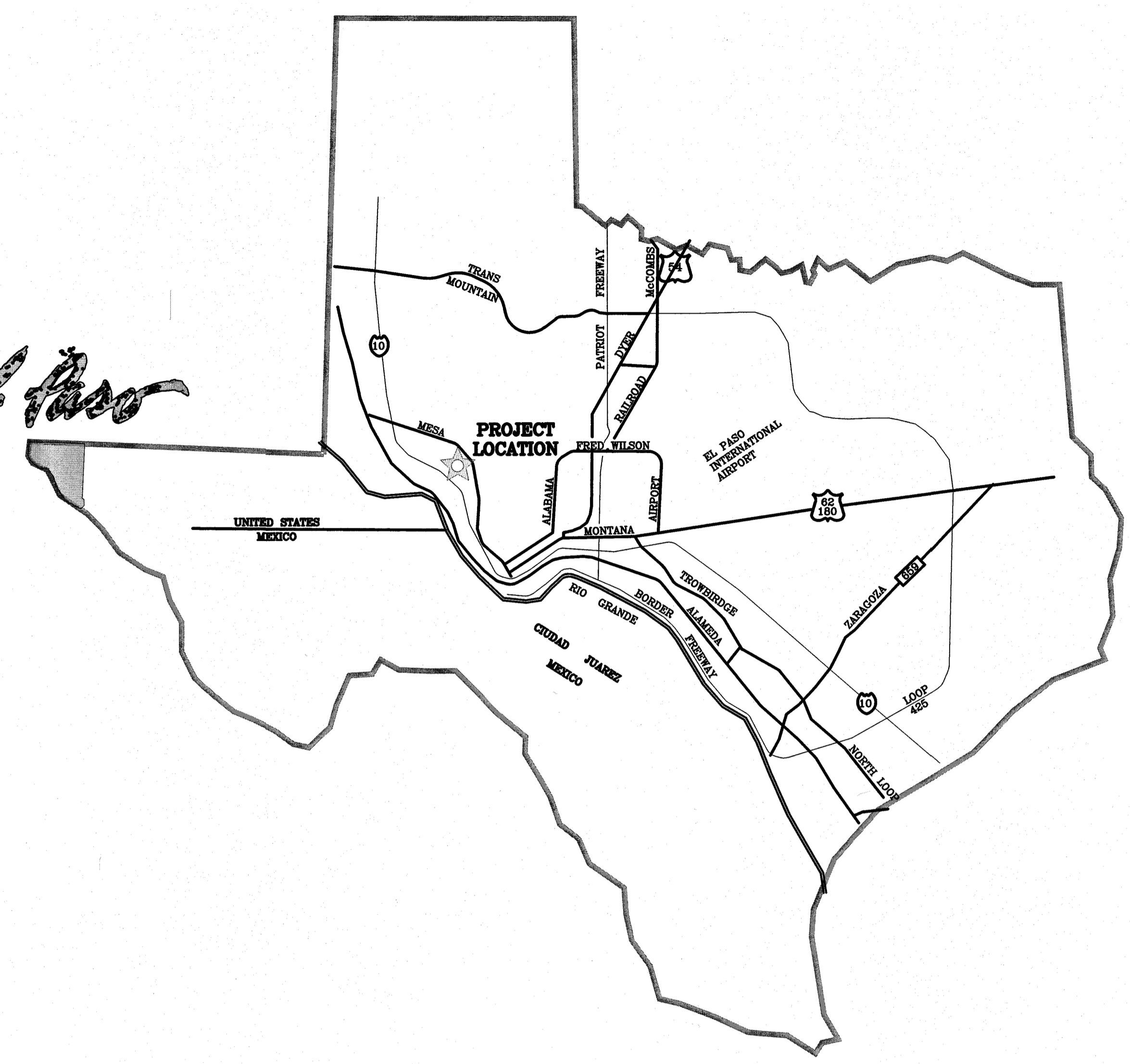
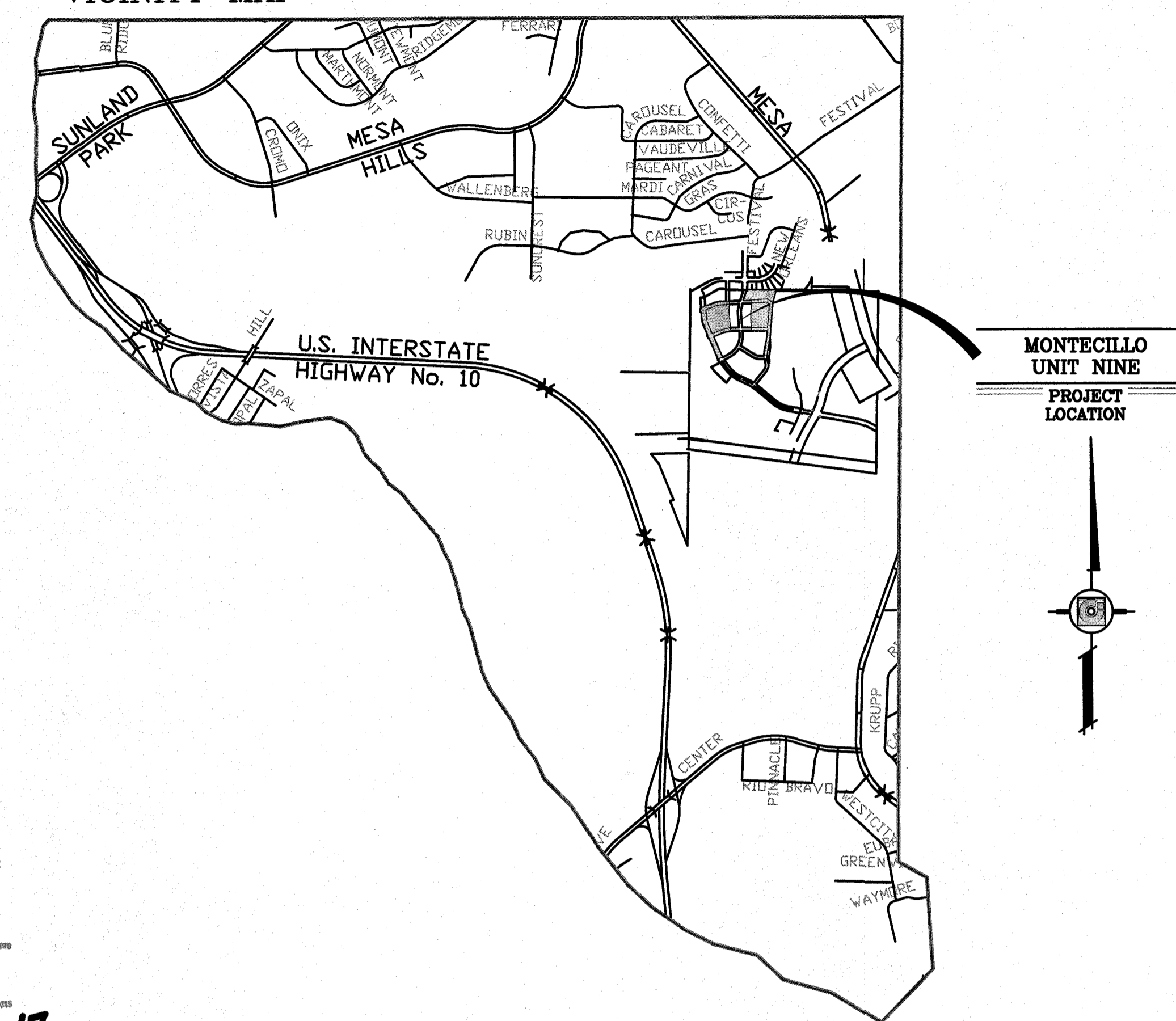


El Paso

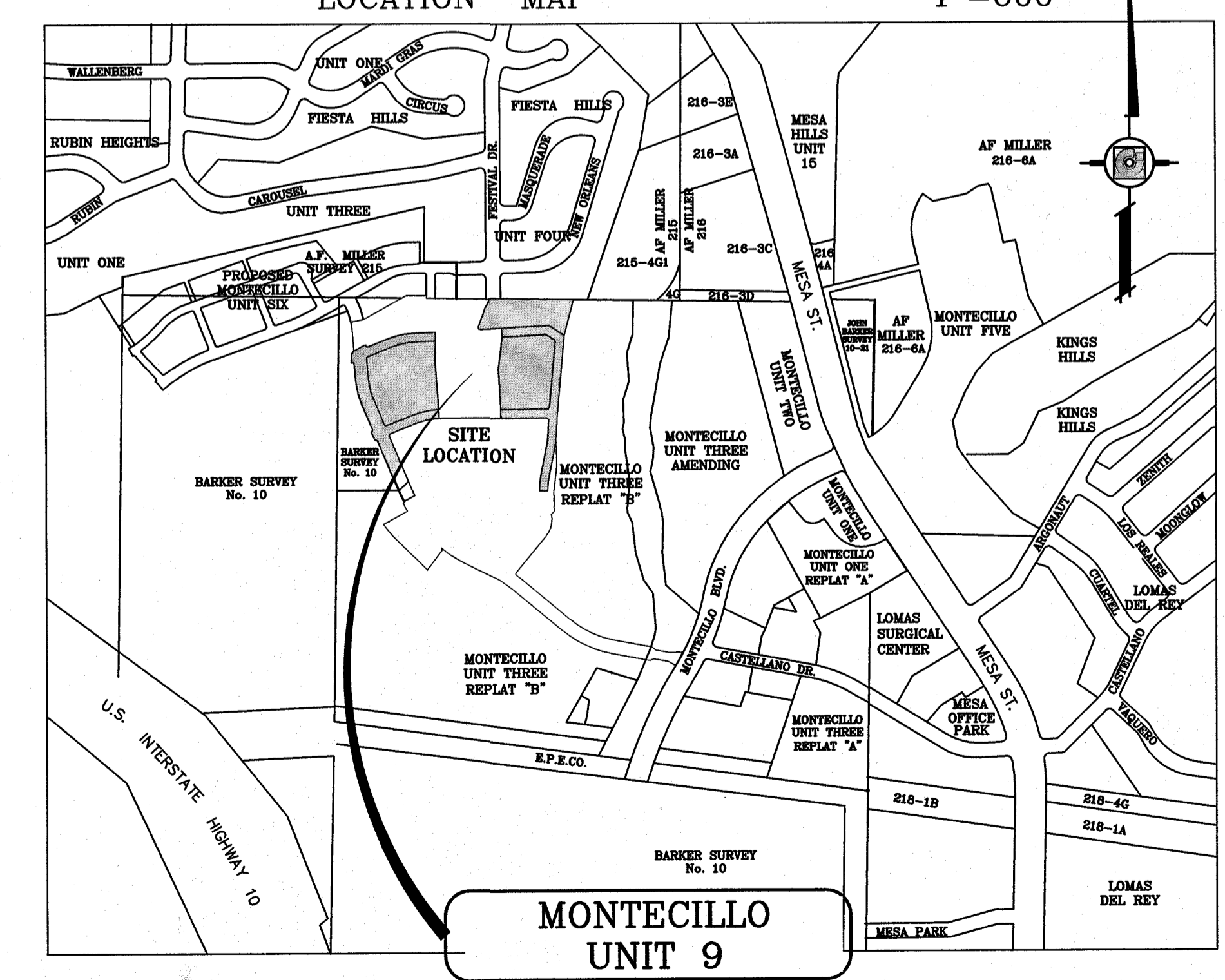


VICINITY MAP



CITY DEVELOPMENT DEPARTMENT
 Reviewed For Conformance For Condition Related To:
 Grading & Drainage, Stormwater Management, Wetland Buffers, On-Site Parking Layout, Stormwater, Retaining Rock Walls, On-Site Pooling of Storm Waters
 Contractor Must Call 24 Hours Prior To Construction For Inspections
 By *José Vignata* 2-9-17 Date

LOCATION MAP 1"=600'



STREET IMPROVEMENTS

I N D E X

TITLE	SHEET No.	TITLE	SHEET No.
COVER SHEET	1 OF 42	VIN ETIENNE DR UTILITY 9+00 TO 16+50	16 OF 42
PLAT	2-2A OF 42	CASTELLANO DR UTILITY 0+00 TO 10+50	17 OF 42
OVERALL GRADING PLAN	3 OF 42	VIN MARBELLA DR UTILITY 0+00 TO 9+00	18 OF 42
DRAINAGE PLAN	3-A OF 42	VIN RALIUGA, VIN BENICARLO, VIN ALMORADI, VIN BUGARRA UTILITY	19 OF 42
ROADWAY SECTIONS	4 OF 42	VIN CADIZ, VIN CATALUNYA, VIN BUNOL, VIN VEJA UTILITY	20 OF 42
VIN ETIENNE DR 0+23.85 TO 9+50	5 OF 42	OVERALL STRIPING PLAN AND SIGNAGE PLAN	21 OF 42
VIN ETIENNE DR 9+50 TO 13+75	6 OF 42	STANDARD ROADWAY DETAILS	22-23 OF 42
VIN MARBELLA DR 0+40.01 TO 9+00	7 OF 42	WATER DETAILS	24 OF 42
CASTELLANO DR 1+60.35 TO 10+50	8 OF 42	WATER AND SEWER NOTES AND DETAILS	25-28 OF 42
VIN VEJA 10+00 TO 13+75	9 OF 42	EROSION CONTROL PLAN	29 OF 42
VIN BUGARRA 10+00 TO 13+80	10 OF 42	EROSION CONTROL DETAILS	30 OF 42
VIN RALIUGA/VIN BENICARLO/VIN ALMORADI	11 OF 42	EROSION CONTROL NOTES	31 OF 42
VIN CATALUNYA/VIN BUNOL/VIN CADIZ	11-A OF 42	ELECTRICAL PLANS	32 OF 42
OVERALL UTILITY PLAN	12 OF 42	ELECTRICAL PLANS	33 OF 42
TOWNHOMES UTILITIES BLOCK 15	13 OF 42	ELECTRICAL PLANS	34 OF 42
TOWNHOMES UTILITIES BLOCK 14	14 OF 42	ELECTRICAL PLANS	35 OF 42
VIN ETIENNE DR UTILITY 0+23.85 TO 9+00	15 OF 42	LANDSCAPE PLANS	L1-L7 OF 42

CITY MONUMENT AT POINT OF CURVE CENTERLINE MONTECILLO BLVD. ADJACENT TO BLOCK 1, MONTECILLO UNIT NINE (STATION 0+82.81) ELEVATION: 4207.13(CITY DATUM)

PROJECT NAME
MONTECILLO UNIT 9 EAST AND WEST
 BEING A REPLAT OF A PORTION OF LOT 6, BLOCK 2, MONTECILLO UNIT THREE, REPLAT 'B' AND A PORTION OF TRACT 1, JOHN BAKER SURVEY NO. 10, CITY OF EL PASO, EL PASO COUNTY, TEXAS, CONTAINING 5.4243 ACRES

ENGINEER'S SEAL

 RONALD R. BOHANNAN
 P.E. #88928

TERRA WEST, LLC
 5571 MIDWAY PARK PLACE NE
 ALBUQUERQUE, NM 87109
 (505) 858-3100
 www.tierrowestllc.com
 TEXAS BUSINESS NO. P-11773

NO.	DATE	DESIGNED BY	VC	DRAWN BY	pm	DRAWING NAME	JOB NO	2015079	CHECKED BY	VC	DATE	1-10-17
						DESIGN						

SHEET TITLE
COVER SHEET

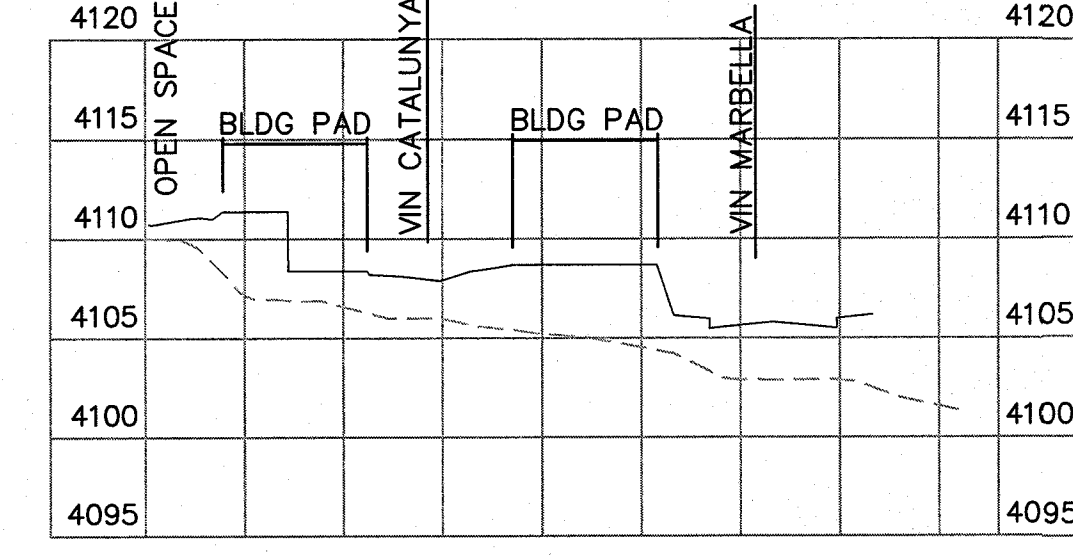
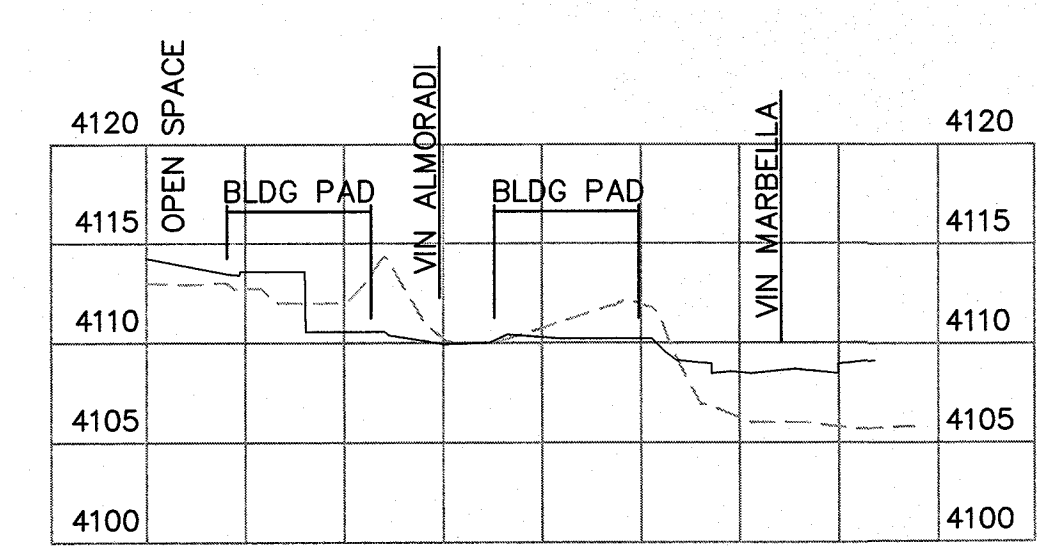
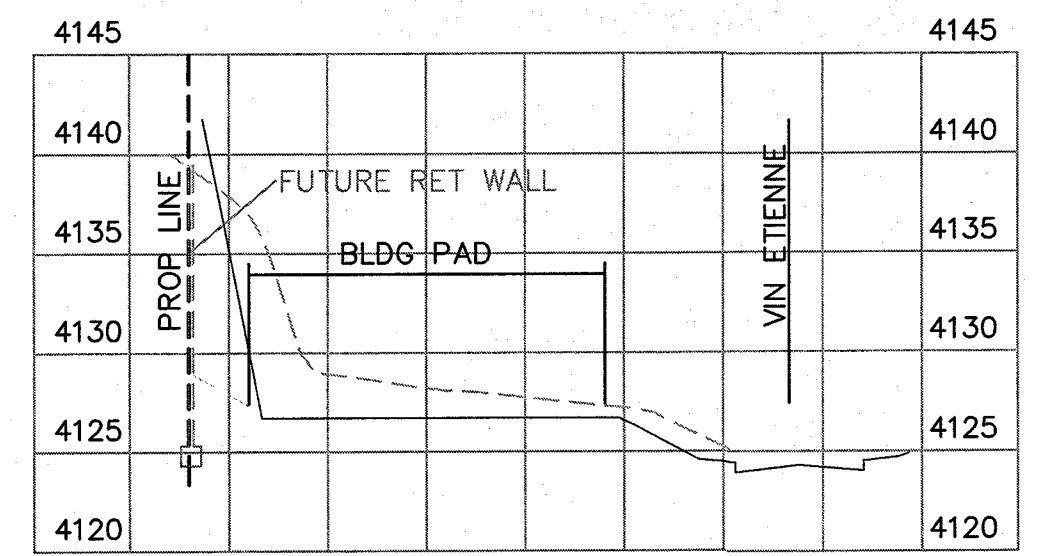
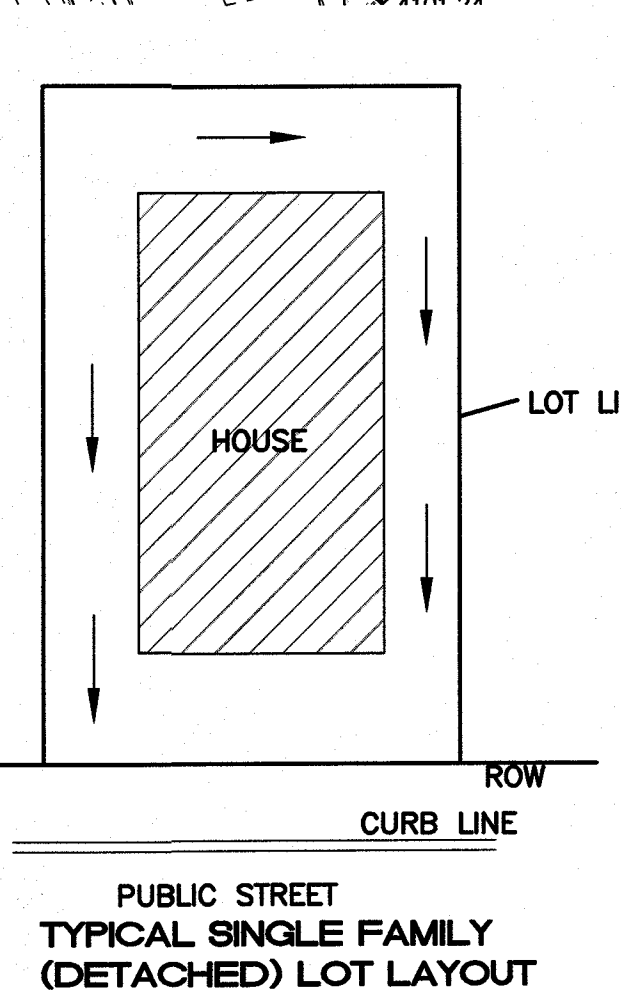
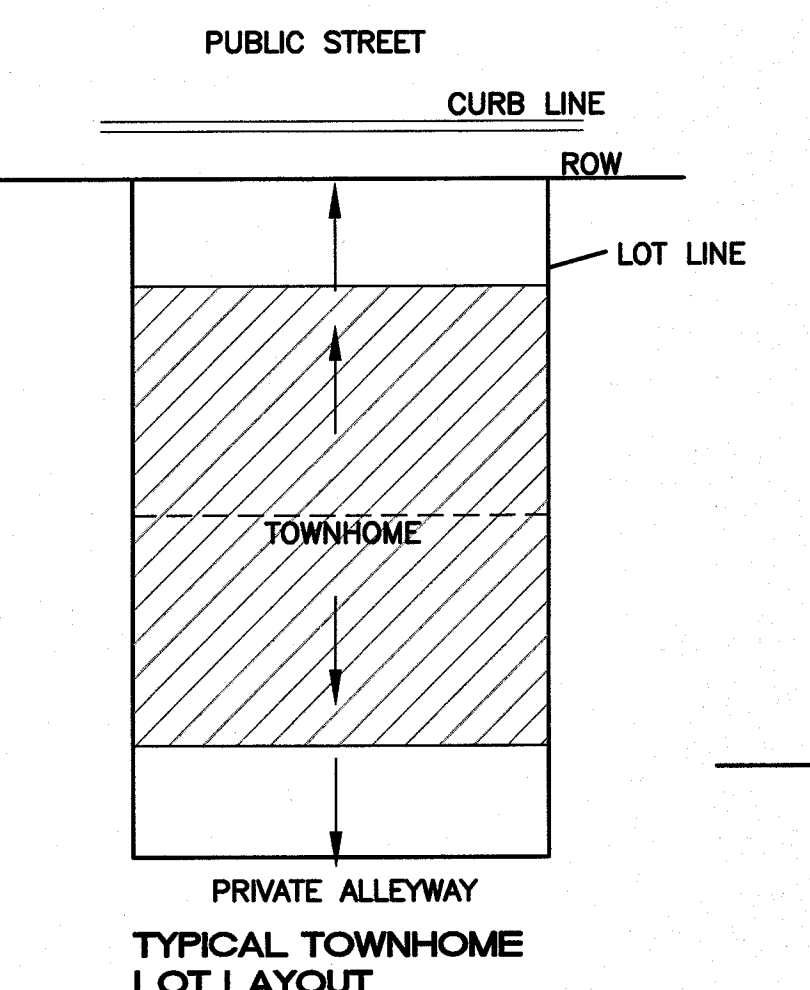
SHT 1 OF 42

LEGEND

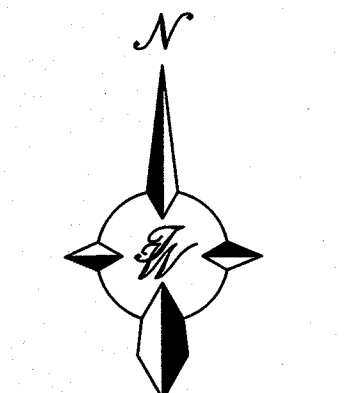
- CURB & GUTTER
- BOUNDARY LINE
- BUILDING
- CONTOUR MAJOR
- CONTOUR MINOR
- SPOT ELEVATION
- EXISTING CURB & GUTTER
- EXISTING CONTOUR MAJOR
- EXISTING CONTOUR MINOR

NOTE

1. ELEVATIONS ARE FLOWLINE/TOP OF SIDEWALK UNLESS OTHERWISE NOTED
2. GRADES SHOWN IN BUILDING FOOTPRINTS ARE FINISH FLOOR ELEVATIONS. FINISH PAD ELEVATIONS EQUAL FINISH FLOOR MINUS 6 IN.



Final Approval



PROJECT NAME
MONTECILLO UNIT 9 EAST AND WEST

ENGINEER'S SEAL
 Ronald R. Bohannan
 88928
 LICENSED PROFESSIONAL ENGINEER

TIERRA WEST, LLC
 5571 MIDWAY PARK PLACE NE
 ALBUQUERQUE, NM 87109
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 www.tierrawest.com
 TEXAS BUSINESS NO. F-11773

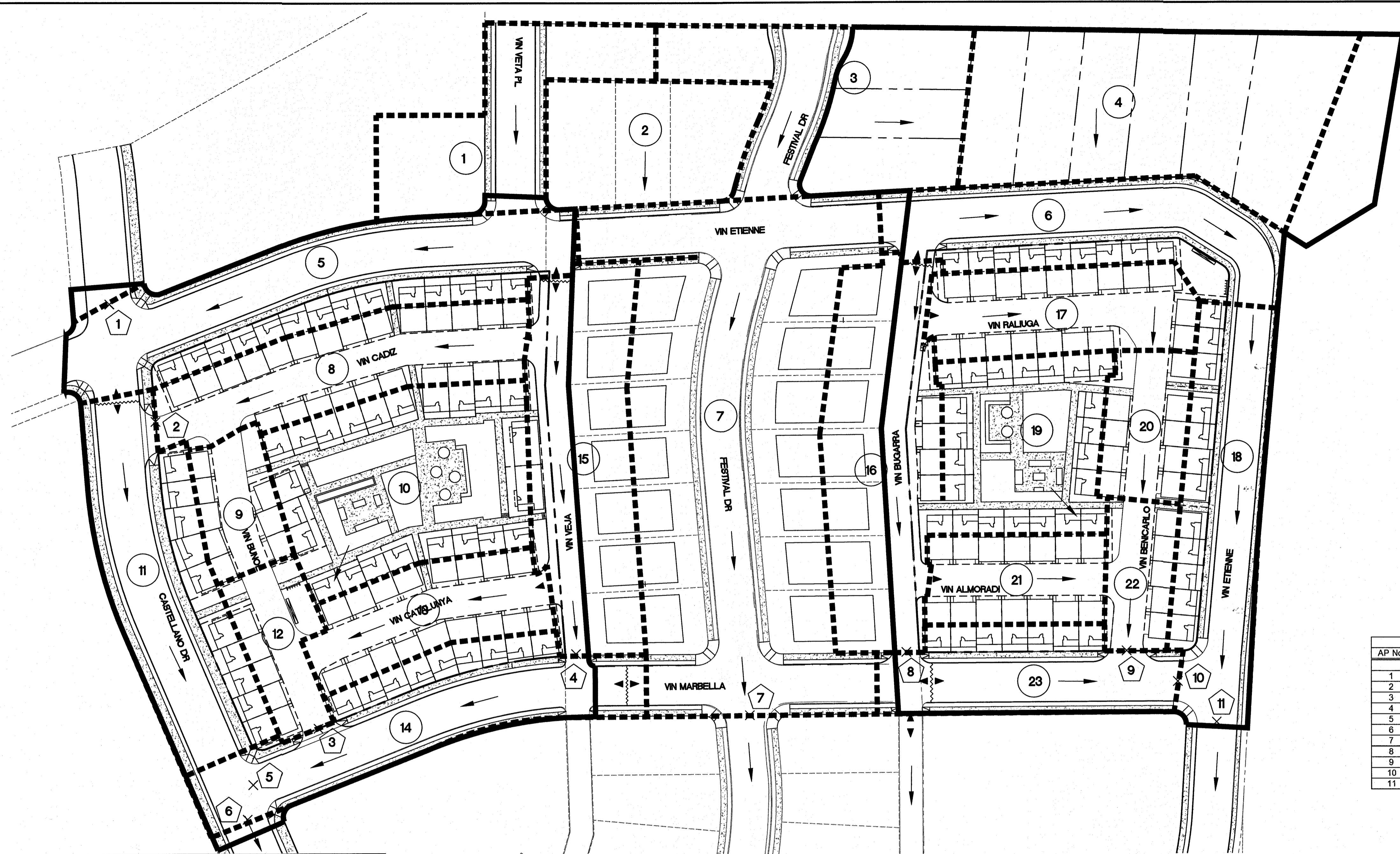
NO.	DATE	REMARKS	BY
DESIGN	1-10-17	REVISIONS	
DESIGNED BY	VC		
DRAWN BY	pm		
DRAWING NAME	JOB NO 2015079		
CHECKED BY	DATE 1-10-17		

SHEET TITLE
OVERALL GRADING PLAN

SHT 3 OF 42

CITY MONUMENT AT POINT OF CURVE CENTERLINE MONTECILLO BLVD. ADJOINING LOT BLOCK 1, MONTECILLO UNIT ONE (STATION 0+82.81). ELEVATION: 4107.13 (CITY DATUM)

BEING A REPLAT OF A PORTION OF LOT 6, BLOCK 2, MONTECILLO UNIT THREE, REPLAT 'B' AND A PORTION OF TRACT 1, JOHN BAKER SURVEY, NO. 10, CITY OF EL PASO, EL PASO COUNTY, TEXAS, CONTAINING 5.3945 ACRES



AP No.	Contributing Basins	Total Q-100 (CFS)	Street Name	Max. Street Capacity (CFS)
1	1,5	5.44	Castellano	251
2	8	2.27	Vin Cadiz	10.8
3	9,10,12,13	5.6	Vin Bunol	13.6
4	15	2.38	Vin Veja	25.2
5	9,10,12,13,15,14	10.69	Vin Marbella	152
6	9,10,11,12,13,15,14	15.68	Castellano	323
7	2,3,7,16	13.09	Festival	265
8	16	2.52	Vin Bugarra	19.8
9	17,19,20,21,22	6.1	Vin Benicarlo	10.5
10	17,19,20,21,22,23	7.87	Vin Marbella	189
11	4,6,17,18,19,20,21,22,23	16.05	Vin Etienne	202

Drainage Area	Length of Basin (ft)	Slope of Basin (ft/ft)	UPLAND METHOD Tc (Min)	KIRPICH FORMULA Tc (Min)	Tc (Min)
1	154	0.0100	1.7	-	10
2	101	0.0200	0.8	-	10
3	154	0.0370	1.3	-	10
4	154	0.0200	1.3	-	10
5	431	0.0287	3.5	-	10
6	335	0.0150	2.7	-	10
7	426	0.0400	3.5	-	10
8	305	0.0365	2.3	-	10
9	118	0.0250	1.3	-	10
10	239	0.0460	2.3	-	10
11	307	0.0260	1.7	-	10
12	145	0.0500	0.7	-	10
13	198	0.0310	0.9	-	10
14	386	0.0180	1.8	-	10
15	306	0.0420	1.5	-	10
16	328	0.0520	1.6	-	10
17	202	0.0285	1.4	-	10
18	360	0.0480	2.5	-	10
19	196	0.0610	1.4	-	10
20	117	0.0580	0.8	-	10
21	146	0.0280	1.0	-	10
22	123	0.0270	0.9	-	10
23	249	0.0200	1.7	-	10
R		#DIV/0!		#DIV/0!	10

UPLAND METHOD 4.3.1.3
 Sheet Flow: $T_c = L / (V \cdot 60)$
 Max. Flow Length = 500 ft.
 Use Figure 4-5 Page 15 Drainage Design Manual for V
 Minimum Tc is 10 minutes

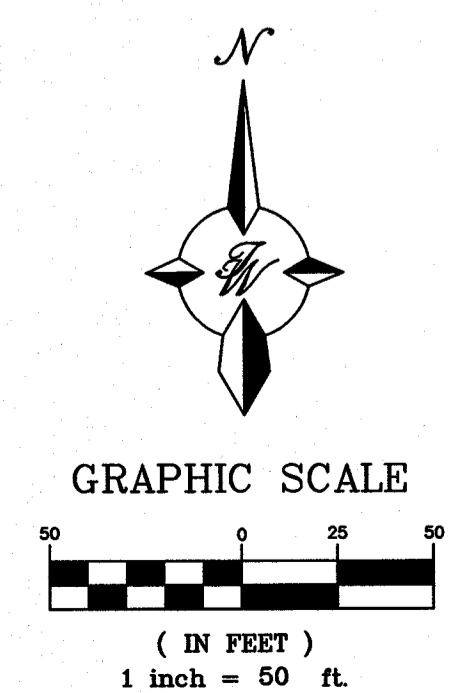
KIRPICH FORMULA METHOD 4.3.1.3
 $T_c = (0.0078 (L^{0.77}) / (S^{0.385}))$
 Minimum Tc is 10 minutes
 L=Longest length for drainage
 S=Average Slope in foot per foot

Drainage Area	Area (Sq. Ft.)	Area (Ac)	Tc (Min)	C-value	I _{50yr} (in/hr)	Q _{50yr} (cfs)	V _{50yr} (ac-ft)	I _{100yr} (in/hr)	Q _{100yr} (cfs)	V _{100yr} (ac-ft)
1	21,030	0.48	10.00	0.77	4.60	1.72	0.11	5.19	1.95	0.12
2	16,891	0.39	10.00	0.72	4.60	1.29	0.08	5.19	1.46	0.09
3	27,385	0.63	10.00	0.75	4.60	2.19	0.14	5.19	2.47	0.16
4	36,692	0.84	10.00	0.72	4.60	2.81	0.18	5.19	3.17	0.20
5	31,263	0.72	10.00	0.93	4.60	3.10	0.19	5.19	3.49	0.22
6	23,034	0.53	10.00	0.91	4.60	2.23	0.14	5.19	2.52	0.16
7	72,726	1.67	10.00	0.76	4.60	5.89	0.37	5.19	6.64	0.42
8	20,328	0.47	10.00	0.93	4.60	2.01	0.13	5.19	2.27	0.14
9	7,355	0.17	10.00	0.91	4.60	0.71	0.04	5.19	0.80	0.05
10	28,190	0.65	10.00	0.73	4.60	2.19	0.14	5.19	2.47	0.16
11	25,161	0.58	10.00	0.90	4.60	2.41	0.15	5.19	2.72	0.17
12	8,131	0.19	10.00	0.81	4.60	0.70	0.04	5.19	0.79	0.05
13	13,828	0.32	10.00	0.93	4.60	1.37	0.09	5.19	1.54	0.10
14	24,772	0.57	10.00	0.91	4.60	2.40	0.15	5.19	2.71	0.17
15	26,115	0.60	10.00	0.76	4.60	2.11	0.13	5.19	2.38	0.15
16	27,640	0.63	10.00	0.76	4.60	2.24	0.14	5.19	2.52	0.16
17	14,661	0.34	10.00	0.93	4.60	1.45	0.09	5.19	1.64	0.10
18	23,554	0.54	10.00	0.88	4.60	2.21	0.14	5.19	2.49	0.16
19	20,329	0.47	10.00	0.73	4.60	1.58	0.10	5.19	1.78	0.11
20	7,880	0.18	10.00	0.90	4.60	0.76	0.05	5.19	0.85	0.05
21	10,112	0.23	10.00	0.93	4.60	1.00	0.06	5.19	1.13	0.07
22	6,450	0.15	10.00	0.90	4.60	0.62	0.04	5.19	0.70	0.04
23	15,980	0.37	10.00	0.92	4.60	1.57	0.10	5.19	1.77	0.11
Totals		11.7				44.6	2.8		50.3	3.2

$V_{100yr} = ARC/12$ City of El Paso Design Standards for Construction Pages 2-1 and 2-4
 A= 100% of contributing watershed area in acres
 R= Rainfall in inches Taken from NOAA Atlas 14, Volume 1, Version 5 for 100-year, 24-hr event = 4.0 inches
 C= Runoff Factor

Example for DA "1" $0.48 \text{ Ac} (4.0 \text{ in.}) (0.93) = 0.149 \text{ ac-ft}$

Drainage Area	Area (Sq. Ft.)	Area (Ac)	Percent Impervious Surface	Percent Landscaping	C-Value for Impervious Surface	C-value for Landscaping	Weighted C-Value
1	21,030	0.48	60%	40%	0.95	0.50	0.77
2	16,891	0.39	49%	51%	0.95	0.50	0.72
3	27,385	0.63	55%	45%	0.95	0.50	0.75
4	36,692	0.84	49%	51%	0.95	0.50	0.72
5	31,263	0.72	95%	5%	0.95	0.50	0.93
6	23,034	0.53	92%	8%	0.95	0.50	0.91
7	72,726	1.67	57%	43%	0.95	0.50	0.76
8	20,328	0.47	95%	5%	0.95	0.50	0.93
9	7,355	0.17	90%	10%	0.95	0.50	0.91
10	28,190	0.65	51%	49%	0.95	0.50	0.73
11	25,161	0.58	89%	11%	0.95	0.50	0.90
12	8,131	0.19	68%	32%	0.95	0.50	0.81
13	13,828	0.32	95%	5%	0.95	0.50	0.93
14	24,772	0.57	90%	10%	0.95	0.50	0.91
15	26,115	0.60	58%	42%	0.95	0.50	0.76
16	27,640	0.63	58%	42%	0.95	0.50	0.76
17	14,661	0.34	95%	5%	0.95	0.50	0.93
18	23,554	0.54	85%	15%	0.95	0.50	0.88
19	20,329	0.47	52%	48%	0.95	0.50	0.73
20	7,880	0.18	89%	11%	0.95	0.50	0.90
21	10,112	0.23	95%	5%	0.95	0.50	0.93
22	6,450	0.15	89%	11%	0.95	0.50	0.90
23	15,980	0.37	94%	6%	0.95	0.50	0.92
Total		11.7					



CITY MONUMENT AT POINT OF CURVE CENTERLINE MONTECILLO BLVD. ADJOINING LOT 1, BLOCK 1, MONTECILLO UNIT ONE (STATION 0+82.61), ELEVATION: 4107.15(CITY DATUM)

PROJECT NAME
MONTECILLO UNIT 9 EAST AND WEST
 BEING A REPLAT OF A PORTION OF LOT 6, BLOCK 2, MONTECILLO UNIT THREE, REPLAT 'B' AND A PORTION OF TRACT 1, JOHN BAKER SURVEY NO. 10, CITY OF EL PASO, EL PASO COUNTY, TEXAS, CONTAINING 5.3943 ACRES

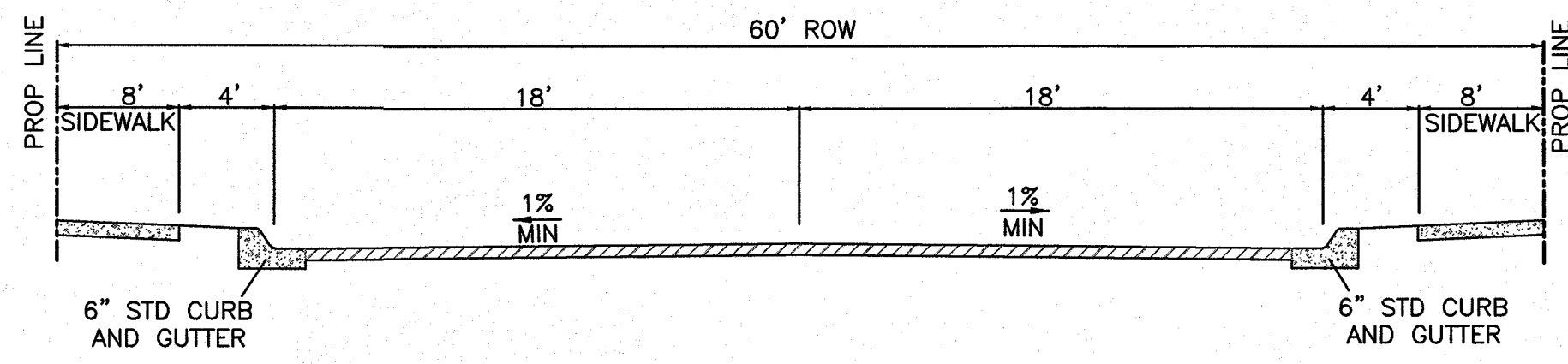


RONALD R. BOHANNAN
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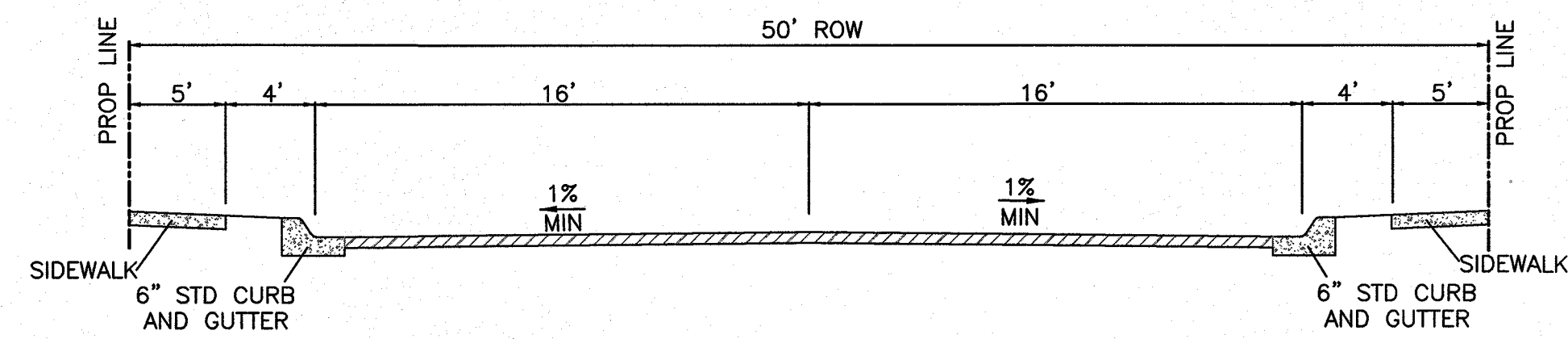
TERRA WEST, LLC
 5571 MIDWAY PARK PLACE NE
 ALBUQUERQUE, NM 87109
 (505) 858-3100
 www.terrawestllc.com
 TEXAS BUSINESS NO. F-11775

NO.	DATE	REMARKS	BY
		DESIGN	
		REVISIONS	
DESIGNED BY	VC	DATE	1-10-17
DRAWN BY	ptt	DATE	1-10-17
DRAWING NAME		JOB NO	2015079
CHECKED BY	VC	DATE	1-10-17

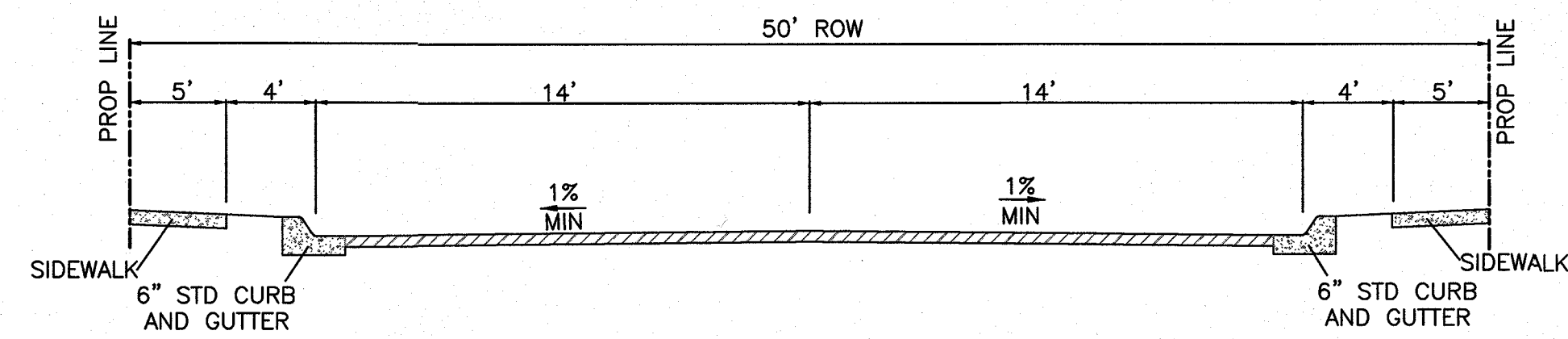
SHEET TITLE
DRAINAGE PLAN
 SHT 3-A OF 42



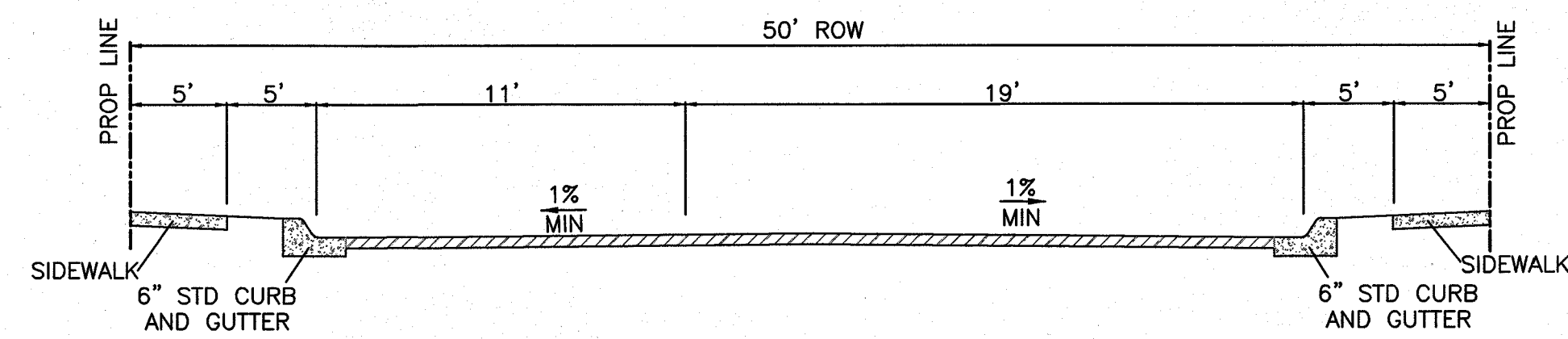
CASTELLANO DR (1+50 to 10+50)



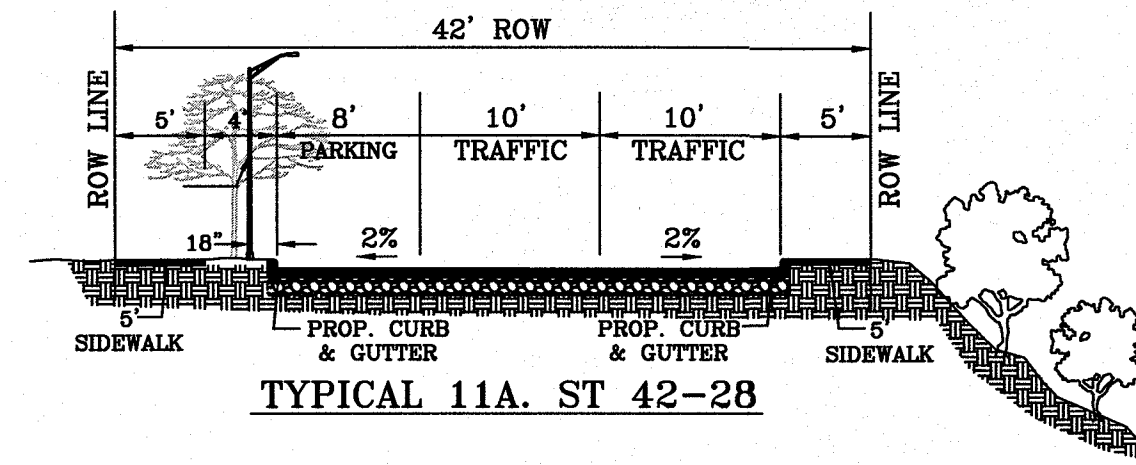
FESTIVAL DR (5+55 to 11+42) , VIN MARBELLA (0+40 to 13+58.07)
VIN ETIENNE (5+81.89 to 10+28.76)



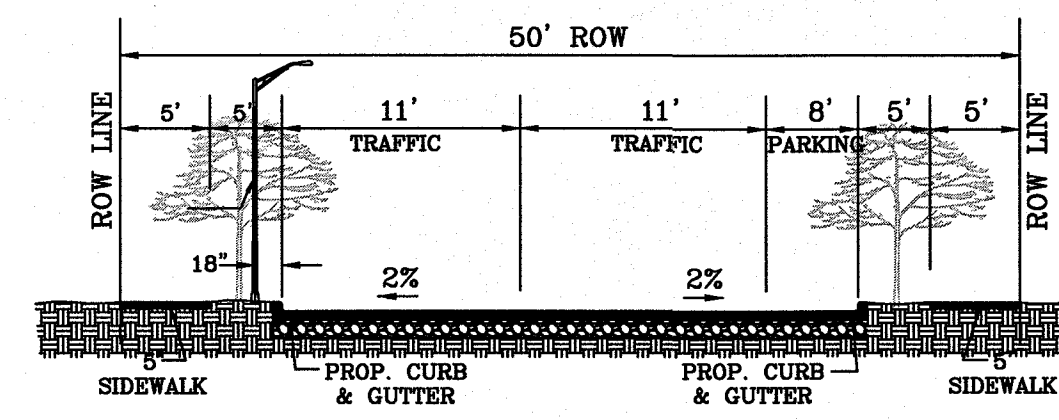
VIN ETIENNE (10+28.76 TO 16+50)



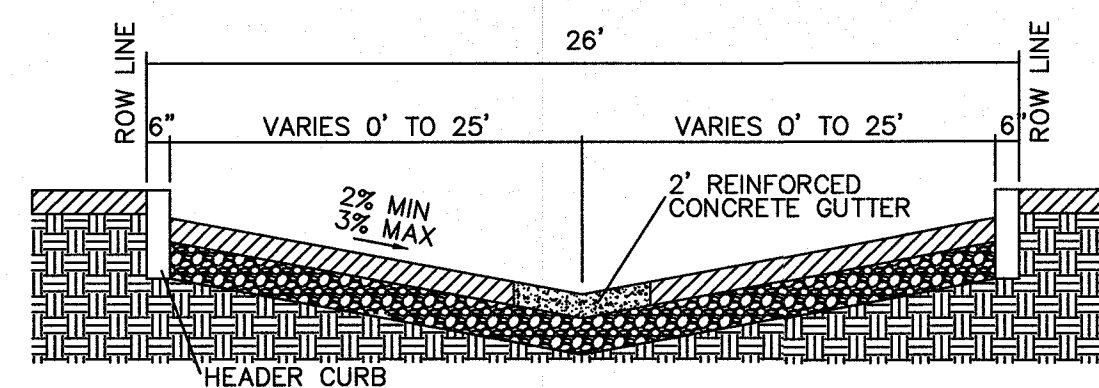
VIN ETIENNE (0+23.85 TO 5+81.89)



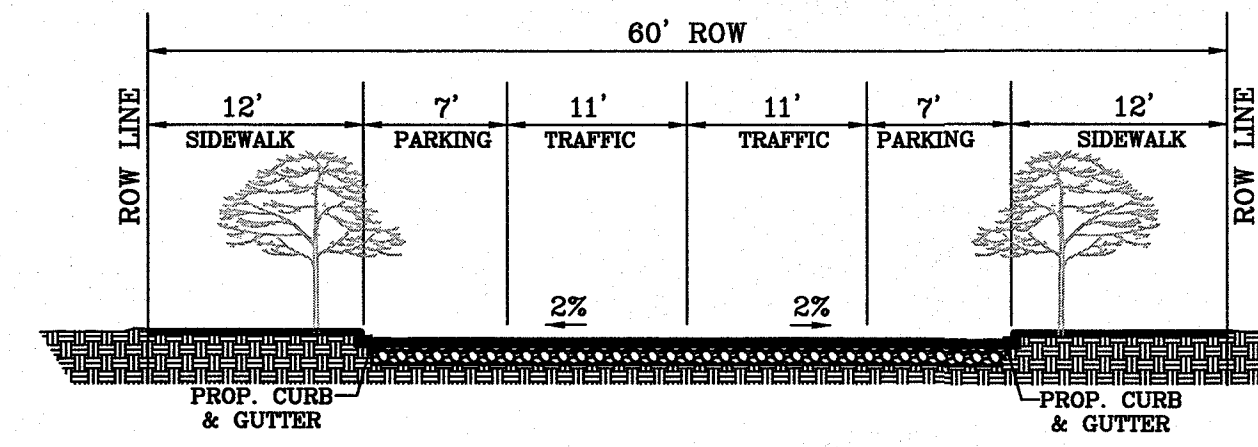
TYPICAL 11A. ST 42-28
VIN ETIENNE (10+28.76 TO 13+58.14)



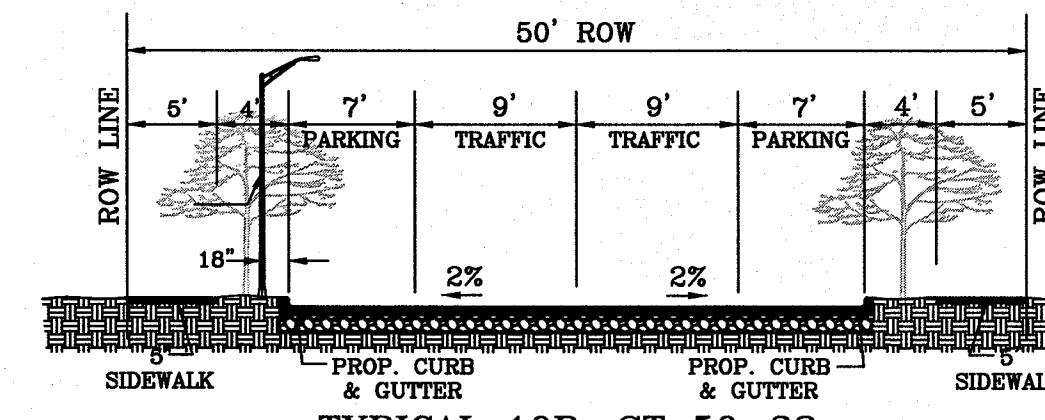
TYPICAL 10C. ST 50-30
VIN ETIENNE (0+23.85 TO 5+81.89)



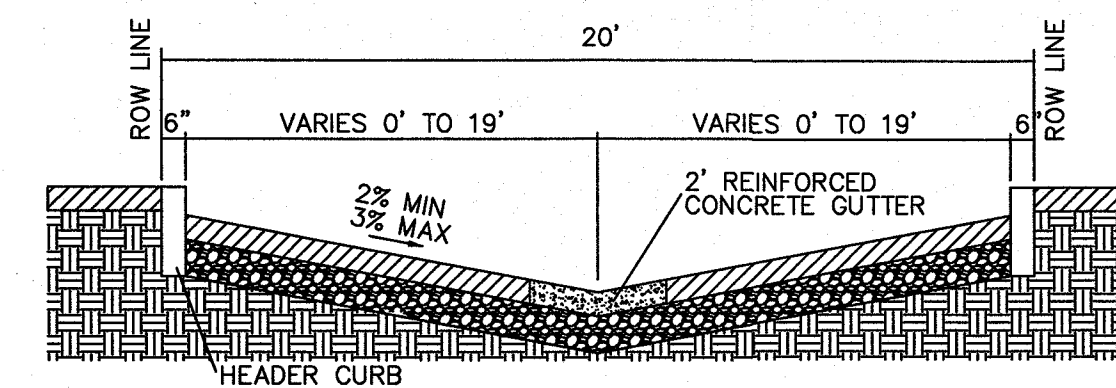
TYPICAL 45. RL-26-26
VIN VEJA/VIN BUGARRA



TYPICAL 8B. ST 60-36
CASTELLANO DR (1+50 to 10+50)



TYPICAL 10B. ST 50-32
VIN ETIENNE (5+81.89 TO 10+28.76)
VIN MARBELLA



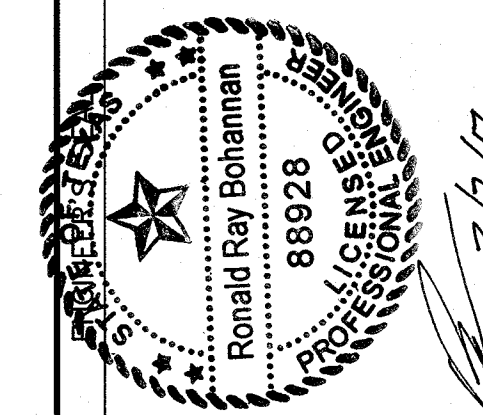
TYPICAL 45A. PRIVATE WAY SECTION
VIN CADIZ/VINBUNOL/VIN CATALUNYA
VIN RALIUGA/VIN BENICARLO/VIN ALMORADI



PROJECT NAME
**MONTECILLO UNIT 9
EAST AND WEST**

CITY MONUMENT AT POINT OF CURVE
CENTERLINE MONTECILLO BLVD.
ADJOINING LOT 1, BLOCK 1,
MONTECILLO UNIT ONE
(STATION 0+82.81)
ELEVATION: 4107.13(CITY DATUM)

BEING A REPLAT OF A PORTION OF LOT 6,
BLOCK 2, MONTECILLO UNIT THREE, REPLAT 'B'
SURVEY A PART OF THE CITY OF EL PASO
COUNTY, TEXAS, CONTAINING 5.3943 ACRES



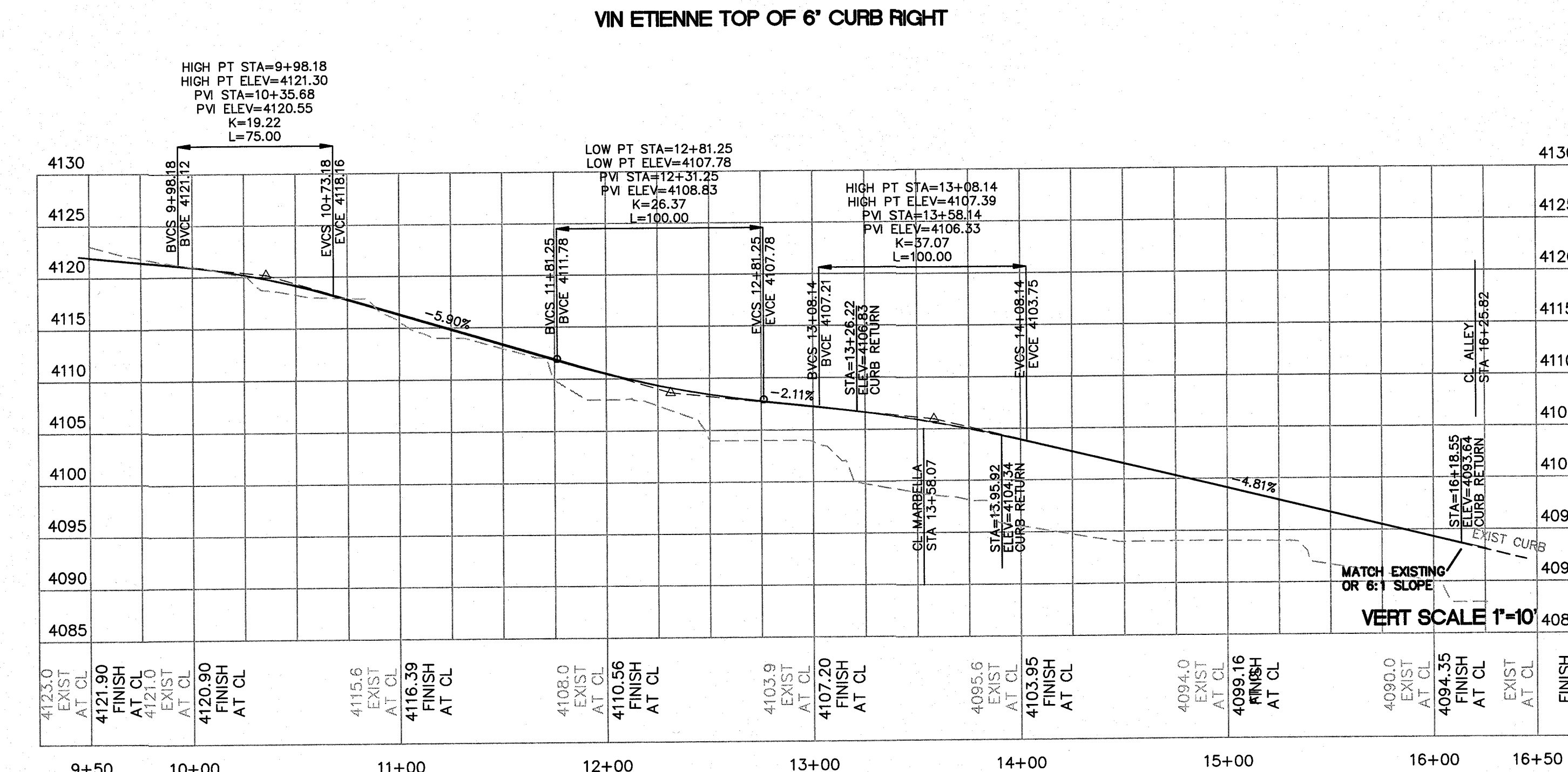
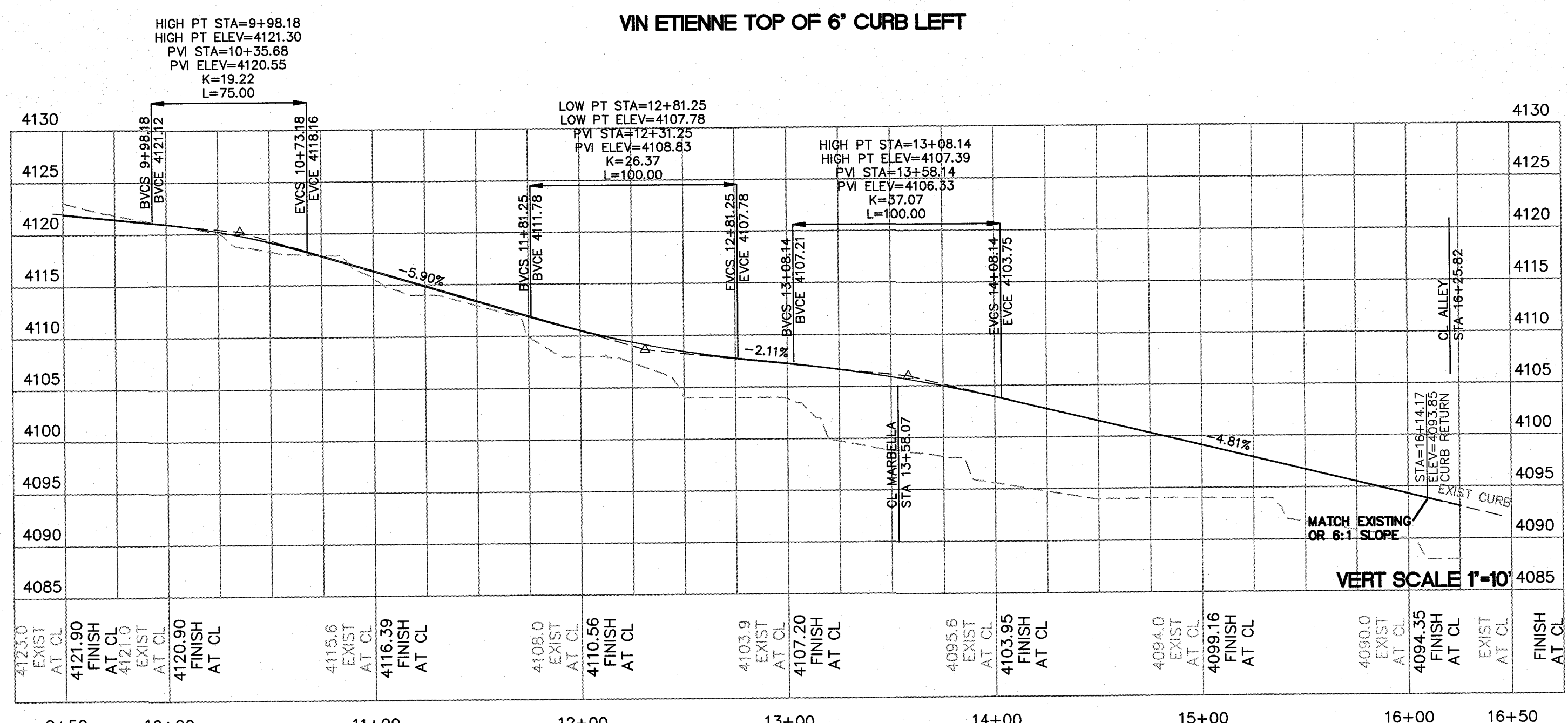
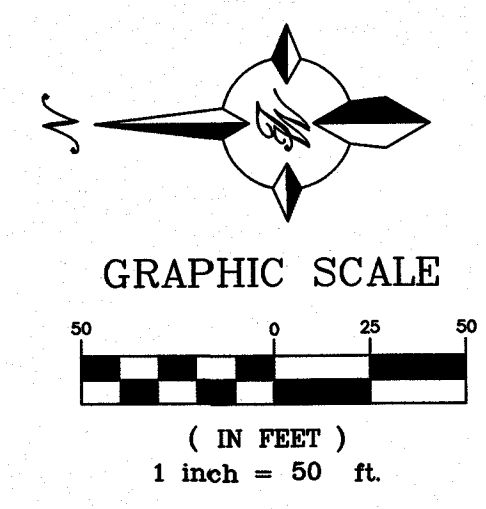
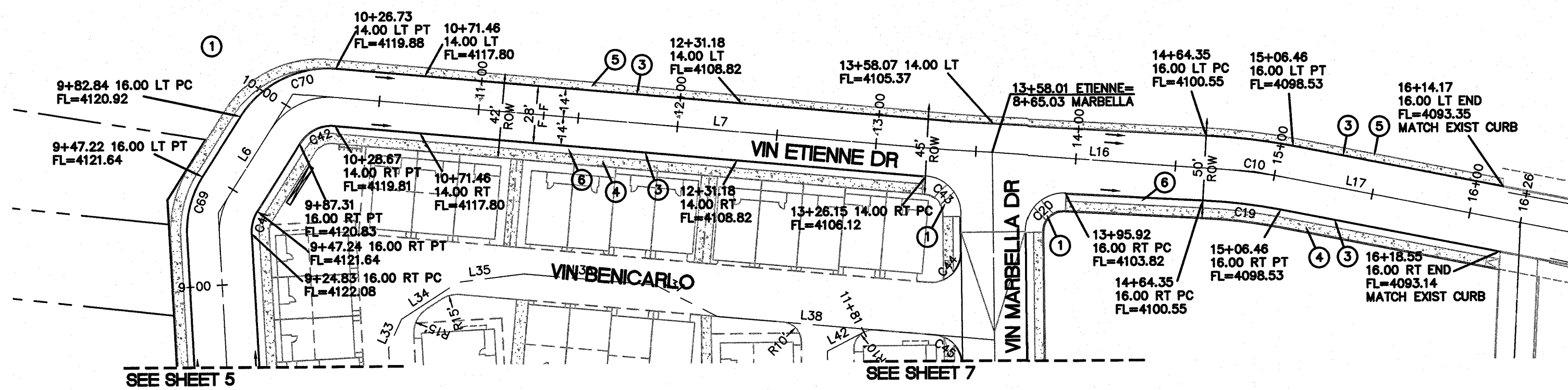
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5571 MIDWAY PARK PLACE NE
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(505) 858-3100
www.twestllc.com
TEXAS BUSINESS NO.
F-111773

NO.	DATE	REMARKS	BY
		DESIGN	
		VC	
		PM	
		PP	
		VC	

DESIGNED BY DATE 1-10-17
DRAWN BY DATE 1-10-17
DRAWING NAME 2015079-PP JOB NO 2015079
CHECKED BY DATE 1-10-17

SHEET TITLE
ROADWAY SECTIONS



LINE	BEARING	LENGTH
L6	S57°24'27\"/>	

CURVE	DELTA	RADIUS	LENGTH	TANGENT	CHORD
C10	5°23'12\"/>				

- KEYED NOTES**
- ACCESSIBLE RAMP SEE DETAIL SHEET 17
 - UNIDIRECTIONAL ACCESSIBLE RAMP SEE DETAIL SHEET 17
 - STANDARD 6" CURB AND GUTTER
 - 5' CONCRETE SIDEWALK
 - 4' CONCRETE SIDEWALK
 - 5' PARKWAY

- NOTES**
- ALL SIDEWALKS AND HCR'S BY DEVELOPER
 - SEE SHEET 4 FOR ROADWAY SECTIONS



CITY MONUMENT AT POINT OF CURVE
 CENTERLINE MONTECILLO BLVD.
 ADJOINING LOT 1, BLOCK 1,
 MONTECILLO UNIT ONE
 (STATION 0+82.81).
 ELEVATION: 4107.13(CITY DATUM)

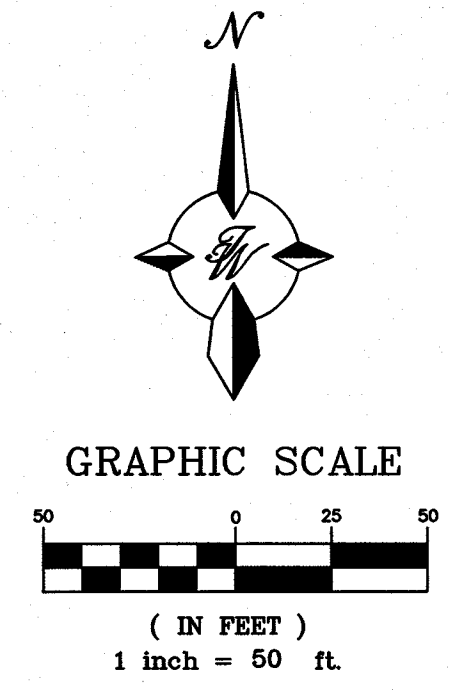
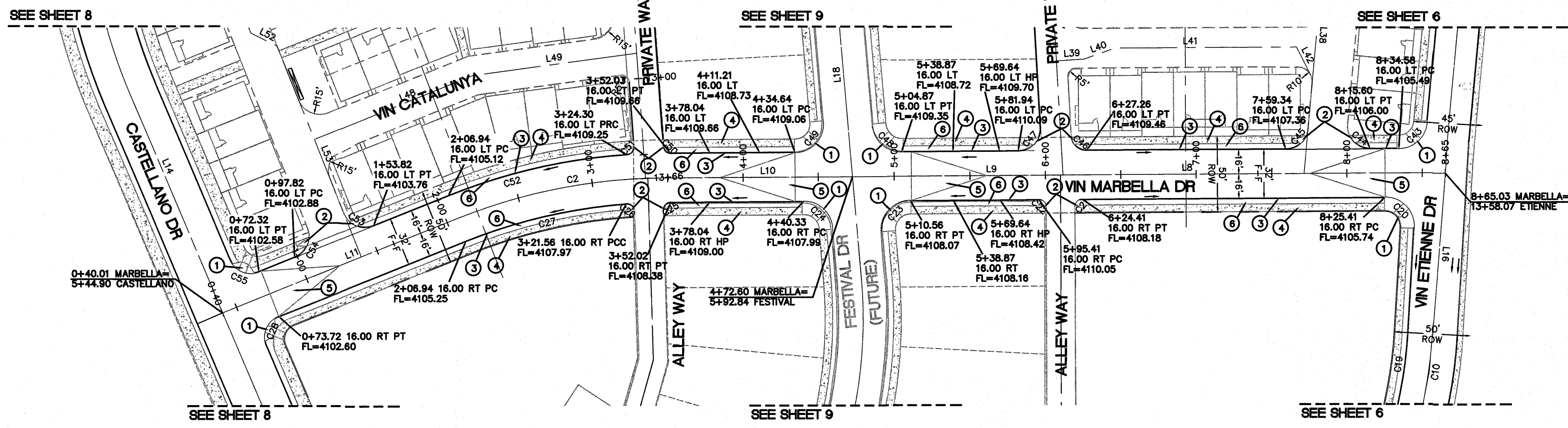
PROJECT NAME
MONTECILLO UNIT 9
EAST AND WEST
 BEING A REPEAT OF A PORTION OF LOT 6,
 BLOCK 2, MONTECILLO UNIT THREE, REPEAT 'B'
 SURVEY NO. 10, CITY OF EL PASO, EL PASO
 COUNTY, TEXAS, CONTAINING 5.3943 ACRES

ENGINEER'S SEAL
 Ronald R. Bohannan
 88928
 LICENSED PROFESSIONAL ENGINEER
 RONALD R. BOHANNAN
 P.E. #88928

TERRA WEST, LLC
 5571 MIDWAY PARK PLACE NE
 ALBUQUERQUE, NM 87109
 (505) 888-0100
 www.tterrawest.com
 TEXAS BUSINESS NO.
 F-11773

NO.	DATE	REMARKS	BY
		DESIGN	
		REVISIONS	

SHEET TITLE
VIN ETIENNE DR
9+50 TO 13+75



- KEYED NOTES**
- ① ACCESSIBLE RAMP SEE DETAIL SHEET 17
 - ② UNIDIRECTIONAL ACCESSIBLE RAMP SEE DETAIL SHEET 17
 - ③ STANDARD 6" CURB AND GUTTER
 - ④ 5' CONCRETE SIDEWALK
 - ⑤ 50' TRANSITION FROM CROWN TO SUPERELEVATION
 - ⑥ 5' PARKWAY

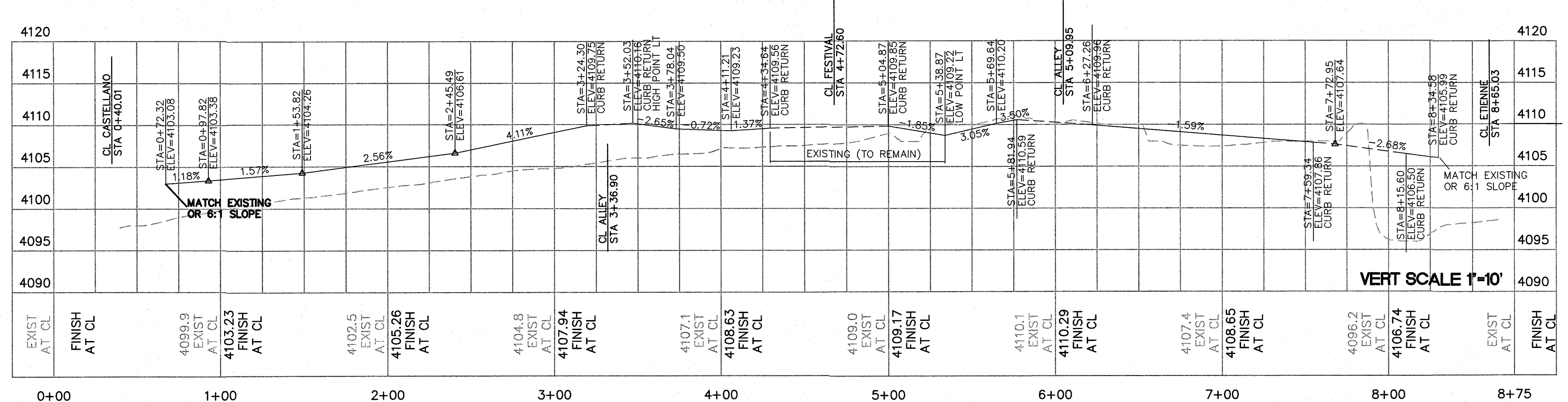
- NOTES**
- 1. ALL SIDEWALKS AND HCR'S BY DEVELOPER
 - 2. SEE SHEET 4 FOR ROADWAY SECTIONS

