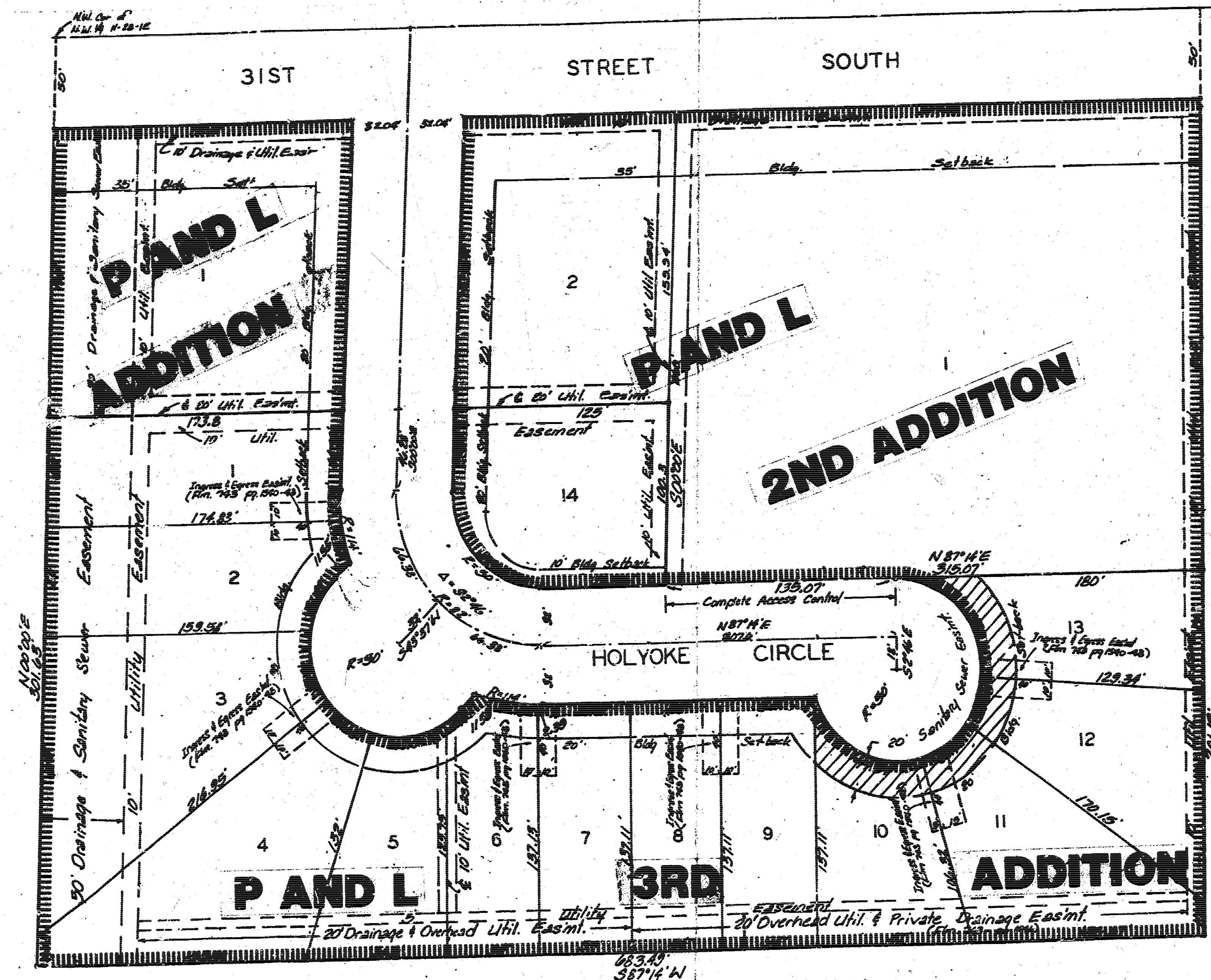


STREET IMPROVEMENTS FOR HOLYOKE CIRCLE FROM THE S.L. OF 31ST STREET SOUTH TO 8 INCLUDING CUL-DE-SAC PROJECT NO. 472-76-245-81516-000-000-001

CITY OF WICHITA, KANSAS
MICHAEL E. LINDEBAK — CITY ENGINEER



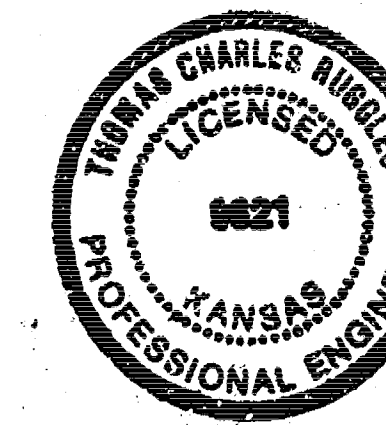
INDEX TO THE PLANS

- 1 Title and Improvement District
- 2 Typical Section 36 Foot Pavement
- 3 Drive Detail Sheet
- 4 Holyoke Circle
- 5 Incident Drainage
- 6 Type "B" Shallow Manhole Detail
- 7 Type 1A Inlet Detail
- 8-10 Earthwork Cross Sections

PROJECT BENCH MARKS

1. City Disc at northeast corner of Hillside and 31st Street South. Elevation = 104.29 City Datum
2. Square cut in top of parking lot curb, south of Quik Trip sign, northeast corner of parking lot. Elevation = 113.34 City Datum

1. The Contractor shall adjust Water Valve Boxes and Fire Hydrants as directed by the Engineer at the price bid for said adjustments. The Water Department shall field locate water valves one time 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.
2. Utility service lines, poles, valve boxes, meters, and etcetera are to be adjusted as necessary by others prior to construction unless the plans specifically call for their adjustment by the Contractor or unless the plans specifically identify a utility to be adjusted by its owner during construction. Existing utilities and their location, as shown on the plans, represent the best information obtainable for design. The contractor will be required to work around existing utilities within the right-of-way which do not conflict with proposed construction.
3. 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 the surface or pavement is required. Sawed joint to facilitate removal within three (3) feet of existing joints will not be permitted and for such instances the limits of removal shall extend to the existing joint. Such saw cuts will not be paid for directly and this cost shall be considered as subsidiary to the removal of the surface or pavement.
4. 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.
5. No more than 12 drives 18 feet in width, or equivalent combinations thereof, are to be constructed with this project.
6. All entrance and cross road pipe within the project limits shall be removed by the Contractor unless otherwise noted on the plans. Removal of such pipes shall conform to the applicable section of the Standard Specifications.
7. 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.
8. Removal of existing concrete parking lot pavements, asphalt parking lot pavements, asphalt driveway pavements and/or asphalt sidewalk pavements will be paid for as square feet of walk and drive removed. Driveway widths and locations shown on the plans are tentative. Contractor will be required to obtain property executed driveway request form signed by property owner or his authorized representative verifying such driveway widths and locations. Such forms shall be submitted to the Engineer for his review and approval.



