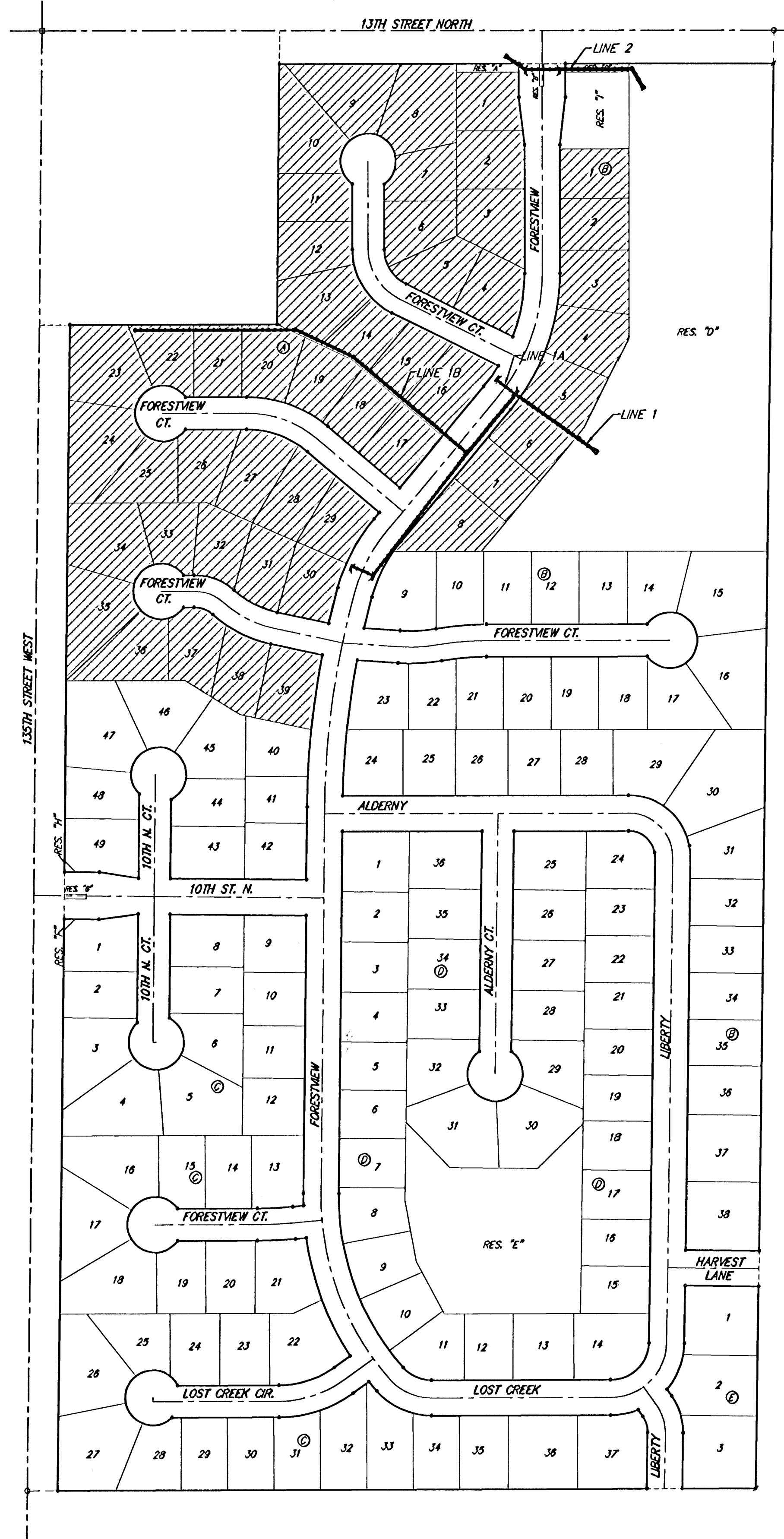




# STORM WATER SEWER NO. 577

to serve

## LIBERTY PARK 2ND ADDITION - PHASE I

CITY OF WICHITA, KANSAS

Neil D. Cable, P.E. City Engineer

Project Number

**468-83544**

OCA Number

**751326**

Scale: 1" = 150'

### GENERAL NOTES

1. 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                 | 262-4270       |
| Kansas Gas Service                 | 1-888-482-4950 |
| Westar Energy                      | 383-8650       |
| Aquila Energy                      | 1-888-482-4950 |
| SBC Communication                  | 268-2245       |
| City of Wichita Water Dept.        | 268-4563       |
| City of Wichita Sewer Maint.       | 268-4024       |
| City of Wichita Storm Sewer Maint. | 268-4090       |
| City of Wichita Traffic Maint.     | 268-4034       |

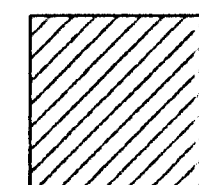
2. Underground utility service lines and overhead utility pole lines are to be adjusted as necessary by others prior to construction unless the plans specifically call for their adjustment by the Contractor or unless the plans specifically identify a utility to be adjusted by its owner during construction. 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.

3. 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.

4. The Contractor shall give all property owners and/or tenants of developed property abutting the construction of this project a minimum of ten (10) days advance notice prior to start of construction.

5. 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.

Benefit District



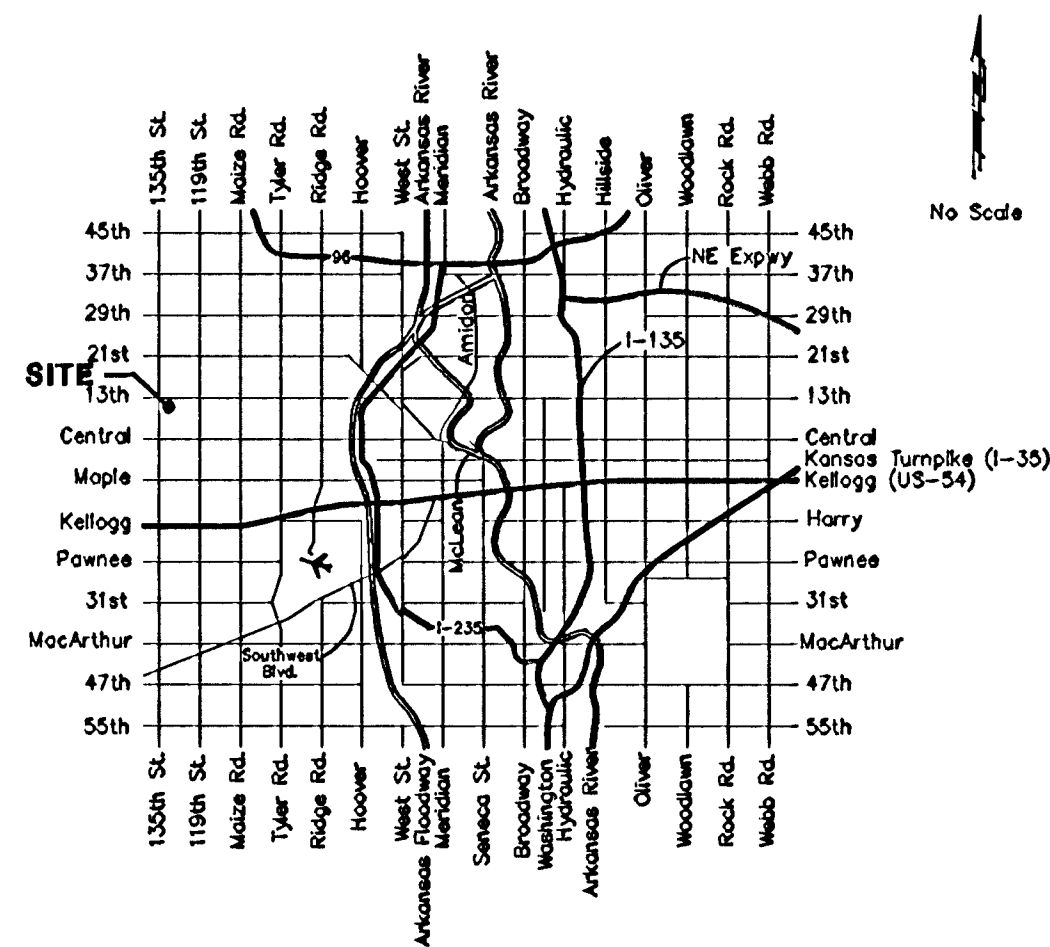
### BENCHMARKS

BM #1: C.O.W. benchmark disk. 56' E and 55' N of CL 135th St. W. & 13th St. N.  
Elev. = 167.83 (City Datum)

BM #2: 60D nail in HLP, 800' W & 31' N of the NE cor., NW1/4, Sec. 13, T-27-S, R-2-W.  
Elev. = 162.68 (City Datum)

### SHEET INDEX

|                                  |     |
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| Title Sheet                      | 1   |
| Line 1                           | 2-3 |
| Line 1A                          | 2   |
| Line 1B                          | 4-5 |
| Line 2                           | 6   |
| Std. Type 1A Single Inlet Detail | 7   |
| Std. Type 1A Double Inlet Detail | 8   |
| Std. Shallow Manhole Detail      | 9   |
| Special Yard Inlet Detail        | 10  |
| Standard Drop Inlet Detail       | 11  |
| Headwall Detail                  | 12  |
| Soil Erosion BMPs                | 13  |
| Copy of Plat                     | 14  |



Vicinity Map



As Built Per Plan 9/03 KX

BENCHMARKS:  
BM #1: C.O.W. benchmark disk.  
56' E and 55' N of CL 135th  
St. W. & 131th St. N.  
Elev. = 167.83 (City Datum)

BM #2: 60D nail in HLP, 800'  
W & 31' N of the NE cor.,  
NW1/4, Sec. 13, T-27-S,  
R-2-W.  
Elev. = 162.68 (City Datum)

Static WS Elev = 152.0  
100-yr Design WS Elev. = 154.9  
Bottom Elev. = 142.00

Sta 0+00, Line 1  
Begin construction of 30"  
SWS with  
1 - 30" RC Headwall.  
Install 29.3 S.Y. light  
stone rip-rap as indicated.

RES. "D"

Proposed  
pond  
(by others)

CAUTION!  
Ex. 10" SS  
Crossing

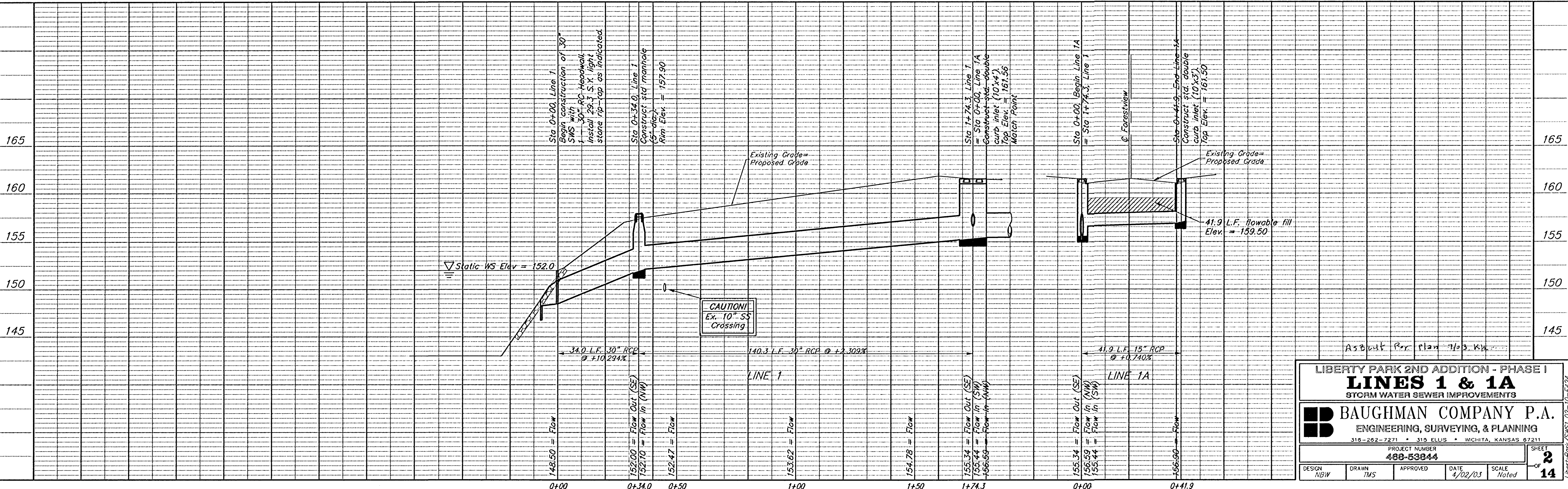
Sta 0+34.0, Line 1  
Construct std manhole  
(5' dia.).  
Rim Elev. = 157.90

Sta 1+74.3, Line 1  
= Sta 0+00, Line 1A  
Construct std. double  
curb inlet (10'x4').  
Top Elev. = 161.56  
Match Point

Sta 0+41.9, End Line 1A  
Construct std. double  
curb inlet (10'x3').  
Top Elev. = 161.50

Sta 0+00 to Sta 0+41.9  
Install 41.9 L.F. flowable  
fill per City specs.

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



LIBERTY PARK 2ND ADDITION - PHASE I  
**LINES 1 & 1A**  
STORM WATER SEWER IMPROVEMENTS

**BAUGHMAN COMPANY P.A.**  
ENGINEERING, SURVEYING, & PLANNING  
316-262-7271 • 319 ELLIS • WICHITA, KANSAS 67211

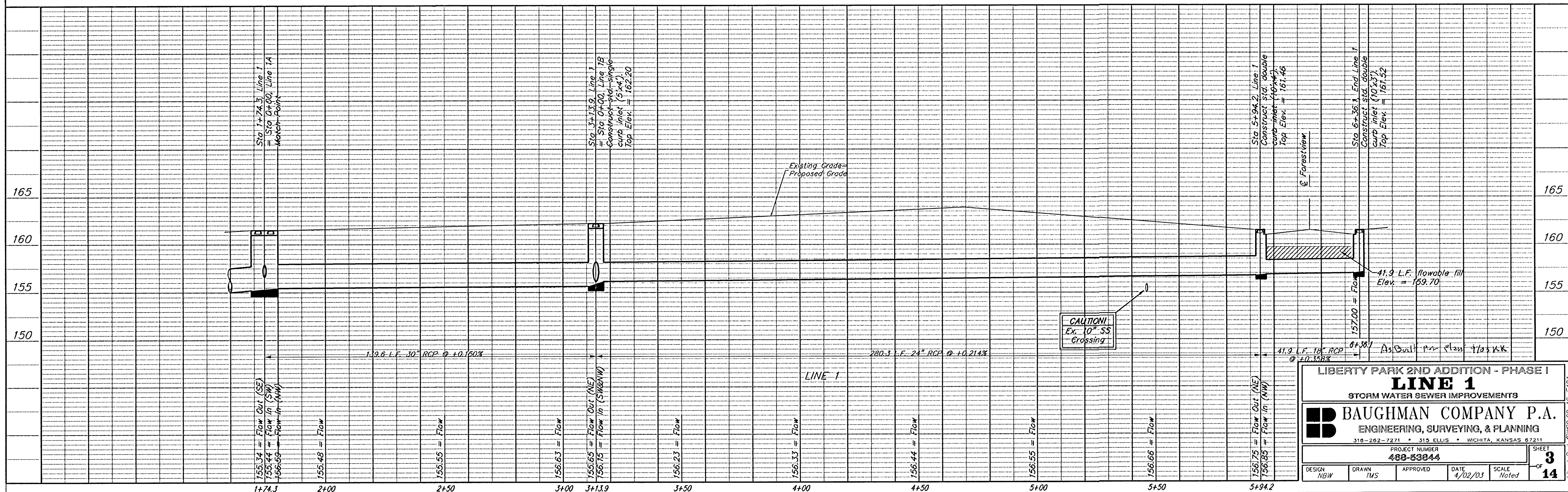
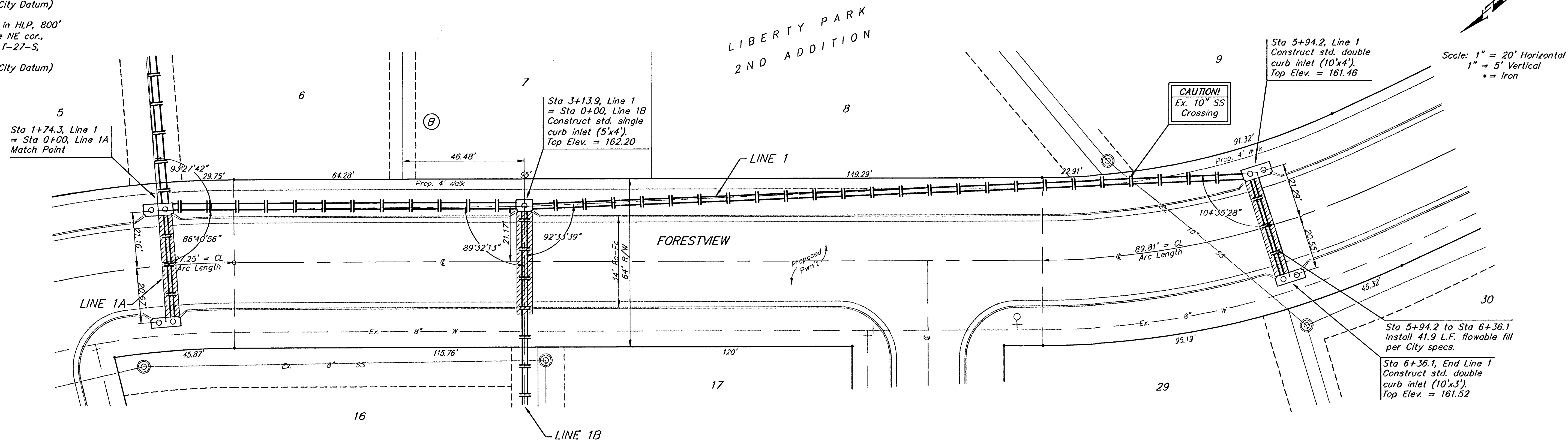
PROJECT NUMBER  
**488-53844**

|               |              |          |                 |                |
|---------------|--------------|----------|-----------------|----------------|
| DESIGN<br>NBW | DRAWN<br>TMS | APPROVED | DATE<br>4/02/03 | SCALE<br>Noted |
|---------------|--------------|----------|-----------------|----------------|

SHEET  
**2**  
OF  
**14**

BENCHMARKS:  
BM #1: C.O.W. benchmark disk.  
56' E and 55' N of CL 135th  
St. W. & 131th St. N.  
Elev. = 167.83 (City Datum)

BM #2: 60D nail in HLP, 800'  
W & 31' N of the NE cor.,  
NW1/4, Sec. 13, T-27-S,  
R-2-W.  
Elev. = 162.68 (City Datum)



