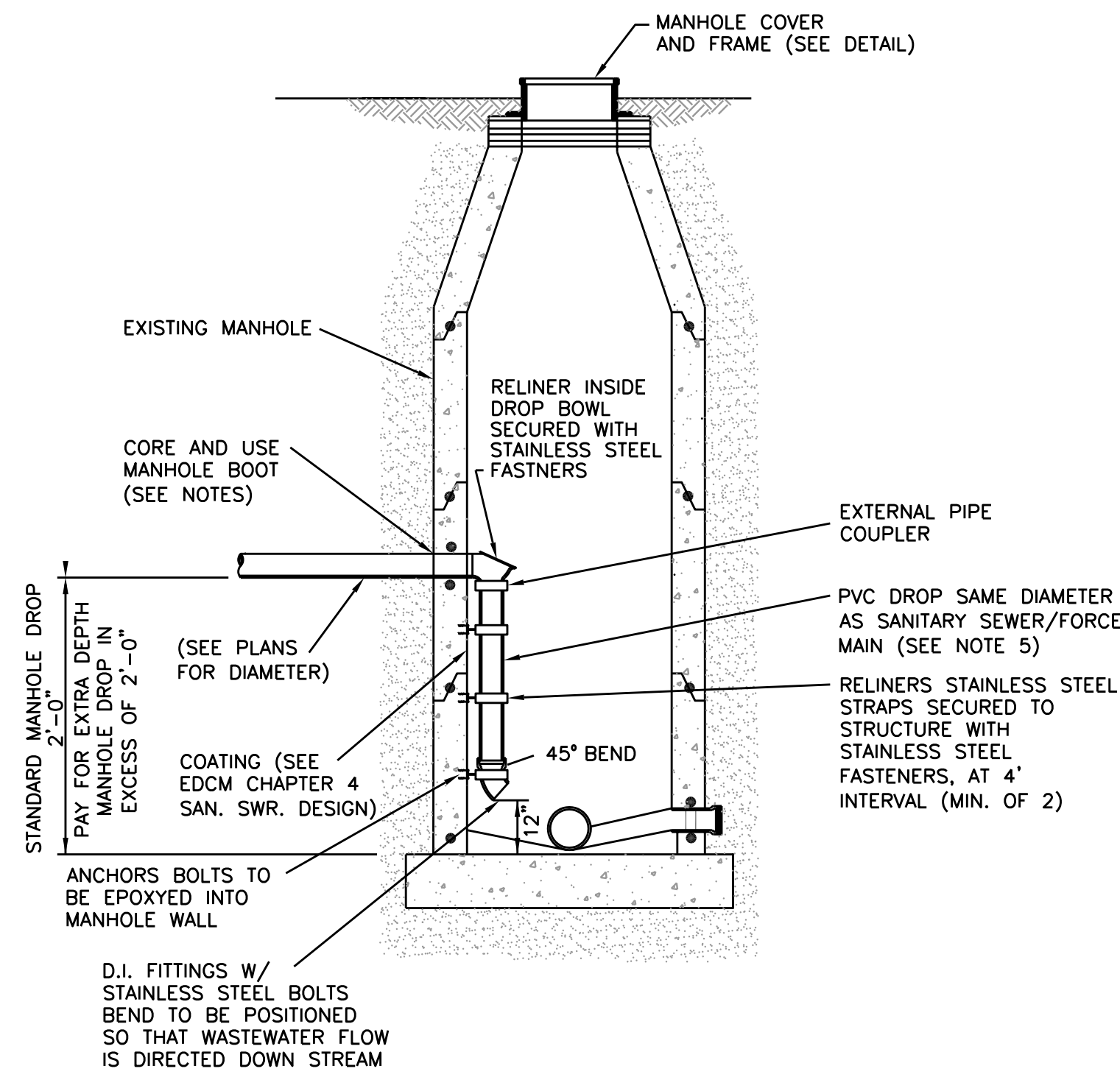


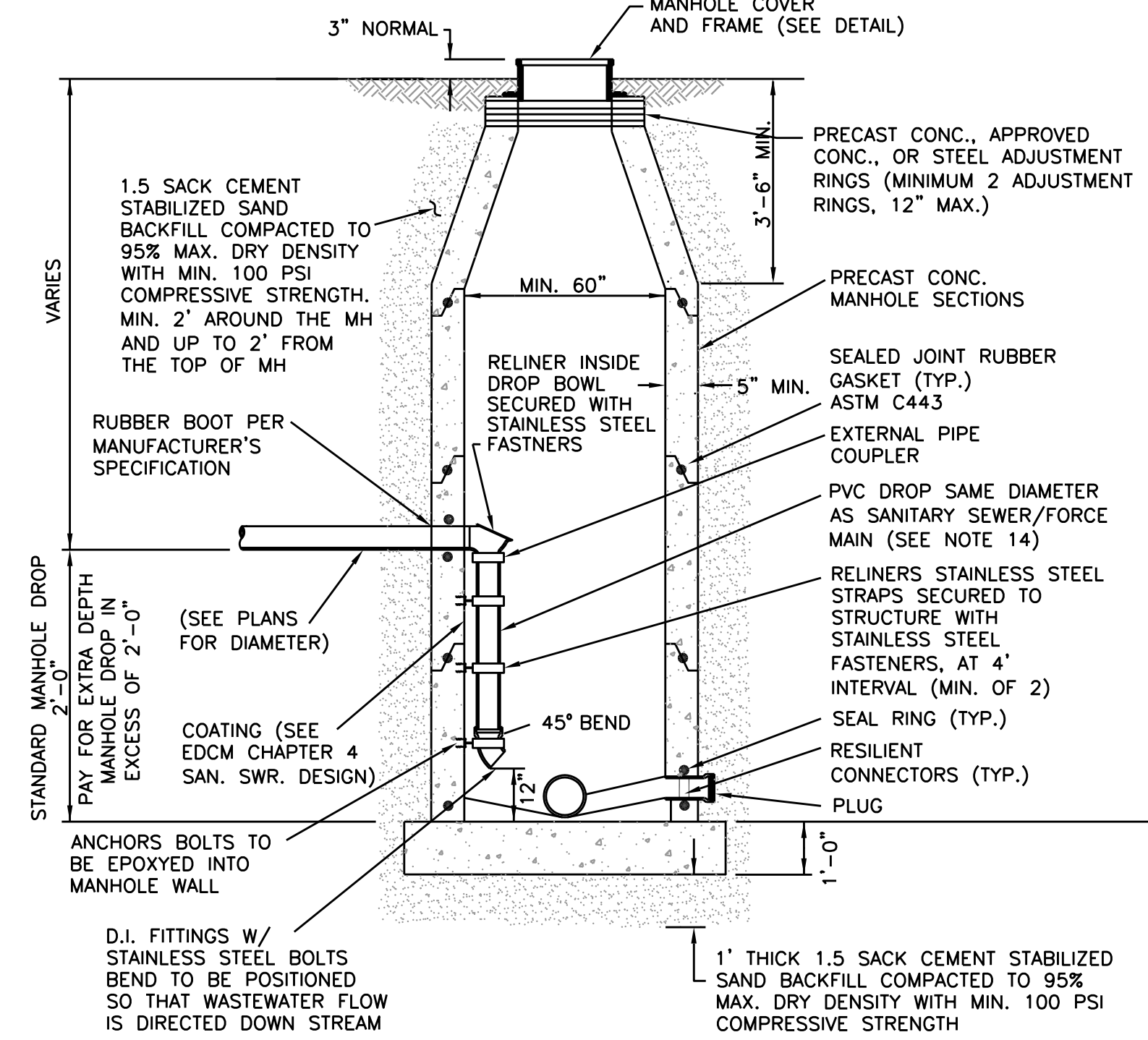
- NOTE:
1. CLASS 1 CONCRETE WITH A DESIGN STRENGTH OF 4500 PSI AT 28 DAYS. RATES FOR H-20 LOADING.
 2. PRECAST CONCRETE MANHOLE CONFORMING TO ASTM C478. STRUCTURAL REINFORCEMENT CONFORMING TO ASTM 615A.
 3. LIFTING INSERTS AS REQUIRED.
 4. ALL JOINTS SHALL BE SEALED WITH APPROVED GASKET.
 5. ALL MANHOLES IN WET SAND REQUIRE SPECIAL DESIGN. SEE GEOTECHNICAL REPORT.
 6. HORSE-SHOE SHAPED PIPE OPENINGS OR BREAKOUT PIPE OPENINGS WILL NOT BE ACCEPTED.
 7. SEALED MANHOLES ARE REQUIRED FOR MANHOLES CONSTRUCTED WITHIN 100-YEAR FLOODPLAIN.
 8. FOR INTERIOR COATING ON THE MANHOLE, SEE EDCM CHAPTER 4 (SAN. SWR. DESIGN)
 9. ALL MANHOLES IN OPEN DITCH SHALL HAVE HINGED FRAME AND COVER (SEE DETAIL).
 10. ALL MANHOLES ABOVE GRADE SHALL USE REVOLUTION ASSEMBLY RIM AND COVER (SEE DETAIL ON SHEET 3 OF 3).
 11. ALL MANHOLES IN PAVED AREAS SHALL HAVE BLOCK OUT (SEE DRIVEWAY DETAIL SHEET).
 12. VACUUM TEST SHALL BE COMPLETED PRIOR TO COATING OF THE MANHOLE.
 13. MANHOLE DEEPER THAN 12' SHALL BE A MINIMUM OF SIX FOOT (6') DIAMETER.

