

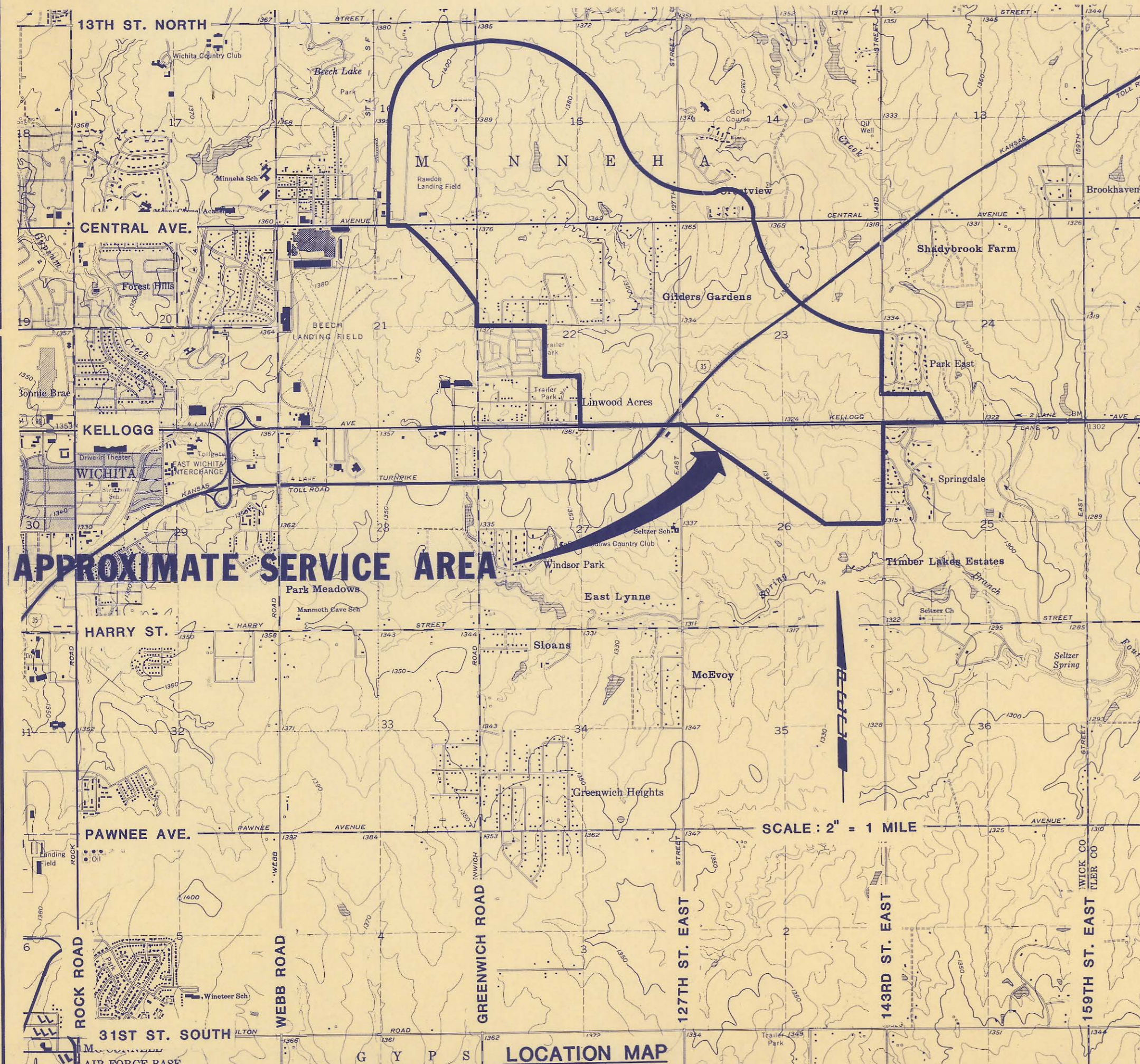
FOUR MILE CREEK 4MC-050

CONSTRUCTION PLANS FOR A SANITARY SEWER INTERCEPTOR

IN THE

MINNEHA JOINT SEWER DISTRICT

Project No. 34-81051-4 -024
NOVEMBER, 1982



INDEX OF SHEETS

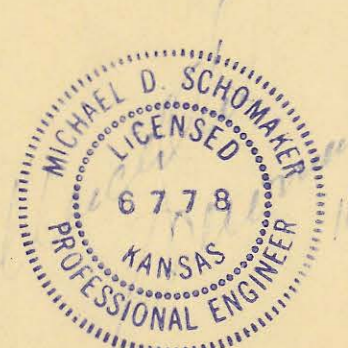
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APPROVED BY:
BOARD OF COUNTY COMMISSIONERS
Bobby Quinn 7/5/94
CHAIR DATE

APPROVED BY:
SEDGWICK COUNTY
BUREAU OF PUBLIC SERVICES
Paul Collins 7/1/94
DIRECTOR DATE

FILED IN THE OFFICE OF:
THE SEDGWICK COUNTY CLERK
Debra L. ... 7/5/94
COUNTY CLERK DATE

RECORD DRAWING
1/00K PROJ. ENG. 3/23/96 DATE
RES. ENG. DATE

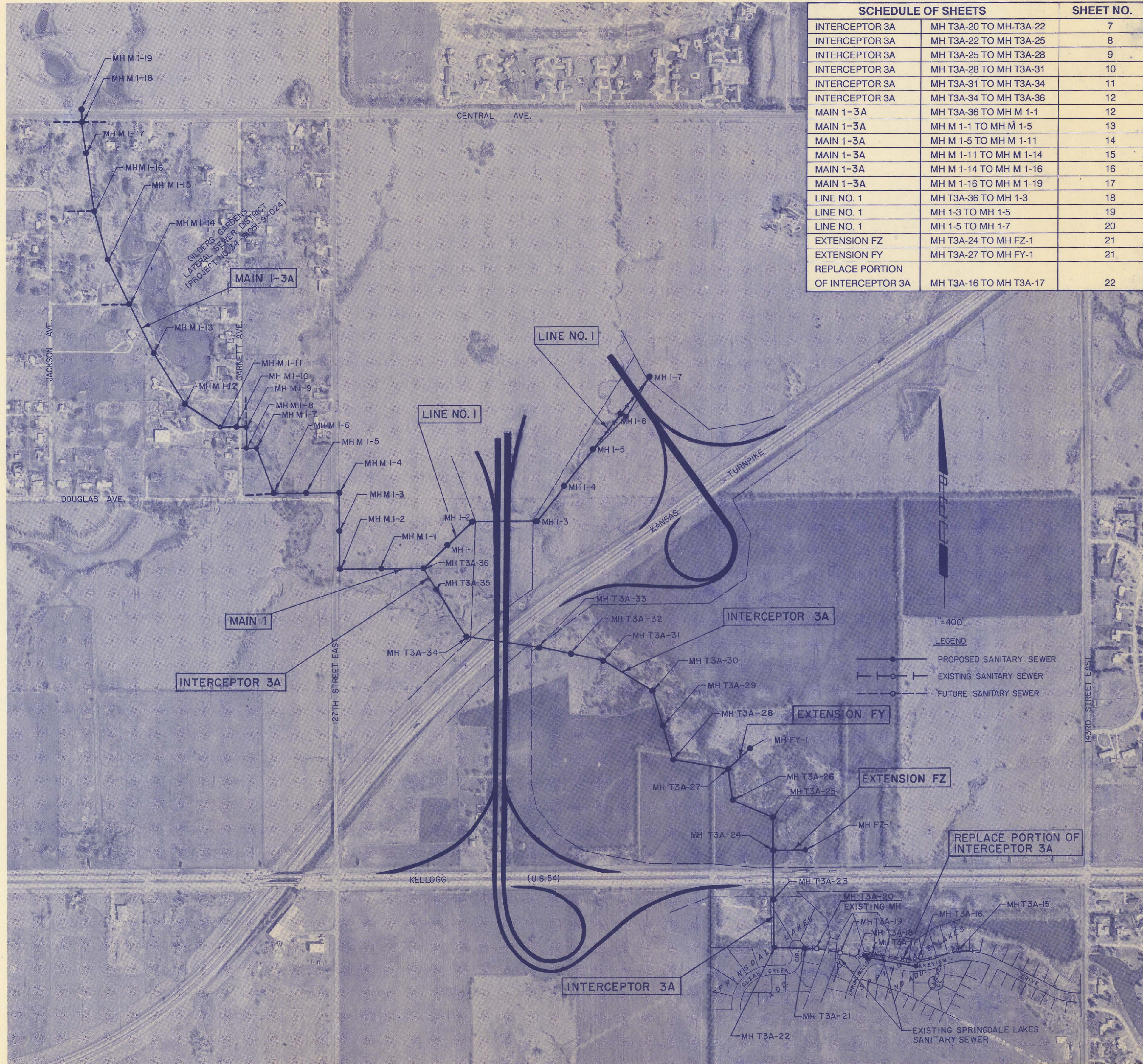


UPDATED PER CURRENT STANDARDS 8/92



PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
WICHITA, KANSAS

4MC-050



SCHEDULE OF SHEETS		SHEET NO.
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LEGEND

- PROPOSED SANITARY SEWER
- - - EXISTING SANITARY SEWER
- - - FUTURE SANITARY SEWER

SEDGWICK COUNTY BUREAU OF PUBLIC SERVICES
 1250 S. SENECA
 WICHITA, KS 67213
 MR. JIM WEBER
 (316) 383-7901

KANSAS DEPARTMENT OF TRANSPORTATION
 3200 E. 45TH NORTH
 WICHITA, KS 67220
 MR. RONNEY CROWELL
 UTILITY COORDINATOR
 (316) 744-1271

- GENERAL NOTES
- ALL ELEVATIONS SHOWN ARE USGS DATUM.
 - AT LEAST 72 HOURS PRIOR TO BEGINNING ANY EXCAVATION (EXCLUDING WEEKENDS AND HOLIDAYS), THE CONTRACTOR SHALL CONTACT THE KANSAS ONE-CALL SYSTEM, A UTILITY LOCATION SERVICE, AT 687-2470 TO REQUEST THE FOLLOWING UTILITY COMPANIES TO LOCATE ANY EXISTING LINES WITHIN THE PROJECT AREA: MULTIMEDIA CABLE TV, WICHITA WATER, SOUTHWESTERN BELL TELEPHONE, K G & E GAS, K G & E ELECTRIC, FARMLAND INDUSTRIES, INC., CONOCO PIPELINE, WILLIAMS NATURAL GAS, AND U.S. SPRINT.
 - THE BURIED UTILITIES AS SHOWN 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 REPAIRED IMMEDIATELY AS DIRECTED BY THE ENGINEER AT THE CONTRACTOR'S EXPENSE.
 - AT LEAST 24 HOURS BEFORE CONNECTING NEW SEWER PIPE TO THE EXISTING SEWERAGE SYSTEM, THE CONTRACTOR SHALL CONTACT THE SEDGWICK COUNTY EASTERN SEWER DISTRICT (733-0202). THE CONTRACTOR SHALL KEEP ANY CONSTRUCTION DEBRIS FROM ENTERING THE EXISTING SANITARY SEWER DURING CONSTRUCTION. TO PREVENT WATER OR DEBRIS FROM ENTERING THE EXISTING SEWER, A MECHANICAL PLUG SHALL BE INSTALLED AND MAINTAINED TO ISOLATE THE EXISTING SEWER FROM THE NEW CONSTRUCTION UNTIL THE NEW CONSTRUCTION IS CLEANED, TELEVIEWED, AND HAS BEEN ACCEPTED. THE WATER USED FOR CLEANING SHALL NOT BE ADDED TO THE FLOW OF THE EXISTING SEWER. THE CLEANING OR OTHERWISE ACCUMULATED WATER SHALL BE PUMPED OR OTHERWISE REMOVED PRIOR TO TELEVIEWING.
 - ALL MANHOLES CONSTRUCTED ON THIS PROJECT SHALL HAVE SELF-SEALING FRAMES AND SHALL BE COATED INTERNALLY WITH STRONG SEAL MS2-A PER PROJECT SPECIFICATIONS.
 - ALL PIPE JOINTS SHALL BE LAID AND PUSHED 'FULL HOME', WITH THE BEVELED END OF THE SPIGOT MAKING FULL CONTACT WITH THE CHAMFERED AREA AT THE THROAT OF THE BELL OR SOCKET, WITH NO SEPARATION BETWEEN THEM. IF SEPARATION IS DETERMINED, THE PIPE SHALL BE EXCAVATED AND RELAID ACCORDING TO SPECIFICATIONS AT THE CONTRACTOR'S EXPENSE.
 - EXCESS EXCAVATED MATERIAL AND OTHER DEBRIS SHALL BE WASTED ON SITES TO BE PROVIDED BY THE CONTRACTOR AS APPROVED BY THE ENGINEER AT NO ADDITIONAL COST TO THE OWNER.
 - THE CONTRACTOR SHALL CONTAIN HIS OPERATIONS TO PERMIT TRAFFIC THROUGH AND ACROSS CONSTRUCTION AT 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 TO ENSURE SAFETY AS DIRECTED IN THE GENERAL CONDITIONS. THE CONTRACTOR SHALL LIMIT THE EXTENT OF TRENCH TO REMAIN OPEN OVERNIGHT AND WEEKENDS TO LESS THAN 60 FEET.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR PRESERVING PROPERTY IRONS. THE CONTRACTOR SHALL BE REQUIRED TO RE-ESTABLISH ANY PROPERTY IRONS WHICH ARE DAMAGED OR DESTROYED BY HIS CONSTRUCTION OPERATIONS. SUCH IRONS SHALL BE RE-ESTABLISHED BY A LICENSED LAND SURVEYOR IN ACCORDANCE WITH STATE LAWS. PRIOR TO START OF CONSTRUCTION THE CONTRACTOR SHALL FLAG AND REFERENCE ALL PROPERTY CORNERS THAT MAY BE DISTURBED BY CONSTRUCTION OPERATIONS, 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 AND SEALED BY THE LICENSED LAND SURVEYOR CERTIFYING REPLACEMENT OF ALL DISTURBED PROPERTY CORNERS SHALL BE SUBMITTED TO THE ENGINEER.
 - THE CONTRACTOR SHALL RESTORE ALL DITCHES, SWALES, ROAD SHOULDERS, AND BANKS TO THEIR ORIGINAL SLOPES AND GRADES. WHERE EXISTING ENTRANCE PIPE, DRAINAGE PIPE, SIGNS, FENCES, ETC., CONFLICT WITH THE PROPOSED WORK HEREIN, THEY SHALL BE REMOVED AND REPLACED OR RESET. THE REPLACEMENT OF ALL THE AFOREMENTIONED ITEMS, INCLUDING SEEDING, FERTILIZER, AND MULCHING SHALL BE CONSIDERED SUBSIDIARY TO "SITE CLEARING AND RESTORATION".
 - EASEMENTS AND RIGHTS-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.
 - POSITIVE DRAINAGE SHALL BE PROVIDED FOR ALL AREAS ON OR NEAR SPOIL AREAS. NATURAL DRAINAGE WAYS SHALL BE MAINTAINED.
 - THE CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE AWAY FROM ALL MANHOLE COVERS.
 - THE CONTRACTOR SHALL GIVE ALL PROPERTY OWNERS AND/OR TENANTS OF DEVELOPED PROPERTY ABUTTING THE CONSTRUCTION OF THIS PROJECT A MINIMUM OF 10 DAYS ADVANCE NOTICE PRIOR TO START OF CONSTRUCTION IN THE VICINITY OF THE AFFECTED PROPERTY.
 - ALL TRENCH BACKFILL SHALL BE EITHER TYPE I OR TYPE III UNLESS NOTED OTHERWISE.
 - TOP ELEVATIONS FOR MANHOLES ARE APPROXIMATE ONLY. TOP ELEVATIONS FOR MANHOLES SHALL BE SET AS FOLLOWS:
 - A. OUTSIDE OF TRAVELED WAYS, 0.4 FEET ABOVE FINISH GRADE.
 - B. PAVED TRAVELED WAYS, FLUSH WITH FINISH GRADE.
 - C. UNPAVED TRAVELED WAYS, AS DIRECTED BY THE ENGINEER.
 - THE CONTRACTOR SHALL ALSO CONTACT THE FOLLOWING AT LEAST 72 HOURS PRIOR TO BEGINNING CONSTRUCTION TO ADVISE THEM OF THE INTENDED WORK AND OF HIS PROPOSED SCHEDULE:
 - SEDGWICK COUNTY BUREAU OF PUBLIC SERVICES
3200 E. 45TH NORTH
WICHITA, KS 67220
MR. RONNEY CROWELL
UTILITY COORDINATOR
(316) 744-1271
 - KANSAS DEPARTMENT OF TRANSPORTATION
3200 E. 45TH NORTH
WICHITA, KS 67220
MR. RONNEY CROWELL
UTILITY COORDINATOR
(316) 744-1271
 - KANSAS TURNPIKE AUTHORITY
9401 E. KELLOGG
WICHITA, KS 67207
MR. MASON LEONARD
UTILITY SUPERVISOR
(316) 682-4537, EXT. 2832
 - WHERE THE IMPROVEMENTS CROSS EXISTING PUBLIC OR PRIVATE UTILITIES WHICH ARE NOT TO BE ADJUSTED BY OTHERS, THE CONTRACTOR SHALL PROVIDE THE MATERIAL AND MEANS TO PROTECT AND SUPPORT SAID UTILITIES DURING CONSTRUCTION TO THE SATISFACTION OF THE ENGINEER.
 - RUBBLE FROM THE REMOVAL OF MISCELLANEOUS STRUCTURES INCLUDING ANY TREES REMOVED, TREE TRIMMINGS, AND EXCESS EXCAVATION WHICH IS TO BE WASTED, SHALL BE DISPOSED OF ON SITES PROVIDED BY THE CONTRACTOR. THESE SITES SHALL BE APPROVED BY THE ENGINEER AS TO SUITABILITY, APPEARANCE, AND SITE LOCATION. LOCATIONS THAT, IN THE OPINION OF THE ENGINEER, WILL LEAVE AN UNSIGHTLY APPEARANCE WILL NOT BE APPROVED. ALL DISPOSAL SITES MUST BE APPROVED BY THE KANSAS DEPARTMENT OF HEALTH AND ENVIRONMENT. MATERIAL EITHER STOCKPILED OR DISPOSED OF IN A FLOOD PLAIN WILL REQUIRE A KANSAS STATE BOARD OF AGRICULTURE PERMIT AND A FLOODPLAIN DEVELOPMENT PERMIT FROM SEDGWICK COUNTY. ANY MATERIAL DUMPED IN WATERS OF THE UNITED STATES OR WETLANDS IS SUBJECT TO U.S. CORPS OF ENGINEERS PERMITTING REGULATIONS. ANY MATERIAL BURIED OR STOCKPILED BEYOND APPROVED CONSTRUCTION LIMITS MAY REQUIRE ARCHAEOLOGICAL INVESTIGATIONS UNLESS BURIED IN A PREVIOUSLY APPROVED DISPOSAL LOCATION.
 - 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.
 - PROPERTIES WITHIN THE PROJECT LIMITS HAVE UNDERGROUND SPRINKLER SYSTEMS IN PUBLIC RIGHT-OF-WAY WHICH CONFLICT WITH NEW CONSTRUCTION. CONTRACTOR WILL BE REQUIRED TO REMOVE SUCH IMPROVEMENTS SHOULD THEY NOT BE REMOVED BY THEIR OWNER AT THE TIME OF CONSTRUCTION OF THE PROJECT. THE CONTRACTOR SHALL REMOVE AND REPLACE OR RESET ANY SPRINKLER HEADS, PIPES, AND/OR VALVES WHICH CONFLICT WITH CONSTRUCTION. ANY SPRINKLER HEADS, PIPES, AND/OR VALVES DAMAGED BY CONSTRUCTION OPERATIONS SHALL BE REPLACED IN KIND AT NO ADDITIONAL COST TO THE OWNER. PORTIONS OF UNDERGROUND SPRINKLER SYSTEMS NOT IN CONFLICT WITH NEW CONSTRUCTION SHALL BE PROTECTED FROM DAMAGE AND SHALL REMAIN IN PLACE. ALL WORK IN CONNECTION WITH UNDERGROUND SPRINKLER SYSTEMS SHALL BE CONSIDERED AS SUBSIDIARY TO "SITE CLEARING AND RESTORATION".
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING CONTINUOUS FLOW OF SEWAGE THROUGH CONSTRUCTION. THE CONTRACTOR'S PROPOSED METHOD FOR MAINTAINING SEWAGE FLOW SHALL BE APPROVED BY THE ENGINEER. COST OF MAINTAINING FLOW OF SEWAGE THROUGH CONSTRUCTION WILL NOT BE PAID DIRECTLY AND THIS COST SHALL BE CONSIDERED AS SUBSIDIARY TO OTHER RELATED WORK ITEMS.
 - THE CONTRACTOR SHALL SUBMIT APPLICATIONS TO THE KANSAS DEPARTMENT OF TRANSPORTATION (KDOT) FOR A "HIGHWAY PERMIT AGREEMENT" FOR "USE OF RIGHT-OF-WAY". COPIES OF THE KDOT APPROVED PERMITS SHALL BE DELIVERED TO THE ENGINEER PRIOR TO BEGINNING ANY WORK NEAR U.S. 54 HIGHWAY AND K-92 HIGHWAY. HIGHWAY PERMIT FEES, IF ANY, SHALL BE BORNE BY THE CONTRACTOR. PERMIT FORMS ARE AVAILABLE FROM THE KDOT OFFICE LISTED BELOW:
 - KANSAS DEPARTMENT OF TRANSPORTATION
3200 E. 45TH NORTH
WICHITA, KS 67220
MR. RONNEY CROWELL
UTILITY COORDINATOR
(316) 744-1271
 - THE CONTRACTOR SHALL SUBMIT AN APPLICATION TO THE KANSAS TURNPIKE AUTHORITY FOR A "HIGHWAY PERMIT". COPIES OF THE KANSAS TURNPIKE AUTHORITY APPROVED PERMIT SHALL BE DELIVERED TO THE ENGINEER PRIOR TO BEGINNING CONSTRUCTION. HIGHWAY CROSSING PERMIT FEES, IF ANY, SHALL BE BORNE BY THE CONTRACTOR. PERMIT FORMS ARE AVAILABLE FROM THE KTA OFFICE LISTED BELOW:
 - KANSAS TURNPIKE AUTHORITY
DIVISION OF ENGINEER
9401 E. KELLOGG
WICHITA, KS 67207
MR. JOHN E. CILLESSEN, P.E.
(316) 682-4537
 - PRIOR TO BEGINNING CONSTRUCTION ACROSS DEVELOPED PROPERTIES, THE CONTRACTOR SHALL CONTACT THE PROPERTY OWNER TO DETERMINE LOCATIONS OF EXISTING PRIVATE SEWER SYSTEMS (I.E. SEPTIC TANKS, LATERAL FIELDS). THE CONTRACTOR SHALL AVOID DRIVING CONSTRUCTION EQUIPMENT OVER THESE FACILITIES. ANY DAMAGE CAUSED TO THESE FACILITIES BY THE CONTRACTOR, IN OR OUT OF PERMANENT OR TEMPORARY EASEMENTS, SHALL BE IMMEDIATELY REPAIRED AT THE CONTRACTOR'S EXPENSE.
 - THE CONTRACTOR SHALL CONSTRUCT A 4" DIAMETER RESIDENTIAL SEWER SERVICE CONNECTION AS SHOWN ON SHEET NO. 8 TO CONNECT THE MH T3A-23. ALIGNMENT OF THE 4" PIPE SHALL BE FLAGGED FOR THE PROPERTY OWNER TO REVIEW THE ALIGNMENT AND SHALL BE APPROVED BY THE PROPERTY OWNER (SEE BELOW). CONSTRUCTION OF THE SERVICE LINE SHALL FOLLOW THE SPECIFICATIONS FOR THE PROJECT, AND ANY AREAS DISTURBED BY CONSTRUCTION SHALL BE SEEDING IN KIND, PROVIDE CLEANOUTS AT ALL HORIZONTAL DEFLECTIONS GREATER THAN 2 1/2". THE CONTRACTOR SHALL DETERMINE THE 4" PIPE FLOWLINE ELEVATIONS AT TIME OF CONSTRUCTION USING A MINIMUM PIPE SLOPE OF 2.00%. THE EXISTING 1000 GALLON SEPTIC TANK AND LATERAL SYSTEM (APPROXIMATELY 500 LF) SHALL BE SANDFILLED AND ABANDONED IN PLACE IN ACCORDANCE WITH SEDGWICK COUNTY SPECIFICATIONS. ALL OF THE WORK DESCRIBED HEREIN INCLUDING PIPE, FITTINGS, AND INCIDENTALS SHALL BE CONSIDERED SUBSIDIARY TO THE LUMP SUM PRICE BID FOR "RESIDENTIAL SERVICE CONNECTION".
 - PROPERTY OWNER: ALVIA CLARK & THEODORA SLAYTON
PROPERTY ADDRESS: 13707 E. HIGHWAY 54
 - THE OWNER WILL PROVIDE CONSTRUCTION STAKING FOR THIS PROJECT, AMONG OTHER SURVEYING SERVICES (SEE SPECIFICATIONS).

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



RECORD DRAWING
 MDK PROJ. ENG. 5/22/96 DATE
 RES. ENG. DATE

No.	Revision	By	Date

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

KEY MAP

SANITARY SEWER INTERCEPTOR
 MINNEHA JOINT SEWER DISTRICT

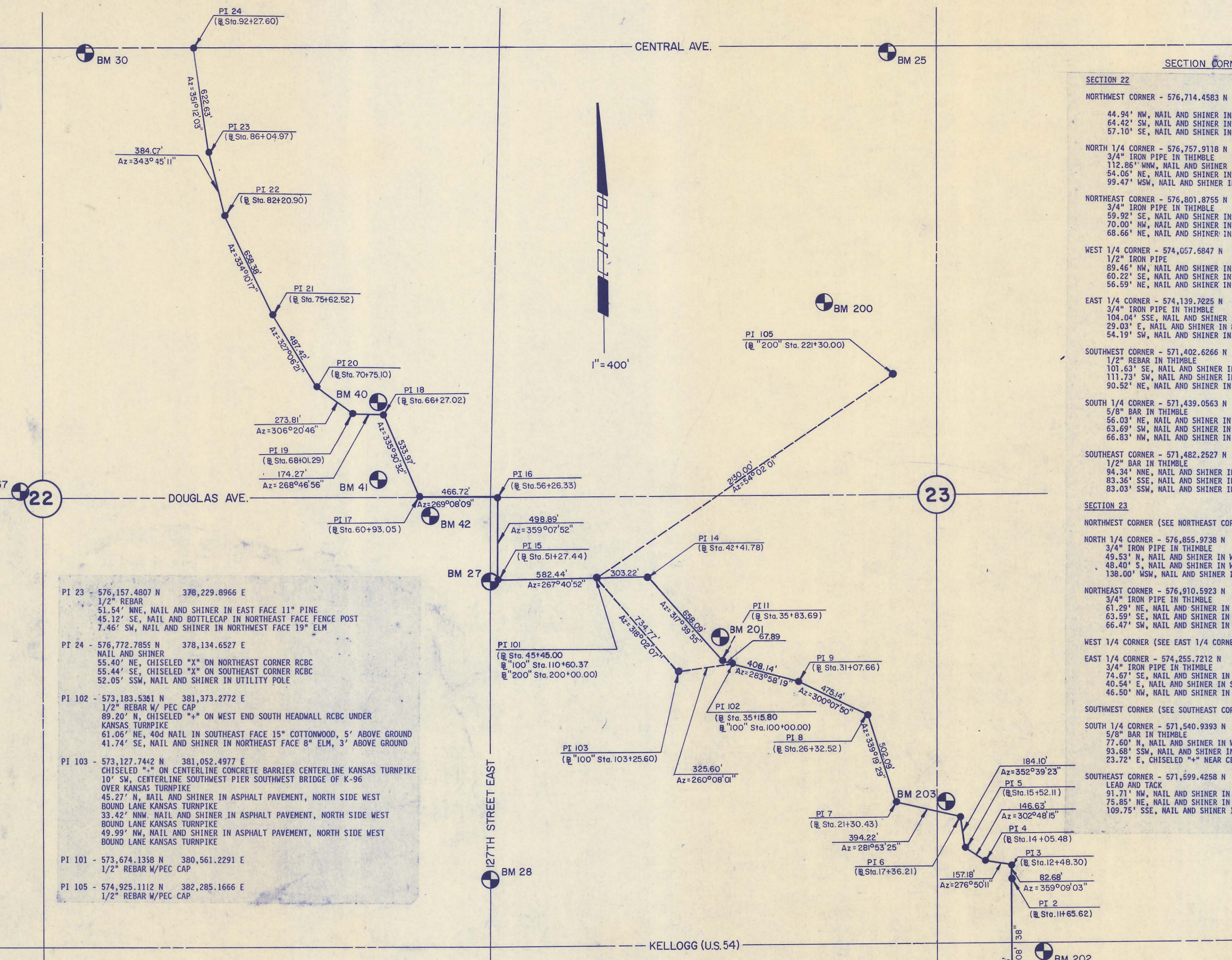
PROFESSIONAL ENGINEERING CONSULTANTS, P.A.

