

Scale: 1" = 150'

Benefit District

STORMWATER DRAIN NO. 125

to serve

Stonebriar Addition

CITY OF WICHITA, KANSAS

Michael E. Lindebak, P.E. City Engineer

Project Number

488-76-245-92887-000-000-001

Index Code:

760886

Sheet Index

Title Sheet	1
Lines 1 & 1A	2
Lines 1 & 1B	3
Line 1	4
Line 2	5-7
Shallow Manhole Detail	8
Ring & Cover Detail	9
Drop Inlet Detail	10
Double Type 1A Inlet Detail	11
Copy of Plat	12

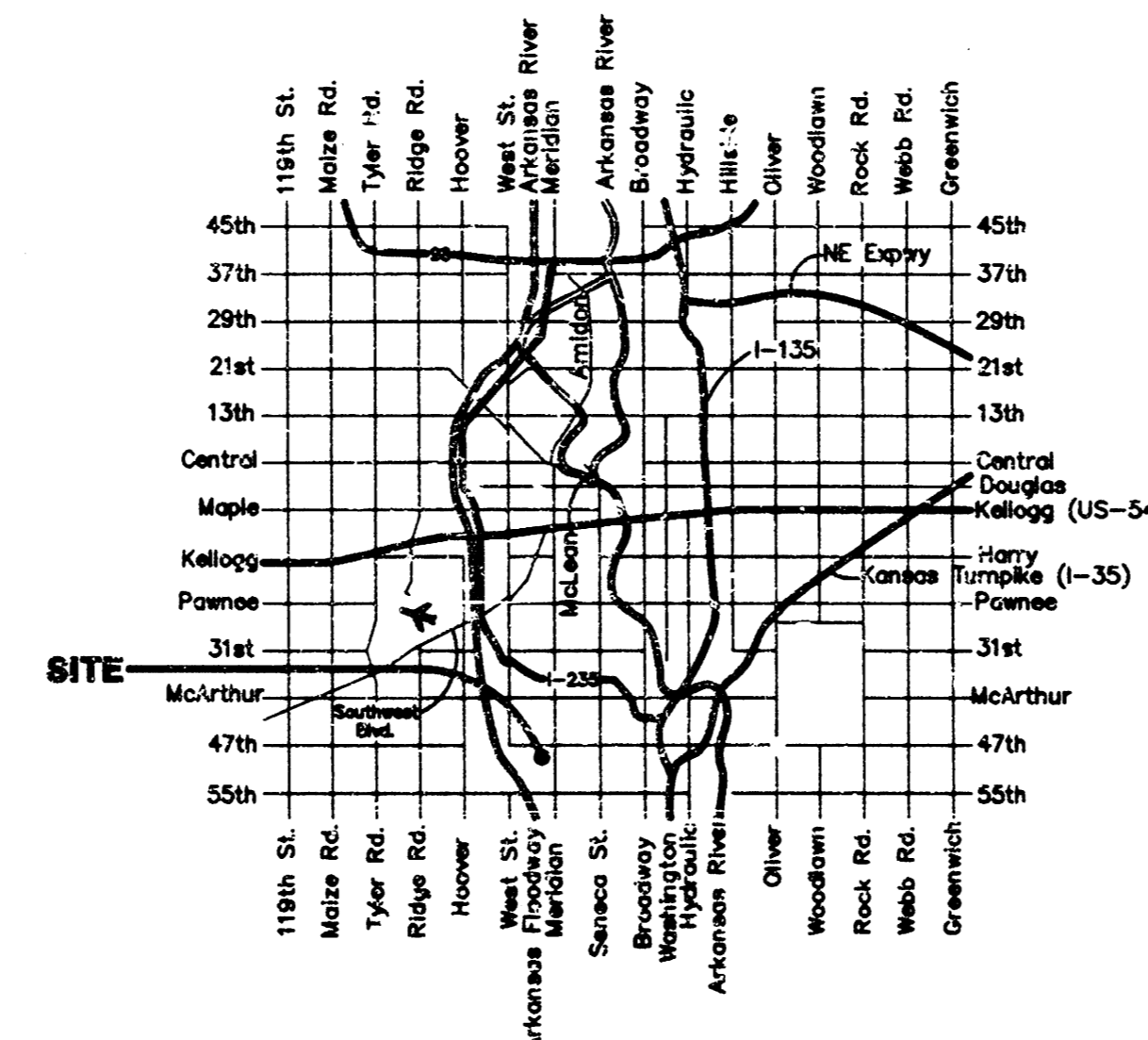
Benchmarks

Railroad Spike in Power Pole
Located 27' South and 402' East
of the Northwest Corner of the
NE 1/4, Section 24, TWP. 28-S,
R-1-W.

Elevation = 92.98 City Datum

City of Wichita Disc Located
44' North and 30' East of the
Centerlines of 47th Street South
and Meridian.

Elevation = 91.78 City Datum



Vicinity Map

GENERAL NOTES:

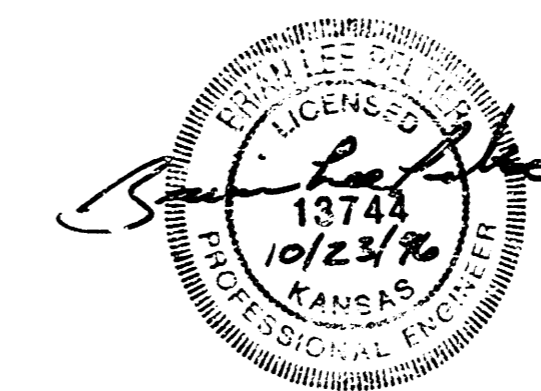
- Contractor will be required to provide notice to utility companies a minimum of twenty-four (24) hours prior to any excavation, as follows:

Kansas One-Call	687-2470
-----------------	----------

The Contractor must notify the following in case of an emergency:

Cablevision	262-4270
or	263-2061
K.P.L. Gas Service Company	263-7511
Kansas Gas & Electric Company	264-1141
Peoples Nat. Gas Company	942-8350
Southwestern Bell Telephone Company	1-571-2611
City of Wichita Water Department	268-4908
City of Wichita Sewer Maintenance	268-4071
- 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.
- Rubble from the removal of miscellaneous structures and excess excavation which is to be wasted shall be disposed of on sites to be provided by the Contractor. These sites shall be approved by the Engineer as to suitability, appearance and site location. Locations that, in the opinion of the Engineer, will leave an unsightly appearance will not be approved. All disposal sites must be approved by the Kansas Department of Health and Environment. Material either stockpiled or disposed of in a flood plain would a Kansas State Board of Agriculture permit. Any material dumped in waters of the United States or wetlands is subject to U.S. Corps. of Engineers permitting regulations. Any material buried or stockpiled beyond approved construction limits would require additional archaeological investigations unless buried in a previously approved borrow location.
- 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.
- 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 law.
- All areas disturbed by construction shall be seeded at 300 lbs./acre with Rye Grass immediately following construction in that area. Contractor shall prepare ground per City specifications prior to seeding.

BOOKED
6-27-96
MCG
D-342



Benchmark:

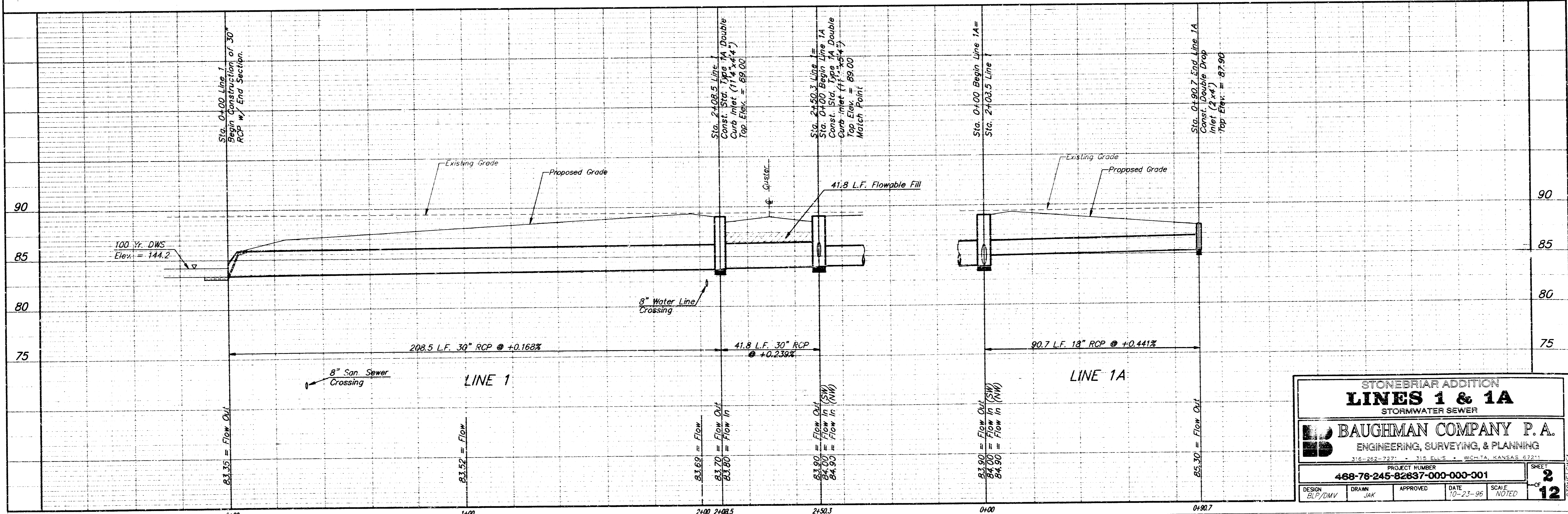
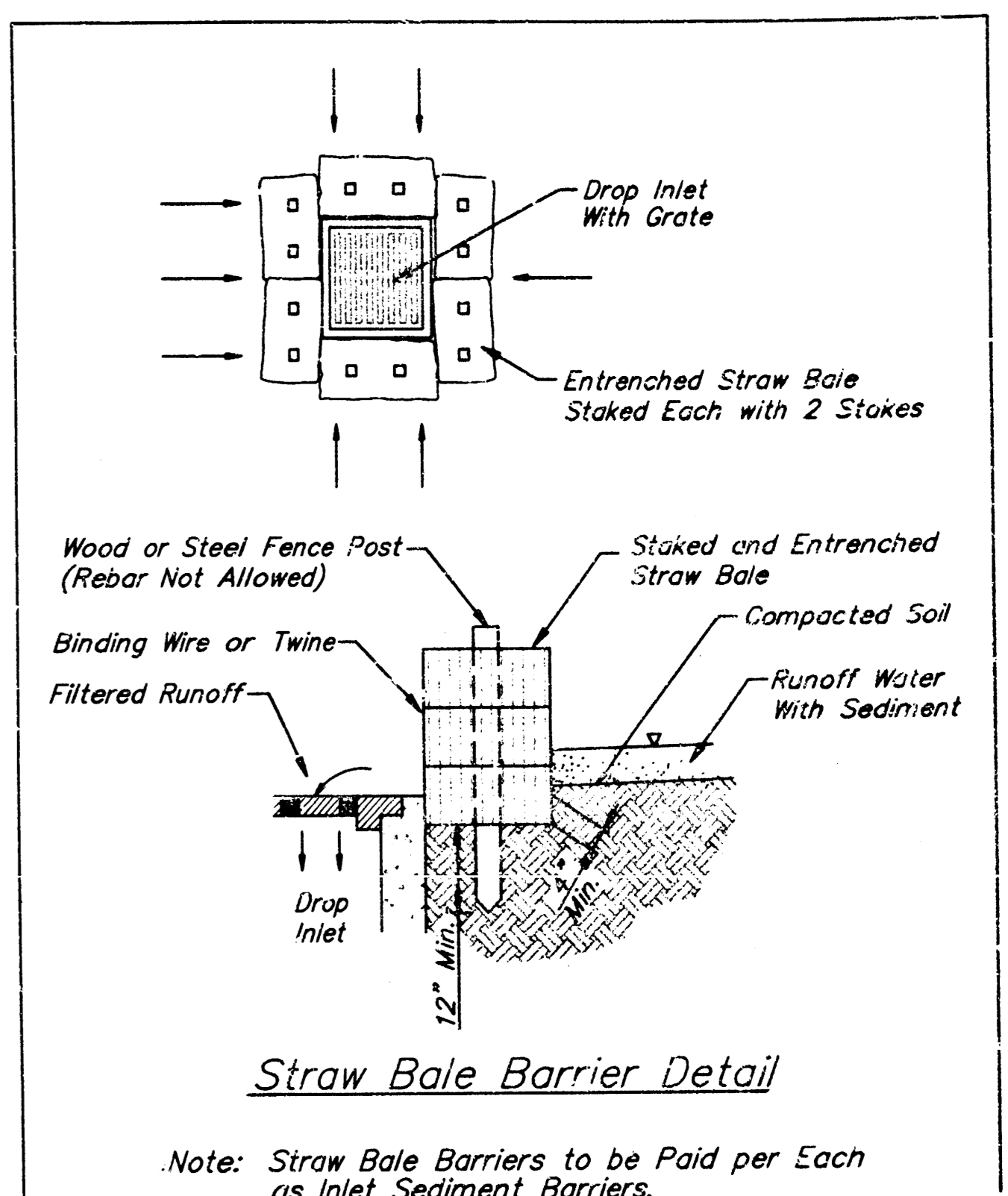
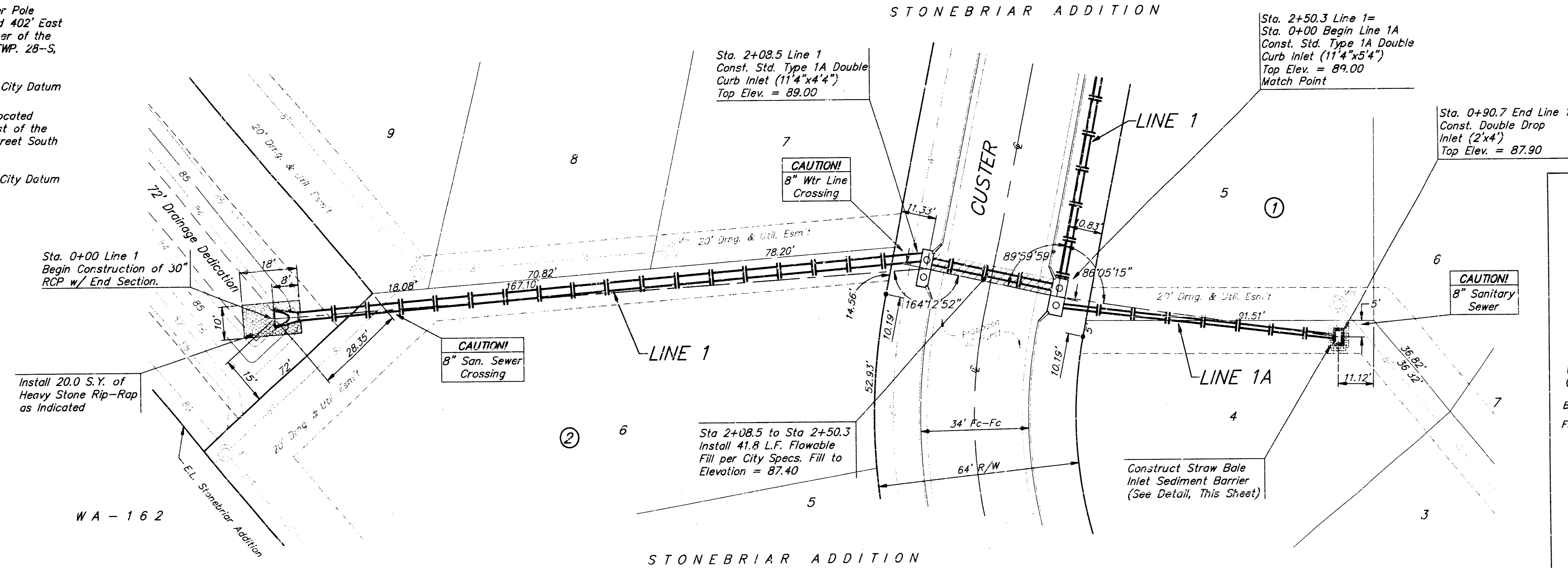
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and Meridian.

