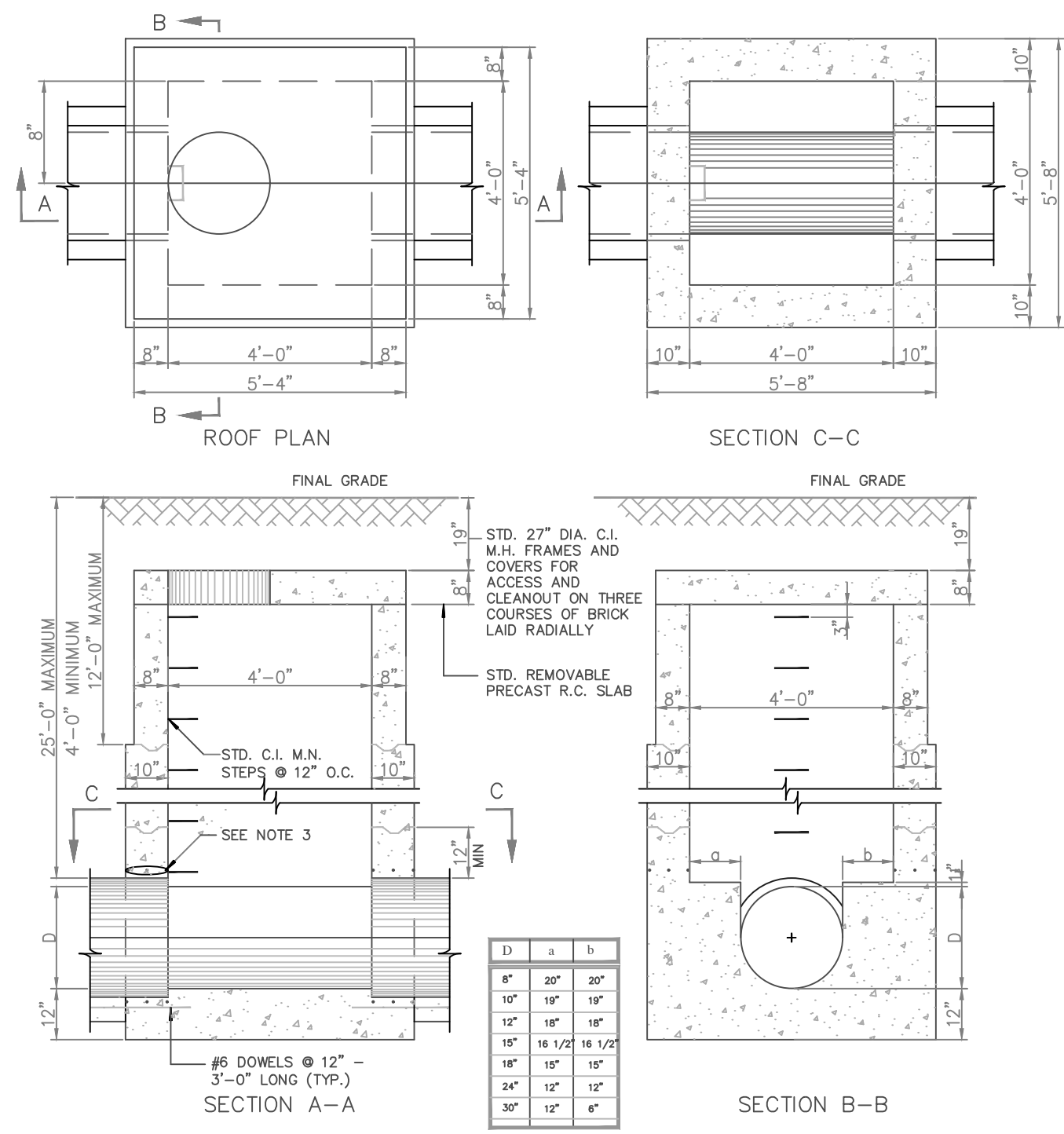
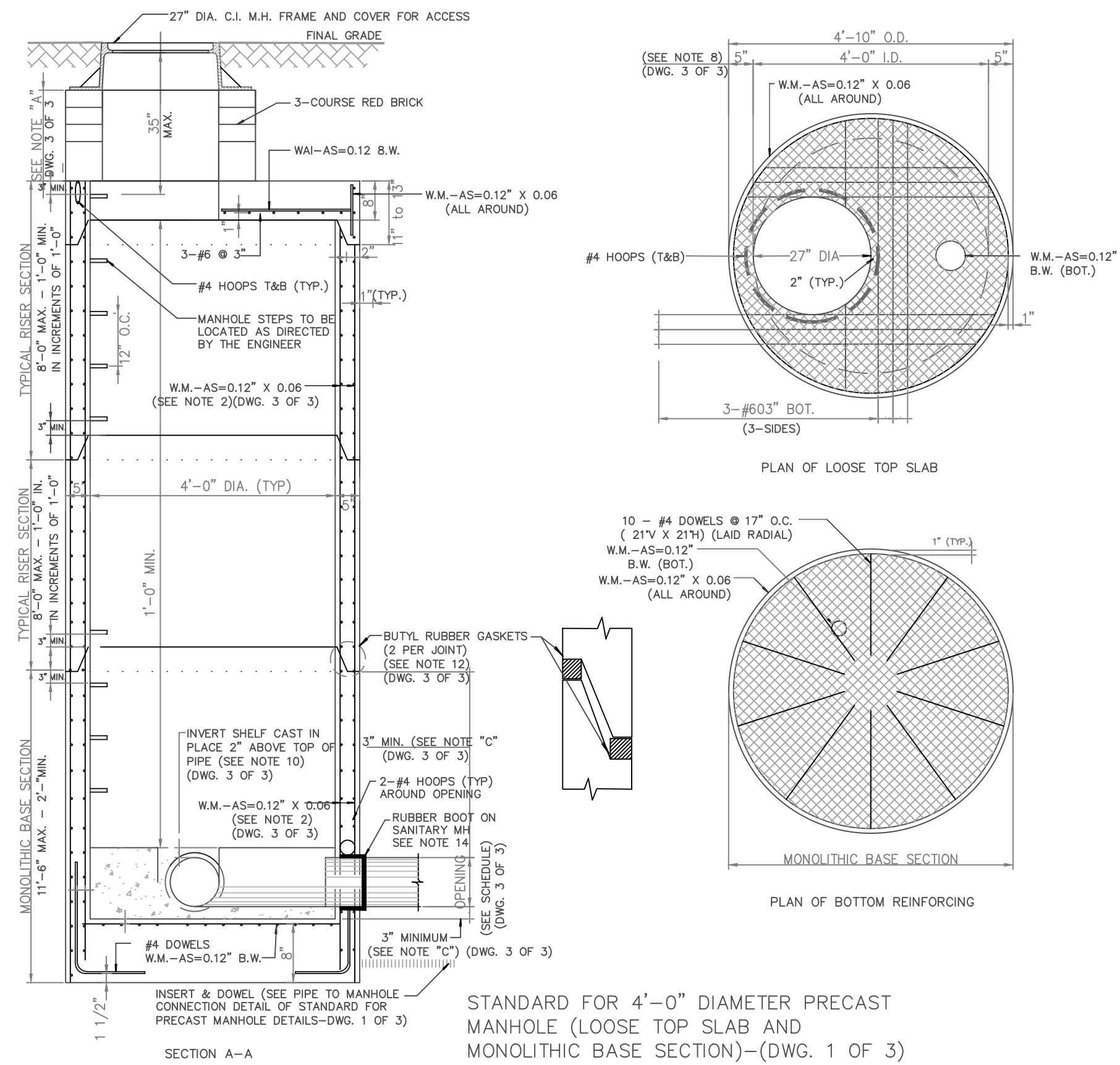


