

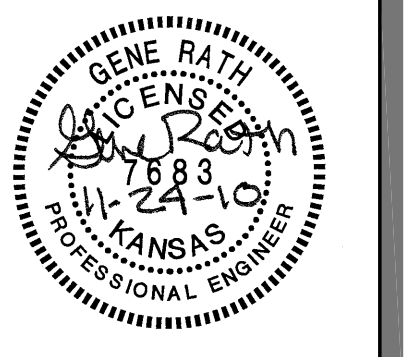
PRIVATE STORM WATER SEWER PLANS FOR
CYPRESS SPRINGS ALZHEIMER'S
 IN
WILSON ESTATES MEDICAL PARK 2ND. ADDITION

WICHITA, KANSAS

CITY OF WICHITA PRIVATE PROJECT
 NO. 2077PPS (607861)

As-Built Plans
 Contractor: Mies Construction
 Inspector: Schwab-Eaton, PA
 pdf by: BDB 01/25/2011
 Project was constructed as
 shown on as-built plans.

MKEC
 ENGINEERING
 CONSULTANTS, INC.
 411 N. WEBB ROAD
 WICHITA, K.S. 67206
 316-684-9600



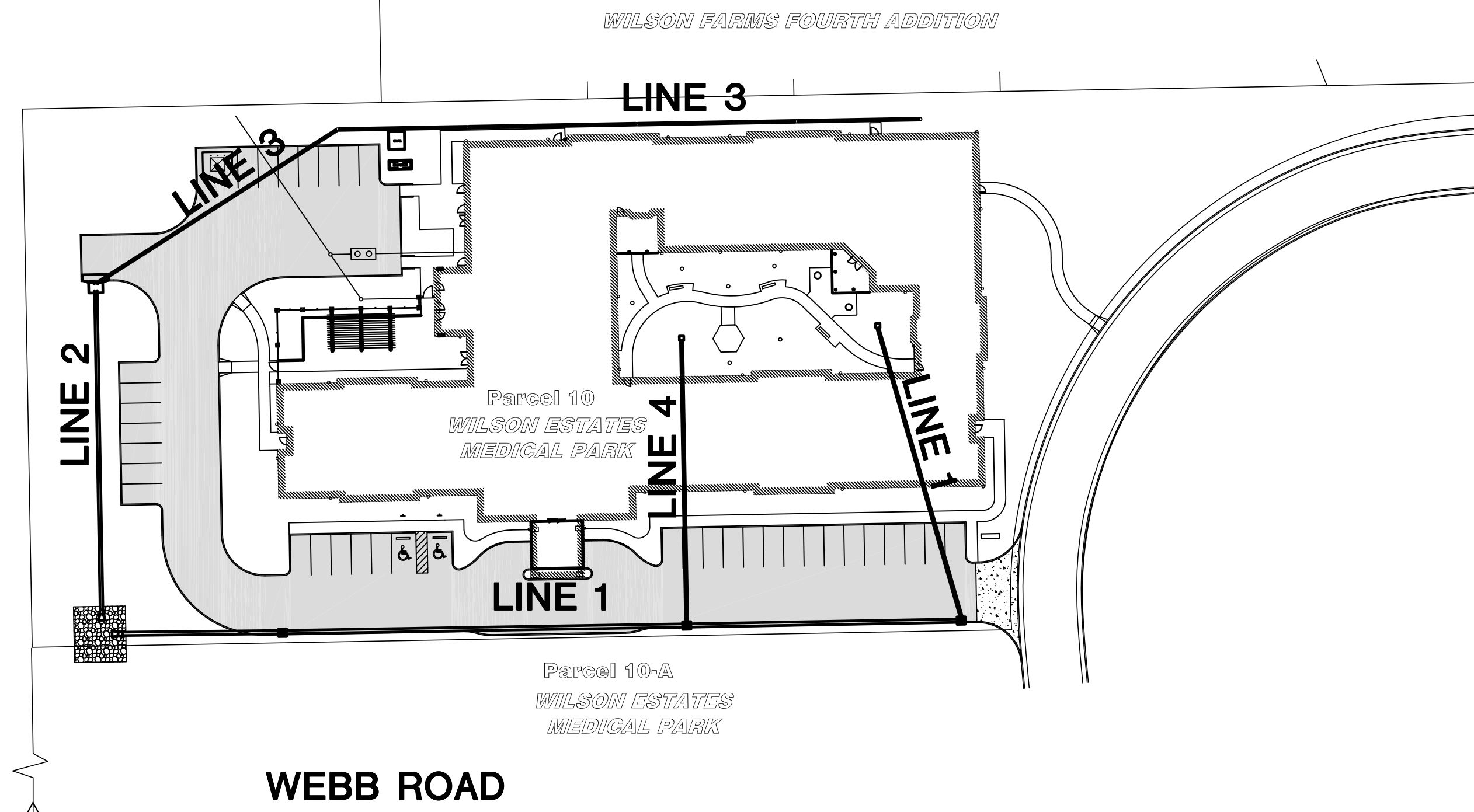
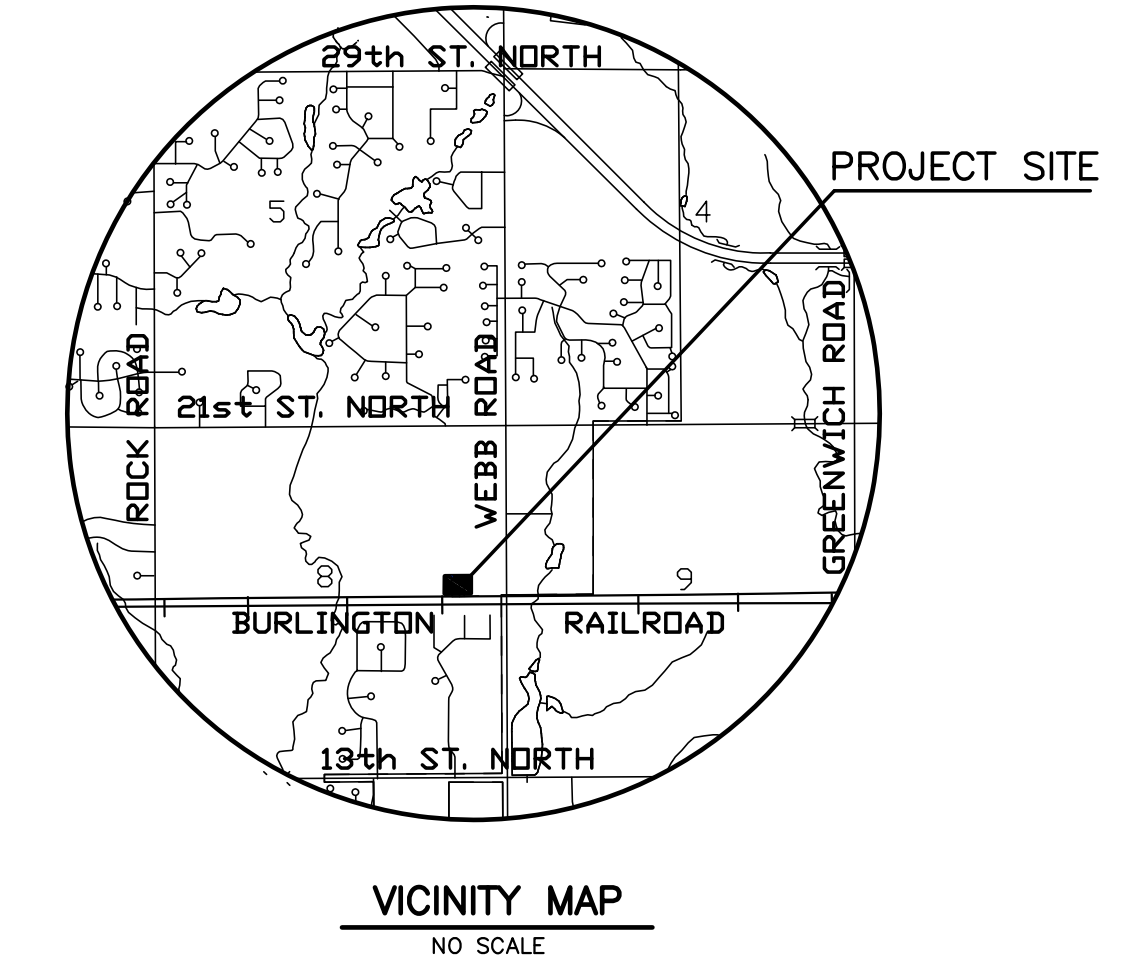
GENERAL NOTES

1. UNLESS SHOWN OR OTHERWISE STATED ON THESE DRAWINGS, MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF WICHITA STANDARD SPECIFICATIONS.
2. THE TOPS OF INLETS AND MANHOLES AS NOTED ON THE PLANS MAY VARY SO AS TO MEET PROPOSED TOP OF CURB ELEVATIONS OR PAVEMENT ELEVATIONS. THE FIELD ENGINEER SHALL LOCATE INLETS AND MANHOLES WITH REFERENCE TO PROPOSED PAVING PLANS OF THE PERTINENT STREETS.
3. ALL CONCRETE SHALL BE STANDARD PAVING MIX UNLESS OTHERWISE NOTED.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PRESERVING PROPERTY IRONS. THE CONTRACTOR SHALL 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.
5. TREES TO BE REMOVED ARE MARKED . ALL TREES WHICH IN THE OPINION OF THE FIELD ENGINEER CAN BE SAVED, SHALL BE SAVED.
6. CONTRACTOR SHALL NOTIFY UTILITY COMPANIES OF CONSTRUCTION SCHEDULING.
7. EXISTING UTILITIES AND THEIR LOCATIONS, AS SHOWN ON THE PLANS REPRESENT THE BEST INFORMATION OBTAINABLE FOR DESIGN. LOCATION INFORMATION HAS BEEN OBTAINED FROM THE VARIOUS COMPANIES AND IS EITHER FROM COMPANY UTILITY DRAWINGS OR COMPANY PROVIDED FIELD LOCATIONS. THE PLAN LOCATIONS SHOWN ARE NOT GUARANTEED. ADDITIONAL EXISTING UTILITIES MAY ALSO BE ENCOUNTERED.
8. CONTRACTOR WILL BE REQUIRED TO PROVIDE A MINIMUM ADVANCE NOTICE OF SEVENTY-TWO (72) HOURS TO UTILITY COMPANIES TO STARTING ANY EXCAVATION AS FOLLOWS:

KANSAS ONE-CALL	800-344-7233
	OR 687-2470 (LOCAL WICHITA)

THE CONTRACTOR MUST NOTIFY THE FOLLOWING IN CASE OF EMERGENCY:

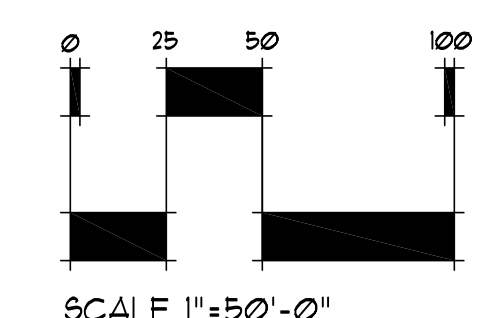
COX COMMUNICATIONS (CABLE)	262-0661
WESTAR (ELECTRIC)	261-6512
KANSAS GAS SERVICE (GAS)	832-3101
SBC (TELEPHONE)	800-870-8390
CITY OF WICHITA WATER & SEWER	262-6000
BLACK HILLS ENERGY (GAS)	800-303-0357
9. RUBBLE FROM THE REMOVAL OF MISCELLANEOUS STRUCTURES AND EXCESS EXCAVATION WHICH IS TO BE WASTED 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 REQUIRE 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.
10. CONTRACTOR SHALL RESEED AND MULCH ALL DISTURBED AREAS. COST SHALL BE CONSIDERED SUBSIDIARY TO SITE RESTORATION.
11. ALL UNDERGROUND RAIN LEADER PIPING SHALL BE A MINIMUM OF 6" DIAMETER UNLESS OTHERWISE SPECIFIED ON THE PLANS.
12. ALL PIPE CROSSINGS UNDER PAVEMENT OR BUILDINGS SHALL BE BACKFILLED WITH FLOWABLE FILL PER CITY OF WICHITA REQUIREMENTS.
13. THE WORK ON THIS PROJECT IS SUBJECT TO THE CITY OF WICHITA REQUIREMENTS FOR "CONSTRUCTION OF INFRASTRUCTURE IMPROVEMENTS BY PRIVATE CONTRACT". THE CONTRACTOR SHOULD FAMILIARIZE HERSELF/HIMSELF WITH AND COMPLY WITH ALL OF THE REQUIREMENTS, INCLUDING BONDING, INSPECTION, TESTING, NOTIFICATION, PROVIDING AS-BUILT DRAWINGS, PAYING FOR ALL NECESSARY CONNECTION AND/OR STREET REPAIR FEES, AND PROVIDING PIPE MATERIAL AND OTHER CERTIFICATIONS AS REQUIRED.
14. LINE 3 SHALL BE CONSTRUCTED UNDER THE REQUIREMENTS, REVIEW, APPROVAL, AND PERMITTING PROCESS OF THE CITY'S OFFICE OF CENTRAL INSPECTION. THE CONTRACTOR SHALL OBTAIN A SEPARATE PERMIT FOR THE CONSTRUCTION OF LINE 3.



INDEX TO DRAWINGS

SHEET NO.	DESCRIPTION
SW1	TITLE SHEET
SW2	AREA INLET DETAILS
SW3	CURB INLET DETAILS
SW4	TYPE II CURB INLET DETAILS
SW5	TYPE II DOUBLE CURB INLET DETAILS
SW6	SWS LINE 1
SW7	SWS LINE 2 & 4
SW8	SWS LINE 3

TITLE SHEET
 SCALE: 1"=50'



BENCHMARKS

- BM #30 — DATUM CHISELED " " T/C @ N.W. CORNER GREENE VISION PARKING LOT
 Elevation=197.02 (city datum)
- BM #31 — BENCH TIE IN NORTH FACE OF NORTH POWER POLE OF A TWO POLE STRUCTURE
 100' +/- NORTH OF SW CORNER OF LOT 3, BLOCK 1
 Elevation=200.21 (city datum)

APPROVED AS NOTED
 BY CITY ENGINEER OF WICHITA

STORM SEWERS *Johnnie Kellerman 11-23-10*

NOTE TO CONTRACTOR
 A LICENSED CONSULTING INSPECTION AND TESTING FOR THIS PROJECT IS TO BE PROVIDED BY ENGINEERING FIRM UNDER CONTRACT WITH THE OWNER/DEVELOPER. SAID INSPECTION TO BE IN ACCORDANCE WITH THE CITY OF WICHITA STANDARD CONSTRUCTION ENGINEERING PRACTICES BE PERFORMED IN AND CERTIFIED BY A LICENSED PROFESSIONAL ENGINEER. NO WORK SHALL DEDICATED EASEMENTS OR THE PUBLIC RIGHT-OF-WAY BY THE CONTRACTOR WITHOUT SUCH BE COMMENCED IN DEDICATED EASEMENTS OR PUBLIC INSPECTION NOR SHALL ANY WORK WITHOUT WRITTEN AUTHORIZATION BY THE CITY ENGINEER. RIGHT-OF-WAY

SITE DEVELOPMENT PLANS FOR
CYPRESS SPRINGS ALZ
 WICHITA, KANSAS

TITLE SHEET
 SHEET TITLE
 10373
 PROJECT NUMBER

DESIGNED / DRAWN / CHECKED

ISSUED
OCTOBER 2010
 REVISED
 ADM#1-11.03.10
 ADM#2-11.09.10
 ADM#3-11.24.10

SHEET NO.
SW1

SITE DEVELOPMENT PLANS FOR
CYPRESS SPRINGS ALZ
WICHITA, KANSAS

**AREA INLET
DETAILS**

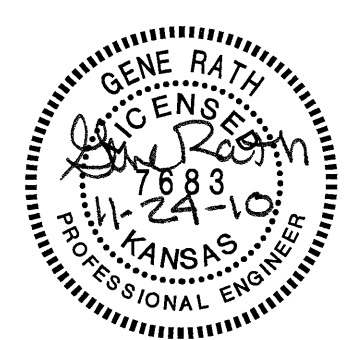
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10373
PROJECT NUMBER