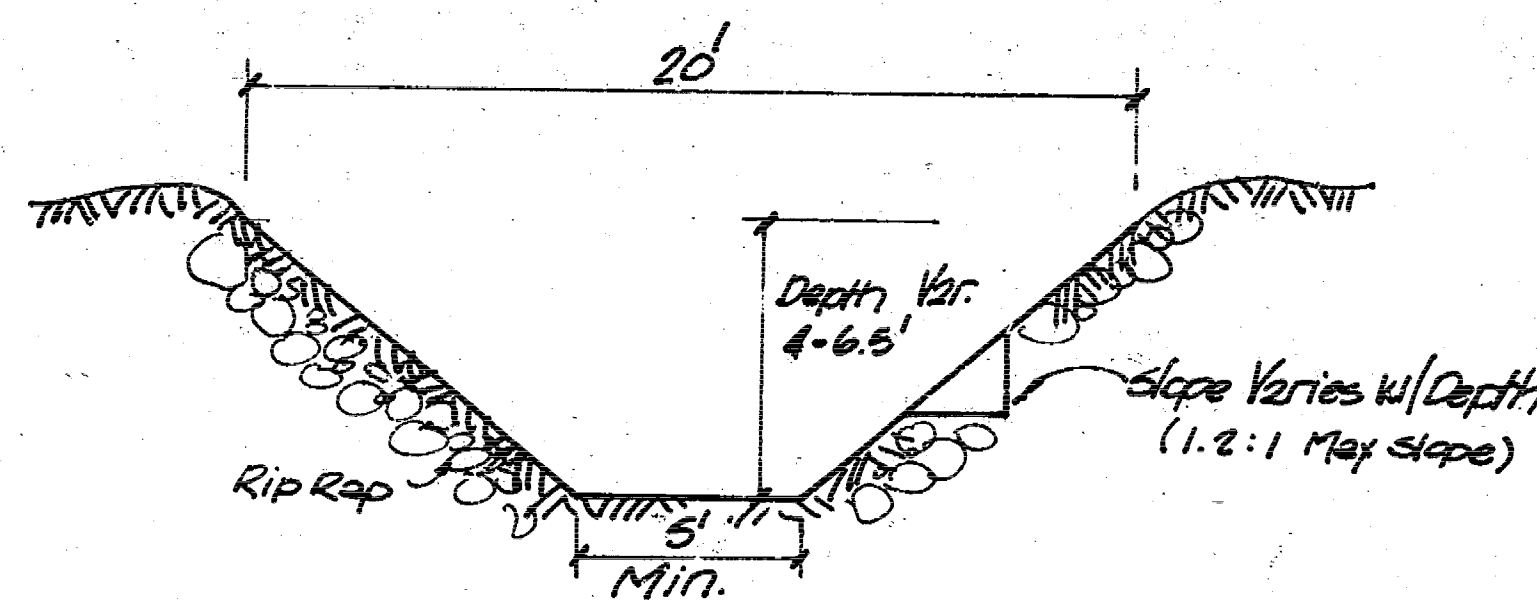
REVISED APRIL 9, 1987
APRIL 24, 1988

BAUGHMAN COMPANY, P.A.
SURVEYING & ENGINEERING
316/262-7271 • 330 LAURA • WICHITA, KANSAS 67211

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PROJECT BENCH MARKS

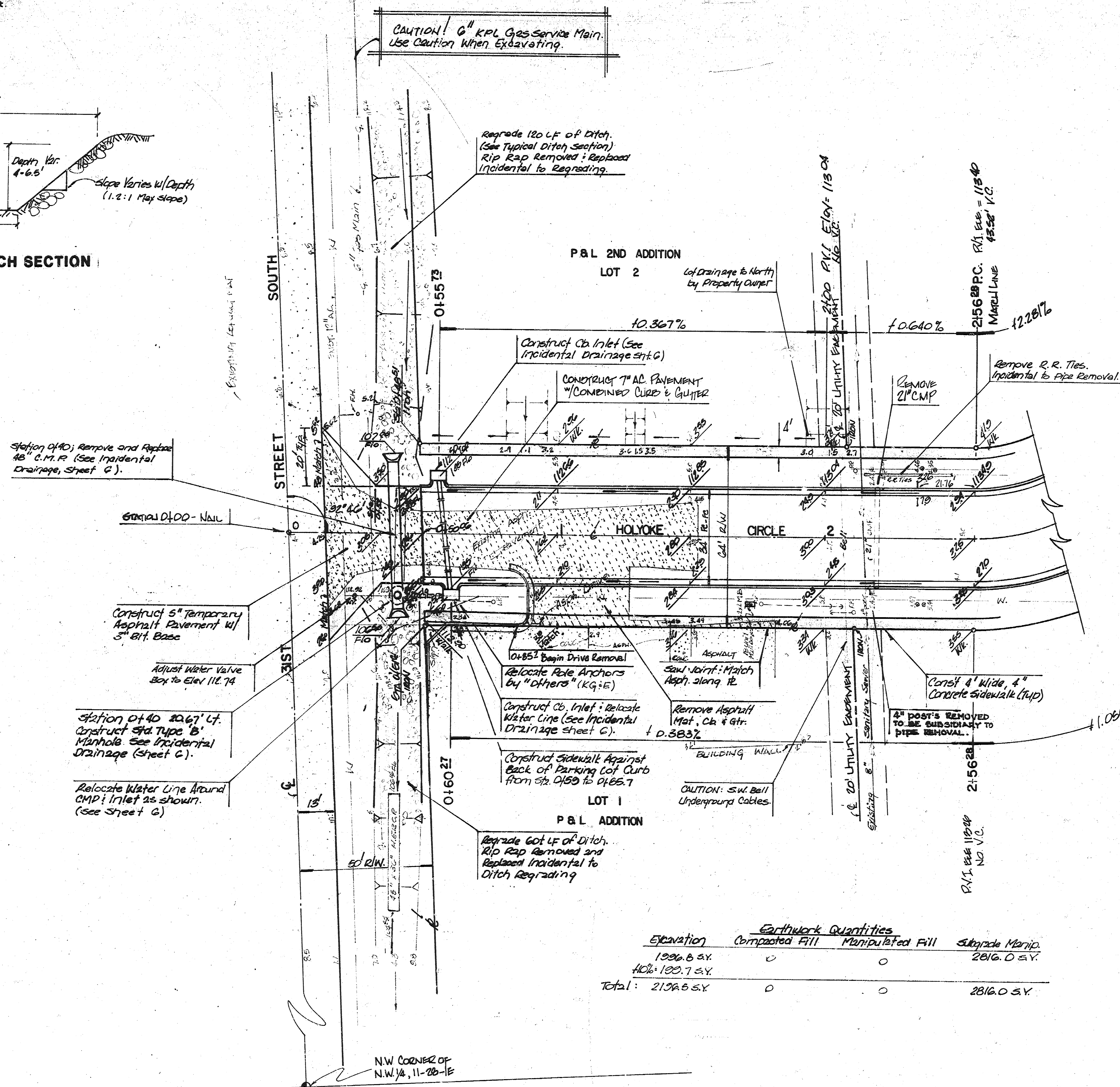
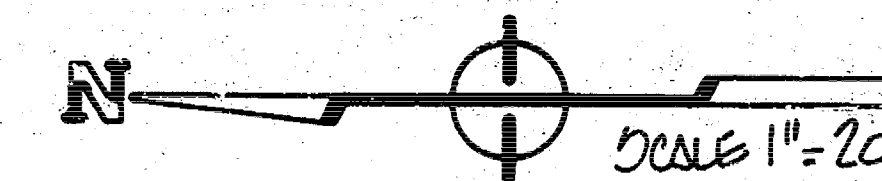
1. City Disc at northeast corner of Hillside and 31st Street South. Elevation = 104.29 City Datum
2. Square cut in top of parking lot curb, south of Quik Trip sign, northeast corner of parking lot. Elevation = 113.34 City Datum



TYPICAL DITCH SECTION

CAUTION! 6" KPL Gas Service Main. Use Caution When Excavating.

Regrade 120 LF of Ditch. (See Typical Ditch Section) Rip Rap Removed; Replaced Incidental to Regrading.



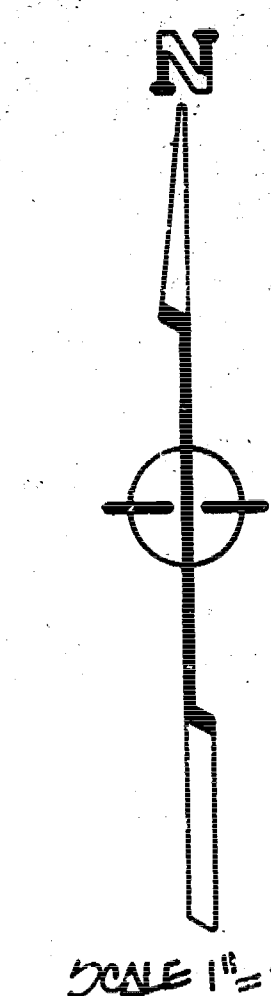
Excavation	Earthwork Quantities		Subgrade Manip.
	Compacted Fill	Manipulated Fill	
1396.6 SY	0	0	2816.0 SY
ADJ: 130.7 SY			
Total: 2196.5 SY	0	0	2816.0 SY

HOLYOKE CIRCLE

472-76-245-81516-000-000-001

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1. City Disc at northeast corner of Hillside and 81st Street South. Elevation = 104.29 City Datum
2. Square cut in top of parking lot curb, south of Quik Trip sign, northeast corner of parking lot. Elevation = 113.34 City Datum



Curve Data Based on Center Line ~					
Radius = 82' Δ = 92° 44' 00" Tan = 86.06 Arc = 132.76 Cof/Pt = 0.54936° Cc = 118.73'					
		Chord Lengths to Face		Cof. Δ	Total Cof. Δ
Station	Arc	8' Left of Face Cb.	8' Right of Face Cb.		
2+56.28 P.C.	0	0	0	0	0
2+76	18.72	12.08	↓	6° 32' 25"	6° 32' 25"
2+88.73	8.73	6.07	36.66	3° 03' 00"	9° 35' 25"
3+00	16.27	11.20	↓	5° 41' 04"	15° 16' 29"
3+22.66	22.66	16.70	50.33	7° 06' 01"	22° 11' 30"
3+50	27.34	18.21	↓	9° 33' 07"	32° 44' 37"
3+61.94	11.50	8.06	50.33	4° 02' 58"	36° 47' 35"
3+80.00 RT.	21.45	18.99	36.66	0° 36' 25"	46° 25' 00"

HOLYOKE CIRCLE 
472-76-245-21518-000-000-001

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- PROJECT BENCH MARKS**
1. City Disc at northeast corner of Hillside and 31st Street South. Elevation = 104.29 City Datum
 2. Square cut in top of parking lot curb, south of Quik Trip sign, northeast corner of parking lot. Elevation = 113.34 City Datum

PROJECT BENCH MARKS

CAUTION: 6" GAS
MAIN (KPL GAS SERV)

Station 0+00 = Pavement
Station 0+40, 20.67' Right,
Construct Shallow Type 'B'
Manhole, Top = 112.40
Diameter = 5'

Relocate Water Line Around
CMP 2nd Inlet as Shown
(see plan & profile, this sheet)

Install 15 S.Y. Pre-packaged Concrete
Rip-Rap as shown (Type Both Sides)

Station of G.I.^B: Pavement Station
of 5573, 20.67' L^t, Crst. Std. Type 1A
Curb Inlet, Top = 112.50 (W = 4' 4")

Lot grading to North
by Property Owner

Relocated Pole Anchor
by "Others"

Station of 20? = Pavement Station
Of 60²¹, 20.67' Rt., Const. Std.
Type 1A Curb Inlet, Top = 112.50
(Width = 4' 4")

INCIDENTAL DRAINAGE

CAUTION: G^N GAS
MAIN (KPL GAS
SERVICE CO.)

Station 0700
Existg. Water Van
Located 26.5' N. :
9' E. Prop. Iron.

Station 0400
Remove ± 43 LF
Existg. 8" Water F
South of Water Val
2' - 8" CKL ST Pipe
Adjust Valve Box to
Elev. 112.74

Station 0402
1-45° CIMJ Bend

Station of 19
1-45° CIMJ Berp

WATER MAIN RELOCATION

NOTES ON WATER MAIN RELOCATION

Remove 43 LF
Existing 8" Water Line

HOLYOKE CIR.

Station of 5241
1-22.5° C/M/T Bore
Connect to Existg
8" Pipe.

