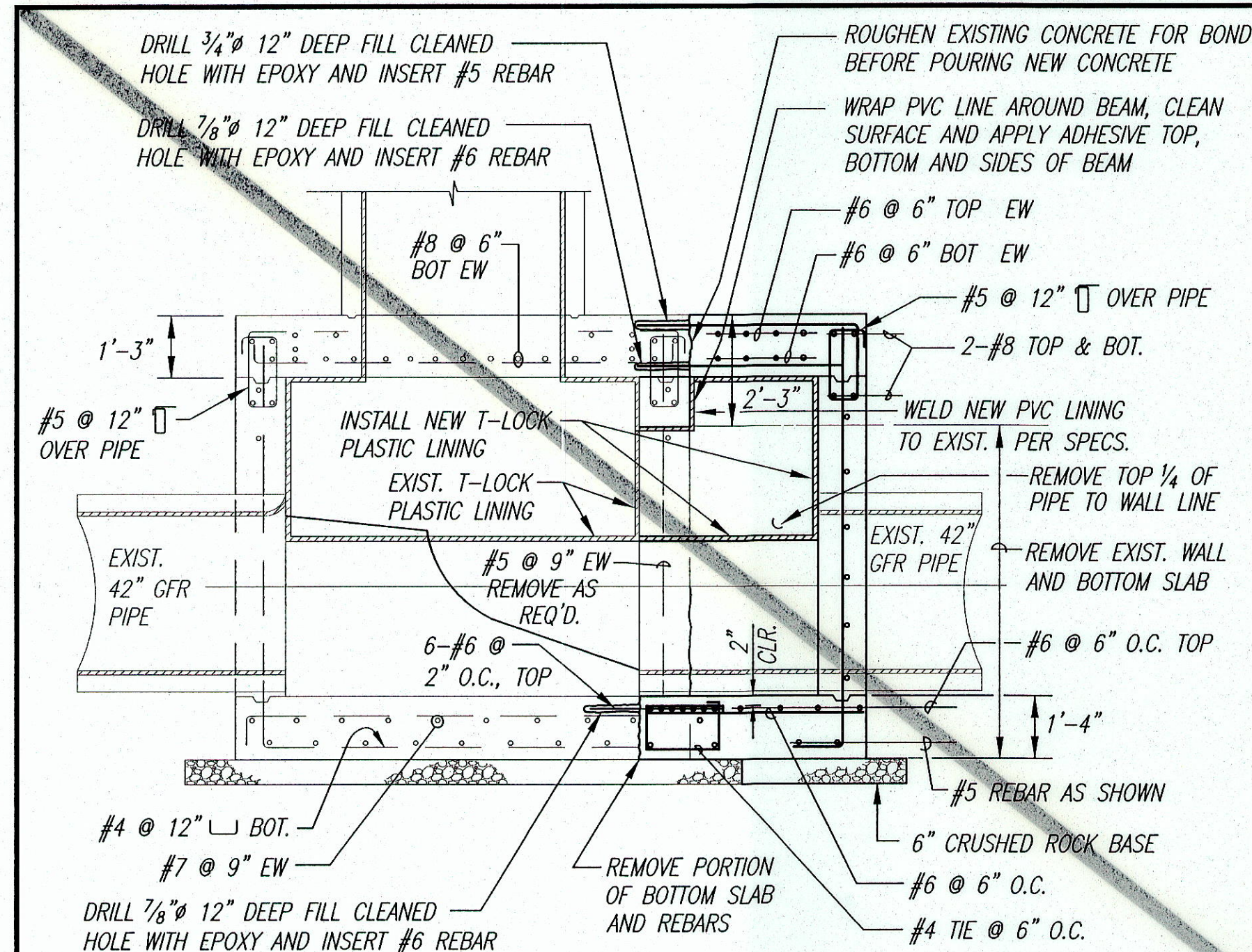
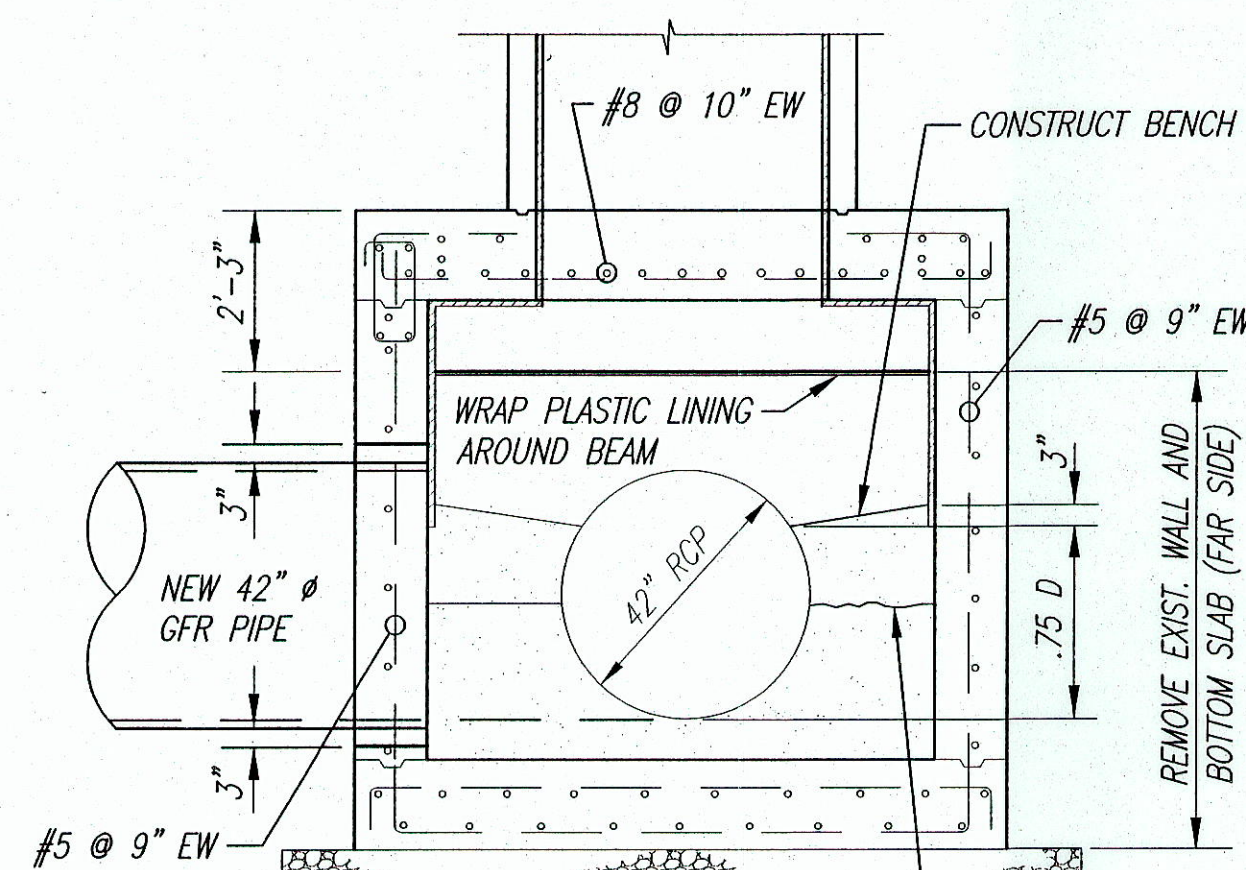
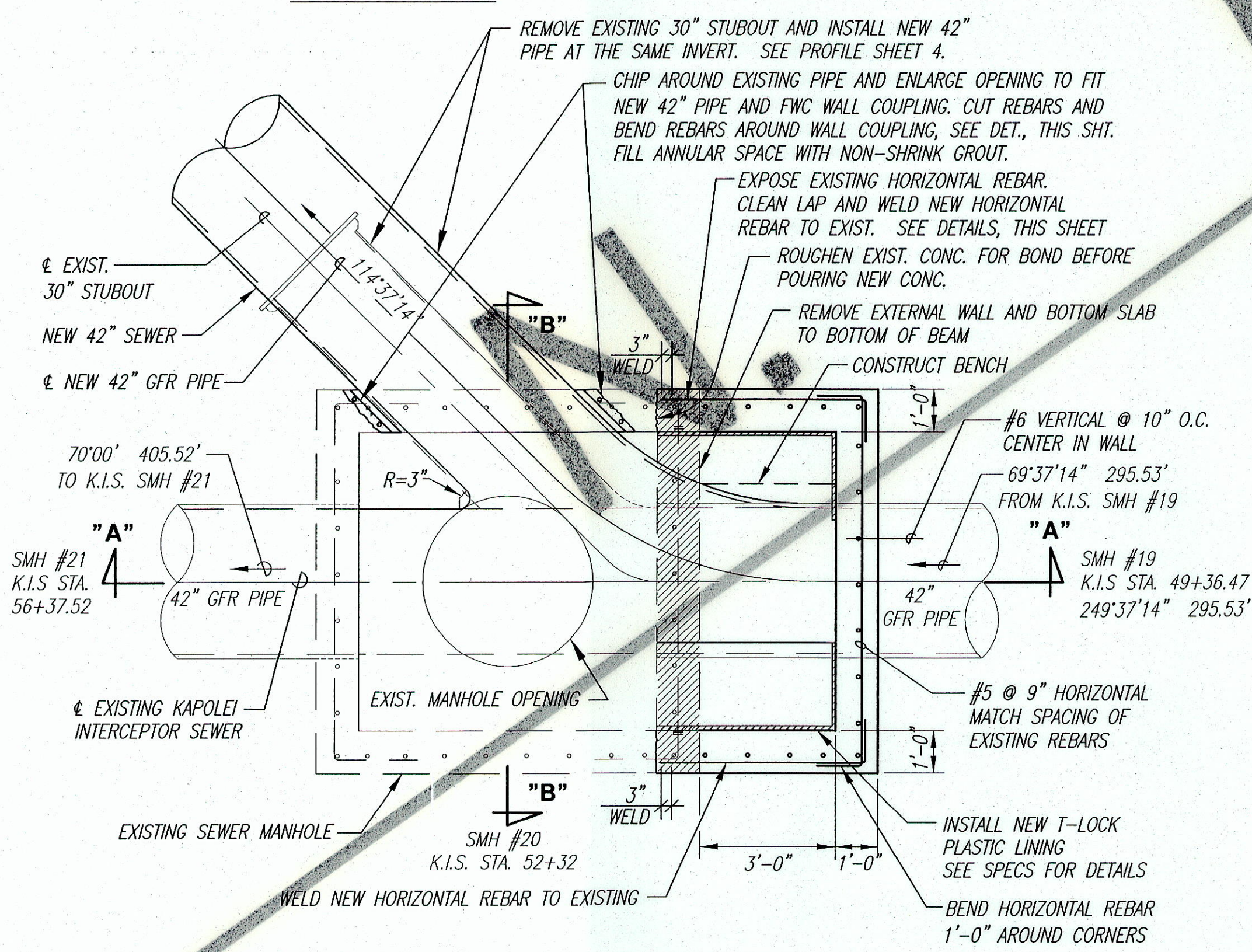




