



# FOUR MILE CREEK

CONSTRUCTION PLANS FOR:

**4MC-004A**

**PART A:**

MAIN NO. 1 OF THE SPRING CREEK SANITARY SEWER INTERCEPTOR IN THE SPRING CREEK JOINT SEWER DISTRICT

**PART B:**

DEMOLITION OF THE PARK MEADOW ESTATES WASTEWATER FACILITIES

**PART C:**

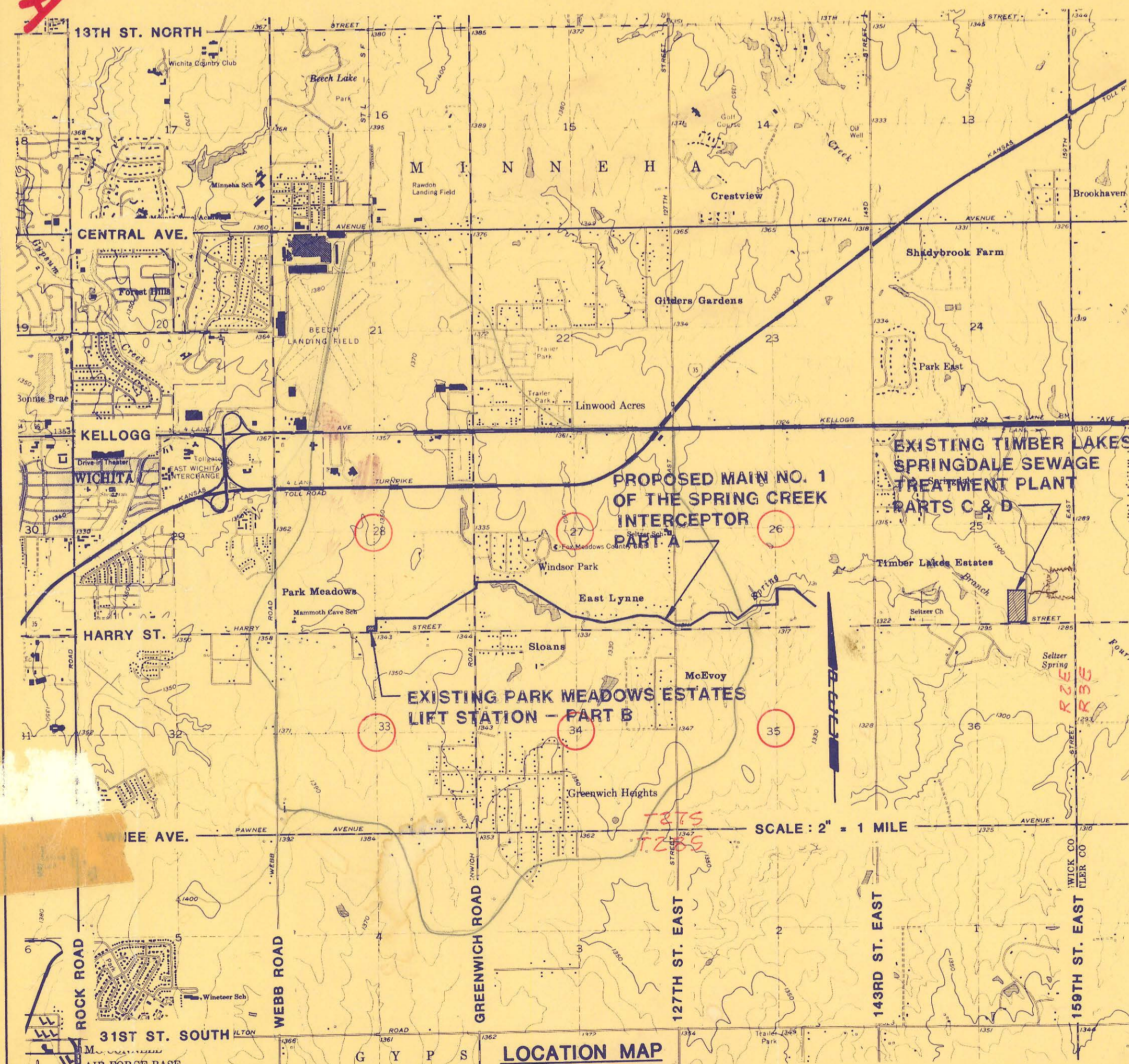
TIMBER LAKES-SPRINGDALE LIFT STATION REPLACEMENT

**PART D:**

TIMBER LAKES-SPRINGDALE SEWAGE TREATMENT PLANT MODIFICATIONS

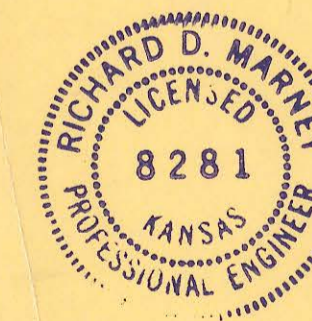
Project No. 34 - 85254 - 1 - 024  
FEBRUARY, 1986

4MC-004A



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APPROVED BY:  
BOARD OF COUNTY COMMISSIONERS  
*Bernard A. Fontana* 4-30-86  
CHAIRMAN DATE

APPROVED BY:  
SEDGWICK COUNTY  
BUREAU OF PUBLIC SERVICES  
*David C. Spurr* 4/27/86  
DIRECTOR / COUNTY ENGINEER DATE

FILED IN THE OFFICE OF:  
THE SEDGWICK COUNTY CLERK  
*Douglas* 4/30/86  
COUNTY CLERK DATE



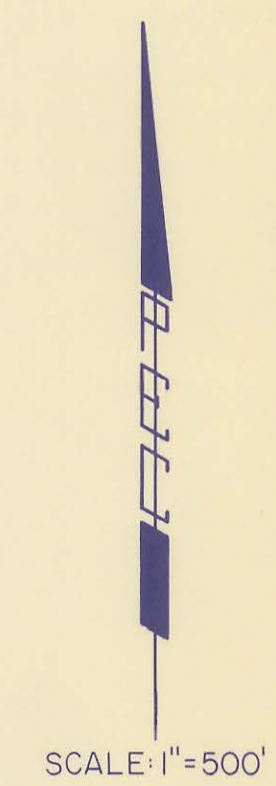
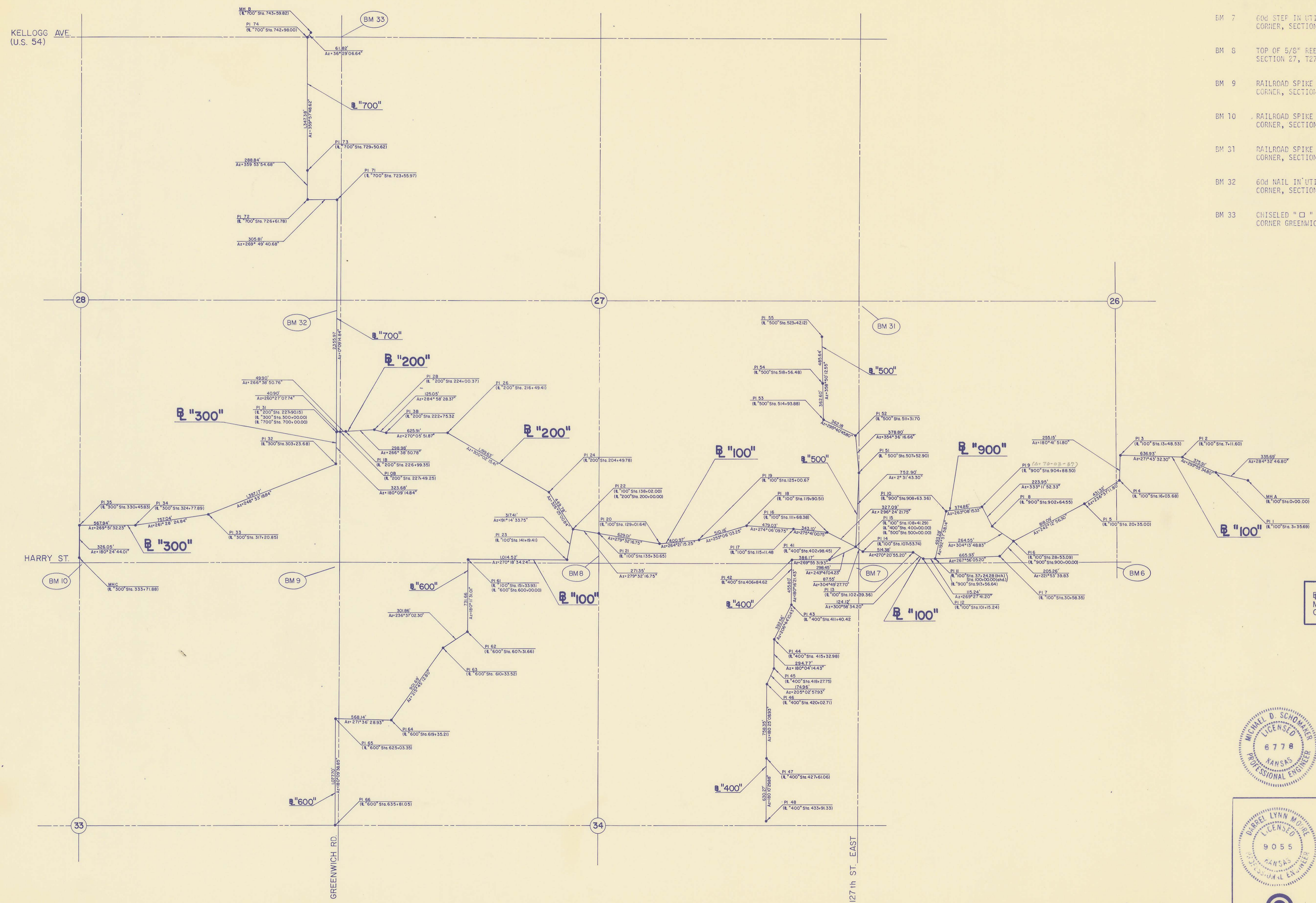
PROFESSIONAL ENGINEERING CONSULTANTS, P.A.  
WICHITA, KANSAS

4MC 004-A

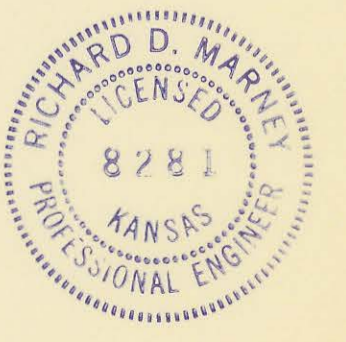
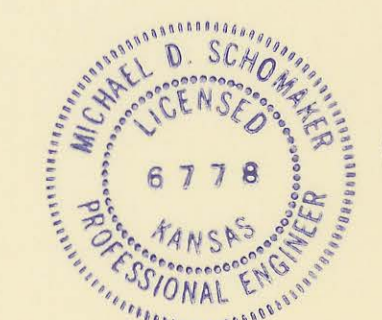


BENCH MARK LIST

BM 6	600 STEP IN UTILITY POLE, 50' SOUTH OF SOUTH 1/4 CORNER, SECTION 26, T27S, R2E.	ELEV. = 1318.00 (MSL)
BM 7	600 STEP IN UTILITY POLE, 40' SOUTH AND 27' WEST OF SOUTHWEST CORNER, SECTION 26, T27S, R2E.	ELEV. = 1313.82 (MSL)
BM 8	TOP OF 5/8" REBAR IN FENCE LINE, 75' NORTH OF SOUTH 1/4 CORNER, SECTION 27, T27S, R2E.	ELEV. = 1328.05 (MSL)
BM 9	RAILROAD SPIKE IN UTILITY POLE, 48' WEST AND 40' SOUTH OF SOUTHWEST CORNER, SECTION 27, T27S, R2E.	ELEV. = 1344.59 (MSL)
BM 10	RAILROAD SPIKE IN UTILITY POLE, 39' SOUTH AND 6' EAST OF SOUTH 1/4 CORNER, SECTION 28, T27S, R2E.	ELEV. = 1345.49 (MSL)
BM 31	RAILROAD SPIKE IN UTILITY POLE, 25' EAST AND 60' SOUTH OF WEST 1/4 CORNER, SECTION 26, T27S, R2E.	ELEV. = 1337.08 (MSL)
BM 32	600 NAIL IN UTILITY POLE, 105' SOUTH AND 45' WEST OF WEST 1/4 CORNER, SECTION 27, T27S, R2E.	ELEV. = 1334.62 (MSL)
BM 33	CHISELED "C" ON TOP CURB, 6' NORTH OF FIRE HYDRANT AT SOUTHWEST CORNER GREENWICH RD AND KELLOGG.	ELEV. = 1350.59 (MSL)



8's "400", "500", "600", AND "700" ARE FOR FUTURE MAINS AND ARE NOT REQUIRED FOR CONSTRUCTION OF MAIN I.



No.	Revision	By	Date
SEDGWICK COUNTY BUREAU OF PUBLIC SERVICES DAVID C. SPEARS, P.E. DIRECTOR, BUREAU OF PUBLIC SERVICES/COUNTY ENGINEER			
<b>BASELINE KEY MAP</b> SANITARY SEWER INTERCEPTOR SPRING CREEK JOINT SEWER DISTRICT <b>PROFESSIONAL ENGINEERING CONSULTANTS, P.A.</b> ENGINEERS WICHITA, KANSAS			
Designed by	RDM, LM, RFJ	Job No.	34-85254-1
Drawn by	TWC	Date	Feb. 1986
		Sht.	3 of 30

PART "A"

GENERAL NOTES

- 1. THE CONTRACTOR SHALL CONTAIN HIS OPERATIONS TO PERMIT LOCAL AND EMERGENCY TRAFFIC THROUGH AND ACROSS CONSTRUCTION ON EXISTING ROADWAYS AT ALL TIMES. THE CONTRACTOR SHALL ERECT WARNING SIGNS, FLASHING LIGHTS, AND BARRICADES IN COMPLIANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) TO ENSURE SAFETY AS DIRECTED IN ARTICLE 11 OF THE GENERAL CONDITIONS. THE CONTRACTOR SHALL LIMIT THE EXTENT OF TRENCH TO REMAIN OPEN OVERNIGHT AND WEEKENDS TO LESS THAN 50 FEET.
2. AT LEAST 48 HOURS PRIOR TO BEGINNING EXCAVATION (EXCLUDING WEEKENDS AND HOLIDAYS), THE CONTRACTOR SHALL CONTACT THE KANSAS ONE-CALL SYSTEM, A UTILITY LOCATION SERVICE, AT (316) 687-2470 TO REQUEST THE FOLLOWING UTILITY COMPANIES TO LOCATE ANY EXISTING LINES WITHIN THE PROJECT AREA: NORTHWEST CENTRAL PIPELINE CORP., GAS SERVICE COMPANY, K.G.&C., THE WICHITA WATER DEPARTMENT, AND AIR CAPITAL CABLEVISION.

THE CONTRACTOR ALSO SHALL CALL THE UTILITY LISTED BELOW AT LEAST 48 HOURS PRIOR TO BEGINNING EXCAVATION (EXCLUDING WEEKENDS AND HOLIDAYS) TO REQUEST LOCATION OF EXISTING UTILITIES WITHIN THE PROJECT AREA.

CONTINENTAL PIPELINE CO.
8001 OAK KNOLL
WICHITA, KS 67207
(316) 681-2081
MR. RON GREEN

- 3. THE CONTRACTOR MUST ALSO NOTIFY THE TELEPHONE COMPANY AT (316) 571-2115 48 HOURS PRIOR TO BEGINNING EXCAVATION AND REQUEST THAT ANY LINES WITHIN THE PROJECT AREA BE FLAGGED.

- 4. THE BURIED UTILITIES AS LOCATED ON THE PLANS ARE APPROXIMATE LOCATIONS ONLY. IT SHOULD BE NOTED THAT OTHER BURIED LINES AND CABLES MAY EXIST WHICH ARE NOT SHOWN ON THESE PLANS. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION DURING TRENCHING OPERATIONS TO AVOID DAMAGING THESE LINES. ANY LINES DAMAGED SHALL BE REPLACED OR REPAIRED IMMEDIATELY AS DIRECTED BY THE ENGINEER AT THE CONTRACTOR'S EXPENSE.

- 5. EXCESS EXCAVATED MATERIAL AND OTHER DEBRIS, INCLUDING ANY TREES REMOVED, TREE TRIMMINGS, AND FENCES REMOVED SHALL BE WASTED ON SITES TO BE PROVIDED BY THE CONTRACTOR AS APPROVED BY THE ENGINEER AT NO ADDITIONAL COST TO THE OWNER.

- 6. THE CONTRACTOR SHALL AVOID REMOVAL OR TRIMMING OF ANY TREES WHERE POSSIBLE. WHERE THE CONTRACTOR BELIEVES THE REMOVAL OR TRIMMING IS UNAVOIDABLE HE SHALL COORDINATE SUCH WORK WITH THE ENGINEER. TREE REMOVAL OR TRIMMING SHALL NOT BE PAID FOR SEPARATELY BUT SHALL BE CONSIDERED SUBSIDIARY TO SITE CLEARING AND RESTORATION.

- 7. WHERE REMOVAL OF EXISTING FENCES PARALLEL TO THE CONSTRUCTION IS DEEMED NECESSARY BY THE CONTRACTOR, THE CONTRACTOR SHALL COORDINATE REMOVAL WITH THE ENGINEER. REMOVAL AND RESETTING OF FENCES SHALL NOT BE PAID FOR SEPARATELY BUT SHALL BE CONSIDERED SUBSIDIARY TO SITE CLEARING AND RESTORATION.

- 8. REMOVAL AND RESETTING OF FENCES, CULVERT PIPES, AND STRUCTURES AND RESTORATION OF ALL SIDEWALKS, MAIL BOXES, NEWSPAPER BOXES, SIGNS, DITCHES, SWALES, ROAD SHOULDERS, DRIVES, AND ENTRANCES TO THEIR ORIGINAL SLOPES, GRADES, AND AS SPECIFIED IN DIVISION 2 OF THE SPECIFICATIONS SHALL BE CONSIDERED SUBSIDIARY TO SITE CLEARING AND RESTORATION.

- 9. TOP ELEVATIONS FOR MANHOLES ARE APPROXIMATE ONLY. MANHOLE TOPS SHALL BE SET AT GRADE AS DIRECTED BY THE ENGINEER. MANHOLES PLACED IN PAVED AREAS SHALL BE SET TO MATCH THE REPLACED PAVEMENT SURFACE.

- 10. ALL TRENCHING AND BACKFILLING IS TYPE I UNLESS NOTED OTHERWISE ON THE PLANS.

- 11. ALL ELEVATIONS GIVEN IN THE PLANS ARE BASED ON USGS DATUM.

- 12. WHERE THE CONNECTION IS TO BE MADE AT STA. 0+00, THE CONTRACTOR SHALL VERIFY THE LOCATION AND FLOW LINE ELEVATION OF THE EXISTING 30" PLRCP STUB PRIOR TO BEGINNING CONSTRUCTION.

- 13. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO RESET ALL PROPERTY CORNERS DISTURBED DURING CONSTRUCTION WHICH ARE NOTED ON THE PLANS AND ANY ADDITIONAL CORNERS FOUND DURING CONSTRUCTION. THE LICENSED LAND SURVEYOR OR LICENSED CIVIL ENGINEER USED TO RESET PROPERTY CORNERS MUST BE APPROVED BY THE ENGINEER.

PRIOR TO START OF CONSTRUCTION, THE CONTRACTOR SHALL FLAG AND REFERENCE ALL PROPERTY CORNERS SHOWN ON THE PLANS, AND VERIFY THESE IN THE FIELD IN THE PRESENCE OF THE ENGINEER AND THE CONTRACTOR'S SURVEYOR.

AFTER CONSTRUCTION AND BEFORE THE FINAL INSPECTION, A LETTER SIGNED BY A LICENSED LAND SURVEYOR OR A LICENSED CIVIL ENGINEER CERTIFYING REPLACEMENT OF ALL DISTURBED PROPERTY CORNERS SHALL BE SUBMITTED TO THE ENGINEER.

ALL COSTS FOR THIS WORK SHALL BE SUBSIDIARY TO THE PRICE BID FOR "SITE CLEARING AND RESTORATION."

- 14. AT LEAST 7 DAYS PRIOR TO REMOVING ANY FENCES, THE CONTRACTOR SHALL NOTIFY THE PROPERTY OWNER AFFECTED. UPON THE REQUEST OF THE PROPERTY OWNER AND IN A MANNER APPROVED BY THE ENGINEER, THE CONTRACTOR SHALL PROVIDE TEMPORARY FENCING, INCLUDING GATES AND ACCESS, SUITABLE FOR CONTAINING LIVESTOCK UNTIL COMPLETION OF ALL WORK IN THE AFFECTED AREA INCLUDING REPLACEMENT OR RESETTING OF ANY EXISTING FENCES REMOVED. PROVIDING TEMPORARY FENCING SHALL BE CONSIDERED SUBSIDIARY TO SITE CLEARING AND RESTORATION.

- 15. PRIVATE UTILITIES, SEPTIC TANK LATERAL LINES, LAWN SPRINKLING SYSTEMS AND OTHER PRIVATELY-OWNED UNDERGROUND IMPROVEMENTS ARE NOT INDICATED ON THE PLANS. THE CONTRACTOR SHALL TAKE APPROPRIATE MEASURES TO ASCERTAIN THE EXISTENCE AND LOCATION OF SUCH PRIVATELY-OWNED UNDERGROUND IMPROVEMENTS. ANY UNDERGROUND IMPROVEMENTS DAMAGED BY THE CONTRACTOR, SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

GRASS PLANTING

THE CONTRACTOR SHALL PLANT GRASS ON ALL AREAS DISTURBED BY CONSTRUCTION WHICH ARE NEITHER PART OF PAVED OR UNPAVED ROADS OR DRIVES NOR AREAS OCCUPIED BY SIDEWALKS, STRUCTURES, GARDENS, OR CULTIVATED CROPS. SURFACES SHALL BE PREPARED, FERTILIZED, AND PLANTED IN ACCORDANCE WITH THE SPECIFICATIONS AND THE APPLICATION RATES GIVEN BELOW. THE COST FOR SEEDING, SPRIGGING, AND/OR SODDING SHALL BE SUBSIDIARY TO THE PRICE BID FOR "SITE CLEARING AND RESTORATION."

- 1. ROAD RIGHTS-OF-WAY AND OTHER PUBLICLY OWNED AREAS SHALL BE SEEDD AS DIRECTED BELOW UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

APPLICATION RATES: (BASED ON USING 12-24-12 FERTILIZER).

- 1. SEED: K-31 FESCUE @ 8 LBS PER 1,000 SQUARE FEET
2. MULCH: HAY: 90 LBS PER 1,000 S.F.
3. FERTILIZER: USING 12-24-12 STRENGTH FERTILIZER, 8 LBS PER 1,000 SQUARE FEET OR 350 LBS PER ACRE. BLEND INTO TOP 3" OF SOIL.

- 2. GRASS ON PRIVATELY-OWNED AREAS (INCLUDING TEMPORARY AND PERMANENT EASEMENTS) SHALL BE REPLACED IN KIND IN ACCORDANCE WITH THE INFORMATION GIVEN BELOW OR AS DIRECTED BY THE ENGINEER.

Table with columns: TYPE OF GRASS, PLANTING TIME, SEED APPLICATION, APPLICATION RATES FERTILIZER (12-24-12). Rows include BLUEGRASS, TALL FESCUE, BERMUDA, ZOYSIA, BUFFALO GRASS, NATIVE GRASS.

NOTE: FERTILIZER RATES IN THE TABLE ARE BASED ON 12-24-12 FERTILIZER WHICH YIELDS 1 LB OF ACTUAL NITROGEN, 2 LBS. OF ACTUAL PHOSPHOROUS AND 1 LB OF ACTUAL POTASSIUM PER 1,000 SQUARE FEET AT THE RATES SPECIFIED.

- 1. NATIVE GRASS SHALL CONSIST OF THE FOLLOWING MIXTURE:

Table with columns: GRASS SPECIES, RATE IN (PURE LIVE SEED) (LBS/ACRE). Rows include BIG BLUESTEM, LITTLE BLUESTEM, INDIAN GRASS, SIDE OATS GRAMA, SWITCHGRASS, WESTERN WHEATGRASS, BROME GRASS, ANNUAL RYE.

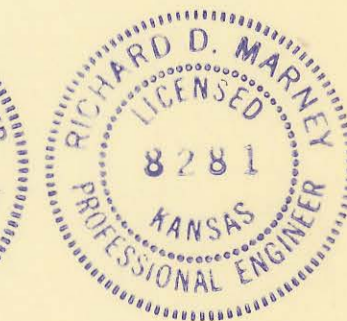
- 2. FERTILIZER: FERTILIZERS RATE OF DISTRIBUTION

Table with columns: FERTILIZERS, RATE OF DISTRIBUTION. Rows include 12-24-12, 10-20-0, 5-10-5.

- 3. MULCH: HAY: 90 LBS/1,000 S.F. (2 TONS/ACRE) (FIRM WITH CULTPAKER OR DISC)

Modification #2

ADAPTORS OF THE SAME SIZE AS THE EXISTING SERVICE LINES. THE ENGINEER WILL OBSERVE THE CONNECTIONS AND RECORD THE LOCATION OF EACH CONNECTION FOR FUTURE REFERENCE. THIS WORK SHALL NOT PROCEED UNTIL MAIN 1 FROM THE EXISTING MANHOLE TO MH 40 HAS BEEN COMPLETED AND ACCEPTED.



CONSTRUCTION SEQUENCE NOTES

MAIN NO. 1 WASTEWATER FLOW IN THE EXISTING 18-INCH PARK MEADOW ESTATES SEWER LINE SHALL BE CONTINUOUS DURING CONSTRUCTION OF MAIN NO. 1 UP TO MANHOLE 47. CONSTRUCTION OF MAIN NO. 1 SHALL BE COMPLETE AND ACCEPTED BY THE ENGINEER FROM THE EXISTING MANHOLE IN THE SPRING HOLLOW ADDITION TO MANHOLE 47 BEFORE THE CONTRACTOR BEGINS CONSTRUCTION OF THE LAST SEGMENT OF MAIN NO. 1 (STA. 140+38 TO 143+69). UPON ACCEPTANCE OF MAIN NO. 1 UP TO MANHOLE 47, THE CONTRACTOR SHALL DIVERT THE WASTEWATER FLOW FROM PARK MEADOW ESTATES INTO THE NEWLY CONSTRUCTED MANHOLE 47 AND THEN COMPLETE THE CONSTRUCTION OF MAIN NO. 1 FROM MANHOLE 47 TO THE EXISTING MANHOLE SOUTHEAST OF THE EXISTING LIFT STATION.

SECTION 26

SOUTH 1/4 CORNER - 10,336.2349 N 18,259.9737 E
3/4" IRON PIPE IN THIMBLE
38.10' N, NAIL AND SHINER IN WEST FACE UTILITY POLE
38.13' S, TOP BOLT IN FIRE HYDRANT
81.64' SW, NAIL AND SHINER IN NORTHWEST FACE FENCE POST
57.86' NE, NAIL AND SHINER IN SOUTHEAST FACE FENCE POST

SECTION 27

NORTHWEST CORNER (SEE NORTHWEST CORNER - SECTION 26)
EAST 1/4 CORNER (SEE WEST 1/4 CORNER - SECTION 26)
SOUTHWEST CORNER (SEE SOUTHWEST CORNER - SECTION 26)
NORTH 1/4 CORNER - 15,628.6745 N 12,984.5036 E
5/8" BAR IN THIMBLE
56.03' NE, NAIL AND SHINER IN WEST GUARDPOST
63.69' SW, NAIL AND SHINER IN GUARDPOST
66.03' NW, NAIL AND SHINER IN GUARDPOST
12.05' S, NORTH EDGE, EASTBOUND LANES KELLOGG AVE.

SECTION 28

NORTHWEST CORNER (SEE NORTHWEST CORNER SECTION 27)
EAST 1/4 CORNER (SEE WEST 1/4 CORNER SECTION 27)
SOUTHWEST CORNER (SEE SOUTHWEST CORNER SECTION 27)
NORTH 1/4 CORNER - 15,635.0555 N 7683.9006 E
LEADED TACK IN WESTBOUND LANE KELLOGG AVE.
64.45' NNE, NAIL AND SHINER IN NORTHWEST FACE UTILITY POLE
65.21' SSE, NAIL AND SHINER IN NORTHWEST FACE UTILITY POLE
134.84' SW, NAIL AND SHINER IN NORTHWEST FACE UTILITY POLE

SECTION 29

NORTH 1/4 CORNER (SEE SOUTH 1/4 CORNER SECTION 28)
NORTHWEST CORNER (SEE SOUTHWEST CORNER SECTION 27)
EAST 1/4 CORNER - 7662.8631 N 10,313.2049 E
3/4" IRON PIPE
38.19' E, NAIL AND SHINER IN NORTHWEST FACE 18" ELM
82.22' SW, NAIL AND SHINER IN SOUTHWEST FACE 30" ELM
29.47' NW, NAIL AND SHINER IN SOUTHWEST FACE UTILITY POLE

SECTION 30

NORTHWEST CORNER (SEE SOUTHWEST CORNER SECTION 27)
WEST 1/4 CORNER (SEE EAST 1/4 CORNER SECTION 33)
NORTH 1/4 CORNER (SEE SOUTH 1/4 CORNER SECTION 27)
NORTHWEST CORNER (SEE SOUTHWEST CORNER SECTION 26)
EAST 1/4 CORNER - 7,662.3978 N 15,615.9518 E
IRON PIPE
65.79' SE, NAIL AND SHINER IN SOUTHWEST FACE UTILITY POLE
79.02' SW, NAIL AND SHINER IN SOUTHWEST FACE UTILITY POLE
84.00' NW, NAIL AND SHINER IN NORTHWEST FACE UTILITY POLE
105.20' W, NAIL AND SHINER IN NORTH FACE OSAGE ORANGE TREE

P1 5 - 10,927.1031 N 17,928.3751
1/2" REBAR
55.32' N, NAIL AND SHINER IN EAST FACE 12" WALNUT
34.44' SSE, NAIL AND SHINER IN EAST FACE 10" PINE
69.78' NW, NAIL AND SHINER IN NORTHWEST FACE 18" BOX ELDER
P1 6 - 10,545.7544 N 17,204.6042 E
1/2" REBAR
141.26' SE, NAIL AND SHINER IN SOUTH FACE 24" COTTONWOOD
64.96' SW, NAIL AND SHINER IN NORTH FACE 12" BOX ELDER
67.66' W, NAIL AND SHINER IN NORTH FACE 12" BOX ELDER

P1 7 - 10,392.9637 N 17,067.5398 E
1/2" REBAR
36.78' SE, NAIL AND SHINER IN SOUTHWEST FACE UTILITY POLE
70.00' SW, NAIL AND SHINER IN CENTERLINE HARRY AT CENTERLINE DRIVEWAY
52.97' NNW, NAIL AND SHINER IN 18" OSAGE ORANGE
P1 8 - 10,694.5690 N 16,985.8785 E
1/2" REBAR
55.31' NE, NAIL AND SHINER IN NORTH FACE 18" OSAGE ORANGE
7.89' SW, NAIL AND SHINER IN NORTH FACE 48" COTTONWOOD
17.44' NE, NAIL AND SHINER NORTHWEST FACE 18" WILLOW
P1 9 - 10,894.4599 N 16,884.6970 E
1/2" REBAR
20.54' SE, NAIL AND SHINER IN NORTH FACE 24" LOCUST
40.82' NW, NAIL AND SHINER IN SOUTH FACE 15" COTTONWOOD

P1 10 - 10,849.6695 N 16,512.7225 E
1/2" REBAR
39.33' SE, NAIL AND SHINER IN WEST FACE 22" HONEY LOCUST
29.73' SW, NAIL AND SHINER IN SOUTHWEST FACE 12" TREE
21.36' NW, NAIL AND SHINER IN SOUTHWEST FACE 30" OSAGE ORANGE
P1 11 - 10,368.9655 N 16,402.0423 E
1/2" REBAR
51.54' N, 1/2" REBAR, 0.5' WEST OF STEEL FENCE POST
54.76' SE, NAIL AND SHINER IN CENTERLINE HARRY
59.07' SW, NAIL AND SHINER IN CENTERLINE HARRY
P1 12 - 10,367.8823 N 16,286.8074 E
1/2" REBAR
88.28' SW, NAIL AND SHINER IN CENTERLINE HARRY
43.53' S, NAIL AND SHINER IN CENTERLINE HARRY
37.29' W, NAIL AND SHINER IN SOUTH FACE UTILITY POLE

P1 13 - 10,431.7645 N 16,180.3892 E
1/2" REBAR
28.49' ENE, NAIL AND SHINER IN NORTHWEST FACE 7" ELM
43.75' WSW, NAIL AND SHINER IN NORTH FACE 24" COTTONWOOD
43.90' NW, 1/2" REBAR IN CENTERLINE ROW ELMS
P1 14 - 10,434.8947 N 15,666.0188 E
1/2" REBAR
54.97' N, NAIL AND SHINER IN SOUTHWEST FACE FENCE POST
21.08' SE, NAIL AND SHINER IN NORTHWEST FACE 18" PINE
30.53' SW, NAIL AND SHINER IN SOUTHWEST FACE, NORTHWEST BRIDGE PILE
P1 15 - 10,484.8912 N 15,594.1484 E
NAIL AND BOTTLECAP
61.44' E, NAIL AND SHINER IN SOUTHWEST FACE FENCE POST
45.48' S, NAIL AND SHINER IN EAST FACE UTILITY POLE
36.91' NNW, 1/2" IRON PIPE, SOUTHWEST CORNER LOT 11, EAST LYNNE ADD.

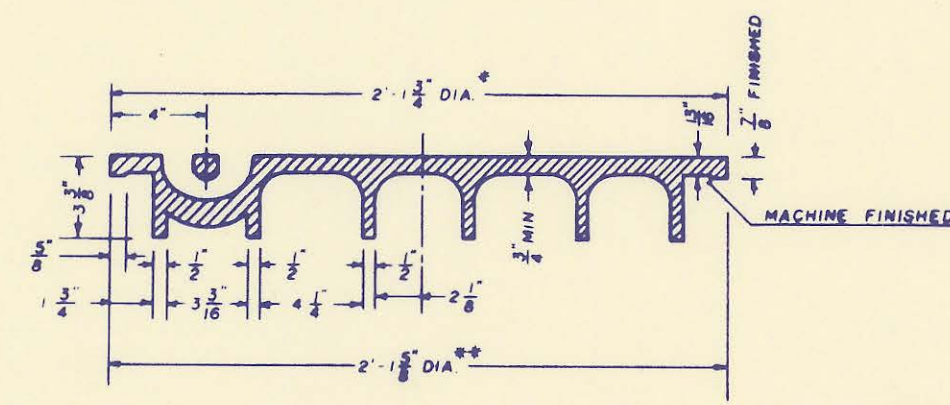
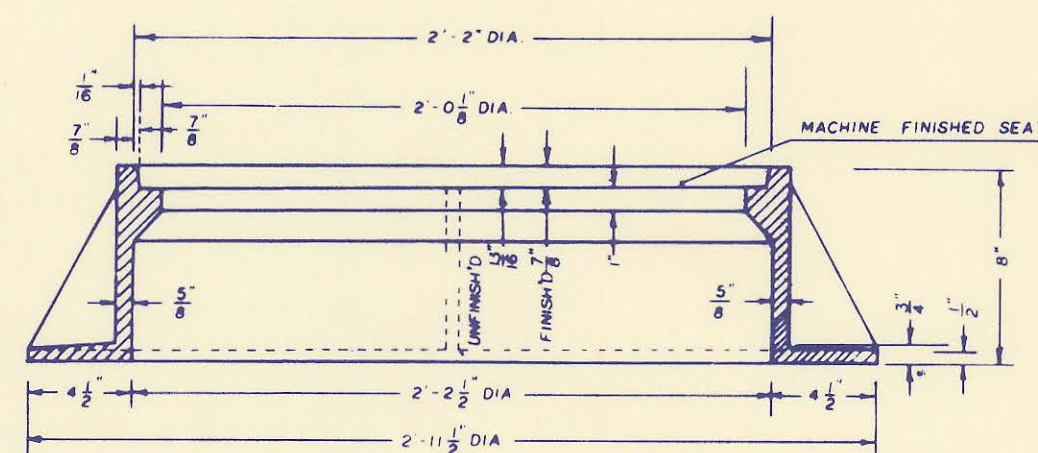
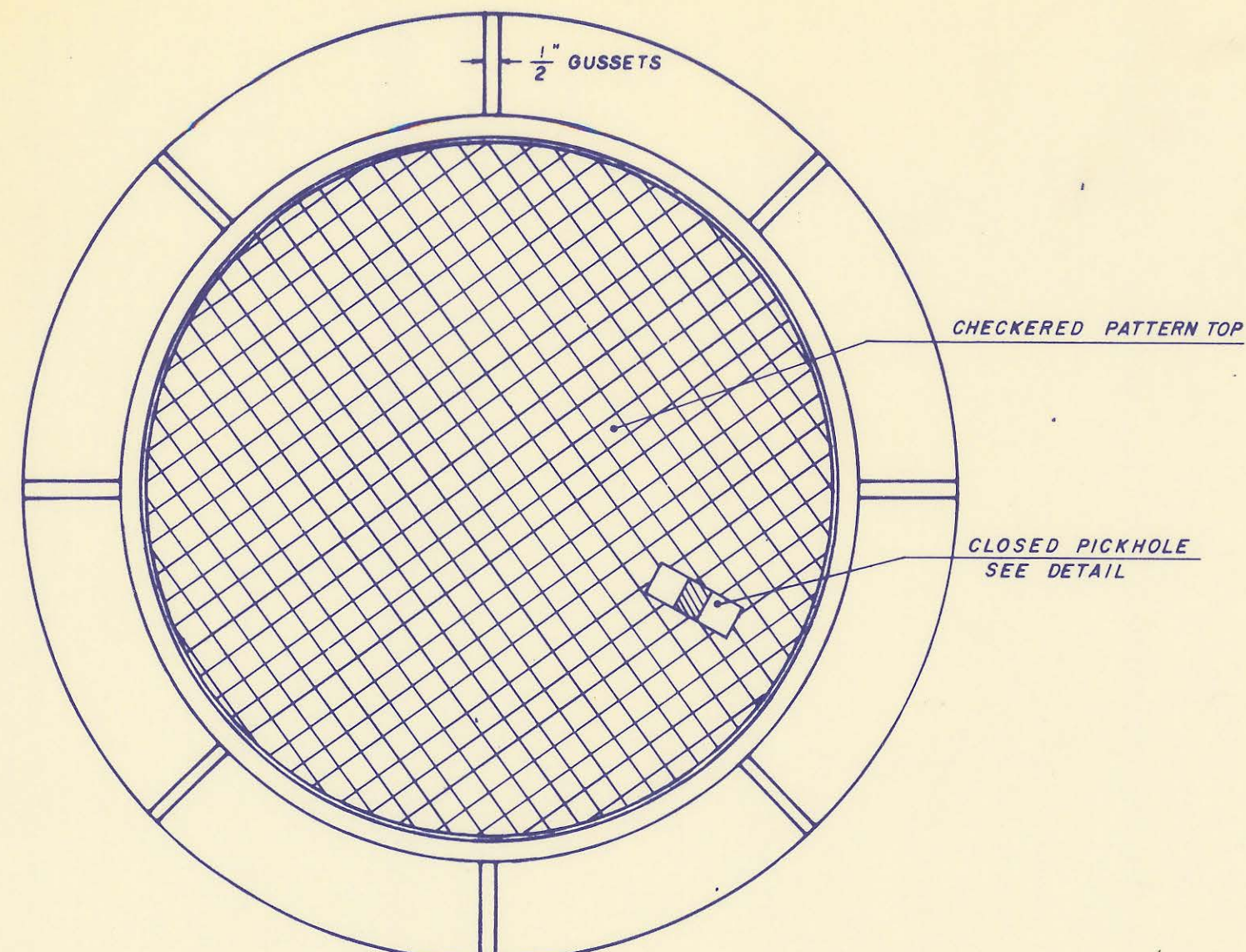
P1 33 - 10,806.9544 N 8,982.9580 E
1/2" REBAR
66.08' NE, 1/2" REBAR ALONG NORTH-SOUTH BARR WIRE FENCE
55.19' SE, NAIL AND SHINER IN EAST FACE 10" ELM
63.96' W, 1/2" REBAR AT TOE SLOPE TO SEWAGE TREATMENT LAZON
P1 34 - 10,694.7113 N 8,204.2851 E
1/2" REBAR
141.26' SE, CENTER KGAE MANHOLE NEAR CORNER SUBSTATION
117.13' WSW, NAIL AND SHINER IN NORTH FACE UTILITY POLE
P1 35 - 10,693.3132 E 7,666.3469 E
1/2" REBAR
129.20' N, NAIL AND SHINER IN EAST FACE CORNER FENCE POST
21.97' SE, NAIL AND SHINER IN WEST FACE UTILITY POLE
59.37' W, 1/2" REBAR IN OPEN FIELD.

MH C - 10,367.27163 N 7,664.0010 E
EXISTING MANHOLE
P1 41 - 10,352.5838 N 15,326.6268 E
1/2" REBAR
51.45' SE, NAIL AND SHINER IN CENTERLINE HARRY
35.00' S, NAIL AND BOTTLECAP ON SECTION LINE
57.77' SW, NAIL AND SHINER IN CENTERLINE HARRY
P1 42 - 10,352.0819 N 14,940.4571 E
1/2" REBAR
34.99' S, NAIL AND BOTTLECAP ON SECTION LINE
P1 43 - 9,896.2871 N 14,938.2884 E
1/2" REBAR
25.17' E, 1/2" IRON PIPE AT SOUTHWEST CORNER LOT 3, MCEVOY ADD.
35.24' NNW, 1/2" PINCHED PIPE AT SOUTHWEST CORNER LOT 1, MCEVOY ADD.
51.88' NNW, CHISELED "X" IN SOUTHWEST CORNER SIDEWALK AROUND WALNUT TREE

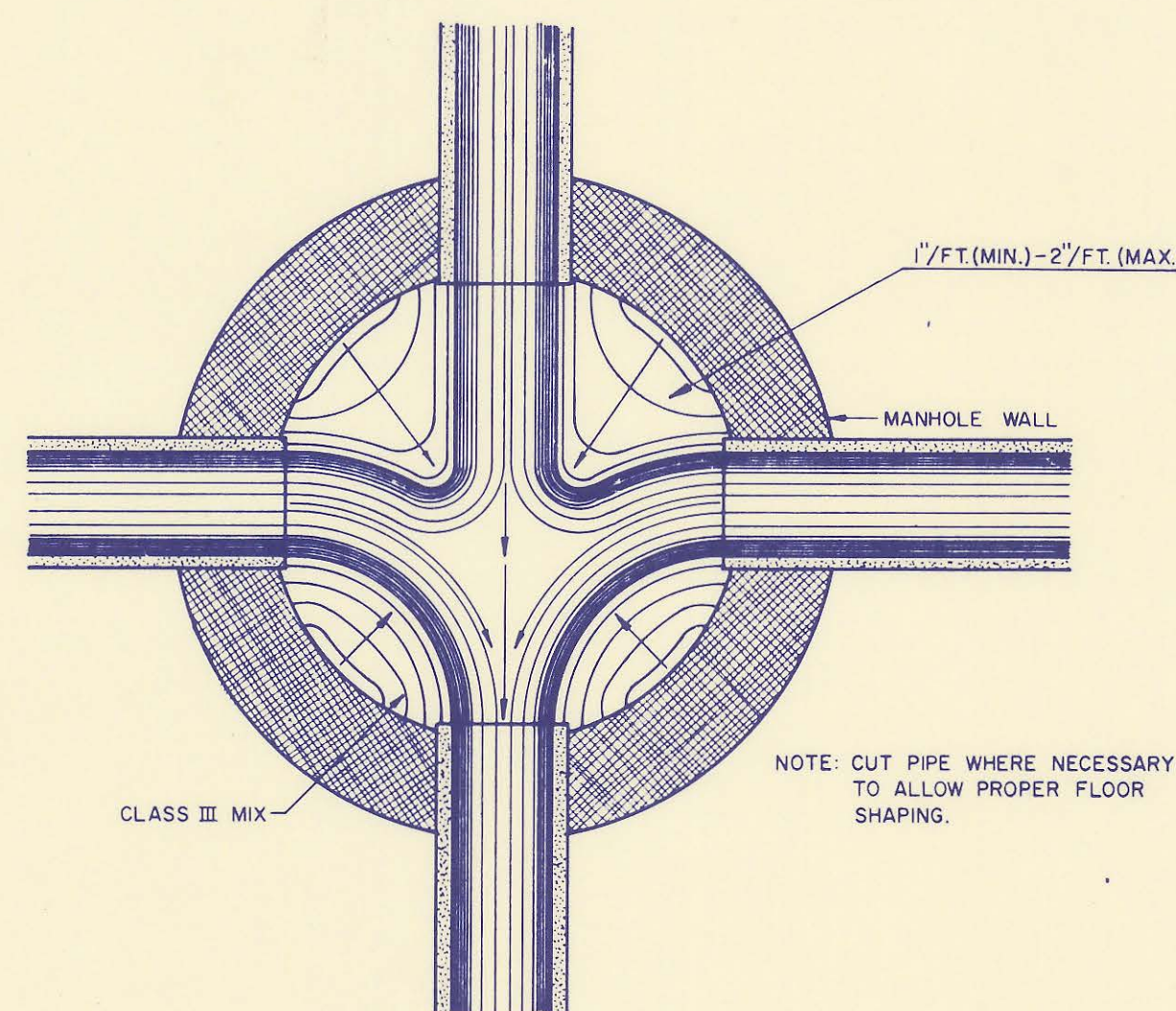
P1 44 - 9,545.6968 N 14,761.6820 E
1/2" REBAR
51.17' NNE, 3/4" IRON PIPE AT SOUTHWEST CORNER LOT 2, MCEVOY ADD.
9.90' NNW, NAIL AND SHINER IN NORTH FACE UTILITY POLE
64.64' NW, NAIL AND SHINER IN SOUTHWEST FACE UTILITY POLE
P1 45 - 9,260.9270 N 14,761.3184 E
1/2" REBAR
72.33' NE, NAIL AND SHINER IN SOUTH FACE 18" WILLOW
37.83' S, NAIL AND SHINER IN WEST FACE UTILITY POLE
31.45' NW, NAIL AND SHINER IN SOUTHWEST FACE 10" ELM
P1 46 - 9,012.4233 N 14,687.2403 E
1/2" REBAR
43.90' SE, NAIL AND SHINER IN 10" HACKBERRY
6.93' E, NAIL AND SHINER IN NORTH FACE UTILITY POLE
2.00' S, EAST-WEST, 4" MOVEN WIRE FENCE
P1 47 - 8,334.036 N 14,681.6927 E
1/2" REBAR
71.27' SE, NAIL AND SHINER IN WEST FACE UTILITY POLE
61.79' SW, 1/2" REBAR NEAR SOUTHWEST CORNER UTILITY SHED
109.67' NW, NAIL AND SHINER IN SOUTHWEST FACE 18" OSAGE ORANGE

P1 48 - 7,703.8265 N 14,679.7680 E
1/2" REBAR
38.55' NE, NAIL AND SHINER IN EAST FACE UTILITY POLE
71.93' SW, CHISELED "X" IN TOP SOUTH END OF STERLY 36" RCP
60.92' NW, NAIL AND SHINER IN NORTH FACE 8" COTTONWOOD
P1 51 - 11,237.0615 N 15,301.1854 E
NAIL AND BOTTLE CAP
104.13' NNE, NAIL AND SHINER IN WEST FACE UTILITY POLE
43.19' SE, NAIL AND SHINER IN SOUTHWEST FACE UTILITY POLE
36.47' SW, NAIL AND SHINER IN SOUTHWEST FACE 12" ELM
P1 52 - 11,614.1832 N 14,591.7485 E
1/2" REBAR
27.23' S, NAIL AND SHINER IN EAST FACE 14" HACKBERRY
43.24' W, NAIL AND SHINER IN NORTH FACE 12" ELM
26.99' NNW, NAIL AND SHINER IN SOUTHWEST FACE 24" OSAGE ORANGE
P1 53 - 11,771.1285 N 15,257.3400 E
1/2" IRON PIPE
19.78' NW, 1/2" IRON PIPE, SOUTHWEST CORNER LOT 5, EAST LYNNE ADD.
23.85' N, NAIL AND SHINER IN WEST FACE 12" ELM
25.57' E, NAIL AND SHINER IN NORTHWEST FACE 12" ELM
23.00' S, NAIL AND SHINER IN WEST FACE 24" MULBERRY

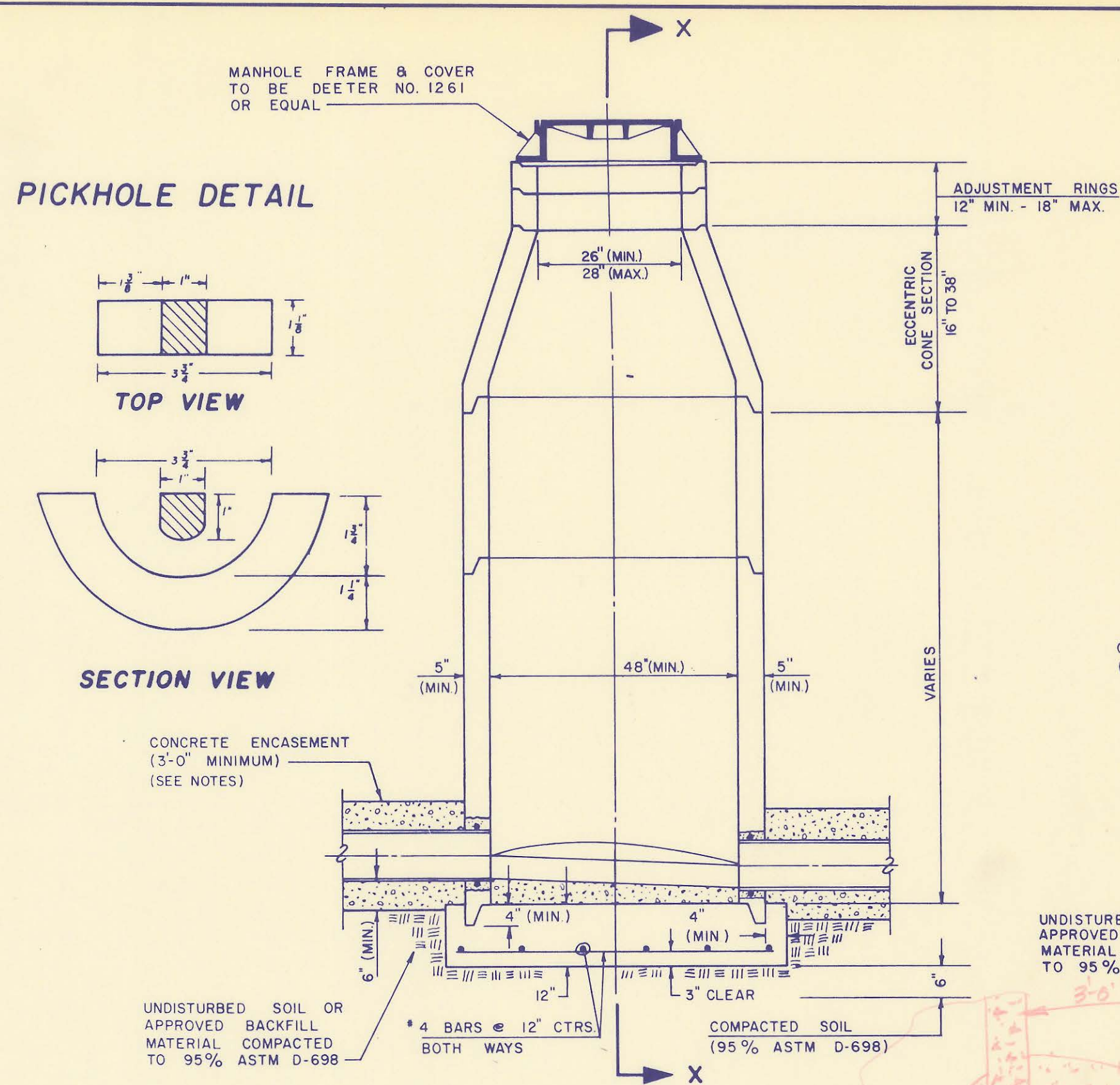
PART "A"



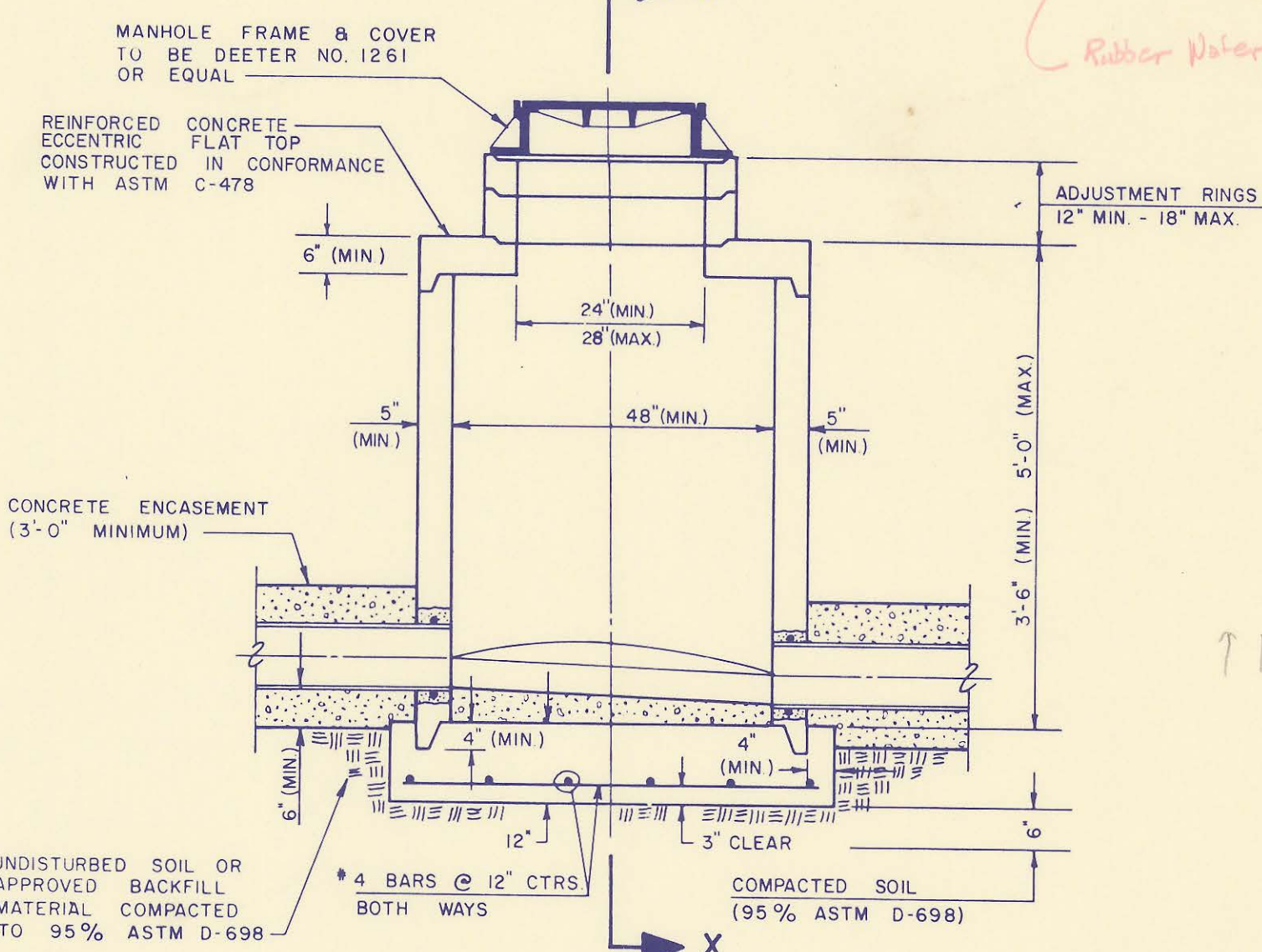
**MANHOLE FRAME AND COVER**  
(TOTAL WEIGHT = 430 LBS)



