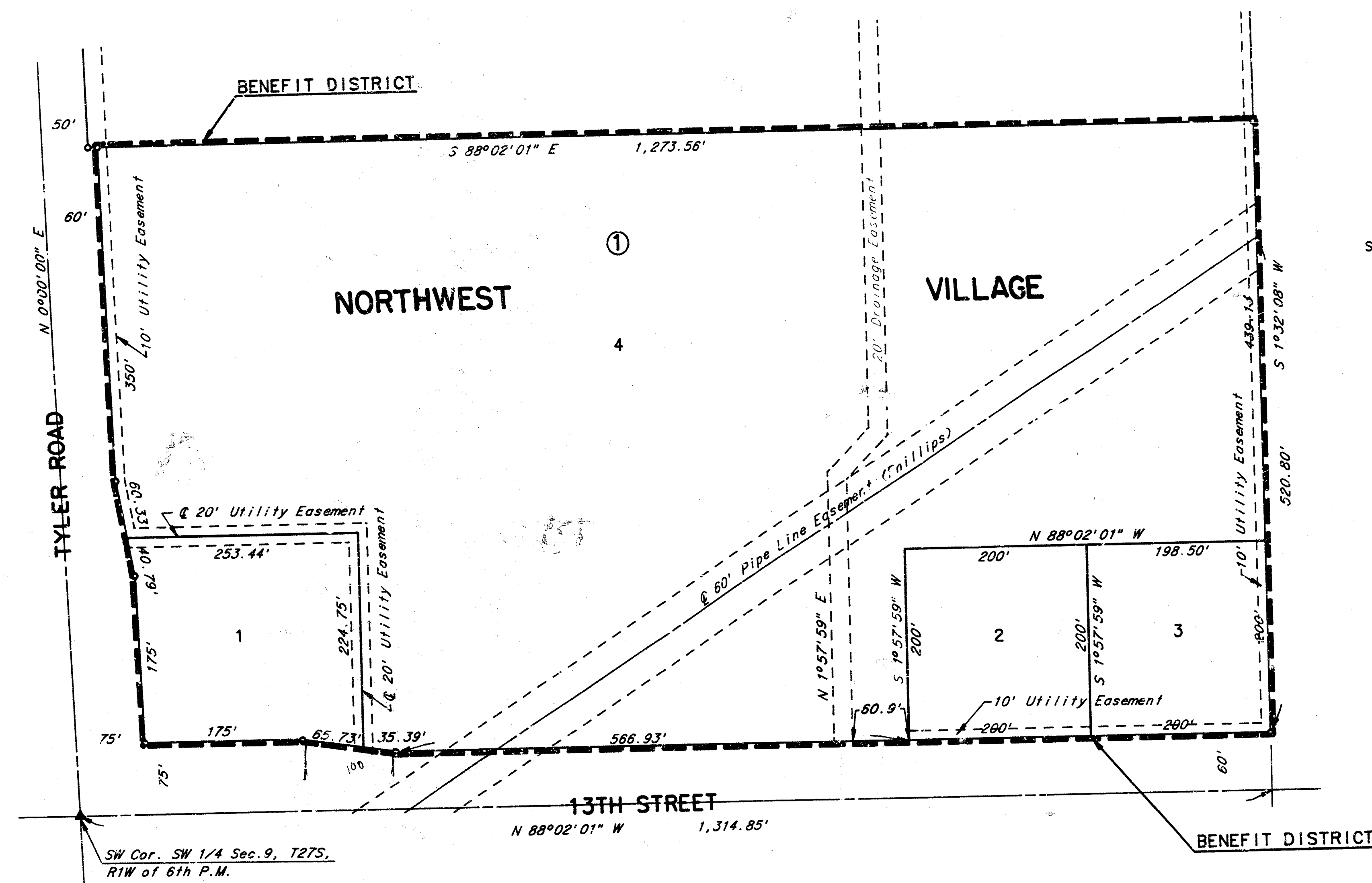


CITY OF WICHITA, KANSAS

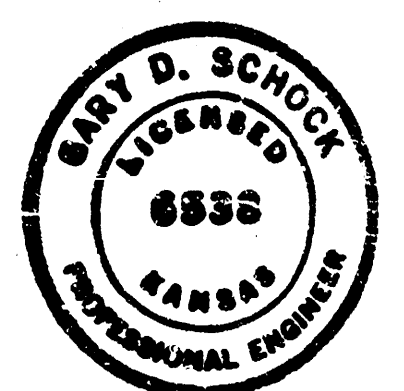
13TH STREET ACCEL AND DECEL LANE (E.L. TYLER ROAD TO E.L. NORTHWEST VILLAGE)

CITY OF WICHITA PROJECT NO. 472-76-245-81017-000-000-001
MICHAEL E. LINDEBAK, P.E., CITY ENGINEER

INDEX OF SHEETS	
SHEET NO. 1	TITLE SHEET
SHEET NO. 2	TYPICAL SECTION & MISC. DETAILS
SHEET NO. 3-5	PLAN SHEETS
SHEET NO. 6	INTERSECTION & 6" WALK DETAILS
SHEET NO. 7	DRIVE DETAILS
SHEET NO. 8	RETAINING WALL DETAILS
SHEET NO. 9	STANDARD TYPE 1A CURB INLET (5'-0")
SHEET NO. 10	STANDARD TYPE 1A CURB INLET (10'-0")
SHEET NO. 11	SPECIAL SHALLOW TYPE B MANHOLE
SHEET NO. 12	MANHOLE FRAME & COVER DETAILS
SHEET NO. 13	R.C.B. TOP MODIFICATIONS
SHEET NO. 14	SIGNALIZATION PLAN (BY OTHERS)
SHEET NO. 15-17	13TH STREET CROSS SECTIONS
SHEET NO. 18	TYLER ROAD CROSS SECTIONS



SCALE: 1"=100'



DECEMBER, 1984
PLANS PREPARED BY
PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
ENGINEERS
WICHITA, KANSAS

GENERAL NOTES

THE ASPHALTIC CONCRETE PAVEMENT BETWEEN THE COMBINED CURB AND GUTTER AND THE EXISTING PAVEMENT SHALL BE PAID AS SQUARE YARDS OF 10" ASPHALTIC CONCRETE PAVEMENT (8" BITUMINOUS BASE).

THE BITUMINOUS BASE UNDER AND BEHIND THE COMBINED CURB AND GUTTER AND UNDER THE 6" WALK SHALL BE PAID AS SQUARE YARDS OF 4" BITUMINOUS BASE.

THE BITUMINOUS BASE IN THE ISLAND, EXCLUSIVE OF THE 6" WALK AREAS, SHALL BE PAID AS SQUARE YARDS OF 18" BITUMINOUS BASE.

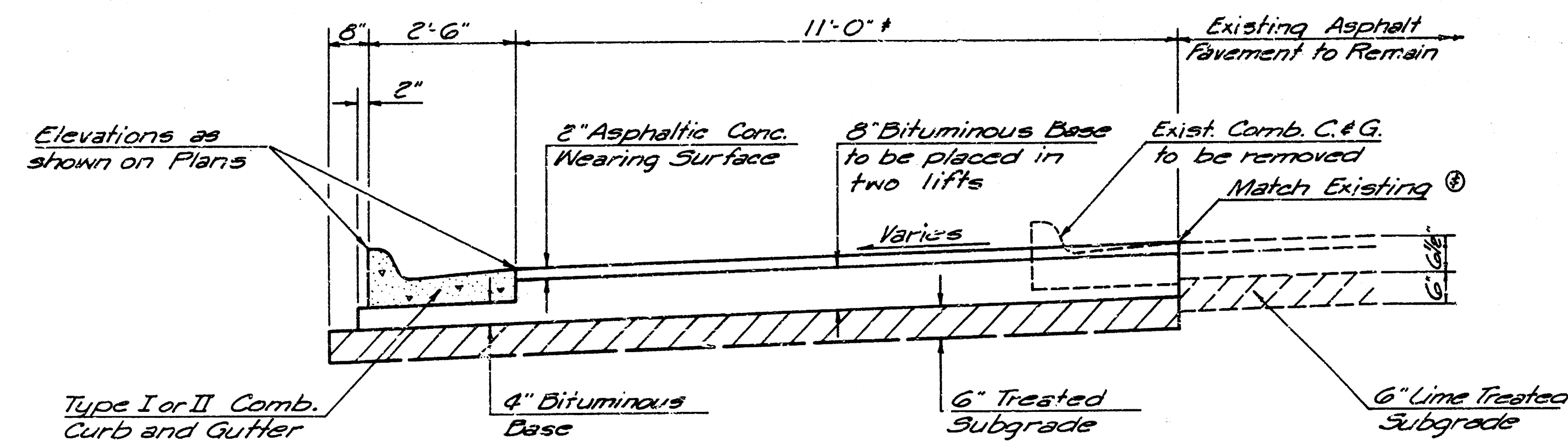
A TACK COAT OF EMULSIFIED ASPHALT (SC-1H OR CSS-1H) SHALL BE APPLIED AT AN APPROXIMATE RATE OF 0.05 GALLONS PER SQUARE YARD BETWEEN EACH LIFT OF ASPHALTIC MATERIAL.

BITUMINOUS BASE AND ASPHALTIC CONCRETE WEARING SURFACE SHALL BE PLACED WITH A LAYDOWN MACHINE HAVING AUTOMATIC CONTROLS FOR LINE AND GRADE.

CONSTRUCTION JOINTS IN EACH LIFT SHALL BE STAGGERED A MINIMUM DISTANCE OF ONE (1) FOOT FROM JOINTS IN PRECEDING LIFTS.

CONTRACTOR TO BID ONLY ONE SUBGRADE TREATMENT ALTERNATIVE WHEN ALTERNATES ARE PROVIDED IN THE PROPOSAL AND CONTRACT. THE ALTERNATE CHOSEN BY THE SUCCESSFUL BIDDER SHALL BE USED IN CONSTRUCTING THIS PROJECT.

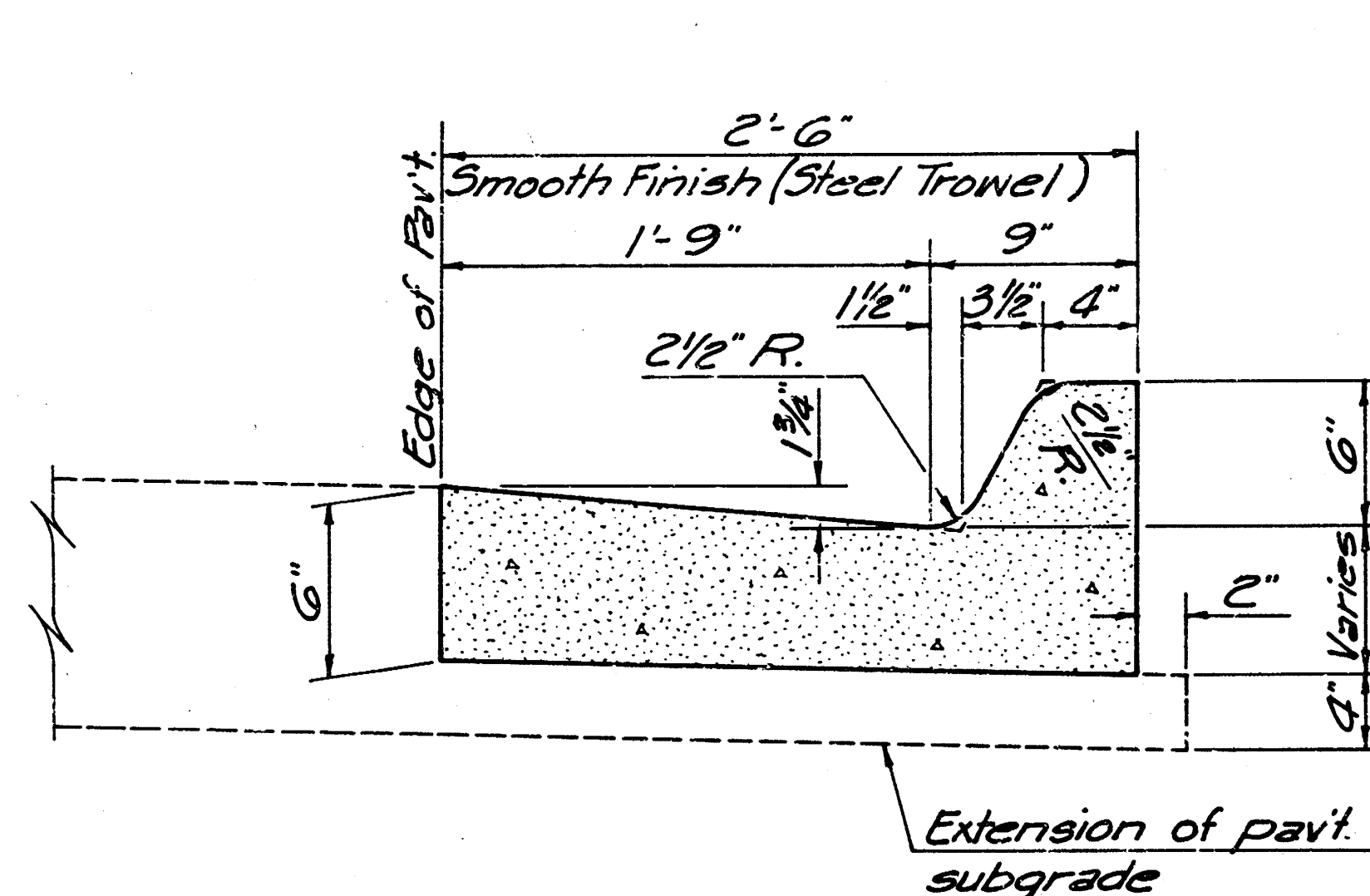
A NEAT VERTICAL CONTACT PLANE SHALL BE PROVIDED BETWEEN THE EXISTING ASPHALT PAVEMENT AND THE NEW 2" ASPHALTIC CONCRETE WEARING SURFACE. SHOULD THE EXISTING EDGE OF PAVEMENT AT THE TIME OF PLACEMENT OF THE NEW 2" ASPHALTIC CONCRETE WEARING SURFACE NOT BE VERTICAL, THE CONTRACTOR SHALL SAW, CUT, OR BY OTHER MEANS ACCEPTABLE TO THE ENGINEER PROVIDE A NEAT VERTICAL CONTACT PLANE. SAWING, CUTTING, OR OTHER WORK REQUIRED TO PROVIDE THE VERTICAL CONTACT PLANE AND ALL ADDITIONAL LABOR, MATERIALS, AND INCIDENTALS SHALL BE CONSIDERED SUBSIDIARY TO OTHER SURFACING ITEMS.



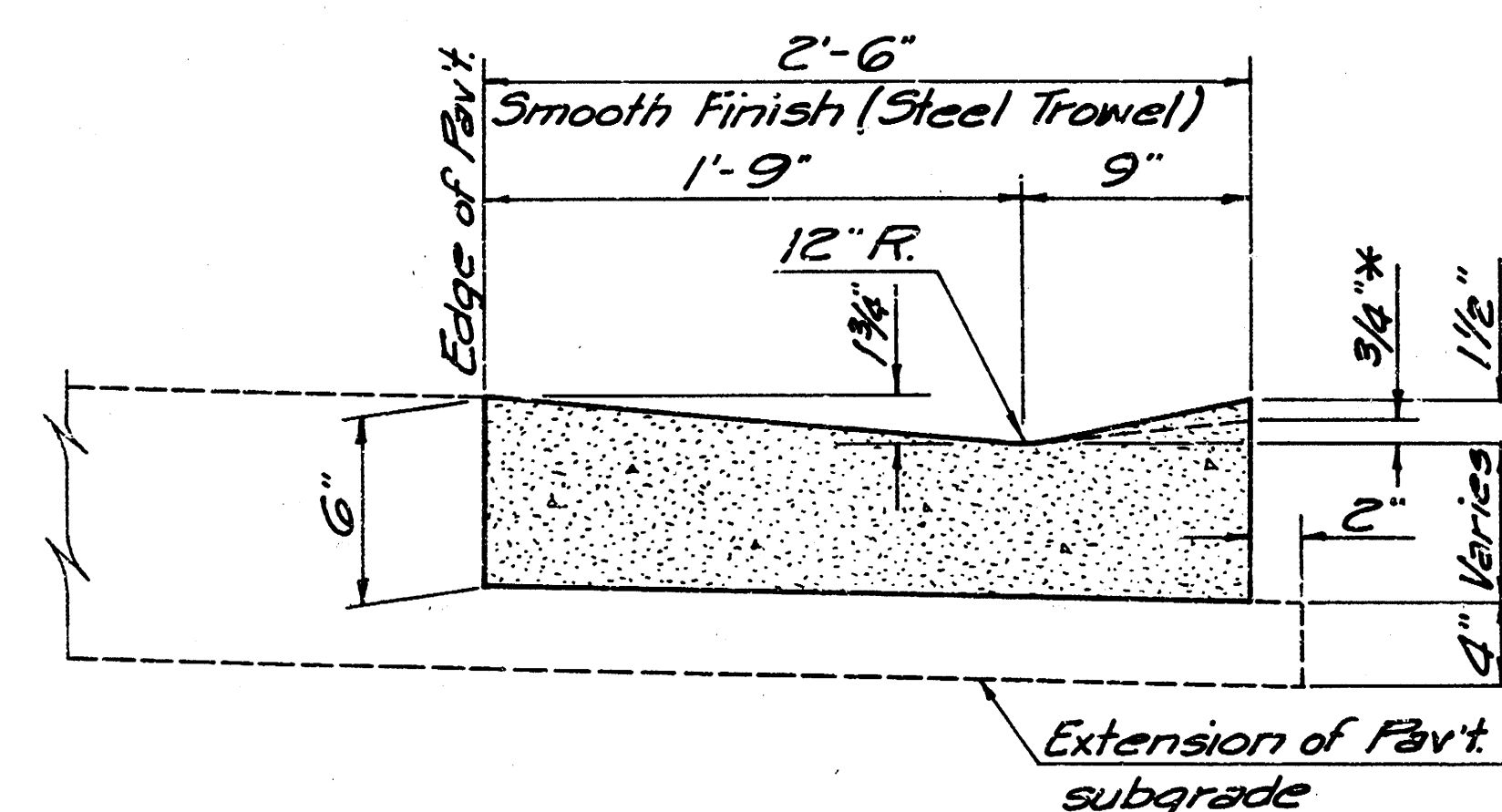
TYPICAL SECTION

Sta. 1059+48.93 to Sta. 1071+45.45

* varies from 11'-0" at Sta. 1070+45.45 to 0'-0" at Sta. 1071+45.45.

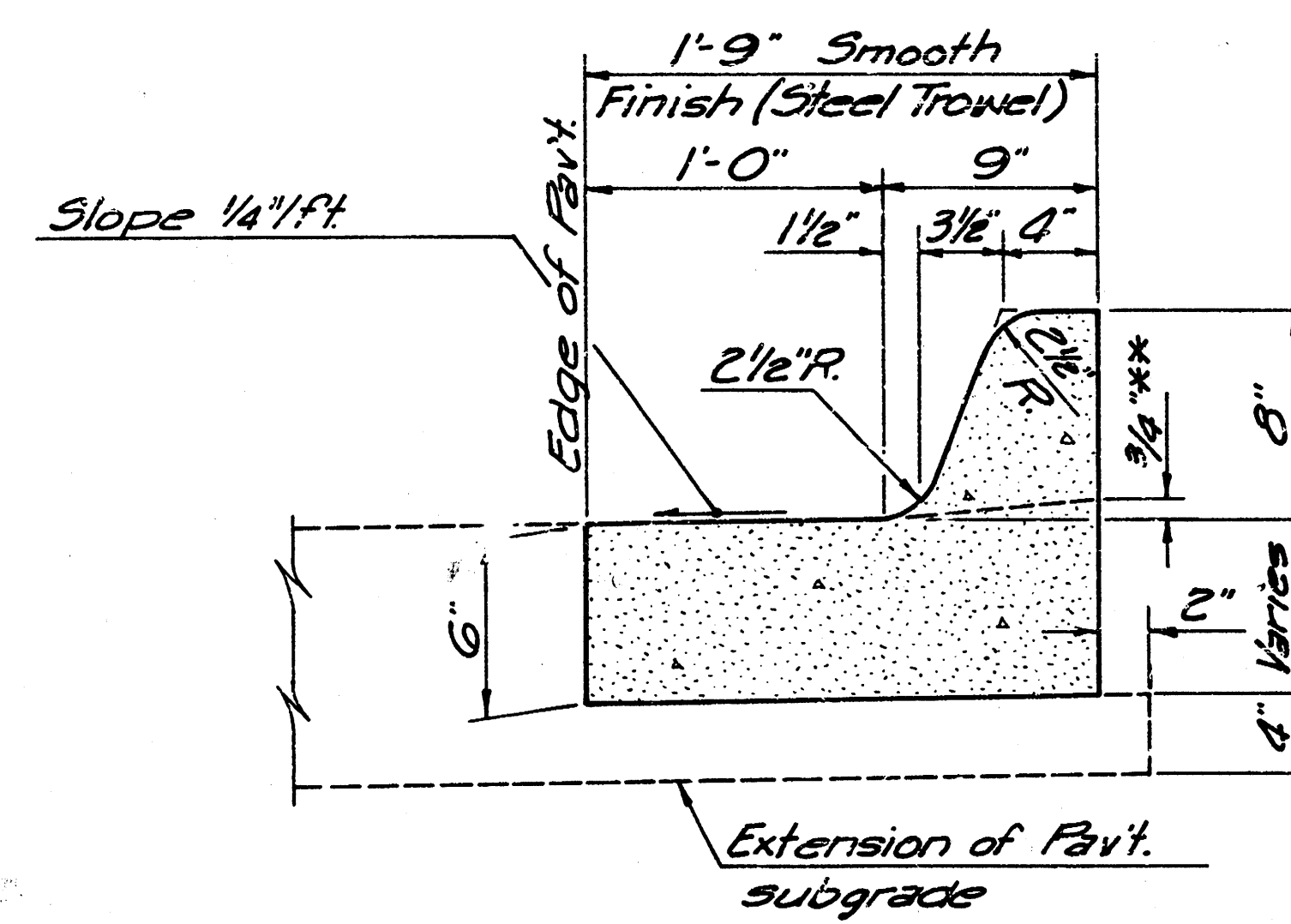


COMBINED CURB & GUTTER - TYPE I

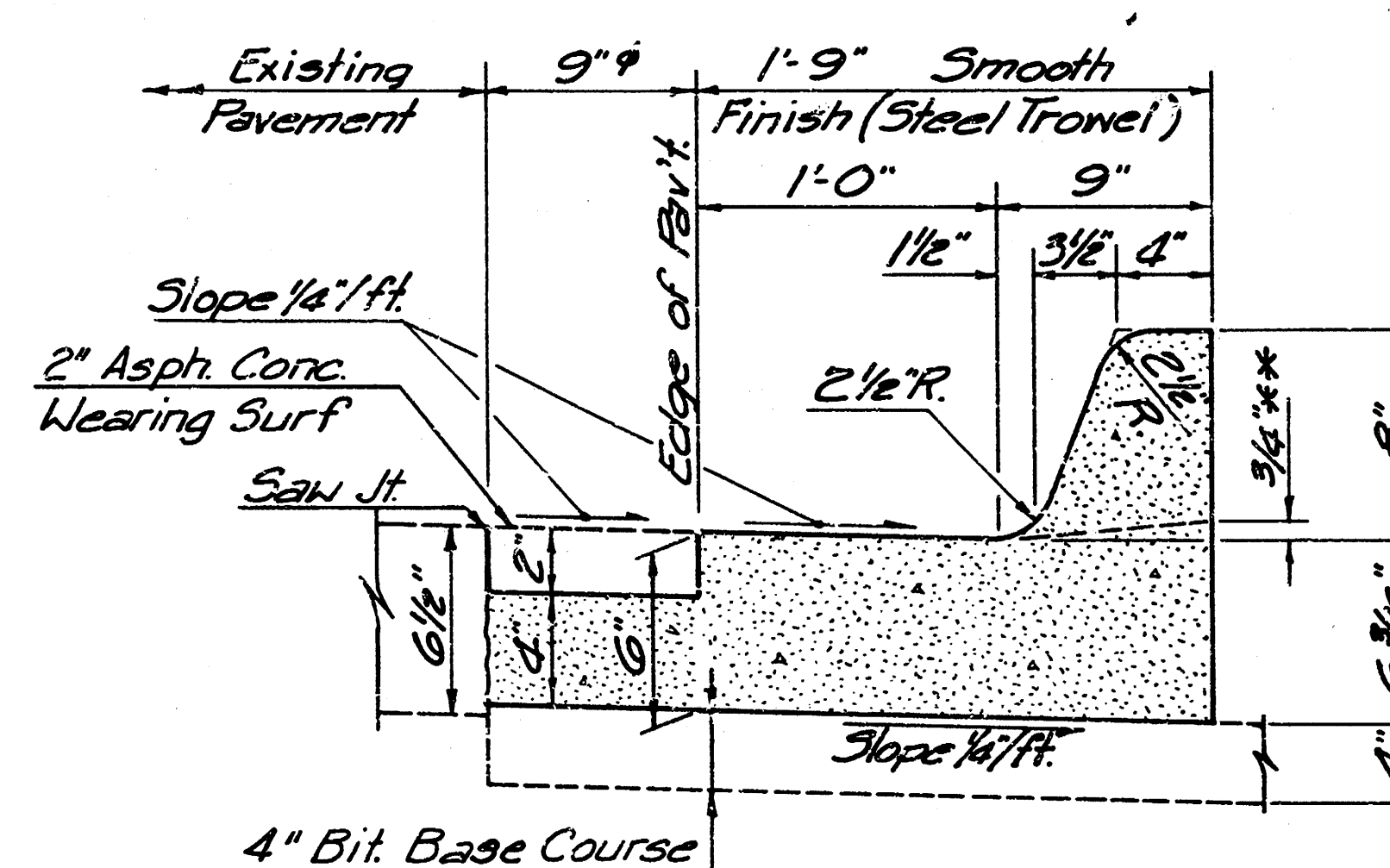


COMBINED CURB & GUTTER - TYPE II

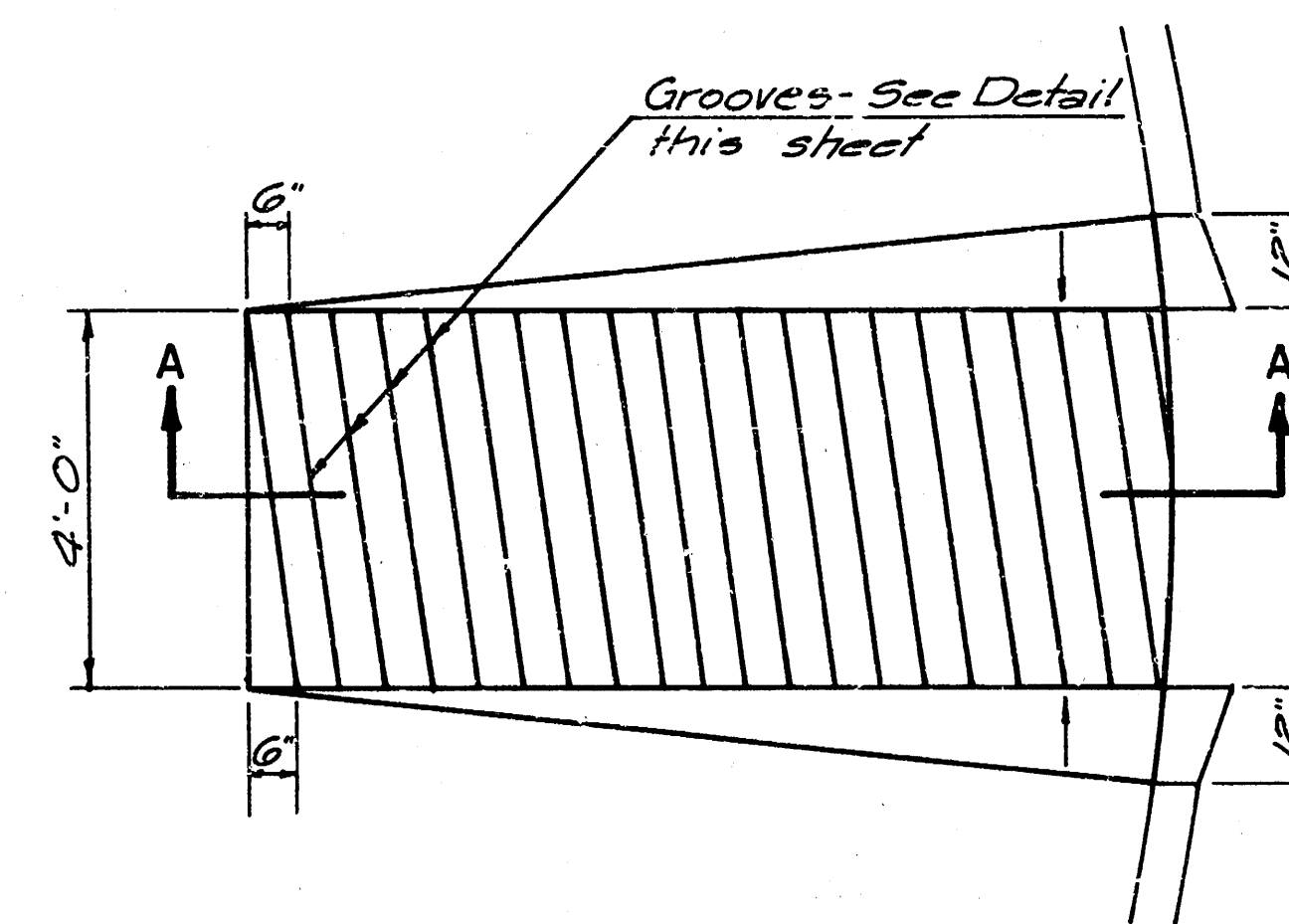
- * 3/4" Lip Curb through Wheelchair Ramp sections.
- ** 3/4" Lip Curb with 12" R. at Flowline through 6" Walk sections.
- * Additional Concrete shall not be paid for directly, but shall be considered subsidiary to "Median Combined Curb & Gutter - Type III."
- * Median Combined Curb & Gutter Type III & Type III Special shall be bid as "Median Combined Curb & Gutter (6" Curb)."
- * Combined Curb & Gutter Type I & II shall be bid as "Combined Curb & Gutter (6" & 1 1/2" Curb)."



