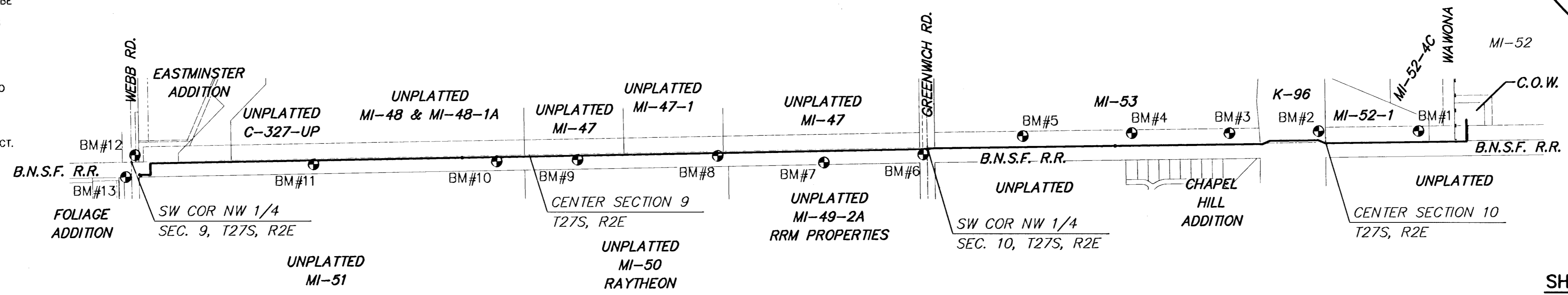
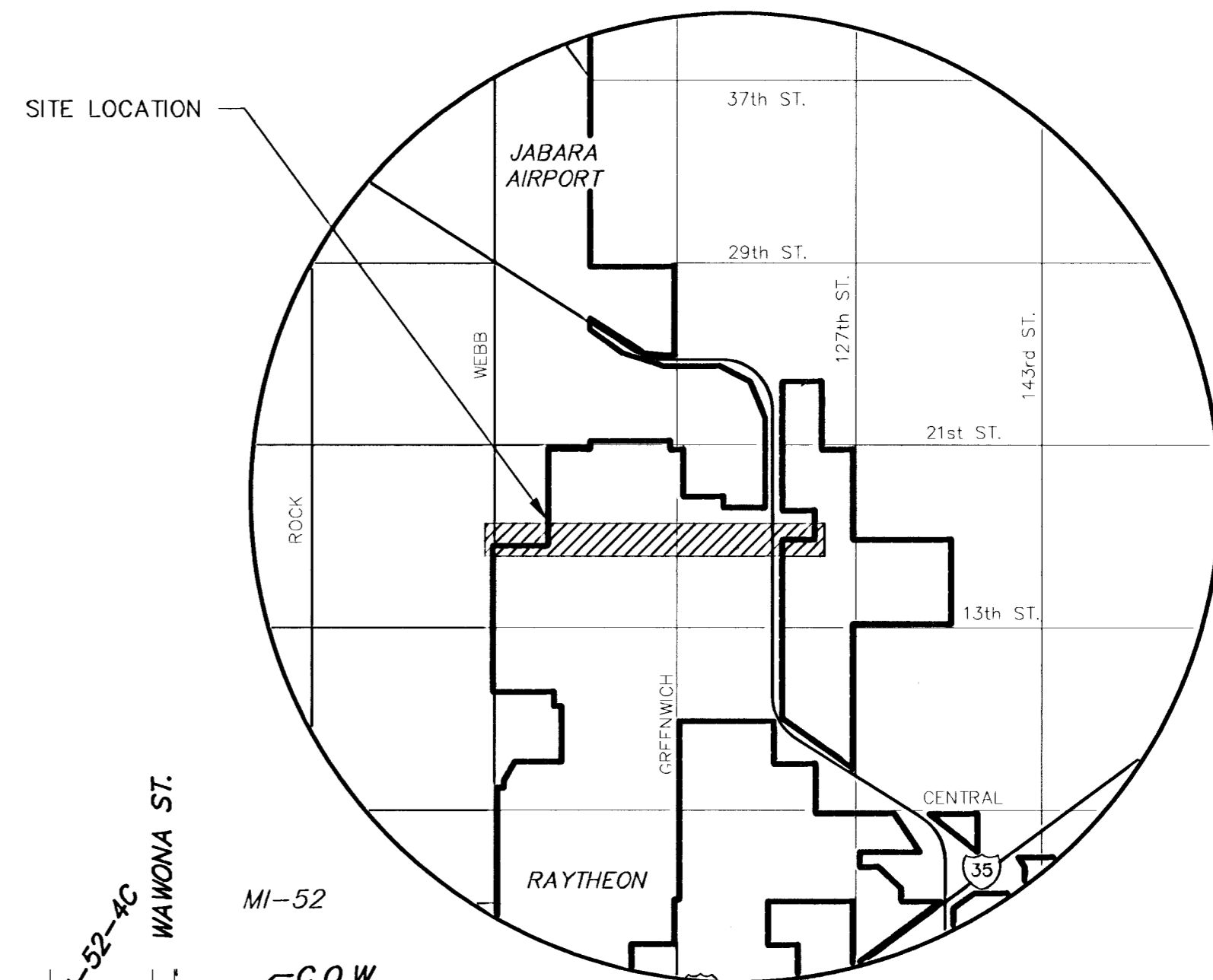


GENERAL NOTES

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PRESERVING PROPERTY IRONS SHOWN ON PLANS. 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.
- EXISTING UTILITIES AND THEIR LOCATIONS AS SHOWN ON THE PLANS REPRESENT THE BEST INFORMATION OBTAINABLE FOR DESIGN. LOCATION INFORMATION HAS BEEN OBTAINED FROM THE VARIOUS UTILITY COMPANIES AND IS EITHER FROM COMPANY RECORD DRAWINGS OR COMPANY PROVIDED FIELD LOCATIONS. THE PLAN LOCATIONS SHOWN ARE NOT GUARANTEED. ADDITIONAL EXISTING UTILITIES MAY BE ENCOUNTERED.
- CONTRACTOR SHALL PROVIDE A MINIMUM ADVANCE NOTICE OF FORTY-EIGHT (48) HOURS TO UTILITY COMPANIES PRIOR TO STARTING ANY EXCAVATION AS FOLLOWS:
 KANSAS ONE-CALL 1-800-344-7233 OR 687-2470 (LOCAL WICHITA)
 THE CONTRACTOR MUST NOTIFY THE FOLLOWING IN CASE OF AN EMERGENCY:
 SOUTHWESTERN BELL TELEPHONE COMPANY 1-800-734-7590
 COX CABLEVISION 1-316-263-2031
 K&E (GAS & ELECTRIC) 1-316-383-8600
 CITY OF WICHITA WATER & SEWER MAINTENANCE 1-316-262-6000
 KANE PIPELINE 1-316-773-9000
 SEDGWICK COUNTY PUBLIC WORKS 1-316-383-7901
- UNDERGROUND UTILITY SERVICE LINES AND OVERHEAD UTILITY POLE LINES ARE TO BE ADJUSTED AS NECESSARY BY OTHERS PRIOR TO CONSTRUCTION UNLESS THE PLANS SPECIFICALLY CALL FOR THEIR ADJUSTMENT BY THE CONTRACTOR OR UNLESS THE PLANS SPECIFICALLY IDENTIFY A UTILITY TO BE ADJUSTED BY ITS OWNER DURING CONSTRUCTION. EXISTING UTILITIES AND THEIR LOCATIONS, AS SHOWN ON THE PLANS, REPRESENT THE BEST INFORMATION OBTAINABLE FOR DESIGN. THE CONTRACTOR WILL BE REQUIRED TO WORK AROUND EXISTING UTILITIES WITHIN THE RIGHT-OF-WAY WHICH DO NOT CONFLICT WITH PROPOSED CONSTRUCTION.
- RUBBLE FROM THE REMOVAL OF MISCELLANEOUS STRUCTURES AND EXCESS EXCAVATION WHICH IS TO BE WASTED SHALL BE DISPOSED OF ON SITES TO BE 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. 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 WILL REQUIRE ADDITIONAL ARCHAEOLOGICAL INVESTIGATIONS UNLESS BURIED IN A PREVIOUSLY APPROVED BORROW LOCATION. COST OF EXCAVATION HAULING, AND DUMPING OF EXCESS EXCAVATION SHALL BE SUBSIDIARY TO THE PROJECT.
- THE CONTRACTOR SHALL GIVE ALL PROPERTY OWNERS AND/OR TENANTS OF DEVELOPED PROPERTY ADJUTING THE CONSTRUCTION OF THIS PROJECT A MINIMUM OF (48) HOURS ADVANCE NOTICE PRIOR TO START OF CONSTRUCTION.
- ALL CONSTRUCTION AND MATERIALS SHALL COMPLY WITH CITY OF WICHITA STANDARD SPECIFICATIONS.
- INTER-URBAN TRAFFIC GENERATED OUTSIDE THE PROJECT AREA AND LOCAL TRAFFIC GENERATED WITHIN THE PROJECT AREA ARE TO BE CARRIED THROUGH CONSTRUCTION ON EXISTING ROADWAYS AT ALL TIMES. ACCESS TO ALL DWELLINGS IN THE PROJECT AREA SHALL BE PROVIDED AT ALL TIMES. THE CONTRACTOR SHALL ERECT WARNING SIGNS, FLASHING LIGHTS, AND BARRICADES IN COMPLIANCE WITH THE STANDARD SPECIFICATIONS.
- THE CONTRACTOR SHALL LIMIT THE EXTENT OF TRENCH TO REMAIN OPEN OVERNIGHT AND WEEKENDS TO LESS THAN 50 FEET.
- THE CONTRACTOR SHALL RESTORE ALL DITCHES, CHANNELS, BANK STABILIZATION, SWALES, ROAD SHOULDERS, PAVEMENT ENTRANCES, AND BANKS TO THEIR ORIGINAL SLOPES AND GRADES. WHERE EXISTING ENTRANCE PIPE, DRAINAGE PIPE, SPRINKLER SYSTEMS, SIDEWALKS, DRIVES, SIGNS, FENCES, ETC., CONFLICT WITH THE PROPOSED WORK HEREIN THEY SHALL BE REMOVED AND REPLACED OR RESET IN LIKE KIND. ALL OF THE ABOVE INCLUDING TREES, SHRUBS, GRASS, SOD AND OTHER LANDSCAPING, WHERE NOTED, SHALL BE CONSIDERED SUBSIDIARY TO THE PRICE BID FOR SITE RESTORATION.
- TREES AND SHRUBS IN PUBLIC RIGHTS-OF-WAY WHICH ARE IN DIRECT CONFLICT WITH PROPOSED NEW CONSTRUCTION SHALL BE REMOVED BY THE CONTRACTOR WITH THE ENGINEER'S APPROVAL. THE CONTRACTOR SHALL RESTORE AND RE-LANDSCAPE FEATURES AND PLANTINGS AS NOTED IN THE DRAWINGS OR AS DIRECTED BY THE ENGINEER. TREES AND SHRUBS WHICH ARE NOT IN DIRECT CONFLICT WITH PROPOSED NEW CONSTRUCTION SHALL BE SAVED AND PROTECTED FROM DAMAGE.
- POSITIVE DRAINAGE SHALL BE PROVIDED FOR ALL AREAS ON OR NEAR SPOIL AREAS. NATURAL DRAINAGE WAYS SHALL BE MAINTAINED.
- WHERE REMOVAL OF EXISTING FENCES NEXT TO THE CONSTRUCTION IS DEEMED NECESSARY BY THE CONTRACTOR, THE CONTRACTOR SHALL COORDINATE REMOVAL WITH ADJACENT PROPERTY OWNERS. ALL REMOVAL AND RESETTING OF FENCES SHALL BE CONSIDERED SUBSIDIARY TO SITE PREPARATION AND SITE RESTORATION, RESPECTIVELY.
- ALL ELEVATIONS SHOWN ARE CITY OF WICHITA DATUM. CITY DATUM = NGVD - 1187.4.
- ALL EXISTING GRASSED AREAS WHICH ARE DISTURBED OR DAMAGED DURING CONSTRUCTION OPERATIONS SHALL BE RESTORED TO ORIGINAL CONDITIONS, AND RE-SEEDED OR RE-SODDED IN LIKE KIND, UNLESS OTHERWISE NOTED ON THE PLANS. COSTS SHALL BE CONSIDERED SUBSIDIARY TO THE PRICE BID FOR SITE RESTORATION. APPLICATION RATE FOR THE VARIOUS SEED MIXTURES SHALL BE AS APPROVED BY THE ENGINEER. SEEDING SHALL CONFORM TO APPLICABLE REQUIREMENTS OF STANDARD SPECIFICATIONS. SODDING SHALL CONFORM TO APPLICABLE REQUIREMENTS OF SUPPLEMENTAL SPECIFICATIONS.
- SLOPES STEEPER THAN 10 TO 1 SHALL BE MULCHED AS REQUIRED BY STANDARD SPECIFICATIONS. COST OF MULCHING SHALL BE INCLUDED IN PRICE BID FOR SITE RESTORATION.
- EROSION CONTROL AREA DISTURBED BY CONSTRUCTION SHALL BE COVERED WITH AN EROSION CONTROL MAT/BLANKET WITHIN TWENTY-FOUR (24) HOURS OF BACKFILLING, LEVELING AND TEMPORARY SEEDING. PLACEMENT OF EROSION CONTROL MATS/BLANKETS (ECM'S) SHALL IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS REGARDING OVERLAPS, EDGE TRENCHING AND STAPLING OR THE CITY OF WICHITA'S STANDARD DETAIL DRAWINGS WHICHEVER IS MORE RESTRICTIVE. (ECM'S) MAY BE AMERICAN EXCELSIOR CURLEX I, NORTH AMERICAN GREEN S75, SYNTHETIC INDUSTRIES LANDLOK BON TERRA 51 OR AN APPROVED EQUAL.
- MANHOLES WITH A DEPTH OF 20 FEET OR MORE SHALL BE A MINIMUM OF 5 FEET IN DIAMETER REGARDLESS OF PIPE SIZE AND SHALL BE PLASTIC LINED.

TEMPORARY FORCE MAIN IN CONNECTION WITH MAIN 10, FOUR MILE CREEK SEWER PROJECT NO. 468-83392

CITY OF WICHITA, KANSAS
 MICHAEL E. LINDEBAK, CITY ENGINEER
 OCA 624501



INDEX TO DRAWINGS

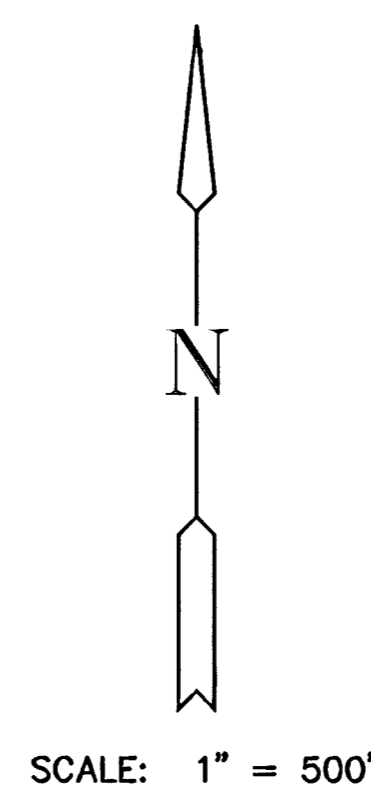
SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	MANHOLE DETAIL
3	AIR RELEASE AND MISC. DETAILS
4-11	FORCE MAIN PLAN/PROFILE

LEGEND

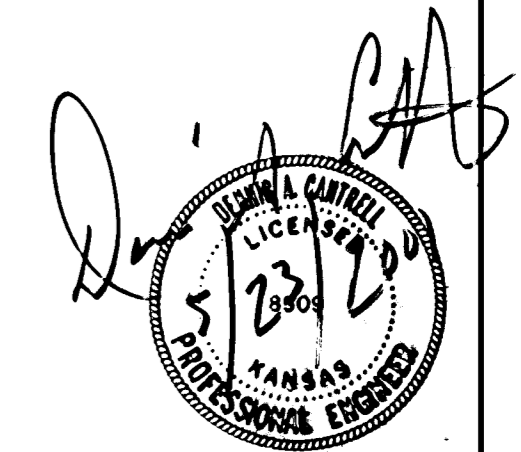
- 31N - TREE AND DIAMETER
- SN, SN - SIGN AND POSTS
- IP-1/2" MID-KANSAS BAR - IRON PIPE AND DESCRIPTION
- 214.49 - SPOT ELEVATION AND LOCATION
- PP-X - POWER POLE AND DEADMAN
- KG-E - ELECTRIC BOX
- - - DRAINAGE ARROW
- - - EDGE OF TREES
- - - UNDERGROUND ELECTRIC LINE
- - - OVERHEAD ELECTRIC LINE
- X - X - FENCE
- BM# - BENCHMARK
- SWMH - STORM WATER MANHOLE
- SSMH - SANITARY SEWER MANHOLE
- - - RETAINING WALL
- LP - LIGHT POLE
- FH - FIRE HYDRANT
- WV - WATER VALVE
- WM - WATER METER
- TCV - IRRIGATION CONTROL VALVE
- G - GRATE INLET
- TR - TELEPHONE RISER
- - - STORM SEWER PIPE
- - - WATER LINE
- - - SANITARY SEWER LINE
- - - GAS LINE
- - - TELEPHONE LINE

BENCHMARKS

- BM #1 RR SPIKE IN N. LEG OF 2ND "H" POLE STRUCTURE E. K-96, 1ST "H" POLE W. OF WAWONA, 660' E. AND 75' N. OF CENTER COR. OF SEC. 10-T27S-R2E ELEV.=167.22
- BM #2 RR SPIKE IN N. LEG OF 1ST "H" POLE STRUCTURE E. K-96, 73' N. AND 39' W. OF CENTER COR. OF SEC. 10-T27S-R2E ELEV.=167.22
- BM #3 RR SPIKE IN N. LEG OF 4TH "H" POLE STRUCTURE E. OF GREENWICH ROAD, 1ST "H" POLE W. OF HIGHWAY K-96, 2015' E. AND 70' N. OF THE W. 1/4 COR. OF SEC. 10-T27S-R2E ELEV.=175.075
- BM #4 RR SPIKE IN N. LEG OF 3RD "H" POLE STRUCTURE EAST OF GREENWICH ROAD, 1370' E. AND 67' N. OF THE W. 1/4 COR. OF SEC. 10-T27S-R2E ELEV.=177.345
- BM #5 RR SPIKE IN N. LEG OF 2ND "H" POLE STRUCTURE EAST OF GREENWICH ROAD, 720' E. AND 66' N. OF THE W. 1/4 COR. OF SEC. 10-T27S-R2E ELEV.=173.37
- BM #6 COW BENCHMARK DISK IN CONCRETE BASE OF RR CROSSING POLE 30.5' S. & 25' W. OF W. 1/4 COR. SEC 10-T27S-R2E (17TH ST. & GREENWICH) ELEV.=183.22 (PUBLISHED 183.19)
- BM #7 CHISELED SQUARE ON A CONCRETE FLUME, 624' WEST AND 90.8' SOUTH OF THE EAST 1/4 CORNER 9-27S-2E. 46' SOUTH OF Q RR TRACKS. ELEV.=188.515
- BM #8 FENCE "T" POST 1367' WEST AND 48' SOUTH OF THE EAST 1/4 CORNER 9-27S-2E. 5' SOUTH OF Q RR TRACKS. ELEV.=197.12
- BM #9 FENCE "T" POST 2221' WEST AND 47' SOUTH OF THE EAST 1/4 CORNER 9-27S-2E. 455' EAST OF THE CENTER 9-27S-2E. 5' SOUTH OF Q RR TRACKS. ELEV.=205.77
- BM #10 FENCE "T" POST 312' WEST AND 46' SOUTH OF THE CENTER 9-27S-2E. 2302' EAST OF THE WEST 1/4 CORNER 9-27S-2E. 4.5' SOUTH OF Q RR TRACKS. ELEV.=208.00
- BM #11 FENCE "T" POST 1254' WEST AND 44' SOUTH OF THE WEST 1/4 CORNER 9-27S-2E. 4.6' SOUTH OF Q RR TRACKS. ELEV.=198.57
- BM #12 CHISELED SQUARE ON SE CORNER HEADWALL, 44' NORTH AND 42' EAST OF THE WEST 1/4 CORNER 9-27S-2E, 82' NORTH OF Q RR TRACKS. ELEV.=192.73
- BM #13 PEC'S BM#6 ON C.O.W. PROJECT NO. 448-76-245-89467-000-000-001. CHISELED SQUARE ON TOP OF WEST CURB ON WEBB ROAD, 16' SOUTH OF RR TRACKS. ELEV.=194.45



AS BUILT
 1/31/03
 R. Loomis
 P-242 P-243



MKEC
 ENGINEERING CONSULTANTS
 411 N. WEBB ROAD
 WICHITA, KS. 67208
 316-684-9600

CITY OF WICHITA
 NORTHEAST SEWER FORCE MAIN
 PROJECT NAME

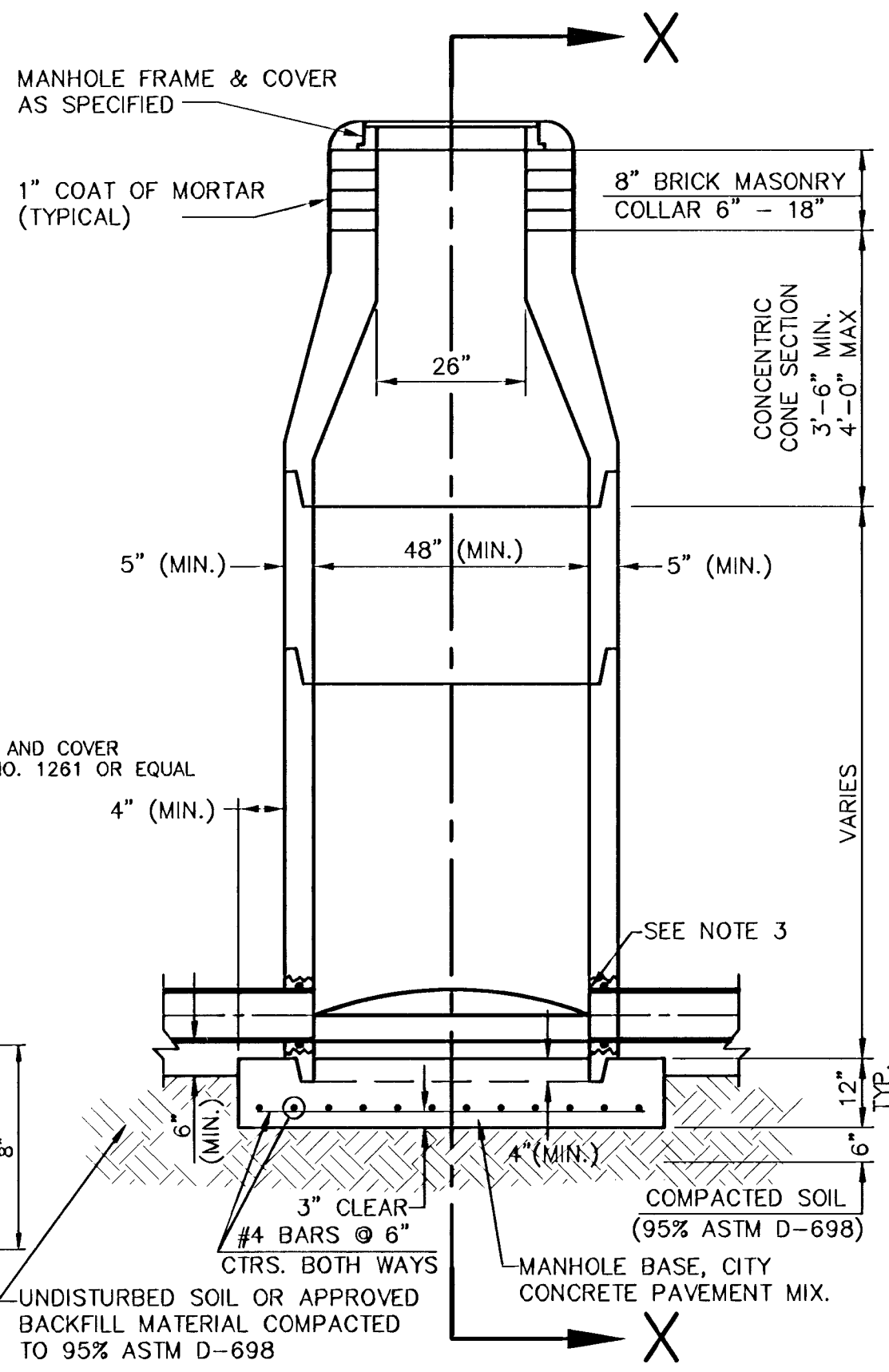
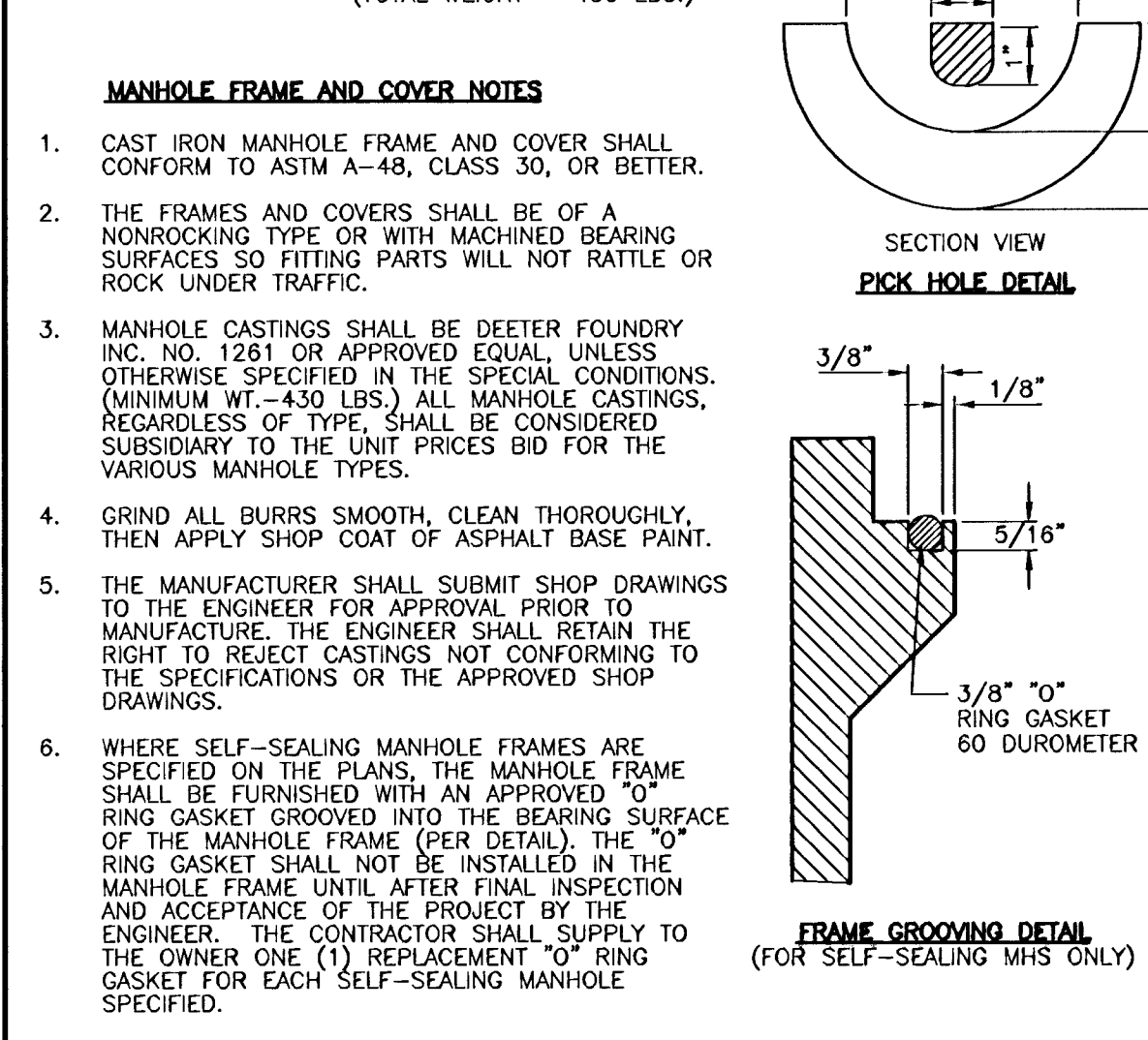
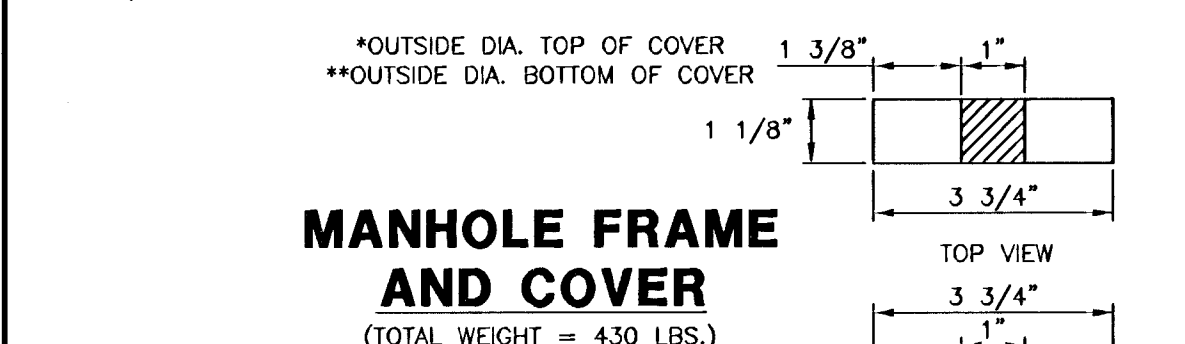
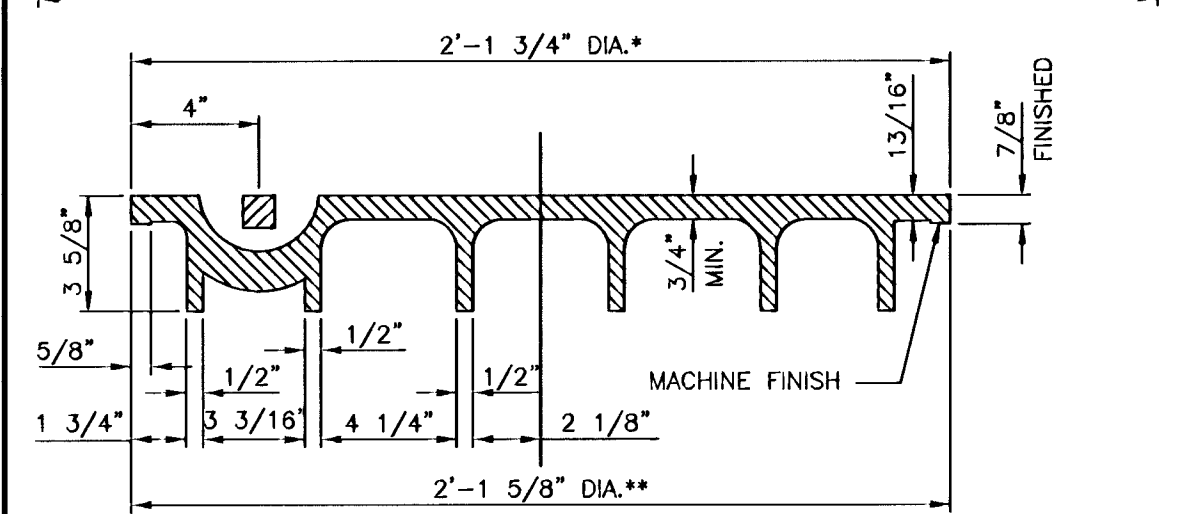
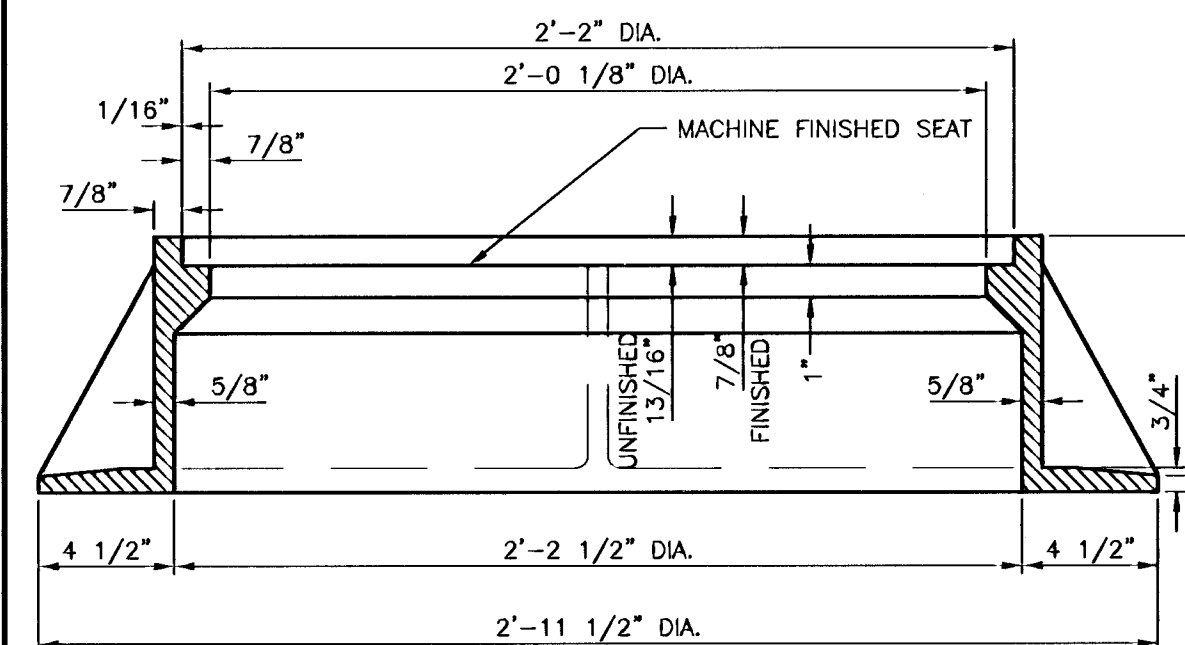
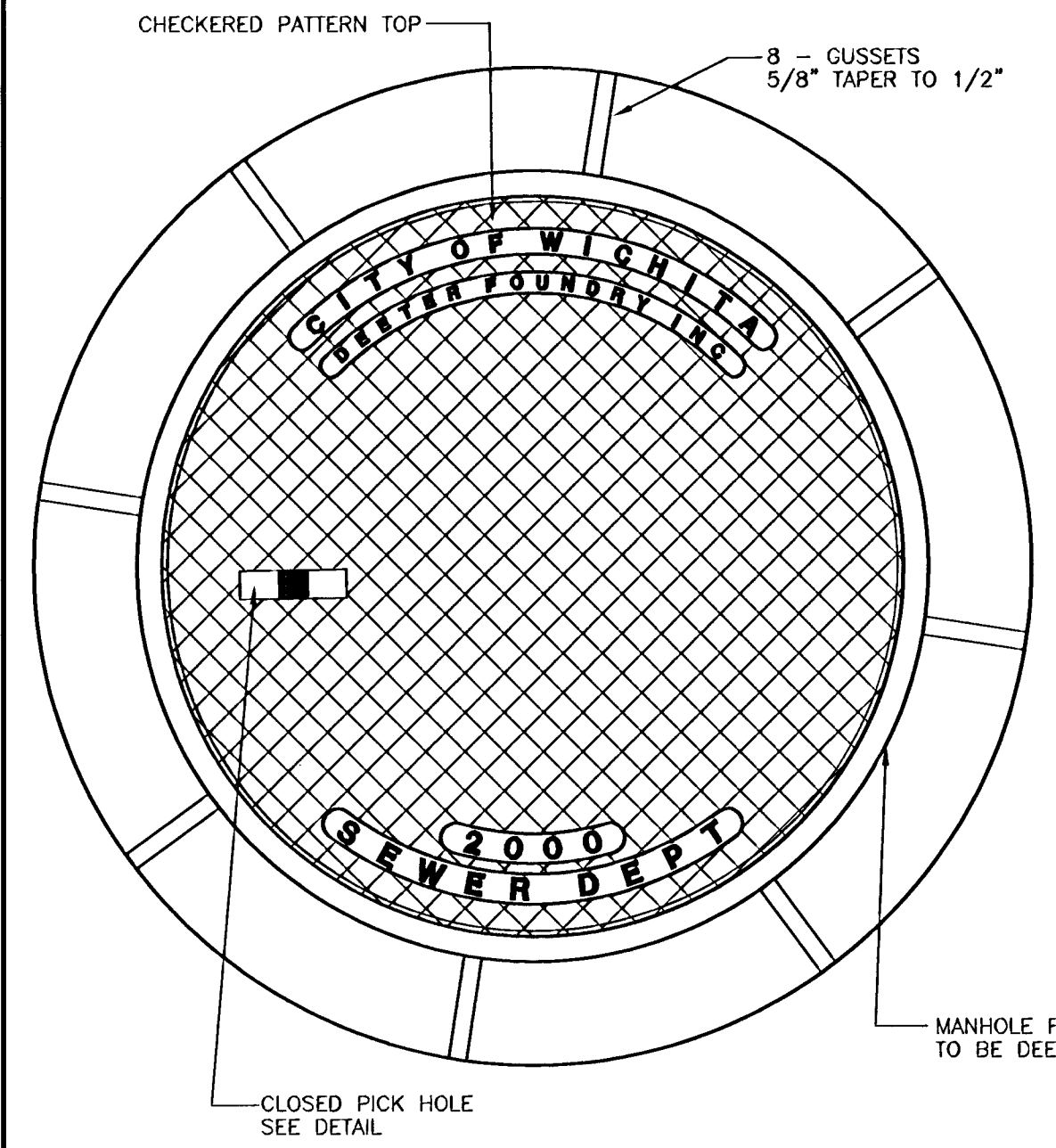
TITLE SHEET
 SHEET TITLE

