

SHEET NO.	TOTAL SHEETS
1	11

CITY OF WICHITA, KANSAS
 MICHAEL E. LINDEBAK, P.E., CITY ENGINEER
 STORM WATER SEWER NO. 463

IN
 NORTHRIDGE LAKES
 NORTHRIDGE LAKES 2ND ADDITION
 CITY OF WICHITA PROJECT NO. 468-76-245-82496-000-000-001
 INDEX NO. 750844

INDEX OF SHEETS

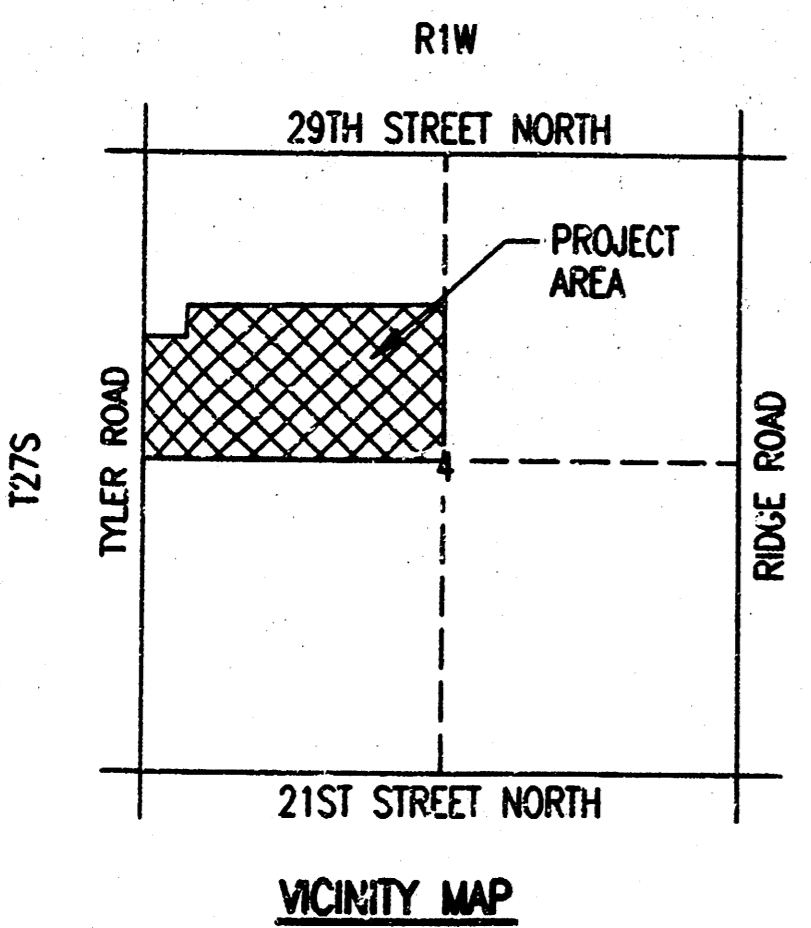
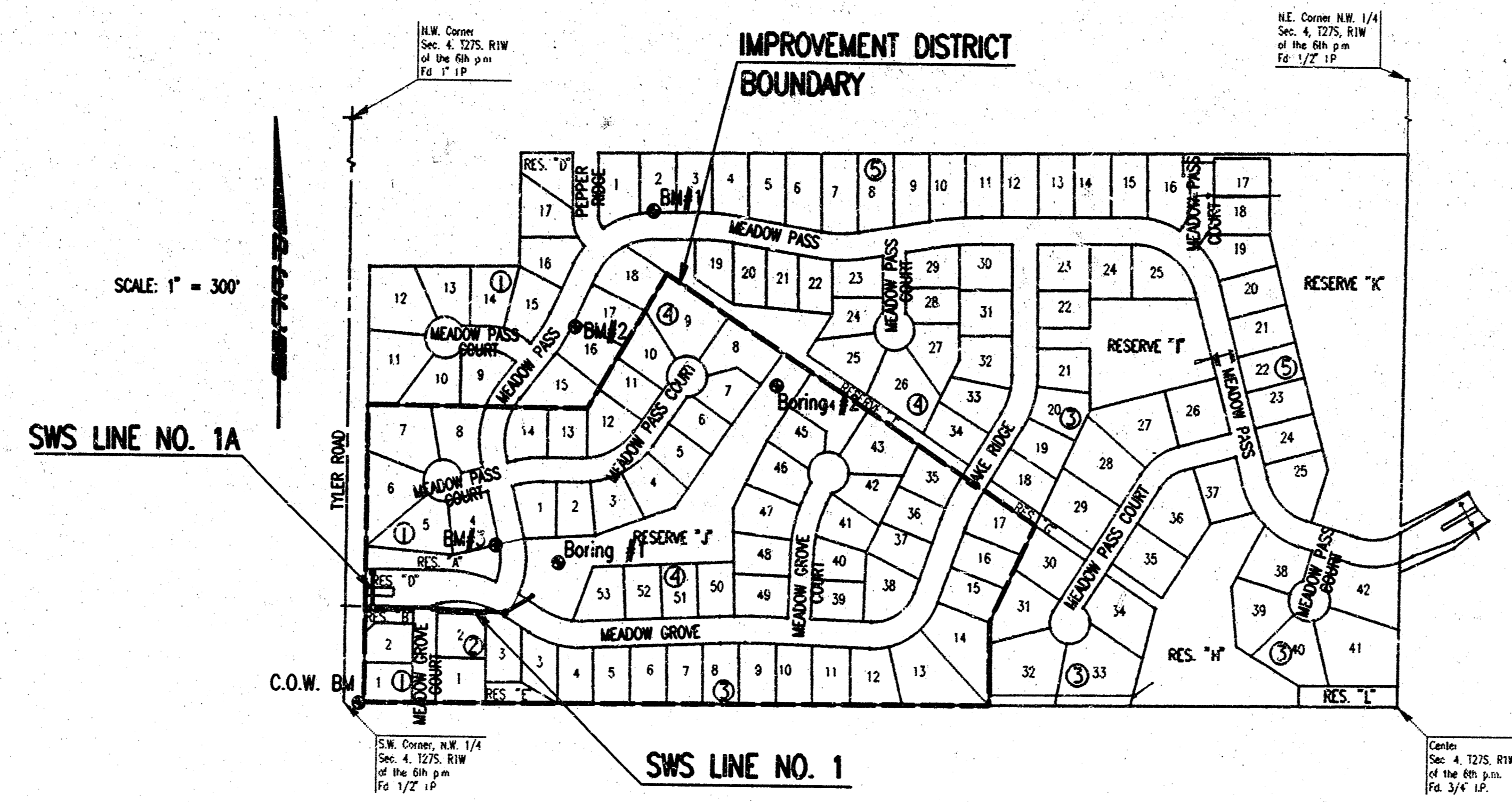
1. TITLE SHEET
- 2-3. PLATS
4. PLAN & PROFILE-SWS LINE NO. 1
5. PLAN & PROFILE-SWS LINE NO. 1A
6. MISCELLANEOUS DRAINAGE DETAILS
7. STD. DETAILS REINFORCED CONCRETE MANHOLES
8. DETAILS STD. TYPE 1A CURB INLET
9. INLET TYPE C
10. MANHOLE FRAME AND COVER DETAIL
11. BORING LOGS

PROJECT SURVEY CONTROL

- CITY OF WICHITA VERTICAL DATUM
- C.O.W. BM: BRASS DISK 6" WEST OF SOUTHWEST CORNER
 NORTHRIDGE LAKES 2ND ADDITION. ELEV.=165.61
- BM 1: TOP "T" POST 5' NORTH OF P.C. LOT 2, BLOCK 5,
 NORTHRIDGE LAKES ADDITION. ELEV.=174.94
- BM 2: TOP "T" POST 5' EAST OF P.C. LOT 16, BLOCK 4,
 NORTHRIDGE LAKES ADDITION. ELEV.=173.76
- BM 3: TOP "T" POST 5' WEST OF SOUTHEAST CORNER LOT 4,
 BLOCK 1, NORTHRIDGE LAKES ADDITION. ELEV.=167.43

GENERAL NOTES

- 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. EXISTING UTILITIES AND THEIR LOCATION, AS SHOWN ON THE PLANS, REPRESENT THE BEST INFORMATION OBTAINABLE FOR DESIGN. LOCATION INFORMATION HAS BEEN OBTAINED FROM THE VARIOUS UTILITY COMPANIES AND IS OTHER 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.
- TREES AND SHRUBS IN PUBLIC RIGHT-OF-WAY WHICH ARE IN DIRECT CONFLICT WITH PROPOSED NEW CONSTRUCTION SHALL BE REMOVED BY THE CONTRACTOR WITH THE ENGINEER'S APPROVAL. TREES AND SHRUBS WHICH ARE NOT IN DIRECT CONFLICT WITH PROPOSED NEW CONSTRUCTION SHALL BE SAVED AND PROTECTED FROM DAMAGE.
- RUBBLE FROM THE REMOVAL OF MISCELLANEOUS STRUCTURES SHALL BE DISPOSED OF ON SITES TO BE PROVIDED BY THE CONTRACTOR AND APPROVED AS NOTED.
- 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 BURED OR STOCKPILED BEYOND APPROVED CONSTRUCTION LIMITS WOULD REQUIRE ADDITIONAL ARCHEOLOGICAL INVESTIGATIONS UNLESS BURED IN A PREVIOUSLY APPROVED BARRON LOCATION.
- CONTRACTOR SHALL SATISFY HIMSELF OF SURFACE AND SUBSURFACE CONDITIONS PRIOR TO BIDDING.
- EXCESS EXCAVATED MATERIAL AND EXCESS TOPSOIL SHALL BE STOCKPILED OR WASTED WITHIN THE PLAT LIMITS. EXACT STOCKPILE LOCATION SHALL BE AS DIRECTED BY THE DEVELOPER, MR. MARVIN SCHELLENBERG, 721-2153. WASTE MATERIAL SHALL BE GRADED SMOOTH AND SLOPED TO DRAIN. THIS WORK SHALL BE CONSIDERED SUBSIDIARY TO OTHER BID ITEMS.
- CONTRACTOR SHALL PROVIDE A MINIMUM FORTY-EIGHT (48) HOUR ADVANCE NOTICE (EXCLUDING WEEKENDS AND HOLIDAYS) PRIOR TO BEGINNING ANY EXCAVATION, TO KANSAS ONE-CALL SYSTEM, A UTILITY LOCATION SERVICE, AT (316) 887-2470 TO REQUEST THE FOLLOWING UTILITY COMPANIES TO LOCATE ALL EXISTING LINES WITHIN THE PROJECT AREA: PEOPLES NATURAL GAS, K.G.E. ELECTRIC, SOUTHWESTERN BELL TELEPHONE, MULTIMEDIA CABLEVISION, CITY OF WICHITA SEWER MAINTENANCE AND CITY OF WICHITA WATER DEPARTMENT.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PRESERVING PROPERTY IRONS. THE CONTRACTOR WILL 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.
- THE WATER DEPARTMENT SHALL FIELD LOCATE WATER VALVES ONE THE DURING CONSTRUCTION WHEN REQUESTED BY THE CONTRACTOR. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PRESERVE SUCH FIELD LOCATIONS DURING THE CONSTRUCTION PROCESS. WATER VALVES, WATER VALVE BOXES OR FIRE HYDRANTS DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED BY THE CONTRACTOR AT HIS OWN EXPENSE.
- THE CONTRACTOR SHALL ADJUST WATER VALVE BOXES AS DIRECTED BY THE ENGINEER. THIS WORK TO BE SUBSIDIARY TO OTHER BID ITEMS.
- THE CONTRACTOR SHALL SEED AND MULCH ALL UNPAVED AREAS DISTURBED BY CONSTRUCTION ACCORDING TO THE STANDARD SPECIFICATIONS. SEED SHALL BE ANNUAL RYE, APPLIED AT THE RATE OF 4 LBS./1000 S.F. MULCH SHALL BE PLY APPLIED AT THE RATE OF 90 LBS./1000 S.F. THIS WORK SHALL BE PAID FOR AT LUMP SUM PRICE BID FOR TEMPORARY PROJECT SEEDING.



AUGUST 1996
 PLANS PREPARED BY
 PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
 ENGINEERS
 WICHITA, KANSAS

uss/ustn/dgn: 1/1996/96049/003/stimille.dgn
 date plottd: 8-6-96
 deliver to: Duane Dunn

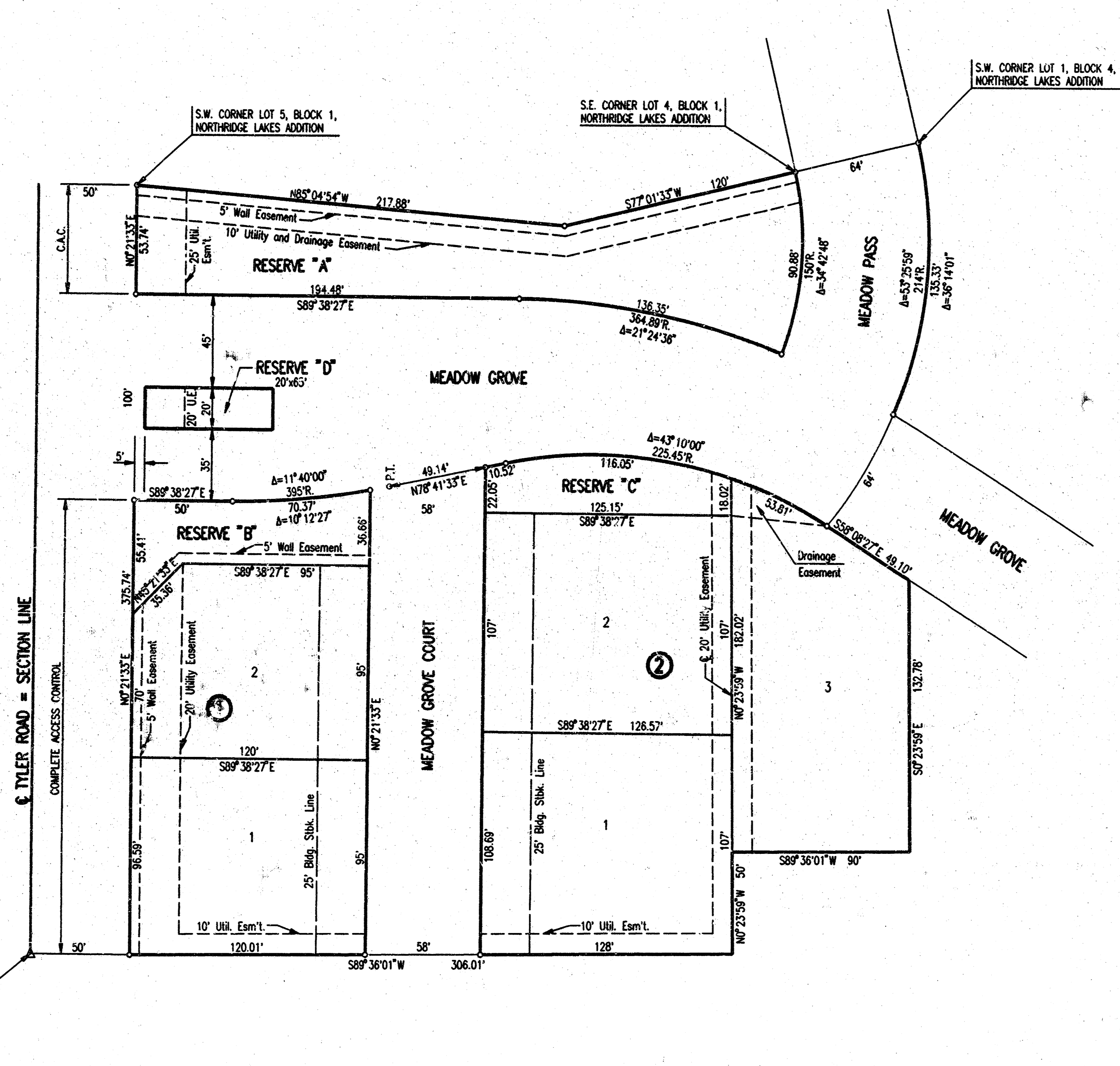
NORTHRIDGE LAKES 2ND ADDITION TO WICHITA, SEDGWICK COUNTY, KANSAS

PROJECT NO. 488-76-245-8248-000-000-001	SHEET NO. 3	TOTAL SHEETS 11
--	----------------	--------------------

SCALE: 1"=40'
 ○ = IRON SET
 ● = IRON FOUND
 C.A.C. = COMPLETE ACCESS CONTROL

B.M. - CITY OF WICHITA BENCH MARK DISC. 38 FEET WEST AND 90 FEET SOUTH OF THE INTERSECTION OF THE CENTERLINES OF TYLER ROAD AND 21ST STREET NORTH.
 ELEV.=169.949 CITY DATUM
 ELEV.=1357.349 M.S.L.

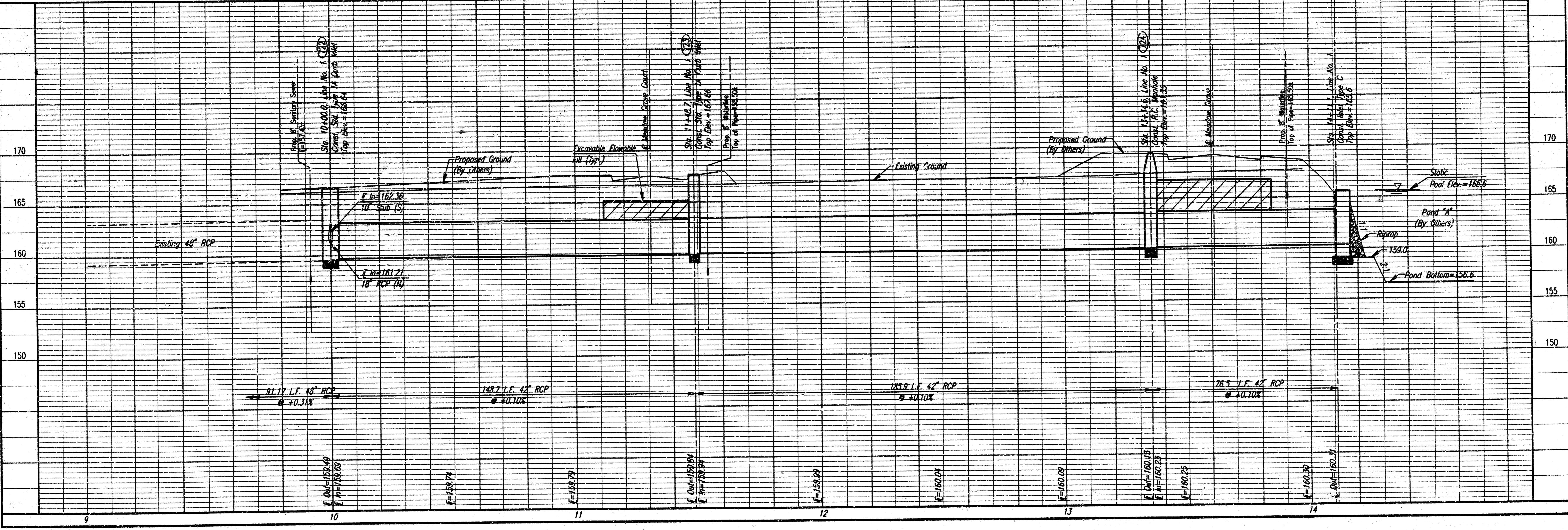
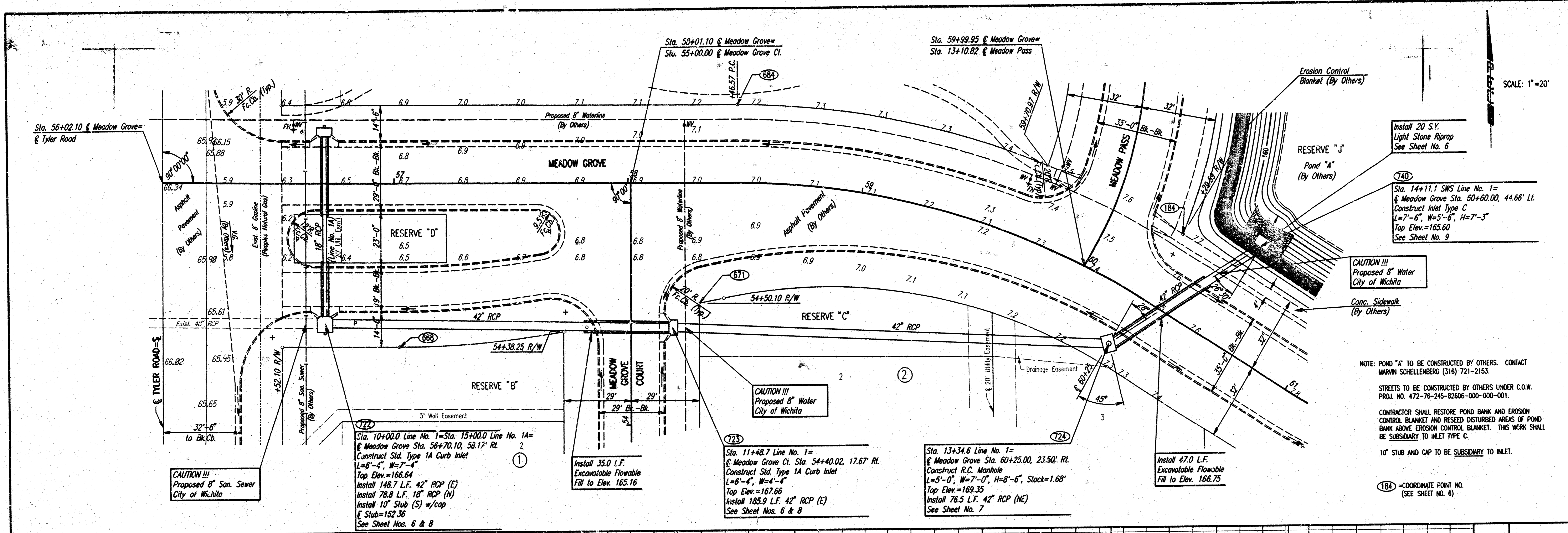
B.M. - RAILROAD SPINE IN SOUTHWEST SIDE OF POWER POLE LOCATED 75' 75" NORTH AND 50' EAST OF THE INTERSECTION OF THE CENTERLINES OF RIDGE ROAD AND 21ST STREET NORTH.
 ELEV.=143.30 CITY DATUM
 ELEV.=1330.70 M.S.L.