LIBERTY PARK 2ND ADDITION - PHASE I  
**LINE 1**  
STORM WATER SEWER IMPROVEMENTS

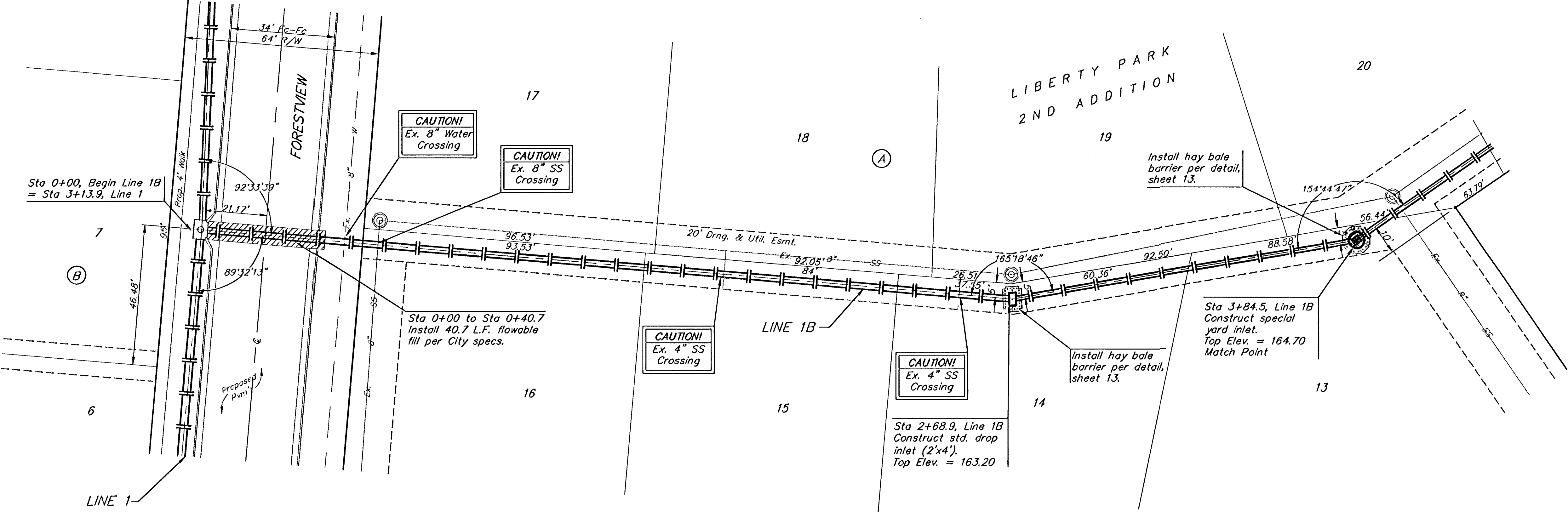
**BAUGHMAN COMPANY P.A.**  
ENGINEERING, SURVEYING, & PLANNING  
318-262-7271 • 315 ELLIS • WICHITA, KANSAS 67211

PROJECT NUMBER  
**488-53844**  
DESIGN NGW DRAWN TMS APPROVED DATE 4/02/03 SCALE Noted

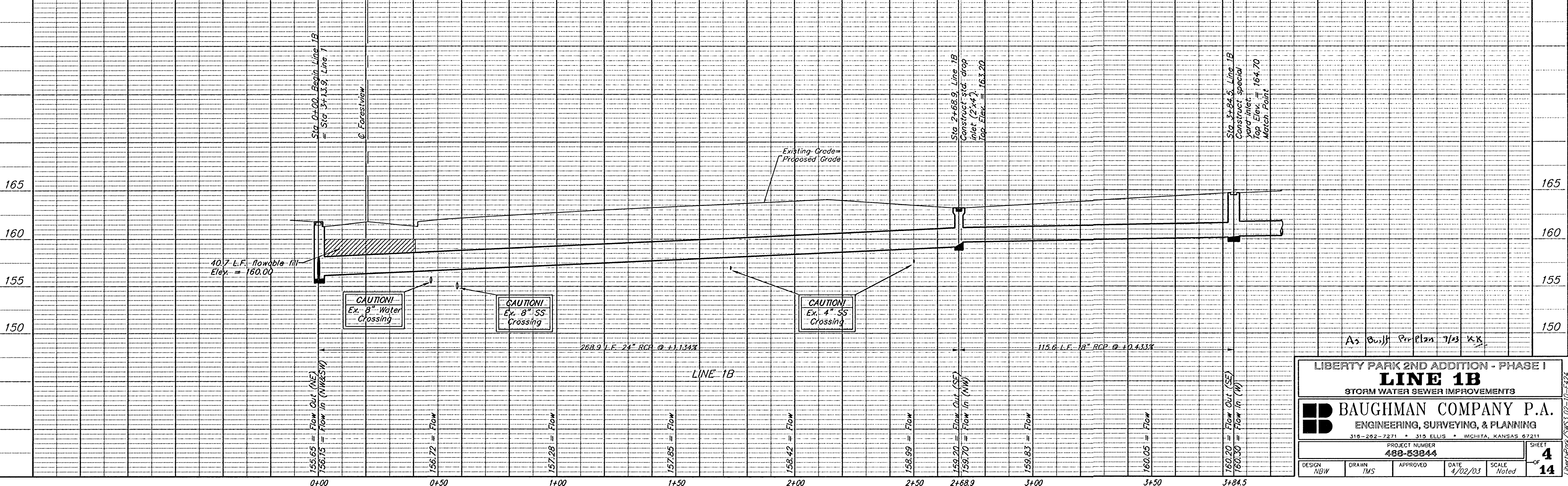
SHEET  
**3**  
OF  
**14**

BENCHMARKS:  
BM #1: C.O.W. benchmark disk.  
56' E and 55' N of CL 135th  
St. W. & 13th St. N.  
Elev. = 167.83 (City Datum)

BM #2: 60D nail in HLP, 800'  
W & 31' N of the NE cor.,  
NW1/4, Sec. 13, T-27-S,  
R-2-W.  
Elev. = 162.68 (City Datum)



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



LIBERTY PARK 2ND ADDITION - PHASE I  
**LINE 1B**  
STORM WATER SEWER IMPROVEMENTS

**BAUGHMAN COMPANY P.A.**  
ENGINEERING, SURVEYING, & PLANNING  
316-262-7271 • 315 ELLIS • WICHITA, KANSAS 67211

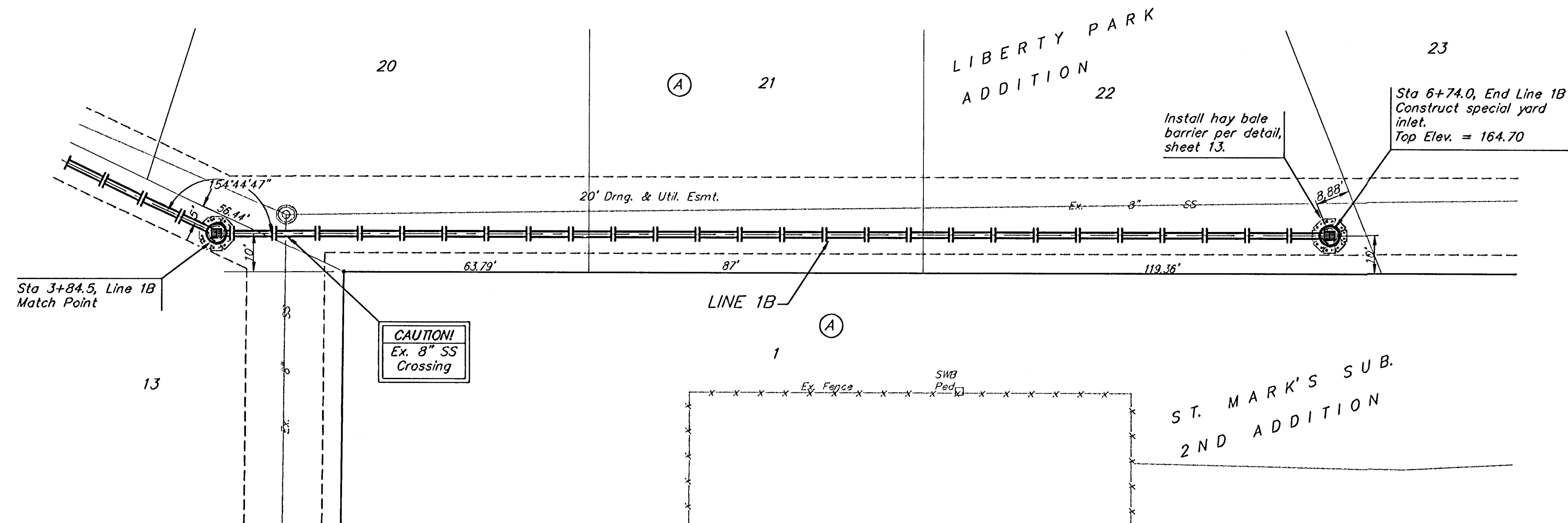
PROJECT NUMBER  
**468-83844**

DESIGN: NBW DRAWN: TMS APPROVED: DATE: 4/02/03 SCALE: Noted

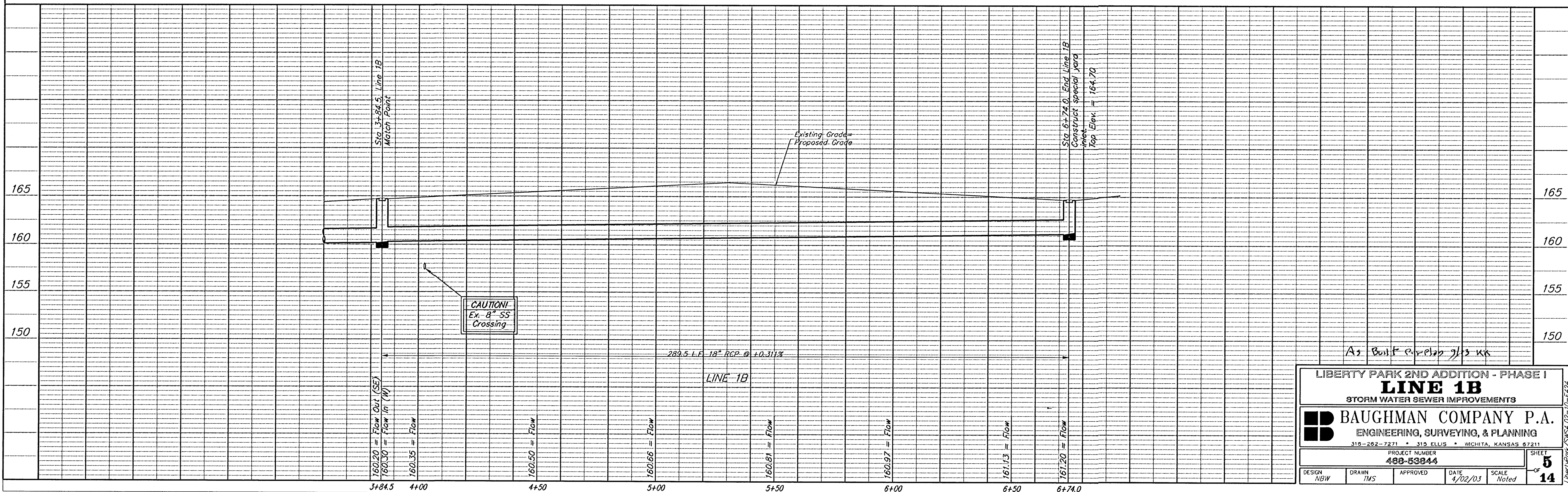
SHEET  
4  
OF  
14

BENCHMARKS:  
BM #1: C.O.W. benchmark disk.  
56' E and 55' N of CL 135th  
St. W. & 13th St. N.  
Elev. = 167.83 (City Datum)

BM #2: 60D nail in HLP, 800'  
W & 31' N of the NE cor.,  
NW1/4, Sec. 13, T-27-S,  
R-2-W.  
Elev. = 162.68 (City Datum)



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



|                                                  |       |          |         |       |
|--------------------------------------------------|-------|----------|---------|-------|
| LIBERTY PARK 2ND ADDITION - PHASE I              |       |          |         |       |
| <b>LINE 1B</b>                                   |       |          |         |       |
| STORM WATER SEWER IMPROVEMENTS                   |       |          |         |       |
| <b>BAUGHMAN COMPANY P.A.</b>                     |       |          |         |       |
| ENGINEERING, SURVEYING, & PLANNING               |       |          |         |       |
| 318-282-7271 • 318 ELLIS • MICHITA, KANSAS 67211 |       |          |         |       |
| PROJECT NUMBER                                   |       |          |         |       |
| 488-53844                                        |       |          |         |       |
| DESIGN                                           | DRAWN | APPROVED | DATE    | SCALE |
| NBW                                              | IMS   |          | 4/02/03 | Noted |
| SHEET                                            |       |          |         | OF    |
| 5                                                |       |          |         | 14    |

BENCHMARKS:  
BM #1: C.O.W. benchmark disk.  
56' E and 55' N of CL 135th  
St. W. & 13th St. N.  
Elev. = 167.83 (City Datum)

BM #2: 600 nail in HLP, 800'  
W & 31' N of the NE cor.,  
NW1/4, Sec. 13, T-27-S,  
R-2-W.  
Elev. = 162.68 (City Datum)

Ditch 500' south to  
ensure positive  
drainage.

Sta 0+00, Line 2  
Begin construction of 36"  
RCP W/end section.  
Install 40 S.Y. light stone  
rip-rap as indicated.

Sta 0+40.9, Line 2  
Construct std manhole  
(5' dia.).  
Rim Elev. = 157.60

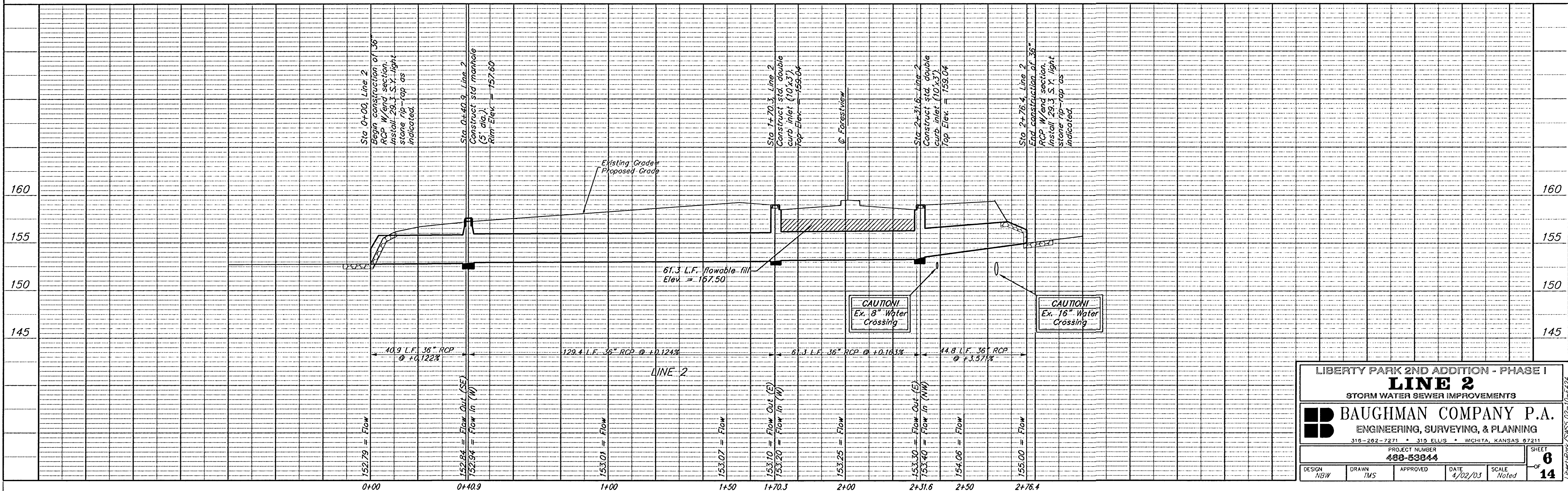
Sta 1+70.3, Line 2  
Construct std. double  
curb inlet (10'x3').  
Top Elev. = 159.04

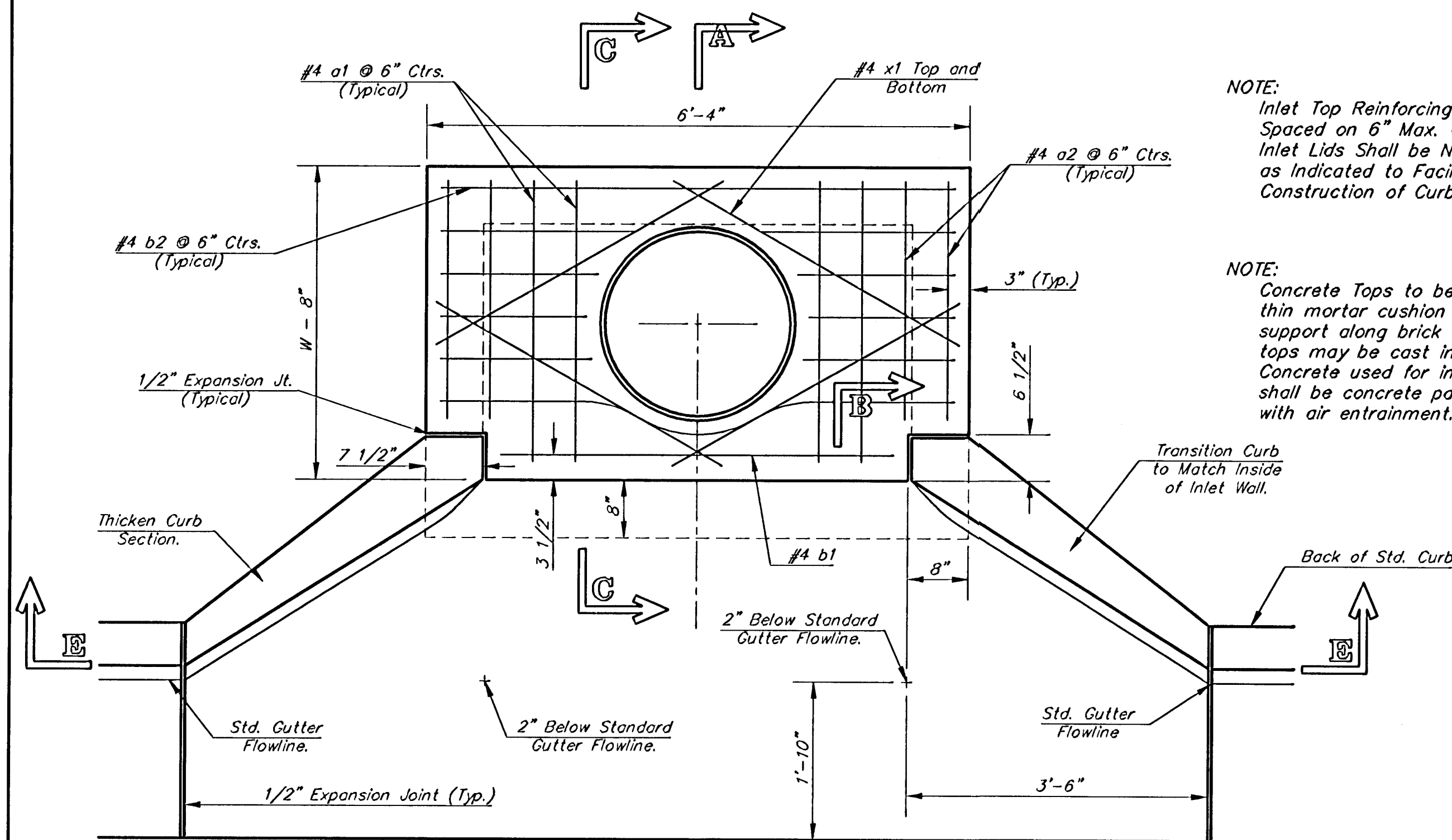
Sta 1+70.3 to Sta 2+31.6  
Install 61.3 L.F. flowable fill  
per City specs.