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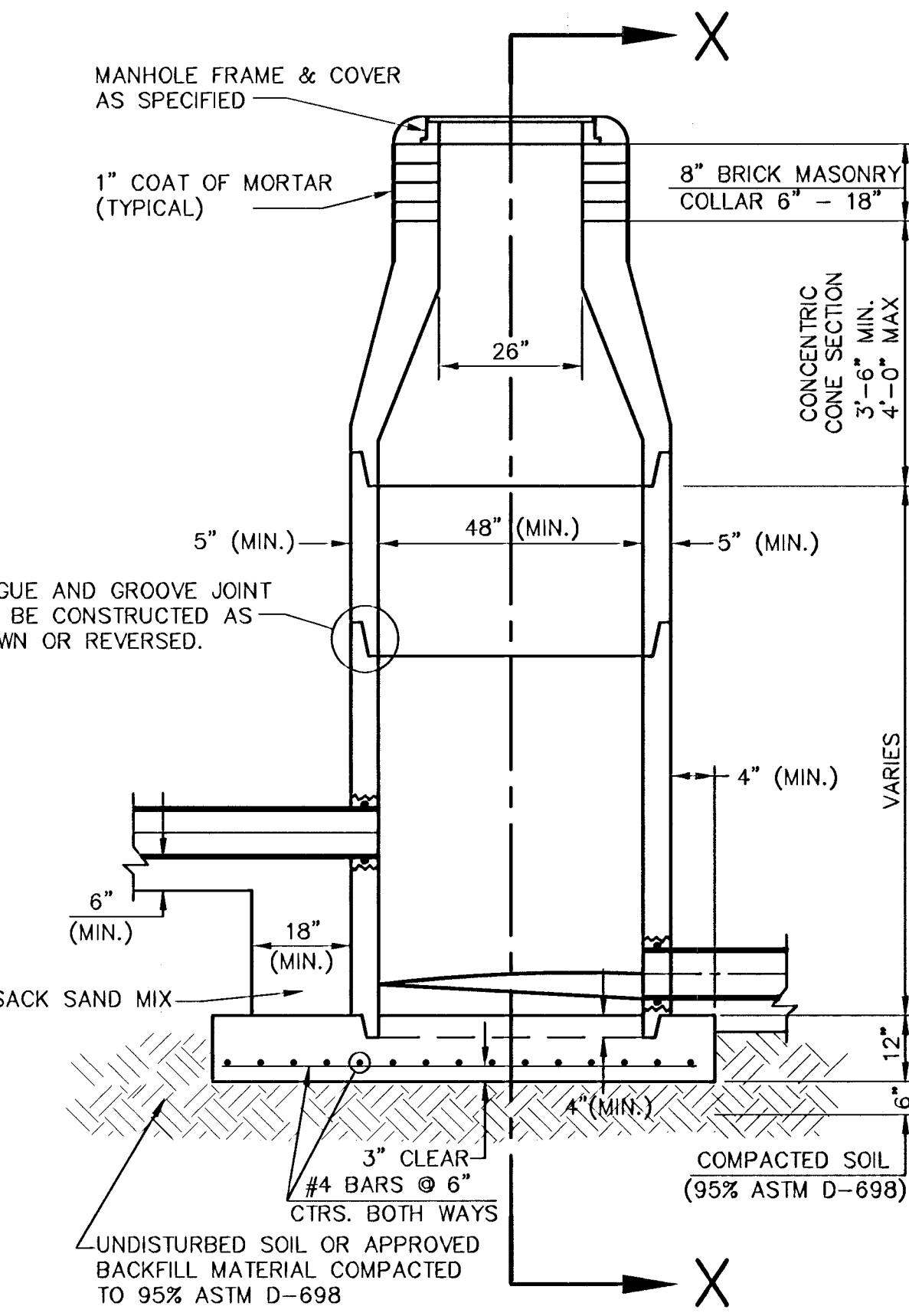
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SEWER APPURTENANCES DETAILS

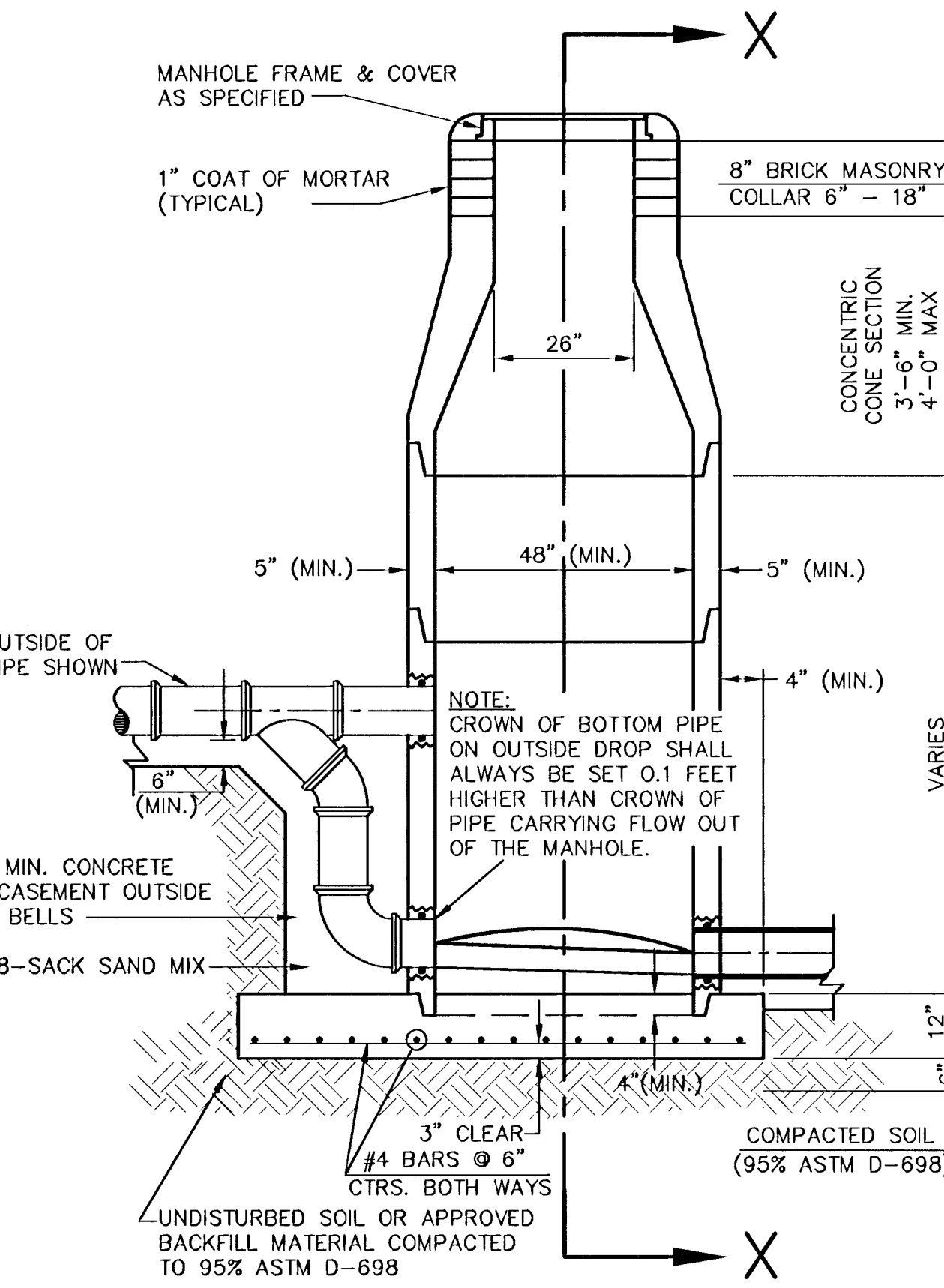
ADOPTED AS STANDARD DESIGN BY CITY OF WICHITA



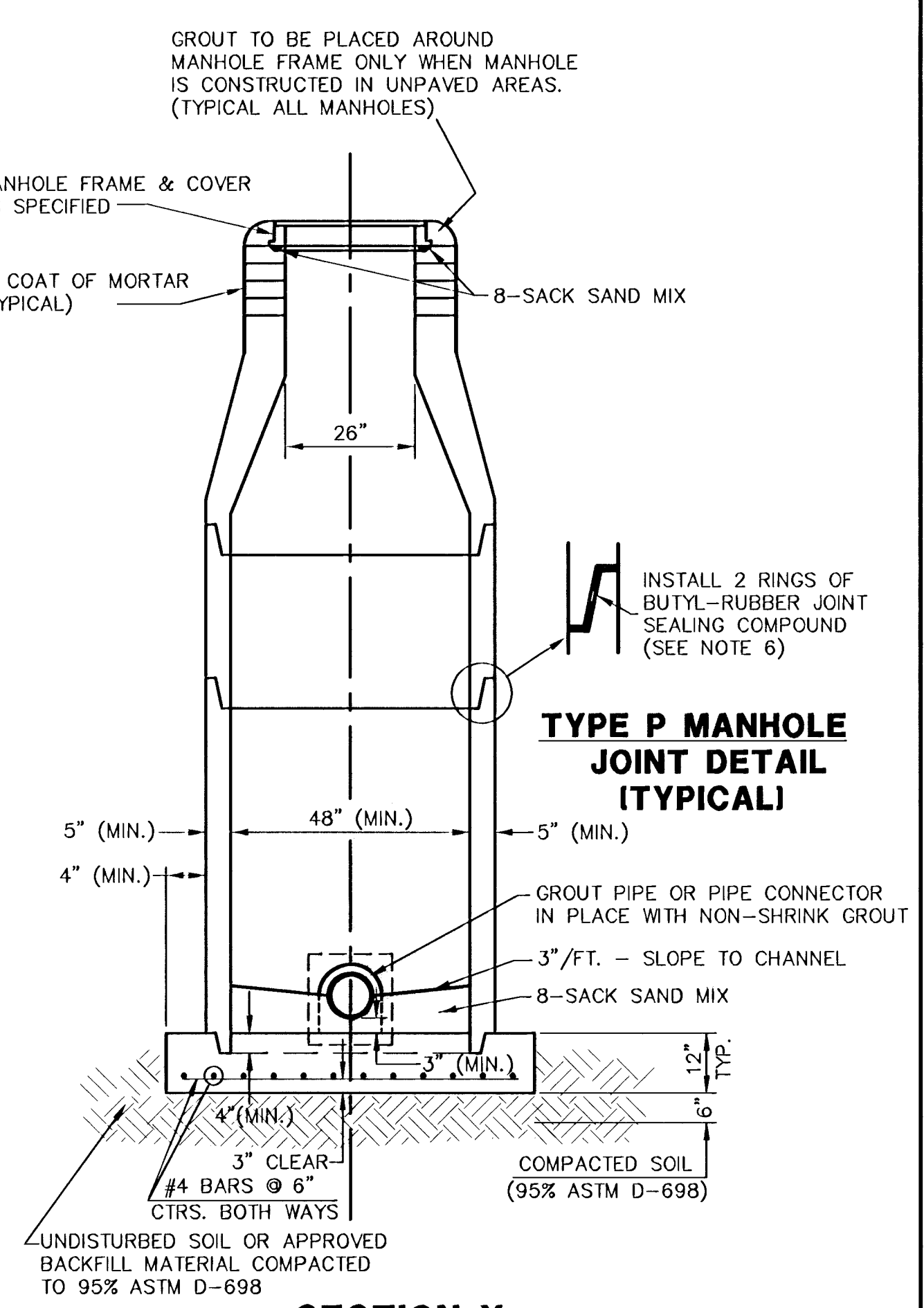
**TYPE P
STANDARD MANHOLE**



**TYPE P
INSIDE DROP MANHOLE**



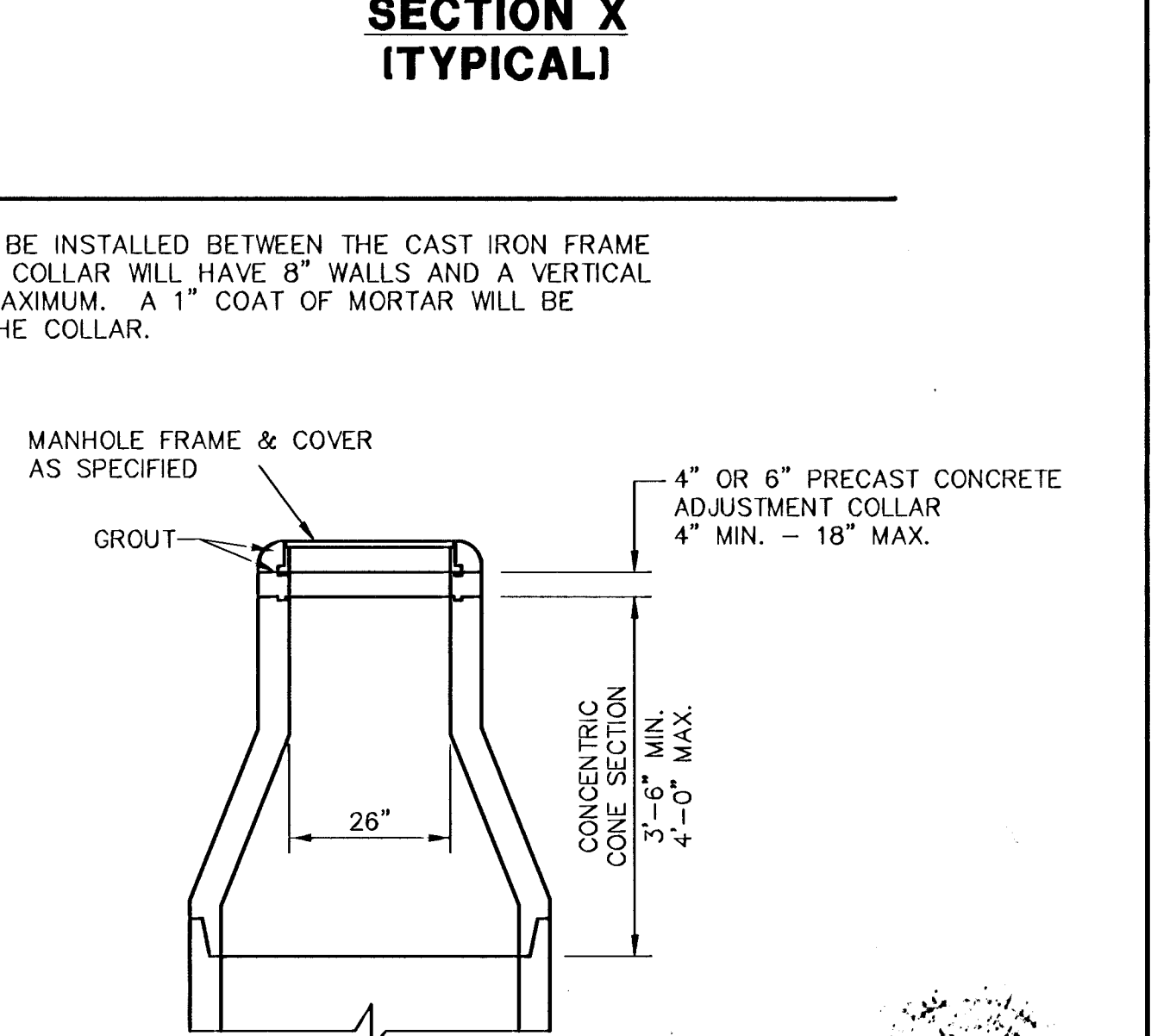
**TYPE P
OUTSIDE DROP MANHOLE**



**TYPE P MANHOLE
JOINT DETAIL
(TYPICAL)**

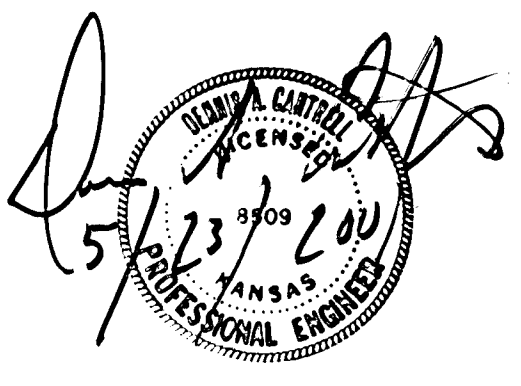
GENERAL NOTES - PRECAST MANHOLE NOTES

1. ALL PRECAST CONCRETE MANHOLE SECTIONS SHALL CONFORM TO THE LATEST REVISIONS OF A.S.T.M. C478 AS MODIFIED BY THE SPECIFICATIONS.
2. NON-SHRINK GROUT SHALL BE NON-METALLIC TYPE.
3. APPROVED FLEXIBLE WATERSTOP GASKETS SHALL BE INSTALLED TO JOIN THE SEWER TO THE MANHOLE WALL WHEN A.B.S. COMPOSITE PIPE OR P.V.C. PIPE IS USED. FOR OTHER TYPES OF PIPE THE SEWER SHALL BE GROUTED IN PLACE WITH NON-SHRINK GROUT. THE SEWER PIPE SHALL BE SUPPORTED WITH CONCRETE ENCASEMENT A MINIMUM OF 3 FEET FROM THE MANHOLE WALL AND TO THE FIRST JOINT FOR V.C.P. SUCH THAT THE JOINT REMAINS FLEXIBLE.
4. ALL INSIDE SURFACES OF THE CONCRETE MANHOLE WHICH WOULD BE EXPOSED TO SEWER GAS SHALL BE COATED WITH 2 COATS TNEPEC SERIES 66 HI-BUILD EPOXYLINE, DRY THICKNESS OF 8 MILS (MIN.)
5. EXTERIOR MANHOLE WALLS SHALL BE COATED WITH 1 COAT MOBILARMA 633 BITUMINOUS COATING.
6. JOINT SEALING COMPOUND SHALL BE KENT SEAL NO. 2 OR APPROVED EQUAL.
7. PRECAST MANHOLES SHALL BE SET AT LEAST 4 INCHES INTO THE MANHOLE BASE.
8. 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.
9. LIFTING HOLES SHALL BE FILLED WITH NON-SHRINK GROUT AND THE INTERIOR SURFACE COATED AS SPECIFIED.
10. MORTAR USED IN MASONRY CONSTRUCTION SHALL CONTAIN 8 SACKS OF CEMENT PER CUBIC YARD. CONCRETE USED IN MANHOLE BASES SHALL CONFORM TO THE REQUIREMENTS OF CONCRETE FOR CONCRETE PAVEMENT CONSTRUCTION AS SPECIFIED IN THE CITY STANDARD PAVING SPECIFICATIONS USING CITY CONCRETE PAVEMENT MIX WITHOUT AIR ENTRAINING ADMIXTURE. MORTAR SHALL BE PLACED AROUND THE MANHOLE RING AS SHOWN ON THE DRAWINGS WHEN MANHOLES ARE CONSTRUCTED IN UNPAVED AREAS. MANHOLES CONSTRUCTED WHERE PIPE SIZES ARE SMALLER THAN 24" SHALL HAVE AN INSIDE DIAMETER OF 4". MANHOLES CONSTRUCTED WHERE PIPE SIZES ARE 24" OR LARGER SHALL HAVE AN INSIDE DIAMETER OF 5". COMPLETED MANHOLE SHALL BE WITHOUT LEAKS AND WATER TIGHT.
11. REINFORCING STEEL SHALL BE INSTALLED IN THE MANHOLE BASES AND SHALL CONSIST OF NO. 4 BARS PLACED ON 6" CENTERS IN BOTH DIRECTIONS. THE MANHOLE BASE REINFORCEMENT SHALL BE PLACED AT LEAST 3" ABOVE THE BOTTOM OF THE MANHOLE BASE. ALL COSTS FOR FURNISHING AND INSTALLING REINFORCING STEEL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE MANHOLE.
12. OPENINGS SHALL BE CUT INTO THE MANHOLE WALL WHEN OUTSIDE DROPS ARE CONSTRUCTED ON EXISTING MANHOLES. SUCH OPENINGS CUT INTO EXISTING MANHOLES SHALL BE AS SMALL AS PRACTICAL TO FACILITATE INSTALLING AND GROUTING THE NEW PIPE IN PLACE. WATERSTOP GASKETS SHALL BE USED WITH P.V.C. AND A.B.S. COMPOSITE PIPE. THE NEW PIPE SHALL BE GROUTED INTO THE OPENING USING AN APPROVED NONSHRINK GROUT FOR THE FULL MANHOLE WALL THICKNESS. THE EXTERIOR OF THE COMPLETED CONNECTION SHALL BE SEALED WITH AN APPROVED BITUMINOUS COATING SUCH THAT THE CONNECTION WILL BE WATER TIGHT. FLOOR OF MANHOLE SHALL BE MODIFIED TO FORM NEW FLOW CHANNEL FOR THE NEW CONNECTION AS INDICATED BY THE DRAWING. THIS WORK, INCLUDING MODIFICATION OF MANHOLE FLOOR, SHALL BE PAID FOR AT THE UNIT PRICE BID FOR OUTSIDE DROP STACK CONSTRUCTED ON EXISTING MANHOLE.
13. THE FLOORS OF ALL MANHOLES SHALL BE SHAPED WITH FLOW CHANNELS SUCH THAT THE MANHOLES WILL BE SELF CLEANING AND FREE OF AREAS WHERE SOLIDS COULD BE DEPOSITED AS SEWAGE FLOWS THROUGH THE MANHOLE FROM ALL INLET PIPES TO THE OUTLET PIPE. FLOW CHANNELS SHALL BE FORMED TO MATCH THE BOTTOM HALVES OF THE INFLOWING PIPES AND THE OUTFLOWING PIPE AS SHOWN BY THE DRAWINGS EXCEPT FOR INSIDE DROP MANHOLES. FLOW CHANNELS FOR INSIDE DROP MANHOLES SHALL BE CONSTRUCTED AS INDICATED BY THE DRAWING. MANHOLE FLOORS SHALL HAVE SLOPES OF 3 INCHES PER FOOT IN THE AREAS OUTSIDE OF THE FLOW CHANNELS SLOPED TOWARD THE FLOW CHANNELS. PIPES LAID THROUGH MANHOLES SHALL HAVE THE TOP HALF REMOVED TO NEAT LINES FOR THE FULL INSIDE DIAMETER OF THE MANHOLE. MANHOLE FLOORS SHALL THEN BE SHAPED AROUND THE BOTTOM HALF OF THE PIPE WHICH FORMS THE FLOW CHANNEL.
14. PIPES INSTALLED WITHIN THE EXCAVATION MADE FOR THE MANHOLE SHALL BE CRADLED WITH CONCRETE TO THE LIMITS OF THE MANHOLE EXCAVATION. WHEN CLAY PIPE IS USED, THE CRADLE SHALL EXTEND TO THE FIRST JOINT OUTSIDE THE MANHOLE. THE CRADLE SHALL BE TERMINATED AT THE CLAY PIPE JOINT IN A MANNER WHICH WILL MAINTAIN THE FLEXIBILITY OF THE JOINT. COST OF CRADLE WITHIN MANHOLE EXCAVATION OR TO CLAY PIPE JOINTS ADJACENT TO MANHOLE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE MANHOLE.
15. MANHOLE COVER CASTINGS AND MANHOLE FRAME CASTINGS SHALL CONFORM TO THE REQUIREMENTS AS INDICATED IN THE STANDARD SPECIFICATIONS AND AS SHOWN IN THE STANDARD DETAIL DRAWING.
16. THE VERTICAL DROP IN INSIDE DROP MANHOLES SHALL NOT EXCEED 2' FOR INFLOWING PIPES. THE CROWNS OF INFLOWING PIPES SHALL NEVER BE SET LOWER THAN THE CROWN OF THE OUTFLOWING PIPE.
17. STANDARD MANHOLES AND STANDARD INSIDE DROP MANHOLES SHALL BE BID AS STANDARD MANHOLES FOR THE TYPE AND DIAMETER INDICATED. OUTSIDE DROP MANHOLES SHALL BE BID AS STANDARD OUTSIDE DROP MANHOLES FOR THE TYPE AND DIAMETER INDICATED. ALL MANHOLE DIAMETERS WILL BE 4" UNLESS INDICATED OTHERWISE.
18. A BRICK MASONRY COLLAR SHALL BE INSTALLED BETWEEN THE CAST IRON FRAME AND THE CONCRETE CONE. THE COLLAR WILL HAVE 8" WALLS AND A VERTICAL HEIGHT OF 6" MINIMUM AND 18" MAXIMUM. A 1" COAT OF MORTAR WILL BE PLASTERED ON THE OUTSIDE OF THE COLLAR.



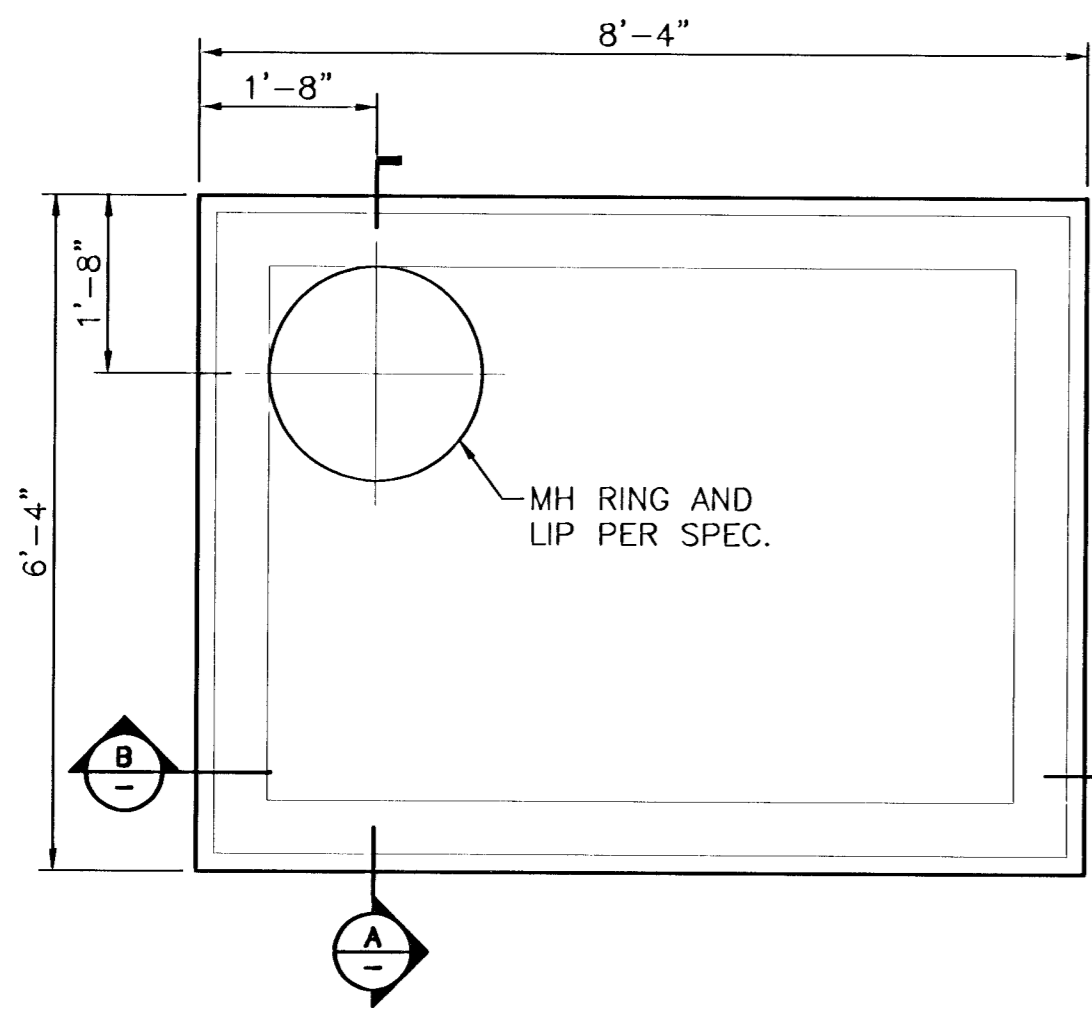
**ALTERNATE CONSTRUCTION
IN UNPAVED AREAS**

REVISED: 6-12-88



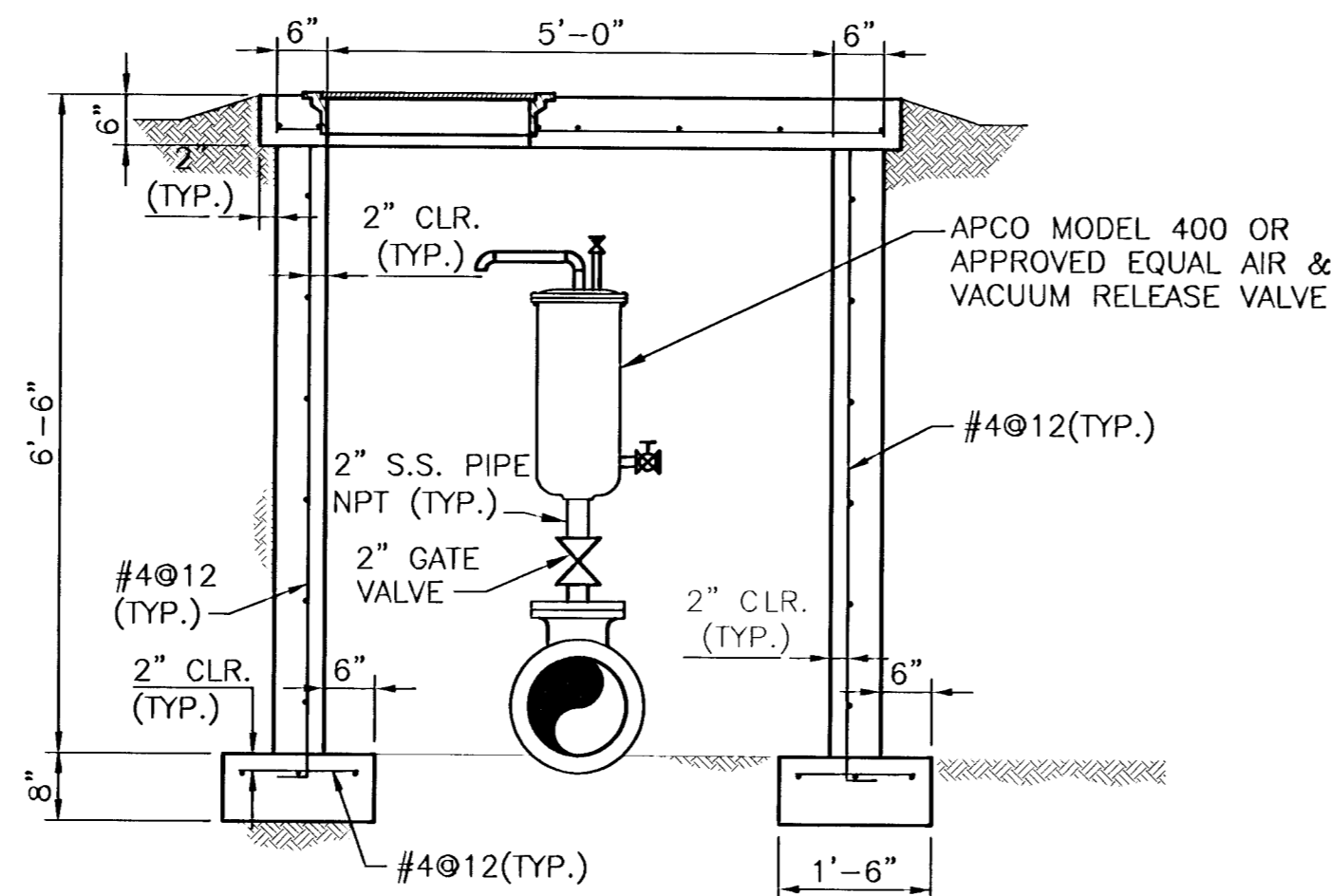
MANHOLE DETAILS			
CITY OF WICHITA, KANSAS			
Design C.O.W.	Checked by	Checked by	
Drawn by	Date	Date APR. 2001	Job No. 00278BD1

