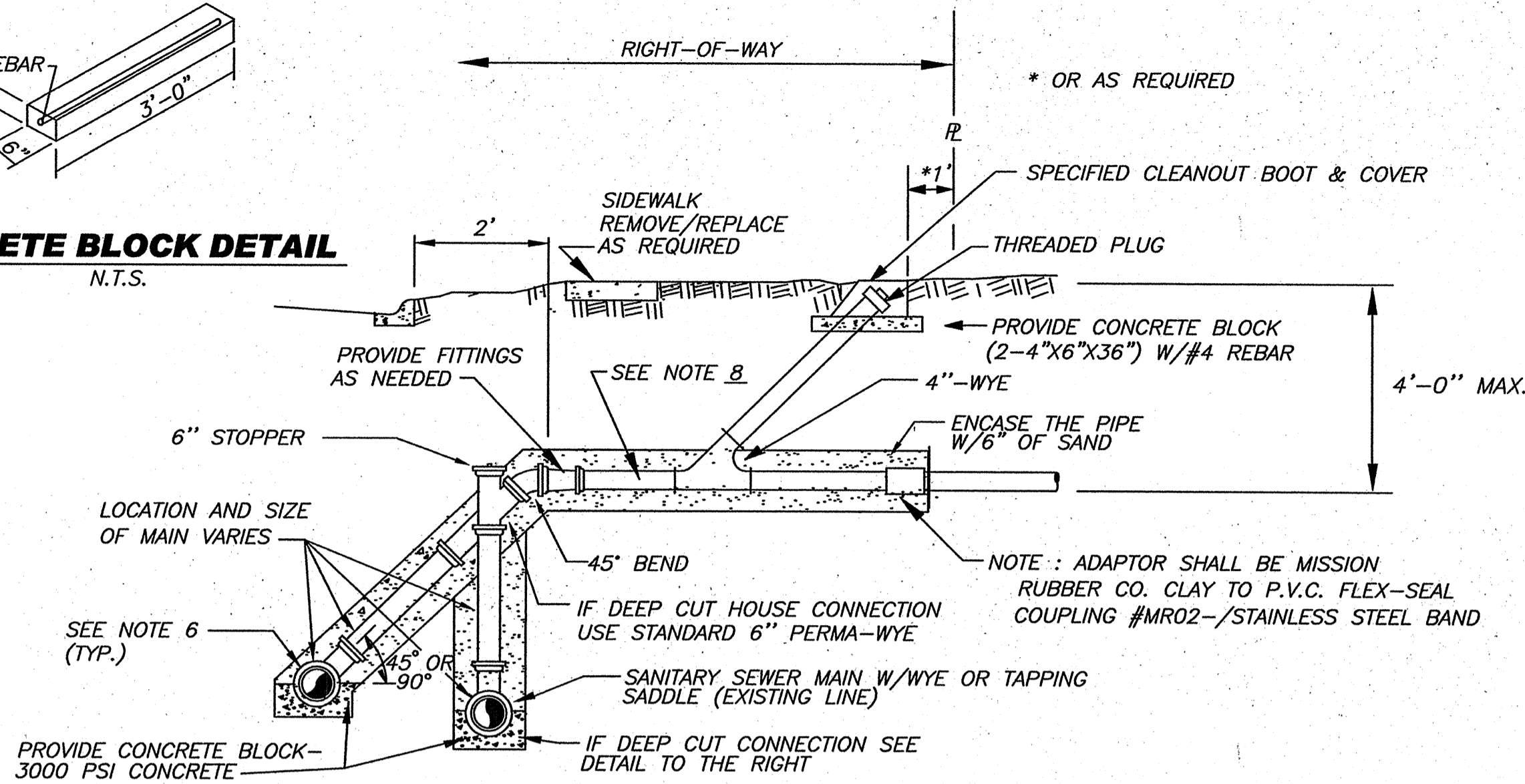
PROVIDE NEW RING & COVER WITH
STAINLESS STEEL (S.S.) INFLOW
INHIBITOR AND NEW ADJUSTMENT RINGS.
(SEE SHEET 5 OF 5 SANITARY
SEWER STANDARD DETAILS)