**Poured-In-Place Manhole Standard
(Dry Location)**



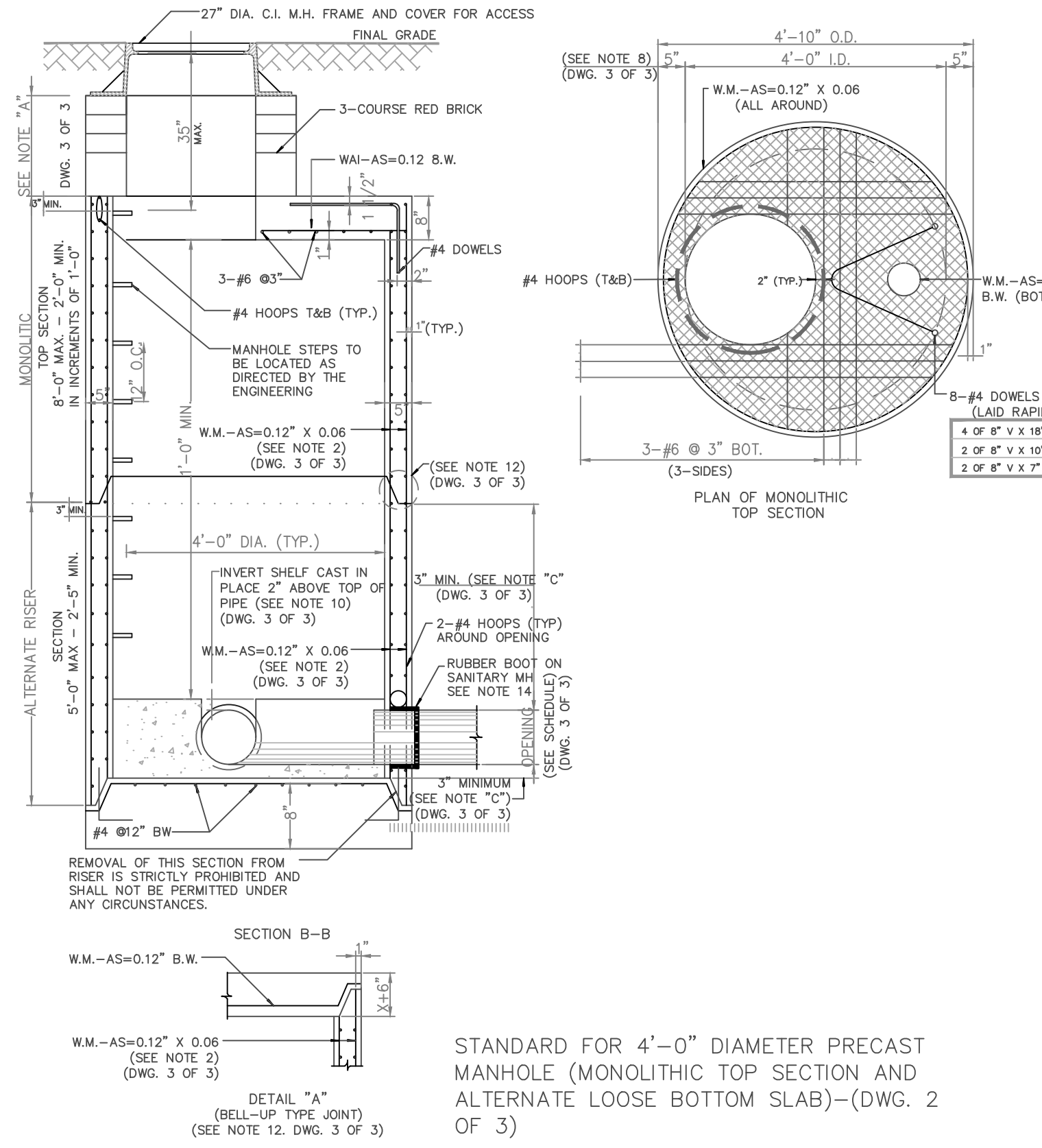
STANDARD FOR MANHOLE ON 8" DIA. TO 30" DIA. PIPE SEWER IN DRY LOCATION TYPE A-1 (12' MAX. COVER) AND TYPE A-2 (25' MAX. COVER)