SECTION "A-A"



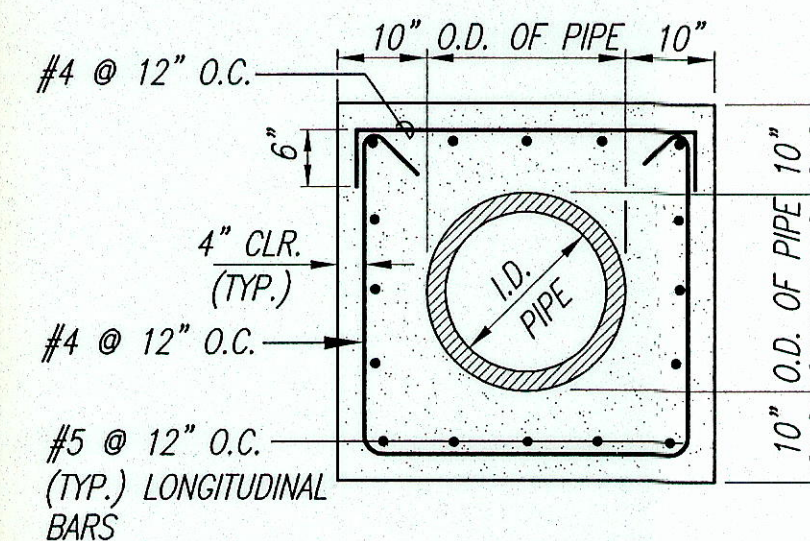
SECTION "B-B"



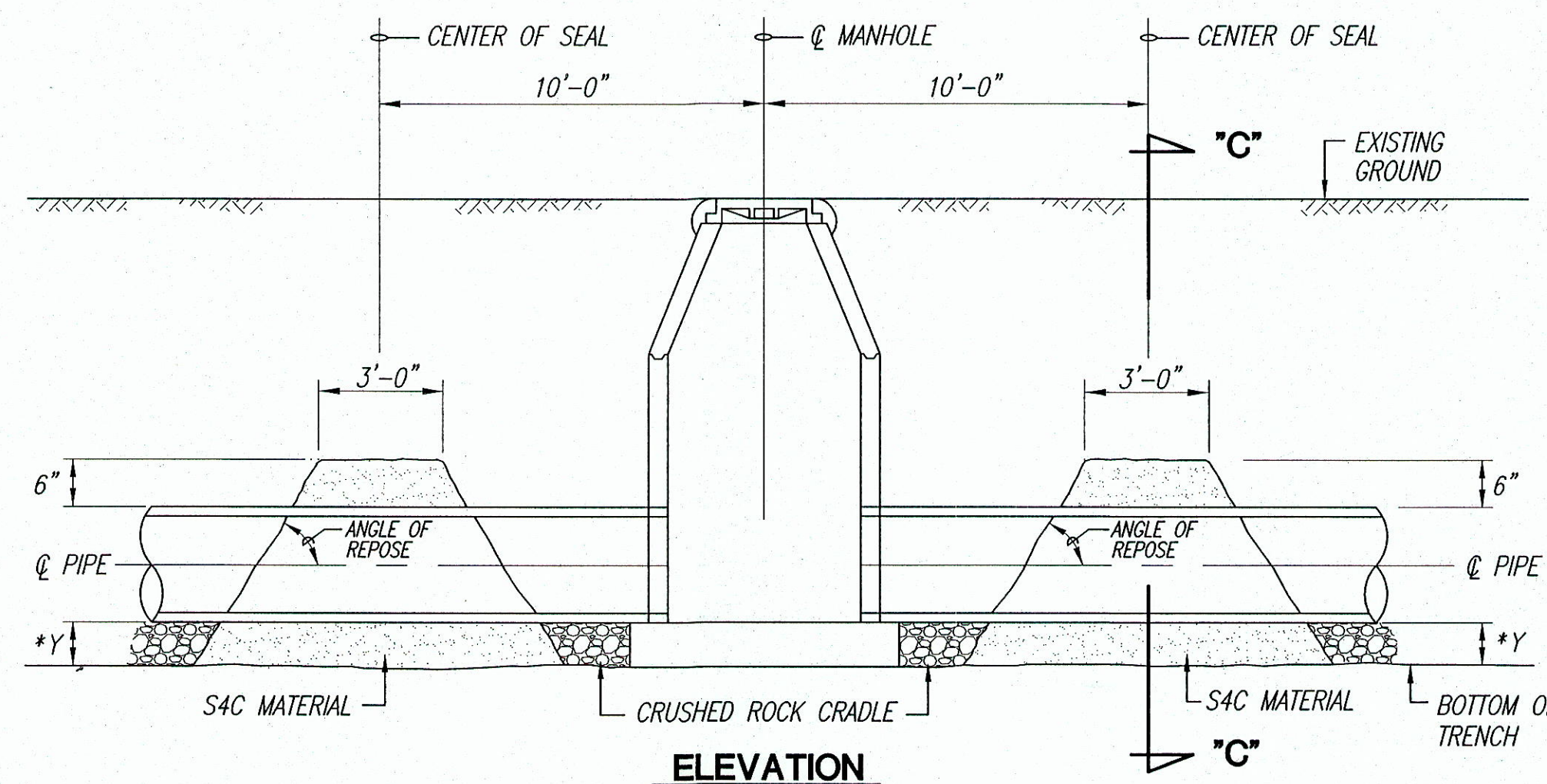
DETAIL - CONNECTION TO EXISTING SMH #20
(KAPOLEI INTERCEPTOR SEWER)

SCALE: 3/8" = 1'-0"

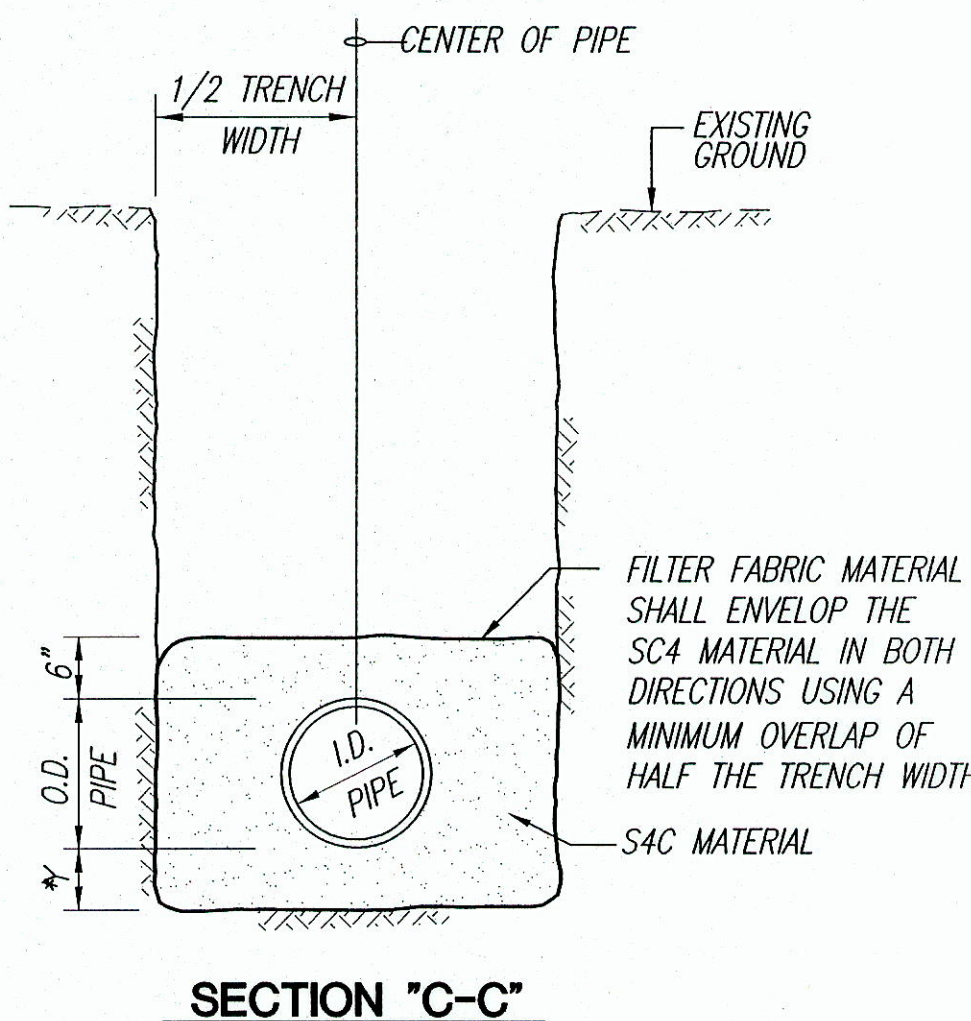
NOTE:
CONCRETE AND REINFORCING STEEL SHALL CONFORM TO THE REQUIREMENTS UNDER SECTION 43, "CONCRETE BLOCKS, CRADLES AND JACKETS", OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.