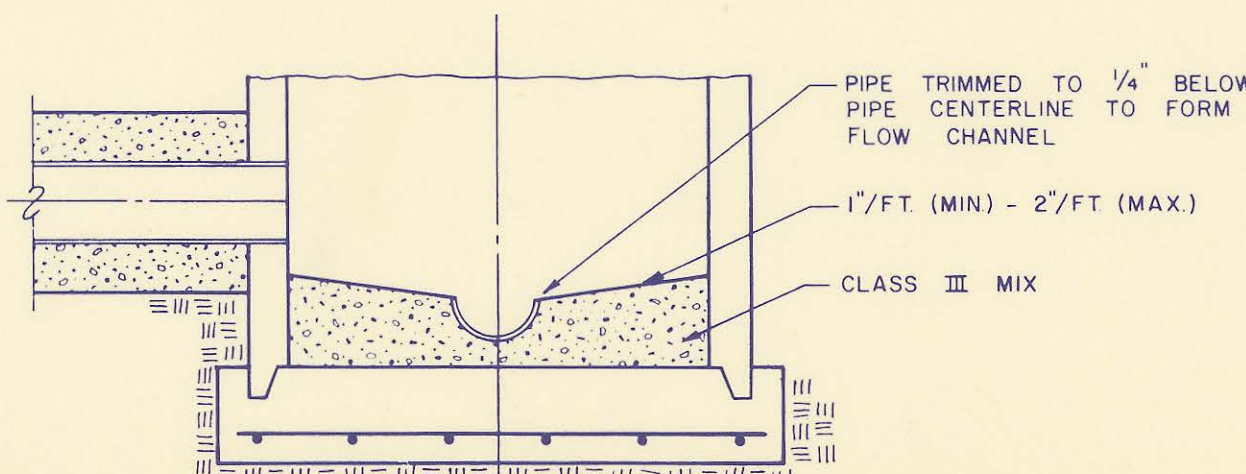
**TYPICAL MANHOLE FLOOR SHAPING**



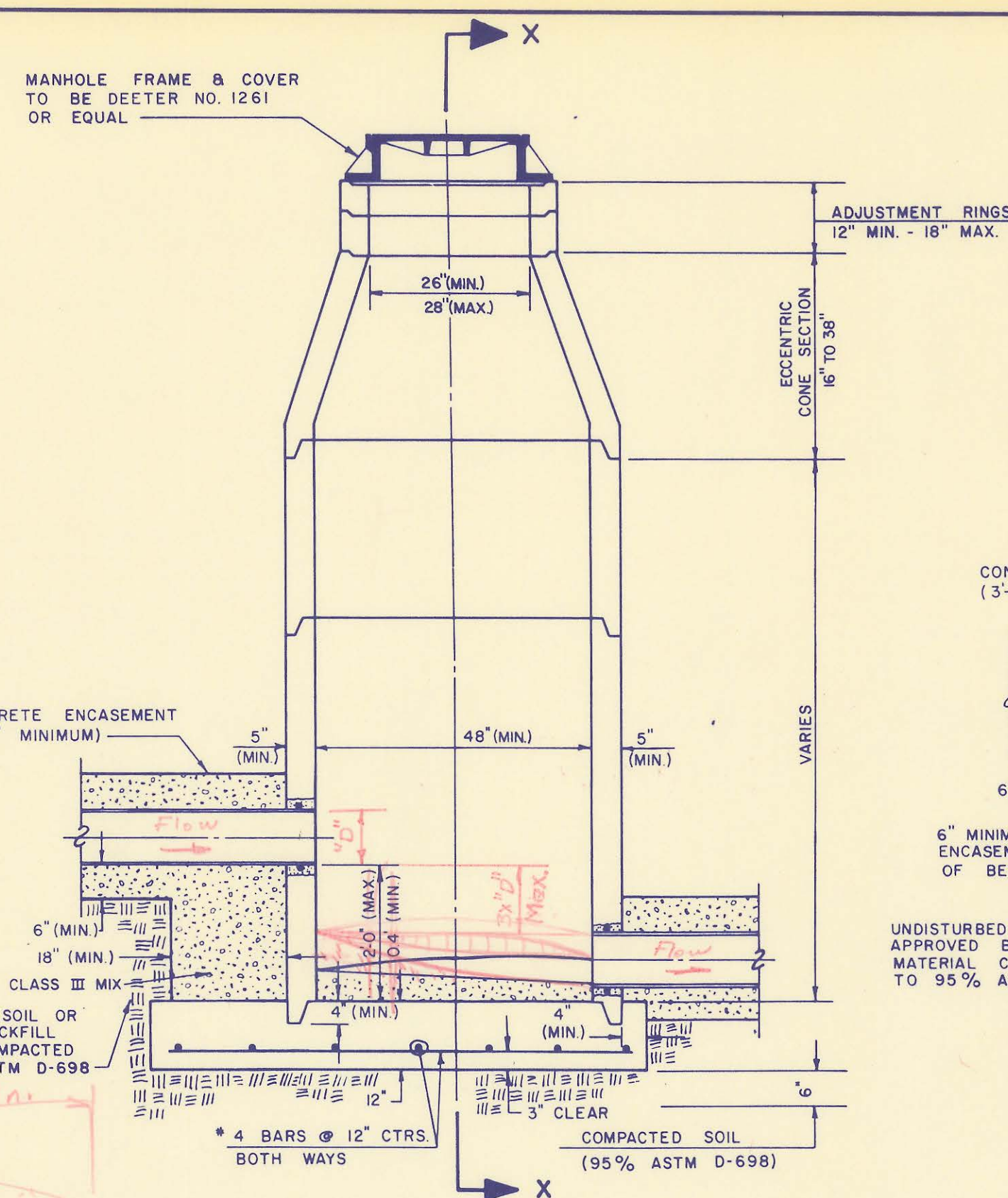
**PICKHOLE DETAIL**



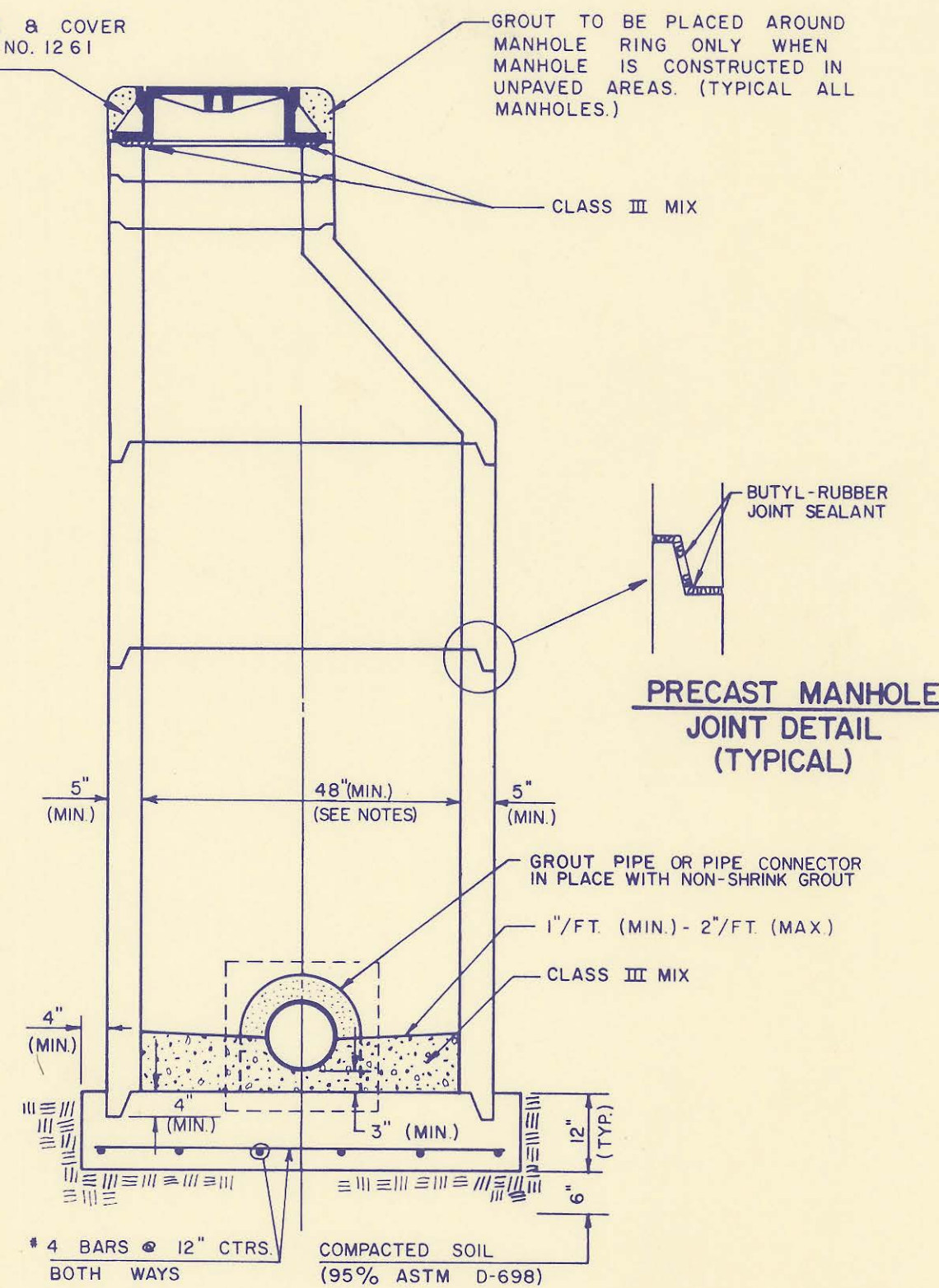
**PRECAST STANDARD MANHOLE TYPE "A"**



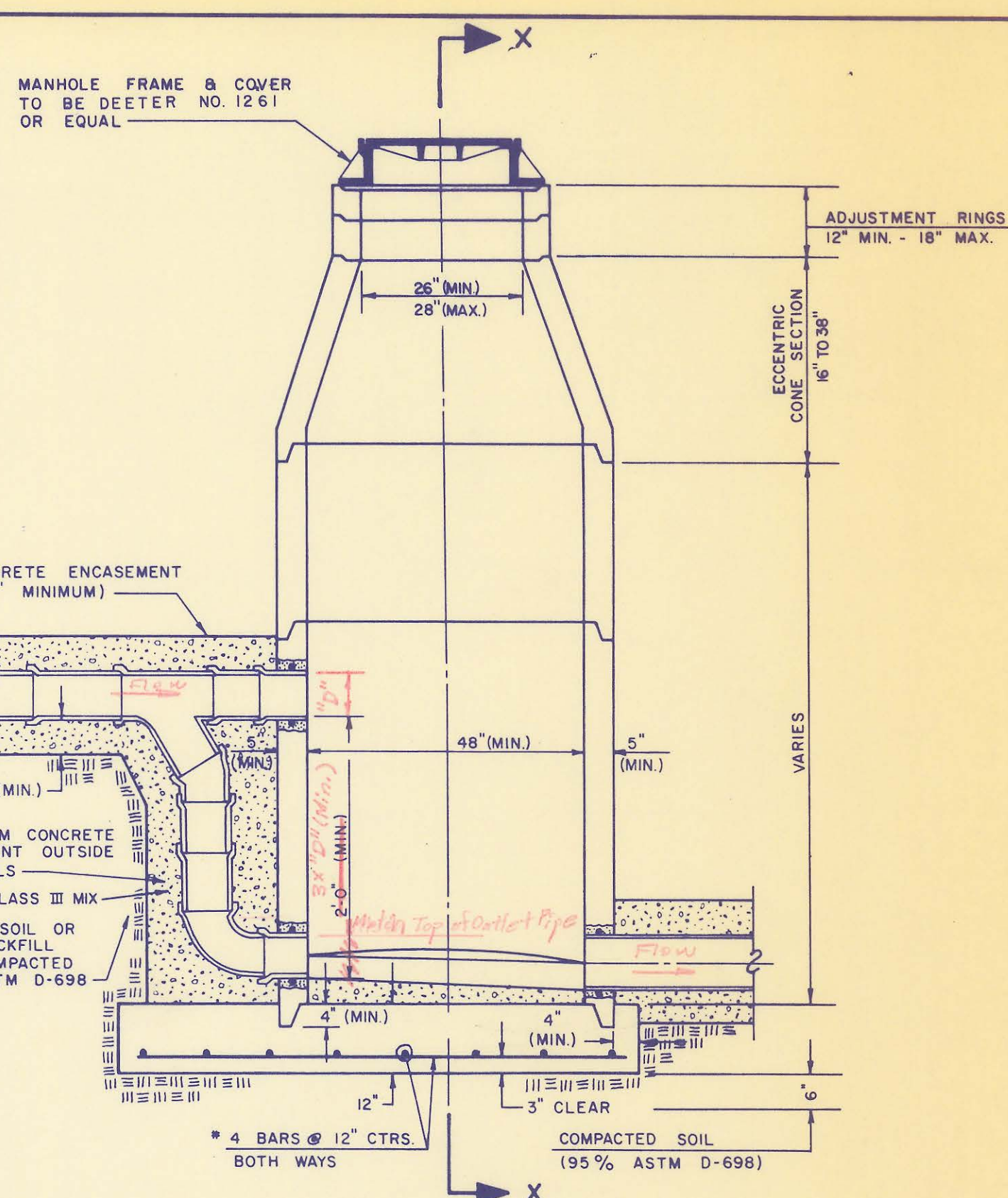
**SECTIONAL ELEVATION - INVERT**



**PRECAST DROP MANHOLE TYPE "B"**



**SECTION X (TYPICAL)**



**PRECAST OUTSIDE DROP MANHOLE TYPE "C"**

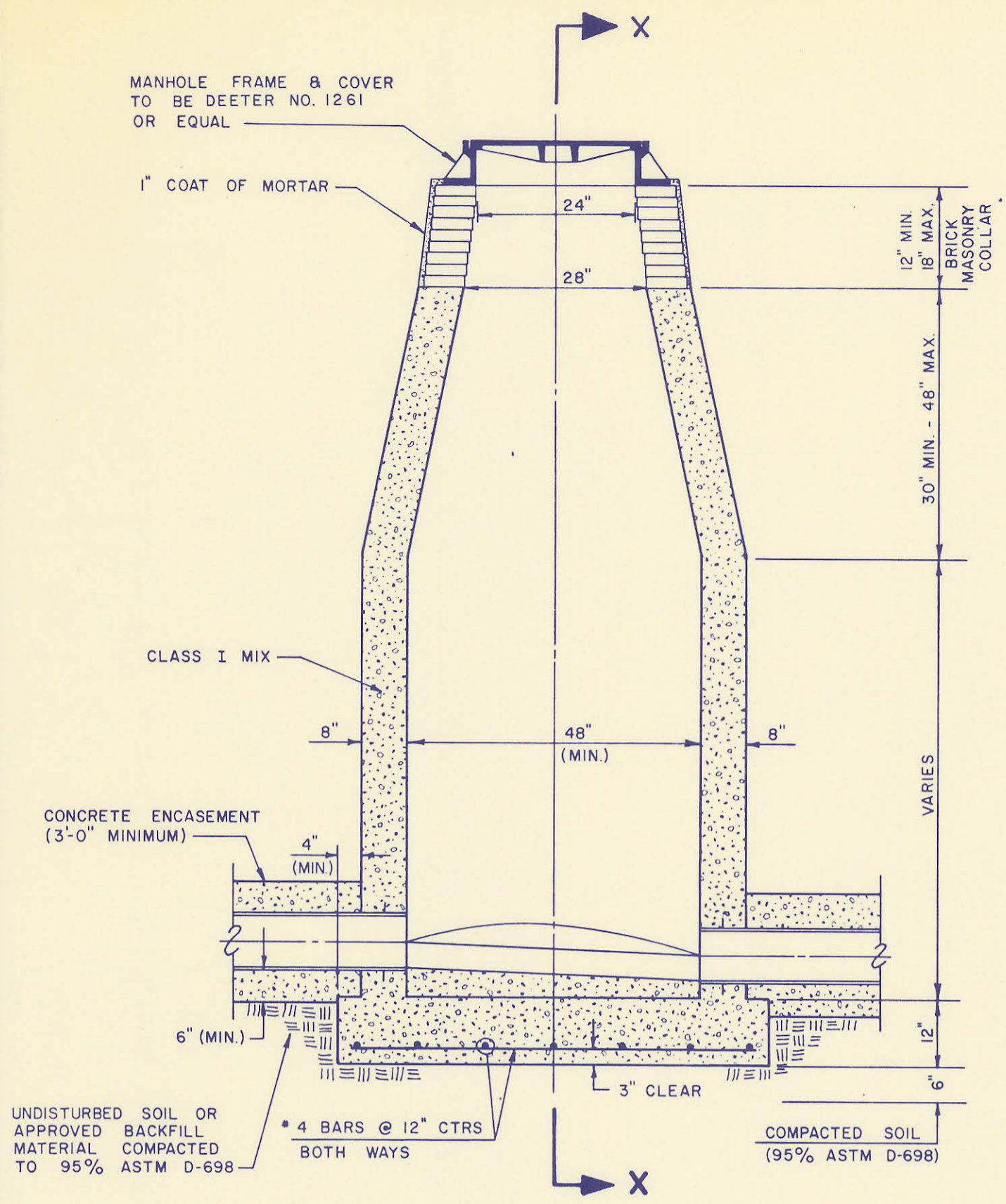
*Kopper's Cool Tar Bit + Flexible Water Stop (1/2" x 3/4") RX-11 Volclay Rope  
Rubber Waterstop Gasket / Stk. 5H. Band*

- PRECAST MANHOLE NOTES**
- IF, IN THE OPINION OF THE ENGINEER, THE MANHOLE SUBGRADE APPEARS UNSTABLE, THE CONTRACTOR WILL HAVE THE OPTION TO COMPACT SUBGRADE AS SHOWN OR INCREASE THE THICKNESS OF THE MANHOLE BASE AS DIRECTED BY THE ENGINEER.
  - STEEL REINFORCING WILL BE REQUIRED IN ALL MANHOLE BASES.
  - APPROVED FLEXIBLE WATERSTOP GASKETS WHICH MEET OR EXCEED THE TEST REQUIREMENTS OF ASTM C-973 SHALL BE INSTALLED TO JOIN THE SEWER TO THE MANHOLE WALL WHEN A COMPOSITE PIPE OR PVC PIPE IS USED. SEWER PIPE EXTENDING FROM MANHOLES SHALL BE SUPPORTED WITH CONCRETE ENCASEMENT A MINIMUM OF 3 FEET FROM THE MANHOLE WALL.
  - PIPE PULGS SHALL BE PROVIDED BY PIPE SUPPLIER.
  - ALL MANHOLE CONSTRUCTION SHALL BE WATER TIGHT.
  - TOP OF MANHOLE FLOOR SLAB SHALL BE AT LEAST 3 INCHES BELOW THE FLOW LINE OF THE OUTLET PIPE TO INSURE SUFFICIENT MINIMUM THICKNESS OF SHAPED INVERT.
  - ALL PRECAST CONCRETE MANHOLE SECTIONS SHALL CONFORM TO THE LATEST REVISION OF ASTM C478 AS INDICATED BY THE SPECIFICATIONS.
  - CONCRETE FOR MANHOLE BASES SHALL BE CLASS I AS DESCRIBED IN THE SPECIFICATIONS.
  - PRECAST MANHOLES SHALL BE SET AT LEAST 4 INCHES INTO THE MANHOLE BASE.
  - MANHOLES WITH PIPE SIZES LARGER THAN 15" SHALL HAVE 5" INSIDE DIAMETER (MIN.).
- MANHOLE FRAME AND COVER NOTES**
- CAST IRON MANHOLE FRAME AND COVER SHALL CONFORM TO ASTM A-48, CLASS 30.
  - THE FRAMES AND COVERS SHALL BE OF A NONROCKING TYPE OR WITH MACHINED BEARING SURFACES SO FITTING PARTS WILL NOT RATTLE OR ROCK UNDER TRAFFIC.
  - MANHOLE CASTINGS SHALL BE DEETER FOUNDRY (INC. NO. 1261) OR EQUAL UNLESS OTHERWISE SPECIFIED IN THE SPECIAL CONDITIONS. (MINIMUM WT. - 430 LBS.) ALL MANHOLE CASTINGS, REGARDLESS OF TYPE, SHALL BE CONSIDERED SUBSIDIARY TO THE UNIT PRICES BID FOR THE VARIOUS MANHOLE TYPES.
  - GRIND ALL BURRS SMOOTH, CLEAN THOROUGHLY, THEN APPLY SHOP COAT OF ASPHALT BASE PAINT.
  - THE MANUFACTURER SHALL SUBMIT SHOP DRAWINGS TO THE ENGINEER FOR APPROVAL PRIOR TO MANUFACTURE. THE ENGINEER SHALL RETAIN THE RIGHT TO REJECT CASTINGS NOT CONFORMING TO THE SPECIFICATIONS OR THE APPROVED SHOP DRAWINGS.
  - WHenever SELF-SEALING MANHOLE LIDS ARE INDICATED ON THE PLANS, THE CONTRACTOR SHALL SUPPLY AND INSTALL A DEETER NO. 1261, OR APPROVED EQUAL, TYPE FRAME WITH SELF-SEALING LID AND CLOSED PICKHOLES. THE CONTRACTOR SHALL SUPPLY TO THE OWNER ONE (1) REPLACEMENT GASKET FOR EACH SELF-SEALING LID.

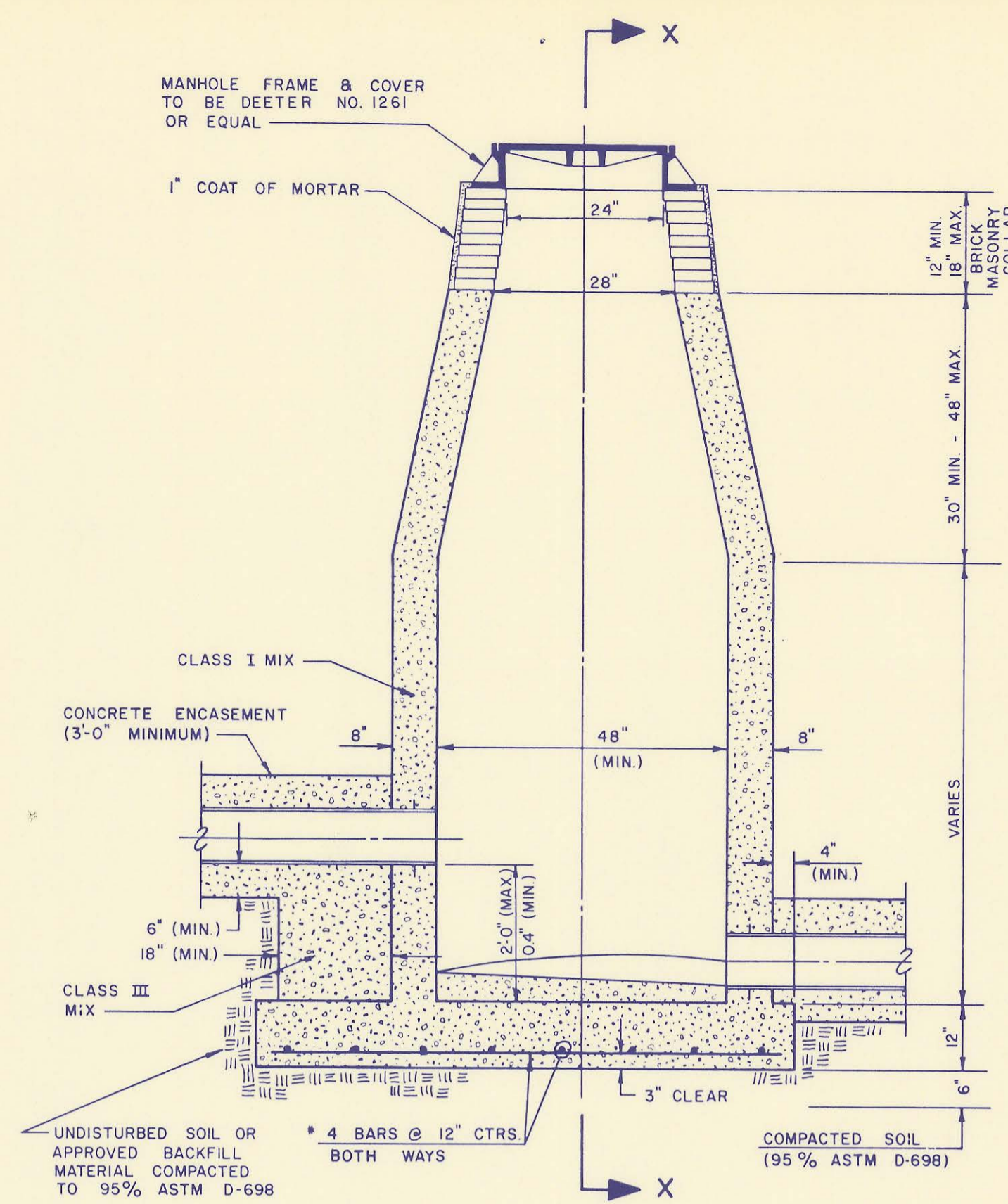


No.	Revision	By	Date
SEDGWICK COUNTY BUREAU OF PUBLIC SERVICES DAVID C. SPEARS, P.E. DIRECTOR, BUREAU OF PUBLIC SERVICES/COUNTY ENGINEER			
<b>MANHOLE DETAILS</b> SANITARY SEWER INTERCEPTOR SPRING CREEK JOINT SEWER DISTRICT <b>PROFESSIONAL ENGINEERING CONSULTANTS, P.A.</b> ENGINEERS WICHITA, KANSAS			
Designed by <i>RDM, DLM</i>	Job No. <i>94-83254-1</i>	Sht. <i>5</i> of <i>30</i>	
Drawn by <i>GM, GD</i>	Date <i>Feb, 1986</i>		

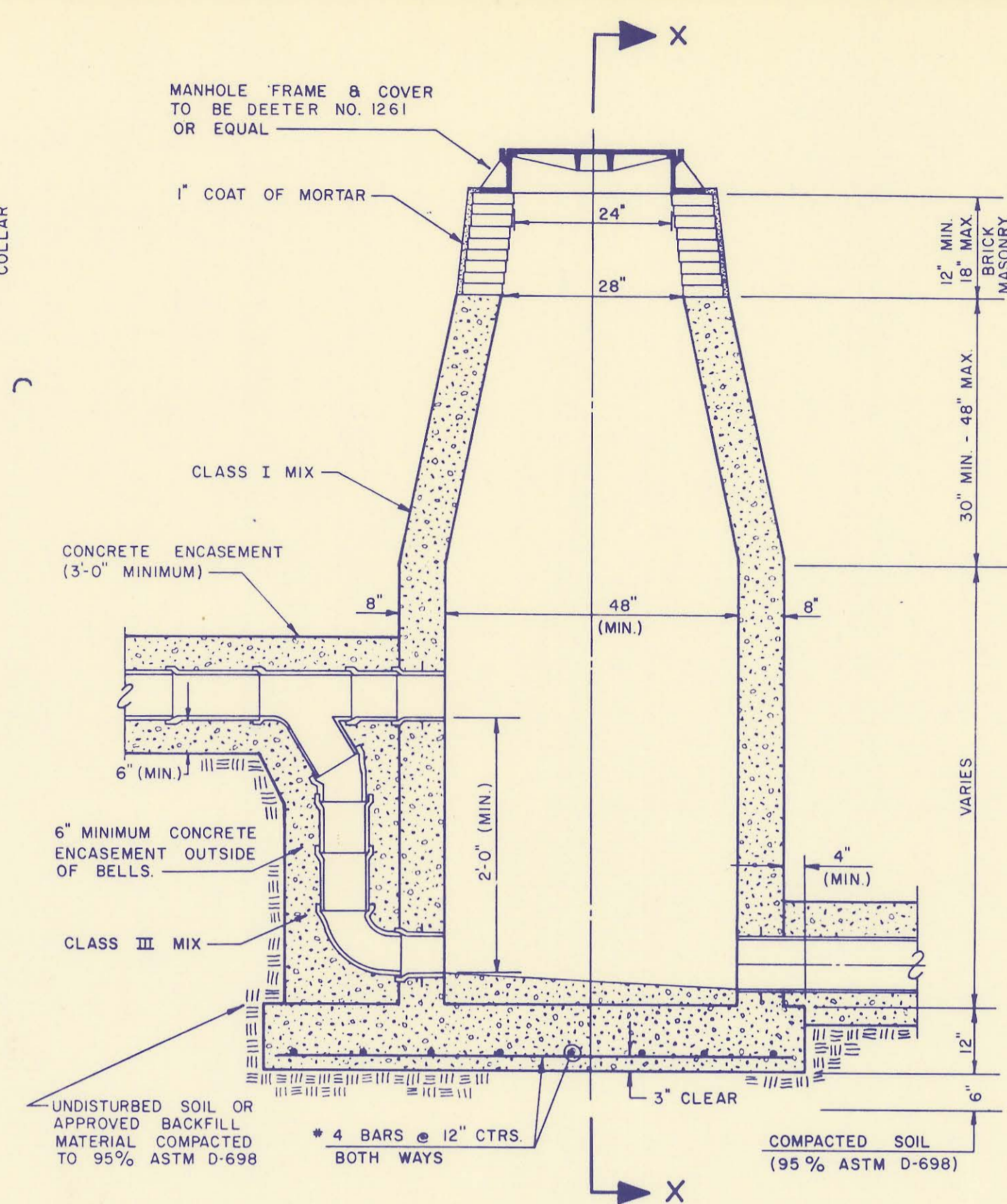
PART "A"



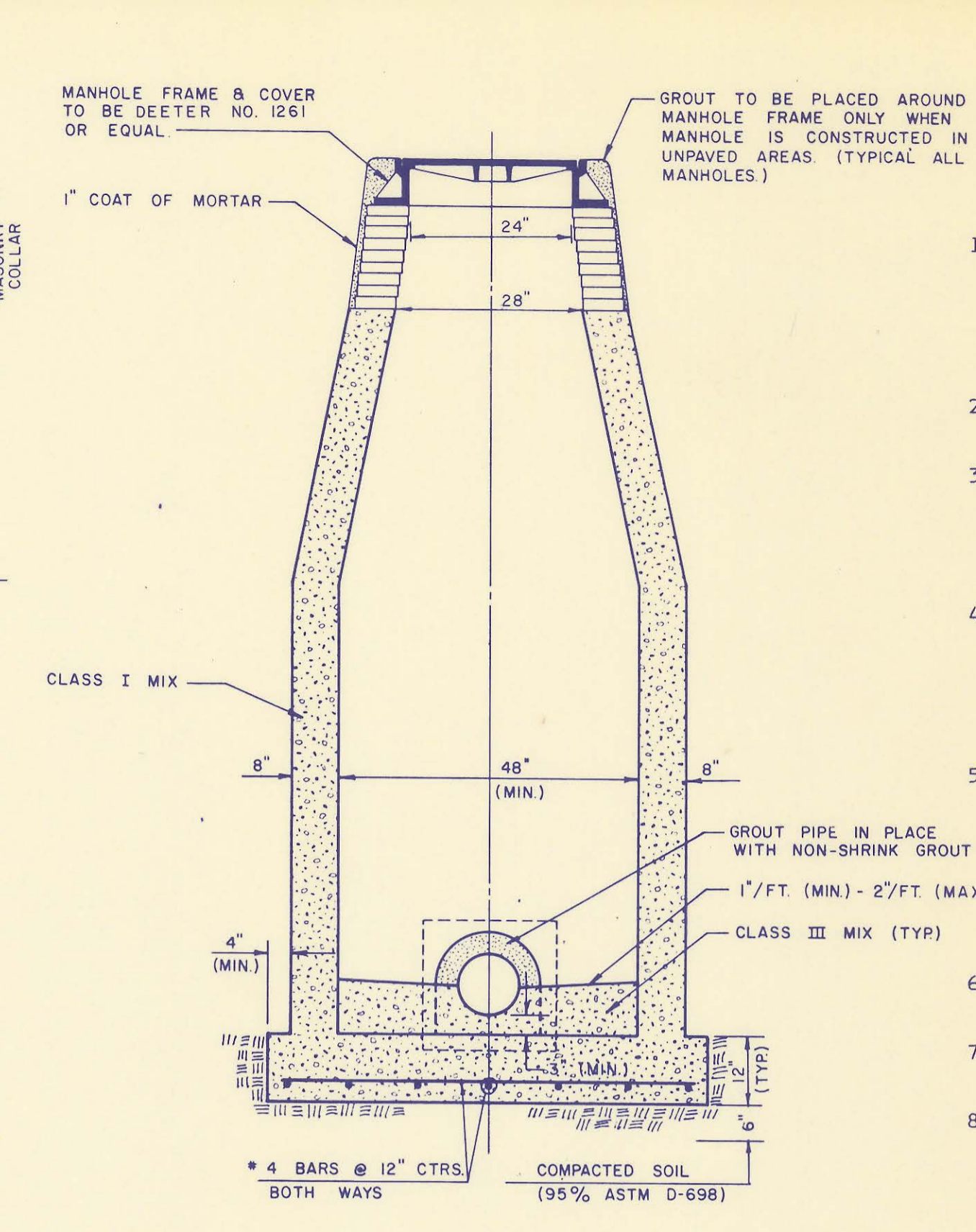
CAST IN PLACE  
STANDARD MANHOLE  
TYPE "A"



CAST IN PLACE  
DROP MANHOLE  
TYPE "B"



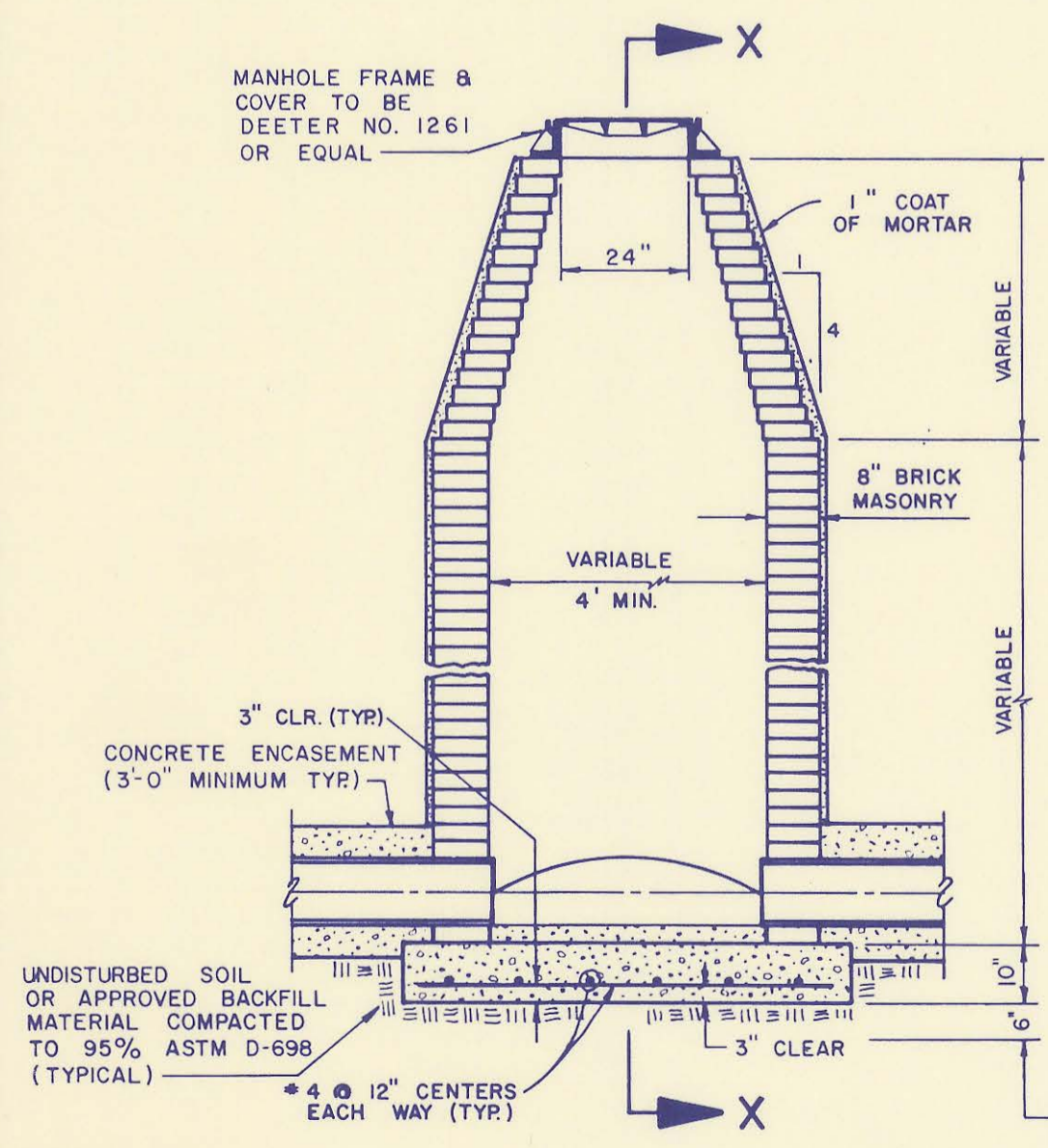
CAST IN PLACE  
OUTSIDE DROP MANHOLE  
TYPE "C"



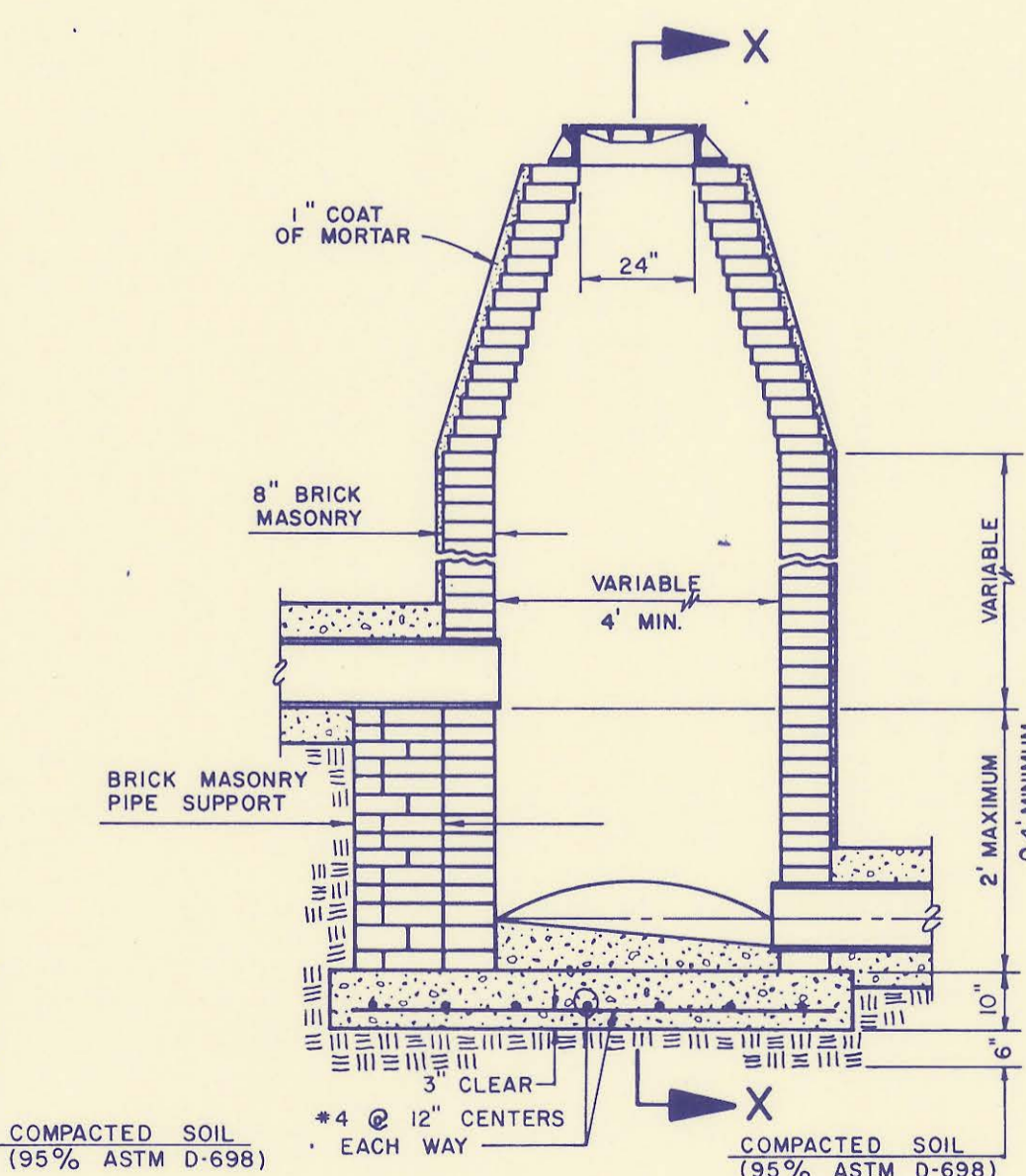
SECTION X  
(TYPICAL)

MANHOLE NOTES

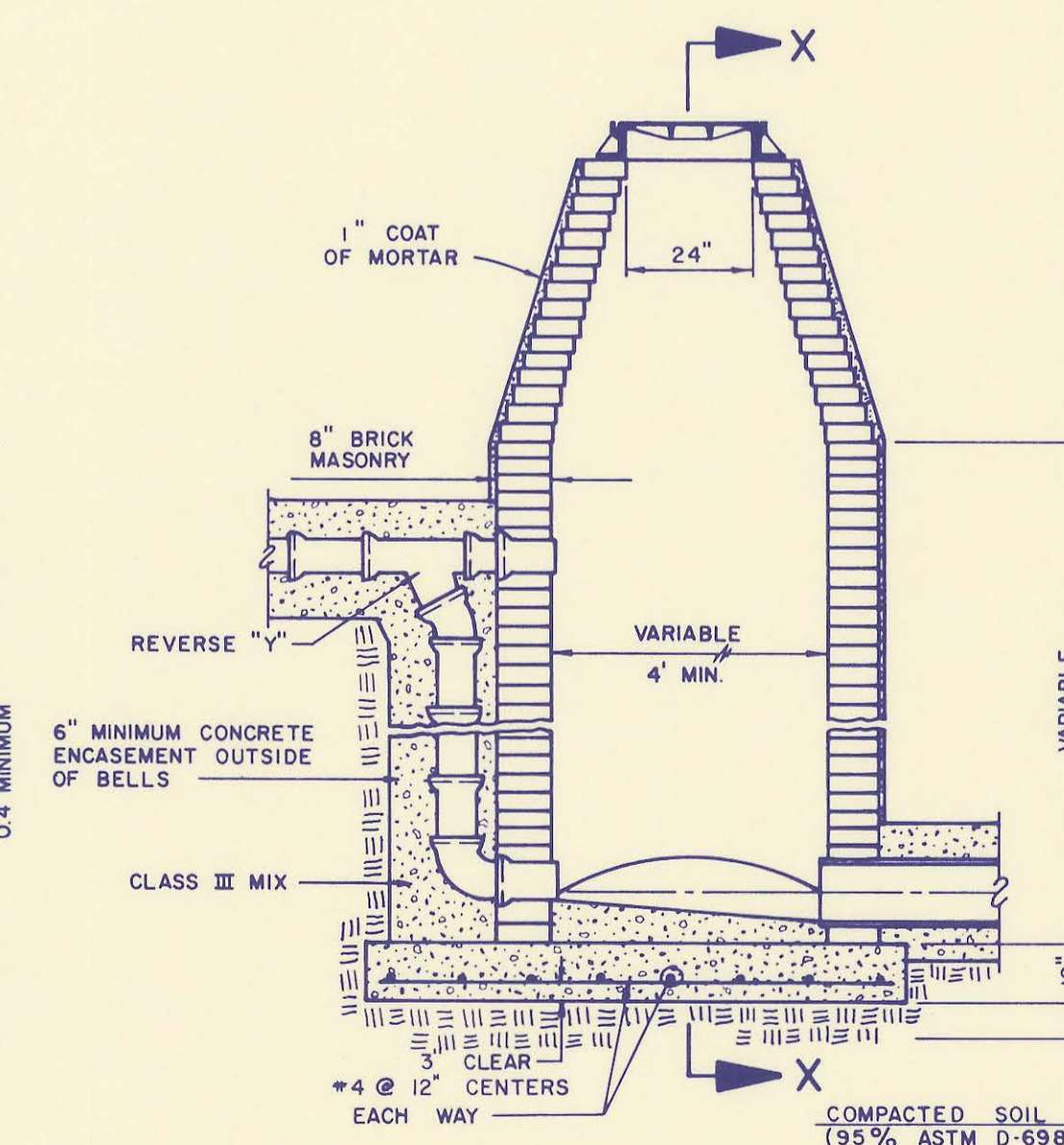
1. IF, IN THE OPINION OF THE ENGINEER, THE MANHOLE SUBGRADE APPEARS UNSTABLE, THE CONTRACTOR WILL HAVE THE OPTION TO COMPACT SUBGRADE AS SHOWN OR INCREASE THE THICKNESS OF THE MANHOLE BASE AS DIRECTED BY THE ENGINEER.
2. STEEL REINFORCING WILL BE REQUIRED IN ALL MANHOLE BASES.
3. WHEN OPENINGS ARE CUT IN MANHOLE WALLS FOR PIPE, THE PIPE OR PIPE CONNECTOR SHALL BE GROUTED IN PLACE WITH NON-SHRINKING GROUT. EXTERIOR OF COMPLETED CONNECTION SHALL BE SEALED WITH APPROVED COATINGS.
4. CAST-IN-PLACE CIRCULAR CONCRETE MANHOLES ARE TO BE CONSTRUCTED ONLY IN LOCATIONS WHERE IT IS OBVIOUS THAT ANY ADJUSTMENT OF THE MANHOLE TOP ELEVATIONS WHICH MAY BE NECESSARY WILL NOT REQUIRE MODIFICATION OF THE CONCRETE BARREL.
5. APPROVED FLEXIBLE WATERSTOP GASKETS WHICH MEET OR EXCEED THE TEST REQUIREMENTS OF ASTM C-923 SHALL BE INSTALLED TO JOIN THE SEWER TO THE MANHOLE WALL WHEN ABS COMPOSITE PIPE OR PVC PIPE IS USED. SEWER PIPE EXTENDING FROM MANHOLES SHALL BE SUPPORTED WITH CONCRETE ENCASEMENT A MINIMUM OF 3 FEET FROM THE MANHOLE WALL.
6. PIPE PLUGS SHALL BE PROVIDED BY PIPE SUPPLIER.
7. CONCRETE FOR MANHOLE BASES SHALL BE CLASS I AS DESCRIBED IN THE SPECIFICATIONS.
8. MANHOLES WITH PIPE SIZES LARGER THAN 15" SHALL HAVE 5' INSIDE DIAMETER.