PRECAST MANHOLE-DWG 1/3-



STANDARD FOR 4'-0" DIAMETER PRECAST MANHOLE (LOOSE TOP SLAB AND MONOLITHIC BASE SECTION)-(DWG. 1 OF 3)

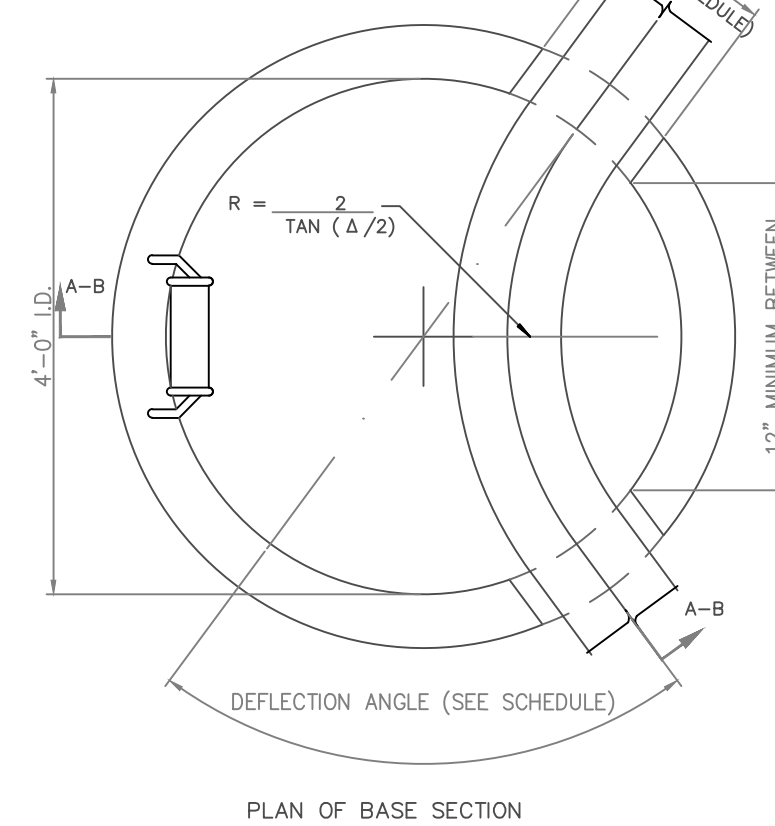
PRECAST MANHOLE-DWG 2/3-



STANDARD FOR 4'-0" DIAMETER PRECAST MANHOLE (MONOLITHIC TOP SECTION AND ALTERNATE LOOSE BOTTOM SLAB)-(DWG. 2 OF 3)

PRECAST MANHOLE-DWG 3/3

PIPE Ø	OPENING Ø	A MAX.
8"	14"	112"
10"	16"	112"
12"	19"	104"
15"	22"	93"
18"	28"	83"
24"	34"	80"