Elevation = 91.78 City Datum

Scale:
1" = 20' Horizontal
1" = 5' Vertical
• = Iron



STONEBRIAR ADDITION
LINES 1 & 1A
STORMWATER SEWER

BAUGHMAN COMPANY P.A.
ENGINEERING, SURVEYING, & PLANNING

PROJECT NUMBER
488-76-245-82637-000-000-001

DESIGN: BCP/DMV DRAWN: JAK APPROVED: DATE: 10-23-96 SCALE: NOTED

SHEET
2
OF
12

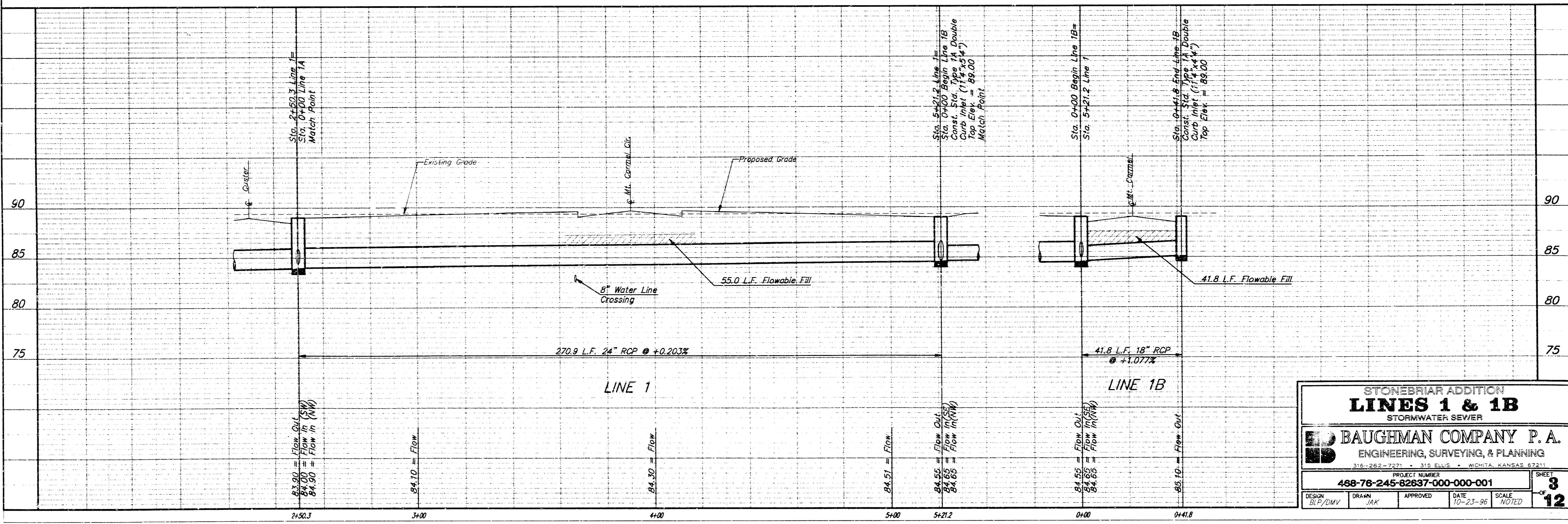
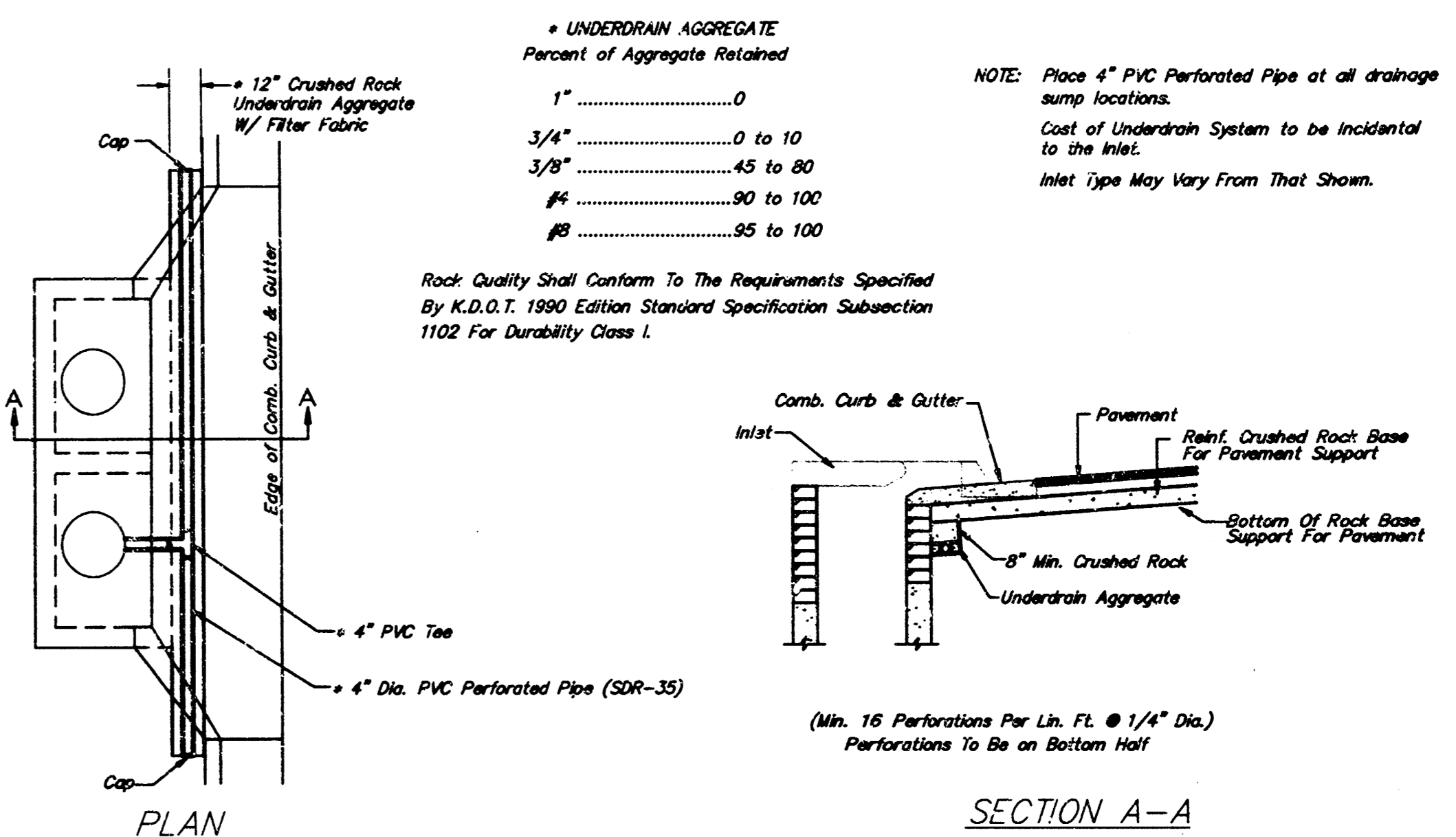
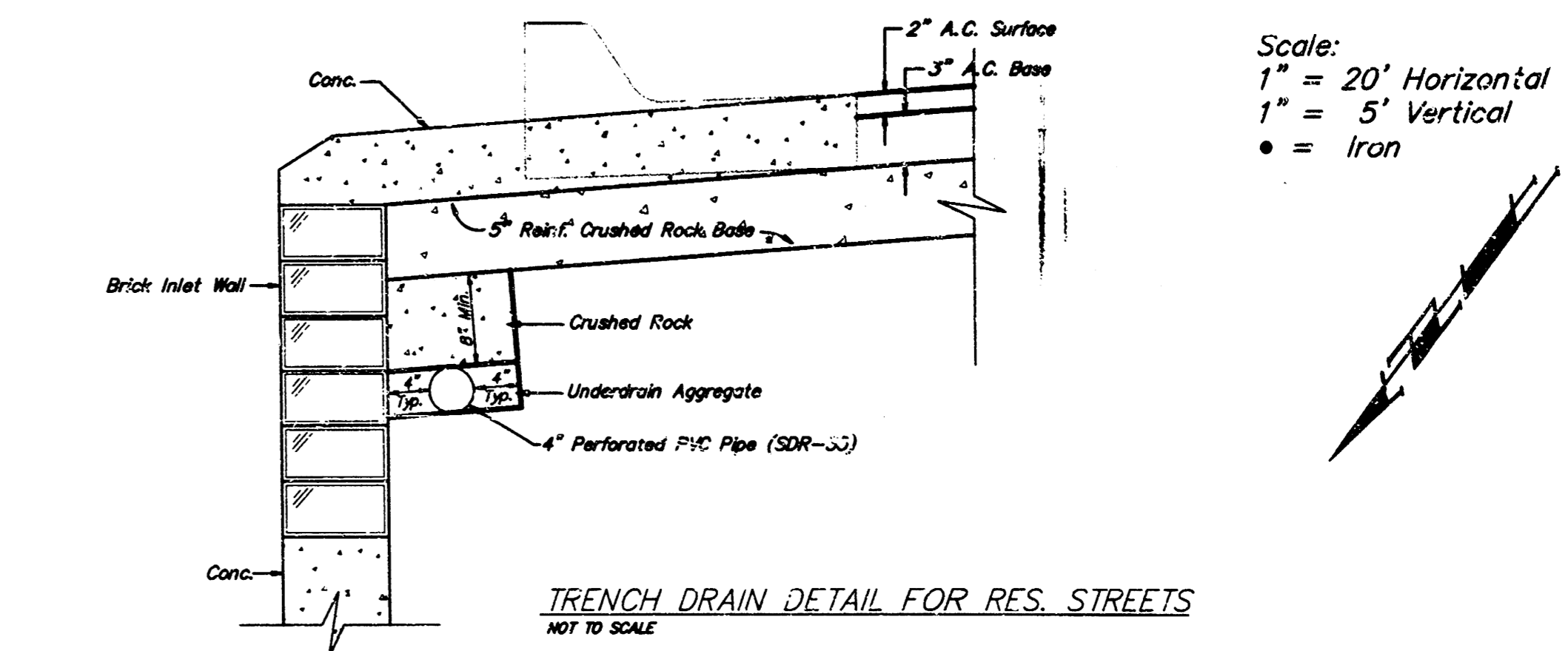
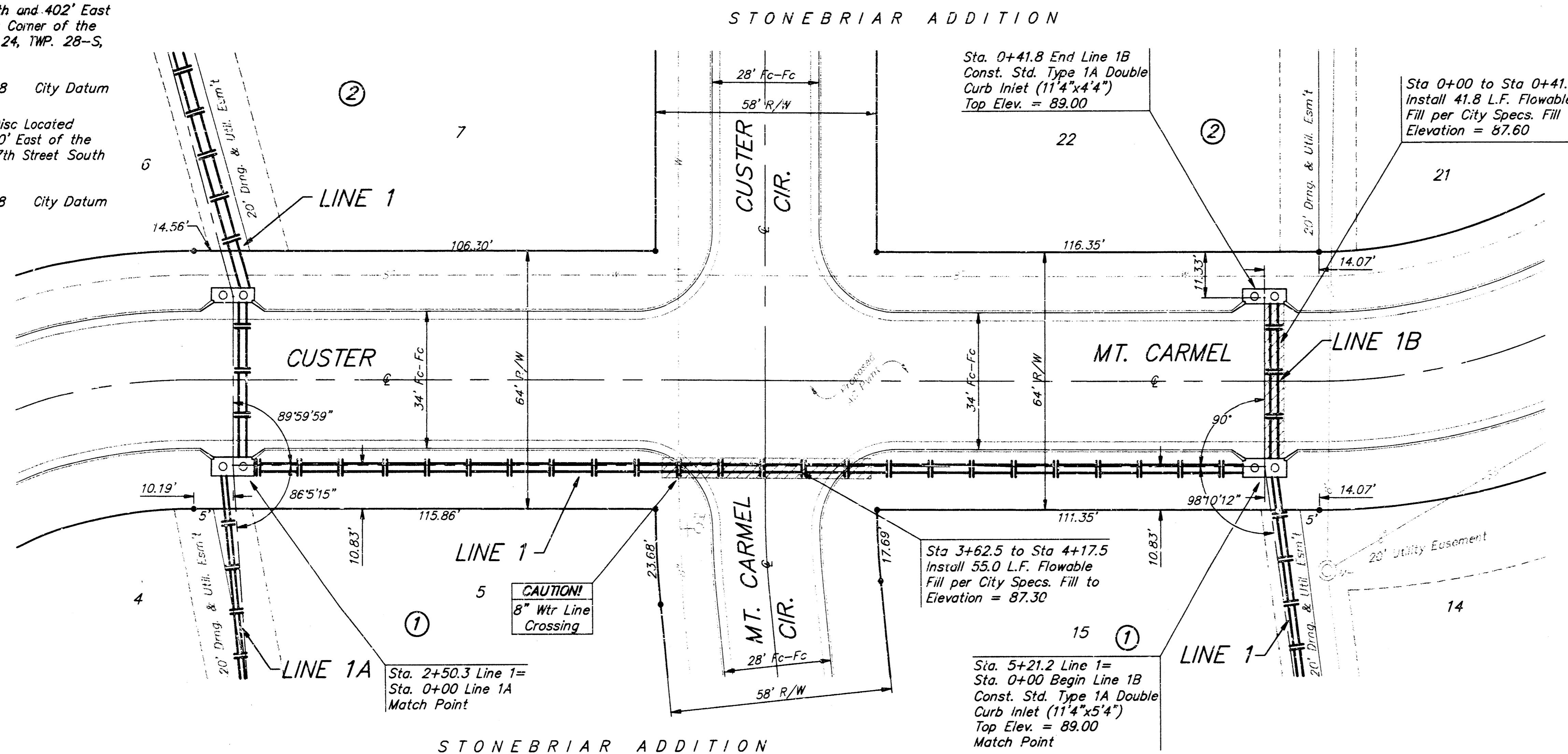
Benchmark:

Railroad Spike in Power Pole
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STONEBRIAR ADDITION
LINES 1 & 1B
STORMWATER SEWER

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

PROJECT NUMBER
488-76-245-82637-000-000-001

DESIGN: BLF/CMV
DRAWN: JAK
APPROVED: [Signature]
DATE: 10-23-98
SCALE: NOTED

SHEET
3
OF
12

98-081-E441
STONEBRIAR

Benchmark:

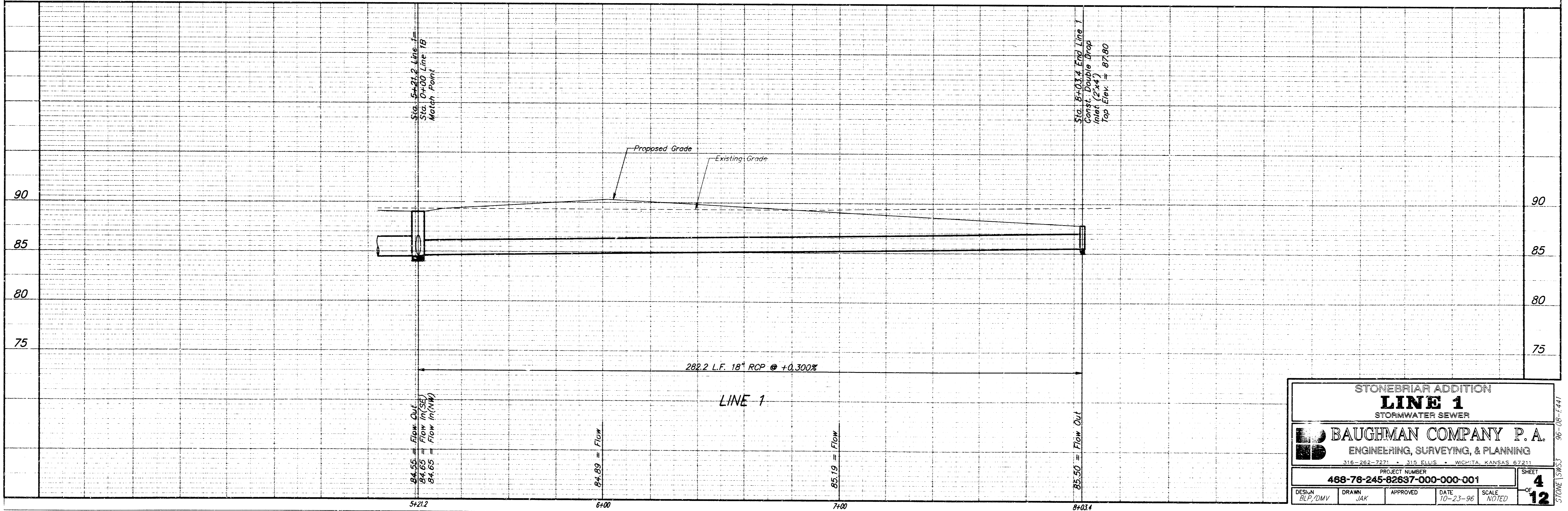
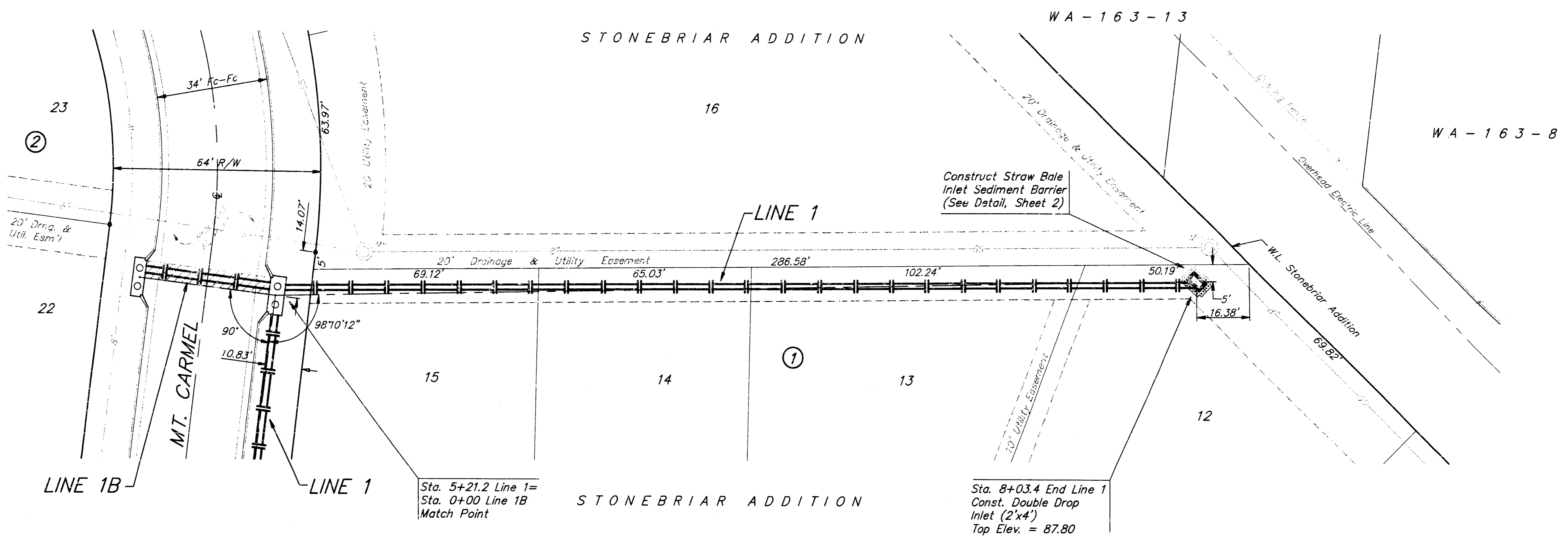
Railroad Spike in Power Pole
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 NE 1/4, Section 24, TWP. 28-S,
 R-1-W.

Elevation = 92.98 City Datum

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Scale:
 1" = 20' Horizontal
 1" = 5' Vertical
 • = Iron



STONEBRIAR ADDITION			
LINE 1			
STORMWATER SEWER			
BAUGHMAN COMPANY P. A.			
ENGINEERING, SURVEYING, & PLANNING			
316-262-7271 • 312 ELLIS • WICHITA, KANSAS 67211			
PROJECT NUMBER			
488-78-245-82637-000-000-001			
DESIGN	DRAWN	APPROVED	DATE
RLP/DMV	JAK		10-23-96
			SCALE
			NOTED
			4
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Benchmark:

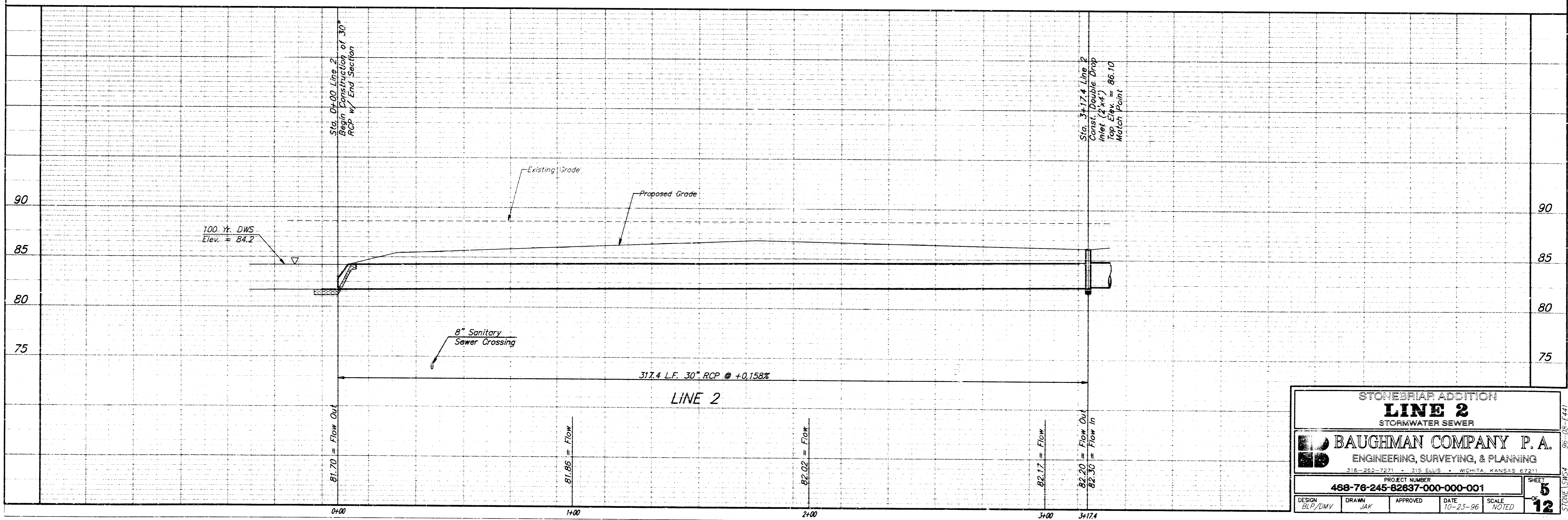
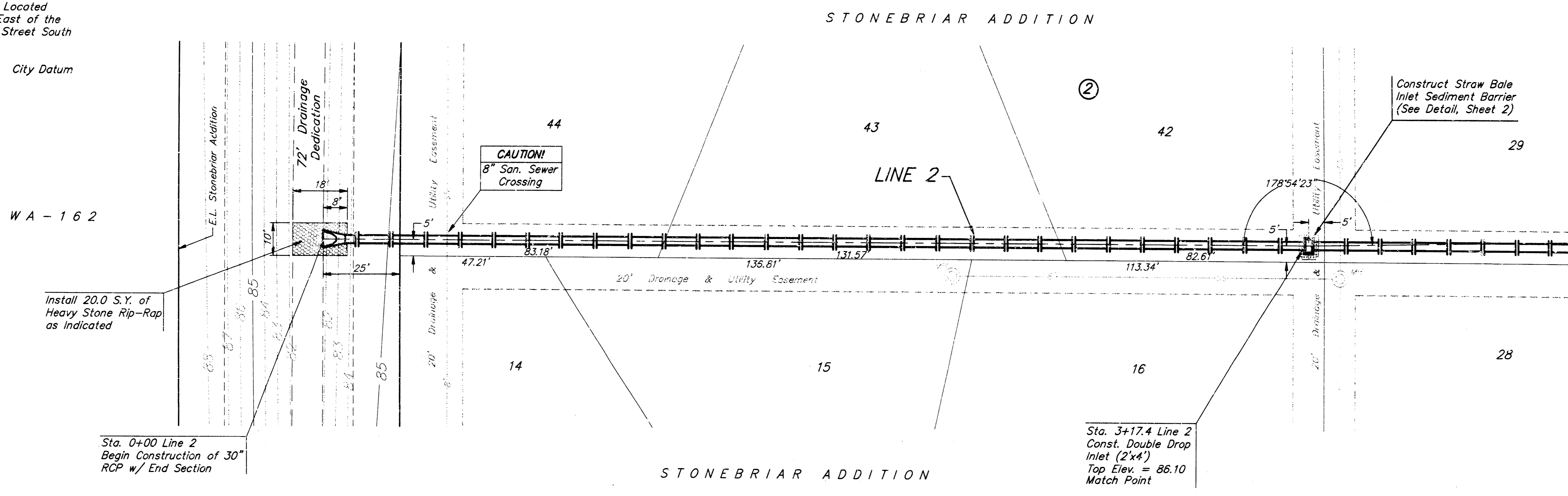
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 R-1-W.