I:\ENVR\00278BD1.dwg 12/18/00 01:13:43 PM PM CST



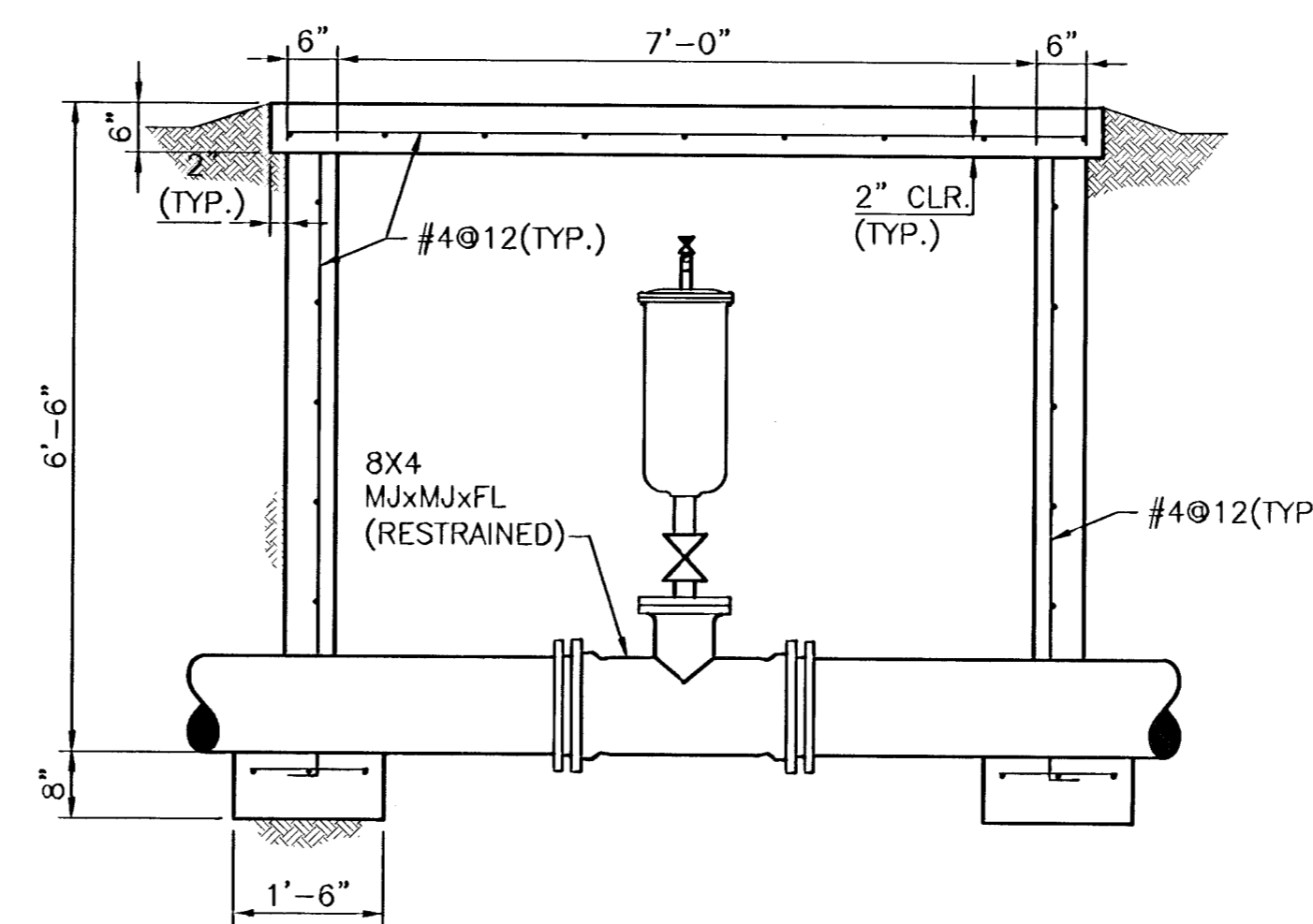
AIR RELEASE DETAIL

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



SECTION A

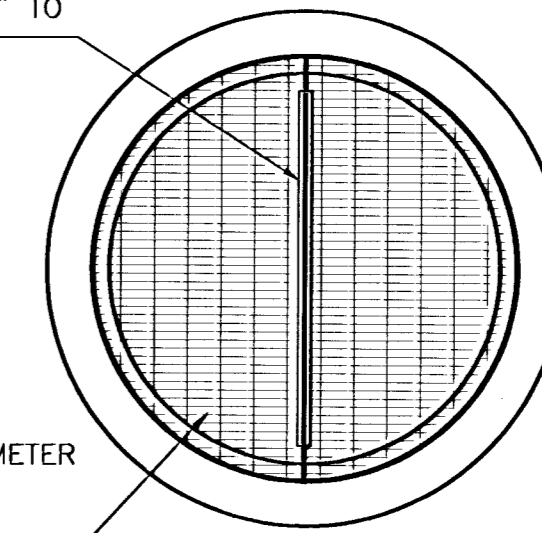
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SECTION B

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

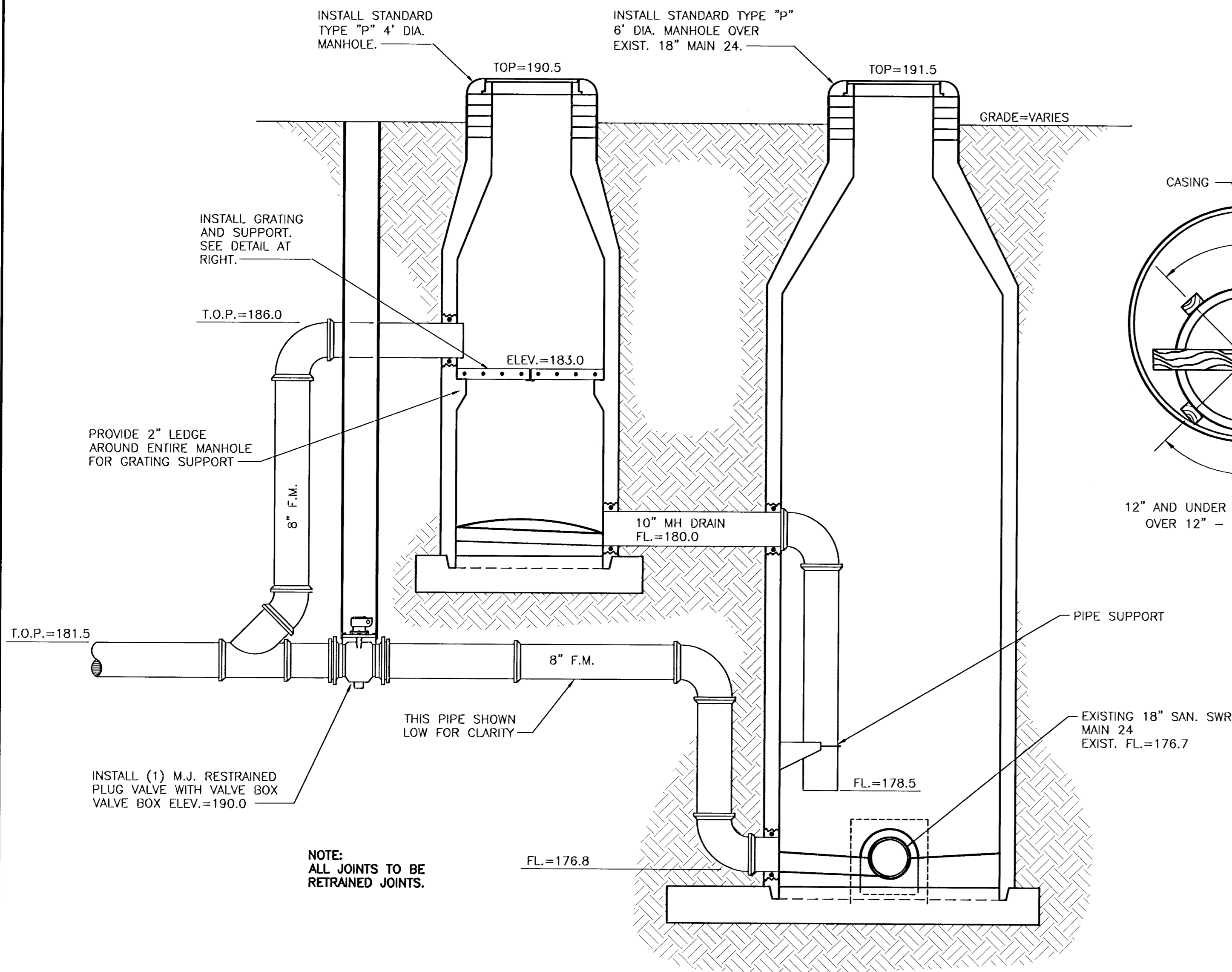
INSTALL (1) 1 1/2"x1/4"x3'-4" LONG STAINLESS STEEL PLATE, PLATE TO BE WELDED TO BOTTOM OF (1) HALF OF GRATING. ALLOW OVERHANG OF 1" TO SUPPORT OPPOSITE GRATING.



INSTALL 1 1/2"x3'-11 1/2" DIAMETER STAINLESS STEEL GRATING IN (2) EQUAL PIECES FOR INSTALLATION THROUGH MANHOLE OPENING.

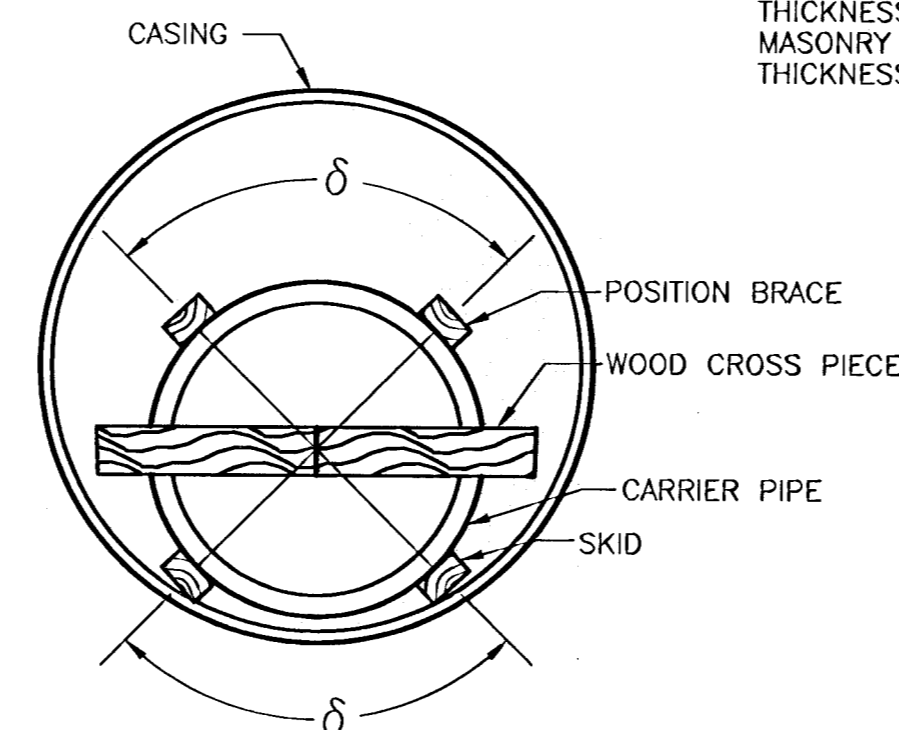
GRATE DETAIL

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PIG RECOVERY MANHOLE DETAIL

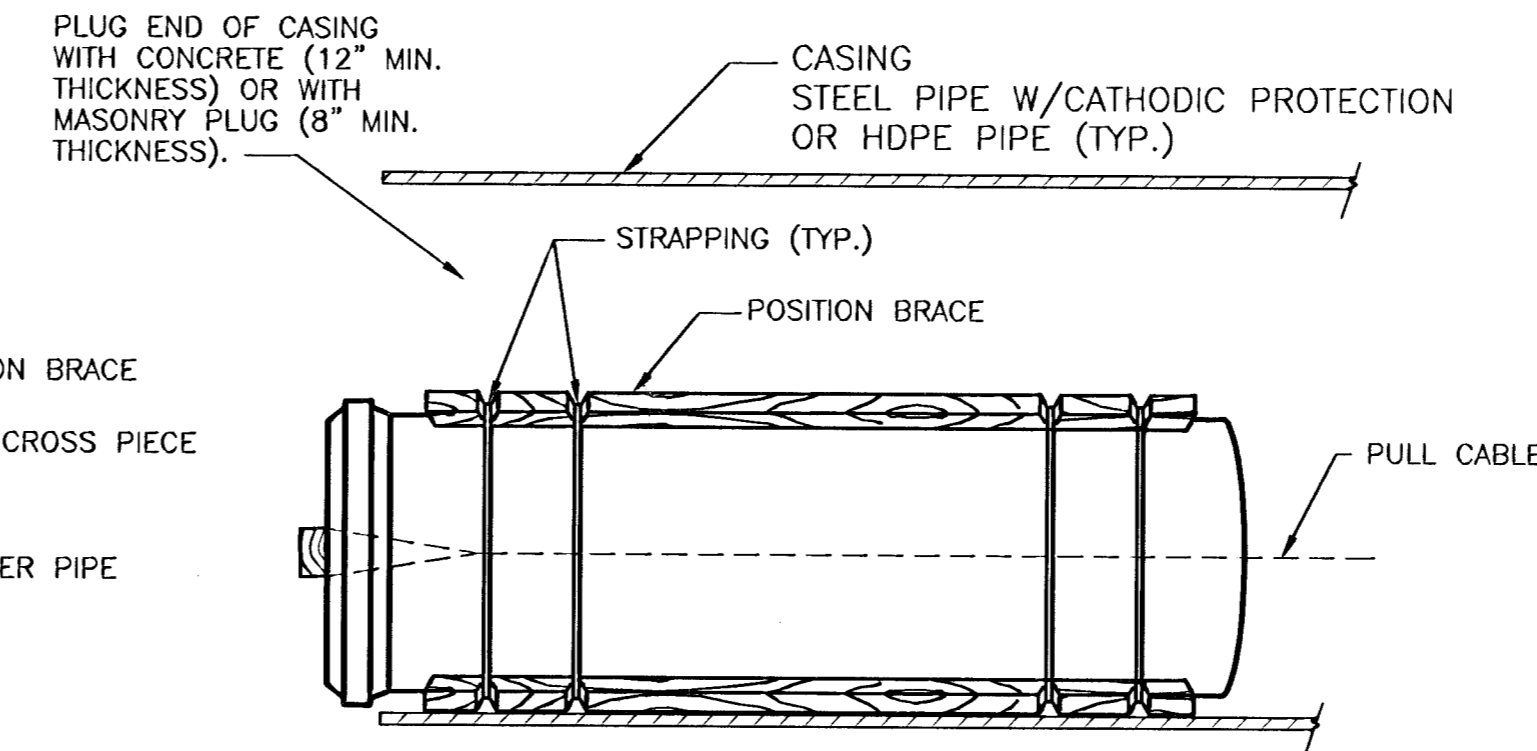
NO SCALE



12" AND UNDER - 4 SKIDS $\phi = 90^\circ$
OVER 12" - 6 SKIDS $\phi = 60^\circ$

PIPE CASING DETAIL

NO SCALE



WHITE LETTERS ON GREEN BACKGROUND

ALUMINUM SIGN (ALUMINUM ALLOY 6061-T6, 080" THK.) BOLTED TO POST

1 1/2" RADIUS CORNERS

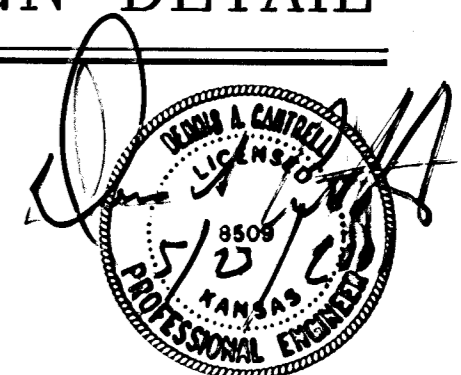
3#/FT. U-CHANNEL W/BAKED GREEN ENAMEL FINISH

6" DIA. CONCRETE FOOTING

CAUTION
PRESSURE
SEWAGE
PIPELINE
IN VICINITY
529-9987

FORCE MAIN WARNING SIGN DETAIL

SCALE: NONE



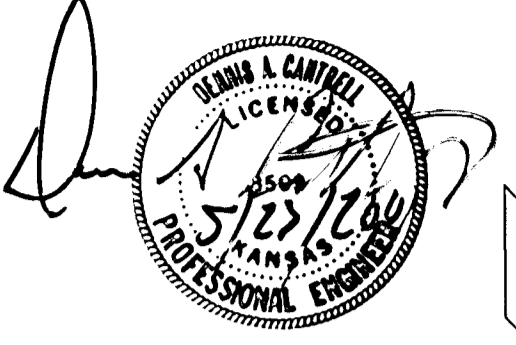
MKEC
ENGINEERING CONSULTANTS
411 N. WEBB ROAD
WICHITA, KS. 67206
316-684-9600

CITY OF WICHITA
NORTHEAST SEWER FORCE MAIN
PROJECT NAME

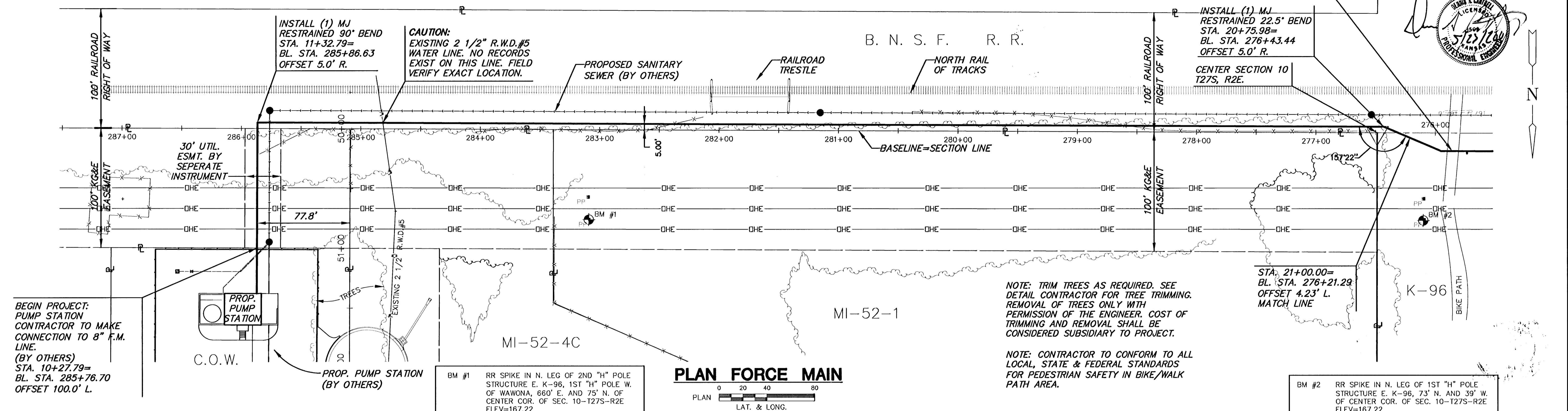
AIR RELEASE & MISCELLANEOUS DETAILS
SHEET TITLE

GJA	BDM	GJA
DESIGN BY:	DRAWN BY:	CHECKED BY:
APRIL, 2001	00276-113	3 / 11
DATE	DRAWING NAME	SHEET / OF

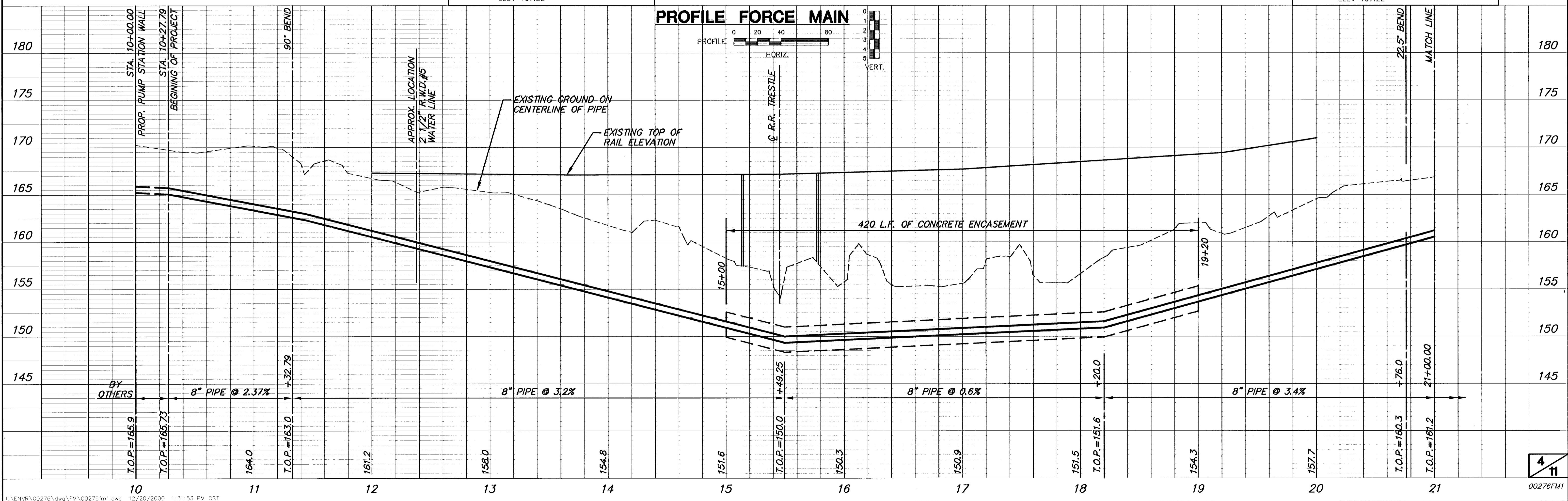
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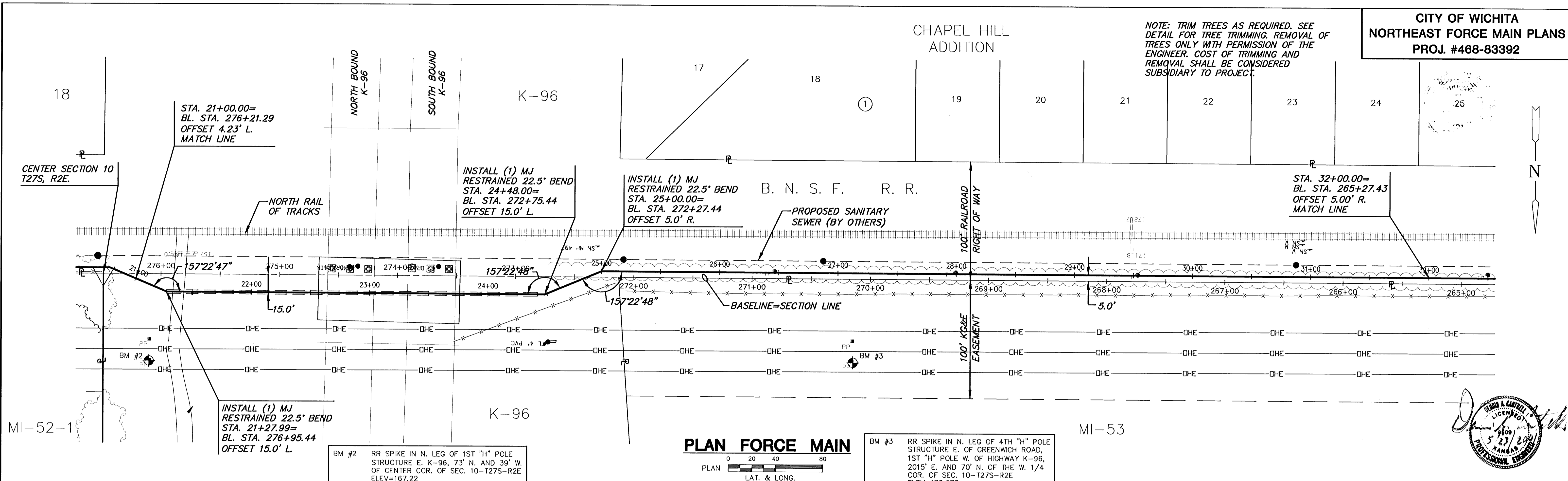
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PROFILE FORCE MAIN



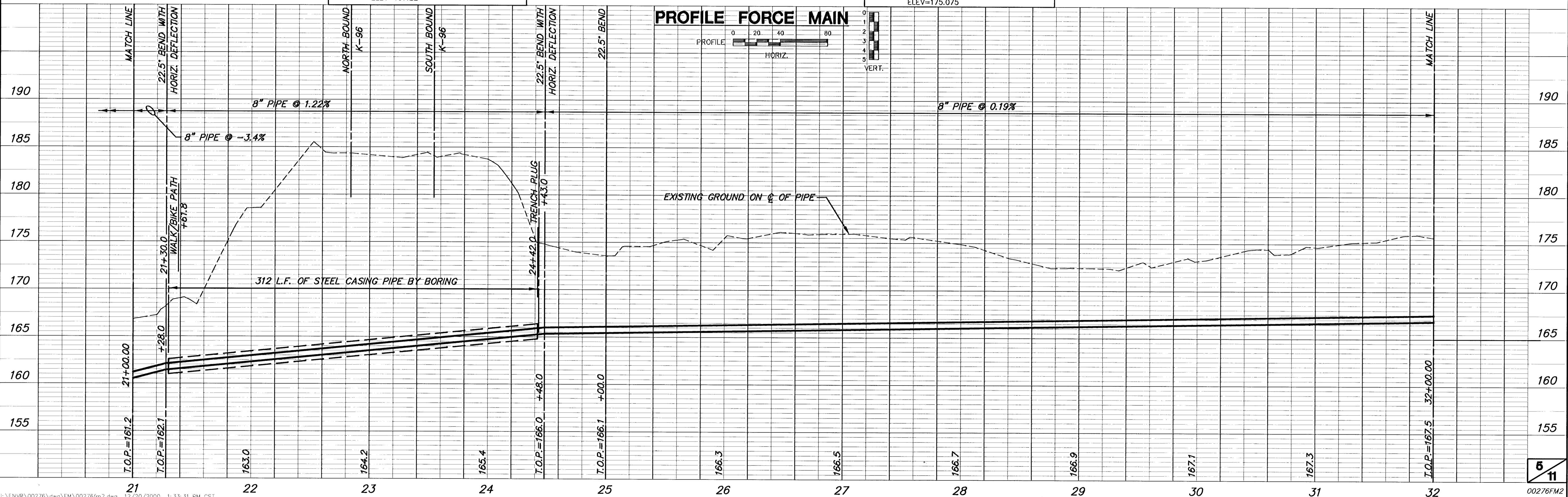
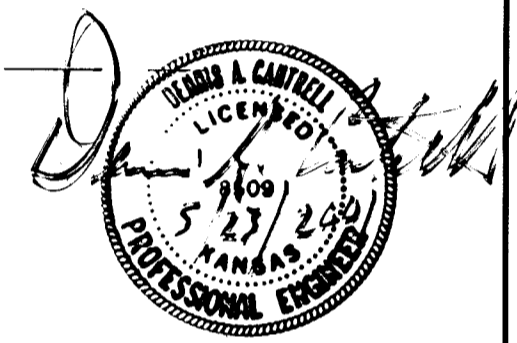
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NOTE: TRIM TREES AS REQUIRED. SEE DETAIL FOR TREE TRIMMING. REMOVAL OF TREES ONLY WITH PERMISSION OF THE ENGINEER. COST OF TRIMMING AND REMOVAL SHALL BE CONSIDERED SUBSIDIARY TO PROJECT.

PLAN FORCE MAIN
LAT. & LONG.

BM #3 RR SPIKE IN N. LEG OF 4TH "H" POLE STRUCTURE E. OF GREENWICH ROAD, 1ST "H" POLE W. OF HIGHWAY K-96, 2015' E. AND 70' N. OF THE W. 1/4 COR. OF SEC. 10-T27S-R2E ELEV=175.075



PROFILE FORCE MAIN
HORIZ. VERT.

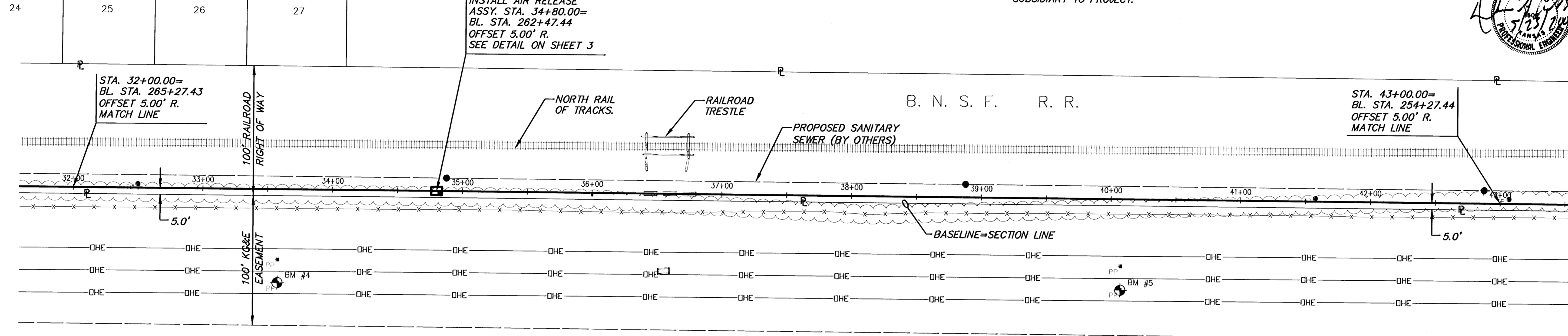
I:\ENVR\00276\dwg\FA\00276m2.dwg 12/20/2000 1:33:31 PM CST

CHAPEL HILL ADDITION

UNPLATTED

CITY OF WICHITA
NORTHEAST FORCE MAIN PLANS
PROJ. #468-83392

NOTE: TRIM TREES AS REQUIRED. SEE DETAIL FOR TREE TRIMMING. REMOVAL OF TREES ONLY WITH PERMISSION OF THE ENGINEER. COST OF TRIMMING AND REMOVAL SHALL BE CONSIDERED SUBSIDIARY TO PROJECT.



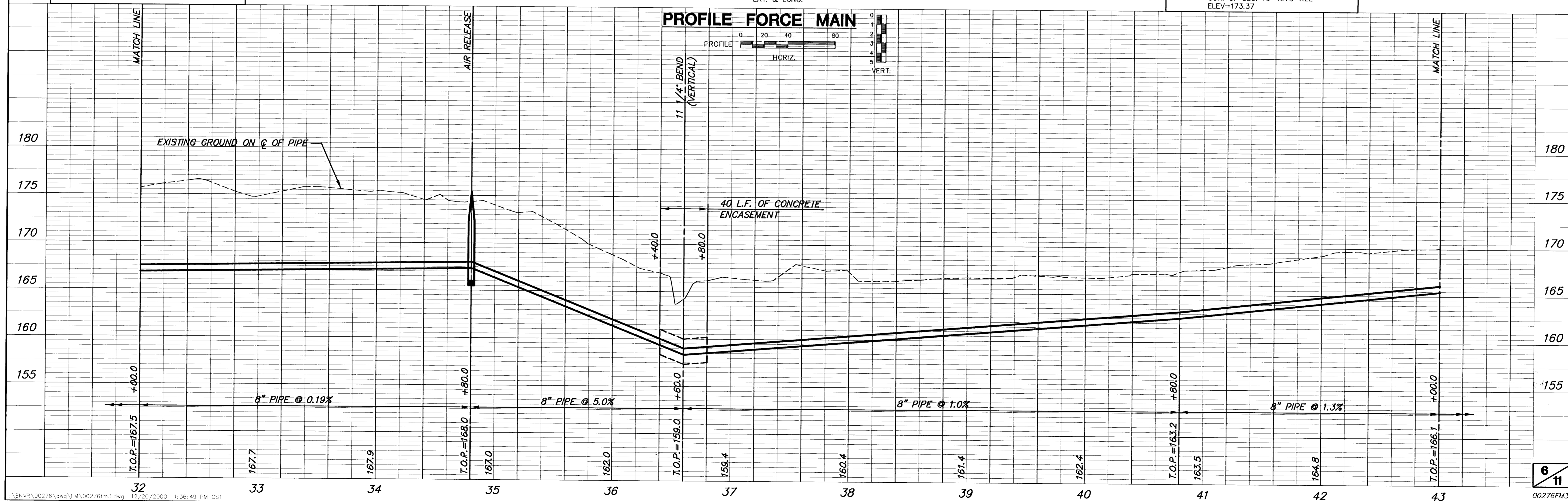
BM #4 RR SPIKE IN N. LEG OF 3RD "H" POLE STRUCTURE EAST OF GREENWICH ROAD, 1370' E. AND 67' N. OF THE W. 1/4 COR. OF SEC. 10-T27S-R2E ELEV=177.345

MI-53

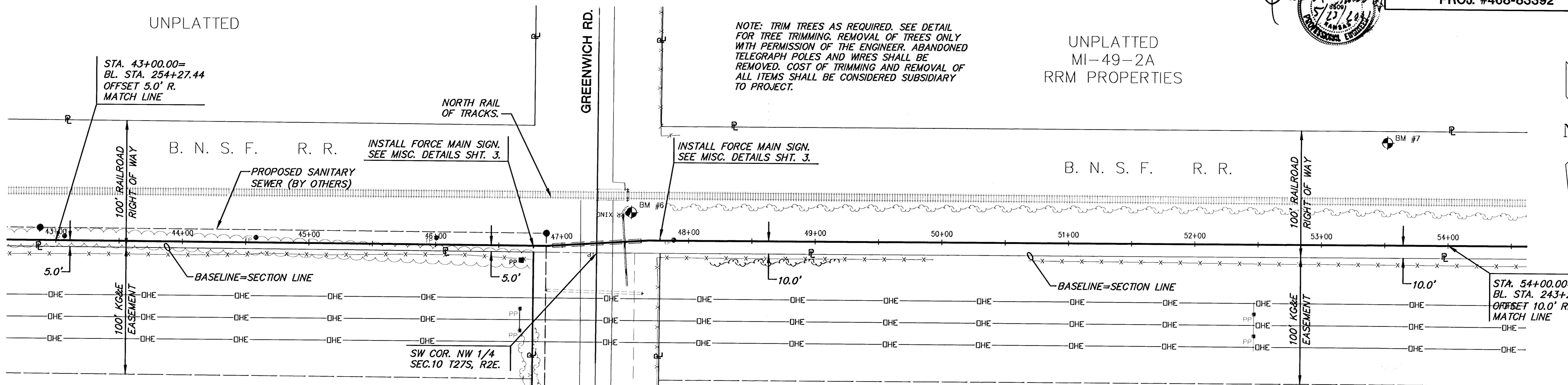
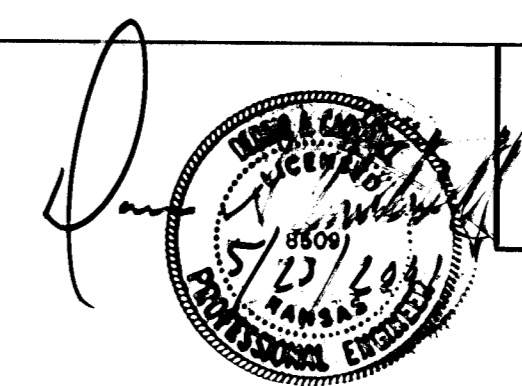
PLAN FORCE MAIN

MI-53

BM #5 RR SPIKE IN N. LEG OF 2ND "H" POLE STRUCTURE EAST OF GREENWICH ROAD, 720' E. AND 66' N. OF THE W. 1/4 COR. OF SEC. 10-T27S-R2E ELEV=173.37



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NOTE: TRIM TREES AS REQUIRED. SEE DETAIL FOR TREE TRIMMING. REMOVAL OF TREES ONLY WITH PERMISSION OF THE ENGINEER. ABANDONED TELEGRAPH POLES AND WIRES SHALL BE REMOVED. COST OF TRIMMING AND REMOVAL OF ALL ITEMS SHALL BE CONSIDERED SUBSIDIARY TO PROJECT.

STA. 43+00.00=
BL. STA. 254+27.44
OFFSET 5.0' R.
MATCH LINE

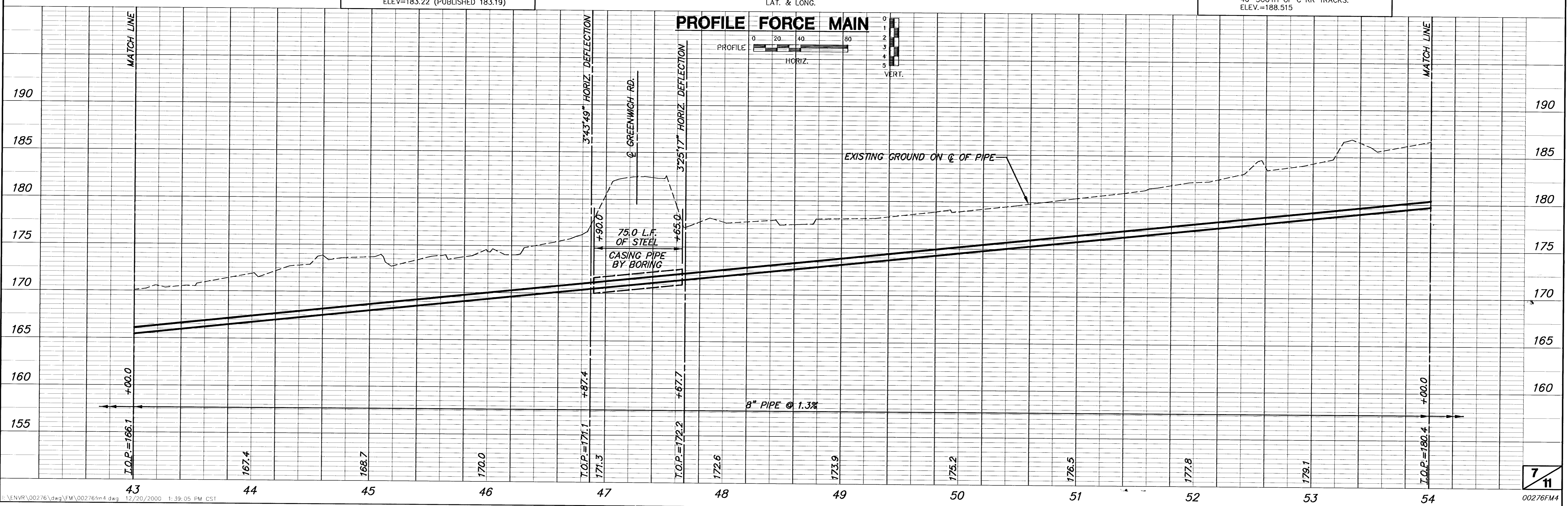
STA. 54+00.00=
BL. STA. 243+27.55
OFFSET 10.0' R.
MATCH LINE

BM #6 COW BENCHMARK DISK IN CONCRETE
BASE OF RR CROSSING POLE 30.5' S.
& 25' W. OF W. 1/4 COR. SEC.
10-T27S-R2E (17TH ST. & GREENWICH)
ELEV.=183.22 (PUBLISHED 183.19)

BM #7 CHISELED SQUARE ON A CONCRETE
FLUME, 624' WEST AND 90.8' SOUTH
OF THE EAST 1/4 CORNER 9-27S-2E.
46' SOUTH OF C RR TRACKS.
ELEV.=188.515

PLAN FORCE MAIN
0 20 40 80
PLAN LAT. & LONG.

