



# City of Rockwall, Texas

## CONSTRUCTION PLANS FOR

# SERVICE CENTER PARKING IMPROVEMENTS

APPROVED FOR  
CONSTRUCTION

MAY 26 2009

City of Rockwall Engineering Dept.  
City Engineer: AT

MAYOR  
Bill Cecil

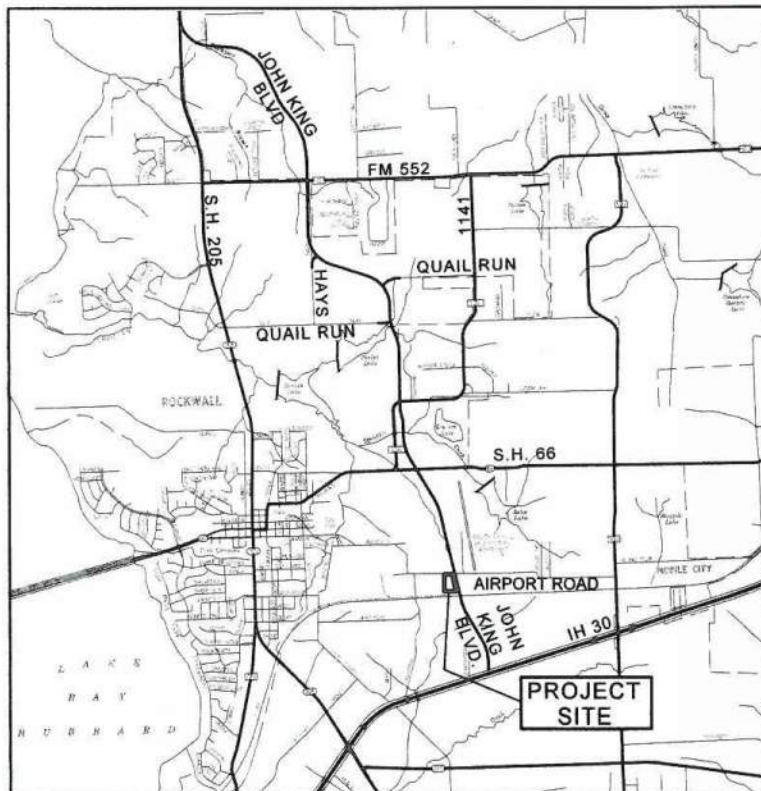
MAYOR PRO-TEM  
Cliff Sevier

CITY COUNCIL  
David Sweet  
Mark Russo  
Glen Farris  
Mathew R. Scott  
Margo Nielsen

CITY MANAGER  
Julie Couch

CITY ENGINEER  
Chuck Todd

APRIL 2009



VICINITY MAP  
SCALE: N.T.S.

### SHEET INDEX

2. GENERAL CONSTRUCTION NOTES
3. SITE PLAN
4. PAVING PLAN
5. DRAINAGE PLAN & PAVEMENT DETAILS
6. STORMWATER INTERCEPTOR SYSTEM PAVEMENT & DRAINAGE PLAN
7. MISCELLANEOUS DETAILS
8. STORMWATER POLLUTION PREVENTION PLAN (SW3P)
9. STORMWATER POLLUTION PREVENTION PLAN LAYOUT
- 10.\* STANDARD DETAIL SHEET CH-FW-0
- 11.\* STANDARD DETAIL SHEET CH-PW-S

\* THE STANDARD DETAIL SHEETS SPECIFICALLY IDENTIFIED ABOVE HAVE BEEN ISSUED BY ME AND ARE APPLICABLE TO THIS PROJECT.

*Theodore H. Gaertner*  
THEODORE H. GAERTNER, P.E. #37124

# AECOM

AECOM USA GROUP, INC.  
17300 DALLAS PARKWAY, SUITE 1010  
DALLAS, TEXAS 75248  
WWW.AECOM.COM  
TBPE REG. NO. F-3082

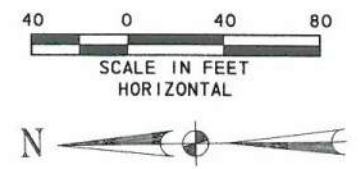


PROJECT MANAGER  
*Gregory G. Hooten*  
4/15/09



PROJECT ENGINEER  
*Theodore H. Gaertner*  
4/15/09





- LEGEND**
- PROPOSED CONCRETE PAVEMENT
  - PROPOSED HMA PAVEMENT
  - EXISTING CONCRETE TO BE REMOVED
  - CURB INLET
  - MANHOLE
  - DRAINAGE FLOW
  - 451.25 SPOT ELEV. (PROP.)

- NOTE:**
1. BERM SHALL BE COMPACTED TO 90% STD. PROCTOR DENSITY.
  2. PROVIDE 4" TOPSOIL AND HYDRO MULCH SEEDING ON BERM AND OTHER DISTURBED AREAS OF THE SERVICE CENTER SITE.
  3. USE IMPORTED TOPSOIL ON THE BERM. USE TOPSOIL FROM THE PROJECT SITE FOR ALL OTHER AREAS. THE IMPORTED TOPSOIL SHALL MEET THE REQUIREMENTS OF C.O.G. SPEC 3.8.I AND BE A CLAYEY SILT OR SILTY CLAY TYPE SOIL MEETING THE APPROVAL OF THE CITY FOR USE ON THIS PROJECT.
  4. DO NOT REMOVE EXISTING FENCING UNTIL CONCRETE PARKING AREA IS COMPLETE AND NEW FENCE ALONG EAST AND SOUTH SIDE OF SERVICE CENTER IS IN PLACE.



BREWER PROPERTIES, L.P.  
VOLUME 2930 PAGE 187  
D.R.R.C.T.  
16.84 ACRES

**APPROVED FOR CONSTRUCTION**

MAY 26 2009

City of Rockwall Engineering Dept.  
City Engineer: \_\_\_\_\_

CONTROL POINTS (SURFACE COORDINATES)					
PT#	TYPE	ELEV.	NORTHING	EASTING	DESCRIPTION
3	5/8" IRON ROD	570.44	7027042.2300	2600161.5800	LOCATED APPROX. ±15' WEST OF MOST EASTERN ENTRANCE TO LEON TURTLE PARK, 7' SOUTH OF EDGE OF AIRPORT ROAD ASPHALT, AND 0.3 MILES WEST OF FIRST AIRPORT ENTRANCE.
AR-1	5/8" IRON ROD	572.39	7027071.8090	2600132.2120	LOCATED APPROX. 279' WEST OF THE C OF INDUSTRIAL BLVD. AND APPROX. 40' SOUTHWEST OF THE SOUTHWEST EDGE OF PAVEMENT OF AIRPORT ROAD MEASURED FROM THE MIDPOINT OF THE ROADWAY CURVE AND 12'± FROM AN ADJACENT POWER POLE.