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STONEBRIAR ADDITION			
LINE 2			
STORMWATER SEWER			
BAUGHMAN COMPANY P. A.			
ENGINEERING, SURVEYING, & PLANNING			
316-262-7271 • 315 ELLIS • WICHITA, KANSAS 67211			
PROJECT NUMBER		SHEET	
488-78-245-62637-000-000-001		5	
DESIGN	DRAWN	APPROVED	DATE
RLP/DNV	JAK		10-23-96
		SCALE	NOTED
			12

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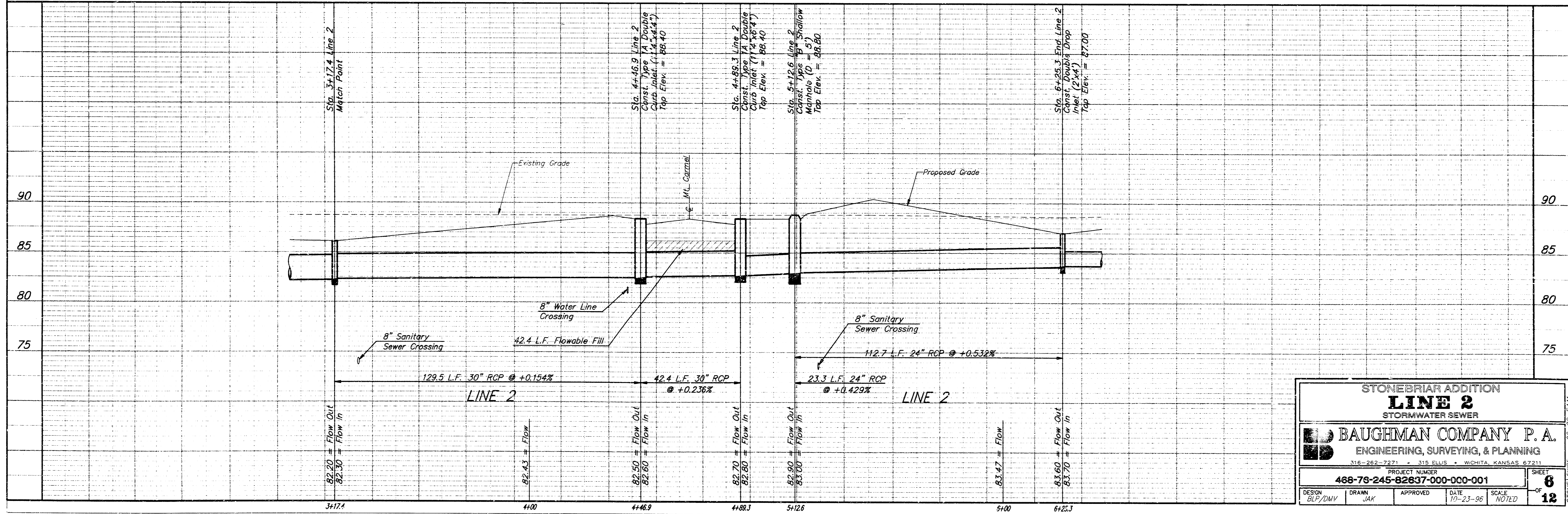
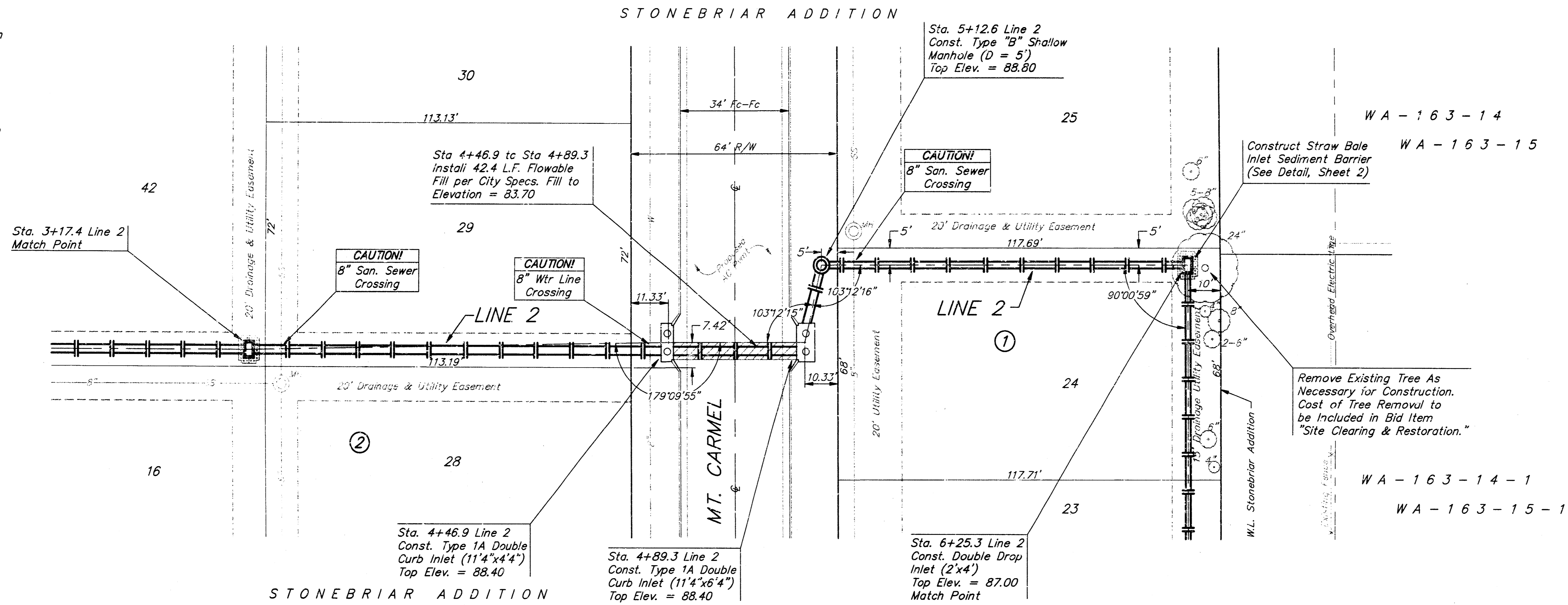
Railroad Spike in Power Pole
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of the Northwest Corner of the
NE 1/4, Section 24, T14P. 28-S,
R-1-W.

Elevation = 92.98 City Datum

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Elevation = 91.78 City Datum

Scale:
1" = 20' Horizontal
1" = 5' Vertical
● = Iron



STONEBRIAR ADDITION			
LINE 2			
STORMWATER SEWER			
BAUGHMAN COMPANY P. A.			
ENGINEERING, SURVEYING, & PLANNING			
316-262-2271 • 315 ELLIS • WICHITA, KANSAS 67211			
PROJECT NUMBER			
468-78-245-82637-000-000-001			
DESIGN	DRAWN	APPROVED	SHEET
BLP/DWV	JAK		6
DATE		SCALE	
10-23-96		NOTED	
			OF
			12

Benchmark:

Railroad Spike in Power Pole
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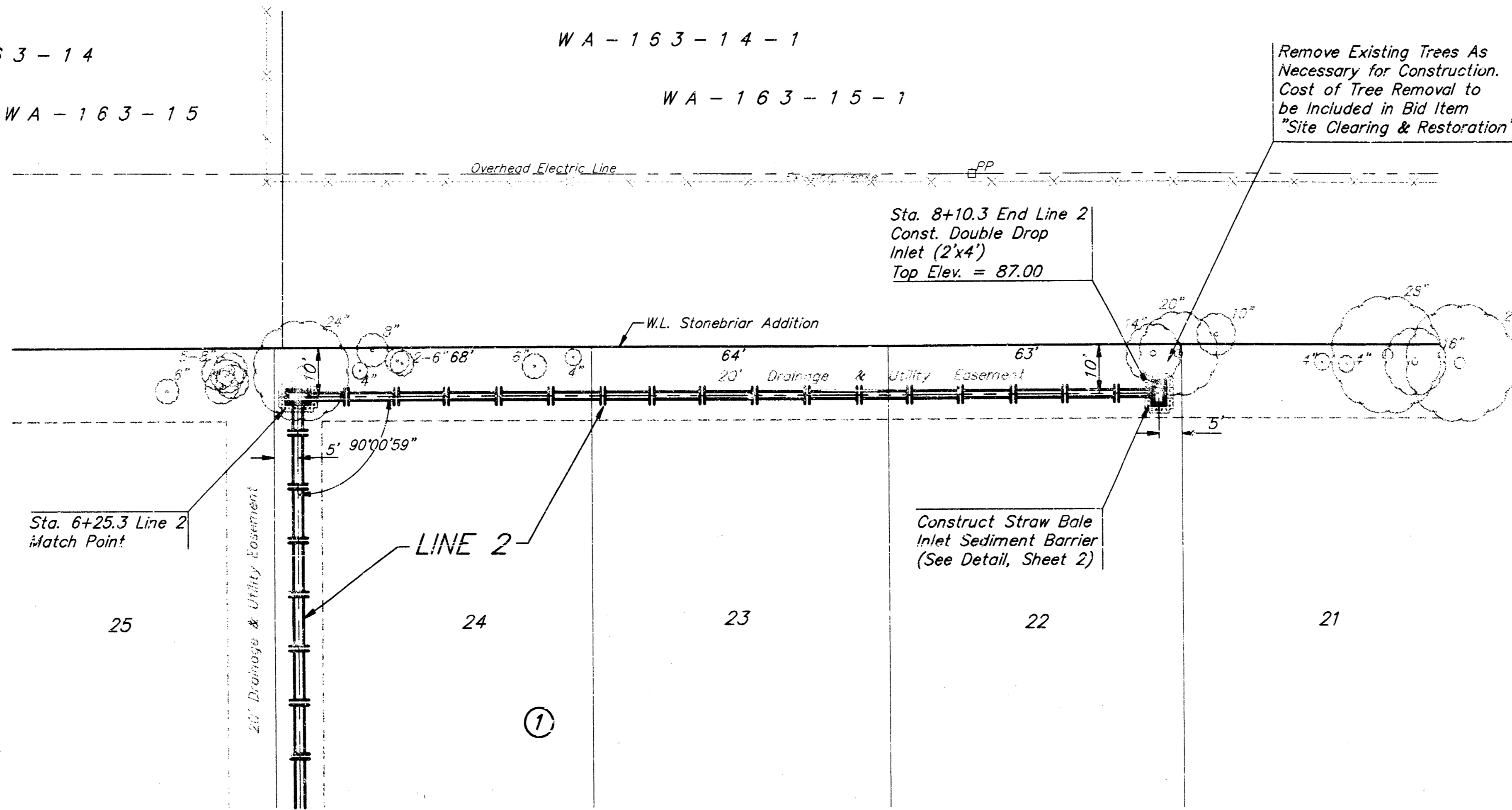
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 1" = 20' Horizontal
 1" = 5' Vertical
 ● = Iron

WA-163-14

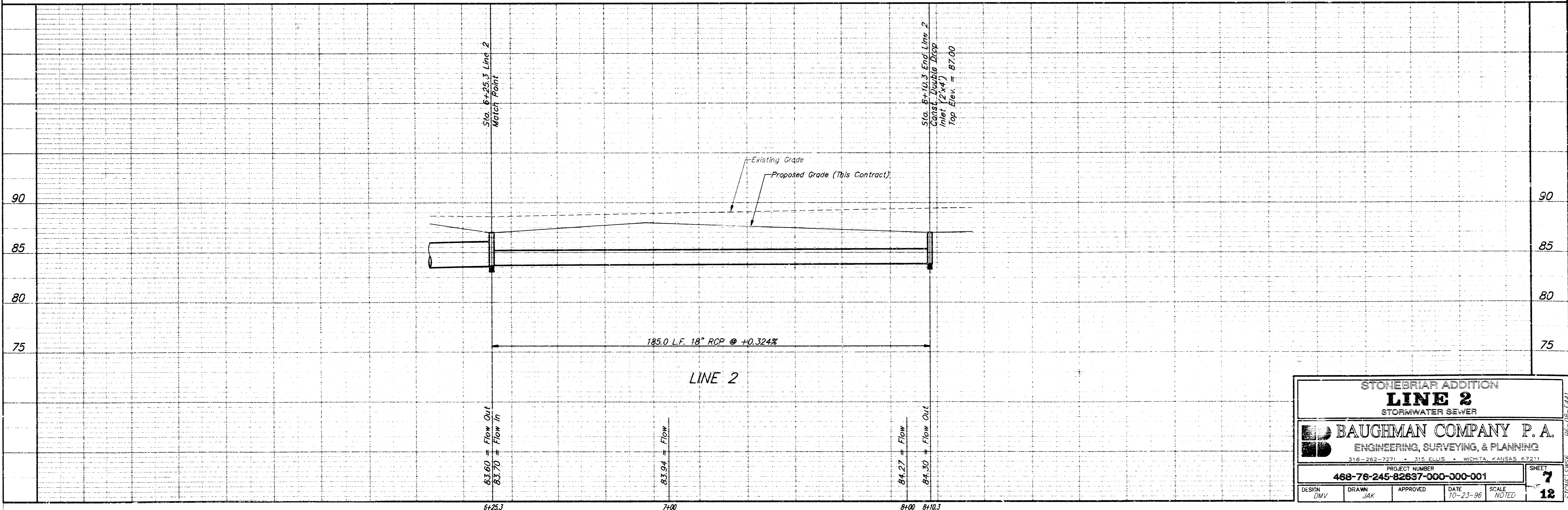
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WA-163-15

WA-163-15-1

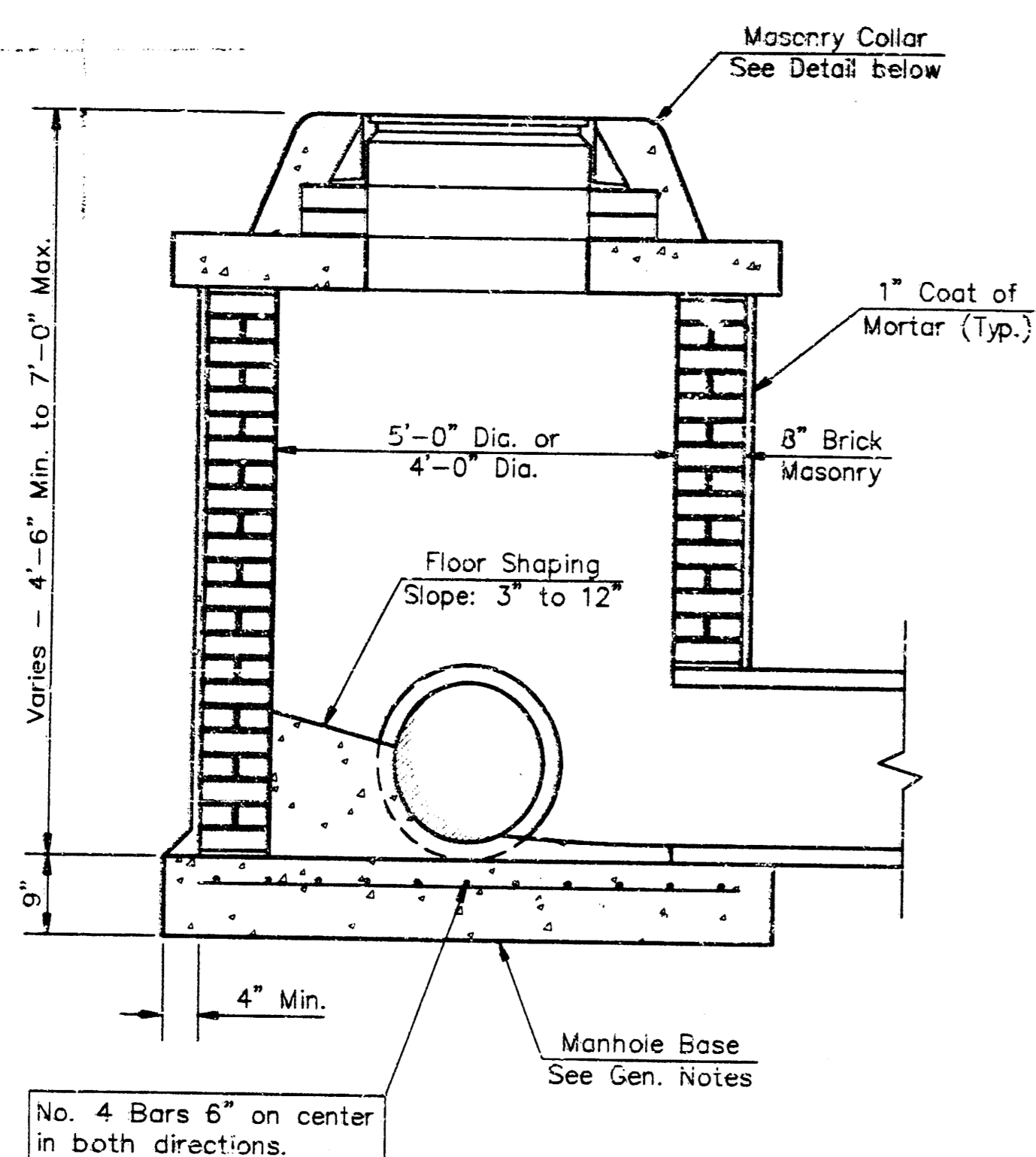


STONEBRIAR ADDITION

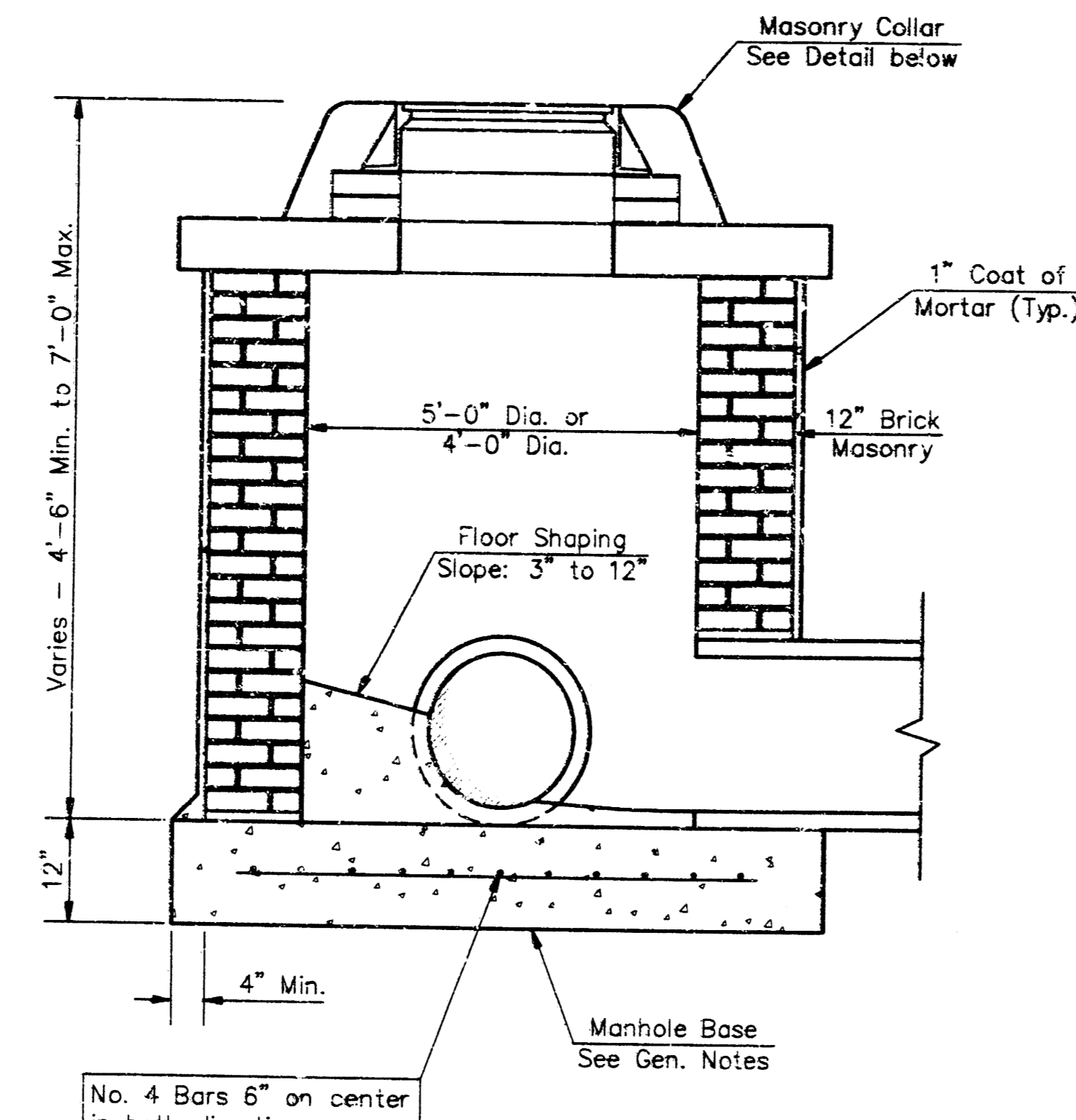


STONEBRIAR ADDITION			
LINE 2			
STORMWATER SEWER			
BAUGHMAN COMPANY P.A.			
ENGINEERING, SURVEYING, & PLANNING			
316-262-7271 • 316-262-7272 • WICHITA, KANSAS 67214			
PROJECT NUMBER			
468-78-245-02637-000-001			
DESIGN	DRAWN	APPROVED	DATE
DMV	JAK		10-23-96
			SCALE
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			SHEET
			7
			12