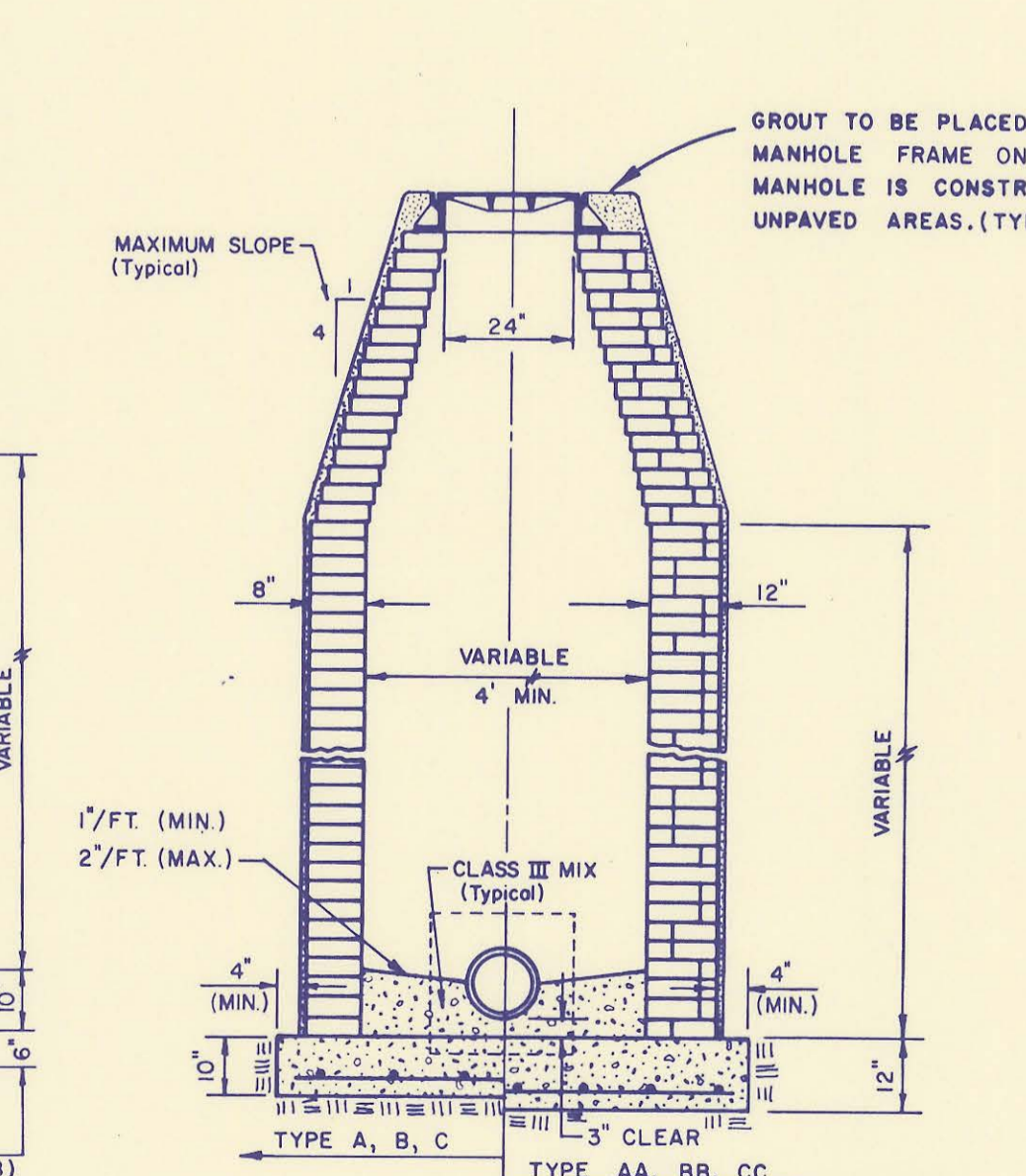
STANDARD MANHOLE  
TYPE A



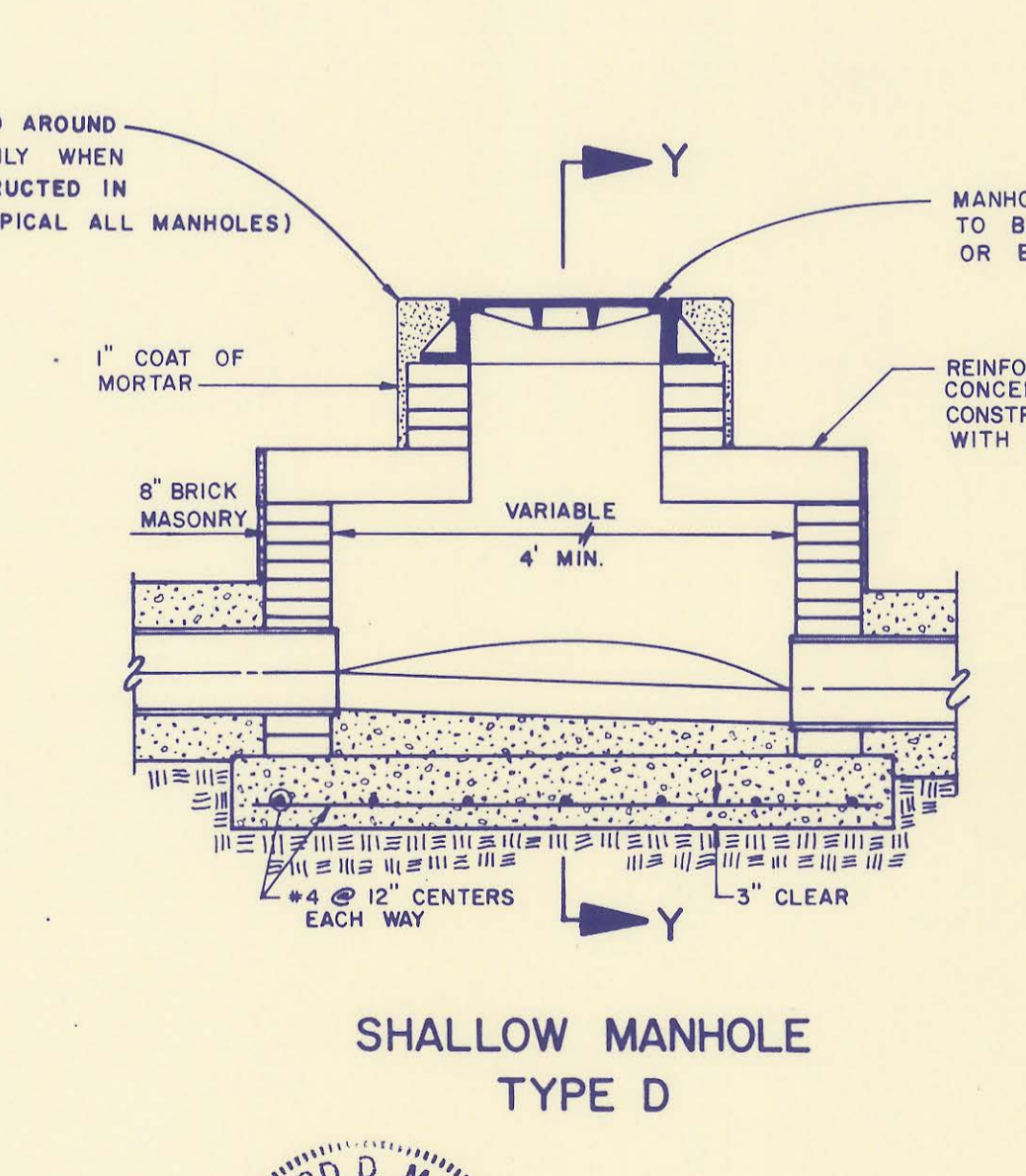
DROP MANHOLE  
TYPE B



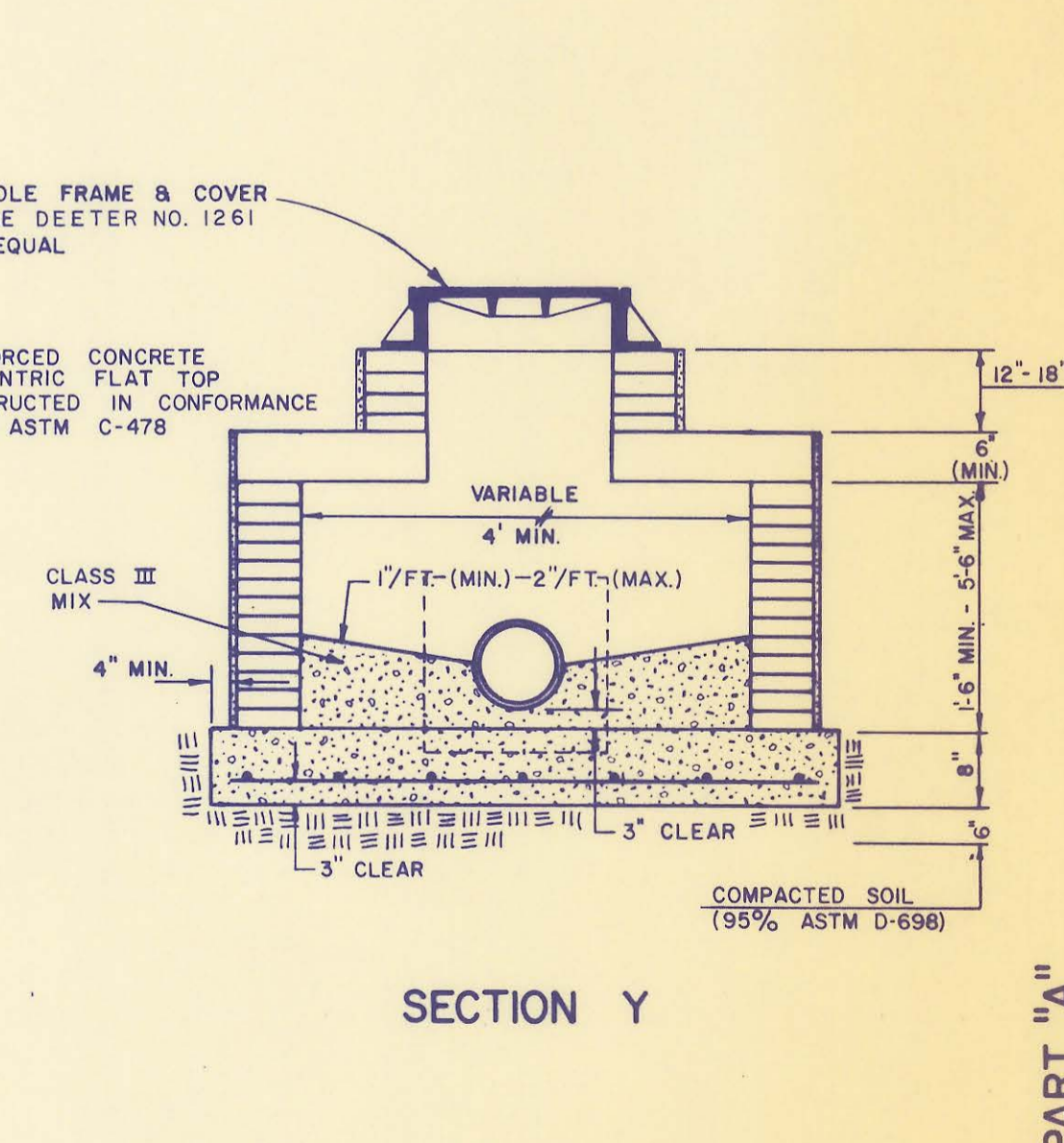
OUTSIDE DROP MANHOLE  
TYPE C



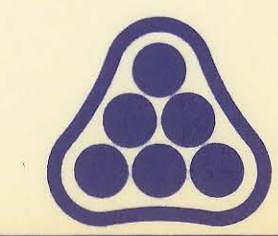
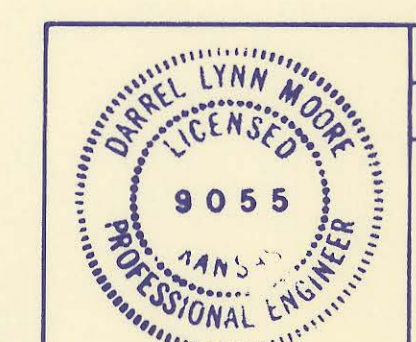
SECTION X



SHALLOW MANHOLE  
TYPE D

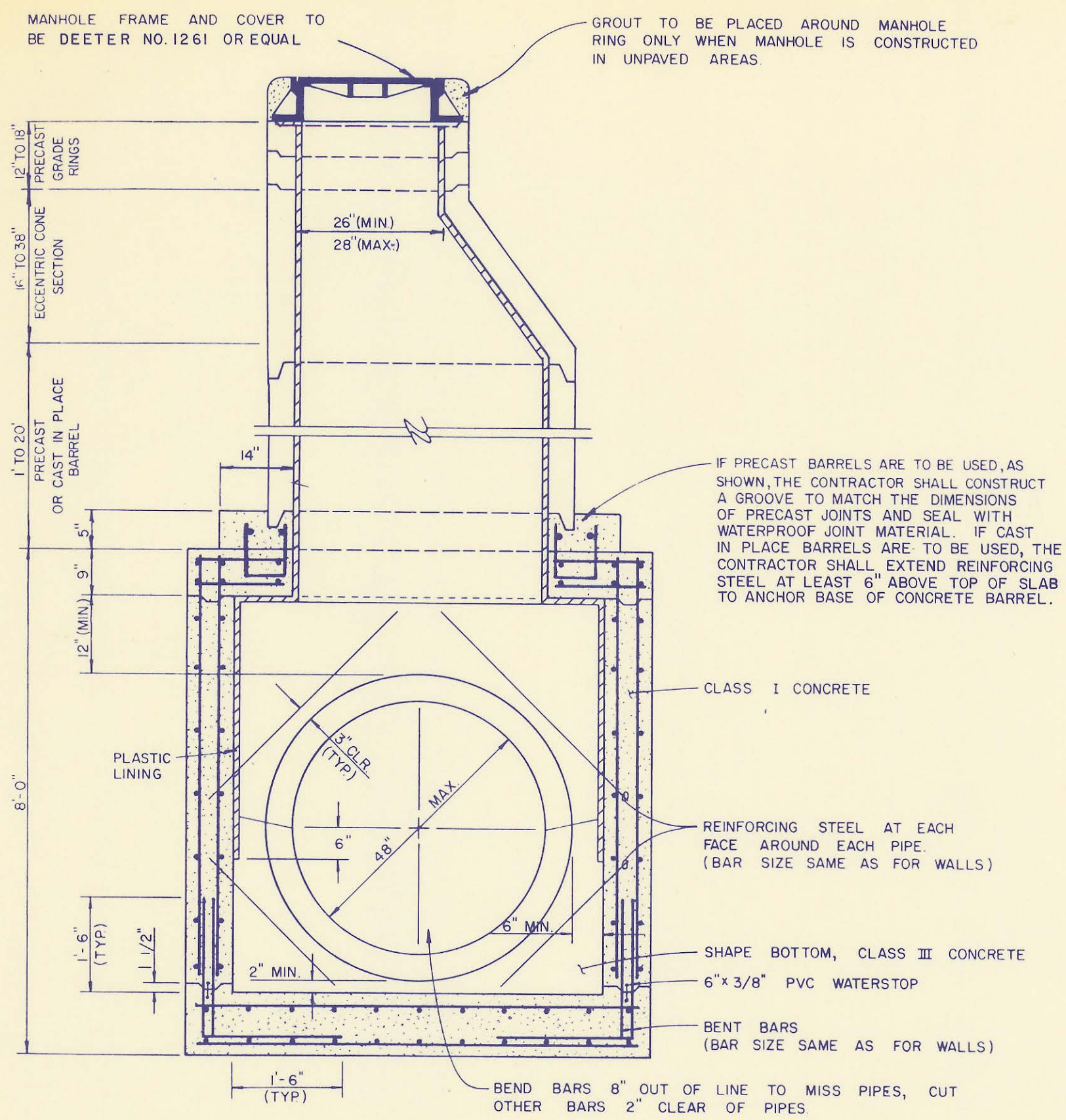


SECTION Y



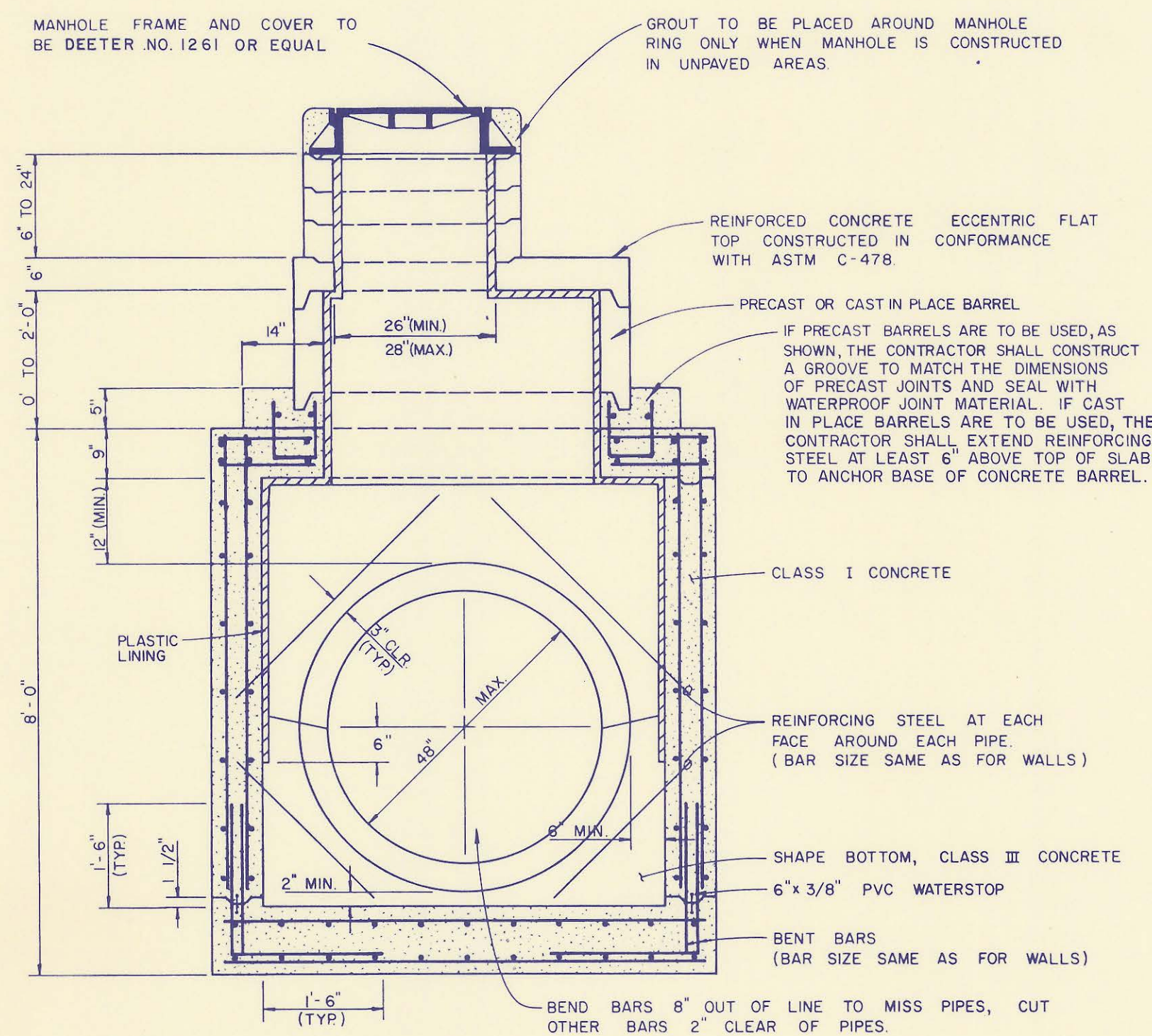
No.	Revision	By	Date
SEDGWICK COUNTY BUREAU OF PUBLIC SERVICES AVID C. SPEARS, P.E. DIRECTOR, BUREAU OF PUBLIC SERVICES/COUNTY ENGINEER			
<b>MANHOLE DETAILS</b> SANITARY SEWER INTERCEPTOR SPRING CREEK JOINT SEWER DISTRICT <b>PROFESSIONAL ENGINEERING CONSULTANTS, P.A.</b> ENGINEERS WICHITA, KANSAS			
Designed by	RDM, LM, RFJ	Job No.	34-85254-1
Drawn by	GM, RFJ	Date	Feb. 1986
		Sht.	6 of 36

PART "A"



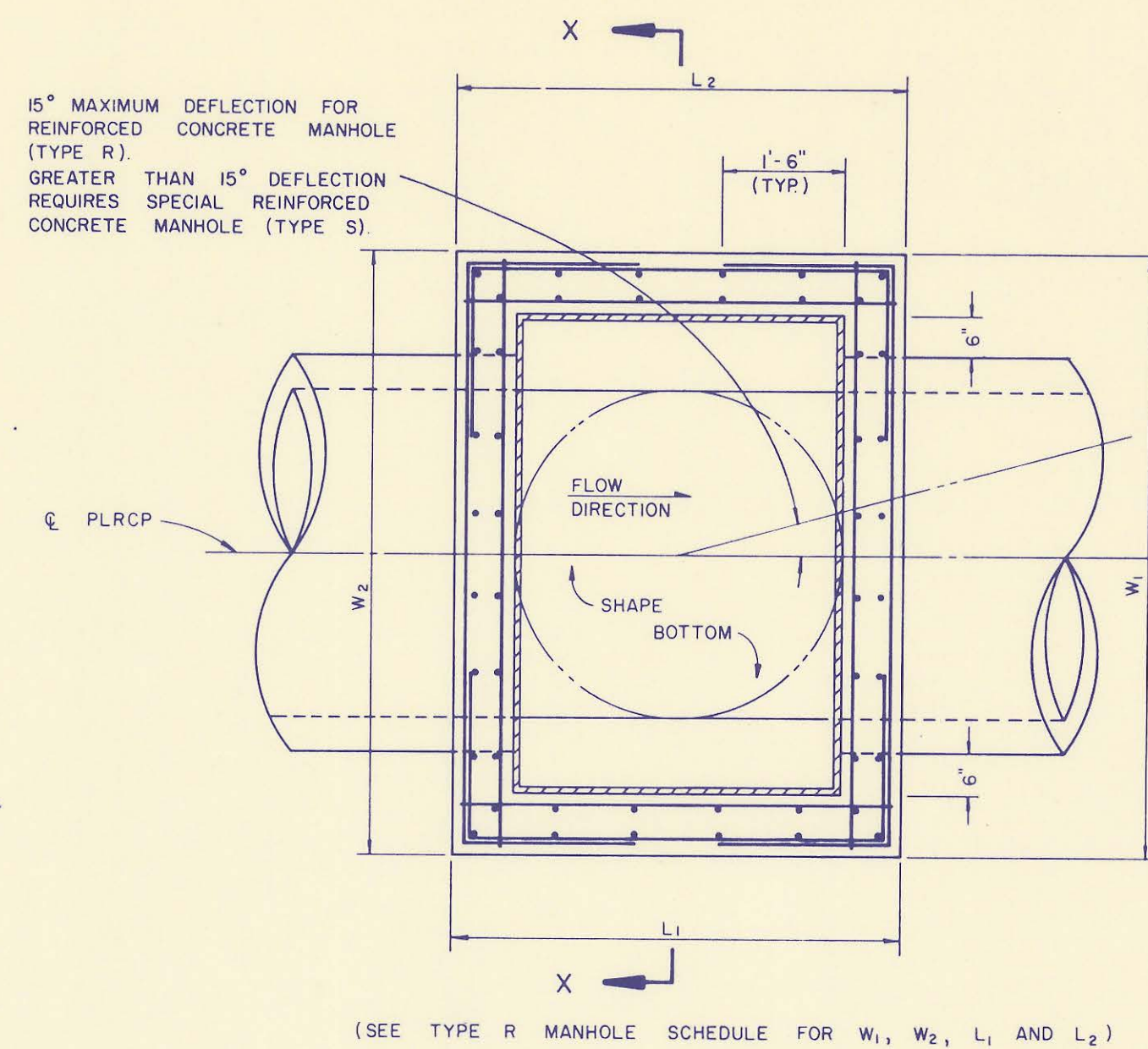
**SECTION "X"**  
**REINFORCED CONCRETE MANHOLE**  
(TOP MH TO R. OUT = 11.0' TO 22.0')

SEE "MANHOLE DIMENSIONS AND REINFORCING STEEL SCHEDULE" FOR WALL, FLOOR, AND TOP SLAB STEEL REINFORCEMENT.

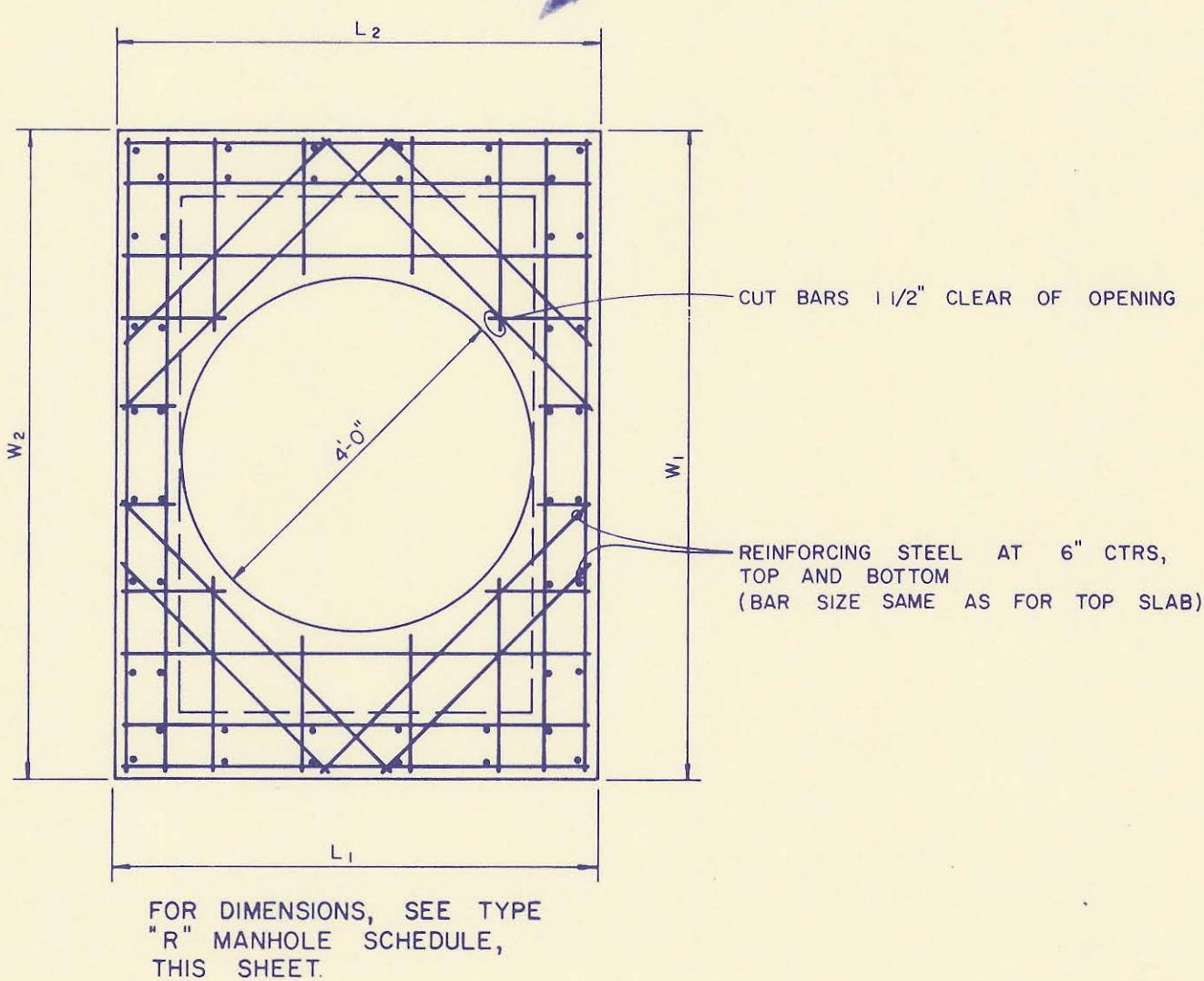


**SECTION "X"**  
**REINFORCED CONCRETE MANHOLE**  
(TOP MH TO R. OUT = 8.2' TO 11.0')

SEE "MANHOLE DIMENSIONS AND REINFORCING STEEL SCHEDULE" FOR WALL, FLOOR, AND TOP SLAB STEEL REINFORCEMENT.

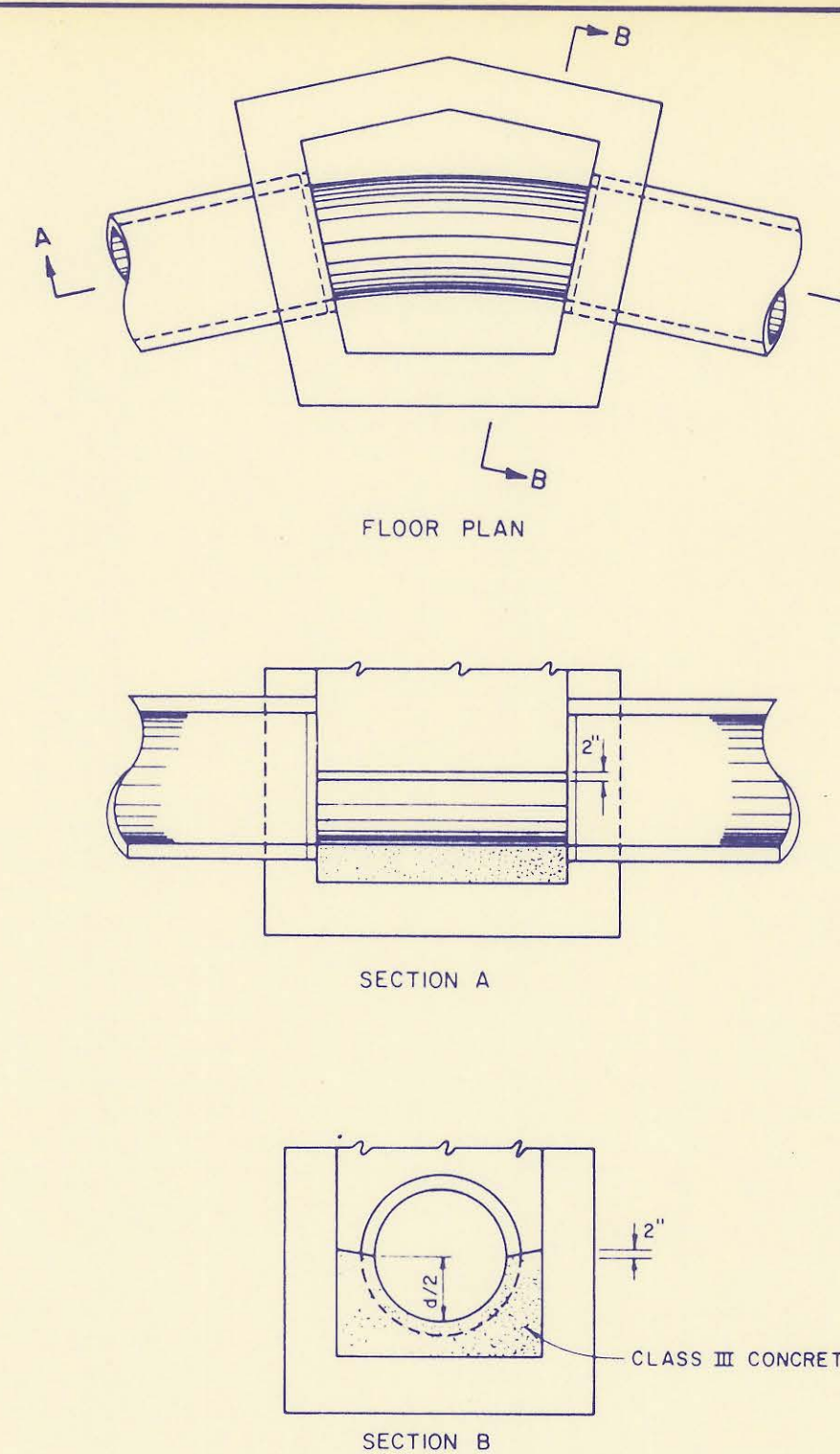


**REINFORCED CONCRETE MANHOLE**  
**TYPICAL PLAN VIEW**

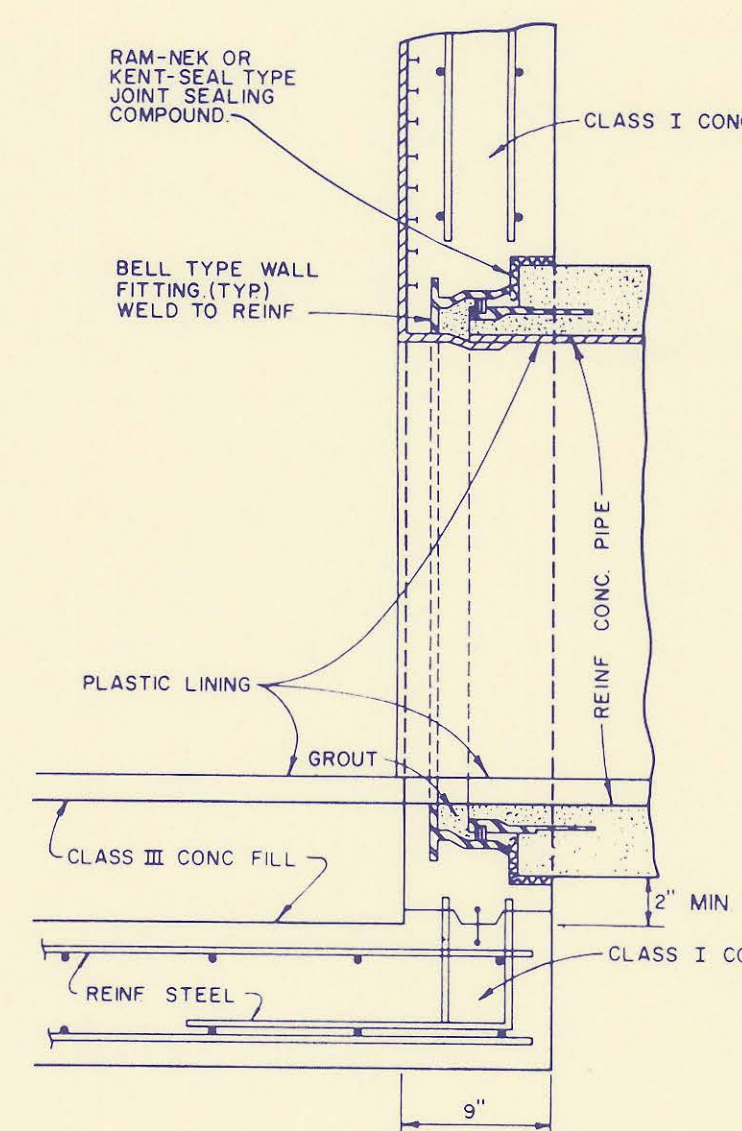


**REINFORCED CONCRETE MANHOLE**  
**TYPICAL TOP SLAB REINFORCEMENT**

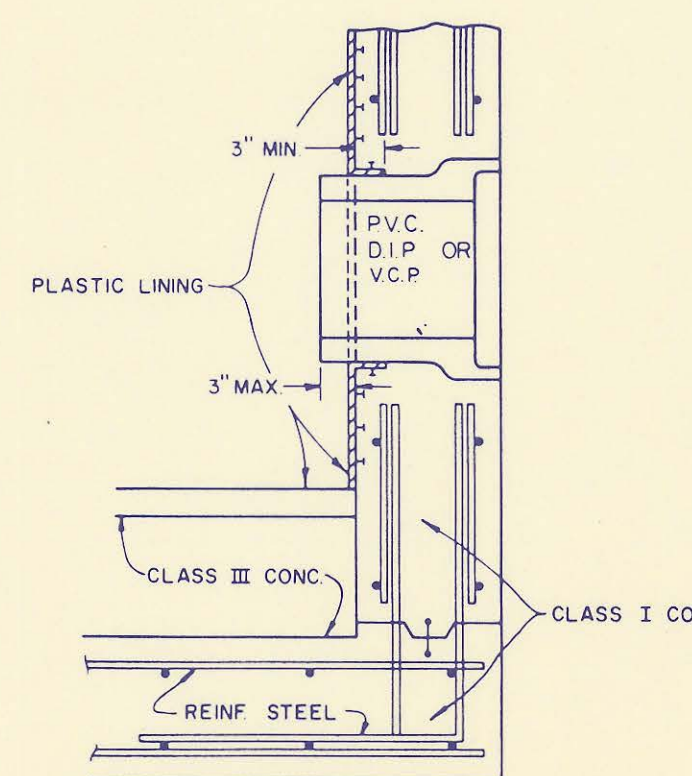
MH DEPTH (TOP FRAME TO R. OUT)	DESCRIPTION	THICKNESS	STEEL PLACEMENT		STEEL CLEARANCE
			WALLS:	FLOOR:	
8.2' TO 11.0'	TOP SLAB:	9"	#4 @ 12" MAX. CTRS. (BOTH WAYS), TOP & BOTTOM.	#4 @ 12" MAX. CTRS. (BOTH WAYS), EACH FACE.	1 1/2" EA. FC.
	WALLS:	9"	#4 @ 12" MAX. CTRS. (BOTH WAYS), TOP & BOTTOM.	#4 @ 8" MAX. CTRS. (BOTH WAYS), TOP & BOTTOM.	2" EA. FC.
11.0' TO 16.0'	TOP SLAB:	9"	#5 @ 12" MAX. CTRS. (BOTH WAYS), TOP & BOTTOM.	#5 @ 12" MAX. CTRS. (BOTH WAYS), EACH FACE.	1 1/2" EA. FC.
	WALLS:	9"	#5 @ 12" MAX. CTRS. (BOTH WAYS), TOP & BOTTOM.	#5 @ 8" MAX. CTRS. (BOTH WAYS), TOP & BOTTOM.	2" EA. FC.
16.0' TO 22.0'	TOP SLAB:	9"	#5 @ 12" MAX. CTRS. (BOTH WAYS), TOP & BOTTOM.	#5 @ 12" MAX. CTRS. (BOTH WAYS), EACH FACE.	1 1/2" EA. FC.
	WALLS:	12"	#5 @ 12" MAX. CTRS. (BOTH WAYS), TOP & BOTTOM.	#5 @ 8" MAX. CTRS. (BOTH WAYS), TOP & BOTTOM.	2" EA. FC.
22.0' TO 30.0'	TOP SLAB:	12"	#5 @ 12" MAX. CTRS. (BOTH WAYS), TOP & BOTTOM.	#6 @ 12" MAX. CTRS. (BOTH WAYS), EACH FACE.	1 1/2" EA. FC.
	WALLS:	12"	#6 @ 12" MAX. CTRS. (BOTH WAYS), TOP & BOTTOM.	#6 @ 8" MAX. CTRS. (BOTH WAYS), TOP & BOTTOM.	2" EA. FC.



**TYPICAL**  
**MANHOLE FLOOR SHAPING**  
**DETAILS**



**R.C.P. CONNECTION DETAIL**



**PIPE CONNECTION DETAIL**

MH NO.	PIPE SIZE	DIMENSIONS*				DEFLECTION ANGLE (Δ)
		W <sub>1</sub>	W <sub>2</sub>	L <sub>1</sub>	L <sub>2</sub>	
1	30" PLRCP	6'-0"	5'-0"	5'-9"	5'-9"	9°22'48"
3	30" PLRCP	5'-6"	5'-6"	5'-7"	5'-7"	0°00'00"
4	30" PLRCP	5'-7 1/2"	5'-7 1/2"	5'-7 1/2"	5'-7 1/2"	91°28'27"
7	30" PLRCP	5'-7 1/2"	5'-7 1/2"	5'-7"	5'-7"	89°21'04"
9	30" PLRCP	5'-1"	5'-11"	5'-8 1/2"	5'-8 1/2"	8°21'17"
10	30" PLRCP	5'-1"	6'-1"	6'-1"	5'-1"	79°34'53"
11	30" PLRCP	5'-10 1/2"	5'-1 1/2"	5'-7 1/2"	5'-7 1/2"	7°37'09"

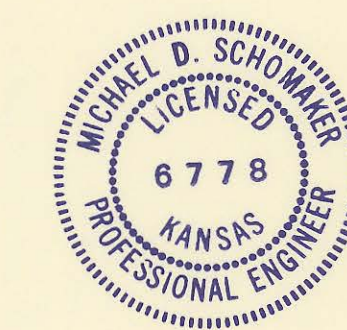
\*SIDE W<sub>1</sub> = DOWNSTREAM SIDE OF MANHOLE  
SIDE W<sub>2</sub> = DIRECTLY OPPOSITE "W<sub>1</sub>"  
SIDE L<sub>1</sub> = ADJACENT TO, AND CLOCKWISE FROM "W<sub>1</sub>"  
SIDE L<sub>2</sub> = DIRECTLY OPPOSITE "L<sub>1</sub>"

**MANHOLE FRAME AND COVER NOTES**

- CAST IRON MANHOLE FRAME AND COVER SHALL CONFORM TO ASTM A-48, CLASS 30.
- THE FRAMES AND COVERS SHALL BE OF A NONROCKING TYPE OR WITH MACHINED BEARING SURFACES SO FITTING PARTS WILL NOT RATTLE OR ROCK UNDER TRAFFIC.
- MANHOLE CASTINGS SHALL BE DEETER FOUNDRY INC. NO. 1261 OR EQUAL UNLESS OTHERWISE SPECIFIED IN THE SPECIAL CONDITIONS. (MINIMUM WT. - 430 LBS.) ALL MANHOLE CASTINGS, REGARDLESS OF TYPE, SHALL BE CONSIDERED SUBSIDIARY TO THE UNIT PRICES BID FOR THE VARIOUS MANHOLE TYPES.
- GRIND ALL BURRS SMOOTH, CLEAN THOROUGHLY, THEN APPLY SHOP COAT OF ASPHALT BASE PAINT.
- THE MANUFACTURER SHALL SUBMIT SHOP DRAWINGS TO THE ENGINEER FOR APPROVAL PRIOR TO MANUFACTURE. THE ENGINEER SHALL RETAIN THE RIGHT TO REJECT CASTINGS NOT CONFORMING TO THE SPECIFICATIONS OR THE APPROVED SHOP DRAWINGS.
- WHEREVER SELF-SEALING MANHOLE LIDS ARE INDICATED ON THE PLANS, THE CONTRACTOR SHALL SUPPLY AND INSTALL A DEETER NO. 1261, OR APPROVED EQUAL, TYPE FRAME WITH SELF-SEALING LID AND CLOSED PICKHOLES. THE CONTRACTOR SHALL SUPPLY TO THE OWNER ONE (1) REPLACEMENT GASKET FOR EACH SELF-SEALING LID.

**MANHOLE NOTES**

- IF, IN THE OPINION OF THE ENGINEER, THE MANHOLE SUBGRADE APPEARS UNSTABLE, THE CONTRACTOR WILL HAVE THE OPTION TO COMPACT SUBGRADE AS SHOWN OR INCREASE THE THICKNESS OF THE MANHOLE BASE AS DIRECTED BY THE ENGINEER.
- STEEL REINFORCING WILL BE REQUIRED IN ALL MANHOLE BASES.
- WHEN OPENINGS ARE CUT IN MANHOLE WALLS FOR PIPE, THE PIPE OR PIPE CONNECTOR SHALL BE GROUDED IN PLACE WITH NON-SHRINKING GROUT. EXTERIOR OF COMPLETED CONNECTION SHALL BE SEALED WITH APPROVED COATINGS.
- ALL MANHOLE CONSTRUCTION SHALL BE WATER TIGHT.
- TOP OF MANHOLE FLOOR SLAB SHALL BE AT LEAST 3 INCHES BELOW THE FLOW LINE OF THE OUTLET PIPE TO INSURE SUFFICIENT MINIMUM THICKNESS OF SHAPED INVERT.
- APPROVED FLEXIBLE WATERSTOP GASKETS WHICH MEET OR EXCEED THE TEST REQUIREMENTS OF ASTM C-923 SHALL BE INSTALLED TO JOIN THE SEWER TO THE MANHOLE WALL WHEN ABS COMPOSITE PIPE OR PVC PIPE IS USED. SEWER PIPE OTHER THAN PLRCP EXTENDING FROM MANHOLES SHALL BE SUPPORTED WITH CONCRETE ENCASEMENT A MINIMUM OF 3 FEET FROM THE MANHOLE WALL.
- PIPE PLUGS SHALL BE PROVIDED BY PIPE SUPPLIER.
- CONCRETE FOR MANHOLE BASES SHALL BE CLASS I AS DESCRIBED IN THE SPECIFICATIONS.
- TYPE R MANHOLES SHALL BE REINFORCED CONCRETE MANHOLES WITH FOUR WALLS AS DETAILED ON THIS SHEET WITH WALL DIMENSIONS AS LISTED ON THE "TYPE R MANHOLE SCHEDULE." TYPE S MANHOLES SHALL BE REINFORCED CONCRETE MANHOLES WITH FIVE OR MORE WALLS AS DETAILED ON THIS SHEET AND THE SHEET TITLED "SPECIAL REINFORCED CONCRETE MANHOLES."



Revision \_\_\_\_\_ By \_\_\_\_\_ Date \_\_\_\_\_

SEDGWICK COUNTY BUREAU OF PUBLIC SERVICES  
DAVID C. SPEARS, P.E. DIRECTOR, BUREAU OF PUBLIC SERVICES/COUNTY ENGINEER

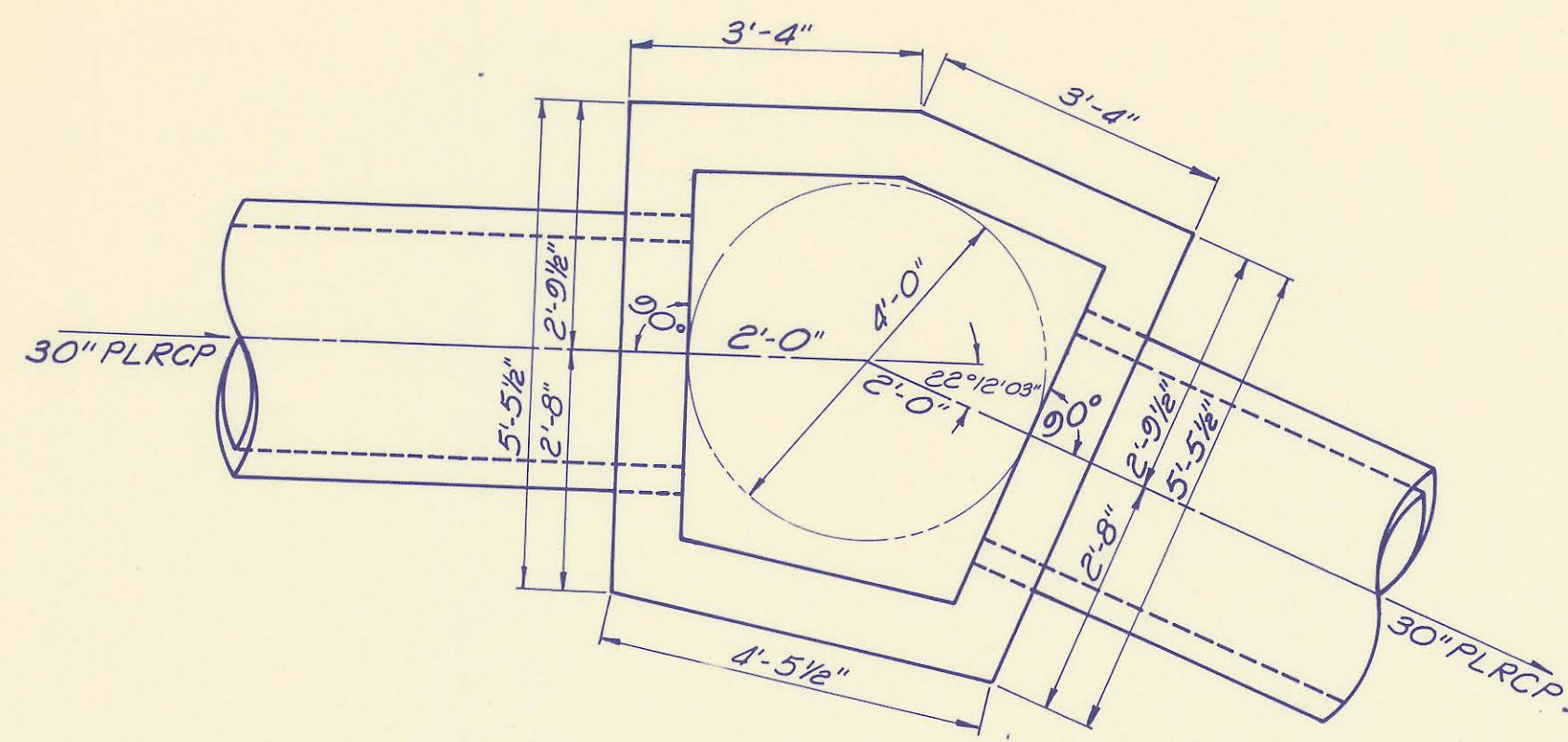
**MANHOLE DETAILS**

SANITARY SEWER INTERCEPTOR  
SPRING CREEK JOINT SEWER DISTRICT

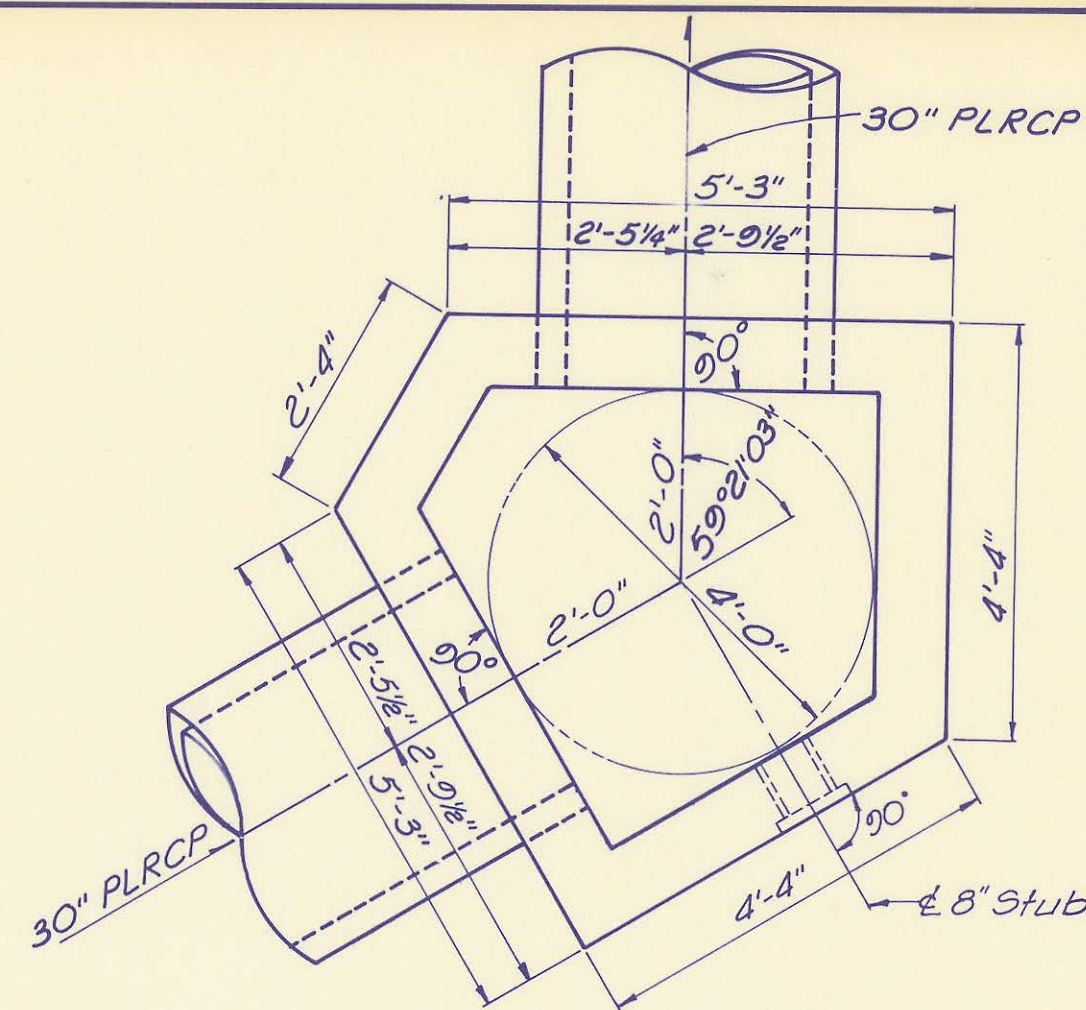
**PROFESSIONAL ENGINEERING CONSULTANTS, P.A.**  
ENGINEERS  
WICHITA, KANSAS

Designed by **RDM, LM, RFJ** Job No. **34-85254-1** Sht. **7** of **36**  
Drawn by **GM** Date **Feb. 1986**

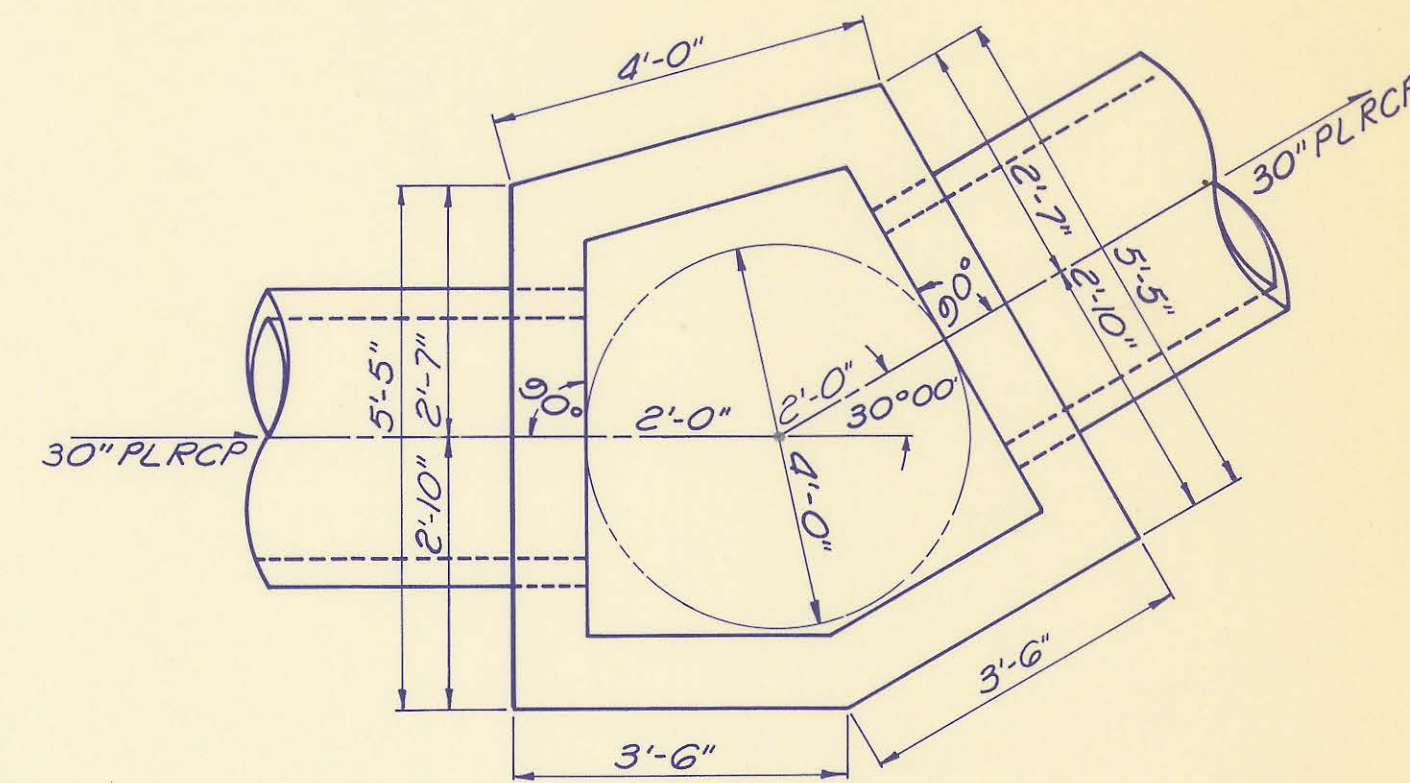
PART "A"