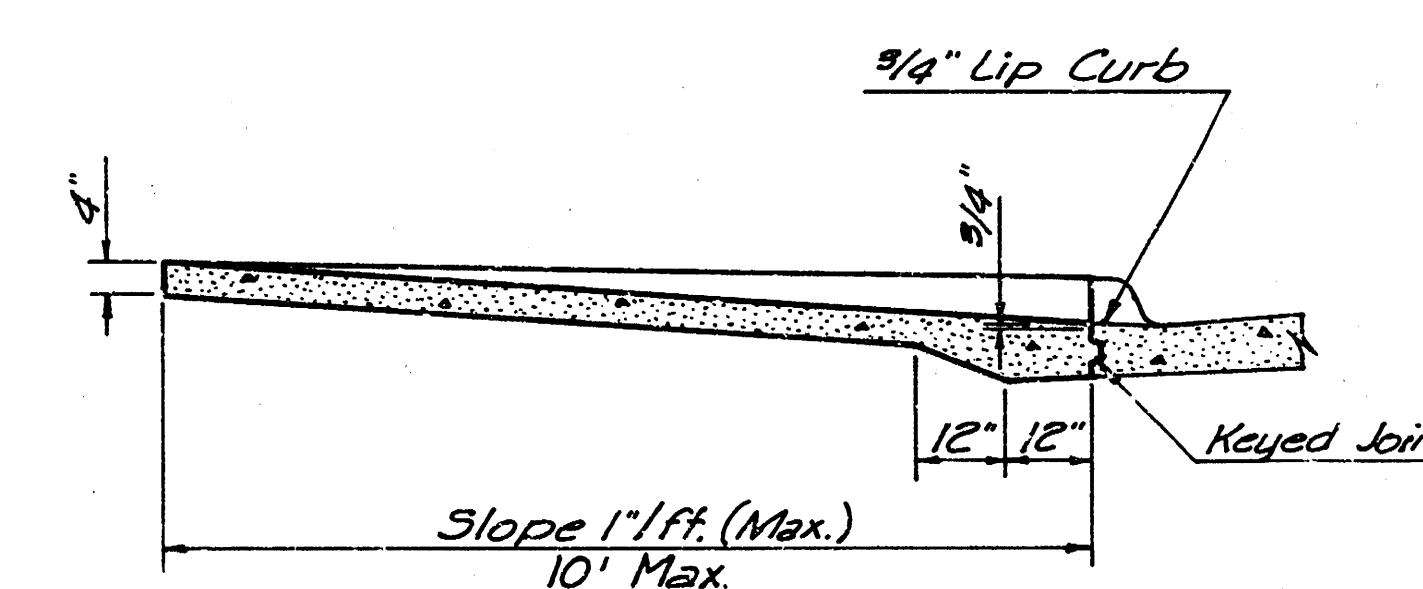
MEDIAN COMBINED CURB & GUTTER - TYPE III



MEDIAN COMBINED CURB & GUTTER - TYPE III SPECIAL

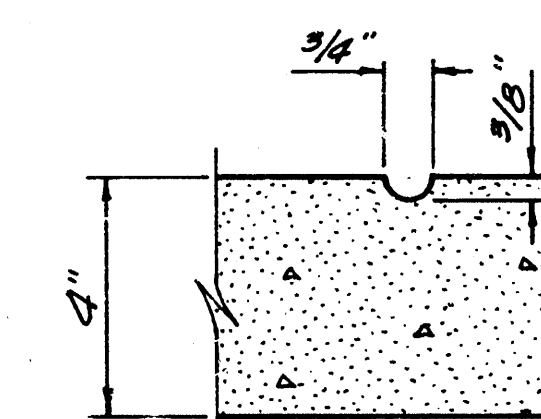


PLAN

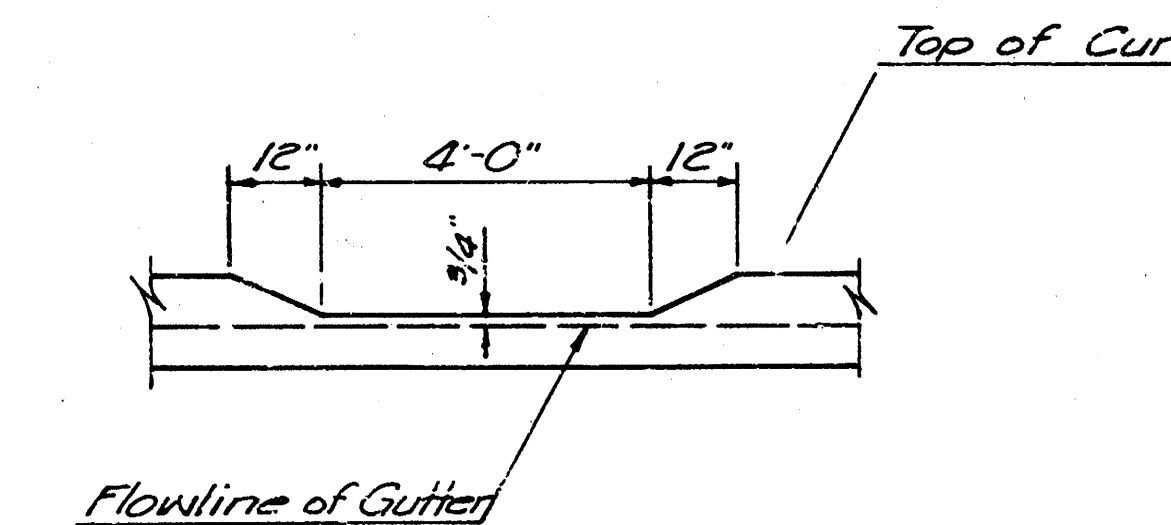


SECTION A-A

STANDARD 4" WHEELCHAIR RAMP DETAILS



GROOVE DETAIL



DEPRESSED CURB DETAIL

TYPICAL SECTION & MISCELLANEOUS DETAILS

PROFESSIONAL ENGINEERING CONSULTANTS, P.A.

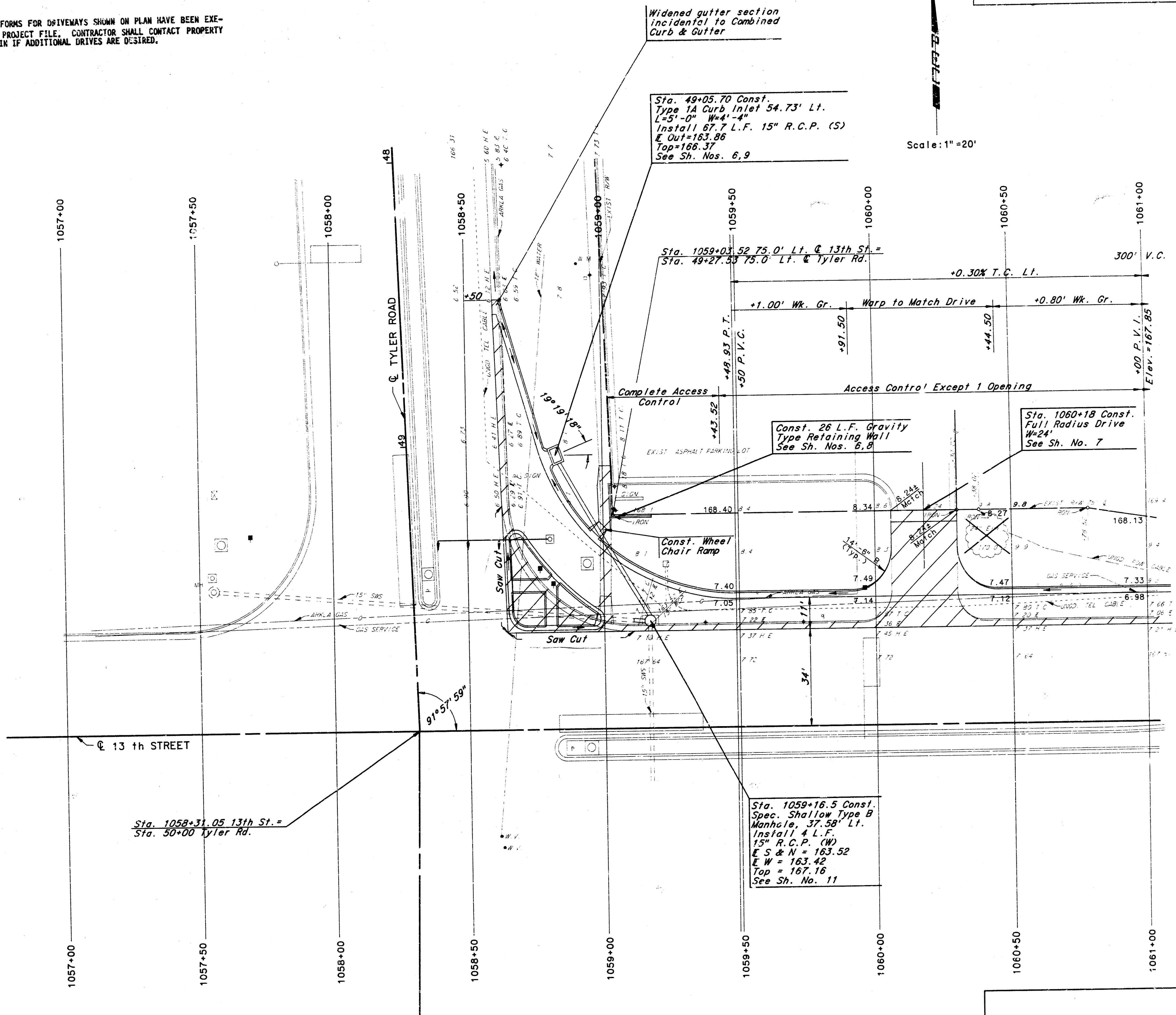
ENGINEERS
WICHITA, KANSAS

Designed by GDD, GDS Checked by GDS
Drawn by GDD Date Dec. 1984 Job No. 84562

GENERAL NOTES:

- INTERURBAN TRAFFIC GENERATED OUTSIDE THE PROJECT AREA AND LOCAL BUSINESS OR APARTMENT TRAFFIC GENERATED WITHIN THE PROJECT AREA ARE TO BE CARRIED THROUGH CONSTRUCTION.
- UTILITY SERVICES, LINES, POLES, VALVE BOXES, METERS, AND ETCETERA ARE TO BE ADJUSTED AS NECESSARY BY OTHERS PRIOR TO OR DURING 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 FROM 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 ALSO BE ENCOUNTERED. THE CONTRACTOR WILL BE REQUIRED TO WORK AROUND EXISTING UTILITIES WITHIN THE RIGHT-OF-WAY WHICH DO NOT CONFLICT WITH PROPOSED CONSTRUCTION.
- A SAW CUT OF AT LEAST ONE-HALF THE DEPTH OF EXISTING SURFACE COURSES OR ONE-FOURTH THE DEPTH OF THE EXISTING TOTAL PAVEMENT THICKNESS SHALL BE PROVIDED AT LOCATIONS WHERE PROPOSED CONSTRUCTION ABUTS AN EXISTING SURFACE COURSE OR PAVEMENT FOR WHICH PARTIAL REMOVAL OF THAT SURFACE OR PAVEMENT IS REQUIRED. SAWED JOINTS WILL NOT BE PERMITTED AND FOR SUCH INSTANCES THE LIMITS OF REMOVAL SHALL EXTEND TO THE EXISTING JOINT. SAW CUTS WILL NOT BE PAID FOR DIRECTLY, BUT SHALL BE CONSIDERED AS SUBSIDIARY TO THE REMOVAL OF THE SURFACE OR PAVEMENT.
- 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.
- CITY OF WICHITA FORCES WILL REMOVE AND REPLACE EXISTING STREET SIGNING AS CONSTRUCTION IS STARTED AND COMPLETED. THE CONTRACTOR WILL COORDINATE HIS ACTIVITIES WITH THE DEPARTMENT OF OPERATIONS AND MAINTENANCE RELATIVE TO REMOVAL OR INSTALLATION OF STREET SIGNING.
- THE CONTRACTOR WILL BE REQUIRED TO COORDINATE HIS WORK WITH TRAFFIC SIGNAL WORK TO BE ACCOMPLISHED BY FORCES OF THE CITY OF WICHITA'S DEPARTMENT OF OPERATIONS AND MAINTENANCE. PORTIONS OF THE GRADING CONSTRUCTION MUST PRECEDE TRAFFIC SIGNAL MODIFICATION CONSTRUCTION. IN GENERAL, CONSTRUCTION IN THE NORTHEAST QUADRANT OF THE INTERSECTION OF 13TH AND TYLER ROAD SHALL PROCEED AS FOLLOWS:
 - THE CONTRACTOR SHALL REMOVE THE EXISTING CURB RETURN CURB AND GUTTER AND FILLET PAVEMENT AND ROUGH GRADE THE PROPOSED FREE RIGHT TURN LANE WITHOUT DISTURBING THE EXISTING SIGNAL INSTALLATION.
 - PERSONNEL OF THE CITY OF WICHITA'S DEPARTMENT OF OPERATIONS AND MAINTENANCE WILL THEN INSTALL TRAFFIC SIGNAL MODIFICATIONS. MODIFICATIONS WILL INCLUDE NEW SIGNAL POLE AND BASE, NEW SERVICE BOXES, NEW JUNCTION BOXES, NEW LOOP DETECTOR, AND ADDITIONAL CONDUIT WITH TRAFFIC SIGNAL WIRING AS SHOWN. IT IS ANTICIPATED THAT TRAFFIC SIGNAL MODIFICATION WORK WILL TAKE APPROXIMATELY ONE (1) WEEK.
 - THE CONTRACTOR SHALL THEN COMPLETE GRADING AND PAVING OF THE FREE RIGHT TURN LANE AND ISLAND WHILE COORDINATING ANY REMAINING HIGH TRAFFIC SIGNAL MODIFICATIONS WITH THE DEPARTMENT OF OPERATIONS AND MAINTENANCE.
- THE CONTRACTOR SHALL NOTIFY PIPELINE COMPANIES AT LEAST 24 HOURS IN ADVANCE OF ANY WORK BEING PERFORMED OVER AND/OR ADJACENT TO PIPELINES.
- PROPERTIES WITHIN THE PROJECT LIMITS WHICH HAVE UNDERGROUND SPRINKLER SYSTEMS IN PUBLIC RIGHT-OF-WAY WHICH CONFLICT WITH NEW CONSTRUCTION HAVE BEEN NOTIFIED TO REMOVE SUCH IMPROVEMENTS. CONTRACTOR WILL BE REQUIRED TO REMOVE SUCH IMPROVEMENTS SHOULD THEY NOT BE REMOVED BY THEIR OWNER AT THE TIME OF CONSTRUCTION OF THE PROJECT. THE CONTRACTOR WILL BE REQUIRED TO SALVAGE ALL SPRINKLER HEADS AND/OR VALVES AND GIVE SUCH MATERIAL TO THEIR OWNER. PORTIONS OF UNDERGROUND SPRINKLER SYSTEMS NOT IN CONFLICT WITH NEW CONSTRUCTION SHALL BE PROTECTED FROM DAMAGE AND SHALL REMAIN IN PLACE. ALL WORK IN CONNECTION WITH UNDERGROUND SPRINKLER SYSTEMS SHALL BE CONSIDERED AS SUBSIDIARY TO THE CONTRACT PAY ITEMS OF WORK.
- WIDENED GUTTER SECTION OF COMBINED CURB AND GUTTER AT INTERSECTIONS WILL NOT BE PAID FOR DIRECTLY, AND THIS COST SHALL BE CONSIDERED AS SUBSIDIARY TO THE OTHER CONTRACT PAY ITEMS OF WORK.
- 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 CONFLICT WITH PROPOSED NEW CONSTRUCTION SHALL BE SAVED AND PROTECTED FROM DAMAGE.
- LIMITS OF EARTHWORK SHALL MATCH EXISTING GROUND ELEVATIONS AT THE RIGHT-OF-WAY LINE UNLESS OTHERWISE NOTED ON THE PLANS WITH A NEW FINISHED GRADE ELEVATION. WHEN A NEW FINISHED GRADE ELEVATION IS SHOWN, THE EARTHWORK SHALL EXTEND ONE FOOT BEYOND THE RIGHT-OF-WAY LINE AND THEN SLOPED UP OR DOWN USING PERMISSIBLE SLOPES TO MATCH THE EXISTING GROUND SURFACE.
- CONTRACTOR SHALL GIVE PROPERTY OWNERS ADJUTING THIS PROJECT, WHOSE PROPERTY WILL BE LOWER THAN THE NEW FINISHED GRADE ELEVATIONS AT THE RIGHT-OF-WAY LINES, AN OPPORTUNITY TO UTILIZE EXCESS EXCAVATED MATERIAL FROM THE PROJECT TO REGRADE THEIR PROPERTY TO DRAIN TO THE NEW PAVEMENT. CONTRACTOR WILL BE REQUIRED TO DUMP AND SPREAD THE EXCESS MATERIAL AS REQUIRED BY THE SPECIFICATIONS WHEN REQUESTED BY THE PROPERTY OWNER. THE CONTRACTOR SHALL ASCERTAIN THAT A DIRT ORDER FORM HAS BEEN PROPERLY EXECUTED BY THE PROPERTY OWNER BEFORE ANY SUCH EXCESS MATERIAL IS DELIVERED TO SUCH PROPERTIES.
- THE CONTRACTOR WILL BE PERMITTED TO BID ONLY ONE OF THE ALTERNATE TYPES OF SUBGRADE TREATMENT. THE TYPE BID BY THE SUCCESSFUL BIDDER WILL BE THE TYPE OF SUBGRADE TREATMENT USED TO CONSTRUCT THE PROJECT.
- 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 OR A LICENSED PROFESSIONAL ENGINEER IN ACCORDANCE WITH STATE LAWS.

- DRIVEWAY REQUEST FORMS FOR DRIVEWAYS SHOWN ON PLAN HAVE BEEN EXECUTED AND ARE IN PROJECT FILE. CONTRACTOR SHALL CONTACT PROPERTY OWNERS TO ASCERTAIN IF ADDITIONAL DRIVES ARE DESIRED.



Note: Elevations shown are "Top of Curb", "High Edge" and "Property Line"

See Sh. No. 6 for Intersection Details

B.M. - "B" Railroad spike in S.E. face of power pole @ N.W. corner of 13th and Tyler 69' L.F. @ Sta. 1057+71 Elev. = 166.83

B.M. - "F" "D" cut in top of south curb 700' E. of Tyler - 32' Rt. & Sta. 1065+31 Elev. = 163.03

PROJECT NO.	SHEET NO.	TOTAL SHEETS
47C-76-243-B-017-000-000-001	3	18

Scale: 1"=20'

13TH STREET NORTH & TYLER ROAD
RIGHT TURN LANE
STA. 1058+63.90 TO STA. 1061+00.00

PROFESSIONAL ENGINEERING CONSULTANTS, P.A.

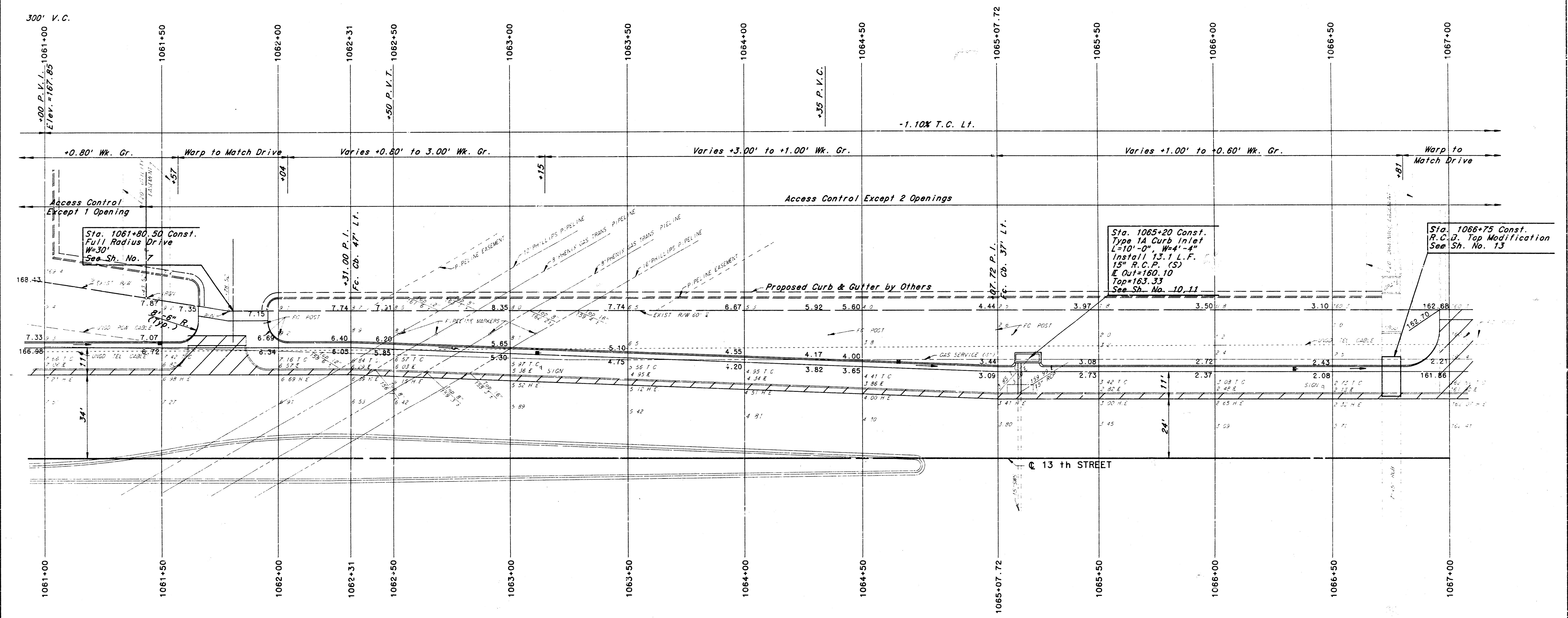
ENGINEERS
WICHITA, KANSAS

Designed by	G.D.S., G.D.D.	Checked by	G.D.S.
Drawn by	J.G.P.	Date	Dec., 1984
		Job No.	84562

3/18

Note: Drive Lt. Sta. 1061+80.50 shall not be closed at the same time as drive Lt. Sta. 1067+18.

Scale: 1"=20'

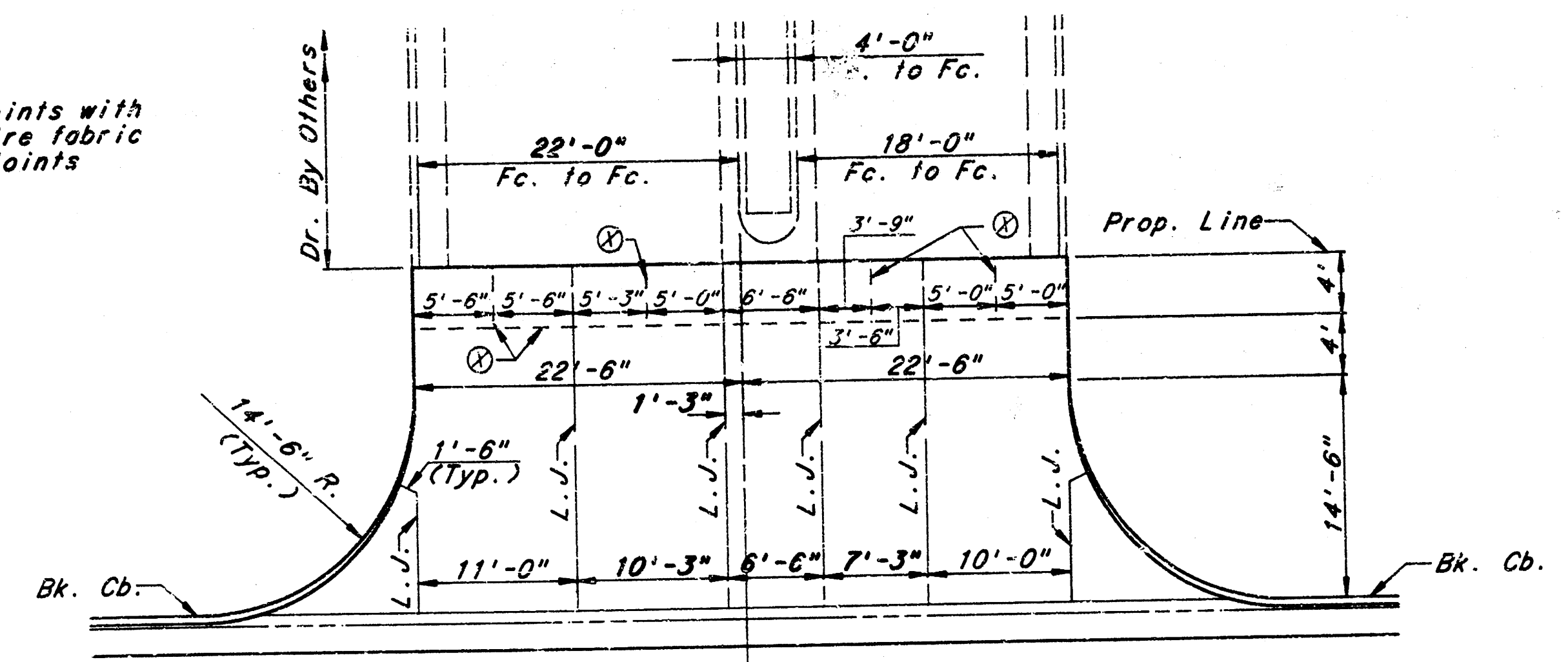


② Tooled joints with welded wire fabric through joints

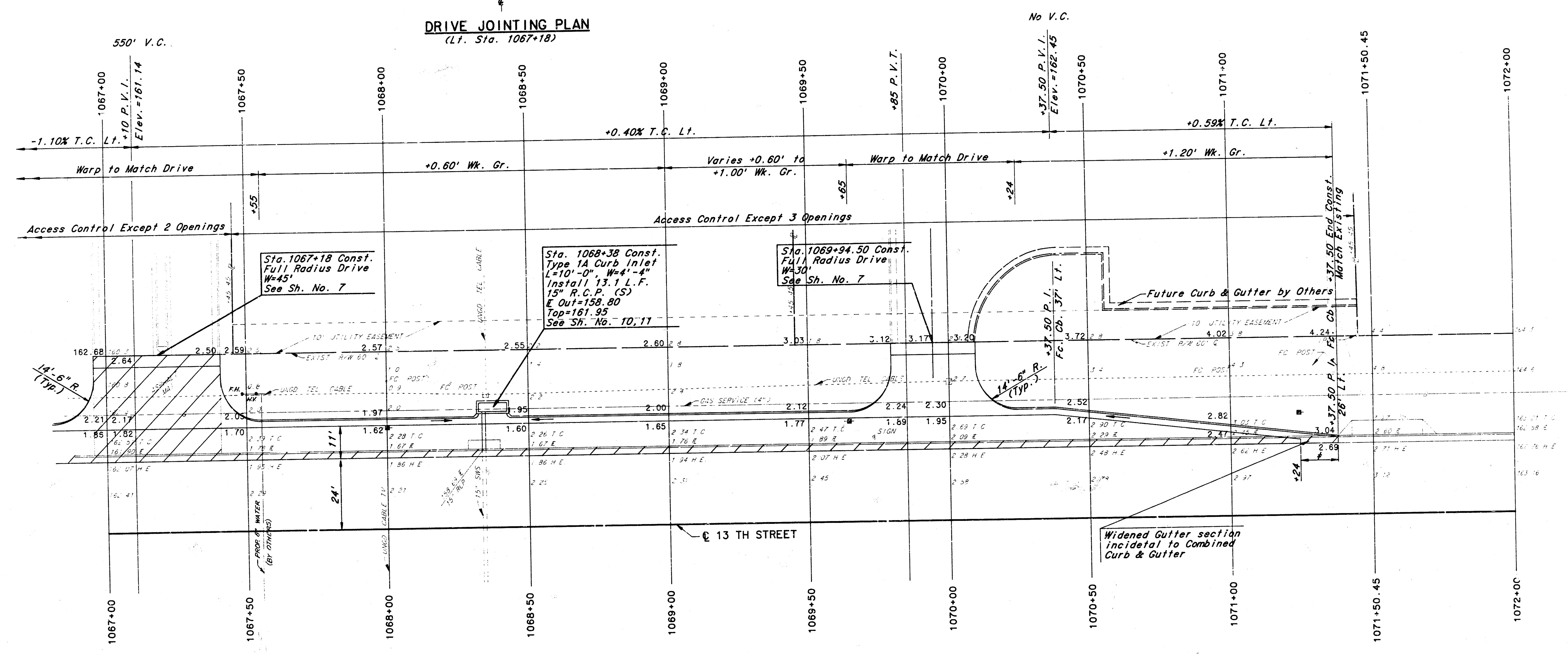
NOTE: DRIVES SHALL BE CONSTRUCTED ONLY AFTER A DRIVEWAY REQUEST FORM HAS BEEN PROPERLY EXECUTED.

