

SOUTH SENECA
DRAINAGE IMPROVEMENTS
DRAINAGE OUTFALL
PROJECT NO. 468-82557

PHASE 3 - CHANNEL SEGMENT FROM 100' S. OF 55TH ST. SO.
TO DETENTION POND #3 AND 36" STORM DRAIN SEWER

CITY OF WICHITA, KANSAS
MICHAEL E. LINDEBAK, CITY ENGINEER
NOVEMBER 1995

INDEX NO. 724120

GENERAL NOTES

- 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.
- ALL CONCRETE SHALL BE STANDARD CITY OF WICHITA PAVING MIX UNLESS OTHERWISE NOTED.
- UNDERGROUND UTILITY SERVICE LINES AND OVERHEAD UTILITY POLES & LINES ARE TO BE ADJUSTED AS NECESSARY BY OTHERS PRIOR TO CONSTRUCTION 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. LOCATION INFORMATION HAS BEEN OBTAINED FROM THE VARIOUS UTILITY COMPANIES AND IS EITHER FROM COMPANY RECORD DRAWINGS, OR COMPANY PROVIDED FIELD LOCATIONS. THE CONTRACTOR WILL BE REQUIRED TO WORK AROUND EXISTING UTILITIES WITHIN THE RIGHT-OF-WAY WHICH DO NOT CONFLICT WITH PROPOSED CONSTRUCTION.

NOTE: NOTIFY ALL OF THE FOLLOWING COMPANIES FORTY EIGHT (48) HOURS PRIOR TO EXCAVATION:

KANSAS ONE-CALL 1-800-344-7233
(WICHITA) 687-2470

KG & E (ELECTRIC) 1-316-264-1141

KG & E (GAS) 1-316-832-3169
1-316-832-3180

MULTIMEDIA CABLEVISION 1-316-262-0661

SOUTHWESTERN BELL TELEPHONE 1-316-571-2115

CITY OF WICHITA WATER & SEWER 1-316-268-4908

WILLIAMS NATURAL GAS CO. (TULSA) 1-918-588-4200
(WICHITA) 524-0491

- A WILLIAMS NATURAL GAS CO. PIPELINE CROSSES THE PROJECT NEAR STA. 21+80. THE GAS COMPANY WILL REBUILD THIS PIPELINE DURING PHASE 1 OF THE CHANNEL CONSTRUCTION BELOW THE EXCAVATION LIMITS. THE STORM DRAIN CONTRACTOR SHALL COORDINATE HIS WORK WITH THE GAS COMPANY.
- SPOIL MATERIAL SHALL BE PLACED ON CITY OF WICHITA PROPERTY ADJACENT TO THE IMPROVEMENTS AS SHOWN ON THE DRAWINGS AND AS APPROVED BY THE FIELD ENGINEER. FINAL GRADING WILL BE AT A SLOPE OF 6:1 OR LESS. NATURAL DRAINAGE PATH SHALL BE PRESERVED.
- ALL AREAS DISTURBED BY EXCAVATION OF THE CHANNEL AND STORM DRAIN ABOVE THE NORMAL WATER SURFACE SHALL BE SEEDED AND MULCHED.
- RUBBLE FROM THE REMOVAL OF MISCELLANEOUS STRUCTURES 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 DEPARTMENT 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.
- CONTRACTOR SHALL NOTIFY THE KANSAS CORPORATION COMMISSION, DOUG LOUIS (316-337-6231), IN THE EVENT ANY ABANDONED OIL OR GAS OR EXPLORATORY HOLES ARE ENCOUNTERED, SO THAT THE APPROPRIATE REGULATORY RESPONSE CAN BE MADE.
- COASTAL DERBY HAS ABANDONED THEIR WELL FIELD LINES IN THIS AREA. THESE LINES SHALL BE CUT, AS NECESSARY, REMOVED, AND THE REMAINING LINES CAPPED. COASTAL DERBY MAY BE CONTACTED FOR QUESTIONS. (GLEN BERG, 316-291-2416)
- CONTRACTOR MAY USE EITHER PRECAST SECTIONS OR CAST-IN-PLACE RCB. B.
- THE CONTRACTOR MAY BORROW MATERIAL FOR SHAPING THE EAST BANK CHANNEL BERM FROM EITHER PHASE 1 OR PHASE 2 SPOIL AREAS. THE CONTRACTOR SHALL COORDINATE BORROW OPERATIONS WITH OTHER CONTRACTORS THROUGH THE ENGINEER. THE CONTRACTOR SHALL GRADE AND RESEED BORROW AREAS AS REQUIRED.

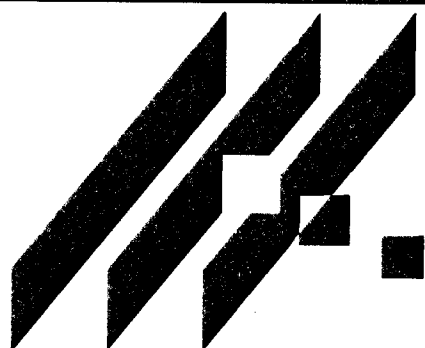
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6	STORM DRAIN PLAN & PROFILE - STA. 43+00 TO STA. 55+00
7	STORM DRAIN PLAN & PROFILE - STA. 55+00 TO STA. 63+00
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BENCH MARKS

- BM #1 RR SPIKE IN EAST FACE OF 2ND PP NORTH OF 55TH ST. S. ON WEST SIDE OF SENECA
ELEV. = 82.48
- BM #2 CHISELED "I" ON EAST END OF N. HEADWALL OF RCB, 1629' WEST & 22' NORTH OF NE COR 55TH ST. S. & SENECA.
ELEV. = 85.11
- BM #3 RR SPIKE IN HEDGE TREE, 1329' SOUTH OF NORTH LINE NE 1/4 SEC 30 & 196' WEST OF EAST LINE OF THE WEST 1/2 NE 1/4 SEC 30-T28S-R1E
ELEV. = 85.745
- BM #4 RR SPIKE IN WEST FACE OF NORTH LEG OF "H" POLE 67' S. & 77' E OF THE NE COR, NW 1/4, SE 1/4, OF SEC. 30-T28S-R1E
ELEV. = 82.355
- BM #5 RR SPIKE IN WEST SIDE OF 24" COTTONWOOD, 1177' NORTH & 7' WEST OF SE COR, SW 1/4, SE 1/4 SEC 30-T28S-R1E
ELEV. = 85.11
- BM #6 STEPPED SPIKE IN NORTH FACE PP, 36' SOUTH OF SE COR, SW 1/4, SE 1/4 SEC 30-T28S-R1E
ELEV. = 79.63

NGVD = 1187.4 + WICHITA DATUM

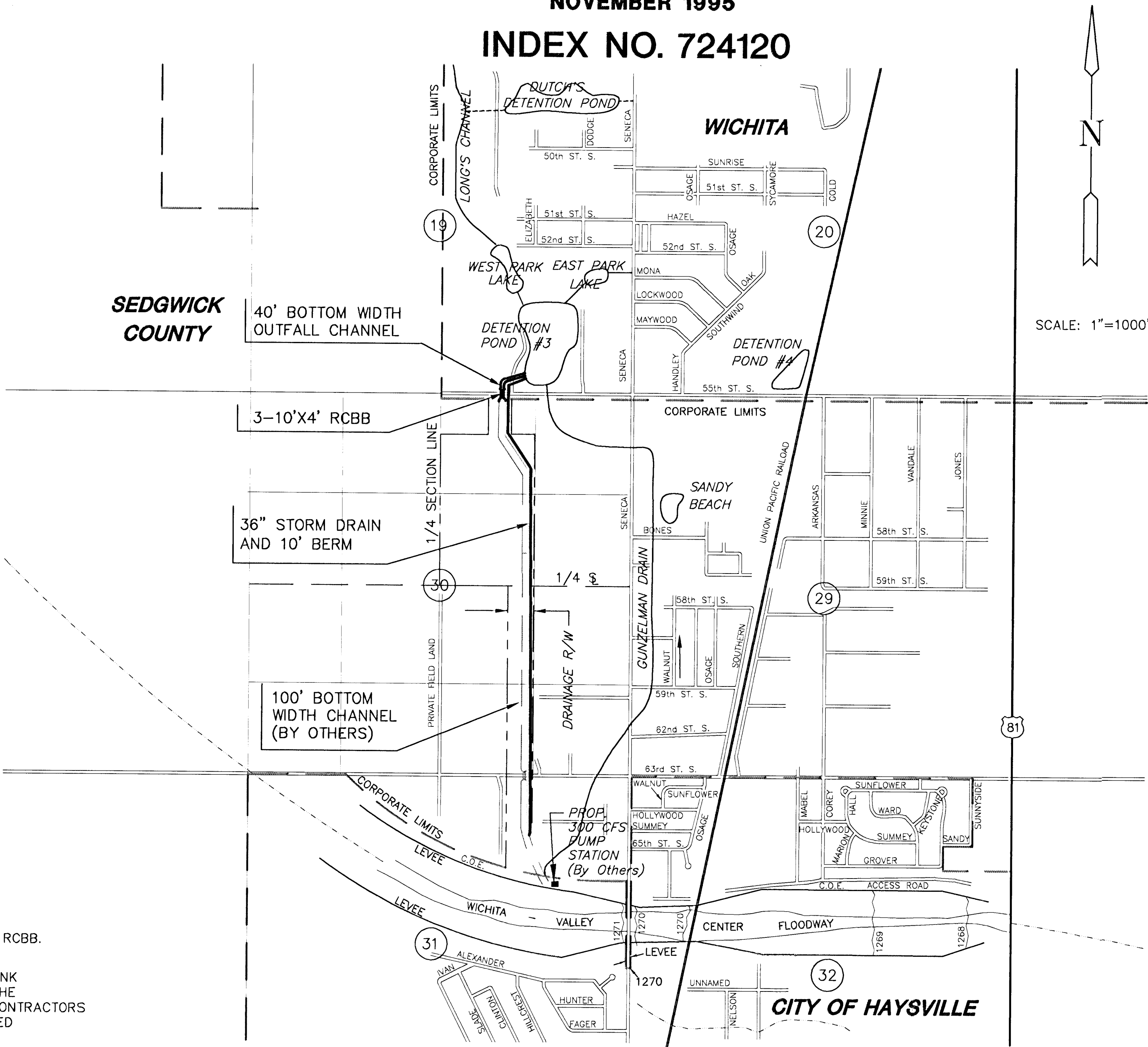


S. SENECA DRAINAGE IMPROVEMENTS
PROJECT NAME

CHANNEL & STORM DRAIN - PHASE 3
SHEET TITLE

MID-KANSAS ENGINEERING
CONSULTANTS, INC.
411 N. WEBB ROAD
WICHITA, KS. 67206
316-684-9600

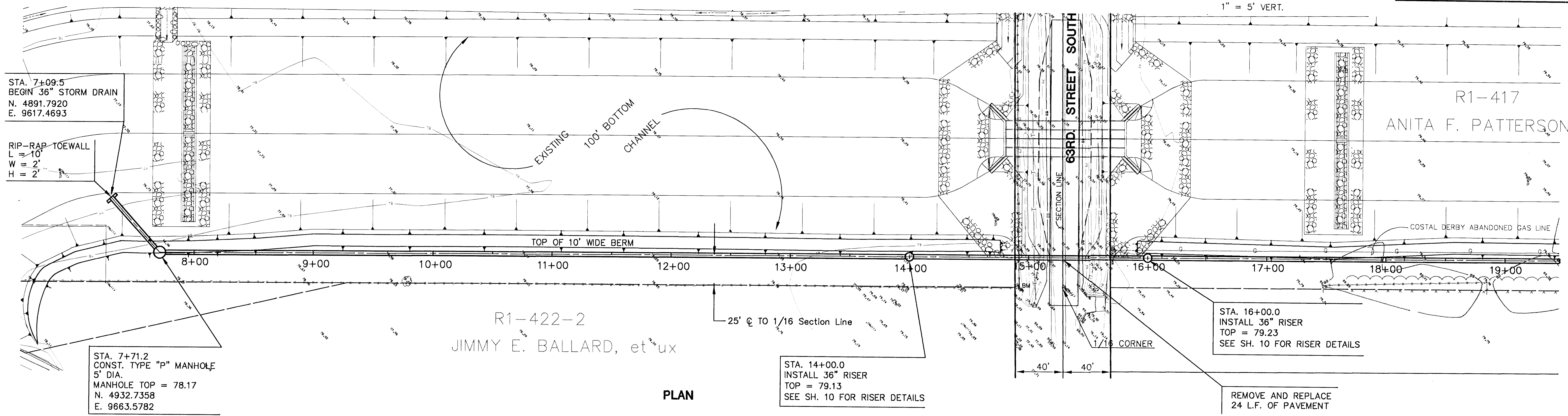
DLM DPG JNJ
DESIGN BY. DRAWN BY. CHECKED BY.
11-95 93035 1 / 19
DATE JOB NO. SHEET/OF