GR
DESIGN BY
DM
DRAWN BY
GR
CHECKED BY

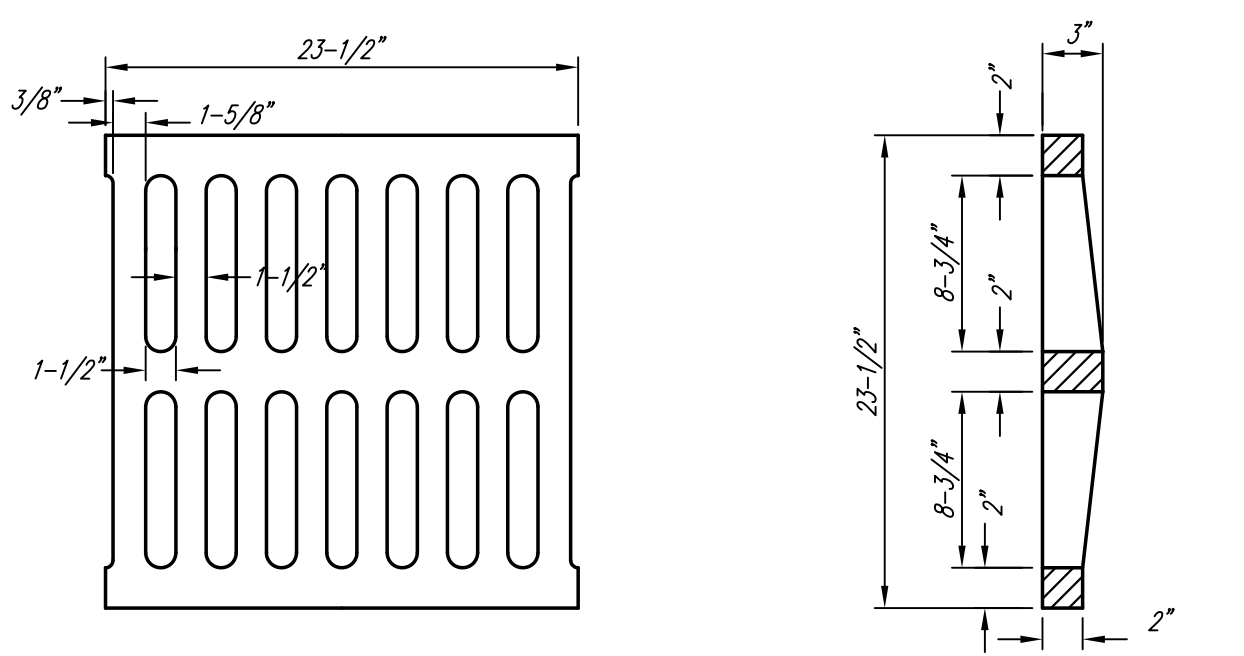
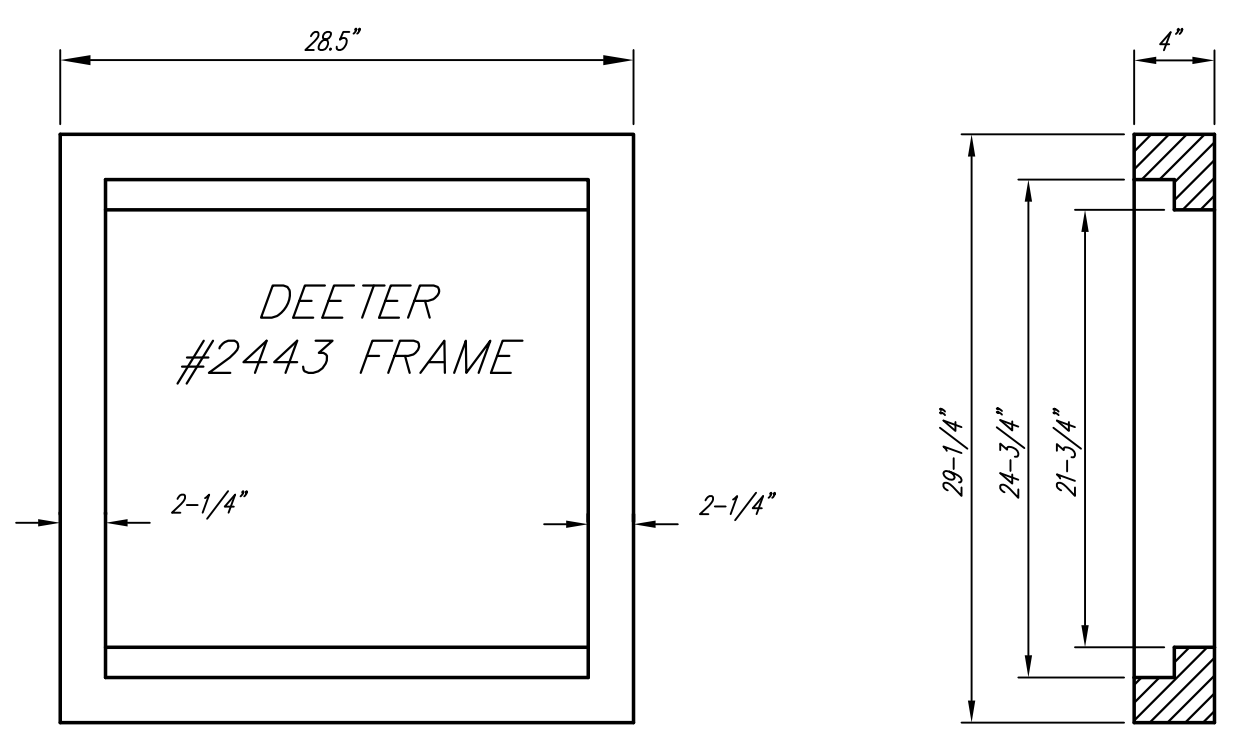
ISSUED
OCTOBER 2010
REVISED
ADM#1-11.03.10
ADM#2-11.09.10
ADM#3-11.24.10

SHEET NO.
SW2

J:\CIVIL\10373 - CYPRESS SPRINGS\DWG\SHEETS\10373_DD_2.DWG

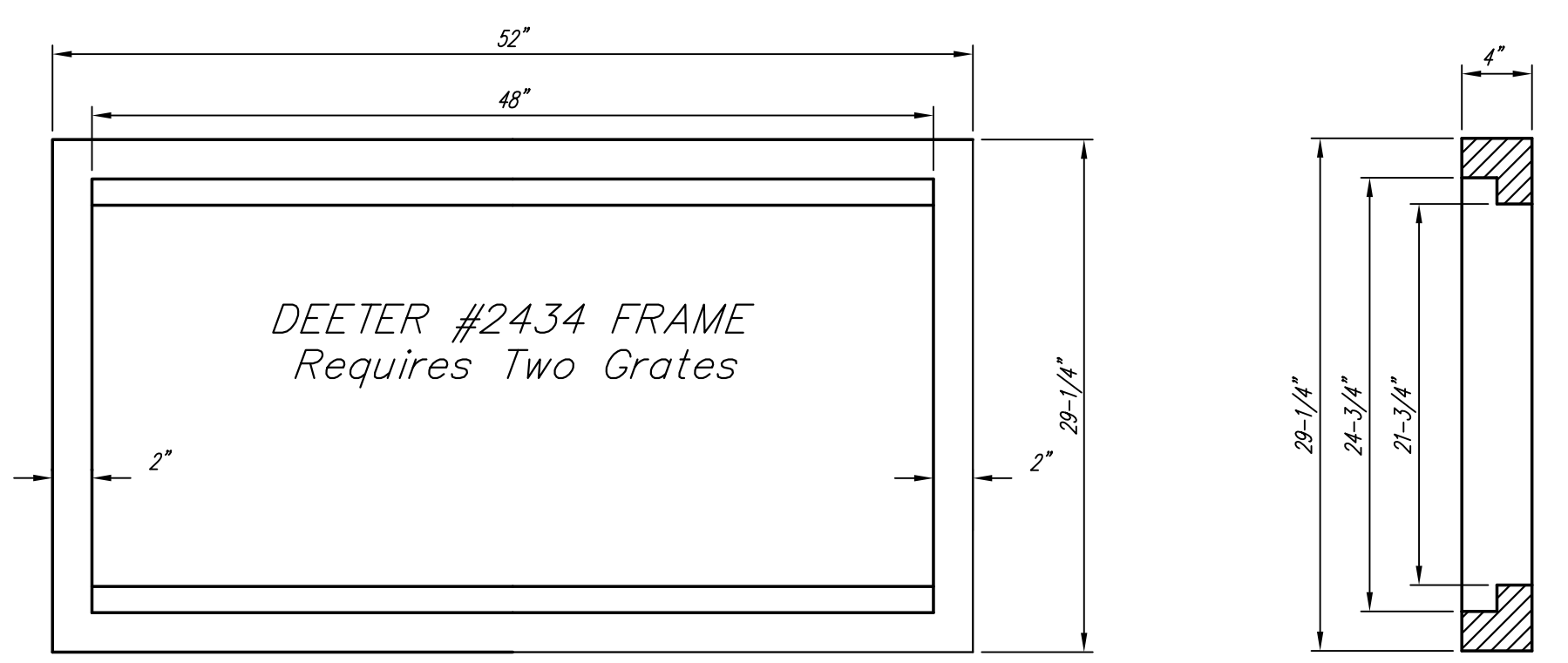
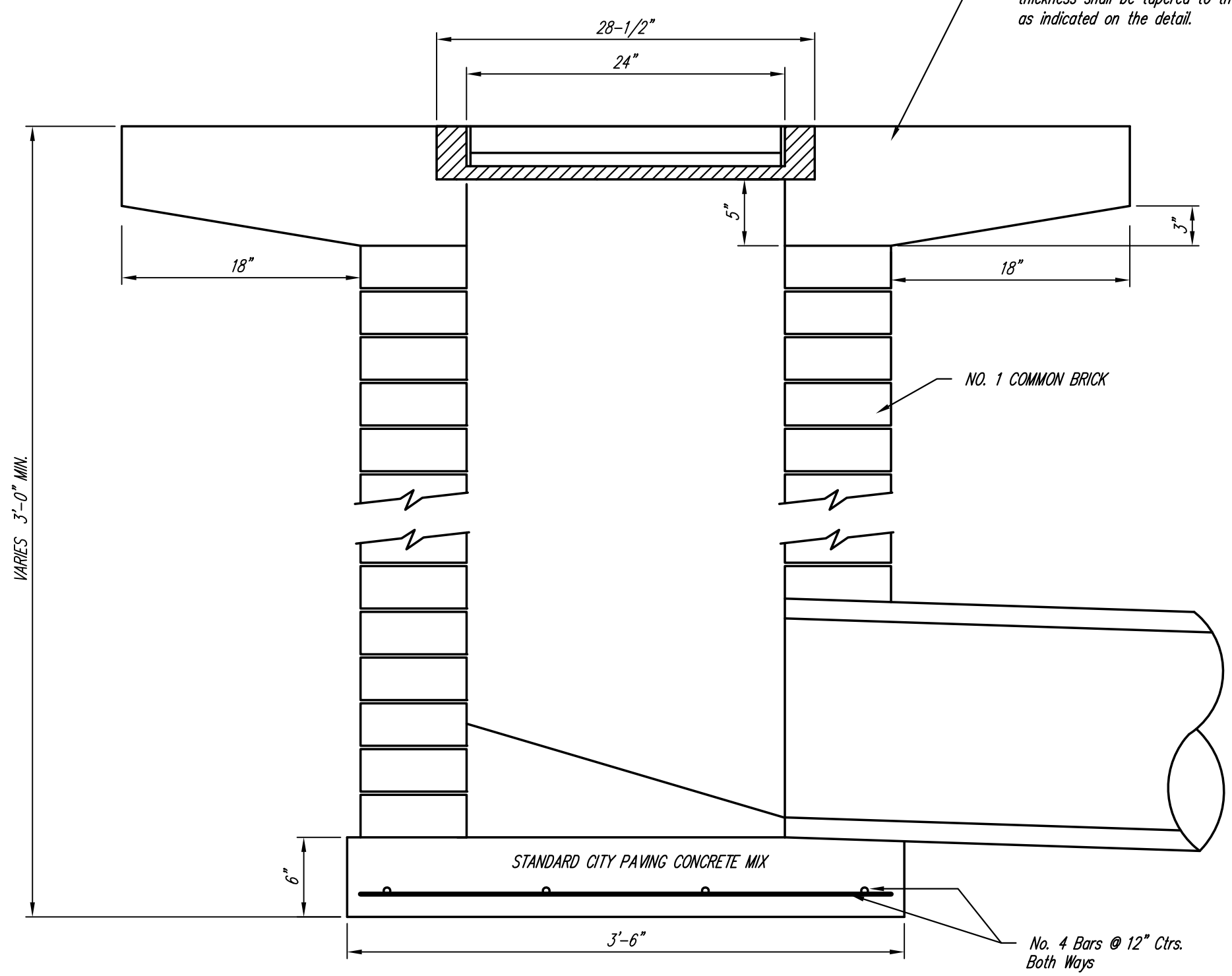
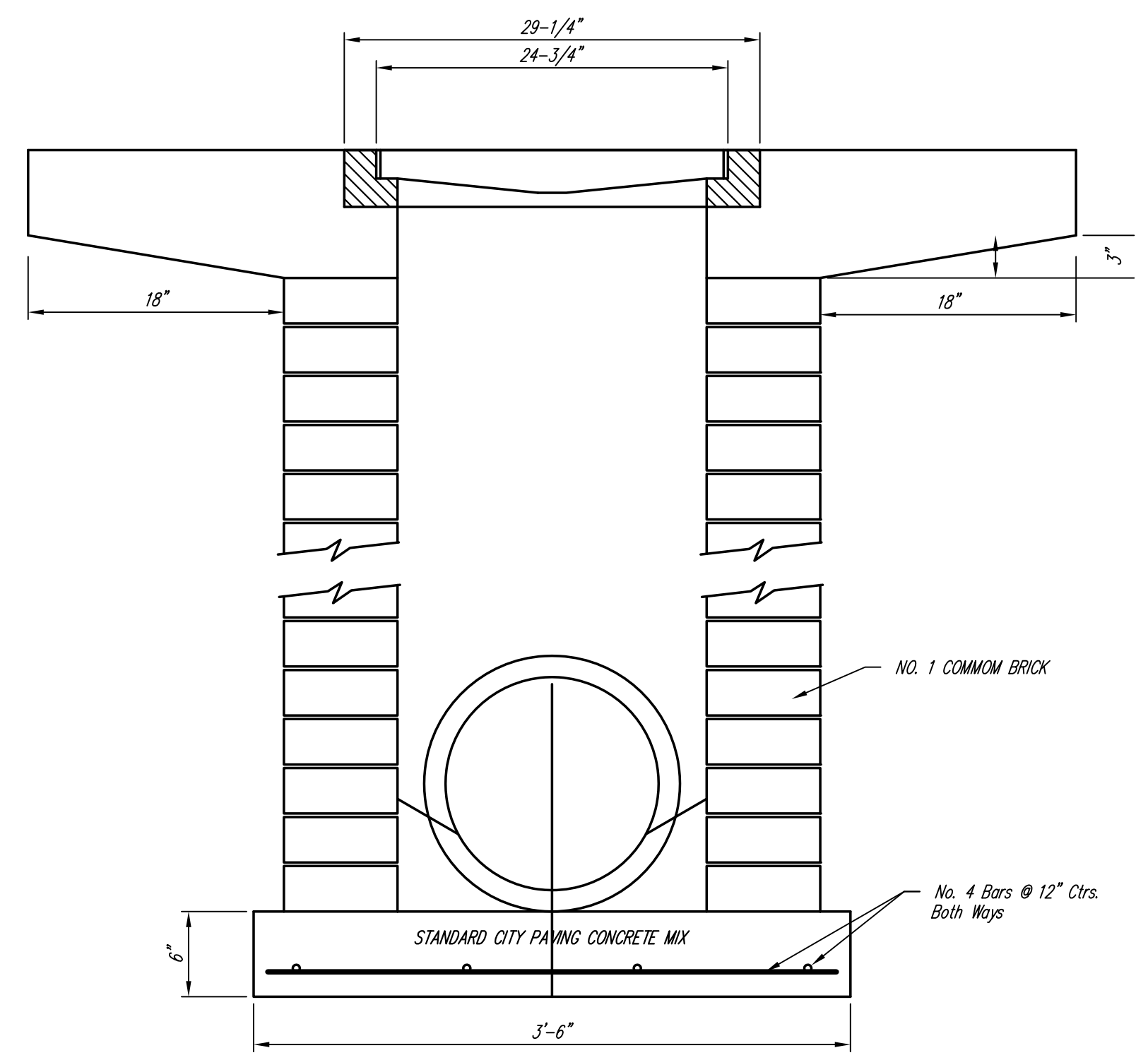


Note: Concrete apron shall be constructed around the inlet when inlet is located in an unpaved area. Where the inlet is adjacent to pavement, the pavement thickness shall be tapered to the inlet in 18 inches as indicated on the detail.