NO.	REVISION	BY	DATE
<b>SERVICE CENTER PARKING IMPROVEMENTS</b>			
<b>SITE PLAN</b>			
<b>City of Rockwall, Texas</b>			
<b>AECOM</b>		AECOM USA GROUP, INC. 17300 DALLAS PARKWAY, SUITE 1010 DALLAS, TEXAS 75248 WWW.AECOM.COM TBPE REG. NO. F-3082	
Unit	PW-DAL	Scale	Horz AS SHOWN Vert AS SHOWN
Designed	THG	Checked	THG
Drawn	FG	Approved	THG
Date	4/15/2009	Project No.	60004153
Sheet	3	of	

Y:\work\115001\1644328\A\Report\Road\G630\Sheet\SC\_311e.dwg  
 4/15/2009



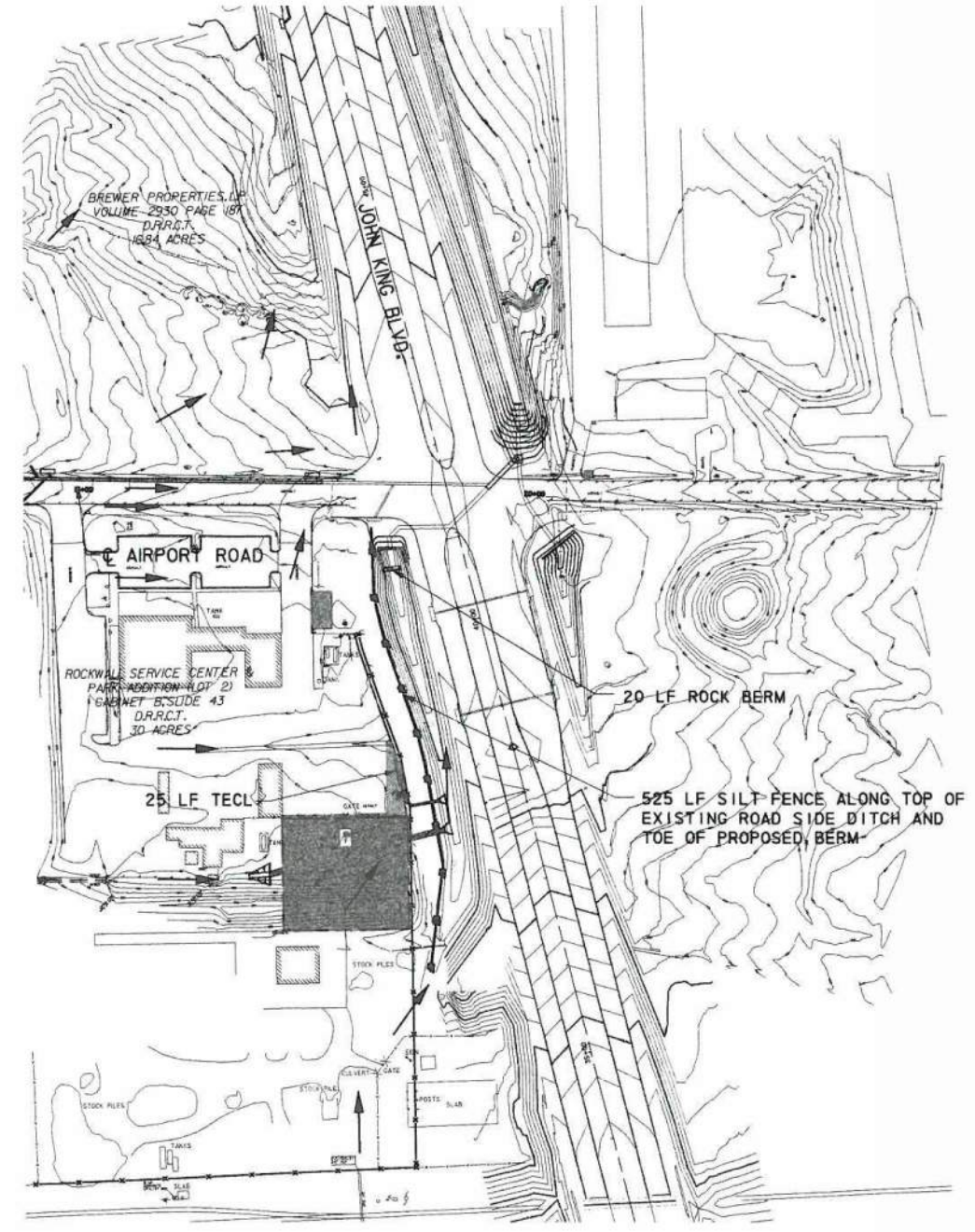













**APPROVED FOR  
CONSTRUCTION**

MAY 26, 2009

City of Rockwall Engineering Dept.  
City Engineer: \_\_\_\_\_



*T.J. Gaertner*  
4/15/09

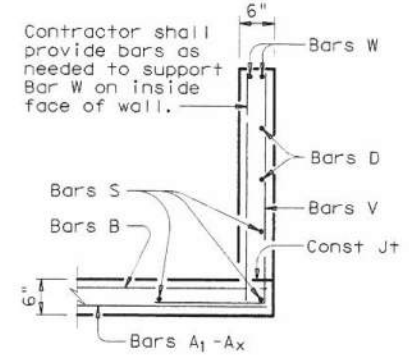
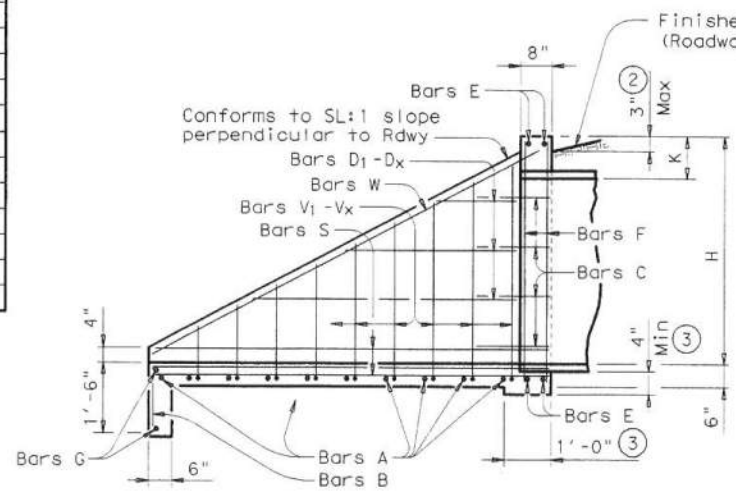
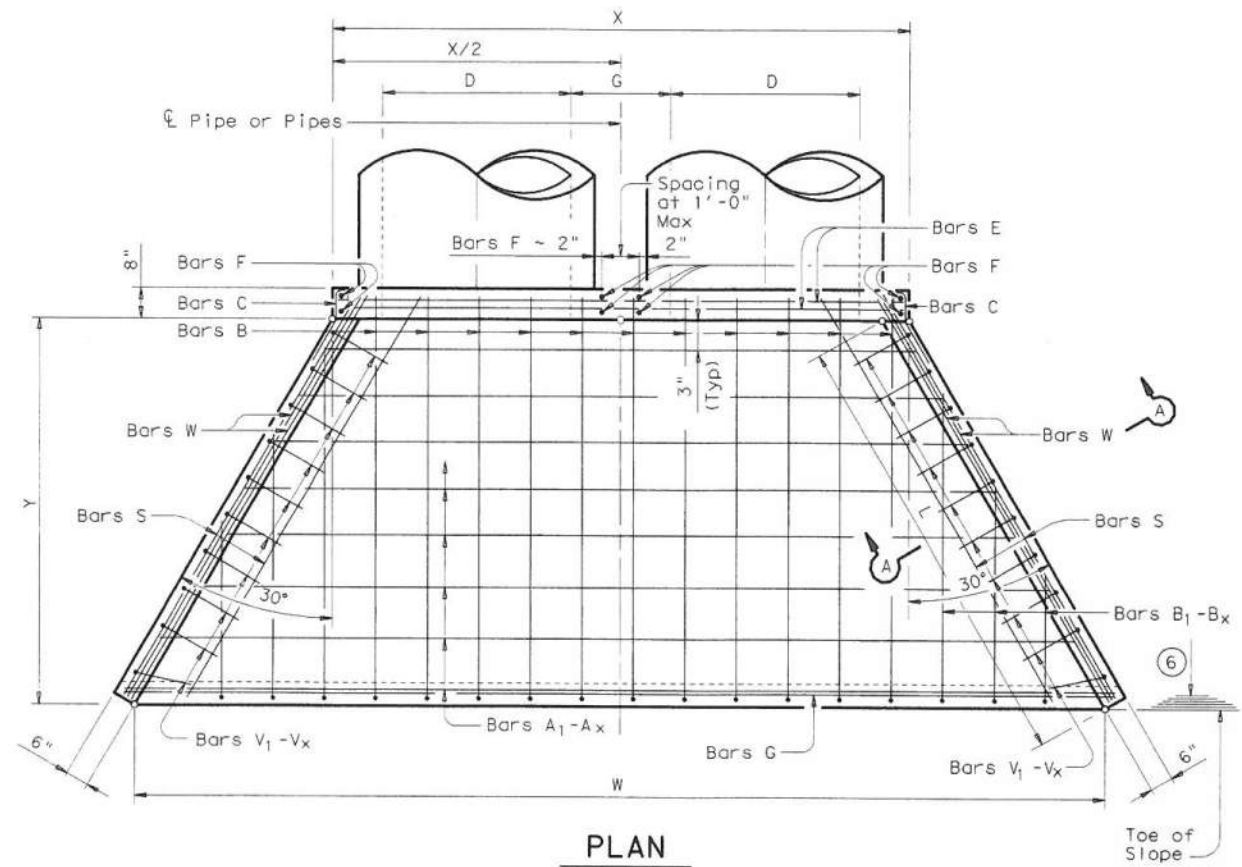
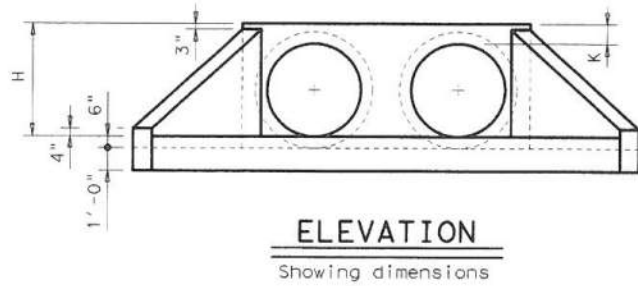
NO.	REVISION	BY	DATE
<b>SERVICE CENTER PARKING IMPROVEMENTS</b>			
<b>STORM WATER POLLUTION PREVENTION PLAN LAYOUT</b>			
 <b>City of Rockwall, Texas</b>			
<b>AECOM</b>		<small>AECOM USA GROUP, INC. 17300 DALLAS PARKWAY, SUITE 1010 DALLAS, TEXAS 75248 WWW.AECOM.COM TBPE REG. NO. F-3082</small>	
Unit	PW-DAL	Date	4/15/2009
Designed	SB	Checked	THG
Drawn	SB	Approved	THG
Project No.		60004153	
Sheet		9 of	

\\sdsda11p001\pww\328\A\Fport+Road\CADD\Sheet\SC\_SWPFF\_021  
 4/15/2009

DISCLAIMER: The use of this standard is governed by the Texas Engineering Practice Act. No warranty of any kind is made by TxDOT for any purpose whatsoever. TxDOT assumes no responsibility for the conversion of this standard to other formats or for incorrect results or damages resulting from its use.

TABLE OF VARIABLE DIMENSIONS AND QUANTITIES FOR ONE HEADWALL (4)

