STEELE CREEK-UNIT 9 CIBOLO, TEXAS **CIVIL CONSTRUCTION PLANS**

	Sheet List Table	
Sheet Title	Sheet Description	
COVER SHEET		
MASTER DRAINAGE PLAN		
DRAIN A	PLAN AND PROFILE	
DRAIN B	PLAN AND PROFILE	
DRAIN C	PLAN AND PROFILE	
DRAINAGE DETAILS	(SHEET 1 OF 4)	
DRAINAGE DETAILS	(SHEET 2 OF 4)	
DRAINAGE DETAILS	(SHEET 3 OF 4)	
DRAINAGE DETAILS	(SHEET 4 OF 4)	
LANCE CROSSING	PLAN AND PROFILE	
MAGNOLIA CREEK	PLAN AND PROFILE (STA. 3+35.02 TO	C 8+50.00)
MAGNOLIA CREEK	PLAN AND PROFILE (STA. 8+50.00 TO	C END)
STREET DETAILS		
OVERALL SIGNAGE PLAN	(SHEET 1 OF 2)	
OVERALL SIGNAGE PLAN	(SHEET 2 OF 2)	
OVERALL SIGNAGE DETAILS	(SHEET 1 OF 3)	
OVERALL SIGNAGE DETAILS	(SHEET 2 OF 3)	
OVERALL SIGNAGE DETAILS	(SHEET 3 OF 3)	

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Sheet Title

OVERALL SANITERY S OVERALL SANITARY SE SANITARY SEWER LINE SANITARY SEWER LINE SANITARY SEWER LINE SANITARY SEWER NOT SANITARY SEWER NOT OVERALL WATER PLAN OVERALL WATER PLAN WATER DISTRIBUTION OVERALL UTILITY PLAN OVERALL UTILITY PLAN **GRADING PLAN** GRADING PLAN STORMWATER POLLUT SWPPP DETAILS

PREPARED FOR:

CONTINENTAL HOOMES OF TEXAS, L.P. 5419 N. LOOP 1604 E. SAN ANTONIO, TEXAS 78247

FEBRUARY 2025



for INTERIM REVIEW purposes ONLY under the authorization of Rebecca Carroll, P.E. #92666 on 2/3/2025 This document is not to be used for CONSTRUCTION.

2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000 TEXAS ENGINEERING FIRM #470 I TEXAS SURVEYING FIRM #10028800

Sheet List Table

	Sheet Description	Sheet Number
EWER PLAN	(SHEET 1 OF 2)	C4.00
EWER PLAN	(SHEET 2 OF 2)	C4.01
EA	PLAN AND PROFILE	C4.02
EB	PLAN AND PROFILE (STA 1+00.00 TO 9+50.00)	C4.03
EB	PLAN AND PROFILE (STA 9+50.00 TO END)	C4.04
TES AND DETAILS	(SHEET 1 OF 2)	C4.10
TES AND DETAILS	(SHEET 2 OF 2)	C4.20
N	(SHEET 1 OF 2)	C5.00
N	(SHEET 2 OF 2)	C5.01
DETAILS		C5.10
N	(SHEET 1 OF 2)	C6.00
N	(SHEET 2 OF 2)	C6.01
	(SHEET 1 OF 2)	C7.00
	(SHEET 2 OF 2)	C7.01
TION PREVENTION PLAN	J	C8.00
		C8.10



12629-09

Existing Conditions Calculations

		Drair	nage Areas	s	h (ft)	Overla	nd/Shee	t Flow	Shall	ow Co	ncentra	ted Flo	w**	Channe	elized	Flow**		Ration	al Method	Q=CIA
Ref. Point	Structure / Description	#	Area (Ac)	С	Total Flowpat	L _o (FT)	S _o (ft/ft)	T _o * (MIN)	L _{SC} (FT)	Condition***	Slope (ft/ft)	V _{sc} (FPS)	T _{sc} ** (MIN)	L _{сн} (FT)	V _{CH} (FPS)	Т _{сн} ** (MIN)	Т _{с-тот}	Return Year	Intensity (in/hr)	Q (cfs)
																	29	10	5.04	123.3
9	CULVERT	P+U+S	49.97	0.49	4,205	210	0	15	1,530	S	0.02	3.5	7.4	2,465	6.0	6.8	29	25	5.20	127.4
						-											29	100	5.73	140.3
	DRAIN/STREET						-										32	10	4.75	24.6
10	CAPACITY	Q+T	10.58	0.49	1,610	300	0	23	1,310	S	0.01	2.4	9.2	-	-	0-0	32	25	4.91	25.5
					 												32	100	5.41	28.1
44	DRAIN/STREET	Б	1 22	0.40	140	140	<u>م</u>	12					2010			Topology and	12	10	7.98	4.8
3.1	CAPACITY	ĸ	1.22	0.49	140	140	U	13	-	-	-	-	-	-	_	-	12	20	0.20	4.9
-									-		-						12	100	6.76	3.8
12	SWALE	S	1 15	049	350	200	0	17	-	-	_	_	-	150	60	04	17	25	6.96	39
12	OWNEL	Ŭ	1.10	0.10	000	200	v							100	0.0	0.1	17	100	7.63	4.3
-																	19	10	6.38	2.9
13	SWALE	U	0.93	0.49	285	235	0	20	-	-	-		-	50	6.0	0.1	19	25	6.57	3.0
																0.000	19	100	7.21	3.3
																	20	10	6.21	4.2
14	SWALE	Т	1.39	0.49	475	235	0	20	÷	÷	-	-	-	240	6.0	0.7	20	25	6.40	4.4
																	20	100	7.03	4.8
Rationa	I Method Time of	Concentra	tion						From T	R-55 F	igure 3-	1**								
*Seelye	Chart or TR-55 E	qn. 3-3				T	(0.007(n*1))	() ^{0.8}	$m = \frac{k}{R}$	$\frac{2}{3} c^{1}$	12		S: For	Streets:	n = 0.	018, R	= 0.2 (/	Adapted fro	om Manning	ls)
**As Ca	lculated using Mar	nnings or TR	-55 Figure	3-1 or	6 ft/s	$I_0 =$	(P2 ^{.5} *S·	⁴) *e	$n = \frac{n}{n}$	- 5 J ₀	2		P: For	Paved:	n = 0.0	25, R =	0.2			
									k = 1.43	86 $ft^{1/2}$	3/s		U: For	Unpave	d: n = 1	0.05, R	= 0.4			
											121		D: For	Default	v = 6	ps				



Master Drainage Plan Calculation

	Master Drainage Plan Calculations (Ultimate Development)																			
											<u>ity</u>									
		Drair	nage Area	s	h (ft)	Overla	nd/Shee	et Flow	Shallov	v Cond	centrate	d Flow	- 1**	Channe	elized F	low**		Ration	al Method	Q=CIA
Ref. Point	Structure / Description	#	Area (Ac)	С	Total Flowpat	L _o (FT)	S _o (ft/ft)	T _o * (MIN)	L _{SC} (FT)	Condition***	Slope (ft/ft)	V _{sc} (FPS)	T _{sc} ** (MIN)	L _{CH} (FT)	V _{CH} (FPS)	Т _{сн} ** (MIN)	Тс-тот	Return Year	Intensity (in/hr)	Q (cfs)
																	29	10	5.04	186.2
9	CULVERT	P+U+S	<mark>49.97</mark>	0.74	4,205	210	0.023	15	1,530	S	0.015	3.5	7.4	2,465	6.0	6.8	29	25	5.20	192.4
																	29	100	5.73	212.0
	DRAIN/STREET																32	10	4.75	31.7
10	CAPACITY	Q+T	10.58	0.63	1,610	300	0.016	23	1,310	S	0.007	2.4	9.2	-	-	-	32	25	4.91	32.7
																	32	100	5.41	36.1
	DRAIN/STREET	Б	1 22	0.62	140	140	0.015	10									12	10	7.98	0.1
- 11	CAPACITY	<u>r</u>	1.22	0.05	140	140	0.015	15				-	-	-	-	-	12	100	0.20 8.08	6.0
																	17	100	6.30	4.9
12	SWALE	s	1 15	0.63	350	200	0.015	17				_	-	150	60	04	17	25	6.96	5.0
	011112	Ŭ		0.00			0.010								0.0	0.1	17	100	7.63	5.5
																	19	10	6.38	3.7
13	SWALE	U	0.93	0.63	285	235	0.015	20				-	-	50	6.0	0.1	19	25	6.57	3.9
																	19	100	7.21	4.2
																	20	10	6.21	5.4
14	SWALE	Т	1.39	0.63	475	235	0.014	20				-	-	240	6.0	0.7	20	25	6.40	<mark>5.6</mark>
																	20	100	7.03	6.2
Rationa	Method Time of	Concentra	tion						From TF	R-55 Fi	dure 3-1	**								