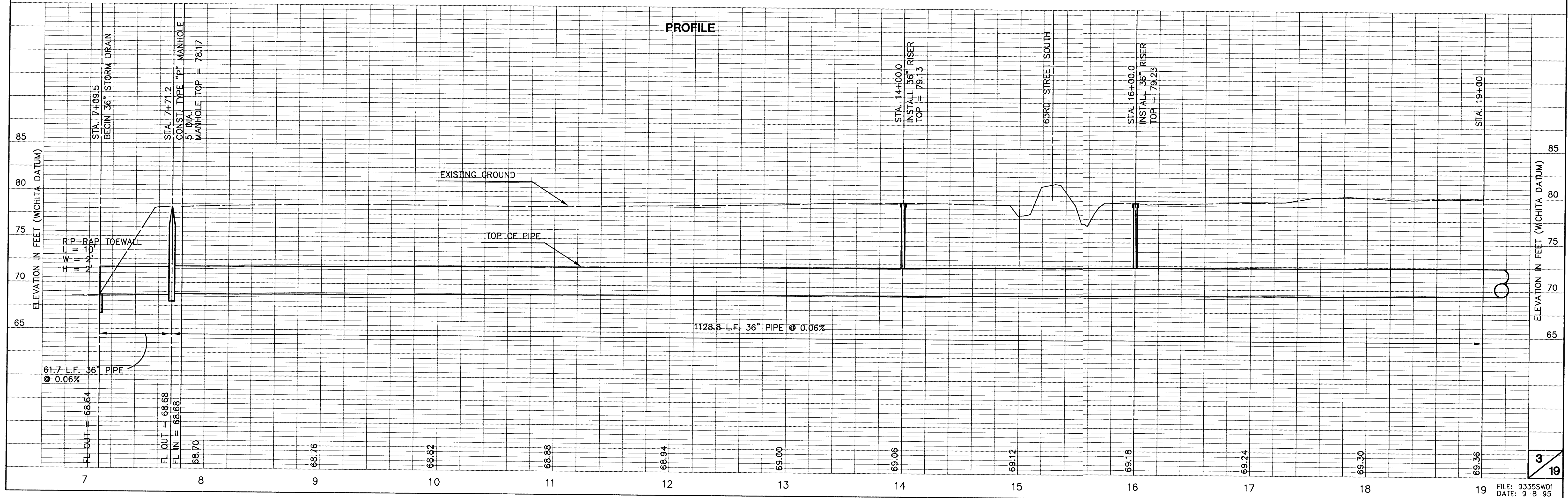
R1-423
ANITA F. PATTERSON

SOUTH SENECA DRAINAGE OUTFALL
PHASE 3
STORM DRAIN PLAN/PROFILE
PROJ. NO. 468-82329

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



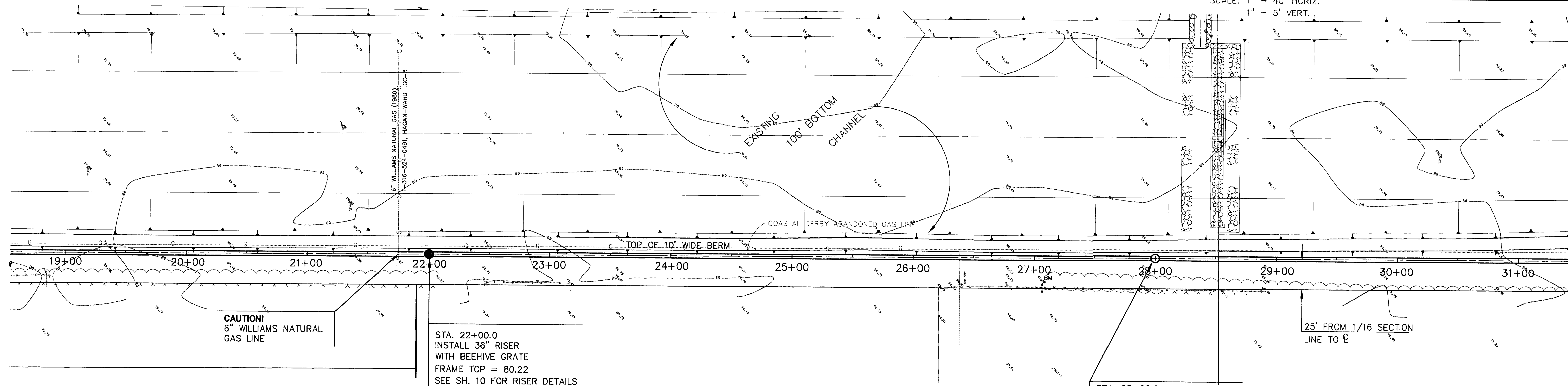
PROFILE



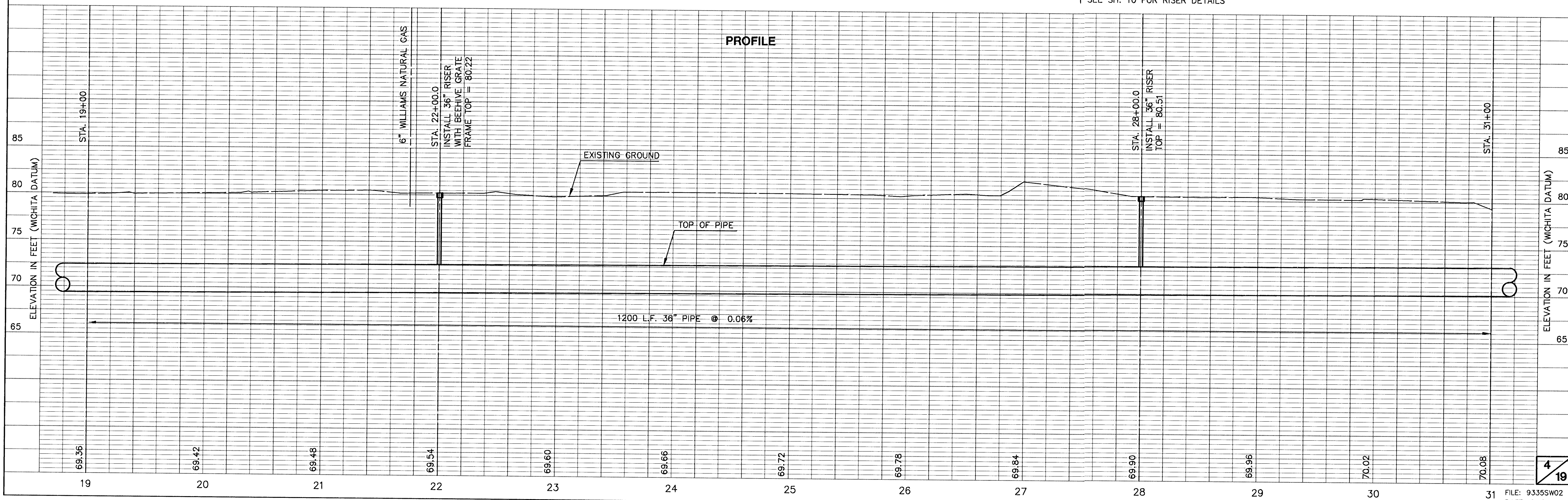
R1-417
ANITA F. PATTERSON

SOUTH SENECA DRAINAGE OUTFALL
PHASE 3
STORM DRAIN PLAN/PROFILE
PROJ. NO. 468-82329

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



PLAN

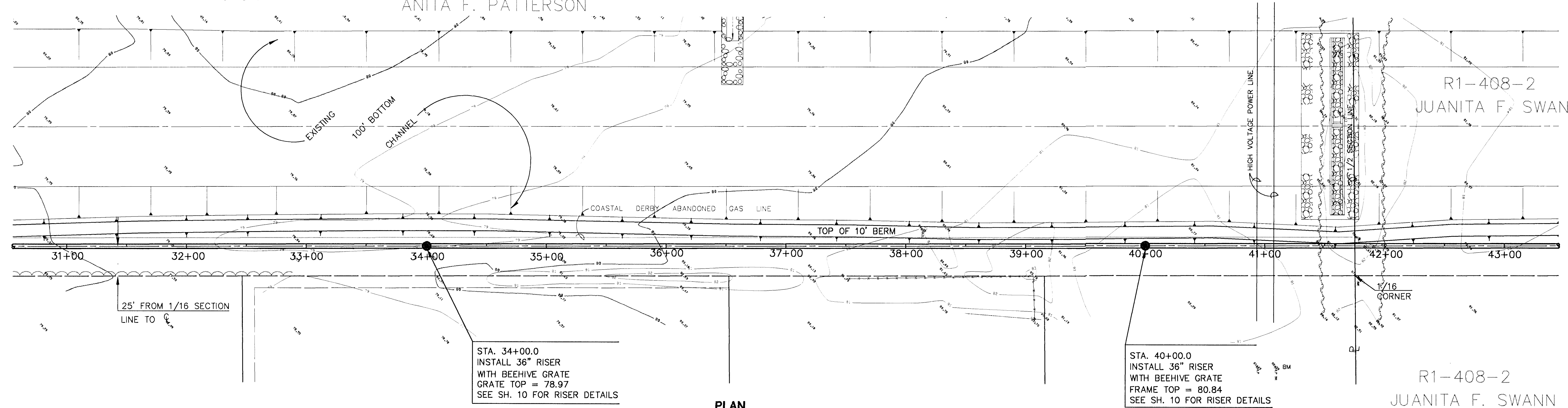


PROFILE

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

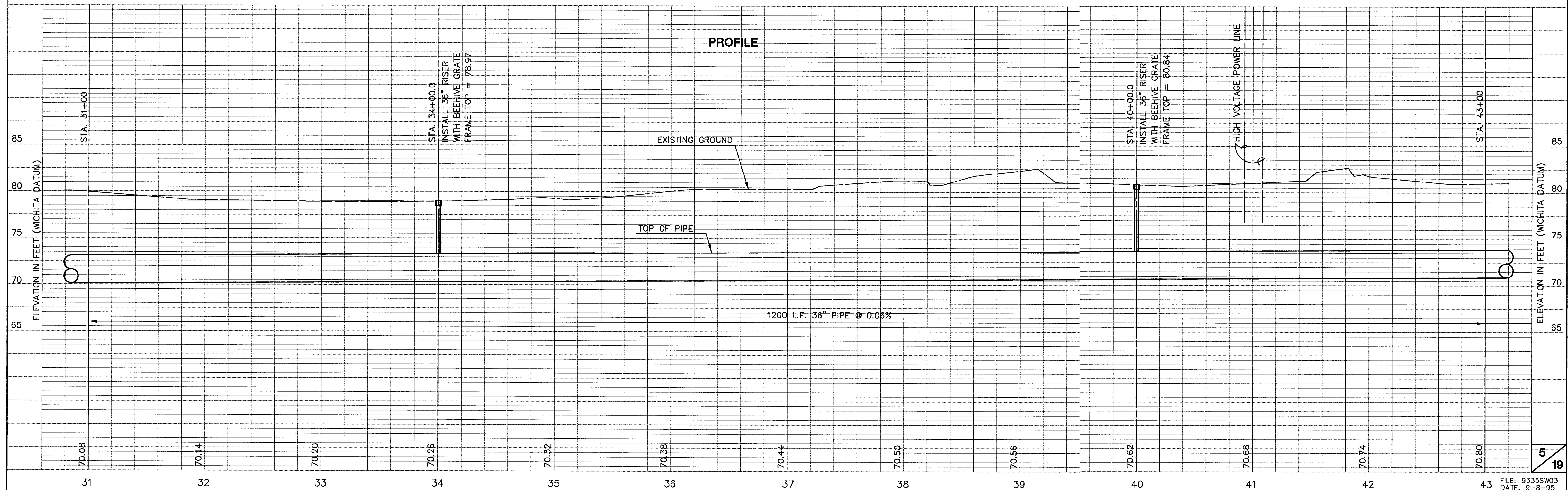
R1-417
ANITA F. PATTERSON

R1-408-2
JUANITA F. SWANN



R1-408-2
JUANITA F. SWANN

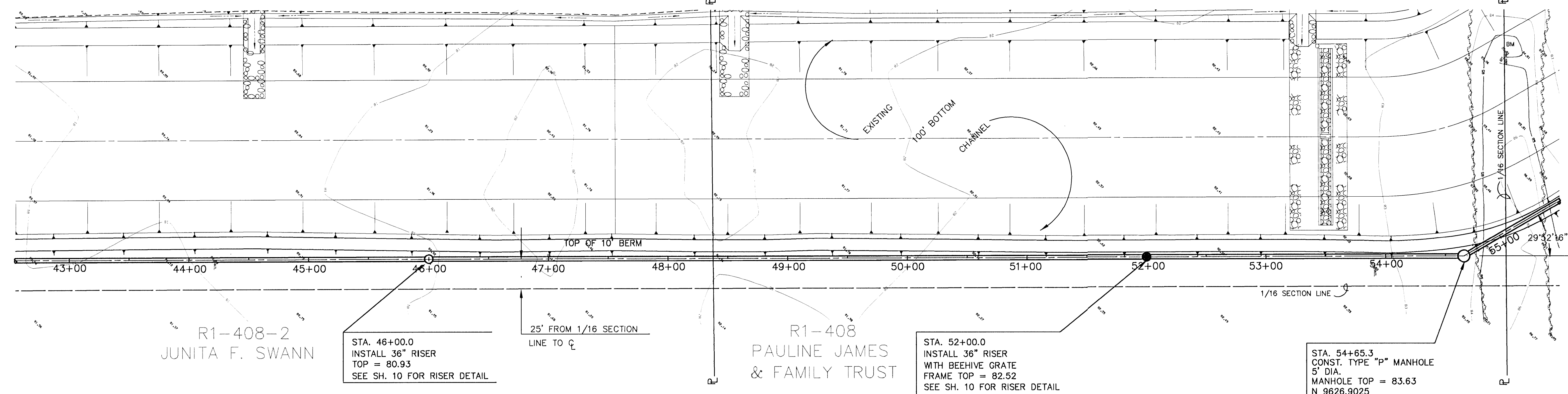
PROFILE



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

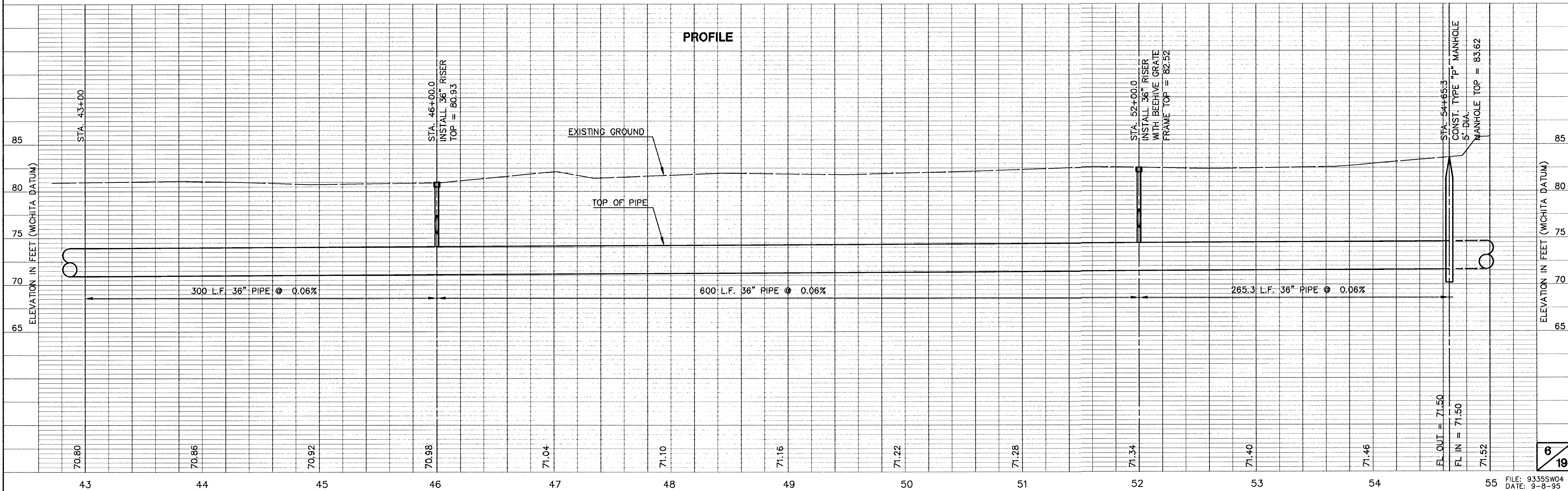
R1-408-2
JUNITA F. SWANN

R1-408
PAULINE JAMES
& FAMILY TRUST



PLAN

PROFILE



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

R1-406-2

STA. 62+70.9
CONST. TYPE "P" MANHOLE
5' DIA.
MANHOLE TOP = 83.11
N. 10324.5123
E. 9251.0985

R1-408
PAULINE JAMES
& FAMILY TRUST

25' FROM 1/16 SECTION
LINE TO CL

STA. 54+65.3
CONST. TYPE "P" MANHOLE
5' DIA.
MANHOLE TOP = 83.63
N. 9626.9025
E. 9653.8652

STA. 58+70.0
INSTALL 36" RISER
WITH BEEHIVE GRATE
FRAME TOP = 81.68
SEE SH. 10 FOR RISER DETAIL

25' FROM PROPERTY
LINE TO CL

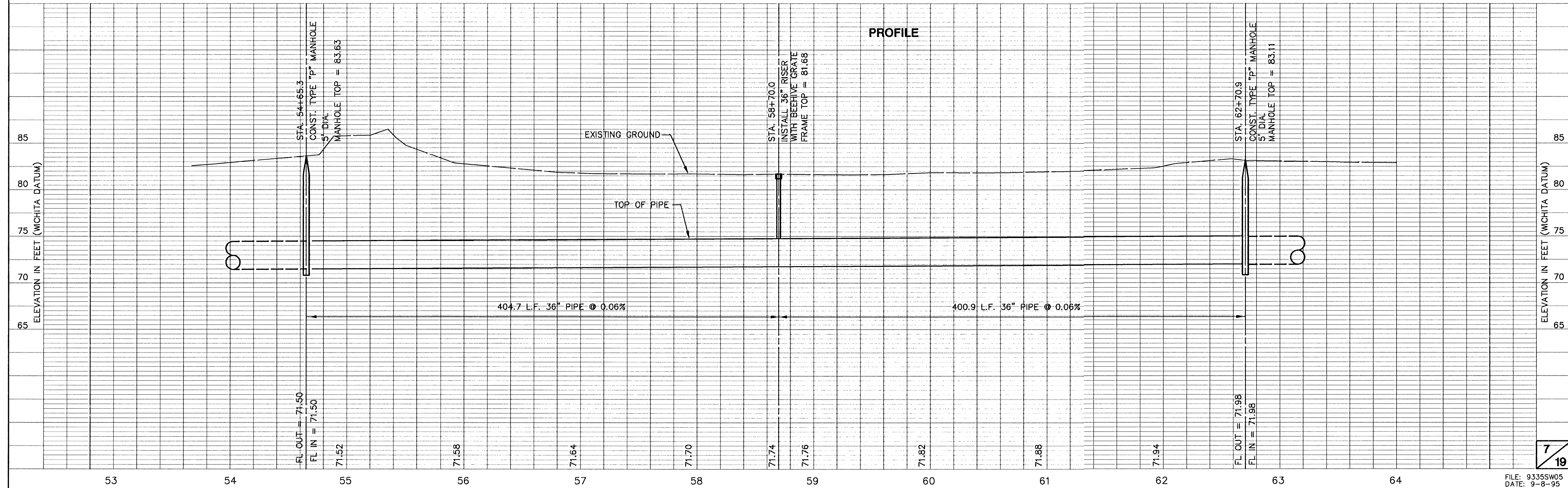
R1-406-2B
WILLIAM F. ANDRLA

R1-407
ALVA J. COOK

R1-407
ALVA J. COOK

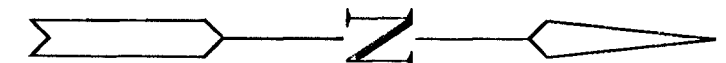
PLAN

PROFILE



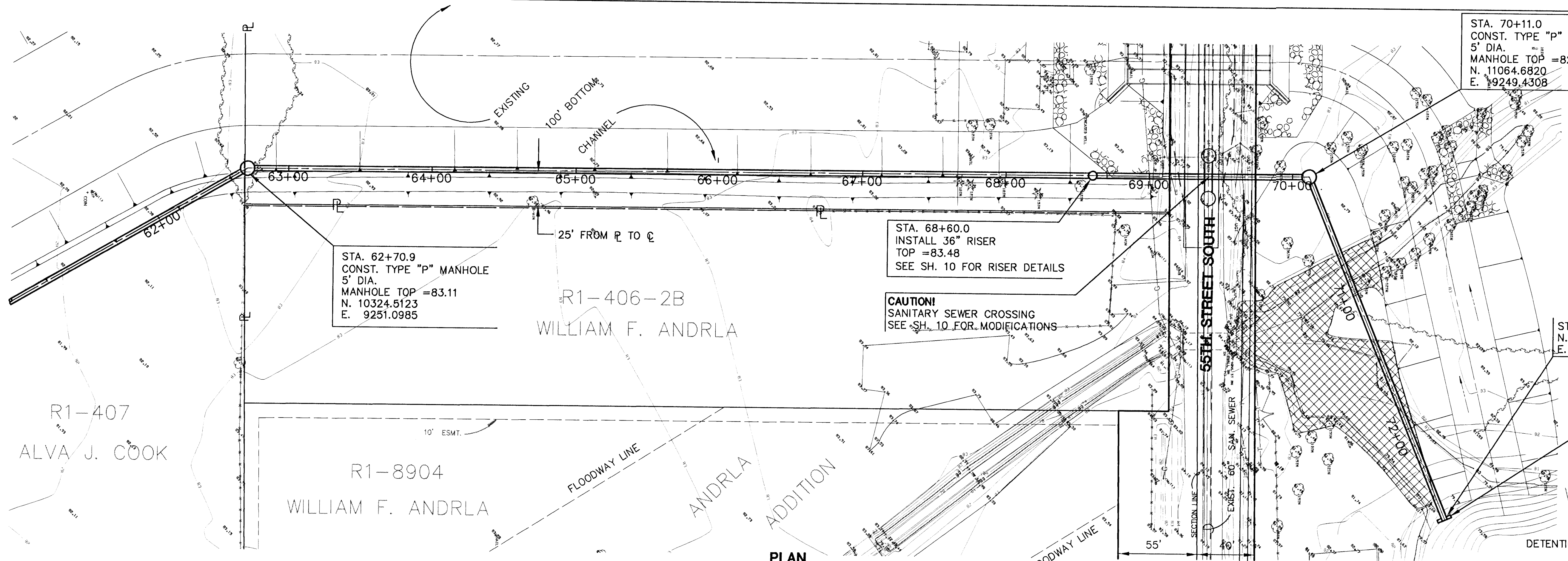
STA. 70+11.0
CONST. TYPE "P" MANHOLE
5' DIA.
MANHOLE TOP = 82.97
N. 11064.6820
E. 9249.4308

SOUTH SENECA DRAINAGE OUTFALL
PHASE 3
STORM DRAIN PLAN/PROFILE
PROJ. NO. 468-82329



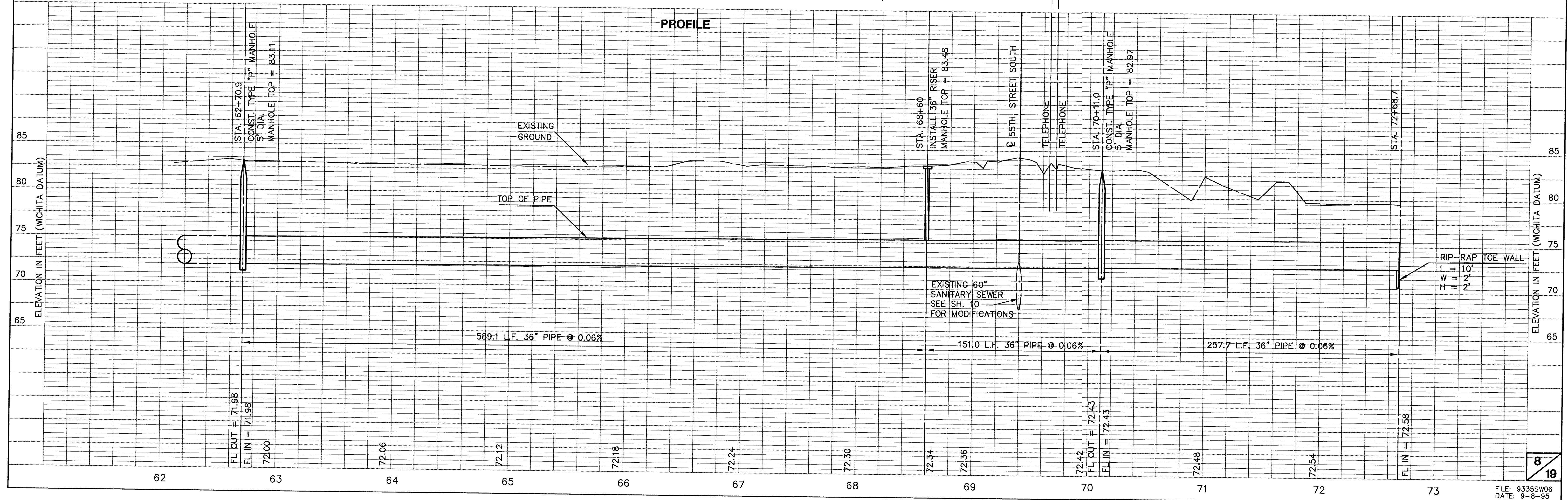
SCALE: 1" = 40' HORIZ.
1" = 5' VERT.