LINE TABLE		
LINE	BEARING	LENGTH
L8	N89°40'52"E	255.08
L9	N89°40'52"E	137.34
L10	N89°40'52"E	125.08
L11	N68°12'08"E	166.93

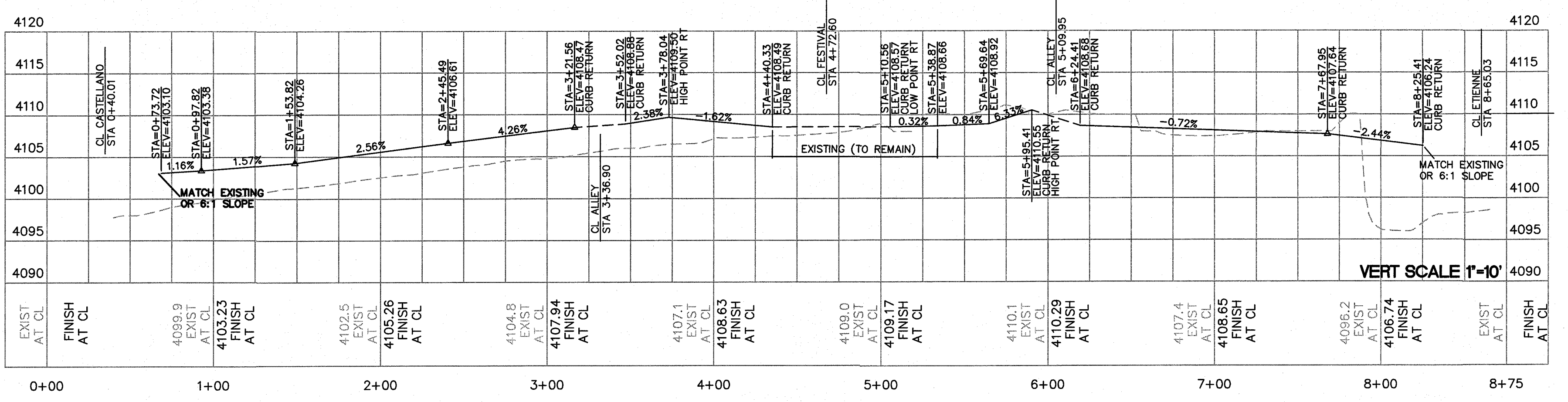


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 TEXAS BUSINESS NO.
 P-11775

VIN MARBELLA TOP OF 6" CURB LEFT



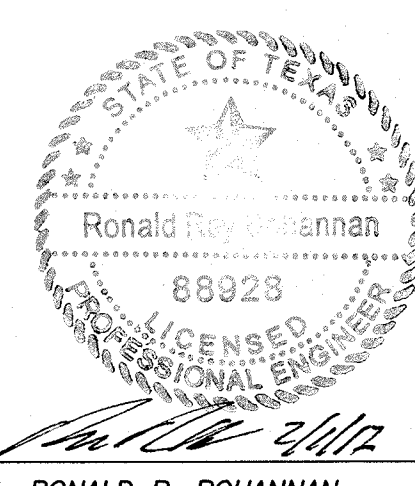
VIN MARBELLA TOP OF 6" CURB RIGHT



CURVE TABLE					
CURVE	DELTA	RADIUS	LENGTH	TANGENT	CHORD
C20	93°32'02"	19.00	31.02	20.210	27.686
C21	89°54'47"	5.00	7.85	4.992	7.066
C22	90°05'13"	5.00	7.86	5.008	7.076
C23	94°38'47"	19.00	31.39	20.607	27.937
C24	85°21'13"	19.00	28.30	17.518	25.759
C25	78°27'47"	5.00	6.85	4.082	6.325
C26	92°35'20"	5.00	8.08	5.231	7.229
C27	17°30'45"	359.00	109.73	55.296	109.302
C43	84°27'05"	19.00	28.01	17.244	25.538
C44	95°45'38"	15.00	25.07	16.589	22.253
C45	84°27'05"	15.00	22.11	13.613	20.162
C46	84°10'18"	10.00	14.69	9.031	13.405
C47	23°35'18"	15.00	6.18	3.132	6.132
C48	85°21'13"	19.00	28.30	17.518	25.759
C49	94°38'47"	19.00	31.39	20.607	27.937
C50	78°27'47"	5.00	6.85	4.082	6.325
C51	78°06'30"	5.00	6.82	4.057	6.301
C52	17°55'53"	391.00	122.37	61.688	121.868
C53	23°35'18"	15.00	6.18	3.132	6.132
C54	90°00'00"	15.00	23.56	15.000	21.213
C55	88°42'19"	15.00	23.22	14.665	20.972

CITY MONUMENT AT POINT OF CURVE CENTERLINE MONTECILLO BLVD. ADJOINING LOT 1, BLOCK 1, MONTECILLO UNIT ONE (STATION 0+82.81). ELEVATION: 4107.13(CITY DATUM)

PROJECT NAME
MONTECILLO UNIT 9 EAST AND WEST
 BEING A REPIAT OF A PORTION OF LOT 6, BLOCK 2, MONTECILLO UNIT THREE, REPIAT 'B' AND A PORTION OF TRACT 1, JOHN BAKER SURVEY NO. 10, CITY OF EL PASO, EL PASO COUNTY, TEXAS, CONTAINING 5.3943 ACRES



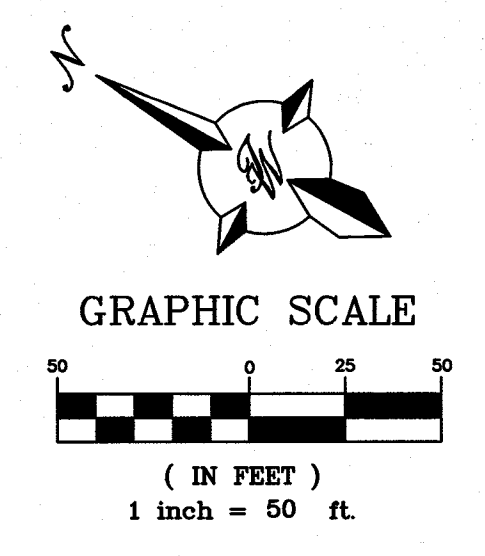
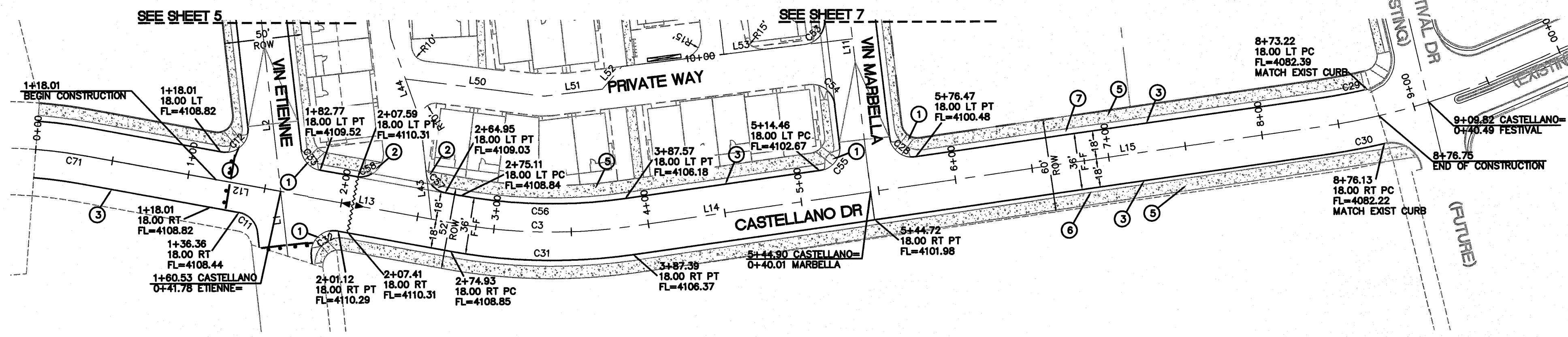
RONALD R. BOHANNAN
 P.E. #88928

NO.	DATE	REMARKS	BY
DESIGNED BY	VC	DESIGN	
DRAWN BY	pm		
CHECKED BY	VC		
DATE	1-10-17		
DATE	1-10-17		
DATE	2015079		
DATE	1-10-17		

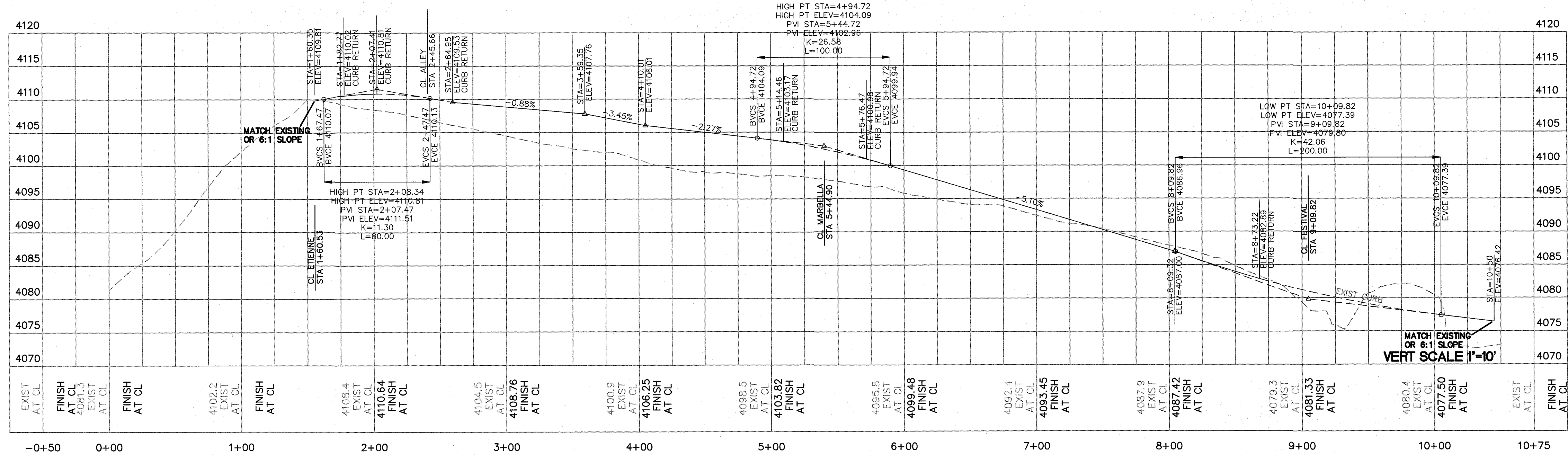
SHEET TITLE

VIN MARBELLA DR
 0+40.01 TO 9+00

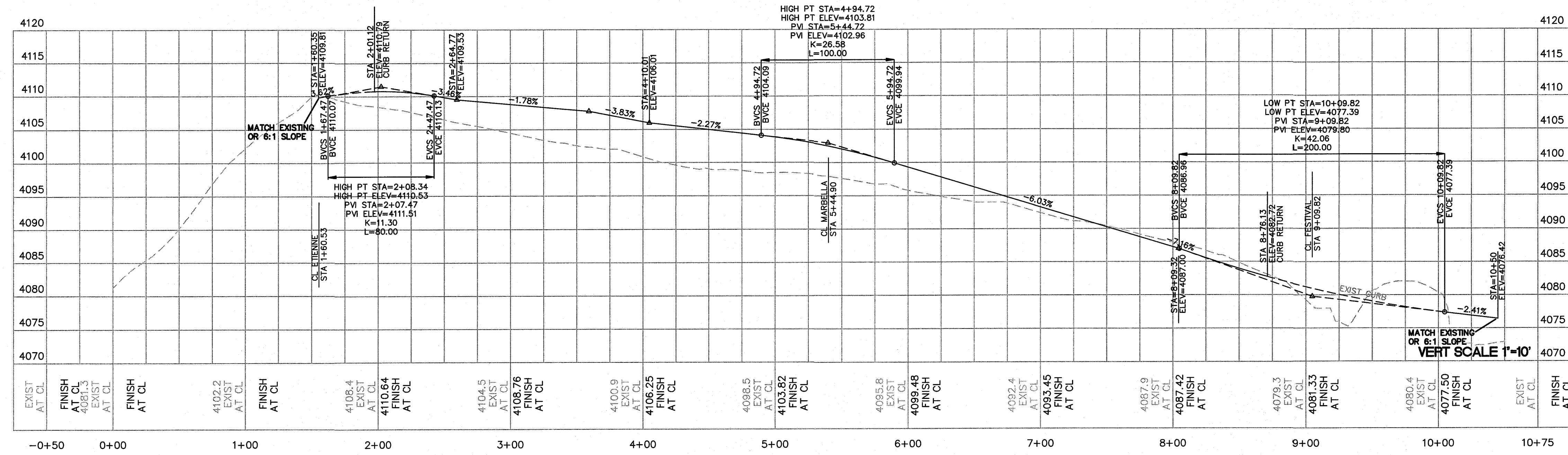
SHT 7 OF 42



CASTELLANO DR TOP OF 6" CURB LEFT



CASTELLANO DR TOP OF 6" CURB RIGHT



- KEYED NOTES**
- ① ACCESSIBLE RAMP SEE DETAIL SHEET 17
 - ② UNIDIRECTIONAL ACCESSIBLE RAMP SEE DETAIL SHEET 17
 - ③ STANDARD 6" CURB AND GUTTER
 - ④ 5' CONCRETE SIDEWALK
 - ⑤ 8' CONCRETE SIDEWALK
 - ⑥ 2' PARKWAY
 - ⑦ 4' PARKWAY

- NOTES**
- 1. ALL SIDEWALKS AND HCR'S BY DEVELOPER
 - 2. SEE SHEET 4 FOR ROADWAY SECTIONS

LINE TABLE

LINE	BEARING	LENGTH
L12	N4°40'53"W	129.41
L13	S4°40'53"E	114.58
L14	S23°05'32"E	157.33
L15	S23°05'32"E	292.99

CURVE TABLE

CURVE	DELTA	RADIUS	LENGTH	TANGENT	CHORD
C11	73°12'24"	15.00	19.17	11.141	17.888
C12	106°47'36"	15.00	27.96	20.195	24.083
C28	91°17'41"	15.00	23.90	15.343	21.452
C29	4°31'18"	432.00	34.09	17.055	34.083
C30	4°53'26"	468.00	39.95	19.985	39.934
C31	18°24'39"	368.00	118.25	59.639	117.742
C32	106°47'36"	15.00	27.96	20.195	24.083
C33	73°24'25"	14.96	19.17	11.156	17.888
C35	88°42'19"	15.00	23.22	14.665	20.972
C56	18°24'39"	332.00	106.68	53.805	106.224
C57	73°12'24"	15.00	19.17	11.141	17.888
C58	106°47'36"	15.00	27.96	20.195	24.083



CITY MONUMENT AT POINT OF CURVE CENTERLINE MONTECILLO BLVD. ADJOINING LOT 1, BLOCK 1, MONTECILLO UNIT ONE (STATION 0+82.81) ELEVATION: 4107.13(CITY DATUM)

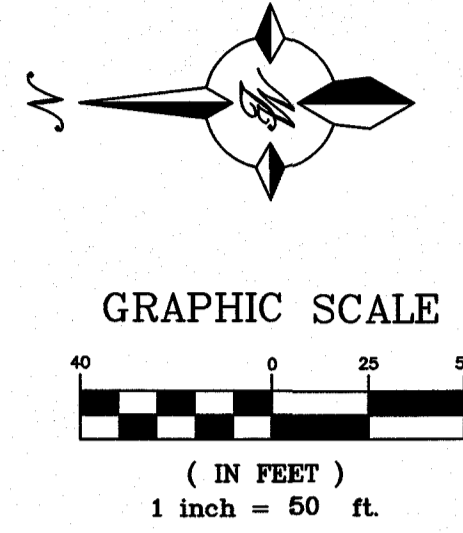
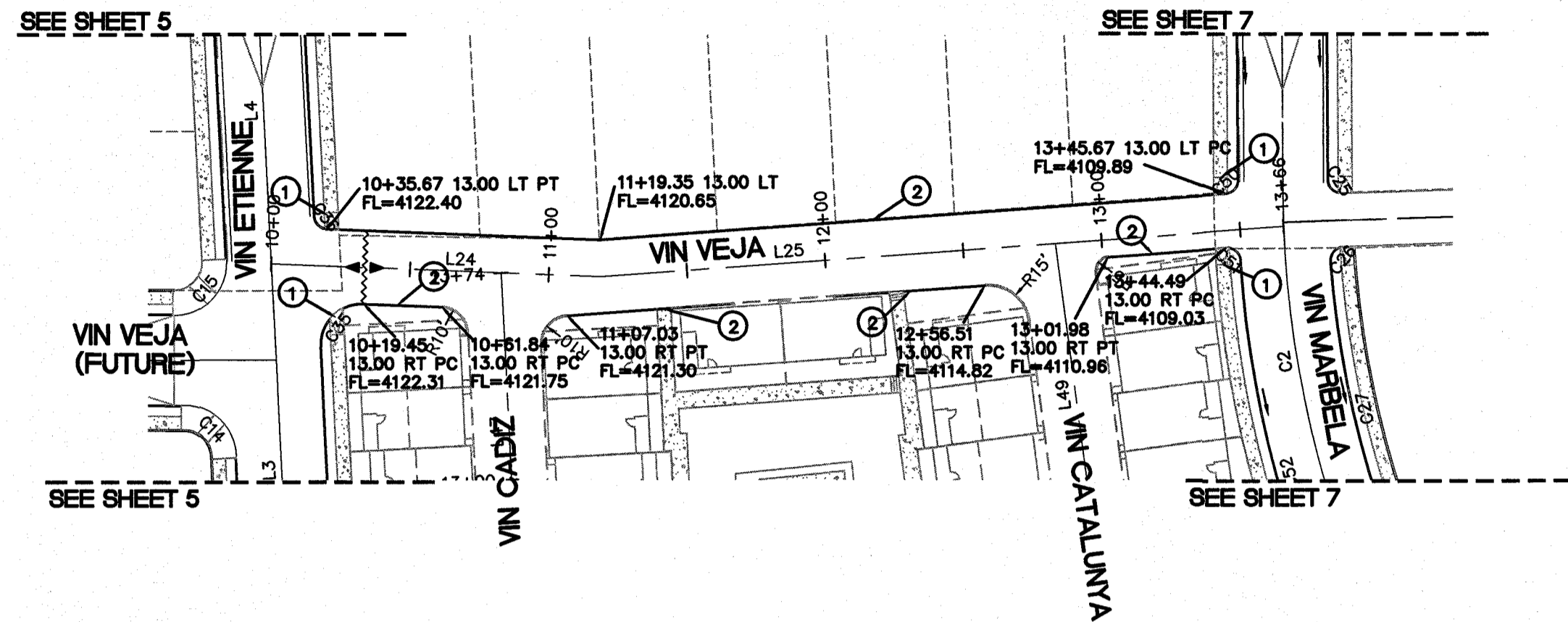
PROJECT NAME
MONTECILLO UNIT 9 EAST AND WEST
 BEING A REPLAT OF A PORTION OF LOT 6, BLOCK 2, MONTECILLO UNIT THREE, REPLAT "B" AND A PORTION OF TRACT "A" JOHN BAKER SURVEY NO. 10, CITY OF EL PASO, EL PASO COUNTY, TEXAS, CONTAINING 5.3943 ACRES

ENGINEER'S SEAL
 Ronald R. Bohannon
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 TEXAS BUSINESS NO. F-11775

NO.	DATE	REMARKS	BY
DESIGNED BY	VC	DESIGN	
DRAWN BY	pm		
CHECKED BY	VC		
DATE	1-10-17		
DATE	1-10-17		
DATE	2015079		
DATE	1-10-17		

SHEET TITLE
CASTELLANO DR
1+60.35 TO 10+50
SHT 8 OF 42



KEYED NOTES

- ① UNIDIRECTIONAL ACCESSIBLE RAMP SEE DETAIL SHEET 17
- ② STANDARD 6" HEADER CURB

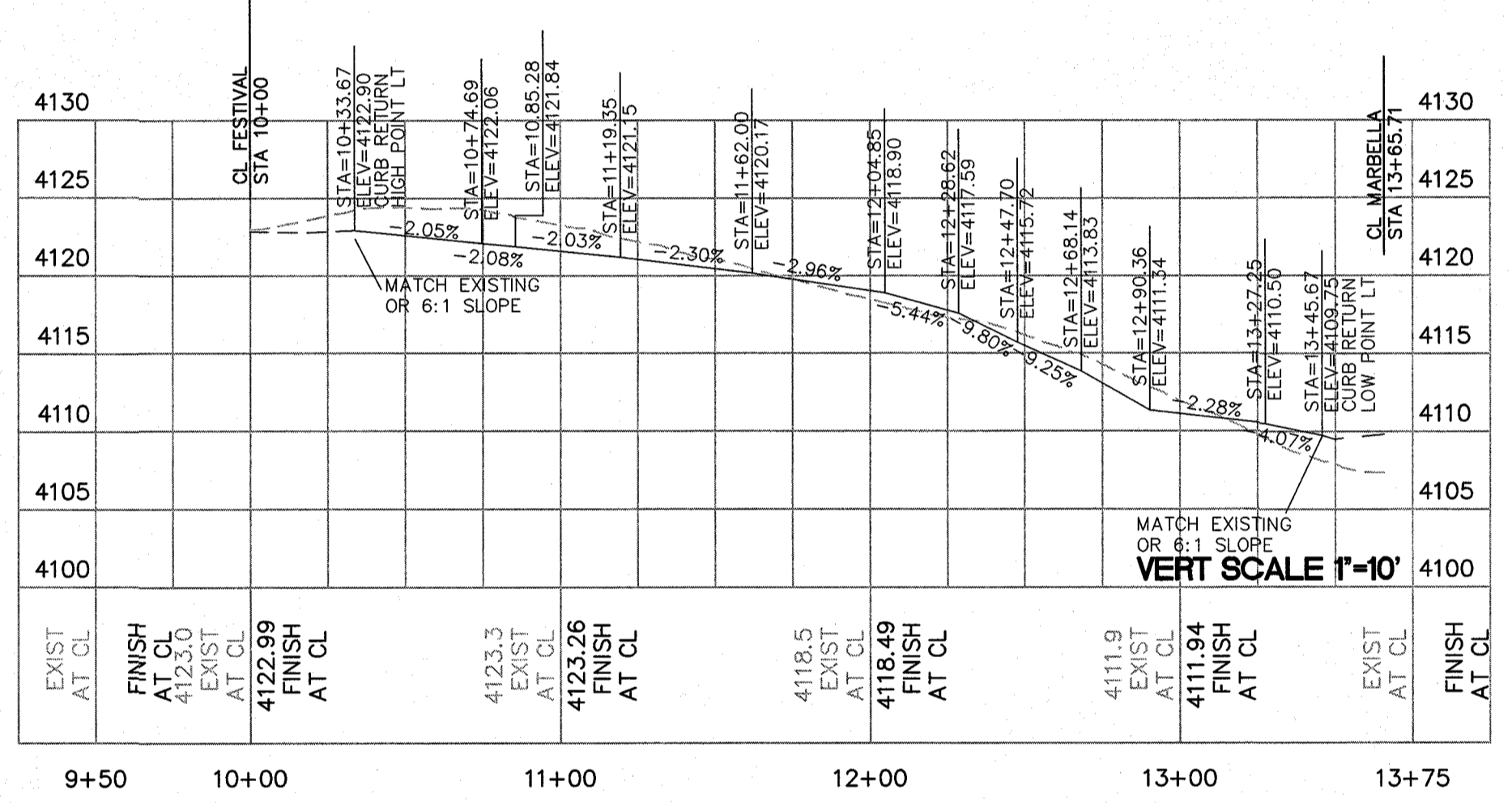
NOTES

- 1. ALL SIDEWALKS AND HCR'S BY DEVELOPER
- 2. SEE SHEET 4 FOR ROADWAY SECTIONS

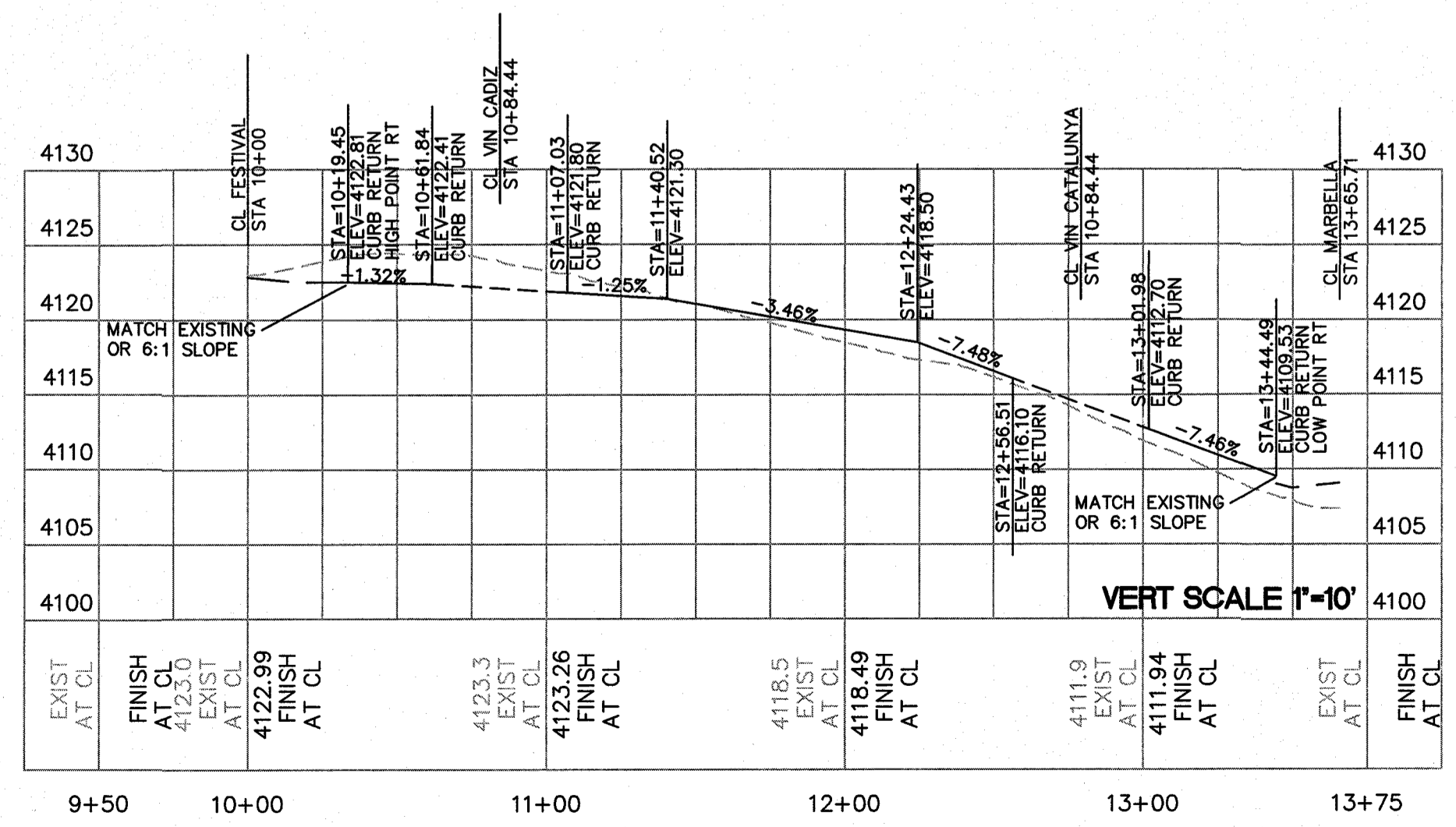
LINE	BEARING	LENGTH
L24	S2°15'54"W	118.62
L25	S4°09'12"E	247.09

CURVE	DELTA	RADIUS	LENGTH	TANGENT	CHORD
C35	42°50'00"	15.00	11.21	5.883	10.954
C36	84°48'19"	5.00	7.40	4.566	6.743
C50	78°27'47"	5.00	6.85	4.082	6.325
C51	78°08'30"	5.00	6.82	4.057	6.301

VIN VEJA TOP OF 6" CURB LEFT

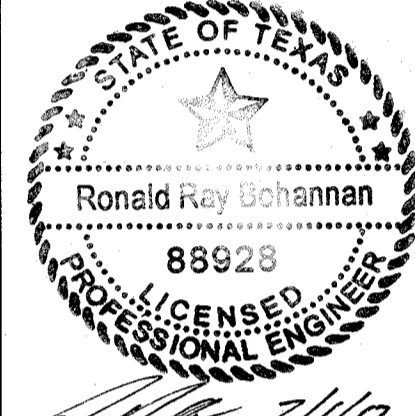


VIN VEJA TOP OF 6" CURB RIGHT



CITY MONUMENT AT POINT OF CURVE CENTERLINE MONTECILLO BLVD. ADJOINING LOT 1, BLOCK 1, MONTECILLO UNIT ONE (STATION 0+82.81). ELEVATION: 4107.13(CITY DATUM)

MONTECILLO UNIT 9 EAST AND WEST
 BEING A REPLAT OF A PORTION OF LOT 6, BLOCK 2, MONTECILLO TRACT, PREPARED BY SURVEY NO. 10, CITY OF EL PASO, EL PASO COUNTY, TEXAS, CONTAINING 5.3943 ACRES



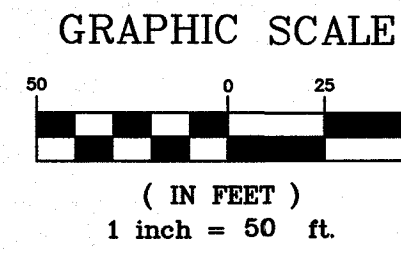
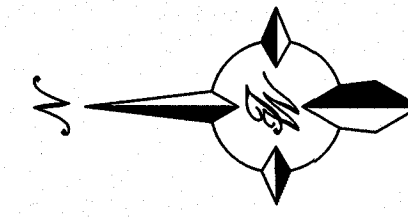
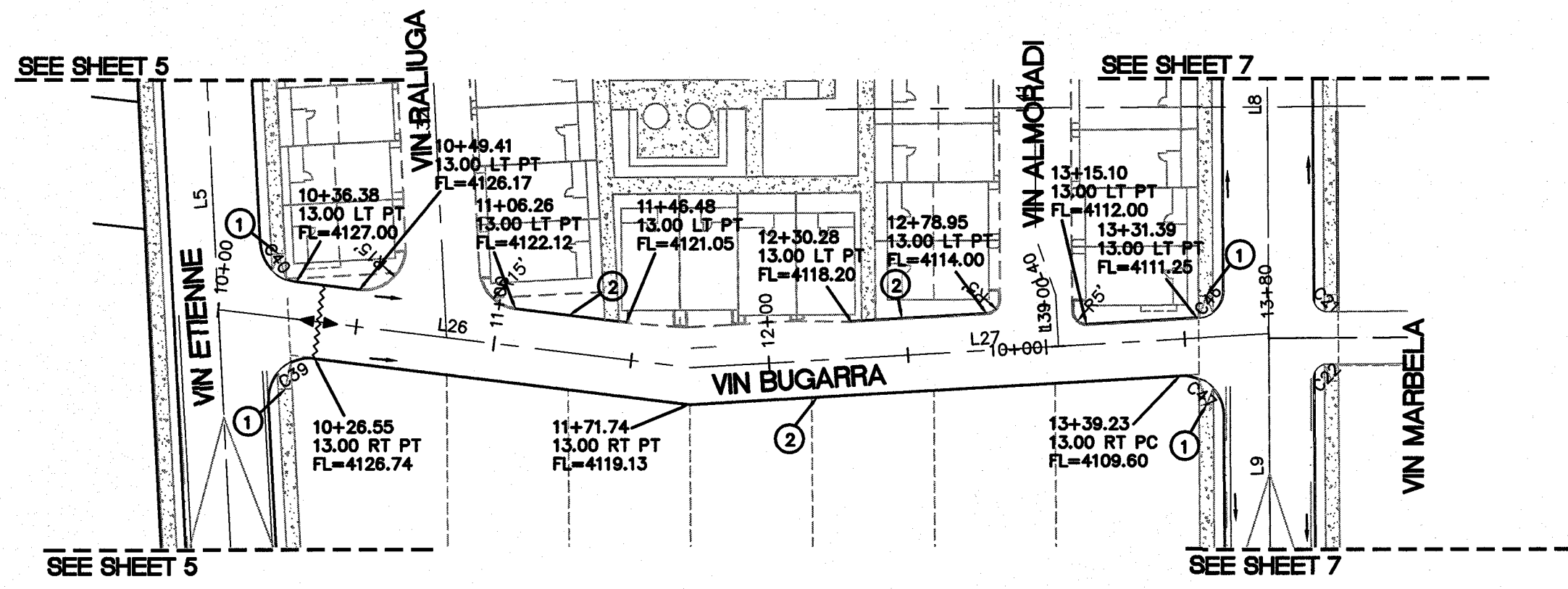
RONALD R. BOHANNAN
 P.E. #88928

TERRA WEST, LLC
 5571 MIDWAY PARK PLACE NE
 ALBUQUERQUE, NM 87109
 (505) 858-3100
 www.terrawestllc.com
 TEXAS BUSINESS NO.
 F-11773

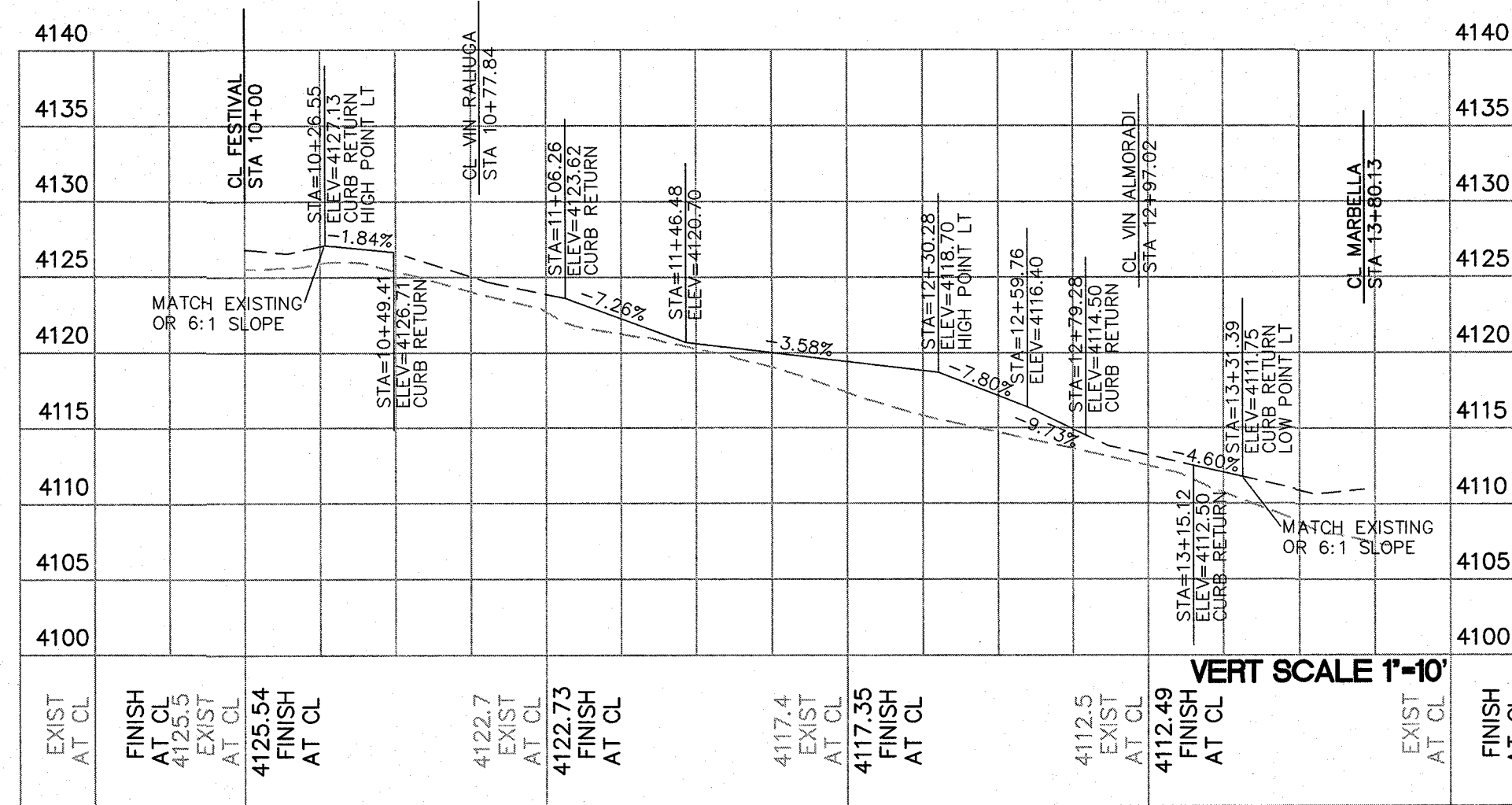
NO.	DATE	REMARKS	BY
		DESIGN	
		REVISIONS	

DESIGNED BY	DATE	DATE	DATE
VC	1-10-17	1-10-17	1-10-17
pm	1-10-17	2015079	2015079
PP	2015079-PP	PP	PP

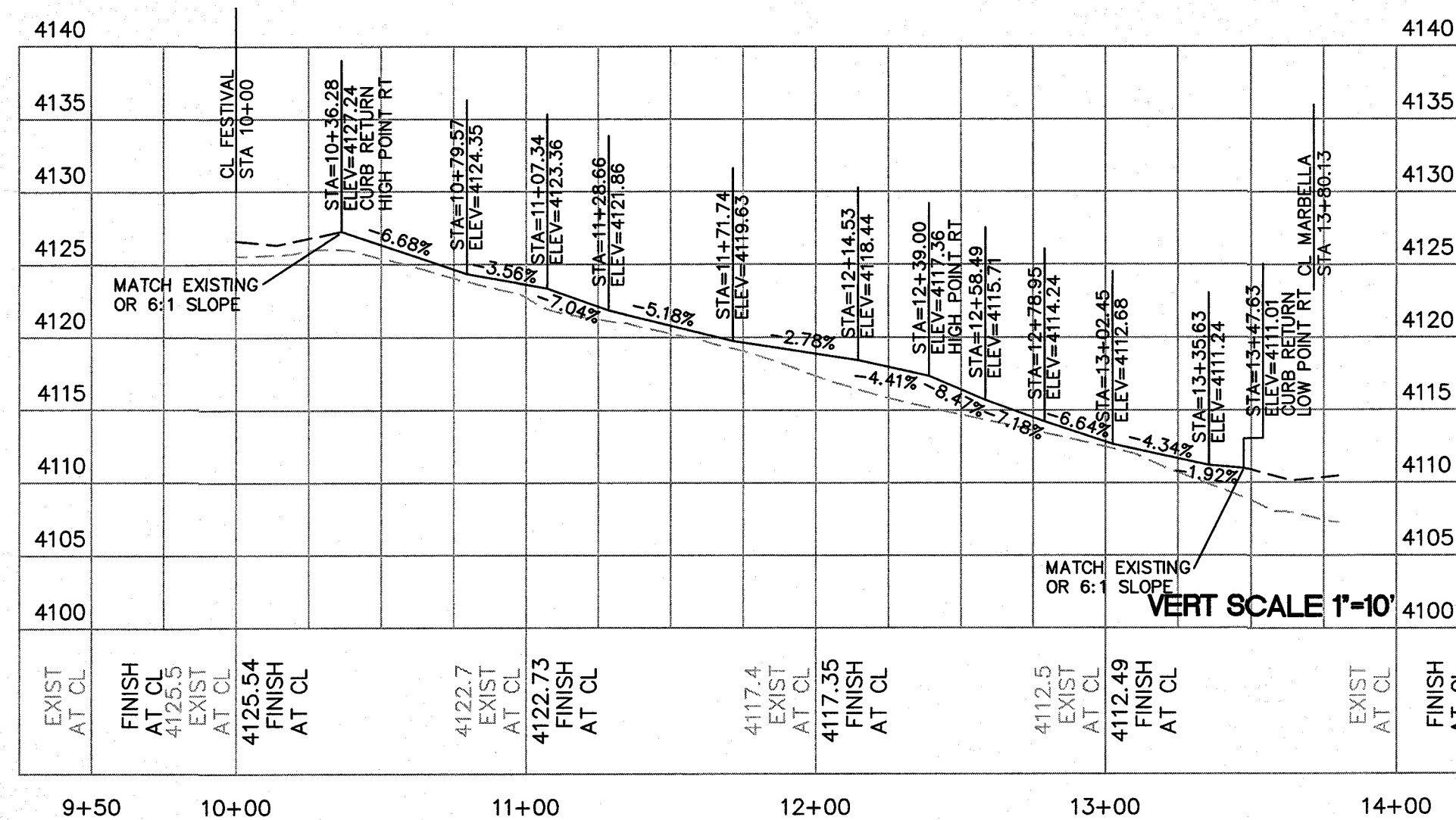
SHEET TITLE
**VIN VEJA
 10+00 TO
 13+75**
 SHT 9 OF 42



VIN BUGARRA TOP OF 6" CURB LEFT



VIN BUGARRA TOP OF 6" CURB RIGHT



KEYED NOTES

- ① UNIDIRECTIONAL ACCESSIBLE RAMP SEE DETAIL SHEET 17
- ② STANDARD 6" HEADER CURB

NOTES

- 1. ALL SIDEWALKS AND HCR'S BY DEVELOPER
- 2. SEE SHEET 4 FOR ROADWAY SECTIONS

LINE TABLE		
LINE	BEARING	LENGTH
L26	S7°00'43"W	171.74
L27	S3°18'19"E	208.39

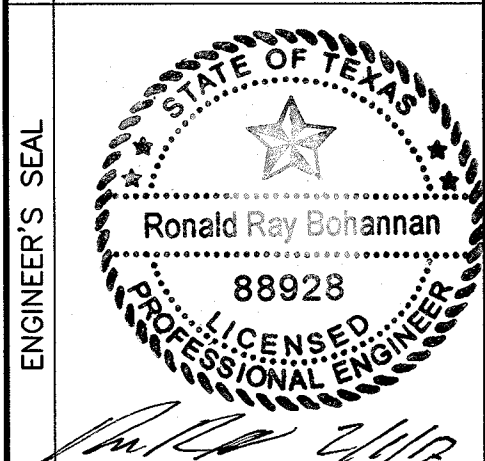
CURVE TABLE					
CURVE	DELTA	RADIUS	LENGTH	TANGENT	CHORD
C39	23°35'18"	15.00	6.18	3.132	6.132
C40	80°03'31"	15.00	20.96	12.600	19.295
C46	84°10'18"	10.00	14.69	9.031	13.405
C47	23°35'18"	15.00	6.18	3.132	6.132



Final Approval

PROJECT NAME
MONTECILLO UNIT 9 EAST AND WEST

BEING A REPLAT OF A PORTION OF LOT 6, BLOCK 2, MONTECILLO UNIT THREE, REPLAT 'B' AND A PORTION OF TRACT 1, JOHN BAKER SURVEY NO. 10, CITY OF EL PASO, EL PASO COUNTY, TEXAS, CONTAINING 5.3943 ACRES

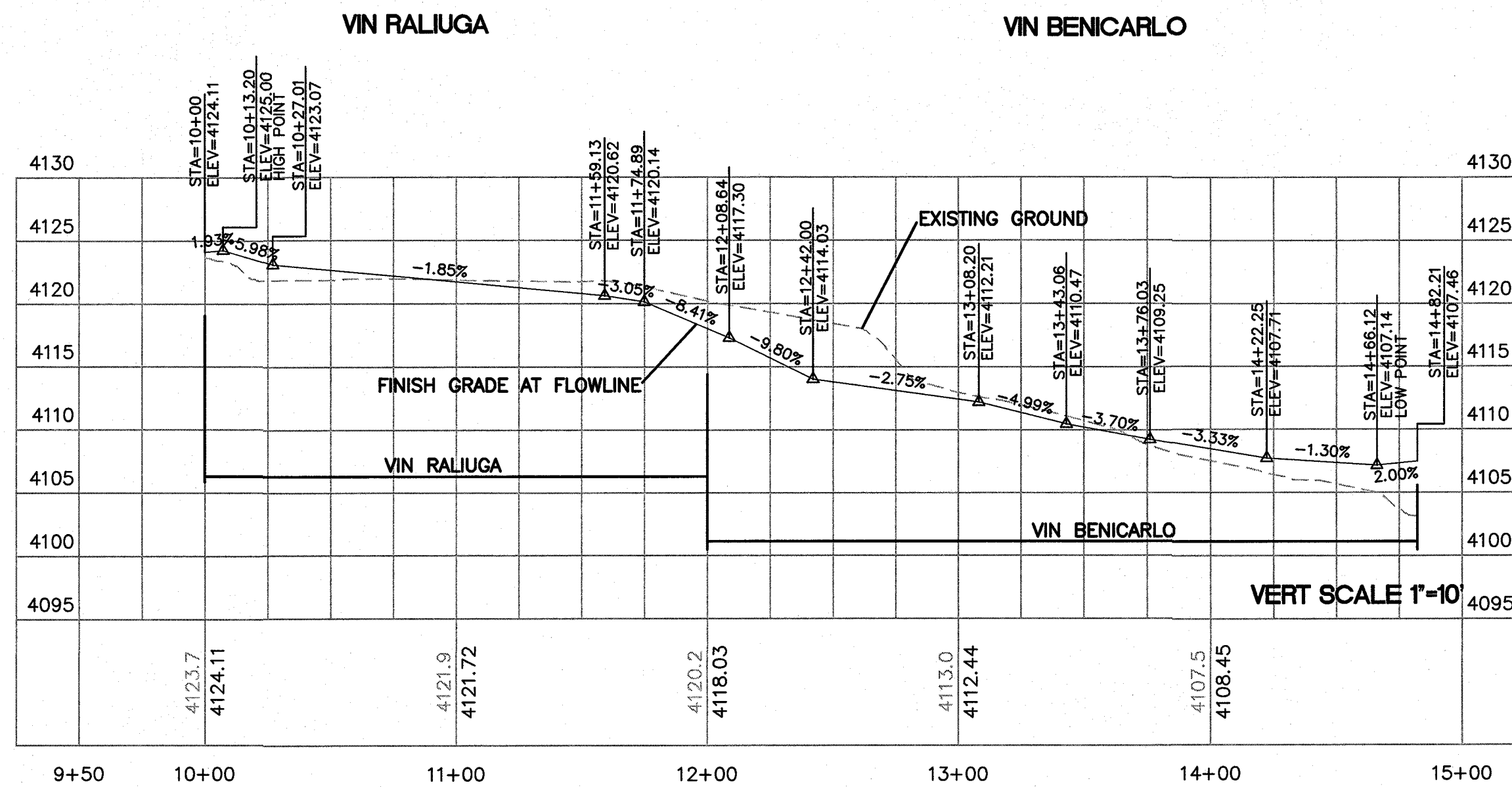
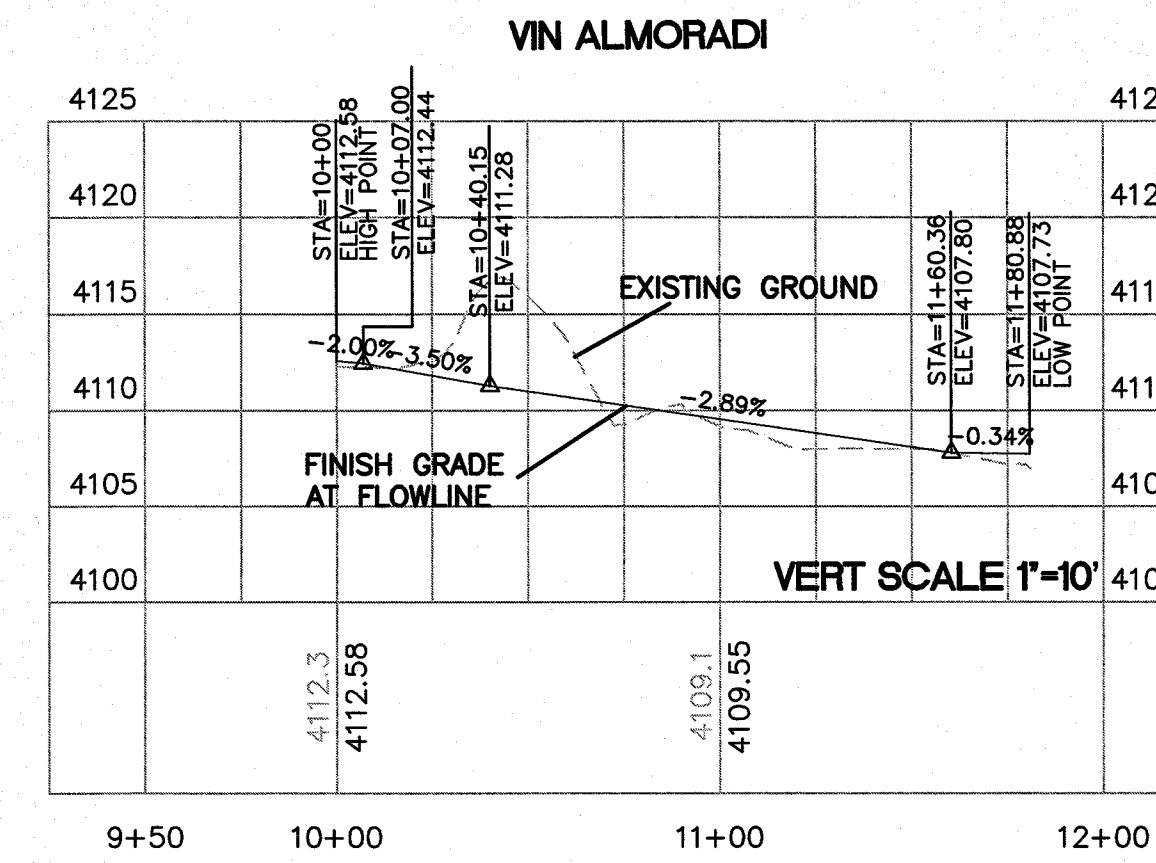
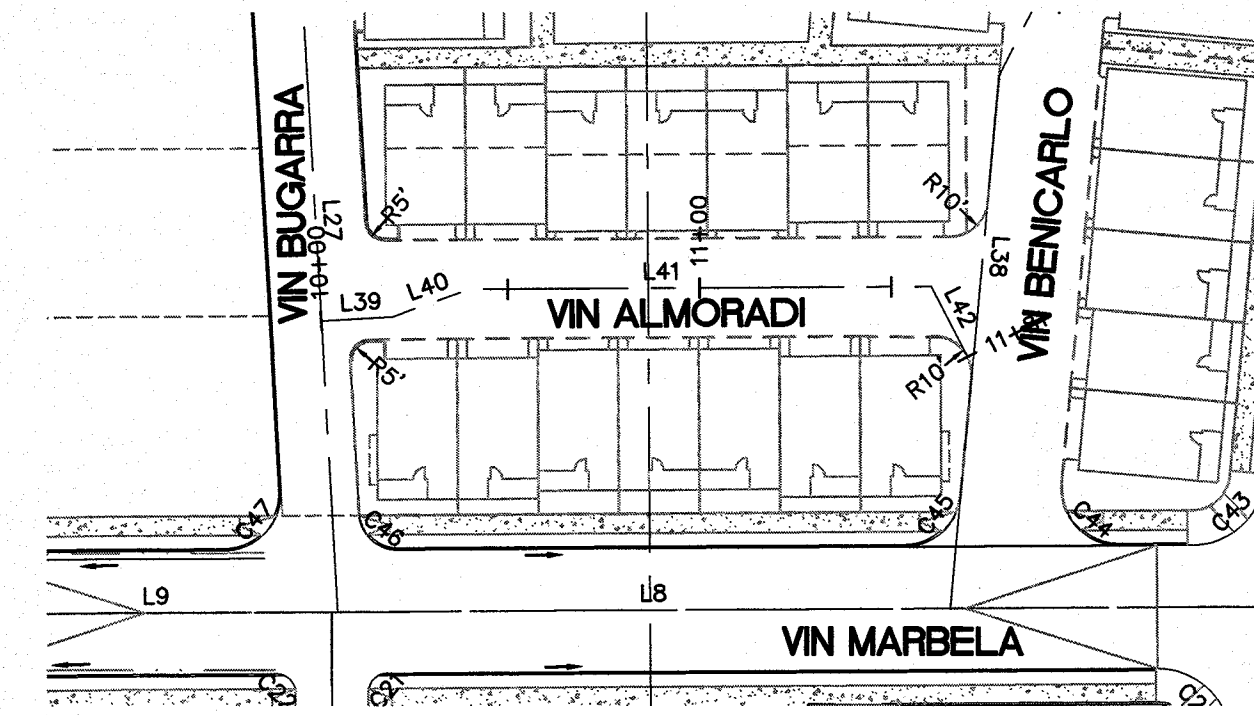
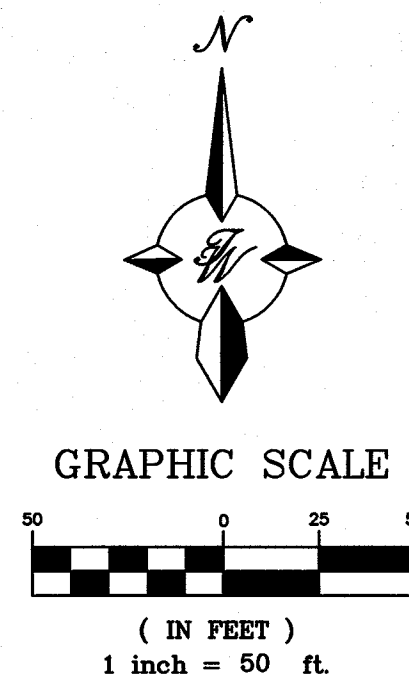
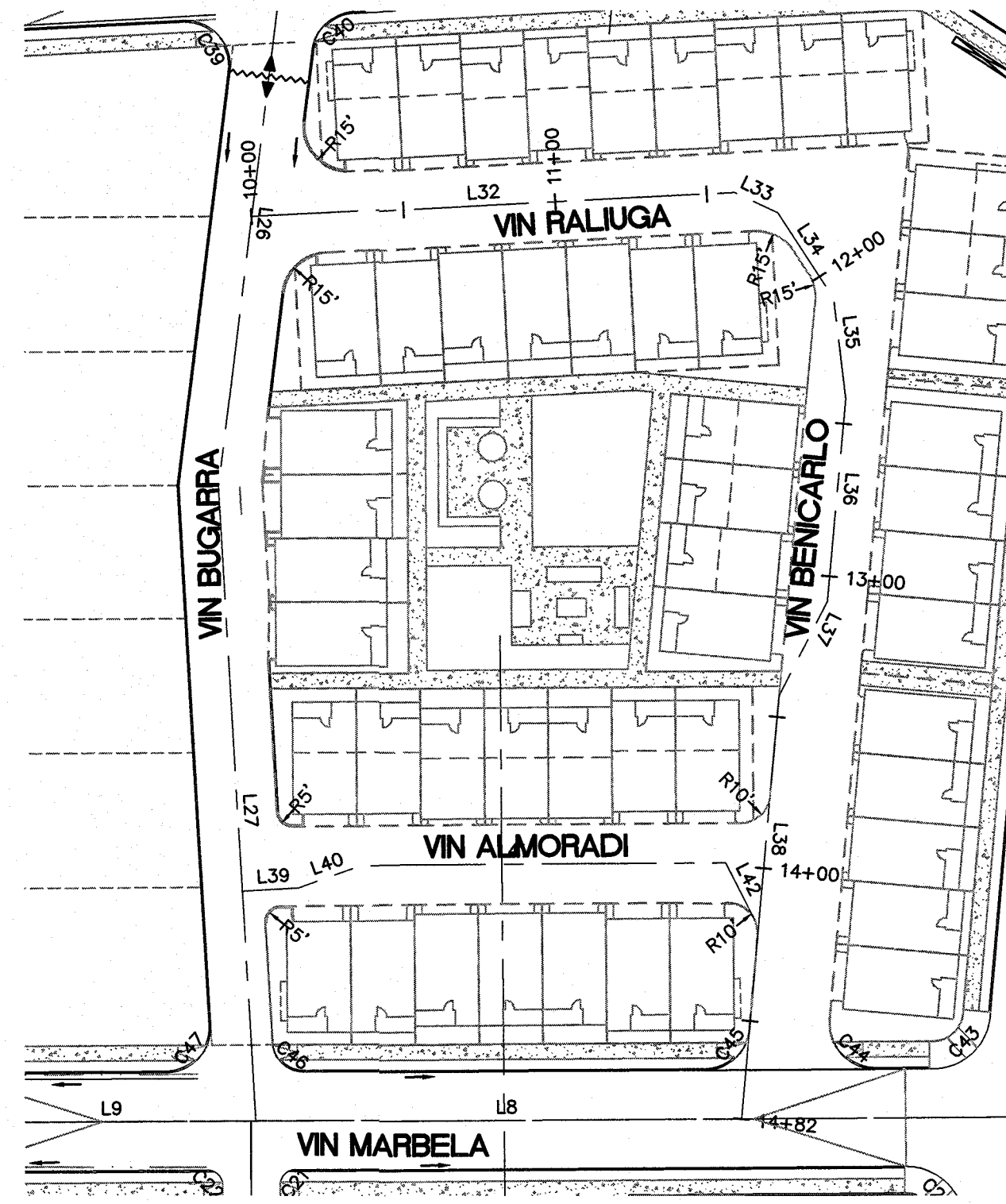


RONALD R. BOHANNAN
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(505) 858-3100
www.tierrovestllc.com
TEXAS BUSINESS NO.
P-11773

NO.	DATE	REMARKS	BY
		DESIGN	
		VC	
		pm	
		DESIGN	
		DATE	
		DATE	
		JOB NO	
		DATE	
		DATE	

SHEET TITLE
**VIN BUGARRA
10+00 TO
13+80**



LINE	BEARING	LENGTH
L32	N87°04'13"E	159.13
L33	S64°59'51"E	15.75
L34	S32°57'36"E	33.75
L35	S6°53'00"E	33.36
L36	S5°13'47"W	66.20
L37	S27°07'18"W	34.87
L38	S5°13'47"W	139.15
L39	N86°41'41"E	18.50
L40	N70°32'59"E	21.65
L41	N89°40'52"E	120.21
L42	S27°15'08"E	20.72



Final Approval

PROJECT NAME
MONTECILLO UNIT 9 EAST AND WEST
 BEING A REPLAT OF A PORTION OF LOT 6, BLOCK 2, MONTECILLO UNIT THREE, REPLAT 'B' AND A PORTION OF TRACT 1, JOHN BAKER SURVEY NO. 10, CITY OF EL PASO, EL PASO COUNTY, TEXAS, CONTAINING 5.3943 ACRES

ENGINEER'S SEAL
 RONALD R. BOHANNAN
 P.E. #88928

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 ALBUQUERQUE, NM 87109
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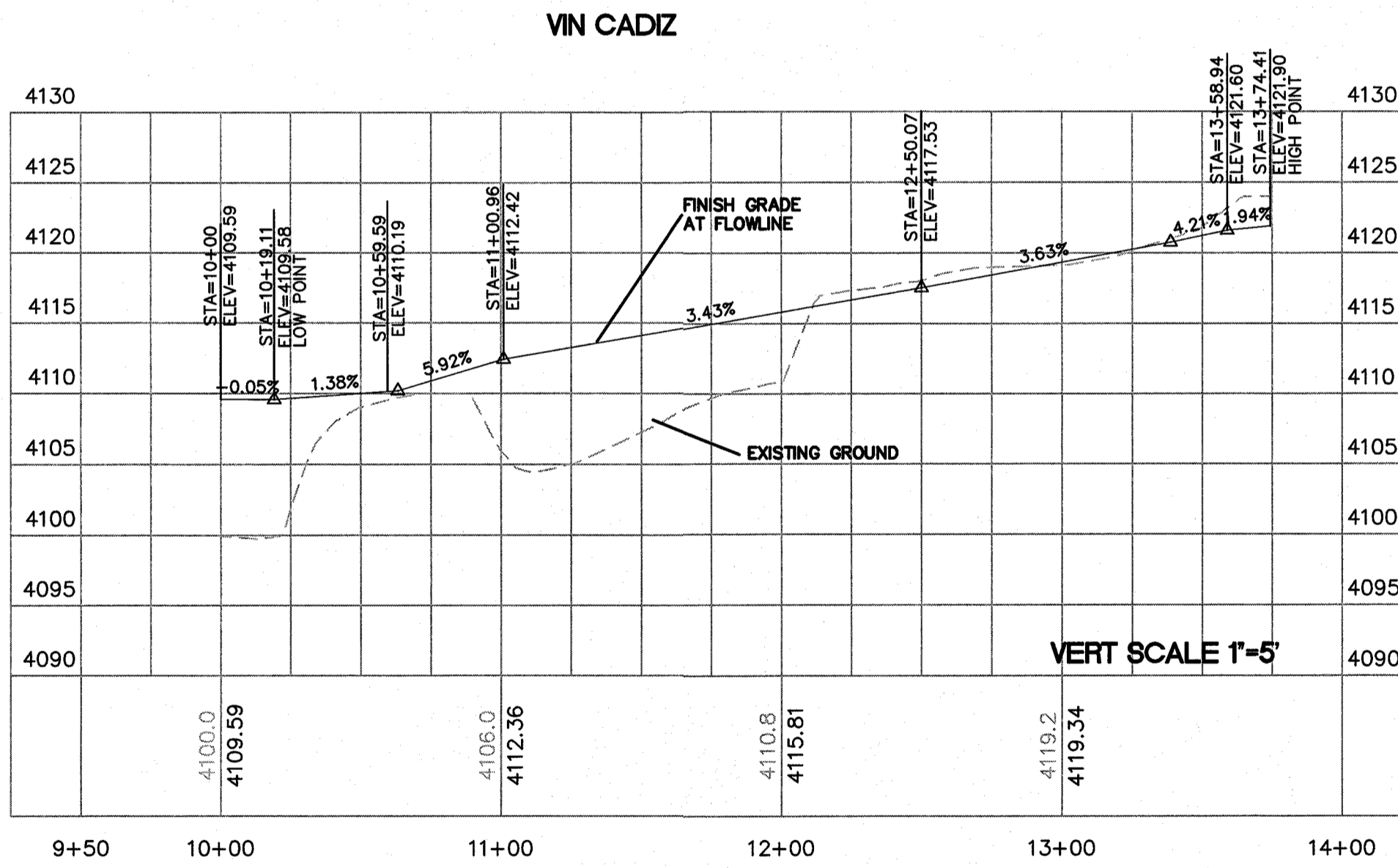
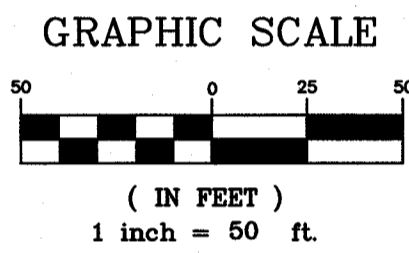
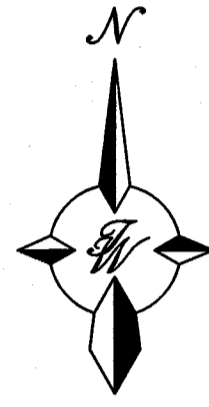
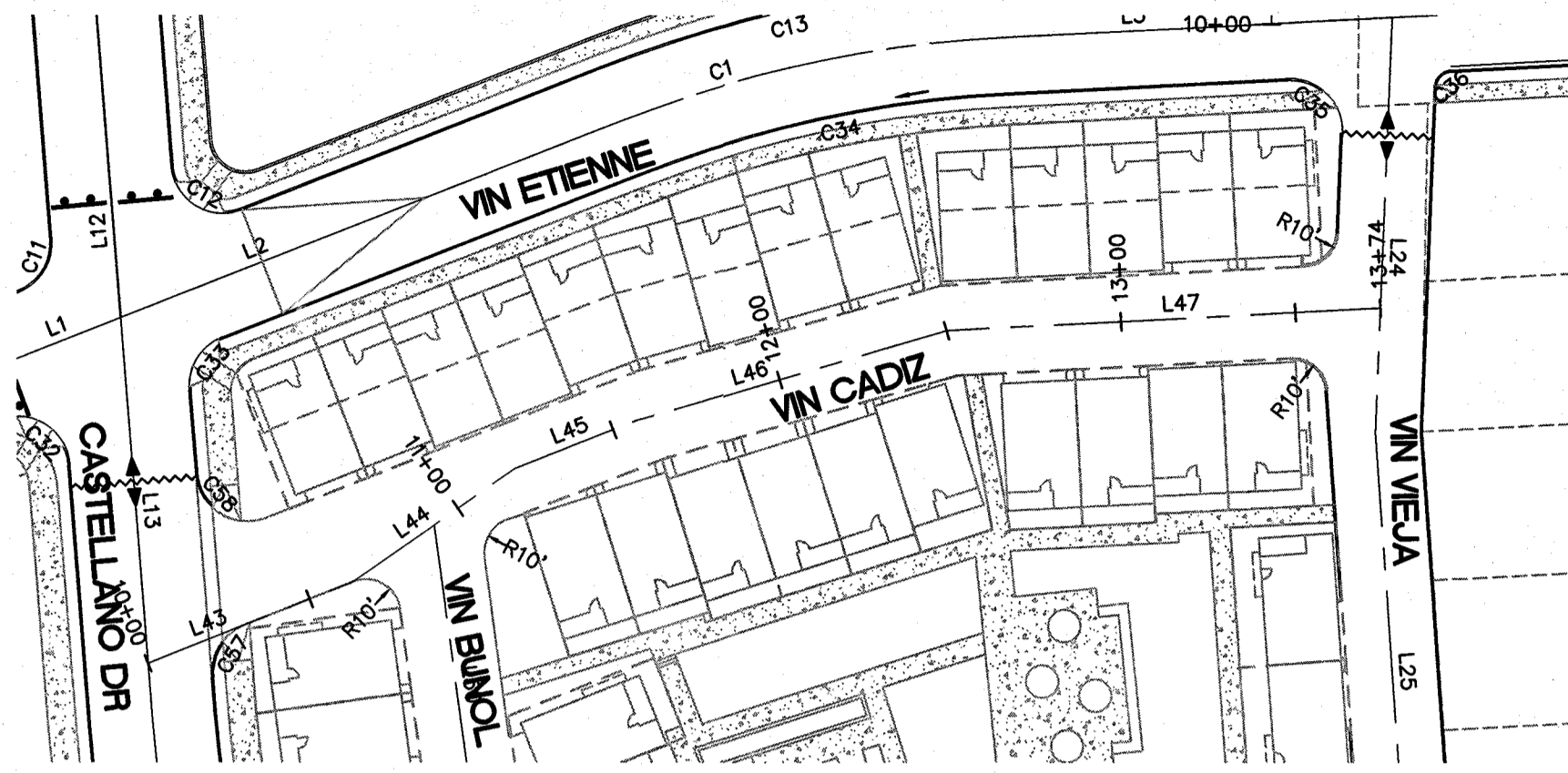
NO.	DATE	REMARKS	BY
		DESIGN	
		REVISIONS	

DESIGNED BY VC DATE 1-10-17
 DRAWN BY pm DATE 1-10-17
 DRAWING NAME 2015079-PP JOB NO 2015079
 CHECKED BY VC DATE 1-10-17

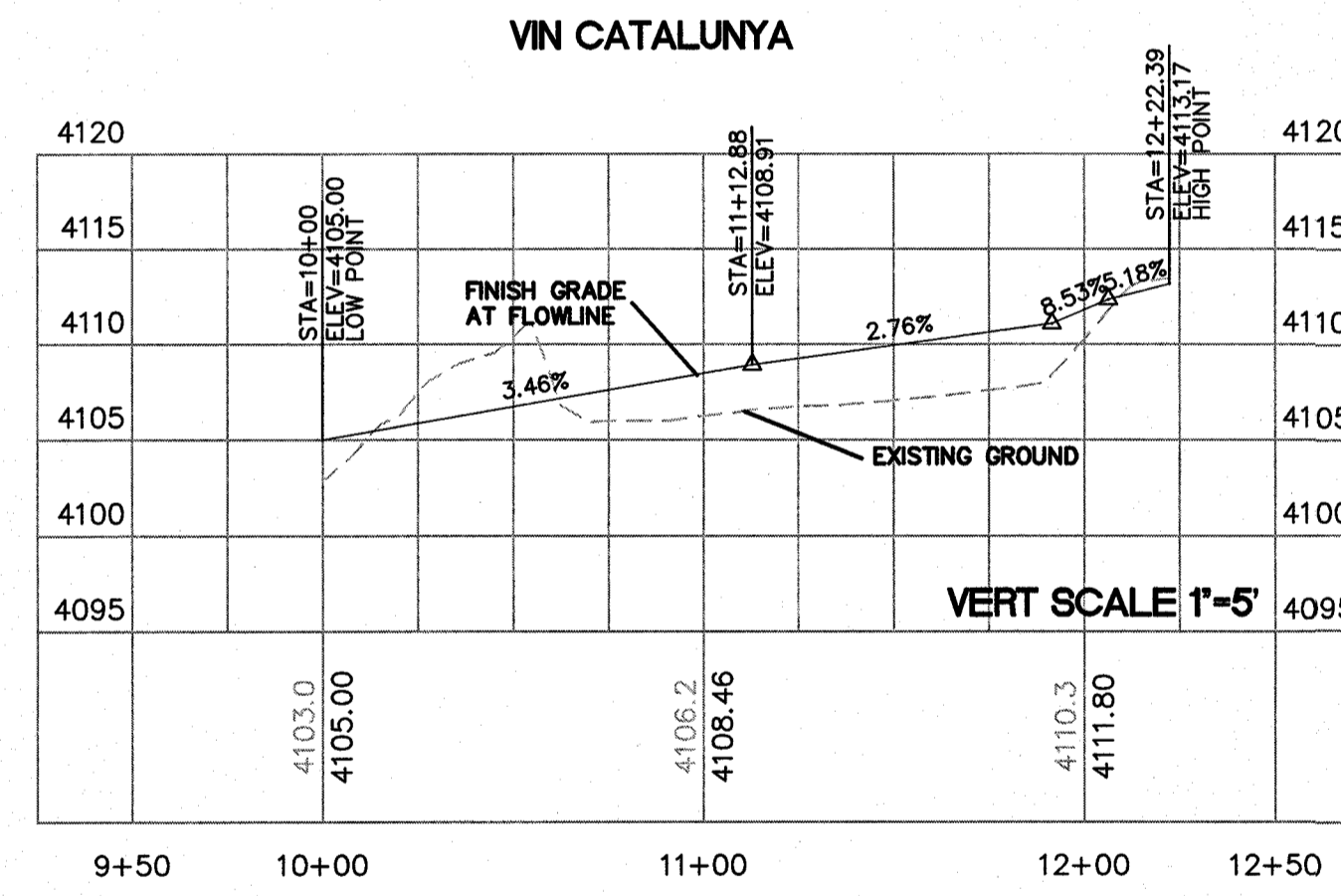
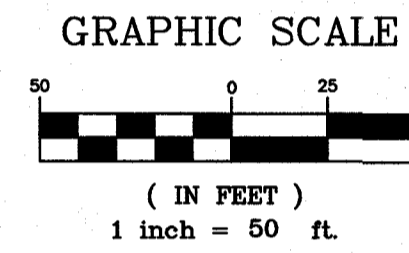
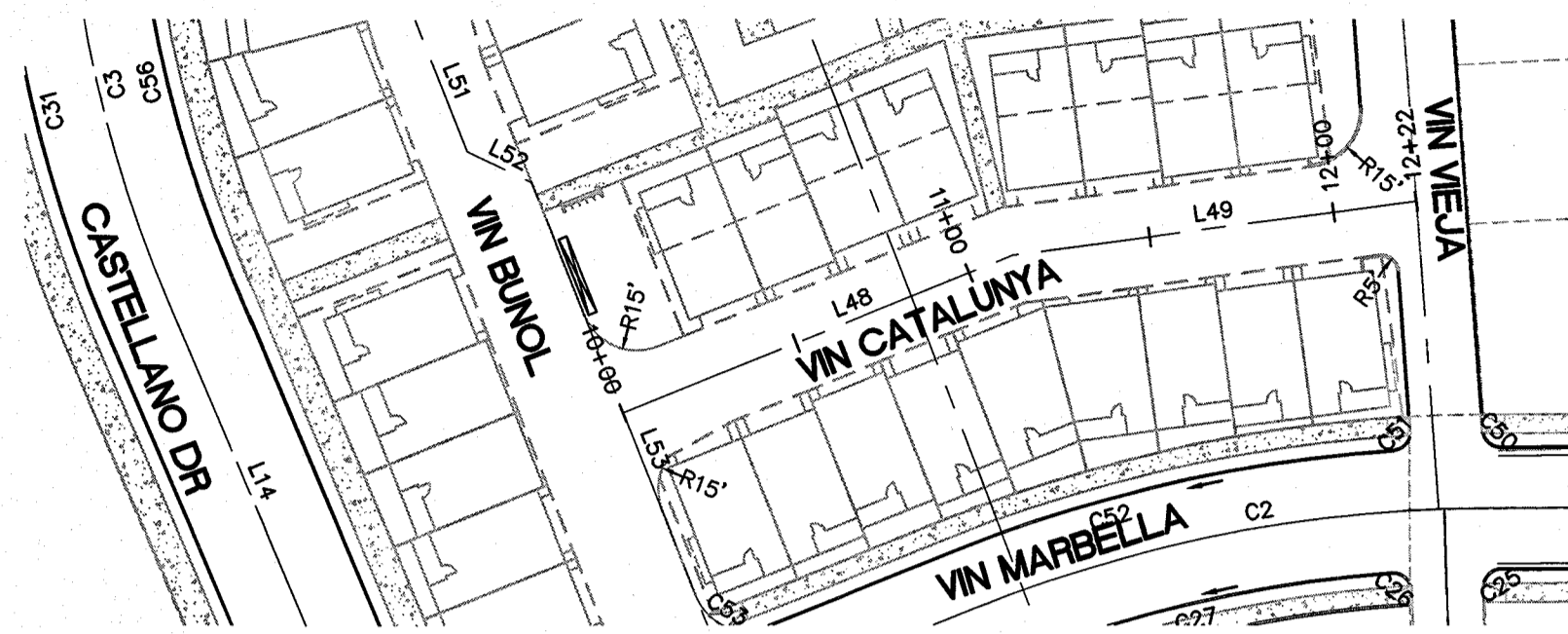
SHEET TITLE
VIN RALIUGA, VIN BENCARLO, VIN ALMORADI