1/1996/96049/003/northridge2.dgn
 date plotted: 8-6-96
 dwg: DEP for Dawkins Damm

STORM WATER SEWER NO. 463			
PLAT			
PROFESSIONAL ENGINEERING CONSULTANTS, P.A. ENGINEERS WICHITA, KANSAS			
Designed by	Checked by	Date	Job No.
Drawn by DEP, BJS	APRIL 1996	96049-3	

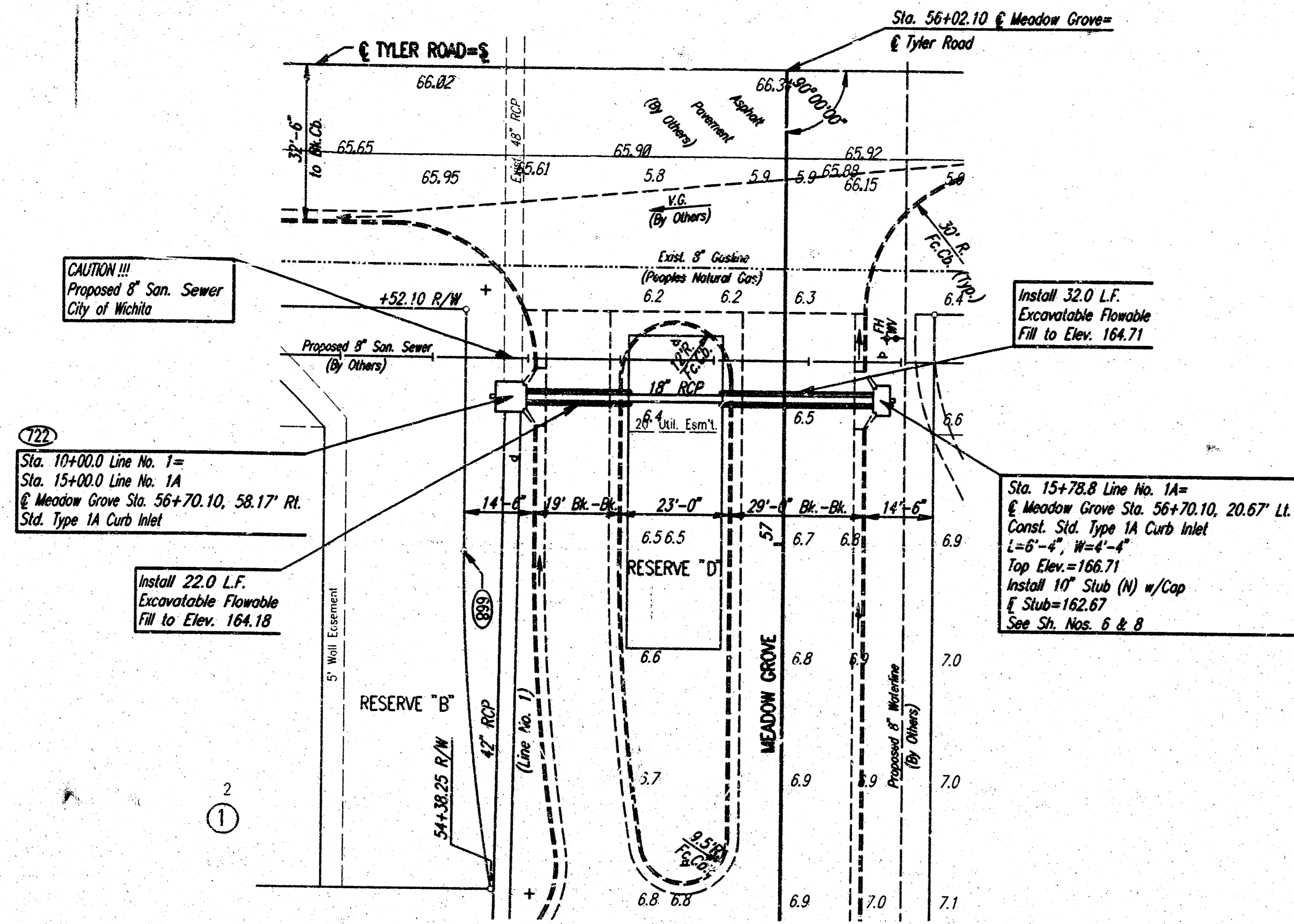
1/1996/96049/003/sws463.dgn
 date plotted: 8-6-96
 deliver to: Dwayne Dunn



NOTE: POND "A" TO BE CONSTRUCTED BY OTHERS. CONTACT
 MARVIN SCHELLENBERG (316) 721-2153.
 STREETS TO BE CONSTRUCTED BY OTHERS UNDER C.O.W.
 PROJ. NO. 472-76-245-82506-000-000-001.
 CONTRACTOR SHALL RESTORE POND BANK AND EROSION
 CONTROL BLANKET AND RESEED DISTURBED AREAS OF POND
 BANK ABOVE EROSION CONTROL BLANKET. THIS WORK SHALL
 BE SUBSIDIARY TO INLET TYPE C.
 10" STUB AND CAP TO BE SUBSIDIARY TO INLET.

SWS LINE NO. 1
 STA. 10+00.0 TO STA. 14+11.1

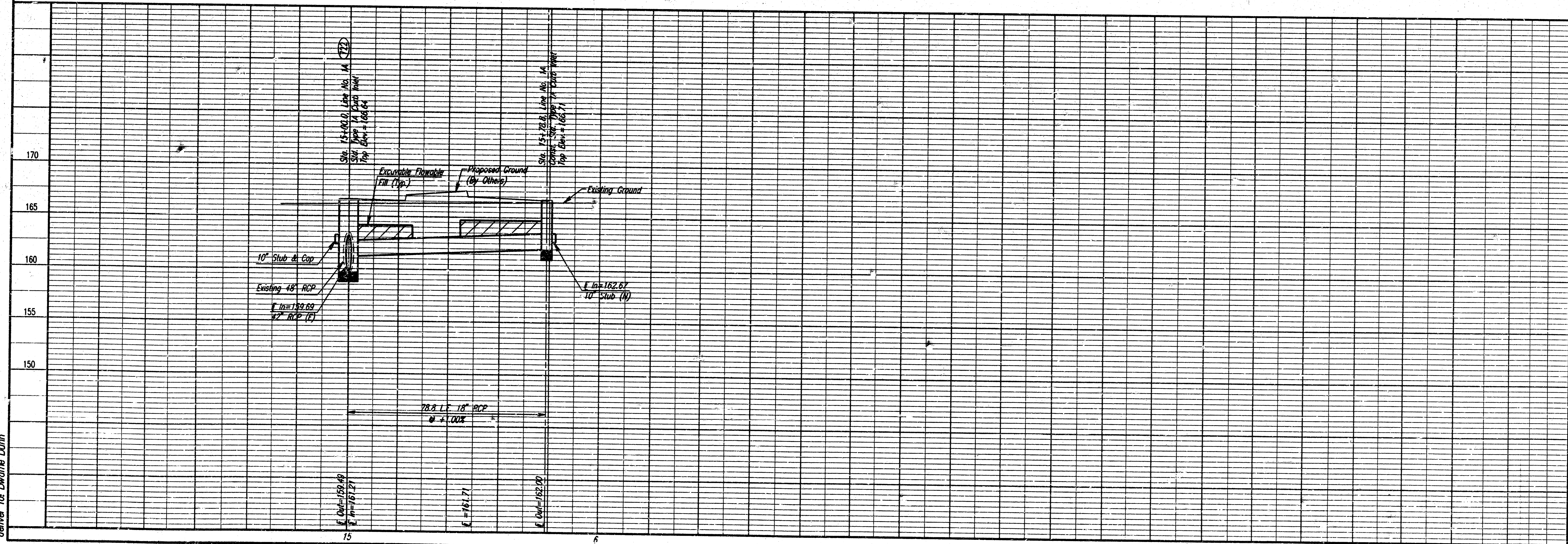
STORM WATER SEWER NO. 463
 PROFESSIONAL ENGINEERING CONSULTANTS P.A.
 WICHITA, KANSAS
 Job No. 96049-3
 Date APRIL 1996
 Drawn by BET, GDD
 Checked by BJS



SCALE: 1"=20'

NOTE: MEADOW GROVE STREET TO BE CONSTRUCTED BY OTHERS UNDER C.D.W. PROJ. NO. 47-76-245-82606-000-000-001.
10' STUB AND CAP TO BE SUBSIDIARY TO INLET.

184 - COORDINATE SHEET NO. (SEE SHEET NO. 6)



STORM WATER SEWER: NO. 463
SWS LINE NO. 1A
STA. 15+00.0 TO STA. 15+78.8
C.D.W. PROJ. NO. 48-76-245-85495-000-001

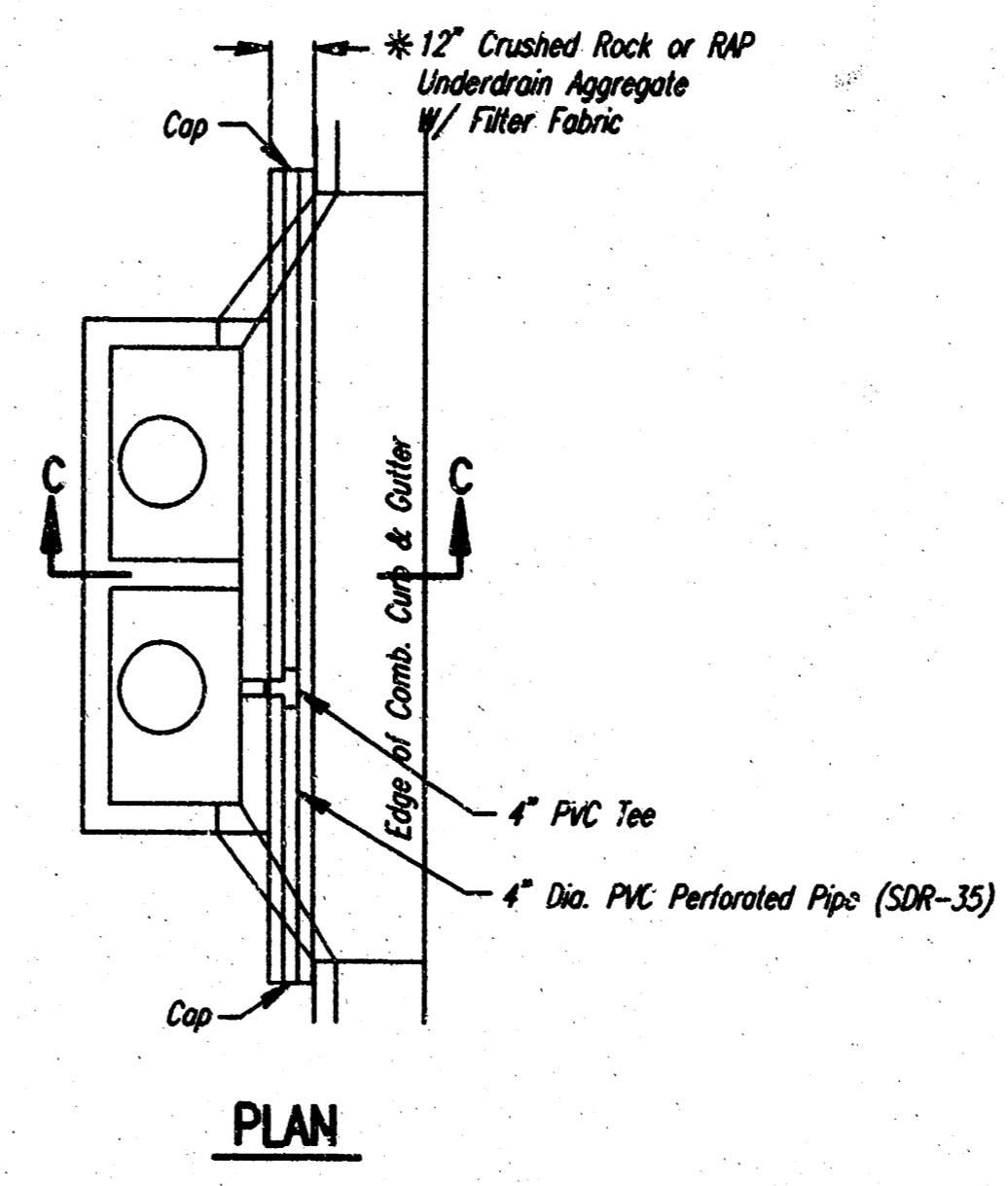
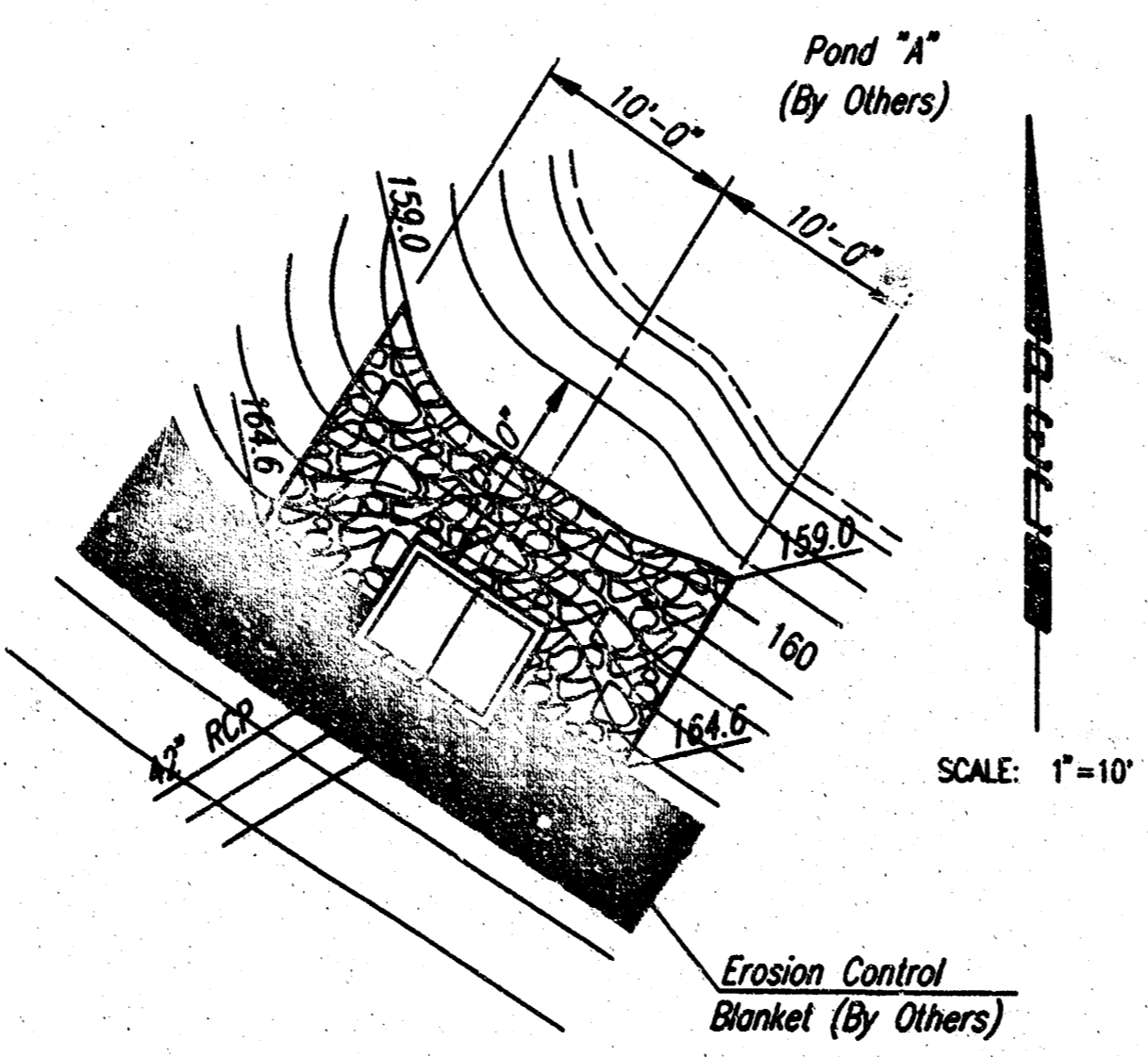
PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
MICHIGAN, KANSAS
Job No. 96049-3
Date: AUGUST 1996
Designed by: BER, GDD
Drawn by: MIF

1/1996/96049/003/enc463.dwg
date printed: 8-9-96
drawn by: Dwayne Dunn

PROJECT NO.	SHEET NO.	TOTAL SHEETS
488-76-245-8296-000-001	6	11

POINT	NORTH	EAST
184	3854.6580	4163.3244
688	3820.5314	3827.9704
671	3837.8991	3956.0818
664	3909.6239	3973.0065
722	3820.5820	3795.9700
723	3817.8242	3844.6257
724	3909.7489	4130.3909
740	3849.3594	4195.8363

184 = COORDINATE POINT NO.