*Seelye Chart or TR-55 Eqn. 3-3 **As Calculated using Mannings or TR-55 Figure 3-1 or 6 ft/s $T_o = \frac{(0.007(n*L)^{0.5})}{(P2^{.5}*S^{.4})}$

 $\frac{8}{2} * 60 = \frac{\kappa}{n} R^{2/3} S_o^{1/2}$ $k = 1.486 \ ft^{1/3}/s$

U: For Unpaved: n = 0.05, R = 0.4 D: For Default: v = 6 fps

S: For Streets: n = 0.018, R = 0.2 (Adapted from Mannings) **P:** For Paved: n = 0.025, R = 0.2



EXISTING CONTOUR

DRAINAGE CALCULATION POINT

LOT GRADING

(11)

A,B,C

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02/03/25

CREEK-UNIT F CIBOLO, TEXAS AN Ц Ш RAINAG \square ШС \mathbf{r} STEEL CITY S È

PLAT NO. JOB NO. 12629-09 DATE FEBRUARY 2025 DESIGNER SS CHECKED ____ DRAWN AR SHEET __ C1.00



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SHEET C1.01



DRAIN STA. 1+00.00



late: Feb 03, 2025, 3:33pm User ID: ssepulveda ile: P:\126\29\09\Desian\Civil\DRB1262909.dwa

1 - 36" RCP HYDRAULIC CALCULATION STA. 1+05.22 TO STA. 2+04.96

 $Q_{10} = 31.7 \text{ CFS}$ n = 0.013 S = 0.65%Sf = 0.00%dn = 2.24' Vn = 7.26 FPS

N B 0 TO ENI	D			\ HOI	/ERTICAL S RIZONTAL S	CALE: 1" = 5' SCALE: 1" = 20'
	STA: 2+04.96	FACE OF CURB INLET	BEING PIPE AT INSIDE FACE OF CURB INLET	STA: 2+43.24 END PIPE AT INSIDE FACE OF CURB INLET		720
						715
						710
						705
IO' TYPE CII- B INLET TOP V.=±698.27					- 1-10' TYPE C CURB INLET TOP ELEV.=±698.27	700
HGL			E <u>GL</u>			695
	7		31,33 L.F. RCP @ 0.	~ 24" L 50% 4.4'	CONTRACTOR GROUT INVER PROVIDE FOR DRAINAGE (T	TO T TO POSITIVE (P.) 690
SHEET C1.20			8" SEWER -/ INV.=688.08	<u>۶</u>		685
		EGL = 696.23 EGL = 696.23		ECL = 696.38		680
		HGL = 695.83		HCL = 695.99		675
	697.93 607 80	092.09 693.09	698.16	698.34 693.25 693.45		PROPOSED DRAIN FLOWLINE
2-	+0(0			2+60	











LOT 901, BLOCK 14

VARIABLE WIDTH DRAINGAGE EASEMENT

(1.97 AC)

1 - 18" RCP HYDRAULIC CALCULATION STA. 1+05.30 TO STA. 2+29.20

 $Q_{10} = 6.10 \text{ CFS}$ n = 0.013 S = 0.50% Sf = 0.66%dn = 1.44' Vn = 5.25 FPS