SEE MK 15 SHEET

Scale: 1"=20'

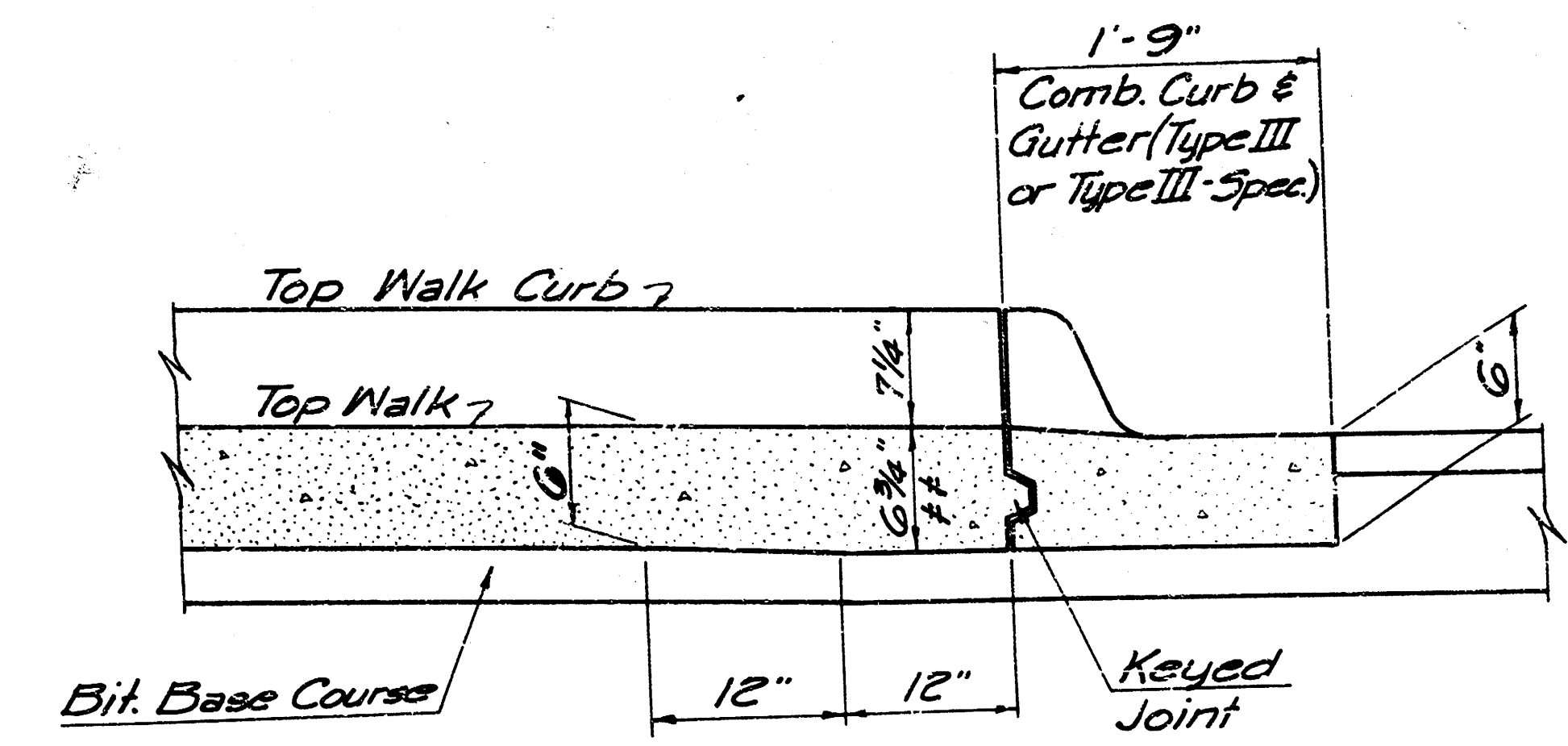
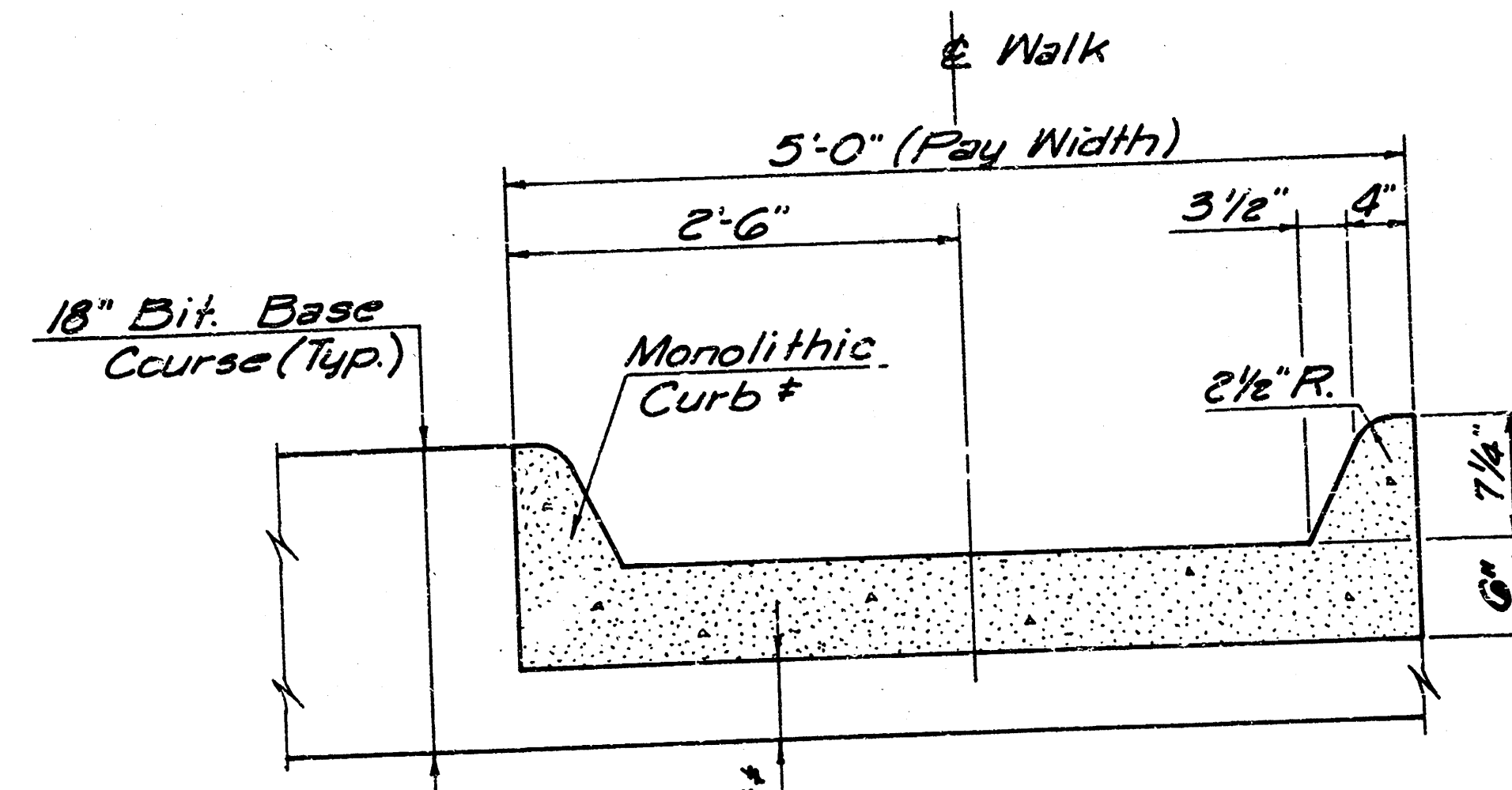
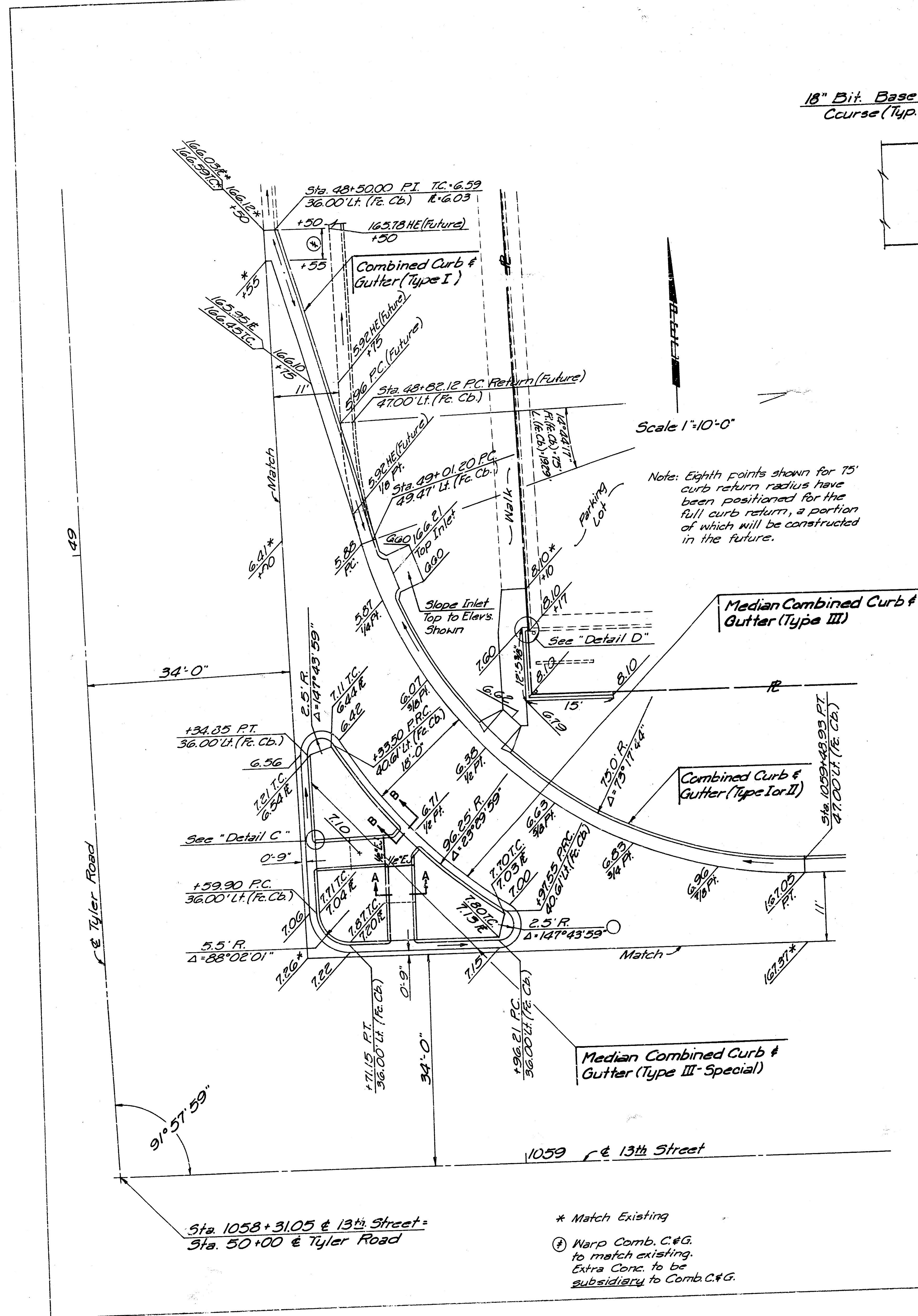


DRIVE JOINTING PLAN
(Lt. Sta. 1067+18)



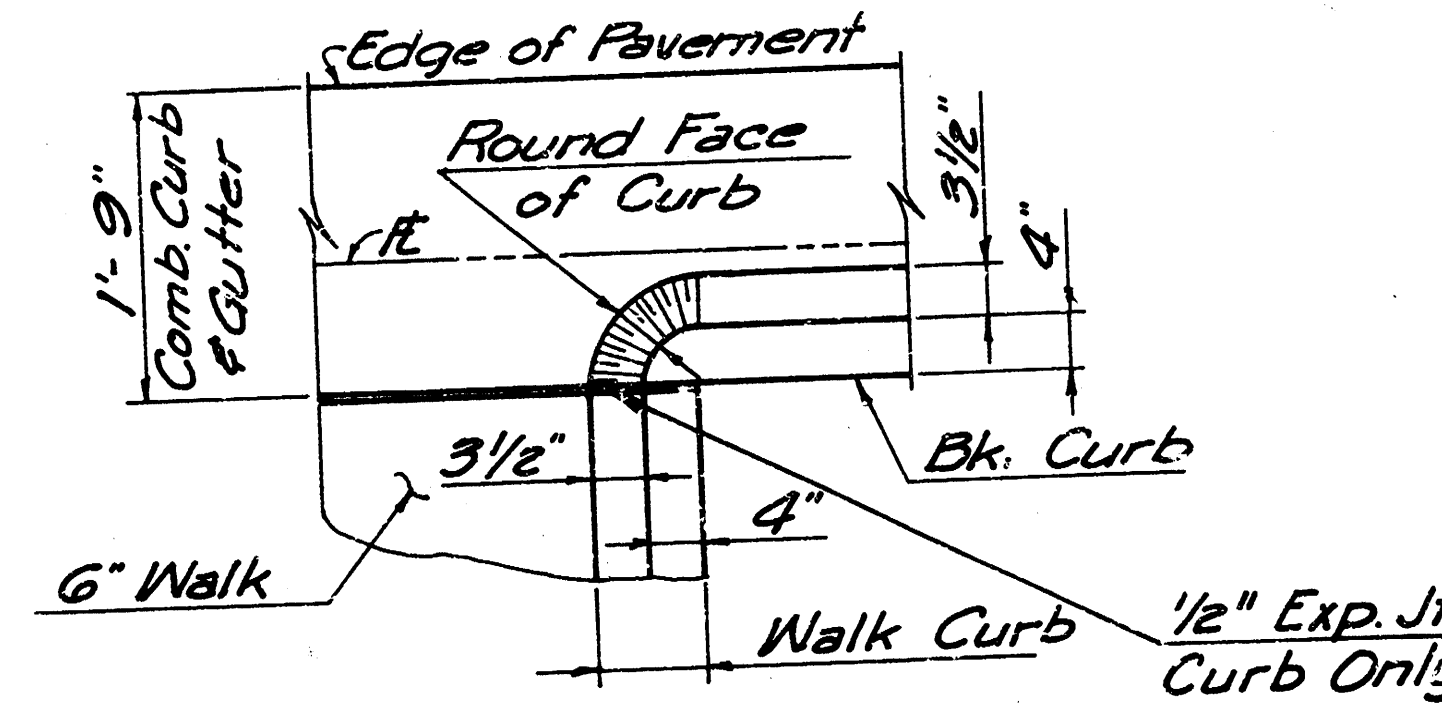
* Transition to Match Existing

13TH STREET NORTH & TYLER ROAD RIGHT TURN LANE STA. 1067+00 TO STA. 1071+37.50			
5/18			
PROFESSIONAL ENGINEERING CONSULTANTS, P.A. ENGINEERS WICHITA, KANSAS			
Designed by	GDS, GDD	Checked by	GDS
Drawn by	JGP	Date	DEC., 1984
		Job No.	84562

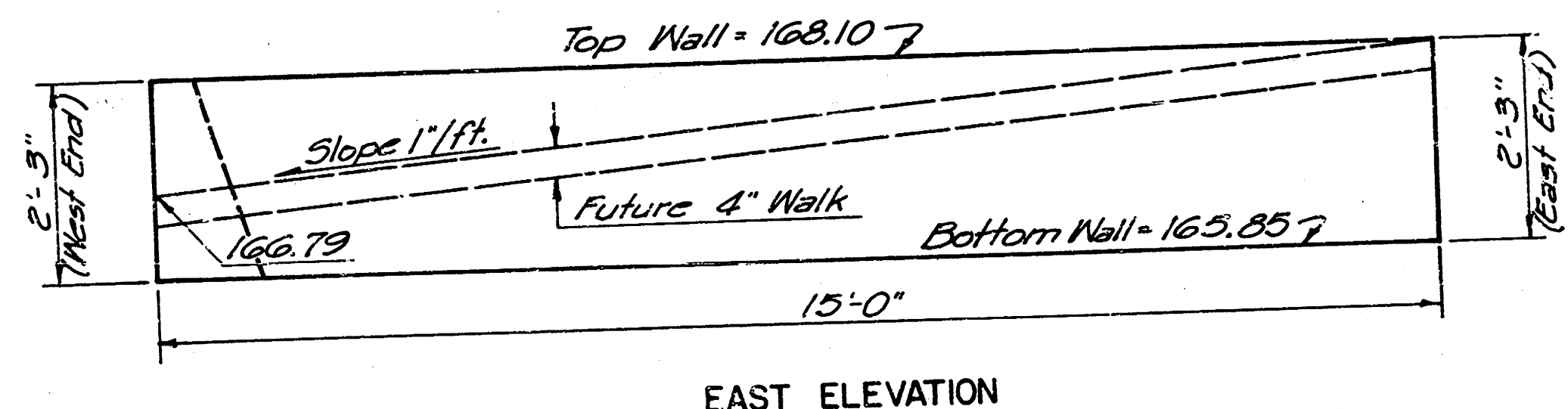
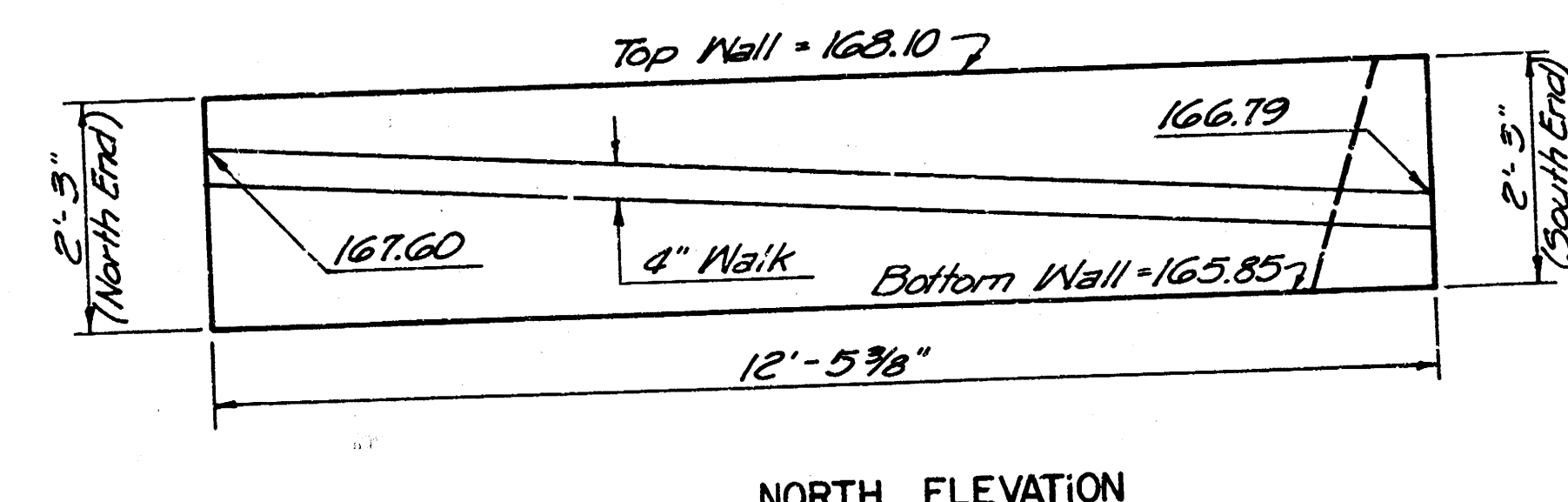


* Monolithic Curb shall not be paid for directly, but shall be considered subsidiary to "6" Walk". Planes of weakness to be constructed on G' c'trs. (Max).

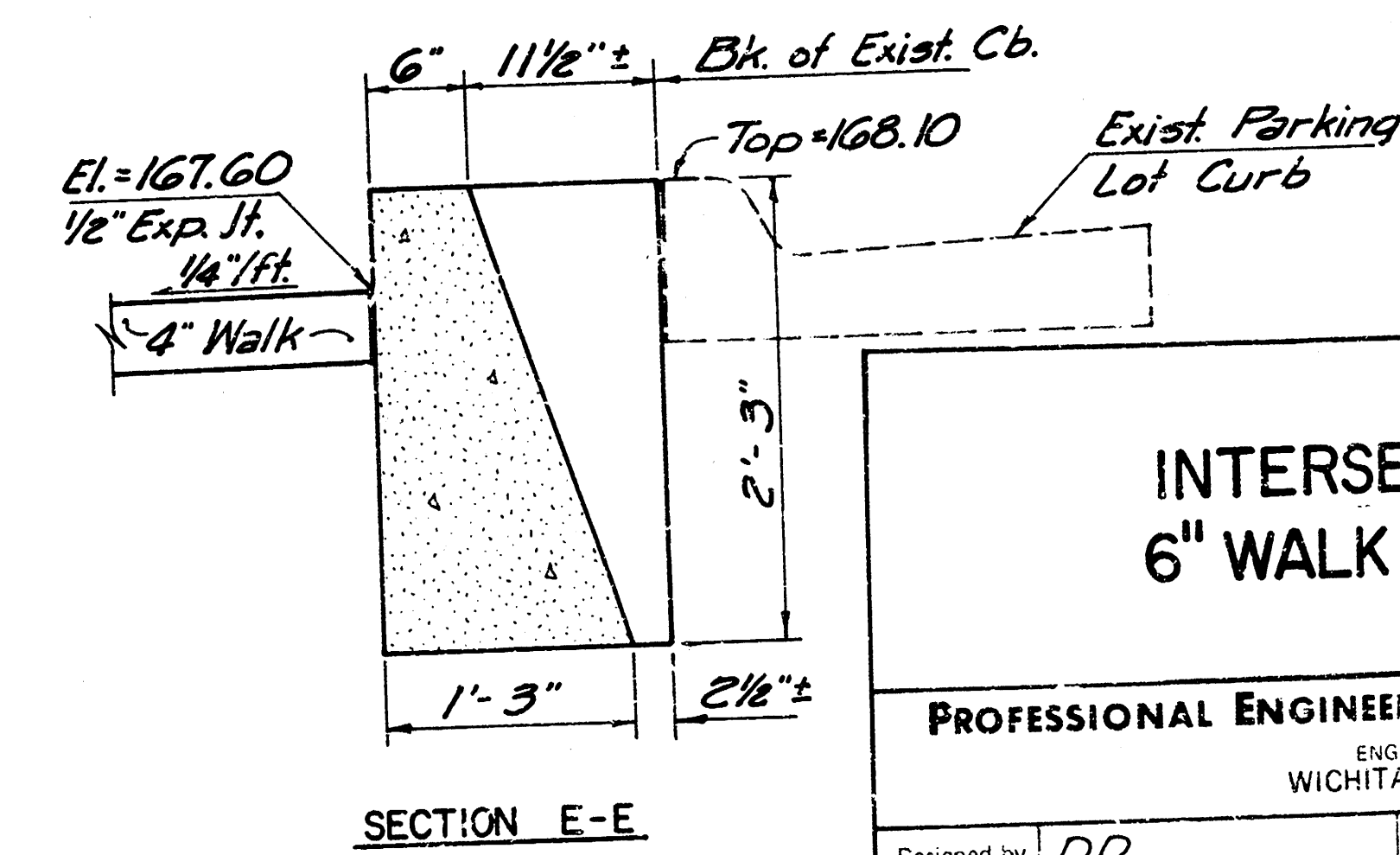
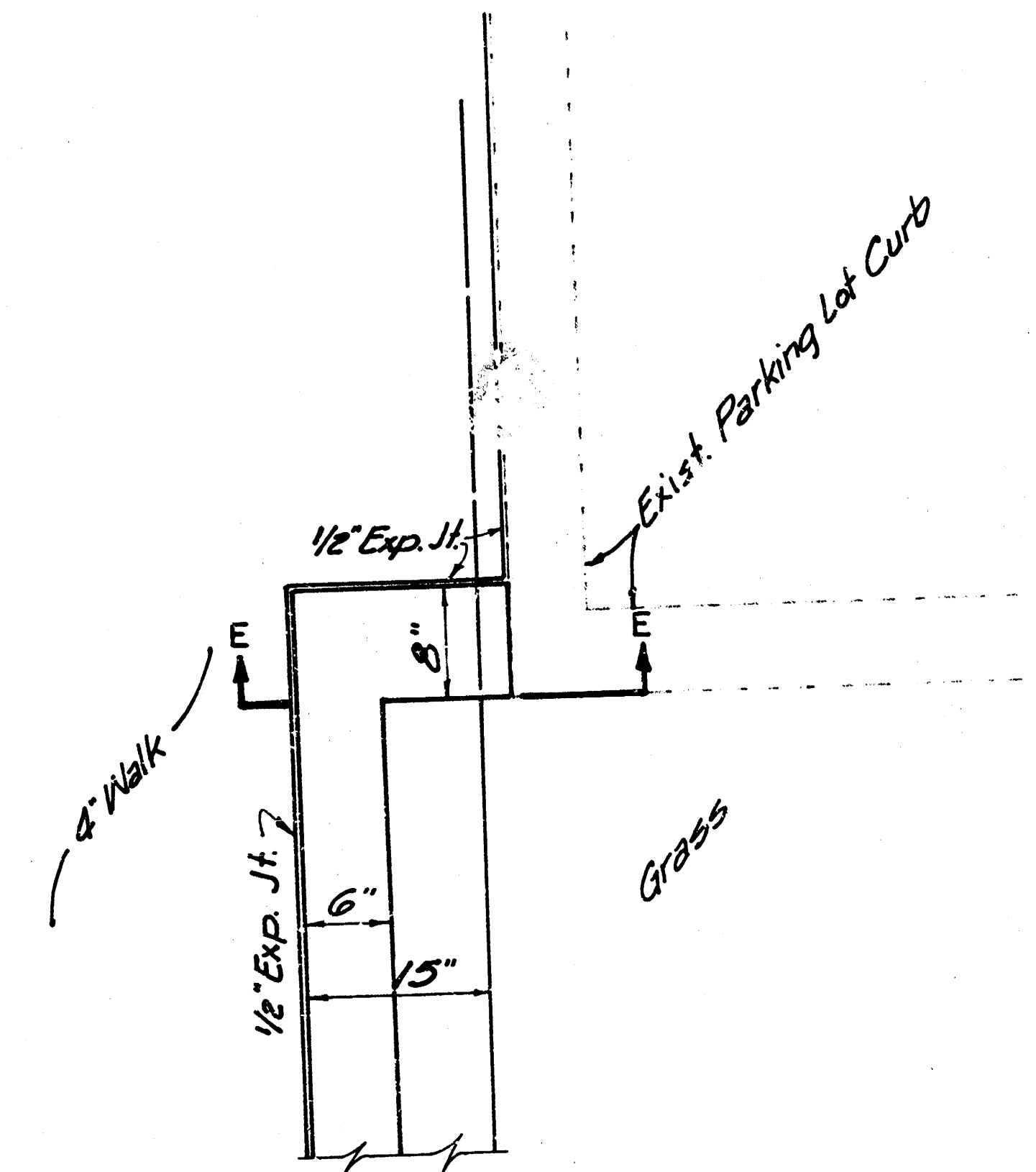
** Additional thickness shall be considered subsidiary.



6" WALK DETAILS

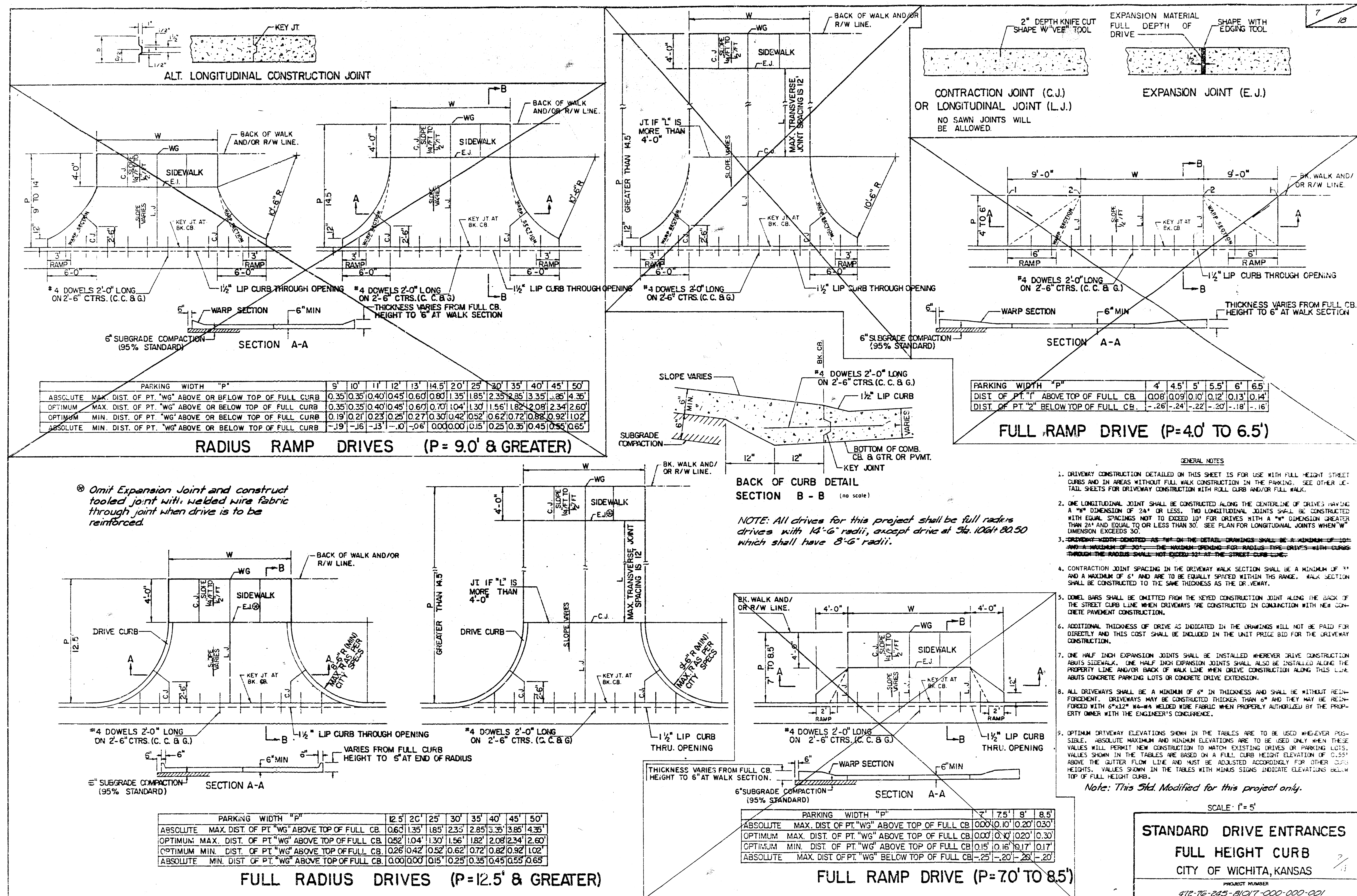


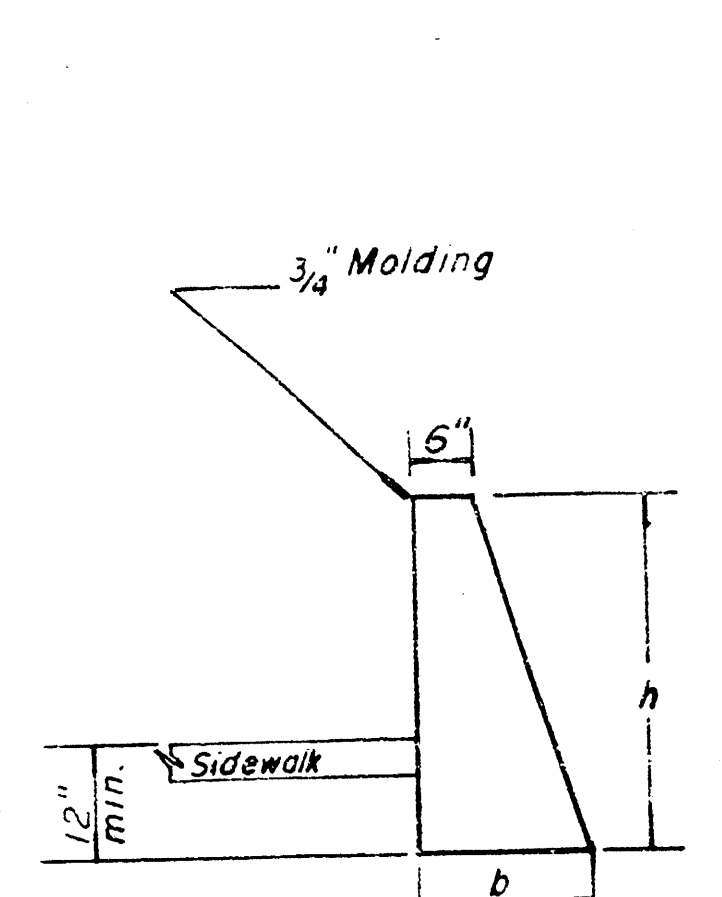
RETAINING WALL ELEVATIONS
For additional details See Sh. No. 8