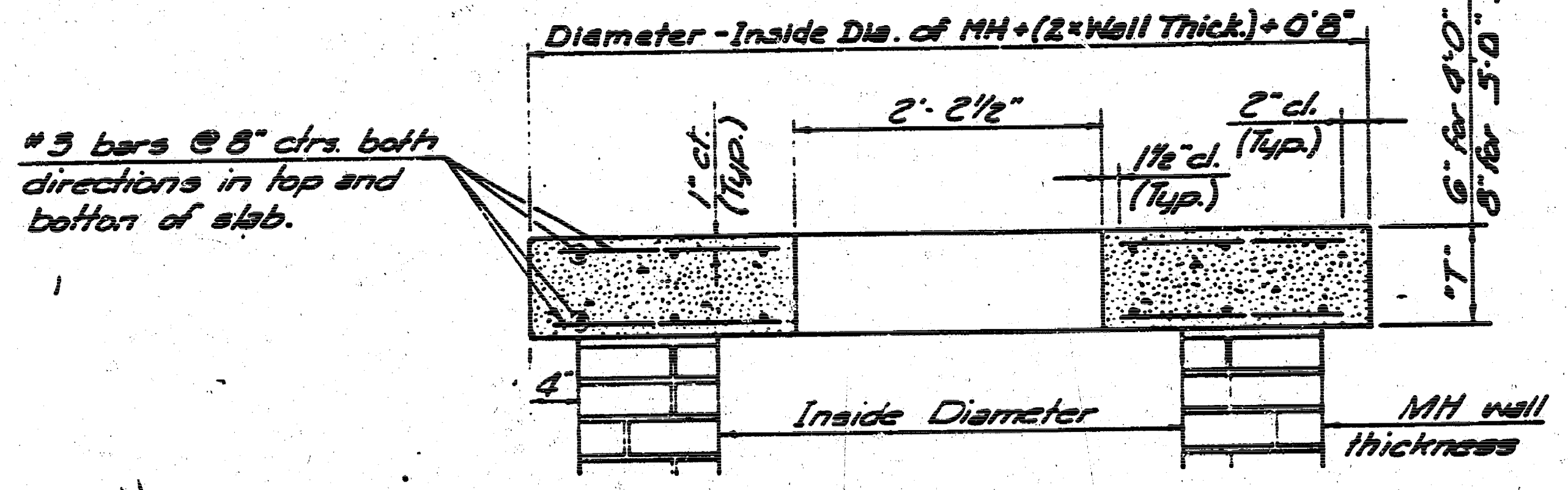
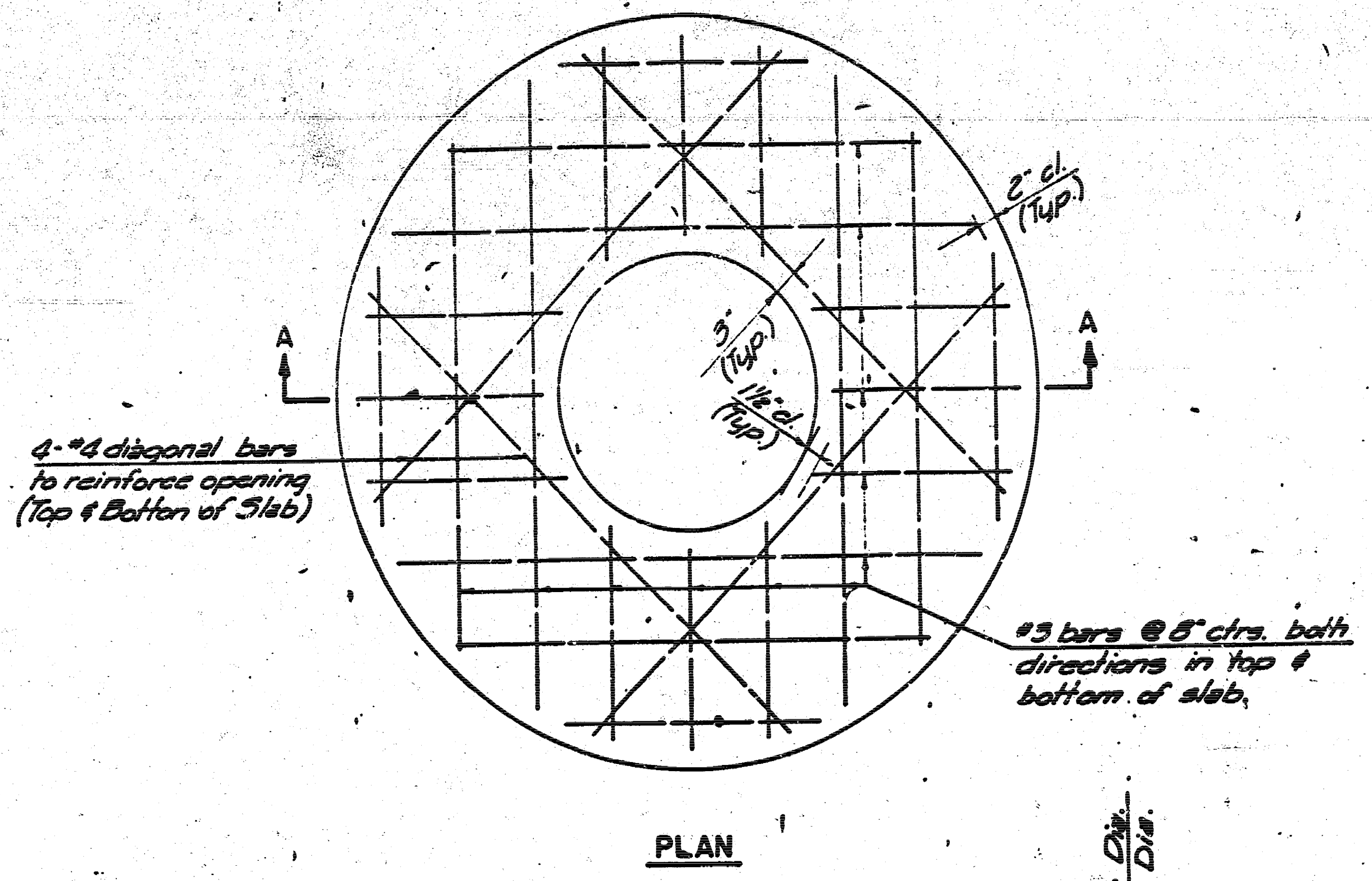
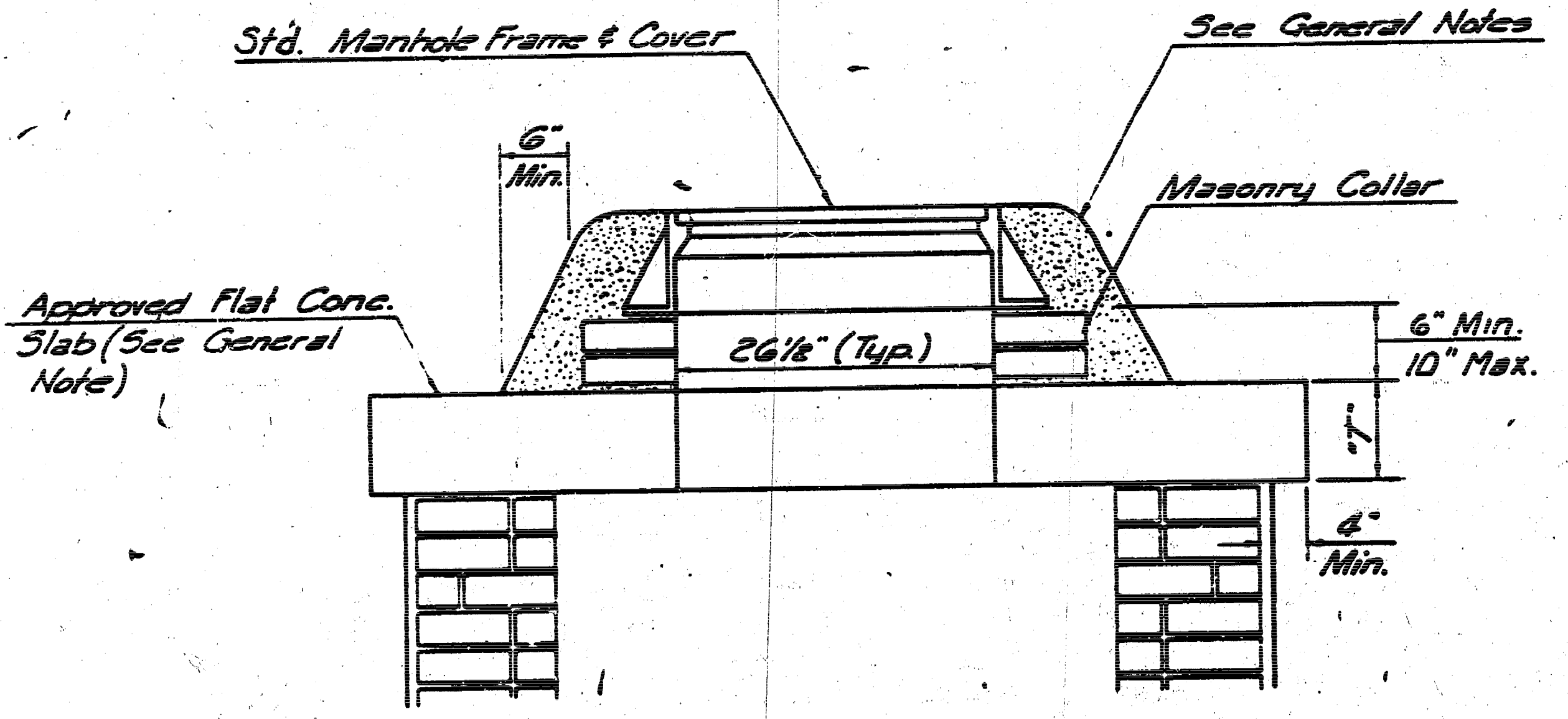
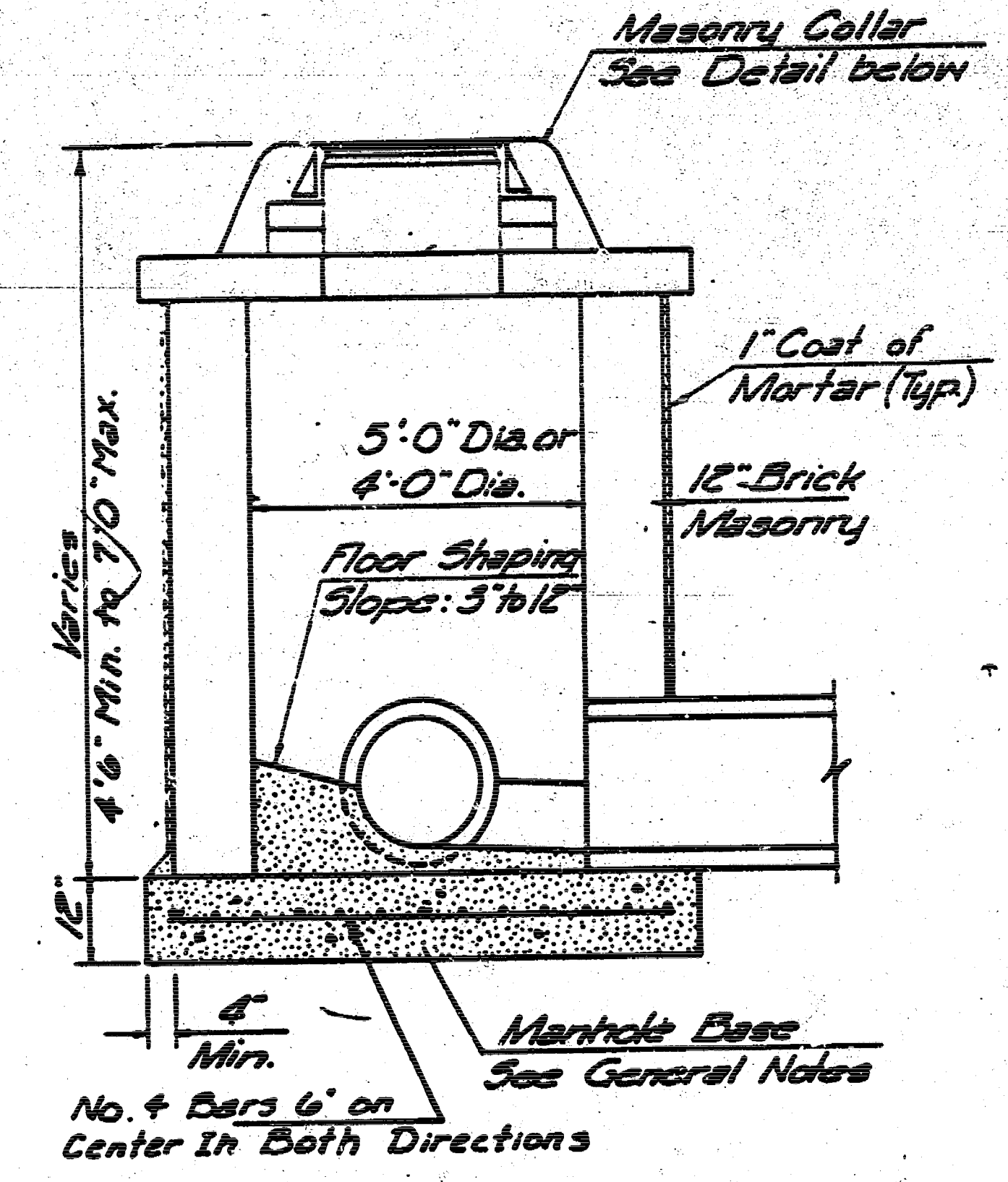
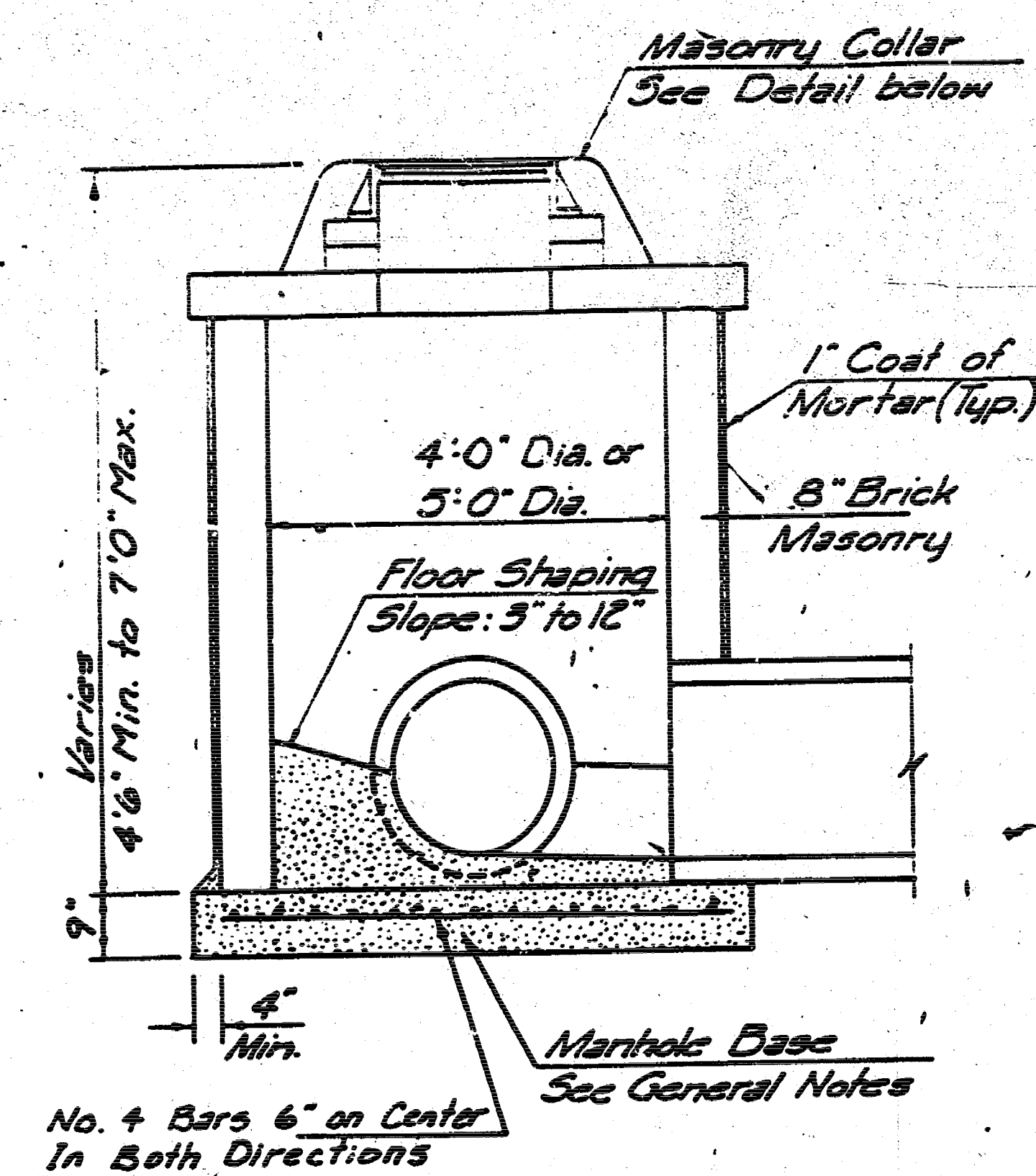
Station 0421
1-22.5° CIMJ Berp