Sta 2+31.6, Line 2  
Construct std. double  
curb inlet (10'x3').  
Top Elev. = 159.04

Sta 2+76.4, Line 2  
End construction of 36"  
RCP W/end section.  
Install 29.3 S.Y. light  
stone rip-rap as  
indicated.

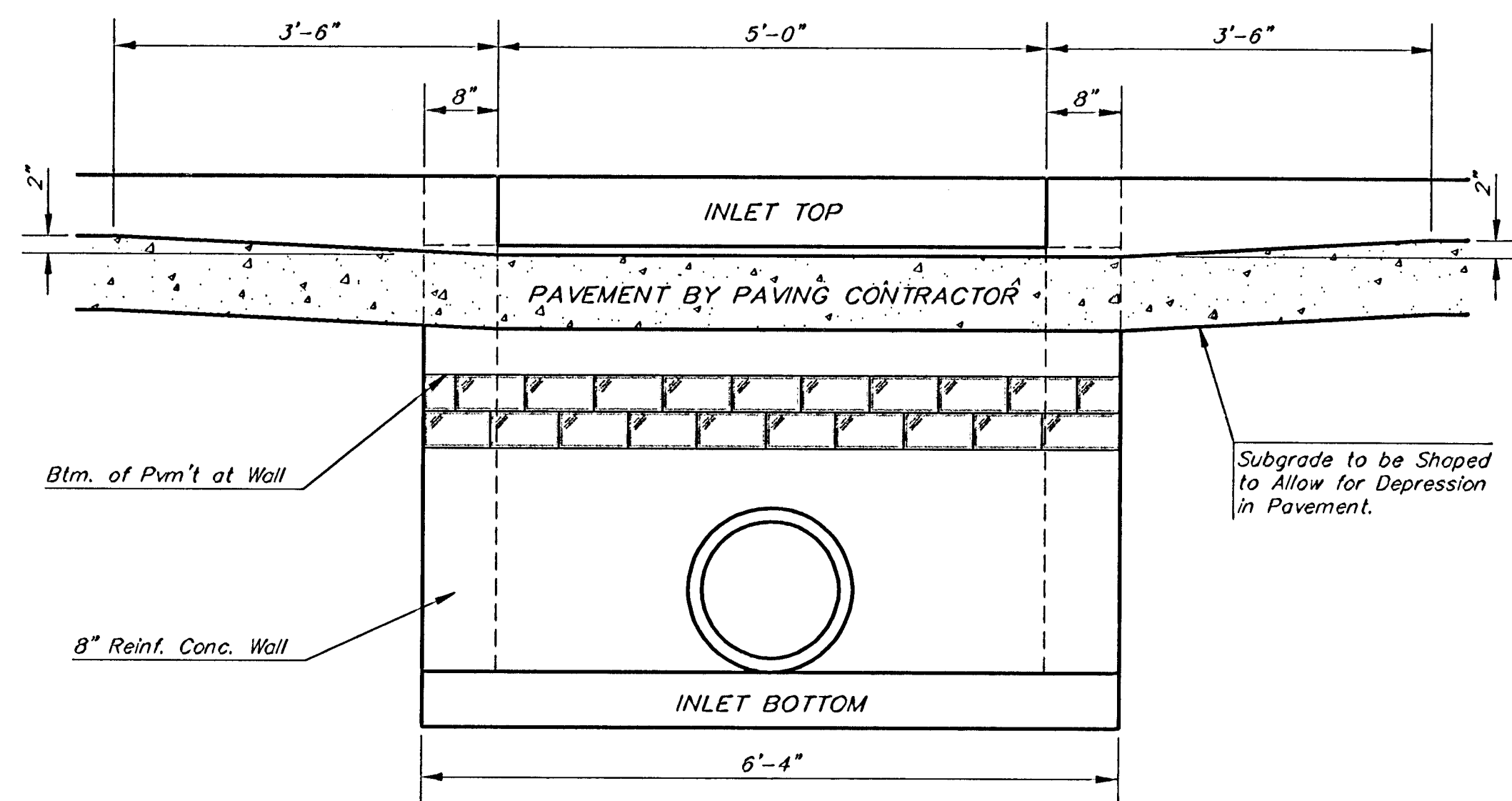
Scale: 1" = 20' Horizontal  
1" = 5' Vertical  
• = Iron



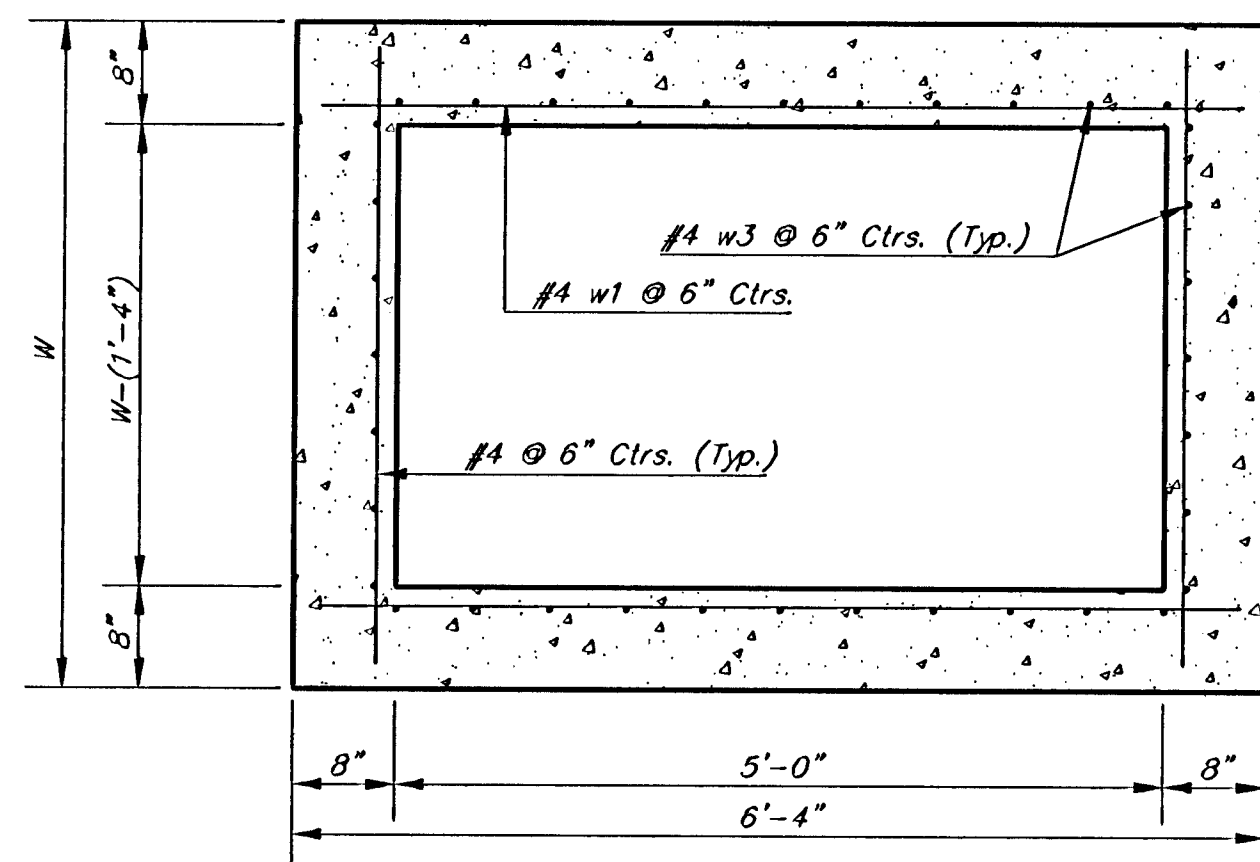


NOTE: Expansion Joint Only in Curb Area With Concrete Pavement.

PLAN



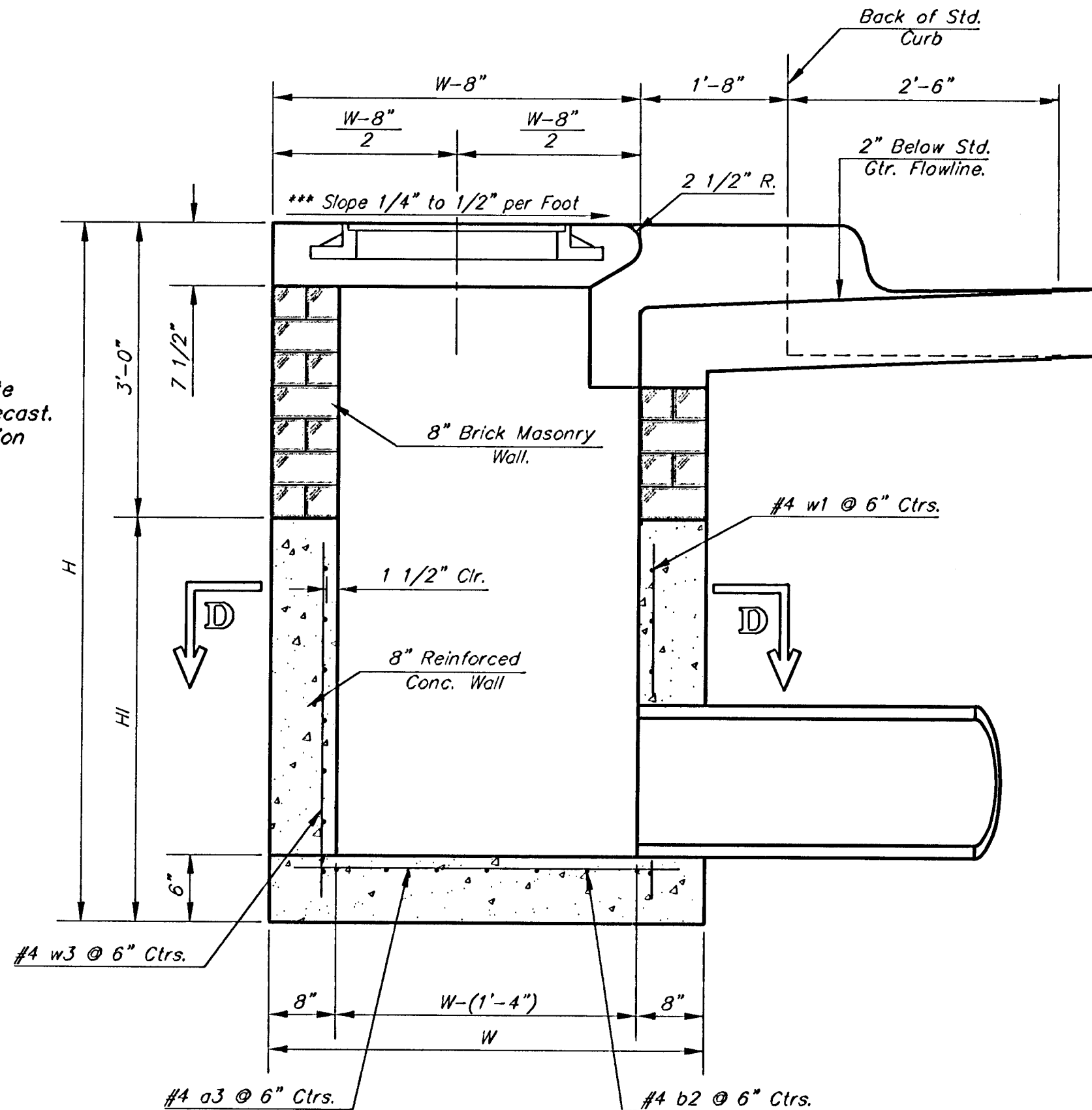
SECTION E-E



SECTION D-D

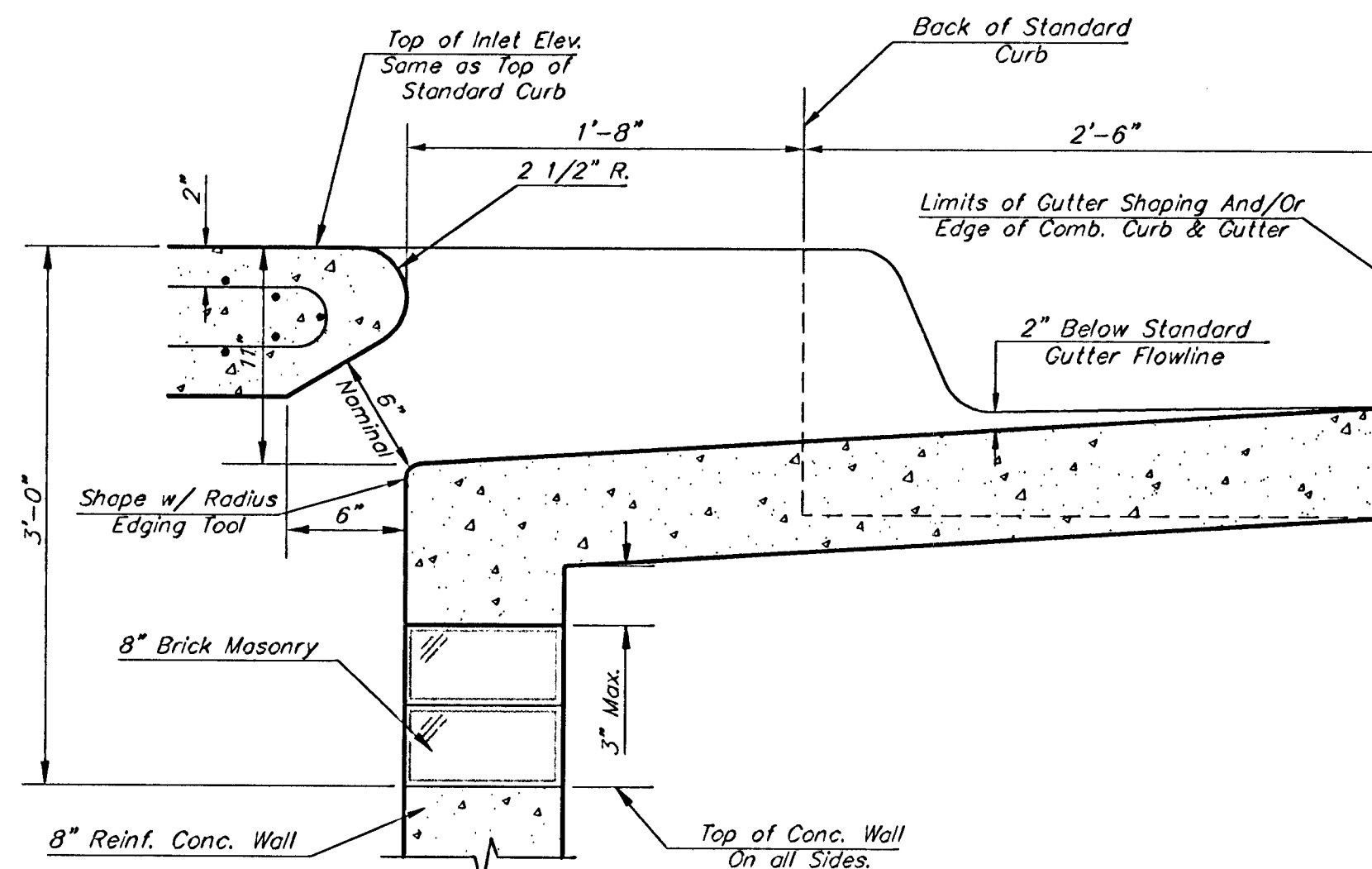
NOTE: Inlet Top Reinforcing shall be Spaced at 6" Max. Centers. Inlet Lids Shall be Notched Out as Indicated to Facilitate Construction of Curb.

NOTE: 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 with air entrainment.

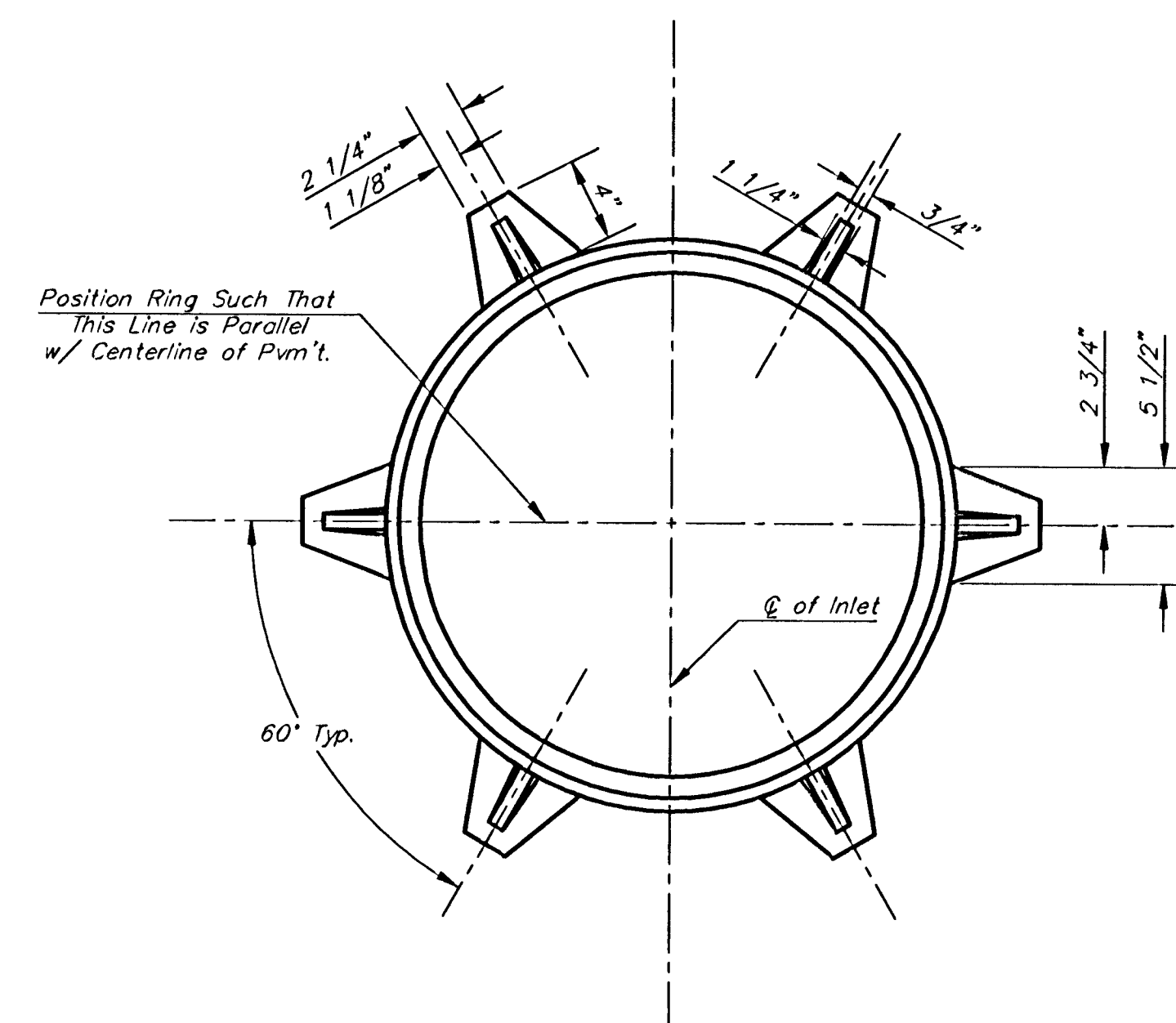


SECTION A-A

\*\*\*NOTE: Slope of Inlet tops to Match Sidewalk or Parking Slopes within Limits Indicated.