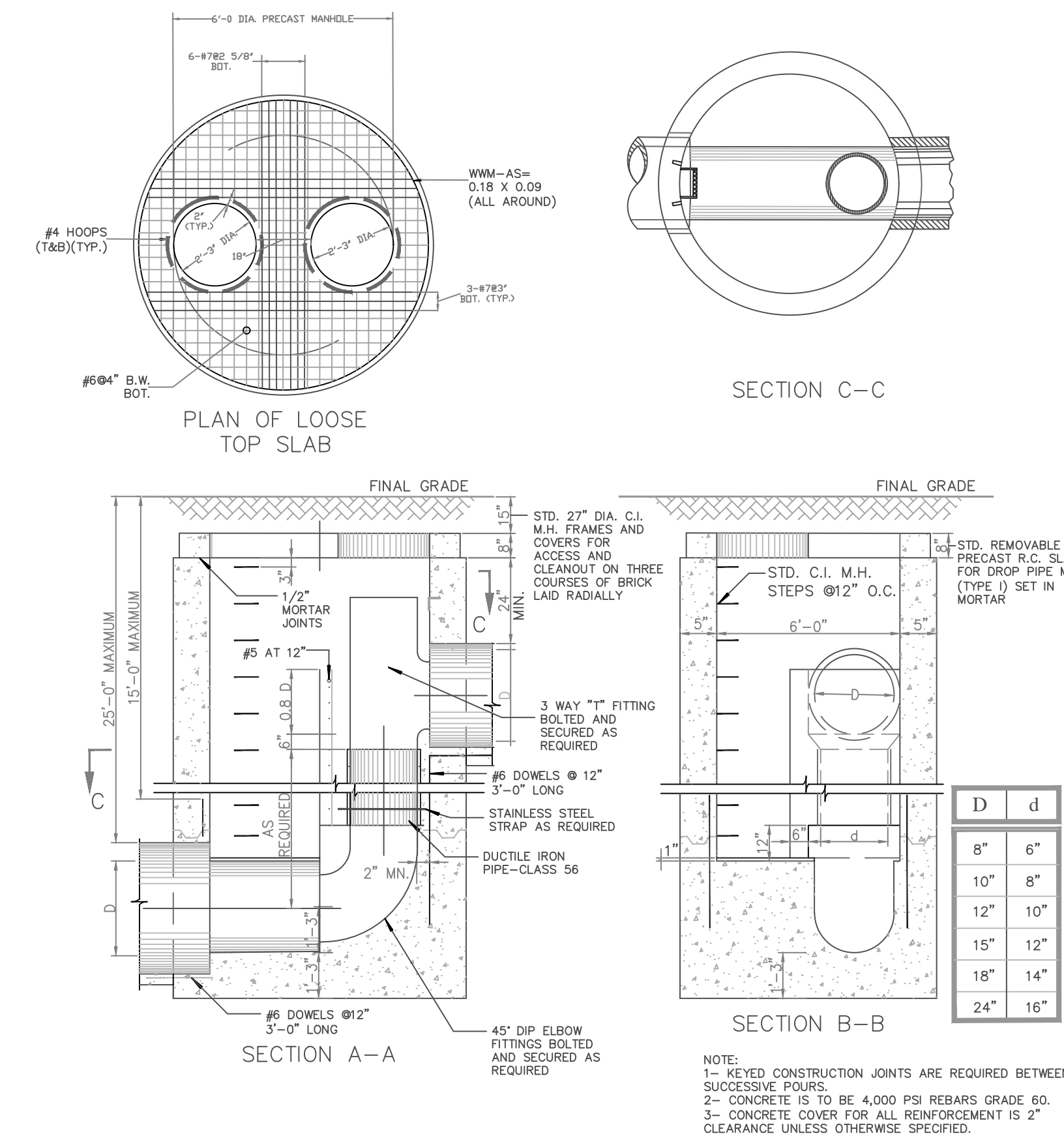


STANDARD FOR 4'-0" DIAMETER PRECAST MANHOLE (MISCELLANEOUS DETAIL NOTES AND SCHEDULE)-(DWG. 3 OF 3)

NOTES:
 A-9" MIN. TO 20" MAX.: 9" RED CLAY BRICK LAD RADIALLY. (4" BRICK MIN. ONLY FOR SHALLOW MANHOLE CONSTRUCTION.)
 B-ALTERNATE LOOSE BOTTOM SLAB TO BE USED ONLY IN SHALLOW MANHOLE CONSTRUCTION.
 C-PIPE OPENINGS WILL BE PERMITTED THROUGH JOINTS. DISTANCE FROM TOP OR BOTTOM OF ANY SECTION SHALL BE A MINIMUM OF 7" PLUS THE JOINT DEPTH FOR CAST PIPE OPENINGS AND A MINIMUM OF 12" PLUS THE JOINT DEPTH FOR CORED OPENINGS FOR BASIN CONNECTIONS.
 D-THE MANUFACTURER SHALL ENSURE THAT ALL PRECAST MANHOLE SECTIONS ARE ADDITIONALLY REINFORCED WHERE REQUIRED TO RESIST DAMAGE FROM HANDLING, SHIPPING AND INSTALLATION STRESSES.