NOTE:
REMOVE THE MINIMUM NUMBER OF
TREES NECESSARY FOR CONSTRUCTION



PLAN

PROFILE



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

- NOTE:
1. COMPACT ALL FILL WITHIN THE 55TH STREET RIGHT-OF-WAY TO 95% ASTM D-698
 2. STRUCTURES AND OTHER PROPERTY IMPROVEMENTS WITHIN THE PROJECT RIGHT-OF-WAY BETWEEN STA. 67+50 AND STA. 68+90 WILL BE DEMOLISHED AND REMOVED BY OTHERS PRIOR TO JANUARY 31, 1996

CHANNEL CURVE DATA
 $\Delta = 77^{\circ}04'59''$
 $R = 100.00'$
 $T = 79.66'$
 $L = 134.54'$

STA. 69+67.41 CONST.
3-10'X4'X100' RCBB
WITH APRON, EACH END
SEE SHEET NO. 7

STA. 69+23 CONST.
BERM FLUME, LT.
INSTALL 154 S.Y.
LIGHT STONE RIPRAP
SEE SHEET NO. 14

INSTALL 380 S.Y.
LIGHT STONE RIPRAP
SEE SHEET NO. 8

STA. 71+66 INSTALL
300 S.Y.
LIGHT STONE RIPRAP

CAUTION!
ABANDONED
WATER WELLS
CUT & CAP 3'
BELOW FINISHED
GRADE

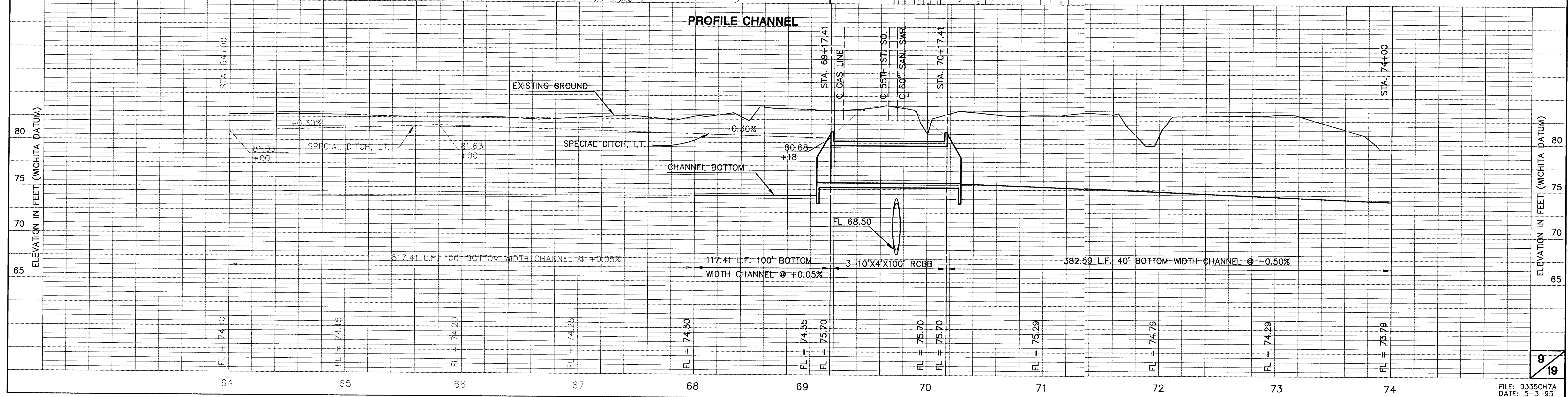
STA. 68+00 BEGIN
CHANNEL - PHASE 3
SEE SHEET NO. 14

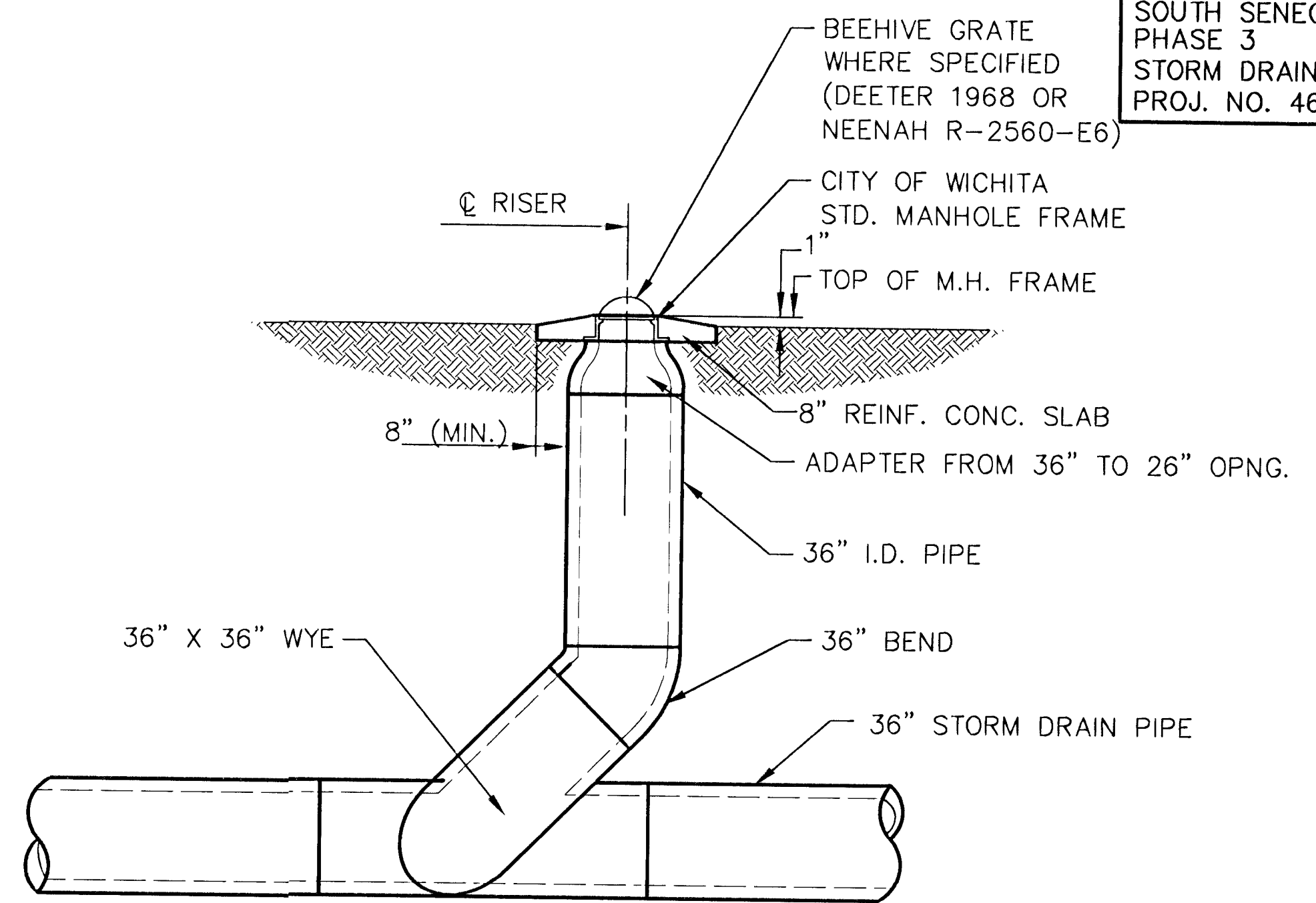
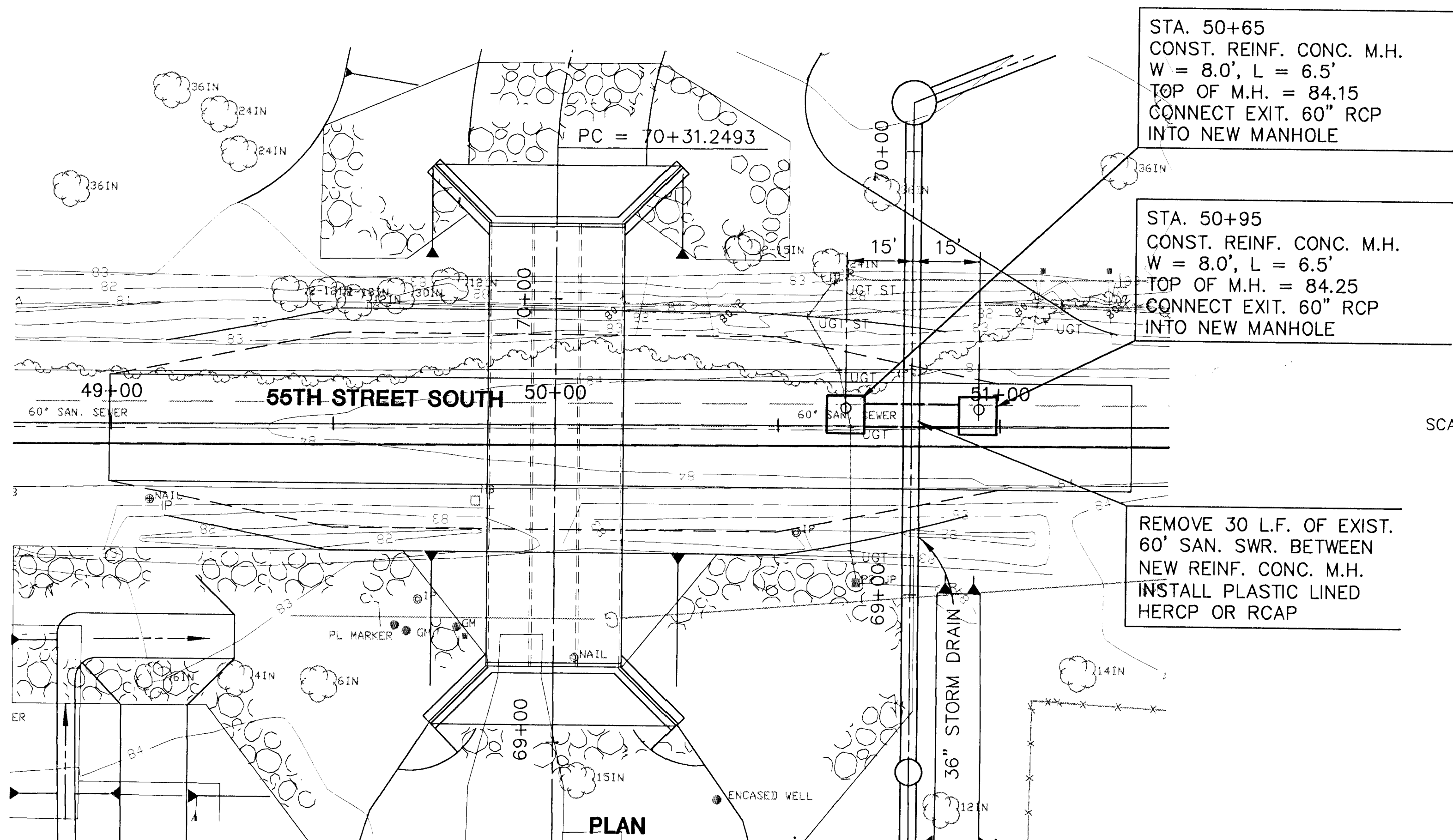
INSTALL 974 S.Y.
LIGHT STONE RIPRAP
SEE SHEET NO. 8

REMOVE EXISTING DRAINAGE STRUCTURE.
REMOVE AND REPLACE PAVEMENT AS
REQUIRED. SHAPE DITCHES TO DRAIN.

PLAN CHANNEL

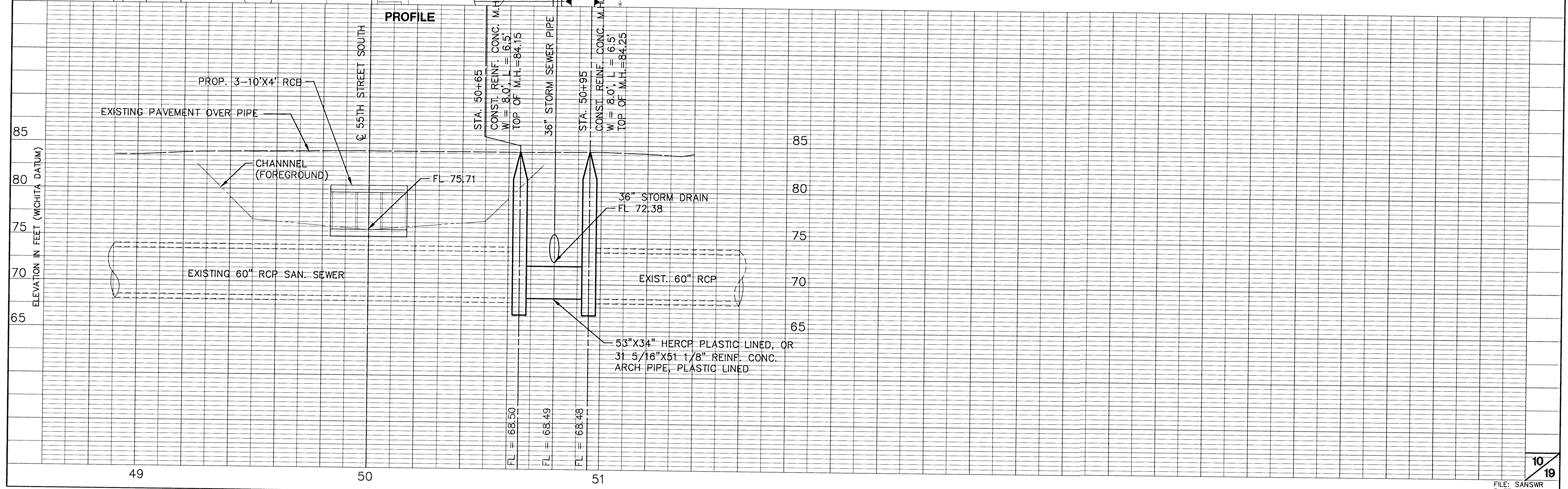
PROFILE CHANNEL





STORM DRAIN RISER DETAIL

CONTRACTOR MAY PROVIDE AND INSTALL 5-FOOT DIAMETER MANHOLE IN PLACE OF 36" WYE AND RISER ASSEMBLY AT NO EXTRA COST. MANHOLES SHALL HAVE WATERTIGHT JOINTS AND WATERTIGHT CONNECTIONS TO PIPE. PLASTIC MANHOLE SHALL BE ANCHORED TO A CONCRETE BASE 8" THICK WITH A DIAMETER AT LEAST 8" GREATER THAN THE MANHOLE OUTSIDE DIAMETER.