SLOPE	DIA OF PIPE, D	Values for one Pipe					Values to be added for each add'l Pipe				
		W	X	Y	L	Reinf (Lbs)	Conc (CY)	X and W	Reinf (Lbs)	Conc (CY)	
2:1	12"	4'-7 1/2"	2'-6"	2'-10"	3'-3 1/4"	84	0.6	1'-9"	20	0.2	
	15"	5'-5 3/4"	2'-9 1/2"	3'-4"	3'-10 1/4"	99	0.7	2'-2"	24	0.3	
	18"	6'-4 1/4"	3'-1"	3'-10"	4'-5"	120	0.9	2'-8"	32	0.3	
	21"	7'-2 3/4"	3'-4 1/2"	4'-4"	5'-0"	137	1.1	3'-1"	43	0.4	
	24"	8'-2 1/2"	3'-9 1/2"	4'-10"	5'-7"	158	1.3	3'-7"	50	0.5	
	27"	9'-1"	4'-1"	5'-4"	6'-2"	173	1.5	3'-11"	56	0.6	
	30"	9'-11 1/2"	4'-4 1/2"	5'-10"	6'-8 3/4"	197	1.7	4'-4"	65	0.8	
	33"	10'-10"	4'-8"	6'-4"	7'-3 3/4"	216	2.0	4'-8"	71	0.9	
	36"	11'-8 1/4"	4'-11 1/2"	6'-10"	7'-10 1/4"	241	2.2	5'-1"	81	1.0	
	42"	13'-5 1/4"	5'-6 1/2"	7'-10"	9'-0 1/2"	290	2.8	5'-10"	97	1.3	
	48"	15'-9"	6'-1 1/2"	9'-4"	10'-9 1/4"	350	3.8	6'-7"	117	1.7	
	54"	17'-5 3/4"	6'-8 1/2"	10'-4"	11'-11 1/4"	415	4.5	7'-6"	151	2.1	
60"	19'-2 3/4"	7'-3 1/2"	11'-4"	13'-1"	469	5.3	8'-3"	174	2.5		
66"	20'-11 1/2"	7'-10 1/2"	12'-4"	14'-3"	530	6.2	8'-9"	194	2.9		
72"	22'-8 1/2"	8'-5 1/2"	13'-4"	15'-4 3/4"	587	7.1	9'-4"	213	3.3		
3:1	12"	6'-3"	2'-6"	4'-3"	4'-11"	114	0.8	1'-9"	22	0.2	
	15"	7'-5"	2'-9 1/2"	5'-0"	5'-9 1/4"	133	1.1	2'-2"	28	0.3	
	18"	8'-6 3/4"	3'-1"	5'-9"	6'-7 3/4"	166	1.3	2'-8"	37	0.5	
	21"	9'-8 3/4"	3'-4 1/2"	6'-6"	7'-6"	189	1.6	3'-1"	48	0.6	
	24"	11'-0"	3'-9 1/2"	7'-3"	8'-4 1/2"	221	2.0	3'-7"	58	0.7	
	27"	12'-2"	4'-1"	8'-0"	9'-2 3/4"	245	2.3	3'-11"	67	0.8	
	30"	13'-4"	4'-4 1/2"	8'-9"	10'-1 1/4"	287	2.7	4'-4"	77	1.0	
	33"	14'-5 3/4"	4'-8"	9'-6"	10'-11 3/4"	310	3.1	4'-8"	84	1.2	
	36"	15'-7 3/4"	4'-11 1/2"	10'-3"	11'-10"	343	3.5	5'-1"	96	1.4	
	42"	17'-11 1/2"	5'-6 1/2"	11'-9"	13'-6 3/4"	424	4.5	5'-10"	119	1.7	
	48"	21'-1 3/4"	6'-1 1/2"	14'-0"	16'-2"	527	6.1	6'-7"	146	2.3	
	54"	23'-5 1/2"	6'-8 1/2"	15'-6"	17'-10 1/4"	618	7.3	7'-6"	186	2.9	
60"	25'-9 1/4"	7'-3 1/2"	17'-0"	19'-7 1/2"	707	8.7	8'-3"	219	3.4		
66"	28'-1"	7'-10 1/2"	18'-6"	21'-4 1/4"	797	10.1	8'-9"	242	3.9		
72"	30'-4 3/4"	8'-5 1/2"	20'-0"	23'-1 1/4"	910	11.7	9'-4"	272	4.4		
4:1	12"	7'-10 3/4"	2'-6"	5'-8"	6'-6 1/2"	144	1.1	1'-9"	24	0.3	
	15"	9'-4"	2'-9 1/2"	6'-8"	7'-8 1/2"	177	1.5	2'-2"	32	0.4	
	18"	10'-9 1/2"	3'-1"	7'-8"	8'-10 1/4"	217	1.9	2'-8"	42	0.5	
	21"	12'-2 3/4"	3'-4 1/2"	8'-8"	10'-0"	254	2.3	3'-1"	57	0.7	
	24"	13'-9 1/2"	3'-9 1/2"	9'-8"	11'-2"	295	2.8	3'-7"	67	0.9	
	27"	15'-3"	4'-1"	10'-8"	12'-3 3/4"	328	3.3	3'-11"	77	1.0	
	30"	16'-8 1/4"	4'-4 1/2"	11'-8"	13'-5 3/4"	379	3.8	4'-4"	89	1.3	
	33"	18'-1 3/4"	4'-8"	12'-8"	14'-7 1/2"	417	4.5	4'-8"	101	1.4	
	36"	19'-7"	4'-11 1/2"	13'-8"	15'-9 1/4"	464	5.1	5'-1"	115	1.7	
	42"	22'-5 3/4"	5'-6 1/2"	15'-8"	18'-1"	575	6.5	5'-10"	141	2.1	
	48"	26'-6 1/4"	6'-1 1/2"	18'-8"	21'-6 3/4"	720	8.9	6'-7"	175	2.8	
	54"	29'-5"	6'-8 1/2"	20'-8"	23'-10 1/4"	863	10.7	7'-6"	226	3.6	
60"	32'-3 3/4"	7'-3 1/2"	22'-8"	26'-2"	984	12.7	8'-3"	264	4.3		
66"	35'-2 1/2"	7'-10 1/2"	24'-8"	28'-5 3/4"	1126	14.9	8'-9"	300	4.9		
72"	38'-1 1/4"	8'-5 1/2"	26'-8"	30'-9 1/2"	1283	17.3	9'-4"	334	5.6		
6:1	12"	11'-2"	2'-6"	8'-6"	9'-9 3/4"	220	1.9	1'-9"	28	0.4	
	15"	13'-2 1/4"	2'-9 1/2"	10'-0"	11'-6 1/2"	264	2.5	2'-2"	37	0.5	
	18"	15'-2 1/2"	3'-1"	11'-6"	13'-3 1/4"	326	3.2	2'-8"	50	0.7	
	21"	17'-2 3/4"	3'-4 1/2"	13'-0"	15'-0 1/4"	381	3.9	3'-1"	69	0.9	
	24"	19'-4 1/2"	3'-9 1/2"	14'-6"	16'-9"	447	4.8	3'-7"	80	1.2	
	27"	21'-4 3/4"	4'-1"	16'-0"	18'-5 3/4"	506	5.7	3'-11"	96	1.4	
	30"	23'-5 1/4"	4'-4 1/2"	17'-6"	20'-2 1/2"	587	6.7	4'-4"	110	1.7	
	33"	25'-5 1/2"	4'-8"	19'-0"	21'-11 1/4"	667	7.8	4'-8"	127	2.0	
	36"	27'-5 3/4"	4'-11 1/2"	20'-6"	23'-8"	727	9.0	5'-1"	144	2.3	
	42"	31'-6 1/4"	5'-6 1/2"	23'-6"	27'-1 1/2"	914	11.5	5'-10"	179	3.0	
	48"	37'-3 1/2"	6'-1 1/2"	28'-0"	32'-4"	1181	15.9	6'-7"	231	4.0	
	54"	41'-4 1/4"	6'-8 1/2"	31'-0"	35'-9 1/2"	1412	19.2	7'-6"	300	5.0	
60"	45'-4 3/4"	7'-3 1/2"	34'-0"	39'-3"	1619	22.9	8'-3"	353	6.0		