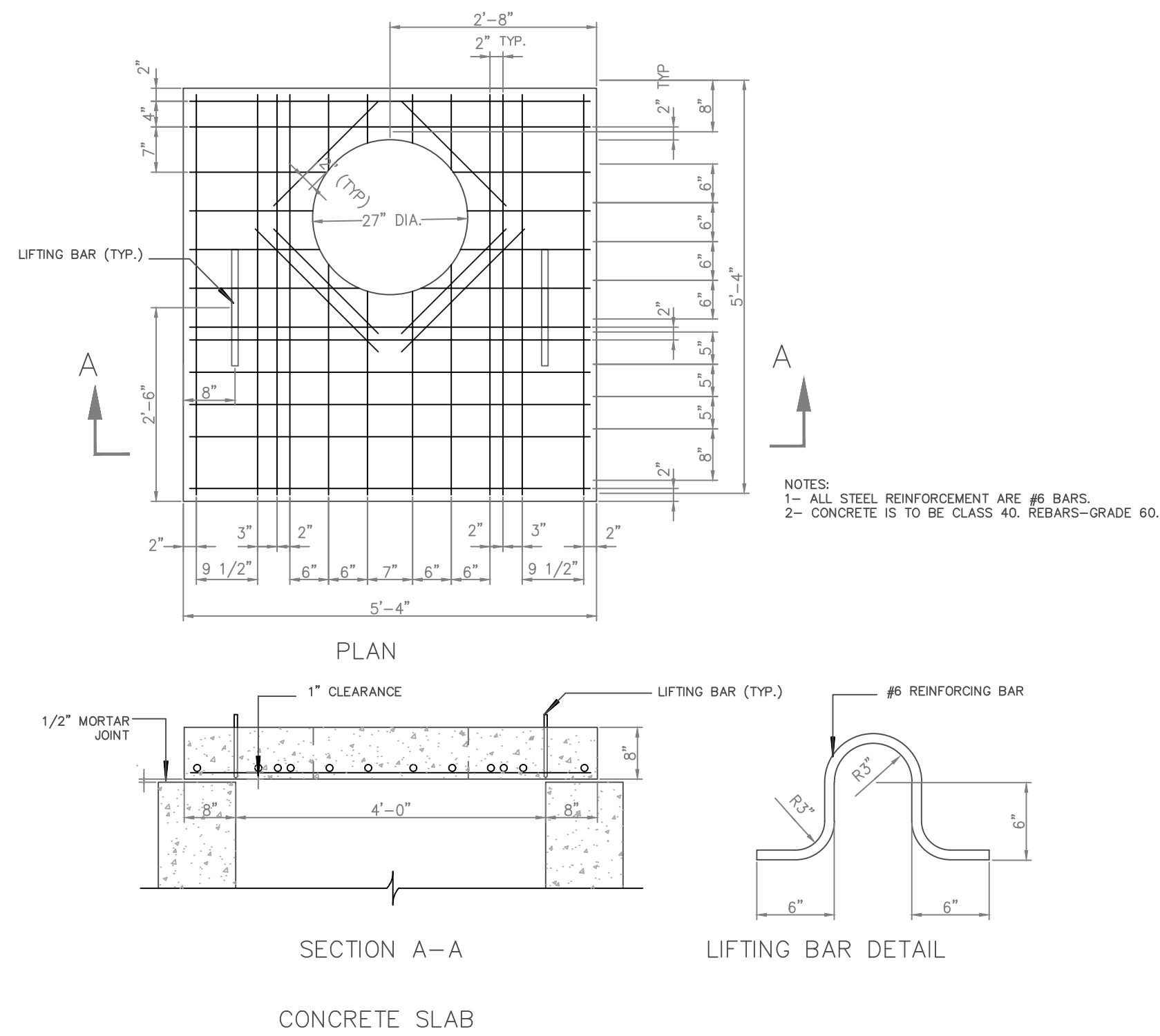
GENERAL NOTES:
 (1) THIS 4'-0" DIAMETER PRECAST MANHOLE MAY BE SUBSTITUTED FOR STANDARD MANHOLE ON SEWERS 24" IN DIAMETER AND LESS ONLY.
 (2) MANHOLE RISER REINFORCING COMPLIES WITH AREA REQUIREMENTS OF ASTM C478, EXCEPT THAT ALL WALL SECTIONS SHALL BE REINFORCED WITH WALL AS 0.12 OR X 0.06 LONG. WITH 2-#4 HOOPS AROUND ALL CAST PIPE OPENINGS. (THE 2-#4 HOOPS WILL NOT BE REQUIRED AT CORED OPENINGS FOR BASIN CONNECTIONS.) (ALL VALUES OF AREA OF STEEL (AS) ARE IN SQUARE INCHES ARE A MINIMAL.)
 (3) CORED OPENINGS WILL BE PERMITTED FOR 12" DIAMETER BASIN CONNECTIONS ONLY. THE MAXIMUM CORED OPENING SHALL BE 1/2" FOR THESE BASIN CONNECTIONS.
 (4) FOR DETAILS OF STEPS, JOINTS, GASKETS, PRECAST COLLARS, PIPE TO MANHOLE CONNECTIONS, FLE CAP AND POURING IN PLACE ALTERNATE MONOLITHIC BASE SECTION SEE STANDARD FOR PRECAST MANHOLE DETAILS, STANDARD FOR MANHOLE DETAILS AND STANDARD FOR ALTERNATE MONOLITHIC BASE SECTIONS FOR PRECAST MANHOLES (POURED IN PLACE).
 (5) THE MAXIMUM DEPTH OF COVER OF THE 4'-0" DIAMETER PRECAST MANHOLE, FROM FINAL GRADE TO THE OUTER TOP OF THE PIPE, SHALL BE TWENTY FIVE (25) FEET.
 (6) ALL COVER DISTANCES SHOWN FOR REINFORCEMENT ARE CLEAR DISTANCES.
 (7) LIFTING HOLES SHALL BE LOCATED IN THE SECTIONS AS PER MANUFACTURER'S RECOMMENDATIONS PRIOR TO BACKFILL.
 (8) THE VALUES OF THE WALL AND SLAB THICKNESSES ARE A MINIMUM.
 (9) CONCRETE DESIGN MAX. 5,000 PSI (MIN. 28 DAY STRENGTH = 4,000 PSI; MAX. W/C = 0.47). REBARS - FS = 50,000 PSI. MAX. FS = 65,000 PSI.
 (10) INVERT SHELVES SHALL HAVE A 1/2" PER LINEAR FOOT PITCH TOWARDS THE SEWER.
 (11) THE OPENING DIAMETERS SHOWN IN THE SCHEDULE ARE MAXIMUM VALUES. THE MINIMUM OPENING DIAMETERS SHALL BE AS FOLLOWS: 8" TO 24" DIAMETER PIPES = O.D. + 3".
 (12) BELL-UP TYPE JOINTS SHALL BE ALLOWED FOR 4'-0" DIAMETER PRECAST MANHOLE, WITH THE FOLLOWING MODIFICATION TO THE LOOSE TOP SLAB: (A) THE MINIMUM SLAB THICKNESS SHALL BE X + 4" (WHERE "X" IS JOINT DEPTH AND (B) THE EMBEDEDMENT LENGTH SHALL BE 4-1" (WHERE "1" IS THE THICKNESS OF RISER WALL); SEE DETAIL "A" ON DWG. 2 OF 3
 (13) PROTECTIVE COATING PAINT APPLIED SSPC-PAINT 16, QUALITY-EPoxy-POLYAMINE 15 MIL MINIMUM THICKNESS APPLIED TO ALL EXTERIOR SURFACES OF SANITARY SEWER MANHOLES.

