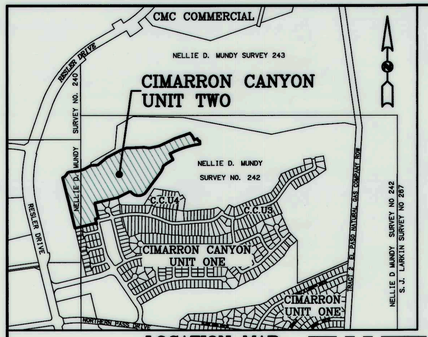
CIMARRON CANYON UNIT TWO

BEING A PORTION OF TRACT 1B2, NELLIE D. MUNDY SURVEY 242 AND A PORTION OF TRACTS 4G AND 4G2, NELLIE D. MUNDY SURVEY 240, CITY OF EL PASO, EL PASO COUNTY, TEXAS.

CONTAINING 30.987 ± ACRES (1,349,777 SQ. FT.)

SHEET 1 OF 2

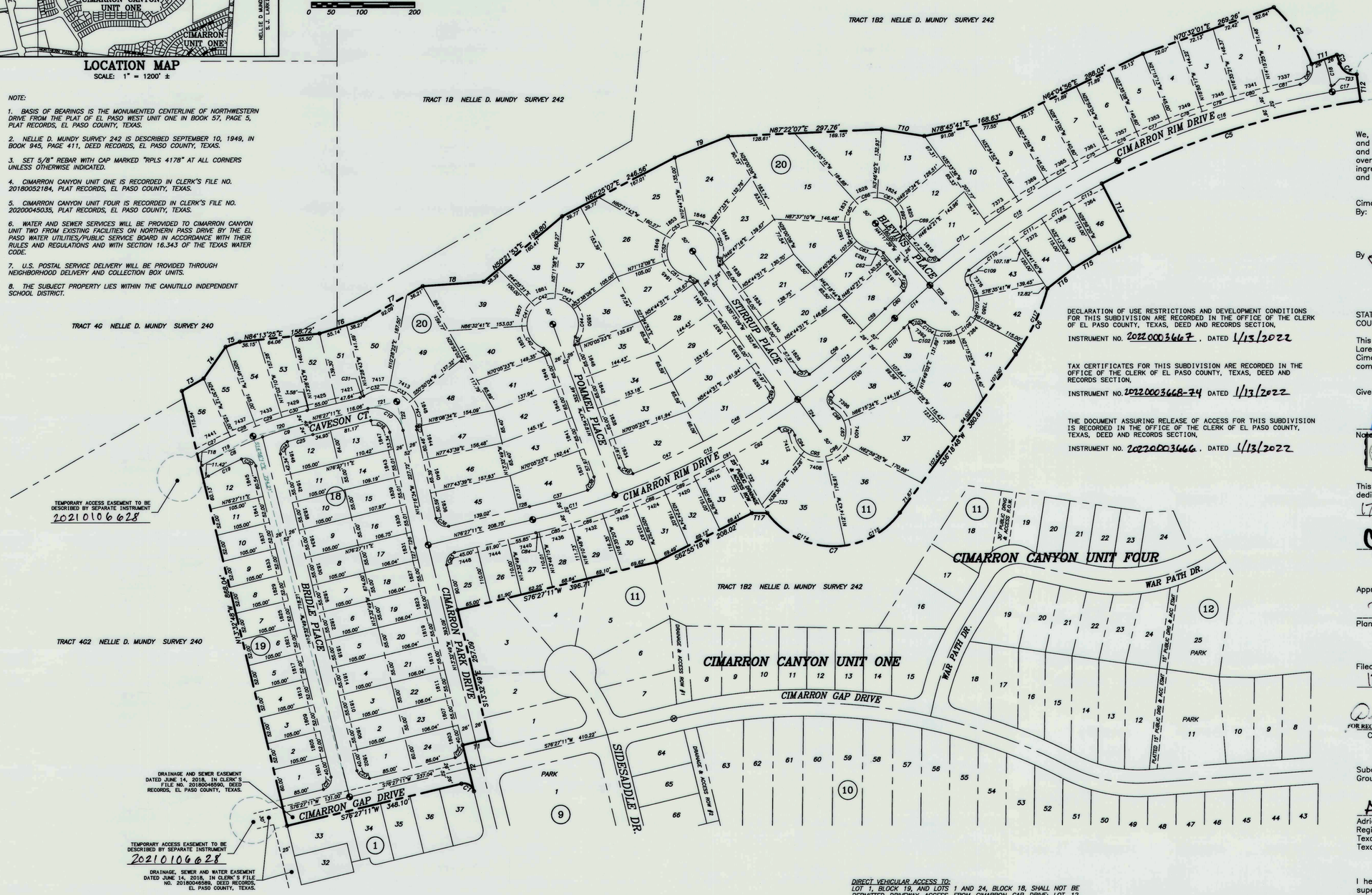


LOCATION MAP
SCALE: 1" = 1200' ±

SCALE: 1" = 100'
0 50 100 200

NOTE:

1. BASIS OF BEARINGS IS THE MONUMENTED CENTERLINE OF NORTHWESTERN DRIVE FROM THE PLAT OF EL PASO WEST UNIT ONE IN BOOK 57, PAGE 5, PLAT RECORDS, EL PASO COUNTY, TEXAS.
2. NELLIE D. MUNDY SURVEY 242 IS DESCRIBED SEPTEMBER 10, 1949, IN BOOK 945, PAGE 411, DEED RECORDS, EL PASO COUNTY, TEXAS.
3. SET 5/8" REBAR WITH CAP MARKED "RPLS 4178" AT ALL CORNERS UNLESS OTHERWISE INDICATED.
4. CIMARRON CANYON UNIT ONE IS RECORDED IN CLERK'S FILE NO. 20180052184, PLAT RECORDS, EL PASO COUNTY, TEXAS.
5. CIMARRON CANYON UNIT FOUR IS RECORDED IN CLERK'S FILE NO. 20200045035, PLAT RECORDS, EL PASO COUNTY, TEXAS.
6. WATER AND SEWER SERVICES WILL BE PROVIDED TO CIMARRON CANYON UNIT TWO FROM EXISTING FACILITIES ON NORTHERN PASS DRIVE BY THE EL PASO WATER UTILITIES/PUBLIC SERVICE BOARD IN ACCORDANCE WITH THEIR RULES AND REGULATIONS AND WITH SECTION 16.343 OF THE TEXAS WATER CODE.
7. U.S. POSTAL SERVICE DELIVERY WILL BE PROVIDED THROUGH NEIGHBORHOOD DELIVERY AND COLLECTION BOX UNITS.
8. THE SUBJECT PROPERTY LIES WITHIN THE CANUTILLO INDEPENDENT SCHOOL DISTRICT.



DECLARATION OF USE RESTRICTIONS AND DEVELOPMENT CONDITIONS FOR THIS SUBDIVISION ARE RECORDED IN THE OFFICE OF THE CLERK OF EL PASO COUNTY, TEXAS, DEED AND RECORDS SECTION,
INSTRUMENT NO. 20220003667 . DATED 1/13/2022

TAX CERTIFICATES FOR THIS SUBDIVISION ARE RECORDED IN THE OFFICE OF THE CLERK OF EL PASO COUNTY, TEXAS, DEED AND RECORDS SECTION,
INSTRUMENT NO. 20220003668-74 DATED 1/13/2022

THE DOCUMENT ASSURING RELEASE OF ACCESS FOR THIS SUBDIVISION IS RECORDED IN THE OFFICE OF THE CLERK OF EL PASO COUNTY, TEXAS, DEED AND RECORDS SECTION,
INSTRUMENT NO. 20220003666 . DATED 1/13/2022

DIRECT VEHICULAR ACCESS TO:
LOT 1, BLOCK 19, AND LOTS 1 AND 24, BLOCK 18, SHALL NOT BE PERMITTED DRIVEWAY ACCESS FROM CIMARRON GAP DRIVE; LOT 12, BLOCK 19, AND LOTS 12 AND 13, BLOCK 18, SHALL NOT BE PERMITTED DRIVEWAY ACCESS FROM CAVESON COURT; LOT 25, BLOCK 11, SHALL NOT BE PERMITTED DRIVEWAY ACCESS FROM CIMARRON PARK DRIVE; LOTS 11, 18, 19, 31, 32, 44 AND 45, BLOCK 20, SHALL NOT BE PERMITTED DRIVEWAY ACCESS FROM CIMARRON RIM DRIVE; AND LOT 1, BLOCK 20, (ALONG CURVE LABELED C2) SHALL NOT BE PERMITTED DRIVEWAY ACCESS FROM PROPOSED STREET IN PROPOSED ADJOINING SUBDIVISION.

ACCORDING TO FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAP PANELS 480214–16C AND 480214–17C, DATED FEBRUARY 5, 1986, THIS PROPERTY LIES IN FLOOD HAZARD ZONE "C".

NOTE: ALL FRONT LOT UTILITY EASEMENTS ARE 10 FEET WIDE UNLESS OTHERWISE INDICATED.

⊗ *EXISTING CITY MONUMENT*
● *PROPOSED CITY MONUMENT*

REVISED: SEPTEMBER 17, 2021
REVISED: SEPTEMBER 15, 2021
REVISED: SEPTEMBER 13, 2021
REVISED: AUGUST 10, 2021
REVISED: DECEMBER 9, 2020
REVISED: NOVEMBER 11, 2020
REVISED: NOVEMBER 6, 2020
REVISED: AUGUST 27, 2020
REVISED: JULY 24, 2020
DATE OF PREPARATION: JUNE 2, 2020

ROBERT SEIPEL ASSOCIATES, INC. PROFESSIONAL LAND SURVEYORS
1845 NORTHWESTERN DRIVE EL PASO TX 79912 PHONE (915) 877–1928 FAX (915) 877–2095

CHAPTER 395 OF THE TEXAS LOCAL GOVERNMENT CODE AUTHORIZES THE CITY OF EL PASO TO ADOPT AND IMPOSE WATER AND WASTEWATER IMPACT FEES. THIS PLAT NOTE FULFILLS AN OBLIGATION MANDATED BY CHAPTER 395 AND SETS THE ASSESSMENT OF THE IMPACT FEES IN ACCORDANCE WITH THE IMPACT FEE SCHEDULE ADOPTED BY CITY COUNCIL AS SET FORTH BELOW. THE COLLECTION OF THE IMPACT FEE FOR THIS SUBDIVISION SHALL BE PRIOR TO THE TIME A BUILDING PERMIT IS ISSUED IF DEVELOPMENT IS WITHIN THE CITY LIMITS OR AT THE TIME OF THE METER CONNECTION IF DEVELOPMENT IS OUTSIDE THE CITY LIMITS.