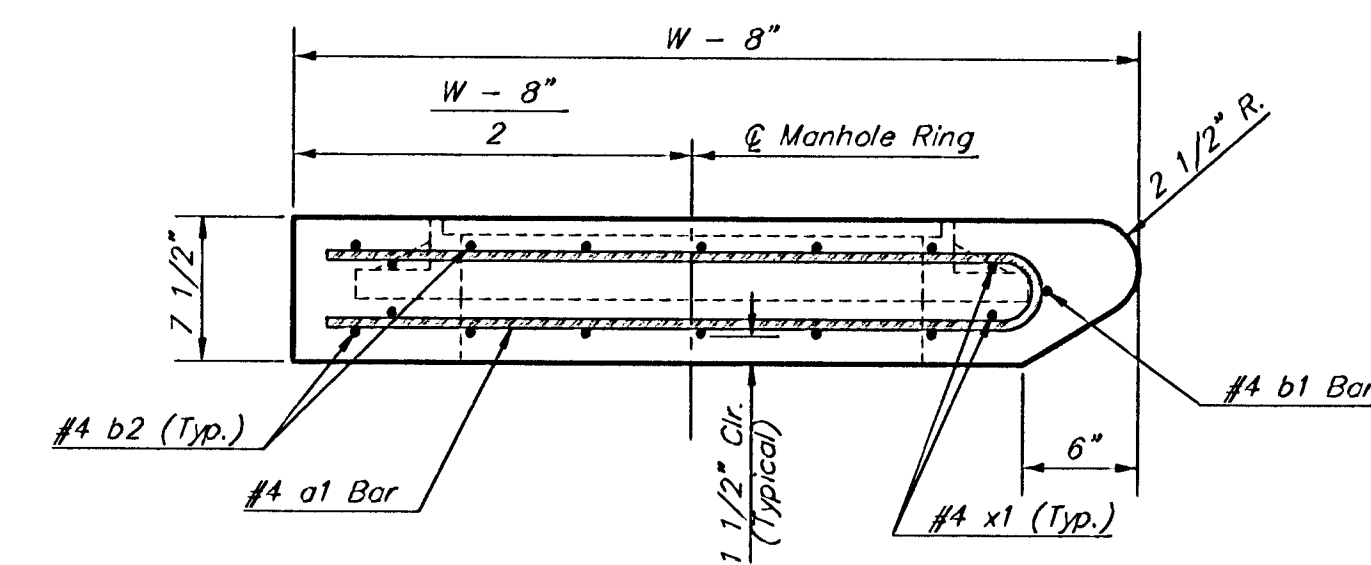
SECTION B-B



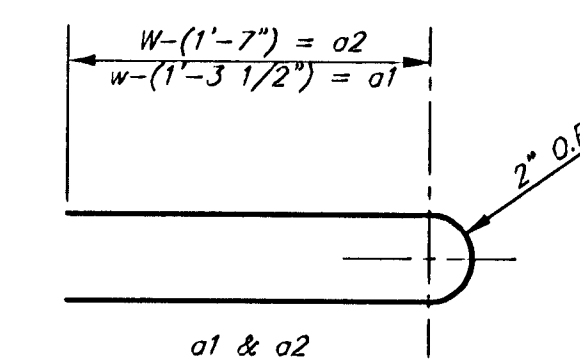
MANHOLE RING AND COVER

Weight = 180 Lbs.

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



SECTION C-C



BENDING DIAGRAM

| PRECAST SLAB AND FLOOR REINFORCING |      |           |        |           |        |           |        |           |        |           |        |
|------------------------------------|------|-----------|--------|-----------|--------|-----------|--------|-----------|--------|-----------|--------|
|                                    |      | W = 4'-4" |        | W = 5'-4" |        | W = 6'-4" |        | W = 7'-4" |        | W = 8'-4" |        |
| MARK                               | SIZE | NO.       | LENGTH | NO.       | LENGTH | NO.       | LENGTH | NO.       | LENGTH | NO.       | LENGTH |
| * a1                               | #4   | 6         | 6'-7"  | 6         | 8'-7"  | 6         | 10'-7" | 6         | 12'-7" | 6         | 14'-7" |
| a2                                 | #4   | 4         | 6'-0"  | 4         | 8'-0"  | 4         | 10'-0" | 4         | 12'-0" | 4         | 14'-0" |
| a3                                 | #4   | 13        | 4'-1"  | 13        | 5'-1"  | 13        | 6'-1"  | 13        | 7'-1"  | 13        | 8'-1"  |
| b1                                 | #4   | 1         | 4'-9"  | 1         | 4'-9"  | 1         | 4'-9"  | 1         | 4'-9"  | 1         | 4'-9"  |
| * b2                               | #4   | 23        | 6'-1"  | 29        | 6'-1"  | 35        | 6'-1"  | 41        | 6'-1"  | 47        | 6'-1"  |
| x1                                 | #4   | 8         | 3'-10" | 8         | 4'-2"  | 8         | 4'-6"  | 8         | 4'-10" | 8         | 5'-2"  |
| WALL REINFORCING                   |      |           |        |           |        |           |        |           |        |           |        |
|                                    |      | W = 4'-4" |        | W = 5'-4" |        | W = 6'-4" |        | W = 7'-4" |        | W = 8'-4" |        |
| MARK                               | SIZE | NO.       | LENGTH | NO.       | LENGTH | NO.       | LENGTH | NO.       | LENGTH | NO.       | LENGTH |
| w1                                 | #4   | ①         | 6'-1"  | ①         | 6'-1"  | ①         | 6'-1"  | ①         | 6'-1"  | ①         | 6'-1"  |
| w2                                 | #4   | ①         | 4'-1"  | ①         | 5'-1"  | ①         | 6'-1"  | ①         | 7'-1"  | ①         | 8'-1"  |
| w3                                 | #4   | 32        | ②      | 36        | ②      | 40        | ②      | 44        | ②      | 48        | ②      |

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

| 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±         |

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

Revised - Feb. 16, 1989

CITY OF WICHITA STANDARD TYPE 1A  
**Curb Inlet Details**  
 INLET OPENING = 6' X 5'-0"

**BAUGHMAN COMPANY P.A.**  
 ENGINEERING, SURVEYING, & PLANNING  
 316-262-7271 • 315 ELLIS • WICHITA, KANSAS 67211

PROJECT NUMBER  
**488-83544**

DESIGN: C.O.W. DRAWN: Staff APPROVED: DATE: 4/02/03 SCALE: None SHEET: 7 OF 14



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



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



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

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

**GENERAL NOTES:**

1. 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.
2. 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.
3. 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.
4. 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.
5. The ends of all pipes installed in inlets shall be cut off flush with the inside face of the inlet wall.

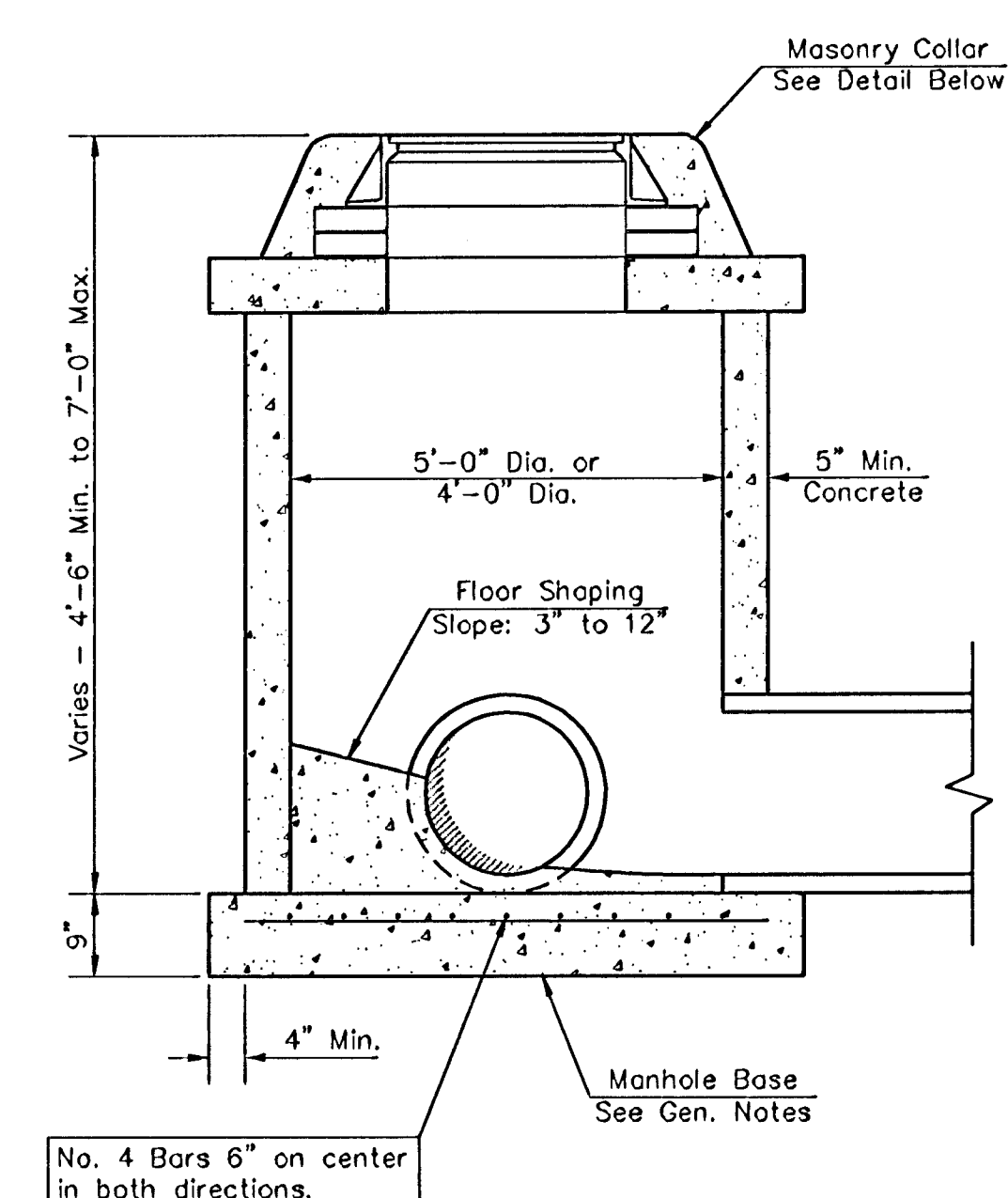


| STANDARD CURB INLET PRECAST TOPS |                   |        |           |               |       |
|----------------------------------|-------------------|--------|-----------|---------------|-------|
| W                                | PRE-CAST TOP SIZE |        | PIPE SIZE | CU. YD. CONC. |       |
| 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± |
| 7'-8"                            | 7'-8"             | 11'-4" | 7 1/2"    | 60" & 66"     | 1.92± |

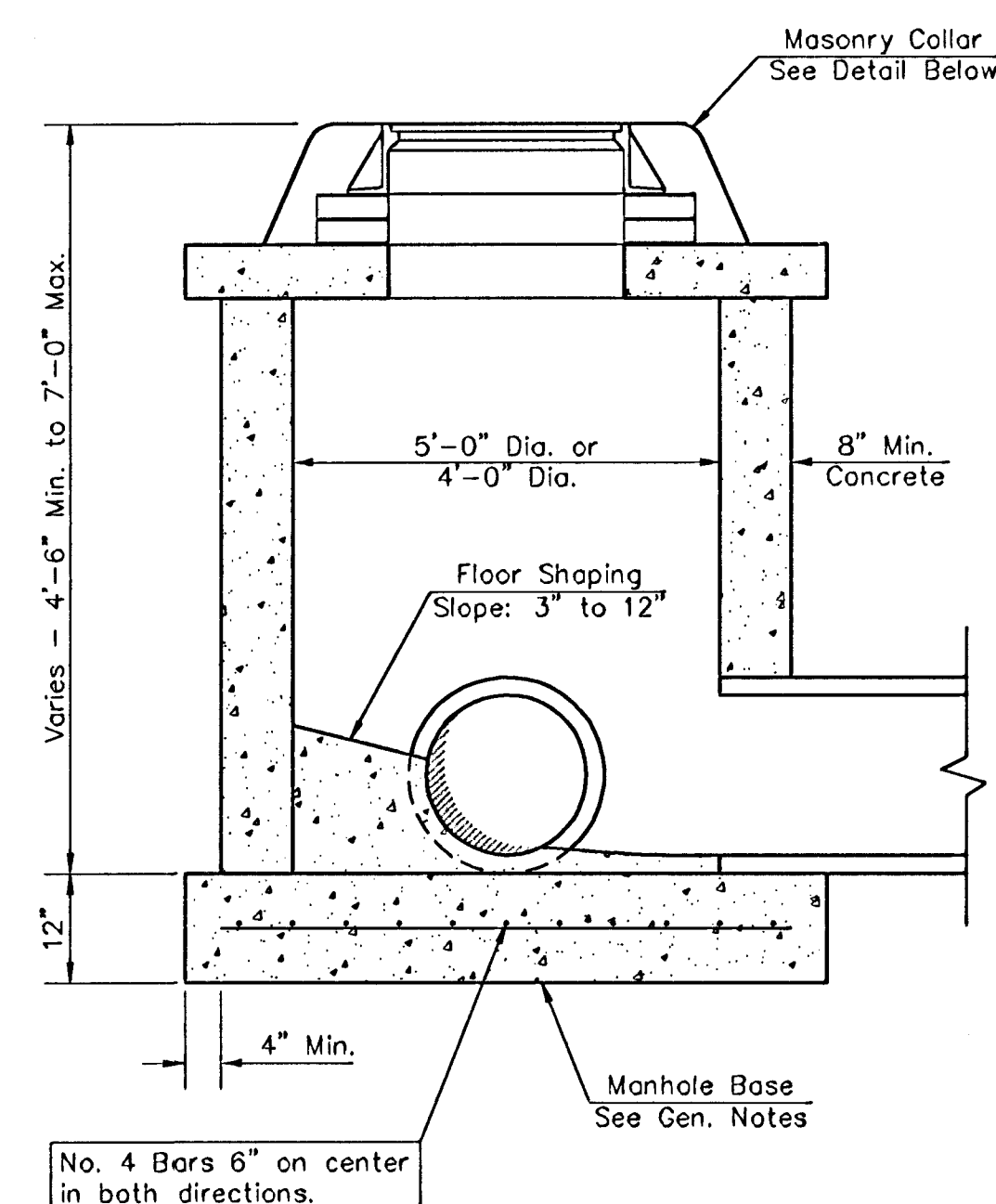


\*See City of Wichita Standard Manhole Ring and Cover Detail Sheet for Cover Details to Be Used With Inlet Frame.