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	IF SPA	DI	SECTI MENS	ON IONS	5										B	ILLS	OF	REIN	IFORC	ING	55	TEEL	(Fo	rВ	ox	Ler	ngth		40 i	feet)	
N N	3ER O						Ba	ars B				Bars	C & L)			В	ars E		В	Bars	F1 ~ ;	#4	В	ars	F2 ~	- #4		Bars	5 M ~	#4	
2 0	NUME	5	Н	Т	U	No.	Spa	Length	Wt	No.	Size Spa	Bai Length	rsC NWt	Bars Length	D Wt	No.	Size Spa	Lengt	h Wt	No.	Spa	Length	Wt	No.	Spa	engt	h Wt	No	Spa	Lengt	h Wt	No
1 0	2 3	4' - 0'' 4' - 0''	2' - 0" 2' - 0"	8" 8"	7" 7"	108 # 108 #	5 9"	9' - 6'' 14' - 1''	1,070	162	#4 6" #4 6"	5' - 8" 5' - 8"	613	5' - 4'' 5' - 4''	577 577	108 108	#5 9" #5 9"	7' - 4 11' - 1	" 826 1" 1.342	6	18" 18"	39' – 9'' 39' – 9''	159 239	36 51	18" . 18"	39' – 9 39' – 9	" 950 " 1.354	5 108 1 108	3 9" 3 9"	2' - 0 2' - 0	' 144 ' 144	54
5 0 <td>4</td> <td>4' - 0''</td> <td>2' - 0"</td> <td>8"</td> <td>7"</td> <td>108 #</td> <td>5 9"</td> <td>18' - 8''</td> <td>2,103</td> <td>162</td> <td>#4 6"</td> <td>5' - 8"</td> <td>613</td> <td>5' - 4"</td> <td>577</td> <td>108</td> <td>#5 9"</td> <td>16' - 6</td> <td>1,342</td> <td>12</td> <td>18"</td> <td>39' - 9''</td> <td>319</td> <td>66</td> <td>18"</td> <td>39' - 9</td> <td>" 1,752</td> <td>2 108</td> <td>3 9"</td> <td>2' - 0</td> <td>144</td> <td>10</td>	4	4' - 0''	2' - 0"	8"	7"	108 #	5 9"	18' - 8''	2,103	162	#4 6"	5' - 8"	613	5' - 4"	577	108	#5 9"	16' - 6	1,342	12	18"	39' - 9''	319	66	18"	39' - 9	" 1,752	2 108	3 9"	2' - 0	144	10
2 0 3 0 101 8 9 0 101 8 9 0 101 8 9 101 8 9 101 8 9 101 101 9 20	5 6	4' - 0'' 4' - 0''	$\frac{2' - 0''}{2' - 0''}$	8" 8"	7" 7"	108 # 108 #	5 9"	23' - 3" 27' - 10	2,619 " 3,135	162	#4 6" #4 6"	5' - 8" 5' - 8"	613 613	5' - 4'' 5' - 4''	577 577	108 108	#5 9" #5 9"	21' - 1	" 2,375 " 2,891	15 18	18" 18"	39' – 9'' 39' – 9''	398 478	81 96	18" . 18"	39' – 9 39' – 9	" 2,15: " 2,540	108	3 9" 3 9"	2' - 0 2' - 0	' 144 ' 144	2
3 <i>4 - 0 5 - 0 6 7 10 6 5 7 100 4 5 7 40 7 100 10 4 4 6 6 - 7 7 2 5 - 7 7 0 4 5 7 10 4 5</i>	2	4' - 0"	3' - 0"	8"	7"	108 #	5 9"	9' - 6''	1,070	162	#4 6"	6' - 8''	721	5' - 4''	577	108	#5 9"	7' - 4		6	18"	39' - 9''	159	42	18" .	39' – 9	" 1,11	5 108	3 9"	3' - 0	216	
5 6 7 70 80 8 7 70	3 4	4' - 0'' 4' - 0''	<u>3' - 0"</u> <u>3' - 0"</u>	8" 8"	7" 7"	108 # 108 #	5 9"	14' - 1" 18' - 8"	1,586	162	#4 6" #4 6"	6' - 8'' 6' - 8''	721	5' - 4" 5' - 4"	577 577	108 108	#5 9" #5 9"	11' - 1	1" 1,342 " 1,859	9 12	18" 18"	39' - 9" 39' - 9"	239 319	59 76	18" . 18"	39' - 9 39' - 9	" 1,567 " 2,018	7 108 3 108	3 9" 3 9"	3' - 0 3' - 0	216	
6 7 7 7 7 100 65 7 7 7 100 65 7 7 7 7 7 7 7 7 7 100 65 7 7 100 65 7 7 100 65 7 7 100 65 7 7 100 65 7 7 100 65 7 7 100 65 7 7 100 65 7 7 100 65 7 7 100 65 7 7 100 65 7 7 100 65 7 7 100 65 7 7 100 65 7 7 100 <th100< th=""> <th100< th=""> 100</th100<></th100<>	5	4' - 0"	3' - 0"	8"	7"	108 #	5 9"	23' - 3"	2,619	162	#4 6"	6' - 8''	721	5' - 4"	577	108	#5 9"	21' - 1	" 2,375	15	18"	39' - 9''	398	93	18"	39' - 9	" 2,469	0 108	3 <i>9</i> "	3' - 0	216	1
3 4 7 00 2 7 500 2 7 500 50 7 700 70 700 70 700 70 700 70 700 70 700	6	4' - 0''	3' - 0''	8" 8"	7" 7"	108 #	5 9"	27' - 10	" 3,135	162	#4 6"	6' - 8" 7' - 8"	721	5' - 4"	577	108	#5 9"	25' - 8	" 2,891 " 826	18	18"	39' - 9" 30' - 0"	478	110	18" .	39' - 9 30' - 0	" 2,92	108	3 9" 3 9"	3' - 0	216	
4 6 7 70 80 8 7 80 8 9 7 80 8 9 7 80 8 9 7 80 8 9 7 80 9 7 80 9 7 80 9 7 80 9 7 80 9 7 80 9 7 80 9 7 80 9 7 80 9 7 80 9 7 10 9 9 10 9 9 10 9 10 9 10 9 10 9 10	2	4' - 0"	4' - 0"	8"	7"	108 #	5 9"	14' - 1"	1,586	162	#4 6"	7' - 8"	830	5' - 4"	577	108	#5 9"	11' - 1	1" 1,342	9	18"	39' - 9''	239	59	18"	39' - 9	" 1,567	108	3 9"	4' - 0	289	-
3 <u>4 - 0</u> <u>4 - 0</u> <u>8 - 1</u> <u>100</u> <u>5</u> <u>9</u> <u>12 - 2</u> <u>2019</u> <u>101</u> <u>5</u> <u>10</u> <u>12 - 3</u> <u>2019</u> <u>101</u> <u>10</u>	4	4' - 0"	4' - 0"	8"	7"	108 #	5 9"	18' - 8''	2,103	162	#4 6"	7' - 8"	830	5' - 4''	577	108	#5 9"	16' - 6	" 1,859	12	18"	39' - 9''	319	76	18" .	39' - 9	" 2,018	3 108	3 <i>9</i> "	4' - 0	289	
	5	4' - 0'' 4' - 0''	$\frac{4' - 0''}{4' - 0''}$	8" 8"	7"	108 # 108 #	5 9"	23' - 3'' 27' - 10	2,619	162	#4 6" #4 6"	7' - 8''	830	5' - 4" 5' - 4"	577	108 108	#5 9" #5 9"	21' - 1	" 2,375 " 2,891	15 18	18"	39' - 9'' 39' - 9''	398 478	93 110	18" . 18" .	39' - 9 39' - 9	" 2,469 " 2,92	108	3 9" 3 9"	4' - 0 4' - 0	289	

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Bars Y													
Bars Y									QL	JAN	ΓΙΤΙ	ES	
Bar	& Z	~ #4		Bars 4 ~ ;	H #4	Bar	rs K	Per of B	Foot arrel	CL	ırb	Тс	otal
Duis	sΥ	Bars	ΞZ	Lenath	Wt	No.	Wt	Conc	Renf	Conc	Renf	Conc	Renf
Length	Wt	Length	Wt					(CY)	(Lb)	(CY)	(Lb)	(CY)	(Lb)
4' - 7" 4' - 7"	165	5' - 3''	189	9' - 6"	25	22	61	0.611	117.5	0.7	86	25.2	4,785
4 - 7 4' - 7"	496	5 - 5 5' - 3''	568	14 - 1 18' - 8''	50	40	111	1.150	210.8	1.1	127	47.4	8,592
4' - 7"	661	5' - 3''	758	23' - 3"	62	50	139	1.420	257.4	1.7	201	58.5	10,497
4' - 7"	827	5' - 3''	947	27' - 10"	74	58	161	1.689	304.0	2.1	235	69.6	12,396
4' - 7"	165	7' - 3''	262	9' - 6"	25	22	61	0.676	127.8	0.7	86	27.8	5,197
4 - /" 4' - 7"	331 496	7' - 3'' 7' - 3''	523 785	14' - 1'' 18' - 8''	38 50	32 40	89 111	1.258	227.4	1.1	127	39.7 51.7	9,255
4' - 7"	661	7' - 3''	1,046	23' - 3"	62	50	139	1.549	277.1	1.7	201	63.7	11,283
4' - 7"	827	7' - 3''	1,308	27' - 10"	74	58	161	1.841	326.9	2.1	235	75.7	13,309
4' - 7"	165	9' - 3''	334	9' - 6''	25	22	61	0.741	134.1	0.7	86	30.4	5,451
4' - 7" 4' - 7"	331 496	9' - 3'' 9' - 3''	667 1.001	14' - 1" 18' - 8"	38 50	32	89	1.053	185.7	1.1	127 161	43.2 56.0	7,555 9,653
4' - 7"	661	9' - 3''	1,335	23' - 3"	62	50	139	1.679	288.8	1.4	201	68.9	11,754
4' - 7"	827	9' - 3''	1,668	27' - 10''	74	58	161	1.992	340.4	2.1	235	81.8	13,851
					Use	thi: ex	s sta istin	ndard g mult	only w iple bo	vhen ox cul	lengti verts	hening :.	
					HL	93 L	.OAD	ING		Sh	EET	2 OF	2
												Brid	ge
					Те	xas l	Depai	tment d	of Trans	porta	tion	Divi. Star	sion ndard
				FILE:	МС <u>ср-мс4</u> сот	DL7 F 23-20.d Februa	FIP C.	LE AST 4'- 0' TC LENG	BOX -IN-I 0"SI 0 23 THEN DN: TBE CONT SEC	C PLA PAN FI ING IC-4 T	ULN ACE LL ONL 4-2.	YER Y 3 xDOT	TS

STEELE CREEK-UNIT 9 CITY OF CIBOLO, TEXAS DRAINAGE DETAILS (SHEET 4 OF 4)
PLAT NO
JOB NO. 12629-09
DATE FEBRUARY 2025
DESIGNER SS
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SHEET C1.40

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RECOMMENDED PAVEMENT SECTION