1 STANDARD PRECAST CONCRETE SANITARY SEWER MANHOLE



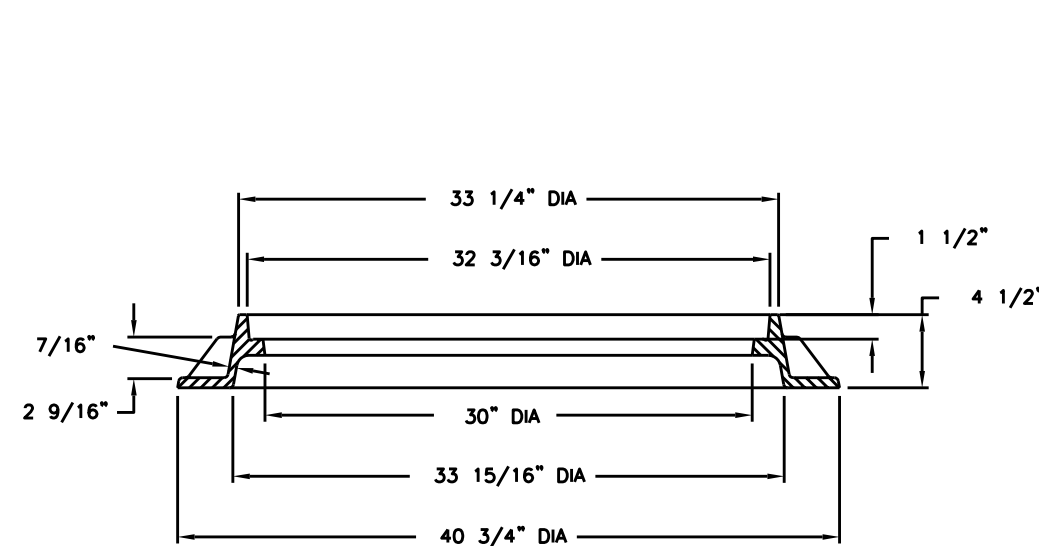
- NOTE:
1. FOR EXISTING SANITARY SEWER MANHOLE ONLY.
 2. CORE-DRILL CIRCULAR OPENING IN MANHOLE WALL OF DIAMETER TO FIT THE REQUIRED BOOT SIZE.
 3. KOR-N SEAL FLEXIBLE RUBBER BOOT SHALL BE USED FOR WATERTIGHT CONNECTION. THE PRODUCT MUST BE APPROVED BY PUBLIC WORKS DEPARTMENT.
 4. CLEAN EXISTING MANHOLE OF ANY DIRT, CONCRETE OR DEBRIS WHICH MAY ACCUMULATE DURING THE CONSTRUCTION PROCESS.
 5. IF BELL AND SPIGOT ARE NEEDED, USE JOINT CLAMPS WITH STAINLESS STEEL ALL-THREAD, NUTS AND WASHERS.