* UNDERDRAIN AGGREGATE
PERCENT OF AGGREGATE RETAINED

1"	0
3/4"	0-10
3/8"	45-80
1/4"	90-100
#8	95-100

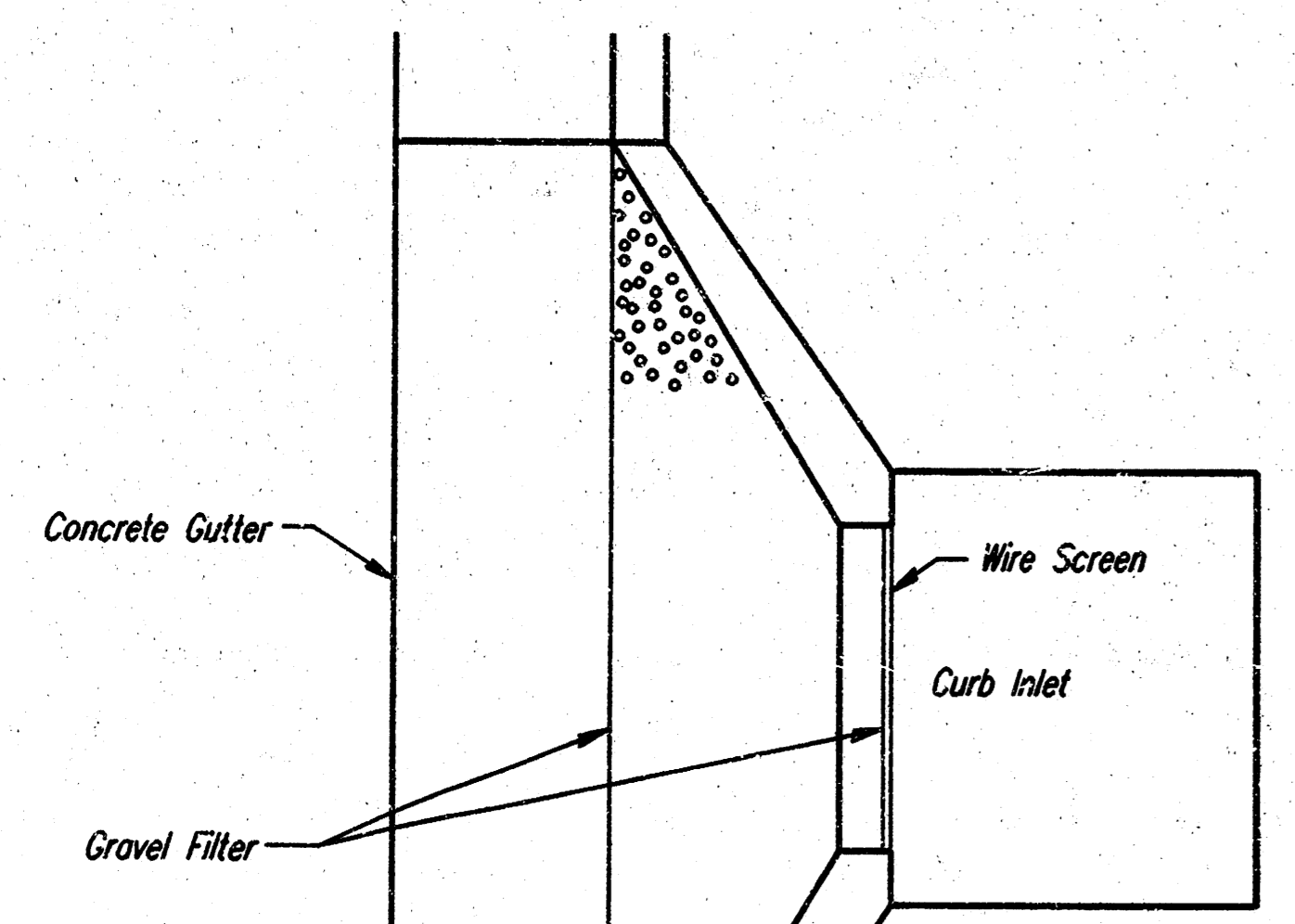
ROCK QUALITY SHALL CONFORM TO THE REQUIREMENTS SPECIFIED BY THE KDOT 1990 EDITION STANDARD SPECIFICATION SUBSECTION 1102 FOR DURABILITY CLASS I.

PAVEMENT UNDERDRAIN LOCATIONS		
STREET	STATION	SIDE
MEADOW GROVE CT.	54+40.02	RT.

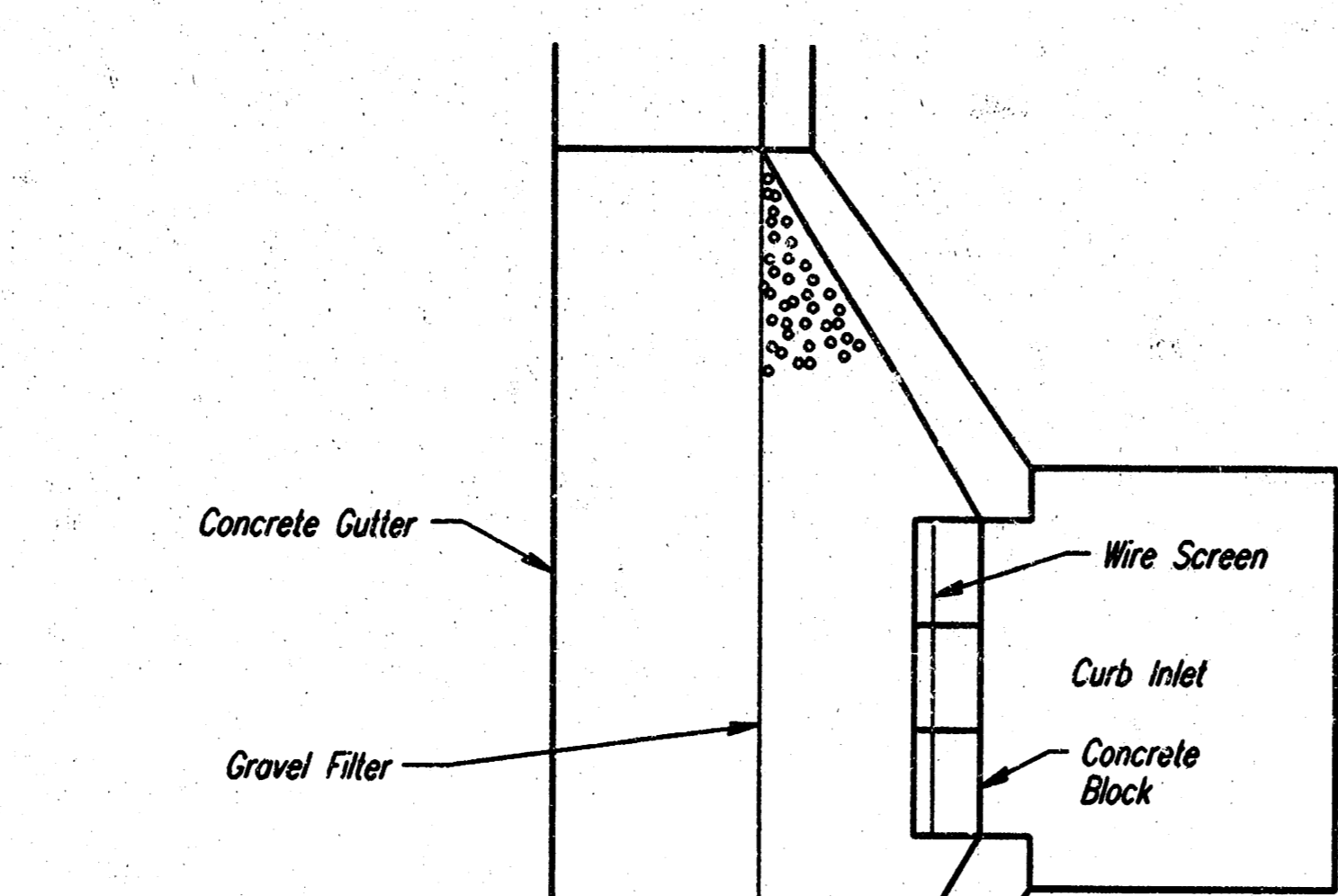
RIPRAP DETAIL
Sta. 14+11.1
SWS Line No. 1

NOTE
ALL RIPRAP FOR THIS PROJECT SHALL BE NATURAL STONE. NEITHER BROKEN CONCRETE, FABRIC ENVELOPE, NOR PREMIXED DRY PACKAGED CONCRETE BAG ALTERNATES WILL BE ALLOWED.

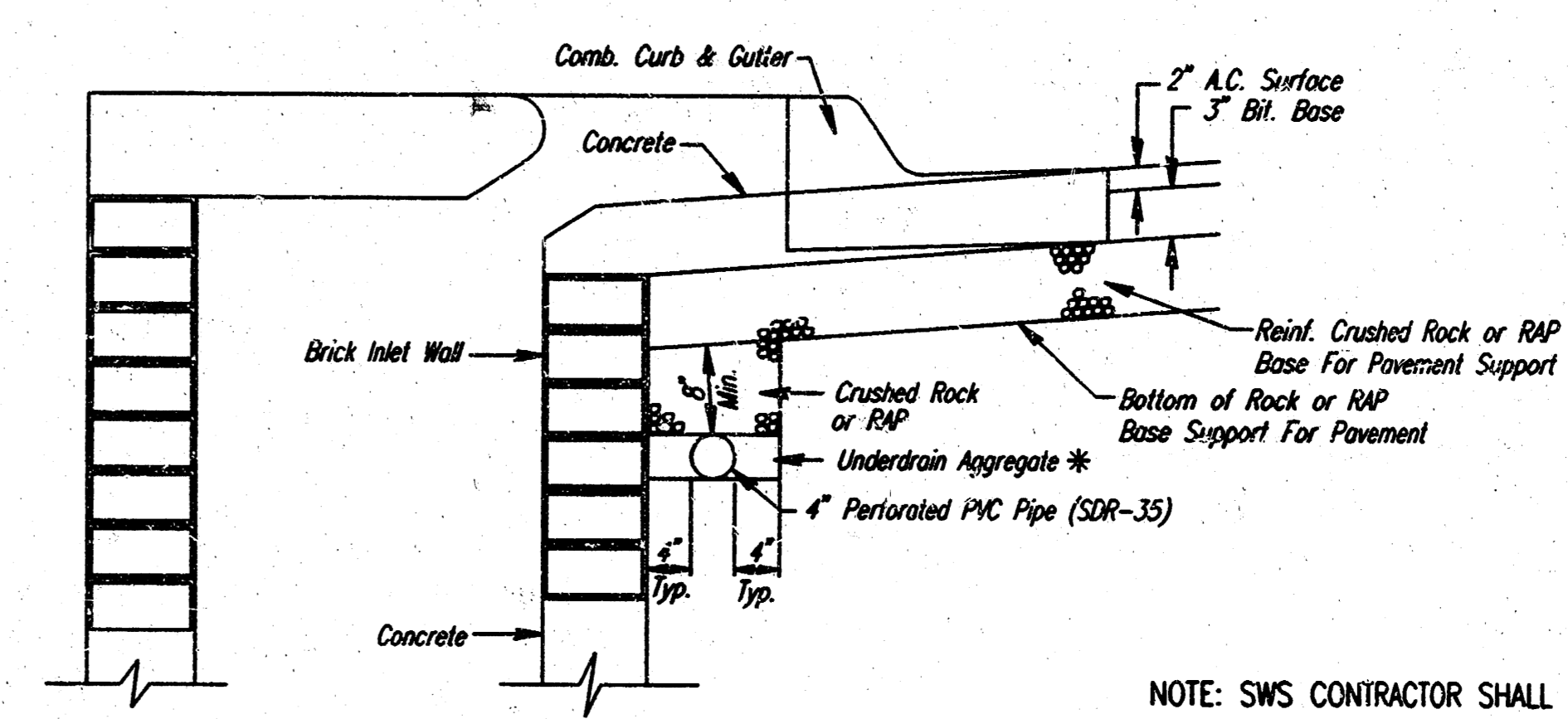
DATE	
BY	
PLAN	
DATE	
BY	
NOTE BOOK	
PLOTTED	
ALIGNMENT	
CHECKED	
NO.	
DATE	
BY	
DATE	
BY	



CURB INLET PROTECTION
GRAVEL AND WIRE MESH FILTER



CURB INLET PROTECTION
BLOCK AND GRAVEL FILTER



(Min. 16 Perforations Per Lin. Ft. @ 1/4" Dia.)
Perforations To Be on Bottom Half

SECTION C-C

PAVEMENT UNDERDRAIN DETAIL

NOTE: PLACE 4" PVC PERFORATED PIPE AT ALL DRAINAGE SUMP LOCATION
COST OF UNDERDRAIN STUB TO BE INCIDENTAL TO THE INLET
INLET TYPE MAY VARY FROM THAT SHOWN.

GENERAL NOTES
INLET PROTECTION

- INLET PROTECTION METHOD MAY BE ANY OF THE APPLICABLE TYPES SHOWN, AT THE CONTRACTORS OPTION.
- GRAVEL FILTER SHALL BE A DURABLE, WELL-GRADED SAND-GRAVEL OR CRUSHED STONE, MAXIMUM 1-1/2 IN. SIZE. AS AN ALTERNATE GRAVEL FILLED BAGS OF BURLAP OR OTHER FABRIC MAY BE USED. WHERE BAGS ARE USED, THE WIRE SCREEN, WHERE SHOWN, MAY BE OMITTED.
- INLET PROTECTION SHALL BE ERECTED AS SOON AS THE STRUCTURE HAS BEEN BACKFILLED. MEASURES SHALL BE TAKEN TO PRECLUDE ENTRY OF SEDIMENT INTO THE STORM WATER SEWER SYSTEM DURING CONSTRUCTION OF THE STRUCTURE.
- REMOVAL AND DISPOSAL OF ACCUMULATED SILT AND DEBRIS AND/OR REMOVAL AND RECONSTRUCTION OF INLET PROTECTION INSTALLATIONS SHALL BE PERFORMED THROUGHOUT THE PROJECT LIFE WHENEVER DEBRIS REACHES ONE-THIRD THE BARRIER HEIGHT, OR AS DEEMED NECESSARY BY THE ENGINEER. ULTIMATE REMOVAL AND DISPOSAL OF INLET PROTECTION AND DEBRIS WILL BE PERFORMED BY THE DEVELOPER.
- MEASUREMENT AND PAYMENT: THE ITEM "INLET PROTECTION" SHALL BE MEASURED AND PAID FOR AT THE CONTRACT UNIT PRICE BID PER EACH FOR EACH INLET LOCATION PROTECTED REGARDLESS OF METHOD SELECTED BY THE CONTRACTOR. SAID PRICE SHALL BE CONSIDERED FULL COMPENSATION FOR EXCAVATION, COMPACTION, BACKFILL, SEDIMENT, AND DEBRIS REMOVAL AND DISPOSAL, AND ALL LABOR, MATERIALS, TOOLS, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK. RECONSTRUCTION OF INLET PROTECTION INSTALLATION DUE TO DAMAGE BY WIND, FLOOD, FIRE, ETC. OR DUE TO ACTIONS BY THE CONTRACTOR OR OTHERS SHALL BE PERFORMED BY THE CONTRACTOR AS DIRECTED BY THE ENGINEER AT NO ADDITIONAL COST.

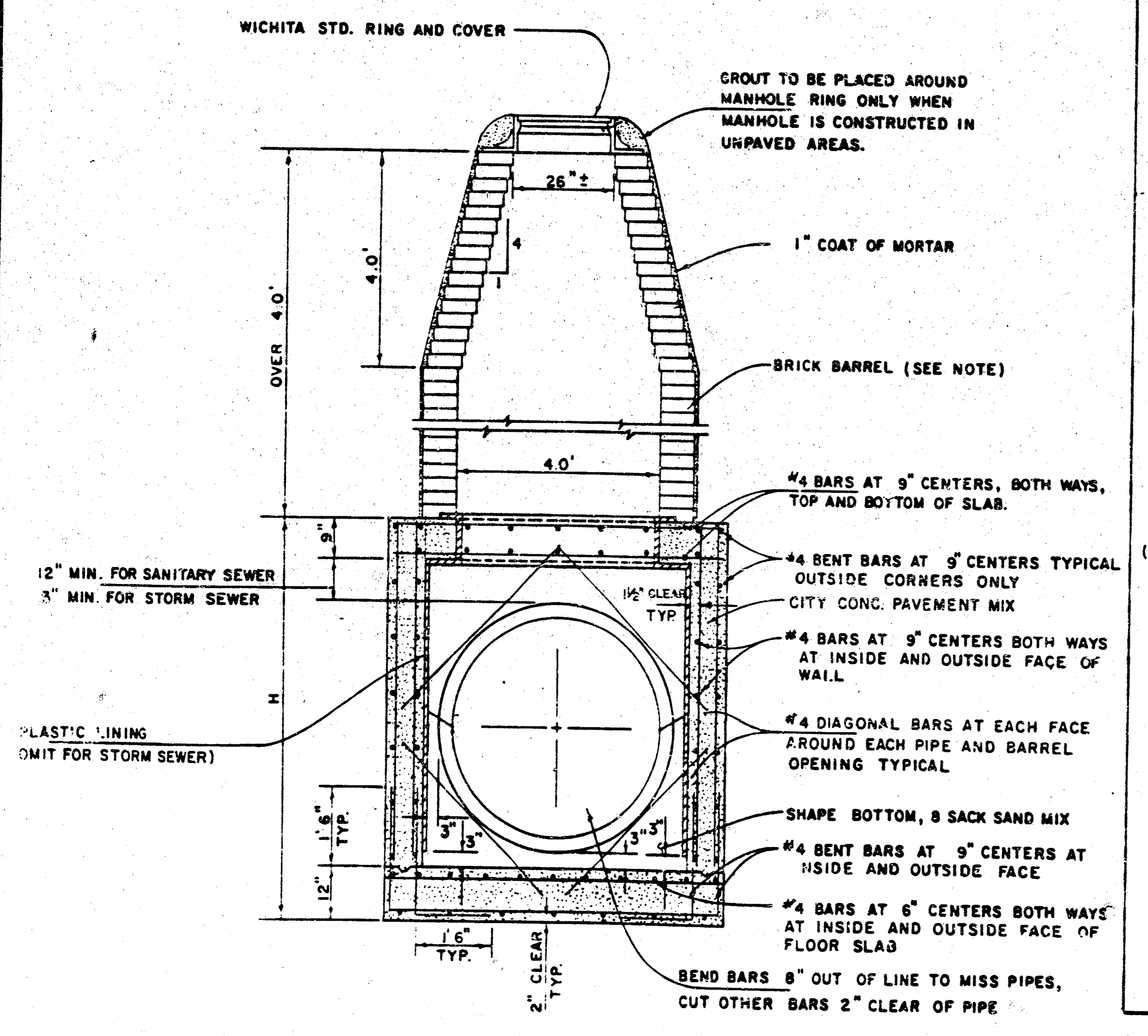
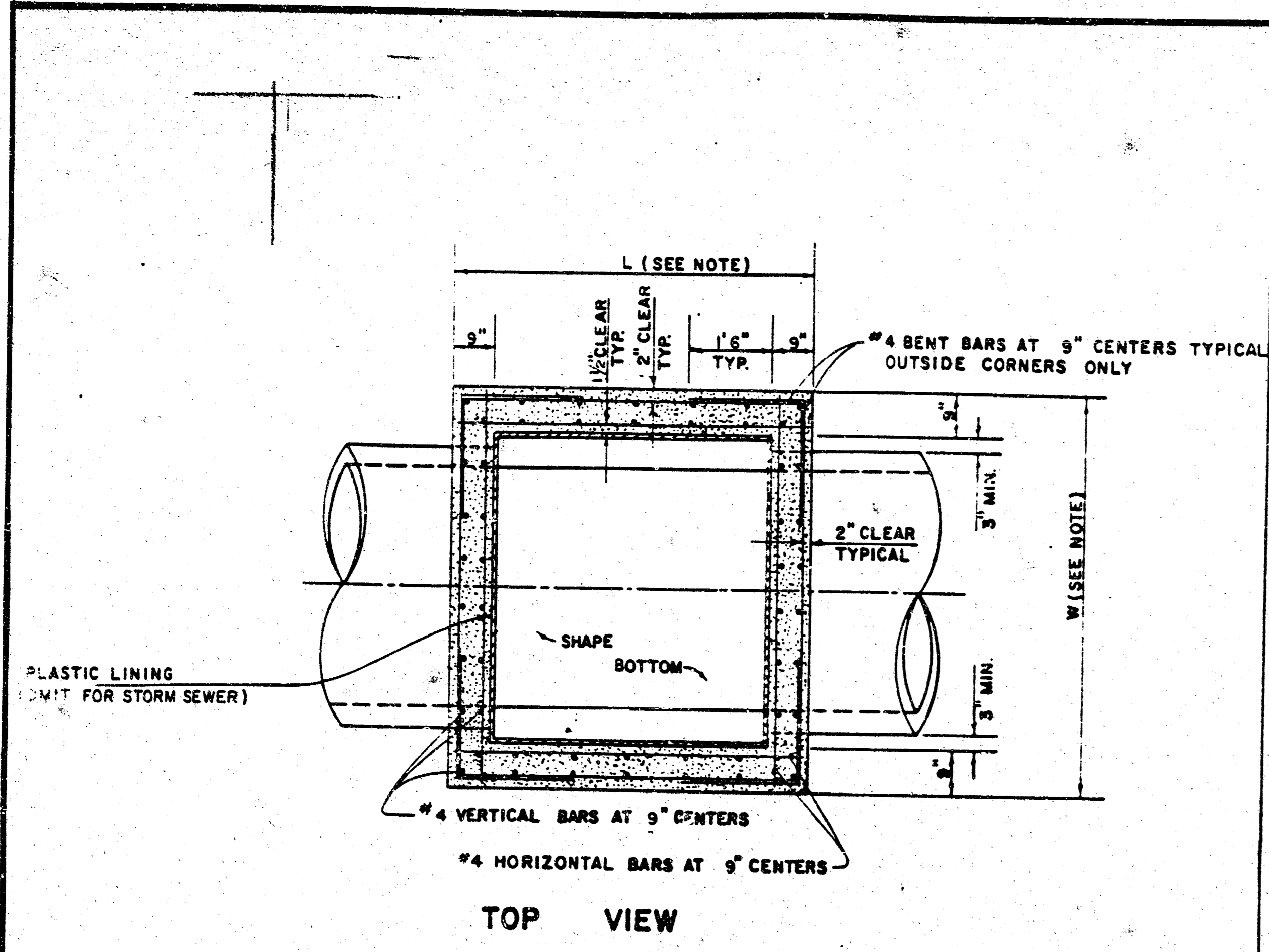
1-1996/96049/003/misc01.dgn
date plotted: 8-6-96
deliver to: Dwayne Dunn