2'-8" CIRC ST PIPE

WATER MAIN RELOCATION AND INCIDENTAL DRAINAGE

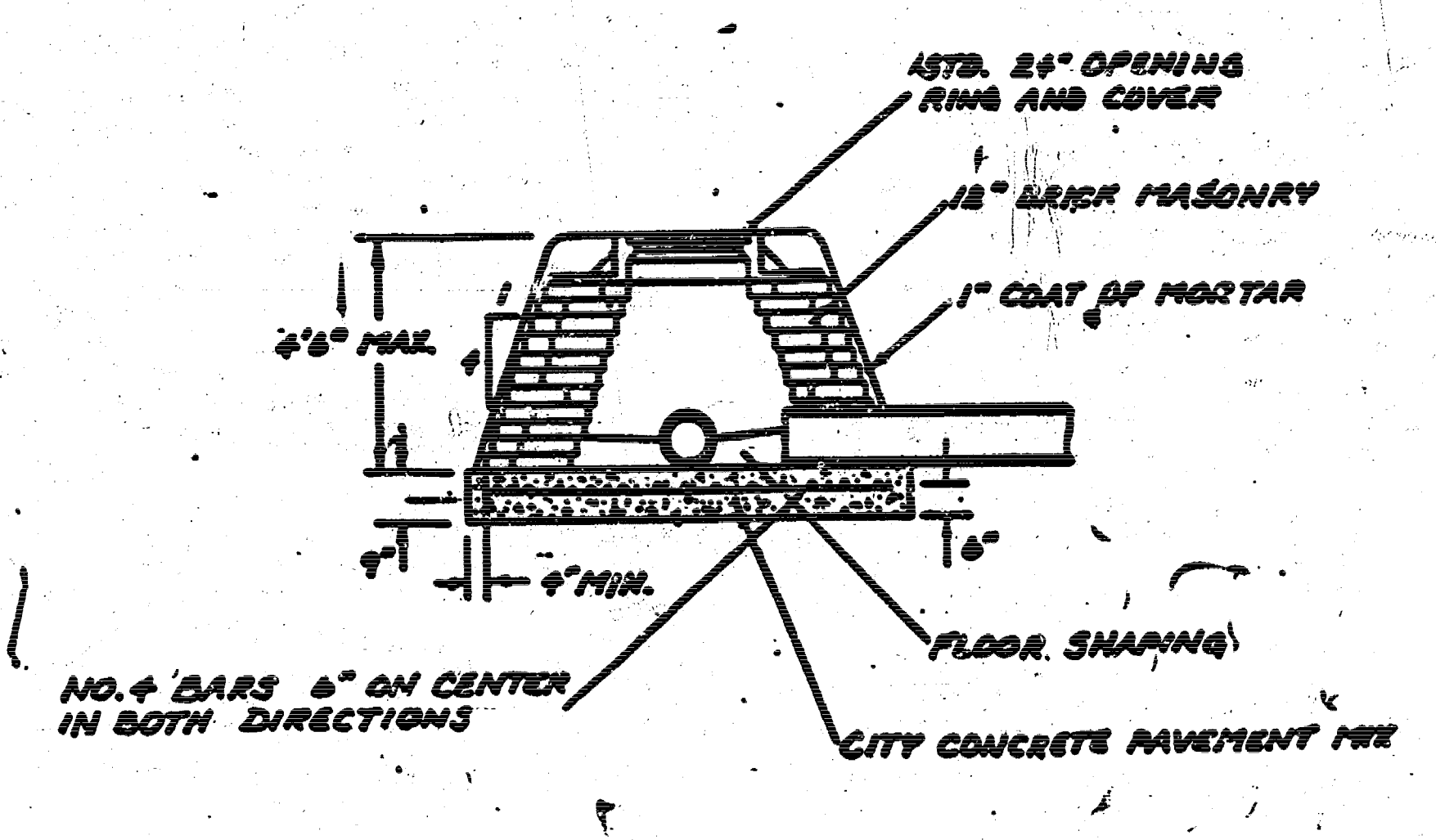
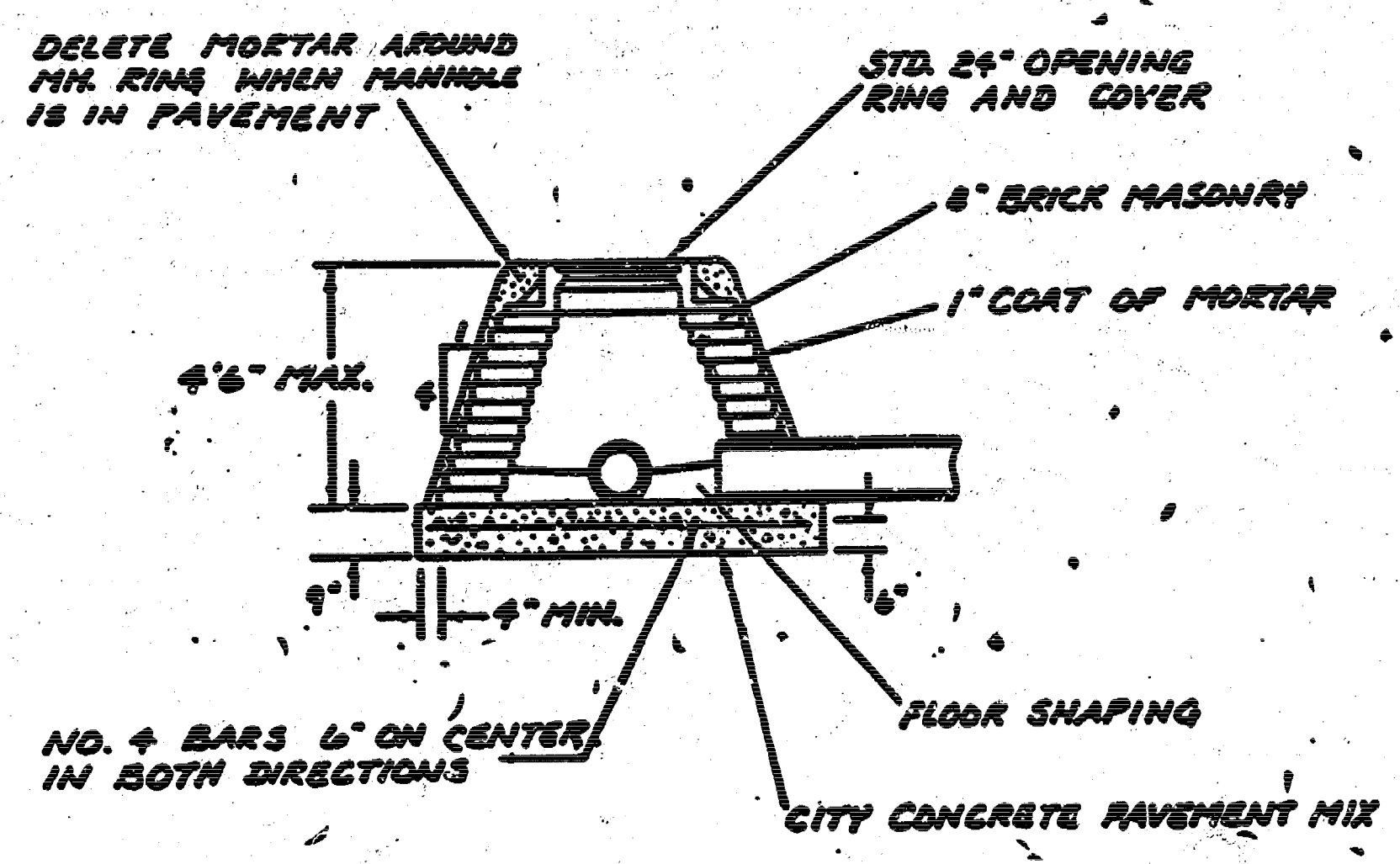
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FLAT CONCRETE SLAB DETAILS.