2 EXISTING SANITARY SEWER MANHOLE WITH PROPOSED INTERNAL DROP/ INTERNAL DROP FOR FORCEMAIN



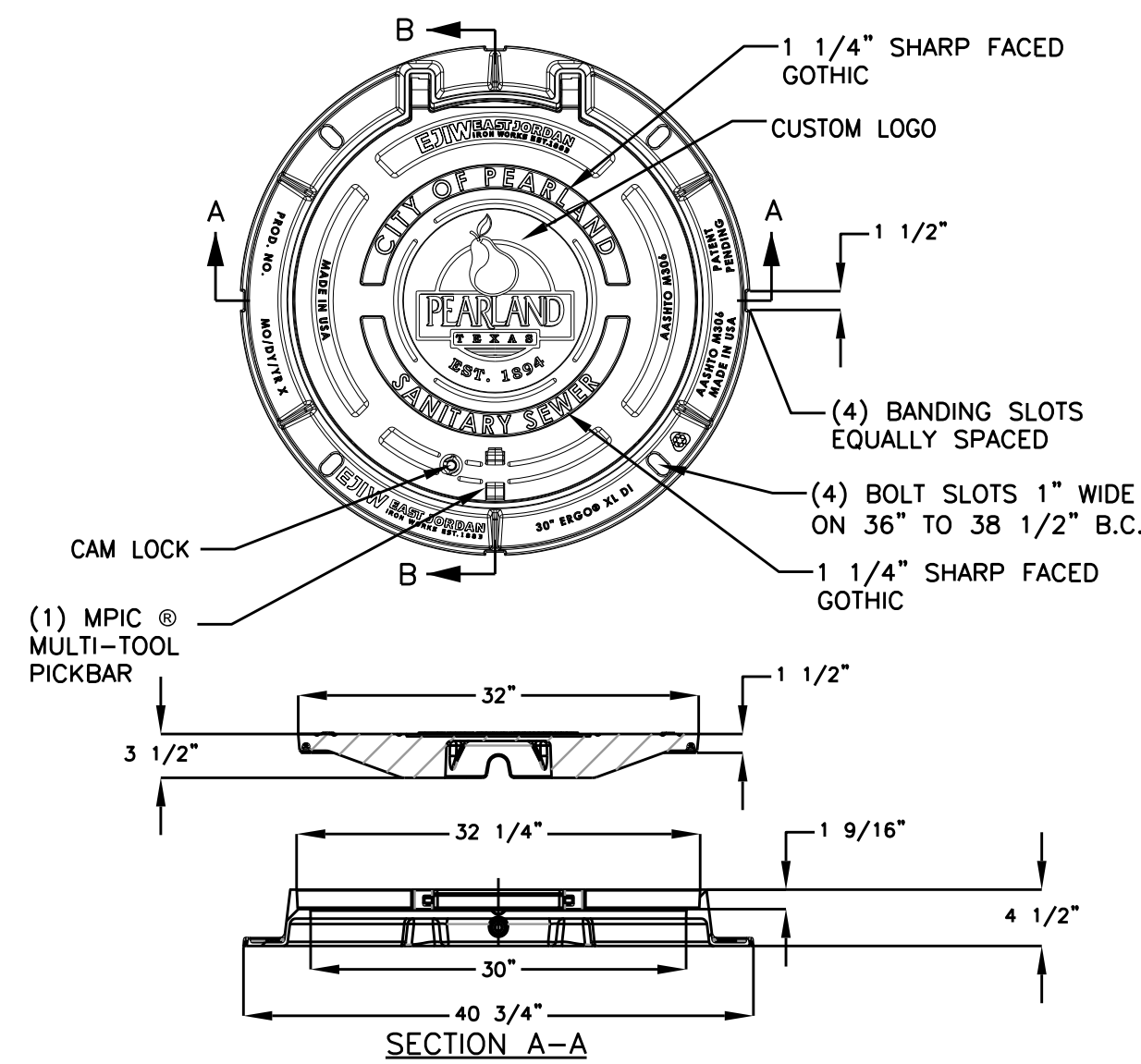
- NOTE:
1. FOR ALL NEW CONSTRUCTION.
 2. CLASS 1 CONCRETE WITH A DESIGN STRENGTH OF 4500 PSI AT 28 DAYS. RATES FOR H-20 LOADING.
 3. PRECAST CONCRETE MANHOLE CONFORMING TO ASTM C478. STRUCTURAL REINFORCEMENT CONFORMING TO ASTM 615A.
 4. LIFTING INSERTS AS REQUIRED.
 5. ALL JOINTS SHALL BE SEALED WITH APPROVED GASKET.
 6. MANHOLE MUST BE CORED TO APPROPRIATE OPENING.
 7. WATER TIGHT GASKET MUST BE USED TO SEAL PIPE TO MANHOLE.
 8. ALL PIPE FITTINGS TO BE 1 (ONE) BOLT TYPE RESTRAINT FITTINGS OR APPROVED EQUAL.
 9. PIPE SUPPORTS MUST BE STAINLESS STEEL (3' MAX SPACING).
 10. ALL MANHOLES IN OPEN DITCH SHALL HAVE HINGED FRAME AND COVER (SEE DETAIL)
 11. ALL MANHOLES 2' ABOVE FINISH GRADE SHALL HAVE REVOLUTION ASSEMBLY RIM AND COVER (SEE DETAIL SHEET 3 OF 3)
 12. ALL MANHOLES IN PAVED AREAS SHALL HAVE BLOCK OUT (SEE DRIVEWAY DETAIL SHEET).
 13. VACUUM TEST SHALL BE COMPLETED PRIOR TO COATING OF THE MANHOLE.
 14. IF BELL AND SPIGOT ARE NEEDED, USE JOINT CLAMPS WITH STAINLESS STEEL ALL-THREAD, NUTS AND WASHERS.