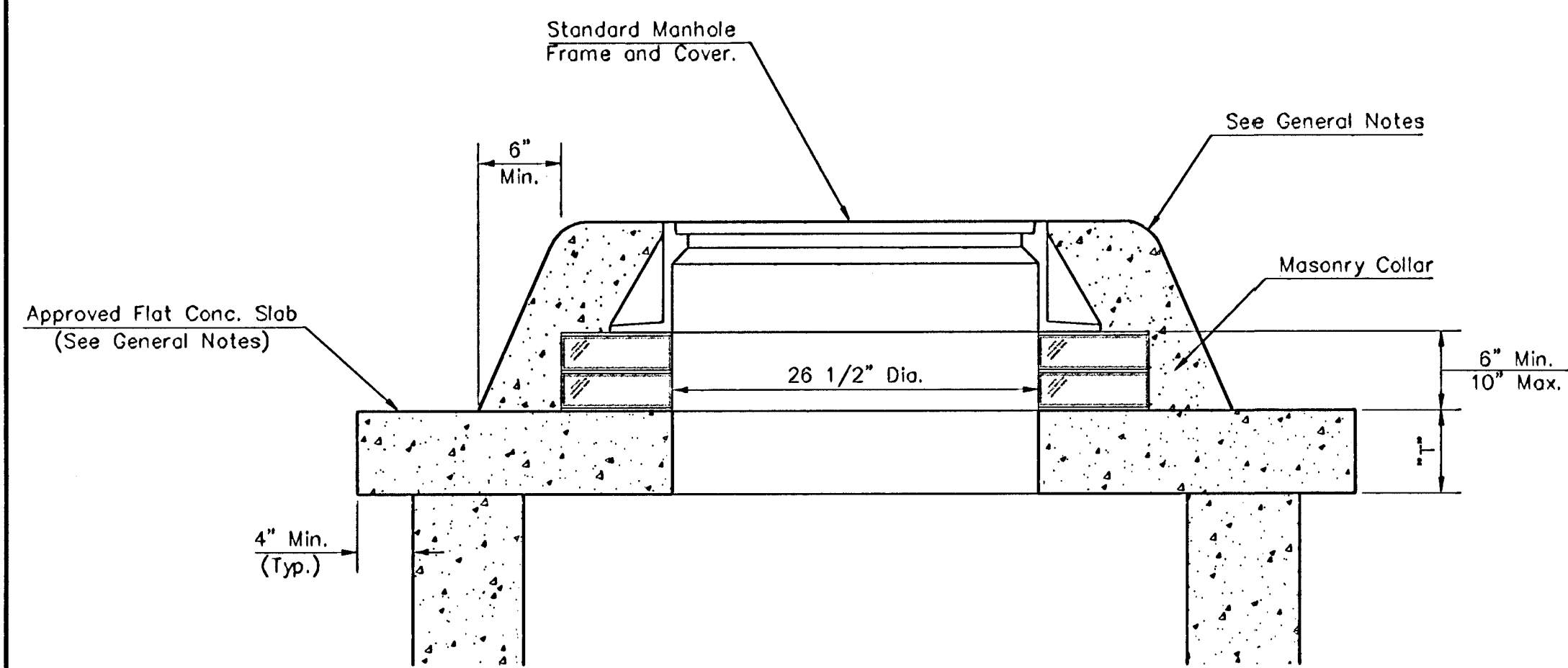
Revised - Feb. 16, 1989



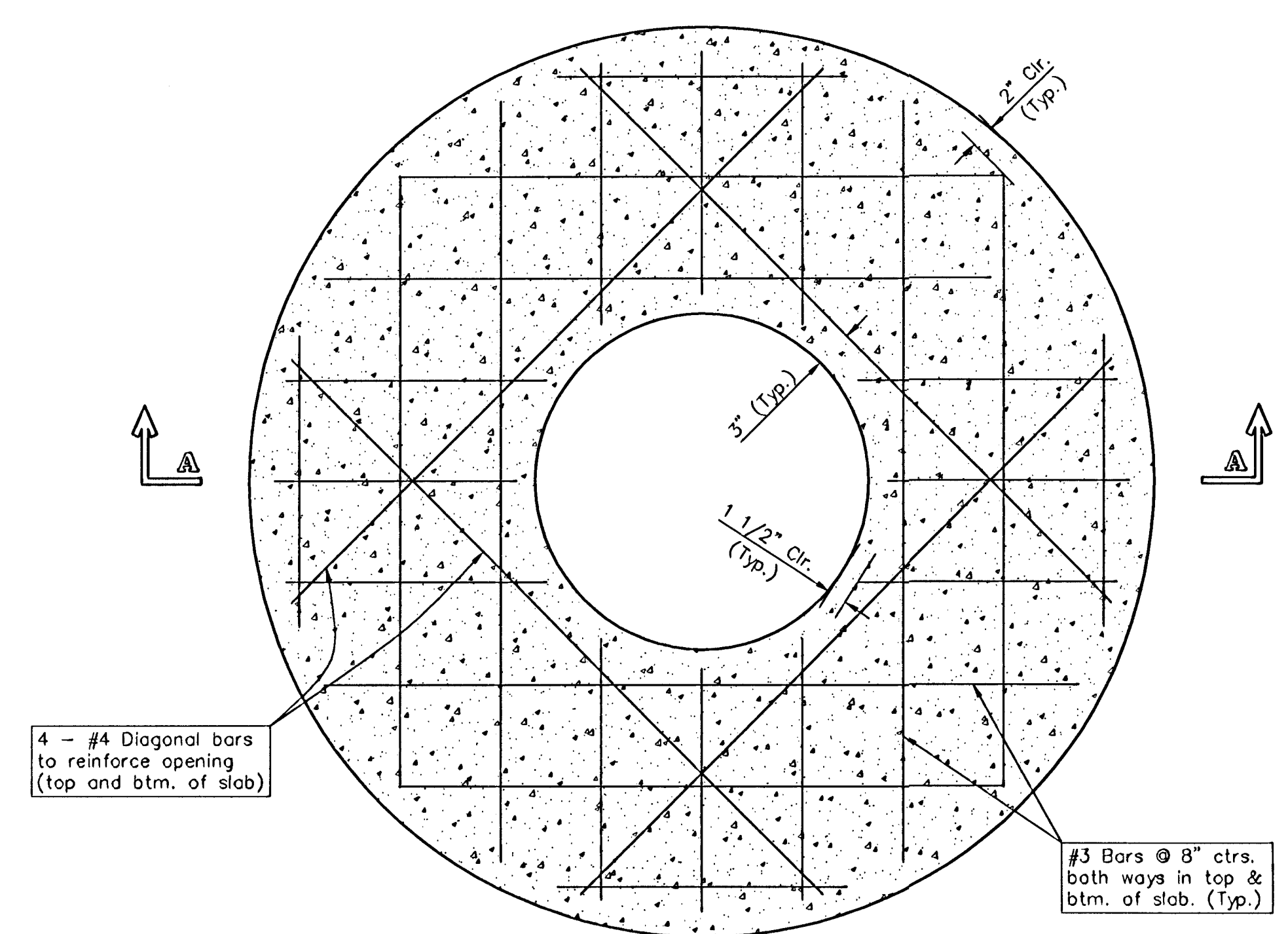
SHALLOW TYPE "P" MANHOLE



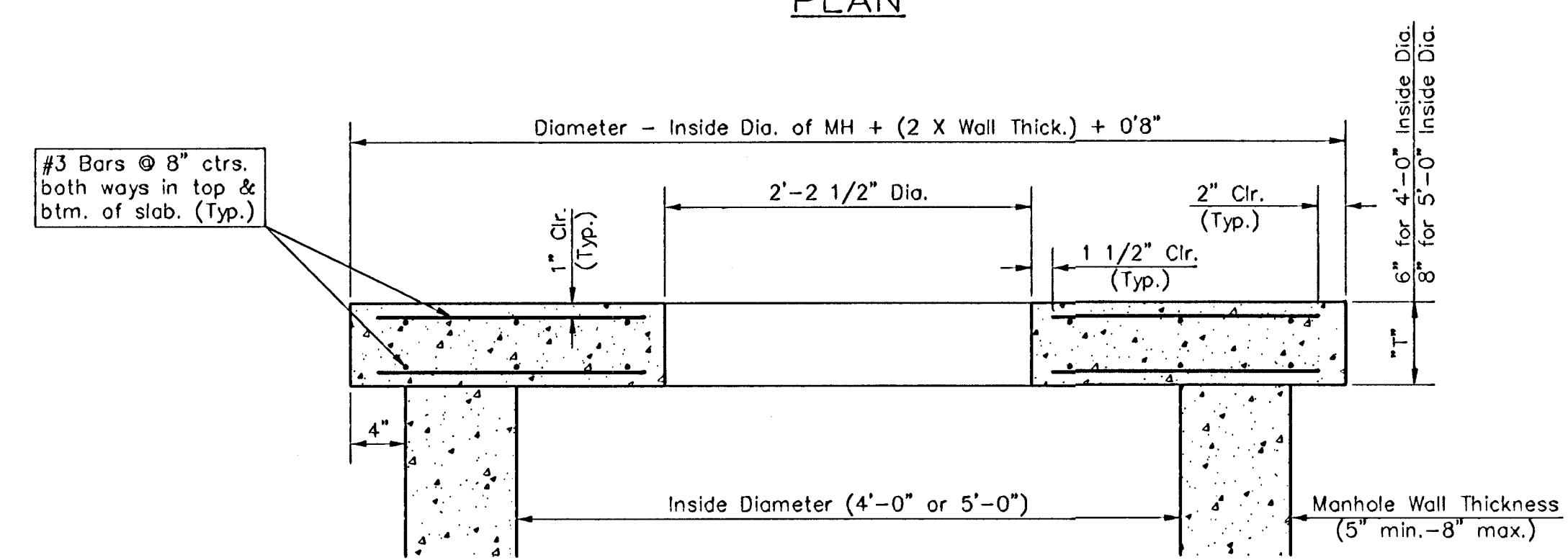
SHALLOW TYPE "C" MANHOLE



MASONRY COLLAR DETAIL



PLAN



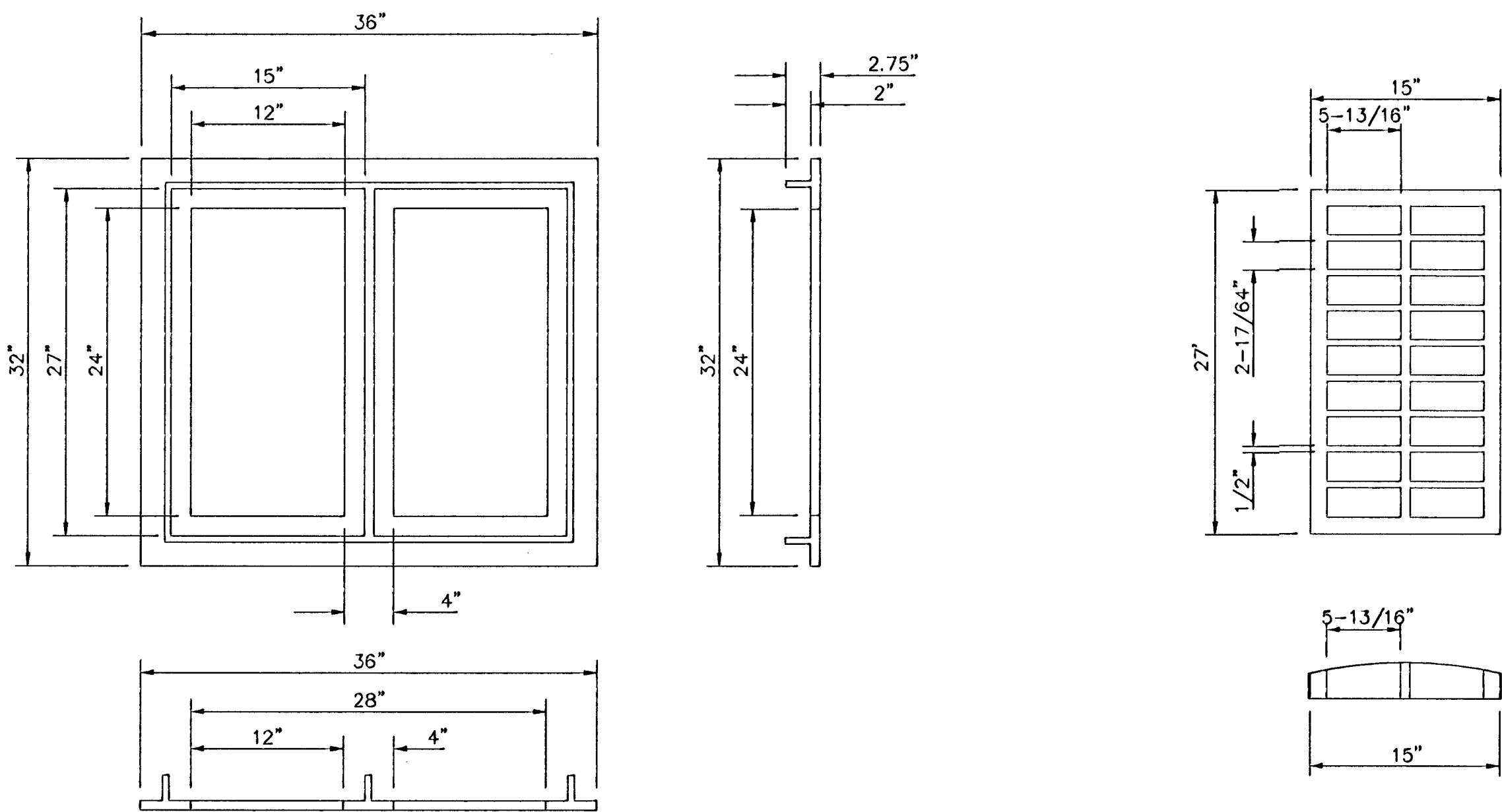
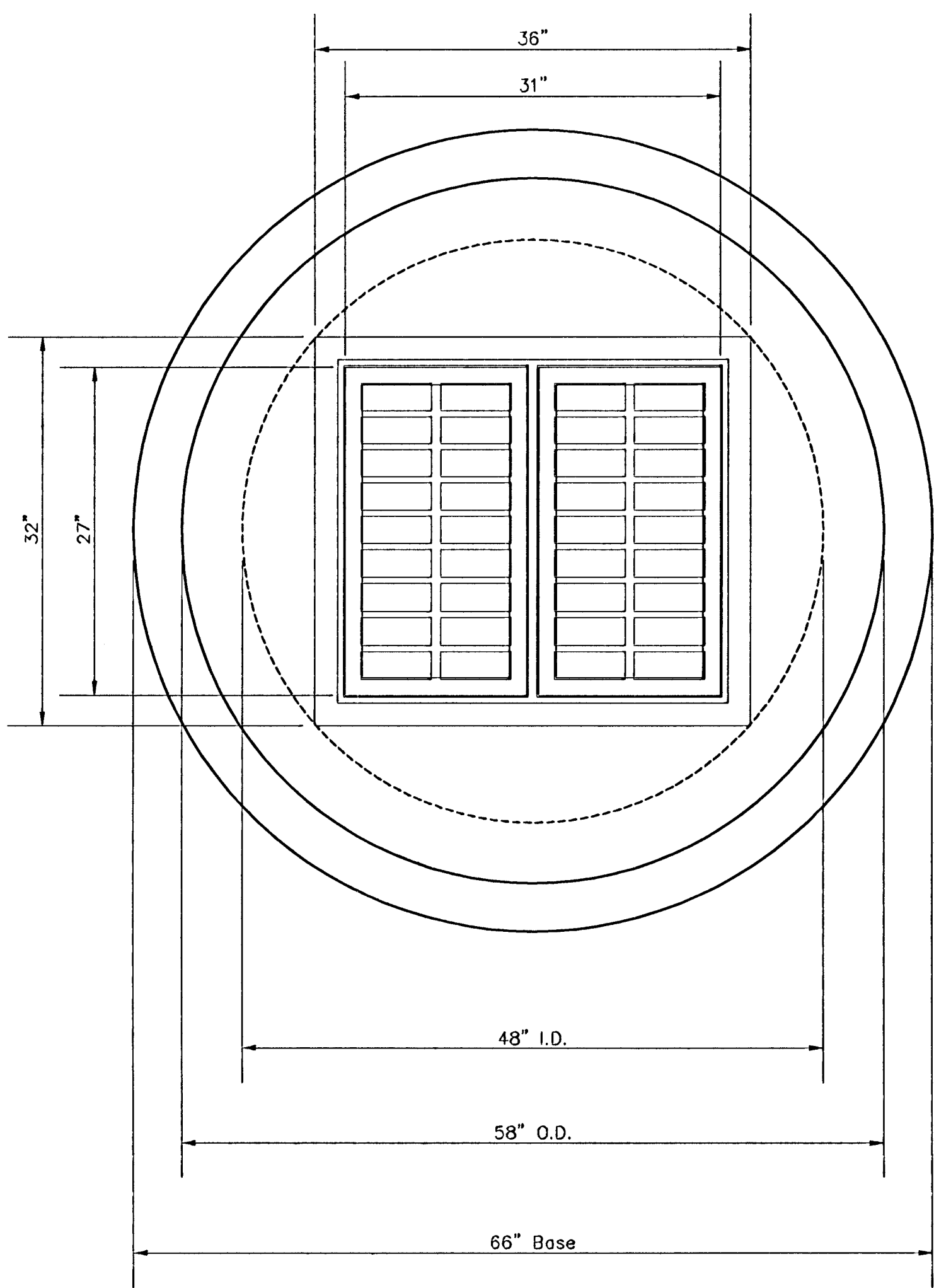
SECTION A-A

FLAT CONCRETE SLAB DETAILS

GENERAL NOTES

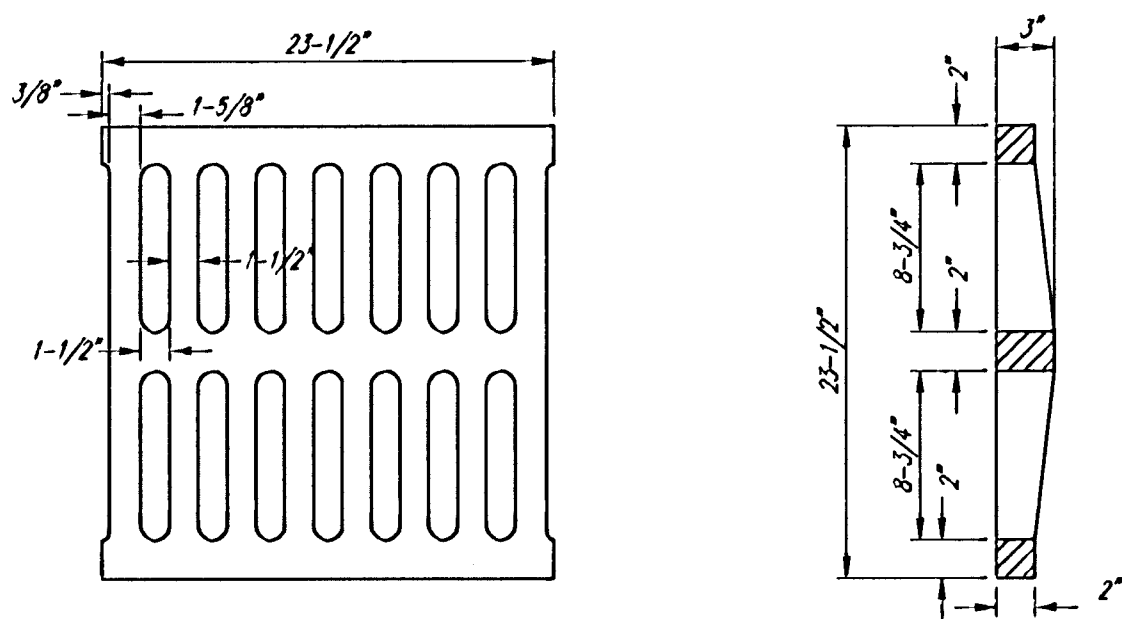
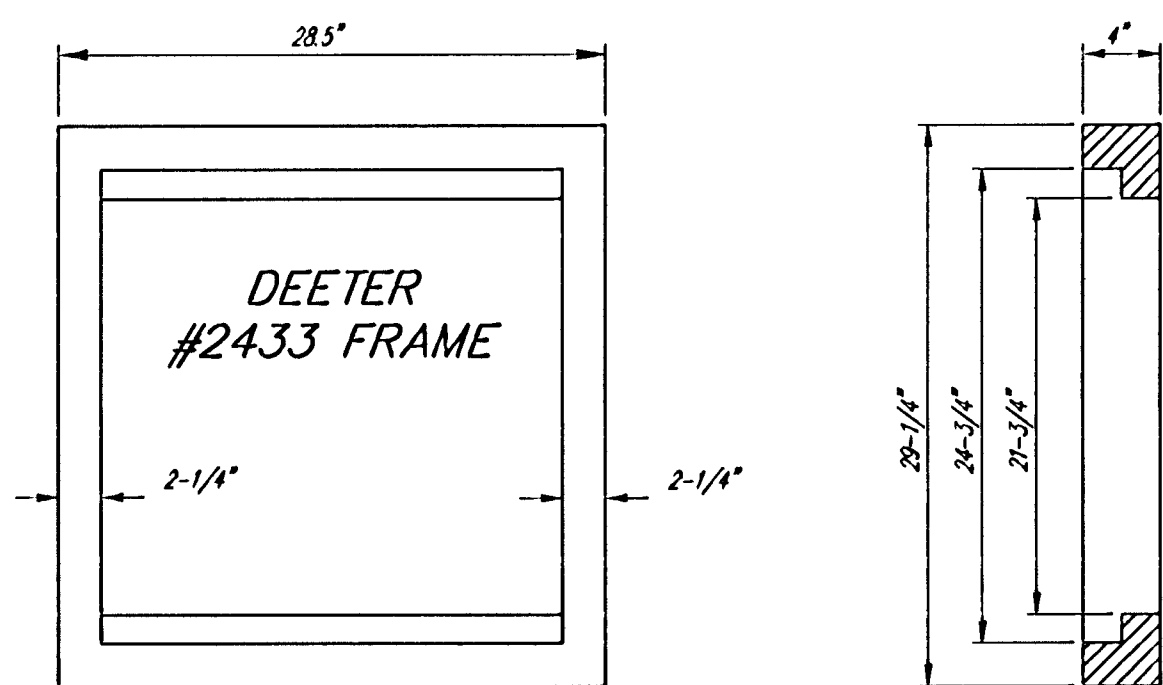
- Mortar used in masonry construction shall contain 8 sacks of cement per cubic yard. Concrete used in manhole bases shall conform to the requirements of concrete for concrete pavement construction as specified in the city standard paving specifications using city concrete cement mix without air entraining admixture. Mortar shall be placed around the manhole ring as shown on the drawings when manholes are constructed in unpaved areas. 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 "P" and "C" shall be paid for at the unit price bid per each for the type and diameter 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                          |       |          |         |       |         |
| <b>STD. SHALLOW MANHOLES</b>                     |       |          |         |       |         |
| TYPE 'P' AND TYPE 'C'                            |       |          |         |       |         |
| BAUGHMAN COMPANY P.A.                            |       |          |         |       |         |
| ENGINEERING, SURVEYING, & PLANNING               |       |          |         |       |         |
| 316-262-7271 • 315 ELLIS • WICHITA, KANSAS 67211 |       |          |         |       |         |
| PROJECT NUMBER                                   |       |          |         |       |         |
| <b>488-83844</b>                                 |       |          |         |       |         |
| DESIGN                                           | DRAWN | APPROVED | DATE    | SCALE | SHEET   |
| STAFF                                            | STAFF | STAFF    | 4/02/03 | NONE  | 9 OF 14 |