SHT 11 OF 42

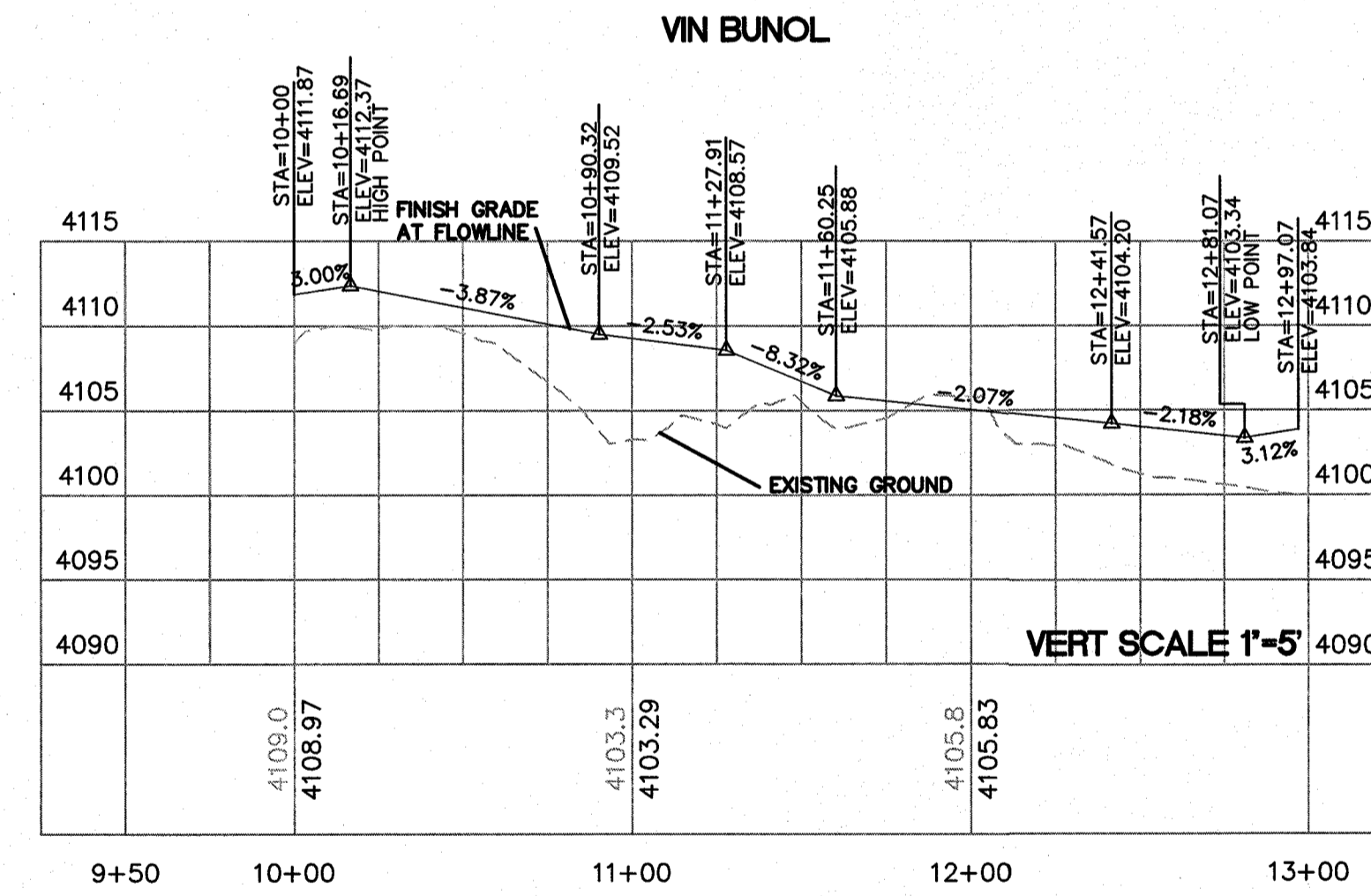
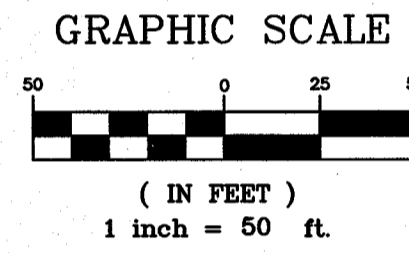
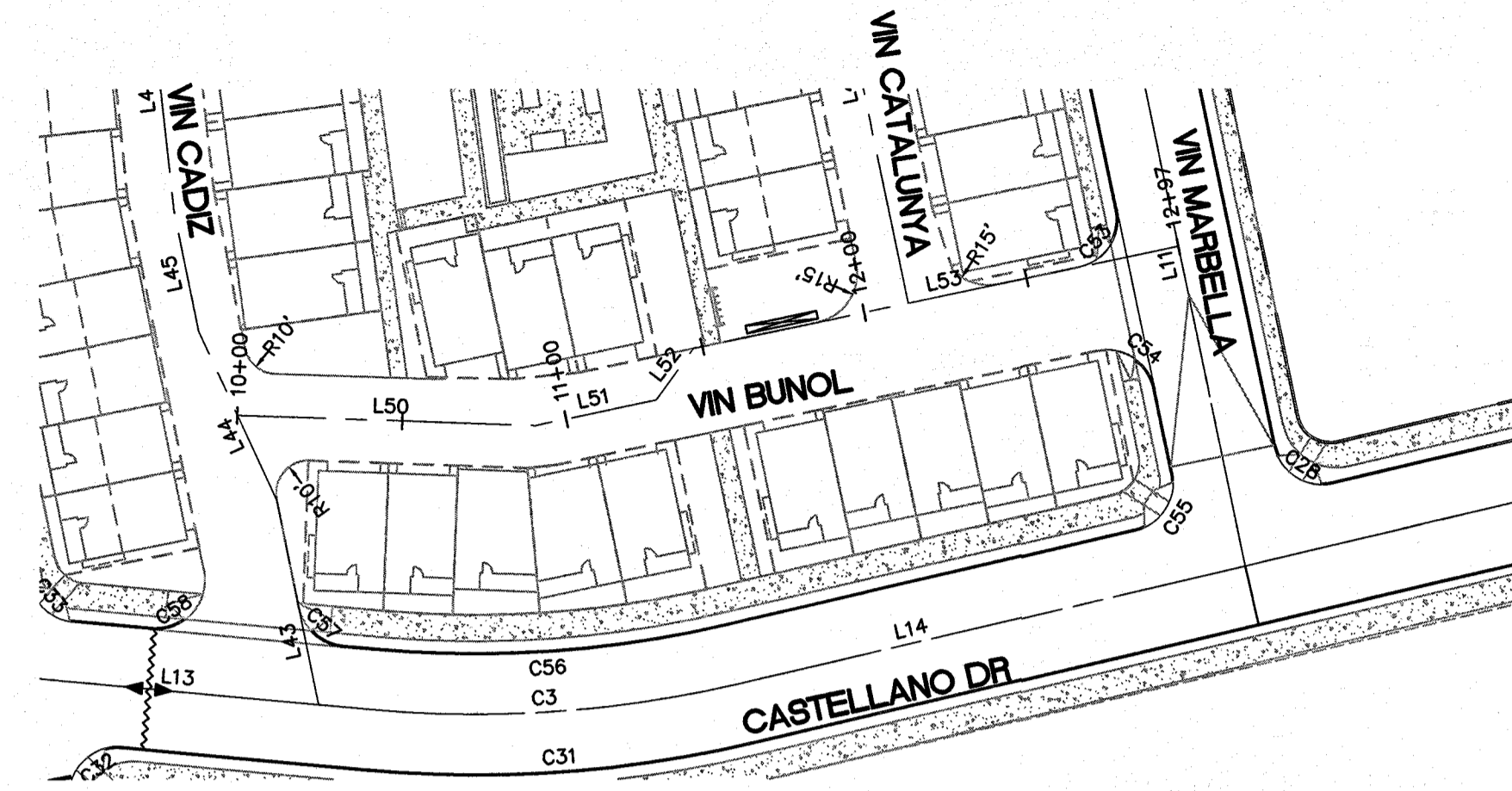
CITY MONUMENT AT POINT OF CURVE CENTERLINE MONTECILLO BLVD. ADJOINING LOT 10, UNIT 9, BLOCK 2, MONTECILLO UNIT THREE, REPLAT 'B' (STATION 0+82.81) ELEVATION: 4107.13(CITY DATUM)



LINE	BEARING	LENGTH
L43	N68°31'32"E	63.27
L44	N55°13'00"E	56.47
L45	N68°31'32"E	37.15
L46	N73°42'31"E	93.17
L47	N87°04'16"E	124.35



LINE	BEARING	LENGTH
L48	N68°12'08"E	112.88
L49	N82°19'53"E	109.51



LINE	BEARING	LENGTH
L50	S7°58'07"E	90.32
L51	S21°47'52"E	37.58
L52	S62°45'40"E	19.83
L53	S21°47'28"E	149.15



Final Approval

CITY MONUMENT AT POINT OF CURVE CENTERLINE MONTECILLO BLVD. ADJACENT TO BLOCK ONE MONTECILLO UNIT ONE (STATION 0+82.81) ELEVATION: 4107.13(CITY DATUM)

MONTECILLO UNIT 9 EAST AND WEST
 BEING A REPLAT OF A PORTION OF LOT 6, BLOCK 2, MONTECILLO UNIT THREE, REPLAT 'B' AND A PORTION OF TRACT 1, JOHN BAKER SURVEY, NO. 10, CITY OF EL PASO, EL PASO COUNTY, TEXAS, CONTAINING 5.3945 ACRES

ENGINEER'S SEAL

 RONALD R. BOHANNAN
 P.E. #88928

PROJECT NAME
MONTECILLO UNIT 9 EAST AND WEST

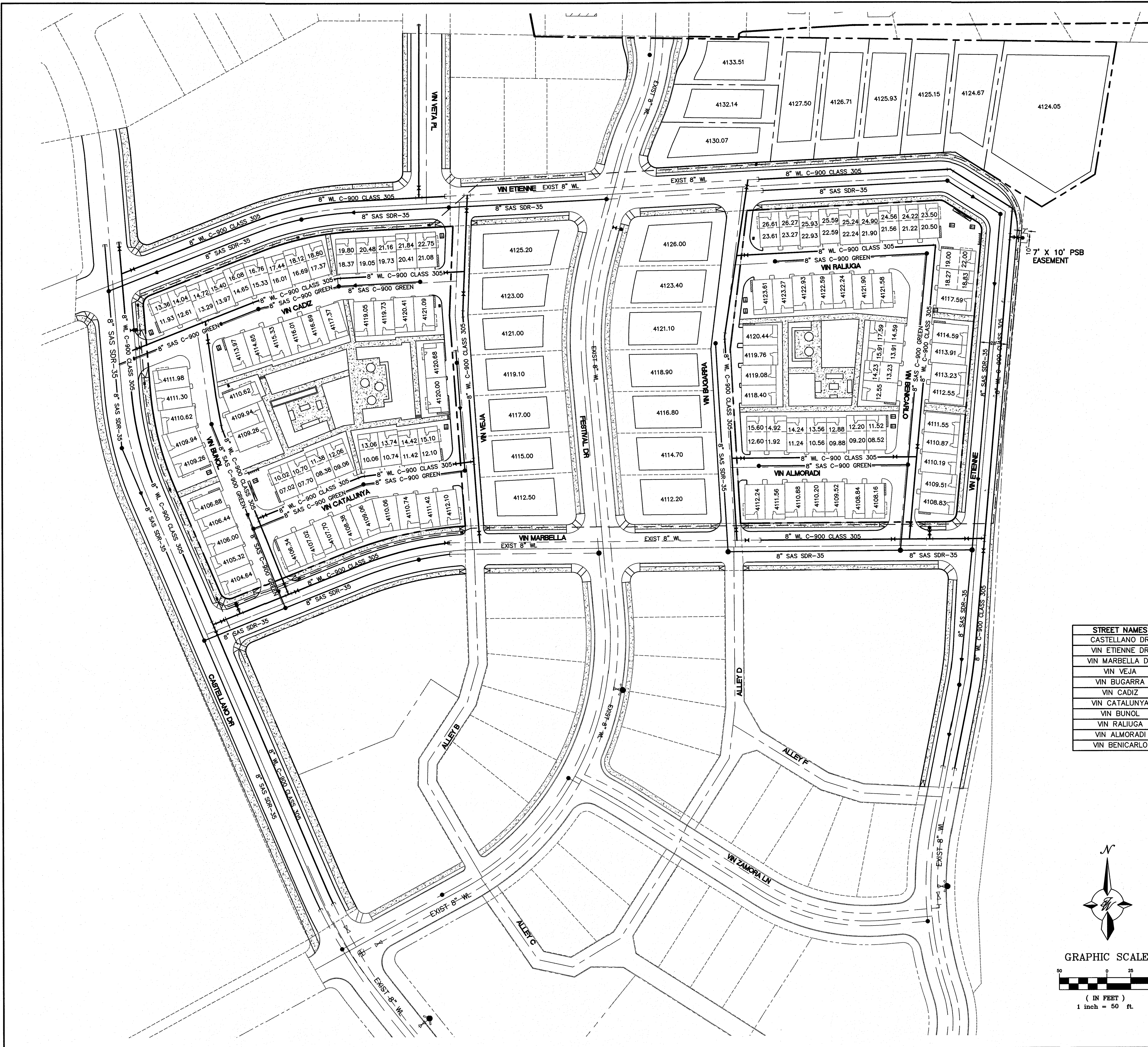
DESIGNED BY VC
 DRAWN BY pm
 CHECKED BY VC

DATE 1-10-17
 DATE 1-10-17
 JOB NO 2015079
 DATE 1-10-17

REMARKS
 REVISIONS
 DESIGN

SHEET TITLE
**VIN CADIZ,
 VIN CATALUNYA,
 VIN BUNOL**

SHT 11A OF 42

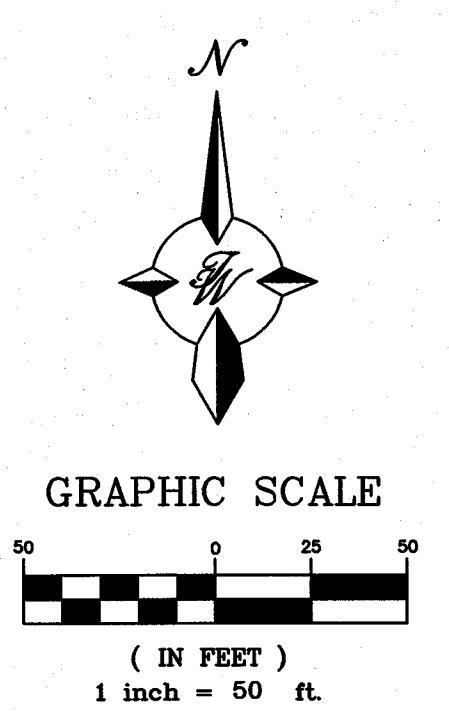


LEGEND

- CURB & GUTTER
- BOUNDARY LINE
- EASEMENT
- SIDEWALK
- PROPOSED ELECTRIC LINE
- PROPOSED TELEPHONE LINE
- PROPOSED GAS LINE
- SIGHT LIGHTING
- TRANSFORMER
- PROPOSED 8" WATERLINE
- EXISTING 8" WATERLINE
- CAP
- SD MANHOLE
- SAS MANHOLE
- FIRE HYDRANT
- GATE VALVE
- EX. 8" SAS-SDR-35
- PROPOSED 8" SANITARY SEWER LINE
- EX. 18" RCP

- GENERAL UTILITY NOTES:**
- 4" MINIMUM BURY REQUIRED FOR ALL UTILITIES UNLESS OTHERWISE NOTED.
 - ALL PLUMBING PIPE MATERIAL TO BE USED PER UPC.
 - ALL EXCAVATION, TRENCHING AND SHORING ACTIVITIES MUST BE CARRIED-OUT IN ACCORDANCE WITH OSHA 29 CFR 1926.650 SUBPART P.
 - ALL UTILITY DISTANCES SHOWN ARE FOR REFERENCE ONLY.
 - DUE TO ANTICIPATED WATERLINE PRESSURES, PRIVATE PRESSURE REGULATION DEVICES ARE REQUIRED AT THE DISCHARGE SIDE OF EACH WATER METER.
 - PUBLIC WATER AND SEWER UTILITY WORK SHALL NOT BE PERFORMED BY CONTRACTOR UNTIL A DEVELOPMENT AGREEMENT HAS BEEN EXECUTED BETWEEN OWNER AND E. P. WATER-P.S.B.
 - CONSTRUCTION OF THE PUBLIC WATER AND SEWER SYSTEM INCLUDING MATERIALS AND TESTING SHALL CONFORM TO E.P. WATER-P.S.B. STANDARD SPECIFICATIONS FOR THE INSTALLATION OF WATER MAINS, SEWER MAINS AND RELATED APPURTENANCES.
 - WATER MAIN IS TO BE C-900 CLASS 305, SEWER MAIN IS TO BE SDR-35 UNLESS OTHERWISE INDICATED.

STREET NAMES	LENGTH, SIZE, TYPE OF PIPE, PIPE CLASS
CASTELLANO DR	INSTALL 742 FEET OF 8" PVC PIPE (SDR 35)
VIN ETIENNE DR	INSTALL 1217 FEET OF 8" PVC PIPE (SDR 35)
VIN MARBELLA DR	INSTALL 532 FEET OF 8" PVC PIPE (SDR 35)
VIN VEJA	INSTALL 136 FEET OF 8" PVC PIPE (SDR 35)
VIN BUGARRA	INSTALL 220 FEET OF 8" PVC PIPE (SDR 35)
VIN CADIZ	INSTALL 336 FEET OF 8" PVC PIPE (C-900)
VIN CATALUNYA	INSTALL 249 FEET OF 8" PVC PIPE (C-900)
VIN BUNOL	INSTALL 208 FEET OF 8" PVC PIPE (C-900)
VIN RALIUGA	INSTALL 137 FEET OF 8" PVC PIPE (C-900)
VIN ALMORADI	INSTALL 153 FEET OF 8" PVC PIPE (C-900)
VIN BENICARLOS	INSTALL 316 FEET OF 8" PVC PIPE (C-900)



CAUTION:
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CITY MONUMENT AT POINT OF CURVE CENTERLINE MONTECILLO BLVD. ADJOINING LOT 1, BLOCK 1, MONTECILLO UNIT ONE (STATION 0+82.81). ELEVATION: 4107.13(CITY DATUM)

PROJECT NAME
MONTECILLO UNIT 9 EAST AND WEST

BEING A REPEAT OF A PORTION OF LOT 6 MONTECILLO UNIT THREE, REPEAT 'B' AND PORTION OF TRACT JOHN BAKER SURVEY NO. 10, CITY OF EL PASO, EL PASO COUNTY, TEXAS, CONTAINING 5.3943 ACRES

ENGINEER'S SEAL

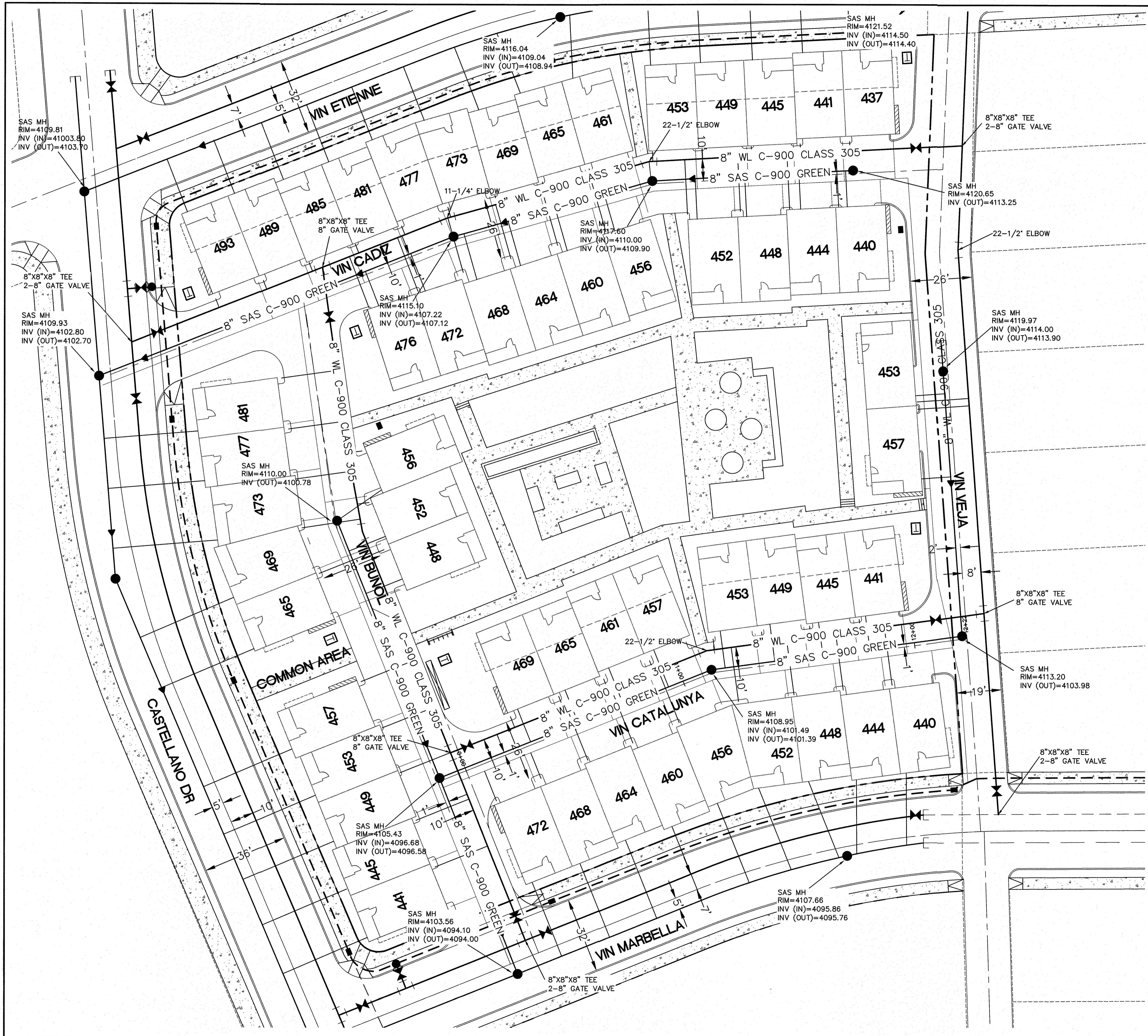
 RONALD R. BOHANNAN
 P.E. #88928

TIERRA WEST, LLC
 5571 MIDWAY PARK PLACE, NE
 ALBUQUERQUE, NM 87109
 (505) 858-3100
 www.tierrawestllc.com
 TEXAS BUSINESS NO. F-117173

NO.	DATE	REMARKS	BY
		DESIGN	VC
	1-10-17	REVISIONS	pm
	1-10-17		VC
	2015079-MU		VC
	1-10-17		VC

SHEET TITLE
OVERALL UTILITY PLAN

SHT 12 OF 42



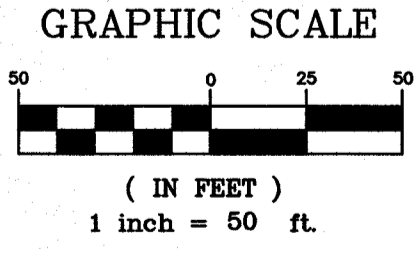
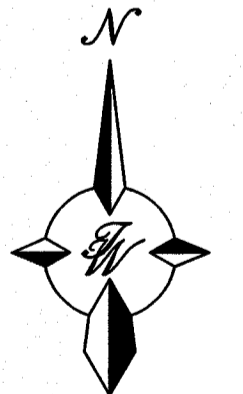
LEGEND

	CURB & GUTTER
	BOUNDARY LINE
	EASEMENT
	SIDEWALK
	PROPOSED ELECTRIC LINE
	PROPOSED TELEPHONE LINE
	PROPOSED GAS LINE
	SIGHT LIGHTING
	TRANSFORMER
	PROPOSED 8" WATERLINE
	EXISTING 8" WATERLINE
	CAP
	SD MANHOLE
	SAS MANHOLE
	FIRE HYDRANT
	GATE VALVE
	EXISTING 8" SANITARY SEWER LINE
	PROPOSED 8" SANITARY SEWER LINE
	EXISTING STORM SEWER LINE
	JOINT UTILITY TRENCH

- GENERAL UTILITY NOTES:**
- 4' MINIMUM BURY REQUIRED FOR ALL UTILITIES UNLESS OTHERWISE NOTED.
 - ALL PLUMBING PIPE MATERIAL TO BE USED PER UPC.
 - ALL EXCAVATION, TRENCHING AND SHORING ACTIVITIES MUST BE CARRIED-OUT IN ACCORDANCE WITH OSHA 29 CFR 1926.650 SUBPART P.
 - ALL UTILITY DISTANCES SHOWN ARE FOR REFERENCE ONLY.



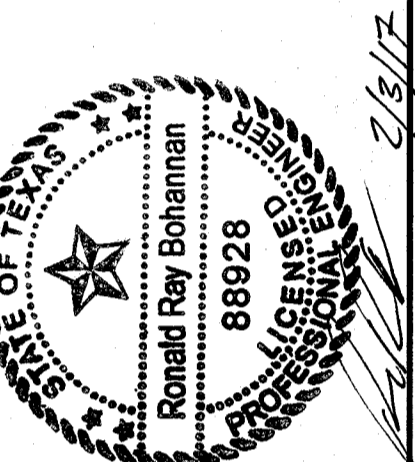
Final Approval



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CITY MONUMENT AT POINT OF CURVE CENTERLINE MONTECILLO BLVD. ADJOINING LOT 1, BLOCK 1, MONTECILLO UNIT 9 (STATION: 0+82.81) ELEVATION: 4107.13(CITY DATUM)

MONTECILLO UNIT 9 EAST AND WEST
 BEING A REPLAT OF A PORTION OF LOT 6, BLOCK 2, MONTECILLO UNIT THREE, REPLAT 'B' AND A PORTION OF TRACT 1, JOHN BAKER SURVEY NO. 10, CITY OF EL PASO, EL PASO COUNTY, TEXAS, CONTAINING 5.3943 ACRES

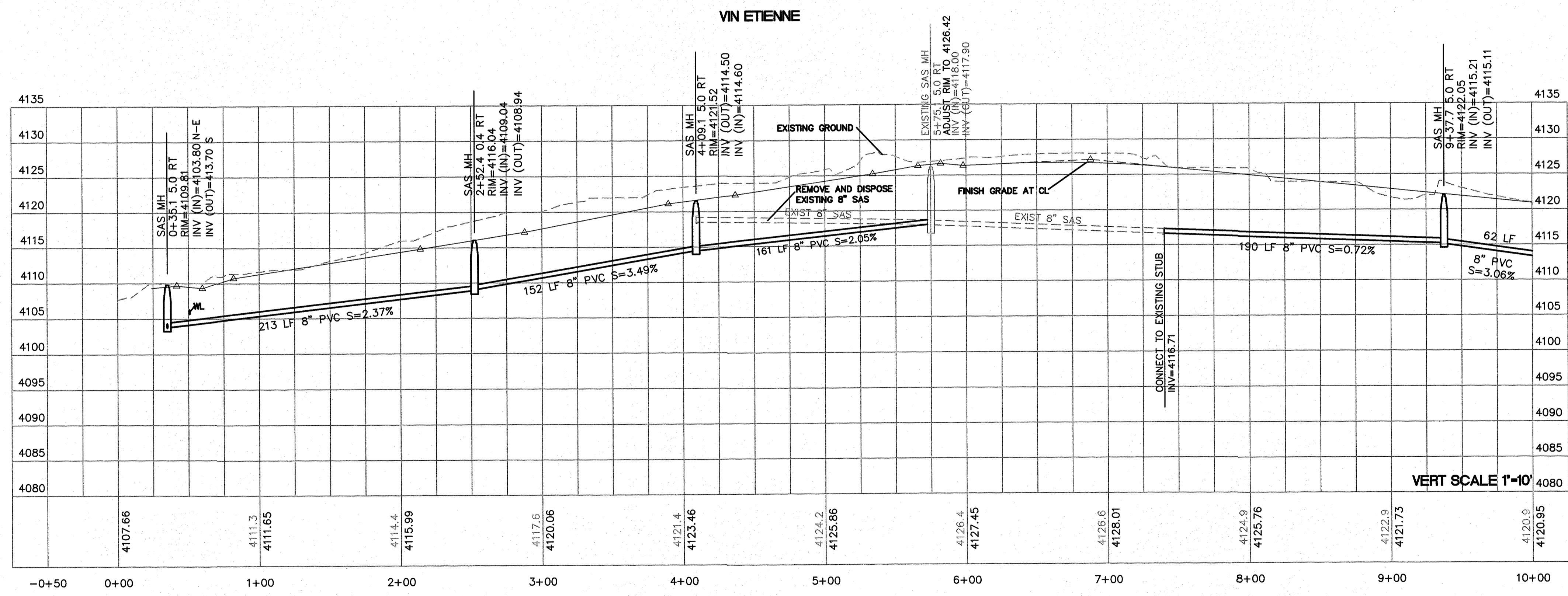
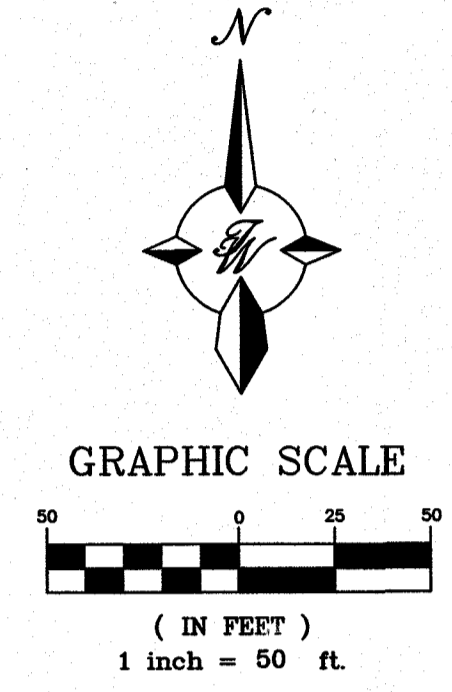
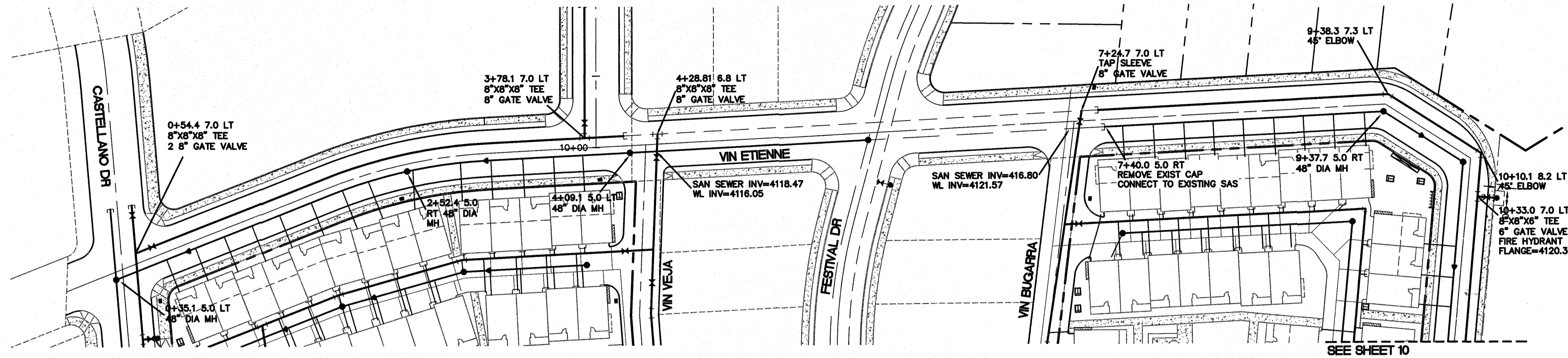


RONALD R. BOHANNON
 P.E. #88928

TIERRA WEST, LLC
 5571 MIDWAY PARK PLACE NE
 ALBUQUERQUE, NM 87109
 (505) 858-3100
 www.tierrewestllc.com
 TEXAS BUSINESS NO. F-11773

NO.	DATE	REMARKS	BY
		DESIGN	
		REVISED	

DESIGNED BY	DATE	1-10-17
DRAWN BY	DATE	1-10-17
DRAWING NAME	JOB NO	2015079
CHECKED BY	DATE	1-10-17



- GENERAL NOTES:**
1. WATER MAIN IS TO BE PVC C-900 CLASS 305
 2. SANITARY SEWER MAIN SI TO BE SDR 35 UNLESS OTHERWISE NOTED



CITY MONUMENT AT POINT OF CURVE CENTERLINE OF BLVD. BEGINNING LOT BLOCK ONE MONTECILLO UNIT ONE (STATION 0+82.81) ELEVATION: 4107.13(CITY DATUM)

PROJECT NAME
MONTECILLO UNIT 9 EAST AND WEST
 BEING A REPLAT OF A PORTION OF LOT 6, BLOCK 2, MONTECILLO UNIT THREE, REPLAT 'B' AND A PORTION OF TRACT 1, JOHN BAKER SURVEY NO. 10, CITY OF EL PASO, EL PASO COUNTY, TEXAS, CONTAINING 5.5943 ACRES

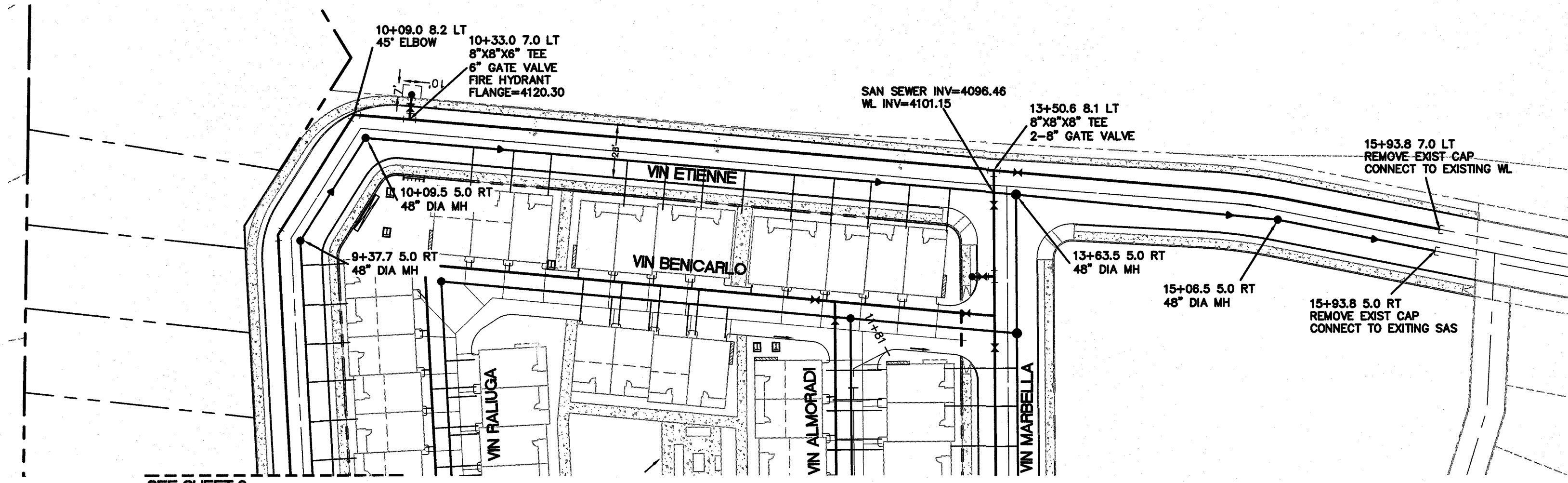
ENGINEER'S SEAL
 RONALD R. BOHANNON
 P.E. #88928

TERRA WEST, LLC
 5571 MIDWAY PARK PLACE NE
 ALBUQUERQUE, NM 87109
 (505) 858-3100
 www.terrawestllc.com
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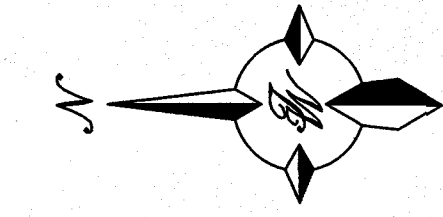
NO.	DATE	REMARKS	BY
DESIGNED BY	VC	DESIGN	
DRAWN BY	pm		
CHECKED BY	VC		
DATE	1-10-17		
DATE	1-10-17		
DATE	2015079		
DATE	1-10-17		

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SHEET TITLE
VIN ETIENNE DR UTILITY
0+23.85 TO 9+50
SHT 15 OF 42



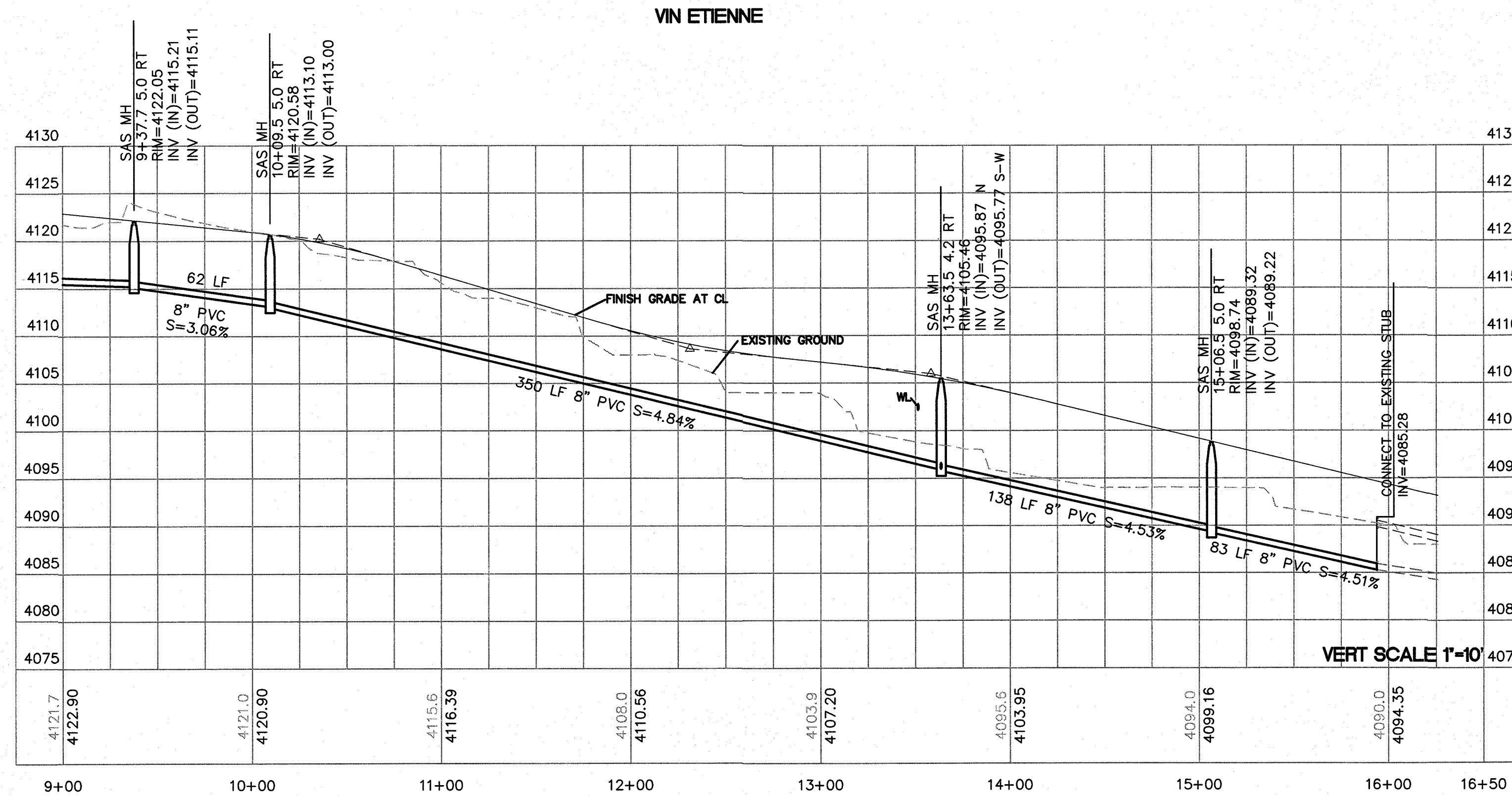
SEE SHEET 9



GRAPHIC SCALE



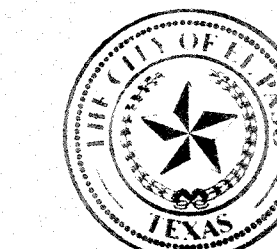
(IN FEET)
1 inch = 50 ft.



VERT SCALE 1"=10'

GENERAL NOTES:

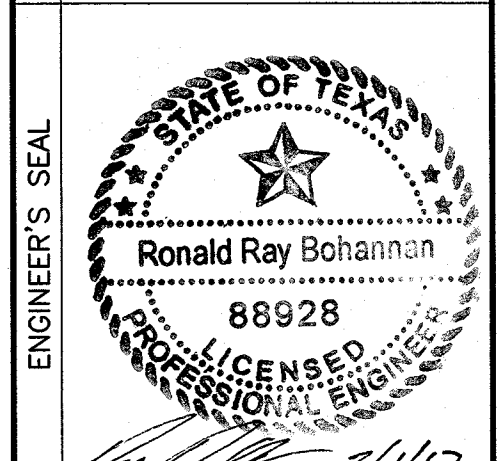
1. WATER MAIN IS TO BE PVC C-900 CLASS 305
2. SANITARY SEWER MAIN IS TO BE SDR 35 UNLESS OTHERWISE NOTED



Final Approval

CITY MONUMENT AT POINT OF CURVE CENTERLINE MONTECILLO BLVD. ADJOINING LOT 1, BLOCK 1, MONTECILLO UNIT ONE (STATION 0+82.81). ELEVATION: 4107.13(CITY DATUM)

PROJECT NAME
MONTECILLO UNIT 9 EAST AND WEST
BEING A REPEAT OF A PORTION OF LOT 6, BLOCK 2, MONTECILLO UNIT THREE, REPEAT 'B' AND A PORTION OF TRACT 1, JOHN BAKER SURVEY NO. 10, CITY OF EL PASO, EL PASO COUNTY, TEXAS, CONTAINING 5.3943 ACRES



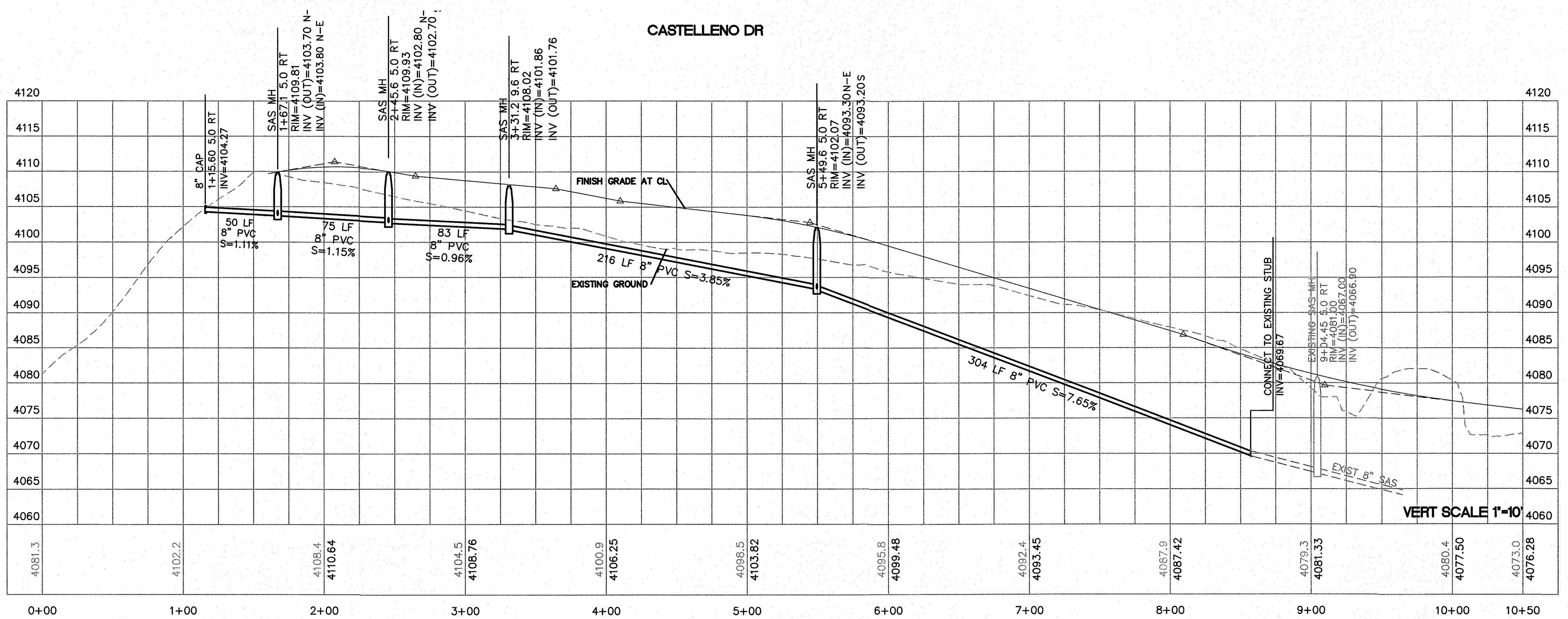
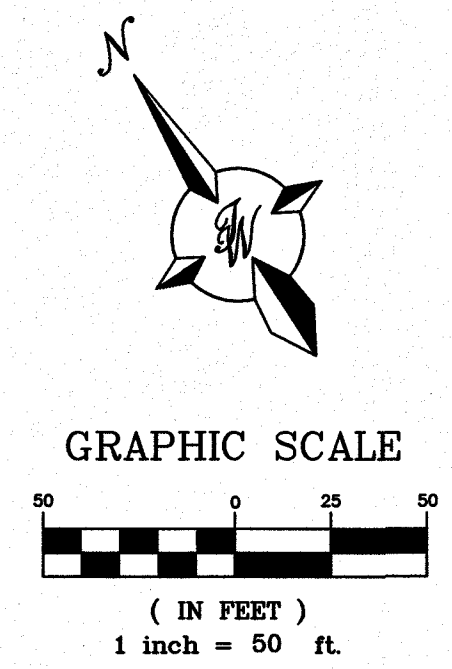
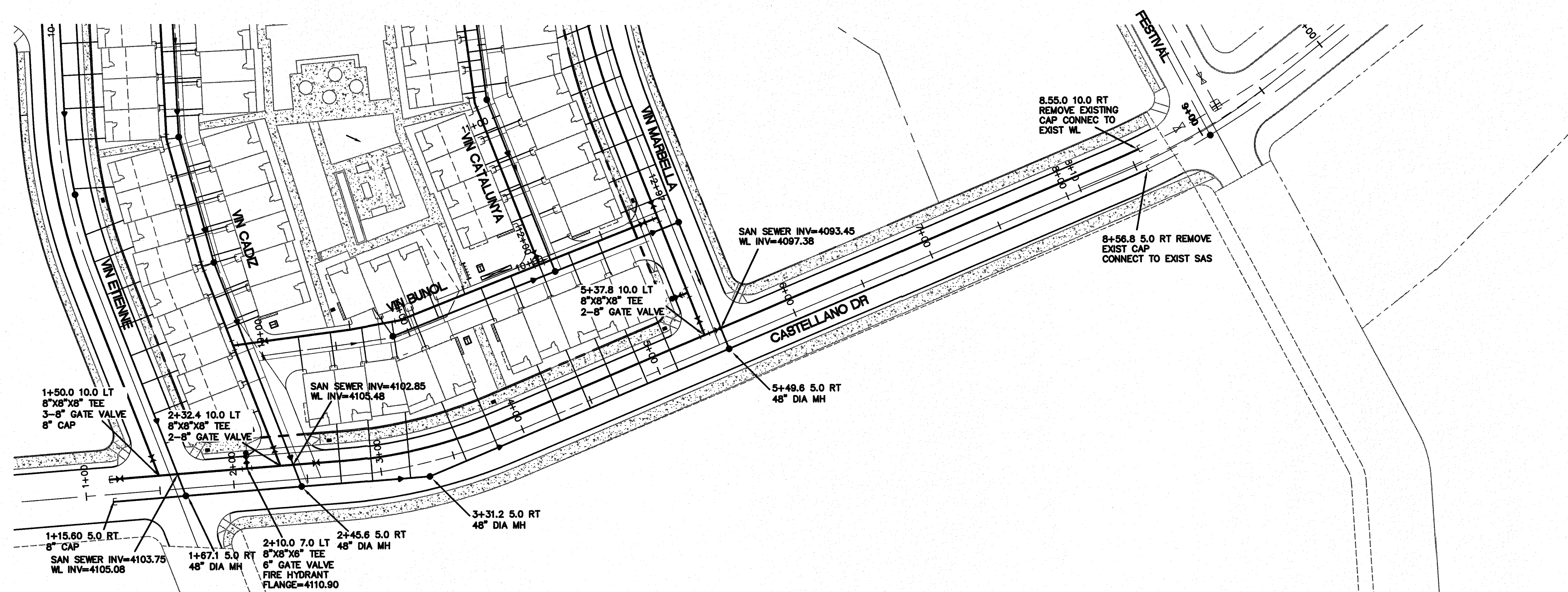
RONALD R. BOHANNAN
P.E. #88928

TERRA WEST, LLC
5571 MIDWAY PARK PLACE NE
ALBUQUERQUE, NM 87109
(505) 858-3100
www.terrawestllc.com
TEXAS BUSINESS NO.
F-11775

NO.	DATE	REMARKS	BY
DESIGNED BY	VC	DESIGN	DATE 1-10-17
DRAWN BY	pm		DATE 1-10-17
CHECKED BY	VC		JOB NO 2015079
			DATE 1-10-17

SHEET TITLE
VIN ETIENNE DR UTILITY
9+00 TO 16+50

CAUTION:
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- GENERAL NOTES:**
1. WATER MAIN IS TO BE PVC C-900 CLASS 305
 2. SANITARY SEWER MAIN SI TO BE SDR 35 UNLESS OTHERWISE NOTED



PROJECT NAME
MONTECILLO UNIT 9 EAST AND WEST

ENGINEER'S SEAL

 RONALD R. BOHANNAN
 P.E. #88928

TIERRA WEST, LLC
 5571 MIDWAY PARK PLACE NE
 ALBUQUERQUE, NM 87109
 (505) 888-3100
 www.tierrawestllc.com
 TEXAS BUSINESS NO. F-11773

NO.	DATE	REMARKS	BY
		DESIGN	
		REVISIONS	

DESIGNED BY	DATE	DRAWN BY	DATE	DRAWING NAME	JOB NO	CHECKED BY	DATE
VC	1-10-17	pm	1-10-17	2015079-MU	2015079	VC	1-10-17

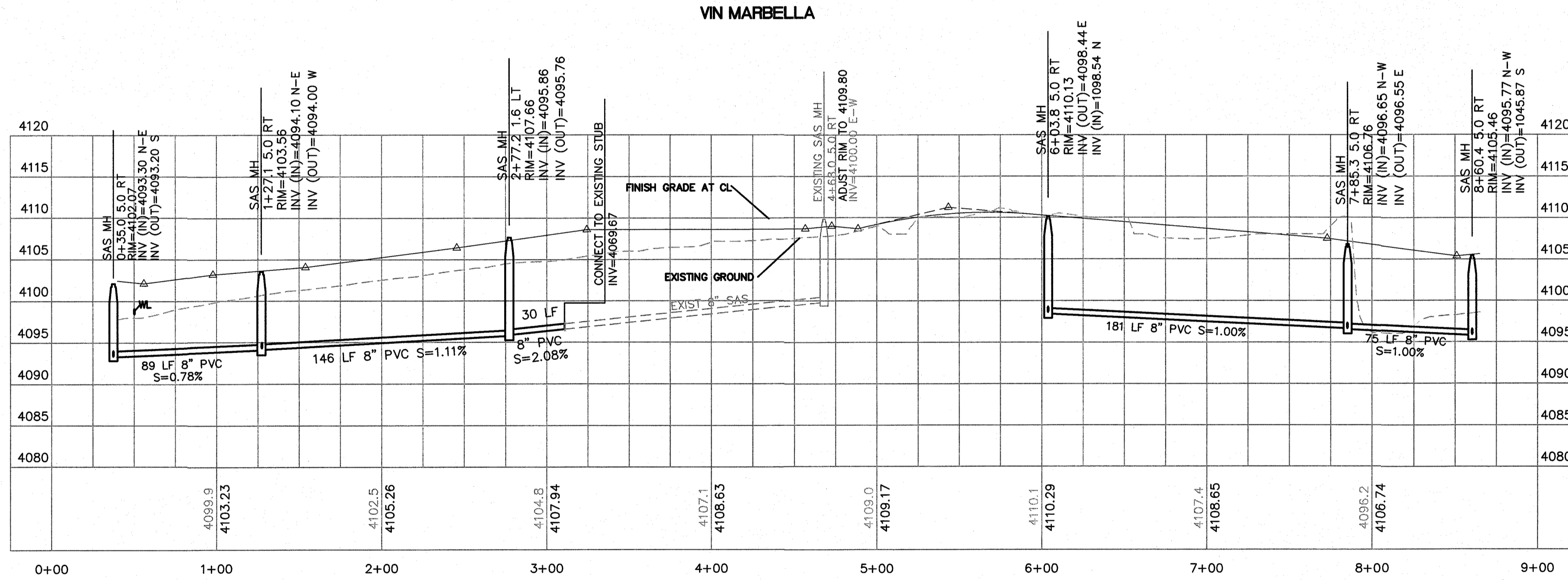
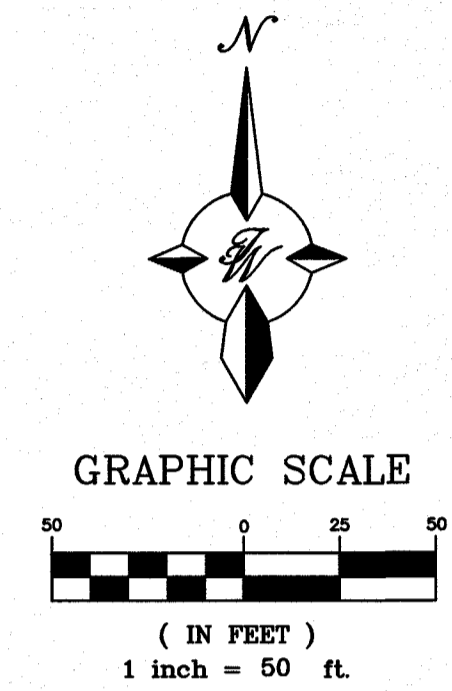
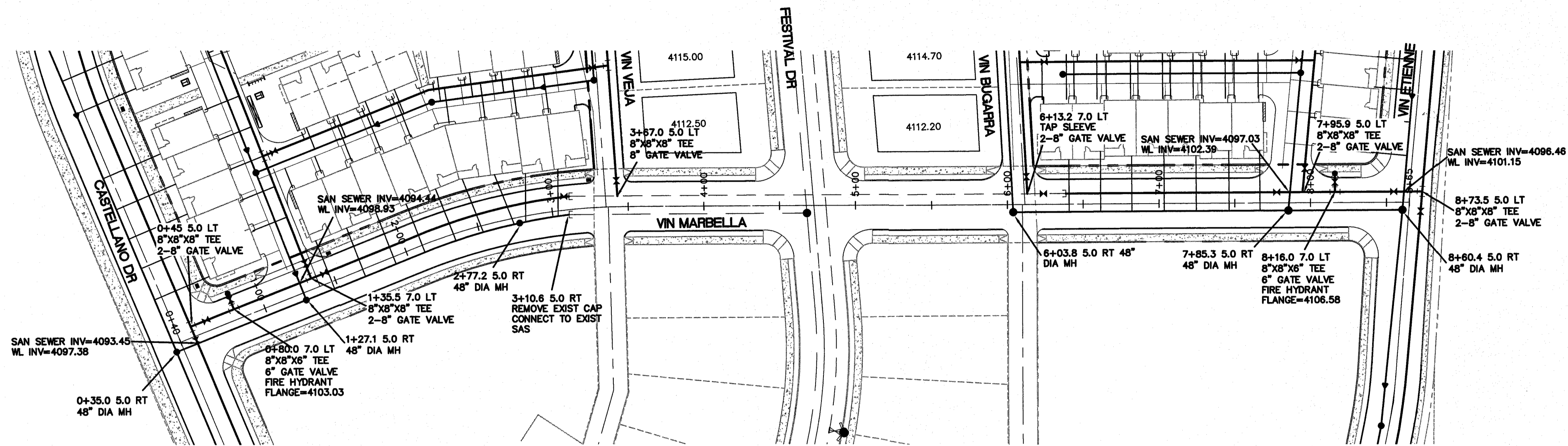
SHEET TITLE
CASTELLANO DR UTILITY 0+00 TO 10+50

SHT 17 OF 42

CITY MONUMENT AT POINT OF CURVE
 CENTERLINE MONTECILLO BLVD.
 ADJACENT TO MONTECILLO UNIT ONE
 MONTECILLO UNIT ONE
 (STATION 0+82.81)
 ELEVATION: 4107.13 (CITY DATUM)

BEING A REPLAT OF A PORTION OF LOT 6, BLOCK 2, MONTECILLO UNIT THREE, REPLAT 'B' AND A PORTION OF TRACT 1, JOHN BAKER SURVEY NO. 10, CITY OF EL PASO, EL PASO COUNTY, TEXAS, CONTAINING 5.3943 ACRES

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- GENERAL NOTES:**
1. WATER MAIN IS TO BE PVC C-900 CLASS 305
 2. SANITARY SEWER MAIN SI TO BE SDR 35 UNLESS OTHERWISE NOTED



Final Approval

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PROJECT NAME
MONTECILLO UNIT 9 EAST AND WEST
 BEING A REPLAT OF A PORTION OF LOT 6, BLOCK 2, MONTECILLO UNIT THREE, REPLAT 'B' AND A PORTION OF TRACT 1, JOHN BAKER SURVEY NO. 10, CITY OF EL PASO, EL PASO COUNTY, TEXAS, CONTAINING 5.3843 ACRES

ENGINEER'S SEAL

 RONALD R. BOHANNAN
 P.E. #88928

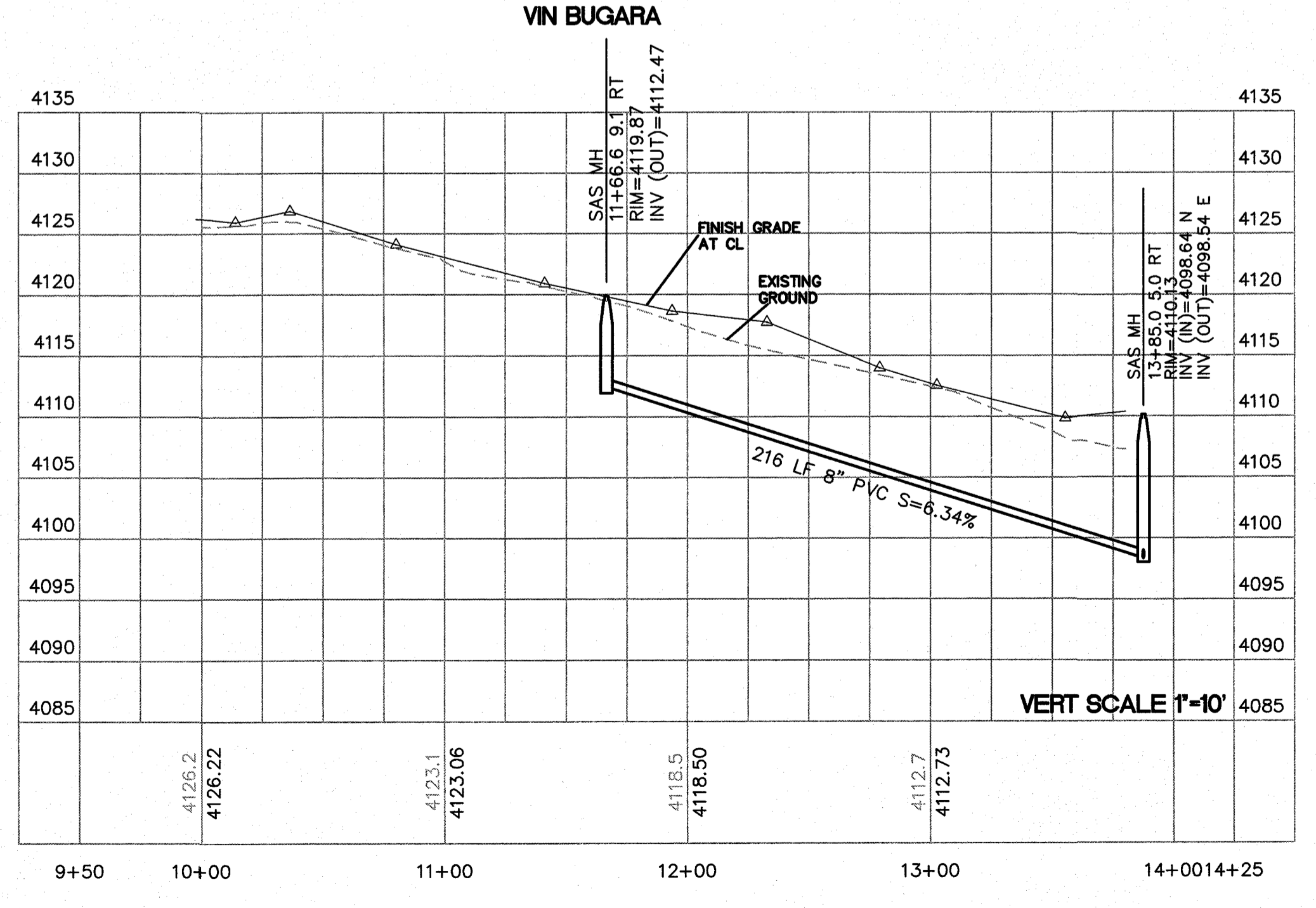
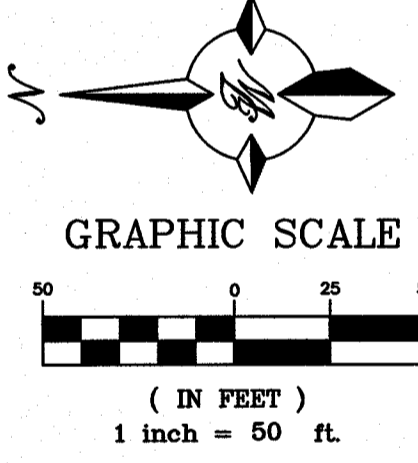
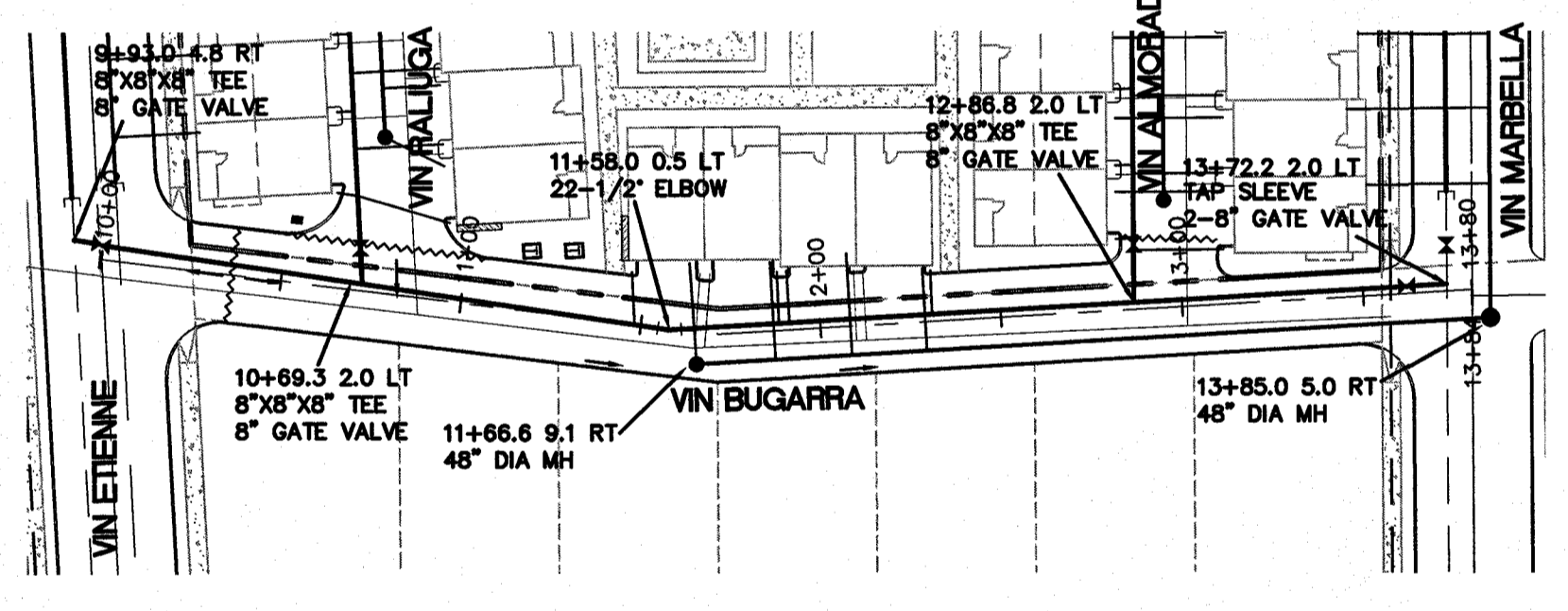
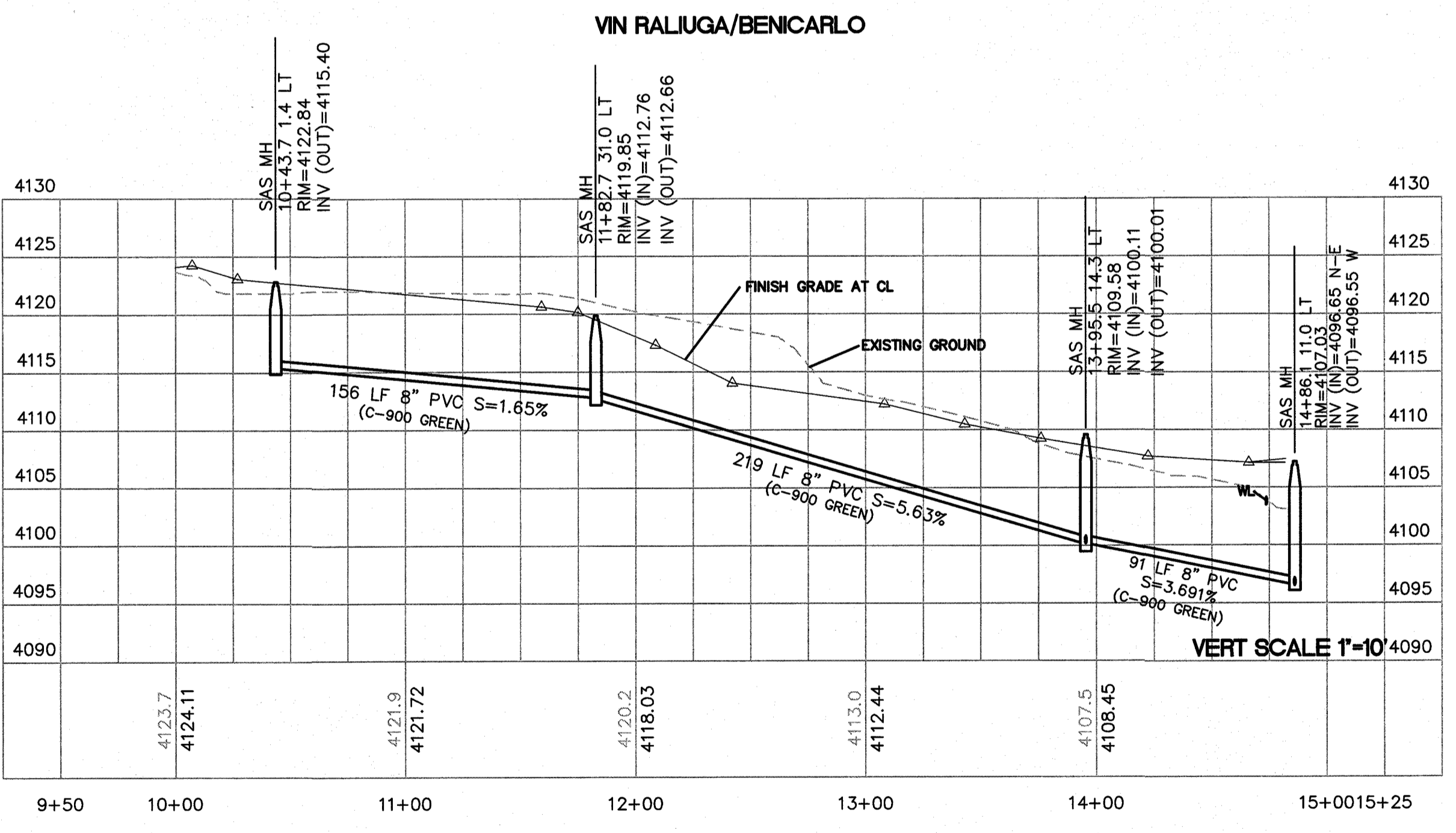
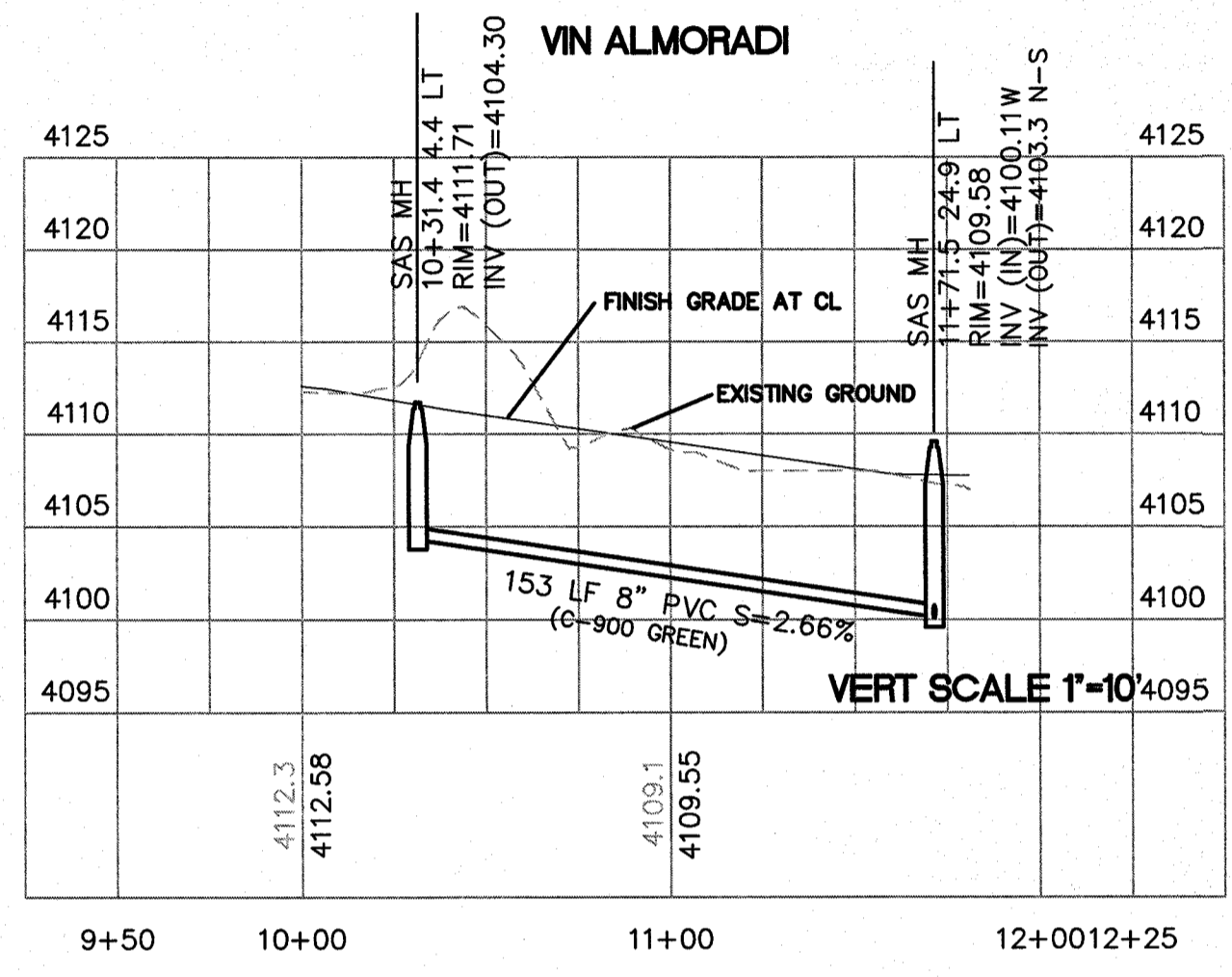
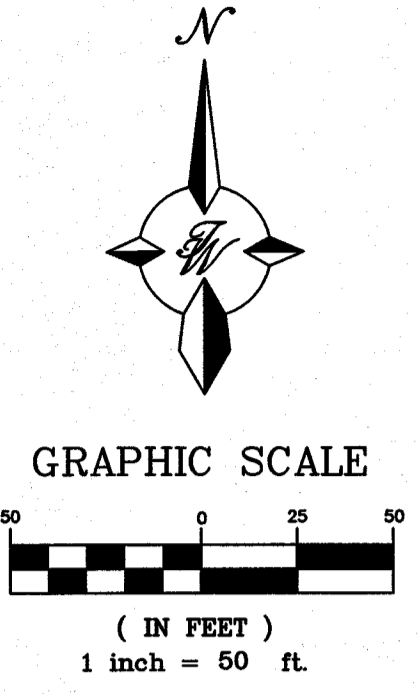
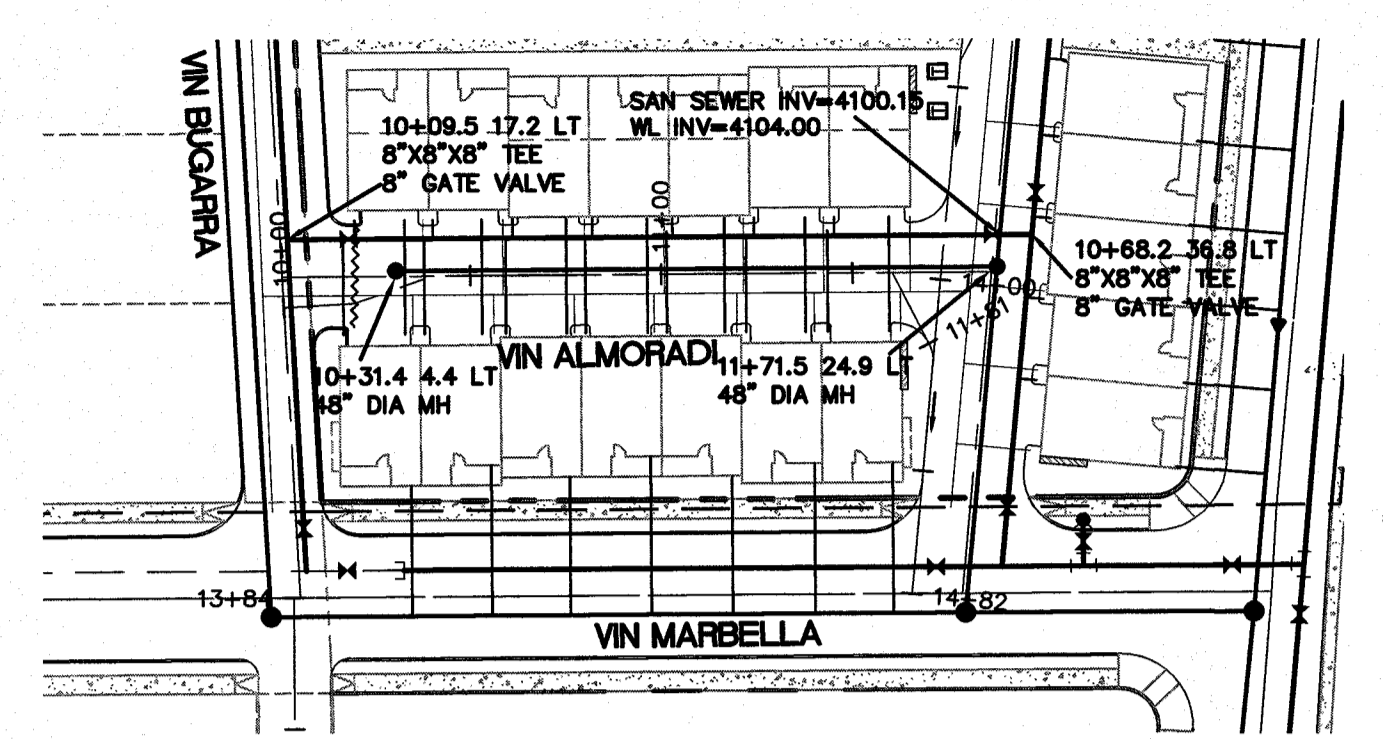
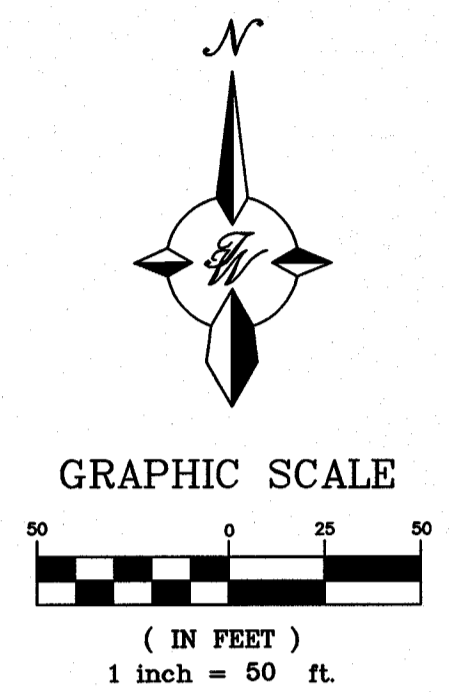
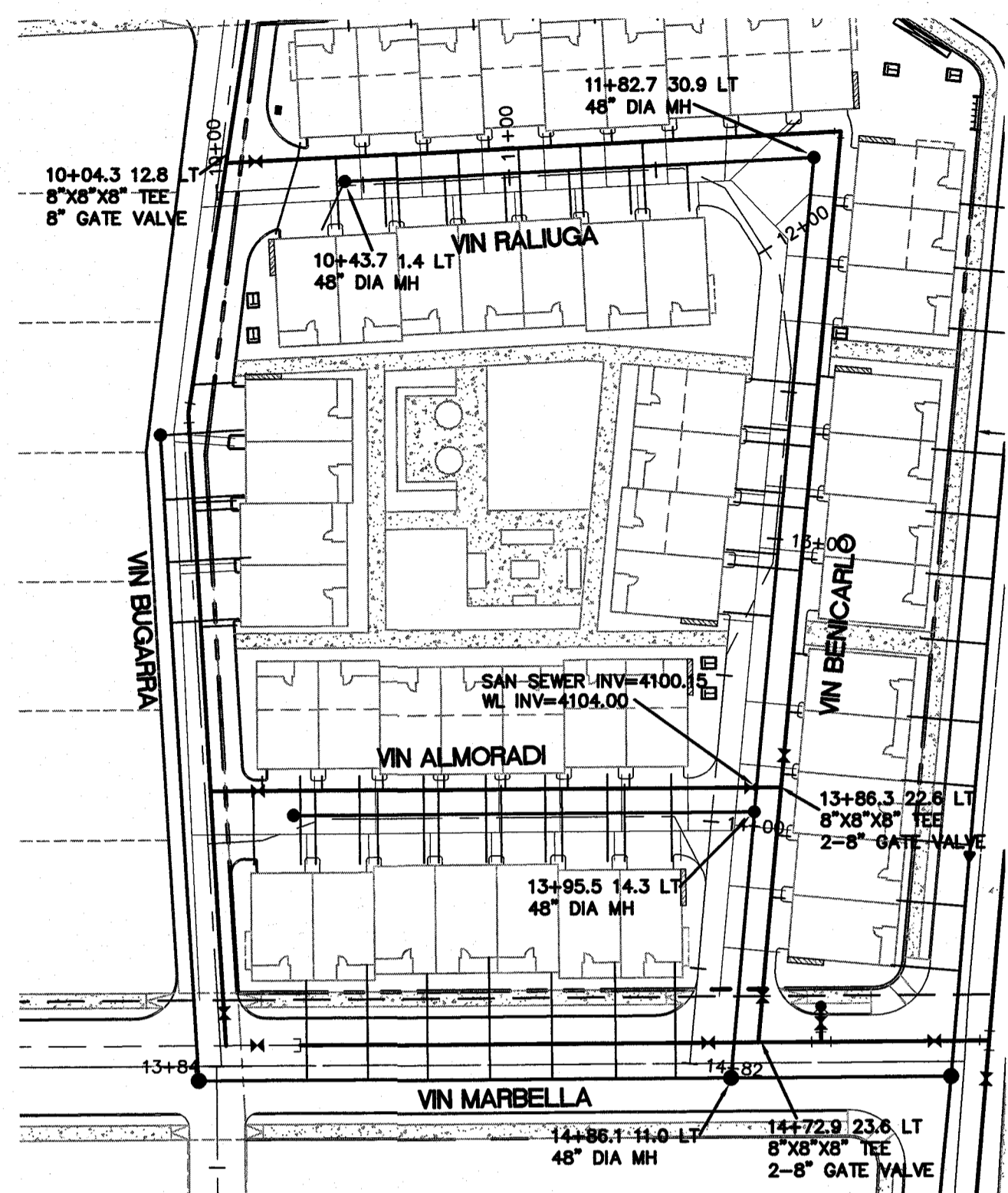
CONTRACTOR
 TERRA WEST, LLC
 5571 MIDWAY PARK PLACE NE
 ALBUQUERQUE, NM 87109
 (505) 858-3100
 www.terrawestllc.com
 TEXAS BUSINESS NO. P-11773