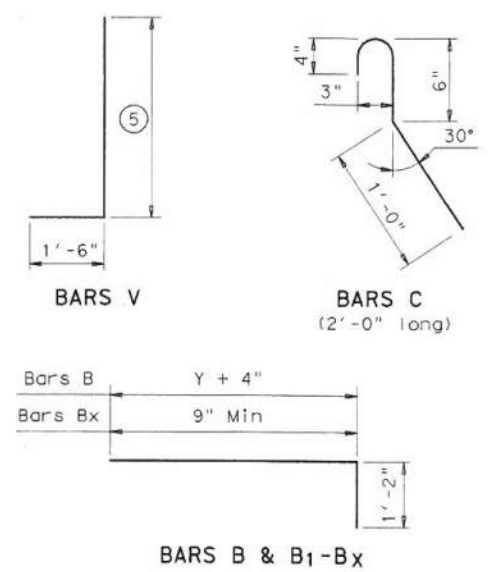
- Quantities shown are for concrete pipe and will increase slightly for metal pipe installations.
- For vehicle safety, curbs shall project no more than 3" above finished grade. Curb heights shall be reduced, if necessary, to meet these requirements. No changes will be made in quantities and no additional compensation will be allowed for this work.
- Provide a 1'-0" footing as shown where required to maintain 4" Min cover for pipes.
- Quantities shown are for one structure end only (one headwall).
- Min Length =  $6" + 3" \times \left( \frac{12 \times H - 7}{12 \times L} \right)$   
Max Length =  $12 \times H - 3" \times \left( \frac{12 \times H - 7}{12 \times L} \right) - 1"$
- Lengths of wings based on SL:1 Slope along this line.

TABLE OF REINFORCING STEEL (4)

Bar	Size	Spa	No.
A	# 4	1'-0"	~
B	# 3	1'-6"	~
C	# 4	1'-0"	~
D	# 3	1'-0"	~
E	# 5	~	4
F	# 5	~	~
G	# 3	~	2
S	# 4	~	6
V	# 4	1'-0"	~
W	# 5	~	4

TABLE OF CONSTANT DIMENSIONS

DIA OF PIPE, D	G	K	H
12"	9"	1'-0"	2'-0"
15"	11"	1'-0"	2'-3"
18"	1'-2"	1'-0"	2'-6"
21"	1'-4"	1'-0"	2'-9"
24"	1'-7"	1'-0"	3'-0"
27"	1'-8"	1'-0"	3'-3"
30"	1'-10"	1'-0"	3'-6"
33"	1'-11"	1'-0"	3'-9"
36"	2'-1"	1'-0"	4'-0"
42"	2'-4"	1'-0"	4'-6"
48"	2'-7"	1'-3"	5'-3"
54"	3'-0"	1'-3"	6'-3"
60"	3'-3"	1'-3"	6'-3"
66"	3'-3"	1'-3"	6'-9"
72"	3'-4"	1'-3"	7'-3"



**GENERAL NOTES:**  
 Designed according to current AASHTO Standard and Interim Specifications.  
 Reinforcing steel shall be placed with the center of the outside layer of bars 2" from the surface of the concrete.  
 All reinforcing steel shall be Grade 60.  
 All concrete shall be Class "C" and shall have a minimum compressive strength of 3600 psi.  
 No bridge rails of any type may be mounted directly to these culvert headwalls.

Texas Department of Transportation  
 Bridge Division

**CONCRETE HEADWALLS WITH FLARED WINGS FOR 0° SKEW PIPE CULVERTS**

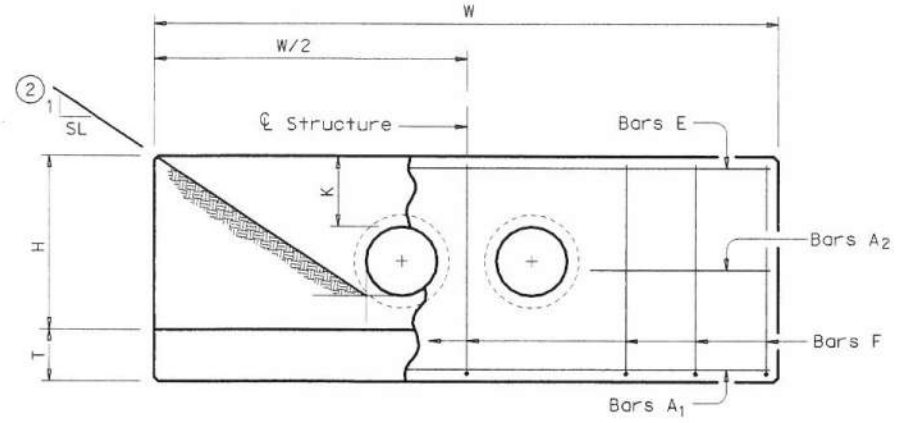
**CH-FW-0**

FILE: chfw00se.dgn	DW: TxDOT	CR: TxDOT	DW: TxDOT	CR: GAF
©TxDOT Mcy 2005	DISTRICT	FEDERAL AID PROJECT	SHEET	
REVISIONS			10	
	COUNTY	CONTROL SECT	JOB	HIGHWAY

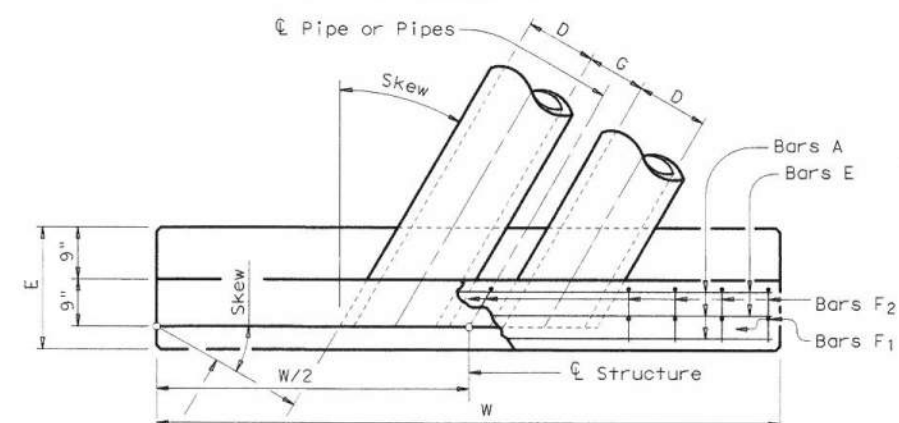
DISCLAIMER: The use of this standard is governed by the "Texas Engineering Practice Act". No warranty of any kind is made by TxDOT for any purpose whatsoever. TxDOT assumes no responsibility for the conversion of this standard to other formats or for incorrect results or damages resulting from its use.

