

# STORM WATER SEWER IMPROVEMENTS

TO SERVE

## WICHITA MID-CONTINENT AIRPORT

## AS BUILT PLANS

PRIVATE PROJECT NO. 0113 PPD (607861)

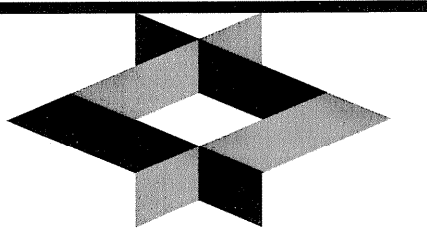
## CITY OF WICHITA, KANSAS

Contractor: Utilities Plus  
Inspector: Fred Smith, Baughman Co.  
pdf's by: KEK, 3/15/13

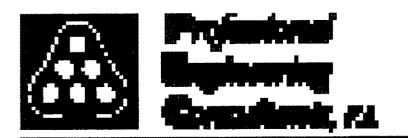
JAMES L. ARMOUR, P.E. - CITY ENGINEER

**HNTB**

HNTB Corporation  
The HNTB Companies  
715 Kirk Drive  
Kansas City, Missouri 64105  
(816) 472-1201 Fax (816) 472-4063

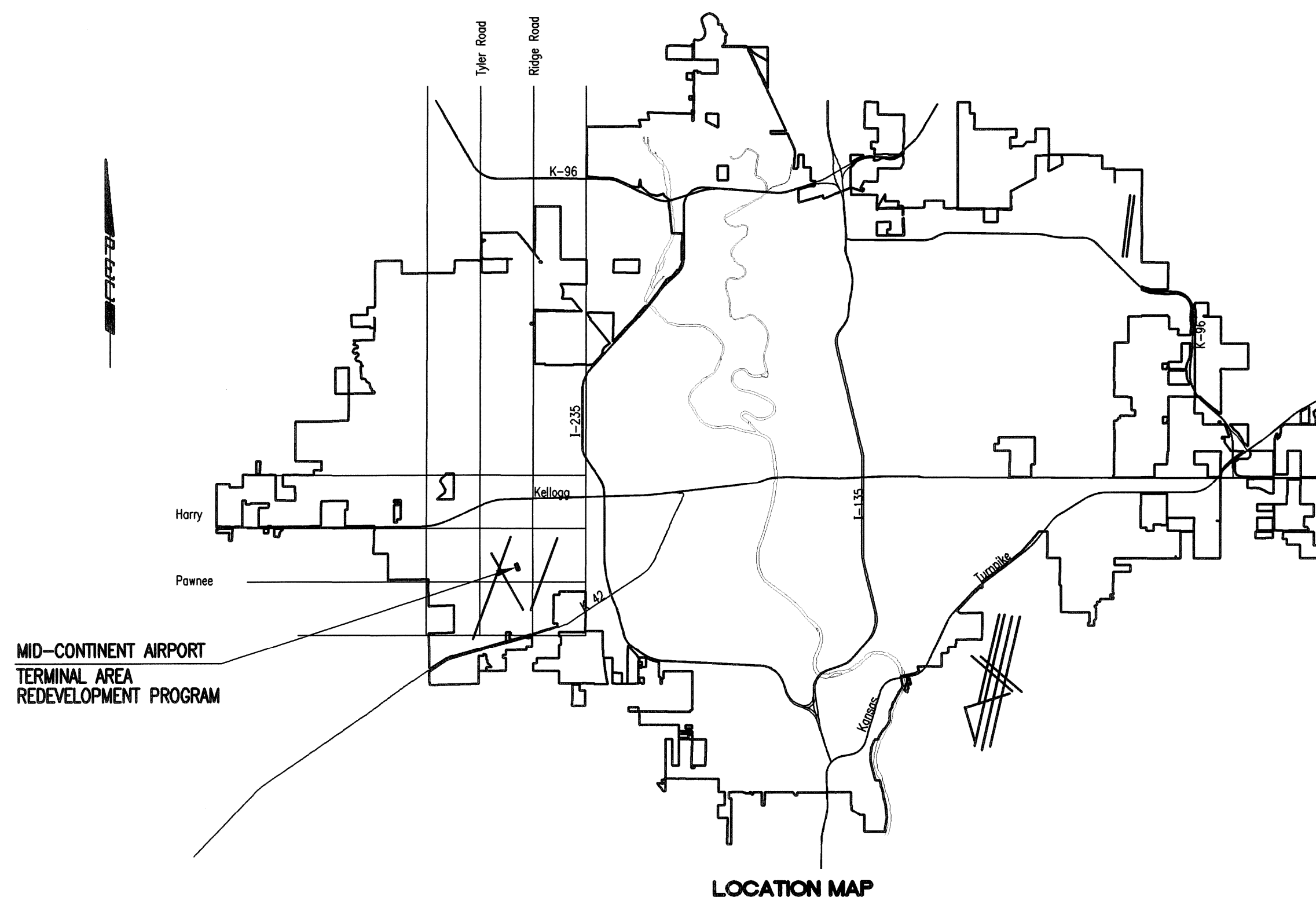


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WICHITA  
MID-CONTINENT AIRPORT  
Air Capital Terminal 3  
PACKAGE #12  
TERMINAL BUILDING



**INDEX OF SHEETS**

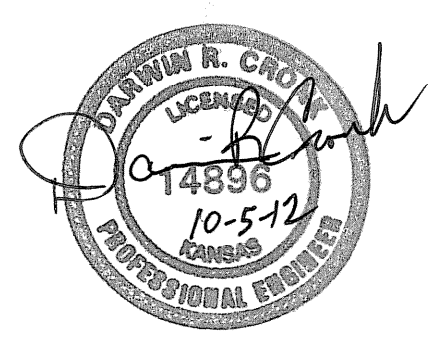
SHEET NO. CU000	STORM SEWER TITLE SHEET
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APPROVED AS NOTED  
BY CITY ENGINEER OF WICHITA

Engineering *Julianne Kellman* 10-5-12  
Stormwater *[Signature]* 10/5/12

**NOTE TO CONTRACTORS**

Inspection and testing for this project are to be provided by a Licensed Consulting Engineering Firm under contract with the Owner/Developer. Said inspection to be in accordance with the City of Wichita standard construction engineering practices and certified by a Licensed Professional Engineer. No work shall be performed in dedicated easements or public right-of-way by the Contractor without such inspection, nor shall any work be commenced without written authorization by the City Engineer.



ISSUE:  
PERMIT / BID / CONSTRUCTION

DATE: SEPTEMBER 15, 2011  
HNTB PROJECT NO.: 34912  
CLIENT PROJECT NO.: 06178

DRAWN BY:		
CHECKED BY:		
APPROVED BY:		
REVISION	DATE	DESCRIPTION
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STORM SEWER  
TITLE SHEET

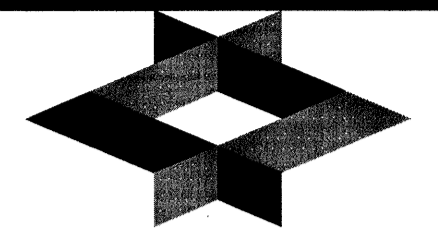
**CU000**

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Plot Scale: 1" = 10'-04"-2012 4:14:28 PM by JASON.D. TEMPLE  
C:\2006\06481\WATER QUALITY\PROTITLE



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**MID-CONTINENT AIRPORT**  
Air Capital Terminal 3  
PACKAGE #12  
TERMINAL BUILDING



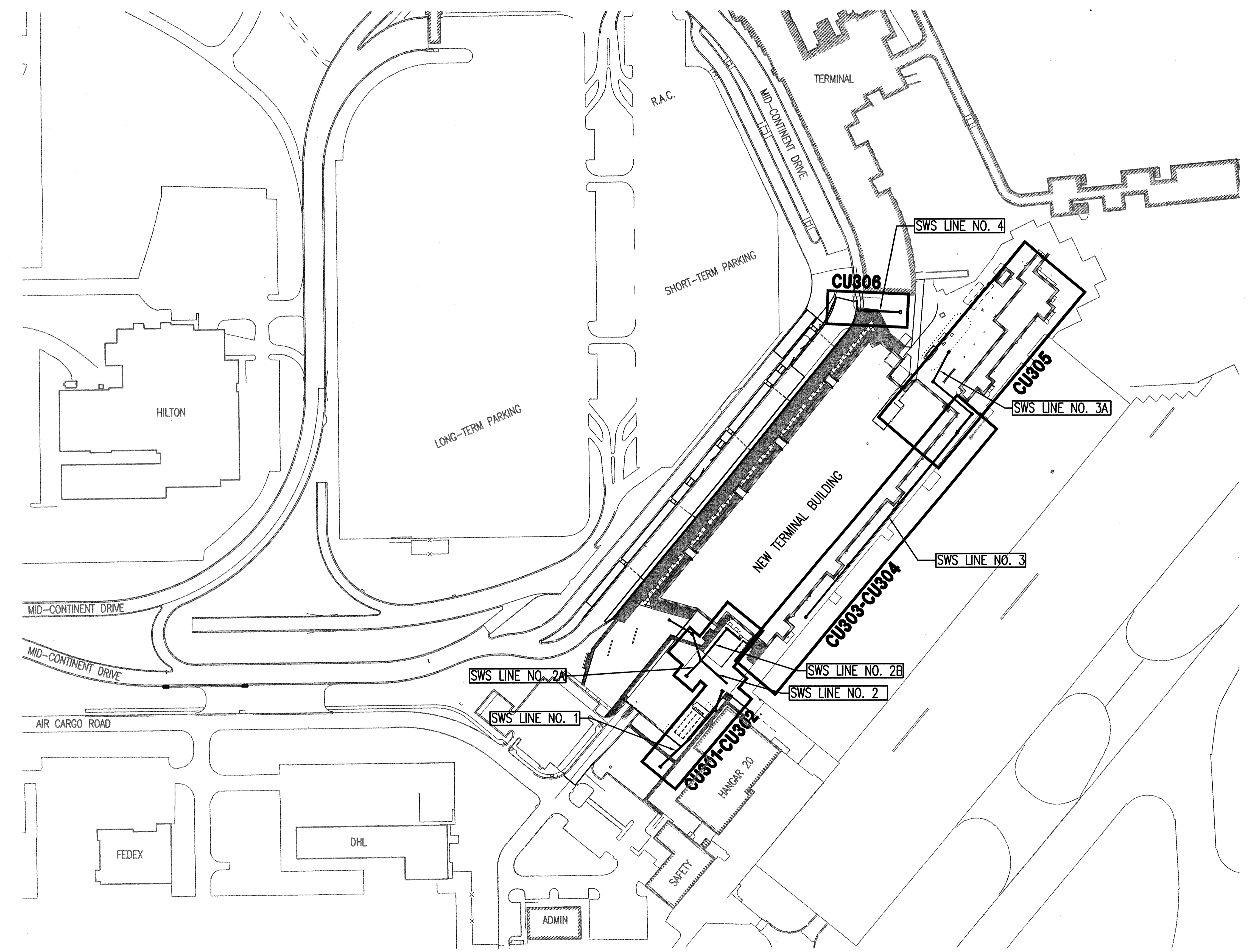
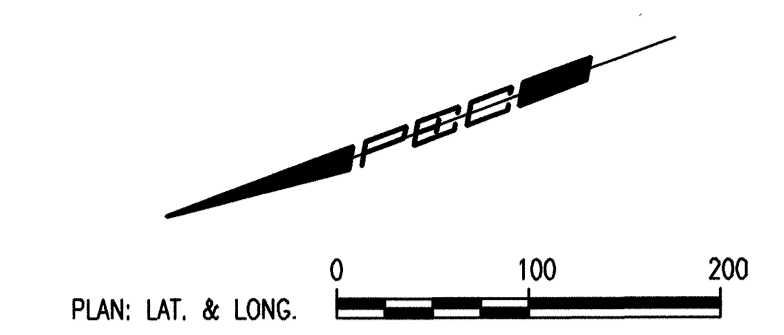
ISSUE: PERMIT / BID  
CONSTRUCTION DOCUMENTS

DATE: MARCH 26, 2010  
HNTB PROJECT NO.: 34912  
CLIENT PROJECT NO.: 06178

DRAWN BY:  
CHECKED BY:  
APPROVED BY:

REVISION	DATE	DESCRIPTION
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SWS PLANS - SHEET INDEX  
**CU300**

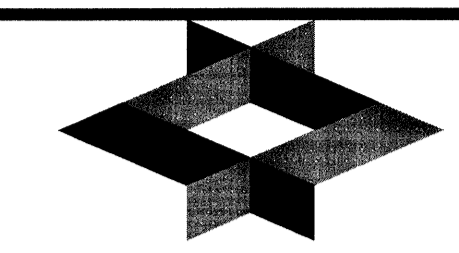


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REVISION	DATE	DESCRIPTION
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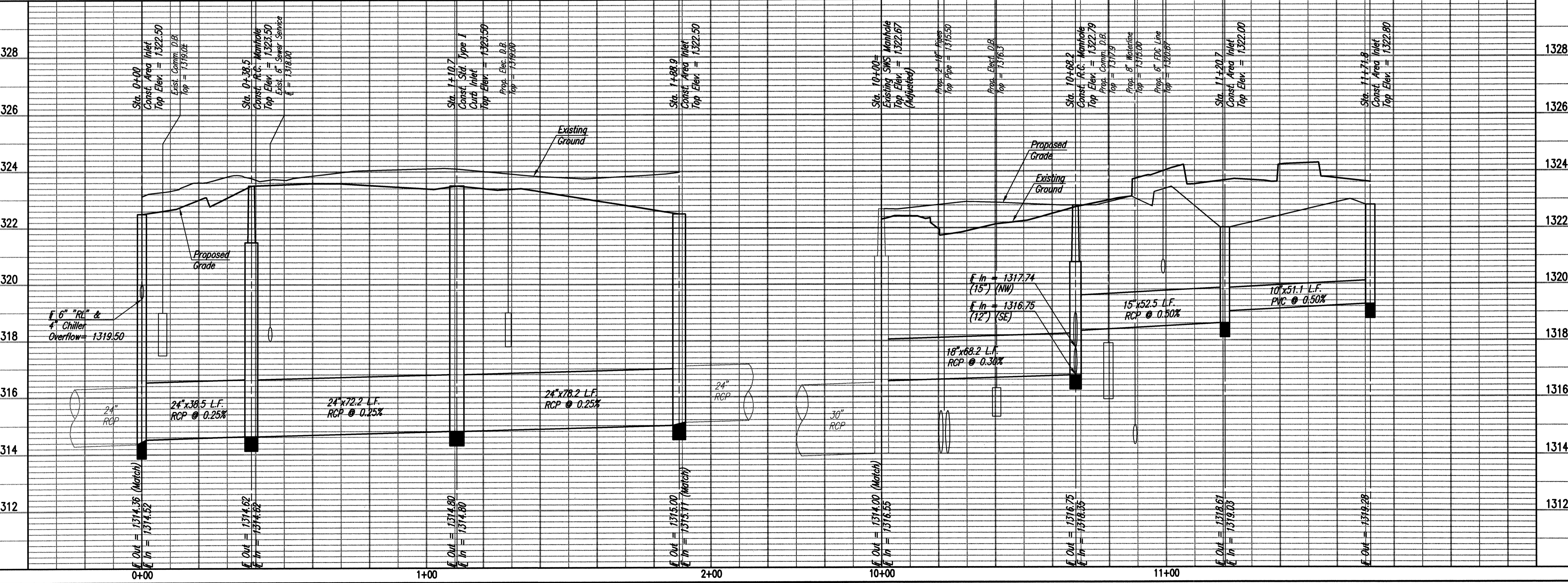
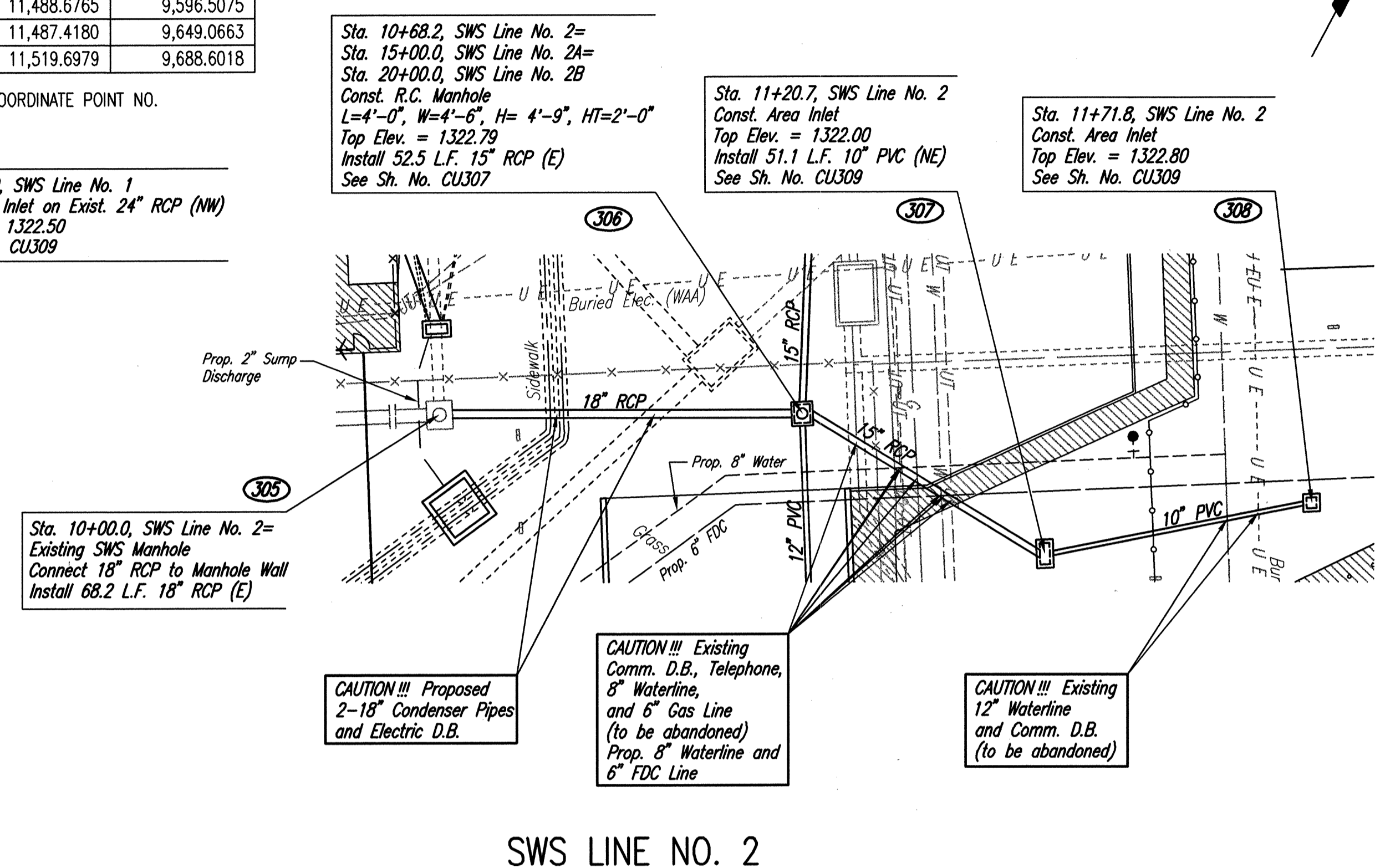
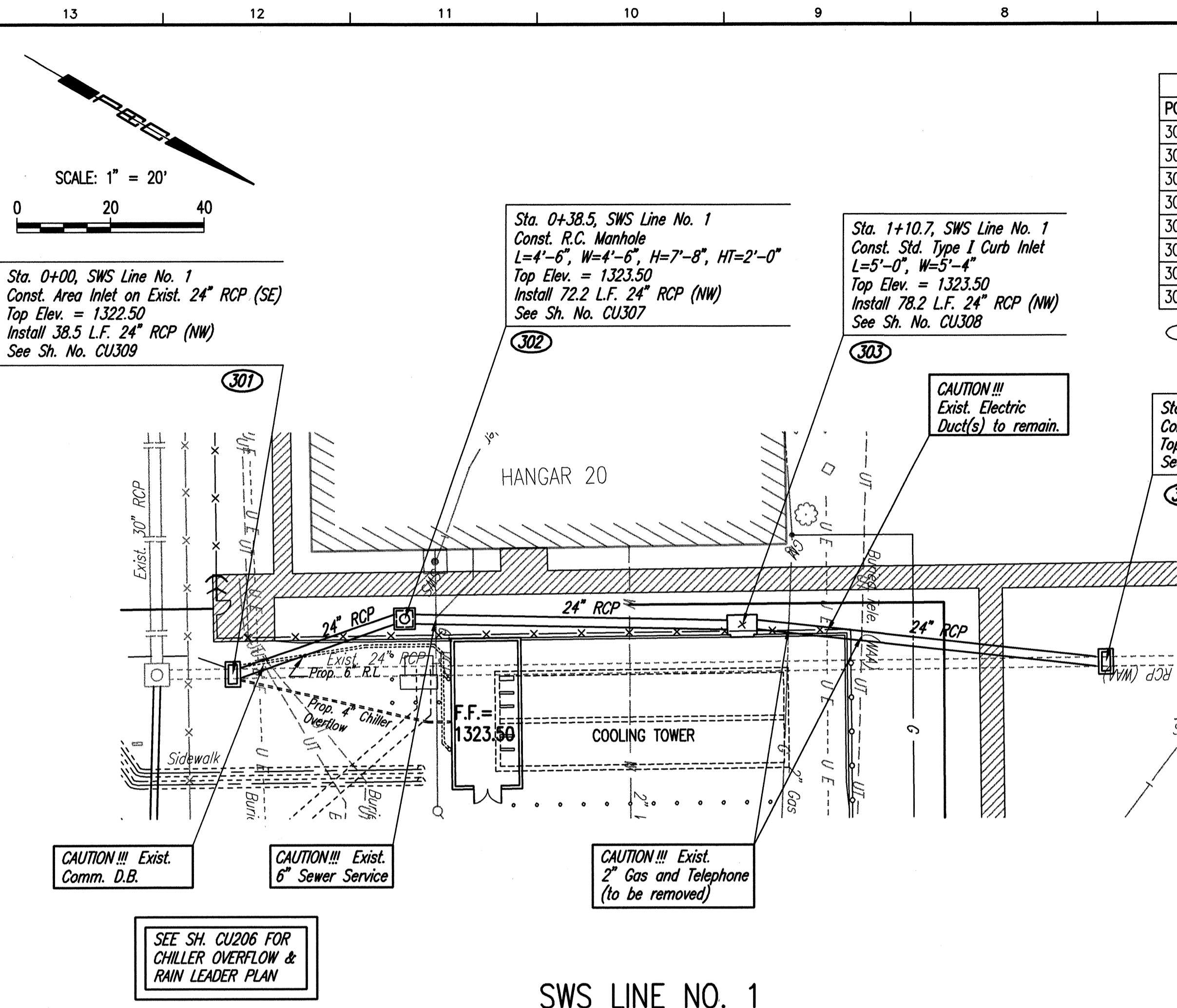
SWS LINE NO. 1  
AND NO. 2

**CU301**

**COORDINATE LIST**

POINT	NORTH	EAST
301	11,470.1429	9,528.4303
302	11,496.1230	9,499.9816
303	11,496.1230	9,499.9816
304	11,559.6583	9,465.5901
305	11,456.1184	9,536.6200
306	11,488.6765	9,596.5075
307	11,487.4180	9,649.0663
308	11,519.6979	9,688.6018

③01 = COORDINATE POINT NO.



DATE	BY	CHECKED

PLAN

DATE	BY	CHECKED

PROFILE

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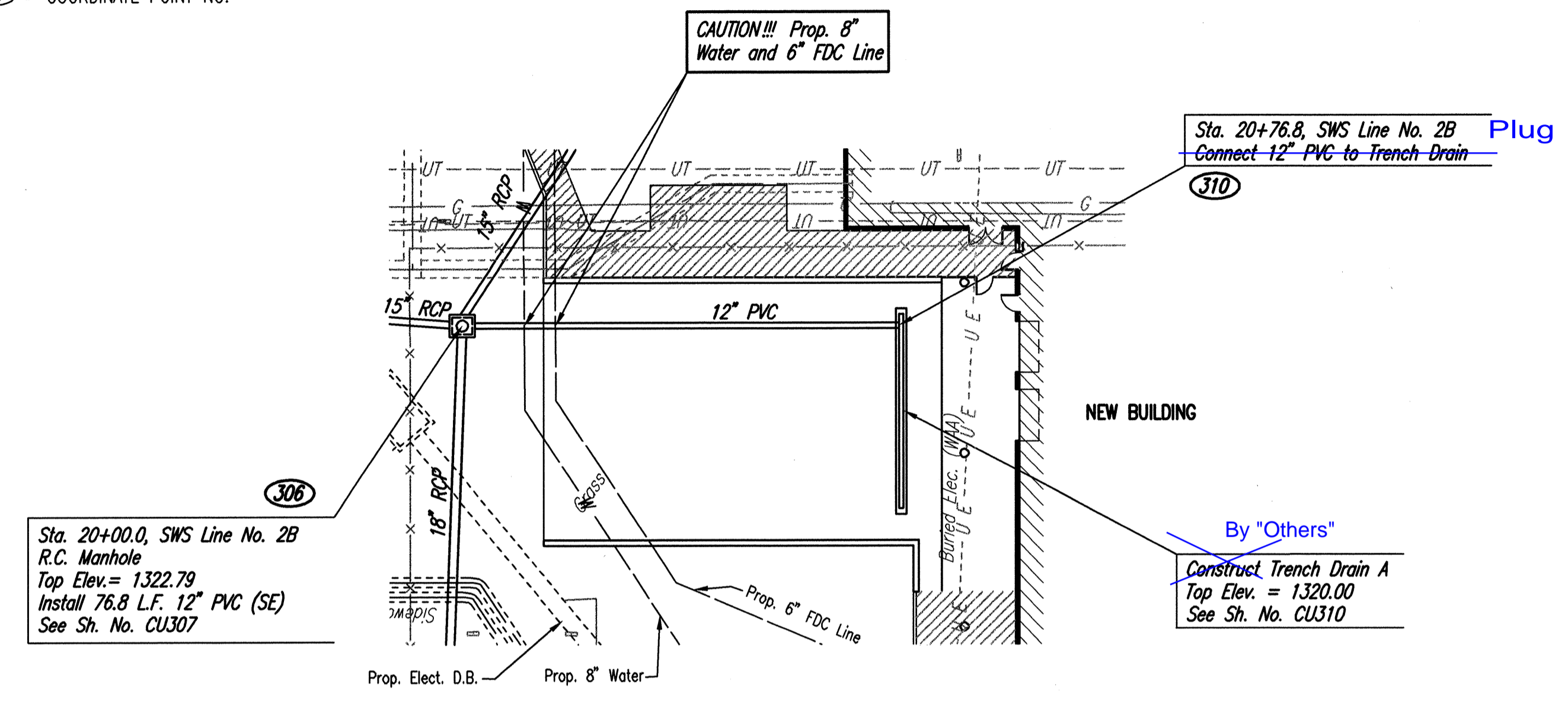
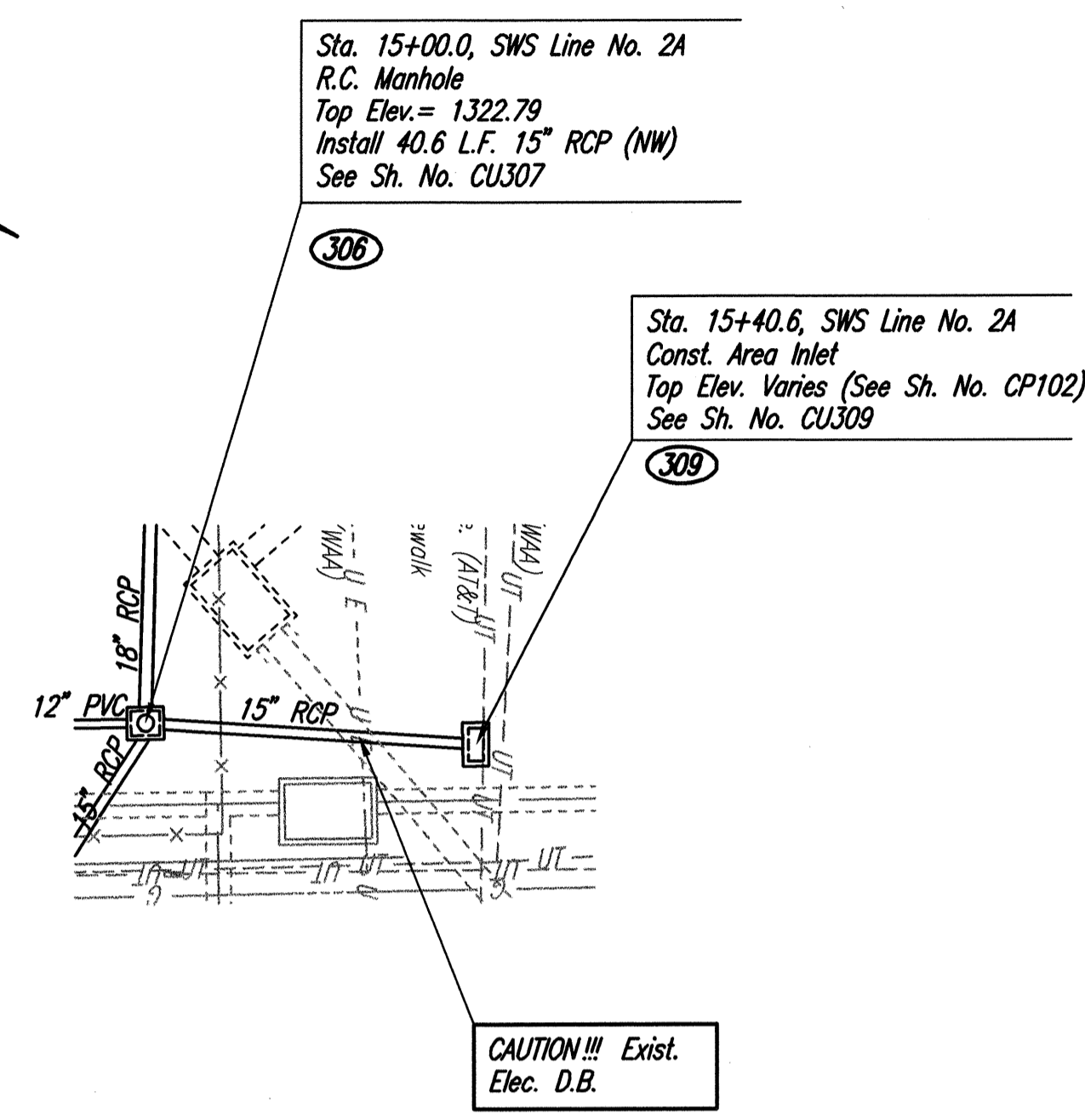
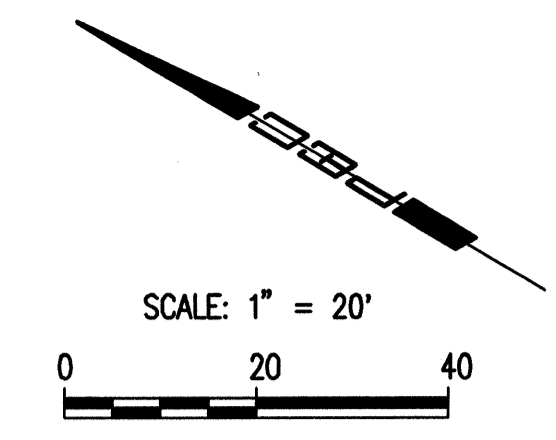
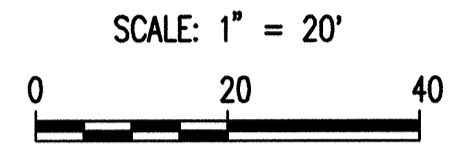


PLAN	CHECKED	CHECKED
BY		
DATE		

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DATE		

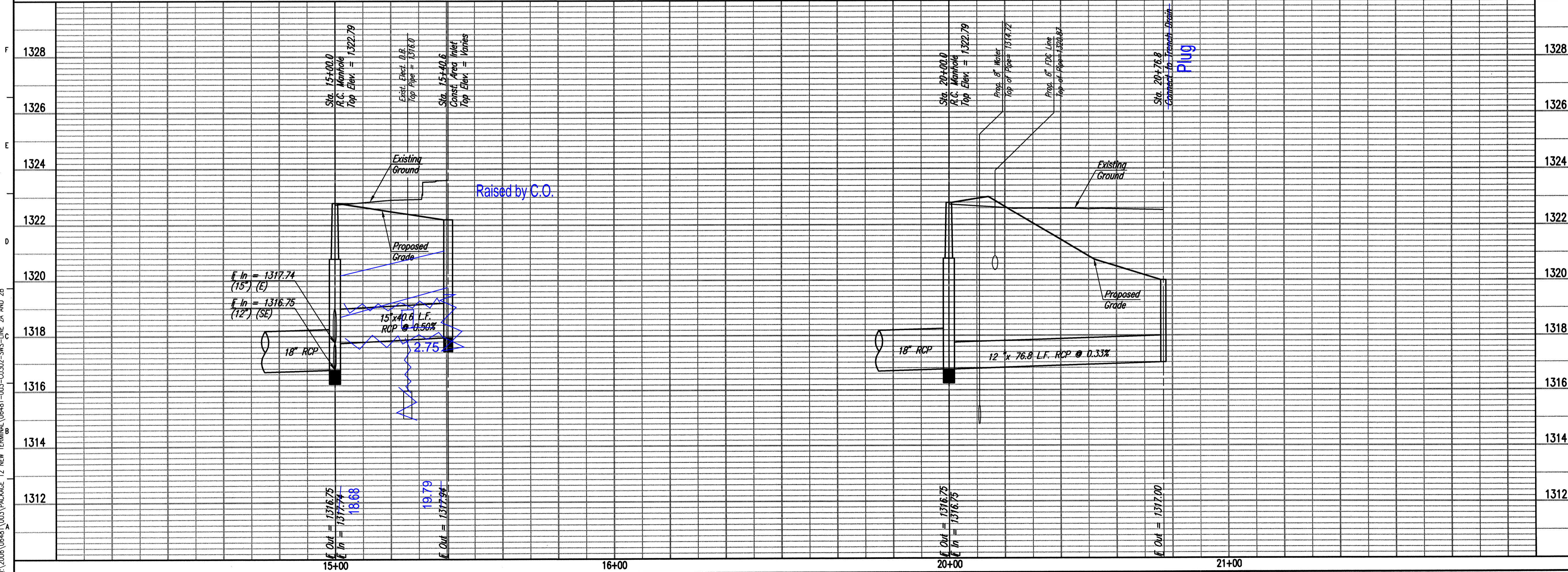
COORDINATE LIST		
POINT	NORTH	EAST
306	11,488.6765	9,596.5075
309	11,525.0997	9,578.5714
310	11,422.6138	9,635.6143

(306) = COORDINATE POINT NO.