[illegible]

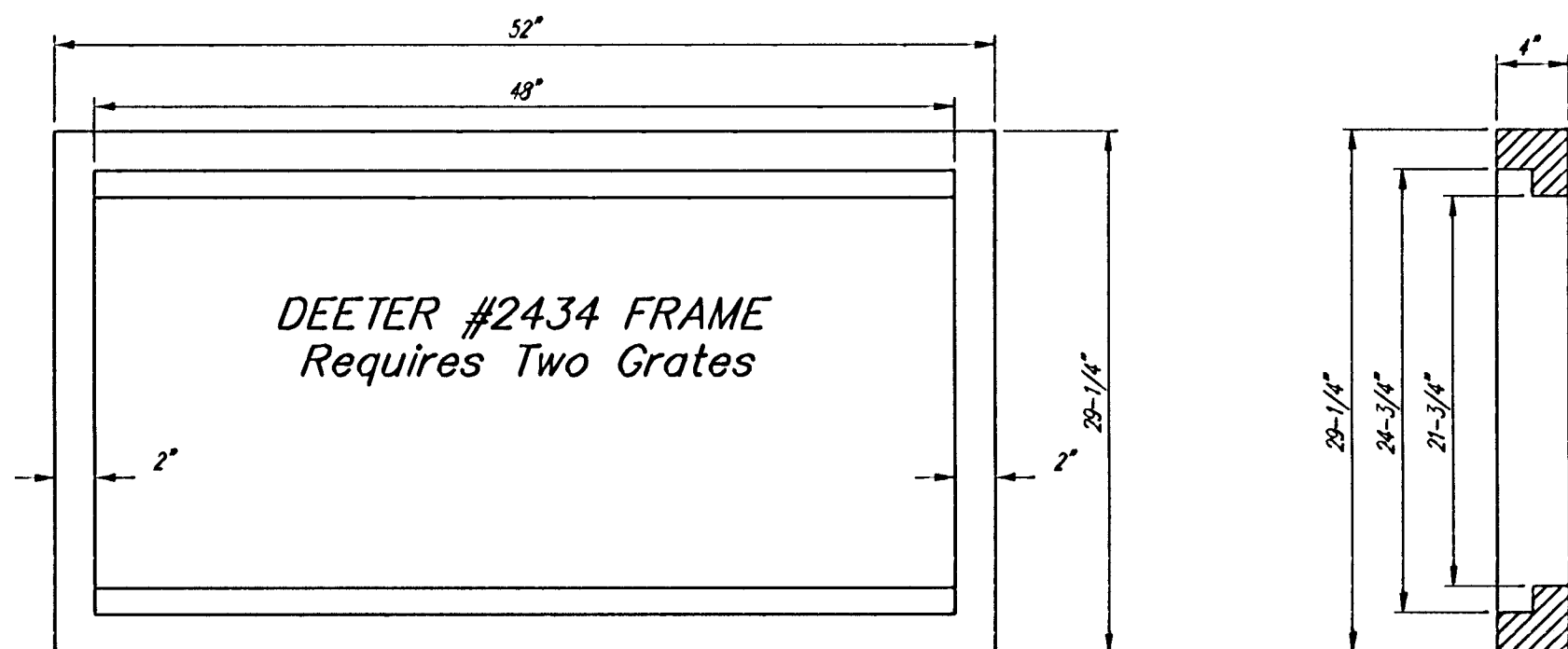
## GENERAL NOTES

1. Mortar used in masonry construction shall contain 8 sacks of cement per cubic yard. Concrete used in yard inlet 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.
2. Reinforcing steel shall be installed in the yard inlet bases and shall consist of no. 4 bars placed on 6" centers in both directions. The yard inlet base reinforcement shall be placed 6" above the bottom of the yard inlet base. All costs for furnishing and installing reinforcing steel shall be included in the unit price bid for the yard inlet.
3. The floors of all yard inlet shall be shaped with flow channels such that the inlets will be self cleaning and free of areas where solids could be deposited. Flow channels shall be formed to match the bottom halves of the inflowing pipes and the outflowing pipe as shown by the drawings. Inlet 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 inlets shall have the top half removed to neat lines for the full inside diameter of the inlet. Inlet floors shall then be shaped around the bottom half of the pipe which forms the flow channel.
4. Pipes installed within the excavation made for the inlet shall be cradled with concrete to the limits of the inlet excavation. When clay pipe is used, the cradle shall extend to the first joint outside the inlet. 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 inlet excavation or to clay pipe joints adjacent to inlet shall be included in the unit price bid for the inlet.
5. Inlet grate castings and inlet frame castings shall conform to the requirements as indicated in the standard specifications and as shown in the standard detail drawing.
6. The crowns of inflowing pipes shall never be set lower than the crown of the outflowing pipe.
7. Joints between inlet sections to be sealed with two wraps of extruded butyl rubber joint mastic meeting City of Wichita Type "P" Manhole Specifications.
8. Special yard inlet shall be paid for at the unit price bid per each. All standard yard inlet diameters will be 4'.



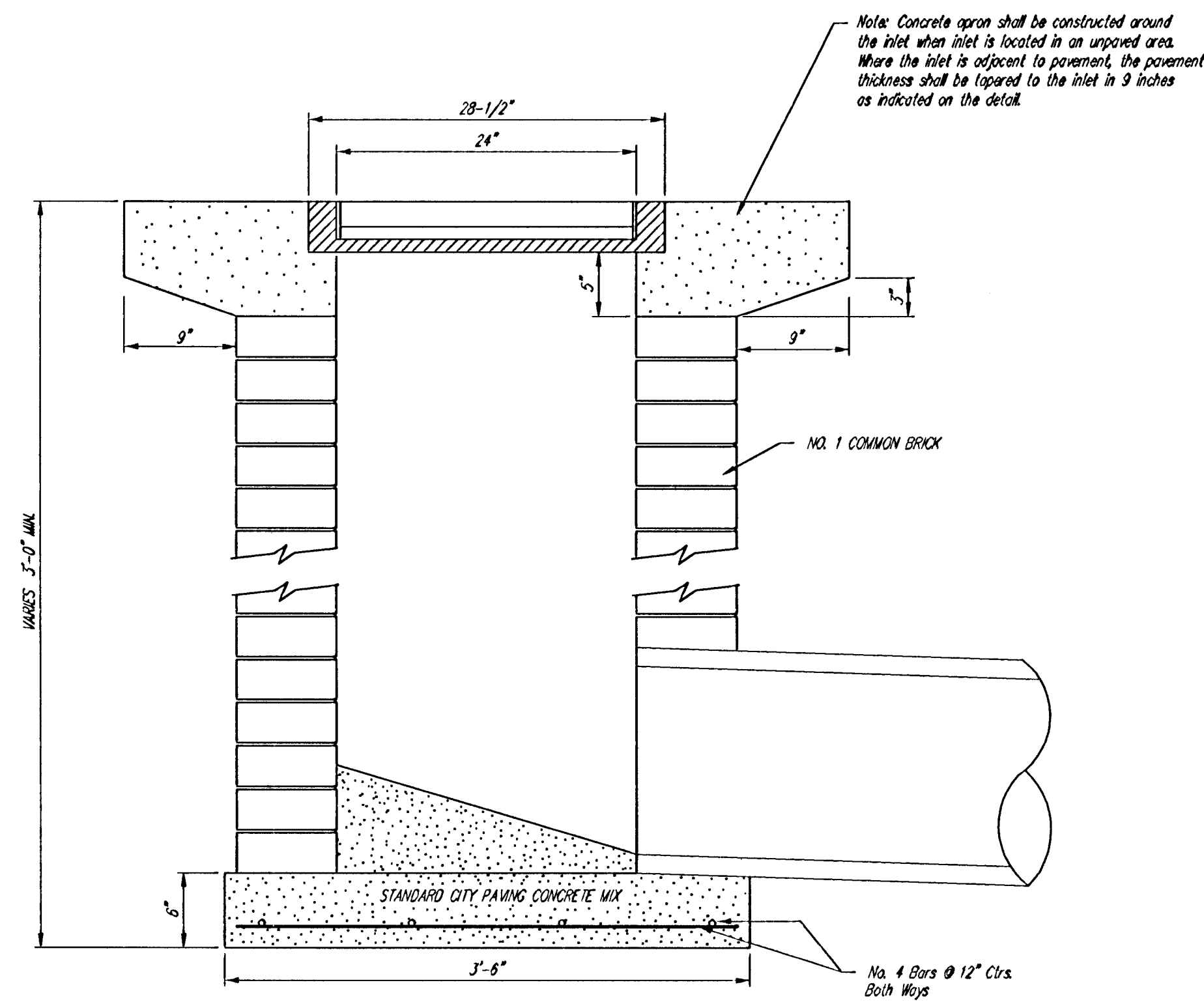
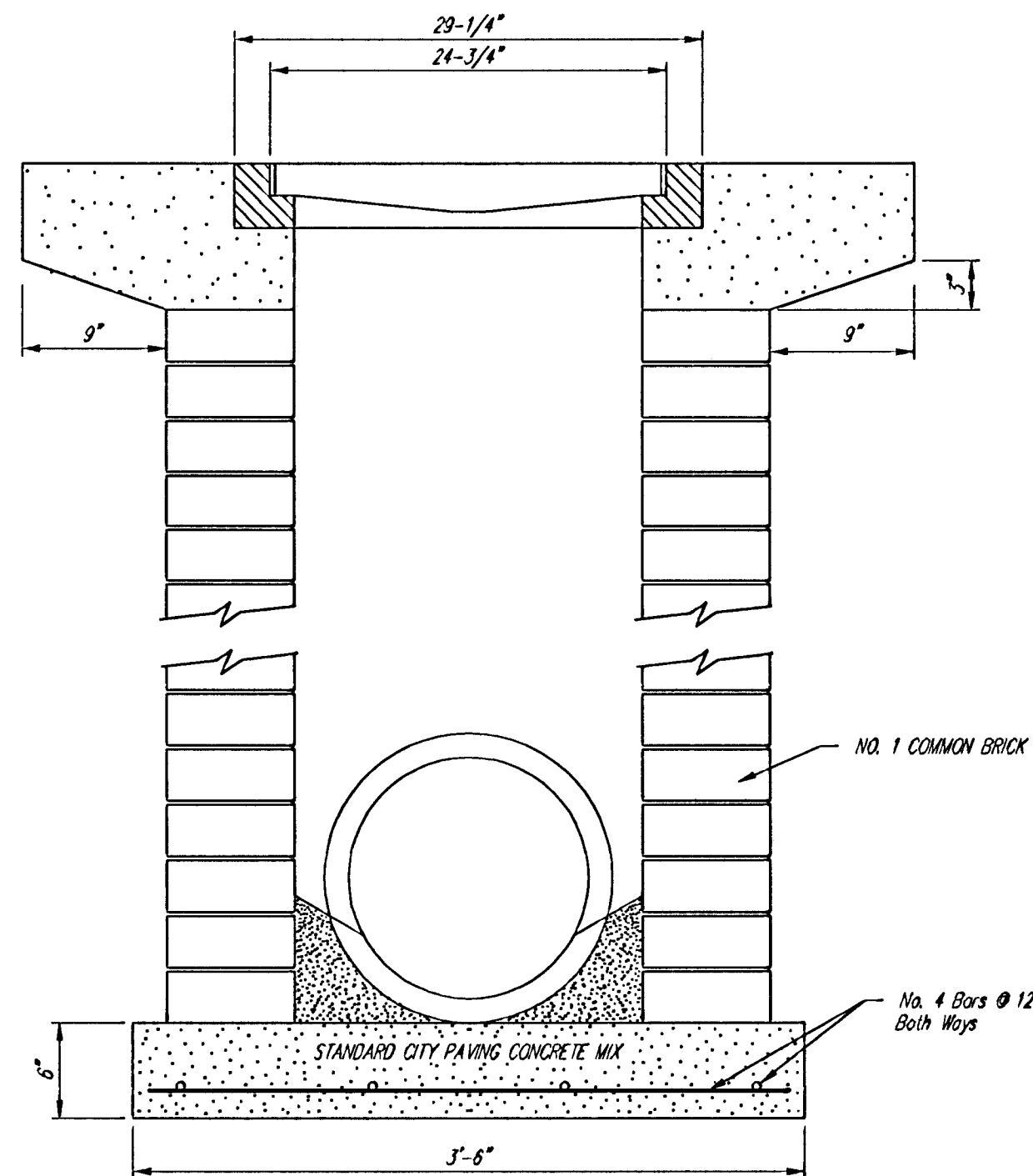
DEETER #2433 GRATE

24" x 24" Frame and Grate Detail

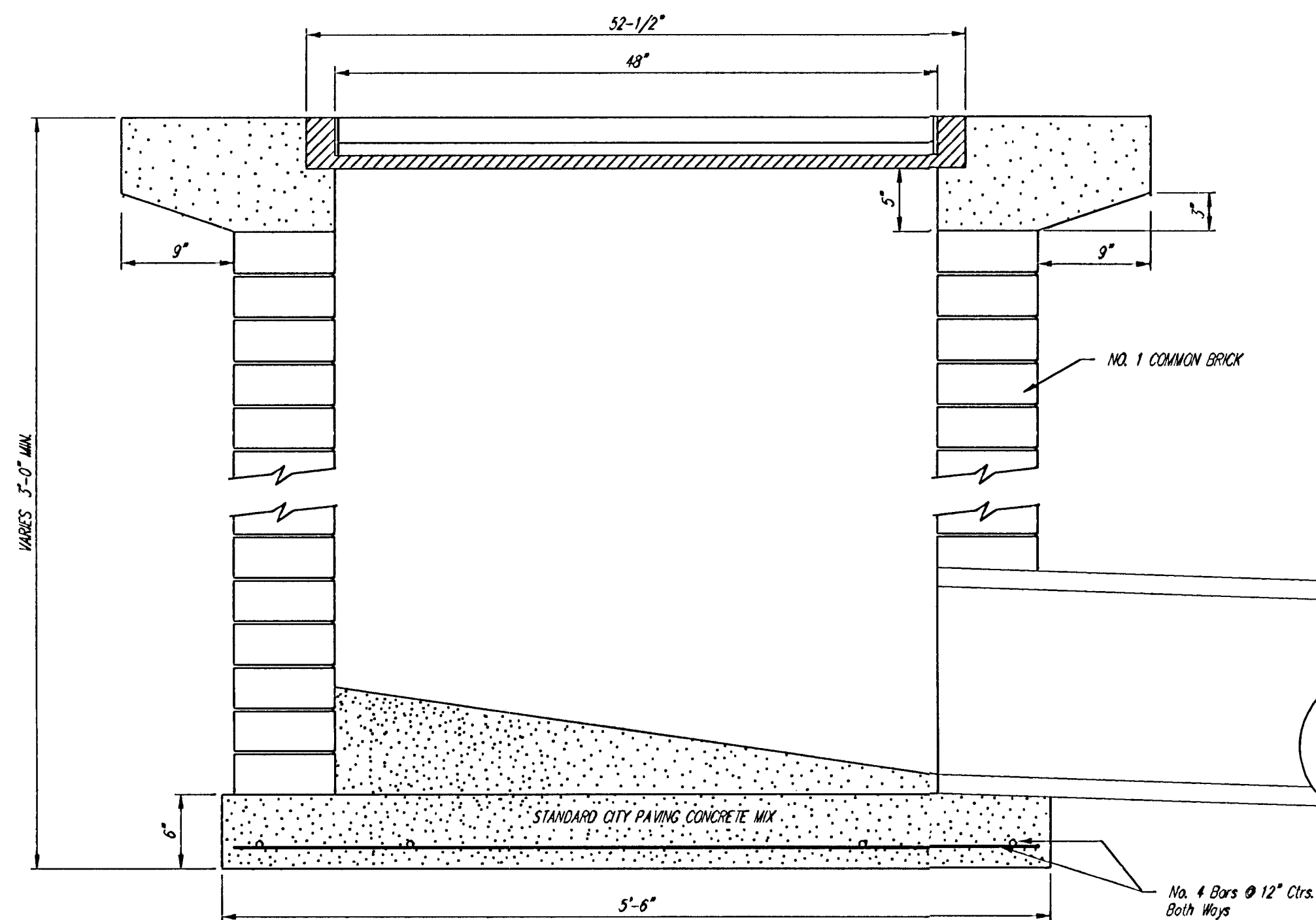


Double 24" x 24" Frame Detail

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.

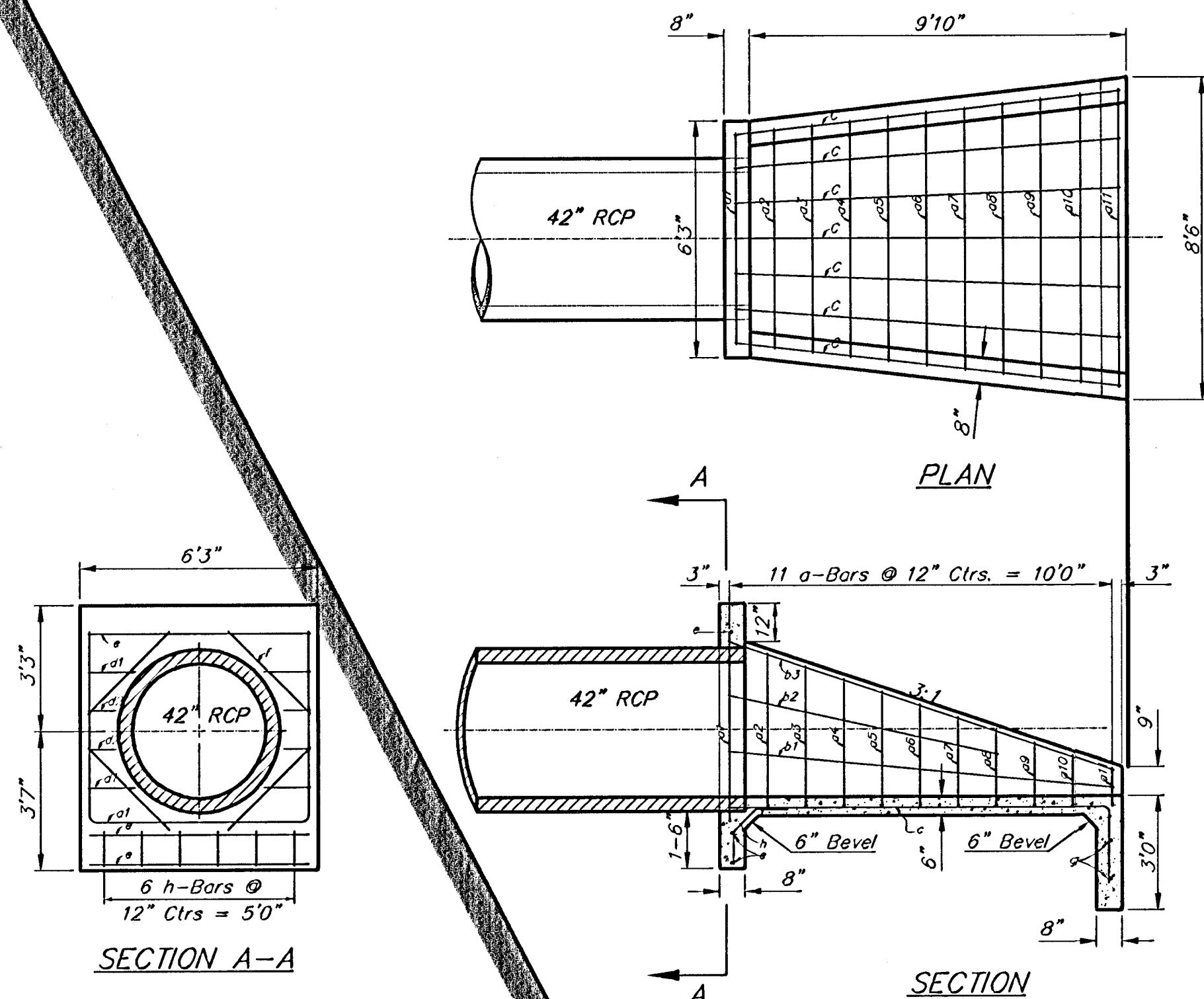


Note: Concrete apron shall be constructed around the inlet when inlet is located in an unpaved area. Where the inlet is adjacent to pavement, the pavement thickness shall be tapered to the inlet in 3 inches as indicated on the detail.