WESTSIDE SERVICE AREA

METER SIZE	METER CAPACITY RATIO	WATER*	WASTEWATER
LESS THAN 1 INCH	1.00	$659.00	$927.00
1 INCH	1.67	$1,101.00	$1,548.00
1½ INCH	3.33	$2,195.00	$3,087.00
2 INCH	5.33	$3,514.00	$4,941.00
3 INCH	10.00	$6,593.00	$9,270.00
4 INCH	16.67	$10,990.00	$15,453.00
6 INCH	33.33	$21,973.00	$30,897.00
8 INCH	53.33	$35,158.00	$49,437.00
10 INCH	76.67	$50,545.00	$71,073.00
12 INCH	143.33	$94,490.00	$132,867.00

*FEES DO NOT APPLY TO WATER METER OR CONNECTIONS MADE FOR STANDBY FIRE PROTECTION SERVICE.

TEMPORARY ACCESS EASEMENT TO BE DESCRIBED BY SEPARATE INSTRUMENT 20210106628

DEDICATION

We, Cimarron Hunt Communities, LLC, owners of this land, do hereby present this plat and dedicate to the use of the public the streets, drainage and access rights–of–way and utility easements as hereon laid down and designated, including easements for overhang of service wires, conduits and pipes for underground utilities, the right to ingress and egress for service and construction, and the right to trim interfering trees and shrubs.

Cimarron Hunt Communities, LLC
By: Hunt Communities Development Co., LLC, Its Sole Member,

By: Jose L. Lares
Jose L. Lares, Vice President

ACKNOWLEDGMENT

STATE OF TEXAS
COUNTY OF EL PASO

This instrument was acknowledged before me on October 1, 2021 by Jose L. Lares, Vice President of Hunt Communities Development Co., LLC, Sole Member of Cimarron Hunt Communities, LLC, a Texas limited liability company, on behalf of said company.

Given under my hand and seal of office this 1st day of October 2021.

Hilary Oney
Notary Public, State of Texas
Hilary Oney
Notary Public, State of Texas
Comm. Expires 8/1/2024
Notary ID 11644054

August 1, 2024
My Commission Expires

CITY PLAN COMMISSION

This subdivision is hereby approved as to the platting and as to the conditions of the dedication in accordance with Chapter 212 of the Local Government Code of Texas this 17th day of December 2020.

Chairperson

Executive Secretary

Approved for filing this 5th day of November, 2021.

Planning & Inspections Director

FILING

Filed and recorded in the office of the County Clerk of El Paso County, Texas, this 13th day of January, 2022, in File No. 20220003665 Plat Records.

FOR RECORDING PURPOSES ONLY
County Clerk

By Deputy

Subdivision improvement plans prepared by and under the supervision of CSA Design Group, Inc.

Adrian I. Holguin–Ontiveros, P.E.
Registered Professional Engineer
Texas License No. 124089
Texas Registered Engineering Firm F–9997

STATE OF TEXAS
ADRIAN I. ONTIVEROS
124089
LICENSED
PROFESSIONAL ENGINEER
10/1/2021

I hereby certify that this plat represents an on–the–ground survey made under my supervision in compliance with current Texas Board of Professional Land Surveying Professional and Technical Standards.

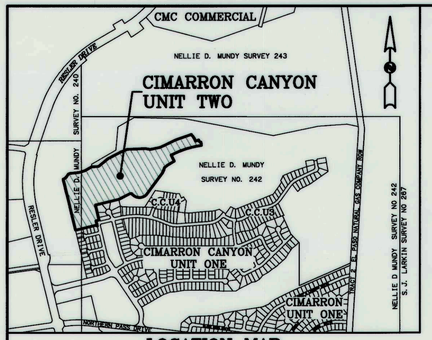
Robert Seipel Associates, Inc.
Professional Land Surveyors

Mark U. Balansay
Registered Professional Land Surveyor
Texas License No. 6489
Texas Registered Surveying Firm 10060500

STATE OF TEXAS
REGISTERED
MARK U. BALANSAY
6489
PROFESSIONAL
LAND SURVEYOR

CIMARRON CANYON UNIT TWO

BEING A PORTION OF TRACT 1B2, NELLIE D. MUNDY SURVEY 242
AND A PORTION OF TRACTS 4G AND 4G2, NELLIE D. MUNDY
SURVEY 240, CITY OF EL PASO, EL PASO COUNTY, TEXAS.
CONTAINING 30.987 ± ACRES (1,349,777 SQ. FT.)
SHEET 2 OF 2



LOCATION MAP
SCALE: 1" = 1200' ±

LOT TABLE		
LOT NUMBER	SQ FT	ACRES
Lot 25 Block 11	7064	0. 162
Lot 26 Block 11	6809	0. 156
Lot 27 Block 11	6824	0. 157
Lot 28 Block 11	7355	0. 169
Lot 29 Block 11	7573	0. 174
Lot 30 Block 11	7995	0. 184
Lot 31 Block 11	8052	0. 185
Lot 32 Block 11	7746	0. 178
Lot 33 Block 11	7587	0. 174
Lot 34 Block 11	10387	0. 238
Lot 35 Block 11	18284	0. 420
Lot 36 Block 11	21066	0. 484
Lot 37 Block 11	22014	0. 505
Lot 38 Block 11	10710	0. 246
Lot 39 Block 11	8494	0. 195
Lot 40 Block 11	16299	0. 374
Lot 41 Block 11	9947	0. 228
Lot 42 Block 11	10614	0. 244
Lot 43 Block 11	9730	0. 223
Lot 44 Block 11	7688	0. 176
Lot 45 Block 11	6969	0. 160
Lot 46 Block 11	8039	0. 185