PROFILE FORCE MAIN
0 20 40 80
PROFILE HORIZ.
0 1 2 3 4 5
VERT.

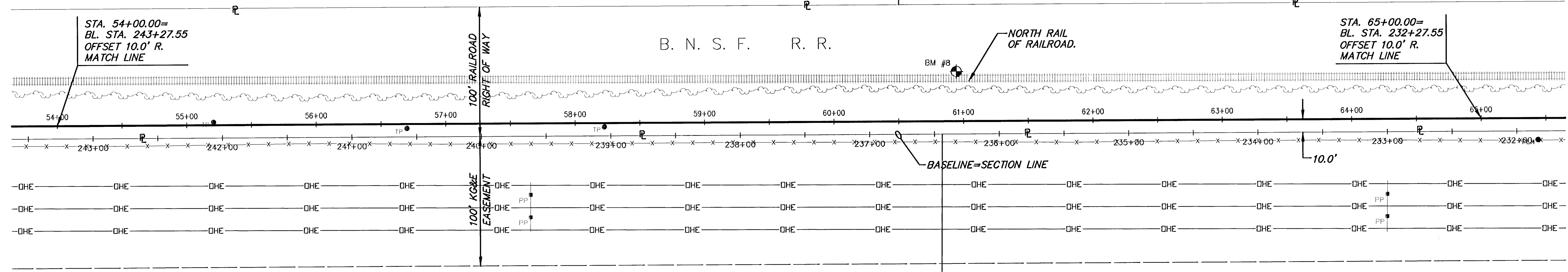




UNPLATTED
 MI-49-2A
 RRM PROPERTIES

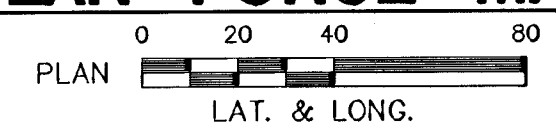
NOTE: TRIM TREES AS REQUIRED. SEE DETAIL FOR TREE TRIMMING. REMOVAL OF TREES ONLY WITH PERMISSION OF THE ENGINEER. ABANDONED TELEGRAPH POLES AND WIRES SHALL BE REMOVED. COST OF TRIMMING AND REMOVAL OF ALL ITEMS SHALL BE CONSIDERED SUBSIDIARY TO PROJECT.

UNPLATTED
 MI-50
 RAYTHEON



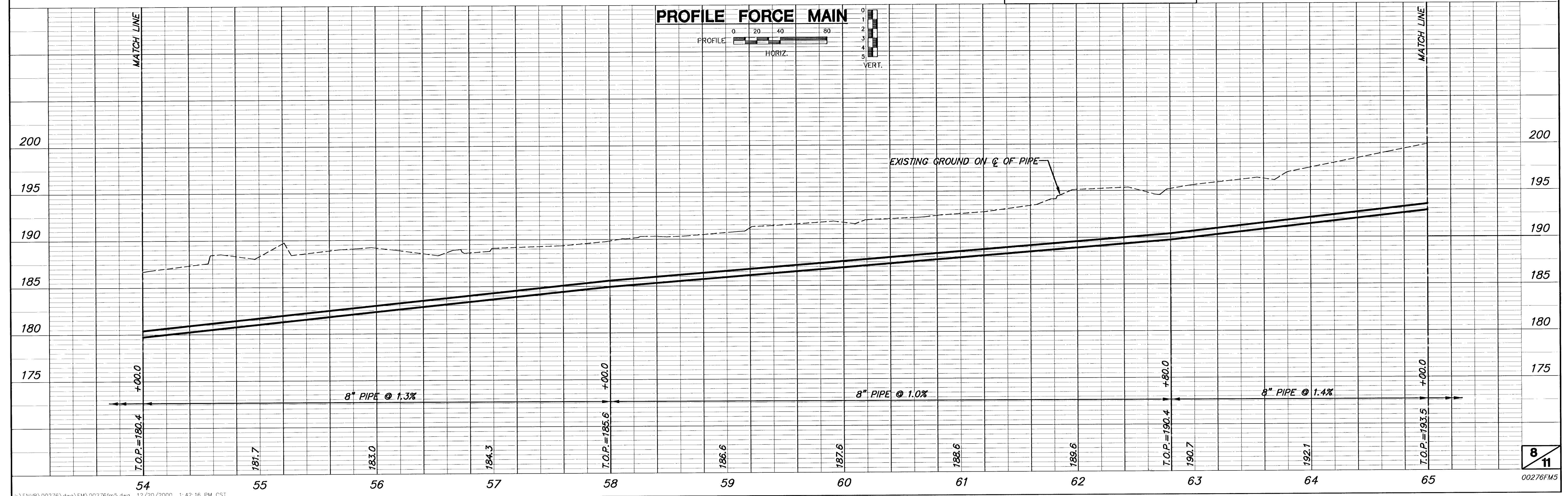
MI-47

PLAN FORCE MAIN

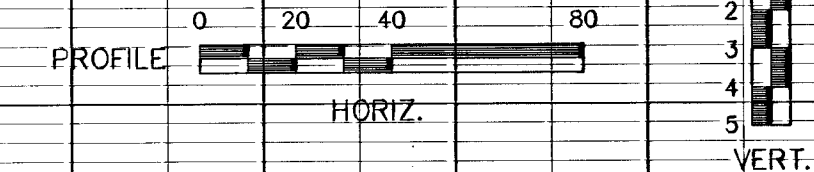


BM #8 FENCE "T" POST 1367' WEST AND 48' SOUTH OF THE EAST 1/4 CORNER 9-27S-2E. 5' SOUTH OF Q RR TRACKS. ELEV.=197.12

MI-47-1



PROFILE FORCE MAIN



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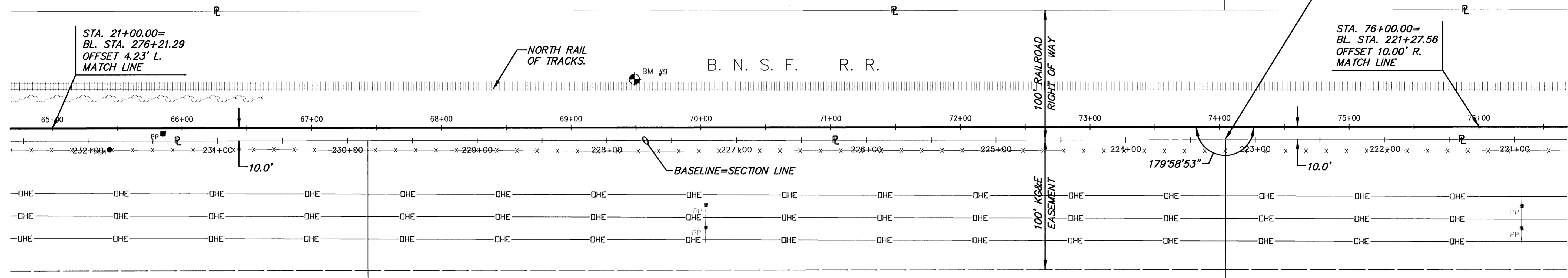
UNPLATTED
MI-50
RAYTHEON

NOTE: TRIM TREES AS REQUIRED. SEE DETAIL FOR TREE TRIMMING. REMOVAL OF TREES ONLY WITH PERMISSION OF THE ENGINEER. ABANDONED TELEGRAPH POLES AND WRES SHALL BE REMOVED. COST OF TRIMMING AND REMOVAL OF ALL ITEMS SHALL BE CONSIDERED SUBSIDIARY TO PROJECT.

UNPLATTED
MI-51
RAYTHEON

CENTER SECTION 9
T27S, R2E.
BL. STA. 223+23.33

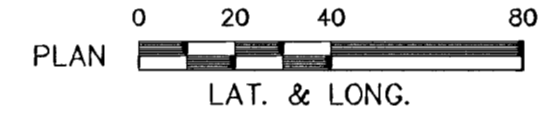
STA. 76+00.00=
BL. STA. 221+27.56
OFFSET 10.00' R.
MATCH LINE



UNPLATTED
MI-47-1

UNPLATTED
MI-47

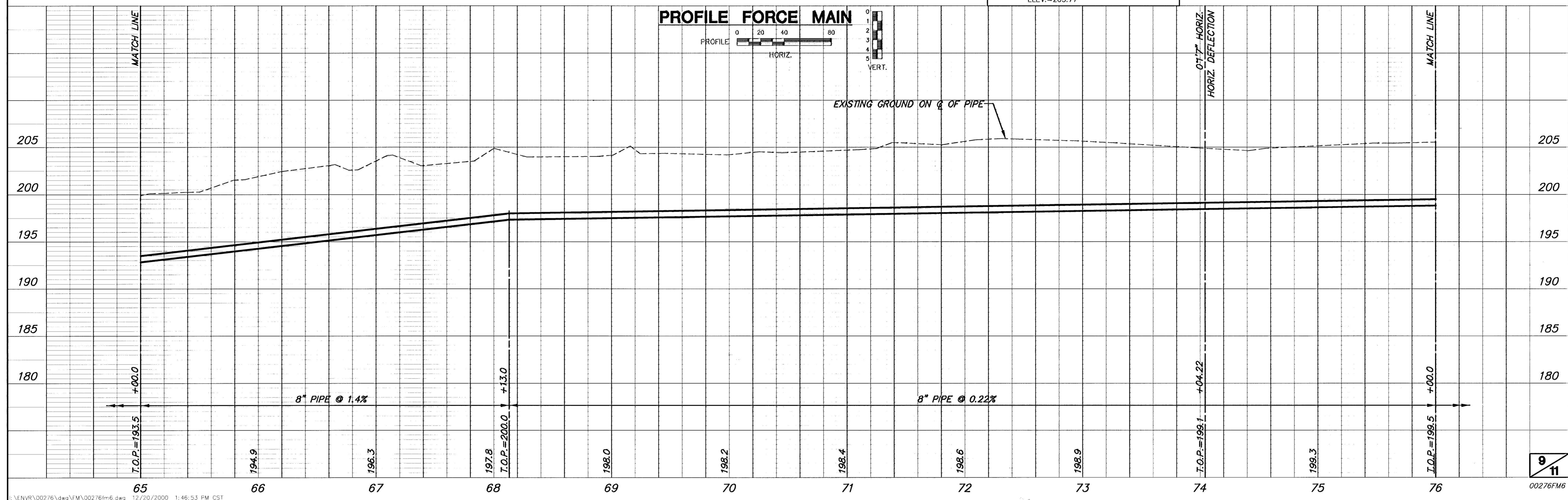
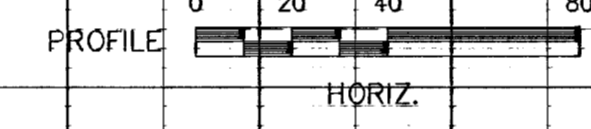
PLAN FORCE MAIN



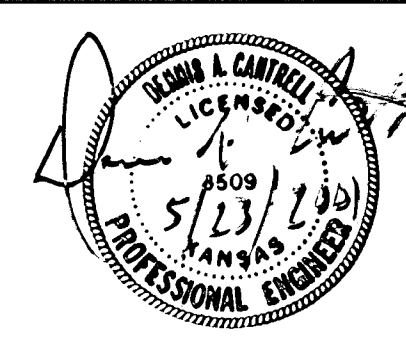
BM #9 FENCE "I" POST 2221' WEST AND 47' SOUTH OF THE EAST 1/4 CORNER 9-27S-2E, 455' EAST OF THE CENTER 9-27S-2E, 5' SOUTH OF ϕ RR TRACKS. ELEV.=205.77

UNPLATTED
MI-48 & MI-48-1A

PROFILE FORCE MAIN



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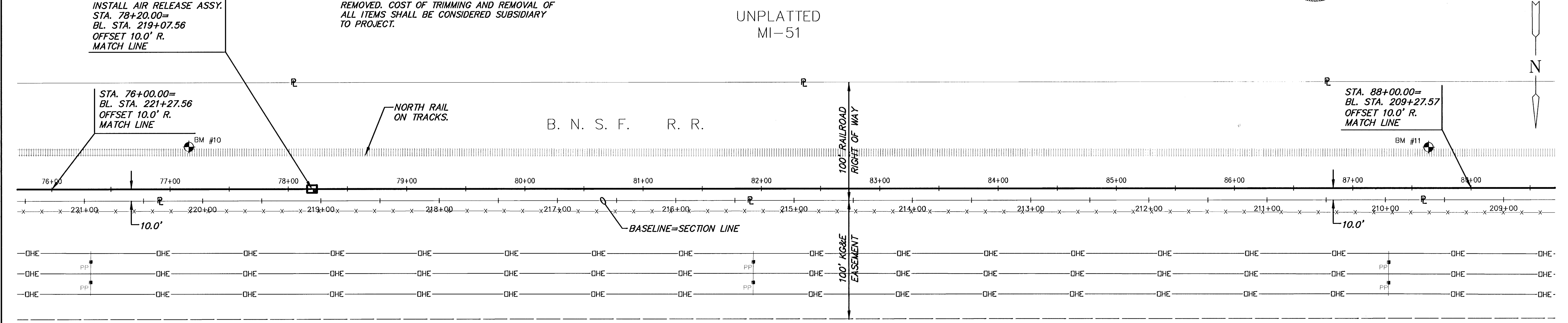


NOTE: TRIM TREES AS REQUIRED. SEE DETAIL FOR TREE TRIMMING. REMOVAL OF TREES ONLY WITH PERMISSION OF THE ENGINEER. ABANDONED TELEGRAPH POLES AND WIRES SHALL BE REMOVED. COST OF TRIMMING AND REMOVAL OF ALL ITEMS SHALL BE CONSIDERED SUBSIDIARY TO PROJECT.

INSTALL AIR RELEASE ASSY.
STA. 78+20.00=
BL. STA. 219+07.56
OFFSET 10.0' R.
MATCH LINE

STA. 76+00.00=
BL. STA. 221+27.56
OFFSET 10.0' R.
MATCH LINE

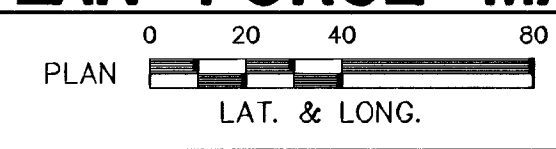
STA. 88+00.00=
BL. STA. 209+27.57
OFFSET 10.0' R.
MATCH LINE



BM #10 FENCE "T" POST 312' WEST AND 46' SOUTH OF THE CENTER 9-27S-2E. 2302' EAST OF THE WEST 1/4 CORNER 9-27S-2E. 4.5' SOUTH OF C RR TRACKS. ELEV.=208.00

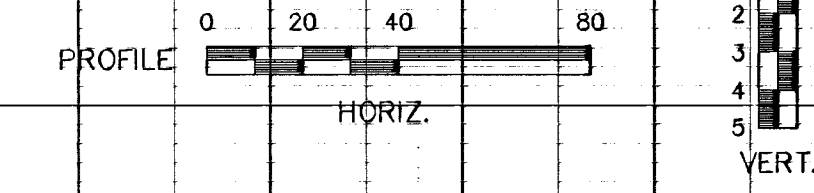
UNPLATTED
MI-48

PLAN FORCE MAIN



BM #11 FENCE "T" POST 1254' WEST AND 44' SOUTH OF THE WEST 1/4 CORNER 9-27S-2E. 4.6' SOUTH OF C RR TRACKS. ELEV.=198.57

PROFILE FORCE MAIN



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**CITY OF WICHITA
NORTHEAST FORCE MAIN PLANS
PROJ. #468-83392**

BM #13 PEC'S BM#8 ON C.O.W. PROJECT NO. 448-78-245-89467-000-000-001. CHISELED SQUARE ON TOP OF WEST CURB ON WEBB ROAD, 16' SOUTH OF RR TRACKS. ELEV.=194.45



CONST. PLASTIC LINED MANHOLE STA. 100+41.27 BL. STA.197+61.36 OFFSET 85.0' R. SEE DETAILS SHEET 3

CONST. 4' MANHOLE STA. 100+41.27 BL. STA.197+71.98 OFFSET 84.91' R. SEE DETAILS SHEET 3

INSTALL (1) M.J. RESTRAINED 90° BEND STA. 99+68.30= BL. STA. 198+34.34 OFFSET 85.0' R.

INSTALL (1) M.J. RESTRAINED 90° BEND STA. 98+93.21= BL. STA. 198+34.35 OFFSET 10.00' R.

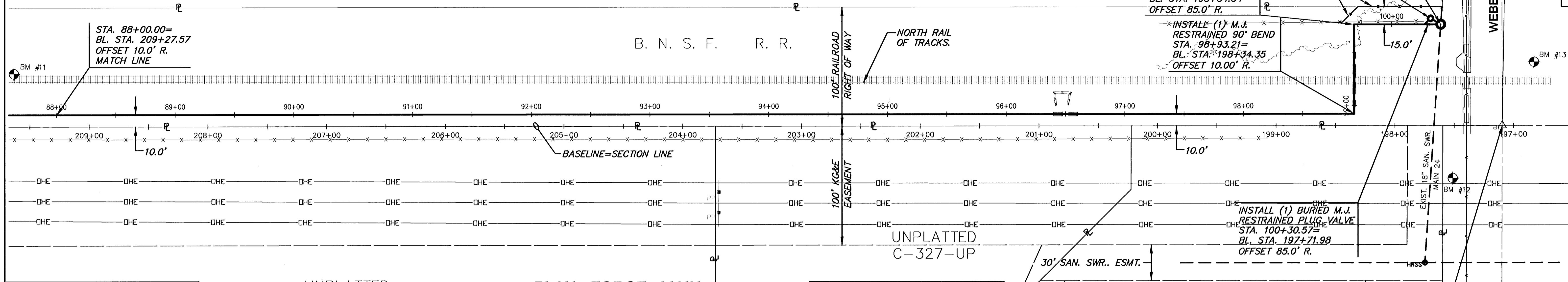
INSTALL (1) BURIED M.J. RESTRAINED PLUG VALVE STA. 100+30.57= BL. STA. 197+71.98 OFFSET 85.0' R.

NOTE: TRIM TREES AS REQUIRED. SEE DETAIL FOR TREE TRIMMING. REMOVAL OF TREES ONLY WITH PERMISSION OF THE ENGINEER. ABANDONED TELEGRAPH POLES AND WIRES SHALL BE REMOVED. COST OF TRIMMING AND REMOVAL OF ALL ITEMS SHALL BE CONSIDERED SUBSIDIARY TO PROJECT.

NOTE: WEST 80 FT. OF FENCE ALONG RAILROAD EASEMENT TO BE RELOCATED ALONG PROPERTY LINE AS SHOWN IN LIKE & KIND.

UNPLATTED MI-51 RAYTHEON

B. N. S. F. R. R.



BM #11 FENCE "T" POST 1254' WEST AND 44' SOUTH OF THE WEST 1/4 CORNER 9-27S-2E. 4.6' SOUTH OF Q RR TRACKS. ELEV.=198.57

UNPLATTED MI-48

PLAN FORCE MAIN

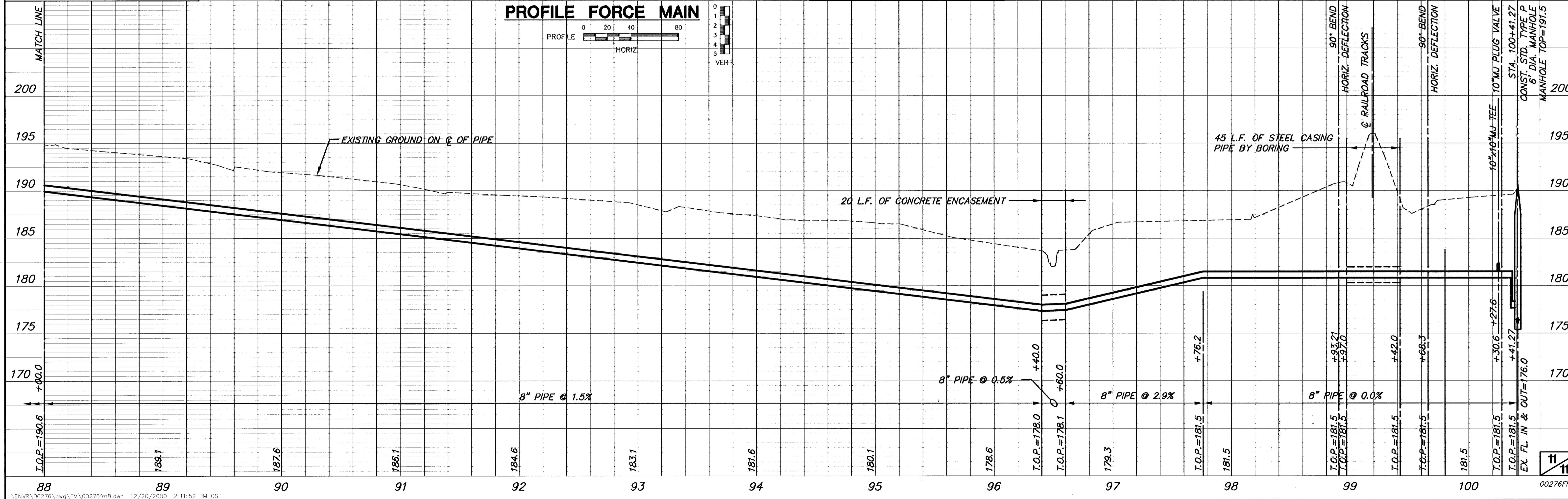


BM #12 CHISELED SQUARE ON SE CORNER HEADWALL, 44' NORTH AND 42' EAST OF THE WEST 1/4 CORNER 9-27S-2E, 82' NORTH OF Q RR TRACKS. ELEV.=192.73

EASTMINSTER ADDITION

BL. STA. 97+09.58 SW COR. NW 1/4 SEC. 9 T27S, R2E.

PROFILE FORCE MAIN



11/11

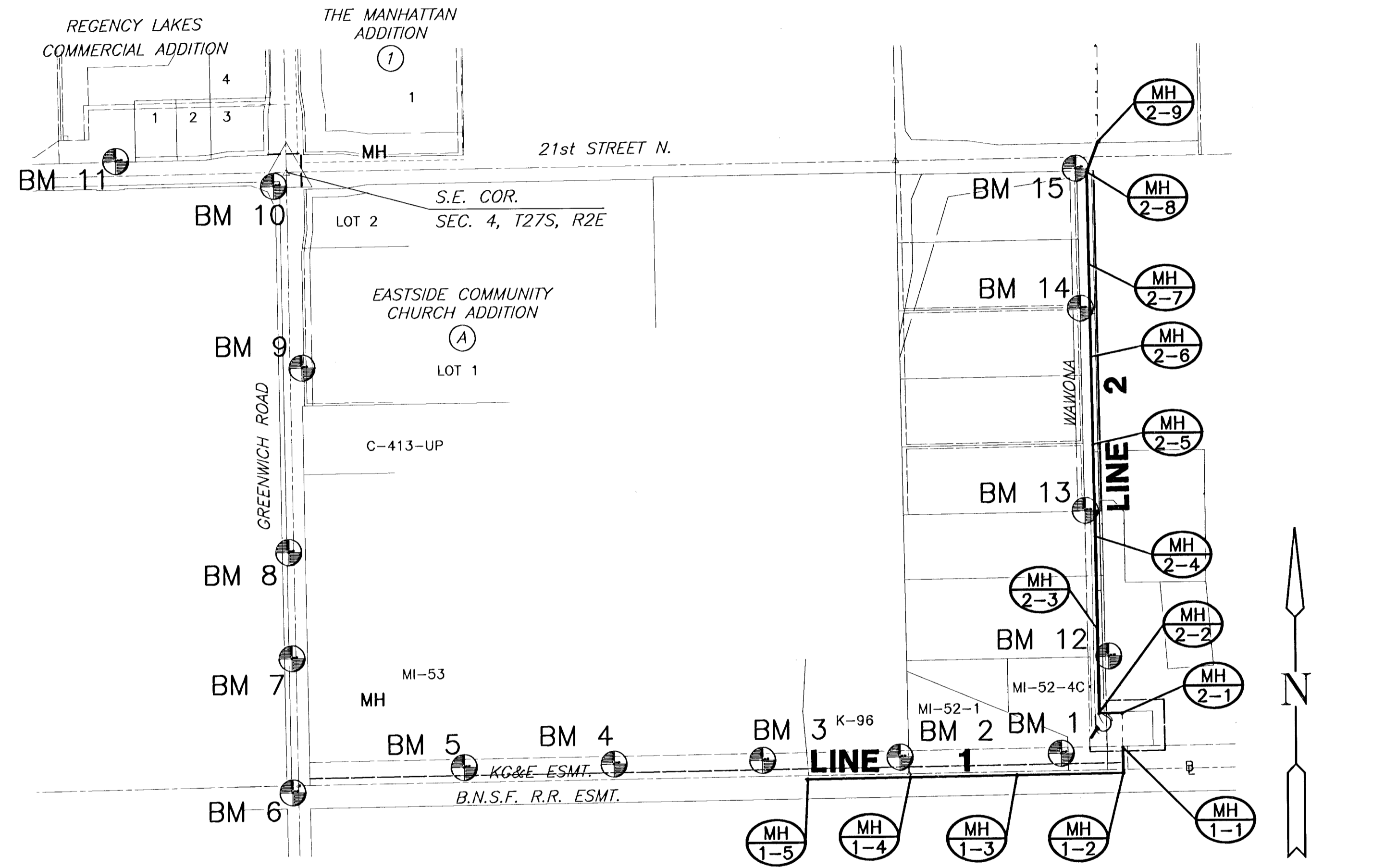
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GENERAL NOTES

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PRESERVING PROPERTY IRONS SHOWN ON PLANS. 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.
- EXISTING UTILITIES AND THEIR LOCATIONS AS SHOWN ON THE PLANS REPRESENT THE BEST INFORMATION OBTAINABLE FOR DESIGN. LOCATION INFORMATION HAS BEEN OBTAINED FROM THE VARIOUS UTILITY COMPANIES AND IS EITHER FROM COMPANY RECORD DRAWINGS OR COMPANY PROVIDED FIELD LOCATIONS. THE PLAN LOCATIONS SHOWN ARE NOT GUARANTEED. ADDITIONAL EXISTING UTILITIES MAY BE ENCOUNTERED.
- CONTRACTOR SHALL PROVIDE A MINIMUM ADVANCE NOTICE OF FORTY-EIGHT (48) HOURS TO UTILITY COMPANIES PRIOR TO STARTING ANY EXCAVATION AS FOLLOWS:
 KANSAS ONE-CALL 1-800-344-7233 OR 687-2470 (LOCAL WICHITA)
 THE CONTRACTOR MUST NOTIFY THE FOLLOWING IN CASE OF AN EMERGENCY:
 SOUTHWESTERN BELL TELEPHONE COMPANY 1-800-734-7590
 COX CABLEVISION 1-316-262-0661
 KG&E (GAS & ELECTRIC) 1-316-383-8600
 CITY OF WICHITA WATER & SEWER MAINTENANCE 1-316-262-6000
 KANEB PIPELINE 1-316-773-9000
 SEDGWICK COUNTY PUBLIC WORKS 1-316-383-7901
- UNDERGROUND UTILITY SERVICE LINES AND OVERHEAD UTILITY POLE LINES ARE TO BE ADJUSTED AS NECESSARY BY OTHERS PRIOR TO CONSTRUCTION UNLESS THE PLANS SPECIFICALLY CALL FOR THEIR ADJUSTMENT BY THE CONTRACTOR OR UNLESS THE PLANS SPECIFICALLY IDENTIFY A UTILITY TO BE ADJUSTED BY ITS OWNER DURING CONSTRUCTION. EXISTING UTILITIES AND THEIR LOCATIONS, AS SHOWN ON THE PLANS, REPRESENT THE BEST INFORMATION OBTAINABLE FOR DESIGN. THE CONTRACTOR WILL BE REQUIRED TO WORK AROUND EXISTING UTILITIES WITHIN THE RIGHT-OF-WAY WHICH DO NOT CONFLICT WITH PROPOSED CONSTRUCTION.
- RUBBLE FROM THE REMOVAL OF MISCELLANEOUS STRUCTURES AND EXCESS EXCAVATION WHICH IS TO BE WASTED SHALL BE DISPOSED OF ON SITES TO BE 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. 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 WILL REQUIRE ADDITIONAL ARCHAEOLOGICAL INVESTIGATIONS UNLESS BURIED IN A PREVIOUSLY APPROVED BORROW LOCATION. COST OF EXCAVATION HAULING, AND DUMPING OF EXCESS EXCAVATION SHALL BE SUBSIDIARY TO THE PROJECT.
- THE CONTRACTOR SHALL GIVE ALL PROPERTY OWNERS AND/OR TENANTS OF DEVELOPED PROPERTY ADJUTING THE CONSTRUCTION OF THIS PROJECT A MINIMUM OF (48) HOURS ADVANCE NOTICE PRIOR TO START OF CONSTRUCTION.
- ALL CONSTRUCTION AND MATERIALS SHALL COMPLY WITH CITY OF WICHITA STANDARD SPECIFICATIONS.
- INTER-URBAN TRAFFIC GENERATED OUTSIDE THE PROJECT AREA AND LOCAL TRAFFIC GENERATED WITHIN THE PROJECT AREA ARE TO BE CARRIED THROUGH CONSTRUCTION ON EXISTING ROADWAYS AT ALL TIMES. ACCESS TO ALL DWELLINGS IN THE PROJECT AREA SHALL BE PROVIDED AT ALL TIMES. THE CONTRACTOR SHALL ERECT WARNING SIGNS, FLASHING LIGHTS, AND BARRICADES IN COMPLIANCE WITH THE STANDARD SPECIFICATIONS.
- THE CONTRACTOR SHALL LIMIT THE EXTENT OF TRENCH TO REMAIN OPEN OVERNIGHT AND WEEKENDS TO LESS THAN 50 FEET.
- THE CONTRACTOR SHALL RESTORE ALL DITCHES, CHANNELS, BANK STABILIZATION, SWALES, ROAD SHOULDERS, PAVEMENT ENTRANCES, AND BANKS TO THEIR ORIGINAL SLOPES AND GRADES. WHERE EXISTING ENTRANCE PIPE, DRAINAGE PIPE, SPRINKLER SYSTEMS, SIDEWALKS, DRIVES, SIGNS, FENCES, ETC., CONFLICT WITH THE PROPOSED WORK HEREIN THEY SHALL BE REMOVED AND REPLACED OR RESET IN LIKE KIND. ALL OF THE ABOVE INCLUDING TREES, SHRUBS, GRASS, SOO AND OTHER LANDSCAPING, WHERE NOTED, SHALL BE CONSIDERED SUBSIDIARY TO THE PRICE BID FOR SITE RESTORATION.
- TREES AND SHRUBS IN PUBLIC RIGHTS-OF-WAY WHICH ARE IN DIRECT CONFLICT WITH PROPOSED NEW CONSTRUCTION SHALL BE REMOVED BY THE CONTRACTOR WITH THE ENGINEER'S APPROVAL. THE CONTRACTOR SHALL RESTORE AND REPLACE LANDSCAPE FEATURES AND PLANTINGS AS NOTED IN THE DRAWINGS OR AS DIRECTED BY THE ENGINEER. TREES AND SHRUBS WHICH ARE NOT IN DIRECT CONFLICT WITH PROPOSED NEW CONSTRUCTION SHALL BE SAVED AND PROTECTED FROM DAMAGE.
- POSITIVE DRAINAGE SHALL BE PROVIDED FOR ALL AREAS ON OR NEAR SPOIL AREAS. NATURAL DRAINAGE WAYS SHALL BE MAINTAINED.
- WHERE REMOVAL OF EXISTING FENCES NEXT TO THE CONSTRUCTION IS DEEMED NECESSARY BY THE CONTRACTOR, THE CONTRACTOR SHALL COORDINATE REMOVAL WITH ADJACENT PROPERTY OWNERS. ALL REMOVAL AND RESETTING OF FENCES SHALL BE CONSIDERED SUBSIDIARY TO SITE PREPARATION AND SITE RESTORATION, RESPECTIVELY.
- ALL ELEVATIONS SHOWN ARE CITY OF WICHITA DATUM. CITY DATUM = NGVD - 1187.4.
- ALL EXISTING GRASSED AREAS WHICH ARE DISTURBED OR DAMAGED DURING CONSTRUCTION OPERATIONS SHALL BE RESTORED TO ORIGINAL CONDITIONS, AND RE-SEEDING OR RE-SODDING IN LIKE KIND, UNLESS OTHERWISE NOTED ON THE PLANS. COSTS SHALL BE CONSIDERED SUBSIDIARY TO THE PRICE BID FOR SITE RESTORATION. APPLICATION RATE FOR THE VARIOUS SEED MIXTURES SHALL BE AS APPROVED BY THE ENGINEER. SEEDING SHALL CONFORM TO APPLICABLE REQUIREMENTS OF STANDARD SPECIFICATIONS. SODDING SHALL CONFORM TO APPLICABLE REQUIREMENTS OF SUPPLEMENTAL SPECIFICATIONS.
- SLOPES STEEPER THAN 10 TO 1 SHALL BE MULCHED AS REQUIRED BY STANDARD SPECIFICATIONS. COST OF MULCHING SHALL BE INCLUDED IN PRICE BID FOR SITE RESTORATION.
- EROSION CONTROL AREA DISTURBED BY CONSTRUCTION SHALL BE COVERED WITH AN EROSION CONTROL MAT/BLANKET WITHIN TWENTY (24) HOURS OF BACKFILLING, LEVELING AND TEMPORARY SEEDING. PLACEMENT OF EROSION CONTROL MATS/BLANKETS (ECM'S) SHALL IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS REGARDING OVERLAPS, EDGE TRENCHING AND STAPLING OR THE CITY OF WICHITA'S STANDARD DETAIL DRAWINGS WHICH EVER IS MORE RESTRICTIVE. (ECM'S) MAY BE AMERICAN EXCELSIOR CURLEX I, NORTH AMERICAN GREEN S75, SYNTHETIC INDUSTRIES LANDLOK BON TERRA S1 OR AN APPROVED EQUAL.
- MANHOLES WITH A DEPTH OF 20 FEET OR MORE SHALL BE A MINIMUM OF 5 FEET IN DIAMETER REGARDLESS OF PIPE SIZE AND SHALL BE PLASTIC LINED.