REINFORCED CONCRETE JACKET
NOT TO SCALE



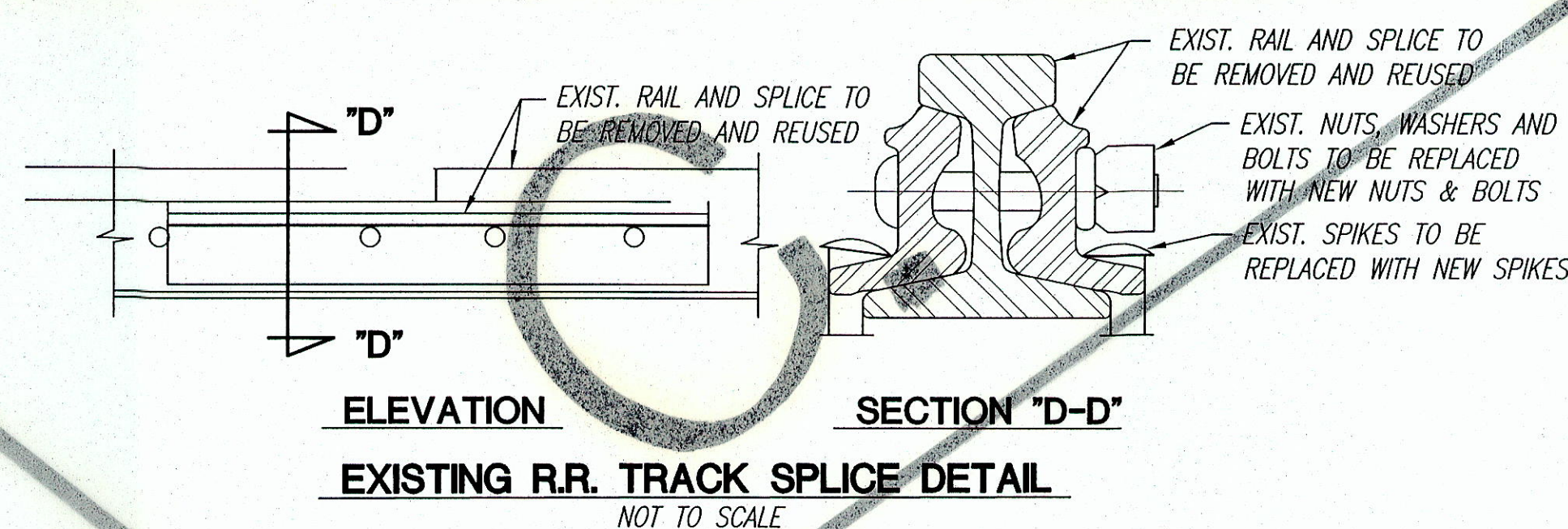
SEAL DETAIL
NOT TO SCALE



SECTION "C-C"

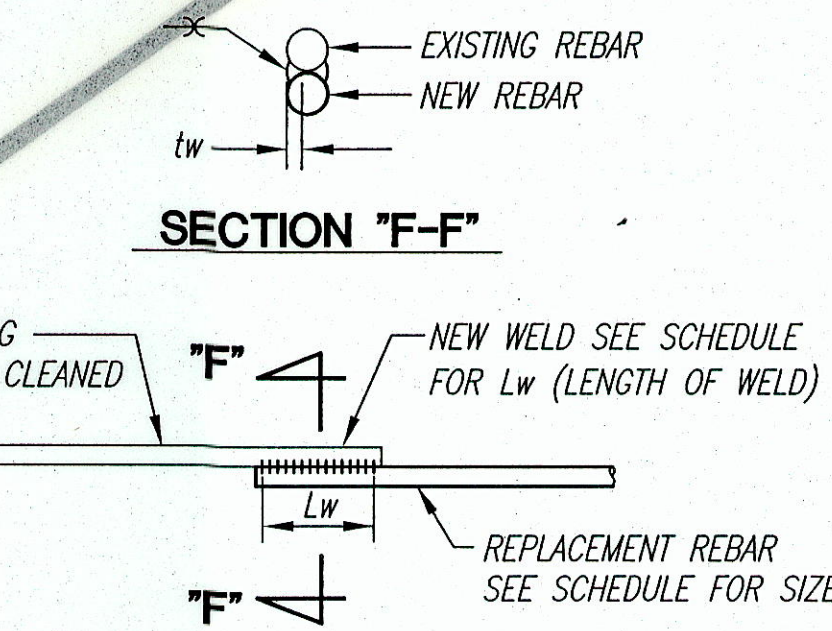
- NOTES:
- SEALS SHALL BE PLACED 10 FT. UPSTREAM AND DOWNSTREAM FROM EACH MANHOLE.
 - THE CONTRACTOR SHALL COMPACT S4C MATERIAL BY PONDING AND DRAINING. UPON DRAINING, A VIBRATORY MACHINE SHALL BE USED UNTIL NO VISIBLE EVIDENCE OF FURTHER CONSOLIDATION EXISTS.
 - SEALS SHALL NOT BE PAID FOR SEPARATELY BUT SHALL BE CONSIDERED INCIDENTAL TO CRUSHED ROCK CRADLE.

* SEE C&C STANDARD DETAILS, SHEET S-1 FOR DIMENSION OR AS SPECIFIED ON THE CONSTRUCTION PLANS

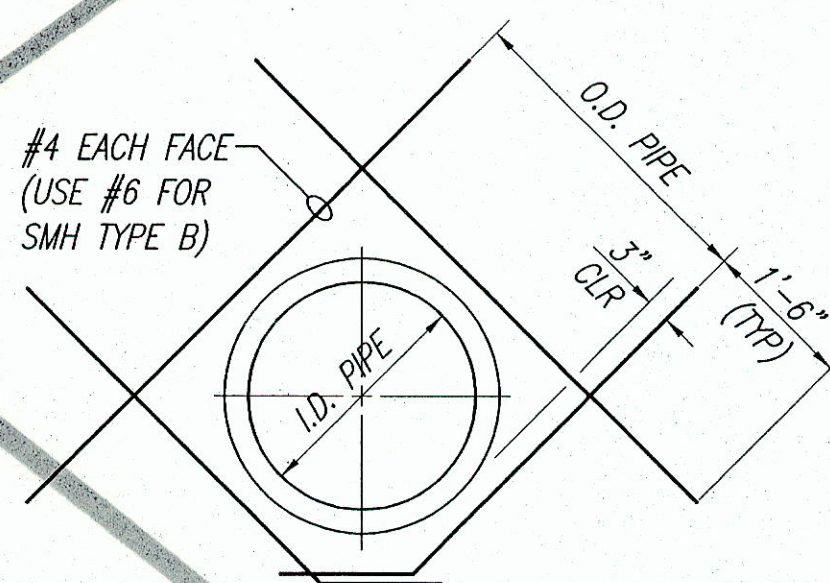


ELEVATION
SECTION "D-D"
EXISTING R.R. TRACK SPLICE DETAIL
NOT TO SCALE

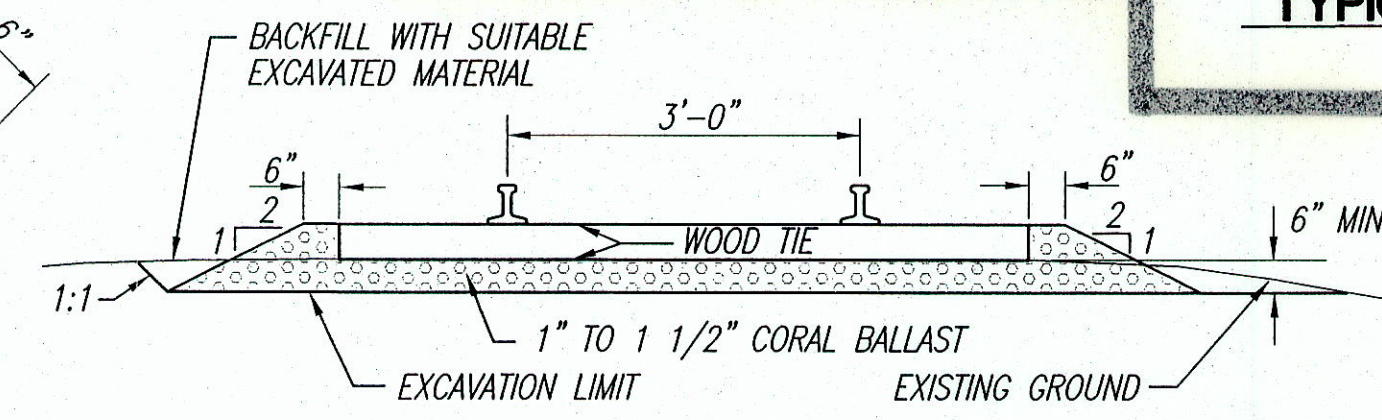
BAR SIZE	MIN. WELD LENGTH (EACH SIDE)
#8	6"
#7	5"
#6	4"
#5	3"
#4	2"
#3	2"