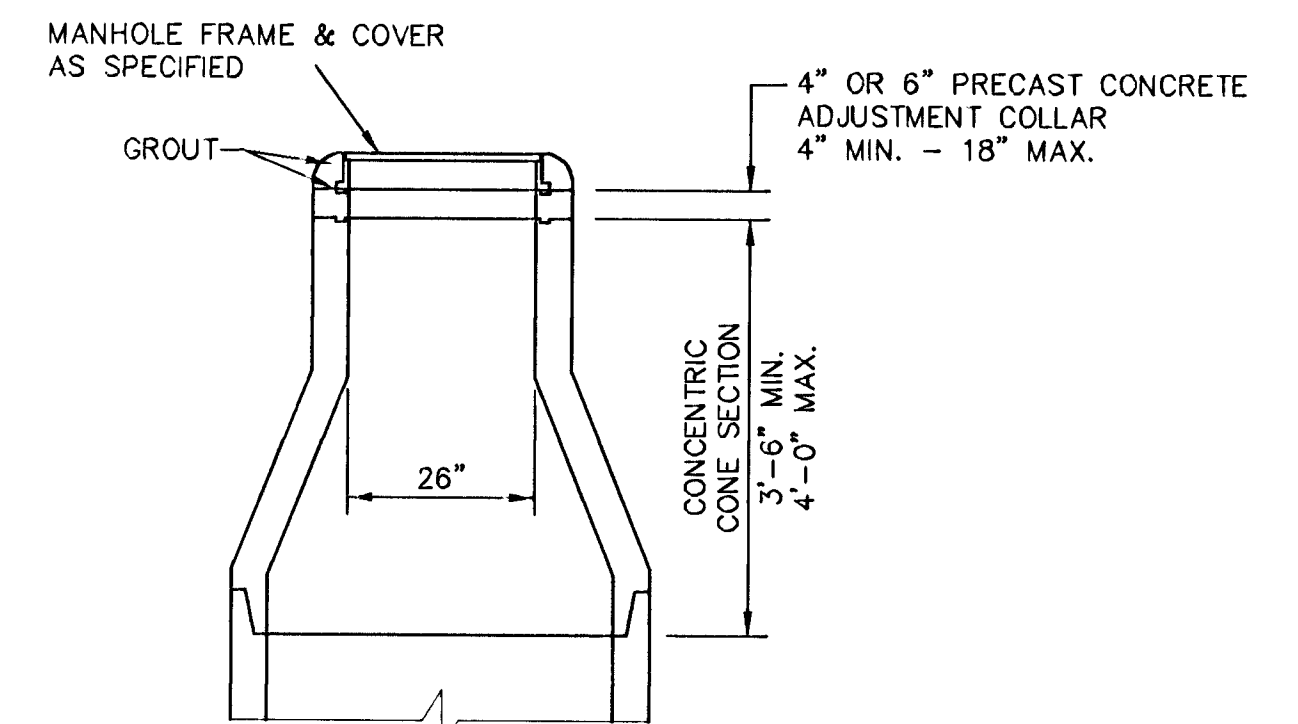
**ADOPTED AS STANDARD DESIGN
BY
CITY OF WICHITA**



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 TNEC SERIES 66 HI-BUILD EPOXOLINE, DRY THICKNESS OF 8 MILS (MIN.)
5. EXTERIOR MANHOLE WALLS SHALL BE COATED WITH 1 COAT MOBILARMA 633 BITUMINUS 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.

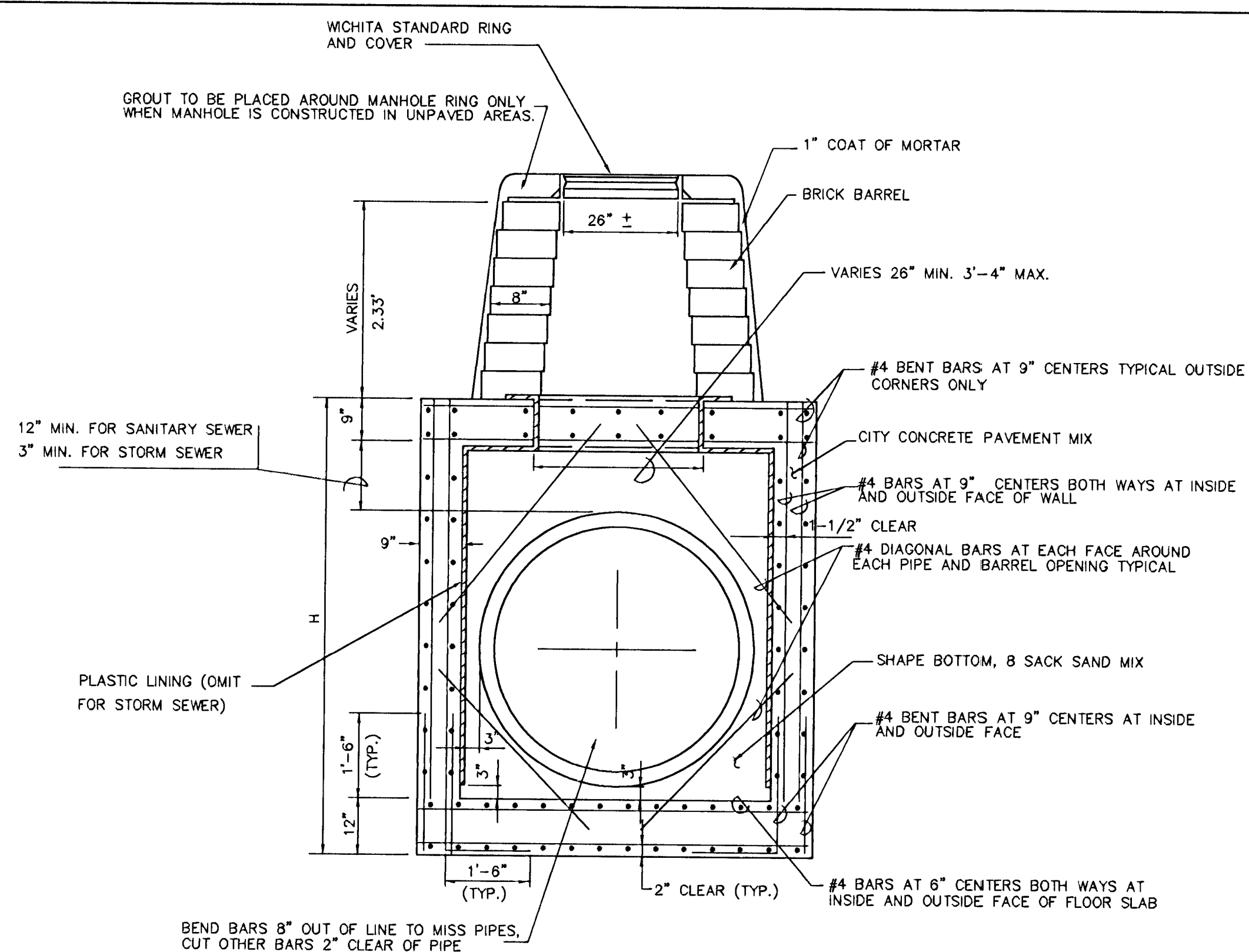
11. REINFORCING STEEL SHALL BE INSTALLED IN THE MANHOLE BASES AND SHALL CONSIST OF NO. 4 BARS PLACED ON 6" CENTERS IN BOTH DIRECTIONS. THE MANHOLE BASE REINFORCEMENT SHALL BE PLACED AT LEAST 3" ABOVE THE BOTTOM OF THE MANHOLE BASE. ALL COSTS FOR FURNISHING AND INSTALLING REINFORCING STEEL SHALL BE INCLUDED 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 SHALL BE CUT INTO EXISTING MANHOLES 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 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 CONCENTRIC 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.



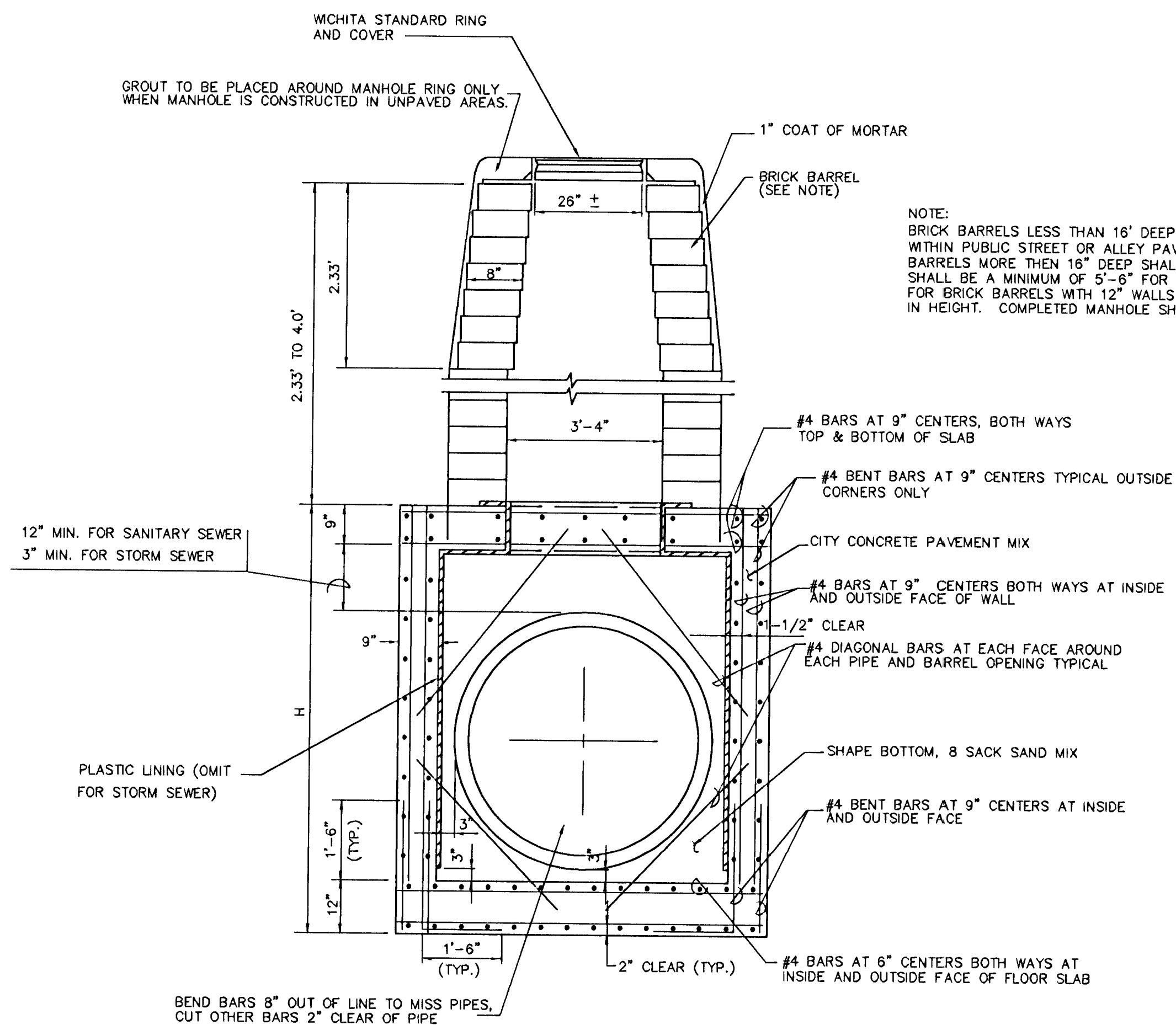
REVISSED: 6-12-86

CITY OF WICHITA, KANSAS			
Design C.O.W.	Checked by	Checked by	
Drawn by	Date	Date 11-95	Job No.



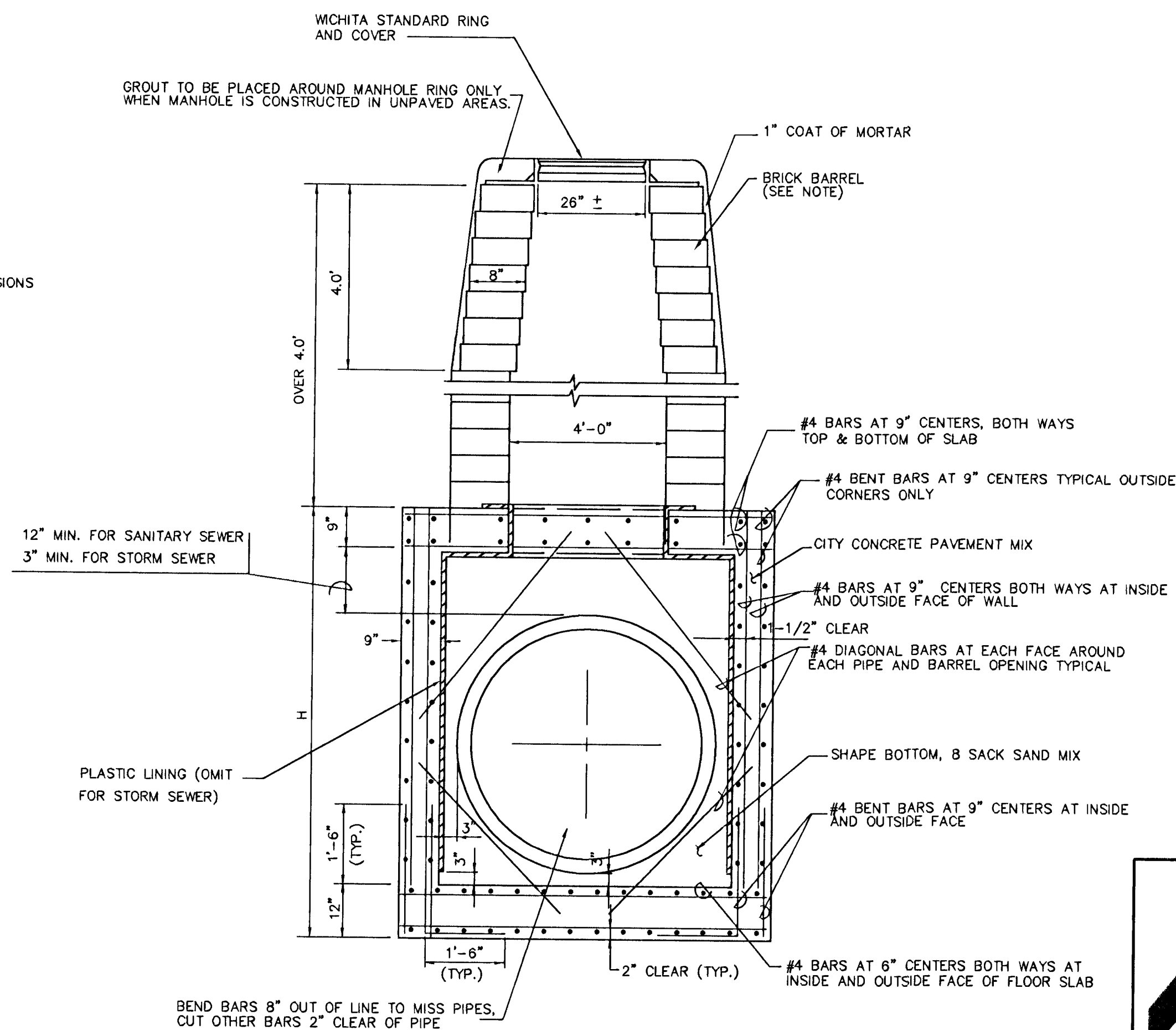
REINFORCED CONCRETE MANHOLE

DEPTH OF STACK: 0' TO 2.33'



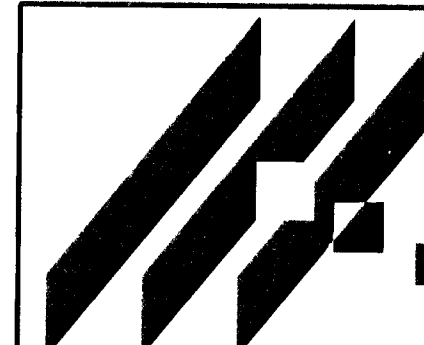
REINFORCED CONCRETE MANHOLE

DEPTH OF STACK: 2.33' TO 4.0'



REINFORCED CONCRETE MANHOLE

DEPTH OF STACK: OVER 4.0'



MID-KANSAS ENGINEERING
CONSULTANTS, INC.
411 N. WEBB ROAD
WICHITA, KS. 67206
316-684-9600

SOUTH SENECA DRAINAGE OUTFALL
PROJECT NAME

REINFORCED CONCRETE MANHOLE
SHEET TITLE

DESIGN BY: _____ DRAWN BY: _____ CHECKED BY: _____

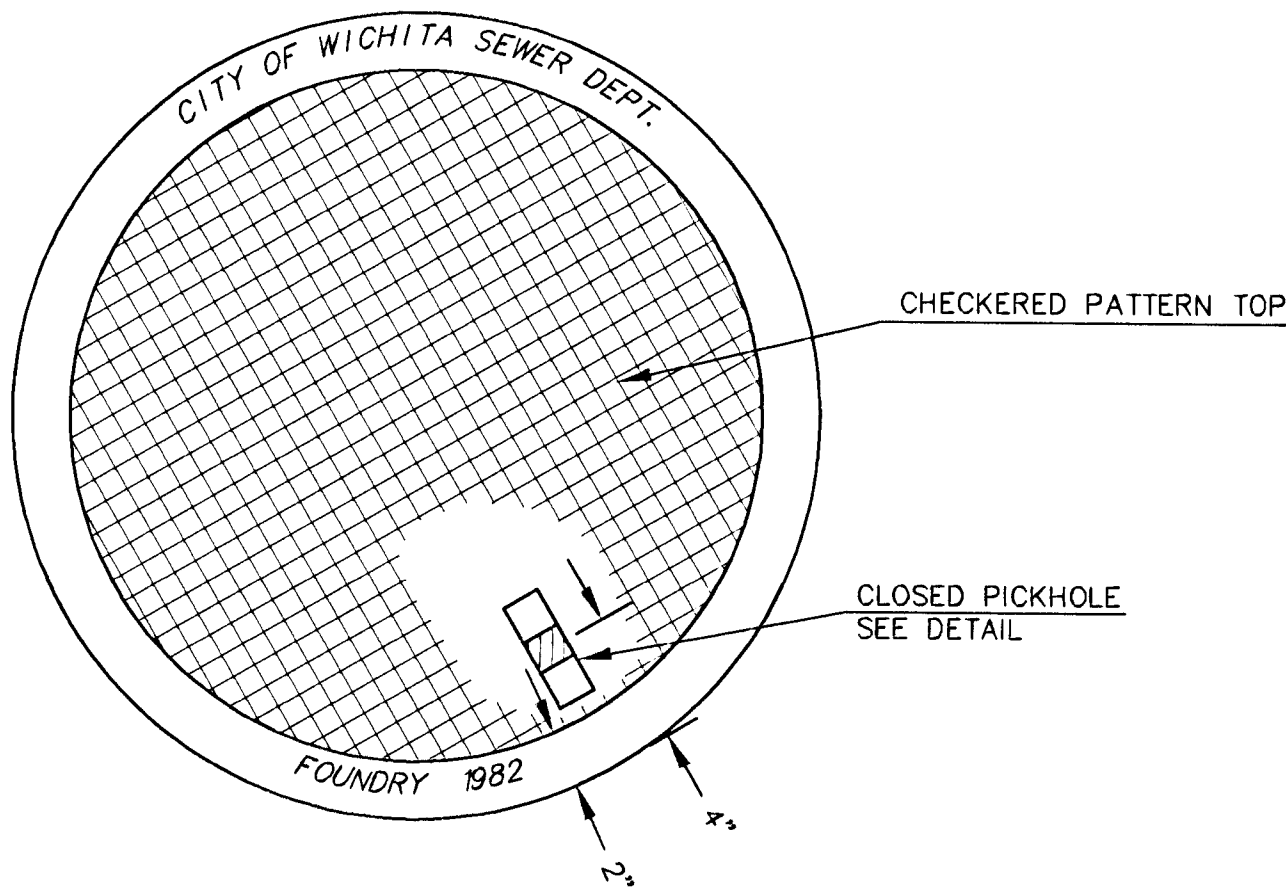
11-95 DATE 93035 JOB NO. 12 / 19 SHEET OF

MANHOLE FRAME AND COVER DETAIL

ADOPTED AS STANDARD DESIGN

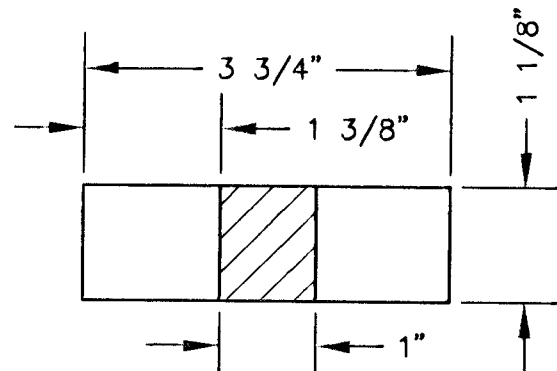
City of Wichita, Kansas

MANHOLE COVER
WEIGHT: 240 LBS.