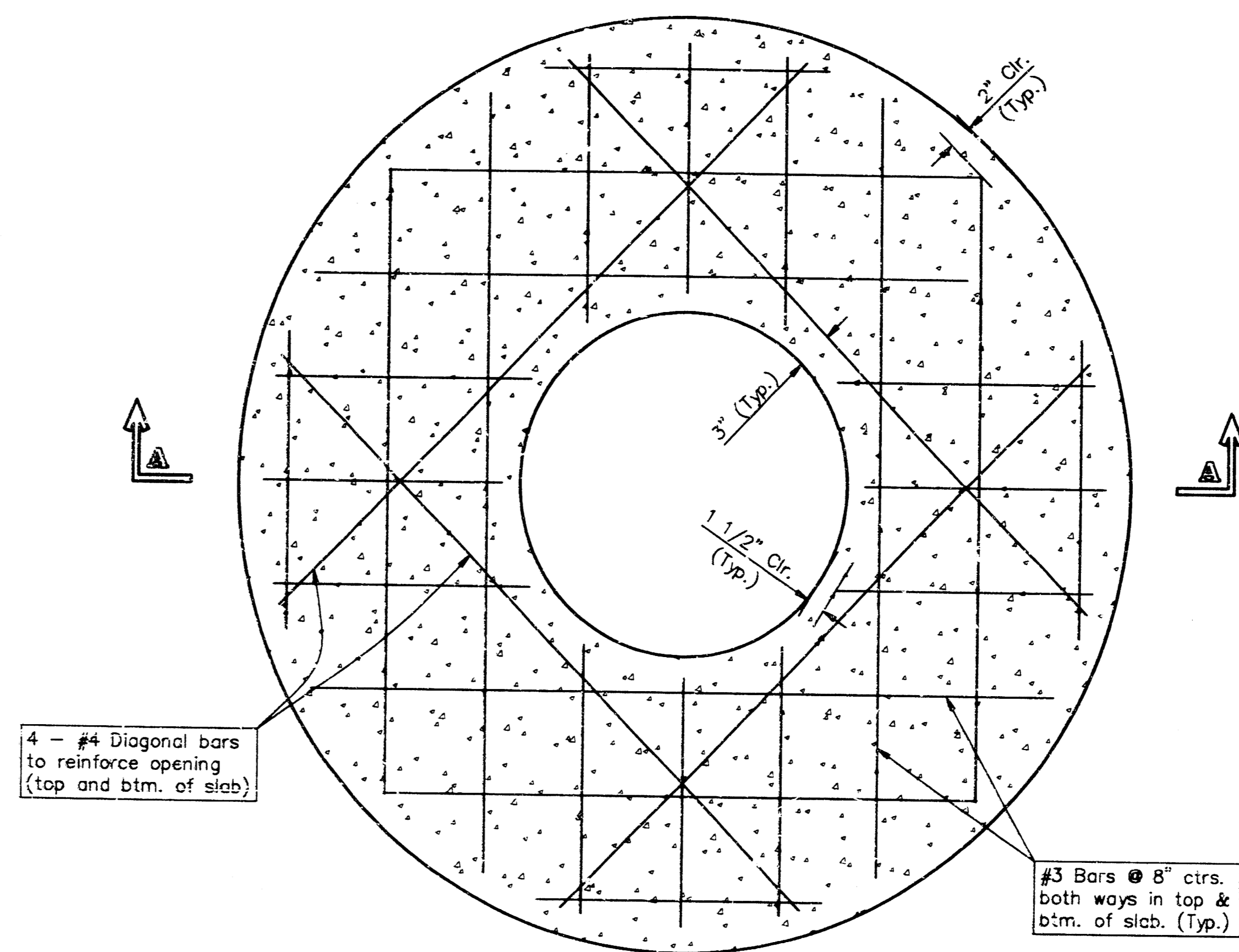
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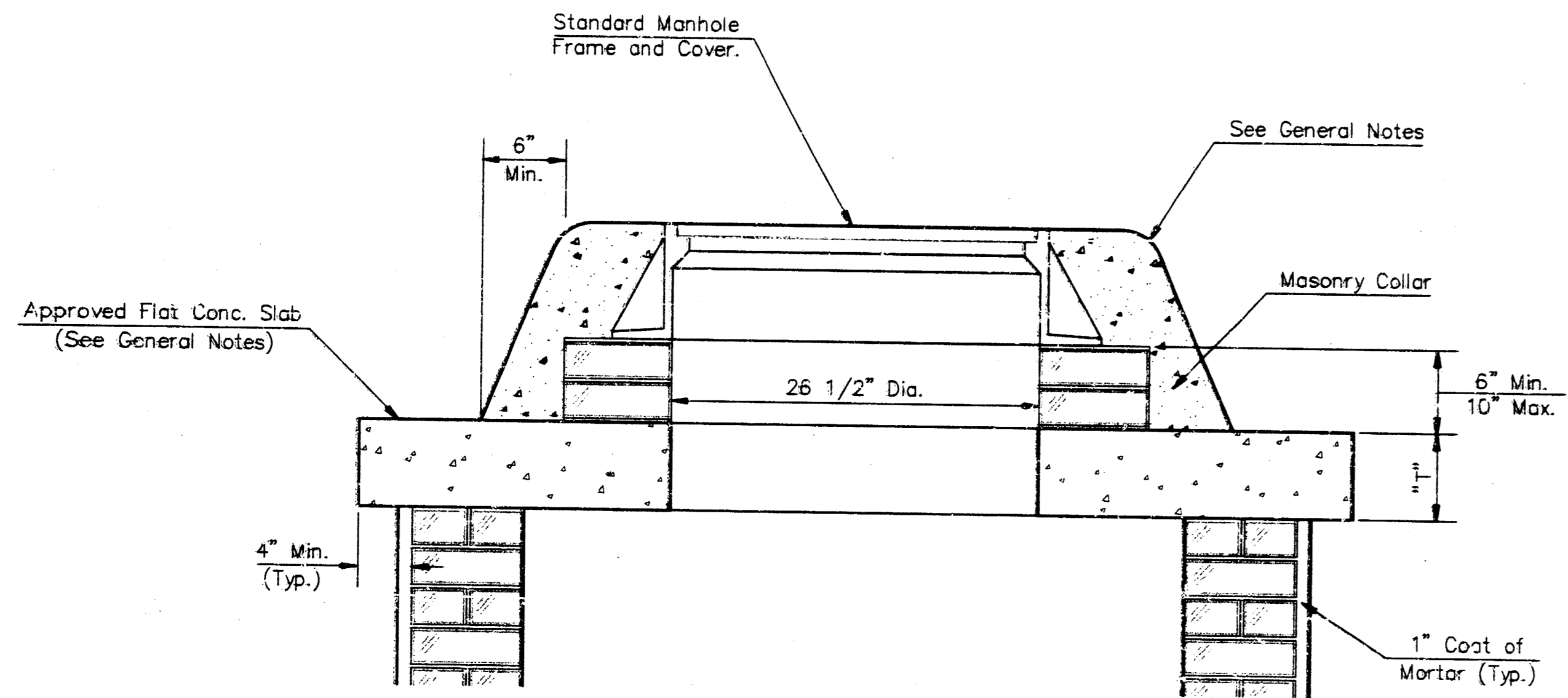
SHALLOW TYPE "A" MANHOLE



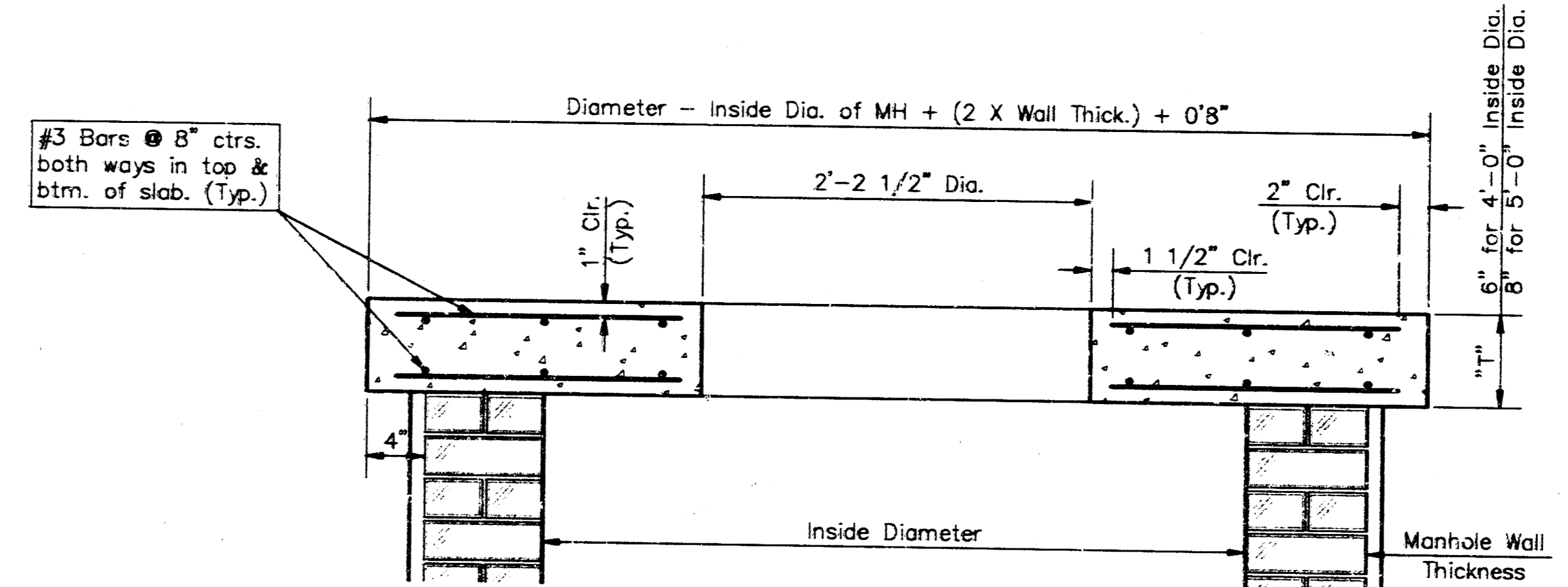
SHALLOW TYPE "B" MANHOLE



PLAN

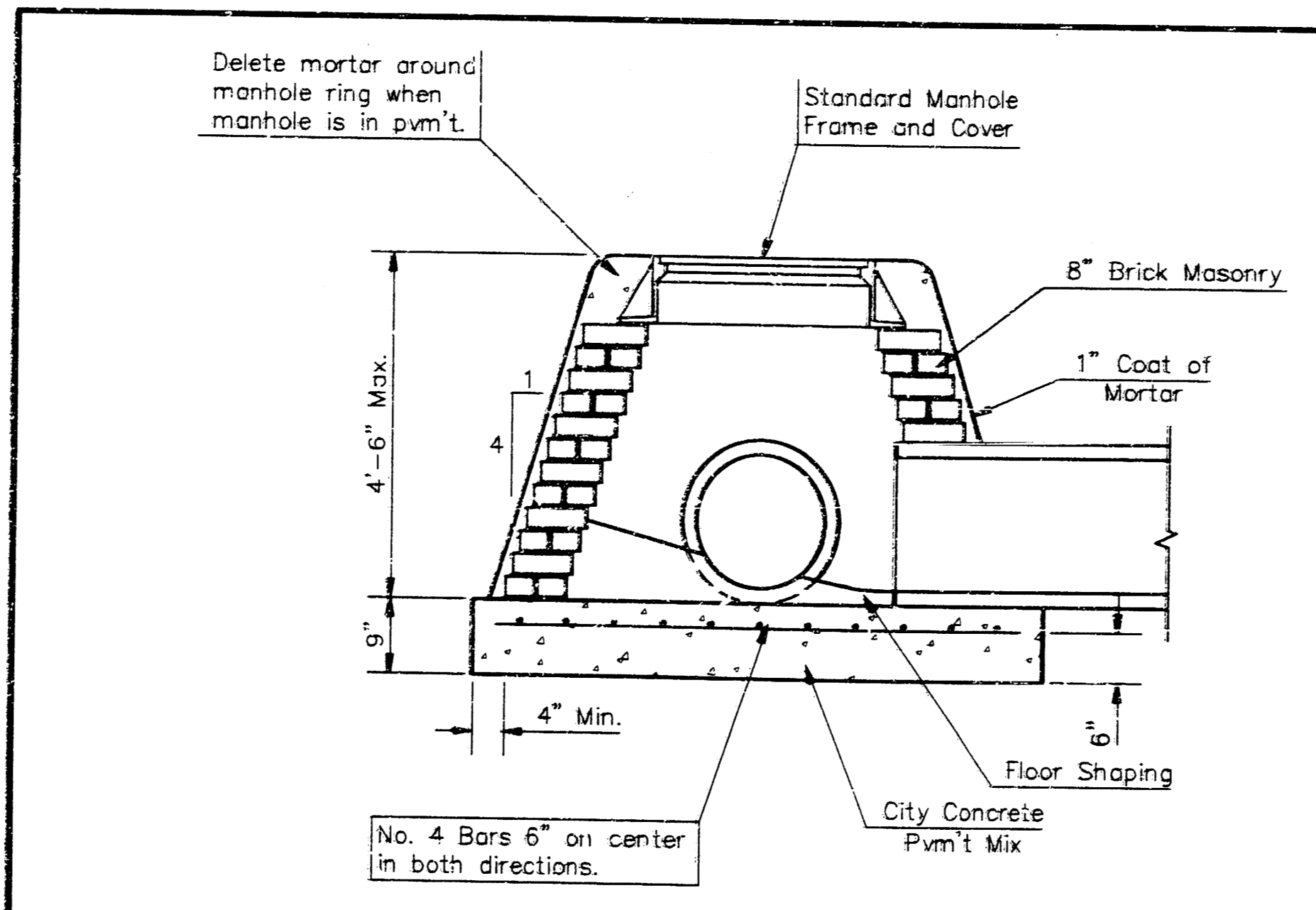


MASONRY COLLAR DETAIL

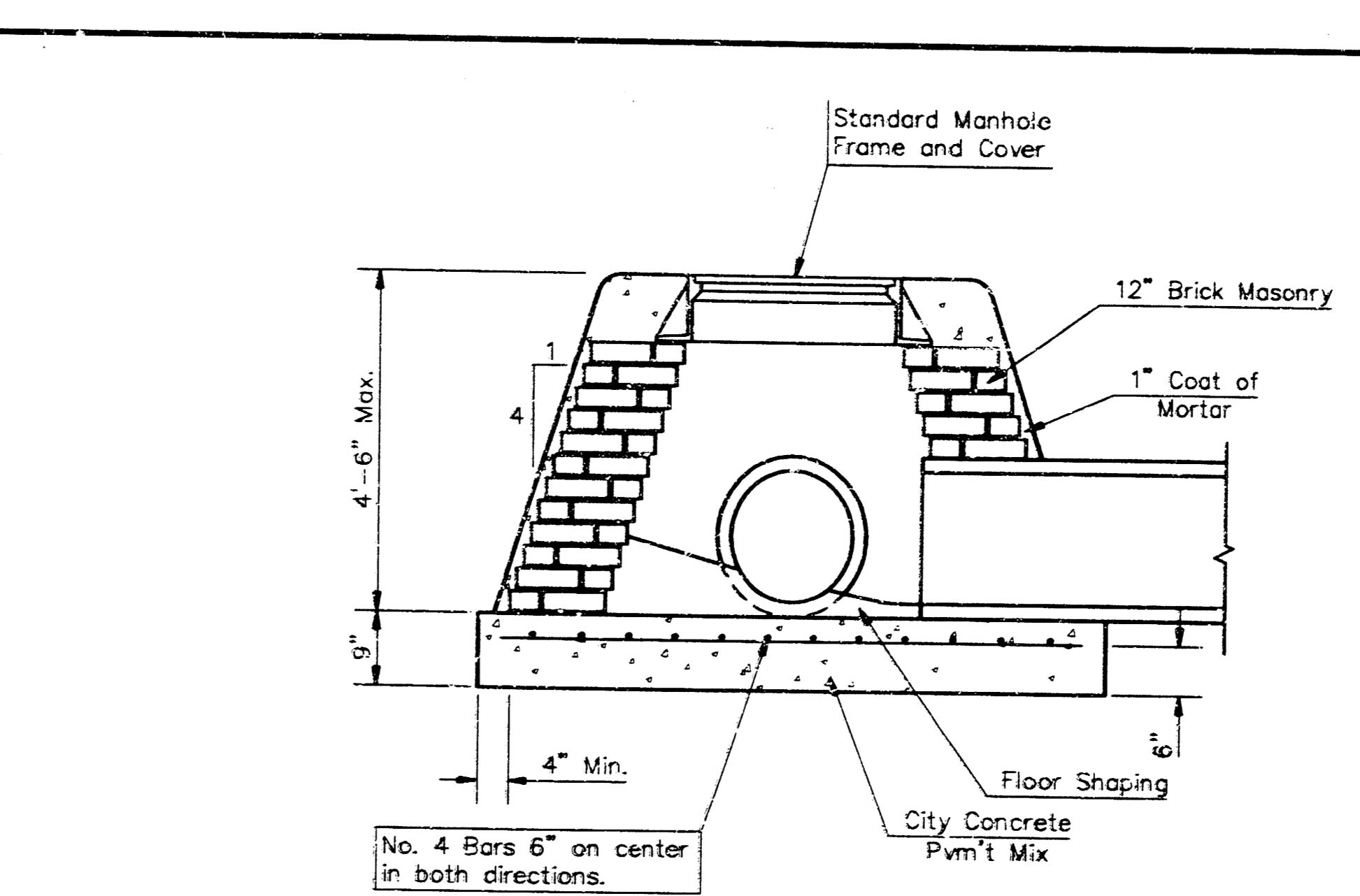


SECTION A-A

FLAT CONCRETE SLAB DETAILS



SPECIAL SHALLOW TYPE "A" MANHOLE



SPECIAL SHALLOW TYPE "B" MANHOLE

GENERAL NOTES

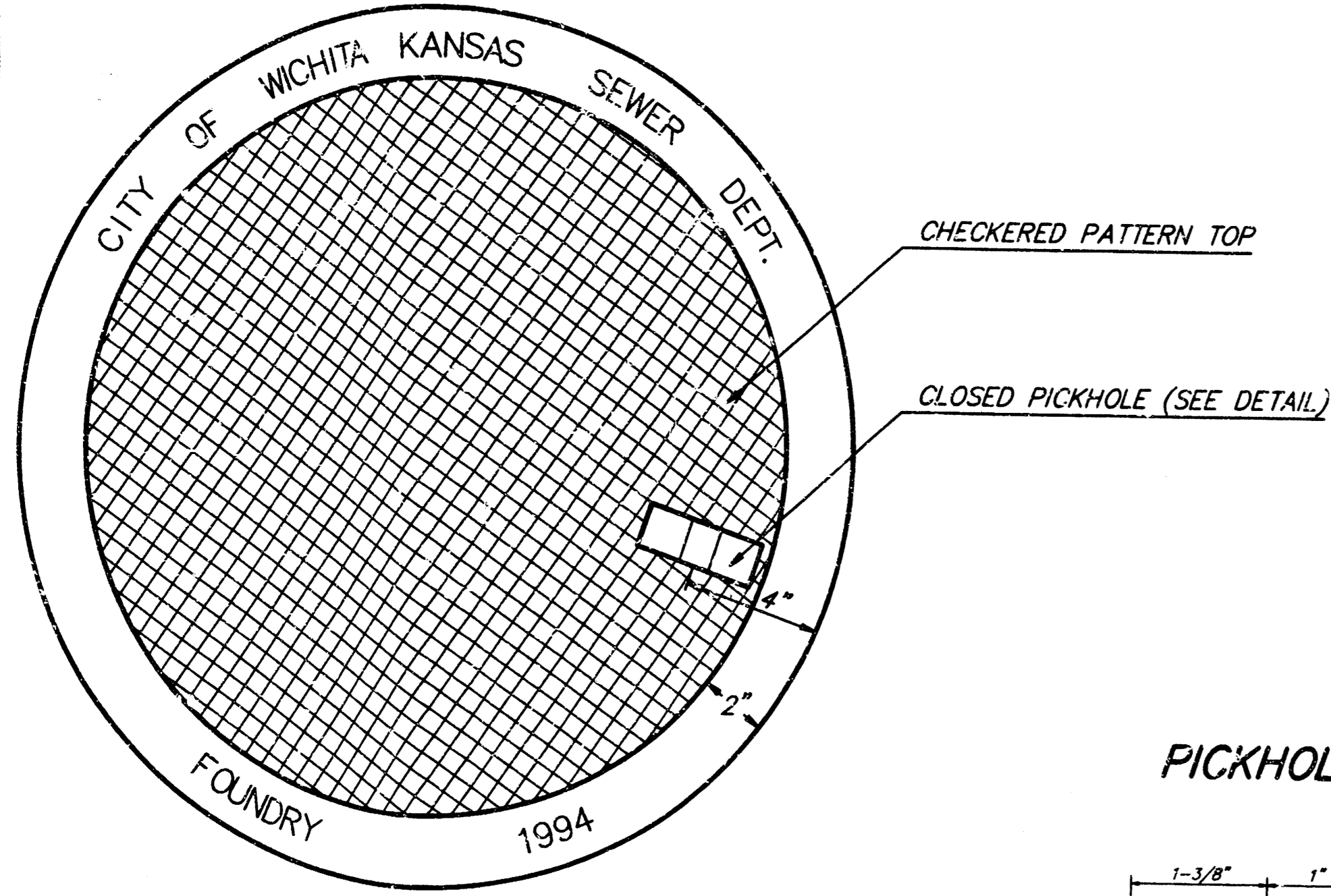
- Mortar used in masonry construction shall contain 8 sacks of cement per cubic yard. Concrete used in manhole bases shall conform to the requirements of concrete for concrete pavement construction as specified in the city standard mix without air entraining admixture. Mortar shall be placed around the manhole ring as shown on the drawings when manholes are constructed in unpaved areas. 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 bottom 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 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.
- Pipes installed within the excavation made for the manhole shall be cradled with concrete to the limits of the manhole excavation. When clay pipe is used, the cradle shall extend to the first joint outside the manhole. The cradle shall be terminated at the clay pipe joint in a manner which will maintain the flexibility of the joint. Cost of cradle within manhole excavation or to clay pipe joints adjacent to manhole shall be included in the unit price bid for the manhole.
- Manhole cover castings and manhole frame castings shall conform to the requirements as indicated in the standard specifications and as shown in the standard detail drawings.
- The crowns 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.
- All brick used in manhole construction shall meet Grade SW of ASTM C652 or C62-87.