MASONRY COLLAR DETAIL



GENERAL NOTES

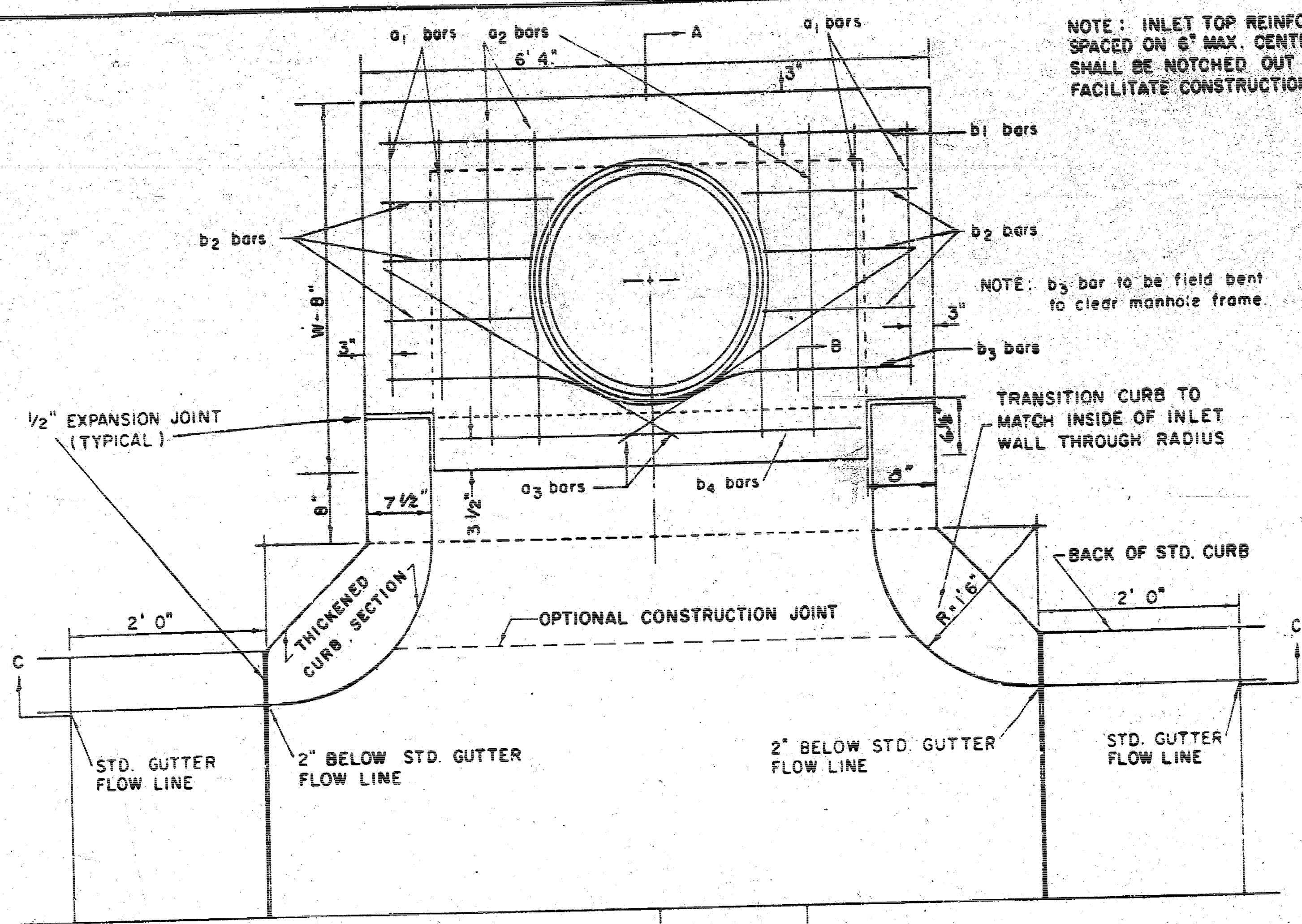
- MORTAR USED IN MASONRY CONSTRUCTION SHALL CONTAIN 8 BAGS OF CEMENT PER CUBIC YARD. CONCRETE USED IN MANHOLE BASES SHALL CONFORM TO THE REQUIREMENTS OF CONCRETE FOR CONCRETE PAVEMENT CONSTRUCTION AS SPECIFIED IN THE CITY STANDARD PAVING SPECIFICATIONS USING CITY CONCRETE CEMENT MIX WITHOUT AIR ENTRAINING ADJUTANT. MORTAR SHALL BE PLACED AROUND THE MANHOLE RING AS SHOWN ON THE DRAWINGS WHEN MANHOLES ARE CONSTRUCTED IN UNPAVED AREAS. TYPE "A" SHALLOW MANHOLES CAN BE USED ON SEWERS WHEN THE MANHOLE IS NOT LOCATED WITHIN PUBLIC STREET PAVEMENT. 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.
- 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 6" 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.
- THE FLOORS OF ALL MANHOLES SHALL BE SHAPED WITH FLOW CHANNELS SUCH THAT THE MANHOLES WILL BE SELF-CLEANING AND FREE OF AREAS WHERE SOLIDS COULD BE DEPOSITED AS SEWAGE FLOWS THROUGH THE MANHOLE FROM ALL INLET PIPES TO THE OUTLET PIPE. FLOW CHANNELS SHALL BE FORMED TO MATCH THE BENTHOF HALVES OF THE INFLOWING PIPES AND THE OUTFLOWING PIPE AS SHOWN BY THE DRAWINGS. 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 REVEAL 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.
- 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. COST OF CRADLE WITHIN MANHOLE EXCAVATION OR TO CLAY PIPE JOINTS ADJACENT TO MANHOLE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE MANHOLE.
- MANHOLE COVER CASTINGS AND MANHOLE FRAME CASTINGS SHALL CONFORM TO THE REQUIREMENTS AS INDICATED IN THE STANDARD SPECIFICATIONS AND AS SHOWN IN THE STANDARD DETAIL DRAWINGS.
- THE CROUNES OF INFLOWING PIPES SHALL NEVER BE SET LOWER THAN THE CROWN OF THE OUTFLOWING PIPE.
- STANDARD SHALLOW MANHOLES TYPE "A" AND "B" SHALL BE PAID FOR AT THE UNIT PRICE BID PER EACH FOR THE TYPE AND DIAMETER INDICATED. STANDARD SPECIAL SHALLOW MANHOLES TYPE "A" AND "B" SHALL BE PAID FOR AT THE UNIT PRICE BID PER EACH FOR THE TYPE INDICATED. ALL STANDARD SHALLOW MANHOLE DIAMETERS WILL BE 4' UNLESS INDICATED OTHERWISE.

CITY OF WICHITA, KANSAS
STANDARD SHALLOW MANHOLES
TYPE "A" AND TYPE "B"

472-76-245-81616-000-000-121

Designed by: _____ Checked by: _____
Drawn by: _____ Date: _____ Job No. 10

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NOTE: EXPANSION JOINT ONLY IN CURB AREA WITH CONC. PAVEMENT.

PLAN

STEEL SCHEDULE

BAR	a ₁	a ₂	a ₃	b ₁	b ₂	b ₃	b ₄	WT. LBS.
NUMBER	4	4	2	1	3	5	7	9
SIZE	"4	"4	"4	"4	"4	"4	"4	"4
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"	-	-	-	-	1'9"