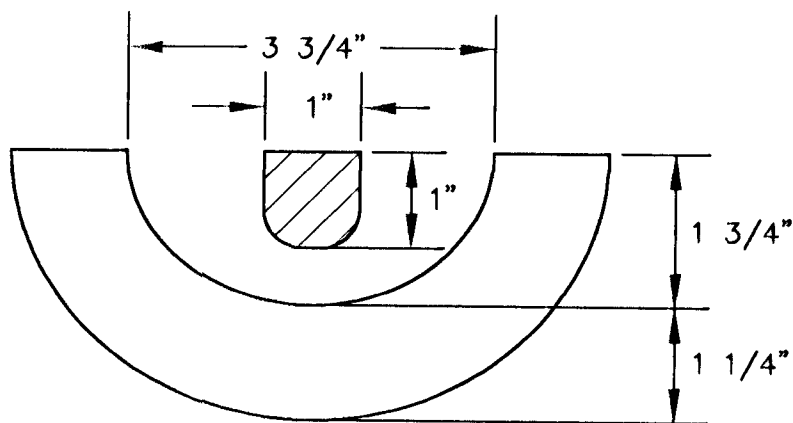


TOP VIEW

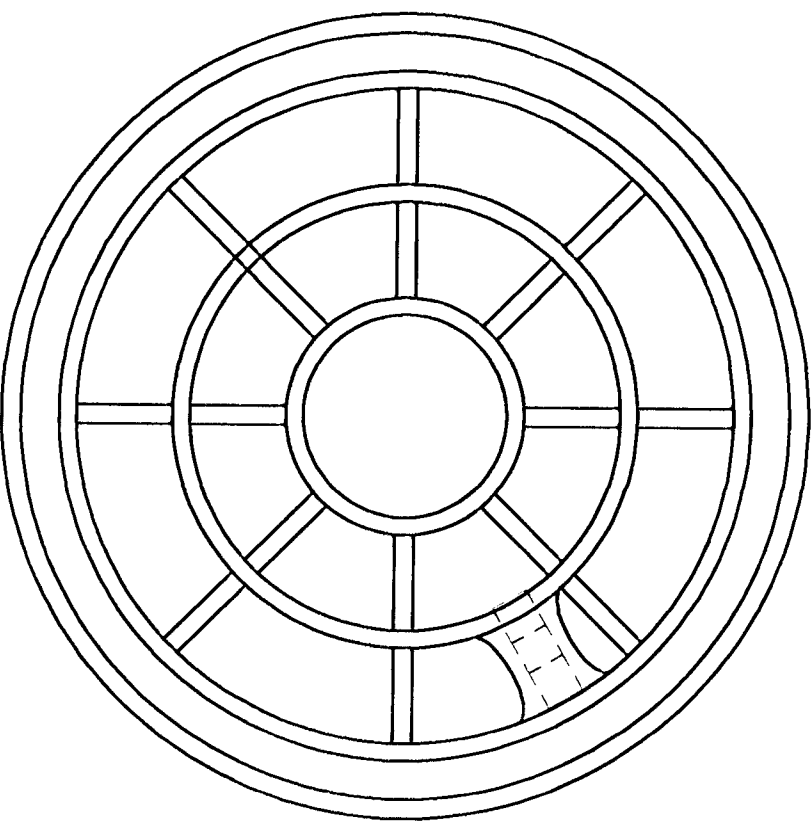
PICKHOLE DETAIL



TOP VIEW

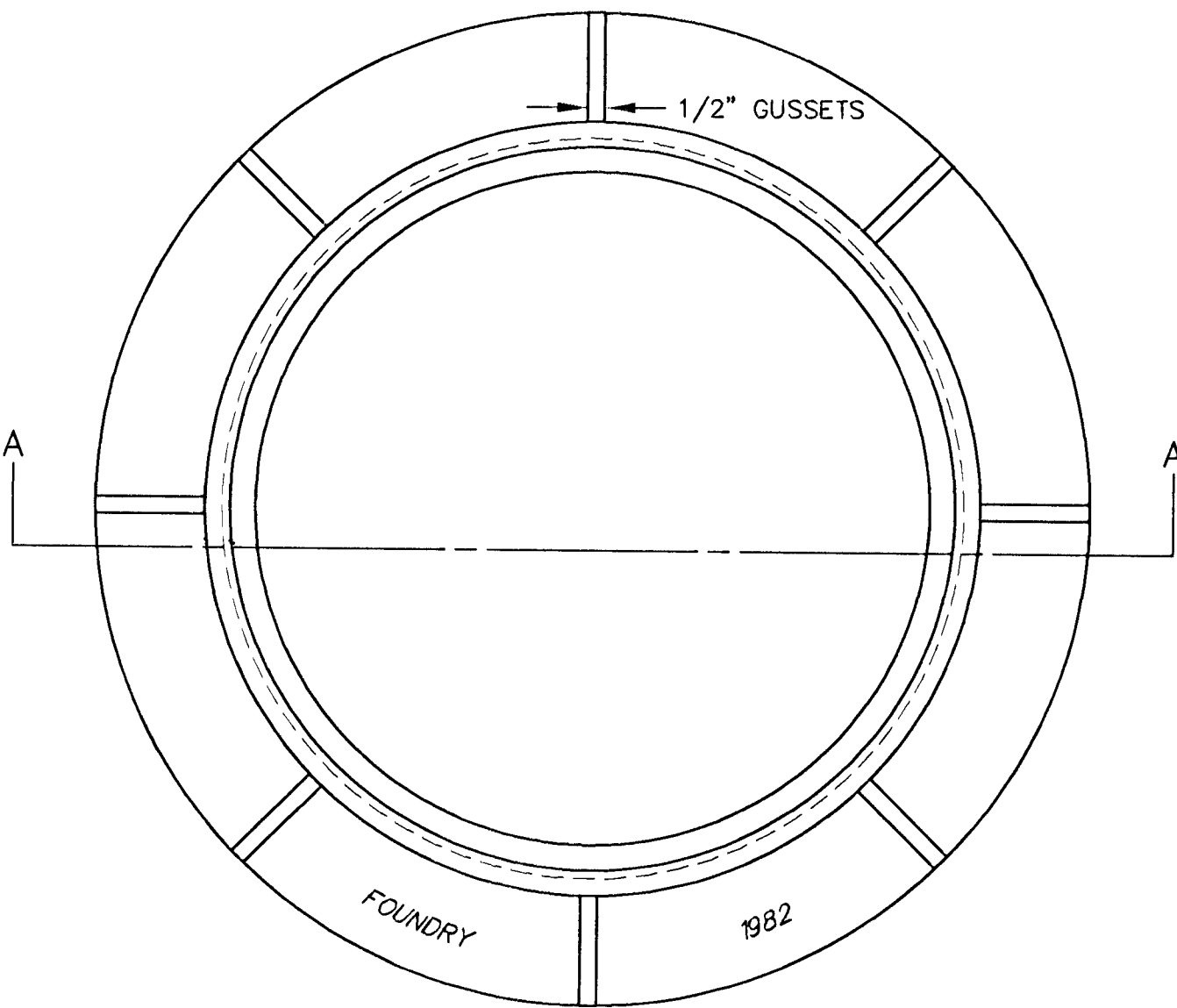


SECTION VIEW



BOTTOM VIEW

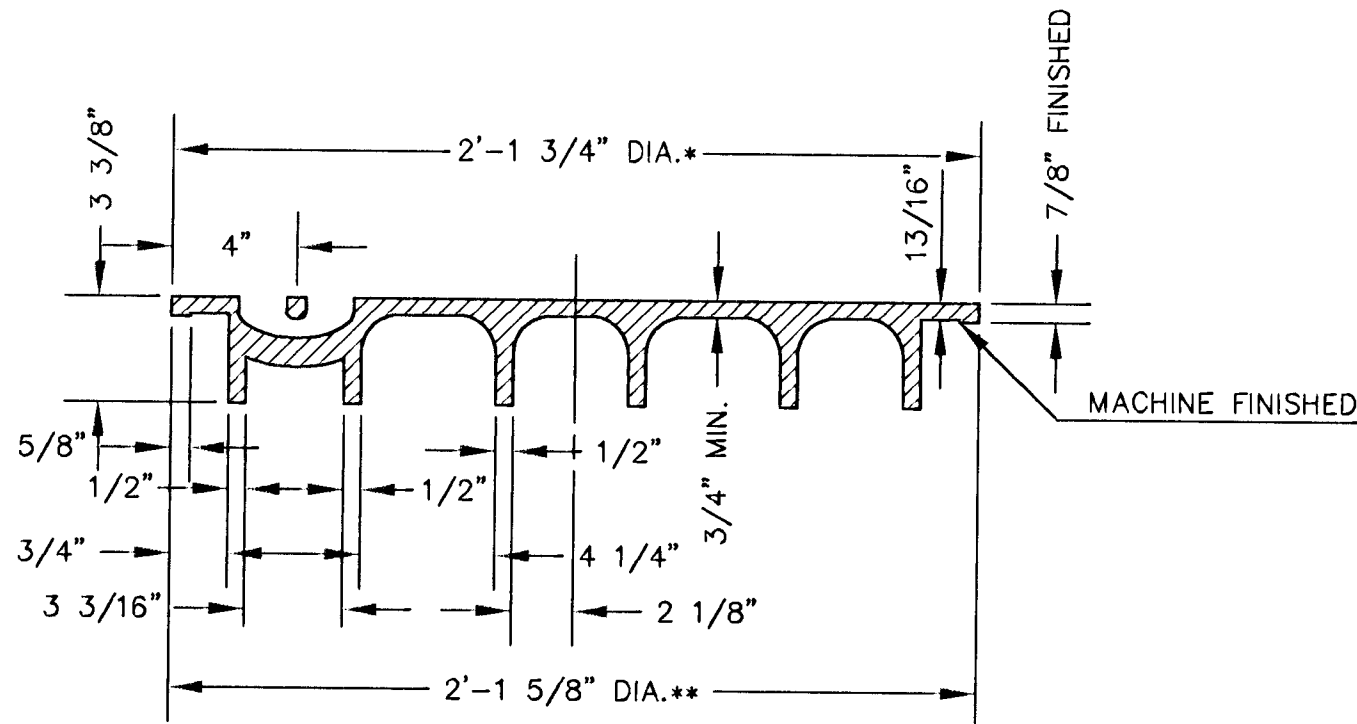
MANHOLE FRAME
WEIGHT: 240 LBS.



TOP VIEW

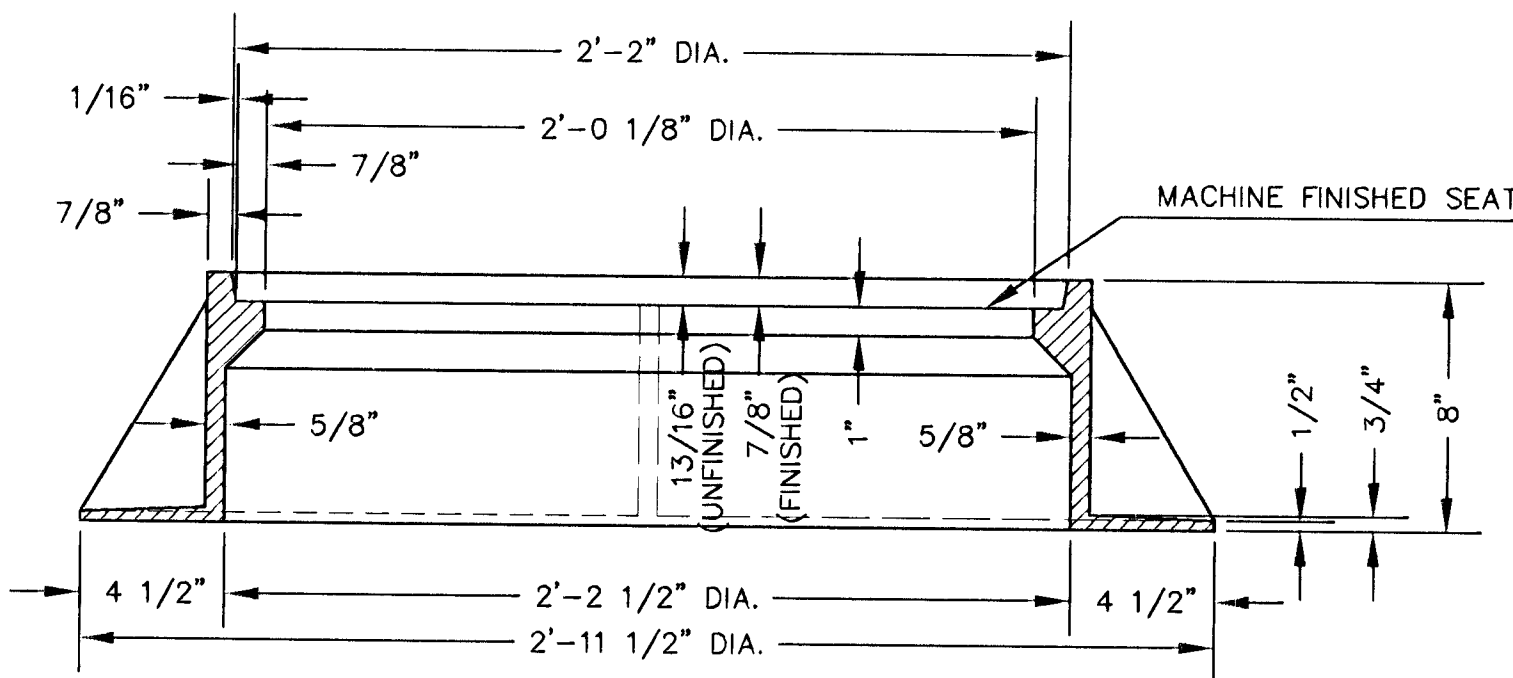
GENERAL NOTES

1. 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.
2. MANHOLE CASTINGS SHALL BE COATED WITH AN ASPHALT PAINT RESULTING IN A SMOOTH, TOUGH AND TENACIOUS COATING WHICH IS NOT BRITTLE OR TACKY.
3. 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.
4. THE OUTSIDE CIRCUMFERENCE OF THE VERTICAL FACE OF THE COVER AND THE INSIDE CIRCUMFERENCE OF THE VERTICAL FACE IN 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 THAT THESE SURFACES SHALL MAKE FULL CONTACT FOR THEIR FULL CIRCUMFERENCE TO PRECLUDE THE COVER FROM ROCKING IN THE FRAME.
5. 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" 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.