STORM WATER SEWER NO. 463

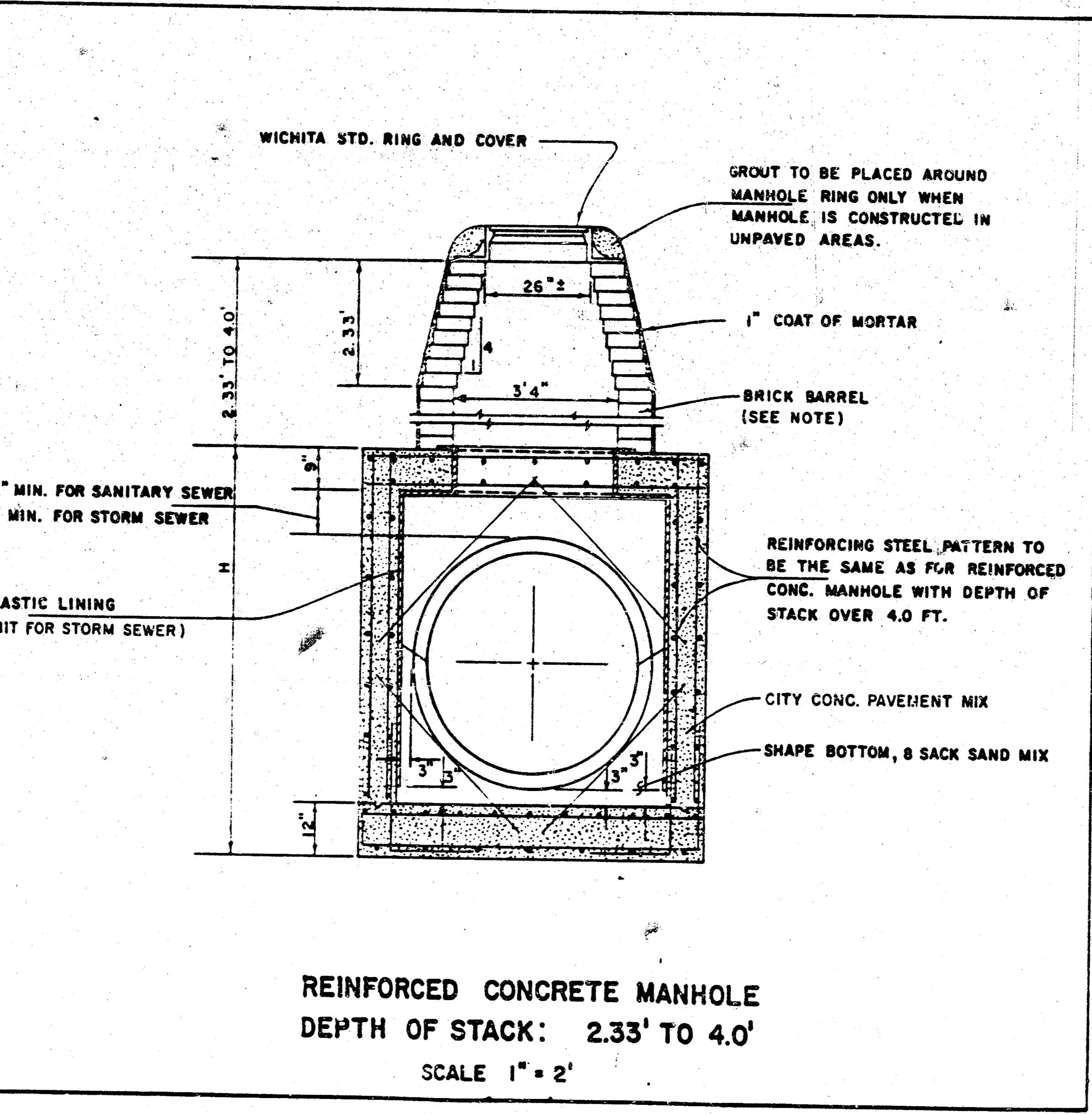
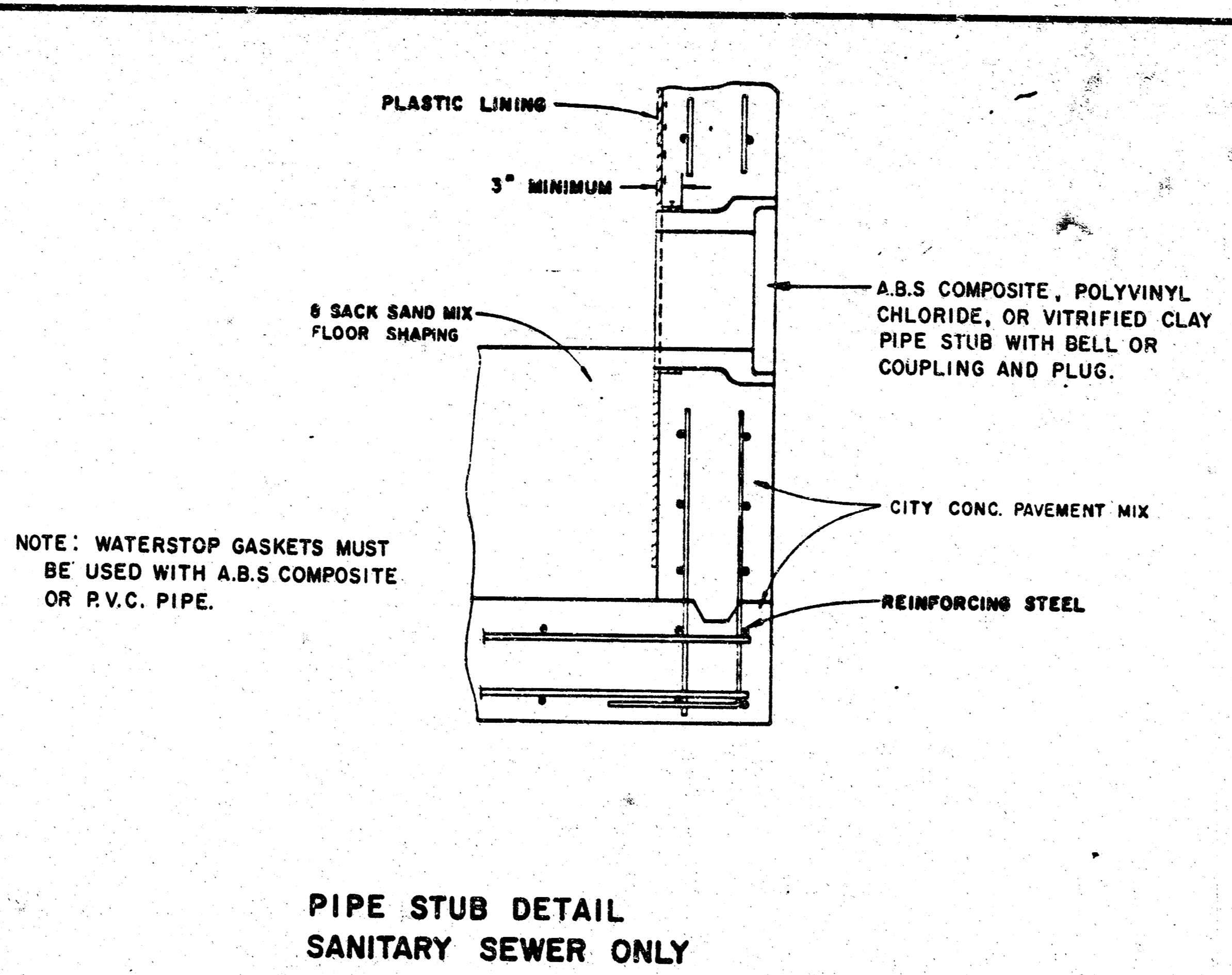
MISCELLANEOUS DRAINAGE DETAILS

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

Designed by	BER, GDD	Checked by	
Drawn by	BJS	Date	APRIL 1996
		Job No.	96049-3

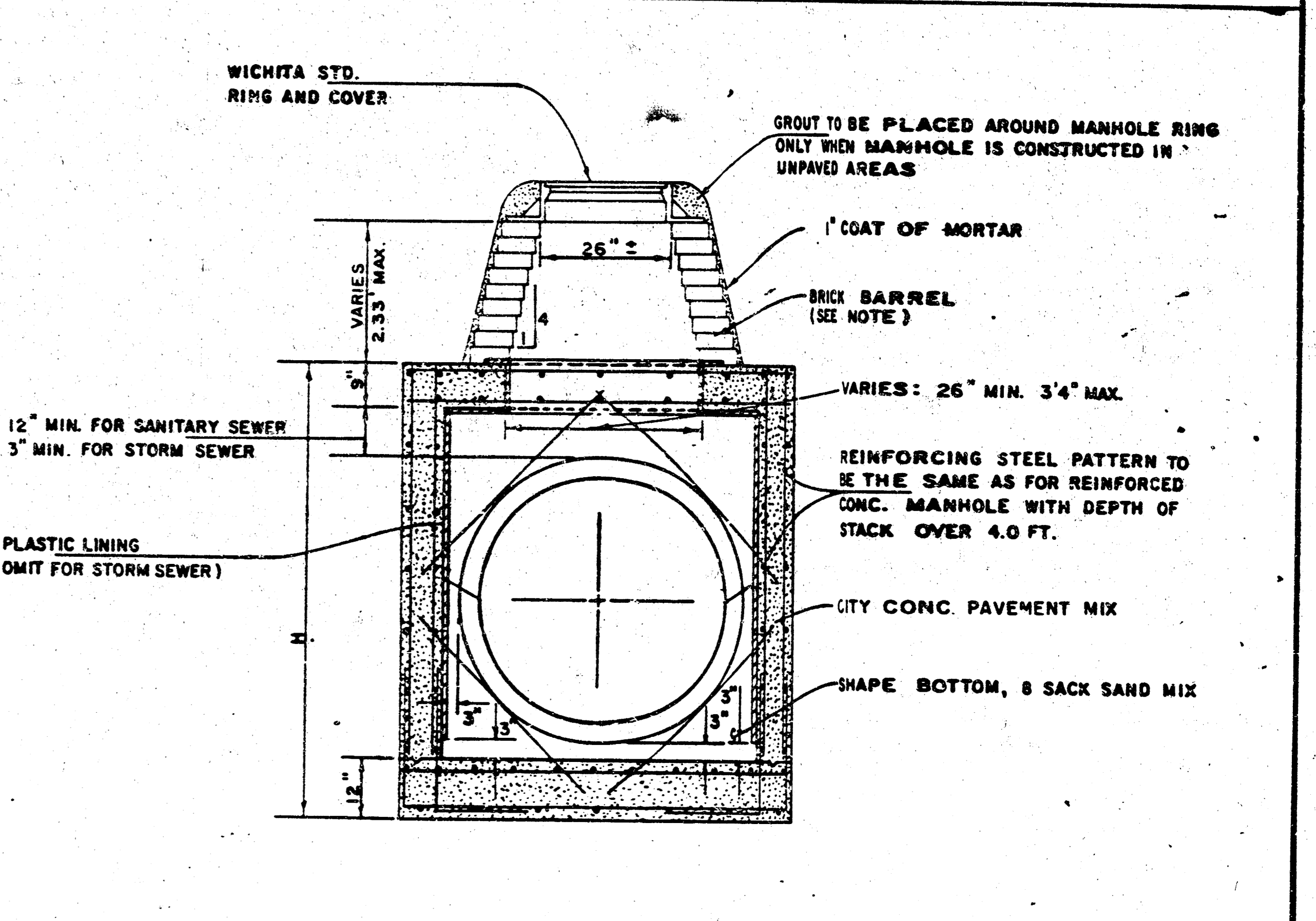
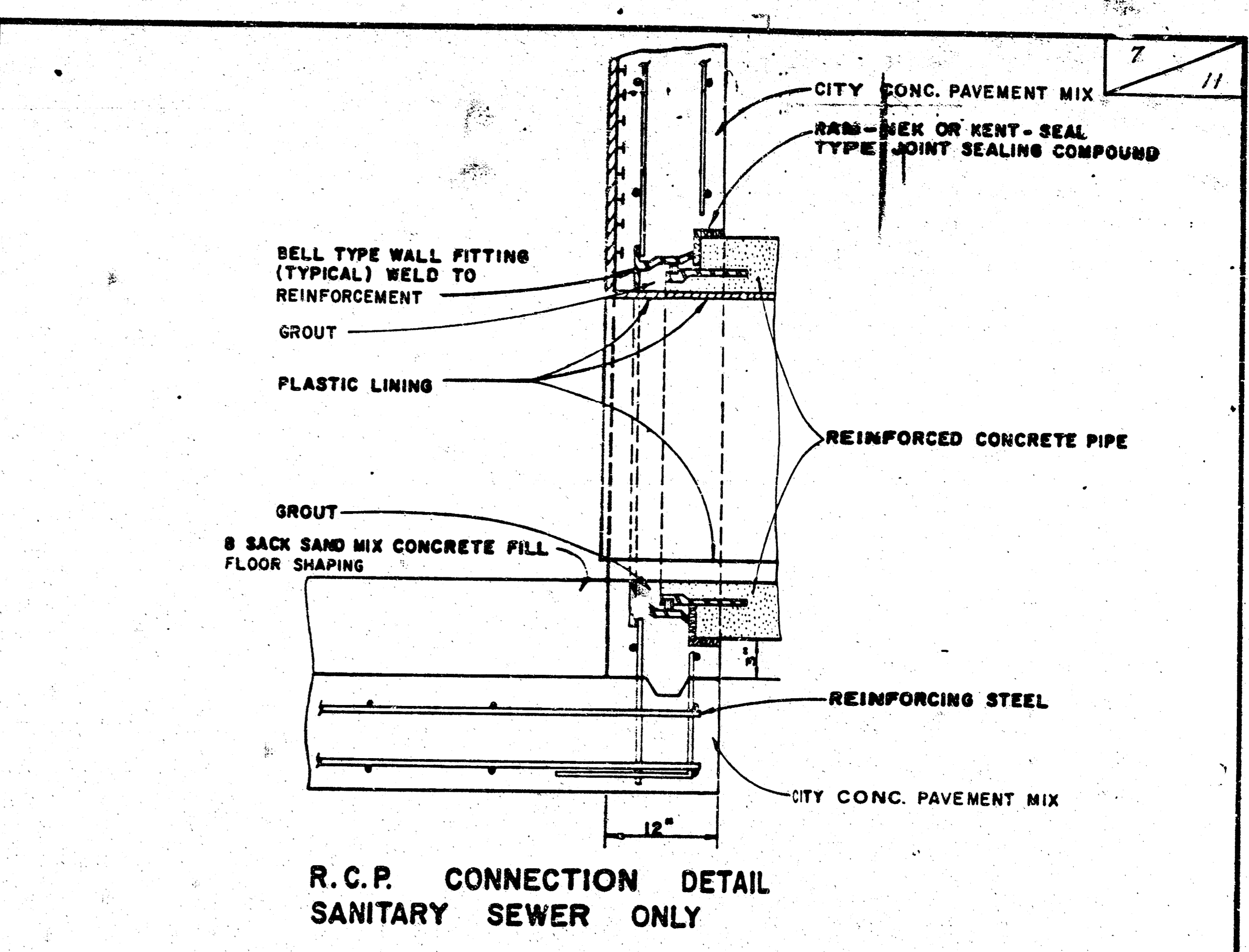


REINFORCED CONCRETE MANHOLE
DEPTH OF STACK: OVER 4.0'
SCALE 1" = 2'