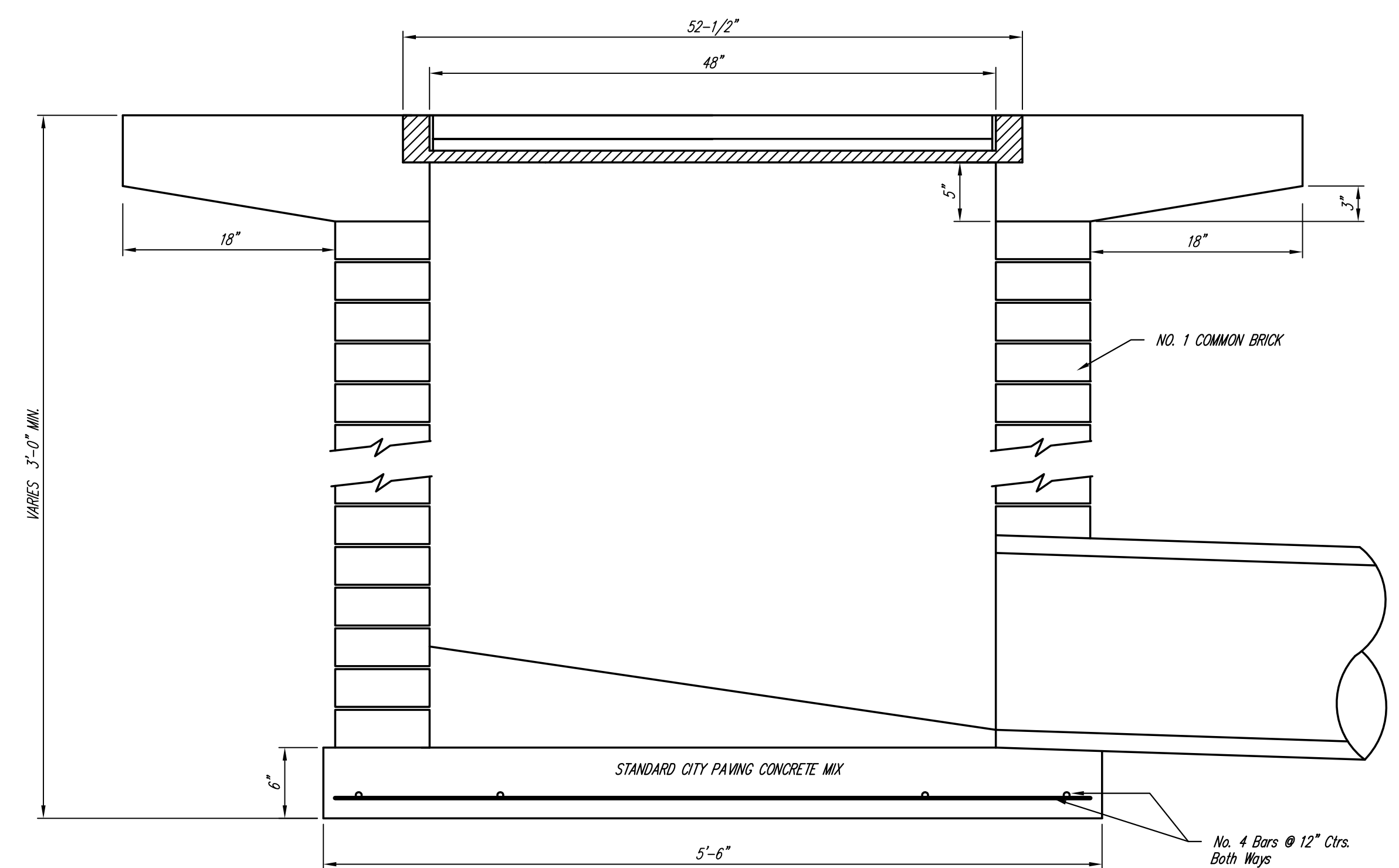


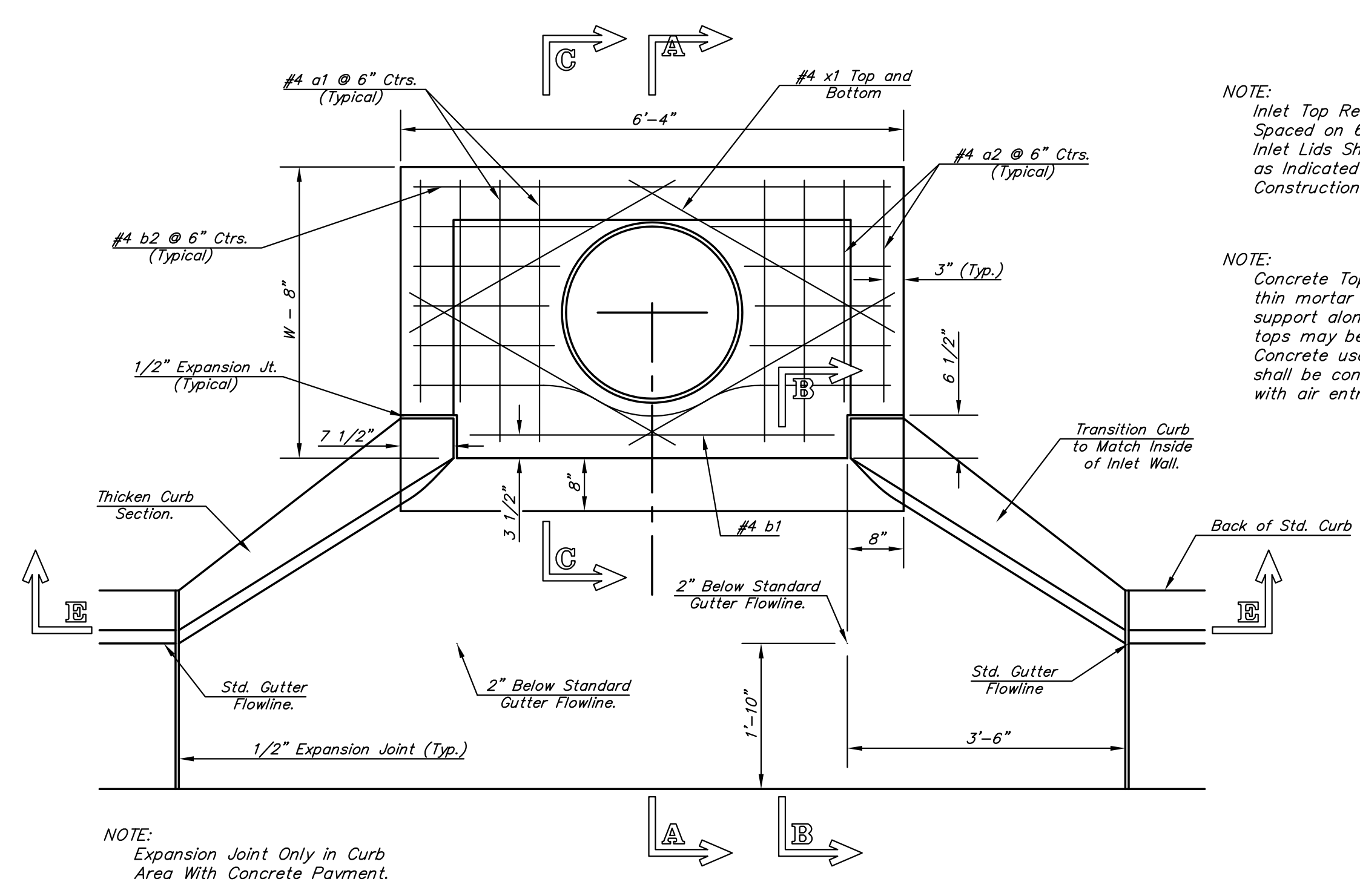
DEETER #2433 GRATE
24" x 24" Frame and Grate Detail

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



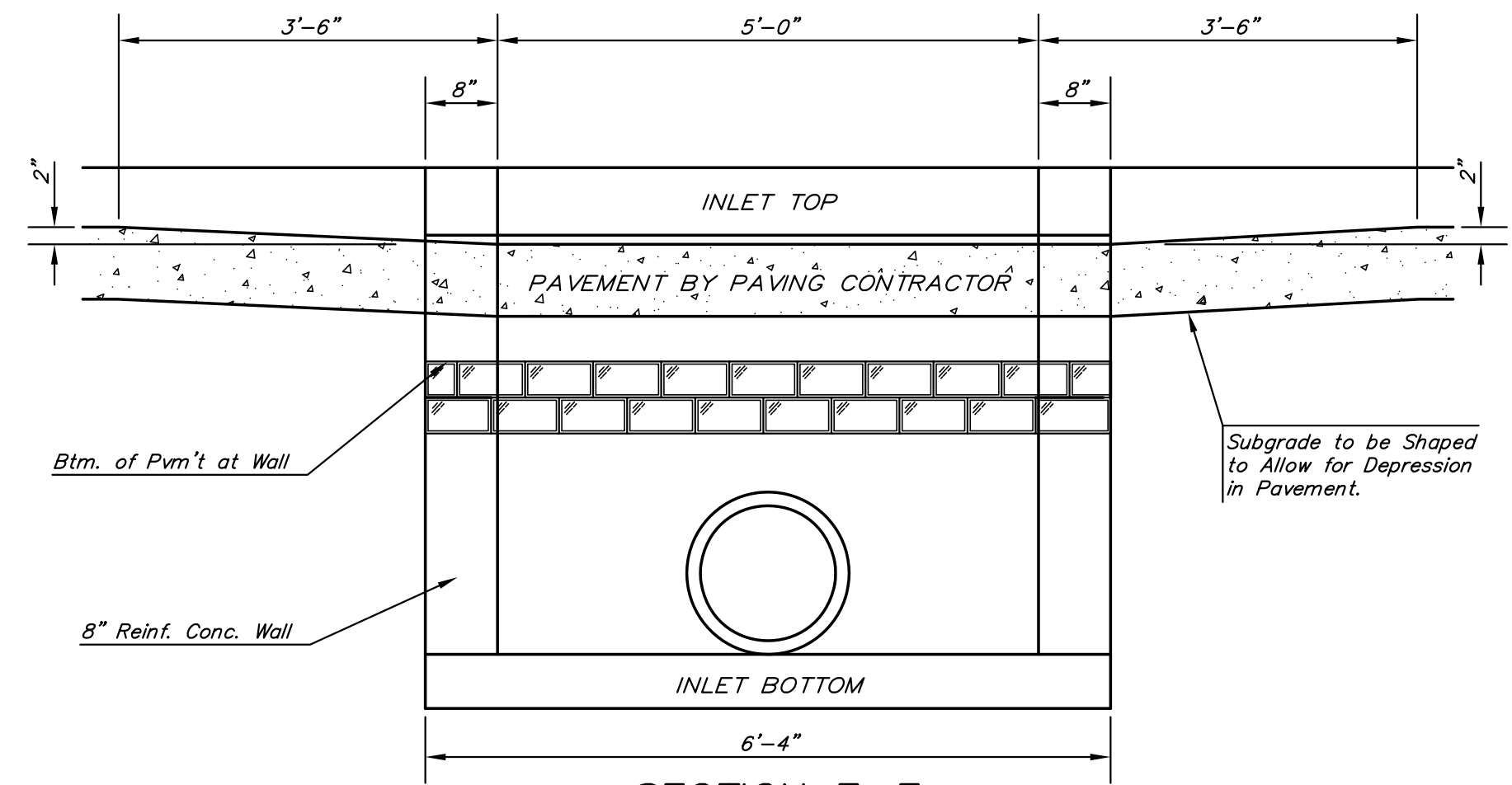


NOTE:
Inlet Top Reinforcing shall be Spaced on 6" Max. Centers. Inlet Lids Shall be Notched Out as Indicated to Facilitate Construction of Curb.

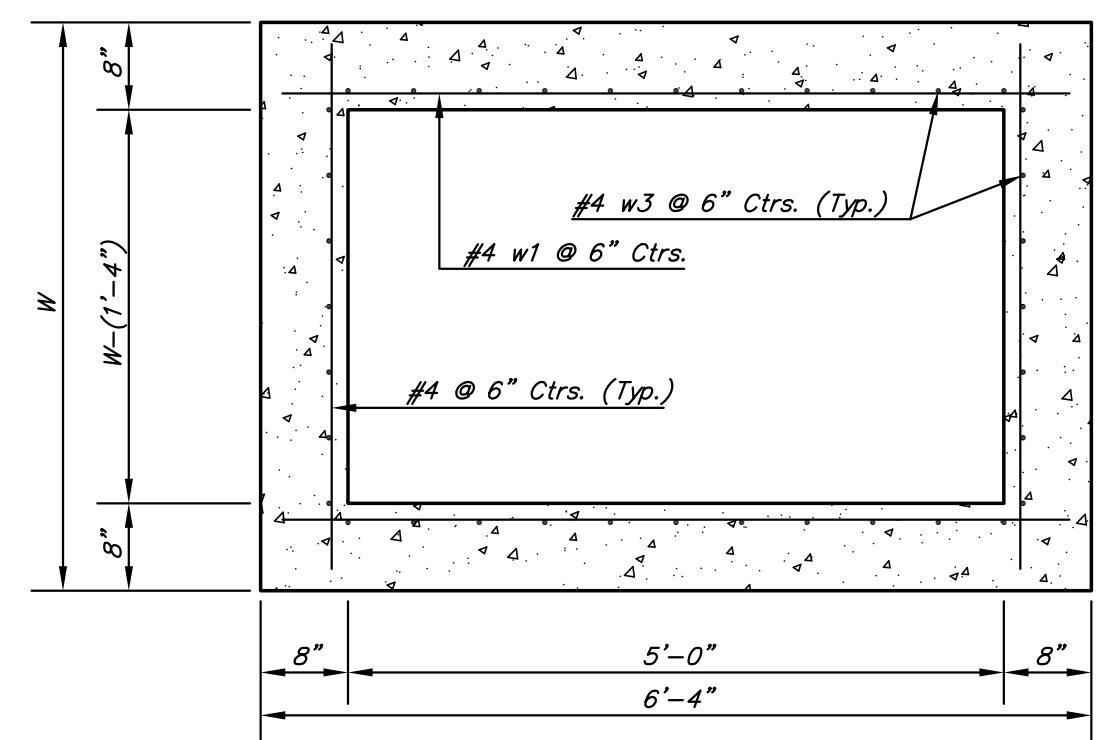
NOTE:
Concrete Tops to be installed on thin mortar cushion to insure full support along brick walls. Concrete tops may be cast in place or precast. Concrete used for inlet construction shall be concrete pavement mix with air entrainment.

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

PLAN



SECTION E-E



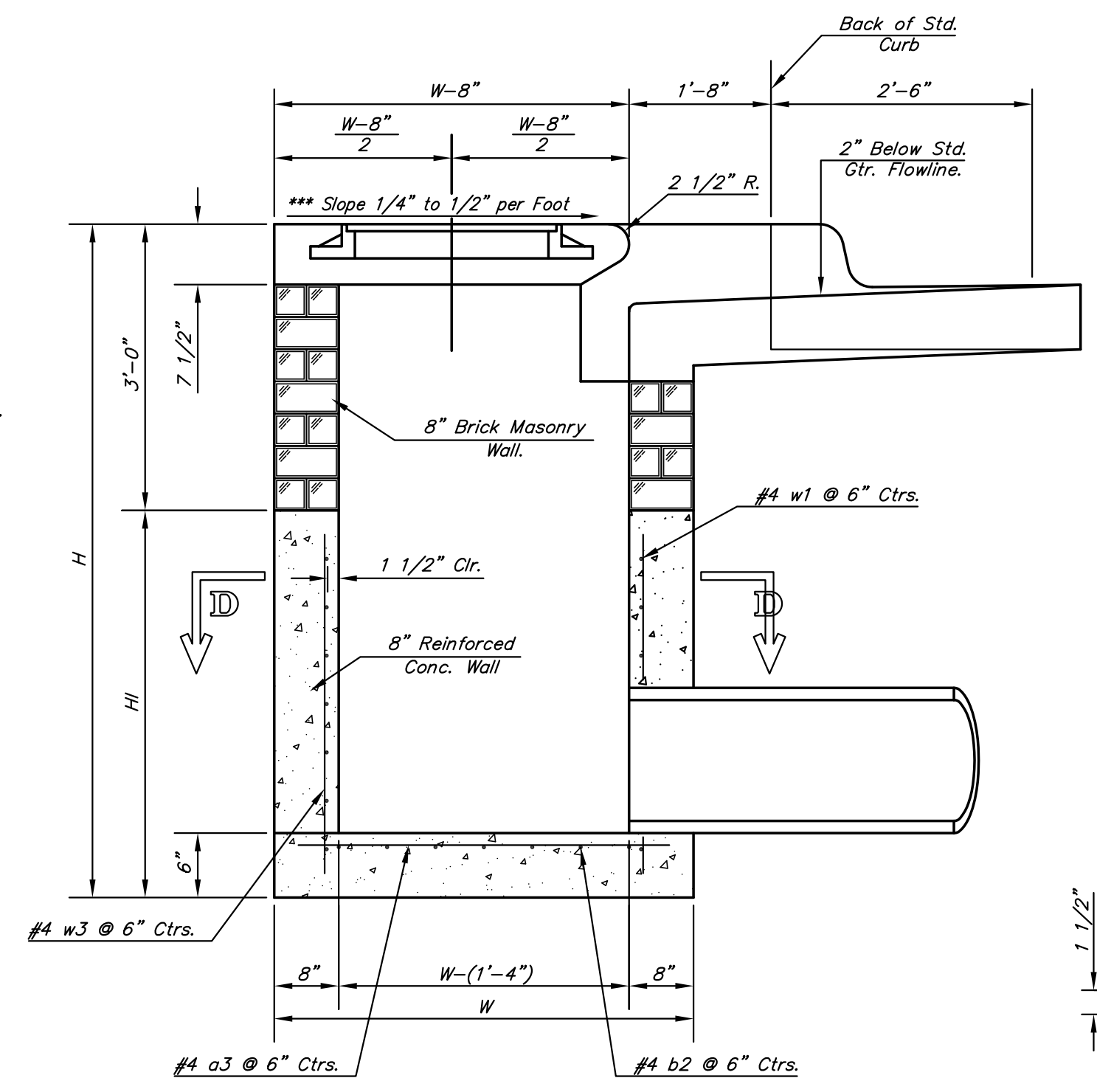
SECTION D-D

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.

