



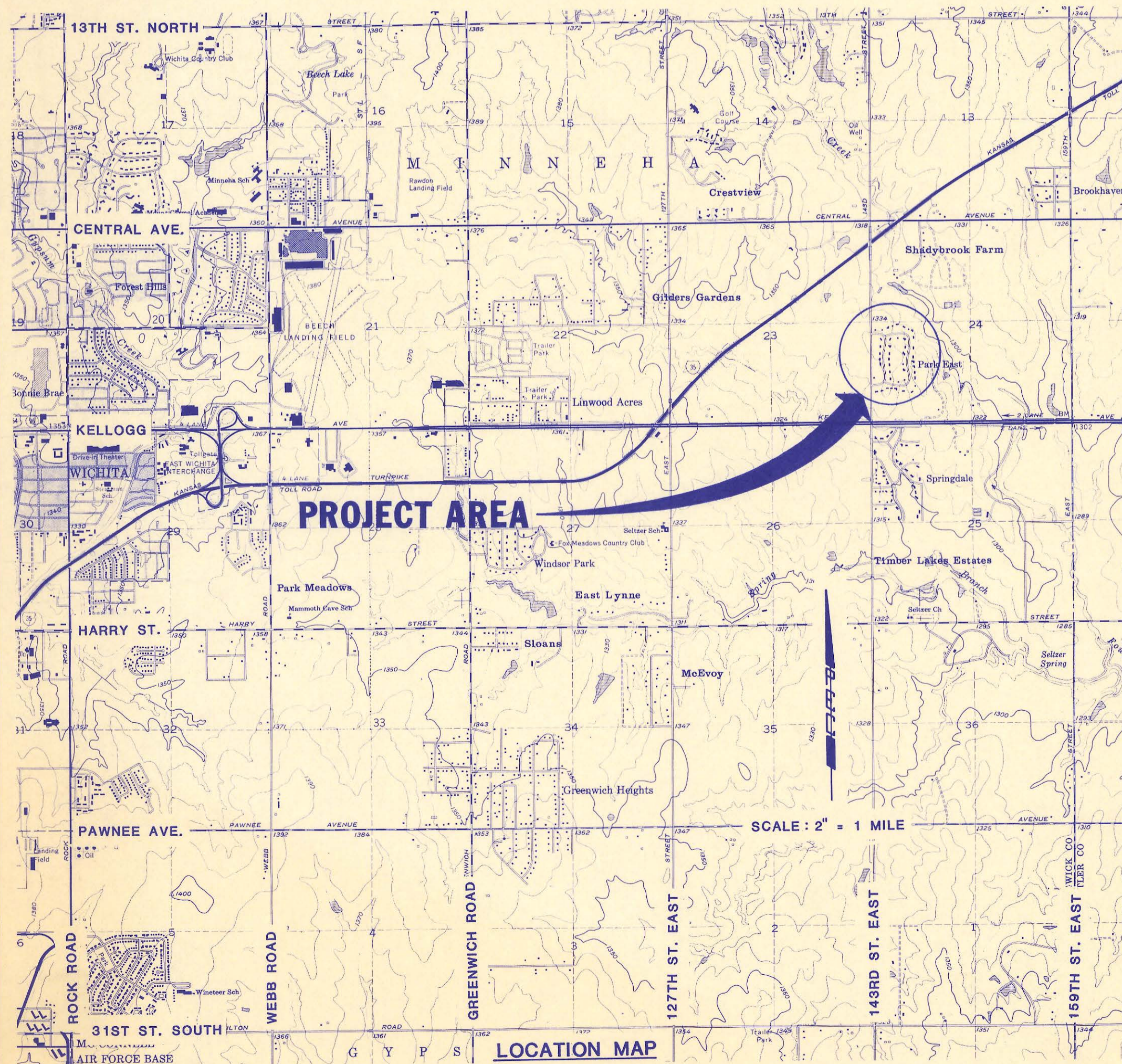
SECTION  
6447c

# FOUR MILE CREEK

4MC-119

## CONSTRUCTION PLANS FOR SANITARY SEWER LATERALS IN THE PARK EAST LATERAL SEWER DISTRICT

### Project No. 34-81051-12-024 AUGUST, 1981



#### INDEX OF SHEETS

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RECORD DRAWING  
7-30-82

APPROVED BY:  
BOARD OF COUNTY COMMISSIONERS  
*Billy McCray* 8/19/81  
CHAIRMAN DATE

APPROVED BY:  
SEDGWICK COUNTY  
BUREAU OF PUBLIC SERVICES  
*David C. Lewis* 8/19/81  
DIRECTOR DATE



FILED IN THE OFFICE OF:  
THE SEDGWICK COUNTY CLERK  
*Don Wright*  
COUNTY CLERK DATE



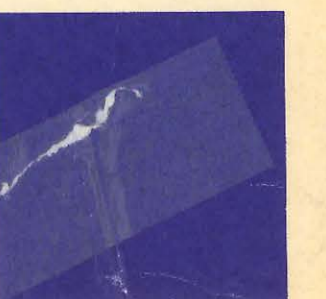
UPDATED PER CURRENT STANDARDS 9/1988

EPA Project No. C 20-0691-05

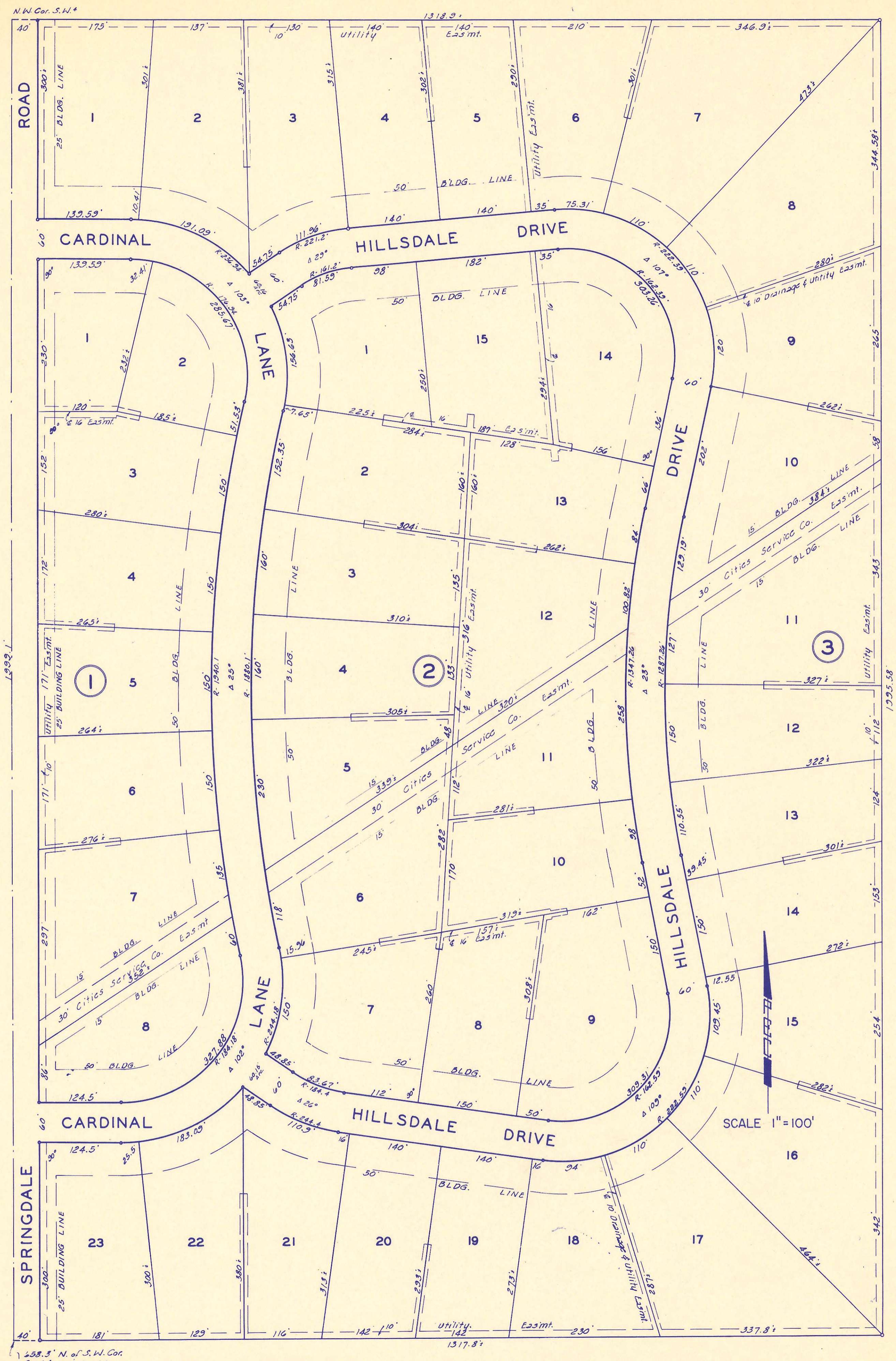


## PROFESSIONAL ENGINEERING CONSULTANTS, P.A.

WICHITA, KANSAS



4MC-119



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

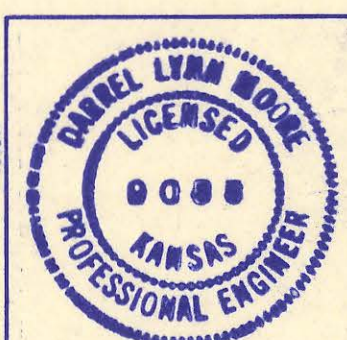
SEWER LINE SCHEDULE				
LINE NO.	STATION TO STATION	MANHOLES	SHEET NO.	
LINE NO. 1	00+01.52 to 10+09.31	1-0 thru 1-6	7	
LINE NO. 1	10+09.31 to 20+96.84	1-6 thru 1-13	8	
LINE NO. 1	20+96.84 to 26+81.86	1-13 thru 1-16	9	
LINE NO. 2	00+00.00 to 00+73.86	2-1	10	
LINE NO. 3	00+00.00 to 05+04.48	1-3,3-1 thru 3-3	10	
LINE NO. 3	05+04.48 to 10+99.39	3-3 thru 3-8	11	
LINE NO. 4	00+00.00 to 00+54.68	3-2 and 4-1	12	
LINE NO. 5	00+00.00 to 02+48.74	3-4,5-1 thru 5-3	12	
LINE NO. 6	00+00.00 to 00+55.11	1-6 and 6-1	12	
LINE NO. 7	00+00.00 to 00+55.11	1-9 and 7-1	12	
LINE NO. 8	00+00.00 to 00+55.08	1-13 and 8-1	13	
LINE NO. 9	00+00.00 to 06+34.24	1-15,9-1 thru 9-5	13	
LINE NO. 10	00+00.00 to 00+55.32	9-2 and 10-1	14	
LINE NO. 11	00+00.00 to 00+55.01	9-3 and 11-1	14	
LINE NO. 12	00+00.00 to 00+55.00	1-5 and 12-1	14	

Ⓜ Denotes lots to be provided with wyes for sanitary sewer service. See the "Wye Location Table" on sheet no. G for exact locations.

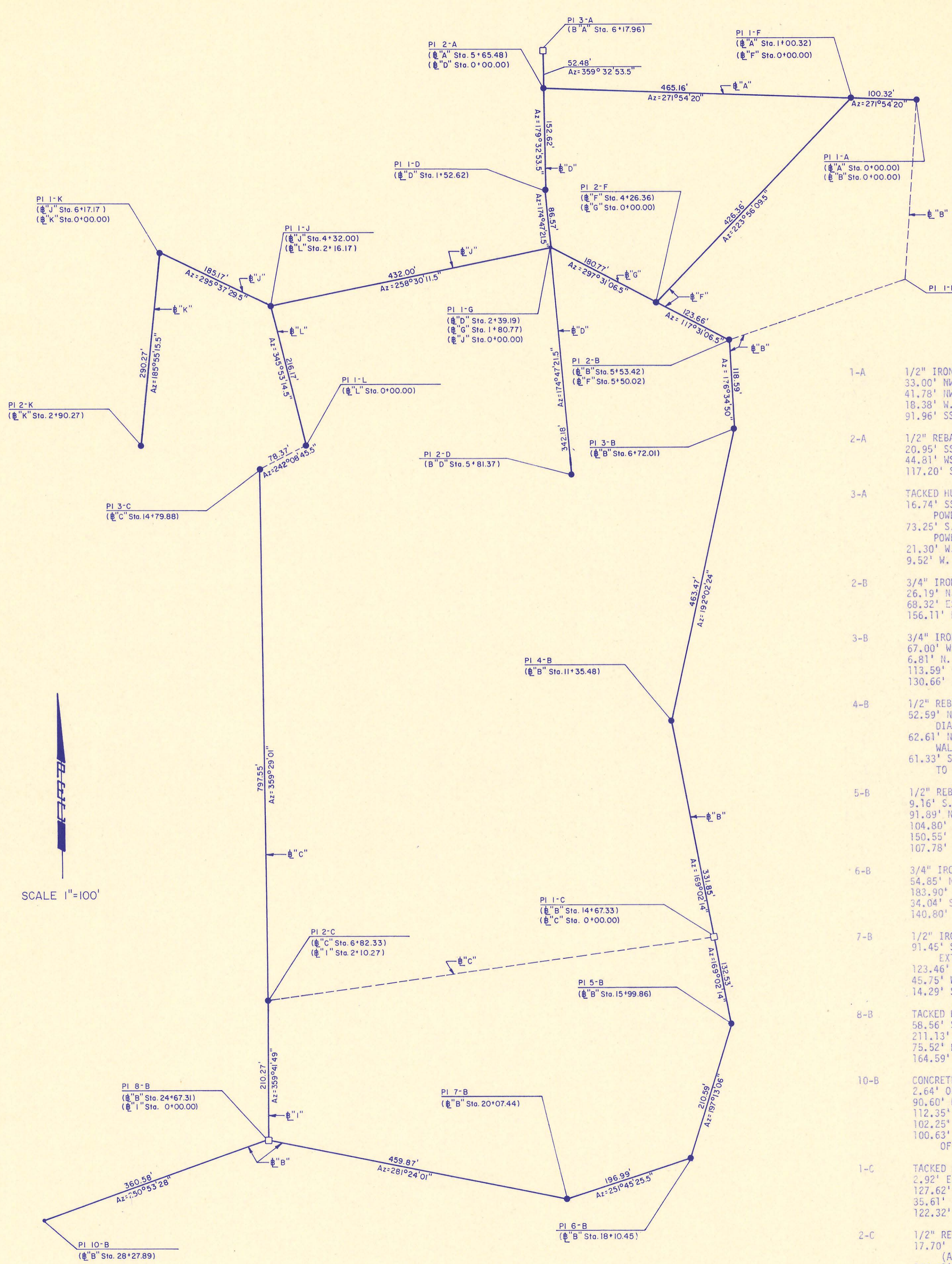
BENCH MARK LIST

- B.M. #18 - 60" STEP IN HLP 15' S. & 50' E. OF W. 1/4 CORNER SEC. 24, T27S, R2E.  
ELEV. = 1335.17 (MSL)
- B.M. #1-P - NAIL IN 3" DIA. TREE STUMP NEAR S.E. CORNER LOT 2, BLOCK 1, PARK EAST.  
ELEV. = 1341.62 (MSL)
- B.M. #2-P - BOLT HEAD BETWEEN MUE & LER ON N. SIDE OF FIRE HYDRANT @ S.E. CORNER LOT 5, BLOCK 1, PARK EAST.  
ELEV. = 1344.01 (MSL)
- B.M. #3-P - BOLT HEAD BETWEEN MUE & LER ON N. SIDE OF FIRE HYDRANT @ S.W. CORNER LOT 8, BLOCK 1, PARK EAST.  
ELEV. = 1333.98 (MSL)
- B.M. #4-P - BOLT HEAD BETWEEN MUE & LER ON N.W. SIDE OF FIRE HYDRANT NEAR S.E. CORNER LOT 9, BLOCK 2, PARK EAST.  
ELEV. = 1332.44 (MSL)
- B.M. #5-P - CHISELED "C" @ N.E. CORNER OF N. CONCRETE HEADWALL @ LOT 13, BLOCK 2, PARK EAST.  
ELEV. = 1331.33 (MSL)
- B.M. #6-P - R.R. SPIKE IN S. FACE 2.5" DIA. HEDGE TREE APPROX. 70' W. OF N.E. CORNER LOT 7, BLOCK 3, PARK EAST.  
ELEV. = 1312.75 (MSL)

RECORD DRAWING  
7-30-82



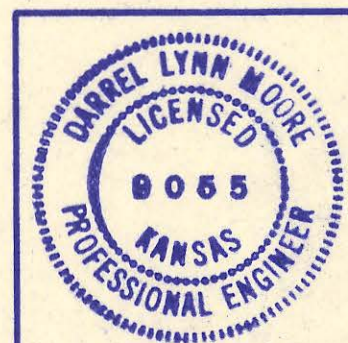
Updated per Current Standards		GM 9/1988
No.	Revision	By Date
SEDGWICK COUNTY BUREAU OF PUBLIC SERVICES DAVID C. SPEARS, P.E. DIRECTOR, BUREAU OF PUBLIC SERVICES/COUNTY ENGINEER		
<b>KEY MAP &amp; PLAT</b>		
SANITARY SEWER LATERALS PARK EAST LATERAL SEWER DISTRICT		
<b>PROFESSIONAL ENGINEERING CONSULTANTS, P.A.</b>		
ENGINEERS WICHITA, KANSAS		
Designed by <b>KLR, LM</b>	Job No. <b>21061-12</b>	Sht. <b>2</b> of <b>14</b>
Drawn by <b>GRH</b>	Date <b>Aug. 1981</b>	



- PI REFERENCE TIES
- 1-A 1/2" IRON PIPE  
33.00' NW. TO SE. CORNER WOOD SHED  
41.78' NW. TO SW. CORNER WOOD SHED  
18.38' W. TO FENCE LINE  
91.96' SSW. TO FENCE CORNER
  - 2-A 1/2" REBAR  
20.95' SSW. TO POWER POLE  
44.81' WSW. TO NE. CORNER OF HOUSE  
117.20' SSE. TO NW. CORNER OF HOUSE
  - 3-A TACKED HUB  
16.74' SSW. TO NAIL & WASHER IN E. FACE  
POWER POLE (APPROX. 0.2' ABOVE GROUND)  
73.25' S. TO NAIL & WASHER IN E. FACE  
POWER POLE (APPROX. 1.0' ABOVE GROUND)  
21.30' W. TO E. FACE 1.5' OSAGE ORANGE STUMP  
9.52' W. TO 1/2" IRON PIPE (PROP. COR.)
  - 2-B 3/4" IRON PIPE  
26.19' N. TO CENTER TOP OF GAS METER  
68.32' ESE. TO NW. CORNER OF HOUSE  
156.11' NE. TO SW. CORNER OF HOUSE
  - 3-B 3/4" IRON PIPE  
67.00' WSW. TO CENTER TOP OF GAS METER  
6.81' N. TO WATER METER  
113.59' ENE. TO SE. CORNER OF HOUSE  
130.66' SSE. TO NW. CORNER OF HOUSE
  - 4-B 1/2" REBAR  
52.59' NE. TO NAIL & SHINER IN SE. FACE 1.0'  
DIA. LOCUST TREE (1.7' ABOVE GROUND)  
62.61' NNW. TO "4" IN NE. CORNER CONC. SIDE-  
WALK TO LOT 12, BLOCK 2  
61.33' SW. TO "4" IN SE. CORNER CONC. DRIVE  
TO LOT 11, BLOCK 2
  - 5-B 1/2" REBAR  
9.16' S. TO 4' LAMP POST  
91.89' NE. TO SW. CORNER OF HOUSE  
104.80' N. TO 6' LAMP POST  
150.55' E. TO NE. CORNER OF HOUSE  
107.78' E. TO POST OF BASKETBALL GOAL
  - 6-B 3/4" IRON PIPE  
54.85' NW. TO TOP OF FIRE HYDRANT  
183.90' E. TO NW. CORNER OF HOUSE  
34.04' SW. TO CENTER TOP OF GAS METER  
140.80' SSE. TO N. CORNER OF HOUSE
  - 7-B 1/2" IRON PIPE  
91.45' SE. TO THE N. CORNER OF NORTHEASTERLY  
EXTENSION OF HOUSE.  
123.46' SW. TO NE. CORNER OF HOUSE  
45.75' W. TO WHITE LAMP POST  
14.29' SW. TO CENTER TOP OF GAS METER
  - 8-B TACKED HUB  
58.56' SW. TO CENTER TOP OF GAS METER  
211.13' SW. TO NW. CORNER OF HOUSE  
75.52' NNW. TO STREET SIGN POLE  
164.59' SSE. TO SW. CORNER OF HOUSE
  - 10-B CONCRETE NAIL IN PAVEMENT  
2.64' OFF EDGE OF PAVEMENT  
90.60' NW. TO CENTER TOP OF GAS METER  
112.35' NNW. TO TOP OF FIRE HYDRANT  
102.25' SSE. TO NW. CORNER OF HOUSE  
100.63' SSE. TO NAIL & WASHER IN WEST FACE  
OF POWER POLE (APPROX. 3.0' ABOVE GROUND)
  - 1-C TACKED HUB  
2.92' E. TO CENTER TOP OF GAS METER  
127.62' NW. TO SW. CORNER OF HOUSE  
35.61' SE. TO LAMP POST  
122.32' SE. TO SW. CORNER OF HOUSE
  - 2-C 1/2" REBAR  
17.70' WSW. TO BOLT IN FENCE CORNER POST  
(APPROX. 0.85' ABOVE GROUND)  
140.01' ESE. TO NW. CORNER OF HOUSE  
59.73' NE. TO CENTER TOP OF GAS METER  
135.29' ENE. TO SW. CORNER OF HOUSE
  - 3-C 1/2" IRON PIPE  
143.66' NW. TO CENTER TOP OF GAS METER  
72.29' SSW. TO CENTER TOP OF GAS METER  
163.43' SE. TO SW. CORNER OF HOUSE  
114.19' WSW. TO NW. CORNER OF HOUSE
  - 1-D 1/2" REBAR  
25.36' WSW. TO NAIL & SHINER IN S. FACE  
1.0' DIA. ELM TREE (0.5' ABOVE GROUND)  
76.20' NE. TO NW. CORNER BRICK GARAGE  
(0.2' ABOVE GROUND)
  - 2-D 1/2" REBAR  
8.32' WSW. TO NAIL & WASHER IN NORTH FACE  
POWER POLE (APPROX. 5' ABOVE GROUND)  
96.56' N. TO NAIL & WASHER IN WEST FACE OF  
UTILITY POLE (APPROX. 0.3' ABOVE GROUND)
  - 1-F 1/2" REBAR  
9.66' SE. TO FENCE LINE  
70.94' N. TO RR SPIKE IN S. FACE 2.5' DIA.  
HEDGE TREE (BM 6-P)  
71.22' ENE. TO SW. CORNER WOOD SHED  
107.98' NNW. TO SE. CORNER WOOD SHED
  - 2-F 1/2" REBAR  
21.81' SE. TO FIRE HYDRANT  
137.00' WNE. TO SE. CORNER OF HOUSE  
70.32' N. TO CENTER TOP OF GAS METER  
36.47' NNW. TO WATER METER
  - 1-G NAIL  
147.88' SW. TO NE. CORNER OF HOUSE  
78.26' SE. TO LAMP POST  
212.10' TO 3' RETAINING WALL  
11.50' NW. TO WATER METER
  - 1-J 1" IRON PIPE  
36.63' N. TO S. END 4' CHAIN LINK FENCE  
46.13' NW. TO CENTER TOP OF GAS METER  
143.38' SSW. TO NE. CORNER OF HOUSE  
154.64' ESE. TO NW. CORNER OF HOUSE
  - 1-K 3/4" IRON PIPE  
3.80' N. TO THE S. END OF FENCE  
96.60' NE. TO SW. CORNER OF HOUSE  
91.00' NNW. TO SE. CORNER OF HOUSE  
154.60' SW. TO NE. CORNER OF HOUSE  
191.20' S. TO CONCRETE NAIL IN WEST FACE OF  
UTILITY POLE (APPROX. 0.5' ABOVE GROUND)
  - 2-K 1" IRON PIPE  
1.10' E. TO NAIL IN POWER POLE  
100.33' NNE. TO CONCRETE NAIL IN WEST FACE  
OF UTILITY POLE (APPROX. 0.5' ABOVE  
GROUND)  
109.50' NNW. TO SE. CORNER OF HOUSE  
88.15' SE. TO NW. CORNER OF HOUSE  
131.76' SE. TO SW. CORNER OF HOUSE
  - 1-L 3/4" IRON PIPE  
30.00' S. TO WATER METER  
134.17' SE. TO SW. CORNER OF HOUSE  
102.87' NW. TO SW. CORNER OF HOUSE  
80.19' N. TO CENTER TOP OF GAS METER  
77.02' WSW. TO NAIL IN 3" DIA. STUMP NEAR  
SE. CORNER LOT 2, BLK. 1 (BM 1-P)