INTERSECTION 8
6" WALK DETAILS

PROFESSIONAL ENGINEERING CONSULTANTS, P.A.			
ENGINEERS WICHITA, KANSAS			
Designed by	DD	Checked by	G.D.S.
Drawn by	DD	Date	Dec. 1984
		Job No.	84562

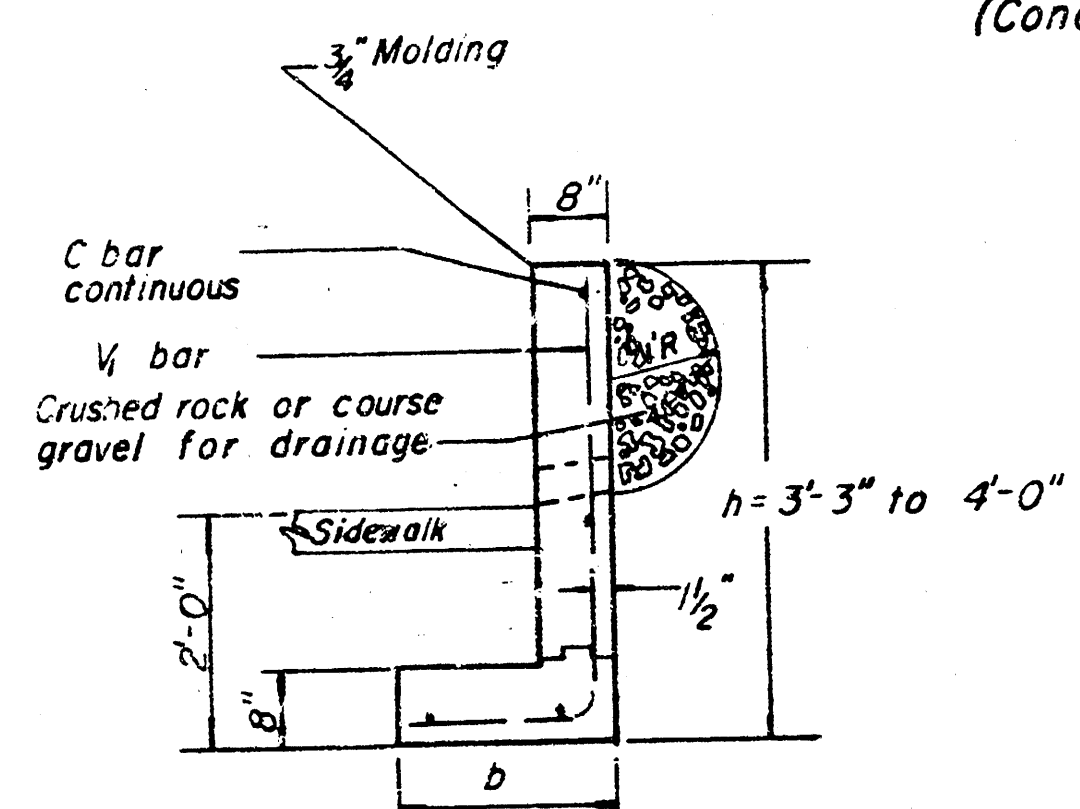




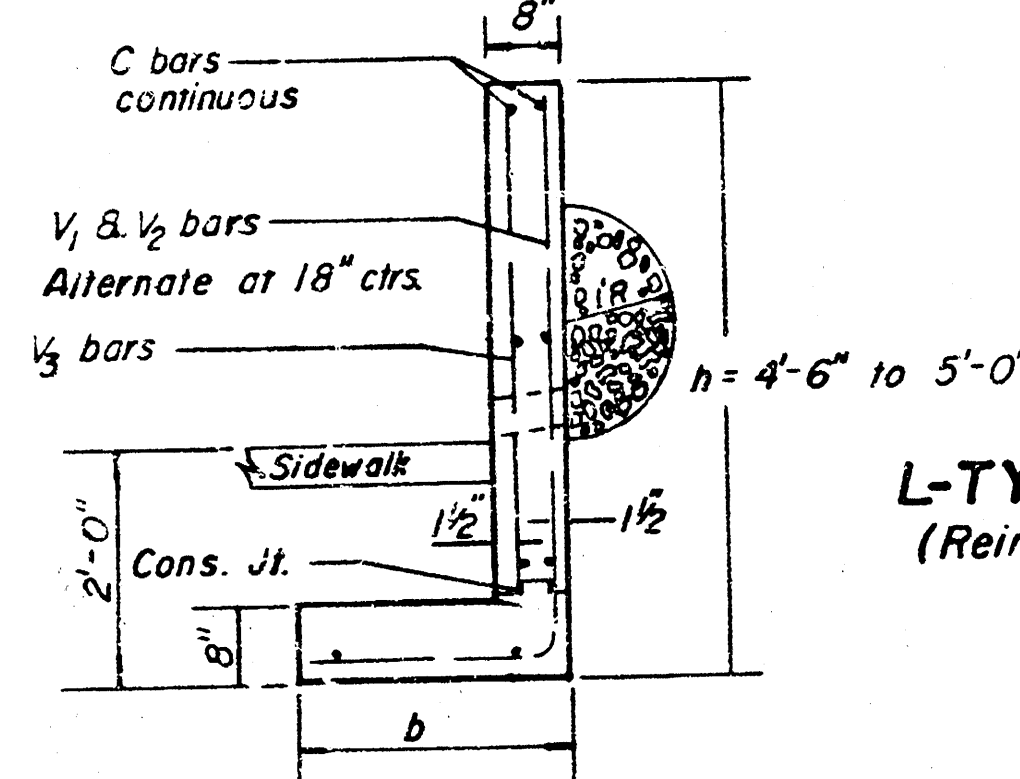
Construct Top Paper & Keyed Construction Joints @ 20' Intervals. Discontinue Reinf. Steel in L & T-Type walls.

DIMENSIONS		CY Conc.
h	b	Foot
1'-9"	11"	0.046
2'-0"	13"	0.059
2'-3"	15"	0.073
2'-6"	17"	0.089
2'-9"	18 1/2"	0.104
3'-0"	20"	0.120

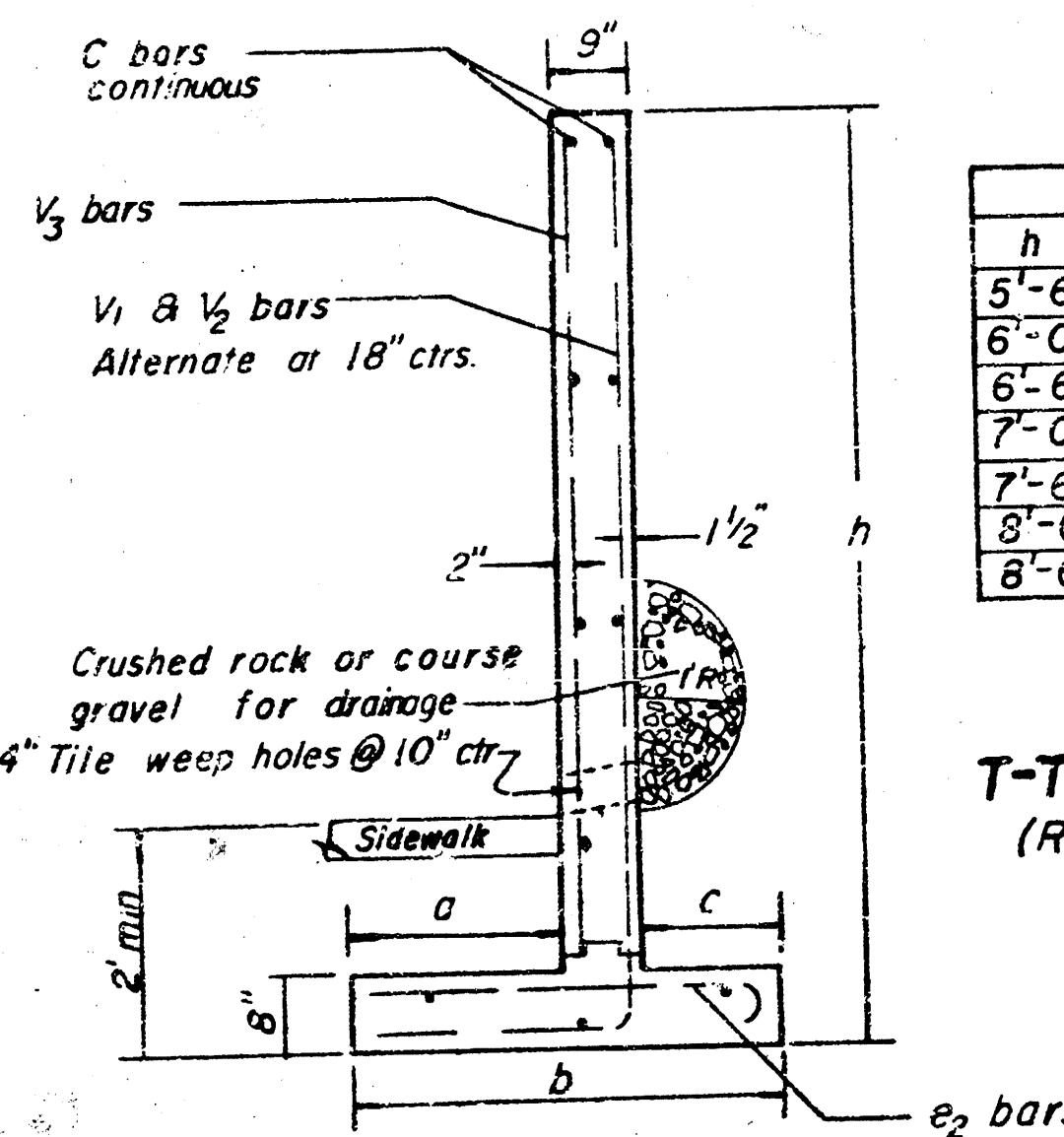
GRAVITY TYPE (Concrete)



DIMENSIONS		Per Lin. Ft. Wall	
h	b	Rein Stl	C.Y. Conc.
3'-3"	1'-6"	4.45	0.101
3'-6"	2'-0"	4.78	0.120
3'-9"	2'-0"	4.90	0.126
4'-0"	2'-0"	5.00	0.132
4'-6"	2'-6"	9.00	0.157
4'-9"	2'-6"	9.17	0.163
5'-0"	2'-6"	9.35	0.169

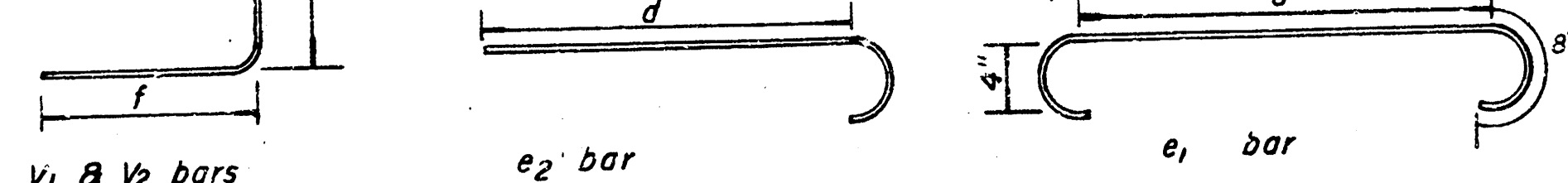


L-TYPE WALL (Reinf. Concrete)



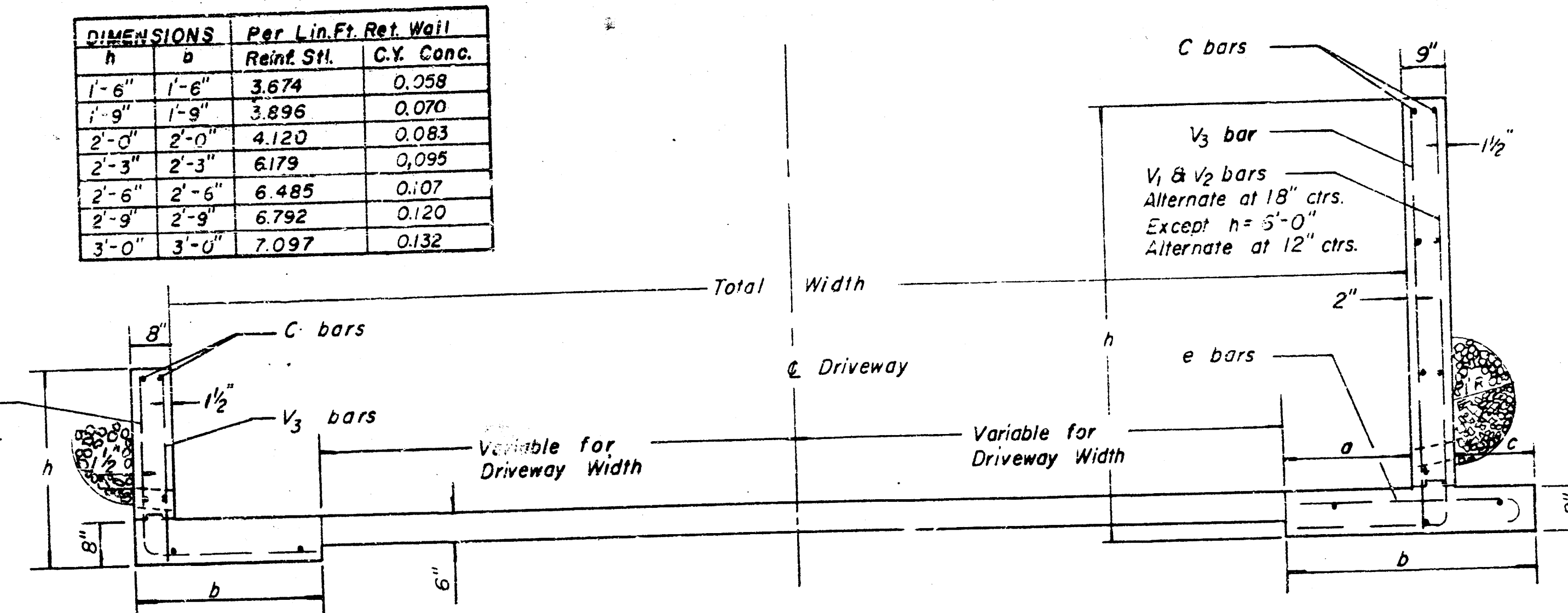
DIMENSIONS				Per Lin.Ft.Wall	
h	b	a	c	Rein.Stl.	C.Y.Conc.
5'-6"	2'-9"	1'-0"	1'-0"	11.630	0.202
6'-0"	3'-3"	1'-3"	1'-3"	13.995	0.229
6'-6"	3'-3"	1'-3"	1'-3"	14.135	0.243
7'-0"	4'-0"	2'-0"	1'-3"	18.282	0.275
7'-6"	4'-0"	2'-0"	1'-3"	23.737	0.289
8'-0"	4'-0"	2'-0"	1'-3"	26.600	0.303
8'-6"	4'-0"	2'-0"	1'-3"	27.380	0.317

T-TYPE WALL (Reinf. Concrete)



L-TYPE RETAINING WALL FOR DRIVEWAYS

DIMENSIONS		Per Lin.Ft.Ret.Wall	
h	a	Reinf.Stl.	C.Y. Conc.
1'-6"	1'-6"	3.674	0.258
1'-9"	1'-9"	3.896	0.070
2'-0"	2'-0"	4.120	0.083
2'-3"	2'-3"	6.179	0.095
2'-6"	2'-6"	6.485	0.107
2'-9"	2'-9"	6.792	0.120
3'-0"	3'-0"	7.097	0.132



h	bar	size	Cutting Length	Spacing	d	f	Remarks
3'-3"	V1	1/2"	4'-0"	18"	2'-11"	1'-2"	L Shape Straight
3'-6"	V1	1/2"	4'-0"	18"	3'-2"	1'-3"	L Shape Straight
3'-9"	V1	1/2"	4'-0"	18"	3'-5"	1'-8"	L Shape Straight
4'-0"	V1	1/2"	4'-0"	18"	3'-8"	1'-8"	L Shape Straight
4'-6"	V1	1/2"	4'-0"	18"	4'-2"	2'-2"	L Shape Straight
4'-9"	V1	1/2"	4'-0"	18"	4'-5"	2'-2"	L Shape Straight
5'-0"	V1	1/2"	4'-0"	18"	4'-8"	2'-2"	L Shape Straight
5'-6"	V1	1/2"	4'-0"	18"	5'-2"	2'-2"	L Shape Straight

h	bar	size	Cutting Length	Spacing	d	f	Remarks
5'-6"	V1	1/2"	4'-0"	18"	5'-2"	2'-2"	L Shape Straight
6'-0"	V1	1/2"	4'-0"	18"	5'-5"	2'-2"	L Shape Straight
6'-6"	V1	1/2"	4'-0"	18"	5'-8"	2'-2"	L Shape Straight
7'-0"	V1	1/2"	4'-0"	18"	6'-2"	2'-2"	L Shape Straight
7'-6"	V1	1/2"	4'-0"	18"	6'-5"	2'-2"	L Shape Straight
8'-0"	V1	1/2"	4'-0"	18"	6'-8"	2'-2"	L Shape Straight
8'-6"	V1	1/2"	4'-0"	18"	7'-2"	2'-2"	L Shape Straight

REIN. STEEL SCHEDULE L-TYPE RET. WALL

h	bar	size	Cutting Length	Spacing	d	f	Remarks
1'-6"	V1	1/2"	2'-3"	18"	1'-1"	1'-3"	L Shape Straight
1'-9"	V1	1/2"	2'-3"	18"	1'-4"	1'-6"	L Shape Straight
2'-0"	V1	1/2"	2'-3"	18"	1'-7"	1'-9"	L Shape Straight
2'-3"	V1	1/2"	2'-3"	18"	1'-10"	2'-0"	L Shape Straight
2'-6"	V1	1/2"	2'-3"	18"	2'-1"	2'-3"	L Shape Straight
2'-9"	V1	1/2"	2'-3"	18"	2'-4"	2'-6"	L Shape Straight
3'-0"	V1	1/2"	2'-3"	18"	2'-7"	2'-9"	L Shape Straight

h	bar	size	Cutting Length	Spacing	d	f	Remarks
3'-3"	V1	1/2"	2'-3"	18"	2'-10"	3'-3"	L Shape Straight
3'-6"	V1	1/2"	2'-3"	18"	2'-11"	3'-6"	L Shape Straight
3'-9"	V1	1/2"	2'-3"	18"	3'-2"	3'-9"	L Shape Straight
4'-0"	V1	1/2"	2'-3"	18"	3'-5"	4'-0"	L Shape Straight
4'-6"	V1	1/2"	2'-3"	18"	3'-8"	4'-6"	L Shape Straight
4'-9"	V1	1/2"	2'-3"	18"	3'-11"	4'-9"	L Shape Straight
5'-0"	V1	1/2"	2'-3"	18"	4'-2"	5'-0"	L Shape Straight

T-TYPE RETAINING WALL FOR DRIVEWAYS

DIMENSIONS				Per Lin.Ft. Wall	
h	b	a	c	Steel	CY Conc.
3'-6"	3'-3"	1'-3"	1'-3"	9.213	0.159
4'-0"	3'-9"	1'-6"	1'-6"	9.805	0.186
4'-6"	4'-0"	1'-9"	1'-6"	11.085	0.206
5'-0"	4'-3"	2'-0"	1'-6"	11.698	0.226
5'-6"	4'-6"	2'-3"	1'-6"	12.867	0.247
6'-0"	4'-9"	2'-6"	1'-6"	14.147	0.266

NOTE ALL excavation for retaining walls shall be included in the b & d price per lin. ft. of retaining wall. The 4" tile weep holes & crushed rock or coarse gravel for drainage shall be included in the bid price per lin. ft. of retaining wall.

SCHEDULE OF MEASUREMENT FOR RETAINING WALLS

GRAVITY - TYPE			L-TYPE			T-TYPE		
From	To	Average Height	From	To	Average Height	From	To	Average Height
1'-6"	2'-0"	1'-9"	3'-0"	3'-6"	3'-3"	5'-0"	5'-6"	5'-3"
2'-0"	2'-6"	2'-3"	3'-6"	4'-0"	3'-9"	5'-6"	6'-0"	5'-9"
2'-6"	3'-0"	2'-9"	4'-0"	4'-6"	4'-3"	6'-0"	6'-6"	6'-3"
			4'-6"	5'-0"	4'-9"	6'-6"	7'-0"	6'-9"
						7'-0"	7'-6"	7'-3"
						7'-6"	8'-0"	7'-9"

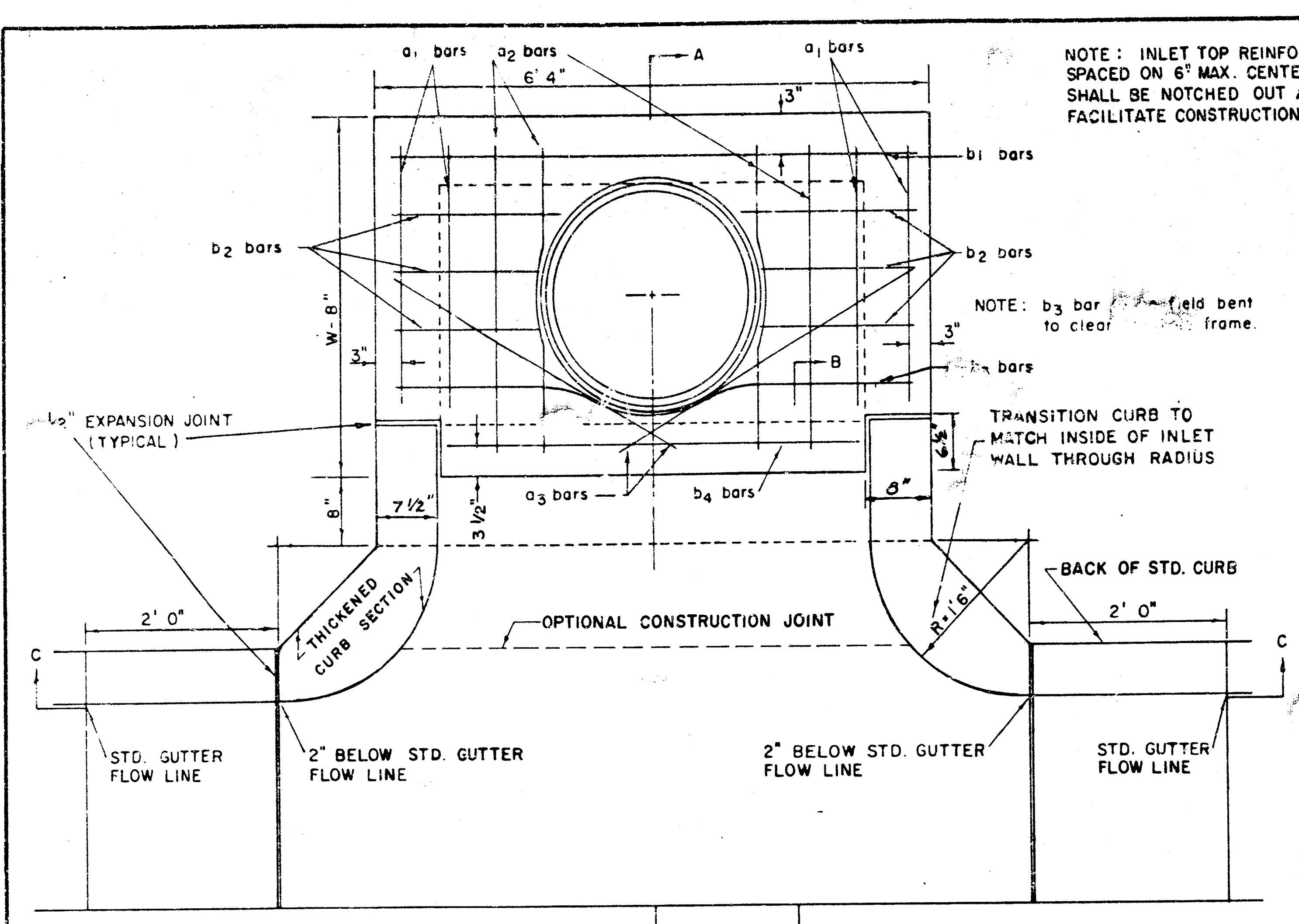
NOTE The field engineer shall final measure retaining walls prior to backfill operation.

RETAINING WALL DETAILS

City of Wichita, Kansas

M.E. LINDEBAK - CITY ENGINEER

Project No. 412-76-245-21017-000-000-000



PLAN

STEEL SCHEDULE

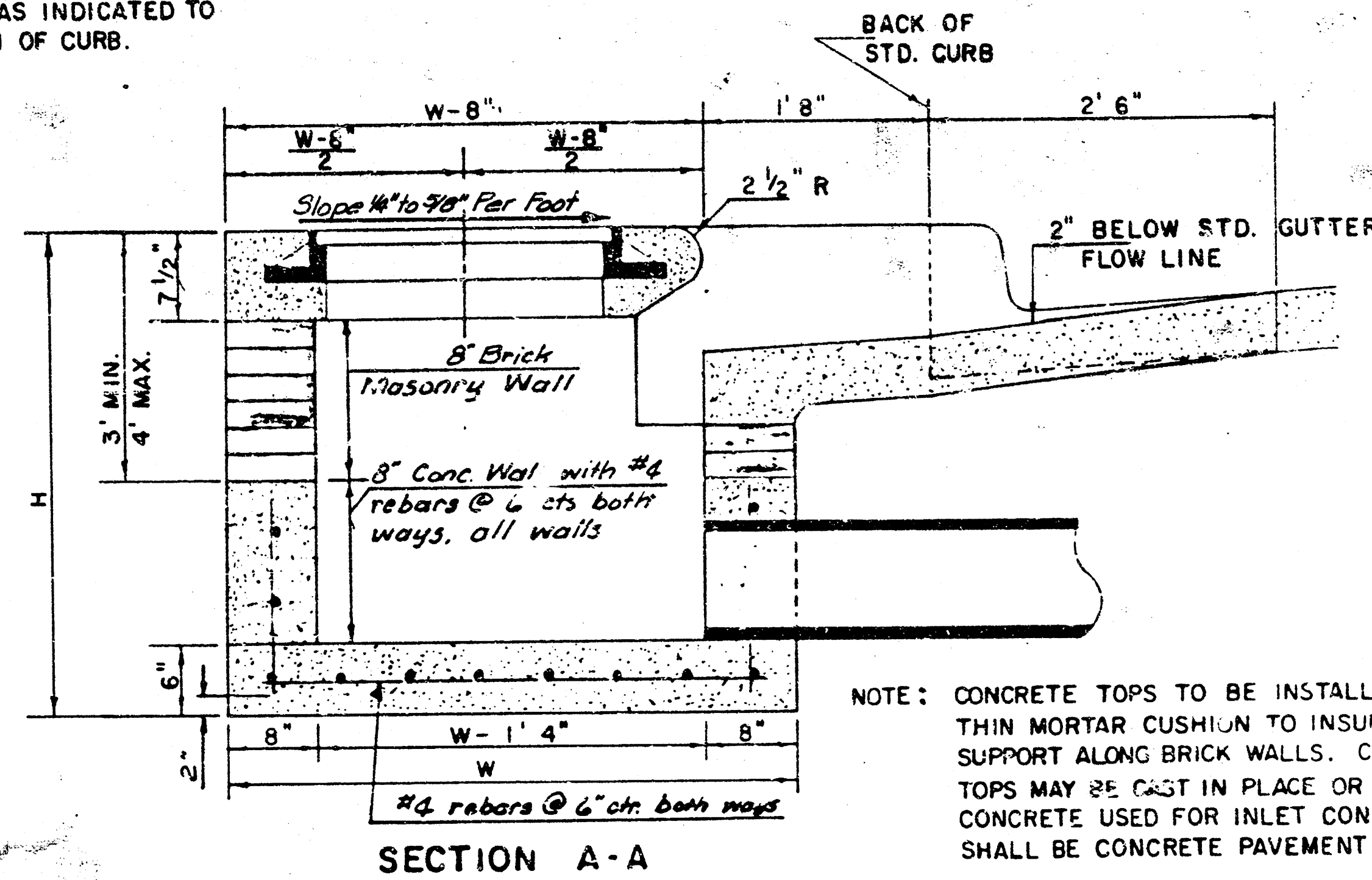
BAR	a1	a2	a3	b1	b2	b3	b4	WT. LBS.
NUMBER	4	4	2	1	3	5	7	9
SIZE	#4	#4	#4	#4	#4	#4	#4	#6
W=4'4"	5'7"	6'7"	4'0"	6'1"	-	-	-	1'9"
W=5'4"	7'7"	8'7"	5'0"	6'1"	-	-	-	1'9"
W=6'4"	9'7"	10'7"	6'0"	6'1"	-	-	-	1'9"
W=7'4"	11'7"	12'7"	7'0"	6'1"	-	-	-	1'9"
W=8'4"	13'7"	14'7"	8'0"	6'1"	-	-	-	1'9"

* NOTE: a3 BARS TO BE PLACED APPROX. 2" BELOW TOP OF INLET COVER

BENDING DIAGRAM

STANDARD CURB INLET PRECAST TOPS

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



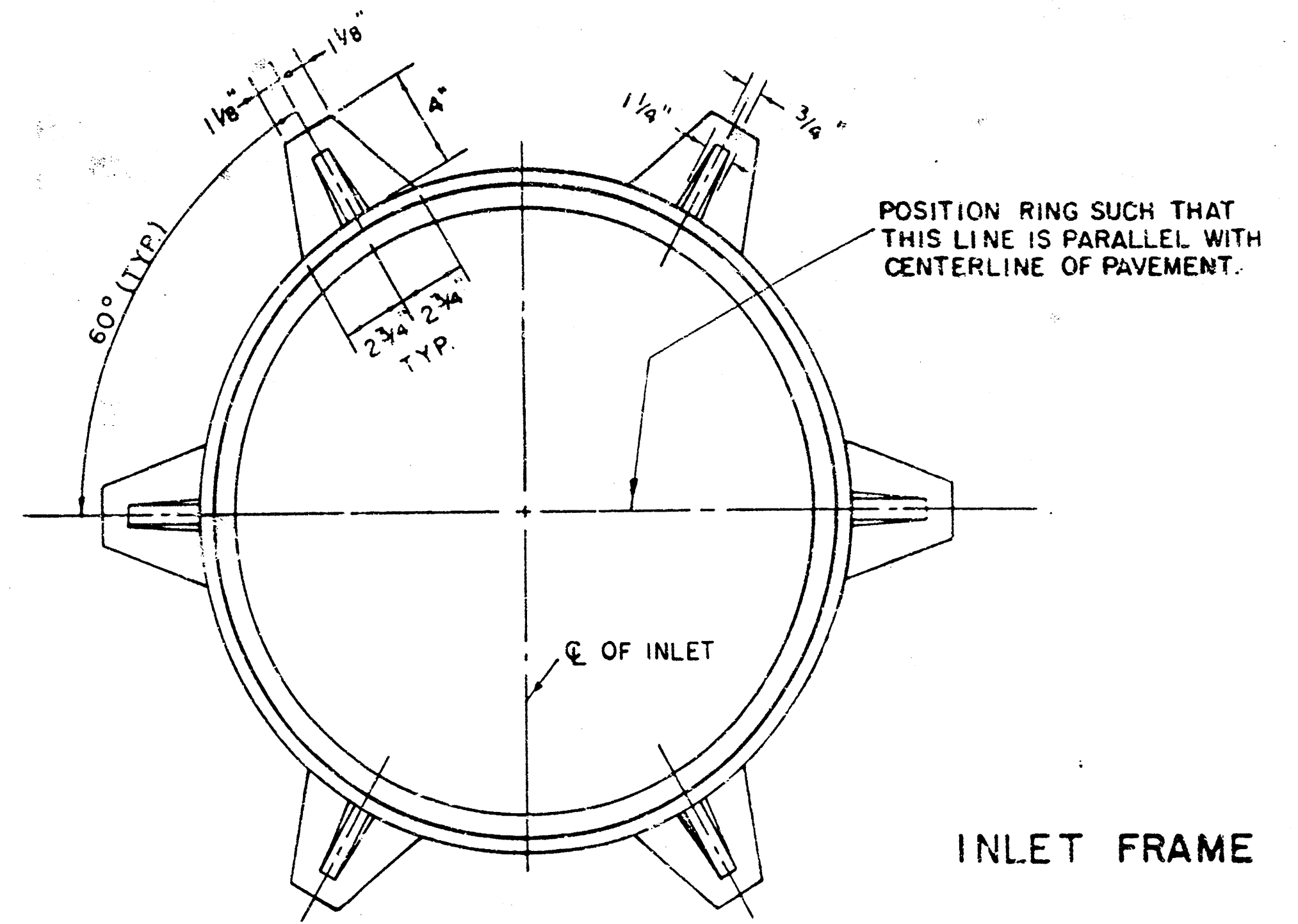
SECTION A-A

NOTE: CONTRACTOR SHALL BE REQUIRED TO CONSTRUCT 8" BRICK MASONRY WALLS BETWEEN THE CONCRETE INLET BASE AND TOP ON THIS INLET WHEN W = 4'4" AND H = 6'6" 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.