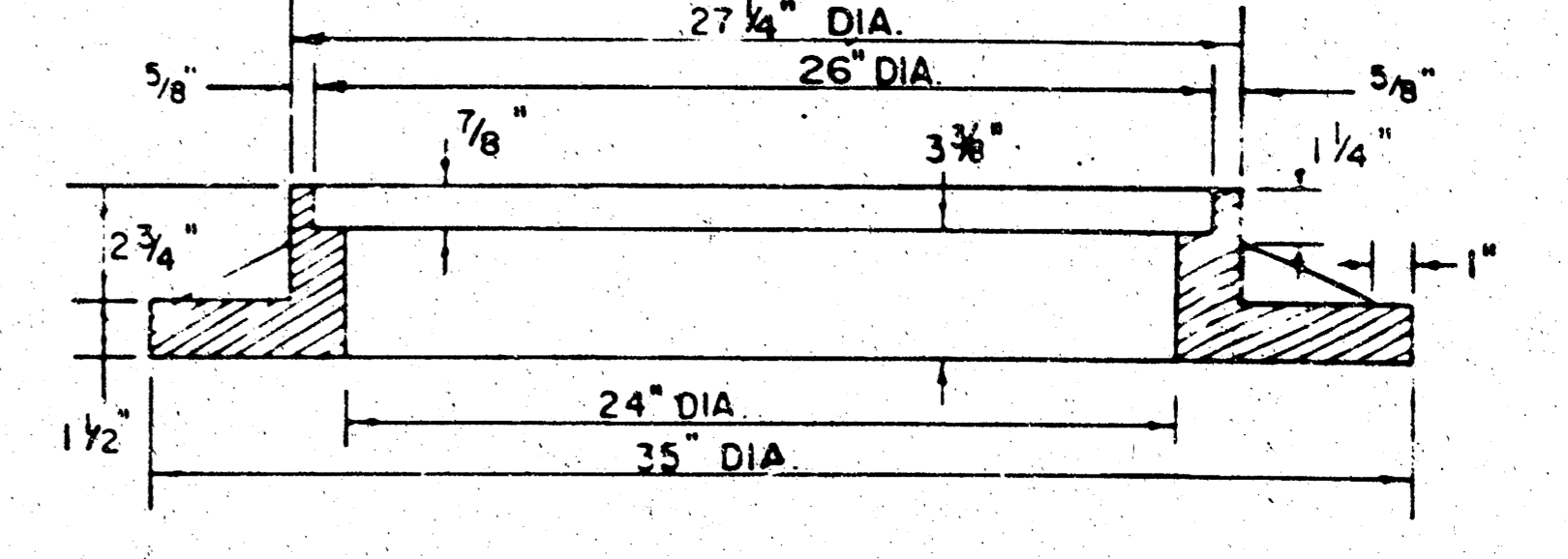
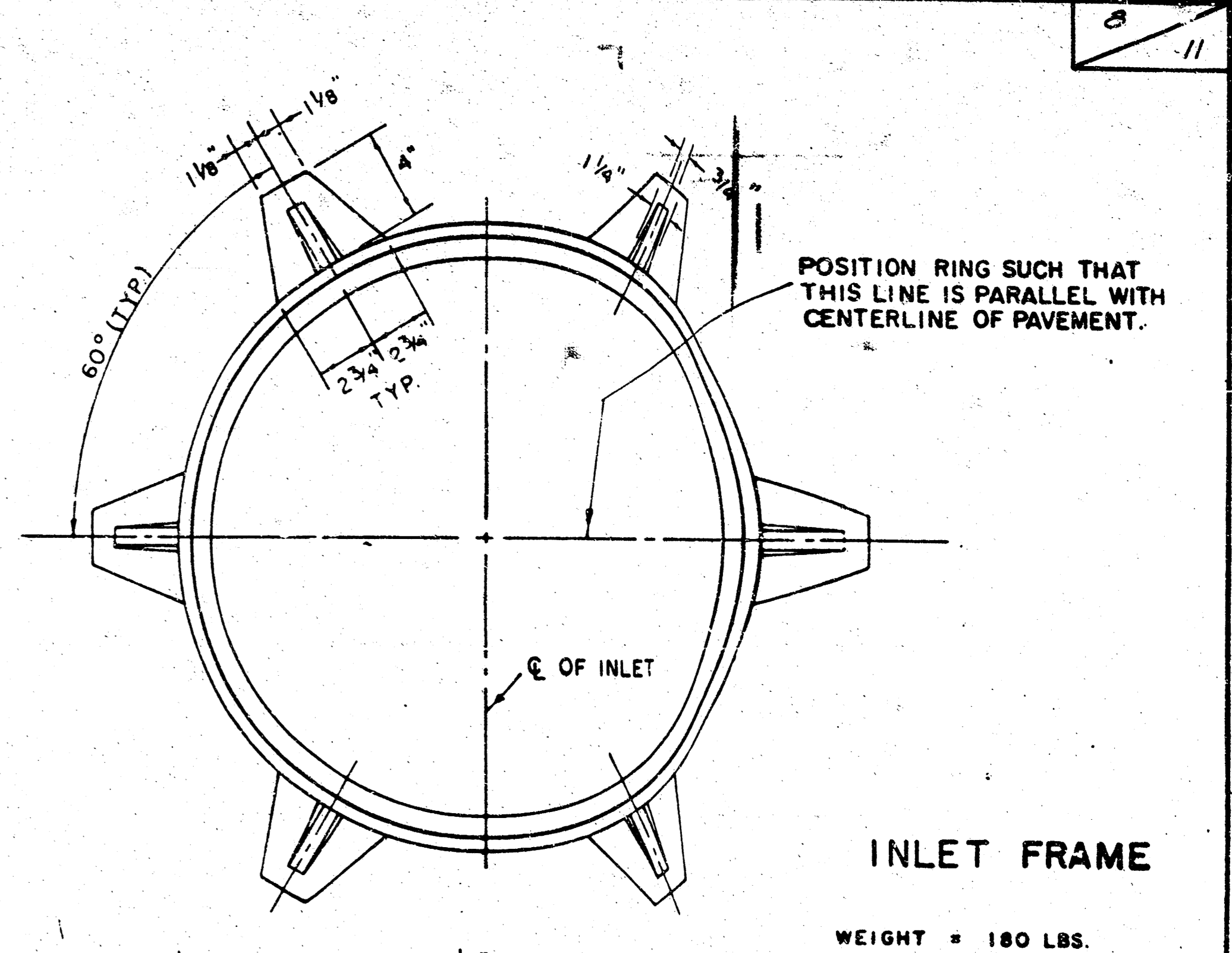
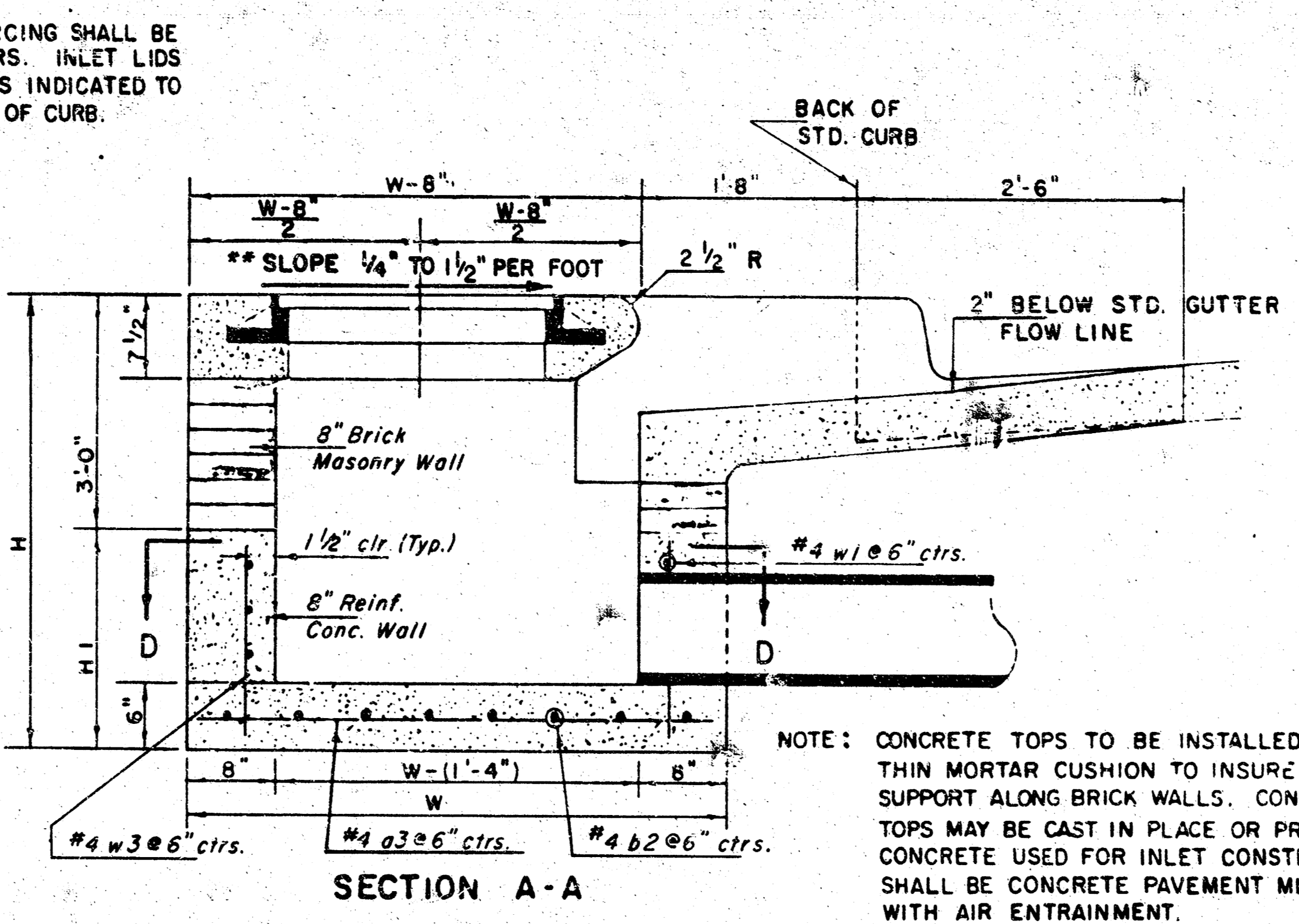
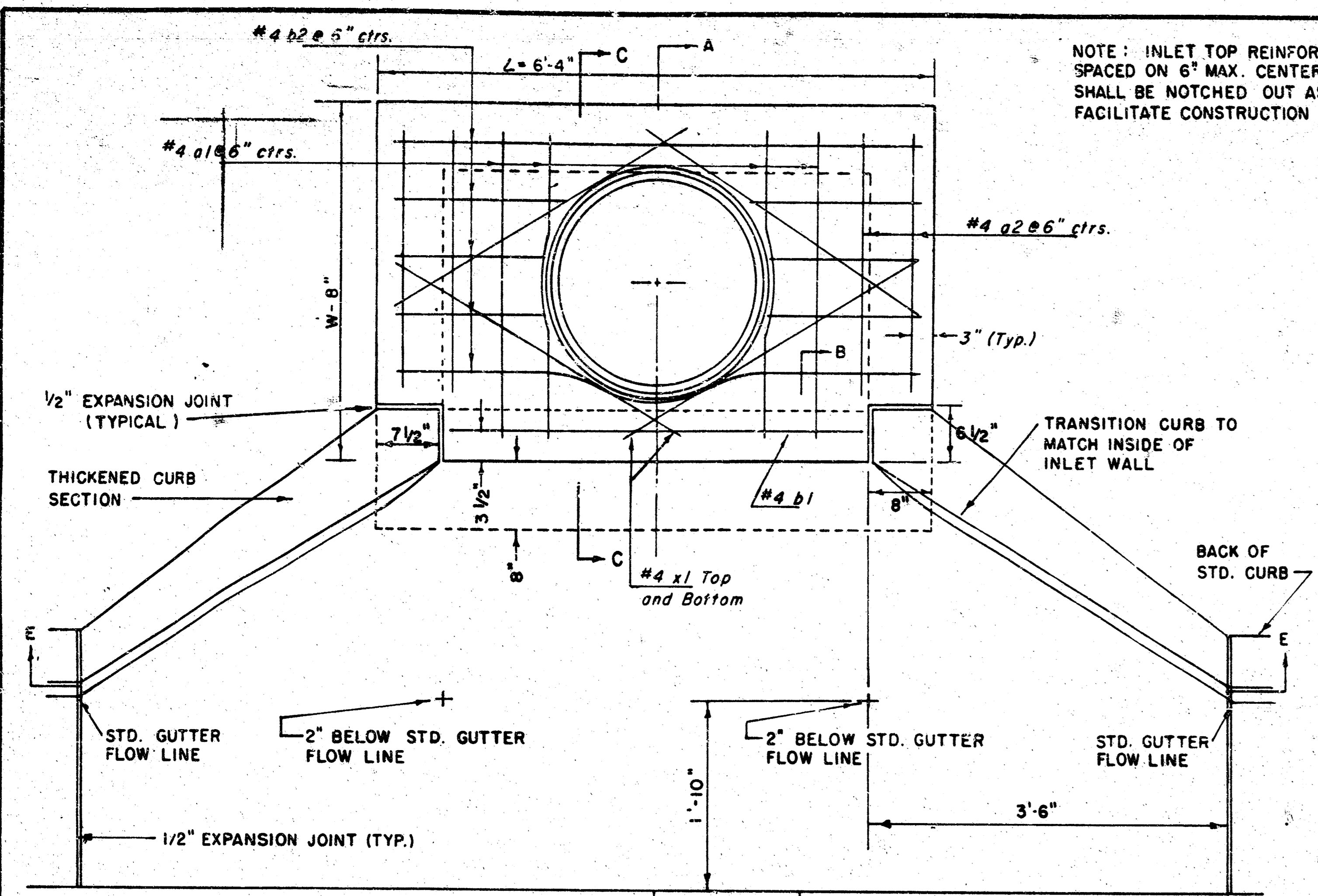
REINFORCED CONCRETE MANHOLE
DEPTH OF STACK: 2.33' TO 4.0'
SCALE 1" = 2'

NOTE:
 BRICK BARRELS LESS THEN 16' DEEP SHALL HAVE 8" WALLS EXCEPT WHEN LOCATED WITHIN PUBLIC STREET OR ALLEY PAVEMENT THEN THE WALL SHALL BE 12". BRICK BARRELS MORE THEN 16' DEEP SHALL HAVE 12" WALLS. THE "L" AND "W" DIMENSIONS SHALL BE A MINIMUM OF 5'6" FOR BRICK BARRELS WITH 8" WALLS AND 6'2" FOR BRICK BARRELS WITH 12" WALLS WHEN THE BRICK BARRELS ARE OVER 4 FT. IN HEIGHT. COMPLETED MANHOLE SHALL BE WITHOUT LEAKS AND WATERTIGHT.



REINFORCED CONCRETE MANHOLE
DEPTH OF STACK: 0' TO 2.33'
SCALE 1" = 2'

REVISED 1-7-85
STANDARD DETAILS
REINFORCED CONCRETE MANHOLES
 CITY OF WICHITA
 FEBRUARY 1984



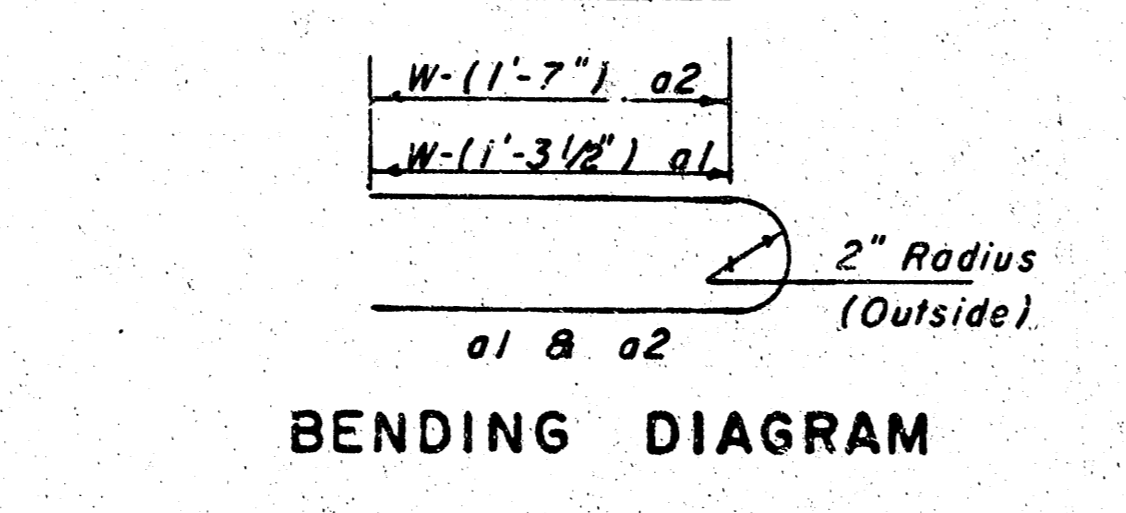
SEE CITY OF WICHITA STANDARD MANHOLE FRAME AND COVER DETAIL SHEET FOR COVER DETAILS TO BE USED WITH INLET FRAME.

PRECAST SLAB AND FLOOR REINFORCING

Mark	Size	No.	Length	No.	Length	No.	Length	No.	Length	No.	Length
a1	#4	5	6'-7"	6	8'-7"	6	10'-7"	6	12'-7"	6	14'-7"
a2	#4	4	6'-0"	4	8'-0"	4	10'-0"	4	12'-0"	4	14'-0"
a3	#4	13	4'-1"	13	5'-1"	13	6'-1"	13	7'-1"	13	8'-1"
b1	#4	1	4'-9"	1	4'-9"	1	4'-9"	1	4'-9"	1	4'-9"
b2	#4	23	6'-1"	29	6'-1"	35	6'-1"	41	6'-1"	47	6'-1"
x1	#4	8	3'-10"	8	4'-2"	8	4'-6"	8	4'-10"	8	5'-2"

WALL REINFORCING

Mark	Size	No.	Length	No.	Length	No.	Length	No.	Length
w1	#4	①	6'-1"	①	6'-1"	①	6'-1"	①	6'-1"
w2	#4	①	4'-1"	①	5'-1"	①	6'-1"	①	8'-1"
w3	#4	32	②	36	②	40	②	44	②



STANDARD CURB INLET PRECAST TOPS

W	PRE-CAST TOP SIZE	PIPE SIZE	CU. YD. CONC.
4' 4"	3'6" x 6'4" x 7'1/2"	21" B SMALLER	0.38 ±
5' 4"	4'8" x 6'4" x 7'1/2"	24" B 30"	0.51 ±
6' 4"	5'8" x 6'4" x 7'1/2"	36" B 42"	0.64 ±
7' 4"	6'8" x 6'4" x 7'1/2"	48" B 54"	0.77 ±
8' 4"	7'8" x 6'4" x 7'1/2"	60" B 66"	0.90 ±