NOTES AND DESIGN BASED ON THE MINIMUM REQUIREMENTS OF THE UDC AND THE GEOTECH REPORT PREPARED BY INTEC OF SAN ANTONIO, L.P., PROJECT NO S181023-P, DATED FEBRUARY 15, 2018. FOR PAVEMENT MATERIAL AND CONSTRUCTION REQUIREMENTS, CONTRACTOR SHALL MEET OR EXCEED ALL PAVEMENT RECOMMENDATIONS

CBR = 2.0 <u>Classification</u>	TYPE "D" HMAC SURFACE COURSE, in.	TYPE "C" HMAC SURFACE COURSE, in.	AGGREGATE BASE, in (TYPE A GRADE 1 or 2)	STABILIZED SUBGRADE, in.	STRUCTURAL NUMBER
(1) LOCAL TYPE A					
MAGNOLIA CREEK, LANCE CROSSING	2.00	0.00	11.00	6.00	2.90

SIDEWALK NOTES:

WHEN POSSIBLE SIDEWALKS SHOULD BE PLACED NEXT TO THE PROPERTY LINE, ALLOWING A MINIMUM OF 1 FOOT BUFFER. DEVIATION OF THE PATHWAY FROM A STRAIGHT LINE IS ENCOURAGED TO AVOID TREES OR OTHER OBSTRUCTIONS.

2. FOR LOCAL TYPE "A" STREETS, SIDEWALKS SHALL HAVE A MINIMUM UNOBSTRUCTED WIDTH OF 5' AND IF SEPARATED FROM THE CURB, THE SIDEWALK SHALL BE LOCATED A MINIMUM OF 2' FROM THE BACK OF CURB.

3. FOR OTHER THAN LOCAL TYPE "A" STREETS, SIDEWALKS SHALL HAVE A MINIMUM UNOBSTRUCTED WIDTH OF 5' AND SEPARATED A MINIMUM OF 2' FROM THE BACK OF CURB OR AS AN OPTION, THE SIDEWALK SHALL HAVE A MINIMUM WIDTH OF 6' WHEN LOCATED AT THE BACK OF CURB.

4. SIDEWALK RAMP LENGTHS PRESENTED IN TABLE 1 ARE GUIDELINES ONLY. SIDEWALK RAMP LENGTHS SHALL BE OF SUFFICIENT LENGTH TO MAINTAIN 8.33% (1:12) MAXIMUM SLOPE.

5. ALL CURB-RAMPS OR LANDINGS ABUTTING THE CROSSWALK SHALL HAVE A DETECTABLE WARNING 24 INCHES DEEP (IN THE DIRECTION OF PEDESTRIAN TRAVEL) AND EXTENDING THE FULL WIDTH OF THE CURB RAMP OR LANDING. THE DETECTABLE WARNING SHALL CONSIST OF RAISED TRUNCATED DOMES, ALIGNED IN A GRID PATTERN WITH A DIAMETER OF A NOMINAL 0.9 INCHES (23 MM), A HEIGHT OF NOMINAL 0.2 INCHES (5 MM) AND A CENTER-TO-CENTER SPACING OF NOMINAL 2.35 INCHES (60 MM).

7. SIDEWALK RAMP TYPE V SHALL BE USED ONLY WHERE THERE IS SIGNIFICANT RESTRICTION WITHIN THE PARKWAY TO

LAID CURB" AND / OR "502 - CONCRETE SIDEWALKS". RAMP SURFACE SHALL BE BRUSH FINISHED.

10. SIDEWALKS LESS THAN 5 FEET IN WIDTH SHALL BE PROVIDED WITH A PASSING SPACE AT A MAXIMUM SPACING OF 200 FEET

FLEXIBLE BASE MATERIAL.

13. SIDEWALK GRADES SHALL NOT EXCEED THE GRADE ESTABLISHED FOR THE ADJACENT ROADWAY, ANY SIDEWALK CONSTRUCTION THAT DEVIATES FROM THE NATURAL GRADE OF THE ROADWAY TO CREATE A GRADE STEEPER THAN THE EXISTING ROADWAY WILL REQUIRE RAMPS, HANDRAILS AND RESTING PLATFORMS TO BE CONSTRUCTED IN ACCORDANCE WITH ADA AND TAS STANDARDS.

ANY DIRECTION.

DEFINED AS THE ALGEBRAIC DIFFERENCE OF THE ADJACENT SURFACE SLOPES. IN THE CASE OF A STREET ACCESS RAMP DESIGNED AT THE 8.33% MAXIMUM SLOPE, THE ADJACENT PAVEMENT CROSS SLOPE SHALL BE LESS THAN 2.67% (I.E. 8.33-(-2.67)=11). IN ADDITION, THE ADJACENT PAVEMENT CROSS SLOPE SHALL BE LESS THAN OR EQUAL TO 5%.

LOCAL TYPE "A" STREET SECTION NOT-TO-SCALE

GENERAL NOTES:

- 2022
- AND IF LIME STABILIZATION IS REQUIRED.
- TO PLACEMENT OF AGGREGATE BASE.
- SPECIFICATIONS, ITEM 247, TYPE A, GRADES 1 OR 2.
- COVERED.
- 6. IN THE EVENT THAT THE CLAY FILL USED IS DIFFERENT THAN THE EXISTING SUBGRADE. THE REQUIRED.
- ENGINEERING REPORT FOR MORE INFORMATION.
- GEOTECHNICAL ENGINEER. TESTING SHALL BE PAID FOR BY THE OWNER.
- SPECIFICATIONS WITH PROJECT GEOTECHNICAL ENGINEERING REPORT.
- STREET SUBGRADE NOTES:

- 1. THE SUBGRADE SHOULD BE PROOF ROLLED TO IDENTIFY SOFT AREAS BEFORE STABILIZATION. MATERIAL. THE MATERIAL SHOULD BE PLACED PER APPLICABLE CITY GUIDLINES
- STABILIZATION IS NEEDED.
- OF 6 1/2 PERCENT OF THE DRY WEIGHT OF THE SOIL TO BE TREATED.
- RECOMMENDED. RECOMMENDED.
- 4. IN LIEU OF STABILIZATION, 3X5 ROCK SUBGRADE MAY BE USED.
- 4.1. 3X5 ROCK SHOULD BE WRAPPED IN GEOTECH (FILTER) FABRIC.
- WATER WITHIN THE 3X5 ROCK LAYER SHOULD BE INTERCEPTED AND TAKEN AWAY. THAT THE BASE IS COMPACTED WITHIN THE 3X5 ROCK LAYER.
- COMPACTED IN LIFTS.