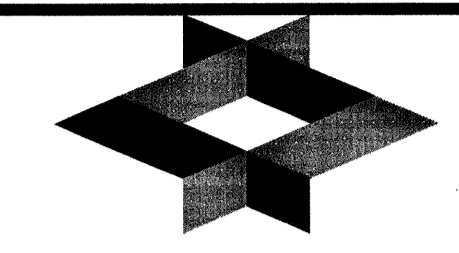
SWS LINE NO. 2A

SWS LINE NO. 2B

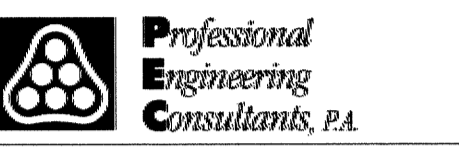


# HNTB

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**MID-CONTINENT AIRPORT**  
Air Capital Terminal 3  
PACKAGE #12  
TERMINAL BUILDING



ISSUE: PERMIT / BID CONSTRUCTION DOCUMENTS

DATE: MARCH 26, 2010  
HNTB PROJECT NO.: 34912  
CLIENT PROJECT NO.: 06178

DRAWN BY:  
CHECKED BY:  
APPROVED BY:

REVISION	DATE	DESCRIPTION
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SWS LINE NO. 2A AND NO. 2B

## CU302

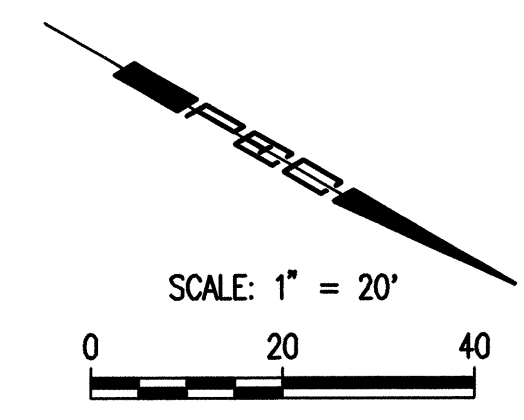
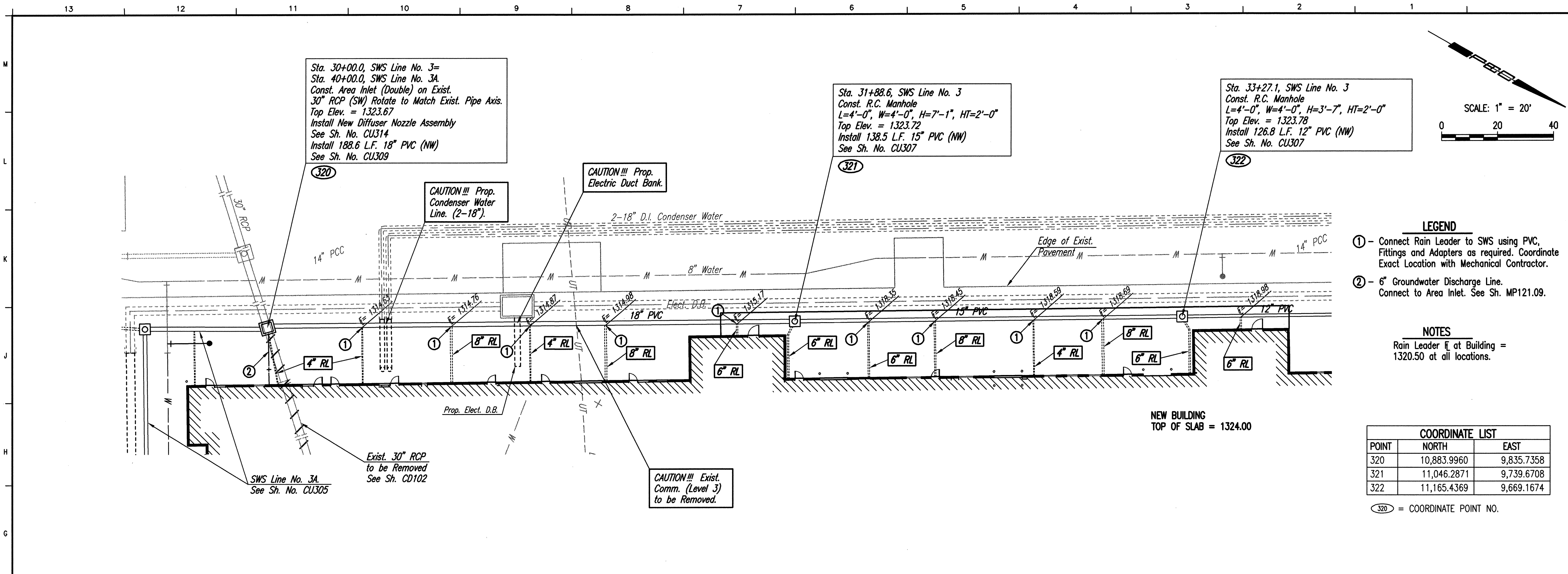
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 C:\2008\064681\001\003\PACKAGE 12 NEW TERMINAL\064681-003-CU302-SWS-LINE 2A AND 2B



PLAN	CHECKED	CHECKED
BY		
DATE		

PROFILE	CHECKED	CHECKED
BY		
DATE		

SWS LINE NO. 3  
 STA. 30+00 TO 33+27.1  
 APRON LEADERS  
 CU303



- LEGEND**
- ① - Connect Rain Leader to SWS using PVC, Fittings and Adapters as required. Coordinate Exact Location with Mechanical Contractor.
  - ② - 6" Groundwater Discharge Line. Connect to Area Inlet. See Sh. MP121.09.

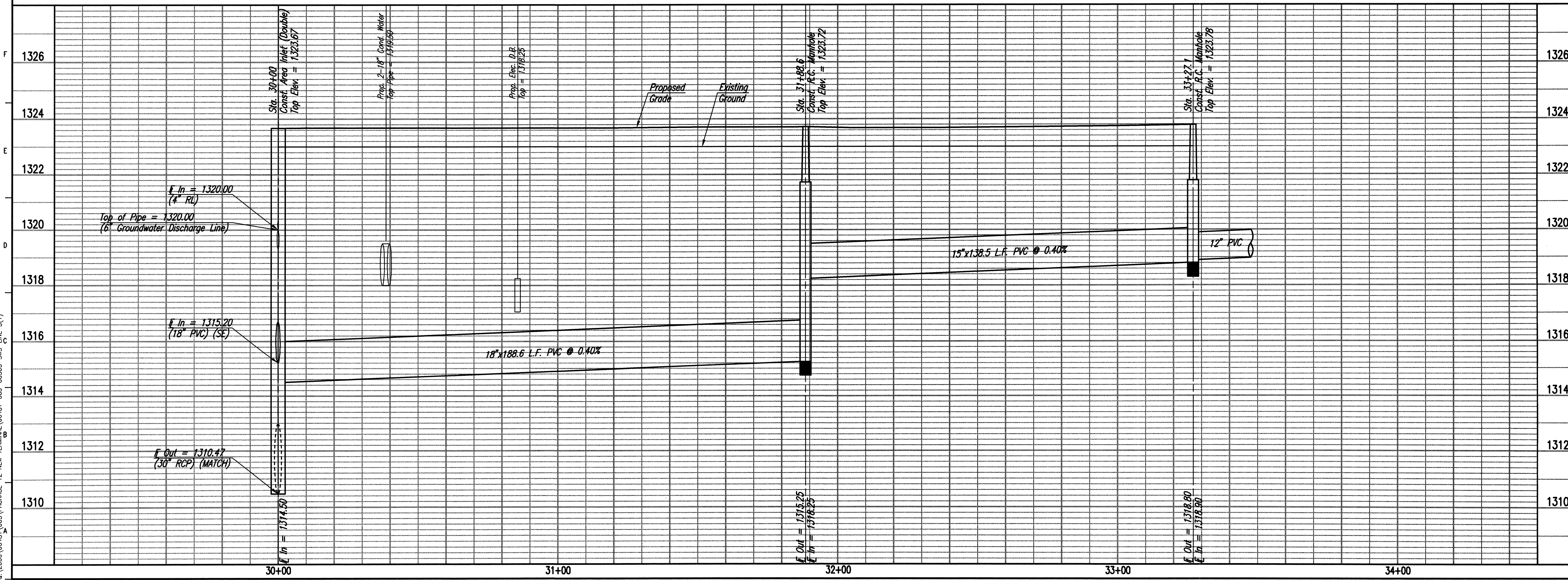
**NOTES**

Rain Leader [ ] at Building = 1320.50 at all locations.

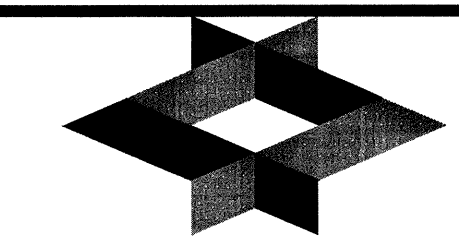
POINT	COORDINATE LIST	
	NORTH	EAST
320	10,883.9960	9,835.7358
321	11,046.2871	9,739.6708
322	11,165.4369	9,669.1674

③20 = COORDINATE POINT NO.

SWS LINE NO. 3



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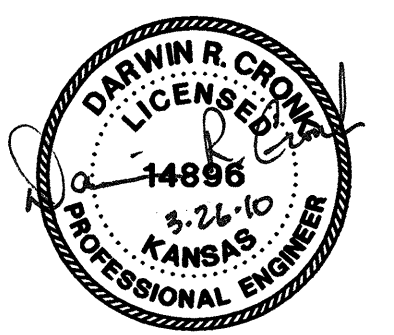


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**MID-CONTINENT AIRPORT**  
 Air Capital Terminal 3  
 PACKAGE #12  
 TERMINAL BUILDING



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 CONSTRUCTION DOCUMENTS

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 HNTB PROJECT NO.: 34912  
 CLIENT PROJECT NO.: 06178

REVISION	DATE	DESCRIPTION
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SWS LINE NO. 3  
 STA. 30+00 TO 33+27.1  
 APRON LEADERS

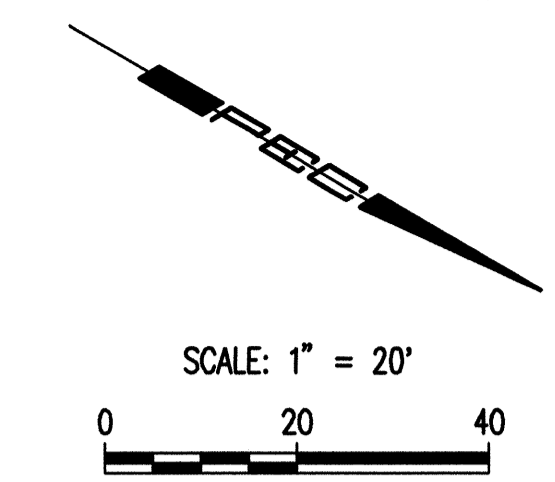
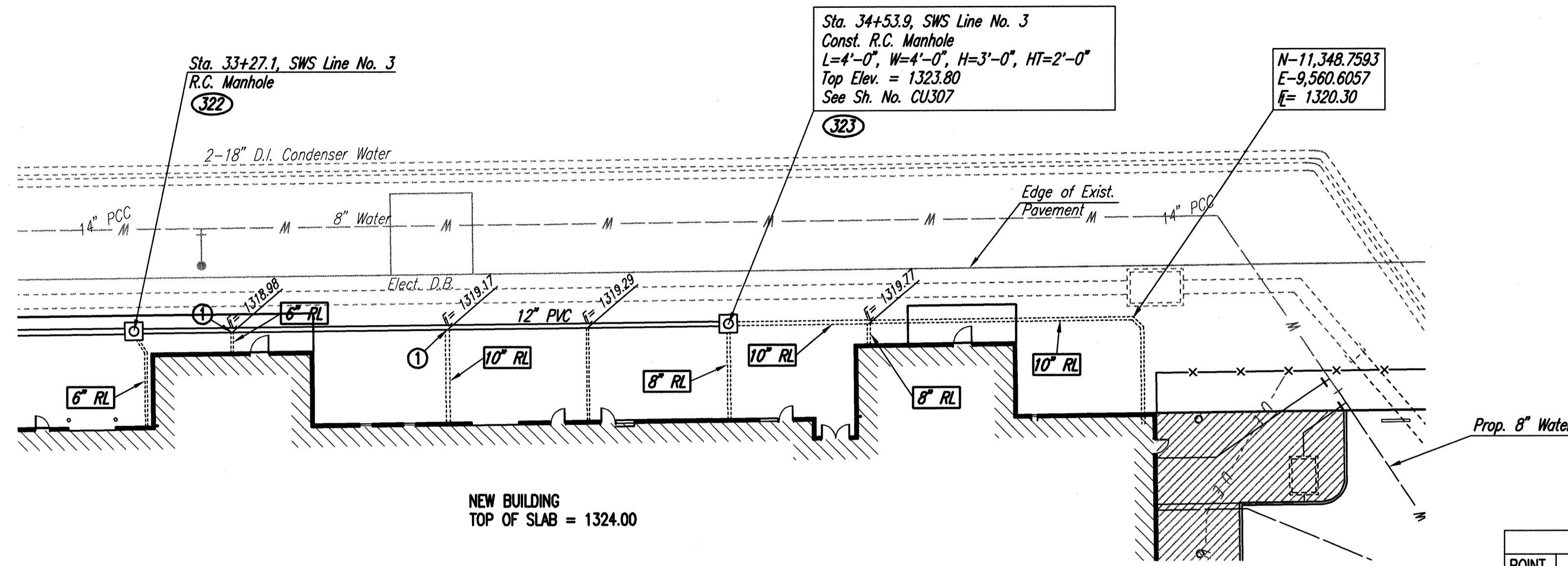
**CU303**



DATE	
BY	
CHECKED	
CHECKED	
PLAN	

DATE	
BY	
CHECKED	
CHECKED	
PROFILE	

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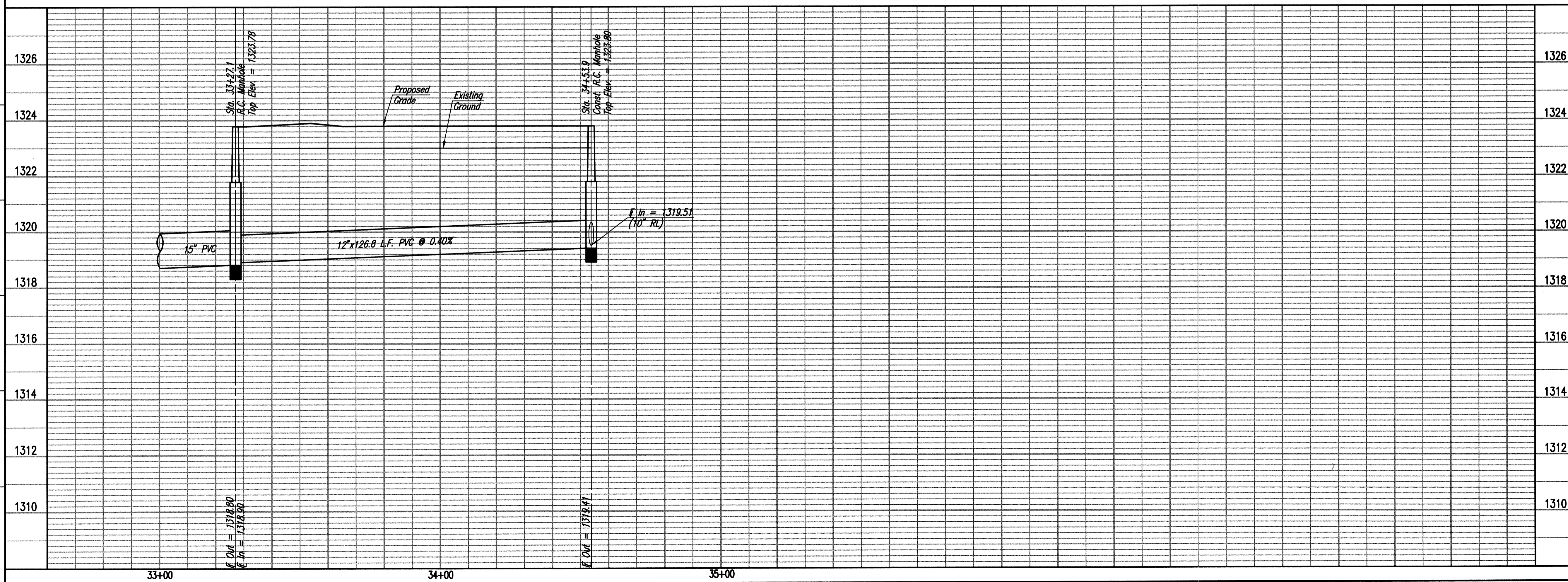
**LEGEND**  
 ① - Connect Rain Leader to SWS using PVC, Fittings and Adapters as required. Coordinate Exact Location with Mechanical Contractor.

**NOTES**  
 Rain Leader  $\bar{x}$  at Building = 1320.50 at all locations.

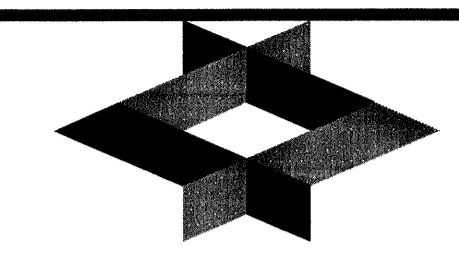
COORDINATE LIST		
POINT	NORTH	EAST
322	11,165.4369	9,669.1674
323	11,274.5772	9,604.5461

③22 = COORDINATE POINT NO.

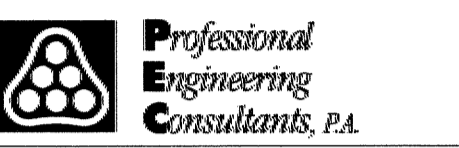
SWS LINE NO. 3



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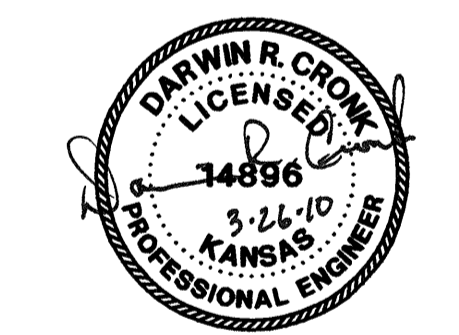


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**MID-CONTINENT AIRPORT**  
 Air Capital Terminal 3  
 PACKAGE #12  
 TERMINAL BUILDING



ISSUE: PERMIT / BID  
 CONSTRUCTION DOCUMENTS

DATE: MARCH 26, 2010  
 HNTB PROJECT NO.: 34912  
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 CHECKED BY:  
 APPROVED BY:

REVISION	DATE	DESCRIPTION
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SWS LINE NO. 3 STA.  
 33+27.1 TO 34+53.9  
 AND APRON-NORTH  
 RAIN LEADERS

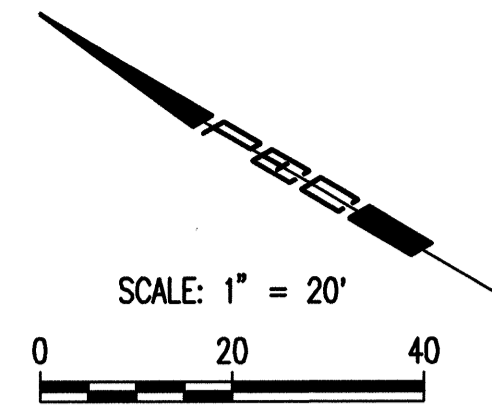
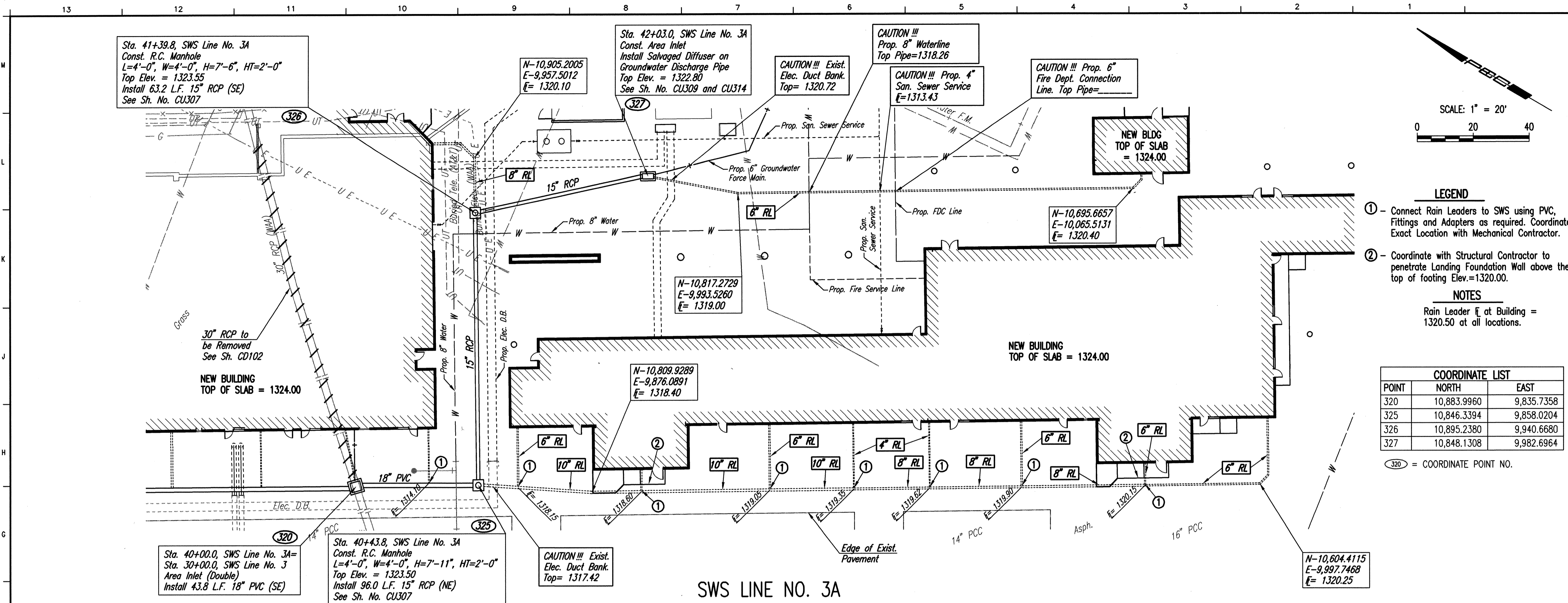
**CU304**



PLAN	CHECKED	CHECKED
BY		
DATE		

PROFILE	CHECKED	CHECKED
BY		
DATE		

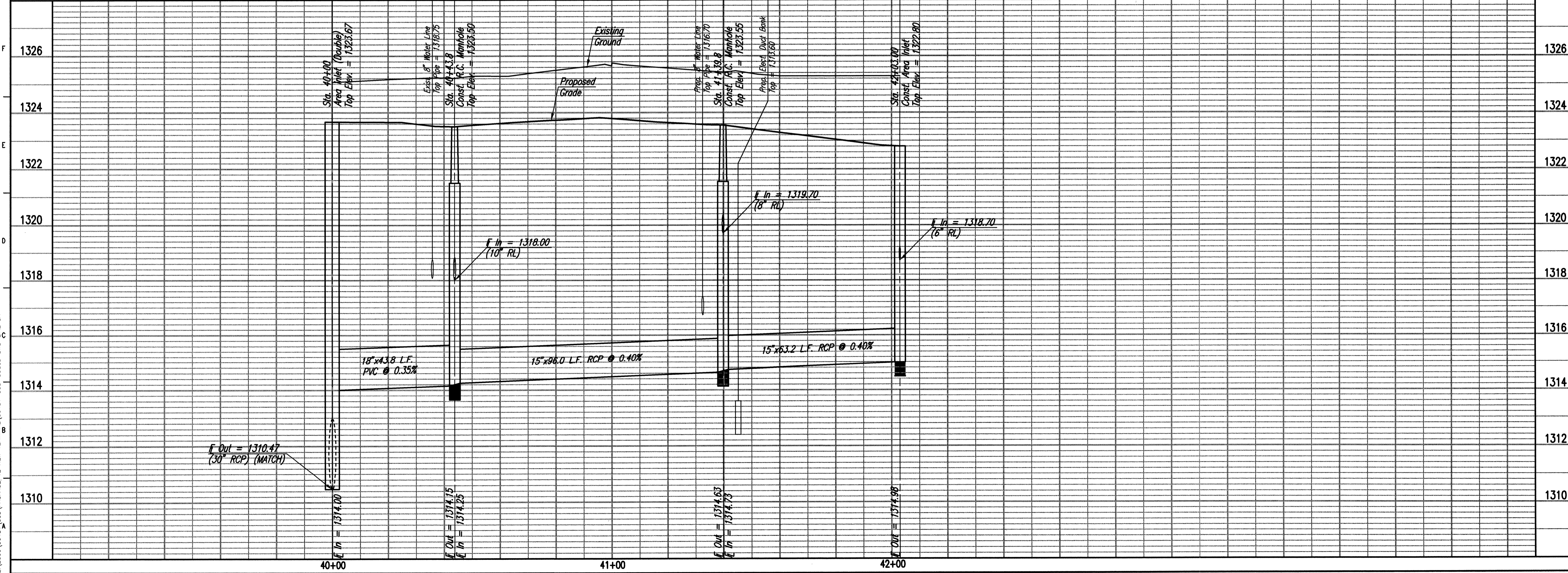
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 Drawn by NCI



- LEGEND**
- ① - Connect Rain Leaders to SWS using PVC, Fittings and Adapters as required. Coordinate Exact Location with Mechanical Contractor.
  - ② - Coordinate with Structural Contractor to penetrate Landing Foundation Wall above the top of footing Elev.=1320.00.
- NOTES**
- Rain Leader  $\bar{c}$  at Building = 1320.50 at all locations.

COORDINATE LIST		
POINT	NORTH	EAST
320	10,883.9960	9,835.7358
325	10,846.3394	9,858.0204
326	10,895.2380	9,940.6680
327	10,848.1308	9,982.6964

③20 = COORDINATE POINT NO.