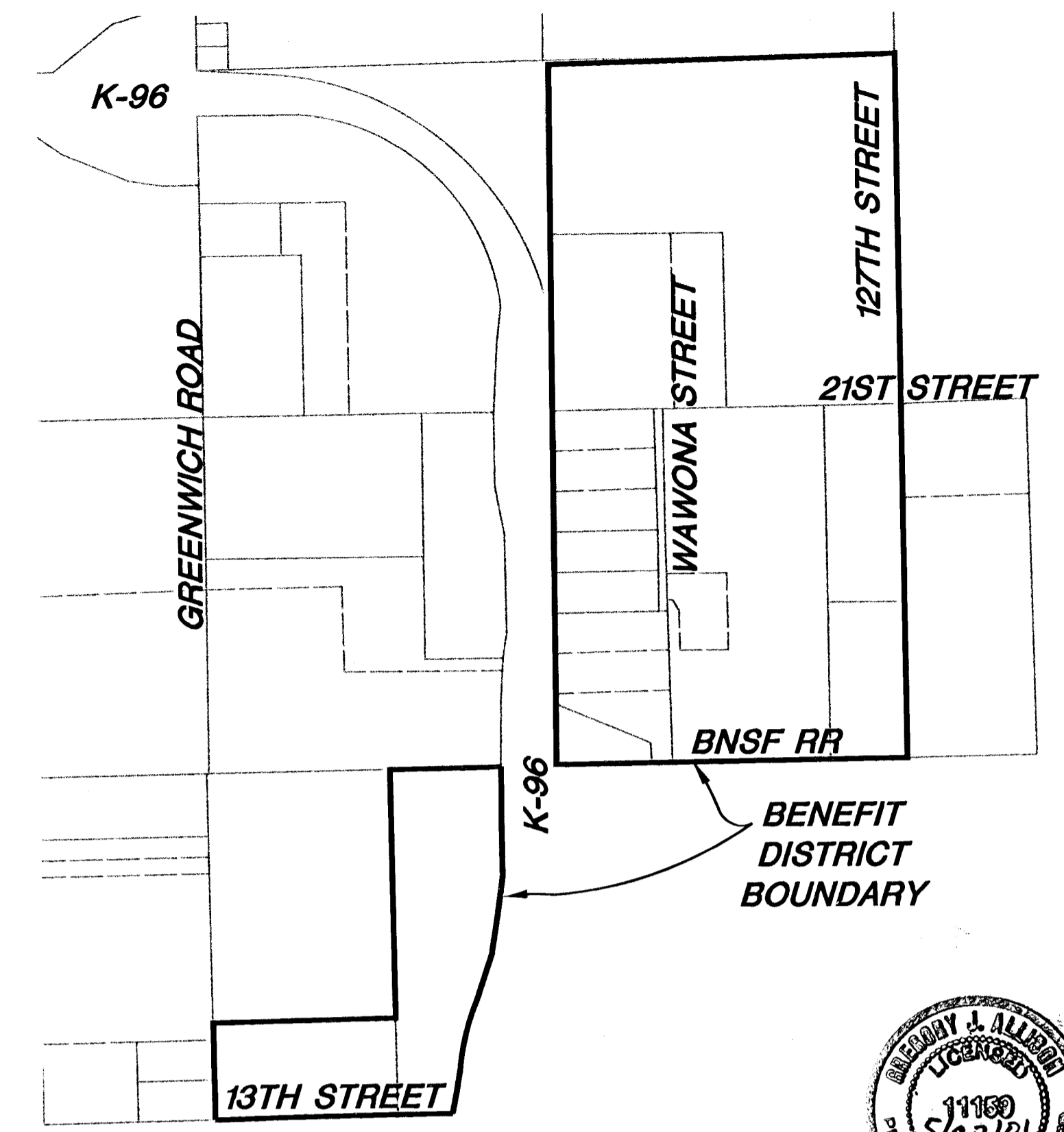
**SANITARY SEWER PLANS FOR
 MAIN 10
 FOUR MILE CREEK SEWER - PHASE 1
 PROJECT NO. 468-83392
 CITY OF WICHITA, KANSAS
 MICHAEL E. LINDEBAK, CITY ENGINEER
 INDEX CODE 624503**



BENCHMARKS

BM #1	RR SPIKE IN N. LEG OF 2ND "H" POLE STRUCTURE E. K-96, 1ST "H" POLE W. OF WAWONA, 660' E. AND 75' N. OF CENTER COR. OF SEC. 10-T27S-R2E ELEV=167.22	BM #6	COW BENCHMARK DISK IN CONCRETE BASE OF RR CROSSING POLE 30.5' S. & 25' W. OF W. 1/4 COR. SEC. 10-T27S-R2E (17TH ST. & GREENWICH) ELEV=183.22 (PUBLISHED 183.19)	BM #12	RR SPIKE IN E. SIDE 18" ELM TREE 2163' S. OF N. LINE NE 1/4 SEC. 10-T27S-R2E (21ST ST. N.) & 62' E. OF THE W. LINE OF WAWONA EXTENDED SOUTH. ELEV=176.30
BM #2	RR SPIKE IN N. LEG OF 1ST "H" POLE STRUCTURE E. OF GREENWICH ROAD, 1ST "H" POLE W. OF HIGHWAY K-96, 2015' E. AND 70' N. OF THE W. 1/4 COR. OF SEC. 10-T27S-R2E ELEV=175.075	BM #7	5/8" BAR AND MKEC CAP. 550' N. & 17.5' W. OF W. 1/4 COR. SEC. 10-T27S-R2E ELEV=177.48	BM #13	RR SPIKE IN W. SIDE OF PP ON W. SIDE OF WAWONA, 1531' S. OF THE N. LINE OF THE NE 1/4 SEC. 10-T27S-R2E ELEV=181.24
BM #3	RR SPIKE IN N. LEG OF 4TH "H" POLE STRUCTURE E. OF GREENWICH ROAD, 1ST "H" POLE W. OF HIGHWAY K-96, 2015' E. AND 70' N. OF THE W. 1/4 COR. OF SEC. 10-T27S-R2E ELEV=175.075	BM #8	CHISELED "I" ON N. END OF W. HDWL OF RCB UNDER GREENWICH RD, 1011' N. OF W. 1/4 COR. SEC. 10-T27S-R2E ELEV=172.705	BM #14	RR SPIKE IN W. SIDE OF PP ON W. SIDE OF WAWONA, 654' S. OF THE N. LINE OF THE NE 1/4 SEC. 10-T27S-R2E ELEV=197.32
BM #4	RR SPIKE IN N. LEG OF 3RD "H" POLE STRUCTURE EAST OF GREENWICH ROAD, 1370' E. AND 67' N. OF THE W. 1/4 COR. OF SEC. 10-T27S-R2E ELEV=177.345	BM #9	RR SPIKE IN SW SIDE OF 24" TREE, 849' S. AND 51' E. OF THE NW. COR. SEC. 10-T27S-R2E ELEV=180.35	BM #15	STEEPLED SPIKE IN N. SIDE OF PP ON SW. COR. 21ST ST. N. AND GREENWICH ROAD. ELEV=197.32
BM #5	RR SPIKE IN N. LEG OF 2ND "H" POLE STRUCTURE EAST OF GREENWICH ROAD, 720' E. AND 66' N. OF THE W. 1/4 COR. OF SEC. 10-T27S-R2E ELEV=173.37	BM #10	CHISELED "I" ON SW. COR. OF CONC. BASE OF TRAFFIC SIGNAL POLE ON SW. COR. 21ST ST. N. AND GREENWICH ROAD. ELEV=176.105		
		BM #11	CHISELED "I" ON E. END OF N. HDWL OF RCB 740' W. OF SE. COR. SEC. 4-T27S-R2E ELEV=175.035		

SCALE: 1" = 400'



BENEFIT DISTRICT MAP



INDEX TO DRAWINGS

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	MANHOLE DETAILS
3-7	PLAN / PROFILE SHEETS

LEGEND

- 3IN - TREE AND DIAMETER
- SN - SIGN AND POSTS
- IP-1/2" MID-KANSAS BAR - IRON PIPE AND DESCRIPTION
- 214 x 49 - SPOT ELEVATION AND LOCATION
- PP - POWER POLE AND DEADMAN
- MKEC - ELECTRIC BOX
- - DRAINAGE ARROW
- - EDGE OF TREES
- E - UNDERGROUND ELECTRIC LINE
- OHE - OVERHEAD ELECTRIC LINE
- - FENCE
- BM - BENCHMARK
- SSMH - STORM WATER MANHOLE
- IP-1/2" MID-KANSAS BAR - IRON PIPE AND DESCRIPTION
- SSMH - SANITARY SEWER MANHOLE
- - RETAINING WALL
- LP - LIGHT POLE
- FH - FIRE HYDRANT
- WV - WATER VALVE
- WM - WATER METER
- ICV - IRRIGATION CONTROL VALVE
- GI - GRATE INLET
- TR - TELEPHONE RISER
- - STORM SEWER PIPE
- - WATER LINE
- SS - SANITARY SEWER LINE
- G - GAS LINE
- T - TELEPHONE LINE

MKEC
 ENGINEERING CONSULTANTS
 411 N. WEBB ROAD
 WICHITA, KS. 67208
 316-684-9600

**MAIN 10
 FOUR MILE CREEK SEWER - PHASE 1**
 PROJECT NAME

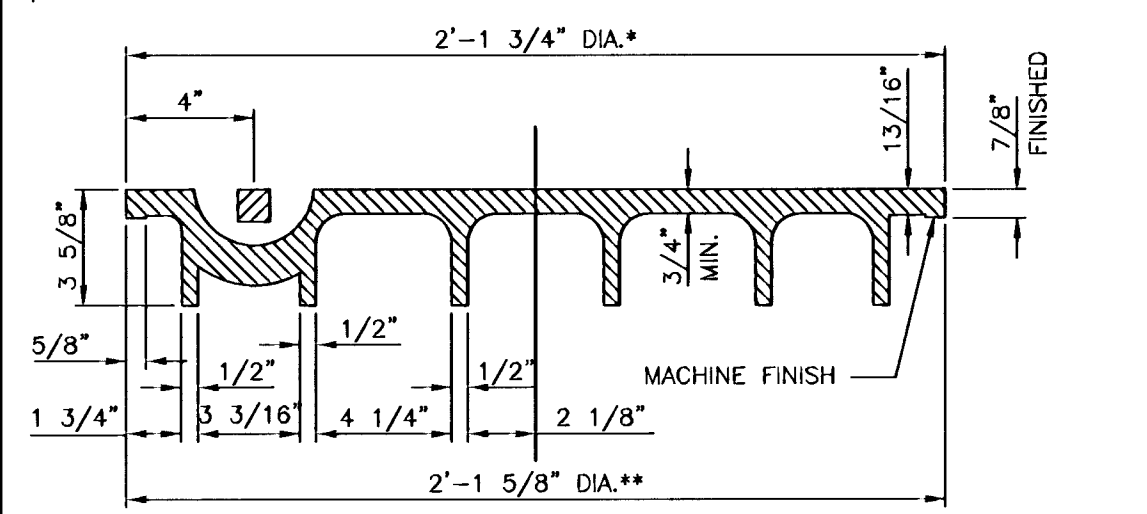
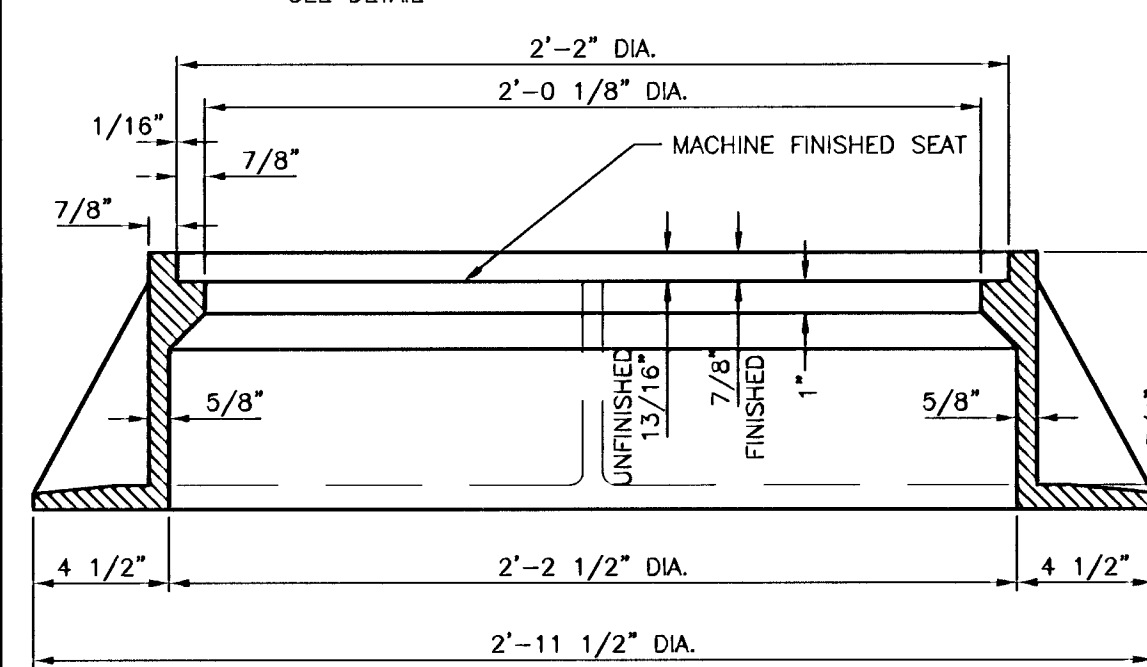
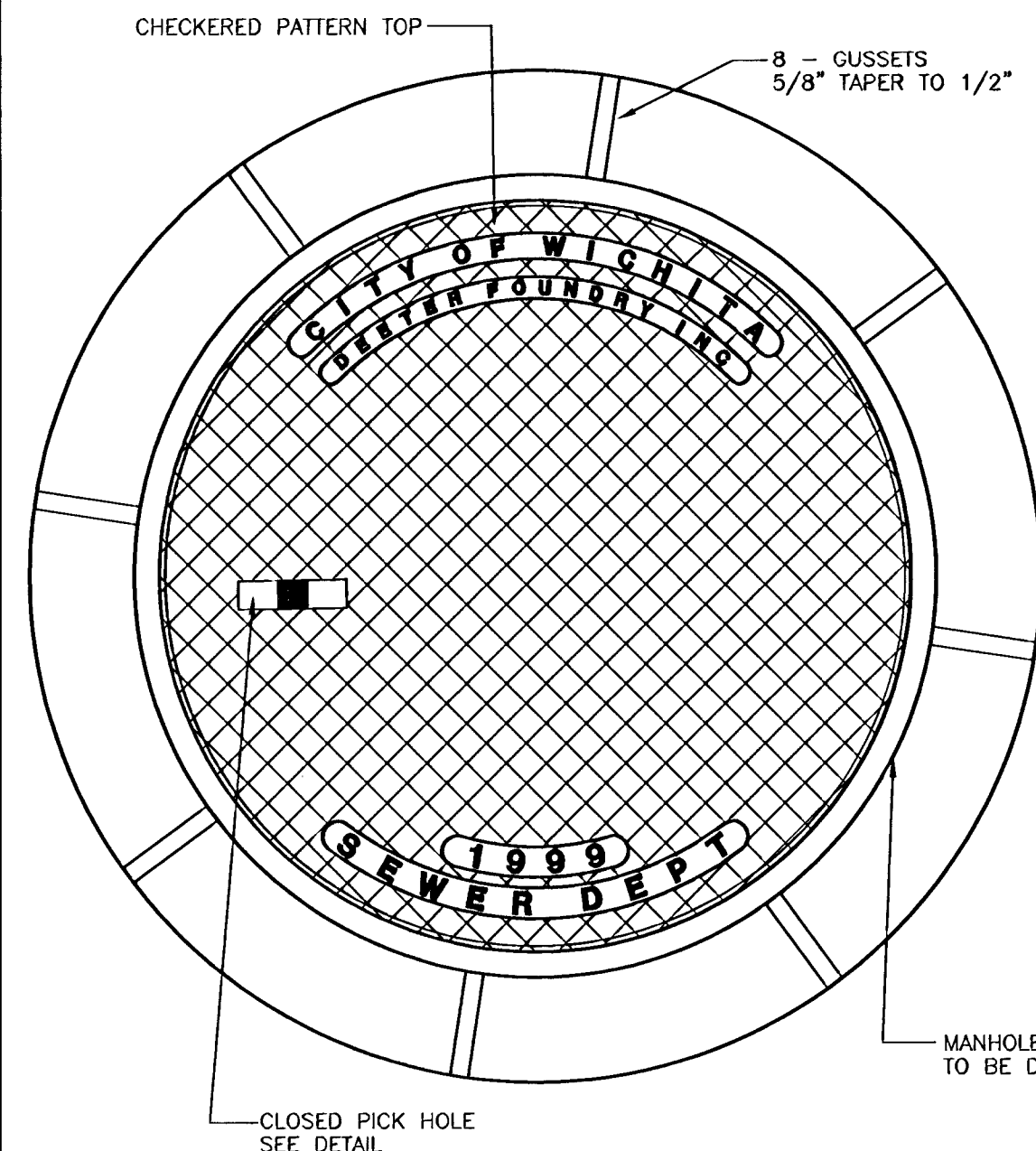
SANITARY SEWER PLANS
 SHEET TITLE

DESIGN BY: **GJA** DRAWN BY: **BDM/KKL** CHECKED BY: **GJA**

DATE: **MAY 2001** DRAWING NAME: **00276_BT** SHEET OF: **1 / 7**

SEWER APPURTENANCES DETAILS

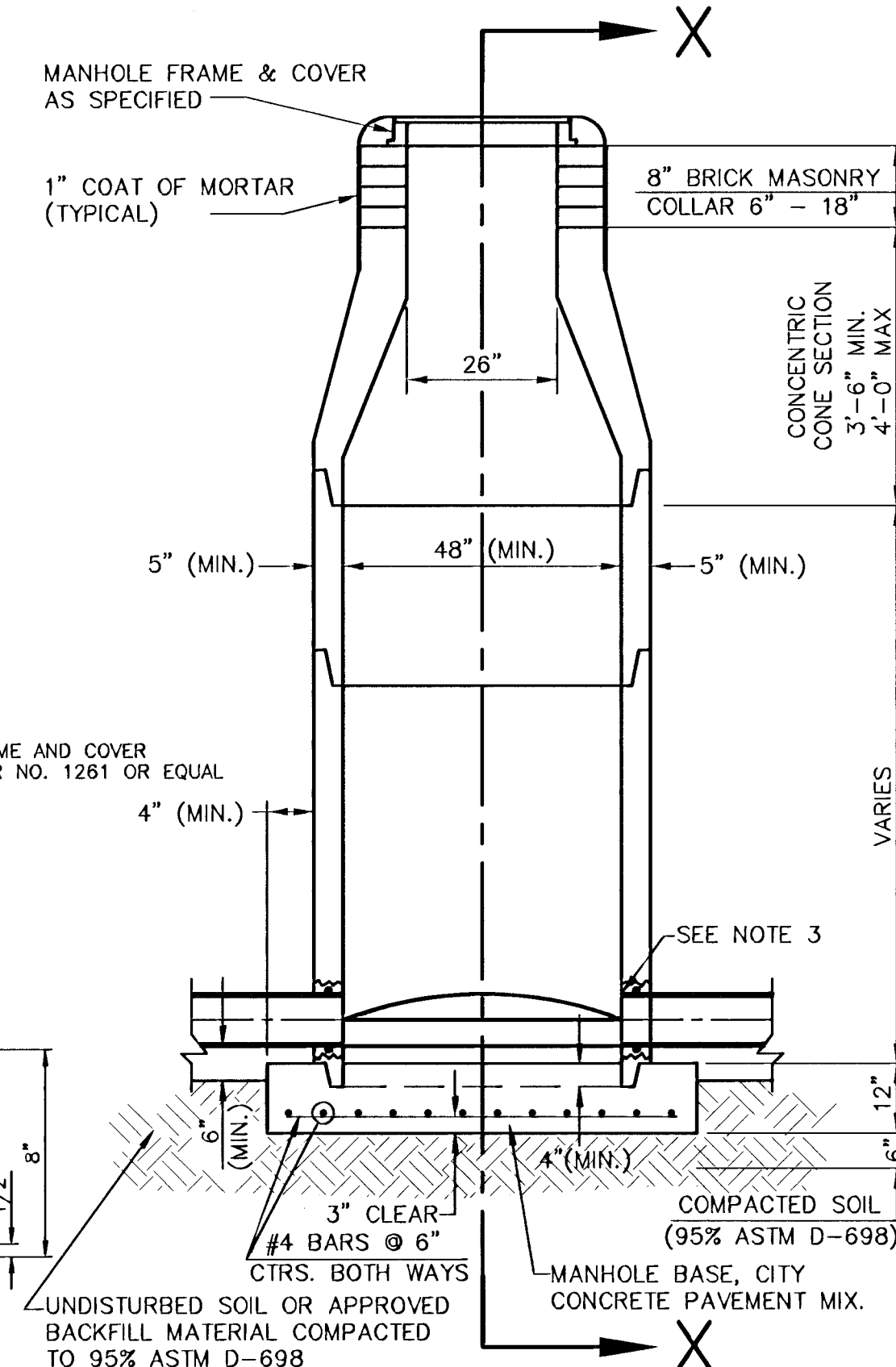
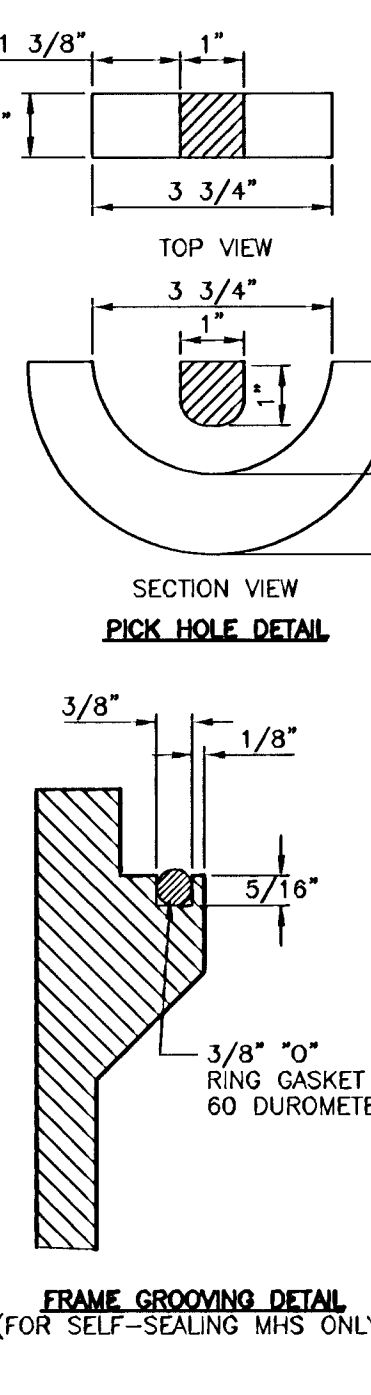
ADOPTED AS STANDARD DESIGN BY CITY OF WICHITA



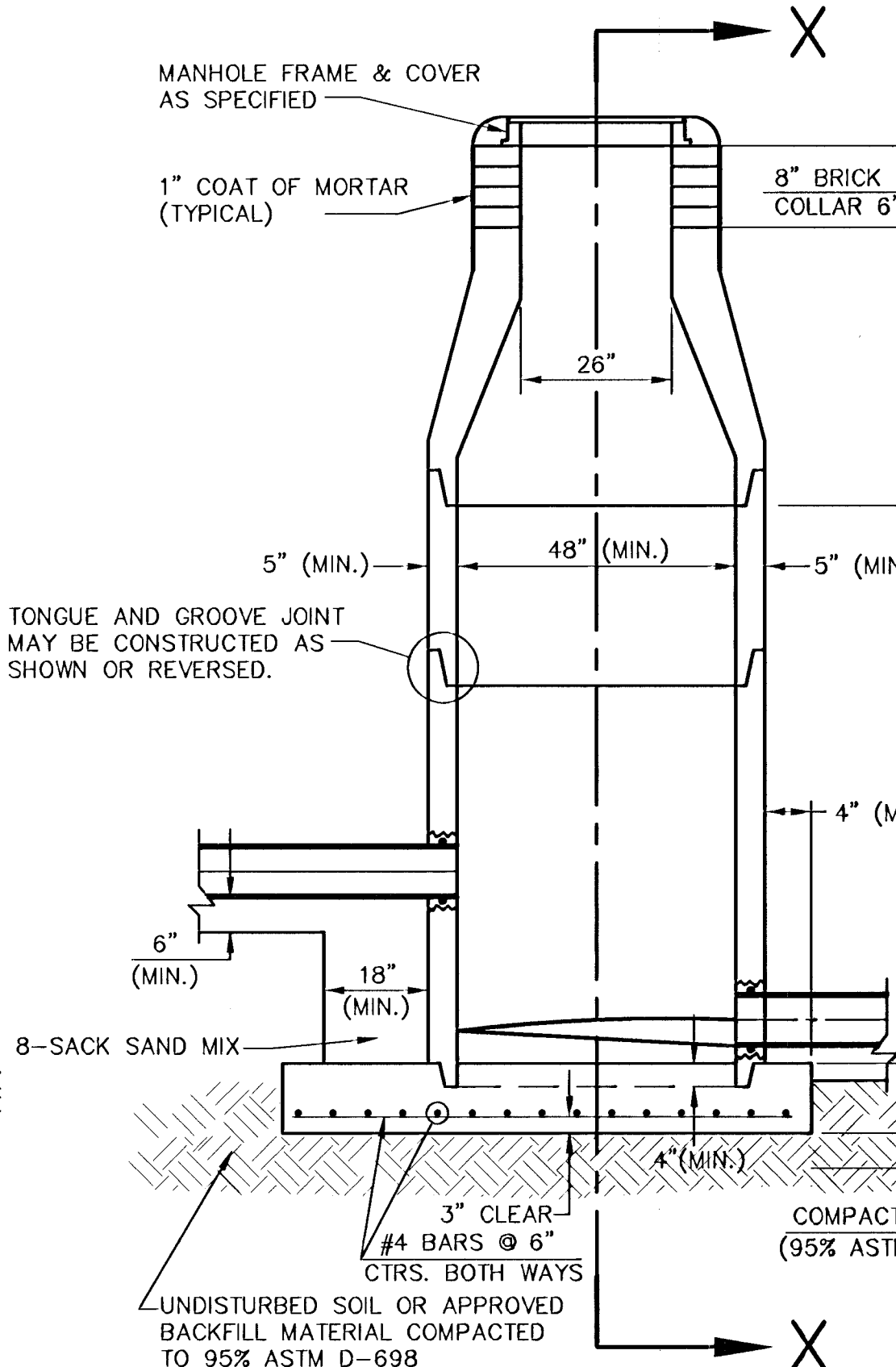
MANHOLE FRAME AND COVER

(TOTAL WEIGHT = 430 LBS.)

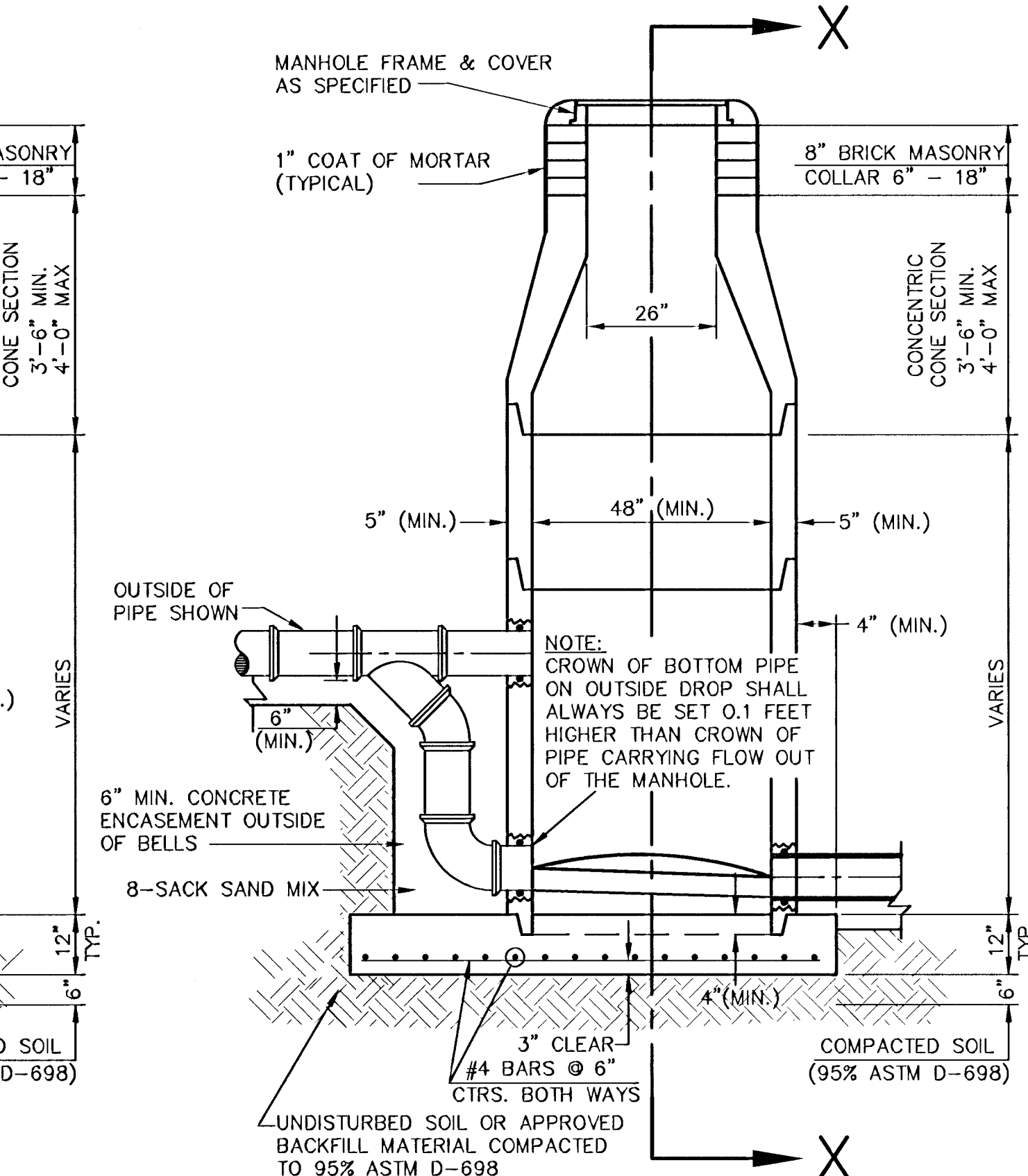
- MANHOLE FRAME AND COVER NOTES**
- CAST IRON MANHOLE FRAME AND COVER SHALL CONFORM TO ASTM A-48, CLASS 30, OR BETTER.
 - THE FRAMES AND COVERS SHALL BE OF A NONROCKING TYPE OR WITH MACHINED BEARING SURFACES SO FITTING PARTS WILL NOT RATTLE OR ROCK UNDER TRAFFIC.
 - MANHOLE CASTINGS SHALL BE DEETER FOUNDRY 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.



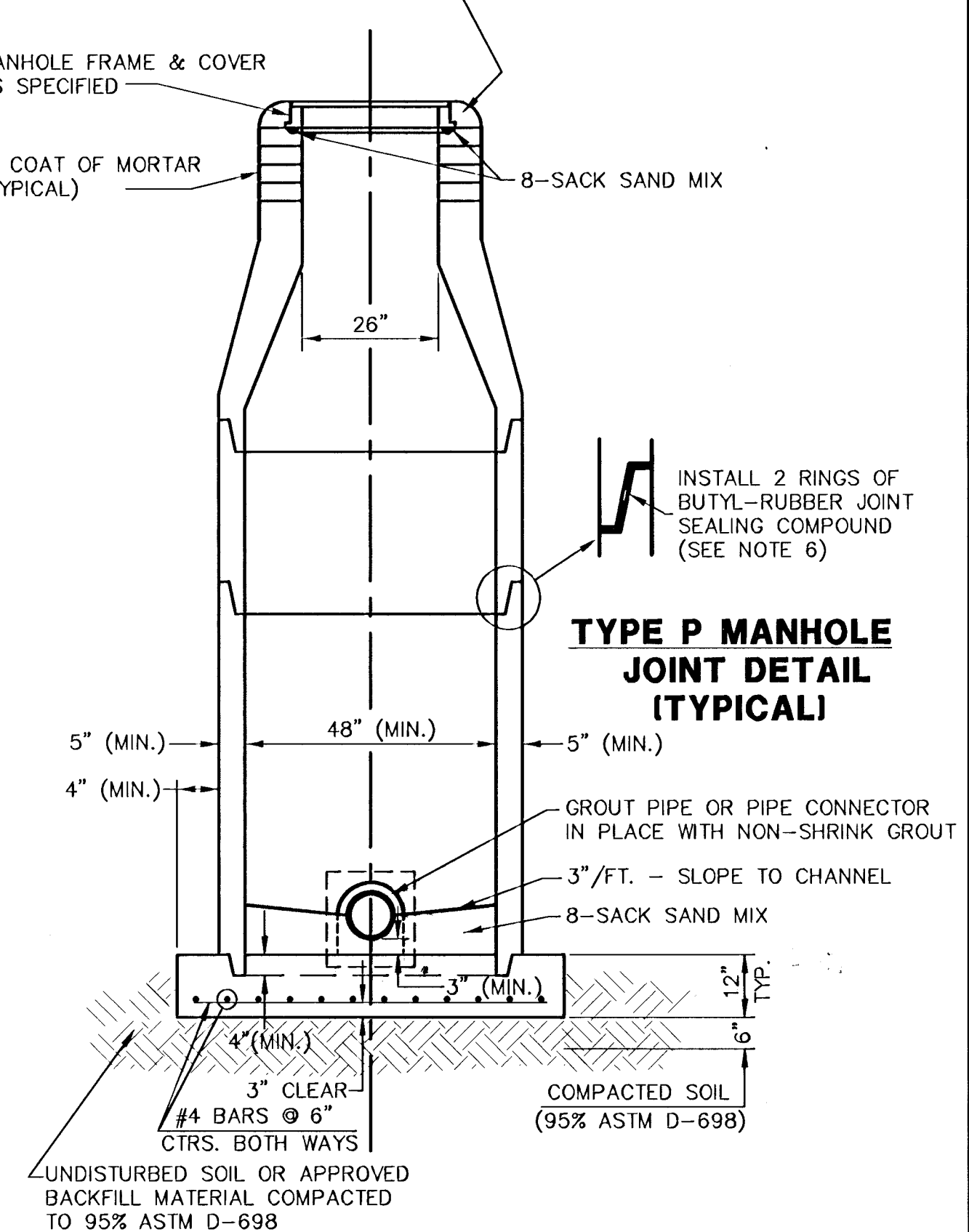
TYPE P STANDARD MANHOLE



TYPE P INSIDE DROP MANHOLE



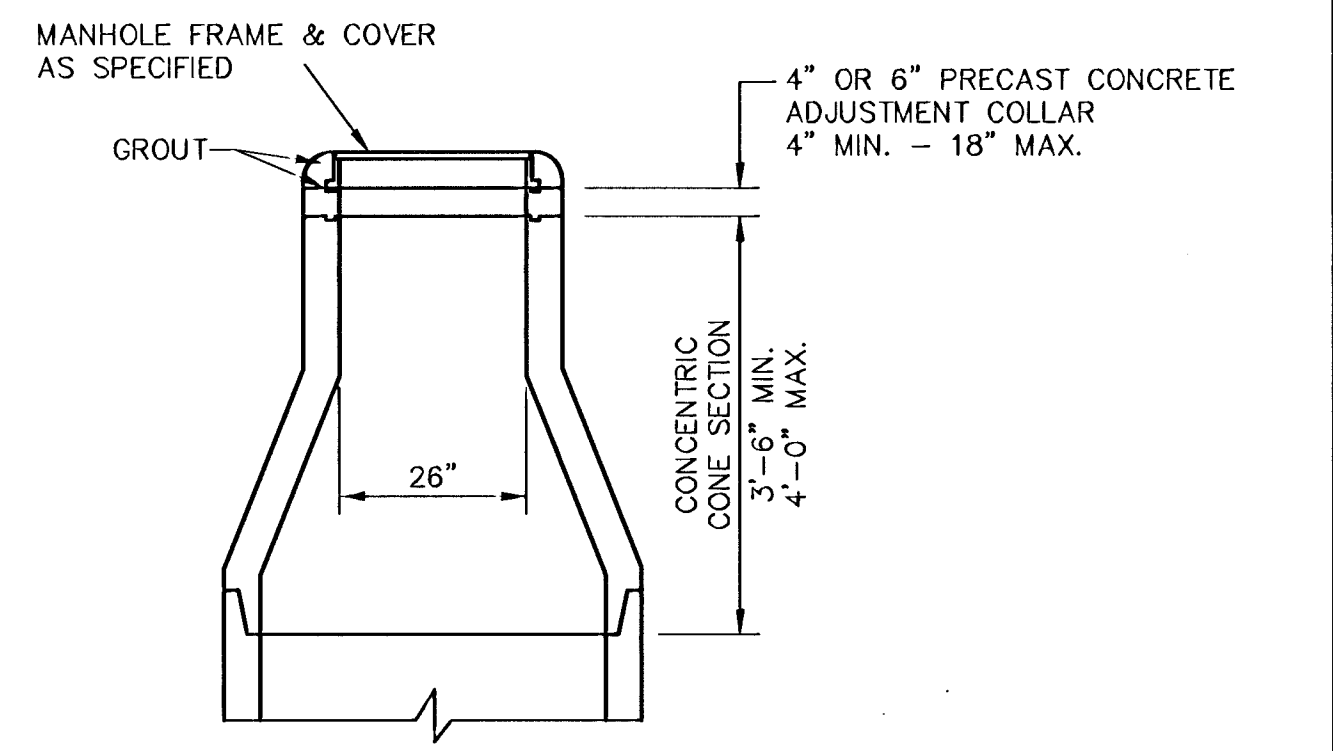
TYPE P OUTSIDE DROP MANHOLE



TYPE P MANHOLE JOINT DETAIL (TYPICAL)