NOTES:
PROVIDE 2-COATS OF 60 MIL.
JEFFCOAT 326 OR APPROVED EQUAL
ON ALL EXPOSED CONCRETE SURFACES,
INCLUDING CORBEL AREA AND ON THE
FILLET AREA, AND 6\"/>

**REHABILITATION
EXISTING MANHOLE**
N.T.S.

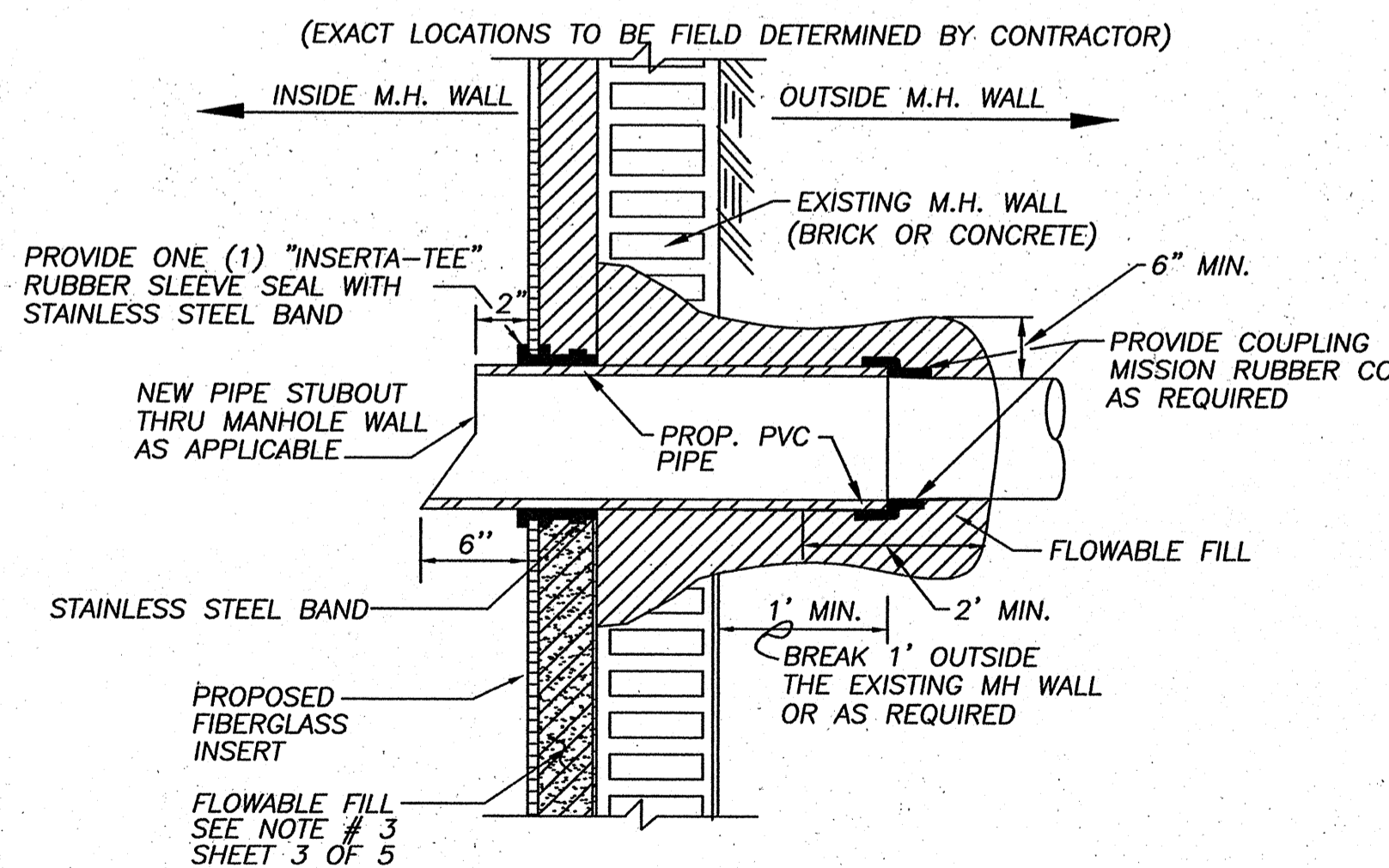
PROVIDE CONCRETE BLOCK-
3000 PSI CONCRETE