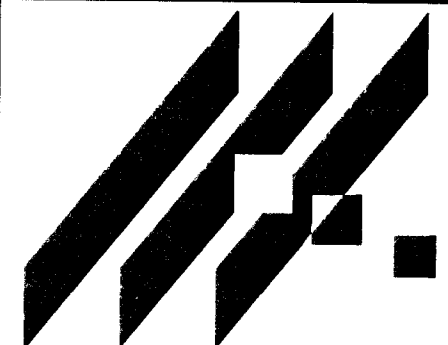


SECTION VIEW

* OUTSIDE DIA. TOP OF COVER
** OUTSIDE DIA. BOTTOM OF COVER



SECTION A-A

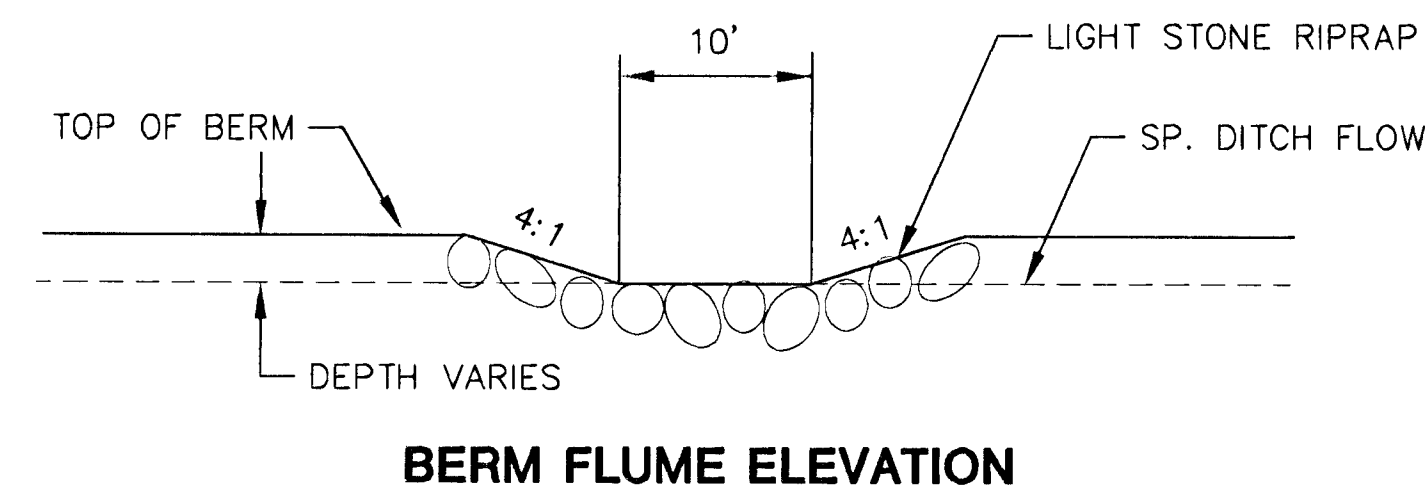
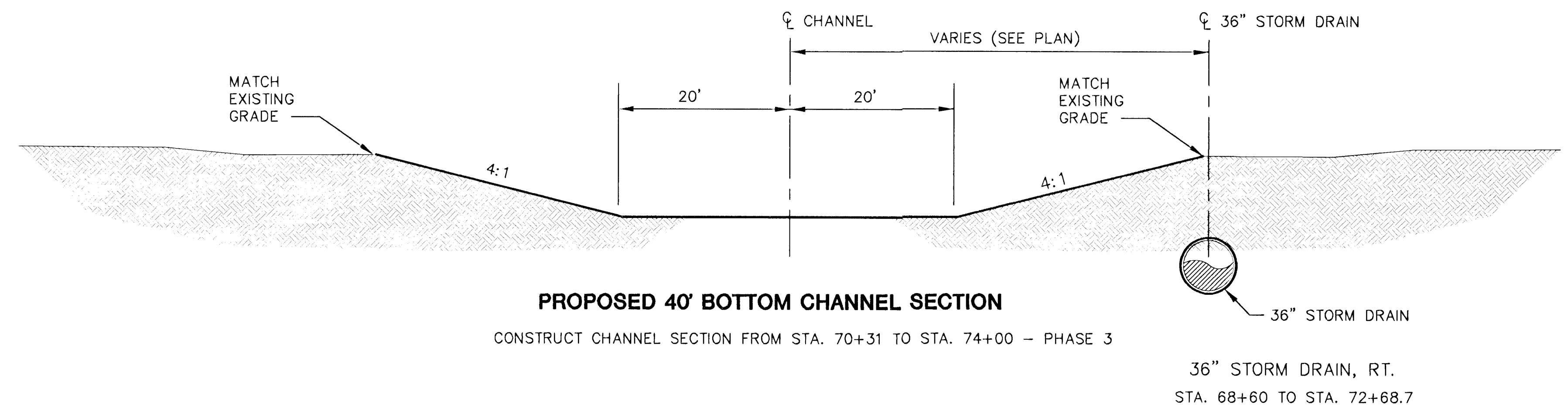
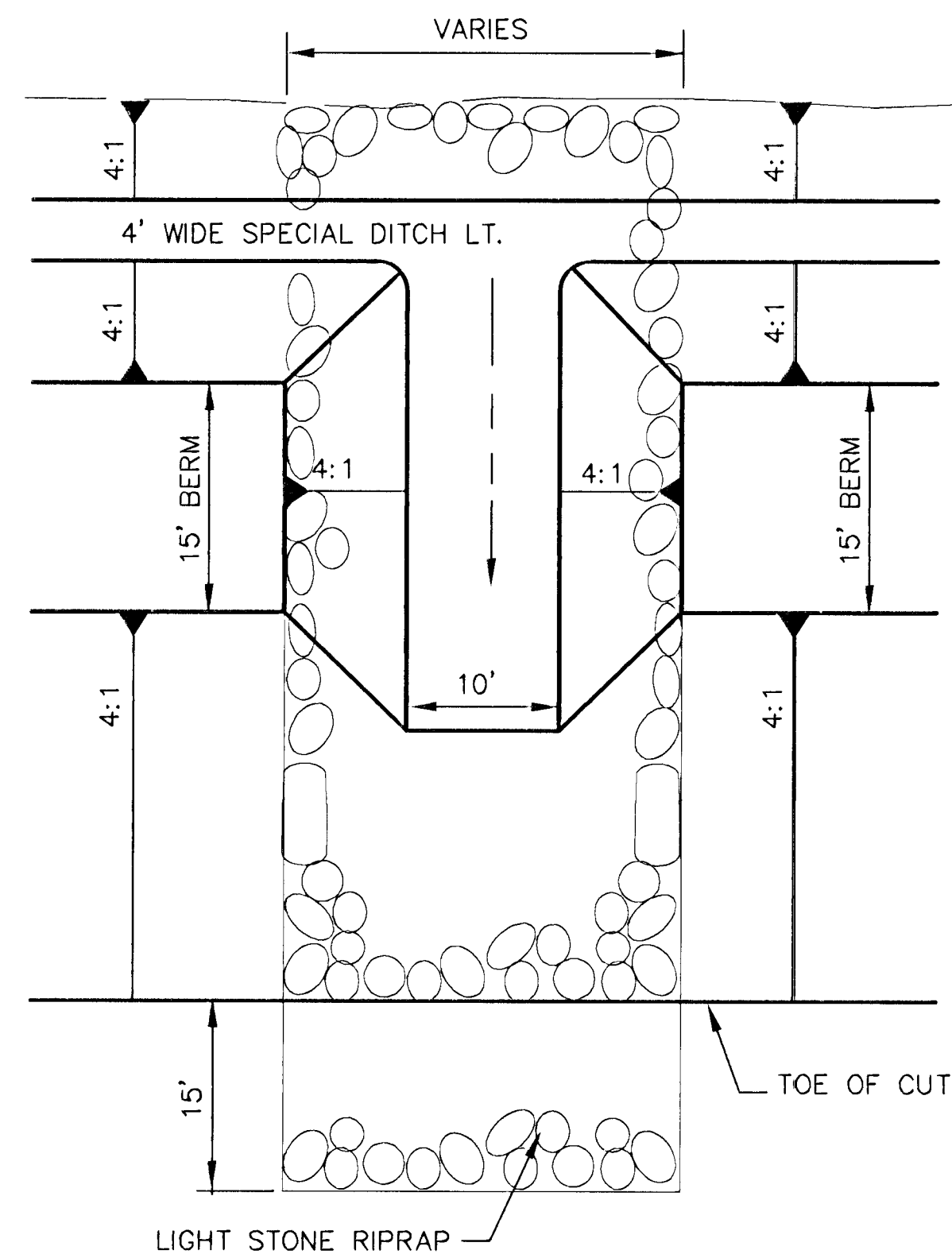
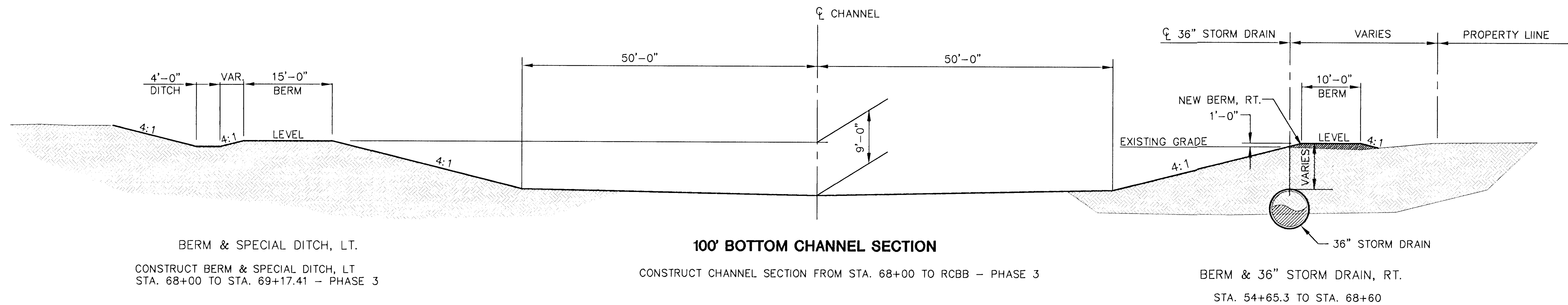
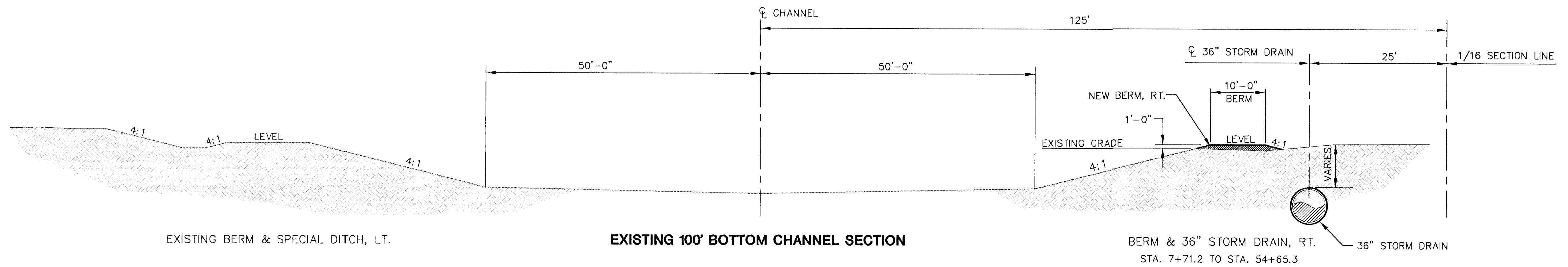


MID-KANSAS ENGINEERING
CONSULTANTS, INC.
411 N. WEBB ROAD
WICHITA, KS. 67206
316-684-9600

SOUTH SENECA DRAINAGE OUTFALL
PROJECT NAME

MANHOLE FRAME AND COVER
SHEET TITLE

DESIGN BY: _____ DRAWN BY: _____ CHECKED BY: _____
11-95 93035 13 / 19
DATE JOB NO. SHEET / OF



S. SENECA DRAINAGE OUTFALL

PROJECT NAME

CHANNEL & BERM DETAILS - PHASE 3

SHEET TITLE

MID-KANSAS ENGINEERING
CONSULTANTS, INC.
411 N. WEBB ROAD
WICHITA, KS. 67206
316-684-9600

DESIGN BY: DLM

DATE: 11-95

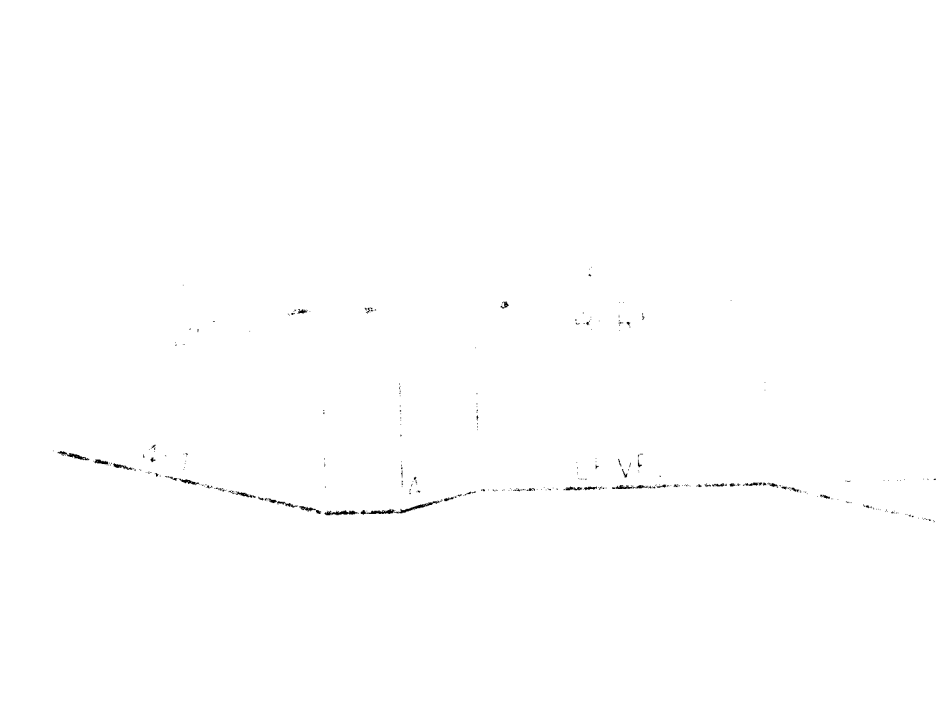
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JOB NO.: 93035