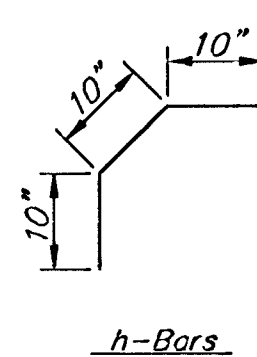


|                                                                                                                        |                |          |                 |               |                    |
|------------------------------------------------------------------------------------------------------------------------|----------------|----------|-----------------|---------------|--------------------|
| City of Wichita Standard<br><b>Drop Inlet</b>                                                                          |                |          |                 |               |                    |
| <b>BAUGHMAN COMPANY P.A.</b><br>ENGINEERING, SURVEYING, & PLANNING<br>316-262-7271 • 315 ELLIS • WICHITA, KANSAS 67211 |                |          |                 |               |                    |
| PROJECT NUMBER<br><b>468-83544</b>                                                                                     |                |          |                 |               | SHEET<br><b>11</b> |
| DESIGN<br>C.O.W.                                                                                                       | DRAWN<br>Staff | APPROVED | DATE<br>4/02/03 | SCALE<br>NONE | OF<br><b>14</b>    |

Dropin12



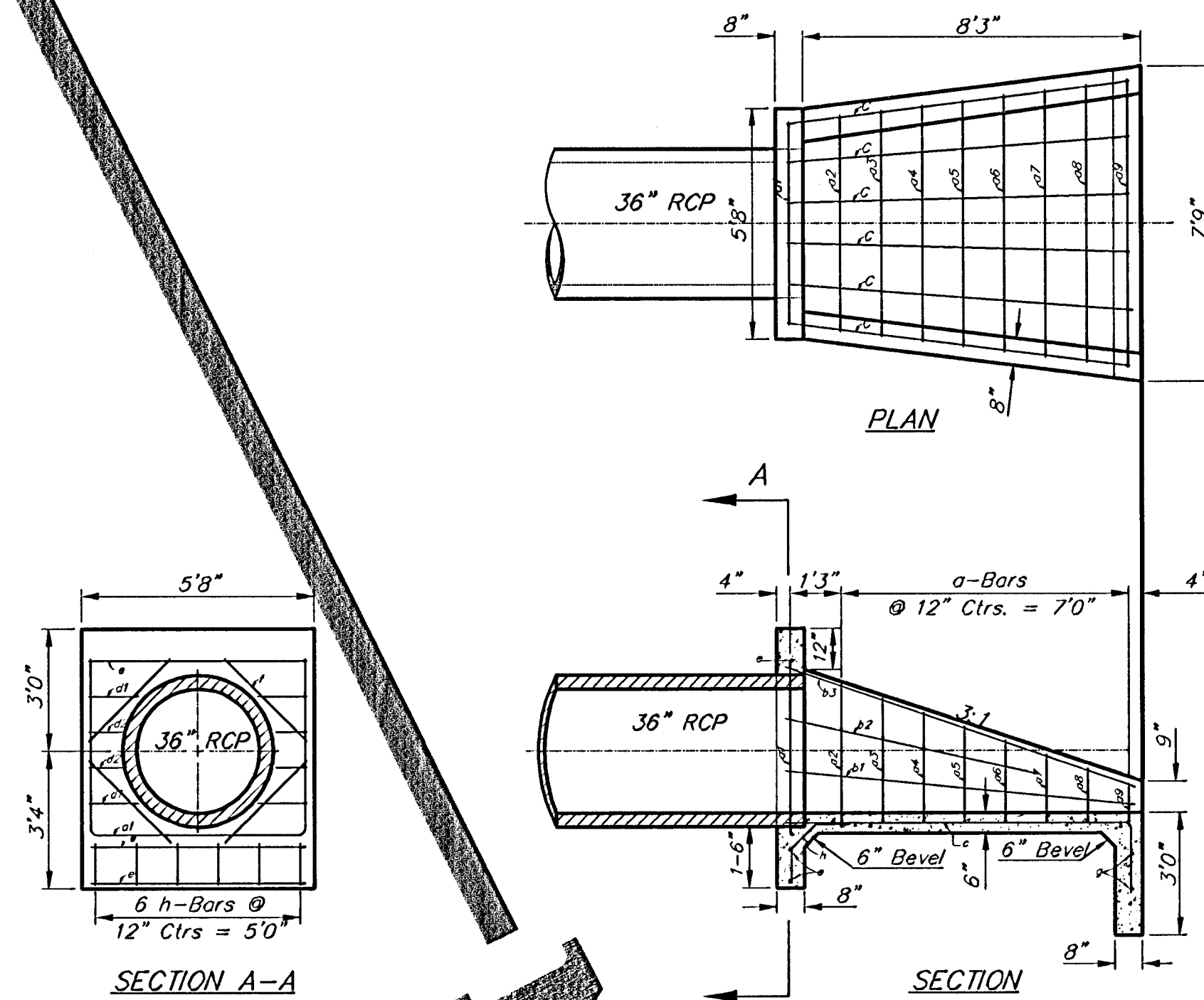
| a-Bars   |  |
|----------|--|
| a1 5'7"  |  |
| a2 5'10" |  |
| a3 6'1"  |  |
| a4 6'4"  |  |
| a5 6'6"  |  |
| a6 6'9"  |  |
| a7 7'0"  |  |
| a8 7'3"  |  |
| a9 7'6"  |  |
| a10 7'9" |  |
| a11 8'0" |  |



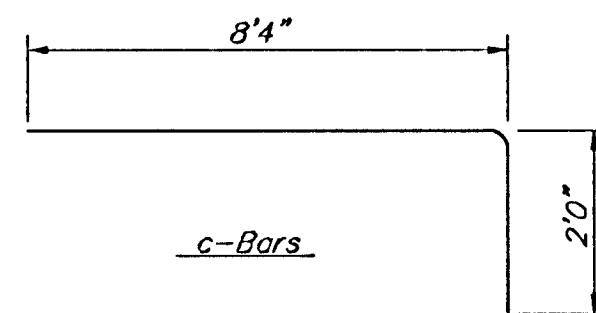
| Bar         | Shape | No. | Length      | Weight |
|-------------|-------|-----|-------------|--------|
| a1          |       | 1   | 15'7"       | 10.41  |
| a2          |       | 1   | 13'10"      | 9.24   |
| a3          |       | 1   | 13'5"       | 8.96   |
| a4          |       | 1   | 13'0"       | 8.68   |
| a5          |       | 1   | 12'6"       | 8.35   |
| a6          |       | 1   | 12'1"       | 8.07   |
| a7          |       | 1   | 11'8"       | 7.79   |
| a8          |       | 1   | 11'3"       | 7.52   |
| a9          |       | 1   | 10'9"       | 7.18   |
| a10         |       | 1   | 10'5"       | 6.96   |
| a11         |       | 1   | 10'0"       | 6.68   |
| b1          |       | 2   | 10'2"       | 13.58  |
| b2          |       | 2   | 9'3"        | 9.69   |
| b3          |       | 2   | 10'3"       | 14.25  |
| c           |       | 7   | 12'0"       | 56.11  |
| d1          |       | 4   | 3'34"       | 3.34   |
| d2          |       | 4   | 3'          | 2.00   |
| e           |       | 3   | 5'10"       | 11.69  |
| f           |       | 4   | 3'0"        | 30.06  |
| g           |       | 2   | 8'0"        | 10.69  |
| h           |       | 6   | 2'6"        | 6.68   |
| Total Rebar |       |     | 247.93 Lbs. |        |
| Concrete    |       |     | 10.12 C.Y.  |        |

A Deduction in Concrete Quantities Has Been Made for Pipe Openings Through the Headwall.  
 \* Field Bend or Cut Reinforcing as Required for Clearance.  
 All Concrete Reinforcement to be #4 Rebar.  
 All Rebar to Have Min. of 1 1/2" Conc. Cover

HEADWALL FOR 42" RCP



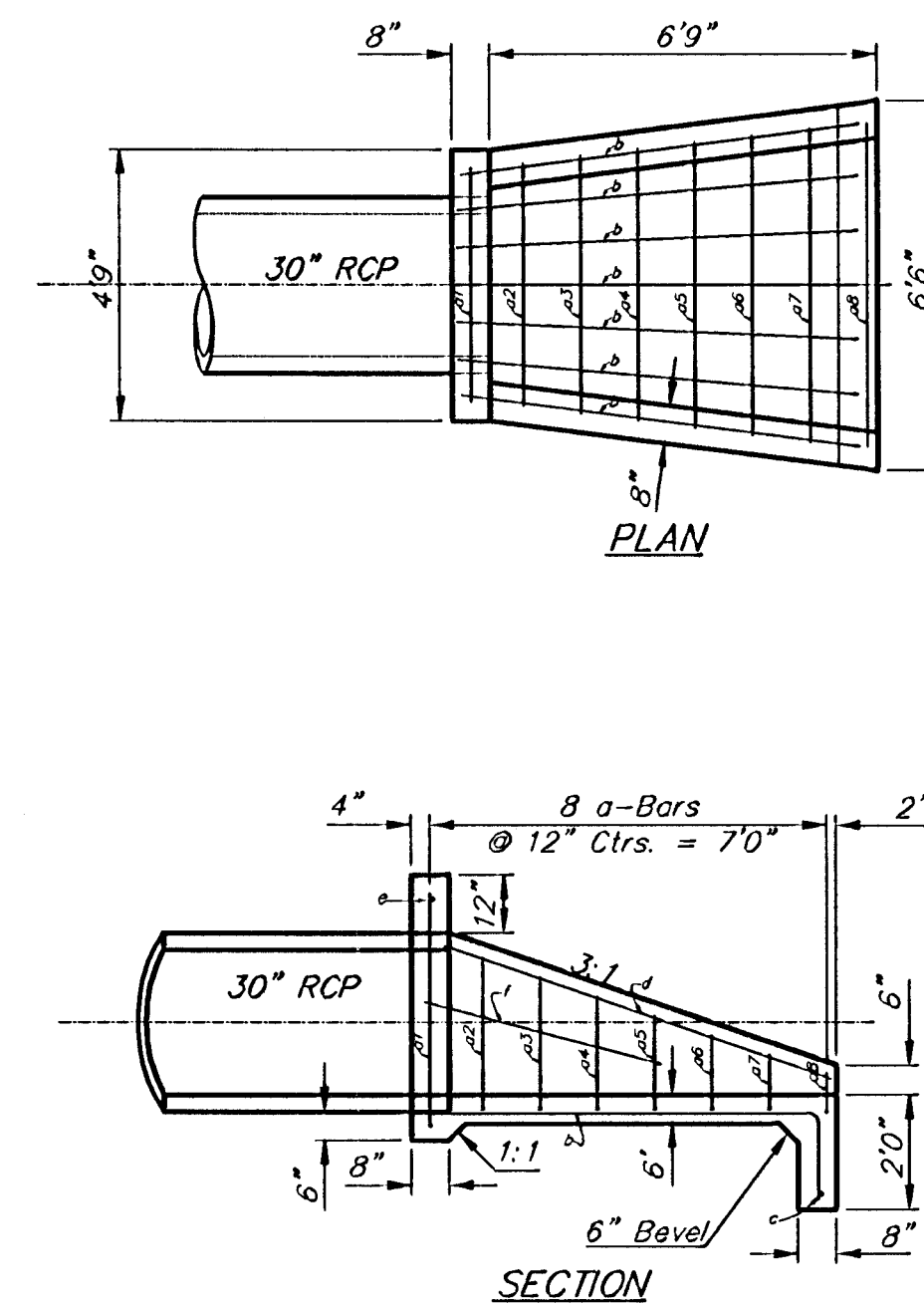
| a-Bars   |  |
|----------|--|
| a1 5'2"  |  |
| a2 5'2"  |  |
| a3 5'5"  |  |
| a4 5'8"  |  |
| a5 5'11" |  |
| a6 6'2"  |  |
| a7 6'5"  |  |
| a8 6'8"  |  |
| a9 6'11" |  |



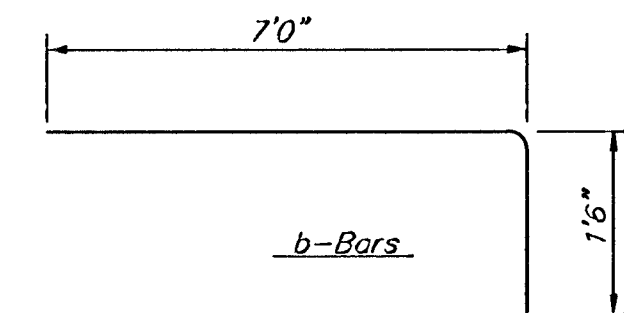
| Bar         | Shape | No. | Length      | Weight |
|-------------|-------|-----|-------------|--------|
| a1          |       | 1   | 14'0"       | 9.35   |
| a2          |       | 1   | 11'10"      | 7.90   |
| a3          |       | 1   | 11'3"       | 7.52   |
| a4          |       | 1   | 10'10"      | 7.24   |
| a5          |       | 1   | 10'5"       | 6.96   |
| a6          |       | 1   | 10'0"       | 6.68   |
| a7          |       | 1   | 9'7"        | 6.40   |
| a8          |       | 1   | 9'0"        | 6.01   |
| a9          |       | 1   | 8'7"        | 5.73   |
| b1          |       | 2   | 10'0"       | 11.24  |
| b2          |       | 2   | 9'0"        | 6.12   |
| b3          |       | 2   | 9'0"        | 12.02  |
| c           |       | 6   | 10'1"       | 41.42  |
| d1          |       | 4   | 1'6"        | 4.01   |
| d2          |       | 4   | 1'0"        | 2.23   |
| e           |       | 3   | 5'4"        | 10.69  |
| f           |       | 4   | 3'0"        | 30.02  |
| g           |       | 2   | 7'0"        | 9.35   |
| h           |       | 6   | 2'6"        | 10.02  |
| Total Rebar |       |     | 178.91 Lbs. |        |
| Concrete    |       |     | 3.20 C.Y.   |        |

A Deduction in Concrete Quantities Has Been Made for Pipe Openings Through the Headwall.  
 \* Field Bend or Cut Reinforcing as Required for Clearance.  
 All Concrete Reinforcement to be #4 Rebar.  
 All Rebar to Have Min. of 1 1/2" Conc. Cover

HEADWALL FOR 36" RCP



| a-Bars  |  |
|---------|--|
| a1 4'1" |  |
| a2 4'3" |  |
| a3 4'6" |  |
| a4 4'8" |  |
| a5 5'0" |  |
| a6 5'3" |  |
| a7 5'6" |  |
| a8 5'8" |  |



| Bar         | Shape | No. | Length      | Weight |
|-------------|-------|-----|-------------|--------|
| a1          |       | 1   | 12'1"       | 8.07   |
| a2          |       | 1   | 9'5"        | 6.29   |
| a3          |       | 1   | 9'0"        | 6.01   |
| a4          |       | 1   | 8'6"        | 5.68   |
| a5          |       | 1   | 8'2"        | 5.46   |
| a6          |       | 1   | 7'9"        | 5.18   |
| a7          |       | 1   | 7'4"        | 4.90   |
| a8          |       | 1   | 7'0"        | 4.68   |
| b           |       | 7   | 8'6"        | 35.07  |
| c           |       | 1   | 6'0"        | 4.01   |
| d           |       | 2   | 7'6"        | 10.02  |
| e           |       | 1   | 4'5"        | 2.95   |
| f           |       | 2   | 4'3"        | 5.68   |
| Total Rebar |       |     | 104.00 Lbs. |        |
| Concrete    |       |     | 2.19 C.Y.   |        |

A Deduction in Concrete Quantities Has Been Made for Pipe Openings Through the Headwall.  
 \* Field Bend or Cut Reinforcing as Required for Clearance.  
 All Concrete Reinforcement to be #4 Rebar.  
 All Rebar to Have Min. of 1 1/2" Conc. Cover