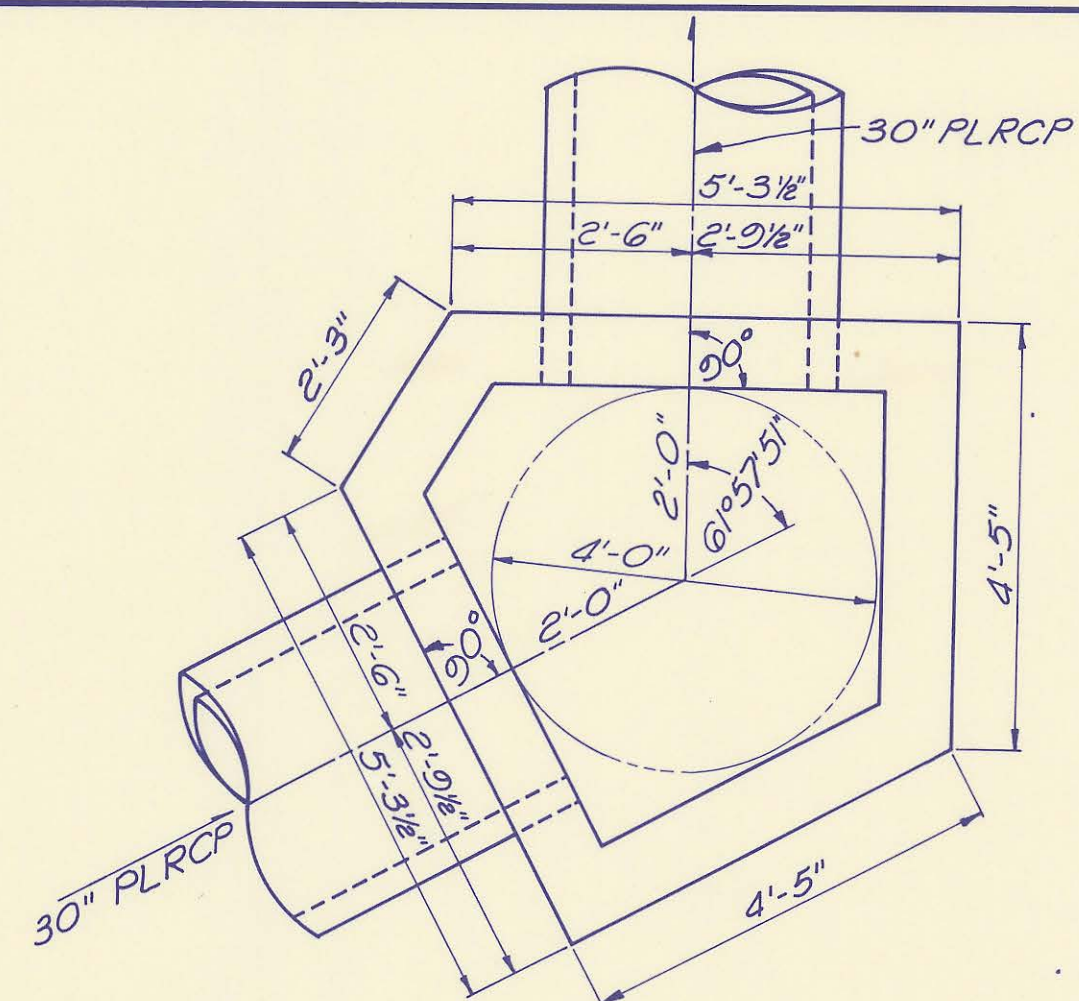
MH 2



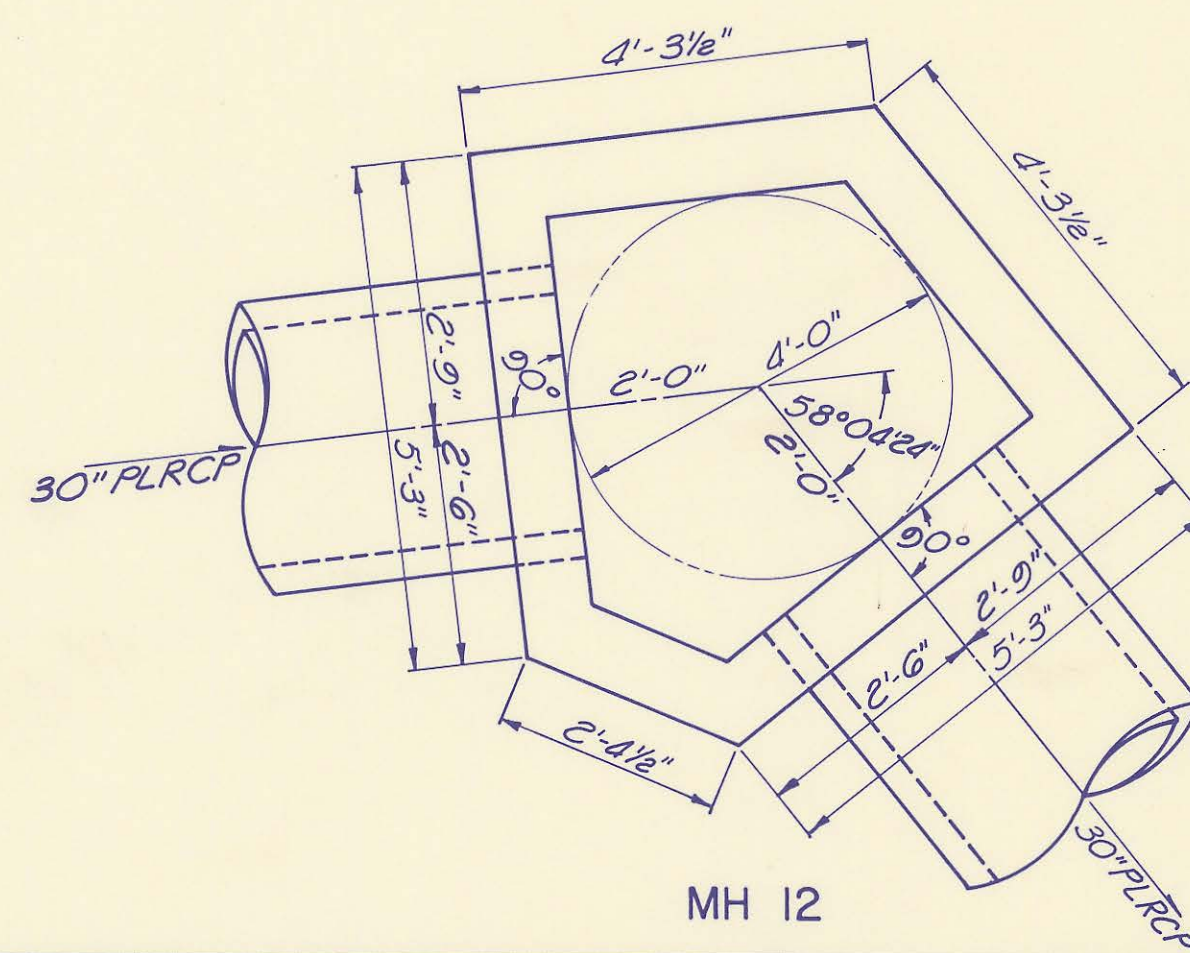
MH 5



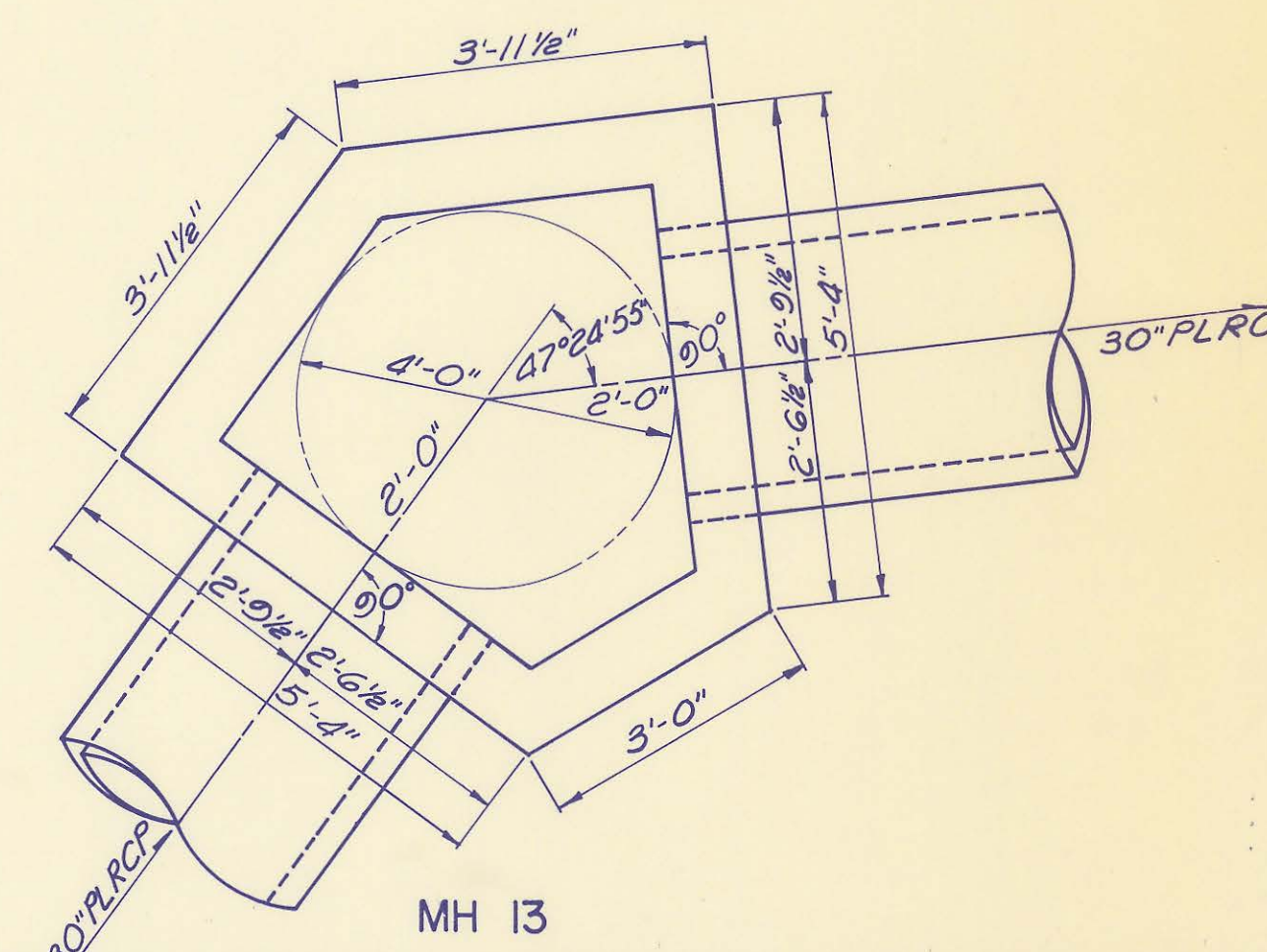
MH 6



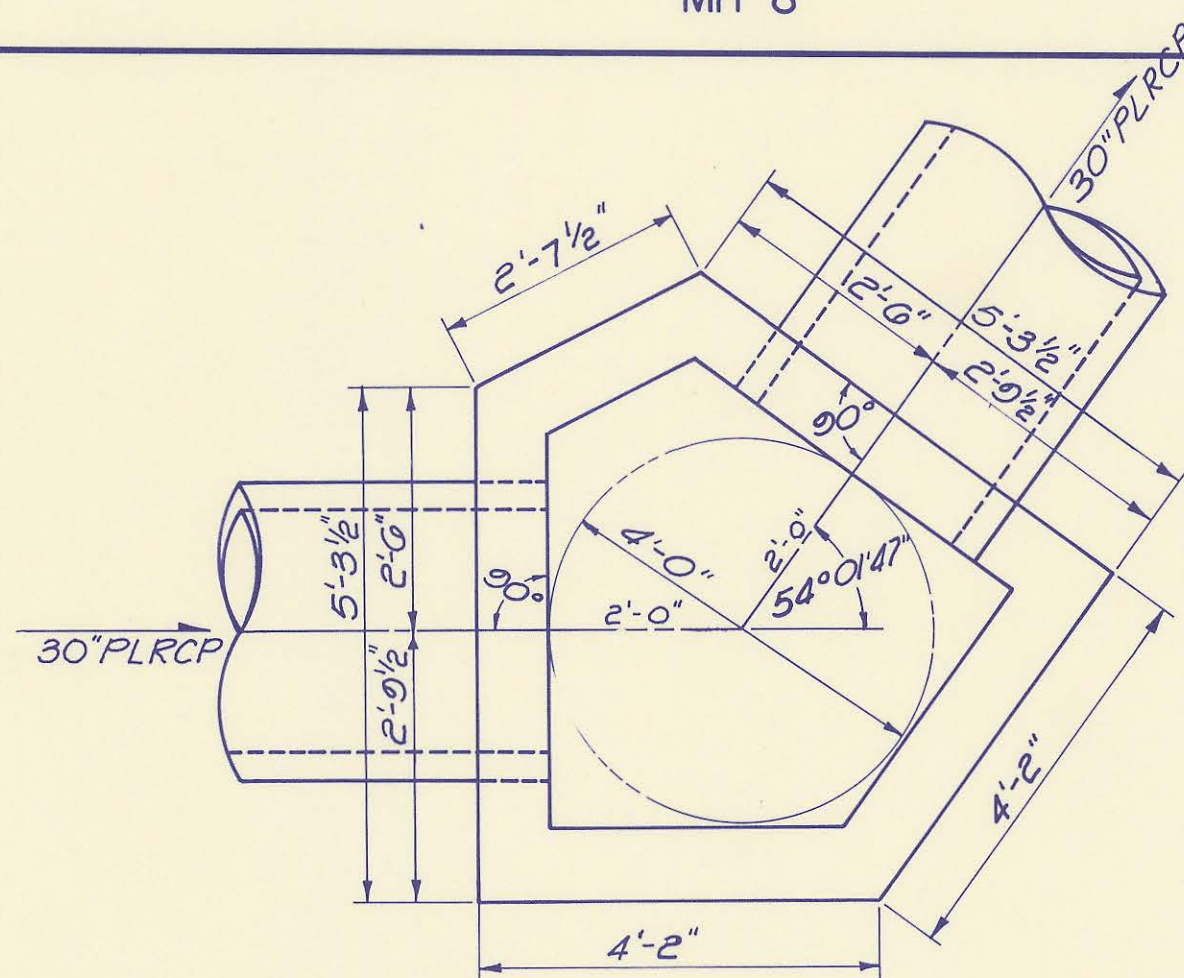
MH 8



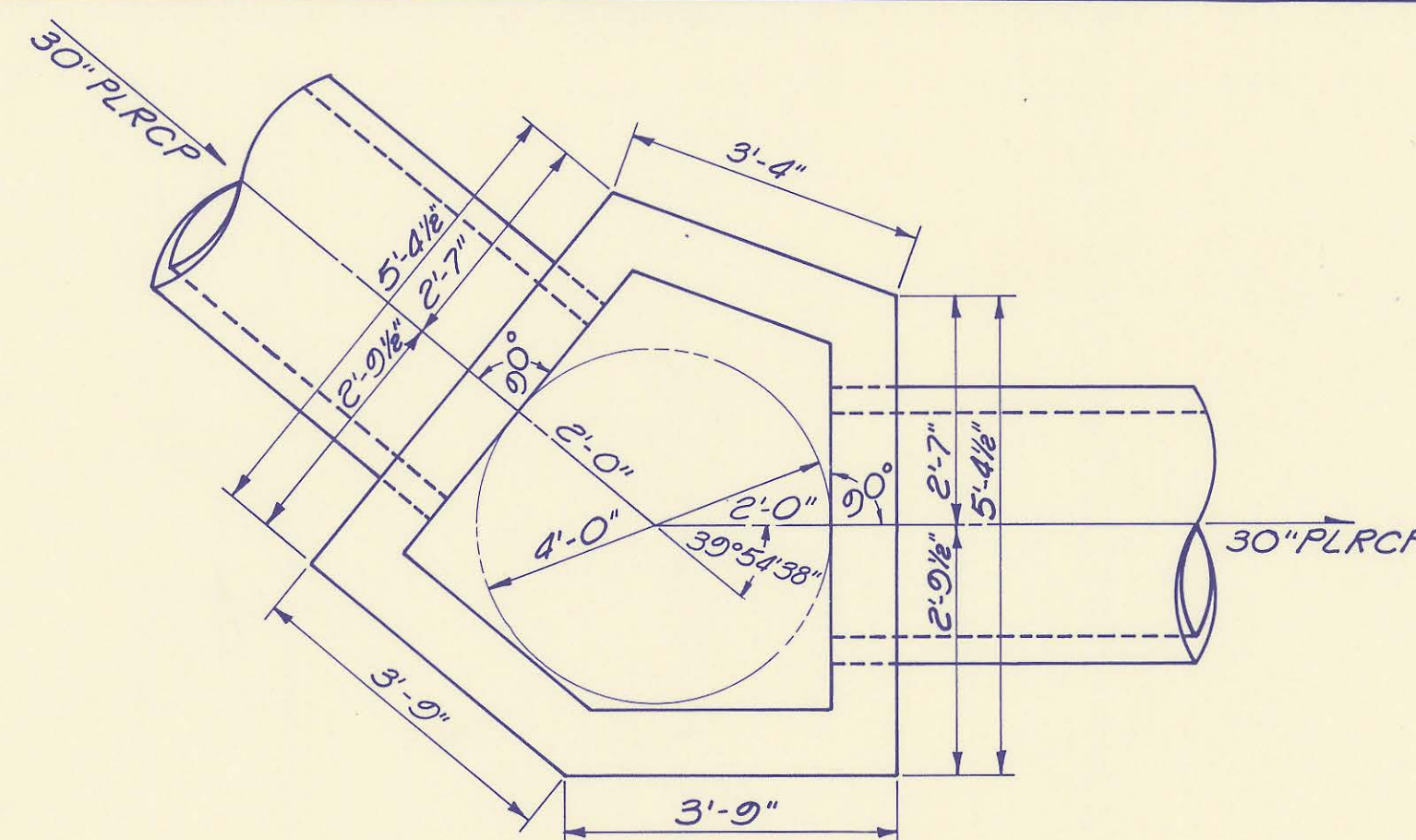
MH 12



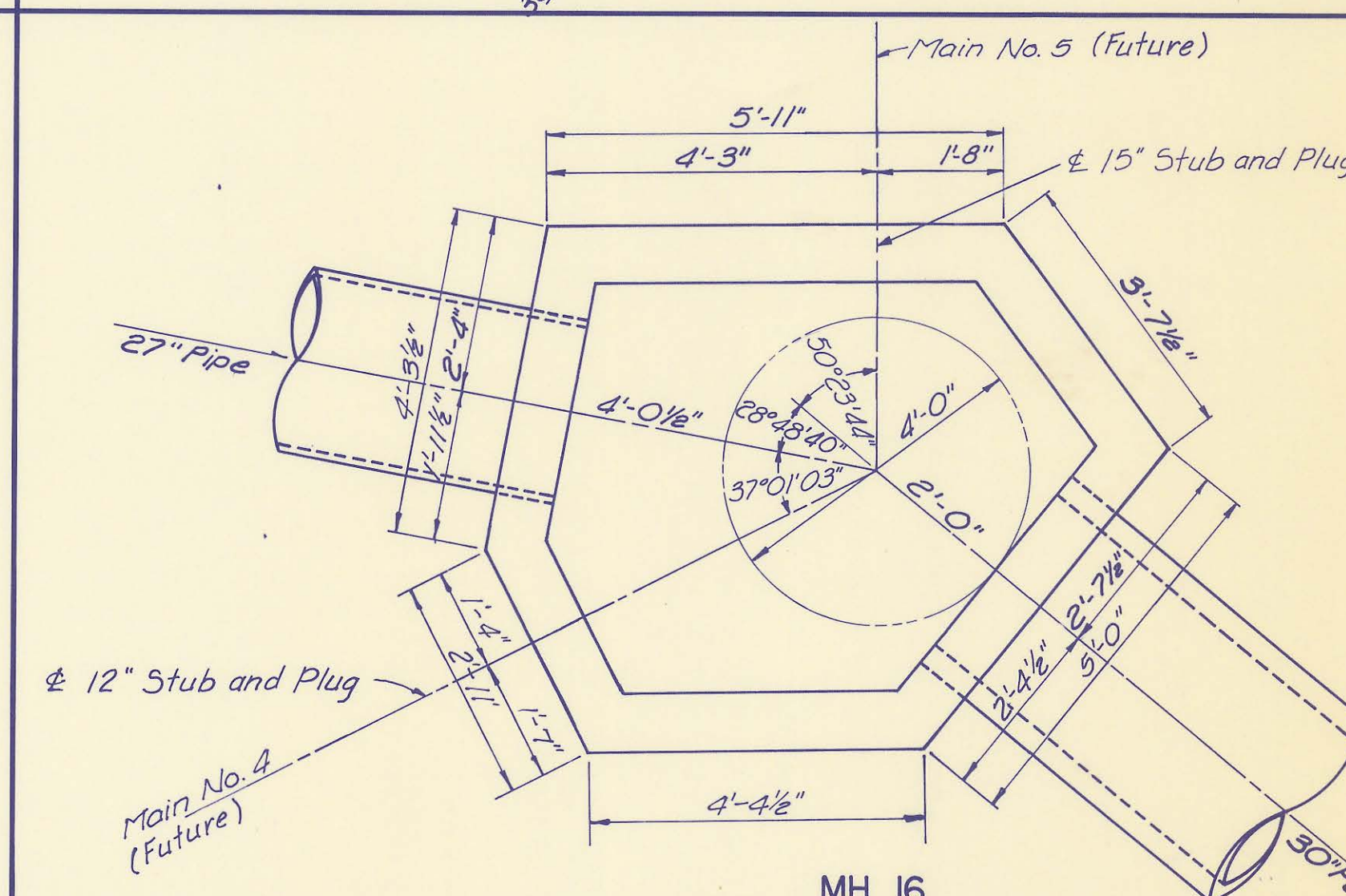
MH 13



MH 14



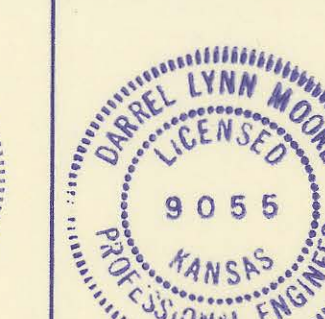
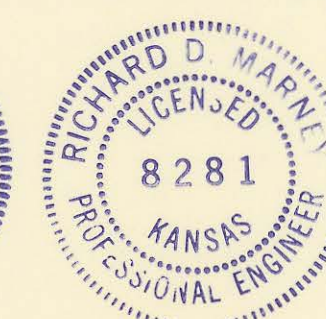
MH 15



MH 16

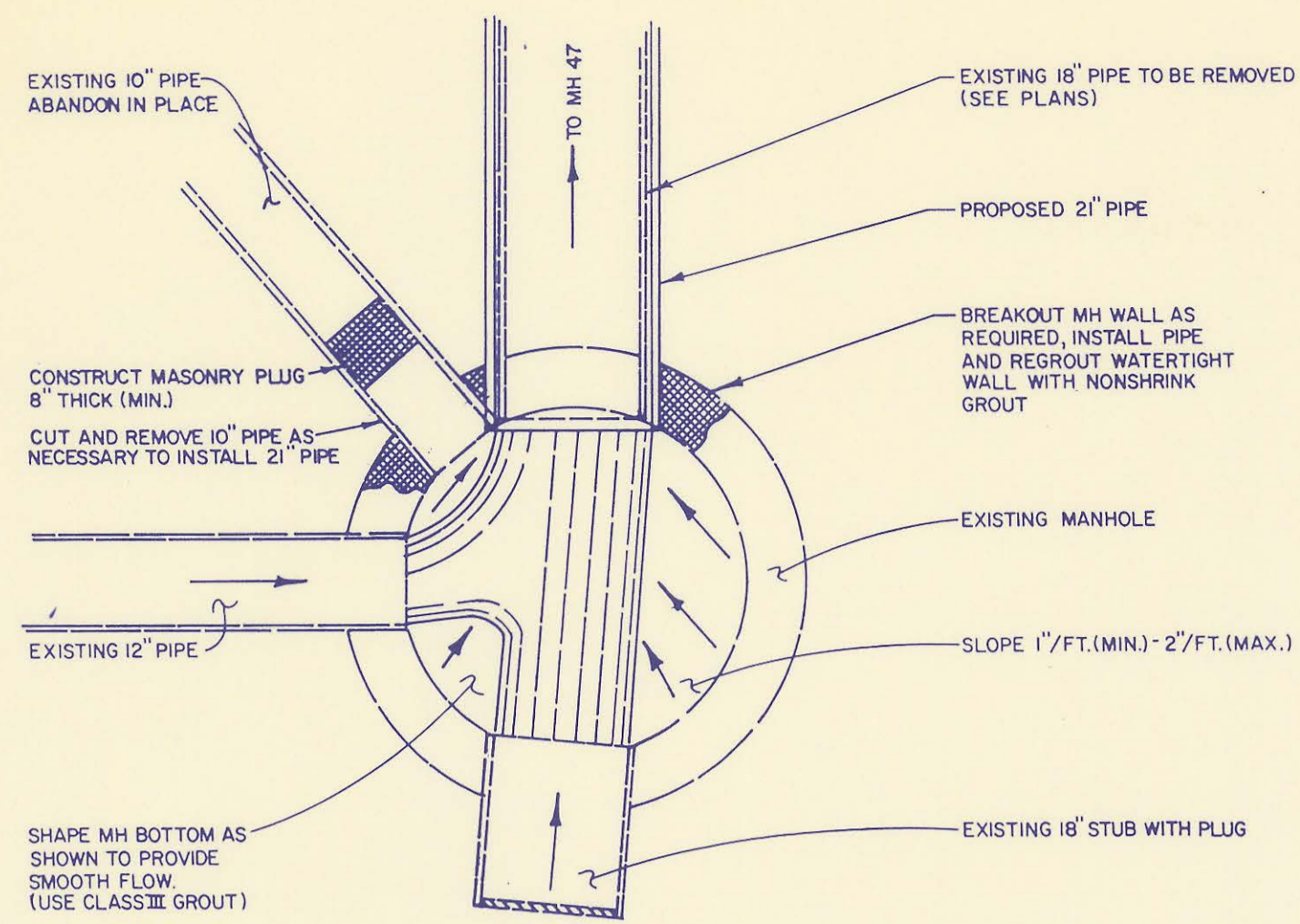
**TYPE S  
SPECIAL REINFORCED CONCRETE MANHOLES**

SCALE: 1/2"=1'-0"



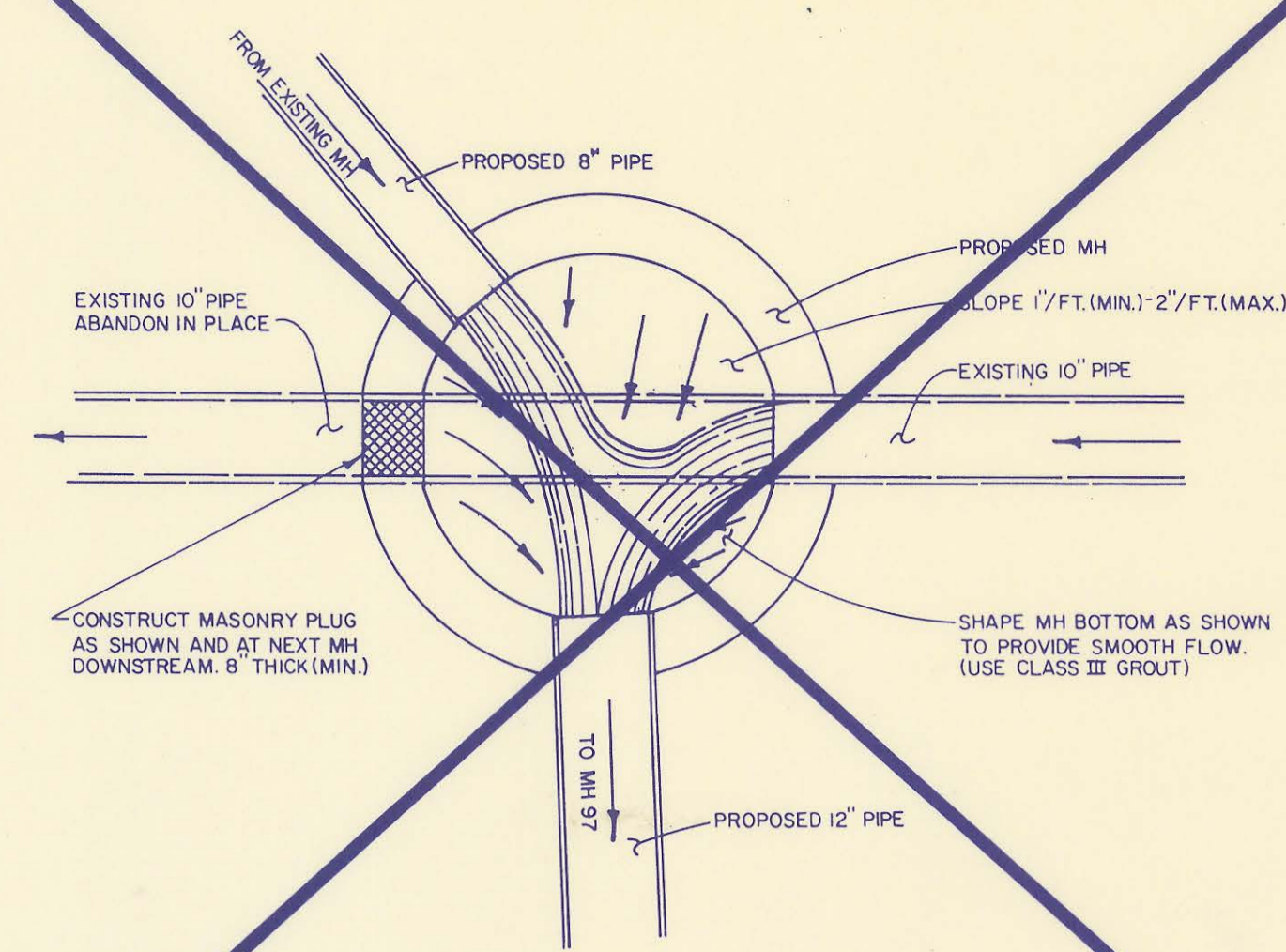
No.	Revision	By	Date
SEDGWICK COUNTY BUREAU OF PUBLIC SERVICES DAVID C. SPEARS, P.E. DIRECTOR, BUREAU OF PUBLIC SERVICES/COUNTY ENGINEER			
<b>SPECIAL REINFORCED CONCRETE MANHOLES</b> SANITARY SEWER INTERCEPTOR SPRING CREEK JOINT SEWER DISTRICT <b>PROFESSIONAL ENGINEERING CONSULTANTS, P.A.</b> ENGINEERS WICHITA, KANSAS			
Designed by	RDM, L.M., RFJ	Job No.	34-85254-1
Drawn by	SC, RFJ	Date	Feb. 1986
		Sht.	8 of 36

PART "A"



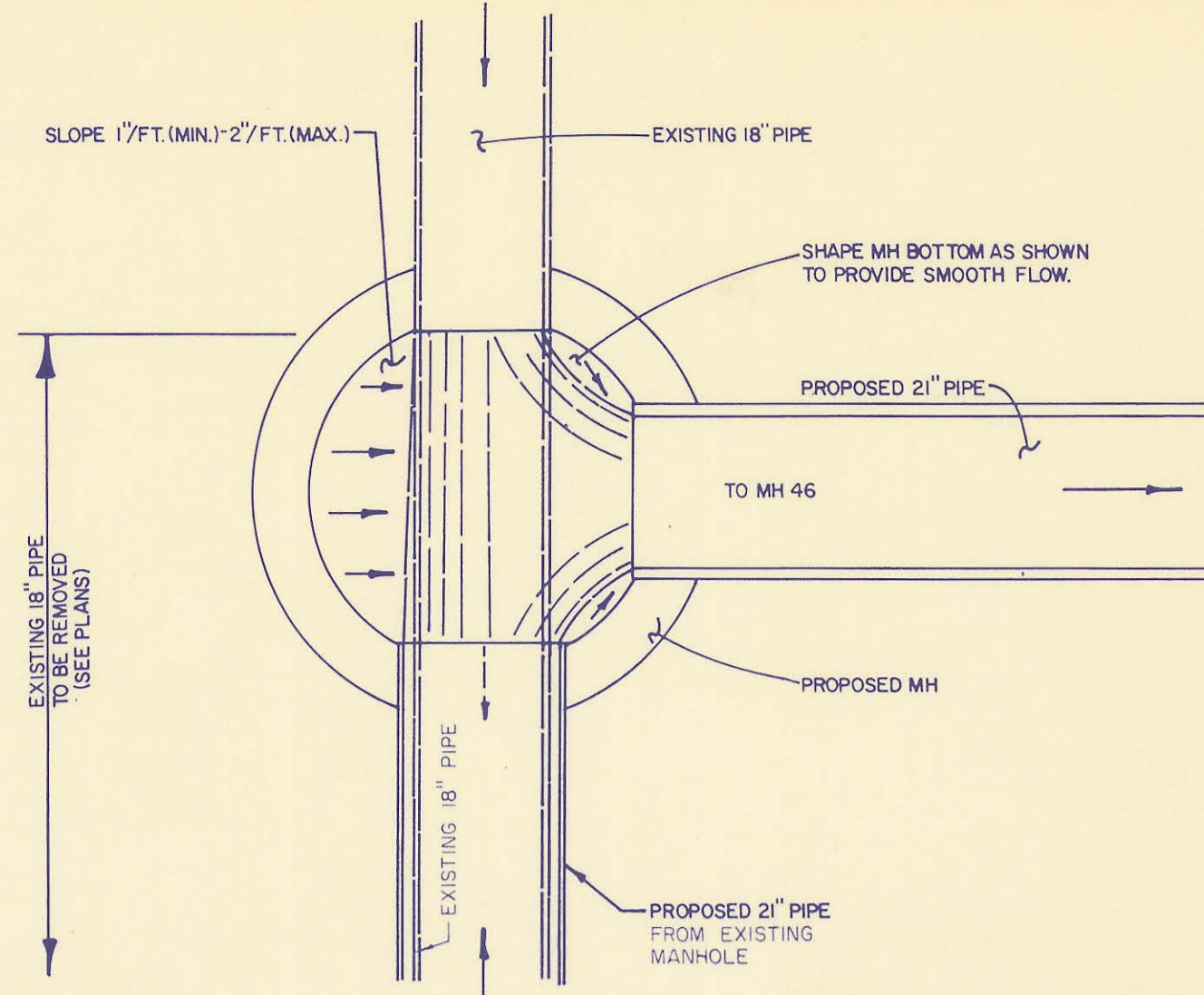
**"BREAK IN" DETAIL**  
STA. 143+69.27, MAIN NO. 1

NOTE: CONTRACTOR SHALL INSTALL TEMPORARY PLUG IN THE EXISTING 12" PIPE BEFORE "BREAK IN" WORK BEGINS. THE CONTRACTOR SHALL PROVIDE TEMPORARY PUMPING FROM THE NEXT MANHOLE UPSTREAM INTO THE EXISTING LIFT STATION TO MAINTAIN THE 12" PIPE IN SERVICE UNTIL WORKS ON THE MANHOLE IS COMPLETED.



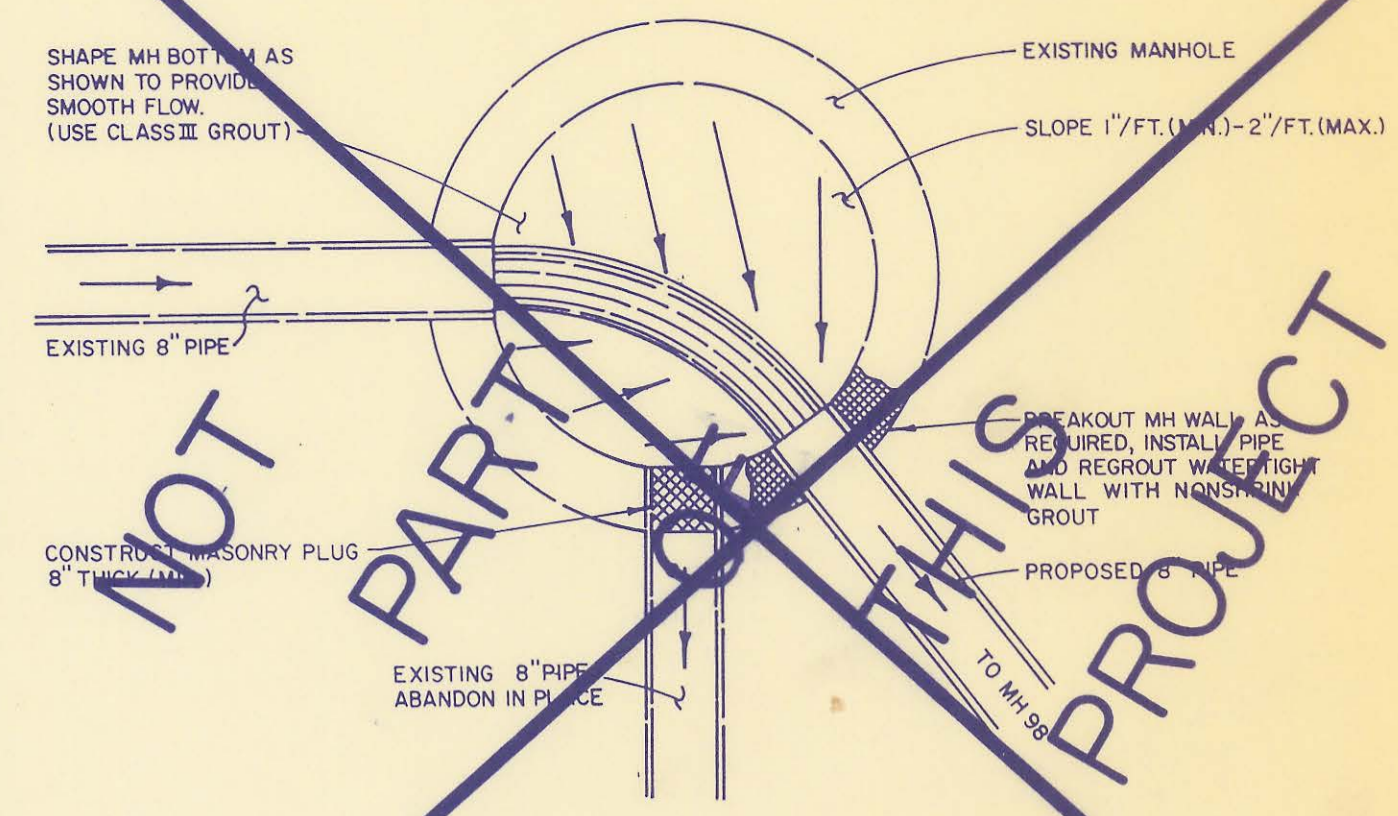
**MH 98**  
STA. 43+61.17, MAIN NO. 7

NOTE: THE CONTRACTOR SHALL MAINTAIN CONTINUOUS SERVICE WITHIN THE EXISTING 10" PIPE DURING CONSTRUCTION OF THE MANHOLE. THE CONTRACTOR SHALL SUBMIT A CONSTRUCTION SEQUENCE TO THE ENGINEER FOR APPROVAL BEFORE BEGINNING THIS WORK.



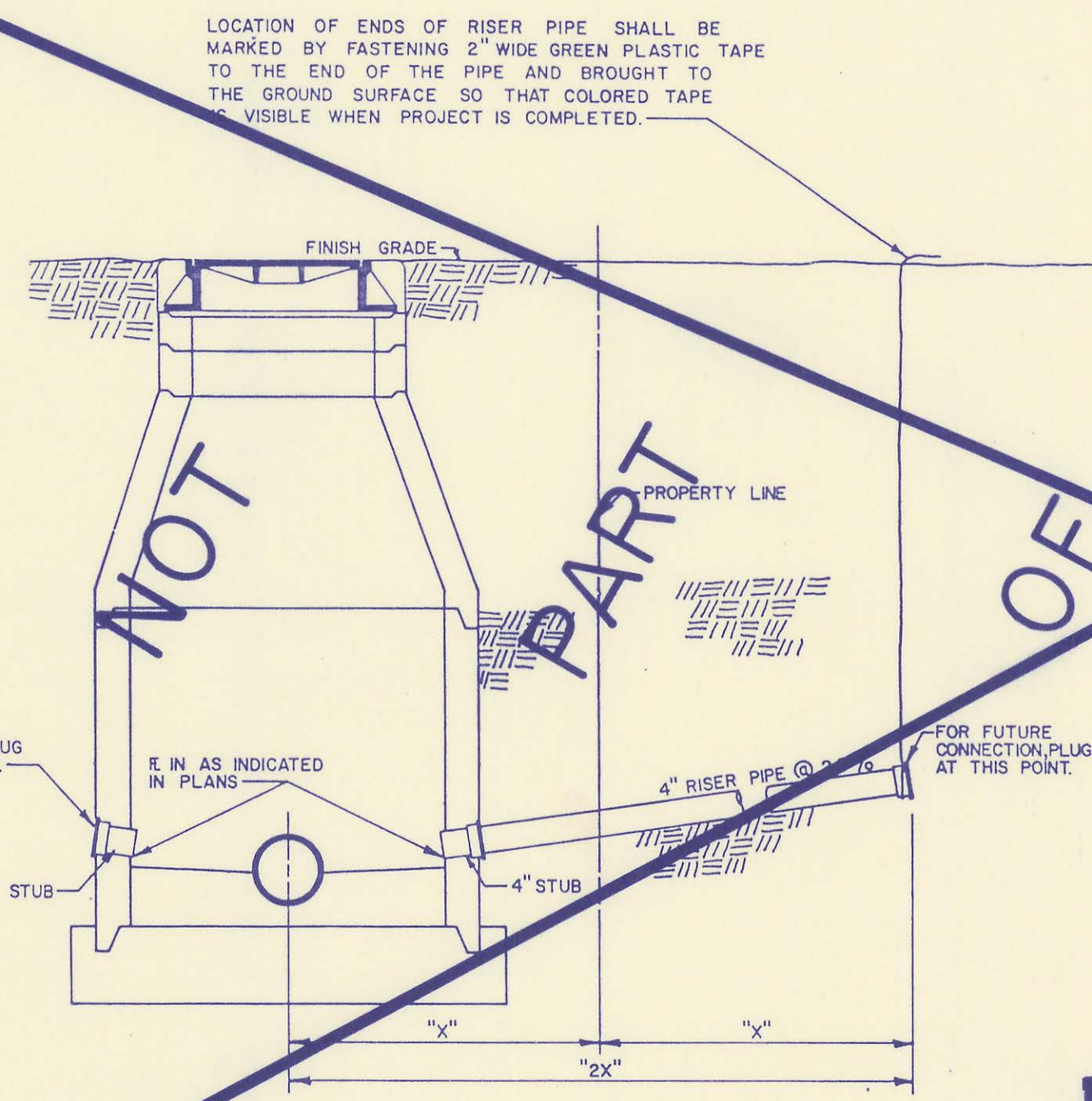
**MH 47**  
STA. 140+38.18, MAIN NO. 1

NOTE: THE CONTRACTOR SHALL MAINTAIN CONTINUOUS SERVICE WITHIN THE EXISTING 18" PIPE DURING CONSTRUCTION OF THE MANHOLE. THE CONTRACTOR SHALL SUBMIT A CONSTRUCTION SEQUENCE TO THE ENGINEER FOR APPROVAL BEFORE BEGINNING THIS WORK.

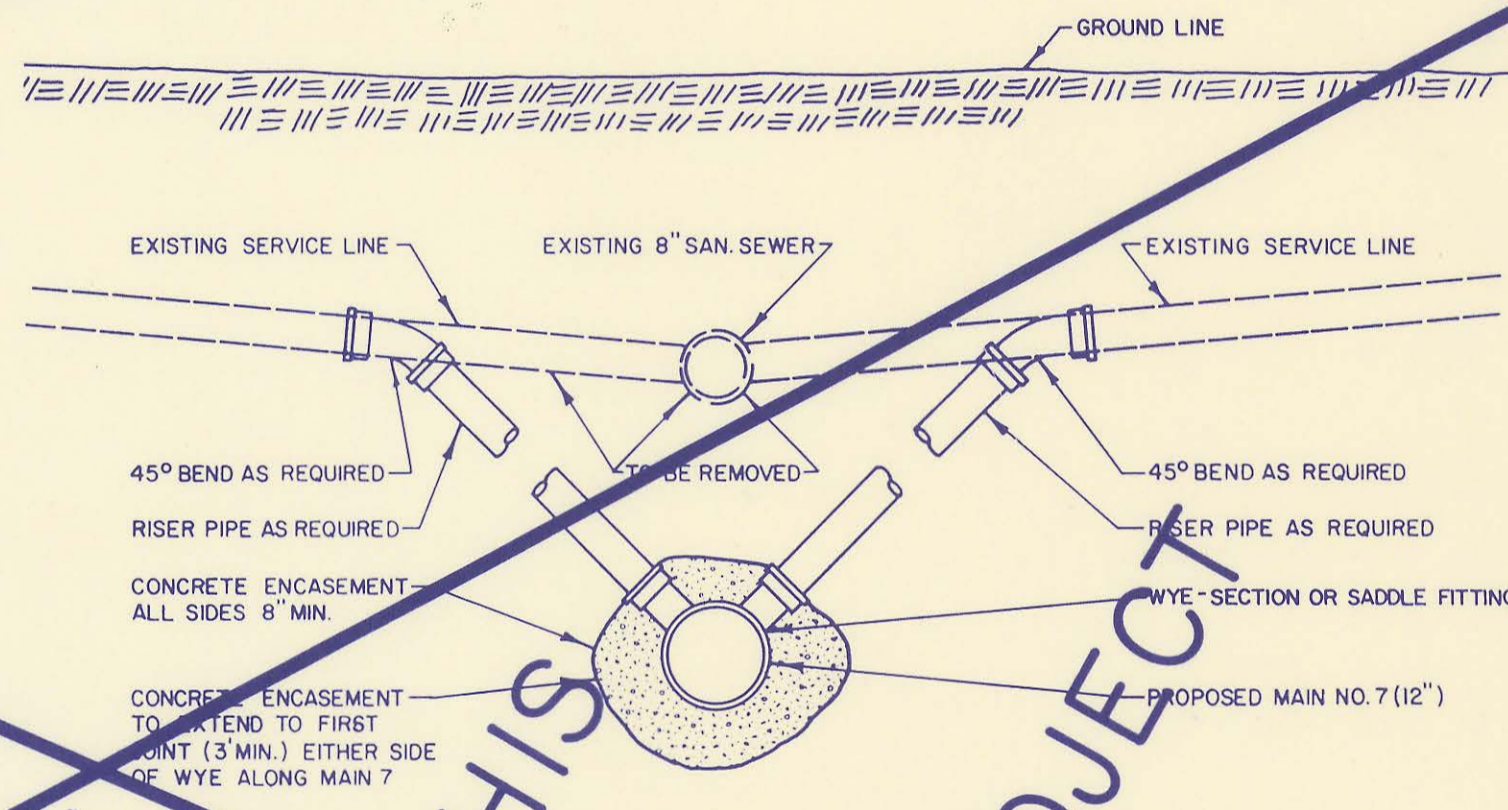


**"BREAK IN" DETAIL**  
STA. 44+03.77, MAIN NO. 7

NOTE: THE CONTRACTOR SHALL PROVIDE TEMPORARY PUMPING OR CHANNELING WITHIN THE MANHOLE TO MAINTAIN CONTINUOUS SERVICE IN THE EXISTING 8" PIPE DURING CONSTRUCTION.



**SERVICE STUB DETAIL**



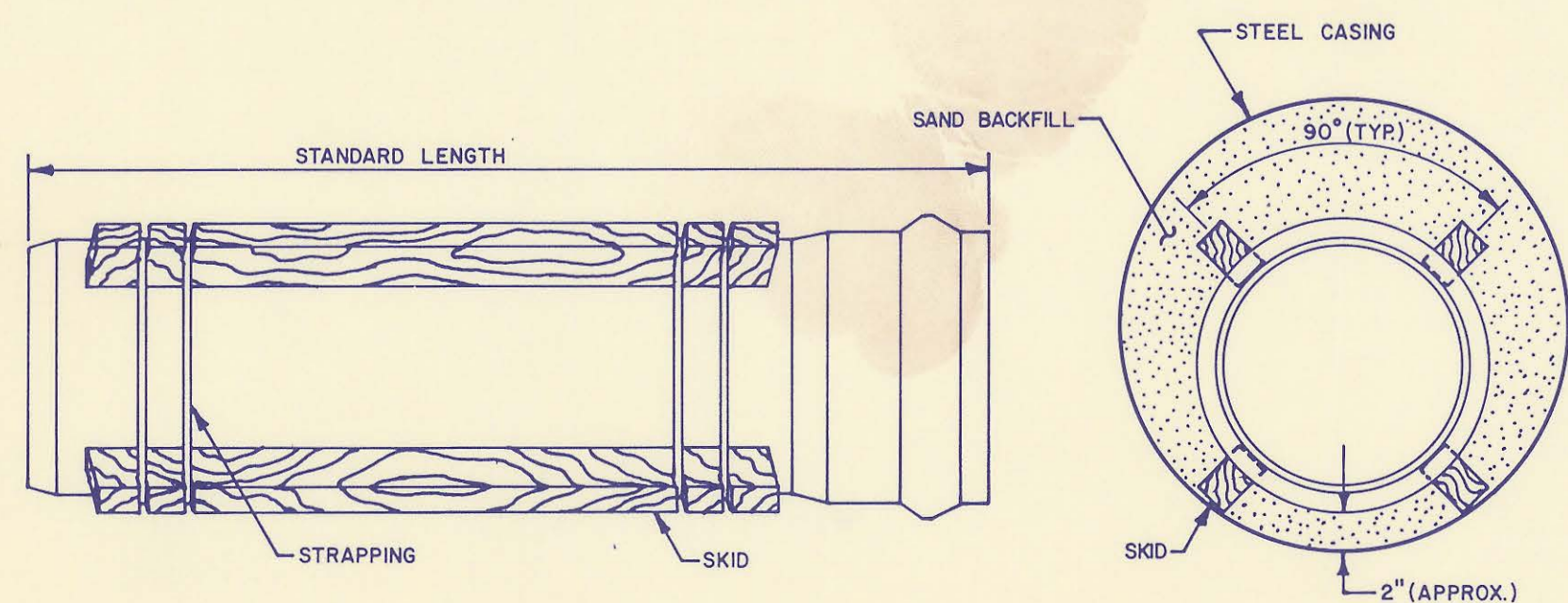
**WYE AND RISER DETAIL**

CONTRACTOR SHALL VERIFY THE LOCATIONS AND SIZES OF THE EXISTING SERVICE LINES AND HE SHALL INSTALL WYES AND RISERS OF MATCHING SIZE SERVICE LINE PIPE MATERIAL DIFFERS FROM WYE AND RISER MATERIAL, THE CONTRACTOR SHALL PROVIDE ADAPTERS APPROVED BY THE ENGINEER.

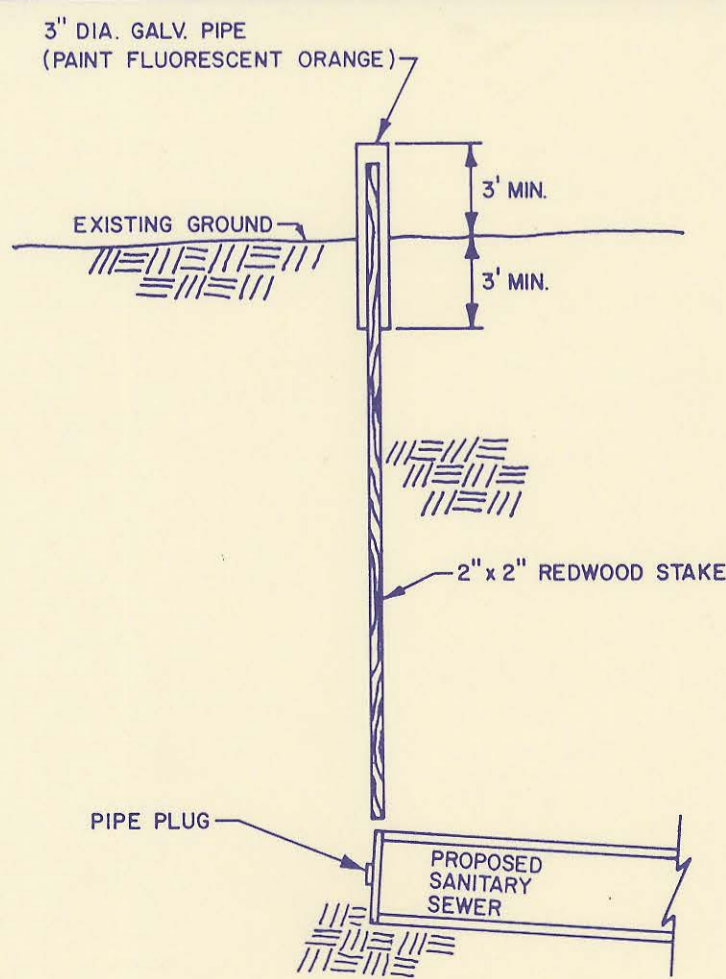
**WYE LOCATION TABLE**

NOTE: THE ENGINEER SHALL MEASURE THE LOCATIONS OF THE INSTALLED WYES AND RECORD THE LOCATIONS ON A LOCATION TABLE SUCH AS THE TABLE BELOW.

WYE NO.	DESIGN LOCATION			RISER PIPE (L.F.)	DISTANCE FROM MANHOLE	
	LATERAL NO.	STATION	BLOCK NO. LOT NO. DIRECTION		UPSTREAM	DOWNSTREAM

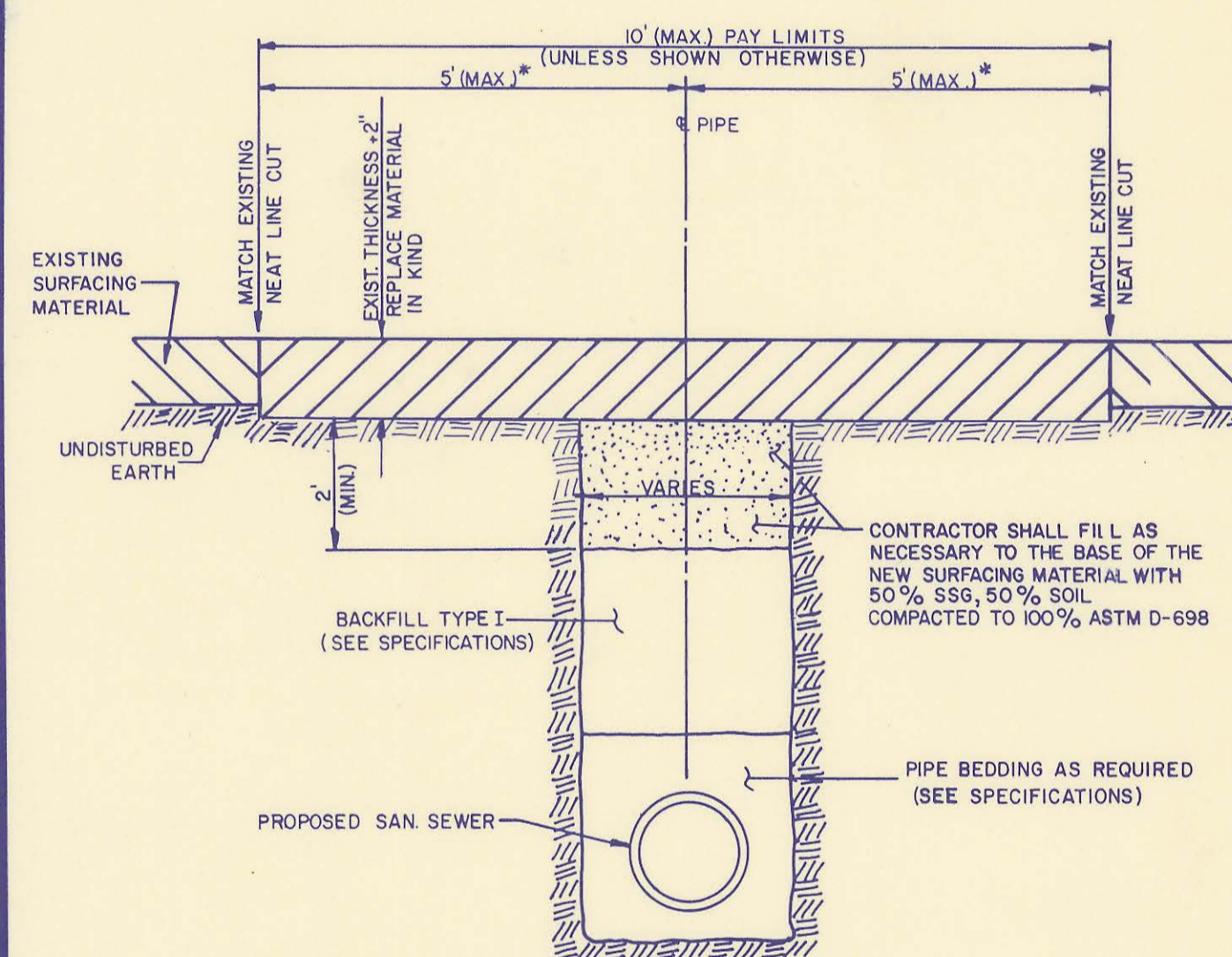


**STEEL ENCASMENT DETAIL**

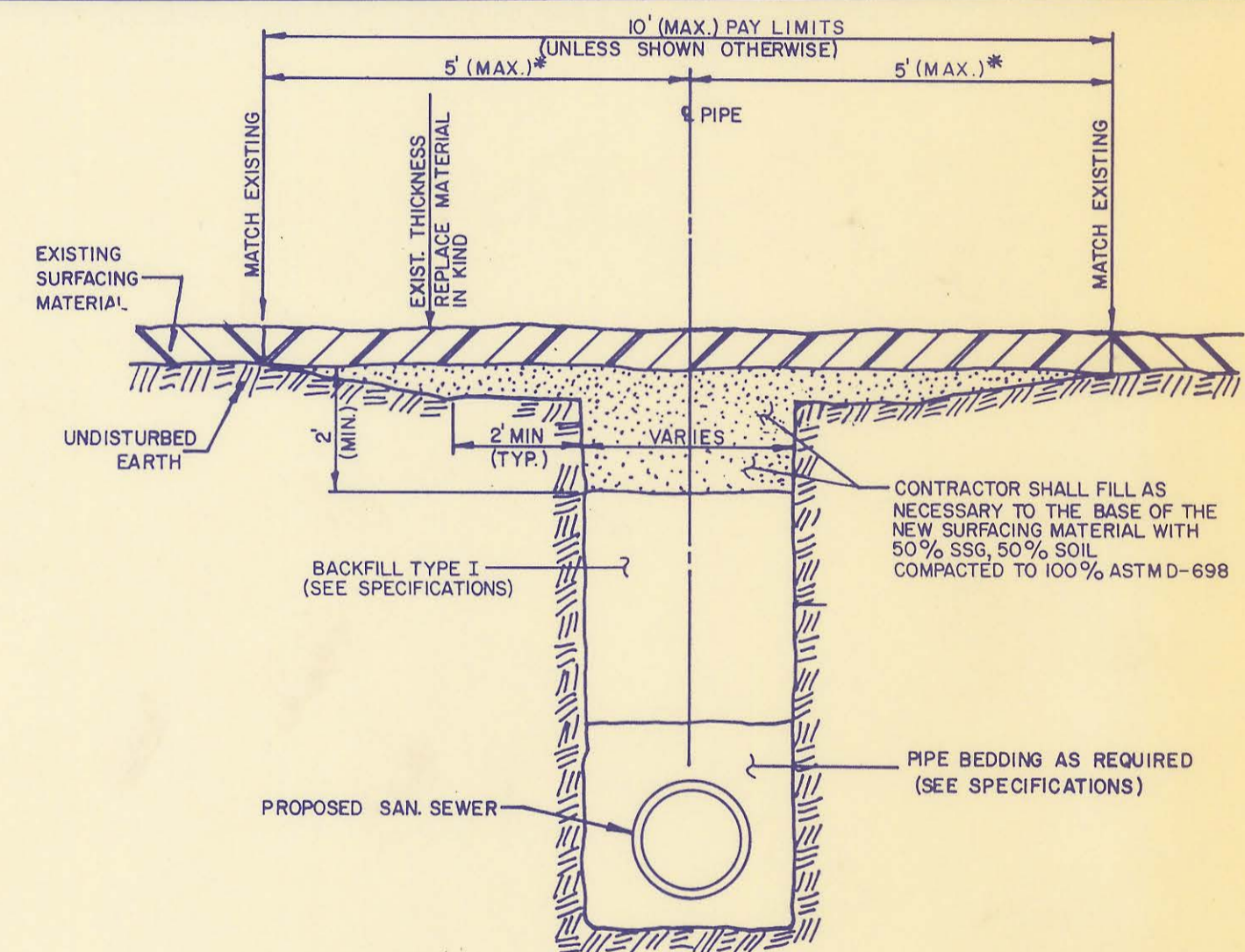


**BURIED PIPE STAKING DETAIL**

(STAKING & PLUGGING SHALL BE SUBSIDIARY TO THE PIPE LINE INSTALLATION)

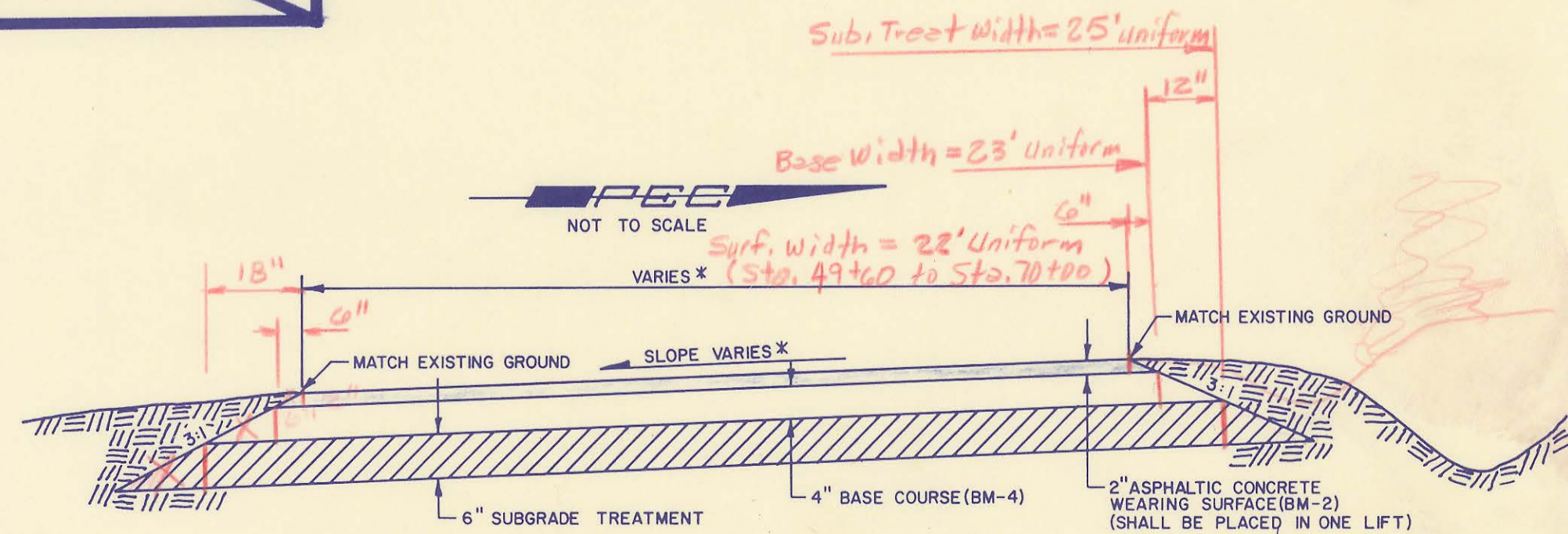


**PAVED DRIVE-REMOVAL AND REPLACEMENT**



**UNPAVED DRIVE-REMOVAL AND REPLACEMENT**

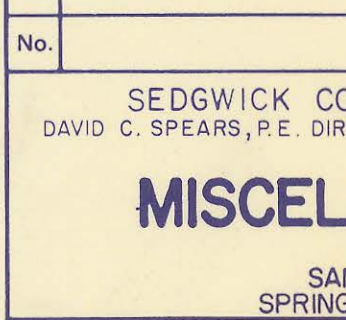
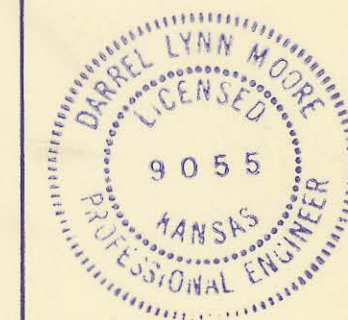
\* MINIMUM = TRENCH WIDTH + 2'



**EAST LYNNE AVENUE**  
**TYPICAL REPLACEMENT DETAIL**

\* MATCH EXISTING SLOPE AND WIDTH

PRIOR TO REMOVING THE EXISTING ROADWAY, THE CONTRACTOR SHALL PROVIDE TO THE OWNER A HORIZONTAL AND VERTICAL CONTROL SURVEY ALONG EAST LYNNE AVENUE. THE CONTRACTOR SHALL THEN USE THIS CONTROL SURVEY FOR REPLACEMENT OF THE ROADWAY. UPON COMPLETION OF THE WORK, THE OWNER WILL CHECK THE WORK TO ENSURE THAT THE ROAD WAS REPLACED TO ITS ORIGINAL LOCATION, HORIZONTALLY AND VERTICALLY. THE CONTRACTOR SHALL PROVIDE A CONSTRUCTION SEQUENCE SCHEDULE PRIOR TO BEGINNING THIS WORK REFLECTING HIS METHOD FOR PROVIDING CONTINUOUS ACCESS FOR AREA RESIDENTS.