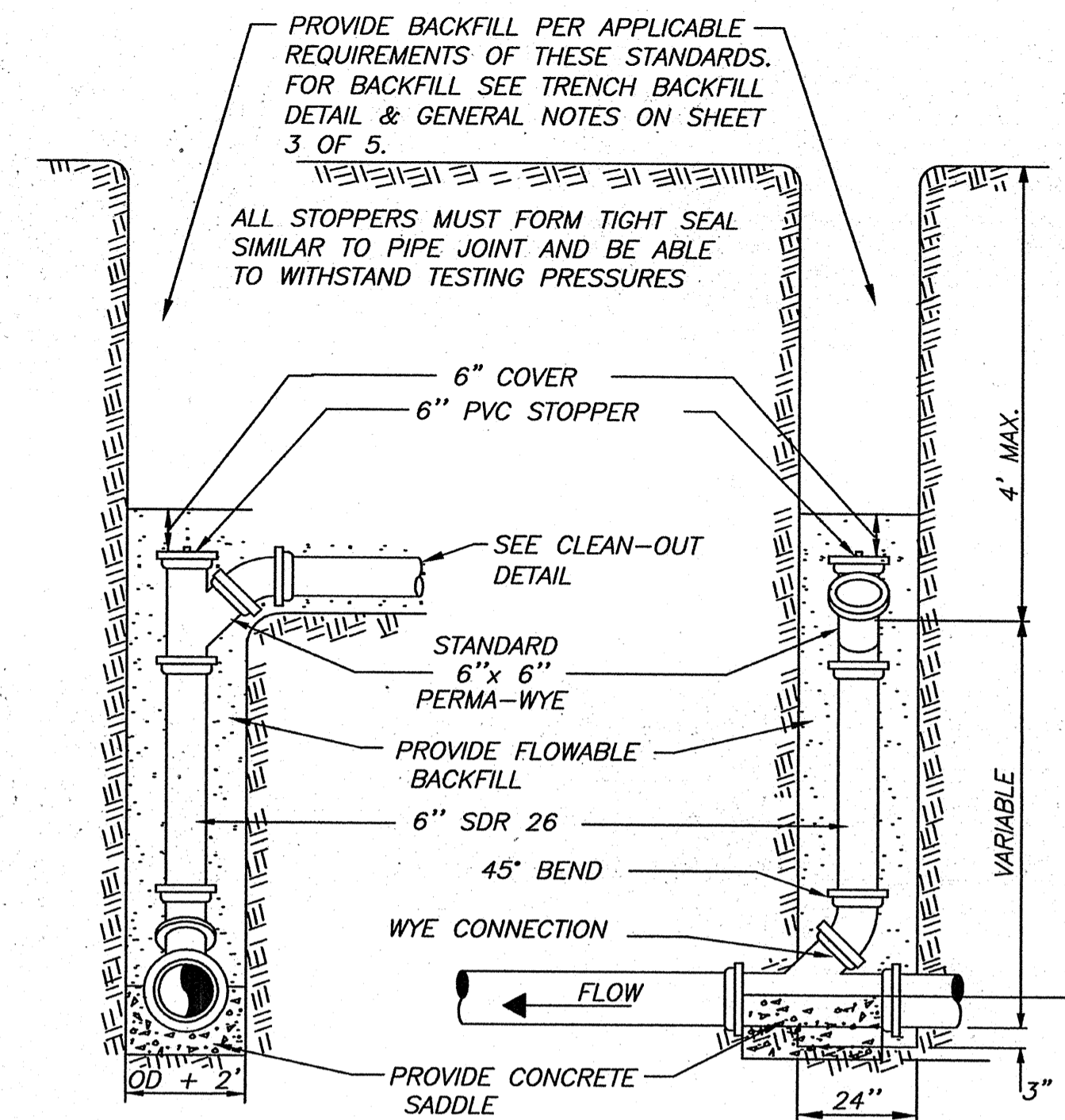
SERVICE CONNECTION NOTES:

1. CONTRACTOR TO PROVIDE SERVICE CONNECTION TAP TO THE R.O.W. LINE & CONNECT EXIST. SERVICE LINE OUTSIDE EASEMENT AS SHOWN AND REQUIRED.
2. ALL PIPE TO BE SDR 26 OR SCH. 40 P.V.C. UNLESS SHOWN OTHERWISE IN THE PLANS.
3. ALL FITTINGS TO BE P.V.C. SERVICE CONNECTIONS.
4. ENCASE PIPE IN 6\"/>

SERVICE CONNECTION DETAILS
N.T.S.