ENGINEERS
 WICHITA, KANSAS

Designed by MDK, MDK Job No. 34-81051-A Sht. 2 of 23
 Drawn by RJJ Date Nov. 1982

BASELINE PI TIES

MH D	- 571,070.1902 N	383,368.8970 E	EXISTING MANHOLE CONCRETE NAIL IN CENTER OF LID
PI 1	- 571,075.3364 N	383,060.1818 E	1/2" REBAR 66.49' NNE, NAIL AND SHINER IN WEST FACE 14" HACKBERRY 39.86' SSE, NAIL AND SHINER IN SOUTHWEST FACE 8" ELM 12.51' NNW, NAIL AND SHINER IN SOUTH FACE 10" TREE
PI 2	- 571,932.0986 N	383,047.3775 E	1/2" REBAR 60.46' SE, NAIL AND SHINER IN NORTH FACE 24" HACKBERRY 38.19' SSE, NAIL AND SHINER IN SOUTHWEST FACE 12" ELM
PI 3	- 572,014.7695 N	383,046.1920 E	1/2" REBAR 60.70' NE, NAIL AND SHINER IN SOUTH FACE 18" ELM 48.09' NNW, NAIL AND SHINER IN WEST FACE 14" OSAGE ORANGE
PI 4	- 572,033.4795 N	382,890.0894 E	1/2" REBAR 34.93' NE, NAIL AND SHINER IN NORTHWEST FACE 17" ELM 35.08' NW, NAIL AND SHINER IN WEST FACE 14" ELM
PI 5	- 572,112.9189 N	382,766.8427 E	1/2" REBAR 9.83' ENE, NAIL AND SHINER IN SOUTHWEST FACE 7" ELM 33.84' ESE, NAIL AND SHINER IN SOUTH FACE 12" ELM
PI 6	- 572,295.5076 N	382,743.3114 E	1/2" REBAR 5.40' NE, NAIL AND SHINER IN SOUTHWEST FACE 17" ELM 28.35' SSE, TO NAIL AND SHINER IN WEST FACE 18" ELM
PI 7	- 572,376.7311 N	382,357.5496 E	1/2" REBAR 15.48' N, NAIL AND SHINER IN EAST FACE 24" OSAGE ORANGE 18.62' NE, NAIL AND SHINER IN NORTHWEST FACE 22" OSAGE ORANGE 30.49' NW, NAIL AND SHINER IN SOUTHWEST FACE 26" OSAGE ORANGE
PI 8	- 572,846.4868 N	382,180.2752 E	1/2" REBAR 28.72' E, NAIL AND SHINER IN NORTH FACE 24" OSAGE ORANGE 45.35' W, NAIL AND SHINER IN SOUTH FACE 30" OSAGE ORANGE 62.63' NNW, NAIL AND SHINER IN EAST FACE 12" ELM
PI 9	- 573,084.9920 N	381,769.3371 E	1/2" REBAR 69.68' NE, NAIL AND SHINER IN NORTH FACE 18" ELM 98.23' SE, NAIL AND SHINER IN NORTHWEST FACE 8" ELM 144.61' NW, NAIL AND SHINER IN SOUTHWEST FACE 16" COTTONWOOD
PI 11	- 573,199.9273 N	381,307.3944 E	1/2" REBAR 16.69' E, NAIL AND SHINER IN SOUTH FACE 22" ELM 41.50' SE, KTA R/W FENCE CORNER POST 28.24' NW, NAIL AND SHINER IN NORTHWEST FACE 6" ELM
PI 14	- 573,686.4037 N	380,864.1960 E	1/2" REBAR 132.34' SSW, NAIL AND SHINER IN NORTHWEST FACE 24" OSAGE ORANGE 54.83' SW, NAIL AND SHINER IN SOUTHWEST FACE 22" OSAGE ORANGE 84.08' WSW, NAIL AND SHINER IN NORTH FACE 20" OSAGE ORANGE
PI 15	- 573,650.5706 N	379,979.2660 E	1/2" REBAR 59.13' SW, CHISELED "X" ON TOP SOUTHWEST END OF NORTHEAST WINGWALL TO RCBC 19.08' WSW, NAIL AND SHINER IN NORTH FACE 13" ELM 31.10' NW, NAIL AND SHINER IN TOP OF FENCE POST
PI 16	- 574,149.4023 N	379,971.6995 E	1/2" REBAR 10.21' S, NAIL AND SHINER IN WEST FACE FENCE POST 18.23' SW, NAIL AND SHINER IN NORTH FACE 18" OSAGE ORANGE 36.00' NW, CENTER 2ND FENCE POST NORTH OF FENCE CORNER
PI 17	- 574,142.3622 N	379,505.0362 E	NAIL AND SHINER 1.5' N OF N EDGE DOUGLAS 74.86' SW, NAIL AND SHINER IN S. EDGE DOUGLAS 96.96' NW, CHISELED "X" ON TOP GALVANIZED RAIL EAST FENCE POST GATE
PI 18	- 574,628.2898 N	379,283.6773 E	5/8" REBAR 49.87' WSW, NAIL AND SHINER NORTH FACE POWER POLE 52.25' NW, NORTHEAST CORNER "D" SOUTH END WEST HEADWALL RCB 35.62' S, NAIL AND SHINER WEST FACE 8" ELM
PI 19	- 574,624.5862 N	379,109.4480 E	1/2" REBAR 33.41' W, NAIL AND SHINER IN WEST FACE 8" COTTONWOOD 62.62' SE, CENTER OF NORTHEAST CORNER CHAINLINK FENCE 40.94' SW, CENTER OF NORTHWEST CORNER CHAINLINK FENCE POST CAP (CONE)
PI 20	- 574,786.8620 N	378,888.9075 E	1/2" REBAR 24.49' ESE, NAIL AND SHINER IN SOUTH FACE 28" ELM 45.79' SW, NAIL AND SHINER IN SOUTHWEST FACE 18" ELM 96.78' NW, NAIL AND SHINER IN SOUTH FACE UTILITY POLE
PI 21	- 575,196.1373 N	378,624.1955 E	1/2" REBAR 28.12' E, NAIL AND SHINER IN NORTH FACE 10" COTTONWOOD 42.95' NW, NAIL AND SHINER IN SOUTHWEST FACE UTILITY POLE
PI 22	- 575,788.7474 N	378,337.3517 E	1/2" REBAR 63.30' NNE, NAIL AND SHINER IN EAST FACE 8" ELM 55.10' E, NAIL AND SHINER IN NORTH FACE 14" COTTONWOOD 8.20' SW, CENTER OF 3RD FENCE POST WEST OF GATE



SECTION 22

NORTHWEST CORNER - 576,714.4583 N 374,592.0640 E

44.94' NW, NAIL AND SHINER IN EAST FACE UTILITY POLE
64.42' SW, NAIL AND SHINER IN NORTHWEST FACE UTILITY POLE
57.10' SE, NAIL AND SHINER IN SOUTHWEST FACE UTILITY POLE

NORTH 1/4 CORNER - 576,757.9118 N 377,237.7410 E
3/4" IRON PIPE IN THIMBLE
112.86' WSW, NAIL AND SHINER IN SOUTHWEST FACE UTILITY POLE
54.05' NE, NAIL AND SHINER IN SOUTHWEST FACE UTILITY POLE
99.47' WSW, NAIL AND SHINER IN NORTH FACE UTILITY POLE

NORTHEAST CORNER - 576,801.8755 N 379,888.7110 E
3/4" IRON PIPE IN THIMBLE
59.92' SE, NAIL AND SHINER IN NORTHEAST FACE UTILITY POLE
70.00' NW, NAIL AND SHINER IN NORTHEAST FACE UTILITY POLE
68.66' NE, NAIL AND SHINER IN SOUTHWEST FACE UTILITY POLE

WEST 1/4 CORNER - 574,657.6847 N 374,629.1920 E
1/2" IRON PIPE
89.46' NW, NAIL AND SHINER IN SOUTHWEST FACE UTILITY POLE
60.22' SE, NAIL AND SHINER IN SOUTHWEST FACE UTILITY POLE
56.59' NE, NAIL AND SHINER IN NORTHWEST FACE UTILITY POLE

EAST 1/4 CORNER - 574,139.7225 N 379,926.8420 E
3/4" IRON PIPE IN THIMBLE
104.04' SSE, NAIL AND SHINER IN NORTHWEST FACE 30" OSAGE ORANGE
23.03' E, NAIL AND SHINER IN 8" OSAGE ORANGE
54.19' SW, NAIL AND SHINER IN SOUTHWEST FACE FENCE POST

SOUTHWEST CORNER - 571,402.6266 N 374,667.6820 E
1/2" REBAR IN THIMBLE
101.63' SE, NAIL AND SHINER IN WEST FACE UTILITY POLE
111.73' SW, NAIL AND SHINER IN NORTHWEST FACE UTILITY POLE
90.52' NE, NAIL AND SHINER IN SOUTHWEST FACE UTILITY POLE

SOUTH 1/4 CORNER - 571,439.0563 N 377,317.8110 E
5/8" BAR IN THIMBLE
56.03' NE, NAIL AND SHINER IN GUARDPOST
63.69' SW, NAIL AND SHINER IN GUARDPOST
66.53' NW, NAIL AND SHINER IN GUARDPOST

SOUTHWEST CORNER - 571,482.2527 N 379,967.0630 E
1/2" BAR IN THIMBLE
94.34' NNE, NAIL AND SHINER IN NORTHWEST FACE UTILITY POLE
83.36' SSE, NAIL AND SHINER IN WEST FACE UTILITY POLE
83.03' SSW, NAIL AND SHINER IN EAST FACE UTILITY POLE

SECTION 23

NORTHWEST CORNER (SEE NORTHEAST CORNER - SECTION 22)

NORTH 1/4 CORNER - 576,855.9738 N 382,534.2530 E
3/4" IRON PIPE IN THIMBLE
49.53' N, NAIL AND SHINER IN WEST FACE UTILITY POLE
48.40' S, NAIL AND SHINER IN WEST FACE UTILITY POLE
138.00' WSW, NAIL AND SHINER IN NORTHWEST FACE 17" ELM

NORTHEAST CORNER - 576,910.5923 N 385,178.8040 E
3/4" IRON PIPE IN THIMBLE
61.28' NE, NAIL AND SHINER IN SOUTHWEST FACE UTILITY POLE
63.59' SE, NAIL AND SHINER IN NORTHEAST FACE UTILITY POLE
66.47' SW, NAIL AND SHINER IN SOUTHWEST CORNER FENCE POST

WEST 1/4 CORNER (SEE EAST 1/4 CORNER - SECTION 22)

EAST 1/4 CORNER - 574,255.7212 N 385,214.0190 E
3/4" IRON PIPE IN THIMBLE
74.67' SE, NAIL AND SHINER IN SOUTHWEST FACE UTILITY POLE
40.54' E, NAIL AND SHINER IN SOUTH FACE FENCE POST
46.50' NW, NAIL AND SHINER IN NORTHEAST FACE FENCE POST

SOUTHWEST CORNER (SEE SOUTHWEST CORNER - SECTION 22)

SOUTH 1/4 CORNER - 571,540.9393 N 382,615.5690 E
5/8" BAR IN THIMBLE
77.60' N, NAIL AND SHINER IN WEST FACE UTILITY POLE
93.68' SSW, NAIL AND SHINER IN WEST FACE UTILITY POLE
23.72' E, CHISELED "X" NEAR CENTERLINE CONCRETE TURNAROUND

SOUTHWEST CORNER - 571,599.4258 N 385,254.1950 E
LEAD AND TRACK
91.71' NW, NAIL AND SHINER IN SOUTHWEST FACE UTILITY POLE
75.85' NE, NAIL AND SHINER IN NORTHEAST FACE UTILITY POLE
109.75' SSE, NAIL AND SHINER IN SOUTHWEST FACE UTILITY POLE

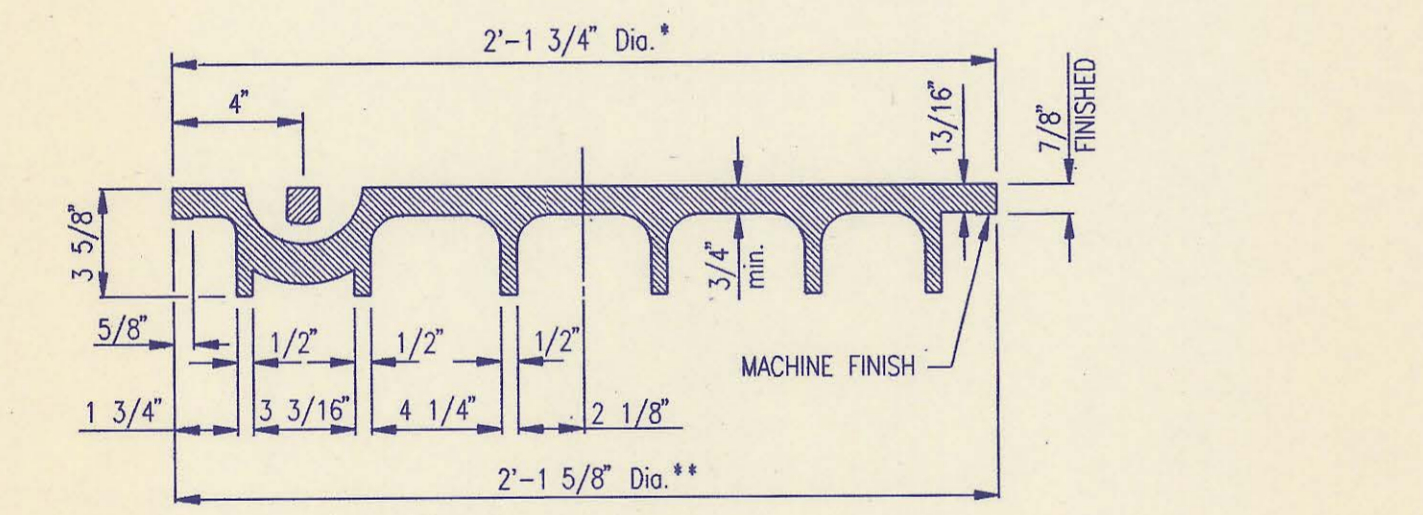
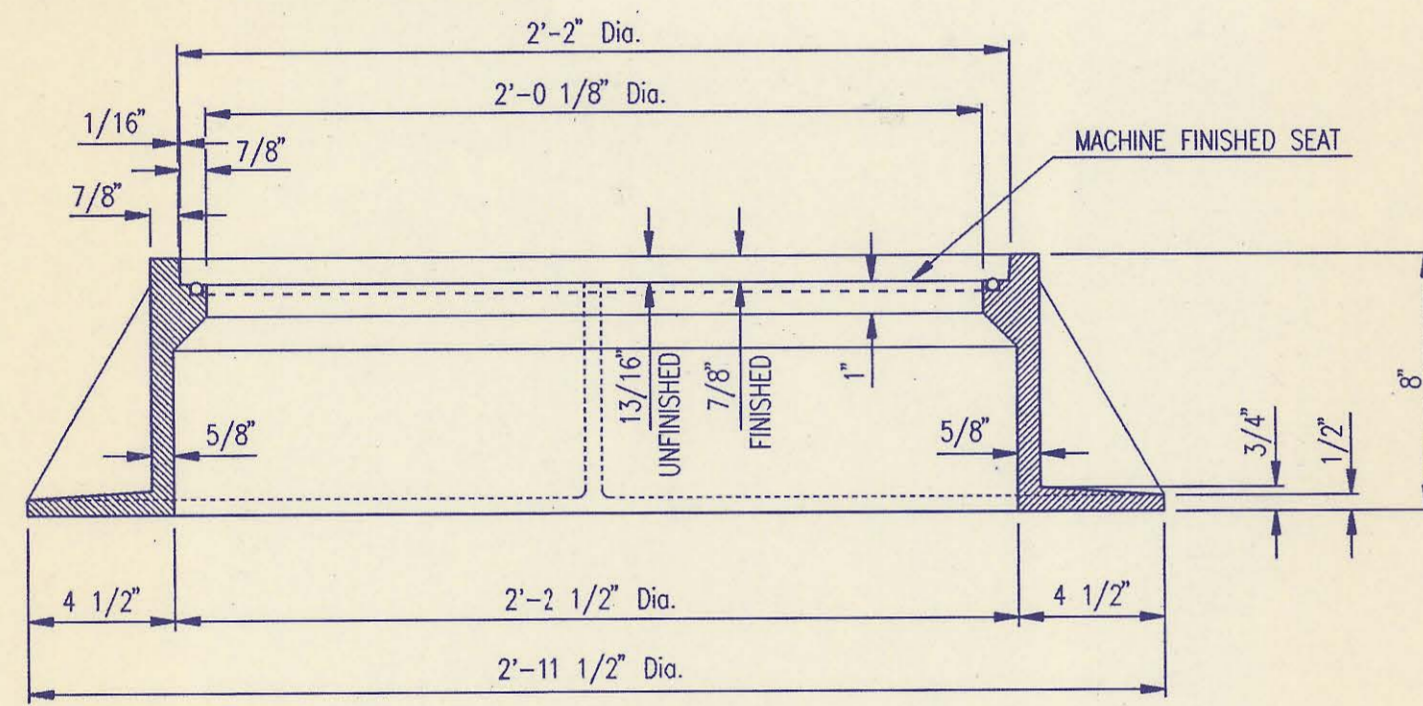
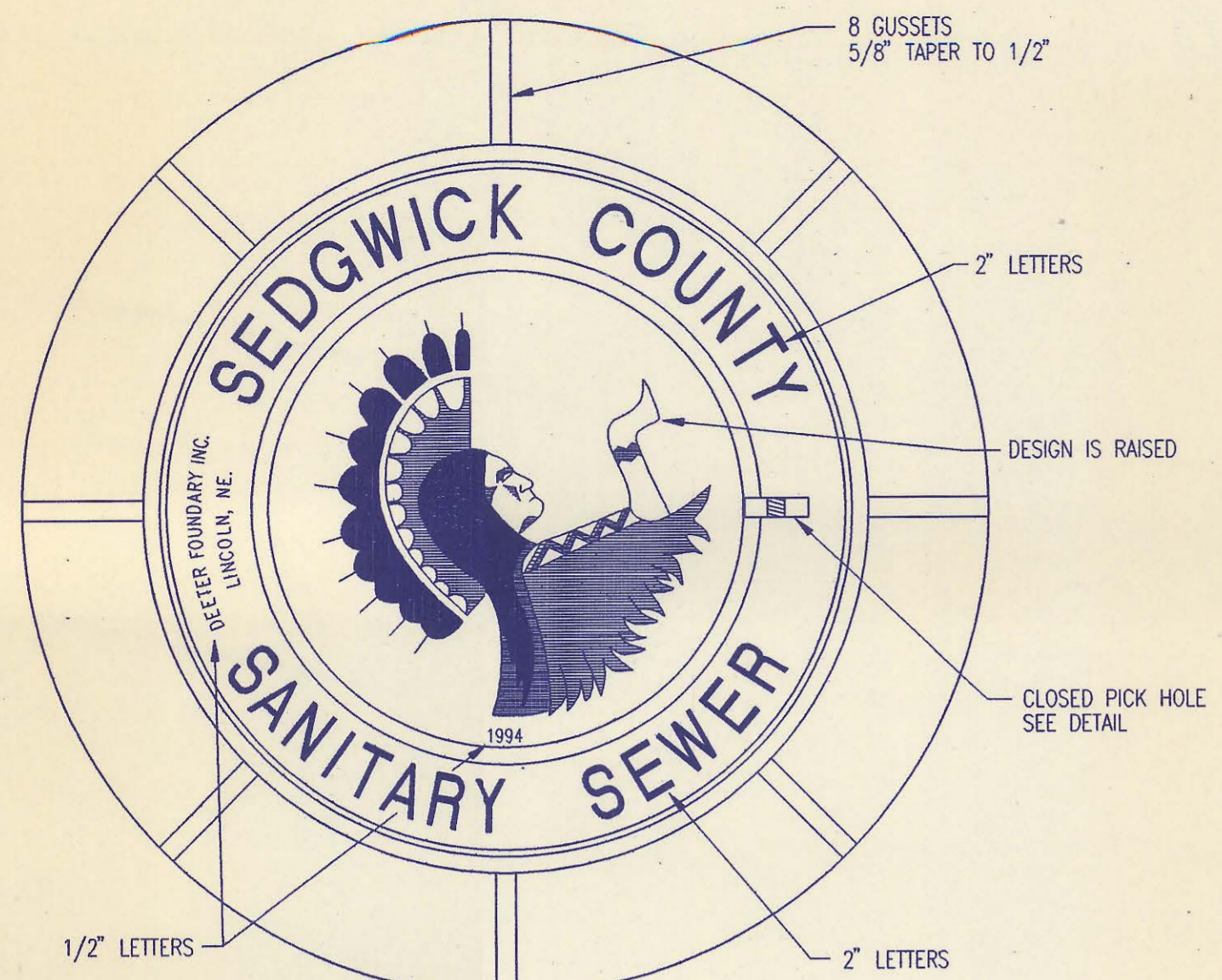
BENCH MARK LIST

PROJECT BM	- CHISELED SQUARE ON CENTERLINE CURB INLET AT WEST END CUL-DE-SAC, LOT 4, BLOCK 1, SPRINGDALE LAKES 2ND. (CORNER SPRINGHOLLOW DRIVE AND LAKEVIEW DRIVE)	ELEV. = 1318.59 (MSL)
BM 25	60d NAIL IN UTILITY POLE, 275' WEST AND 40' SOUTH OF NORTH 1/4 CORNER, SECTION 23, T27S, R2E.	ELEV. = 1366.43 (MSL)
BM 27	CHISELED SQUARE ON CENTER OF EAST HUBGUARD TO RCBC, 500' SOUTH OF WEST 1/4 CORNER, SECTION 23, T27S, R2E.	ELEV. = 1329.58 (MSL)
BM 28	CHISELED SQUARE ON CENTER OF EAST HUBGUARD TO RCB OVER KANSAS TURNPIKE, 400' NORTH OF SOUTHWEST CORNER SECTION 23, T27S, R2E.	ELEV. = 1358.47 (MSL)
BM 30	CHISELED SQUARE ON CENTER OF SOUTH HUBGUARD TO RCBC, 250' EAST OF NORTH 1/4 CORNER, SECTION 22, T27S, R2E.	ELEV. = 1349.26 (MSL)
BM 37	CITY OF WICHITA STANDARD BRASS CAP IN CONCRETE, 37' NORTH OF CENTERLINE OF DOUGLAS AVE. AND 33' WEST OF CENTERLINE OF ZELTA DRIVE.	ELEV. = 1357.47 (MSL)
BM 40	CHISELED SQUARE AT SOUTH END, WEST HEADWALL TO RCBC AT WEST SIDE GARNETT ST., APPROXIMATELY 500' NORTH OF DOUGLAS.	ELEV. = 1334.41 (MSL)
BM 41	CHISELED SQUARE AT CENTERLINE, WEST HEADWALL TO RCBC AT WEST SIDE GARNETT ST., APPROXIMATELY 100' NORTH OF DOUGLAS.	ELEV. = 1333.35 (MSL)
BM 42	CHISELED SQUARE AT SOUTHWEST END WINGWALL AT NORTHWEST CORNER RCBC UNDER DOUGLAS APPROXIMATELY 350' WEST OF 127TH ST. EAST.	ELEV. = 1333.81 (MSL)
BM 200	RAILROAD SPIKE IN SOUTH FACE 8" ELM TREE ON EAST SIDE CREEK 2000' ± EAST, AND 1450' ± SOUTH OF CENTERLINE OF 127TH ST. EAST AND CENTRAL. (BASELINE STA. 221+33.00, 637' LT.)	ELEV. = 1339.99 (MSL)
BM 201	CHISELED "X" WEST END CONCRETE HEADWALL, SOUTH END RCBC UNDER KANSAS TURNPIKE, 200' ± NORTHEAST OF K-96 BRIDGE.	ELEV. = 1325.59 (MSL)
BM 202	ROUNDED BOLT HEAD IN CONCRETE WINGWALL AT SOUTHWEST CORNER OF EAST BOUND BRIDGE US 54 (KELLOGG), 5/8 MILE ± EAST OF 127TH STREET EAST.	ELEV. = 1318.32 (MSL)
BM 203	RAILROAD SPIKE IN SOUTH FACE 12" ELM AT SOUTH EDGE GROVE OF TREES, APPROXIMATELY 800' NORTH OF KELLOGG, 1/2 MILE EAST OF 127TH ST. EAST AT NORTH EDGE OF CULTIVATED FIELD, 30' EAST OF HEDGEROW. (BASELINE STA. 18+56, 15' RT.)	ELEV. = 1320.60 (MSL)

RECORD DRAWING
 MDK - PROJ. ENG. 3/22/06 DATE
 REG. ENG. DATE

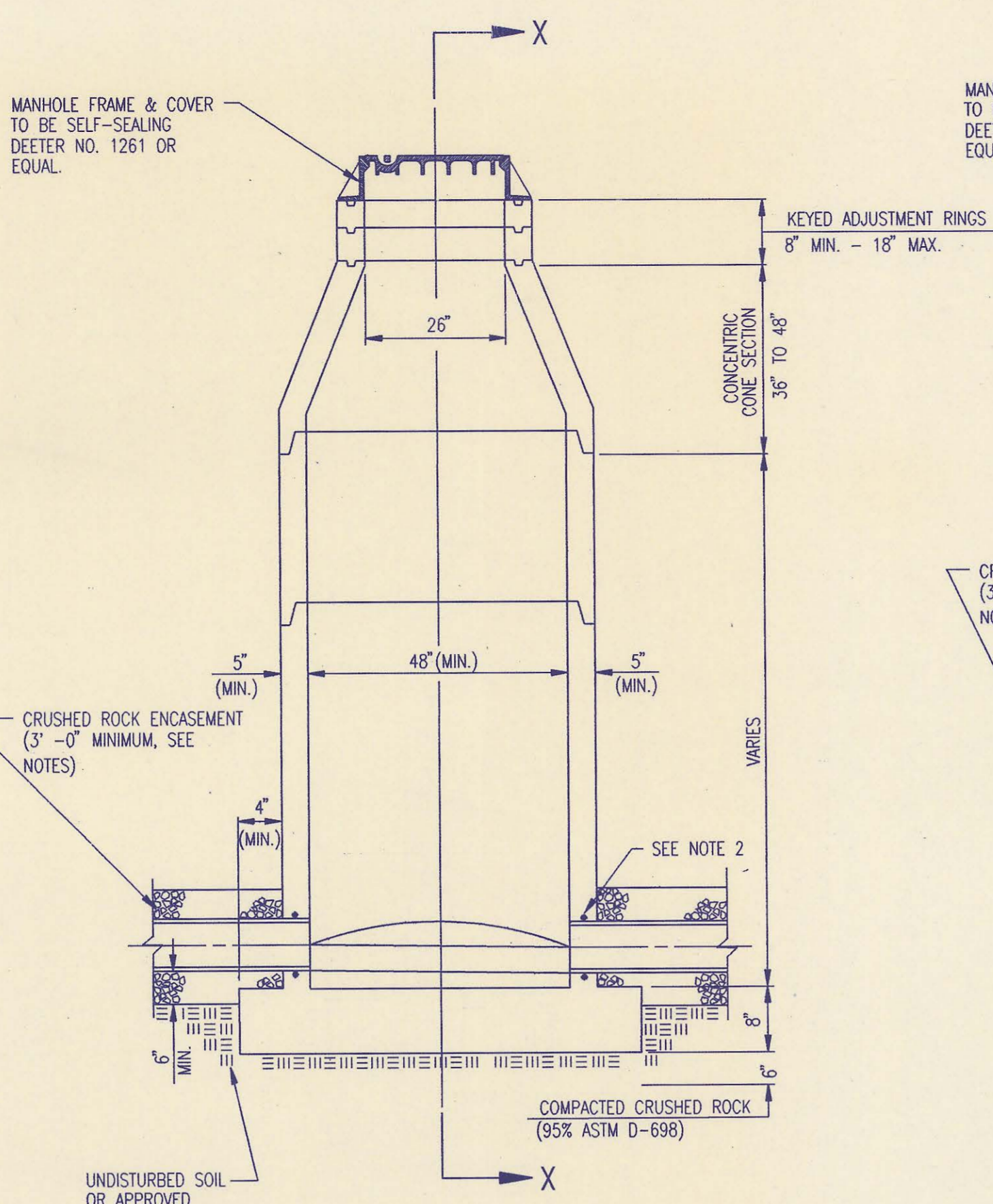
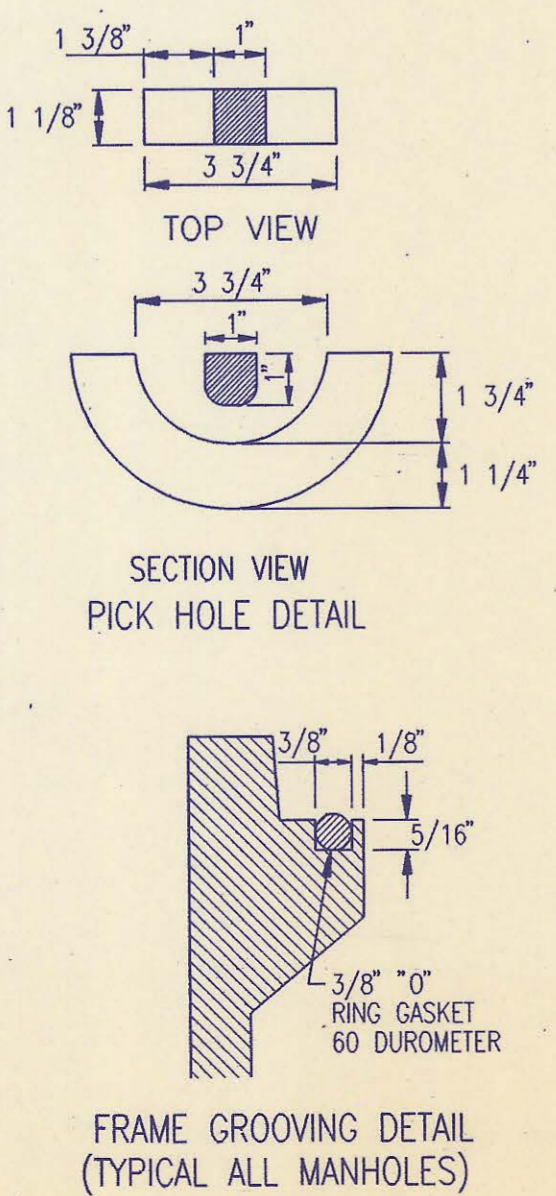


1	Updated Per Current Standards	RJ	8/02
No.	Revision	By	Date
SEDGWICK COUNTY BUREAU OF PUBLIC SERVICES DAVID E. SPEARS, P.E. DIRECTOR, BUREAU OF PUBLIC SERVICES/COUNTY ENGINEER			
BASELINE KEY MAP SANITARY SEWER INTERCEPTOR MINNEHA JOINT SEWER DISTRICT			
PROFESSIONAL ENGINEERING CONSULTANTS, P.A. ENGINEERS WICHITA, KANSAS			
Designed by	MDK	Job No.	81051-4
Drawn by	SM	Date	Nov 1982
		Sheet	3 of 23

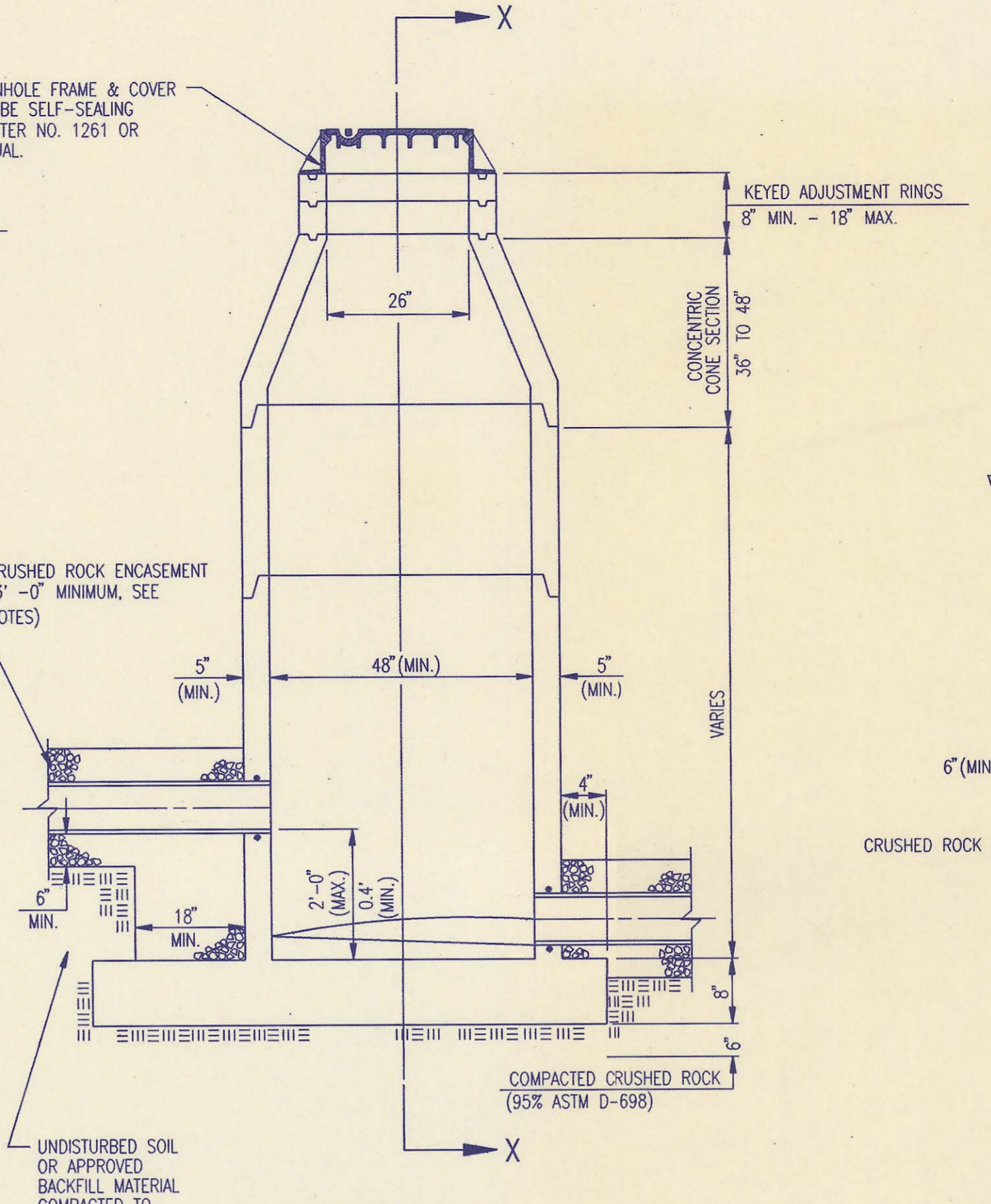


MANHOLE FRAME AND COVER
(TOTAL WEIGHT = 430 LBS.)

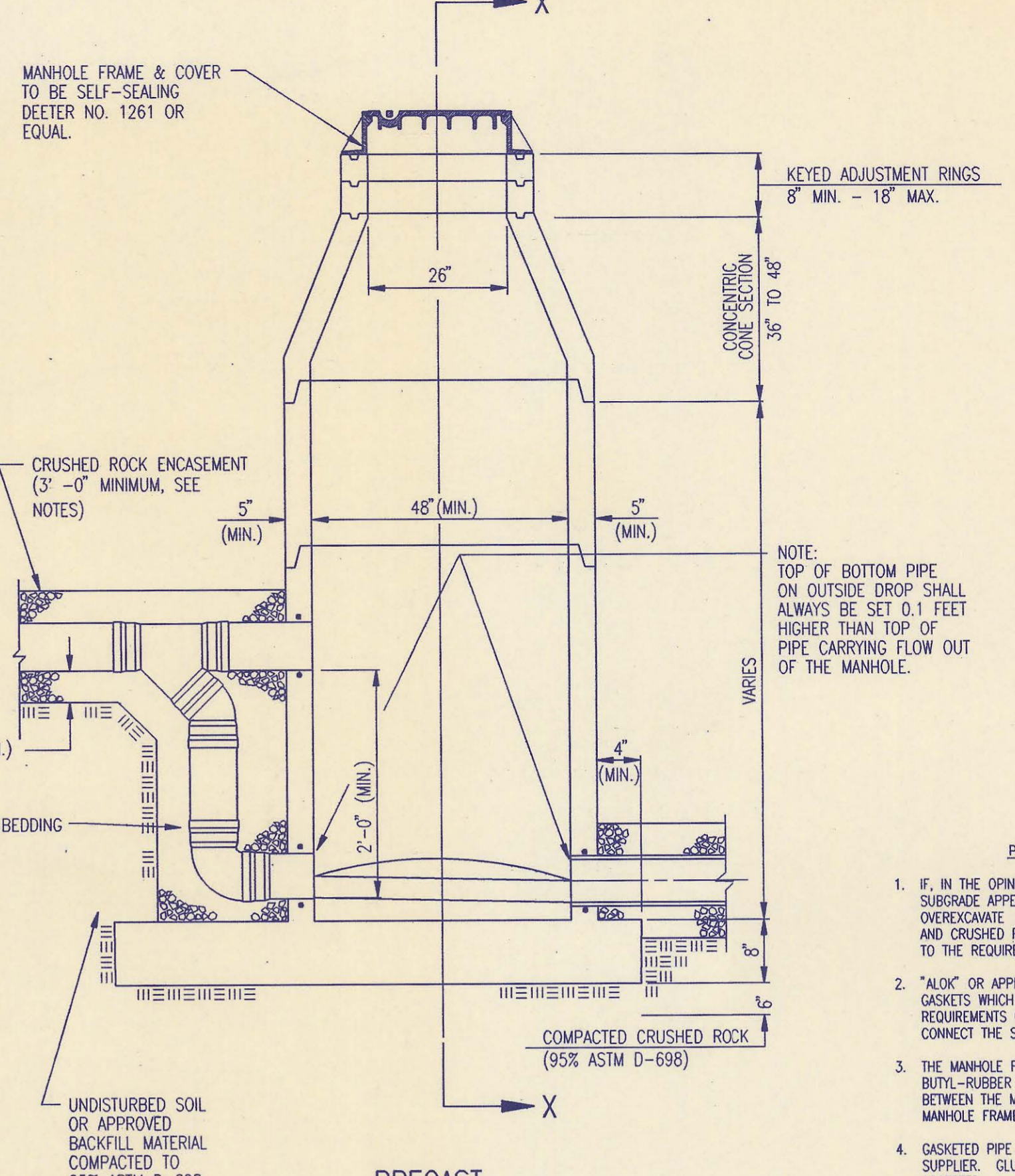
- MANHOLE FRAME AND COVER NOTES**
- CAST IRON MANHOLE FRAME AND COVER SHALL CONFORM TO ASTM A-48, CLASS 35B, OR BETTER.
 - CASTINGS ARE TO BE MANUFACTURED TRUE TO PATTERN AND WITH SATISFACTORY FIT OF COMPONENT PARTS. CASTINGS SHALL BE FREE OF DEFECTS AND ALL BURS SHALL BE GRIND SMOOTH. DIMENSIONS AS DETAILED ON PLAN SHALL NOT DEVIATE BY $\pm 1/16$ " PER FOOT.
 - NO OTHER LETTERING OR MARKINGS OTHER THAN THOSE DETAILED ON PLAN WILL BE PERMITTED ON CASTINGS.
 - CASTINGS MUST BE DOMESTICALLY MANUFACTURED IN THE UNITED STATES OF AMERICA.
 - THE FRAMES AND COVERS SHALL BE FURNISHED WITH MACHINED HORIZONTAL BEARING SURFACES SO FITTING PARTS WILL NOT RATTLE OR ROCK UNDER TRAFFIC.
 - MANHOLE CASTINGS SHALL BE SELF-SEALING DEETER FOUNDRY INC. NO. 1261 OR APPROVED EQUAL, UNLESS OTHERWISE SPECIFIED IN THE SPECIAL CONDITIONS. (MINIMUM WT. = 430 LBS.) ALL MANHOLE CASTINGS SHALL BE CONSIDERED SUBSIDIARY TO THE UNIT PRICES BID FOR THE VARIOUS MANHOLE TYPES.
 - 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.
 - THE MANHOLE FRAME SHALL BE FURNISHED WITH AN APPROVED CONTINUOUS "O" RING GASKET GROOVED INTO THE BEARING SURFACE OF THE MANHOLE FRAME (PER DETAIL). THE "O" RING GASKET SHALL BE FACTORY INSTALLED IN THE MANHOLE FRAME WITH 100% SILICON SEALANT-DOW CORNING OR EQUAL.