GENERAL NOTES - PRECAST MANHOLE NOTES

- ALL PRECAST CONCRETE MANHOLE SECTIONS SHALL CONFORM TO THE LATEST REVISIONS OF A.S.T.M. C478 AS MODIFIED BY THE SPECIFICATIONS.
- NON-SHRINK GROUT SHALL BE NON-METALLIC TYPE.
- APPROVED FLEXIBLE WATERSTOP GASKETS SHALL BE INSTALLED TO JOIN THE SEWER TO THE MANHOLE WALL WHEN A.B.S. COMPOSITE PIPE OR P.V.C. PIPE IS USED. FOR OTHER TYPES OF PIPE THE SEWER SHALL BE GROUTED IN PLACE WITH NON-SHRINK GROUT. THE SEWER PIPE SHALL BE SUPPORTED WITH CONCRETE ENCASEMENT A MINIMUM OF 3 FEET FROM THE MANHOLE WALL AND TO THE FIRST JOINT FOR V.C.P. SUCH THAT THE JOINT REMAINS FLEXIBLE.
- ALL INSIDE SURFACES OF THE CONCRETE MANHOLE WHICH WOULD BE EXPOSED TO SEWER GAS SHALL BE COATED WITH 2 COATS TNEMC SERIES 66 HI-BUILD EPOXOLINE, DRY THICKNESS OF 8 MILS (MIN.)
- EXTERIOR MANHOLE WALLS SHALL BE COATED WITH 1 COAT MOBILARMA 633 BITUMINOUS COATING.
- JOINT SEALING COMPOUND SHALL BE KENT SEAL NO. 2 OR APPROVED EQUAL.
- PRECAST MANHOLES SHALL BE SET AT LEAST 4 INCHES INTO THE MANHOLE BASE.
- 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.
- LIFTING HOLES SHALL BE FILLED WITH NON-SHRINK GROUT AND THE INTERIOR SURFACE COATED AS SPECIFIED.
- MORTAR USED IN MASONRY CONSTRUCTION SHALL CONTAIN 8 SACKS OF CEMENT PER CUBIC YARD. CONCRETE USED IN MANHOLE BASES SHALL CONFORM TO THE REQUIREMENTS OF CONCRETE FOR CONCRETE PAVEMENT CONSTRUCTION AS SPECIFIED IN THE CITY STANDARD PAVING SPECIFICATIONS USING CITY CONCRETE PAVEMENT MIX WITHOUT AIR ENTRAINING ADMIXTURE. MORTAR SHALL BE PLACED AROUND THE MANHOLE RING AS SHOWN ON THE DRAWINGS WHEN MANHOLES ARE CONSTRUCTED IN UNPAVED AREAS. MANHOLES CONSTRUCTED WHERE PIPE SIZES ARE SMALLER THAN 24\"/>
- OPENINGS SHALL BE CUT INTO THE MANHOLE WALL WHEN OUTSIDE DROPS ARE CONSTRUCTED ON EXISTING MANHOLES. SUCH OPENINGS CUT INTO EXISTING MANHOLES SHALL BE AS SMALL AS PRACTICAL TO FACILITATE INSTALLING AND GROUTING THE NEW PIPE IN PLACE. WATERSTOP GASKETS SHALL BE USED WITH P.V.C. AND A.B.S. COMPOSITE PIPE. THE NEW PIPE SHALL BE GROUTED INTO THE OPENING USING AN APPROVED NONSHRINK GROUT FOR THE FULL MANHOLE WALL THICKNESS. THE EXTERIOR OF THE COMPLETED CONNECTION SHALL BE SEALED WITH AN APPROVED BITUMINOUS COATING SUCH THAT THE CONNECTION WILL BE WATER TIGHT. FLOOR OF MANHOLE SHALL BE MODIFIED TO FORM NEW FLOW CHANNEL FOR THE NEW CONNECTION AS INDICATED BY THE DRAWING. THIS WORK, INCLUDING MODIFICATION OF MANHOLE FLOOR, SHALL BE PAID FOR AT THE UNIT PRICE BID FOR OUTSIDE DROP STACK CONSTRUCTED ON EXISTING MANHOLE.
- THE FLOORS OF ALL MANHOLES SHALL BE SHAPED WITH FLOW CHANNELS SUCH THAT THE MANHOLES WILL BE SELF CLEANING AND FREE OF AREAS WHERE SOLIDS COULD BE DEPOSITED AS SEWAGE FLOWS THROUGH THE MANHOLE FROM ALL INLET PIPES TO THE OUTLET PIPE. FLOW CHANNELS SHALL BE FORMED TO MATCH THE BOTTOM HALVES OF THE INFLOWING PIPES AND THE OUTFLOWING PIPE AS SHOWN BY THE DRAWINGS EXCEPT FOR INSIDE DROP MANHOLES. FLOW CHANNELS FOR INSIDE DROP MANHOLES SHALL BE CONSTRUCTED AS INDICATED BY THE DRAWING. MANHOLE FLOORS SHALL HAVE SLOPES OF 3 INCHES PER FOOT IN THE AREAS OUTSIDE OF THE FLOW CHANNELS SLOPED TOWARD THE FLOW CHANNELS. PIPES LAID THROUGH MANHOLES SHALL HAVE THE TOP HALF REMOVED TO NEAT LINES FOR THE FULL INSIDE DIAMETER OF THE MANHOLE. MANHOLE FLOORS SHALL THEN BE SHAPED AROUND THE BOTTOM HALF OF THE PIPE WHICH FORMS THE FLOW CHANNEL.
- A BRICK MASONRY COLLAR SHALL BE INSTALLED BETWEEN THE CAST IRON FRAME AND THE CONCENTRIC CONE. THE COLLAR WILL HAVE 8\"/>
- PIPES INSTALLED WITHIN THE EXCAVATION MADE FOR THE MANHOLE SHALL BE CRADLED WITH CONCRETE TO THE LIMITS OF THE MANHOLE EXCAVATION. WHEN CLAY PIPE IS USED, THE CRADLE SHALL EXTEND TO THE FIRST JOINT OUTSIDE THE MANHOLE. THE CRADLE SHALL BE TERMINATED AT THE CLAY PIPE JOINT IN A MANNER WHICH WILL MAINTAIN THE FLEXIBILITY OF THE JOINT. COST OF CRADLE WITHIN MANHOLE EXCAVATION OR TO CLAY PIPE JOINTS ADJACENT TO MANHOLE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE MANHOLE.
- MANHOLE COVER CASTINGS AND MANHOLE FRAME CASTINGS SHALL CONFORM TO THE REQUIREMENTS AS INDICATED IN THE STANDARD SPECIFICATIONS AND AS SHOWN IN THE STANDARD DETAIL DRAWING.
- THE VERTICAL DROP IN INSIDE DROP MANHOLES SHALL NOT EXCEED 2' FOR INFLOWING PIPES. THE CROWNS OF INFLOWING PIPES SHALL NEVER BE SET LOWER THAN THE CROWN OF THE OUTFLOWING PIPE.
- STANDARD MANHOLES AND STANDARD INSIDE DROP MANHOLES SHALL BE BID AS STANDARD MANHOLES FOR THE TYPE AND DIAMETER INDICATED. OUTSIDE DROP MANHOLES SHALL BE BID AS STANDARD OUTSIDE DROP MANHOLES FOR THE TYPE AND DIAMETER INDICATED. ALL MANHOLE DIAMETERS WILL BE 4' UNLESS INDICATED OTHERWISE.



ALTERNATE CONSTRUCTION IN UNPAVED AREAS

REVISED: 8-12-86
L:\ENVR\00276\DWG\SAN\WAWONA\00276_BD

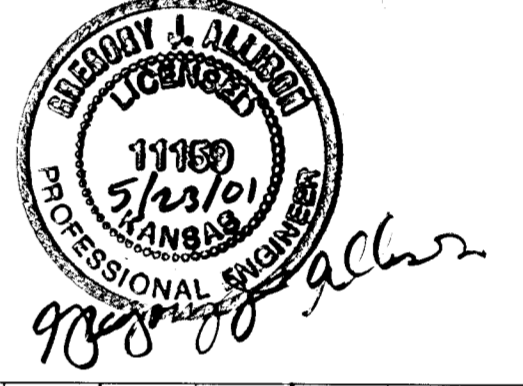
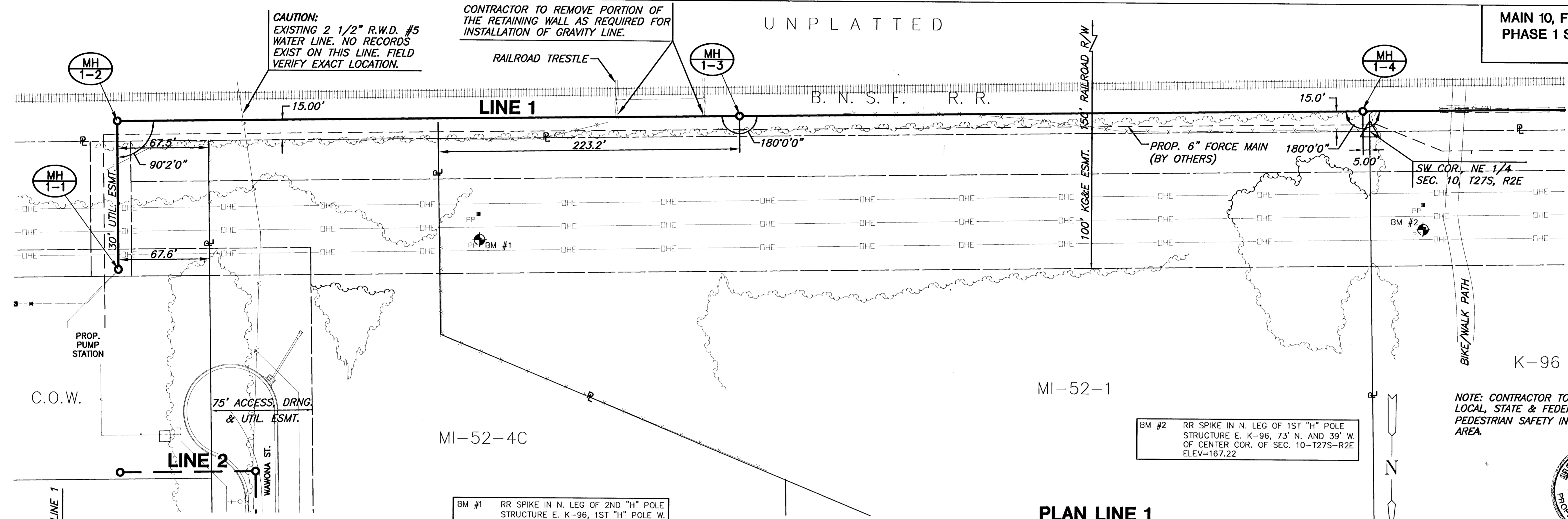


MANHOLE DETAILS			
CITY OF WICHITA, KANSAS			
Design C.O.W.	Checked by	Checked by	
Drawn by	Date	Date	APRIL 2001
		Job No.	468-699003

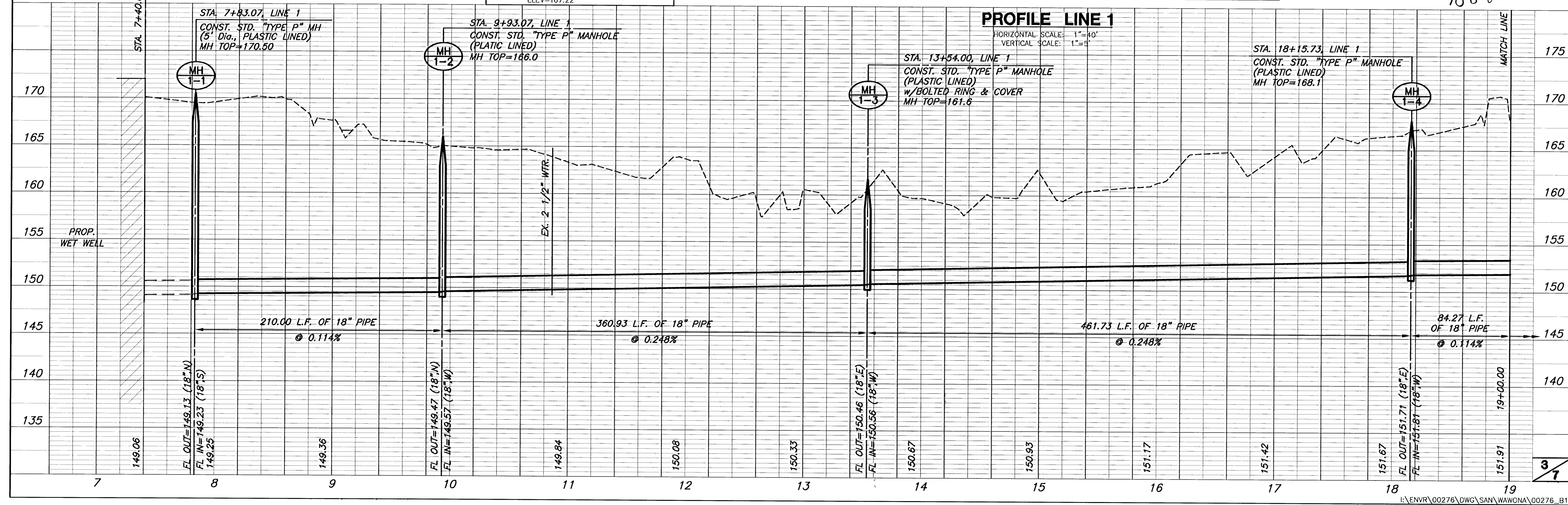
2/7

**MAIN 10, FOUR MILE CREEK
PHASE 1 SANITARY SEWER
LINE 1**

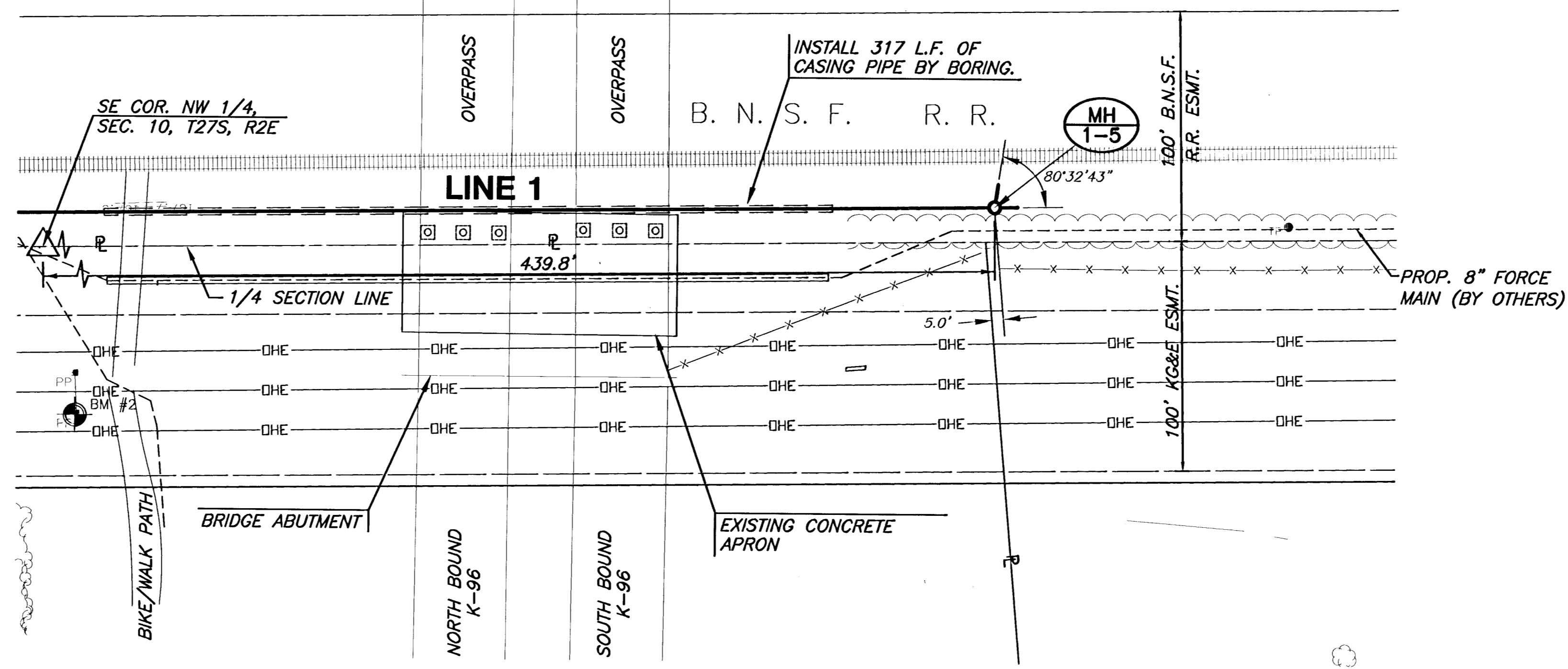
UNPLATTED



PLAN LINE 1
SCALE: 1"=40'



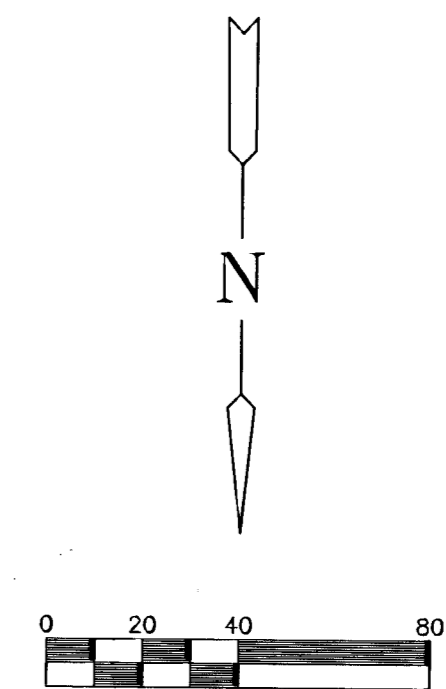
NOTE: TRIM TREES AS REQUIRED. SEE DETAIL FOR TREE TRIMMING. REMOVAL OF TREES ONLY WITH PERMISSION OF THE ENGINEER. ABANDONED TELEGRAPH POLES AND WIRES SHALL BE REMOVED. COST OF TRIMMING AND REMOVAL OF ALL ITEMS SHALL BE CONSIDERED SUBSIDIARY TO PROJECT.



PLAN LINE 1 (cont.)

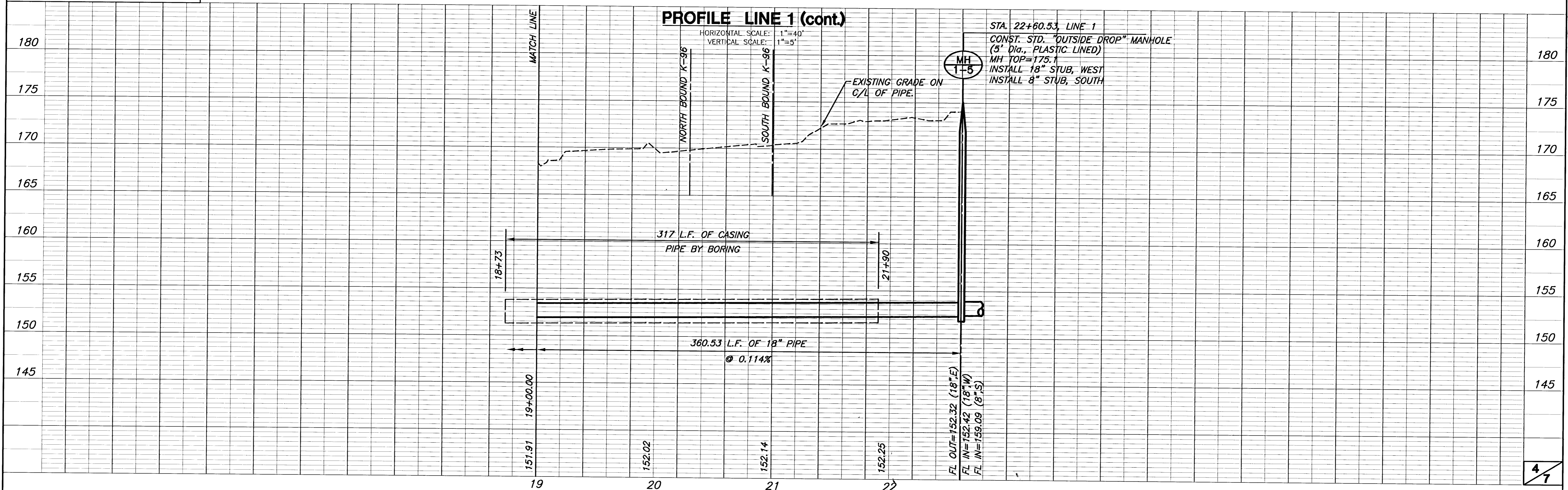
SCALE: 1"=40'

BM #2 RR SPIKE IN N. LEG OF 1ST "H" POLE STRUCTURE E. K-96, 73' N. AND 39' W. OF CENTER COR. OF SEC. 10-T27S-R2E ELEV=167.22



PROFILE LINE 1 (cont.)

HORIZONTAL SCALE: 1"=40'
 VERTICAL SCALE: 1"=5'

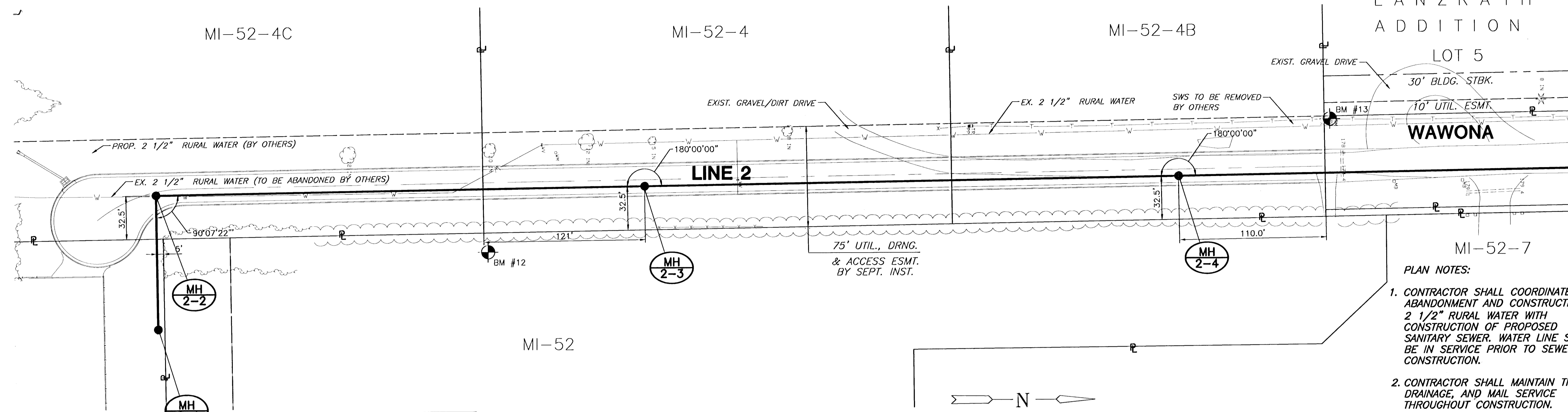


MAIN 10, FOUR MILE CREEK
PHASE 1 SANITARY SEWER
LINE 2

LANZRATH
ADDITION

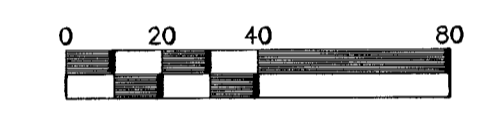
LOT 5

WAWONA



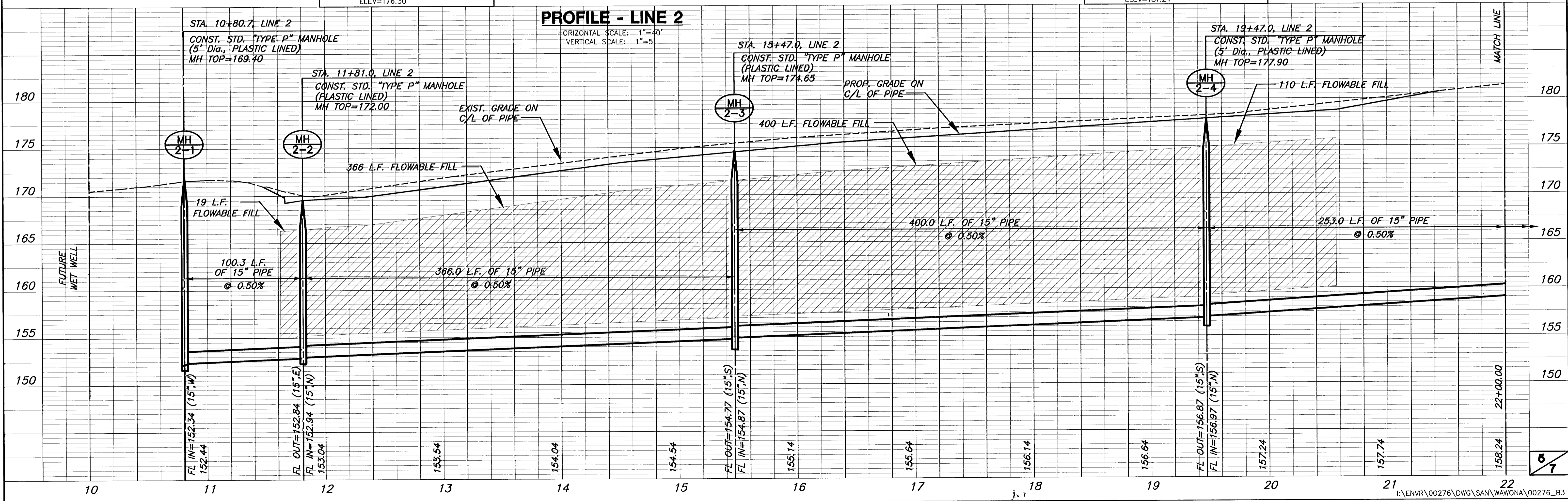
BM #12 RR SPIKE IN E. SIDE 18" ELM TREE
2163' S. OF N. LINE NE 1/4 SEC.
10-T27S-R2E (21ST ST. N.) & 62'
E. OF THE W. LINE OF WAWONA
EXTENDED SOUTH.
ELEV=176.30

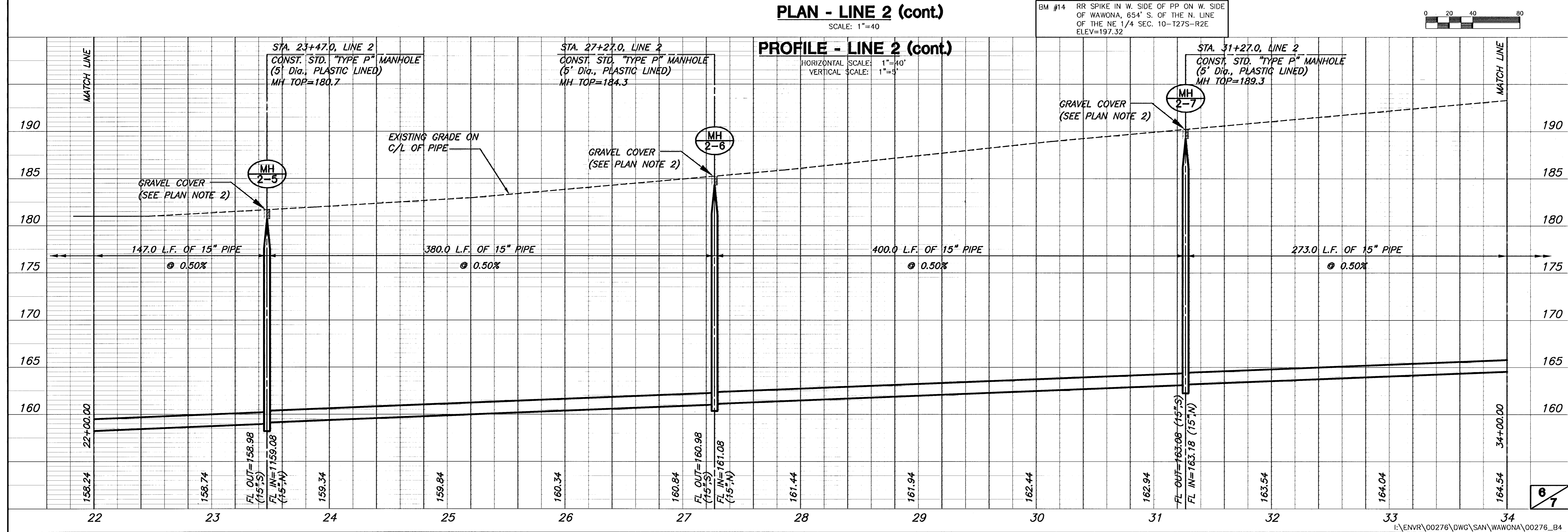
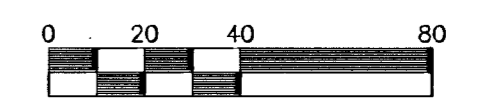
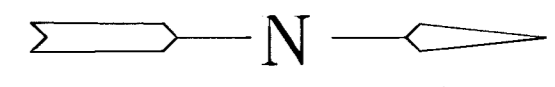
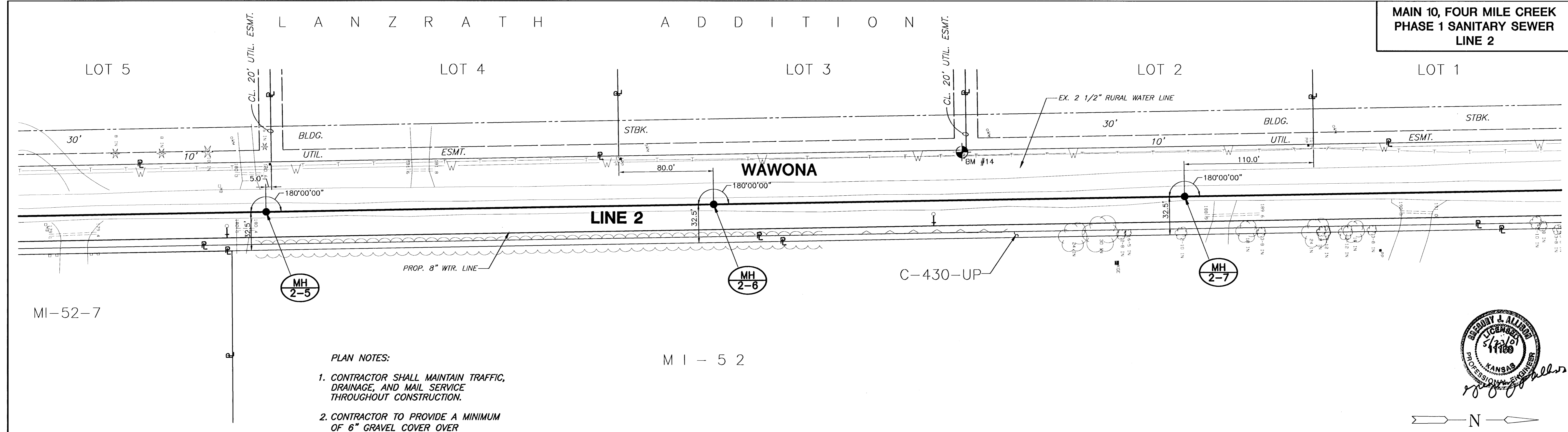
BM #13 RR SPIKE IN W. SIDE OF PP ON W.
SIDE OF WAWONA, 1531' S. OF THE N.
OF THE NE 1/4 SEC. 10-T27S-R2E
ELEV=181.24



PROFILE - LINE 2

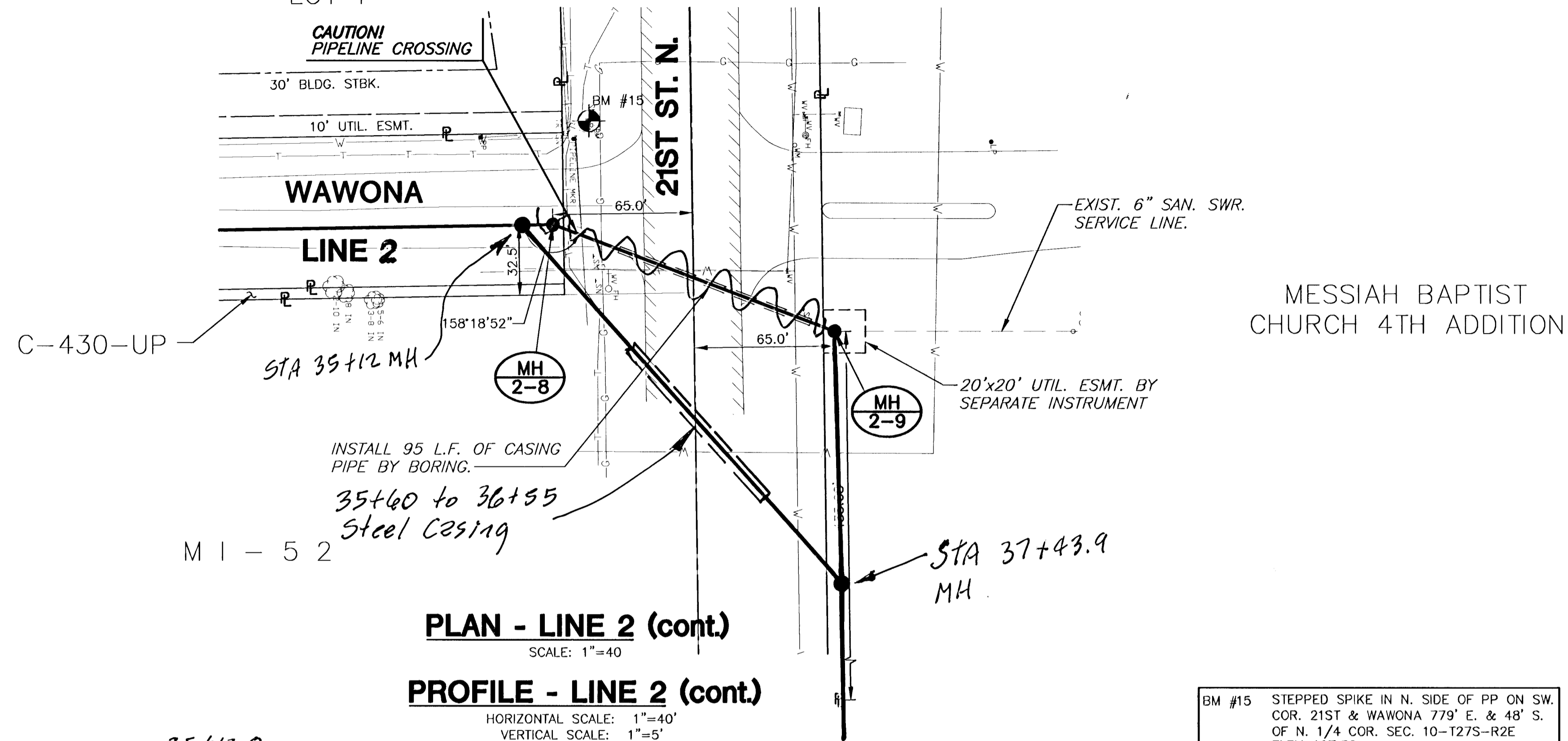
HORIZONTAL SCALE: 1"=40'
VERTICAL SCALE: 1"=5'





LANZRATH ADDITION

LOT 1



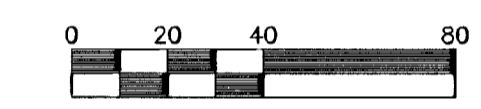
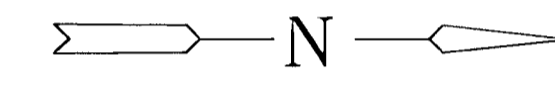
PLAN - LINE 2 (cont.)