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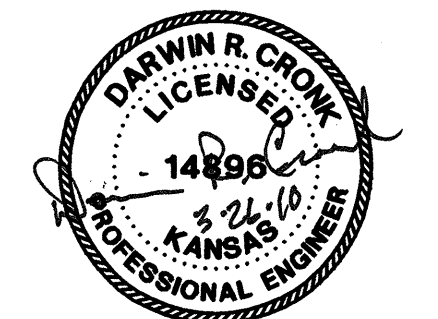
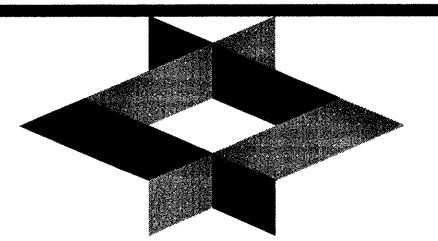
DATE: MARCH 26, 2010  
 HNTB PROJECT NO.: 34912  
 CLIENT PROJECT NO.: 06178

DRAWN BY:  
 CHECKED BY:  
 APPROVED BY:

REVISION	DATE	DESCRIPTION
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**SWS LINE NO. 3A AND COURTYARD/APRON-SOUTH RAIN LEADERS**  
**CU305**





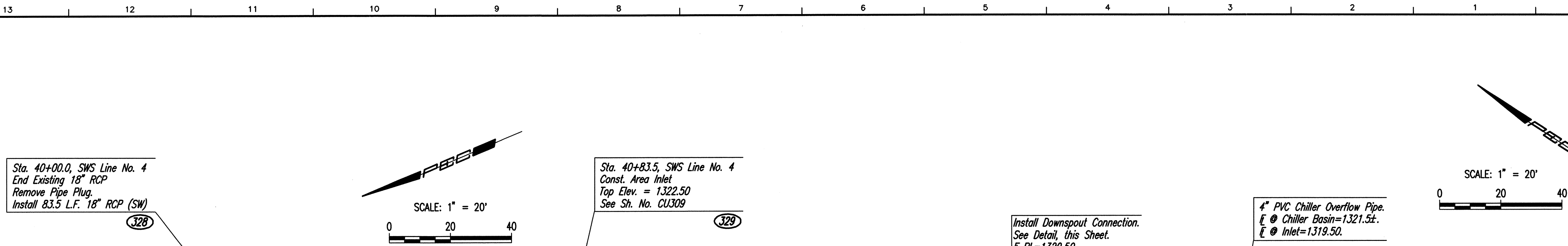
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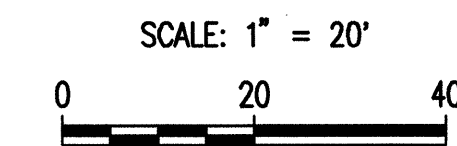
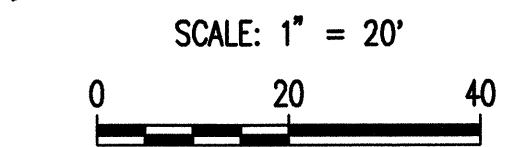
SWS LINE NO. 4 AND  
CHILLER PLANT  
UTILITY PLAN

## CU306



Sta. 40+00.0, SWS Line No. 4  
End Existing 18" RCP  
Remove Pipe Plug.  
Install 83.5 L.F. 18" RCP (SW)

Sta. 40+83.5, SWS Line No. 4  
Const. Area Inlet  
Top Elev. = 1322.50  
See Sh. No. CU309



**CAUTION!!! Prop. 8" Water**

**CAUTION!!! Prop. Water Service**

COORDINATE LIST		
POINT	NORTH	EAST
328	10,985.7193	10,117.2540
329	10,908.6997	10,085.1228

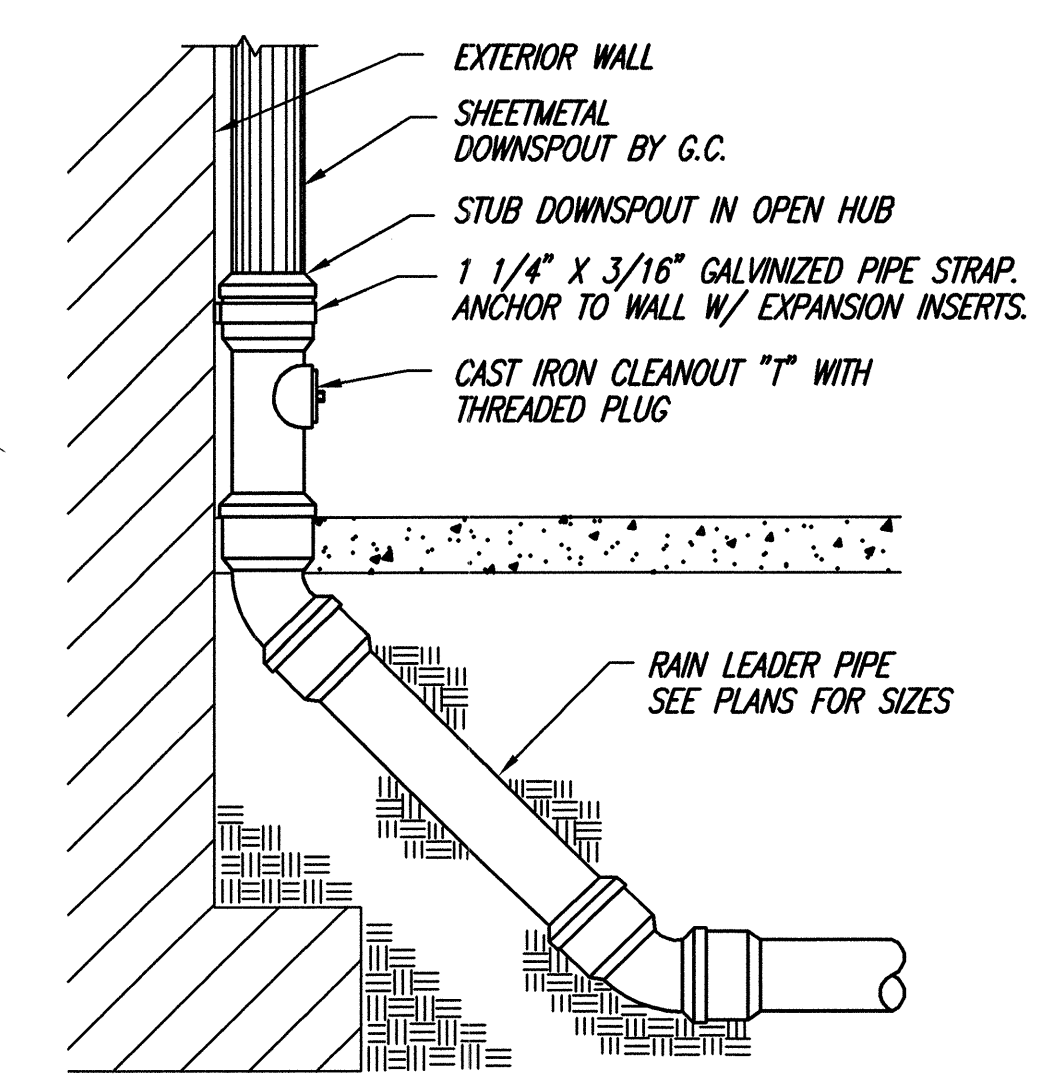
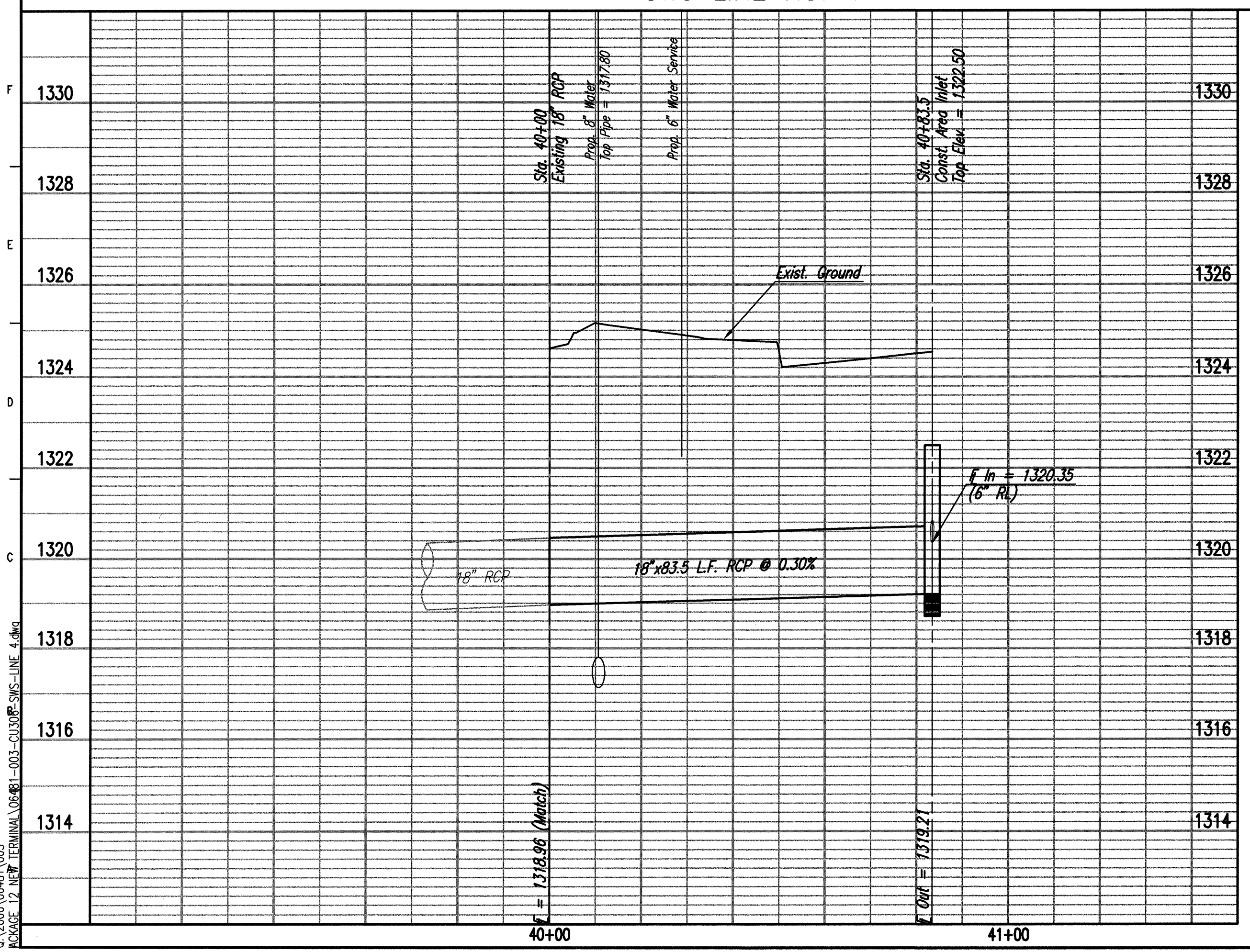
320 = COORDINATE POINT NO.

### SWS LINE NO. 4

### CHILLER PLANT UTILITY PLAN

DATE	
BY	
CHECKED	
CHECKED	
PLAN	

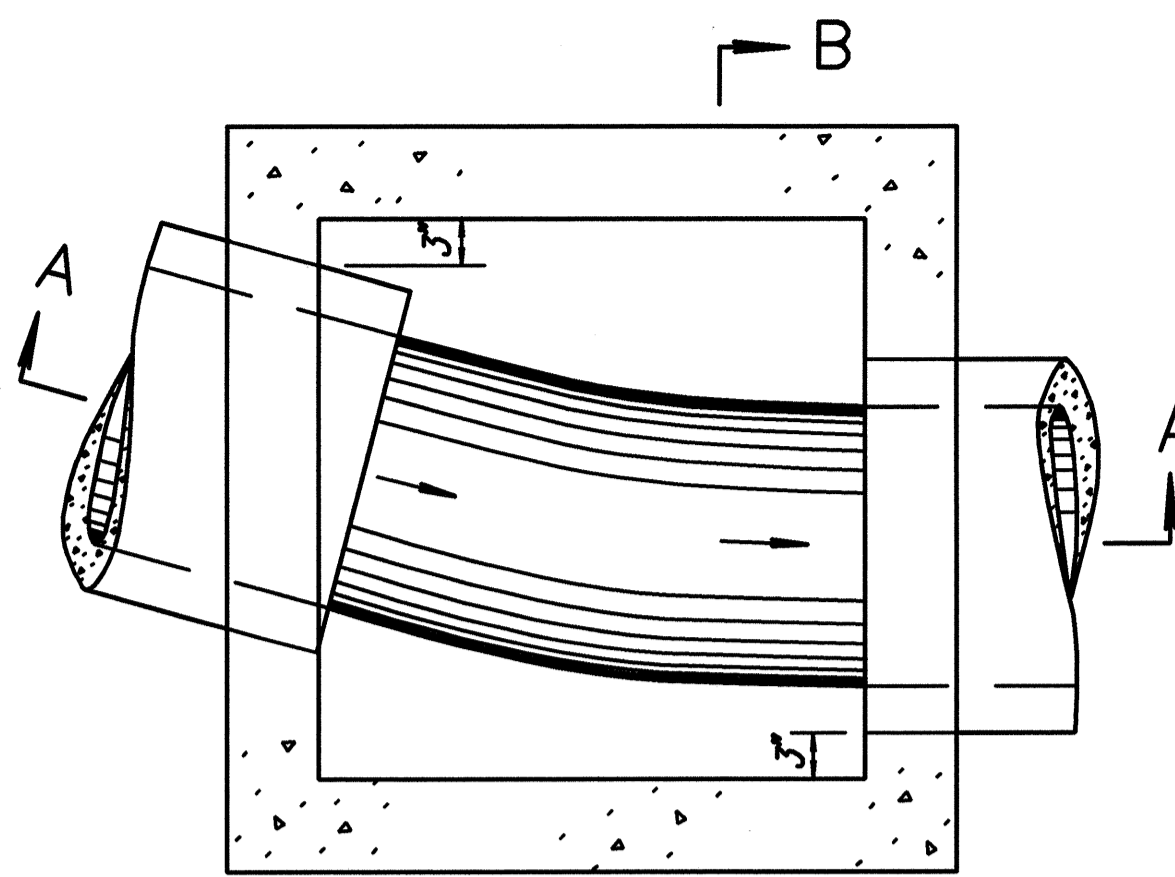
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PROFILE	



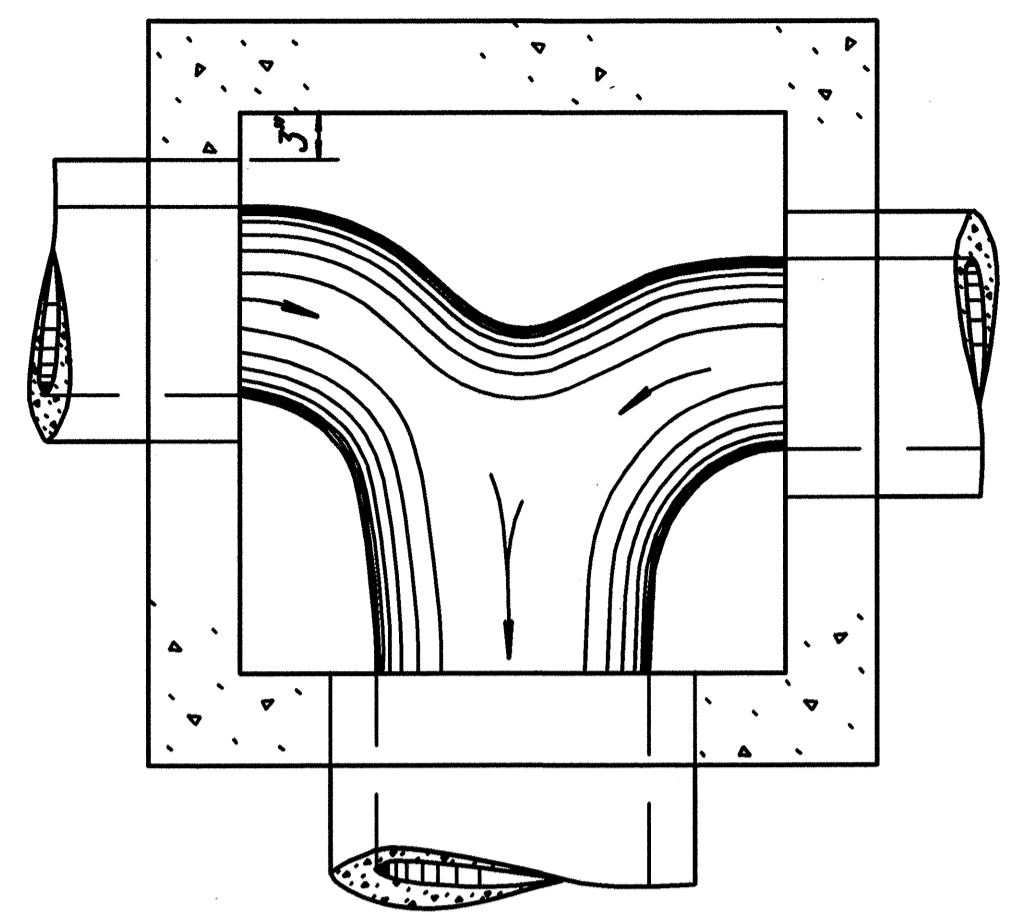
**DOWNSPOUT CONNECTION**  
SCALE: NONE

Sheet 01-18-2010 7:00:48 PM by NCL  
 Plot Scale 1/20 03-17-2010 9:25:31 PM by gsl  
 C:\2006\06481\003\PACKAGE 12 NEW TERMINAL\06481-003-CU306-SWS-LINE 4.dwg

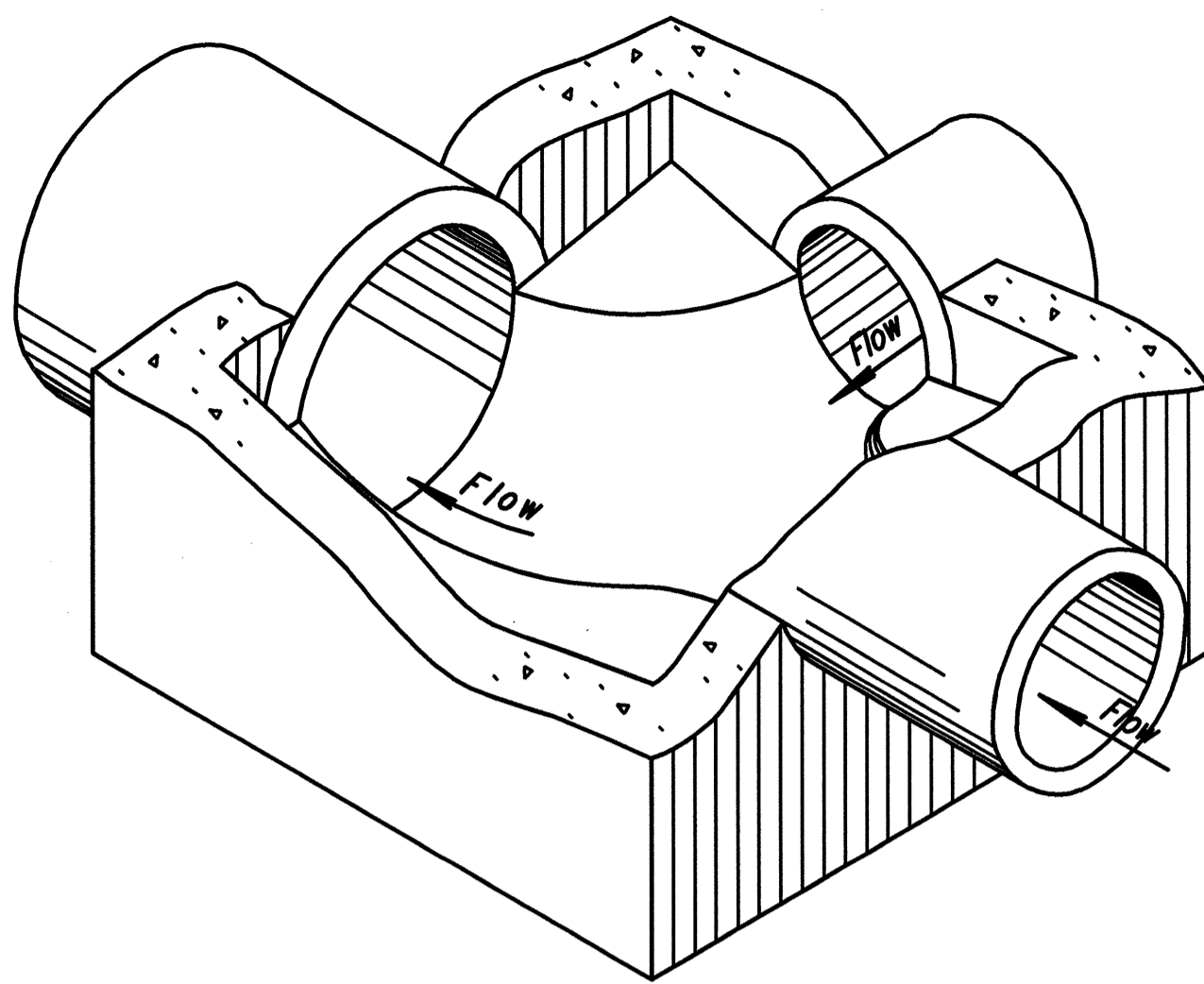




PLAN - FLOOR (Example I)

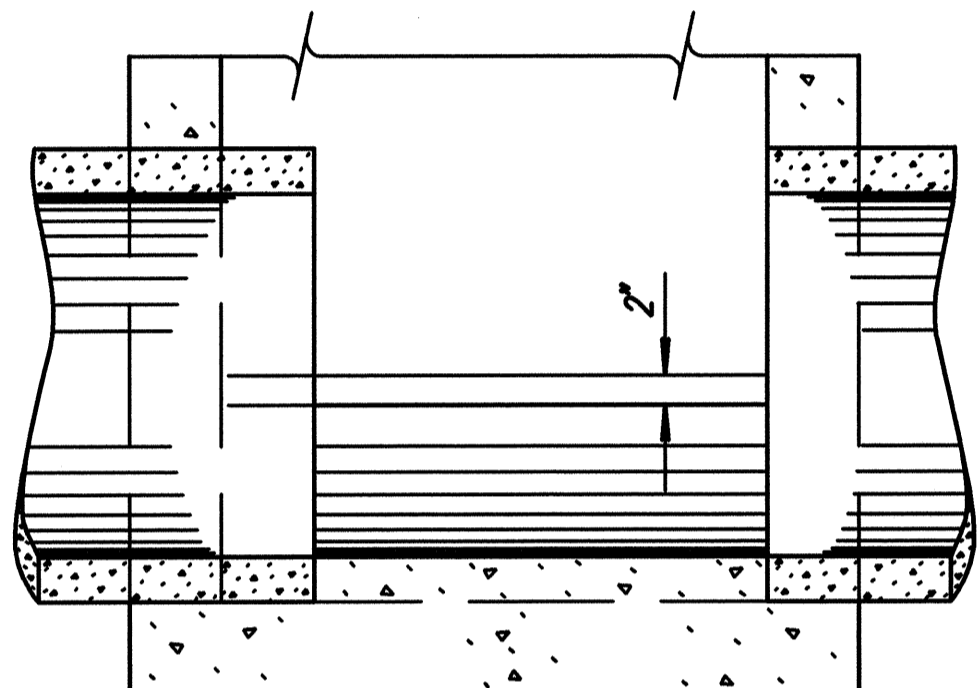


PLAN - FLOOR (Example III)

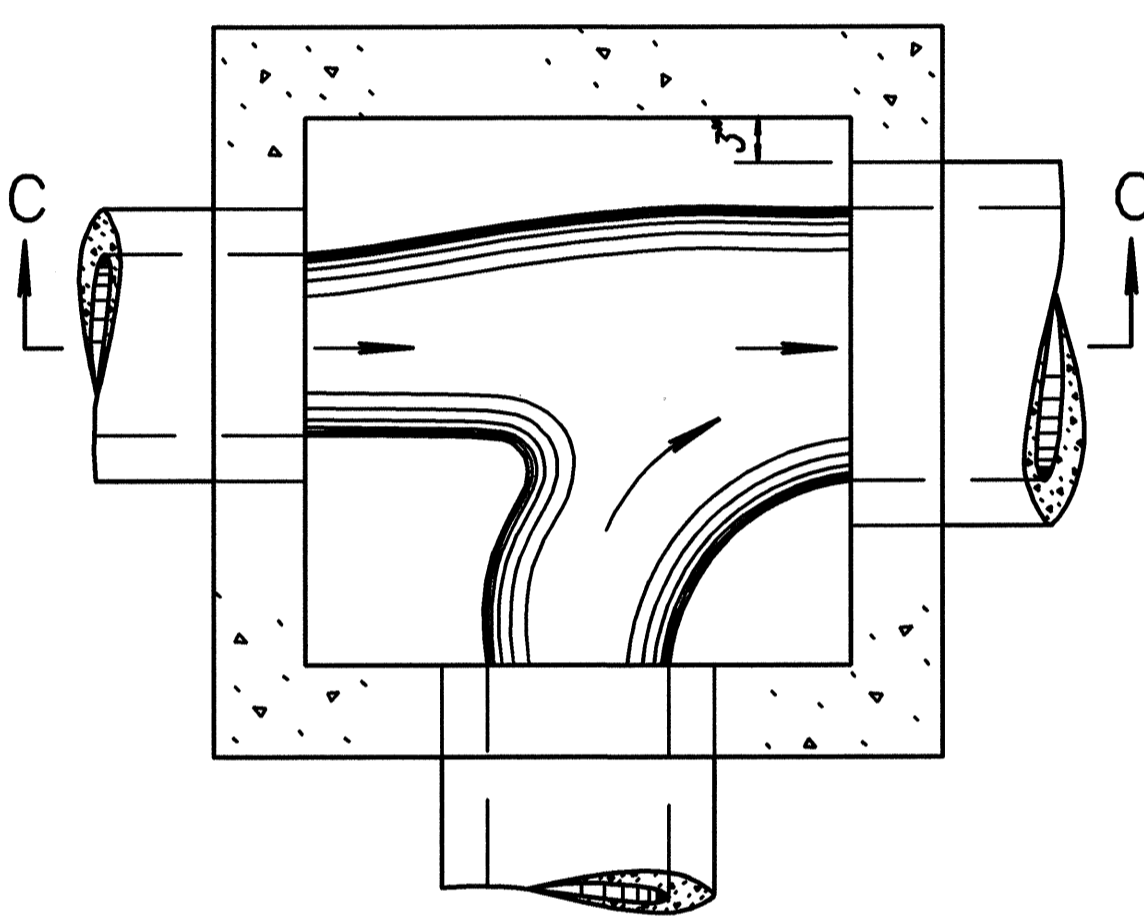


Floor of manhole shall be shaped as shown in the examples to increase hydraulic efficiency.

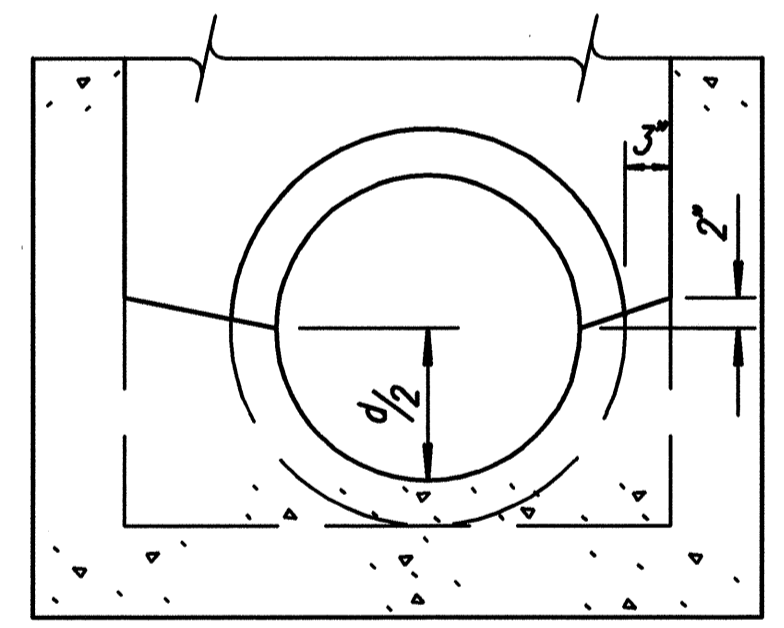
ISOMETRIC VIEW (Example IV)



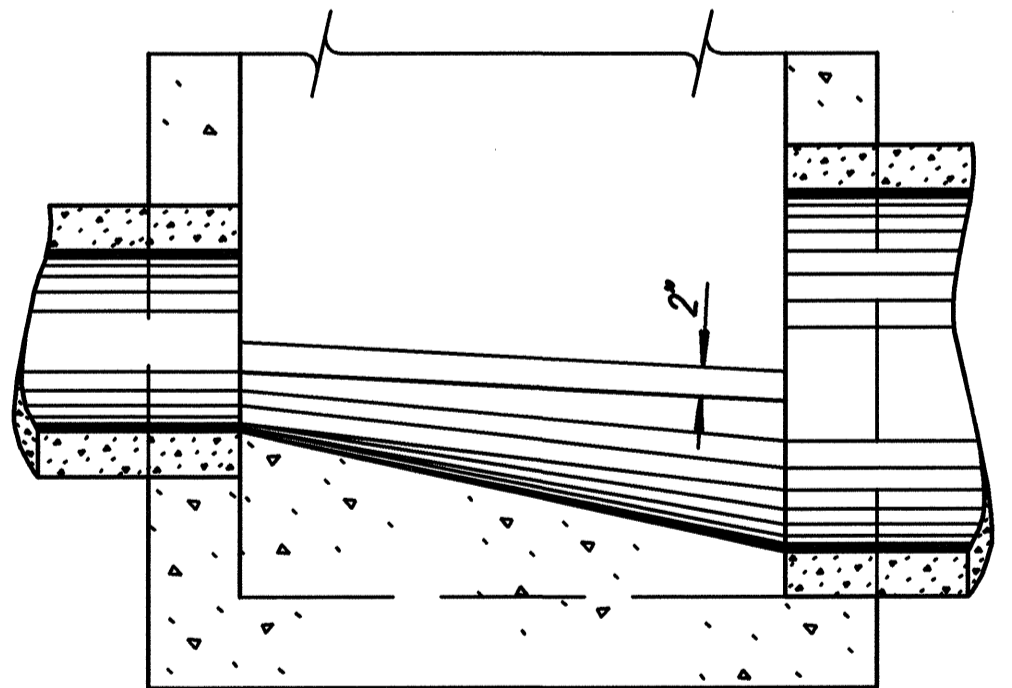
SECTION A-A (Example I)



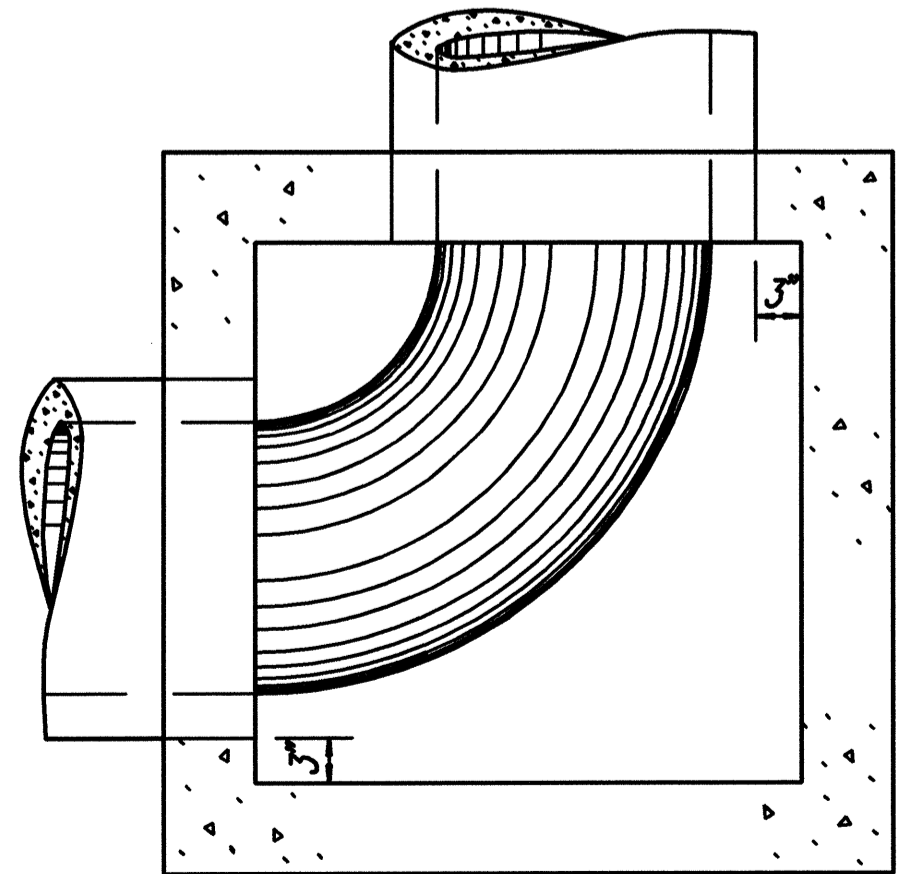
PLAN - FLOOR (Example IV)



SECTION B-B (Example I)