LOT TABLE		
LOT NUMBER	SQ FT	ACRES
25' Public Drainage & Access ROW Block 11	3054	0. 070

LOT TABLE		
LOT NUMBER	SQ FT	ACRES
Lot 1 Block 19	6214	0. 143
Lot 2 Block 19	5460	0. 125
Lot 3 Block 19	5460	0. 125
Lot 4 Block 19	5460	0. 125
Lot 5 Block 19	5460	0. 125
Lot 6 Block 19	5460	0. 125
Lot 7 Block 19	5460	0. 125
Lot 8 Block 19	5460	0. 125
Lot 9 Block 19	5460	0. 125
Lot 10 Block 19	5460	0. 125
Lot 11 Block 19	5460	0. 125
Lot 12 Block 19	7586	0. 174

LOT TABLE		
LOT NUMBER	SQ FT	ACRES
Lot 1 Block 18	6214	0. 143
Lot 2 Block 18	5775	0. 133
Lot 3 Block 18	5775	0. 133
Lot 4 Block 18	5775	0. 133
Lot 5 Block 18	5775	0. 133
Lot 6 Block 18	5775	0. 133
Lot 7 Block 18	5775	0. 133
Lot 8 Block 18	5775	0. 133
Lot 9 Block 18	5775	0. 133
Lot 10 Block 18	5775	0. 133
Lot 11 Block 18	5775	0. 133
Lot 12 Block 18	6574	0. 151
Lot 13 Block 18	6909	0. 159
Lot 14 Block 18	6039	0. 139
Lot 15 Block 18	5972	0. 137
Lot 16 Block 18	5905	0. 136
Lot 17 Block 18	5843	0. 134
Lot 18 Block 18	5832	0. 134
Lot 19 Block 18	5832	0. 134
Lot 20 Block 18	5832	0. 134
Lot 21 Block 18	5832	0. 134
Lot 22 Block 18	5832	0. 134
Lot 23 Block 18	5832	0. 134
Lot 24 Block 18	6277	0. 144

LOT TABLE		
LOT NUMBER	SQ FT	ACRES
Lot 1 Block 20	12776	0. 293
Lot 2 Block 20	10290	0. 236
Lot 3 Block 20	10029	0. 230
Lot 4 Block 20	9979	0. 229
Lot 5 Block 20	9849	0. 226
Lot 6 Block 20	9638	0. 221
Lot 7 Block 20	9638	0. 221
Lot 8 Block 20	9849	0. 226
Lot 9 Block 20	10987	0. 252
Lot 10 Block 20	15062	0. 346
Lot 11 Block 20	9730	0. 223
Lot 12 Block 20	8996	0. 207
Lot 13 Block 20	12572	0. 289
Lot 14 Block 20	14378	0. 330
Lot 15 Block 20	26103	0. 599
Lot 16 Block 20	10665	0. 245
Lot 17 Block 20	8169	0. 188
Lot 18 Block 20	8420	0. 193
Lot 19 Block 20	11165	0. 256
Lot 20 Block 20	9280	0. 213
Lot 21 Block 20	8757	0. 201
Lot 22 Block 20	9559	0. 219
Lot 23 Block 20	9885	0. 227
Lot 24 Block 20	16712	0. 384
Lot 25 Block 20	13675	0. 314
Lot 26 Block 20	14242	0. 327
Lot 27 Block 20	9267	0. 213
Lot 28 Block 20	9103	0. 209
Lot 29 Block 20	9672	0. 222
Lot 30 Block 20	10241	0. 235
Lot 31 Block 20	12196	0. 280
Lot 32 Block 20	12196	0. 280
Lot 33 Block 20	10241	0. 235
Lot 34 Block 20	9672	0. 222
Lot 35 Block 20	9103	0. 209
Lot 36 Block 20	9267	0. 213
Lot 37 Block 20	14242	0. 327
Lot 38 Block 20	10877	0. 250
Lot 39 Block 20	16290	0. 374
Lot 40 Block 20	12336	0. 283
Lot 41 Block 20	9337	0. 214
Lot 42 Block 20	9202	0. 211
Lot 43 Block 20	9673	0. 222
Lot 44 Block 20	11517	0. 264
Lot 45 Block 20	10903	0. 250
Lot 46 Block 20	10279	0. 236
Lot 47 Block 20	10269	0. 236
Lot 48 Block 20	11598	0. 266
Lot 49 Block 20	17947	0. 412
Lot 50 Block 20	12770	0. 293
Lot 51 Block 20	7763	0. 178
Lot 52 Block 20	7868	0. 181
Lot 53 Block 20	8869	0. 204
Lot 54 Block 20	9604	0. 220
Lot 55 Block 20	8436	0. 194
Lot 56 Block 20	7423	0. 170