PRECAST STANDARD MANHOLE TYPE "A"



PRECAST INSIDE DROP MANHOLE TYPE "B"

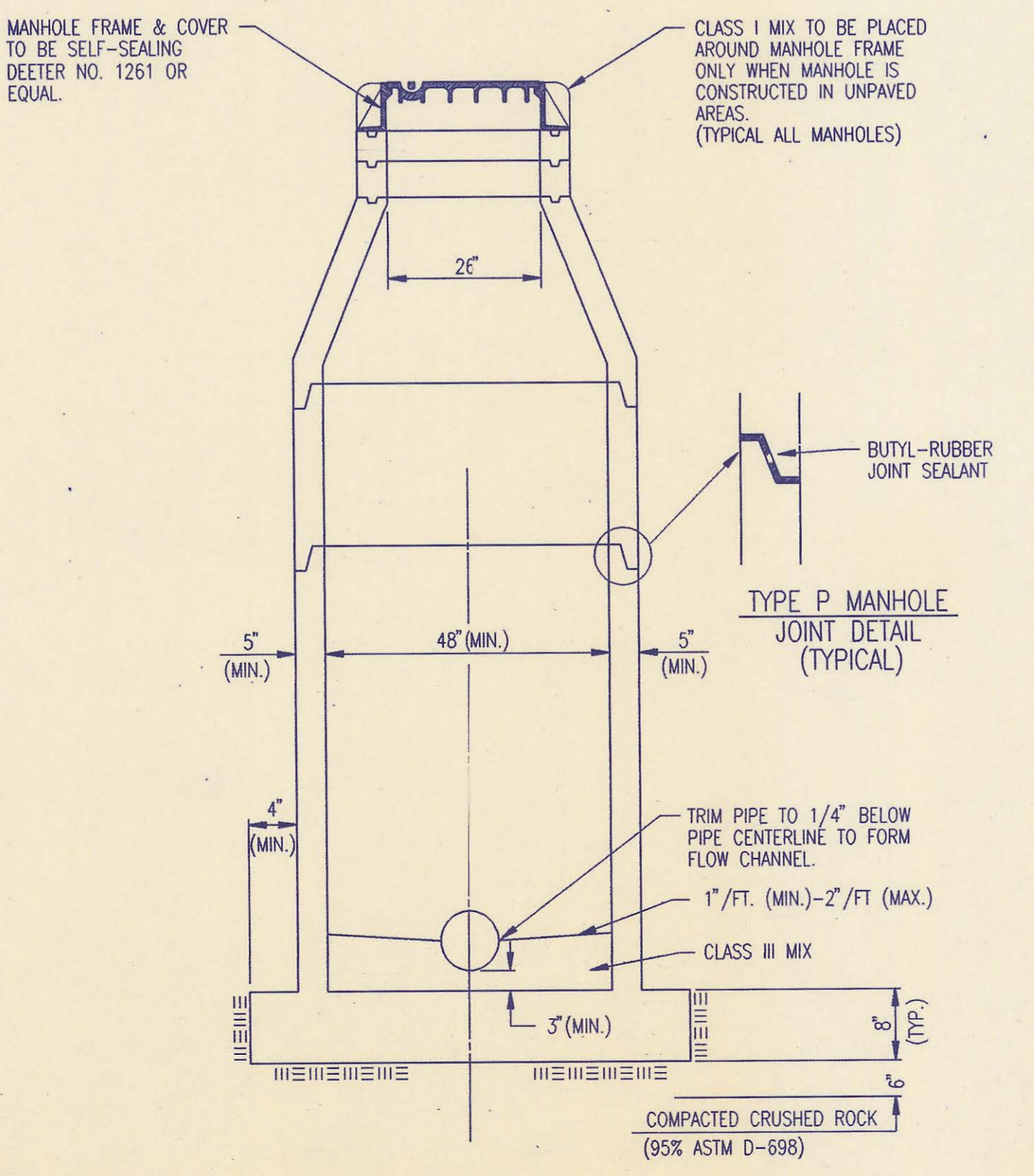


PRECAST OUTSIDE DROP MANHOLE TYPE "C"

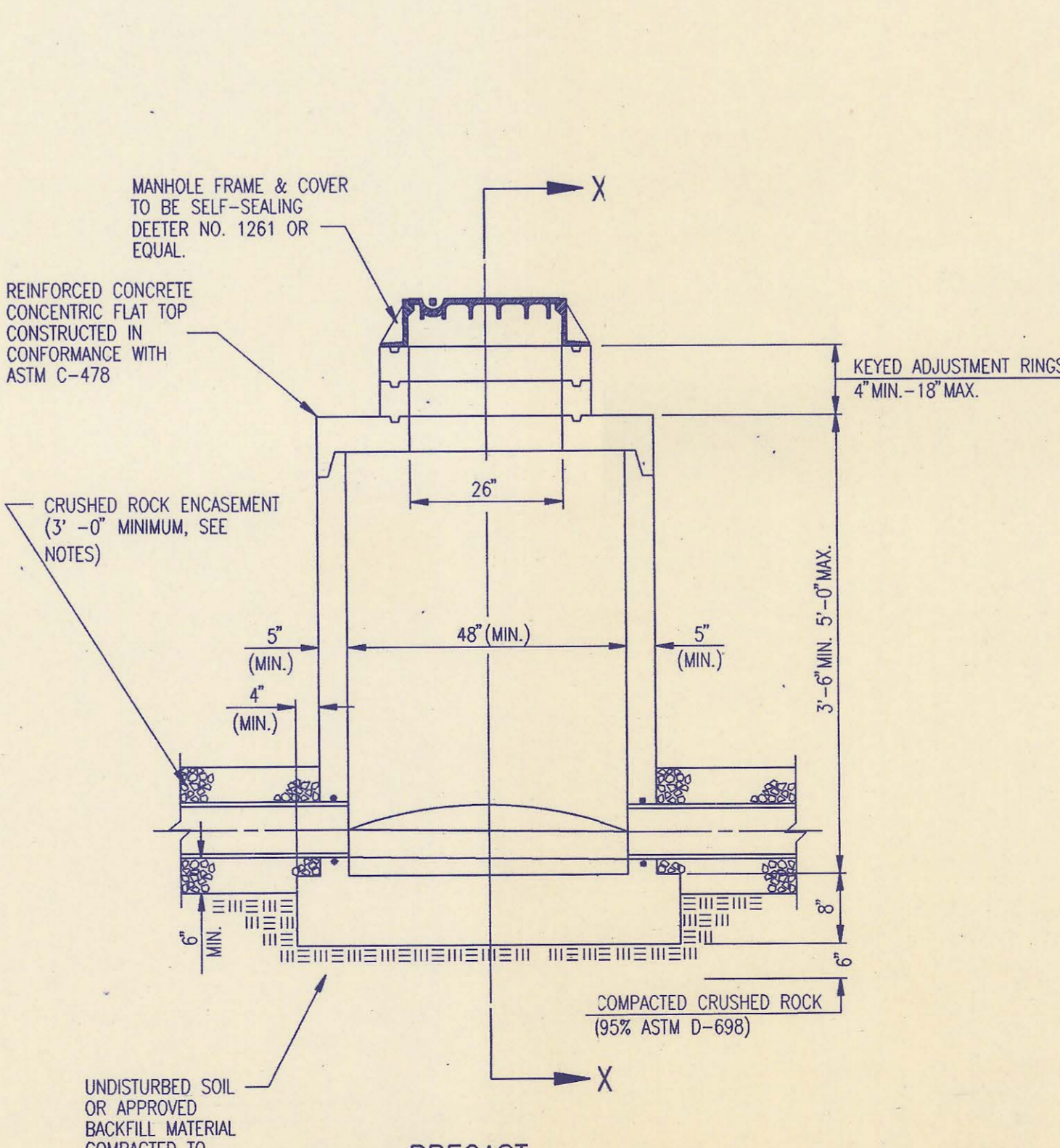
NOTE:
TOP OF BOTTOM PIPE ON OUTSIDE DROP SHALL ALWAYS BE SET 0.1 FEET HIGHER THAN TOP OF PIPE CARRYING FLOW OUT OF THE MANHOLE.

PRECAST MANHOLE NOTES

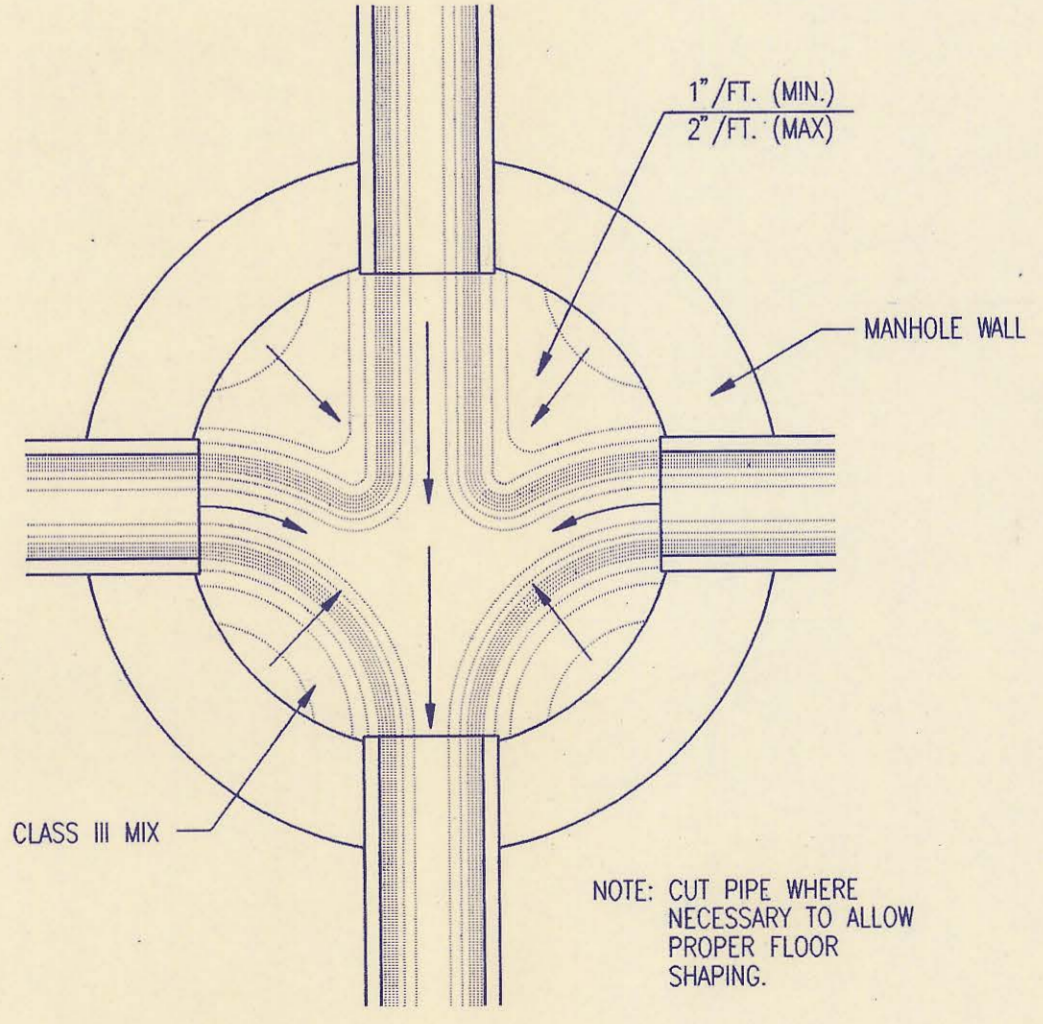
- IF, IN THE OPINION OF THE ENGINEER, THE MANHOLE SUBGRADE APPEARS UNSTABLE, THE CONTRACTOR WILL OVEREXCAVATE TO A SUITABLE SUBGRADE CONDITION AND CRUSHED ROCK SHALL BE PLACED AND COMPACTED TO THE REQUIRED GRADE.
- "ALOK" OR APPROVED EQUAL FLEXIBLE WATER-STOP GASKETS WHICH MEET OR EXCEED THE TEST REQUIREMENTS OF ASTM C-923 SHALL BE INSTALLED TO CONNECT THE SEWER TO THE MANHOLE WALL.
- THE MANHOLE FRAME SHALL BE SEATED ON AN APPROVED BUTYL-RUBBER SEALANT TO PROVIDE WATER-TIGHT SEAL BETWEEN THE MANHOLE ADJUSTMENT RING AND THE MANHOLE FRAME.
- GASKETED PIPE CAPS SHALL BE PROVIDED BY THE PIPE SUPPLIER. GLUED OR CEMENTED CAPS WILL NOT BE ACCEPTED.
- 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.
- 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.
- MANHOLES SHALL BE SUPPLIED WITH PRECAST BASE SECTIONS UNLESS OTHERWISE APPROVED. ALL PRECAST CONCRETE MANHOLE SECTIONS AND BASES SHALL CONFORM TO THE LATEST REVISIONS OF ASTM C478 AS MODIFIED BY THE SPECIFICATIONS.
- WHERE MANHOLE STUBS ARE SHOWN ON THE PLANS, THE STUB SHALL EXTEND AT LEAST 5 FEET FROM THE INSIDE WALL OF THE MANHOLE. 4" STUBS SHALL BE SET AT 2.0% GRADE. 6" STUBS SHALL BE SET AT 1.0% GRADE.
- MANHOLE SECTIONS SHALL BE SUPPLIED WITH RECESSED LIFTING EYES. LIFTING EYE RECESSES SHALL BE GROUTED FLUSH TO THE MANHOLE WALL WITH HYDRAULIC CEMENT AFTER THE MANHOLE IS IN PLACE. LIFTING HOLES THRU THE MANHOLE WALL WILL NOT BE ACCEPTED.
- WHERE A-LOK GASKETS ARE REQUIRED, THE CONTRACTOR SHALL UTILIZE A CRUSHED ROCK BEDDING MATERIAL. THE ROCK BEDDING MATERIAL SHALL EXTEND TO 3 FEET FROM THE MANHOLE WALL AND SHALL BE COMPACTED IN PLACE FROM THE BOTTOM OF THE DISTURBED AREA TO 1 FOOT ABOVE THE TOP OF PIPE. THE CRUSHED ROCK WHICH IS PLACED BELOW THE PIPE BEDDING ZONE SHALL BE COMPACTED TO 95% ASTM D-698 (MIN.).
- WHERE MANHOLES ARE TO BE BUILT OVER EXISTING SANITARY SEWER LINES, SEWER PIPES SHALL BE SUPPORTED WITH CLASS I MIX AT CONCRETE ENCASEMENT A MINIMUM OF 3 FEET OUTSIDE THE MANHOLE WALL.
- CRUSHED ROCK SHALL MEET THE REQUIREMENTS FOR GRANULAR BEDDING MATERIAL, AS OUTLINED IN THE SPECIFICATIONS.



SECTION X (TYPICAL)



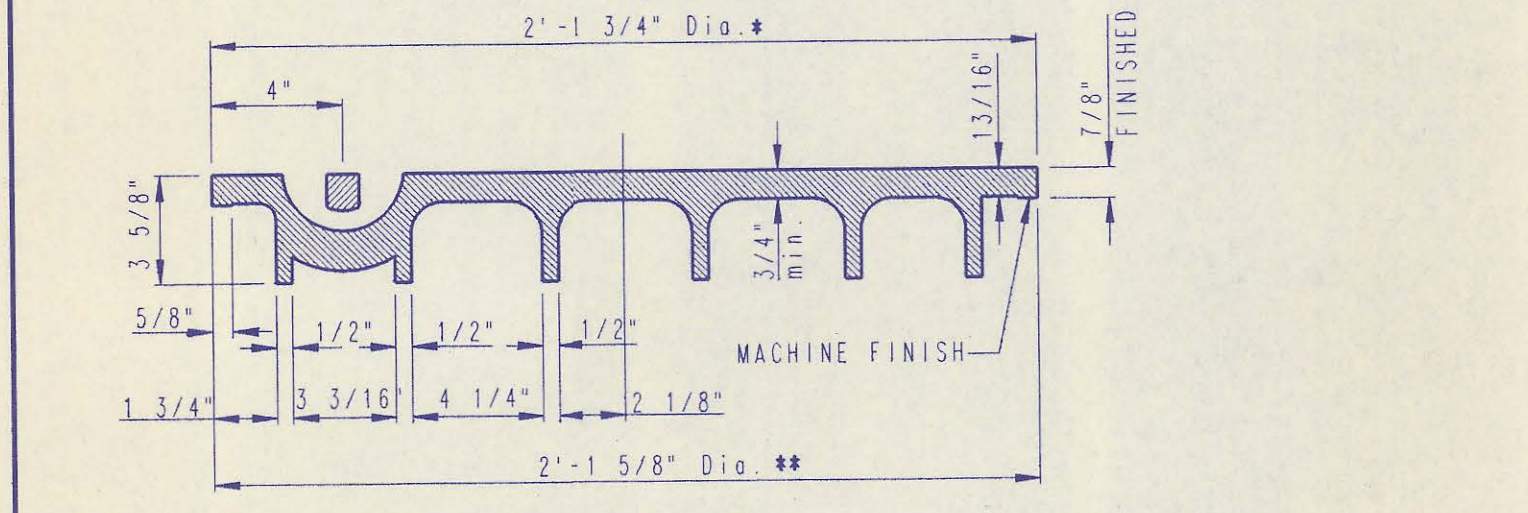
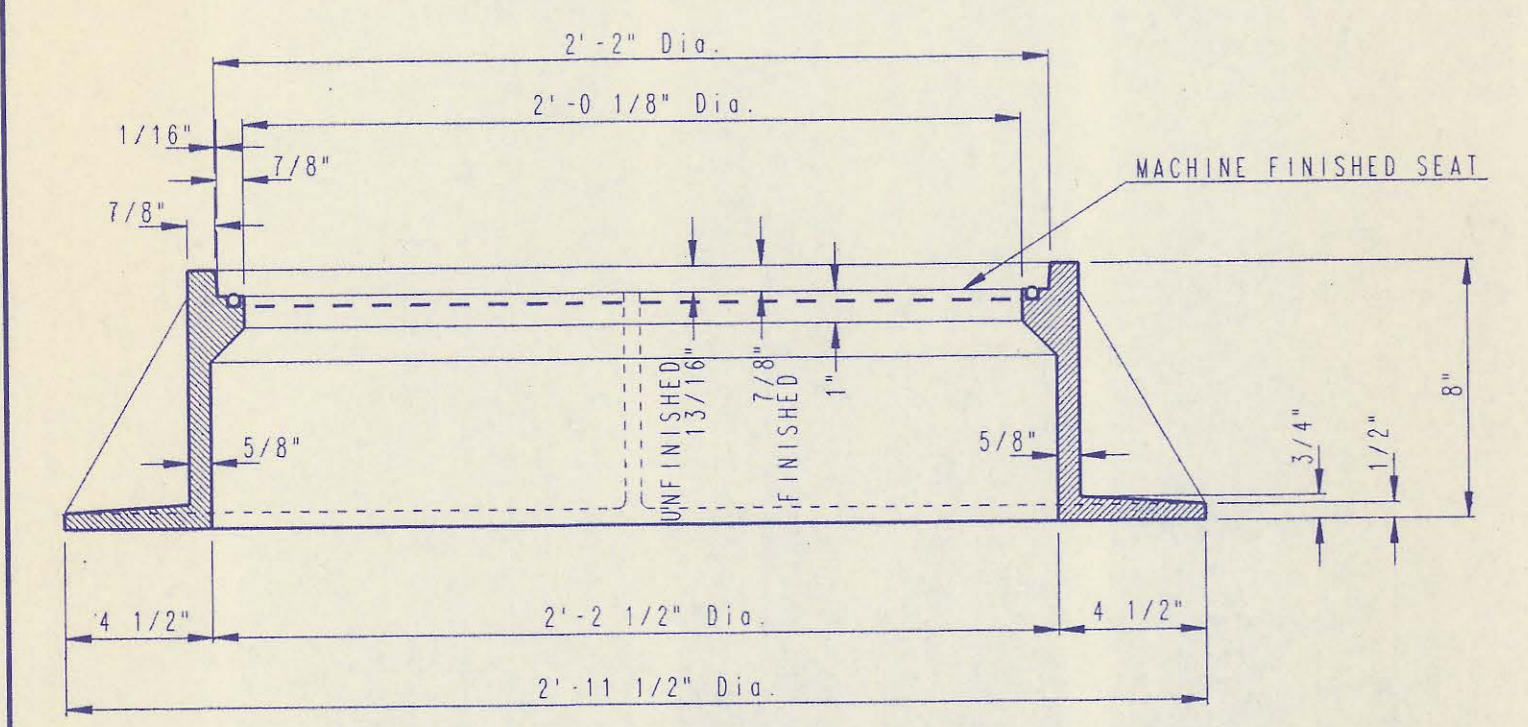
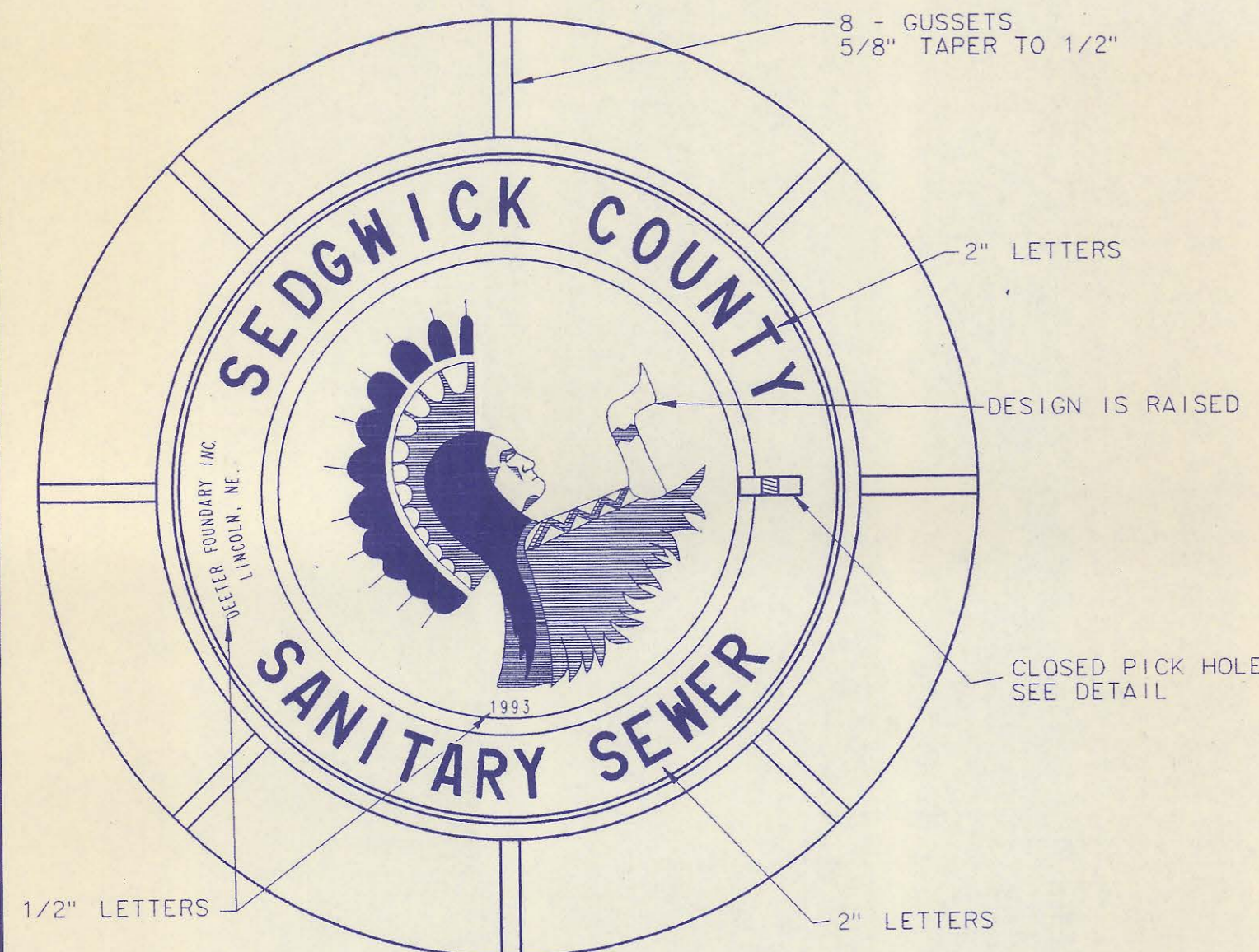
PRECAST SHALLOW MANHOLE TYPE "D"



TYPICAL MANHOLE FLOOR SHAPING

No.	Revision	By	Date
5	Change concrete encasement to crushed rock encasement	RJ	3/9/94
4	Precast Bases, Precast Manhole Notes, Manhole Frame and Cover Notes, Keyed Adjustment Rings, and Class I mix at concrete encasement and field cap.	RJ	8/27/93
3	All Manholes self-sealing/MH Cover	RJ	1/25/93
2	Modified pipe connection note	RJ	6/01/92
1	Manhole Frame and Cover Note 1	RJ	7/16/91

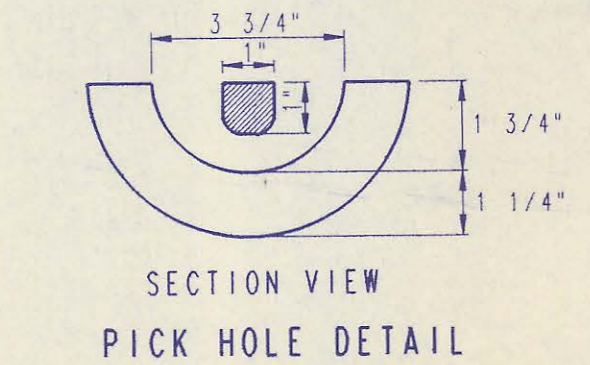
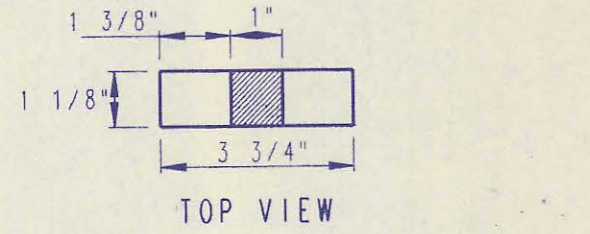
PRECAST MANHOLE DETAILS
ADOPTED AS STANDARD DESIGN SEPTEMBER, 1989
BY
SEDGWICK COUNTY BUREAU OF PUBLIC SERVICES
DAVID C. SPEARS, P.E. DIRECTOR, BUREAU OF PUBLIC SERVICES/COUNTY ENGINEER



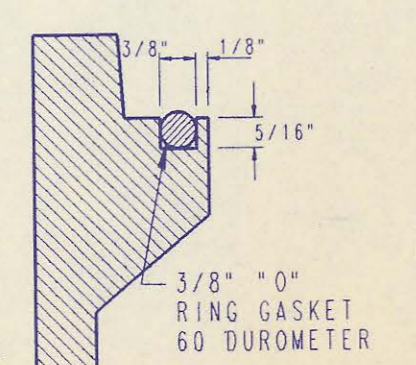
MANHOLE FRAME AND COVER
(TOTAL WEIGHT = 430 LBS.)

MANHOLE FRAME AND COVER NOTES

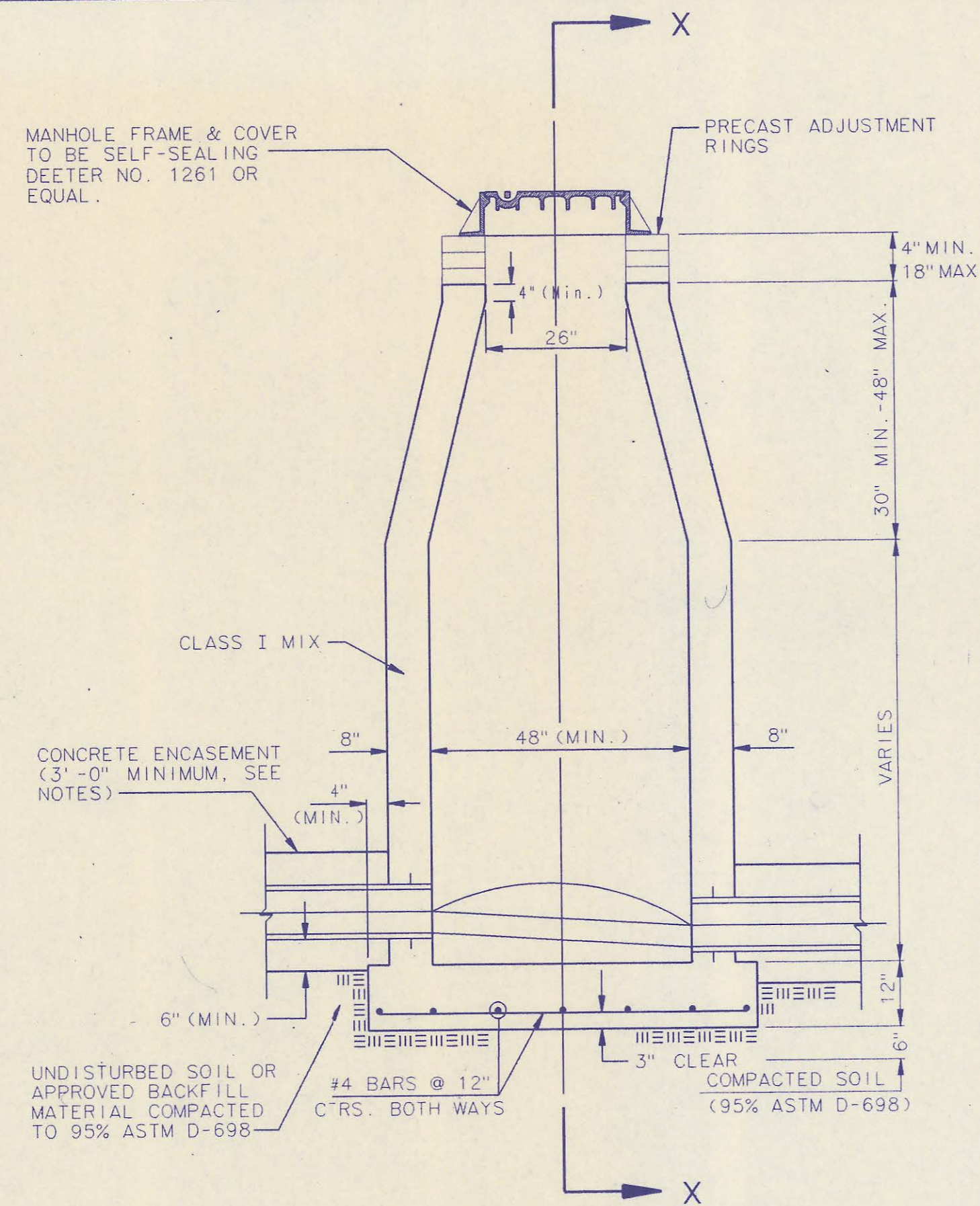
1. CAST IRON MANHOLE FRAME AND COVER SHALL CONFORM TO ASTM A-48, CLASS 35B, OR BETTER.
2. CASTINGS ARE TO BE MANUFACTURED TRUE TO PATTERN AND WITH SATISFACTORY FIT OF COMPONENT PARTS. CASTINGS SHALL BE FREE OF DEFECTS. DIMENSIONS AS DETAILED ON PLAN SHALL NOT DEVIATE BY ± 1/16" PER FOOT.
3. NO OTHER LETTERING OR MARKINGS OTHER THAN THOSE DETAILED ON PLAN WILL BE PERMITTED ON CASTINGS.
4. CASTINGS MUST BE DOMESTICALLY MANUFACTURED IN THE UNITED STATES OF AMERICA.
5. THE FRAMES AND COVERS SHALL BE FURNISHED WITH MACHINED HORIZONTAL BEARING SURFACES SO FITTING PARTS WILL NOT RATTLE OR ROCK UNDER TRAFFIC.
6. MANHOLE CASTINGS SHALL BE SELF-SEALING DEETER FOUNDRY INC. NO. 1261 OR APPROVED EQUIVALENT. UNLESS OTHERWISE SPECIFIED IN THE SPECIAL CONDITIONS (MINIMUM WT. +430 LBS.) ALL MANHOLE CASTINGS SHALL BE CONSIDERED SUBSIDIARY TO THE UNIT PRICES BID FOR THE VARIOUS MANHOLE TYPES.
7. GRIND ALL BURRS SMOOTH, CLEAN THOROUGHLY, THEN APPLY SHOP COAT OF ASPHALT BASE PAINT.
8. 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.
9. THE MANHOLE FRAME SHALL BE FURNISHED WITH AN APPROVED "O" RING GASKET GROOVED INTO THE BEARING SURFACE OF THE MANHOLE FRAME (SEE 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.