CITY OF WICHITA, KANSAS
STD. SHALLOW MANHOLES
 TYPE "A" AND TYPE "B"
BAUGHMAN COMPANY P. A.
 ENGINEERING, SURVEYING, & PLANNING
 316-262-1211 216 S. BELL ST. WICHITA, KANSAS 67201
 PROJECT NUMBER
472-76-245-82637-000-000-001
 DESIGN: C.O.W. DRAWN: Staff APPROVED: DATE: SCALE: **8**
12

MANHOLE COVER
Weight = 180 Lbs.

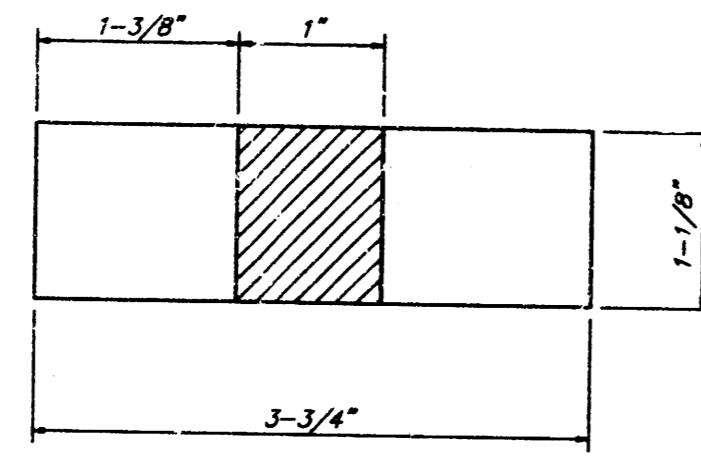
MANHOLE FRAME AND COVER DETAIL

ADOPTED AS STANDARD DESIGN BY
CITY OF WICHITA, KANSAS

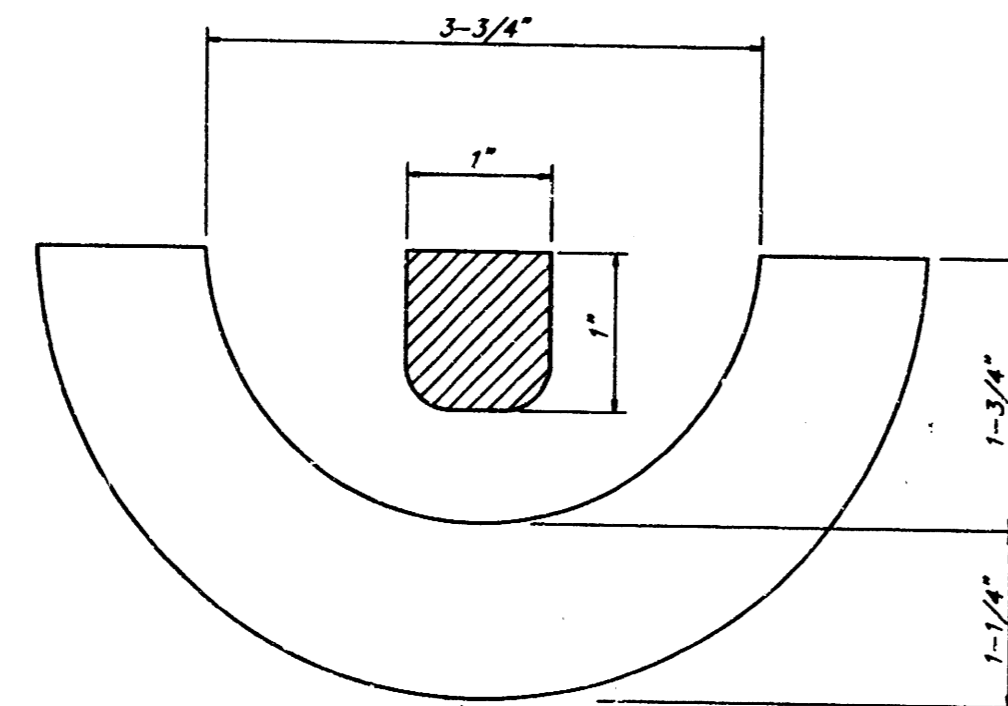


TOP VIEW

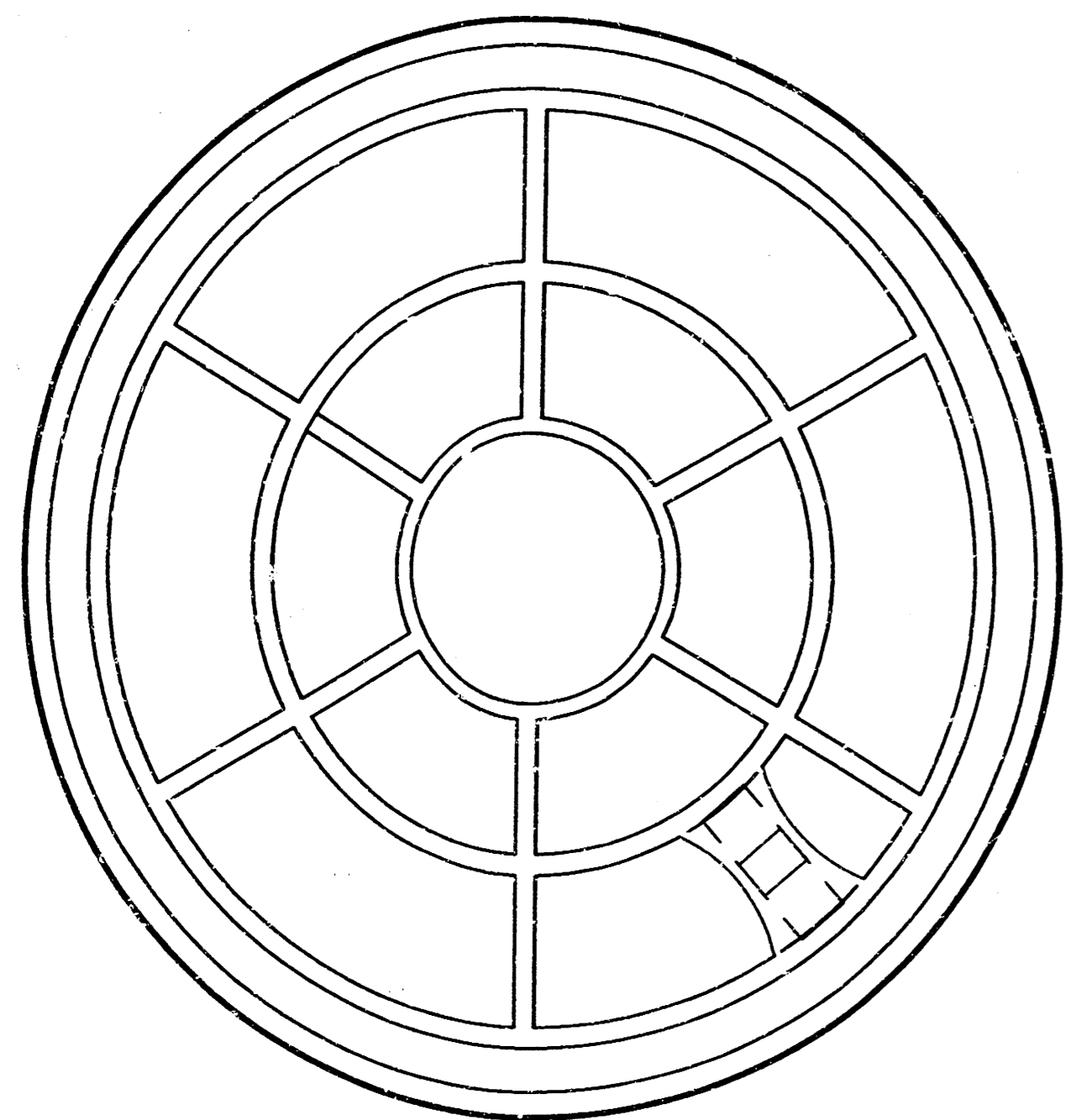
PICKHOLE DETAIL



TOP VIEW

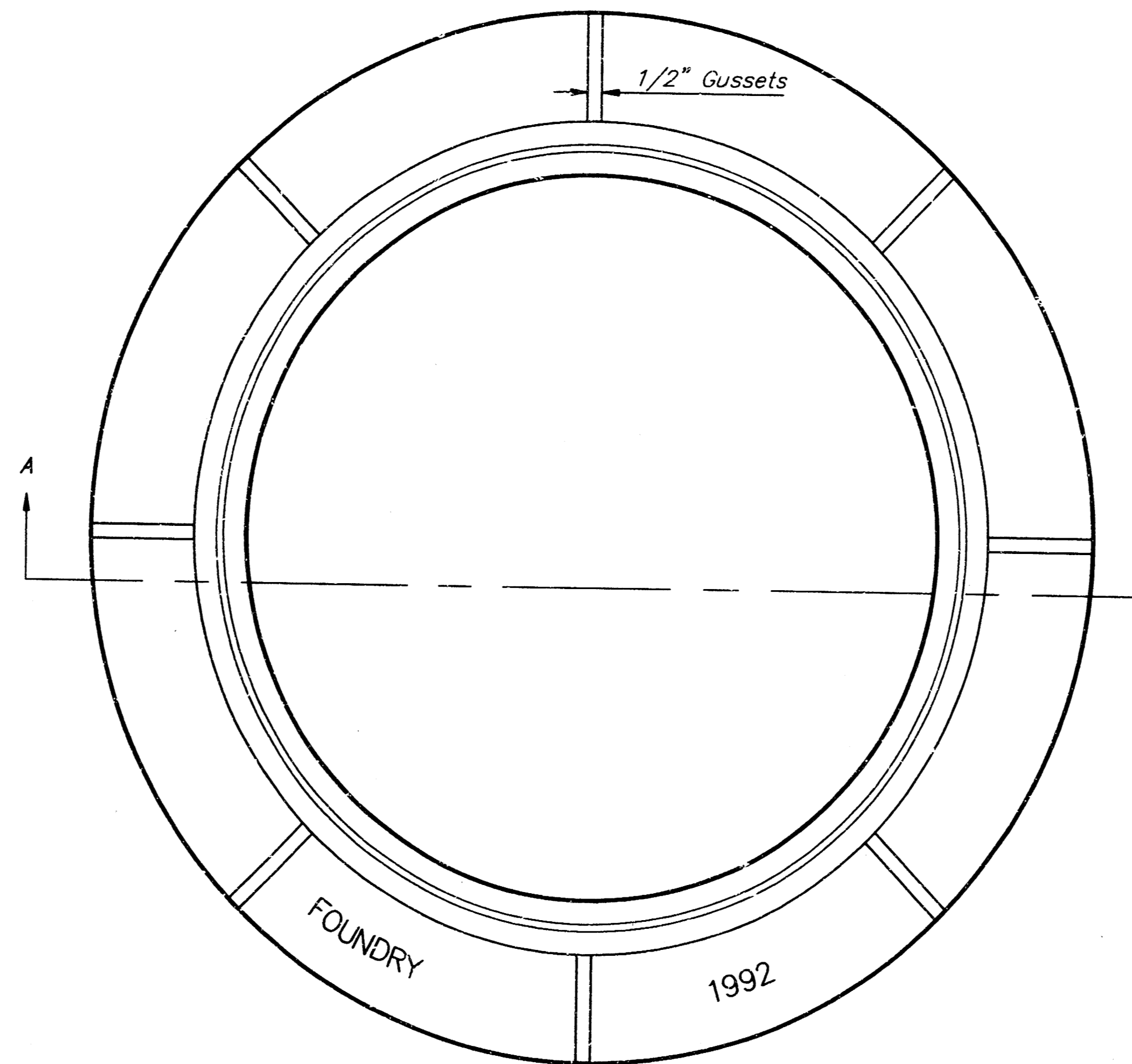


SECTION VIEW



BOTTOM VIEW

MANHOLE FRAME
Weight = 240 Lbs.



TOP VIEW

GENERAL NOTES

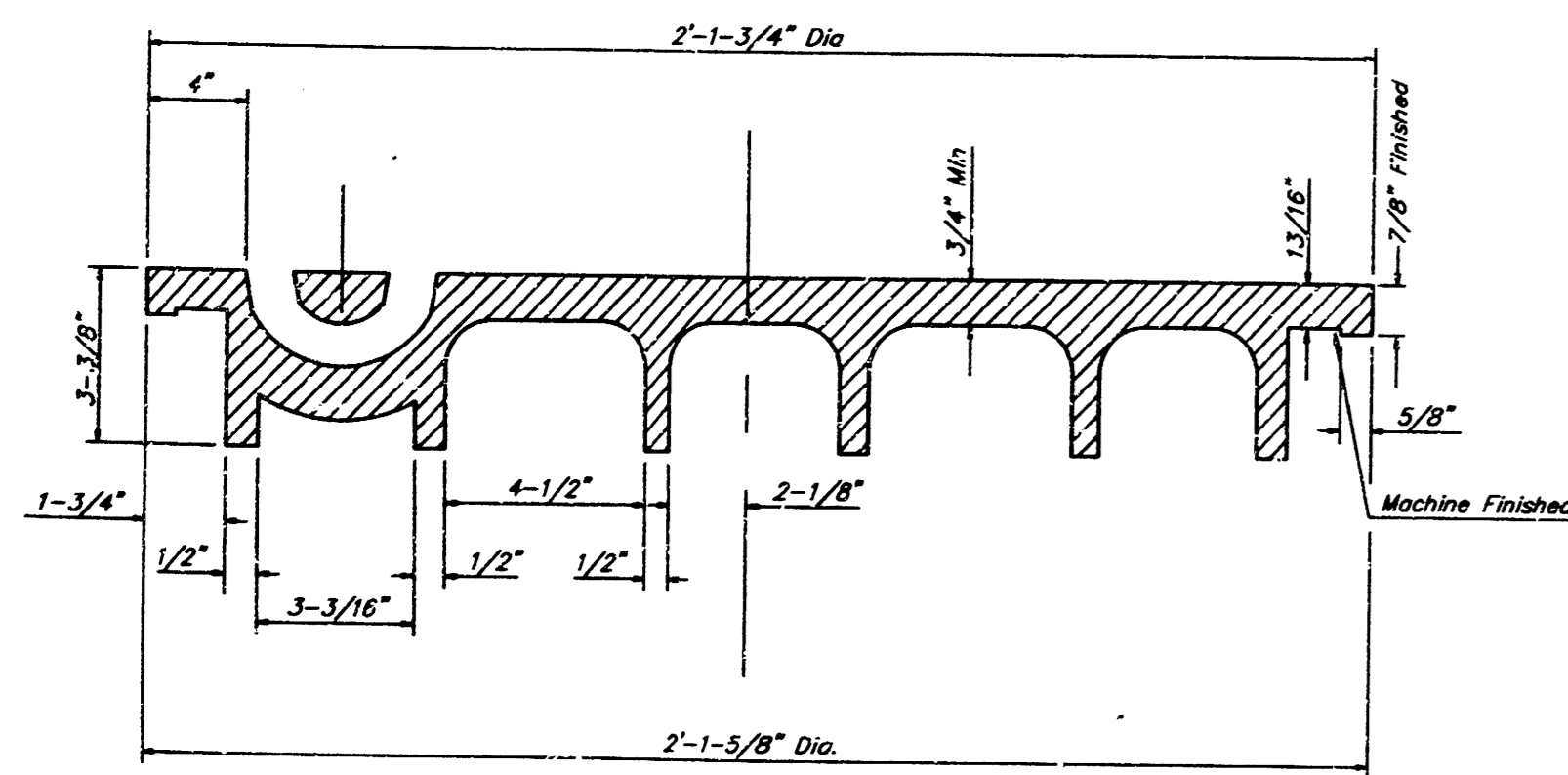
MANHOLE CASTINGS SHALL BE MANUFACTURED USING GOOD QUALITY GRAY IRON CONFORMING TO CLASS 30 OF A.S.T.M. DESIGNATION A-48. DIMENSIONS AND WEIGHTS SHOWN ON THE DETAILED DRAWINGS SHALL BE CONSIDERED AS MINIMUM REQUIREMENTS AND ANY DEVIATIONS FROM THE DIMENSIONS SHOWN MUST BE SPECIFICALLY APPROVED. THE FINISHED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

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

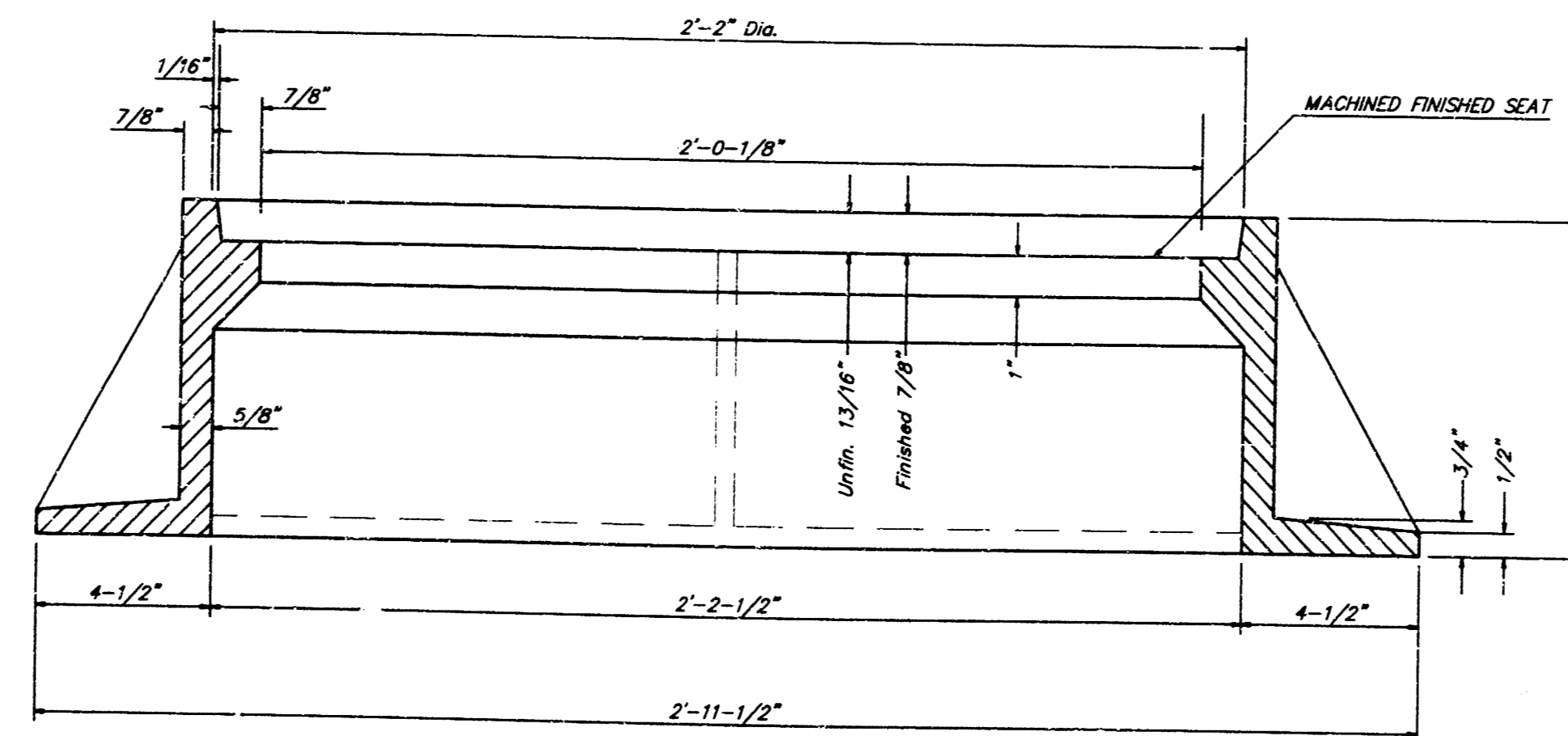
MANHOLE CASTINGS SHALL BE MANUFACTURED SUCH THAT A COVER MANUFACTURED BY ANY ONE FOUNDRY WILL FIT INTERCHANGEABLY INTO A FRAME MANUFACTURED BY ANOTHER FOUNDRY AND STILL MEET ALLOWABLE CLEARANCES AND NON-ROCKING REQUIREMENTS. THIS WILL REQUIRE MANUFACTURING OF THE MATCHING FACES ON THE COVER AND THE FRAME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

THE OUTSIDE CIRCUMFERENCE OF THE VERTICAL FACE OF THE COVER AND THE INSIDE CIRCUMFERENCE OF THE VERTICAL FACE 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.

