

STORM WATER SEWER IMPROVEMENTS #550

to serve

ONE KELLOGG PLACE 2ND ADDITION

CITY OF WICHITA, KANSAS

Michael E. Lindebak, P.E. City Engineer

Project Number

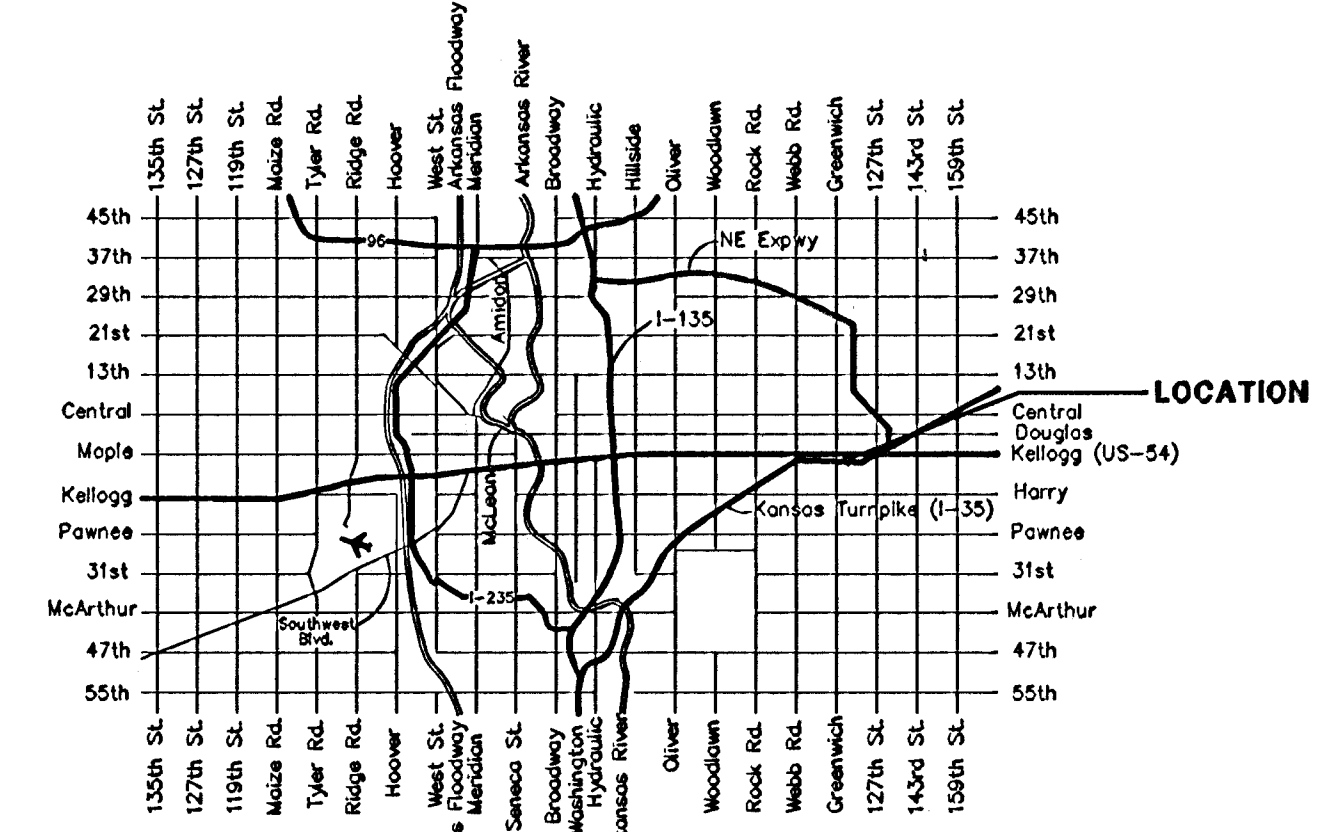
468-83237

O.C.A. Number

751297

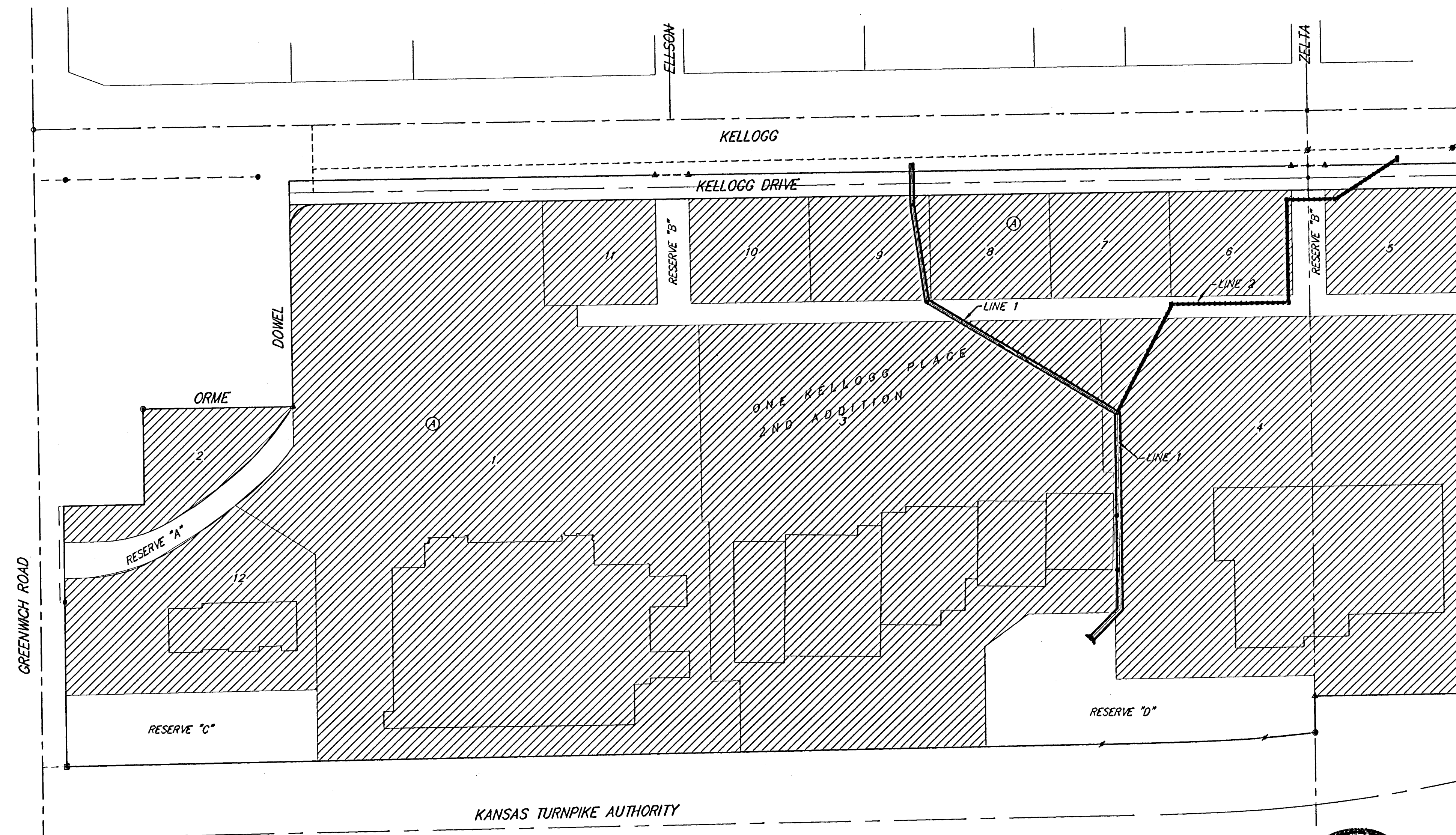
GENERAL NOTES:

- 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:
Cox Communications, Inc. 262-0661
K.G.E. Electric Service 383-8650
Kansas Gas Service 383-8600
Peoples Gas Company 942-8350
Southwestern Bell Telephone Company 1-571-2611
City of Wichita Water Dept. 268-4908
City of Wichita Traffic Engineering 269-4446
- 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 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.
- 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 laws.
- In addition to the accompanying specs, the Contractor shall obtain 95% compaction in the trench in areas under pavement and shall test every 1' at 10-12 locations in the project.
- Site will have been graded by Wittwer, Inc. to an elevation close to that shown as the proposed profile prior to the stormwater sewer construction.
- Contractor shall be required to coordinate construction with Water project 448-89563 and sanitary sewer project 468-83235.
- All disturbed areas not intended for pavement or sidewalk construction shall be seeded with Kansas Premium Fescue Blend at a rate of 8 lb./1000 Sq. Ft., fertilized with a 16-20-6 ratio at a rate of 4 lb./1000 Sq. Ft., and mulched with Prairie Hay at a rate of 92 lb./1000 Sq. Ft. Mulch shall be "patted" with forks or punched into soil to reduce loss due to wind.
- All reinforced concrete boxes (R.C.B.), manholes and inlet structures shall be pre-cast, unless otherwise noted. Contractor to supply Engineer with shop drawings of structures for approval prior to construction.
- The Contractor shall contact Baughman Company, P.A. for project coordinate control and additional staking information prior to proceeding with the staking and layout of the project in the field.
- The Contractor shall not begin construction within the Kansas Department of Transportation (KDOT) right-of-way until a Highway Permit for work in the right-of-way has been completed. Contact Baughman Company prior to construction to verify KDOT acceptance of the permit.
- The Contractor shall provide Geotechnical Services for the testing of the compacted fill and shall be paid as INCIDENTAL to the bid item "L.F. of RCB or Pipe".



Vicinity Map

Scale: 1" = 150'



Sheet Index

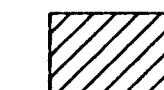
Title Sheet	1
Line 1	2-4
Line 2	5-7
R.C.B. Details	8-9
Ditch Inlet Details	10-11
Structure Stack Details	12-13
R.C. Manhole Details	14-15
Copy of Plat	16

Benchmark

Greenwich Road & Kellogg - C.O.W. disk, NW corner of traffic signal light pole base. 48.60' NNW of Q of sanitary sewer manhole. 48.70' S of Q of traffic signal manhole in Kellogg median. 70.50' E of back of E curb return on E side of median in Greenwich Rd.
Elev. = 164.78 City Datum

As Built 11/01 KK

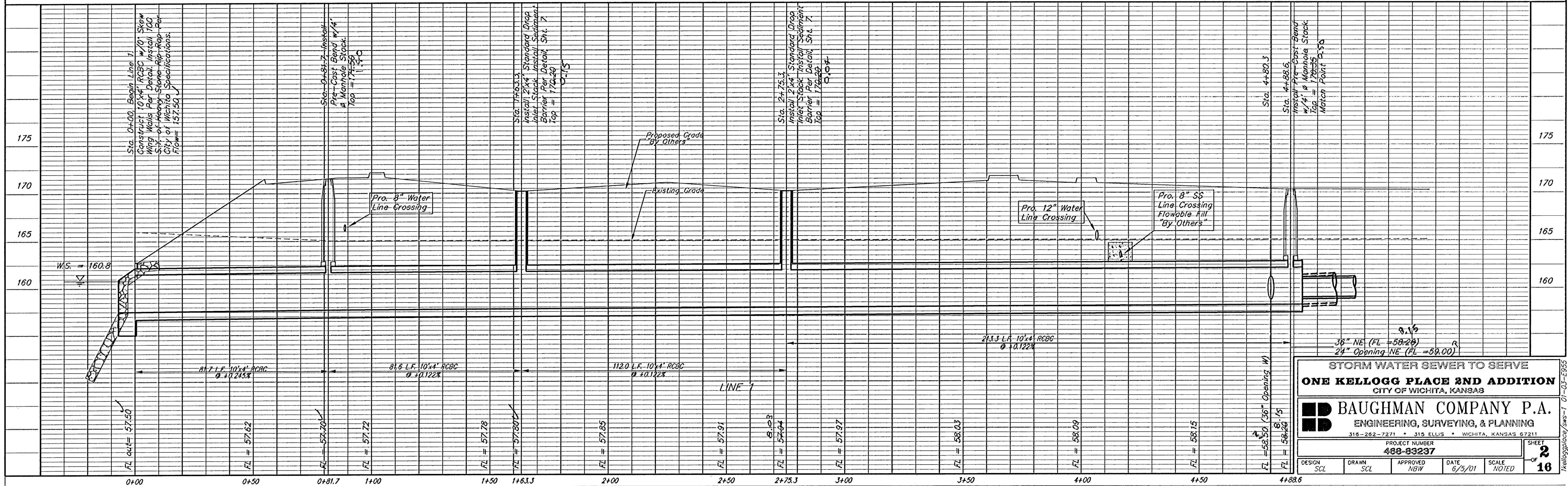
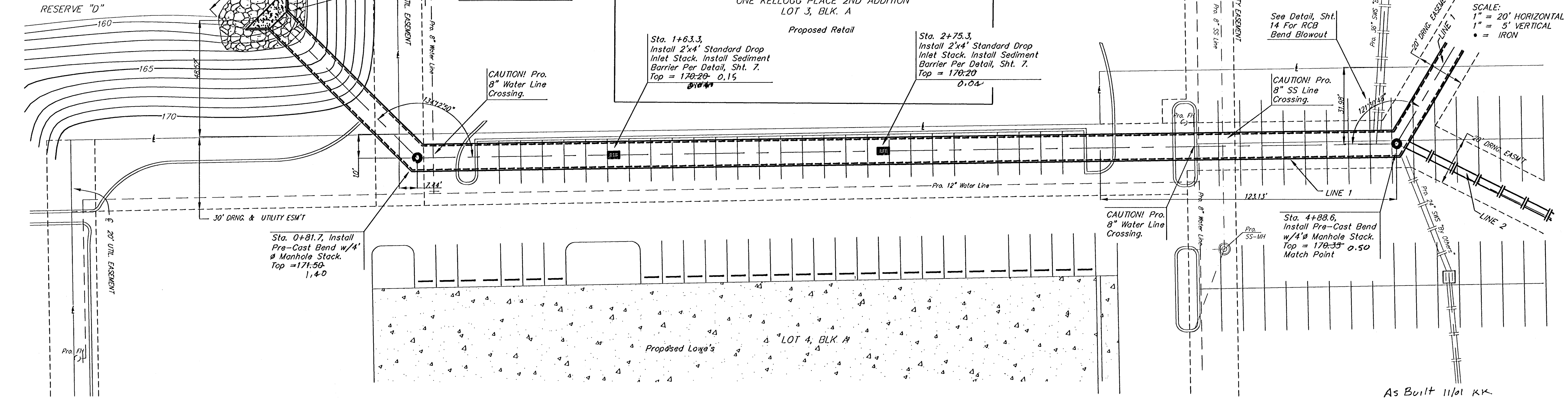
Benefit District



BAUGHMAN COMPANY P.A.
ENGINEERING, SURVEYING, & PLANNING
318-282-7271 • 318 ELLIS • WICHITA, KANSAS 67211
F:\ENG\KELLOGG\PLACE\515\515SCOVING-SCL

06/20/2001

BENCHMARK:
Greenwich Rd. & Kellogg - City of Wichita Disc. N.W.
Cor. of Traffic Signal Light Pole Base. 48.70' NNW Of
Centerline Sanitary Sewer Manhole. 48.70' S. of
Centerline of Traffic Signal Manhole In Kellogg Median
70.50' E. Of Back Of E. Curb On E. Side Of Median In
Greenwich Road.
Elev. = 164.78 City Datum



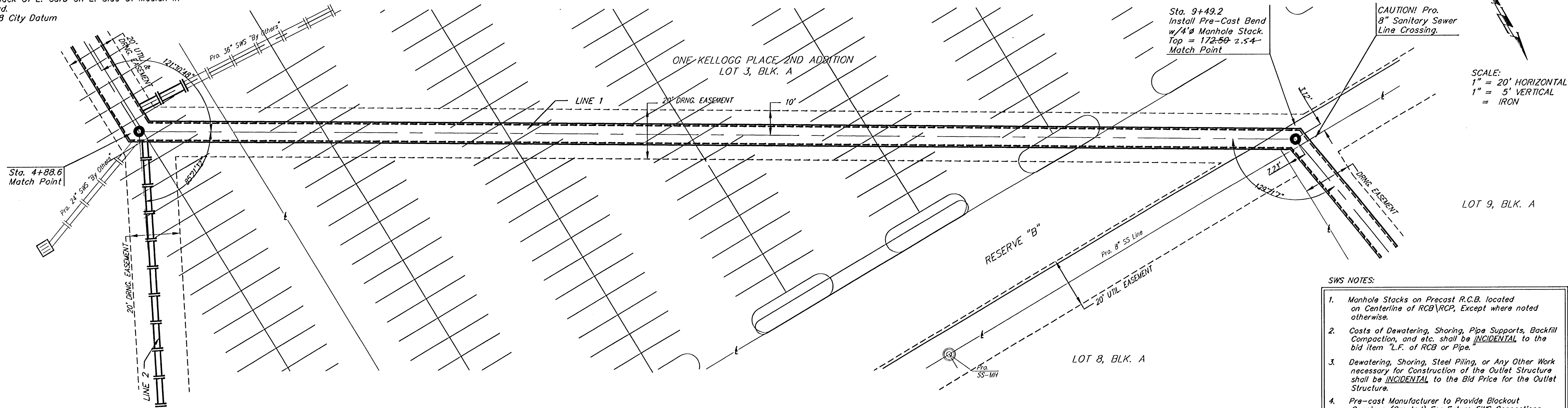
STORM WATER SEWER TO SERVE
ONE KELLOGG PLACE 2ND ADDITION
CITY OF WICHITA, KANSAS

BAUGHMAN COMPANY P.A.
ENGINEERING, SURVEYING, & PLANNING
315-262-7271 • 315 ELLIS • WICHITA, KANSAS 67211

PROJECT NUMBER
488-83237

SHEET
OF **2**
16

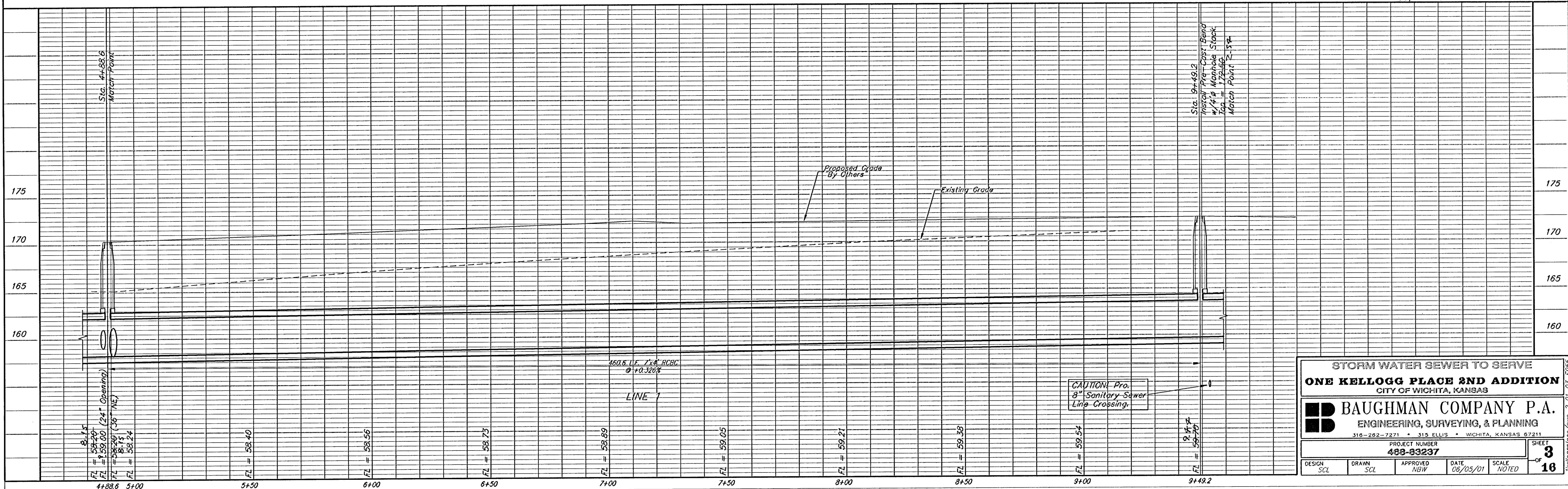
BENCHMARK:
Greenwich Rd. & Kellogg - City of Wichita Disc, N.W.
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SWS NOTES:

1. Manhole Stacks on Precast R.C.B. located on Centerline of RCB/RCP, Except where noted otherwise.
2. Costs of Dewatering, Shoring, Pipe Supports, Backfill Compaction, and etc. shall be INCIDENTAL to the bid item "L.F. of RCB or Pipe."
3. Dewatering, Shoring, Steel Piling, or Any Other Work necessary for Construction of the Outlet Structure shall be INCIDENTAL to the Bid Price for the Outlet Structure.
4. Pre-cast Manufacturer to Provide Blockout Openings (Grouted) For Future SWS Connections.