LINE TABLE		
LINE #	BEARING	DISTANCE
T1	S76°27'11"W	52.00'
T2	S13°32'49"E	92.00'
T3	N60°08'16"E	48.63'
T4	N35°01'13"E	74.73'
T5	N70°06'39"E	28.98'
T6	N72°30'11"E	93.40'
T7	N60°07'58"E	128.30'
T8	N85°52'20"E	118.00'
T9	N68°25'07"E	111.55'
T10	S81°02'09"E	84.00'
T11	N70°13'27"E	52.00'
T12	S8°11'00"E	52.00'
T13	S27°18'10"E	114.91'
T14	S61°18'20"W	67.13'
T15	S58°55'05"W	58.21'
T16	S51°59'14"W	62.97'
T17	S89°26'57"W	30.00'
T18	N60°17'06"E	4.46'
T19	N60°17'06"E	113.63'
T20	N76°27'11"E	113.63'
T21	N76°27'11"E	57.26'
T22	N12°16'34"W	57.26'
T23	S9°53'39"E	12.71'
T24	N35°15'09"W	75.63'
T25	N41°17'39"W	46.00'
T26	S12°16'21"E	31.62'
T27	S13°32'49"E	23.38'
T28	N76°27'11"E	22.69'
T29	N41°17'39"W	18.28'
T30	S41°17'39"E	14.61'
T31	N29°06'44"W	115.00'
T32	N29°06'44"W	110.00'
T33	S33°08'42"E	19.19'

CURVE TABLE					
CURVE #	DELTA	RADIUS	ARC	CHORD BEARING	CHORD
C1	89°51'14"	20.00'	31.37'	N58°28'27"W	28.25'
C2	27°42'43"	276.00'	133.49'	S33°37'54"E	132.19'
C3	3°04'31"	328.00'	17.61'	S18°14'17"E	17.60'
C4	81°20'35"	30.00'	42.59'	S57°22'19"E	39.10'
C5	19°15'50"	1574.00'	529.21'	S72°19'45"W	526.72'
C6	21°15'21"	385.23'	142.91'	S25°41'07"W	142.10'
C7	107°06'10"	160.01'	299.11'	S89°52'00"W	257.42'
C8	9°16'22"	800.00'	129.47'	S64°55'17"W	129.33'
C9	6°53'44"	800.00'	96.28'	S73°00'19"W	96.22'
C10	91°16'15"	56.00'	89.21'	N57°54'41"W	80.07'
C11	6°21'48"	1500.00'	166.59'	N73°16'17"E	166.51'
C12	15°20'32"	1500.00'	401.66'	N82°25'07"E	400.46'
C13	9°23'38"	1500.00'	245.93'	N50°03'02"E	245.66'
C14	3°21'08"	1600.00'	93.61'	S47°01'47"W	93.60'
C15	15°42'00"	1600.00'	438.43'	S56°33'21"W	437.06'
C16	15°42'00"	1600.00'	438.43'	S72°15'21"W	437.06'
C17	1°51'10"	1600.00'	51.74'	S81°01'57"W	51.74'
C18	9°52'54"	302.00'	52.09'	N14°50'06"W	52.02'
C19	5°20'18"	776.00'	72.30'	S82°57'15"W	72.28'
C20	100°49'47"	20.00'	35.20'	N63°57'42"W	30.83'
C21	90°00'00"	20.00'	31.42'	N31°27'11"E	28.28'
C22	89°59'59"	20.00'	31.42'	N31°27'11"E	28.28'
C23	90°00'00"	20.00'	31.42'	S58°32'49"E	28.28'
C24	86°12'16"	20.00'	30.09'	S29°33'19"W	27.33'
C25	3°47'44"	776.00'	51.41'	S74°33'19"W	51.40'
C26	91°16'28"	30.00'	47.79'	N57°54'35"W	42.90'
C27	5°02'16"	824.00'	72.45'	S62°58'40"W	72.43'
C28	3°44'01"	824.00'	53.70'	S67°21'48"W	53.69'
C29	3°44'01"	824.00'	53.70'	S71°05'50"W	53.69'
C30	3°29'21"	824.00'	50.18'	S74°42'31"W	50.17'
C31	21°36'46"	20.00'	7.54'	N65°38'48"E	7.50'
C32	45°37'57"	65.00'	51.77'	S77°39'24"W	50.41'
C33	40°21'42"	65.00'	45.79'	N59°20'47"W	44.85'
C34	44°29'13"	65.00'	50.47'	N16°55'20"W	49.21'
C35	17°35'37"	20.00'	6.14'	S3°28'32"E	6.12'
C36	91°16'28"	20.00'	31.86'	S57°54'35"E	28.60'
C37	4°33'01"	1474.00'	117.06'	N74°10'41"E	117.03'
C38	91°48'47"	20.00'	32.05'	N25°59'47"E	28.73'
C39	48°55'04"	20.00'	17.08'	N44°22'08"W	16.56'
C40	65°22'21"	50.00'	57.05'	S36°08'29"E	54.00'
C41	49°01'48"	50.00'	42.79'	S21°03'35"W	41.49'
C42	49°01'48"	50.00'	42.79'	S70°05'23"W	41.49'
C43	49°01'48"	50.00'	42.79'	N60°52'48"W	41.49'
C44	65°22'21"	50.00'	57.05'	N3°40'44"W	54.00'
C45	48°55'04"	20.00'	17.08'	S4°32'55"W	16.56'
C46	91°48'47"	20.00'	32.05'	S65°49'00"E	28.73'
C47	5°51'29"	1474.00'	150.71'	N65°20'52"E	150.64'
C48	5°51'29"	1474.00'	150.71'	N59°29'23"E	150.64'
C49	91°48'47"	20.00'	32.05'	N10°39'15"E	28.73'
C50	48°55'04"	20.00'	17.08'	N59°42'41"W	16.56'
C51	65°22'21"	50.00'	57.05'	S51°29'02"E	54.00'
C52	49°01'48"	50.00'	42.79'	S5°43'03"W	41.49'
C53	49°01'48"	50.00'	42.79'	S54°44'51"W	41.49'
C54	49°01'48"	50.00'	42.79'	N76°13'21"W	41.49'
C55	65°22'21"	50.00'	57.05'	N19°01'16"W	54.00'
C56	48°55'04"	20.00'	17.08'	S10°47'37"E	16.56'
C57	91°48'47"	20.00'	32.05'	S81°09'32"E	28.73'
C58	5°14'49"	1474.00'	134.98'	N50°18'40"E	134.93'
C59	2°20'03"	1474.00'	60.05'	N46°31'14"E	60.04'