No.	Revision	By	Date

SEDGWICK COUNTY BUREAU OF PUBLIC SERVICES  
DAVID C. SPEARS, P.E. DIRECTOR, BUREAU OF PUBLIC SERVICES/COUNTY ENGINEER

**MISCELLANEOUS DETAILS**

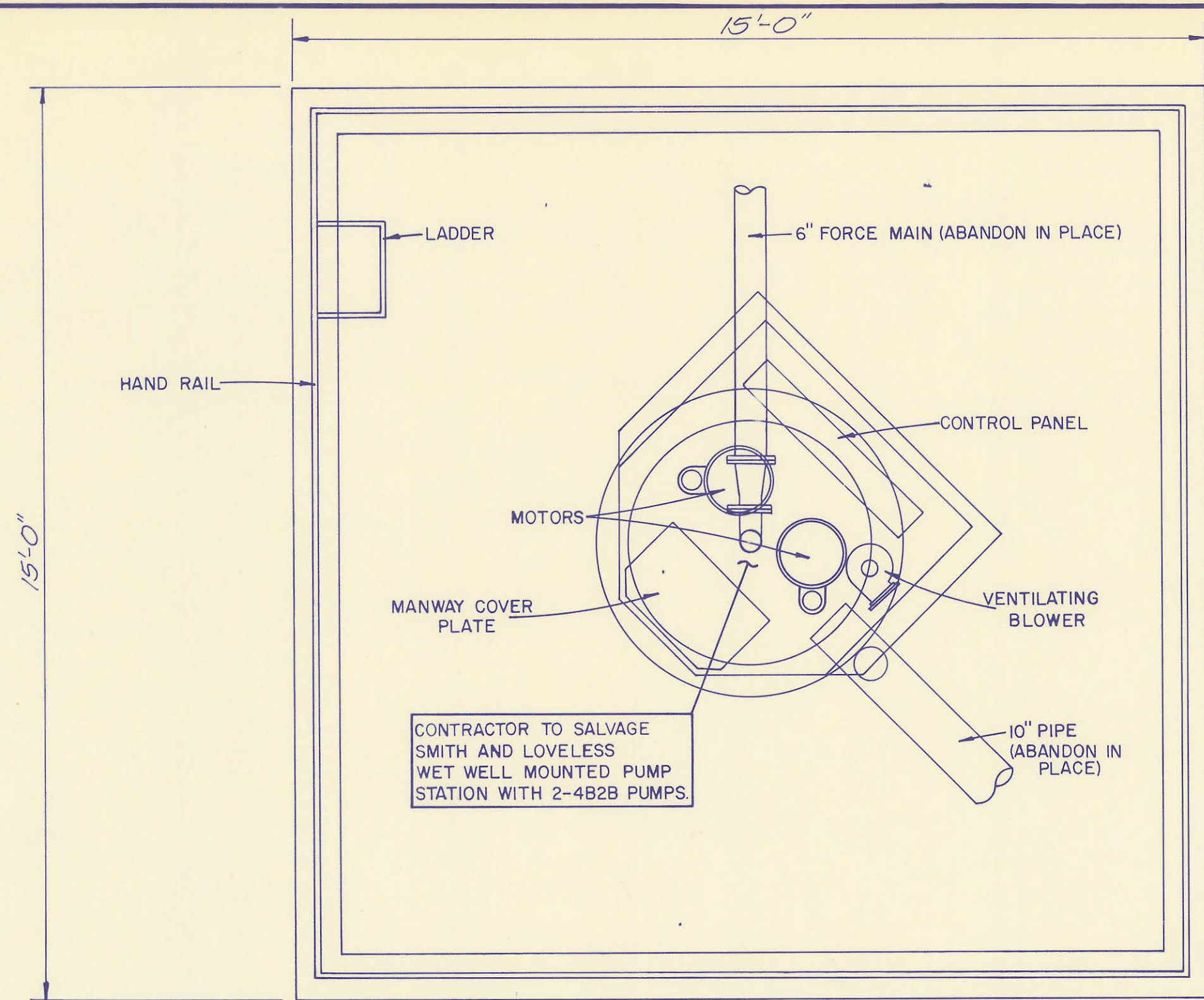
SANITARY SEWER INTERCEPTOR  
SPRING CREEK JOINT SEWER DISTRICT

**PROFESSIONAL ENGINEERING CONSULTANTS, P.A.**

ENGINEERS  
WICHITA, KANSAS

Designed by *RDM, LM, RFJ* Job No. *34-B5254* Sht. *9* of *36*  
Drawn by *RFJ, SM* Date *Feb. 1980*

PART "A"



PLAN VIEW

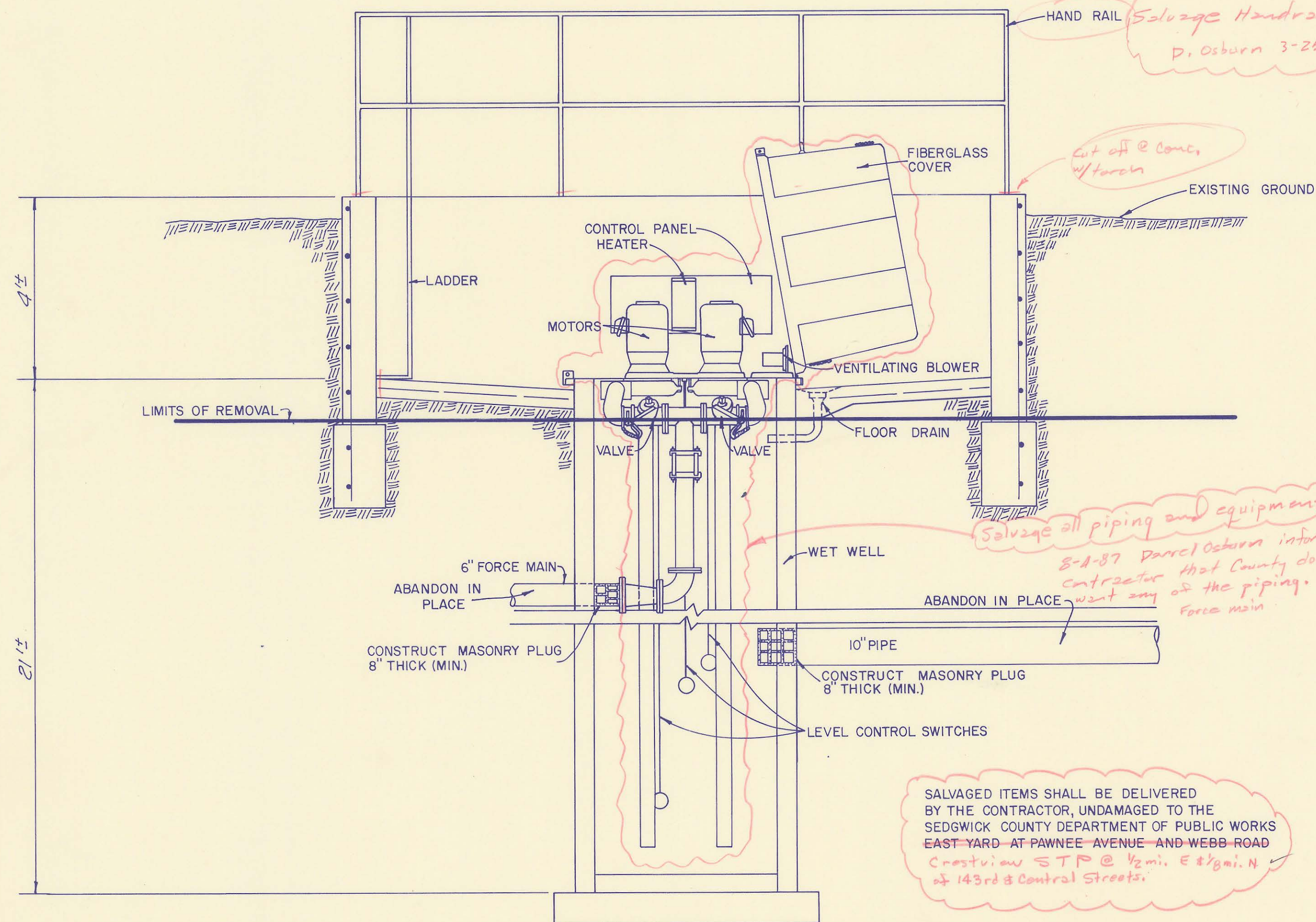
NOTES:

- CONSTRUCTION OF SPRING CREEK INTERCEPTOR MAIN NO. 1 MUST BE COMPLETE AND ACCEPTED BY THE ENGINEER BEFORE DEMOLITION WORK ON THE PARK MEADOW ESTATES PUMPING STATION BEGINS. THE CONTRACTOR SHALL COORDINATE SALVAGE AND DEMOLITION OPERATIONS WITH THE ENGINEER BEFORE BEGINNING THE WORK.
- THE CONTRACTOR SHALL COMPLETELY DRAIN ALL WASTEWATER FROM THE 6-INCH FORCE MAIN AND DISPOSE OF THE WASTEWATER IN A MANNER ACCEPTABLE TO THE ENGINEER. THE COMPLETED MAIN NO. 1 MAY BE USED FOR THIS DISPOSAL WITH THE WRITTEN CONSENT OF THE ENGINEER.
- DISCONNECT THE ELECTRIC SERVICE LINE TO THE PUMP STATION AND GENERATOR. REMOVE THE EXISTING SERVICE WIRE FROM THE EQUIPMENT CONNECTIONS TO THE METER. THE CONTRACTOR SHALL CONTACT K.G.&E. TO ORDER REMOVAL OF THE METER.
- THE EMERGENCY GENERATOR, AND THE PUMP STATION EQUIPMENT SHALL BE CAREFULLY SALVAGED BY THE CONTRACTOR AND DELIVERED TO A STORAGE SITE AS DIRECTED BY THE ENGINEER.
- ALL PIPE CONNECTIONS TO THE WET WELL SHALL BE PLUGGED BY INSTALLING MASONRY PLUGS AT LEAST 8-INCHES THICK IN THE ENDS OF THE PIPES.
- THE CONTRACTOR SHALL DEMOLISH THE PUMP STATION PIT AND THE GENERATOR PAD BY BREAKING UP THE WALLS, FLOOR, AND PAD; AND DISPOSING OF THE HANDRAIL AND CONCRETE RUBBLE IN A MANNER AND LOCATION APPROVED BY THE ENGINEER. THE WET WELL SHALL BE ABANDONED IN PLACE BY PUNCTURING OR BREAKING THROUGH THE FLOOR OR THROUGH THE WALLS WITHIN ONE FOOT OF THE FLOOR TO PROVIDE DRAINAGE AND THEN COMPLETELY FILLING THE WET WELL AND PIT AREA WITH APPROVED SAND MATERIAL TO WITHIN TWO FEET OF THE EXISTING GRADE. THE UPPER TWO FEET OF THE PIT AREA SHALL BE BACKFILLED WITH APPROVED EXISTING MATERIAL COMPACTED AS REQUIRED FOR TRENCH BACKFILL TO MATCH THE EXISTING GRADE OF THE IMMEDIATE AREA.
- CONCRETE RUBBLE FROM DEMOLITION OF THE PUMP PIT AND GENERATOR PAD MAY BE PLACED IN THE WET WELL UP TO THE LIMITS OF REMOVAL AS SHOWN IN THE PLANS. THE LARGEST DIMENSION OF BROKEN CONCRETE PIECES USED AS FILL SHALL NOT EXCEED 18-INCHES. REBAR SHALL NOT EXTEND MORE THAN TWO-INCHES FROM ANY RUBBLE USED AS FILL. LOOSE REBAR SHALL NOT BE USED AS FILL.
- ALL AREAS DISTURBED BY THE DEMOLITION WORK SHALL BE REGRADED SMOOTH AND SEEDED AS DIRECTED IN THE SPECIFICATIONS.
- CONTRACTOR SHALL REMOVE NATURAL GAS PIPING FROM GENERATOR TO GAS METER. CONTRACTOR SHALL CONTACT GAS SERVICE COMPANY TO DISCONNECT SERVICE AND REMOVE THE GAS METER.

*Meredith Company for repair of existing S.T.P.*

*Only 5' of force main was left in ground with no plugs. 10" inlet pipe was plugged with concrete at existing 12-in manhole which was only about 10' away.*

*Packed into wet well with the large backhoe until the whole wet well settled 2-3 inches. 4-5 feet of compacted soil backfilled over the old wet well with all concrete removed except lower portion of wet well.*



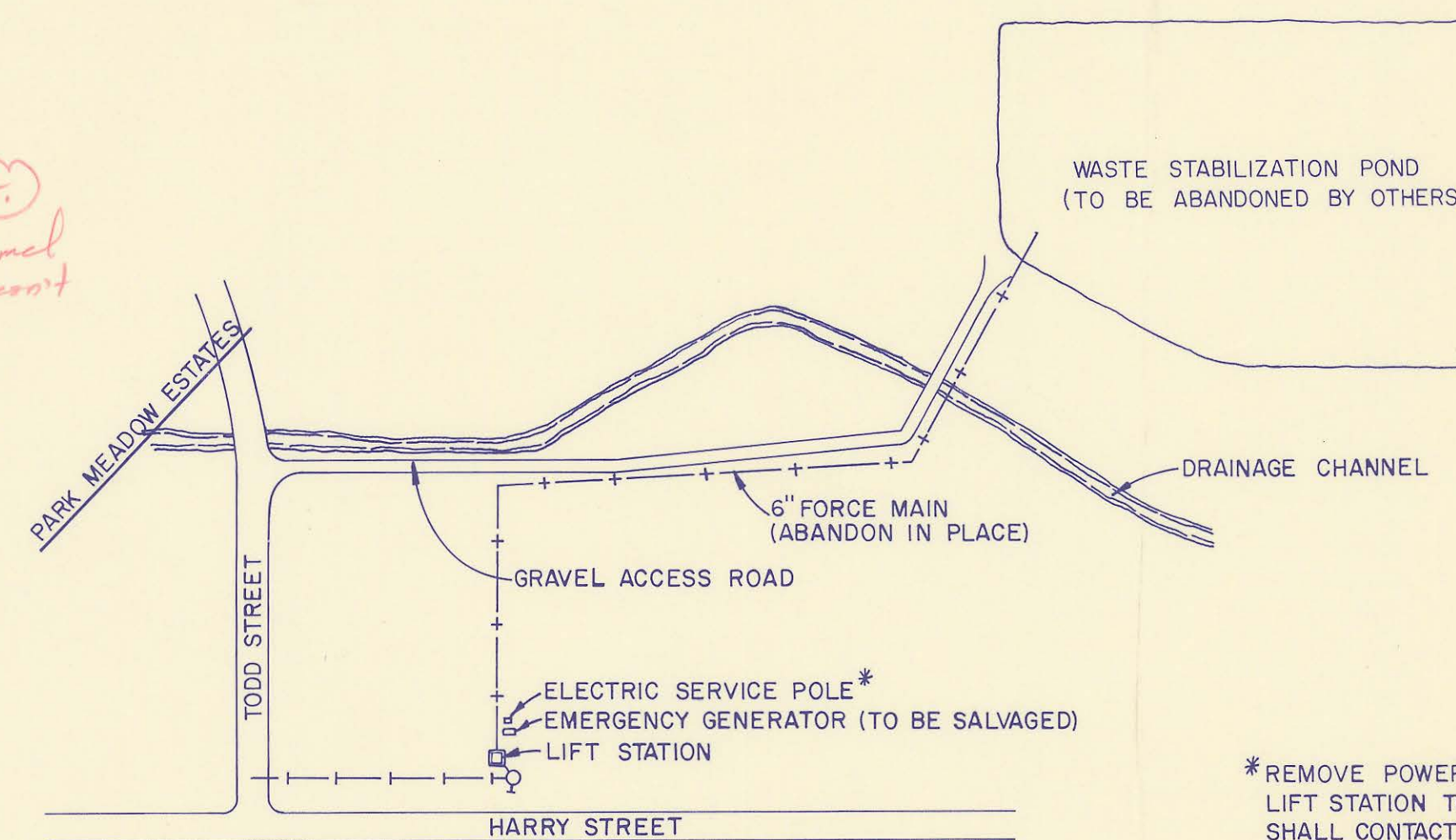
ELEVATION VIEW  
LIFT STATION DEMOLITION PLAN

*Salvage Handrail  
D. Osburn 3-25-87*

*Cut off @ Cont. w/ torch*

*Salvage all piping and equipment.  
8-8-87 Parcel Osburn informal contractor that County doesn't want any of the piping. Force main*

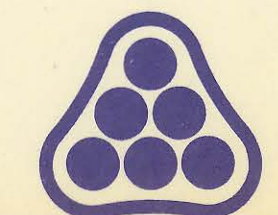
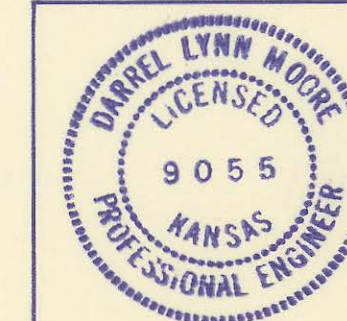
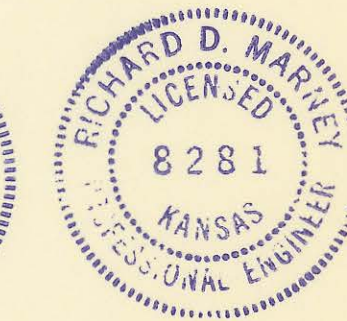
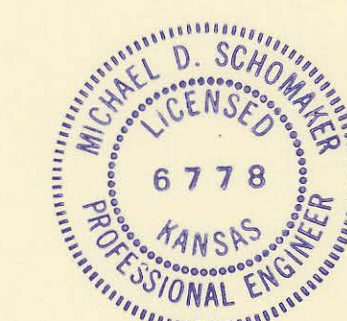
*SALVAGED ITEMS SHALL BE DELIVERED BY THE CONTRACTOR, UNDAMAGED TO THE SEDGWICK COUNTY DEPARTMENT OF PUBLIC WORKS EAST YARD AT PAWNEE AVENUE AND WEBB ROAD Crestview S.T.P. @ 1/2 mi. E of Hwy. N 143rd & Central Streets.*



LOCATION MAP  
(INTERCEPTOR IMPROVEMENTS NOT SHOWN)

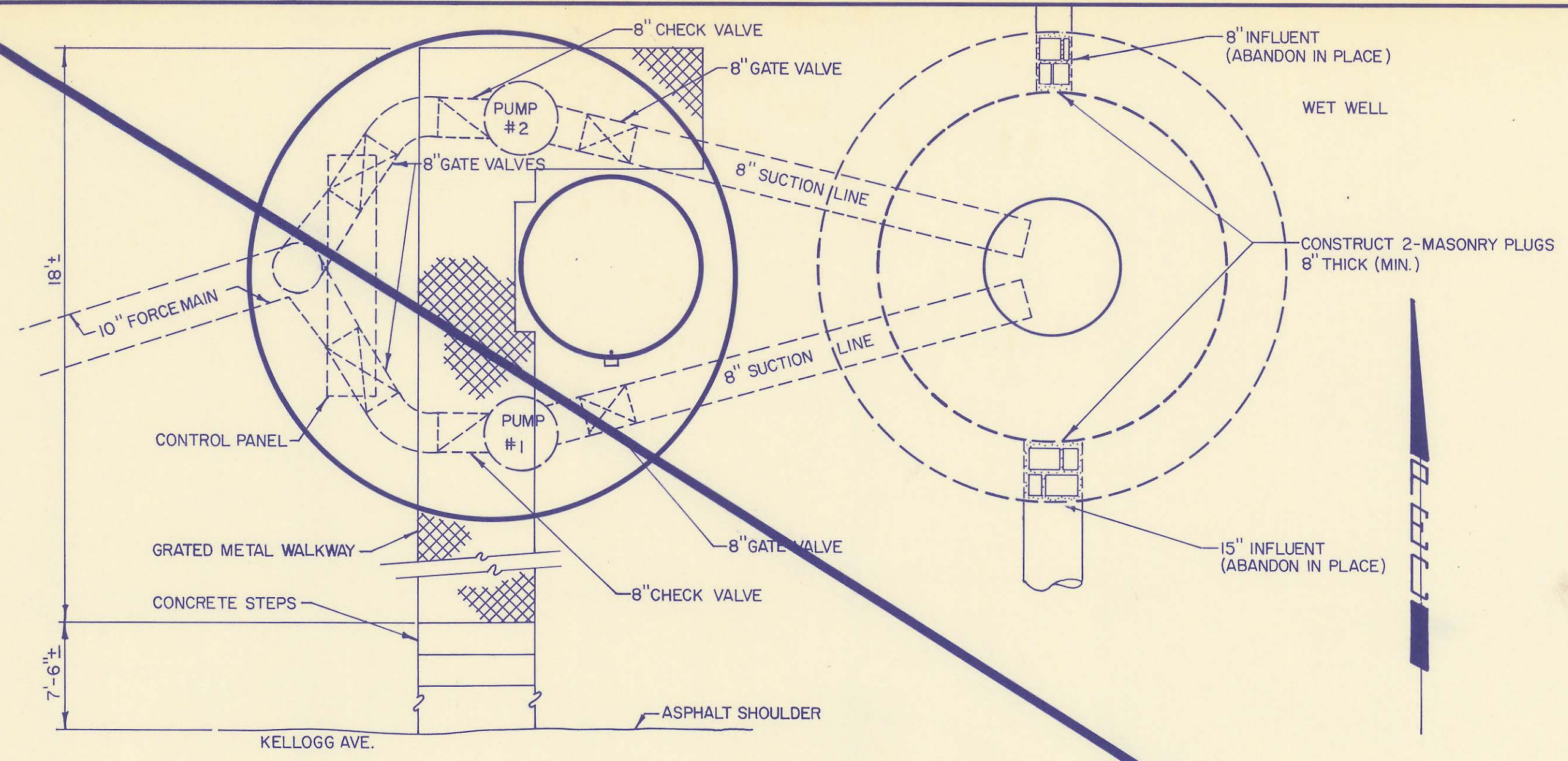
1"=200'

\*REMOVE POWER SERVICE LINE FROM LIFT STATION TO METER. CONTRACTOR SHALL CONTACT KG&E TO ORDER DISCONNECTION OF SERVICE AND REMOVAL OF METER.



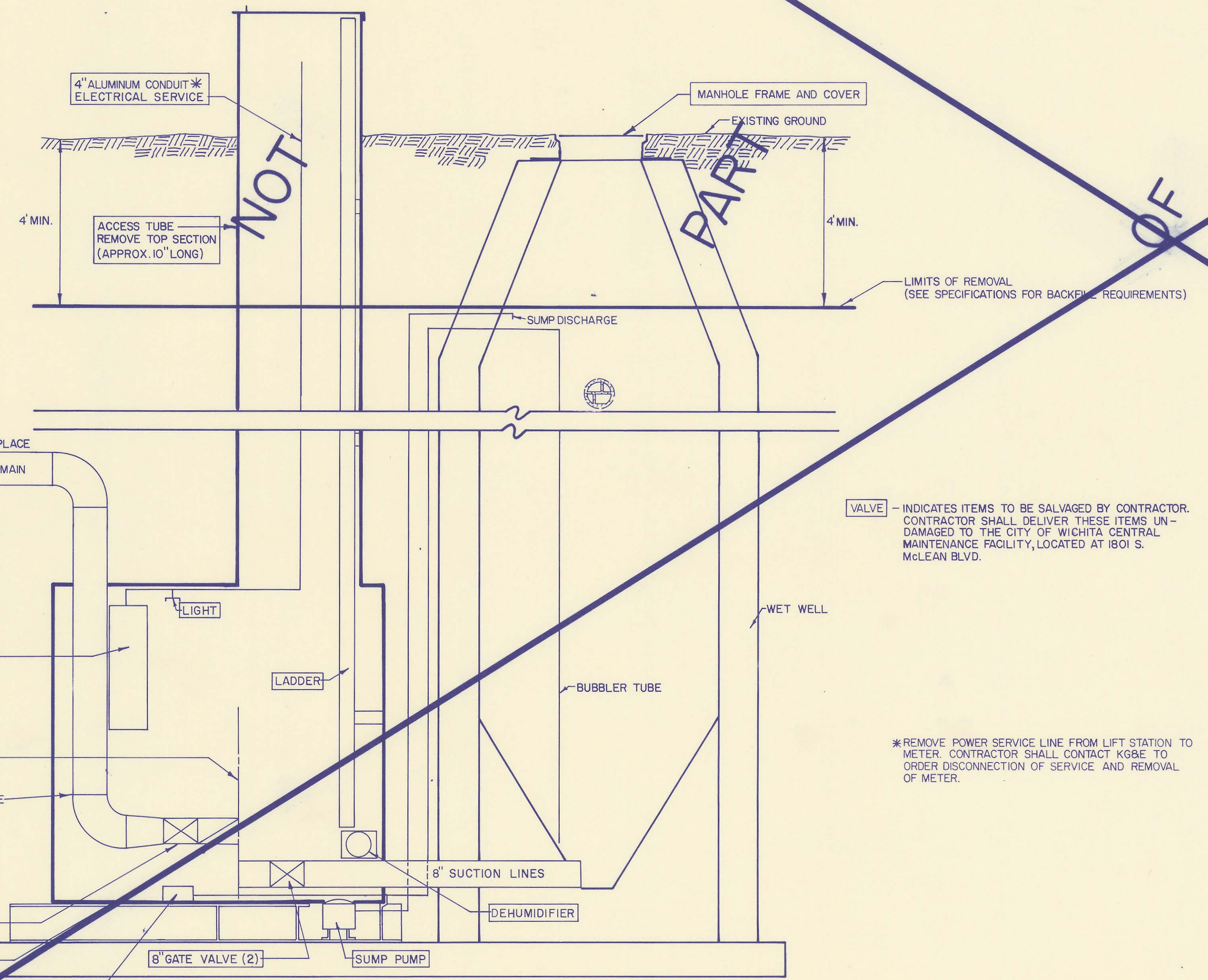
No.	Revision	By	Date
SEDGWICK COUNTY BUREAU OF PUBLIC SERVICES DAVID C. SPEARS, P.E. DIRECTOR, BUREAU OF PUBLIC SERVICES/COUNTY ENGINEER <b>PARK MEADOW ESTATES</b> <b>WASTEWATER FACILITIES DEMOLITION</b> SANITARY SEWER INTERCEPTOR SPRING CREEK JOINT SEWER DISTRICT <b>PROFESSIONAL ENGINEERING CONSULTANTS, P.A.</b> ENGINEERS WICHITA, KANSAS			
Designed by	RDM, LM, RFJ	Job No.	34-89254-1
Drawn by	CL, TWC	Date	Feb. 1986
		Sh.	10 of 36

PART "B"

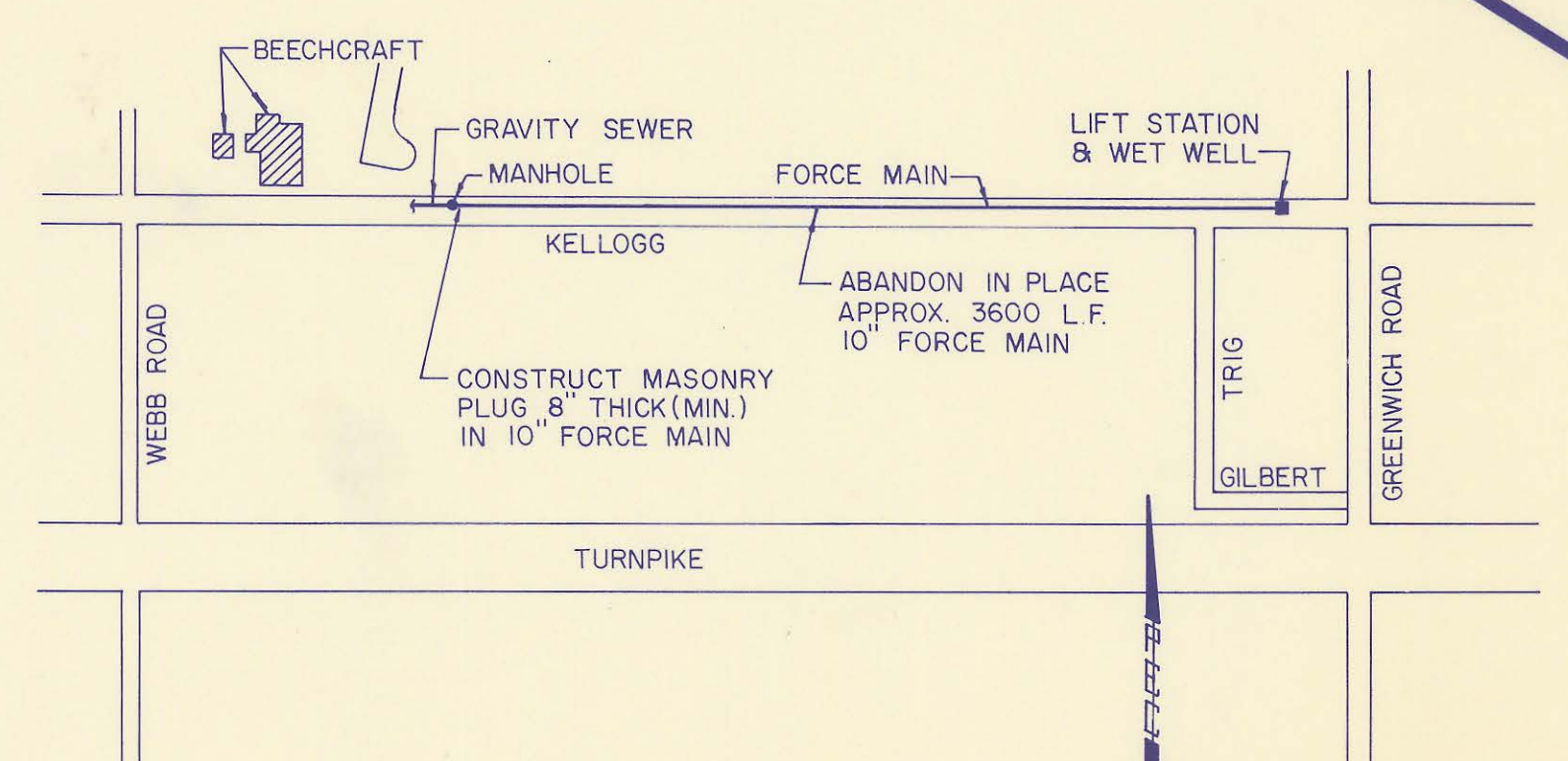


**PLAN VIEW**

- NOTES:
1. AFTER THE INTERCEPTOR HAS BEEN COMPLETED AND PLACED INTO SERVICE SO THAT THE CITY OF WICHITA LIFT STATION IS NO LONGER IN USE, THE CONTRACTOR SHALL DEMOLISH THE LIFT STATION AS DIRECTED HEREIN. BEFORE BEGINNING DEMOLITION, THE CONTRACTOR SHALL CONTACT THE SEWER MAINTENANCE DIVISION OF THE WICHITA WATER AND WASTEWATER DEPARTMENT (268-4210) TO COORDINATE THE WORK AND THE DELIVERY OF ITEMS TO BE SALVAGED.
  2. THE CONTRACTOR SHALL COMPLETELY DRAIN ALL WASTEWATER FROM THE 10-INCH FORCE MAIN AND DISPOSE OF THE WASTEWATER IN A MANNER ACCEPTABLE TO THE ENGINEER.
  3. THE CONTRACTOR SHALL DISCONNECT THE ELECTRIC SERVICE TO THE LIFT STATION AND REMOVE THE EXISTING SERVICE WIRE FROM THE LIFT STATION TO THE METER AND SHALL CONTACT KG&E TO ORDER REMOVAL OF THE METER.
  4. THE MANHOLE FRAME AND COVER, METAL WALKWAY, WASTEWATER PUMPS, CONTROL PANEL, VALVES, PIPE FITTING, COMPRESSORS, SUMP PUMP, DEHUMIDIFIER, ACCESS LADDER, AND ACCESS TUBE AND ANY OTHER ITEMS INDICATED FOR SALVAGE SHALL BE CAREFULLY REMOVED FROM THE LIFT STATION AND DELIVERED TO THE CITY OF WICHITA CENTRAL MAINTENANCE FACILITY AT 1801 SOUTH McLEAN BOULEVARD.
  5. ALL PIPE CONNECTIONS TO THE LIFT STATION AND WET WELL SHALL BE PLUGGED USING EITHER BLIND FLANGES OR 8-INCH THICK FITTING MASONRY PLUGS AS REQUIRED. THE 10-INCH FORCE MAIN ALSO SHALL BE PLUGGED AT THE RECEIVING MANHOLE BY CONSTRUCTION OF AN 8-INCH MASONRY PLUG (SEE LOCATION MAP).
  6. THE WET WELL MANHOLE AND THE LIFT STATION SHALL BE ABANDONED IN PLACE BY REMOVING ANY WALLS, PIPES, CONDUIT, CONCRETE STEPS, OR OTHER MATERIAL TO A DEPTH OF AT LEAST 4 FEET BELOW EXISTING GRADE. DRAINAGE OF THE LIFT STATION AND MANHOLE SHALL BE PROVIDED BY PUNCTURING OR BREAKING THE WALLS OF BOTH STRUCTURES WITHIN ONE FOOT OF THE STRUCTURE FLOOR. BOTH STRUCTURES THEN SHALL BE COMPLETELY FILLED WITH APPROVED SAND MATERIAL TO WITHIN TWO FEET OF GRADE. THE FINAL TWO FEET SHALL BE BACKFILLED WITH APPROVED EXISTING MATERIAL COMPACTED AS REQUIRED FOR TRENCH BACKFILL.
  7. DEBRIS SUCH AS BRICK, GROUT, AND BROKEN CONCRETE FROM DEMOLITION OF THE STRUCTURES MAY BE DEPOSITED IN THE BOTTOM OF THE STRUCTURES AS FILLED. THE LARGEST DIMENSION IN ANY DIRECTION OF MATERIAL DISPOSED IN THIS MANNER SHALL BE NO MORE THAN 18 INCHES.
  8. ALL AREAS DISTURBED BY THIS WORK SHALL BE REGRADED TO THE ORIGINAL CONTOURS AND SLOPED AS DIRECTED IN THE SPECIFICATIONS.



**LIFT STATION AND WET WELL DEMOLITION PLAN**



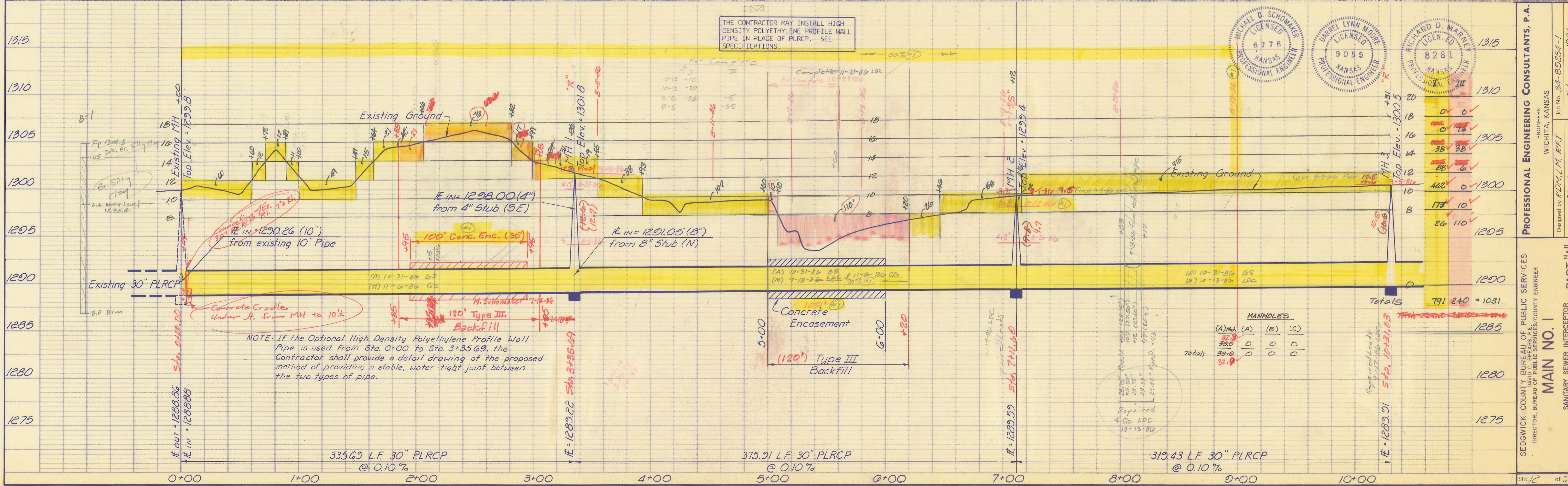
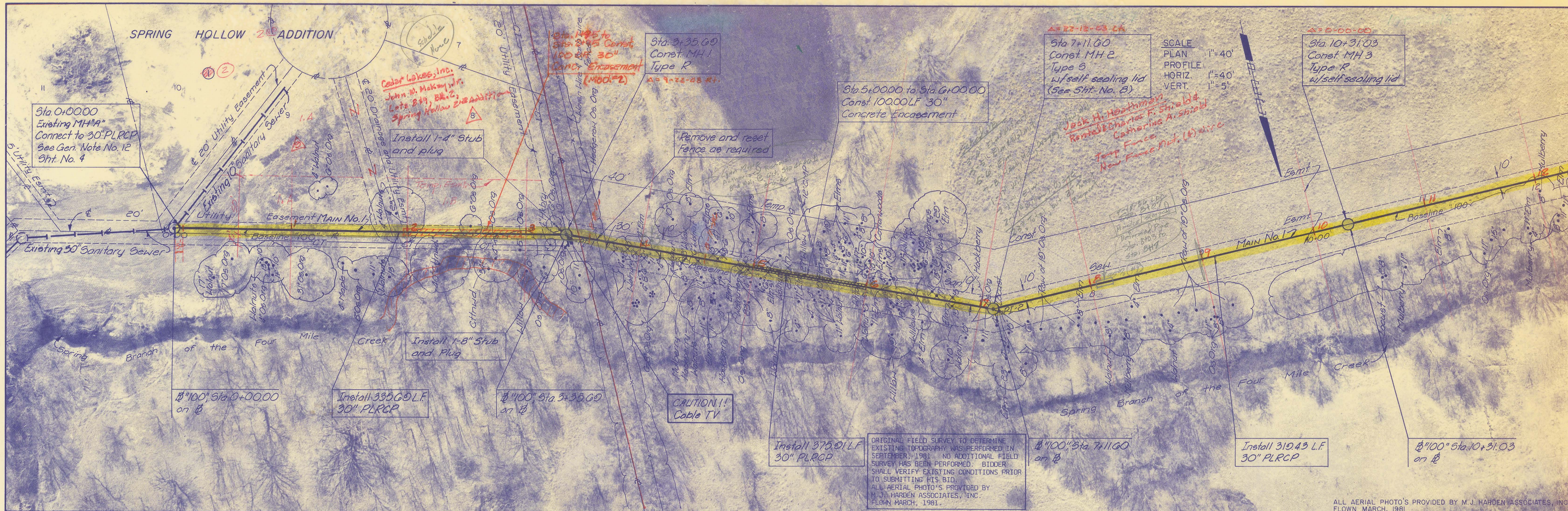
**LOCATION MAP**

SCALE: 1" = 800'



Note: Contractors may arrange to inspect lift station prior to bid by calling the Sewer Maintenance Division of the Wichita Department of Water and Water Pollution Control. Ph. 268-4210

	Revision		By		Date	
	SEDGWICK COUNTY BUREAU OF PUBLIC SERVICES DAVID C. SPEARS, P.E. DIRECTOR, BUREAU OF PUBLIC SERVICES/COUNTY ENGINEER <b>CITY OF WICHITA LIFT STATION NO. II DEMOLITION</b> SANITARY SEWER INTERCEPTOR SPRING CREEK JOINT SEWER DISTRICT <b>PROFESSIONAL ENGINEERING CONSULTANTS, P.A.</b> ENGINEERS WICHITA, KANSAS					
	Designed by RDM, LM, RFJ		Job No. 34-85254-1		Sht. //	
	Drawn by CL, TWC		Date			



NOTE: If the Optional High Density Polyethylene Profile Wall Pipe is used from Sta. 0+00 to Sta. 3+35.69, the Contractor shall provide a detail drawing of the proposed method of providing a stable, water-tight joint between the two types of pipe.

THE CONTRACTOR MAY INSTALL HIGH DENSITY POLYETHYLENE PROFILE WALL PIPE IN PLACE OF PLRCP. SEE SPECIFICATIONS.

MANHOLES			
(A) M.H.	(A)	(B)	(C)
Totals	32.0	0	0
	32.0	0	0

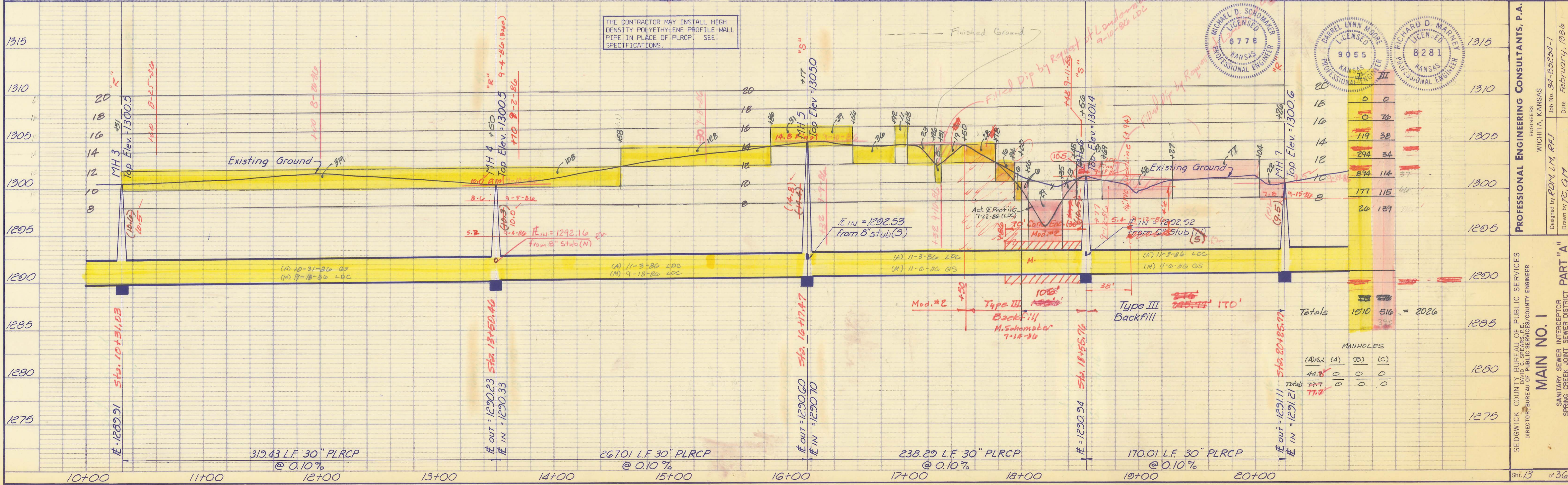
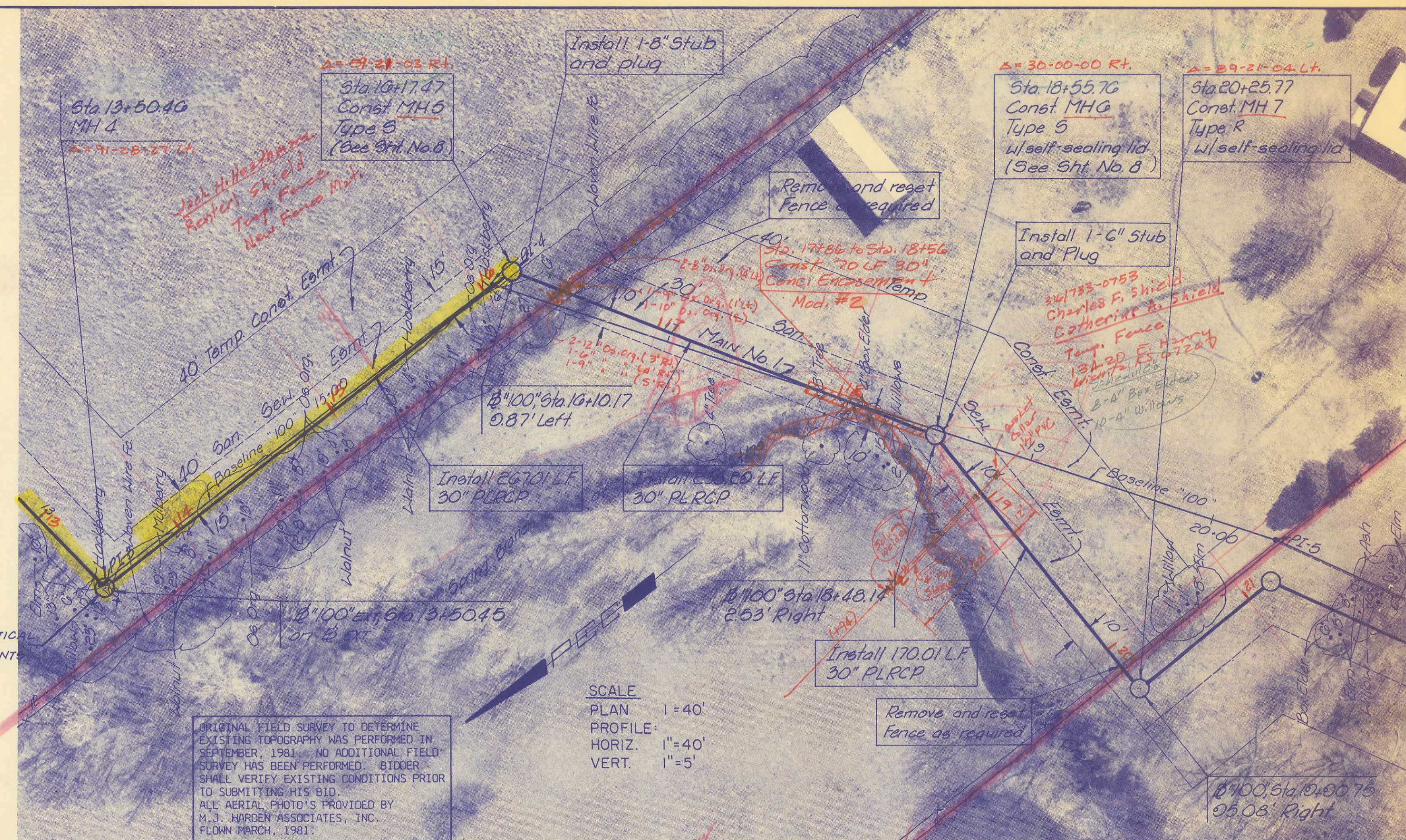
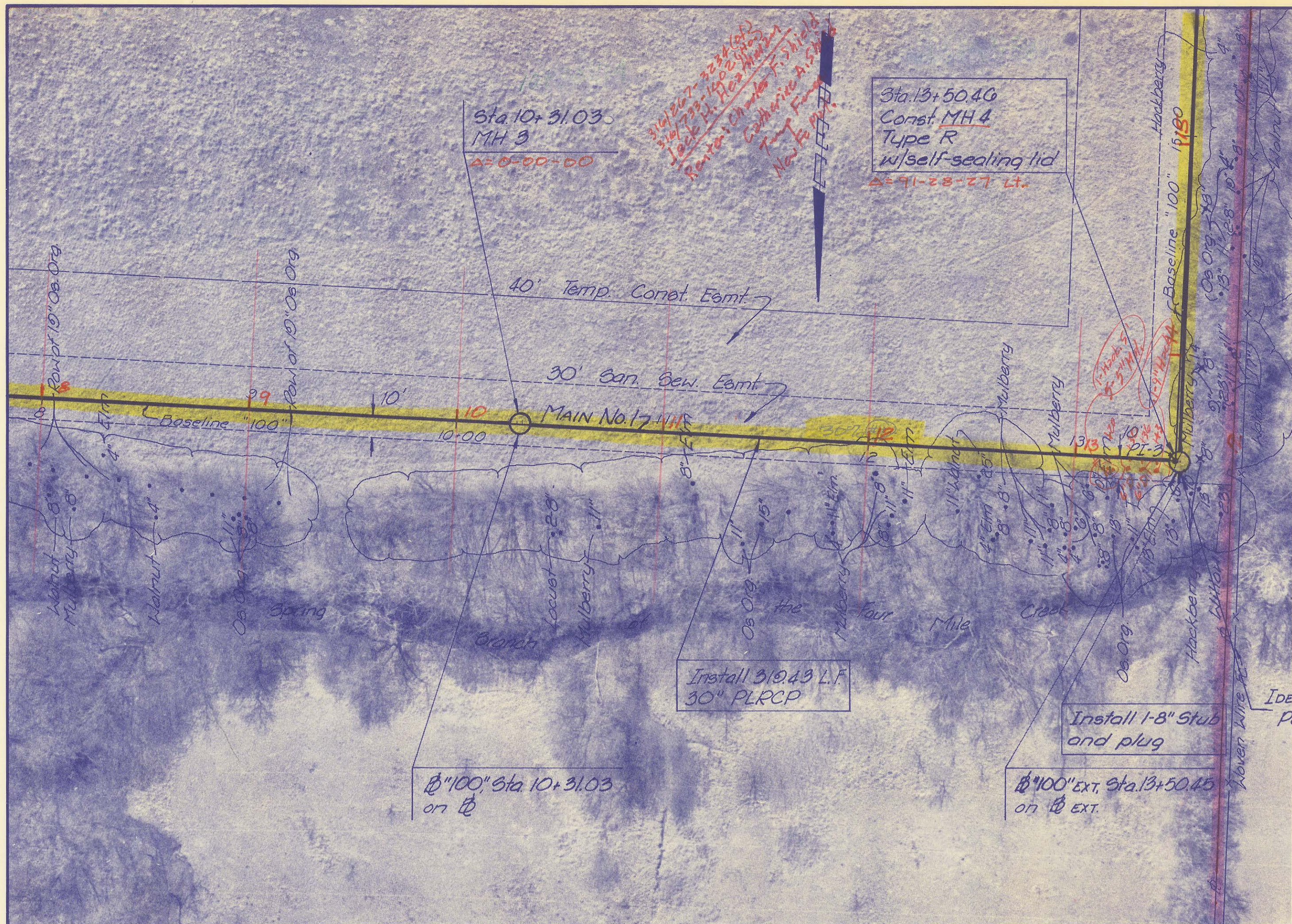
Elev.	0'	2'	4'	6'	8'	10'	12'	14'	16'	18'	20'
1315	0	0	0	0	0	0	0	0	0	0	0
1310	0	0	0	0	0	0	0	0	0	0	0
1305	0	0	0	0	0	0	0	0	0	0	0
1300	0	0	0	0	0	0	0	0	0	0	0
1295	0	0	0	0	0	0	0	0	0	0	0
1290	0	0	0	0	0	0	0	0	0	0	0
1285	0	0	0	0	0	0	0	0	0	0	0
1280	0	0	0	0	0	0	0	0	0	0	0
1275	0	0	0	0	0	0	0	0	0	0	0
Totals	791	240	0	0	0	0	0	0	0	0	0

SEDGWICK COUNTY BUREAU OF PUBLIC SERVICES  
 DIRECTOR, BUREAU OF PUBLIC SERVICES/COUNTY ENGINEER  
**MAIN NO. 1**  
 SANITARY SEWER INTERCEPTOR  
 SPRING CREEK JOINT SEWER DISTRICT  
 Sht. 12 of 36