As Built 11/01 KX



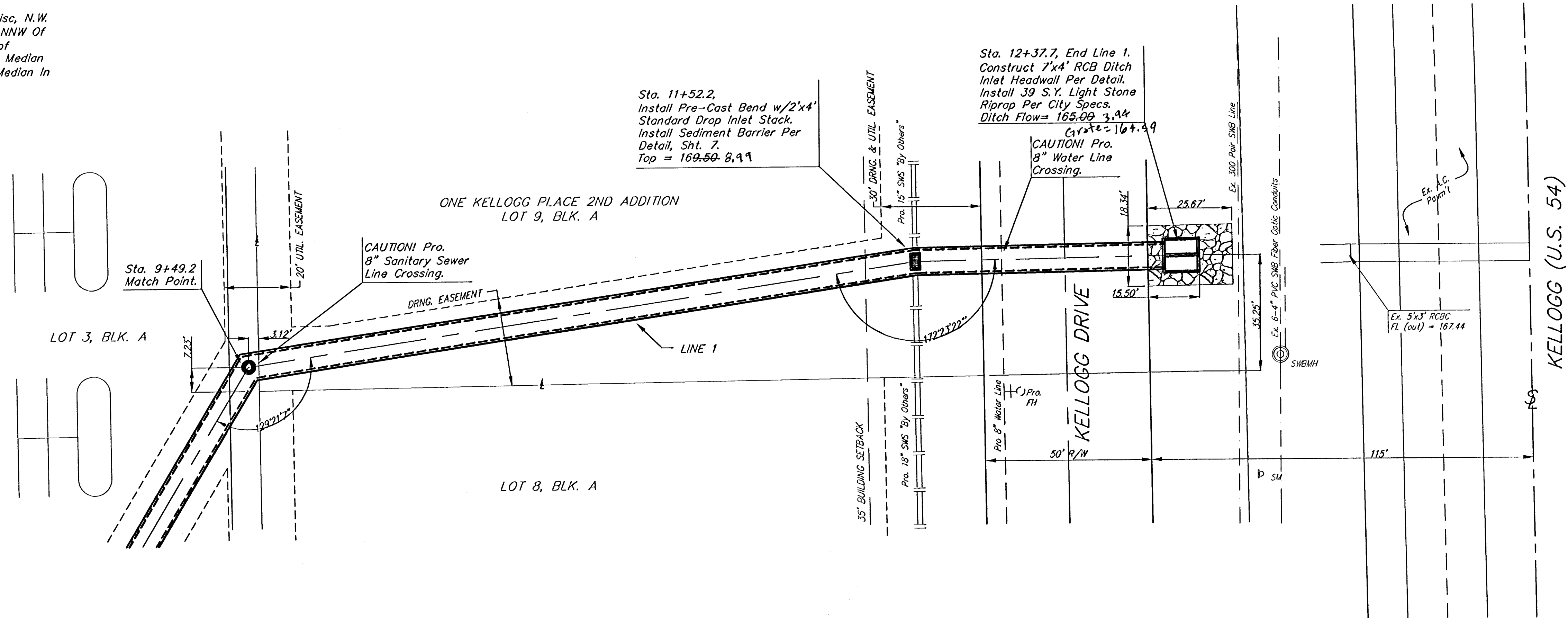
STORM WATER SEWER TO SERVE
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BAUGHMAN COMPANY P.A.
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315-282-7271 • 315 ELLIS • WICHITA, KANSAS 67211

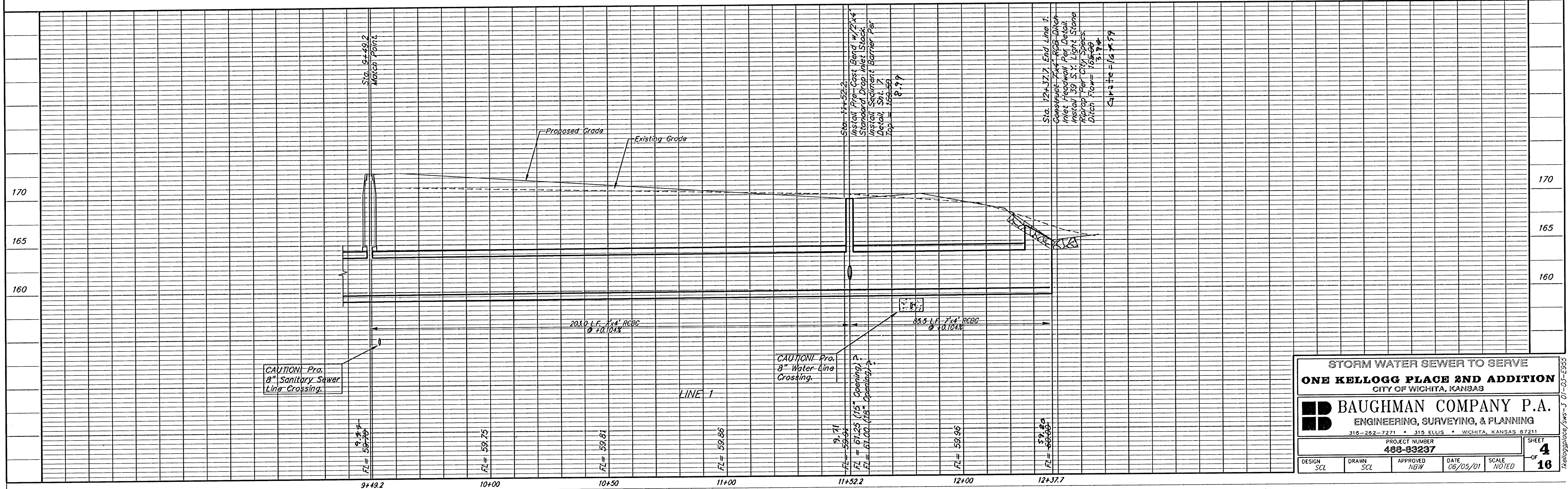
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DESIGN SCL DRAWN SCL APPROVED NBW DATE 06/05/01 SCALE NOTED SHEET 3 OF 16

BENCHMARK:
Greenwich Rd. & Kellogg - City of Wichita Disc, N.W.
Cor. of Traffic Signal Light Pole Base. 48.70' NNW Of
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As Built 11/01 K K



STORM WATER SEWER TO SERVE			
ONE KELLOGG PLACE 2ND ADDITION			
CITY OF WICHITA, KANSAS			
BAUGHMAN COMPANY P.A.			
ENGINEERING, SURVEYING, & PLANNING			
316-262-7271 • 315 ELLIS • WICHITA, KANSAS 67211			
PROJECT NUMBER		SHEET	
488-89237		4	
DESIGN	DRAWN	APPROVED	DATE
SCL	SCL	NBW	06/05/01
SCALE		NOTED	
OF		16	

BENCHMARK:
Greenwich Rd. & Kellogg - City of Wichita Disc, N.W.
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LOT 3, BLK. A

LOT 4, BLK. A

LOT 5, BLK. A

LOT 6, BLK. A

ONE KELLOGG PLACE 2ND ADDITION
LOT 4, BLK. A

RESERVE "B"

RESERVE "B"

20' DRWG. EASEMENT

20' UTIL. EASEMENT

30' DRWG. EASEMENT

LINE 1

LINE 2

Pro. 16" SWS "By Others"

Pro. 24" SWS "By Others"

Pro. 8" SS Line

Pro. SS-MH

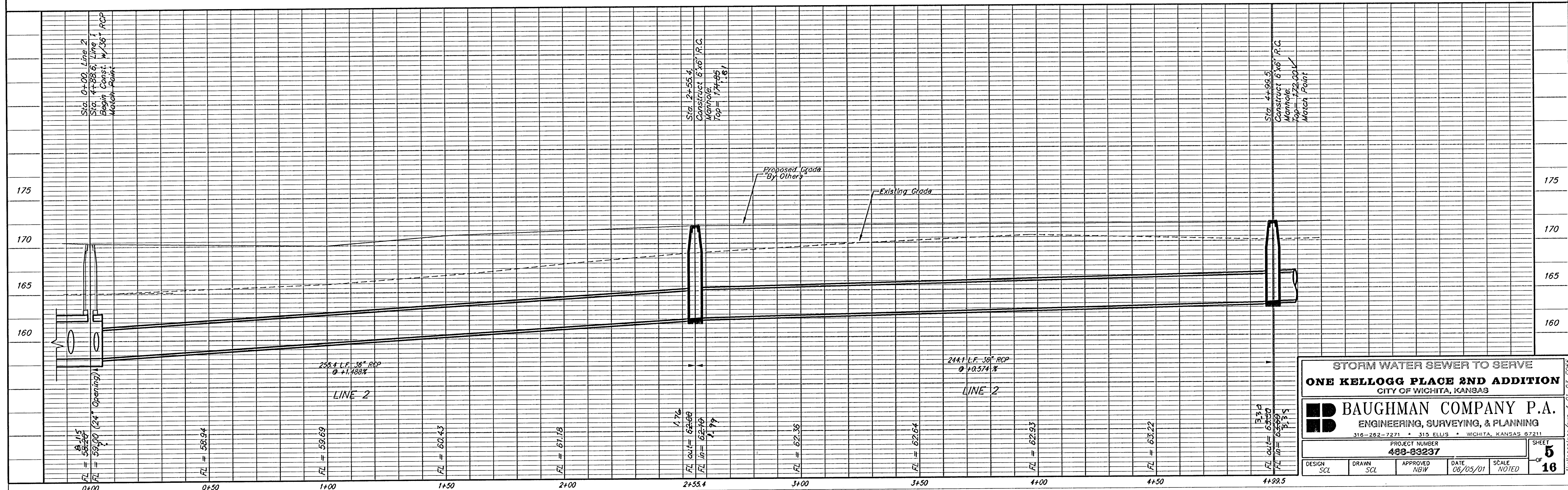
Sta. 0+00, Line 2
Sta. 4+88.6, Line 1
Begin Const. w/36" RCP
Match Point

Sta. 2+55.4,
Construct 6'x6' R.C.
Manhole.
Top = 174.85
1, Ø1

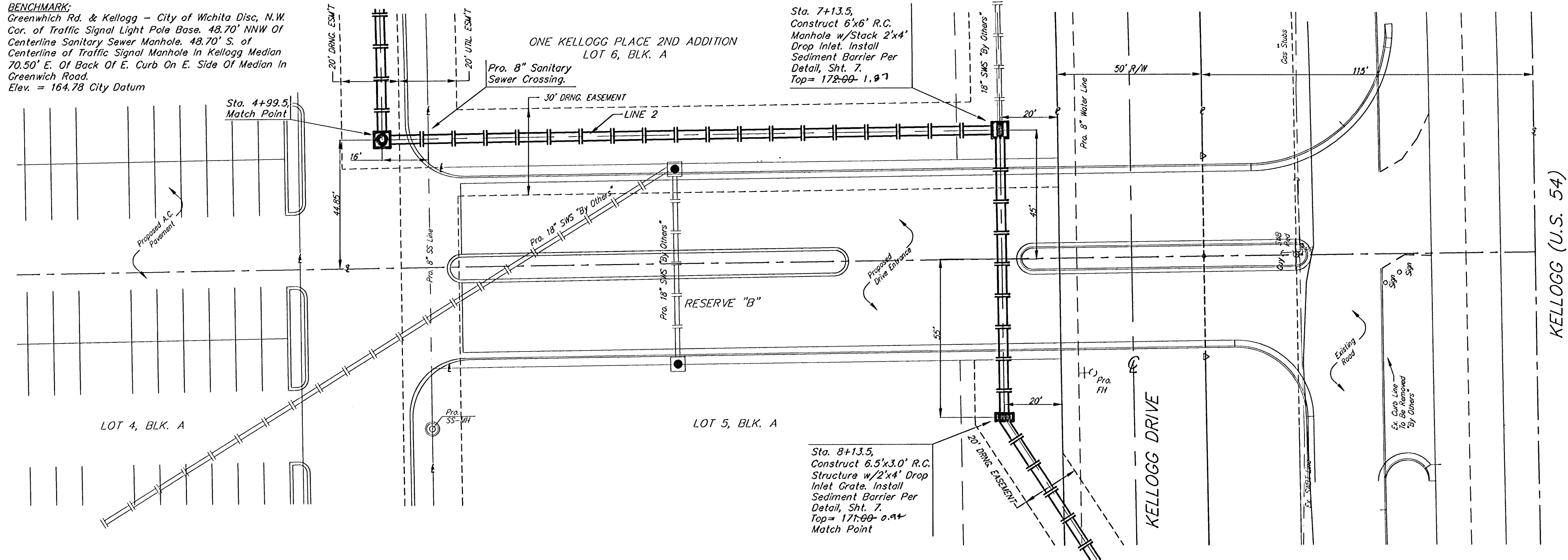
Sta. 4+99.5,
Construct 6'x6' R.C.
Manhole.
Top = 172.00 ✓
Match Point

SCALE:
1" = 20' HORIZONTAL
1" = 5' VERTICAL
• = IRON

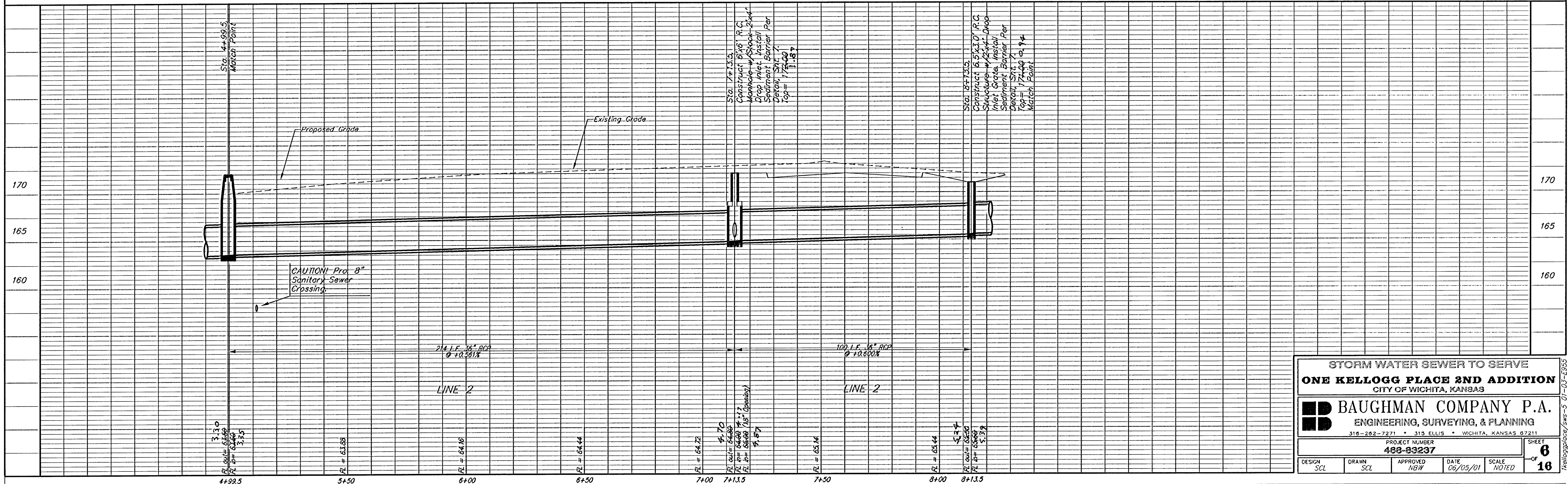
As Built 11/01 KIK



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Greenwich Rd. & Kellogg - City of Wichita Disc, N.W.
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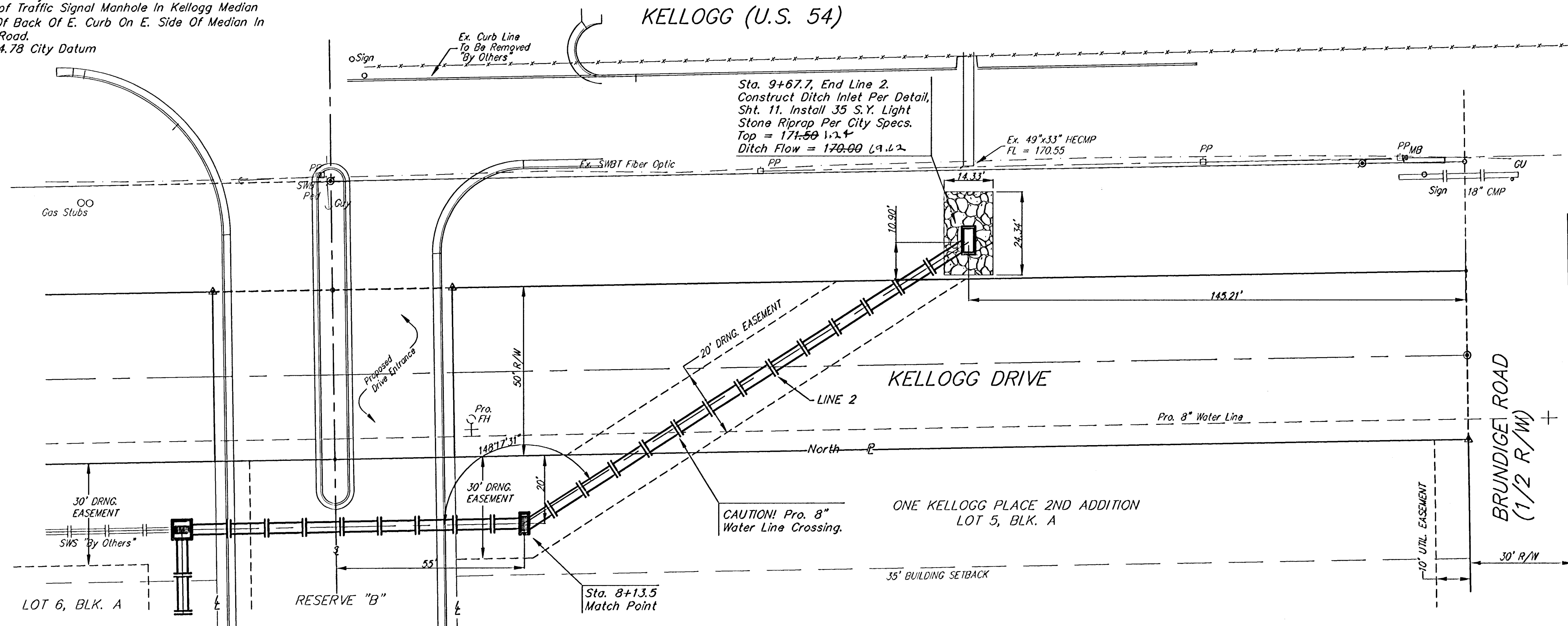


As Built 11/01 KKK



STORM WATER SEWER TO SERVE			
ONE KELLOGG PLACE 2ND ADDITION			
CITY OF WICHITA, KANSAS			
BAUGHMAN COMPANY P.A.			
ENGINEERING, SURVEYING, & PLANNING			
315-282-7271 • 315 ELLIS • WICHITA, KANSAS 67211			
PROJECT NUMBER			
488-83237			
DESIGN	DRAWN	APPROVED	DATE
SCL	SCL	NBW	06/05/01
SCALE			NOTED
SHEET			6
OF			16

BENCHMARK:
Greenwich Rd. & Kellogg - City of Wichita Disc, N.W.
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SCALE:
1" = 20' HORIZONTAL
1" = 5' VERTICAL
• = IRON

NOTES:

Surface of grate must be clean and free of dirt and debris.
Position Verti-Pro squarely on the inlet grate.
Install toggle bolt assembly (See Figure 2), the hold down plate must contact both the lower frame flange and grate. The toggle bolt must engage two bars on grate. Repeat on opposite sides.
The Verti-Pro has four (4) legs that unfold just like a card table (See Figure 3). Rotate legs to upright position on diagonal corners, this will support the upper framework on the Verti-Pro.
Align holes in each leg with the two (2) holes in upper frame. Insert a plastic retainer (or equal) in each of the holes from the outside in.