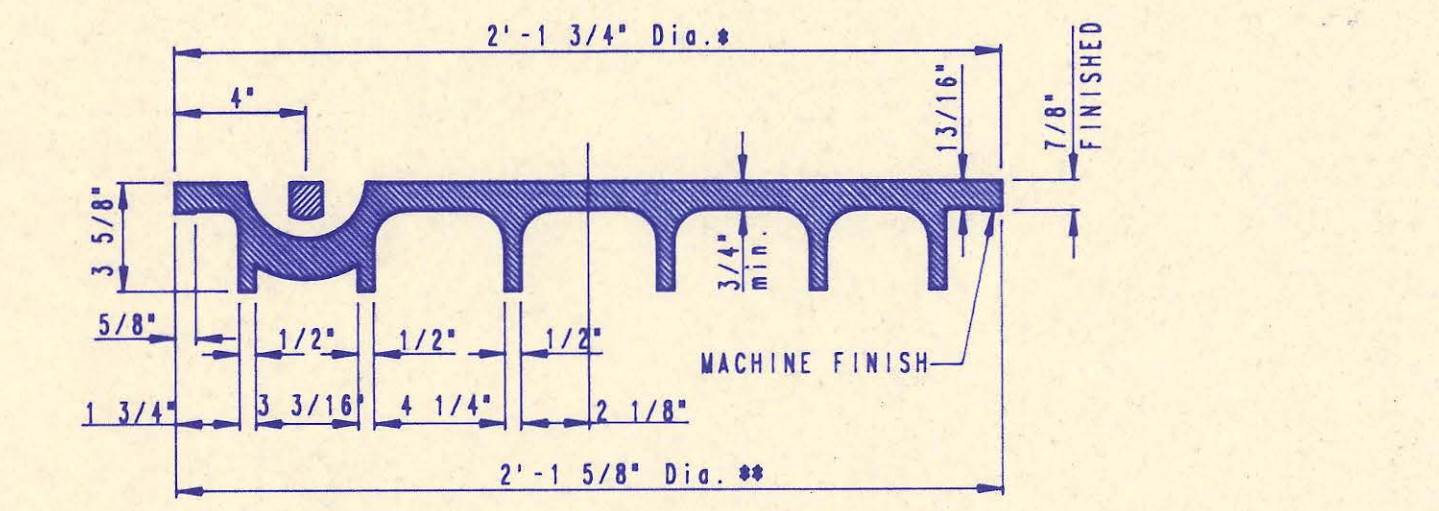
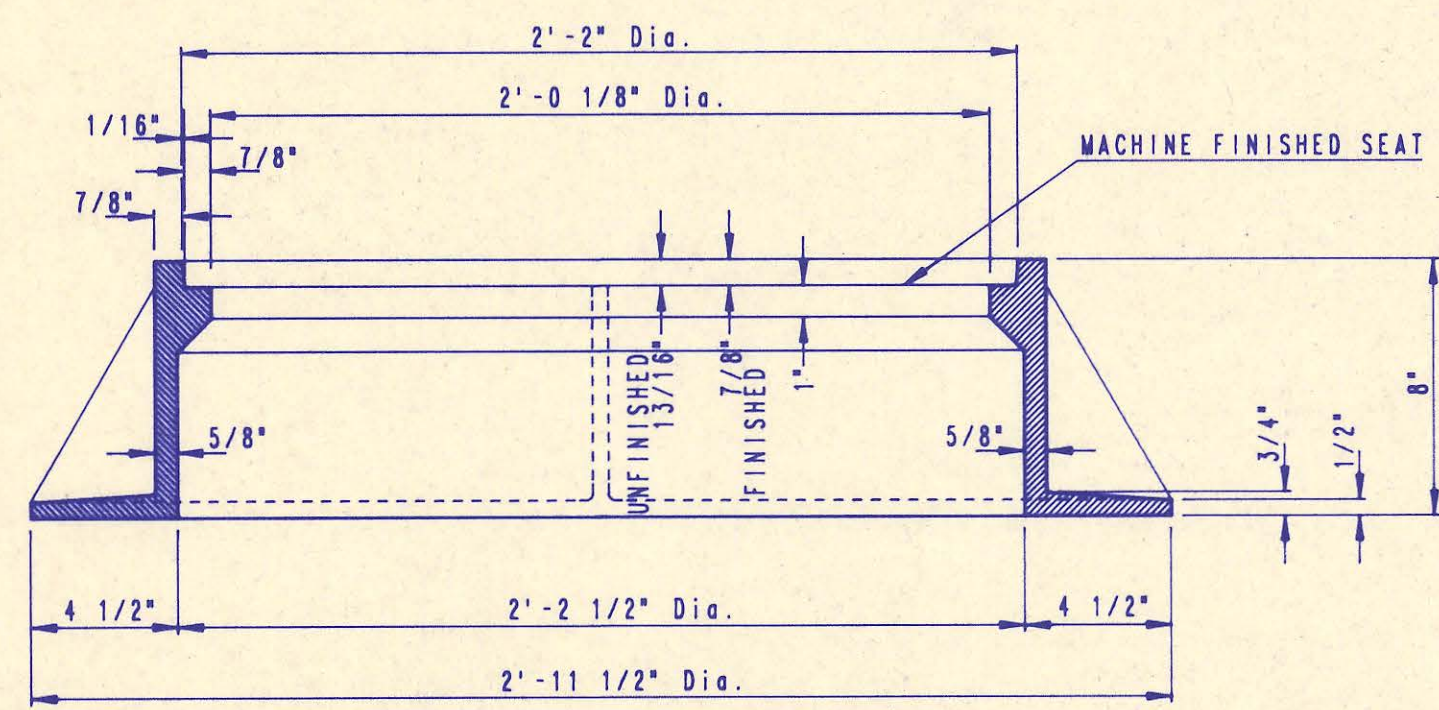
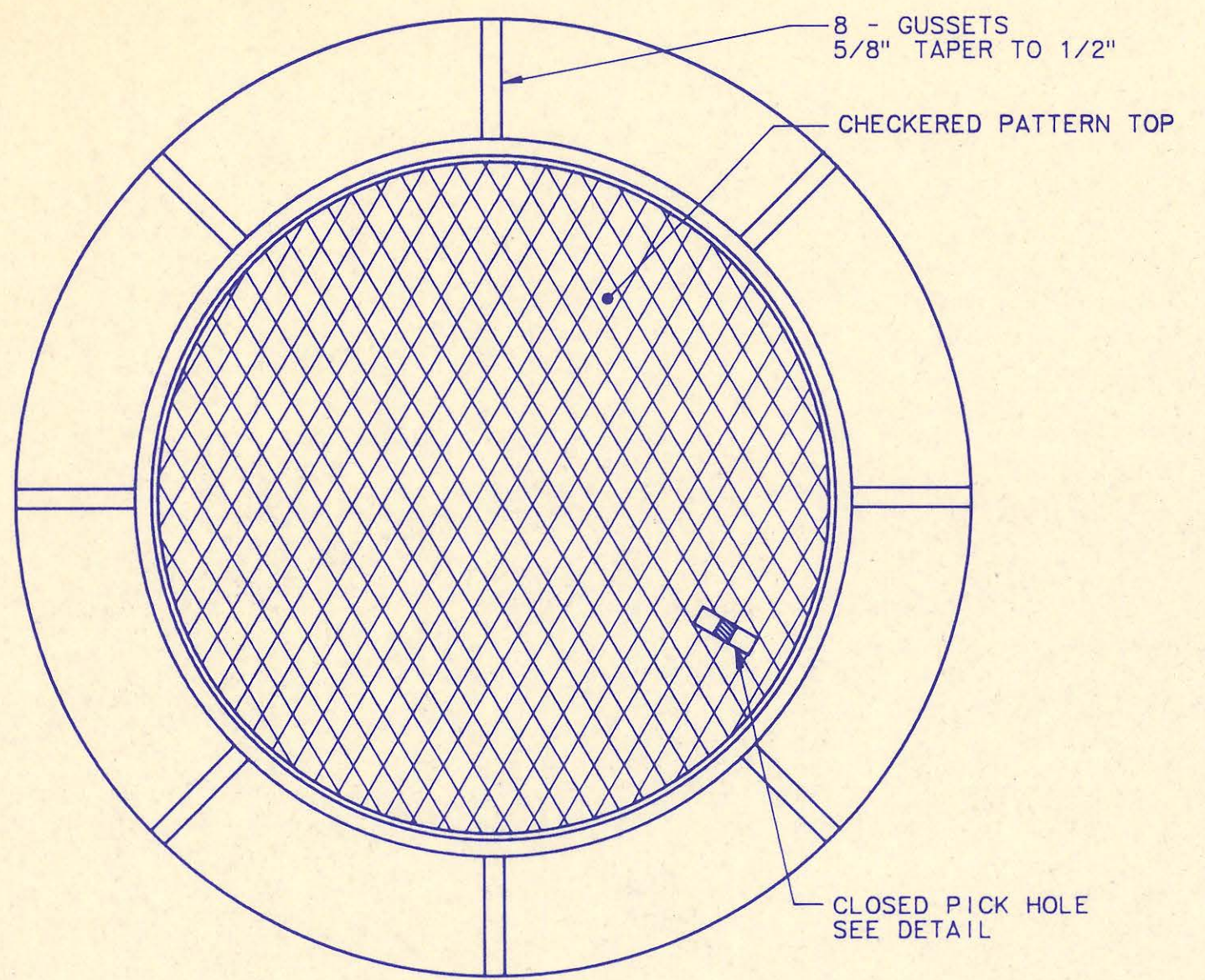
GENERAL NOTES

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: KPL/GAS SERVICE COMPANY, K.G. & E., THE WICHITA WATER DEPARTMENT, SOUTHWESTERN BELL TELEPHONE, MULTIMEDIA CABLEVISION, AND WILLIAMS NATURAL GAS COMPANY.
3. 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.
4. 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.
5. 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.
6. WHERE REMOVAL OF EXISTING FENCES PARALLEL TO THE CONSTRUCTION IS DEEMED NECESSARY BY THE CONTRACTOR, THE CONTRACTOR SHALL CONTACT THE OWNER WITH THE ENGINEER. REMOVAL AND RESETTING OF FENCES SHALL NOT BE PAID FOR SEPARATELY BUT SHALL BE CONSIDERED SUBSIDIARY TO SITE CLEARING AND RESTORATION.
7. REMOVAL AND RESETTING OF FENCES, CULVERT PIPES AND STRUCTURES, RESTORATION OF ALL SIDEWALKS, MAIL BOXES, NEWSPAPER BOXES, SIGNS, DITCHES, SWALES, ROAD SHOULDERS, DRIVES, AND ENTRANCES TO THEIR ORIGINAL SLOPES, GRADES, LOCATIONS, AND AS REQUIRED IN THE SPECIFICATIONS SHALL BE CONSIDERED SUBSIDIARY TO SITE CLEARING AND RESTORATION.
8. TOP ELEVATIONS FOR MANHOLES ARE APPROXIMATE ONLY. MANHOLE TOPS SHALL BE SET AT 0.4' ABOVE FINISH GRADE OR AT FINISHED GRADE AS INDICATED ON THE DRAWINGS. MANHOLES PLACED IN PAVED AREAS SHALL BE SET TO MATCH THE REPLACED PAVEMENT SURFACE.
9. ALL TRENCHING AND BACKFILLING IS TYPE I OR TYPE III UNLESS NOTED OTHERWISE ON THE PLANS. ROAD CROSSING INDICATING TYPE I TRENCH AND BACKFILL SHALL BE TYPE I ONLY.
10. ALL ELEVATIONS GIVEN IN THE PLANS ARE BASED ON USGS DATUM.
11. 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 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 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.
12. EASEMENTS AND RIGHT-OF-WAY PROVIDED BY THE OWNER FOR THE PROJECT ARE SHOWN IN THE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ACQUISITION OF ANY ADDITIONAL TEMPORARY EASEMENTS OR RIGHTS-OF-WAY THAT HE DESIRES TO USE IN COMPLETING THE WORK.
13. WHERE CONNECTIONS ARE TO BE MADE TO EXISTING 8-INCH PIPE, THE CONTRACTOR SHALL VERIFY THE LOCATION AND FLOW LINE ELEVATION OF THE EXISTING 8-INCH PIPE PRIOR TO BEGINNING CONSTRUCTION.
14. THE SANITARY SEWER IS TO BE CONSTRUCTED ADJACENT TO EXISTING UNDERGROUND TELEPHONE CABLES. THE CONTRACTOR SHALL COORDINATE THIS CONSTRUCTION WITH ANY NECESSARY TELEPHONE CABLE RELOCATION. ALL TELEPHONE CABLES SHALL BE LOCATED BY CONTACTING THE KANSAS ONE-CALL SYSTEM AT (316) 687-2470.
15. WHERE THE PLANS CALL FOR AN 8-INCH OR LARGER PIPE STUD, THE STUD SHALL EXTEND 5 FEET OUTSIDE THE MANHOLE WALL UNLESS DIRECTED OTHERWISE BY THE ENGINEER. THE END OF THE STUD SHALL BE PLUGGED AND SHALL BE SET AT AN ELEVATION 0.03 FEET HIGHER THAN THE STUD FLOWLINE AT THE MANHOLE.
16. LOCATION OF ENDS OF RISER PIPE SHALL BE MARKED BY FASTENING 2-INCH WIDE METALLIC DETECTABLE TAPE TO THE END OF THE PIPE AND WRAPPED AROUND 1" PVC PIPE EXTENDING VERTICALLY FROM THE END OF THE RISER PIPE TO 3 FEET ABOVE THE GROUND SURFACE. METALLIC DETECTABLE TAPE SHALL BE "Magnetec" AS MANUFACTURED BY THOR ENTERPRISES, INC., WATERLOO, WISCONSIN OR "LINEGUARD TYPE III" AS MANUFACTURED BY LINEGUARD, INC., CHICAGO, ILLINOIS OR APPROVED EQUAL.
17. PAVEMENTS AND OTHER TRAVELWAYS DAMAGED BY THE CONTRACTOR'S OPERATIONS, INCLUDING TRAFFIC FOR MATERIAL DELIVERY AND REMOVAL, OUTSIDE THE PAYMENT LIMITS FOR REMOVAL AND REPLACEMENT SHALL BE REPLACED OR REPAIRED IN KIND AS DIRECTED BY THE ENGINEER AT NO ADDITIONAL COST TO THE OWNER. ALL COSTS ASSOCIATED WITH REPAIR, REMOVAL, AND REPLACEMENT OF DAMAGED PAVEMENTS AND OTHER TRAVELWAYS OUTSIDE OF THE SPECIFIC PAYMENT LIMITS SHALL BE CONSIDERED SUBSIDIARY TO "SITE CLEARING AND RESTORATION".



RECORD DRAWING  
7-30-92

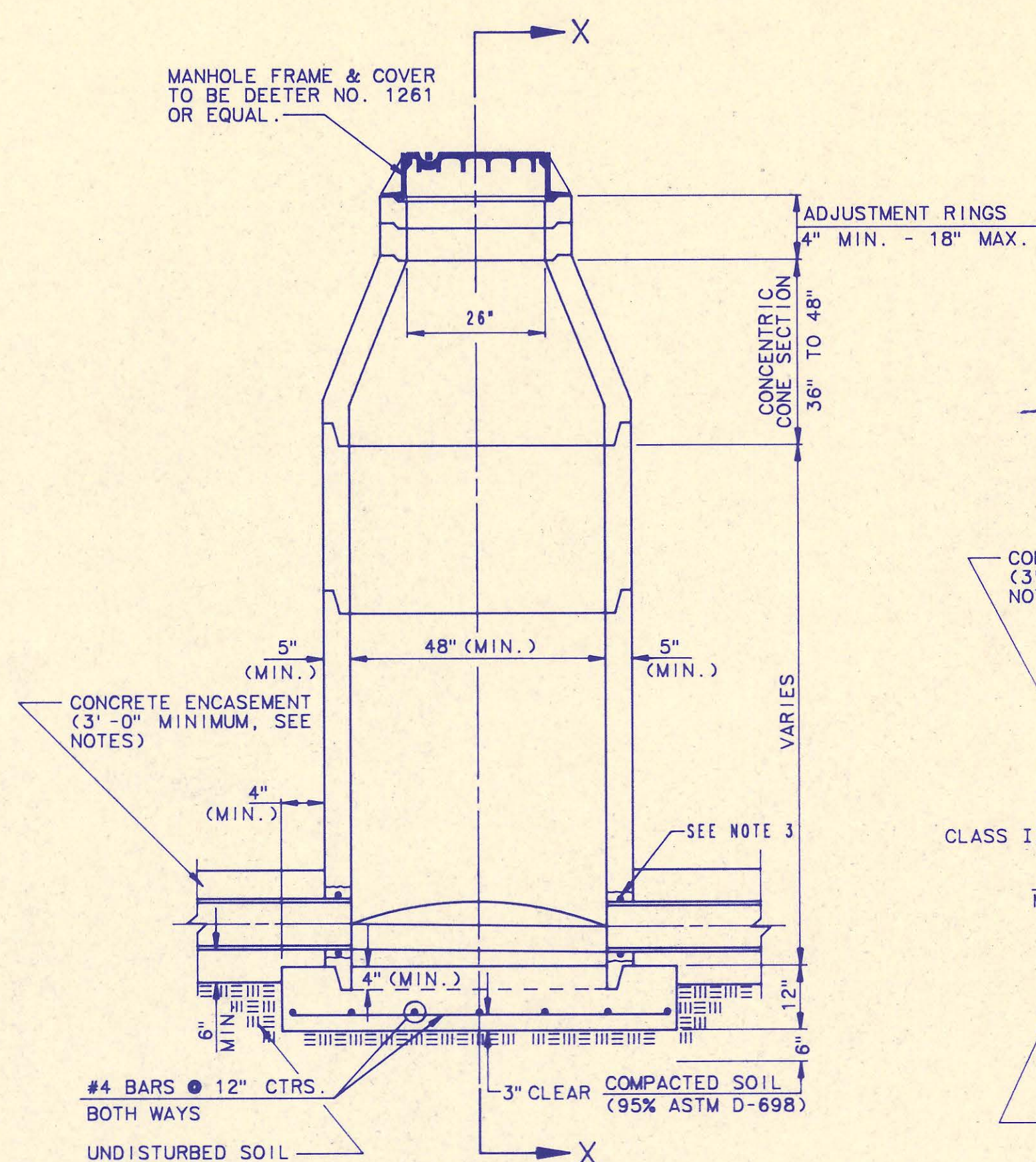
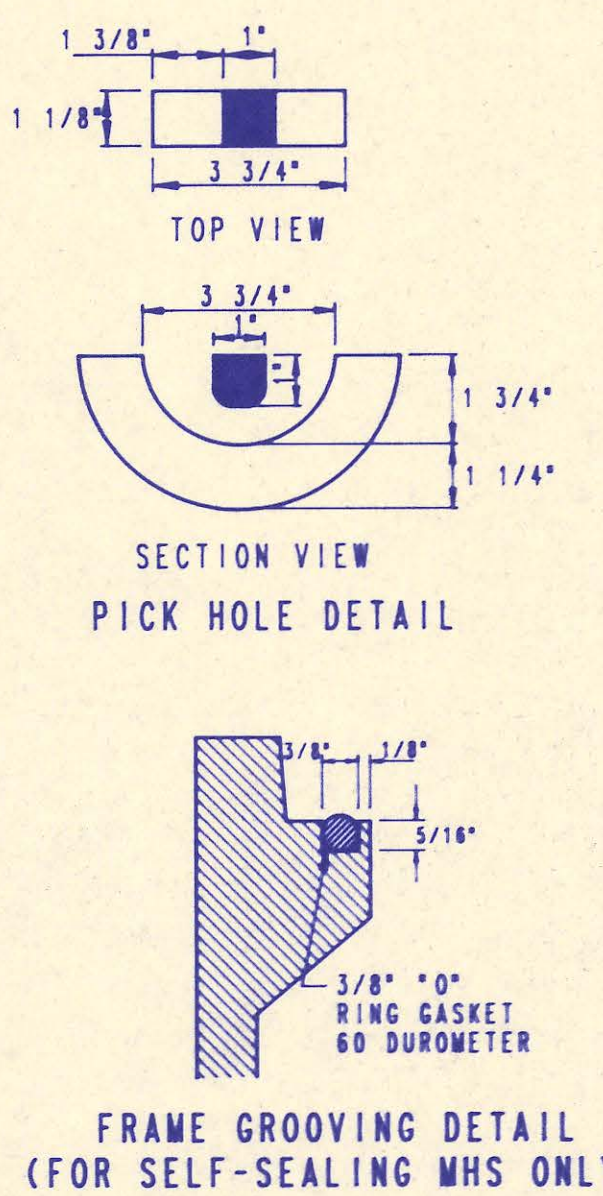
Updated per Current Standards		GM	9/1988
No.	Revision	By	Date
SEDGWICK COUNTY BUREAU OF PUBLIC SERVICES DAVID C. SPEARS, P.E. DIRECTOR, BUREAU OF PUBLIC SERVICES/ COUNTY ENGINEER			
<b>BASELINE KEY MAP</b>			
SANITARY SEWER LATERALS PARK EAST LATERAL SEWER DISTRICT			
<b>PROFESSIONAL ENGINEERING CONSULTANTS, P.A.</b>			
ENGINEERS WICHITA, KANSAS			
Designed by	KLR, LM	Job No.	81051-12
Drawn by	GRH	Date	August, 1981
		Sht.	3 of 14



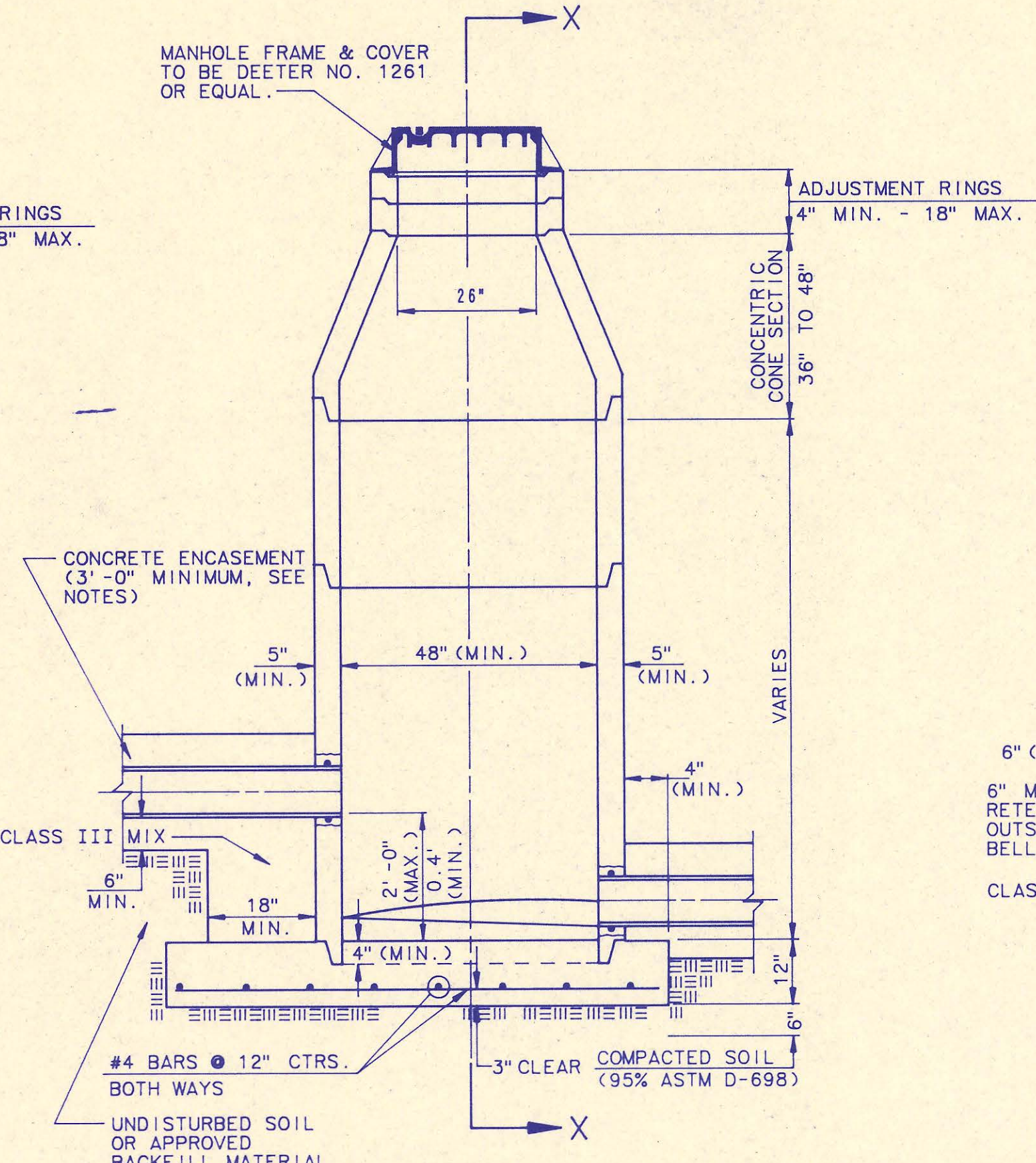
**MANHOLE FRAME AND COVER**  
(TOTAL WEIGHT = 430 LBS.)