NO.	DATE	REMARKS	BY
		DESIGN	
		VC	
		pm	
		DRAWN NAME 2015079-WU	
		CHECKED BY VC	

SHEET TITLE
VIN MARBELLA DR UTILITY 0+00 TO 9+00

SHT 18 OF 42

CITY MONUMENT AT POINT OF CURVE CENTERLINE MONTECILLO BLVD. ADJOINING LOT 1, BLOCK 1, MONTECILLO UNIT ONE (STATION 9+82.87) ELEVATION: 4107.15(CITY DATUM)

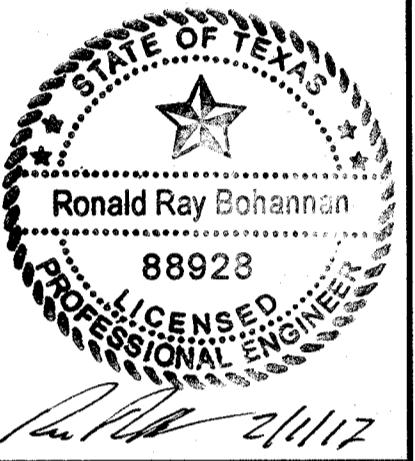


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- GENERAL NOTES:**
1. WATER MAIN IS TO BE PVC C-900 CLASS 305
 2. SANITARY SEWER MAIN SI TO BE SDR 35 UNLESS OTHERWISE NOTED

CITY MONUMENT AT POINT OF CURVE CENTERLINE MONTECILLO BLVD. ADJOINING LOT 1, BLOCK 1, MONTECILLO UNIT 9 (STATION 0+82.81) ELEVATION: 4107.13(CITY DATUM)

PROJECT NAME
MONTECILLO UNIT 9 EAST AND WEST
 BEING A REPLAT OF A PORTION OF LOT 6, BLOCK 2, MONTECILLO UNIT THREE, REPLAT 'B' AND A PORTION OF TRACT 1, JOHN BAKER SURVEY NO. 10, CITY OF EL PASO, EL PASO COUNTY, TEXAS, CONTAINING 5.3943 ACRES

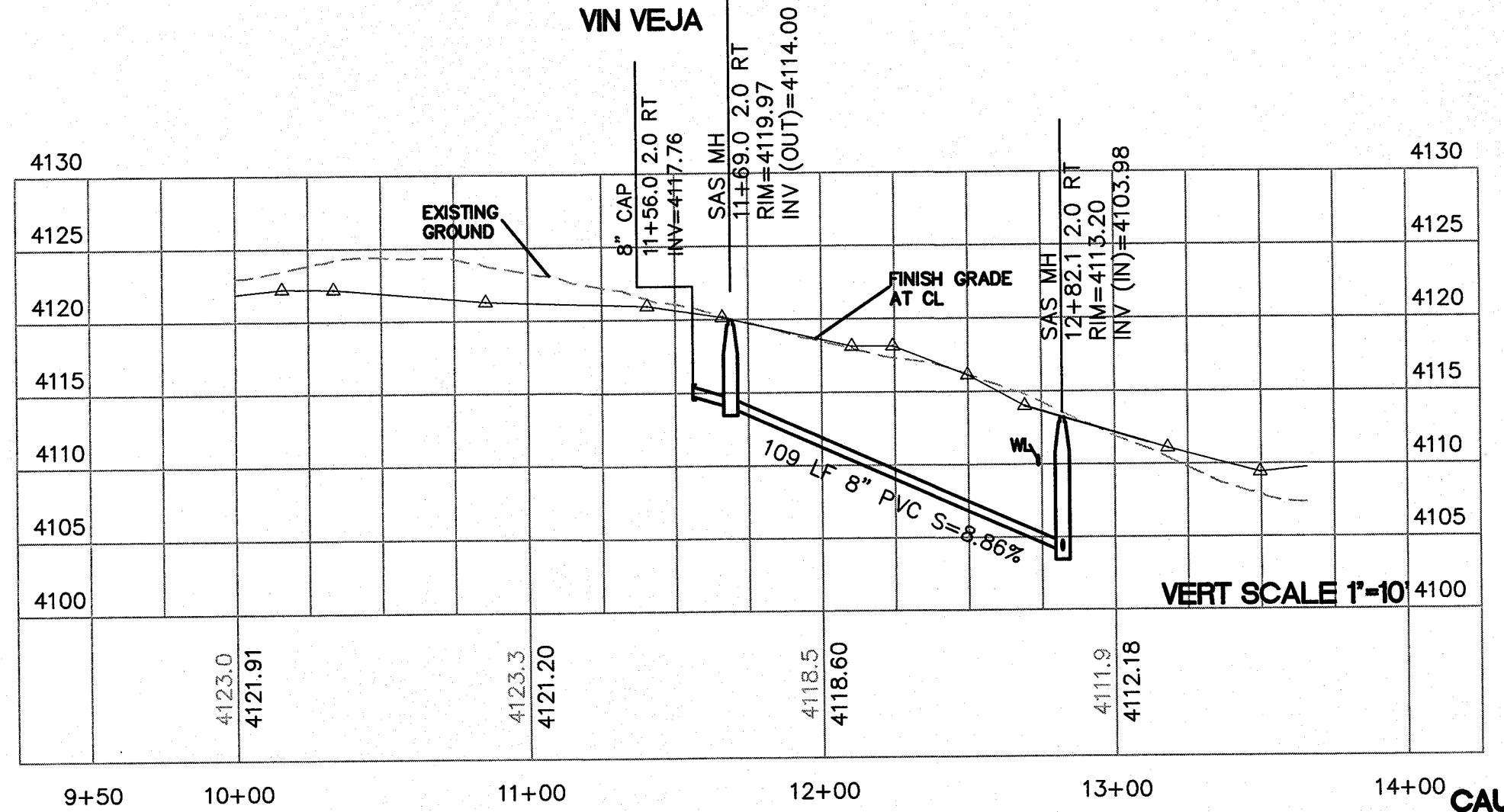
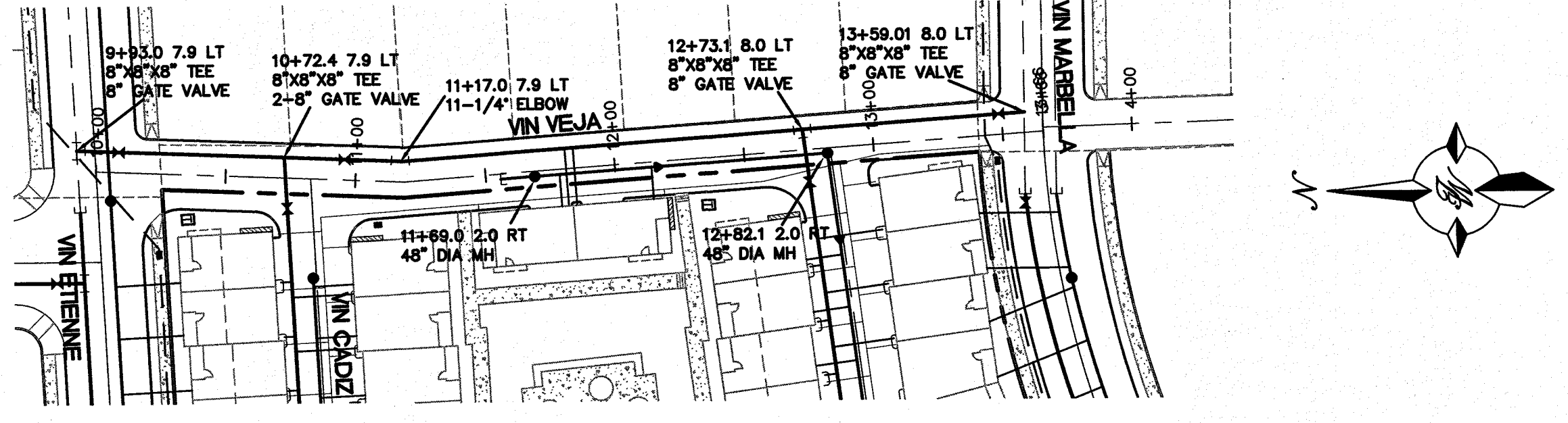
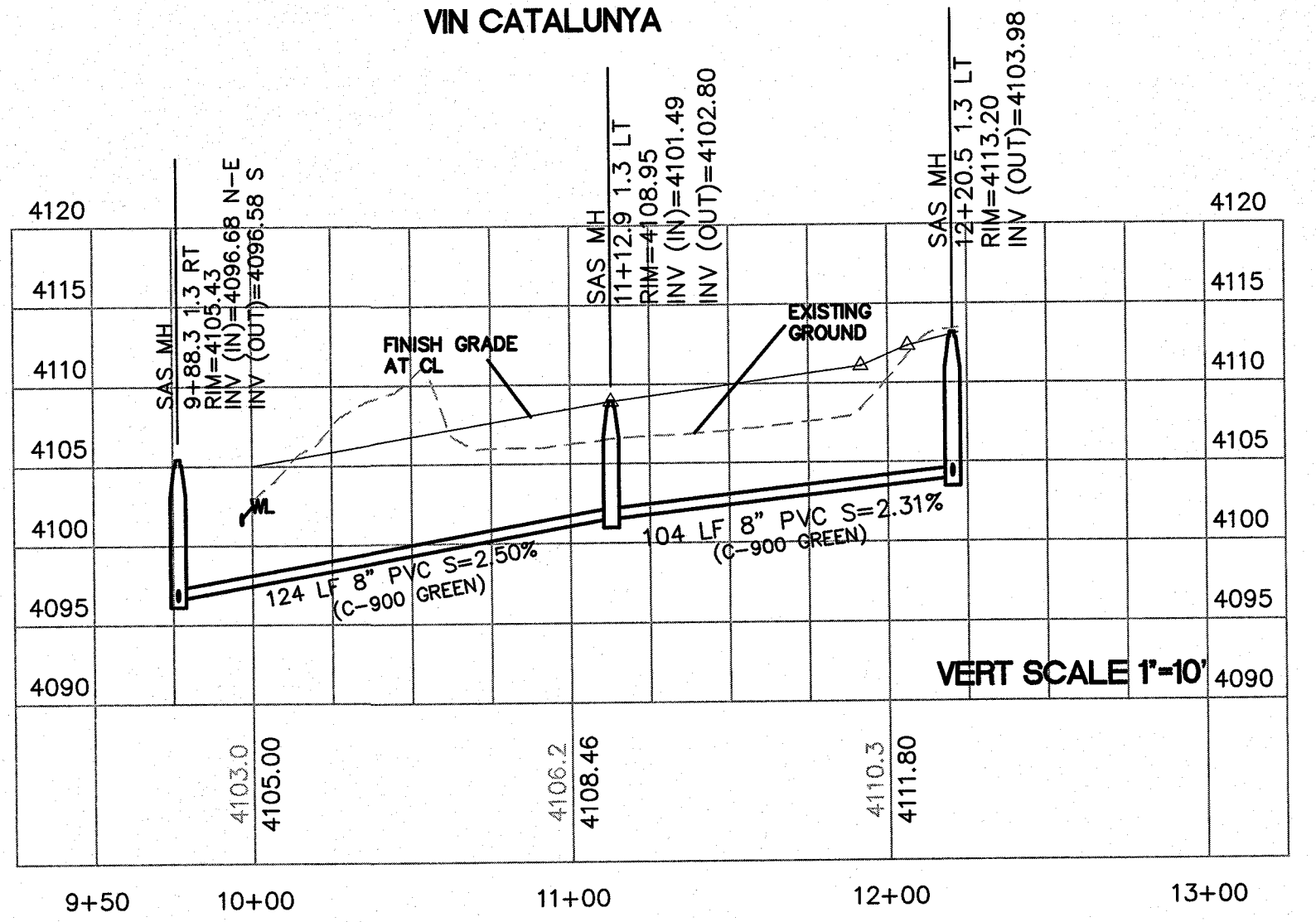
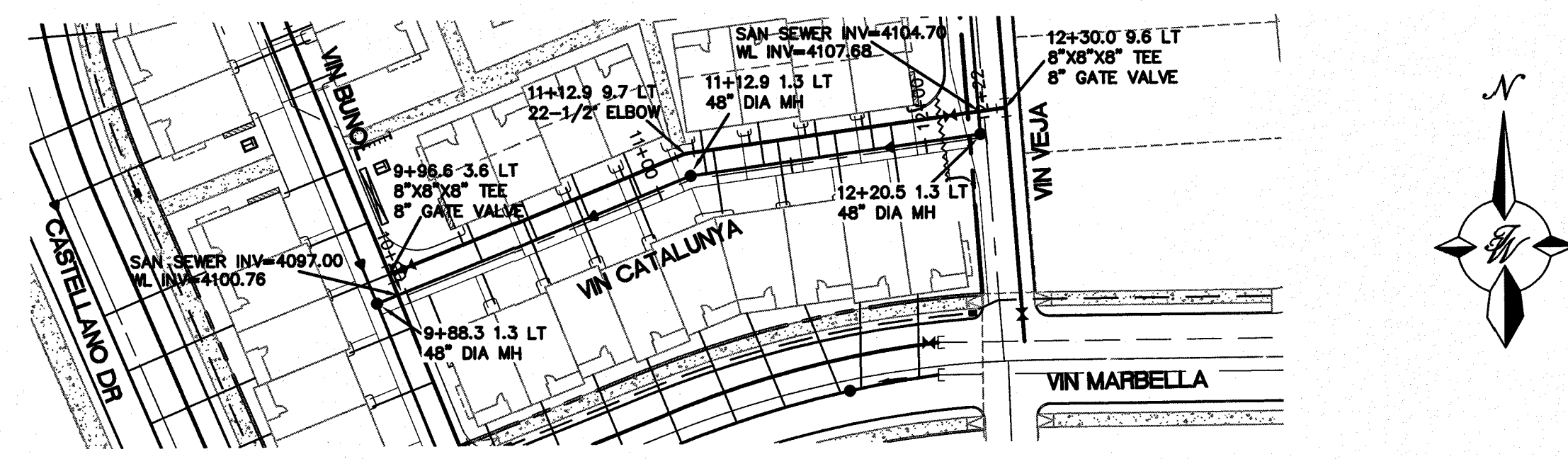
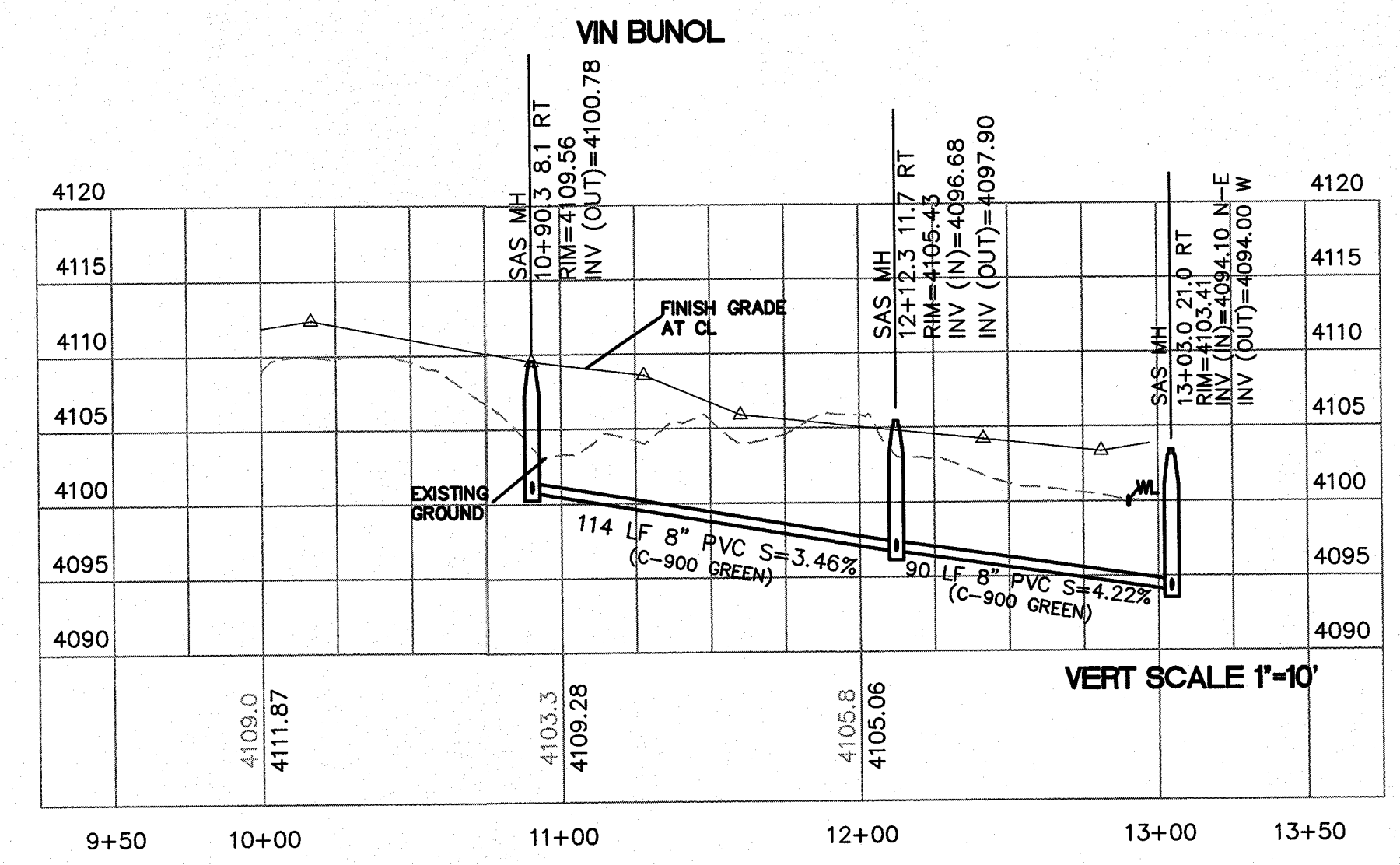
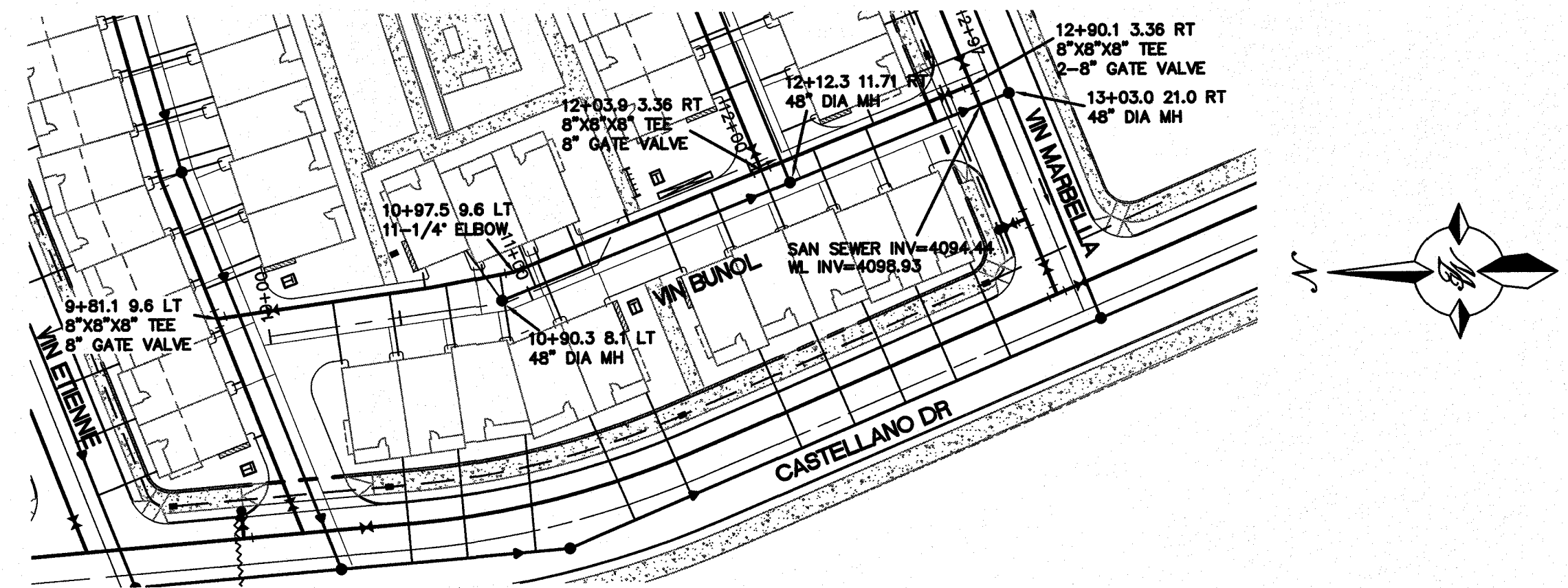
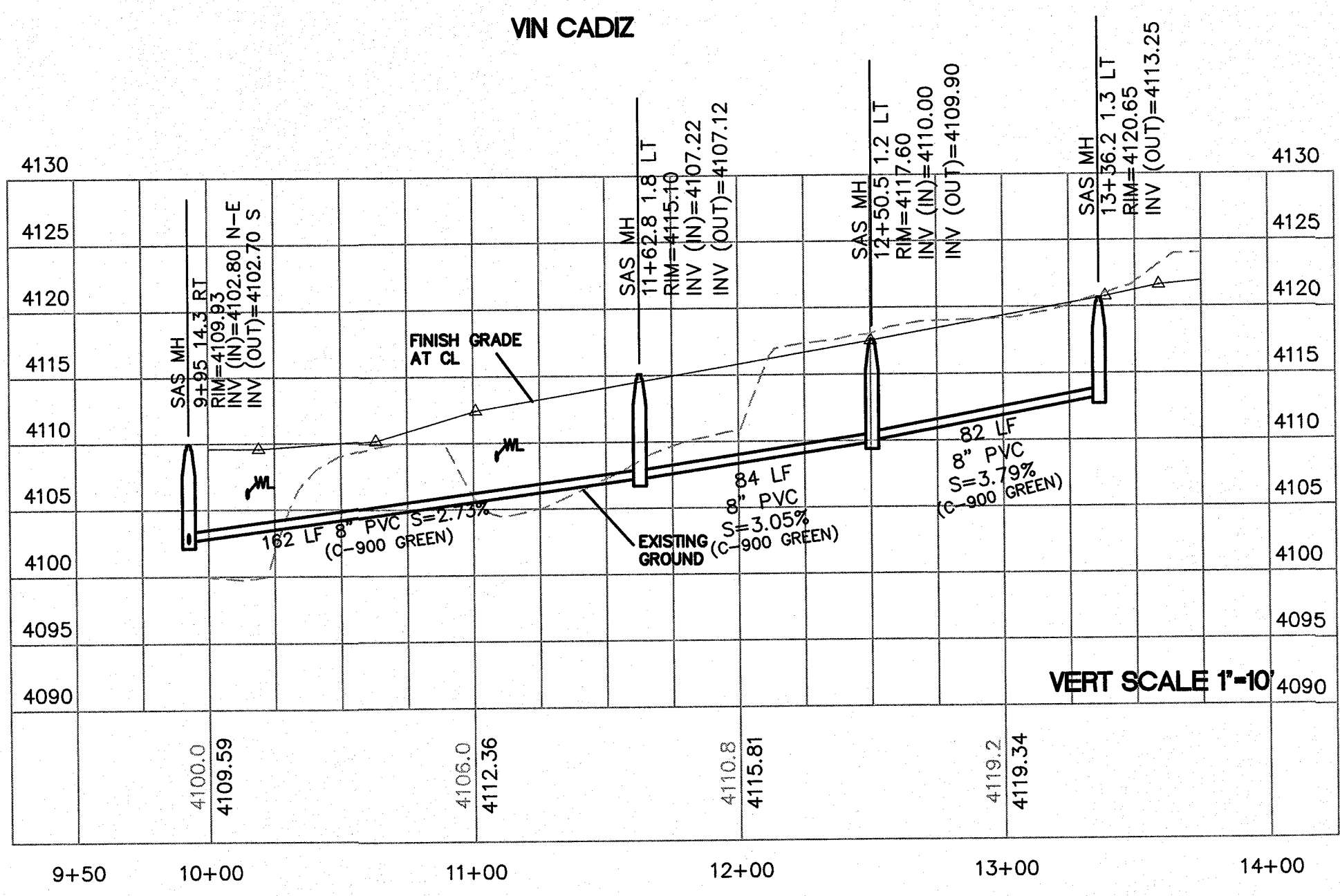
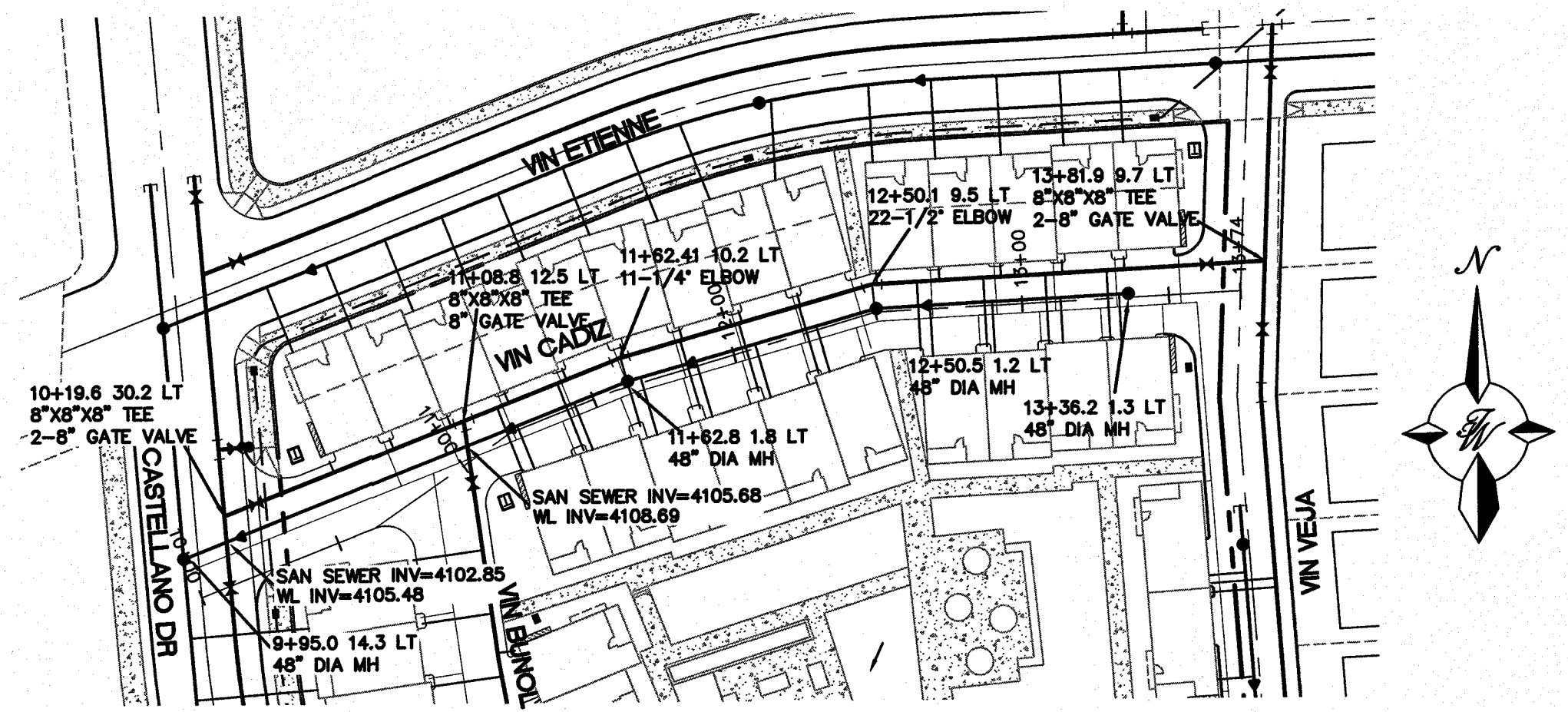


RONALD R. BOHANNAN
 P.E. #88923

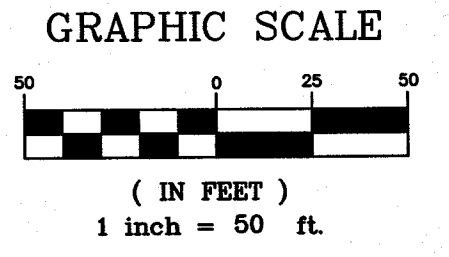
TERRA WEST, LLC
 5571 MIDWAY PARK PLACE NE
 ALBUQUERQUE, NM 87109
 (505) 858-3100
 www.terrawestllc.com
 TEXAS BUSINESS NO. F-11773

NO.	DATE	REMARKS	BY
DESIGNED BY	VC	DESIGN	
DRAWN BY	pm		
CHECKED BY	VC		
DATE	1-10-17		
DATE	1-10-17		
DATE	2015079		
DATE	1-10-17		

SHEET TITLE
VIN RALIUGA, VIN BENICARLO, VIN ALMORADI, VIN BUGARRA UTILITY



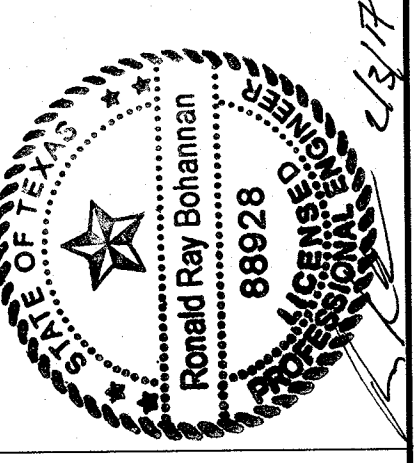
- GENERAL NOTES:**
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CITY MONUMENT AT POINT OF CURVE CENTERLINE MONTECILLO BLVD. ADJOINING LOT 1, BLOCK 1, MONTECILLO UNIT ONE (STATION 0+82.81). ELEVATION: 4107.13(CITY DATUM)

PROJECT NAME
MONTECILLO UNIT 9 EAST AND WEST
BEING A REPLAT OF A PORTION OF LOT 6, BLOCK 2, MONTECILLO UNIT THREE, REPLAT 'B' AND A PORTION OF TRACT 1, JOHN E. BAKER SURVEY, NO. 10, CITY OF EL PASO, EL PASO COUNTY, TEXAS, CONTAINING 5.3943 ACRES



RONALD R. BOHANNAN
P.E. #88928

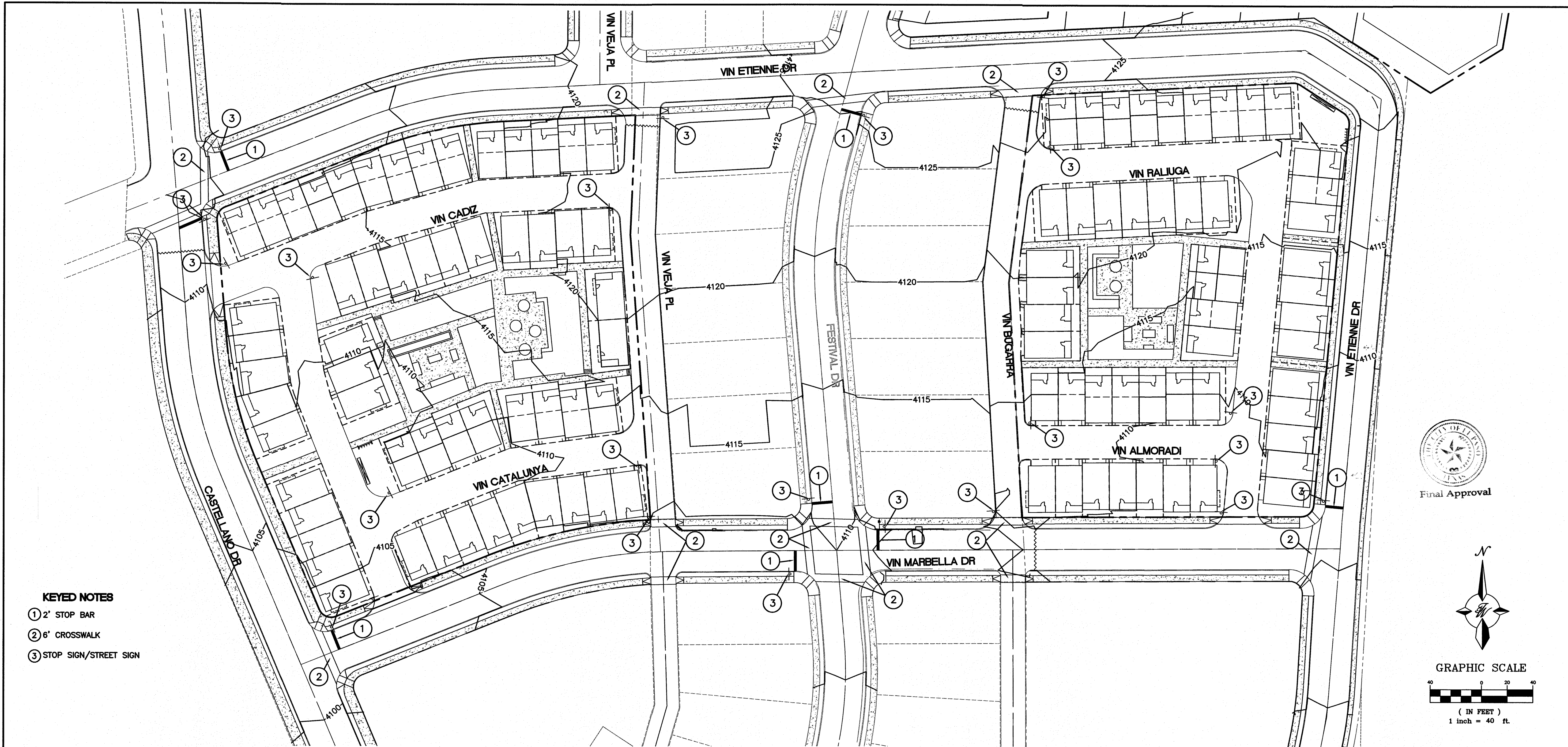
TERRA WEST, LLC
5571 MIDWAY PARK PLACE NE
ALBUQUERQUE, NM 87109
(505) 858-3100
www.terrawestllc.com
TEXAS BUSINESS NO.
F-11773

NO.	DATE	REMARKS	BY
		DESIGN	
		REVISIONS	
DESIGNED BY	VC	DATE	1-10-17
DRAWN BY	pm	DATE	1-10-17
CHECKED BY	VC	JOB NO	2015079
		DATE	1-10-17

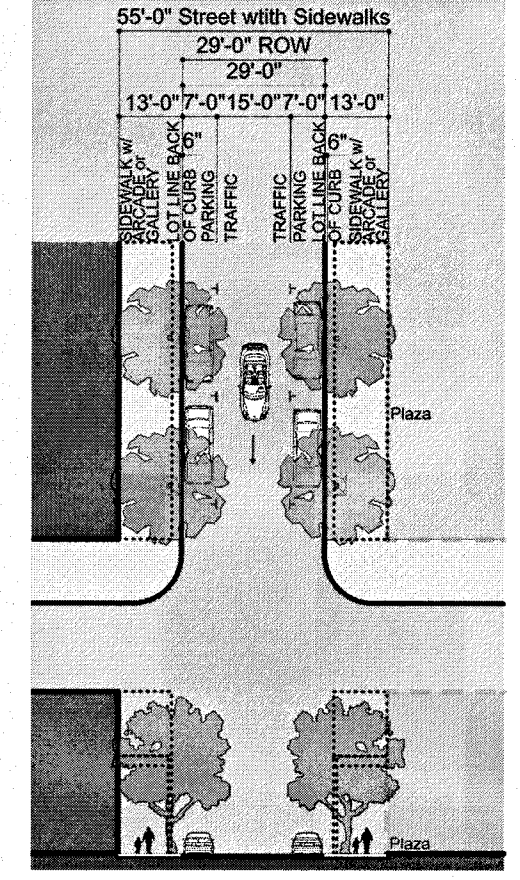
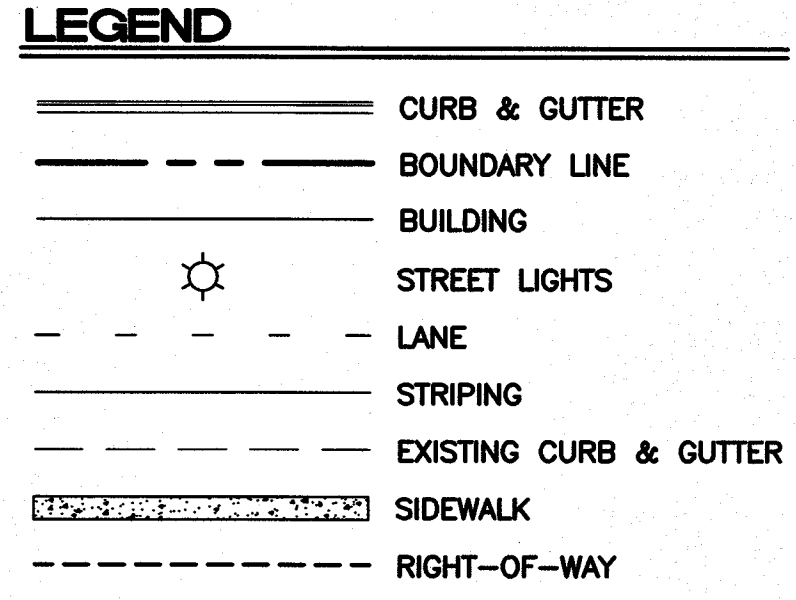
SHEET TITLE
VIN CADIZ, VIN CATALUNYA, VIN BUNOL, VIN VEJIA UTILITY
SHT 20 OF 42



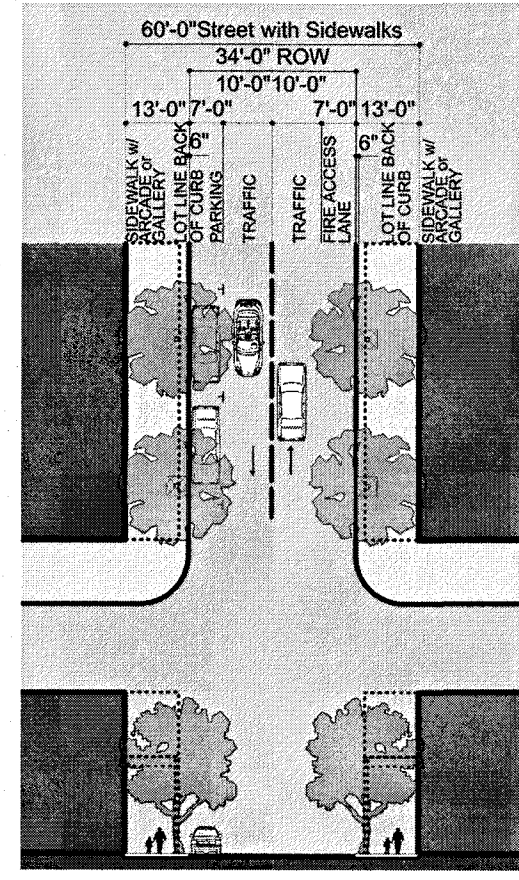
Final Approval



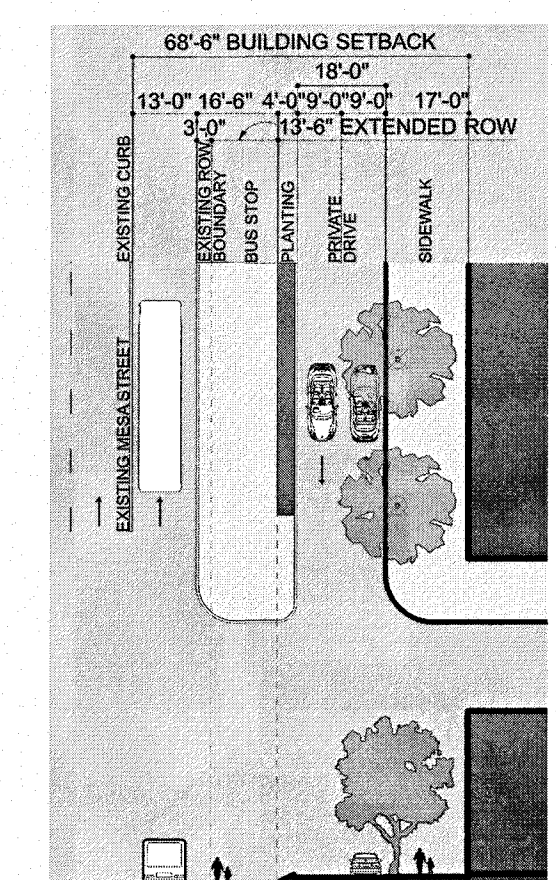
- KEYED NOTES**
- ① 2' STOP BAR
 - ② 6' CROSSWALK
 - ③ STOP SIGN/STREET SIGN



CS 29-29	
Thoroughfare Type	Commercial Street
Transact Zone Assignment	T5, T50, T6
Right-of-Way Width	29'
Pavement Width	29'
Movement	slow movement
Design Speed	20 mph
Propulsion Crossing Time	8.2 seconds
Traffic Lanes	1 One way lane
Parking Lanes	None
Curb Radius	15 feet
Public Frontage Type	Arcade, Gallery, Shopfront
Walkway Type	12' sidewalk
Planter Type	4' x 4' Tree well in sidewalk
Curb Type	Vertical
Landscape Type	Trees @ 30' o.c. average
Transportation Provision	SR, TR



CS 34-34 Fire Lane	
Thoroughfare Type	Commercial Street
Transact Zone Assignment	T40, T5, T50, T6
Right-of-Way Width	34'
Pavement Width	34'
Movement	slow movement
Design Speed	20 mph
Propulsion Crossing Time	9.7 seconds
Traffic Lanes	2 lanes One each way
Parking Lanes	One side @ 7' marked
Curb Radius	10 feet
Public Frontage Type	Arcade, Gallery, Shopfront
Walkway Type	12' sidewalk
Planter Type	4' x 4' Tree well in sidewalk
Curb Type	Vertical
Landscape Type	Trees @ 30' o.c. average
Transportation Provision	BR, SR, TR

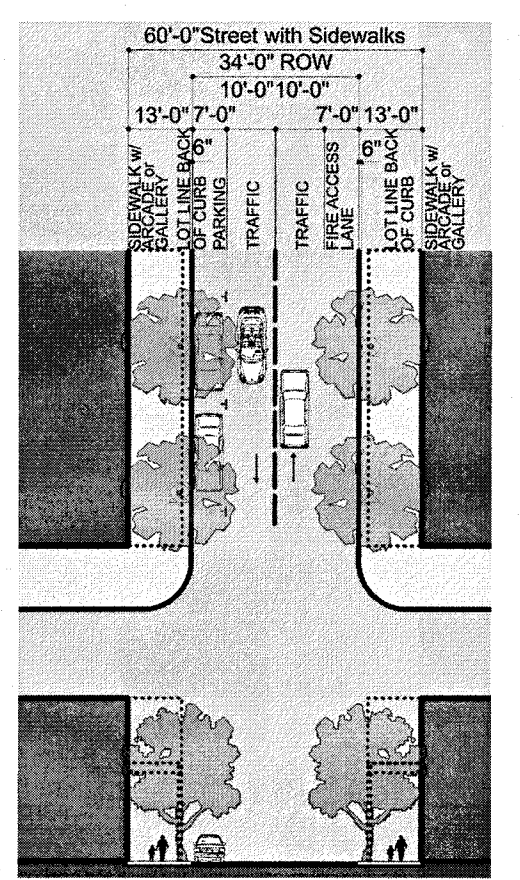


BRT STOP w/ PRIVATE DRIVE THOROUGHFARE TYPES

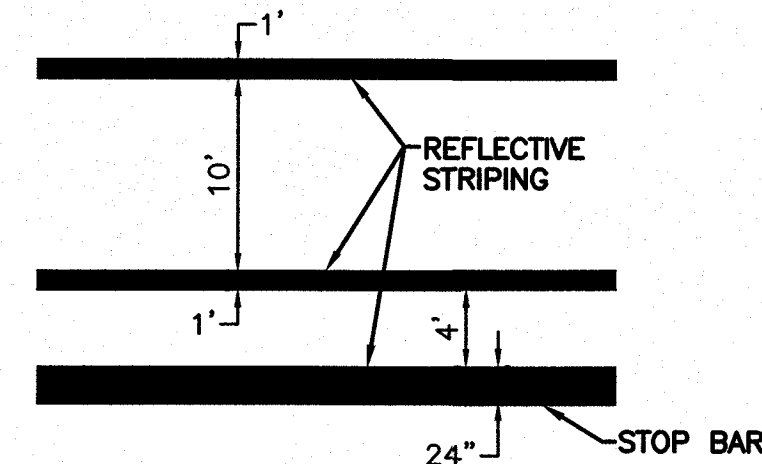
Thoroughfare Type	BRT
Right-of-Way Width	68'-6"
Pavement Width	68'-6"
Movement	slow movement
Design Speed	20 mph
Propulsion Crossing Time	9.7 seconds
Traffic Lanes	2 lanes One each way
Parking Lanes	None
Curb Radius	10 feet
Public Frontage Type	Arcade, Gallery, Shopfront
Walkway Type	12' sidewalk
Planter Type	4' x 4' Tree well in sidewalk
Curb Type	Vertical
Landscape Type	Trees @ 30' o.c. average
Transportation Provision	BR, SR, TR

General Notes

- Vallet Lanes to be for occupied vehicle drop off and pickup. Vallet Lanes are not for parking or unattended Vehicles.

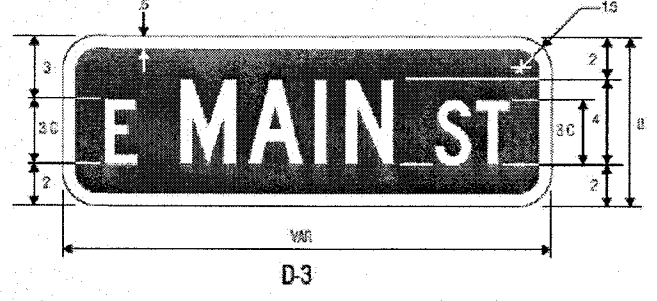


CS 34-34 Fire Lane	
Thoroughfare Type	Commercial Street
Transact Zone Assignment	T40, T5, T50, T6
Right-of-Way Width	34'
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Walkway Type	12' sidewalk
Planter Type	4' x 4' Tree well in sidewalk
Curb Type	Vertical
Landscape Type	Trees @ 30' o.c. average
Transportation Provision	BR, SR, TR

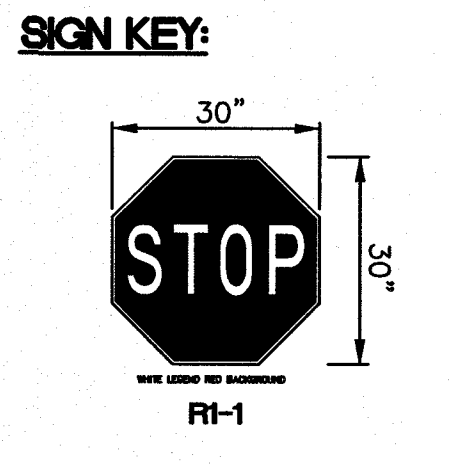


CROSSWALK DETAIL
NTS

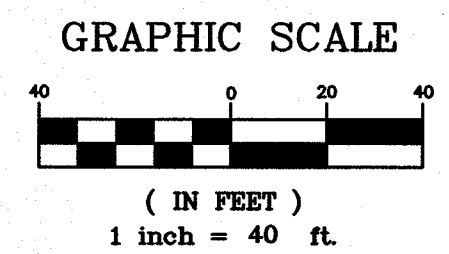
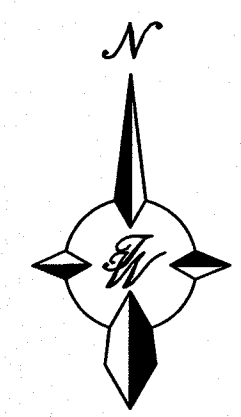
** ALL PAVEMENT MARKINGS SHALL CONFORM TO M.U.T.C.D. SPECS (LATEST EDITION)



COLORS: LEGEND — WHITE (REFLECTIVE)
BACKGROUND — GREEN (REFLECTIVE)

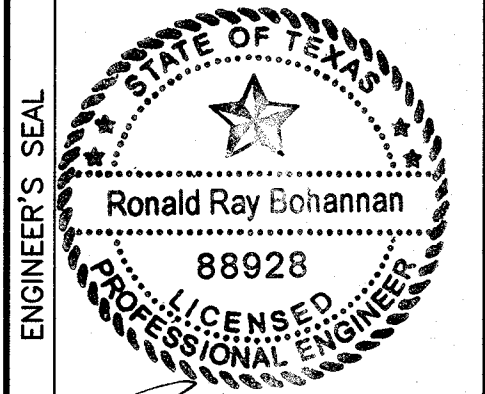


Final Approval



CITY MONUMENT AT POINT OF CURVE CENTERLINE MONTECILLO BLVD. ADJOINING LOT 1, BLOCK 1, MONTECILLO UNIT ONE (STATION 0+82.81). ELEVATION: 4107.13(CITY DATUM)

PROJECT NAME
MONTECILLO UNIT 9 EAST AND WEST
BEING A REPLAT OF A PORTION OF LOT 6, BLOCK 2, MONTECILLO UNIT THREE, REPLAT 'B' AND A PORTION OF TRACT 1, JOHN BAKER SURVEY NO. 10, CITY OF EL PASO, EL PASO COUNTY, TEXAS, CONTAINING 5.3943 ACRES

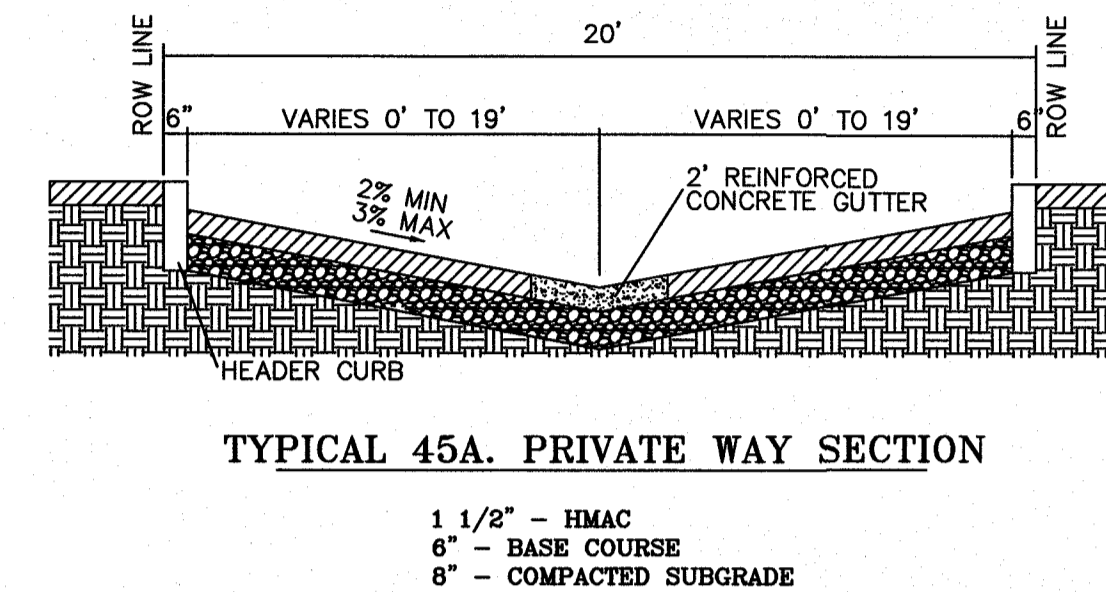
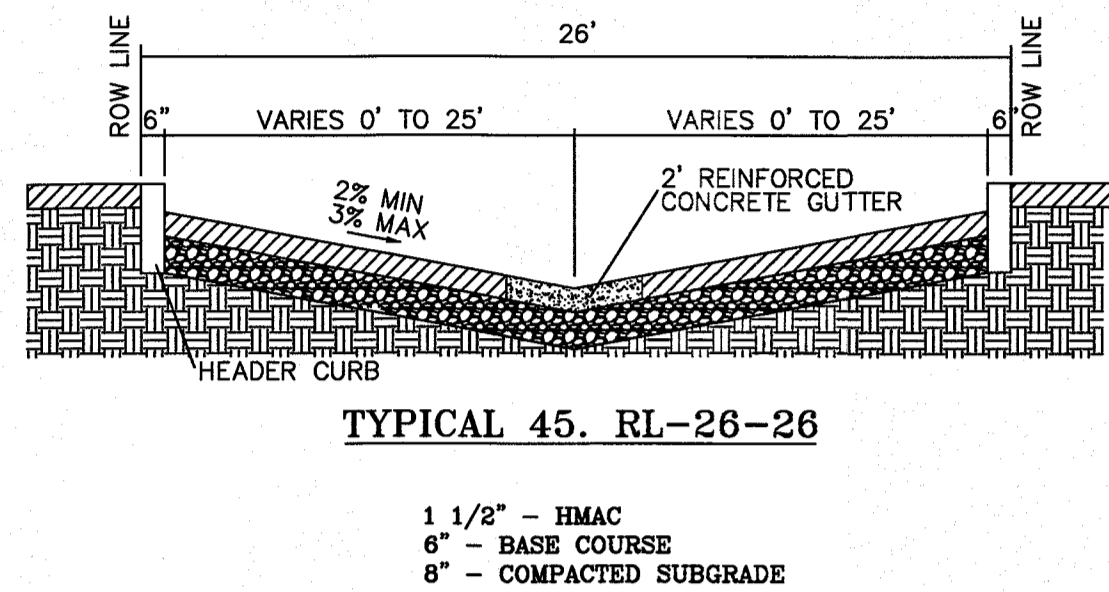
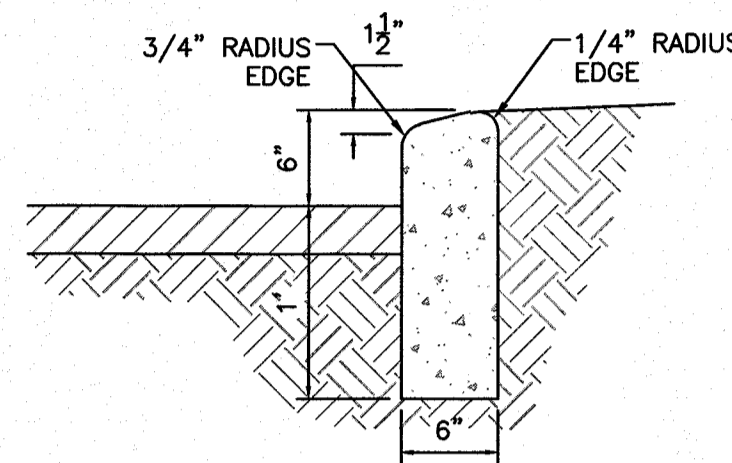
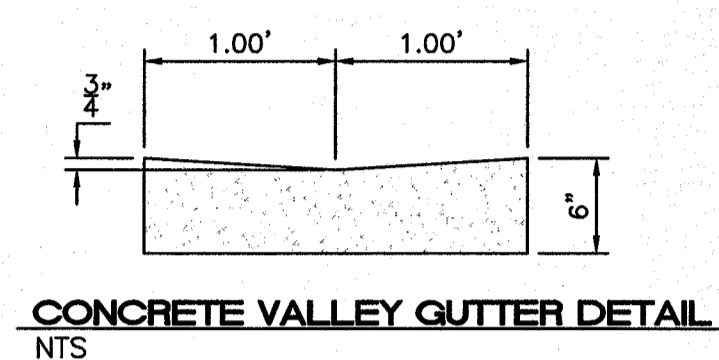
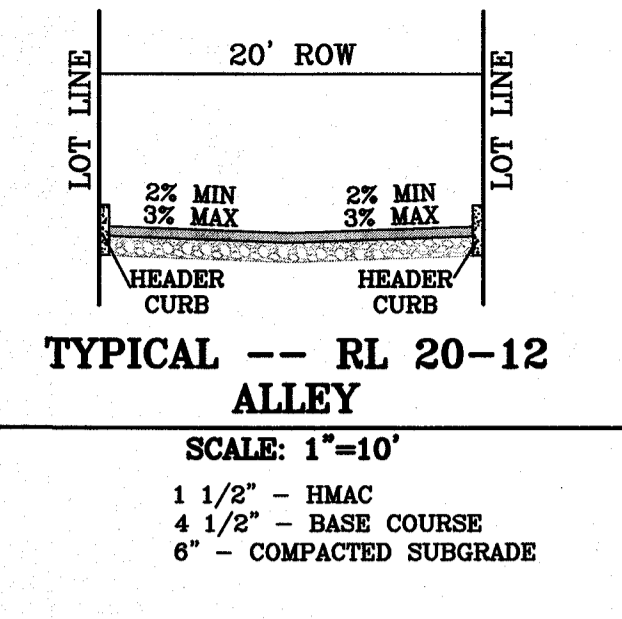
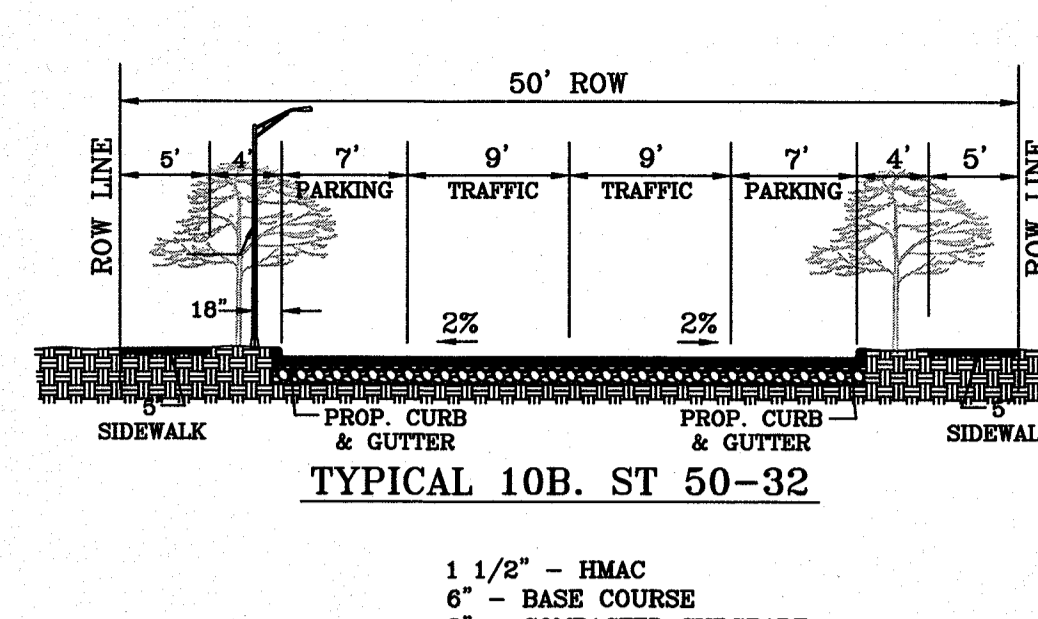
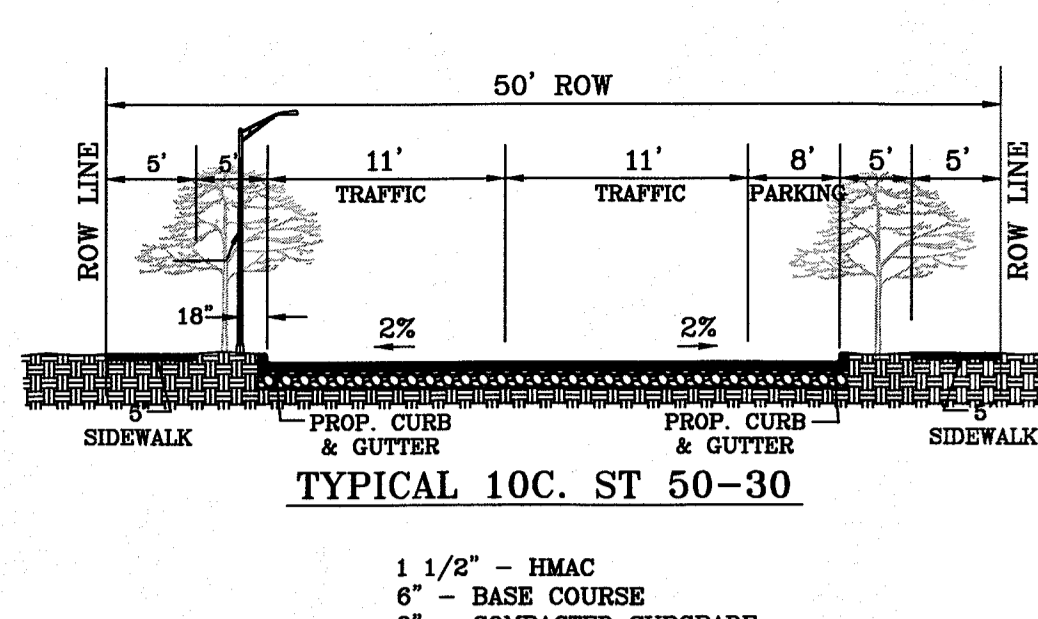
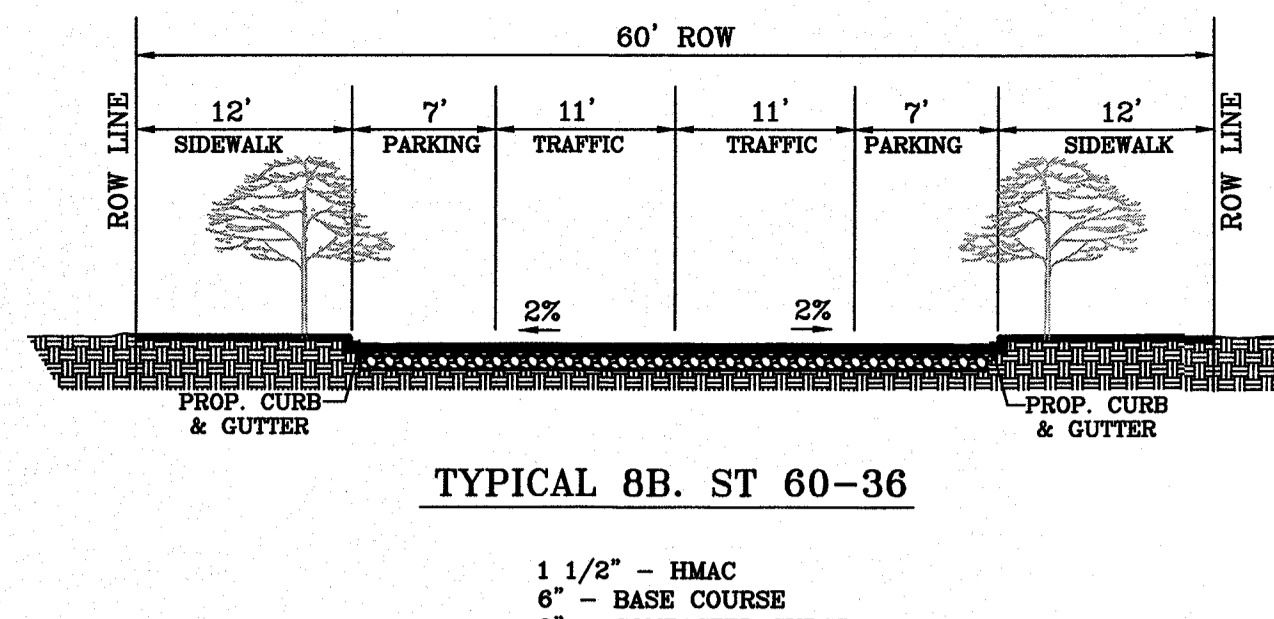
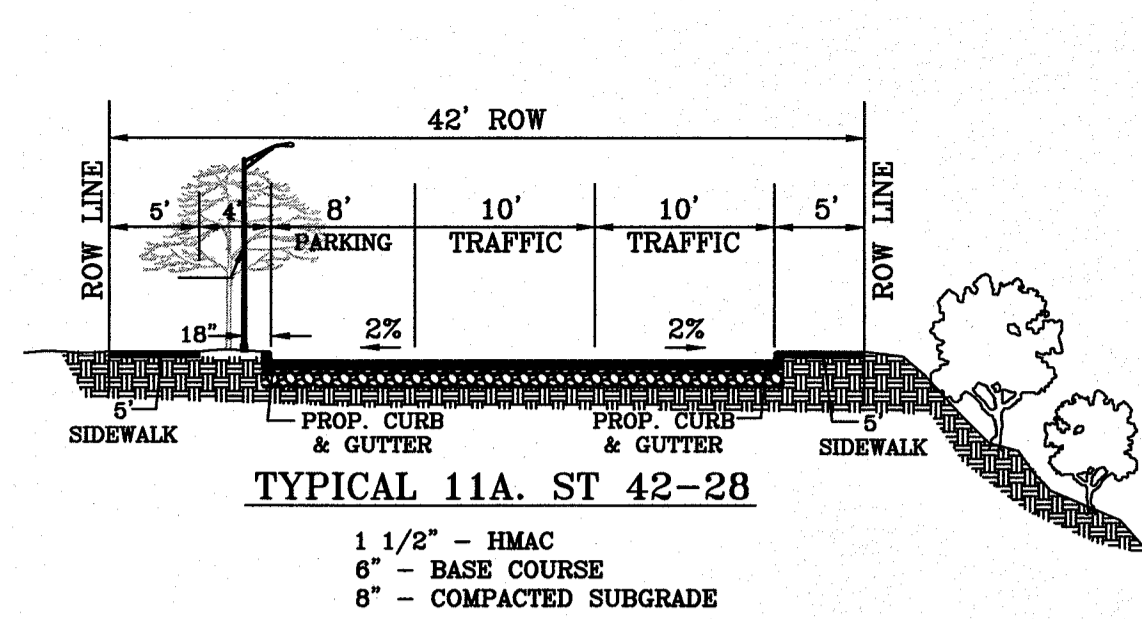


RONALD R. BOHANNON
P.E. #88928

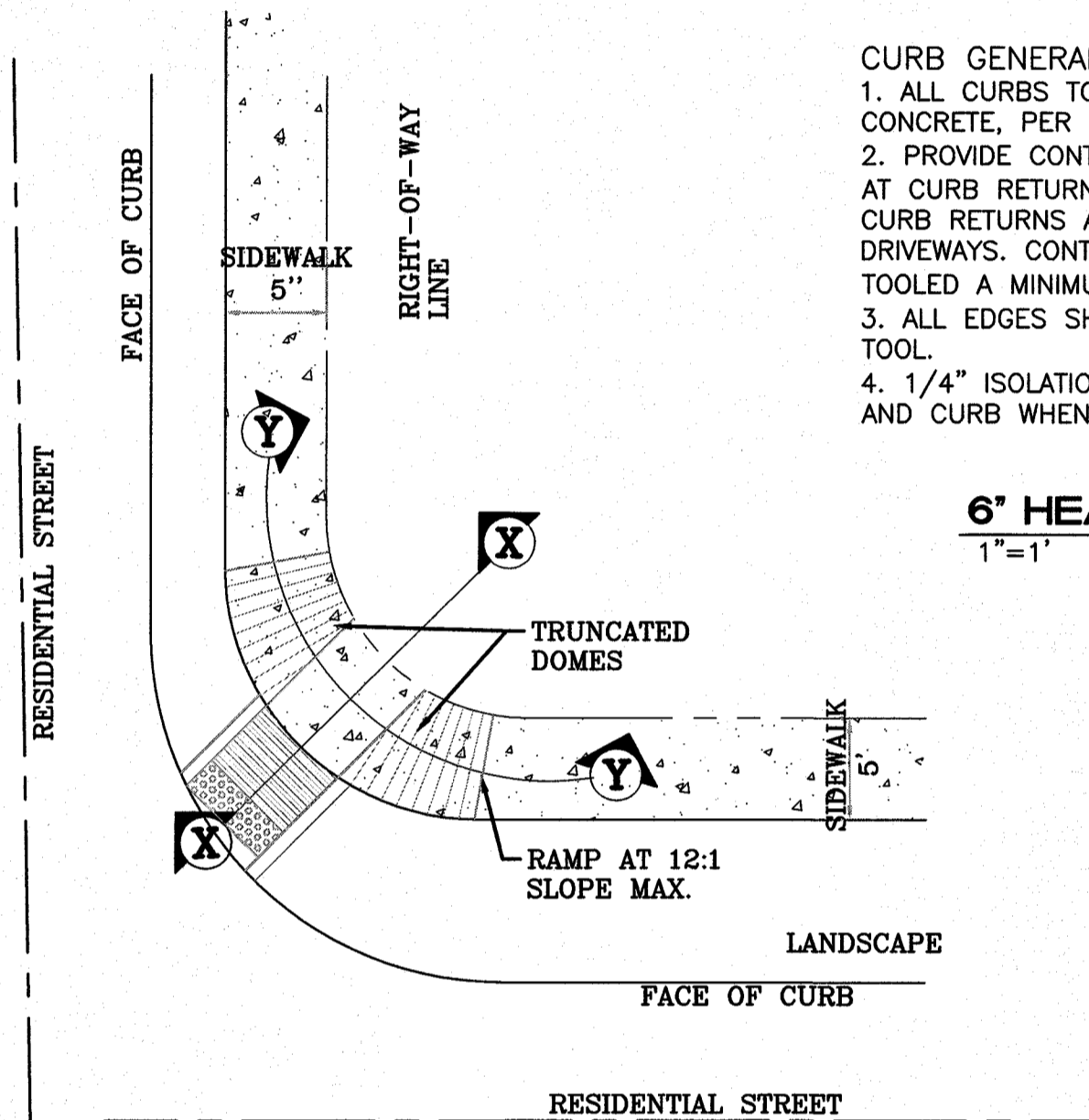
TIERRA WEST, LLC
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ALBUQUERQUE, NM 87109
(505) 858-3100
www.ttierrawest.com
TEXAS BUSINESS NO. F-11773

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DRAWN BY	pm		1-10-17
CHECKED BY	VC		2015079
			DATE
			1-10-17

SHEET TITLE
OVERALL STRIPING AND SIGNAGE PLAN

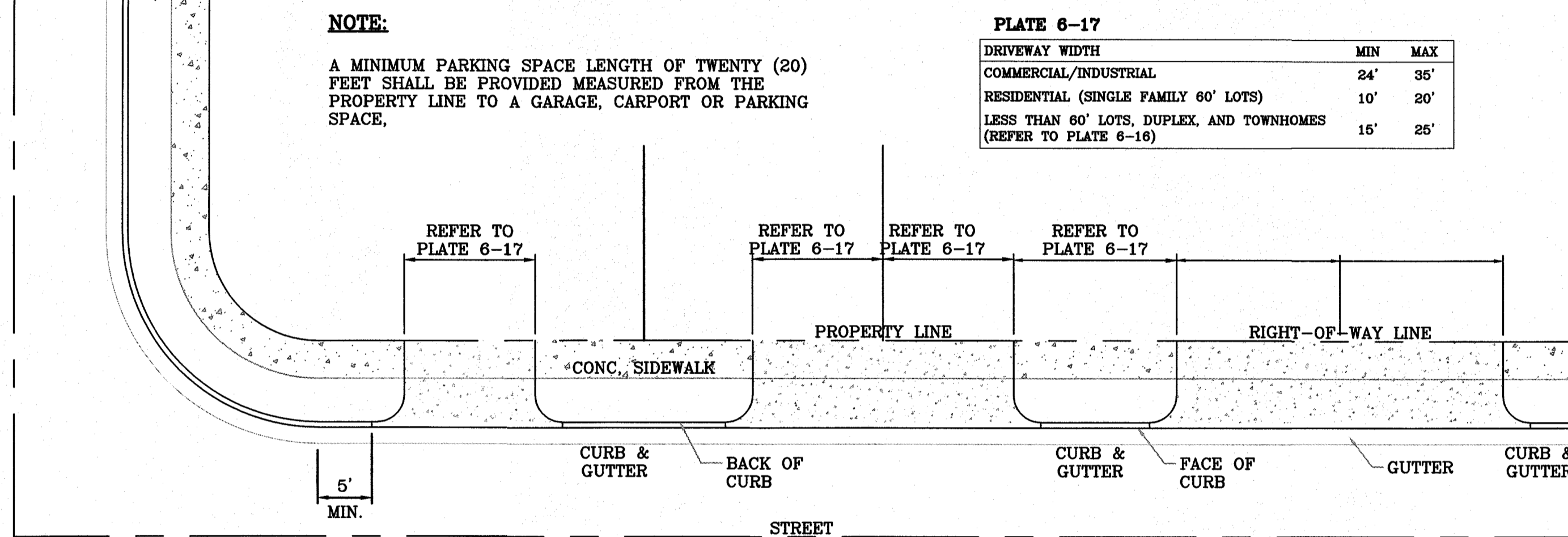


- NOTES:**
- ALL RAMP SHALL HAVE DETECTABLE WARNINGS CONSISTING OF TRUNCATED DOMES WITH A DIAMETER OF NOMINAL 0.9 IN. A HEIGHT OF NOMINAL 0.2 IN AND A CENTER-TO-CENTER SPACING OF NOMINAL 2.35 IN. AND SHALL CONTRAST VISUALLY WITH ADJOINING SURFACES, EITHER LIGHT-ON-DARK OR DARK-ON-LIGHT.
 - CROSS SLOPE SHALL NOT EXCEED 1:50
 - RAMP SLOPE SHALL NOT EXCEED 1:12
 - ALL RAMP SHALL BE BUILT BY DEVELOPER
 - AND COMPLY WITH ADA STANDARDS