MAINTENANCE:

Inspect after each rain event. Remove debris and captured sediment when deposits reach 7" or 1/2 the height of the Verti-Pro. Remove captured debris from the filter fabric with a stiff bristle brush. (Frames are reusable and easy to install).

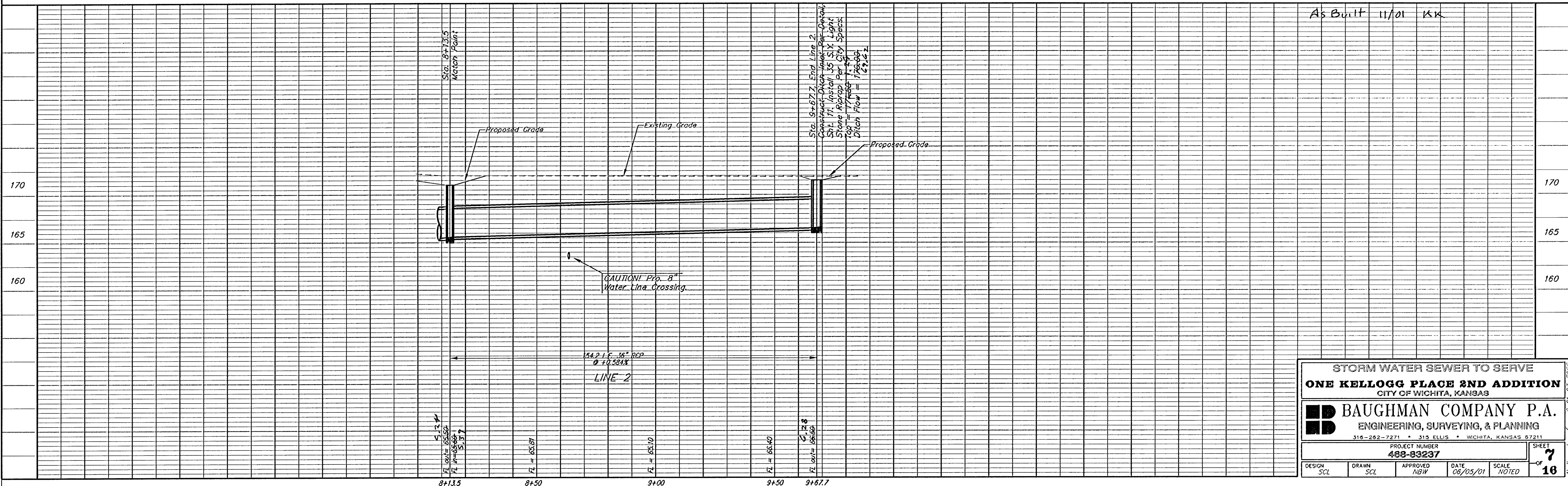
ORDERING:

ALPINE STORMWATER MANAGEMENT COMPANY
4127 Broadway, Suite B
Grove City, Ohio 43123
Phone: 688-539-8240, Dan Strasser, Sr., President

DROP INLET PROTECTION - The 'Verti-Pro' by Alpine™

For Yard and Parking Lot Inlet Usage

As Built 11/01 KK



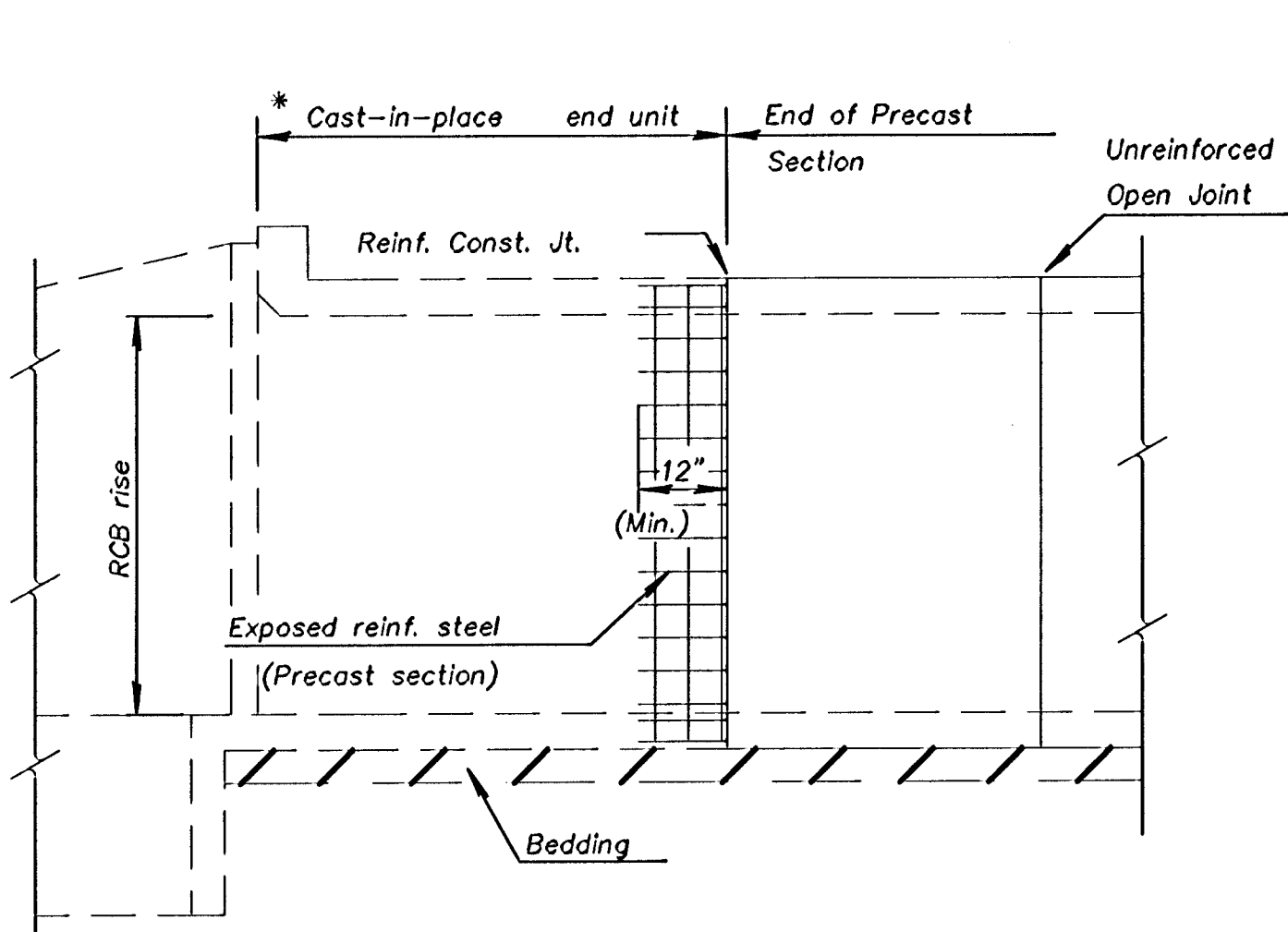
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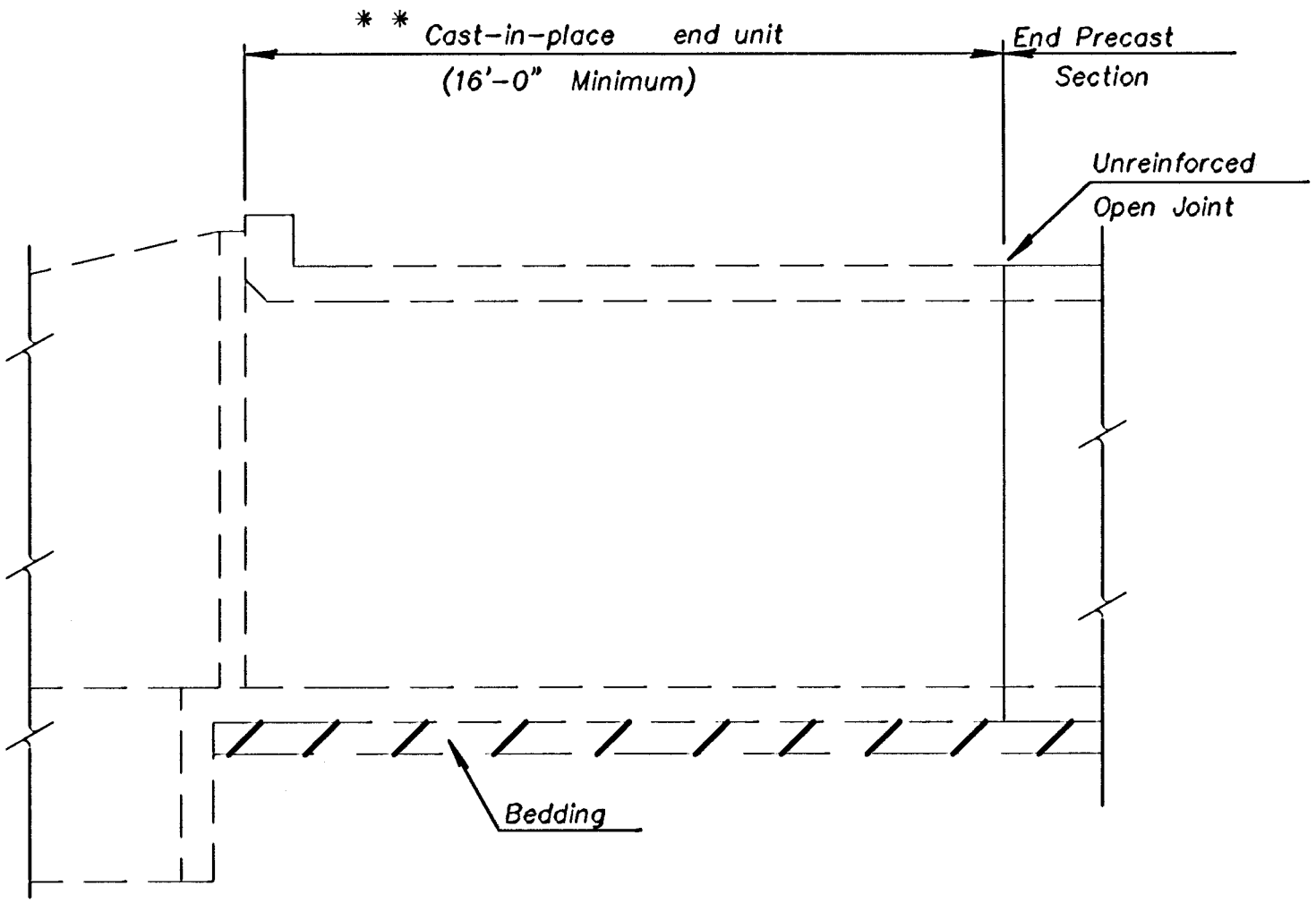
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FHWA REGION NO.	STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
7	KANSAS	468-83237	2001	8	16



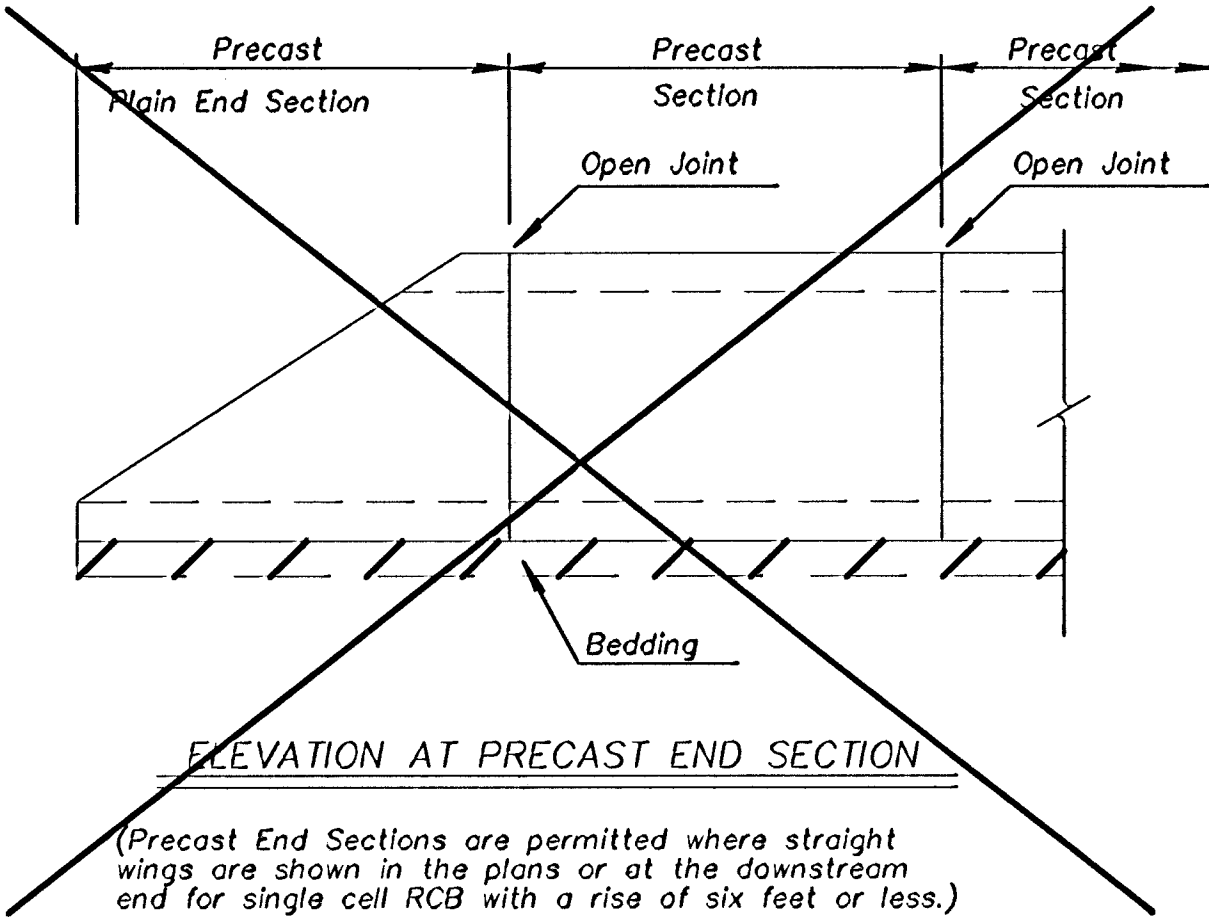
ELEVATION AT HEADWALL

* Minimum barrel length of cast-in-place end unit shall equal the RCB rise or 8'-0", whichever is less. This length can be used when the joint between the cast-in-place end unit and the precast section is reinforced as shown.



ELEVATION AT HEADWALL

** Minimum barrel length of cast-in-place end unit shall be 16'-0" when using an unreinforced open joint at the end of the precast section.



GENERAL NOTES

PRECAST BOX CULVERTS: If precast boxes are specified, construct them at the locations shown in the plans and according to the requirement shown on this sheet. When approved by the Engineer, precast box culverts may be used in lieu of cast-in-place box culverts. If the Contractor chooses the precast option, use the cast-in-place quantities as the cost basis. This cost includes all labor, equipment, material and incidentals necessary to complete the installation.

Unless otherwise approved by the Engineer, use cast-in-place collars at horizontal and vertical changes in RCB alignment. Use cast-in-place end sections and wingwalls except as noted on this sheet. The Engineer may require cast-in-place sections at junctions of drainage structures.

Cast-in-place concrete work shall conform to the requirements of the KDOT Specifications and KDOT's "Guidelines for Structural Design and Detail of Reinforced Concrete Box Culverts". Use Class AAA concrete and Grade 60 reinforcing steel conforming to ASTM A615M for cast-in-place construction.

SPECIFICATIONS: Single-cell Precast Concrete Box Culverts shall conform to the requirements of the following specifications except as noted in the KDOT Specifications. Design multiple-cell precast boxes in accordance with the criteria used to develop the single-cell precast boxes. (See Appendix of ASTM Specification C 1433, Table 2 and the latest AASHTO Specifications.)

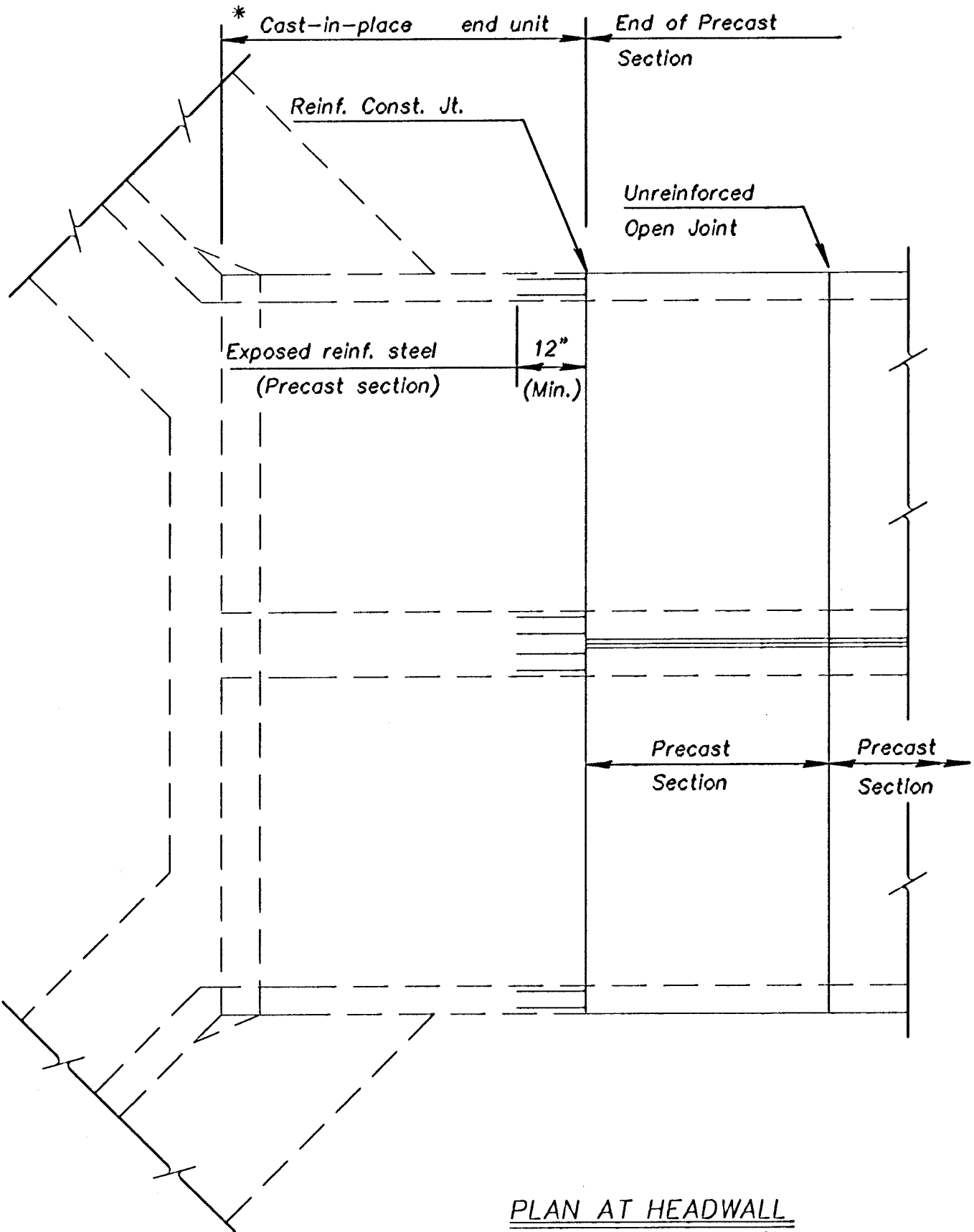
DISTRIBUTION SLAB: Fill heights less than 2 feet require a distribution slab. Precast distribution slabs may be used for fill heights over 1 foot, otherwise use cast-in-place.