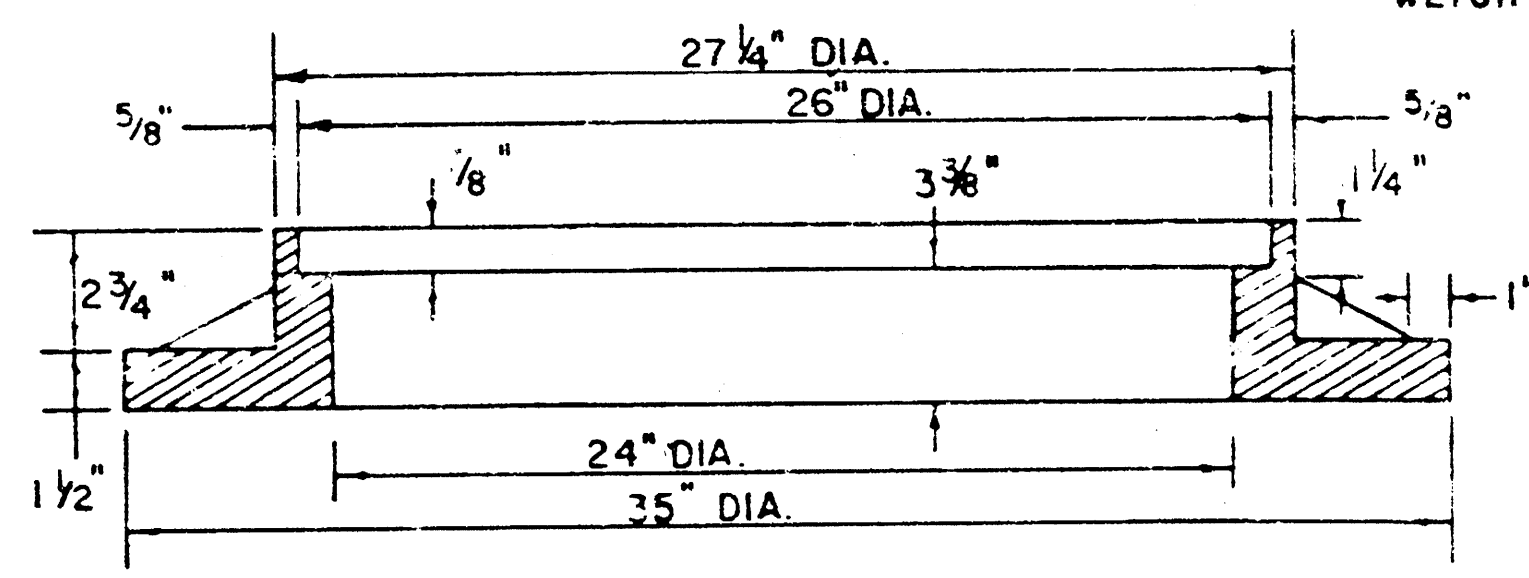
INLET INVERT SHALL BE SHAPED WITH 8 SACK SAND MIX CONCRETE TO CREATE FLOW CHANNELS AND TO INCREASE HYDRAULIC EFFICIENCY SUCH THAT THE INLET WILL BE SELF CLEANING BETWEEN ALL INLET AND/OR OUTLET PIPES.

The ends of all pipes installed in inlets shall be cut off flush with the inside face of the inlet wall.

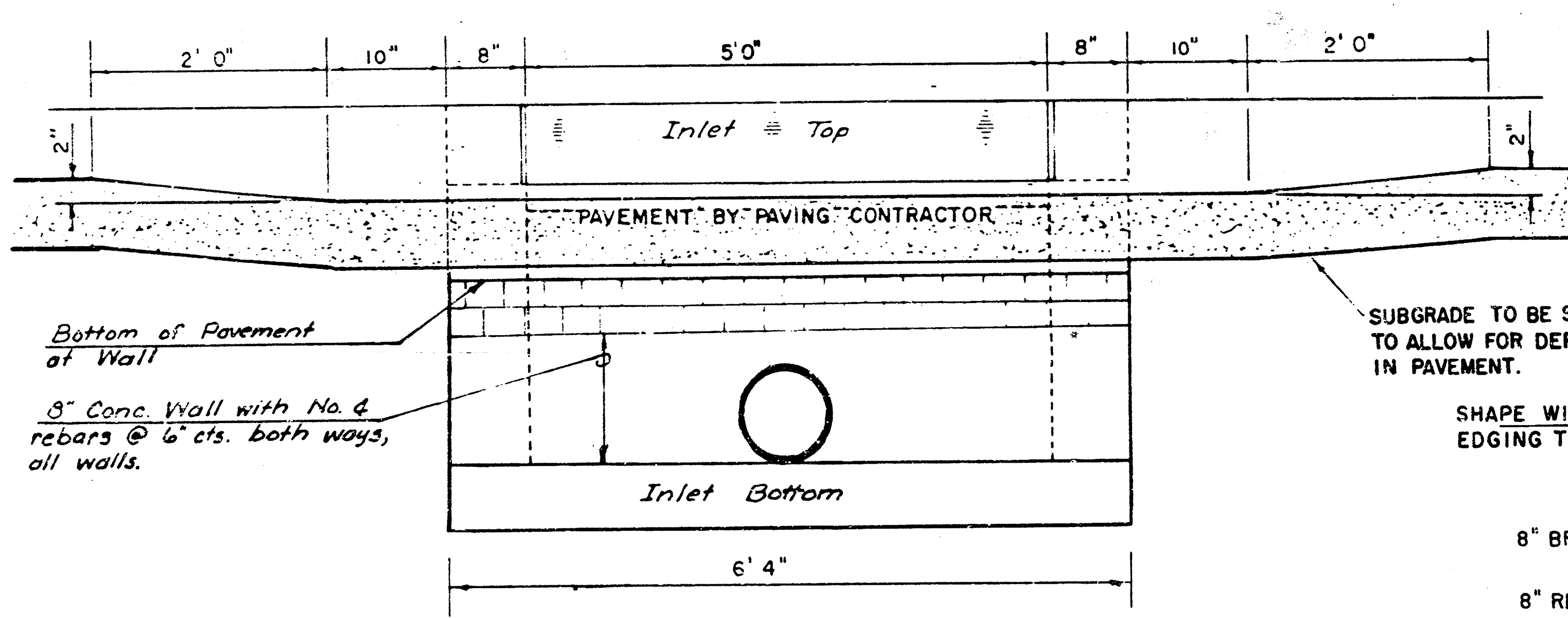


INLET FRAME

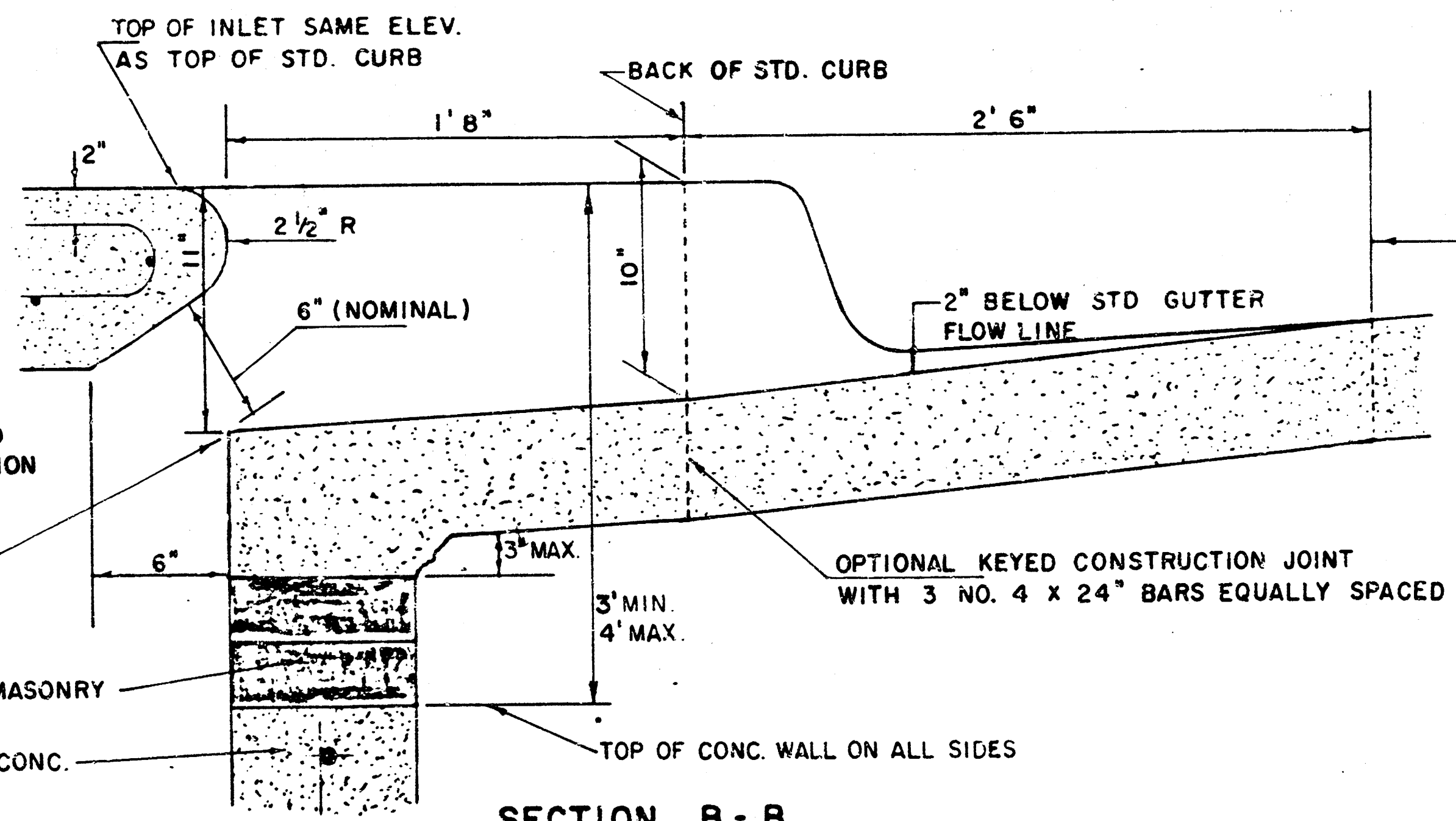
WEIGHT = 180 LBS.



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



SECTION C-C



SECTION B-B

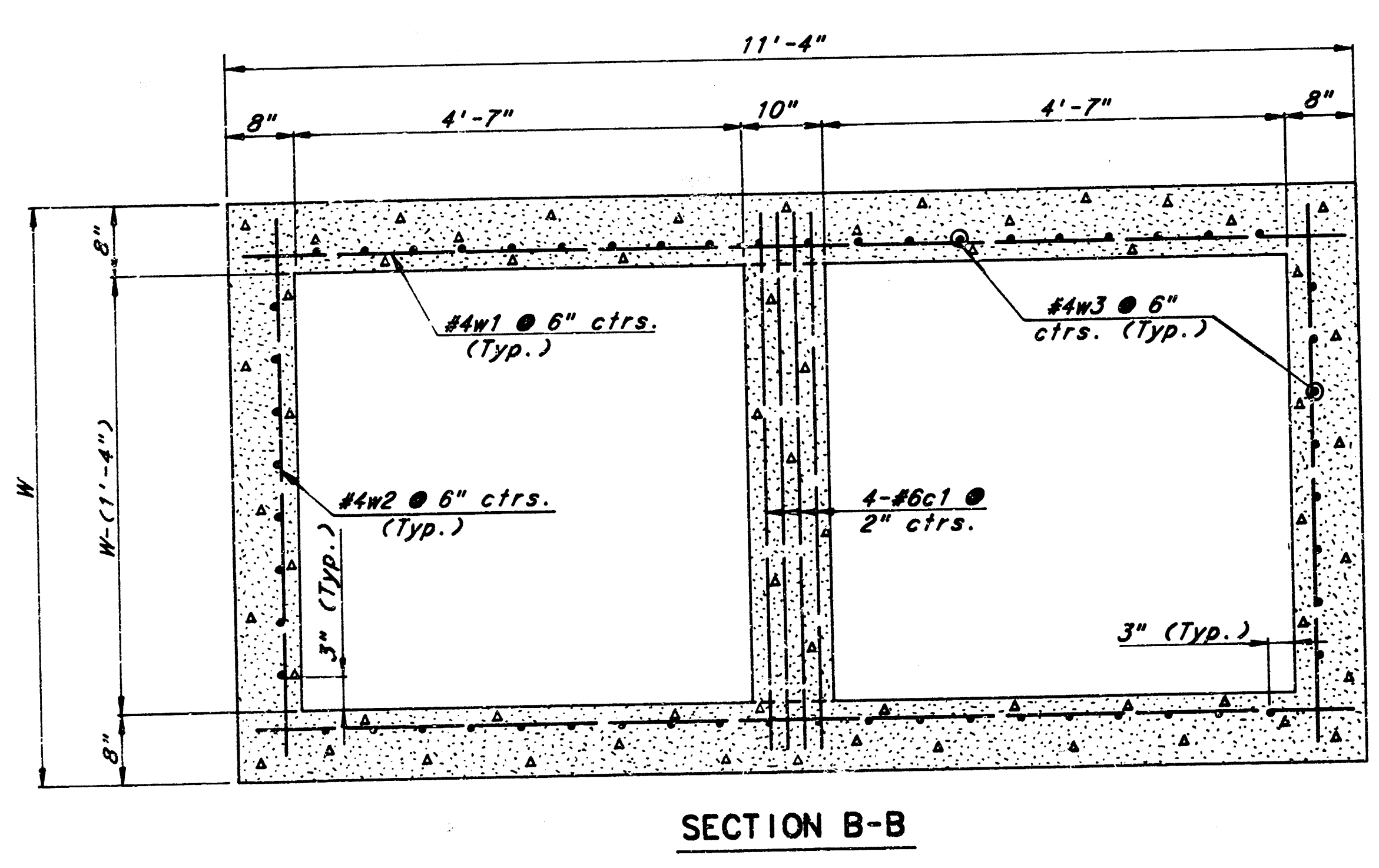
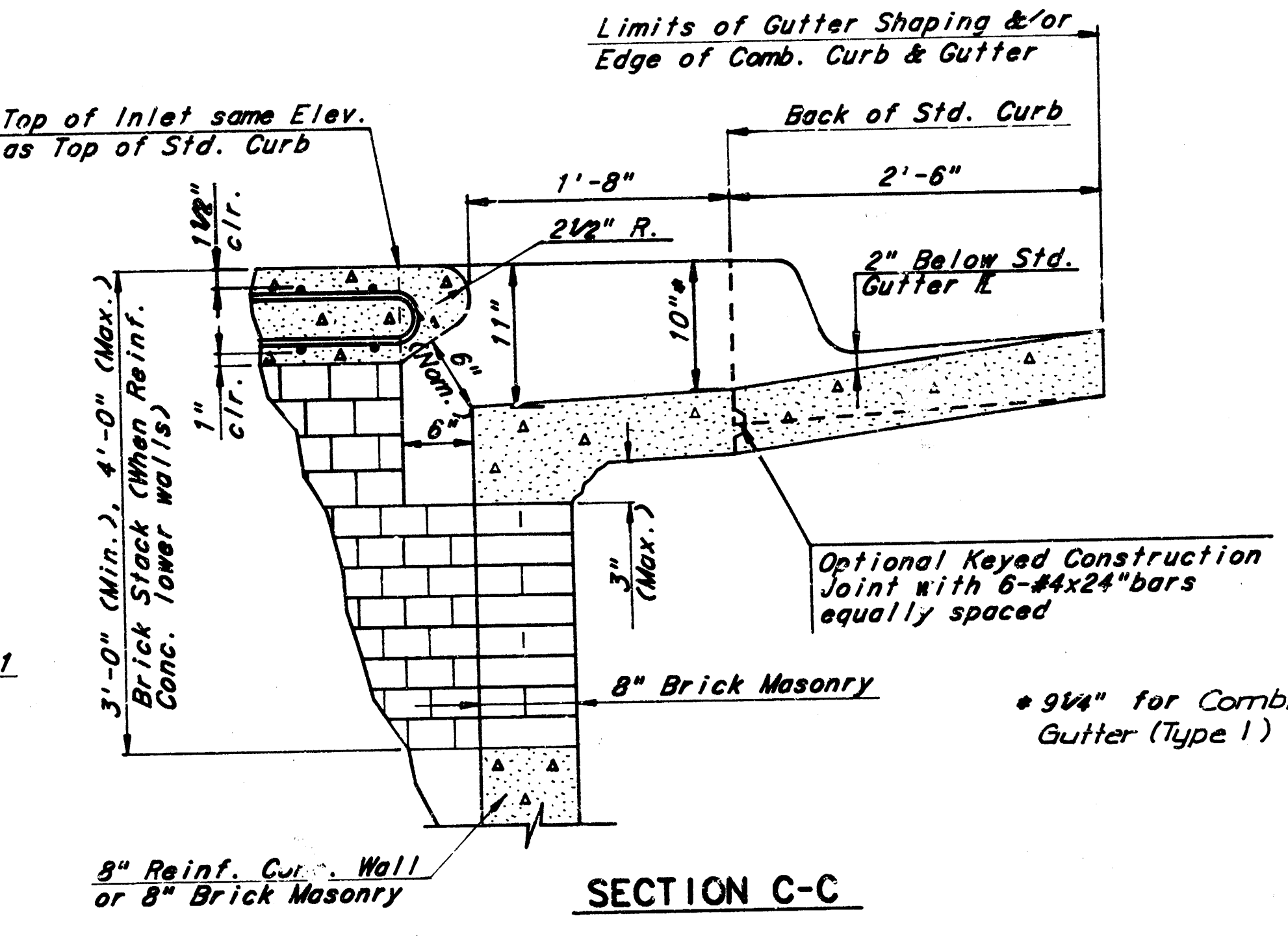
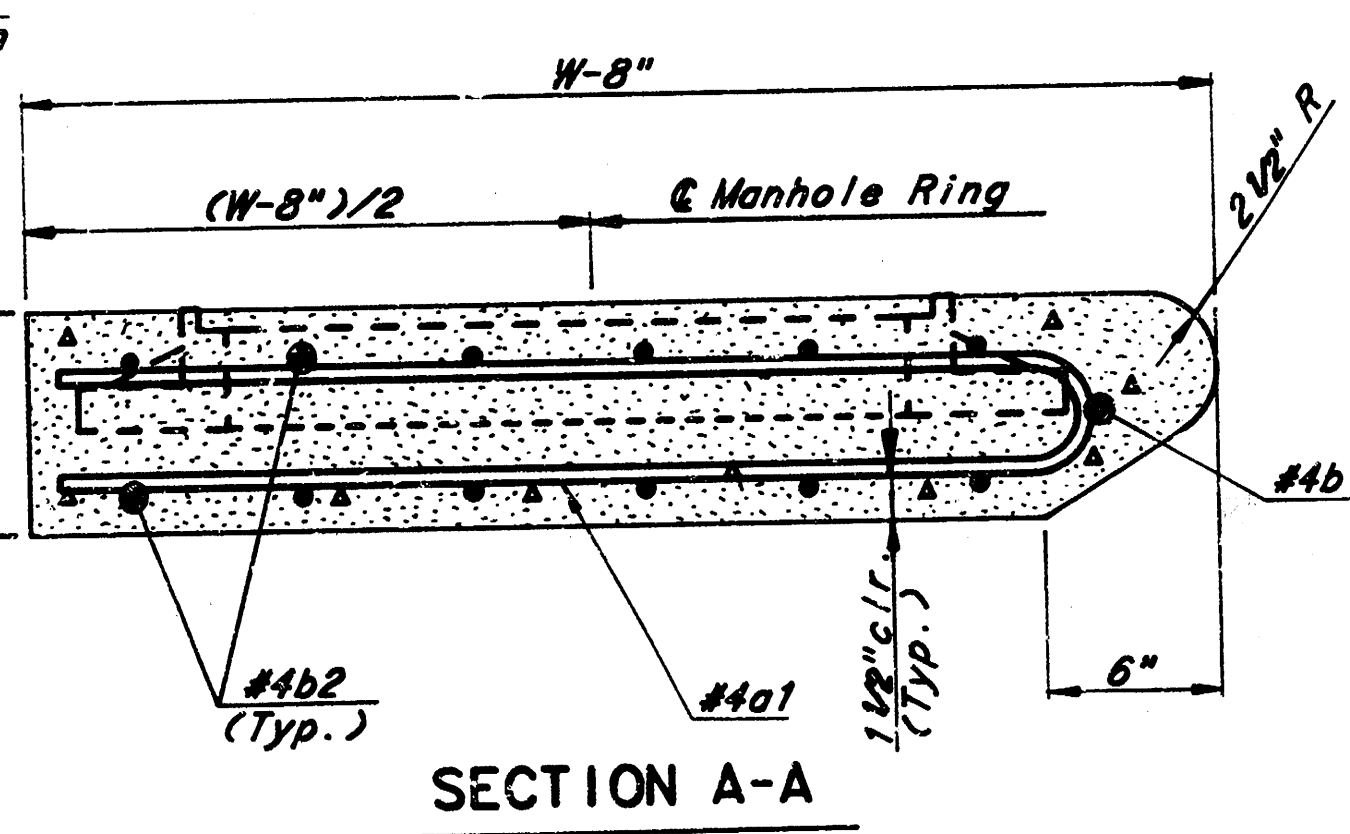
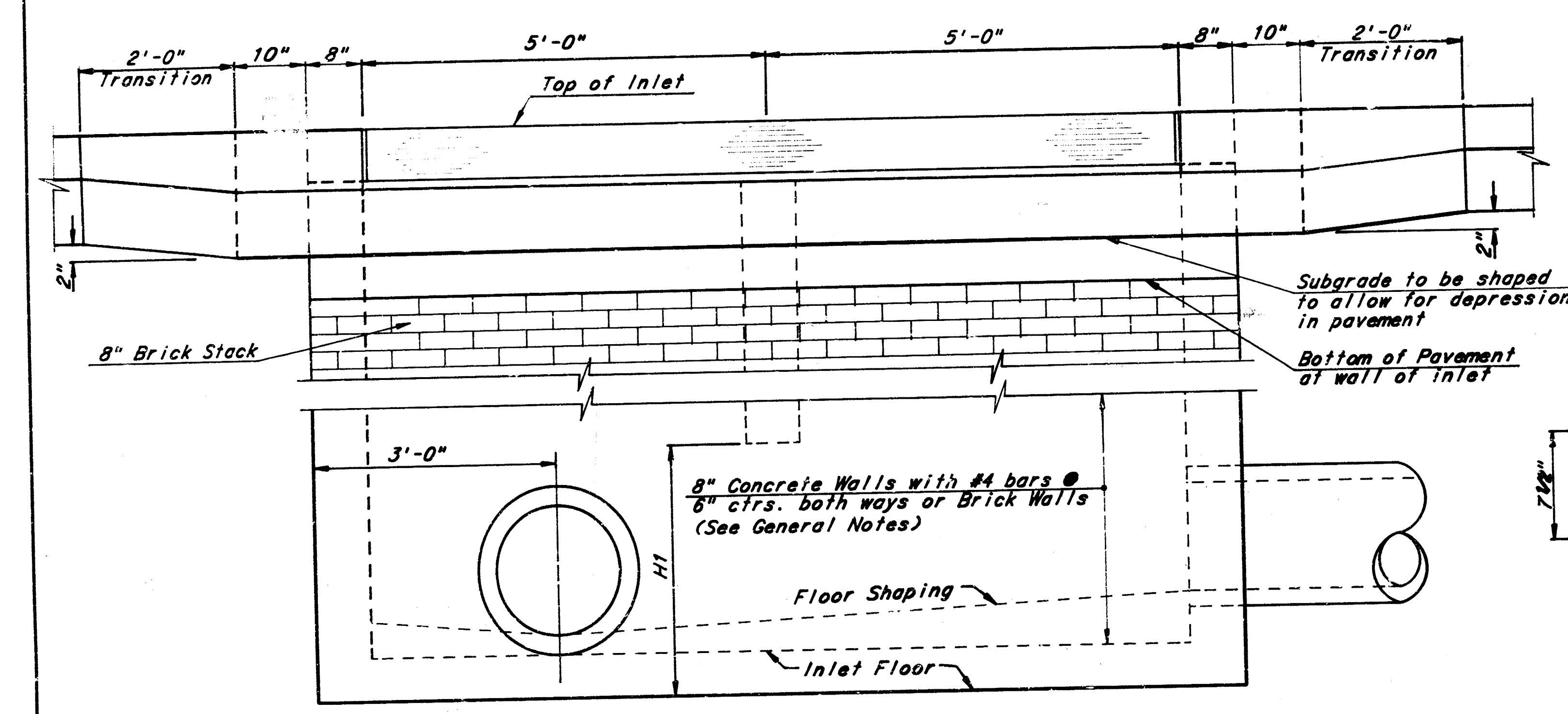
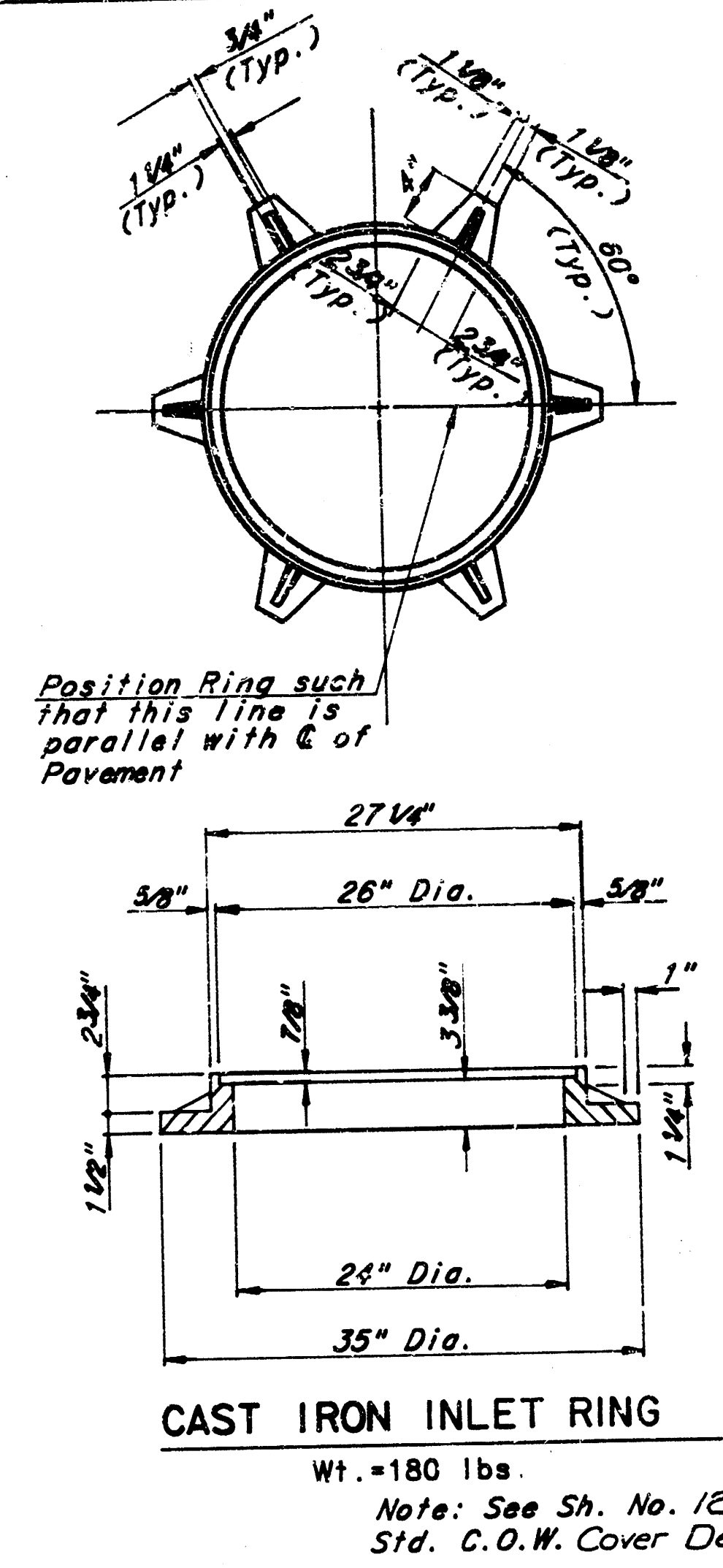
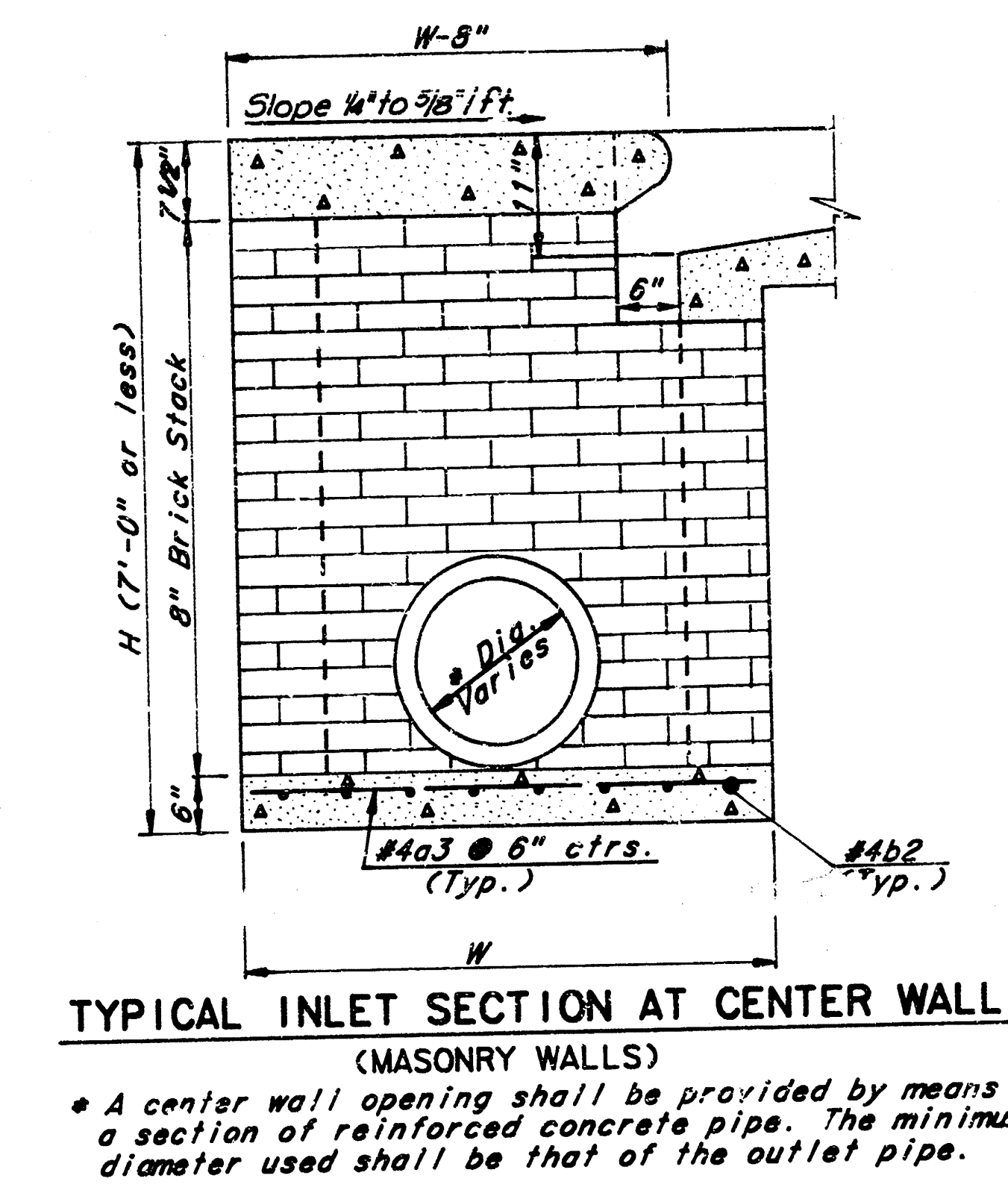
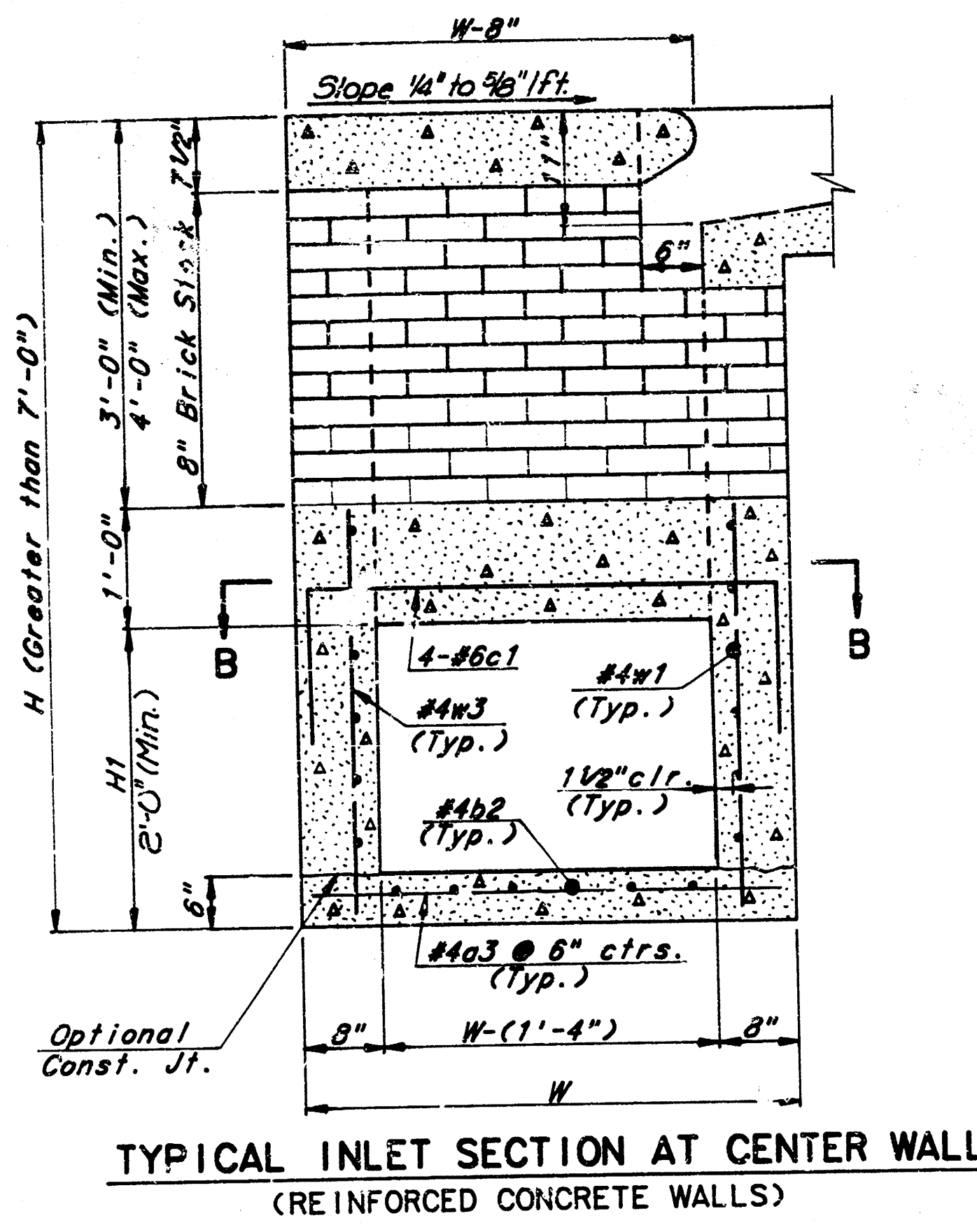
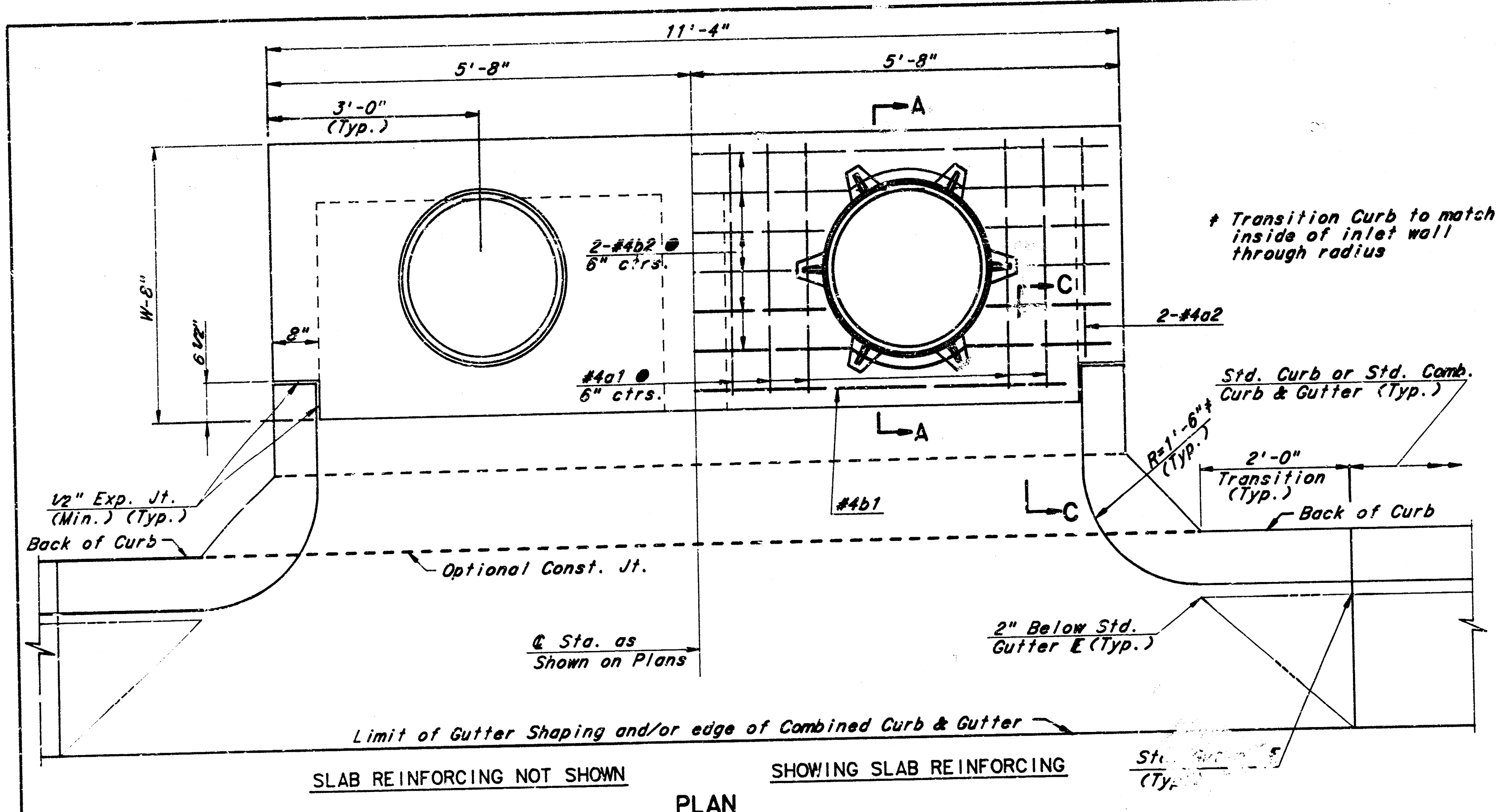
LIMITS OF GUTTER SHAPING AND/OR EDGE OF COMB. CURB AND GUTTER