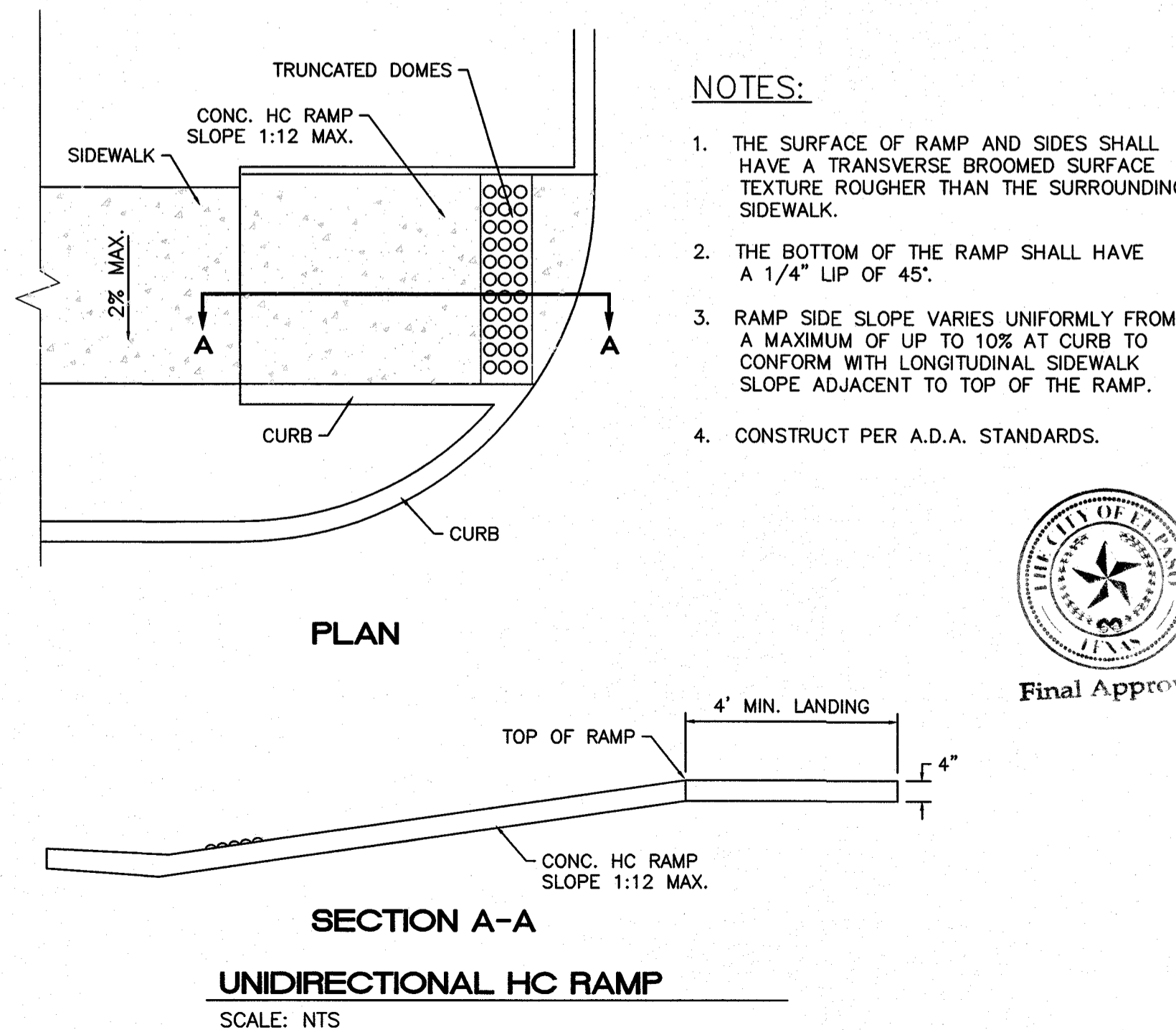
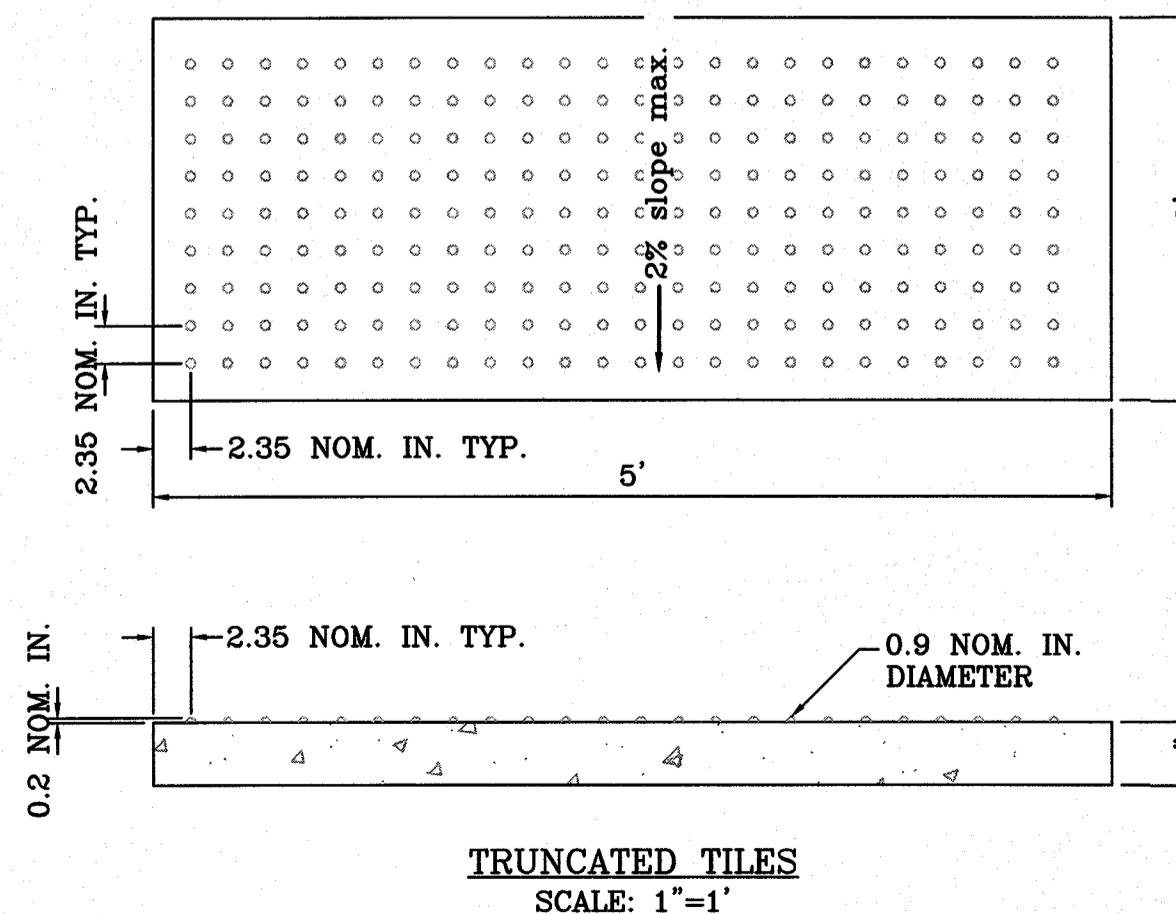
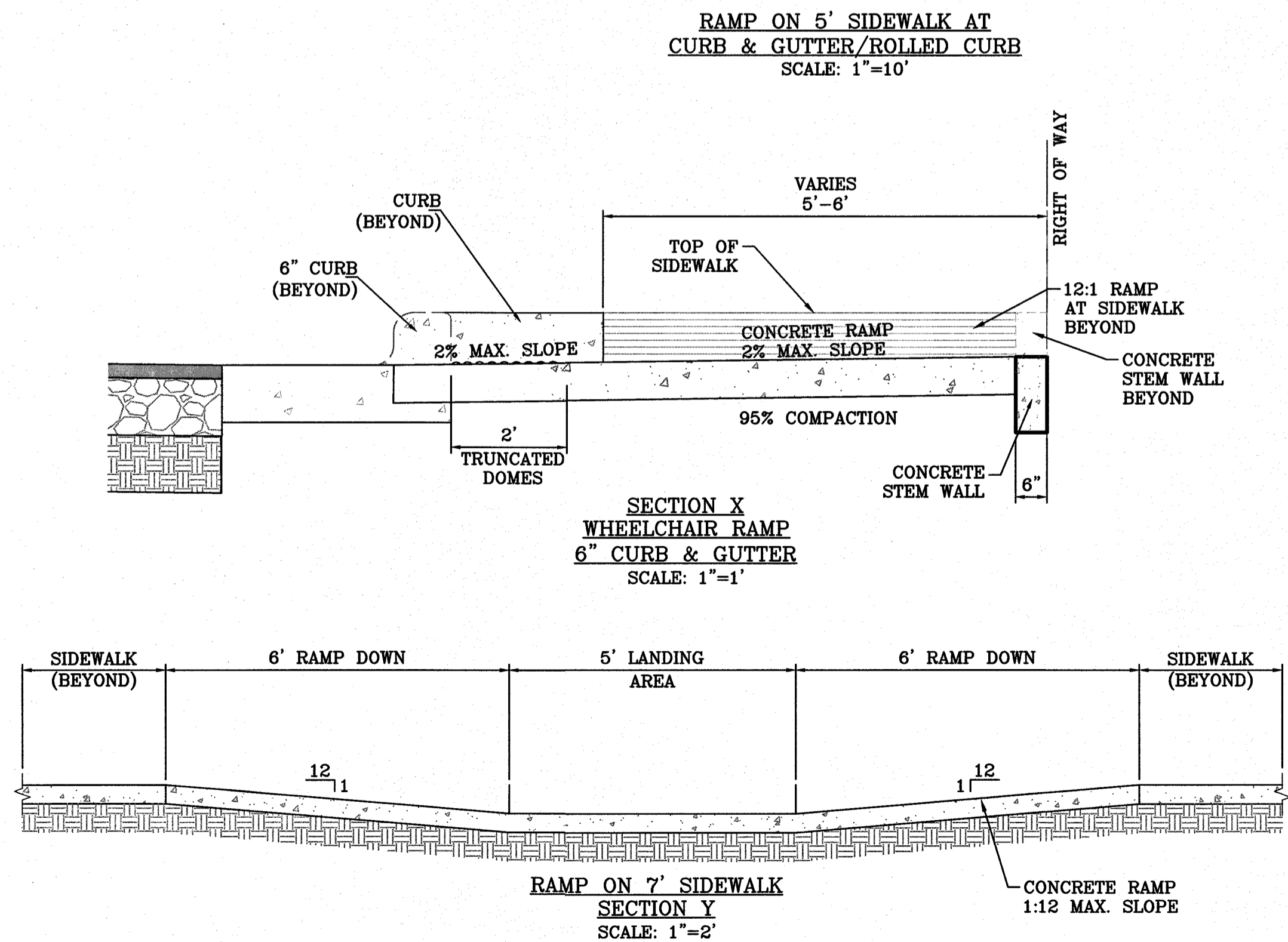


- CURB GENERAL NOTES:**
- ALL CURBS TO BE CONSTRUCTED OF PORTLAND CEMENT CONCRETE, PER CITY OF EL PASO SPECIFICATIONS.
 - PROVIDE CONTRACTION JTS. 12\"/>

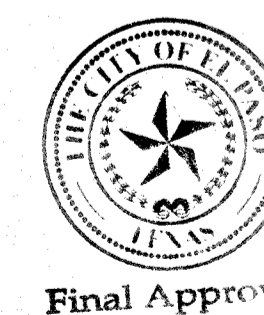
6\"/>



TYPICAL RESIDENTIAL DRIVEWAY WITH CURB & GUTTER
SCALE: 1"=10'



- NOTES:**
- THE SURFACE OF RAMP AND SIDES SHALL HAVE A TRANSVERSE BROOMED SURFACE TEXTURE ROUGHER THAN THE SURROUNDING SIDEWALK.
 - THE BOTTOM OF THE RAMP SHALL HAVE A 1/4" LIP OF 45°.
 - RAMP SIDE SLOPE VARIES UNIFORMLY FROM A MAXIMUM OF UP TO 10% AT CURB TO CONFORM WITH LONGITUDINAL SIDEWALK SLOPE ADJACENT TO TOP OF THE RAMP.
 - CONSTRUCT PER A.D.A. STANDARDS.



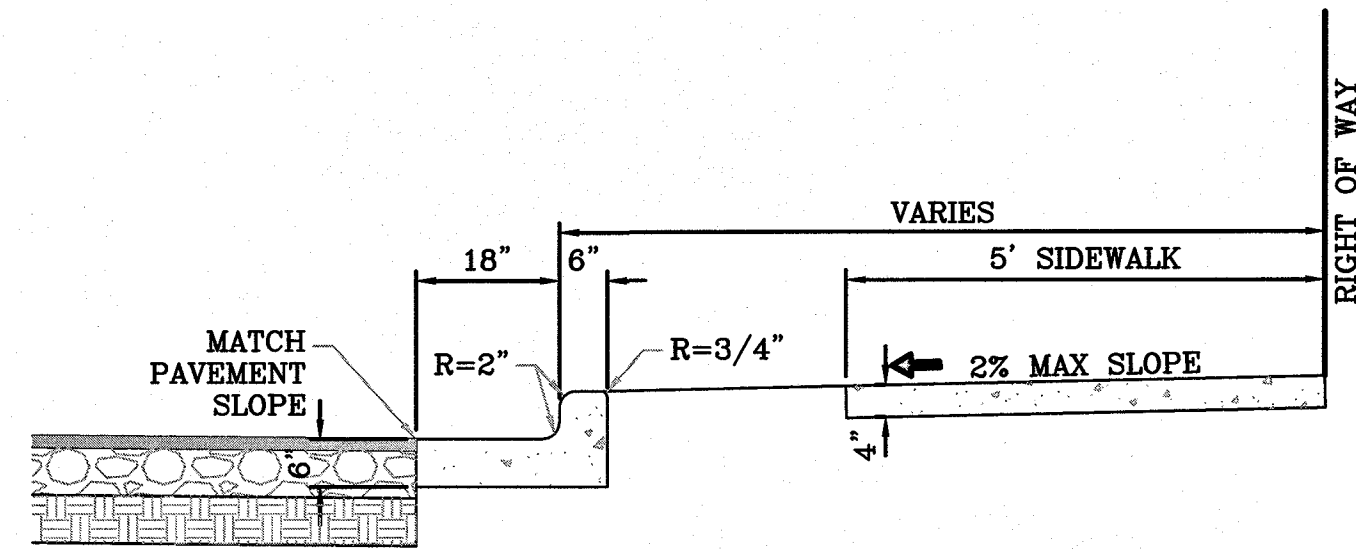
PROJECT NAME
MONTECILLO UNIT 9 EAST AND WEST

BEING A REPLAT OF A PORTION OF LOT 6, BLOCK 2, MONTECILLO UNIT THREE, REPLAT 'B' AND A PORTION OF TRACT 1, JOHN BAKER SURVEY NO 10, CITY OF EL PASO, EL PASO COUNTY, TEXAS, CONTAINING 5.3943 ACRES

ENGINEER'S SEAL
RONALD R. BOHANNAN
P.E. #88928

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ALBUQUERQUE, NM 87109
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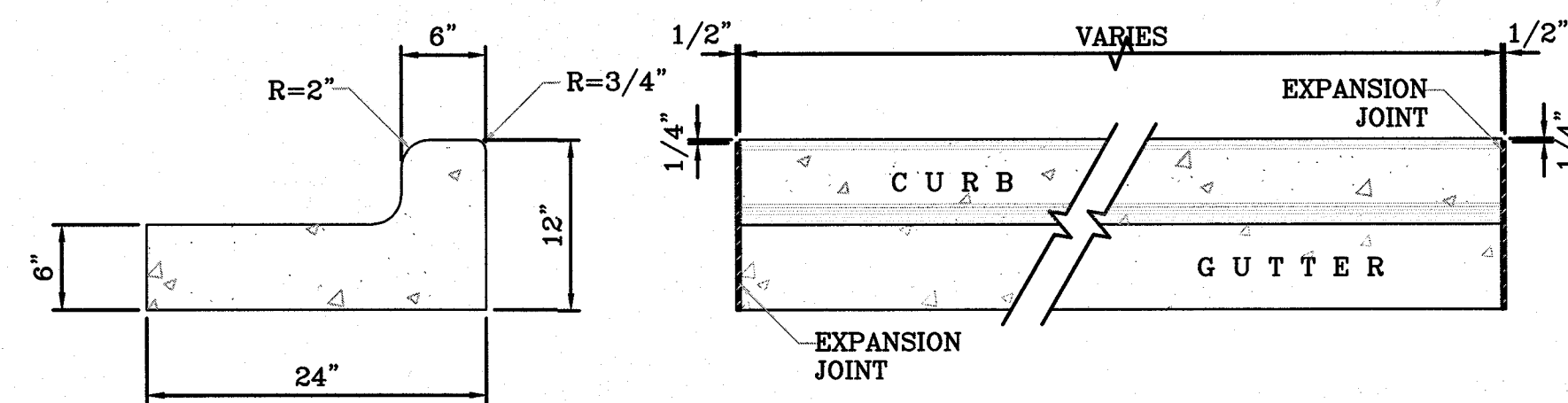
NO.	DATE	REMARKS	BY
DESIGNED BY	VC	DESIGN	1-10-17
DRAWN BY	pm		1-10-17
DRAWING NAME	2015079-RD-DET		2015079
CHECKED BY	VC		1-10-17



NOTES:

1. CONCRETE SHALL BE 3000 P.S.I. MINIMUM.
2. DUMMY JOINTS REQUIRED AT 10' O.C. FOR CURB/GUTTER AND 5' O.C. FOR SIDEWALK.
3. EXPANSION MATERIAL REQUIRED AT CURB RETURNS WITH 1/2" PREMOLDED ASPHALT IMPREGNATED EXPANSION MATERIAL OR EQUAL.
4. EXPANSION JOINTS REQUIRED AT 50' O.C. WHEN FORMING FOR CURBS.
5. WHENEVER SIDEWALK ABUTS ROCK OR MASONRY STRUCTURES SUCH AS CURBS OR BUILDINGS, EXPANSION JOINT FILLER SHALL BE USED IN ACCORDANCE WITH STANDARD SPECIFICATIONS.

CURB & GUTTER AND SIDEWALK DETAIL
SCALE: 1"=2"



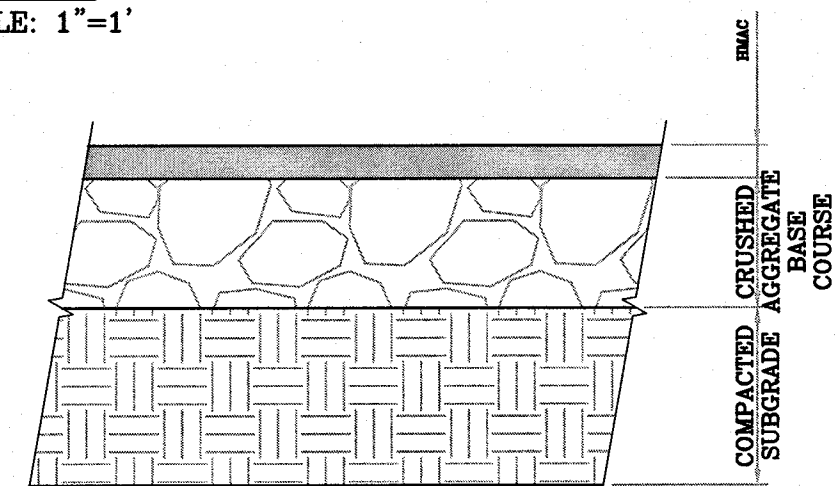
END SECTION

PLAN VIEW

NOTES:

1. NO EXPANSION JOINT WILL BE REQUIRED EXCEPT AT THE END OF CURB RETURNS. (POINT OF TANGENCY WITH STRAIGHT LINE).
2. CONTRACTION JOINTS (1/2" INCH MIN.) MUST BE SCORD EVERY 10 FEET IN CURB AND GUTTER.
3. ALL EXPANSION JOINTS WILL BE OF PREFORMED BITUMINOUS FIBER 1/2" INCH THICK.
4. CONCRETE: CLASS "A" 3000 PSI.
5. EXPANSION JOINTS REQUIRED AT 5' O.C. WHEN FORMING FOR CURBS.

STANDARD 6" CURB & GUTTER DETAIL
SCALE: 1"=1"



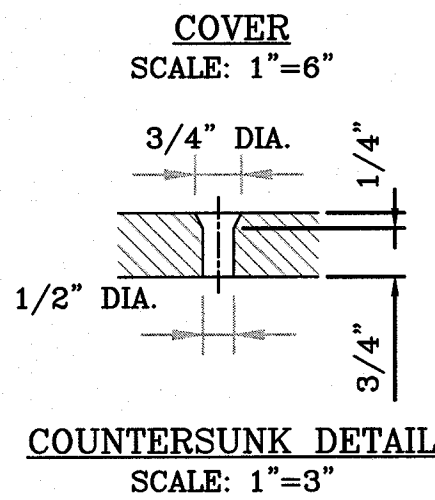
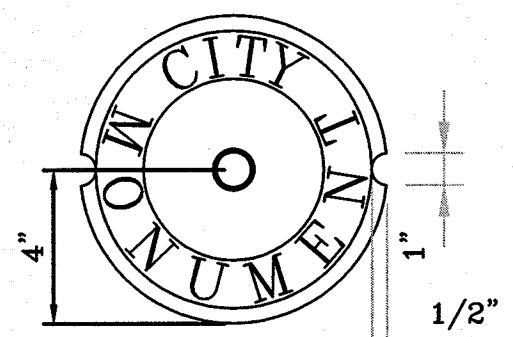
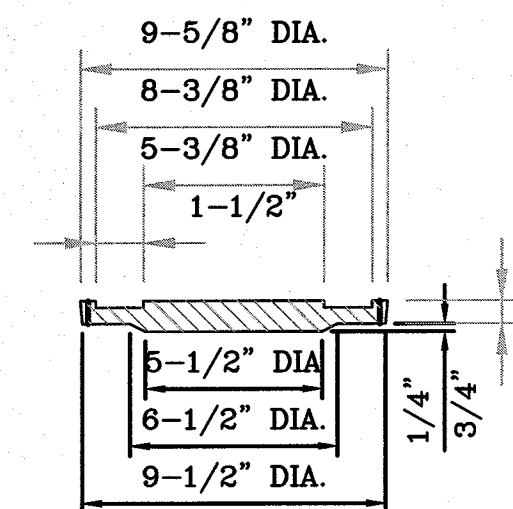
PAVEMENT SECTION DETAIL
SCALE: 1"=1"

PAVEMENT NOTES

1. SUBGRADE TO BE COMPACTED TO 95% OF MAXIMUM DENSITY AS PER ASTM D1557.
2. BASE TO BE COMPACTED TO NOT LESS THAN 100% DENSITY IN ACCORDANCE WITH ASTM D1557. TYPE A, GRADE 1 OR 2.
3. BITUMINOUS MATERIAL SHALL CONFORM TO AC-10 OR AC-20, TYPE "C" IN ACCORDANCE WITH ASTM D3318.
4. PRIME COAT TO BE 0.25 GAL. PER SQUARE YARD (MINIMUM COVERAGE) MC-70.
5. COMPACTION TESTS WHERE REQUIRED BY THE CITY ENGINEER MUST BE PAID FOR BY THE DEVELOPER.
6. C.B.R. TESTS WILL BE REQUIRED AT 500 FOOT INTERVALS AFTER SUBGRADE IS PLACED AND/OR A MINIMUM OF TWO TESTS IF STREET IS LESS THAN 500 FEET.
7. STRICT VERTICAL CONTROL OF ALL CURB AND GUTTER ELEVATIONS WILL BE MAINTAINED. BLUE TOPPING WILL BE REQUIRED THROUGHOUT.
8. ALL PLANS MUST BE IN ACCORDANCE WITH THE LATEST EDITION OF THE CITY OF EL PASO SUBDIVISION DESIGN AND IMPROVEMENT STANDARDS.
9. HMAC, BASE, SUB BASE WILL BE IN ACCORDANCE WITH THE LATEST CITY OF EL PASO SPECIFICATIONS.
10. MINIMUM PAVEMENT DESIGN DETAILS ARE SHOWN. ACTUAL PAVEMENT DESIGN WILL BE DETERMINED BY: C.B.R.

TRENCHING

ALL TRENCHING SHALL BE DONE IN STRICT ACCORDANCE WITH OSHA-2226.



COUNTERSUNK DETAIL
SCALE: 1"=3"

SIZE AND CONSTRUCTION:

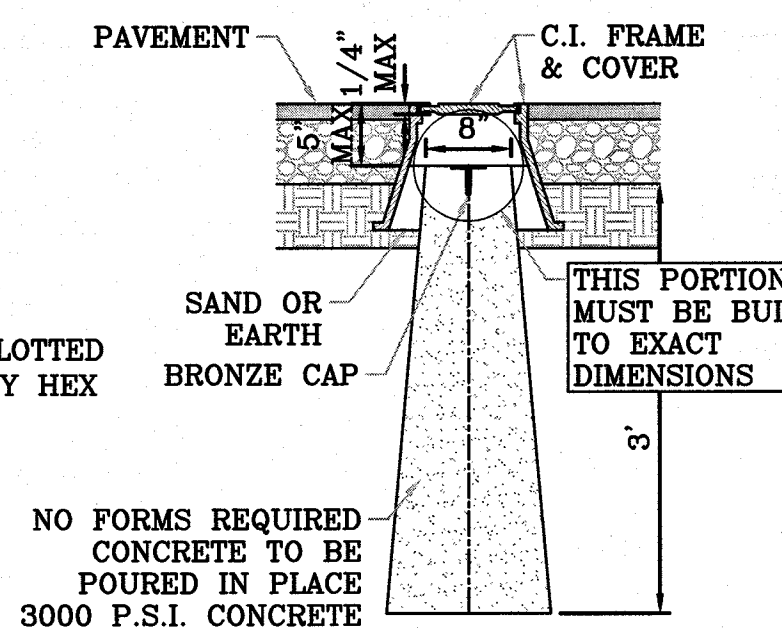
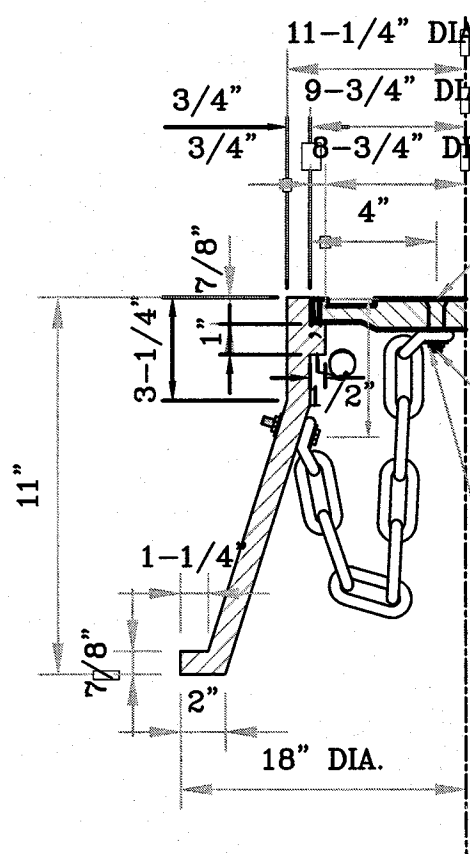
THE STANDARD CITY MONUMENT SHALL BE POURED-IN-PLACE CONCRETE CONE. EIGHT (8) INCHES MINIMUM DIAMETER AT THE TOP, EIGHTEEN (18) INCHES MINIMUM DIAMETER AT THE BOTTOM, THIRTY-SIX (36) INCHES MINIMUM IN DEPTH WITH THE MONUMENT CAP IN PLACE ON TOP.

THE MONUMENT SHALL BE COVERED WITH A CAST IRON BOX AND COVER.

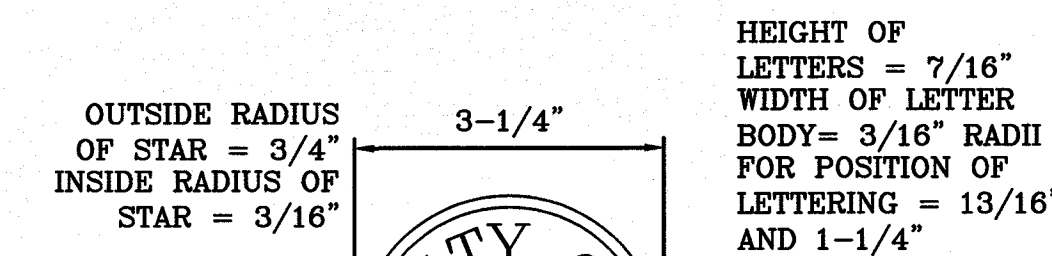
NUMBER AND LOCATIONS:

THE MONUMENTS SHALL BE INSTALLED WHERE SHOWN ON THE SUBDIVISION PLAT AS APPROVED BY THE CITY ENGINEER.

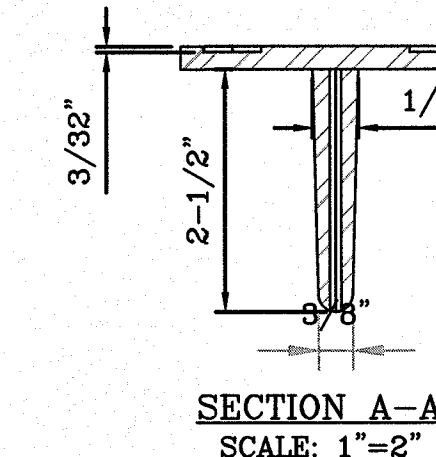
THE SIZE, TOPOGRAPHY AND LAYOUT OF THE SUBDIVISION SHALL GOVERN MONUMENT MUST BE WITHIN THE LINE OF SIGHT OF ANY OTHER MONUMENT (2000 FEET MAXIMUM DISTANCE BETWEEN MONUMENTS). THE NUMBER OF MONUMENTS REQUIRED.



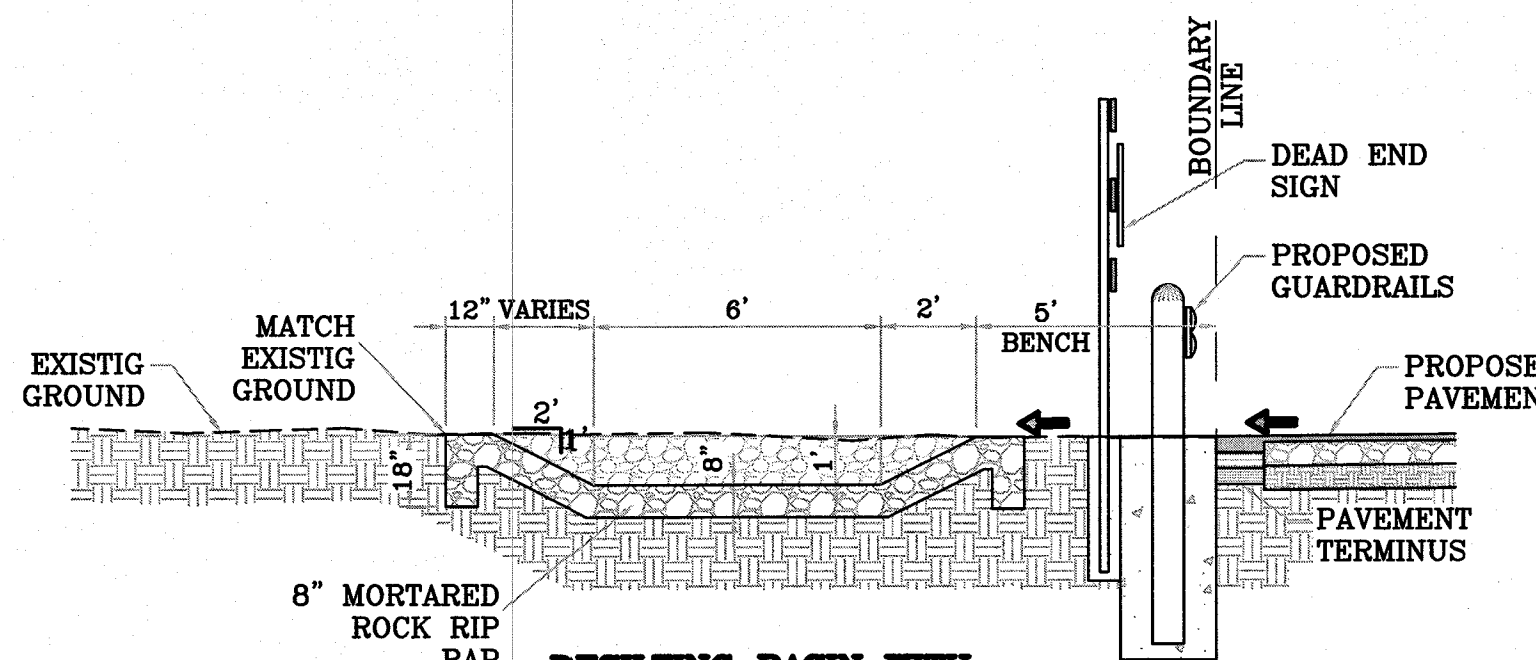
CITY MONUMENT DETAIL
SCALE: 1"=2"



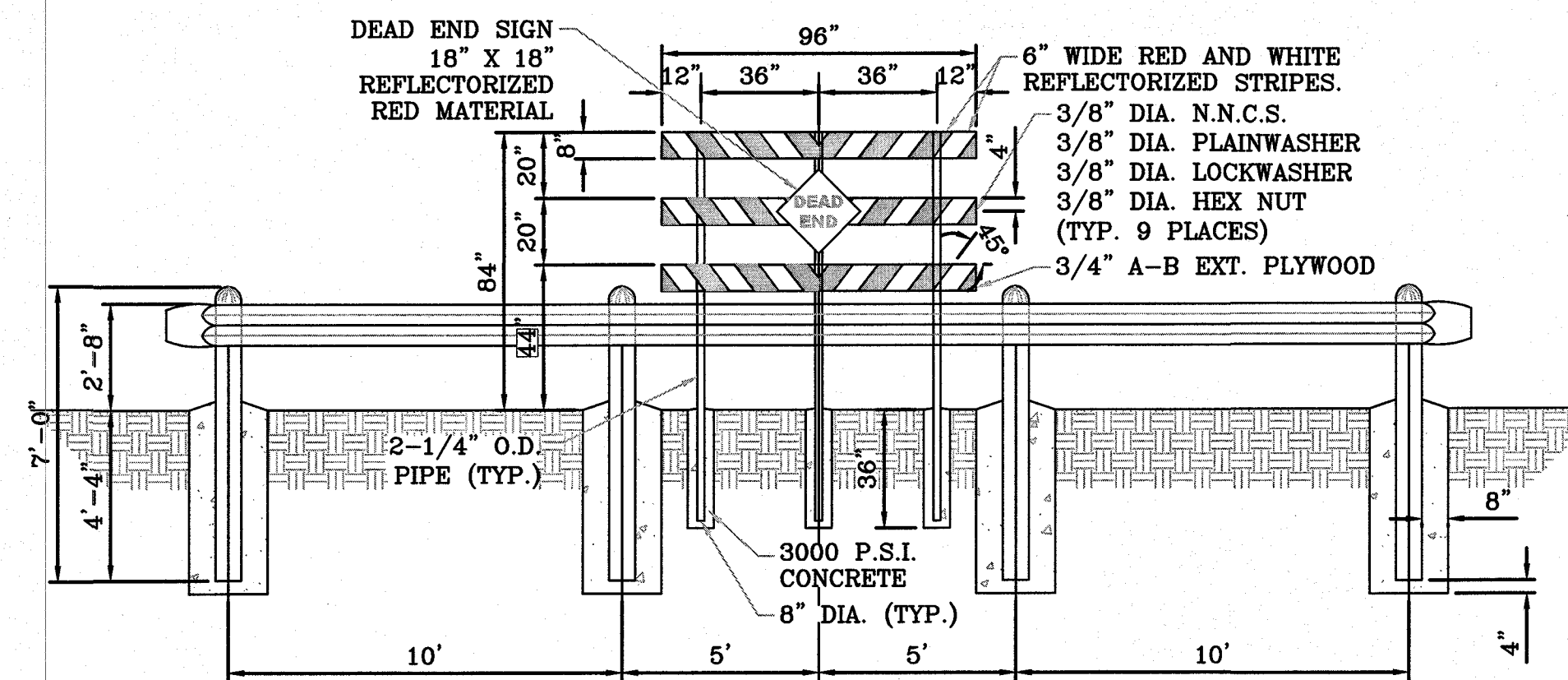
BRONZE MONUMENT CAP
SCALE: 1"=2"



SECTION A-A
SCALE: 1"=2"



DESILTING BASIN WITH GUARD RAIL DETAIL
SCALE: 1"=4"



GUARD RAIL DETAIL
SCALE: 1"=4"

NOTE:
DEAD END SIGN TO BE USED WITH GUARDRAILS.
RED AND WHITE PORTIONS TO BE REFLECTIVE SHEETING.
DEAD END SIGN MUST COMPLY WITH THE CITY OF EL PASO SUBDIVISION DESIGN STANDARDS.



Final Approval

CITY MONUMENT AT POINT OF CURVE CENTERLINE MONTECILLO BLVD. ADJOINING LOT 1, BLOCK 1, MONTECILLO UNIT ONE (STATION 0+82.81), ELEVATION: 4107.13(CITY DATUM)

PROJECT NAME
MONTECILLO UNIT 9 EAST AND WEST

BEING A REPLAT OF A PORTION OF LOT 6, BLOCK 2, RECORD NO. 101, TRACT 101, BAKER SURVEY NO. 10, CITY OF EL PASO, EL PASO COUNTY, TEXAS, CONTAINING 5.3943 ACRES

ENGINEER'S SEAL
Ronald Ray Bohannon
88928
LICENSED PROFESSIONAL ENGINEER

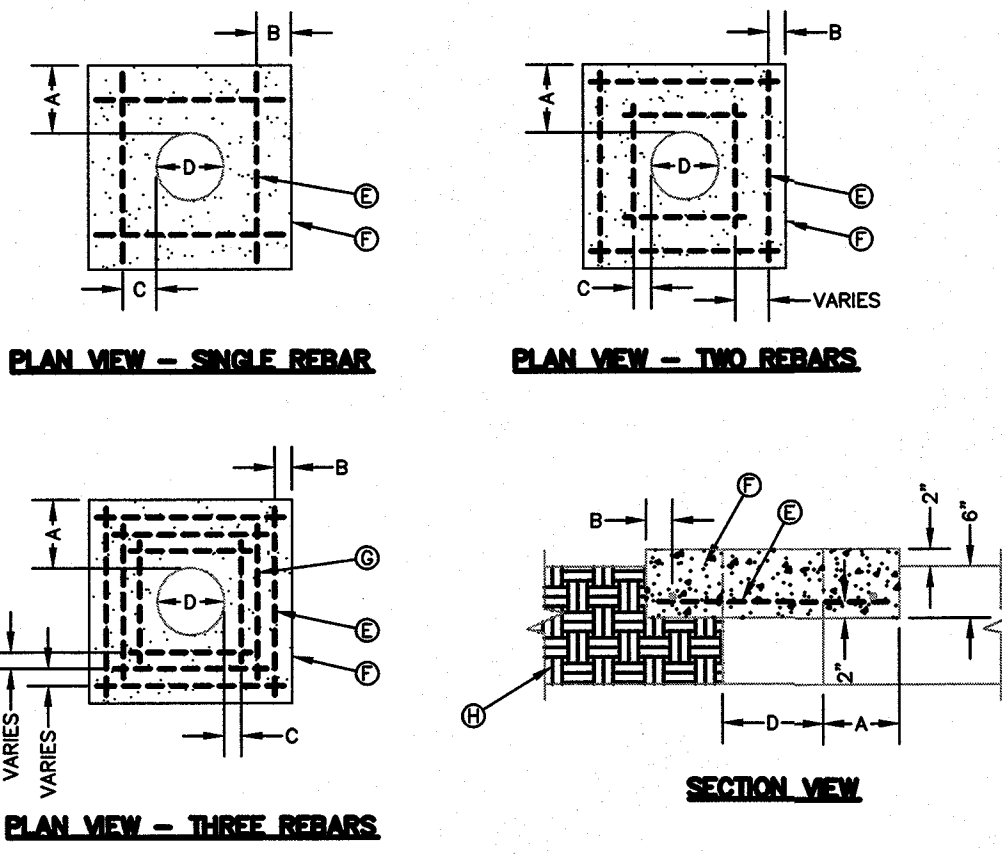
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DRAWN BY	1-10-17	pm	VC
DRAWING NAME	2015079-RD-DET		
CHECKED BY	1-10-17	VC	

SHEET TITLE
STANDARD ROADWAY DETAILS

SHT 23 OF 42

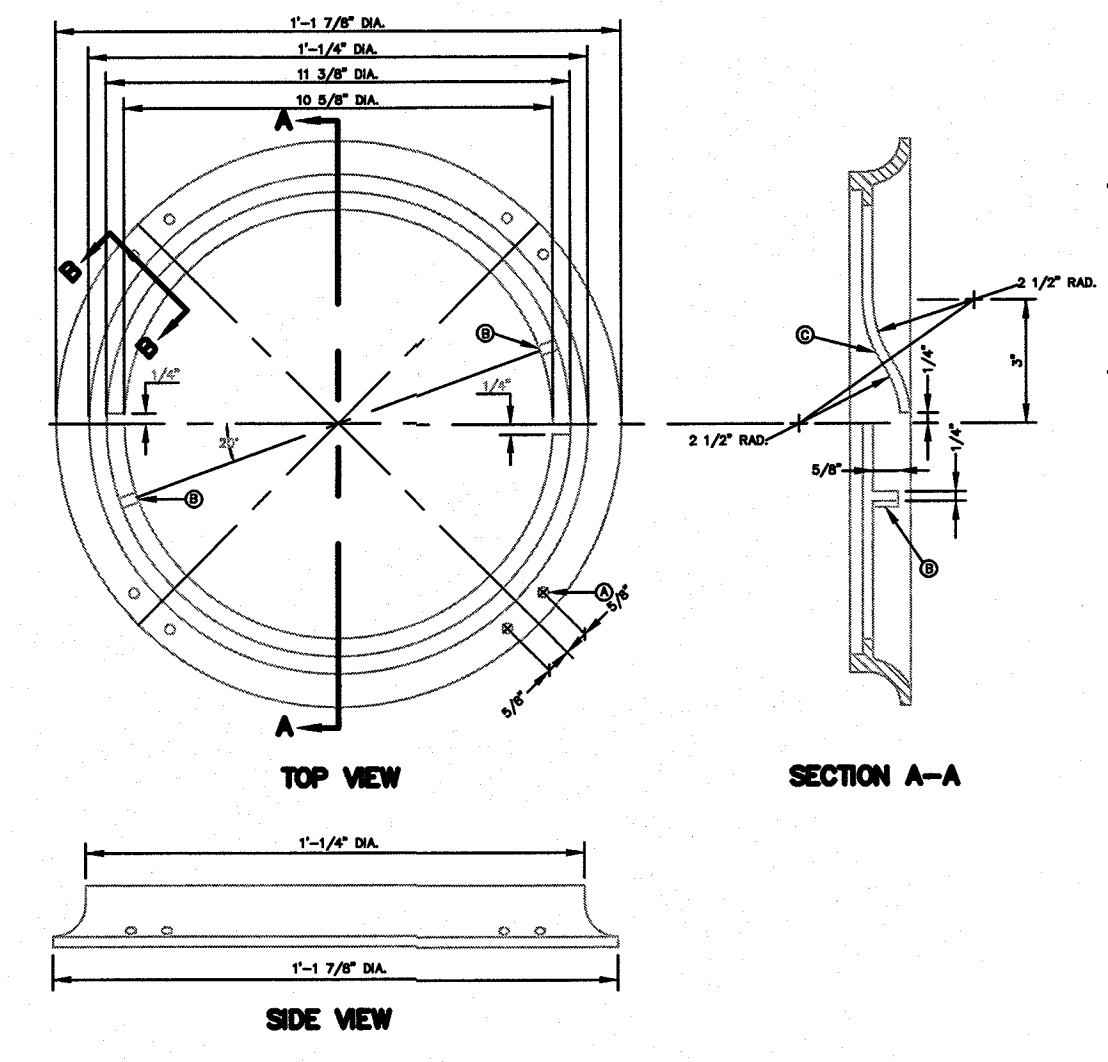


GENERAL NOTES:
 1. THE CONCRETE APRON SHOULD BE CAST IN-PLACE CONCRETE. (MINIMUM 28 DAY COMPRESSIVE STRENGTH 4000 PSI. HIGH EARLY CONCRETE IS REQUIRED)
 2. TOPS OF CONCRETE APRON SHALL BE FLUSH WITH ROADWAY SURFACE OR FINISHED GRADE UNLESS OTHERWISE SPECIFIED BY THE ENGINEER.
 3. PROVIDE A MINIMUM OF 1 1/2" OF CONCRETE COVER FOR ALL REINFORCEMENT STEEL.
 4. REINFORCING SHALL MEET ASTM C-478 AND TRAFFIC LOADING (HS-20).
 5. NO. 3 REBARS SPACED EQUALLY MAY BE LAP TIED OR SQUARE HOOPS.

CONSTRUCTION KEY NOTES:
 E. #3 REINFORCING STEEL TYPE
 F. CONCRETE APRON.
 G. #3 REINFORCING STEEL EQUALLY SPACED.
 H. COMPACTED BACKFILL.

"D" DIAMETER OF PENETRATION	NUMBER OF #3 REINFORCING STEEL BARS	"A" MINIMUM CONCRETE HORIZONTAL DIMENSION FROM PENETRATION	"E" MINIMUM CLEARANCE FROM EDGE OF CONCRETE APRON TO CENTER OF NEAREST REBAR	"F" MINIMUM CLEARANCE FROM PENETRATION EDGE TO CENTER OF NEAREST REBAR
0" TO 6"	1	4"	1 1/2"	4 1/2"
6.1" TO 16"	2	6"	1 1/2"	1 1/2"
16.1" AND OVER	3	8"	1 1/2"	1 1/2"

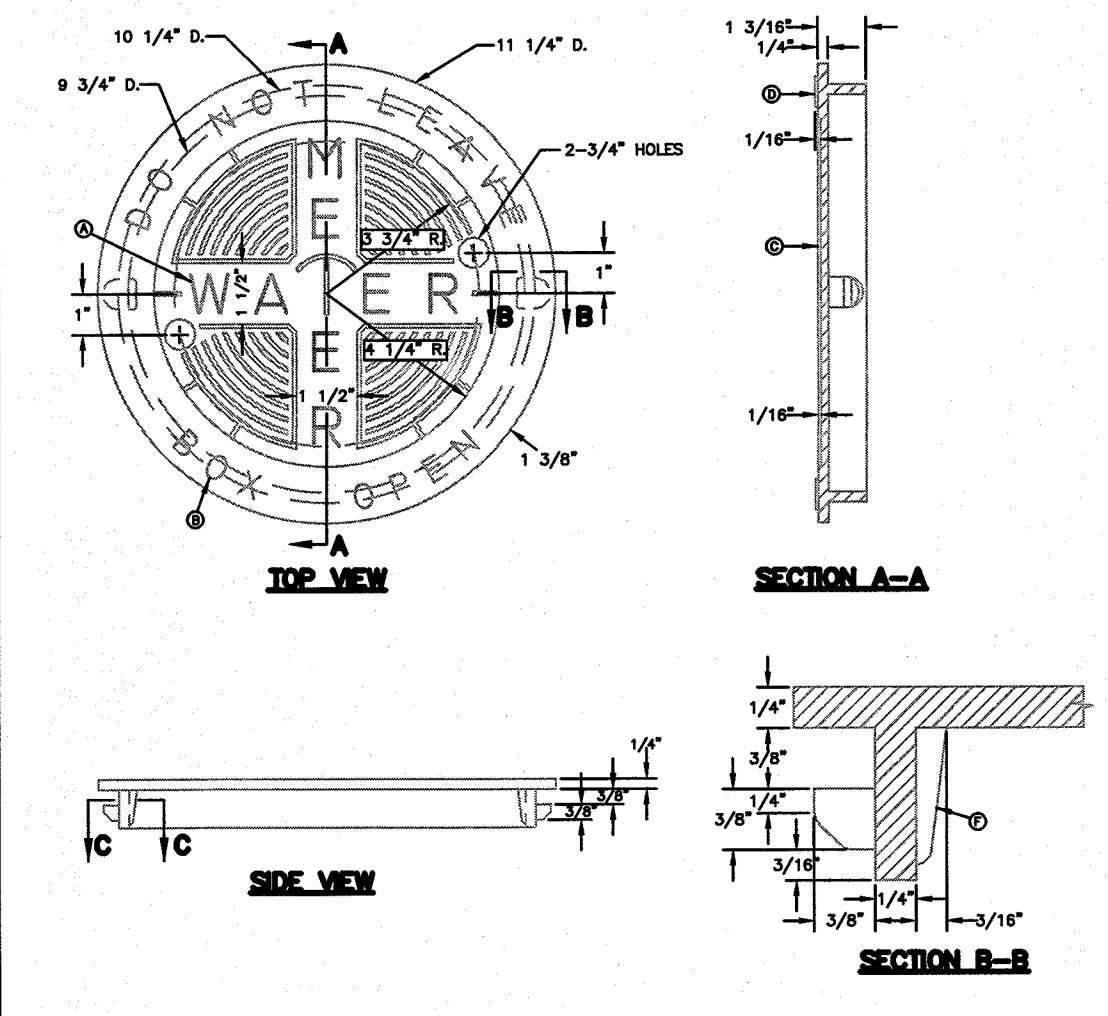
STANDARD DETAIL DATE: 11/6/2008 CONCRETE APRON INSTALLATION IN NON PAVED AREAS N.T.S. EL PASO COUNTY UTILITIES PUBLIC WORKS BOARD DETAIL No. 184-2



GENERAL NOTES:
 1. MATCHING SURFACES TO BE FINISHED OF ANY IRREGULARITIES THAT WOULD PREVENT A SNUG FIT.
 2. CASTING TO BE SMOOTH AND VOID OF AIR HOLES.
 3. METER BOX RING WEIGHT = 7 LBS.
 4. METER BOX RING MADE OF CAST IRON.

CONSTRUCTION KEY NOTES:
 A. 1/2" DIAMETER HOLES FOR ANCHORING RING TO CONCRETE METER BOX.
 B. LUG STOP
 C. LOCKING LUG SLIDE

STANDARD DETAIL DATE: 1/1995 METER BOX RING FOR TYPE "A" & "B" METER BOXES N.T.S. EL PASO COUNTY UTILITIES PUBLIC WORKS BOARD DETAIL No. 300



GENERAL NOTES:
 1. MATCHING SURFACES TO BE ROUGH GROUND OF ANY IRREGULARITIES THAT WOULD PREVENT A SNUG FIT.
 2. CASTING TO BE SMOOTH AND VOID OF AIR HOLES.
 3. METER BOX COVER WEIGHT= 1 1/4 lbs.

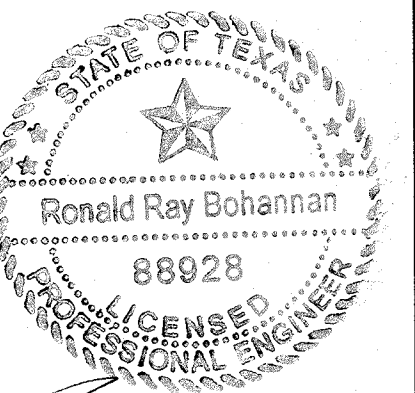
CONSTRUCTION KEY NOTES:
 A. LETTERS TO BE 1" HIGH, 3/4" WIDE, 1/8" THICK
 B. LETTERS TO BE X" HIGH, 5/8" WIDE, 1/2" THICK
 C. INSIDE LETTERS A PESS 1/2" TALL
 D. OUTSIDE LETTERS 1/2" TALL
 E. REINFORCE BACK OF LUG
 F. REINFORCEMENT

STANDARD DETAIL DATE: 4/1994 METER BOX COVER FOR TYPE "A" & "B" METER BOXES N.T.S. EL PASO COUNTY UTILITIES PUBLIC WORKS BOARD DETAIL No. 301



CITY MONUMENT AT POINT OF CURVE CENTERLINE MONTECILLO BLVD. ADJOINING LOT 1, BLOCK 1, MONTECILLO UNIT ONE (STATION 0+82.61). ELEVATION: 4107.13(CITY DATUM)

PROJECT NAME
MONTECILLO UNIT 9 EAST AND WEST
 BEING A REPLAT OF A PORTION OF LOT 6, BLOCK 2, MONTECILLO UNIT THREE, REPLAT "B" AND A PORTION OF TRACT 1, JOHN BAKER SURVEY NO. 10, CITY OF EL PASO, EL PASO COUNTY, TEXAS, CONTAINING 5.3943 ACRES



RONALD R. BOHANNAN
 P.E. #88928

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 TEXAS BUSINESS NO. T-111775

NO.	DATE	REMARKS	BY
		DESIGN	
		REVISIONS	
DESIGNED BY	VC	DATE	1-10-17
DRAWN BY	pm	DATE	1-10-17
DRAWING NAME	2015079-DET	JOB NO	2015079
CHECKED BY	VC	DATE	1-10-17

SHEET TITLE
WATER DETAILS

WATER AND SEWER NOTES

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE TCEQ AND EL PASO WATER UTILITIES DESIGN STANDARDS AND SPECIFICATIONS WHEN CONFLICTS ARE NOTED WITH LOCAL STANDARDS, THE MORE STRINGENT SHALL BE APPLIED. CONSTRUCTION FOR PUBLIC WATER SYSTEMS MUST ALWAYS, AT A MINIMUM, MEET TCEQ'S RULES AND REGULATIONS FOR PUBLIC WATER SYSTEMS.
- PRIOR TO BEGINNING CONSTRUCTION, THE OWNER OR HIS/HER AUTHORIZED REPRESENTATIVE SHALL CONVENE A PRE-CONSTRUCTION CONFERENCE BETWEEN THE CONSULTING ENGINEERS REPRESENTATIVE, CONTRACTORS(S), PSB ENGINEER, EL PASO COUNTY (IF APPROPRIATE), THE PSB AND ANY OTHER AFFECTED PARTIES. NOTIFY ALL SUCH PARTIES AT LEAST 48 HOURS PRIOR TO THE TIME OF THE CONFERENCE AND 48 HOURS PRIOR TO THE BEGINNING OF CONSTRUCTION.
- THE CONTRACTOR SHALL GIVE THE ENGINEER, CITY, AND THE PSB A MINIMUM OF 48 HOURS NOTICE BEFORE BEGINNING EACH PHASE OF CONSTRUCTION. PUBLIC WATER AND SEWER UTILITY WORK, INCLUDING TIE-INS SHALL NOT BE PERFORMED UNTIL A DEVELOPMENT AGREEMENT HAS BEEN EXECUTED BETWEEN THE OWNER AND EPWU-PSB. WORK SHALL BE COORDINATED WITH EPWU-PSB FIELD ENGINEER AT LEAST 48 HOURS PRIOR TO COMMENCING ANY PUBLIC UTILITY WORK.
- ANY EXISTING PAYMENT, CURBS AND/OR SIDEWALKS DAMAGED OR REMOVED WILL BE REPAIRED BY THE CONTRACTOR AT HIS OWN EXPENSE BEFORE ACCEPTANCE OF THE WORK.
- THE LOCATION OF ANY WATER AND/OR WASTEWATER LINES TO BE CROSSED OR CONNECTED TO SHALL BE VERIFIED BY THE CONTRACTOR AT THE TIME OF COMMENCEMENT OF CONSTRUCTION.
- CONTRACTORS SHALL VERIFY EXACT DEPTH AND LOCATION OF ALL UTILITIES PRIOR TO BEGINNING CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES, DRIVEWAYS, PAVEMENT, CURB & GUTTER, SIDEWALKS, ETC. SHALL BE REPAIRED BY THE CONTRACTOR, OR THE UTILITY, AT UTILITIES OPTION, AND CONTRACTOR, OR THE UTILITY, AT UTILITIES OPTION, AND SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
- ALL WATER MAINS SHALL HAVE A MINIMUM 48 INCHES OF COVER FROM FINISHED GRADE OR 40 INCHES BELOW ACTUAL SUBGRADE UNLESS OTHERWISE DENOTED ON THE PLANS.
- CONTACT THE EL PASO WATER UTILITIES AND ANY OTHER CONCERNED PARTIES 48 HOURS PRIOR TO CONNECTING TO EXISTING WATER AND/OR WASTEWATER LINES.
- ALL FILL AREAS OVER ALL UTILITIES, SHALL BE COMPACTED TO 95 % STANDARD PROCTOR DENSITY IN ACCORDANCE WITH TEX 113-E METHOD.
- WATER AND WASTEWATER ALIGNMENTS SHOWN ON THE PLANS SHOULD BE ACHIEVED BY DEFLECTION WITHIN THE MANUFACTURER'S SPECIFICATIONS, EXCEPT WHERE SPECIFIC FITTINGS ARE CALLED FOR THE PLANS.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE AND PROTECT ALL EXISTING UTILITIES SUCH AS GAS LINES, ELECTRIC LINES, WATERLINES, VALVE BOXES, FIRE HYDRANTS, STRUCTURES, AND OTHER APPURTENANCES THAT LIE WITHIN THE RIGHT-OF-WAY OR EASEMENTS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REPAIR ALL UTILITIES, DRIVEWAYS, PAVEMENT, CURB, GUTTER, SIDEWALKS, FENCES AND OTHER ITEMS DAMAGED DURING CONSTRUCTION REGARDLESS OF WHETHER ALL ITEMS ARE SHOWN ON THE PLANS AT HIS SOLE EXPENSE. IN ADDITION TO NORMAL PRECAUTIONS WHEN EXCAVATING, TAKE EXTRA CAUTION WHEN EXCAVATING WITHIN 25 FT. OF ANY UTILITIES SHOWN ON THE PLANS.
- THE CONTRACTOR SHALL INCLUDE ADDITIONAL FLUSHING VALVES AND TEST CONNECTIONS NECESSARY TO PERFORM TEST AND STERILIZATION OPERATION.
- ALL CONSTRUCTION ACTIVITIES, INCLUDING ACCESS, EGRESS, TRAVEL, STOCKPILING, ETC. ARE TO BE CONFINED TO AREAS IDENTIFIED BY THE ENGINEER.
- DISPOSAL OF ALL SPOIL OFFSITE WILL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
- PIPE FITTINGS AND JOINTS: WATER PIPE-PVC SDR 14, C-900, CL-350 WITH BOLTLESS GASKETED JOINTS AND C.I., M.J. OR FLANGED PIPE FITTINGS UNLESS OTHERWISE SHOWN ON THE PLANS; FLUSHING VALVE / FIRE HYDRANTS LEAD - DUCTILE IRON, CLASS 50, MECHANICAL JOINTS AND C.I. (D.I. ENDS) FITTINGS, UNLESS OTHERWISE SHOWN ON THE PLANS; GRAVITY SEWER - PVC SDR 35 AND SDR 26 UNLESS OTHERWISE NOTED. ALL PIPES, FITTINGS, VALVES, HYDRANTS, AND OTHER APPURTENANCES TO BE USED ON THE INSTALLATION OF PUBLIC SYSTEMS SHALL CONFORM TO THE MATERIALS AND DIMENSIONS DEPICTED ON CURRENT EPWU-PSB STANDARD DETAILS.
- ALL GATE VALVES SHALL HAVE RESILIENT VALVE SEATS.
- AT ALL LOCATIONS WHERE A WATERLINE CROSSES A WASTEWATER LINE, THE CONSTRUCTION SHALL STRICTLY COMPLY WITH ALL APPLICABLE RULES AND REGULATIONS OF THE TCEQ, TCEQ SPECIFICATIONS FOR LOCATION OF WATERLINES AS REQUIRED IN TITLE 30 TAC, CHAPTER 290.44(e) (RULES AND REGULATIONS FOR PUBLIC WATER SYSTEMS) ARE MINIMUM REQUIREMENTS.
- THE CONTRACTOR SHALL FURNISH THE ENGINEER ONE SET OF AS-BUILT PLANS REFLECTING ALL CHANGES MADE IN THE FIELD, AND TWO MEASUREMENTS TO ALL VALVES AND MANHOLES INSTALLED FROM PERMANENT OBJECTS.
- THE PSB AND THE ENGINEER SHALL BE GIVEN 48 HOURS NOTICE PRIOR TO ANY TESTING PHASE (DENSITY, PRESSURE, LEAKAGE, ETC.)
- MANHOLE CONSTRUCTION AND REHABILITATION: ALL MANHOLES ARE WATERTIGHT, WITH WATERTIGHT RINGS AND COVERS. IF MANHOLES ARE WITHIN THE 100-YEAR FLOODPLAIN THE MANHOLE COVERS SHALL HAVE GASKETS AND BE BOLTED. WHERE GASKETED MANHOLE COVERS ARE REQUIRED FOR MORE THAN THREE MANHOLES IN SEQUENCE, ALTERNATE MEANS OF VENTING SHALL BE PROVIDED. BRICKS ARE NOT AN ACCEPTABLE CONSTRUCTION MATERIAL FOR ANY PORTION OF THE MANHOLE PER 30 TAC 89317.2 (5)(F).
- CONSTRUCTION OF PUBLIC WATER AND SEWER SYSTEM INCLUDING MATERIALS AND TESTING SHALL CONFORM WITH EPWU-PSB STANDARD SPECIFICATIONS FOR THE INSTALLATION OF WATER MAINS, SANITARY SEWER MAIN AND RELATED APPURTENANCES.

ALL MANHOLES MUST BE TESTED TO MEET OR EXCEED THE FOLLOWING REQUIREMENTS:

MANHOLES AND WET WELLS MUST BE TESTED SEPARATELY AND INDEPENDENTLY OF THE COLLECTION LINES. ALL MANHOLES MUST BE HYDROSTATICALLY TESTED WITH A MAXIMUM-LOSS ALLOWANCE OF 0.025-GALLON PER FOOT DIAMETER PER FOOT OF HEAD PER HOUR. OTHER TESTING METHODS, SUCH AS VACUUM TESTING, MAY BE APPROVED ON A CASE-BY-CASE BASIS BY THE EXECUTIVE DIRECTOR OF THE TCEQ.

22. ALL 8" SEWER LINES SHALL BE TESTED USING THE FOLLOWING METHOD:

- ALL LOW PRESSURE AIR SHALL CONFORM TO THE PROCEDURES DESCRIBED IN ASTM C-828, ASTM C-924, OR OTHER APPROPRIATE PROCEDURES. THE TIME FOR THE PRESSURE TO DROP SHALL BE AT LEAST AS STRINGENT AS THE REQUIREMENTS OF TCEQ RULES SECTION 317.2(A)(4)(B) DESCRIBED BELOW.

FOR SECTIONS OF PIPE UP TO 36-INCHES AVERAGE INSIDE DIAMETER MINIMUM TIME ALLOWABLE FOR THE PRESSURE TO DROP FROM 3.5 POUND PER SQUARE INCH GAUGE TO 2.5 POUNDS PER SQUARE INCH GAUGE SHALL BE COMPUTED FROM THE FOLLOWING EQUATION:

$$T = 0.0850(D)(K) / (Q) \text{ WHERE } T = \text{TIME FOR PRESSURE TO DROP 1.0 POUND PER SQUARE INCH GAUGE IN SECONDS.}$$

$$K = 0.000491(Q)(L), \text{ BUT NOT LESS THAN } 1.0$$

$$D = \text{AVERAGE INSIDE DIAMETER IN INCHES}$$

$$L = \text{LENGTH OF LINE IN FEET OF SAME SIZE BEING TESTED}$$

$$Q = \text{RATE OF LOSS, 0.0015 CUBIC FEET PER MINUTE PER SQUARE FOR INTERNAL SURFACE SHALL BE USED.}$$

SINCE A K VALUE OF LESS THAN 1.0 SHALL NOT BE USED, THERE ARE MINIMUM TIMES FOR EACH PIPE DIAMETER AS OUTLINED BELOW:

PIPE DIA. (IN)	MIN. TIME (SEC)	LEN. FOR MIN (FT)	TIME FOR LONGER LENGTH (SEC)
6	340	398	0.855 (L)
8	454	298	1.520 (L)
10	567	239	2.374 (L)
12	680	199	3.419 (L)
15	850	159	5.342 (L)
18	1020	133	7.693 (L)
21	1190	114	10.471 (L)
24	1360	100	13.676 (L)
27	1530	88	17.309 (L)
30	1700	80	21.369 (L)
33	1870	72	25.856 (L)

- ALL INFILTRATION/EXFILTRATION TESTS SHALL MEET THE FOLLOWING MINIMUM REQUIREMENTS. THE TOTAL INFILTRATION OR EXFILTRATION, AS DETERMINED BY WATER TEST, MUST BE AT A RATE NOT GREATER THAN 50 GALLONS PER INCH OF PIPE DIAMETER PER MILE OF PIPE PER 24 HOURS AT A MINIMUM TEST HEAD OF TWO FEET. IF THE QUANTITY OF INFILTRATION OR EXFILTRATION EXCEEDS THE MAXIMUM QUANTITY SPECIFIED, REMEDIAL ACTION MUST BE UNDERTAKEN IN ORDER TO REDUCE THE INFILTRATION OR EXFILTRATION TO AN AMOUNT WITHIN THE LIMITS SPECIFIED IN 30 TAC SEC 317.2 (A)(4)(A).

- DEFLECTION TEST SHALL BE PERFORMED ON ALL FLEXIBLE AND SEMI-RIGID PIPES. THE TEST SHALL BE CONDUCTED AFTER THE FINAL BACKFILL HAS BEEN IN PLACE AT LEAST 30 DAYS. NO PIPE SHALL EXCEED A DEFLECTION OF FIVE PERCENT. IF THE DEFLECTION TEST IS TO BE RUN USING A RIGID BALL OR MANDREL, SUCH TEST DEVICE SHALL HAVE A DIAMETER EQUAL TO 95% OF THE INSIDE DIAMETER OF THE PIPE. THE TESTS SHALL BE PERFORMED WITHOUT MECHANICAL PULLING DEVICES. THE DESIGN ENGINEER SHOULD RECOGNIZE THAT THIS IS A MAXIMUM DEFLECTION CRITERION FOR ALL PIPES. A REDUCED PERCENT DEFLECTION MAY BE MORE APPROPRIATE FOR SPECIFIC TYPES AND SIZES OF PIPE. REFERENCE 30 TAC SEC 317.2 (A)(4)(A).

- THE BEDDING AND BACKFILL FOR FLEXIBLE PIPE SHALL COMPLY WITH THE STANDARDS OF ASTM D-2321, CLASSES I OR II. FOR RIGID PIPE BEDDING SHALL COMPLY WITH THE REQUIREMENTS OF ASTM-C-12 CLASSES A OR B. REFERENCE 30 TAC 5317.2.A.5

- 8" SEWER LINES SHALL BE TESTED FROM MANHOLE TO MANHOLE OR WHEN A NEW 8" SEWER LINE IS CONNECTED TO AN EXISTING STUB OR

CLEAN-OUT, IT SHALL BE TESTED FROM AN EXISTING MANHOLE TO A NEW MANHOLE.

24. WATER LINE/NEW 8" SEWER LINE SEPARATION: WHEN NEW SANITARY SEWERS ARE INSTALLED, THEY SHALL BE INSTALLED NO CLOSER TO WATER LINES THAN NINE FEET IN ALL DIRECTIONS. SEWERS THAT PARALLEL WATER LINES MUST BE INSTALLED IN SEPARATE TRENCHES. WHERE THE TEN (10) FOOT SEPARATION DISTANCE CANNOT BE ACHIEVED, THE FOLLOWING GUIDELINES APPLY:

- WHERE A SANITARY SEWER PARALLELS A WATER LINE, THE SEWER SHALL BE CONSTRUCTED OF CAST IRON, DUCTILE IRON OR PVC MEETING ASTM SPECIFICATION WITH A PRESSURE RATING FOR BOTH THE PIPE AND JOINTS OF 150 PSI. THE VERTICAL SEPARATION SHALL BE A MINIMUM OF TWO FEET BETWEEN OUTSIDE DIAMETERS AND THE HORIZONTAL SEPARATION SHALL BE A MINIMUM OF FOUR FEET BETWEEN OUTSIDE DIAMETERS. THE SEWER SHALL BE LOCATED BELOW THE WATER LINE.
- WHERE A SANITARY SEWER CROSSES A WATER LINE AND THE SEWER IS CONSTRUCTED OF CAST IRON, DUCTILE IRON OR PVC WITH A MINIMUM PRESSURE RATING OF 150 PSI, AN ABSOLUTE MINIMUM DISTANCE OF 6 INCHES BETWEEN OUTSIDE DIAMETERS SHALL BE MAINTAINED. IN ADDITION THE SEWER SHALL BE LOCATED BELOW THE WATER LINE WHERE POSSIBLE AND ONE LENGTH OF THE SEWER PIPE MUST BE CENTERED ON THE WATER LINE.
- WHERE A SEWER CROSSES UNDER A WATER LINE AND THE SEWER IS CONSTRUCTED OF ABS TRUSS PIPE, SIMILAR SEMI-RIGID PLASTIC COMPOSITE PIPE, CLAY PIPE OR CONCRETE PIPE WITH GASKETED JOINTS, A MINIMUM TWO FOOT SEPARATION DISTANCE SHALL BE MAINTAINED. THE INITIAL BACKFILL SHALL BE CEMENT STABILIZED SAND (TWO OR MORE BAGS OF CEMENT PER CUBIC YARD OF SAND) FOR ALL SECTIONS OF SEWER WITHIN NINE FEET OF THE WATER LINE. THIS INITIAL BACKFILL SHALL BE FROM ONE QUARTER DIAMETER BELOW THE CENTERLINE OF THE PIPE TO ONE PIPE DIAMETER (BUT NOT LESS THAN 12 INCHES) ABOVE THE TOP OF THE PIPE.
- WHERE A SEWER CROSSES OVER A WATER LINE ALL PORTIONS OF THE SEWER WITHIN NINE FEET OF THE WATER LINE SHALL BE CONSTRUCTED OF CAST IRON, DUCTILE IRON, OR PVC PIPE WITH A PRESSURE RATING OF AT LEAST 150 PSI USING APPROPRIATE ADAPTERS. IN LIEU OF THIS PROCEDURE, THE NEW CONVEYANCE MAY BE ENCASED IN A JOINT OF 150 PSI PRESSURE CLASS PIPE AT LEAST 18 FEET LONG AND TWO NOMINAL SIZES LARGER THAN THE WATERLINE. THE SPACE AROUND THE CARRIER PIPE SHALL BE SUPPORTED AT 5 FOOT INTERVALS WITH SPACERS OR BE FILLED TO THE SPRINGLINE WITH WASHED SAND. THE ENCASEMENT PIPE SHOULD BE CENTERED ON THE CROSSING AND BOTH ENDS SEALED WITH CEMENT GROUT OR MANUFACTURED SEAL.
- UNLESS MANHOLES CAN BE MADE WATERTIGHT AND TESTED FOR NO LEAKAGE THEY MUST BE INSTALLED SO AS TO PROVIDE A MINIMUM OF NINE FEET OF HORIZONTAL CLEARANCE FROM AN EXISTING OR PROPOSED WATER LINE. IF THE NINE FOOT SEPARATION DISTANCE CANNOT BE ACHIEVED, THE WATERLINE MUST BE ENCASED IN A JOINT OF 150 PSI PRESSURE CLASS PIPE AT LEAST 18 FEET LONG AND TWO NOMINAL SIZES LARGER THAN THE WATERLINE. THE SPACE AROUND THE CARRIER PIPE SHALL BE SUPPORTED AT 5 FOOT INTERVALS WITH SPACERS OR BE FILLED TO THE SPRINGLINE WITH WASHED SAND. THE ENCASEMENT PIPE SHALL BE CENTERED PMTJE CROSSING AND BOTH ENDS SEALED WITH CEMENT GROUT OR MANUFACTURED SEAL.

27. SEWERS SHALL BE LAID IN STRAIGHT ALIGNMENT WITH UNIFORM GRADE BETWEEN MANHOLES. DEVIATION FROM STRAIGHT ALIGNMENT AND UNIFORM GRADE SHALL BE APPROVED ONLY ON A CASE BY CASE BASIS BY THE TCEQ. IF APPROVAL IS GIVEN FOR DEVIATION FROM STRAIGHT ALIGNMENT AND UNIFORM GRADE, CURRENT COMMISSION POLICY REGARDING HORIZONTAL CURVATURE SHALL BE COMPLIED WITH FULLY.

TPEO NOTES:

- THE WATERLINES MUST BE DISINFECTED BEFORE USING ACCORDING TO THE CURRENT STANDARD, AWWA C651-92. A MINIMUM OF ONE BACTERIOLOGICAL SAMPLE MUST BE COLLECTED FOR EACH 1,000 FEET OF COMPLETED WATERLINE TO CHECK EFFICIENCY OF DISINFECTION PROCEDURES AND MUST BE REPEATED IF CONTAMINATION PERSISTS AS PER 290.44(f)(3).
- ALL NEWLY INSTALLED PIPE AND FITTINGS MUST CONFORM TO ANSI/NSF STANDARD 61 AND MUST BE CERTIFIED BY AN ORGANIZATION ACCREDITED BY ANSI. ALL PLASTIC PIPE FOR USE IN PUBLIC WATER SYSTEMS MUST ALSO BEAR THE NATIONAL SANITATION FOUNDATION SEAL OF APPROVAL (NSF-pw) AS PER 290.44(o)(1) AND (2).
- THE SYSTEM MUST MAINTAIN A MINIMUM PRESSURE OF 35 PSI AT ALL POINTS WITHIN THE DISTRIBUTION NETWORK AT FLOW RATES AT LEAST 1.5 GALLONS PER MINUTE PER CONNECTION. WHEN THE SYSTEM IS INTENDED TO PROVIDE FIRE FIGHTING CAPABILITY, IT MUST ALSO MAINTAIN A MINIMUM PRESSURE OF 20 PSI UNDER COMBINED FIRE AND DRINKING WATER FLOW CONDITIONS AS REQUIRED IN 290.44(d) OF THE RULES.

TRENCH SAFETY NOTES:

- IN ACCORDANCE WITH THE LAWS OF THE STATE OF TEXAS AND THE U.S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION REGULATIONS, ALL TRENCHES OVER 5 FEET IN DEPTH IN EITHER HARD AND COMPACT OR SOFT AND UNSTABLE SOIL SHALL BE SLOPED, SHORED, SHEETED, BRACED OR OTHERWISE SUPPORTED. FURTHERMORE, ALL TRENCHES LESS THAN 5 FEET IN DEPTH SHALL ALSO BE EFFECTIVELY PROTECTED WHEN HAZARDOUS GROUND MOVEMENT MAY BE EXPECTED.
- IN ACCORDANCE WITH THE U.S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION REGULATIONS, WHEN EMPLOYEES ARE REQUIRED TO BE IN TRENCHES 4- FEET DEEP OR MORE, ADEQUATE MEANS EXIT, SUCH AS A LADDER OR STEPS, MUST BE PROVIDED AND LOCATED SO AS TO REQUIRE NO MORE THAN 25 FEET OF LATERAL TRAVEL.
- IF TRENCH SAFETY SYSTEM DETAILS WERE NOT PROVIDED IN THE PLANS BECAUSE TRENCHES WERE ANTICIPATED TO BE LESS THAN FIVE FEET IN DEPTH AND DURING CONSTRUCTION IT IS FOUND THAT TRENCHES ARE IN FACT 5 FEET OR MORE IN DEPTH OR TRENCHES LESS THAN 5 FEET IN DEPTH ARE IN AN AREA WHERE HAZARDOUS GROUND MOVEMENT IS EXPECTED, ALL CONSTRUCTION SHALL CEASE, THE TRENCHED AREA SHALL BE BARRICADED AND THE ENGINEER NOTIFIED IMMEDIATELY. CONSTRUCTION SHALL NOT RESUME UNTIL APPROPRIATE TRENCH SAFETY SYSTEM DETAILS, AS DESIGNED BY A PROFESSIONAL ENGINEER, ARE SUBMITTED TO AND ACCEPTED BY THE HORIZON REGIONAL MUNICIPAL UTILITY DISTRICT.
- CONTRACTOR SHALL PROVIDE TO THE P.S.B. A TRENCH SAFETY PLAN, SEALED BY A REGISTERED ENGINEER.

UTILITY NOTES:

- CONTRACTOR MUST COORDINATE WATER SYSTEM WITH SEWER SYSTEM TO PREVENT ANY CONFLICTS WHERE THIS LINES INTERSECT ONE ANOTHER.
- AREAS WHERE WATER PIPES CROSS OVER SEWER PIPES SHALL NOT HAVE ANY JOINTS.
- WATER & SEWER TO HAVE A MINIMUM SEPARATION OF 10 FEET.