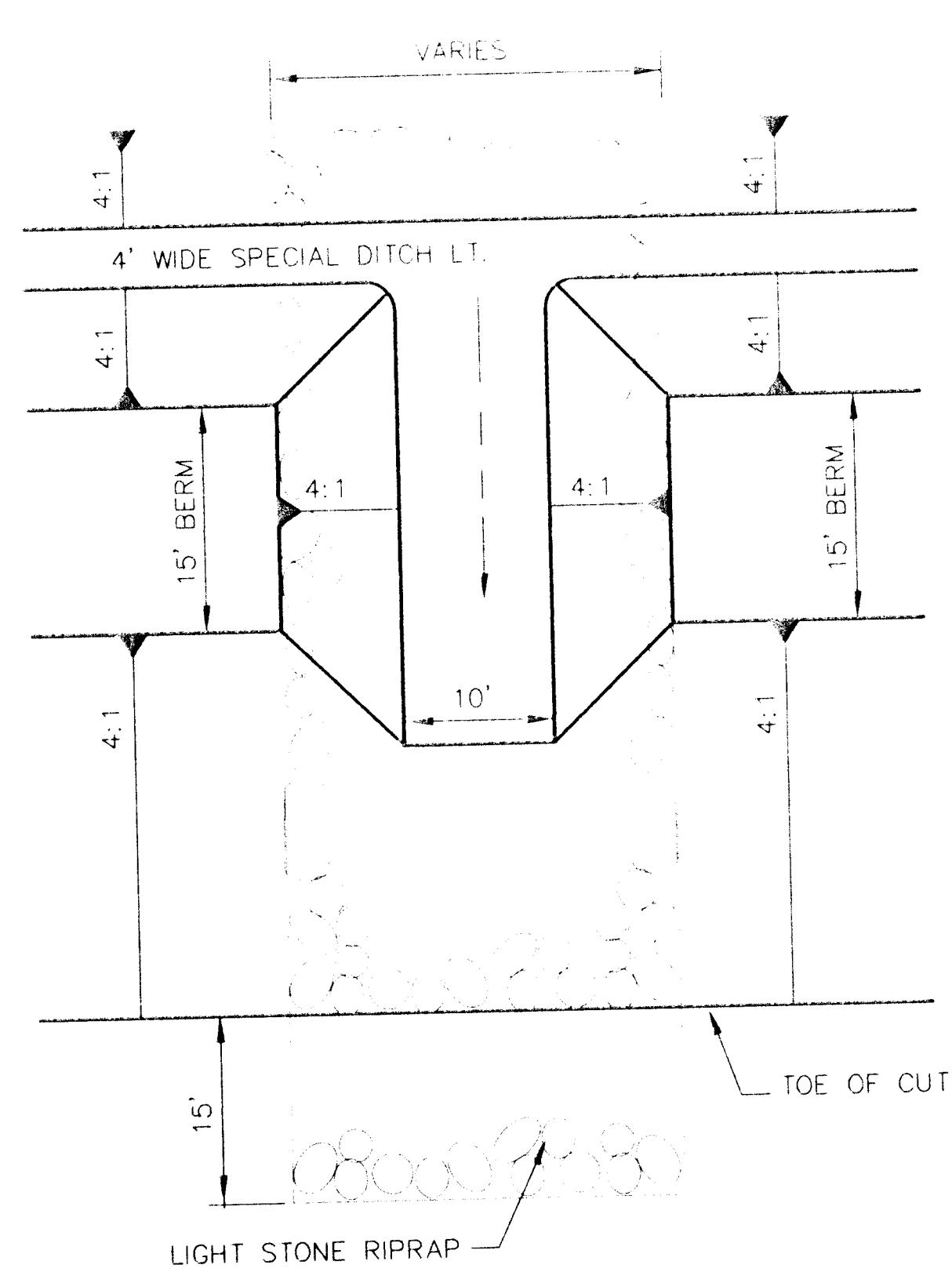
CHECKED BY: JNJ

SHEET / OF: 14 / 19

EXISTING 10' BOTTOM CHANNEL SECTION

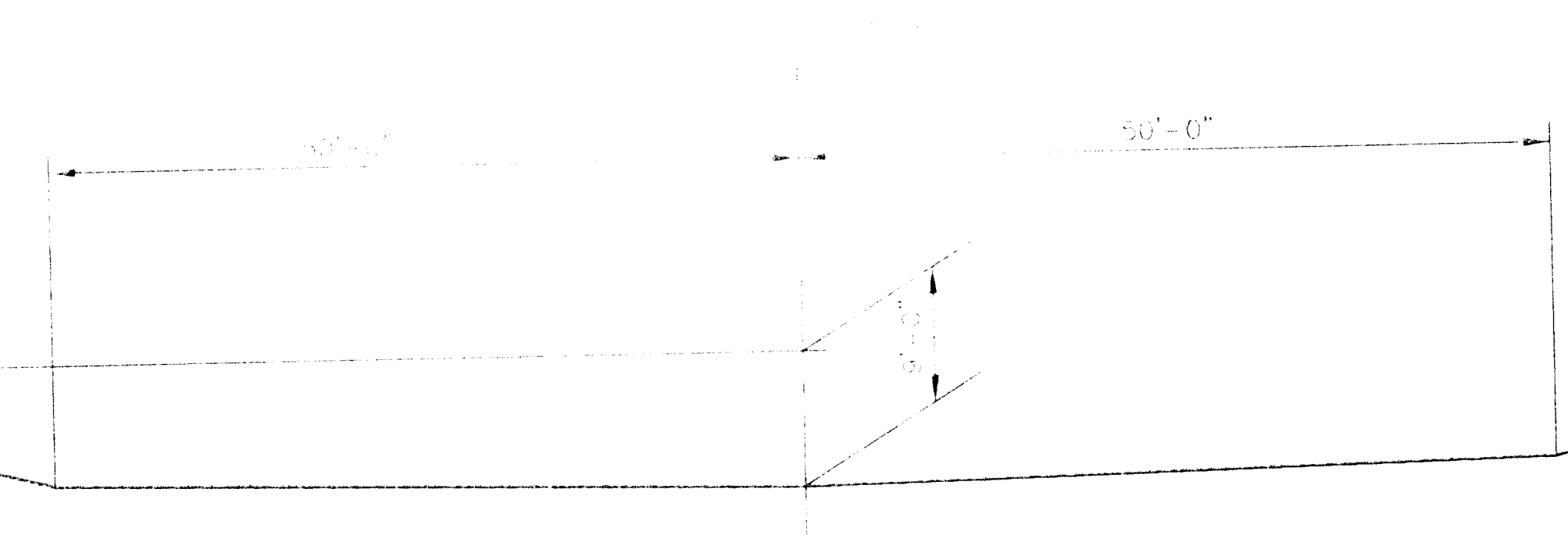


BERM & SPECIAL DITCH, LT.
CONSTRUCT BERM & SPECIAL DITCH, LT.
STA. 68+00 TO STA. 69+17.41 - PHASE 3



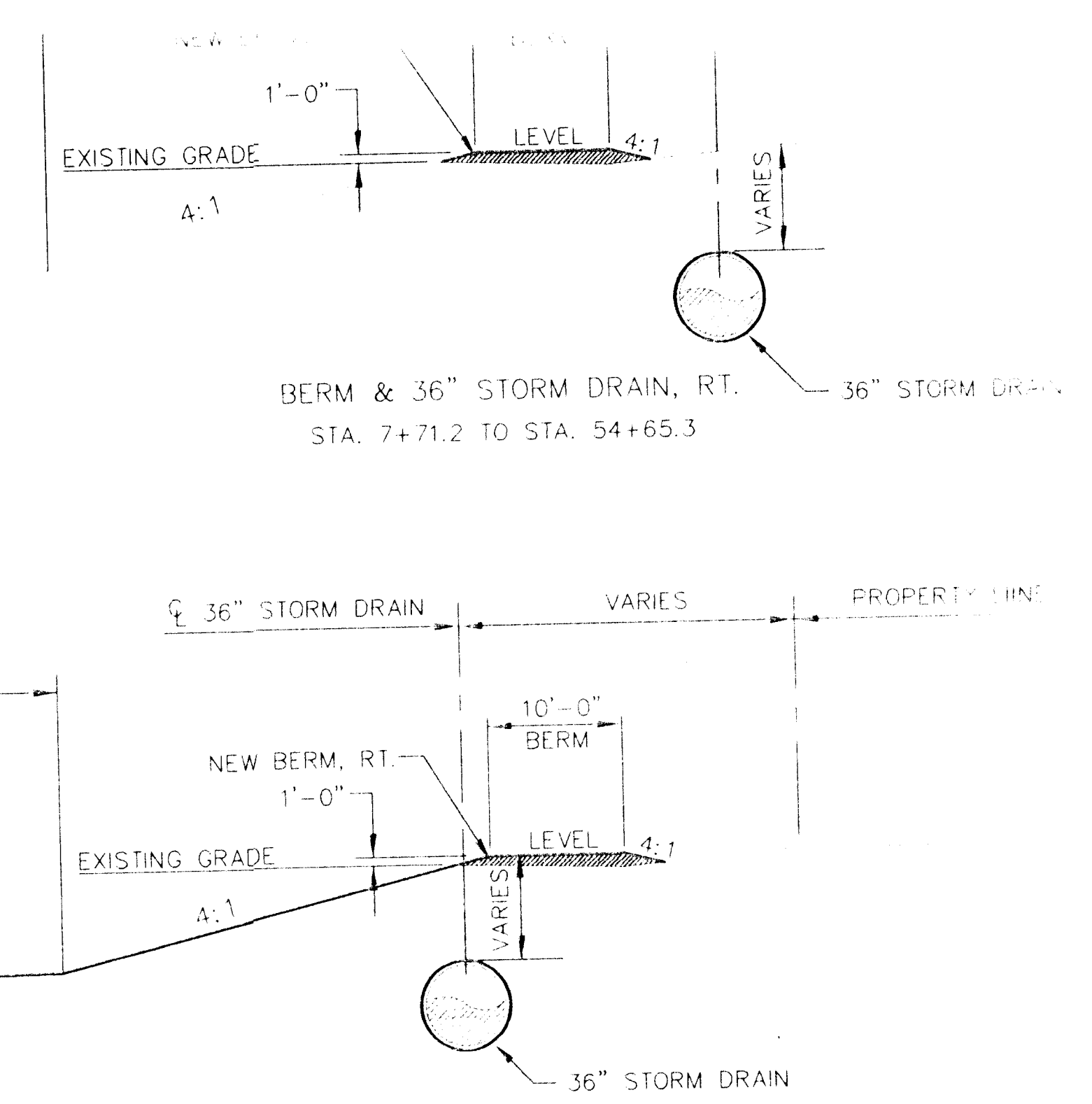
BERM FLUME PLAN

EXISTING 10' BOTTOM CHANNEL SECTION



100' BOTTOM CHANNEL SECTION

CONSTRUCT CHANNEL SECTION FROM STA. 68+00 TO RCBB - PHASE 3

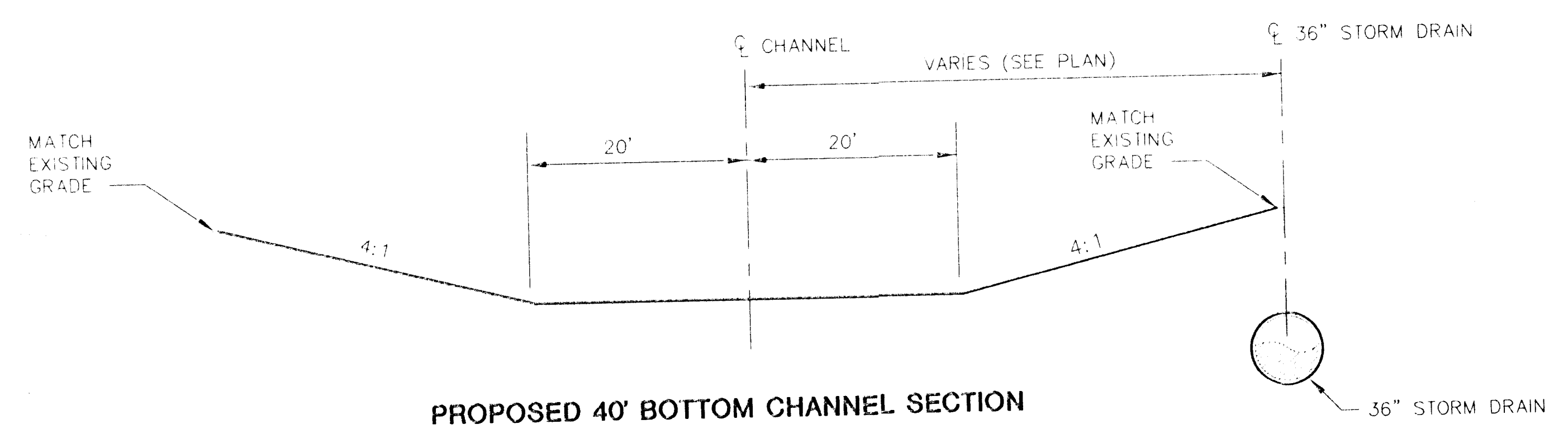


BERM & 36" STORM DRAIN, RT.
STA. 7+71.2 TO STA. 54+65.3

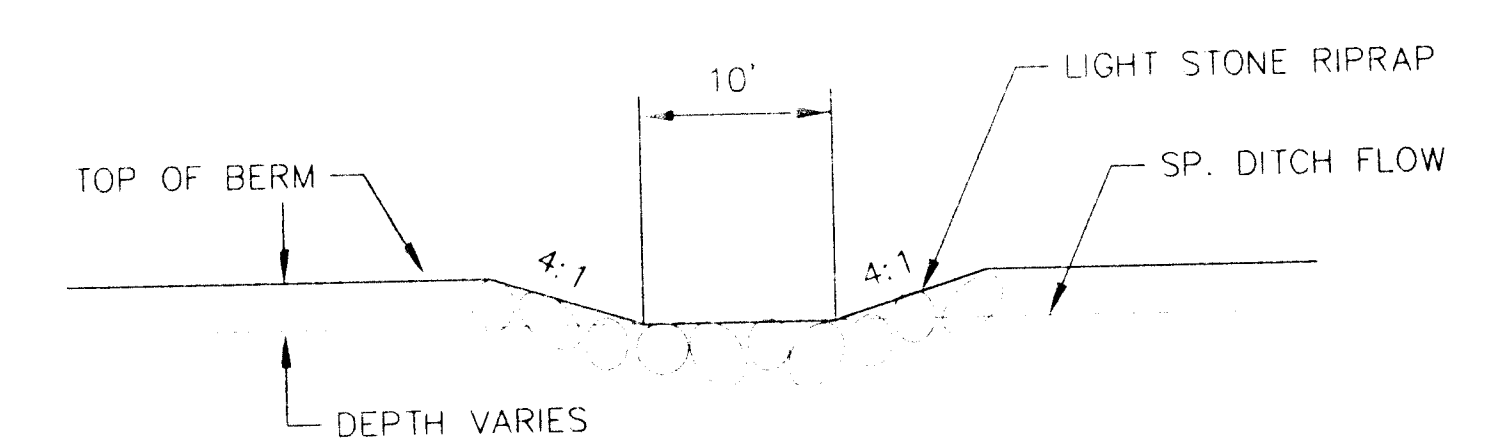
BERM & 36" STORM DRAIN, RT.
STA. 54+65.3 TO STA. 68+60

PROPOSED 40' BOTTOM CHANNEL SECTION

CONSTRUCT CHANNEL SECTION FROM STA. 70+31 TO STA. 74+00 - PHASE 3



36" STORM DRAIN, RT.
STA. 68+60 TO STA. 72+68.7



BERM FLUME ELEVATION

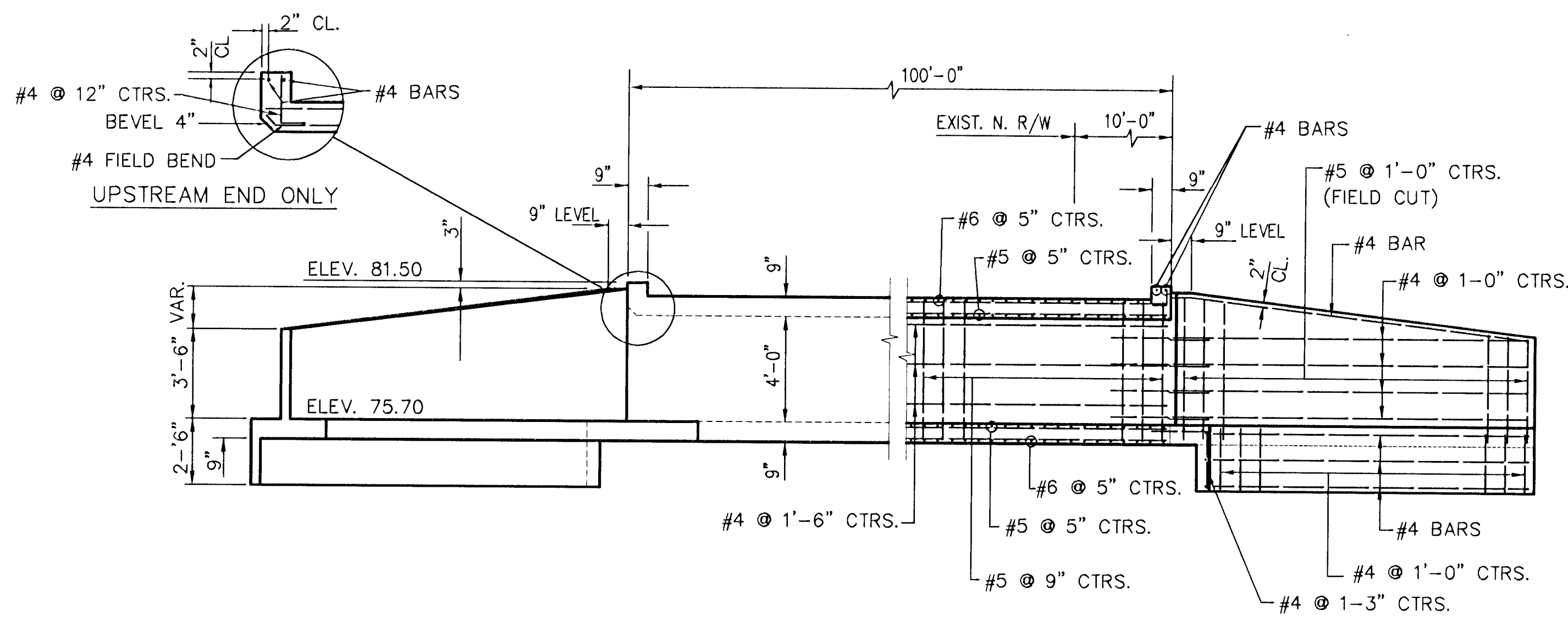
S. SENECA DRAINAGE OUTFALL

PROJECT NAME

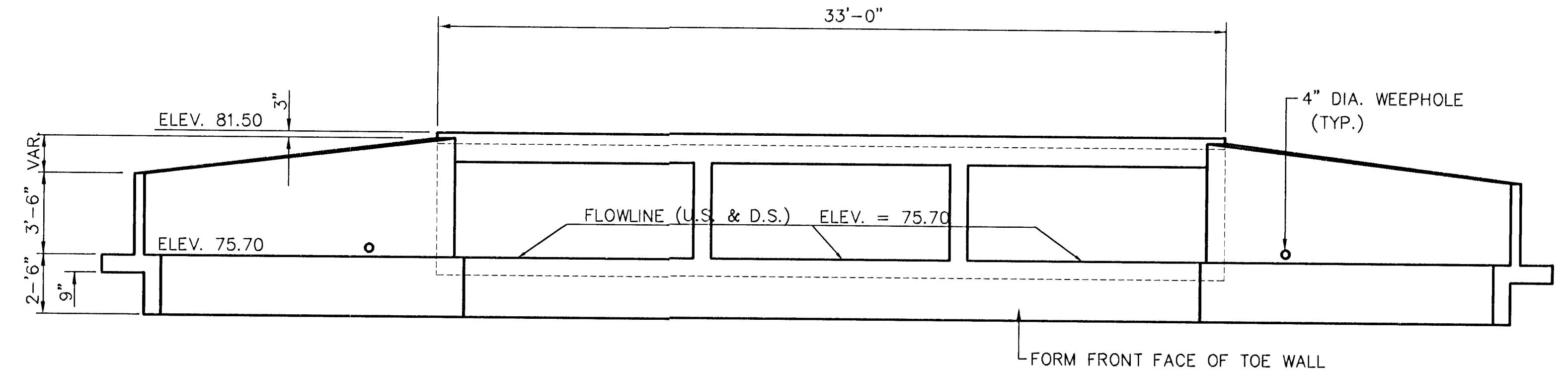
CHANNEL & BERM DETAILS - PHASE 3

SHEET TITLE

MID-KANSAS ENGINEERING CONSULTANTS, INC. 411 N. WEBB ROAD WICHITA, KS. 67206 316-684-9600	DESIGN BY: <u>DPG</u> DATE: <u>11-95</u> 93035
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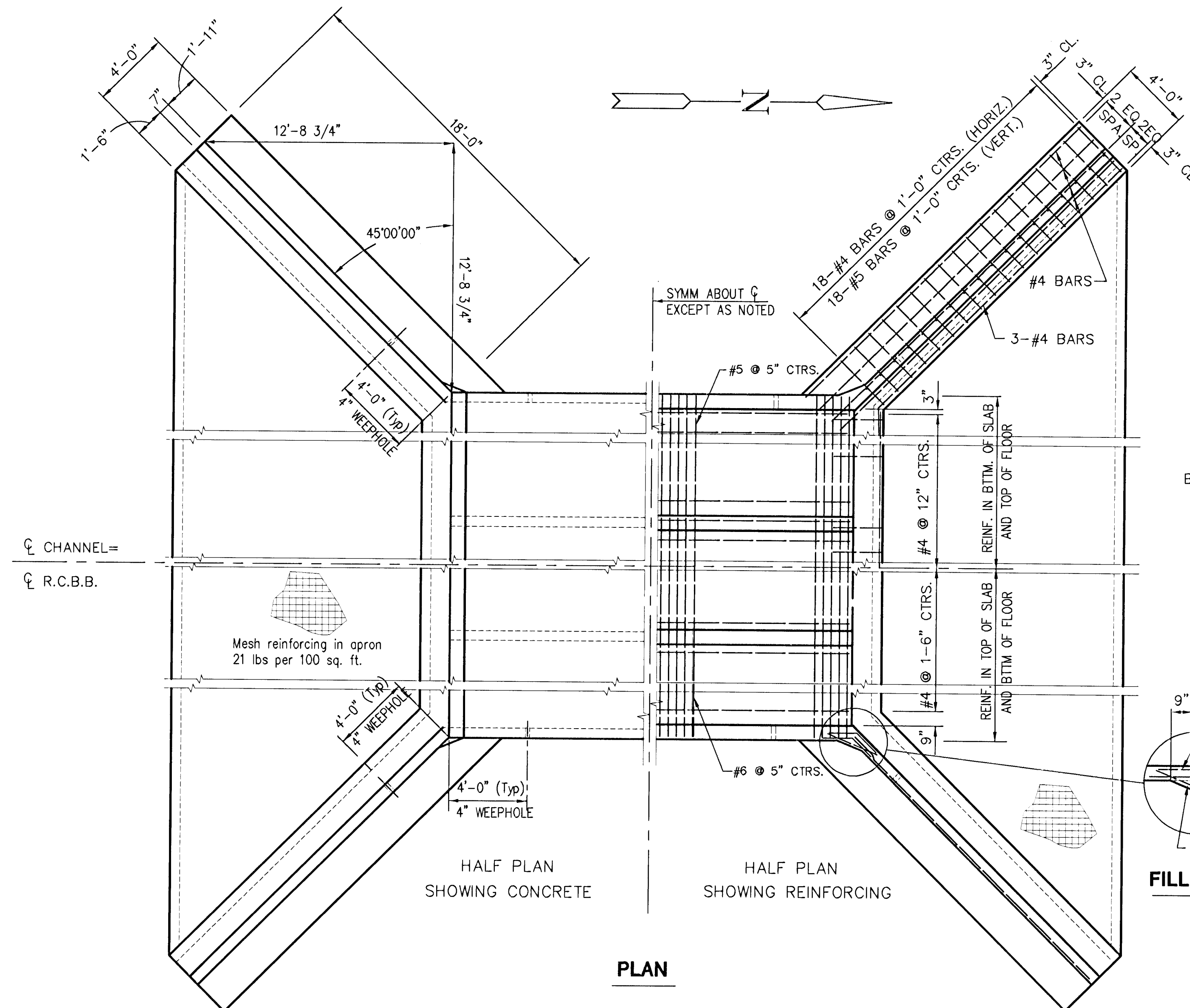