CURVE TABLE					
CURVE #	DELTA	RADIUS	ARC	CHORD BEARING	CHORD
C60	1°45'03"	1626.00'	49.69'	S46°13'45"W	49.69'
C61	88°23'55"	20.00'	30.86'	N2°54'19"E	27.89'
C62	48°55'04"	20.00'	17.08'	N65°45'11"W	16.56'
C63	46°53'41"	50.00'	40.92'	S66°45'52"E	39.79'
C64	45°41'52"	50.00'	39.88'	S20°28'06"E	38.83'
C65	45°41'55"	50.00'	39.88'	S25°13'47"W	38.83'
C66	45°41'55"	50.00'	39.88'	S70°55'42"W	38.83'
C67	45°41'55"	50.00'	39.88'	N63°22'23"W	38.83'
C68	48°08'51"	50.00'	42.02'	N16°27'00"W	40.79'
C69	48°55'04"	20.00'	17.08'	S16°50'07"E	16.56'
C70	88°23'55"	20.00'	30.86'	S85°29'36"E	27.89'
C71	4°07'58"	1626.00'	117.28'	S52°22'25"W	117.26'
C72	2°38'44"	1626.00'	75.08'	S55°45'46"W	75.07'
C73	2°19'56"	1626.00'	66.19'	S58°15'06"W	66.18'
C74	2°19'56"	1626.00'	66.19'	S60°35'02"W	66.18'
C75	2°19'56"	1626.00'	66.19'	S62°54'58"W	66.18'
C76	2°19'56"	1626.00'	66.19'	S65°14'54"W	66.18'
C77	2°19'56"	1626.00'	66.19'	S67°34'50"W	66.18'
C78	2°19'56"	1626.00'	66.19'	S69°54'45"W	66.18'
C79	2°19'56"	1626.00'	66.19'	S72°14'41"W	66.18'
C80	2°19'56"	1626.00'	66.19'	S74°34'37"W	66.18'
C81	2°17'55"	1626.00'	65.23'	S76°53'33"W	65.23'
C82	97°49'03"	30.00'	51.22'	N29°07'59"E	45.22'
C83	90°00'00"	20.00'	31.42'	S31°27'11"W	28.28'
C84	0°13'27"	1526.00'	5.97'	N76°20'28"E	5.97'
C85	2°24'32"	1526.00'	64.16'	N75°01'28"E	64.15'
C86	2°24'32"	1526.00'	64.16'	N72°36'56"E	64.15'
C87	2°24'32"	1526.00'	64.16'	N70°12'24"E	64.15'
C88	2°24'32"	1526.00'	64.16'	N67°47'52"E	64.15'
C89	2°24'32"	1526.00'	64.16'	N65°23'20"E	64.15'
C90	2°21'29"	1526.00'	62.80'	N63°00'19"E	62.80'
C91	0°56'19"	1526.00'	25.00'	N61°21'25"E	25.00'
C92	3°48'42"	1526.00'	101.52'	N58°58'55"E	101.50'
C93	113°52'10"	20.00'	39.75'	N65°59'22"W	33.52'
C94	42°26'35"	50.00'	37.04'	S30°16'34"E	36.20'
C95	50°44'52"	50.00'	44.29'	S76°52'17"E	42.85'
C96	50°44'52"	50.00'	44.29'	N52°22'51"E	42.85'
C97	50°44'52"	50.00'	44.29'	N1°37'59"E	42.85'
C98	37°42'35"	50.00'	32.91'	N42°35'44"W	32.32'
C99	113°52'10"	20.00'	39.75'	S4°30'56"E	33.52'
C100	4°23'38"	1526.00'	117.03'	N50°13'20"E	117.00'
C101	2°40'18"	1526.00'	71.16'	N46°41'22"E	71.15'
C102	0°35'12"	1574.00'	16.12'	S45°38'49"W	16.12'
C103	91°22'58"	20.00'	31.90'	N88°22'06"W	28.62'
C104	28°30'22"	55.00'	27.36'	S56°55'47"E	27.08'
C105	40°04'27"	55.00'	38.47'	N88°46'48"E	37.69'
C106	40°04'27"	55.00'	38.47'	N48°42'21"E	37.69'
C107	40°04'27"	55.00'	38.47'	N8°37'54"E	37.69'
C108	28°30'22"	55.00'	27.36'	N25°39'30"W	27.08'
C109	91°22'58"	20.00'	31.90'	S5°46'48"W	28.62'
C110	3°50'03"	1574.00'	105.33'	S53°23'19"W	105.31'
C111	2°28'10"	1574.00'	67.84'	S56°32'25"W	67.83'
C112	2°17'09"	1574.00'	62.80'	S58°55'05"W	62.79'
C113	2°38'11"	1574.00'	72.42'	S61°22'45"W	72.42'
C114	61°32'36"	160.01'	171.87'	S67°21'13"E	163.73'
C115	45°33'34"	160.01'	127.23'	N59°05'41"E	123.91'
C116	3°21'39"	385.23'	22.60'	N34°37'59"E	22.59'
C117	17°53'43"	385.23'	120.32'	N24°00'18"E	119.83'