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

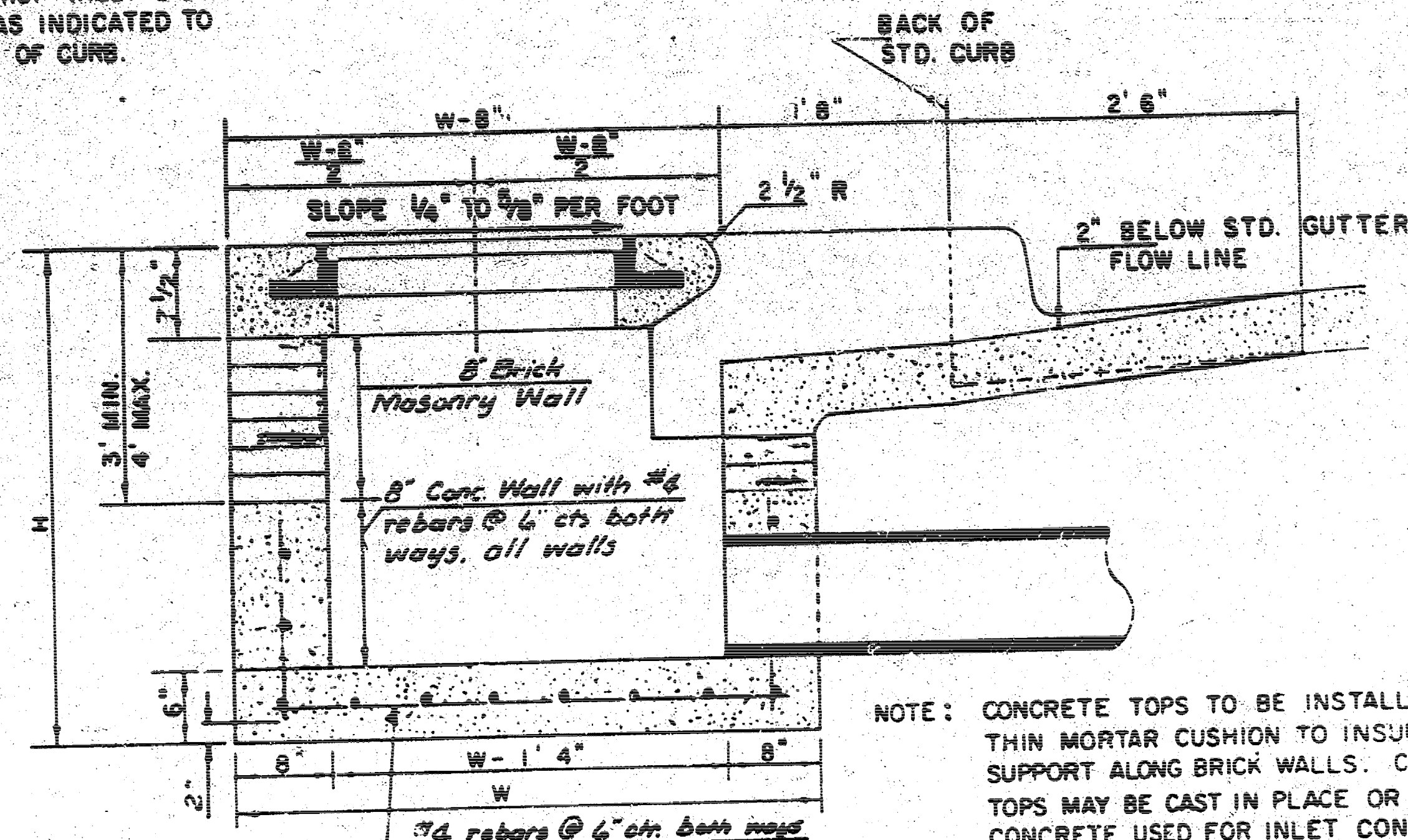
BENDING DIAGRAM

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' 6" x 6' 4" x 7 1/2"	24" B 30"	0.51 ±
6' 4"	5' 6" x 6' 4" x 7 1/2"	36" B 42"	0.64 ±
7' 4"	6' 6" x 6' 4" x 7 1/2"	48" B 54"	0.77 ±
8' 4"	7' 6" x 6' 4" x 7 1/2"	60" B 66"	0.90 ±

NOTE: INLET TOP REINFORCING SHALL BE SPACED ON 6" MAX. CENTERS. INLET LIDS SHALL BE NOTCHED OUT AS INDICATED TO FACILITATE CONSTRUCTION OF CURB.

NOTE: b₃ bar to be field bent to clear manhole frame

TRANSITION CURB TO MATCH INSIDE OF INLET WALL THROUGH RADIUS



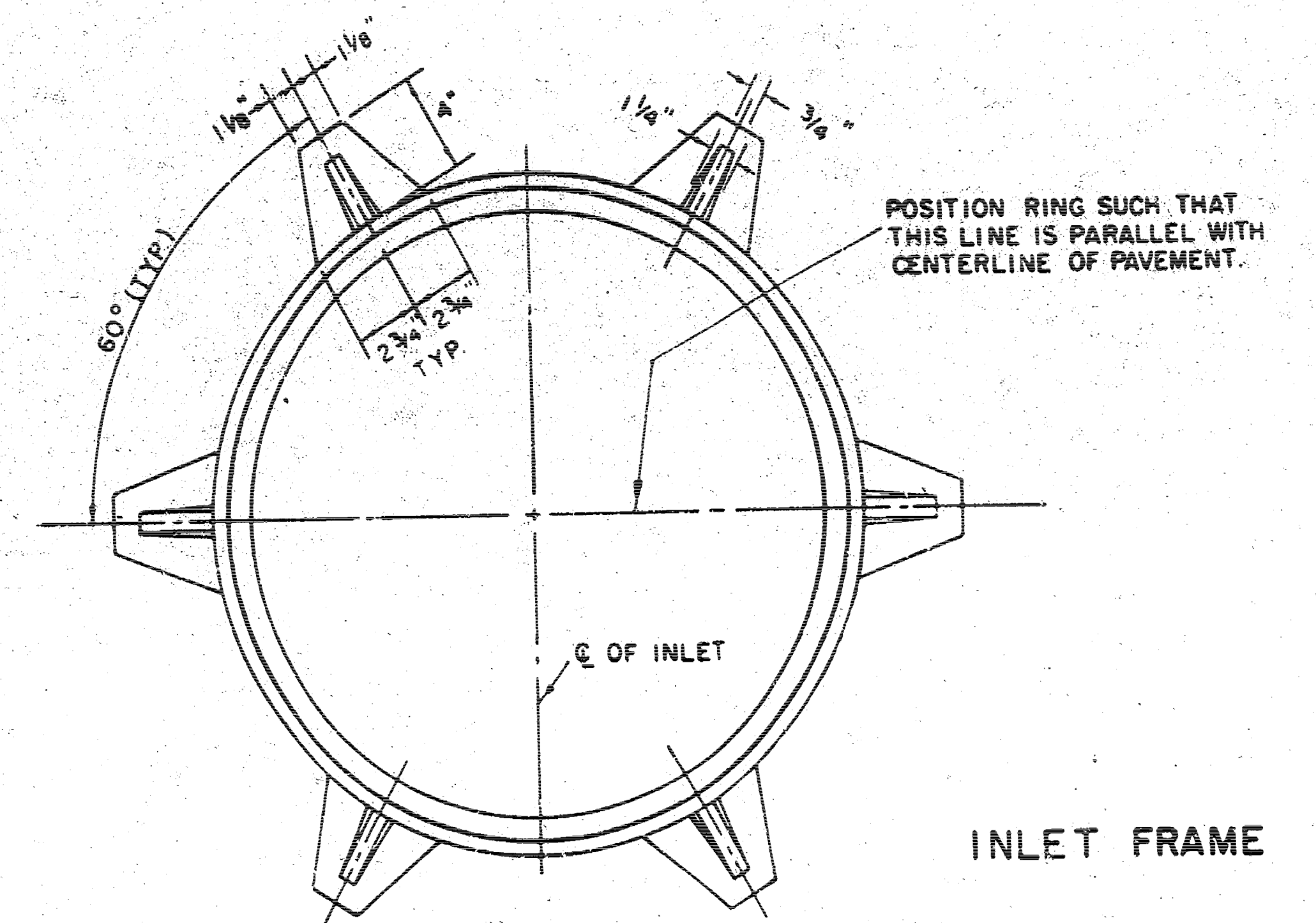
SECTION A-A

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.

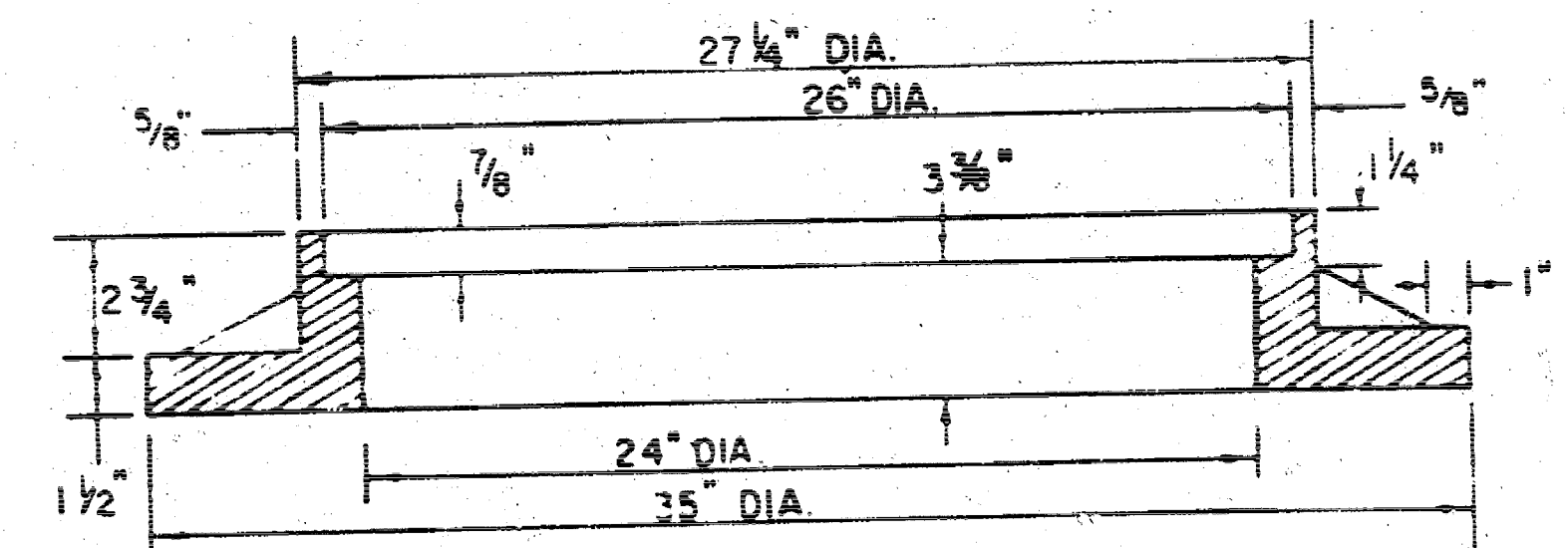
INLET INVERT SHALL BE SHAPED WITH 8 SACK SAND MIX CONCRETE TO CREATE FLOW CHANNELS AND TO INCREASE HYDRAULIC EFFICIENCY SUCH THAT THE INLET WILL BE SELF-CLEANING BETWEEN ALL INLET AND/OR OUTLET PIPES.