Revised 12-21-1984 Proj. No. 472-70-245-B1017-000-000-001

DETAIL STANDARD TYPE IA CURB INLET
CITY OF WICHITA, KANSAS
INLET OPENING = 6" x 5'0"

JUNE 1984

Sheet No. 9 of 18

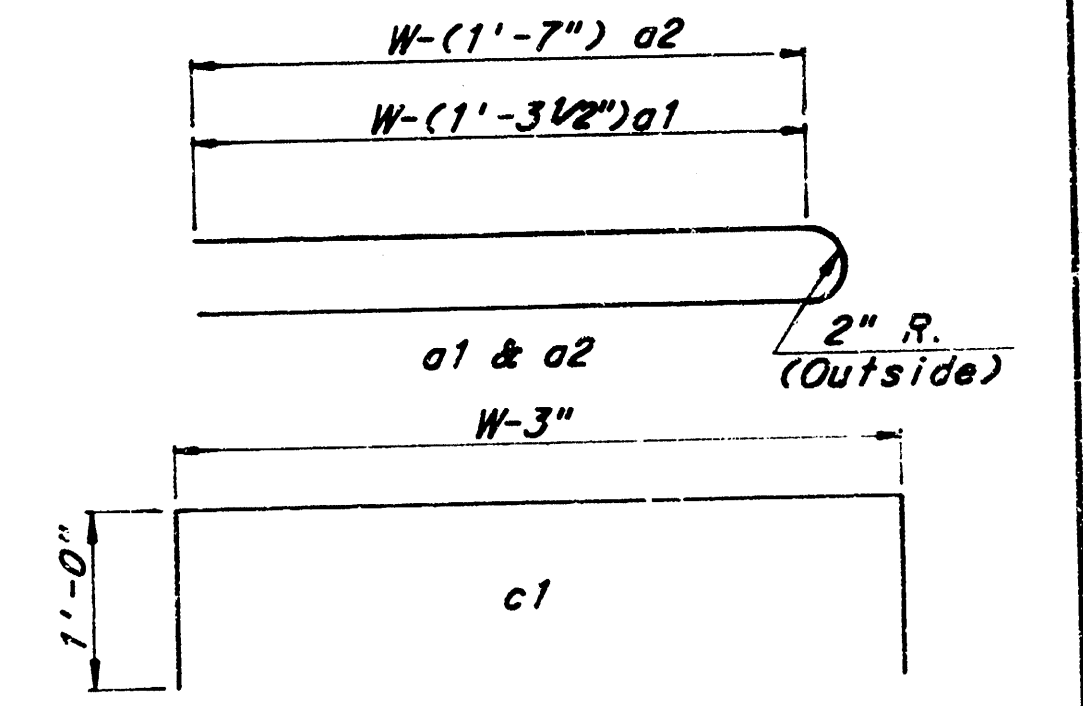


MARK	SIZE	W=4'-4"		W=5'-4"		W=6'-4"		W=7'-4"		W=8'-4"	
		NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH
a1	#4	13	8'-7 1/2"	13	8'-7 1/4"	13	10'-7 1/4"	13	12'-7 1/4"	13	14'-7 1/4"
a2	#4	2	6'-0"	2	3'-0"	2	10'-0"	2	12'-0"	2	14'-0"
a3	#4	20	4'-1"	20	5'-1"	20	6'-1"	20	7'-1"	20	8'-1"
b1	#4	1	9'-8"	1	9'-8"	1	9'-8"	1	9'-8"	1	9'-8"
b2	#4	18	11'-1"	24	11'-1"	30	11'-1"	36	11'-1"	42	11'-1"

MARK	SIZE	W=4'-4"		W=5'-4"		W=6'-4"		W=7'-4"		W=8'-4"	
		NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH
c1	#6	4	6'-1"	4	7'-1"	4	8'-1"	4	9'-1"	4	10'-1"
w1	#4	1	11'-1"	1	11'-1"	1	11'-1"	1	11'-1"	1	11'-1"
w2	#4	1	4'-1"	1	5'-1"	1	6'-1"	1	7'-1"	1	8'-1"
w3	#4	2	3"	2	3"	2	3"	2	3"	2	3"

* Field bend or cut Reinforcing as required for clearance
 ① 4(H1+6")
 ② 40+4(W-16") ③ H1+(9")

- GENERAL NOTES**
- THE CONTRACTOR SHALL BE REQUIRED TO CONSTRUCT 8" BRICK MASONRY WALLS BETWEEN THE CONCRETE INLET BASE AND TOP ON THIS INLET WHEN W=6'-4" OR LESS AND H=7'-0" OR LESS. WHEN W IS GREATER THAN 6'-4" AND H IS LESS THAN 7'-0", THE OUTSIDE INLET WALLS BELOW THE BRICK STACK SHALL BE REINFORCED CONCRETE CONSTRUCTION AND THE CENTER WALL SHALL BE OF MASONRY CONSTRUCTION AS SHOWN FOR THE MASONRY WALL OPTION.
 - 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.
 - CONCRETE TOPS TO BE INSTALLED ON THIN MORTAR CUSHION TO INSURE FULL SUPPORT ALONG BRICK WALLS. CONCRETE TOPS MAY BE CAST IN PLACE OR PRECAST. CONCRETE USED FOR INLET CONSTRUCTION SHALL BE CONCRETE PAVEMENT MIX.
 - INLET TOP REINFORCING SHALL BE SPACED ON 8" MAX. CENTERS. INLET LIDS SHALL BE NOTCHED OUT AS INDICATED TO FACILITATE CONSTRUCTION OF CURB. BARS IN INLET TOP TO BE FIELD BENT OR CUT TO CLEAR MANHOLE RING.
 - The ends of all pipes installed in inlets shall be cut off flush with the inside face of the inlet wall.

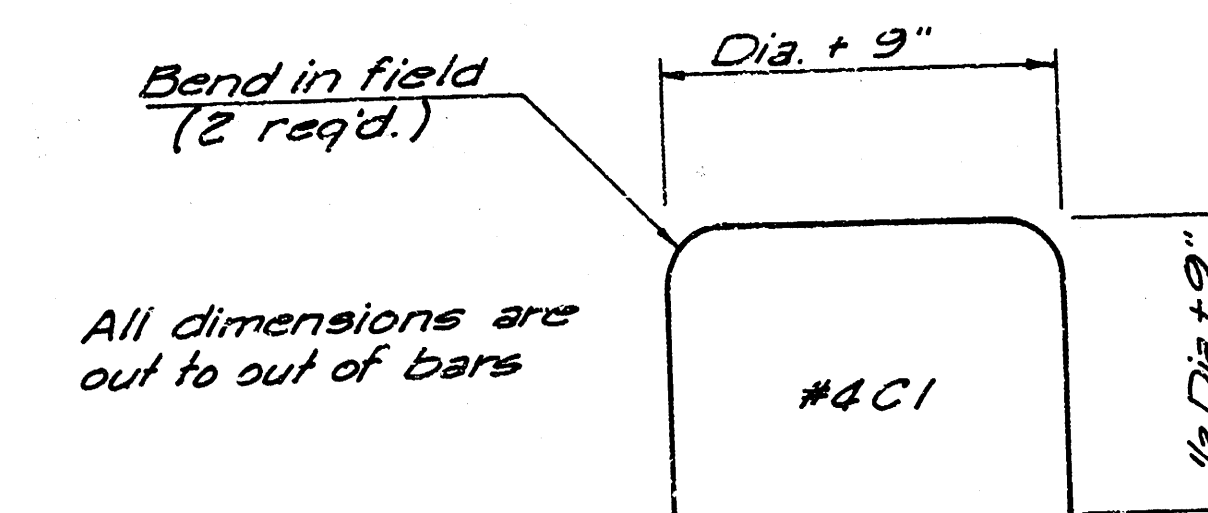


STANDARD TYPE 1A CURB INLET
 INLET OPENING = 6" x 10'-0"

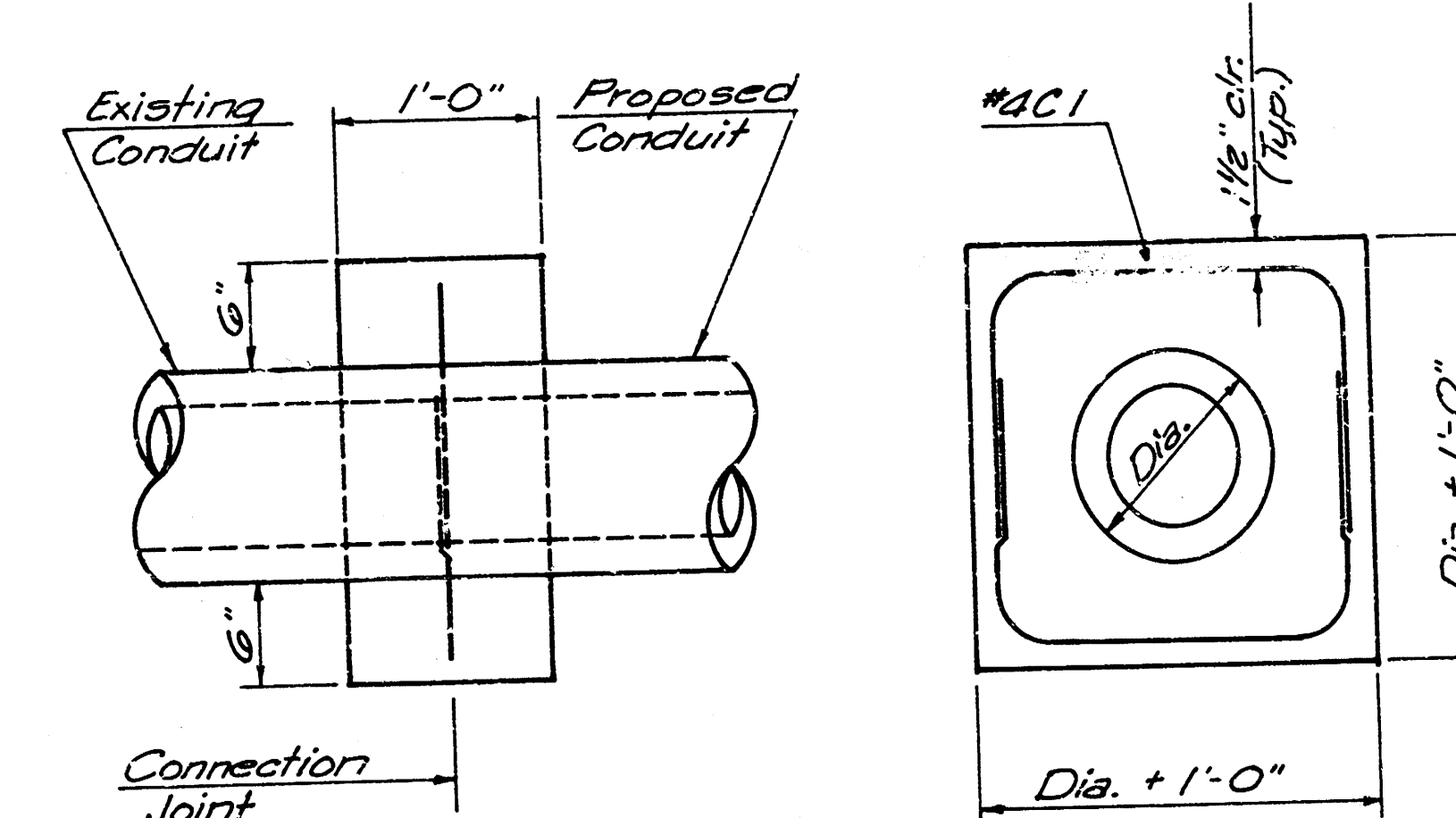
PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
 ENGINEERS
 WICHITA, KANSAS

Designed by BER, KJS, AMB
 Drawn by JGP
 Checked by AMB
 Date Nov., 1984
 Job No. 54562

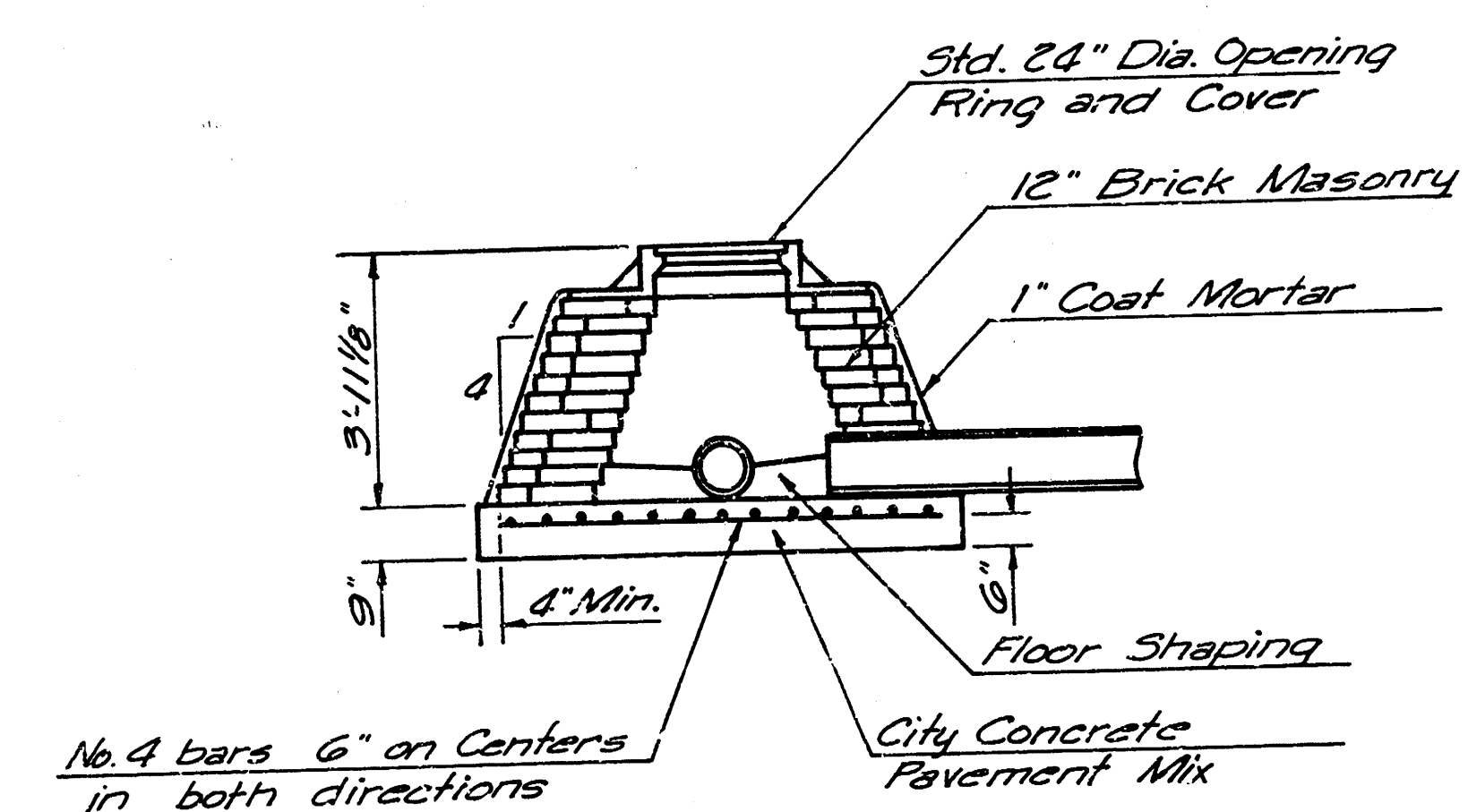
PROJECT NO.	SHEET NO.	TOTAL SHEETS
172-76-245-B1017-000-000-001	11	13



Concrete collars shall be provided at connection to existing conduits where, in the opinion of the Engineer, a collar is required for a satisfactory connection. C.O.W. std. pavement mix shall be used throughout. See bending diagram and views for reinforcing steel. Concrete collars will not be paid for directly, but shall be considered subsidiary to the various conduits involved.



CONCRETE COLLAR DETAILS



Note: See Sh. No. 12 for Std. Manhole Frame and Cover Details.

SPECIAL SHALLOW TYPE "B" MANHOLE
Sta. 1059+16.50 37.5833' Lt.

SPECIAL
SHALLOW TYPE "B" MANHOLE
& CONCRETE COLLAR DETAILS

PROFESSIONAL ENGINEERING CONSULTANTS, P.A.