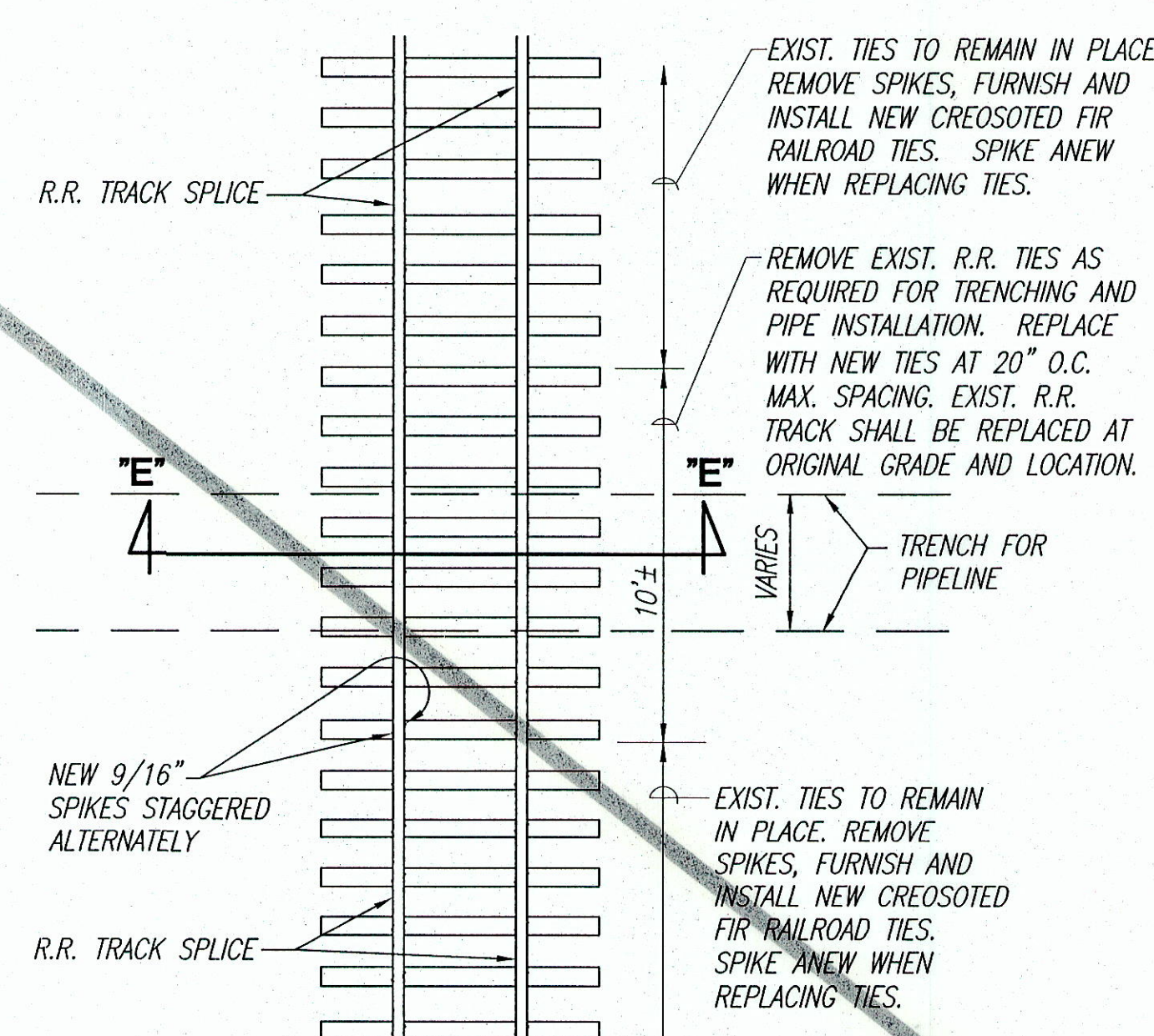
LAP SPLICE FOR
#5 BARS AND SMALLER
NOT TO SCALE



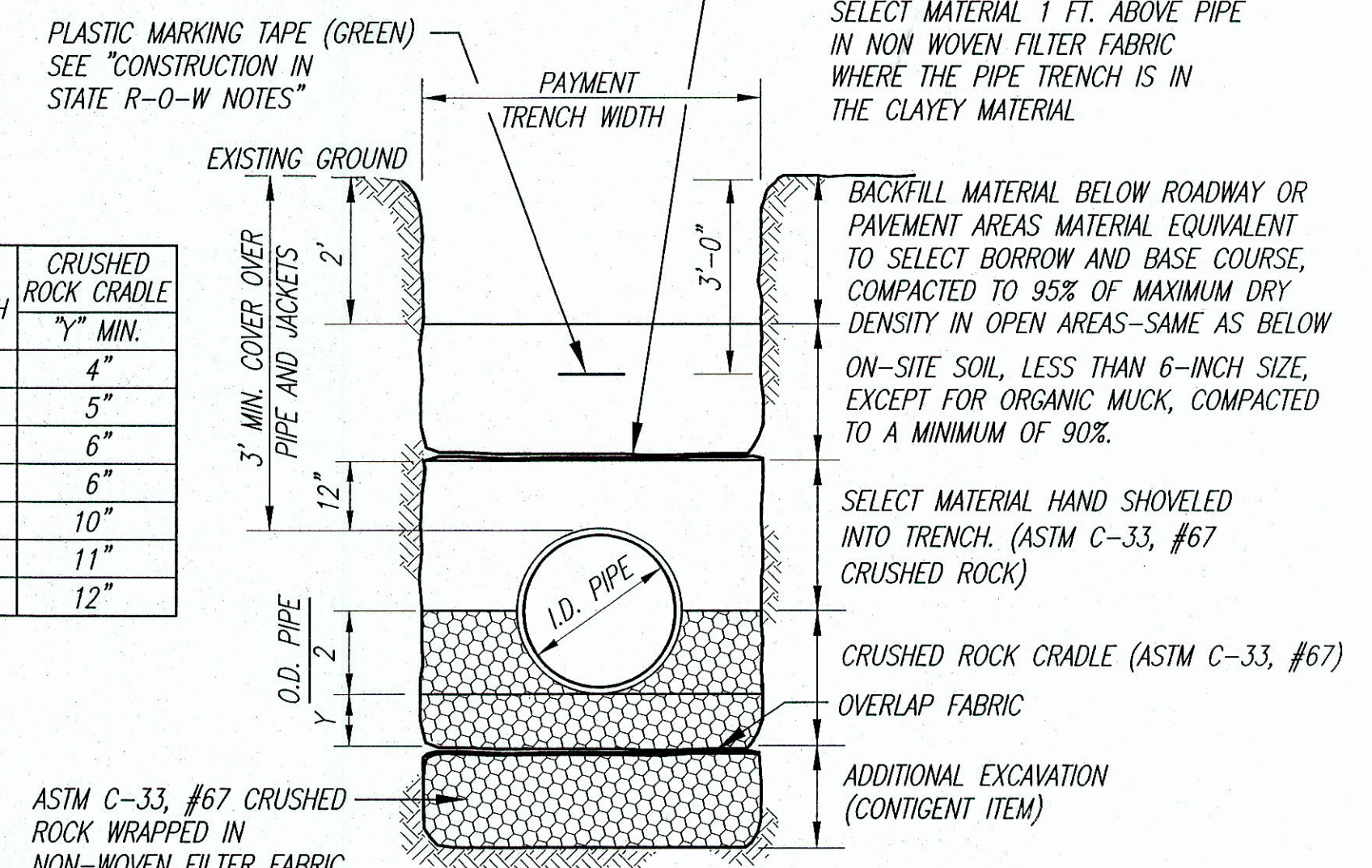
REINFORCEMENT
AT PIPE OPENING
NOT TO SCALE



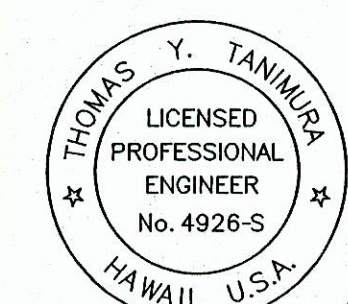
SECTION "E-E"



TYPICAL SECTION - TRACK RECONSTRUCTION
NOT TO SCALE



TYPICAL TRENCH DETAIL
NOT TO SCALE



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION. CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. LICENSE EXPIRATION DATE: 04/30/08

REVISION DATE	DESCRIPTION	MADE BY	APPROVED
5/11/07	ADD SE'S SIG. APPVD. DWG.		