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

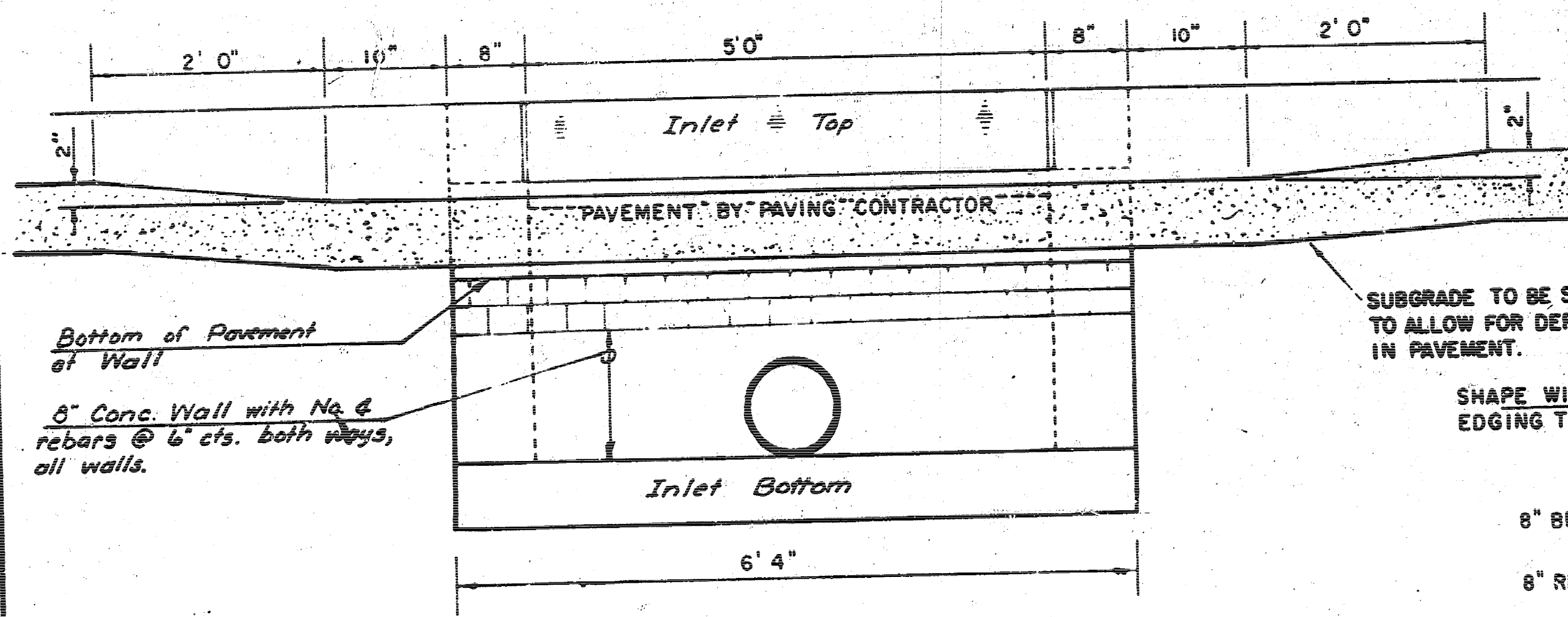


INLET FRAME

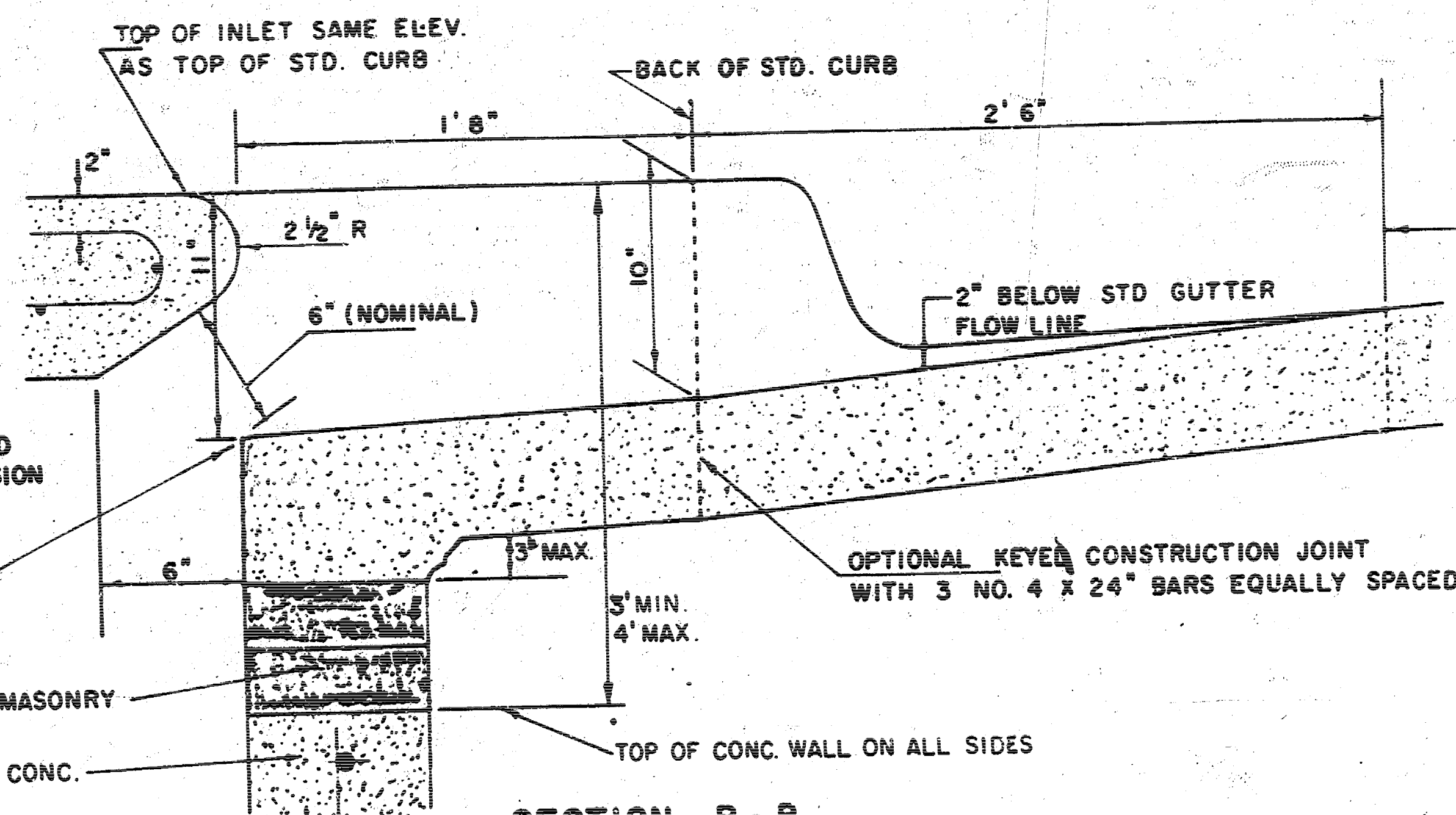
WEIGHT = 180 LBS.



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

DETAIL STANDARD TYPE IA CURB INLET

CITY OF WICHITA, KANSAS

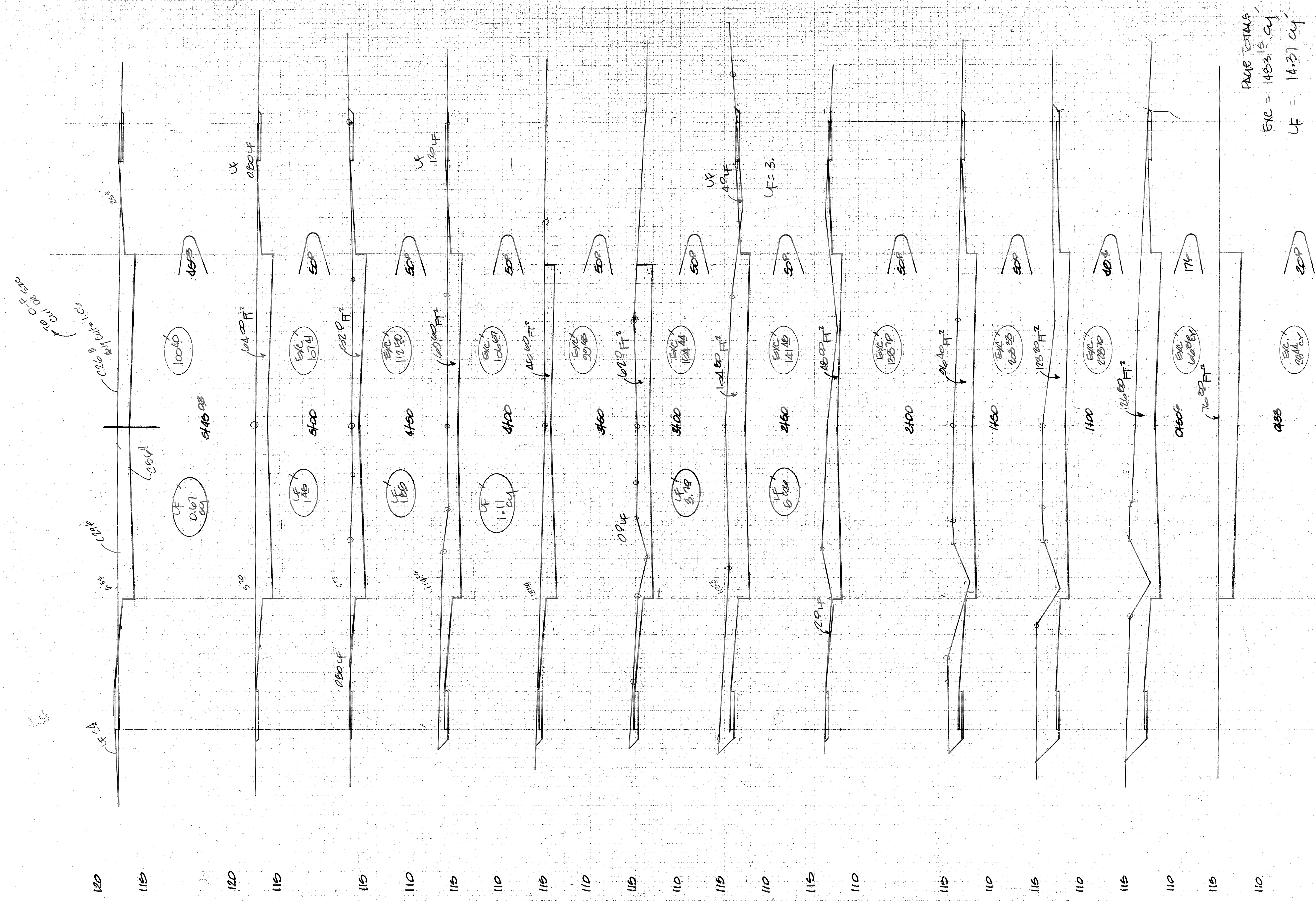
INLET OPENING = 6" x 5' 0"

472-76-245-81518-000-300-001

JUNE 1984

8/10

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PAGE TOTALS
 EXC = 1483.15 cy
 LF = 14.37 cy