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	GUADALUPE COUNTY COUNTY STATE HWY 78 STATE HWY 78 STATE HWY 78 THE HWY 78 STATE HWY 78 THE HWY 78 T	HEQ Image: Construction of Rebecca Carroll, P.E. #92666 on 2/3/2025 This document is not to be used for CONSTRUCTION.
LEGEND: STOP STOP STREET NAME	UNIT BOUNDARY R1–1 30"X30" R2–1 24X30 STANDARD CITY OF CIBOLO STREET NAME SIGN 9XSTD (NOTE: STREET SIGNS MUST SHOW BLOCK NUMBERS) ITEM 531.57 TRAFFIC FLOW ARROW	TAL BAPPEDANSON ENGLINARYSON SA ANTONIO I AUSTIN I HOUSTON I FORT WORTH I DALLAS 2000 NW LOOP 410 I SAN ANTONIO, TX 78213 I 210.375.9000 TEXAS ENGINEERING FIRM #470 I TEXAS SURVEYING FIRM #10028800
SIGNAGE NOTES: 	TYPE II BB (BLUE) RAISED PAVEMENT MARKERS – NO SEPARATE PAY ITEM (N.T.S.) PROPOSED DRIVEWAY (SEE NOTE) SHALL HAVE THE UTILITIES MARKED PRIOR TO THE PLANS ARE APPROXIMATE. CONTRACTOR NSIBLE FOR DETERMINING THE EXISTENCE AND ON ACT THE TELEPHONE NUMBER FOR A UTILITY BILITY TO MAKE ARRANGEMENTS FOR UTILITY BILITY TO MAKE ARRANGEMENTS FOR UTILITY SO AS NOT TO RUPTURE EXISTING DRAINAGE CTRICAL CONDUITS AND PUBLIC UTILITIES. TANDARD HIGHWAY SIGN DESIGNS FOR TEXAS OR IS SPECIFIED ON THE PLANS. SIGNS SHALL BE LOCATED IN THE FIELD TO COMPLY WITH GUIDELINES AND REQUIREMENTS FES. ROL DEVICES, LIGHTING, OR WARNING DEVICES TRAFFIC CONTROL DEVICES SHALL CONFORM TO SIGN COMPONENTS SHALL BE SENT TO THE INATION OF CATALOG SHEETS, MATERIAL LISTS, IAGRAMS, OR PRODUCT SAMPLES NECESSARY TO O PRODUCT CODES WILL BE CLEARLY IDENTIFIED COPE OF THIS PROJECT SHALL CONFORM TO WORKS CONSTRUCTION (LATEST EDITION), TEXAS S AS WELL AS PROVISIONS APPLICABLE TO THE OF THE FIRE DEPARTMENT. EPRECIATED STOCK. ALL EQUIPMENT SHALL BE MOUNTING. ENGINEER GRADE REFLECTIVE SHEETING (TXDOT ATED WITH HIGH SPECIFIC INTENSITY REFLECTIVE ONDITION, ALLS, UTILITIES, FENCES, PAVEMENT, CURBS OR	STEELE CREEK-UNIT 9 CITY OF CIBOLO, TEXAS OVERALL SIGNAGE PLAN (SHEET 2 OF 2)
OR BETTER, PRIOR TO FINAL INSPECTION. 12. ANY CONFLICT BETWEEN ANY DEFINITION, MATERIAL SPECIFICATION, C PAYMENT PROCEDURE, ETC., SHOWN IN THIS PLAN SET AND ANY TEXAS CIBOLO STANDARD SPECIFICATION SHALL BE RESOLVED ONLY BY THE EN- FINAL AND BINDING. 13. ALL STREET NAME SIGNS ARE TO BE PROVIDED AND INSTALLED BY T 14. ALL PAVEMENT MARKINGS SHALL BE THERMOPLASTIC AS PER TXDOT 15. STREET NAME SIGNS SHALL BE DOUBLE SIDED AND MOUNTED ON TO BRACKETS. 16. DRIVEWAYS SHOWN ON THIS PLAN ARE FOR THE SOLE PURPOSE OF RAMP, DRAINAGE INFRASTRUCTURE, OR OTHER CONFLICT. DRIVEWAY LOCA SELECTION AND FINAL LOT DESIGN.	ONSTRUCTION SPECIFICATION, MEASUREMENT AND B DEPARTMENT OF TRANSPORTATION OR CITY OF GINEER AND THE ENGINEER'S DECISION SHALL BE THE DEVELOPER TO CITY SPECIFICATIONS. ITEM NO. 666. OP OF POST WITH DOUBLE SIDED ROUND POLE INDICATING A POTENTIAL CONFLICT WITH CURB ATION IS SUBJECT TO CHANGE BASED ON HOME	PLAT NO JOB NO DATEFEBRUARY 2025 DESIGNERSS CHECKEDDRAWNAR SHEETC3.01

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SEWER LEGEND

PROJECT LIMITS EXISTING WATER EXISTING SEWER PROPOSED SEWER

PROPOSED WATER PROPOSED SEWER LATERAL

NOTE:

WATER AND SEWER INFRASTRUCTURE SHOULD COMPLY WITH AND BE INSPECTED BY THE CITY OF CIBOLO. IN THE EVENT OF A CONFLICT, CITY OF CIBOLO SPECIFICATIONS CONTROL.

TRENCH EXCAVATION SAFETY PROTECTION:

CONTRACTOR AND/ OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/ GEOTECHNICAL/ SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND /OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFÉTY PROTECTION THAT COMPLY WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

CAUTION!!

CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING BUT NOT LIMITING TO: WATER, SEWER, TELEPHONE AND FIBER OPTIC LINES, SITE LIGHTING ELECTRIC, SECONDARY ELECTRIC, PRIMARY ELECTRICAL DUCTBANKS, LANDSCAPE IRRIGATION FACILITIES, AND GAS LINES. ANY UTILITY CONFLICTS THAT ARISE SHOULD BE COMMUNICATED TO THE ENGINEER IMMEDIATELY AND PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONTACT 1-800-DIG-TESS A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES SHALL E THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND THE REPAIR SHALL BE AT CONTRACTOR'S SOLE EXPENSE WHETHER THE UTILITY IS SHOWN ON THESE PLANS OR NOT.

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E ENGINEERS	SAN ANTONIO I AUSTIN I HOUSTON I FORT WORTH I DALLAS 2000 NW LOOP 410 I SAN ANTONIO, TX 78213 I 210.375.9000 Texas engineering firm #470 i texas surveying firm #10028800
STEELE CREEK-UNIT 9 CITY OF CIBOLO, TEXAS	OVERALL SANITERY SEWER PLAN (SHEET 1 OF 2)

JOB NO. 12629-09

DATE FEBRUARY 2025

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SANITARY SEWER LINE "A"

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VERTICAL SCALE: 1" = 5'

HORIZONTAL SCALE: 1" = 50'

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EXCAVATION.

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SANITARY SEWER NOTES

1. ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THIS PROJECT SHALL COMPLY WITH THE FOLLOWING AS APPLICABLE: A. CURRENT TEXAS COMMISSION ON ENVIRONMENTAL QUALITY'S DESIGN CRITERIA FOR SEWERAGE SYSTEMS [30 TAC 217]. B. CURRENT TXDOT " STANDARD SPECIFICATION FOR CONSTRUCTION OF HIGHWAYS, STREETS AND DRAINAGE". C. CITY OF CIBOLO RULES AND REQUIREMENTS.

2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING TO ITS ORIGINAL OR BETTER CONDITION FROM DAMAGE DONE TO EXISTING FENCES, CURBS, STREETS, DRIVEWAYS, LANDSCAPING AND STRUCTURES.

3. THE CONTRACTOR SHALL AVOID CUTTING ROOTS LARGER THAN ONE INCH IN DIAMETER WHEN EXCAVATING NEAR EXISTING TREES. EXCAVATION IN VICINITY OF TREES SHALL PROCEED WITH CAUTION. 4. THE CONTRACTOR SHALL MAINTAIN SERVICE TO EXISTING SANITARY SEWERS AT ALL TIMES DURING CONSTRUCTION.

5. DUE TO FEDERAL REGULATIONS TITLE 49, PART 192.181, UTILITY PURVEYORS MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT AND WORK AROUND GAS VALVES THAT ARE IN THE PROJECT AREAS. 6. ALL RESIDENTIAL SEWER SERVICE LATERALS ARE 6" DIA. AND SHALL BE EXTENDED TO THE 15' UTILITY EASEMENT AND CAPPED AND SEALED. NO SEPARATE PAY ITEM.

7. CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES. THE CONTRACTOR'S IMPLEMENTATION OF THE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLIES WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH

8. CONTRACTOR IS RESPONSIBLE FOR REMOVAL OF ALL WASTE MATERIALS UPON PROJECT COMPLETION. THE CONTRACTOR SHALI PERMANENTLY PLACE ANY WASTE MATERIALS IN THE 100-YEAR FLOOD PLAIN WITHOUT FIRST OBTAINING AN APPROVED FLOOD PLAIN DEVELOPMENT PERMIT.