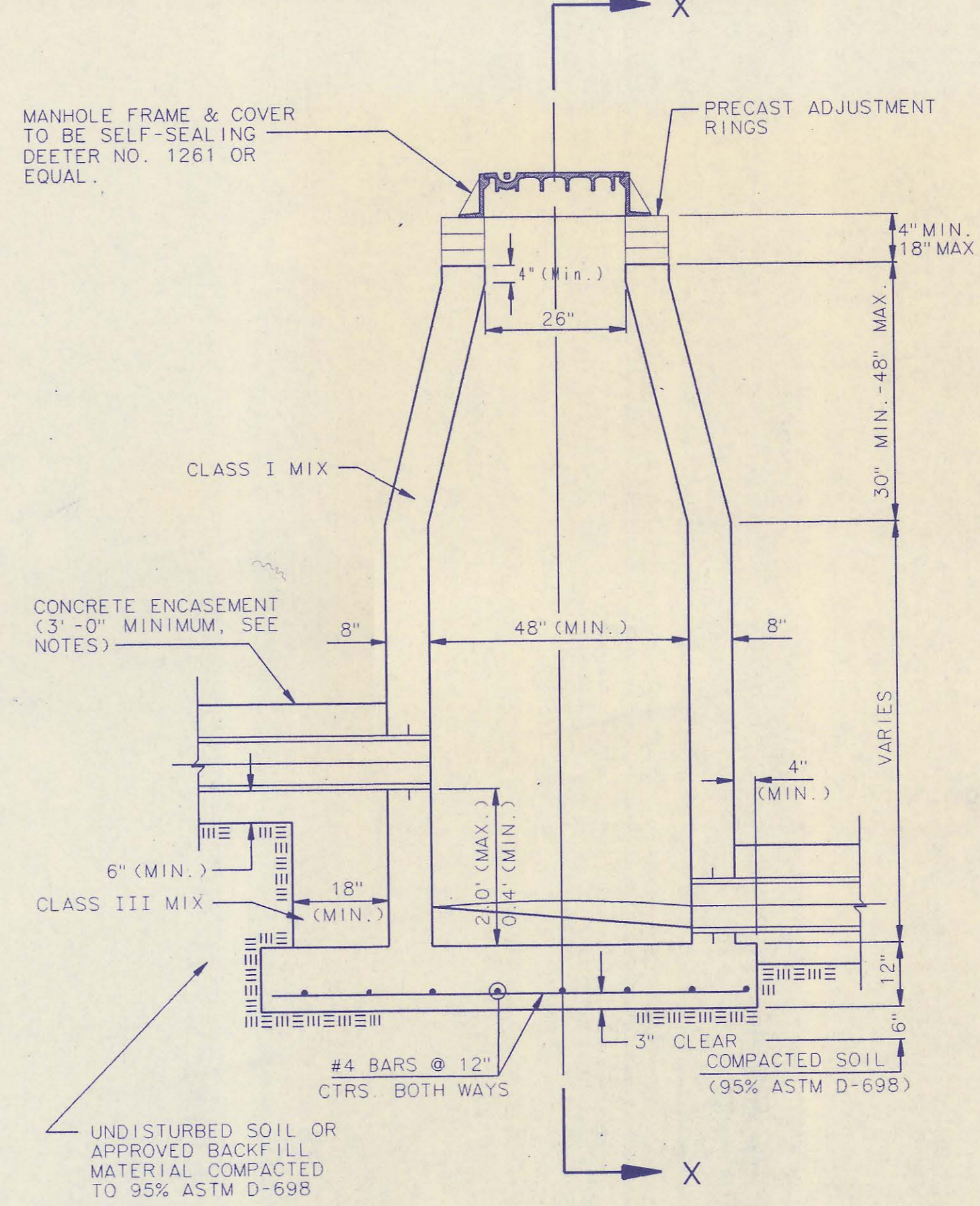
PICK HOLE DETAIL



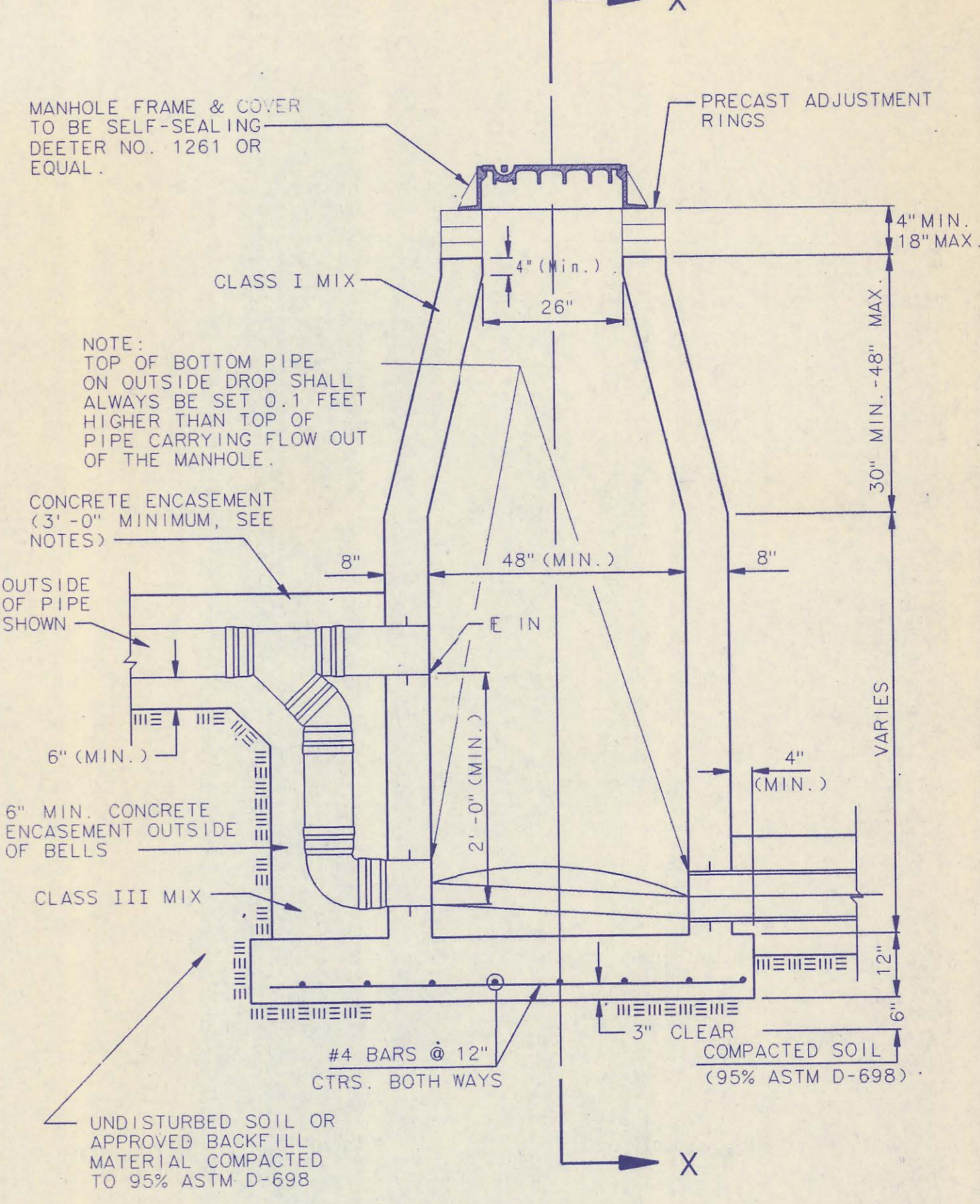
FRAME GROOVING DETAIL (TYPICAL ALL MANHOLES)



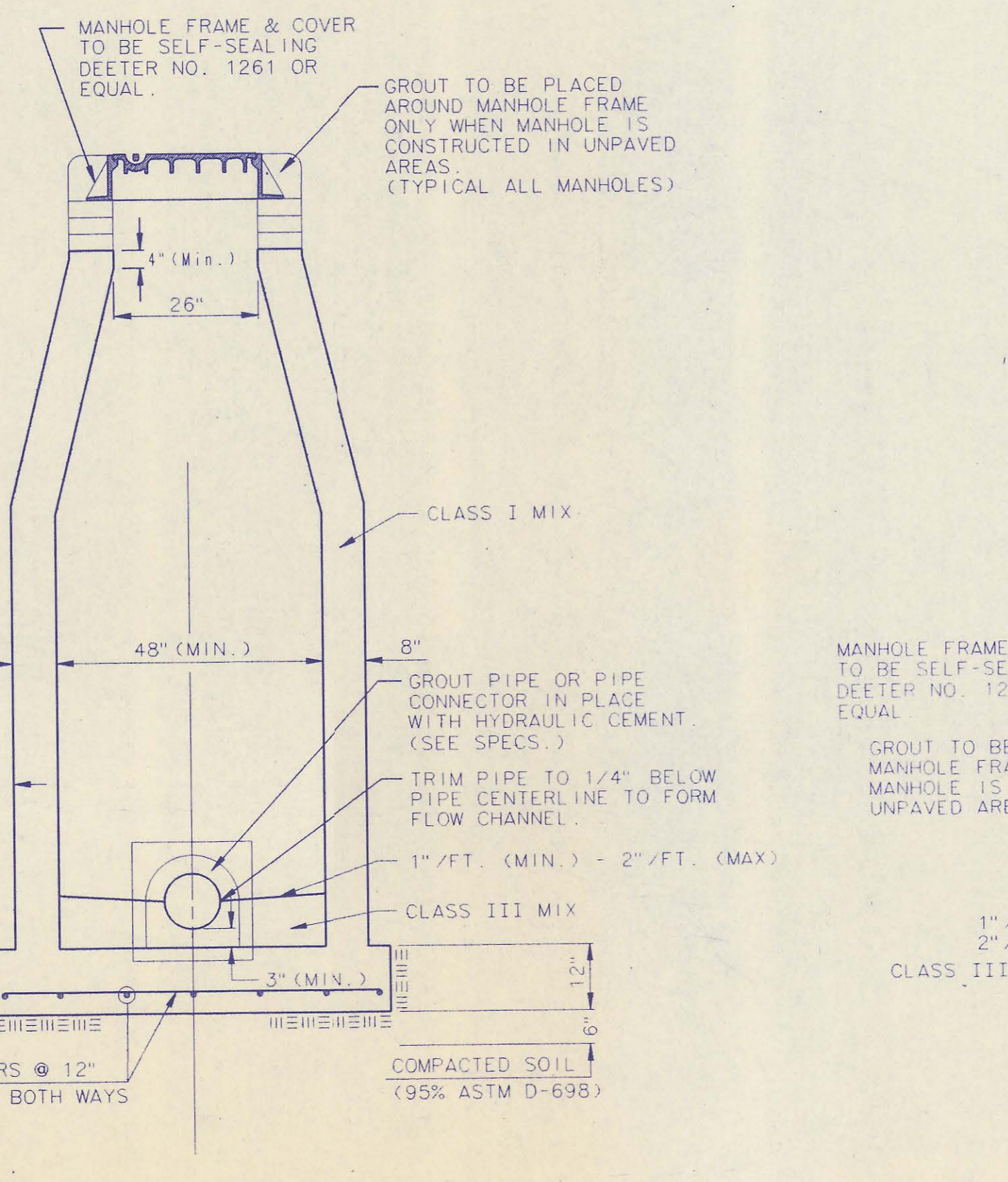
CAST IN PLACE STANDARD MANHOLE TYPE "A"



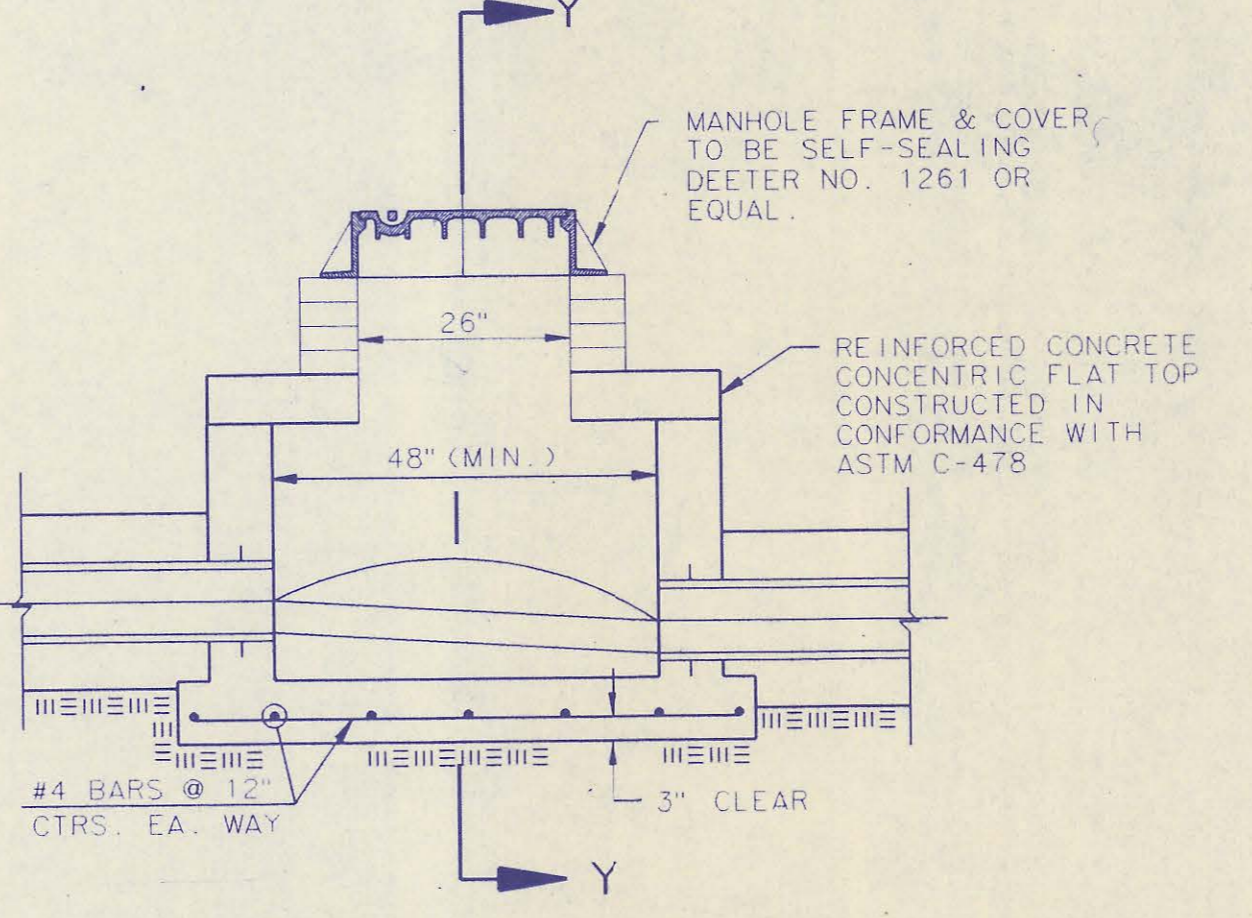
CAST IN PLACE DROP MANHOLE TYPE "B"



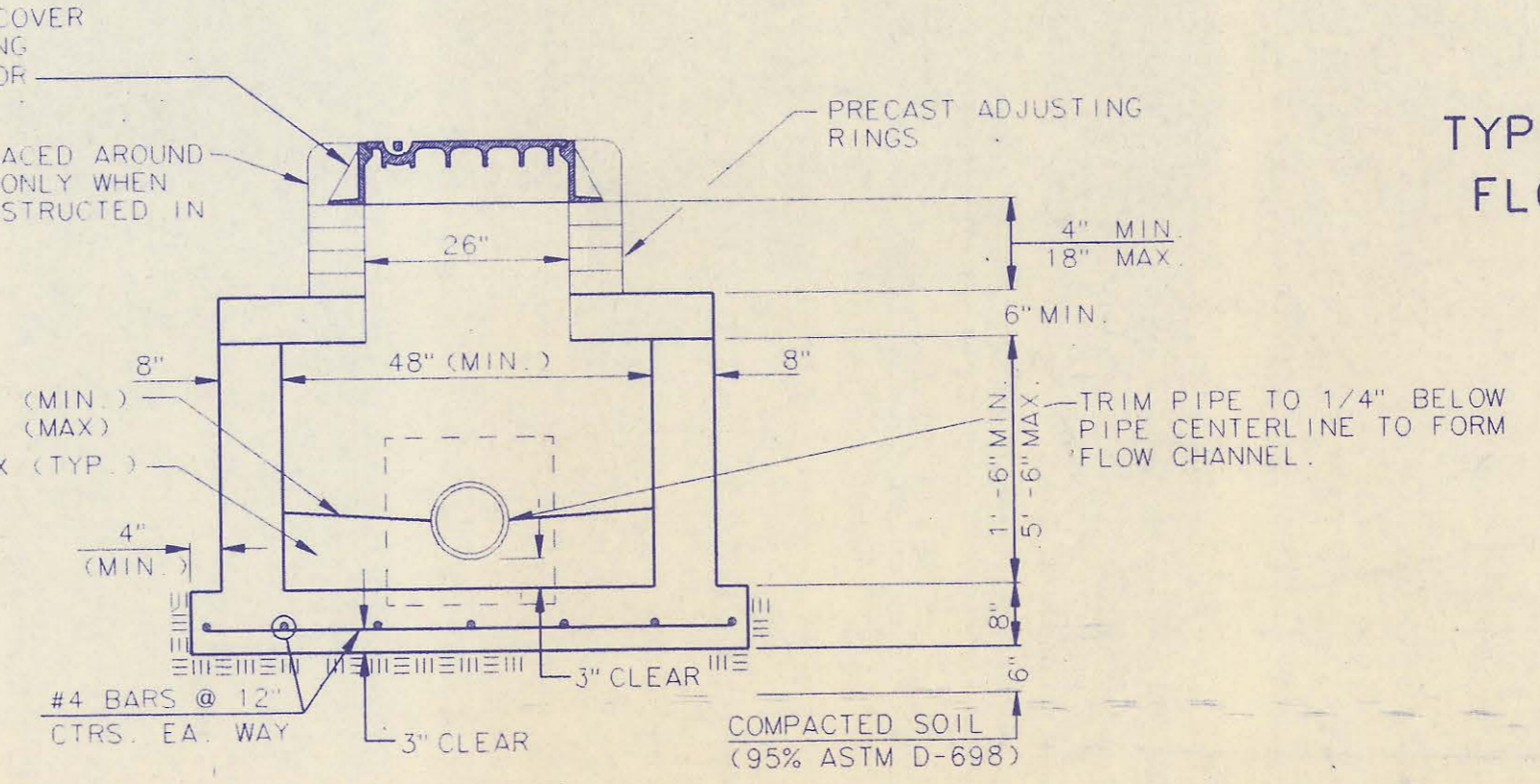
CAST IN PLACE OUTSIDE DROP MANHOLE TYPE "C"



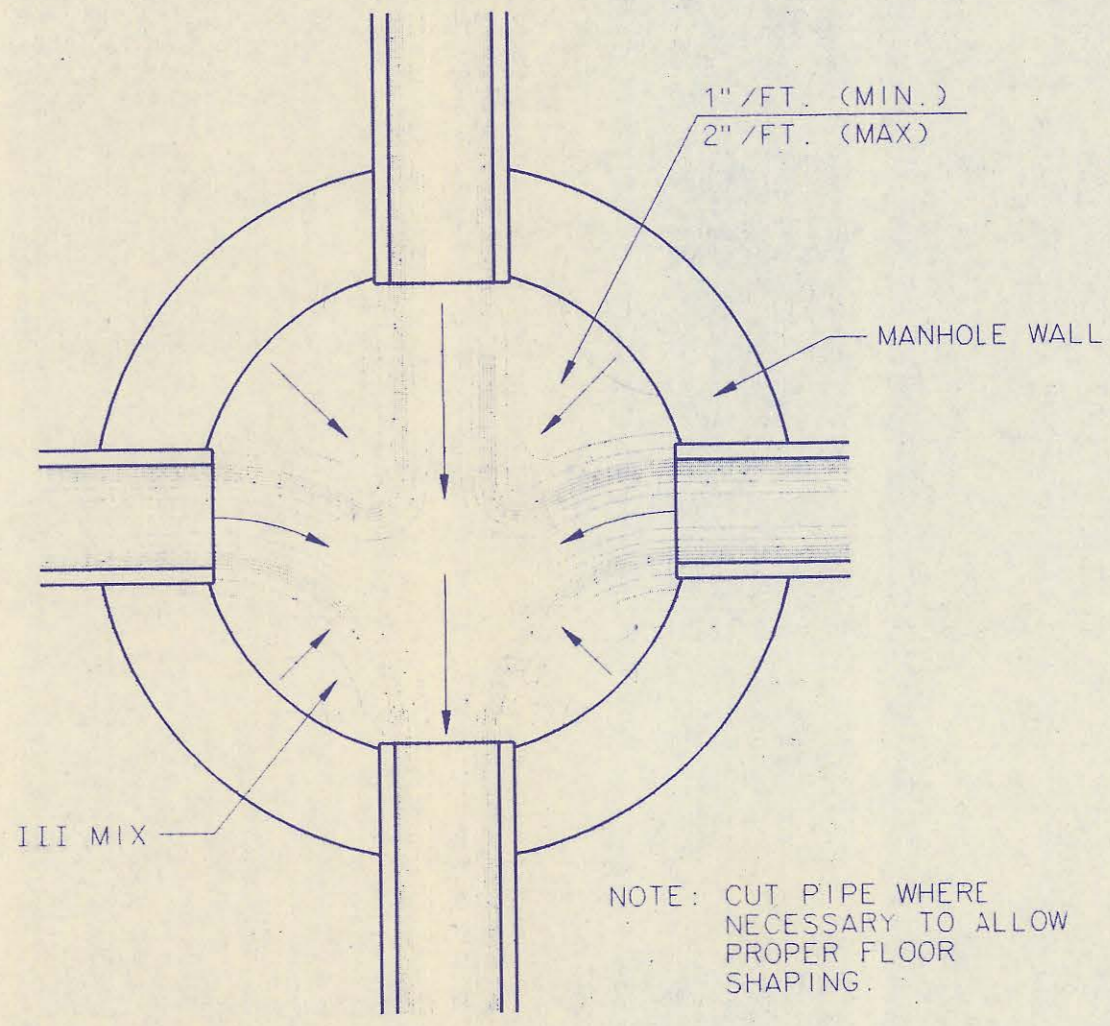
SECTION X (TYPICAL)



SHALLOW MANHOLE TYPE "D"



SECTION Y



TYPICAL MANHOLE FLOOR SHAPING

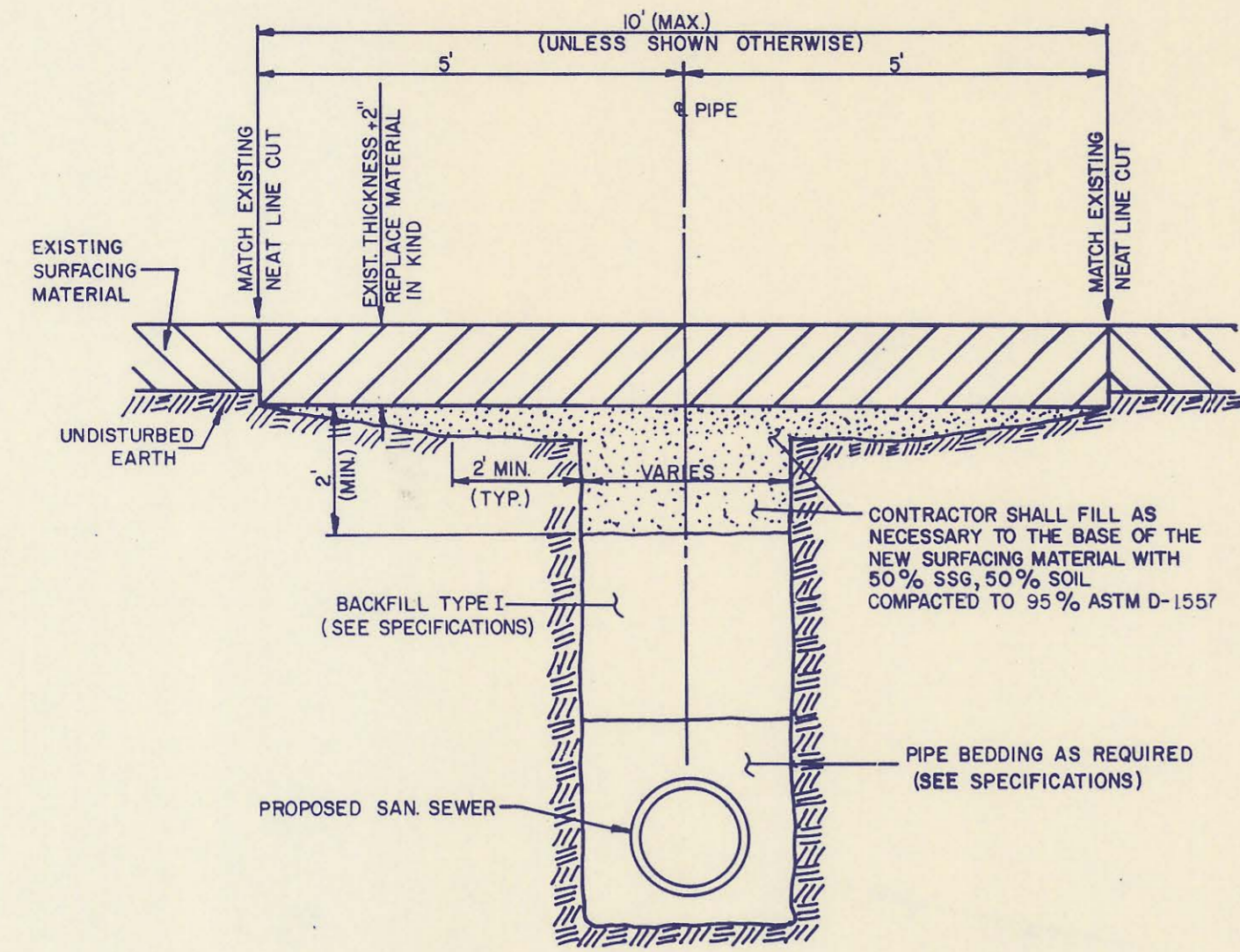
CAST-IN-PLACE MANHOLE NOTES

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 GROUTED IN PLACE WITH HYDRAULIC CEMENT. 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. GULCH OR GEMENTED CAPS WILL NOT BE ACCEPTED.
8. CONCRETE FOR MANHOLE BASES SHALL BE CLASS I AS DESCRIBED IN THE SPECIFICATIONS.
9. MANHOLES WITH PIPE SIZES LARGER THAN 15" SHALL HAVE 5" INSIDE DIAMETER.

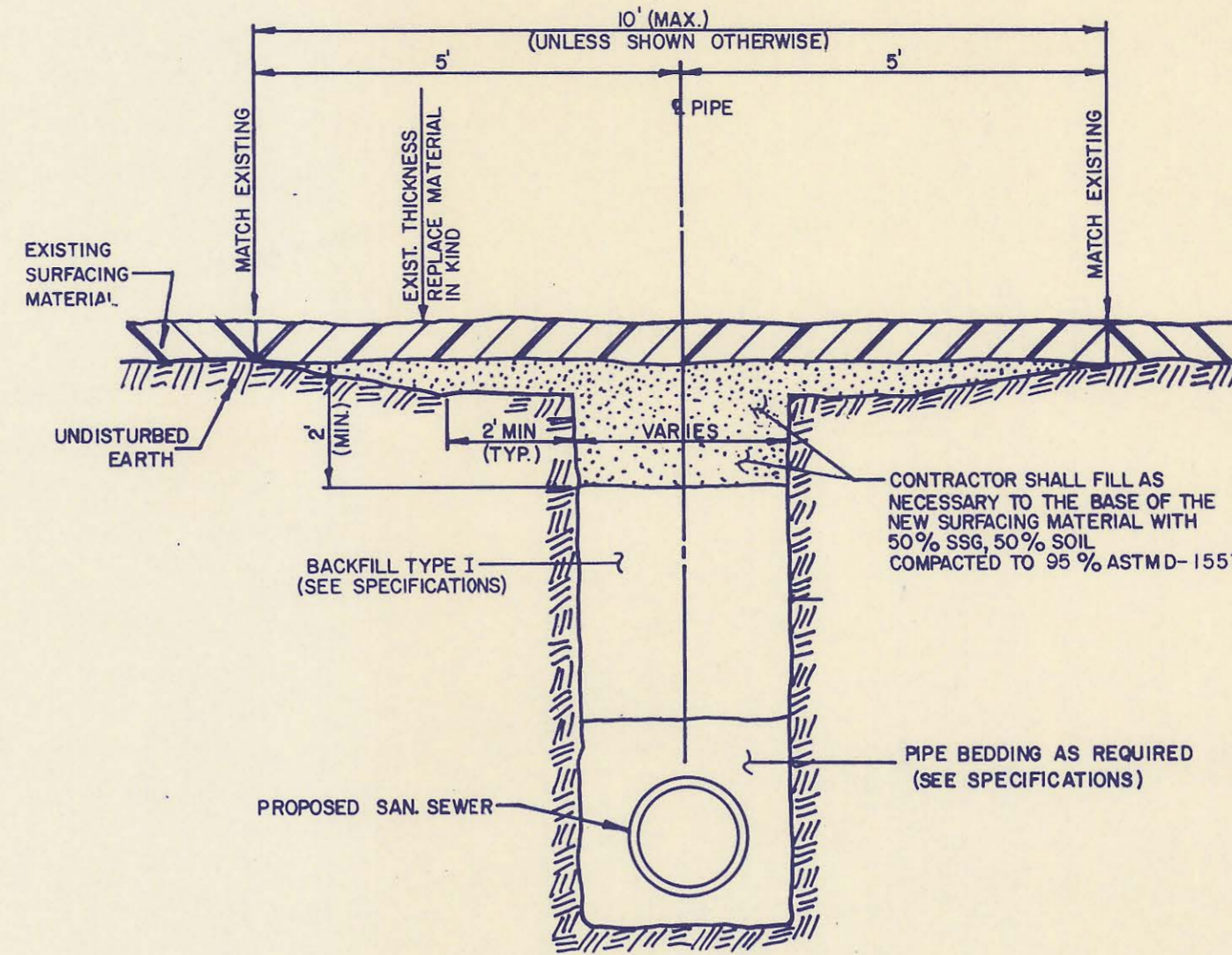
3	All Manholes Self-sealing/ MH Cover	RJ	1/25/93
2	Modified Pipe connection note and MH Note 3	RJ	6/01/92
1	Manhole Frame and Cover Note 1	RJ	7/16/91
No.	Revision	By	Date

CAST-IN-PLACE MANHOLE DETAILS

ADOPTED AS STANDARD DESIGN SEPTEMBER, 1989
BY
SEDGWICK COUNTY BUREAU OF PUBLIC SERVICES
DAVID C. SPEARS, P.E., DIRECTOR, BUREAU OF PUBLIC SERVICES/COUNTY ENGINEER