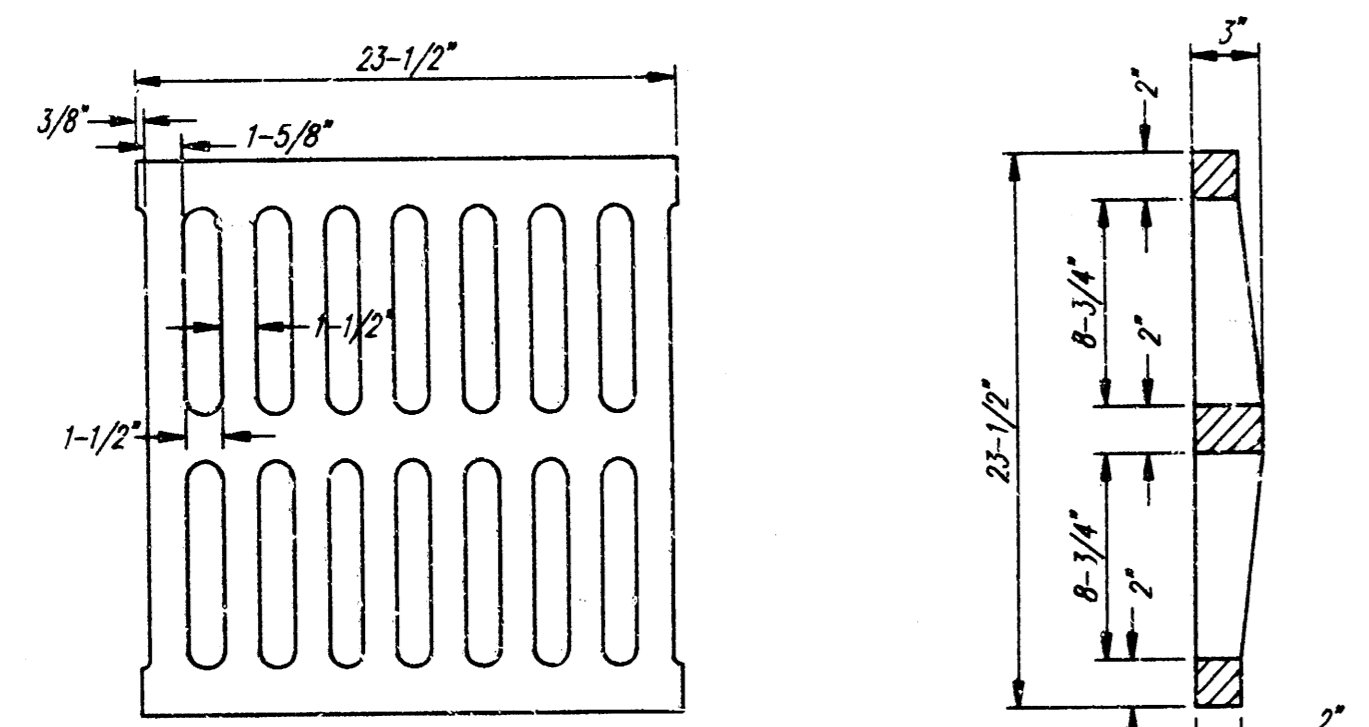
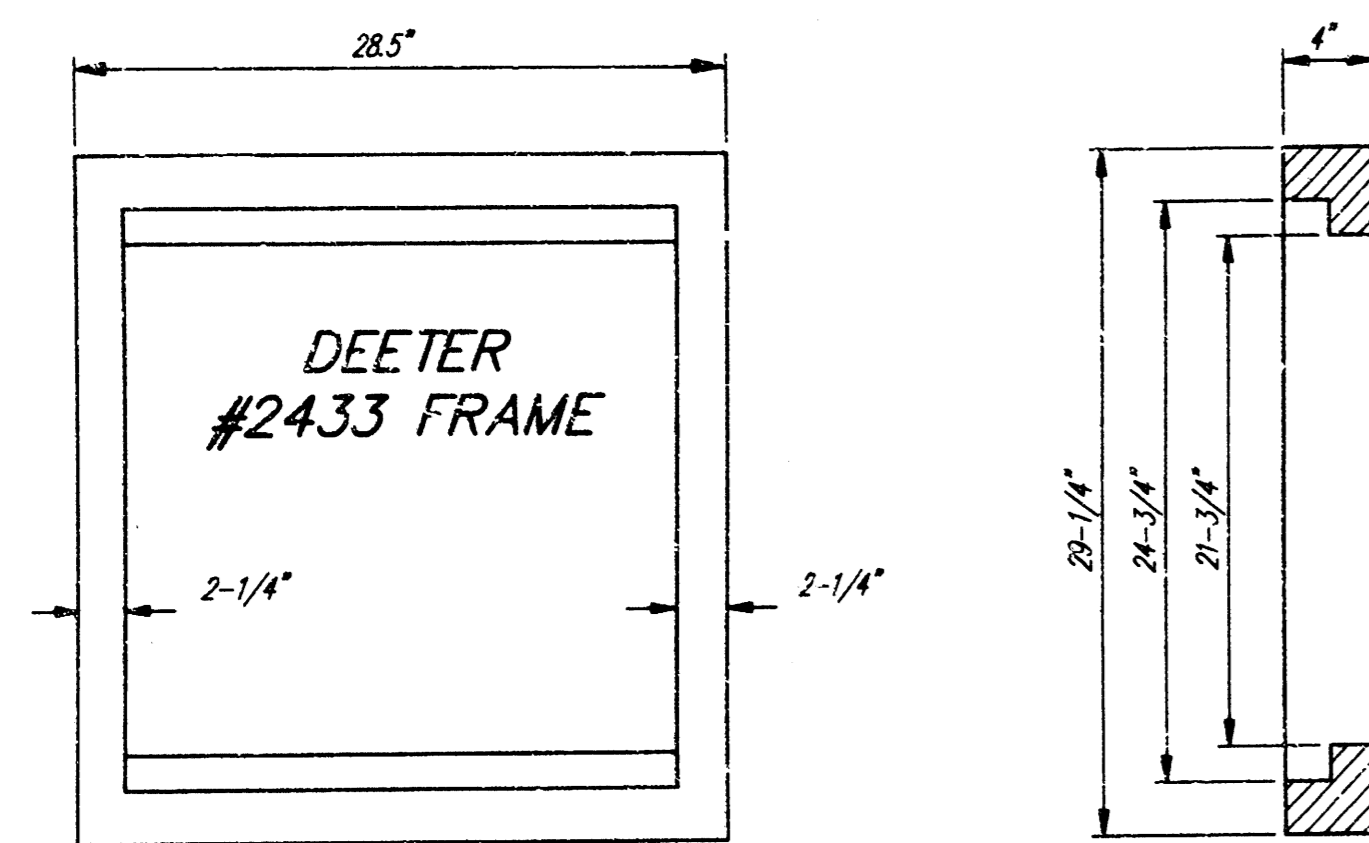


SECTION VIEW



SECTION A-A

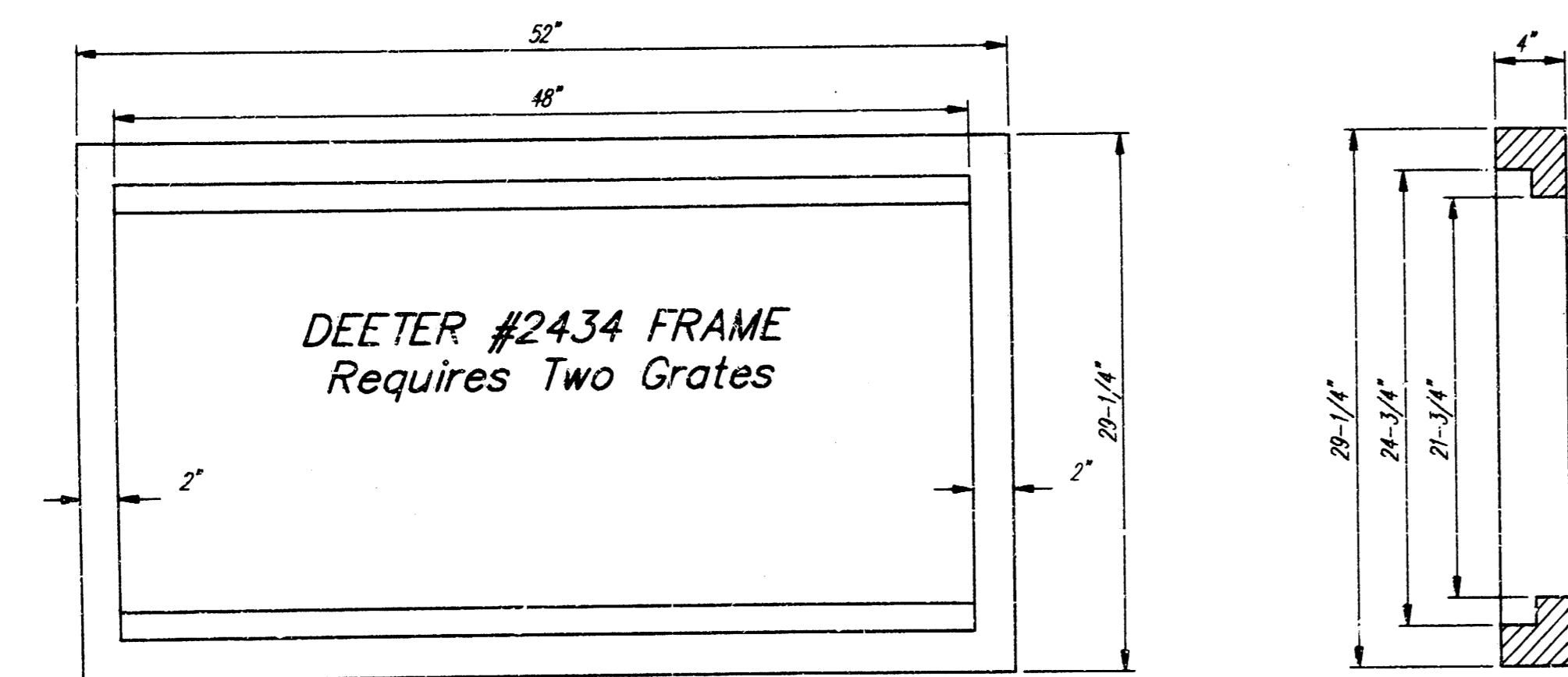
MANHOLE FRAME AND COVER DETAIL			
ADOPTED AS STANDARD DESIGN BY CITY OF WICHITA, KANSAS			
BAUGHMAN COMPANY P. A.			
ENGINEERING, SURVEYING, & PLANNING			
316-262-7221 • 316 ELLIS • WICHITA, KANSAS 67211			
PROJECT NUMBER 472-78-245-82637-000-000-001			
DESIGN	DRAWN Staff	APPROVED	DATE
			SCALE
			SHEET 9 of 12



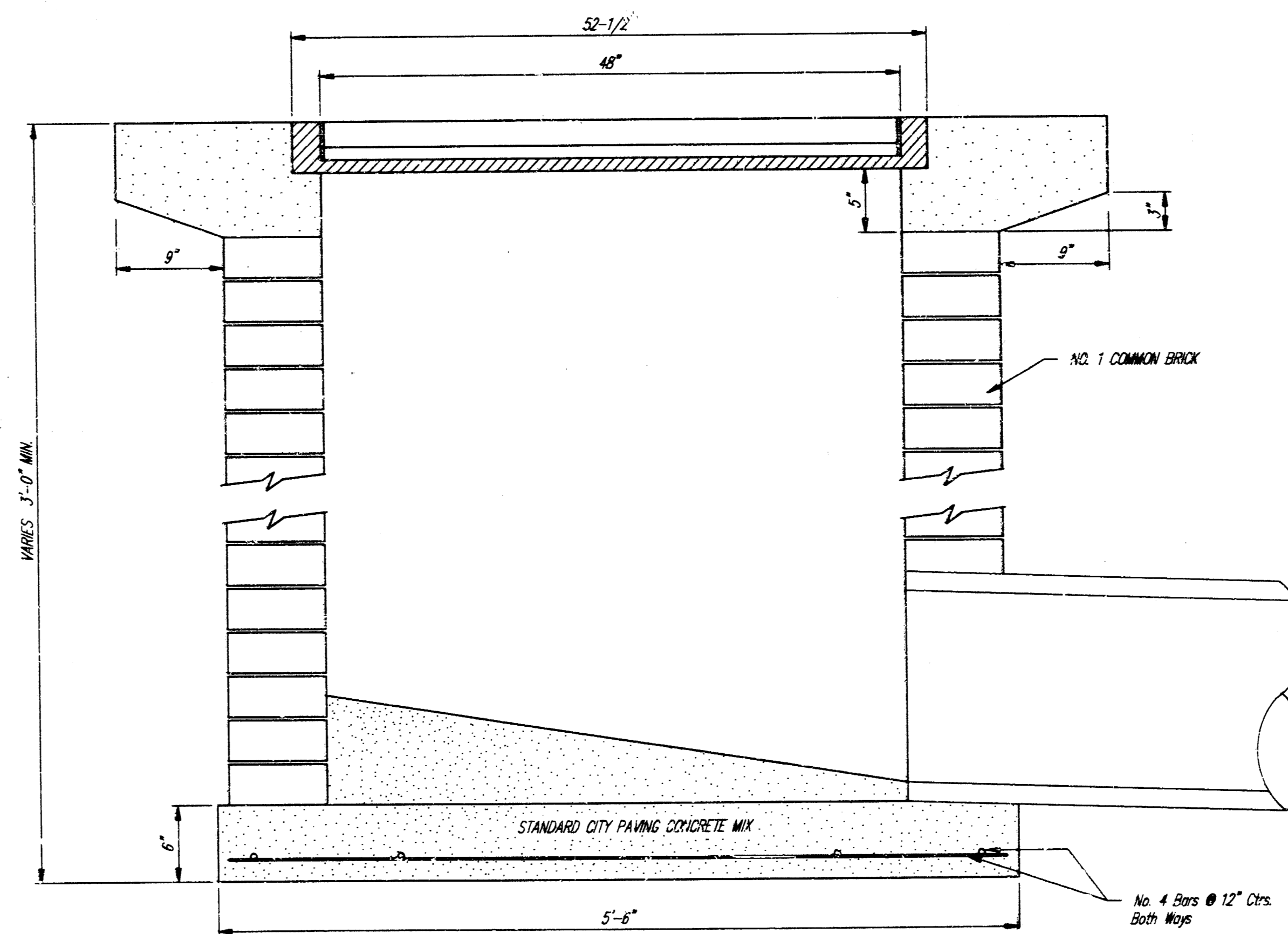
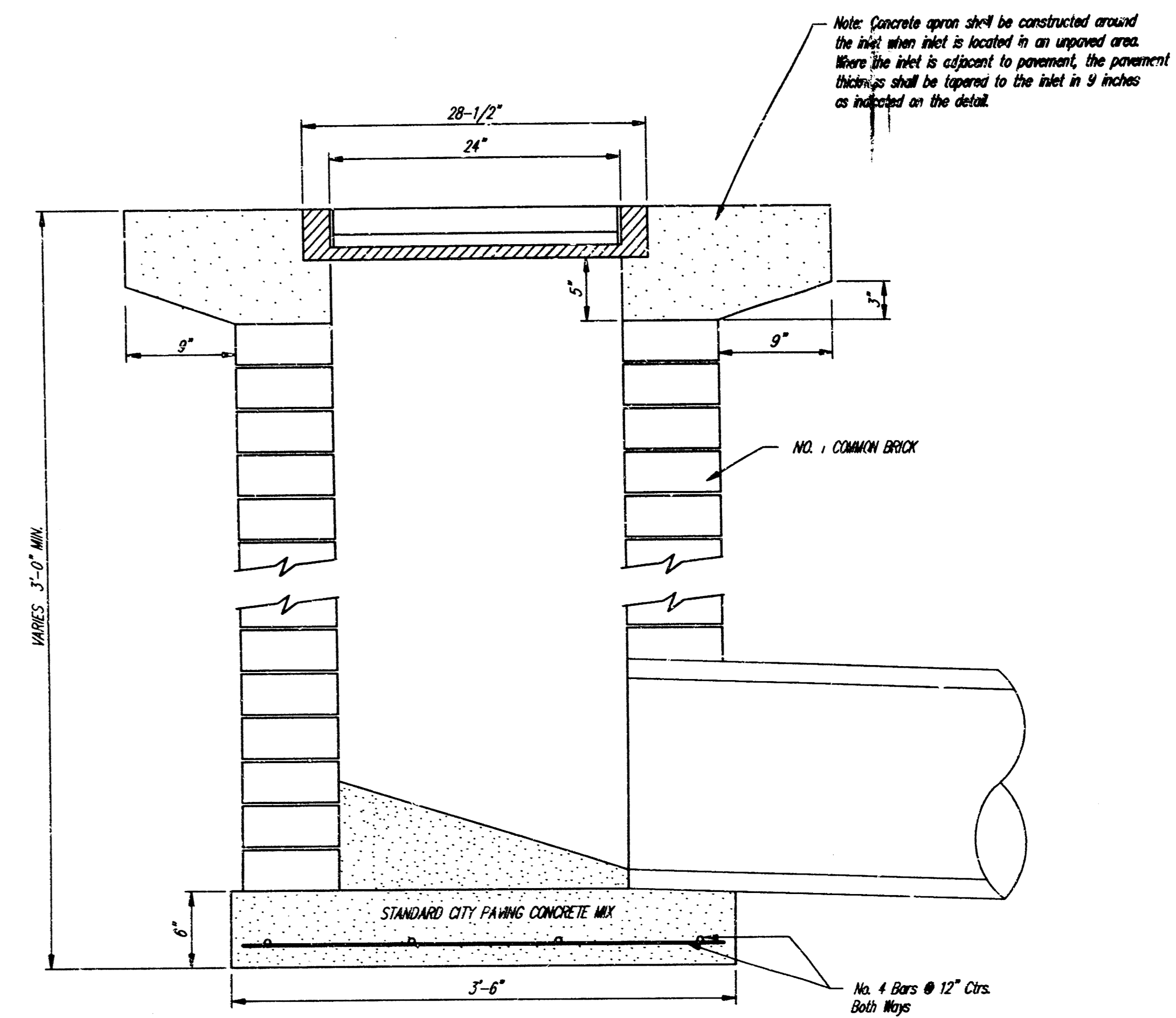
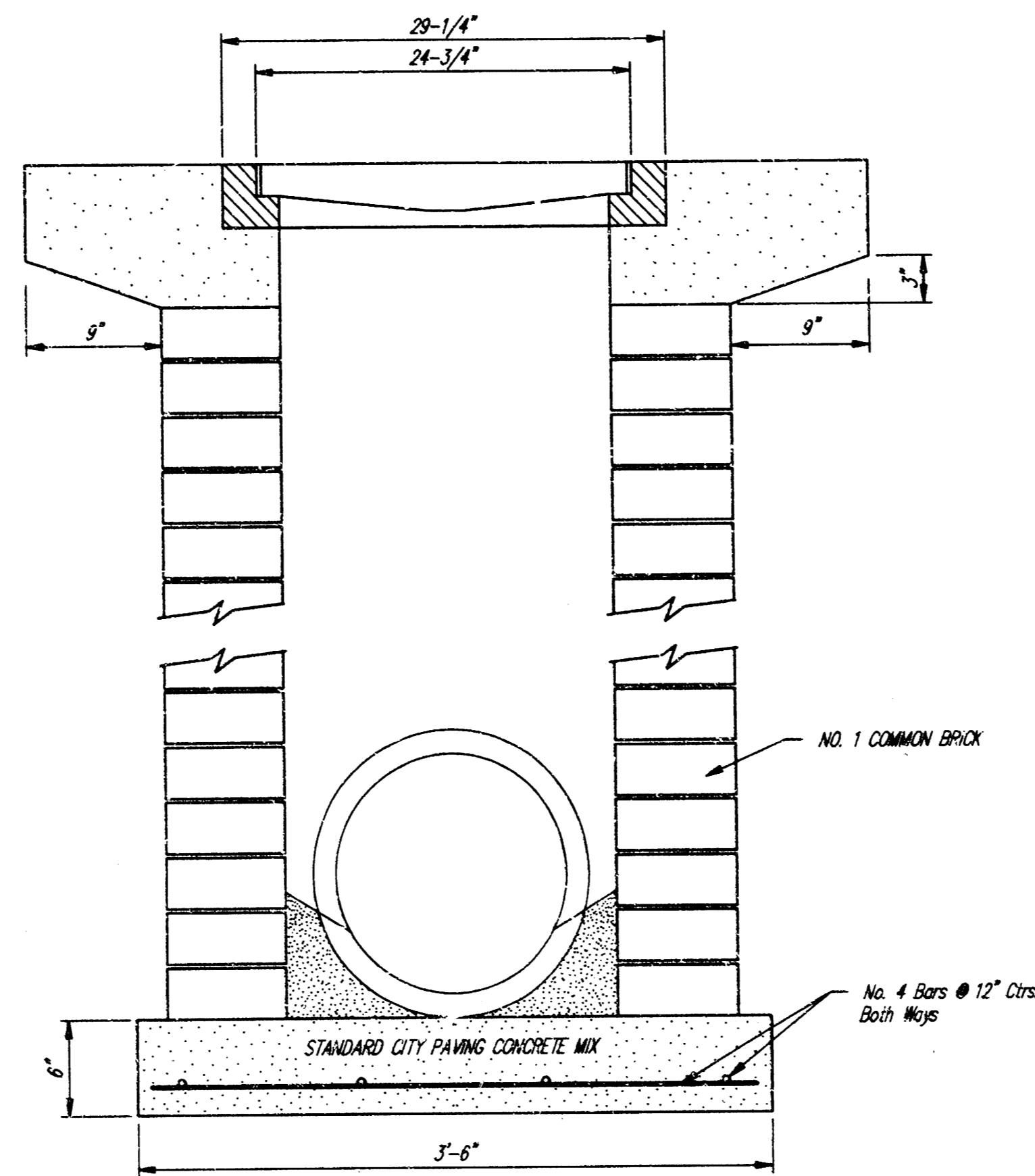
DEETER #2433 GRATE

24" x 24" Frame and Grate Detail

NOTE: Grates shall be imprinted on the top surface with "CITY OF WICHITA" using letters of least 1" in height. Other marking methods may be approved by the engineer.