SCALE: 1"=40'

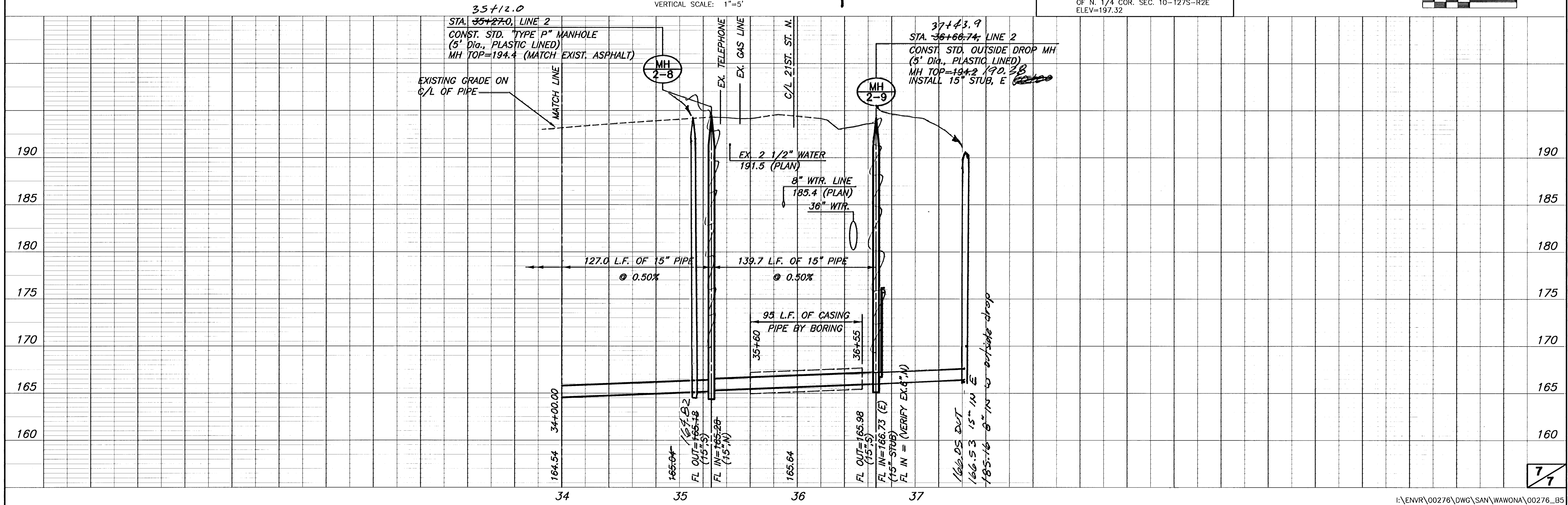
PROFILE - LINE 2 (cont.)

HORIZONTAL SCALE: 1"=40'
VERTICAL SCALE: 1"=5'

- PLAN NOTES:
- CONTRACTOR SHALL MAINTAIN TRAFFIC AND DRAINAGE THROUGHOUT CONSTRUCTION



BM #15 STEPPED SPIKE IN N. SIDE OF PP ON SW. COR. 21ST & WAWONA 779' E. & 48' S. OF N. 1/4 COR. SEC. 10-T27S-R2E ELEV=197.32



SANITARY SEWER EXTENSION

MAIN #10, 4 MILE CREEK SEWER, PHASE 1

Church Of The Magdalen Addition

Index

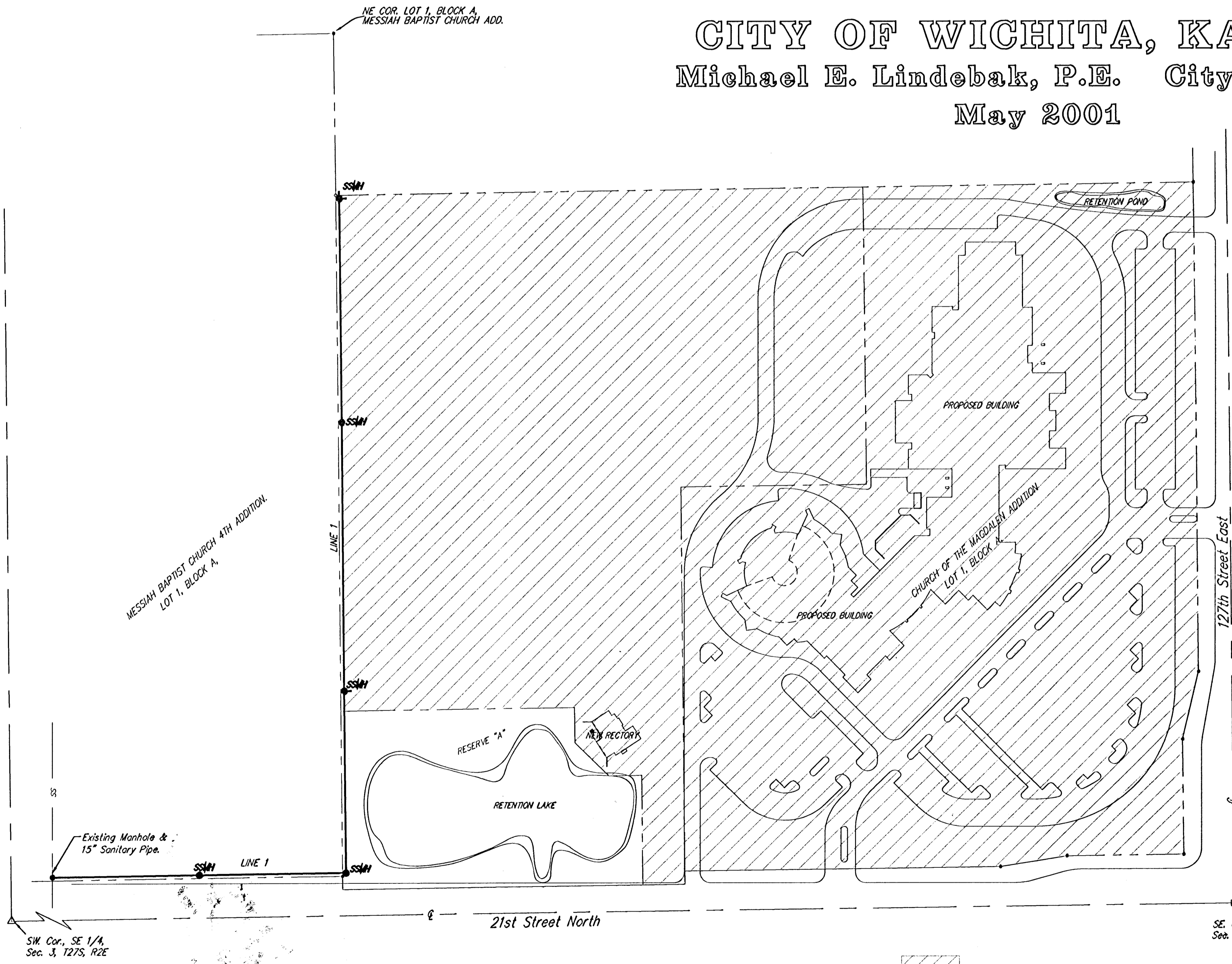
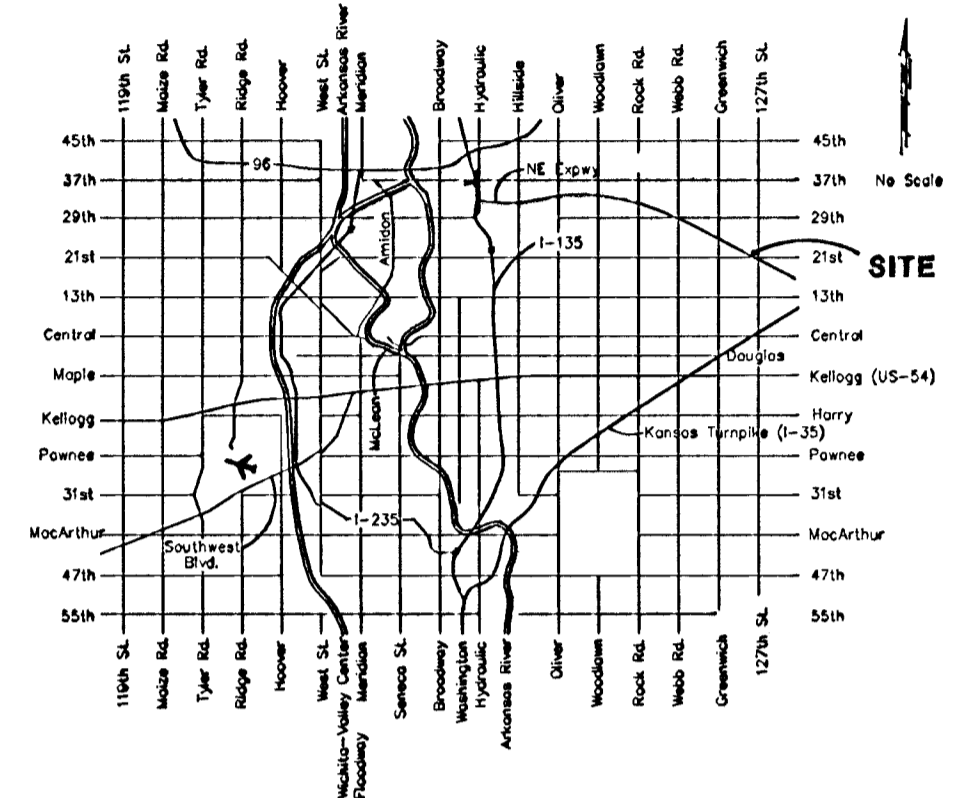
Cover Sheet	1
Plan/Profile Sheet	2-3
Manhole Details	4
Ring & Cover Details	5
Copy Of Plat	6

LOT 1

Project Number 468-83392
OCA Number 624503

CITY OF WICHITA, KANSAS
Michael E. Lindebak, P.E. City Engineer
May 2001

Location Map



BENCHMARKS:

- COUNTY Benchmark #1:**
"□" Cut South Headwall 1/2 mile West of 127th Street East on 37th Street North.
Elevation = 200.16' City Datum
- Benchmark #2:**
"○" in "Open" of Fire Hydrant On East Side of 127th Street East Approximately 354' North of Intersection of 127th Street East & 21st Street North.
Elevation = 197.93' City Datum
- Benchmark #3:**
Top of Iron Pipe S.E. Corner, Sec. 1275, R2E Intersection of 127th Street East & 21st Street North.
Elevation = 198.01' City Datum

LEGAL DESCRIPTION:

Lot 1, Block A, Church Of The Magdalen Addition
Wichita, Sedgwick County, Kansas

General Notes

- Contractor will be required to provide notice to utility companies a minimum of forty-eight (48) hours prior to any excavation, as follows:
Kansas One-Call 687-2470
The Contractor must notify the following in case of an emergency:
Cox Communications 262-4270
Kansas Gas Service Company 383-8600
Kansas Gas & Electric Company 383-8650
Peoples Gas Company 942-7600
Southwestern Bell Telephone Company 1-571-2611
City of Wichita Water Department 268-4908
City of Wichita Sewer Department 268-4071
- Rubble from the removal of miscellaneous structures and excess excavation which is to be wasted shall be disposed of on sites to be 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 would require a Kansas State Board of Agriculture permit. 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 would require additional archaeological investigations unless buried in a previously approved borrow location.
- Utility service lines, poles, valve boxes, meters, at cetera are to be adjusted as necessary by others prior to construction unless the plans specifically call for their adjustment by the Contractor or unless the plans specifically identify a utility to be adjusted by its owner during construction. Existing utilities and their location, as shown on the plans represent the best information obtainable for design and shall be field verified. The contractor will be required to work around existing utilities within the right-of-way which do not conflict with proposed construction.
- Contractor shall not start work on the project until the project inspector is assigned to the project and is present on the site. Any work done without inspection will be required to be uncovered for inspection.
- All areas disturbed by construction operations shall be seeded with rye grass at a rate of 6 lbs. per 1000 sq. feet or as per city specs. Contractor to prepare grounds to city specifications.
- The Contractor shall be responsible for maintaining continuous flow of sewage through construction. 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 for directly and this cost shall be considered as subsidiary to the other pay items of work.



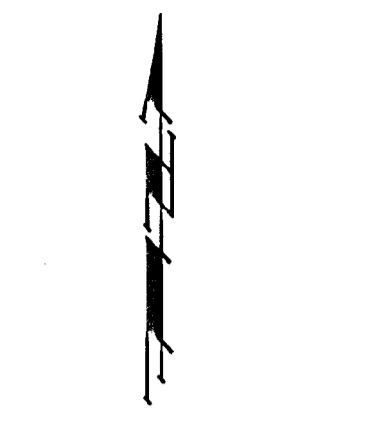
BAUGHMAN COMPANY P. A.
ENGINEERING, SURVEYING, & PLANNING
315-292-7221 • 315 ELLIS • WICHITA, KANSAS 67211

BENCHMARKS:

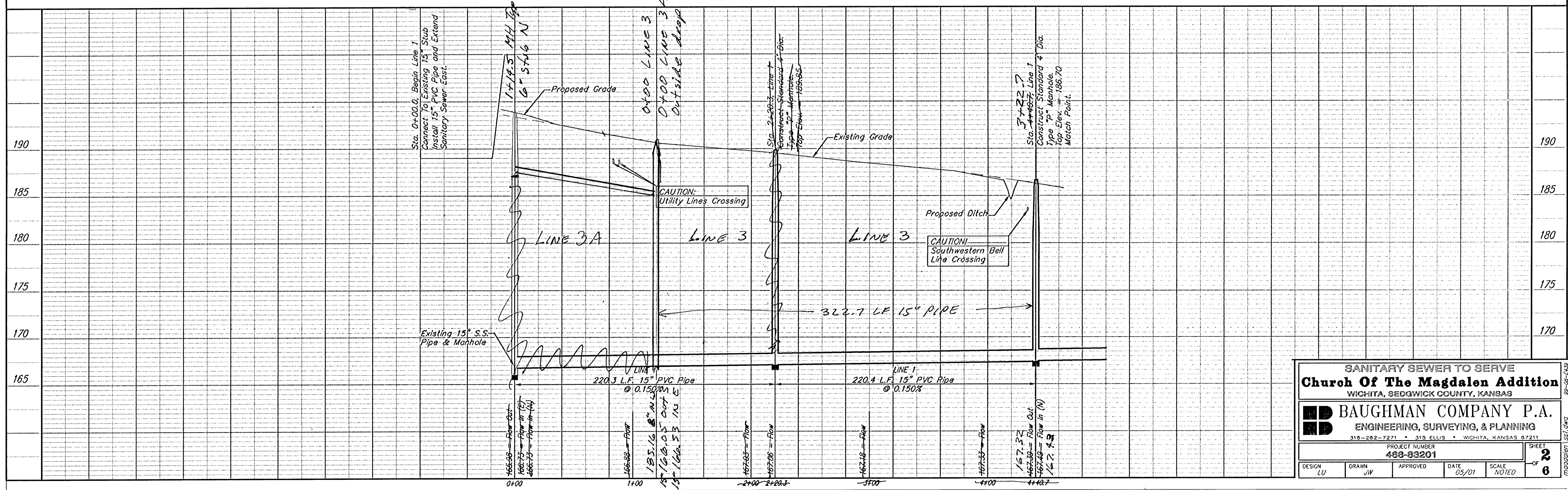
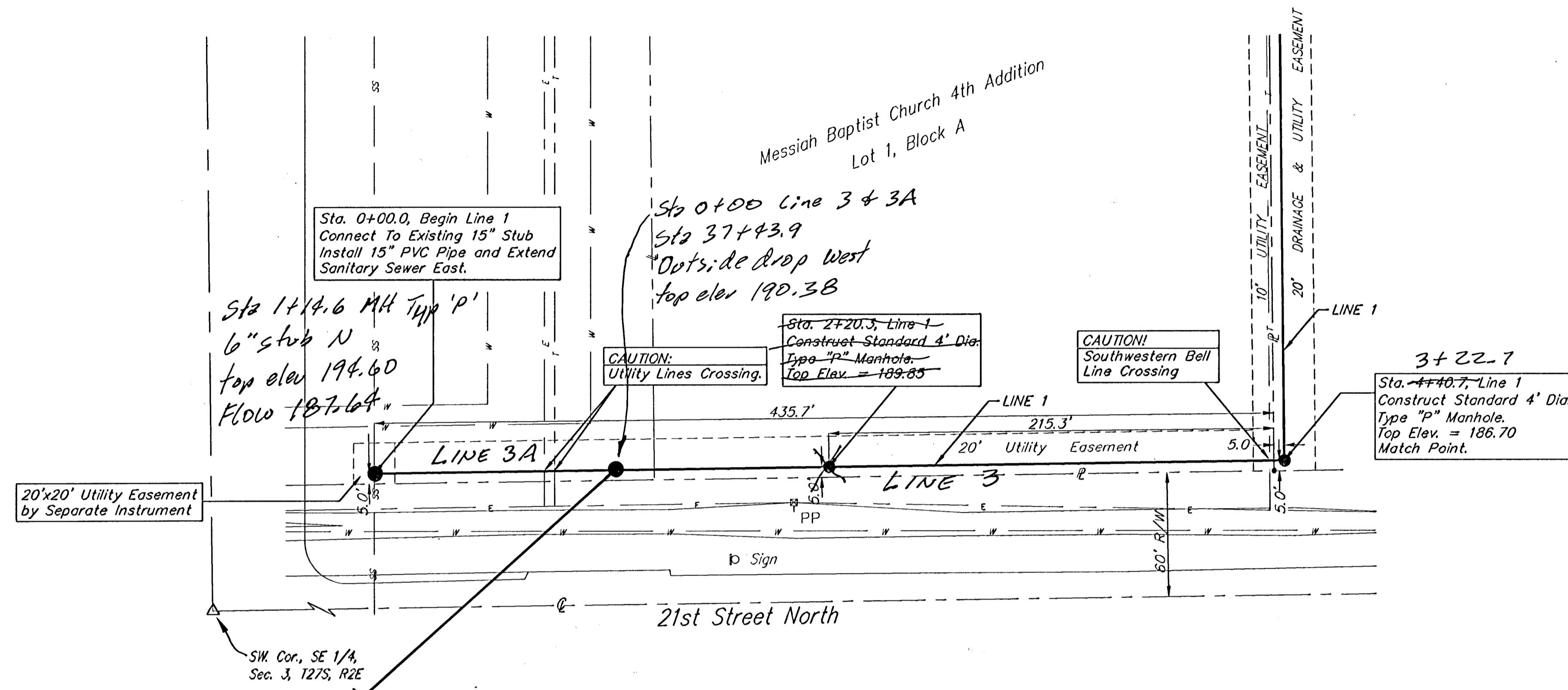
COUNTY Benchmark #1:
 "□" Cut South Headwall 1/2 mile West of
 127th Street East on 37th Street North.
 Elevation = 200.16 City Datum

Benchmark #2:
 "○" In "Open" of Fire Hydrant On East Side of 127th
 Street East Approximately 35' North of Intersection
 of 127th Street East & 21st Street North.
 Elevation = 197.93 City Datum

Benchmark #3:
 Top of Iron Pipe S.E. Corner, Sec 3, T27S, R2E
 Intersection of 127th Street East & 21st Street North.
 Elevation = 198.01 City Datum



SCALE:
 1" = 40' HORIZONTAL
 1" = 5' VERTICAL



SANITARY SEWER TO SERVE
Church Of The Magdalen Addition
 WICHITA, SEDGWICK COUNTY, KANSAS

BAUGHMAN COMPANY P.A.
 ENGINEERING, SURVEYING, & PLANNING
 316-262-7271 • 315 ELLIS • WICHITA, KANSAS 67211

PROJECT NUMBER
488-83201

DESIGN LU	DRAWN JW	APPROVED	DATE 05/01
SCALE NOTED		SHEET 2 OF 6	

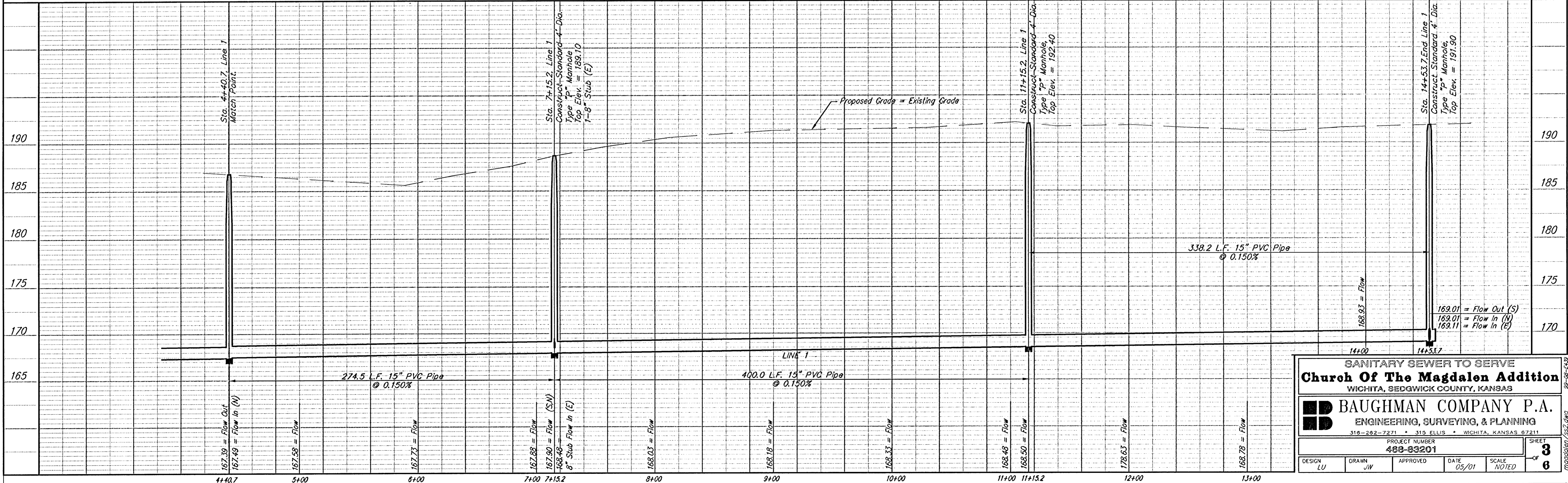
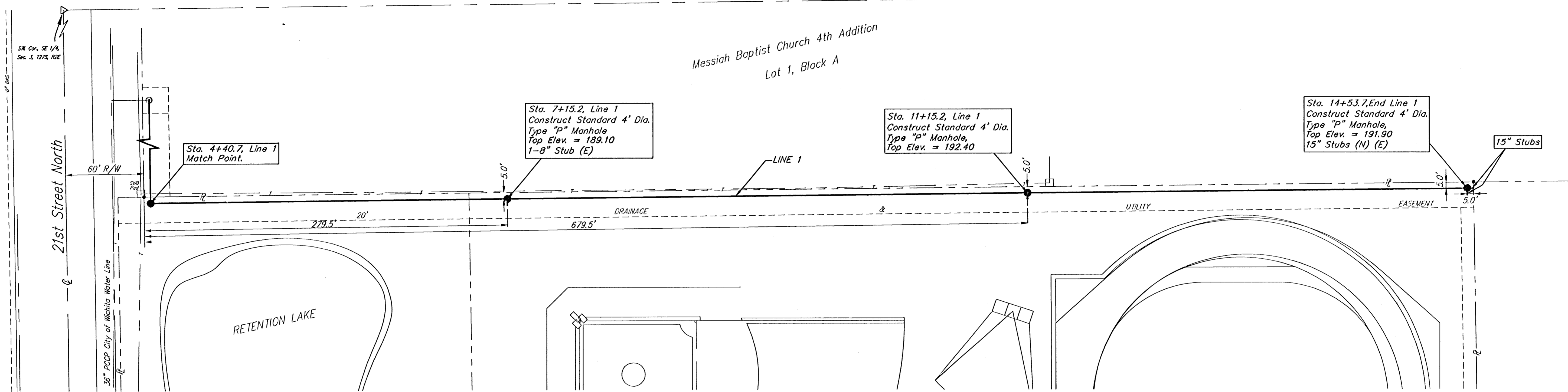
BENCHMARKS:

COUNTY Benchmark #1:
 "□" Cut South Headwall 1/2 mile West of
 127th Street East on 37th Street North.
 Elevation = 200.16 City Datum

Benchmark #2:
 "O" In "Open" of Fire Hydrant On East Side of 127th
 Street East Approximately 354' North of Intersection
 of 127th Street East & 21st Street North.
 Elevation = 197.93 City Datum

Benchmark #3:
 Top of Iron Pipe S.E. Corner, Sec 3, T27S, R2E
 Intersection of 127th Street East & 21st Street North.
 Elevation = 198.01 City Datum

SCALE:
 1" = 40' HORIZONTAL
 1" = 5' VERTICAL



SANITARY SEWER TO SERVE
Church Of The Magdalen Addition
 WICHITA, SEDGWICK COUNTY, KANSAS

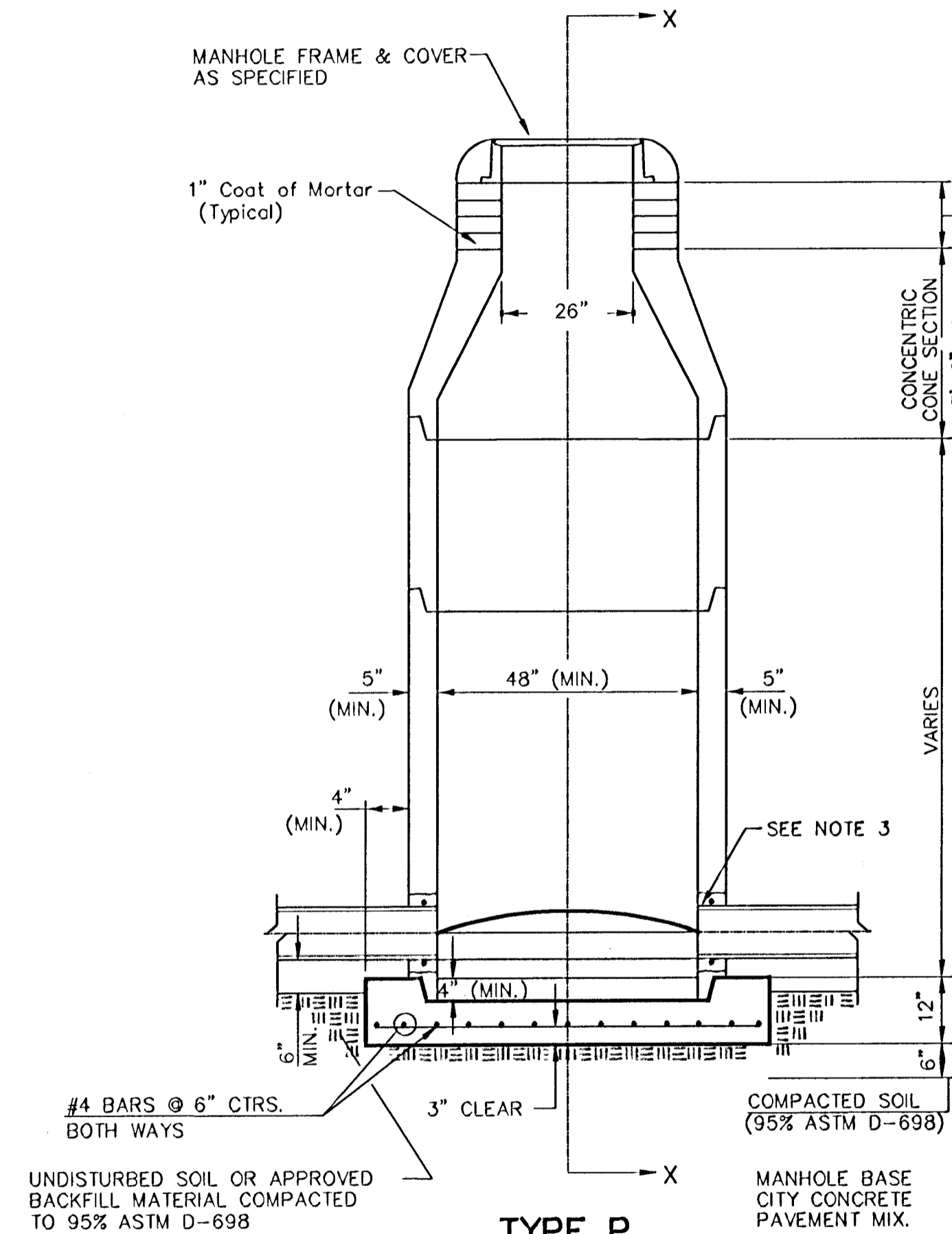
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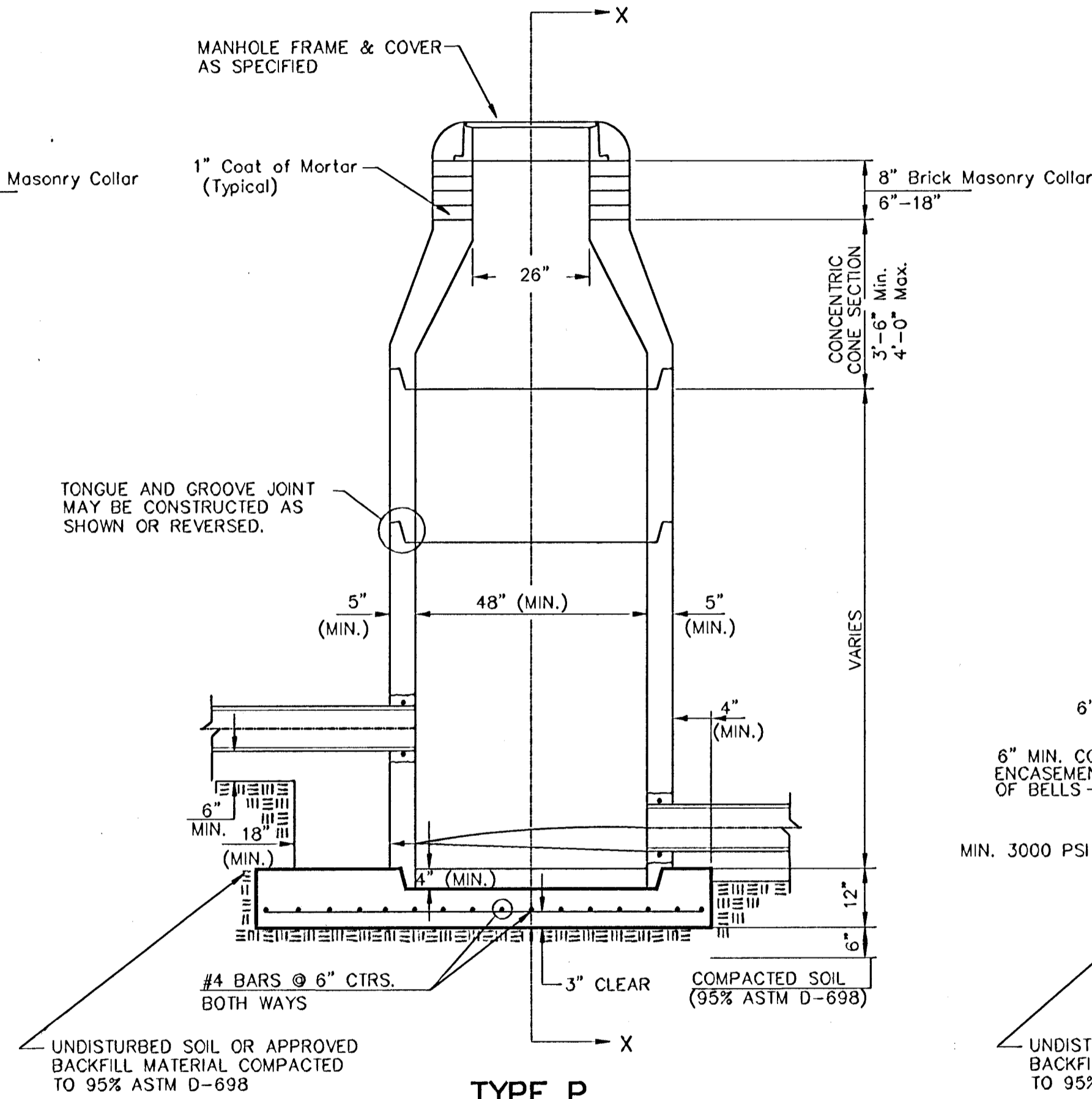
DESIGN LU	DRAWN JW	APPROVED	DATE 05/01
SCALE NOTED		SHEET 3 OF 6	