**STANDARD FOR DROP PIPE MANHOLE
ON 10" DIA. TO 24" DIA. PIPE SEWERS,
(25'-0" MAXIMUM COVER)**



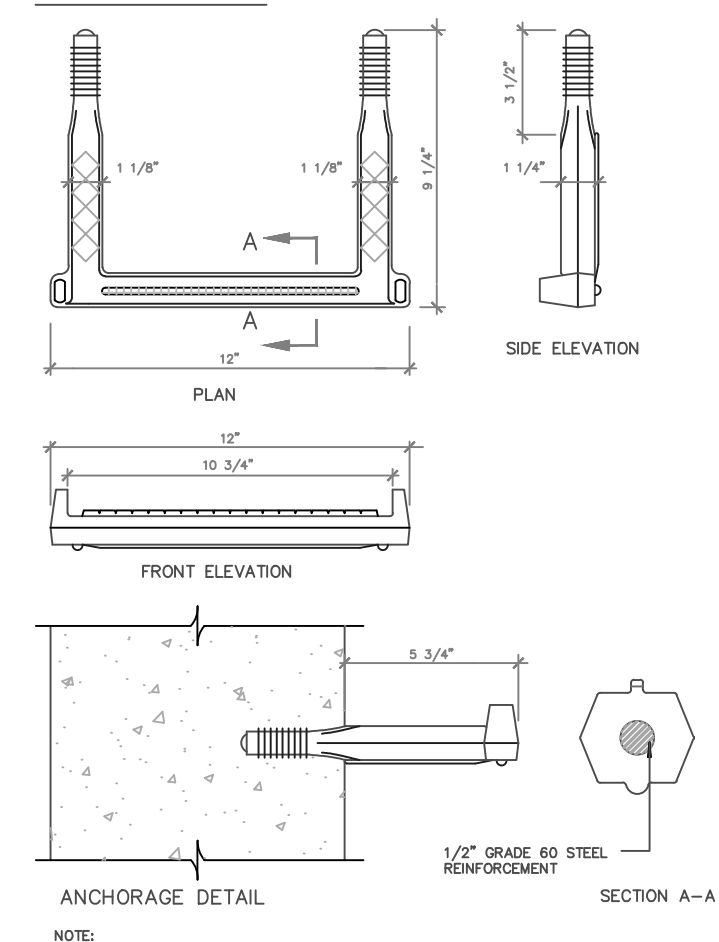
STANDARD FOR DROP PIPE MANHOLE ON 10" DIA. TO 24" DIA. PIPE SEWERS, (25'-0" MAXIMUM COVER)