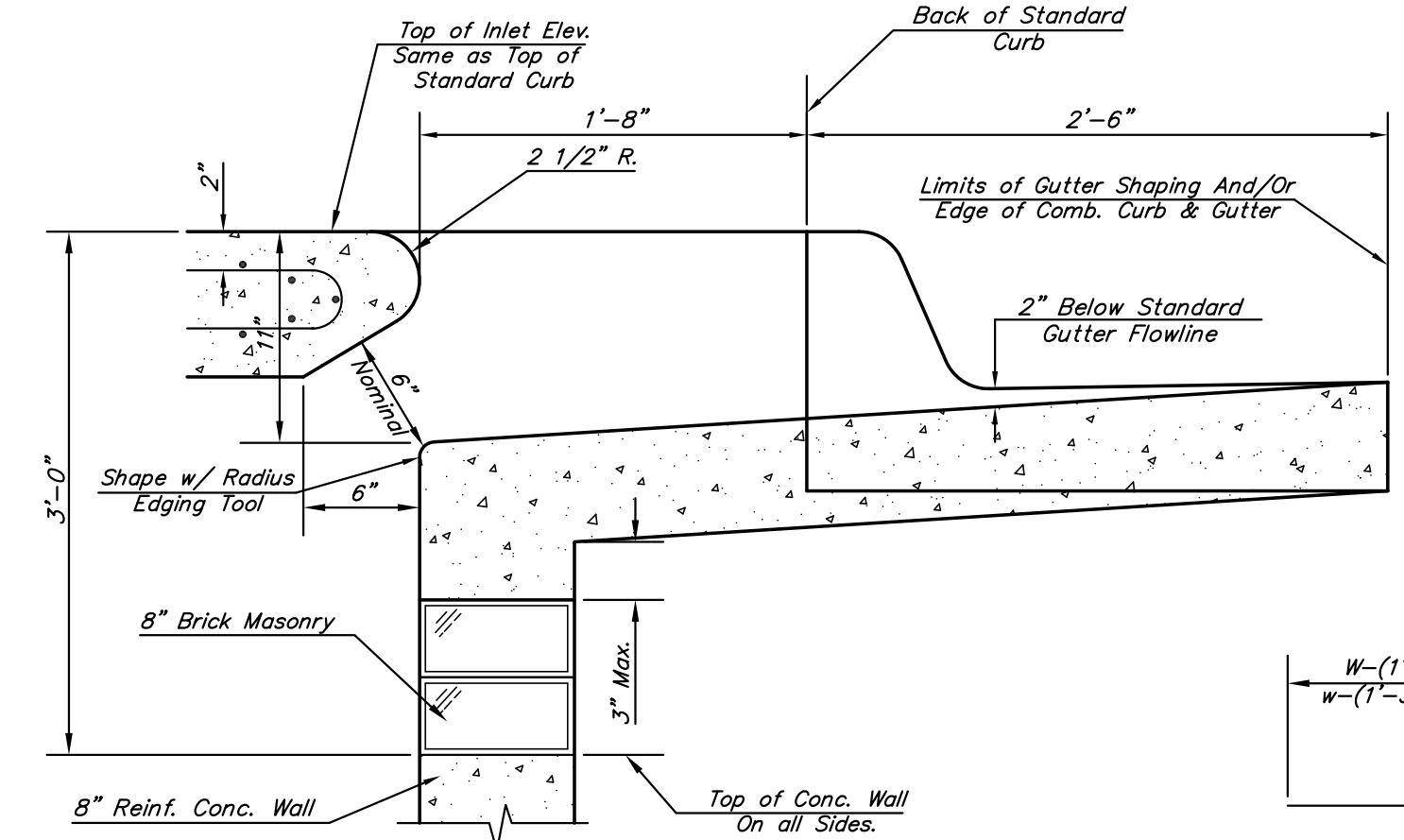
Inlet invert shall be shaped with 8 sack sand mix concrete to create flow channels and to increase hydraulic efficiency such that the inlet will be self-cleaning between all inlet and/or outlet pipes.

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

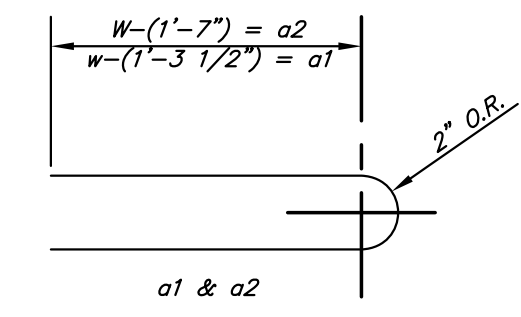


SECTION A-A

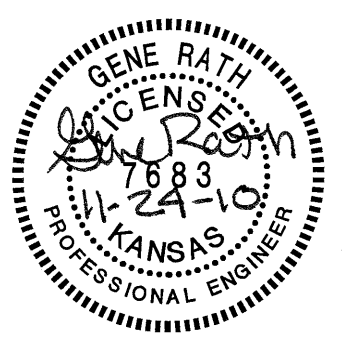
***NOTE: Slope of inlet tops to Match Sidewalk or Parking Slopes within Limits Indicated.



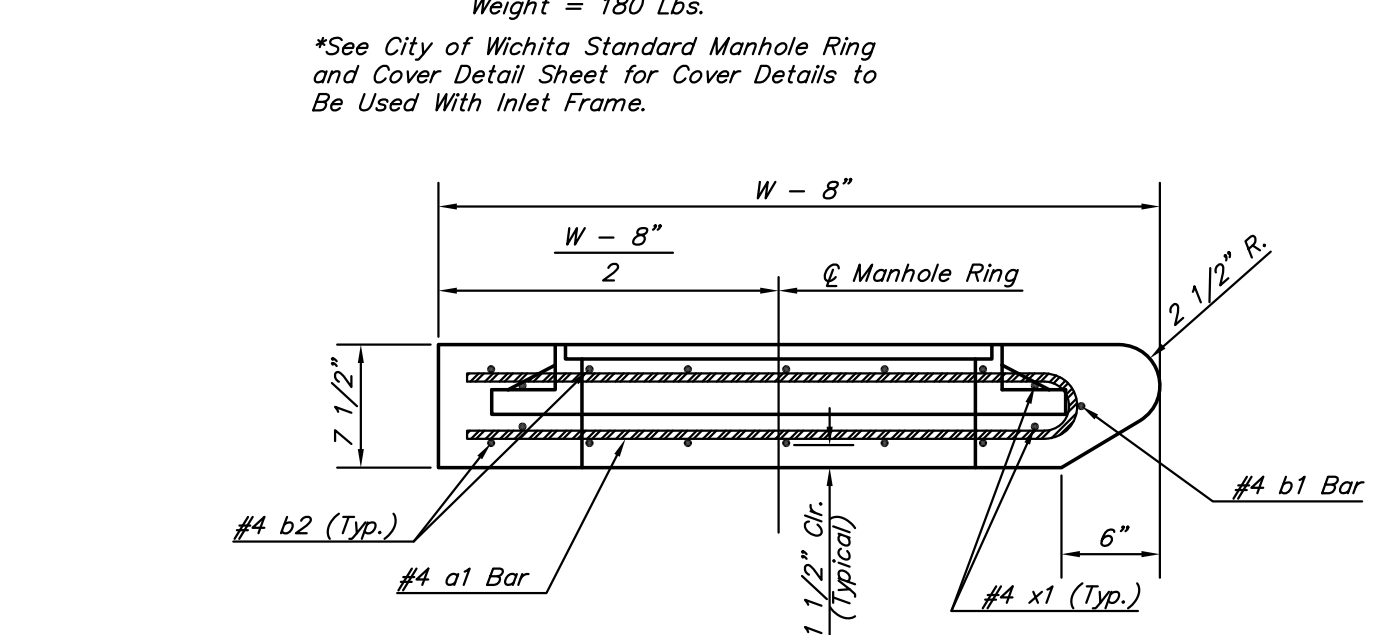
SECTION B-B



BENDING DIAGRAM



MANHOLE RING AND COVER

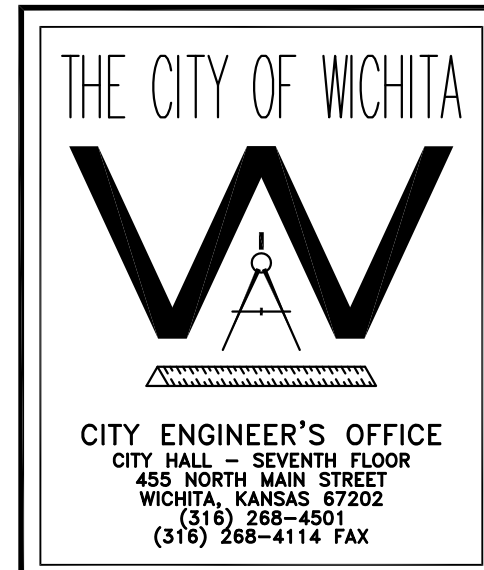


SECTION A-A

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±

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"

* 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 TYPE 1-A
CURB INLET
OPENING = 6" x 5'-0"

JAMES L. ARMOUR, P.E. - CITY ENGINEER

PROJECT NUMBER: _____ INDEX CODE: _____

DATE: _____ Sheet of _____

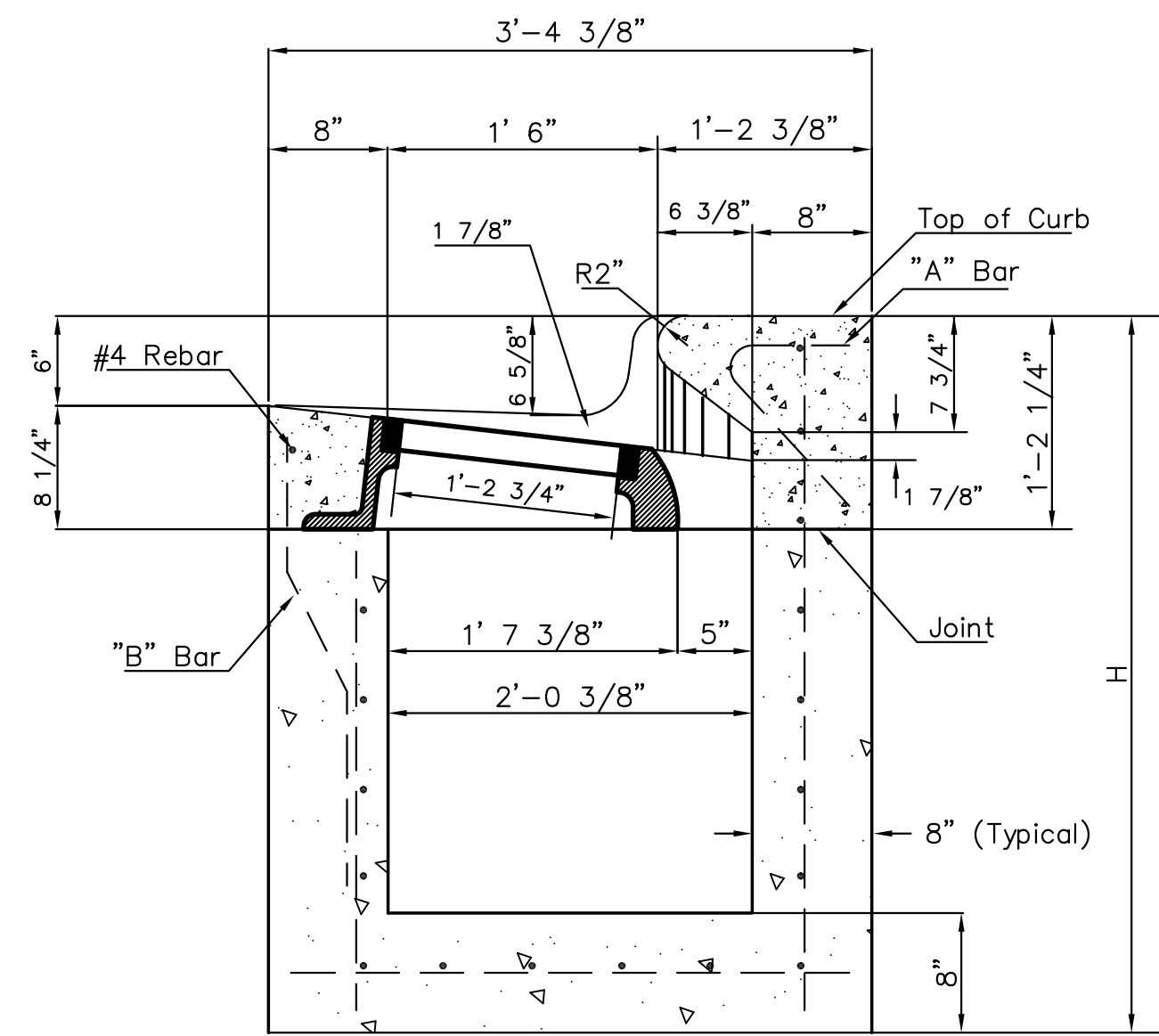
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PROJECT NUMBER

DESIGN BY: GR
DRAWN BY: DM
CHECKED BY: GR

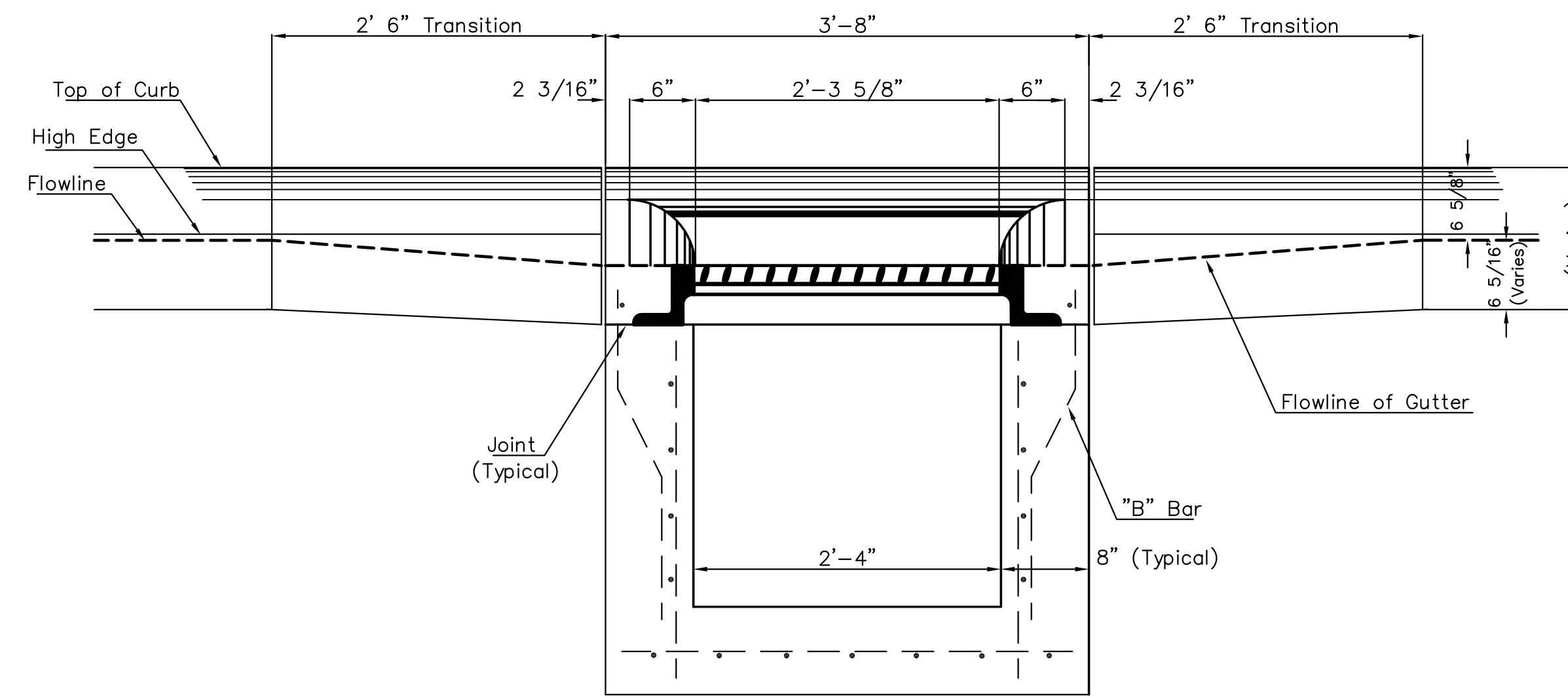
ISSUED: OCTOBER 2010
REVISED:
ADM#1-11.03.10
ADM#2-11.09.10
ADM#3-11.24.10