NOTE: See "Bridge Excavation" sheet, (Std. No. BR1#), for excavation details and basis of payment.

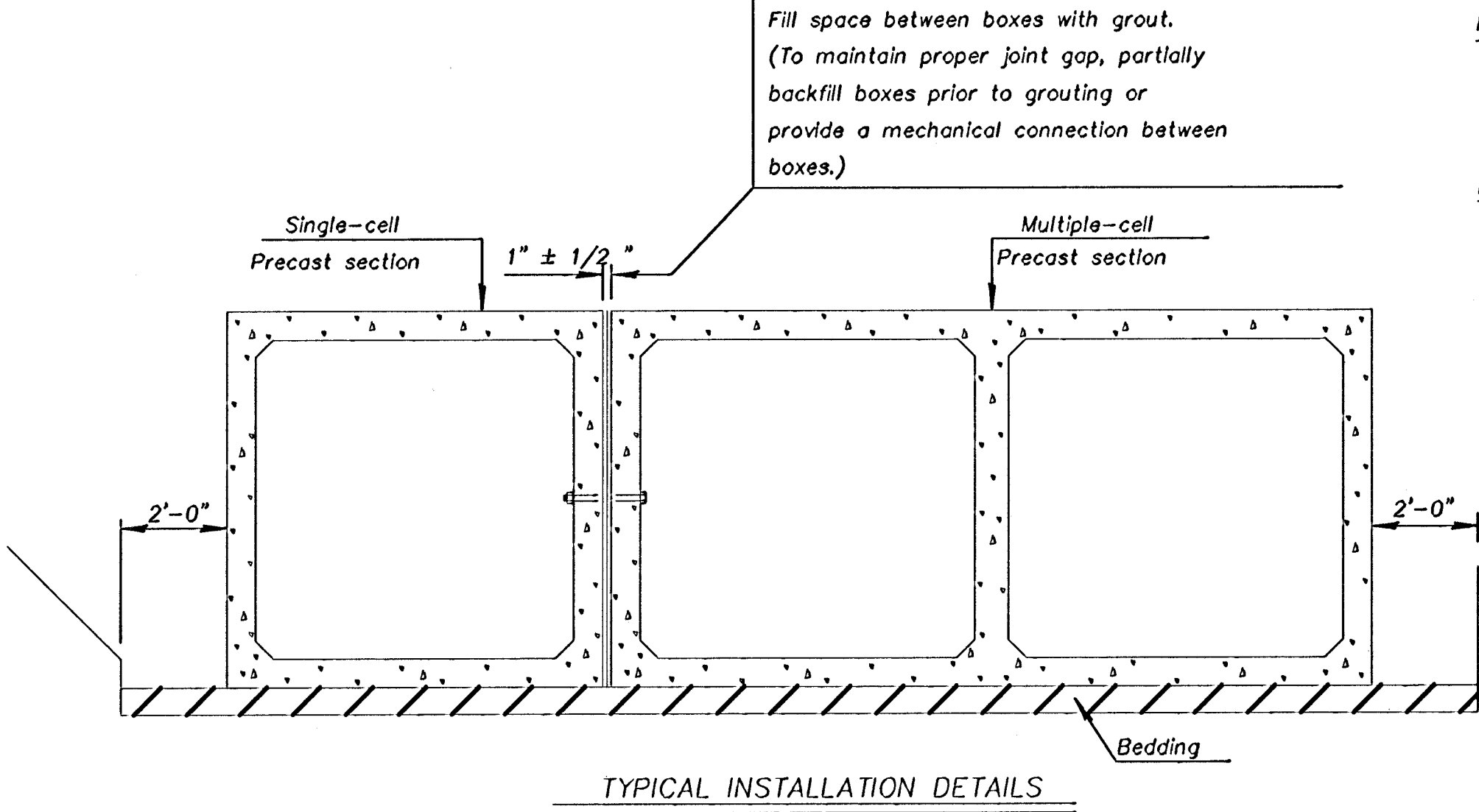
NOTE: Minimum length of precast section shall be 4'-0".

NOTE: A single cell box of equivalent area may be substituted for a double cell box with cell spans less than or equal to 6'-0". Two single cell boxes may be substituted for a double cell box, when approved by the Engineer.

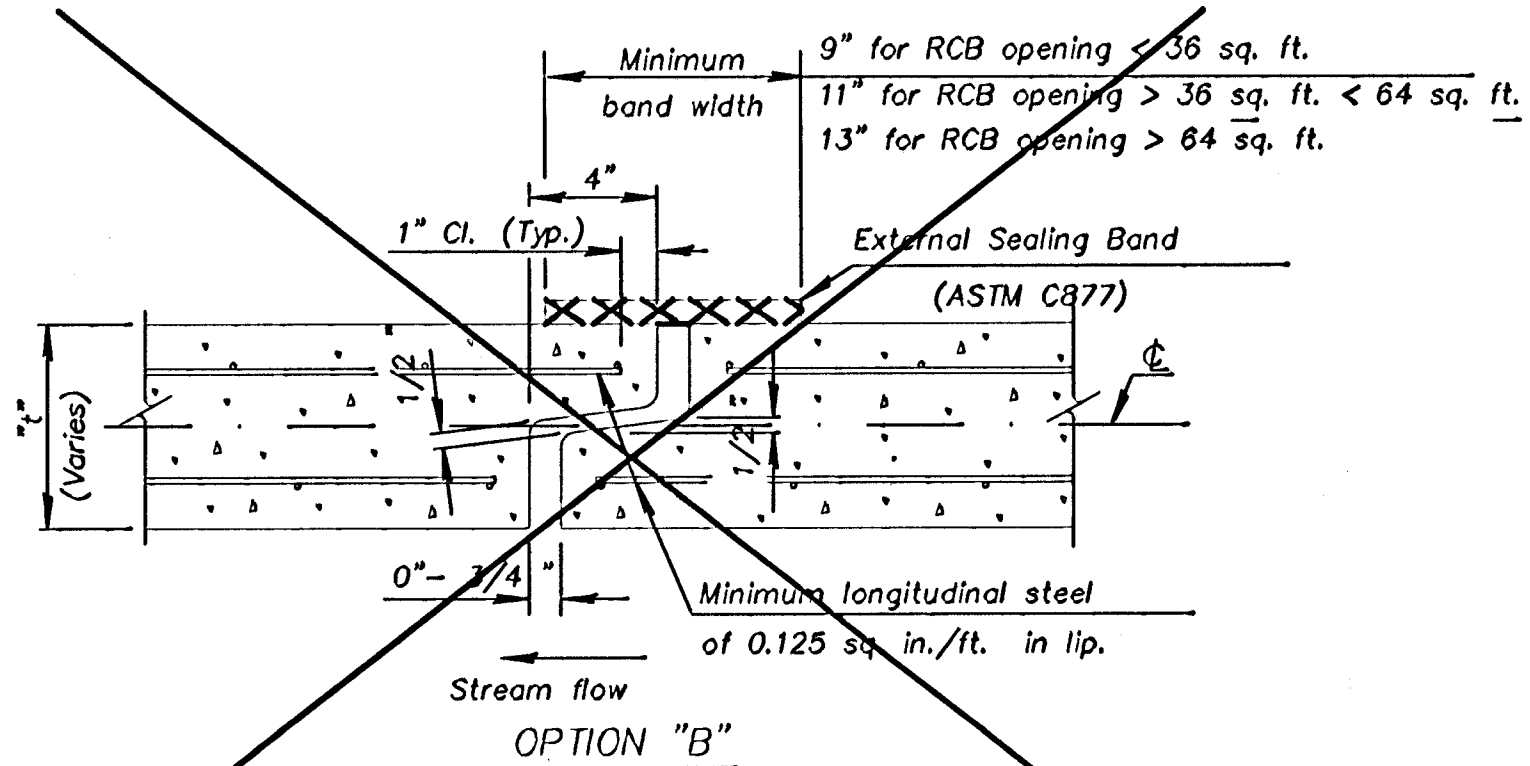
NOTE: See respective RCB Standard Sheets for cast-in-place details.



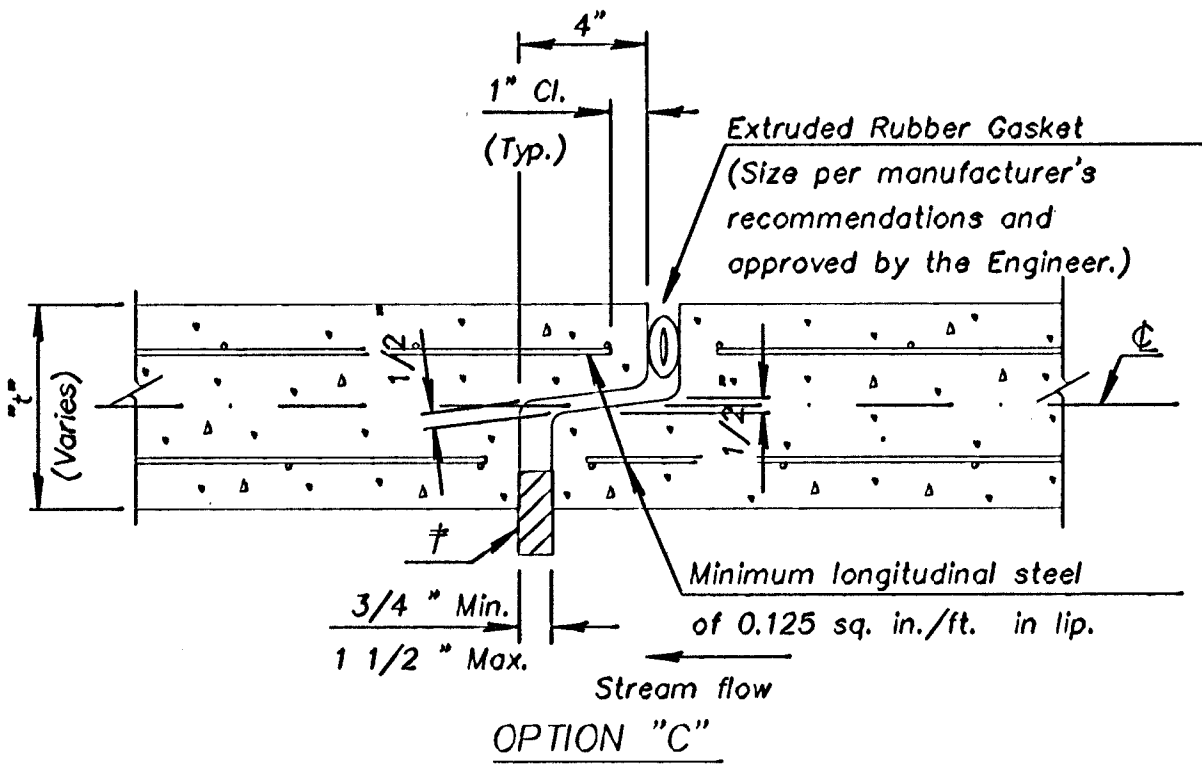
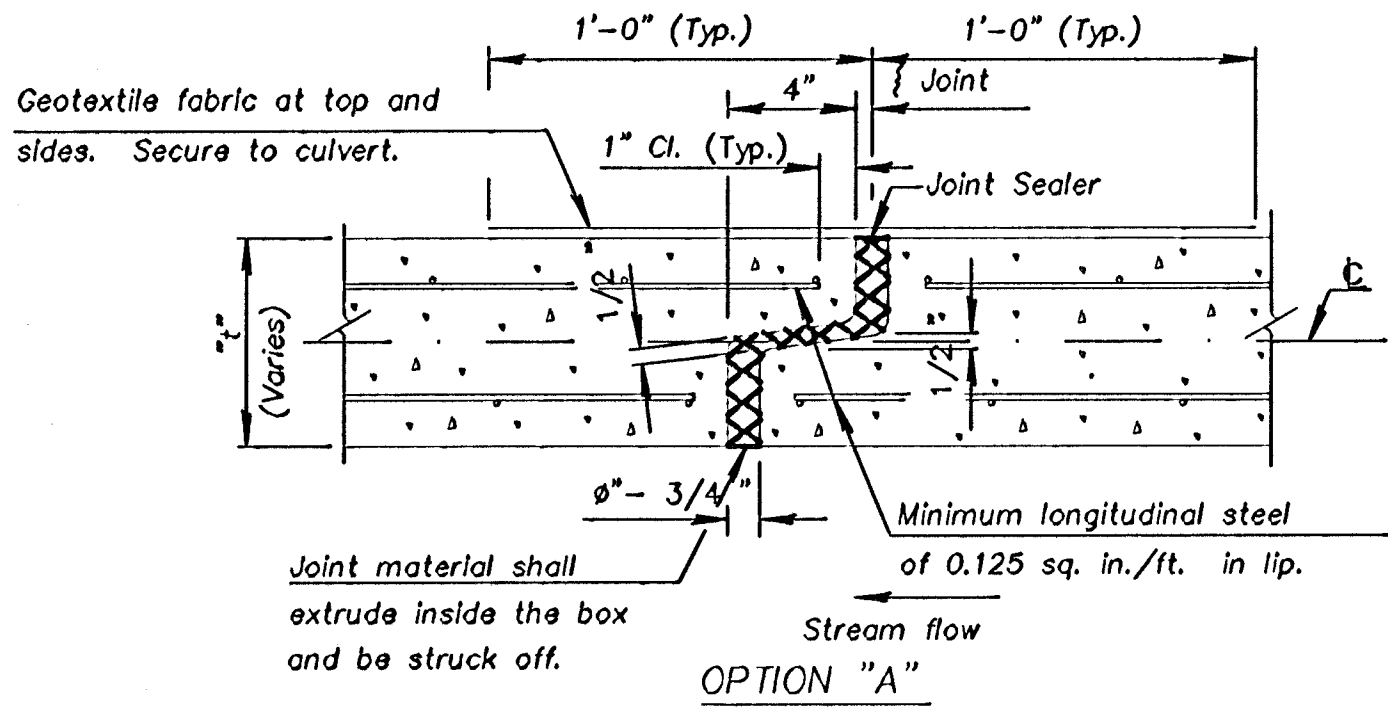
PLAN AT HEADWALL
(Double culvert installation shown)



TYPICAL INSTALLATION DETAILS



OPEN JOINT DETAIL



† Insert temporary, 3/4" - 1" wide, hardwood wedges to prevent over-compressing gasket.

NO.	DATE	REVISIONS	BY	APP'D
4	11-03-00	Revised ASTM / Added Note	RAM	KFH
3	12-20-96	Revised CIP end unit details.	RAM	KFH
2	1-17-95	Revised general notes	LRR	KFH
1	6-22-94	Added option 'C' & revised notes	RAM	KFH

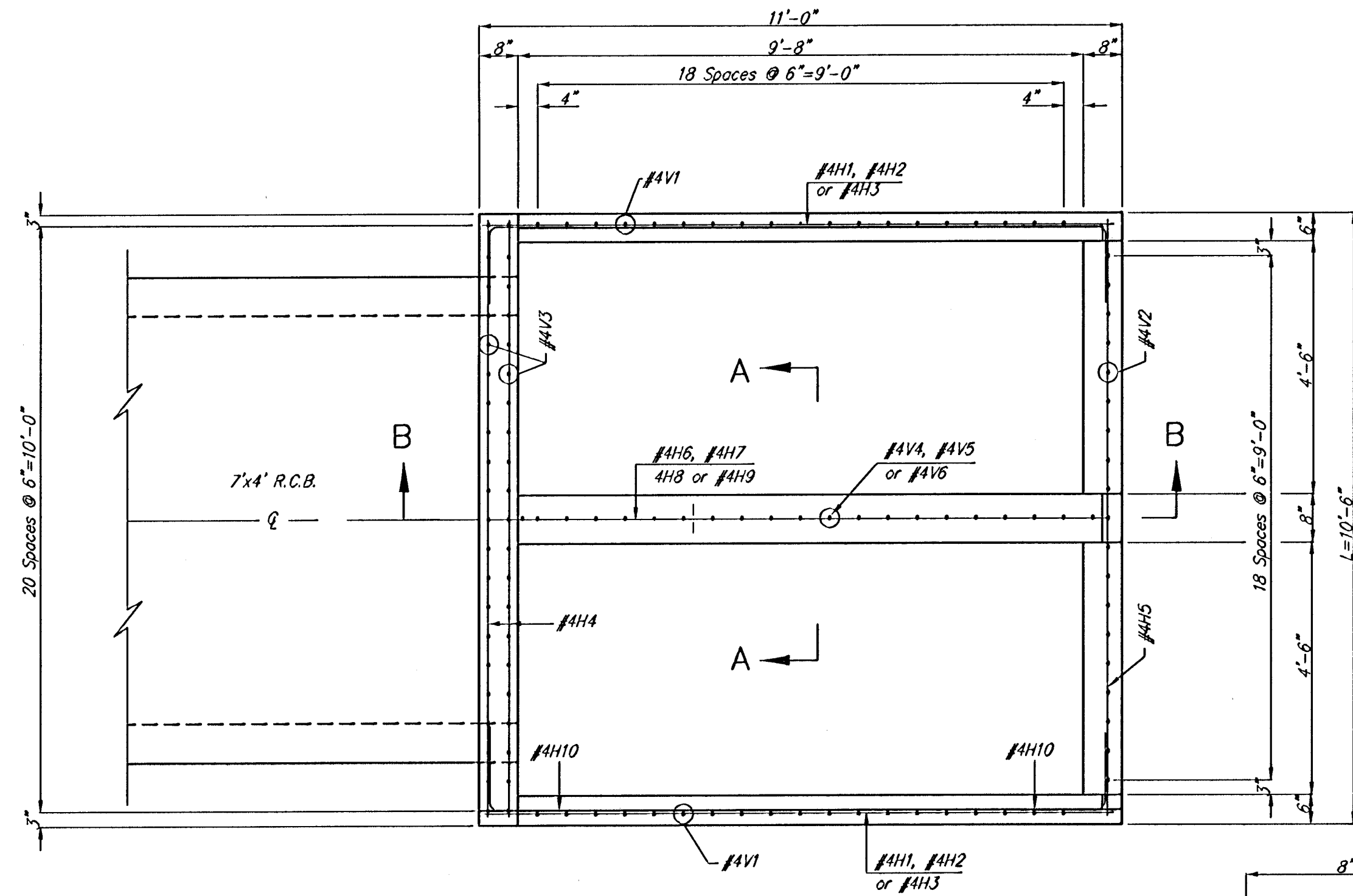
KANSAS DEPARTMENT OF TRANSPORTATION

PRECAST CONCRETE BOX CULVERT DETAILS

BR031			
FHWA APPROVAL	11-27-00 APP'D	KENNETH F. HURST	
DESIGNED	DETAILED	PH QUANTITIES	CADD
DESIGN CK.	DETAIL CK.	RAM QUAN. CK.	CADD CK.