Community Planning and Engineering, Inc.
Engineering Design | Construction Management | Infrastructure Planning
1100 Alakea Street, 8th Floor Honolulu, Hawaii

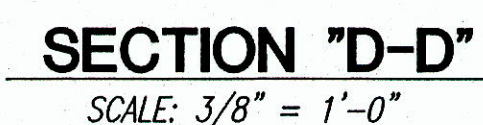
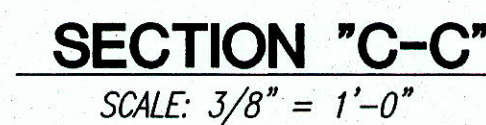
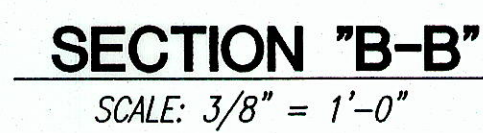
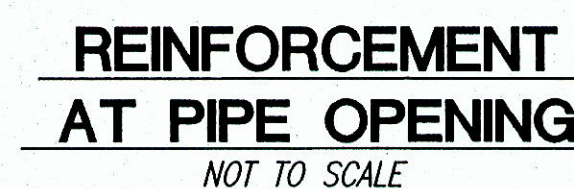
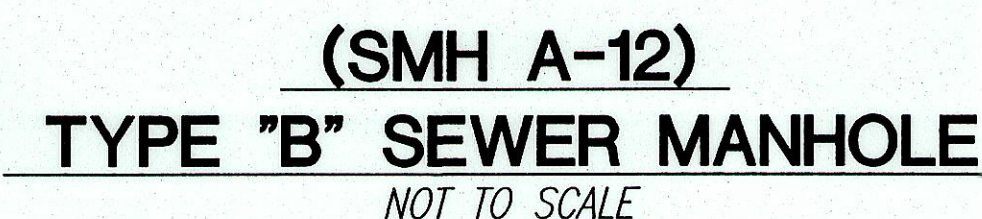
EAST KAPOLEI OFFSITE TRUNK SEWER
(DPP SUBD. FILE NO. 2006/SUB-308)
HONOLULU, EWA, OAHU, HAWAII
OWNER & DEVELOPER: DEPARTMENT OF HAWAIIAN HOME LANDS
TAX MAP KEYS: 9-1-16: Por. 27, 31, Por. 108, 109
9-1-69: Por. 1

DETAILS - 1

DRAWN BY: MEN	ENGINEER: DKM	CHECKED BY: CMS
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APPROVED:

4/9/07
DATE

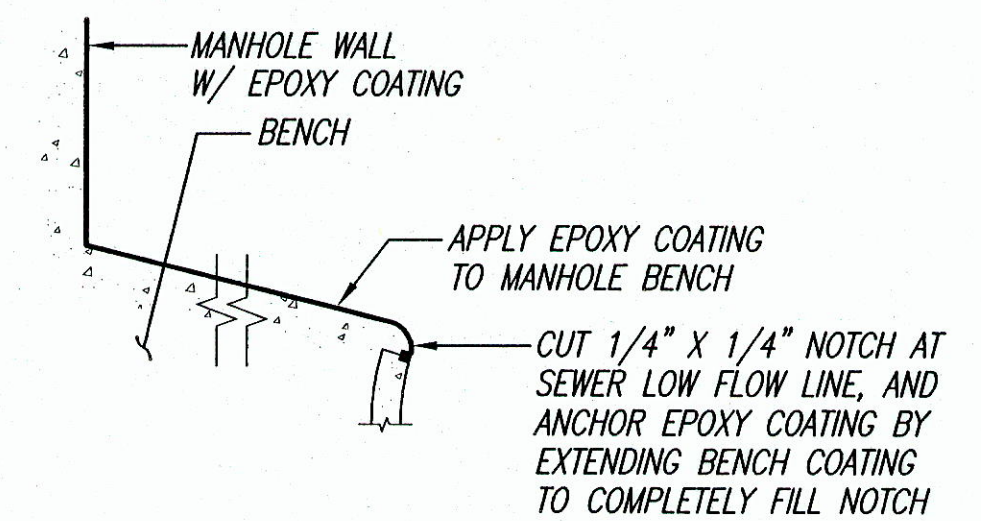
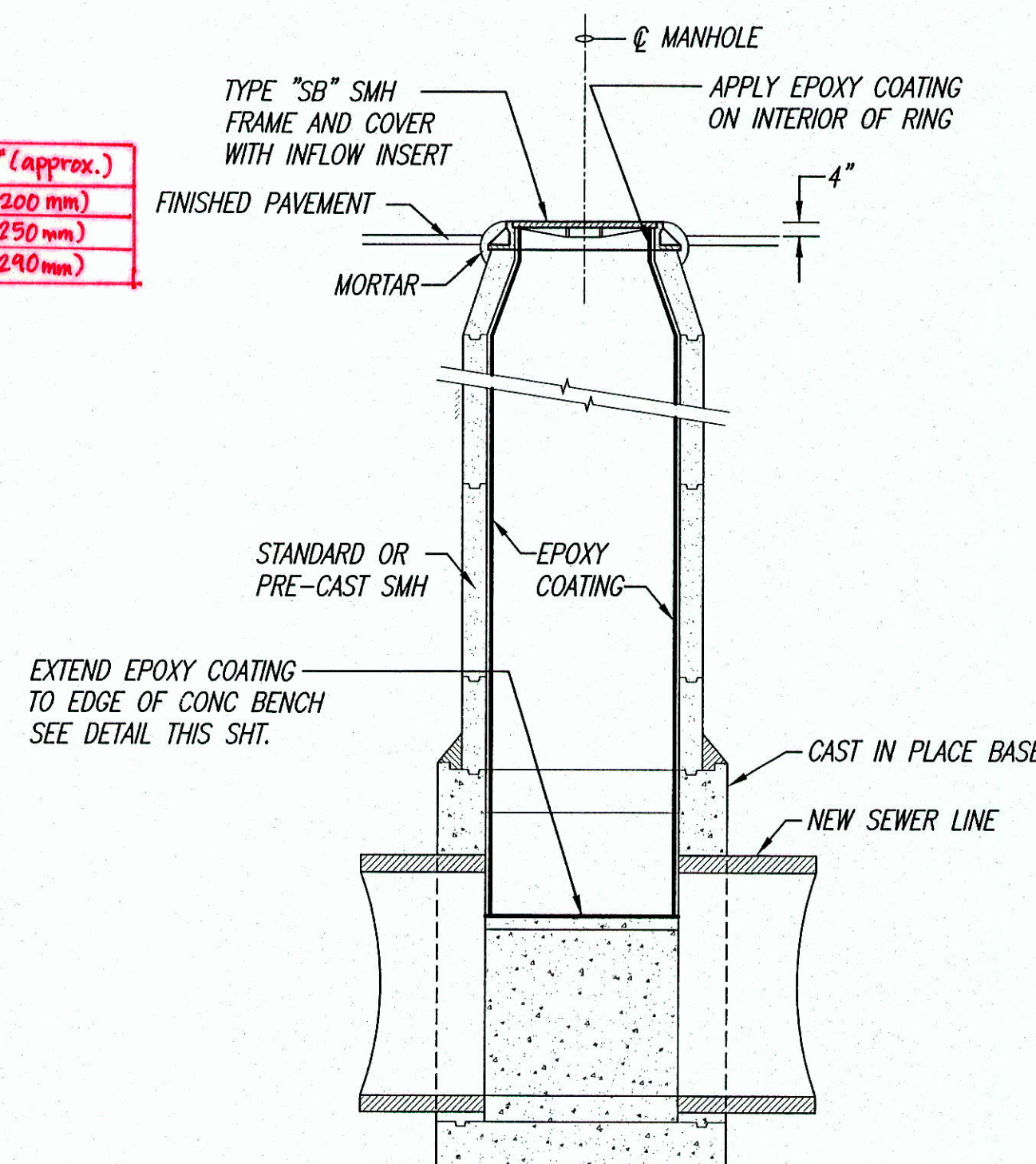
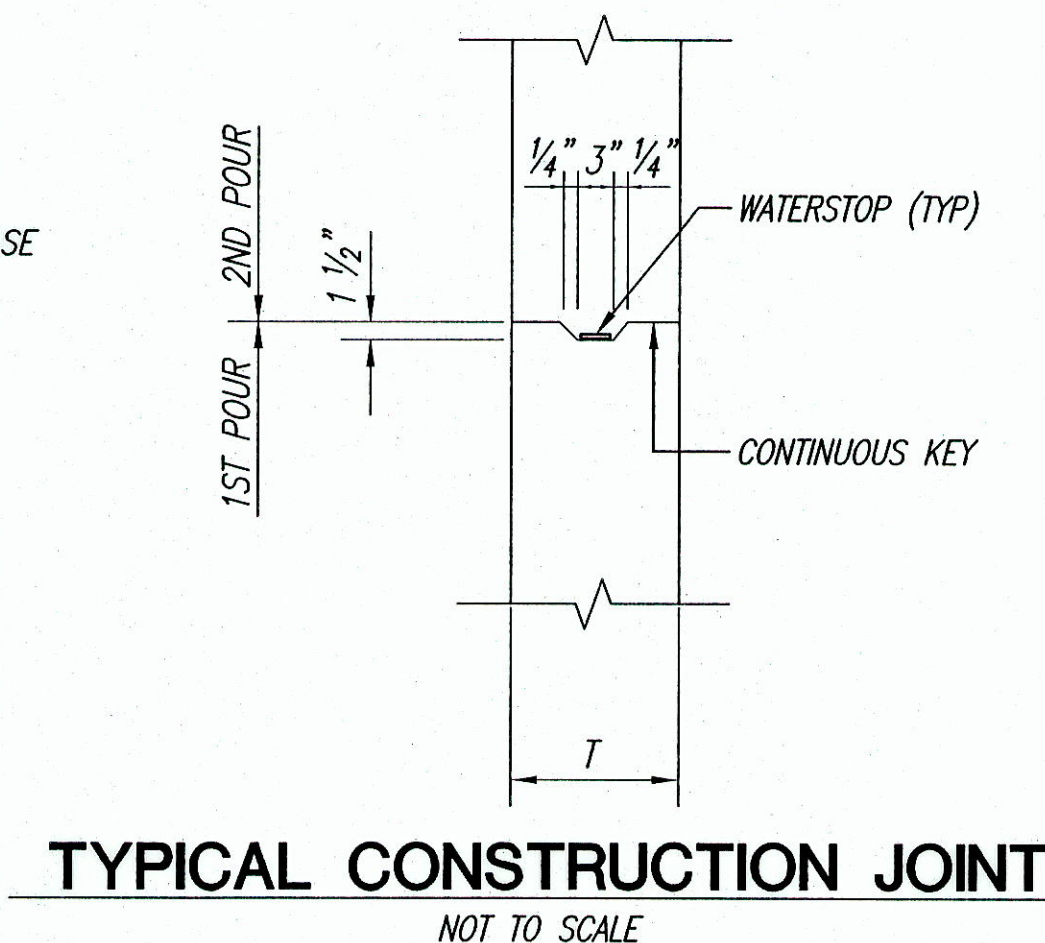
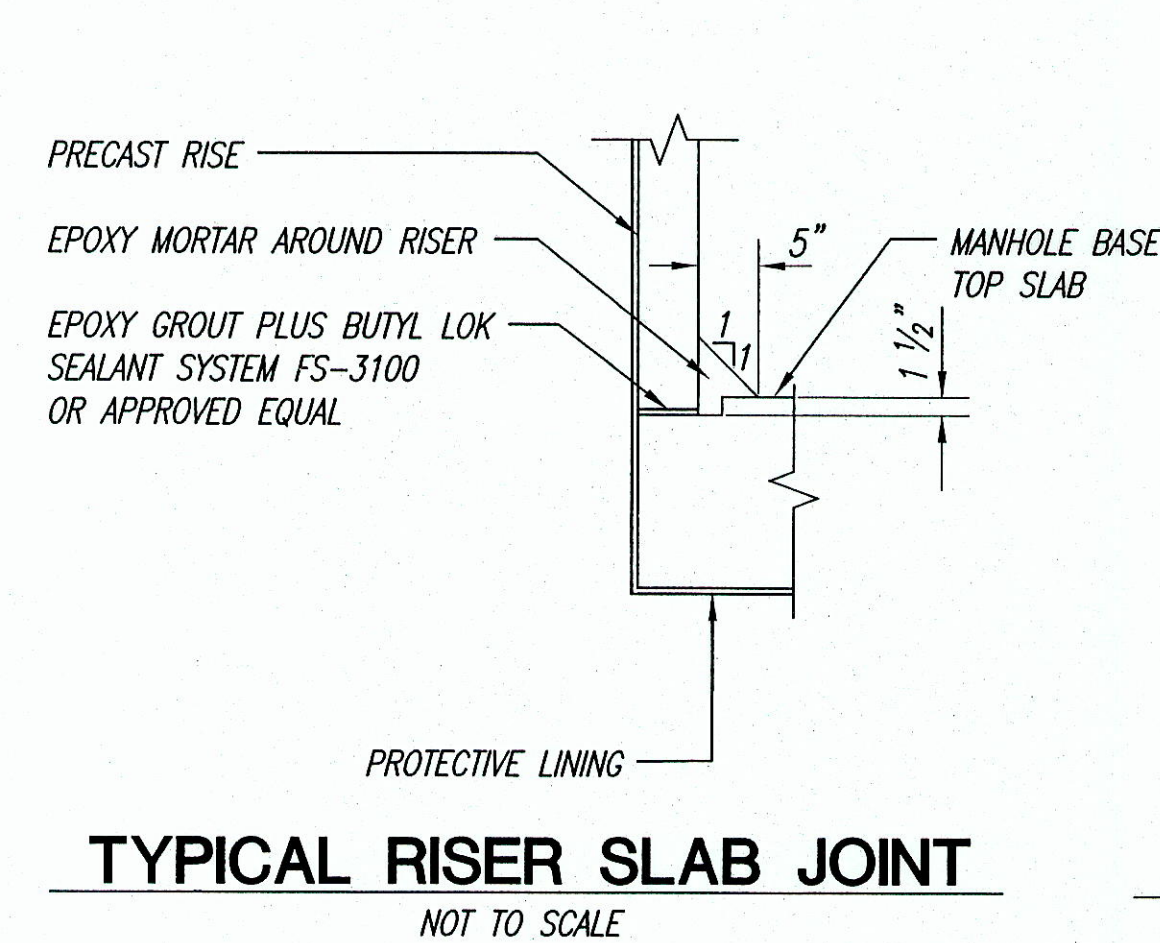
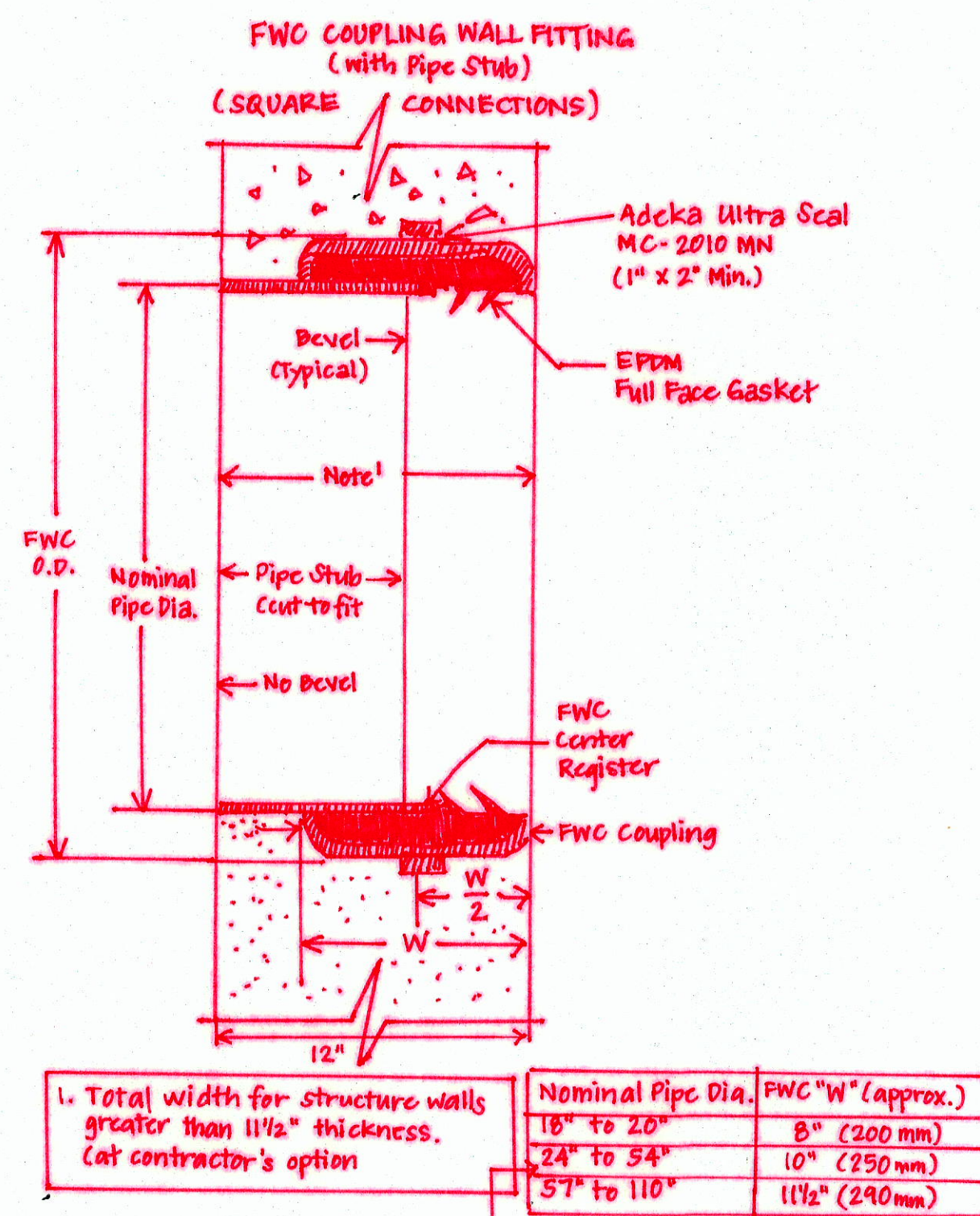
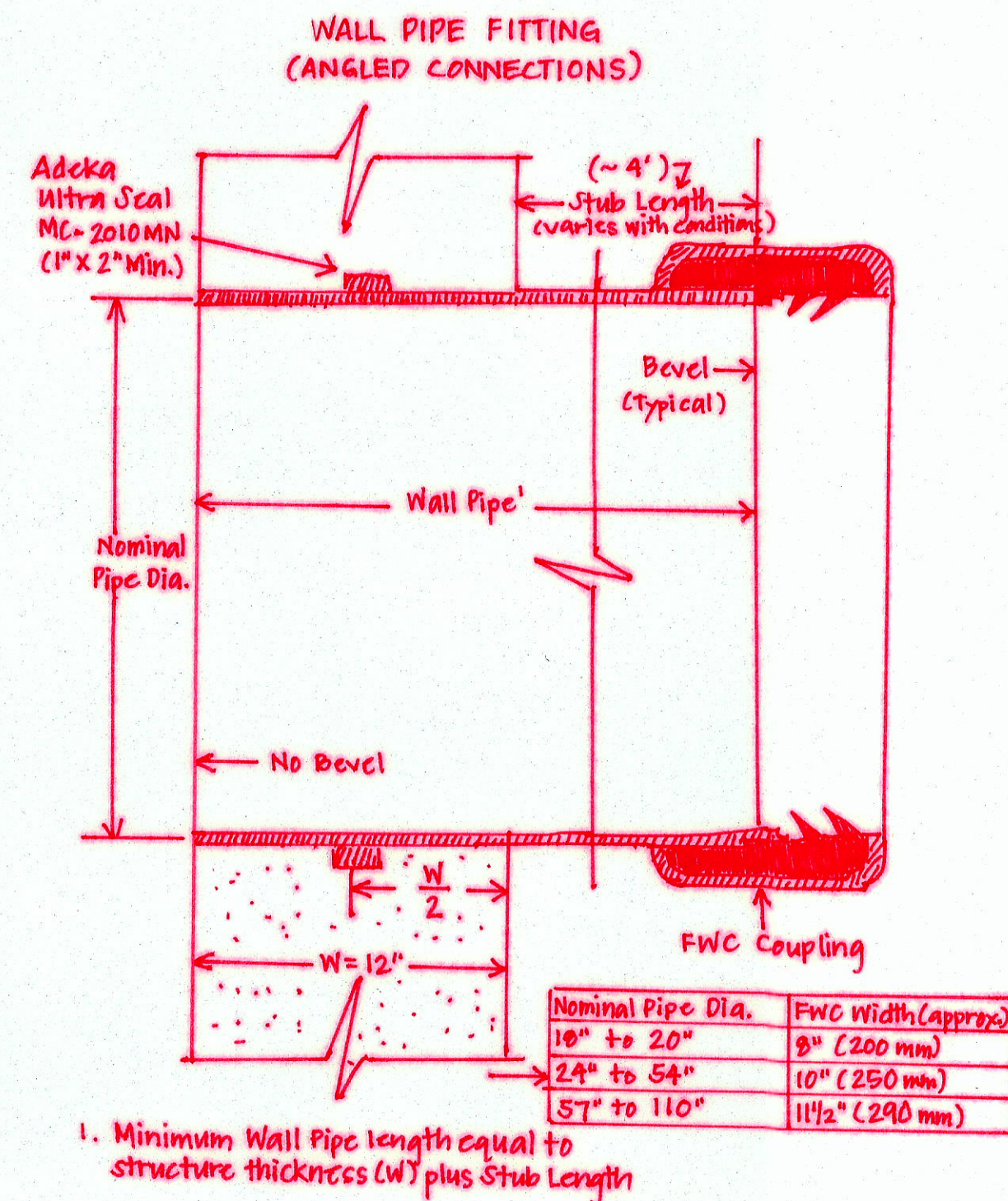