THE FOLLOWING LIST INCLUDES THE KNOWN RESPONSIBLE AUTHORITIES:

TEXAS GAS SERVICE	
MARIA ORTIZ.....	(915) 680-7238
EL PASO ELECTRIC COMPANY	
SILVIA RIVAS.....	(915) 543-5970
EL PASO WATER UTILITIES	
FELIPE LOPEZ.....	(915) 594-5515
TIME WARNER COMMUNICATIONS	
RAY MENDOZA.....	(915) 241-0878
PARKS AND RECREATION	
DAVID OCHOA.....	(915) 598-0771
LOUIS ALOYSIUS.....	(915) 621-3791
AT&T	
FRANCISCO VACIO.....	(915) 595-5119

WATER NOTES:

- CONTACT UTILITY COMPANIES FOR EXACT LOCATION FOR UNDERGROUND UTILITIES IN THE AREA.
- PROVIDE ADEQUATE CONCRETE THRUST BLOCKING AT THE FOLLOWING: TAPPING, SLEEVES, TEES, BENDS, PLUGS - ALL FITTINGS.
- INSTALL A TRENCH SAFETY SYSTEM TO PROVIDE FOR THE SAFE EXCAVATION OF ALL TRENCHES EXCEEDING A DEPTH OF (5') FIVE FEET AS PER O.S.H.A. STANDARDS.
- ALL P.V.C. PIPE ON THIS PLAN SHALL BE ENCASED WITH SELECT BEDDING WHEN PLACED IN CITY ROW. IN SITU (ACCEPTABLE) MATERIAL CAN BE USED IN PRIVATE LINES.
- ALL VALVES ON P.V.C. WATER MAINS SHALL BE ANCHORED IN CONCRETE.
- CITY PAVING CUT PERMIT REQUIRED BEFORE EXCAVATION.
- RECONNECTION OF EXISTING WATER LINE SYSTEM SHOWN ON THESE PLANS MUST BE MADE, SUCH THAT MINIMAL INTERRUPTION OF SERVICE TO CUSTOMER IS MADE.
- ALL EXISTING LINES CURRENTLY IN SERVICE MUST REMAIN IN SERVICE THROUGHOUT CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR PROTECTING 8" SEWER LINES (INCLUDING SERVICES) FROM DAMAGE AS A RESULT OF CONSTRUCTION.
- VALVES AND OTHER PIPE MATERIALS TO BE ABANDONED SHALL BE REMOVED AND DISPOSED AT THE CONTRACTOR'S RESPONSIBILITY AND EXPENSE.
- CONTRACTOR SHALL VERIFY LOCATION OF SERVICES BEFORE CONSTRUCTION.
- CONTRACTOR SHALL COORDINATE WITH CITY CONSTRUCTION SEQUENCE AND TRAFFIC CONTROL PLANS.
- CONTRACTOR SHALL PROVIDE TEMPORARY SERVICE TO CUSTOMERS IF SERVICE WILL BE INTERRUPTED FOR MORE THAN (4) HOURS IN A 24-HOUR PERIOD.
- CONTRACTOR TO ADJUST WATER VALVES TO FINAL GRADE WHERE NECESSARY. COORDINATE FINAL GRADE ELEVATION WITH JOHN HAYES ST.
- FIRE PROTECTION LINE TO BE SIZED BY FIRE PROTECTION CONTRACTOR.

SEWER NOTES:

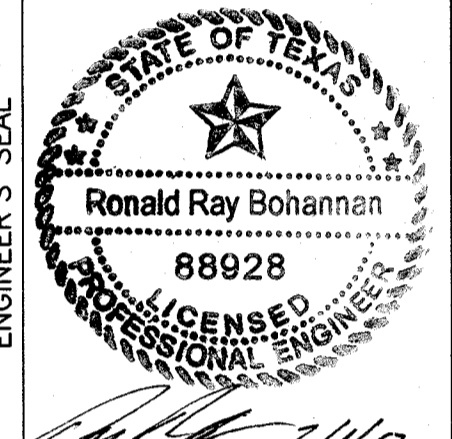
- CONTACT UTILITY COMPANIES FOR EXACT LOCATION OF UNDERGROUND UTILITIES IN THIS AREA.

- INSTALL A TRENCH SAFETY SYSTEM TO PROVIDE FOR THE SAFE EXCAVATION OF ALL TRENCHES EXCEEDING A DEPTH OF (5') FIVE FEET AS PER O.S.H.A. STANDARDS.
- ALL P.V.C. PIPE ON THIS PLAN SHALL BE ENCASED WITH SELECT BEDDING WHEN PLACED IN CITY ROW. IN SITU (ACCEPTABLE) MATERIAL CAN BE USED IN PRIVATE LINES.
- PROVIDE MANHOLE ADAPTER WHERE P.V.C. PIPE CONNECTS TO MANHOLE.
- WATER & SANITARY SEWER MAIN SEPARATION REQUIREMENTS SHALL COMPLY WITH "T.C.E.Q." MINIMUM VERTICAL SEPARATION REQUIREMENTS. (REFER TO SPECIFICATIONS.)
- ALL EXISTING 8" SEWER LINES AND SERVICES CURRENTLY IN SERVICE MUST REMAIN IN SERVICE THROUGHOUT CONSTRUCTION. CONTRACTOR SHALL PROVIDE TEMPORARY SERVICE TO CUSTOMERS IF SERVICE WILL BE INTERRUPTED FOR MORE THAN (4) HOURS IN A 24-HOUR PERIOD. CONTRACTOR IS RESPONSIBLE FOR PROTECTING 8" SEWER LINES (INCLUDING SERVICES) FROM DAMAGE AS A RESULT OF CONSTRUCTION.
- CONTRACTOR SHALL COORDINATE WITH CITY CONSTRUCTION SEQUENCE AND TRAFFIC CONTROL PLANS.

CITY MONUMENT AT POINT OF CURVE CENTERLINE MONTECILLO BLVD. ADJOINING LOT 1, BLOCK 1, MONTECILLO UNIT ONE (STATION 0+82.87). ELEVATION: 4107.13(CITY DATUM)

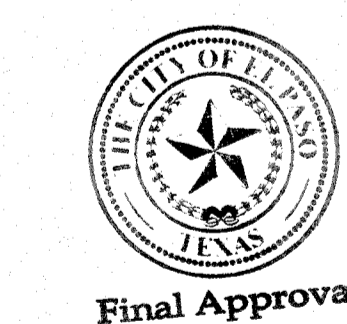
MONTECILLO UNIT 9 EAST AND WEST

BEING A REPLAT OF A PORTION OF LOT 6, BLOCK 2, MONTECILLO UNIT THREE, REPLAT 'B' AND A PORTION OF TRACT 1, JOHN BAKER SURVEY NO. 10, CITY OF EL PASO, EL PASO COUNTY, TEXAS, CONTAINING 5.3945 ACRES



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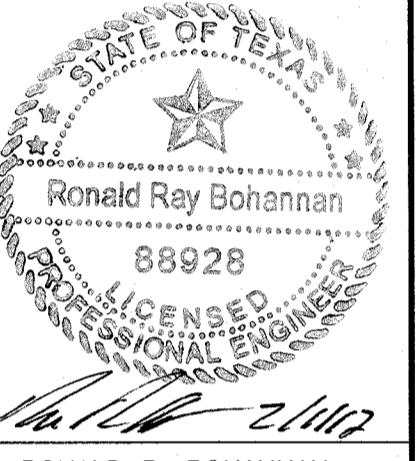
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SHEET TITLE

WATER AND SEWER NOTES AND DETAILS

CITY MONUMENT AT POINT OF CURVE
CENTERLINE MONTECILLO BLVD.
ADJOINING LOT 1, BLOCK 1,
MONTECILLO UNIT ONE
(STATION 0+82.81)
ELEVATION: 4107.13(CITY DATUM)

**MONTECILLO UNIT 9
EAST AND WEST**



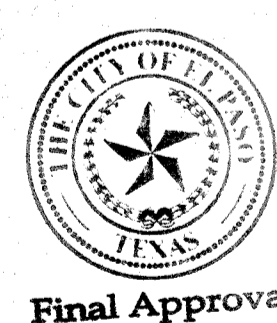
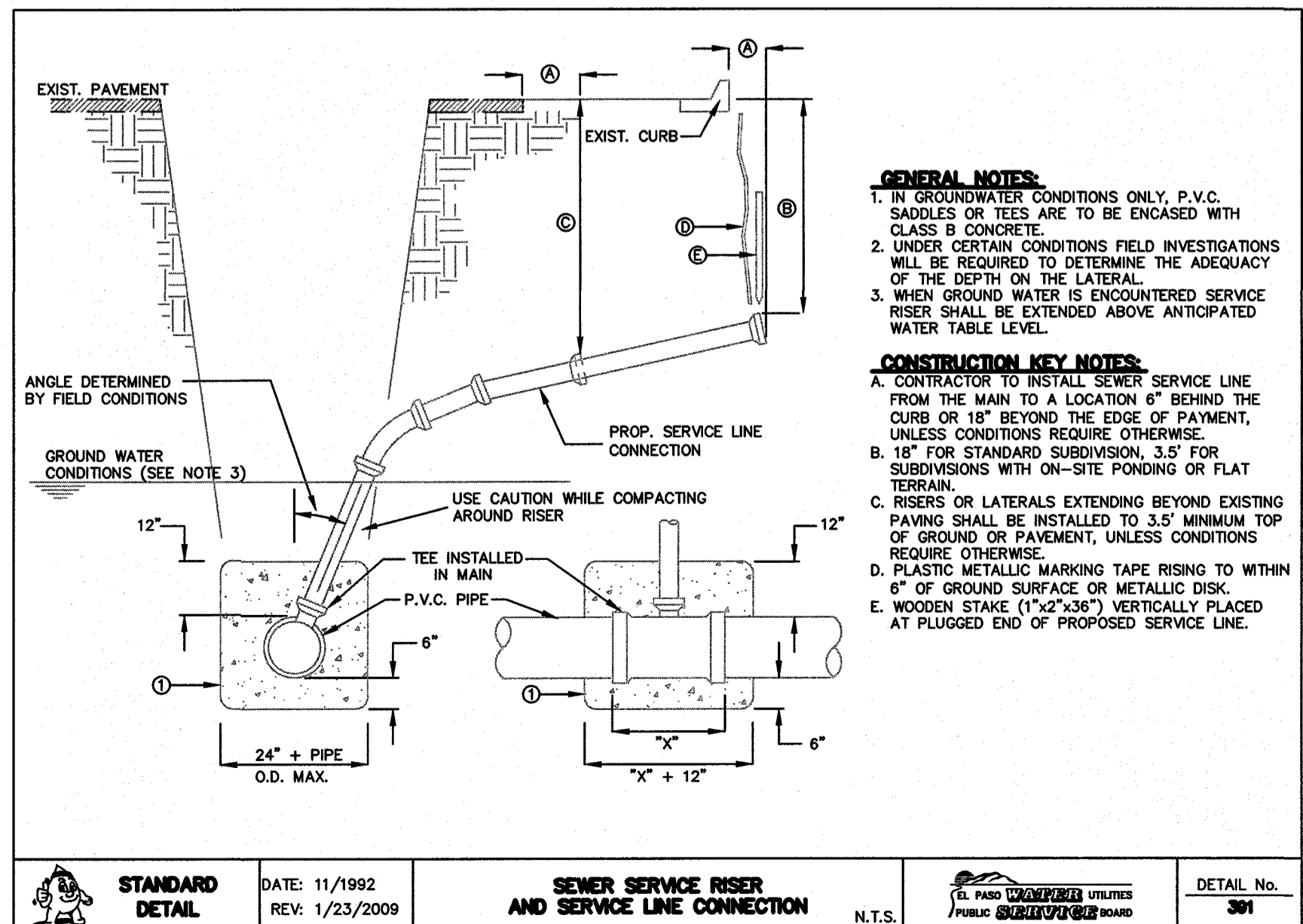
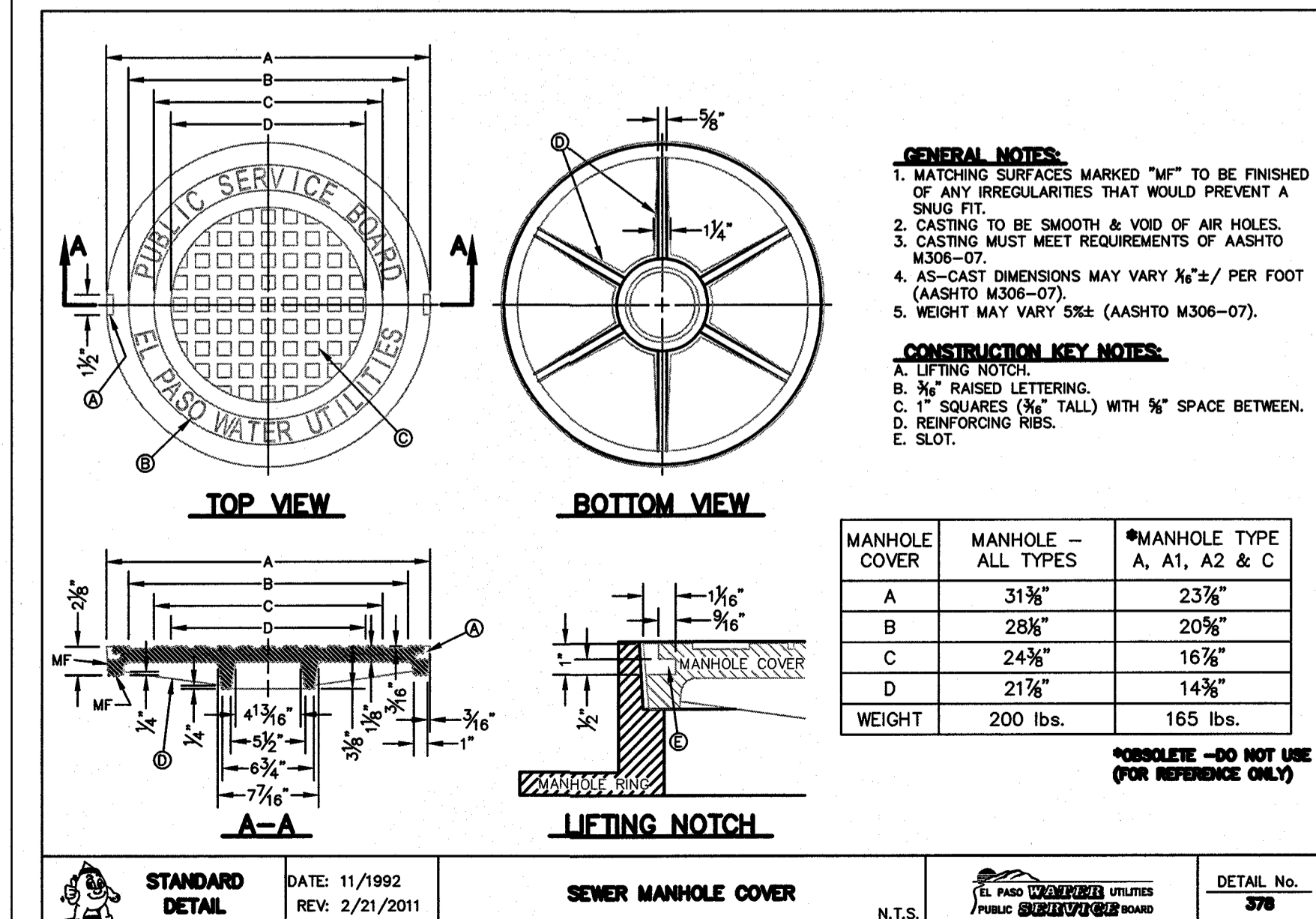
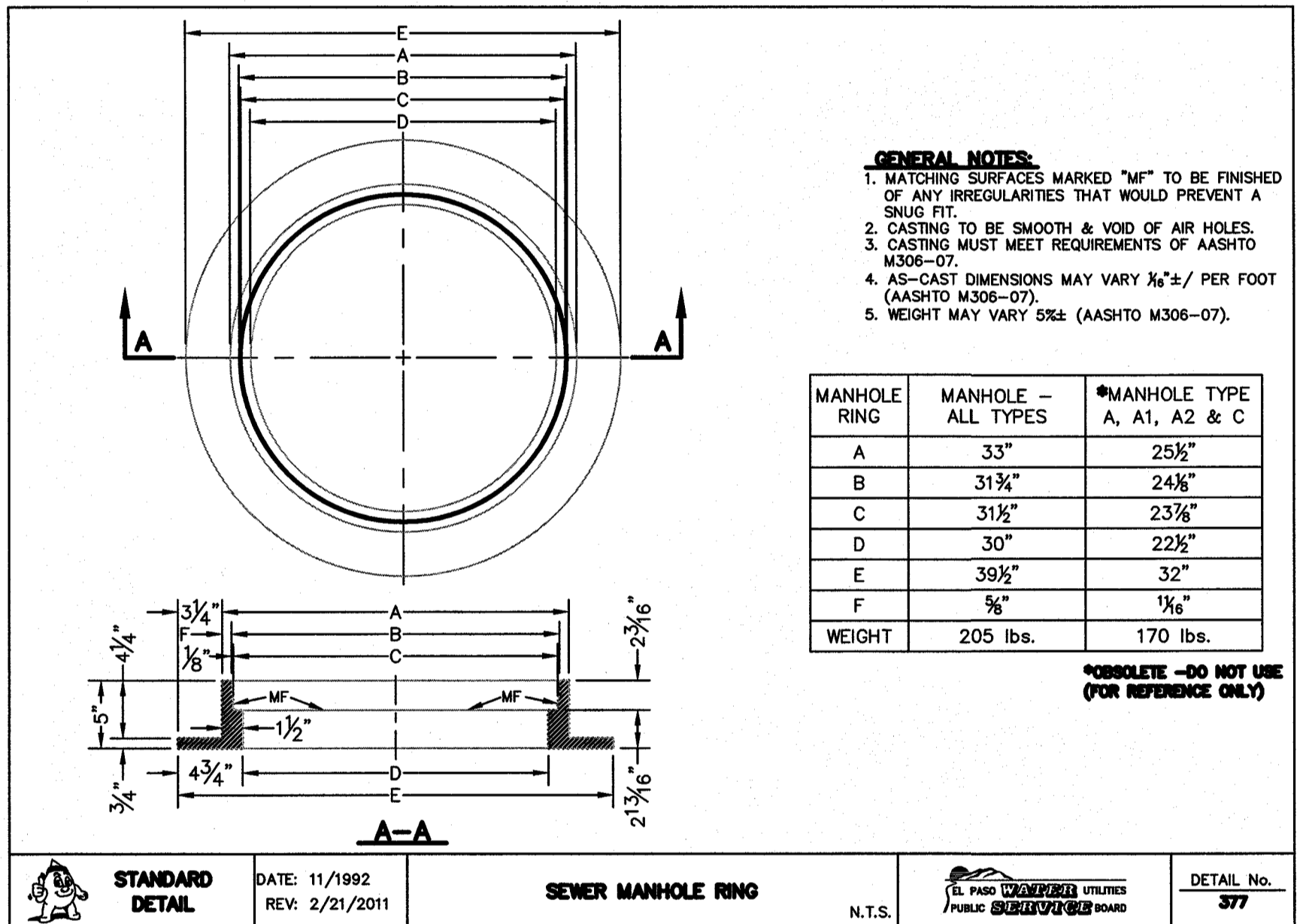
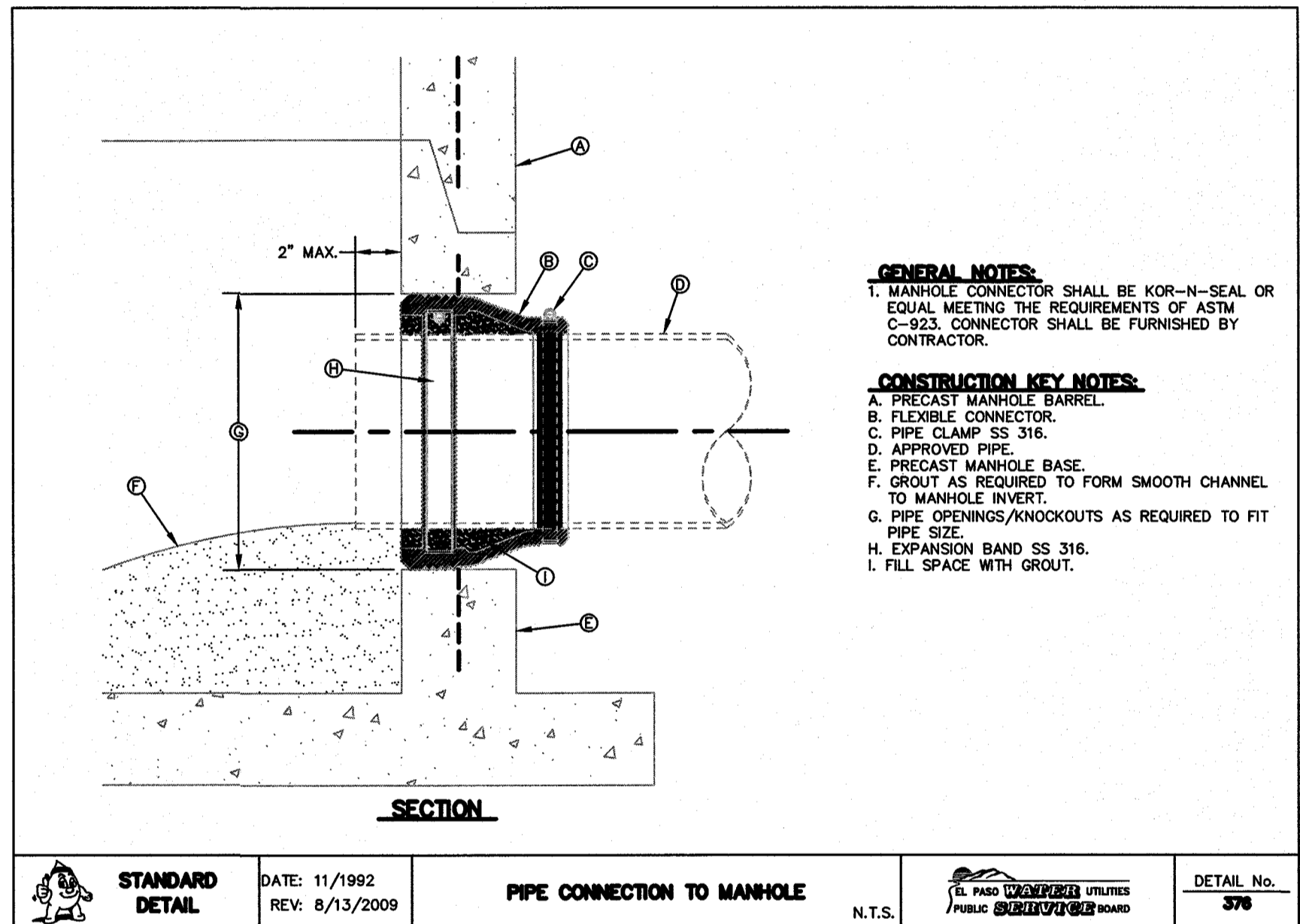
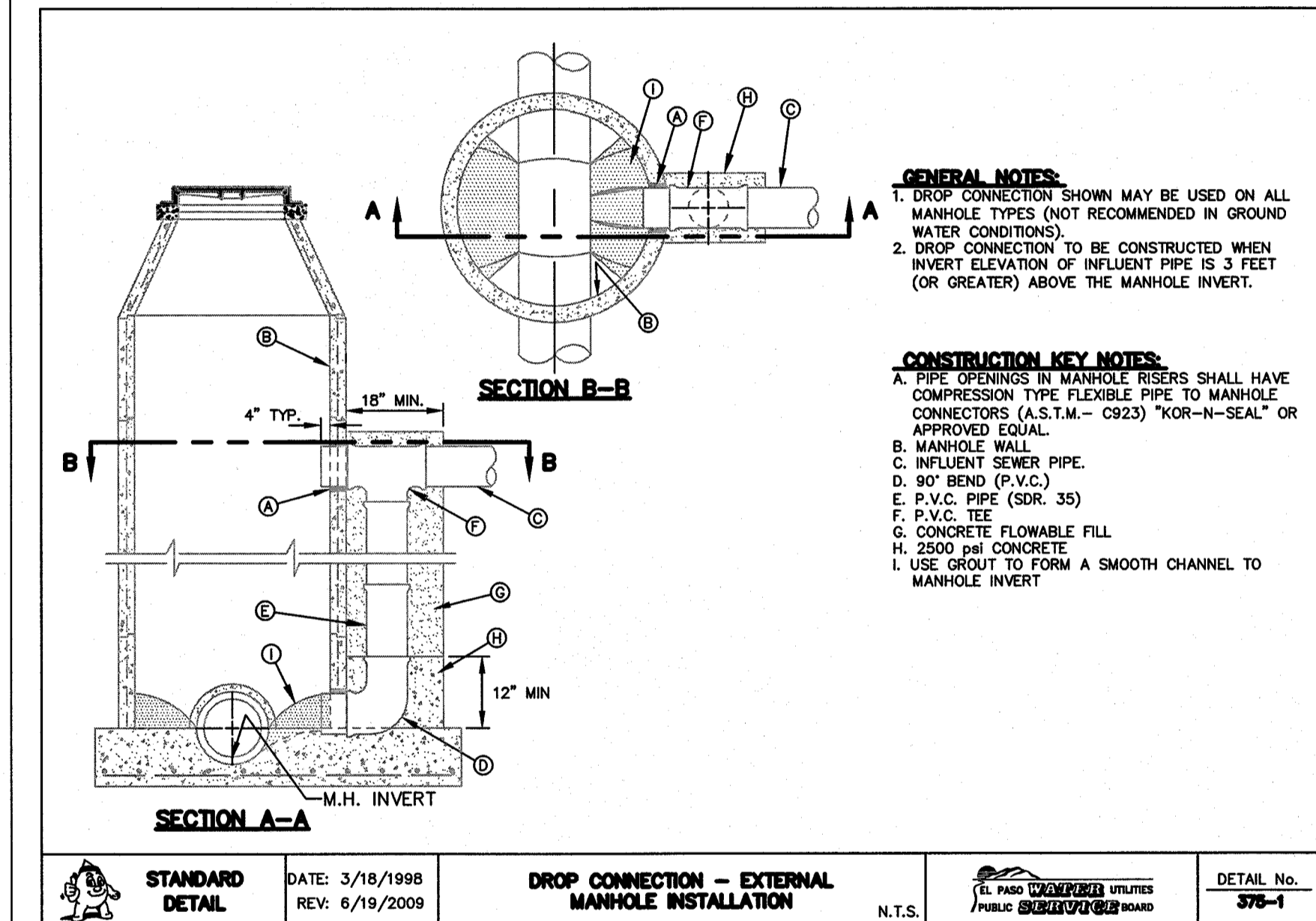
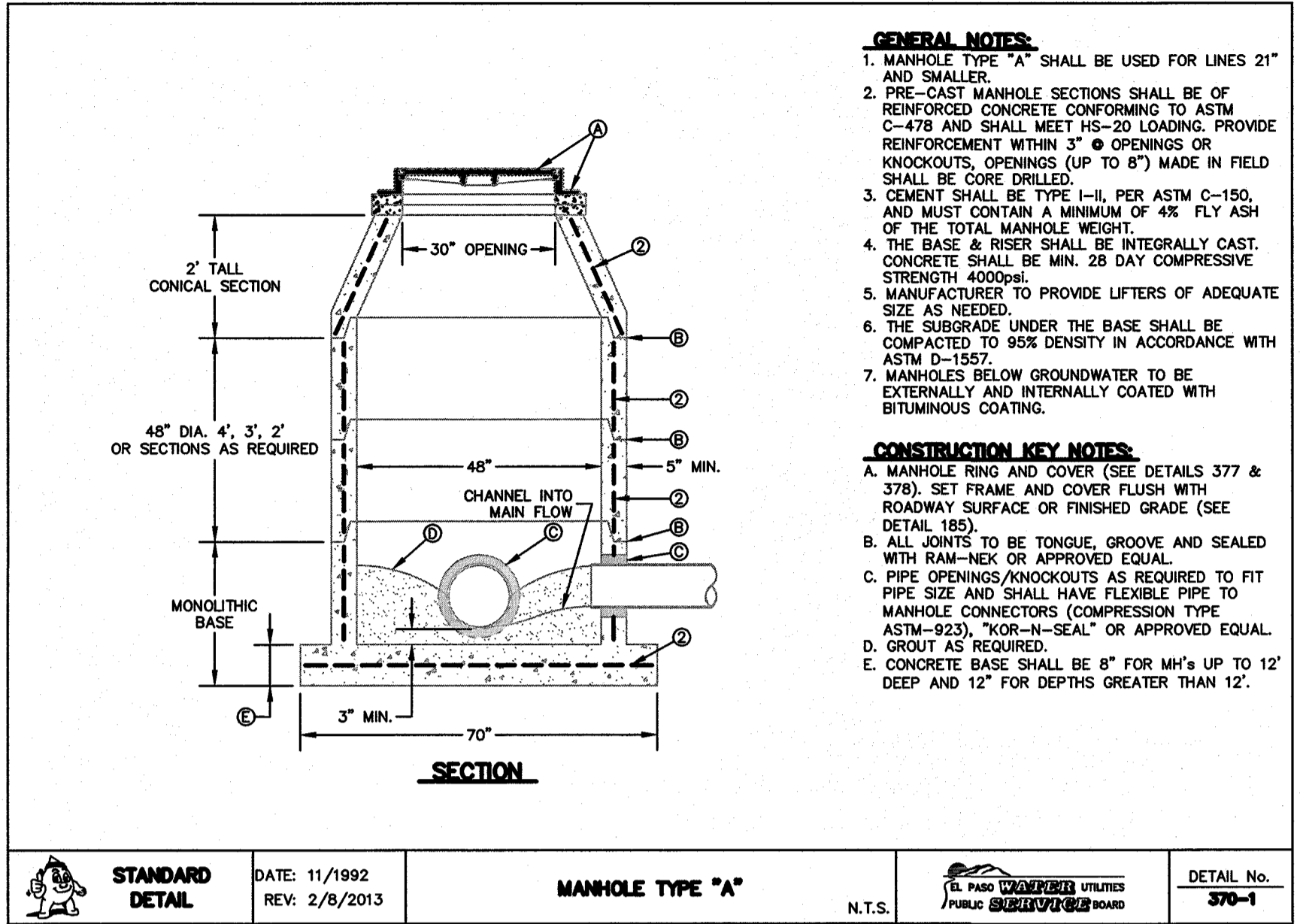
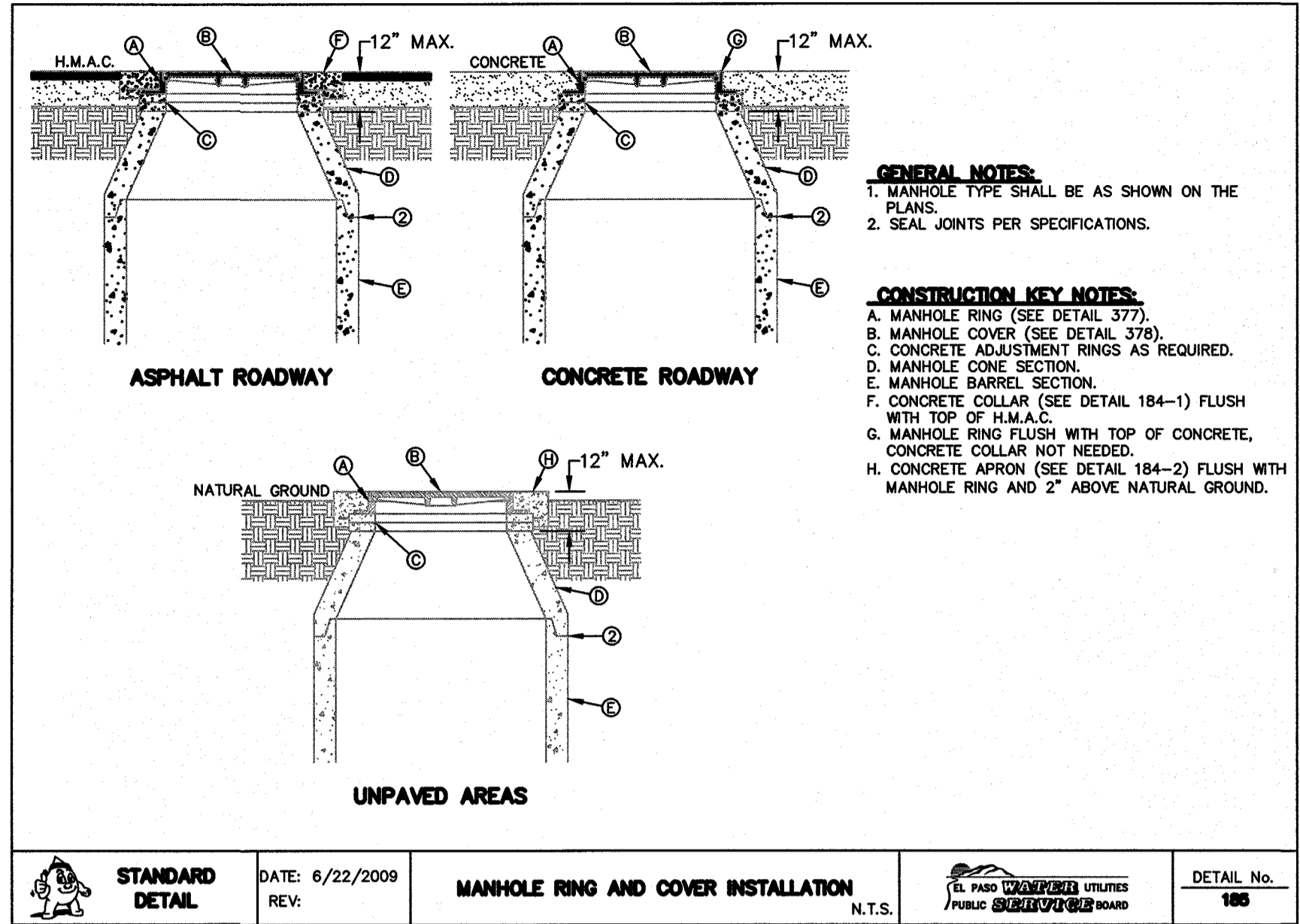
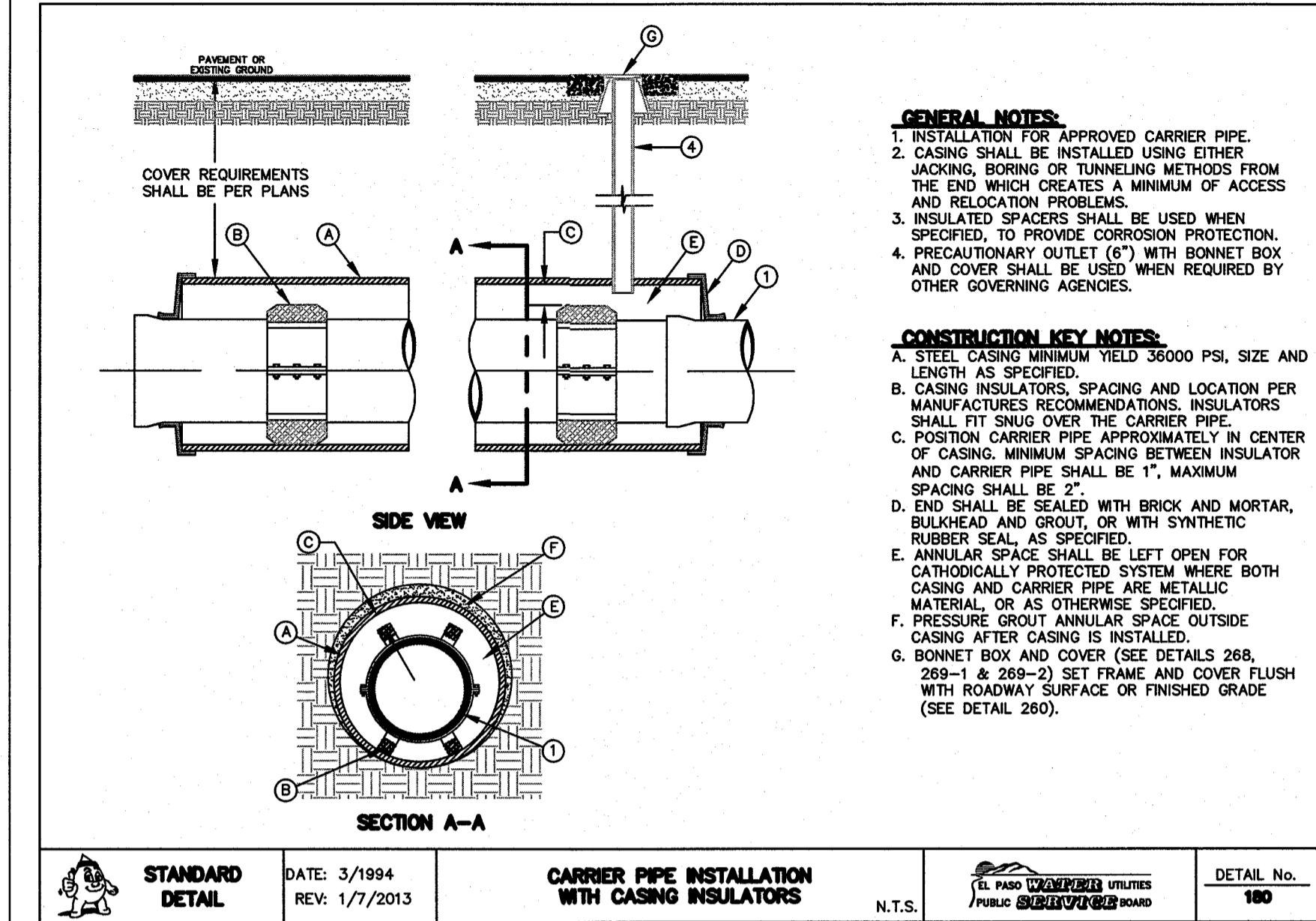
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TEXAS BUSINESS NO.
F-11773

NO.	DATE	REMARKS	BY
DESIGN	1-10-17	DESIGN	VC
DRAWN BY	1-10-17	DESIGN	pm
DRAWING NAME	2015079-DET		VC
CHECKED BY	1-10-17		VC

SHEET TITLE

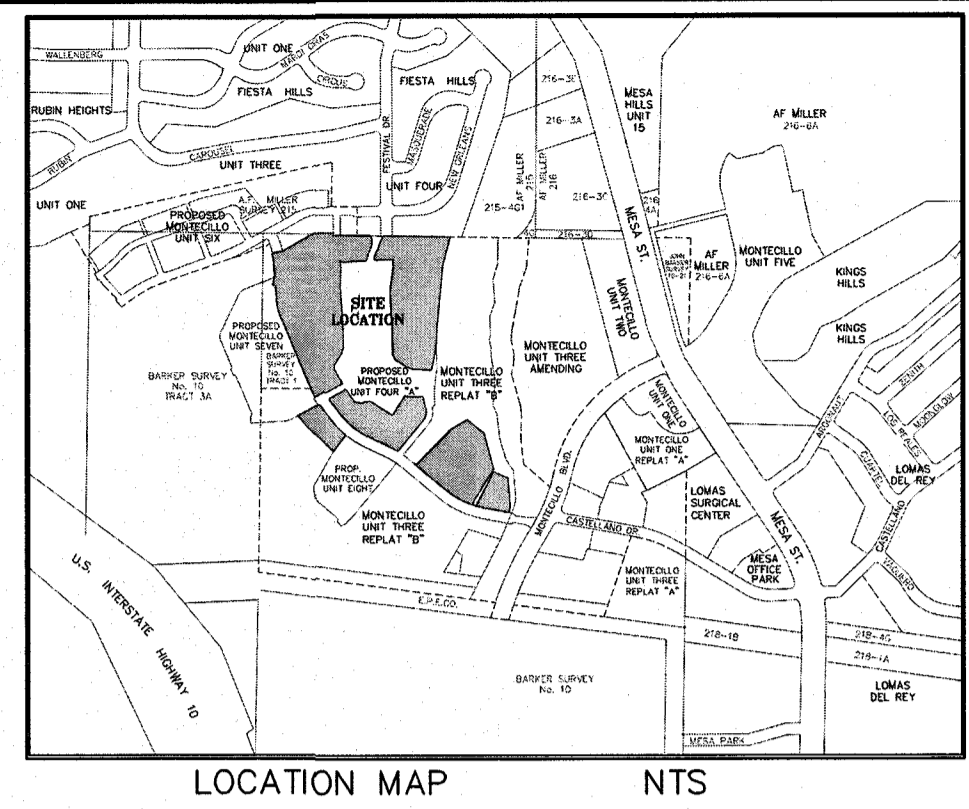
WATER AND SEWER NOTES AND DETAILS



Final Approval



- EROSION NOTES
- (TPS) → TPS TEMPORARY PARKING AND STORAGE
- EROSION DETAILS
- ▨ CE TEMPORARY STONE CONSTRUCTION EXIT
- SF — SF TEMPORARY SILT FENCE
- ← ST → ST TEMPORARY SEDIMENT TRAP
- SS ○ SS SWPPP SIGN



GENERAL EROSION NOTES

- A. THE STORMWATER POLLUTION PREVENTION PLAN IS COMPRISED OF THIS DRAWING ("SITE MAP"), THE STANDARD DETAILS, THE PLAN NARRATIVE PLUS THE PERMIT AND ALL SUBSEQUENT REPORTS AND RELATED DOCUMENTS.
- B. ALL CONTRACTORS AND SUBCONTRACTORS INVOLVED WITH STORM WATER POLLUTION PREVENTION SHALL OBTAIN A COPY OF THE STORM WATER POLLUTION PREVENTION PLAN AND THE STATE OF NEW MEXICO NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM GENERAL PERMIT (NPDES PERMIT) AND BECOME FAMILIAR WITH THEIR CONTENTS.
- C. CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES AS REQUIRED BY THE SWPPP. ADDITIONAL BEST MANAGEMENT PRACTICES SHALL BE IMPLEMENTED AS DICTATED BY CONDITIONS AT NO ADDITIONAL COST OF OWNER THROUGHOUT ALL PHASES OF CONSTRUCTION.
- D. BEST MANAGEMENT PRACTICES (BMP'S) AND CONTROLS SHALL CONFORM TO FEDERAL, STATE, OR LOCAL REQUIREMENTS OR MANUAL OF PRACTICE, AS APPLICABLE. CONTRACTOR SHALL IMPLEMENT ADDITIONAL CONTROLS AS DIRECTED BY PERMITTING AGENCY OR OWNER.
- E. SITE MAP MUST CLEARLY DELINEATE ALL STATE WATERS. PERMITS FOR ANY CONSTRUCTION ACTIVITY IMPACTING STATE WATERS OR REGULATED WETLANDS MUST BE MAINTAINED ON SITE AT ALL TIMES.
- F. CONTRACTOR SHALL MINIMIZE CLEARING TO THE MAXIMUM EXTENT PRACTICAL OR AS REQUIRED BY THE GENERAL PERMIT.
- G. GENERAL CONTRACTOR SHALL DENOTE ON PLAN THE TEMPORARY PARKING AND STORAGE AREA WHICH SHALL ALSO BE USED AS THE EQUIPMENT MAINTENANCE AND CLEANING AREA, EMPLOYEE PARKING AREA, AND AREA FOR LOCATING PORTABLE FACILITIES, OFFICE TRAILERS, AND TOILET FACILITIES.
- H. ALL WASH WATER (CONCRETE TRUCKS, VEHICLE CLEANING, EQUIPMENT CLEANING, ETC.) SHALL BE DETAINED AND PROPERLY TREATED OR DISPOSED.
- I. SUFFICIENT OIL AND GREASE ABSORBING MATERIALS AND FLotation BOOMS SHALL BE MAINTAINED ON SITE OR READILY AVAILABLE TO CONTAIN AND CLEAN-UP FUEL OR CHEMICAL SPILLS AND LEAKS.
- J. DUST ON THE SITE SHALL BE CONTROLLED. THE USE OF MOTOR OILS AND OTHER PETROLEUM BASED OR TOXIC LIQUIDS FOR DUST SUPPRESSION OPERATIONS IS PROHIBITED.
- K. RUBBISH, TRASH, GARBAGE, LITTER, OR OTHER SUCH MATERIALS SHALL BE DEPOSITED INTO SEALED CONTAINERS. MATERIALS SHALL BE PREVENTED FROM LEAVING THE PREMISES THROUGH THE ACTION OF WIND OR STORMWATER DISCHARGE INTO DRAINAGE DITCHES OR WATERS OF THE STATE.
- L. ALL STORM WATER POLLUTION PREVENTION MEASURES PRESENTED ON THIS PLAN, AND IN THE STORM WATER POLLUTION PREVENTION PLAN, SHALL BE INITIATED AS SOON AS PRACTICABLE.
- M. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS STOPPED FOR AT LEAST 21 DAYS, SHALL BE TEMPORARILY SEEDED. THESE AREAS SHALL BE SEEDED NO LATER THAN 14 DAYS FROM THE LAST CONSTRUCTION ACTIVITY OCCURRING IN THESE AREAS. PROVIDE ADEQUATE TEMPORARY IRRIGATION FOR GERMINATION.
- N. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS PERMANENTLY STOPPED SHALL BE PERMANENTLY SEEDED. THESE AREAS SHALL BE SEEDED NO LATER THAN 14 DAYS AFTER THE LAST CONSTRUCTION ACTIVITY OCCURRING IN THESE AREAS. REFER TO THE GRADING PLAN AND/OR LANDSCAPE PLAN.
- O. IF THE ACTION OF VEHICLES TRAVELING OVER THE GRAVEL CONSTRUCTION ENTRANCES IS NOT SUFFICIENT TO REMOVE THE MAJORITY OF DIRT OR MUD, THEN THE TIRES MUST BE WASHED BEFORE THE VEHICLES ENTER A PUBLIC ROAD. IF WASHING IS USED, PROVISIONS MUST BE MADE TO INTERCEPT THE WASH WATER AND TRAP THE SEDIMENT BEFORE IT IS CARRIED OFF THE SITE.
- P. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.
- Q. CONTRACTORS OR SUBCONTRACTORS WILL BE RESPONSIBLE FOR REMOVING SEDIMENT THAT MAY HAVE COLLECTED IN THE STORM SEWER DRAINAGE SYSTEMS IN CONJUNCTION WITH THE STABILIZATION OF THE SITE.
- R. ON-SITE & OFFSITE SOIL STOCKPILE AND BORROW AREAS SHALL BE PROTECTED FROM EROSION AND SEDIMENTATION THROUGH IMPLEMENTATION OF BEST MANAGEMENT PRACTICES. STOCKPILE AND BORROW AREA LOCATIONS SHALL BE NOTED ON THE SITE MAP AND PERMITTED IN ACCORDANCE WITH GENERAL PERMIT REQUIREMENTS.
- S. SLOPES SHALL BE LEFT IN A ROUGHENED CONDITION DURING THE GRADING PHASE TO REDUCE RUNOFF VELOCITIES AND EROSION.
- T. DUE TO THE GRADE CHANGES DURING THE DEVELOPMENT OF THE PROJECT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING THE EROSION CONTROL MEASURES (SILT FENCES, STRAW BALES, ETC.) TO PREVENT EROSION.
- U. ALL CONSTRUCTION SHALL BE STABILIZED AT THE END OF EACH WORKING DAY, THIS INCLUDES BACKFILLING OF TRENCHES FOR UTILITY CONSTRUCTION AND PLACEMENT OF GRAVEL OR BITUMINOUS PAVING FOR ROAD CONSTRUCTION.

MAINTENANCE

- ALL MEASURES STATED ON THIS EROSION AND SEDIMENT CONTROL PLAN, AND IN THE STORM WATER POLLUTION PREVENTION PLAN, SHALL BE MAINTAINED IN FULLY FUNCTIONAL CONDITION UNTIL NO LONGER REQUIRED FOR A COMPLETED PHASE OF WORK OR FINAL STABILIZATION OF THE SITE. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE CHECKED BY A QUALIFIED PERSON AT LEAST ONCE EVERY FOURTEEN CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A 0.5" RAINFALL EVENT, AND CLEANED AND REPAIRED IN ACCORDANCE WITH THE FOLLOWING:
1. INLET PROTECTION DEVICES AND BARRIERS SHALL BE REPAIRED OR REPLACED IF THEY SHOW SIGNS OF UNDERMINING, OR DETERIORATION.
 2. ALL SEEDED AREAS SHALL BE CHECKED REGULARLY TO SEE THAT A GOOD STAND IS MAINTAINED. AREAS SHOULD BE FERTILIZED, WATERED, AND RESEEDED AS NEEDED.
 3. SILT FENCES SHALL BE REPAIRED TO THEIR ORIGINAL CONDITIONS IF DAMAGED. SEDIMENT SHALL BE REMOVED FROM THE SILT FENCES WHEN IT REACHES ONE-HALF THE HEIGHT OF THE SILT FENCE.
 4. THE CONSTRUCTION ENTRANCES SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE CONSTRUCTION ENTRANCES AS CONDITIONS DEMAND.
 5. THE TEMPORARY PARKING AND STORAGE AREA SHALL BE KEPT IN GOOD CONDITION (SUITABLE FOR PARKING AND STORAGE). THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE TEMPORARY PARKING AS CONDITIONS DEMAND.
 6. OUTLET STRUCTURES IN THE SEDIMENTATION BASINS SHALL BE MAINTAINED IN OPERATIONAL CONDITIONS AT ALL TIMES. SEDIMENT SHALL BE REMOVED FROM SEDIMENT BASINS OR TRAPS WHEN THE DESIGN CAPACITY HAS BEEN REDUCED BY 50%.

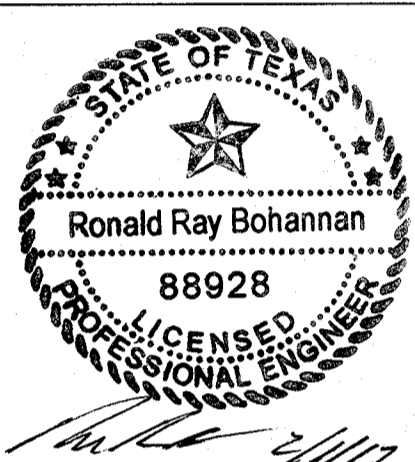
SEQUENCE OF CONSTRUCTION

1. CONSTRUCT THE SILT FENCES ON THE SITE.
2. PREPARE TEMPORARY PARKING AND STORAGE AREA.
3. CONSTRUCT THE SEDIMENTATION AND SEDIMENT TRAP BASINS.
4. PERFORM GRADING OPERATIONS.
5. UNDERCUT GRADE AS REQUIRED.
6. START CONSTRUCTION OF INFRASTRUCTURE.
7. FINISH GRADING AND PAVING INFRASTRUCTURE.



CITY MONUMENT AT POINT OF CURVE CENTERLINE MONTECILLO BLVD. ADJOINING LOT 1, BLOCK 1, MONTECILLO UNIT ONE (STATION 0+82.81) ELEVATION: 4107.13(CITY DATUM)

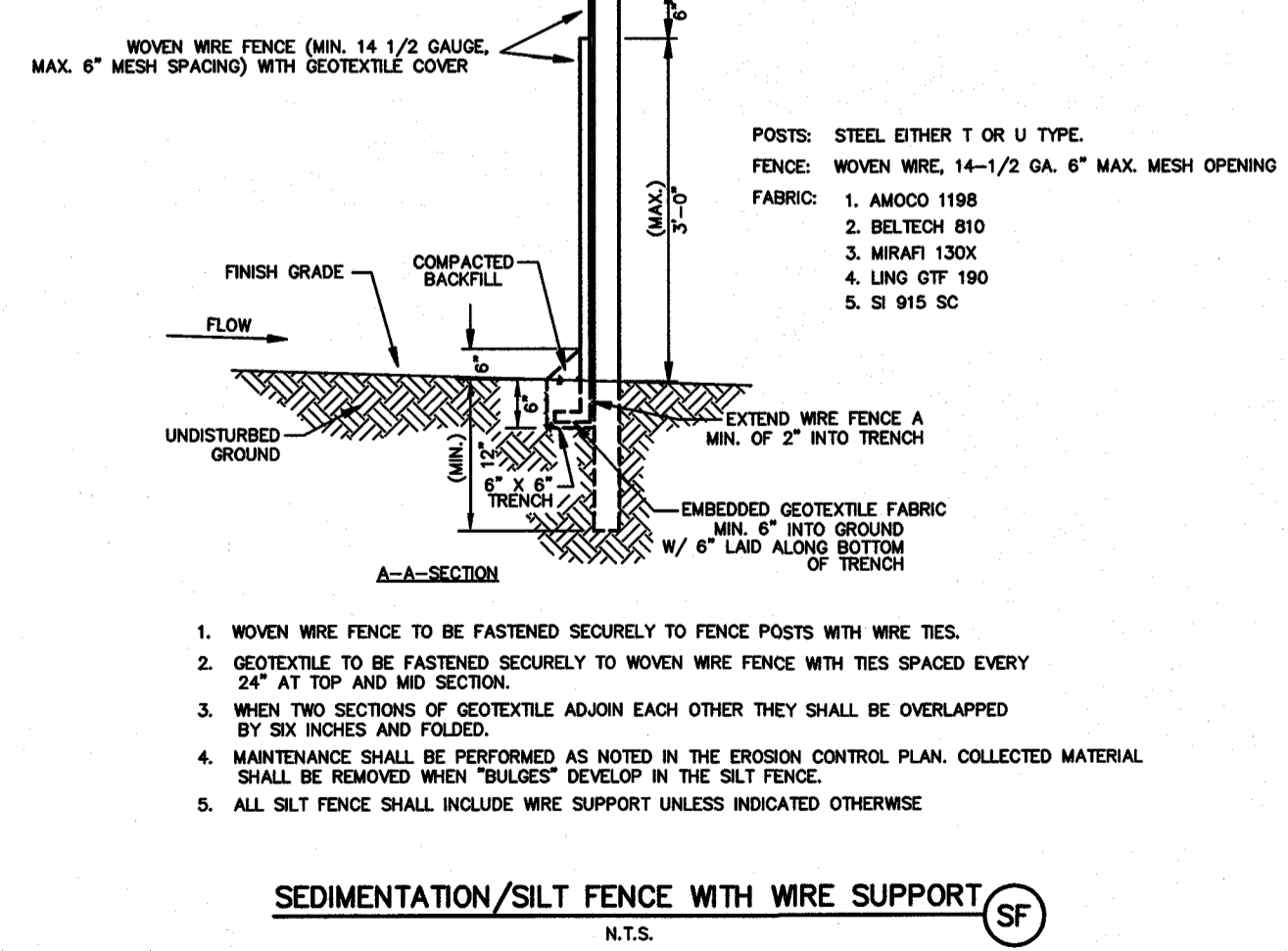
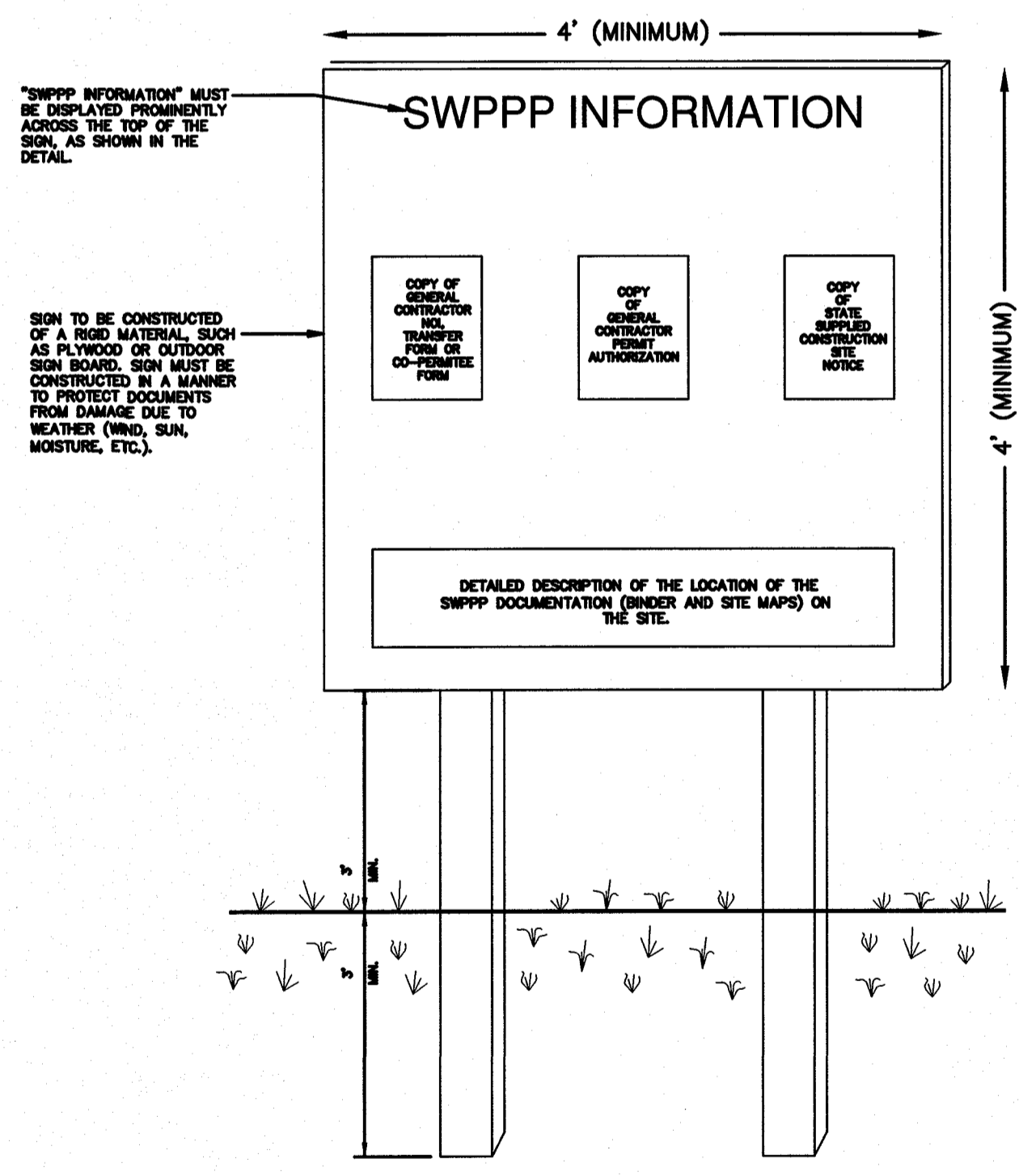
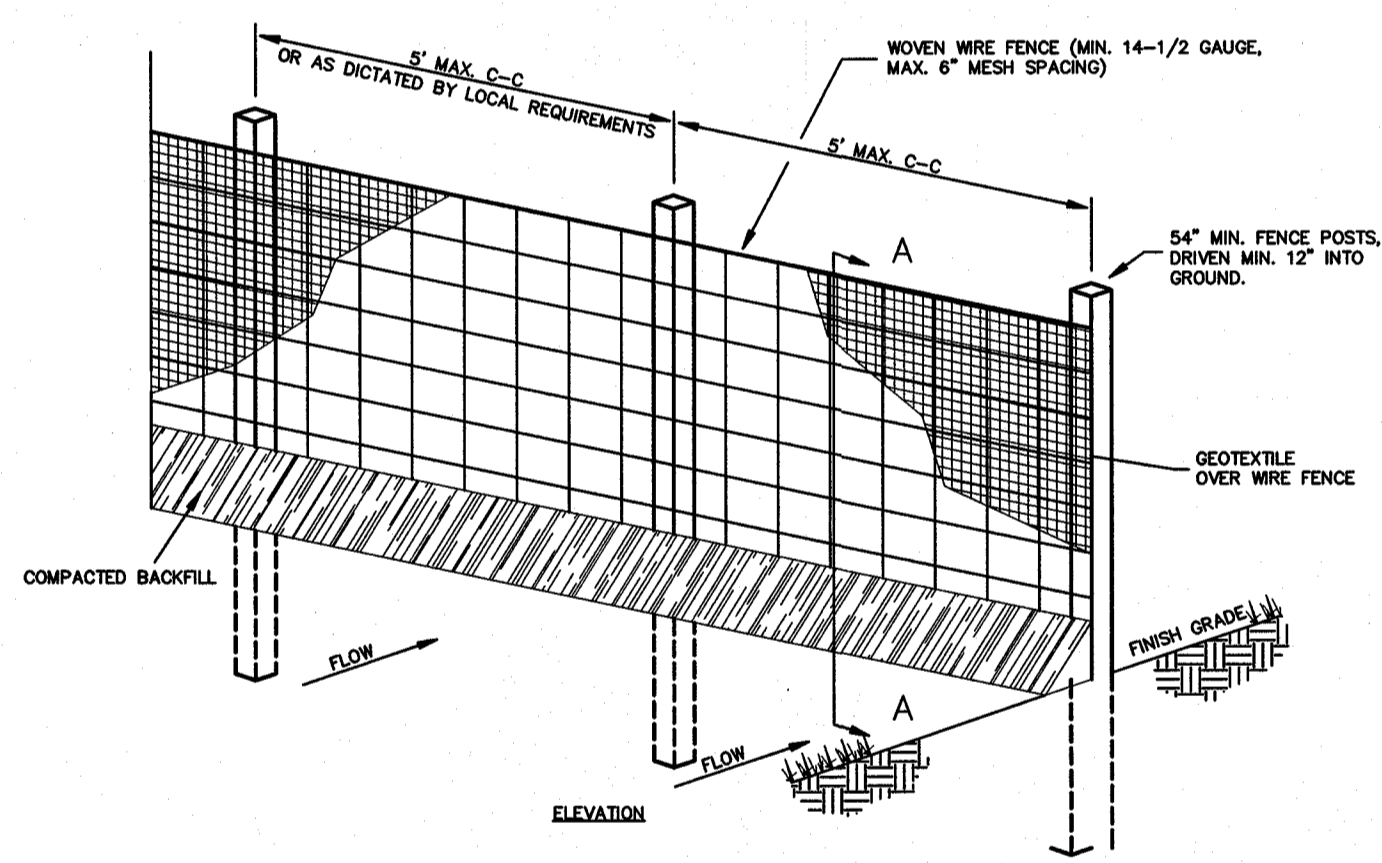
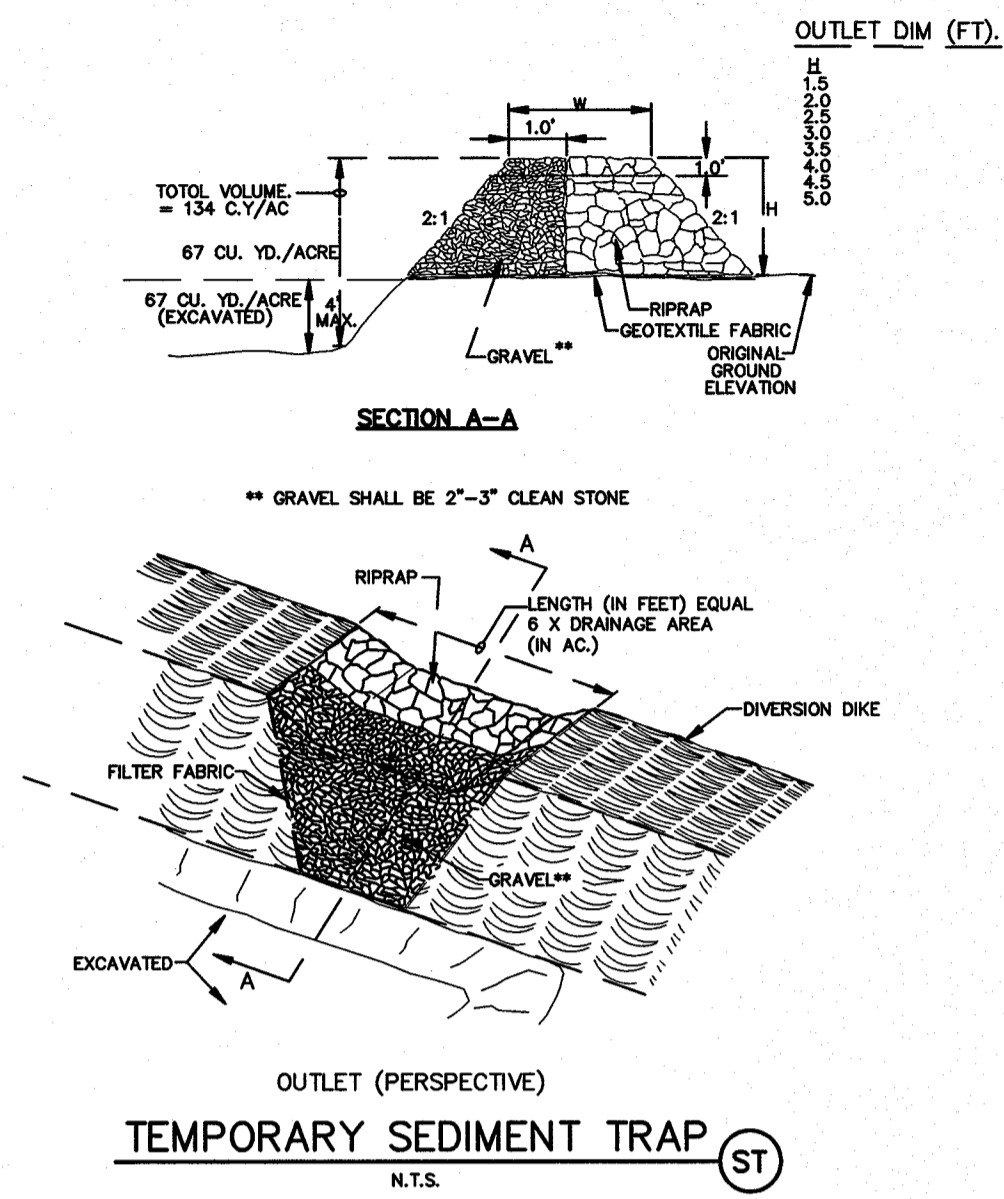
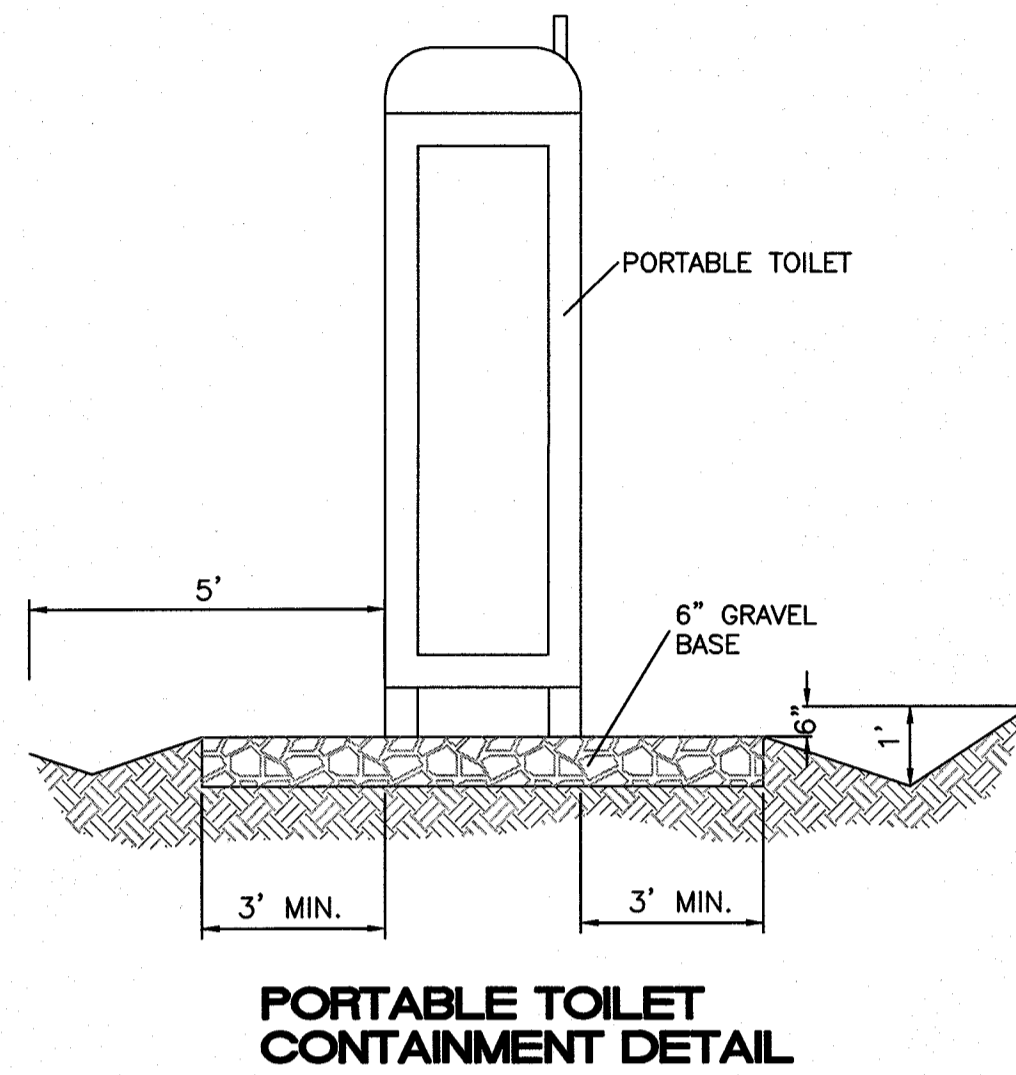
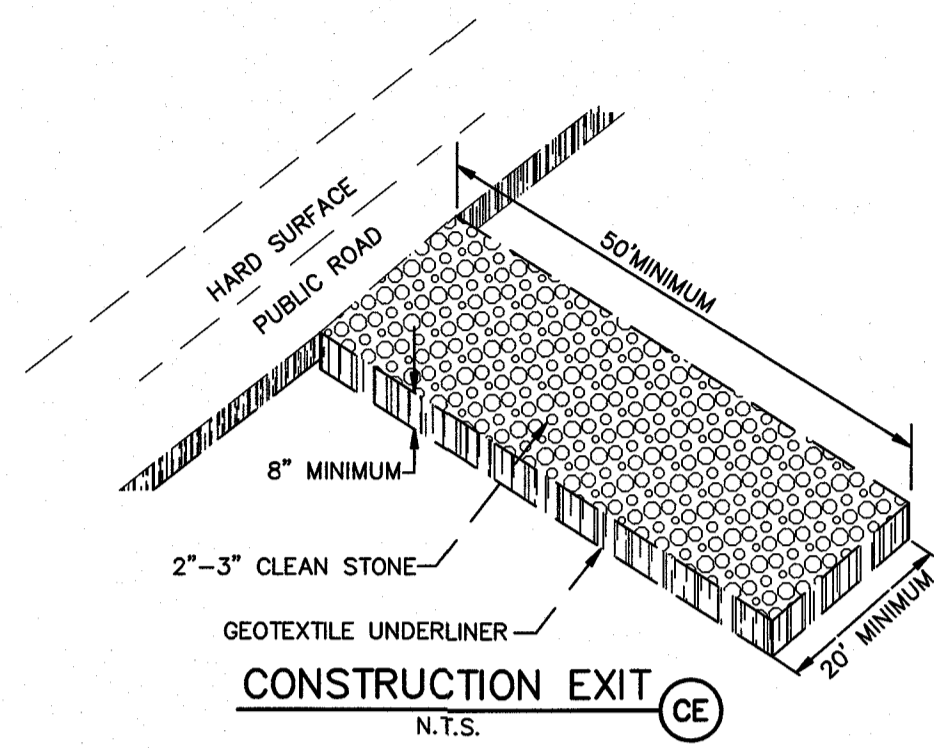
MONTECILLO UNIT 9 EAST AND WEST
 BEING A REPLAT OF A PORTION OF LOT 6, BLOCK 2, MONTECILLO UNIT THREE, BEING A REPLAT OF A PORTION OF TRACT 1, JOHN BAKER SURVEY NO. 10, CITY OF EL PASO, EL PASO COUNTY, TEXAS, CONTAINING 5.3943 ACRES



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 TEXAS BUSINESS NO.
 F-11773

NO.	DATE	REMARKS	BY
		DESIGN	
	1-10-17	DESIGN	
	1-10-17	DESIGN	
	2015079	DESIGN	
	1-10-17	DESIGN	



- NOTES:**
- 1) THE SWPPP INFORMATION SIGN MUST BE LOCATED NEAR THE CONSTRUCTION EXIT OF THE SITE, SUCH THAT IT IS ACCESSIBLE AND VIEWABLE BY THE GENERAL PUBLIC, BUT NOT OBSTRUCTING VIEWS AS TO CAUSE A SAFETY HAZARD.
 - 2) ALL POSTED DOCUMENTS MUST BE MAINTAINED IN A CLEARLY READABLE CONDITION AT ALL TIMES THROUGHOUT CONSTRUCTION AND UNTIL THE NOTICE-OF-TERMINATION (NOT) IS FILED FOR THE PERMIT.
 - 3) CONTRACTOR SHALL POST OTHER STORM WATER AND/OR EROSION AND SEDIMENT CONTROL RELATED PERMITS ON THE SIGN AS REQUIRED BY THE GOVERNING AGENCY.
 - 4) SIGN SHALL BE LOCATED OUTSIDE OF PUBLIC RIGHT-OF-WAY AND EASEMENTS UNLESS APPROVED BY THE GOVERNING AGENCY.
 - 5) CONTRACTOR IS RESPONSIBLE FOR ENSURING STABILITY OF THE SWPPP INFORMATION SIGN.



CITY MONUMENT AT POINT OF CURVE
CENTERLINE MONTECILLO BLVD.
ADJACENT TO MONTECILLO UNIT ONE
MONTECILLO UNIT ONE
(STATION 0+82.81)
ELEVATION: 4107.13(CITY DATUM)

MONTECILLO UNIT 9 EAST AND WEST
BEING A REPLAT OF A PORTION OF LOT 6, BLOCK 2, MONTECILLO UNIT THREE, REPLAT 'B' AND A PORTION OF TRACT 1, JOHN BAKER SURVEY NO. 10, CITY OF EL PASO, EL PASO COUNTY, TEXAS, CONTAINING 5.3945 ACRES



RONALD R. BOHANNAN
P.E. #68928

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		DESIGN	
		REVISIONS	
		DATE	1-10-17
		DATE	1-10-17
		JOB NO	2015079
		DRAWING NAME	2015079-SWPPP
		CHECKED BY	VC

SHEET TITLE
EROSION CONTROL DETAILS

GENERAL NOTES

THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF ALL EXISTING AND PROPOSED UTILITIES AND ALL SITE CONDITIONS PRIOR TO BEGINNING CONSTRUCTION. ANY DAMAGE CAUSED BY THE CONTRACTOR SHALL BE REPAIRED OR REPLACED AT NO ADDITIONAL COST TO THE OWNER.

NO CHANGES SHALL BE MADE WITHOUT NOTIFICATION OF LANDSCAPE ARCHITECT OR OWNER'S REPRESENTATIVE

THE FINISHED GRADES OF ALL PLANTING AREAS SHALL BE SMOOTH, EVEN AND FREE OF HUMPS, DEPRESSIONS OR IRREGULARITIES. SEE DETAILS TO DETERMINE FINISH GRADE ADJACENT TO CONCRETE AREAS AND WALKWAYS TO ALLOW FOR MULCH THICKNESS (IF SPECIFIED).

CONTRACTOR SHALL PERFORM LANDSCAPE MAINTENANCE ON PROJECT UNTIL COMPLETION AND ACCEPTANCE.

TREE NOTES:

PROVIDE PLANTS TYPICAL OF THEIR SPECIES OR VARIETY, WITH NORMAL, DENSELY DEVELOPED BRANCHES AND VIGOROUS, FIBROUS ROOT SYSTEMS. PROVIDE ONLY SOUND, HEALTHY VIGOROUS PLANTS FREE FROM DEFECTS, DISFIGURATIONS, OR ABRASIONS. PLANTS SHALL BE FIRMLY ROOTED IN THEIR CONTAINERS BUT NOT POT BOUND WITH CIRCLING ROOTS. THE OWNER'S REPRESENTATIVE HAS FINAL APPROVAL OF ALL PLANT MATERIAL AND MAY REJECT PLANT MATERIAL AT THEIR DISCRETION.