SHEET NO. **SW3**

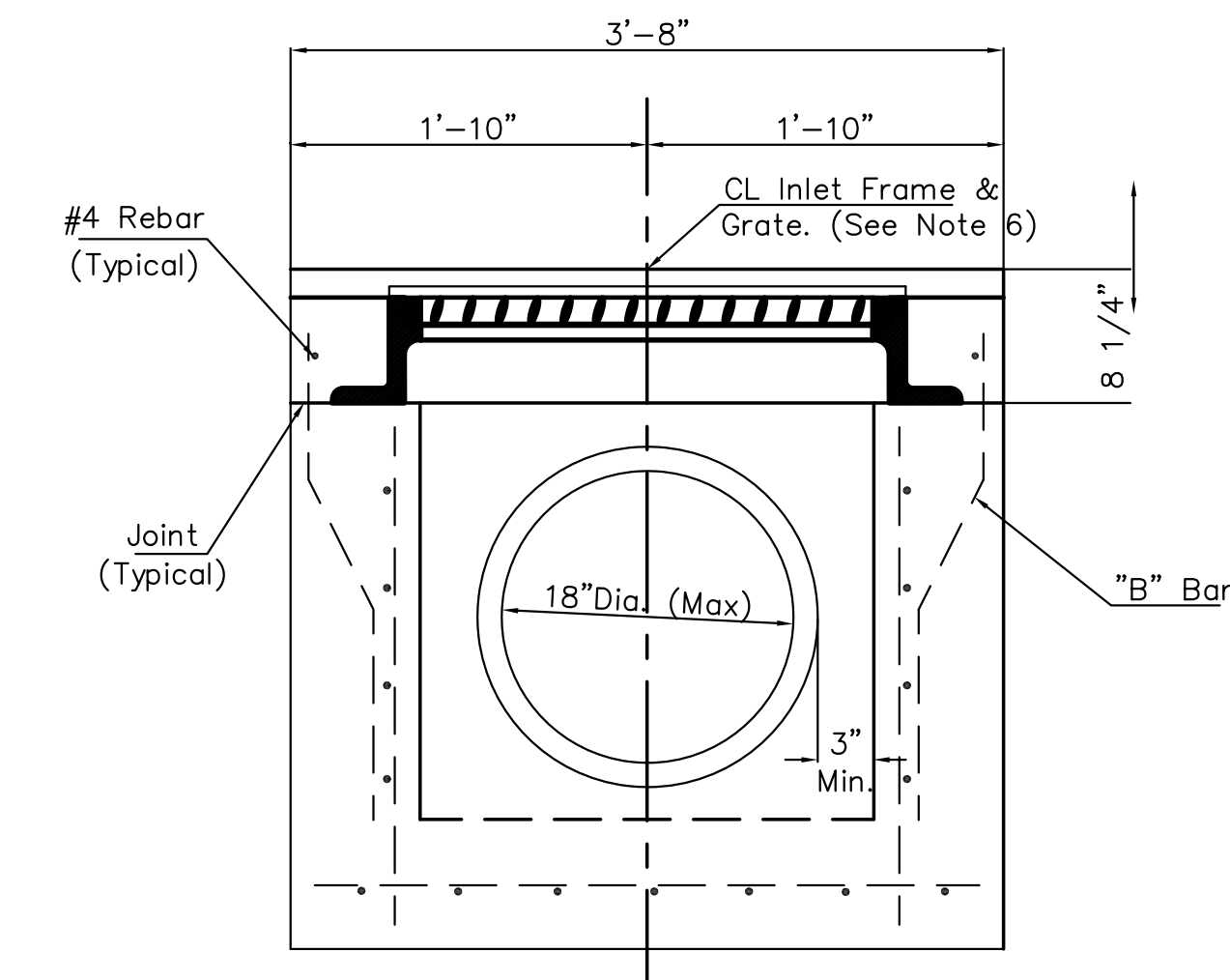
SITE DEVELOPMENT PLANS FOR
CYPRESS SPRINGS ALZ
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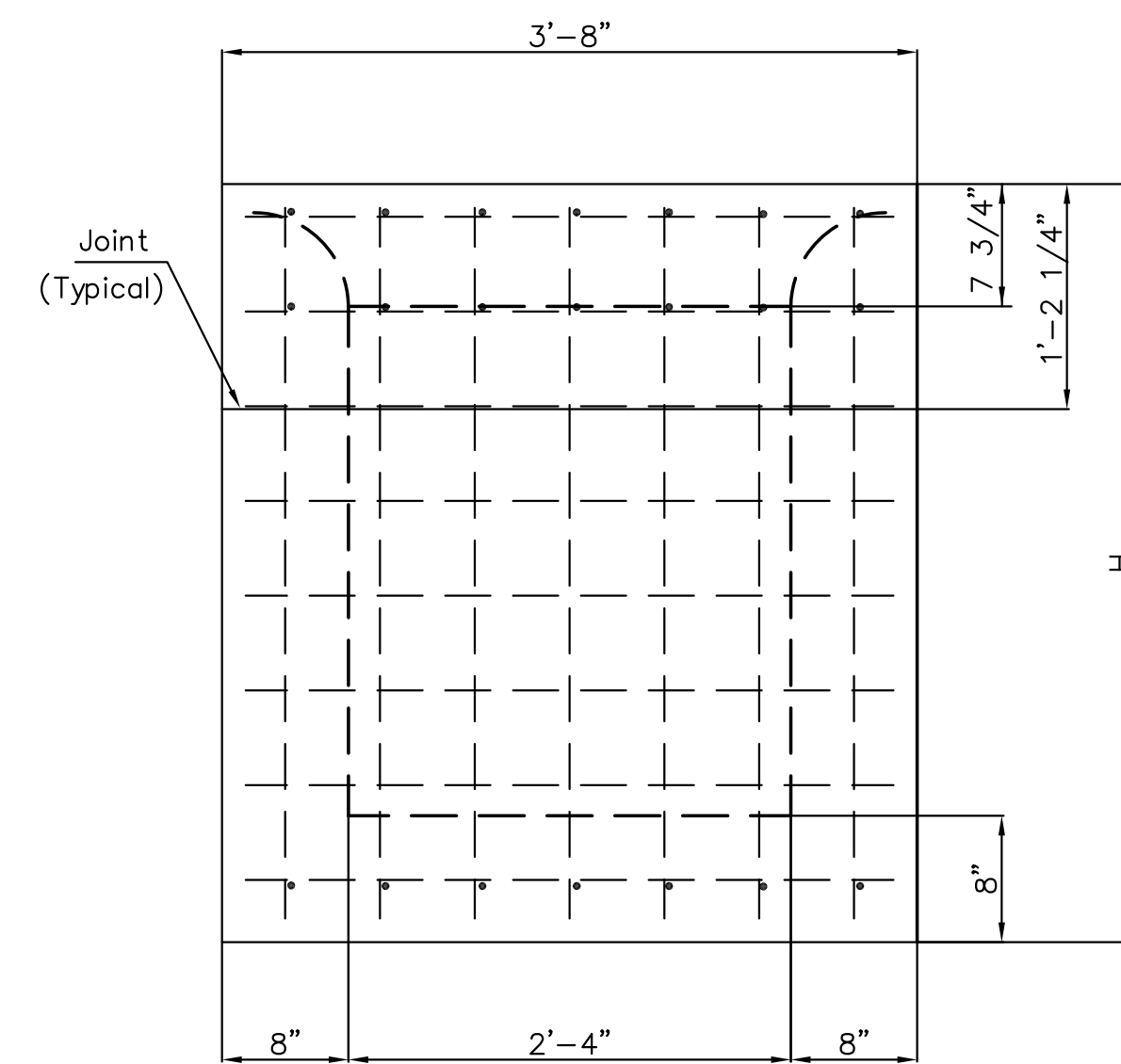
SECTION A-A



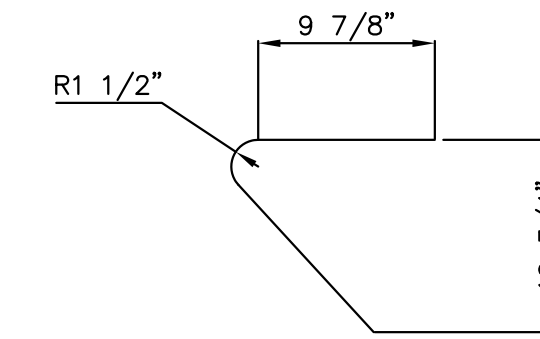
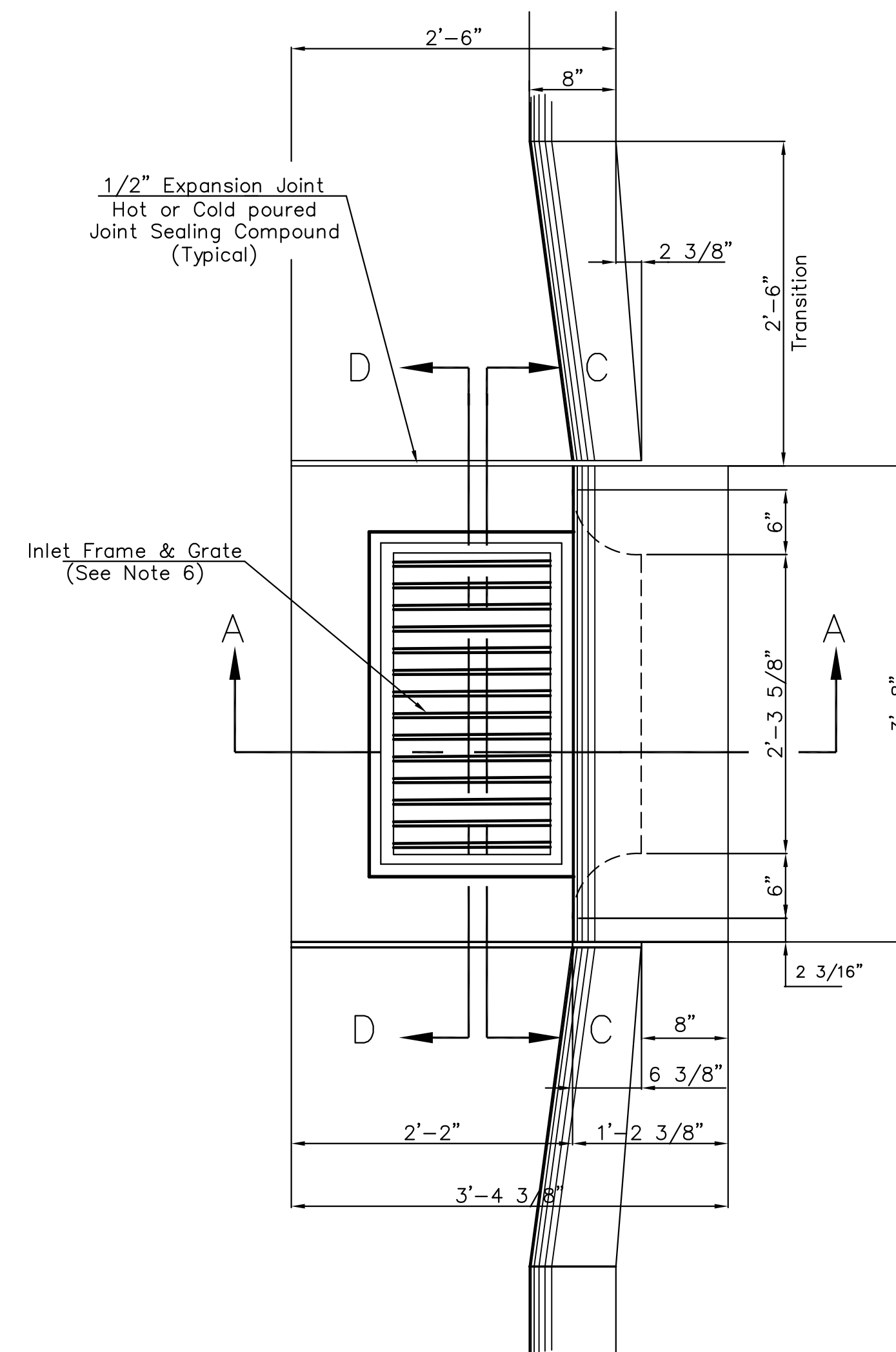
SECTION C-C



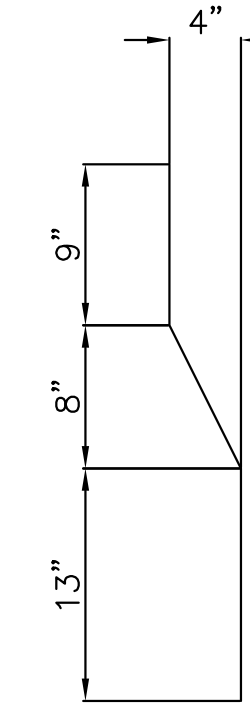
SECTION D-D



REAR WALL



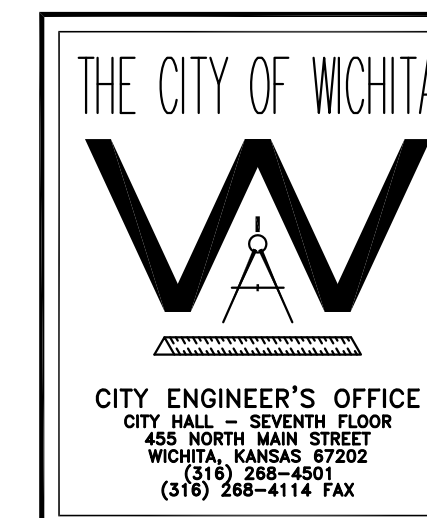
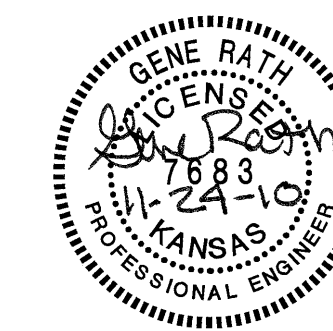
"A" Bar



"B" Bar

General Notes

1. Use the concrete mix specified for the City of Wichita concrete pavement throughout. All exposed edges shall be finished with an edging tool. Reinforcing bars shall be bent around pipe.
2. Inlet invert shall be shaped with 8 sack 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. All bars are #4 with 6" spacing and shall have a minimum clearance of 1 1/2" inches unless otherwise noted on the plans.
4. When directed by the Engineer, a small opening may be required in the back of the inlet in order to drain a low area. Reinforcing bars will extend through the openings. No deductions in concrete quantities will be made for these openings.
5. No deductions will be made in pay length of curb, gutter, or curb and gutter through the inlet area.
6. Use Neenah R-3289 HV Single Inlet Frame and Grate or approved equal. Inlet frame to be proof load tested to 40,000 lbs. on unsupported side.
7. Reinforcing bars shall be cut or bent around pipes. No deduction in concrete quantities shall be made for pipe openings.
8. The vanes of the grate shall be oriented with respect to the flow arrows shown on the plans.