**STANDARD FOR REMOVABLE
PRECAST REINFORCED CONCRETE SLAB**

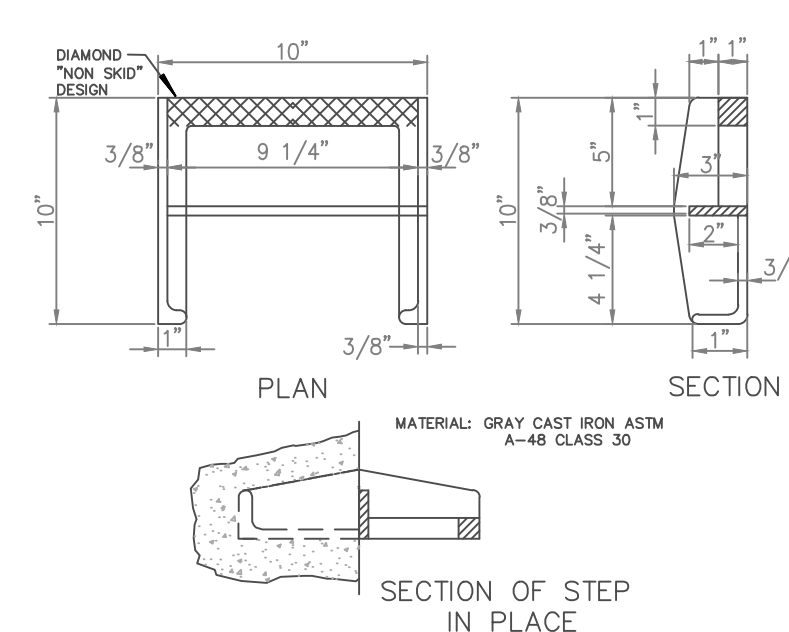


STANDARD FOR REMOVABLE PRECAST REINFORCED CONCRETE SLAB

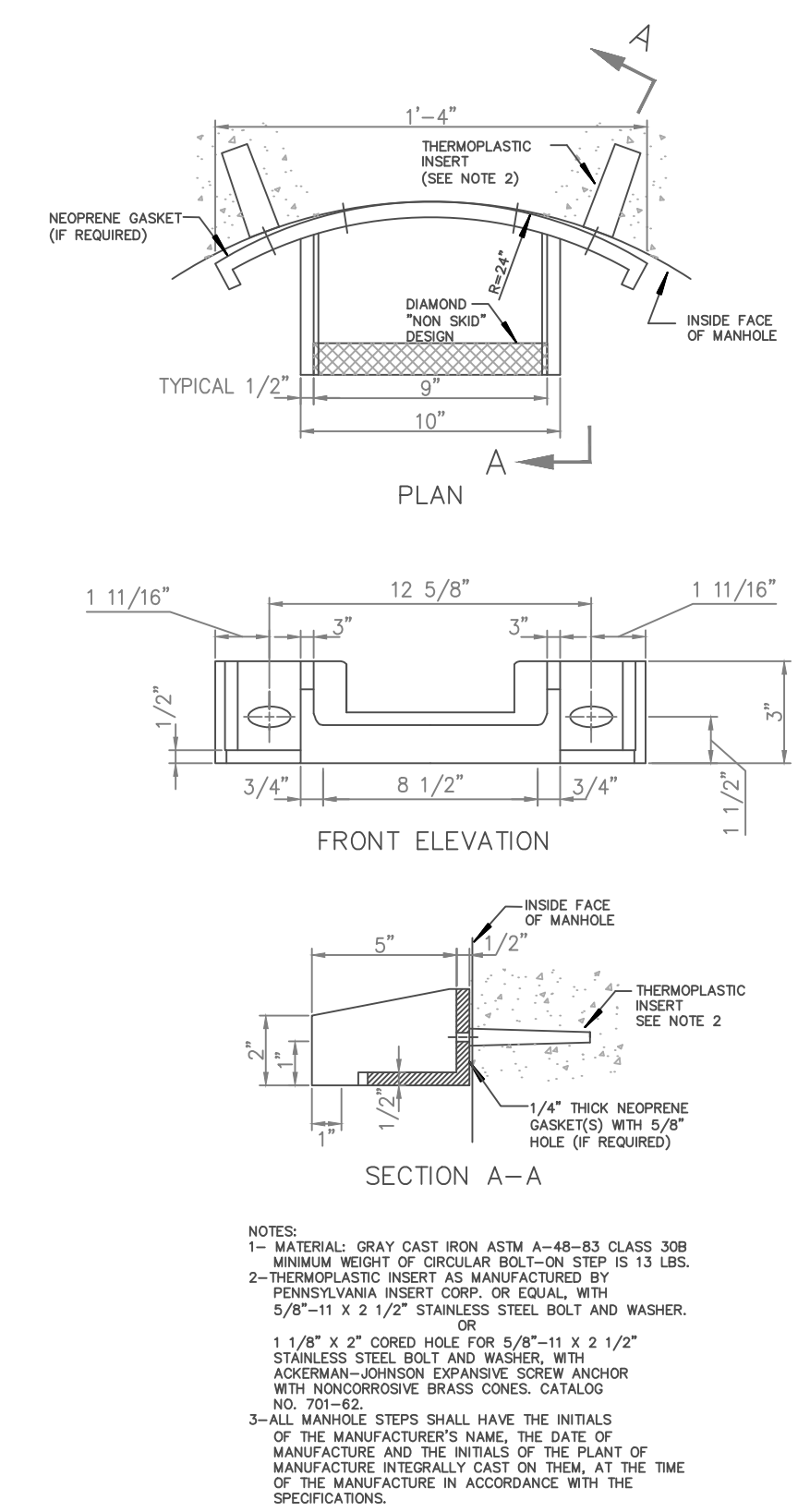
**STANDARD FOR PLASTIC
MANHOLE STEP (COPOLYMER
POLYPROPYLENE PLASTIC)
FABRICATED IN SHOP WITH
MANHOLE**