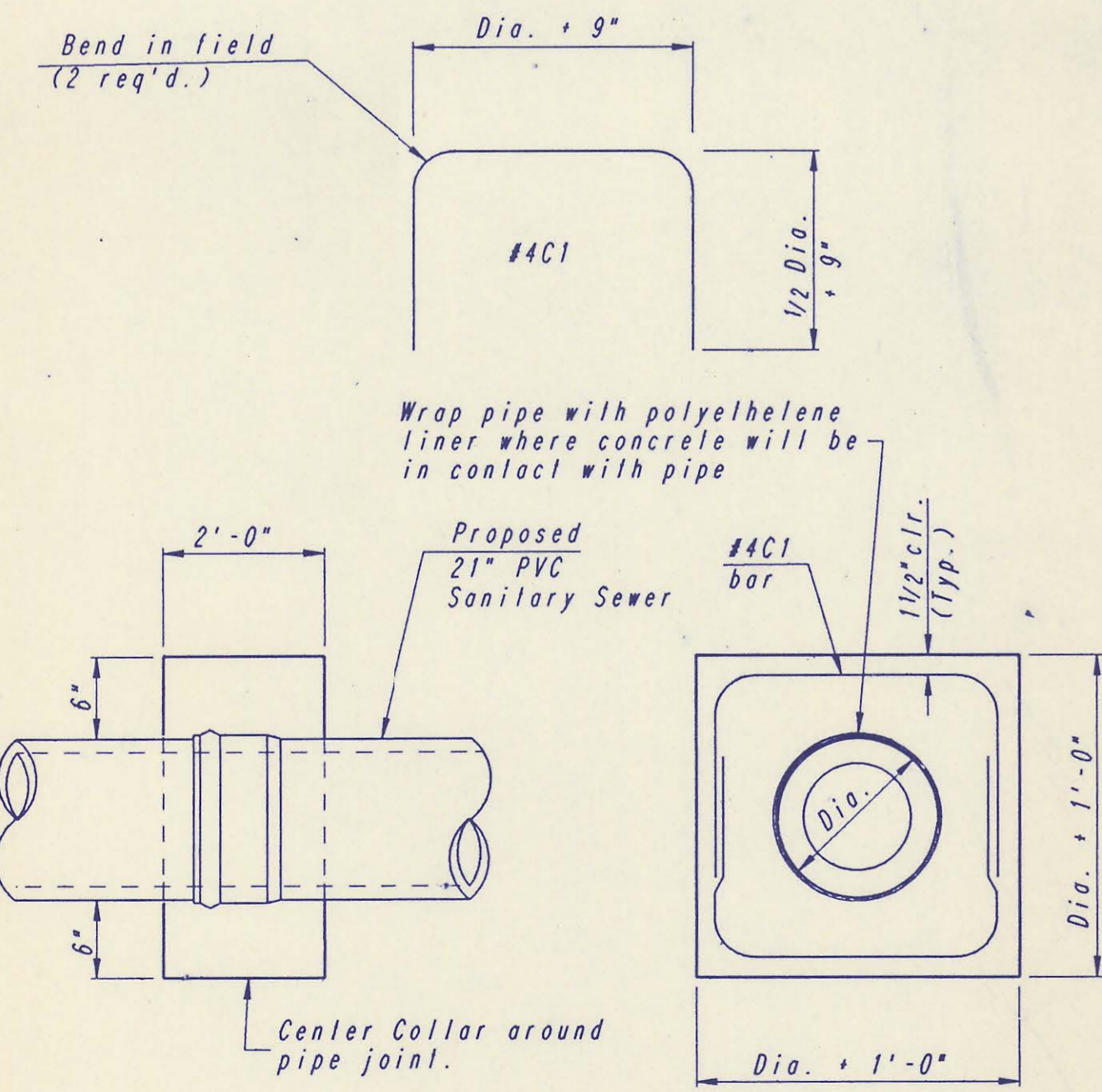


PAVED ROAD OR DRIVE-REMOVAL AND REPLACEMENT



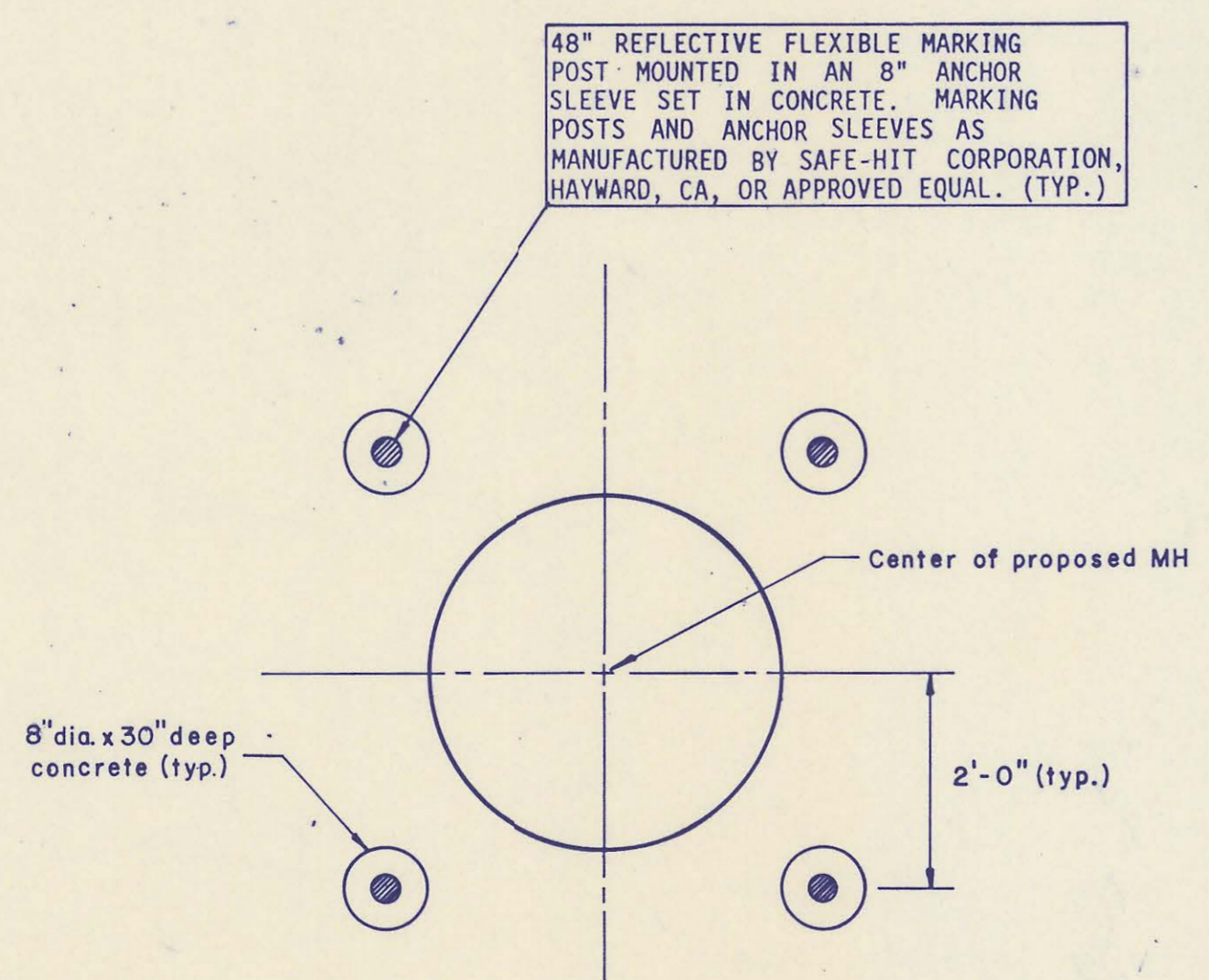
UNPAVED ROAD OR DRIVE-REMOVAL AND REPLACEMENT

MANHOLE NO.	MAIN LINE		OTHER PIPE "IN" (AZIMUTH-DESCRIPTION)
	PIPE "OUT" (AZIMUTH-SIZE)	PIPE "IN" (AZIMUTH-SIZE)	
T3A-21	88°42'11" - 21" PVC	270°42'50" - 21" PIPE	328°42'49" - 8" STUB 28°42'41" - 4" STUB
T3A-22	90°42'50" - 21" PIPE	359°18'29" - 21" PIPE	268°36'40" - 8" STUB 140°42'50" - 4" STUB
T3A-23	179°18'29" - 21" PIPE	359°18'29" - 21" PIPE	269°18'29" - 4" PIPE
T3A-24	179°18'29" - 21" PIPE	359°18'29" - 18" PIPE	88°58'51" - 8" PIPE
T3A-25	179°18'29" - 18" PIPE	292°02'38" - 18" PIPE	NONE
T3A-26	112°02'38" - 18" PIPE	352°39'23" - 18" PIPE	NONE
T3A-27	172°39'23" - 18" PIPE	281°53'25" - 18" PIPE	47°39'23" - 8" PIPE
T3A-28	101°53'25" - 18" PIPE	339°19'29" - 18" PIPE	NONE
T3A-29	159°19'29" - 18" PIPE	339°19'29" - 18" PIPE	NONE
T3A-30	159°19'29" - 18" PIPE	300°07'50" - 18" PIPE	NONE
T3A-31	120°07'50" - 18" PIPE	280°58'10" - 18" PIPE	NONE
T3A-32	100°58'10" - 18" PIPE	280°58'10" - 18" PIPE	NONE
T3A-33	100°58'10" - 18" PIPE	278°21'12" - 18" PIPE	NONE
T3A-34	98°21'12" - 18" PIPE	326°34'13" - 18" PIPE	NONE
T3A-35	146°34'13" - 18" PIPE	326°34'13" - 18" PIPE	NONE
T3A-36	146°34'13" - 18" PIPE	267°40'52" - 15" PIPE	45°56'12" - 8" PIPE
M 1-1	87°40'52" - 15" PIPE	267°40'52" - 15" PIPE	NONE
M 1-2	87°40'52" - 15" PIPE	359°07'58" - 15" PIPE	NONE
M 1-3	179°07'58" - 15" PIPE	359°07'58" - 15" PIPE	NONE
M 1-4	179°07'58" - 15" PIPE	269°06'46" - 15" PIPE	95°07'50" - 8" STUB
M 1-5	89°06'46" - 15" PIPE	269°06'46" - 15" PIPE	NONE
M 1-6	89°06'46" - 15" PIPE	334°11'48" - 12" PIPE	267°13'31" - 8" STUB
M 1-7	154°11'48" - 12" PIPE	269°03'00" - 12" PIPE	NONE
M 1-8	89°03'00" - 12" PIPE	359°10'46" - 12" PIPE	269°03'00" - 8" STUB
M 1-9	179°10'46" - 12" PIPE	287°51'04" - 12" PIPE	95°10'46" - 8" STUB
M 1-10	107°51'04" - 12" PIPE	268°46'56" - 12" PIPE	NONE
M 1-11	88°46'56" - 12" PIPE	306°20'46" - 12" PIPE	213°46'56" - 4" STUB
M 1-12	126°20'46" - 12" PIPE	327°06'21" - 12" PIPE	189°20'46" - 4" STUB
M 1-13	147°06'21" - 12" PIPE	332°33'48" - 12" PIPE	187°06'21" - 4" STUB
M 1-14	152°33'48" - 12" PIPE	334°10'17" - 12" PIPE	266°07'09" - 8" STUB 302°33'48" - 4" STUB 189°33'48" - 4" STUB
M 1-15	154°10'17" - 12" PIPE	343°51'56" - 12" PIPE	234°10'17" - 4" STUB
M 1-16	163°51'56" - 12" PIPE	350°55'54" - 12" PIPE	269°11'03" - 8" STUB
M 1-17	170°55'54" - 12" PIPE	350°55'54" - 12" PIPE	NONE
M 1-18	170°55'54" - 12" PIPE	359°03'00" - 12" PIPE	269°03'00" - 10" STUB 89°03'00" - 8" STUB
M 1-19	179°03'00" - 12" PIPE	NONE	269°03'00" - 8" STUB 89°03'00" - 8" STUB
1-1	225°56'12" - 8" PIPE	45°56'12" - 8" PIPE	NONE
1-2	225°56'12" - 8" PIPE	89°28'11" - 8" PIPE	NONE
1-3	269°26'11" - 8" PIPE	37°39'14" - 8" PIPE	NONE
1-4	217°39'14" - 8" PIPE	37°39'14" - 8" PIPE	NONE
1-5	217°39'14" - 8" PIPE	37°39'14" - 8" PIPE	NONE
1-6	217°39'14" - 8" PIPE	37°39'14" - 8" PIPE	NONE
1-7	217°39'14" - 8" PIPE	NONE	330°32'04" - 8" STUB 268°39'14" - 1 1/2" F.M. 120°03'27" - 8" STUB
FZ-1	268°58'51" - 8" PIPE	NONE	88°58'51" - 8" STUB
FY-1	227°39'23" - 8" PIPE	NONE	47°39'23" - 8" STUB



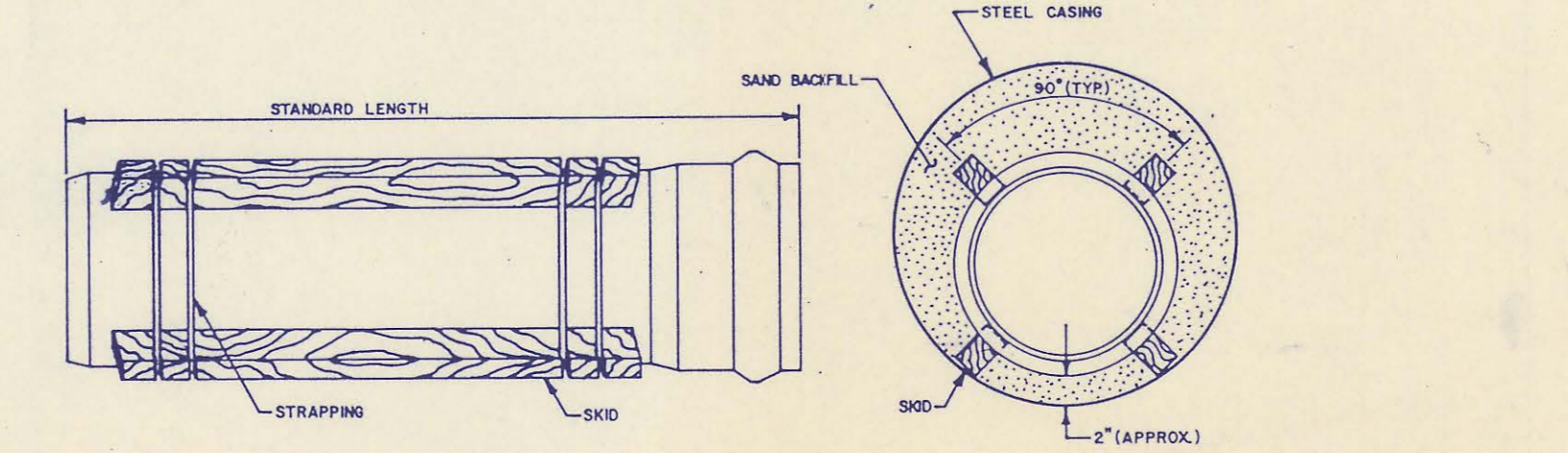
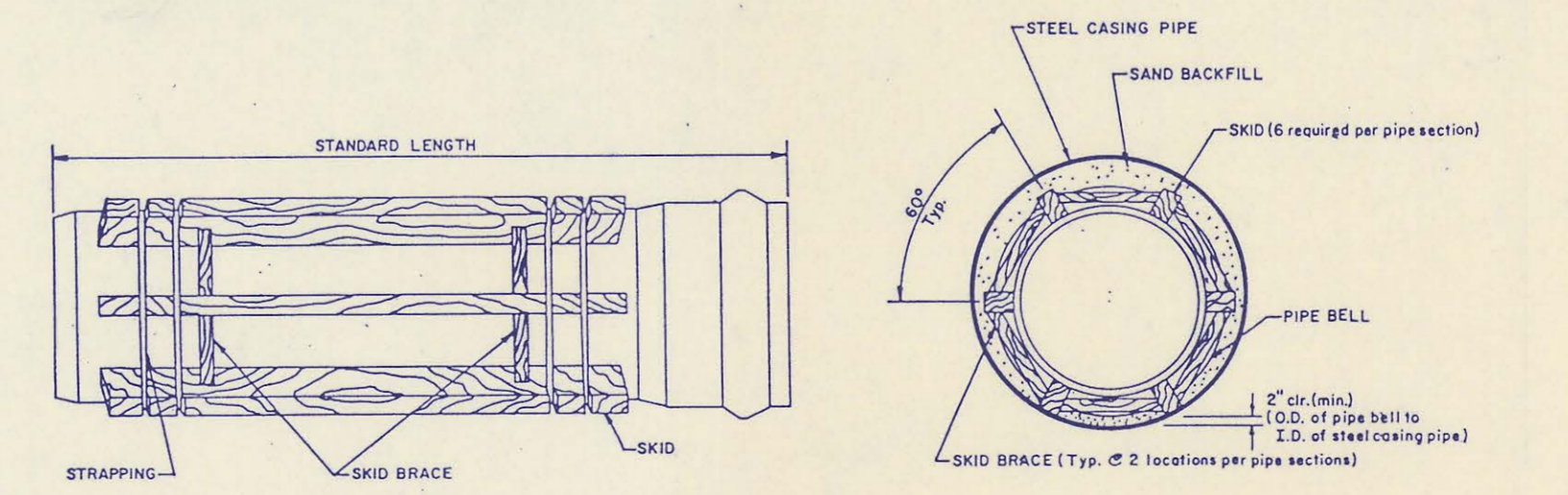
CONCRETE COLLAR DETAIL

FOR A PORTION OF INTERCEPTOR 3A SPRINGDALE LAKES 2ND ADDITION ALONG LAKEVIEW DRIVE
CONCRETE COLLARS SHALL BE PROVIDED AT ALL PIPE JOINTS BETWEEN STA. 30+55.78 AND STA. 33+85.80 (BACK) CLASS 1 CONCRETE MIX SHALL BE USED THROUGHOUT. SEE BENDING DIAGRAM AND VIEWS ABOVE FOR REINFORCING STEEL. CONCRETE COLLARS WILL NOT BE PAID FOR DIRECTLY, BUT SHALL BE CONSIDERED SUBSIDIARY TO THE PIPE REMOVAL AND REPLACEMENT ALONG LAKEVIEW DRIVE. SEE SHEET NO. 22.



MANHOLE MARKING DETAIL

NOTE: ONLY MANHOLES T3A-24 THRU T3A-29 AND FZ-1 SHALL BE MARKED PER THIS DETAIL (7 MANHOLES). MANHOLE MARKING IS NOT REQUIRED FOR OTHER MANHOLES. COSTS FOR MANHOLE MARKING PER THE ABOVE DETAIL SHALL BE CONSIDERED SUBSIDIARY TO THE PROJECT.



STEEL ENCASEMENT DETAIL (PIPE GREATER THAN 12")

STEEL ENCASEMENT DETAIL (PIPE 12" AND SMALLER)

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 SEEDED 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 @ 1 LB PER 1,000 S.F. PHOSPHORUS @ 2 LBS PER 1,000 S.F. POTASSIUM @ 1 LB 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.

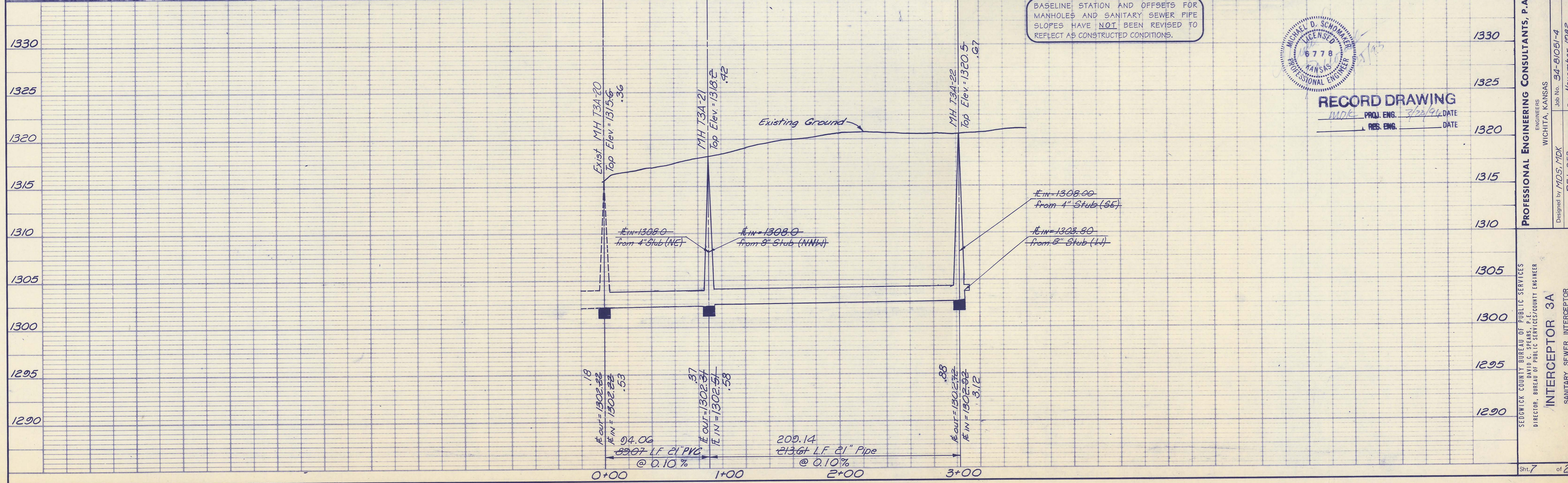
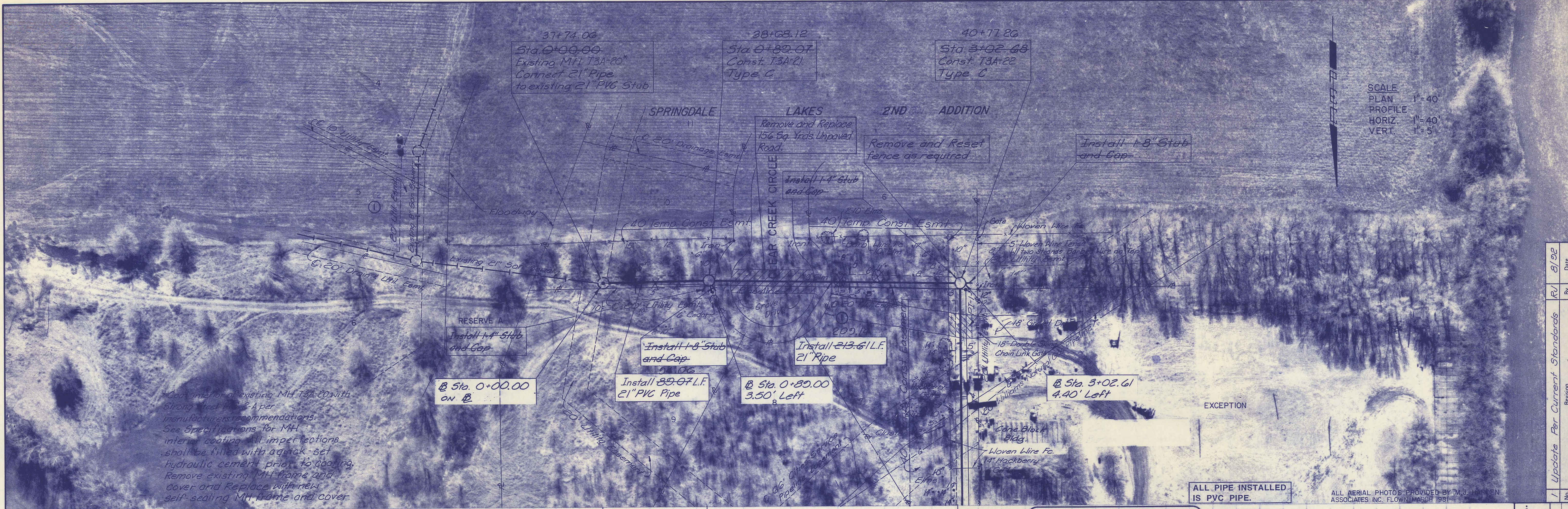
TYPE OF GRASS	PLANTING TIME	SEED APPLICATION	FERTILIZER*
BLUEGRASS (WINDSOR, KENTUCKY, ETC.)	FALL	3 LBS/1,000 S.F.	8 LBS/1,000 S.F.*
TALL FESCUE (K-31)	SPRING OR FALL	8 LBS/1,000 S.F.	8 LBS/1,000 S.F.*
BERMUDA	SPRING	SPRIGS OR SOD (SEE SPECIFICATIONS)	8 LBS/1,000 S.F.*
ZOYSIA	SPRING	SPRIGS OR SOD (SEE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

*FERTILIZER APPLICATION RATES ARE BASED ON ACTUAL LBS OF PHOSPHOROUS APPLIED PER 1,000 S.F. FERTILIZER SHALL BE 12-24-12 OR OTHER HIGH PHOSPHOROUS TYPE AS APPROVED BY THE ENGINEER. (EXAMPLE: TO APPLY 2 LBS OF PHOSPHOROUS USING A 12-24-12 FERTILIZER, 8 LBS OF FERTILIZER WOULD BE REQUIRED.)

RECORD DRAWING
MOR PROJ. ENG. 3/22/96 DATE
RES. ENG. DATE



1	Update Per Current Standards	RJ	8/02
No.	Revision	By	Date
SEDCWICK COUNTY BUREAU OF PUBLIC SERVICES DAVID C. SPEARS, P.E. DIRECTOR, BUREAU OF PUBLIC SERVICES/COUNTY ENGINEER			
MISCELLANEOUS DETAILS			
SANITARY SEWER INTERCEPTOR MINNEHA JOINT SEWER DISTRICT			
PROFESSIONAL ENGINEERING CONSULTANTS, P.A.			
ENGINEERS WICHITA, KANSAS			
Designed by	MDS, MDK	Job No	21051-A
Drawn by	SM	Date	Nov. 1982
		Sht.	6 of 23



Update Per Current Standards
By: RFJ
Date: 8/92

1 Update Per Current Standards
By: RFJ, DEP
Date: November, 1982

WICHITA, KANSAS
Job No. 94-81051-4
Date November, 1982

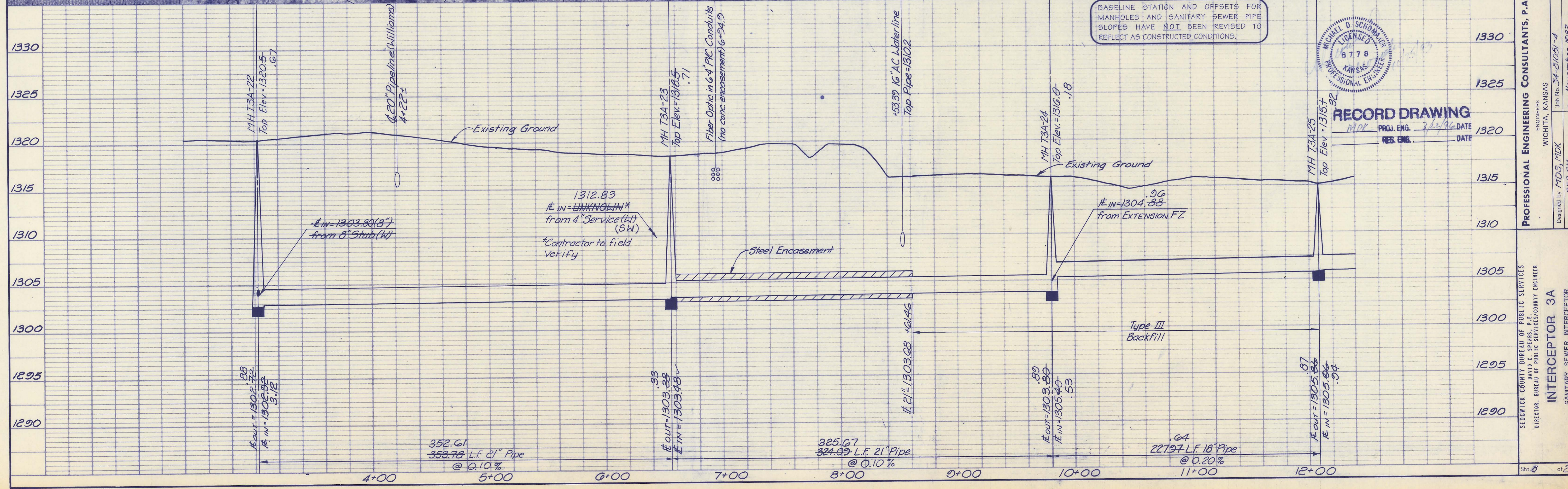
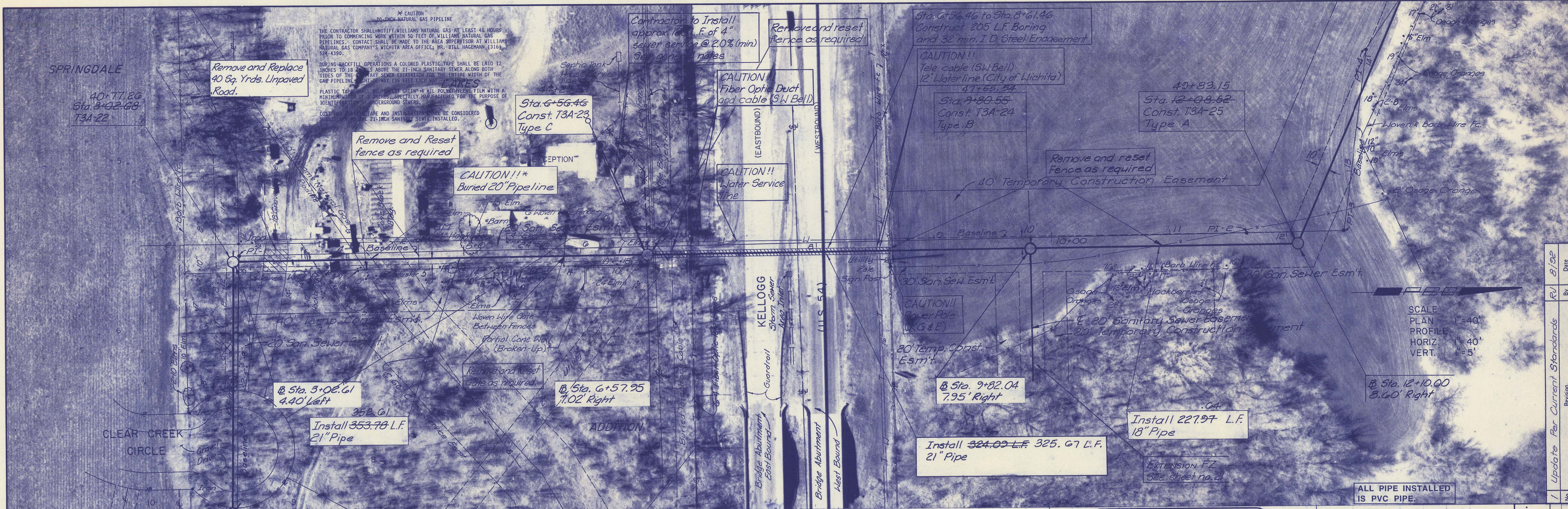
DESIGNED BY: MDS, MDK
DRAWN BY: RFJ, DEP

SEDIWICK COUNTY BUREAU OF PUBLIC SERVICES
DIRECTOR, BUREAU OF PUBLIC SERVICES/COUNTY ENGINEER

INTERCEPTOR 3A
SANITARY SEWER INTERCEPTOR
MINNEHA JOINT SEWER DISTRICT

PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
WICHITA, KANSAS

Sht. 7 of 23



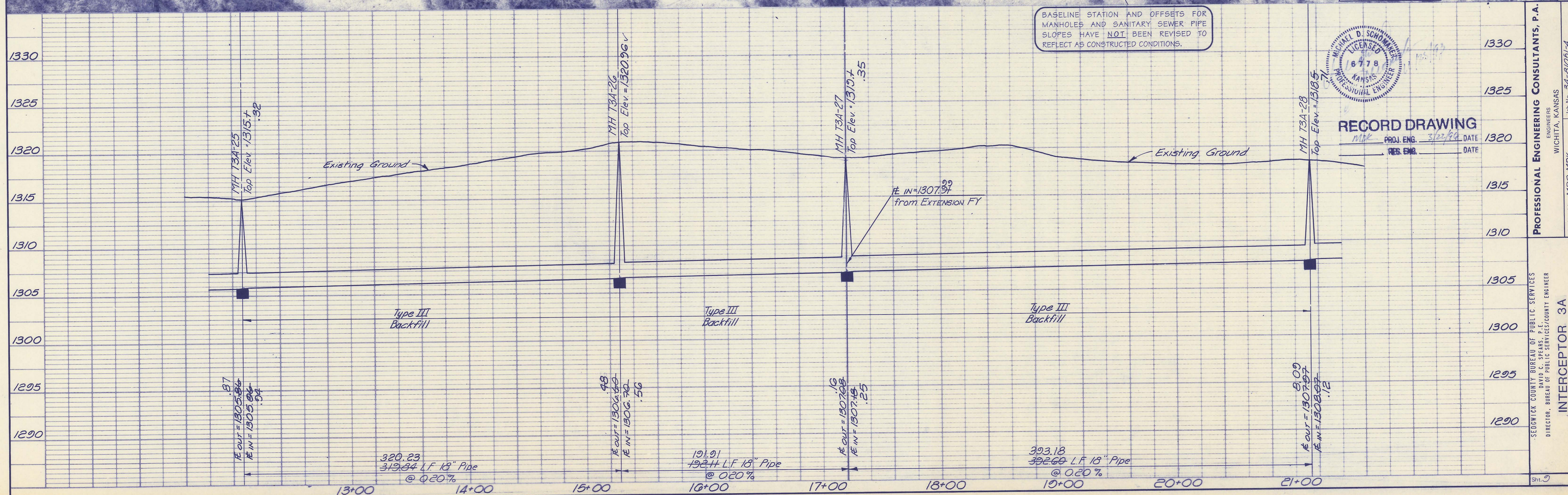
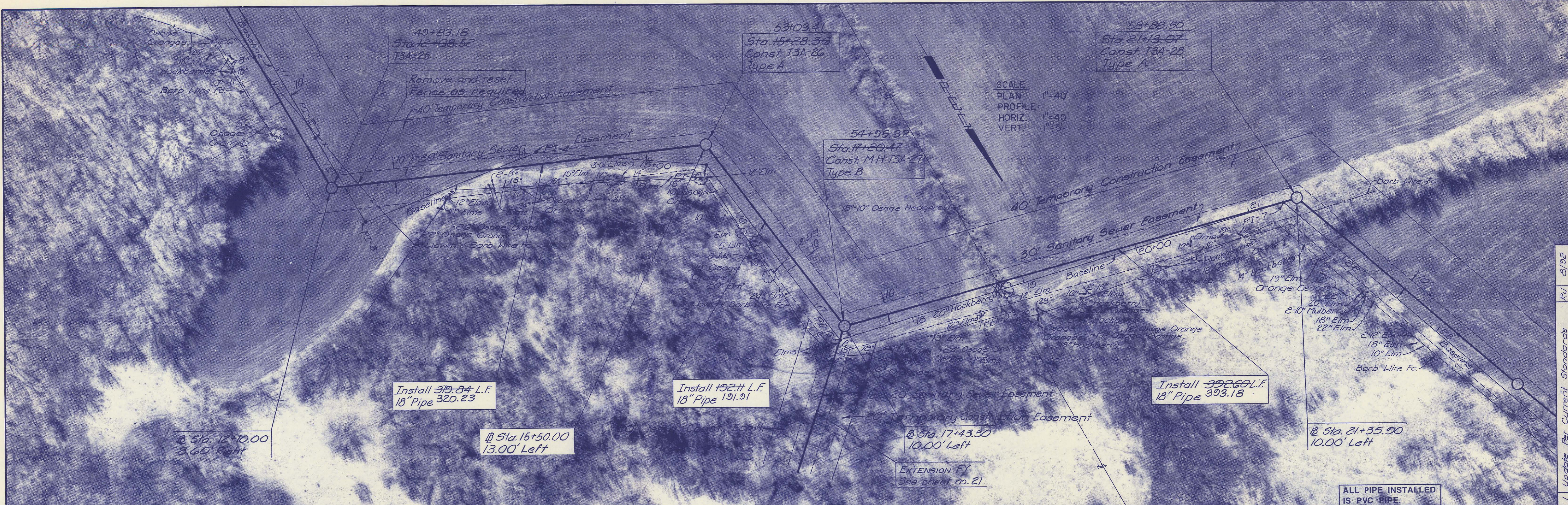
RECORD DRAWING
 M.D.K. PROJ. ENG. 3/22/96 DATE
 RES. ENG. DATE

BASILINE STATION AND OFFSETS FOR
 MANHOLES AND SANITARY SEWER PIPE
 SLOPES HAVE NOT BEEN REVISED TO
 REFLECT AS CONSTRUCTED CONDITIONS.

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

ALL PIPE INSTALLED
 IS PVC PIPE.