STANDARD TYPE II
CURB INLET
INLET OPENING =
6" x 2'-3 5/8"

JAMES L. ARMOUR, P.E. - CITY ENGINEER

PROJECT NUMBER INDEX CODE

DATE Sheet of

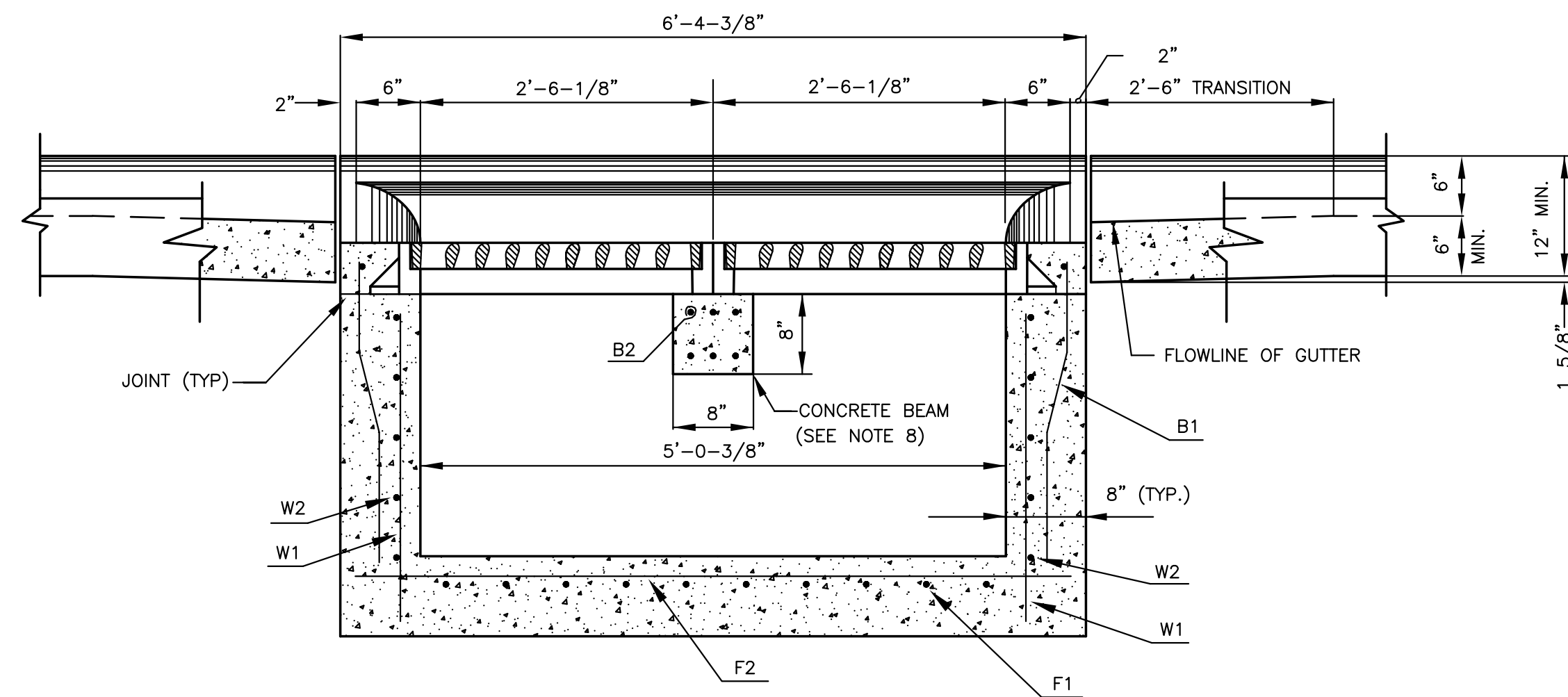
TYPE II
CURB INLET
DETAILS

SHEET TITLE
10373
PROJECT NUMBER

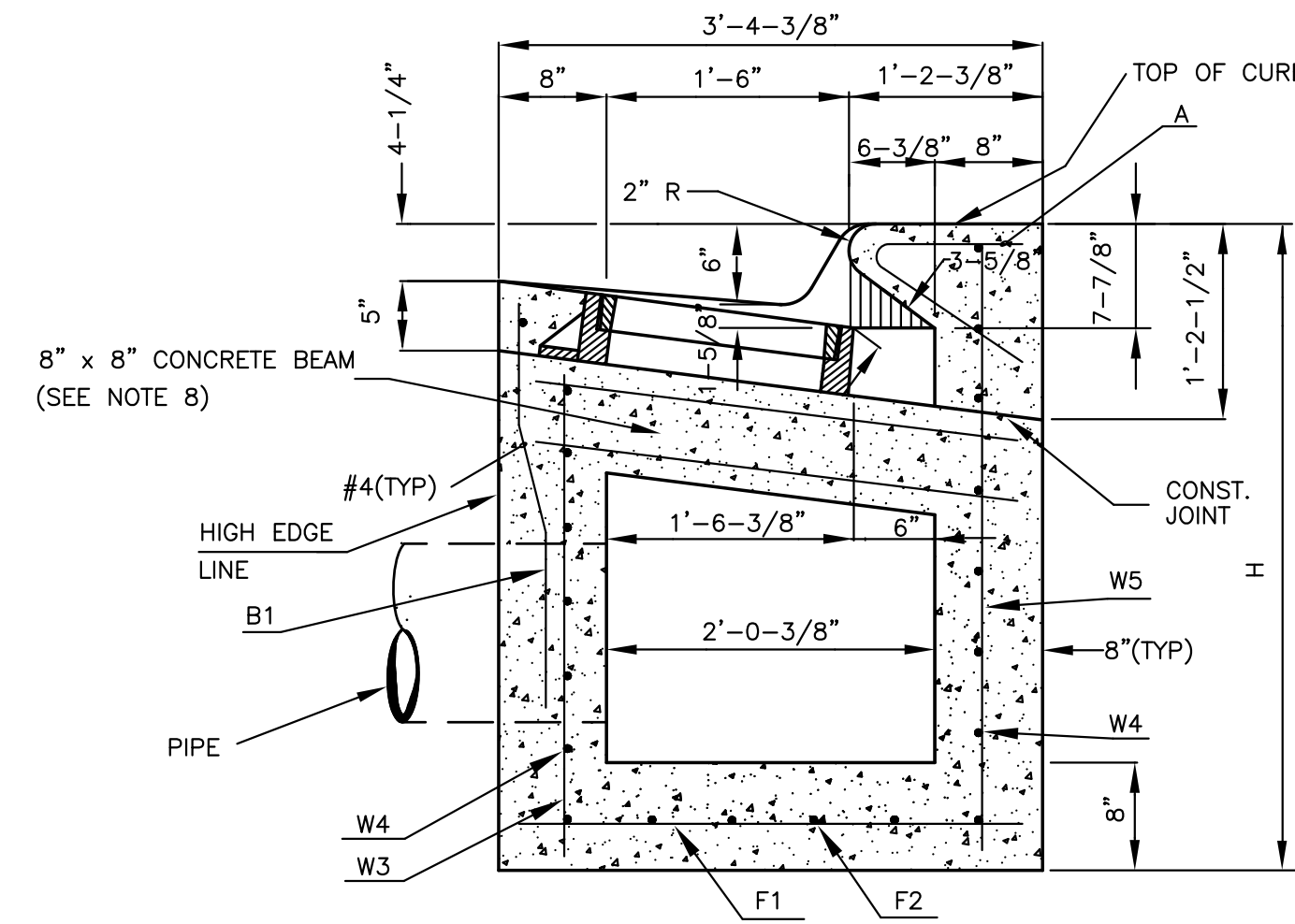
DESIGN BY GR
DRAWN BY DM
CHECKED BY GR

ISSUED
OCTOBER 2010
REVISED
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ADM#2-11.09.10
ADM#3-11.24.10

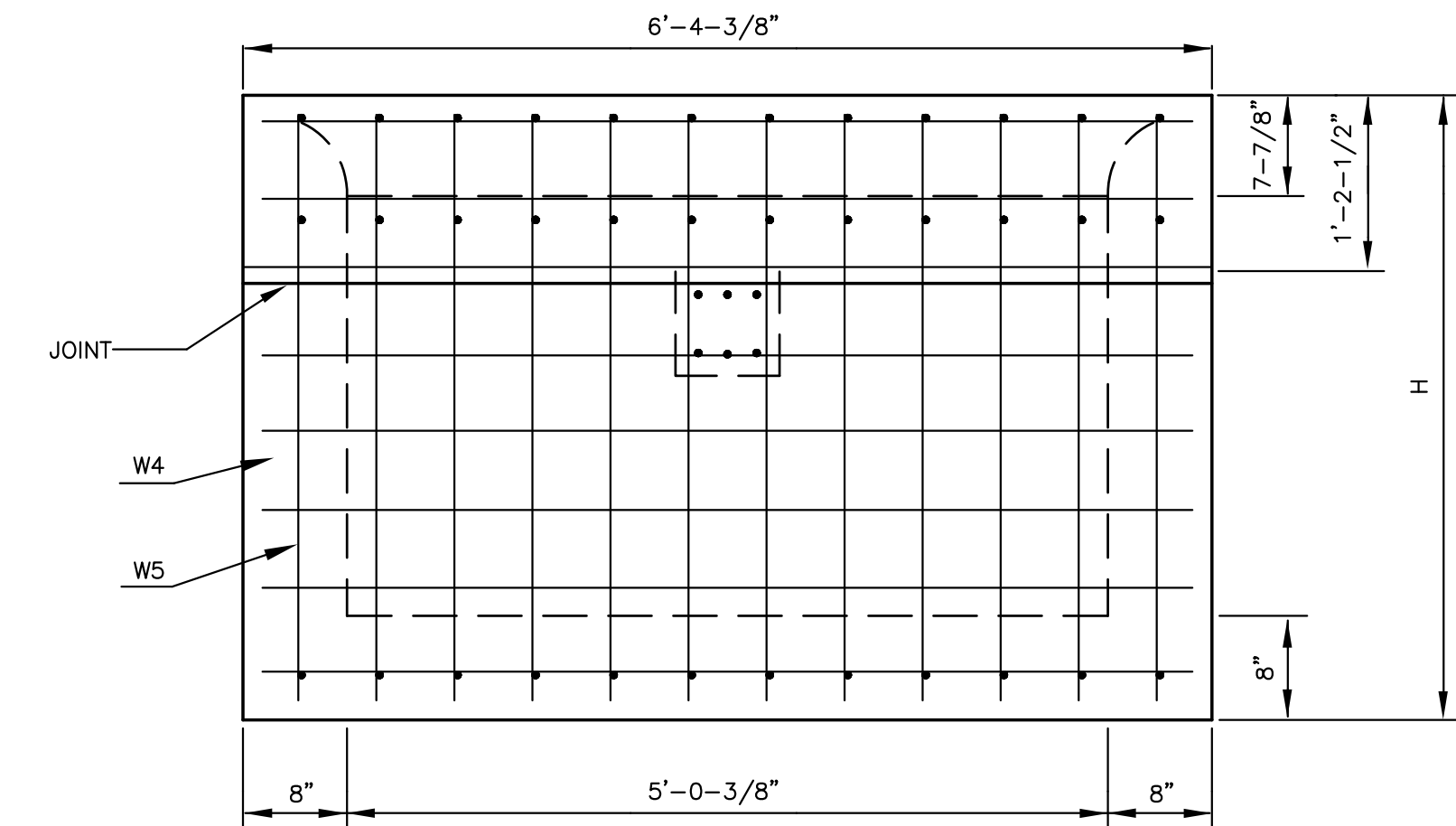
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SW4



SECTION C - C



SECTION A - A



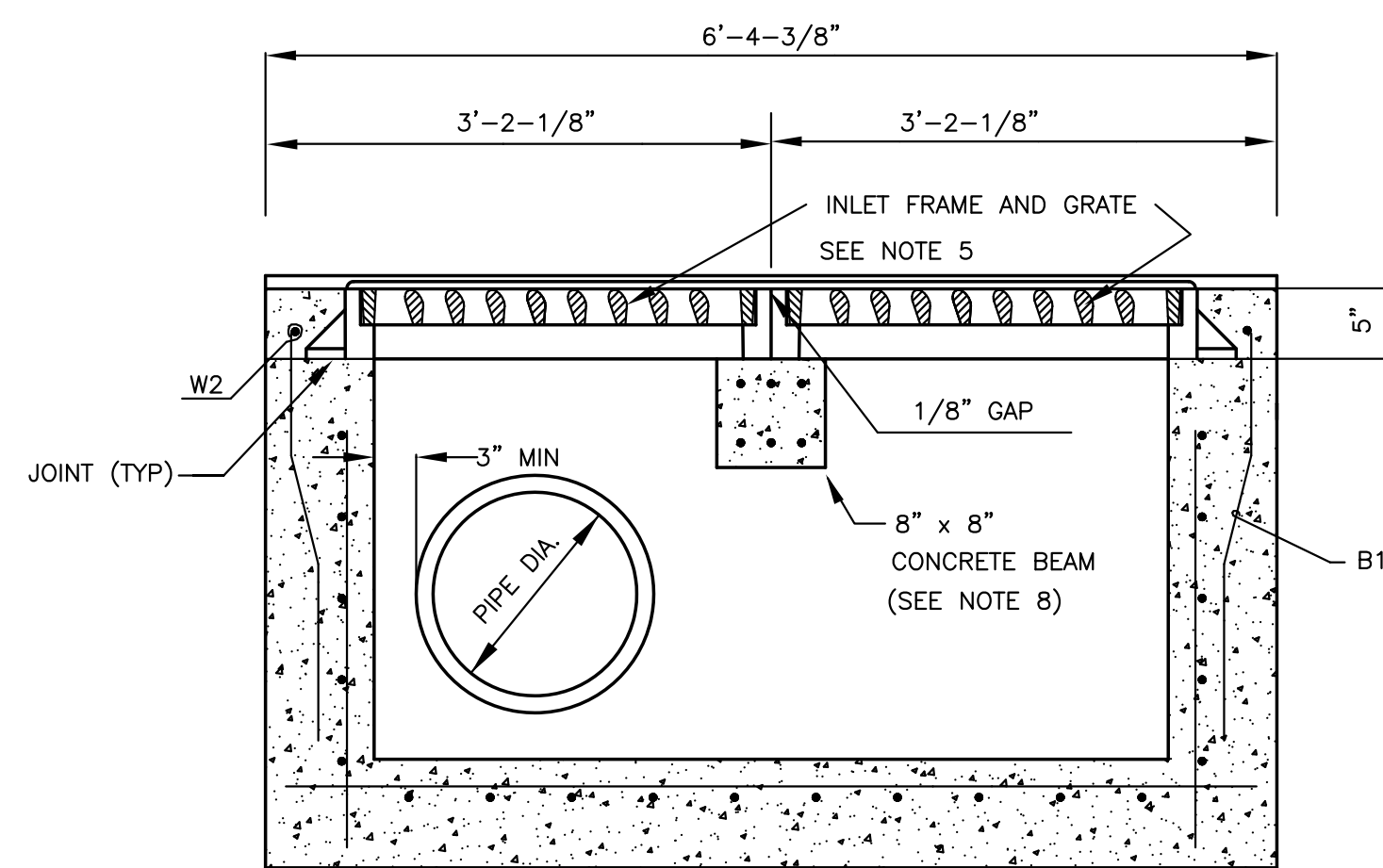
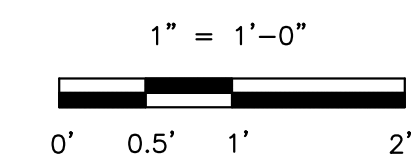
REBAR SIZES, SPACING, AND CLEARANCES PER NOTE 3.

REAR WALL

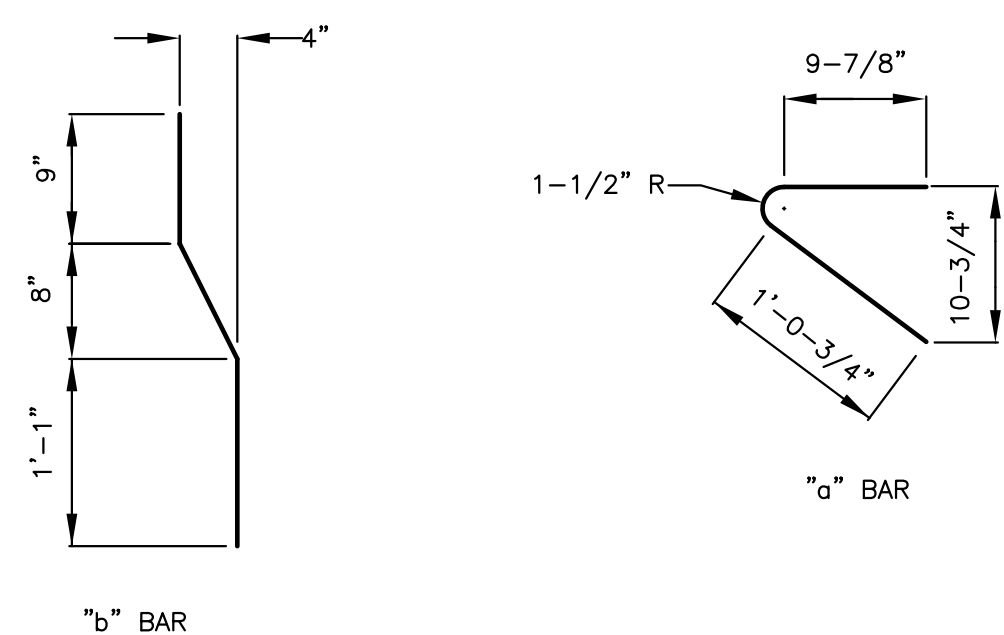
GENERAL NOTES

- USE THE CONCRETE MIX SPECIFIED FOR THE CITY OF WICHITA CONCRETE PAVEMENT THROUGHOUT. ALL EXPOSED EDGES SHALL BE FINISHED WITH AN EDGING TOOL.
- INLET INVERT SHALL BE SHAPED WITH 8 SACK 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.
- ALL BARS ARE #4 WITH 6" SPACING AND SHALL HAVE A MINIMUM CLEARANCE OF 1-1/2" UNLESS OTHERWISE NOTED ON THE PLANS.
- NO DEDUCTIONS WILL BE MADE IN PAY LENGTH OF CURB, GUTTER, OR CURB AND GUTTER THROUGH THE INLET AREA.
- USE DEETER 2442 & 2443 INLET FRAMES WITH GRATES OR APPROVED EQUAL. INLET FRAMES TO BE PROOF LOAD TESTED TO 40,000 LBS ON UNSUPPORTED SIDE.
- REINFORCING BARS SHALL BE CUT OR BENT AROUND PIPES. NO DEDUCTION IN CONCRETE QUANTITIES SHALL BE MADE FOR PIPE OPENINGS.
- THE VANES OF THE GRATE SHALL BE ORIENTED TO INTERCEPT FLOW FROM THE DIRECTION SHOWN BY FLOW ARROWS ON THE PLANS.
- ALTERNATE: IN LIEU OF CONCRETE BEAM, INSTALL A GALVANIZED STEEL W8x24 BEAM 3' LONG. STEEL AND GALVANIZING SHALL MEET THE REQUIREMENTS OF ASTM A36 AND A123 RESPECTIVELY.
- SEE PAVEMENT UNDERDRAIN DETAIL SHEET _____
- SEE REINFORCING STEEL FOR INLETS AND MANHOLES.