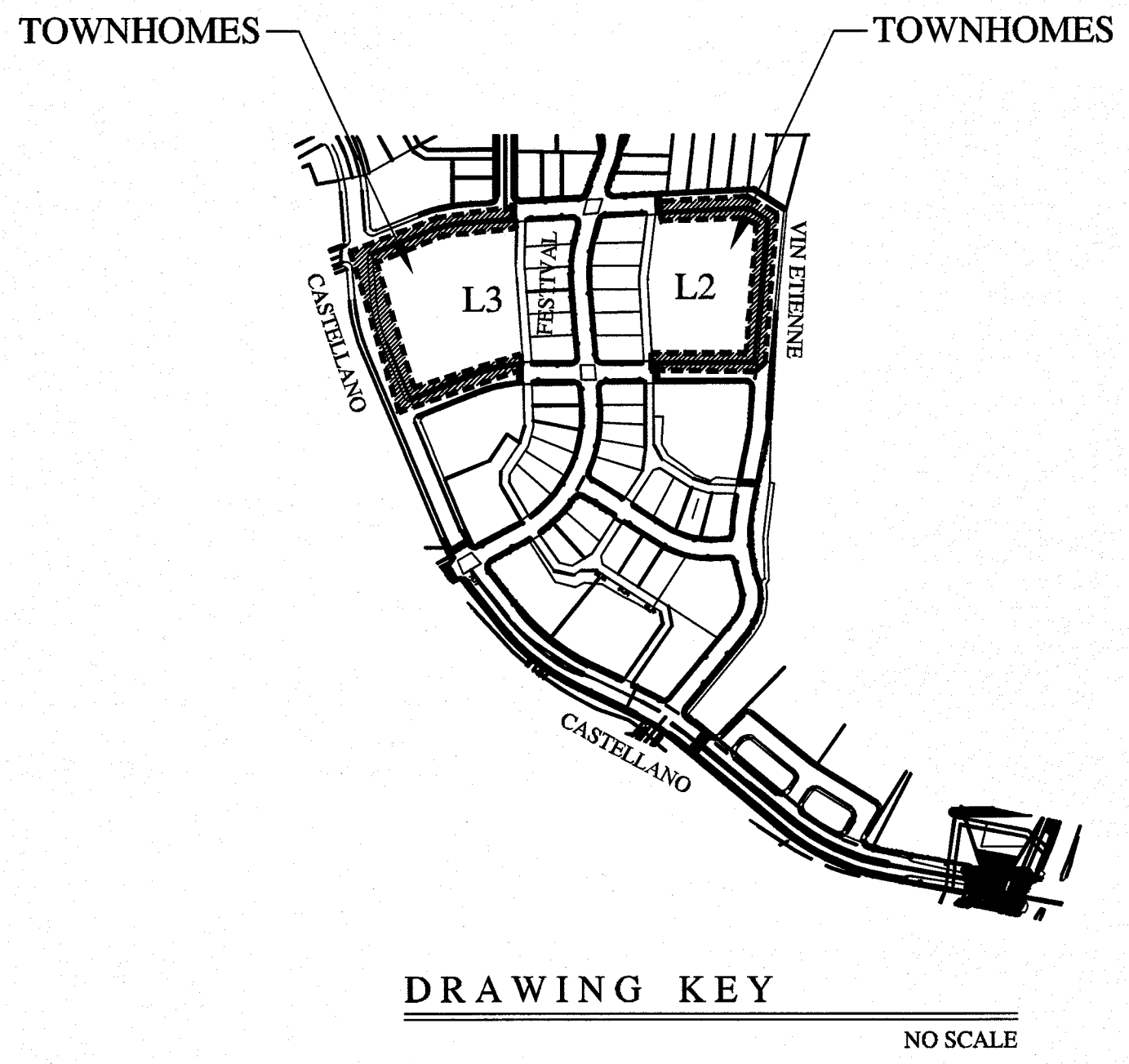
TREES AND SHRUBS MUST MEET THE SIZE REQUIREMENTS INDICATED ON THE LEGEND. THE CONTRACTOR MAY SUBSTITUTE A LARGER SIZE DUE TO AVAILABILITY BUT AT NO ADDITIONAL EXPENSE TO THE OWNER.

PLANTING NOTES

- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PREVENT PLANTS FROM FALLING OR BEING BLOWN OVER AND TO STRAIGHTEN OR REPLANT ALL PLANTS WHICH ARE DAMAGED DUE TO WIND. PLANTS BLOWN OVER BY HIGH WINDS SHALL NOT BE A CAUSE FOR ADDITIONAL EXPENSE TO THE OWNER, BUT SHALL BE THE FINANCIAL RESPONSIBILITY OF THE CONTRACTOR.
- NATIVE SOIL FOR PLANTING SHALL BE FREE FROM HARD CLODS, STIFF CLAY, HARD PAN, STONES LARGER THAN 1" IN DIAMETER, NOXIOUS WEEDS AND PLANTS, SOD, PARTIALLY DISINTEGRATED DEBRIS INSECTS OR ANY OTHER UNDESIRABLE MATERIAL. PLANTS OR SEEDS THAT WOULD BE TOXIC OR HARMFUL TO GROWTH, IT SHALL BE TESTED TO DETERMINE THE PH FACTOR, FERTILITY, SOLUBLE SALTS AND PERCOLATION.
- EXCAVATE TWO TIMES GREATER THAN THE ROOT BALL DIAMETER OF SHRUBS AND ROOT BALLS OF TREES. SCARIFY THE BOTTOM OF PLANTING PIT BEFORE PLACING PLANT. PLACEMENT OF PLANT SHALL BE PERPENDICULAR TO GROUND/VERTICAL WITHOUT LEANING.
- SET PLANT MATERIAL IN PLANTING PIT TO PROPER GRADE AND ALIGNMENT. SET PLANTS SO THAT THE ROOT BALL IS FLUSH WITH FINISHED GRADE. REMOVE ALL WIRE, STRINGS, WIRE BASKETS, BURLAP, CONTAINERS, ETC. FROM THE ROOTBALL OF PLANTS BEFORE BACKFILLING THE PLANTING HOLE. BACKFILL THE PIT WITH 50% NATIVE SOIL (UNLESS UNSUITABLE FOR GROWTH) 50% COMPOST. IMPERVIOUS SOIL AND LARGE ROCKS MUST BE REMOVED. "WATER IN" TO PREVENT AIR POCKETS AND SETTLING. FORM A RING OF SOIL AROUND PLANTS THAT ARE LOCATED ON A SLOPE TO RETAIN WATER.
- CONTRACTOR IS RESPONSIBLE FOR VERIFICATION OF PLANT MATERIAL QUANTITIES. IN THE EVENT OF VARIATION BETWEEN QUANTITIES SHOWN ON THE PLANT LIST AND THE PLANS, THE PLANS SHALL CONTROL. IMPROPER PLANT COUNT MADE BY THE LANDSCAPE CONTRACTOR SHALL BE NO CAUSE FOR ADDITIONAL COSTS TO THE OWNER.
- THE CONTRACTOR SHALL MEET BOTH THE CONTAINER SIZE AND CALIPER SIZE, AS WELL AS HEIGHT AND SPREAD SPECIFICATIONS.
- CONTRACTOR WILL NOT PLANT MATERIAL SHOWN ON PLANS WHEN IT IS EVIDENT THAT FIELD CONDITIONS HAVE CHANGED SINCE PLANS WERE DRAWN OR IF OTHER CONFLICTS ARE EVIDENT. ANY CHANGES ARE TO BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT BEFORE PLANTING IS DONE IN THE AREA.
- PLANT SUBSTITUTIONS MAY BE PERMITTED DUE TO AVAILABILITY ISSUES NOT PRICE. REQUEST SUBSTITUTION IN WRITING GIVING REASON FOR SUCH SUBSTITUTIONS AND SOURCES ALREADY CONTACTED.
- WARRANTY FOR THE PLANTING MATERIAL SHALL BE ONE YEAR FROM THE DATE OF ACCEPTANCE. (TREES, SHRUBS AND GROUND COVER PLANTS - AS APPLIES).

GENERAL IRRIGATION NOTES

- ALL MATERIALS LISTED BY BRAND NAME MAY BE SUBSTITUTED BY EQUAL OR BETTER PRODUCTS AS DECIDED BY LANDSCAPE ARCHITECT.
- THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF ALL EXISTING AND PROPOSED UTILITIES, AND ALL SITE CONDITIONS PRIOR TO BEGINNING CONSTRUCTION. ANY DAMAGE CAUSED BY THE CONTRACTOR SHALL BE REPAIRED OR REPLACED AT NO ADDITIONAL COST TO THE OWNER.
- THE CONTRACTOR SHALL COORDINATE HIS WORK WITH THE OTHER CONTRACTORS WORKING ON THE SITE. COORDINATE INSTALLATION OF SLEEVINGS!
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY WATER PRESSURE, WATER SOURCE AND SIZE IN THE FIELD PRIOR TO CONSTRUCTION. SHOULD A DISCREPANCY EXIST BETWEEN DESIGN PRESSURE AND FIELD PRESSURE THE LANDSCAPE ARCHITECT SHALL BE NOTIFIED IMMEDIATELY.
- IF PRESSURE IS MORE THAN 90 PSI DOWNSTREAM OF METER NOTIFY THE PROJECT MANAGER AND LANDSCAPE ARCHITECT IMMEDIATELY.
- CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS.
- LOCATION OF THE CONTROLLER AND BACKFLOW SHALL BE APPROVED BY THE OWNER'S REPRESENTATIVE.
- STAKE OUT TREE LOCATIONS PRIOR TO TRENCHING.
- THE CONTRACTOR SHALL NOT IMPEDE DRAINAGE IN ANY WAY. THE CONTRACTOR SHALL ALWAYS MAINTAIN POSITIVE DRAINAGE AWAY FROM BUILDINGS, WALLS, ETC.
- ALL PIPING/WIRING RUNNING BENEATH PAVED SURFACES (DRIVES, WALKS, ETC.) SHALL BE INSTALLED IN SCHEDULE 40 PVC SLEEVES. SLEEVES MUST BE 2 X THE DIAMETER SIZE OF PIPE ENCASED. EXTEND SLEEVE TWENTY-FOUR INCHES (24") BEYOND EDGE OF HARD SURFACES; WRAP ENDS WITH FOUR (4) MILS PLASTIC AND GOOD QUALITY PLASTIC TAPE. GRAY, CLOTH DUCT TAPE IS NOT ACCEPTABLE.
- USE DRI-SPLICE CONNECTORS FACTORY FILLED WITH SILICONE FOR VALVE WIRING.
- ALL PIPE CUTS SHALL BE MITERED TO 90 DEGREES TO ASSURE PROPER SOLVENT WELD. ALL BURRS SHALL BE REMOVED PRIOR TO GLUING AND MUST HAVE A FILED BEVELED EDGE A MINIMUM OF ONE FOURTH (1/4) THE WIDTH OF PIPE WALL. USE "3-STEP" GLUING PROCESS. PIPE MUST BE CLEAN AND PRIMER APPLIED AS RECOMMENDED BY MANUFACTURER WHEN GLUING PROCESS IS UNDERTAKEN. PRIMER SHOULD BE MOIST AS GLUE IS APPLIED AND PVC PIPING IS ASSEMBLED. USE IPS WELD-ON PURPLE PRIMER P68 OR P70. USE IPS WELD-ON GRAY GLUE #111 HEAVY DUTY. WIPE OFF ALL EXCESS GEMENT AND LET SET PER MANUFACTURER'S RECOMMENDATIONS. INITIAL SET TIMES SHALL BE MINIMUM OF 5 MIN. FOR 1/2 TO 1-1/4" PIPE; 8 MIN. FOR 1-1/2" PIPE TO 2" PIPE; 2 HOURS FOR 2-1/2" TO 6" PIPE. CURE TIMES ARE 20 MIN FOR 1/2" TO 1-1/4" PIPE; 30 MIN. FOR 1-1/2" PIPE; 4 HOURS FOR 2-1/2" PIPE. WHEN HUMIDITY EXCEEDS 60% INCREASE CURE TIME BY 50%. ONCE WELD IS SET, PIPE SHALL NOT BE MOVED FOR ANY REASON UNTIL SET TIMES HAVE BEEN ACHIEVED. WATER SHALL NOT BE TURNED ON UNTIL ALL CURE TIMES HAVE BEEN ACHIEVED.
- THE PROJECT MANAGER MUST BE PRESENT DURING ALL FLUSHING, TESTING AND ADJUSTING. THE CONTRACTOR MUST PROVIDE 24 HRS NOTICE TO THE PROJECT MANAGER PRIOR TO CONDUCTING THE TESTS.
- THE FINISH GRADE OF ALL TRENCHED AREAS SHALL BE SMOOTH, EVEN AND CONSISTENT, FREE OF ANY HUMPS, DEPRESSIONS OR OTHER GRADING IRREGULARITIES. OVERFILL TRENCHES AND COMPACT SO NOT TO CRUSH THE PIPE. FOR SETTILING AND BACKFILL AND REGRADE IF NECESSARY. DO NOT PLACE GRAVEL UNTIL TRENCHES ARE ACCEPTABLE.
- THE CONTRACTOR SHALL FINE TUNE AND ADJUST THE IRRIGATION SYSTEM SO THAT NO WATER WILL RUN ONTO THE STREET OR WALKS
- THE CONTRACTOR SHALL MAINTAIN ALL WORK UNTIL ALL WORK IS COMPLETE AND ACCEPTED.
- WARRANTY PERIOD IS ONE YEAR FROM DATE OF ACCEPTANCE.
- SUBMITTALS DUE AT OR PRIOR TO THE FINAL WALK-THROUGH INSPECTION
 - BACKFLOW REPORT
 - TBOS TRANSMITTER
 - AS-BUILTS
 - MAINTENANCE AGREEMENT - AS APPLICABLE



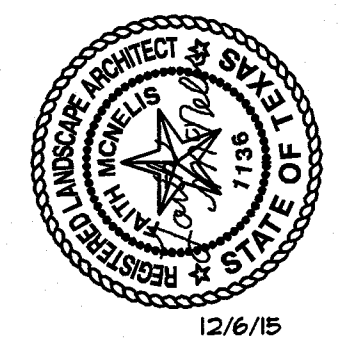
TREES AND OTHER PLANTS IN LEAF DELIVERED TO THE SITE SHALL BE COVERED WITH CANVAS TARP DURING TRANSPORT. PLASTIC TARPS ARE PROHIBITED.

TRANSPORT IN ENCLOSED VAN IS ACCEPTABLE BUT PLANTS MUST BE UNLOADED IMMEDIATELY UPON ARRIVAL AT SITE.

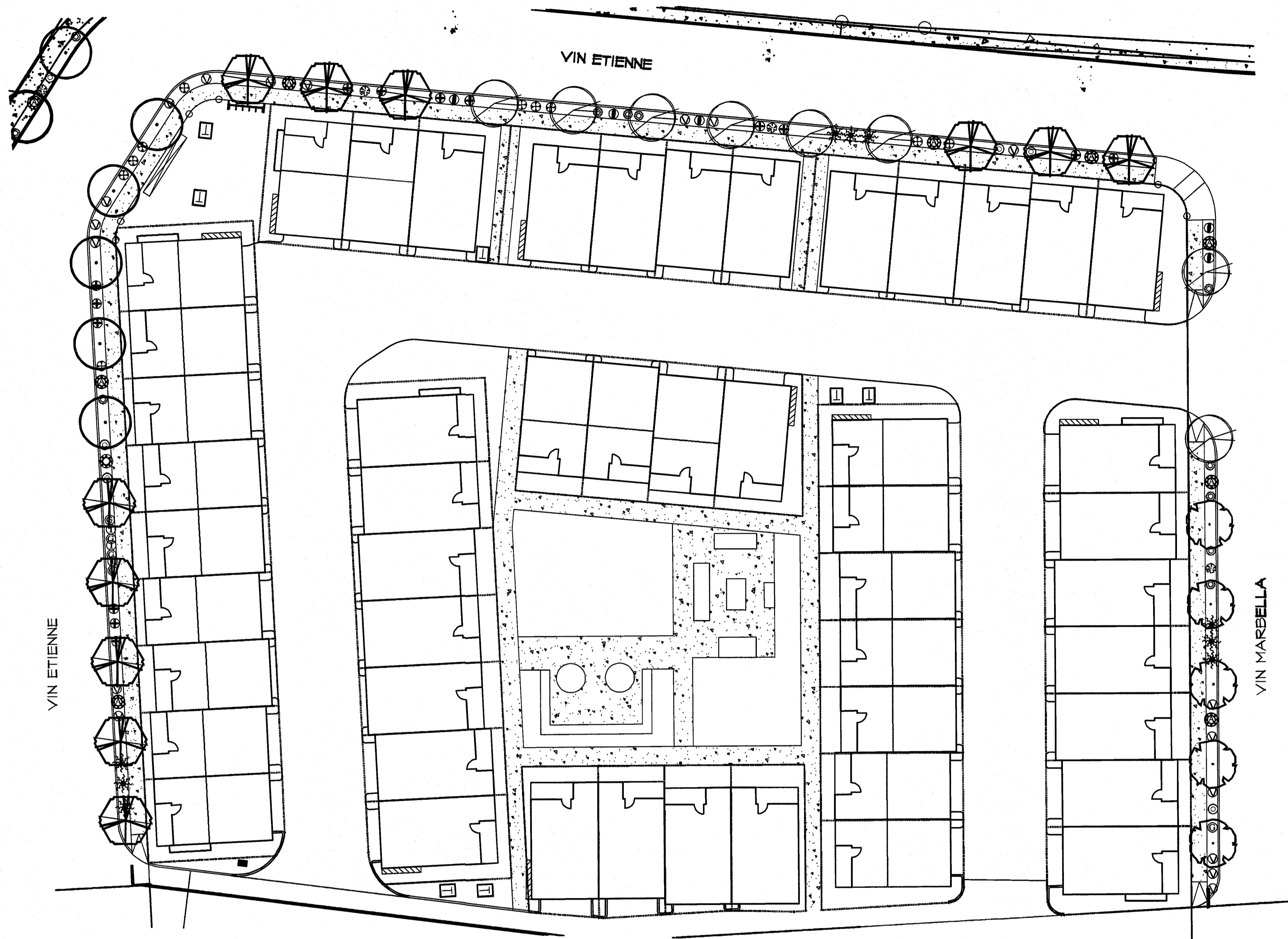
DO NOT LIFT TREES BY THE TRUNK. LIFT BY CONTAINER.

SHEET INDEX	
L1	SITE MAP, SHEET INDEX, NOTES
L2	PLANTING & MATERIALS PLAN
L3	PLANTING & MATERIALS PLAN
L4	IRRIGATION PLAN
L5	CONSTRUCTION DETAILS
L6	IRRIGATION DETAILS

A LANDSCAPE DESIGN FOR
MONTECILLO UNIT 9 TOWNHOMES
 EL PASO, TEXAS



LISA MCNELIS
 LANDSCAPE ARCHITECT
 1400 FOXBORO COURT
 LAS CRUCES, NEW MEXICO 88007
 (505) 621-3032



PLAN VIEW A - PLANTING AND MATERIALS
SCALE: 1" = 20' - 0"

VERIFY QUANTITIES. PLAN TAKES PRECEDENCE.

MATERIAL LEGEND AND DETAIL KEY- PROJECT TOTALS:

- 1. 1/4" FRANKLIN RED GRAVEL, 5" DEPTH
2" BELOW ALL CONCRETE SURFACES. USE NON WOVEN POLY FABRIC.
SEE DETAIL E SHEET L6.
- 2. LIGHT POLE

NOTE:
USE DEWITT PRO 5 NEED BARRIER OR EQUAL.
PIN ON 3" OC WITH 1/2" SHAPED PINS.
OVERLAP EDGES 2'-0"

SEE SHEET L5 FOR PLANTING DETAILS.



VERIFY QUANTITIES! PLANS TAKE PRECEDENCE

SYN	KEY	COMMON NAME	BOTANICAL NAME	CONT.	SPACING	QUANT.	SIZE	REMARKS
CG	⊙	SUN GOLD CREEPING GAZANIA	GAZANIA ROSENS var. LEUCOLABRA	1 GAL	2' OC	0	4" HT	USE THO FOR EVERY SYMBOL
HR	⊙	'ARP' ROSEMARY	ROSMARINUS OFFICINALIS 'ARP'	5 GAL	3' OC	0	18" HT	⊙
MB	⊕	MEXICAN BLUE SAGE	SALVIA GYNAEBORYOIDES	1 GAL	3' OC	0	10" HT	USE THO FOR EVERY SYMBOL
DA	⊕	DAMANTA	CHRYSACTINA MEXICANA	5 GAL	3' OC	0	10" HT	⊙
YL	⊙	NEW GOLD' LANTANA	LANTANA CAMERA NEW GOLD'	5 GAL	4' OC	0	10" HT	CUT BACK END FEB
BP	⊙	BLACKFOOT DANDY	MELANOPHYLLUM LEUCANTHUM	1 GAL	3' OC	0	8" HT	USE THO FOR EVERY SYMBOL
DG	⊙	'ARP' ROSEMARY	ROSMARINUS OFFICINALIS 'ARP'	5 GAL	3' OC	0	6" HT	TRIM AFTER BLOOM
AS	⊙	RED' AUTUMN SAGE	SALVIA GREGGII	5 GAL	3' OC	0	18" HT	CUT BACK TO 12" END FEB.
VB	⊙	PURPLE LANTANA	LANTANA MONTEVIDENSIS	5 GAL	3' OC	0	10" HT	CUT BACK END FEB
SD	⊙	DESERT ZINNA	ZINNA AGEROSA	1 GAL	3' OC	0	4" HT	USE THO FOR EVERY SYMBOL
LA	⊙	CLEVELAND SAGE	SAVIA CLEVELANDI	5 GAL	4' OC	0	18" HT	⊙
CG	⊙	GIMARRON SAGE	LEUCOPHYLLUM ZYGOPHYLLUM	5 GAL	4' OC	0	18" HT	⊙
RO	⊙	GIBBOS ROSEWOOD	VALEXILINA CORNIBOSA ANGIPTOLIA	5 GAL	6' OC	0	18" HT	DO NOT CUT
RH	⊙	RESAL WEST MILLY	MILIBENERSIA CAPILLARIS RESAL MS'	5 GAL	6' OC	0	18" HT	CUT EVERY OTHER YEAR TO 10"
CS	⊙	ROSE PAVONIA	PAVONIA LASIOPETALA	1 GAL	4' OC	0	18" HT	USE THO FOR EVERY SYMBOL

⊙ AND ⊕ BOTH SYMBOLS REPRESENT ROSEMARY

TREE LEGEND/SCHEDULE

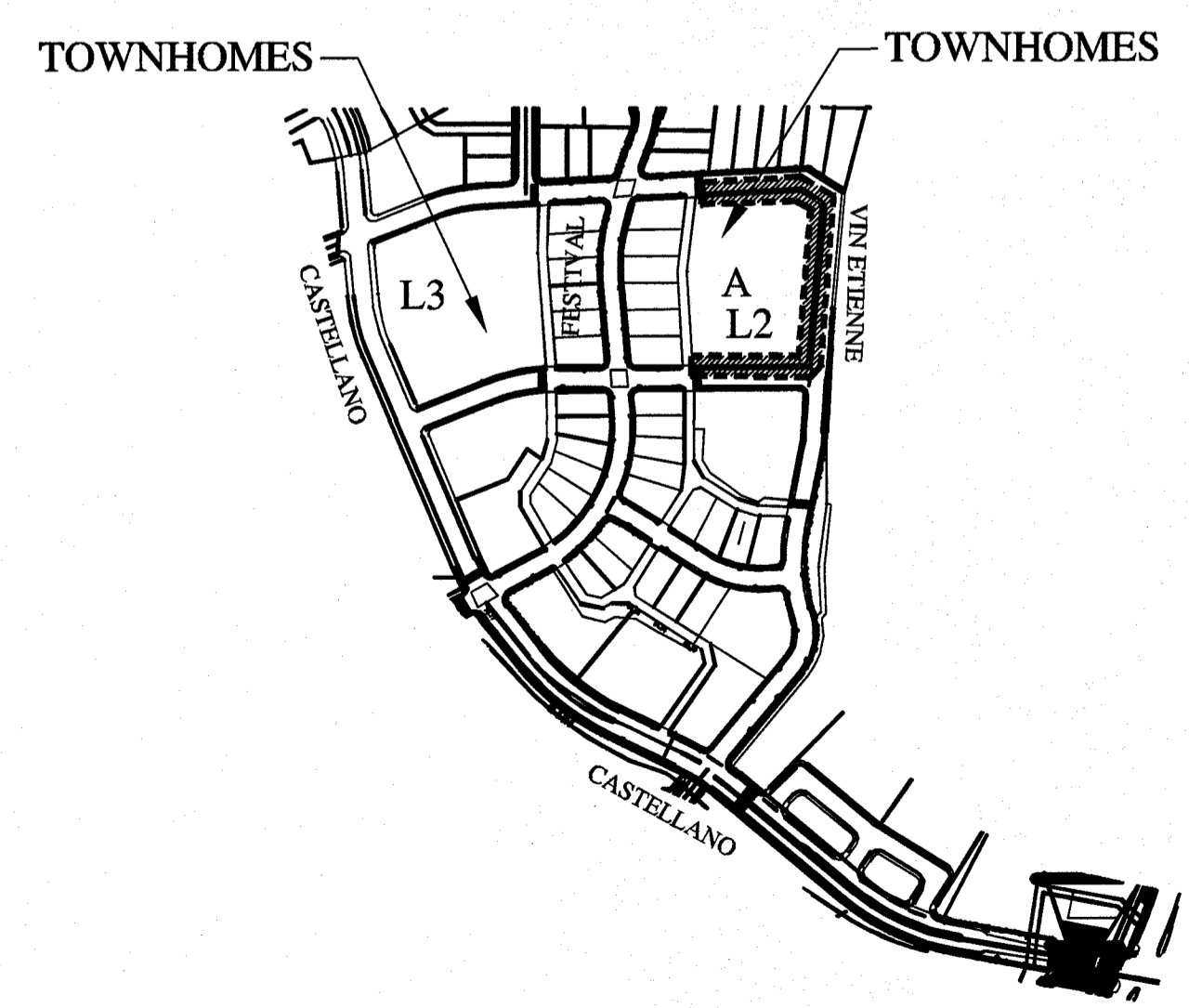
SYN	KEY	COMMON NAME	BOTANICAL NAME	CONT.	SIZE	QUANT.	REMARKS
LET	⊙	LACEBARK ELM	ULMUS PARVIFOLIA	36"BOX	3" CAL-12HT-6" SPREAD	0	SINGLE TRUNK
RAT	⊙	RAYWOOD ASH	FRAXINUS OXYCARPA	36"BOX	3" CAL-12HT-6" SPREAD	0	SINGLE TRUNK
GPT	⊙	CHINESE PISTACHE	PISTACIA CHINENSIS	36"BOX	3" CAL-12HT-6" SPREAD	0	SINGLE TRUNK
MOT	⊙	MONTERREY OAK	QUERCUS POLYMORPHA	36"BOX	3" CAL-12HT-6" SPREAD	0	SINGLE TRUNK
RAT	⊙	RAYWOOD ASH	FRAXINUS OXYCARPA	42"BOX	4" CAL-14HT-8" SPREAD	0	SINGLE TRUNK
GPT	⊙	CHINESE PISTACHE	PISTACIA CHINENSIS	42"BOX	4" CAL-14HT-8" SPREAD	0	SINGLE TRUNK
MOT	⊙	MONTERREY OAK	QUERCUS POLYMORPHA	42"BOX	4" CAL-14HT-8" SPREAD	0	SINGLE TRUNK

TREE SIZE AND CLEARANCES MUST MEET CITY OF EL PASO STANDARDS.
NO LOW FORKS IN TREE TRUNKS. THOSE FORMS DO NOT ALLOW FOR
PRUNING FOR CLEARANCE REQUIREMENTS WITHOUT DESTROYING FORM OF TREE.

TREES MUST DISPLAY A CENTRAL LEADER AND MEET ANSI STANDARD Z.601
AMERICAN STANDARD FOR NURSERY STOCK, LATEST EDITION

DO NOT BURY PLANTS IN GRAVEL!

NOT FOR CONSTRUCTION



A LANDSCAPE DESIGN FOR
MONTECILLO UNIT 9 TOWNHOMES
EL PASO, TEXAS

LISA MCNELIS
LANDSCAPE ARCHITECT
1400 FOXBORO COURT
LAS CRUCES, NEW MEXICO 88007
(575) 621-3032

L2
PLANTING
AND MATERIALS
SHEET 2 OF 6

VERIFY QUANTITIES. PLAN TAKES PRECEDENCE.

MATERIAL LEGEND AND DETAIL KEY- PROJECT TOTALS:

	1. 1/4\"/>
	2. LIGHT POLE

NOTE:
USE DENTIT PRO 5 NEED BARRIER OR EQUAL.
PIN ON 3' OC WITH 1/2\"/>

SEE SHEET L5 FOR PLANTING DETAILS.

DO NOT COVER THE PLANTS WITH GRAVEL!

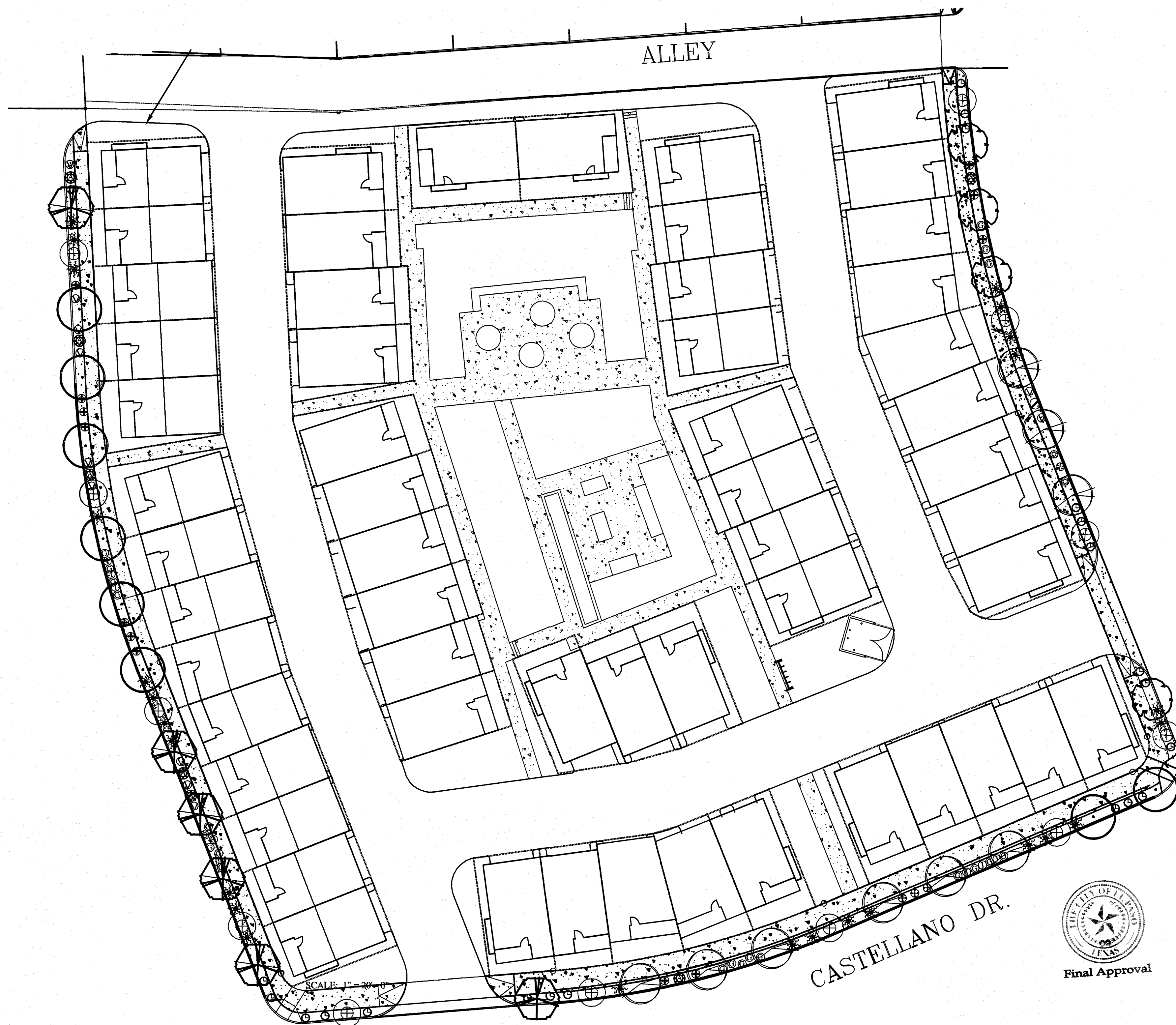
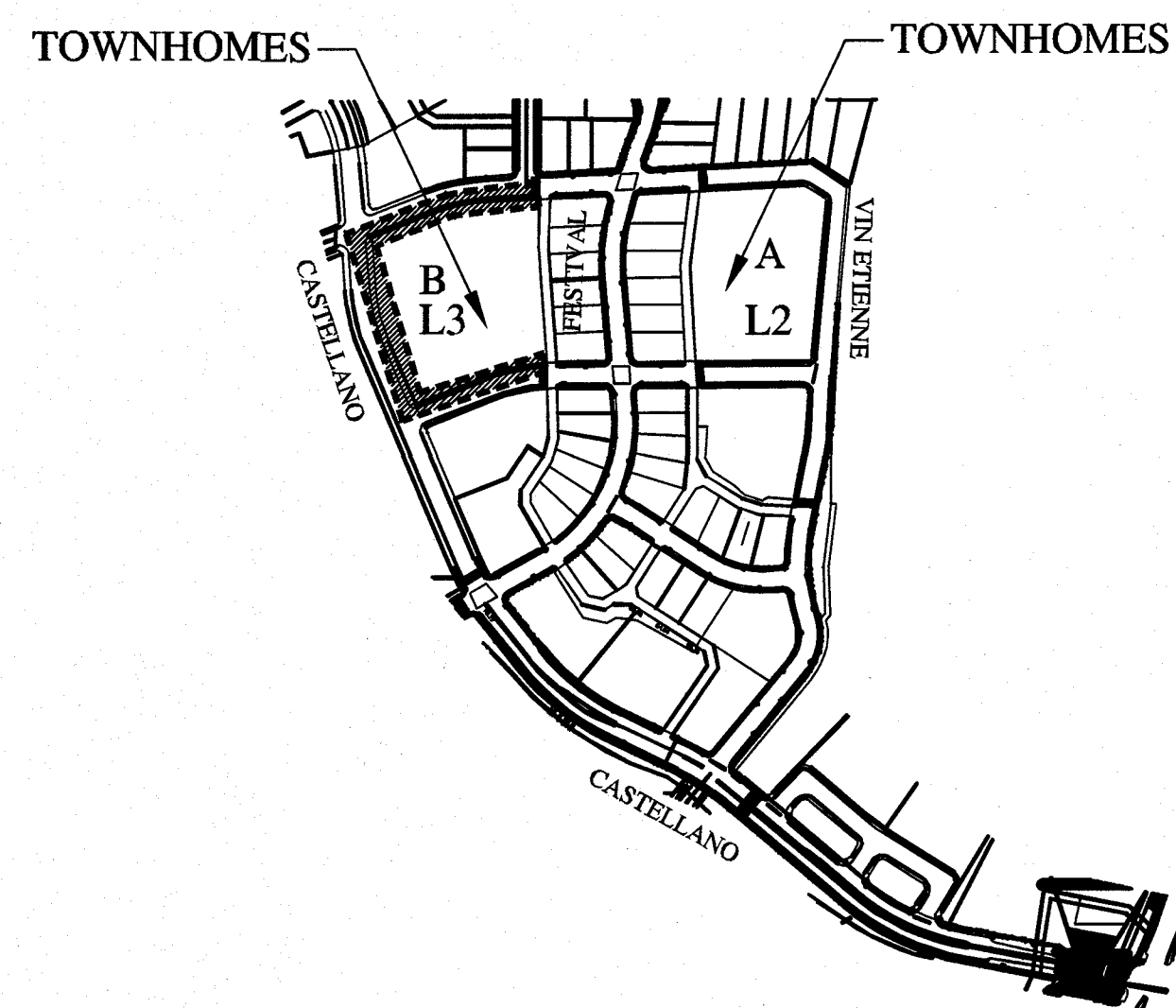
VERIFY QUANTITIES! PLANTS TAKE PRECEDENCE

SYM	KEY	COMMON NAME	BOTANICAL NAME	CONT.	SPACING	QUANT.	SIZE	REMARKS
CG	CG	SUN GOLD CREEPING GAZANIA	GAZANIA RIGENS var. LEUCOLAENA	1 GAL	2' OC	0	4' HT	USE THO FOR EVERY SYMBOL
HR	HR	'ARR' ROSEMARY	ROSAMARINUS OFFICINALIS 'ARR'	5 GAL	3' OC	0	18' HT	0
HB	HB	MEXICAN BLUE SAGE	SALVIA GHAMMADRYOIDES	1 GAL	3' OC	0	10' HT	USE THO FOR EVERY SYMBOL
DA	DA	DAMAZANTA	CHRYSANTHEMUM MEXICANUM	5 GAL	3' OC	0	10' HT	0
YL	YL	'NEW GOLD' LANTANA	LANTANA CAMERA 'NEW GOLD'	5 GAL	4' OC	0	10' HT	CUT BACK END FEB
BF	BF	BLACKFOOT DAISY	MELANPODIUM LEUCANTHUM	1 GAL	3' OC	0	8' HT	USE THO FOR EVERY SYMBOL
DR	DR	'ARR' ROSEMARY	ROSAMARINUS OFFICINALIS 'ARR'	5 GAL	3' OC	0	6' HT	TRIM AFTER BLOOM
AS	AS	RED AUTUMN SAGE	SALVIA GREGGII	5 GAL	3' OC	0	18' HT	CUT BACK TO 12' END FEB.
VB	VB	PURPLE LANTANA	LANTANA MONTEVIDEENSIS	5 GAL	3' OC	0	10' HT	CUT BACK END FEB
SD	SD	DESERT ZINNIA	ZINNIA AGEROSA	1 GAL	3' OC	0	4' HT	USE THO FOR EVERY SYMBOL
LA	LA	CLEVELAND SAGE	SAVIA GLEVELANDII	5 GAL	4' OC	0	18' HT	0
GS	GS	CHARRON SAGE	LEUCOPHYLLUM ZYGOPHYLLUM	5 GAL	4' OC	0	18' HT	0
RD	RD	GRASS ROSEWOOD	VALEXELIA CORYMBOSA ANGUSTIFOLIA	5 GAL	6' OC	0	18' HT	DO NOT CUT
RH	RH	REGAL MIST MIMULUS	MULDEBERGIA CAPILLARS REGAL MIST	5 GAL	6' OC	0	18' HT	CUT EVERY OTHER YEAR TO 10'
CS	CS	ROSE PAVONIA	PAVONIA LASIOPETALA	1 GAL	4' OC	0	18' HT	USE THO FOR EVERY SYMBOL

AND ① BOTH SYMBOLS REPRESENT ROSEMARY

SYM	KEY	COMMON NAME	BOTANICAL NAME	CONT.	SIZE	QUANT.	REMARKS
LET	LET	LACEDARK ELM	ULMUS PARVIFOLIA	36"BOX	3' CAL-12HT-6' SPREAD	0	SINGLE TRUNK
RAT	RAT	RAYWOOD ASH	FRAXINUS OXYCARPA	36"BOX	3' CAL-12HT-6' SPREAD	0	SINGLE TRUNK
CPT	CPT	CHINESE PISTACHE	PISTACIA CHINENSIS	36"BOX	3' CAL-12HT-6' SPREAD	0	SINGLE TRUNK
MOT	MOT	MONTERREY OAK	QUERCUS POLYMORPHA	36"BOX	3' CAL-12HT-6' SPREAD	0	SINGLE TRUNK
RAT	RAT	RAYWOOD ASH	FRAXINUS OXYCARPA	42"BOX	4' CAL-14HT-8' SPREAD	0	SINGLE TRUNK
CPT	CPT	CHINESE PISTACHE	PISTACIA CHINENSIS	42"BOX	4' CAL-14HT-8' SPREAD	0	SINGLE TRUNK
MOT	MOT	MONTERREY OAK	QUERCUS POLYMORPHA	42"BOX	4' CAL-14HT-8' SPREAD	0	SINGLE TRUNK

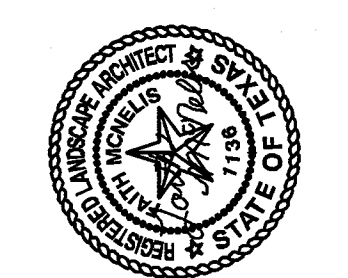
TREE SIZE AND CLEARANCES MUST MEET CITY OF EL PASO STANDARDS.
NO LOW FORKS IN TREE TRUNKS. THOSE FORMS DO NOT ALLOW FOR
PRUNING FOR CLEARANCE REQUIREMENTS WITHOUT DESTROYING FORM OF TREE.



PLAN VIEW B - PLANTING AND MATERIALS



A LANDSCAPE DESIGN FOR
MONTECILLO UNIT 9 TOWNHOMES
EL PASO, TEXAS



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L3
PLANTING AND MATERIALS
SHEET 3 OF 6

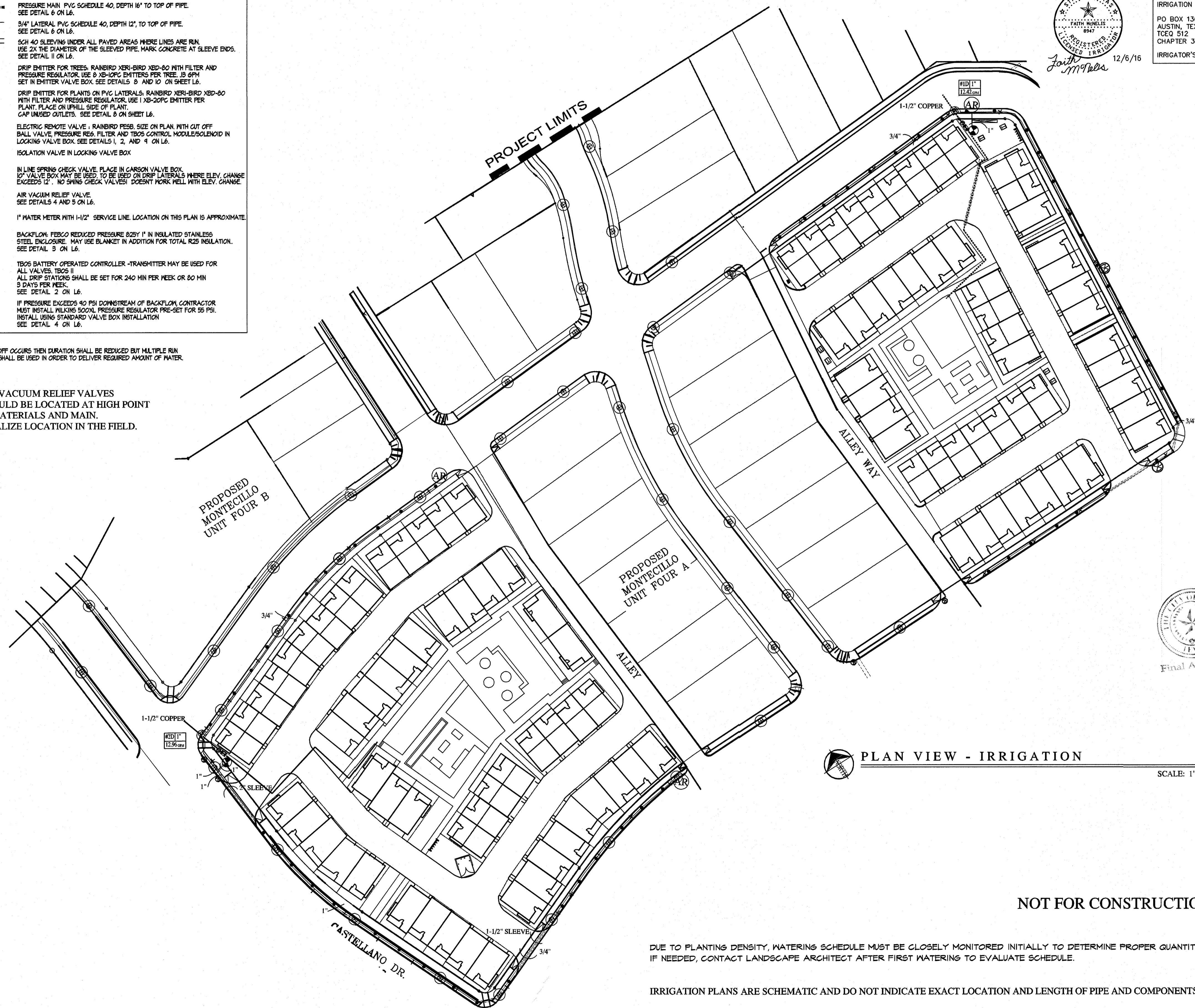
NOT FOR CONSTRUCTION

MATERIAL LEGEND:

-----	PRESSURE MAIN: PVC SCHEDULE 40, DEPTH 16" TO TOP OF PIPE. SEE DETAIL 6 ON L6.
-----	3/4" LATERAL: PVC SCHEDULE 40, DEPTH 12", TO TOP OF PIPE. SEE DETAIL 6 ON L6.
-----	3/4" SLEEVING UNDER ALL PAVED AREAS WHERE LINES ARE RUN. USE 2X THE DIAMETER OF THE SLEEVED PIPE. MARK CONCRETE AT SLEEVE ENDS. SEE DETAIL 11 ON L6.
●	DRIP EMITTER FOR TREES: RAINBIRD XERI-BIRD XBD-80 WITH FILTER AND PRESSURE REGULATOR. USE 8 XBD-OPC EMITTERS PER TREE. @ 6PM SET IN EMITTER VALVE BOX. SEE DETAILS 8 AND 10 ON SHEET L6.
✱	DRIP EMITTER FOR PLANTS ON PVC LATERALS: RAINBIRD XERI-BIRD XBD-80 WITH FILTER AND PRESSURE REGULATOR. USE 1 XBD-OPC EMITTER PER PLANT. PLACE ON UPHILL SIDE OF PLANT. CAP UNUSED OUTLETS. SEE DETAIL 8 ON SHEET L6.
⊕	ELECTRIC REMOTE VALVE: RAINBIRD P858. SIZE ON PLAN WITH CUT OFF BALL VALVE, PRESSURE REG. FILTER AND TBOS CONTROL MODULE/SOLENOID IN LOCKING VALVE BOX. SEE DETAILS 1, 2, AND 4 ON L6.
⊗	ISOLATION VALVE IN LOCKING VALVE BOX
⊙	IN LINE SPRING CHECK VALVE. PLACE IN CARSON VALVE BOX. 1/2" VALVE BOX MAY BE USED. TO BE USED ON DRIP LATERALS WHERE ELEV. CHANGE EXCEEDS 12'. NO SPRING CHECK VALVES! DOESN'T WORK WELL WITH ELEV. CHANGE.
Ⓐ	AIR VACUUM RELIEF VALVE. SEE DETAILS 4 AND 5 ON L6.
M	1" WATER METER WITH 1-1/2" SERVICE LINE. LOCATION ON THIS PLAN IS APPROXIMATE.
⊠	BACKFLOW: FERCO REDUCED PRESSURE 825Y 1" IN INSULATED STAINLESS STEEL ENCLOSURE. MAY USE BLANKET IN ADDITION FOR TOTAL R25 INSULATION. SEE DETAIL 3 ON L6.
C	TBOS BATTERY OPERATED CONTROLLER -TRANSMITTER MAY BE USED FOR ALL VALVES, TBOS 1. ALL DRIP STATIONS SHALL BE SET FOR 240 MIN PER WEEK OR 80 MIN 3 DAYS PER WEEK. SEE DETAIL 2 ON L6.
P	IF PRESSURE EXCEEDS 40 PSI DOWNSTREAM OF BACKFLOW, CONTRACTOR MUST INSTALL MILKING SOOL, PRESSURE REGULATOR, PRE-SET FOR 55 PSI. INSTALL USING STANDARD VALVE BOX INSTALLATION. SEE DETAIL 4 ON L6.

IF RUNOFF OCCURS THEN DURATION SHALL BE REDUCED BUT MULTIPLE RUN TIMES SHALL BE USED IN ORDER TO DELIVER REQUIRED AMOUNT OF WATER.

AIR VACUUM RELIEF VALVES SHOULD BE LOCATED AT HIGH POINT OF LATERALS AND MAIN. FINALIZE LOCATION IN THE FIELD.

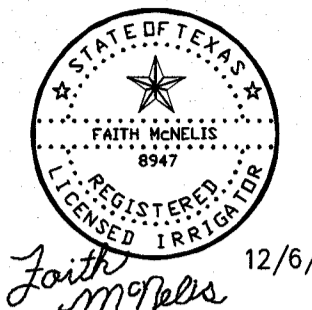


PLAN VIEW - IRRIGATION SCALE: 1" = 50'-0"

NOT FOR CONSTRUCTION

DUE TO PLANTING DENSITY, WATERING SCHEDULE MUST BE CLOSELY MONITORED INITIALLY TO DETERMINE PROPER QUANTITIES. IF NEEDED, CONTACT LANDSCAPE ARCHITECT AFTER FIRST WATERING TO EVALUATE SCHEDULE.

IRRIGATION PLANS ARE SCHEMATIC AND DO NOT INDICATE EXACT LOCATION AND LENGTH OF PIPE AND COMPONENTS.

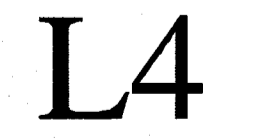


IRRIGATION IS REGULATED BY:
 PO BOX 13087
 AUSTIN, TEXAS 78711-3087
 TCEQ 512 239-6719
 CHAPTER 34, TEXAS WATER CODE
 IRRIGATOR'S LIC. #8947

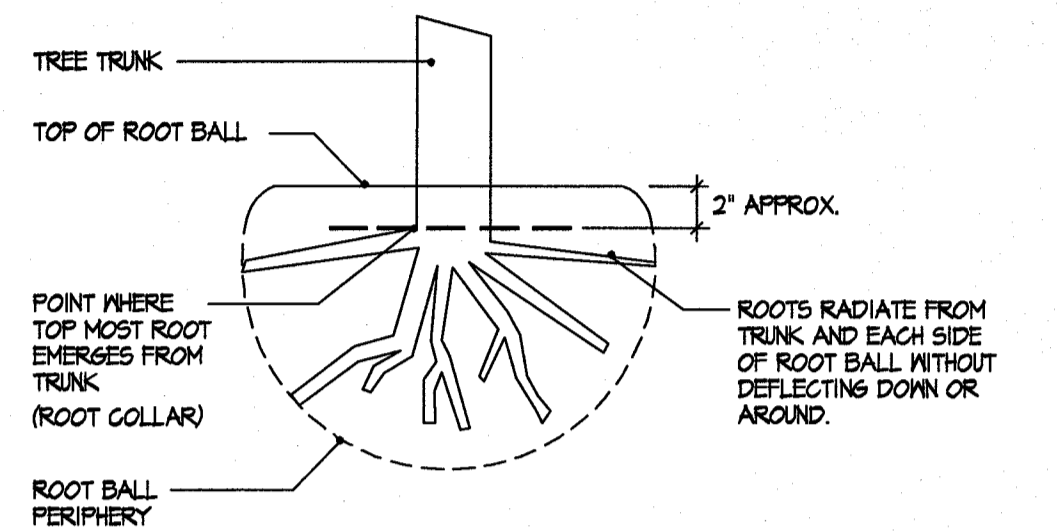
A LANDSCAPE DESIGN FOR
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 EL PASO, TEXAS



LISA MCNEILIS
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 LAS CRUCES, NEW MEXICO 88007
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IRRIGATION
 SHEET 4 OF 6



THE POINT WHERE THE TOP-MOST ROOTS EMERGE FROM THE TRUNK SHOULD BE WITHIN TOP 2' OF SUBSTRATE.

THE ROOT COLLAR AND THE ROOT BALL INTERIOR SHOULD BE FREE OF DEFECTS INCLUDING GIRDLING, KINKED, ASCENDING, AND STEM GIRDLING ROOTS.

STRUCTURAL ROOTS SHALL REACH THE PERIPHERY NEAR THE TOP OF THE ROOT BALL ON ALL SIDES OF THE TREE.

A RANDOM SAMPLE OF TREE ROOT BALLS MAY BE INSPECTED. THE CONTRACTOR MUST REMOVE THE SIDES OF THE BOX AS NEEDED FOR INSPECTION. THE INSPECTION MAY INVOLVE SOME REMOVAL OF ROOTS OR SOIL.

(A) ROOT OBSERVATION DETAIL
NOT TO SCALE

STAKING IS NOT REQUIRED BUT IF DEEMED NECESSARY THE STAKING DETAIL SHALL BE FOLLOWED. STAKING IS AT THE DISCRETION OF THE CONTRACTOR, LANDSCAPE ARCHITECT AND CITY OF EP REP. BUT SHOULD TREES REQUIRE STAKING THE CONTRACTOR SHALL INCLUDE THE COST OF THE STAKING IN THE COST OF THE TREE.

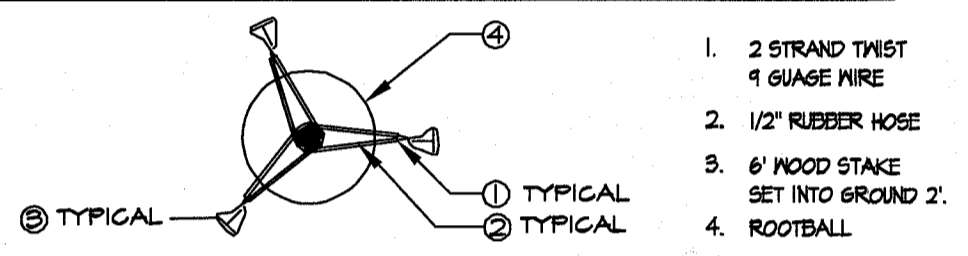
IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REMOVE STAKES AT END OF THE GUARANTEE PERIOD AT NO COST TO THE OWNER.

TREES THAT ARE DAMAGED DUE TO IMPROPER OR LACK OF STAKING MUST BE REPLACED BY THE CONTRACTOR AT NO COST TO THE OWNER.

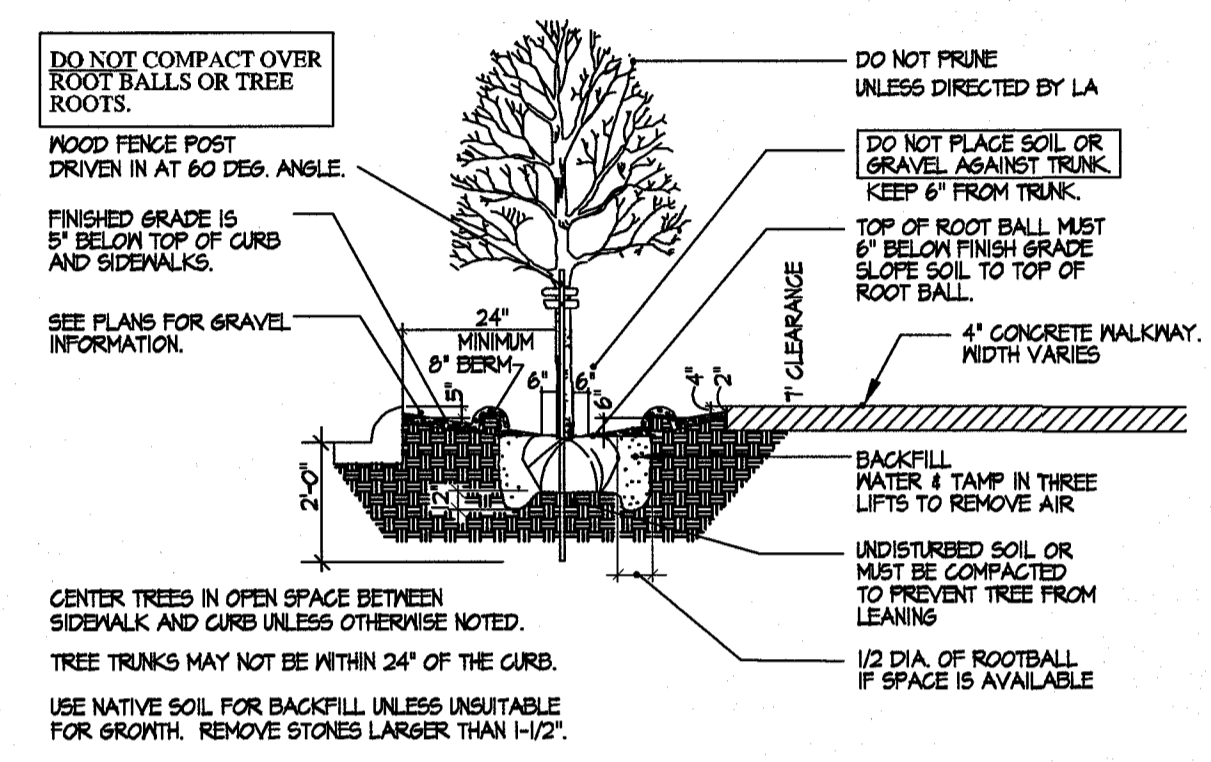
WIRES SHALL NOT BE TAUT BUT SHOULD ALLOW MOVEMENT OF 5 - 10 DEGREES FROM VERTICAL.

STAKES SHALL NOT BE DRIVEN INTO ROOTBALL OF TREES.

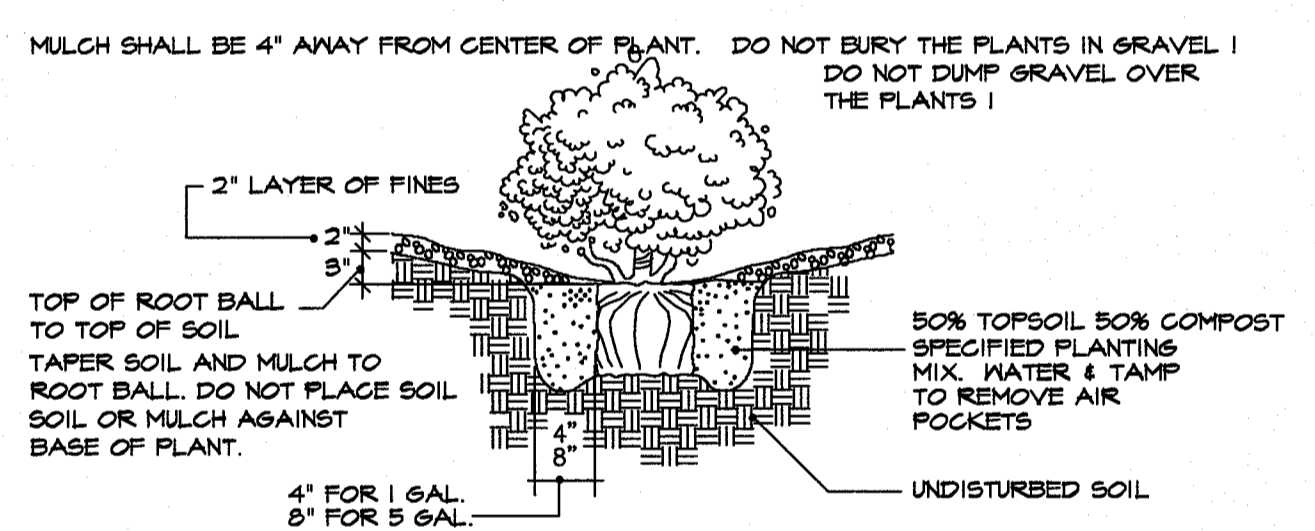
IF TREES ARE NOT PLUMB DUE TO LACK OF STAKING THE CONTRACTOR MUST STAKE TREE AND EXTEND THE WARRANTY 1 YEAR FROM DATE OF STAKING.



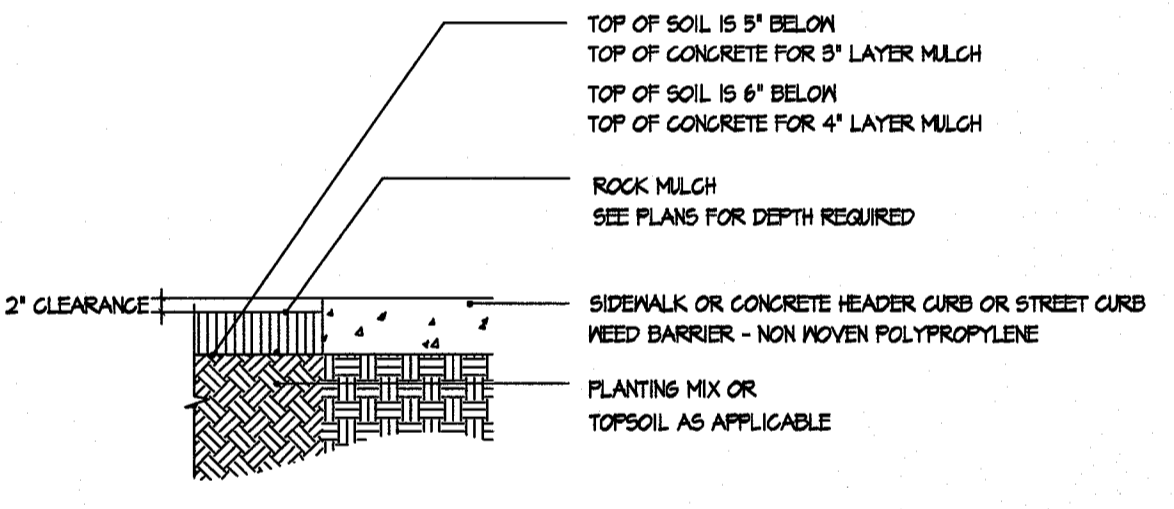
(B) TYPICAL TREE GUYING DETAIL - PLAN VIEW
NOT TO SCALE



(C) TYPICAL TREE PLANTING DETAIL - SECTION/ELEV.
NOT TO SCALE



(D) TYPICAL SHRUB AND GROUND COVER PLANTING DETAIL - SECTION
NOT TO SCALE

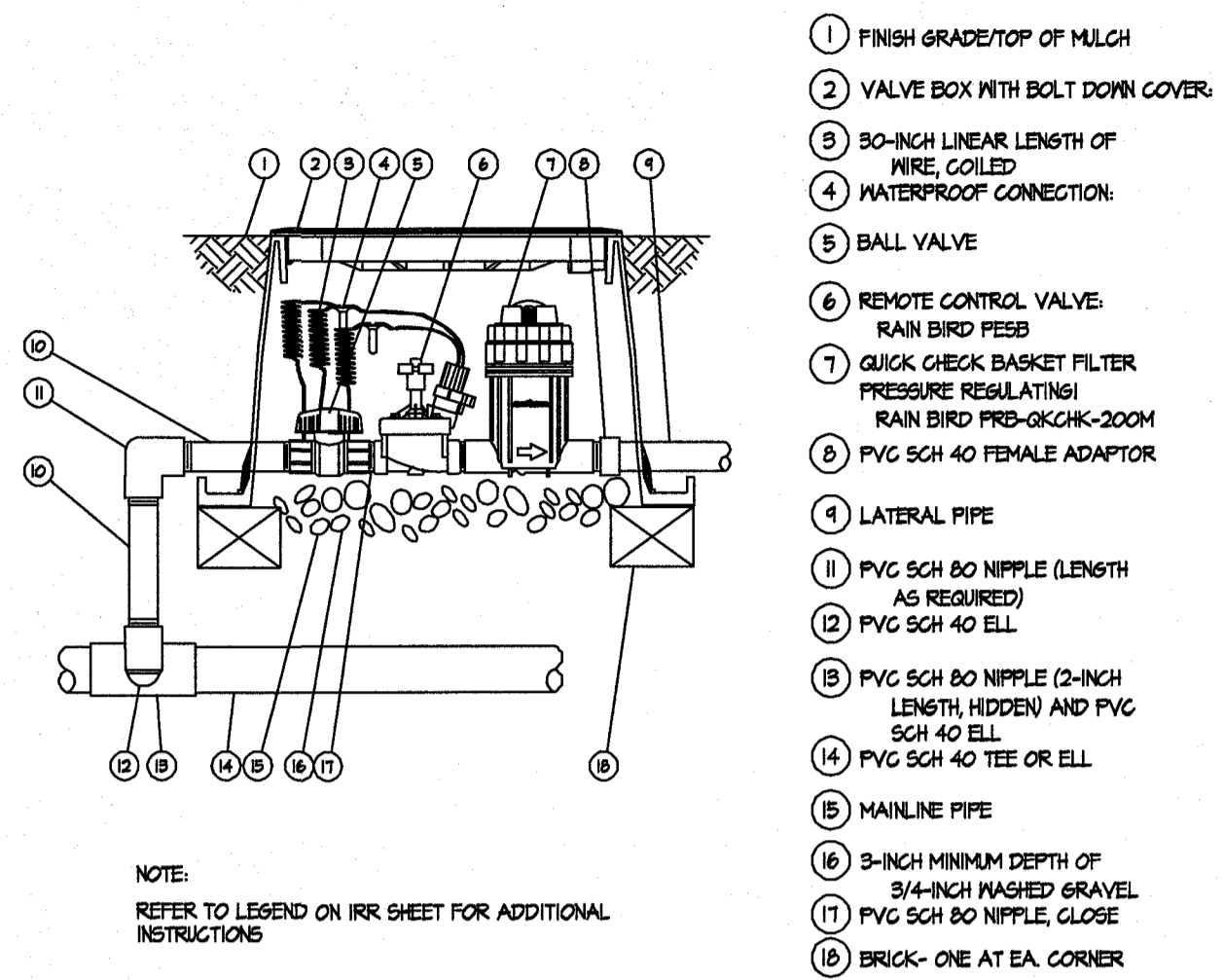


NOTE: TOP OF ROCK MULCH IS 2" BELOW CONCRETE SURFACES. USE DENITT PRO 5 WEED BARRIER.

WEED BARRIER MUST BE PINNED 120G ON SEAMS AND OVERLAPS AND 9'-0" OC THROUGHOUT.

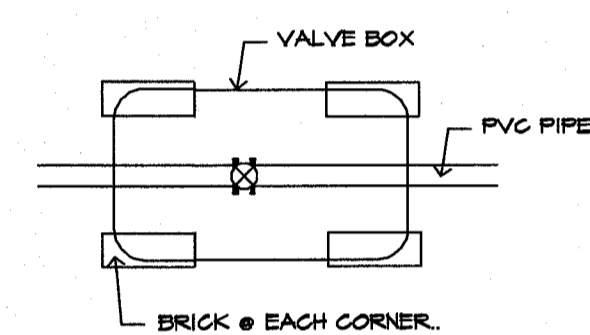
(E) GRAVEL AT CONCRETE DETAIL
NOT TO SCALE





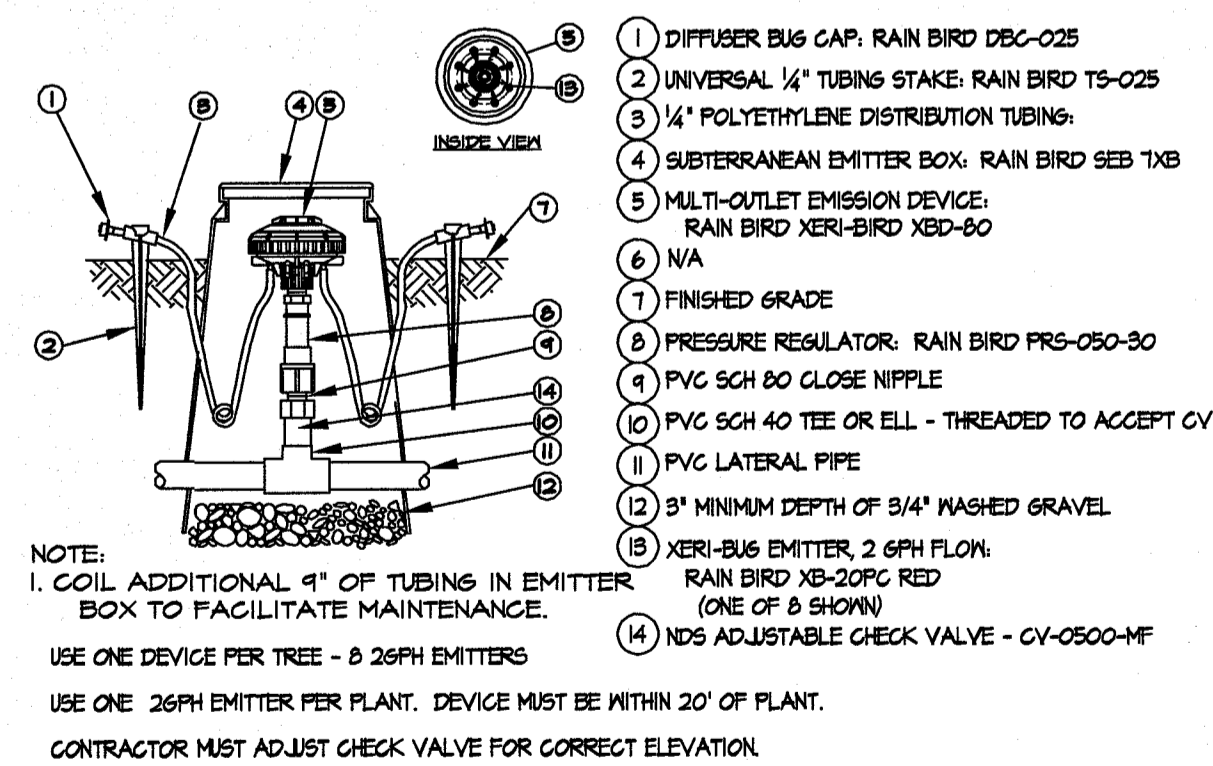
1 DRIP STATION CONTROL VALVE IN LOCKING VALVE BOX
NOT TO SCALE

THIS DETAIL SHALL TAKE PRECEDENCE TO ANY OTHER DETAIL SHOWING VALVE BOX INSTALLATION.

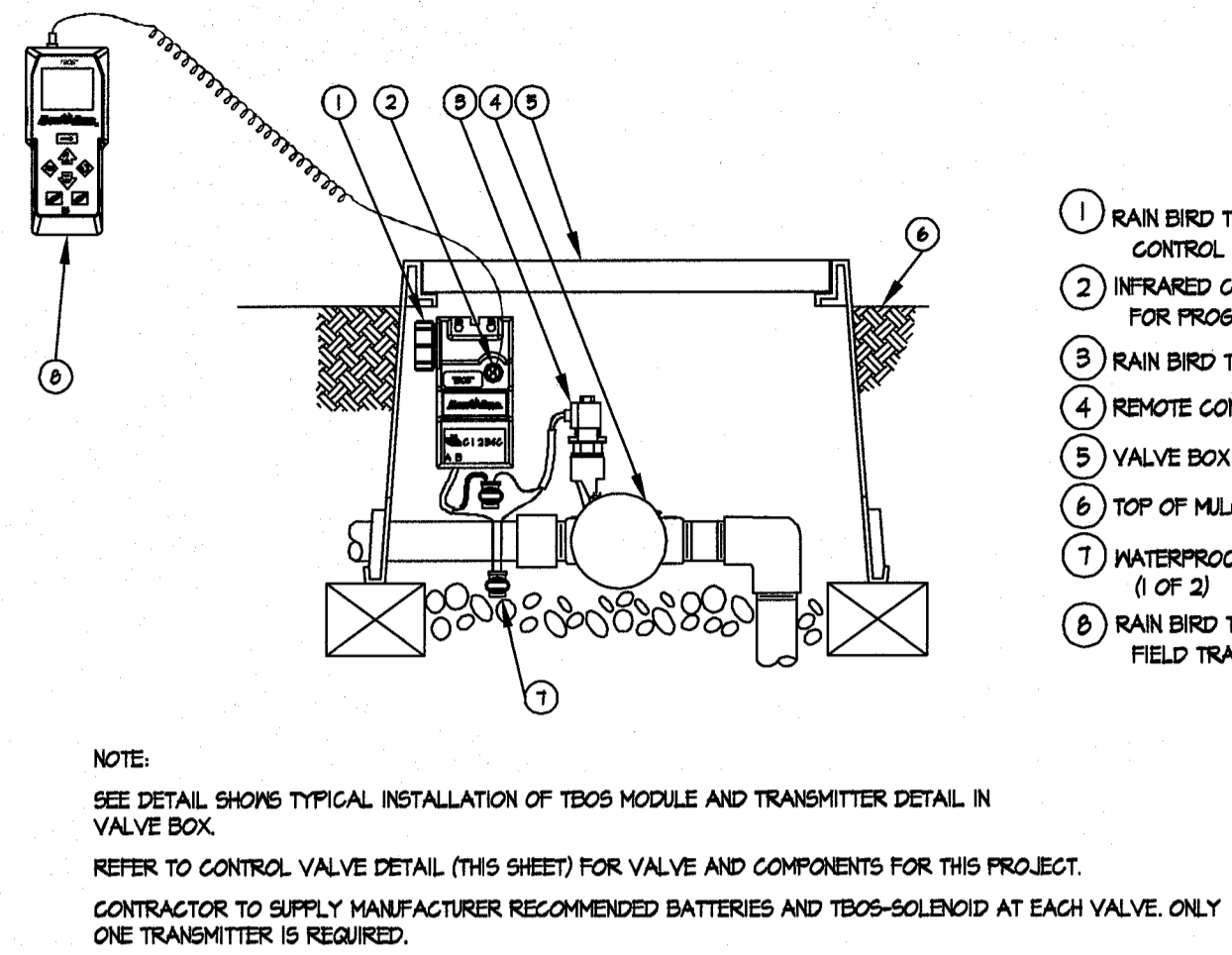


NOTE: BRICKS TO SIT ON NEED CLOTH ON UNDISTURBED SOIL. DISTURBED SOILS SHALL BE COMPACTED WITH TAMPER PRIOR TO SETTING NEED CLOTH & BRICKS. VALVE BOX AND EXTENSIONS TO SIT ON BRICKS. VALVE BOX AND EXTENSIONS TO HAVE A MINIMUM 2' CLEARANCE TO THE TOP OF PVC PIPE.