9. WHERE THE MINIMUM 9 FOOT SEPARATION DISTANCE BETWEEN SEWER LINES AND WATER LINES/MAINS CANNOT BE MAINTAINED, THE INSTALLATION OF SEWER LINES SHALL BE IN STRICT ACCORDANCE OF 30 TAC 217.5. 10. THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY AND ENVIRONMENTAL PROTECTION AGENCY (EPA) REQUIRE EROSION AND SEDIMENTATION CONTROL FOR CONSTRUCTION OF SEWER COLLECTION SYSTEMS. DEVELOPER OR AUTHORIZED REPRESENTATIVE SHALL PROVIDE EROSION AND SEDIMENTATION CONTROL AS NOTES ON THE PROJECT'S PLAN AND PROFILE SHEETS.

11. ALL TEMPORARY EROSION AND SEDIMENTATION CONTROLS SHALL BE REMOVED BY THE CONTRACTOR AT FINAL ACCEPTANCE OF THE PROJECT. 12. NO EXTRA-PAYMENT SHALL BE ALLOWED FOR WORK CALLED FOR ON THE PLANS BUT NOT INCLUDED ON THE BID SCHEDULE. THIS INCIDENTAL WORK WILL BE REQUIRED AND SHALL BE INCLUDED UNDER THE PAY ITEM TO WHICH IT RELATES. 13. ALL PVC SEWER PIPE WITH OVER 14 FEET OF COVER SHALL BE EXTRA STRENGTH PIPE, MINIMUM STIFFNESS OF 115 PSI.

14. WHERE REQUIRED, CONCRETE ENCASEMENT SHALL BE PLACED FOR FULL WIDTH OF THE TRENCH TO A PLANE 6" ABOVE THE TOP OF THE

14. A MINIMUM OF 3 FEET OF COVER IS TO BE MAINTAINED OVER THE SANITARY SEWER MAIN AND LATERALS AT SUBGRADE, OTHERWISE CONCRETE ENCASEMENT WILL BE REQUIRED. 15. A DEFLECTION TEST SHALL BE PERFORMED ON ALL FLEXIBLE PIPE. THE TEST SHALL BE CONDUCTED AFTER INITIAL BACKFILL HAS BEEN IN PLACE AT LEAST 30 DAYS.

16. ALL MAINS MUST PASS AIR TESTING PER THE PROJECT SPECIFICATIONS PRIOR TO ACCEPTANCE.

17. SANITARY SEWER MAIN CONNECTIONS MADE DIRECTLY TO EXISTING MANHOLES WILL REQUIRE SUCCESSFUL TESTING OF THE MANHOLES IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS.

18. AFTER CONSTRUCTION, TESTING WILL BE DONE BY T.V. CAMERA BY THE CONTRACTOR AND OBSERVED BY INSPECTOR, AND WASTEWATER ENGINEERING PERSONNEL AS THE CAMERA IS RUN THROUGH THE LINES. ANY ABNORMALITIES, SUCH AS BROKEN PIPE OR MISALIGNED JOINTS, MUST BE REPLACED BY THE CONTRACTOR AT HIS EXPENSE. 19. THE LOCATIONS AND DEPTHS OF EXISTING UTILITIES SHOWN ON THESE PLANS ARE APPROXIMATE ONLY. ACTUAL LOCATIONS AND DEPTHS

OF UTILITIES MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LOCATE UTILITY SERVICE LINES AS REQUIRED FOR CONSTRUCTION AND NOTIFY THE ENGINEER OF ANY CONFLICTS IMMEDIATELY. ANY DAMAGE BY THE CONTRACTOR TO EXISTING UTILITIES, WHETHER SHOWN ON THE PLANS OR NOT, SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPAIR, AT HIS SOLE EXPENSE.

20. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUIRING ALL PERMITS, TESTS, APPROVALS AND ACCEPTANCES REQUIRED TO COMPLETE CONSTRUCTION OF THIS PROJECT.

21. ALL UTILITIES SHALL BE INSTALLED PRIOR TO PAVEMENT CONSTRUCTION. 22. NO WATER JETTING TO BACKFILL TRENCHES WILL BE ALLOWED ON THIS PROJECT.

23. IF THE GIVEN TOP OF MANHOLE ELEVATION DOES NOT AGREE WITH ACTUAL GROUND SURFACE, THE CONTRACTOR SHALL ADJUST ELEVATIONS SUCH THAT THE TOP OF MANHOLE SHALL BE 3" ABOVE EXISTING GROUND OR FLUSH WITH FINISHED PAVEMENT IN PAVED AREA. 24. ALL MANHOLES TO BE EPOXY LINED.

25. CONTRACTOR SHALL PROVIDE TV INSPECTION REPORT OF SANITARY SEWER MAIN WITH AS-BUILT SUBMITTAL.

26. NO SEWER LATERAL LINES OR CLEANOUTS WILL BE ALLOWED IN OR UNDER RESIDENTIAL DRIVEWAYS.

27. NO VERTICAL STACKS ALLOWED FOR ANY LOTS UNLESS OTHERWISE SPECIFIED BY THE ENGINEER.

C4.10

SHEET

V1420 V1430 Assembly

V1430CPT/V1420 ASSEMBLY

Product Number 41430016W01 Design Features -Materials Frame Gray Iron (CL35B) Cover Gray fron (CL35B)

-Design Load Heavy Duty -Open Area

n/a -Coating Undipped -VDesignates Machined Surface

Certification - ASTM A48

-Country of Origin: USA Major Components

41420015 41430016

Drawing Revision 07/08/2009 Designer: GAD 8/1/2013 Revised By: DAE

Disclaimer Weights (bs.kg) dimensions (inchesimm) end drawings provided for your guidence. We reserve the right to modify specifications without pror notice.

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Contact 800 626 4653 ejco.com

> **PRODUCT NUMBER** 41430012B01

DESIGN FEATURES MATERIALS FRAME-GRAY IRON ASTM A48 CL35B COVER-GRAY RON ASTM A48 CL35B

DESIGN LOAD HEAVY DUTY COATING

V DESIGNATES MACHINED SURFACE SPECIAL FEATURES

ALTERNATE OPTIONS

REFERENCE INFORMATION 41430012

41420015

DRAWING DETAILS ORIGINAL DRAWING: GAD 07/08/09 REVISED BY: SBB 12/07/10

V1430APT/V1420-1480Z1PT ASSEMBLY

Weights (bs./kg.) dimensions (inches/mm.) and drawings provided for your guidance.
 We reserve the right to modify specifications without prior notice.
 Uncontrolled distribution.

PRODUCT NUMBER 41430014W01

DESIGN FEATURES MATERIALS FRAME-GRAY IRON ASTM A48 CL35B COVER-GRAY RON ASTM A48 CL35B **Design Load** Heavy Duty COATING UNDIPPED

V DESIGNATES MACHINED SURFACE **SPECIAL FEATURES**

ALTERNATE OPTIONS

REFERENCE INFORMATION 41430014 41420015

DRAWING DETAILS ORIGINAL DRAWING: GAD 07/08/09 REV/SED BY: SBB 12/07/10

SANITARY SEWER NOTES AND DETAILS (SHEET 2 OF 2) (SHEET 2 OF 2)
PLAT NO
JOB NO. <u>12629–09</u> DATE FEBRUARY 2025
DATE FEDRUART 2020 DESIGNER SS
CHECKED DRAWN AR
SHEET 04.20

PROJECT LIMITS

EXISTING WATER

EXISTING SEWER PROPOSED SEWER

PROPOSED WATER PROPOSED 3/4" SINGLE SERVICE WITH 5/8" METER PROPOSED 3/4" DUAL SERVICE WITH 5/8" METER JOINT RESTRAINT

02/03/25

NOTE:

WATER AND SEWER INFRASTRUCTURE SHOULD COMPLY WITH AND BE INSPECTED BY THE CITY OF CIBOLO. IN THE EVENT OF A CONFLICT, CITY OF CIBOLO SPECIFICATIONS CONTROL.