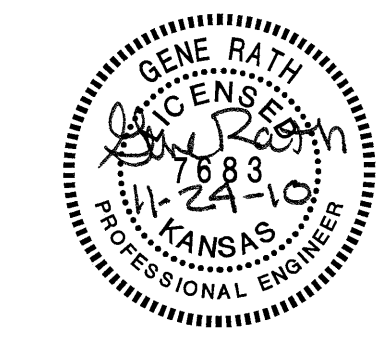
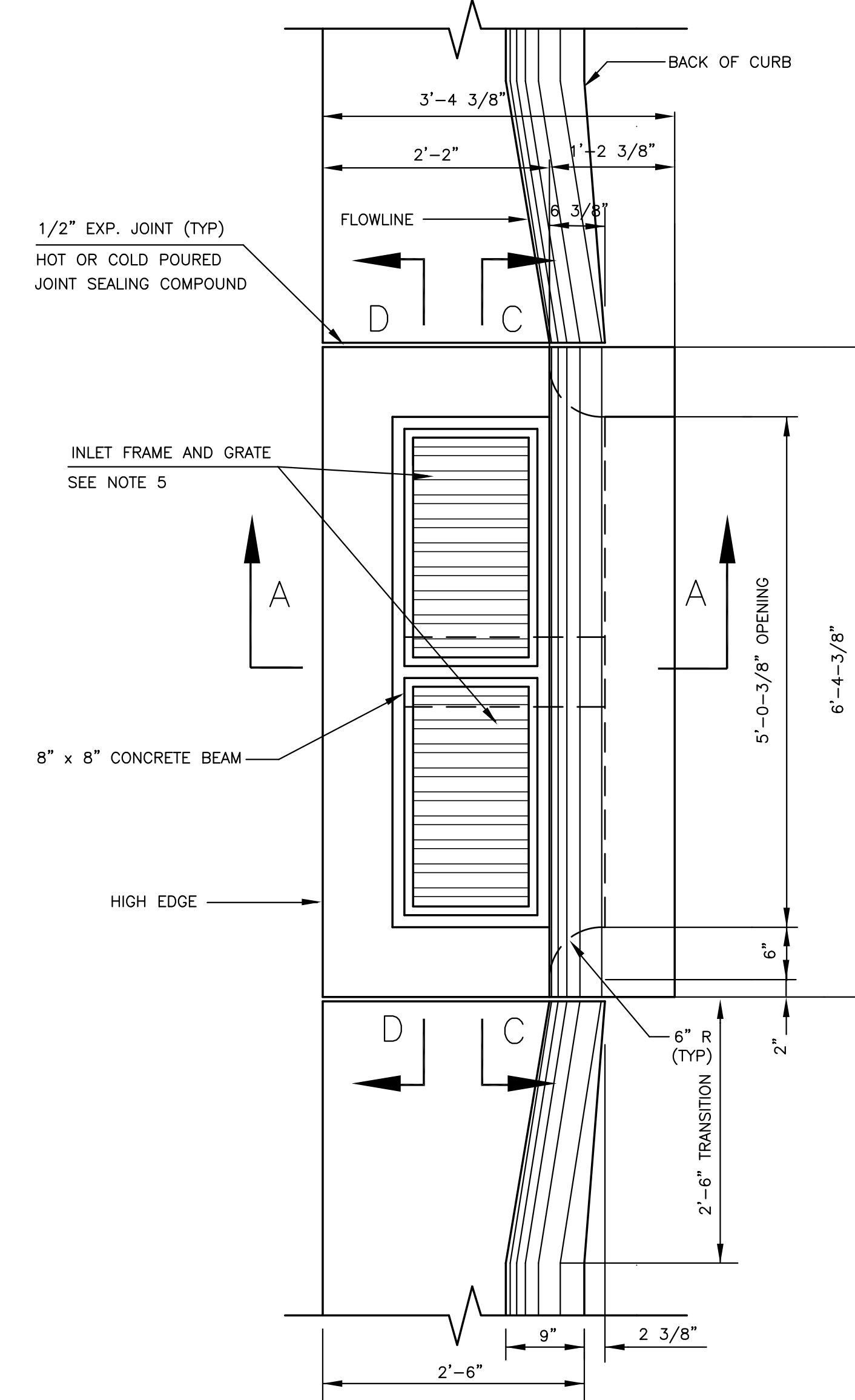
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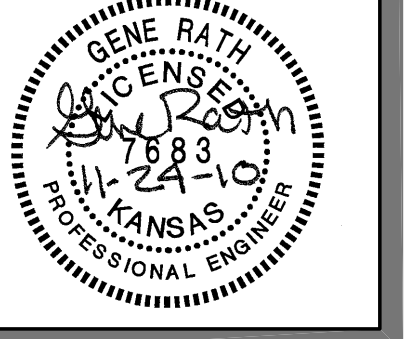


SECTION D - D



BENDING DIAGRAM



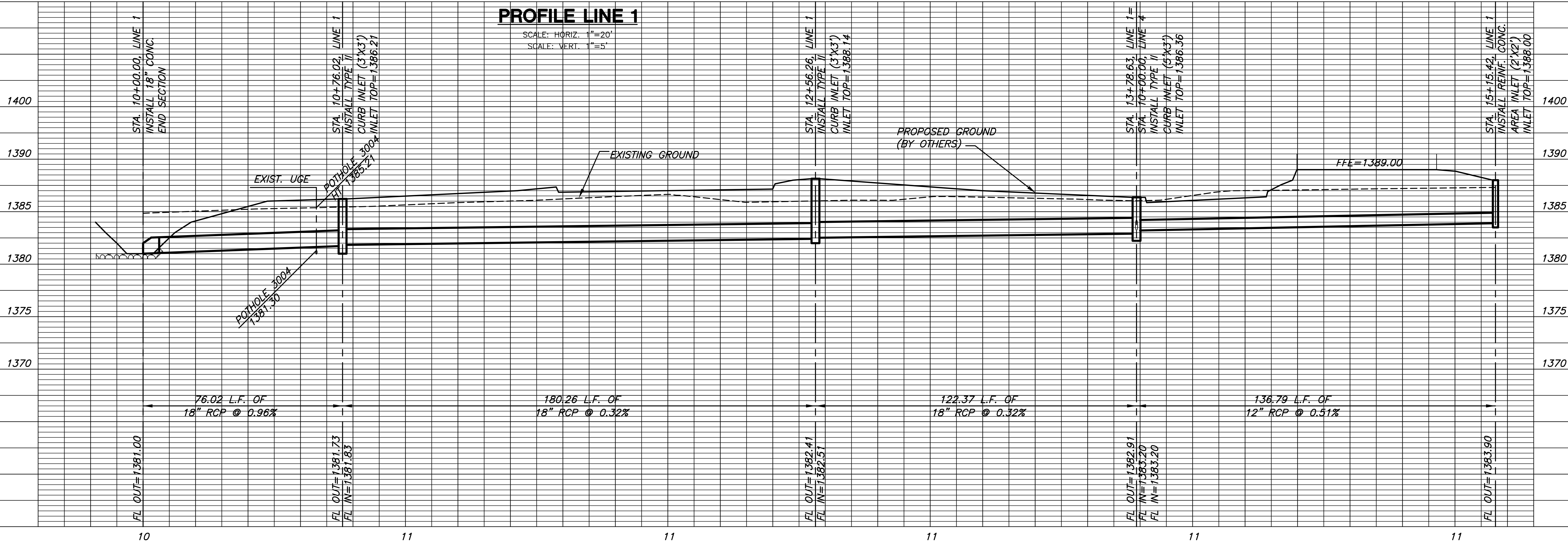
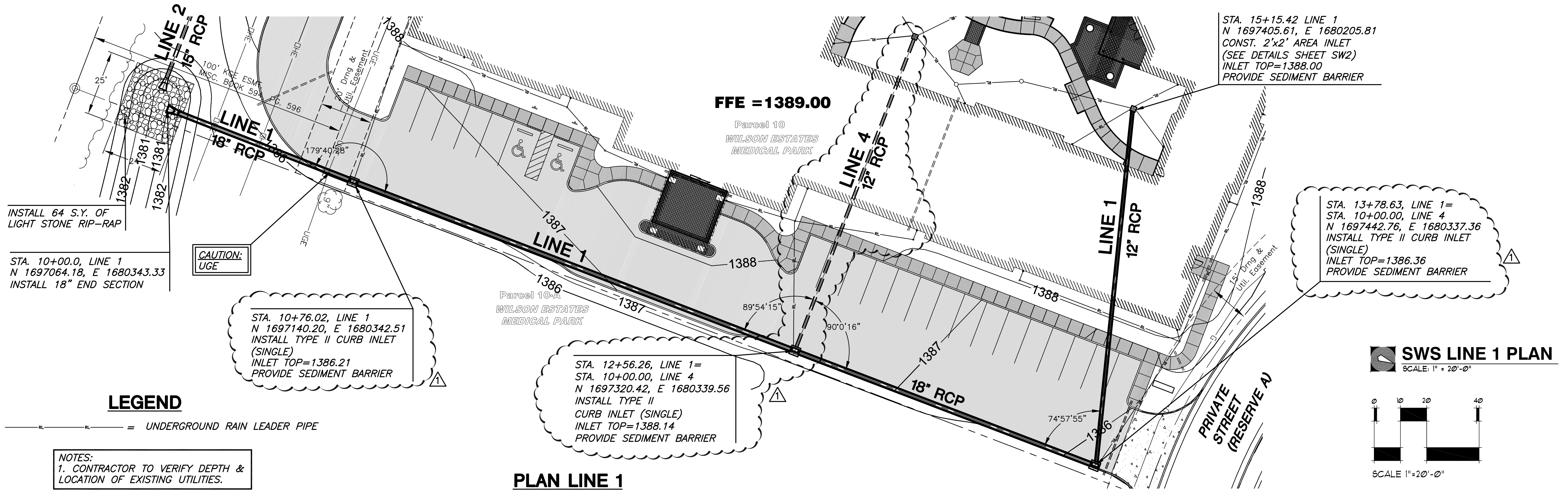


**PRIVATE
STORM WATER
SEWER
PLAN & PROFILE**
SHEET TITLE
10373
PROJECT NUMBER

DESIGN BY: **MKEC**
DRAWN BY: **DM**
CHECKED BY: **GR**

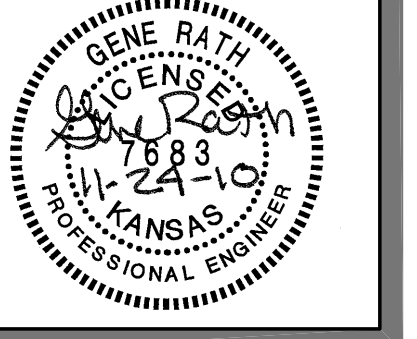
ISSUED: **OCTOBER 2010**
REVISED:
ADM#1-11.03.10
ADM#2-11.09.10
ADM#3-11.24.10