TABLE OF VARIABLE DIMENSIONS AND QUANTITIES FOR ONE HEADWALL (4)

SLOPE DIA OF PIPE, D	15 Degrees						30 Degrees						45 Degrees						
	Values for one Pipe			Values to be added for each add'l Pipe			Values for one Pipe			Values to be added for each add'l Pipe			Values for one Pipe			Values to be added for each add'l Pipe			
	W	Reinf (Lbs)	Conc (CY)	W	Reinf (Lbs)	Conc (CY)	W	Reinf (Lbs)	Conc (CY)	W	Reinf (Lbs)	Conc (CY)	W	Reinf (Lbs)	Conc (CY)	W	Reinf (Lbs)	Conc (CY)	
2:1	12"	9'-4"	124	1.1	1'-9 3/4"	15	0.2	10'-5"	130	1.2	2'-0"	16	0.2	12'-9"	159	1.5	2'-5 3/4"	17	0.3
	15"	10'-7"	136	1.3	2'-3"	17	0.2	11'-10"	159	1.5	2'-6"	18	0.2	14'-6"	191	1.8	3'-0 3/4"	20	0.3
	18"	11'-11"	165	1.5	2'-9"	19	0.3	13'-3"	174	1.7	3'-1"	29	0.3	16'-3"	207	2.1	3'-9 1/4"	33	0.4
	21"	13'-2"	203	1.9	3'-2 1/4"	31	0.4	14'-9"	233	2.1	3'-6 3/4"	33	0.4	18'-0"	276	2.6	4'-4 1/4"	36	0.5
	24"	14'-6"	240	2.1	3'-8 1/4"	34	0.4	16'-2"	251	2.4	4'-1 3/4"	36	0.5	19'-10"	318	2.9	5'-0 3/4"	39	0.6
	27"	15'-9"	258	2.5	4'-0 3/4"	38	0.5	17'-7"	292	2.8	4'-6 1/4"	39	0.6	21'-7"	342	3.4	5'-6 1/4"	44	0.7
	30"	17'-1"	297	2.8	4'-5 3/4"	40	0.6	19'-1"	311	3.1	5'-0"	42	0.6	23'-4"	388	3.8	6'-1 3/4"	47	0.8
	33"	18'-5"	320	3.3	4'-9 3/4"	43	0.6	20'-6"	358	3.6	5'-4 3/4"	46	0.7	25'-1"	439	4.4	6'-7 1/4"	51	0.9
	36"	19'-8"	401	4.0	5'-3"	47	0.9	21'-11"	422	4.5	5'-10 3/4"	50	0.9	26'-10"	517	5.5	7'-2 1/4"	55	1.2
	42"	22'-3"	476	5.0	6'-0 3/4"	53	1.1	24'-10"	528	5.6	6'-8 3/4"	56	1.2	30'-5"	634	6.9	8'-3"	76	1.4
	48"	25'-11"	577	6.6	6'-9 3/4"	60	1.3	28'-10"	637	7.3	7'-7 1/4"	79	1.5	35'-4"	791	9.0	9'-3 3/4"	88	1.8
	54"	28'-6"	711	7.8	7'-9"	83	1.6	31'-9"	781	8.7	8'-8"	87	1.8	38'-11"	958	10.7	10'-7 1/4"	97	2.2
	60"	31'-1"	805	9.2	8'-6 1/4"	91	1.9	34'-8"	881	10.2	9'-6 1/4"	97	2.1	42'-5"	1113	12.5	11'-8"	124	2.6
	66"	33'-8"	907	10.6	9'-0 3/4"	98	2.1	37'-6"	1028	11.8	10'-1 1/4"	102	2.4	46'-0"	1235	14.5	12'-4 1/4"	132	2.9
	72"	36'-3"	1071	12.1	9'-8"	105	2.4	40'-5"	1207	13.5	10'-9 1/4"	110	2.6	49'-6"	1446	16.6	13'-2 1/4"	141	3.2
3:1	12"	13'-6"	178	1.6	1'-9 3/4"	15	0.2	15'-0"	189	1.8	2'-0"	15	0.2	18'-5"	237	2.2	2'-5 3/4"	17	0.2
	15"	15'-3"	212	1.9	2'-3"	17	0.2	17'-0"	223	2.1	2'-6"	17	0.3	20'-10"	276	2.6	3'-0 3/4"	20	0.3
	18"	17'-1"	231	2.3	2'-9"	19	0.3	19'-1"	259	2.5	3'-1"	29	0.3	23'-4"	318	3.1	3'-9 1/4"	32	0.4
	21"	18'-11"	306	2.7	3'-2 1/4"	31	0.4	21'-1"	339	3.0	3'-6 3/4"	33	0.4	25'-10"	413	3.7	4'-4 1/4"	36	0.5
	24"	20'-8"	345	3.1	3'-8 3/4"	35	0.4	23'-1"	384	3.5	4'-1 3/4"	36	0.5	28'-3"	462	4.2	5'-0 3/4"	40	0.6
	27"	22'-6"	376	3.7	4'-0 3/4"	38	0.5	25'-1"	438	4.1	4'-6 1/4"	39	0.6	30'-9"	522	5.0	5'-6 1/4"	44	0.7
	30"	24'-4"	422	4.1	4'-5 3/4"	40	0.6	27'-2"	466	4.6	5'-0"	42	0.6	33'-3"	578	5.6	6'-1 3/4"	47	0.8
	33"	26'-2"	476	4.8	4'-10"	43	0.6	29'-2"	522	5.3	5'-4 3/4"	46	0.7	35'-9"	644	6.5	6'-7 1/4"	51	0.9
	36"	27'-11"	590	5.9	5'-3 1/4"	47	0.8	31'-2"	645	6.6	5'-10 3/4"	50	0.9	38'-2"	787	8.0	7'-2 1/4"	56	1.2
	42"	31'-7"	684	7.3	6'-0 1/4"	53	1.1	35'-3"	776	8.2	6'-8 3/4"	56	1.2	43'-2"	933	10.0	8'-3"	79	1.4
	48"	36'-9"	880	9.6	6'-9 3/4"	61	1.3	41'-0"	953	10.7	7'-7 1/4"	81	1.5	50'-2"	1166	13.1	9'-3 3/4"	88	1.8
	54"	40'-5"	1065	11.4	7'-9"	85	1.6	45'-0"	1185	12.7	8'-8"	89	1.8	55'-2"	1435	15.5	10'-7 1/4"	97	2.2
	60"	44'-0"	1224	13.3	8'-6 1/4"	93	1.9	49'-1"	1356	14.8	9'-6 1/4"	96	2.1	60'-1"	1627	18.2	11'-8"	124	2.6