**STANDARD FOR CAST
IRON MANHOLE STEP**

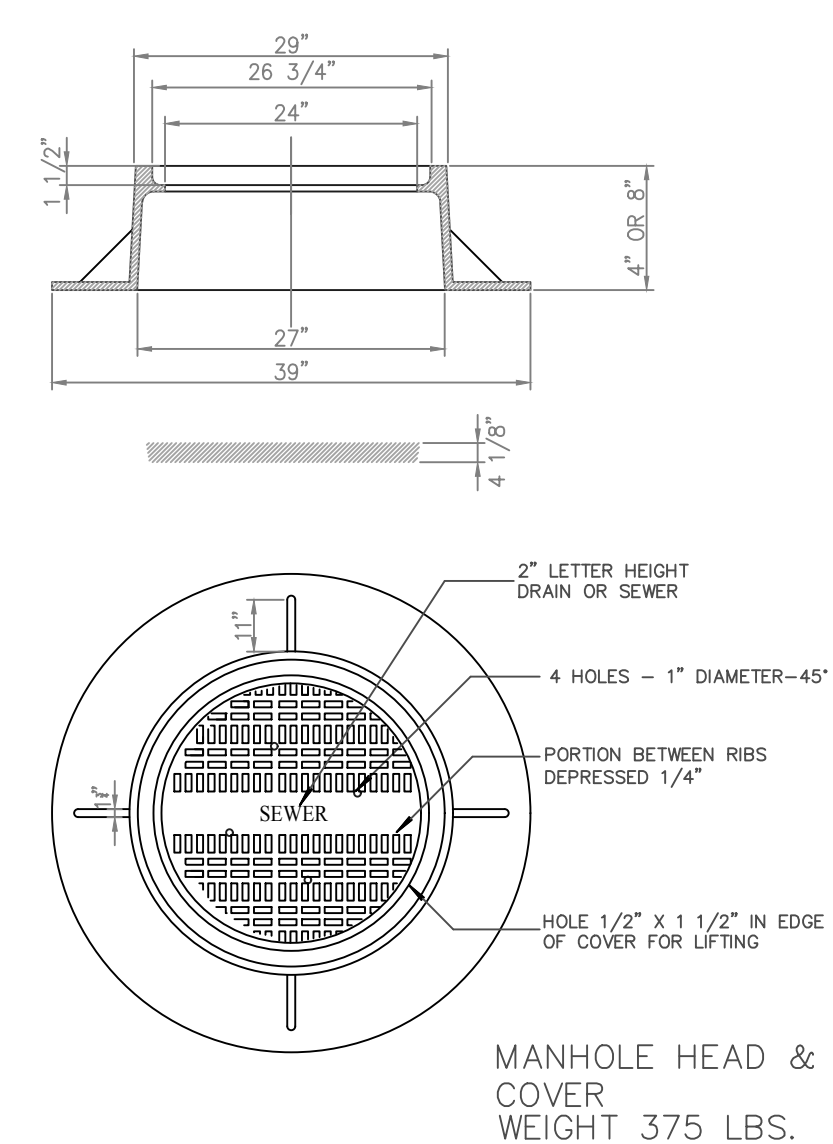


**STANDARD FOR CIRCULAR
CAST IRON MANHOLE STEP
(BOLT ON TYPE)**



**STANDARD FOR MANHOLE
HEAD AND COVER**

AS MANUFACTURED BY THE CAMPBELL FOUNDRY CO. PATTERN # 1041A - 195# +/-
 OR # 1041B FOR 8" - 210# +/-
 FOR STORM SEWER, COVER MUST SAY "DRAIN"
 FOR SANITARY, COVER MUST SAY "SEWER"
 ROUND FLANGE ONLY



MANHOLE HEAD & COVER WEIGHT 375 LBS.

IN CHARGE OF: JM
 MADE BY: DM
 CHECKED BY: JM

**UNAUTHORIZED ALTERATION OR ADDITIONS TO THIS MAP IS A VIOLATION
OF SECTION 7209 SUB-SECTION 2, OF THE STATE EDUCATION LAW.**

CITY OF NEW ROCHELLE
DEPARTMENT OF PUBLIC WORKS

**STANDARD DETAILS
FOR CONSTRUCTION**

PROJECT NUMBER	CONTRACT NUMBER
SHEET NO. 1 OF 3	SCALE: NTS
DATE: 06/02/2016	REV. NO. 0
DRAWING NO.	