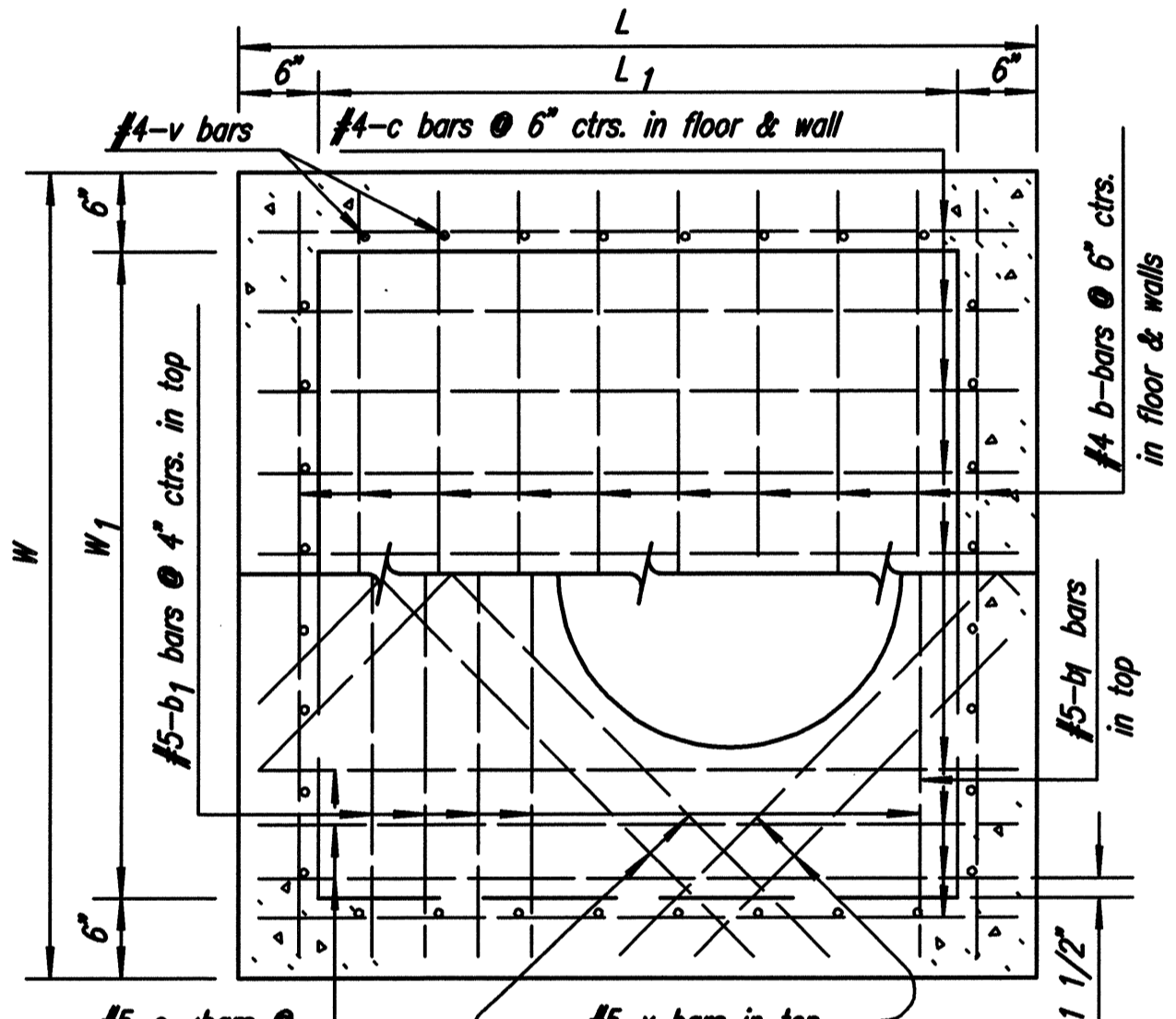


SECTION C-C (Example IV)

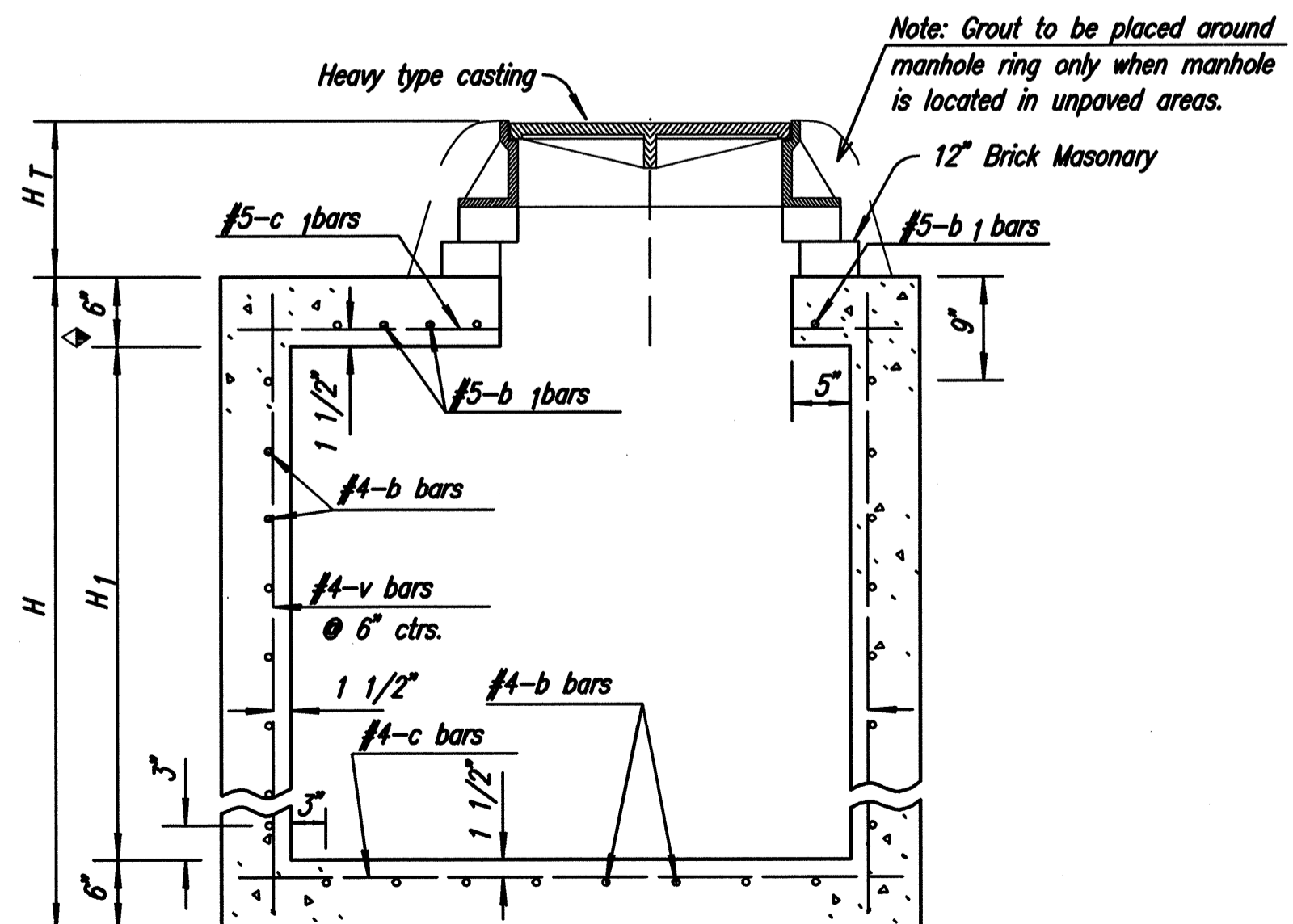


PLAN - FLOOR (Example II)

This sheet has been adapted from  
KDOT Std. No. 633 Dated 1-30-92



PLAN (Showing top & floor reinf.)



SECTION (Exclusive of floor shaping)

Note: Use Concrete with a minimum 28-day compressive strength of 4000 PSI throughout. All exposed edges shall be finished with an edging tool.

In general, pipes will enter and leave manhole at various positions. Where possible bend bars around pipes.

Floor of manhole shall be shaped as shown in various "EXAMPLES" with unreinforced 3000 PSI Concrete. Manhole opening and steps, where used, shall be placed to afford easy access to top of shaped invert. Top reinforcing bars shall be adjusted accordingly.

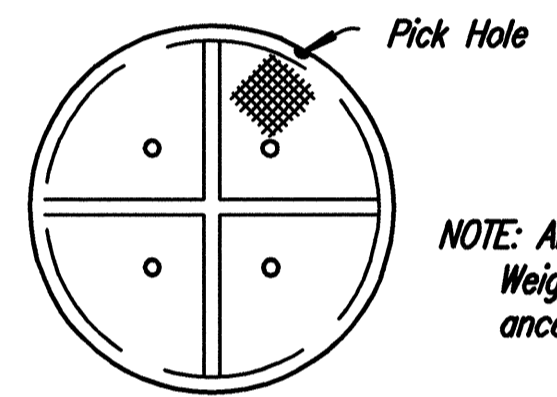
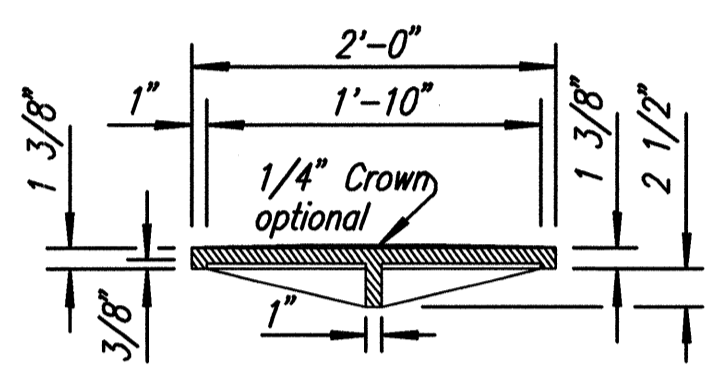
All castings shall be gray iron and shall comply with the Standard Specifications.

All exposed cast iron surfaces not subjected to traffic shall be painted with a coat of inorganic zinc primer and then with a topcoat or a field coat of organic zinc, each coat to be 3 to 4 mils.

The top of the manhole shall be sloped slightly to approximately fit the ground line or other condition as directed by the Engineer. Manhole tops shall be adjusted flush with proposed pavement.

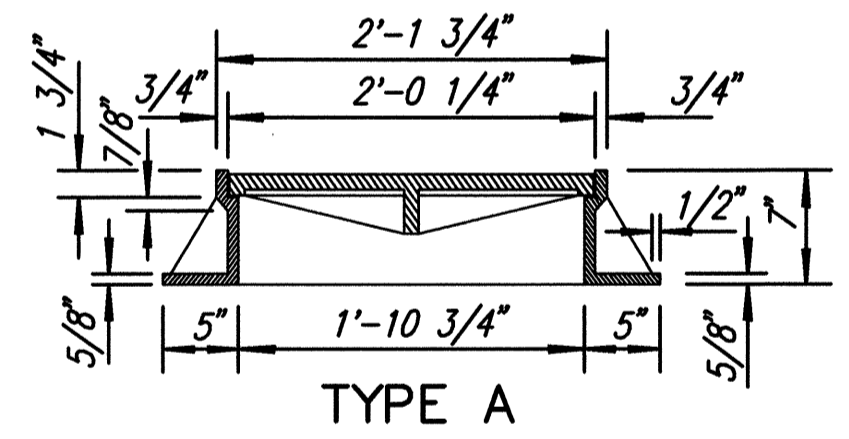
Dimensions and weights of cast iron as shown on this sheet are minimum. Larger dimensions and/or heavier weights of cast iron may be used.

The Contractor has the option of using precast manholes, as approved by the Engineer.

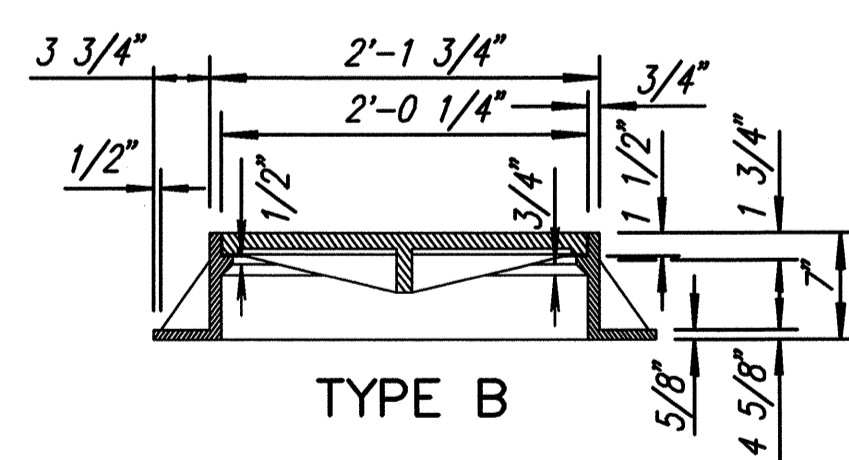


NOTE: All manhole castings are cast iron. Weight of castings includes no allowance for fillets and overruns.

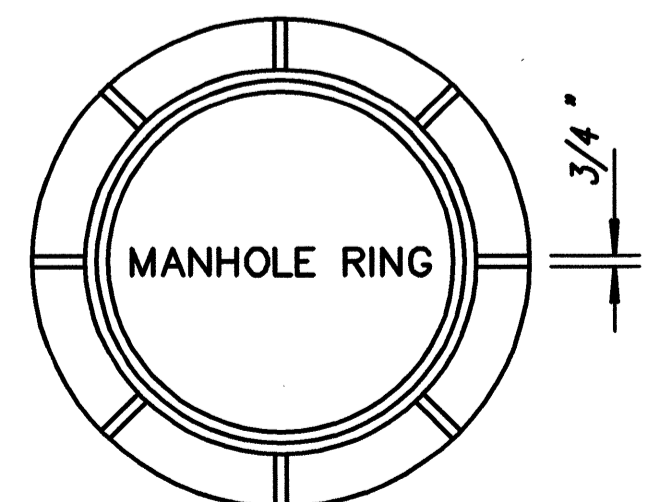
MANHOLE COVER TYPE A & B  
(Weight=134 lbs.; without 1/4" Crown= 125 lbs.)



TYPE A



TYPE B



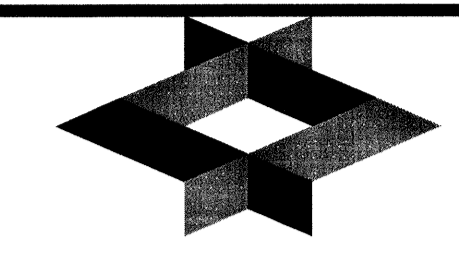
(Type A Ring= 192 lbs., Type B Ring= 198 lbs.)

HEAVY TYPE  
MANHOLE COVER AND RING

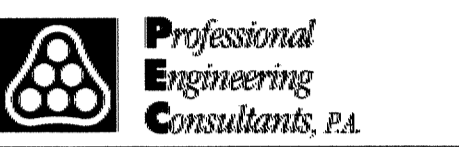
Note: Either Type A or Type B may be used.

**HNTB**

HNTB Corporation  
The HNTB Companies  
715 Kirk Drive  
Kansas City, Missouri 64105  
(816) 472-1201 Fax: (816) 472-4063



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**MID-CONTINENT AIRPORT**  
WICHITA  
Air Capital Terminal 3  
PACKAGE #12  
TERMINAL BUILDING



ISSUE: PERMIT / BID  
CONSTRUCTION DOCUMENTS

DATE: MARCH 26, 2010  
HNTB PROJECT NO.: 34912  
CLIENT PROJECT NO.: 06178

DRAWN BY:		
CHECKED BY:		
APPROVED BY:		
REVISION	DATE	DESCRIPTION
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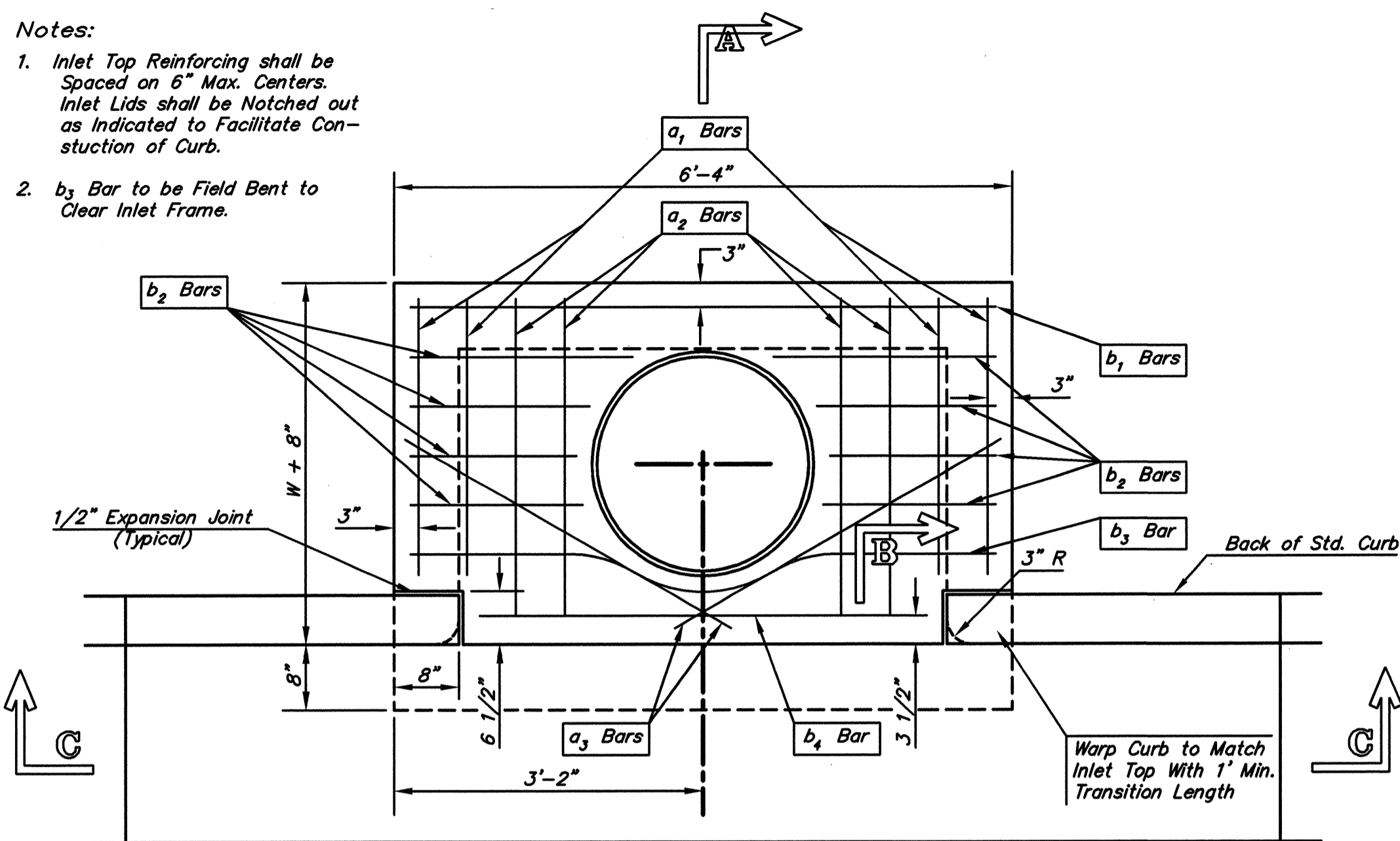
REINFORCED  
CONCRETE MANHOLE

**CU307**

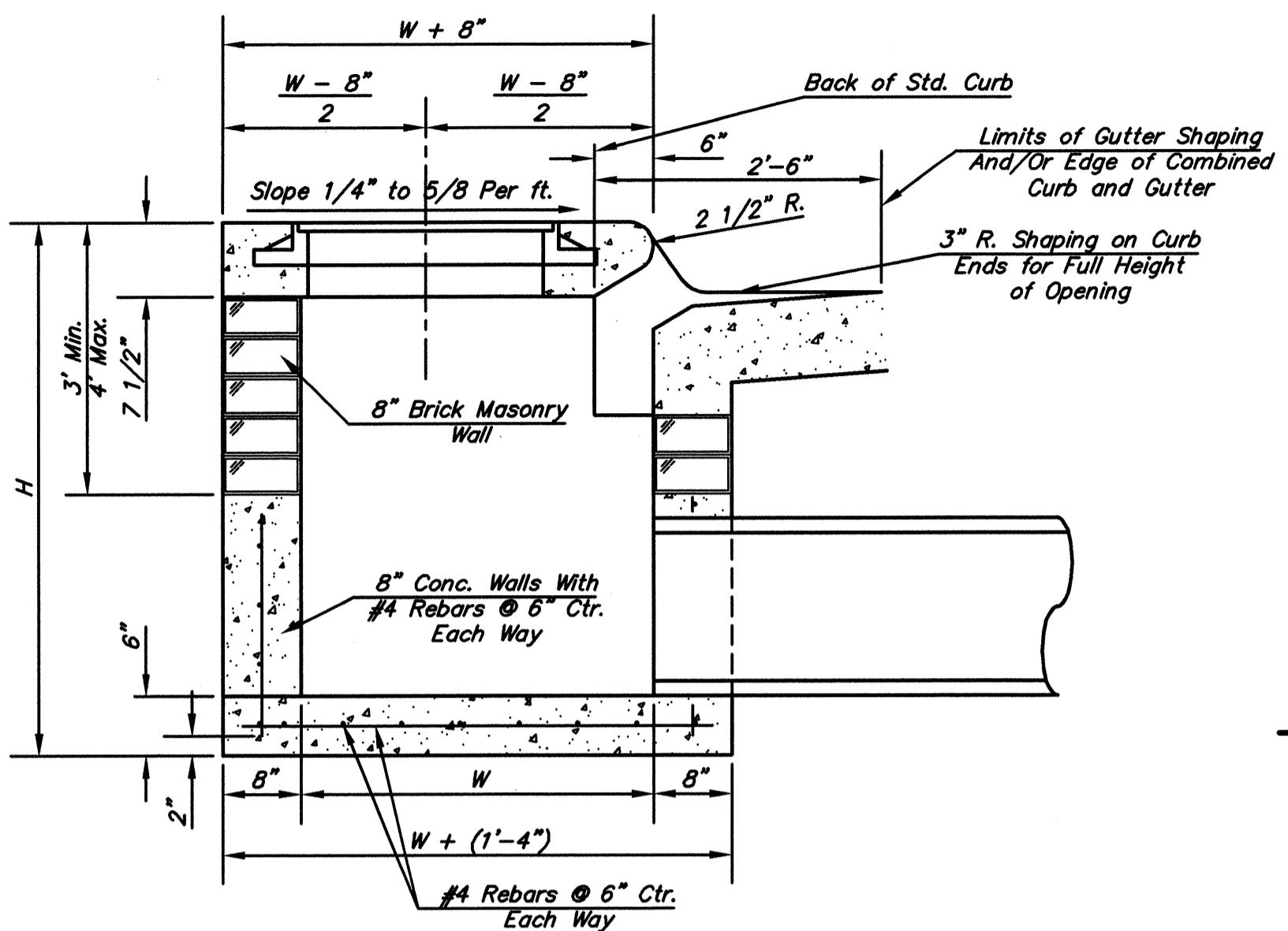


**Notes:**

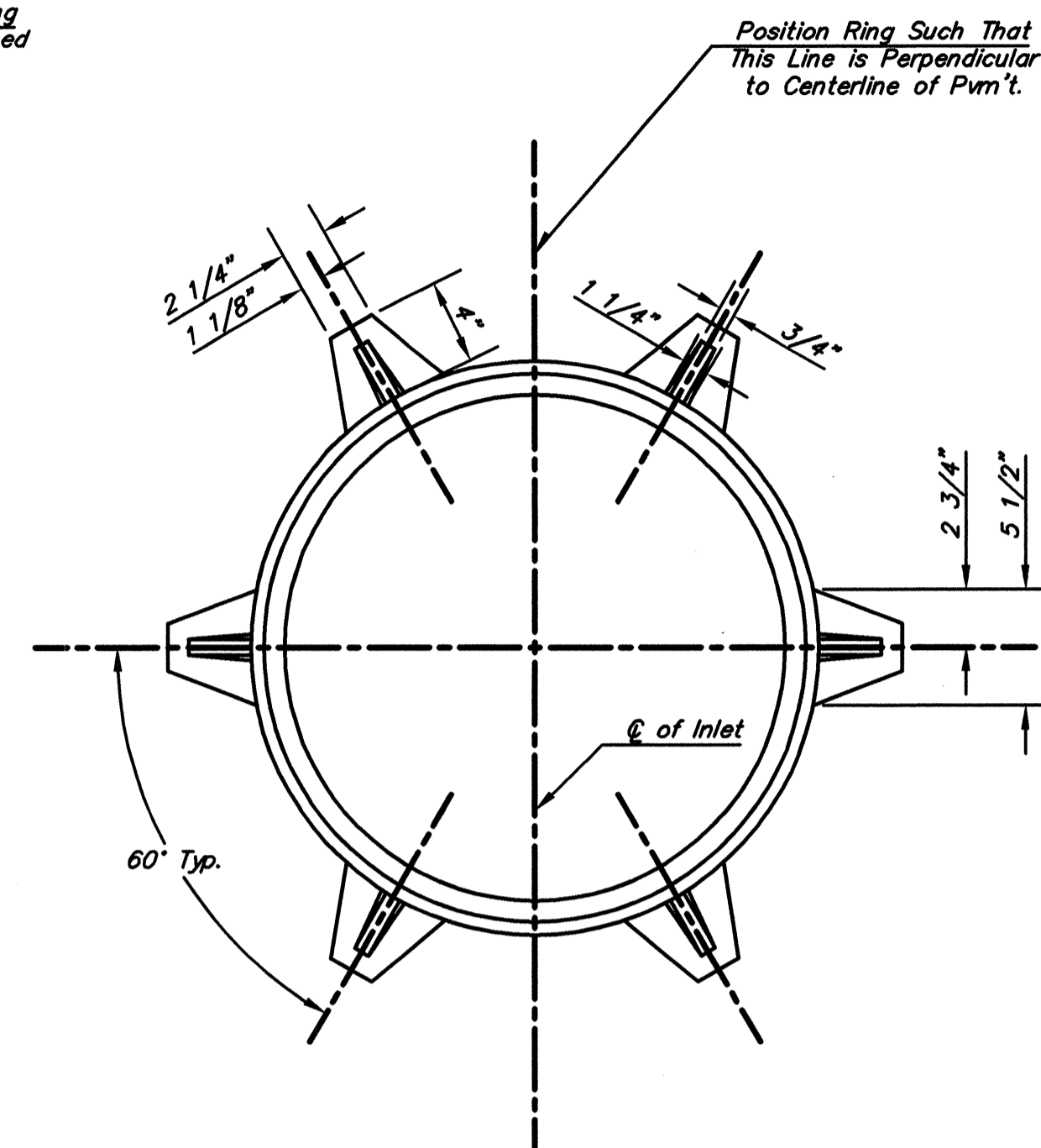
- Inlet Top Reinforcing shall be Spaced on 6" Max. Centers. Inlet Lids shall be Notched out as Indicated to Facilitate Construction of Curb.
- b<sub>3</sub> Bar to be Field Bent to Clear Inlet Frame.



PLAN



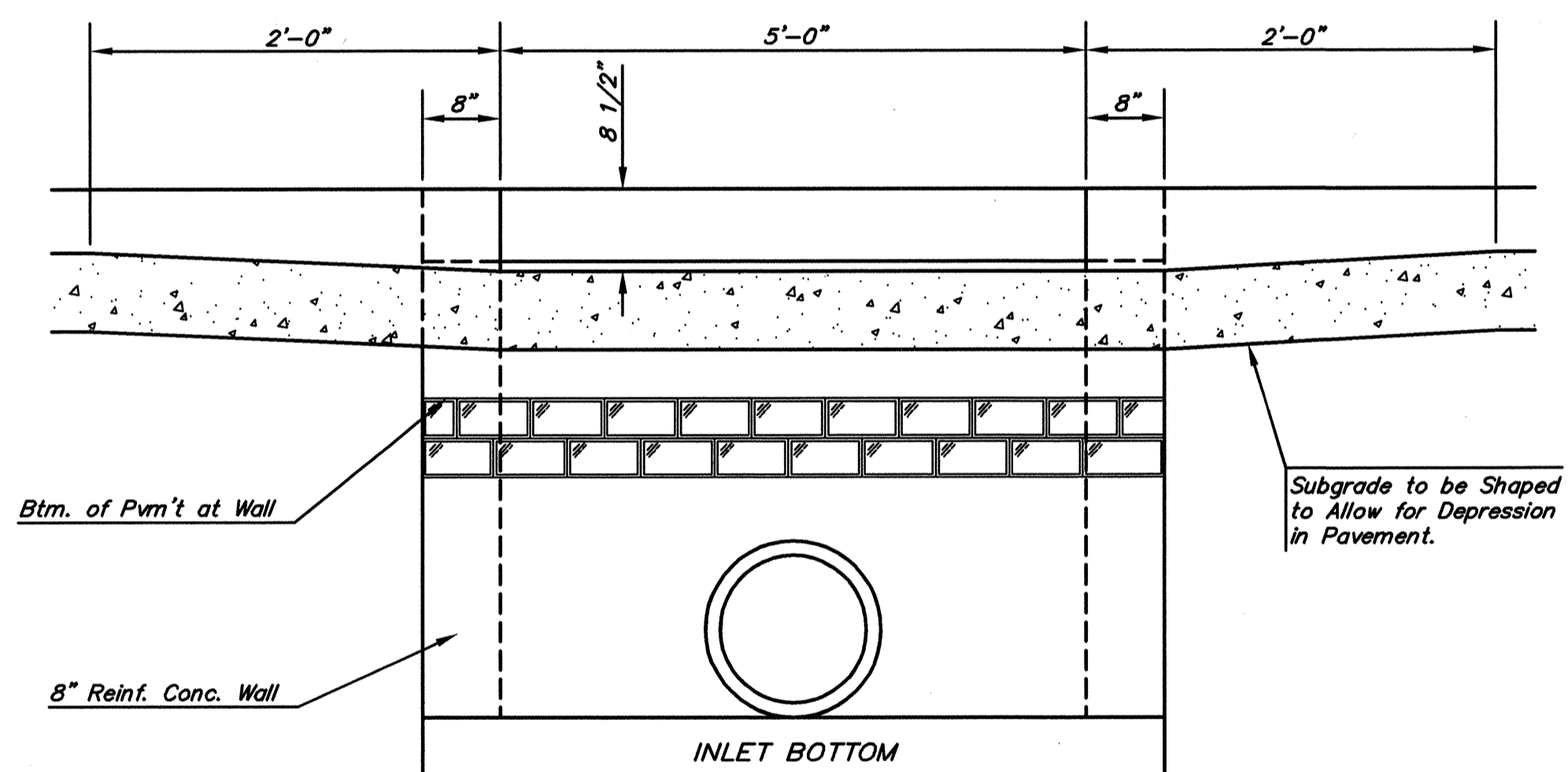
SECTION A-A



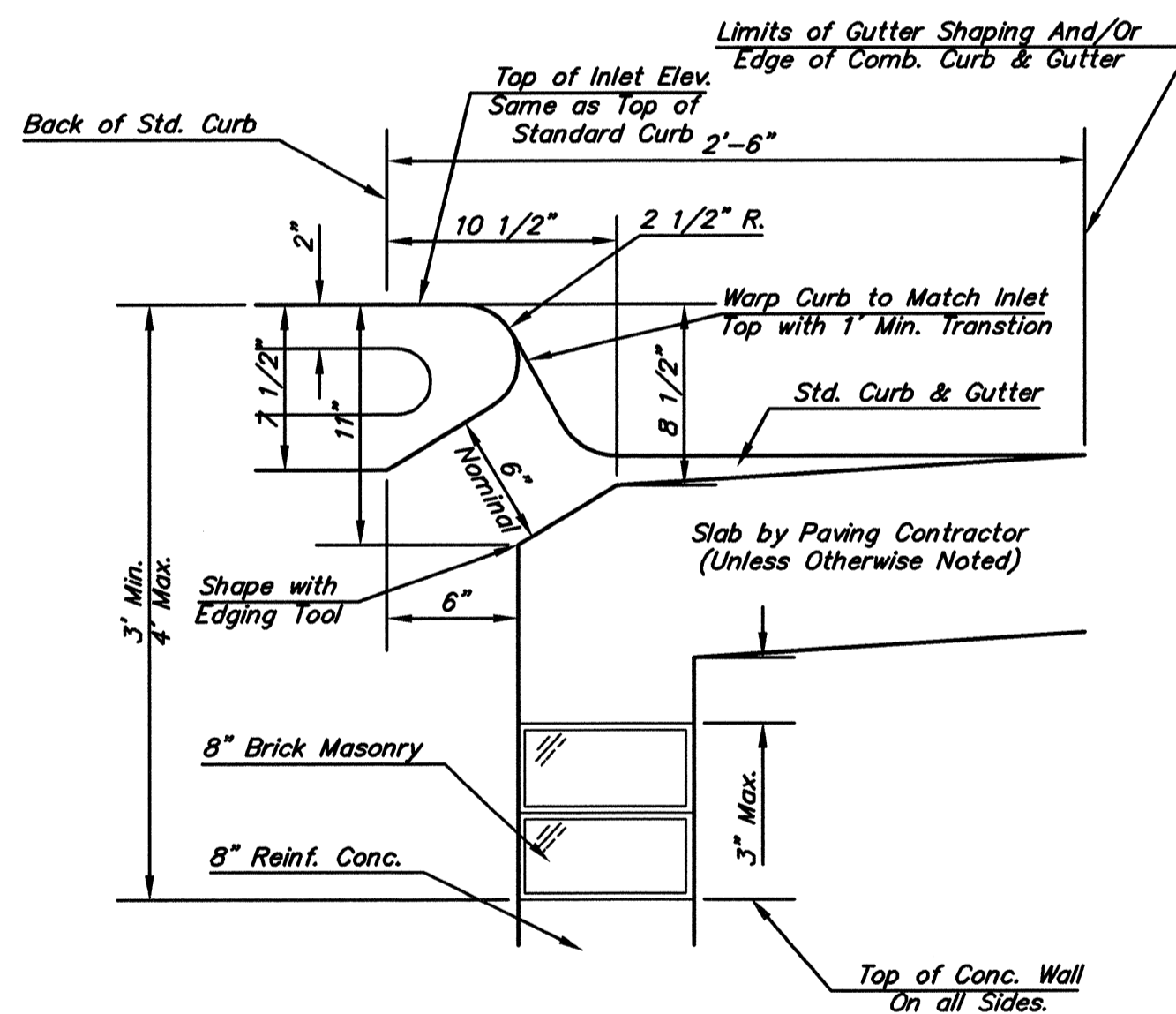
MANHOLE RING AND COVER

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

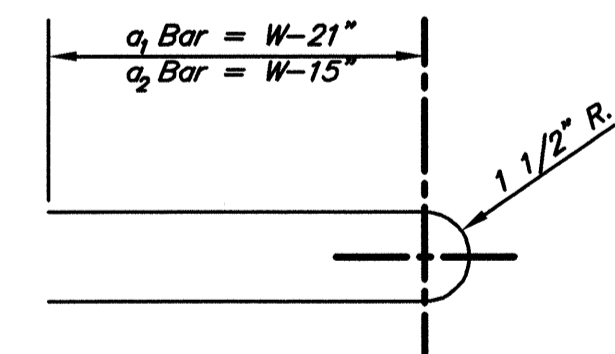
WT. = 180 lbs.