SHEET 20 OF 26 SHEETS ADD. 352

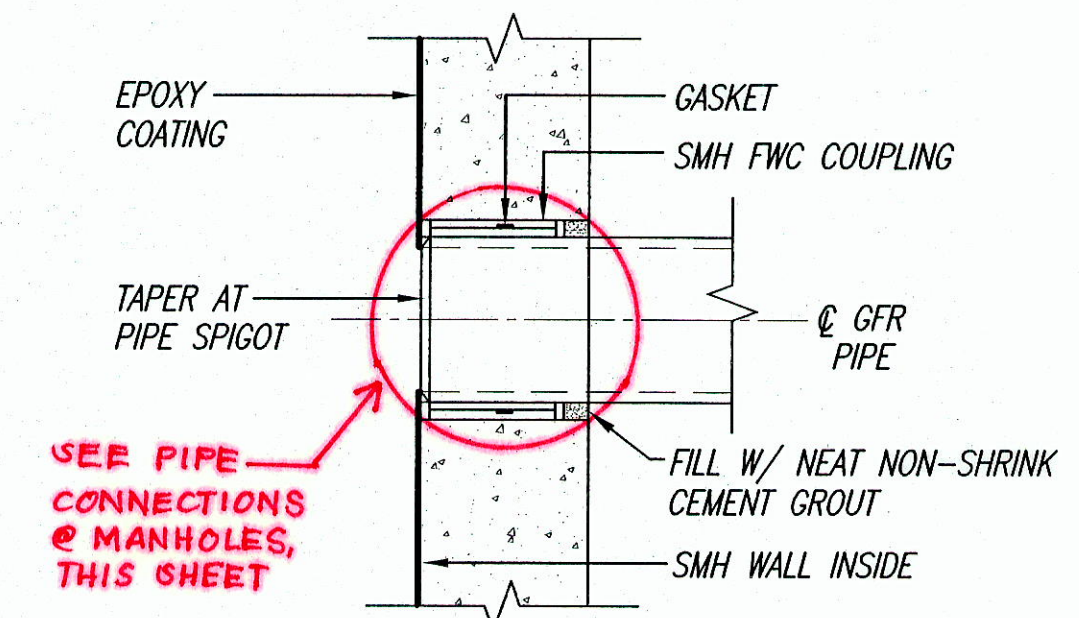
1. ALL WORK SHALL CONFORM TO THE "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION" (LATEST).
2. CONCRETE SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH AND A MAXIMUM WATER TO CEMENT RATIO AS FOLLOWS:

	<u>STRENGTH</u>	<u>(CLASS)</u>	<u>W/C RATIO</u>
SMH	4,000 PSI	(AAA-S)	0.48
3. ALL REINFORCING STEEL SHALL CONFORM TO ASTM A615 GRADE 60.
4. MINIMUM COVER IN INCHES FOR REBARS FOR CAST-IN-PLACE AND PRECAST CONCRETE:

CONCRETE CAST AGAINST EARTH (C.I.P.)	3"
FORMED CONCRETE EXPOSED TO EARTH OR WEATHER	2"
5. UNLESS OTHERWISE NOTED, SPLICES, LAPS, DOWEL EXTENSIONS AND EMBEDMENTS SHALL BE 40 BAR DIAMETERS MINIMUM.
6. ALL REINFORCING BARS MARKED 'CONT.' OR 'TEMP.' SHALL BE LAPPED 40 BAR DIAMETERS MINIMUM.
7. STAGGER ALL SPLICES WHERE POSSIBLE.
8. REBARS SHALL BE SUPPORTED, BENT AND PLACED AS PER "MANUAL OF STANDARD PRACTICE FOR DETAILING CONCRETE STRUCTURES" ACI 315 (LATEST).
9. AT TIME CONCRETE IS PLACED, REINFORCING SHALL BE FREE FROM MUD, OIL, LAITANCE OR OTHER SUBSTANCES ADVERSELY AFFECTING BOND CAPACITY.
10. FOR REINFORCING NOT SHOWN ON THE PLANS, FOLLOW LATEST APPROVED VERSION OF THE "STANDARD DETAILS FOR PUBLIC WORK CONSTRUCTION" (STANDARD DETAILS).
11. REINFORCEMENT, ANCHOR BOLTS, DOWELS AND ALL OTHER EMBEDDED ITEMS SHALL BE POSITIVELY SECURED BEFORE POURING.
12. NEW REINFORCING BARS THAT WILL BE WELDED TO EXISTING REBARS SHALL BE ASTM A-706 GRADE 60 AND WELDED IN ACCORDANCE WITH THE "STRUCTURAL WELDING CODE-REINFORCING STEEL" (AWS D1.4). NO WELDS WILL BE PERMITTED WITHIN 3 INCHES OF THE TANGENT POINT OF BENT BARS. CONCRETE DAMAGED DURING THE WELDING PROCESS SHALL BE REMOVED.