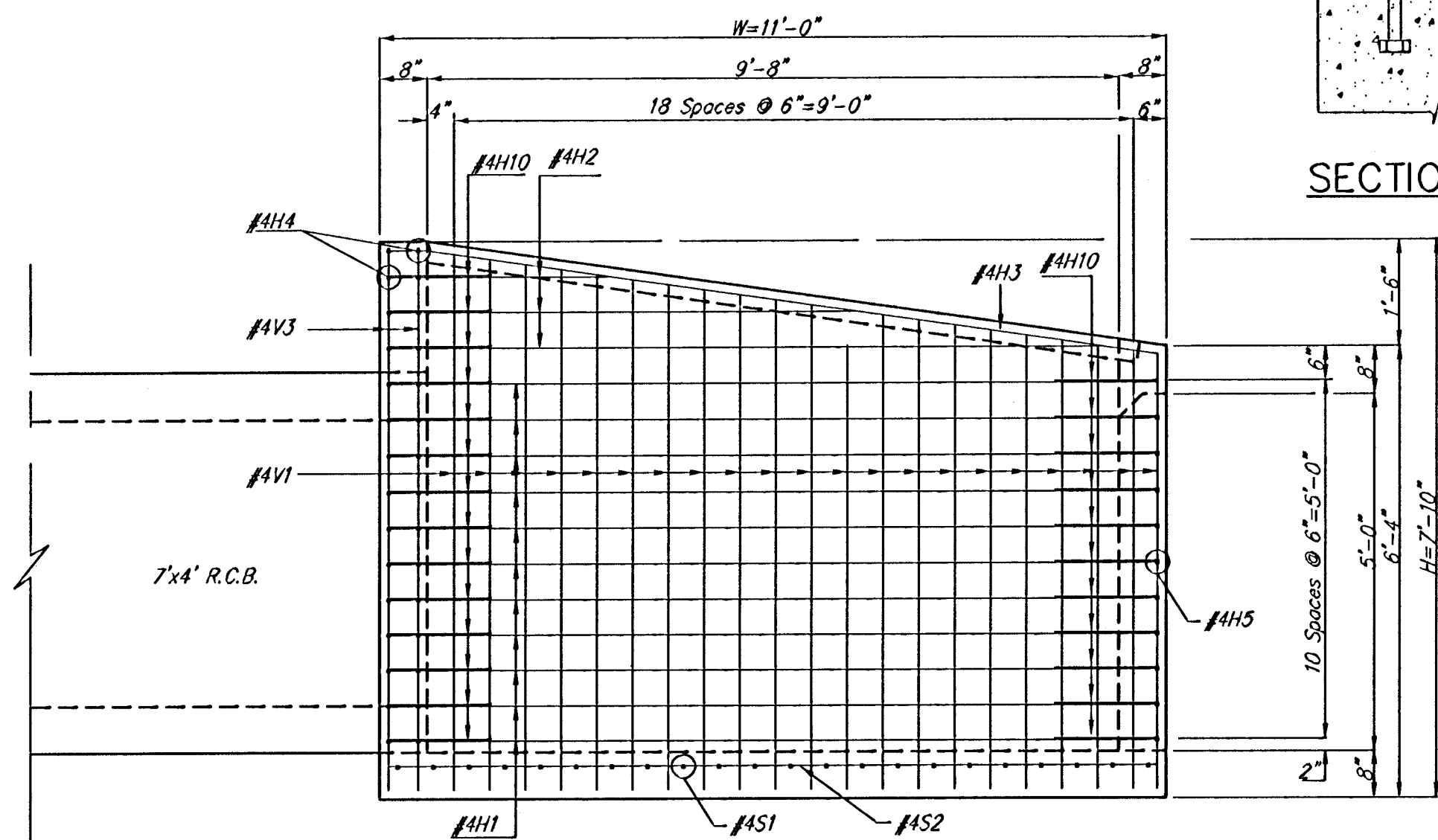
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SUMMARY OF QUANTITIES (FOR INFORMATION ONLY)		
ITEM	QUANTITY	UNIT
Class A Concrete	8.6	C.Y.
Reinforcing Steel (Gr.60)	1,200	Lbs.
Structural Steel	1,590	Lbs.

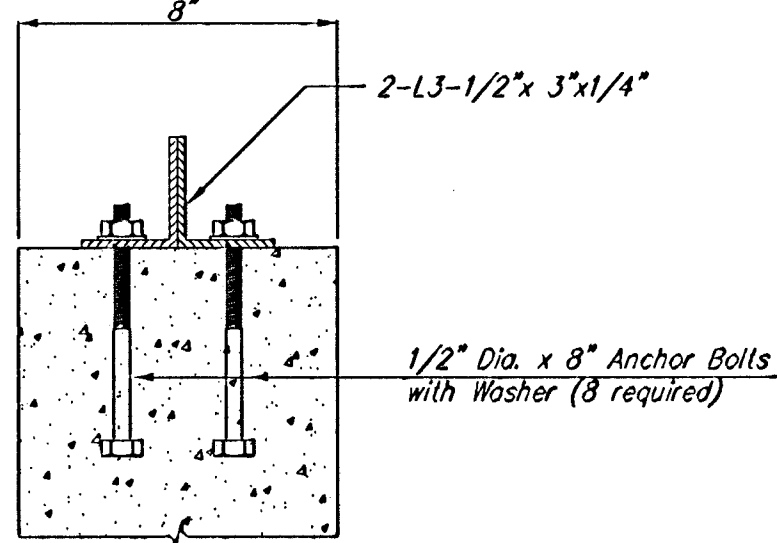


PLAN VIEW

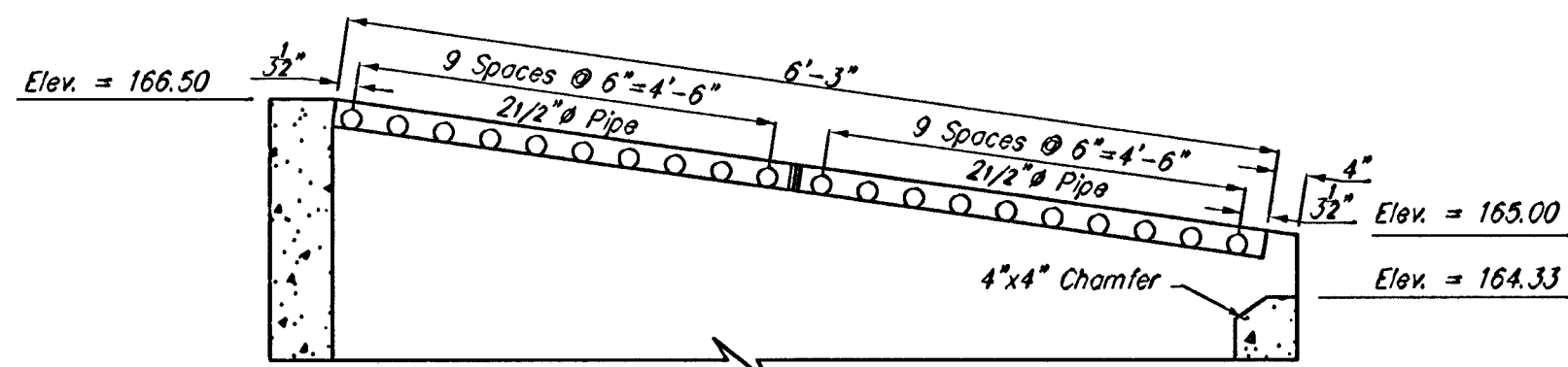
NOTE:
End of 7'x4' R.C.B. shall be cut or cast to fit
flush with the inside face of the inlet wall.



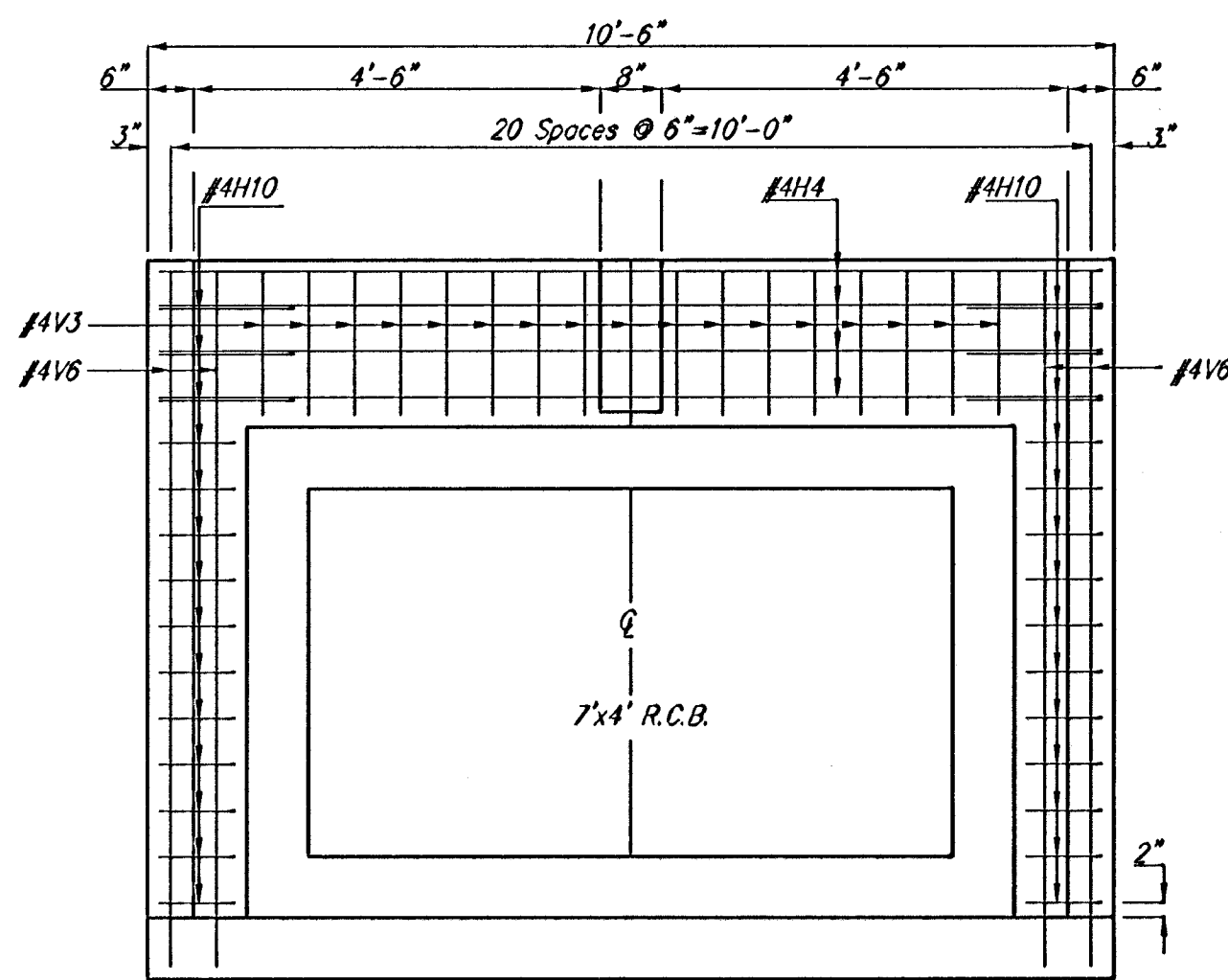
EXTERIOR WALL ELEVATION



SECTION A-A

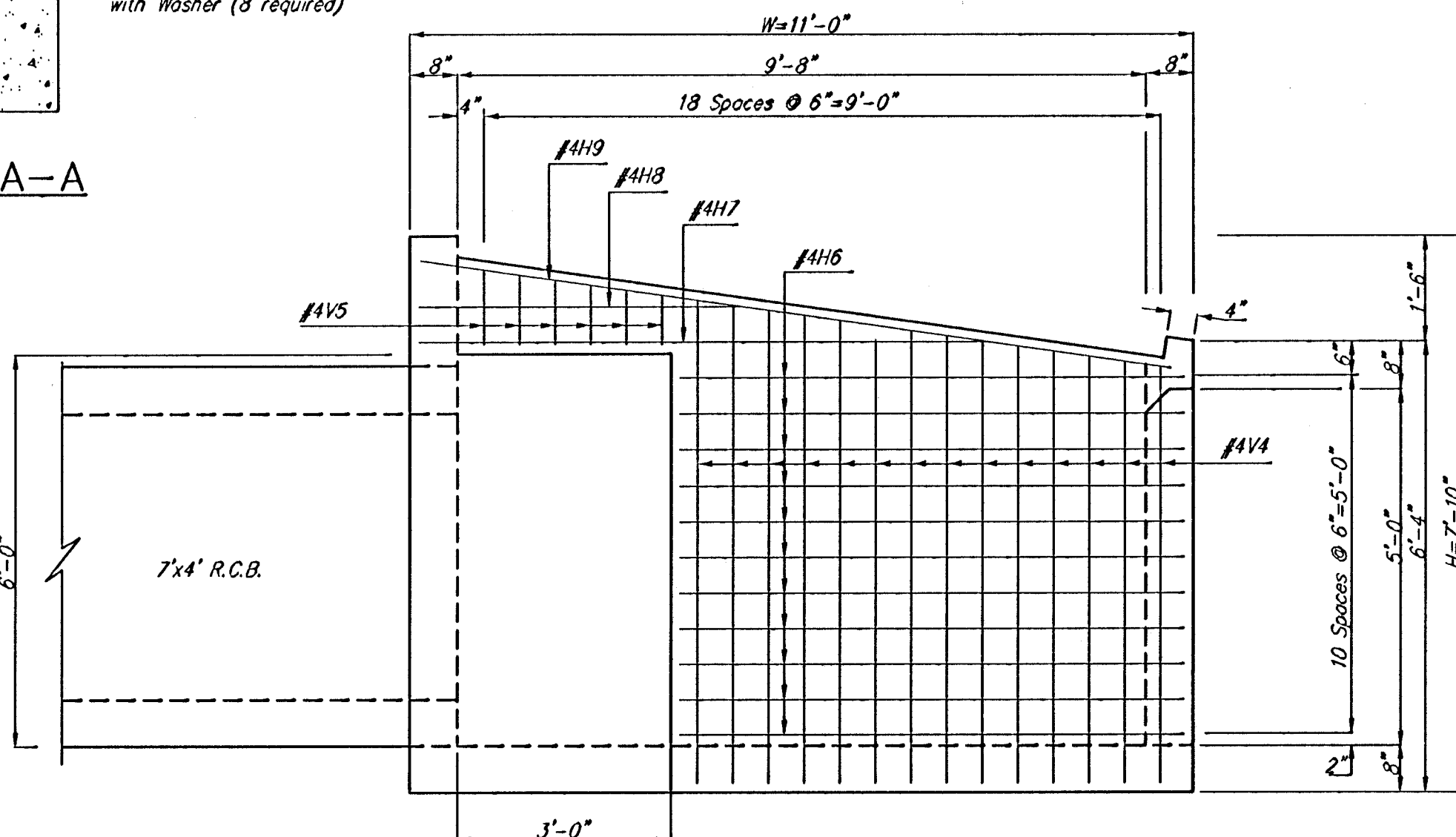


SECTION B-B

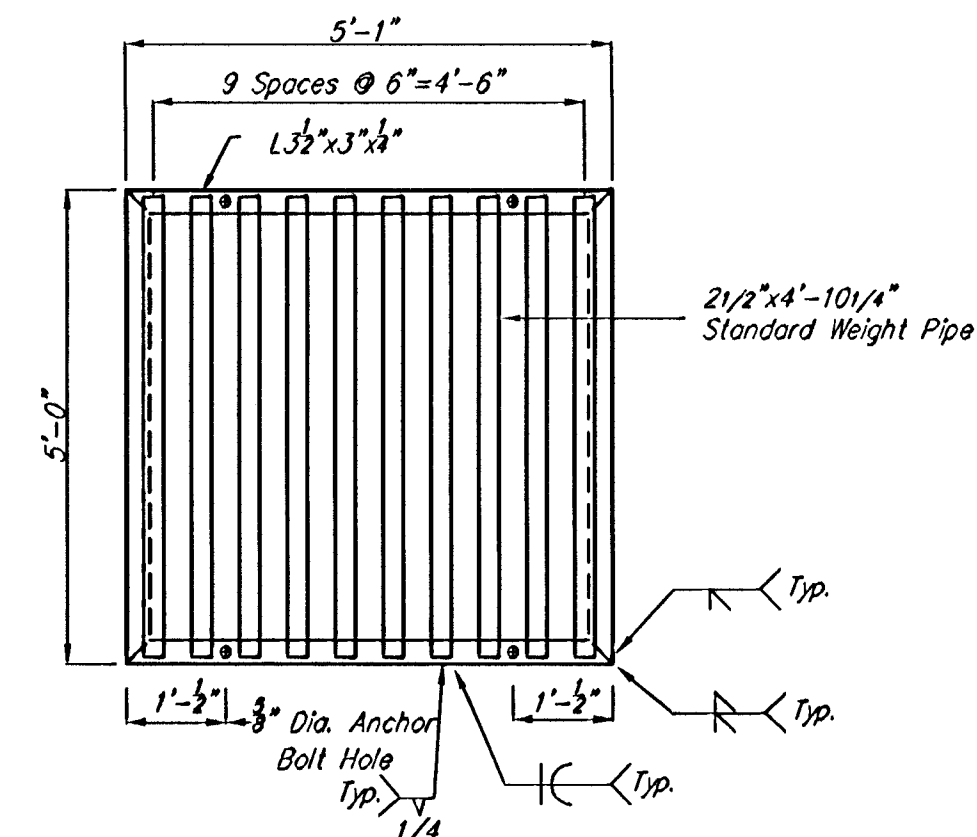


BACKWALL ELEVATION

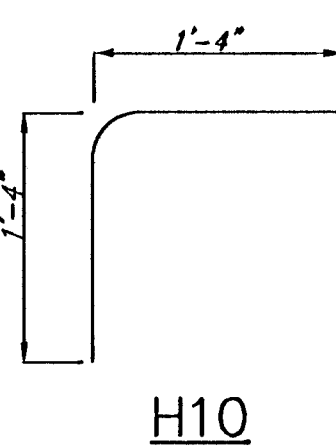
NOTE:
Field Cut #4H10 bars as required to clear R.C.B.