SECTION C-C



SECTION B-B



BENDING DIAGRAM

**STEEL SCHEDULE**

BAR NUMBER	a <sub>1</sub>	a <sub>2</sub>	a <sub>3</sub>	b <sub>1</sub>					b <sub>2</sub>	b <sub>3</sub>	b <sub>4</sub>	Wt. Lbs.
				W=3'-0"	W=4'-0"	W=5'-0"	W=6'-0"	W=7'-0"				
4	4	2	1	3	5	7	9	6	1	1		
SIZE	#4	#4	#4	#4	#4	#4	#4	#4	#4	#6		
LENGTH	W=3'-0"	5'-7"	6'-7"	4'-0"	6'-1"	-	-	-	1'-9"	6'-2"	4'-8"	60±
	W=4'-0"	7'-7"	8'-7"	5'-0"	6'-1"	-	-	-	1'-9"	6'-2"	4'-8"	81±
	W=5'-0"	9'-7"	10'-7"	6'-0"	-	6'-1"	-	-	1'-9"	6'-2"	4'-8"	101±
	W=6'-0"	11'-7"	12'-7"	7'-0"	-	-	6'-1"	-	1'-9"	6'-2"	4'-8"	121±
	W=7'-0"	13'-7"	14'-7"	8'-0"	-	-	-	6'-1"	1'-9"	6'-2"	4'-8"	141±

Note: a<sub>3</sub> Bars to be Placed Approx. 2" Below Top of Inlet Cover.

W	PRE-CAST TOP SIZE	PIPE SIZE	CU. YD. CONC.
3'-0"	3'-8" 6'-4" 7 1/2"	21" & SMALLER	0.38±
4'-0"	4'-8" 6'-4" 7 1/2"	24" & 30"	0.51±
5'-0"	5'-8" 6'-4" 7 1/2"	36" & 42"	0.64±
6'-0"	6'-8" 6'-4" 7 1/2"	48" & 54"	0.77±
7'-0"	7'-8" 6'-4" 7 1/2"	60" & 66"	0.90±

**GENERAL NOTES**

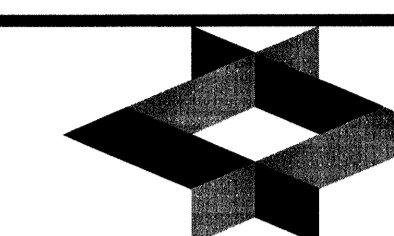
- Concrete tops to be installed on thin mortar cushion to insure full support along brick walls. Concrete tops may be cast in place or precast. Concrete used for inlet construction shall be concrete pavement mix.
- Contractor shall have the option of constructing 8" brick masonry walls between the concrete inlet base and top on this inlet when W=6'-4" and H=7'-0" or less.
- 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.

THE CITY OF WICHITA  
  
 CITY ENGINEER'S OFFICE  
 CITY HALL - SEVENTH FLOOR  
 425 NORTH MAIN STREET  
 WICHITA, KANSAS 67202  
 (316) 268-4861  
 (316) 268-4114 FAX

STANDARD TYPE 1  
 CURB INLET  
 OPENING = 6" x 5'-0"  
 JAMES L. ARMOUR, P.E. - CITY ENGINEER  
 PROJECT NUMBER 472-8XXXX OCA NO. XXXXXX  
 DATE MAR 96



**HNTB Corporation**  
 The HNTB Companies  
 715 Kirk Drive  
 Kansas City, Missouri 64105  
 (816) 472-1201 Fax (816) 472-4063

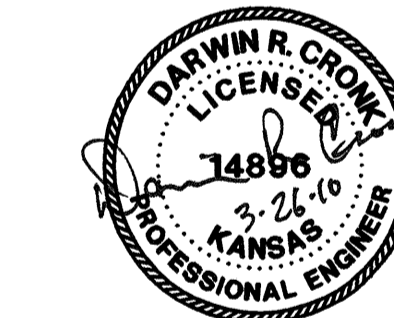


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**MID-CONTINENT AIRPORT**  
 Air Capital Terminal 3  
 PACKAGE #12  
 TERMINAL BUILDING



ISSUE: PERMIT / BID  
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DATE: MARCH 26, 2010  
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 CLIENT PROJECT NO.: 06178

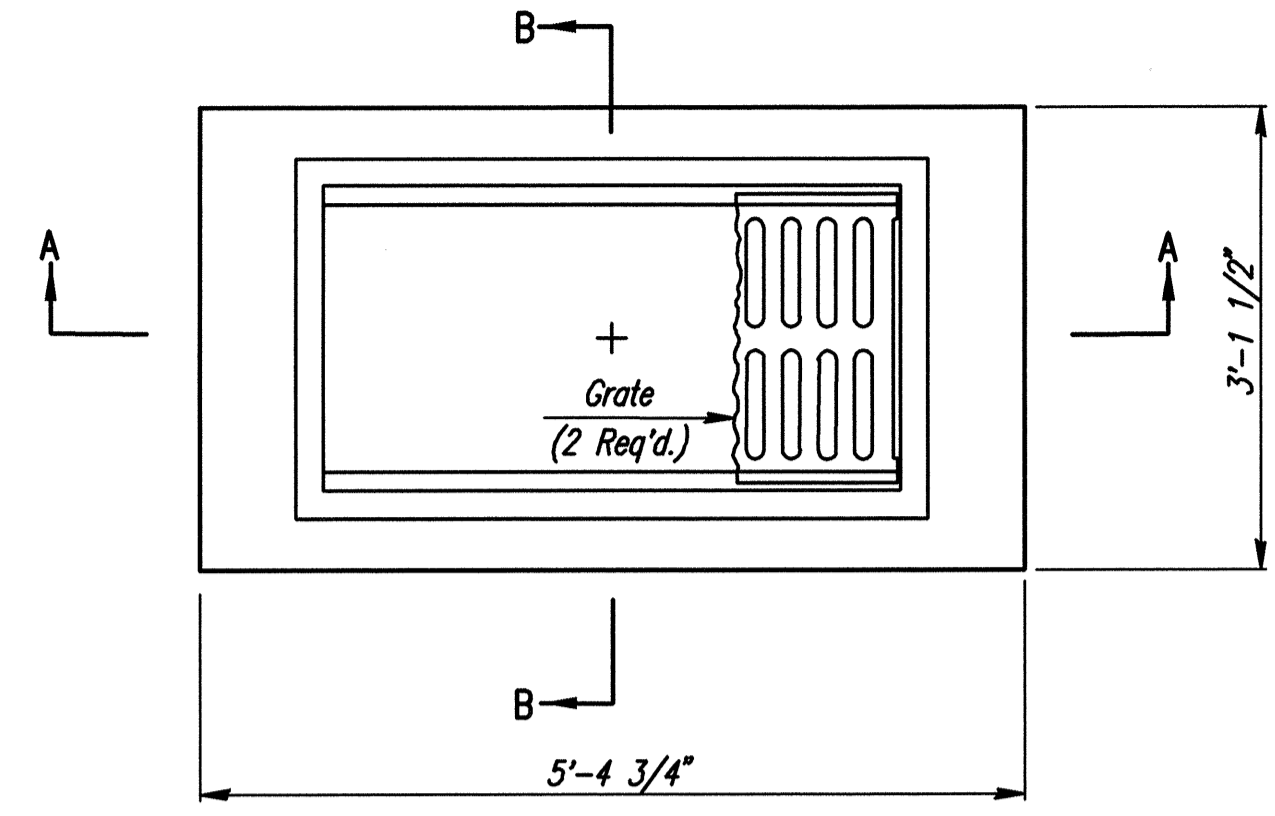
REVISION	DATE	DESCRIPTION
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STANDARD TYPE I  
 CURB INLET -  
 5'-0" OPENING

**CU308**



Saved 01-18-2010 7:17:00 PM by NCI  
 Plot Scale: 1" = 0'-0" (1:0)  
 C:\2008\66481\003\PACKAGE 12 NEW TERMINAL\06481-003-CU309-SWS AREA INLET DETAILS



**PLAN**

**GENERAL NOTES**

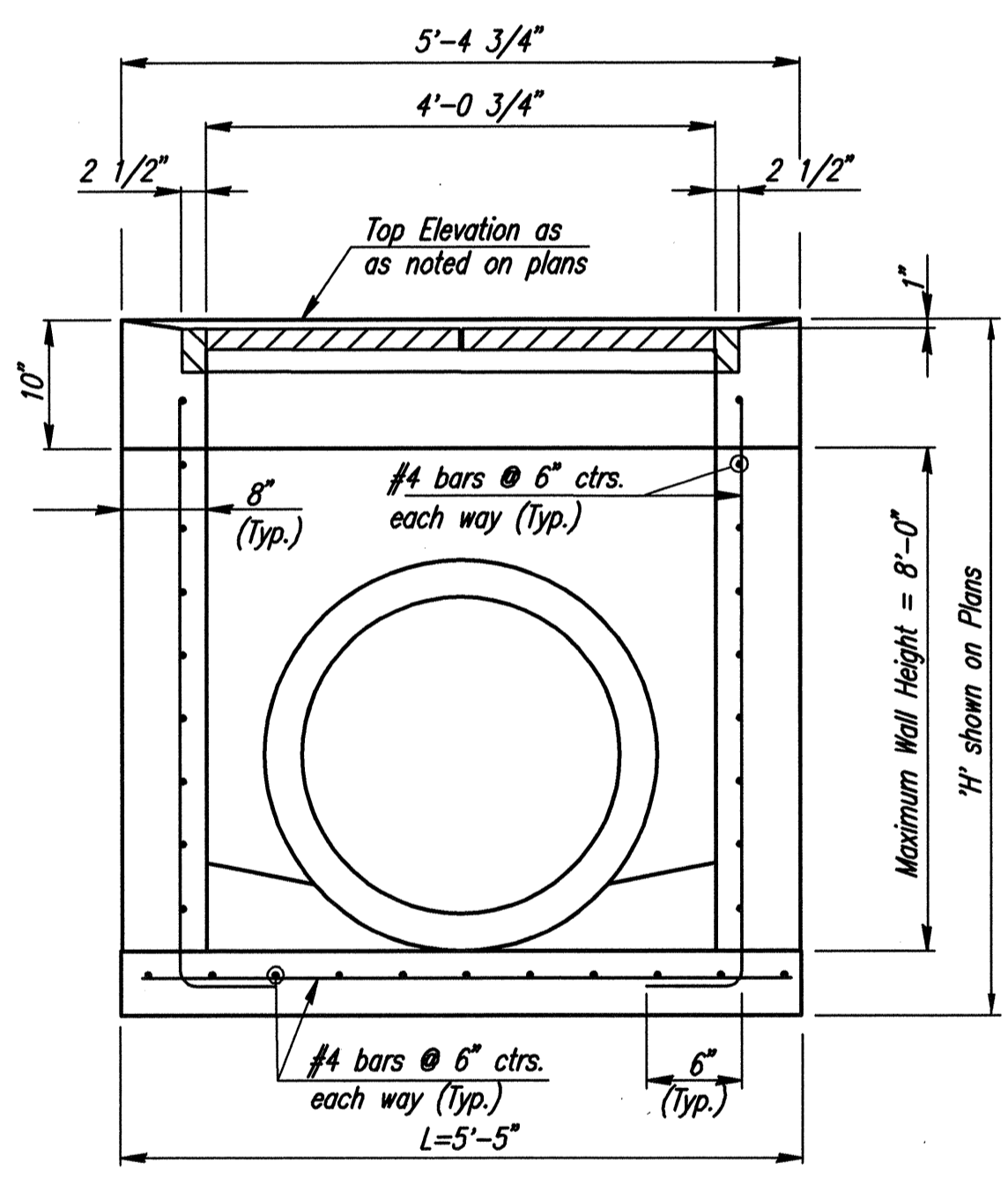
REINFORCING STEEL SHALL BE GRADE 60, A.S.T.M. A615. ALL DIMENSIONS RELATIVE TO PLACEMENT OF REINFORCING ARE TO THE CENTERLINE OF BARS UNLESS OTHERWISE NOTED.

INLET CASTINGS SHALL BE MANUFACTURED USING DUCTILE IRON CONFORMING TO ASTM A536-80 GRADE 65-45-12. DIMENSIONS AND WEIGHTS SHOWN ON THE DETAILED DRAWINGS SHALL BE CONSIDERED AS MINIMUM REQUIREMENTS AND ANY DEVIATIONS FROM THE DIMENSIONS SHOWN MUST BE SPECIFICALLY APPROVED. THE FINISHED CASTINGS SHALL BE OF UNIFORM QUALITY, FREE FROM BLOWHOLES, POROSITY, HARD SPOTS, SHRINKAGE DISTORTIONS OR OTHER DEFECTS.

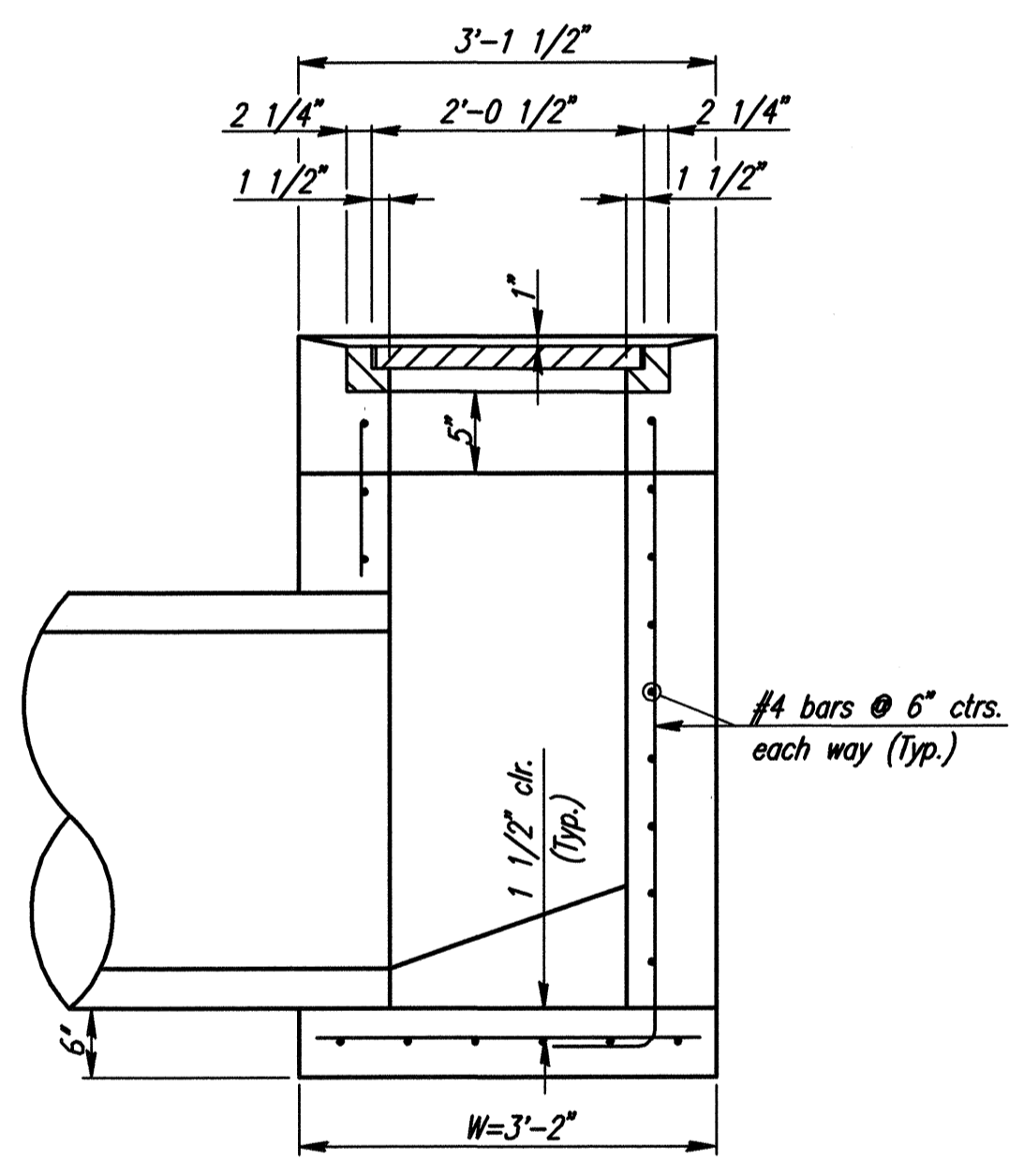
INLET FLOOR SHALL BE SHAPED WITH UNREINFORCED CONCRETE (8 SACK SAND MIX) TO CREATE FLOW CHANNELS AND TO INCREASE HYDRAULIC EFFICIENCY SUCH THAT THE INLET WILL BE SELF CLEANING BETWEEN ALL INLET AND/OR OUTLET PIPES.

PIPES ENTERING EXISTING STRUCTURE SHALL BE CENTERED ON INSIDE FACE OF WALL.

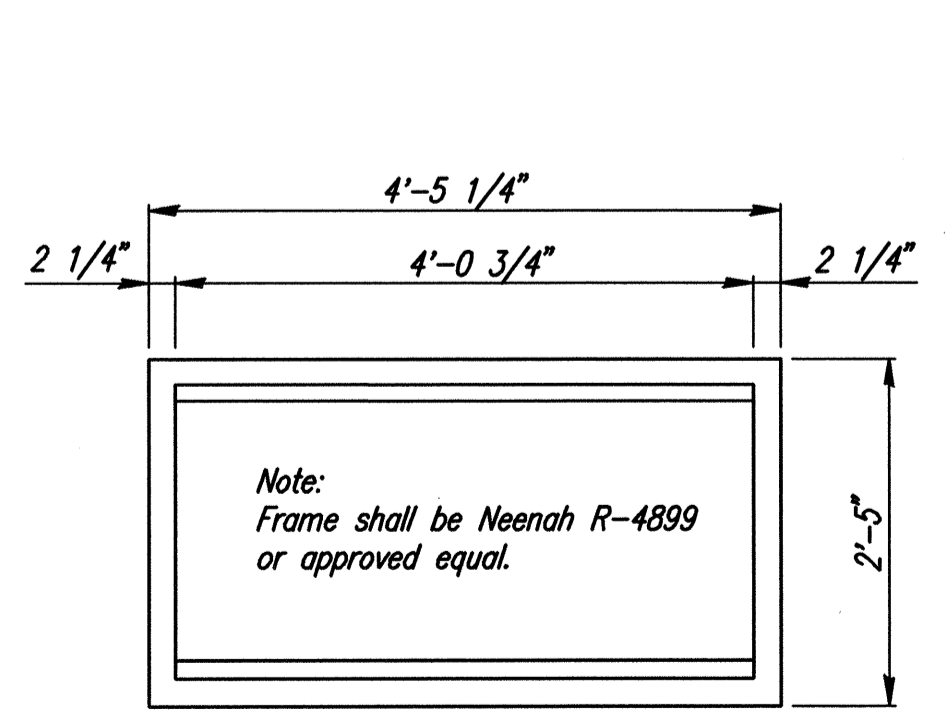
ALL EXPOSED STRUCTURAL STEEL SHALL BE PAINTED WITH A COAT OF INORGANIC ZINC PRIMER AND THEN WITH A TOP COAT OF OR A FIELD COAT OF ORGANIC ZINC, EACH COAT TO BE 3 TO 4 MILS. STRUCTURAL STEEL USED TO FABRICATE THE SPECIAL AREA INLET FRAME SHALL COMPLY WITH A.S.T.M. A36. WELDING SHALL CONFORM TO THE STRUCTURAL WELDING CODE A.W.S. D1.1-88.



**SECTION A-A**



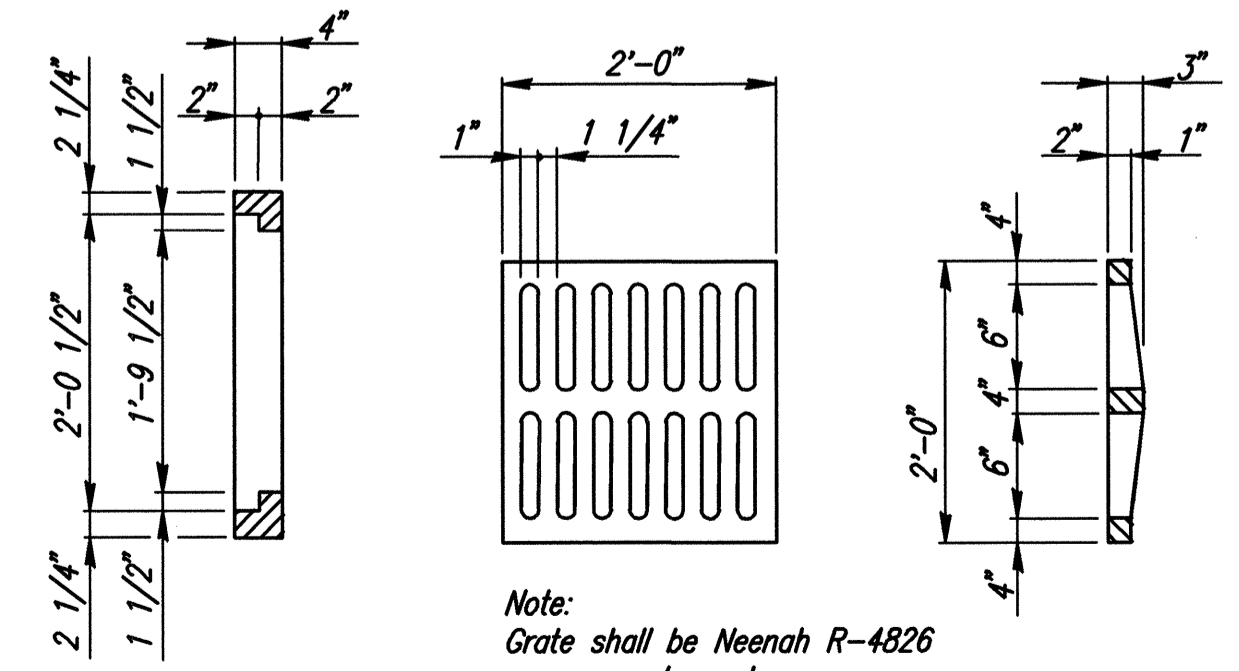
**SECTION B-B**



**FRAME DETAIL**  
(Wt.=440 lbs.)

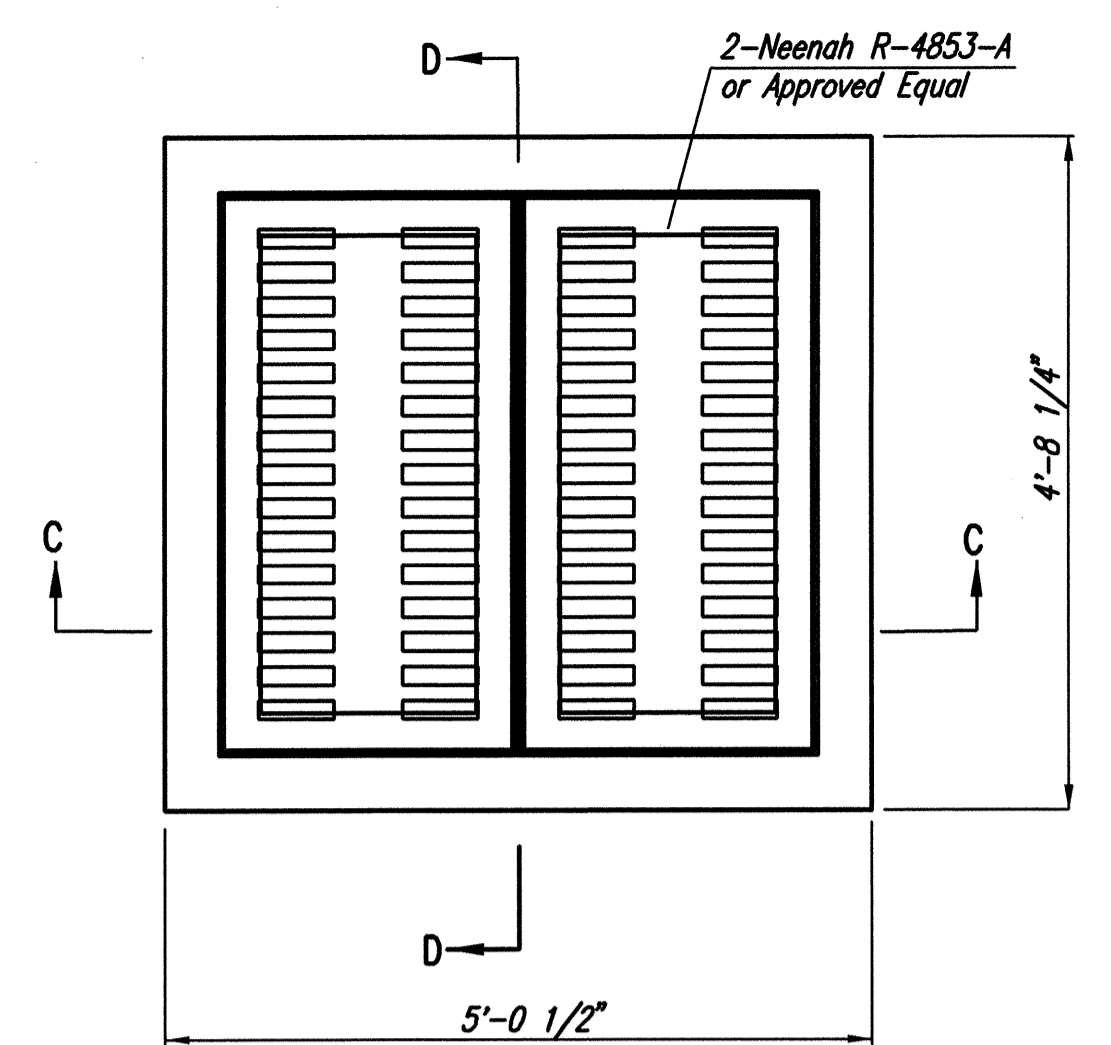
Note:  
Frame to mate with 2 Neenah R-4826 Grates or approved equal.