REVISED: SEPTEMBER 17, 2021
REVISED: SEPTEMBER 15, 2021
REVISED: SEPTEMBER 13, 2021
REVISED: AUGUST 10, 2021
REVISED: DECEMBER 9, 2020
REVISED: NOVEMBER 11, 2020
REVISED: NOVEMBER 6, 2020
REVISED: AUGUST 27, 2020
REVISED: JULY 24, 2020
DATE OF PREPARATION: JUNE 2, 2020

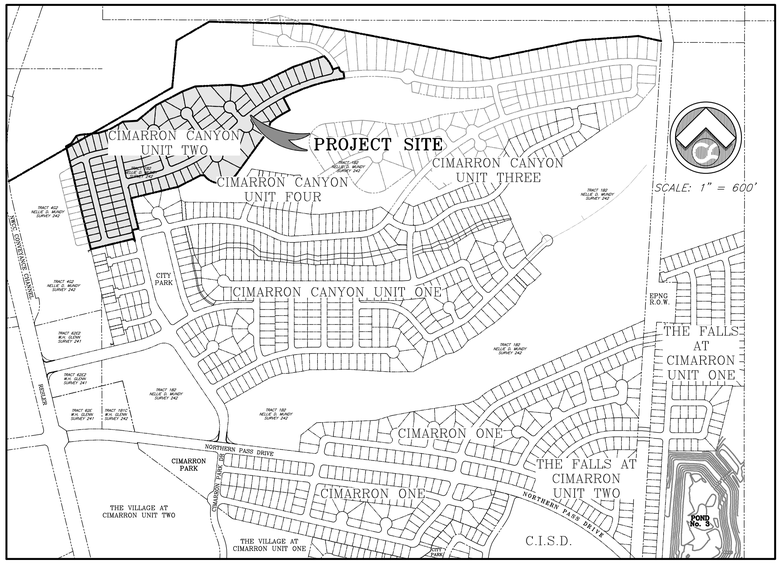
ROBERT SEIPEL ASSOCIATES, INC. PROFESSIONAL LAND SURVEYORS
1845 NORTHWESTERN DRIVE EL PASO TX 79912 PHONE (915) 877-1928 FAX (915) 877-2095

PLANS FOR CONSTRUCTION OF

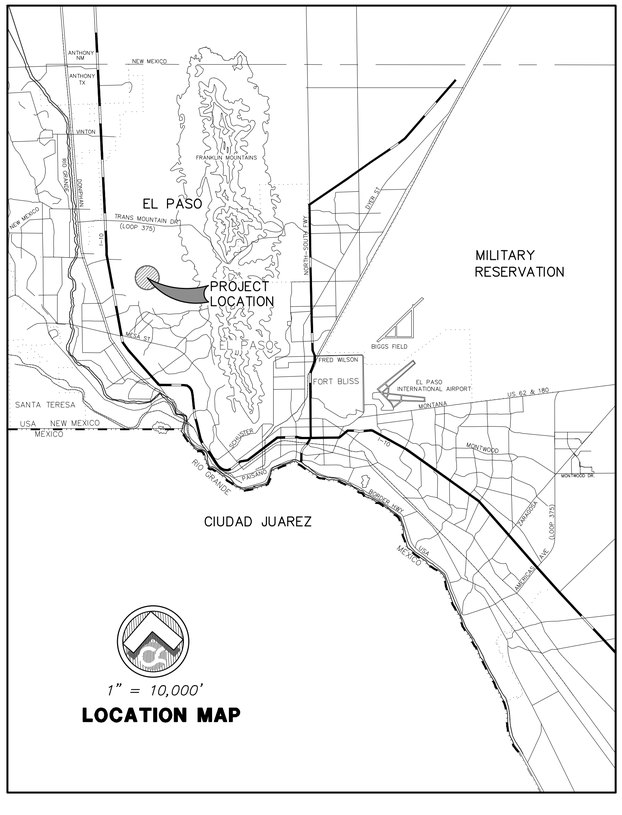
CIMARRON CANYON UNIT TWO SUBDIVISION

CITY OF EL PASO, TEXAS

HUNT COMMUNITIES



VICINITY MAP



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FILE No. 1908

3rd City Submittal 03-15-2021

1908 CIMARRON CANYON UNIT TWO

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NOTE:

CALLOUTS SUCH AS 'REFER TO SHEET . . .'
'REFER TO DETAIL ON SHEET . . .'
'SEE SHEET . . .'
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NOTES AND MATCHLINES CONTAINED IN THIS PLAN SET REFER TO THE SHEET NUMBER, NOT THE SHEET SEQUENCE.