INTERIOR WALL ELEVATION



GRATE DETAIL



H10

REINFORCING STEEL			
Mark	No.	Size	Length
H1	22	#4	10'-10"
H2	3	#4	⊕
H3	2	#4	10'-10"
H4	8	#4	10'-3"
H5	10	#4	10'-3"
H6	11	#4	7'-1"
H7	1	#4	7'-11"
H8	1	#4	4'-6"
H9	1	#4	10'-2"
H10	50	#4	2'-8"
S1	21	#4	10'-3"
S2	22	#4	10'-9"
V1	42	#4	⊕
V2	19	#4	6'-1"
V3	34	#4	1'-7"
V4	14	#4	⊕
V5	6	#4	⊕
V6	8	#4	7'-7"

⊕ H2 Incr. from 3'-1" to 10'-0" by ±3'-5"
Cut 2 Each Length
V1 Incr. from 6'-1" to 7'-6" by ±0.8"
Cut 2 Each Length
V4 Incr. from 5'-10" to 6'-9" by ±0.8"
Cut 1 Each Length
V5 Incr. from 1'-0" to 8" by ±0.6"
Cut 1 Each Length

General Notes

Class A Concrete shall be used throughout. At the Contractor's option, Class A Concrete (AE) may be used. Bevel all exposed edges with a 3/4" triangular molding or an approved edging tool. Deductions in concrete quantities have been made for pipe openings.

Reinforcing Steel shall be a minimum Grade 60 ASTM A615.

All dimensions relative to placement of reinforcing are to the centerline of bars unless otherwise noted. All Clearances are 1-1/2" unless otherwise noted.

Pipes will enter and leave the inlet at various positions. Field bend or cut reinforcing to clear pipes.

Inlet invert shall be shaped with unreinforced Class A Concrete and should be considered subsidiary to the Ditch Inlet.

Ditch Inlet Type 1 shall be measured and paid for at the contract unit price bid per each. This shall be considered full compensation for all excavation, backfilling, materials, labor, equipment, tools and incidentals necessary to complete the work.

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.

DITCH INLET TYPE 1
CITY OF WICHITA, KANSAS

BAUGHMAN COMPANY P.A.
ENGINEERING, SURVEYING, & PLANNING
316-282-7271 • 315 ELLIS • WICHITA, KANSAS 67211

PROJECT NUMBER
488-83237

DATE
3/31/01

SCALE
NOTED

DESIGN
SCL

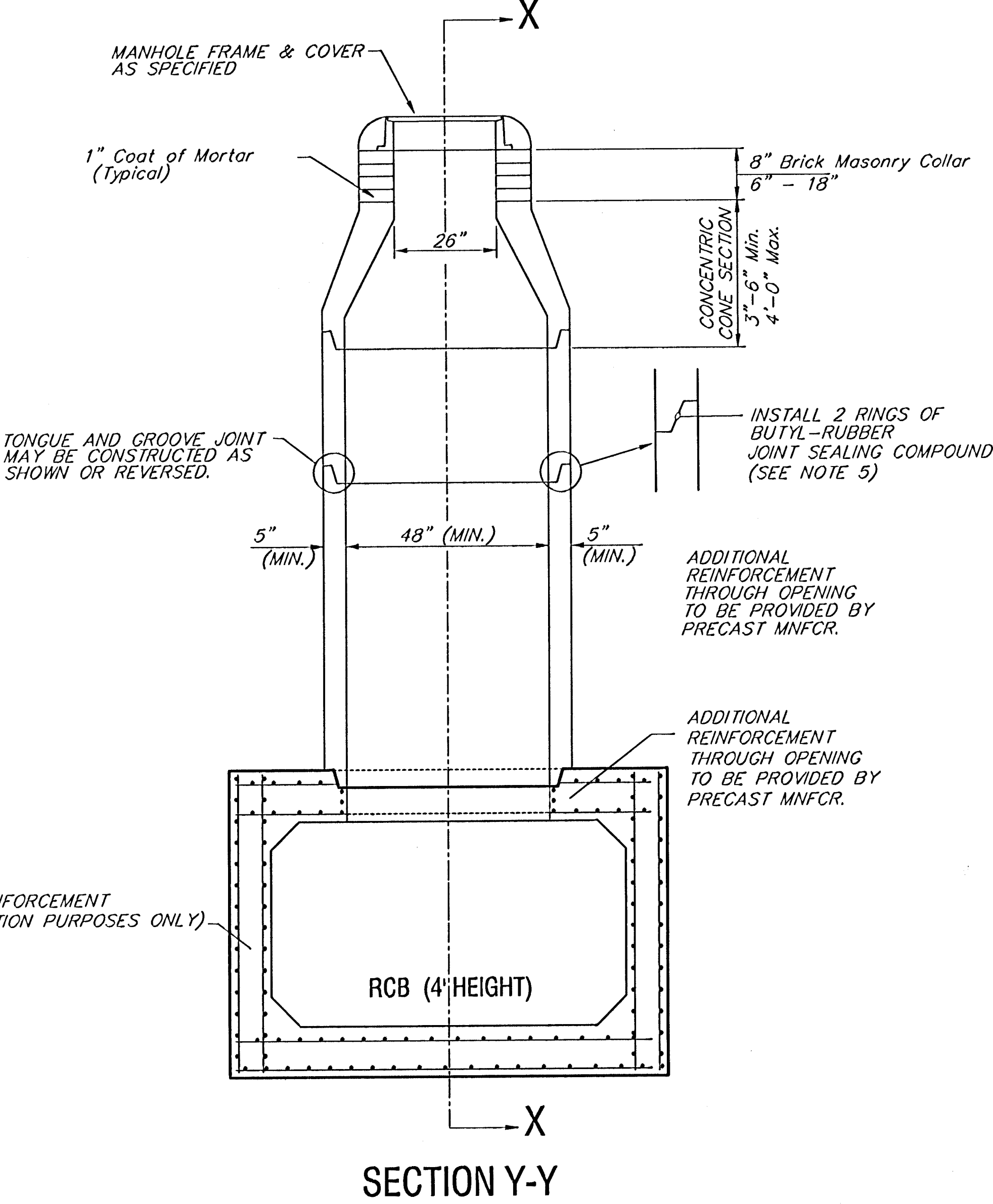
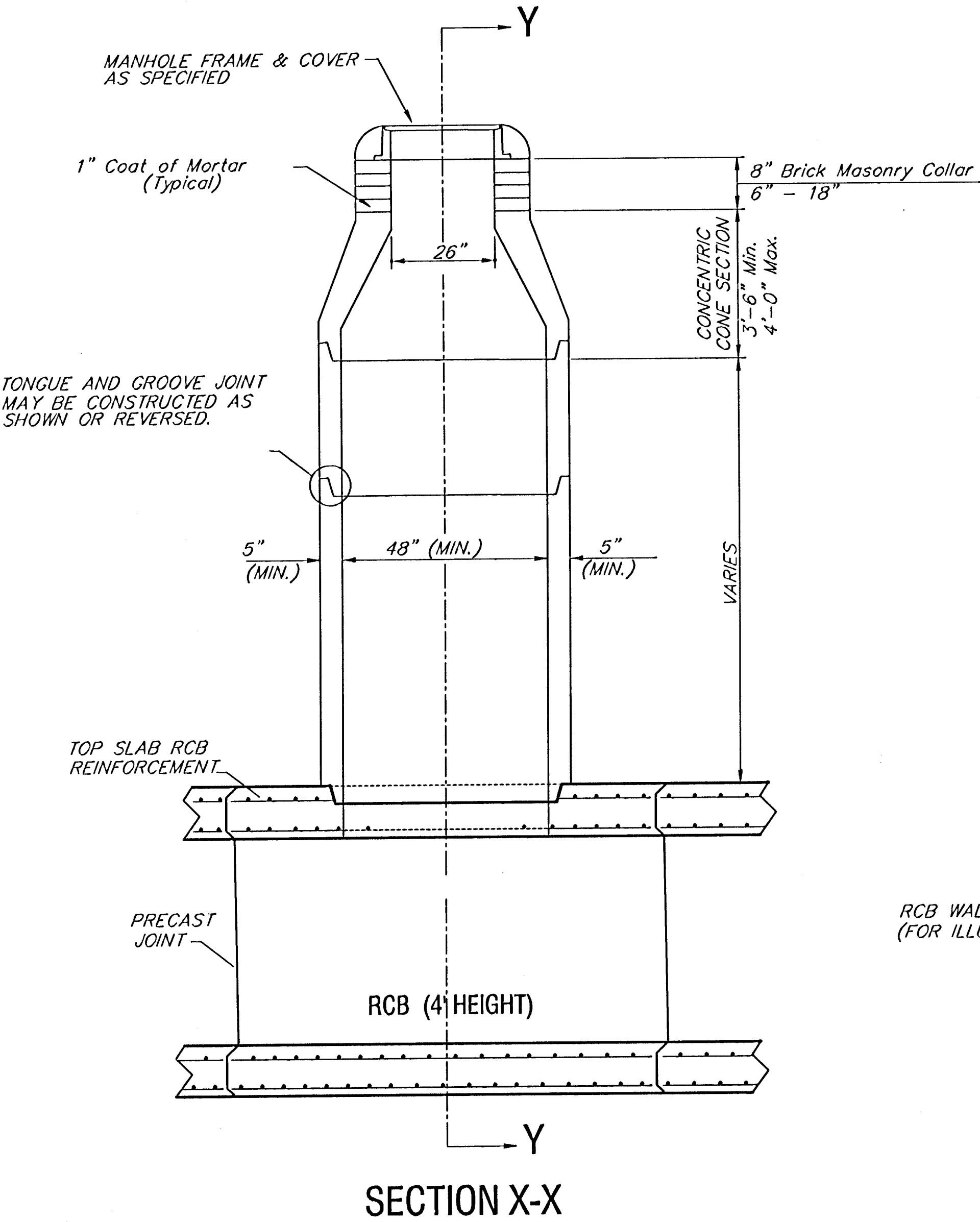
DRAWN
SCL

APPROVED
NGW

SHEET
10
OF
16

PRECAST MANHOLE LOCATED ALONG THE REINF.
CONCRETE BOX SHALL HAVE A TONGUE &
GROOVE JOINT AT THE MATING SURFACE OF
THE BASE OF THE STACK & THE ADJOINING
REINFORCED CONCRETE BOX.

PRECAST MANHOLE DETAIL



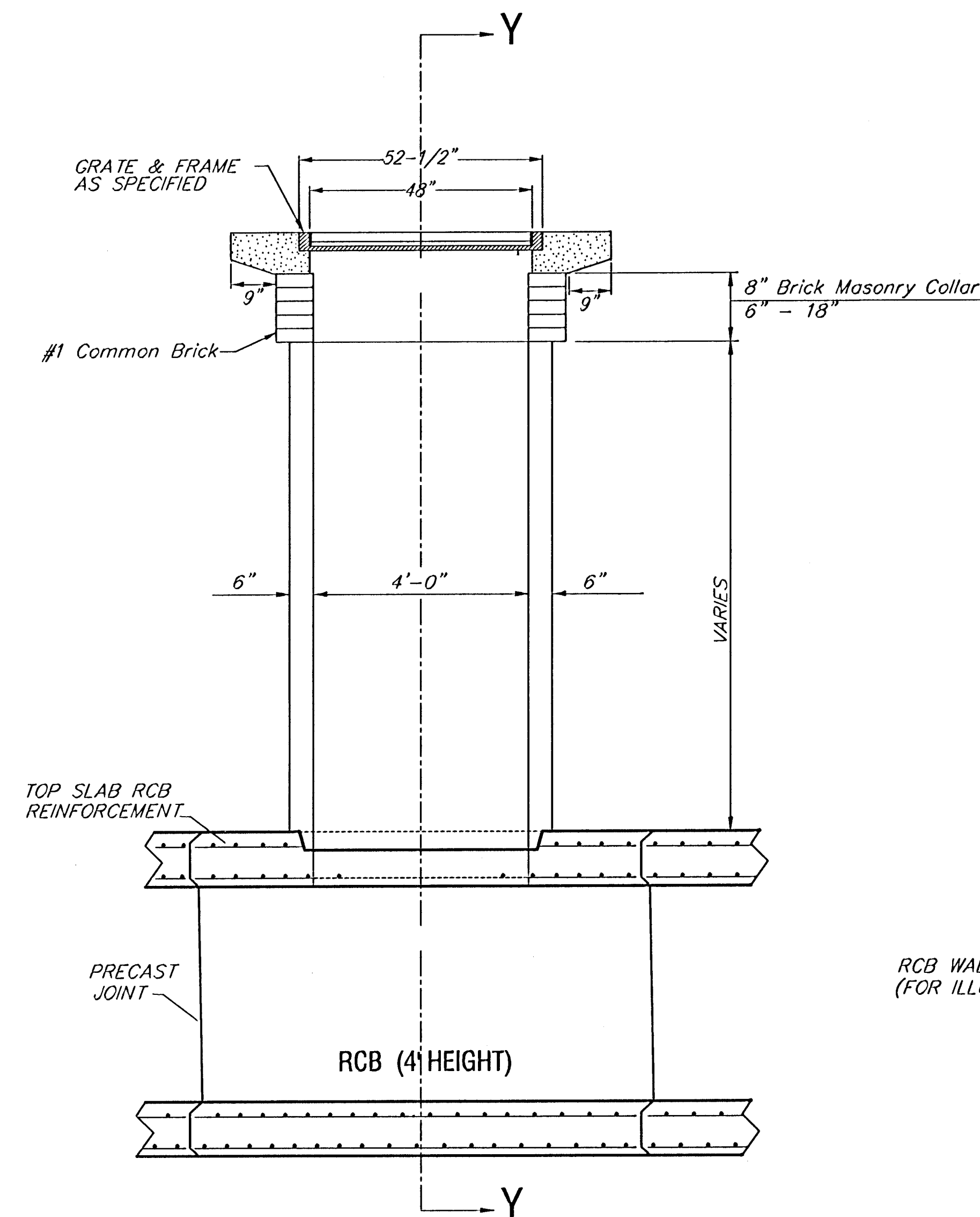
GENERAL NOTES

1. ALL PRECAST CONCRETE MANHOLE SECTIONS SHALL CONFORM TO THE LATEST REVISIONS OF A.S.T.M. C-478M AS MODIFIED BY THE SPECIFICATIONS.
2. NON-SHRINK GROUT SHALL BE NON-METALLIC TYPE.
3. ALL INSIDE SURFACES OF THE CONCRETE MANHOLE WHICH WOULD BE EXPOSED TO SEWER GAS SHALL BE COATED WITH 2 COATS TNEC SERIES 68 HI-BUILD EPOXOLINE, DRY THICKNESS OF 8 MILS (MIN.) OR APPROVED EQUAL.
4. EXTERIOR MANHOLE WALLS SHALL BE COATED WITH 1 COAT MOBILARMA 633 BITUMINOUS COATING OR APPROVED EQUAL.
5. JOINT SEALING COMPOUND SHALL BE KENT SEAL NO. 2 OR APPROVED EQUAL.
6. LIFTING HOLES SHALL BE FILLED WITH NON-SHRINK GROUT AND THE INTERIOR SURFACE COATED AS SPECIFIED.
7. MORTAR USED IN MASONRY CONSTRUCTION SHALL CONTAIN 10.5 SACKS OF CEMENT PER ONE CUBIC METER.
8. MANHOLES CONSTRUCTED WHERE INFLOWING 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.
9. MANHOLE COVER CASTINGS AND MANHOLE FRAME CASTINGS SHALL CONFORM TO THE REQUIREMENTS AS INDICATED IN THE STANDARD SPECIFICATIONS AND AS SHOWN IN THE STANDARD DETAIL DRAWING.
10. THE BID ITEM "PRECAST MANHOLE" SHALL INCLUDE ALL MATERIAL, PAINTING, CAST IRON, EXCAVATION, BACKFILLING, EQUIPMENT, TOOLS, AND ALL OTHER INCIDENTALS NECESSARY TO COMPLETE THE WORK.
11. A BRICK MASONRY COLLAR SHALL BE INSTALLED BETWEEN THE CAST IRON FRAME AND THE CONCENTRIC CONE. THE COLLAR WILL HAVE 8" WALLS AND A VERTICAL HEIGHT OF 6" MINIMUM AND 18" MAXIMUM. A 1" COAT OF MORTAR WILL BE PLASTERED ON THE OUTSIDE OF THE COLLAR. THE USE OF PRE-CAST CONCRETE SPACERS FOR MANHOLE TOP ADJUSTMENT SHALL BE ALLOWED.
12. PIPES INSTALLED WITHIN THE EXCAVATION MADE FOR THE MANHOLE MAY REQUIRE (WHEN DIRECTED BY THE ENGINEER) A SUPPORTING CONCRETE CRADLE TO THE LIMITS OF THE EXCAVATION. COST OF CRADLE WITHIN MANHOLE EXCAVATION SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE MANHOLE.

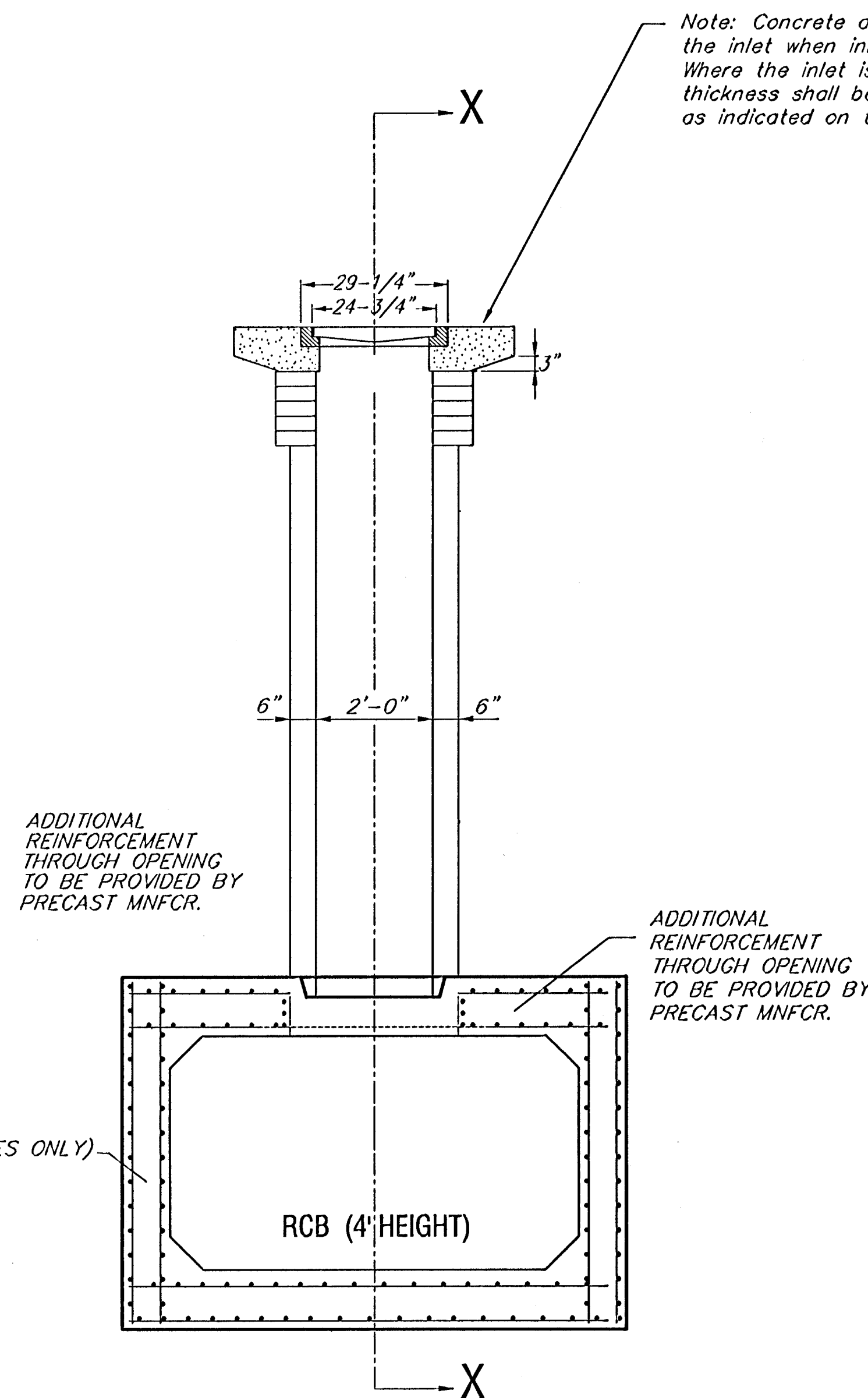
CONCRETE MANHOLE STACK DETAIL CITY OF WICHITA, KANSAS					
BAUGHMAN COMPANY P.A. ENGINEERING, SURVEYING, & PLANNING 316-262-7271 • 315 ELLIS • WICHITA, KANSAS 67211					
PROJECT NUMBER 488-83237					
DESIGN C.O.W.	DRAWN STAFF	APPROVED	DATE	SCALE NONE	SHEET 12 OF 16

PRECAST INLET LOCATED ALONG THE REINF.
CONCRETE BOX SHALL HAVE A TONGUE &
GROOVE JOINT AT THE MATING SURFACE OF
THE BASE OF THE STACK & THE ADJOINING
REINFORCED CONCRETE BOX.