ENGINEERS
WICHITA, KANSAS

Designed by: DD Checked by: GDS
Date: Dec. 1984 Job No: 84362

MANHOLE FRAME AND COVER DETAIL

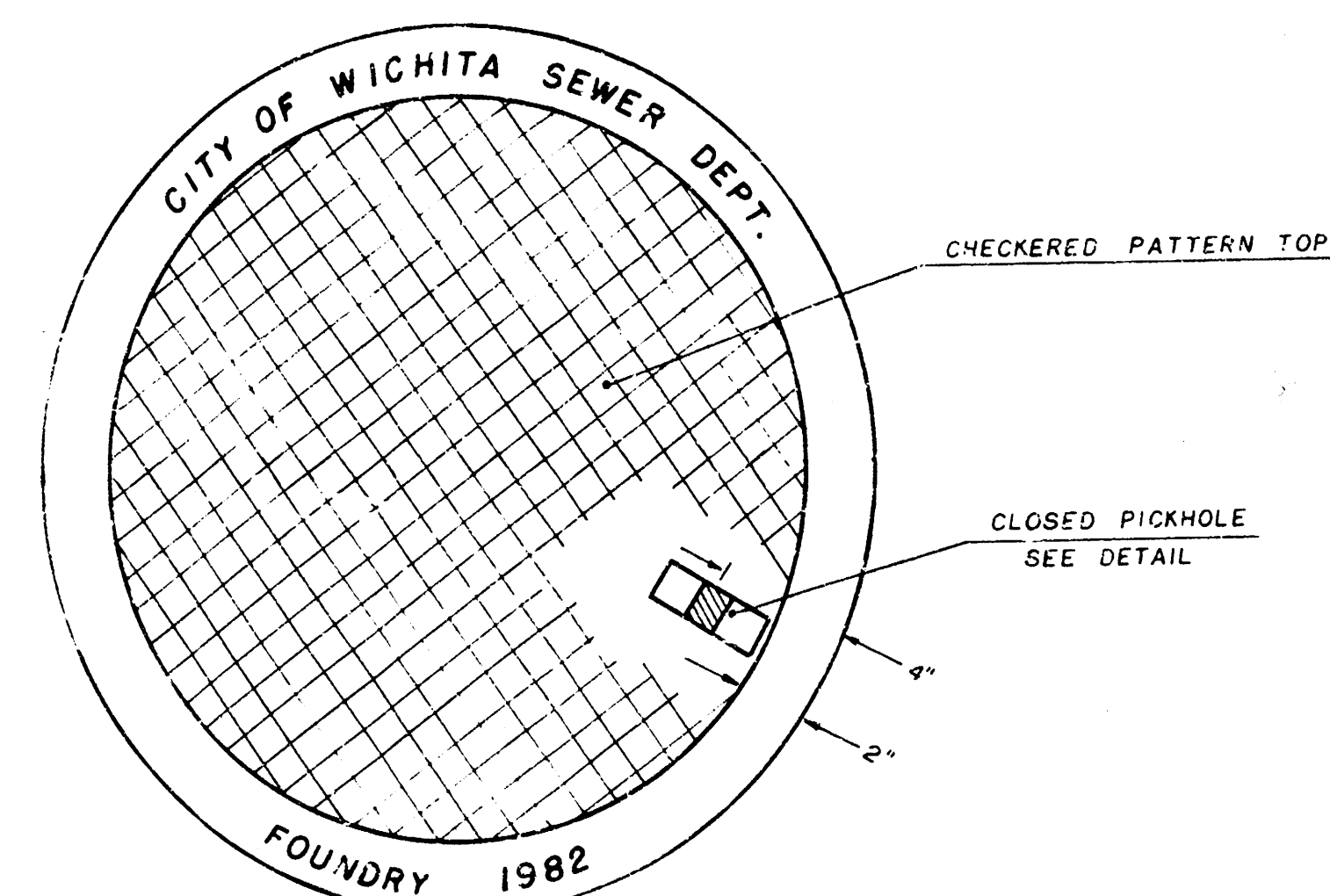
ADOPTED AS STANDARD DESIGN

BY

City of Wichita, Kansas

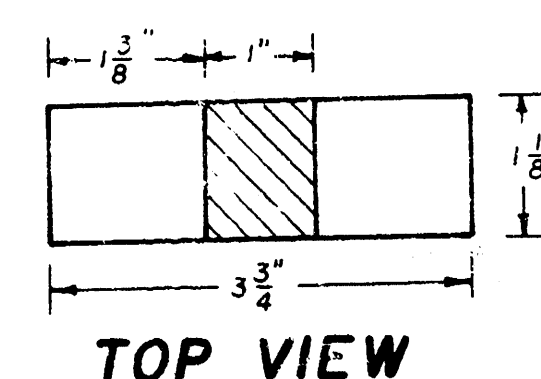
MANHOLE COVER

Weight: 180 Lbs.

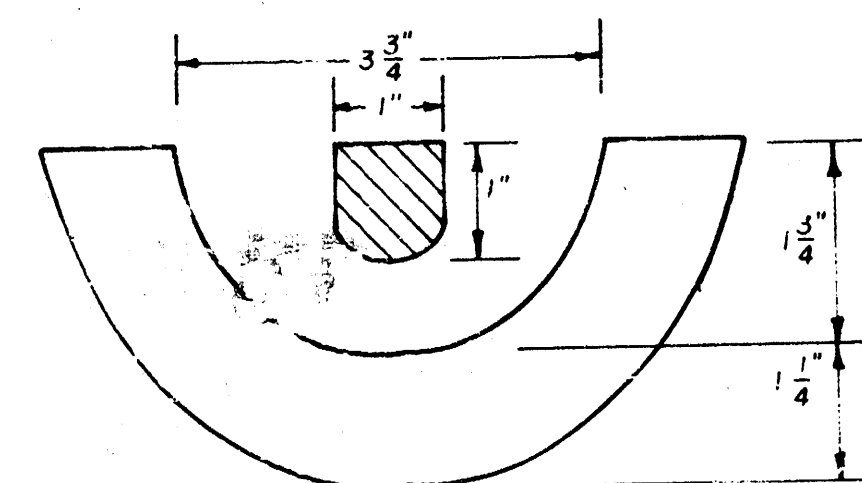


TOP VIEW

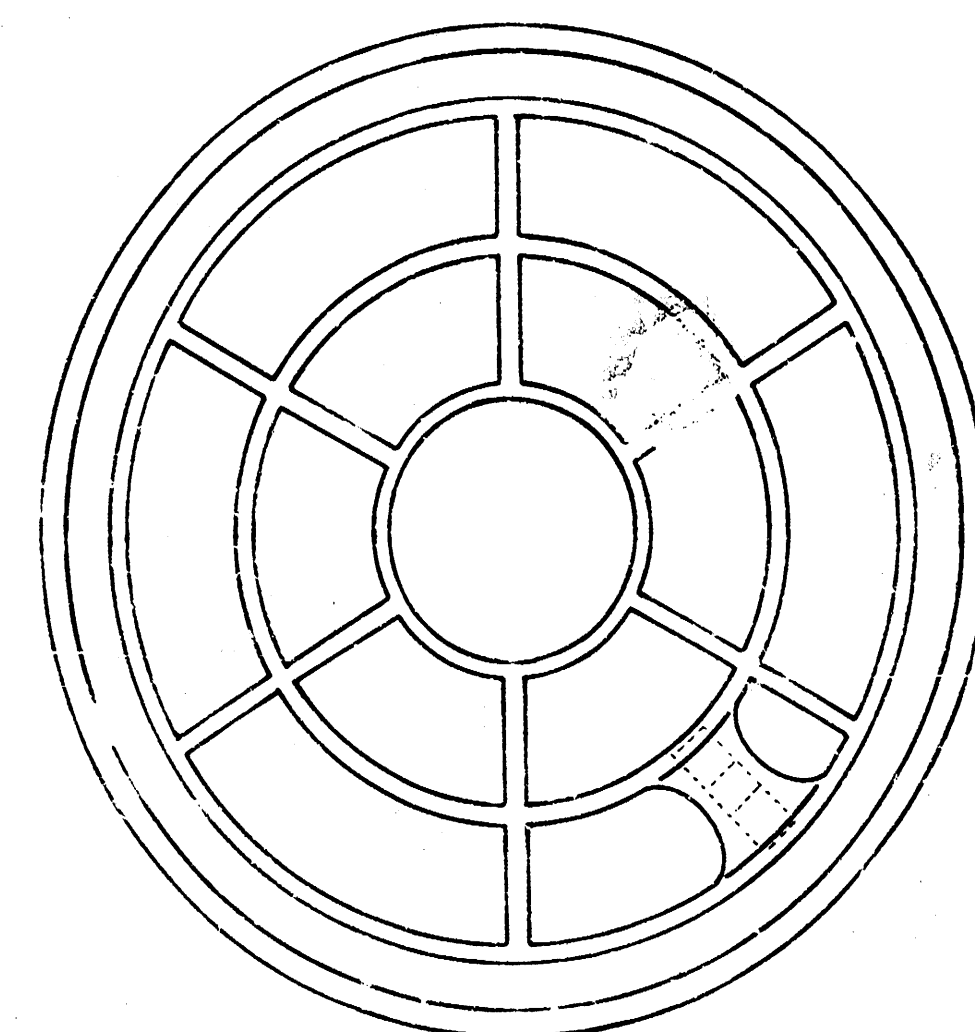
PICKHOLE DETAIL



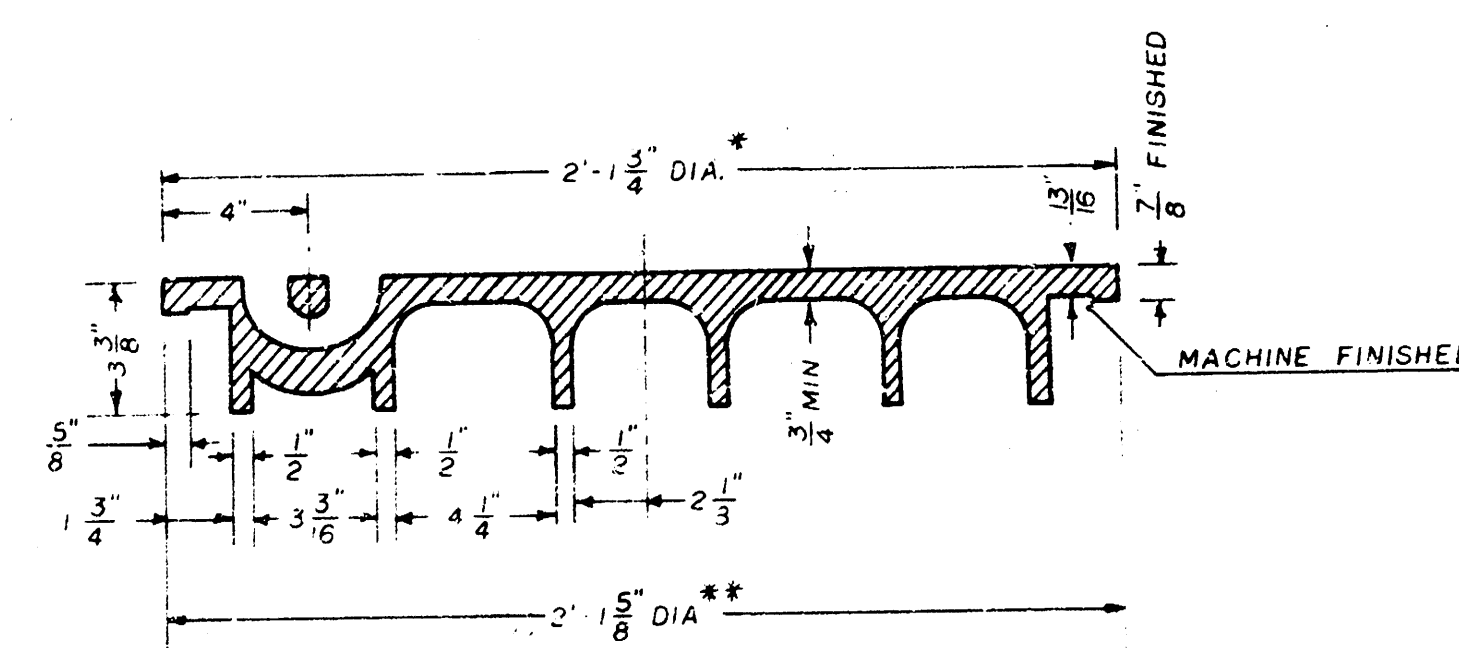
TOP VIEW



SECTION VIEW



BOTTOM VIEW

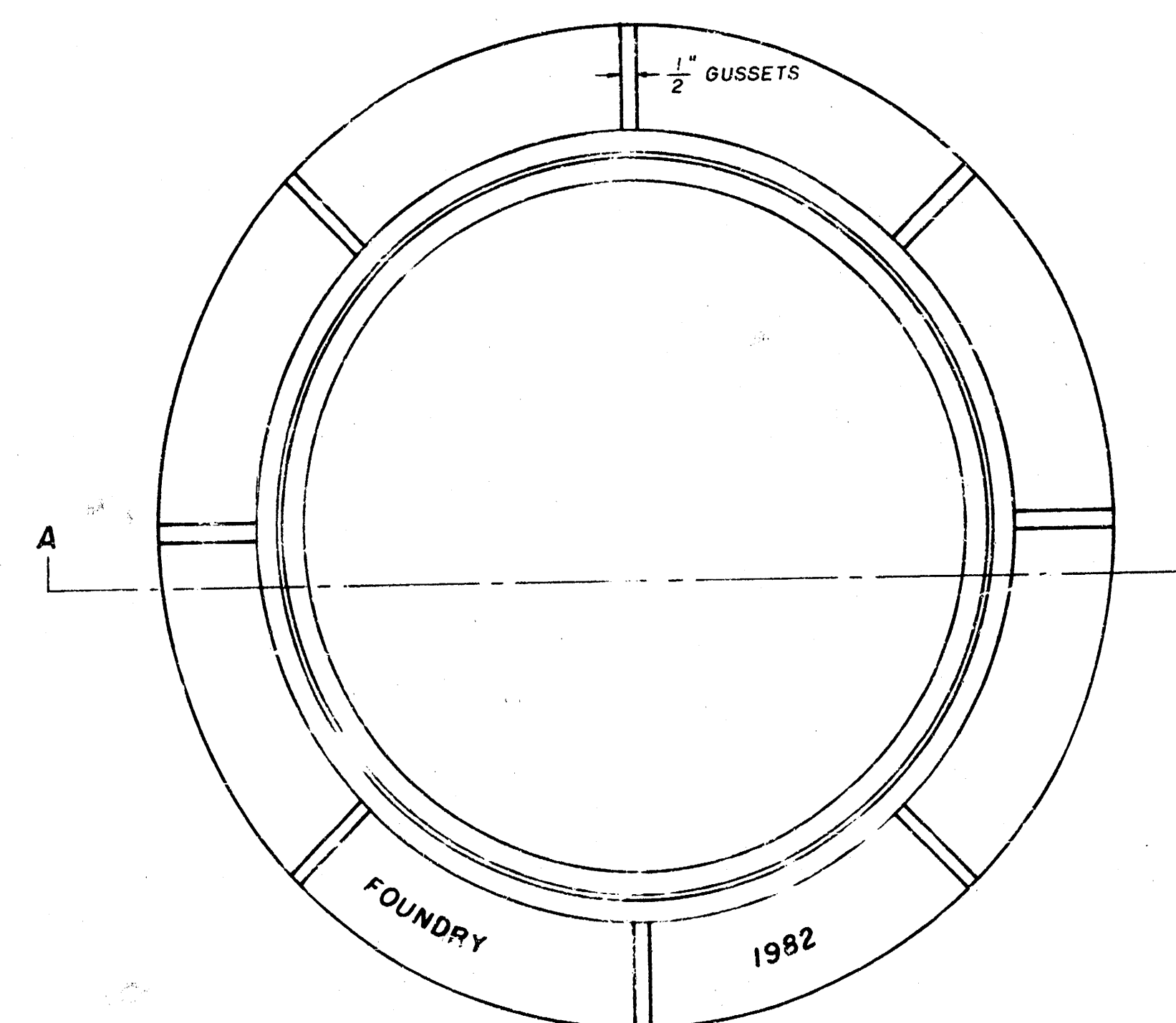


SECTION VIEW

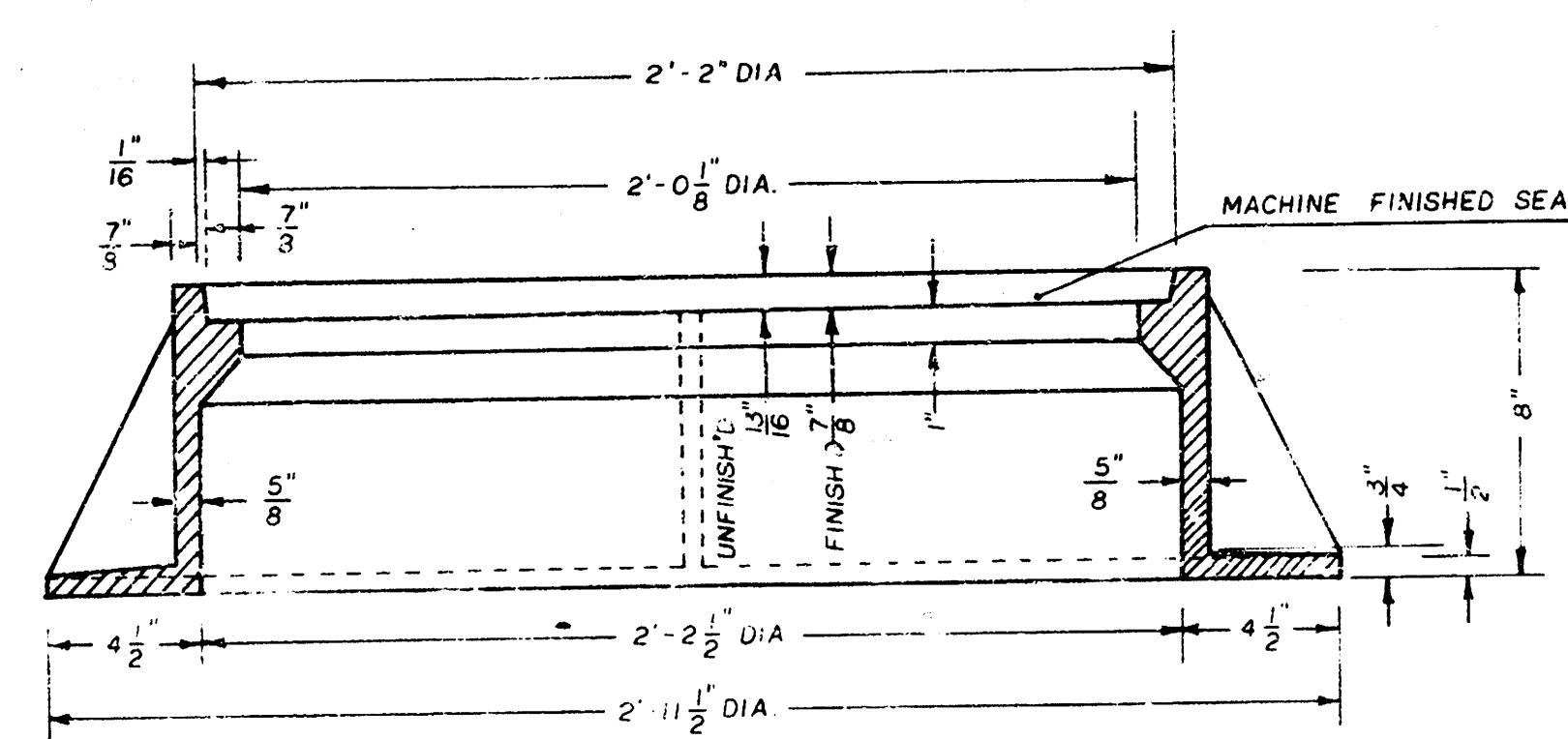
* OUTSIDE DIA. TOP OF COVER
** OUTSIDE DIA. BOTTOM OF COVER

MANHOLE FRAME

Weight: 240 Lbs.



TOP VIEW

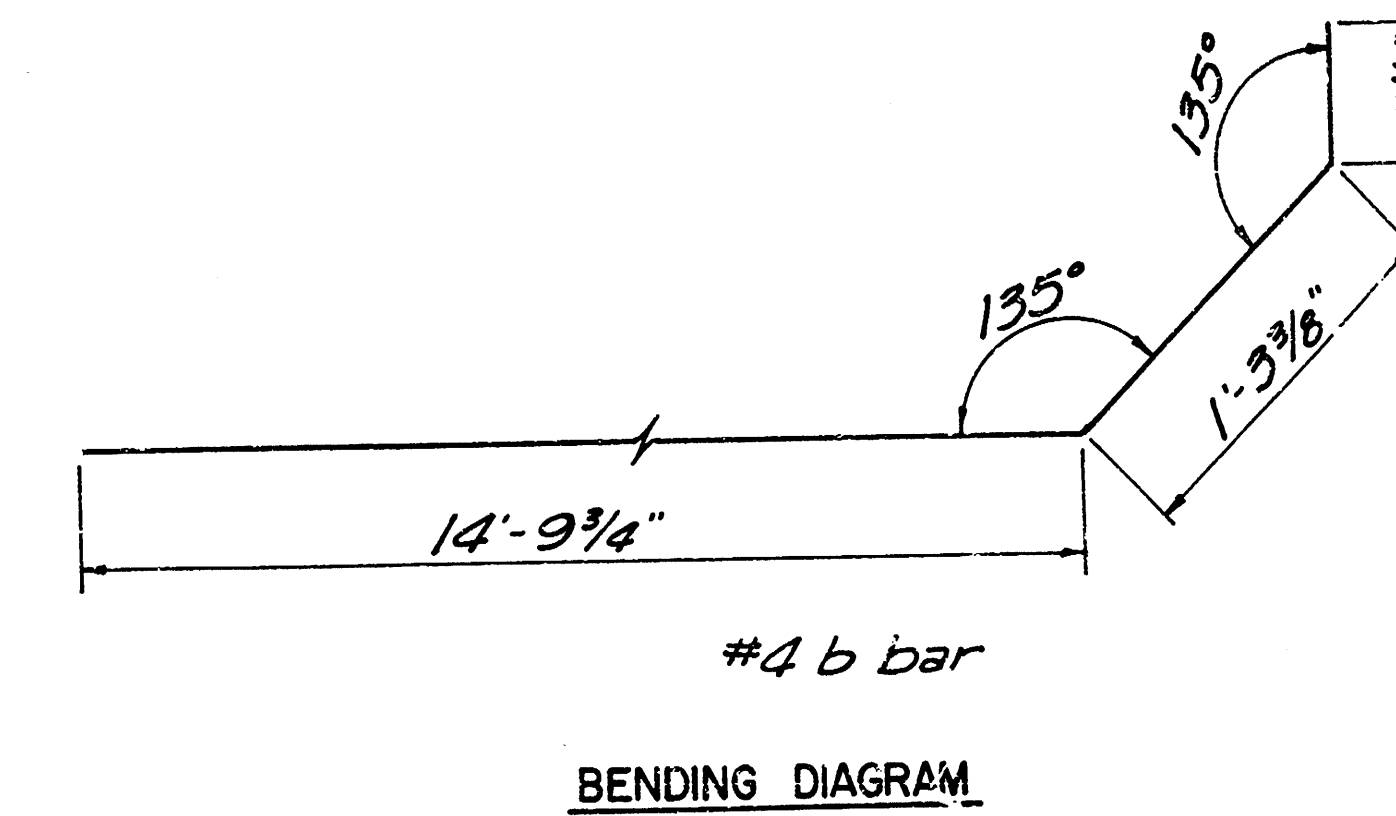
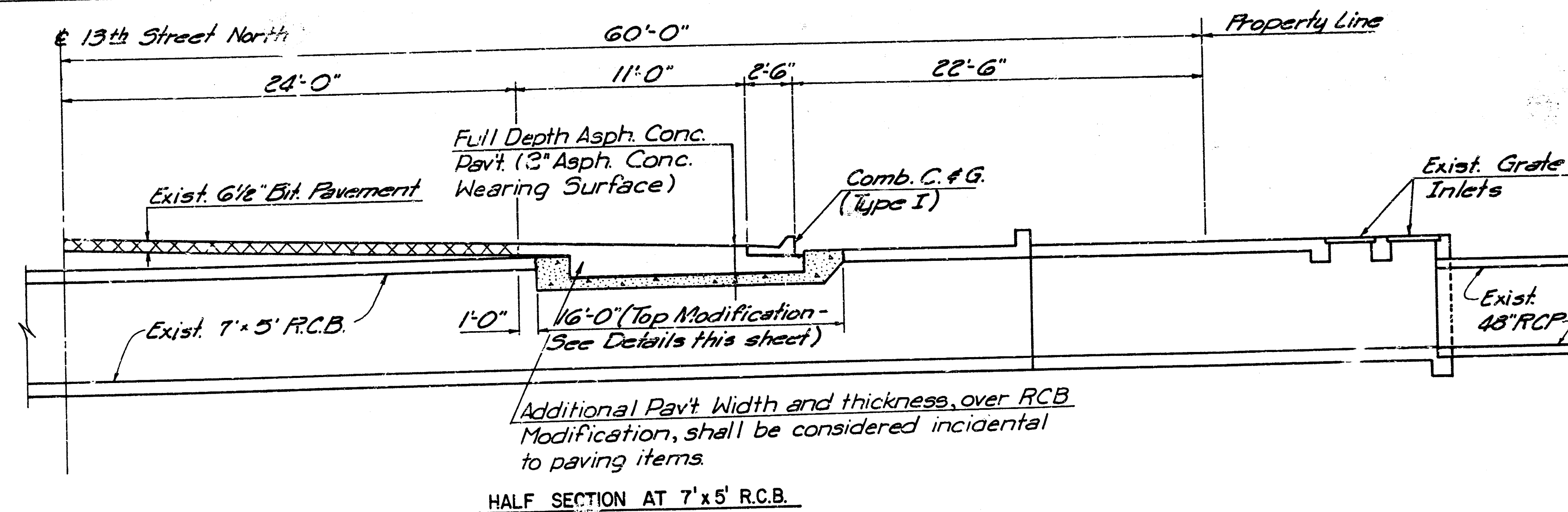


SECTION A-A

GENERAL NOTES

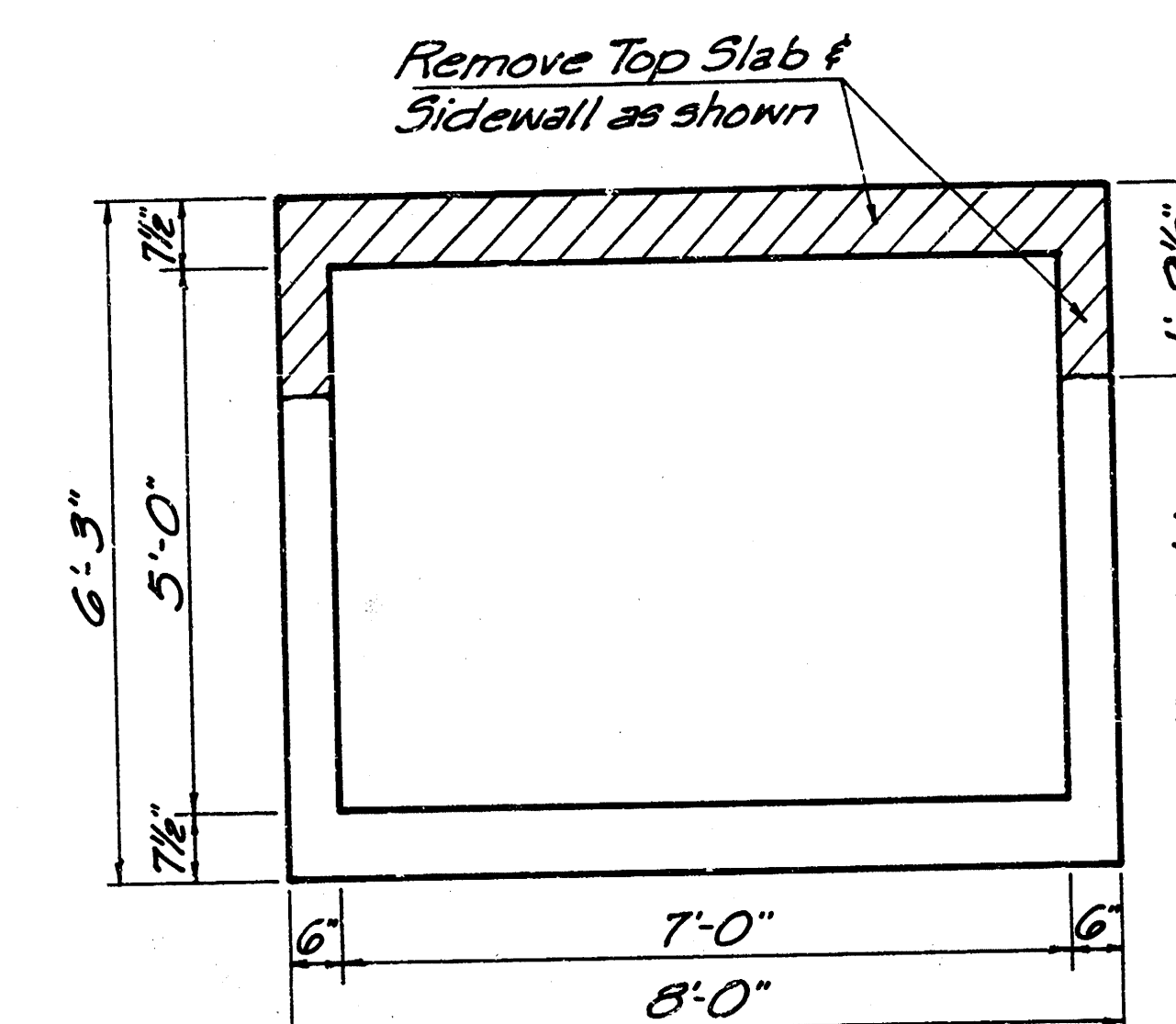
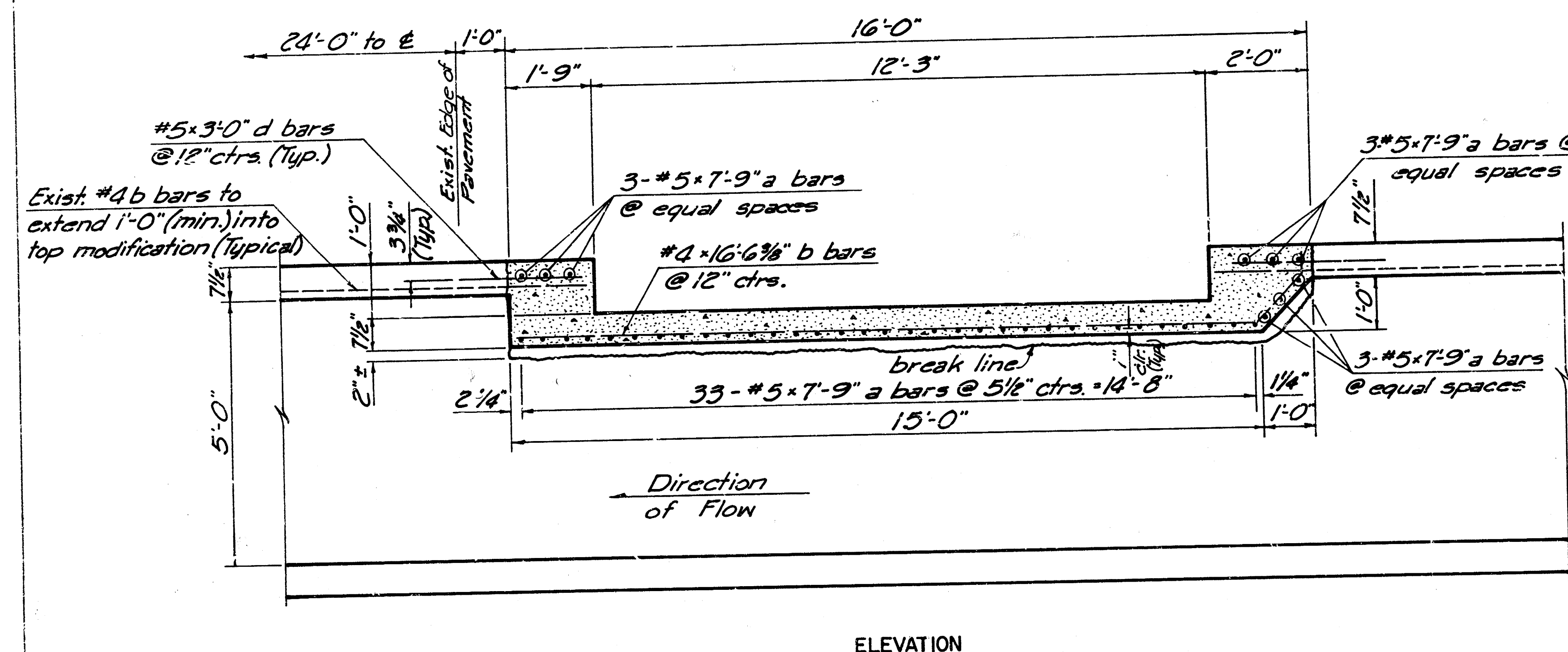
1. MANHOLE CASTINGS SHALL BE MANUFACTURED USING GOOD QUALITY GRAY IRON CONFORMING TO CLASS 30 OF A.S.T.M. DESIGNATION A-48. DIMENSIONS AND WEIGHTS SHOWN ON THE DETAIL DRAWINGS SHALL BE CONSIDERED AS MINIMUM REQUIREMENTS AND ANY DEVIATIONS FROM THE DIMENSIONS SHOWN MUST BE SPECIFICALLY APPROVED. THE FINISHED 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.