**MANHOLE FRAME AND COVER NOTES**

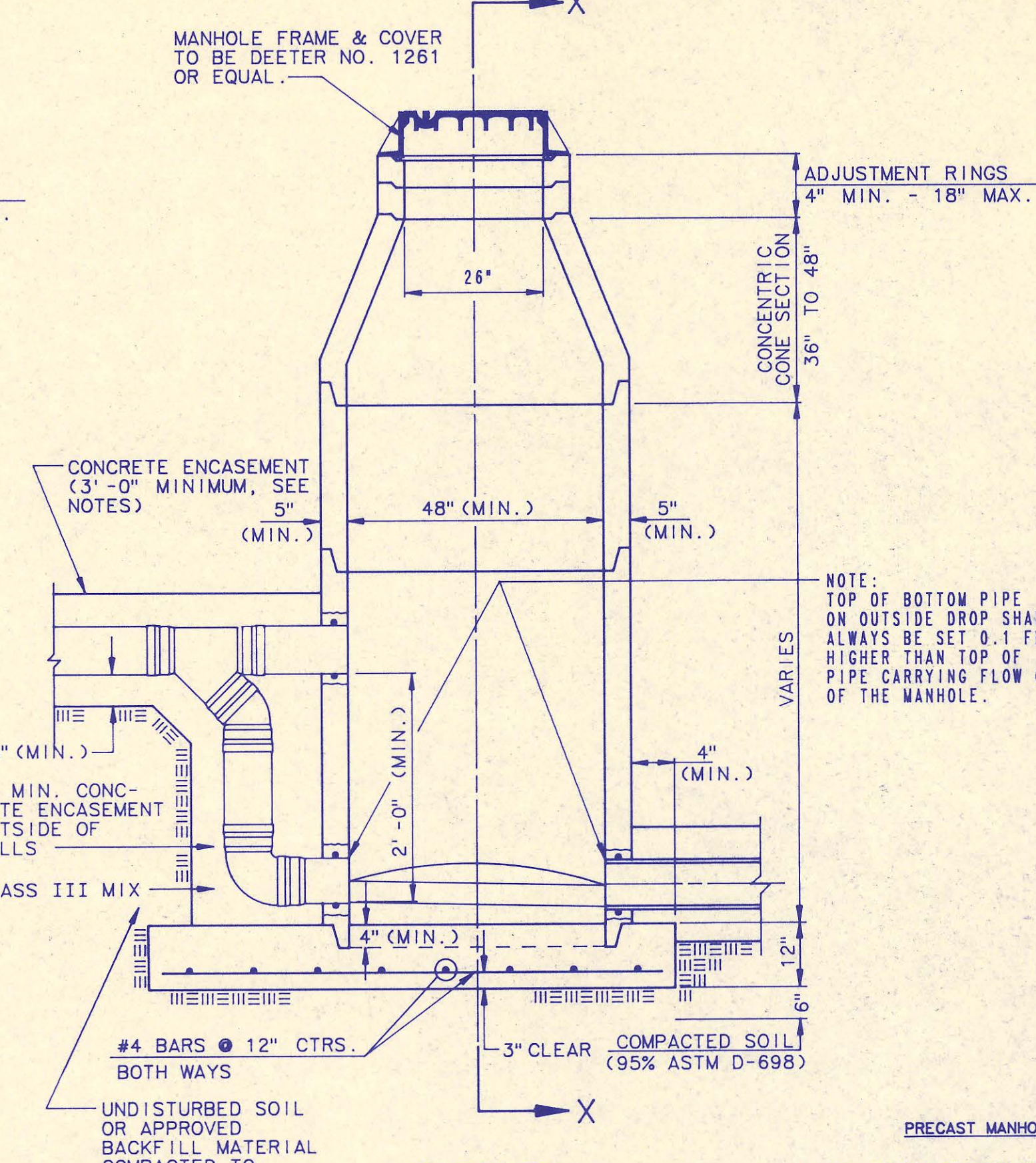
- CAST IRON MANHOLE FRAME AND COVER SHALL CONFORM TO ASTM A-48, CLASS 35B, OR BETTER.
- THE FRAMES AND COVERS SHALL BE OF A NONROCKING TYPE OR WITH MACHINED BEARING SURFACES SO FITTING PARTS WILL NOT RATTLE OR ROCK UNDER TRAFFIC.
- MANHOLE CASTINGS SHALL BE DEETER FOUNDRY INC. NO. 1261 OR APPROVED EQUAL, 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.
- WHERE SELF-SEALING MANHOLE FRAMES ARE SPECIFIED ON THE PLANS, THE MANHOLE FRAME SHALL BE FURNISHED WITH AN APPROVED "O" RING GASKET GROOVED INTO THE BEARING SURFACE OF THE MANHOLE FRAME (PER DETAIL). THE "O" RING GASKET SHALL NOT BE INSTALLED IN THE MANHOLE FRAME UNTIL AFTER FINAL INSPECTION AND ACCEPTANCE OF THE PROJECT BY THE ENGINEER. THE CONTRACTOR SHALL SUPPLY TO THE OWNER ONE (1) REPLACEMENT "O" RING GASKET FOR EACH SELF-SEALING MANHOLE SPECIFIED.



**PRECAST STANDARD MANHOLE TYPE "A"**



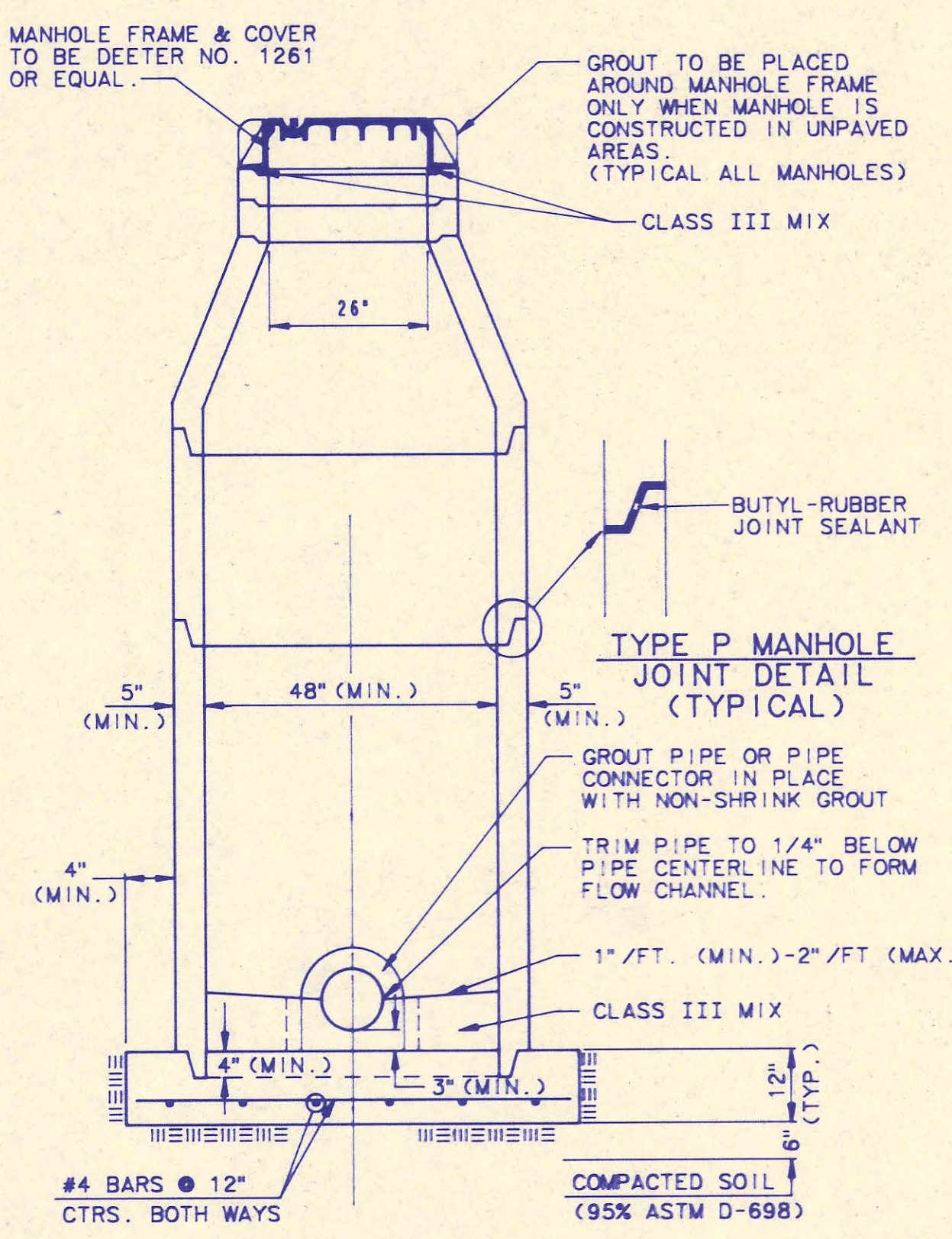
**PRECAST INSIDE DROP MANHOLE TYPE "B"**



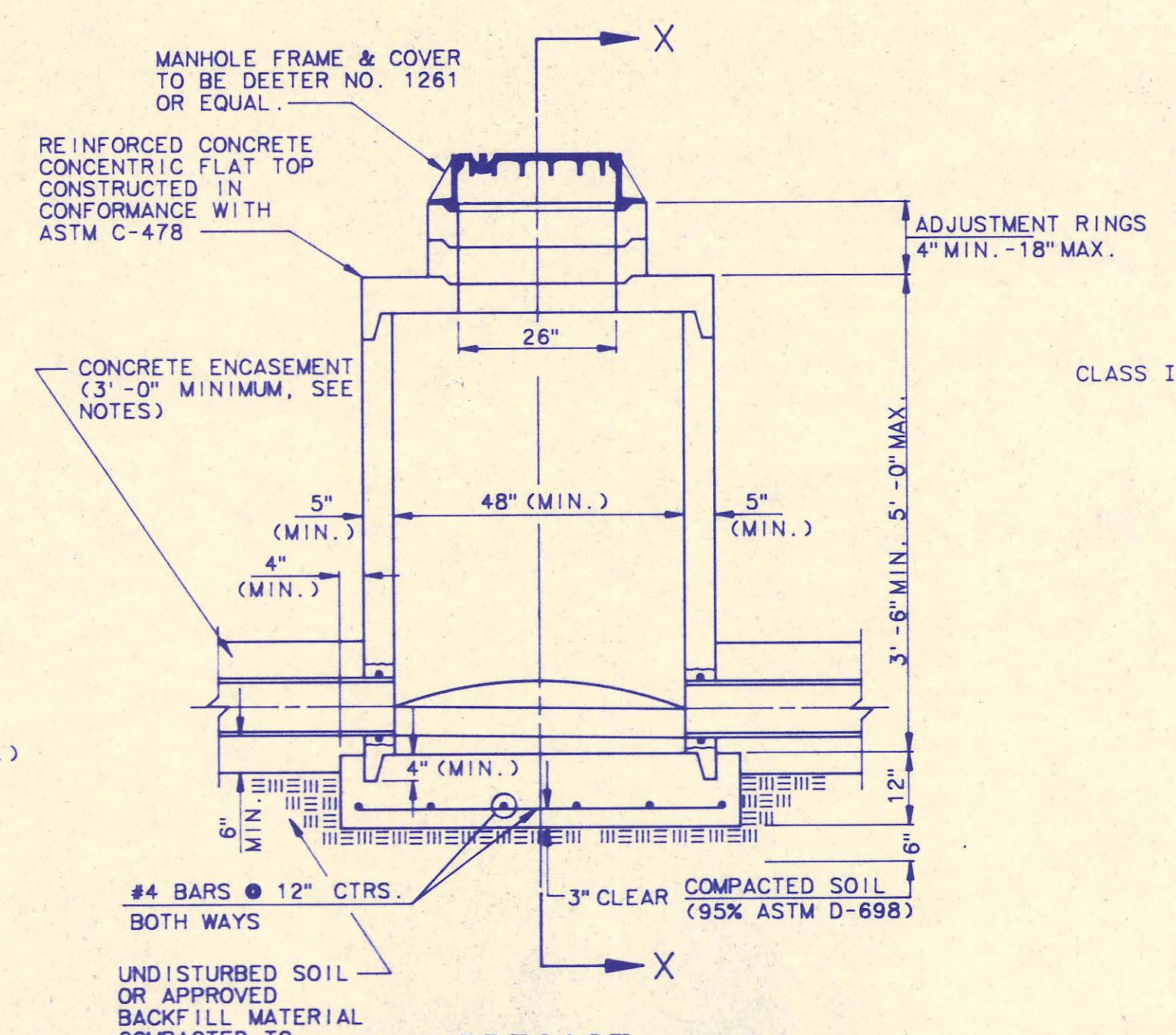
**PRECAST OUTSIDE DROP MANHOLE TYPE "C"**

**PRECAST MANHOLE NOTES**

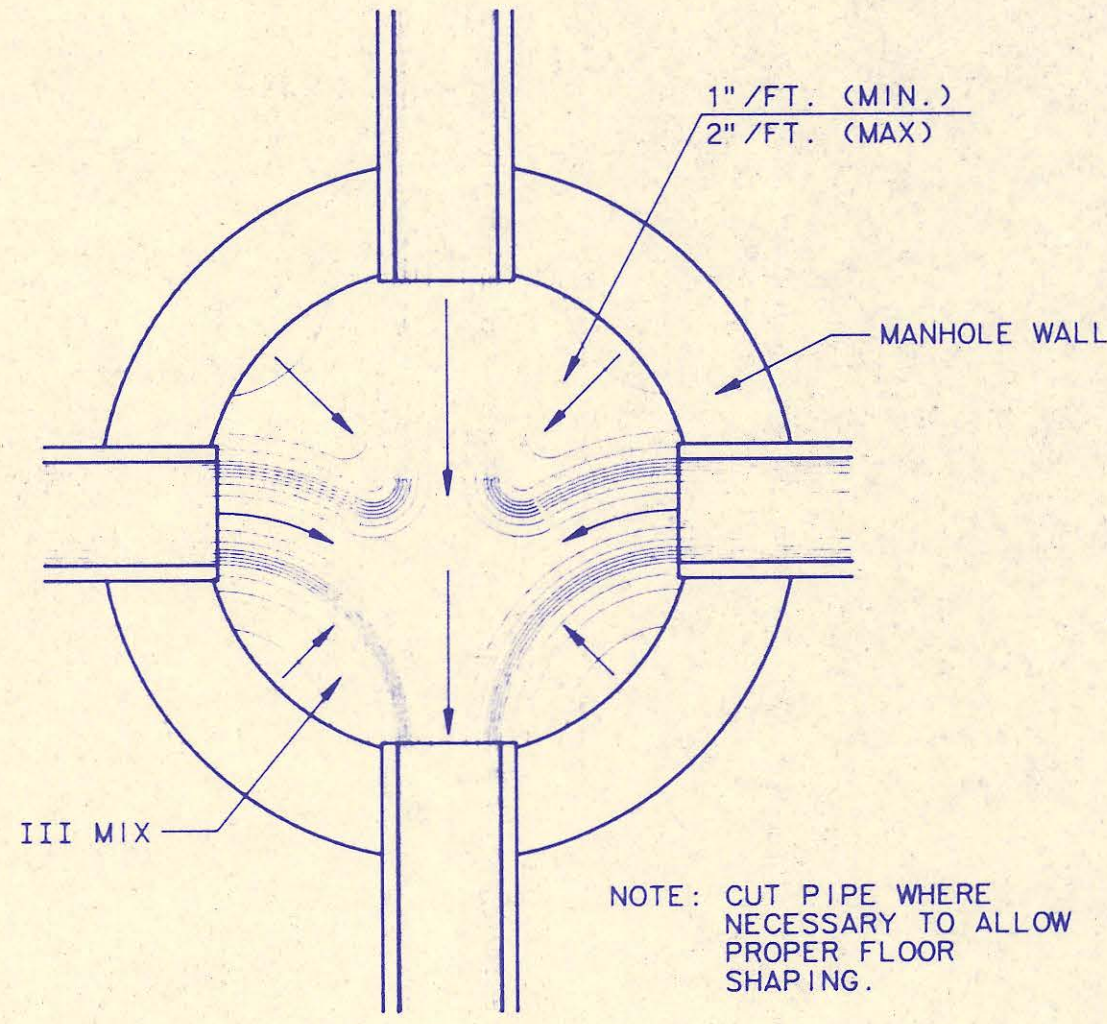
- IF, IN THE OPINION OF THE ENGINEER, THE MANHOLE SUBGRADE APPEARS UNSTABLE, THE CONTRACTOR WILL HAVE THE OPTION TO COMPACT SUBGRADE AS SHOWN OR INCREASE THE THICKNESS OF THE MANHOLE BASE AS DIRECTED BY THE ENGINEER.
- STEEL REINFORCING WILL BE REQUIRED IN ALL MANHOLE BASES.
- APPROVED FLEXIBLE WATERSTOP GASKETS WHICH MEET OR EXCEED THE TEST REQUIREMENTS OF ASTM C-923 SHALL BE INSTALLED TO JOIN THE SEWER TO THE MANHOLE WALL WHEN PLASTIC PIPE IS USED. SEWER PIPE EXTENDING FROM MANHOLES SHALL BE SUPPORTED WITH CONCRETE ENCASEMENT A MINIMUM OF 3 FEET FROM THE MANHOLE WALL.
- THE MANHOLE FRAME SHALL BE SEATED ON AN APPROVED BUTYL-RUBBER SEALANT TO PROVIDE A WATER-TIGHT SEAL BETWEEN THE MANHOLE ADJUSTMENT RING AND THE MANHOLE FRAME.
- GASKETED PIPE CAPS SHALL BE PROVIDED BY THE 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 MODIFIED 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 MANHOLE BASE.
- MANHOLES WITH PIPE SIZES 24" AND LARGER SHALL HAVE 5' INSIDE DIAMETER (MIN.)
- INSIDE DIAMETER OF FIVE-FOOT DIAMETER PRECAST MANHOLES SHALL REMAIN CONSTANT TO THE LOCATION OF THE REDUCING FLAT TOP WHICH CONNECTS THE FOUR-FOOT DIAMETER CONE SECTION TO THE FIVE-FOOT DIAMETER MANHOLE BARREL.