1	Update Per Current Standards	RU	8/92
		By	Date
		No.	Revision
		Date November, 1992	
		Job No. 34-81051-4	
		WICHITA, KANSAS	
		ENGINEER	
		PROFESSIONAL ENGINEERING CONSULTANTS, P.A.	
		SANTARY SEWER INTERCEPTOR	
		MINNEHA JOINT SEWER DISTRICT	
		INTERCEPTOR 3A	
		DESIGNED BY M.D.S., M.D.K.	
		DRAWN BY DEP, SM	
		SIOUX COUNTY BUREAU OF PUBLIC SERVICES	
		DIRECTOR, BUREAU OF PUBLIC SERVICES/COUNTY ENGINEER	
		SHEET 8 OF 23	

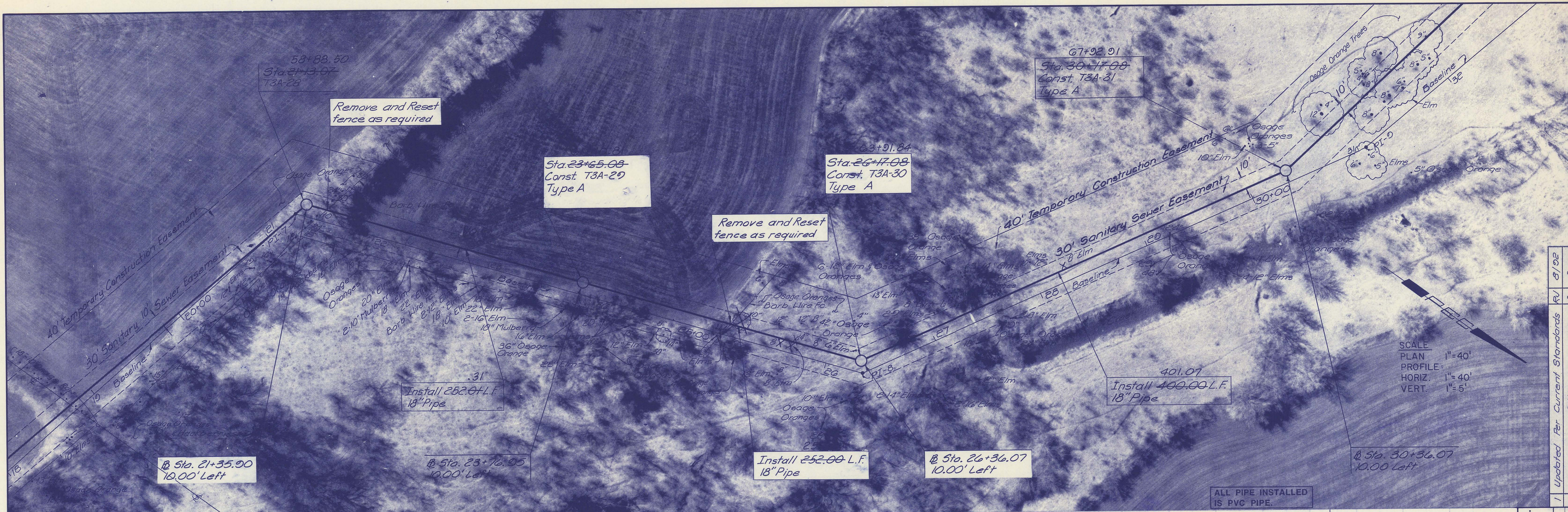


RECORD DRAWING

No.	1	Update Per Current Standards	RU	8/92	Date
Revision					

PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
 ENGINEERS
 WICHITA, KANSAS
 Job No. 34-81051-4
 Date November, 1992

SEDGWICK COUNTY BUREAU OF PUBLIC SERVICES
 DIRECTOR, BUREAU OF PUBLIC SERVICES/COUNTY ENGINEER
INTERCEPTOR 3A
 SANITARY SEWER INTERCEPTOR
 MINNEHA JOINT SEWER DISTRICT

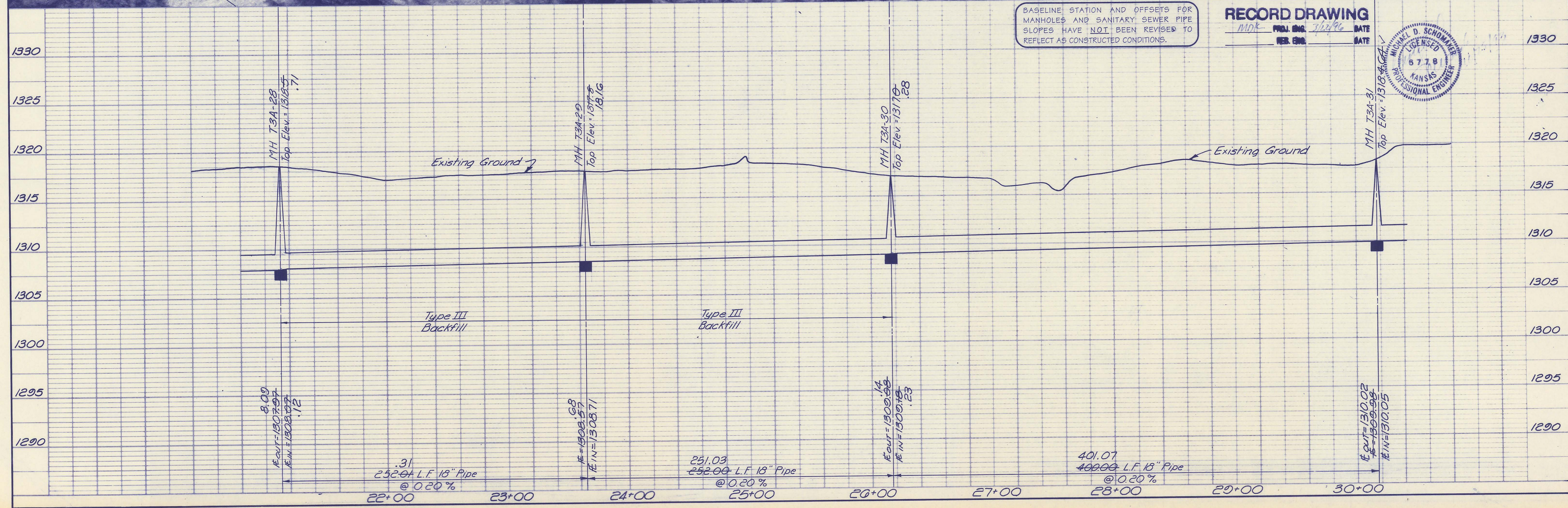


SCALE
 PLAN 1"=40'
 PROFILE 1"=40'
 HORIZ. 1"=40'
 VERT. 1"=5'

ALL PIPE INSTALLED IS PVC PIPE.

BASILINE STATION AND OFFSETS FOR MANHOLES AND SANITARY SEWER PIPE SLOPES HAVE NOT BEEN REVISED TO REFLECT AS CONSTRUCTED CONDITIONS.

RECORD DRAWING
 MDK - PROJ. ENG. 7/29/96 DATE
 REL. ENG. DATE



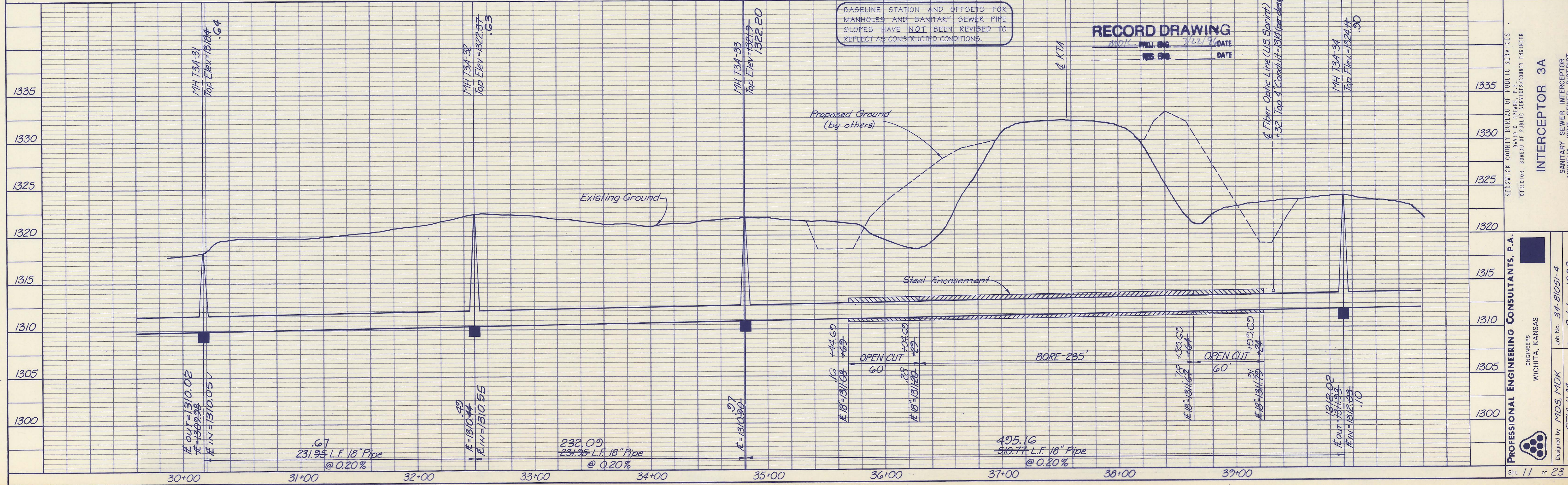
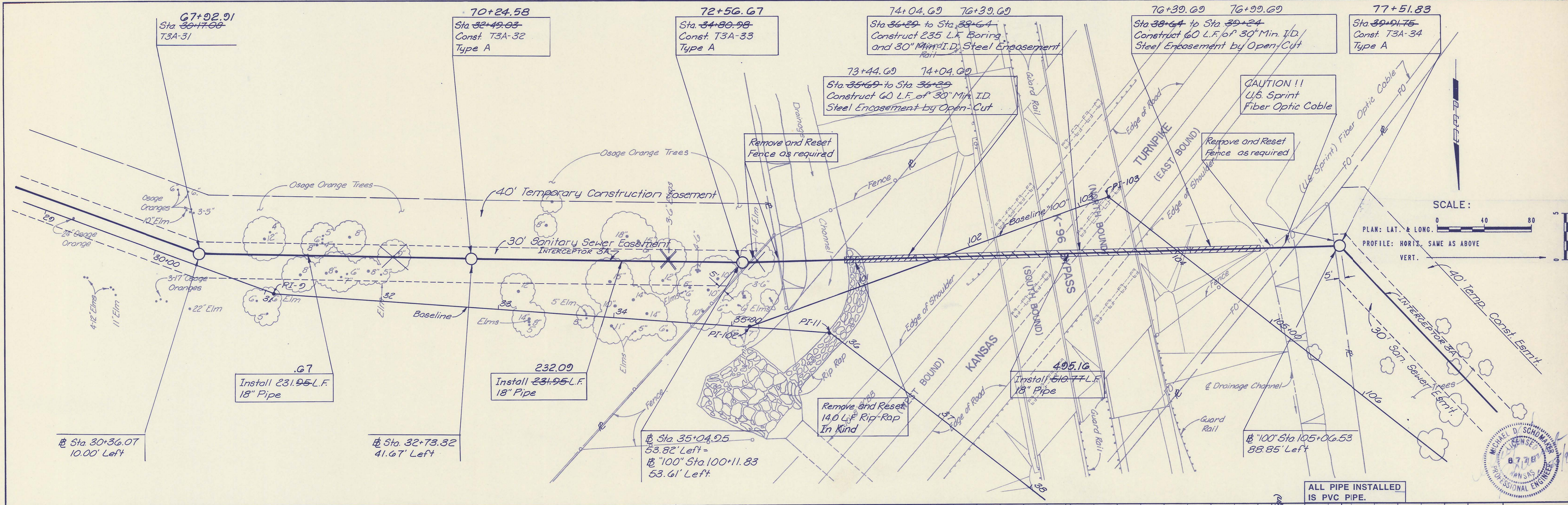
1	Updated Per Current Standards	RV	8/02
		By	Date
		Revision	

PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
 ENGINEERS
 WICHITA, KANSAS
 Job No. 34-81051-4
 Date November, 1992
 Designed by MDS, MDK
 Drawn by DEP, SM

SEDGWICK COUNTY BUREAU OF PUBLIC SERVICES
 DIRECTOR, BUREAU OF PUBLIC SERVICES/COUNTY ENGINEER
INTERCEPTOR 3A
 SANITARY SEWER INTERCEPTOR
 MINNEHA JOINT SEWER DISTRICT
 SH. 10 of 23

PLAN	SURVEYED	DATE
	NOTE BOOK	
	ALIGNMENT CHECKED	
	RT. OF WAY CHECKED	
	NO.	

PROFILE	SURVEYED	DATE
	NOTE BOOK	
	FLIGHT CHECKED	
	B. M.'S. NOTED	
	STRUCTURE NOTATIONS CHECKED	
	NO.	



RECORD DRAWING

DATE: 7/22/92

DATE: 7/22/92

INTERCEPTOR 3A

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

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

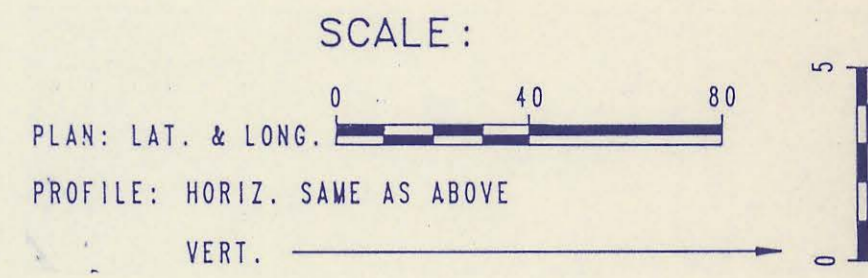
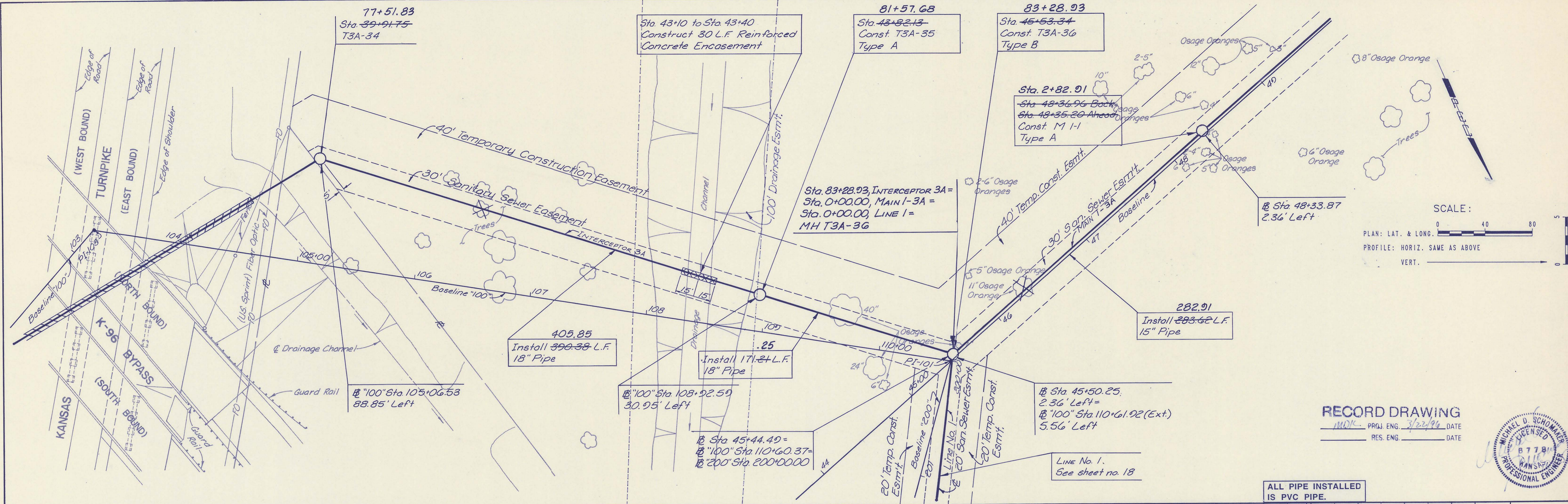
Job No. 34-81051-4
 Date October, 1992

Designed by MDS, MDK
 Drawn by STM, JLM

Sheet 11 of 23

PLAN
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 NOTE BOOK ALIGNMENT CHECKED, RT. OF WAY CHECKED, NO.

PROFILE
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 NOTE BOOK STRUCTURE NOTATIONS CHECKED, NO.

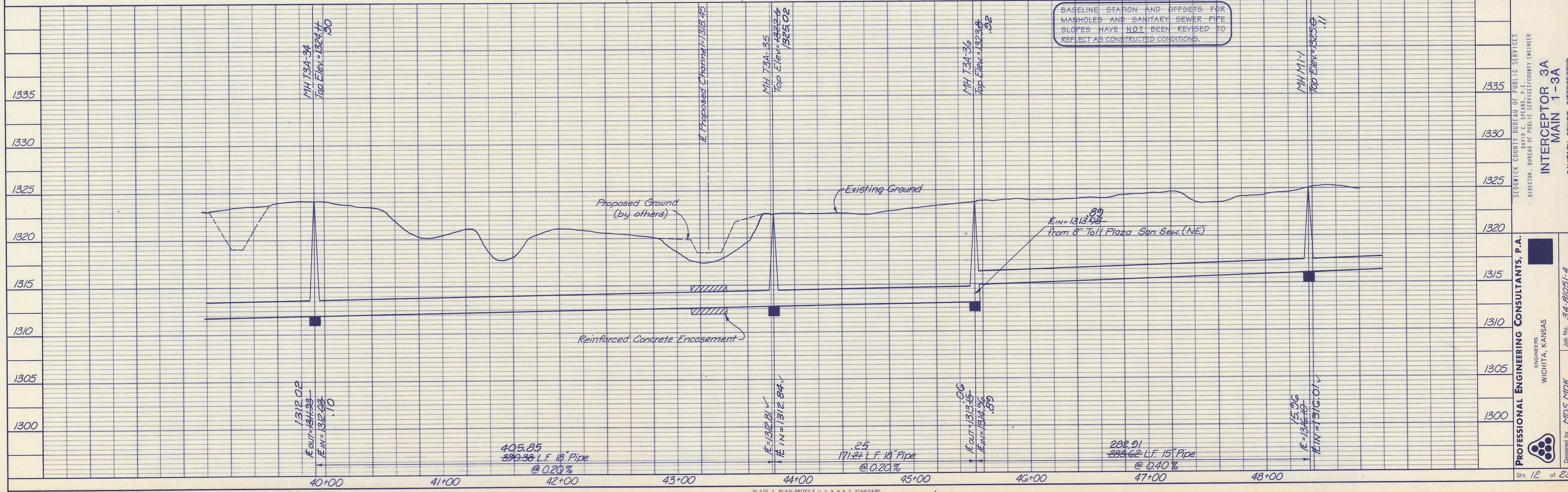


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 MDK PROJ. ENG. 3/22/96 DATE
 RES. ENG. DATE



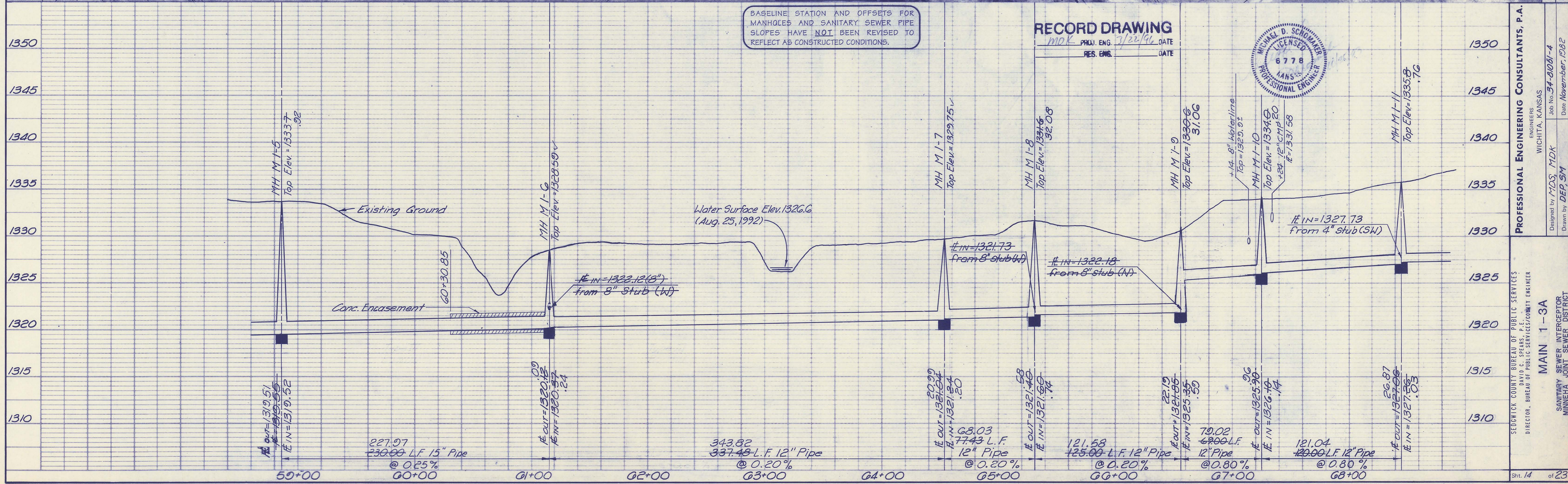
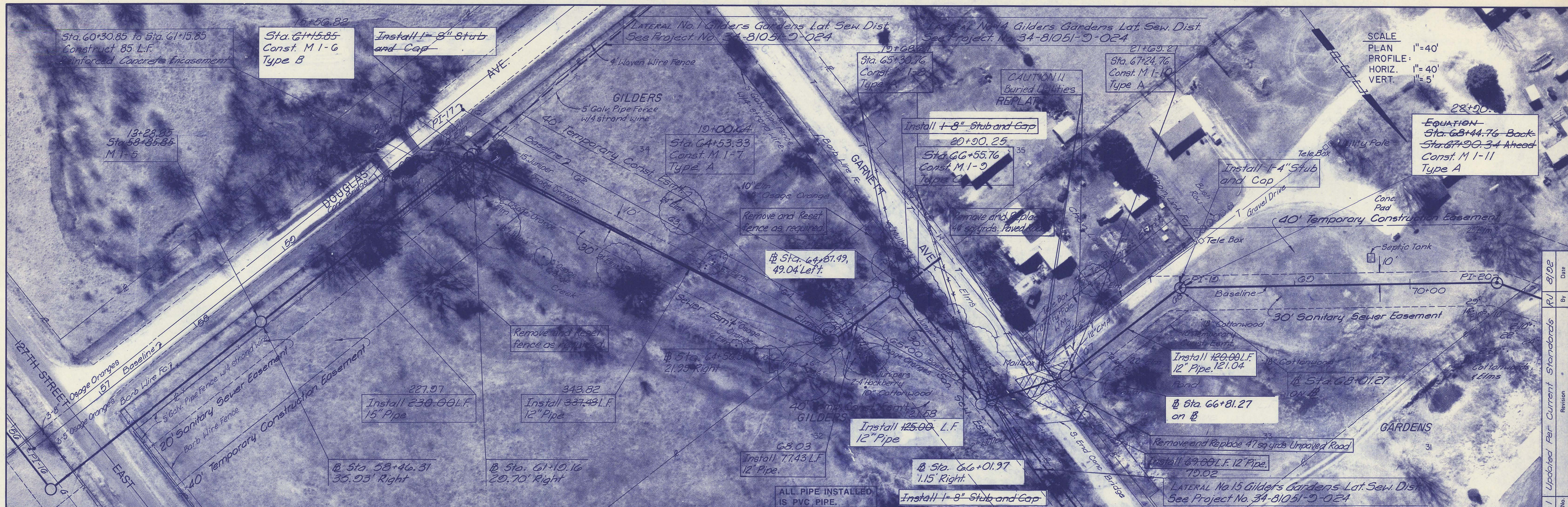
BASILINE STATION AND OFFSETS FOR MANHOLES AND SANITARY SEWER PIPE SLOPES HAVE NOT BEEN REVISED TO REFLECT AS CONSTRUCTED CONDITIONS.

ALL PIPE INSTALLED IS PVC PIPE.



SEDGWICK COUNTY BUREAU OF PUBLIC SERVICES
 DIRECTOR, BUREAU OF PUBLIC SERVICES/COURTY ENGINEER
INTERCEPTOR 3A
 MAIN 1-3A
 SANITARY SEWER INTERCEPTOR
 MINNEHA, JOINT SEWER DISTRICT

PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
 ENGINEERS
 WICHITA, KANSAS
 Job No. 34-81051-4
 Date October, 1992
 Drawn by STY, JLM



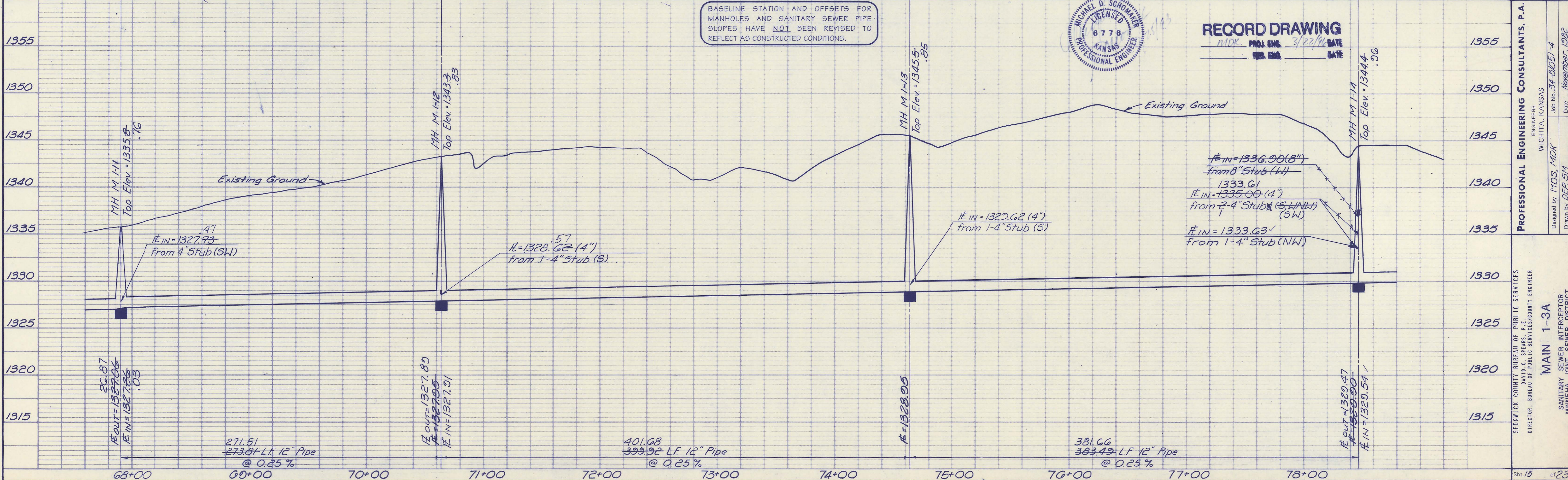
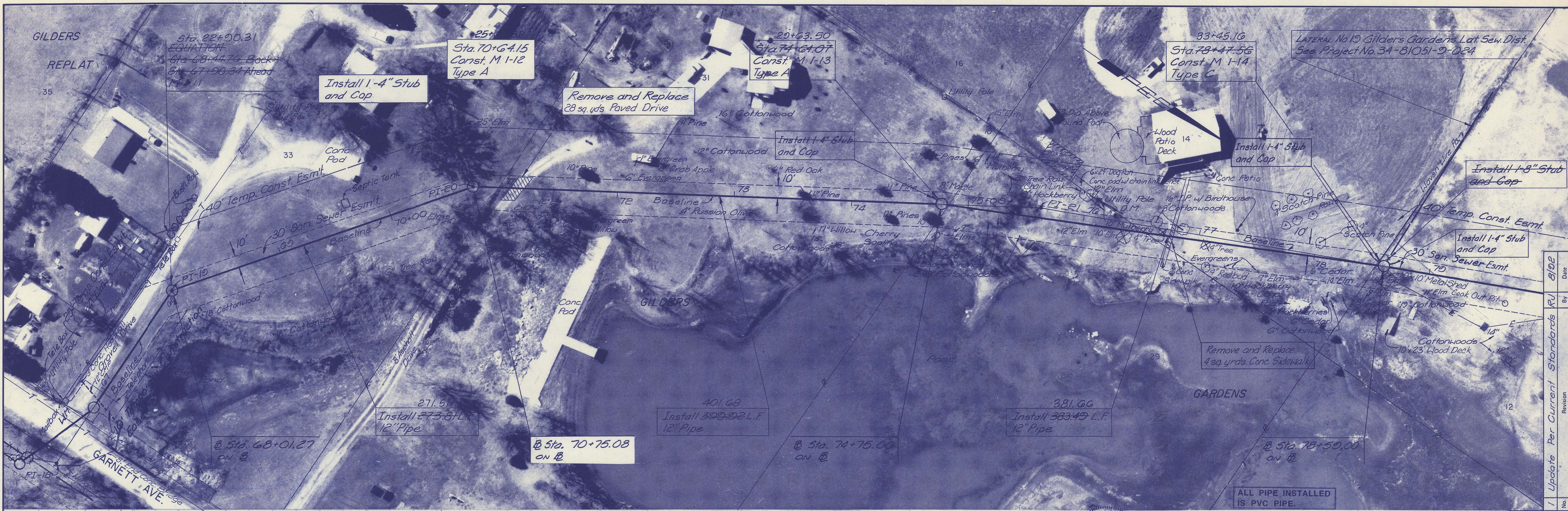
RECORD DRAWING

MDK PROJ. ENG. 3/22/96 DATE
RES. ENG. DATE



BASELINE STATION AND OFFSETS FOR MANHOLES AND SANITARY SEWER PIPE SLOPES HAVE NOT BEEN REVISED TO REFLECT AS CONSTRUCTED CONDITIONS.

PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
WICHITA, KANSAS
Job No. 34-81051-4
Date November, 1992
Designed by MDK
Drawn by DEP-SY
SANTARY SEWER INTERCEPTOR
MINNEHA JOINT SEWER DISTRICT
SHEET 14 OF 23

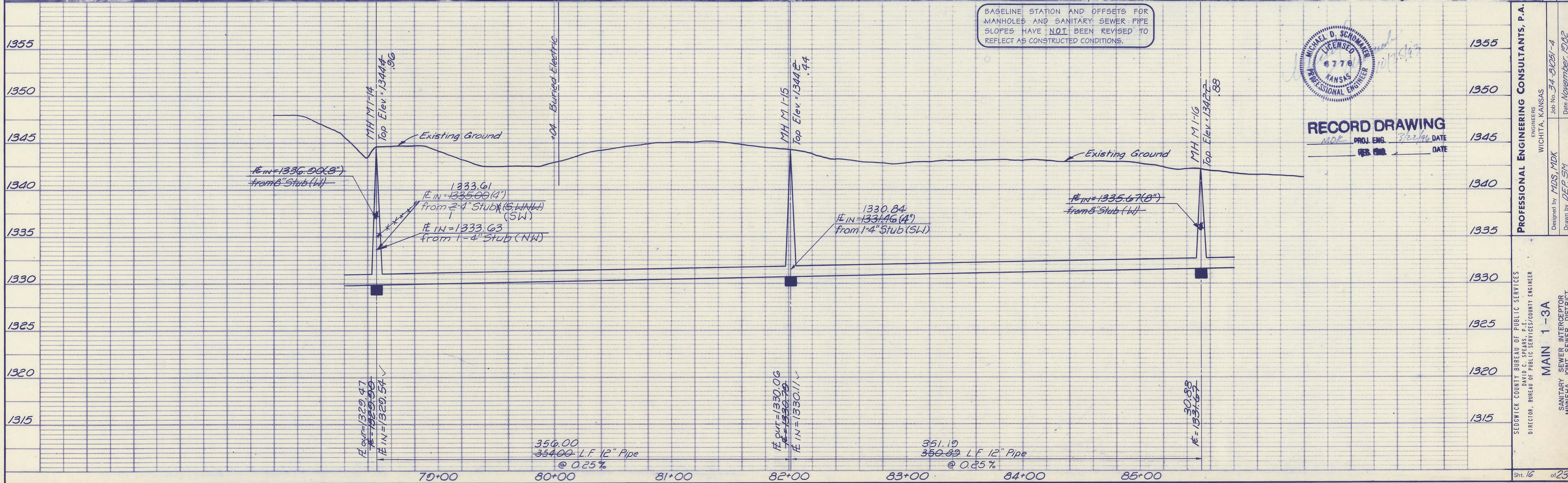


No. 1 Update Per Current Standards RU 8102
 By
 Date November, 1982
 PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
 ENGINEERS
 WICHITA, KANSAS
 Designed by MDS, MDK
 Drawn by DEP, SM
 SEDGWICK COUNTY BUREAU OF PUBLIC SERVICES
 DIRECTOR, BUREAU OF PUBLIC SERVICES/COUNTY ENGINEER
 MAIN 1-3A
 SANITARY SEWER INTERCEPTOR
 MINNEHA JOINT SEWER DISTRICT
 Sh. 15 of 23



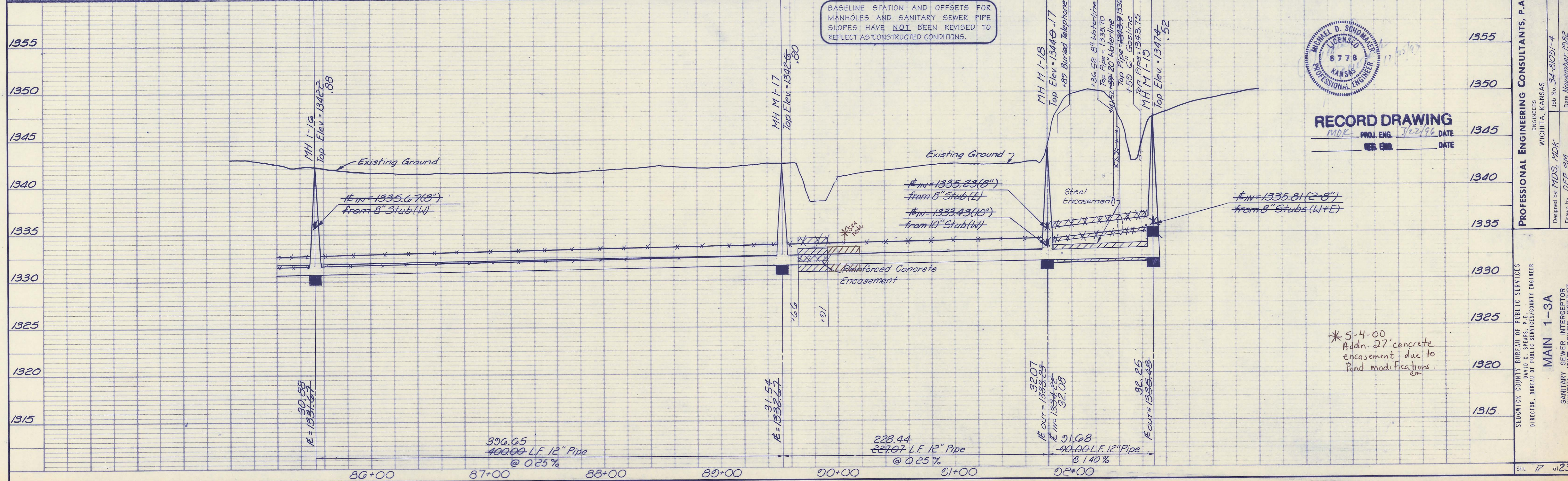
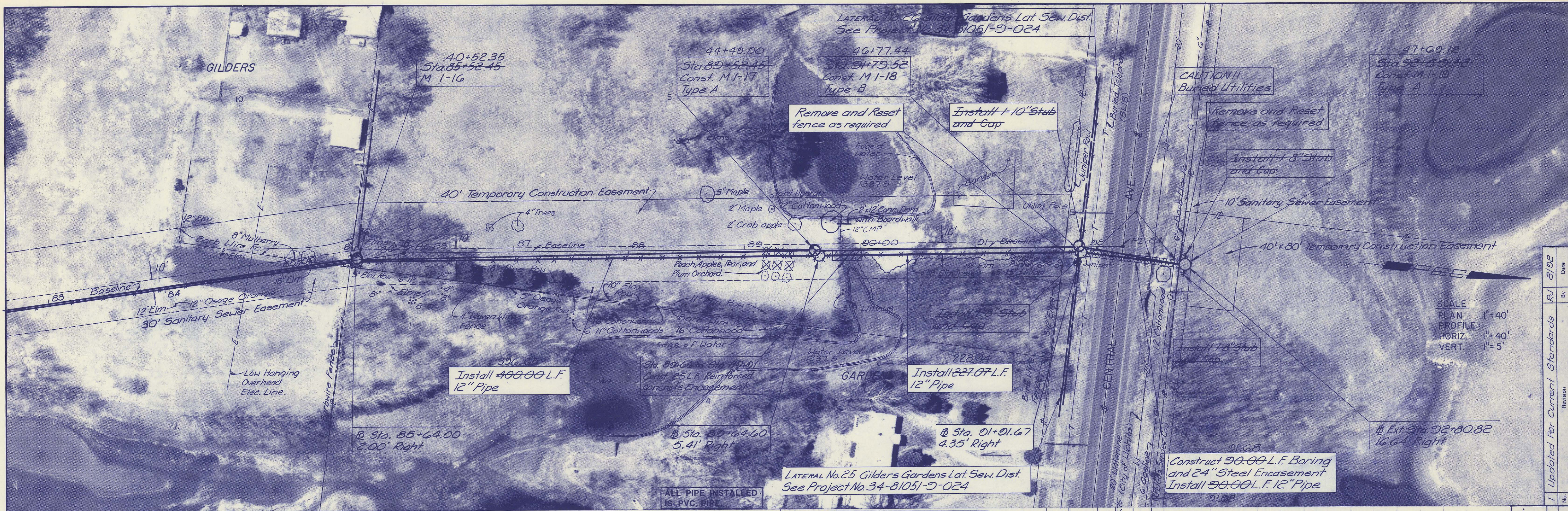
SCALE
 PLAN 1"=40'
 PROFILE 1"=40'
 HORIZ. 1"=40'
 VERT. 1"=5'

BASILINE STATION AND OFFSETS FOR
 MANHOLES AND SANITARY SEWER PIPE
 SLOPES HAVE NOT BEEN REVISED TO
 REFLECT AS CONSTRUCTED CONDITIONS.