3 STANDARD PRECAST CONCRETE SANITARY SEWER MANHOLE AND INTERNAL DROP



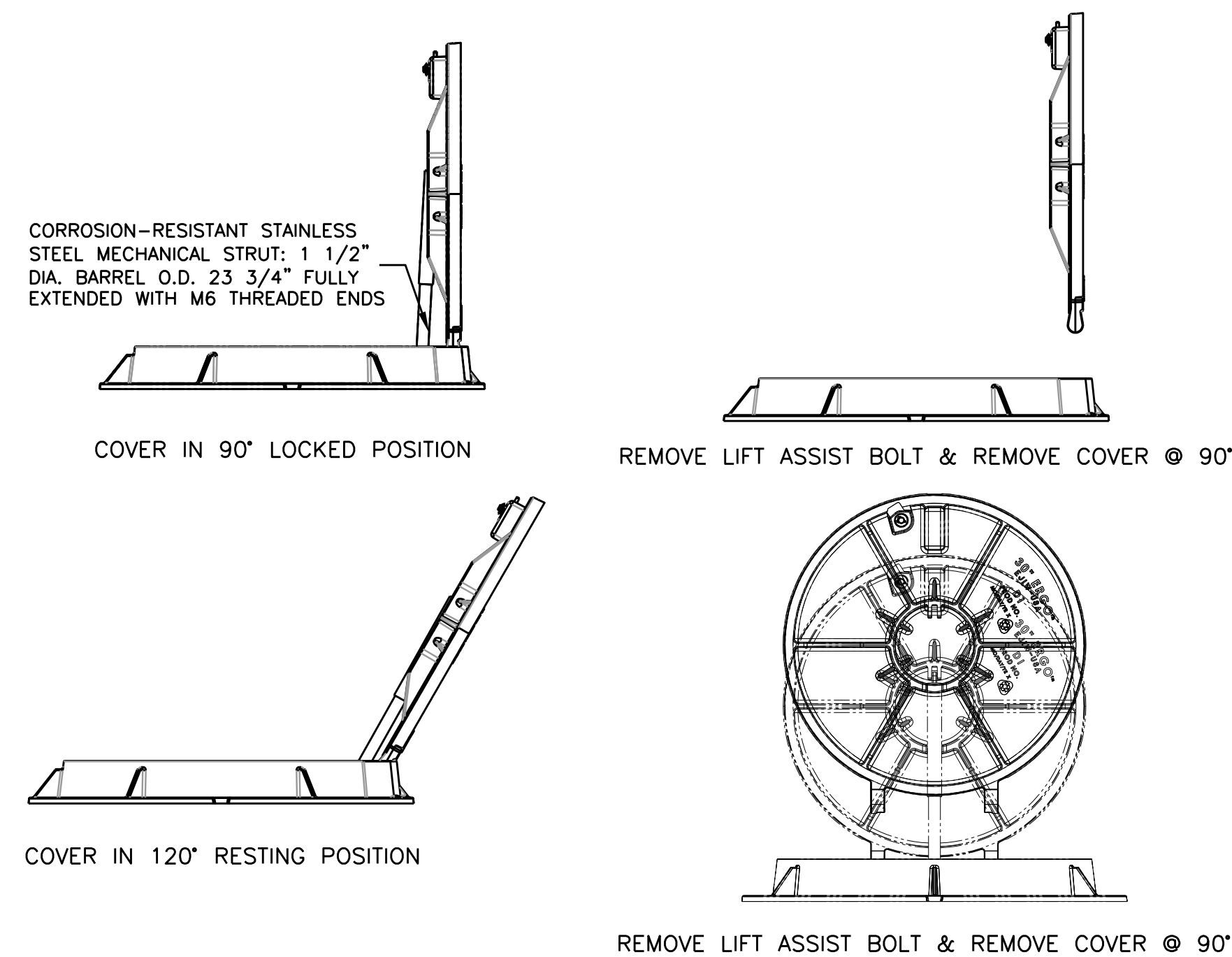
- NOTE:
1. MANHOLE FRAME AND COVER TO BE EJ IRON WORKS OR OTHER APPROVED EQUAL BY PUBLIC WORKS. WHERE SEWER IS LOCATED IN EASEMENTS, CONTRACTOR MAY USE LIGHTWEIGHT F AND C, APPROVED BY THE ENGINEER.
 2. STAINLESS STEEL INFLOW PREVENTERS MADE BY KOLO, INC., OR APPROVED EQUAL, SHALL BE USED ON ALL SANITARY SEWER MANHOLES. (SEE APPROVED PRODUCT LIST)