**STANDARD AREA INLET**

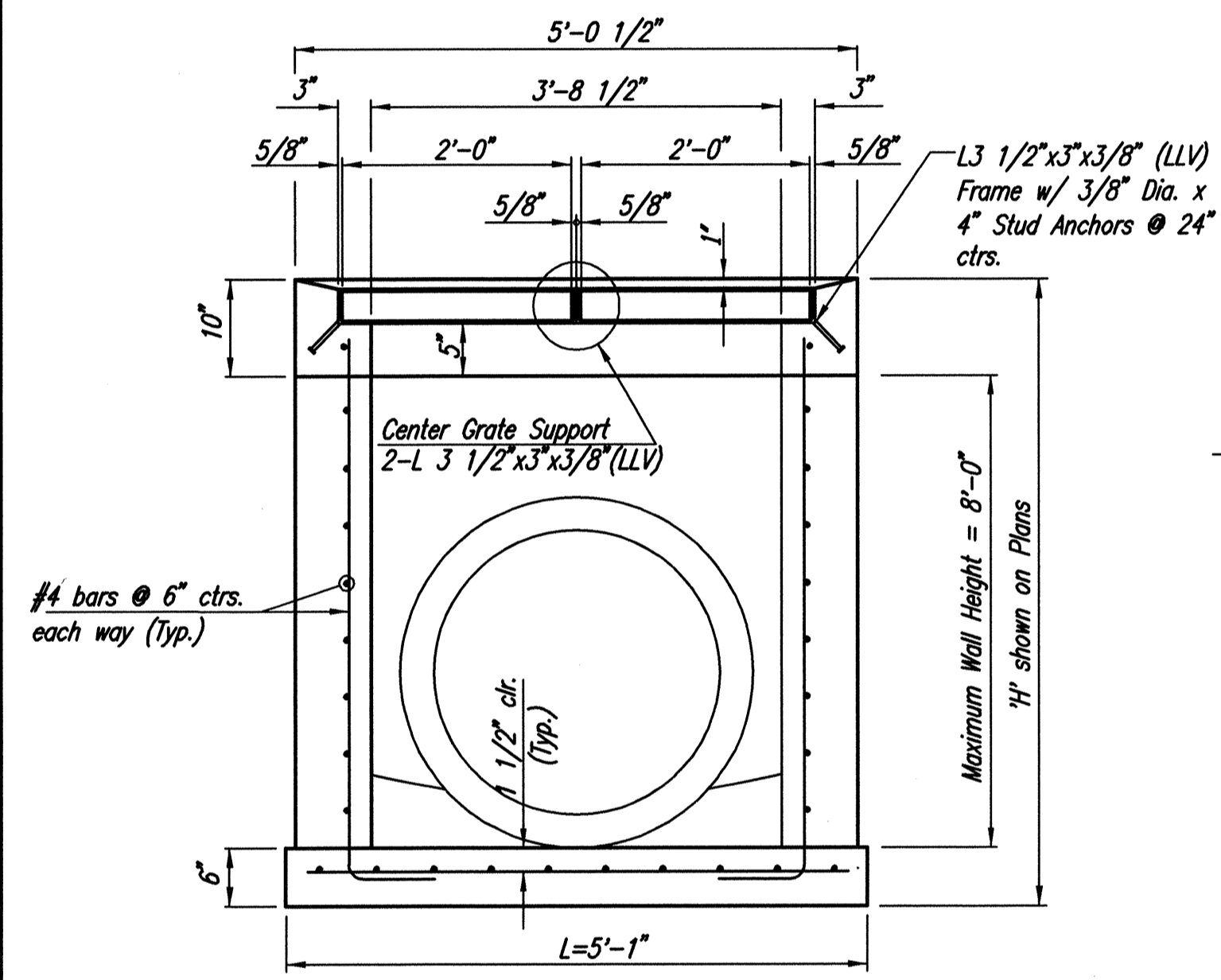


**GRATE DETAIL**  
(Wt.=190 lbs.)  
(2 Required)

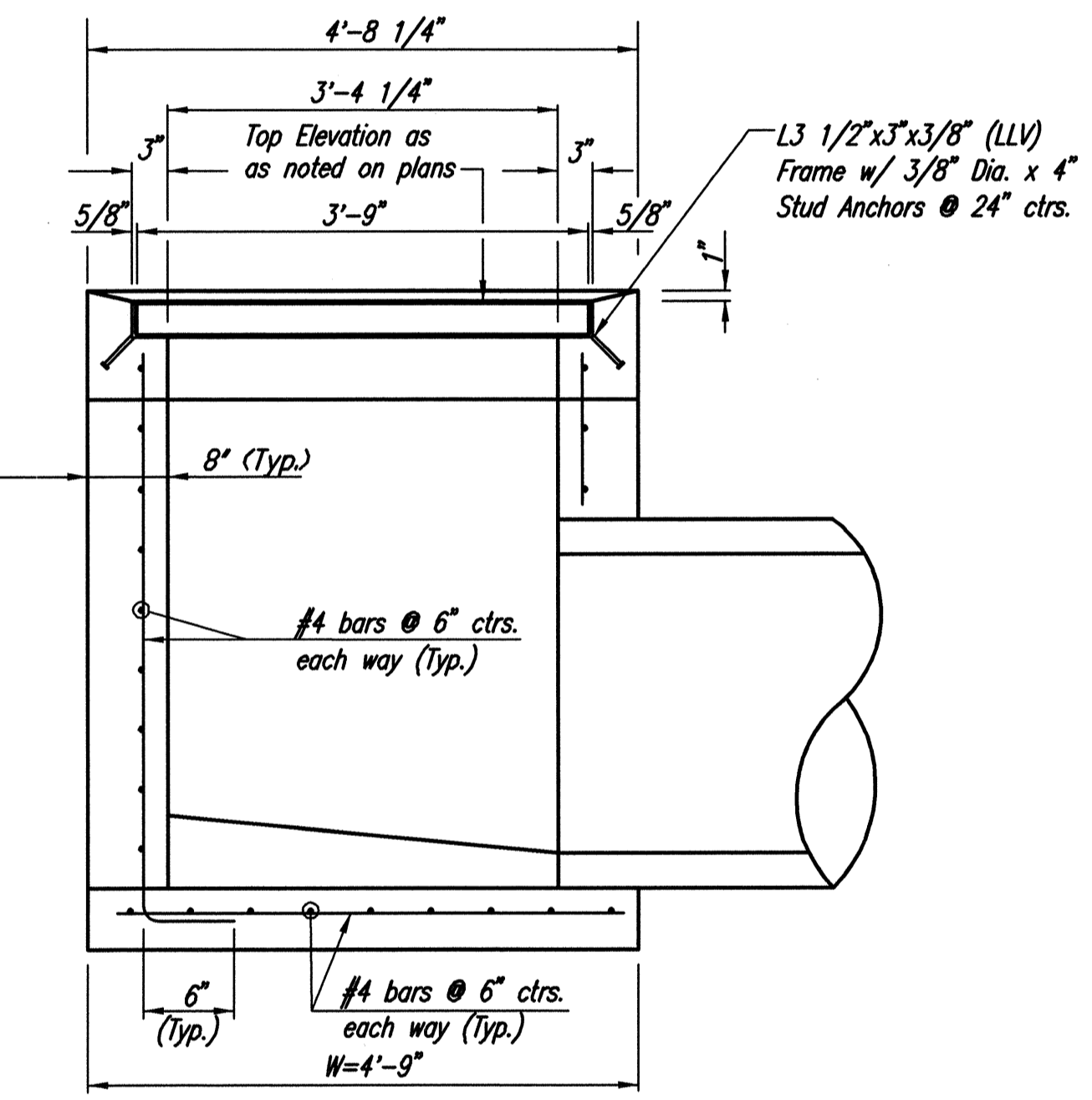
Note:  
Grate shall be Neenah R-4826 or approved equal.



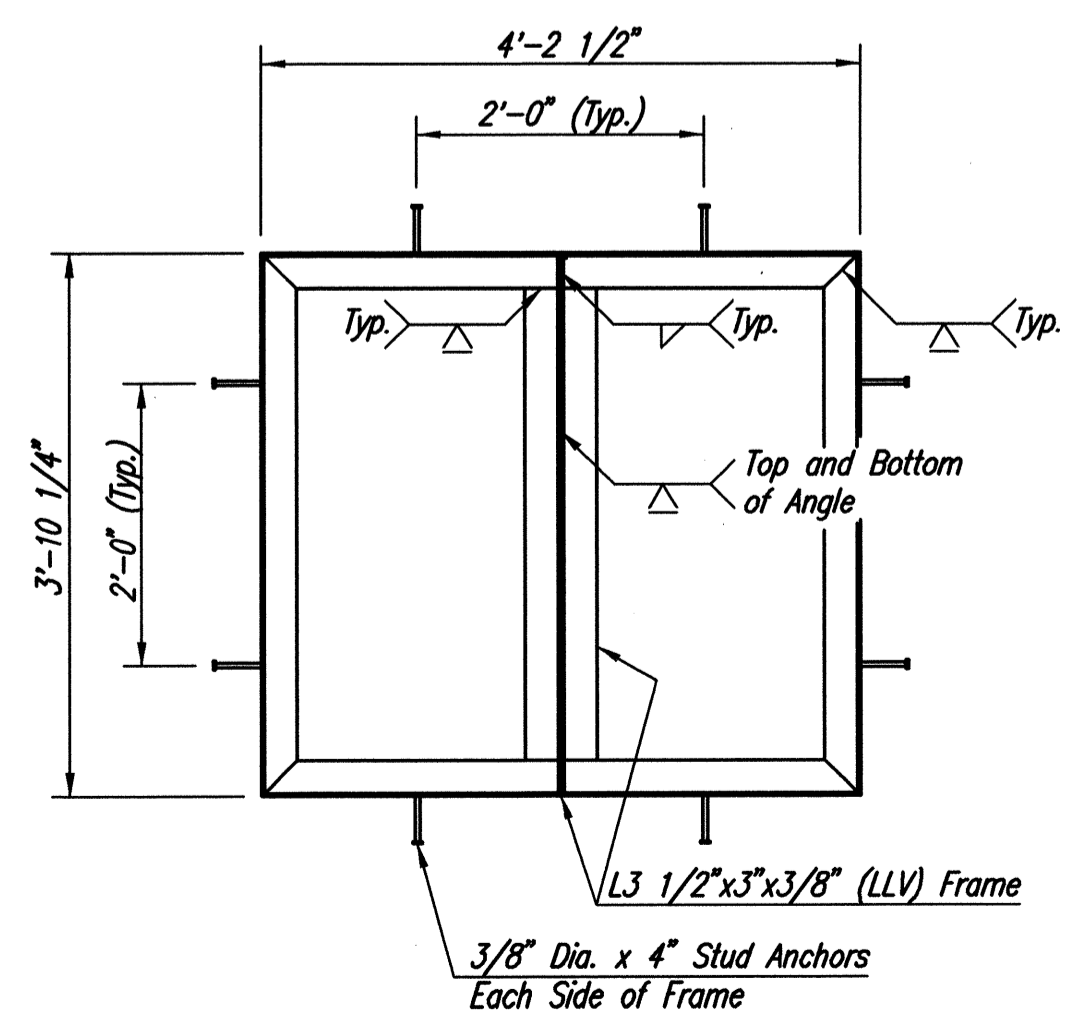
**PLAN**



**SECTION C-C**

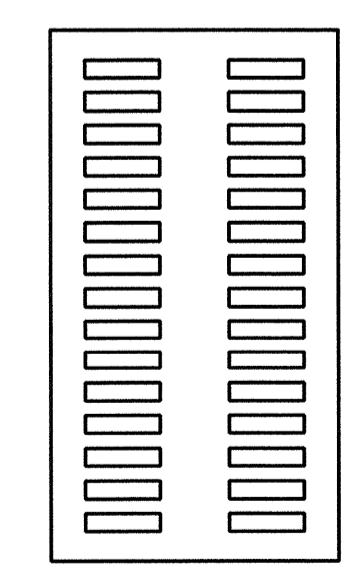


**SECTION D-D**



**FRAME DETAIL**  
(For Special Area Inlet)

Note:  
Frame to mate with 2 Neenah R-4853-A Grates or approved equal.



**GRATE DETAIL**  
(Wt.=520 lbs.)  
(2 Required)

Note:  
Grate shall be Neenah R-4853-A or approved equal.

**GENERAL NOTES**

CONCRETE SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 4000 PSI. ALL PIPES SHALL BE FLUSH CUT PRIOR TO BEING CAST INTO WALLS.

REINFORCING STEEL SHALL BE GRADE 60, A.S.T.M. A615. ALL DIMENSIONS RELATIVE TO PLACEMENT OF REINFORCING ARE TO THE CENTERLINE OF BARS UNLESS OTHERWISE NOTED.

INLET CASTINGS SHALL BE MANUFACTURED USING DUCTILE IRON CONFORMING TO ASTM A536-80 GRADE 65-45-12. DIMENSIONS AND WEIGHTS SHOWN ON THE DETAILED DRAWINGS SHALL BE CONSIDERED AS MINIMUM REQUIREMENTS AND ANY DEVIATIONS FROM THE DIMENSIONS SHOWN MUST BE SPECIFICALLY APPROVED. THE FINISHED CASTINGS SHALL BE OF UNIFORM QUALITY, FREE FROM BLOWHOLES, POROSITY, HARD SPOTS, SHRINKAGE DISTORTIONS OR OTHER DEFECTS.

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

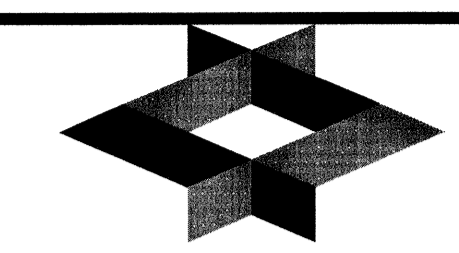
PIPES ENTERING EXISTING STRUCTURE SHALL BE CENTERED ON INSIDE FACE OF WALL.

ALL EXPOSED STRUCTURAL STEEL SHALL BE PAINTED WITH A COAT OF INORGANIC ZINC PRIMER AND THEN WITH A TOP COAT OF OR A FIELD COAT OF ORGANIC ZINC, EACH COAT TO BE 3 TO 4 MILS. STRUCTURAL STEEL USED TO FABRICATE THE SPECIAL AREA INLET FRAME SHALL COMPLY WITH A.S.T.M. A36. WELDING SHALL CONFORM TO THE STRUCTURAL WELDING CODE A.W.S. D1.1-88.

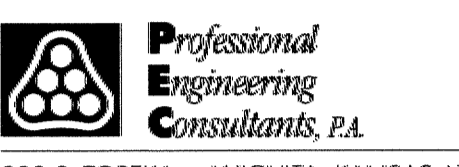
INLET GRATE(S) AND FRAMES SHALL BE PROVIDED WITH BOLTS AND THREADED HOLES ALLOWING FOR THE GRATES TO BE SECURED TO THE FRAME. EACH GRATE SECTION SHALL HAVE A MINIMUM OF FOUR (4) BOLTS.



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The HNTB Companies  
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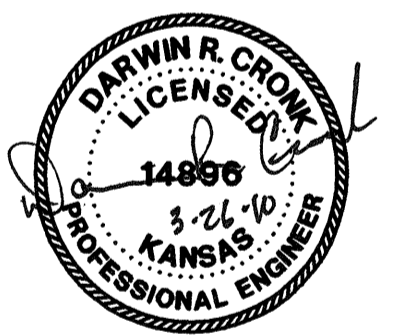


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**MID-CONTINENT AIRPORT**  
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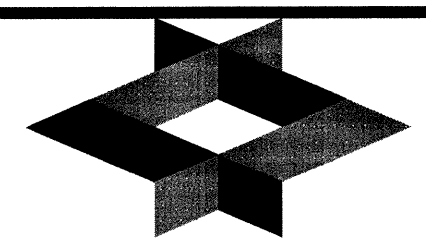
DATE: MARCH 26, 2010  
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CLIENT PROJECT NO.: 06178

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REVISION	DATE	DESCRIPTION

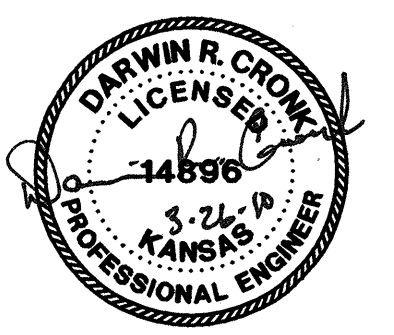
**SWS AREA INLET DETAILS**

**CU309**





**MID-CONTINENT AIRPORT**  
WICHITA  
Air Capital Terminal 3  
PACKAGE #12  
TERMINAL BUILDING



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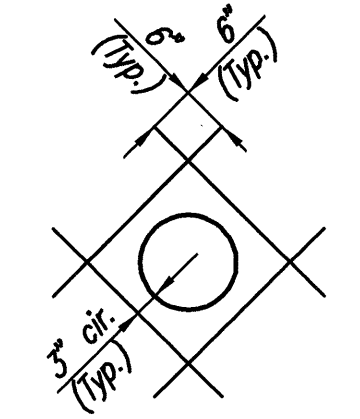
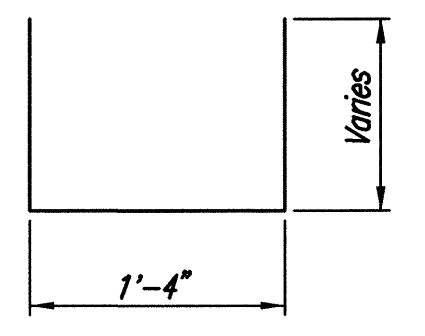
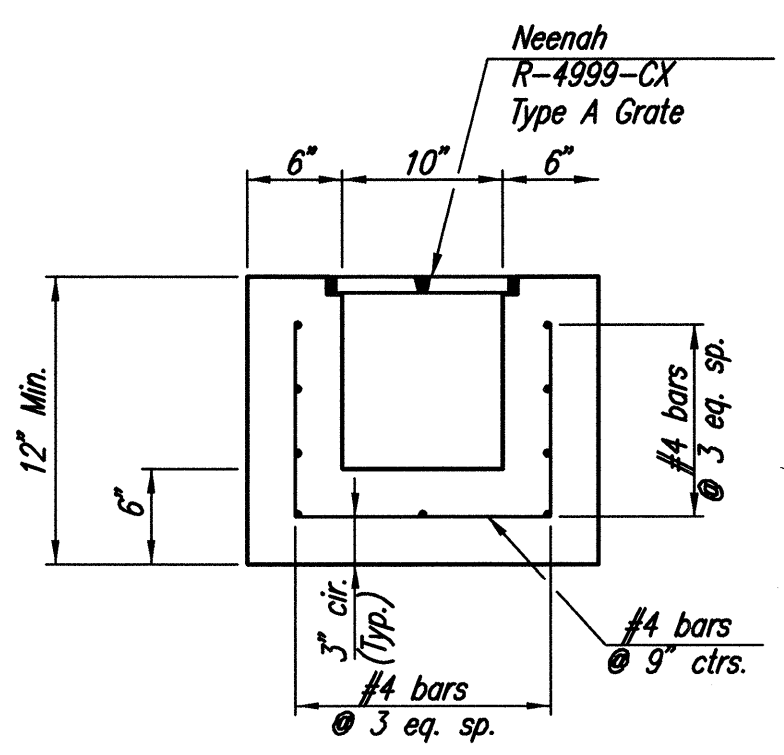
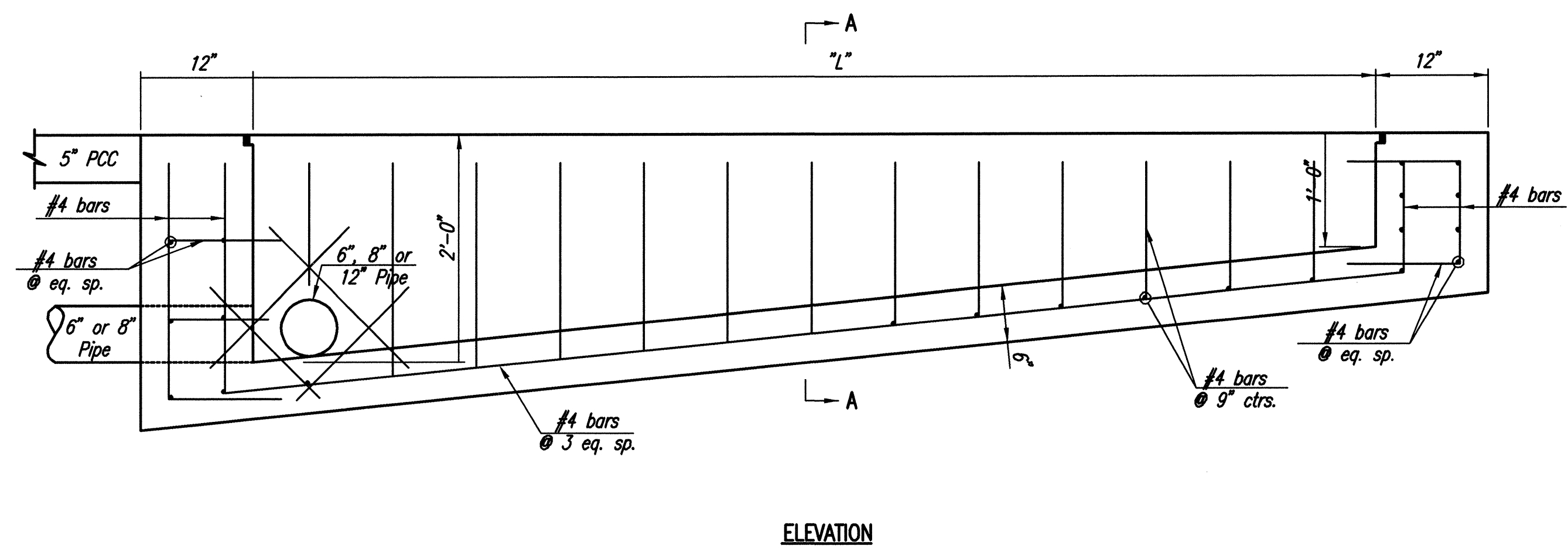
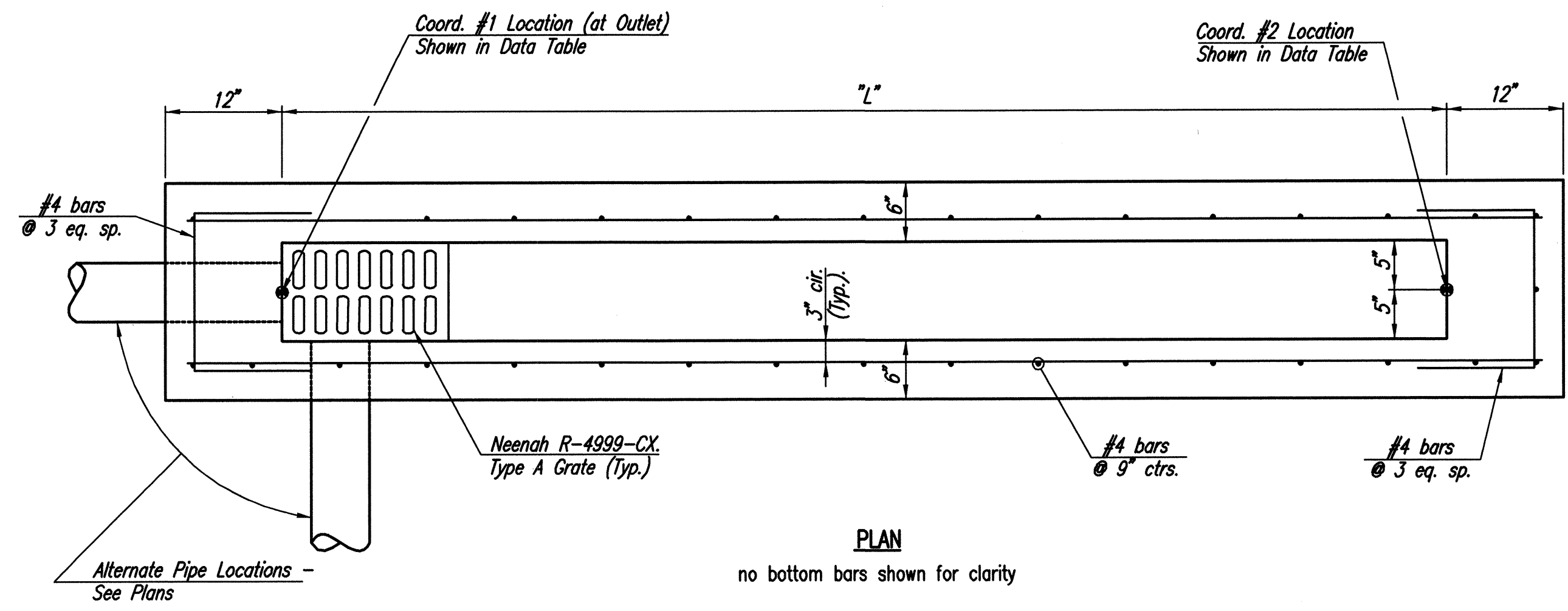
DATE: **MARCH 26, 2010**  
HNTB PROJECT NO.: **34912**  
CLIENT PROJECT NO.: **06178**

DRAWN BY: \_\_\_\_\_  
CHECKED BY: \_\_\_\_\_  
APPROVED BY: \_\_\_\_\_

REVISION	DATE	DESCRIPTION

**TRENCH DRAIN DETAILS**

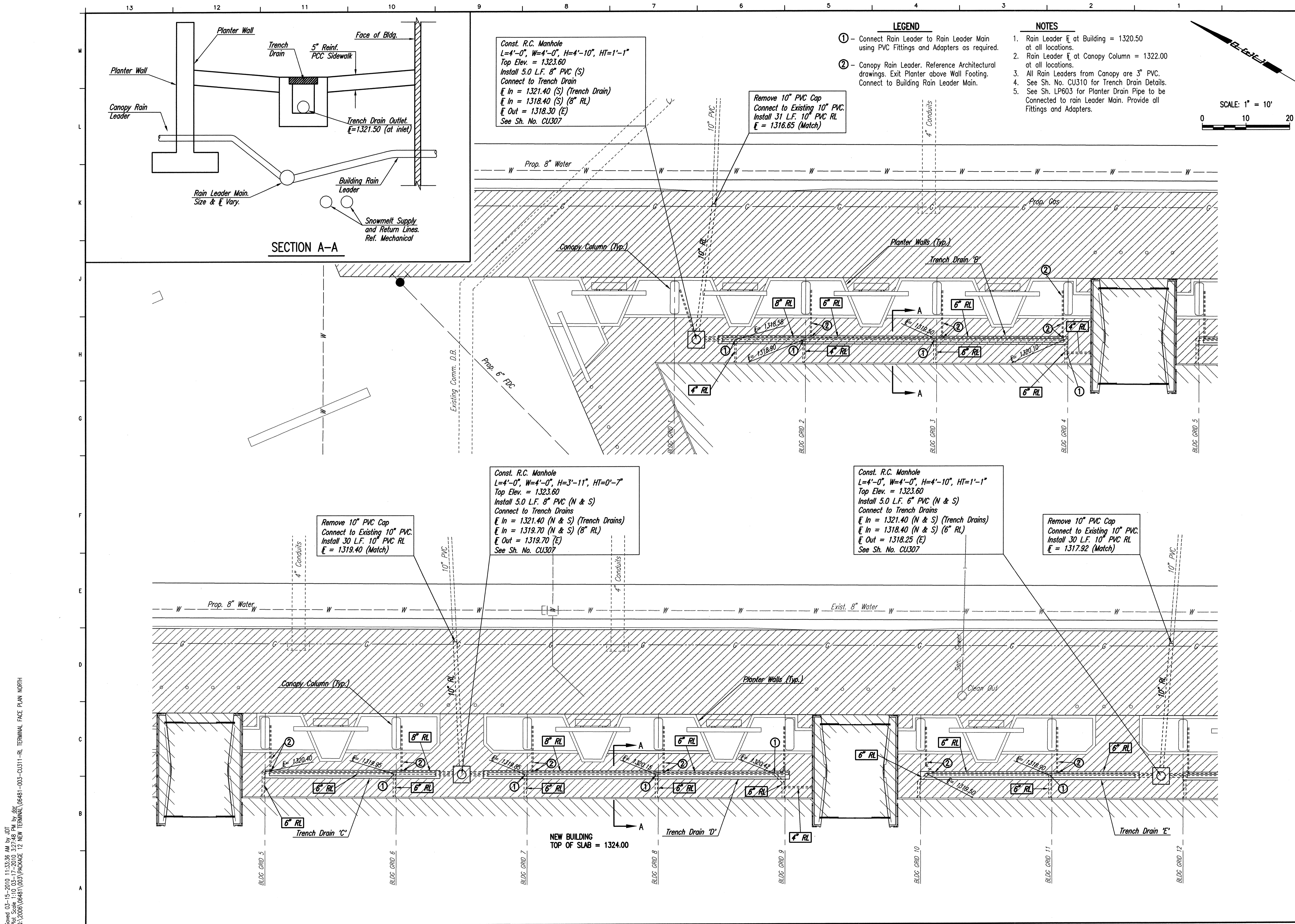
## CU310



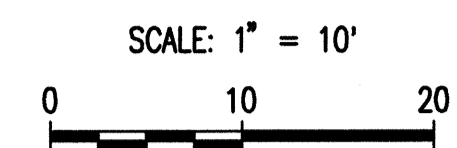
TRENCH DRAIN	TRENCH DRAIN DATA				
	TOP ELEV.	LENGTH	# OF GRATES	COORD. #1	COORD. #2
A	1320.00	34'	17	N = 11,423.2740 E = 9,637.5476	N = 11,405.9543 E = 9,608.2897
B	1323.50	78'	39	N = 11,519.0267 E = 9,746.4622	N = 11,451.9055 E = 9,786.1956
C	1323.50	38'	19	N = 11,391.6685 E = 9,821.8537	N = 11,424.3686 E = 9,802.4964
D	1323.50	68'	34	N = 11,381.3421 E = 9,827.9665	N = 11,322.8262 E = 9,862.6058
E	1323.50	48'	24	N = 11,253.9839 E = 9,903.3580	N = 11,295.2893 E = 9,878.9067
F	1323.50	28'	14	N = 11,243.6575 E = 9,909.4708	N = 11,219.5627 E = 9,923.7341
G	1323.50	48'	24	N = 11,150.7204 E = 9,964.4862	N = 11,192.0258 E = 9,940.0350
H	1323.50	48'	29	N = 11,140.3941 E = 9,970.5591	N = 11,090.4834 E = 10,000.1444
I	1323.50	28'	14	N = 11,038.8513 E = 10,030.7079	N = 11,062.9461 E = 10,016.4446
J	1323.50	48'	24	N = 11,028.5250 E = 10,036.8207	N = 11,987.2196 E = 10,061.2720

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- LEGEND**
- ① - Connect Rain Leader to Rain Leader Main using PVC Fittings and Adapters as required.
  - ② - Canopy Rain Leader. Reference Architectural drawings. Exit Planter above Wall Footing. Connect to Building Rain Leader Main.
- NOTES**
1. Rain Leader at Building = 1320.50 at all locations.
  2. Rain Leader at Canopy Column = 1322.00 at all locations.
  3. All Rain Leaders from Canopy are 3" PVC.
  4. See Sh. No. CU310 for Trench Drain Details.
  5. See Sh. LP603 for Planter Drain Pipe to be Connected to rain Leader Main. Provide all Fittings and Adapters.



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**MID-CONTINENT AIRPORT**  
 Air Capital Terminal 3  
 PACKAGE #12  
 TERMINAL BUILDING



ISSUE: PERMIT / BID CONSTRUCTION DOCUMENTS

DATE: MARCH 26, 2010  
 HNTB PROJECT NO.: 34912  
 CLIENT PROJECT NO.: 06178

DRAWN BY:  
 CHECKED BY:  
 APPROVED BY:

REVISION	DATE	DESCRIPTION
▲		
▲		
▲		
▲		

RAINLEADER PLAN  
 TERMINAL FACE - NORTH

**CU311**

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R.C. Manhole  
 Top Elev. = 1323.60  
 In = 1321.40 (N & S) (Trench Drains)  
 In = 1318.40 (N & S) (6" RL)  
 Out = 1318.25 (E)

Const. R.C. Manhole  
 L=4'-0", W=4'-0", H=4'-10", HT=1'-1"  
 Top Elev. = 1323.60  
 Install 5.0 L.F. 8" PVC (N & S)  
 Connect to Trench Drains  
 In = 1321.40 (N & S) (Trench Drains)  
 In = 1318.40 (N & S) (8" RL)  
 Out = 1318.25 (E)  
 See Sh. No. CU307

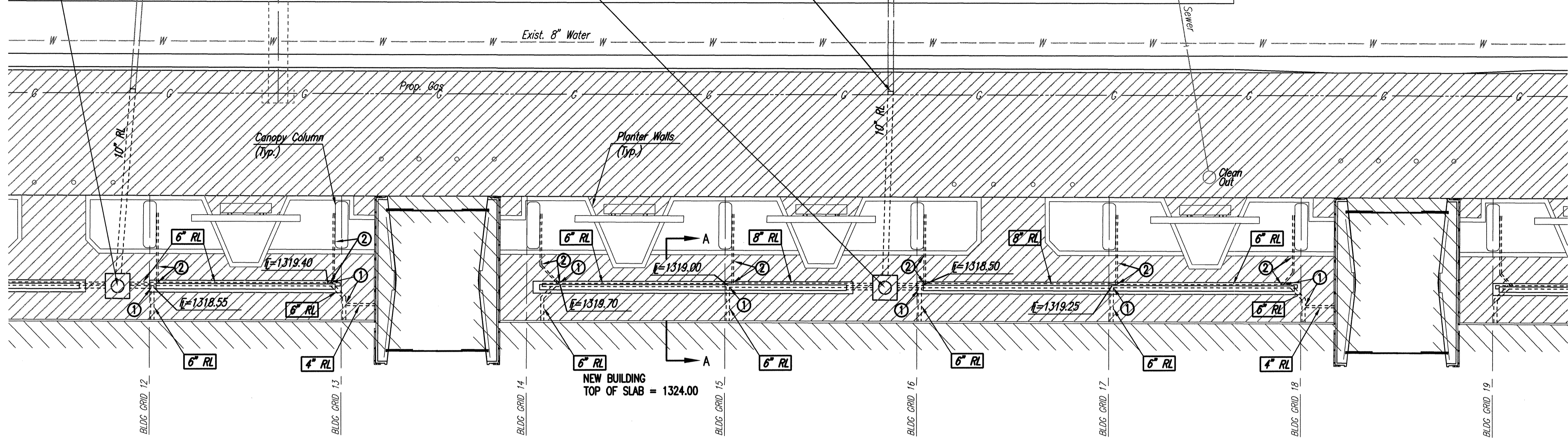
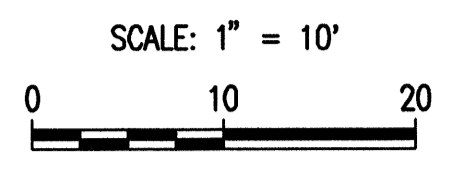
Remove 10" PVC Cap  
 Connect to Existing 10" PVC  
 Install 30 L.F. 10" PVC RL  
 In = 1317.92 (Match)

**LEGEND**

- ① - Connect Rain Leader to Rain Leader Main using PVC, Fittings and Adapters as required. Coordinate Exact Location with Mechanical Contractor.
- ② - Canopy Rain Leader. Reference Architectural drawings. Exit Planter above Wall Footing. Connect to Building Rain Leader.