RECORD DRAWING

1 Updated Per Current Standards RU B12E
 No. By Date
 1 Updated Per Current Standards RU B12E
 No. By Date
 PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
 ENGINEERS
 WICHITA, KANSAS
 Job No. 34-0051-4
 Date November, 1982
 Designed by MDS, MDK
 Drawn by DEP SM
 SEDGWICK COUNTY BUREAU OF PUBLIC SERVICES
 DIRECTOR, BUREAU OF PUBLIC SERVICES/COUNTY ENGINEER
 MAIN 1-3A
 SANITARY SEWER INTERCEPTOR
 MINNEHA JOINT SEWER DISTRICT
 Sht. 16 of 23



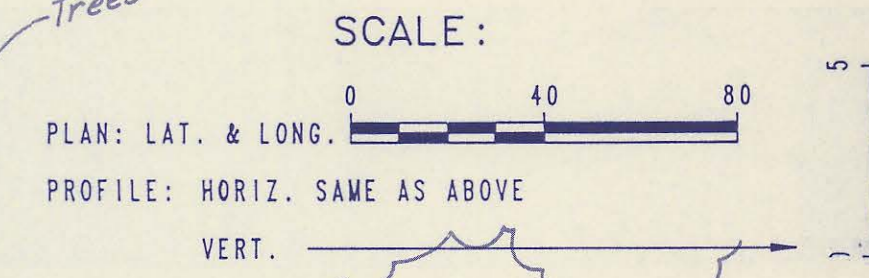
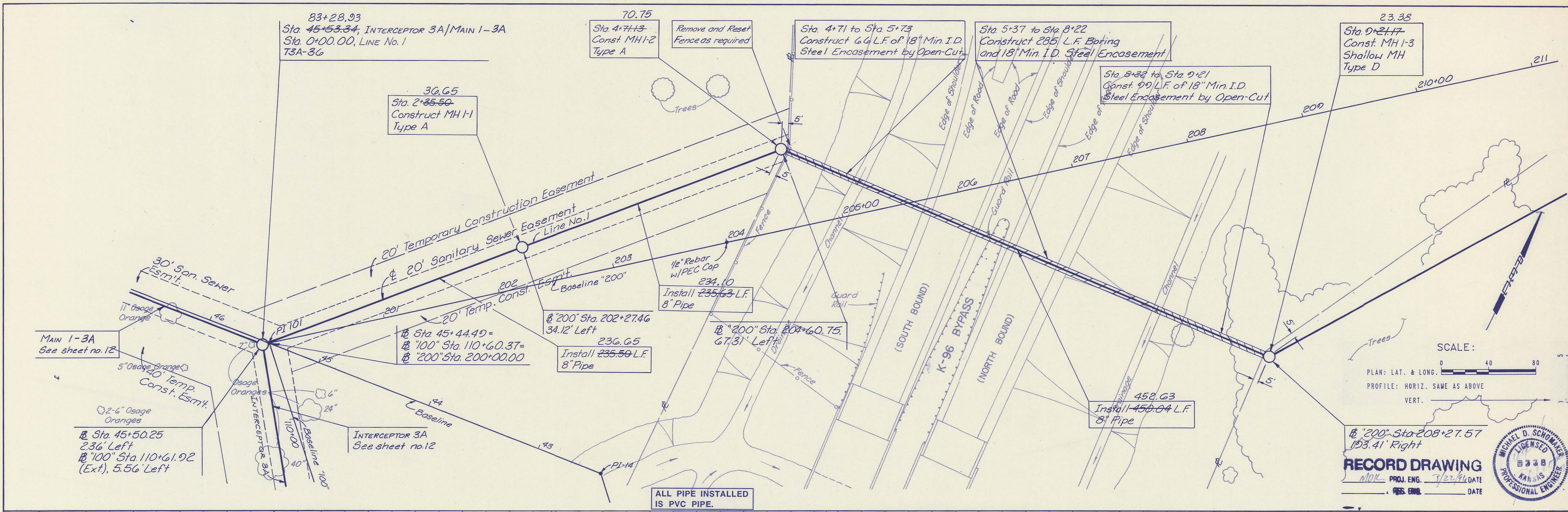
1	Updated Per Current Standards	RU	By	Date
				8/02

PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
 ENGINEERS
 WICHITA, KANSAS
 Job No. 34-81051-4
 Date November, 1982

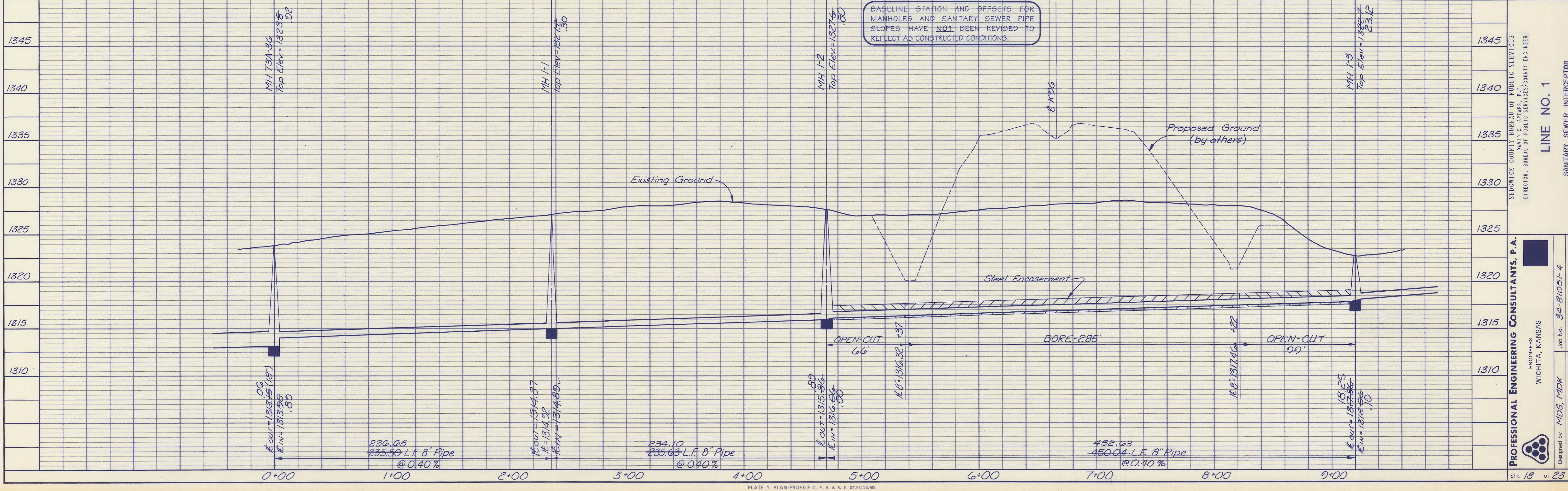
SEOCHICK COUNTY BUREAU OF PUBLIC SERVICES
 DIRECTOR, BUREAU OF PUBLIC SERVICES/COUNTY ENGINEER
 DAVID C. SPEARS, P.E.
 MAIN 1-3A
 SANITARY SEWER INTERCEPTOR
 MINNETONKA JOINT SEWER DISTRICT
 Sht. 17 of 23

DATE	
BY	
SURVEYED	
PLOTTED	
NOTE BOOK	
ALIGNMENT CHECKED	
RT. OF WAY CHECKED	
NO.	

DATE	
BY	
SURVEYED	
PLOTTED	
NOTE BOOK	
GRADES CHECKED	
B. M. S. NOTED	
STRUCTURE NOTATIONS (PK)	
NO.	



RECORD DRAWING
MDK PRJ. ENG. 3/22/94 DATE
RES. ENR. DATE



LINE NO. 1
SANITARY SEWER INTERCEPTOR
MINNEHA JOINT SEWER DISTRICT

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

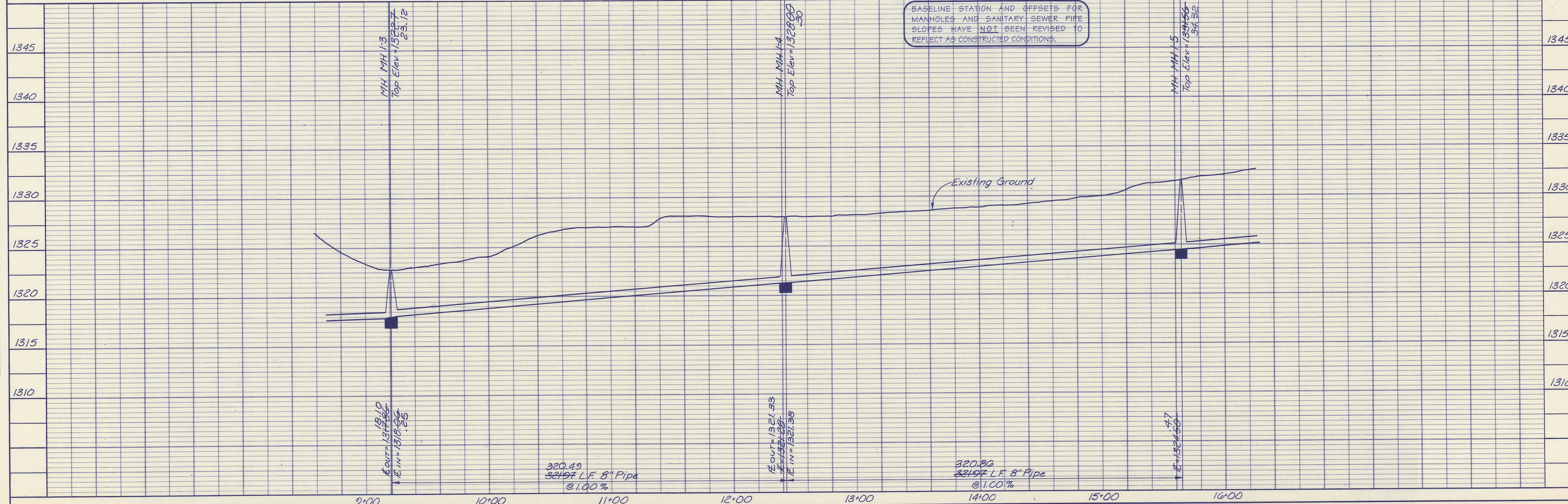
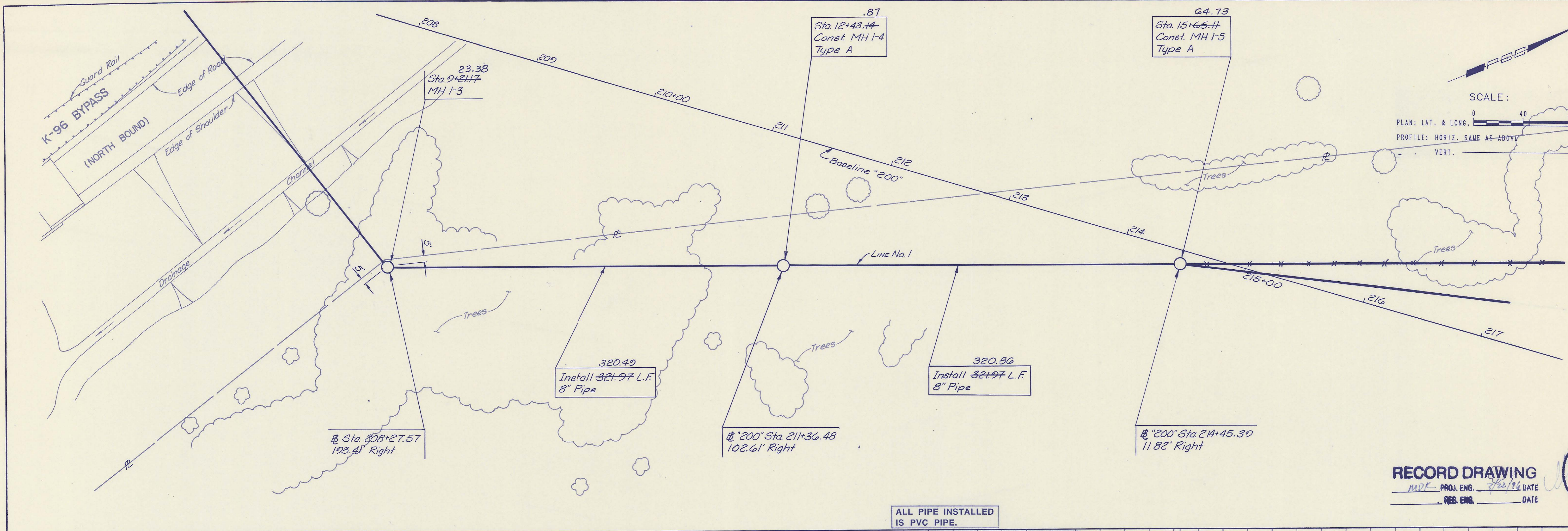
SEDCWICK COUNTY BUREAU OF PUBLIC SERVICES
DIRECTOR, BUREAU OF PUBLIC SERVICES/COUNTY ENGINEER
DAVID C. SPEARS, P.E.

Job No. 34-81051-4
Date October, 1992

Designed by MDS, MDK
Drawn by 577M

PLAN	SURVEYED	DATE
	ALIGNED	
	NOTED	
	BY	
	NO.	
	DATE	

PROFILE	SURVEYED	DATE
	PLOTTED	
	BY	
	NO.	
	DATE	



RECORD DRAWING
 PROJ. ENG. DATE
 RES. ENG. DATE



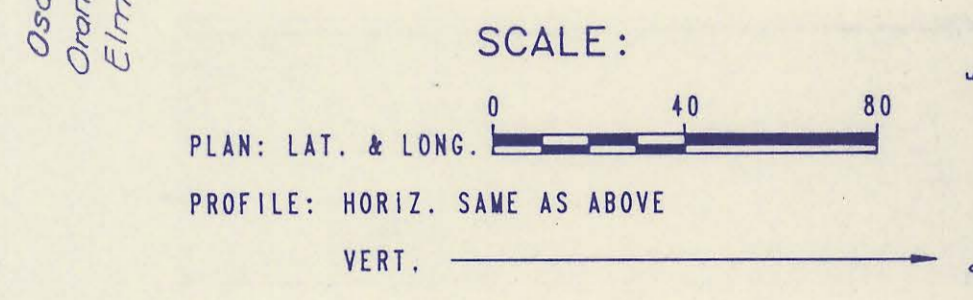
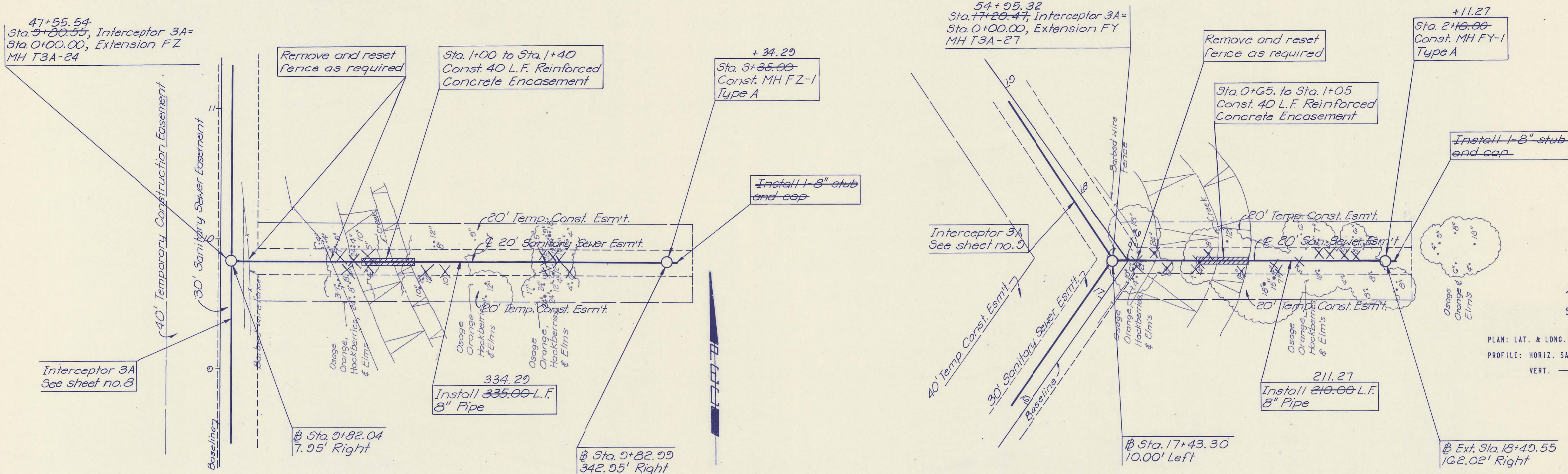
PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
 ENGINEERS
 WICHITA, KANSAS
 Job No. 34-81051-4
 Date October, 1992
 Designed by MDS, MDK
 Drawn by STM

SEDGWICK COUNTY BUREAU OF PUBLIC SERVICES
 DIRECTOR, BUREAU OF PUBLIC SERVICES/COUNTY ENGINEER

LINE NO. 1
 SANITARY SEWER INTERCEPTOR
 MINNEHA JOINT SEWER DISTRICT

PLAN
 SURVEYED, PLOTTED, CHECKED, BY: DATE
 NOTE BOOK NO. OF WAY CHECKED, NO.

PROFILE
 SURVEYED, PLOTTED, GRADES CHECKED, STRUCTURE NOTATIONS CHKO, BY: DATE
 NOTE BOOK NO. DATE

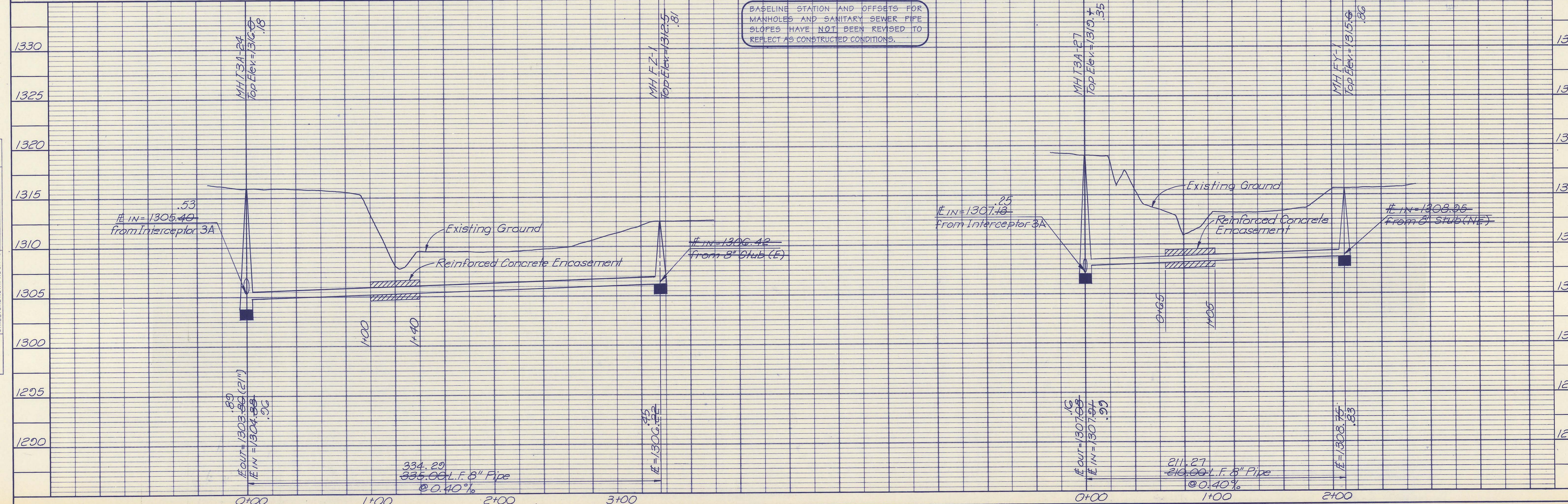


RECORD DRAWING
 MDK. PROJ. ENG. 7/22/96 DATE
 RES. ENG. DATE



EXTENSION FZ

EXTENSION FY



EXTENSION FZ AND FY
 SANITARY SEWER INTERCEPTOR
 MINNEHA JOINT SEWER DISTRICT
 SDCWICK COUNTY BUREAU OF PUBLIC SERVICES
 DIRECTOR: DAVID C. SPARS, P.E.
 BUREAU OF PUBLIC SERVICES/COUNTY ENGINEER
 PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
 ENGINEERS
 WICHITA, KANSAS
 Job No. 34-0214-1
 Date November, 1992
 Drawn by TJS
 Sht. 21 of 23

DATE	
BY	
SURVEYED	
NOTED	
ALIGNMENT CHECKED	
RT. OF WAY CHECKED	
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DATE	
BY	
SURVEYED	
NOTED	
ALIGNMENT CHECKED	
RT. OF WAY CHECKED	
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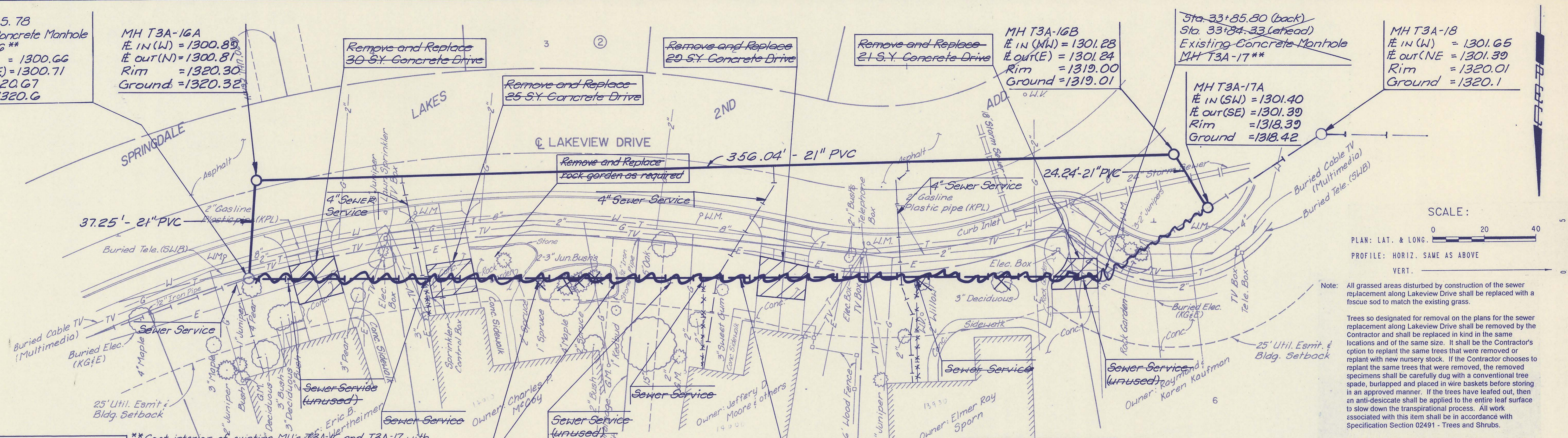
Sta. 30+55.76
Existing Concrete Manhole
MH T3A-16**
I.E. IN (S) = 1300.66
I.E. out (ENE) = 1300.71
Rim = 1320.67
Ground = 1320.6

MH T3A-16A
I.E. IN (W) = 1300.83
I.E. out (N) = 1300.81
Rim = 1320.30
Ground = 1320.32

MH T3A-16B
I.E. IN (NW) = 1301.28
I.E. out (E) = 1301.24
Rim = 1319.00
Ground = 1319.01

Sta. 33+85.80 (back)
Sta. 33+84.33 (ahead)
Existing Concrete Manhole
MH T3A-17**
MH T3A-17A
I.E. IN (SW) = 1301.40
I.E. out (SE) = 1301.39
Rim = 1318.39
Ground = 1318.42

MH T3A-18
I.E. IN (W) = 1301.65
I.E. out (NE) = 1301.39
Rim = 1320.01
Ground = 1320.1



SEWER SERVICE CONNECTIONS
Sewer Service Line Locations Assumed. Contractor to verify and reconnect as required. Contractor shall also maintain sewage flows from the existing services during construction. Flows generated upstream of MH T3A-17 shall be bypassed by pumping or other approved means during construction.

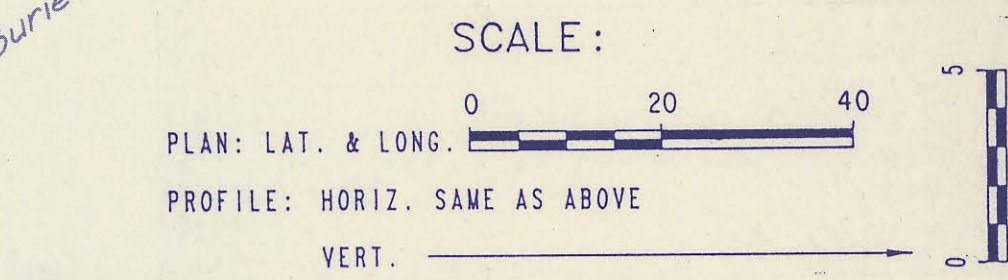
** Coat interior of existing MHs T3A-16 and T3A-17 with Strong Steel MS 2-A per manufacturers recommendations. See Specifications for MH interior coating. All imperfections shall be filled with a quick-set hydraulic cement prior to coating. Remove exist. MH Frame and Cover and replace with new self-sealing MH Frame and Cover.

Remove and Reset Stone Wall as required

Remove and Replace 33002 LF 21" PVC Pipe with Concrete Collars *

C.A.U.T.I.O.N
Buried Utilities
House service lines
Gas - KPL Gas Service
Water - City of Wichita
Power - K&E
Telephone - S.W. Bell
TV - Multimedia

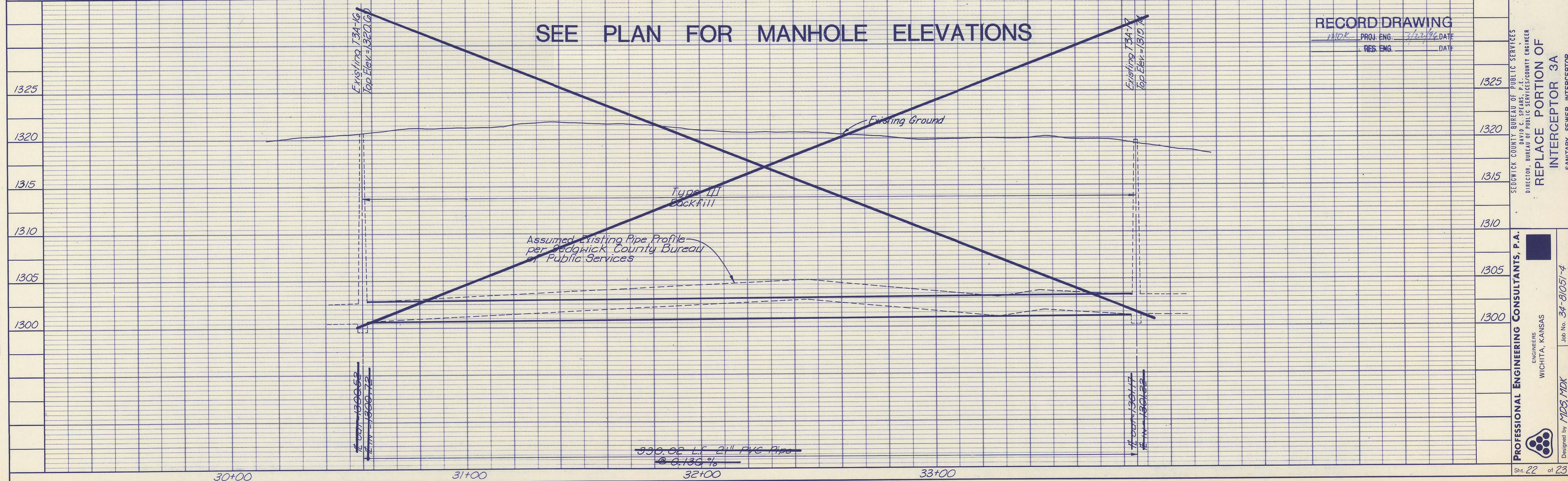
Note:
The contractor shall utilize sheeting/shoring for constructing the sanitary sewer, in accordance with OSHA requirements. The shoring shall be removed 8 feet from finished grade, with the shoring below 8 feet to remain in place. All costs to perform this work shall be considered subsidiary to the lump sum price bid for "Replace a Portion of Interceptor 3A".



Note: All grassed areas disturbed by construction of the sewer replacement along Lakeview Drive shall be replaced with a fascue sod to match the existing grass.
Trees so designated for removal on the plans for the sewer replacement along Lakeview Drive shall be removed by the Contractor and shall be replaced in kind in the same locations and of the same size. It shall be the Contractor's option to replant the same trees that were removed or replant with new nursery stock. If the Contractor chooses to replant the same trees that were removed, the removed specimens shall be carefully dug with a conventional tree spade, burlapped and placed in wire baskets before storing in an approved manner. If the trees have leafed out, then an anti-desiccate shall be applied to the entire leaf surface to slow down the transpirational process. All work associated with this item shall be in accordance with Specification Section 02491 - Trees and Shrubs.
All sodding, removal and replacement of trees and shrubs, and any site clearing and restoration items associated with the sewer replacement along Lakeview Drive shall be considered subsidiary to the lump sum price bid for "Replace a portion of Interceptor 3A".