DROP INLET STACK DETAIL

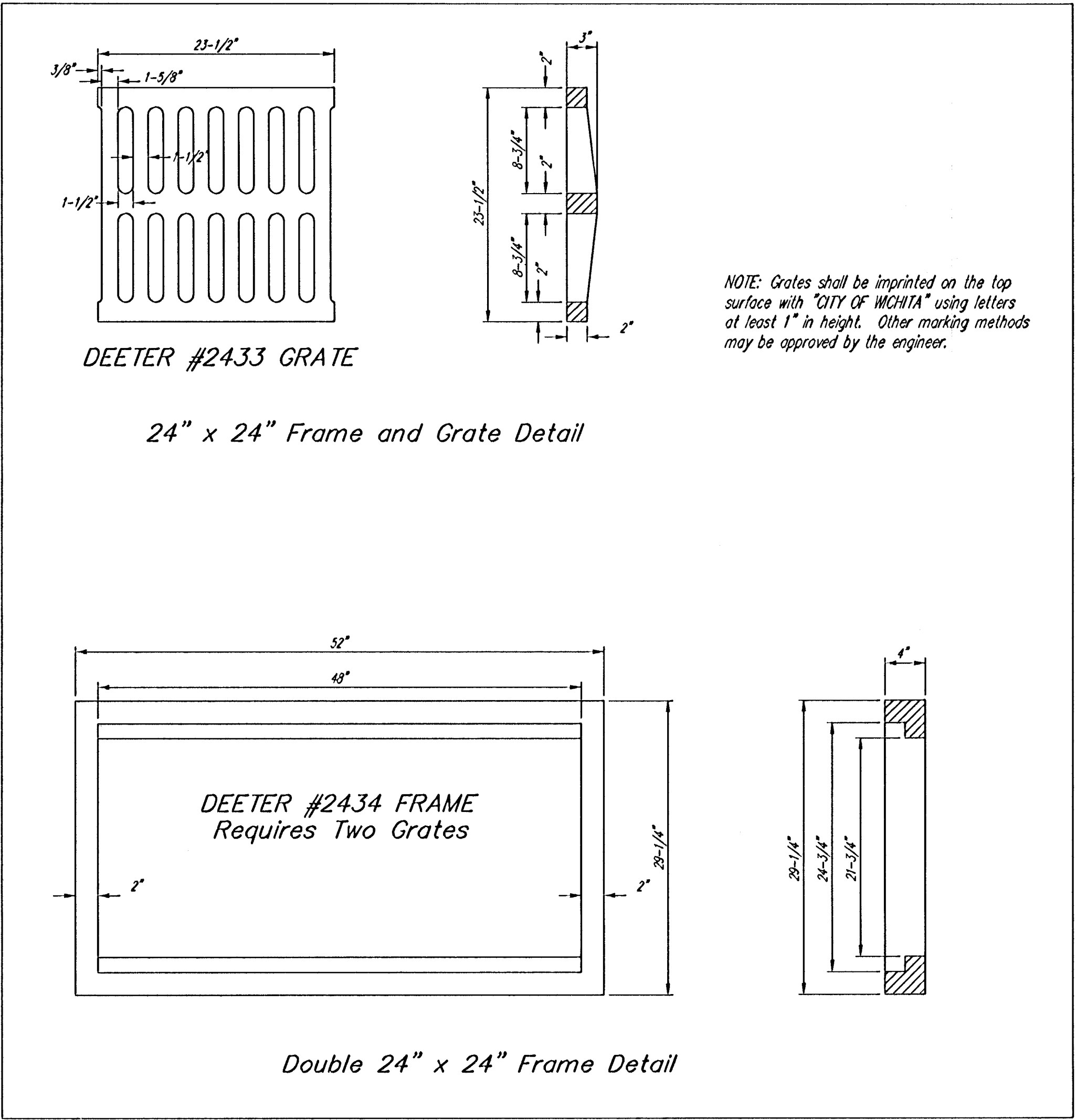


SECTION X-X



SECTION Y-Y

Note: Concrete apron shall be constructed around the inlet when inlet is located in an unpaved area. Where the inlet is adjacent to pavement, the pavement thickness shall be tapered to the inlet in 9 inches as indicated on the detail.



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

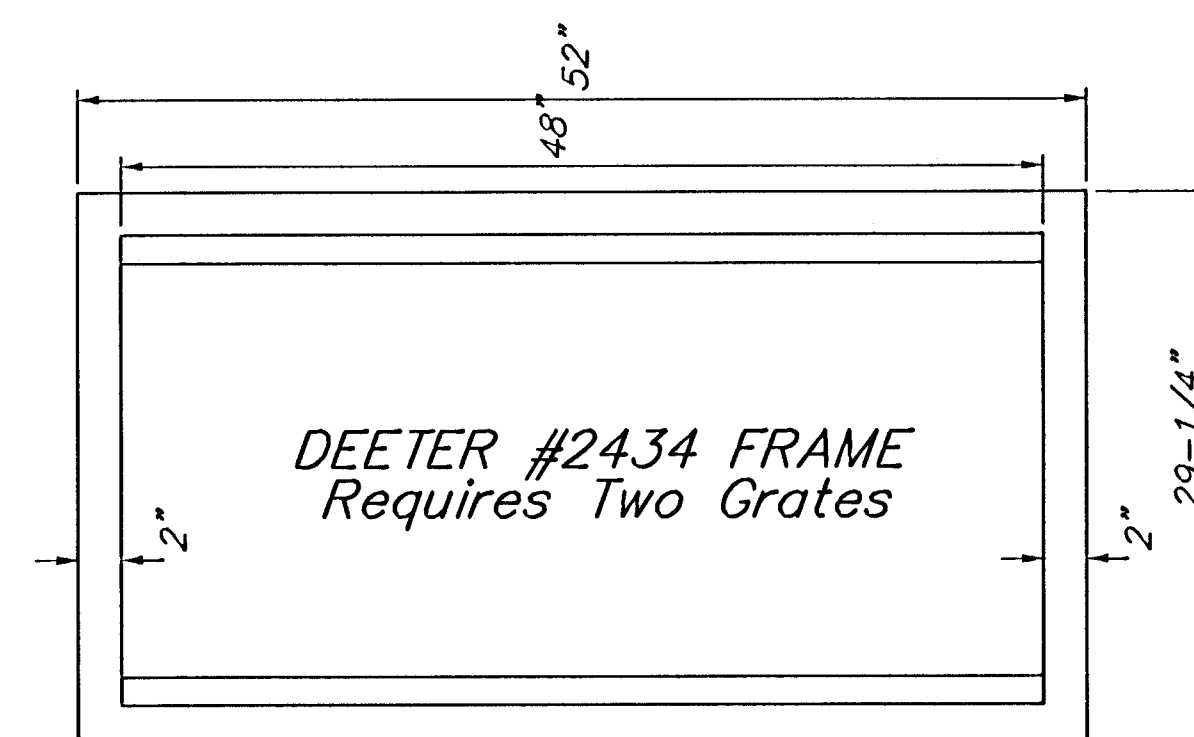
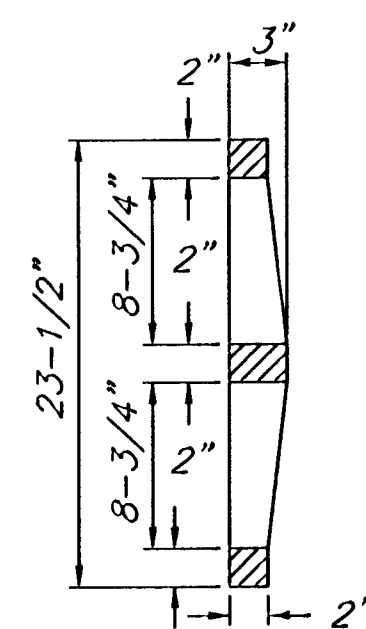
CONCRETE INLET STACK DETAIL CITY OF WICHITA, KANSAS				
BAUGHMAN COMPANY P.A. ENGINEERING, SURVEYING, & PLANNING 316-262-7271 • 315 ELLIS • WICHITA, KANSAS 67211				
PROJECT NUMBER 488-83237				SHEET 13
DESIGN C.O.W.	DRAWN STAFF	APPROVED	DATE	SCALE NONE

Relayplace/mistad01-03-E955

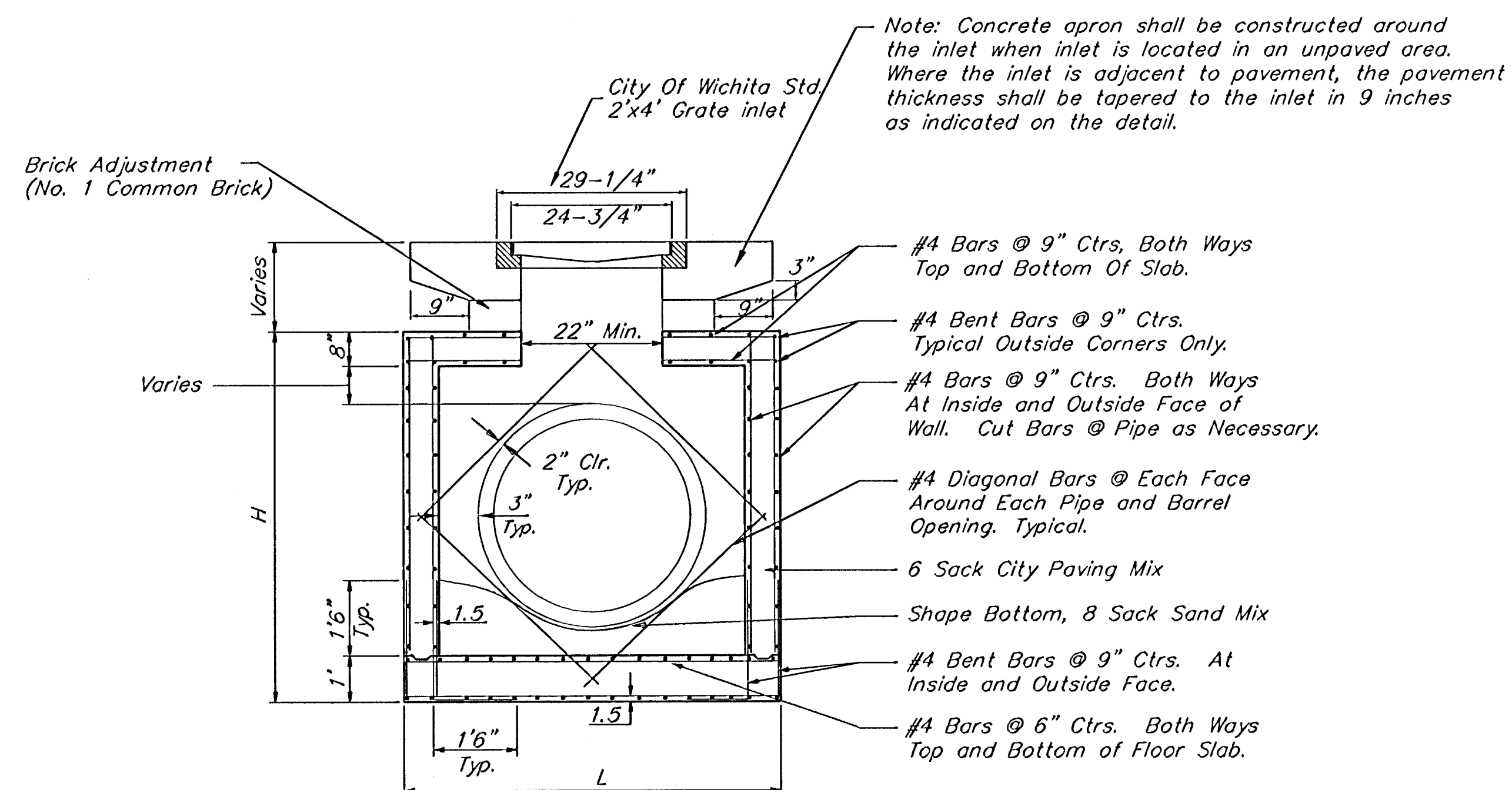
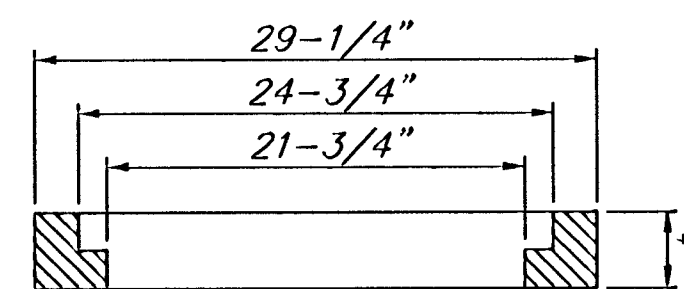
DEETER #2433 GRATE

24" x 24" Frame and Grate Detail

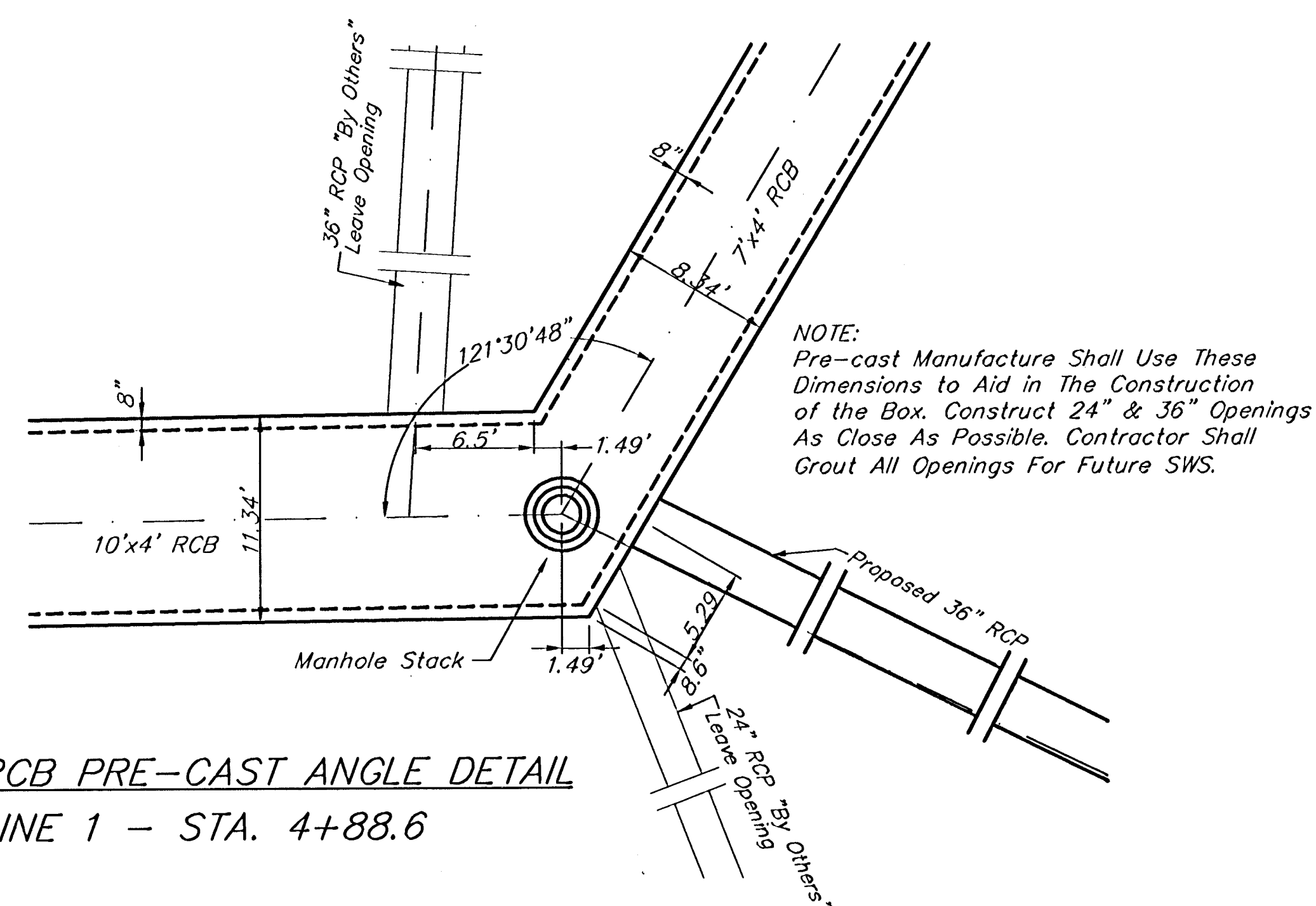
NOTE: Grates shall be imprinted on the top surface with "CITY OF WICHITA" using letters at least 1" in height. Other marking methods may be approved by the engineer.