**SECTION X (TYPICAL)**



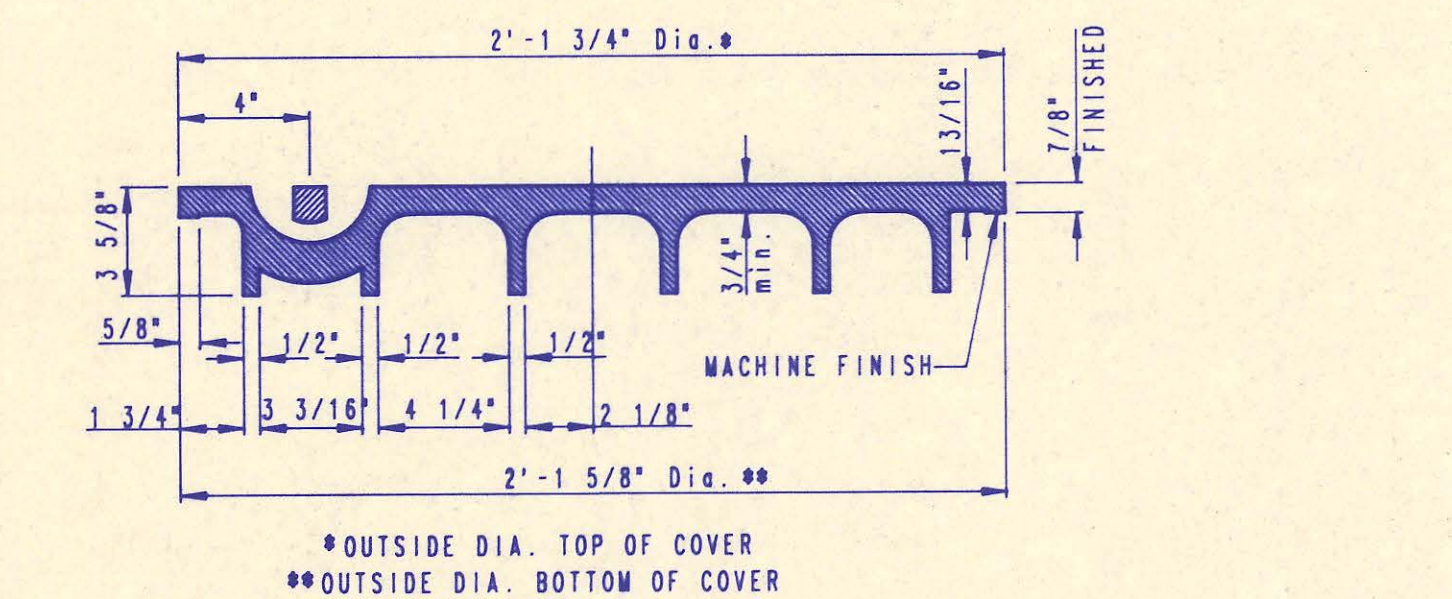
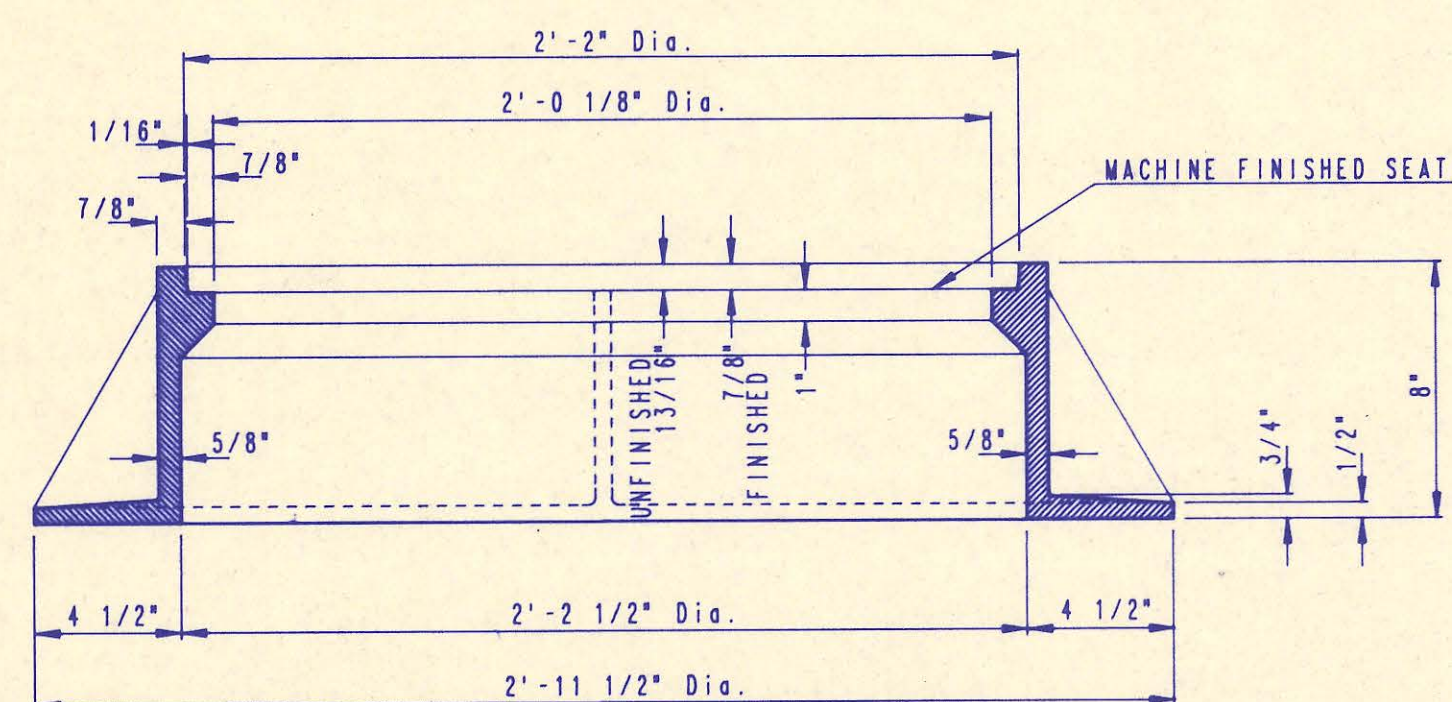
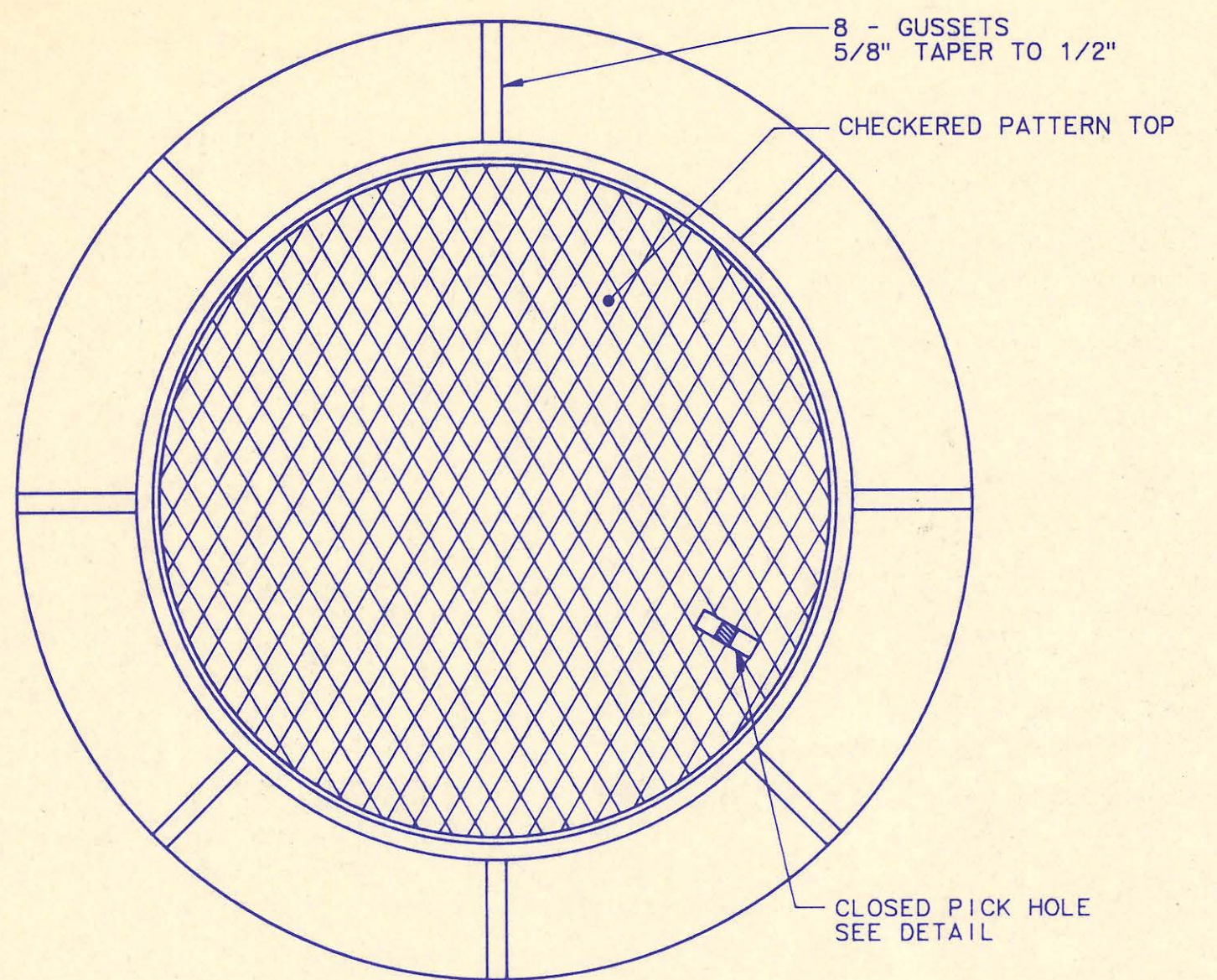
**PRECAST SHALLOW MANHOLE TYPE "D"**



**TYPICAL MANHOLE FLOOR SHAPING**

1	Manhole Frame and Cover Note 1	RJ	7/16/91
No.	Revision	By	Date
<b>PRECAST MANHOLE DETAILS</b> ADOPTED AS STANDARD DESIGN BY SEDWICK COUNTY BUREAU OF PUBLIC SERVICES DAVID C. SPEARS, P.E. DIRECTOR, BUREAU OF PUBLIC SERVICES/COUNTY ENGINEER			
<b>PROFESSIONAL ENGINEERING CONSULTANTS, P.A.</b> ENGINEERS WICHITA, KANSAS			
Designed by DLW	Job No.	Sht. 4 of 4	
Drawn by DMW, TDS	Date NOVEMBER, 1990		

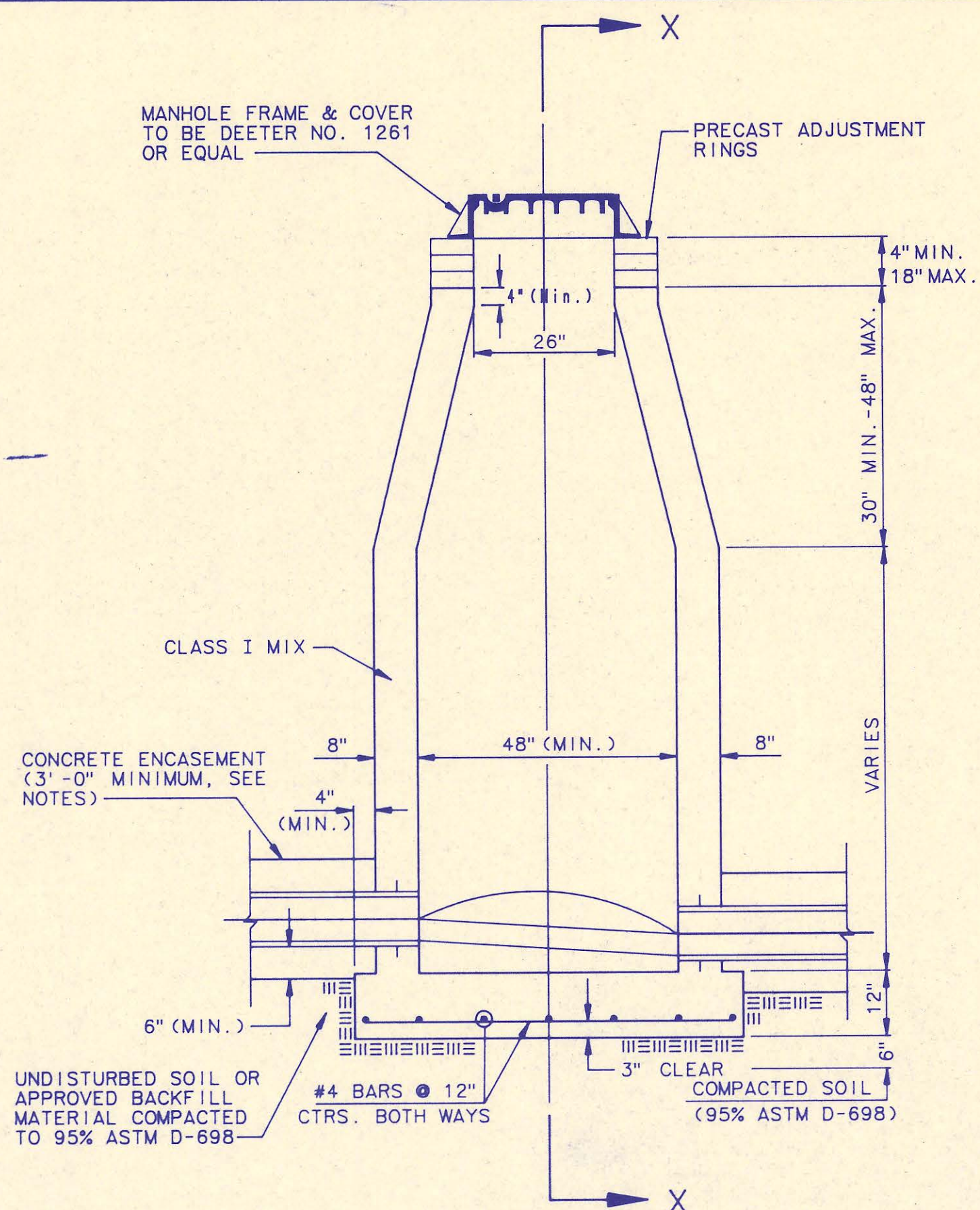
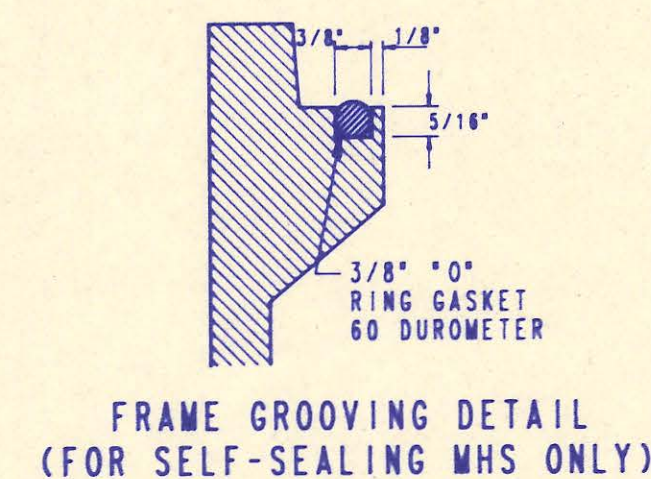
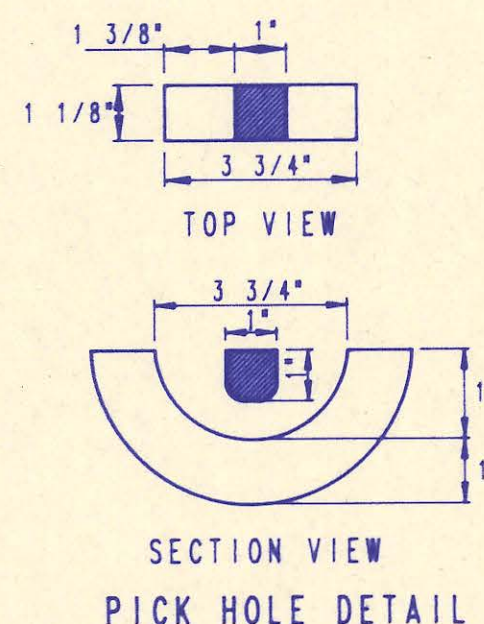
DRAWING NAME: PEC Precast MH Sids  
CENTER COORDINATES: 006.4903  
ROTATION ANGLE: 0  
DATE LAST WORKED ON: JUL 16, 1991  
SPECIAL INSTRUCTIONS:



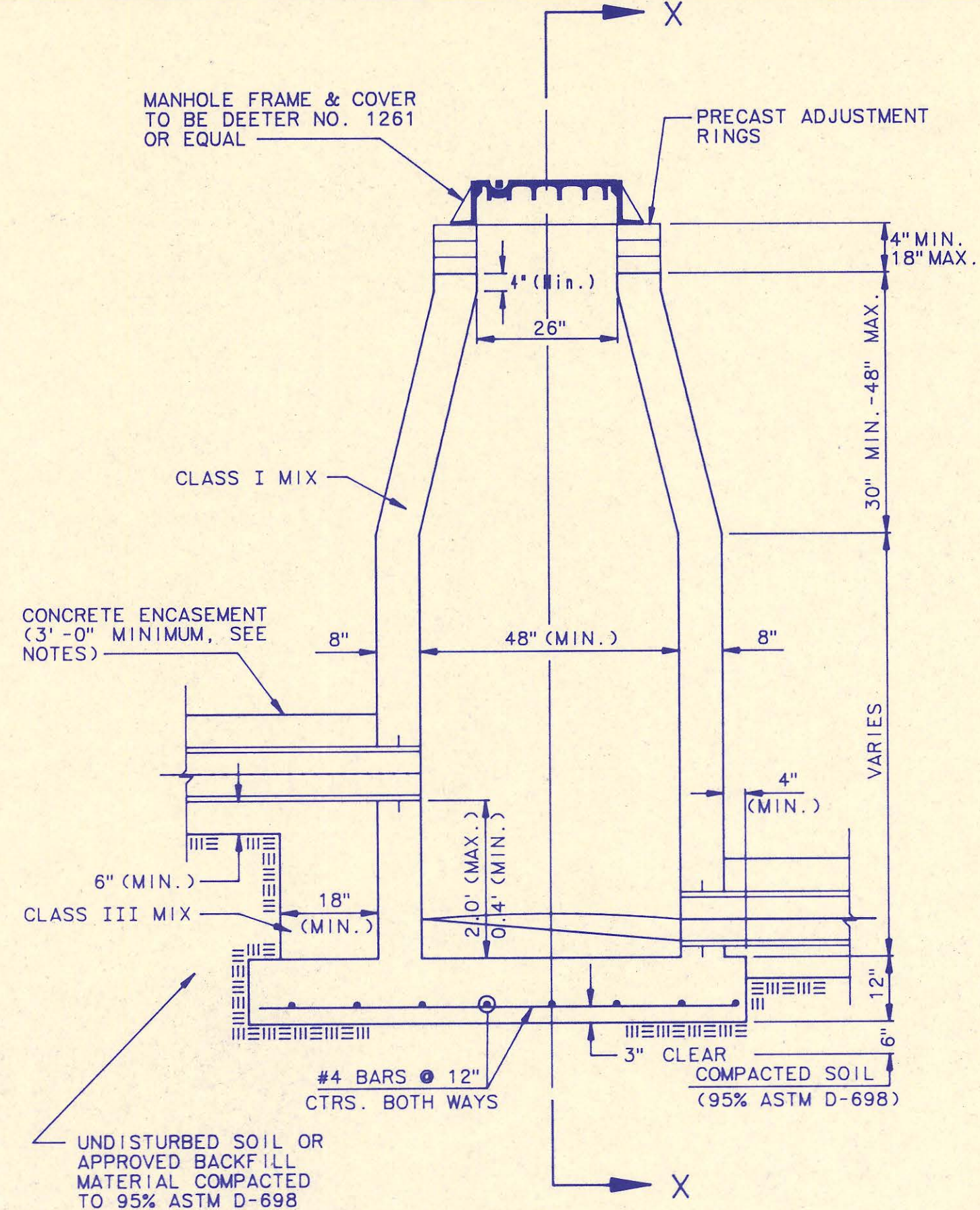
**MANHOLE FRAME AND COVER**  
(TOTAL WEIGHT = 430 LBS.)

**MANHOLE FRAME AND COVER NOTES**

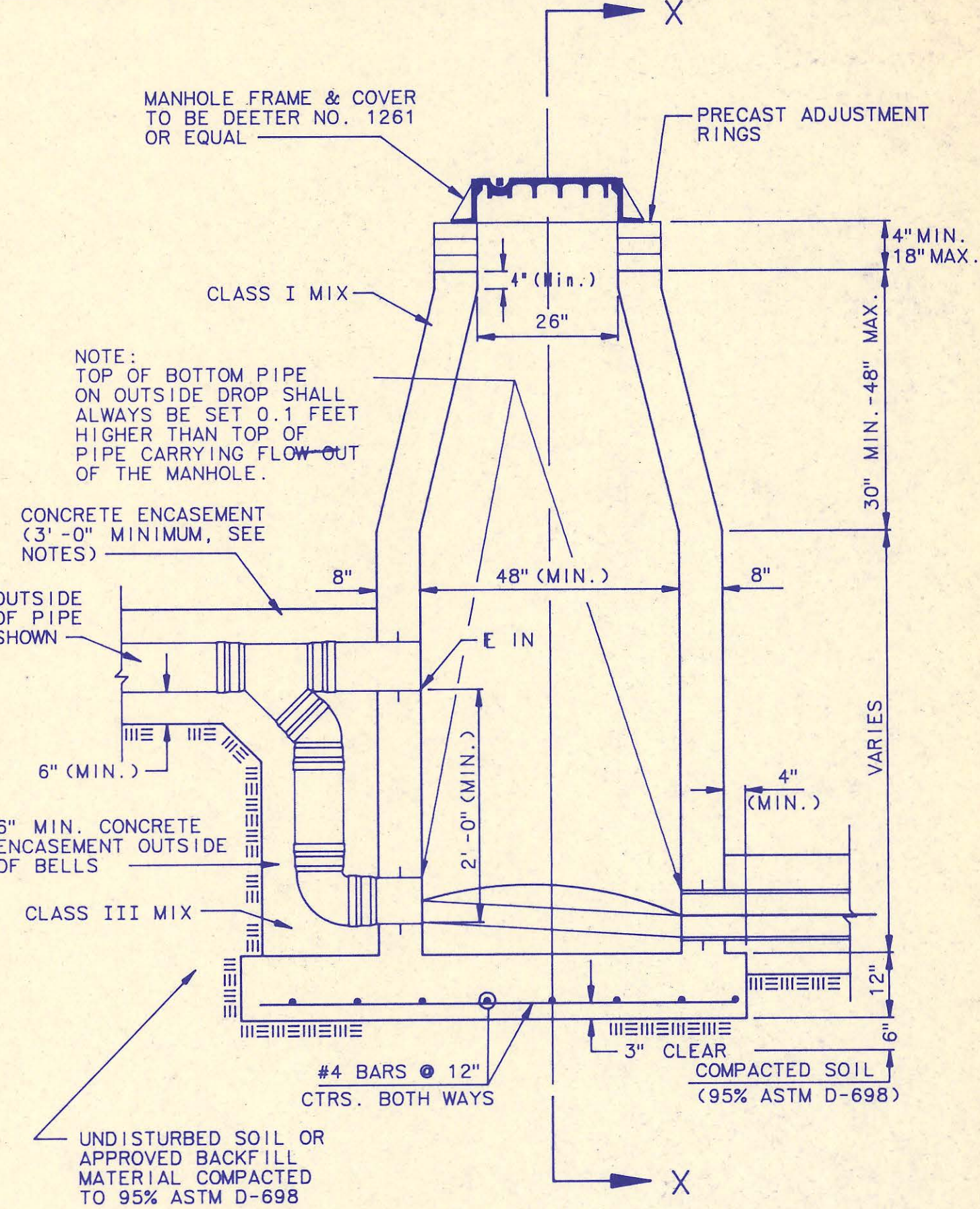
1. CAST IRON MANHOLE FRAME AND COVER SHALL CONFORM TO ASTM A-48, CLASS 35B, OR BETTER.
2. THE FRAMES AND COVERS SHALL BE OF A NONROCKING TYPE OR WITH MACHINED BEARING SURFACES SO FITTING PARTS WILL NOT RATTLE OR ROCK UNDER TRAFFIC.
3. MANHOLE CASTINGS SHALL BE DEETER FOUNDRY INC. NO. 1261 OR APPROVED 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.
4. GRIND ALL BURRS SMOOTH, CLEAN THOROUGHLY, THEN APPLY SHOP COAT OF ASPHALT BASE PAINT.
5. THE MANUFACTURER SHALL SUBMIT SHOP DRAWINGS TO THE ENGINEER FOR APPROVAL PRIOR TO MANUFACTURE. THE MANUFACTURER SHALL RETAIN THE RIGHT TO REJECT CASTINGS NOT CONFORMING TO THE SPECIFICATIONS OR THE APPROVED SHOP DRAWINGS.
6. WHERE SELF-SEALING MANHOLE FRAMES ARE SPECIFIED ON THE PLANS, THE MANHOLE FRAME SHALL BE FURNISHED WITH AN APPROVED "O" RING GASKET GROOVED INTO THE BEARING SURFACE OF THE MANHOLE FRAME (PER DETAIL). THE "O" RING GASKET SHALL NOT BE INSTALLED IN THE MANHOLE FRAME UNTIL AFTER FINAL INSPECTION AND ACCEPTANCE OF THE PROJECT BY THE ENGINEER. THE CONTRACTOR SHALL SUPPLY TO THE OWNER ONE (1) REPLACEMENT "O" RING GASKET FOR EACH SELF-SEALING MANHOLE SPECIFIED.