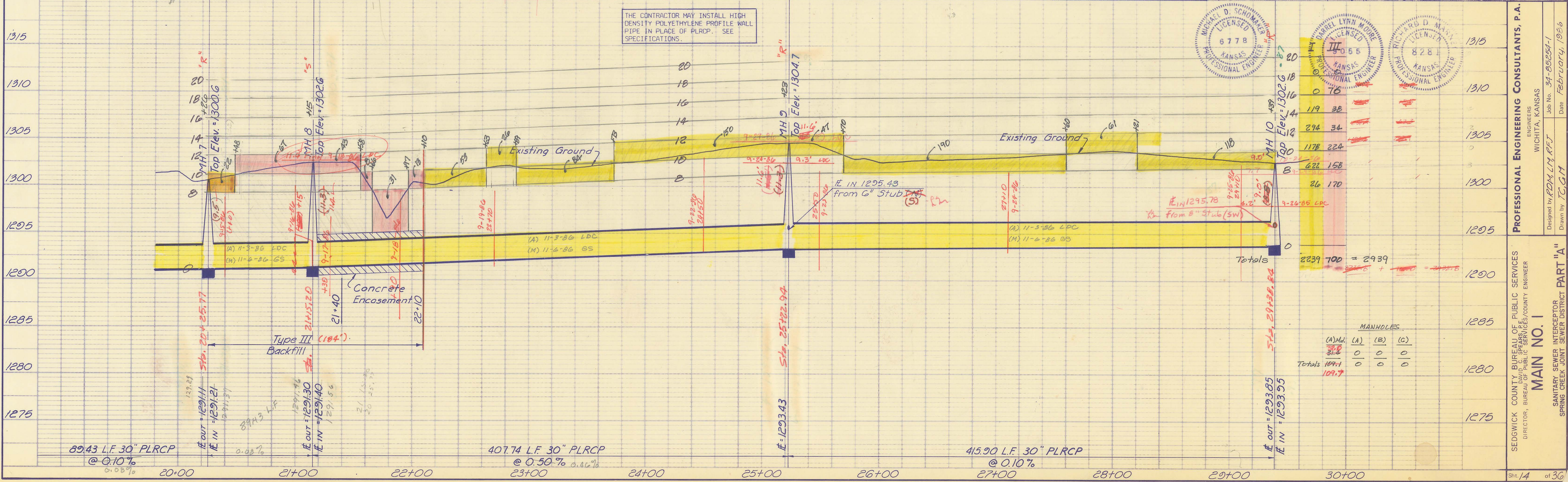
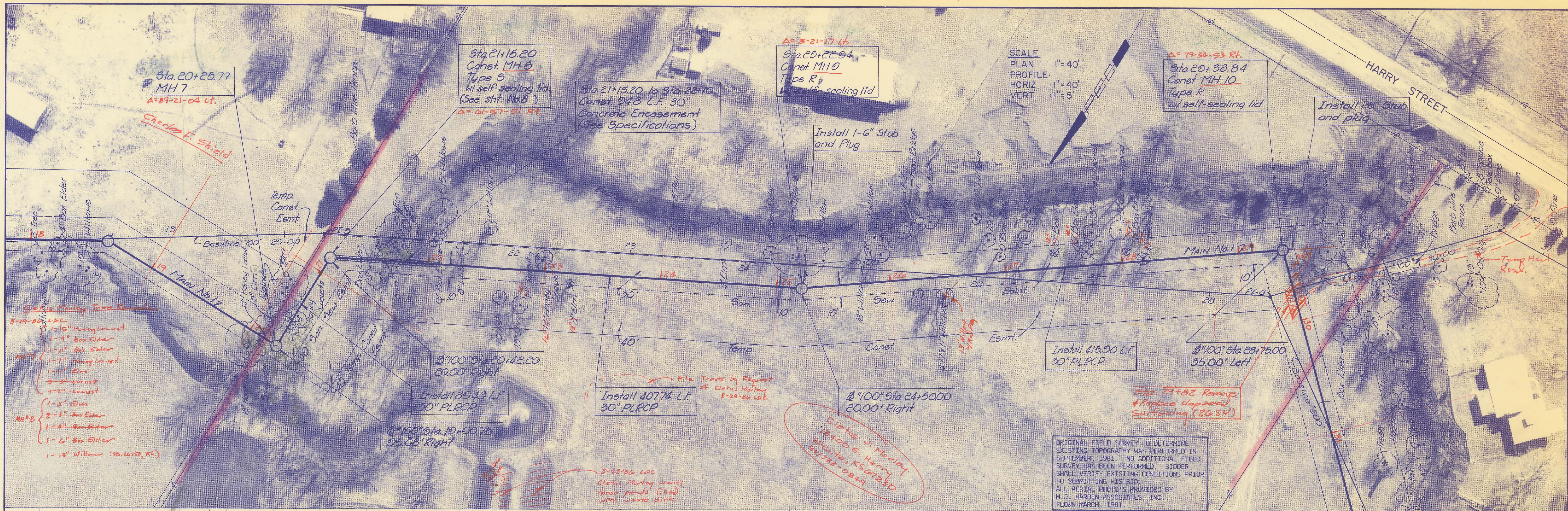
PROFESSIONAL ENGINEERING CONSULTANTS, P.A.  
 ENGINEERS  
 WICHITA, KANSAS  
 Designed by: R.O.M.L.M. R.F.T.  
 Drawn by: T.C. GM  
 Date: February, 1986  
 Job No. 34-82254-1

ALL AERIAL PHOTO'S PROVIDED BY M.J. HARDEN ASSOCIATES, INC. FLOWN MARCH, 1981

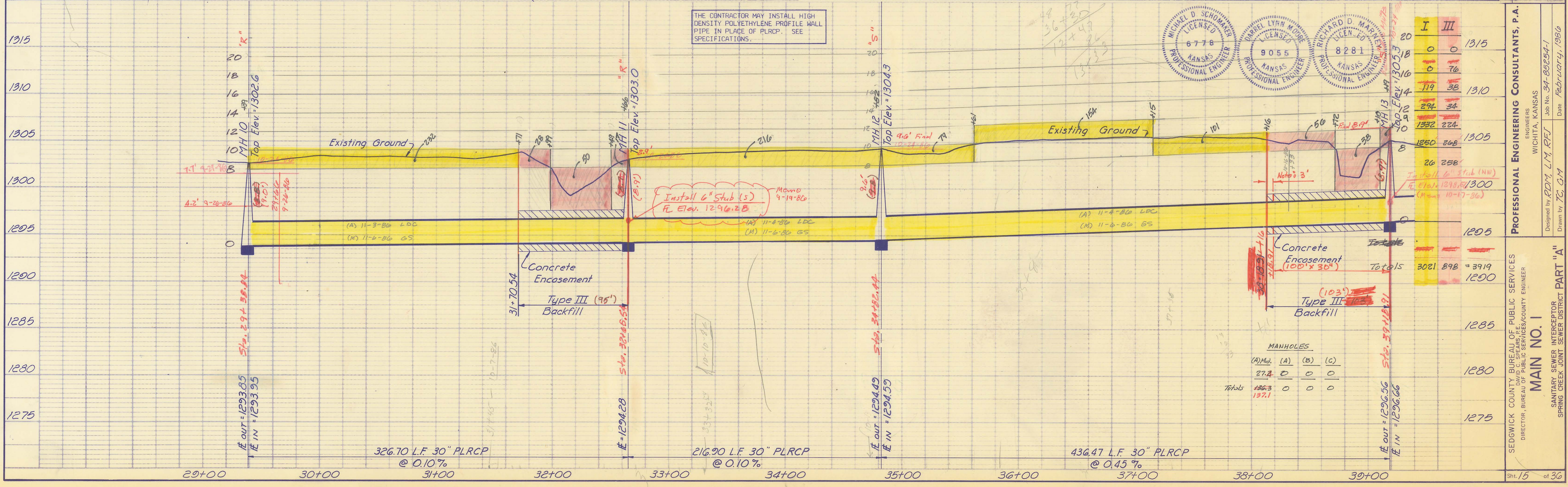
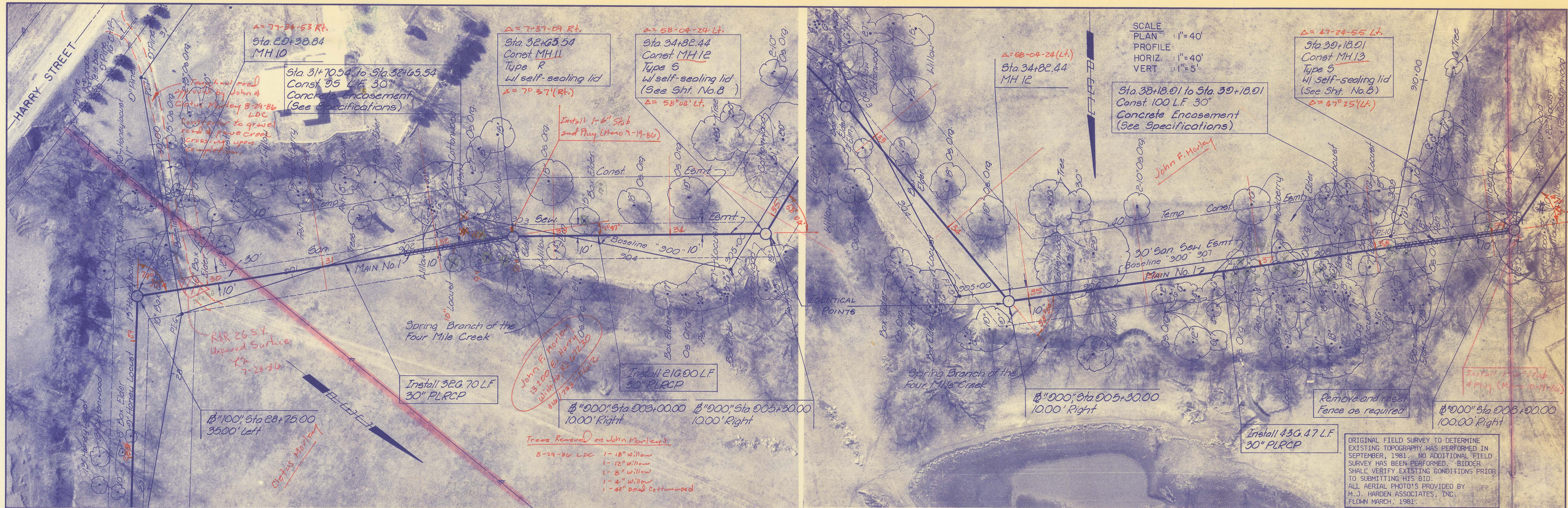
Sht 11 Omitted from Plans

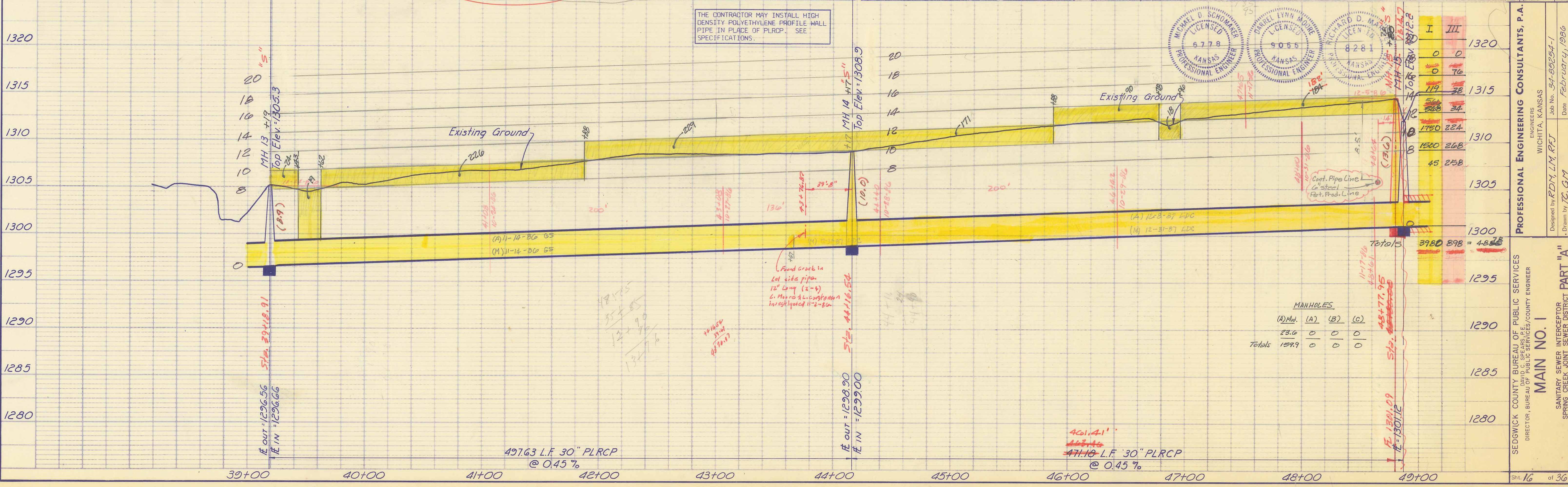
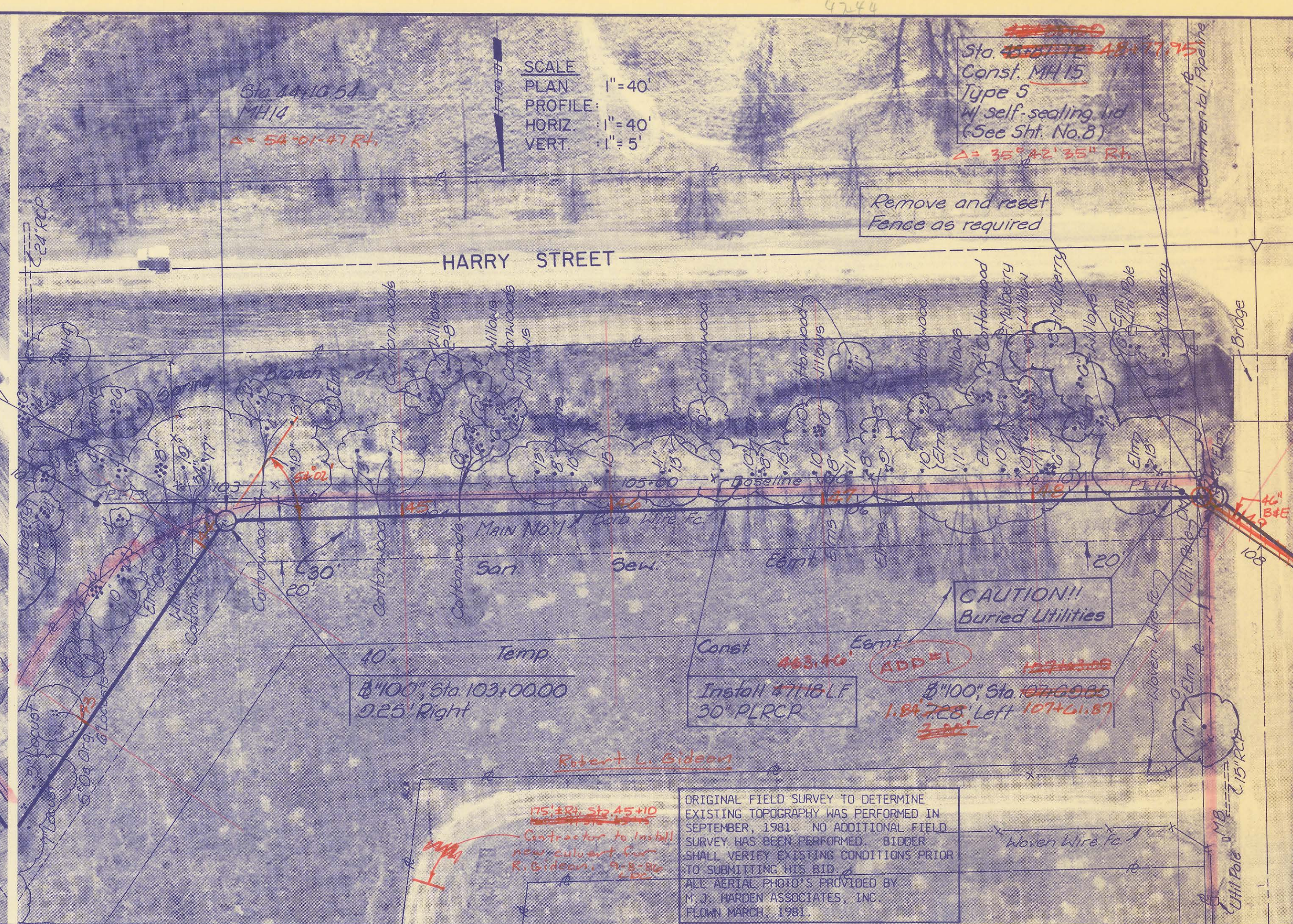
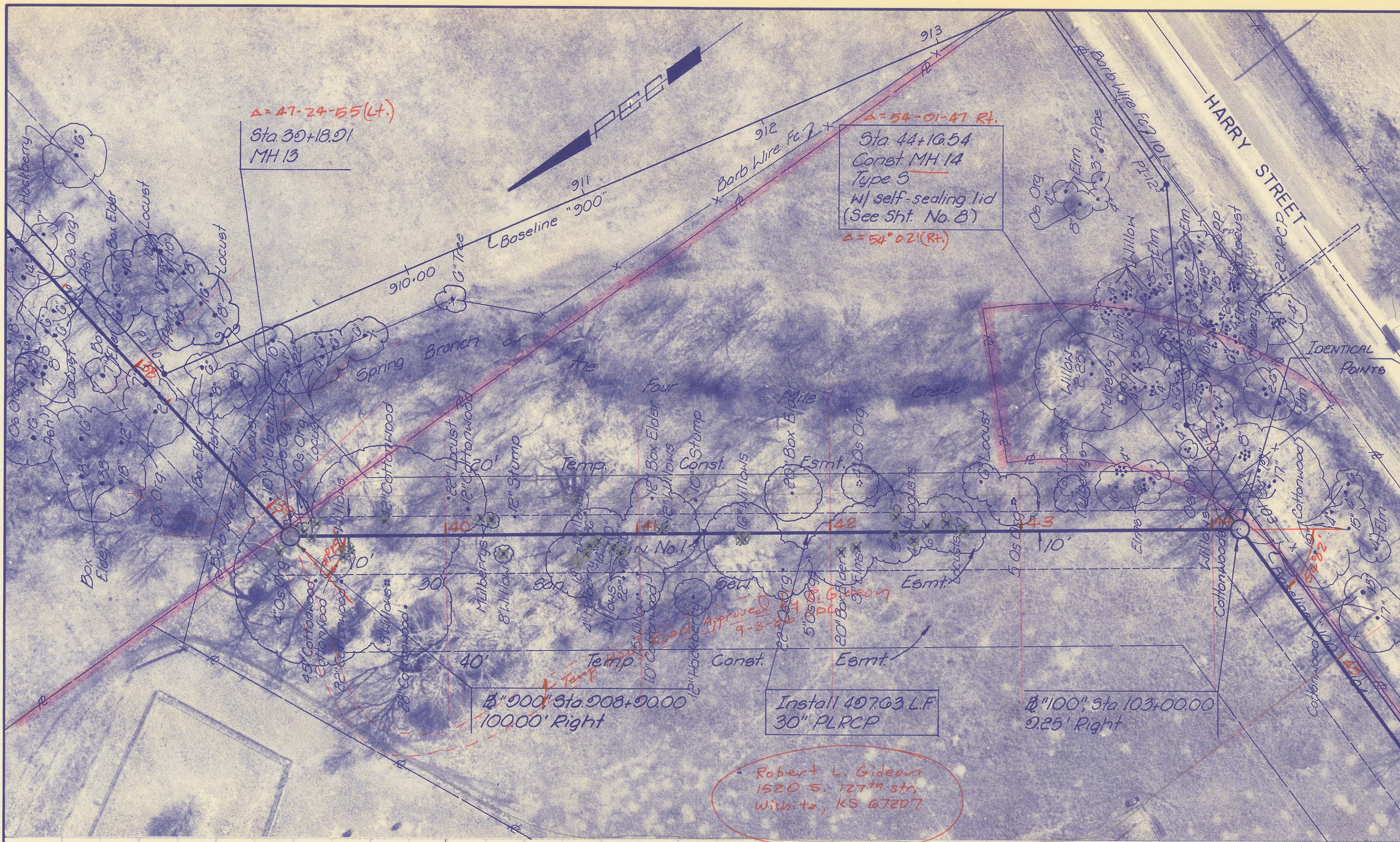


SEDGWICK COUNTY BUREAU OF PUBLIC SERVICES  
 DIRECTOR: DAVID S. SEARS, P.E.  
 SANITARY SEWER INTERCEPTOR  
 SPRING CREEK JOINT SEWER DISTRICT  
**MAIN NO. 1**  
**PART "A"**  
 PROFESSIONAL ENGINEERING CONSULTANTS, P.A.  
 WICHITA, KANSAS  
 Job No. 37-03254-1  
 Date February, 1986



PROFESSIONAL ENGINEERING CONSULTANTS, P.A.  
 ENGINEERS  
 WICHITA, KANSAS  
 Job No. 34-85254-1  
 Date February, 1986  
 Drawn by J.C.M.  
 SEDGWICK COUNTY BUREAU OF PUBLIC SERVICES  
 DIRECTOR, BUREAU OF PUBLIC SERVICES/COUNTY ENGINEER  
 MAIN NO. 1  
 SANITARY SEWER INTERCEPTOR  
 SPRING CREEK JOINT SEWER DISTRICT PART "A"  
 Sh. 14 of 36





**PROFESSIONAL ENGINEERING CONSULTANTS, P.A.**  
WICHITA, KANSAS

Designed by R.D.Y. L.M. R.F.J.  
Drawn by T.C. G.M.

Job No. 34-88234-1  
Date February, 1986

**MANHOLES**

(A) M.D.	(A)	(B)	(C)
23.6	0	0	0
<b>Totals</b>	<b>23.6</b>	<b>0</b>	<b>0</b>

**MANHOLES**

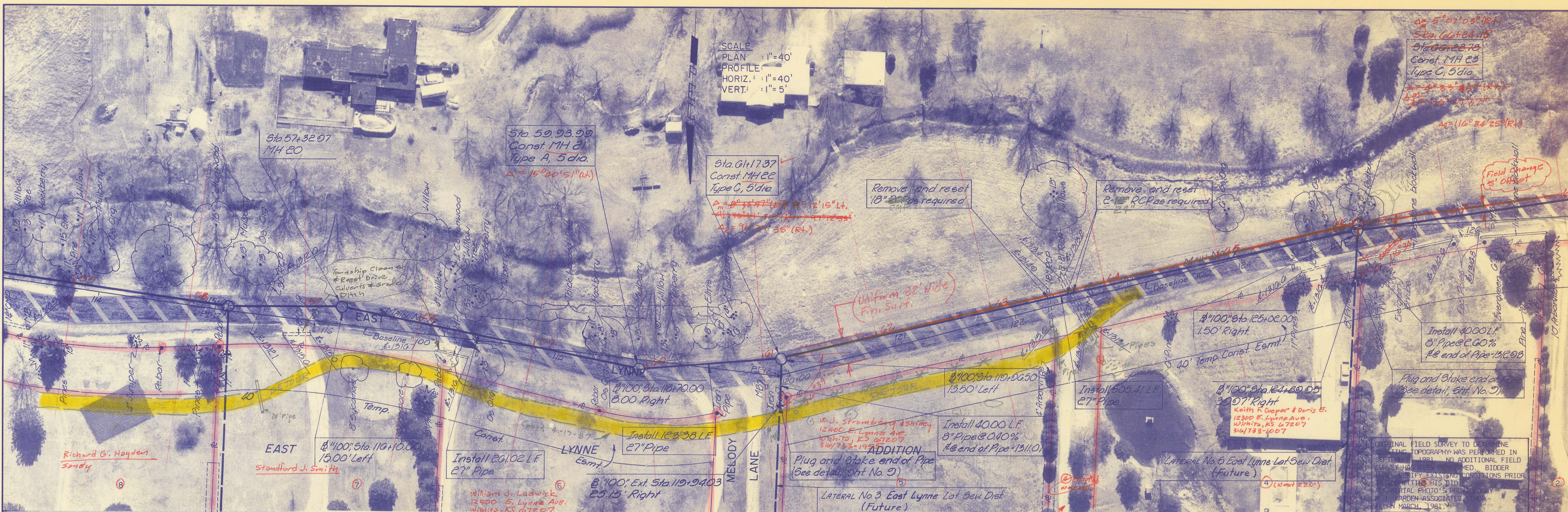
(A) M.D.	(A)	(B)	(C)
23.6	0	0	0
<b>Totals</b>	<b>23.6</b>	<b>0</b>	<b>0</b>

**MANHOLES**

(A) M.D.	(A)	(B)	(C)
23.6	0	0	0
<b>Totals</b>	<b>23.6</b>	<b>0</b>	<b>0</b>



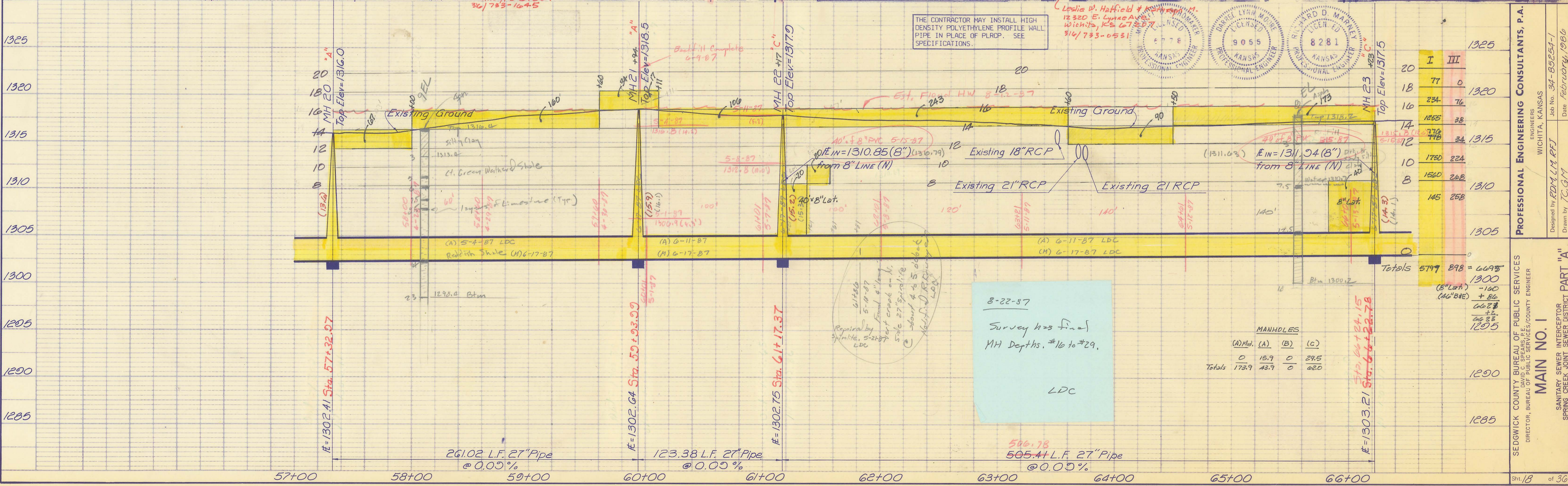




SCALE  
 PLAN : 1" = 40'  
 PROFILE : 1" = 40'  
 HORIZ. : 1" = 40'  
 VERT. : 1" = 5'

Sta. 60+22.78  
 Const. MH 23  
 Type C, 5 dia.

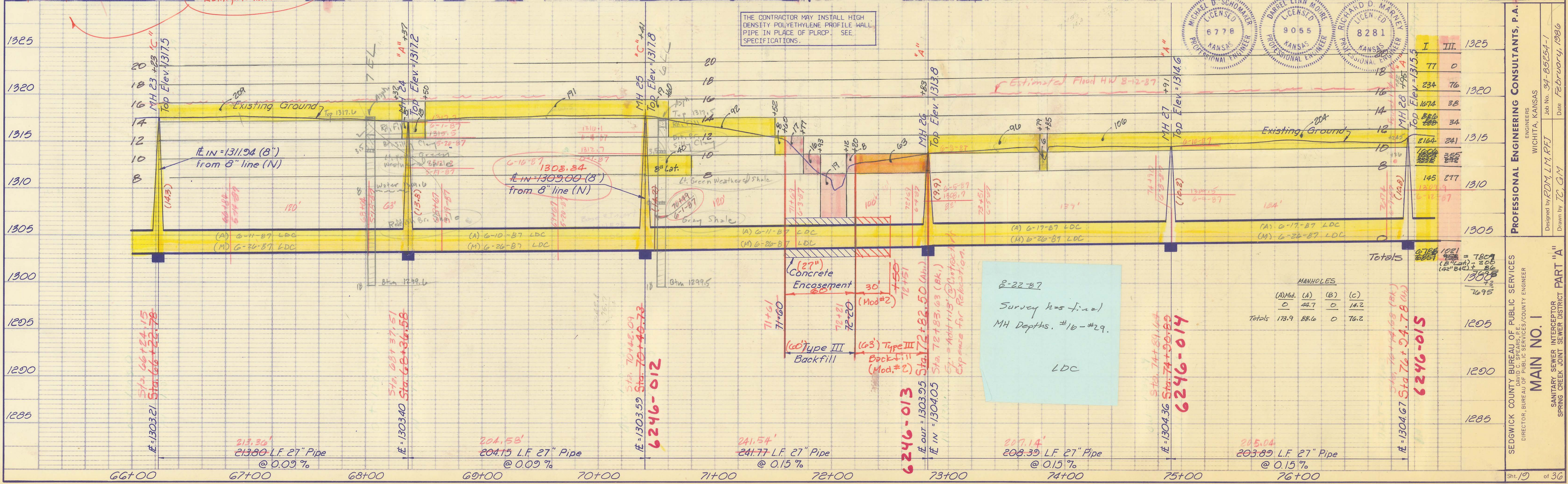
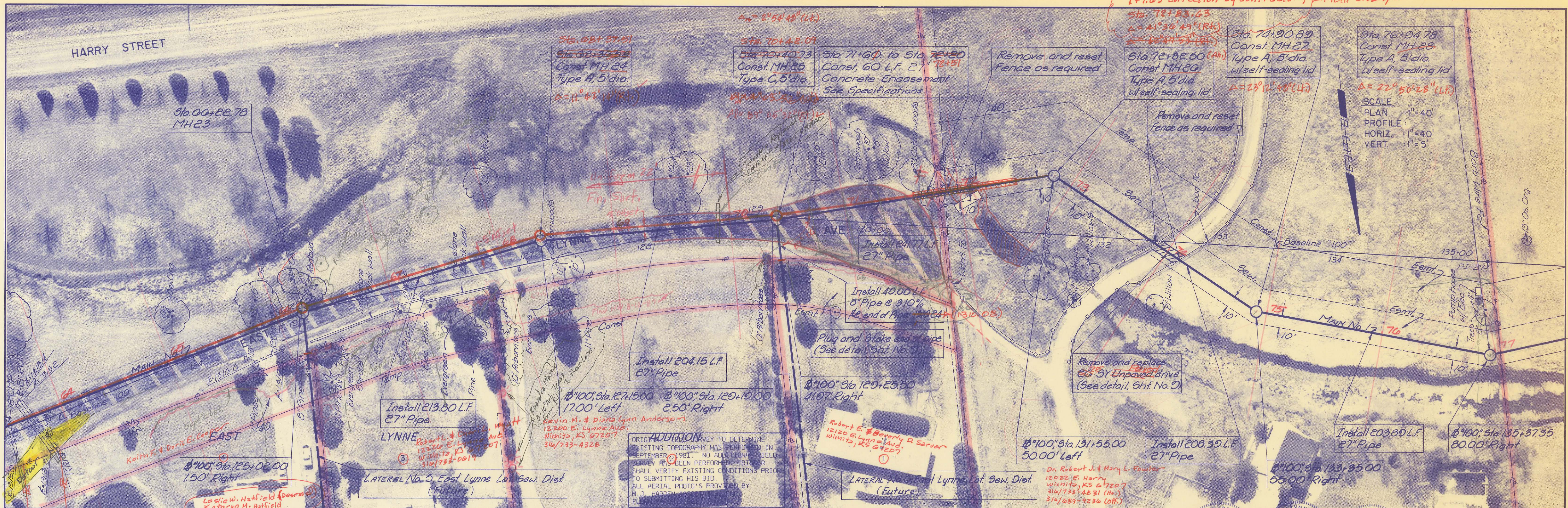
ORIGINAL FIELD SURVEY TO DETERMINE EXISTING TOPOGRAPHY WAS PERFORMED IN SEPTEMBER 1991. NO ADDITIONAL FIELD SURVEY HAS BEEN CONDUCTED SINCE. VERIFY EXISTING CONDITIONS PRIOR TO BIDDING THIS PROJECT. BY ACCEPTING THIS BID, THE CONTRACTOR AGREES TO HOLD HARMLESS THE ENGINEER AND ARCHITECT FROM ANY AND ALL CLAIMS, DAMAGES, LOSSES AND EXPENSES, INCLUDING REASONABLE ATTORNEY'S FEES, THAT MAY BE ASSERTED AGAINST THEM BY ANY PARTY AS A RESULT OF THIS PROJECT.  
 MARCH 1991



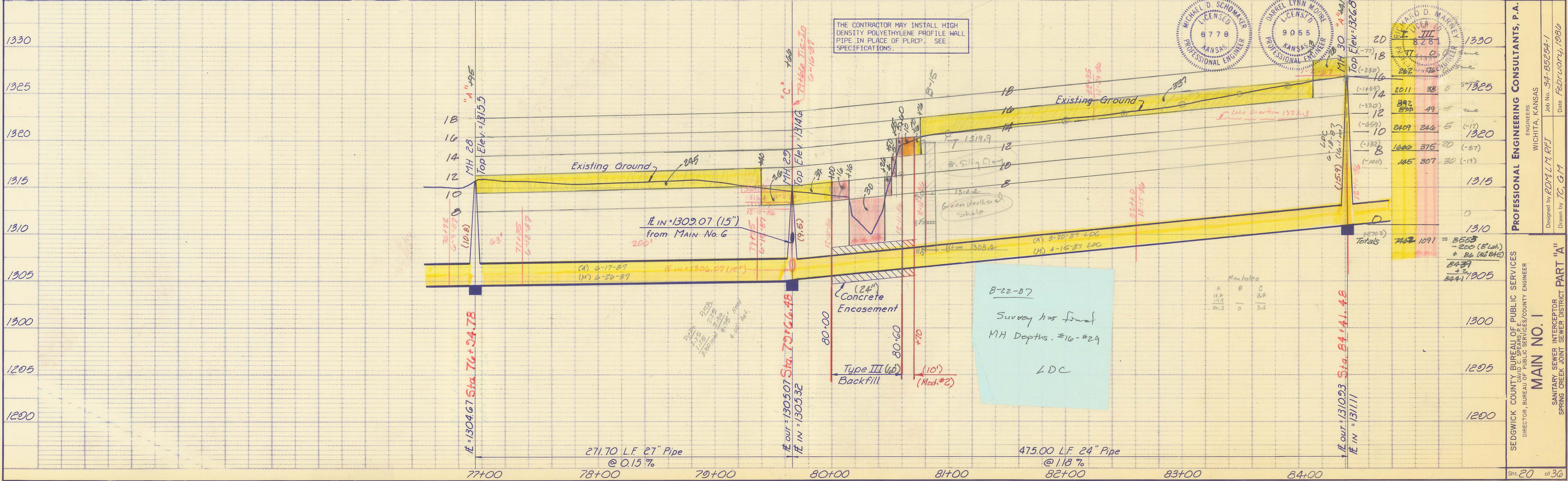
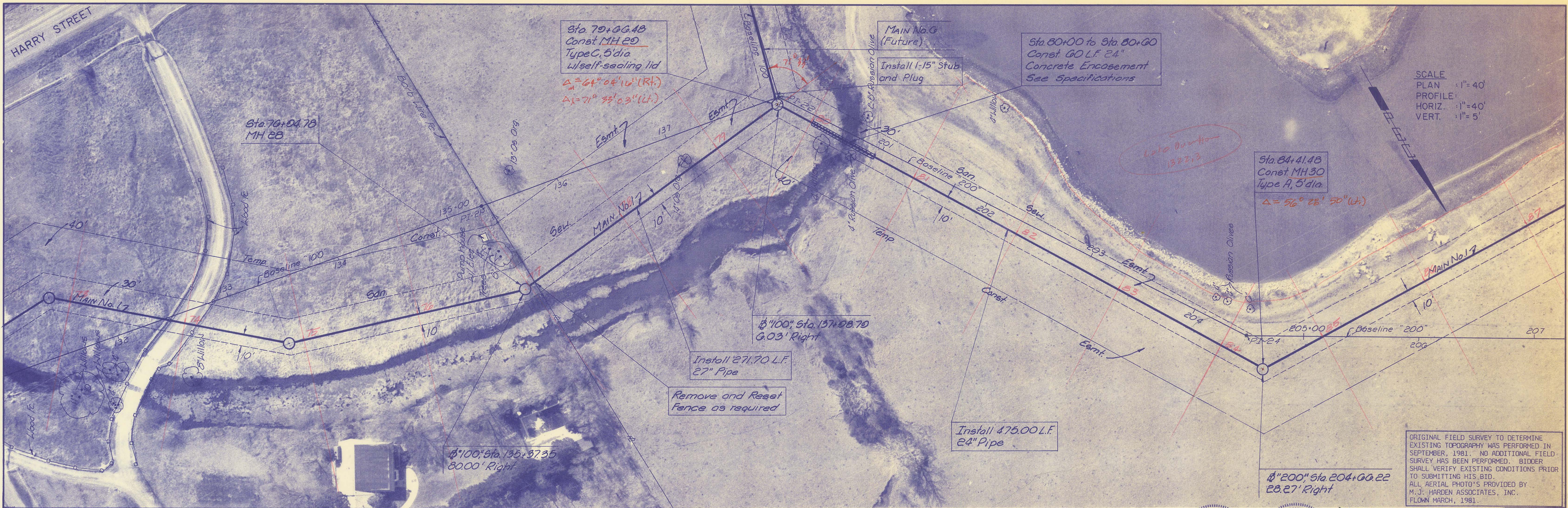
Professional Engineer Seal: DAVID LYNN MOORE, 9055, KANSAS PROFESSIONAL ENGINEER. RICHARD D. MARNEY, 8281, KANSAS PROFESSIONAL ENGINEER.

Station	I	III
1325	20	1325
1320	18	77 0
1315	16	234 76
1310	14	1855 38
1305	12	1315 776 34
1300	10	1780 224
1295	8	1560 268
1290	6	145 258
1285	0	0
Totals	5799	898 = 6697
	(8" L.F.)	-160
	(40" DIA)	+86
		6628
		+2
		6630
		1295

PROFESSIONAL ENGINEERING CONSULTANTS, P.A.  
 WICHITA, KANSAS  
 Job No. 34-8024-1  
 Date February, 1990  
 Designed by EDM LM RJJ  
 Drawn by J.C.G.M.  
 SEDGWICK COUNTY BUREAU OF PUBLIC SERVICES  
 DIRECTOR, BUREAU OF PUBLIC SERVICES/COUNTY ENGINEER  
 MAIN NO. 1  
 SANITARY SEWER INTERCEPTOR  
 SPRING CREEK JOINT SEWER DISTRICT PART "A"  
 Sht. 18 of 36



PROFESSIONAL ENGINEERING CONSULTANTS, P.A.  
 ENGINEERS  
 WICHITA, KANSAS  
 Job No. 34-80254-1  
 Date February, 1986  
 Drawn by T.C.G.M.  
 SEDGWICK COUNTY BUREAU OF PUBLIC SERVICES  
 DIRECTOR, BUREAU OF PUBLIC SERVICES/COUNTY ENGINEER  
 MAIN NO. 1  
 SANITARY SEWER INTERCEPTOR  
 SPRING CREEK JOINT SEWER DISTRICT PART "A"  
 Sht. 19 of 36

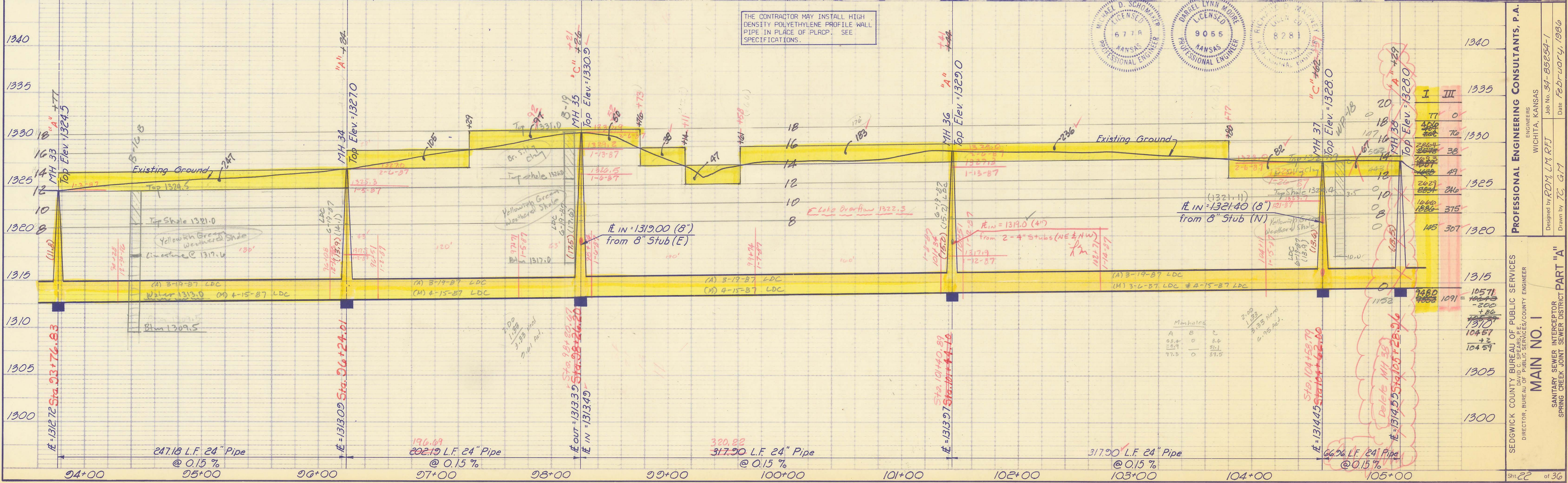
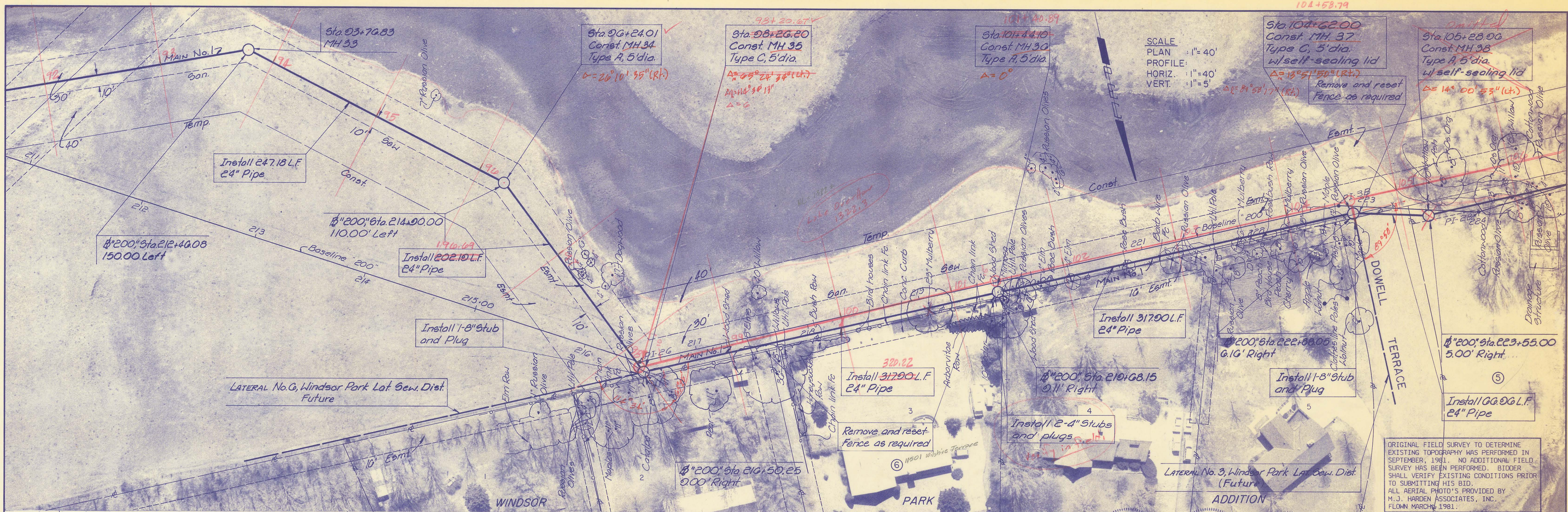


MICHAEL D. SCHMIDT  
 LICENSED PROFESSIONAL ENGINEER  
 KANSAS 8778  
 APRIL LYNN MOORE  
 LICENSED PROFESSIONAL ENGINEER  
 KANSAS 9055

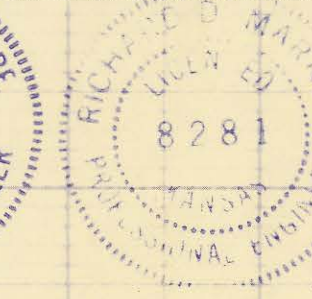
SEDGWICK COUNTY BUREAU OF PUBLIC SERVICES  
 DIRECTOR, BUREAU OF PUBLIC SERVICES/COUNTY ENGINEER  
**MAIN NO. 1**  
 SANITARY SEWER INTERCEPTOR  
 SPRING CREEK JOINT SEWER DISTRICT PART "A"  
 Sh. 20 of 30

PROFESSIONAL ENGINEERING CONSULTANTS, P.A.  
 ENGINEERS  
 WICHITA, KANSAS  
 Job No. 34-05204-1  
 Date February, 1986  
 Drawn by TC, G.M.





THE CONTRACTOR MAY INSTALL HIGH DENSITY POLYETHYLENE PROFILE WALL PIPE IN PLACE OF PLRCP. SEE SPECIFICATIONS.



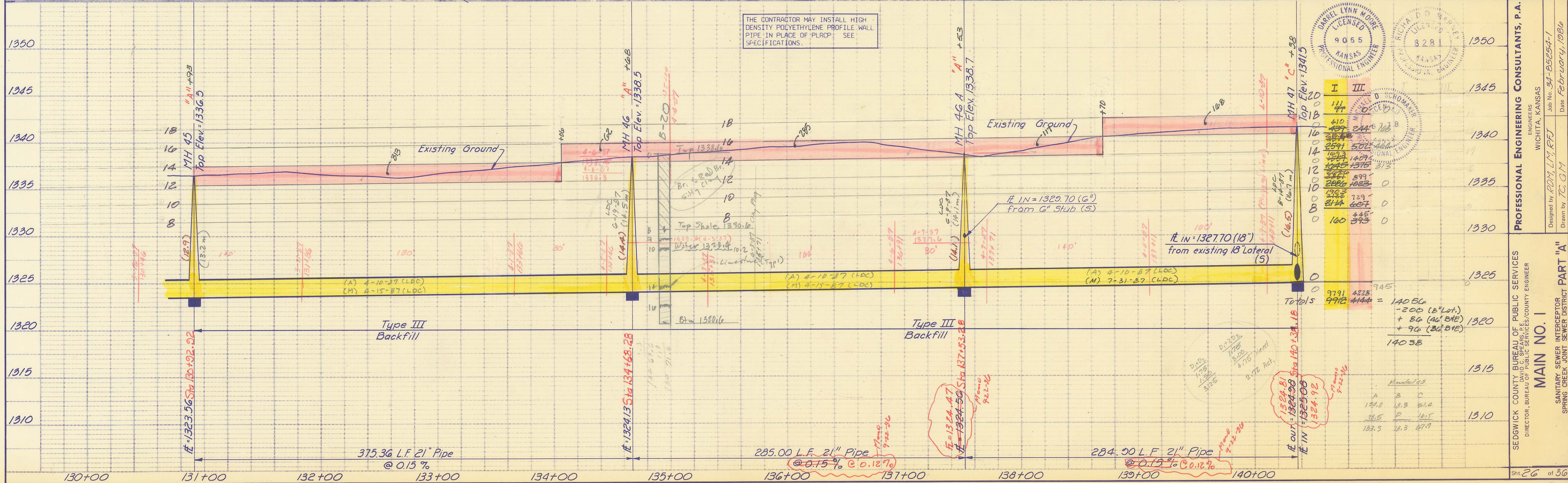
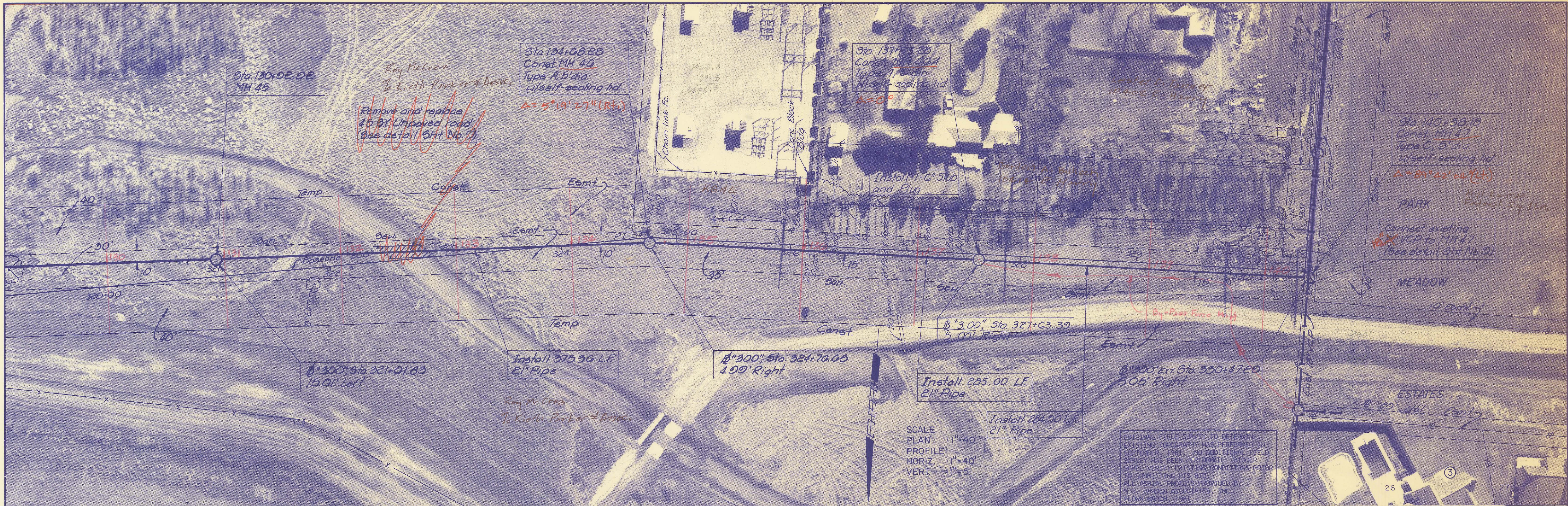
PROFESSIONAL ENGINEERING CONSULTANTS, P.A.  
 ENGINEERS, KANSAS  
 WICHITA, KANSAS  
 Job No. 84-02284-1  
 Date February, 1986  
 Drawn by J.C. G.M.

SEDGWICK COUNTY BUREAU OF PUBLIC SERVICES  
 DIRECTOR, BUREAU OF PUBLIC SERVICES, COUNTY ENGINEER  
 MAIN NO. 1  
 SANITARY SEWER INTERCEPTOR  
 SPRING CREEK JOINT SEWER DISTRICT PART "A"  
 SH 22 of 36







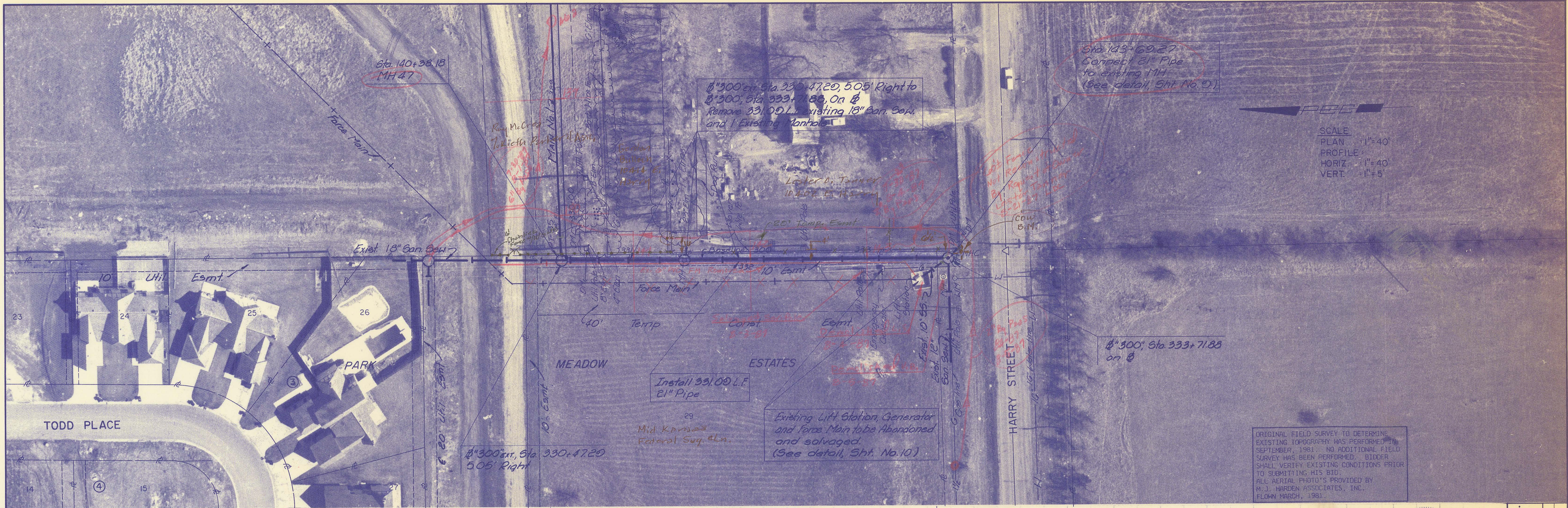


Professional Engineer Seal: DARREL LYNN DOORE, LICENSED PROFESSIONAL ENGINEER, KANSAS, 9055.

Professional Engineer Seal: RICHARD D. SCHWARTZ, LICENSED PROFESSIONAL ENGINEER, KANSAS, 8281.