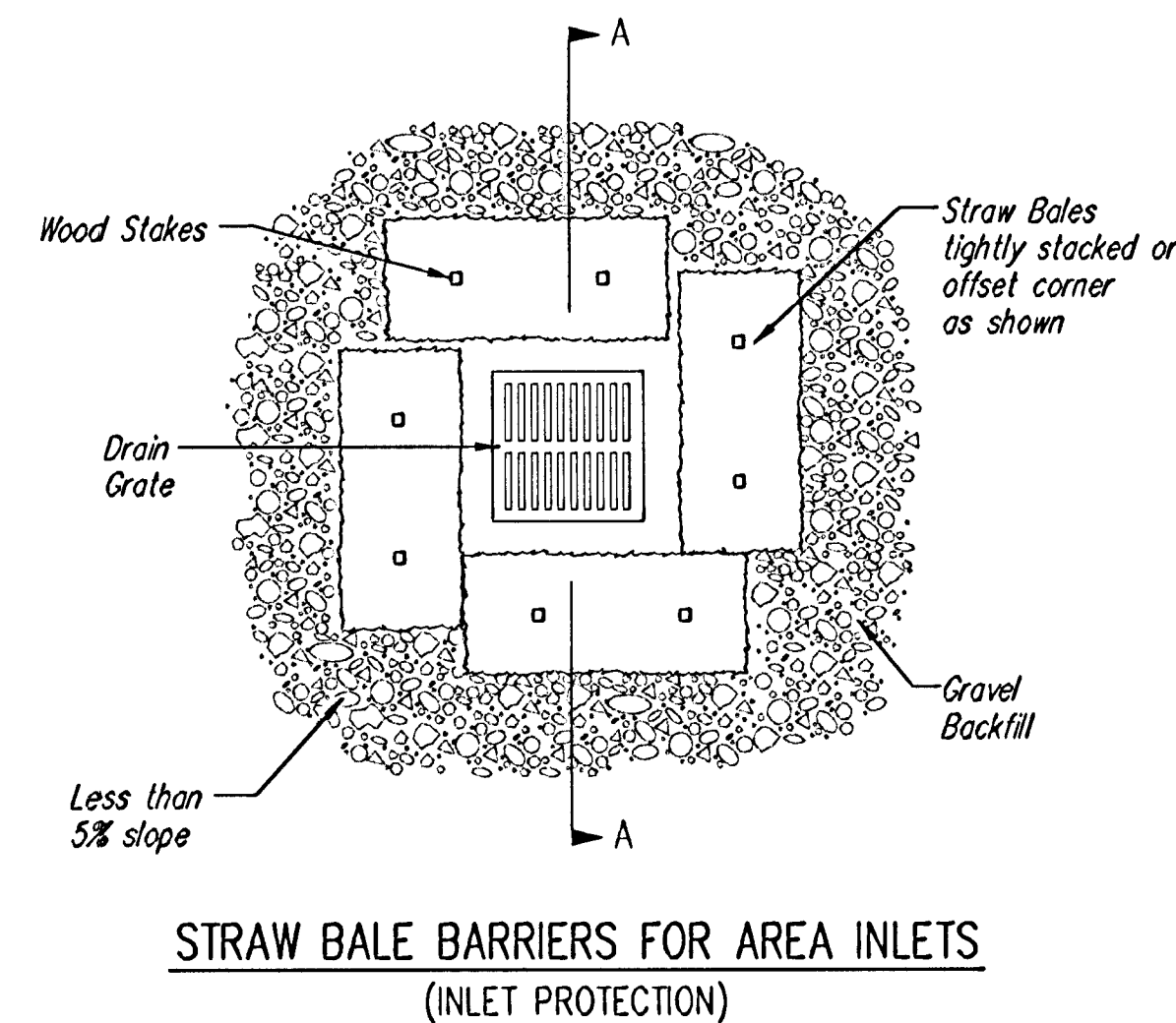
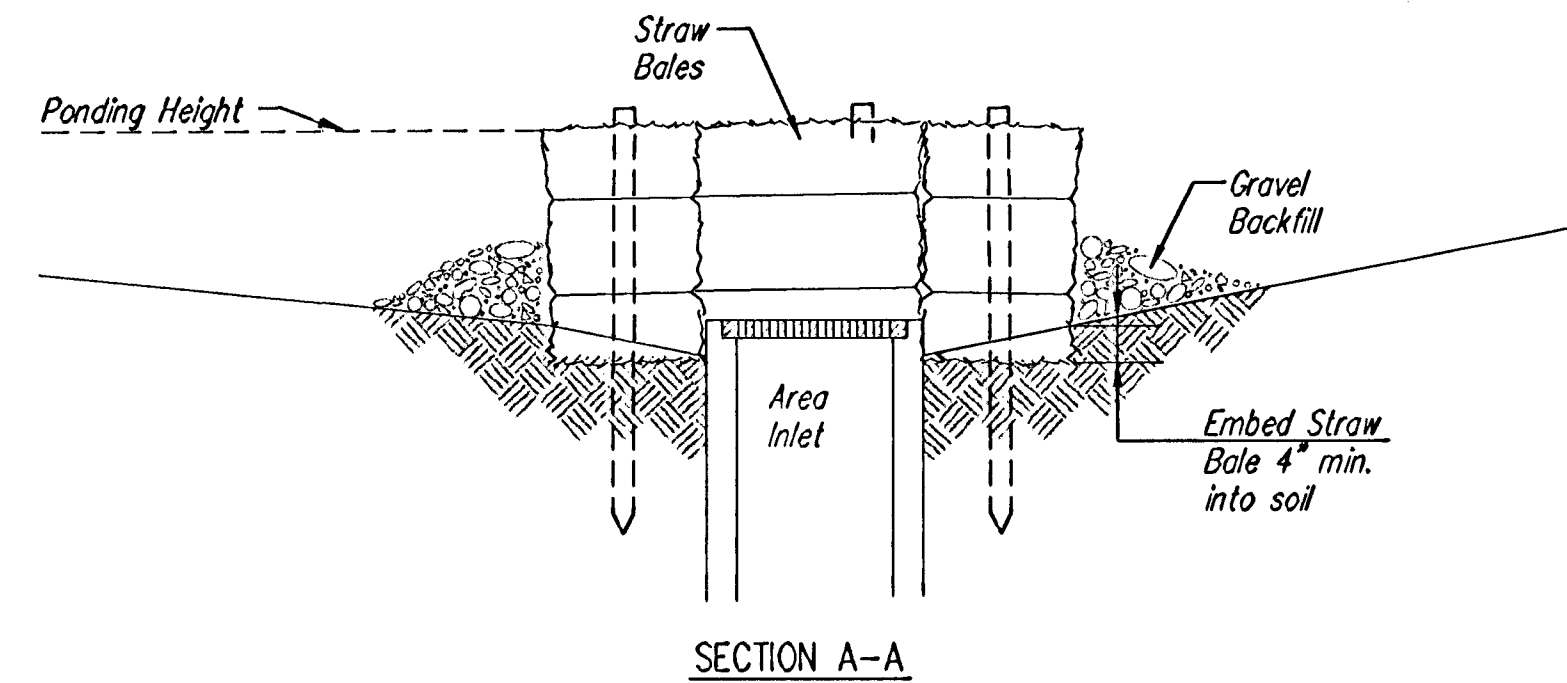
HEADWALL FOR 30" RCP

- GENERAL NOTES**
- ALL PIPES SHALL BE FLUSH CUT PRIOR TO BEING CAST INTO CONCRETE HEADWALL.
  - CONCRETE USED IN HEADWALL CONSTRUCTION SHALL BE SAME AS PER CITY STANDARD PAVING MIX EXCEPT THAT IT SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 4000 PSI.
  - ALL EXPOSED EDGES SHALL BE BEVELED 1/2".
  - REINFORCING STEEL SHALL COMPLY TO A.S.T.M. DESIGNATION A615 GRADE 60. ALL DIMENSIONS RELATIVE TO REINFORCING STEEL ARE TO CENTERLINE OF BAR UNLESS OTHERWISE NOTED.
  - THE "REIN. CONC. HEADWALL" SHALL BE PAID FOR AT THE UNIT PRICE BID PER EACH IN PLACE WHICH SHALL INCLUDE ALL LABOR, MATERIALS, EXCAVATION, CONCRETE, REINFORCING STEEL AND ALL OTHER INCIDENTAL ITEMS NECESSARY TO COMPLETE THE WORK. MATERIAL QUANTITIES SHOWN ARE FOR INFORMATION ONLY.

## HEADWALL DETAIL

**BAUGHMAN COMPANY P.A.**  
 ENGINEERING, SURVEYING, & PLANNING  
 316-262-7271 • 315 ELLIS • WICHITA, KANSAS 67211

| PROJECT NUMBER | 488-83544 | SHEET | 12      |
|----------------|-----------|-------|---------|
| DESIGN         | BLP       | DRAWN | JAK     |
| APPROVED       |           | DATE  | 4/02/03 |
| SCALE          | NONE      | OF    | 14      |



#### Material Specification:

Bale area inlet barriers should be constructed of wheat straw, oat straw, prairie hay, or bromegrass hay that is free of weeds declared noxious by the Kansas State Board of Agriculture. The stakes used to anchor the bales should be a hardwood material with the following minimum dimensions: 2" square (nominal) by 4' long.

#### Placement:

Bale area inlet barriers should be placed directly around the perimeter of a drop inlet. When a bale area inlet barrier is located near an inlet that has steep approach slopes, the storage capacity behind the barrier is drastically reduced. Timely removal of sediment must occur for a barrier to operate properly in this location.

#### Proper Installation Method:

Excavate a trench around the perimeter of the area inlet that is at least 4" deep by a bale's width wide. Place the bales in the trench, making sure that they are butted tightly. Some bales may need to be shortened to fit into the trench around the area inlet. Two stakes should be driven through each bale, approximately 6" to 8" in from the bale ends. Stakes should be driven at least 12" into the ground. Once all the bales have been installed and anchored, place the excavated soil against the receiving side of the barrier and compact it. The compacted soil should be no more than 3" to 4" deep. Note: When a bale area inlet barrier is placed in a shallow median ditch, make sure that the top of the barrier is not higher than the paved road. In this configuration, water may spread onto the roadway causing a hazardous condition.

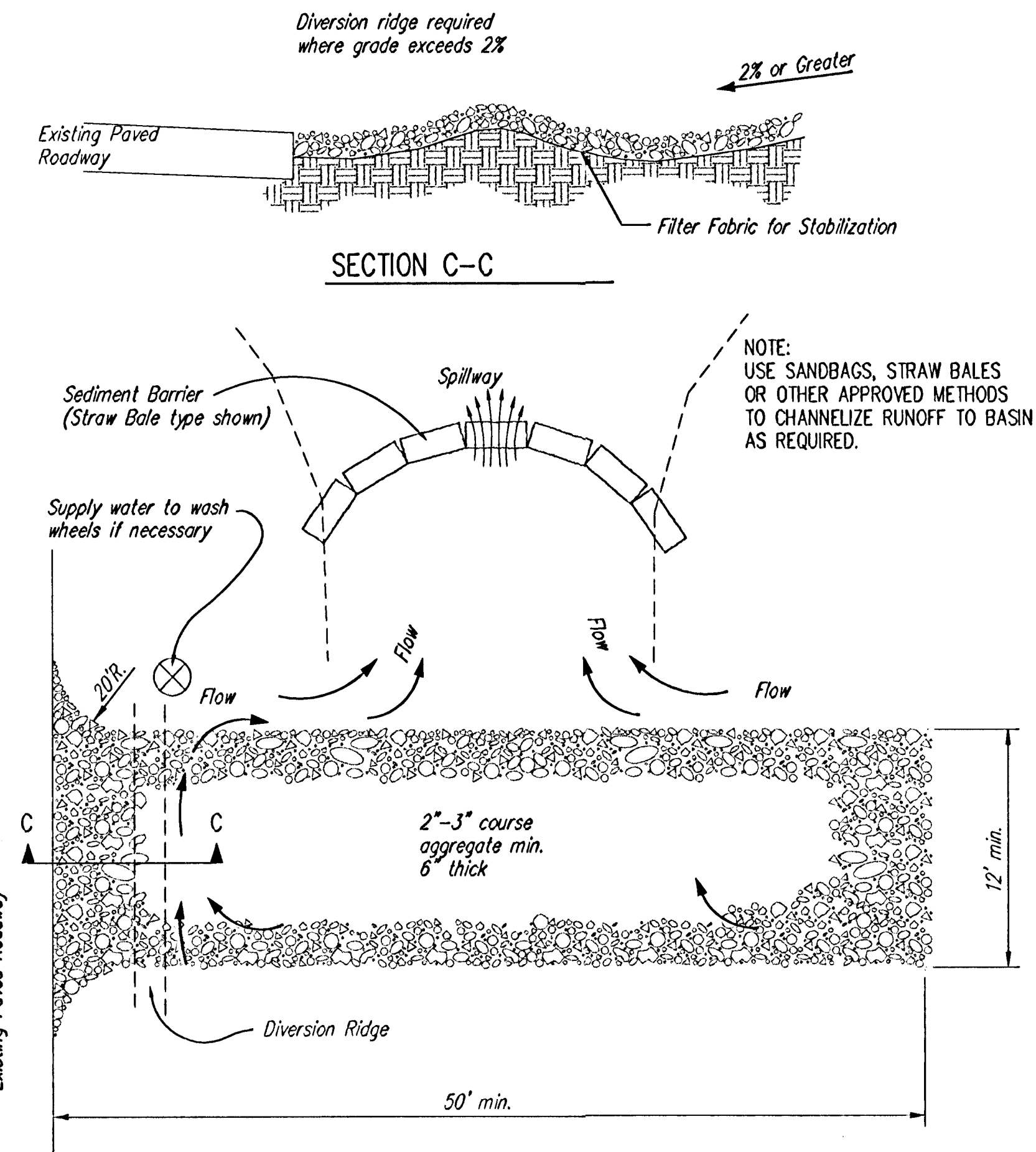
#### List of common placement installation mistakes to avoid:

Bales should be placed directly against the perimeter of the area inlet. This allows overtopping water to flow directly into the inlet instead of onto nearby soil causing scour. Bale area inlet barriers must be dug into the ground. Bales at ground level do not work because they allow water to flow under the barrier.

#### Inspection and Maintenance:

Bale area inlet barriers should be inspected every 7 days and within 24 hours of a rainfall 1/2" or more. The following is a list of questions that should be addressed during each inspection:

Does water flow under the area inlet barrier?  
Does water flow through spaces between abutting bales?  
Are any bales dislodged?  
Are bales decomposing due to age and/or water damage?  
Does sediment need to be removed from behind the area inlet barrier?



#### STABILIZED CONSTRUCTION ENTRANCE

#### NOTES:

1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN, AS SHOWN ABOVE.
4. DRIVE ENTRANCES ONTO RESIDENTIAL LOTS WILL NOT BE REQUIRED TO HAVE THE SEDIMENT BARRIER SHOWN, BUT WHEEL WASHING MAY BE REQUIRED IF STABILIZED ENTRANCE IS NOT SUFFICIENT TO KEEP MUD FROM BEING TRACKED ONTO ADJACENT STREET. ENTRANCE SHALL EXTEND FROM BACK OF CURB TO DWELLING.

|                                                                                       |  |                                                      |                   |
|---------------------------------------------------------------------------------------|--|------------------------------------------------------|-------------------|
|  |  | <b>SOIL EROSION<br/>BMP DETAILS</b>                  |                   |
|                                                                                       |  | CHRISTOPHER M. CARRIER, P.E.<br>STORM WATER ENGINEER |                   |
|                                                                                       |  | PROJECT NUMBER<br>468-83544                          | OCA NO.<br>751326 |
|                                                                                       |  | DATE<br>APR 2003                                     | SHEET 13 OF 14    |

LIBERTY PARK  
AN ADDITION TO WICHITA, SEDGWICK COUNTY, KANSAS

SS We, Baughman Company P.A., Surveyors in and for Seagovick County and State do hereby certify that we have surveyed and plotted LIBERTY PARK, an addition to Wichita, Seagovick County, Kansas and that the accompanying plat is a true and correct exhibit of the property surveyed, described as the W/2 of the NW1/4 of Sec. 15, Twp. 27-S, R-2-W of the 6th P.M., Seagovick County, Kansas, EXCEPT that part platted as Conservation Sub., Seagovick County, Kansas, and EXCEPT that part platted as St. Marks Sub., Seagovick County, Kansas, all being subject to road rights of-way of record.

Existing public easements and dedications being recited by virtue of K.S.A. 12-512(a).

Existing public easements and dedications being vacated by virtue of K.S.A. 12-512(b).

*Baughman Company, P.A.*

Michael A. Conroy 9-10-2007, Surrey  
Michael G. Conroy

the undersigned, have caused the land in the surveyors certificate to be putted into Lots, Blocks, Streets and Reserves, to be known as TABERNASH, on Addition to Wichita, Sedgwick County, Kansas. The utility easements are hereby granted as indicated for the construction and maintenance of all public utilities. The drainage and utility easements are hereby granted as indicated for drainage purposes and for the construction and maintenance of all public utilities. The drainage easements are hereby granted as indicated for drainage purposes. The drainage and pedestrian access easement is hereby granted as indicated for drainage purposes and for pedestrian access to or from Reserve "D" and no fences or other obstructions shall be constructed or placed on or within this easement. The utility and pedestrian access easements are hereby granted as indicated for the construction and maintenance of all public utilities and for pedestrian access to or from Reserve "E" and no fences or other obstructions shall be constructed or placed on or within these easements. The wall easements are hereby granted as indicated for the construction and maintenance of a private screening wall and utility main lines and service lines shall be allowed to cross these easements. The streets are hereby dedicated to and for the use of the public. Reserves "A", "C", "D", and "H" are reserved for entry monuments, landscaping, open space, berms, drainage purposes, and utilities. Reserves "B" and "G" are reserved for entry monuments, streets, landscaping, open space, drainage purposes, and utilities. Reserves "J" and "I" are reserved for landscaping, lakes, open space, berms, drainage purposes, and utilities as confined to easements. Reserves "A", "B", "C", "D", "E", "F", "G", "H", will be owned and maintained by the homeowners association for the addition. Access grants shall be as depicted on the face of the plat and are hereby granted to the City of Wichita, Kansas. The Minimum Building Foot Elevations for the lowest opening to the structures shall be as indicated on the face of the plat.

*Kelsey Investment*

 DANYA M. DECKER  
NOTARY PUBLIC  
STATE OF KANSAS  
My Comm. Exp. 11/14/24

*Paul E. Kelsey*, President

State of Kansas) SS The foregoing instrument acknowledged before Sedwick County) me, this 26<sup>th</sup> day of September, 2002, by Paul E. Kelsey, President of Kelsey Investments, Inc., on behalf of the corporation.

My App't: Exp. 11/14/04

Dana M. Decker, Notary Public  
DANA M. DECKER

Dana M. Decker, Notary Public  
DANA M. DECKER

We, the undersigned holders of a mortgage on the property, do hereby consent to this plat of "LIBERTY to Wichita, Sedgwick County, Kansas.

**DAWA M. DECKER**  
NOTARY PUBLIC  
STATE OF KANSAS  
My Appt. Exp. 11/15/24

Brad E. Jaeger, SVP.  
BRAD E. JAEGER (17th)

State of Kansas) SS The foregoing instrument acknowledged before me, this 21<sup>st</sup> day of September, 2002, by Brad E. Jaeger SVP of Lamar Bank on behalf of the bank

My App<sup>n</sup> Exp 11/14/04  
Dana M. Decker, Notary Public  
 DANA M. DECKER

DANA M. DECKER, Notary Public  
DANA M. DECKER

*This plot of "LIBERTY PARK", an Addition Wichita, Sedgewick County, Kansas has been submitted to and approved the Wichita-Sedgewick County Metropolitan Area Planning Commission.*

Dated this 25th day of July, 2002.  
Michiko-Sedgwick County Metropolitan Area Planning Commission

Chaffin, J. D. Michaelis

*Michael E. Lyndeck*  
Michael E. Lyndeck

*This plat approved and all dedications shown hereon accepted by the City Council of the City of Wichita, Kansas, this 1<sup>st</sup> day of December, 2002.*

At the direction of the City Council



\_\_\_\_\_,  
City Manager

 Pat Weaver, City Clerk

Approved in accordance with K.S.A. 58-2005

*Josie Hobbs*

Deputy County Surveor  
Sedgwick County, Kansas

Entered on transfer record this 8<sup>th</sup> day  
of January, 2003

Don Bruce, County Clerk

State of Kansas)  
Sedgwick County) SS This is to certify that this plot has been

of January, 2003 at Liea o'clock P.M. and is duly recorded.

Bill Meek  
Dynda Ferrino  
Dennis

# 2/6/311

BAUGHMAN COMPANY

316-263-7271 • 315-6115 • WORTH, KANSAS  
P: 316-263-7271 FAX: 316-263-7271

PC143-2

50-11-01-05