Double 24" x 24" Frame Detail

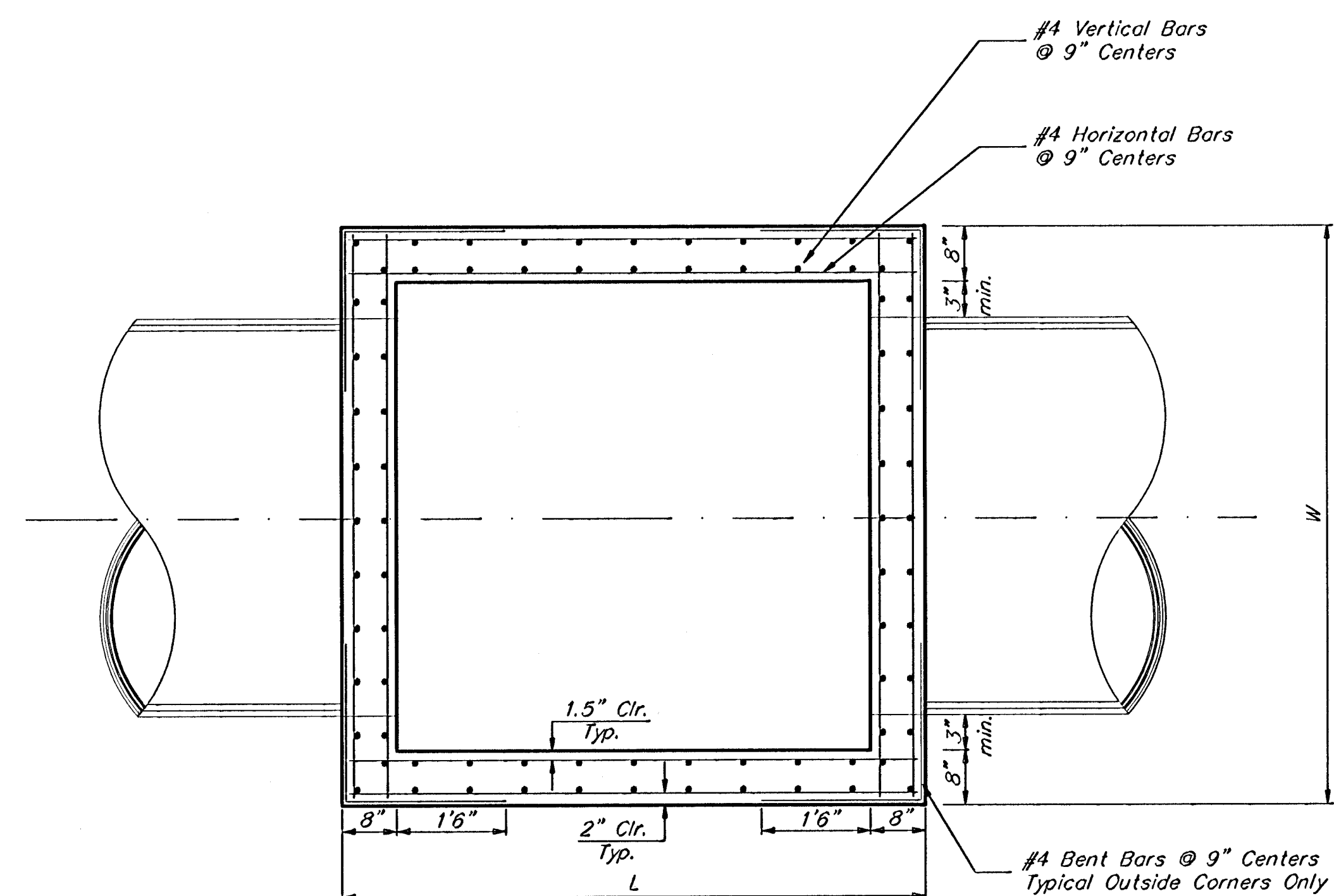


REINFORCED CONCRETE MANHOLE
WITH 2'x4' INLET GRATE



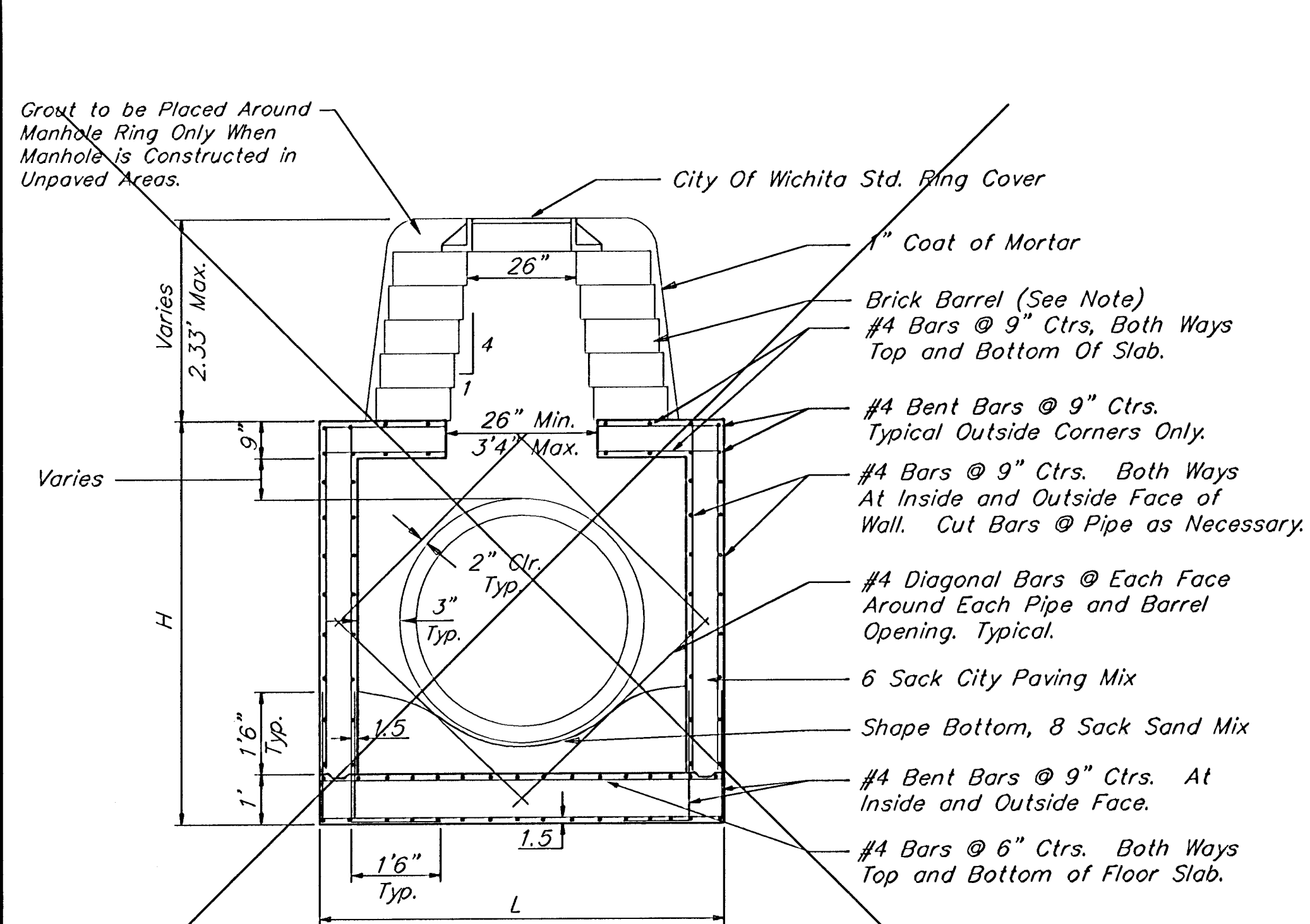
RCB PRE-CAST ANGLE DETAIL
LINE 1 - STA. 4+88.6

NO SCALE

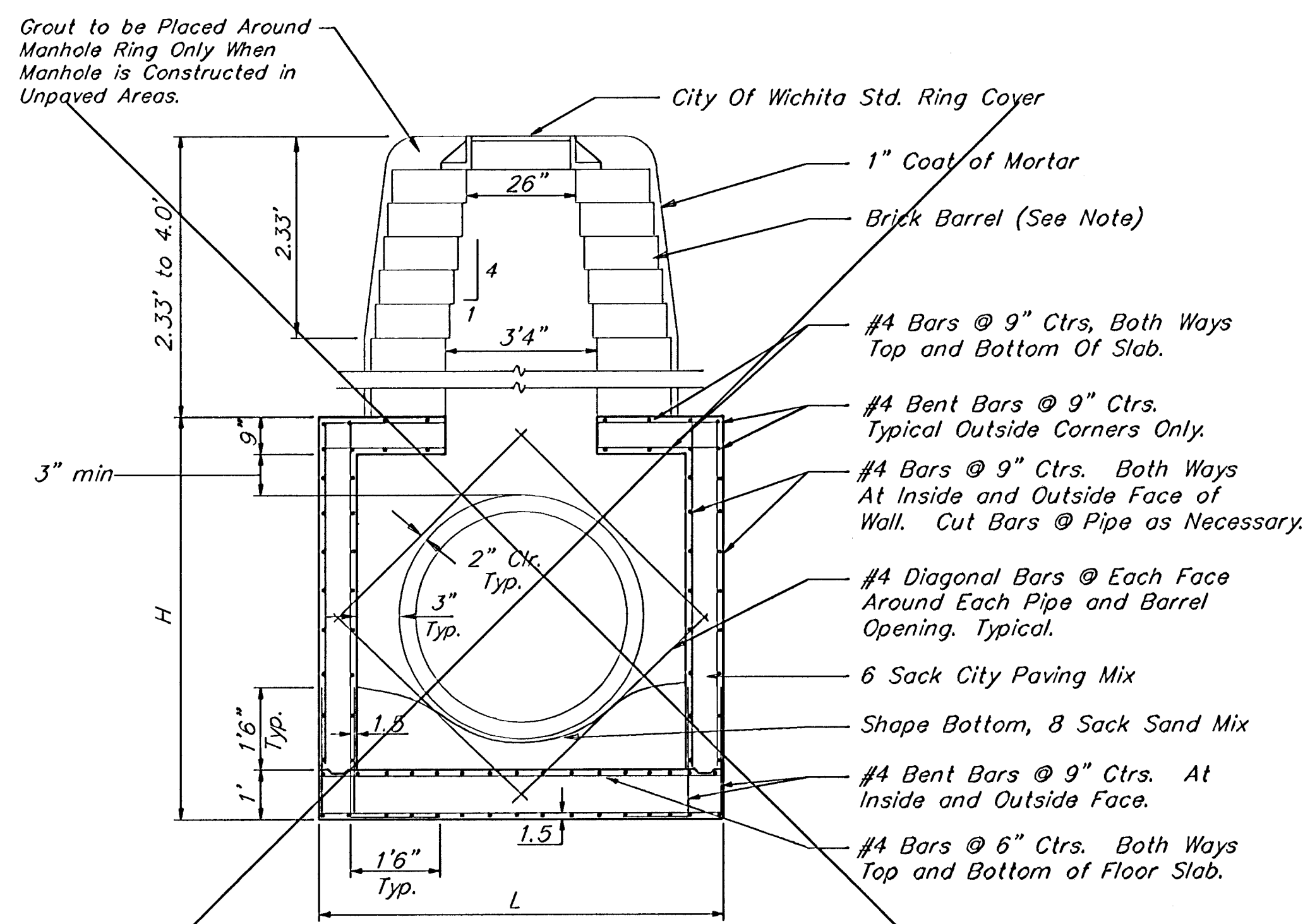


TOP VIEW

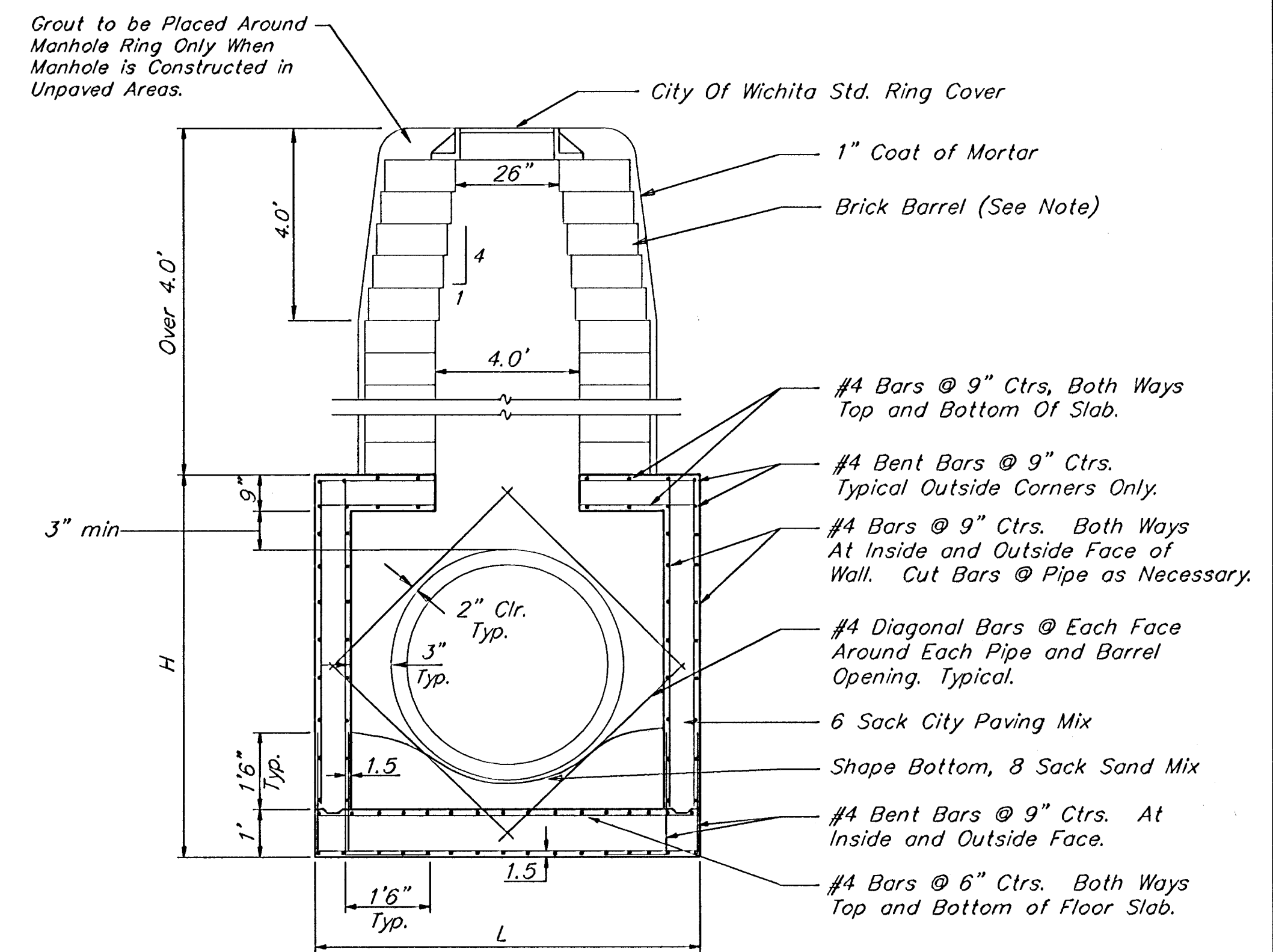
DROP INLET REINFORCED CONCRETE MANHOLE CITY OF WICHITA, KANSAS				
 BAUGHMAN COMPANY P.A. ENGINEERING, SURVEYING, & PLANNING 316-262-7271 • 315 ELLIS • WICHITA, KANSAS 67211				
PROJECT NUMBER 488-93237				
DESIGN	DRAWN <i>STAFF</i>	APPROVED	DATE	SCALE <i>NONE</i>



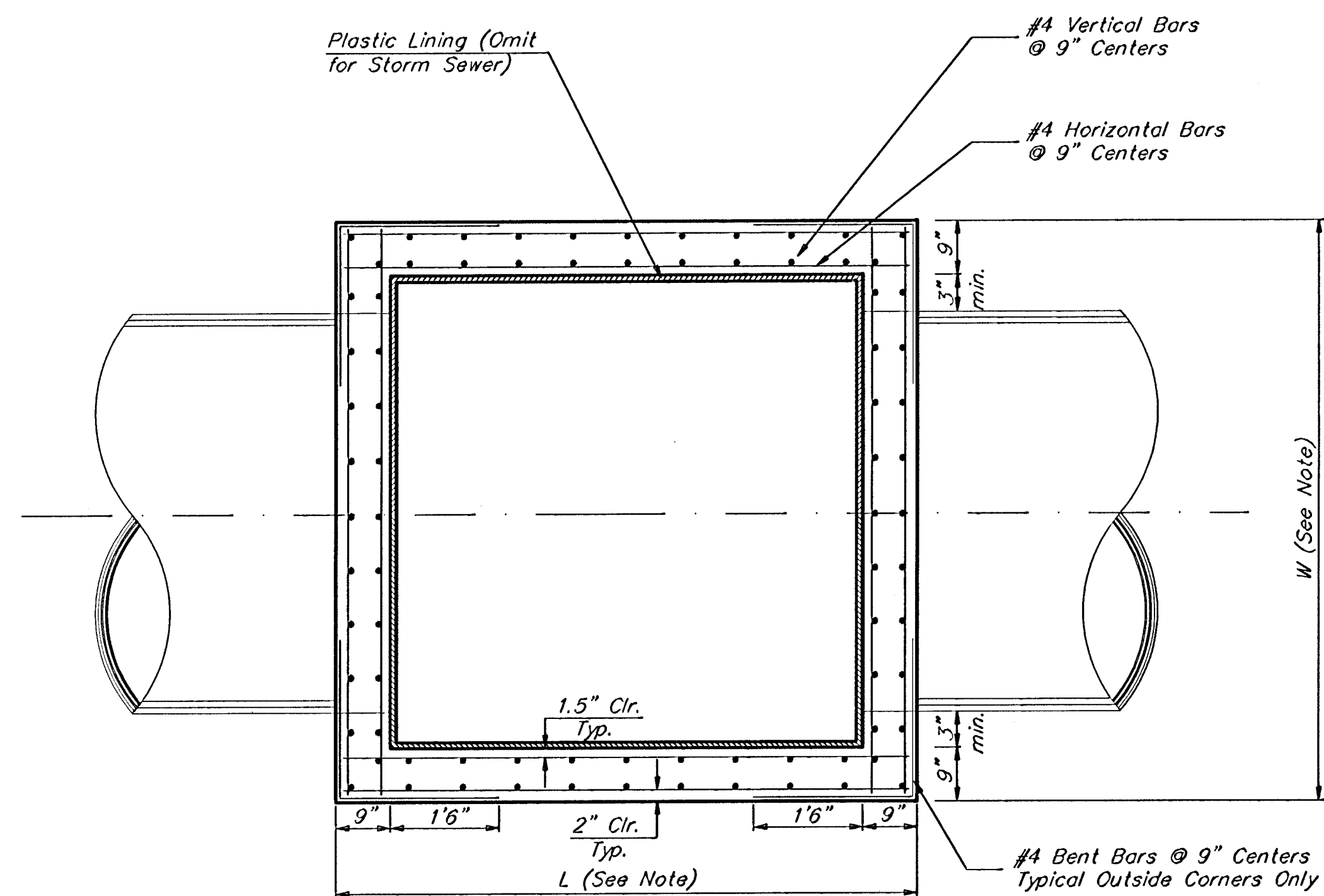
REINFORCED CONCRETE MANHOLE
DEPTH OF STACK: 0' TO 2.33'



REINFORCED CONCRETE MANHOLE
DEPTH OF STACK: 2.33' TO 4.0'



REINFORCED CONCRETE MANHOLE
DEPTH OF STACK: OVER 4.0'



TOP VIEW

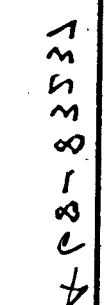
Notes:

Brick barrels less than 16' deep shall have 8" walls except when located within public street or alley pavement; then the wall shall be 12". Brick barrels more than 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' in height. Completed manhole shall be without leaks and watertight.

Concrete wall thicknesses shown represents manhole type located within traffic bearing areas. Manhole wall, base, & top dimensions may be reduced when manholes are not subject to vehicle loads. Contractor shall be required to submit shop drawings to the Engineer for approval.

CITY OF WICHITA STANDARD					
REINFORCED CONCRETE MANHOLE					
BAUGHMAN COMPANY P.A. ENGINEERING, SURVEYING, & PLANNING 318-282-7271 • 315 ELLIS • WICHITA, KANSAS 67211					
PROJECT NUMBER 488-83237					SHEET 15
DESIGN C.O.W.	DRAWN STAFF	APPROVED	DATE	SCALE NONE	OF 18

$\Delta Z = +1.0 \text{ B} - 2 \text{ W} - 2 \text{ W} + 2 \text{ W} + 2 \text{ W}$



ADDITIONAL BUILDING SETBACKS &