**CAST IN PLACE STANDARD MANHOLE TYPE "A"**



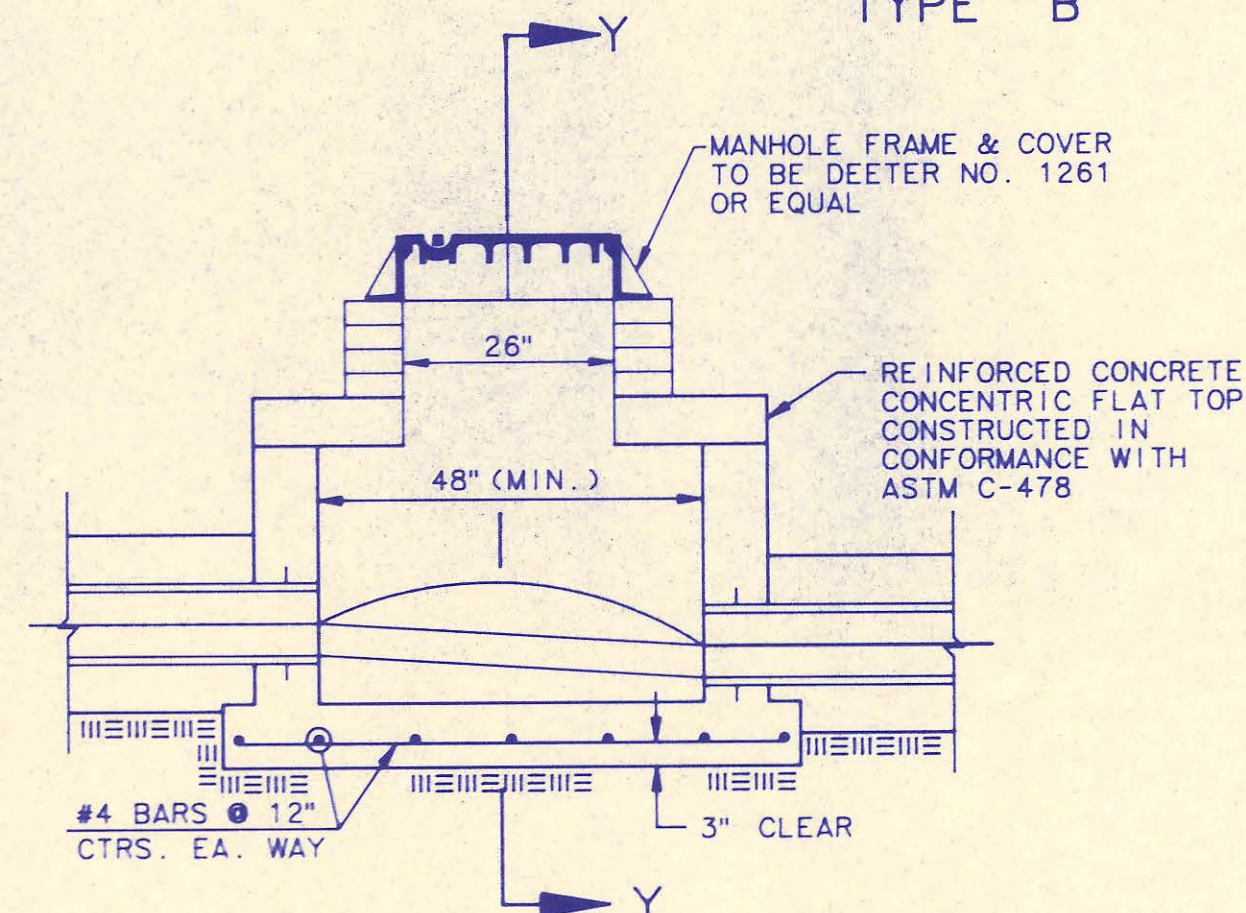
**CAST IN PLACE DROP MANHOLE TYPE "B"**



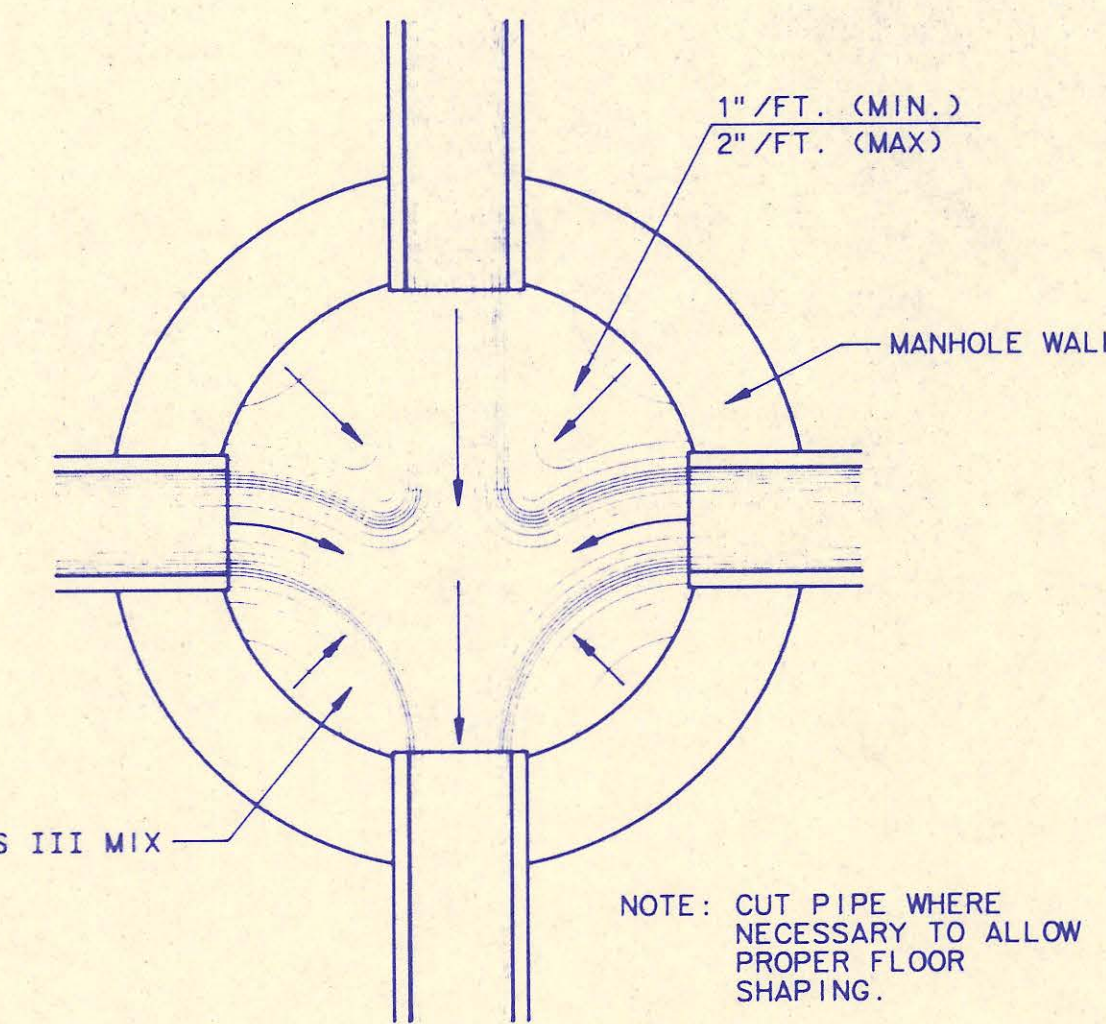
**CAST IN PLACE OUTSIDE DROP MANHOLE TYPE "C"**

**CAST-IN-PLACE MANHOLE NOTES**

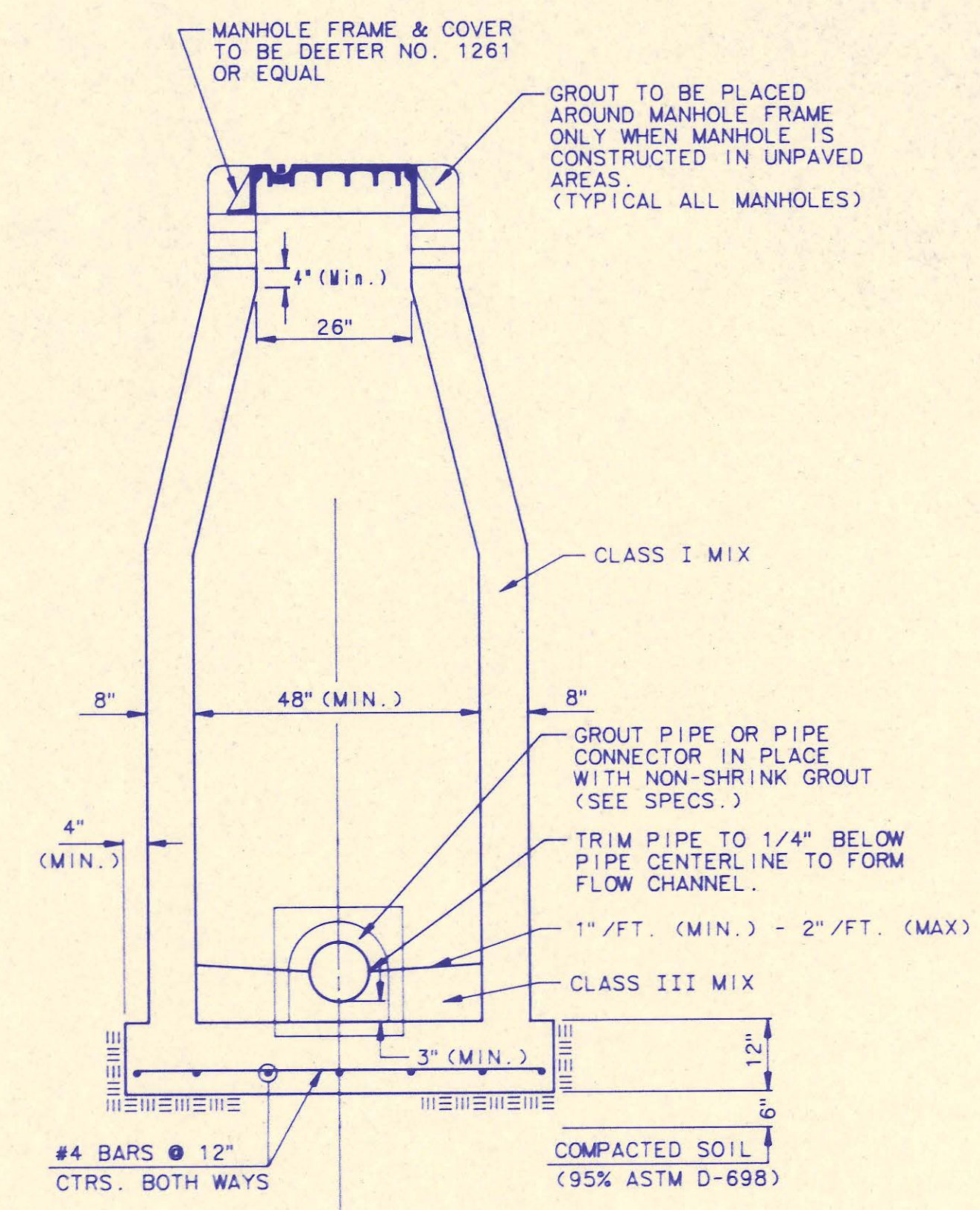
1. IF, IN THE OPINION OF THE ENGINEER, THE MANHOLE SUBGRADE APPEARS UNSTABLE, THE CONTRACTOR WILL HAVE THE OPTION TO COMPACT SUBGRADE AS SHOWN OR INCREASE THE THICKNESS OF THE MANHOLE BASE AS DIRECTED BY THE ENGINEER.
2. STEEL REINFORCING WILL BE REQUIRED IN ALL MANHOLE BASES.
3. WHEN OPENINGS ARE CUT IN MANHOLE WALLS FOR PIPE, THE PIPE OR PIPE CONNECTOR SHALL BE GROUDED 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. FOR OTHER TYPES OF PIPE THE SEWER EXTENDING FROM MANHOLES SHALL BE SUPPORTED WITH CONCRETE ENCASEMENT A MINIMUM OF 3 FEET FROM THE MANHOLE WALL.
6. THE MANHOLE FRAME SHALL BE SEATED ON AN APPROVED BUTYL-RUBBER SEALANT TO PROVIDE A WATER-TIGHT SEAL BETWEEN THE MANHOLE ADJUSTMENT RING OR BRICK MASONRY COLLAR AND THE MANHOLE FRAME.
7. GASKETED PIPE CAPS SHALL BE PROVIDED BY THE PIPE SUPPLIER.
8. CONCRETE FOR MANHOLE BASES SHALL BE CLASS "C" AS DESCRIBED IN THE SPECIFICATIONS.
9. MANHOLES WITH PIPE SIZES LARGER THAN 15" SHALL HAVE 5" INSIDE DIAMETER.



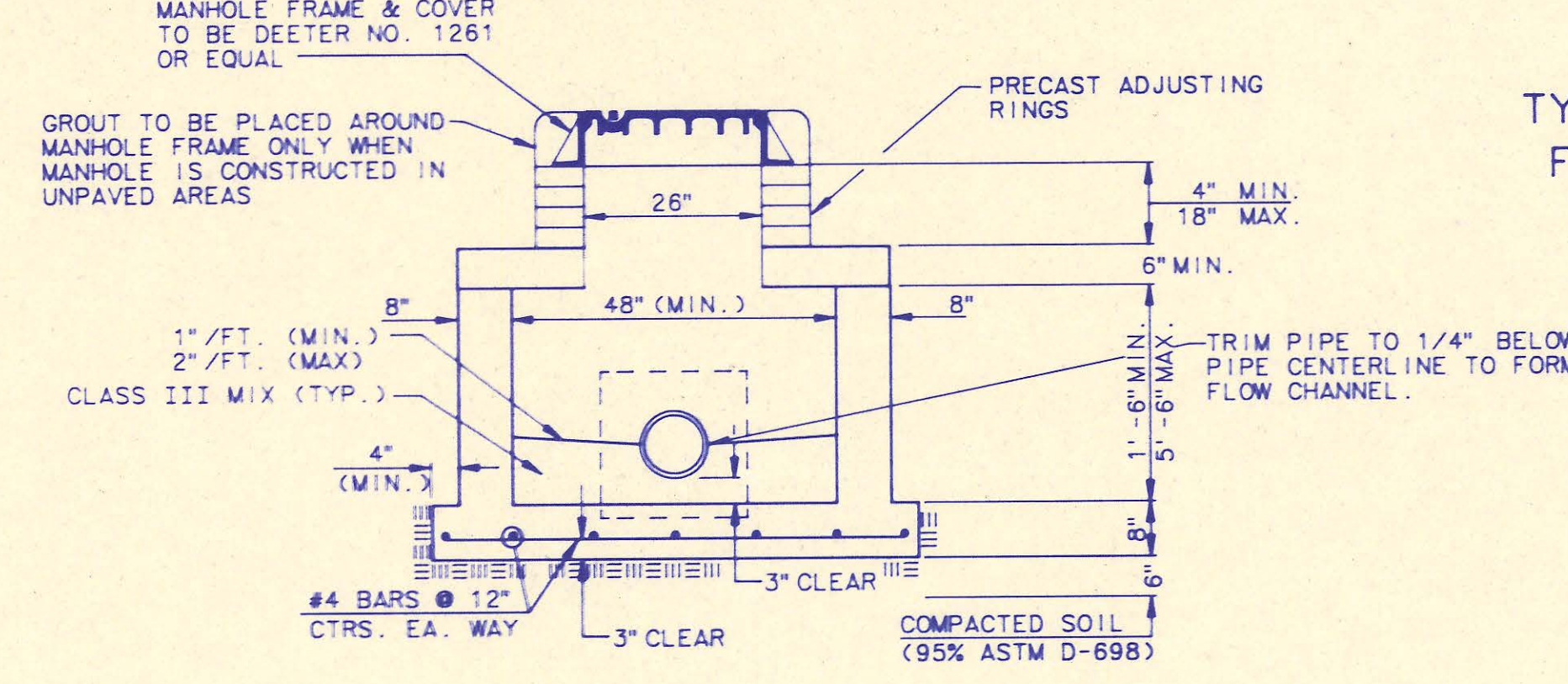
**SHALLOW MANHOLE TYPE "D"**



**TYPICAL MANHOLE FLOOR SHAPING**



**SECTION X (TYPICAL)**



**SECTION Y**

DRAWING NAME: PCC Cast-in-Pl. MH Sids  
 CUSTOMER: CHICAGO  
 DATE: 7/16/91  
 SPECIAL INSTRUCTIONS:

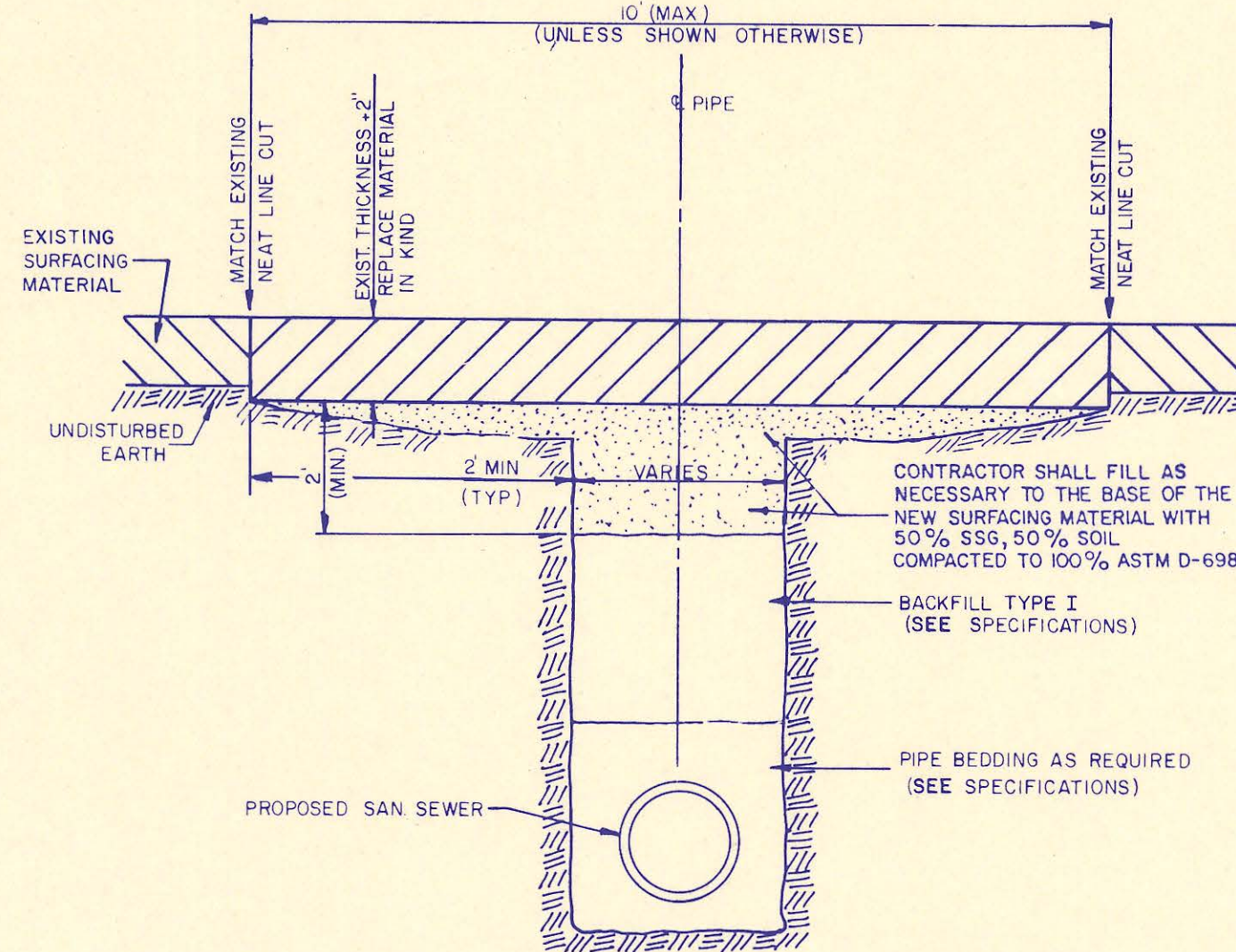
1	Manhole Frame and Cover Note 1	RJ	7/16/91
No.	Revision	By	Date
<b>CAST-IN-PLACE MANHOLE DETAILS</b>			
ADOPTED AS STANDARD DESIGN			
BY			
SEDGWICK COUNTY BUREAU OF PUBLIC SERVICES			
DAVID C. SPEARS, P.E. DIRECTOR, BUREAU OF PUBLIC SERVICES/COUNTY ENGINEER			
<b>PROFESSIONAL ENGINEERING CONSULTANTS, P.A.</b>			
ENGINEERS			
WICHITA, KANSAS			
Designed by DLM	Job No.	Sht. 5 of 7	
Drawn by DMW, TDS	Date NOVEMBER, 1990		

**WYE LOCATION TABLE**

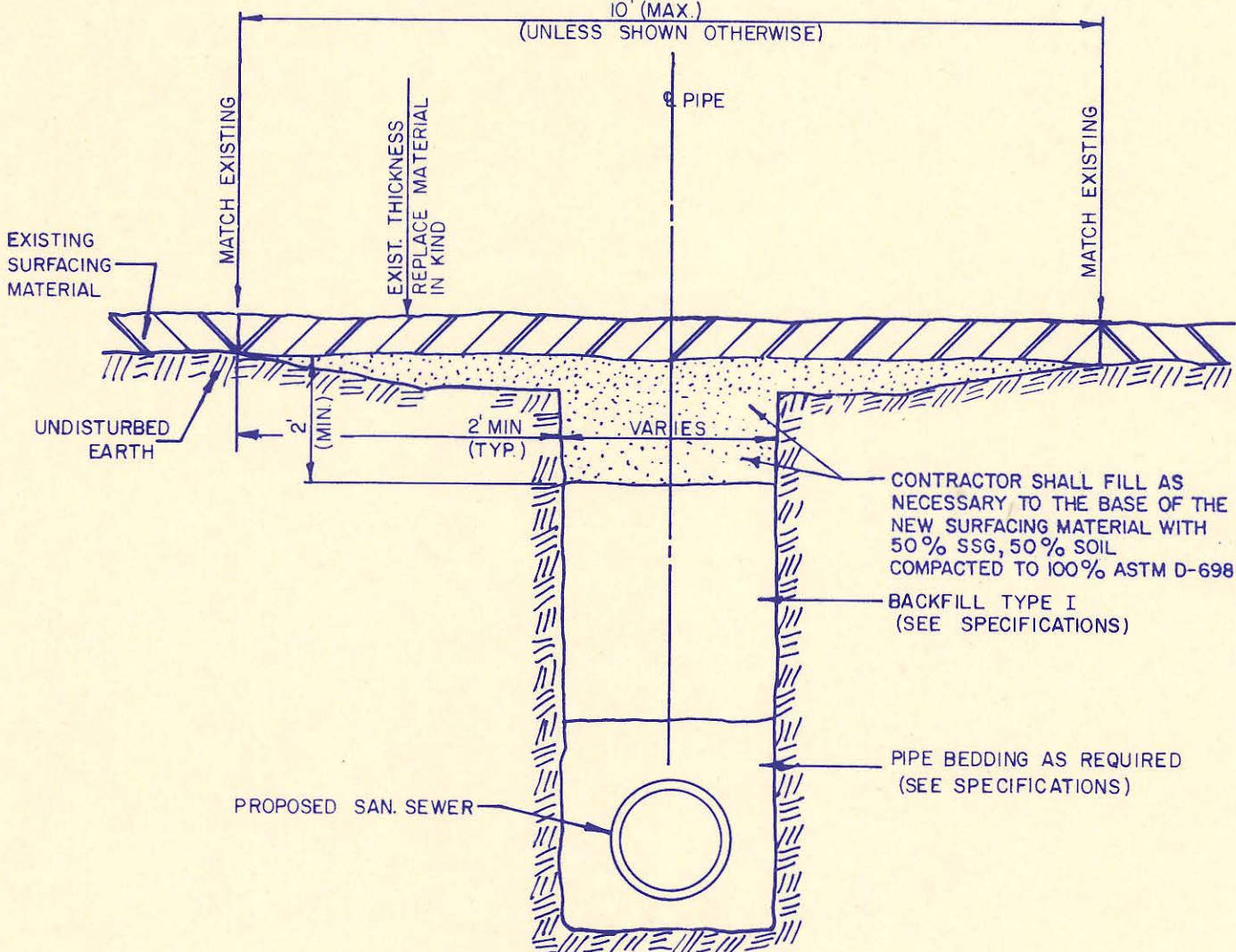
NOTE: THE ENGINEER WILL MEASURE THE LOCATIONS OF INSTALLED WYES AND RECORD THE LOCATIONS ON THE TABLE BELOW. DESIGN WYE LOCATIONS ARE APPROXIMATE AND MAY BE MODIFIED AS NECESSARY TO BEST SERVE EXISTING BUILDINGS AND LOTS AS DIRECTED BY THE ENGINEER.