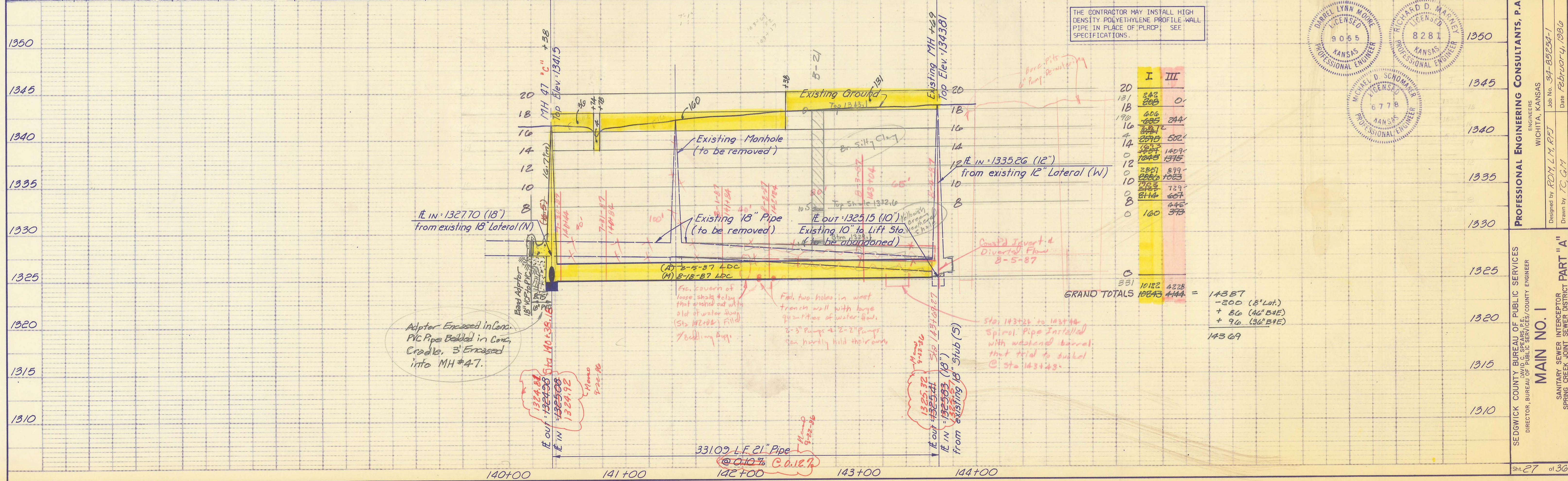
Professional Engineering Consultants, P.A. WICHITA, KANSAS. Job No. 34-0505A-1. Date: February, 1986. Designed by: R.M., L.M., R.F.J. Drawn by: T.C.G.

SEDGWICK COUNTY BUREAU OF PUBLIC SERVICES, DIRECTOR, BUREAU OF PUBLIC SERVICES/COUNTY ENGINEER. MAIN NO. 1. SANITARY SEWER INTERCEPTOR PART 'A'. SPRING CREEK JOINT SEWER DISTRICT. Sht. 26 of 36.



SCALE  
 PLAN 1"=40'  
 PROFILE 1"=40'  
 HORIZ 1"=40'  
 VERT 1"=5'

ORIGINAL FIELD SURVEY TO DETERMINE EXISTING TOPOGRAPHY WAS PERFORMED IN SEPTEMBER, 1981. NO ADDITIONAL FIELD SURVEY HAS BEEN PERFORMED. BIDDER SHALL VERIFY EXISTING CONDITIONS PRIOR TO SUBMITTING HIS BID. ALL AERIAL PHOTO'S PROVIDED BY M.J. HARDEN ASSOCIATES, INC. FLOWN MARCH, 1981.



THE CONTRACTOR MAY INSTALL HIGH DENSITY POLYETHYLENE PROFILE WALL PIPE IN PLACE OF PLRPC. SEE SPECIFICATIONS.

Professional Engineer stamps for:  
 DARL LYNN MOORE, 9055, KANSAS PROFESSIONAL ENGINEER  
 RICHARD D. MARNE, 8281, KANSAS PROFESSIONAL ENGINEER  
 MICHAEL D. SCHOMBERG, 6778, KANSAS PROFESSIONAL ENGINEER

	I	III
20	242	0
18	206	0
16	255	244
14	297	502
12	252	1409
10	286	1375
8	285	899
6	173	1023
4	214	729
2	160	667
0	160	445
0	160	373
GRAND TOTALS		
	10182	4228
	15843	4444
	= 14387	
	- 200 (8' Lot)	
	+ 86 (46' B+E)	
	+ 96 (36' B+E)	
	14369	

SEDGWICK COUNTY BUREAU OF PUBLIC SERVICES  
 DIRECTOR, BUREAU OF PUBLIC SERVICES/COUNTY ENGINEER  
**MAIN NO. 1**  
 SANITARY SEWER INTERCEPTOR  
 SPRING CREEK JOINT SEWER DISTRICT PART "A"  
 Sht. 27 of 36

Scale: 1" = 50'

Pond No. 2  
2.71 Acres @ Design Water Surface El. 1291.0  
Bottom El. 1288.0  
Total Volume = 4.0 MG @ 5.0' depth

Pond No. 3  
7.02 Acres @ Design Water Surface El. 1296.0  
Bottom El. 1291.0  
Total Volume = 10.4 MG @ 5.0' depth

Pond No. 1  
4.15 Acres @ Design Water Surface El. 1291.0  
Bottom El. 1286.0  
Total Volume = 6.3 MG @ 5.0' depth

NOTE:  
Underground piping shall be PE-3406 plastic gas piping with heat fusion or compression fittings with built-in stiffeners and conforming to ASTM-D2513-73 or D2517-73. Install per manufacturers instructions. Bury with #18 copper tracer wire per code.

For Installation of Control Structure and Discharge Piping, See Shit. 32

Install 3" Plastic Gas Piping from Gas Meter to Standby Power Source.

Sta. 0+00.00  
566,717.26 N; 388,811.88 E  
BEGIN FORCE MAIN CONSTRUCTION

Lift Station Modification  
See Details Shits. 29, 30 & 31

Sta. 0+10.19  
566,737.90 N; 388,801.69 E  
Install 1-10" DI CL WJ 45° Bend  
1-10" DI CL WJ 22 1/2° Bend  
2' -10" DI CL Pipe

Install 10.2 L.F.  
10" DI CL Force Main

Install 361.9 L.F.  
10" PVC Force Main

Sta. 3+04.78  
566,912.10 N; 388,580.88 E  
Install 1-10" DI CL WJ 45° Bend

Sta. 6+76.99  
567,281.75 N; 388,582.24 E  
END FORCE MAIN CONSTRUCTION  
Connect to Existing 8" DIP  
See Detail Shit. 29

4" Vent Pipe  
See Detail Shit. 29

PROPERTY CORNER COORDINATES

1	566394.989733 N	389298.778395 E
2	567339.849917 N	389282.323202 E
3	567754.788517 N	389275.384678 E
4	567754.634634 N	389265.385862 E
5	567740.169632 N	388325.497165 E
6	566875.961908 N	388338.793237 E
7	566770.952606 N	388447.621356 E
8	566774.523738 N	388647.589471 E
9	566513.151088 N	388804.781512 E
10	566387.475882 N	388806.785768 E
11	566354.995651 N	389299.466445 E
12	566347.480731 N	388807.403827 E

NOTE:  
Force Main shall have a Minimum Depth of Bury of 4.5' unless shown otherwise.



Revision \_\_\_\_\_ By \_\_\_\_\_ Date \_\_\_\_\_

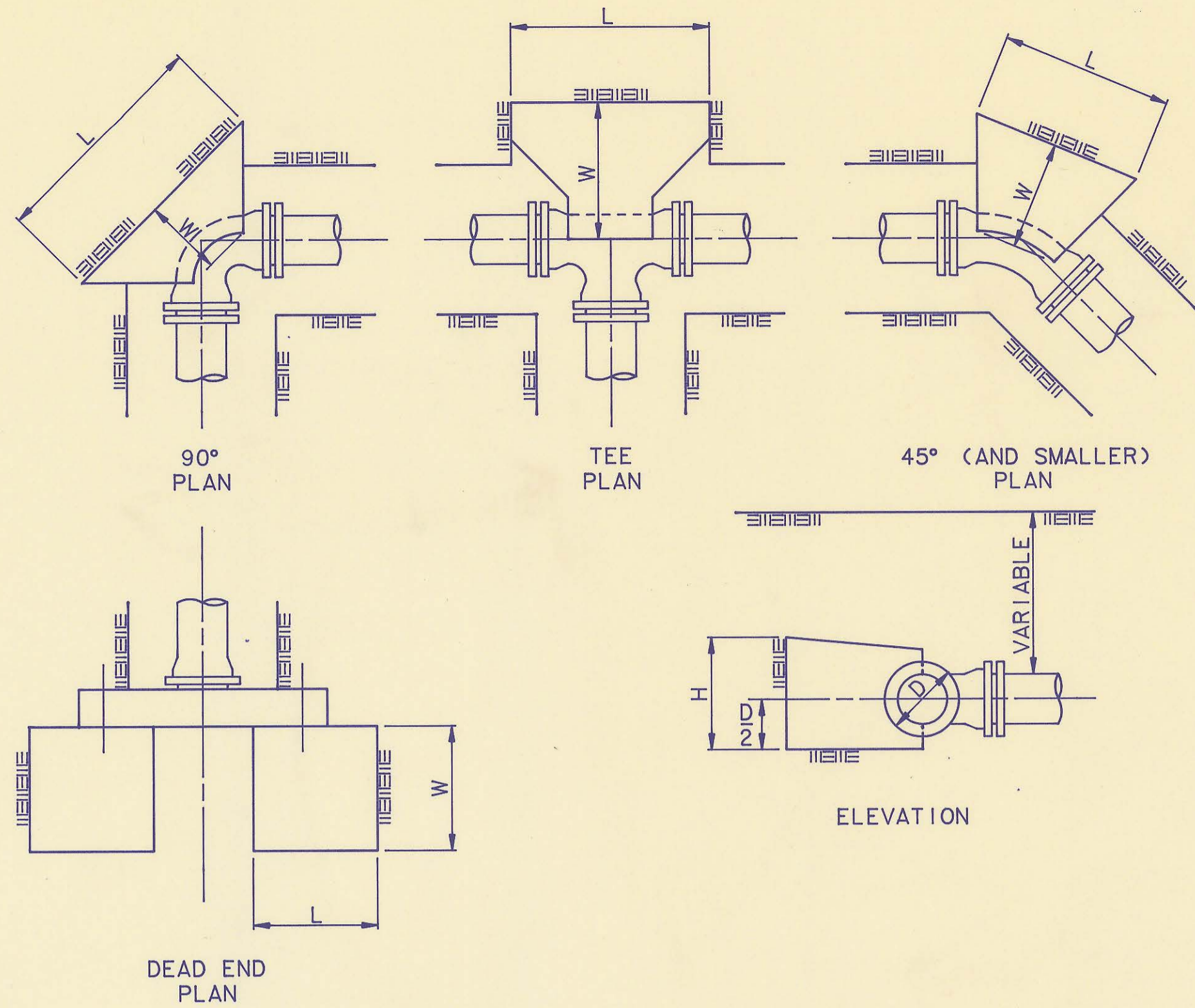
SEDGWICK COUNTY BUREAU OF PUBLIC SERVICES  
DAVID C. SPEARS, P.E. DIRECTOR, BUREAU OF PUBLIC SERVICES/COUNTY ENGINEER

**SITE PLAN**  
MODIFICATIONS TO EXISTING FACILITY  
TIMBER LAKES-SPRINGDALE SEWAGE TREATMENT PLANT

**PROFESSIONAL ENGINEERING CONSULTANTS, P.A.**  
ENGINEERS  
WICHITA, KANSAS

Designed by BDR Job No. 34-85254-1 Shit. 28 of 36  
Drawn by CAL Date February, 1986

PART C

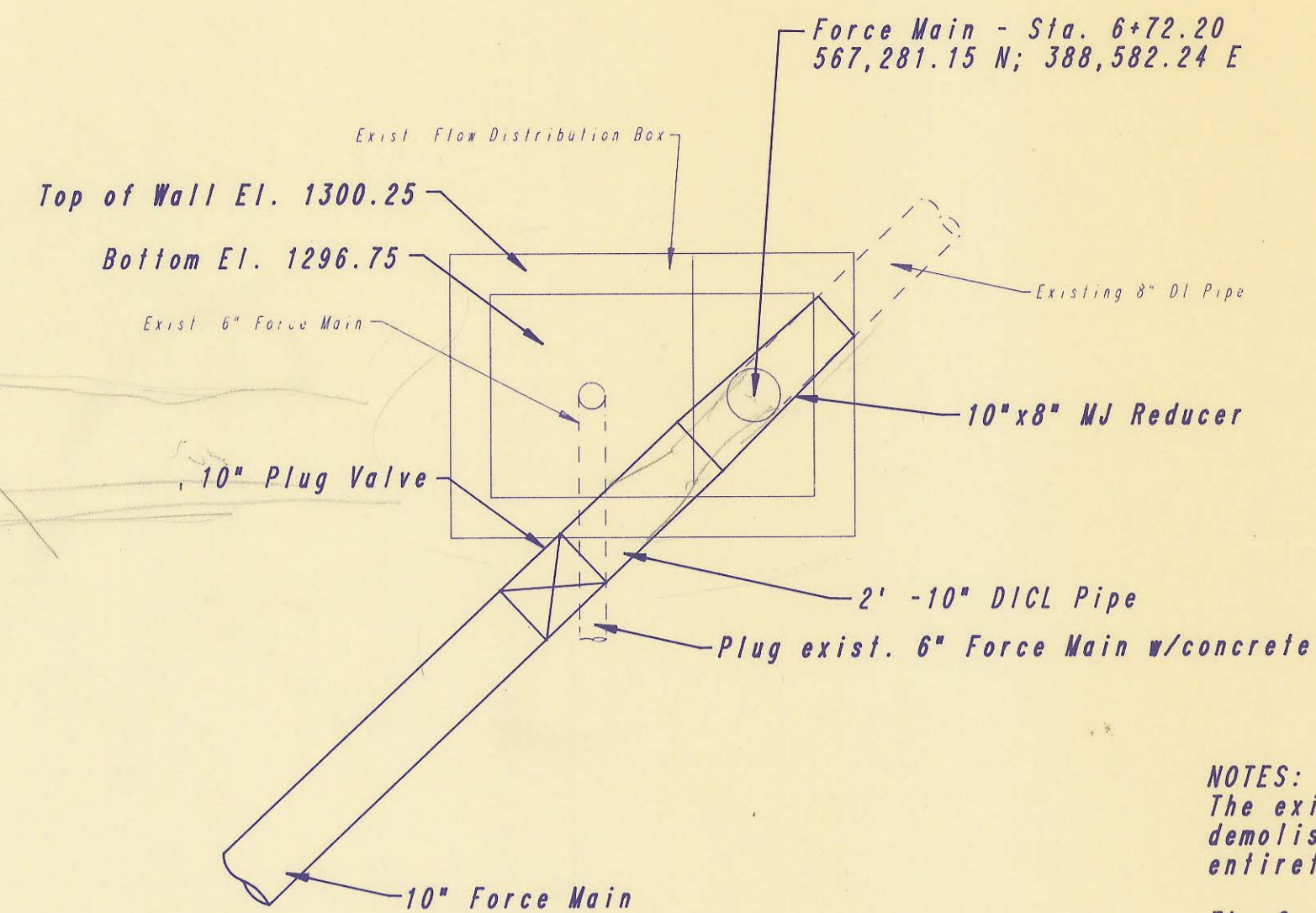


THRUST BLOCK DETAILS

THRUST BLOCK SCHEDULE				
LINE SIZE	FITTINGS & ANGLE $\theta$	DIM. L	DIM. W	DIM. H
10"	90°	3.0'	2.0'	2.5'
10"	45°	3.0'	2.0'	2.0'
10"	22 1/2°	3.0'	2.0'	2.0'

TEMPORARY BYPASS PUMPING NOTES:

- Prior to beginning work at the existing Lift Station. The Contractor shall provide to the Engineer, for approval, the following information:
  - A list of the proposed temporary pumping equipment.
  - A construction schedule showing the order of completion for the work items and the estimated time for completion of each item.
- The following conditions shall apply to the work of providing temporary bypass pumping at the Timber Lakes-Springdale Lift Station.
  - The Contractor shall notify the Engineer at least 7 days prior to taking the Lift Station out of service.
  - Two temporary pumps shall be provided by the contractor. Each pump shall be capable of delivering a minimum of 500 gallons per minute to Pond No. 3. Pumps shall be Diesel or Gasoline Powered.
  - Pumps shall be monitored continuously during operation.
  - Pumping shall be performed using the existing manhole immediately upstream of the Lift Station as a Wet Well.
  - The Contractor shall organize the work in such a manner so that periods of temporary pumping are kept to a minimum length.

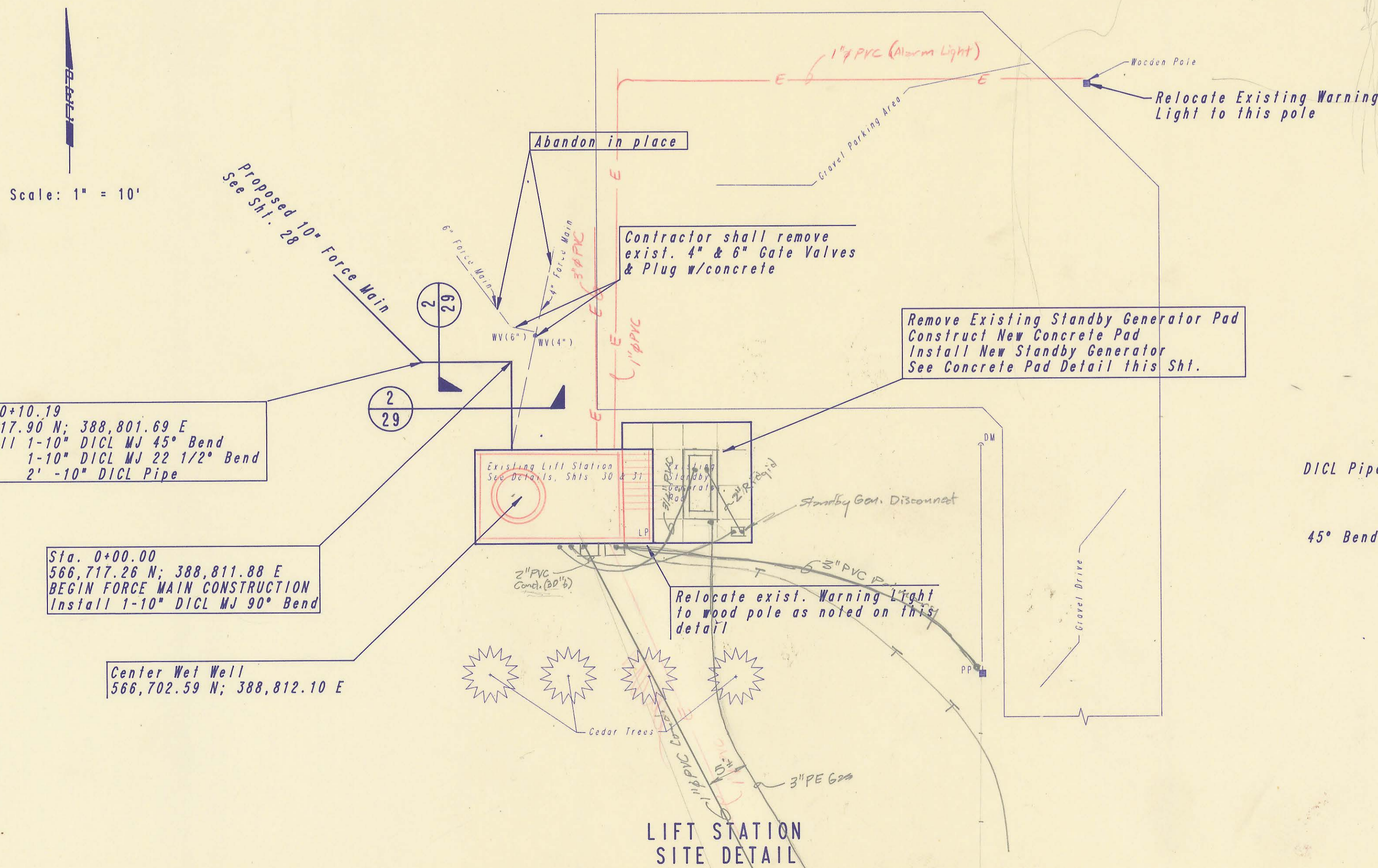


FORCE MAIN CONNECTION DETAIL  
SCALE: 1" = 2'

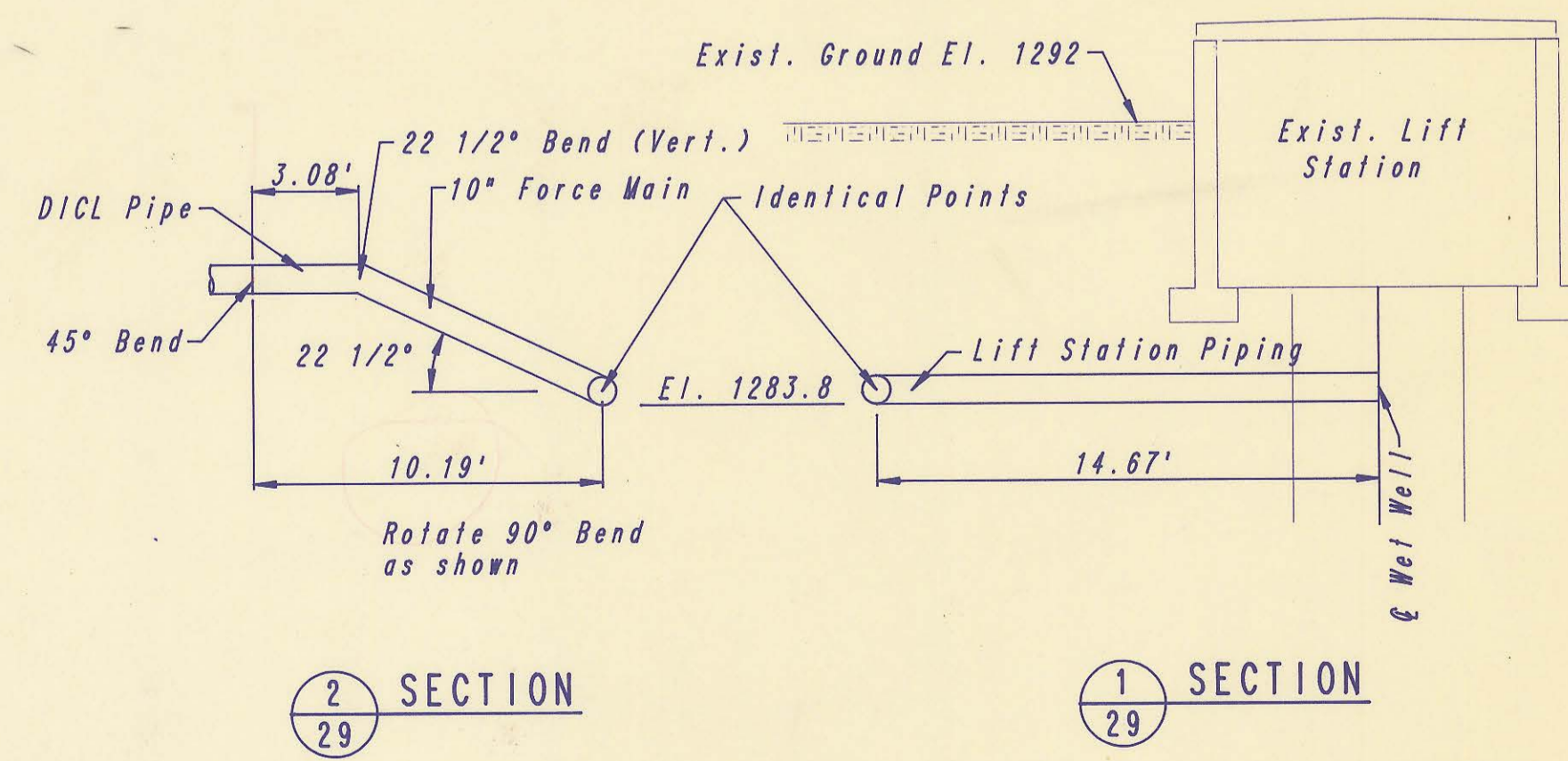
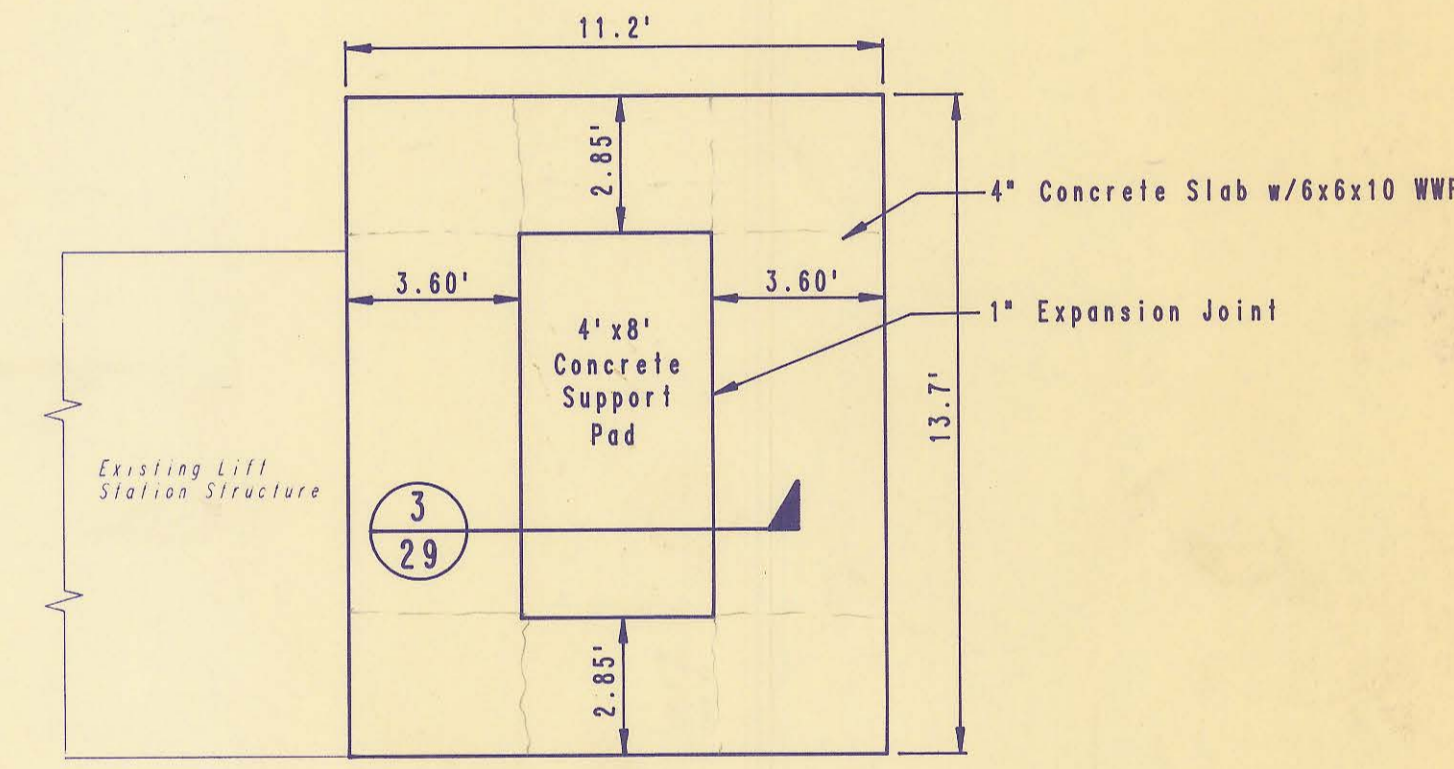
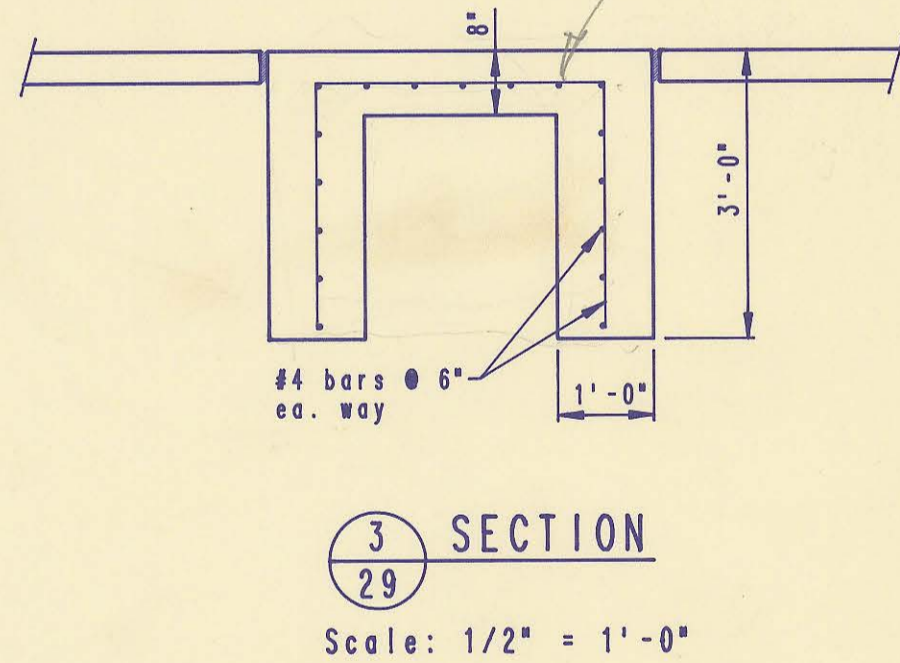
NOTES:  
The existing Flow Distribution Box shall be demolished and removed from the site in its entirety.

The Contractor shall determine the exact depth and location of the end of the 8" line to Pond No. 3 and shall adjust line and grade of the proposed 10" Force Main as required.

The Contractor may lower the water surface elevation as required to make the connection to the existing 8" DI Pipe. This action shall only be taken with the approval of the Engineer and only to the extent necessary.



LIFT STATION SITE DETAIL



No.	Revision	By	Date

SEDGWICK COUNTY BUREAU OF PUBLIC SERVICES  
DAVID C. SPEARS, P.E. DIRECTOR, BUREAU OF PUBLIC SERVICES/COUNTY ENGINEER

**DETAILS**

MODIFICATIONS TO EXISTING FACILITY  
TIMBER LAKES-SPRINGDALE SEWAGE TREATMENT PLANT

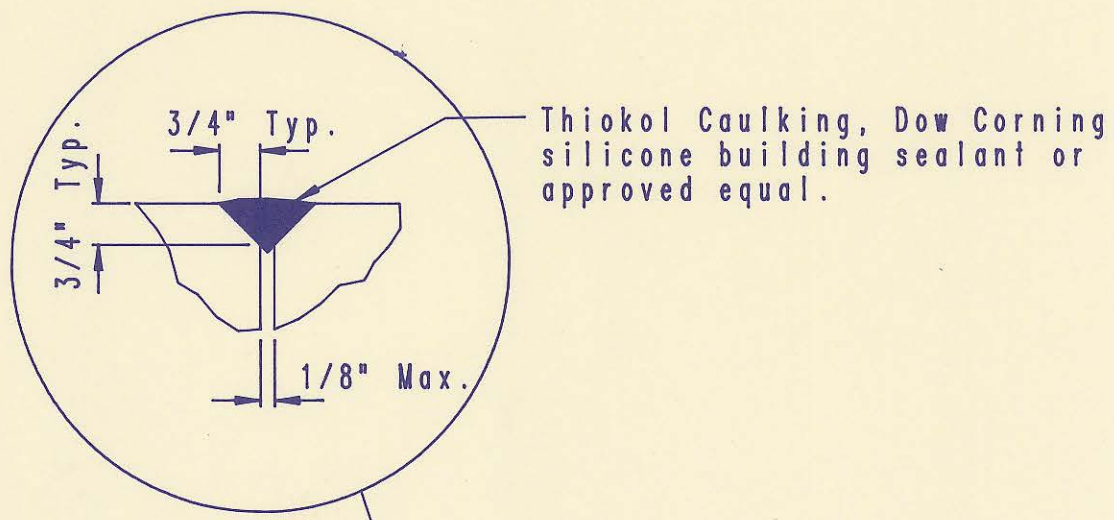
PROFESSIONAL ENGINEERING CONSULTANTS, P.A.  
ENGINEERS  
WICHITA, KANSAS

Designed by BDR Job No. 34-85254-1 Sht. 29 of 36  
Drawn by CAL Date February, 1986

Note:  
Contractor shall reconnect existing  
4" PVC Wet Well Vent.

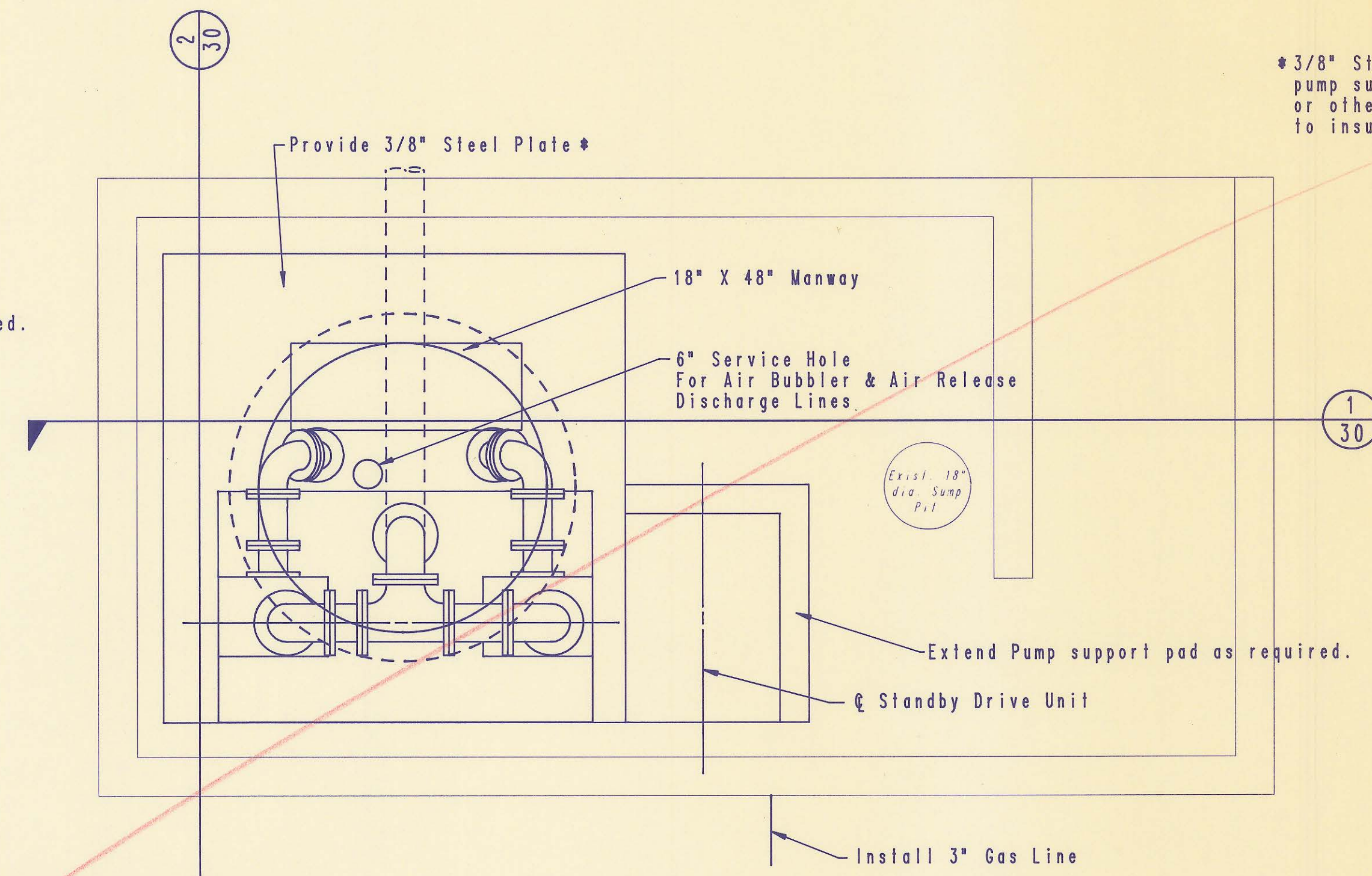
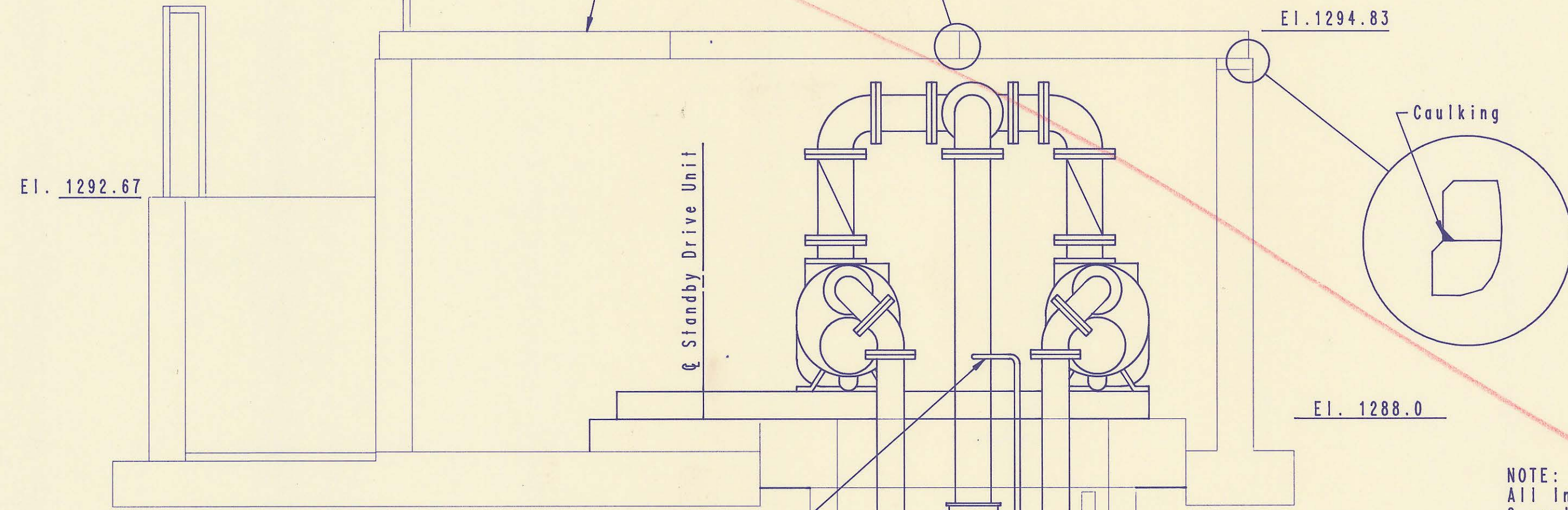
Contractor shall seal roof sections  
when set in position. See Details  
this sheet.

3 section Removable Concrete Roof  
Each Section 5'-3 7/8" x 10'-6" w/4  
Lifting Hooks per Section.



All openings through Floor Plate  
shall be sealed w/Embeco grout  
or equal after lines are installed.

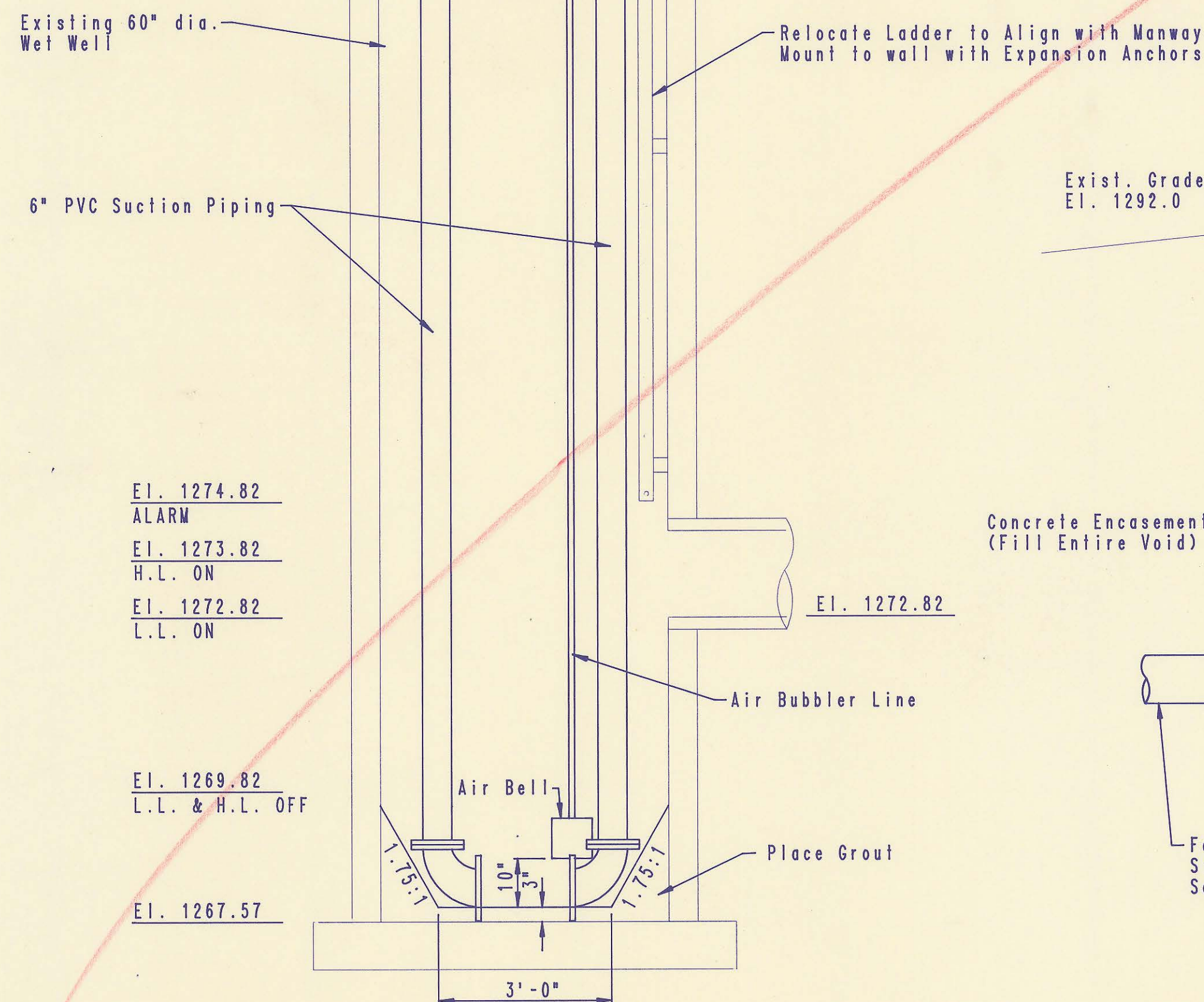
\*3/8" Steel Plate shall cover entire  
pump support pad. Broken down edges  
or other reinforcing shall be provided  
to insure rigid support.



LIFT STATION  
PLAN VIEW

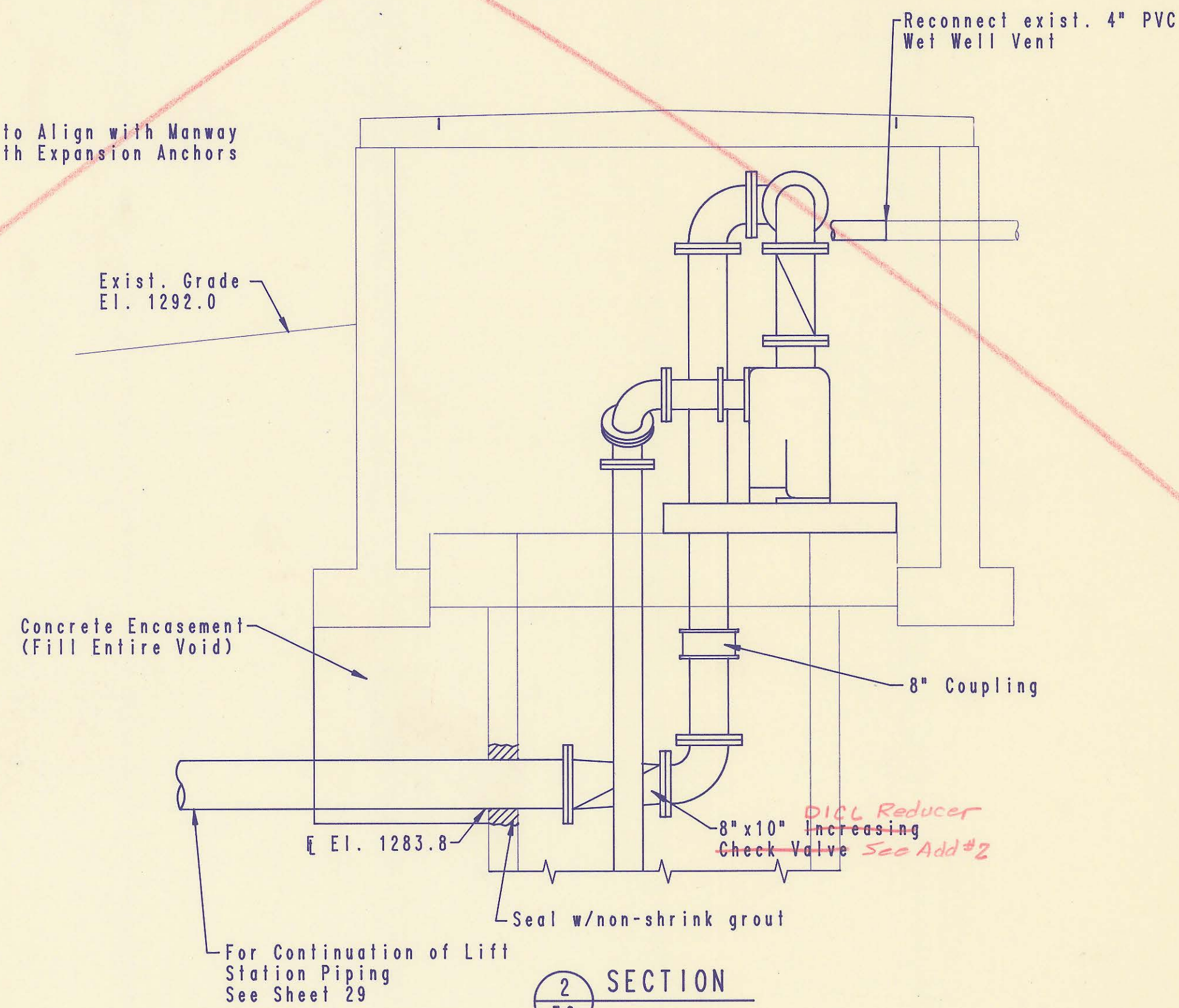
Scale: 1/2" = 1'-0"

NOTE:  
All interior & exterior Concrete Walls shall receive  
2 coatings of Acrylic Latex Paint. Walls shall receive  
a General Surface Preparation Prior to Painting.



SECTION 1

Scale: 1/2" = 1'-0"



SECTION 2

Scale: 1/2" = 1'-0"

- NOTES:
- SEE SHEET 34 FOR EXISTING EQUIPMENT REMOVAL PLAN.
  - SEE SHEETS 35 & 36 FOR ELECTRICAL INSTALLATION REQUIREMENTS.
  - PUMP OPERATING CONDITIONS
 

MINIMUM FLOW AT MAXIMUM TDH	- 1000 G.P.M.
MAXIMUM STATIC HEAD	- 26.2 FT.
FORCE MAIN HEAD LOSS	- 17.5 FT.
STATION DISCHARGE HEAD LOSS (ESTIMATED)	- 4.0 FT.
MAXIMUM STATIC SUCTION LIFT	- 20.0 FT.
TOTAL SUCTION LIFT	- 23.4 FT.
MAXIMUM ESTIMATED TDH	- 51.1 FT.
MINIMUM ESTIMATED TDH	- 48.1 FT.
MAXIMUM REQUIRED REPRIMING LIFT	- 22.0 FT.
PUMP MOTOR	- 25 HP; 1350 RPM; 480/60/3
  - DUCT STANDBY ENGINE EXHAUST TO OUTSIDE OF BUILDING.
  - GAS PIPING
 

STANDARD BLACK STEEL PIPING WITH WELDING FITTINGS FOR PIPING 2 1/2" AND LARGER. STANDARD THREADED FITTINGS FOR 2" AND SMALLER.

TEST UNDER 30 PSI AIR PRESSURE.

INSTALL GAS COCK EXTERNAL TO THE BUILDING ON LINE ENTERING THE BUILDING AND AT PIECE OF EQUIPMENT SERVED.

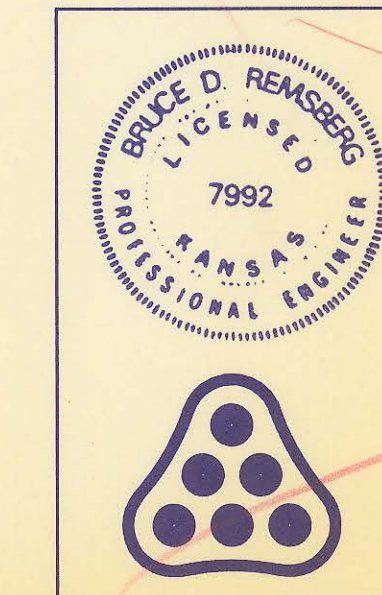
THE MECHANICAL CONTRACTOR SHALL BRING PIPING ABOVE GRADE, VALVE, AND ENTER BUILDING. USE A FLANGED PLUG VALVE WITH AN INSULATING FLANGE GASKET AND PLASTIC SLEEVES FOR THE BOLTS OF THE FLANGED JOINTS.

LIFT STATION OPTION NO. 1 PART C

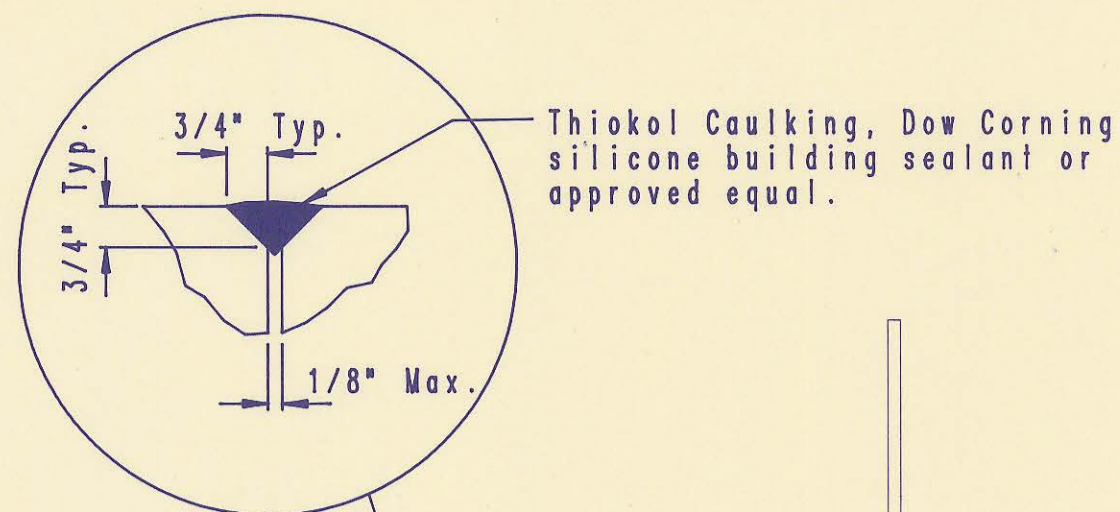
**NOT USED**

No.	Revision	By	Date
SEDGWICK COUNTY BUREAU OF PUBLIC SERVICES DAVID C. SPEARS, P.E., DIRECTOR, BUREAU OF PUBLIC SERVICES/COUNTY ENGINEER <b>SELF PRIMING LIFT STATION DETAILS</b> MODIFICATIONS TO EXISTING FACILITY TIMBER LAKES-SPRINGDALE SEWAGE TREATMENT PLANT <b>PROFESSIONAL ENGINEERING CONSULTANTS, P.A.</b> ENGINEERS WICHITA, KANSAS			
Designed by	BDR	Job No.	34-85254-1
Drawn by	CAL	Date	February, 1986

Sht. 30 of 36

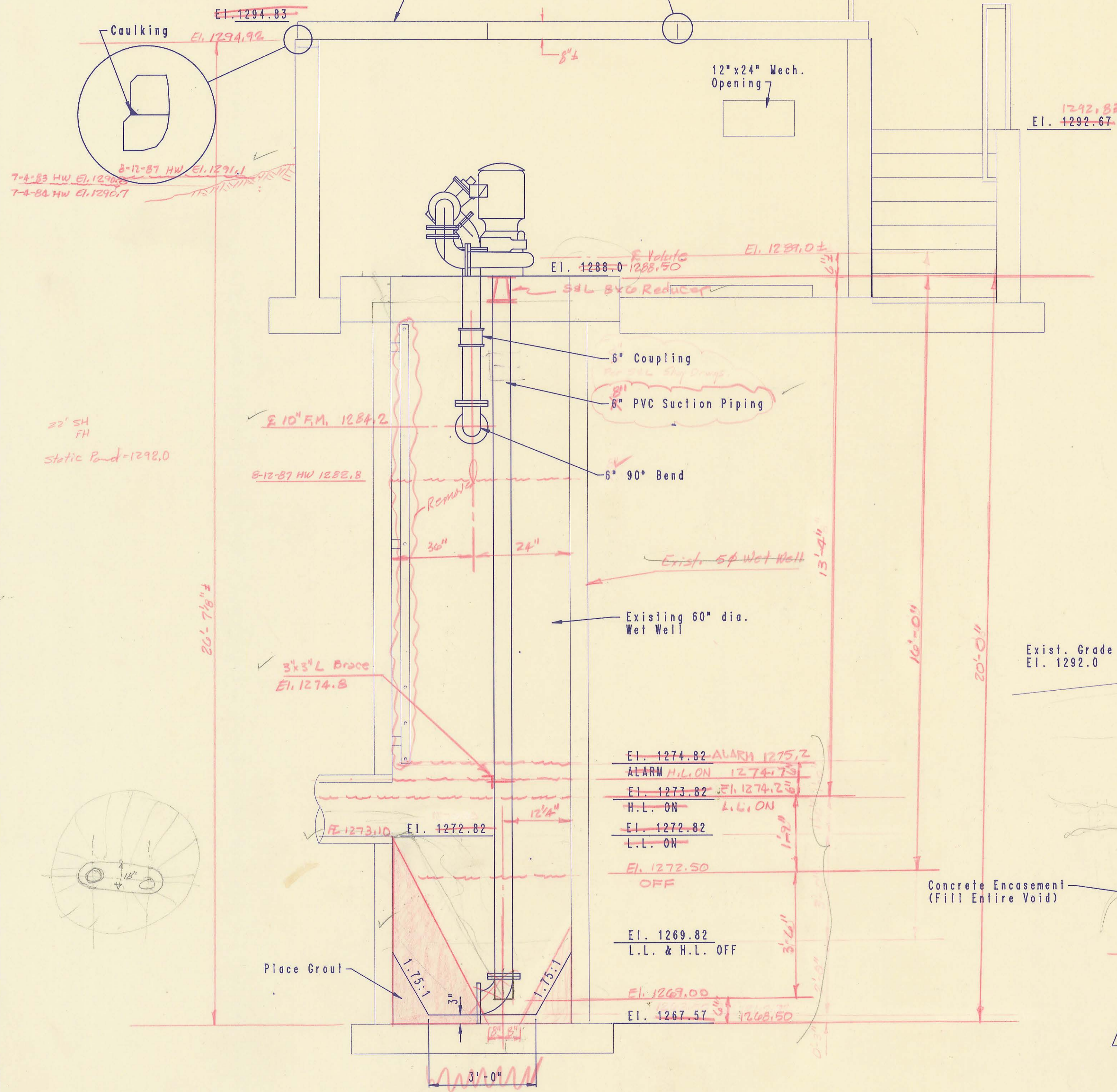


Note:  
Contractor shall reconnect existing 4" PVC Wet Well Vent.  
Contractor shall seal roof sections when set in position. See Details this sheet.