SHEET NO.
SW6



PLOTTED: Monday, December 27, 2010 @ 11:59AM

J:\CIVIL\10373 - CYPRESS SPRINGS\DWG\SHEETS\10373_PVT_SWS_1.DWG

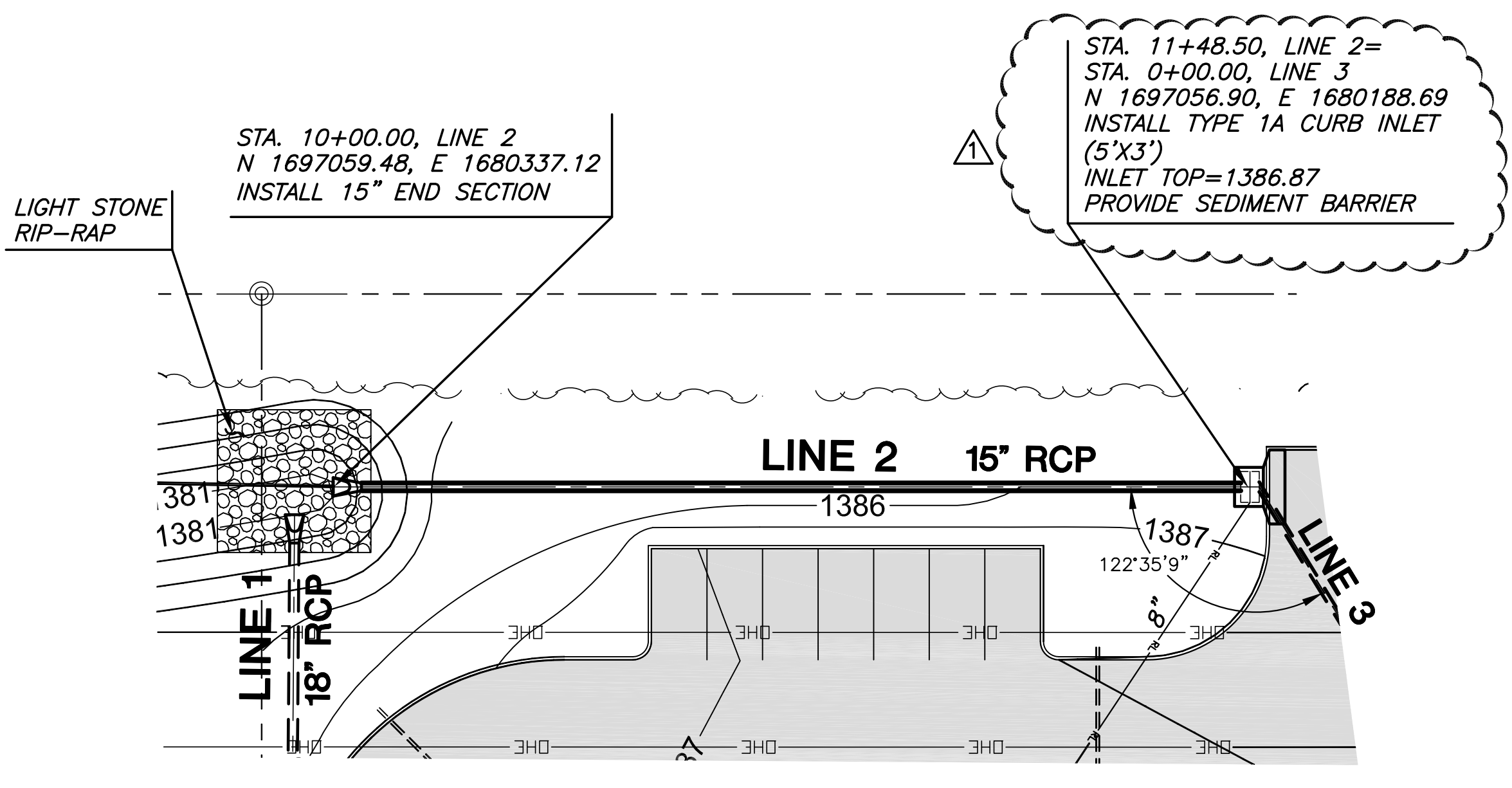


PRIVATE STORM WATER SEWER PLAN & PROFILE
SHEET TITLE
10373
PROJECT NUMBER

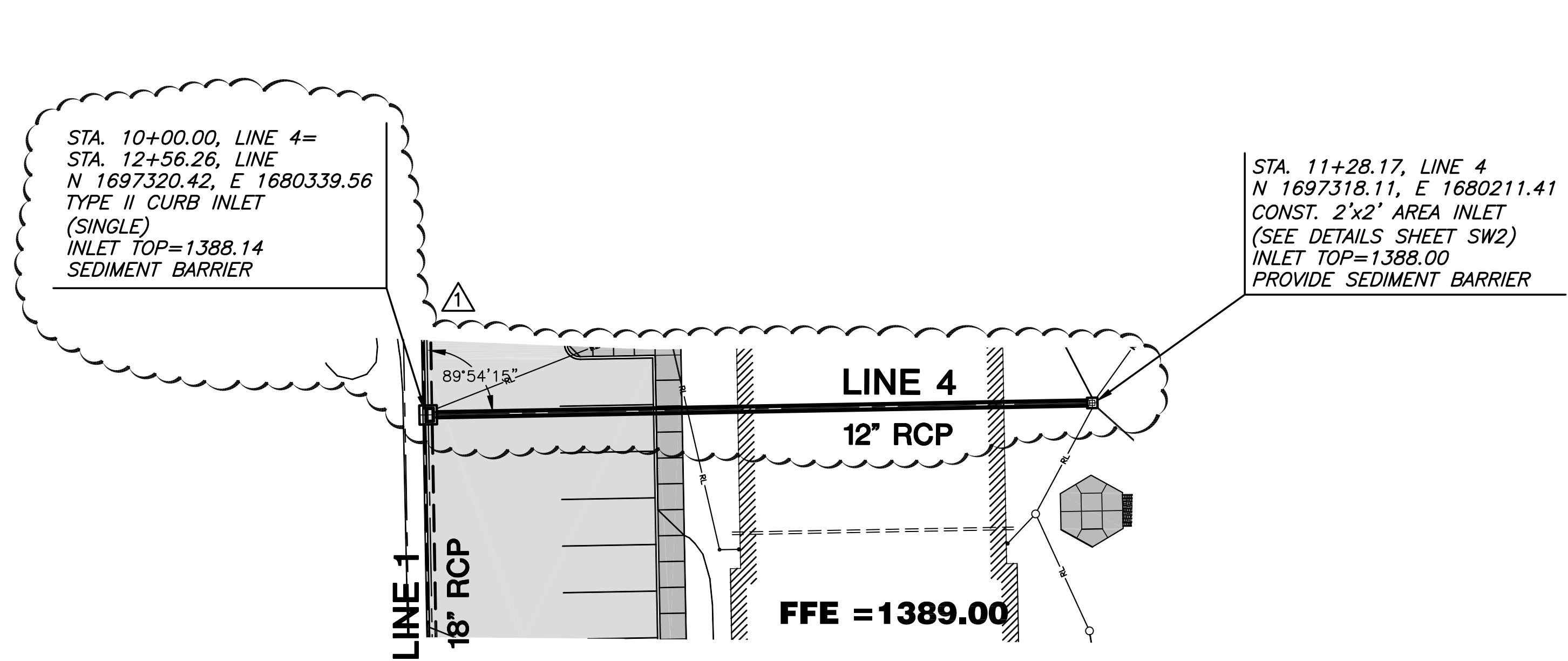
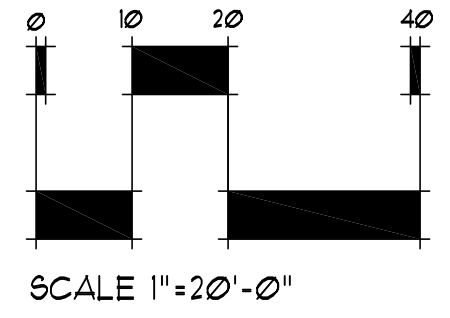
DESIGN BY: **MKEC**
DRAWN BY: **DM**
CHECKED BY: **GR**

ISSUED: **OCTOBER 2010**
REVISED:
ADM#1-11.03.10
ADM#2-11.09.10
ADM#3-11.24.10

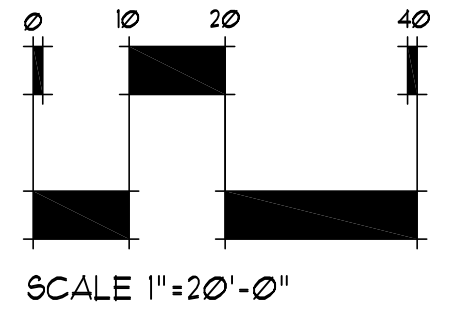
SHEET NO.
SW7



SWS LINE 2 PLAN
SCALE: 1" = 20'-0"



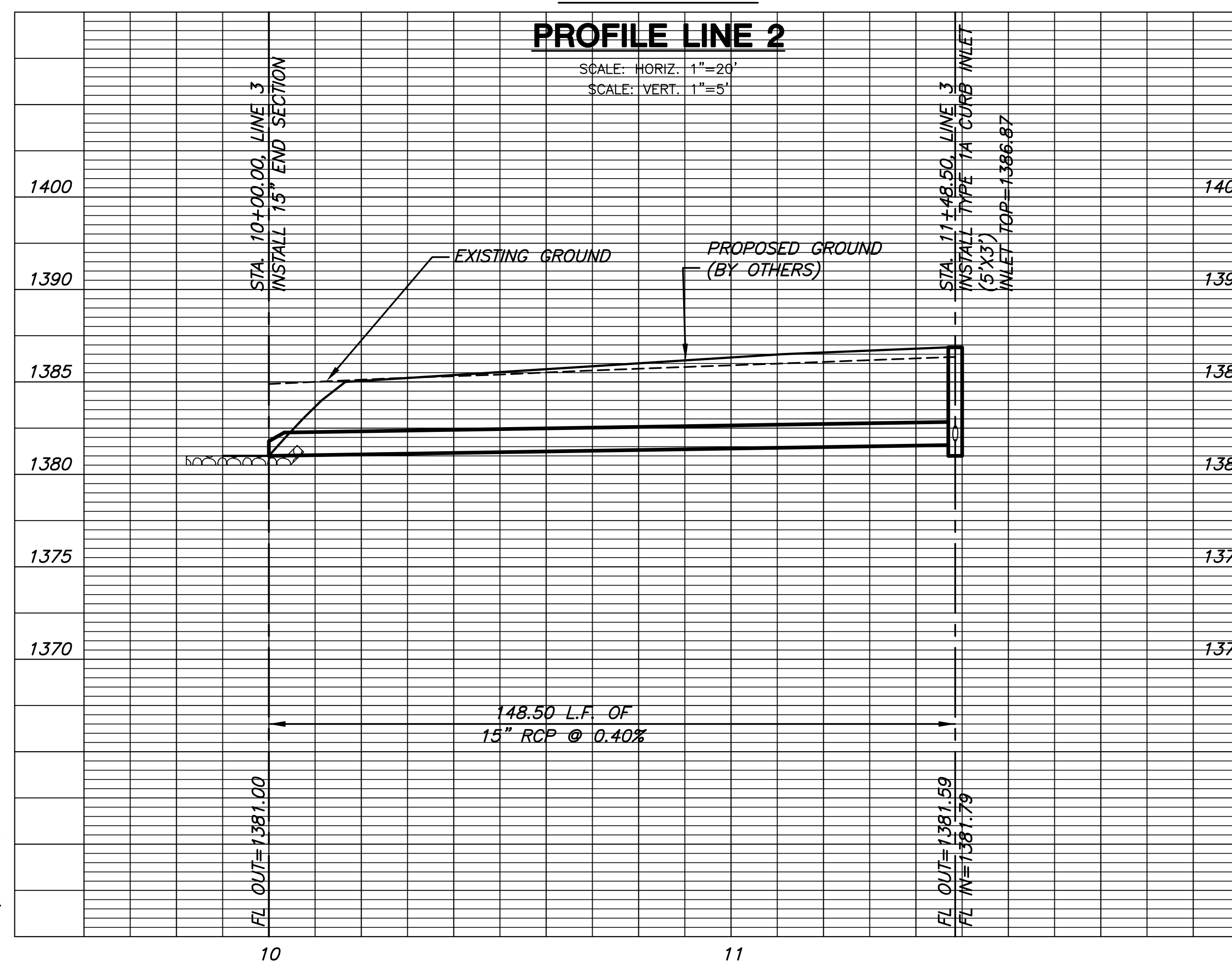
SWS LINE 4 PLAN
SCALE: 1" = 20'-0"



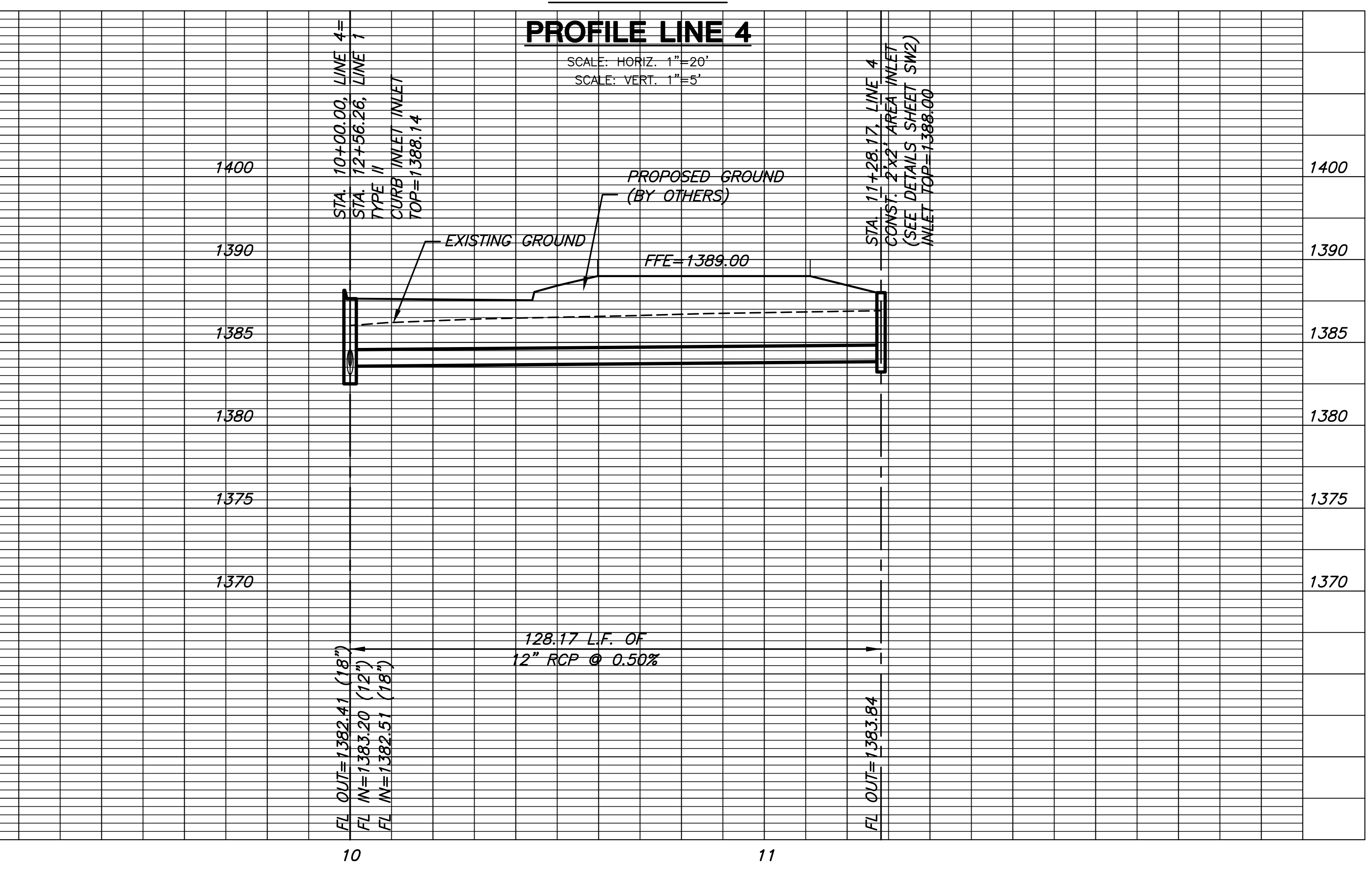
LEGEND
— = UNDERGROUND RAIN LEADER PIPE

NOTES:
1. CONTRACTOR TO VERIFY DEPTH & LOCATION OF EXISTING UTILITIES.

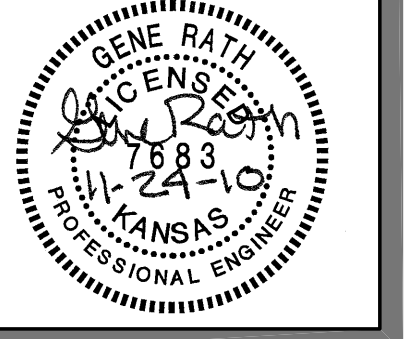
PLAN LINE 2
PROFILE LINE 2
SCALE: HORIZ. 1" = 20'
SCALE: VERT. 1" = 5'



PLAN LINE 4
PROFILE LINE 4
SCALE: HORIZ. 1" = 20'
SCALE: VERT. 1" = 5'



SITE DEVELOPMENT PLANS FOR
CYPRESS SPRINGS ALZ
WICHITA, KANSAS



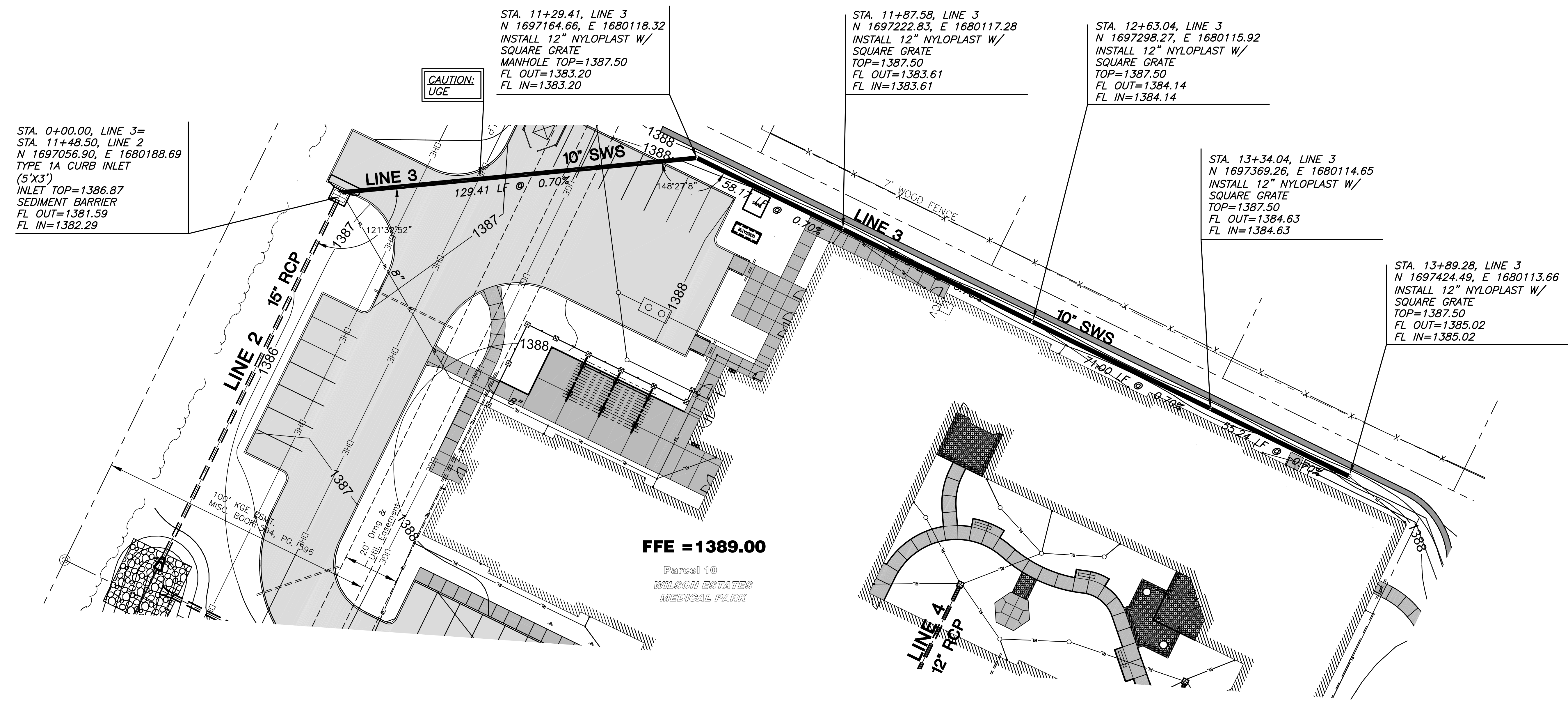
**PRIVATE
STORM WATER
SEWER
PLAN**

SHEET TITLE
10373
PROJECT NUMBER

MKEC
DESIGN BY
DM
DRAWN BY
GR
CHECKED BY

ISSUED
OCTOBER 2010
REVISED
ADM#1-11.03.10
ADM#2-11.09.10
ADM#3-11.24.10

SHEET NO.
SW8



PLAN LINE 3

LEGEND

— — — — — = UNDERGROUND RAIN LEADER PIPE

NOTES:
1. CONTRACTOR TO VERIFY DEPTH &
LOCATION OF EXISTING UTILITIES.

LINE 3 CONSTRUCTION AND PERMITTING
LINE 3 SHALL BE CONSTRUCTED UNDER THE
REQUIREMENTS, REVIEW, APPROVAL, AND
PERMITTING PROCESS OF THE CITY'S OFFICE OF
CENTRAL INSPECTION. THE CONTRACTOR SHALL
OBTAIN A SEPARATE PERMIT FOR THE
CONSTRUCTION OF LINE 3.

SWS LINE 3 PLAN
SCALE: 1" = 20'-0"