SEE PLAN FOR MANHOLE ELEVATIONS



RECORD DRAWING

MDK PROJ. ENG. 1/22/86 DATE
RES. ENG. DATE

SEDGWICK COUNTY BUREAU OF PUBLIC SERVICES
DIRECTOR, BUREAU OF PUBLIC SERVICES/COUNTY ENGINEER

REPLACE PORTION OF INTERCEPTOR 3A
SANTARY SEWER INTERCEPTOR DISTRICT MINNEHA JOINT SEWER

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

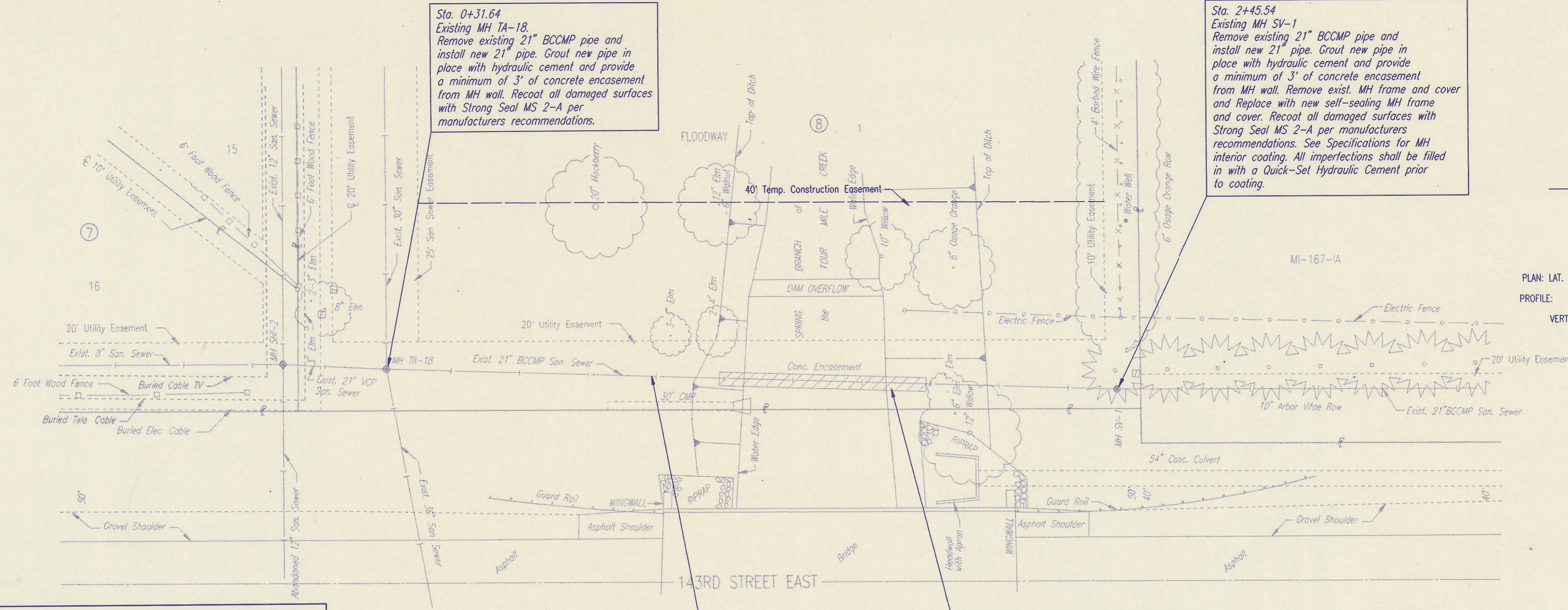
Job No. 34-81051-4
Date August, 1986
Designed by MDS, MDK
Drawn by JLM

Sht. 22 of 23

DATE	
BY	
CHECKED	CHECKED
PLAN	

DATE	
BY	
CHECKED	CHECKED
PROFILE	

DSNR: GLM OPER: JLM SCALE: 1 = 20
 Q:\92114\001\PP1 04-13-1994 16:41:28



Sta. 0+31.64
 Existing MH TA-18.
 Remove existing 21" BCCMP pipe and install new 21" pipe. Grout new pipe in place with hydraulic cement and provide a minimum of 3' of concrete encasement from MH wall. Recoat all damaged surfaces with Strong Seal MS 2-A per manufacturers recommendations.

Sta. 2+45.54
 Existing MH SV-1
 Remove existing 21" BCCMP pipe and install new 21" pipe. Grout new pipe in place with hydraulic cement and provide a minimum of 3' of concrete encasement from MH wall. Remove exist. MH frame and cover and Replace with new self-sealing MH frame and cover. Recoat all damaged surfaces with Strong Seal MS 2-A per manufacturers recommendations. See Specifications for MH interior coating. All imperfections shall be filled in with a Quick-Set Hydraulic Cement prior to coating.

CONTRACTOR SHALL MAINTAIN WASTEWATER FLOWS DURING CONSTRUCTION BY TEMPORARY PUMPING AND PIPING. ALL COSTS FOR MAINTAINING WASTEWATER FLOWS SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR REPLACEMENT OF A PORTION OF THE SPRING VALLEY INTERCEPTOR.

THE CONTRACTOR SHALL MAINTAIN STREAM FLOWS IN THE SPRING BRANCH OF THE FOUR MILE CREEK DURING CONSTRUCTION OF THE CREEK CROSSING BY THE USE OF TEMPORARY CHANNELS OR CULVERTS.

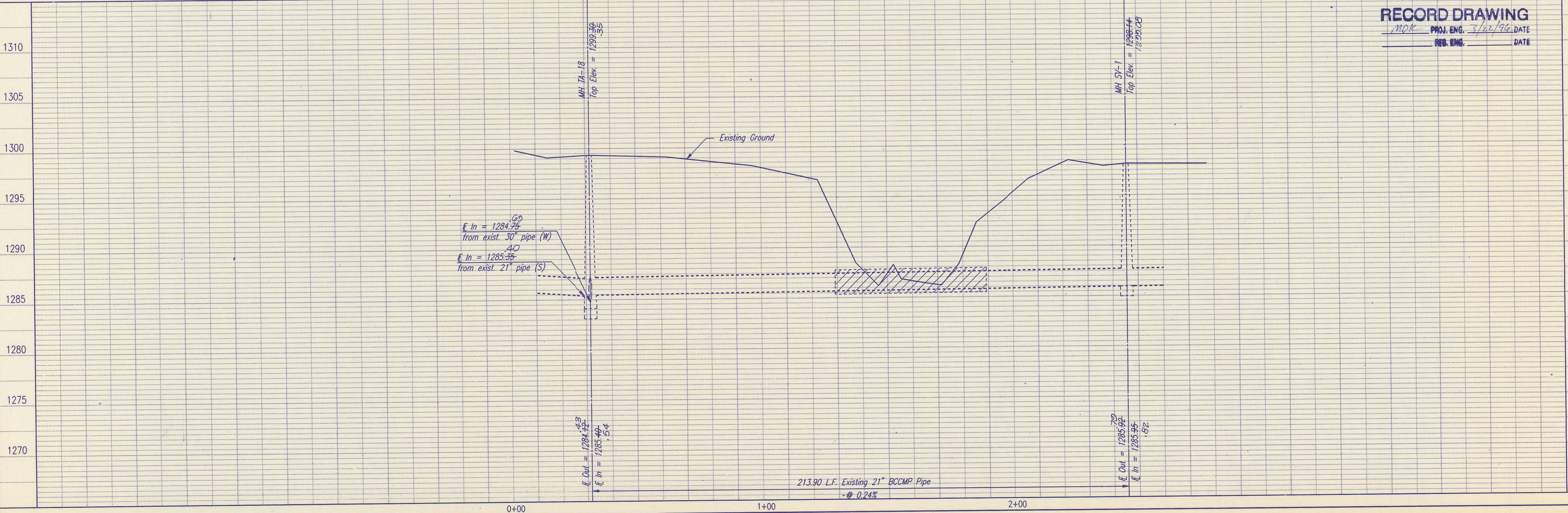
Remove existing 21" BCCMP pipe. Replace with 213.90 L.F. of new 21" pipe.

Remove existing Reinforced Concrete Encasement and Construct Creek Crossing from Sta. 1+30 to Sta. 1+90. See detail, this sheet.

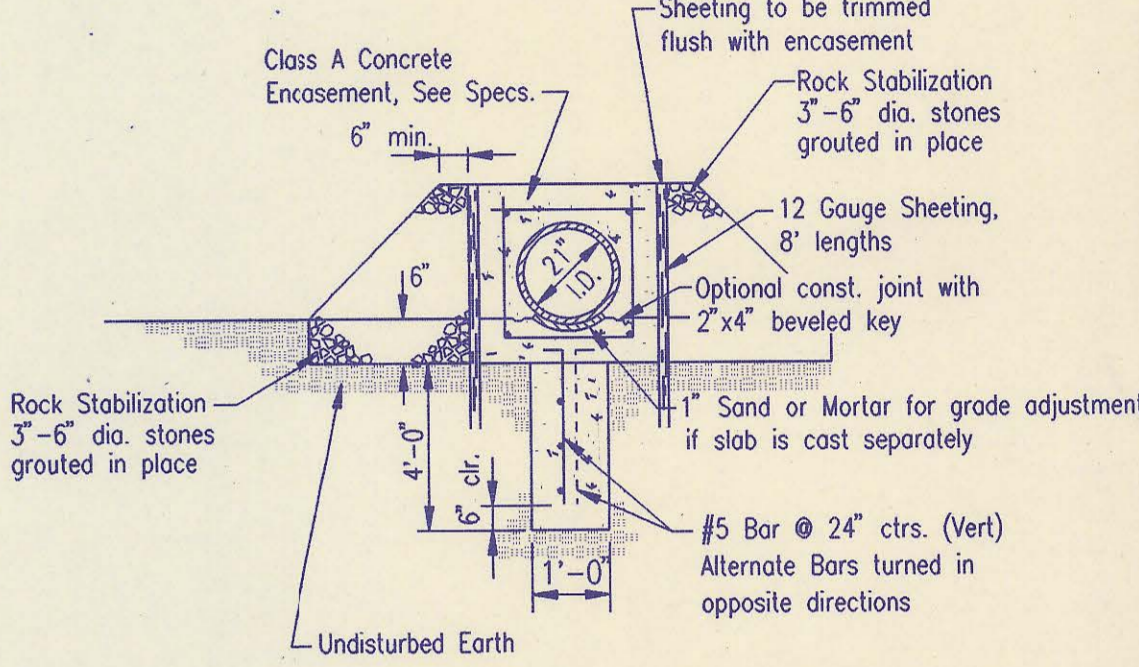
REPLACE PORTION OF SPRING VALLEY INTERCEPTOR

BM 108 - Chiseled "D" on Southwest corner of the Southwest wingwall on 143rd Street bridge over the Spring Branch of the Four Mile Creek. Elev. = 1301.58

RECORD DRAWING
 MDR PROJ. ENG. 3/22/96 DATE
 REG. ENG. DATE

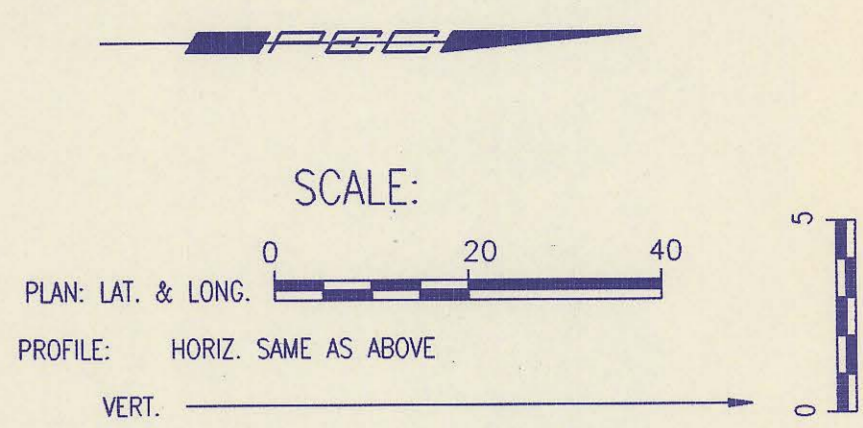
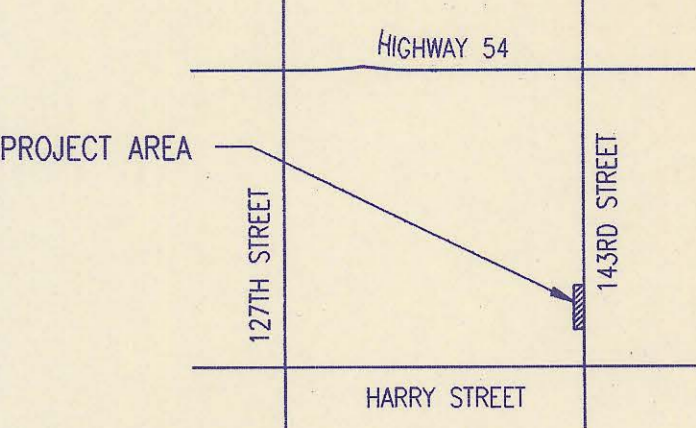


CREEK CROSSING DETAIL



Rock used for Rock Stabilization shall meet the quality requirements for coarse aggregate for concrete.

LOCATION MAP



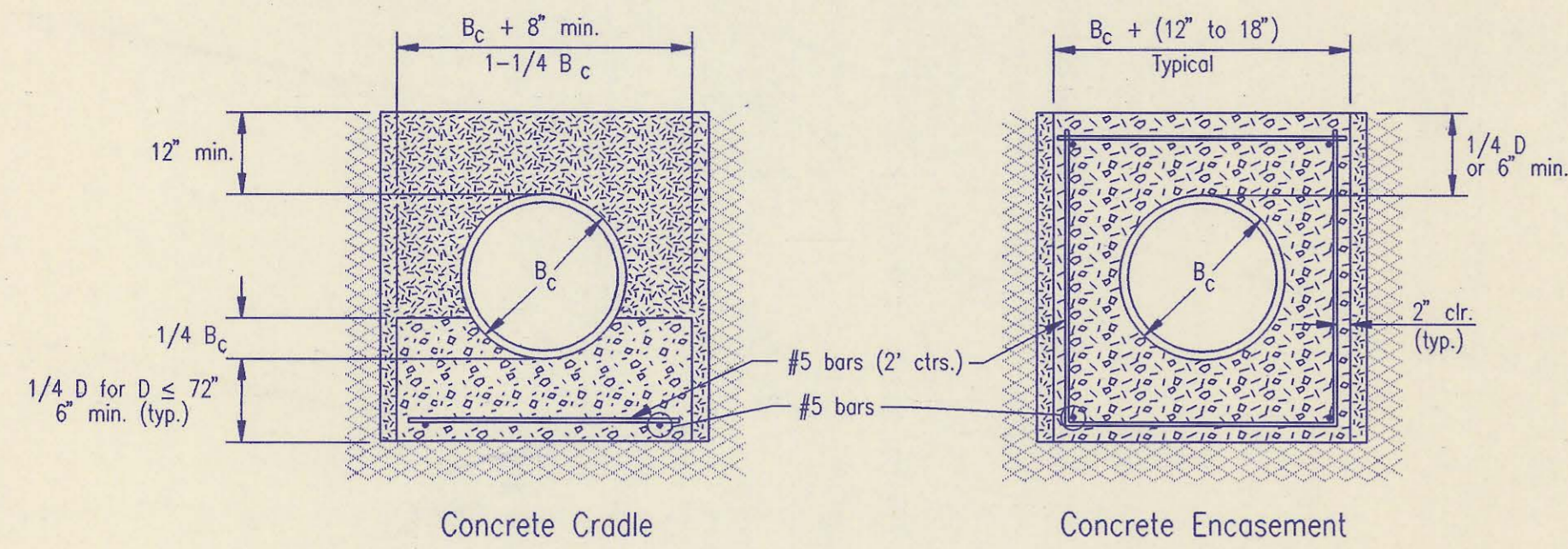
SEDGWICK COUNTY BUREAU OF PUBLIC SERVICES
 DIRECTOR BUREAU OF PUBLIC SERVICES/COUNTY ENGINEER
REPLACE PORTION OF SPRING VALLEY INTERCEPTOR
 SANITARY SEWER INTERCEPTOR
 MINNEHA JOINT SEWER DISTRICT

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

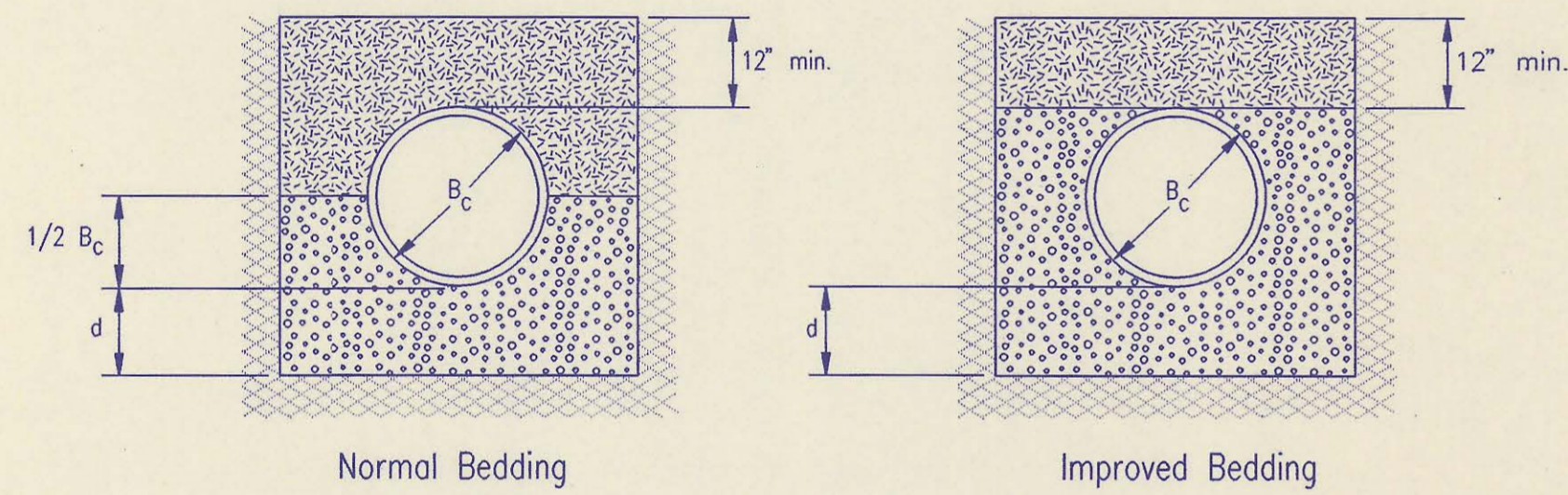
Designed By: CRY, MDK
 Drawn By: JLM

Job No. 34-92114-1
 Date: March, 1994

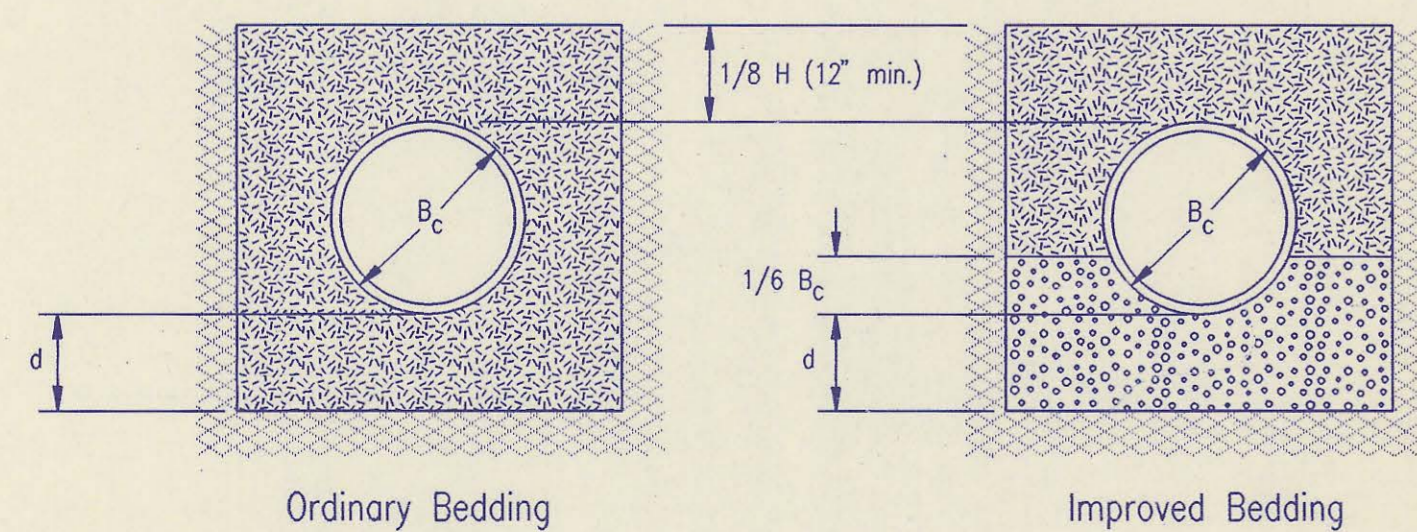
DATE	
BY	
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PLAN	



CLASS A



CLASS B



CLASS C

PIPE ZONE BACKFILLING

- B_c = Outside Pipe Diameter
- H = Backfill from Top of Pipe to Existing Ground
- D = Inside Pipe Diameter
- d = Depth of Bedding Material Below Pipe
- = Granular Bedding Material or Sand-Gravel Bedding
- = Compacted Embedment
- = Concrete

Depth of Bedding Material Below Pipe		
D	d(min) Soil	d(min) Rock
27" & smaller	4"	6"
30" to 60"	5"	9"
66" & larger	6"	12"

Granular Bedding Material shall be an approved material consisting of durable crushed rock conforming with the requirements of the latest revision of ASTM C-33 Size No. 67 (3/4" to No. 4); to be placed in not more than 6" layers and compacted by slicing with a shovel or vibrating. Soundness, abrasion, and absorption limits shall be as required for coarse aggregates in Section 03010-Concrete Work in the specifications.

Sand-Gravel Bedding Material - sand-gravel mix meeting Type UD-1 of the 1990 Kansas Standard Specifications for State Road and Bridge Construction.

Compacted Embedment shall be an approved sand material free from debris, organic material, and stones with 100% passing the 3/4" sieve to be placed in uniform layers not more than 6" thick and compacted to 95 percent maximum density as determined by ASTM D698. Granular Bedding Material may be substituted for all or part of Compacted Embedment Materials.

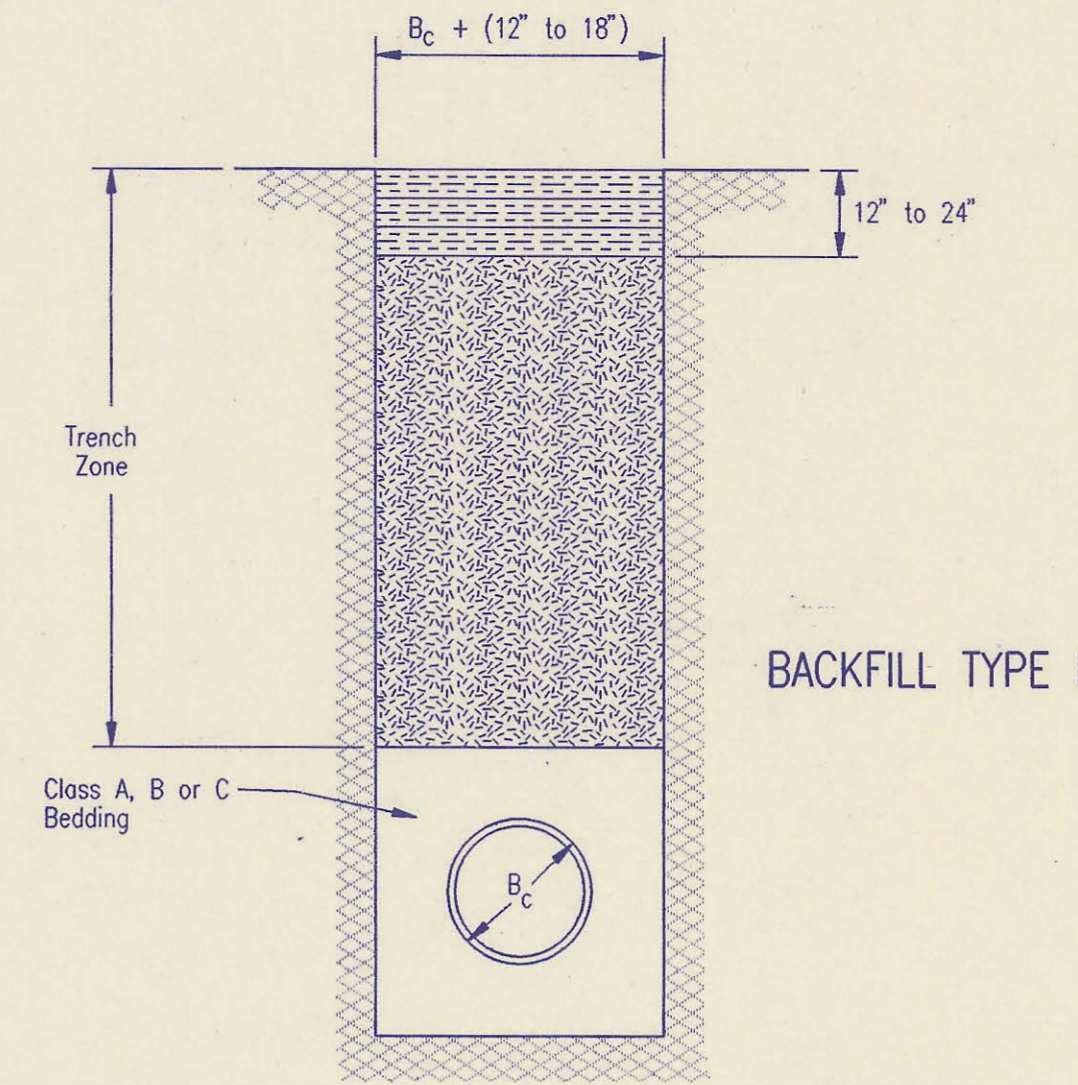
Class A "Concrete Cradle" and/or Class A "Concrete Encasement" is not required unless specified on the plans. However, where unexpected trench conditions exist or improper trenching is performed Class A Bedding may be required as determined by the Engineer.

Class B Bedding shall be used for all flexible pipe.

- a. Class B Normal Bedding shall be used for PVC Pipe unless wet conditions are encountered.
- b. Class B Improved Bedding shall be used for other flexible pipe, and for PVC pipe in wet conditions.

Class C Bedding shall be used for all rigid pipe.

- a. Class C Ordinary Bedding shall be used for all rigid pipe unless wet conditions are encountered.
- b. Class C Improved Bedding shall be used for wet conditions existing in the trench, as directed by the Engineer, at no additional cost to the Owner. The dimensions shall be equal to that required for "rock" excavation (see specifications).



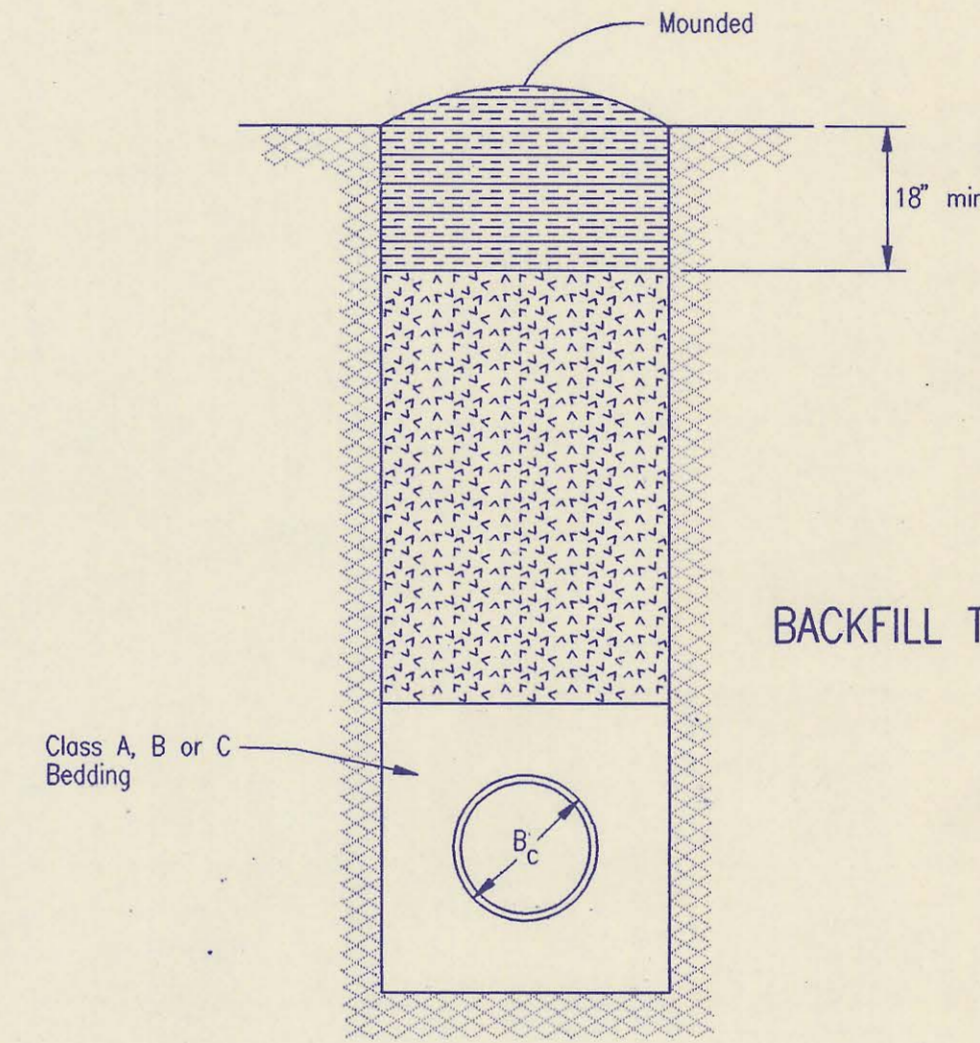
BACKFILL TYPE I

- B_c = Outside Pipe Diameter
- = Compacted Granular Backfill
- = Uncompacted Earth Backfill
- = Compacted Earth Backfill

Compacted Granular Backfill material shall be an approved sand material free from debris, organic material and stones with 100% passing the 3/4" sieve and not more than 15% passing a No. 200 sieve, to be jetted and mechanically vibrated into place and compacted to 95% density as determined by ASTM D698.

Uncompacted Earth Backfill material may be natural soil free from large clods or stones, brush, roots more than 2 inches in diameter, debris, and junk. Flooding with water shall be provided as directed by the Engineer.

Compacted Earth Backfill shall consist of material existing prior to trenching or selected material as directed by the Engineer, and shall be compacted to 90% density as determined by ASTM D698.



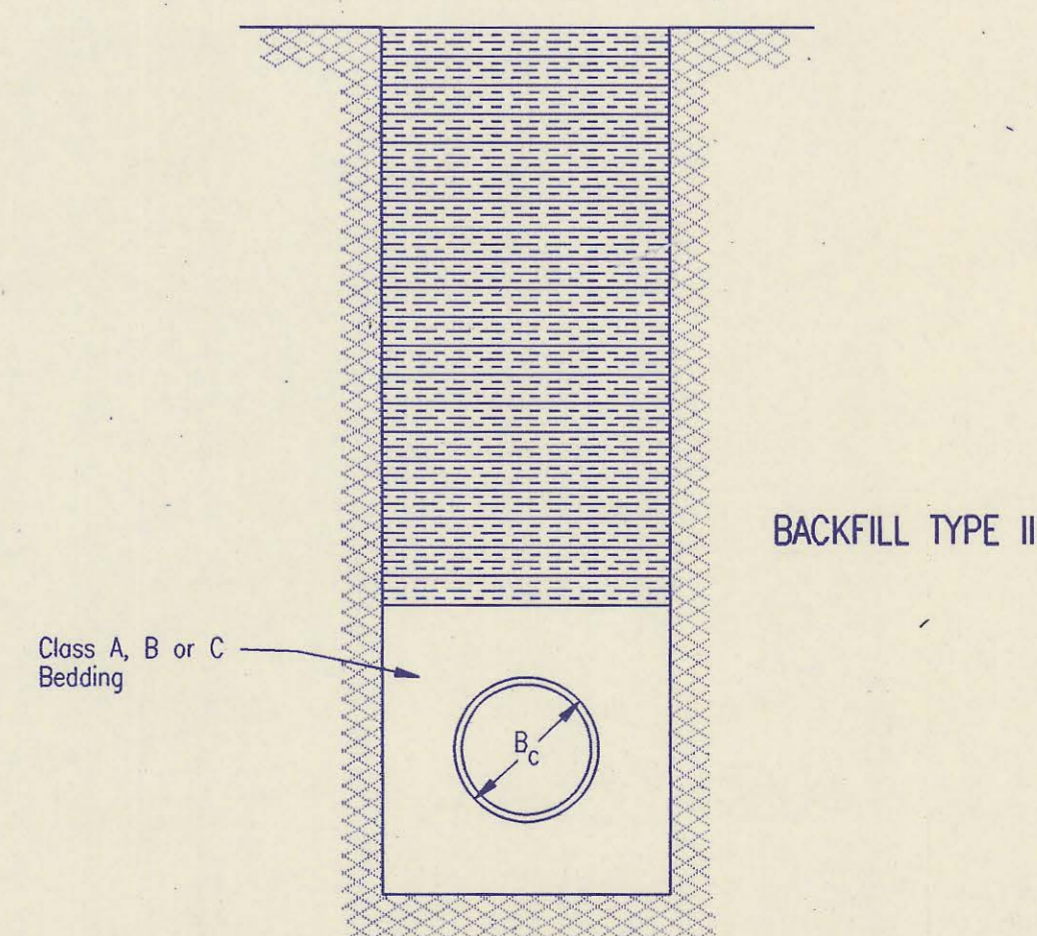
BACKFILL TYPE II

Backfill: Backfill material and compaction requirements shall conform to either Type I, Type II or Type III as specified in the plans. One years maintenance will be required on all backfill.

Backfilling Through Rock: Backfilling through rock shall be performed as specified in the paragraph Backfill above, except that the Pipe Zone is increased to provide eighteen (18) inches of cover over the pipe. When approved by the Engineer the remainder of the backfill may be excavated rock provided the excavated rock has been broken up so that earth and rock will thoroughly mix and not result in voids around the larger pieces of rock. Any excess rock remaining after the trench has been backfilled shall be removed or wasted as directed by the Engineer.

Backfilling Under Pavement: Backfilling under existing or proposed pavement shall be performed as Backfill Type I to a level of two (2) feet from the bottom of the pavement. The remainder of the trench shall be backfilled with selected material, sufficiently damp to be properly compacted in layers not exceeding six (6) inches in depth, compaction shall be performed with mechanical tampers and continued until a relative density of 100 percent of modified density, in conformance with ASTM D698 is attained.

Backfilling Under Gravel Streets: Where the trench crosses or is in existing gravel surfaced streets, the backfill shall be compacted as provided in the paragraph "Backfilling Under Pavement".



BACKFILL TYPE III

TRENCH ZONE BACKFILLING

1	Revised compaction designation	RJ	3/9/94
No.	Revision	By	Date

BACKFILL DETAILS

ADOPTED AS STANDARD DESIGN SEPTEMBER, 1989
BY
SEDGWICK COUNTY BUREAU OF PUBLIC SERVICES
DAVID C. SPEARS, P.E. DIRECTOR, BUREAU OF PUBLIC SERVICES/COUNTY ENGINEER