99-06-00-503
magdalen_ssz.dwg

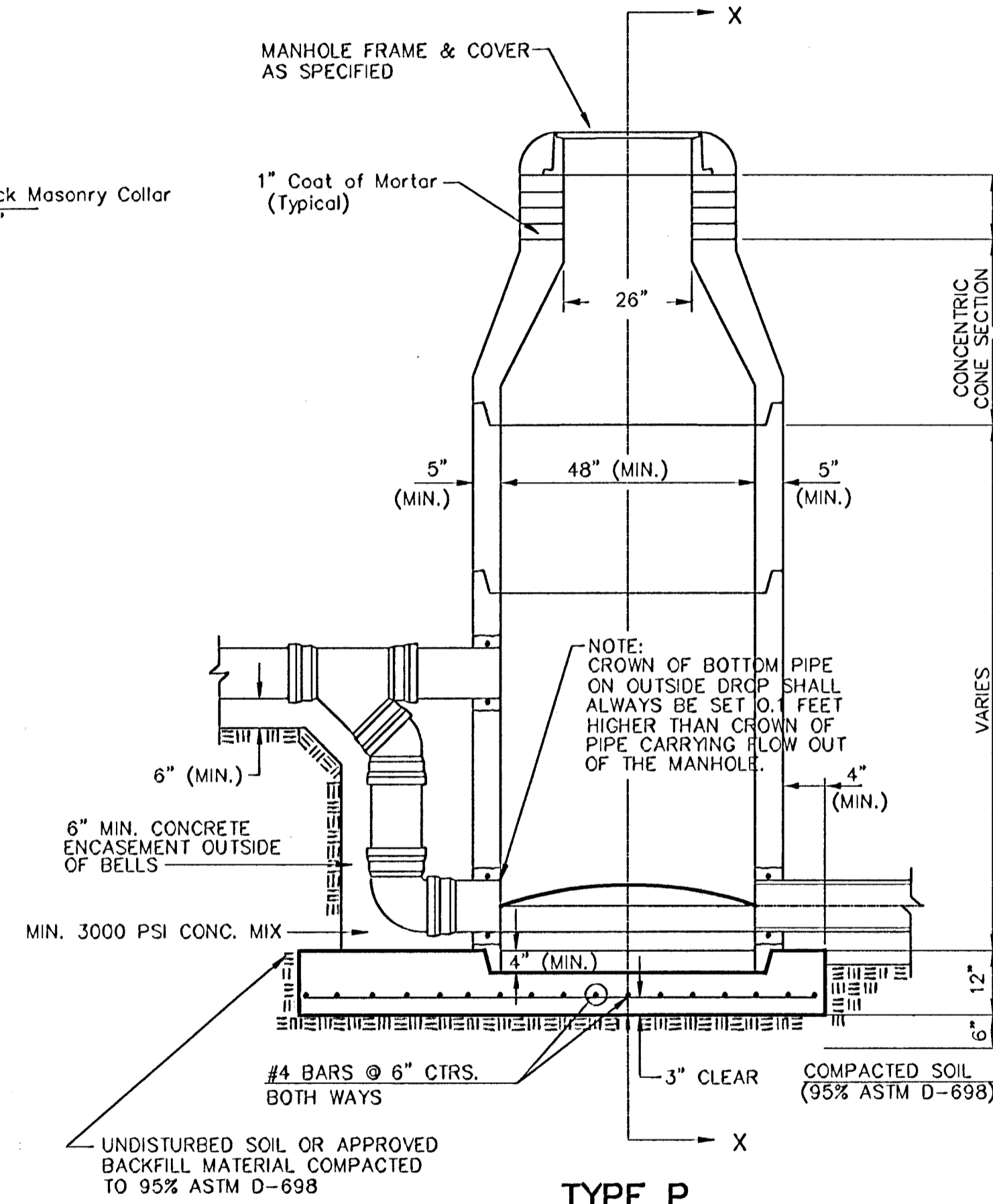
SEWER APPURTENANCES DETAILS



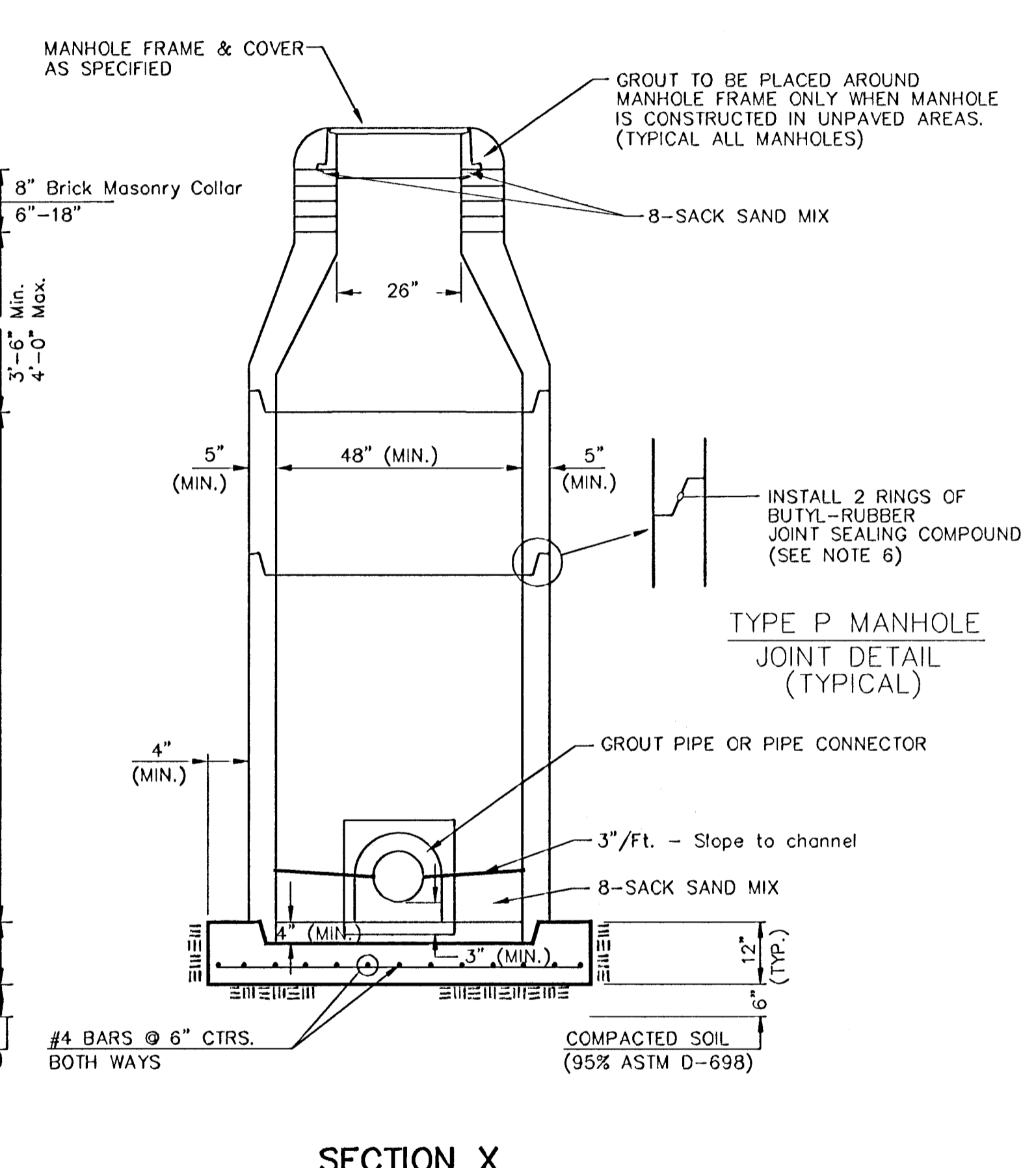
**TYPE P
STANDARD MANHOLE**



**TYPE P
INSIDE DROP MANHOLE**



**TYPE P
OUTSIDE DROP MANHOLE**



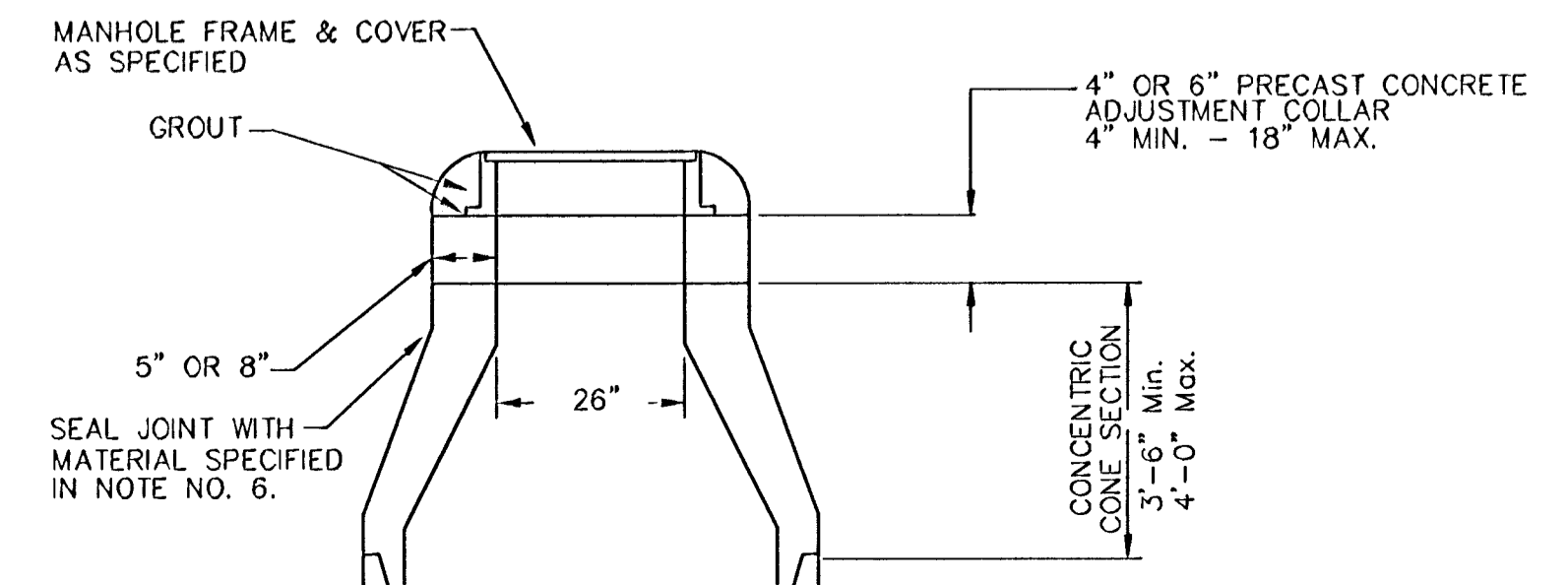
**SECTION X
(TYPICAL)**

**GENERAL NOTES
PRECAST MANHOLE NOTES**

1. ALL PRECAST CONCRETE MANHOLE SECTIONS SHALL CONFORM TO THE LATEST REVISIONS OF A.S.T.M. C478 AS MODIFIED BY THE SPECIFICATIONS.
2. NON-SHRINK GROUT SHALL BE NON-METALLIC TYPE.
3. APPROVED FLEXIBLE WATERSTOP GASKETS SHALL BE INSTALLED TO JOIN THE SEWER TO THE MANHOLE WALL WHEN A.B.S. COMPOSITE PIPE OR P.V.C. PIPE IS USED. FOR OTHER TYPES OF PIPE THE SEWER SHALL BE GROUTED IN PLACE WITH NON-SHRINK GROUT. THE SEWER PIPE SHALL BE SUPPORTED WITH CONCRETE ENCASEMENT A MINIMUM OF 3 FEET FROM THE MANHOLE WALL AND TO THE FIRST JOINT FOR V.C.P. SUCH THAT THE JOINT REMAINS FLEXIBLE.
4. ALL INSIDE SURFACES OF THE CONCRETE MANHOLE WHICH WOULD BE EXPOSED TO SEWER GAS SHALL BE COATED WITH 2 COATS INEMEC

11. REINFORCING STEEL SHALL BE INSTALLED IN THE MANHOLE BASES AND SHALL CONSIST OF NO. 4 BARS PLACED ON 6" CENTERS IN BOTH DIRECTIONS. THE MANHOLE BASE REINFORCEMENT SHALL BE PLACED AT LEAST 3" ABOVE THE BOTTOM OF THE MANHOLE BASE. ALL COSTS FOR FURNISHING AND INSTALLING REINFORCING STEEL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE MANHOLE.
12. OPENINGS SHALL BE CUT INTO THE MANHOLE WALL WHEN OUTSIDE DROPS ARE CONSTRUCTED ON EXISTING MANHOLES. SUCH OPENINGS CUT INTO EXISTING MANHOLES SHALL BE AS SMALL AS PRACTICAL TO FACILITATE INSTALLING AND GROUTING THE NEW PIPE IN PLACE. WATERSTOP GASKETS SHALL BE USED WITH P.V.C. AND A.B.S. COMPOSITE PIPE. THE NEW PIPE SHALL BE GROUTED INTO THE OPENING USING AN APPROVED NON-SHRINK GROUT FOR THE FULL MANHOLE WALL THICKNESS. THE EXTERIOR OF THE COMPLETED CONNECTION SHALL BE SEALED WITH AN APPROVED BITUMINOUS COATING SUCH THAT THE CONNECTION WILL BE

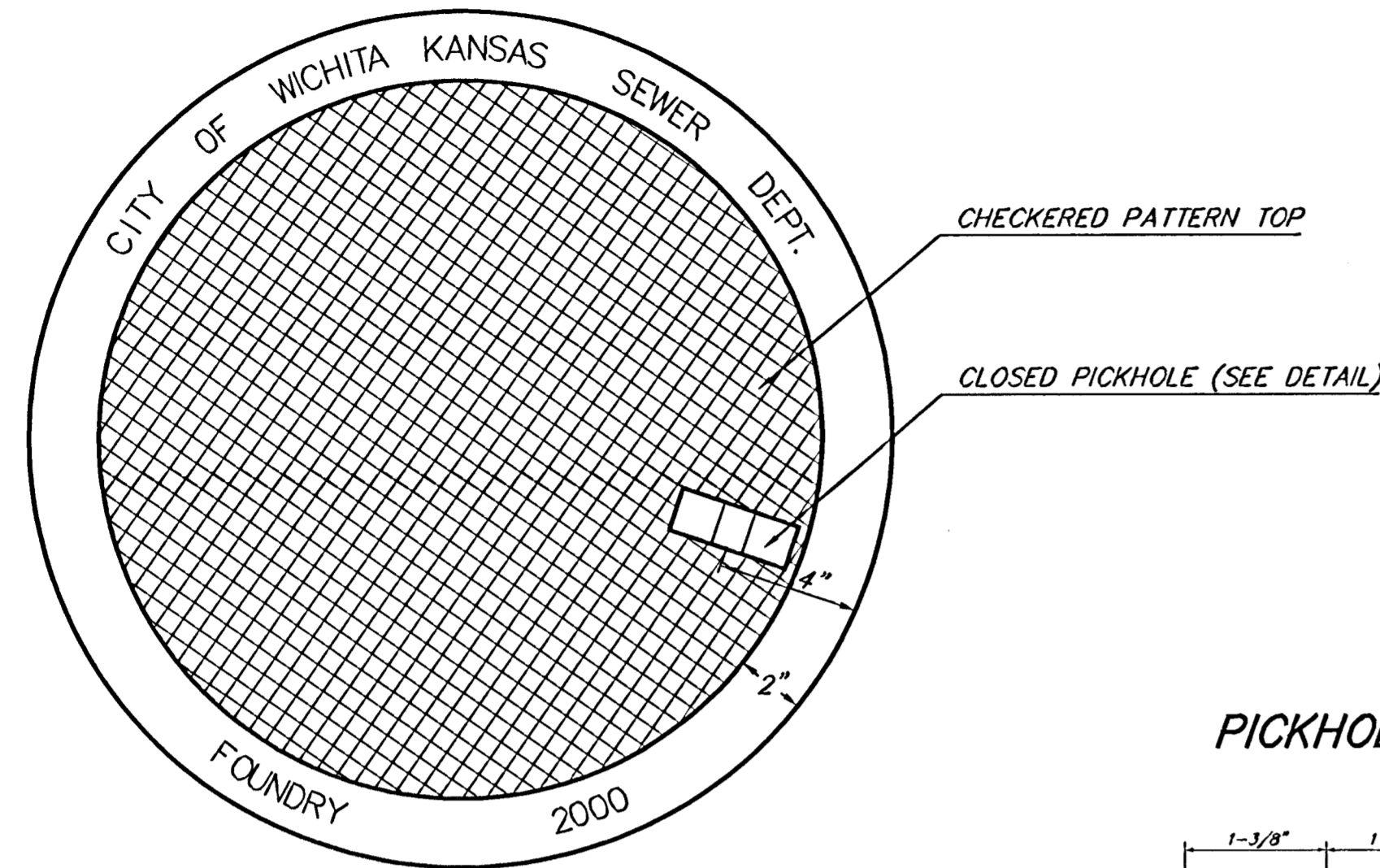
15. MANHOLE COVER CASTINGS AND MANHOLE FRAME CASTINGS SHALL CONFORM TO THE REQUIREMENTS AS INDICATED IN THE STANDARD SPECIFICATIONS AND AS SHOWN IN THE STANDARD DETAIL DRAWING.
16. THE VERTICAL DROP IN INSIDE DROP MANHOLES SHALL NOT EXCEED 2' FOR INFLOWING PIPES SIZED 12" OR SMALLER AND 2' FOR INFLOWING PIPES LARGER THAN 12". THE CROWNS OF INFLOWING PIPES SHALL NEVER BE SET LOWER THAN THE CROWN OF THE OUTFLOWING PIPE.
17. STANDARD MANHOLES AND STANDARD INSIDE DROP MANHOLES SHALL BE BID AS STANDARD MANHOLES FOR THE TYPE AND DIAMETER INDICATED. OUTSIDE DROP MANHOLES SHALL BE BID AS STANDARD OUTSIDE DROP MANHOLES FOR THE TYPE AND DIAMETER INDICATED. ALL MANHOLE DIAMETERS WILL BE 4' UNLESS INDICATED OTHERWISE.
18. A BRICK MASONRY COLLAR SHALL BE INSTALLED BETWEEN THE CAST IRON FRAME AND THE CONCENTRIC CONE. THE COLLAR WILL HAVE 8" WALLS



MANHOLE COVER
Weight = 180 Lbs.

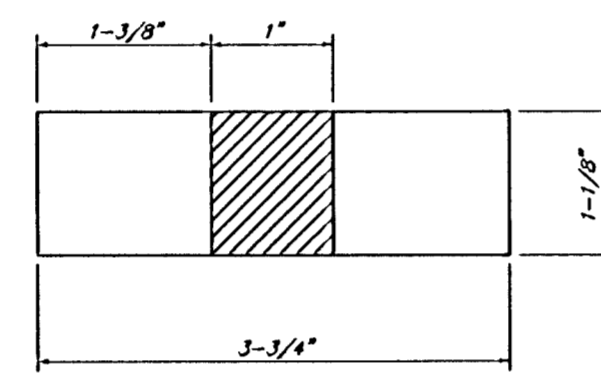
MANHOLE FRAME AND COVER DETAIL

ADOPTED AS STANDARD DESIGN BY
CITY OF WICHITA, KANSAS

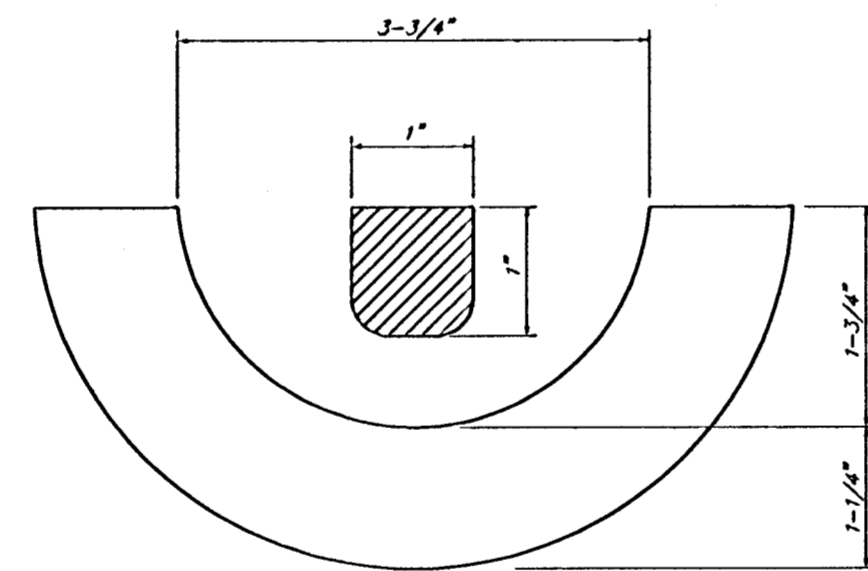


TOP VIEW

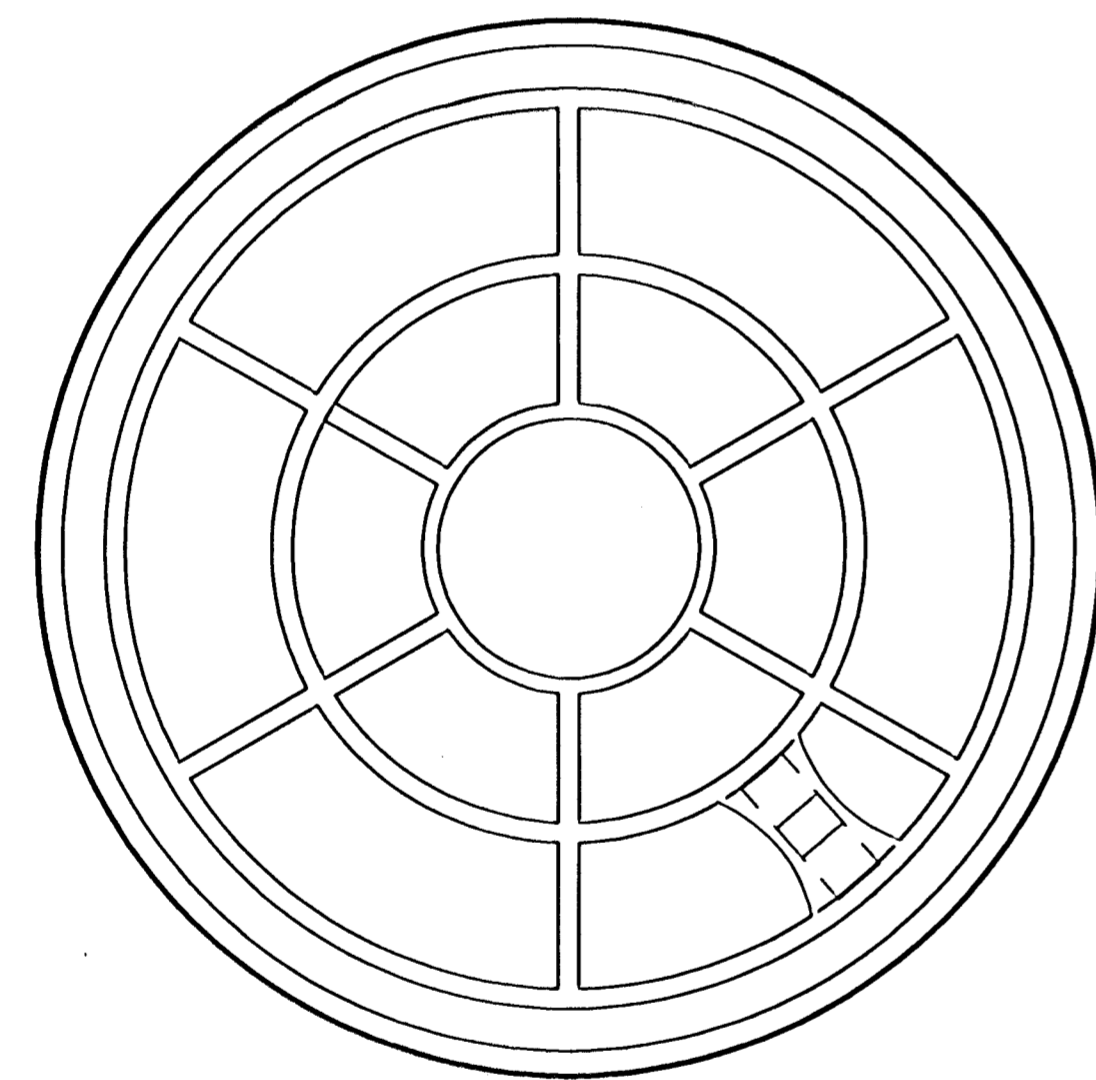
PICKHOLE DETAIL



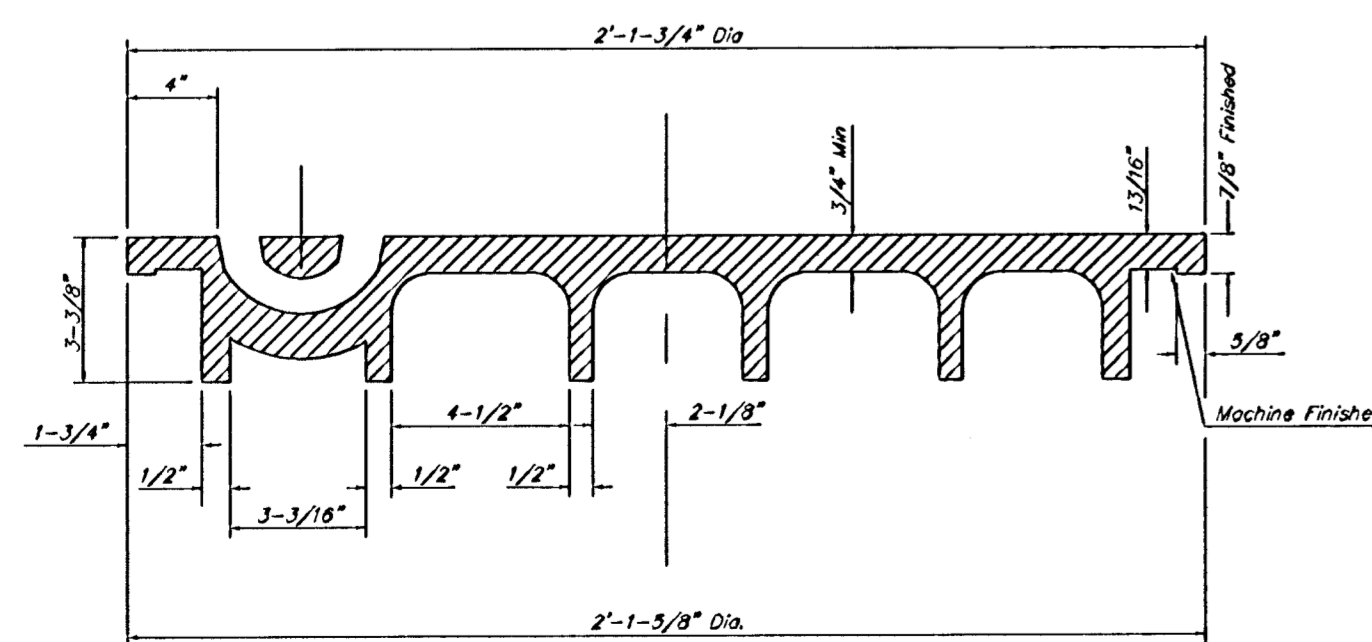
TOP VIEW



SECTION VIEW

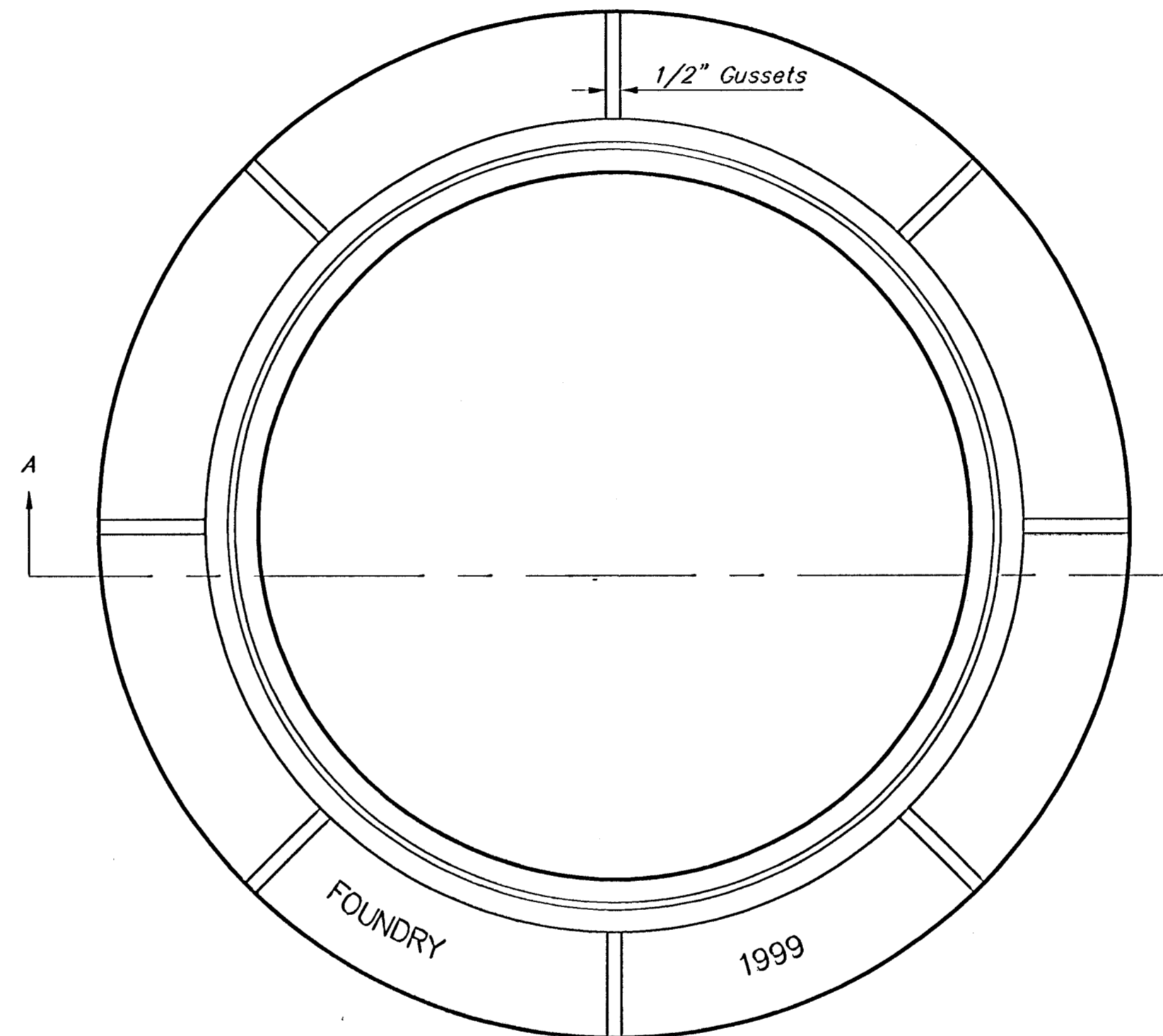


BOTTOM VIEW



SECTION VIEW

MANHOLE FRAME
Weight = 145 Lbs.



TOP VIEW

GENERAL NOTES

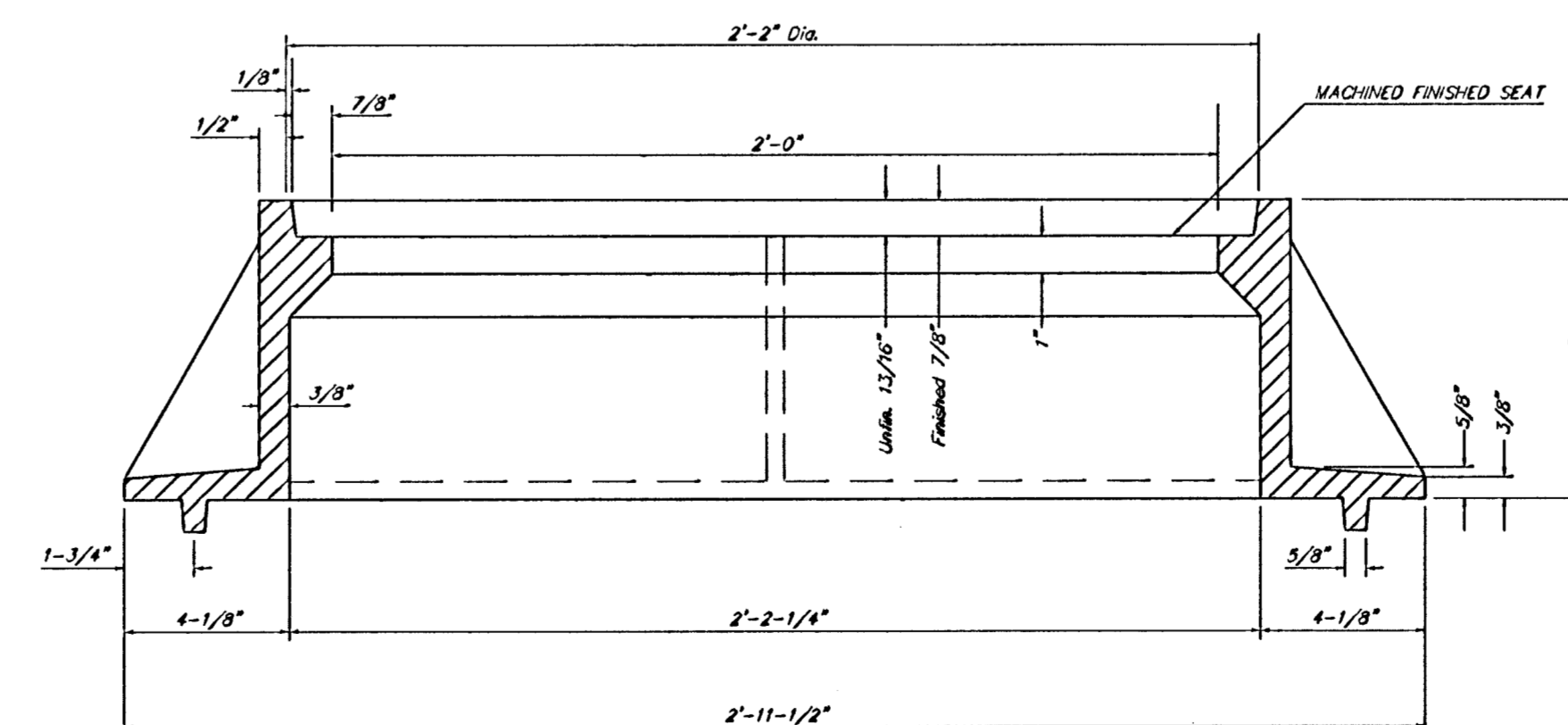
MANHOLE CASTINGS SHALL BE MANUFACTURED USING GOOD QUALITY GRAY IRON CONFORMING TO CLASS 30 OF A.S.T.M. DESIGNATION A-48. DIMENSIONS AND WEIGHTS SHOWN ON THE DETAILED DRAWINGS SHALL BE CONSIDERED AS MINIMUM REQUIREMENTS AND ANY DEVIATIONS FROM THE DIMENSIONS SHOWN MUST BE SPECIFICALLY APPROVED. THE FINISHED CASTINGS SHALL BE OF UNIFORM QUALITY, FREE FROM BLOWHOLES, POROSITY, HARD SPOTS, SHRINKAGE DISTORTIONS OR OTHER DEFECTS.

MANHOLE CASTINGS SHALL BE COATED WITH AN ASPHALT PAINT RESULTING IN A SMOOTH, TOUGH AND TENACIOUS COATING WHICH IS NOT BRITTLE OR TACKY.

MANHOLE CASTINGS SHALL BE MANUFACTURED SUCH THAT A COVER MANUFACTURED BY ANY ONE FOUNDRY WILL FIT INTERCHANGEABLY INTO A FRAME MANUFACTURED BY ANOTHER FOUNDRY AND STILL MEET ALLOWABLE CLEARANCES AND NON-ROCKING REQUIREMENTS. THIS WILL REQUIRE MANUFACTURING OF THE MATCHING FACES ON THE COVER AND THE FRAME TO CLOSE TOLERANCES.

THE OUTSIDE CIRCUMFERENCE OF THE VERTICAL FACE OF THE COVER AND THE INSIDE CIRCUMFERENCE OF THE VERTICAL FACE OF THE FRAME RECESS SHALL BE MANUFACTURED TO TOLERANCES SUCH THAT THE CLEARANCE BETWEEN THE COVER AND FRAME WILL NOT EXCEED 1/8" AT ANY POINT AROUND THE CIRCUMFERENCE OF THE COVER. THE SEATING SURFACES BETWEEN THE COVER AND FRAME SHALL BE MACHINED SUCH AS THESE SURFACES SHALL MAKE FULL CONTACT FOR THEIR FULL CIRCUMFERENCE TO PRECLUDE THE COVER FROM ROCKING IN THE FRAME.

THE MANHOLE FRAME AND COVER SHALL BE MARKED WITH LETTERING INDICATING THE NAME OF THE MANUFACTURER AND THE YEAR WHEN THE COVER OR FRAME WAS CAST. THE COVER SHALL BE FURTHER IDENTIFIED WITH REGARDS TO OWNERSHIP USING LETTERS AT LEAST 1 INCH IN HEIGHT. THIS IDENTIFICATION SHALL BE "CITY OF WICHITA SEWER DEPARTMENT". THE WORD DEPARTMENT MAY BE ABBREVIATED. THE TEXTURE OF THE TOP SURFACE OF THE COVER SHALL BE MANUFACTURED IN A CHECKERED PATTERN DESIGN AS INDICATED ON THE DRAWINGS. SMOOTH BLOCKOUTS SHALL BE UTILIZED TO HIGHLIGHT THE LETTERING ON THE COVER SURFACE. THE TOTAL AREA OF SMOOTH SURFACE BLOCKOUT SHALL NOT EXCEED THE AREA AS INDICATED ON THE DRAWING. POSITIONING OF SMOOTH BLOCKOUTS AND LETTERING MAY VARY FROM THAT SHOWN ON THE DETAILED DRAWING.



SECTION A-A

MANHOLE FRAME AND COVER DETAIL					
ADOPTED AS STANDARD DESIGN BY CITY OF WICHITA, KANSAS					
BAUGHMAN COMPANY P.A. ENGINEERING, SURVEYING, & PLANNING					
318-262-7271 • 315 ELLIS • WICHITA, KANSAS 67211					
PROJECT NUMBER 488-83201					
DESIGN STAFF	DRAWN STAFF	APPROVED	DATE 05/01	SCALE NONE	SHEET 5 OF 6

Mapleden Training 99-08-E439