4 31-7/8" MANHOLE COVER AND FRAME



- NOTE:
1. HINGED MANHOLE FRAME AND COVER TO BE EJ IRON WORKS, OR OTHER APPROVED EQUAL BY PUBLIC WORKS. WHERE SEWER IS LOCATED IN EASEMENTS, CONTRACTOR MAY USE LIGHTWEIGHT F AND C, APPROVED BY THE ENGINEER

5 HINGED MANHOLE COVER AND FRAME



- NOTE:
1. ONLY PRE-CAST MANHOLES SHALL BE USED.
 2. NO BRICKS OF ANY KIND WILL BE ALLOWED IN CONSTRUCTION OF MANHOLES.
 3. MANHOLES SHOULD BE PLACED HALF WAY BETWEEN THE FRONT LOT CORNERS IN MULTI LOT SUBDIVISION.
 4. IF LOTS ARE LESS THAN 60' IN WIDTH, MANHOLES ARE TO BE PLACED AT PROPERTY CORNERS.
 5. ALL CEMENT STABILIZED SAND BACKFILL SHALL CONFORM TO SPECIFICATION CEMENT STABILIZED SAND - EDCM CHAPTER 10.
 6. FINAL DECISION SHALL BE MADE BY PUBLIC WORKS FOR ALL APPROVED EQUAL ITEMS.

PLEASE READ THE APPLICABLE COP SPECIFICATION SECTIONS FOR DETAILED INFORMATION.

PLEASE REFERENCE THE COP APPROVED PRODUCT LIST FOR APPLICABLE PRODUCT INFORMATION.

THIS DETAIL SHEET HAS BEEN PREPARED FOR USE ON STANDARD CITY OF PEARLAND PROJECTS. AN ENGINEER WHO INCORPORATES THE DETAILS ON THIS SHEET BECOMES RESPONSIBLE FOR ITS USE IN THE END PRODUCT IN ACCORDANCE WITH RULE 137.33 (b) AND (c) OF THE TEXAS STATE BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS.



City of Pearland, Texas

STANDARD DETAILS

SANITARY SEWER

Job No.:	Scale:	SHEET
Date: JAN 2020	HORZ: 1"=NONE	1
Dwn By:RS	VERT: 1"=NONE	OF 3
Chk'd By:RU	CAD FILE:	
	COP-SAN1	