	66"	47'-7"	1357	15.4	9'-1"	98	2.1	53'-1"	1497	17.2	10'-1 1/4"	103	2.3	65'-1"	1834	21.1	12'-4 1/4"	130	2.9
	72"	51'-3"	1624	17.7	9'-8"	105	2.3	57'-2"	1787	19.7	10'-9 1/4"	109	2.6	70'-0"	2210	24.1	13'-2 1/4"	139	3.2
4:1	12"	17'-7"	232	2.1	1'-9 3/4"	15	0.2	19'-8"	259	2.4	2'-0"	16	0.2	24'-0"	314	2.9	2'-5 3/4"	18	0.2
	15"	19'-11"	272	2.5	2'-3"	17	0.2	22'-3"	301	2.8	2'-6"	18	0.3	27'-3"	361	3.5	3'-0 3/4"	21	0.3
	18"	22'-3"	313	3.0	2'-9"	19	0.3	24'-10"	344	3.3	3'-1"	29	0.3	30'-5"	427	4.0	3'-9 1/4"	32	0.4
	21"	24'-7"	407	3.6	3'-2 1/4"	31	0.4	27'-5"	446	4.0	3'-6 3/4"	33	0.4	33'-7"	549	4.9	4'-4 1/4"	36	0.5
	24"	26'-11"	455	4.1	3'-8 3/4"	35	0.4	30'-0"	499	4.5	4'-1 3/4"	36	0.5	36'-9"	609	5.6	5'-0 3/4"	40	0.6
	27"	29'-3"	514	4.8	4'-0 3/4"	38	0.5	32'-7"	562	5.4	4'-6 1/4"	40	0.6	39'-11"	703	6.6	5'-6 1/4"	43	0.7
	30"	31'-7"	568	5.4	4'-5 3/4"	40	0.6	35'-3"	620	6.0	5'-0"	42	0.6	43'-2"	768	7.4	6'-1 3/4"	49	0.8
	33"	33'-11"	634	6.2	4'-10"	43	0.7	37'-10"	710	7.0	5'-4 3/4"	46	0.7	46'-4"	848	8.5	6'-7 1/4"	52	0.9
	36"	36'-3"	776	7.7	5'-3"	48	0.9	40'-5"	868	8.6	5'-10 3/4"	49	0.9	49'-6"	1058	10.6	7'-2 1/4"	56	1.1
	42"	40'-11"	921	9.6	6'-0 1/4"	53	1.0	45'-7"	1022	10.7	6'-8 3/4"	57	1.2	55'-10"	1262	13.1	8'-3"	78	1.4
	48"	47'-7"	1152	12.6	6'-10"	61	1.3	53'-1"	1268	14.0	7'-7 1/4"	80	1.5	65'-1"	1579	17.2	9'-3 3/4"	86	1.8
	54"	52'-3"	1416	14.9	7'-9 1/4"	86	1.6	58'-4"	1589	16.6	8'-8"	89	1.8	71'-5"	1916	20.4	10'-7 1/4"	95	2.2
	60"	56'-11"	1606	17.5	8'-6 3/4"	92	1.9	63'-6"	1798	19.5	9'-6 1/4"	95	2.1	77'-9"	2184	23.9	11'-8"	122	2.6
	66"	61'-7"	1811	20.2	9'-0 3/4"	97	2.1	68'-8"	2011	22.5	10'-1 1/4"	101	2.4	84'-2"	2464	27.6	12'-4 1/4"	131	2.9
	72"	66'-3"	2142	23.2	9'-8"	104	2.4	73'-11"	2371	25.9	10'-9 1/4"	108	2.6	90'-6"	2929	31.7	13'-2 1/4"	138	3.2
6:1	12"	25'-11"	342	3.1	1'-9 3/4"	15	0.2	28'-10"	374	3.5	2'-0"	16	0.2	35'-4"	456	4.3	2'-5 3/4"	17	0.2
	15"	29'-3"	390	3.7	2'-3"	17	0.2	32'-7"	442	4.2	2'-6"	18	0.2	39'-11"	549	5.1	3'-0 3/4"	20	0.3
	18"	32'-7"	459	4.4	2'-9"	20	0.3	36'-4"	515	4.9	3'-1"	29	0.3	44'-7"	629	6.0	3'-9 1/4"	33	0.4
	21"	36'-0"	608	5.3	3'-2 1/4"	31	0.4	40'-2"	660	5.9	3'-6 3/4"	33	0.4	49'-2"	823	7.2	4'-4 1/4"	38	0.5
	24"	39'-4"	672	6.0	3'-8 3/4"	35	0.4	43'-11"	748	6.7	4'-1 3/4"	36	0.5	53'-9"	920	8.2	5'-0 3/4"	42	0.6
	27"	42'-8"	770	7.1	4'-0 3/4"	38	0.5	47'-8"	852	8.0	4'-6 1/4"	41	0.5	58'-4"	1039	9.7	5'-6 1/4"	45	0.7
	30"	46'-1"	839	8.0	4'-5 3/4"	40	0.6	51'-5"	949	8.9	5'-0"	44	0.6	62'-11"	1154	10.9	6'-1 3/4"	48	0.8
	33"	49'-5"	947	9.2	4'-10"	45	0.7	55'-2"	1040	10.3	5'-4 3/4"	48	0.7	67'-6"	1284	12.6	6'-7 1/4"	50	0.9
	36"	52'-10"	1151	11.4	5'-3"	49	0.8	58'-11"	1287	12.7	5'-10 3/4"	51	1.0	72'-1"	1575	15.6	7'-2 1/4"	55	1.1
	42"	59'-6"	1365	14.2	6'-0 1/4"	55	1.0	66'-5"	1522	15.8	6'-8 3/4"	57	1.2	81'-4"	1867	19.4	8'-3"	76	1.4
	48"	69'-4"	1729	18.5	6'-10"	59	1.3	77'-4"	1934	20.7	7'-7 1/4"	79	1.5	94'-9"	2360	25.3	9'-3 3/4"	86	1.8
	54"	76'-1"	2130	22.0	7'-9 1/4"	83	1.6	84'-10"	2370	24.6	8'-8"	87	1.8	103'-11"	2904	30.1	10'-7 1/4"	95	2.2
	60"	82'-10"	2414	25.8	8'-6 3/4"	90	1.9	92'-5"	2673	28.8	9'-6 1/4"	94	2.1	113'-2"	3286	35.3	11'-8"	122	2.6
	66"	89'-7"	2712	29.9	9'-0 3/4"	96	2.1	99'-11"	3030	33.3	10'-1 1/4"	101	2.4	122'-4"	3689	40.8	12'-4 1/4"	130	2.9
	72"	96'-3"	3210	34.2	9'-8"	102	2.4	107'-5"	3572	38.2	10'-9 1/4"	108	2.6	131'-6"	4364	46.8	13'-2 1/4"	139	3.2