SECTION AND ELEVATION

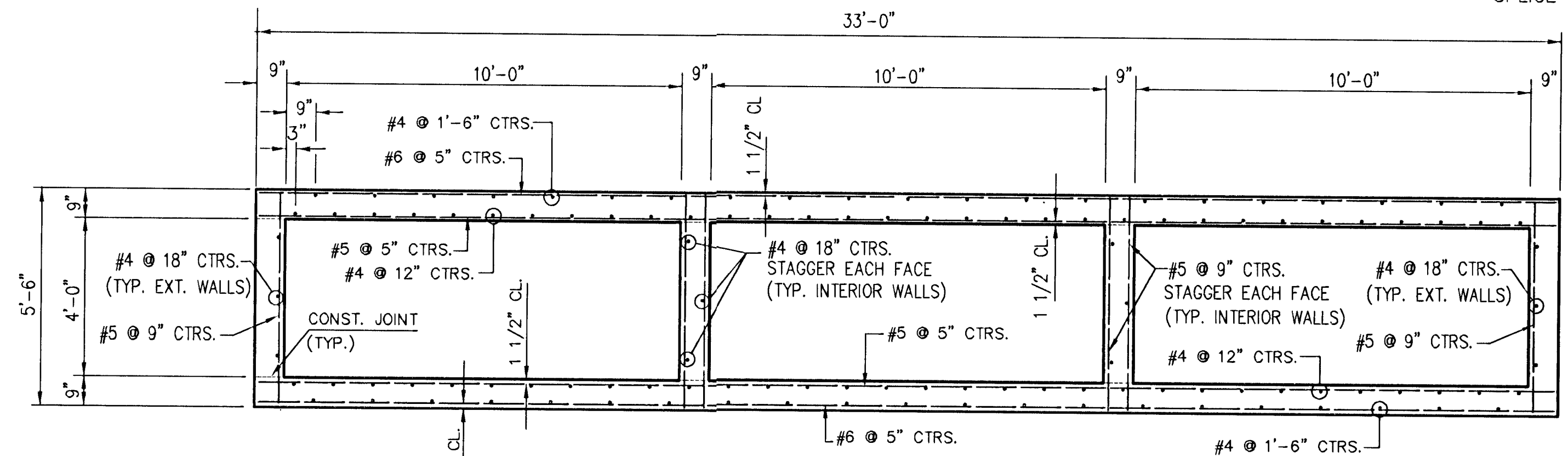


END ELEVATION

NOTE: ALL LONGITUDINAL #4 BARS SHALL HAVE A MIN. LAP SPLICE OF 2'-0"



PLAN



TYPICAL SECTION THRU BOX

GENERAL NOTES

LOADING: HS20-44 AASHTO SPECIFICATIONS, EDITION 1992 WITH THE LATEST INTERM. UNIT STRESSES: F'C = 4,000 PSI; FS = 24,000 PSI (GR. 60) THE CONCRETE MIX SPECIFIED FOR THE CITY OF WICHITA CONCRETE PAVEMENT SHALL BE USED THROUGHOUT. BEVEL ALL EXPOSED EDGES WITH A 3/4" TRIANGULAR MOULDING, UNLESS OTHERWISE NOTED.

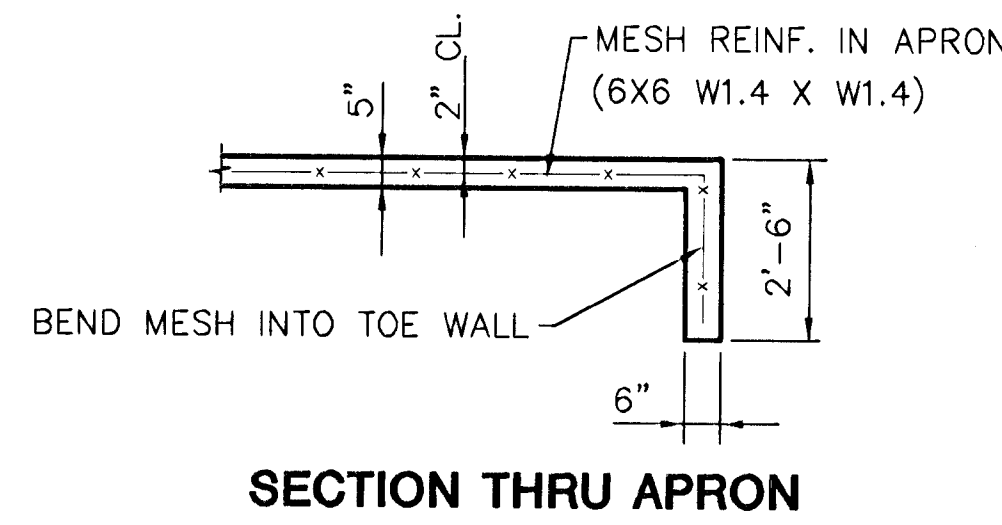
COARSE AGGREGATE SHALL BE DEPOSITED BEHIND EACH WEEPHOLE TO OCCUPY A SPACE EXTENDING 15" IN ALL DIRECTIONS ABOVE THE WEEPHOLE FLOWLINE. THIS WORK SHALL NOT BE PAID FOR DIRECTLY, BUT SHALL BE CONSIDERED AS PART OF THE EXCAVATION WORK.

CONSTRUCTION JOINTS SHALL BE FORMED ONLY AT LOCATIONS SHOWN OR AS APPROVED BY THE ENGINEER.

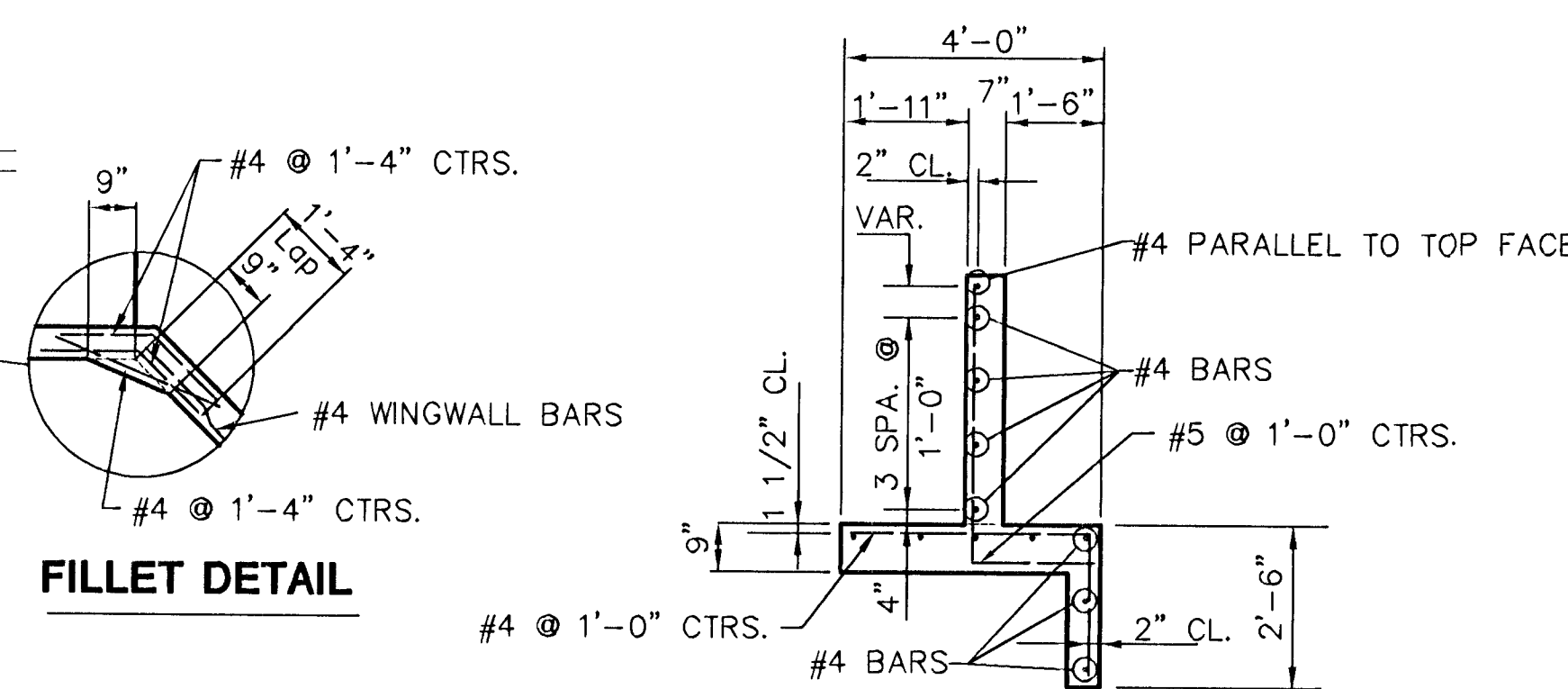
A SEAL COURSE OF 2" CONCRETE SHALL BE CONSTRUCTED UNDER THE ENTIRE FLOOR SLAB AND WING FOOTINGS. NO REINFORCING STEEL SHALL BE PLACED UNTIL THE SEAL COURSE HAS GAINED SUFFICIENT STRENGTH TO PERMIT WORKING UPON IT WITHOUT INJURY. THIS ITEM SHALL NOT BE PAID DIRECTLY BUT SHALL BE SUBSIDIARY TO OTHER ITEMS.

THE BARREL OF THE CULVERT MAY BE FORMED OF PRECAST UNITS APPROVED BY THE ENGINEER WITH THE HEADWALLS CAST-IN-PLACE AS SHOWN ON THIS DRAWING. IF USED, LAYOUT AND INSTALLATION DRAWINGS SHALL BE SUBMITTED PRIOR TO PRECAST INSTALLATION. PRECAST BARREL SHALL BE TIED TO THE HEADWALL WITH REINFORCING APPROVED BY THE ENGINEER.

FLOWABLE FILL SHALL BE SUBSIDIARY TO CONSTRUCTION OF THE REINFORCED CONCRETE BOX.

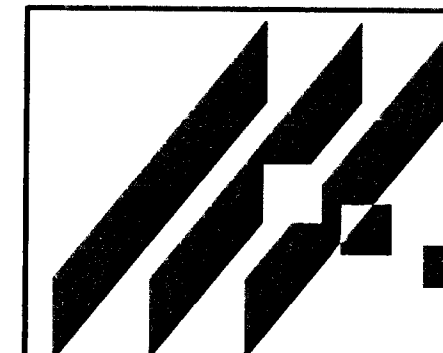


SECTION THRU APRON



SECTION THRU WINGWALL

FILLET DETAIL



SOUTH SENECA DRAINAGE OUTFALL
PROJECT NAME

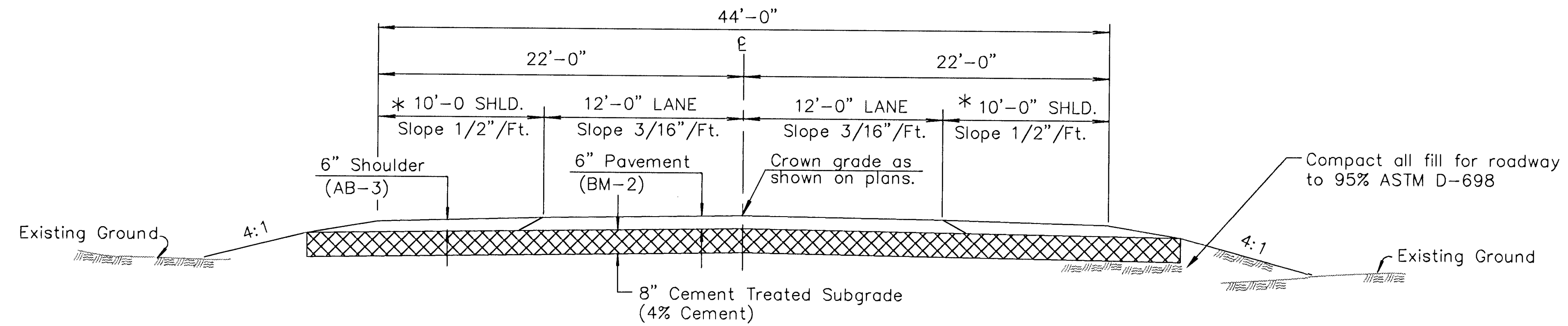
3 - 10' X4' X 100' R.C.B.B. - PHASE 3
SHEET TITLE

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

JAH
DESIGN BY:
11-95
DATE

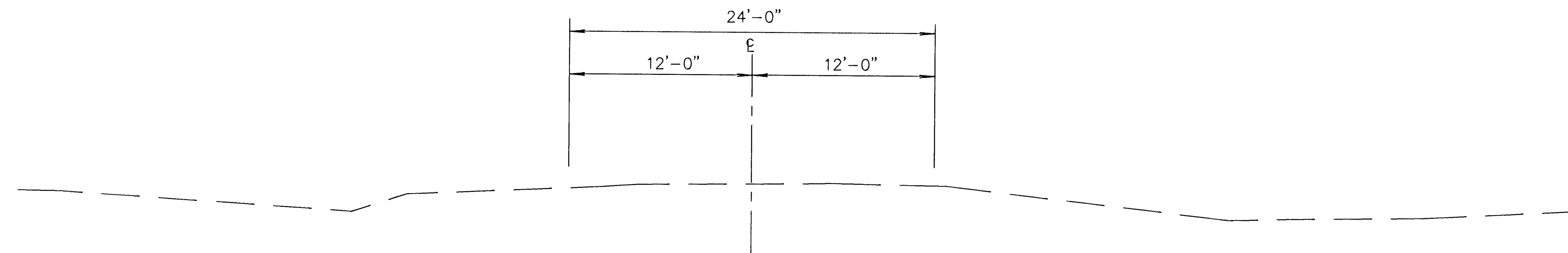
DPG
DRAWN BY:
93035
JOB NO.

KJS
CHECKED BY:
15 / 19
SHEET/OF

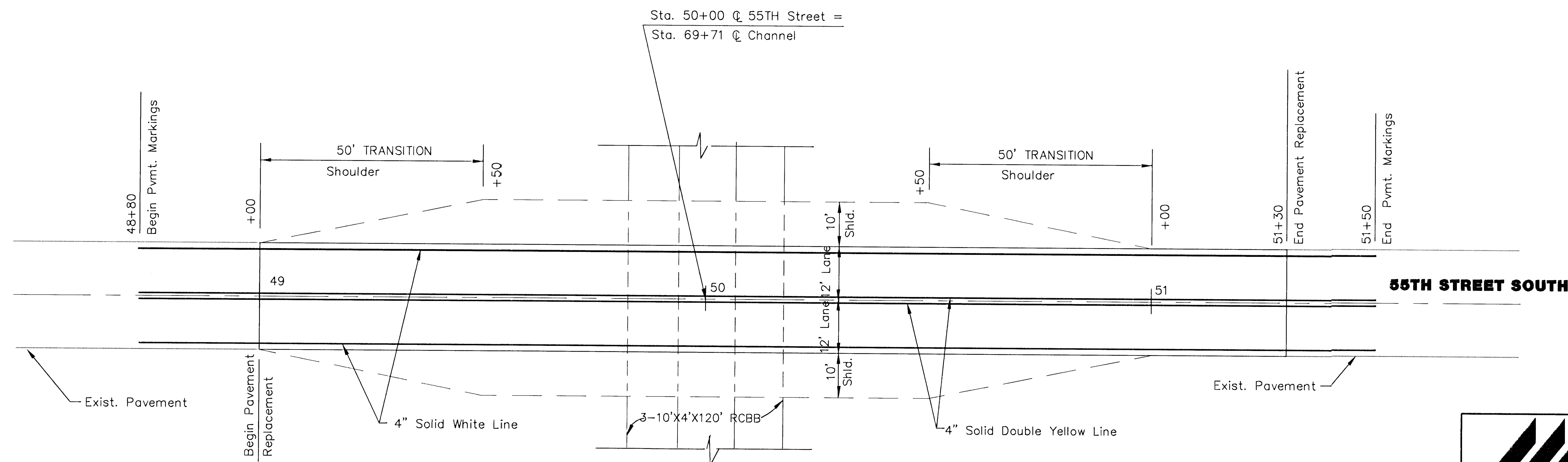


TYPICAL SECTION - STA. 49+00 TO 51+30
 * Transition Shoulder Width from 10' to 0' in 50 feet.

Note: Intersection of all slope lines shall be softened and rounded for pleasing appearance.

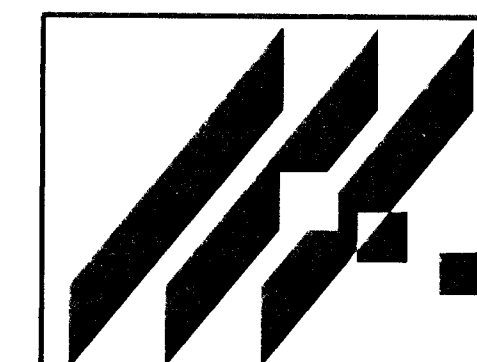


EXISTING SECTION STA. 49+50



PAVEMENT MARKING PLAN

NOTE: Striping shall be thermal plastic reflective pavement markings and shall meet Sedgwick County Specifications.

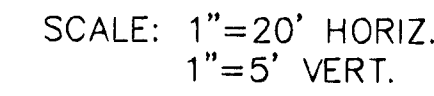


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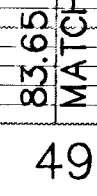
S. SENECA DRAINAGE IMPROVEMENTS
 PROJECT NAME

PAVEMENT REPLACEMENT DETAILS
 SHEET TITLE

DESIGN BY:	DPG	CHECKED BY:
DATE	11-95	16 / 19
JOB NO.	93035	SHEET / OF



PROFILE



17	19
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