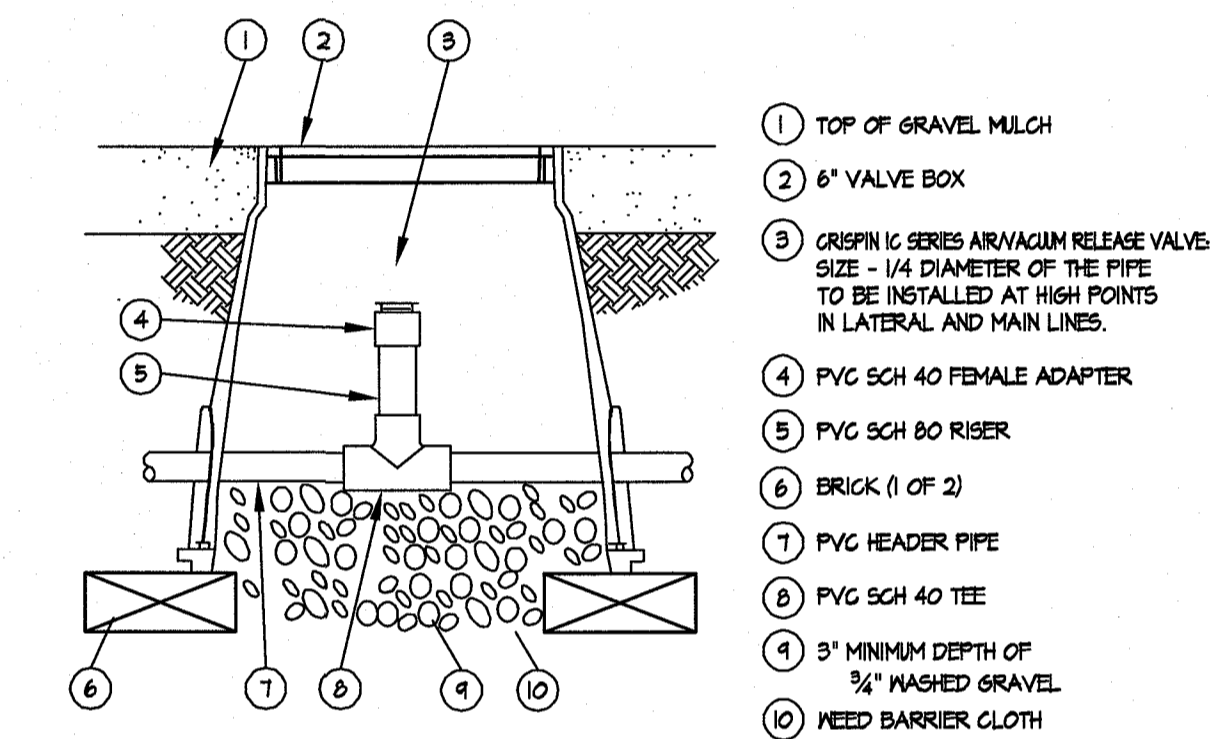
4 BRICK PLACEMENT FOR VALVE BOXES
NOT TO SCALE



8 XERI-BIRD 8 MULTI-OUTLET EMISSION DEVICE
NOT TO SCALE

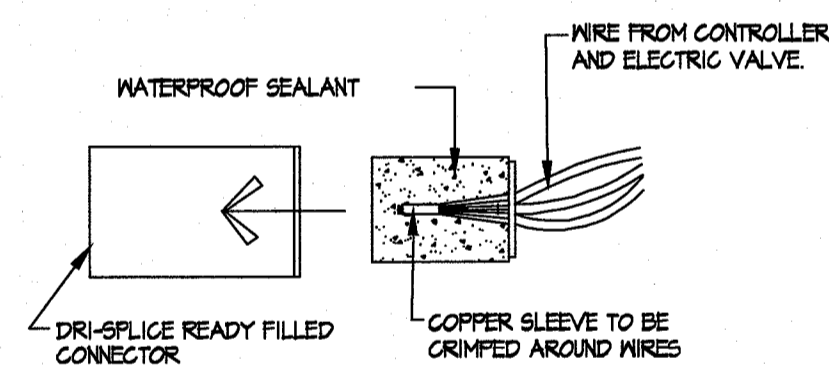


2 TBOS MODULE AND TRANSMITTER DETAIL
NOT TO SCALE

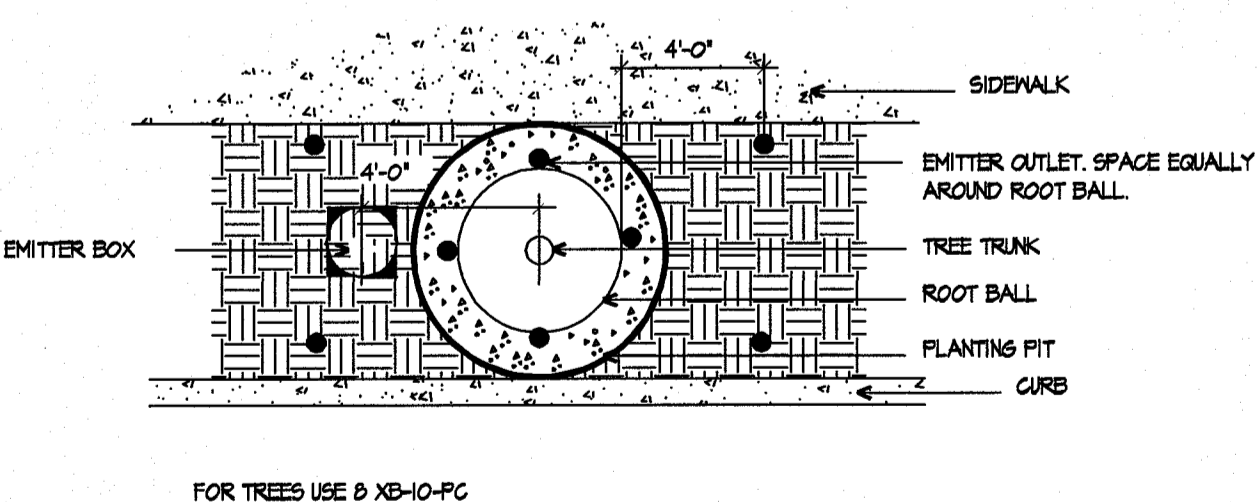


3 REDUCED PRESSURE BACKFLOW PREVENTER
NOT TO SCALE

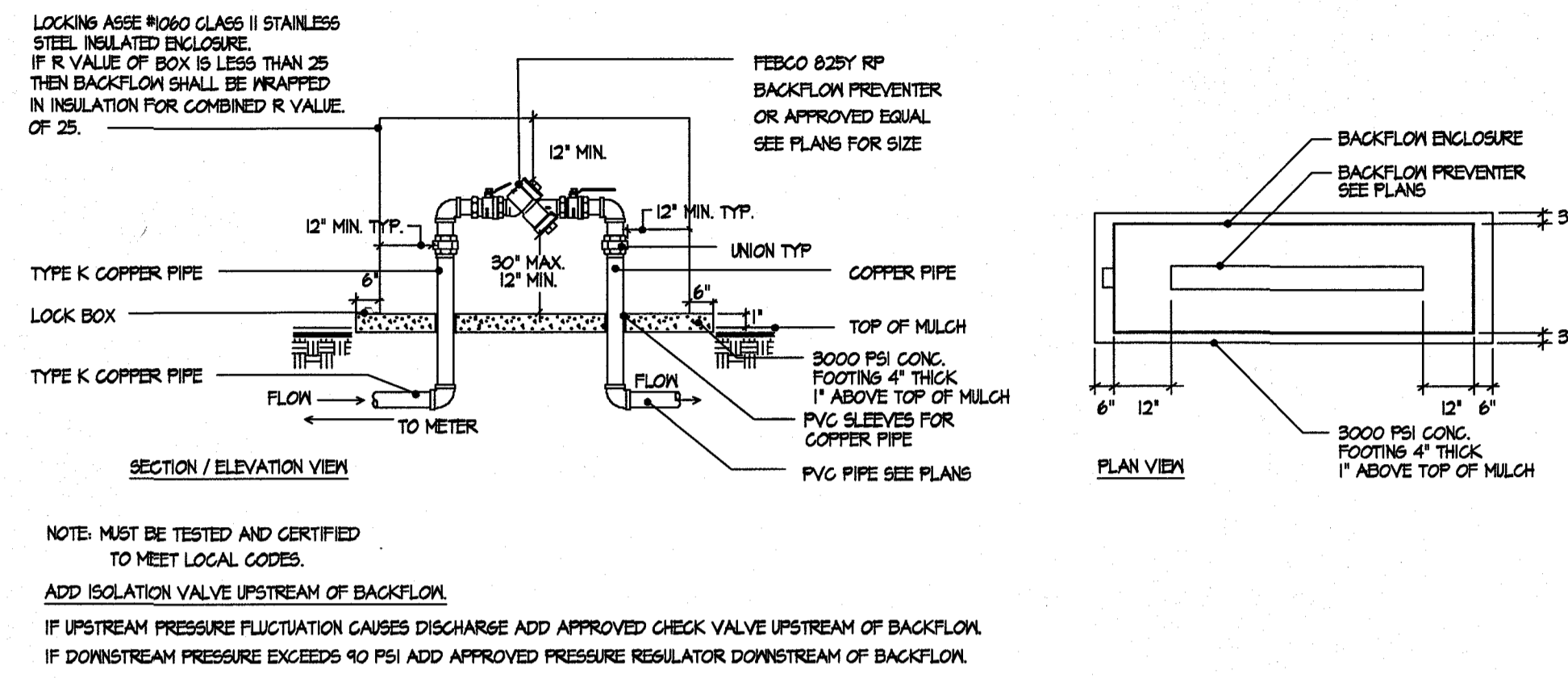
5 AIR VACUUM/RELIEF VALVE
NOT TO SCALE



9 WIRE CONNECTORS
NOT TO SCALE

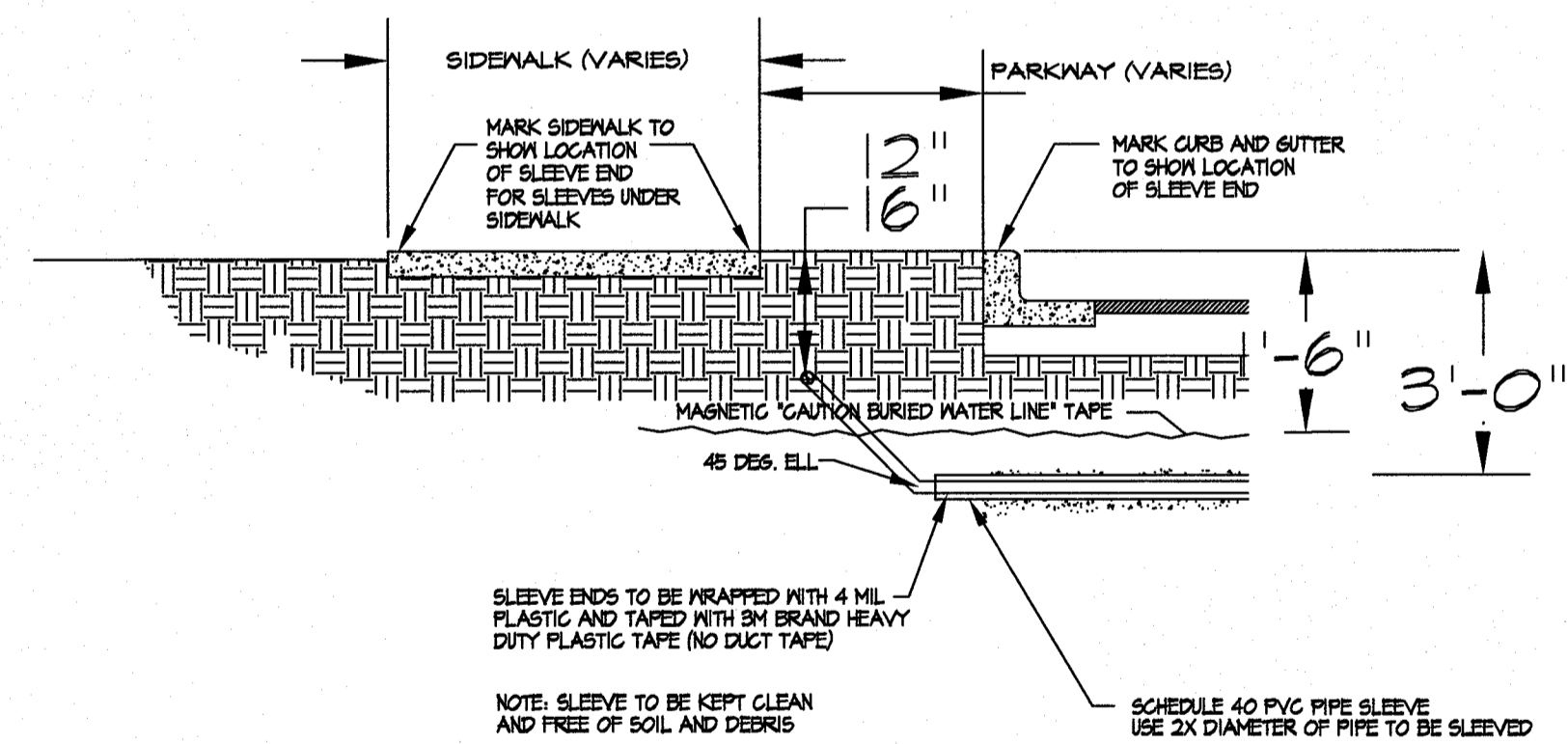


10 NEW TREE IN 4' TO 6' WIDE PARKWAY - EMITTER LAYOUT - PLAN VIEW
NOT TO SCALE



6 PIPE PLACEMENT
NOT TO SCALE

7 BLANK
NOT TO SCALE



11 TYPICAL SLEEVES BELOW STREETS
NOT TO SCALE



IRRIGATION IS REGULATED BY:
PO BOX 13087
AUSTIN, TEXAS 78711-3087
TQEQ 512-239-6719
CHAPTER 34, TEXAS WATER CODE
IRRIGATOR'S LIC. #8947



ELECTRICAL SYMBOL LEGEND

1. THESE SYMBOLS COMPRISE A STANDARD LIST; NOT ALL SYMBOLS MAY APPEAR ON THIS PROJECT.
2. ALL MOUNTING HEIGHTS ARE TO CENTER OF DEVICE ABOVE FINISHED FLOOR, MOUNTING HEIGHTS INDICATED ON ARCHITECTURAL WALL ELEVATIONS OR AS NOTED SPECIFICALLY ON THE DRAWINGS SHALL TAKE PRECEDENCE OVER MOUNTED HEIGHTS LISTED BELOW.

SYMBOL	DESCRIPTION	MTG. HT.
	DECORATIVE POLE LIGHTING FIXTURE, CAPITAL LETTER INDICATES FIXTURE TYPE, REFER TO FIXTURE SCHEDULE	
	JUNCTION BOX	
	PANELBOARD, REFER TO CORRESPONDING PANEL SCHEDULE	
	KEYED NOTE, REFER TO SPECIFIC NOTES ON SAME DRAWING	
	ELECTRICAL WIRING THRU WALL OR CEILING	
	PIPE RUN TO CONTROL PANEL, CROSS MARKS INDICATE QUANTITY OF WIRE, ARROWS INDICATE QUANTITY OF CIRCUITS, NUMBERS INDICATE PANEL AND CIRCUITS	
	CONCRETE GROUND PULLBOX, SEE ELECTRICAL SPECIFICATIONS	

ABBREVIATIONS

A OR AMP	AMPERE	NEUT	NEUTRAL
AFB	ABOVE FINISH FLOOR	NEMA	NATIONAL ELECTRICAL MANUFACTURER ASSOCIATION
AHU	AIR HANDLING UNIT	NO	NORMALLY OPEN
AL	ALUMINUM	PB	PLUSH/BUTTON
AC	ABOVE COUNTER	PC	PHOTOCELL
COND. C	CONDUIT	PH	PHASE
CKT	CIRCUIT	PNL	PANEL
CLG	CEILING	PRV	POWER-ROOF VENTILATION
CORN	CONNECTION	PVC	PLASTIC CONDUIT
CU	CUTTED	RECEP	RECEPTACLE
DISC	DISCONNECT	SW	SWITCH
EC	ELECTRICAL CONTRACTOR	TC	TIMBER CONTACTOR
EM	EMERGENCY	TEL	TELEPHONE
EQUIP	EQUIPMENTS	TRN	TRANSFORMER
EWC	ELECTRICAL WATER COOLER	TYP	TYPICAL
EWH	ELECTRICAL WATER HEATER	UG	UNDER GROUND
FA	FIRE ALARM	UH	UNIT HEATER
FLA	FULL LOAD AMPERES	UV	UNIT VENTILATOR
FLOUR	FLUORESCENT	V	VOLT
F	FUSE	VA	VOLT AMPERES
GC	GENERAL CONTRACTOR	W	WATTS
GI	GROUND FAULT INTERRUPTER	WP	WEATHER PROOF
GND	GROUND	WO	WITHOUT
GRS	GALVANIZED RIGID STEEL	WTR	WATER
HP	HORSE POWER	Y	WYE CONNECTED
HZ	HERTZ	Z	PHASE
JBOX	JUNCTION BOX		
KV	KILOVOLT		
KVA	KILOVOLT AMPERES		
KW	KILOWATT		
LTS	LIGHTING		
MOMECH	MECHANICAL CONTRACTOR		
MM	THOUSAND CIRCULAR MIL		
MTD	MOUNTED		
NC	NORMALLY CLOSED		
NEC	NATIONAL ELECTRIC CODE		

ELECTRICAL GENERAL NOTES

- GENERAL
- THE ELECTRICAL CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH THE PROJECT CONDITIONS.
 - THE ELECTRICAL CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH ALL ARCHITECTURAL AND MECHANICAL EQUIPMENT AND PROVIDE ELECTRICAL CONNECTIONS IN THIS CONTRACT FOR ANY ITEM REQUIRED.
 - THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH PROJECT PRIOR TO THE BID OPENING, TO ALLOW HIM TO SUBMIT A COMPLETE BID WITHIN THE SCOPE OF THE DRAWINGS AND SPECIFICATIONS. ANY QUESTIONS ARISING DURING THE BID PERIOD, IN REGARD TO THE CONTRACTOR'S FUNCTIONS, THE SCOPE OF THE WORK OR ANY OTHER ISSUE RELATED TO THIS PROJECT SHALL BE BROUGHT UP DURING THE BID PERIOD WITH THE ENGINEER FOR CLARIFICATION PRIOR TO AWARD OF CONTRACT.
 - IT WILL BE THE CONTRACTOR'S OBLIGATION TO INCLUDE, IN THEIR BID, THE COSTS FOR INSTALLING PULL BOXES, JUNCTION BOXES PROVIDING MISCELLANEOUS COVERS, WORK WITH OTHER DISCIPLINES WHERE THE CONTRACT INVOLVES ELECTRICAL POWER OR CONTROL CONNECTIONS, SWITCHES, ETC. ALL OF THIS WORK SHALL BE PART OF THIS CONTRACT.
 - LOCATION OF EQUIPMENT AND OTHER DEVICES SHOWN ON THE PLANS ARE APPROXIMATE AND SHALL BE FIELD VERIFIED. COORDINATE WITH ARCHITECTURAL DOCUMENTS FOR EXACT LOCATIONS.
 - THE CONDUIT RUNS AS SHOWN ON PLANS INDICATE APPROXIMATE ROUTING, EXACT LOCATION OF CONDUIT RUNS SHALL BE AS FIELD CONDITIONS DICTATE.
 - CONTRACTOR SHALL INSTALL PULL AND JUNCTION BOXES WHEREVER REQUIRED BY N.E.C. OR JOB CONDITIONS. ALL NEW WIRING SHALL BE TAGGED AT ALL PULL BOXES, JUNCTION BOXES, EQUIPMENT BOXES AND CABINETS WITH APPROVED PLASTIC TAGS, ACTION CRAFT, BRADY OR APPROVED EQUAL.
 - SHOULD CONTRACTOR AT ANY TIME NOTICE THAT THE ACTUAL FIELD CONDITIONS DO NOT CORRESPOND TO THE INFORMATION GIVEN ON THE DRAWINGS, THEN IT WILL BE THEIR RESPONSIBILITY TO NOTIFY THE ENGINEER FOR CLARIFICATION, PRIOR TO COMMENCING SUCH WORK.
 - IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE WITH ALL TRADES FOR THE EXACT LOCATION OF EQUIPMENT AND APPURTENANCES THAT REQUIRE ELECTRICAL CONNECTIONS.
 - CONTRACTOR SHALL MAKE AS-BUILT DRAWINGS DOCUMENTING ANY AND ALL WIRING AND EQUIPMENT CONDITIONS AND CHANGES WHILE COMPLETING THIS CONTRACT. PROVIDE UPDATED TYPEWRITTEN DIRECTORIES FOR ALL CONTROL PANELS.
 - REFER TO RISER DIAGRAM FOR DETAILED LAYOUTS OF ELECTRICAL GEAR.
 - AFTER THE CONTRACTOR HAS RECEIVED APPROVED SHOP DRAWINGS FOR THE ELECTRICAL DISTRIBUTION EQUIPMENT, THEY SHALL SUBMIT SCALED LAYOUTS OF ALL ELECTRICAL EQUIPMENT TO THE ENGINEER FOR APPROVAL TO ENSURE THAT ALL CLEARANCE REQUIREMENTS ARE MET. THIS SUBMITTAL SHALL BE PROVIDED WITH SUFFICIENT TIME SO AS NOT TO INTERFERE WITH THE TIMELY EXECUTION OF THE ROUGH-IN WORK THAT WILL BE REQUIRED.
 - MOUNTING HEIGHTS INDICATED ON THE DRAWINGS ARE APPROXIMATE. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH OTHER TRADES FOR EXACT HEIGHT REQUIRED.
 - CONTRACTOR SHALL SAW CUT AND PATCH ASPHALT, CONCRETE OR OTHER MATERIAL ENCOUNTERED AS REQUIRED TO INSTALL NEW UNDERGROUND RACEWAY. REFER TO ARCHITECTURAL/CIVIL REGARDING PATCHING REQUIREMENTS.
 - USE CLAND RING COMPRESSION THREADED FITTINGS WITH INSULATED THROAT FOR EMT CONDUIT, DOUBLE SET SCREW FITTINGS ARE ACCEPTABLE FOR 2-1/2" CONDUIT AND LARGER ONLY.
 - COORDINATE WITH EL PASO ELECTRICAL FOR EXACT LOCATION OF ELECTRICAL SERVICE BEFORE DOING ANY WORK. FINAL DETERMINATION BY EL PASO ELECTRIC.
 - ALL EASEMENTS SHALL BE PER EPDOT SECTION 19.16010.

ELECTRICAL SPECIFICATIONS

- THE ELECTRICAL WORK SHALL BE PERFORMED IN STRICT ACCORDANCE WITH THE APPLICABLE AND ADOPTED PROVISIONS OF THE NATIONAL ELECTRICAL CODE, ENERGY CODE AS ADOPTED AND INTERPRETED BY THE STATE OF TEXAS, AND THE NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) REGULATIONS, CURRENT ADOPTED EDITION REGARDING MECHANICAL SYSTEMS, FIRE SYSTEMS AND ELECTRICAL SYSTEMS. ALL MATERIALS AND LABOR NECESSARY TO COMPLY WITH RULES, REGULATIONS AND ORDINANCES SHALL BE PROVIDED, WHERE THE DRAWINGS INDICATE MATERIALS OR METHODS OF CONSTRUCTION IN EXCESS OF REQUIREMENTS, THE EPDOT, ARCHITECT AND ENGINEERS FREE AND HARMLESS FROM LIABILITY OF ANY NATURE OR KIND ARISING FROM HIS FAILURE TO COMPLY WITH ALL APPLICABLE CODES AND ORDINANCES.
- ALL WORK SHALL CONFIRM WITH FEDERAL, STATE, AND LOCAL CODES, RULES, AND REGULATIONS. ALL WORK SHALL BE PERFORMED BY A LICENSED CONTRACTOR IN A FIRST CLASS WORKMANLIKE MANNER. THE SYSTEMS SHALL BE INSTALLED COMPLETE AND FULLY OPERATIVE UNLESS OTHERWISE INDICATED.
- ALL MATERIALS SHALL BE NEW EXCEPT WHERE NOTED OTHERWISE. ALL WORK SHALL PRESENT A NEAT AND MECHANICAL APPEARANCE WHEN COMPLETED AND SHALL BE EXECUTED IN A WORKMANLIKE MANNER.
- REQUIRED INSURANCE SHALL BE PROVIDED BY THIS CONTRACTOR FOR PROTECTION AGAINST PUBLIC LIABILITY AND PROPERTY DAMAGE FOR THE DURATION OF WORK. CONTRACTOR SHALL SECURE AND PAY ALL PERMITS, FEES, INSPECTIONS, AND TESTS UNLESS OTHERWISE INDICATED. COORDINATE WITH ARCHITECT, ENGINEER OR EPDOT, SUBSTITUTIONS REQUESTED BY THE CONTRACTOR SHALL BE PAID FOR BY THE CONTRACTOR.
- CONTRACTOR SHALL SUBMIT SPECIFIC INFORMATION ON LIST OF EQUIPMENT AND PRINCIPAL MATERIAL SPECIFIED. CONTRACTOR SHALL INDICATE AND/OR PROVIDE NAME OF MANUFACTURER, CATALOG NUMBER, AND MODEL NUMBER, AND SUCH SUPPLEMENTARY INFORMATION AS NECESSARY FOR EVALUATION. MINIMUM OF SIX (6) COPIES, OR AS DIRECTED BY THE ENGINEER, OF EACH SECTION SHALL BE SUBMITTED AND SHALL INCLUDE ALL ITEMS MENTIONED BY MODEL NUMBER AND/OR MANUFACTURER'S NAME IN THE SPECIFICATION OR IN SCHEDULES ON THE DRAWINGS. SUBMIT (3) SEPARATE COPIES TO EPDOT FOR APPROVAL.
- PROVIDE THE EPDOT WITH THREE (3) COPIES OF ALL INSTALLATIONS INSTRUCTIONS, PRODUCT DATA SUBMITTAL INFORMATION, WARRANTIES, CONTACT INFORMATION DURING WARRANTY PERIOD AND BALANCING REPORTS IN 3-RING BINDERS.
- ALL SYSTEMS AND COMPONENTS SHALL BE APPROVED FOR THE PURPOSE FOR WHICH INSTALLED. ALL EQUIPMENT AND MATERIALS SHALL BE NEW AND FROM ESTABLISHED AMERICAN SUPPLIERS UNLESS OTHERWISE INDICATED.
- THE CONTRACTOR SHALL COORDINATE WITH EPDOT, ARCHITECT, AND/OR ENGINEER ANY WORK THAT HAS THE POTENTIAL TO HINDER ELECTRICAL SERVICES TO AREA OUTSIDE OF THIS CONTRACT. ALL SHUT-DOWNS OR TIERS RELATING TO THESE SYSTEMS SHALL BE SCHEDULED AND SUBMITTED IN WRITING TO BE APPROVED BY THE EPDOT'S FACILITY MANAGEMENT, EPDOT, ARCHITECT, OR ENGINEER. CONTRACTOR SHALL SUBMIT IN WRITING A SCHEDULE FOR PHASING OF CONSTRUCTION THAT INDICATES AREAS OF FIRST PRIORITY DURING EACH PHASE AND ANTICIPATED COMPLETION TIMES. SCHEDULES SHALL BE SUBMITTED A MINIMUM OF ONE WEEK PRIOR TO COMMENCING WORK. FACILITY MANAGEMENT, EPDOT, ARCHITECT OR ENGINEER SHALL REVIEW THESE SCHEDULES AND NOTIFY CONTRACTOR OF ACCEPTANCE PRIOR TO COMMENCEMENT OF WORK.
- CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS AND PROVIDE A WRITTEN REPORT TO THE ARCHITECT OFFICE. THIS REPORT SHALL DESCRIBE EXISTING DAMAGE OR OTHER CONDITIONS THAT MAY INTERFERE WITH THIS PROPOSED NEW WORK. THIS SITE SURVEY SHALL ALSO INCLUDE VERIFICATION OF SIZES, LOCATIONS, AND CONDITIONS OF EXISTING UTILITIES.
- ALL WIRING SHALL BE RUN IN RIGID CONDUIT ABOVE GROUND OR PVC SCHEDULE 40 BELOW GRADE, INSTALLED IN ACCORDANCE WITH THE NEC. ALUMINUM CONDUIT SHALL NOT BE USED UNLESS SPECIFICALLY INDICATED ON THE DRAWINGS. CONDUIT INSTALLED UNDERGROUND IN CONTACT WITH EARTH OR FILL SHALL BE RIGID STEEL WITH AN 18 MIL PVC COATING FITTINGS FOR ALL ELBOWS AND RISERS. EMT OR ALUMINUM CONDUIT SHALL NOT BE INSTALLED IN CONCRETE SLABS OR BELOW GRADE. MINIMUM SIZE - 1" INCH. ALL CONDUITS CONTAINING POWER CONDUCTORS SHALL CONTAIN AN EQUIPMENT GROUND CONDUCTOR SIZED IN ACCORDANCE WITH THE NEC. A #9 FULL WIRE SHALL BE INSTALLED IN EACH EMPTY CONDUIT.
- INCREASE BRANCH CIRCUIT WIRE SIZE AS REQUIRED TO PREVENT EXCESSIVE VOLTAGE DROP IF CONTRACTOR DETERMINES LENGTHS WERE GREATER THAN THOSE ON VOLTAGE DROP TABLE.
- THE CONDUIT SYSTEM AND NEUTRAL CONDUCTOR OF THE WIRING SYSTEM SHALL BE GROUNDED IN ACCORDANCE WITH THE NEC AND ALL LOCAL CODES AND ORDINANCES. GROUNDING AND BONDING SHALL COMPLY WITH ALL THE APPLICABLE REQUIREMENTS OF THE NEC.
- USE THE FOLLOWING WIRING COLOR CODE:

PHASE A	BLACK	277/480
PHASE B	BROWN	
PHASE C	RED	ORANGE
NEUTRAL	WHITE	GRAY
GROUND	GREEN	GREEN
SWITCH	PINK/PURPLE	PINK/PURPLE
- ALL NEUTRAL CONDUCTOR SHALL BE GRAY OR WHITE IN COLOR DEPENDING ON VOLTAGE AND ALL GROUNDING CONDUCTORS SHALL BE GREEN IN COLOR FOR ALL SIZES. DO NOT PHASE CONDUCTORS WITH ELECTRICAL TAPE FOR NEUTRAL AND GROUND.
- BURIED ELECTRICAL CONDUITS SHALL BE MARKED PER CODE REQUIREMENTS WITH UNDERGROUND WARNING TAPE 18" BELOW FINISHED GRADE. TAPE SHALL BE 4" WIDE COLORED RED WITH SUITABLE WARNING LEGEND PER ASME A13.1.
- CONTRACTOR TO PROVIDE BLANK COVER FOR ALL J-BOXES AND WEATHERPROOF COVERS FOR J-BOXES IN WET LOCATIONS.
- ENCLOSURES, BOXES AND COVERS ARE REQUIRED TO CONFORM TO ALL TEST PROVISIONS OF THE MOTS CURRENT ANSI/ICSE77. WHEN MULTIPLE TIERS ARE SPECIFIED THE BOXES MUST PHYSICALLY ACCOMMODATE AND STRUCTURALLY SUPPORT COMPATIBLE COVER WHILE POSSESSING THE HEIGHT TIER RATING. ALL COVERS ARE REQUIRED TO HAVE THE TIER LEVEL RATINGS EMBOSSED ON THE SURFACE. IN NO ASSEMBLY CAN THE COVER DESIGN LOAD EXCEED THE DESIGN LOAD OF THE BOX. ALL COMPONENTS IN AN ASSEMBLY (BOX & COVER) ARE MANUFACTURED USING MATCHED SURFING TOOLING. INDEPENDENT THIRD PARTY VERIFICATION OR TEST REPORTS STAMPED BY A REGISTERED PROFESSIONAL ENGINEER CERTIFYING THAT ALL TEST PROVISIONS OF THIS SPECIFICATION HAVE BEEN MET ARE REQUIRED WITH EACH SUBMITTAL. CONTRACTOR TO ENSURE EXACT LOCATION AND PLACEMENT OF BOXES AND COVERS AND PROVIDE THE RATING REQUIRED BY LOCAL AND NATIONAL CODES.
- ALL DETAILS AND SCHEMATICS ARE GRAPHICAL REPRESENTATIONS OF REQUIREMENTS FOR PROPER INSTALLATION AND DRAMATIC IN NATURE. CONTRACTOR TO COORDINATE WITH MANUFACTURER, SUPPLIERS, AND WIRING DIAGRAMS OF EACH EQUIPMENT. PROVIDE A FULL WORKING SYSTEM.
- DIMENSIONS SHOWN ARE APPROXIMATE AND A GEOGRAPHICAL REPRESENTATION AND ARE NOT TO BE SCALED FROM DRAWINGS. FIELD VERIFY ALL DIMENSIONS.
- GROUND BOXES
 - GROUND BOXES 16X30X24 INCHES (WXLXD) OR SMALLER SHALL BE POLYMER CONCRETE OF TGIH TYPE REQUIRED BY THE DESCRIPTIVE CODE SHOWN ELSEWHERE. LARGER GROUND BOXES SHALL BE AS SHOWN ELSEWHERE. ON PLANS ALL GROUND BOXES AND COVERS SHALL BE PERMANENTLY MARKED EITHER BY IMPRESS INK, WITH MANUFACTURER'S MODEL NUMBER AND MANUFACTURER'S NAME OR LOGO.
 - COVERS SHALL BE BOLTED DOWN, AND BOLT HOLES IN THE BOX SHALL BE ARRANGED TO DRAIN DIRT.
 - GROUND BOX TYPES A, SHALL MEET THE FOLLOWING REQUIREMENTS:
 - GROUND BOXES AND COVERS SHALL BE MANUFACTURED FROM POLYMER CONCRETE REINFORCED WITH CONTINUOUS STRANDS OF WOVEN OR STITCHED ROXBOLITE FIBERGLASS CLOTH. THE POLYMER CONCRETE SHALL BE MADE FROM CATALYZED POLYESTER RESIN, SAND AND AGGREGATE, AND SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 11,000 PSI. POLYMER CONCRETE CONTAINING CHOPPED FIBERGLASS OR FIBERGLASS REINFORCED PLASTIC IS NOT ACCEPTABLE.
 - MINIMUM INSIDE DIMENSIONS SHALL BE AS FOLLOWS (WIDTH X LENGTH X DEPTH) TYPE A SHALL BE 11.5 INCHES X 21 INCHES X 10 INCHES (122311)
 - BOTTOM EDGE OF BOX OR EXTENSION SHALL BE FOOTED WITH A MINIMUM 1 1/4 INCH FLANGE.
 - GROUND BOXES SHALL WITHSTAND 600lbs. PER SQ. FT. APPLIED OVER THE ENTIRE SIDEWALL WITH LESS THAN 1/4 INCH DEFLECTION PER FOOT LENGTH OF BOX. GROUND BOXES AND COVERS SHALL WITHSTAND A TEST LOADING OF 20,000lbs. OVER A 10 INCH BY 10 INCH AREA CENTERED ON THE COVER WITH LESS THAN 1/2 INCH DEFLECTION. GROUND BOX AND COVERS SHALL MEET WESTERN UNDERGROUND STANDARDS 3.3. MANUFACTURER SHALL SUPPLY CERTIFICATION BY AN INDEPENDENT LABORATORY OR SEALED BY A TEXAS LICENSED PROFESSIONAL ENGINEER.
 - COVERS SHALL BE 2 INCH (NOMINAL) THICK POLYMER CONCRETE. ALL HARDWARE SHALL BE STAINLESS STEEL. COVER SHALL BE SECURED WITH TWO 1/2 INCH STAINLESS STEEL BOLTS. BOLTS SHALL BE SELF-RETAINING AND SHALL WITHSTAND A MINIMUM OF 70 FT-LBS. TORQUE AND SHALL HAVE A MINIMUM 750 LBS. STRAIGHT PULL OUT STRENGTH. NUTS SHALL BE FLOATING AND SHALL PROVIDE A MINIMUM OF 1/2 INCH MOVEMENT FROM THE CENTER OF THE NUT. COVERS SHALL BE SKID RESISTANT, MINIMUM OF .05 COEFFICIENT OF FRICTION. COVERS SHALL BE INTERCHANGEABLE BETWEEN MANUFACTURERS SYSTEM AND SHALL CONFORM TO THE DIMENSIONS SHOWN HEREIN. UNLESS OTHERWISE APPROVED BY ENGINEER, COVER SHALL BE LEGIBLY IMPRINTED WITH THE FOLLOWING WORDS IN MINIMUM 1 INCH LETTERS:
 - GROUND BOXES CONTAINING WIRING FOR TRAFFIC SIGNALS SHALL BE LABELED, "DANGER HIGH VOLTAGE TRAFFIC SIGNAL".
 - GROUND BOXES CONTAINING WIRING FOR ILLUMINATION SYSTEMS SHALL BE LABELED, "DANGER HIGH VOLTAGE ILLUMINATION".
 - GROUND BOXES CONTAINING WIRING FOR TRAFFIC MANAGEMENT SYSTEMS SHALL BE LABELED, "DANGER HIGH VOLTAGE TRAFFIC MANAGEMENT".
 - GROUND BOXES CONTAINING WIRING FOR SIGN ILLUMINATIONS SYSTEMS SHALL BE LABELED, "DANGER HIGH VOLTAGE SIGN ILLUMINATION".
 - GROUND BOXES CONTAINING WIRING FOR TRAFFIC SIGNAL ALSO CONTAINING ILLUMINATION, POWERED BY THE SIGNAL ELECTRICAL SERVICE, SHALL BE LABELED, "DANGER HIGH VOLTAGE TRAFFIC SIGNAL".
 - GROUND BOXES SHALL BE SET ON A 9 INCH MINIMUM BED OF AGGREGATE FROM 3/4" UP TO 2" IN SIZE. AGGREGATE SHALL BE IN PLACE PRIOR TO SETTING BOX AND CONDUITS SHALL BE CAPPED. ANY GRAVEL OR DIRT IN CONDUIT SHALL BE REMOVED.
 - WHEN REQUIRED BY ITEM DESCRIPTIVE CODE, CONSTRUCTION OF AN APRON ENCASES A GROUND BOX INCLUDING CONCRETE REINFORCING STEEL SHALL NOT BE PAID FOR DIRECTLY BUT SHALL BE SUBSIDIARY TO THE GROUND BOX. REINFORCING STEEL MAY BE FIELD BENT. CONCRETE FOR APRONS SHALL BE CONSIDERED MISCELLANEOUS CONCRETE FOR TESTING PURPOSES. APRONS SHALL BE CAST IN PLACE.
 - CONDUIT HOLES MAY BE CUT IN THE WALLS OF TYPE B & D BOXES AT LEAST 18 INCHES BENEATH THE COVER.

CITY MONUMENT AT POINT OF CURVE CENTERING MONTECELLO BLVD. MONTECELLO UNIT 4B (STATION 0+42.81). ELEVATION: 4107.13(CITY DATUM)

MONTECELLO UNIT 4B
BEING A PORTION OF TRACTS 4A AND 6A, A.F. MILLER SURVEY 216, AND PORTION OF TRACT 21, JOHN BARKER SURVEY 10, CITY OF MONTECELLO, COUNTY, TEXAS CONTAINING .12,6862 ACRES



RONALD R. BOHANNAN
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		DATE	
		DESIGNED BY	
		DRAWN BY	
		DRAWING NAME	
		CHECKED BY	

E1
SHT 26 OF 28

CAROLINA LED SERIES
CR-GLASS-BAND-CN-ROTO-LED-TLPC

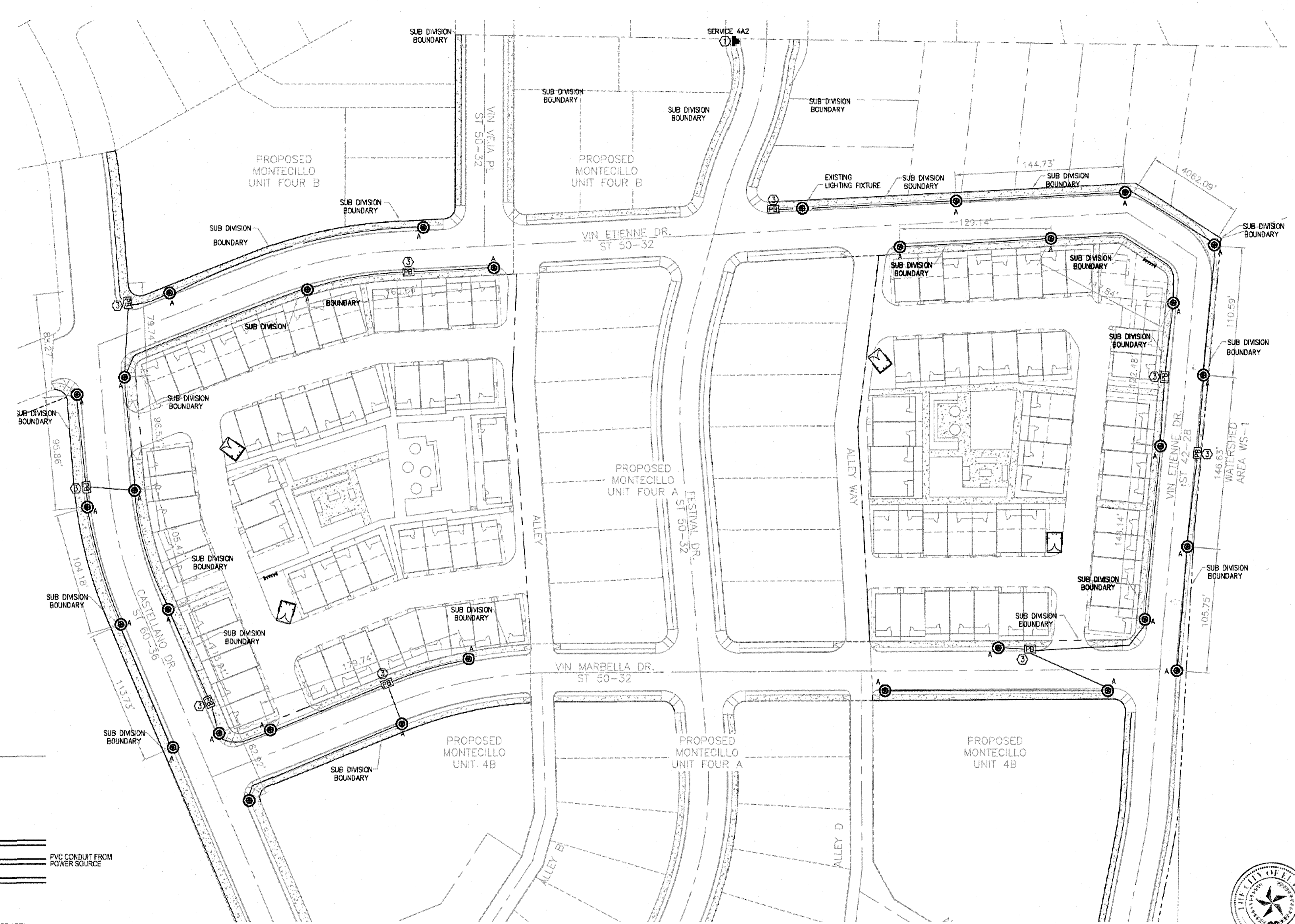
NILAND/LED
OSRAM SYLVANIA QUICK 60 WARRANTY ON PARTS AND LABOR

NILAND-17 SERIES
OSI POLE SPECIFICATION

NILAND/LED
OSRAM SYLVANIA QUICK 60 WARRANTY ON PARTS AND LABOR

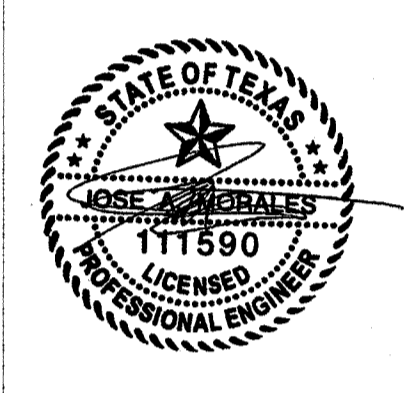
NILAND-17 SERIES
ORDERING GUIDE

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OSRAM SYLVANIA QUICK 60 WARRANTY ON PARTS AND LABOR



CITY MONUMENT AT POINT OF CURVE CENTERLINE MONTECILLO BLVD. ADJOINING LOT 1, BLOCK 1, MONTECILLO UNIT ONE (STATION 0+82.81). (ELEVATION: 4107.13)(CITY DATUM)

MONTECILLO UNIT 4B
 BEING A PORTION OF TRACTS 4A AND 6A, A.F. MILLER SURVEY, PART 16, AND PORTION OF A.F. MILLER SURVEY, PART 16, AND PORTION OF A.F. MILLER SURVEY, PART 16, ADJOINING LOT 1, BLOCK 1, MONTECILLO UNIT ONE, CITY OF EL PASO, EL PASO COUNTY, TEXAS CONTAINING: 12.686± ACRES



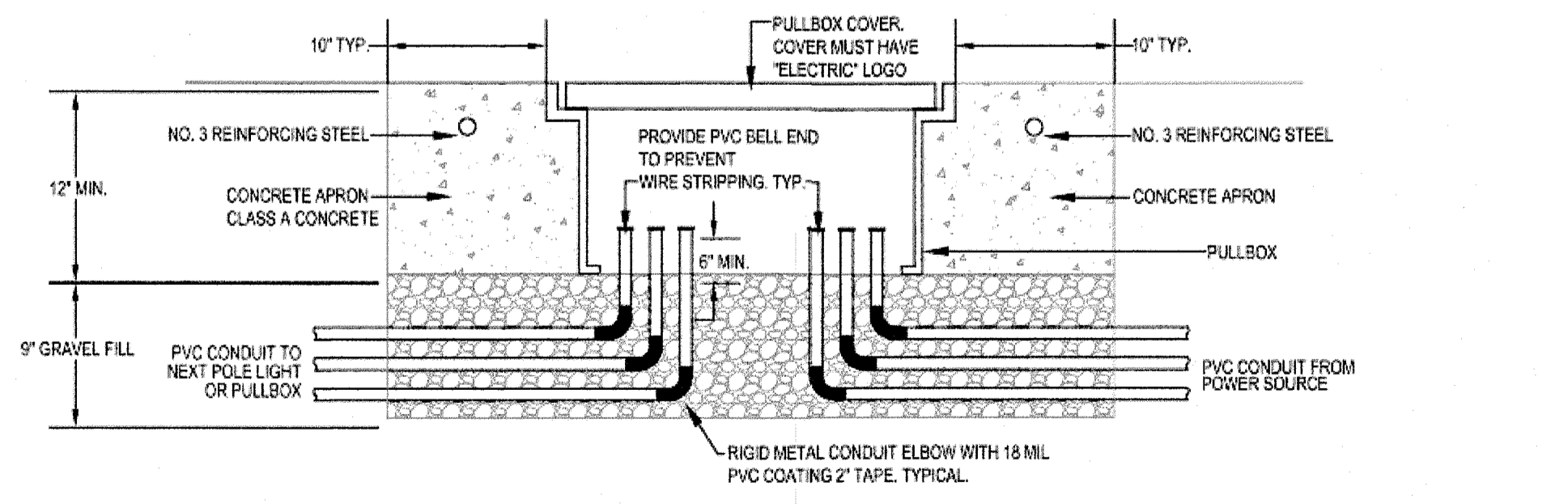
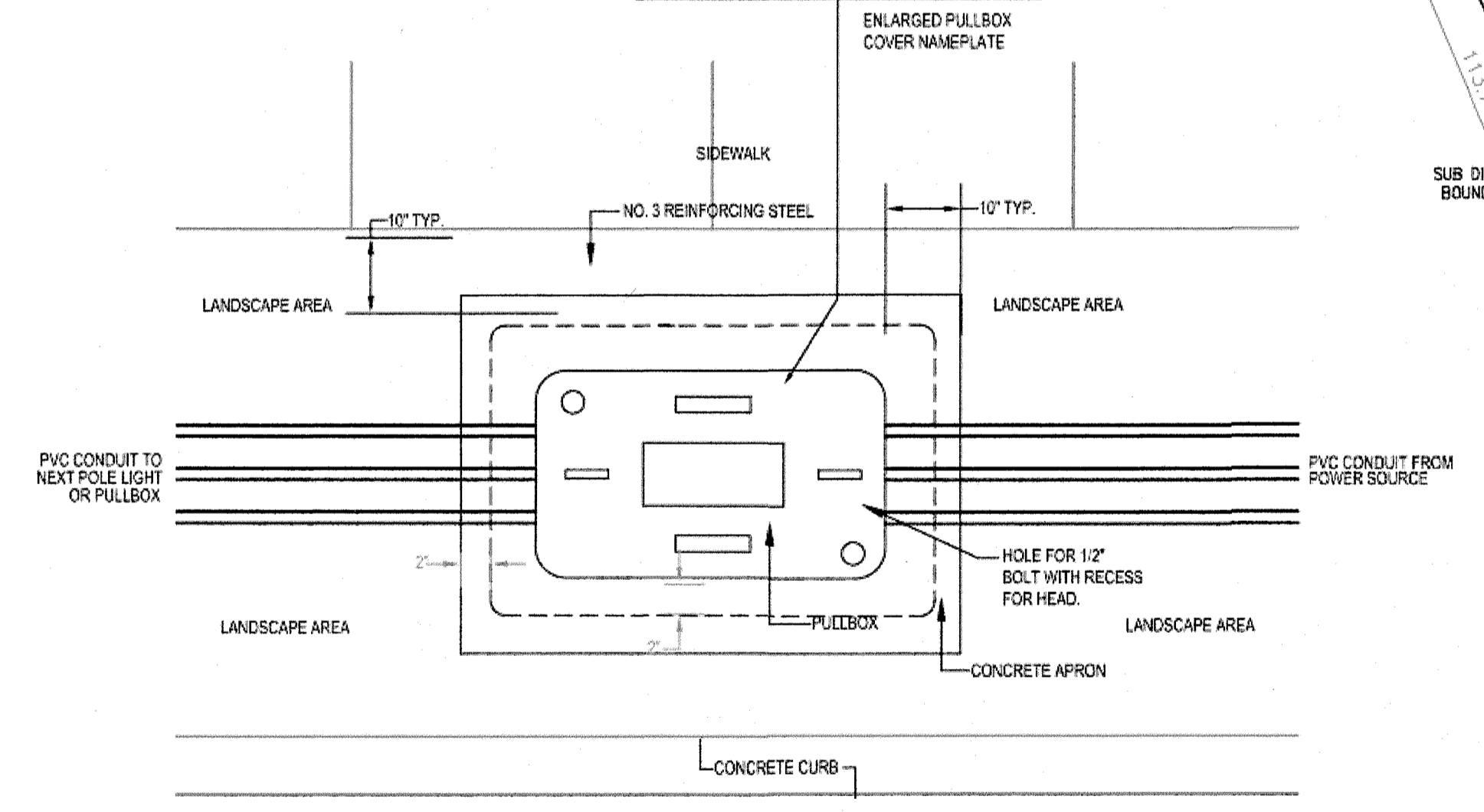
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NO.	DATE	REMARKS	BY
DESIGNED BY	DATE	DESIGN	VC
DRAWN BY	DATE	DESIGN	pm
DRAWING NAME	DATE	2015079-ELECTRICAL	VC
CHECKED BY	DATE		VC

SHEET TITLE
E2
 SHT 27 OF 28

**DANGER
 HIGH VOLTAGE
 ILLUMINATION**



**1
 E-4** PULLBOX DETAIL

DETAIL GENERAL NOTES:
 A. PULLBOX AND CONCRETE APRON MUST BE INSTALLED AS PER TEXAS DEPARTMENT OF TRANSPORTATION SPECIFICATIONS.
 B. CONDUIT SHALL BE INSTALLED IN LANDSCAPING AREA BETWEEN CONCRETE CURBS AND SIDEWALK. CONDUIT SHALL NOT BE INSTALLED UNDER STREET. CONDUIT MUST BE BURIED BELOW IRRIGATION SYSTEM. COORDINATE WITH IRRIGATION INSTALLER.
 C. PULLBOX MUST BE INSTALLED SO THERE IS NO RUN LARGER THAN 500FT.

ELECTRICAL SITE PLAN KEYED NOTES

- ① LIGHTING CONTROL PANEL. REFER TO RISER DIAGRAM 1.E-5.
- ② WIRE CIRCUIT THRU CONTROL PANEL.
- ③ PROVIDE AND INSTALL PULLBOX. PULLBOXES MUST BE INSTALLED SO THERE IS NO RUN LONGER THAN 500' WITHOUT A PULLBOX. SEE DETAIL 1.E-4.

GENERAL NOTE FOR THIS SHEET:
 CONDUIT SIZE AND EXACT ROUTE ARE NOT INDICATED ON THIS DRAWING DUE TO FIELD CONDITION INSTALLATIONS. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR PROVIDING "AS BUILT" DRAWINGS INDICATING CONDUIT SIZE, CONDUIT ROUTE, CONDUCTOR SIZE AND PULLBOX EXACT LOCATIONS.

GENERAL NOTES:
 A. CONDUIT RUNS AND CIRCUIT DESIGNATION ARE SHOWN FOR CLARIFICATION AND GRAPHICAL REPRESENTATION. BY NO MEANS DOES IT SHOW HOW TO BE PHYSICALLY INSTALLED.
 B. DIMENSIONS SHOWN ARE APPROXIMATE AND A GEOGRAPHICAL REPRESENTATION AND ARE NOT TO BE SCALED FROM DRAWINGS. FIELD VERIFY ALL DIMENSIONS.
 C. CONTRACTOR SHALL BE RESPONSIBLE TO PHYSICALLY LABEL ALL CONDUIT AND WIRING USING WEATHERPROOF MATERIAL.
 D. COORDINATE LOCATION OF ALL STREET LIGHTS SO AS NOT TO CREATE VISUAL OBSTRUCTION/CONFLICTS WITH TREES (NOW AND AT MATURITY), EXISTING/PROPOSED UTILITIES AND EXISTING/PROPOSED SIGNAGE BEFORE DOING ANY WORK.



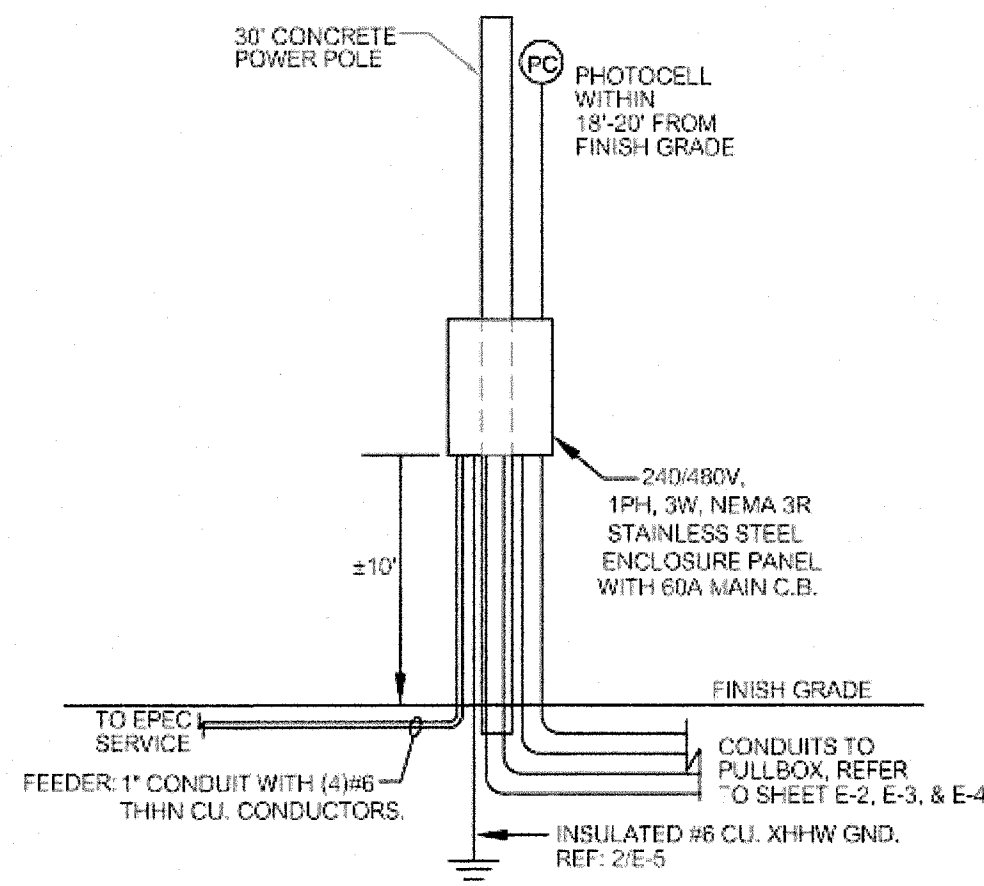
CONDUCTOR TABLE

CIRCUIT	APRX LENGTH	AMPS	VOLTAGE DROP	HOT	NEUT	GND
HP-1	3700 FEET	7.1	2.94%	#8	#8	#10
HP-2	3700 FEET	7.1	2.94%	#8	#8	#10

- NOTES:**
1. CALCULATIONS AS PER NEC 310-15
 2. CALCULATIONS BASED ON 150W LED DRIVER.
 3. MAXIMUM VOLTAGE DROP 5%.
 4. SINGLE CARRIER CURRENT CONDUCTOR.
 5. CALCULATION WITH COPPER CONDUCTORS AT 75°C.
 6. PROVIDE CONDUIT AS PER NEC 2009.
 7. USE INSULATED GREEN WIRE.
 8. NEUTRAL CONDUCTOR SHALL NOT BE PHASED WITH ELECTRICAL TAPE IT SHALL BE GRAY IN COLOR.

GENERAL NOTES FOR VOLTAGE DROP TABLE

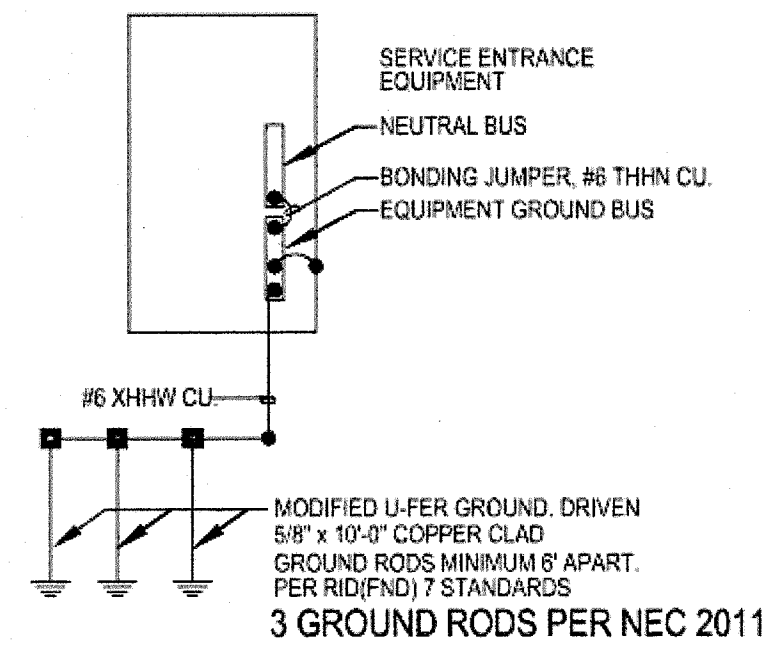
- REFER TO "NOTES" BELOW TABLE FOR ADDITIONAL INFORMATION.
- "APPROX LENGTH" IS THE LENGTH FROM THE CONTROL PANEL TO THE END OF CIRCUIT OR FARTHEST POLE LIGHT ON THAT CIRCUIT.
- "VOLTAGE DROP TABLE" REPRESENT MINIMUM CONDUCTOR SIZE AS ALLOWED BY NEC 2011 DUE TO ITS VOLTAGE DROP. UTILIZING CAD SOFTWARE, FIELD CONDITIONS WILL VARY DEPENDING ON INSTALLATION AND ROUTE METHODS.
- EXACT LENGTH WILL DEPEND ON FIELD INSTALLATION AND ROUTE.
- CONTRACTOR SHALL PROVIDE "AS BUILTS" INDICATING CONDUIT ROUTE AND EXACT CONDUCTOR LENGTHS.
- ELECTRICAL CONTRACTOR SHALL UTILIZED CONDUIT SIZE AS PER NEC 2011 APPENDIX C.



1 ELECTRICAL RISER DIAGRAM
E-5 NTS

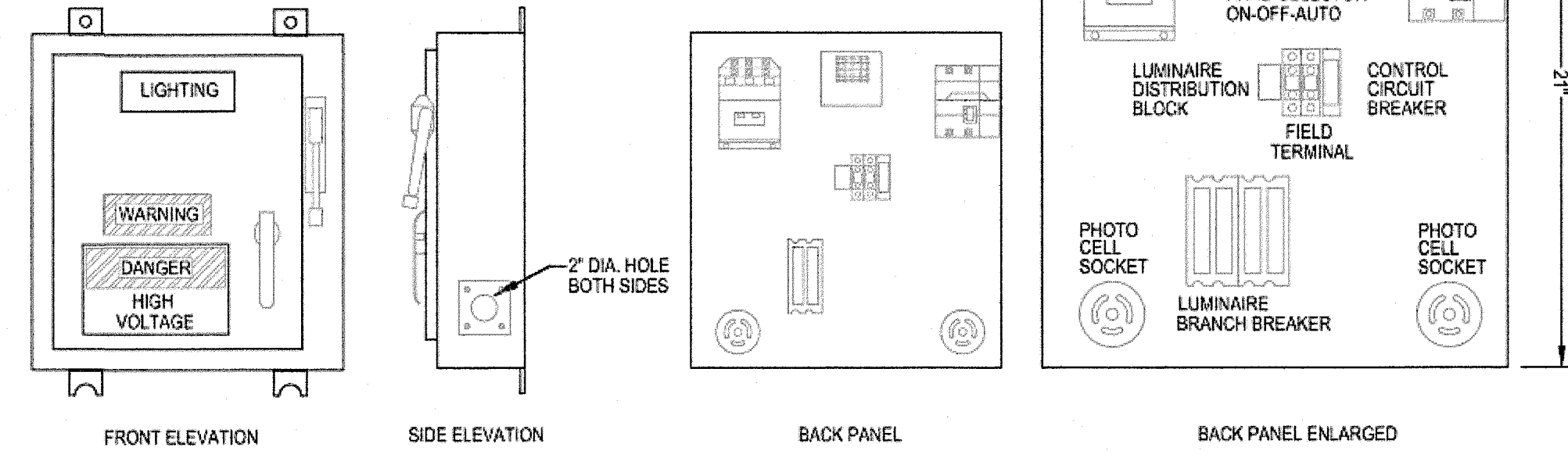
EL PASO ELECTRIC CONTACT PERSON: Damian Lamas, Office: 915-543-5935
INDUSTRIAL CONTROL PANEL: TECHLINE INC. PART # TYA (240/480/660 (NS)SSE)
ENCLOSURE PANEL: ASSOCIATED STARTERS & CONTROLS LP; 210-790-1334

ALL GROUNDING CONDUCTORS SHALL BE THHN INSULATED CONDUCTORS AS INDICATED.



2 GROUNDING SCHEMATIC
E-5 NTS

ALL GROUNDING CONDUCTORS SHALL BE THHN INSULATED CONDUCTORS AS INDICATED.



5 LIGHTING CONTROL BOX
E-5 NTS

GENERAL NOTES:

- EPDOT STANDARD 2003, ED(4)-03 AND ED(5)-03, EPDOT TYPE A, NEMA 3R STAINLESS STEEL ENCLOSURE PANEL LAYOUT, DRAWING #ASCC ASSISE-ES-S1, FILE NAME: ALA20207 FROM ASSOCIATED STARTER & CONTROL LP; (210) 798-1334.
- LABELS MUST BE PLACED ON THE INSIDE OF DOOR OF ENCLOSURE
 - 1 LISTED - INDUSTRIAL CONTROL PANEL ENCLOSURE
 - 2 LISTED - ENCLOSURE INDUSTRIAL CONTROL PANEL
 - 3 LISTED - INDUSTRIAL CONTROL PANEL FOR SERVICE EQUIPMENT USE
 - 4 MANUFACTURER NAME WITH REFERENCE NO.
 - 5 DRAWING NUMBER AS RECORDED TO THE UL LABEL NUMBER USED.
- INDUSTRIAL CONTROL PANEL - SUBJECT 508A
UL UNDERWRITER LABORATORIES, INC. FILE NUMBER E247288
- AL INTERIOR COMPONENTS ARE TO BE LABELED.
- PROVIDE A COMPLETE SYSTEM TO JOB ACCORDING TO TX DOT SPECIFICATION AND INFORMATION PROVIDED ON THESE DRAWINGS.
- ENCLOSURE TYPE - NEMA 3R, EXTERIOR USE.
- MATERIAL: STAINLESS STEEL 304

POLE BASE DETAIL GENERAL NOTES

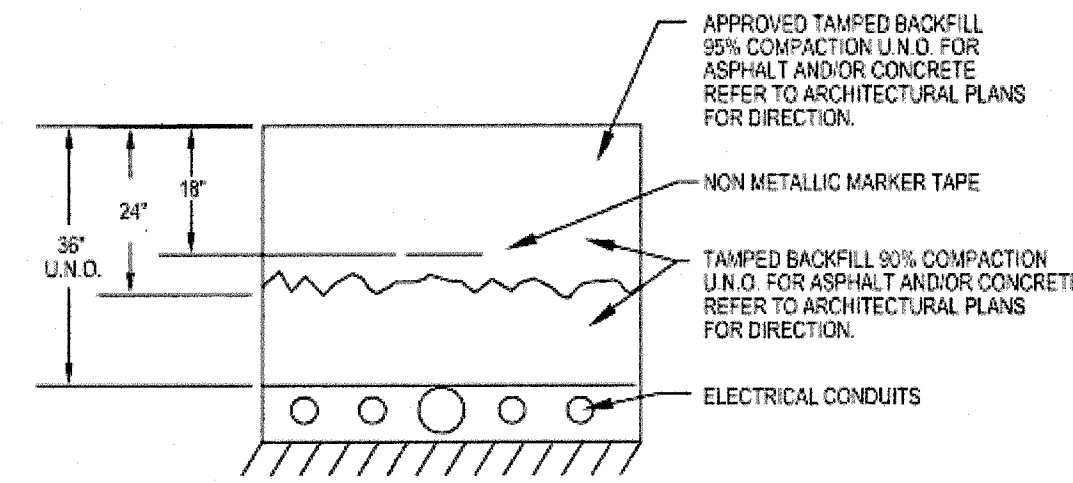
- CONTRACTOR TO COORDINATE AND VERIFY WITH THE POLE LIGHTS VENDOR FOR FINAL INSTALLATION DETAIL AND PERFORM AS PER MANUFACTURE TO MEET WIND RATING AS SET OUT IN FIXTURE TYPE 'A' IN FIXTURE SCHEDULE.
- CONCRETE SHALL BE BASE 3000 PSI MIN.
- LIGHT POLE MUST BE FOUNDED IN NATURAL SOIL OR STRUCTURE FILL AND MUST BE APPROVED BY GEOTECHNICAL ENGINEER. IF ACTUAL SOIL DOES NOT MEET THIS REQUIREMENT, CONTACT ENGINEER OF RECORD.
- REINFORCEMENT, SOIL, AND ANCHOR RODS MUST BE INSPECTED PER CITY OF EL PASO REQUIREMENTS PRIOR TO POURING CONCRETE.
- NOT USED.
- PROVIDE 10A, 600V BREAKAWAY FUSES ON POLE.

3 TYPICAL LIGHT POLE BASE DETAIL
E-2 NTS

FIXTURE SCHEDULE

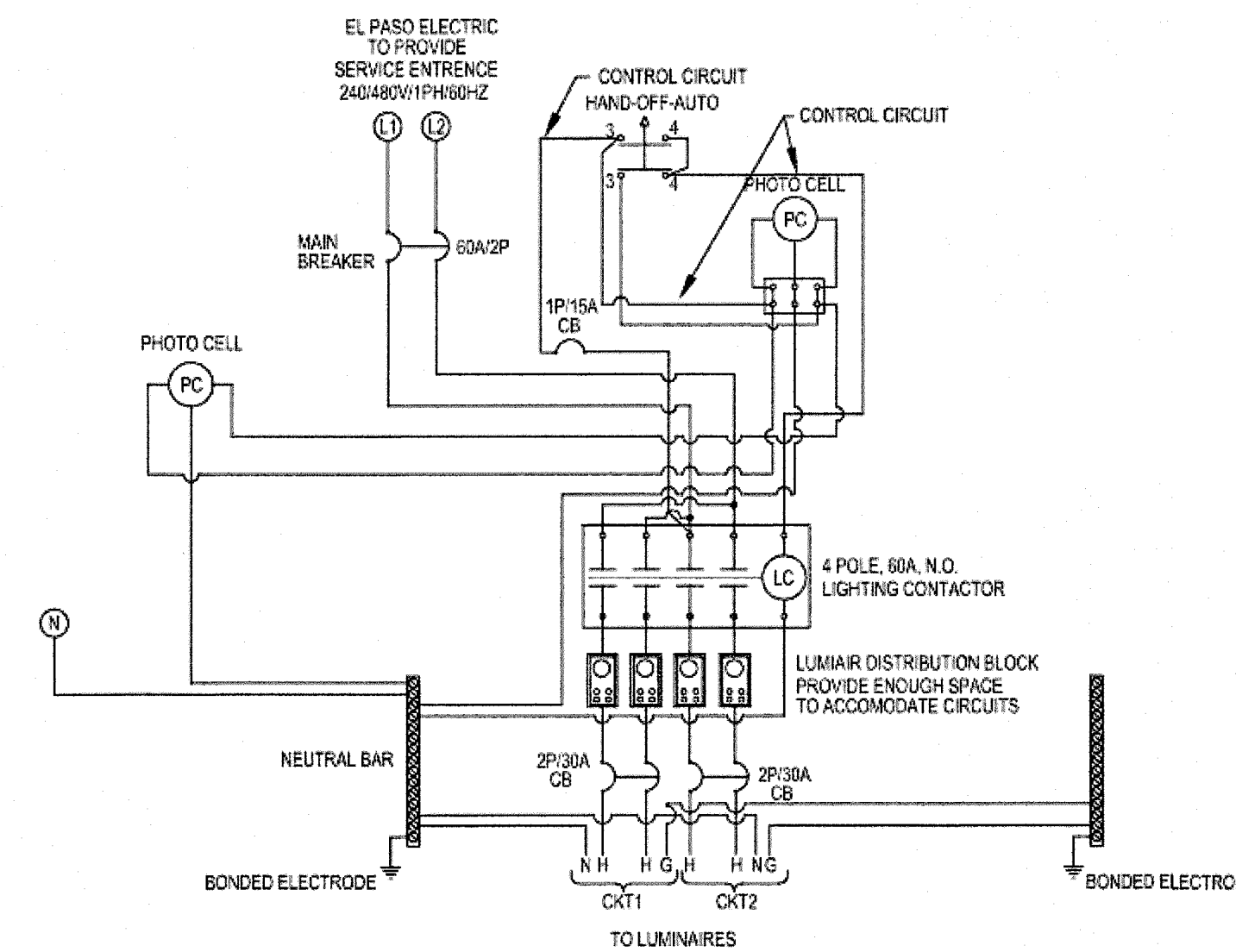
TYPE	MANUFACTURE/MODEL NO.	SUPPLY	LAMP		MOUNTING	NOTE
			QTY	TYPE		
A	NILAND CR-GLASS-CN-BAND-ROTC-LED-TLPC N-17-TF-35-14-4000-190-480V-TYPE III-EPG POLE: NILAND N-17-TF35-14 - CAST AL-EXT-EPG	480V	--	LED-50K	14' POLE	[1]

- NOTES:**
- [1] EL PASO CITY TO APPROVE LIGHTING FIXTURE BEFORE ORDERING FIXTURE.
- GENERAL NOTES:**
- ALL FINAL COLOR SELECTIONS SHALL BE SELECTED BY EL PASO CITY.
 - LIGHTING FIXTURES WHERE SELECTED BY PERFORMANCE AND APPEARANCE. PRIOR APPROVAL WILL BE REQUIRED 2 WEEKS BEFORE BID DATE, PROVIDE SHOP DRAWINGS, ENERGY REPORT, LIGHTING FACTS AND PHOTOMETRIC ANALYSIS.
 - PROVIDE 10A BREAK AWAY FUSES AT EACH POLE.
 - FIXTURE MUST BE CITY OF EL PASO DARK SKY ORDINANCE COMPLIANT.
 - FIXTURE TO HAVE GOLD DECORATE TRIM.



7 TRENCH DETAIL
E-5 NTS

DETAIL GENERAL NOTES:
A. PULLBOXES AND CONDUITS MUST BE INSTALLED IN RIGHT OF WAY.



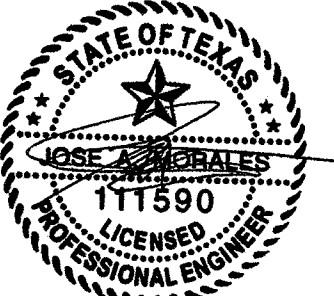
6 LIGHTING CONTROL WIRING SCHEMATIC
E-5 NTS

GENERAL NOTES:

- BONDED NEUTRAL. REMOVE BONDING MEANS FOR TEST PURPOSES ONLY. SERVICE DISCONNECT CIRCUIT BREAKERS 150 AMPS OR LESS, SQUARE TYPE KAL. CIRCUIT BREAKERS 150 AMPS OR LESS; CUTTLER HAMMER GHC, ALLEN BRADLEY TYPE 1482-MCQA.
- SHORT CIRCUIT RATING: RMS SYMMETRICAL AMPS 14,000 AT 240/480 VAC. THE SHORT CIRCUIT RATING IS LIMITED TO THE LOWEST INTERRUPTING CAPACITY OF ANY DEVICE INSTALLED THEREIN. REPLACEMENT BREAKERS MUST BE SAME TYPE AND RATING. FIELD INSTALLED CONDUCTORS SHALL BE SIZED BASED ON 75C CAPACITY.
- "SUITABLE FOR SERVICE EQUIPMENT ONLY"
- USE COPPER WIRE ONLY.
- COMPONENTS TORQUE VALUES MUST BE AS PER DRAWINGS STANDARDS LABELED ON BACK PANEL.
- WIRE SIZE MUST BE ON DRAWINGS SIZED PER UL TABLE 29.1 SECTION 505A.

CITY MONUMENT AT POINT OF CURVE
CENTERLINE MONTECELLO BLVD.
ADJOINING LOT 1 BLOCK 1,
MONTECELLO UNIT ONE
(STATION 0+82.81).
ELEVATION: 4107.13(CITY DATUM)

PROJECT NAME
MONTECELLO UNIT 4B
BEING A PORTION OF TRACTS 4A AND 6A,
A.F. MILLER SURVEY 2716, AND PORTION
OF TRACT 10, JOHN BACKUS SURVEY TO
CITY OF EL PASO, COUNTY OF EL PASO,
TEXAS
CONTAINING: 12.686± ACRES



RONALD R. BOHANNAN
P.E. #85928

TIERRA WEST, LLC
5571 MIDWAY PARK PLACE NE
ALBUQUERQUE, NM 87109
(505) 868-3100
www.tierrawestllc.com
TEXAS BUSINESS NO.
F-11773

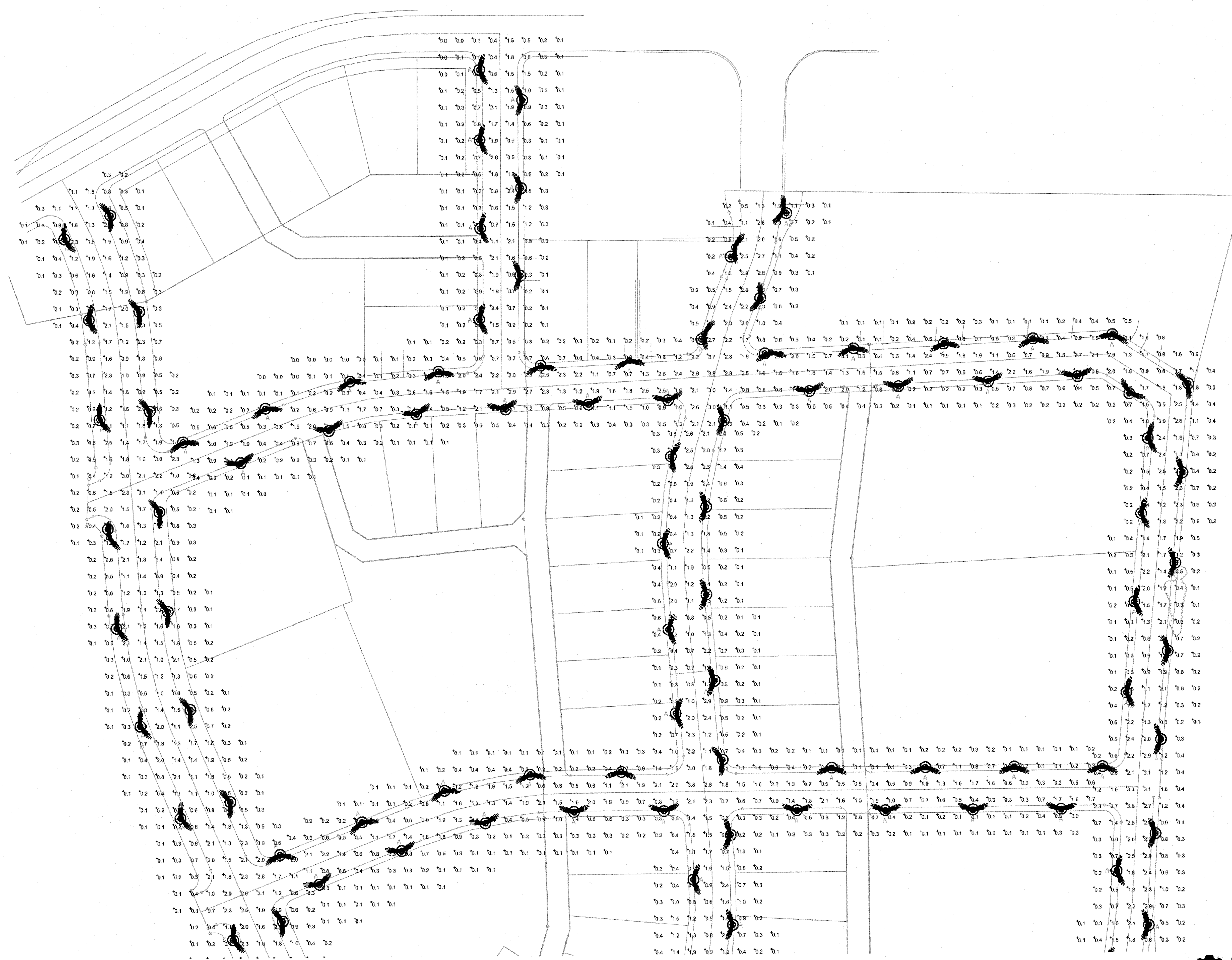


NO.	DATE	DESIGNED BY	DRAWN BY	DRAWING NAME	CHECKED BY
	6-13-16	VC	PTT	2015079-ELECTRICAL	VC
	6-13-16				
	6-13-16				

SHEET TITLE

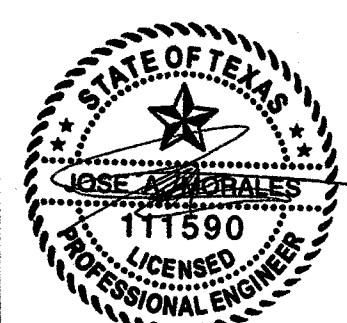
E3





CITY MONUMENT AT POINT OF CURVE
 CENTERLINE MONTICELLO BLVD.
 ADJOINING LOT 1, BLOCK 1,
 MONTICELLO UNIT ONE
 (STATION 0+82.81)
 ELEVATION: 4107.13(CITY DATUM)

PROJECT NAME
MONTICELLO UNIT 4B
 BEING A PORTION OF TRACTS 4A AND 6A
 BEING A PORTION OF TRACTS 21E AND PORTION
 OF TRACT 21 JOHN BARKER SURVEY 10,
 CITY OF EL PASO, EL PASO COUNTY, TEXAS
 CONTAINING: 12.686± ACRES



RONALD R. BOHANNAN
 P.E. #88928

METRA WEST LLC
 5571 MIDWAY PARK PLACE NE
 ALBUQUERQUE, NM 87109
 (505) 865-3100
 www.metrawestllc.com
 TEXAS BUSINESS NO.
 F-11773



Final Approval

NO.	DATE	REMARKS	BY
		DESIGN	
		REVISIONS	

DESIGNED BY	VC	DATE	6-13-16
DRAWN BY	pm	DATE	6-13-16
DRAWING NAME	2015079-ELECTRICAL	JOB NO.	2015079
CHECKED BY	VC	DATE	6-13-16

SHEET TITLE
E4

ENGINEERING-PLUS
 130 Will Scarlett, El Paso, TX 79924 | TFR#: 11465
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