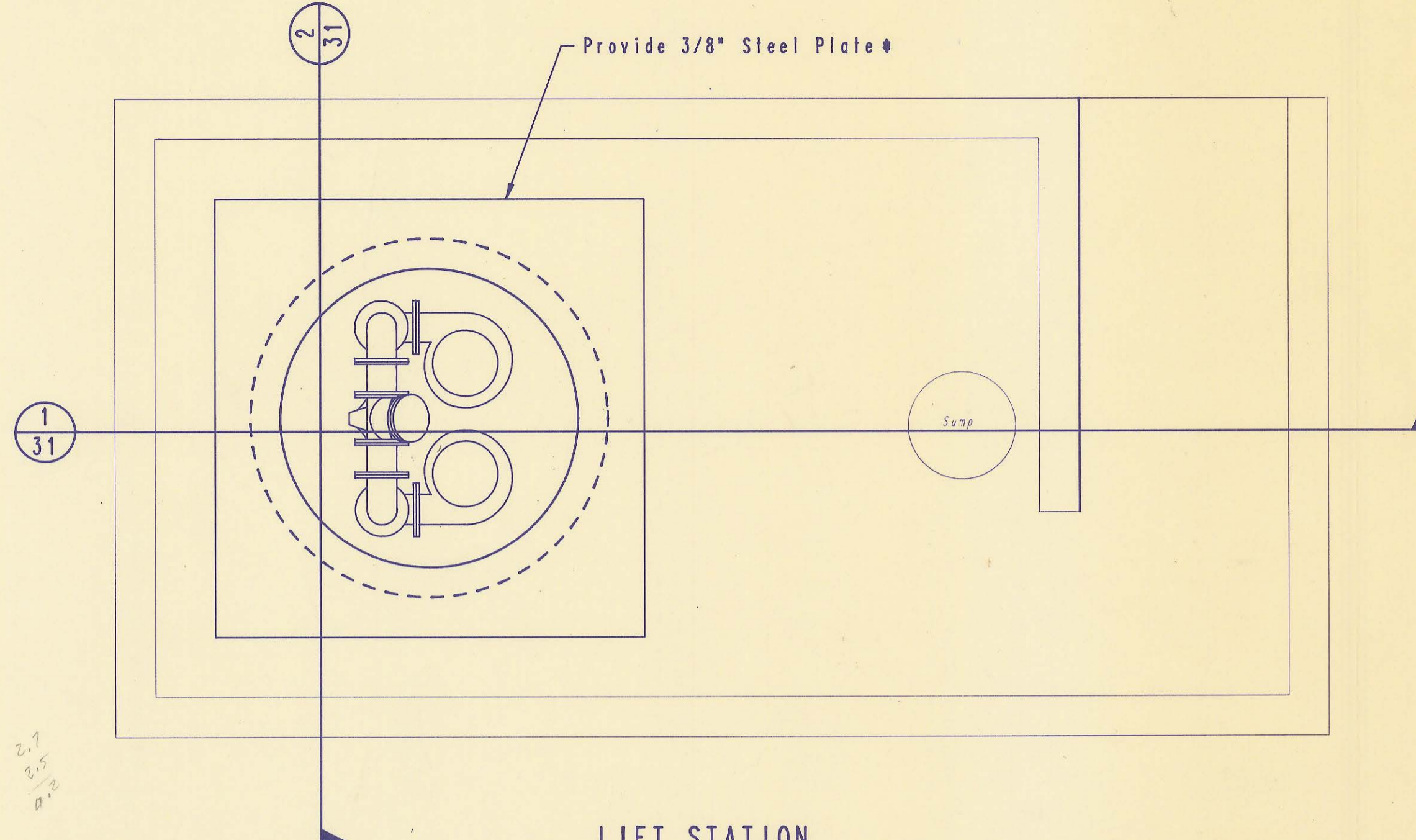


All openings through Floor Plate shall be sealed w/Embecco grout or equal after lines are installed.

3 section Removable Concrete Roof  
Each Section 5'-3 7/8" x 10'-6" w/4 Lifting Hooks per Section.

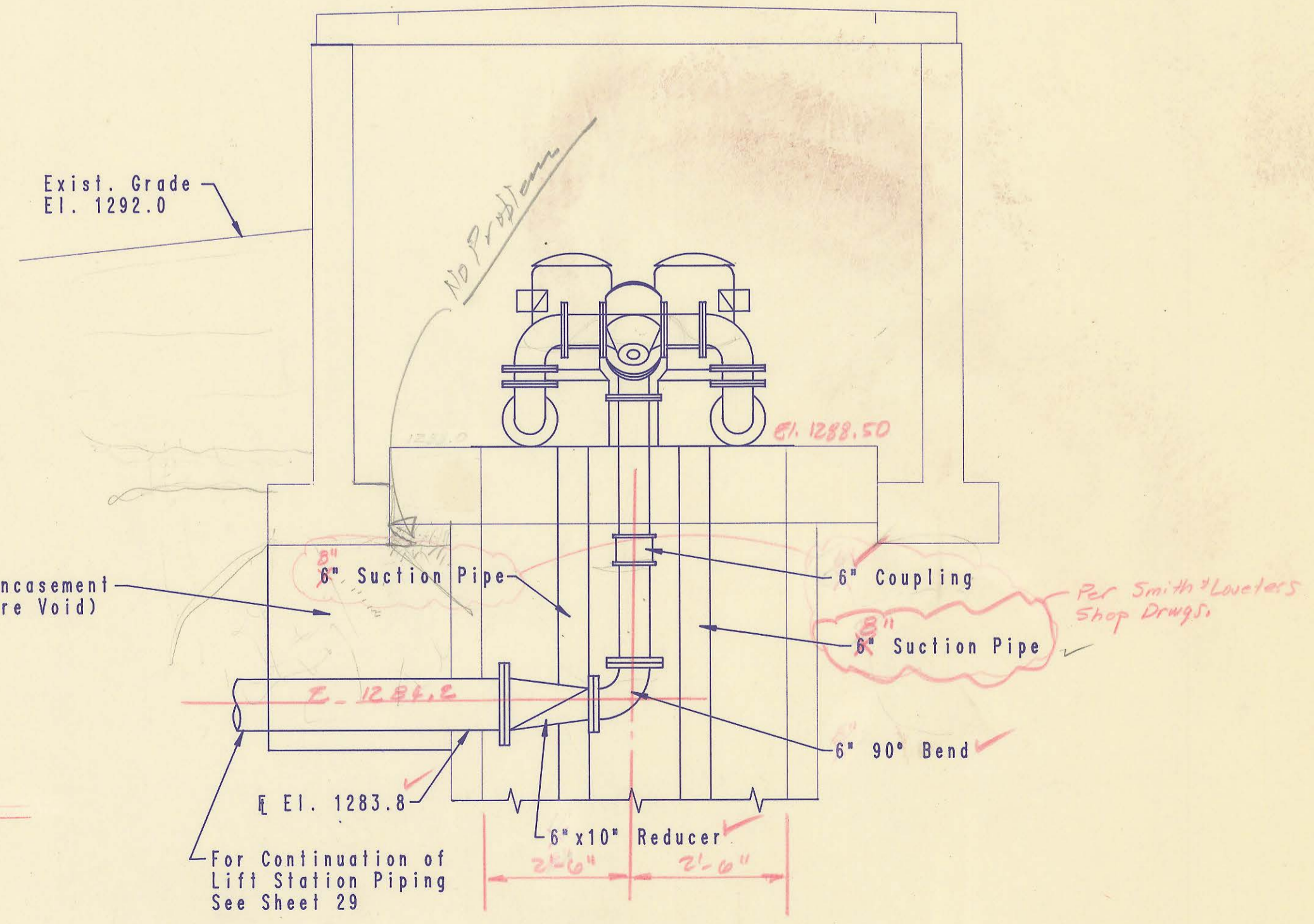


SECTION 1 See As-Built Sketch (7-23-87) LOC  
Scale: 1/2" = 1'-0"



LIFT STATION PLAN VIEW  
Scale: 1/2" = 1'-0"

3/8" Steel Plate shall cover entire pump support pad. Broken down edges or other reinforcing shall be provided to insure rigid support.



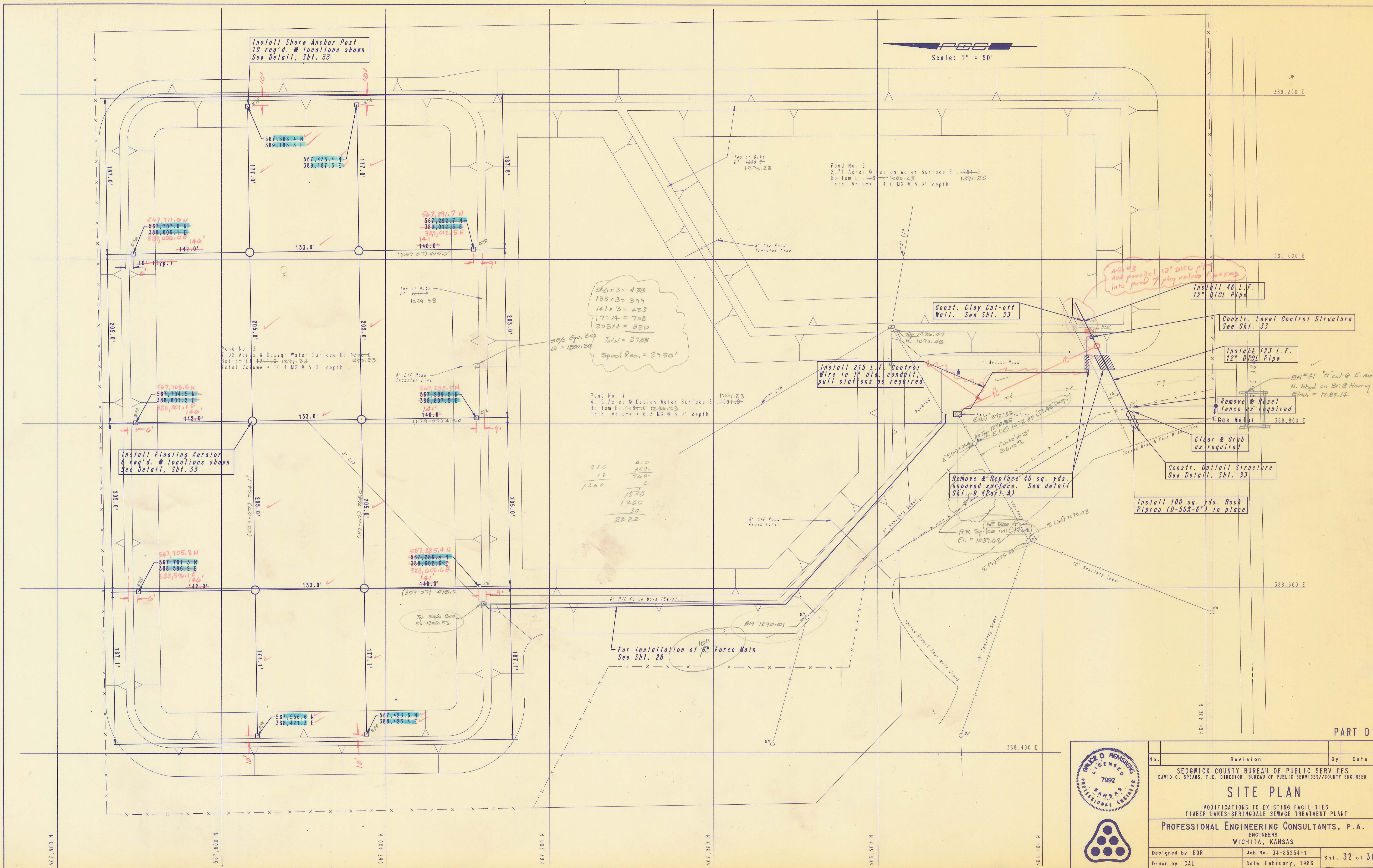
SECTION 2  
Scale: 1/2" = 1'-0"

NOTES

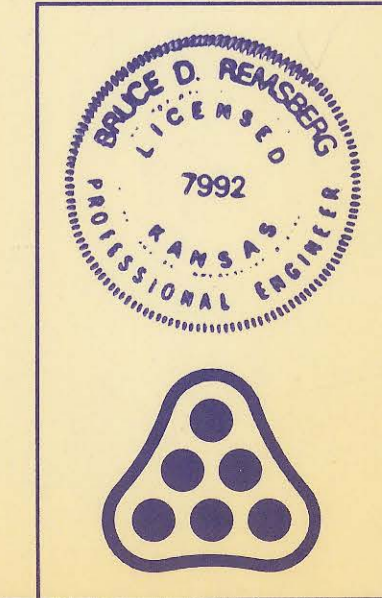
- SEE PLAN SHEET 34 FOR EXISTING EQUIPMENT REMOVAL PLAN.
- SEE PLAN SHEETS 35 & 36 FOR ELECTRICAL INSTALLATION REQUIREMENTS.
- SEE PLAN SHEET 29 FOR STANDBY GENERATOR LOCATION.
- PUMP OPERATING CONDITIONS
  - MINIMUM FLOW AT MAXIMUM TDH - 1000 GPM
  - MAXIMUM STATIC HEAD - 26.2 FT.
  - FORCE MAIN HEAD LOSS - 17.5 FT.
  - STATION DISCHARGE HEAD LOSS (ESTIMATED) - 8.0 FT.
  - MAXIMUM STATIC SUCTION LIFT - 20.4 FT.
  - TOTAL SUCTION LIFT - 22.9 FT.
  - MAXIMUM ESTIMATED TDH - 54.2 FT.
  - MINIMUM ESTIMATED TDH - 51.2 FT.
  - PUMP MOTOR - 25 H.P.; 1170 RPM; 480/60/3

Smith & Lowless (2-4838, 20HP @1800 RPM) Mod 5(87020)  
LIFT STATION OPTION NO. 2 PART C

	Revision		By	Date
	SEDGWICK COUNTY BUREAU OF PUBLIC SERVICES DAVID C. SPEARS, P.E. DIRECTOR, BUREAU OF PUBLIC SERVICES/COUNTY ENGINEER <b>VACUUM PRIMING LIFT STATION DETAILS</b> MODIFICATIONS TO EXISTING FACILITIES TIMBER LAKES-SPRINGDALE SEWAGE TREATMENT PLANT <b>PROFESSIONAL ENGINEERING CONSULTANTS, P.A.</b> ENGINEERS WICHITA, KANSAS			
	Designed by BDR	Job No. 34-85254-1	Sht. 31 of 36	
	Drawn by CAL	Date February, 1986		

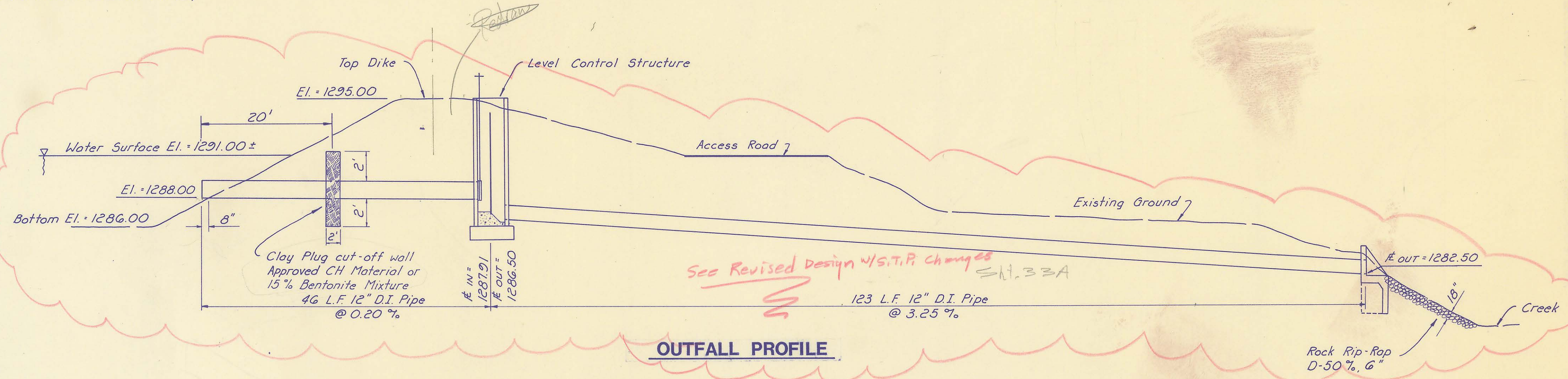


PART D



No.	Revision	By	Date
SEDGWICK COUNTY BUREAU OF PUBLIC SERVICES DAVID C. SPEARS, P.E. DIRECTOR, BUREAU OF PUBLIC SERVICES/COUNTY ENGINEER			
<b>SITE PLAN</b> MODIFICATIONS TO EXISTING FACILITIES TIMBER LAKES-SPRINGDALE SEWAGE TREATMENT PLANT			
<b>PROFESSIONAL ENGINEERING CONSULTANTS, P.A.</b> ENGINEERS WICHITA, KANSAS			
Designed by BDR	Job No. 34-85254-1	Sht. 32 of 36	
Drawn by CAL	Date February, 1986		

NOTE: All trench backfill shall be compacted to 95% ASTM D-698, MR (0)



OUTFALL PROFILE

NOTE:

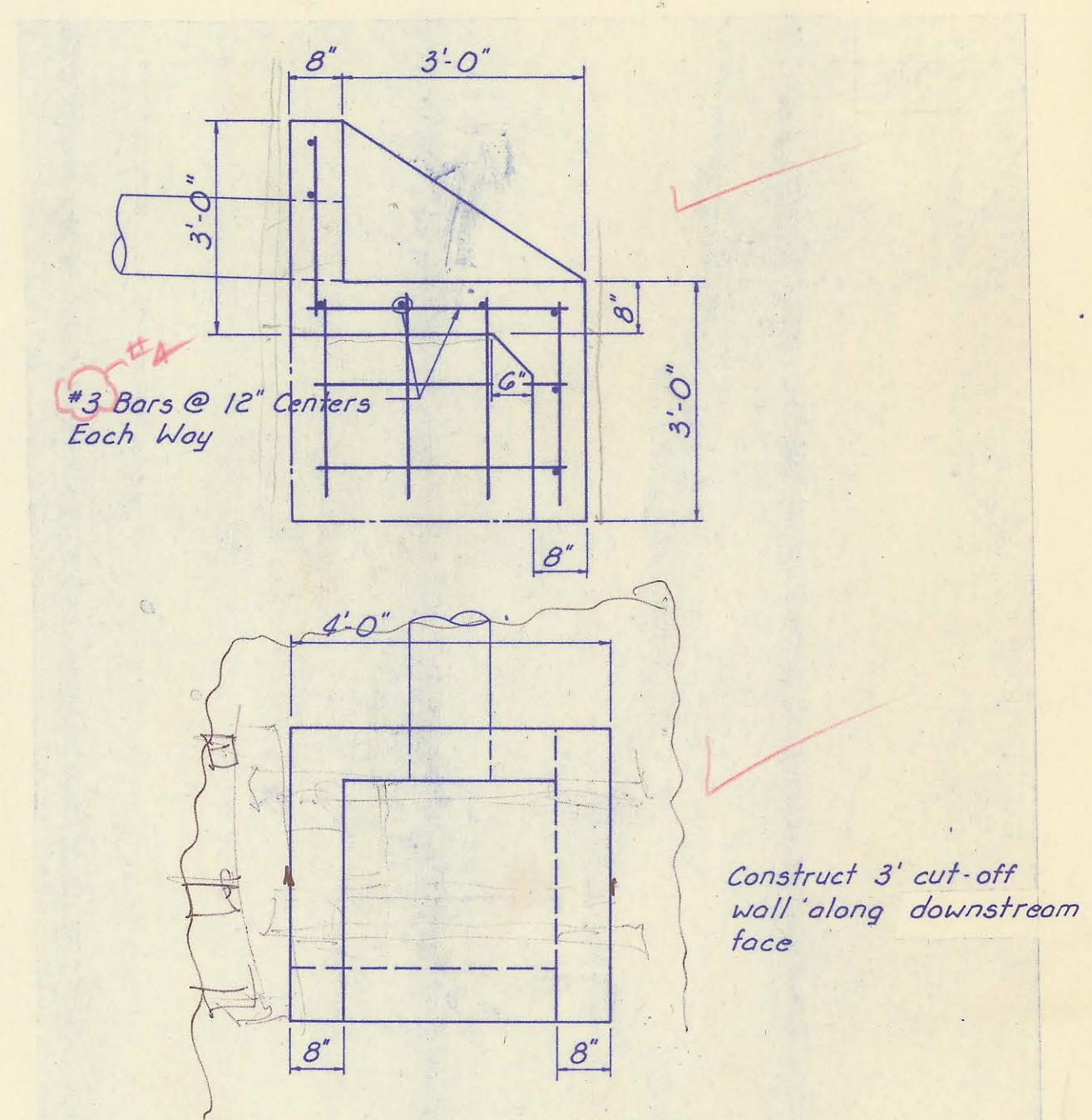
IN ORDER TO INSTALL THE OUTFALL LINE, THE CONTRACTOR MAY ELECT TO USE ONE OF THE FOLLOWING OPTIONS (SUBJECT TO THE VARIOUS PROVISIONS SET OUT BELOW) TO PROTECT THE WORK FROM WATER FROM THE LAGOON

- A) CONSTRUCT A COFFERDAM FOR DEWATERING.
- B) LOWER THE WATER SURFACE ELEVATION BY PUMPING INTO THE OTHER LAGOONS.
- C) LOWER THE WATER SURFACE ELEVATION BY DISCHARGING THROUGH THE EXISTING OUTLET PIPE.

THE CONTRACTOR SHALL NOT BE ALLOWED TO DISCHARGE INTO THE EXISTING LAGOONS TO THE EXTENT THAT WATER SURFACE ELEVATIONS EXCEED TWO FEET (2') OVER NORMAL WATER SURFACE ELEVATION.

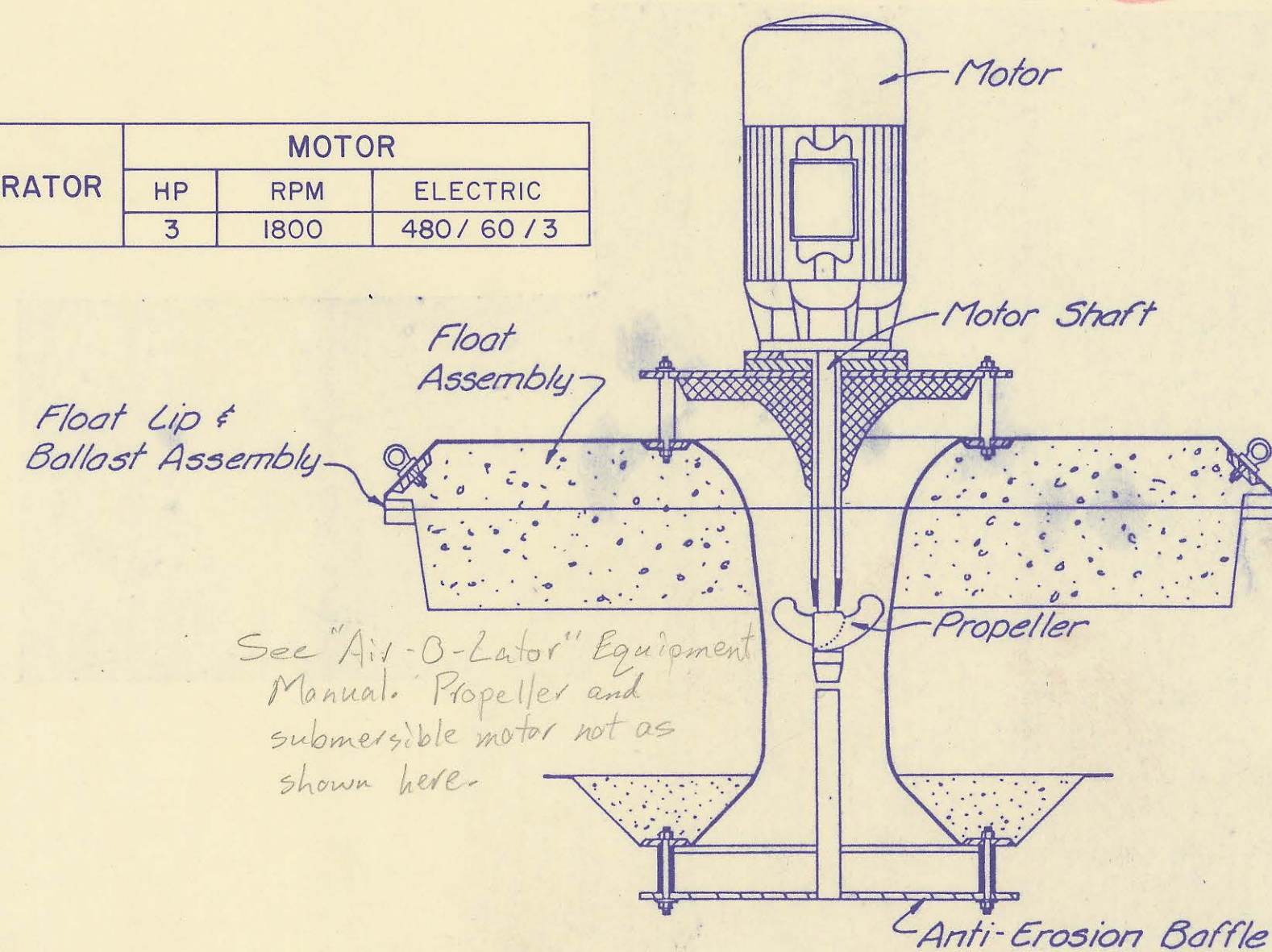
THE CONTRACTOR SHALL BE ALLOWED TO DISCHARGE OUT OF THE TREATMENT PLANT ONLY IF THE FOLLOWING CONDITIONS ARE MET.

- A) PRIOR APPROVAL FOR DISCHARGING IS GIVEN BY THE KANSAS DEPARTMENT OF HEALTH AND ENVIRONMENT IN WRITING.
- B) EFFLUENT QUALITY STANDARDS, AS MONITORED BY SEDGWICK COUNTY BUREAU OF PUBLIC SERVICES PERSONNEL, ARE CONTINUALLY MET DURING DISCHARGE.
- C) THE CONTRACTOR SHALL AGREE TO HALT DISCHARGE IMMEDIATELY UPON RECEIPT OF NOTICE FROM THE ENGINEER TO DO SO.

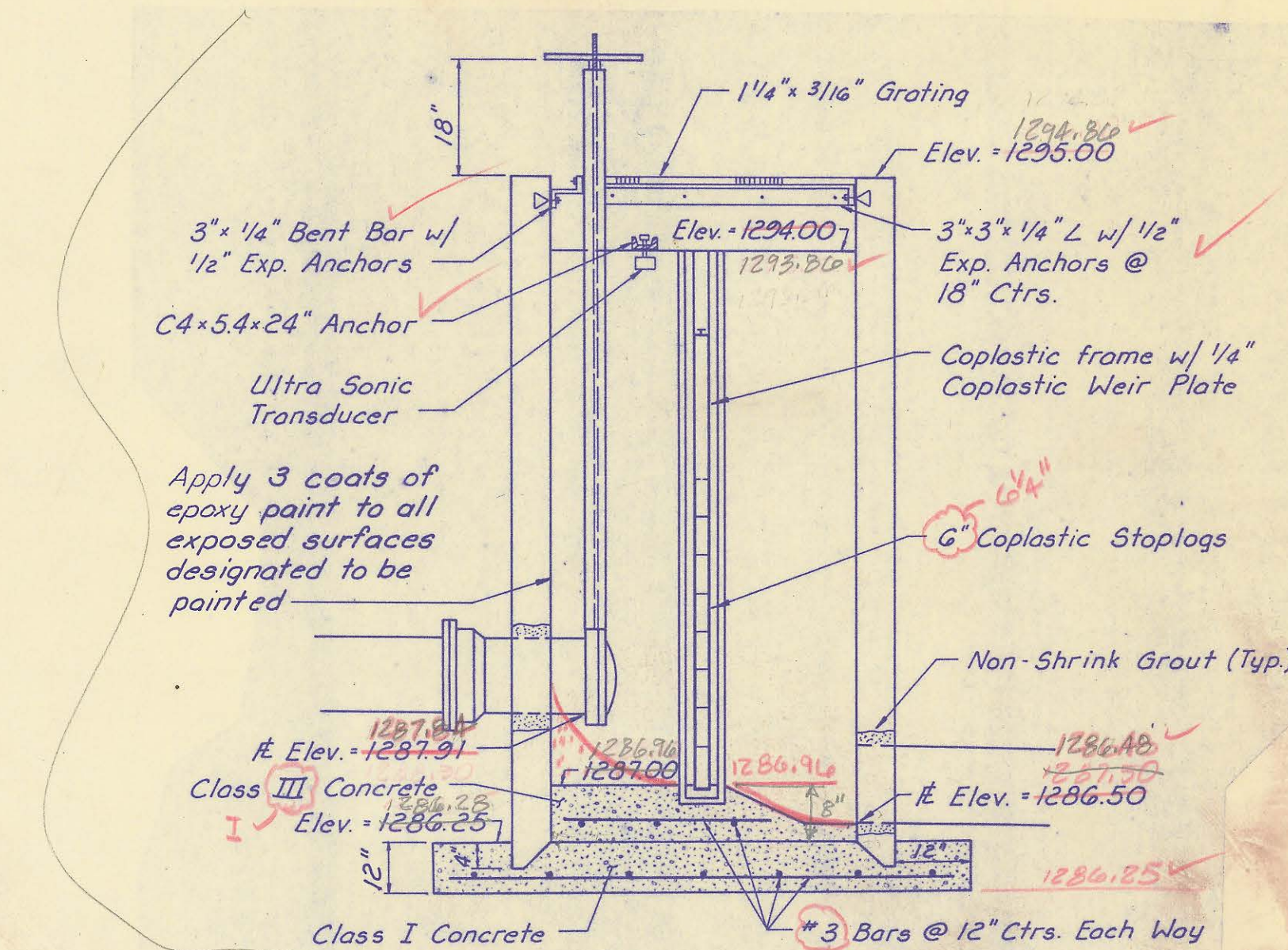


OUTFALL STRUCTURE DETAIL

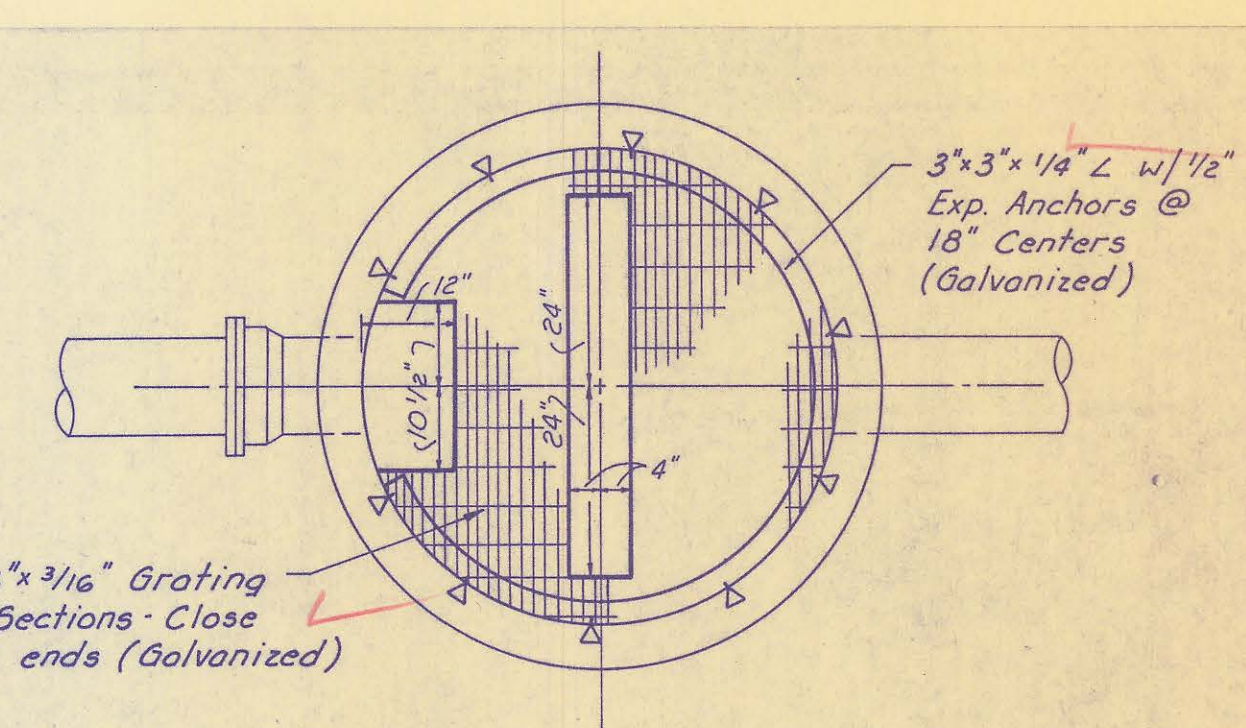
AERATOR	MOTOR		
	HP	RPM	ELECTRIC
	3	1800	480 / 60 / 73



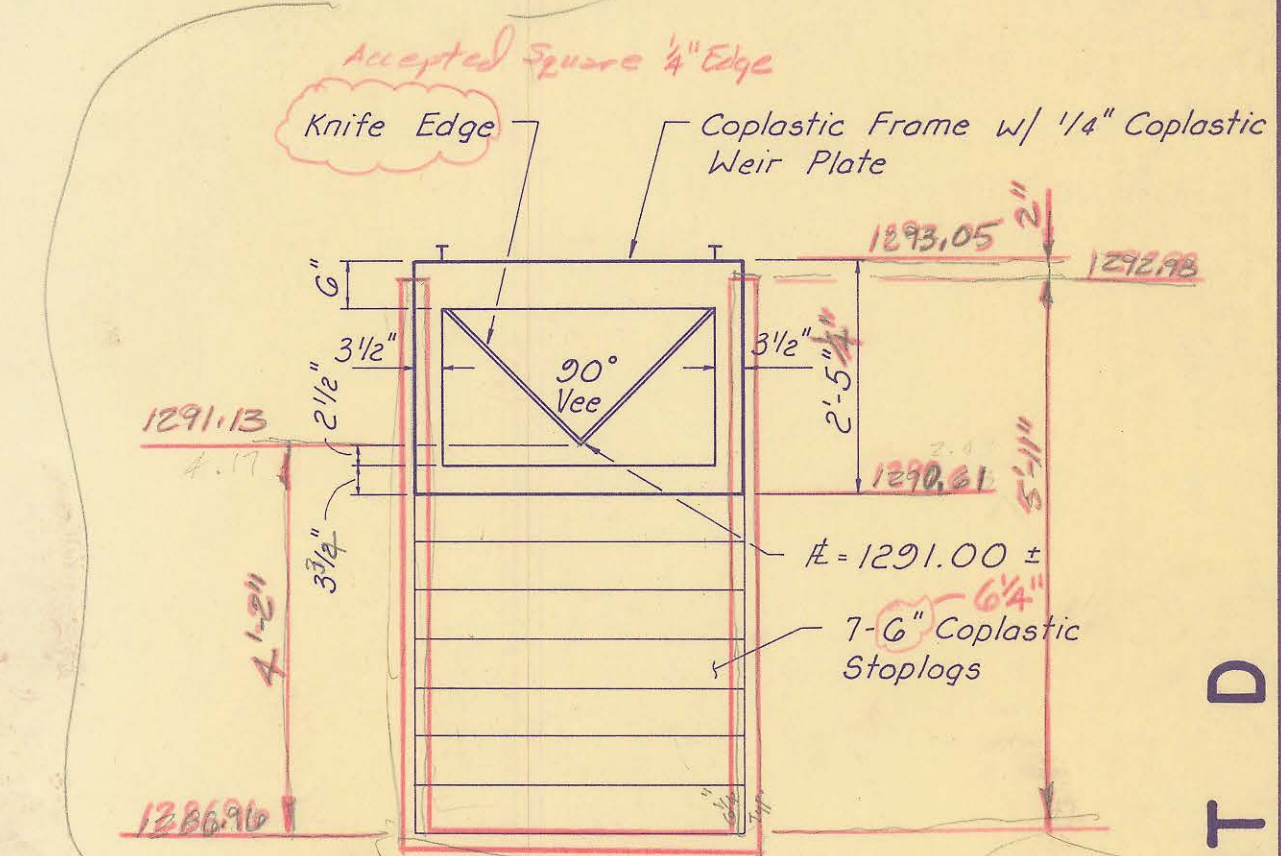
FLOATING AERATOR DETAIL



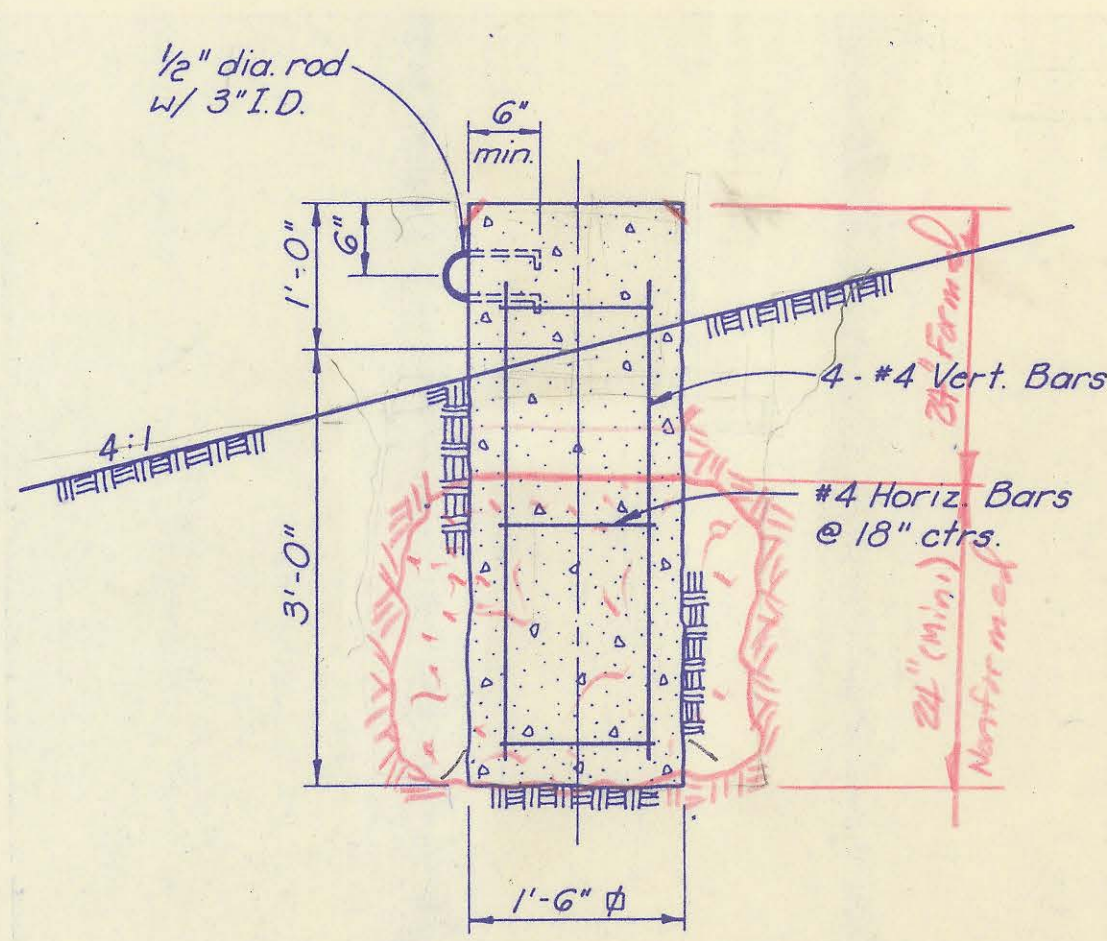
SECTION



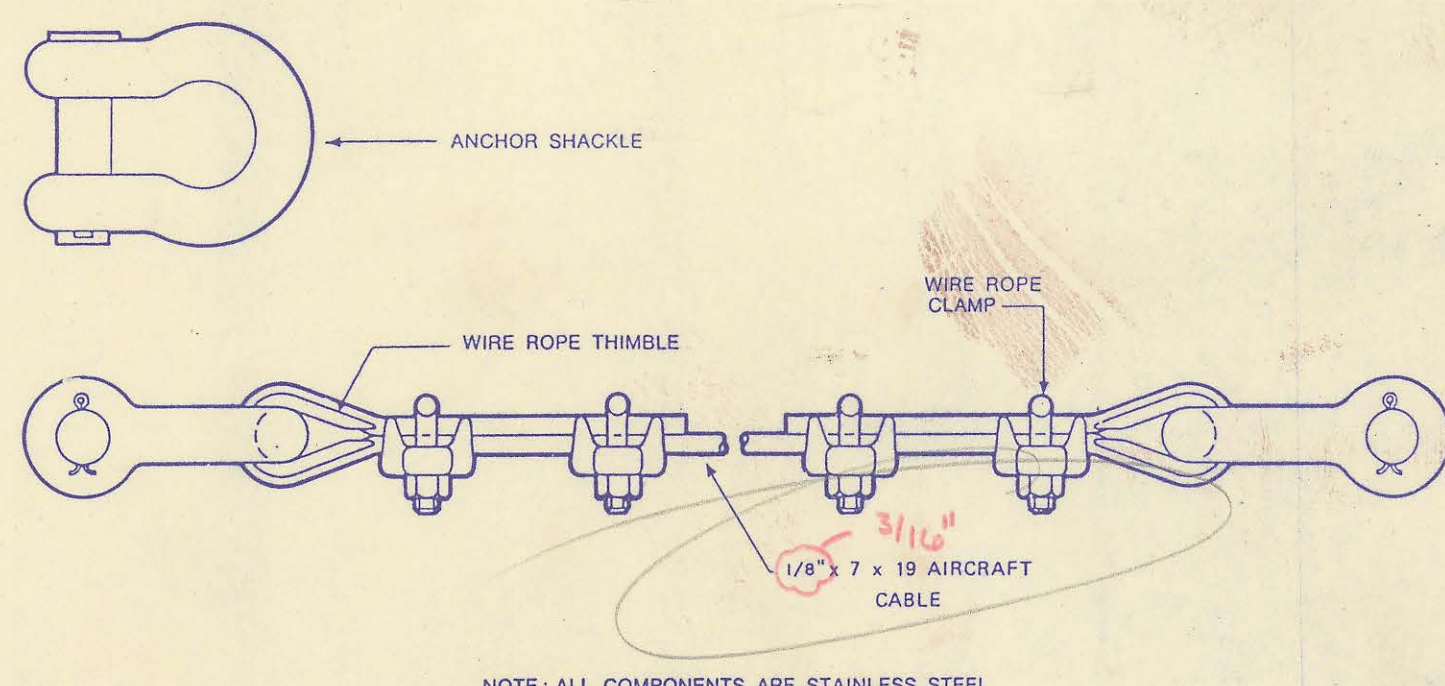
GRATING PLAN



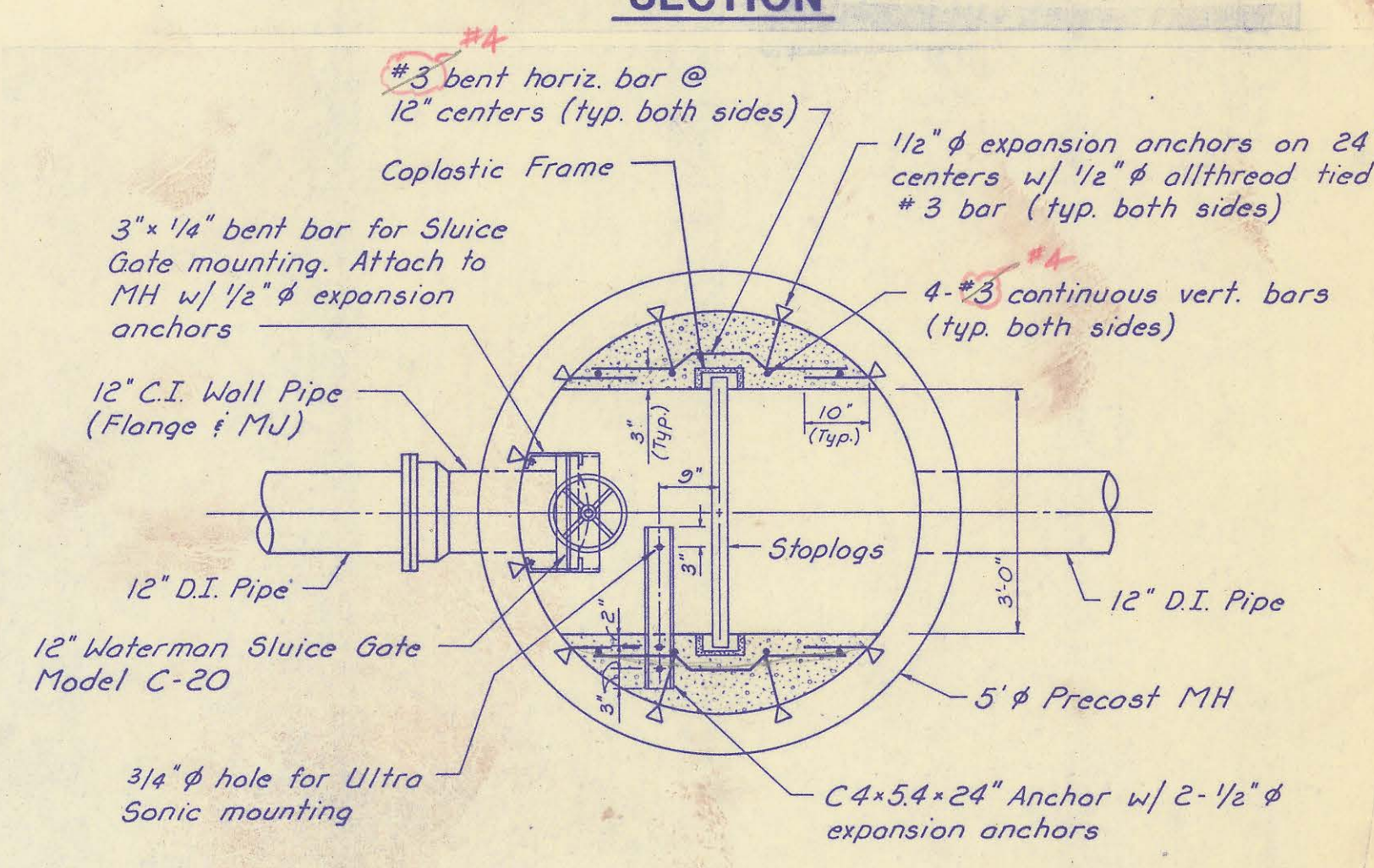
WEIR PLATE DETAIL



SHORE ANCHOR POST DETAIL



AERATOR MOORINGS



PLAN

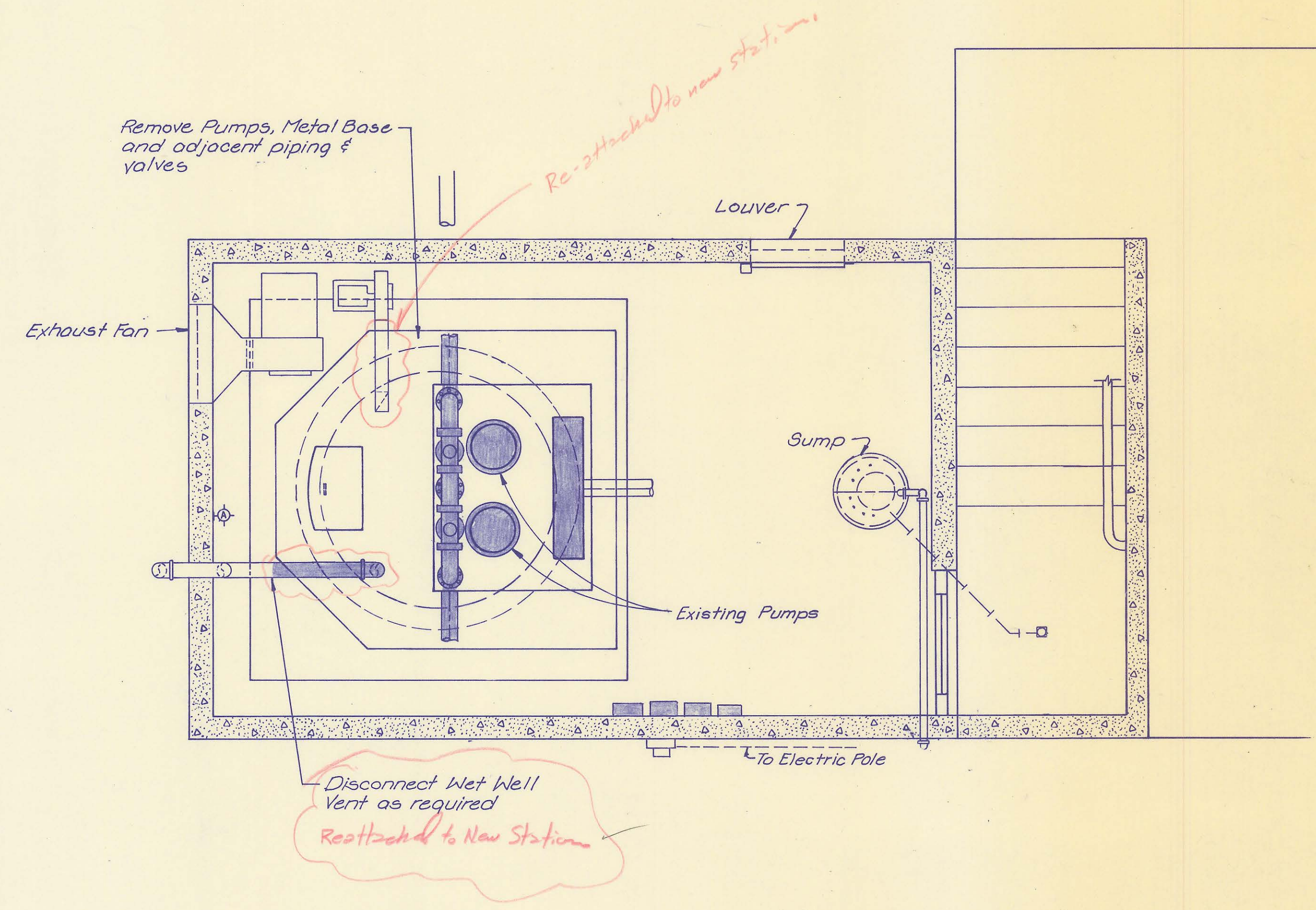
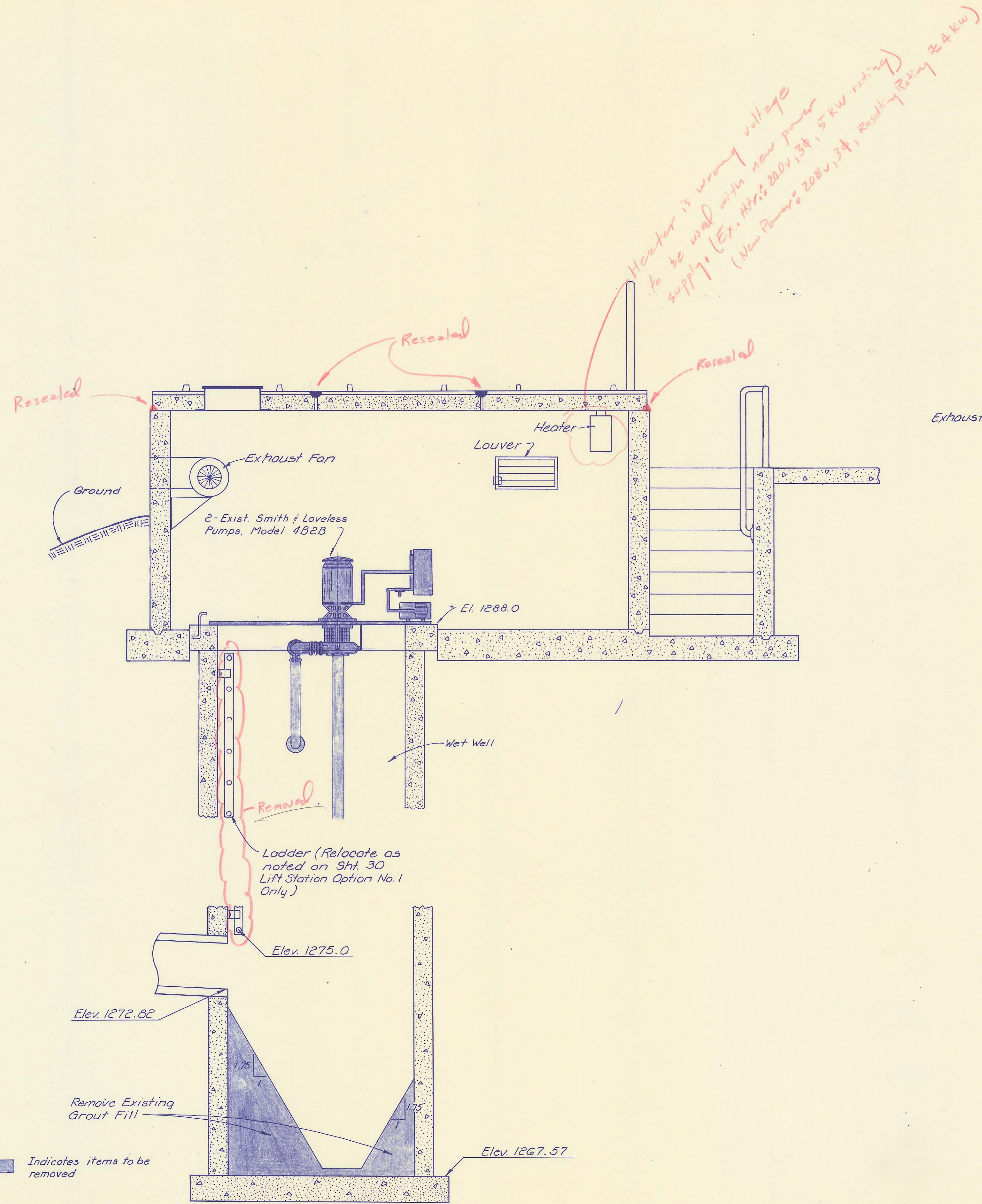
Note: All expansion anchors to be Hilti "Kwik Bolt", No. 12-234

LEVEL CONTROL STRUCTURE



No.	Revision	By	Date
SEDGWICK COUNTY BUREAU OF PUBLIC SERVICES DAVID C. SPEARS, P.E. DIRECTOR, BUREAU OF PUBLIC SERVICES/COUNTY ENGINEER			
<b>DETAILS</b> MODIFICATIONS TO DISCHARGING FACILITIES TIMBER LAKES-SPRINGDALE SEWAGE TREATMENT PLANT <b>PROFESSIONAL ENGINEERING CONSULTANTS, P.A.</b> ENGINEERS WICHITA, KANSAS			
Designed by	MDS, KLR	Job No.	34-85254-1
Drawn by	GM	Date	Feb. 1986
		Sht. 33 of 36	

PART D



Indicates items to be removed

	No.	Revision	By	Date
	SEDGWICK COUNTY BUREAU OF PUBLIC SERVICES DAVID C. SPEARS, P.E. DIRECTOR, BUREAU OF PUBLIC SERVICES/COUNTY ENGINEER <b>EQUIPMENT REMOVAL PLAN</b> <b>EXISTING LIFT STATION</b> MODIFICATIONS TO DISCHARGING FACILITIES TIMBER LAKES-SPRINGDALE SEWAGE TREATMENT PLANT <b>PROFESSIONAL ENGINEERING CONSULTANTS, P.A.</b> ENGINEERS WICHITA, KANSAS			
Designed by <i>BDR</i> Drawn by <i>CAL</i>	Job No. <i>85254-1</i> Date <i>Feb. 1986</i>	Sht. <i>34</i> of <i>36</i>		