FILE

$$\text{Avg Cut} = \frac{1.9 + 1.2 + 0.9 + 1.3 + 0.8 + 1.4}{6}$$

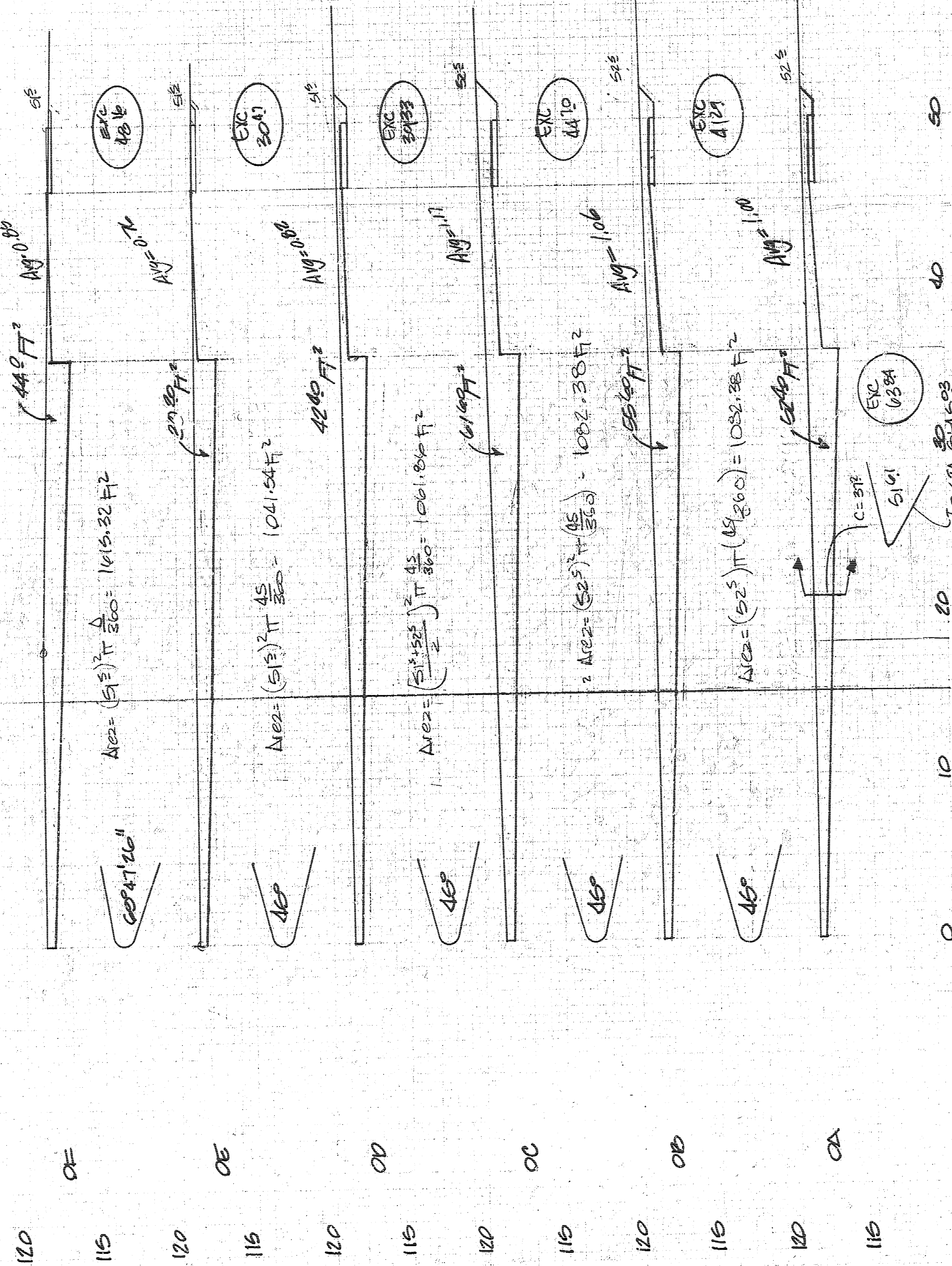
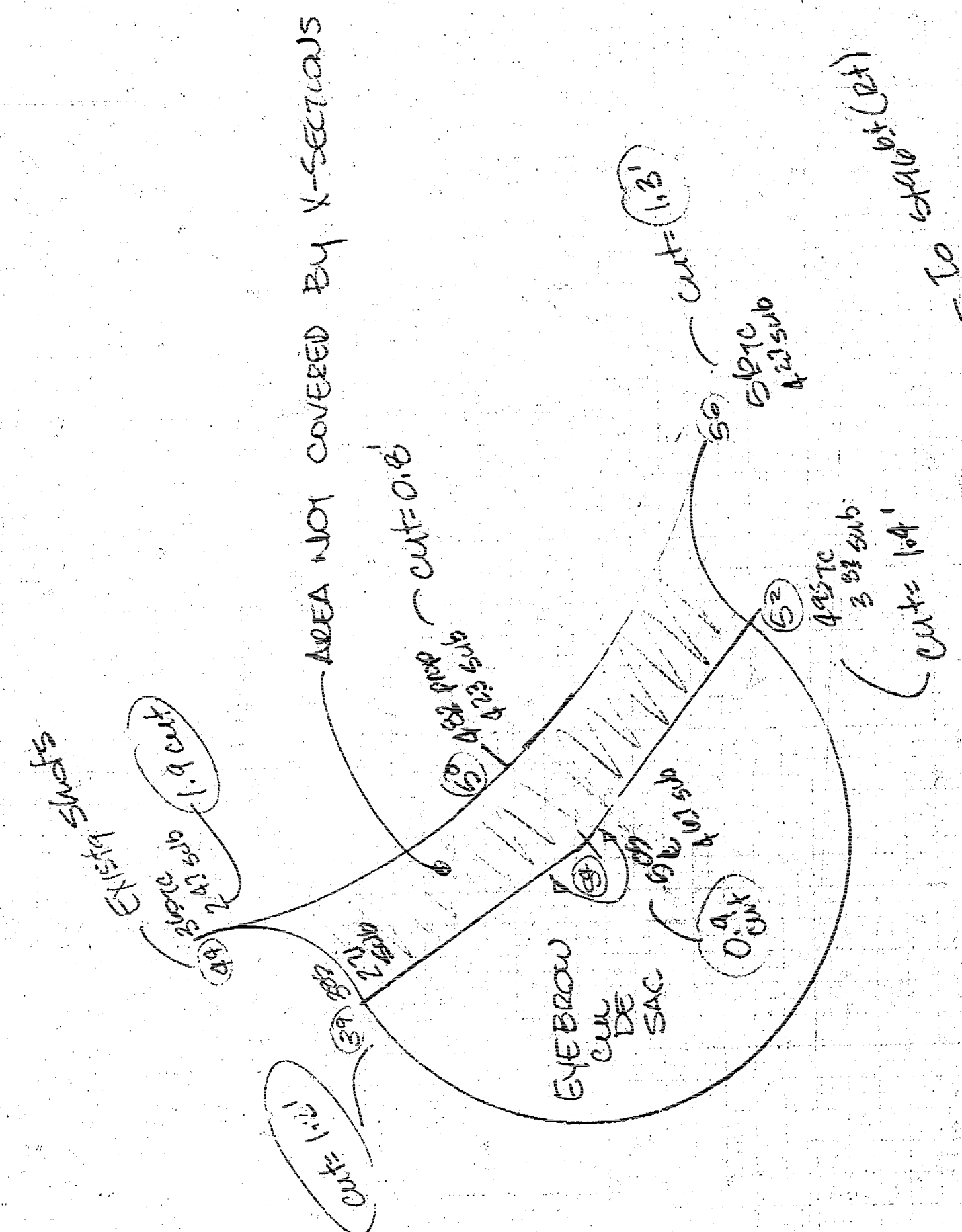
$$\text{Avg Cut} = 1.25 \text{ feet over Area}$$

$$\text{Area} = 1144 \text{ ft}^2 (\text{perimeter})$$

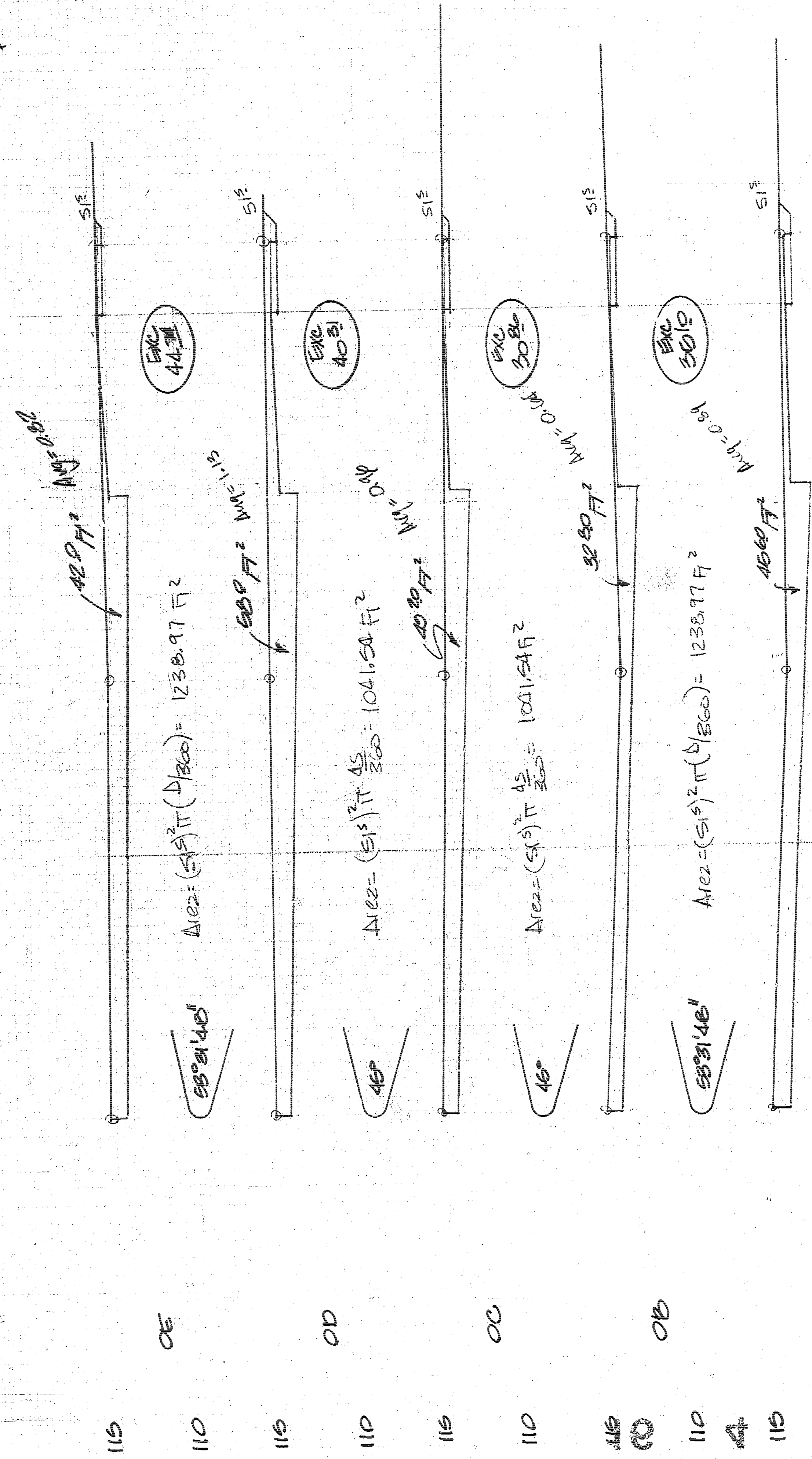
$$\text{Exc} = (1144 \text{ ft}^2 \times 1.25) = 1430 \text{ ft}^3$$

$$\frac{1430 \text{ ft}^3}{27} = 52.3 \text{ cu yd}$$

$$\text{ADD TO EXC TOTALS}$$



CU - DE - SAC



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PAGE TOTAL: 51344 01
EXPLANATION: 51344 01

EARTHWORK QUANTITIES
HOLYOKE CIRCLE
472-16-245-21016-000-000-001