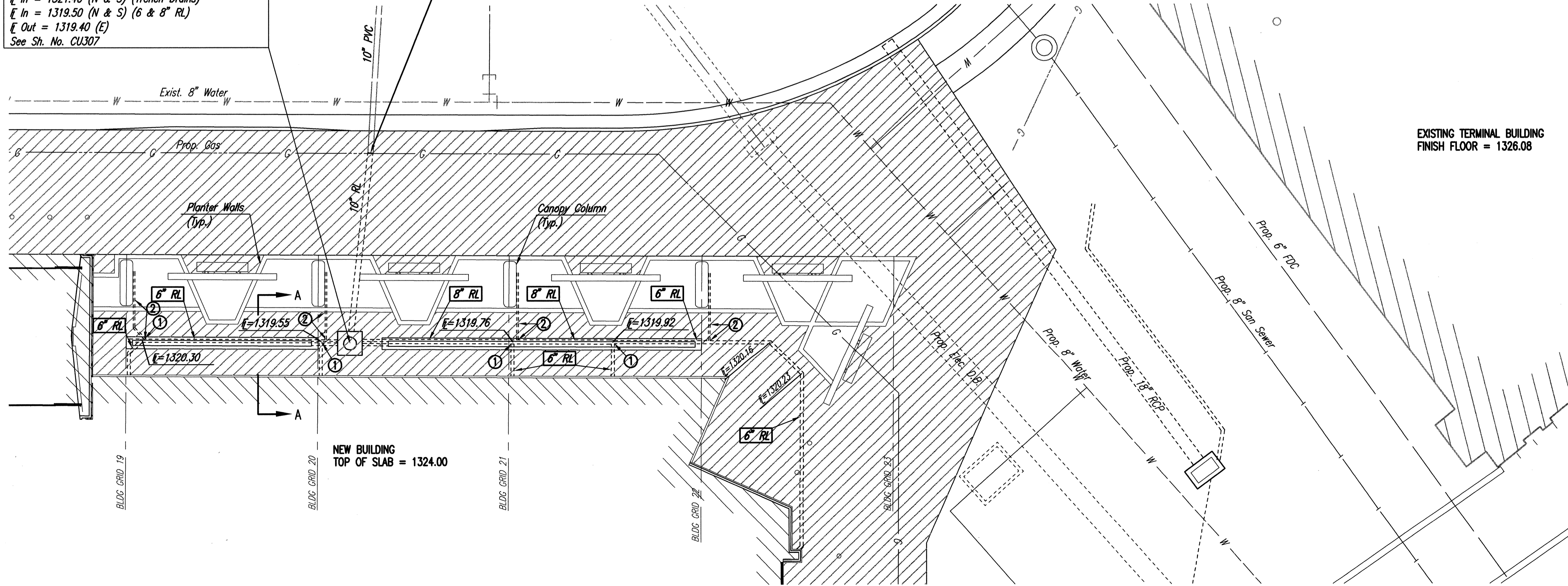
**NOTES**

- 1. Rain Leader In at Building = 1320.50 at all locations.
- 2. Rain Leader In at Canopy Column = 1322.00 at all locations.
- 3. All Rain Leaders from Canopy are 3" PVC.
- 4. See Sh. No. CU310 for Trench Drain Details.
- 5. See Sh. LP603 for Planter Drain Pipe to be Connected to rain Leader Main. Provide all Fittings and Adapters.
- 6. See Sh. CU310 for Section A-A.

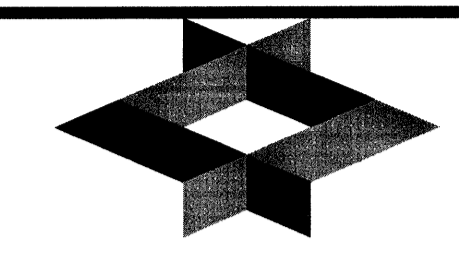


Const. R.C. Manhole  
 L=4'-0", W=4'-0", H=4'-2", HT=0'-7"  
 Top Elev. = 1323.60  
 Install 5.0 L.F. 6" PVC (N) & 5.0 L.F. 8" PVC (N)  
 Connect to Trench Drains  
 In = 1321.40 (N & S) (Trench Drains)  
 In = 1319.50 (N & S) (6 & 8" RL)  
 Out = 1319.40 (E)  
 See Sh. No. CU307

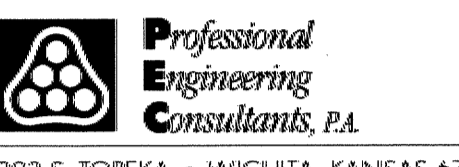
Remove 10" PVC Cap  
 Connect to Existing 10" PVC  
 Install 30 L.F. 10" PVC RL  
 In = 1319.08 (Match)



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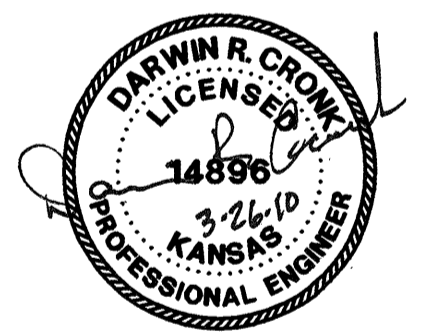


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**MID-CONTINENT AIRPORT**  
 Air Capital Terminal 3  
 PACKAGE #12  
 TERMINAL BUILDING



ISSUE: PERMIT / BID  
 CONSTRUCTION DOCUMENTS

DATE: MARCH 26, 2010  
 HNTB PROJECT NO.: 34912  
 CLIENT PROJECT NO.: 06178

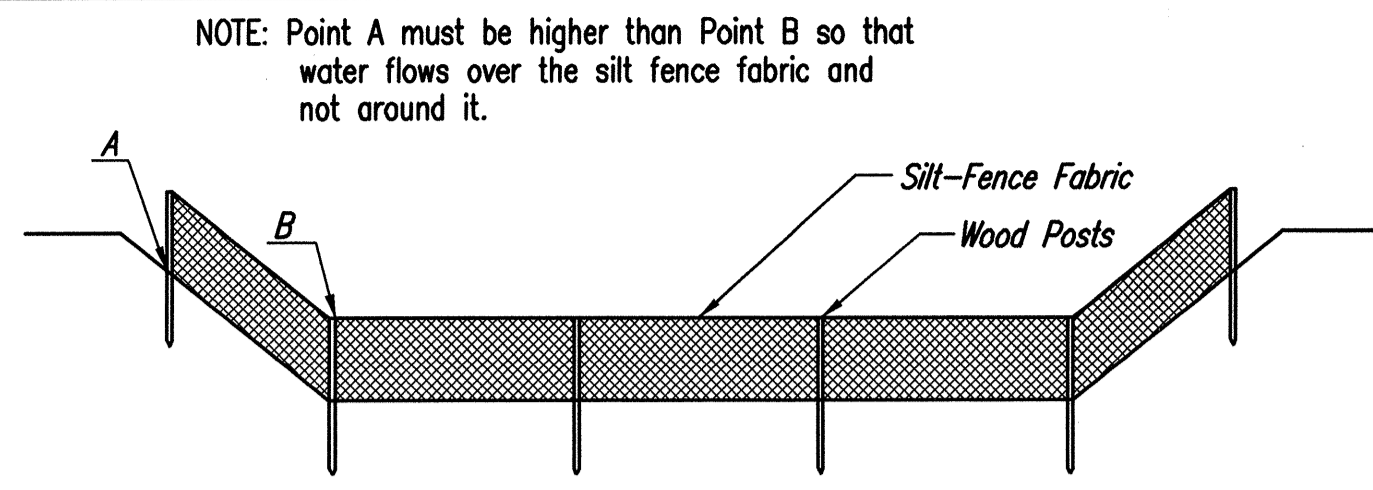
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RAINLEADER PLAN  
 TERMINAL FACE-  
 SOUTH

**CU312**

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**ELEVATION**  
**SILT FENCE DITCH CHECKS**  
(STREAM PROTECTION)

**Material Specification:**

Silt fence fabric should conform to the AASHTO M288 96 silt fence specification. The posts used to support the silt fence fabric should be a hardwood material with the following minimum dimensions: 2" square (nominal) by 4' long. Silt fence fabric should be attached to the wooden posts with staples, wire, zip ties, or nails.

**Placement:**

Place silt fence in ditches where it is unlikely that it will be overtopped. Water should flow through a silt fence ditch check, not over it. Silt fence ditch checks often fail when overtopped. Silt fence ditch checks should be placed perpendicular to the flowline of the ditch. The silt fence should extend far enough so that the ground level at the ends of the fence is higher than the top of the low point of the fence. This prevents water from flowing around the check. Silt fence ditch checks should not be placed in ditches where high flows are expected. Rock checks should be used instead. Silt fence should be placed in ditches with slopes of 6% or less. For slopes steeper than 6%, rock checks should be used.

The following table provides check spacing for a given ditch grade:

Ditch Check Ditch grade (%)	Spacing Check Spacing (feet)
0.5	200
1.0	200
2.0	100
3.0	65
4.0	50
5.0	40
6.0	30

**Proper installation method:**

Excavate a trench perpendicular to the ditch flowline that is at least 12" deep by 6" wide. Extend the trench in a straight line along the entire length of the proposed ditch check. Place the soil on the upstream side of the trench for later use. Roll out a continuous length of silt fence fabric on the downstream side of the trench. Place the edge of the fabric in the trench starting at the top upstream edge of the trench. Line two sides of the trench with the fabric as shown in detail. Backfill over the fabric in the trench with the excavated soil and compact. After filling the trench, approximately 24" to 36" of silt fence fabric should remain exposed. Lay the exposed silt fence on the upstream side of the trench to clear an area for driving in the posts. Just downstream of the trench, drive posts into the ground to a depth of at least 24". Place posts no more than 4' apart. Attach the silt fence to the anchored post with staples, wire, zip ties, or nails.

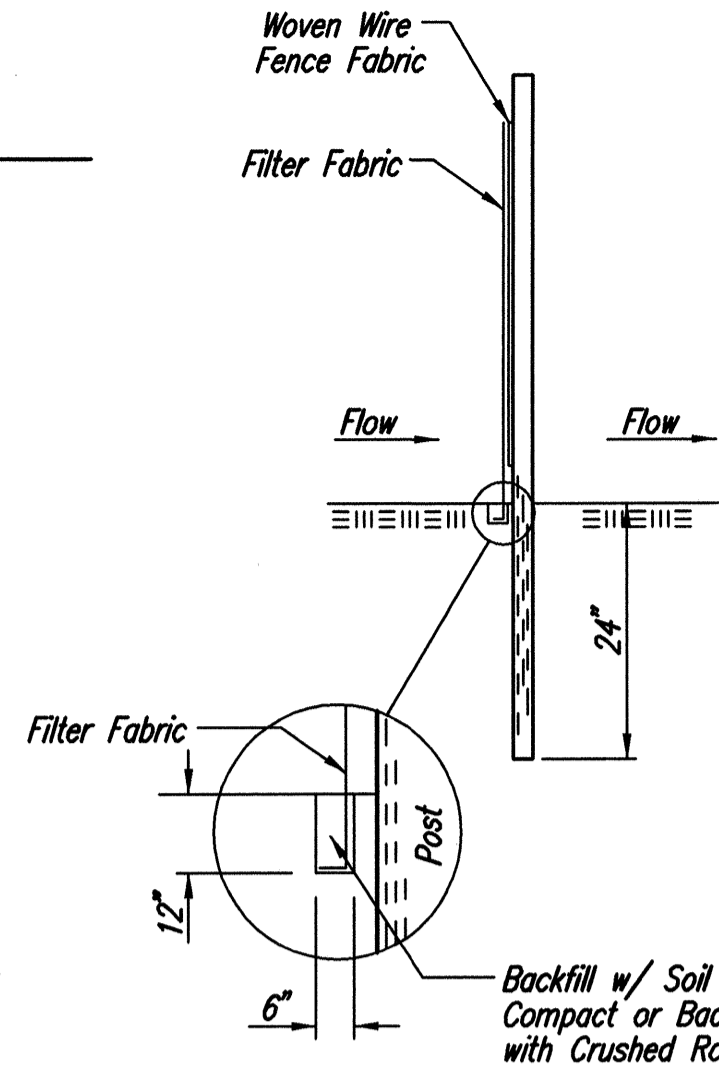
**List of common placement/installation mistakes to avoid:**

Water should flow through a silt fence ditch check—not over it. Place silt fence in ditches where it is unlikely that it will be overtopped. Silt fence installations quickly deteriorate when water overtops them. Do not place silt fence posts on the upstream side of the silt fence fabric. In this configuration, the force of the water is not restricted by the posts, but only by the staples (wire, zip ties, nails, etc.). The silt fence will rip and fail. Do not place a silt fence ditch check directly in front of a culvert outlet. It will not stand up to the concentrated flow. Do not place silt fence ditch checks in ditches that will likely experience high flows. They will not stand up to concentrated flow. Follow prescribed ditch check spacing guidelines. If spacing guidelines are exceeded, erosion will occur between the ditch checks. Do not allow water to flow around the ditch check. Make sure that the ditch check is long enough so that the ground level at the ends of the fence is higher than the low point on the top of the fence. Do not place silt fence ditch checks in channels with shallow soils underlain by rock. If the check is not anchored sufficiently, it will wash out.

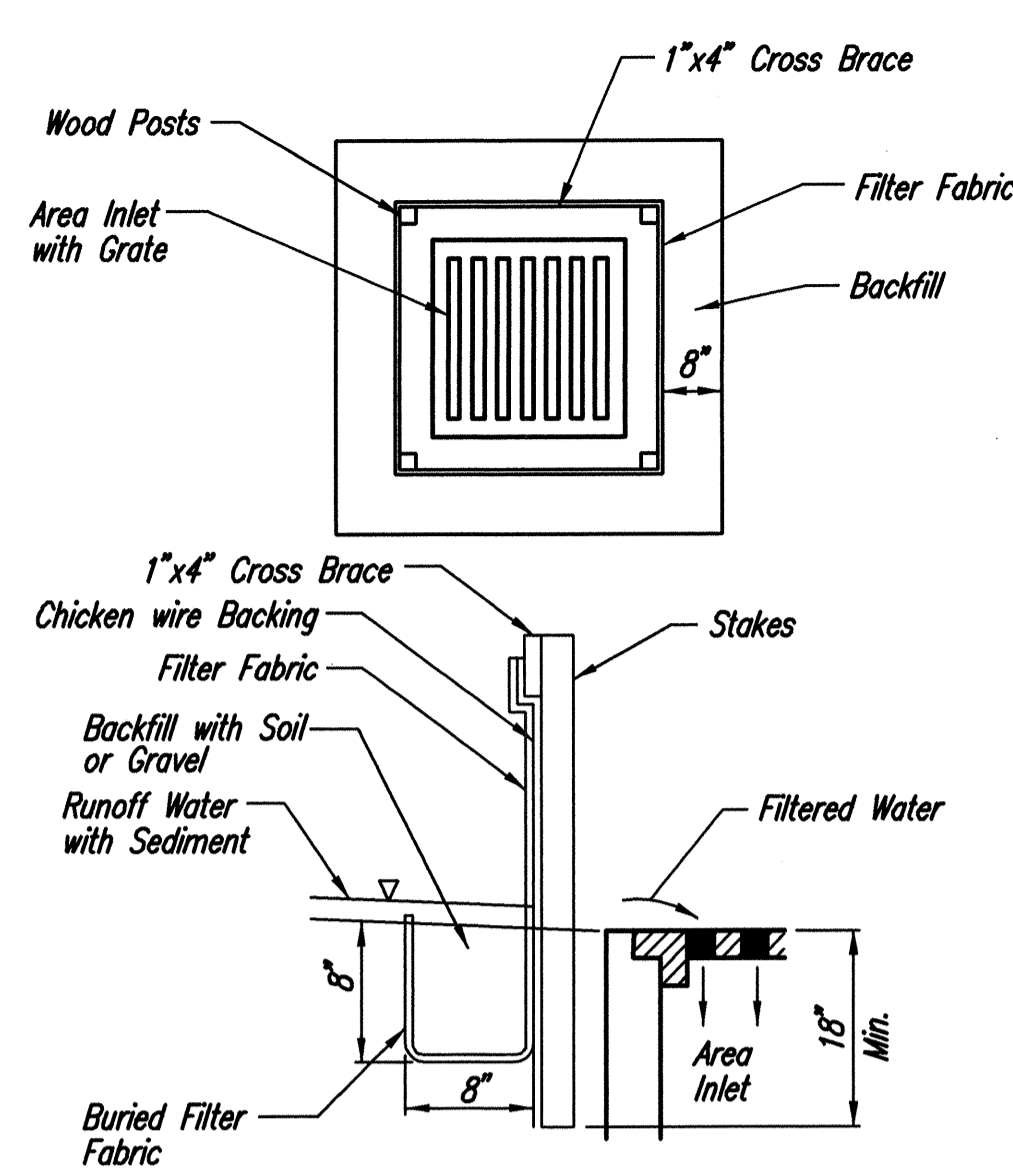
**Inspection and Maintenance:**

Silt fence ditch checks should be inspected every 7 days and within 24 hours of a rainfall of 1/2" or more. The following is a list of questions that should be addressed during each inspection:

- Does water flow around the ditch check?
- Does water flow under the ditch check?
- Does the silt fence sag excessively?
- Has the silt fence torn or become detached from the posts?
- Does sediment need to be removed from behind the ditch check?



**ANCHOR TRENCH DETAIL**



**SILT FENCE BARRIERS FOR AREA INLETS**  
(INLET PROTECTION)

**Material Specification:**

Silt fence fabric should conform to the AASHTO M288 96 silt fence specification. The wire or polymeric mesh backing used to help support the silt fence fabric should conform to the AASHTO M288 96 silt fence specification. The posts used to support the silt fence fabric should be a hardwood material with the following minimum dimensions: 2" square (nominal) by 4' long. The material used to frame the tops of the posts should be 1" by 4" boards. Silt fence fabric and support backing should be attached to the wooden posts and frame with staples, wire, zip ties, or nails.

**Placement:**

Place a silt fence drop inlet barrier in a location where it is unlikely to be overtopped. Water should flow through silt fence, not over it. Silt fence barriers for area inlets often fail when repeatedly overtopped. When used as a barrier for area inlets, silt fence fabric and posts must be supported at the top by a wooden frame. When a silt fence barrier for area inlets 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 8" deep by 8" wide. Drive posts to a depth of at least 18" around the perimeter of the area inlet. The distance between posts should be 4' or less. If the distance between two adjacent corner posts is more than 4', add another post(s) between them. Connect the tops of all the posts with a wooden frame made of 1" by 4" boards. Use nails or screws for fastening. Attach the wire or polymeric-mesh backing to the outside of the post/frame structure with staples, wire, zip ties, or nails. Roll out a continuous length of silt fence fabric long enough to wrap around the perimeter of the area inlet. Add more length for overlapping the fabric joint. Place the edge of the fabric in the trench, starting at the outside edge of the trench. Line all three sides of the trench with the fabric. Backfill over the fabric in the trench with the excavated soil and compact. After filling the trench, approximately 24" to 36" of silt fence fabric should remain exposed. Attach the silt fence to the outside of the post/frame structure with staples, wire, zip ties, or nails. The joint should be overlapped to the next post.

Note: When a silt fence barrier for area inlet 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.

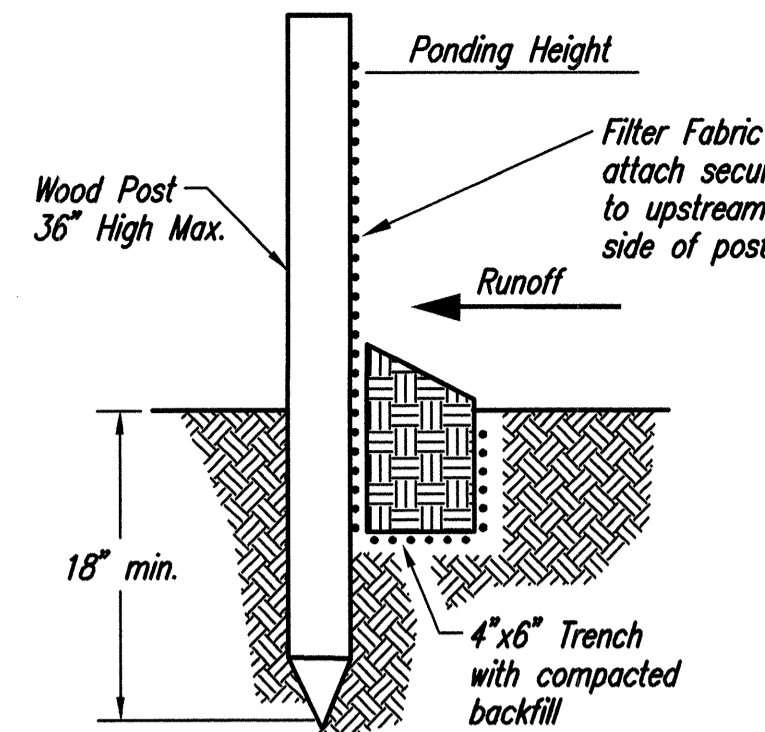
**List of common placement/installation mistakes to avoid:**

Water should flow through a silt fence barrier for area inlet—not over it. Place a silt fence barrier for area inlet in a location where it is unlikely to be overtopped. Silt fence barrier for area inlets often fail when repeatedly overtopped. Do not place posts on the outside of the silt fence barrier for area inlet. In this configuration, the force of the water is not resisted by the posts, but only by the staples (wire, zip ties, nails, etc.). The silt fence will rip and fail. Do not install silt fence barrier for area inlets without framing the top of the posts. The corner posts around area inlets are stressed in two directions whereas a normal silt fence is only stressed in one direction. This added stress requires more support.

**Inspection and Maintenance:**

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

- Does water flow under the silt fence?
- Does the silt fence sag excessively?
- Has the silt fence torn or become detached from the posts?
- Does sediment need to be removed from behind the area inlet barrier?



**SILT FENCE BARRIERS**

**Material Specification:**

Silt fence fabric should conform to the AASHTO M288 96 silt fence specification. The posts used to support the silt fence fabric should be a hardwood material with the following minimum dimensions: 2" square (nominal) by 4' long. Silt fence fabric should be attached to the wooden posts with staples, wire, zip ties, or nails.

**Placement:**

A slope barrier should be used at the toe of a slope when a ditch does not exist. The slope barrier should be placed on nearly level ground 5' to 10' away from the toe of a slope. The barrier is placed away from the toe of the slope to provide adequate storage for setting out sediment. When practicable, silt fence slope barriers should be placed along contours to avoid a concentration of flow. Silt fence slope barriers can also be placed along right-of-way fence lines to keep sediment from crossing onto adjacent property. When placed in this manner, the slope barrier will not likely follow contours.

**Proper installation method:**

Excavate a trench the length of the planned slope barrier that is 6" deep by 4" wide. Make sure that the trench is excavated along a single contour. When practicable, slope barriers should be placed along contours to avoid a concentration of flow. Place the soil on the upslope side of the trench for later use. Roll out a continuous length of silt fence fabric on the downslope side of the trench. Place the edge of the fabric in the trench starting at the top upslope edge. Line all three sides of the trench with the fabric. Backfill over the fabric in the trench with the excavated soil and compact. After filling the trench, approximately 24" to 36" of silt-fence fabric should remain exposed. Lay the exposed silt fence upslope of the trench to clear an area for driving in the posts. Just downslope of the trench, drive posts into the ground to a depth of at least 18". Place posts no more than 4' apart. Attach the silt fence to the anchored post with staples, wire, zip ties, or nails.

**List of common placement/installation mistakes to avoid:**

When practicable, do not place silt fence slope barriers across contours. Slope barriers should be placed along contours to avoid a concentration of flow. When the flow concentrates, it overtops the barrier and the silt fence slope barrier quickly deteriorates. Do not place silt-fence posts on the upslope side of the silt fence fabric. In this configuration, the force of the water is not restricted by the posts, but only by the staples (wire, zip ties, nails, etc.). The silt fence will rip and fail. Do not place silt fence slope barriers in areas with shallow soils underlain by rock. If the barrier is not sufficiently anchored, it will wash out. Silt fence slope barriers must be dug into the ground—silt fence at ground level does not work because water will flow underneath.

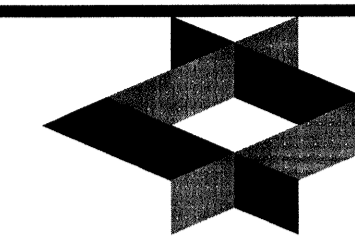
**Inspection and Maintenance:**

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

- Are there any points along the slope barrier where water is concentrating?
- Does water flow under the slope barrier?
- Do the silt fences sag excessively?
- Has the silt fence torn or become detached from the posts?
- Does sediment need to be removed from behind the slope barrier?

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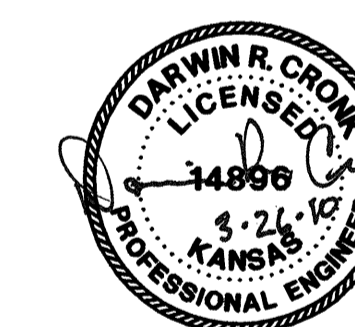


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ISSUE: PERMIT / BID  
CONSTRUCTION DOCUMENTS

DATE: MARCH 26, 2010  
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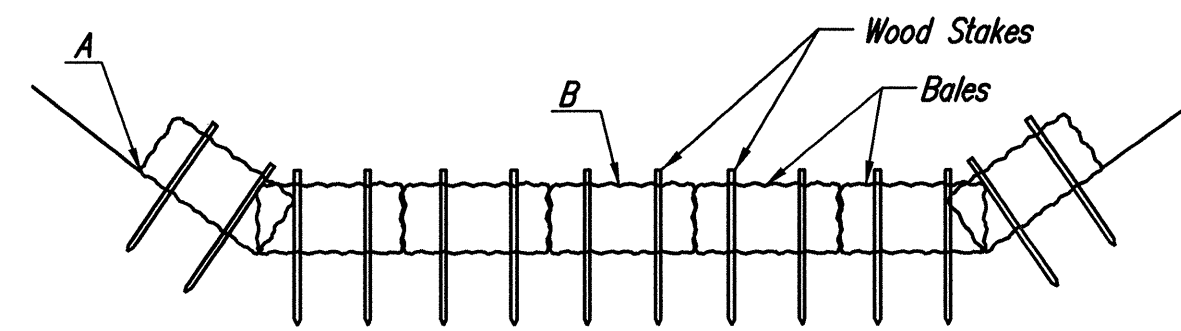
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SOIL EROSION BMP DETAILS

**CU500**



NOTE: Point A must be higher than Point B so that water flows over the bales and not around them.



**STRAW BALE DITCH CHECKS**

**Material Specification:**

Bale ditch checks may 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. Optional: The downstream scour apron should be constructed of a double-netted straw erosion-control blanket at least 6' wide. Optional: The metal landscape staples used to anchor the erosion-control blanket should be at least 8" long.

**Placement:**

Bale ditch checks should be placed perpendicular to the flowline of the ditch. The ditch check should extend far enough so that the ground level at the ends of the check is higher than the top of the lowest center bale. This prevents water from flowing around the check. Straw bale ditch checks should not be placed in ditches where high flows are expected. Rock checks should be used instead. Bales should be placed in ditches with slopes of 6% or less. For slopes steeper than 6%, rock checks should be used. The following table provides check spacing for a given ditch grade:

Ditch grade (%)	Check Spacing (feet)
0.5	200
1.0	200
2.0	100
3.0	65
4.0	50
5.0	40
6.0	30

**Proper installation method:**

Excavate a trench perpendicular to the ditch flowline that is 4" deep and a bale's width wide. Extend the trench in a straight line along the entire length of the proposed ditch check. Place the soil on the upstream side of the trench—it will be used later. Optional: On the downstream side of the trench, roll out a length of erosion-control blanket (scour apron) equal to the length of the trench. Place the upstream edge of the erosion-control blanket along the bottom upstream edge of the trench. The erosion control blanket should be anchored in the trench with one row of 8" landscape staples placed on 18" centers. The remainder of the erosion-control blanket (the portion that is not lying in the trench) will serve as the downstream scour apron. This section of the blanket should be anchored to the ground with 8" landscape staples placed around the perimeter of the blanket on 18" centers. The remainder of the blanket should be anchored using two evenly spaced rows of 8" landscape staples on 18" centers placed perpendicular to the flowline of the ditch. Place the bales in the trench, making sure that they are butted tightly. Two stakes should be driven through each bale along the centerline of the ditch check, 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 upstream side of the check and compact it. The compacted soil should be no more than 3" to 4" deep and extend upstream no more than 24".

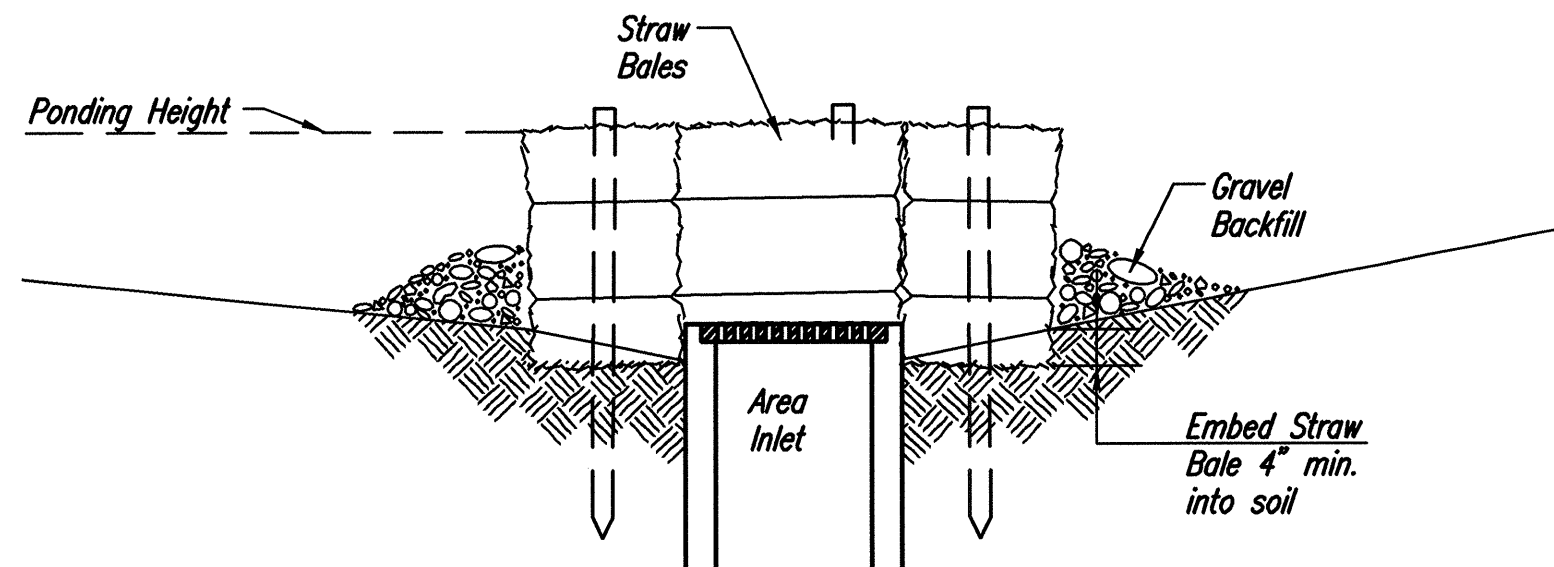
**List of common placement/installation mistakes to avoid:**

- Do not place a bale ditch check directly in front of a culvert outlet. It will not stand up to the concentrated flow.
- Do not place bale ditch checks in ditches that will likely experience high flows. They will not stand up to concentrated flow.
- Follow prescribed ditch-check spacing guidelines. If spacing guidelines are exceeded, erosion will occur between the ditch checks.
- Do not allow water to flow around the ditch check. Make sure that the ditch check is long enough so that the ground level at the ends of the check is higher than the top of the lowest center bale.
- Do not place bale ditch checks in channels with shallow soils underlain by rock. If the check is not anchored sufficiently, it will wash out.
- Bale ditch checks must be dug into the ground. Bales at ground level do not work because they allow water to flow under the check.