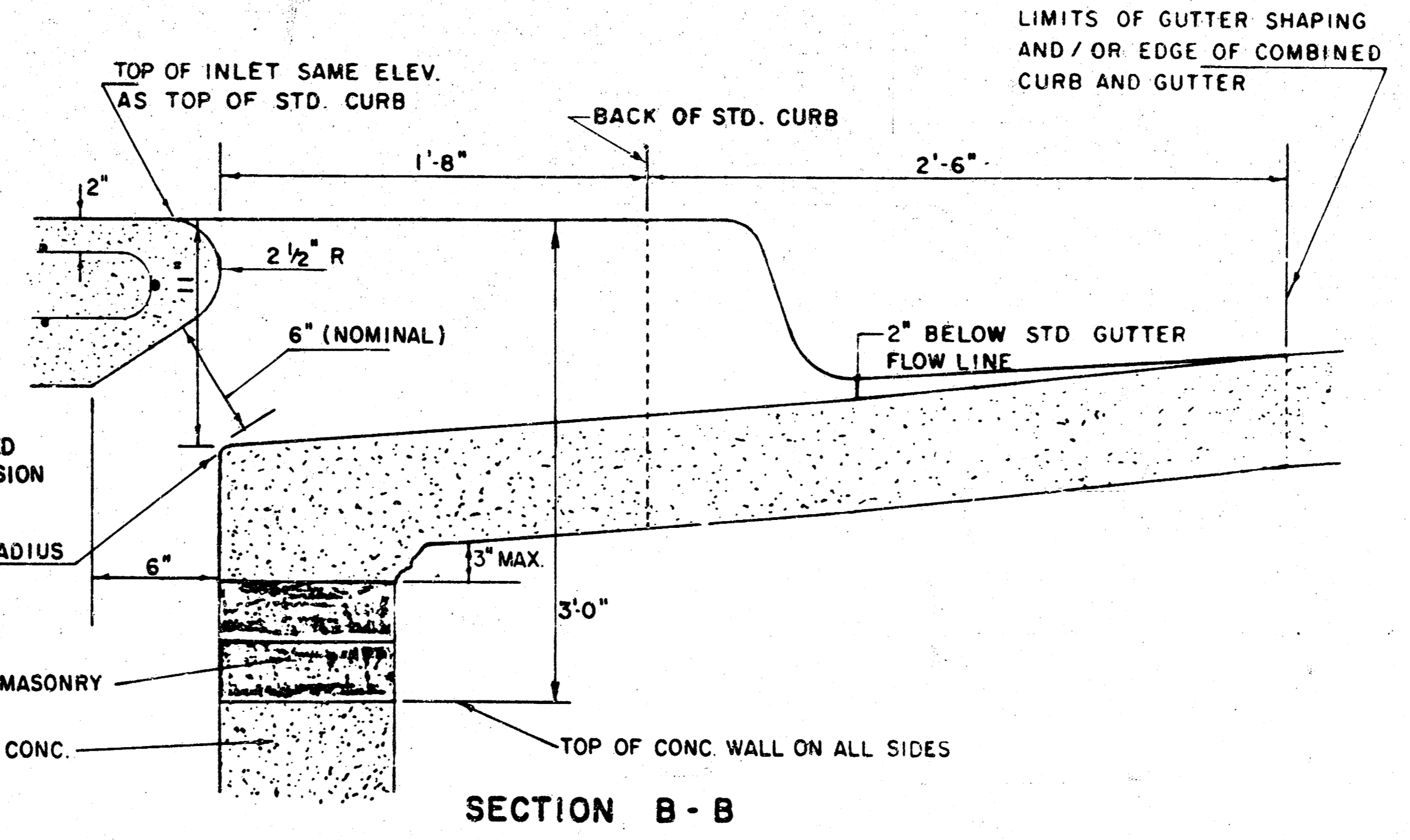
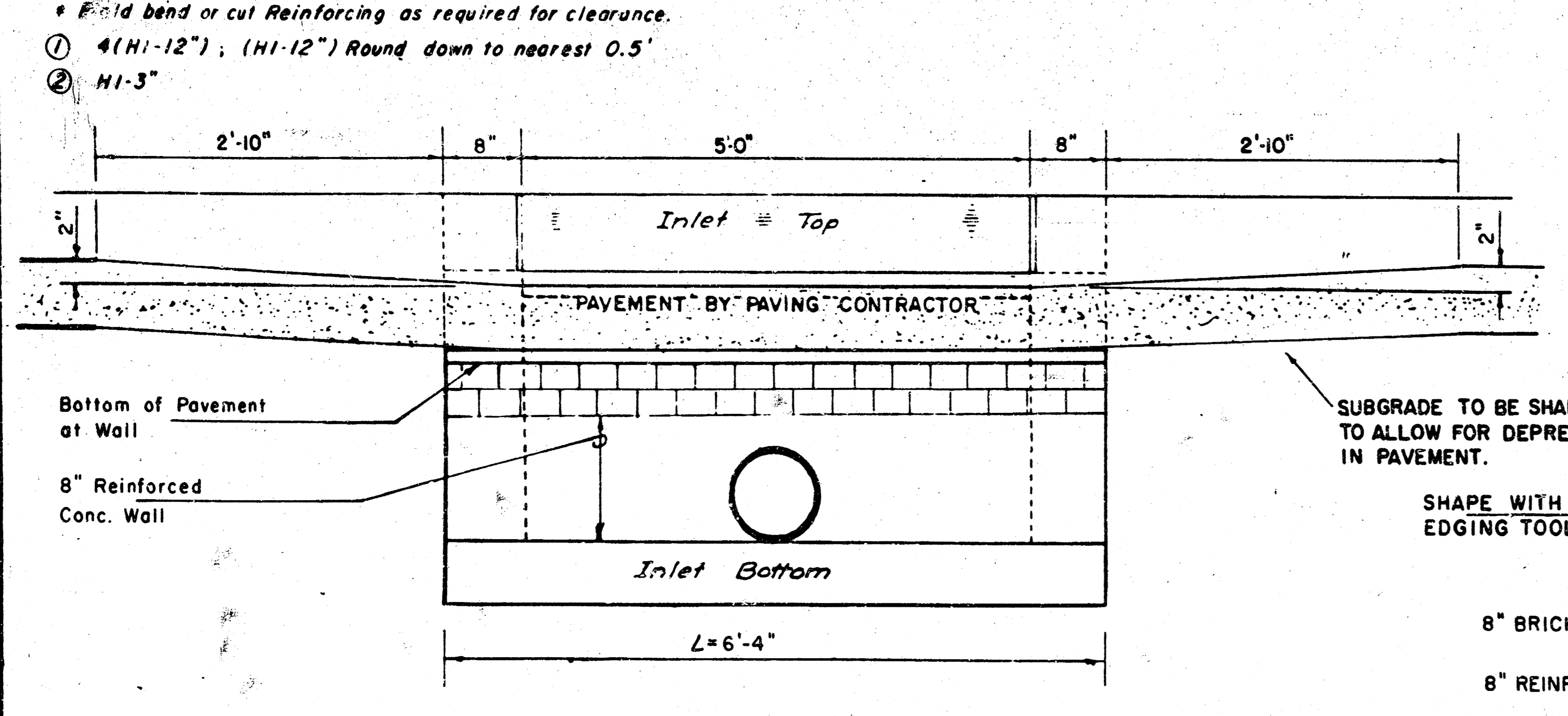
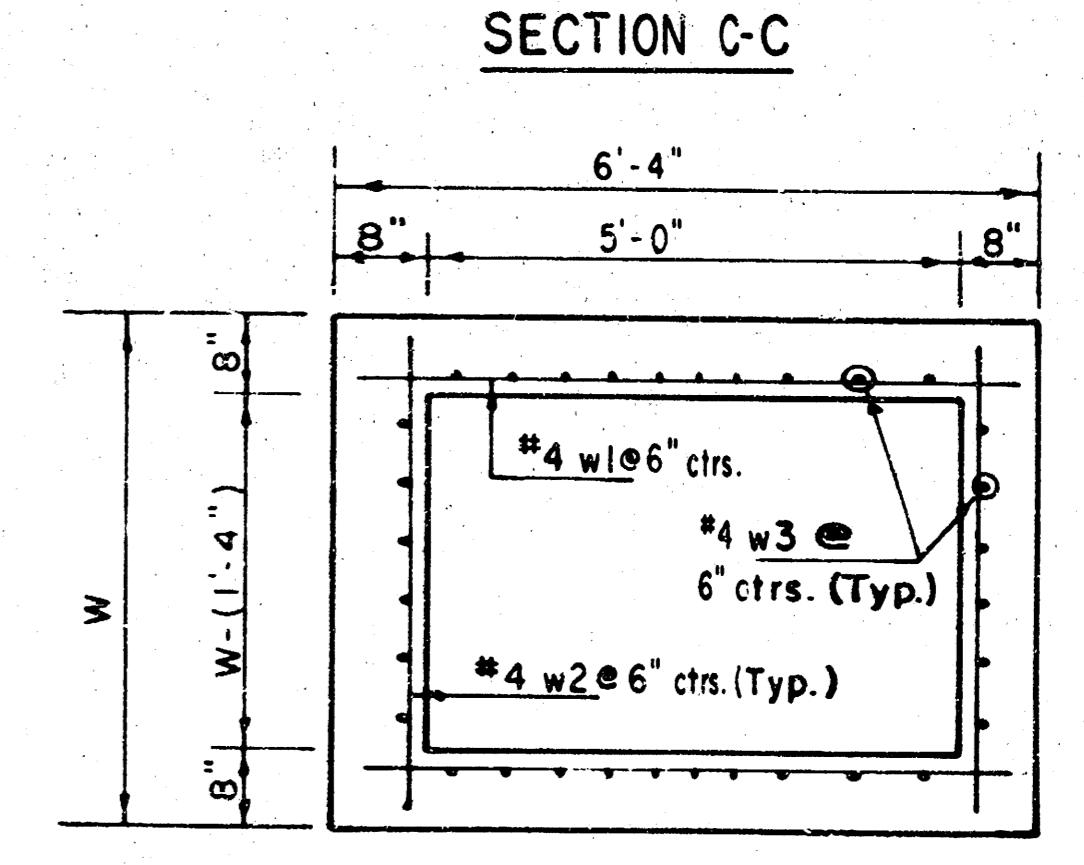
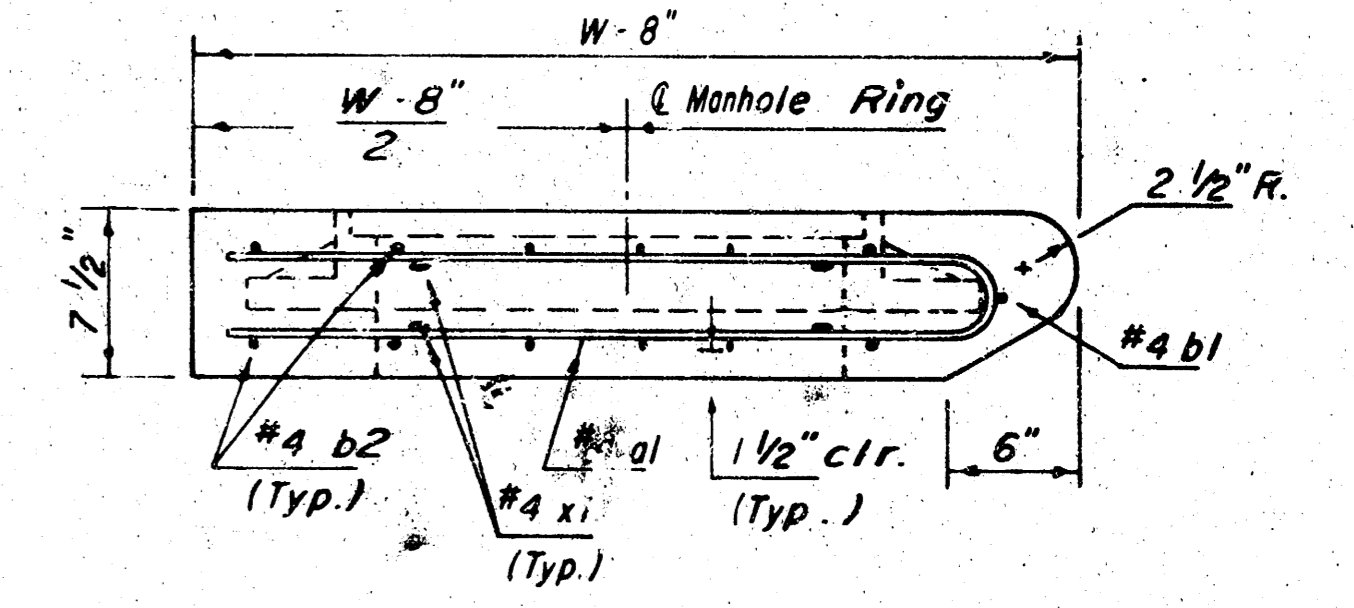
NOTE: CONTRACTOR SHALL HAVE THE OPTION OF CONSTRUCTING 8" BRICK MASONRY WALLS BETWEEN THE CONCRETE INLET BASE AND TOP ON THIS INLET WHEN W = 6'-4" AND H = 7'-0" OR LESS.

ADDITIONAL CURB AND GUTTER CONSTRUCTION NECESSARY TO CONNECT SET-BACK INLET TO PAVEMENT WILL BE PAID FOR AT THE UNIT PRICE BID FOR EACH INLET HOOKUP.

INLET INVERT SHALL BE SHAPED WITH 8 SACK SAND MIX CONCRETE TO CREATE FLOW CHANNELS AND TO INCREASE HYDRAULIC EFFICIENCY SUCH THAT THE INLET WILL BE SELF-CLEANING BETWEEN ALL INLET AND/OR OUTLET PIPES.

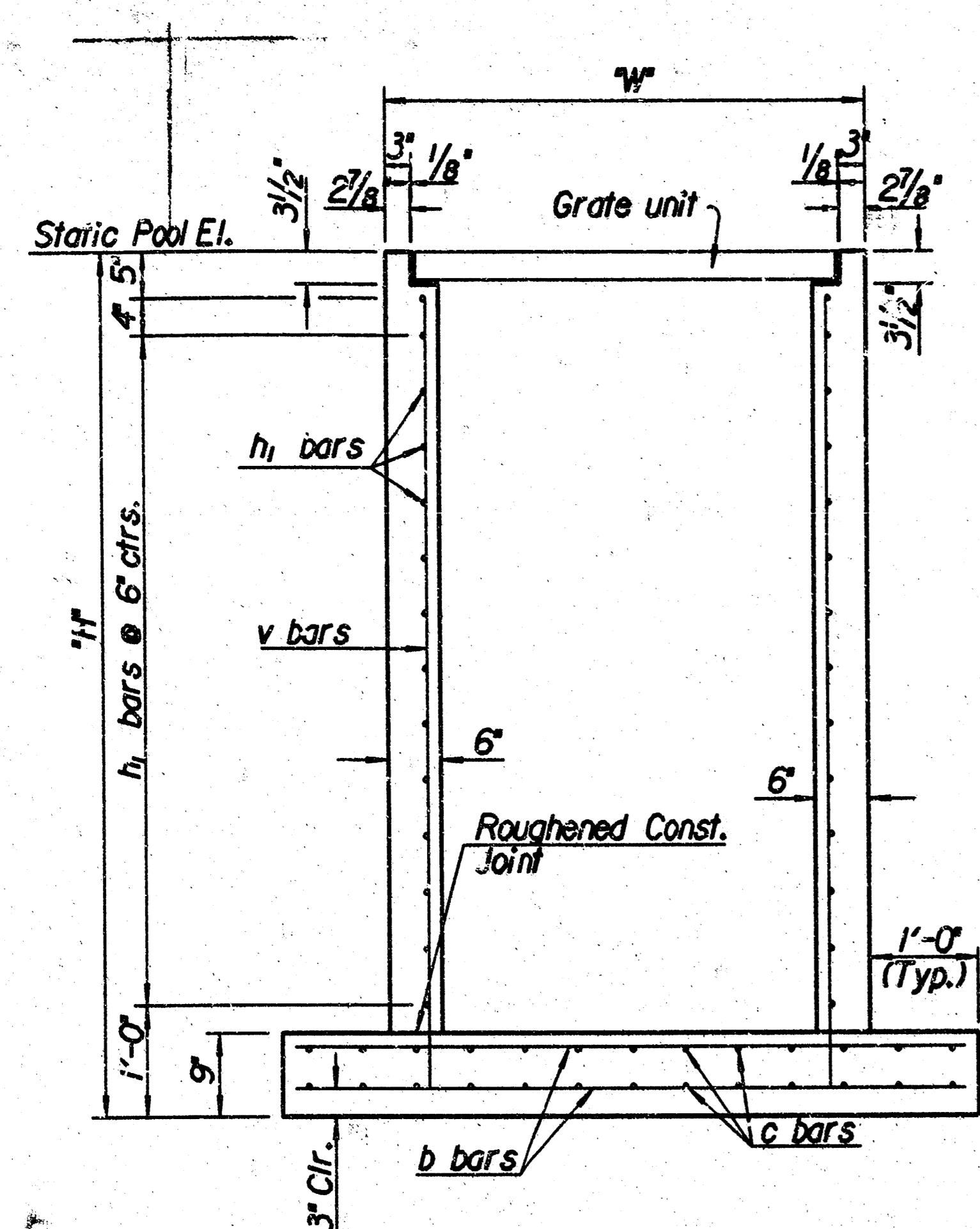
THE ENDS OF ALL PIPES INSTALLED IN INLETS SHALL BE CUT OFF FLUSH WITH THE INSIDE FACE OF THE INLET WALL.