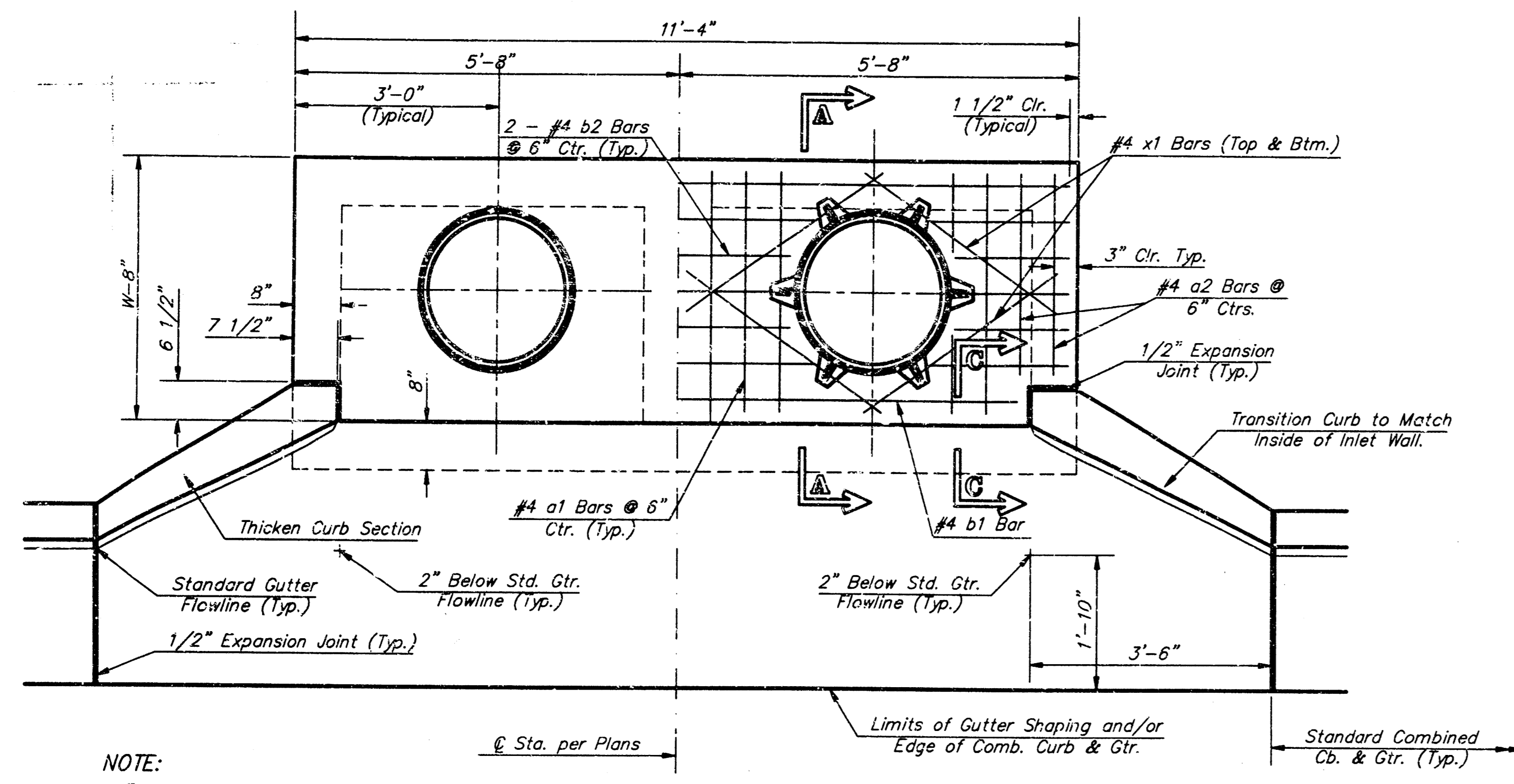


Double 24" x 24" Frame Detail



City of Wichita Standard				
Drop Inlet				
BAUGHMAN COMPANY P. A.				
ENGINEERING, SURVEYING, & PLANNING				
316 - 262 - 2271 315 - 2515 WICHITA, KANSAS 67211				
PROJECT NUMBER				SHEET
468-76-245-82637-000-000-001				10
DESIGN	DRAWN	APPROVED	DATE	SCALE
C.O.W.	Staff			

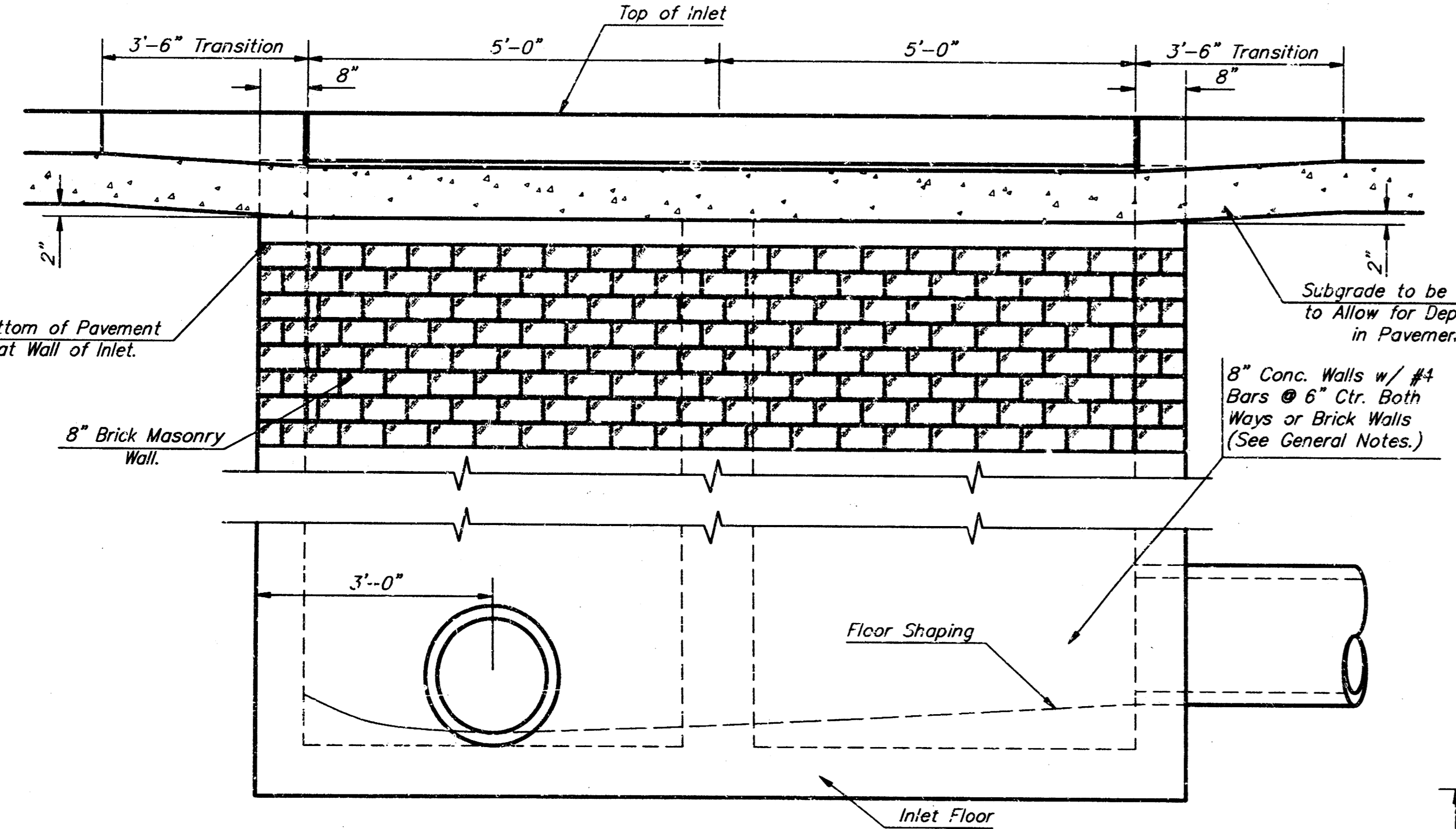
FR. FALES/STURP/WITZ



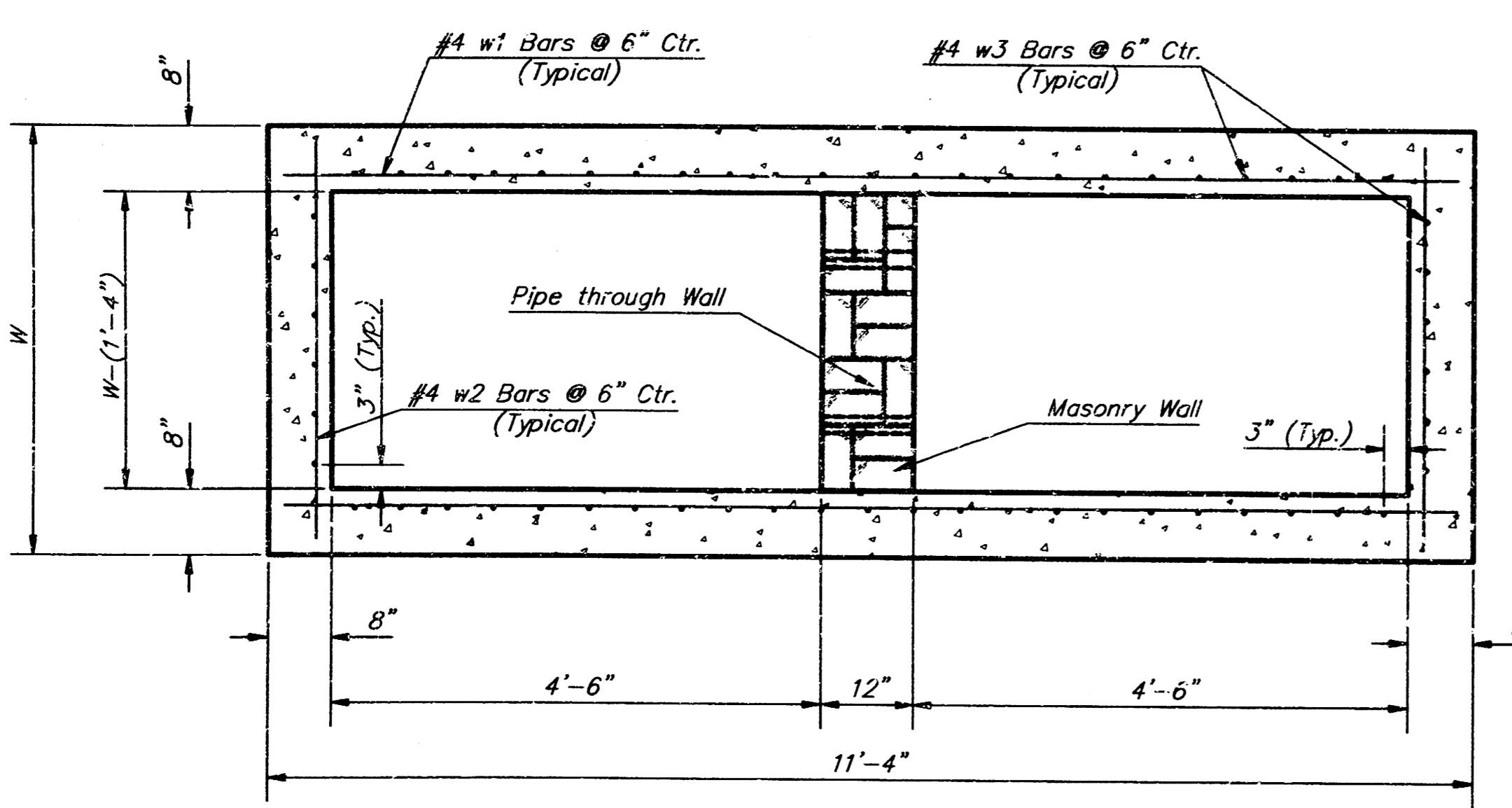
NOTE:
Expansion Joint Only in Curb Area with Concrete Pavement.

PLAN

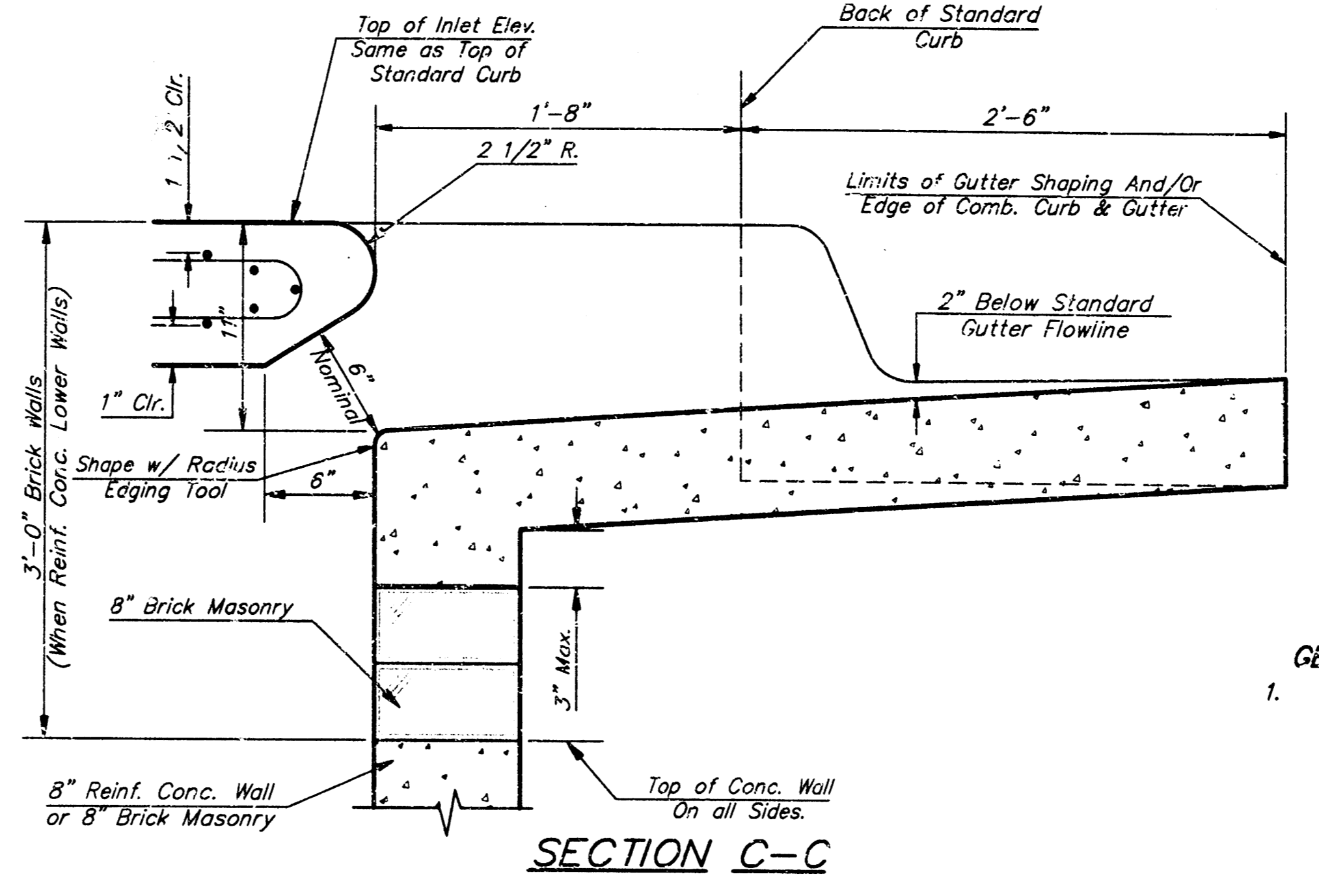
*Left Side Shown Without Slab Reinforcing, Right Side Shown With Slab Reinforcing