**SANITARY MANHOLE LINER
PIPE SEAL DETAIL
(FOR NEW PIPES ABOVE MANHOLE INVERT)**
N.T.S.



DEEP CUT HOUSE CONNECTION
N.T.S.

**GENERAL NOTES:
(REHABILITATION/EXISTING MANHOLE)**

1. CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING THE CITY INSPECTION REPRESENTATIVE IMMEDIATELY OF ANY SPECIAL CONDITIONS THAT ARE PRESENT ON THE SITE DURING CONSTRUCTION, AT PHONE NO. (361) 880-3555.
2. CONTRACTOR SHALL FIELD VERIFY THE EXISTING MANHOLE DIAMETER, FLOW LINE, RIM ELEVATION, NUMBER OF LATERALS, LOCATIONS, SIZES, AND OTHER INFORMATION NEEDED TO REHABILITATE EACH MANHOLE.
3. BARRICADING AND SIGNS ARE TO BE PLACED TO DIVERT THE TRAFFIC AND PEDESTRIANS PER THE APPROVED TRAFFIC CONTROL PLAN, PRIOR TO INSTALLING THE BYPASS OR INITIATING REPAIRS ON THE MANHOLE, AS REQUIRED.
4. EXCAVATE AROUND THE EXISTING MANHOLE SUFFICIENTLY WIDE AND DEEP FOR REMOVAL OF THE RING AND COVER, REDUCER CONE SECTION AND MASONRY MANHOLE TO ACCOMMODATE THE NEW FIBERGLASS MANHOLE LINER AND NEW RING & COVER W/HEIGHT ADJUSTMENT RING AND STAINLESS STEEL INFLOW INHIBITOR.
5. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING SEWAGE FLOWS AT ALL TIMES. CONTRACTOR IS REQUIRED TO HAVE ALL MATERIALS AND BY-PASS PUMPING EQUIPMENT NECESSARY TO BYPASS THE FLOW WHILE REHABILITATION OF THE MANHOLE IS IN PROCESS.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONFORMING WITH THE O.S.H.A. REGULATIONS PERTAINING TO CONFINED SPACE ENTRY IN THE MANHOLES, AND TRENCH SAFETY IN ANY EXCAVATIONS.
7. PREPARE THE INTERIOR OF THE EXISTING STRUCTURE BY REMOVING ALL GROUT TO ORIGINAL CONCRETE BASE, DEBRIS AND BLOCKAGES, AND THEN MECHANICALLY ROUGHEN ENTIRE INVERT, CLEAN THE INTERIOR WITH HIGH-PRESSURE WATER JET.
8. DISPOSAL OF THE RESULTING SLUDGE AND DEBRIS SHALL BE THE CONTRACTOR'S RESPONSIBILITY, AND SHALL BE DISPOSED AT APPROVED SITE MEETING ALL REGULATIONS.
9. THE NEW FIBERGLASS MANHOLE LINER SHALL CONFORM TO CITY STANDARD SPECIFICATIONS.
10. FORM BOTTOM SEAL AROUND THE PERIMETER OF THE LINER. QUICK-SETTING, NON-SHRINK CONCRETE GROUT TO SEAL AND RESHAPE THE BOTTOM AS DIRECTED. GROUT MIX TO SET THE FIBERGLASS MANHOLE ON THE CONCRETE BASE SHALL MEET THE FOLLOWING STRENGTH REQUIREMENTS: (MIN. 6\"/>

IN CASE OF CONFLICT, DESIGN ENGINEER'S
PLANS/SPECS/STDS SHALL
TAKE PRECEDENCE



CITY OF
CORPUS CHRISTI
TEXAS
WASTEWATER
DEPARTMENT
Department of Engineering Services

SERVICE CONNECTIONS AND
REHABILITATION OF EXISTING MANHOLES
SANITARY SEWER
STANDARD DETAILS

FILE: \\MProject\ateststds\SAN2004-2.dwg 3-2004