TRENCH EXCAVATION SAFETY PROTECTION:

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CAUTION!!

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HEET

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UTILITY LEGEND

PROJECT LIMITS EXISTING WATER EXISTING SEWER PROPOSED SEWER

PROPOSED WATER PROPOSED WYE & LATERAL SINGLE WATER SERVICE STREET LIGHTS

DUAL WATER SERVICE

NOTE:

WATER AND SEWER INFRASTRUCTURE SHOULD COMPLY WITH AND BE INSPECTED BY THE CITY OF CIBOLO. IN THE EVENT OF A CONFLICT, CITY OF CIBOLO SPECIFICATIONS CONTROL.

CONDUIT NOTES:

- 1. CONTRACTOR SHALL INSTALL PERMANENT MARKERS IN PROPOSED CURB WHERE CONDUITS CROSS THE ROADWAY (BOTH SIDES).
- 2. CONDUITS SHALL BE PVC WITH MINIMUM BURY OF 30 INCHES. SCHEDULE 80 TO BE USED FOR CPS CONDUITS, ALL OTHER CONDUITS ARE SCHEDULE 40.
- 3. ALL CONDUITS SHALL BE EXTENDED BEHIND CURBS OR PROPOSED SIDEWALKS A MINIMUM OF 3 FEET AND CAPPED FOR FUTURE USE.

TRENCH EXCAVATION SAFETY PROTECTION:

CONTRACTOR AND/ OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/ GEOTECHNICAL/ SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND /OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFÉTY PROTECTION THAT COMPLY WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

CAUTION!!

CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING BUT NOT LIMITING TO: WATER, SEWER, TELEPHONE AND FIBER OPTIC LINES, SITE LIGHTING ELECTRIC, SECONDARY ELECTRIC, PRIMARY ELECTRICAL DUCTBANKS, LANDSCAPE IRRIGATION FACILITIES, AND GAS LINES. ANY UTILITY CONFLICTS THAT ARISE SHOULD BE COMMUNICATED TO THE ENGINEER IMMEDIATELY AND PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONTACT 1-800-DIG-TESS A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES SHALL B THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND THE REPAIR SHALL BE AT CONTRACTOR'S SOLE EXPENSE WHETHER THE UTILITY IS SHOWN ON THESE PLANS OR NOT.

STEELE CREEK-UNIT 9	OVERALL UTILITY PLAN
CITY OF CIBOLO, TEXAS	(SHEET 1 OF 2)
PLAT NO JOB NO DATEFEB DESIGNER CHECKED SHEET	12629-09 RUARY 2025 SS DRAWN AR C6.00

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- 3. 4.

SWP3 MODIFICATIONS SIGNATURE DESCRIPTION

RESIST WASHOUT DURING THE ESTABLISHMENT PERIOD. MESH OR OTHER NETTING MAY BE PEGGED OVER THE SOD FOR EXTRA PROTECTION IN CRITICAL AREAS.

LOCATE AND REPAIR ANY DAMAGE.

SOON AS PRACTICAL.

2. DAMAGE FROM STORMS OR NORMAL CONSTRUCTION ACTIVITIES SUCH AS TIRE RUTS OR DISTURBANCE OF SWALE STABILIZATION SHOULD BE REPAIRED AS

6. THE ROCK BERM SHOULD BE LEFT IN PLACE UNTIL ALL UPSTREAM AREAS ARE STABILIZED AND ACCUMULATED SILT REMOVED.

SOMETRIC PLAN VIEW

🖛 24" MIN. 🗕

ROCK BERMS

THE PURPOSE OF A ROCK BERM IS TO SERVE AS A CHECK DAM IN AREAS OF CONCENTRATED FLOW, TO INTERCEPT SEDIMENT-LADEN RUNOFF, DETAIN THE SEDIMENT AND RELEASE THE WATER IN SHEET FLOW. THE ROCK BERM SHOULD BE USED WHEN THE CONTRIBUTING DRAINAGE AREA IS LESS THAN 5 ACRES. ROCK BERMS ARE USED IN AREAS WHERE THE VOLUME OF RUNOFF IS TOO GREAT FOR A SILT FENCE TO CONTAIN. THEY ARE LESS EFFECTIVE FOR SEDIMENT REMOVAL THAN SILT FENCES, PARTICULARLY FOR FINE PARTICLES, BUT ARE ABLE TO WITHSTAND HIGHER FLOWS THAN A SILT FENCE. AS SUCH, ROCK BERMS ARE OFTEN USED IN AREAS OF CHANNEL FLOWS (DITCHES, GULLIES, ETC.). ROCK BERMS ARE MOST EFFECTIVE AT REDUCING BED LOAD IN CHANNELS AND SHOULD NOT BE SUBSTITUTED FOR OTHER EROSION AND SEDIMENT CONTROL MEASURES FARTHER UP THE WATERSHED.

INSPECTION AND MAINTENANCE GUIDELINES

. INSPECTION SHOULD BE MADE WEEKLY AND AFTER EACH RAINFALL BY THE RESPONSIBLE PARTY. FOR INSTALLATIONS IN STREAMBEDS, ADDITIONAL DAILY INSPECTIONS SHOULD BE MADE.

2. REMOVE SEDIMENT AND OTHER DEBRIS WHEN BUILDUP REACHES 6 INCHES AND DISPOSE OF THE ACCUMULATED SILT IN AN APPROVED MANNER THAT WILL NOT CAUSE ANY ADDITIONAL SILTATION. 3. REPAIR ANY LOOSE WIRE SHEATHING.

4. THE BERM SHOULD BE RESHAPED AS NEEDED DURING INSPECTION

5. THE BERM SHOULD BE REPLACED WHEN THE STRUCTURE CEASES TO FUNCTION AS INTENDED DUE TO SILT ACCUMULATION AMONG THE ROCKS, WASHOUT, CONSTRUCTION TRAFFIC DAMAGE, ETC.

MATERIALS

THE BERM STRUCTURE SHOULD BE SECURED WITH A WOVEN WIRE SHEATHING HAVING MAXIMUM OPENING OF 1 INCH AND A MINIMUM WIRE DIAMETER OF 20 GAUGE GALVANIZED AND SHOULD BE SECURED WITH SHOAT RINGS.

2. CLEAN, OPEN GRADED 3-INCH TO 5-INCH DIAMETER ROCK SHOULD BE USED, EXCEPT IN AREAS WHERE HIGH VELOCITIES OR LARGE VOLUMES OF FLOW ARE EXPECTED, WHERE 5-INCH TO 8-INCH DIAMETER ROCKS MAY BE USED

INSTALLATION

1. LAY OUT THE WOVEN WIRE SHEATHING PERPENDICULAR TO THE FLOW LINE THE SHEATHING SHOULD BE 20 GAUGE WOVEN WIRE MESH WITH 1 INCH OPENINGS.

2. BERM SHOULD HAVE A TOP WIDTH OF 2 FEET MINIMUM WITH SIDE SLOPES BEING 2:1 (H:V) OR FLATTER. 3. PLACE THE ROCK ALONG THE SHEATHING AS SHOWN IN THE DIAGRAM TO

A HEIGHT NOT LESS THAN 18". 4. WRAP THE WIRE SHEATHING AROUND THE ROCK AND SECURE WITH TIE WIRE SO THAT THE ENDS OF THE SHEATHING OVERLAP AT LEAST 2 INCHES.