WYE NO.	DESIGN LOCATION				DIRECTION	RISER PIPE (L.F.)	DISTANCE FROM MANHOLE	
	LINE NO.	STATION	BLOCK NO.	LOT NO.			UPSTREAM	DOWNSTREAM
1								DELETED
2								DELETED
3	1	55	3	9	Left	28		
4								DELETED
5	1	10+5	3	11	Left	18		
6	1	11+90	3	12	Left	20		
7	1	13+60	3	13	Left	28		
8	1	15+45	3	14	Left	24		
9	1	16+70	3	15	Left	24		
10	1	17+60	3	16	Left	32		
11								DELETED
12								DELETED
13	1	21+10	3	17	Left	18		
14	1	22+10	3	20	Left	20		
15	1	23+70	3	21	Left	26		
16	1	25+40	3	22	Left	14		
17	1	26+70	3	23	Left	18		
18								DELETED
19								DELETED
20	3	4+10	4	4	Right	14		
21								DELETED
22	3	7+10	2	1	Left	22		
23								DELETED
24								DELETED
25	5	0+0	3	2	Right	22		
26								DELETED
27	9	0+95	2	7	Right	14		
28								DELETED
29								DELETED
30								DELETED

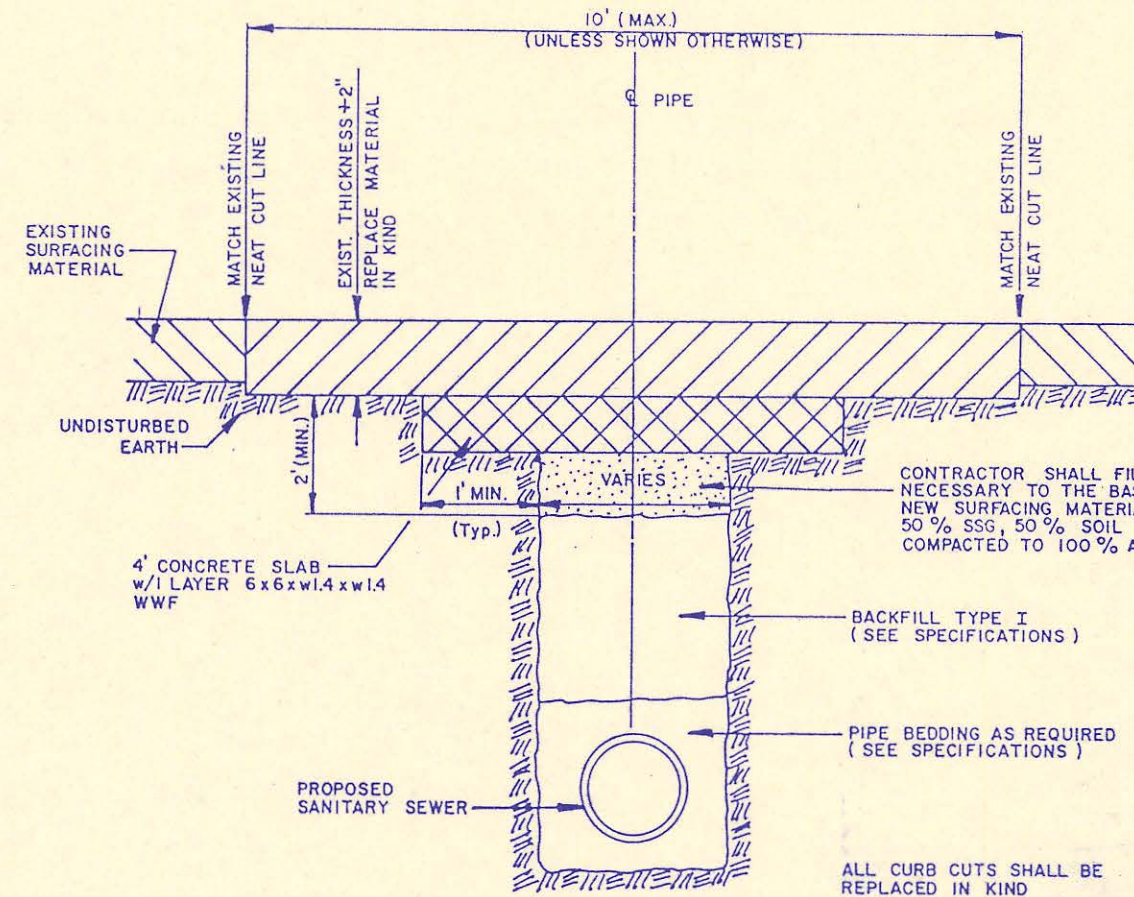
LOCATION OF ENDS OF RISER PIPE SHALL BE MARKED BY FASTENING 2-INCH WIDE METALLIC DETECTABLE TAPE TO THE END OF THE PIPE AND WRAPPED AROUND 1" PVC PIPE EXTENDING VERTICALLY FROM THE END OF THE RISER PIPE TO 3 FEET ABOVE THE GROUND SURFACE. METALLIC DETECTABLE TAPE SHALL BE "MagnaTec" AS MANUFACTURED BY THOR ENTERPRISES, INC., WATERLOO, WISCONSIN OR "LINEGUARD TYPE III" AS MANUFACTURED BY LINEGUARD, INC., CHICAGO, ILLINOIS OR APPROVED EQUAL.



PARALLEL PAVED ROAD - REMOVAL AND REPLACEMENT OR PAVED DRIVE CROSSING - REMOVAL AND REPLACEMENT

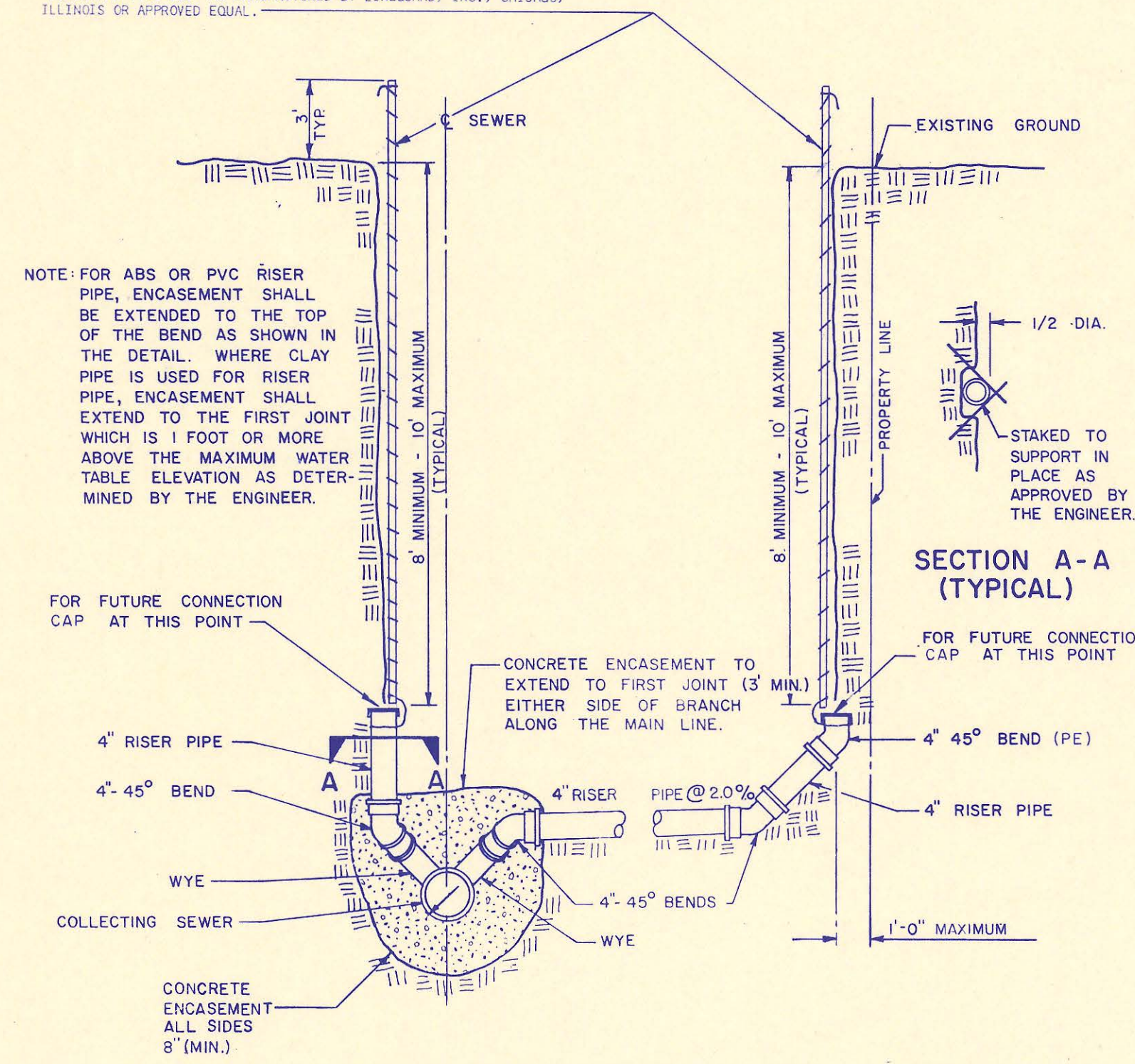


UNPAVED ROAD OR DRIVE - REMOVAL AND REPLACEMENT

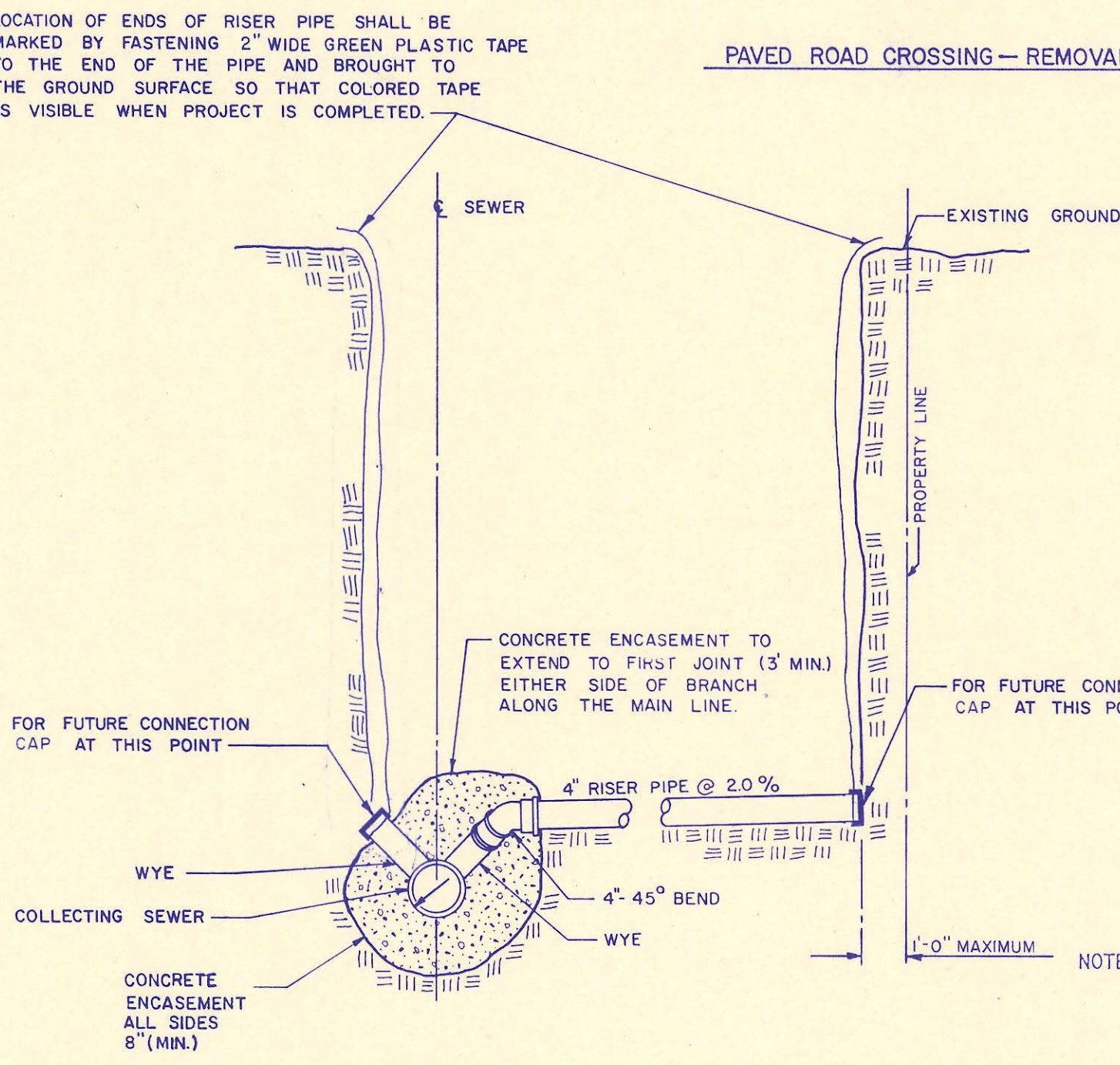


PAVED ROAD CROSSING - REMOVAL AND REPLACEMENT

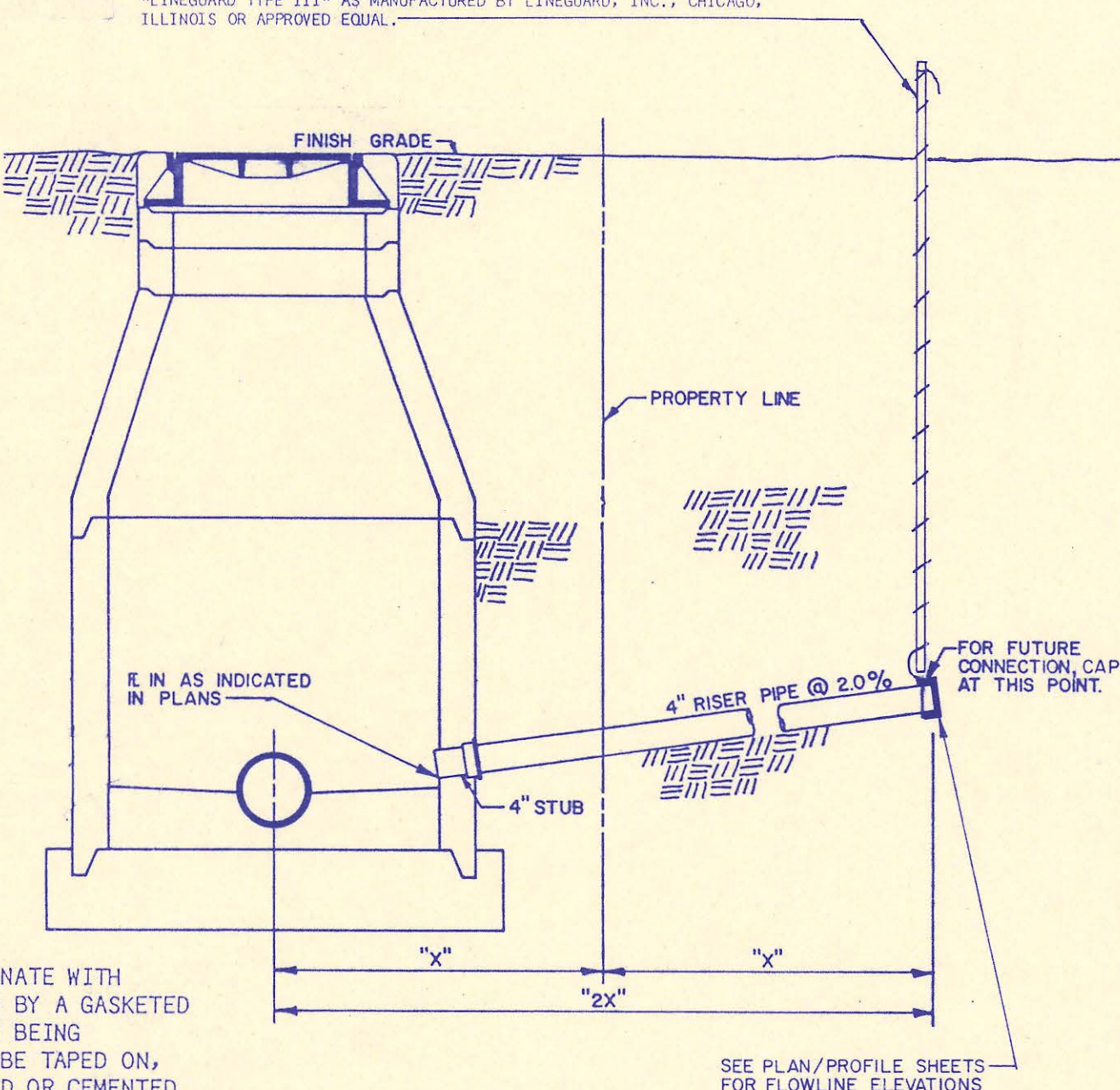
LOCATION OF ENDS OF RISER PIPE SHALL BE MARKED BY FASTENING 2-INCH WIDE METALLIC DETECTABLE TAPE TO THE END OF THE PIPE AND WRAPPED AROUND 1" PVC PIPE EXTENDING VERTICALLY FROM THE END OF THE RISER PIPE TO 3 FEET ABOVE THE GROUND SURFACE. METALLIC DETECTABLE TAPE SHALL BE "MagnaTec" AS MANUFACTURED BY THOR ENTERPRISES, INC., WATERLOO, WISCONSIN OR "LINEGUARD TYPE III" AS MANUFACTURED BY LINEGUARD, INC., CHICAGO, ILLINOIS OR APPROVED EQUAL.



WYE AND RISER DETAIL (FOR COLLECTING SEWER DEPTH GREATER THAN 10')



WYE AND RISER DETAIL (FOR COLLECTING SEWER DEPTH LESS THAN 10')



SERVICE STUB DETAIL

NOTE: ALL STUBS SHALL TERMINATE WITH PLAIN END PIPE CAPPED BY A GASKETED CAP MADE FOR THE PIPE BEING INSTALLED. CAPS MAY BE TAPED ON, BUT SHALL NOT BE GLUED OR CEMENTED TO THE STUB.

**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 AT THE APPLICATION RATES GIVEN BELOW. THE COST FOR SEEDING, SPRIGGING, AND SODDING SHALL BE SUBSIDIARY TO THE PRICE BID FOR "SITE CLEARING AND RESTORATION".

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

**APPLICATION RATES:**

1. SEED: K-31 FESCUE @ 8 LBS PER 1,000 SQUARE FEET
2. MULCH (IF REQUIRED): 90 LBS PER 1,000 S.F.
3. FERTILIZER: NITROGEN @ 4 LBS PER 1,000 S.F.  
PHOSPHOROUS @ 8 LBS PER 1,000 S.F.  
POTASSIUM @ 4 LBS PER 1,000 S.F.

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.

TYPE OF GRASS	PLANTING TIME	SEED APPLICATION	FERTILIZER*
BLUEGRASS (WINDSOR, KENTUCKY, ETC.)	FALL	3 LBS/1,000 S.F.	8 LBS/1,000 S.F.*
TALL FESCUE (K-31)	SPRING OR FALL	8 LBS/1,000 S.F.	8 LBS/1,000 S.F.*
BERMUDA	SPRING	SPRIGS OR SOD (SEE SPECIFICATIONS)	8 LBS/1,000 S.F.*
ZOYSIA	SPRING	SPRIGS OR SOD (SEE SPECIFICATIONS)	8 LBS/1,000 S.F.*

\*FERTILIZER APPLICATION RATES ARE BASED ON ACTUAL LBS OF PHOSPHOROUS APPLIED. FERTILIZER SHALL BE 12-24-12 OR OTHER HIGH PHOSPHOROUS TYPE AS APPROVED BY THE ENGINEER. (EXAMPLE: TO APPLY 8 LBS OF PHOSPHOROUS USING A 12-24-12 FERTILIZER, 33 LBS OF FERTILIZER WOULD BE REQUIRED.)

Wye Location Table

No.	Line No.	Station	Block No.	Lot No.	Direction	Riser-Pipe (L.F.)	Distance from MH Up Down
1	1	3+62.93	3	7	Rt.	8	311 22
2	1	6+73.81	3	9	Lt.	6	76 57
3	1	8+49.81	3	10	Lt.	11	119 160
4	1	10+78.40	3	11	Lt.	12	69 33
5	1	14+33.10	3	13	Lt.	16	80 274
6	1	16+10.76	3	14	Lt.	16	258 96
7	1	17+46.76	3	15	Lt.	12	40 105
8	1	17+86.76	3	16	Lt.	9	80 65
9	1	21+06.84	3	19	Lt.	10	10 232
10	1	22+50.77	3	20	Lt.	12	154 88
11	1	23+69.77	3	21	Lt.	14	31 131
12	1	26+27.86	3	22	Lt.	17	127 54
13	3	3+71.22	3	4	Rt.	14	168 103
14	5	8+57.00	3	2	Rt.	13	57 36
15	3	8+07.25	2	1	Lt.	12	72 44
16	3	9+77.93	2	2	Lt.	13	127 63



**RECORD DRAWING 7-30-92**

Updated per Current Standards GM 9/1988

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

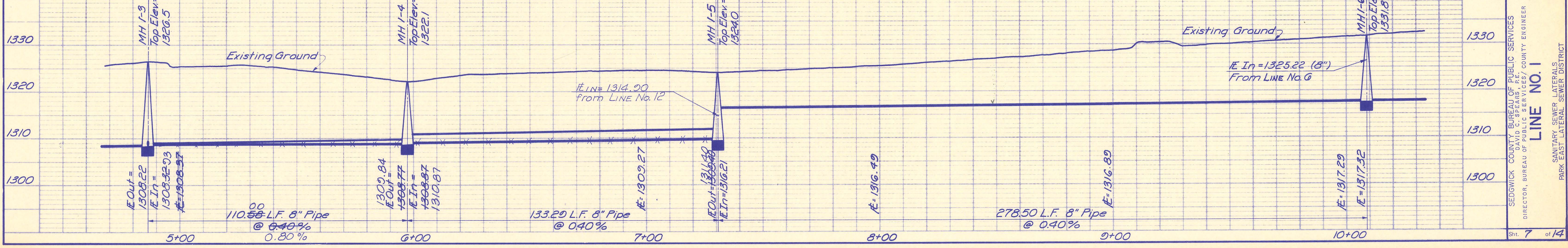
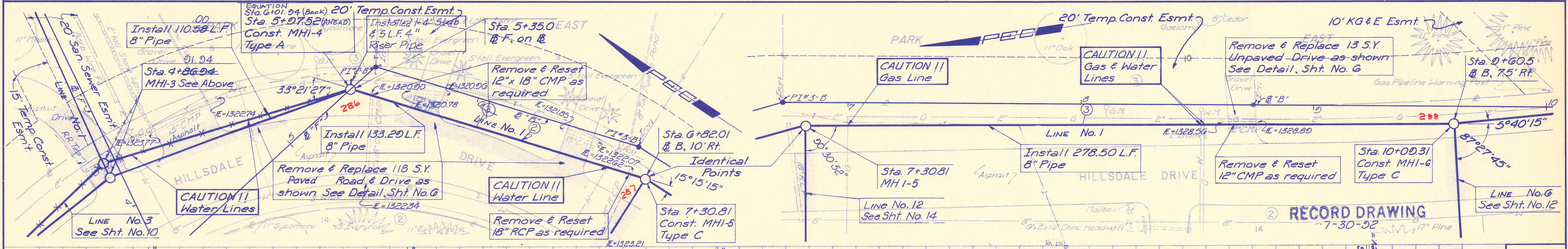
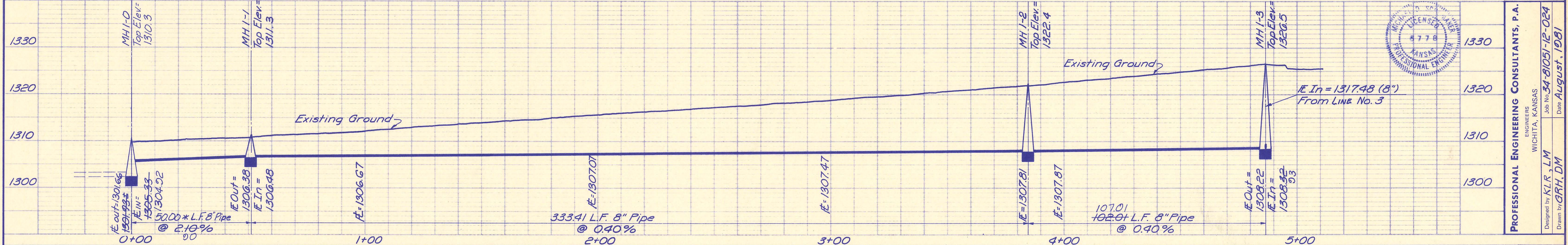
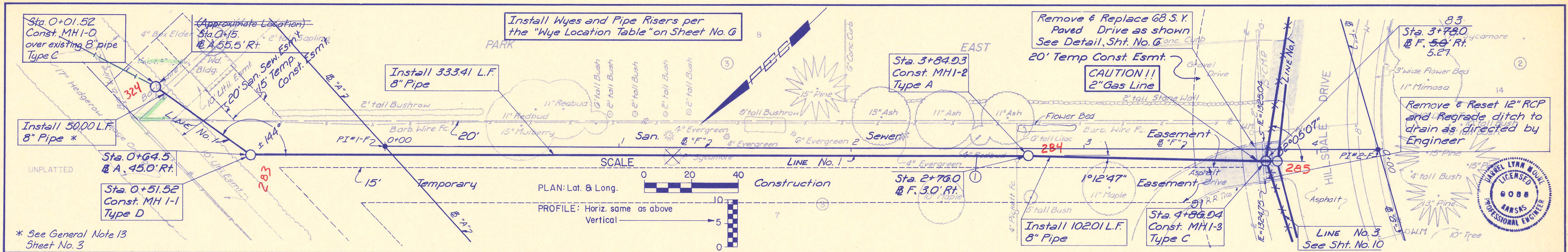
**MISCELLANEOUS DETAILS**