PROJECT NO.	SHEET NO.	TOTAL SHEETS
472-76-245-81017-000-000-001	13	18

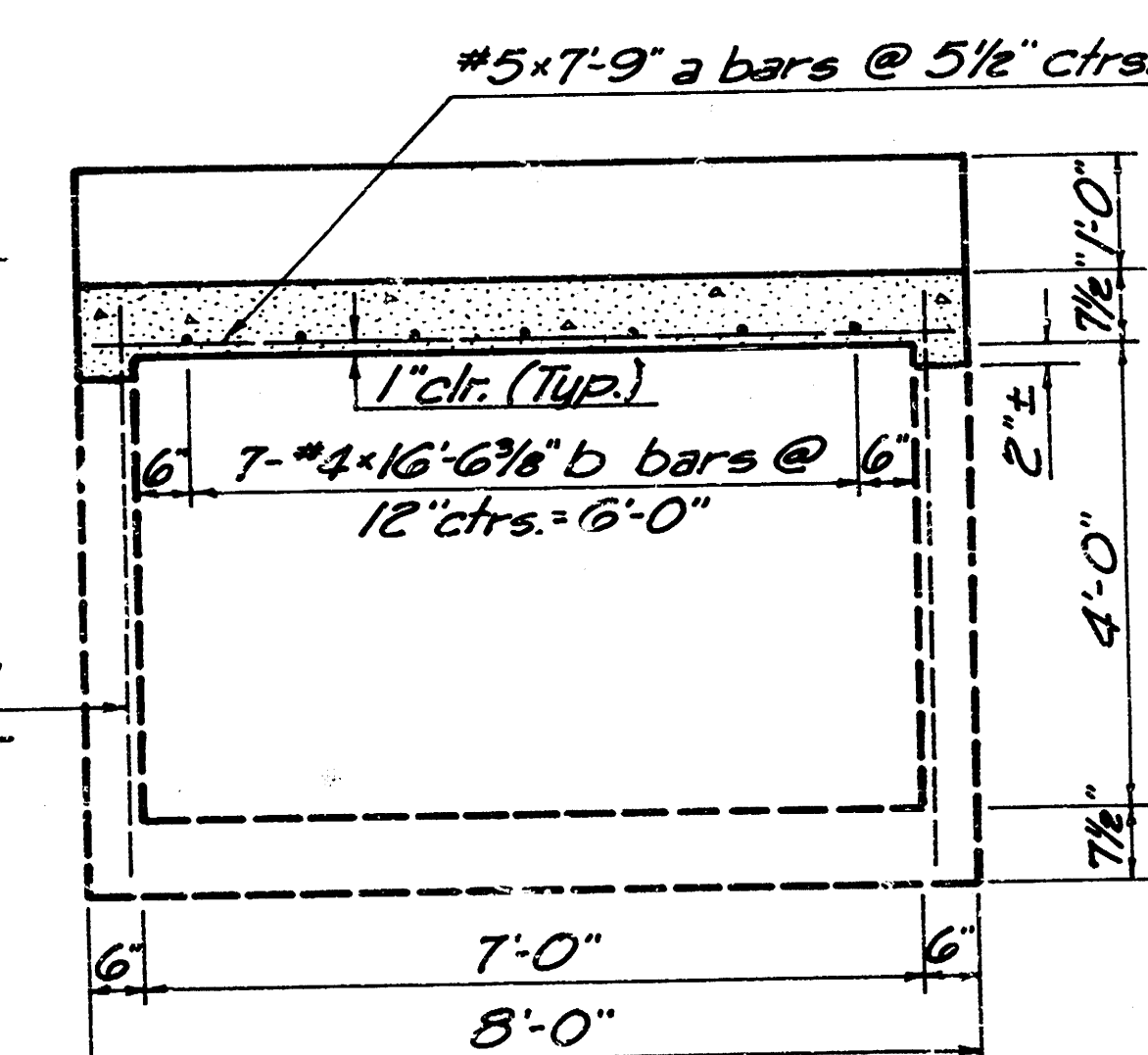
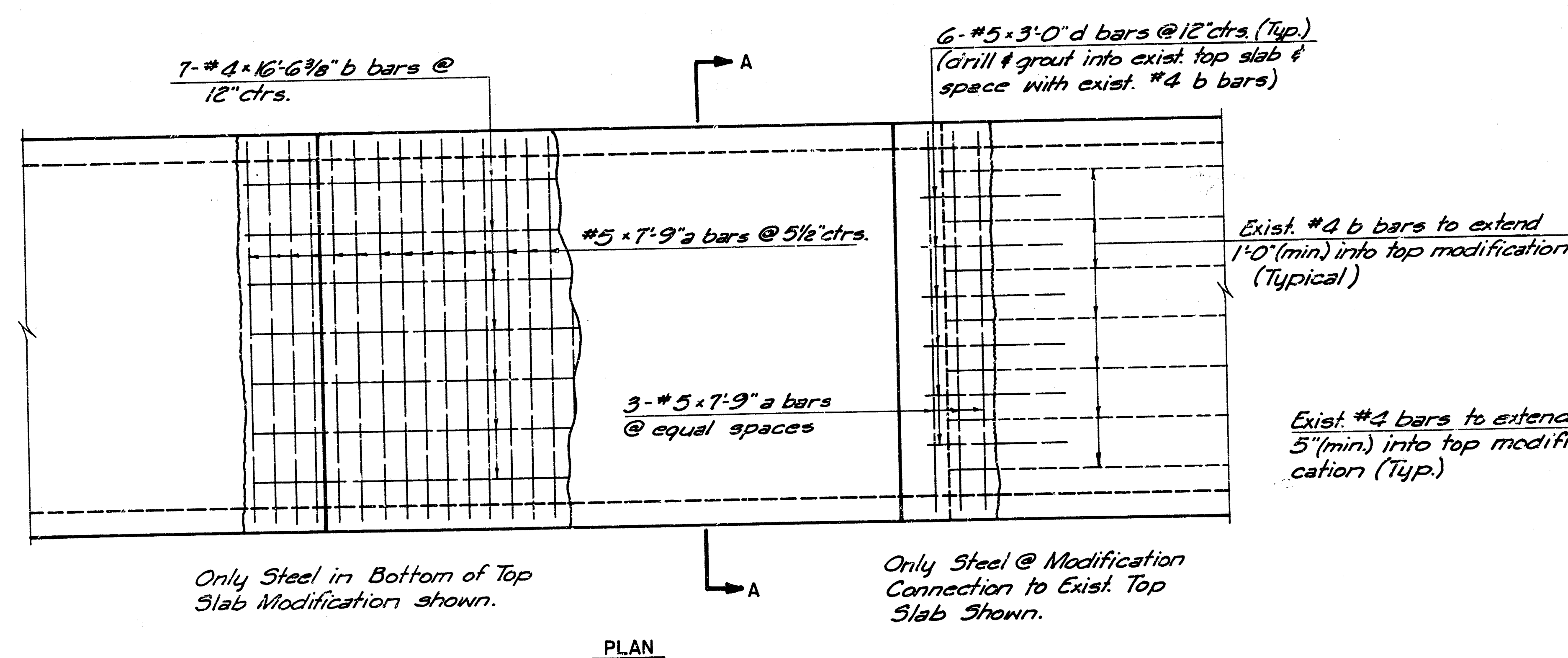


* BILL OF MATERIALS			
REINFORCING STEEL			
Mark	No.	Size	Length
a	42	#5	7'-9"
b	7	#4	16'-6 3/8"
d	12	#5	3'-0"
Class A (AE) Concrete			4.0 Cu Yds
Reinforcing Steel			450 Lbs.

*For Information Only



- GENERAL NOTES
- CONCRETE: CLASS A(AE) CONCRETE AS SPECIFIED IN THE 1980 EDITION OF STANDARD SPECIFICATIONS OF THE KANSAS DEPARTMENT OF TRANSPORTATION, SHALL BE USED THROUGHOUT ON THIS STRUCTURE.
 - BEVEL: BEVEL ALL EXPOSED EDGES WITH A 3/4" TRIANGULAR MOLDING.
 - REINFORCING STEEL: ALL REINFORCING STEEL SHALL CONFORM TO A.S.T.M. SPECIFICATIONS A615 GRADE 40. ALL DIMENSIONS RELATIVE TO PLACEMENT OF REINFORCING STEEL ARE TO CENTER LINE OF BARS UNLESS OTHERWISE NOTED.
 - REMOVAL OF EXISTING CONCRETE: THE EXISTING CONCRETE SHALL BE REMOVED TO THE BREAK LINE SHOWN ON THE PLANS. EXISTING REINFORCING STEEL SHALL BE EXPOSED, STRAIGHTENED, THOROUGHLY CLEANED BY BRUSHING, CUT TO LENGTH NOTED, AND CAST INTO TOP MODIFICATION.
 - TREATMENT OF EXISTING CONCRETE SURFACES: ALL EXISTING CONCRETE SURFACES UPON WHICH NEW CONCRETE IS TO BE PLACED SHALL BE THOROUGHLY BRUSHED AND WASHED WITH CLEAN WATER. THE SURFACE SHALL THEN BE WATERSOAKED AND SHALL BE PAINTED WITH A THICK COAT OF NEAT CEMENT MORTAR IMMEDIATELY PRIOR TO PLACING NEW CONCRETE.
 - DOWEL BARS: ALL WORK AND MATERIAL NECESSARY FOR INSTALLING THE DOWEL BARS SHALL BE SUBSIDIARY TO THE LUMP SUM BID ITEM FOR "RCB TOP MODIFICATION". GROUTING OF BARS SHALL MEET THE 1980 EDITION OF THE STANDARD SPECIFICATIONS OF THE KANSAS DEPARTMENT OF TRANSPORTATION.
 - PAYMENT: THE COMPLETED AND ACCEPTED WORK, AS SHOWN THIS SHEET, SHALL BE PAID FOR AT THE CONTRACT "LUMP SUM" PRICE BID FOR "RCB TOP MODIFICATION". SAID PRICE BID SHALL BE FULL PAYMENT FOR ALL REMOVAL, FOR FURNISHING ALL MATERIALS, FOR ALL EXCAVATION AND BACK-FILLING, AND FOR ALL LABOR, EQUIPMENT, TOOLS, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK.

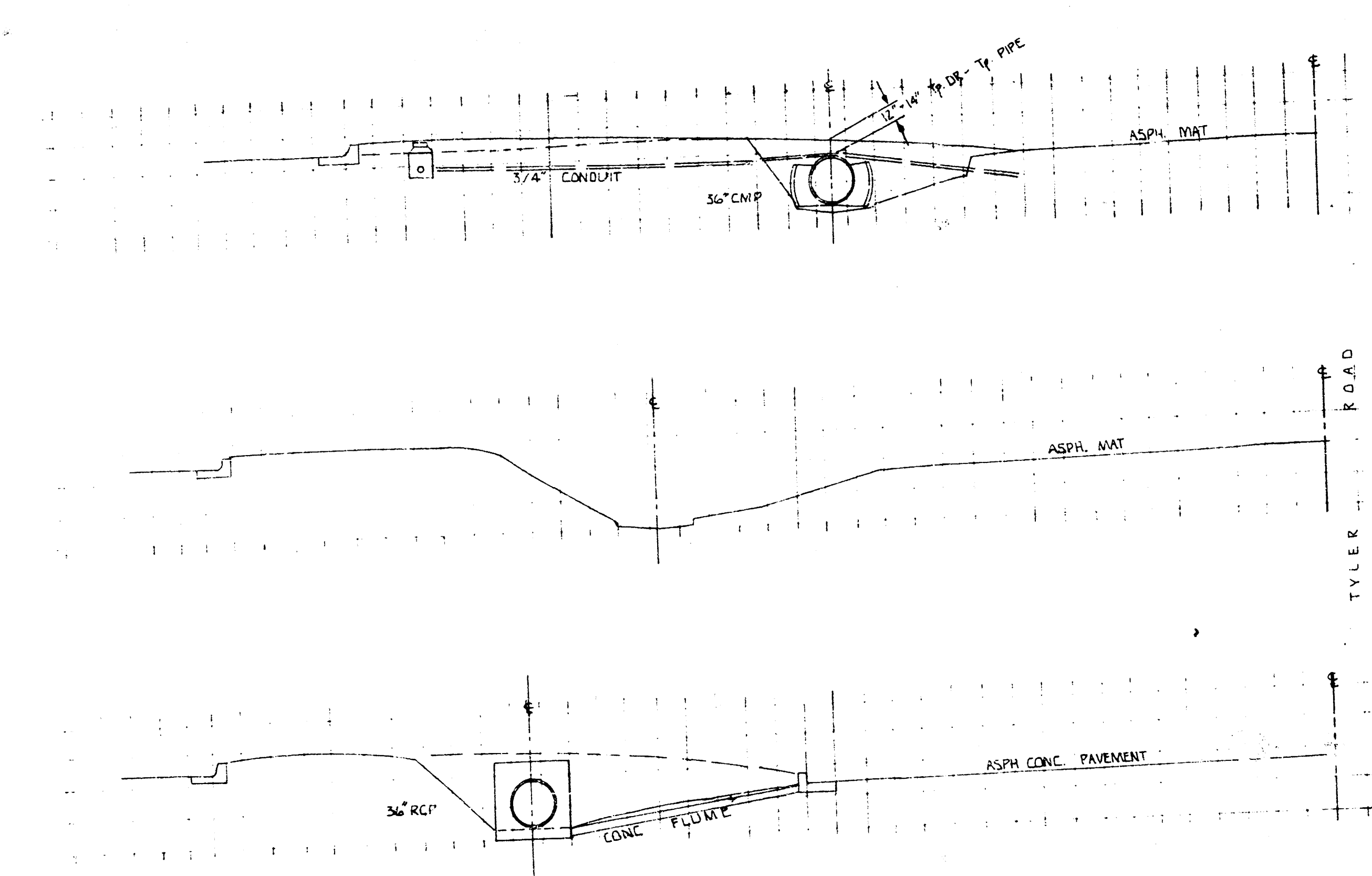
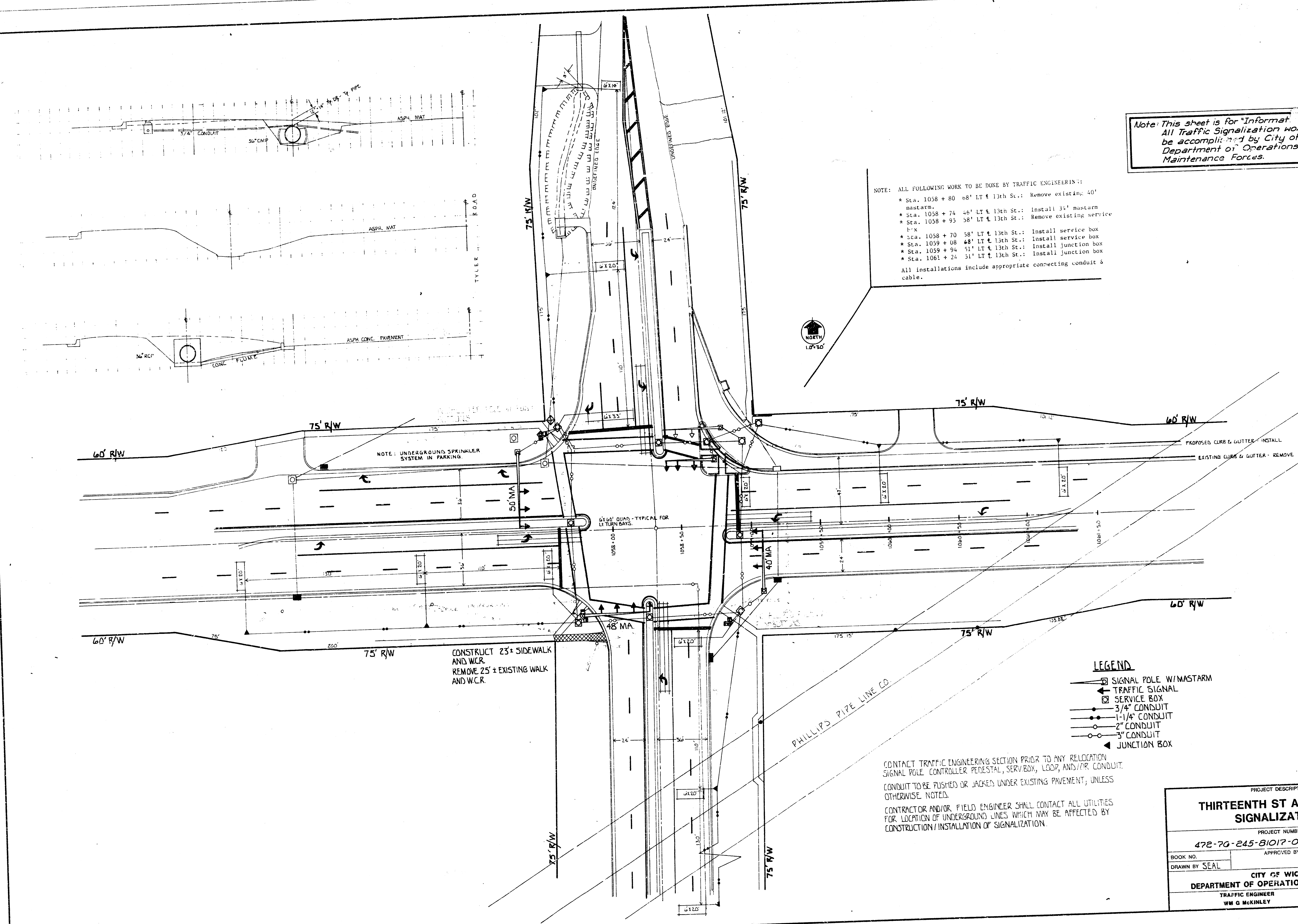


R.C.B. TOP MODIFICATION
7'x5' R.C.B. at 13th. STREET
STA. 1066+75

PROFESSIONAL ENGINEERING CONSULTANTS, P.A.			
ENGINEERS WICHITA, KANSAS			
Designed by: GDS, KLS	Checked by: GDS	13/18	
Drawn by: DD	Date: Dec. 1984	Job No. 84562	

Note: This sheet is for information only.
All Traffic Signalization work will
be accomplished by City of Wichita
Department of Operations and
Maintenance Forces.

NOTE: ALL FOLLOWING WORK TO BE DONE BY TRAFFIC ENGINEERING:
* Sta. 1058 + 80 68' LT 13th St.: Remove existing 40' mastarm.
* Sta. 1058 + 74 46' LT 13th St.: Install 34' mastarm.
* Sta. 1058 + 93 58' LT 13th St.: Remove existing service box.
* Sta. 1058 + 70 58' LT 13th St.: Install service box.
* Sta. 1059 + 08 48' LT 13th St.: Install service box.
* Sta. 1059 + 94 51' LT 13th St.: Install junction box.
* Sta. 1061 + 24 51' LT 13th St.: Install junction box.
All installations include appropriate connecting conduit & cable.

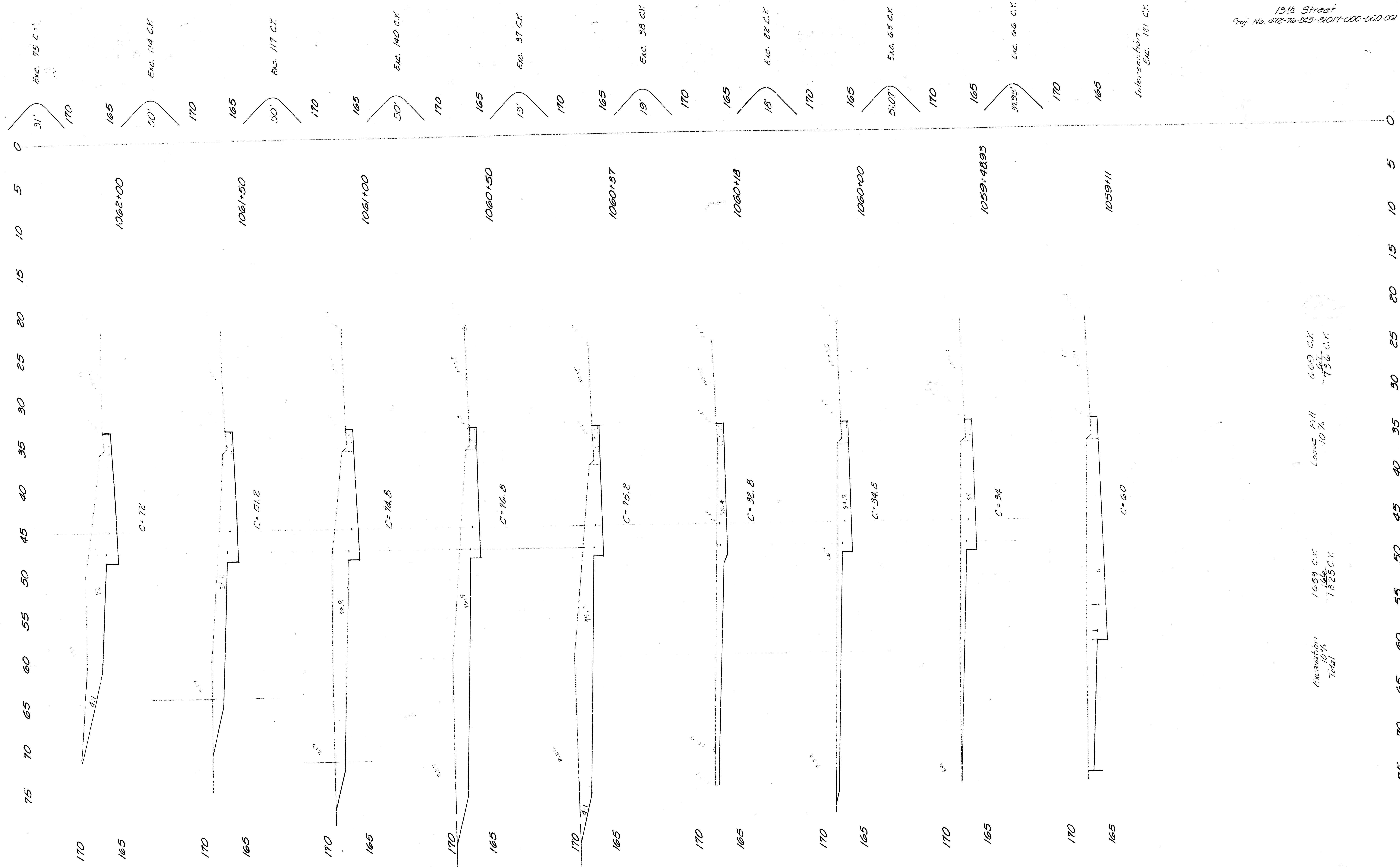


CONSTRUCT 23' SIDEWALK AND W.C.R.
REMOVE 25' EXISTING WALK AND W.C.R.

- LEGEND**
- SIGNAL POLE W/MASTARM
 - ▲— TRAFFIC SIGNAL
 - SERVICE BOX
 - 3/4\"/>
 - 1-1/4\"/>
 - 2\"/>
 - 3\"/>
 - ▲— JUNCTION BOX

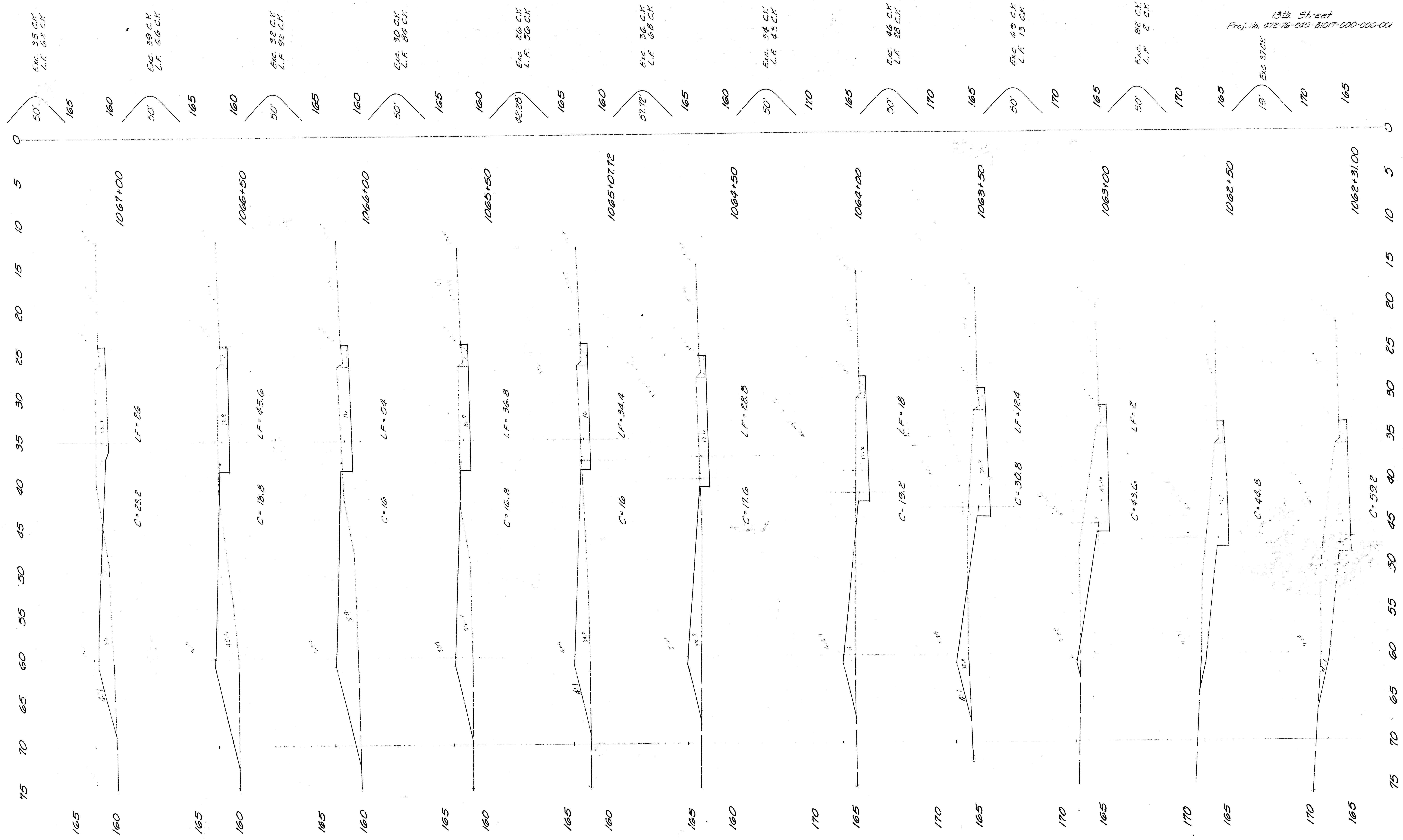
CONTACT TRAFFIC ENGINEERING SECTION PRIOR TO ANY RELOCATION
SIGNAL POLE, CONTROLLER PEDESTAL, SERVICE BOX, LOOP AND/OR CONDUIT.
CONDUIT TO BE PUSHED OR JACKED UNDER EXISTING PAVEMENT, UNLESS
OTHERWISE NOTED.
CONTRACTOR AND/OR FIELD ENGINEER SHALL CONTACT ALL UTILITIES
FOR LOCATION OF UNDERGROUND LINES WHICH MAY BE AFFECTED BY
CONSTRUCTION/INSTALLATION OF SIGNALIZATION.

PROJECT DESCRIPTION		
THIRTEENTH ST AT TYLER RD SIGNALIZATION		
PROJECT NUMBER		
472-70-245-81017-000-000-001		
BOOK NO.	APPROVED BY	DATE 83 MAY
DRAWN BY SEAL		REVISED 85 JAN
CITY OF WICHITA		
DEPARTMENT OF OPERATIONS & MAINTENANCE		
TRAFFIC ENGINEER		SCALE 1/4\"/>
WM G MCKINLEY		1/3



13th Street
 Proj. No. 472-76-225-81017-000-000-001

Excavation	1659 C.Y.
Loose Fill	669 C.Y.
Total	2328 C.Y.



75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0

165

160

1072+00

165

160

1071+50.45

$\text{C} = 51.9$
 $\text{C} = 23.6$
 $\text{L.F.} = 0$

165

160

1071+00

$\text{C} = 27.2$
 $\text{L.F.} = 0$

165

160

1070+50

$\text{C} = 25.2$
 $\text{L.F.} = 7.6$

165

160

1070+00

$\text{C} = 50.8$
 L.F.

165

160

1069+50

$\text{C} = 16.8$
 $\text{L.F.} = 16$

165

160

1069+00

$\text{C} = 20.4$
 $\text{L.F.} = 5.2$

165

160

1068+50

$\text{C} = 13.6$
 $\text{L.F.} = 10.8$

165

160

1068+00

$\text{C} = 16.4$
 $\text{L.F.} = 20$

165

160

1067+50

$\text{C} = 14.8$
 $\text{L.F.} = 40.8$

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0

165

160

165

160

Exc. 35 C.K.

165

160

Exc. 49 C.K.
L.F. 7 C.K.

165

160

Exc. 52 C.K.
L.F. 10 C.K.

165

160

Exc. 44 C.K.
L.F. 18 C.K.

165

160

Exc. 34 C.K.
L.F. 20 C.K.

165

160

Exc. 37 C.K.
L.F. 15 C.K.

165

160

Exc. 33 C.K.
L.F. 29 C.K.

165

160

Exc. 29 C.K.
L.F. 56 C.K.

165

160

13th Street
Proj. No. 478-76-265 8/20/77-000-000-001

Tyler Road
 Proj. No. 412-16-245-8-017-000-000-001

170 165 19' Exc. 39 C.H.
 170 165 50' Exc. 46 C.H.
 170 165

49+19

49+00

48+50

C=63.6

C=47.6

C=2