AND THE BERM RETAINS ITS SHAPE WHEN WALKED UPON. 5. BERM SHOULD BE BUILT ALONG THE CONTOUR AT ZERO PERCENT GRADE

OR AS NEAR AS POSSIBLE. 6. THE ENDS OF THE BERM SHOULD BE TIED INTO EXISTING UPSLOPE GRADE

AND THE BERM SHOULD BE BURIED IN A TRENCH APPROXIMATELY 3 TO 4 INCHES DEEP TO PREVENT FAILURE OF THE CONTROL.

COMMON TROUBLE POINTS

. INSUFFICIENT BERM HEIGHT OR LENGTH (RUNOFF QUICKLY ESCAPES OVER THE TOP OR AROUND THE SIDES OF BERM).

2. BERM NOT INSTALLED PERPENDICULAR TO FLOW LINE (RUNOFF ESCAPING AROUND ONE SIDE).

SILT FENCE

A SILT FENCE IS A BARRIER CONSISTING OF GEOTEXTILE FABRIC SUPPORTED BY METAL POSTS TO PREVENT SOIL AND SEDIMENT LOSS FROM A SITE. WHEN PROPERLY USED. SILT FENCES CAN BE HIGHLY EFFECTIVE AT CONTROLLING SEDIMENT FROM DISTURBED AREAS. THEY CAUSE RUNOFF TO POND, ALLOWING HEAVIER SOLIDS TO SETTLE OUT. IF NOT PROPERLY INSTALLED, SILT FENCES ARE NOT LIKELY TO BE EFFECTIVE.

THE PURPOSE OF A SILT FENCE IS TO INTERCEPT AND DETAIN WATER-BORN SEDIMENT FROM UNPROTECTED AREAS OF A LIMITED EXTENT. SILT FENCE IS USED DURING THE PERIOD OF CONSTRUCTION NEAR THE PERIMETER OF A DISTURBED AREA TO INTERCEPT SEDIMENT WHILE ALLOWING WATER TO PERCOLATE THROUGH. THIS FENCE SHOULD REMAIN IN PLACE UNTIL THE DISTURBED AREA IS PERMANENTLY STABILIZED. SILT FENCE SHOULD NOT BE USED WHERE THERE IS A CONCENTRATION OF WATER IN A CHANNEL OR DRAINAGE WAY. IF CONCENTRATED FLOW OCCURS AFTER INSTALLATION, CORRECTIVE ACTION MUST BE TAKEN SUCH AS PLACING A ROCK BERM IN THE AREAS OF CONCENTRATED FLOW.

SILT FENCING WITHIN THE SITE MAY BE TEMPORARILY MOVED DURING THE DAY TO ALLOW CONSTRUCTION ACTIVITY PROVIDED IT IS REPLACED AND PROPERLY ANCHORED TO THE GROUND AT THE END OF THE DAY. SILT FENCES ON THE PERIMETER OF THE SITE OR AROUND DRAINAGE WAYS SHOULD NOT BE MOVED AT ANY TIME.

MATERIALS

I. SILT FENCE MATERIAL SHOULD BE POLYPROPYLENE, POLYETHYLENE, OR POLYAMIDE WOVEN OR NONWOVEN FABRIC. THE FABRIC SHOULD BE 36 INCHES, WITH A MINIMUM UNIT WEIGHT OF 4.5 OZ/YD, MULLEN BURST STRENGTH EXCEEDING 190 LB/IN2, ULTRAVIOLET STABILITY EXCEEDING 70%, AND MINIMUM APPARENT OPENING SIZE OF U.S. SIEVE NUMBER 30.

2. FENCE POSTS SHOULD BE MADE OF HOT ROLLED STEEL, AT LEAST 4 FEET LONG WITH TEE OR Y-BAR CROSS SECTION, SURFACE PAINTED OR GALVANIZED, MINIMUM WEIGHT 1.25 LB/FT, AND BRINDELL HARDNESS EXCEEDING 140.

3. WOVEN WIRE BACKING TO SUPPORT THE FABRIC SHOULD BE GALVANIZED 2" X 4" WELDED WIRE, 12 GAUGE MINIMUM.

INSTALLATION

1. STEEL POSTS, WHICH SUPPORT THE SILT FENCE, SHOULD BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POSTS MUST BE EMBEDDED A MINIMUM OF 1-FOOT DEEP AND SPACED NOT MORE THAN 8 FEET ON CENTER. WHERE WATER CONCENTRATES, THE MAXIMUM SPACING SHOULD BE 6 FEET.

2. LAY OUT FENCING DOWN-SLOPE OF DISTURBED AREA, FOLLOWING THE CONTOUR AS CLOSELY AS POSSIBLE. THE FENCE SHOULD BE SITED SO THAT THE MAXIMUM DRAINAGE AREA IS 1/4 ACRE/100 FEET OF FENCE.

3. THE TOE OF THE SILT FENCE SHOULD BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWN-SLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW. WHERE FENCE CANNOT BE TRENCHED IN (E.G., PAVEMENT OR ROCK OUTCROP), WEIGHT FABRIC FLAP WITH 3 INCHES OF PEA GRAVEL ON UPHILL SIDE TO PREVENT FLOW FROM SEEPING UNDER FENCE.

4. THE TRENCH MUST BE A MINIMUM OF 6 INCHES DEEP AND 6 INCHES WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL.

5. SILT FENCE SHOULD BE SECURELY FASTENED TO EACH STEEL SUPPORT POST OR TO WOVEN WIRE, WHICH IS IN TURN ATTACHED TO THE STEEL FENCE POST. THERE SHOULD BE A 3-FOOT OVERLAP, SECURELY FASTENED WHERE ENDS OF FABRIC MEET

6. SILT FENCE SHOULD BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.

COMMON TROUBLE POINTS FENCE NOT INSTALLED ALONG THE CONTOUR CAUSING WATER TO

CONCENTRATE AND FLOW OVER THE FENCE. 2. FABRIC NOT SEATED SECURELY TO GROUND (RUNOFF PASSING UNDER

FENCE).

3. FENCE NOT INSTALLED PERPENDICULAR TO FLOW LINE (RUNOFF ESCAPING AROUND SIDES

4. FENCE TREATING TOO LARGE AN AREA, OR EXCESSIVE CHANNEL FLOW (RUNOFF OVERTOPS OR COLLAPSES FENCE).

INSPECTION AND MAINTENANCE GUIDELINES 1. INSPECT ALL FENCING WEEKLY, AND AFTER RAINFALL.

2. REMOVE SEDIMENT WHEN BUILDUP REACHES 6 INCHES.

3. REPLACE TORN FABRIC OR INSTALL A SECOND LINE OF FENCING PARALLEL TO THE TORN SECTION.

4. REPLACE OR REPAIR SECTIONS CRUSHED OR COLLAPSED IN THE COURSE OF CONSTRUCTION ACTIVITY. IF A SECTION OF FENCE IS OBSTRUCTING VEHICULAR ACCESS, CONSIDER RELOCATING IT TO A SPOT WHERE IT WILL PROVIDE EQUAL PROTECTION, BUT WILL NOT OBSTRUCT VEHICLES. A TRIANGULAR FILTER DIKE MAY BE PREFERABLE TO A SILT FENCE AT COMMON VEHICLE ACCESS POINTS.

WHEN CONSTRUCTION IS COMPLETE, THE SEDIMENT SHOULD BE DISPOSED OF IN A MANNER THAT WILL NOT CAUSE ADDITIONAL SILTATION AND THE PRIOR LOCATION OF THE SILT FENCE SHOULD BE REVEGETATED. THE FENCE ITSELF SHOULD BE DISPOSED OF IN AN APPROVED LANDFILL

CURB.

FROM STORM WATER RUNOFF.

MATERIALS

MAINTENANCE

BACKFILLED AND REPAIRED.

SILT FENCE DETAIL

NOT-TO-SCALE