SANITARY SEWER LATERALS  
PARK EAST LATERAL SEWER DISTRICT

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

ENGINEERS  
WICHITA, KANSAS

Designed by KLR, LM, RFJ Job No. 81051-  
Drawn by TC, SC Date Aug. 1981 Sht. 6 of 14



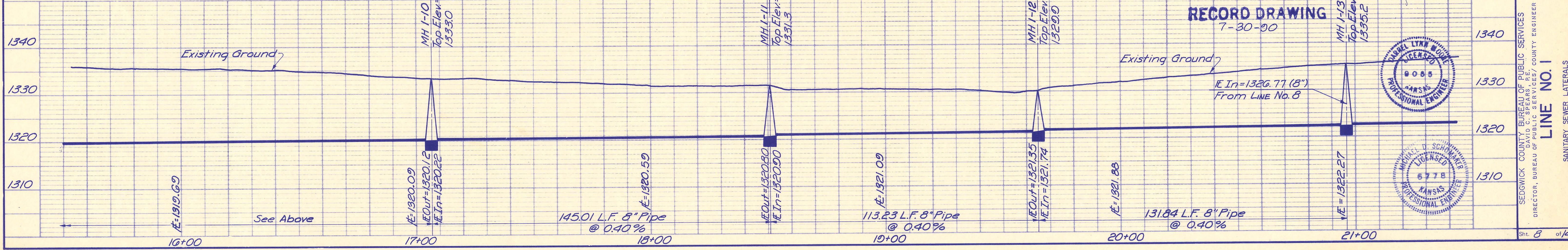
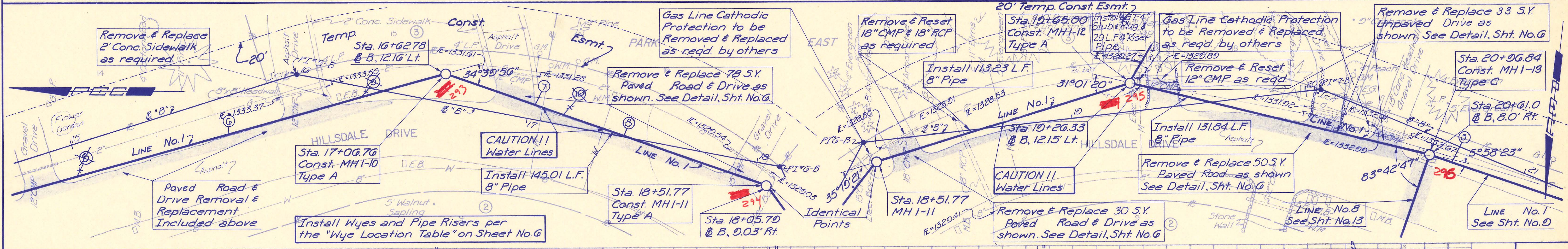
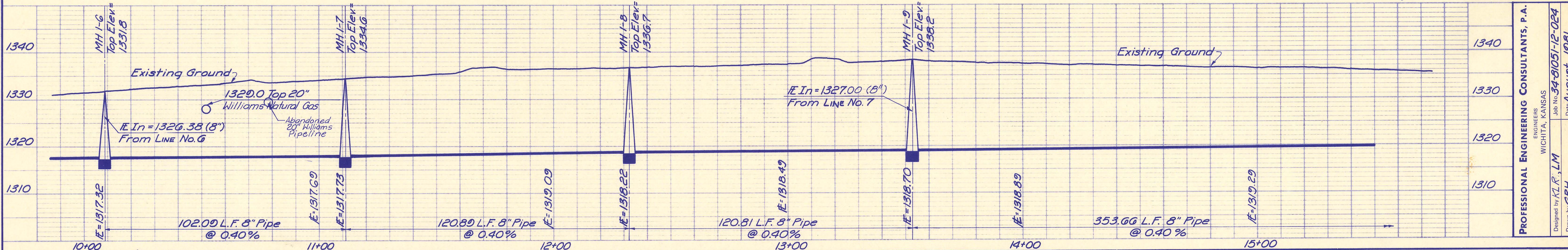
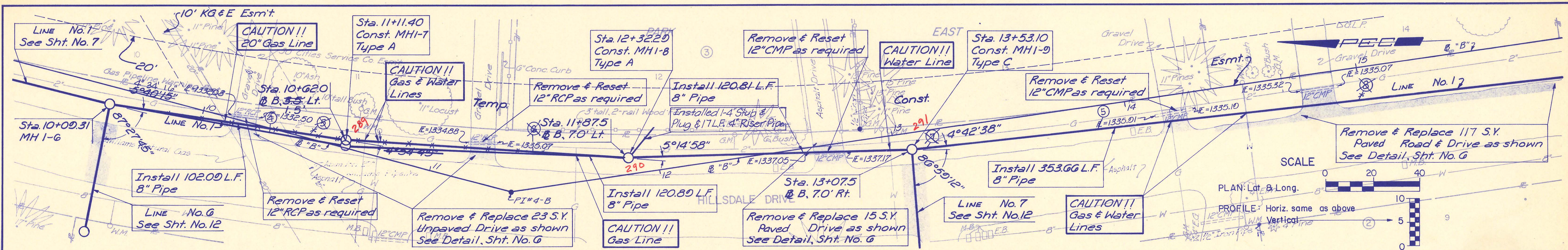
DAVID LYNN DOWE  
LICENSED  
PROFESSIONAL ENGINEER  
KANSAS  
0088

DAVID LYNN DOWE  
LICENSED  
PROFESSIONAL ENGINEER  
KANSAS  
4778

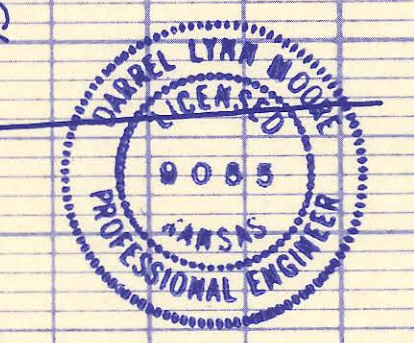
PROFESSIONAL ENGINEERING CONSULTANTS, P.A.  
ENGINEERS  
WICHITA, KANSAS  
Job No. 34-81051-12-024  
Date August, 1981  
Designed by KLR, LM  
Drawn by DRH, DM

RECORD DRAWING  
7-30-92

SEDGWICK COUNTY BUREAU OF PUBLIC SERVICES  
DAVID C. SPEARS, P.E.  
DIRECTOR, BUREAU OF PUBLIC SERVICES / COUNTY ENGINEER  
LINE NO. 1  
SANITARY SEWER LATERALS  
PARK EAST LATERAL SEWER DISTRICT  
Sht. 7 of 14

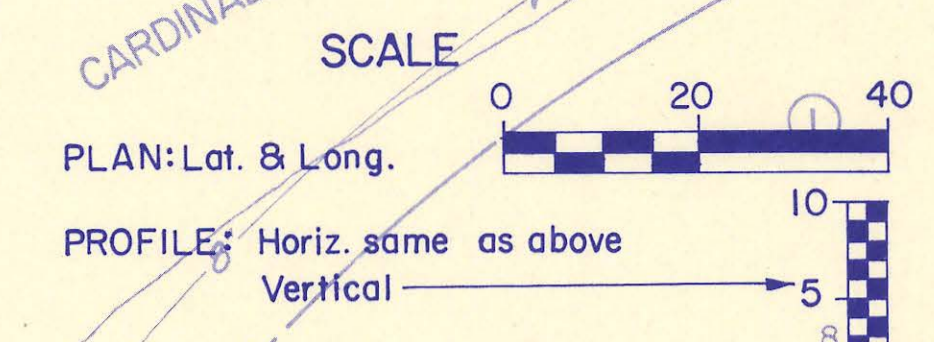
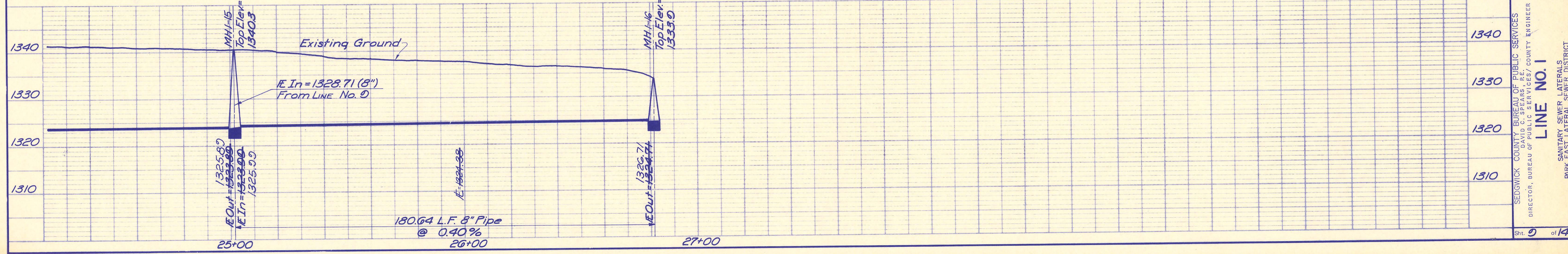
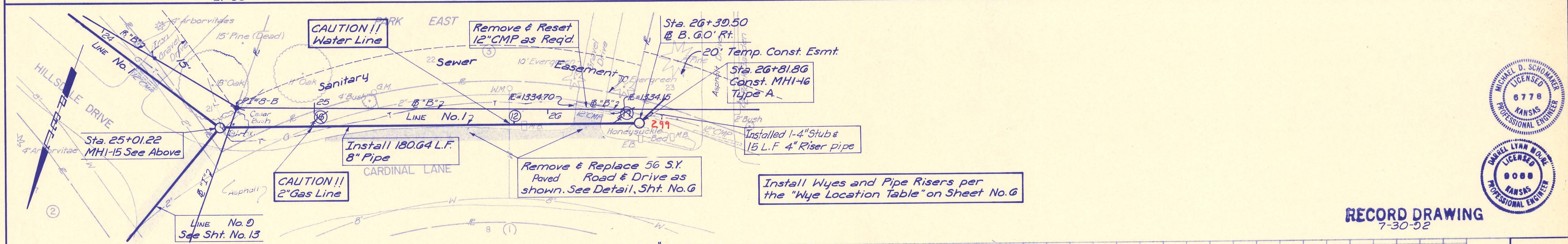
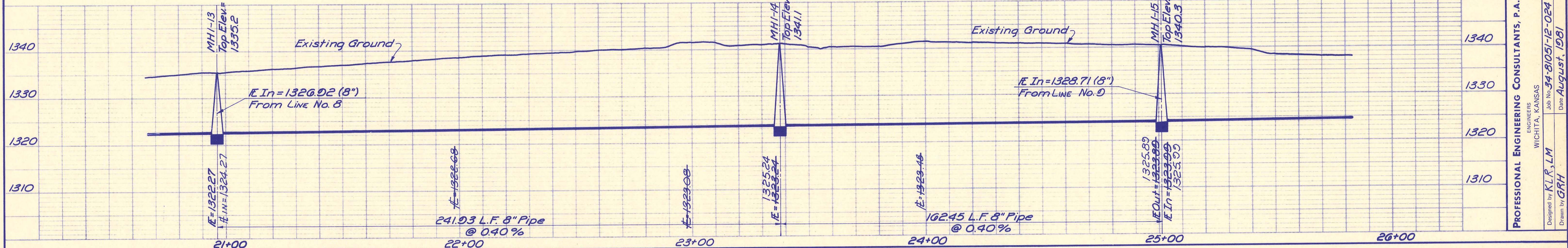
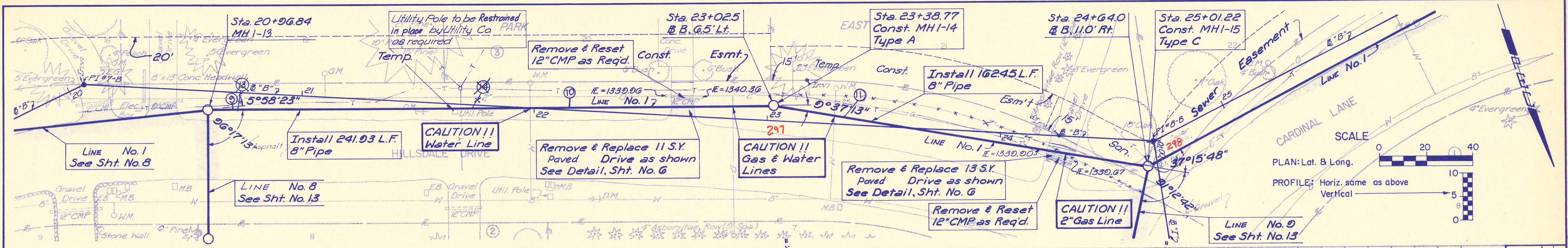


RECORD DRAWING  
7-30-90

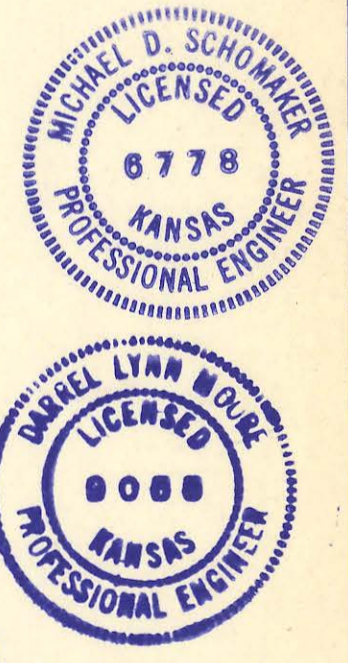


PROFESSIONAL ENGINEERING CONSULTANTS, P.A.  
ENGINEERS  
WICHITA, KANSAS  
Job No. 34-81051-E-024  
Designed by KLR, LM  
Drawn by GRH  
Date August, 1981

LINE NO. 1  
SANITARY SEWER LATERALS  
PARK EAST LATERAL SEWER DISTRICT  
SEDGWICK COUNTY BUREAU OF PUBLIC SERVICES  
DAVID C. SPEARS, P.E.  
DIRECTOR, BUREAU OF PUBLIC SERVICES / COUNTY ENGINEER  
Sht. 8 of 14



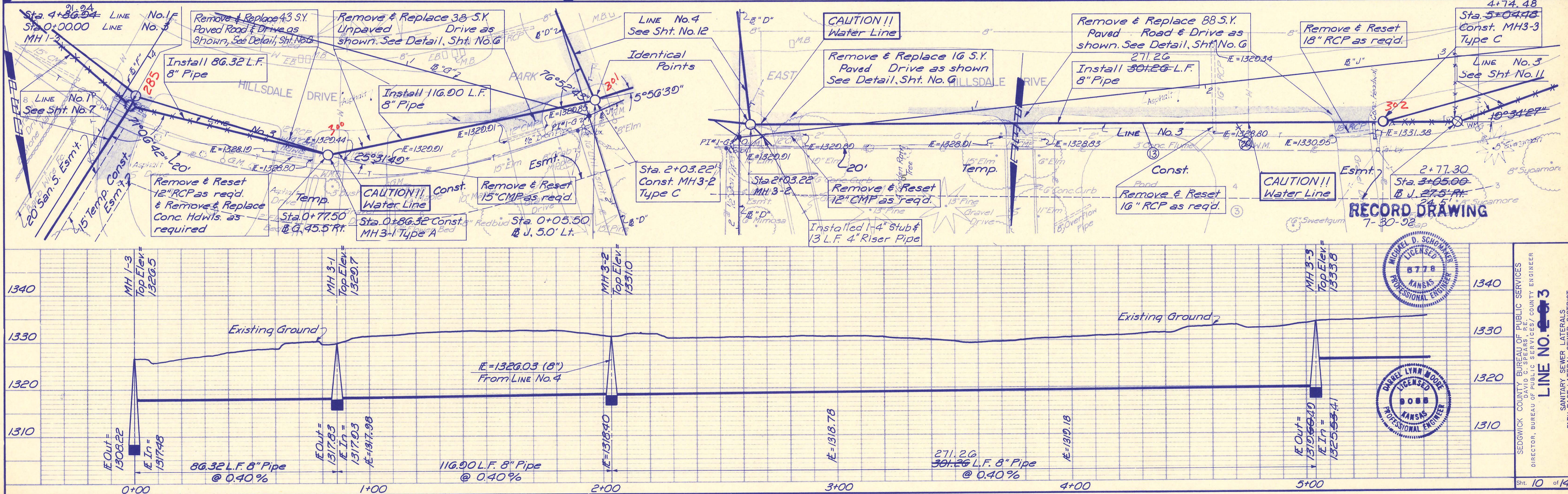
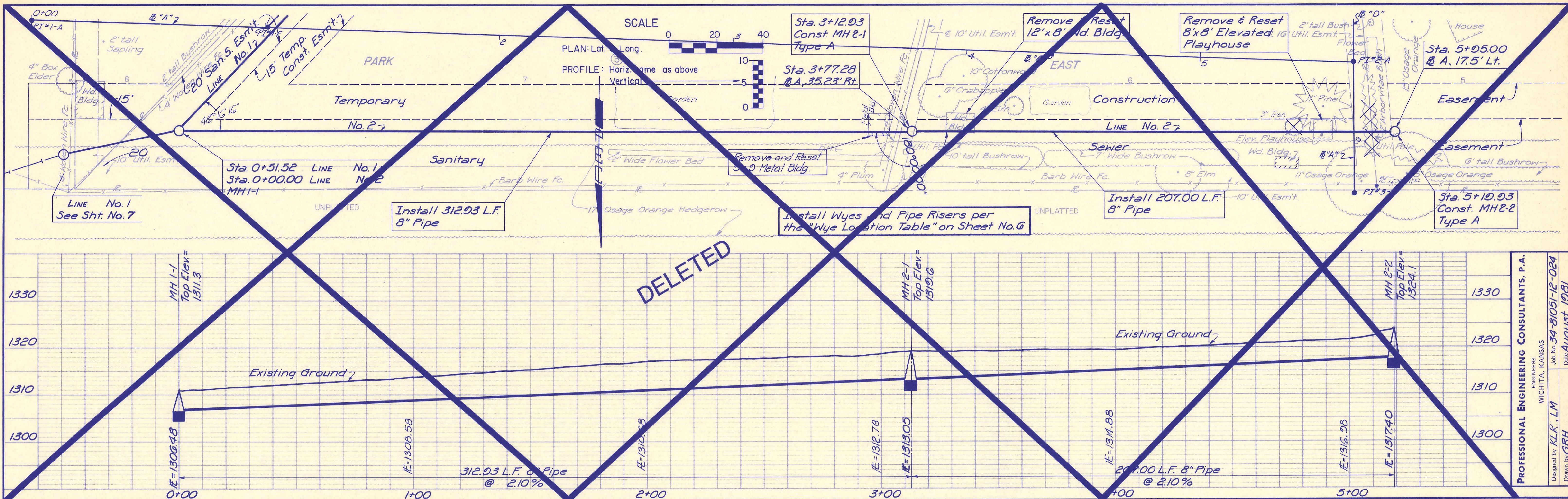
PROFESSIONAL ENGINEERING CONSULTANTS, P.A.  
 ENGINEERS  
 WICHITA, KANSAS  
 Designed by: K.L.R., L.M.  
 Drawn by: G.R.H.  
 Job No. 34-81051-12-024  
 Date August, 1981