**NOTE: Slope of Inlet Tops to match Sidewalk or Parking Slopes within Limits indicated.

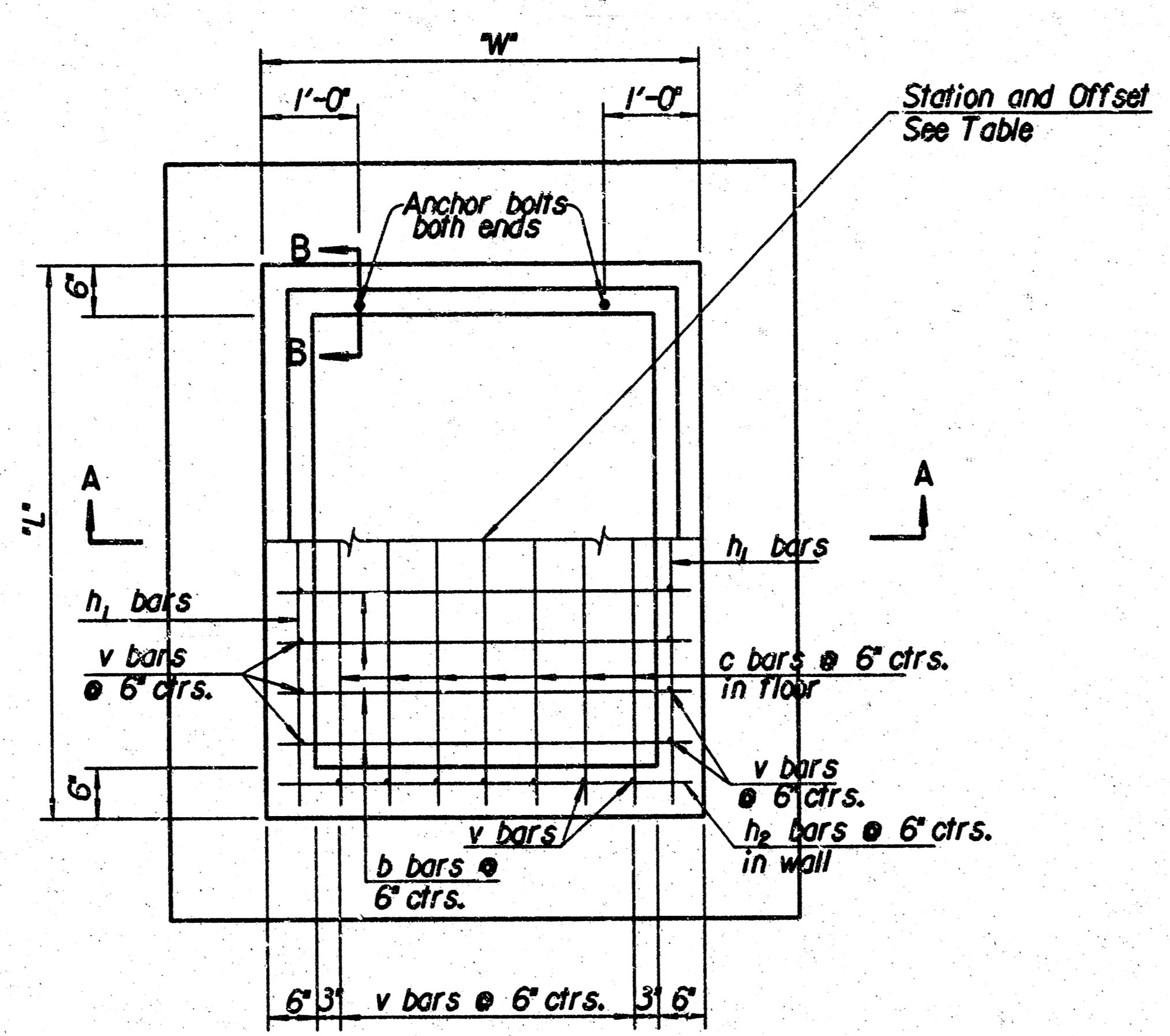


REVISED 11-30-1988
REVISED 12-21-1984
Revised 2-16-1989

DETAIL STANDARD TYPE IA CURB INLET
CITY OF WICHITA, KANSAS
INLET OPENING = 6" x 5' 0"
L=6'-4"
JUNE 1984

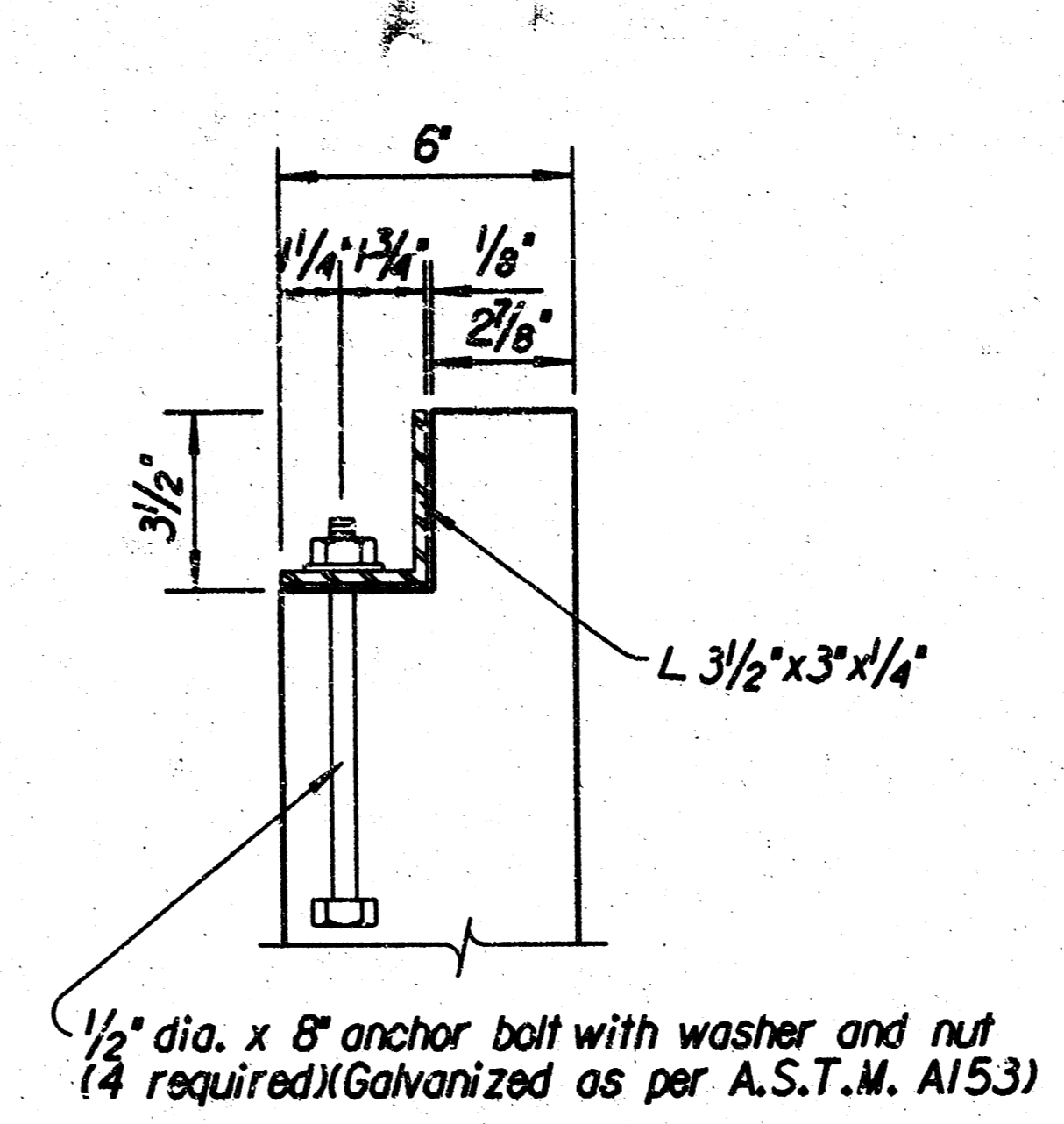


SECTION A-A

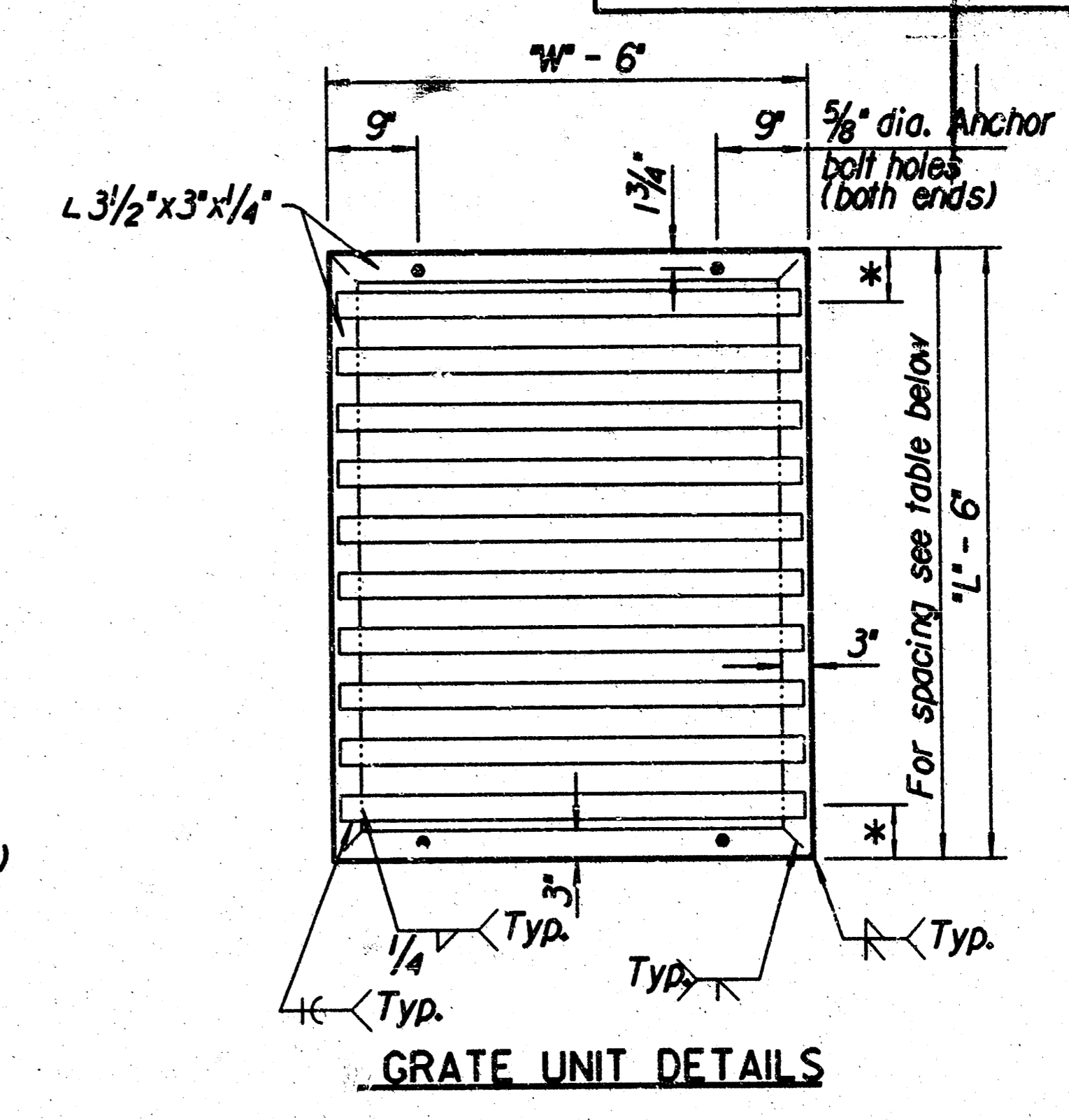


PLAN SECTION

AREA INLET
See Plan Sheet for Inlet orientation.



SECTION B-B
Note: Anchor bolts are subsidiary to the bid item 'Inlet Type C'.



PIPE DIMENSIONS AND SPACING				
Location	L x W	No. of Pipes	Dia. x Length x Spacing	*
	7'-6" x 5'-6"	7	2 1/2" x 4'-10 1/2" Pipes @ 12" ctrs.	6"

BILL OF MATERIALS INLET TYPE C				
"L"	"W"	"H"		
7'-6"	5'-6"	7'-3"		
Bar	No.	Size	Length	
v	44	#4	6'-9"	
c	30	#4	9'-0"	
b	38	#4	7'-0"	
h1	26	#4	7'-3"	
h2	26	#4	5'-3"	
Class "A" Conc.		4.87	Cu.Yd.	
Reinif. steel		766	Lbs.	
Struct. steel		327	Lbs.	

Quantities for inlets are for information only.

INLET TABLE	
Item	
S.W.S. Line No.	1
Station	14+11.10
Static Pool Elev.	165.60
Outlet R.C.P. E. Elev.	162.31
Pipe Size	42" R.C.P.

GENERAL NOTES

Concrete shall be as per City of Wichita Standard Specifications for Concrete Paving Mix. Except that it shall have a minimum 28 day compressive strength of 4,000 p.s.i. All Pipes shall be flush cut prior to being cast into the Inlet.

All dimensions relative to Reinforcing Steel are to centerline of bar unless otherwise noted. All Reinforcing Steel shall conform to A.S.T.M. Designation A615 Grade 60 and shall be Epoxy Coated.

All exposed edges shall be finished with an edging tool.

All external pipe to inlet joints shall be coated with an asphaltic tar to waterproof the joint interface.

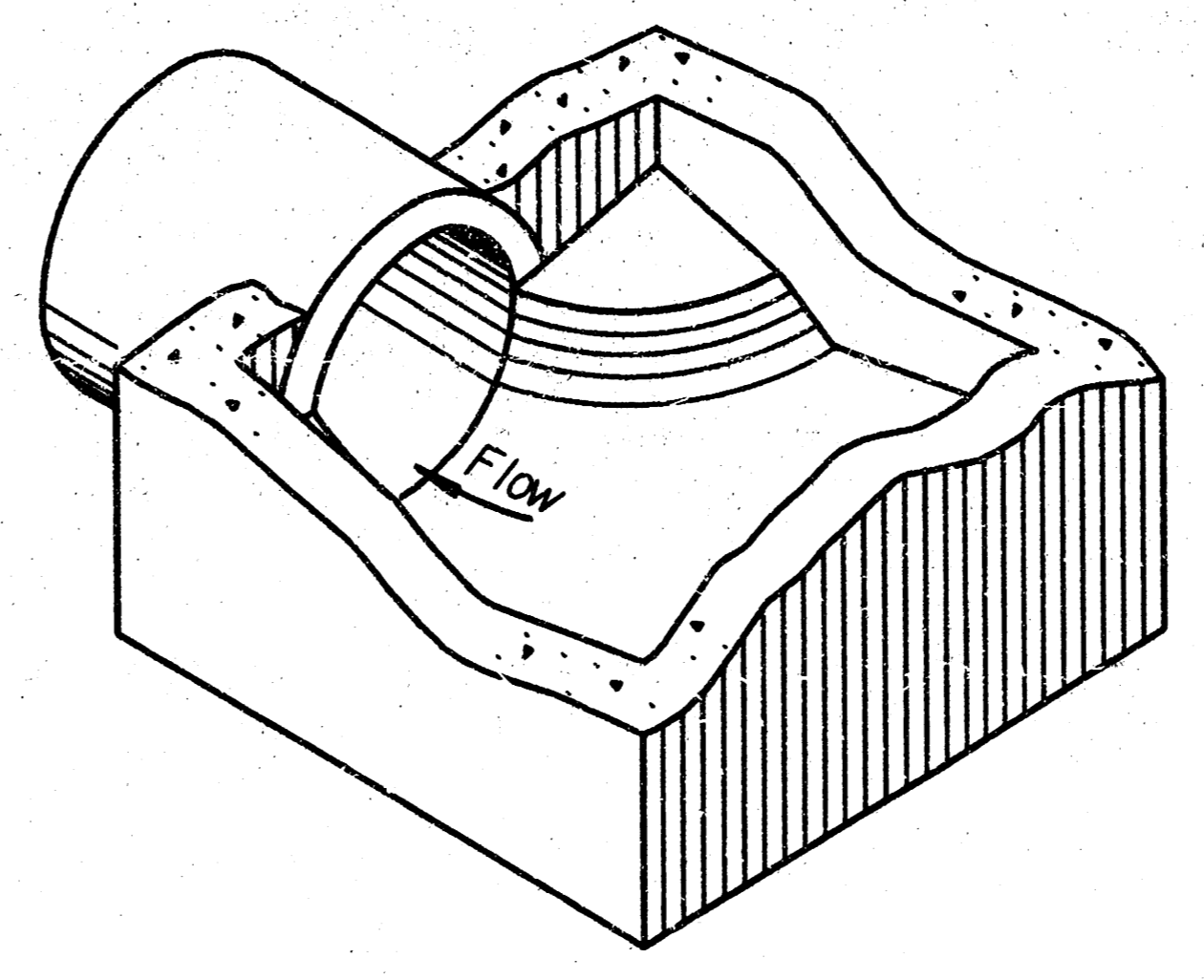
In general, pipes will enter and leave the manhole at various positions. Where possible bend bars around pipes.

Floor of inlet shall be shaped as shown. Concrete used for shaping shall be unreinforced concrete pavement mix. No addition in concrete quantities shall be made for shaping floor of inlets.

No deductions in concrete quantities shall be made for pipe openings. All bars are #4 @ 6" spacing and shall have a minimum clearance of 1 1/2" unless otherwise noted on the plans.

The top of the manhole shall be set level.

The grate shall be fabricated from standard or commercial grade structural steel and black steel pipe. The unit shall be hot dipped, galvanized after fabrication, in accordance with ASTM A123 except the weight of coating shall average not less than 2.0 ounces per square foot of actual surface and no individual test shall show less than 1.8 ounces of coating per square foot of actual surface area.



Floor of inlet or manhole shall be shaped as shown to increase hydraulic efficiency.

ISOMETRIC VIEW

Note: Inlets modified from KDOT Std. No. 648

No.	Revisions	By	Date

**NORTHRIDGE LAKES
PHASE 2
STORM WATER SEWER NO. 463
INLET TYPE C**

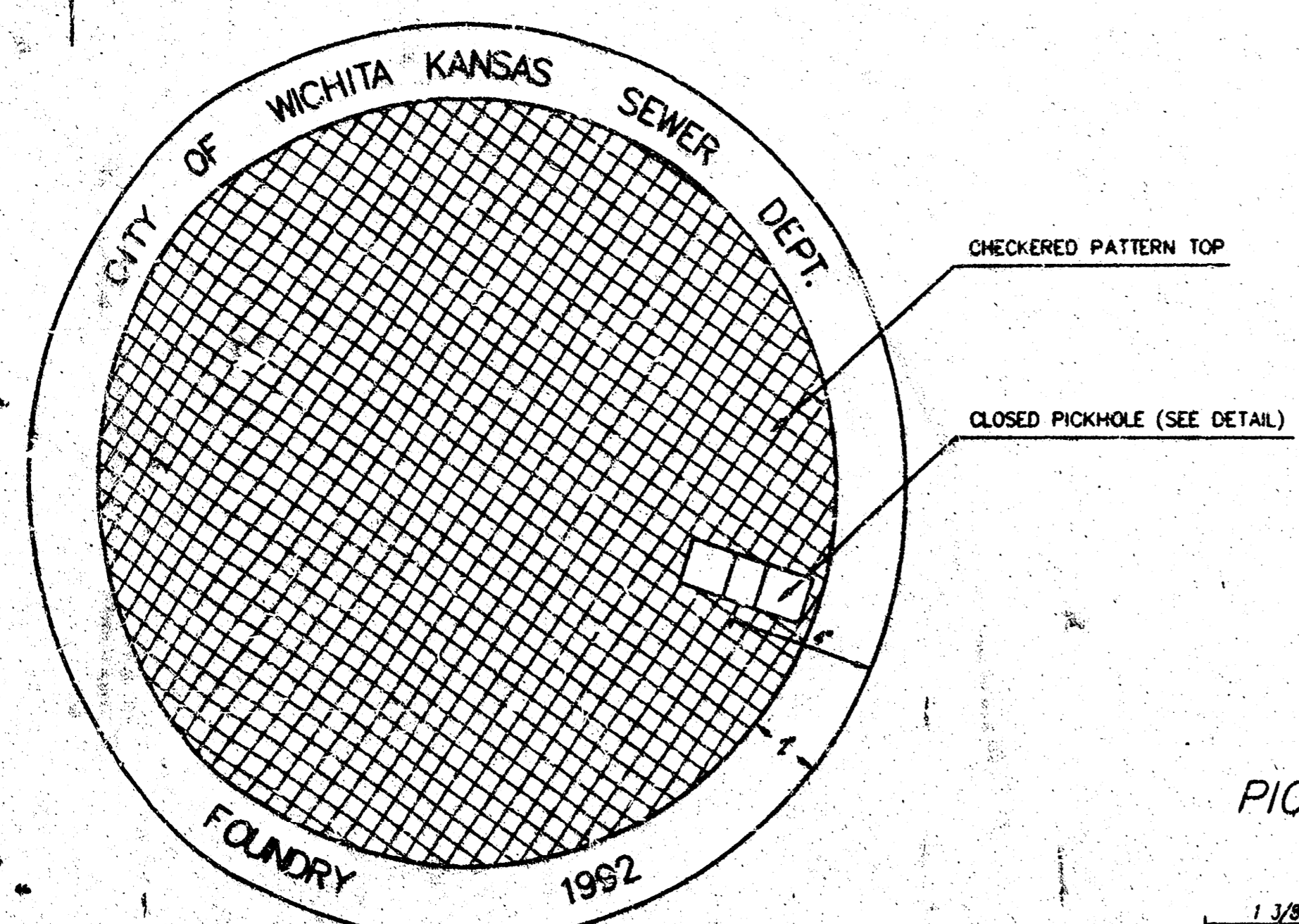
COW PROJ. NO. 468-76-245-82496-000-001

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

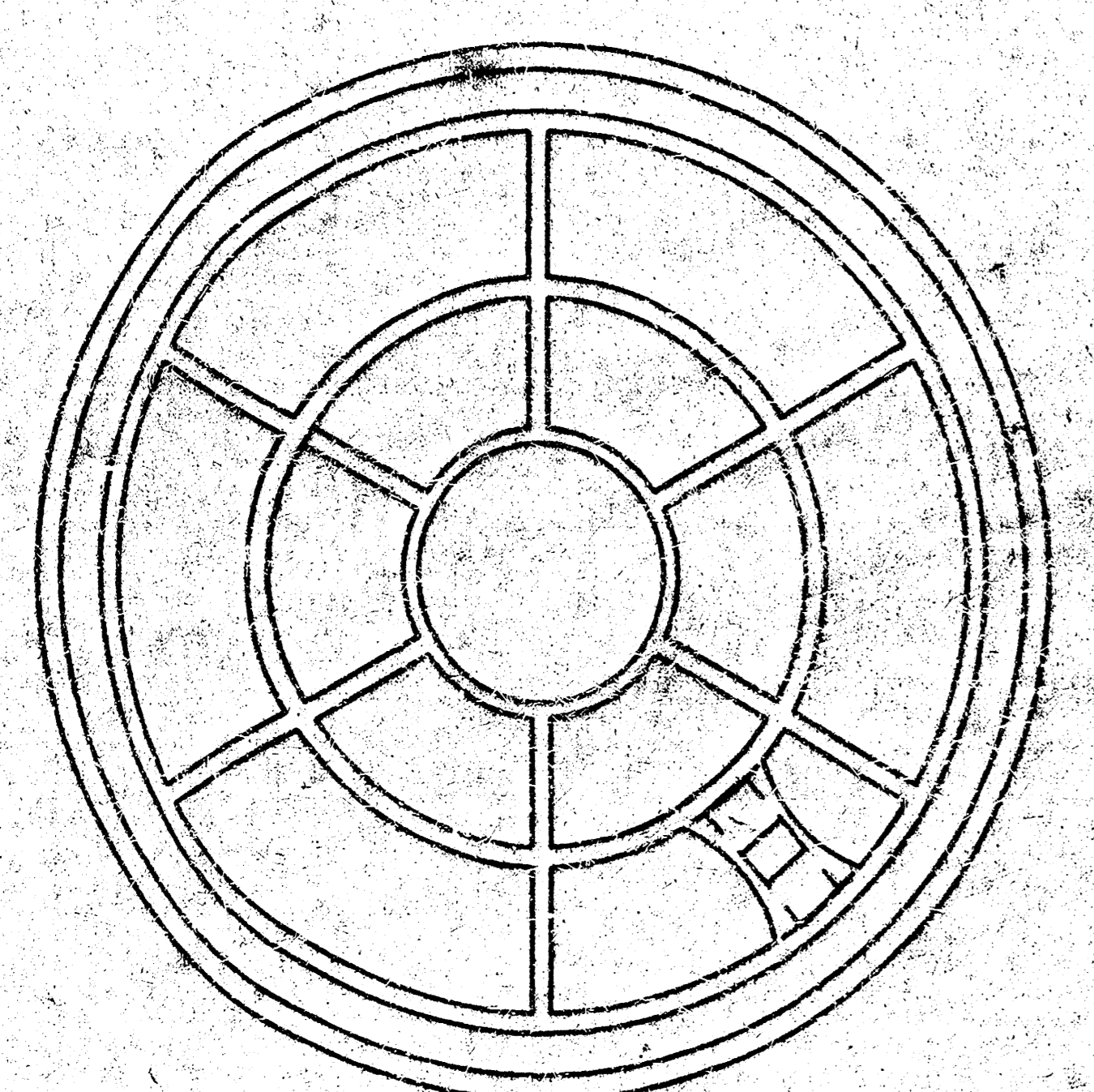
Designed by	RWA	Checked by	RAS
Drawn by	WLL	Date	Apr 11 1996 Job No. 96049-3

i:\1996\96049\003\areainlt.dgn
 Drawn By: KDOI/RAS
 Plotted By: maf 8-6-96, Deliver to: D. Dunn

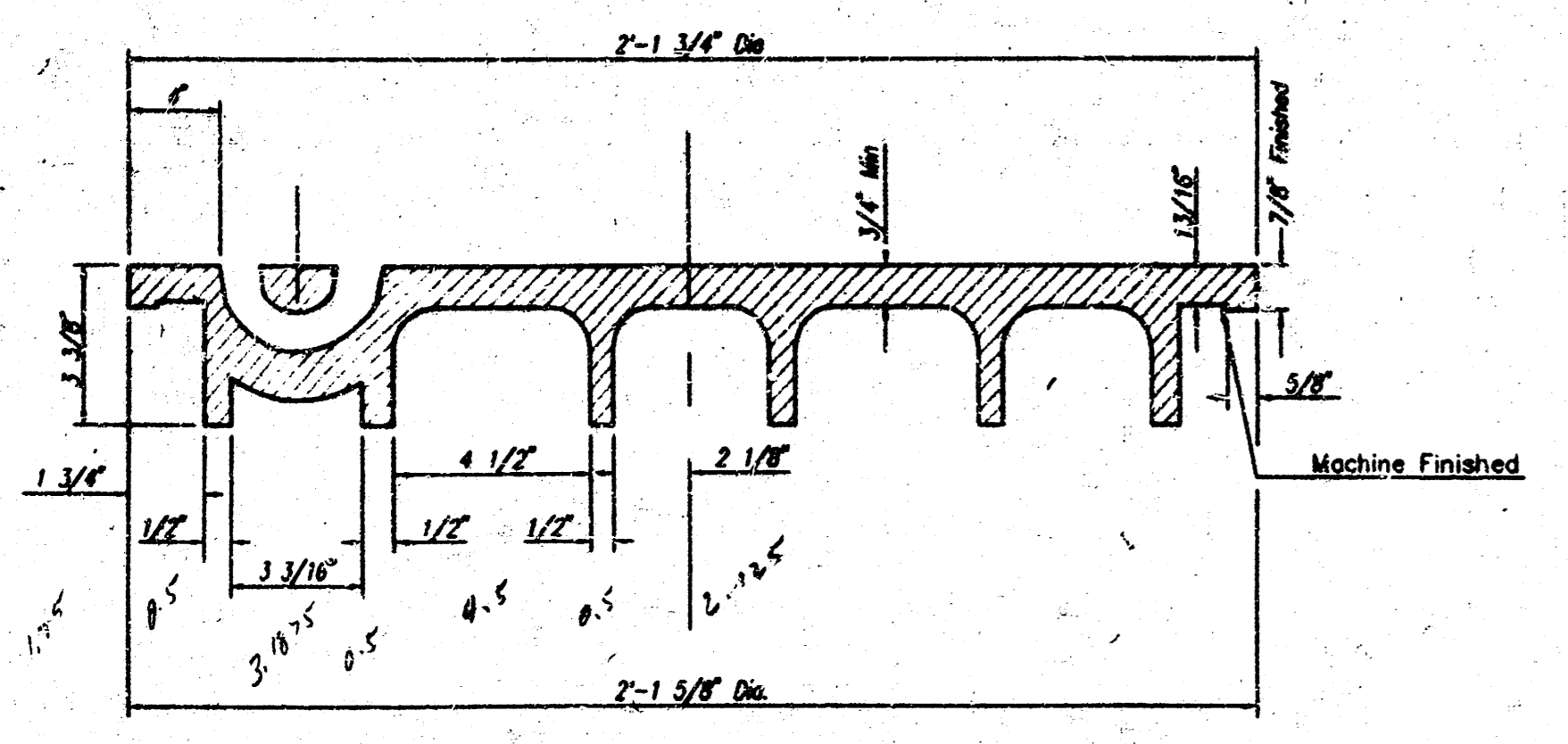
MANHOLE COVER
Weight = 180 Lbs.