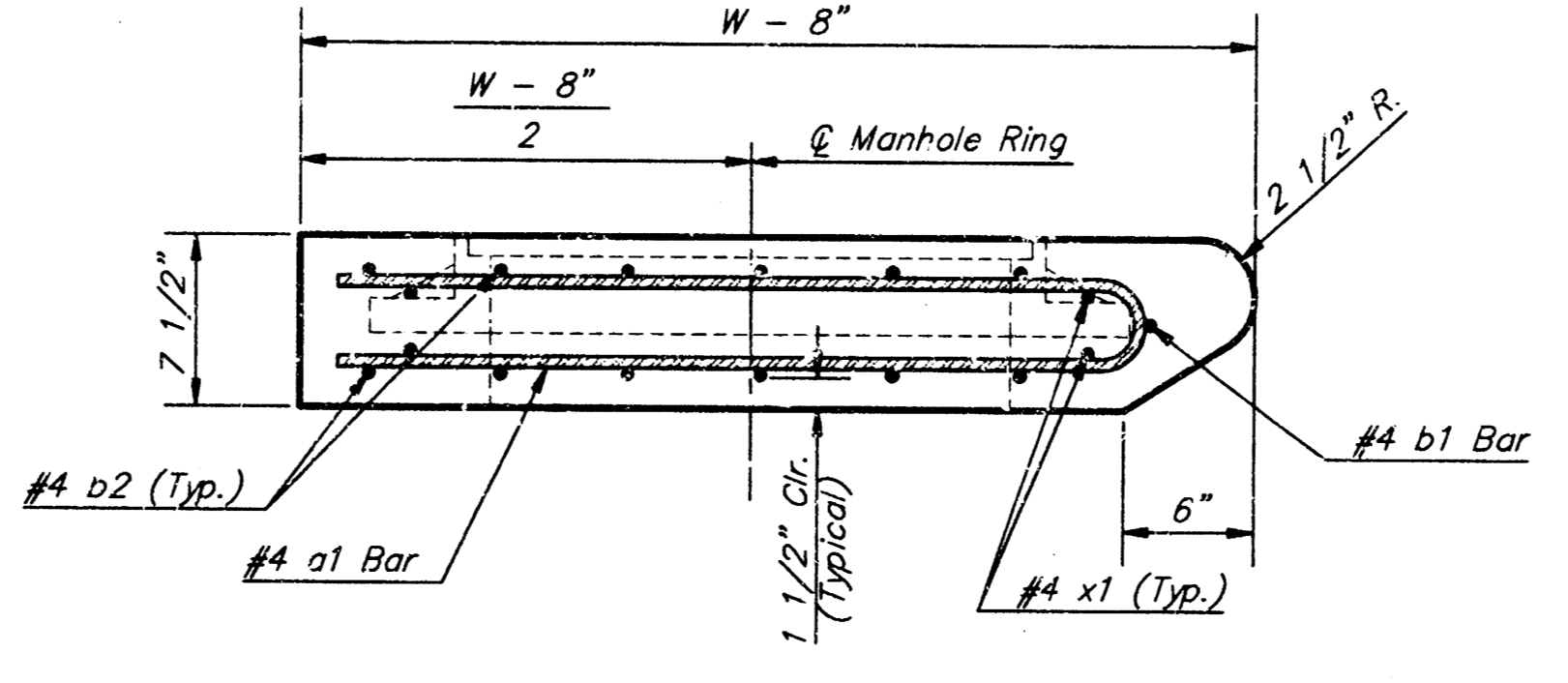
ELEVATION



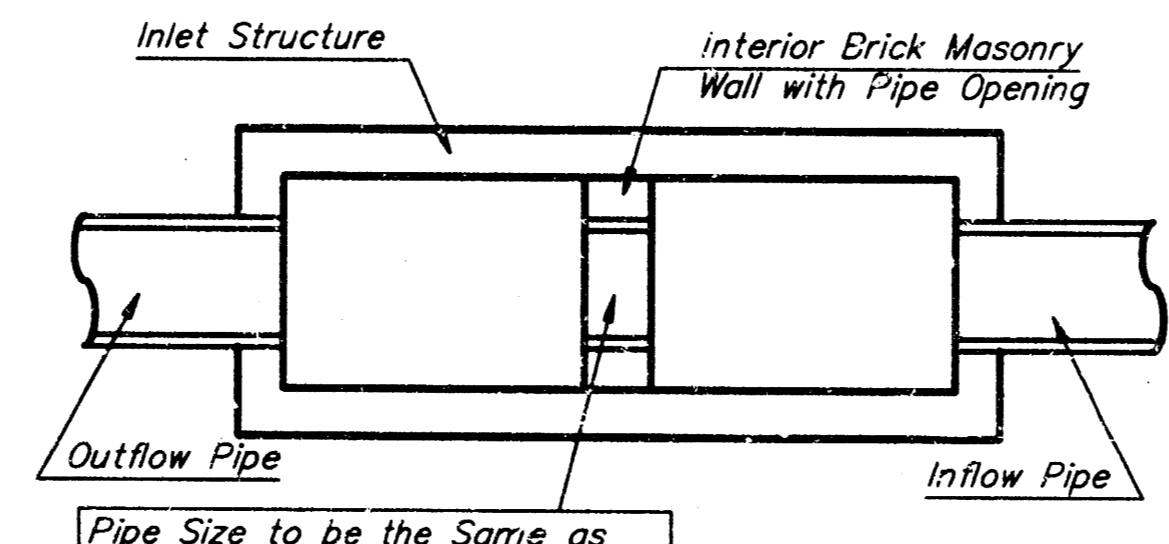
SECTION B-B



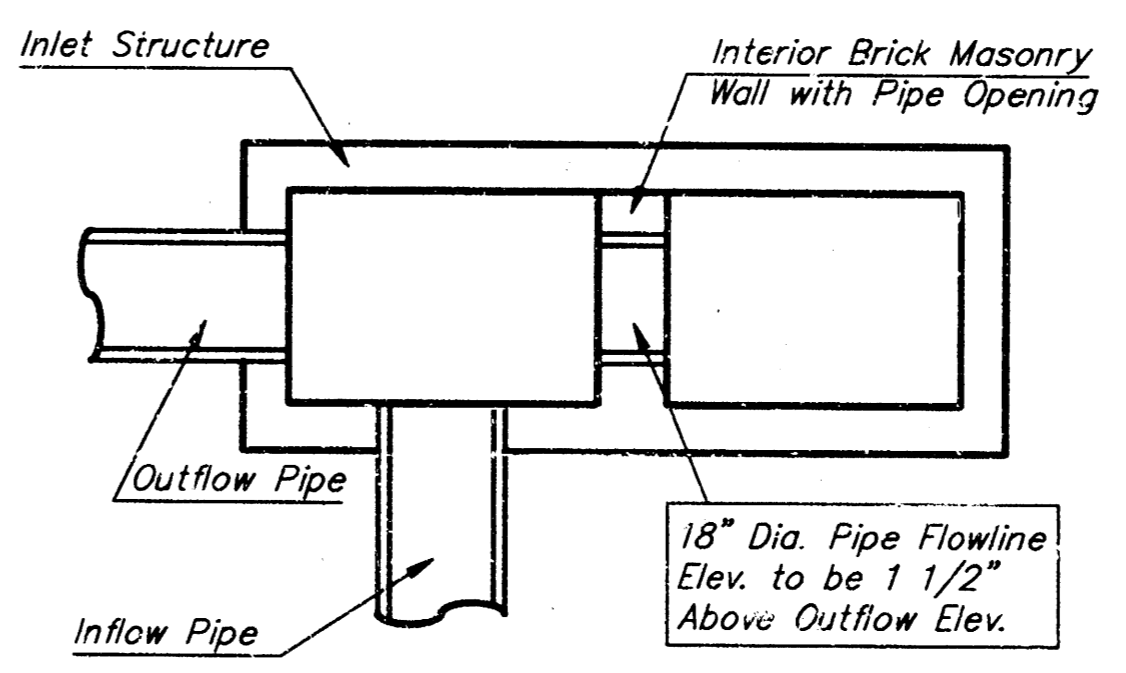
SECTION C-C



SECTION A-A

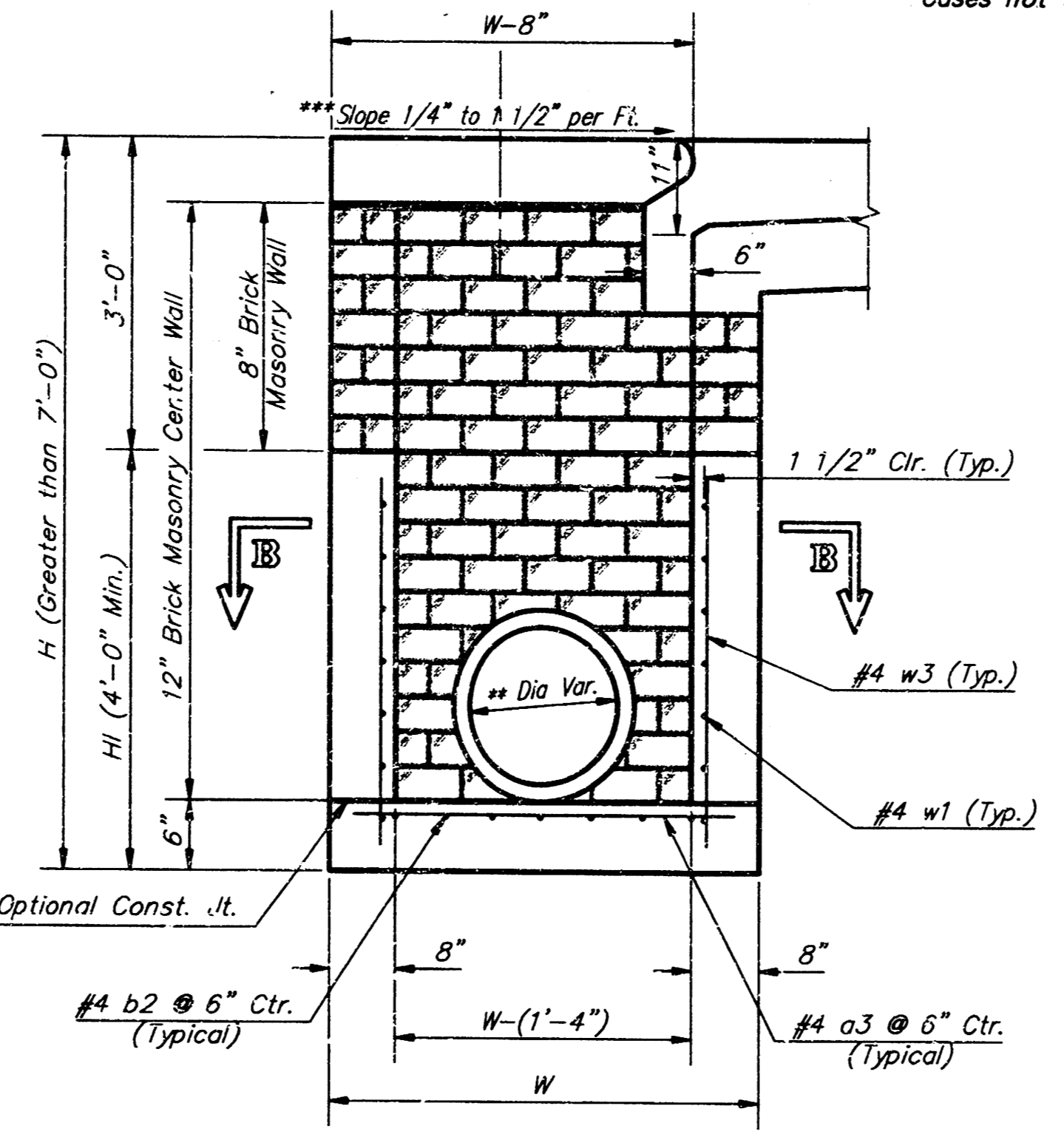


CASE I

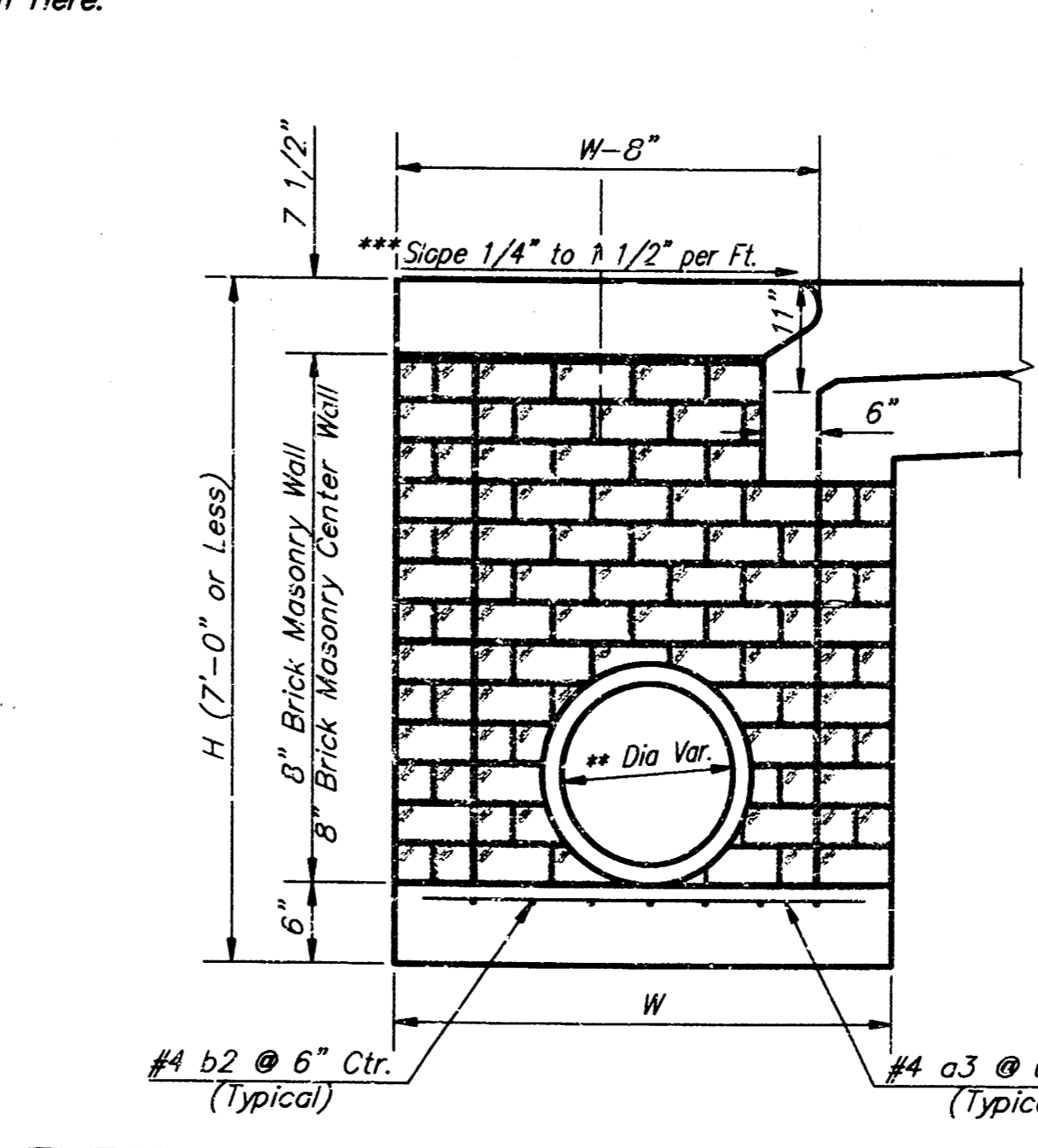


CASE II

NOTE:
Center Wall Pipe Size shall be as Specified in Inlet Construction Notes on the Plan/Profile Sheets for those Cases Not Shown Here.



TYPICAL INLET SECTION AT CENTER WALL (Reinforced Concrete Walls)



TYPICAL INLET SECTION AT CENTER WALL (Masonry Walls)

NOTES:
* A center wall opening shall be provided by means of a section of reinforced concrete pipe. See Case I and Case II above.
** Slope of inlet tops to match sidewalk of parking slopes within limits indicated

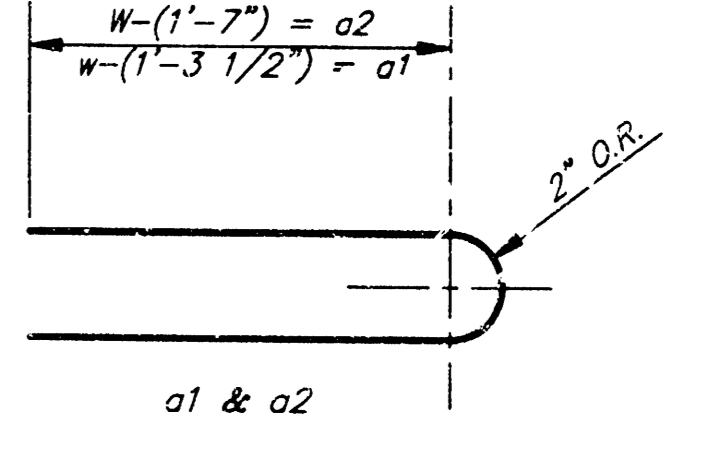
PRECAST SLAB AND FLOOR REINFORCING											
MARK	SIZE	W = 4'-4"		W = 5'-4"		W = 6'-4"		W = 7'-4"		W = 8'-4"	
		NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH
a1	#4	13	6'-7"	13	8'-7"	13	10'-7"	13	12'-7"	13	14'-7"
a2	#4	4	6'-0"	4	8'-0"	4	10'-0"	4	12'-0"	4	14'-0"
a3	#4	23	4'-1"	23	5'-1"	23	6'-1"	23	7'-1"	23	8'-1"
b1	#4	1	9'-9"	1	9'-9"	1	9'-9"	1	9'-9"	1	9'-9"
b2	#4	23	11'-1"	29	11'-1"	35	11'-1"	41	11'-1"	47	11'-1"
x1	#4	16	3'-10"	16	4'-2"	16	4'-6"	16	4'-10"	16	5'-2"

WALL REINFORCING											
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
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	52	2	56	2	60	2	64	2	68	2

* Field bend or Cut Reinforcing as Required for Clearance.
① 4 (H1 - 12") (H1 - 21") Rounded down to nearest 0.5"
② H1 - 3"

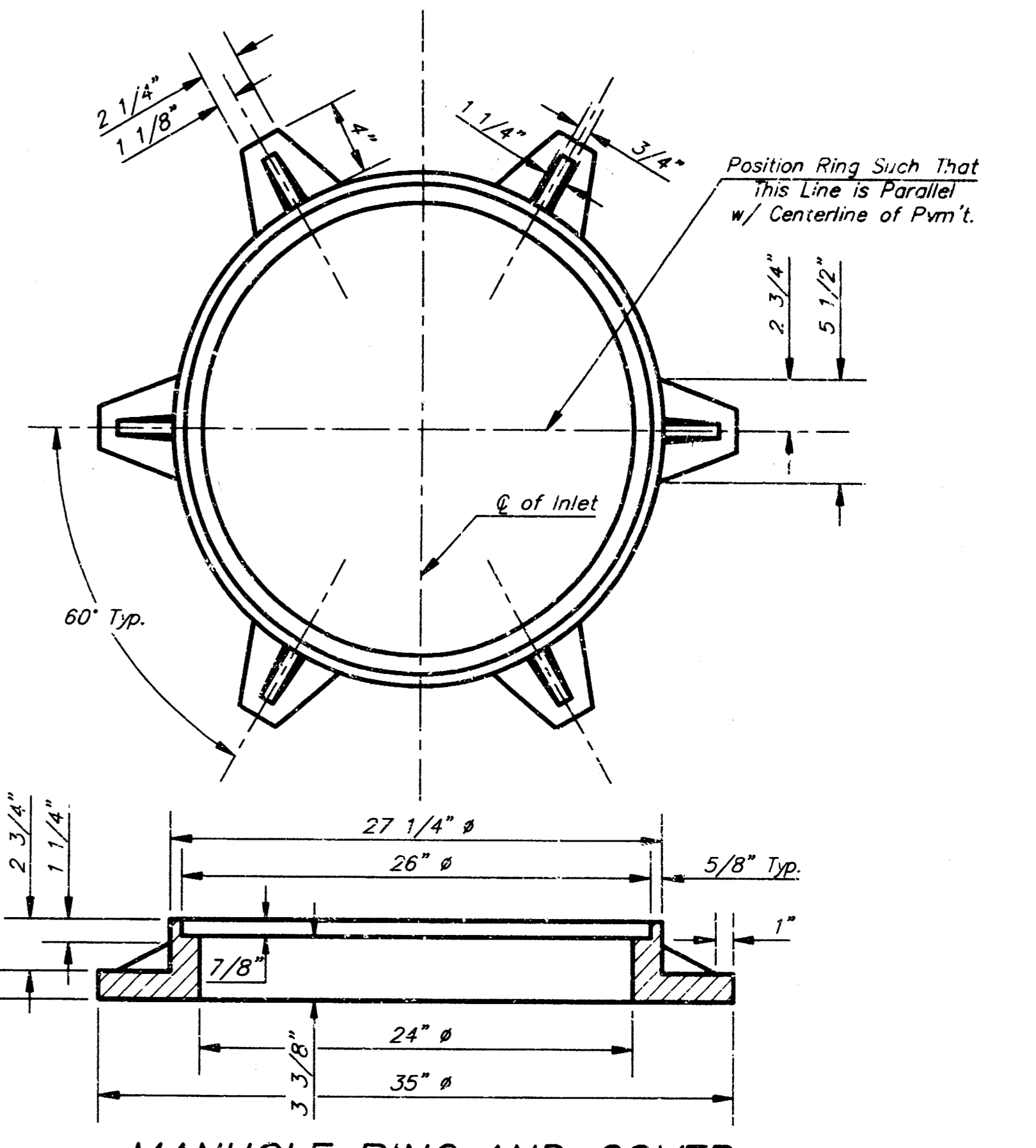
GENERAL NOTES:

- 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 stock 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 6" 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.



BENDING DIAGRAM

STANDARD CURB INLET PRECAST TOPS			
W	PRE-CAST TOP SIZE	PIPE SIZE	CU. YD. CONC.
4'-4"	3'-8" 11'-4" 7 1/2"	21" & SMALLER	0.83±
5'-4"	4'-8" 11'-4" 7 1/2"	24" & 30"	1.09±
6'-4"	5'-8" 11'-4" 7 1/2"	36" & 42"	1.35±
7'-4"	6'-8" 11'-4" 7 1/2"	48" & 54"	1.61±
8'-4"	7'-8" 11'-4" 7 1/2"	60" & 66"	1.87±



MANHOLE RING AND COVER
Weight = 180 lbs.

*See City of Wichita Standard Manhole Ring and Cover Detail Sheet for Cover Details to Be Used With Inlet Frame.

Revised - Feb. 16, 1989

CITY OF WICHITA STANDARD TYPE 1A
Curb Inlet Details
INLET OPENING = 8" x 10"

BAUGHMAN COMPANY P.A.
ENGINEERING, SURVEYING, & PLANNING
316-252-7271 • 315 ELLIS • WICHITA, KANSAS 67211

PROJECT NUMBER
488-78-245-82637-000-000-001

DESIGN: C.O.W. DRAWN: Staff APPROVED: DATE: SCALE: None SHEET: 11 OF 12