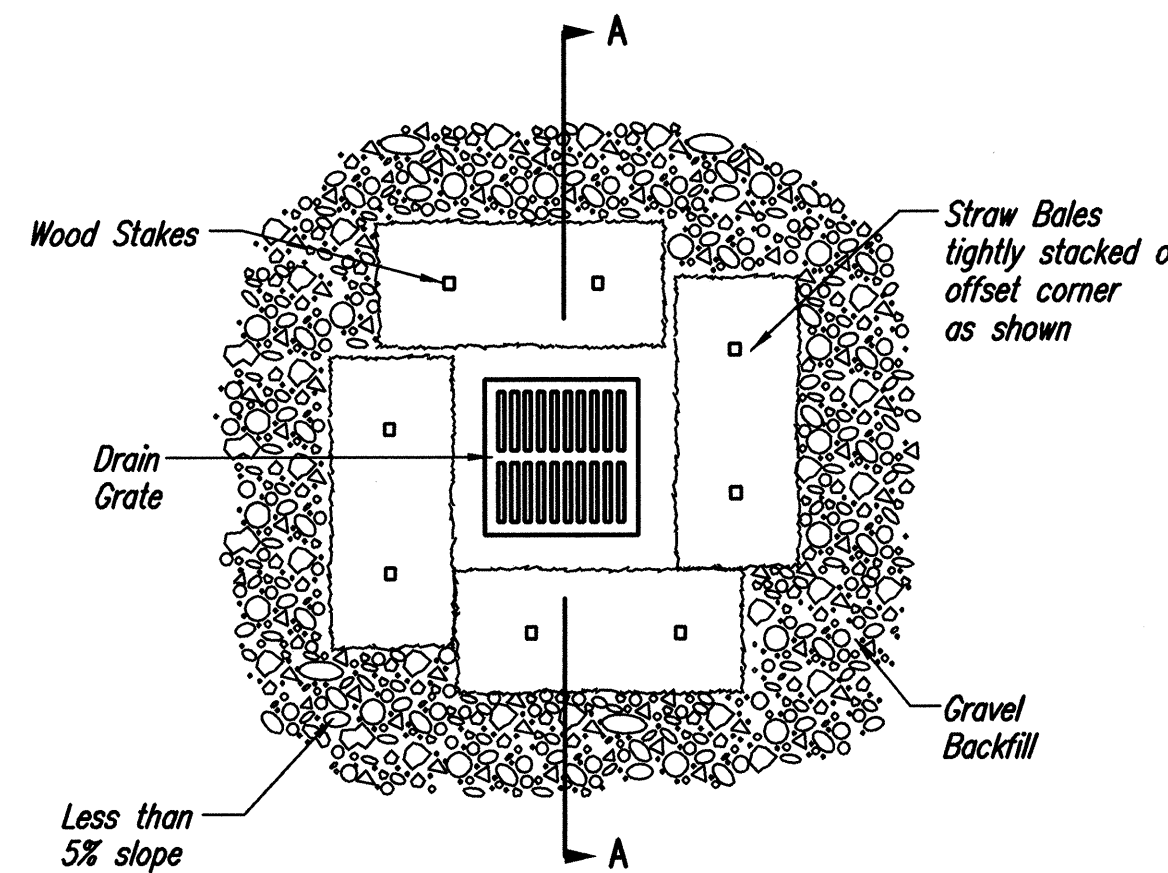
**Inspection and Maintenance:**

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

- Does water flow around the ditch check?
- Does water flow under the ditch check?
- Does water flow through spaces between abutting bales?
- Are any bales and/or scour aprons (optional) dislodged?
- Are bales decomposing due to age and/or water damage?
- Does sediment need to be removed from behind the ditch check?



**SECTION A-A**



**STRAW BALE BARRIERS FOR AREA INLETS (INLET PROTECTION)**

**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. Twine should be used to bind bales. The use of wire binding is prohibited because it does not biodegrade readily.

**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.

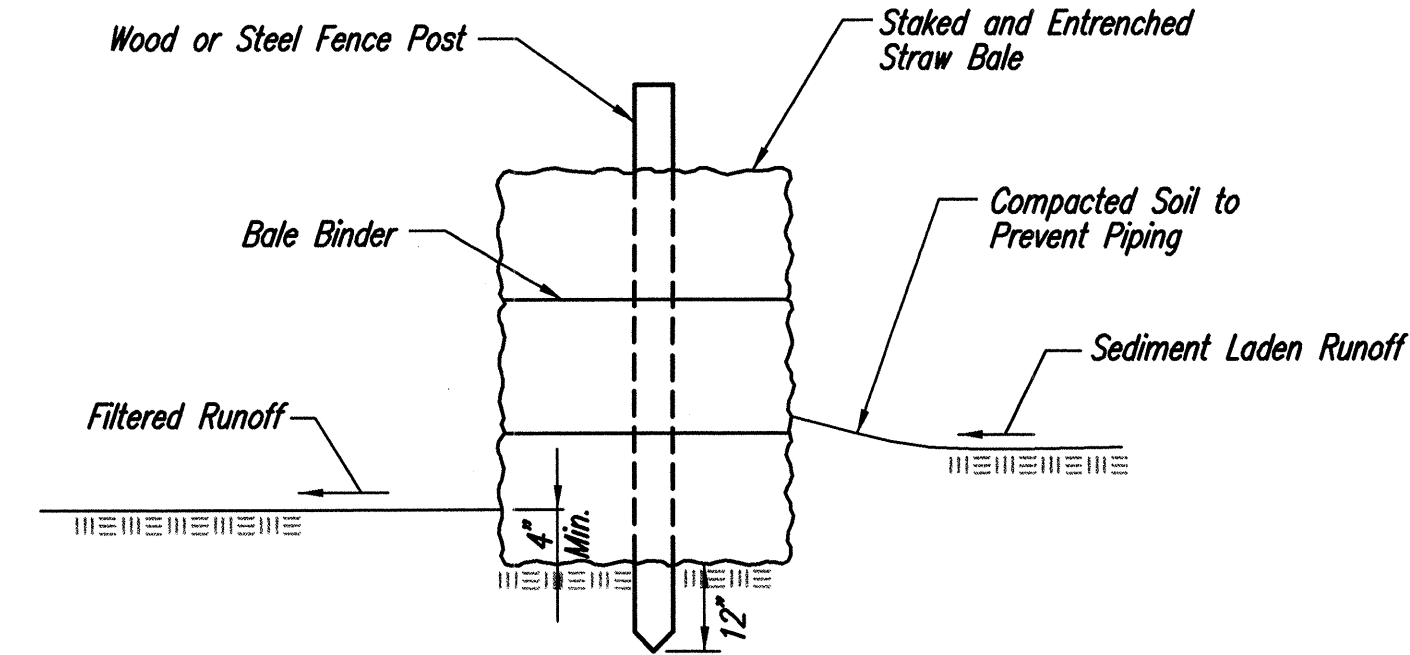
**List of common placement installation mistakes to avoid:**

- 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 of 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?



**STRAW BALE BARRIERS**

**Material Specification:**

Bale slope barriers may 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. Twine should be used to bind bales. The use of wire binding is prohibited because it does not biodegrade readily.

**Placement:**

A slope barrier should be used at the toe of a slope when a ditch does not exist. The slope barrier should be placed on nearly level ground 5' to 10' away from the toe of a slope. The barrier is placed away from the toe of the slope to provide adequate storage for setting out sediment. When practicable, bale slope barriers should be placed along contours to avoid a concentration of flow. Bale slope barriers can also be placed along right-of-way fence lines to keep sediment from crossing onto adjacent property. When placed in this manner, the slope barrier will not likely follow contours.

**Proper installation method:**

Excavate a trench the length of the planned slope barrier that is 4" deep and a bale's width wide. Make sure that the trench is excavated along a single contour. When practicable, slope barriers should be placed along contours to avoid a concentration of flow. Place the soil on the upslope side of the trench for later use. Place the bales in the trench, making sure that they are butted tightly. Two stakes should be driven through each bale along the centerline of the ditch check, 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 upslope side of the check and compact it. The compacted soil should be no more than 3" to 4" deep.

**List of common placement/installation mistakes to avoid:**

- When practical, do not place bale slope barriers across contours. Slope barriers should be placed along contours to avoid a concentration of flow. Concentrated flow over a slope barrier creates a scour hole on the downslope side of the barrier. The scour hole eventually undermines the bales and the barrier fails.
- Do not place bale slope barriers in areas with shallow soils underlain by rock. If the barrier is not anchored sufficiently, it will wash out.
- Bale slope barriers must be dug into the ground. Bales at ground level do not work because they allow water to flow under the barrier.

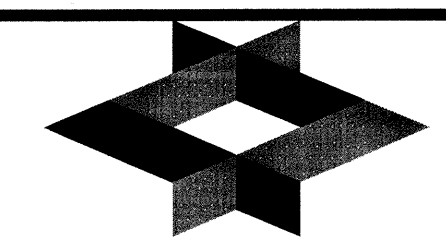
**Inspection and Maintenance:**

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

- Are there any points along the slope barrier where water is concentrating?
- Does water flow under the slope 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 slope barrier?



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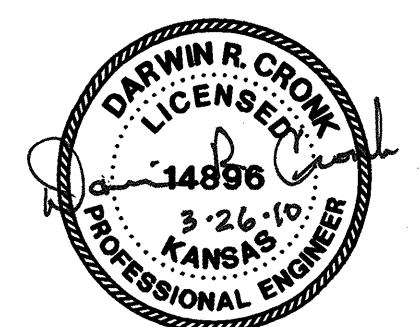


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**MID-CONTINENT AIRPORT**  
WICHITA, KANSAS  
Air Capital Terminal 3  
PACKAGE #12  
TERMINAL BUILDING



ISSUE: PERMIT / BID  
CONSTRUCTION DOCUMENTS

DATE: MARCH 26, 2010  
HNTB PROJECT NO.: 34912  
CLIENT PROJECT NO.: 06178

DRAWN BY:  
CHECKED BY:  
APPROVED BY:

REVISION	DATE	DESCRIPTION
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△		
△		
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**SOIL EROSION BMP DETAILS**

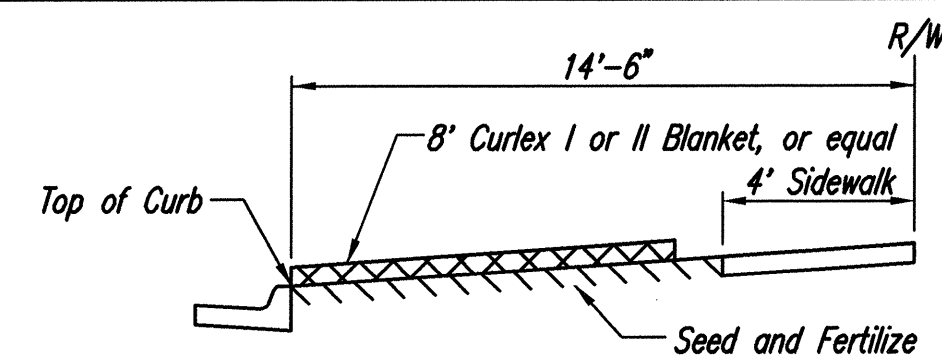
**CU501**

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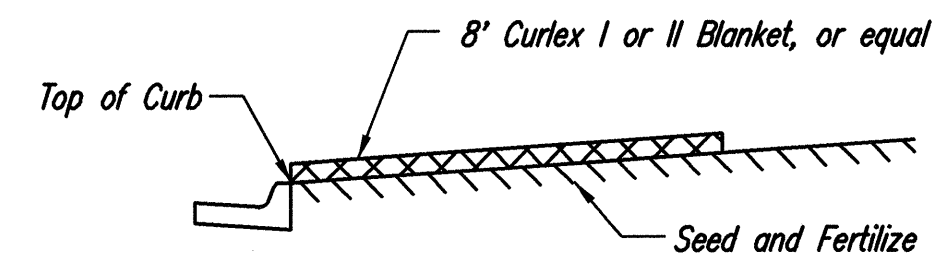


<b>SOIL EROSION BMPs</b>	
<b>STRAW BALE DITCH CHECK AND BARRIER DETAILS</b>	
<b>JIM ARMOUR, P.E. CITY ENGINEER</b>	
PROJECT NUMBER	CCA NO.
607861	607861
DATE	SHEET CU501
JAN. 2007	



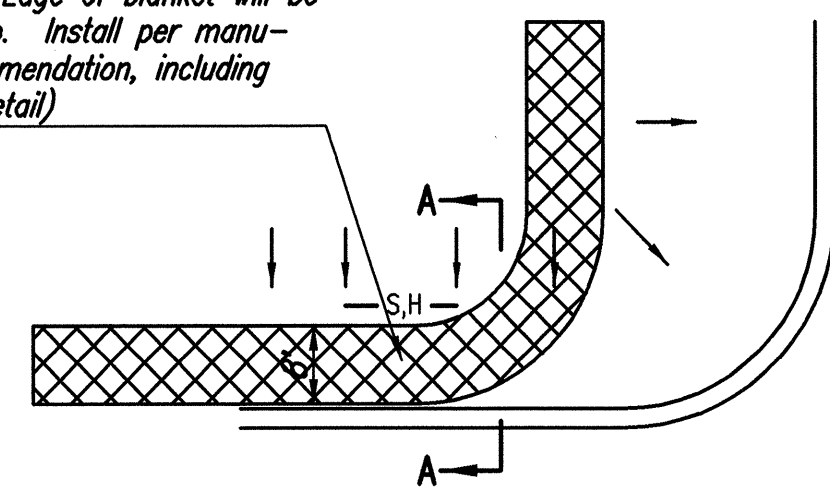


SECTION B-B

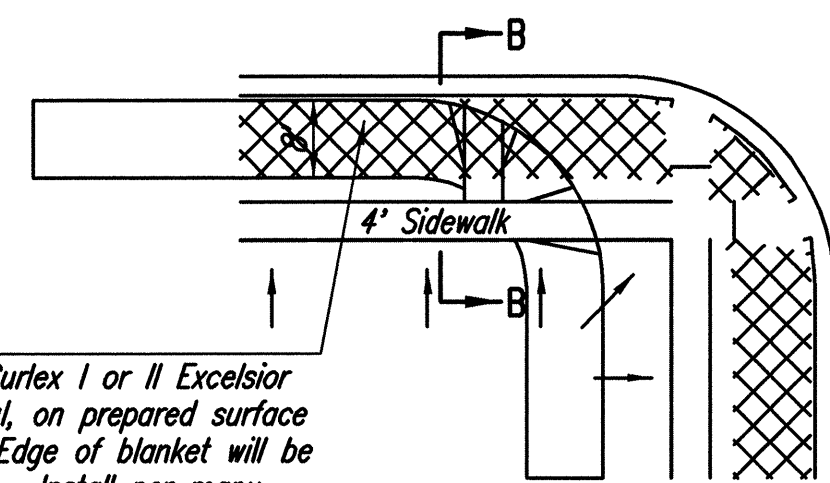


SECTION A-A

Install 8' wide Curlex I or II Excelsior Blanket, or equal, on prepared surface back of curb. Edge of blanket will be at back of curb. Install per manufacturer's recommendation, including staples. (See detail)



SOUTH STREET

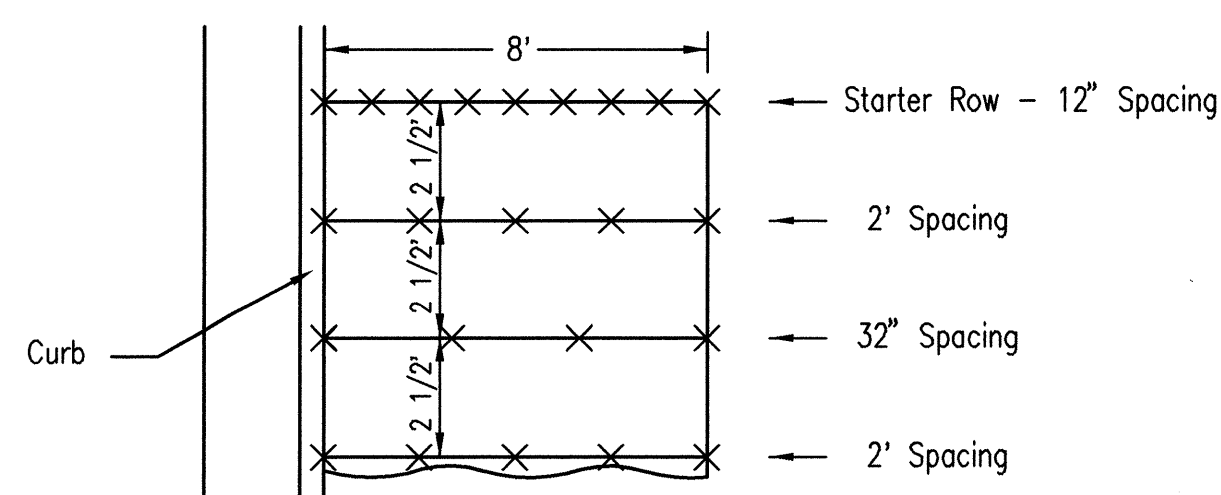


Install 8' wide Curlex I or II Excelsior Blanket, or equal, on prepared surface back of curb. Edge of blanket will be at back of curb. Install per manufacturer's recommendation, including staples. (See detail)

NOTES:

- EXCELSIOR MAT TO BE INSTALLED WHEN SOD IS NOT SPECIFIED ON PROJECT.
- EXCELSIOR BLANKET TO BE INSTALLED OVER SEED AND FERTILIZER, AS SPECIFIED IN THE PROJECT SPECIFICATIONS.
- AFTER INSTALLATION OF EXCELSIOR BLANKET, AT LOCATIONS WHERE CONCENTRATED FLOW CARRIES SEDIMENT OVER THE CURB AND INTO THE GUTTER, SUPPLEMENTAL EROSION CONTROL DEVICES WILL BE INSTALLED BY THE CONTRACTOR AS NEEDED, TO FIX THE PROBLEM.

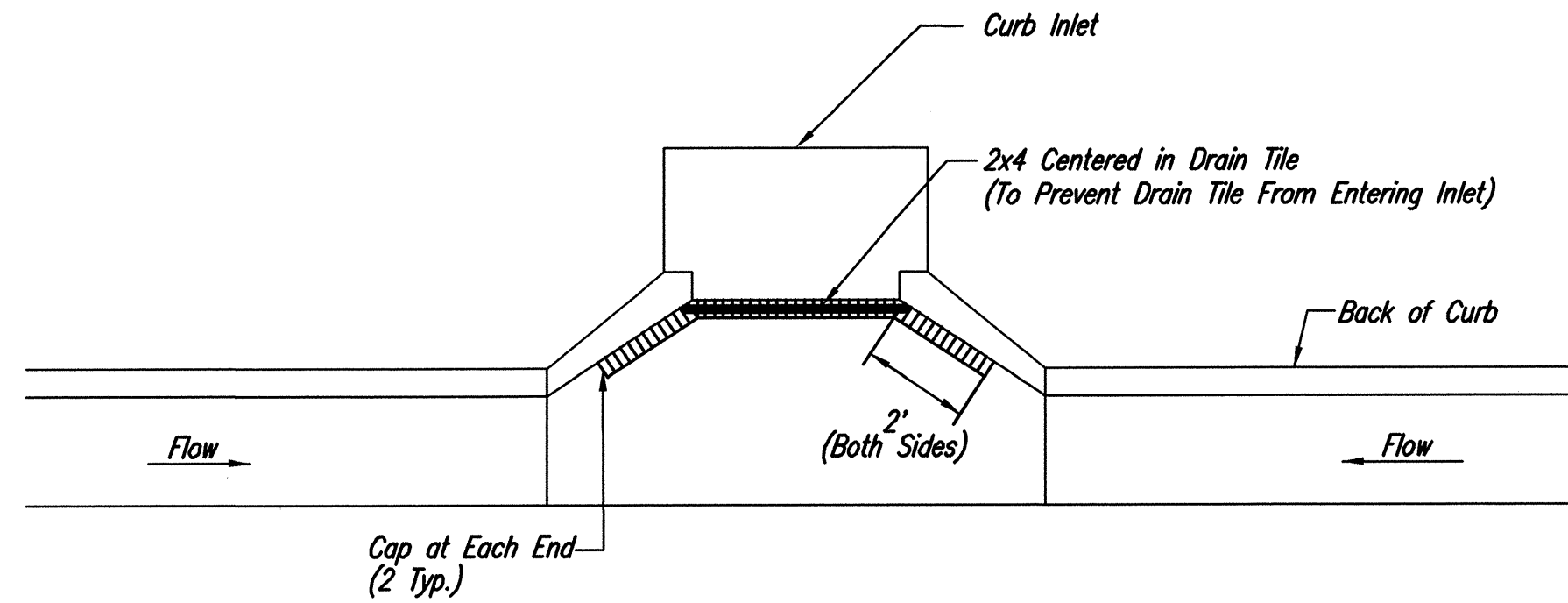
BACK OF CURB PROTECTION DETAIL



STAPLE PATTERN

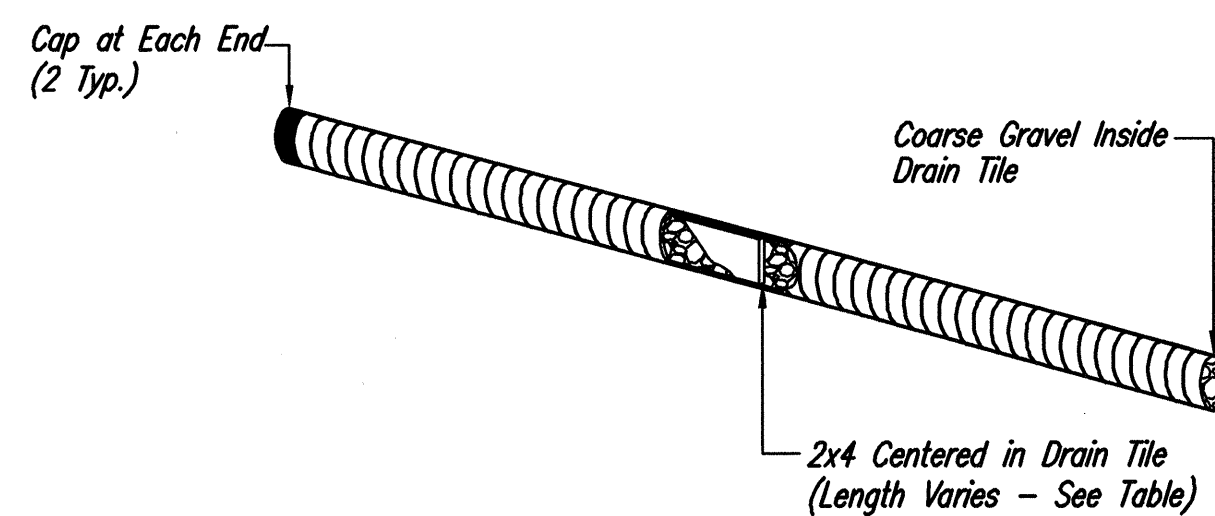
NOTES: Use 6" seam overlap

DETAILS FOR CURLEX I OR II BLANKETS

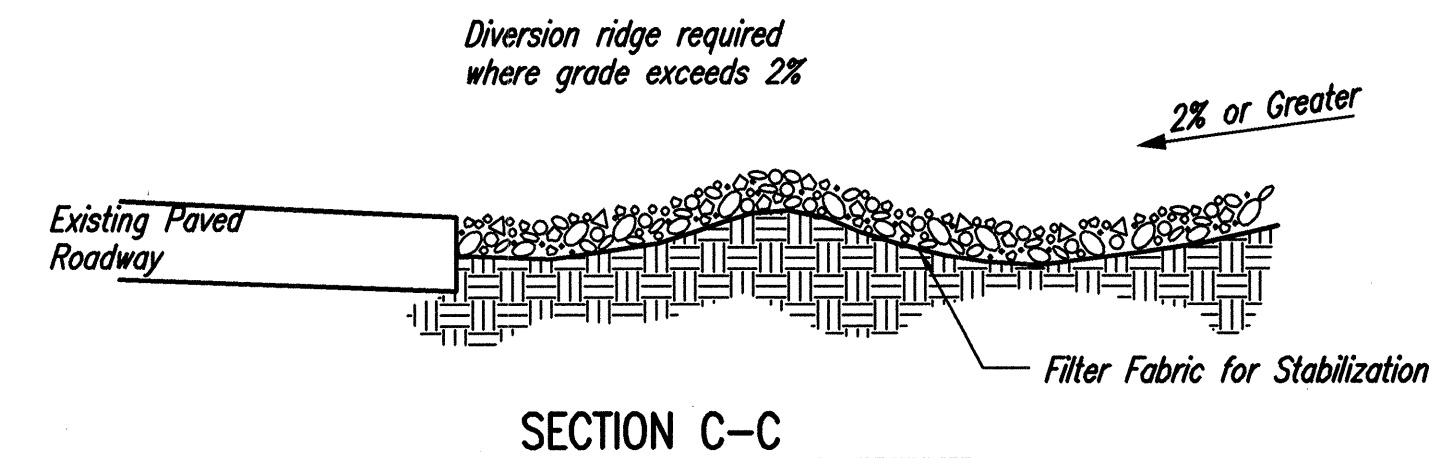


Note: Place 4" perforated PVC pipe, filled with 1/2"-1" dia. gravel, in front of curb inlet as shown.

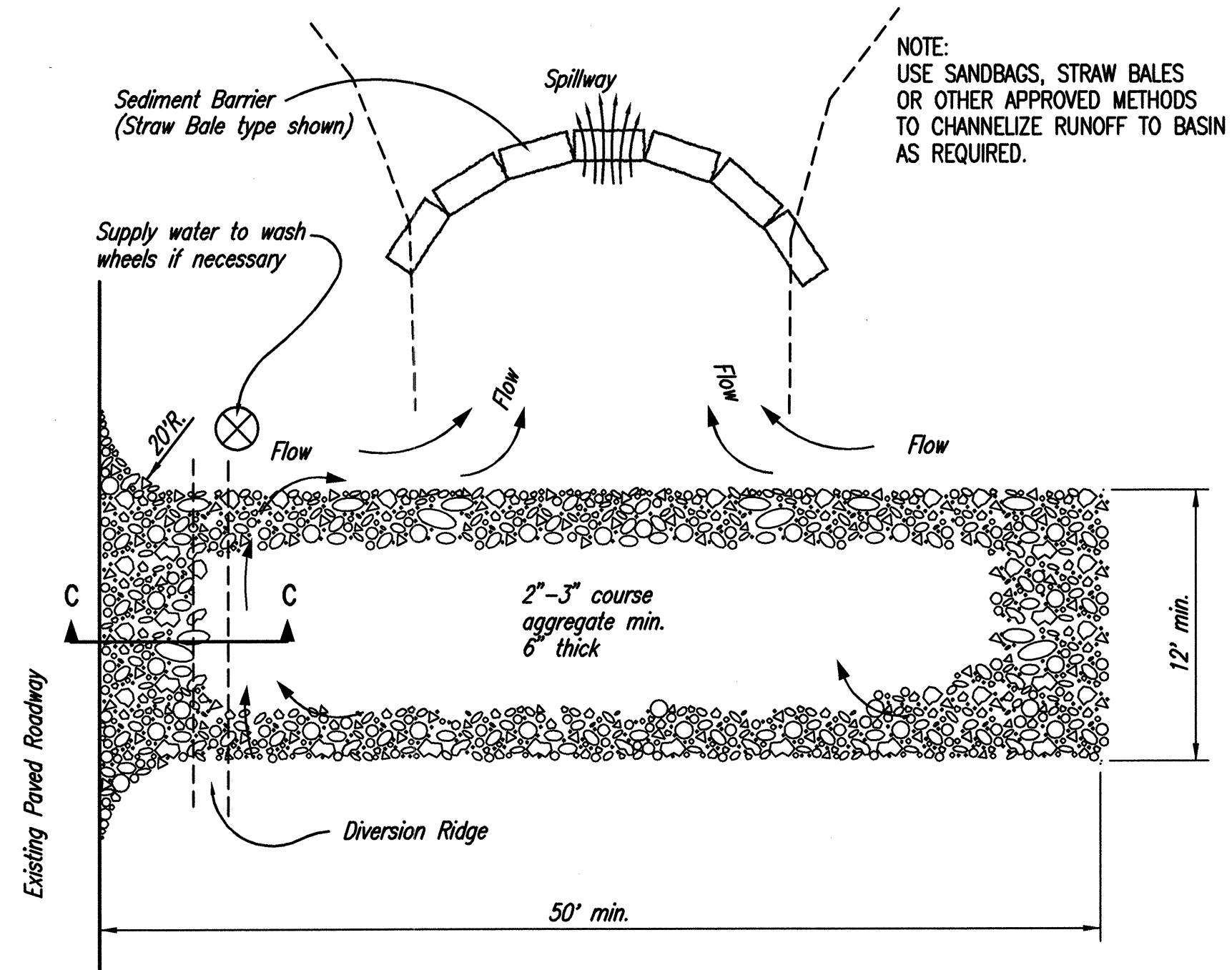
2X4 LENGTH	INLET TYPE	INLET OPENING
5'-6"	1-A	5'-0"
10'-6"	1-A	10'-0"
15'-6"	1-A	15'-0"



CURB INLET PROTECTION  
4" PERFORATED PIPE W/ GRAVEL



SECTION C-C



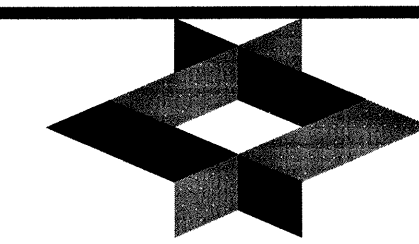
STABILIZED CONSTRUCTION ENTRANCE

NOTES:

- 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.
- WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
- 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.
- 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.



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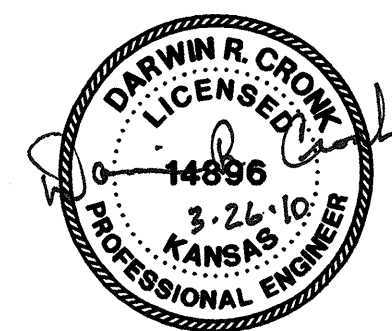


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WICHITA  
Air Capital Terminal 3  
PACKAGE #12  
TERMINAL BUILDING



ISSUE: PERMIT / BID  
CONSTRUCTION DOCUMENTS

DATE: MARCH 26, 2010  
HNTB PROJECT NO.: 34912  
CLIENT PROJECT NO.: 06178

DRAWN BY:		
CHECKED BY:		
APPROVED BY:		
REVISION	DATE	DESCRIPTION
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SOIL EROSION BMP DETAILS

**CU502**

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SOIL EROSION BMPs  
**BACK OF CURB PROTECTION,  
CURB INLET PROTECTION  
AND  
CONSTRUCTION ENTRANCE**

JIM ARMOUR, P.E.  
CITY ENGINEER

PROJECT NUMBER: OCA NO.  
607861

DATE: JAN. 2007  
SHEET CU502