RECORD DRAWING  
 7-30-82

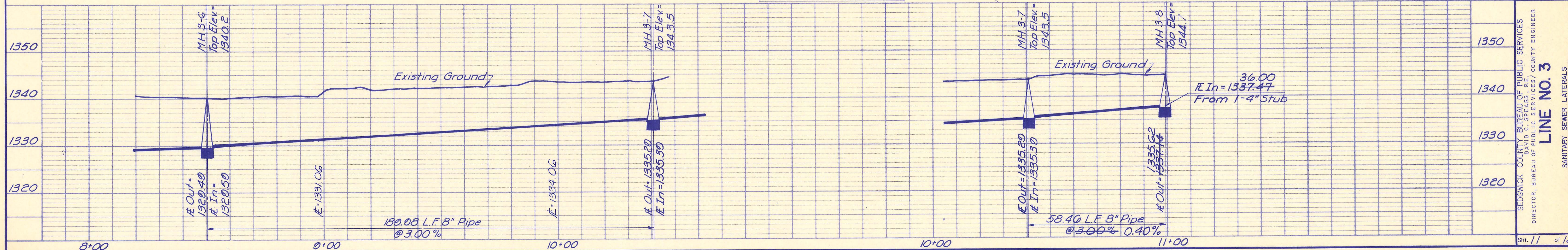
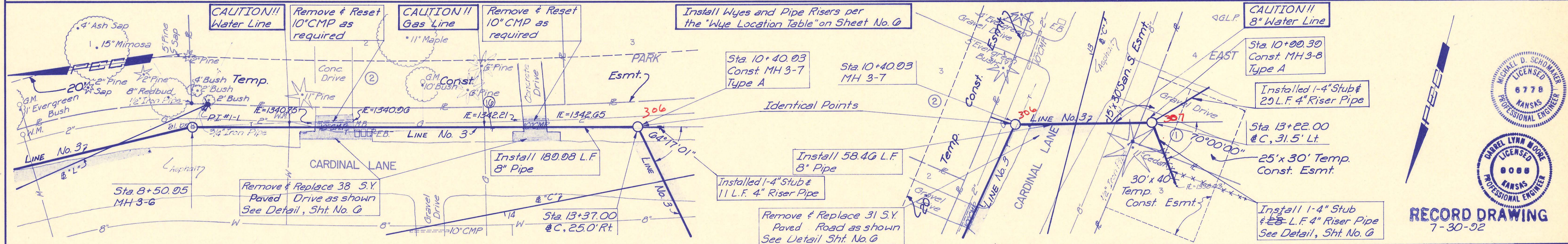
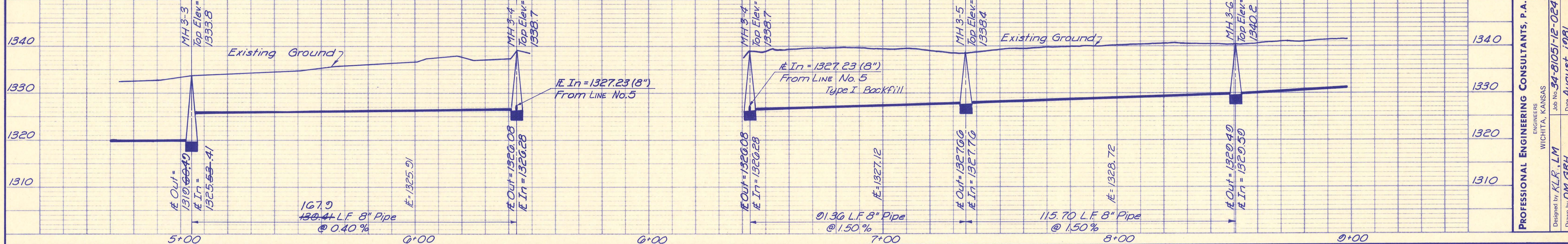
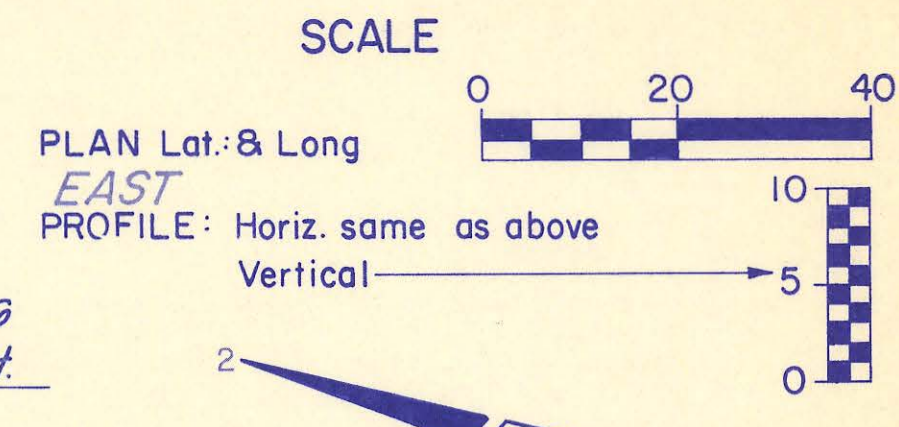
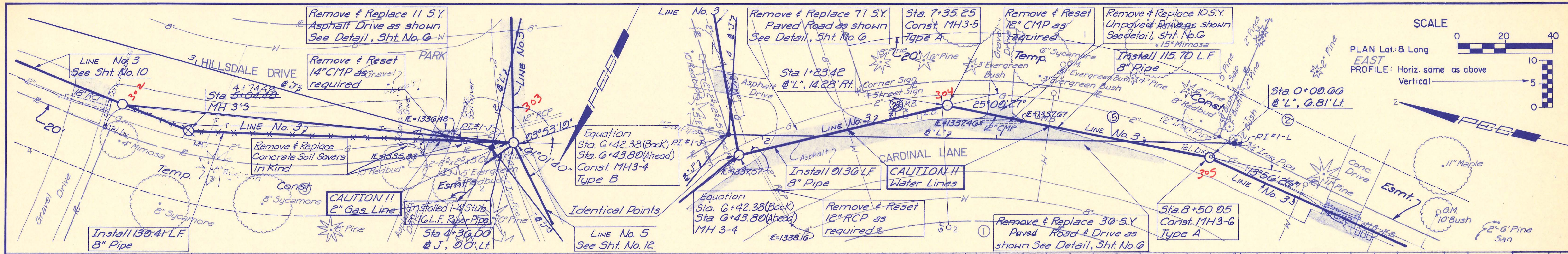
SEDGWICK COUNTY BUREAU OF PUBLIC SERVICES  
 DIRECTOR, BUREAU OF PUBLIC SERVICES / COUNTY ENGINEER  
 SANITARY SEWER LATERALS  
 PARK EAST LATERAL SEWER DISTRICT  
**LINE NO. 1**  
 Sht. 9 of 14



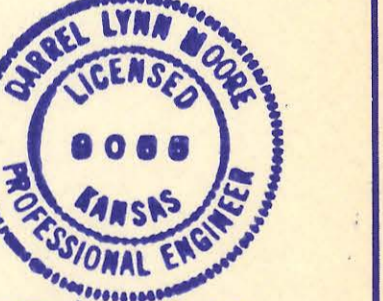


PROFESSIONAL ENGINEERING CONSULTANTS, P.A.  
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 WICHITA, KANSAS  
 Designed by KLR, L.M.  
 Drawn by GRH  
 Job No. 34-81051-12-024  
 Date August, 1981

SEDGWICK COUNTY BUREAU OF PUBLIC SERVICES  
 DIRECTOR, BUREAU OF PUBLIC SERVICES/COUNTY ENGINEER  
 LINE NO. 003  
 SANITARY SEWER LATERALS  
 PARK EAST LATERAL SEWER DISTRICT  
 Sht. 10 of 14

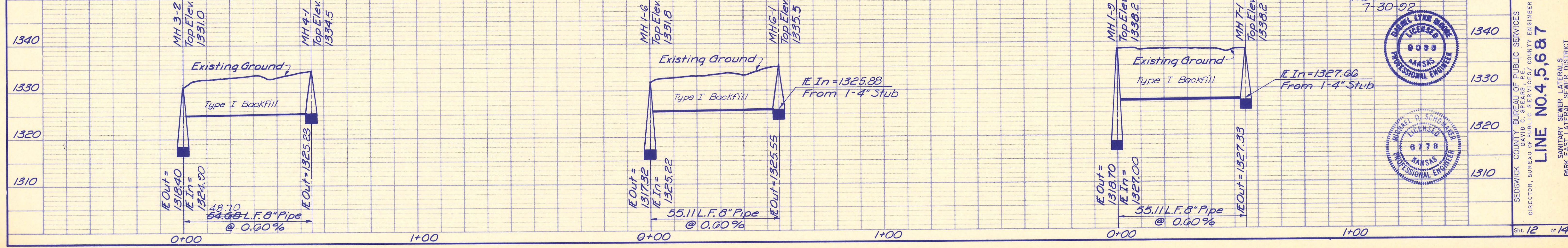
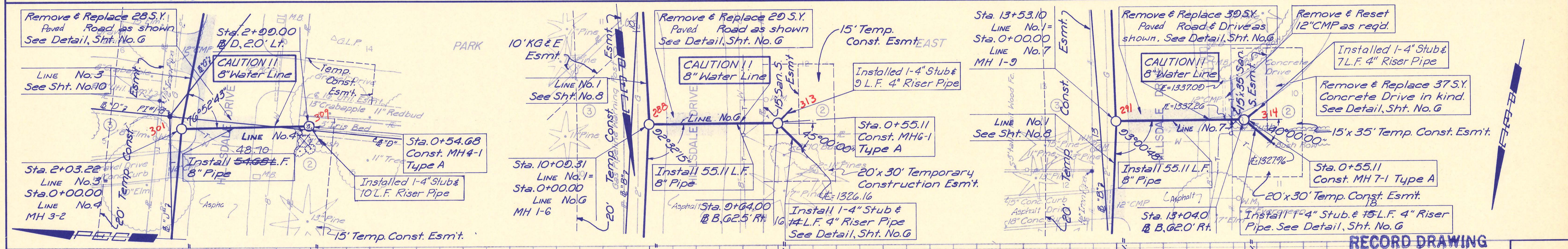
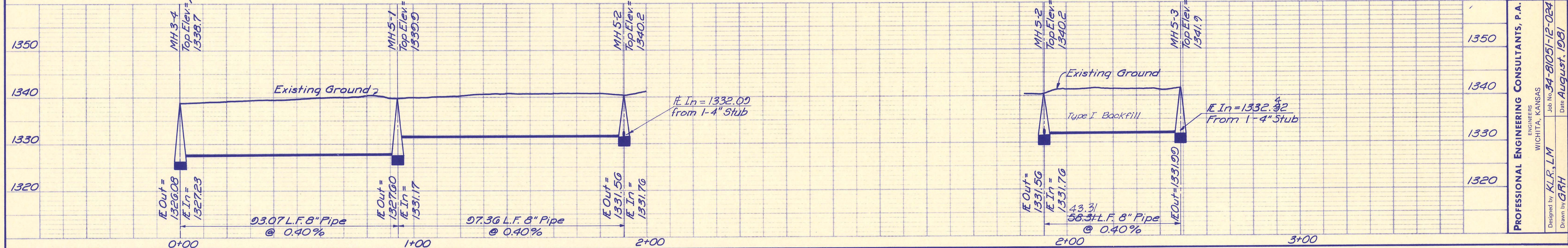
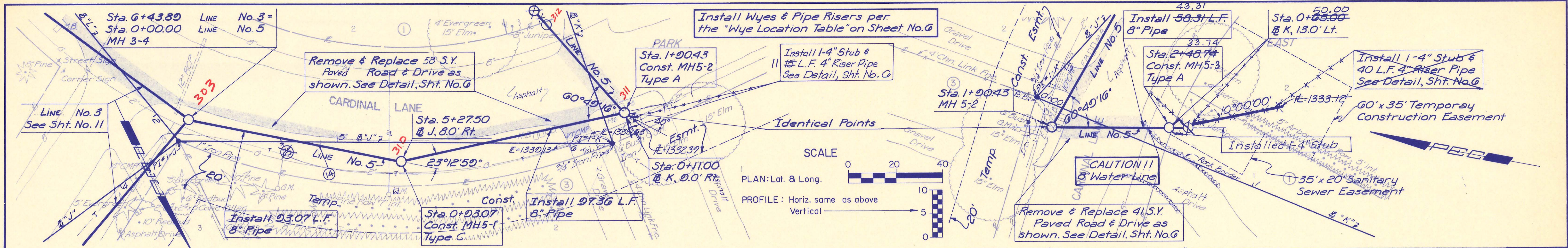


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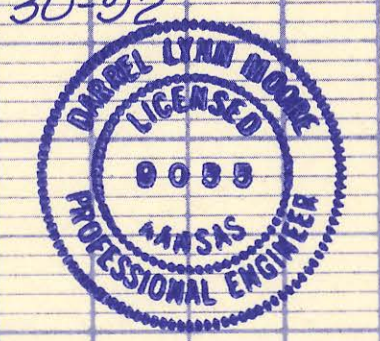
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7-30-82

SEDGWICK COUNTY, BUREAU OF PUBLIC SERVICES  
DIRECTOR, BUREAU OF PUBLIC SERVICES/COUNTY ENGINEER  
SANITARY SEWER LATERALS  
PARK EAST LATERAL SEWER DISTRICT  
LINE NO. 3  
Sht. 11 of 14



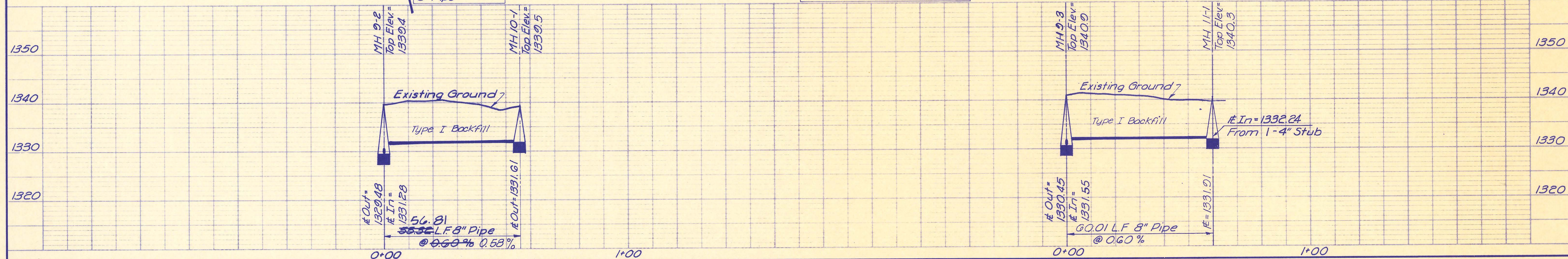
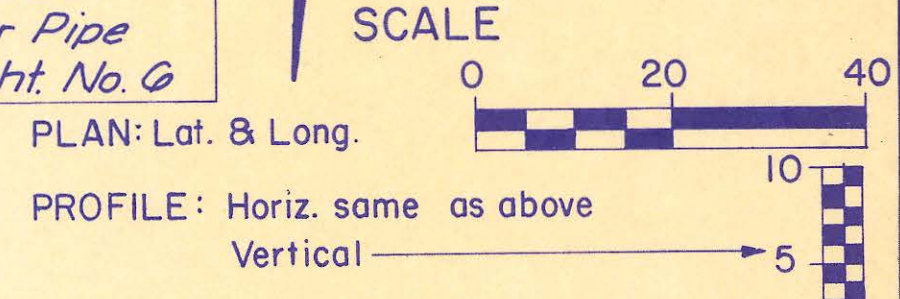
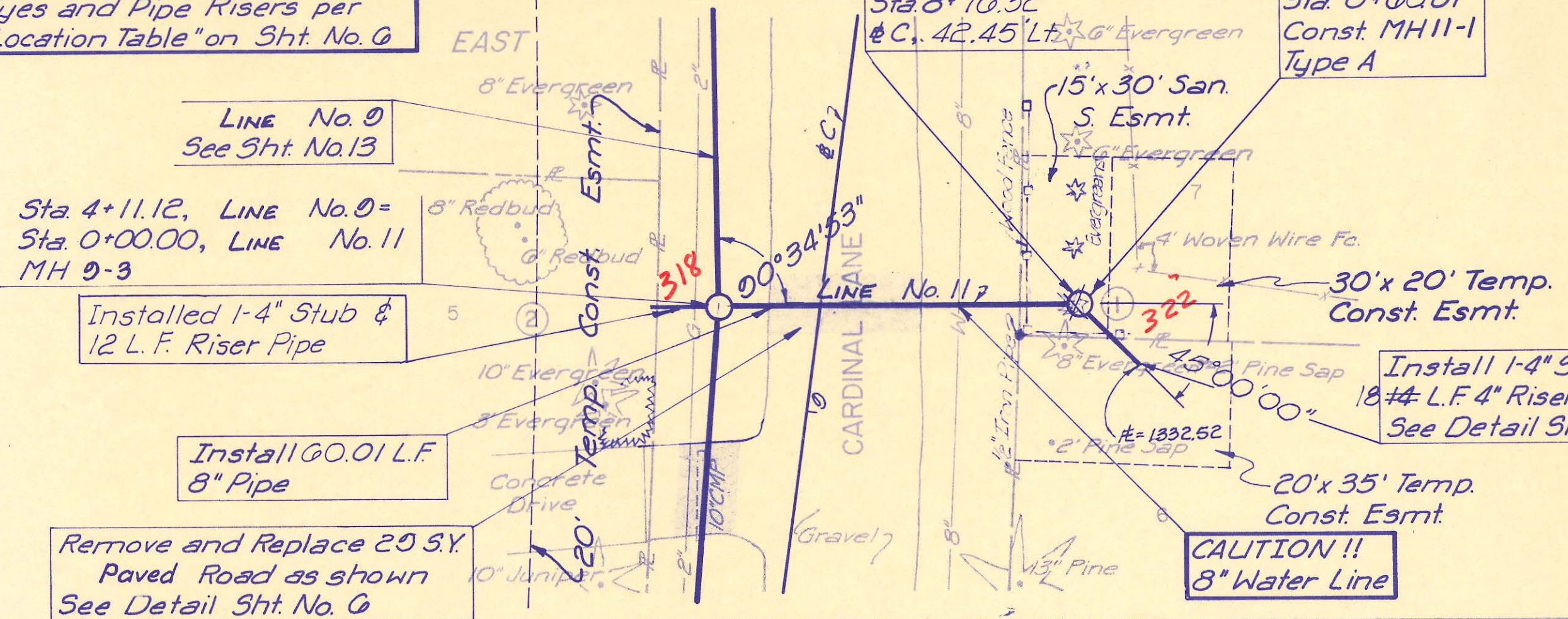
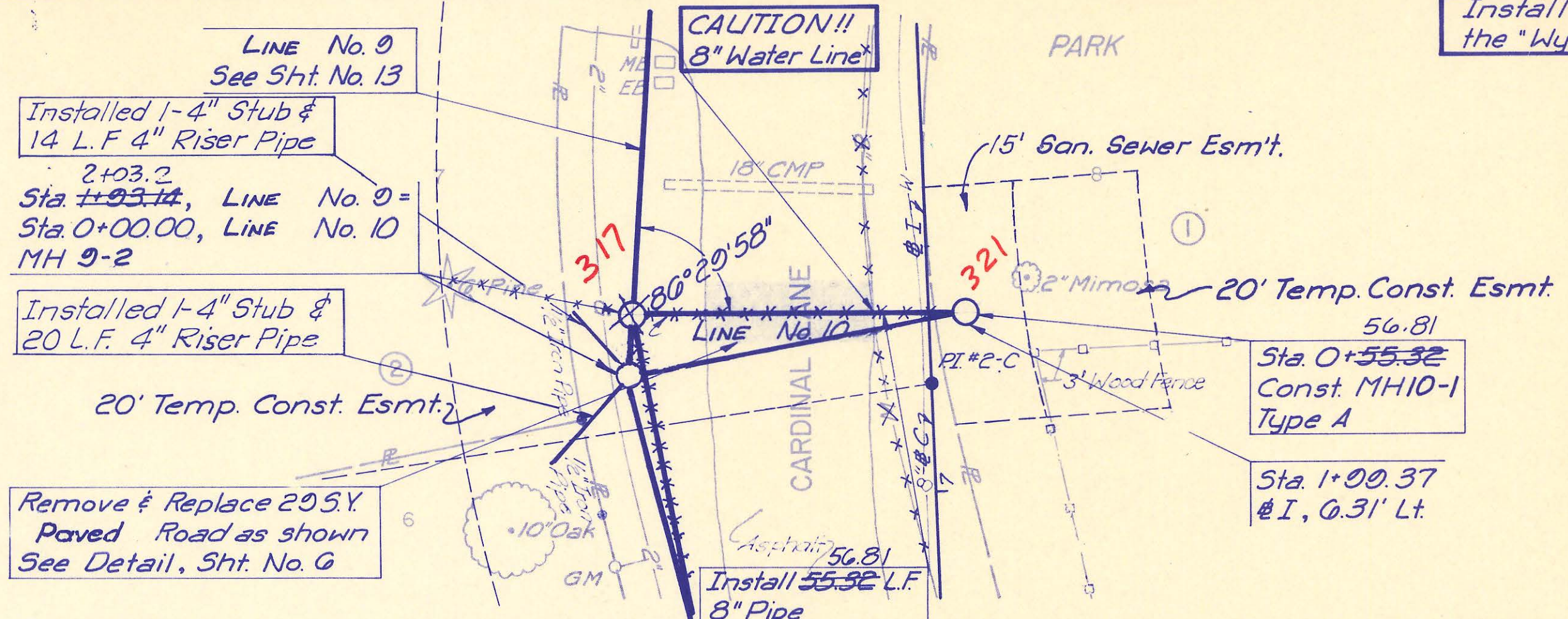
PROFESSIONAL ENGINEERING CONSULTANTS, P.A.  
 ENGINEERS  
 WICHITA, KANSAS  
 Designed by **KLR, LM**  
 Drawn by **GRH**  
 Job No. **34-81051-12-024**  
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**LINE NO. 4, 5, 6 & 7**  
 SANITARY SEWER, LATERALS  
 PARK EAST LATERAL SEWER DISTRICT  
 Sht. 12 of 14

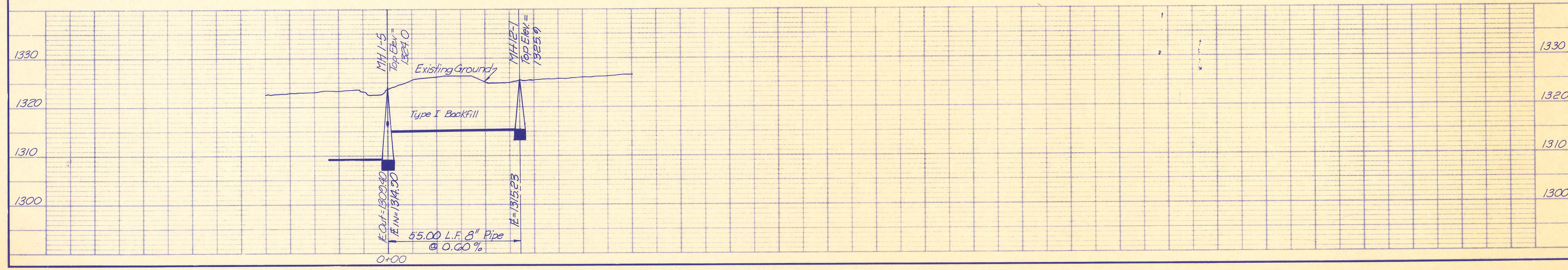
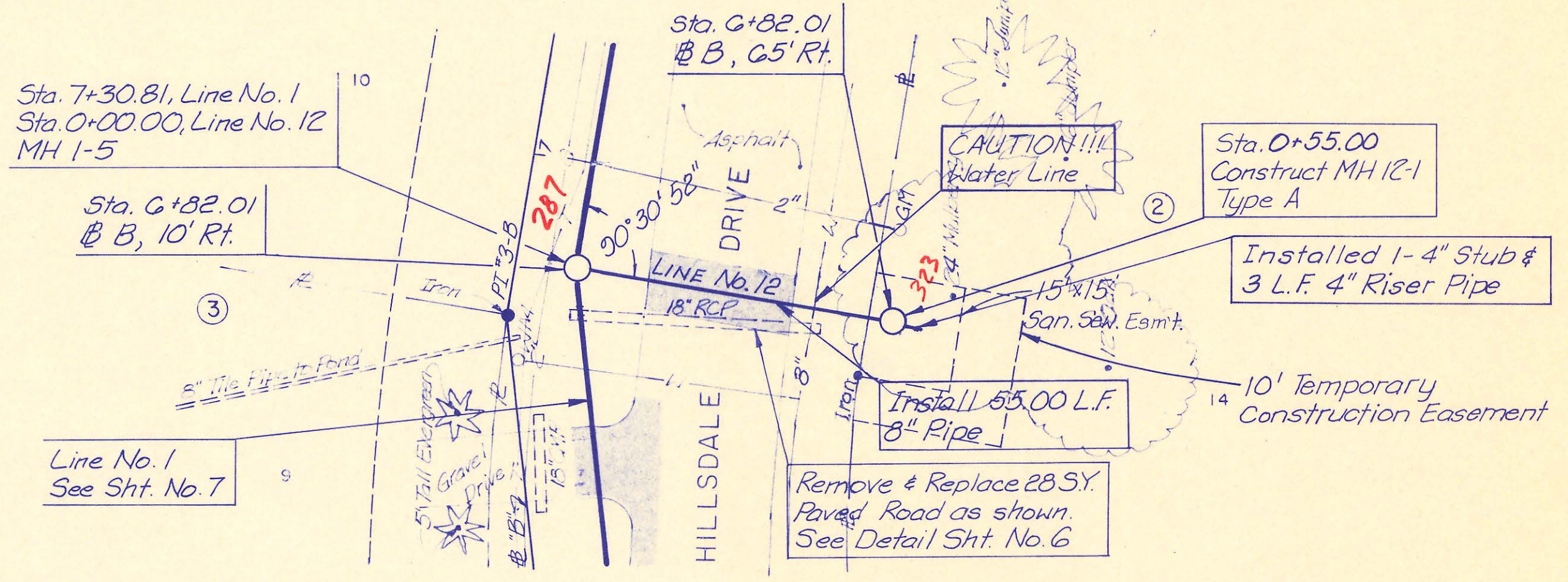




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DIRECTOR, BUREAU OF PUBLIC SERVICES / COUNTY ENGINEER

LINE NO. 10 & 11 & 12

SANITARY SEWER LATERALS  
PARK EAST LATERAL SEWER DISTRICT

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RECORD DRAWING  
7-30-92