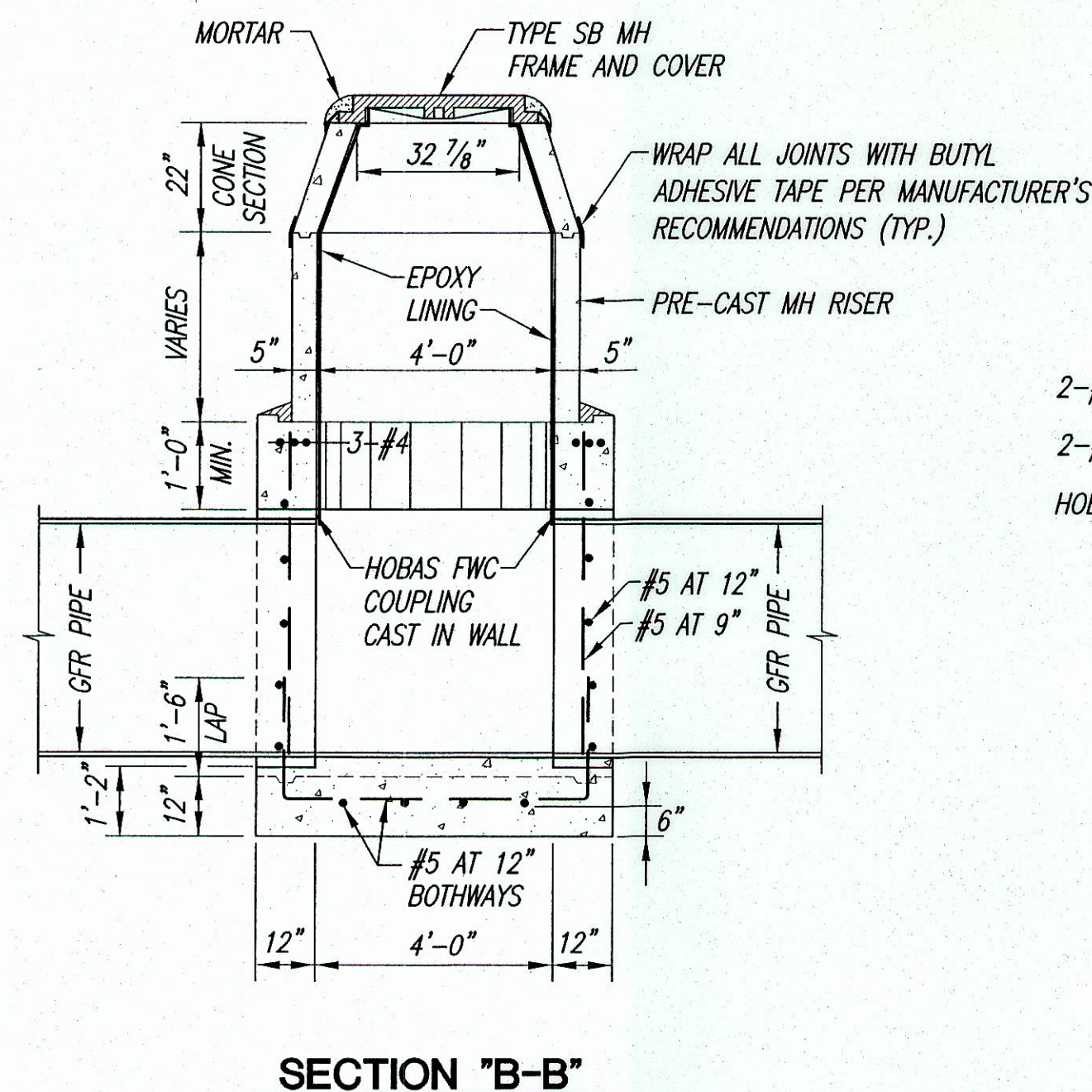
NOT TO SCALE



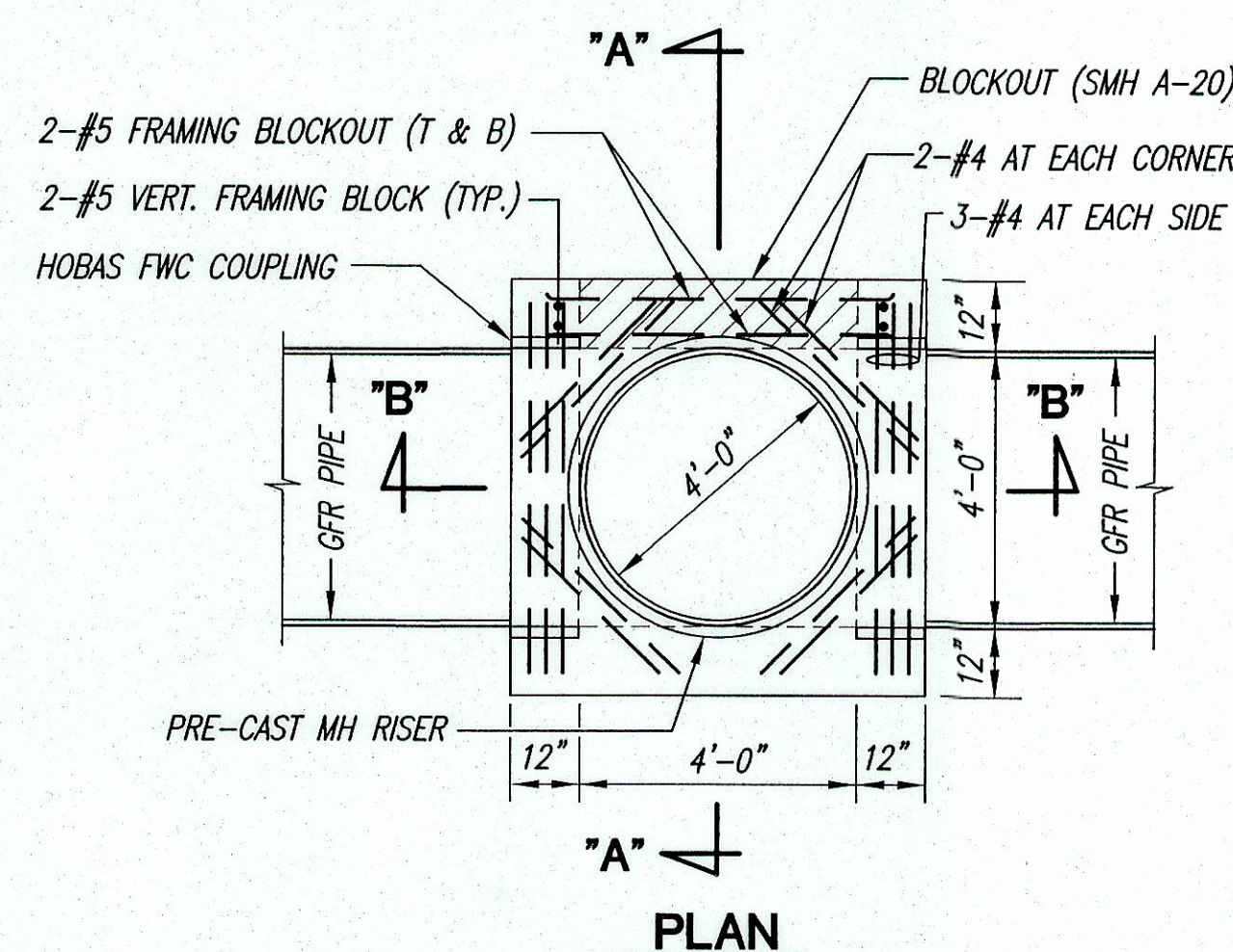
NOT TO SCALE

NOT TO SCALE

- NOTES:**
1. INTERIOR WALLS OF SEWER MANHOLE SHALL BE CLEANED AND PREPARED AS SPECIFIED IN THE SPECIAL PROVISIONS PRIOR TO PLACEMENT OF EPOXY COATING.
 2. EPOXY COATING SHALL BE APPLIED WITH HAND-TROWEL OR SPRAY APPLICATION.



SCALE: $3/8" = 1'-0"$



FRAME OPENING (SMH A-20) W/2-#5
CONSTRUCT BLOCKOUT FOR SMH A-20
12"x8" HOLLOW BLOCKS
FILL CELLS SOLID W/ CONC.
#5 @ 8" REINFORCING STEEL



THIS WORK WAS PREPARED BY _____
OR UNDER MY SUPERVISION _____



C. Michael Street

THIS WORK WAS PREPARED BY
ME OR UNDER MY SUPERVISION.
CONSTRUCTION OF THIS PROJECT
WILL BE UNDER MY OBSERVATION.
LICENSE EXPIRATION DATE: 04/30/08

5/11/07	ADD 9E's SIG. APPROV. DWG.		
REVISION DATE	DESCRIPTION	MADE BY	APPROVED
	Community Planning and Engineering, Inc. Engineering Design Construction Management Infrastructure Planning 1100 Alakea Street, Sixth Floor Honolulu, Hawaii		
EAST KAPOLEI OFFSITE TRUNK SEWER (DPP SUBD. FILE NO. 2006/SUB-308) HONOLULU, EWA, OAHU, HAWAII OWNER & DEVELOPER: DEPARTMENT OF HAWAIIAN HOME LANDS TAX MAP KEY: 9-1-16 : Por. 27, 31, Por. 108, 109 9-1-69 : Por. 1			
DETAILS - 4			
DRAWN BY: SWE		ENGINEER: SES	CHECKED BY: OMS
APPROVED: 			
Dennis M. Nakamura		4/9/07	
CHIEF, WASTEWATER BRANCH, D.P.P.		D.P.P.	