TOP VIEW



BOTTOM VIEW

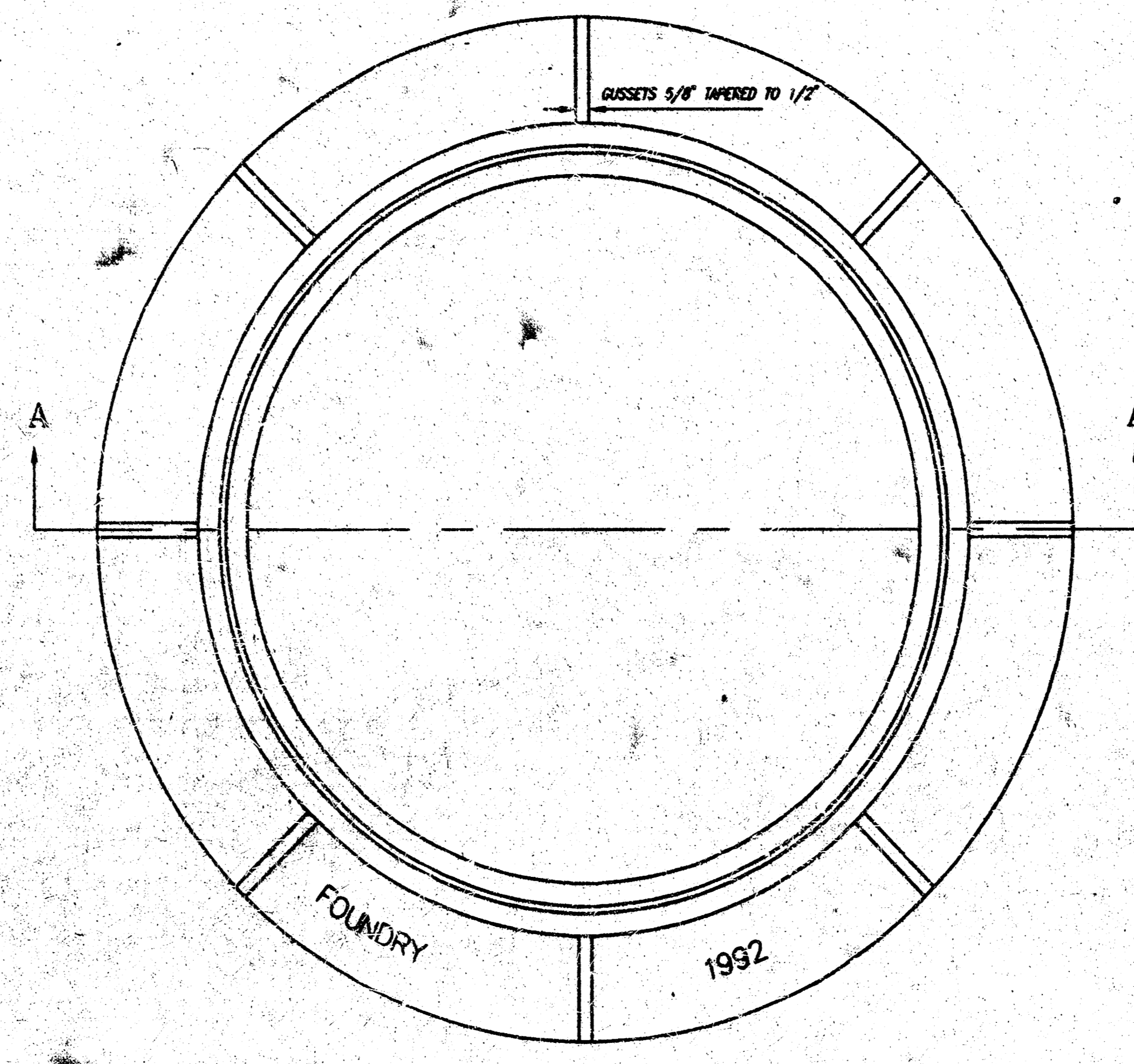


SECTION VIEW

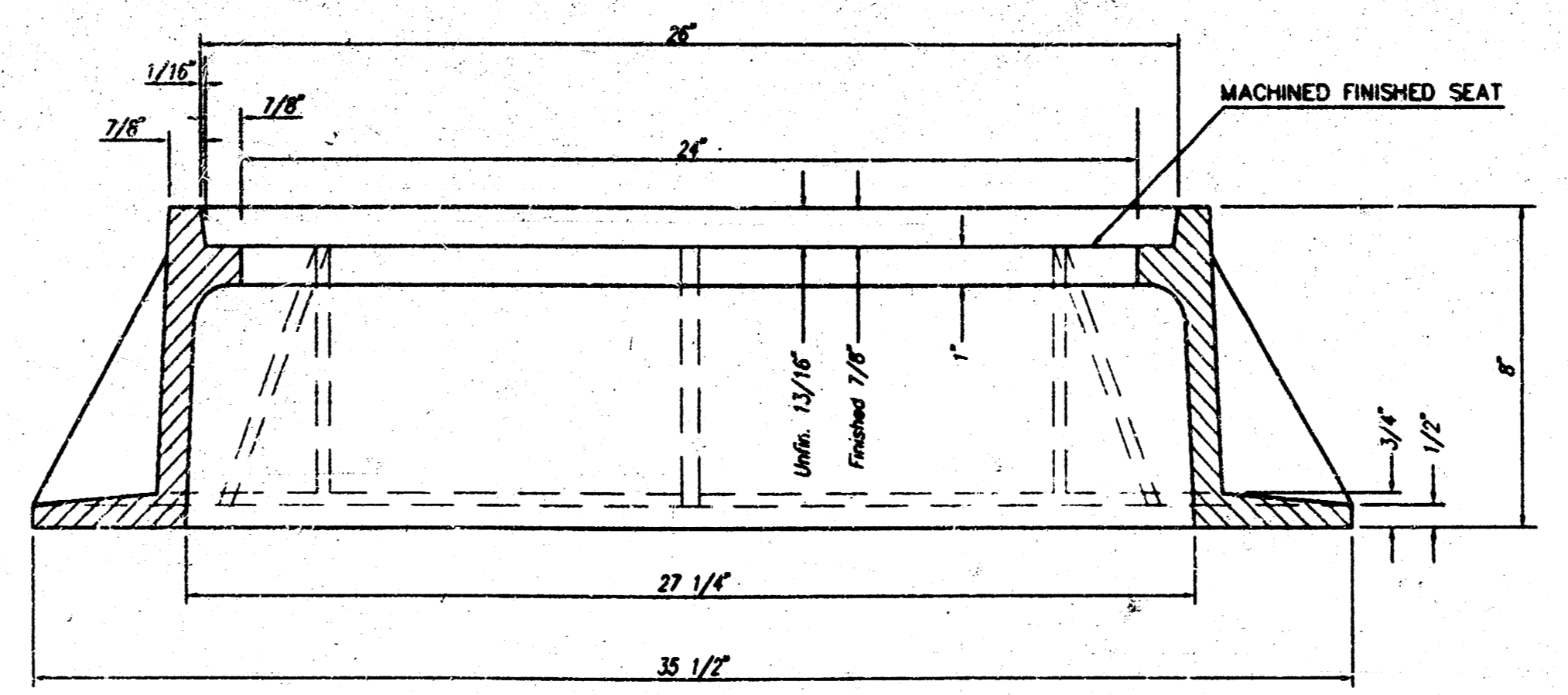
MANHOLE FRAME AND COVER DETAIL

ADOPTED AS STANDARD DESIGN BY
CITY OF WICHITA, KANSAS

MANHOLE FRAME
Weight = 240 Lbs.



TOP VIEW



SECTION A-A

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 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 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 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.

MANHOLE CASTINGS SHALL WEIGH A MINIMUM OF 180 POUNDS ON THE SOLID COVER AND 240 POUNDS ON THE MANHOLE RING. THIS IS A TOTAL OF 420 POUNDS ON A RING AND COVER SET. CASTINGS WEIGHING LESS THAN THE MINIMUM SPECIFICATIONS WILL NOT BE ACCEPTED.

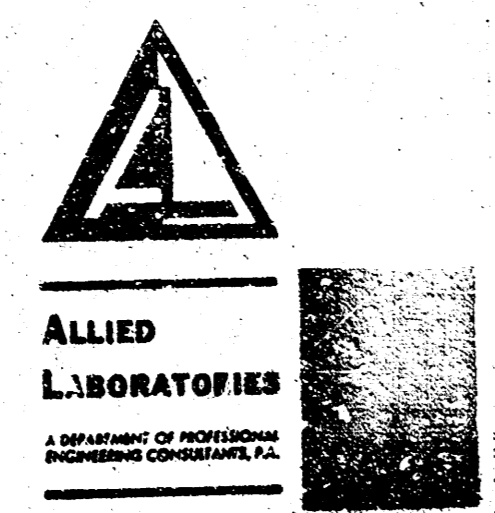
TO INSURE CONFORMANCE TO TENSILE STRENGTH REQUIREMENTS ALL CASTINGS SHALL BE JULIAN HEAT DATED WITH THE FOLLOWING REQUIREMENTS:

TWO TEST BAR SPECIMENS MUST BE POURED WHEN PRODUCING CITY OF WICHITA CASTINGS. ONE OF THE TEST BAR SPECIMENS SHALL BE SENT TO AN INDEPENDENT LABORATORY FOR TENSILE STRENGTH VERIFICATION TESTING. A TEST REPORT SHALL ACCOMPANY EACH SHIPMENT OF CASTINGS. THE HEAT DATE(S) ON THE CASTINGS SHALL RESPOND TO THE TENSILE STRENGTH REPORT(S). THE TEST REPORT WILL BE PAID FOR BY THE SUPPLIER. THE REMAINING TEST BAR SPECIMEN WILL BE SHIPPED TO SEWER MAINTENANCE AT 715 W. HARRY, WICHITA, KANSAS 67213.

MANHOLE FRAME AND COVER DETAIL		REVISED
ADOPTED AS STANDARD DESIGN BY		6/27/83
CITY OF WICHITA, KANSAS		
M. E. LINDEBAK	CITY ENGINEER	
PROJ. NO.	468-76-245-000-000-001	SHEET
		10
		OF
		11

PROJECT NO.	SHEET NO.	TOTAL SHEETS
468-76-245-82498-000-001	//	//

ALLIED LABORATORIES DEPARTMENT
 G. S. GIBSON, P.E., Manager
 W. H. GILBERT, P.E., Assistant Manager
CONSTRUCTION DIVISION
 L. E. HARRIS, P.E., Director, Manager
 A. D. WARD, P.E., Asst. Dir. Construction
 S. A. WELLS, P.E., Asst. Dir. Construction
 J. E. GIBSON, P.E., Asst. Dir. Construction
 J. L. WARD, P.E., Asst. Dir. Construction
SOILS DIVISION
 R. E. HERRMANN, P.E., Manager
 K. J. POYNER, Asst. Mgr.
 R. E. BROWNELL, Asst. Mgr.
 J. L. WARD, P.E., Asst. Dir. Construction



March 4, 1998
 Mr. Dwayne Dunn
 Professional Engineering Consultants, P.A.
 303 South Topoka
 Wichita, Kansas 67202

Re: Subsurface Exploration Results for
 Northridge Lakes Phase II Pond, Wichita, Kansas
 Allied Project No: 72-86048-S-147

Dear Mr. Dunn:

Allied Laboratories has completed a subsurface exploration at the above referenced project. The field exploration results are presented herein and on the attached boring logs, Figures 1 through 4.

The field exploration for this project consisted of drilling 2 exploratory borings to depths of 15 feet to explore subsurface and groundwater conditions. The exploratory borings were drilled at the locations indicated on the boring logs. Ground elevation at the boring locations was supplied by Allied Laboratories Survey Division based on City Datum.

Field exploration results indicate the subsurface conditions at the site generally consist of sandy clay and medium to high plasticity clay overlying silty sand to the depth investigated. Thin clay seams were observed in the silty sand in the lower portions of the borings. Groundwater was not encountered in boring B-1 during drilling. Groundwater was observed in boring B-2 at approximately 14 feet below the existing ground surface. A clay seam was observed in the bottom of boring B-2 which may indicate the groundwater was perched. Previous explorations indicate that perched water on clay seams is common in the project area. Water levels in this formation will vary throughout the year depending on climatic conditions, runoff, etc.

Should you have any questions regarding the data presented or if we may be of further assistance, please contact us at your convenience.

Sincerely,

 Steven M. Herrmann, P.E.
 Geotechnical Division Manager

attachments
 FORWARD ALL MAIL TO
 ALLIED LABORATORIES
 350 SOUTH WASHINGTON
 WICHITA, KANSAS 67202
 CONSTRUCTION DIVISION/GEOTECHNICAL
 DIVISION LOCATED AT
 385 SOUTH WASHINGTON
 WICHITA, KANSAS 67202
 314-288-4487
 FAX NO. 314-288-4348

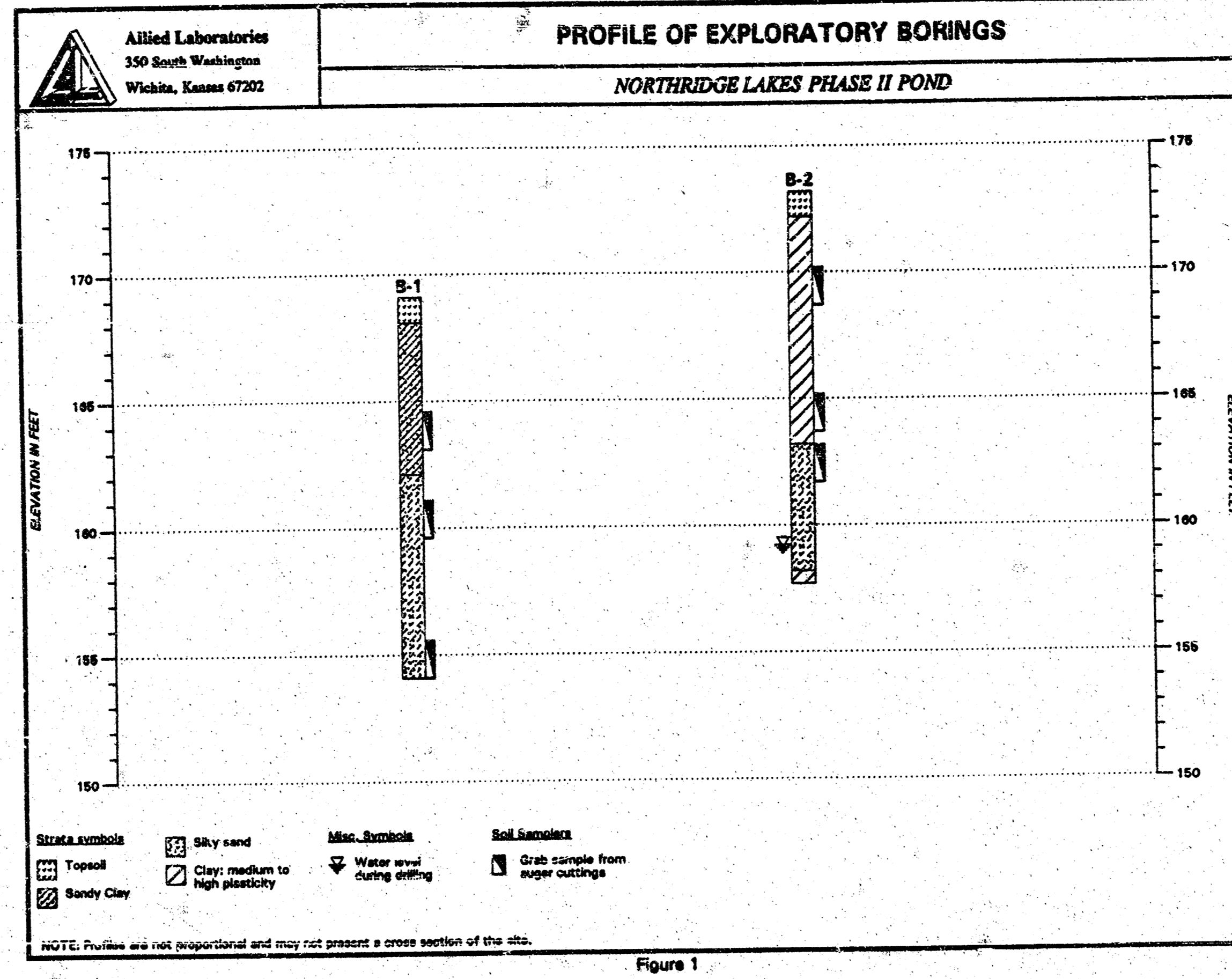


Figure 1

Allied Laboratories 350 South Washington Wichita, Kansas 67202		EXPLORATORY BORING LOG		B-1
PROJECT NO: 72-86048-S-147 BORING LOCATION: Southwest End of Pond: N4931.3 E4241.5				
SCALE: 1 IN = 4 FT. BORING DATE: 1-29-96 DRILLER: KJP LOGGED BY: RBH CHECKED BY: SMH				
WATER LEVEL @ DRILL: Dry DATE: 1-29-96 WATER LEVEL AFTER DRILL: DATE:				
LOG	ELEVATION	SOIL DESCRIPTION	TOOL	SPF
	0	TOPSOIL: silty sand, brown, moist		
	168.1	SANDY CLAY: reddish brown, moist, stiff		
	4		1-1	F
	8		1-2	F
	12		1-3	F
	164.1	End of boring at 15 feet.		

Figure 2

Allied Laboratories 350 South Washington Wichita, Kansas 67202		EXPLORATORY BORING LOG		B-2
PROJECT NO: 72-86048-S-147 BORING LOCATION: Northeast End of Pond: N4641.1 E4197.6				
SCALE: 1 IN = 4 FT. BORING DATE: 1-29-96 DRILLER: KJP LOGGED BY: RBH CHECKED BY: SMH				
WATER LEVEL @ DRILL: 14.8 DATE: 1-29-96 WATER LEVEL AFTER DRILL: DATE:				
LOG	ELEVATION	SOIL DESCRIPTION	TOOL	SPF
	0	TOPSOIL: silty sand, brown, moist		
	172.2	CLAY: dark grey, moist, stiff, medium to high plasticity	2-1	F
	4	... grades to sandy lean clay, grey to yellow-brown, very moist		
	8		2-2	F
	12		2-3	F
	163.2	SILTY SAND: grey, moist, medium dense, fine grained		
	16	... very moist		
	167.7	... saturated		
	158.2	... clayey, possible clay seam		
	167.7	End of boring at 15.5 feet.		

Figure 3

Allied Laboratories 350 South Washington Wichita, Kansas 67202		EXPLORATORY BORING LEGEND	
NORTHBRIDGE LAKES PHASE II POND			
Strata Symbols			
	Topsoil		
	Sandy Clay		
	Silty sand		
	Clay: medium to high plasticity		
Misc. Symbols			
	Depth of wet cave after drilling		
	Water level during drilling		
Soil Samplers			
	Grab sample from auger cuttings		
Notes:			
1. Exploratory borings were drilled on 1-29-96 with a Mobile Drill B-31 drill rig utilizing 4 inch diameter continuous flight auger.			
2. Water levels in the borings were estimated based on depth to wet cave and observation of auger cuttings during drilling.			
3. Borings were located referencing existing site features. Elevations were determined by Allied Laboratories Survey Division by referencing city datum.			
4. Depths to transitions between soil types presented on the exploratory boring logs are approximate within the limits of this investigation.			

Figure 4

PLAN	DATE
REVISED	
NOTED	
CHECKED	
BY	
DATE	

usr:\stn\dgn\1\1996\96049\003\boringlog.dgn
 date plotted: april 23, 1998
 deliver to: dwayne dunn

STORM WATER SEWER NO. 463

BORING LOGS

PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
 WICHITA, KANSAS

Designed by: BER, GDD
 Drawn by: BJS
 Checked by:
 Date: APR 1998
 Job No: 82049-3