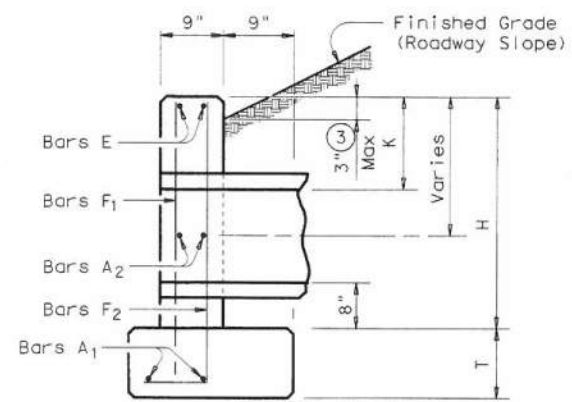
ELEVATION



PLAN OF SKEWED PIPES

Lengths of wings based on SL:1 Slope along this line.

Showing 30° Skew



SECTION

TABLE OF CONSTANT DIMENSIONS

DIA OF PIPE, D	G	K	H	T	E
12"	9"	1'-0"	2'-8"	9"	1'-9"
15"	11"	1'-0"	2'-11"	9"	1'-9"
18"	1'-2"	1'-0"	3'-2"	9"	1'-9"
21"	1'-4"	1'-0"	3'-5"	9"	2'-0"
24"	1'-7"	1'-0"	3'-8"	9"	2'-0"
27"	1'-8"	1'-0"	3'-11"	9"	2'-3"
30"	1'-10"	1'-0"	4'-2"	9"	2'-3"
33"	1'-11"	1'-0"	4'-5"	9"	2'-6"
36"	2'-1"	1'-0"	4'-8"	1'-0"	2'-6"
42"	2'-4"	1'-0"	5'-2"	1'-0"	2'-9"
48"	2'-7"	1'-3"	5'-11"	1'-0"	3'-0"
54"	3'-0"	1'-3"	6'-5"	1'-0"	3'-3"
60"	3'-3"	1'-3"	6'-11"	1'-0"	3'-6"
66"	3'-3"	1'-3"	7'-5"	1'-0"	3'-9"
72"	3'-4"	1'-3"	7'-11"	1'-0"	4'-0"

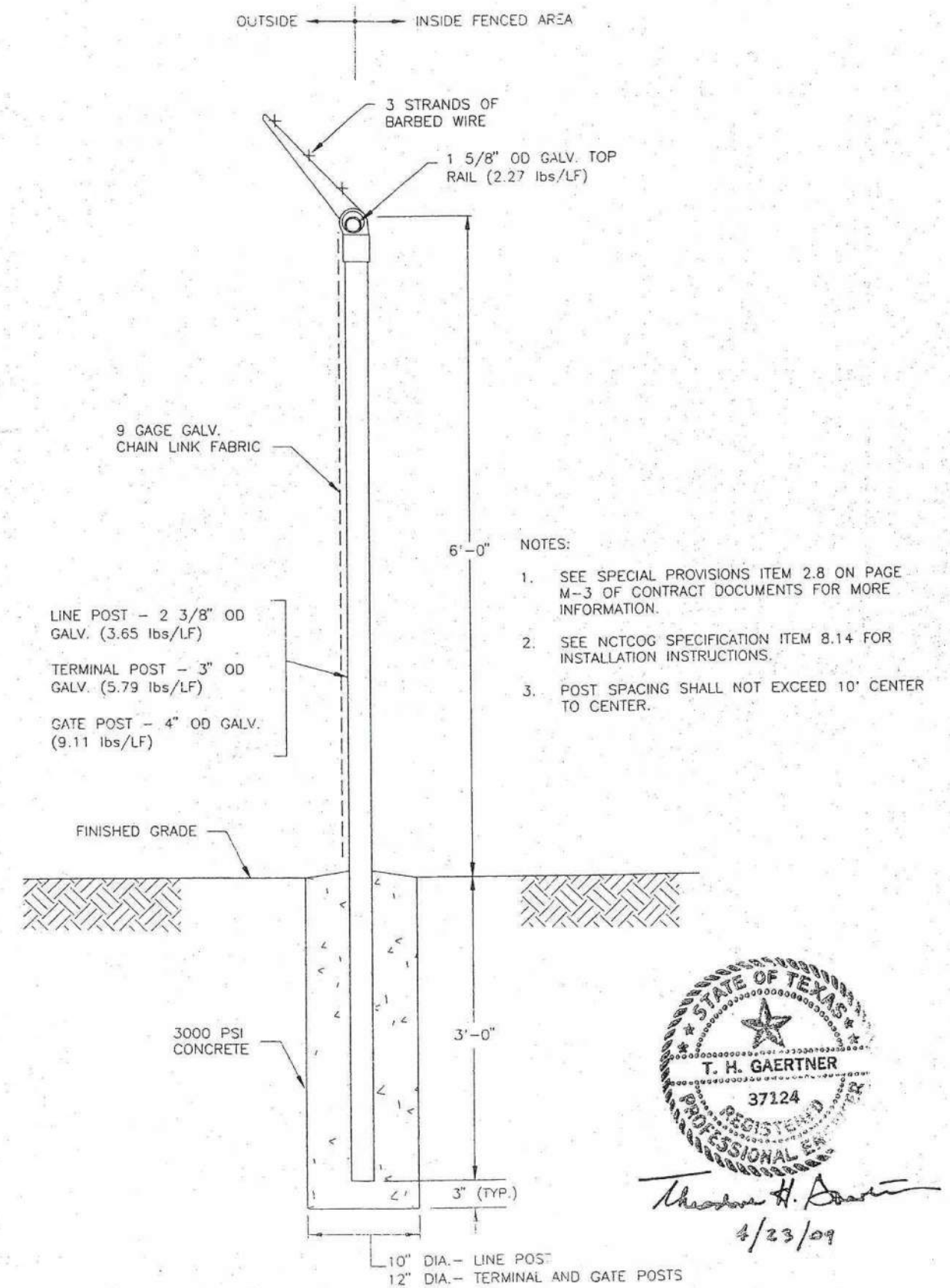
TABLE OF REINFORCING STEEL (4)

Bar	
-----	--

**APPROVED FOR  
CONSTRUCTION**

MAY 26 2009

City of Rockwall Engineering Dept.  
City Engineer: \_\_\_\_\_



*Theodore H. Gaertner*  
4/23/09

**CHAIN LINK FENCE DETAIL**

3/4" = 1'-0"

**CITY OF ROCKWALL  
SERVICE CENTER PARKING IMPROVEMENTS**