BENCHMARK: CITY MONUMENT AT THE CENTERLINE INTERSECTION OF ALBERTA PASS DRIVE AND CIMARRON PARK DRIVE.
ELEVATION = 3976.53 (EL PASO CITY DATUM)

NO.	DATE	DESCRIPTION	BY
3	03/15/2021	3rd City Submittal	AHO
2	01/22/2021	2nd City Submittal	AHO
1	11/25/2020	1st City Submittal	AHO

WARNING! BEFORE YOU DIG IN PROJECT AREA CONTRACTOR SHALL FIELD LOCATE ALL EXISTING UNDERGROUND IMPROVEMENTS

Texas 811 Know what's below. Call before you dig.

BEFORE YOU DIG - CALL

EL PASO ELECTRIC COMPANY	543-5720
AT&T	1-800-ONE-CALL
TEXAS GAS SERVICE	544-6300
TGS EMERGENCY HOTLINE	562-8411/562-2603
PUBLIC SERVICE BOARD (WATER & SEWER)	1-800-DIG-TESS
AFTER HOURS EMERGENCY (EPW)	594-5775
SPECTRUM	775-7414
TEXAS EXCAVATION SAFETY SYSTEM	1-800-344-8377
KINDER-MORGAN/EPNG PIPELINES	1-800-238-3764
EL PASO STREETS AND MAINTENANCE	212-0151
EL PASO TRAFFIC SIGNAL STREETS AND MAINTENANCE	transportation@elpasotexas.gov

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05/15/2021

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SUBDIVISION
CIMARRON CANYON UNIT TWO SUBDIVISION

SHEET TITLE
DRAWING INDEX

GOB — DESIGN BY	1908 — JOB NO.
GOB-DG-SM — DRAWN BY	12/20/2019 — DATE OF COMMISSION
AHO — CHECKED BY	AS NOTED — SCALE

SHEET NO. 2
SHEET SEQUENCE 2 OF 82

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dgabeldo

GRAPHIC SCALE

1"

SCALE: 1" = 1'

WHEN PRINTED TO SCALE, THE CSA NORTH ARROW USED IN THIS PLAN SET HAS BEEN INSERTED INTO THE DRAWINGS SO THAT THE OUTER RING MEASURES EXACTLY ONE INCH IN DIAMETER AND THEREFORE MAY BE USED AS A GRAPHIC SCALE.

ABBREVIATIONS

AC	ACRES
ACFT	ACRE FEET
AD	ALGEBRAIC DIFFERENCE
A	AREA
AT,ASPH	ASPHALT
BVCE	BEGINNING VERTICAL CURVE ELEVATION
BVCS	BEGINNING VERTICAL CURVE STATION
BW	BOTTOM OF WALL
BIW	BOTTOM INSIDE OF WALL
BOC	BACK OF CURB
BOW	BOTTOM OUTSIDE OF WALL
BYP	BYPASSED FLOW
CAP	CAPACITY
CAP'D	CAPTURED FLOW
C/C	CENTER TO CENTER
CL	CENTER LINE
CC,CONC	CONCRETE
COEFF	COEFFICIENT
CMP	CORRUGATED METAL PIPE
CFS	CUBIC FEET PER SECOND
CY	CUBIC YARDS
CPI	CURB POINT INTERSECTION
CR	CURB RETURN
DIA	DIAMETER
DI	DIAMETER INSIDE
DO	DIAMETER OUTSIDE
DA	DRAINAGE AREA
EW	EACH WAY
ESMT	EASEMENT
EL, ELEV	ELEVATION
EVCE	END VERTICAL CURVE ELEVATION
EVCS	END VERTICAL CURVE STATION
EG	EXISTING GRADE
EXP	EXPECTED, EXPECTANCY
FPS	FEET PER SECOND
FF	FINISHED FLOOR
FG	FINISHED GROUND
FS	FINISHED SURFACE
FH	FIRE HYDRANT
FL	FLOW LINE
GALV	GALVANIZED
GR	GROUND
GT, GUT	GUTTER
HC	HEADER CURB
HP	HIGH POINT
HWE	HIGH WATER ELEVATION
HORIZ	HORIZONTAL
HGL	HYDRAULIC GRADE LINE
ID	INSIDE DIAMETER
I/I	INSIDE TO INSIDE
I	INTENSITY
INV	INVERT
LF	LINEAR FEET
LONG	LONGITUDINAL
LP	LOW POINT
MH	MANHOLE
MAX	MAXIMUM
MIN	MINIMUM
OS	OFF SITE
OC	ON CENTER
OCEW	ON CENTER EACH WAY
OD	OUTSIDE DIAMETER (DIMENSION)
O/O	OUTSIDE TO OUTSIDE
OAW	OVERALL WIDTH
PKG	PARKING
PV, PVMT	PAVEMENT
PSI	POUNDS PER SQUARE INCH
PC	POINT OF CURVATURE
PCC	POINT OF CONTINUOUS CURVATURE
PI	POINT OF INTERSECTION
PRC	POINT OF REVERSE CURVATURE
PT	POINT OF TANGENCY
PVI	POINT OF VERTICAL INTERSECTION
PL	PROPERTY LINE
R, RAD	RADIUS
RCBC	REINFORCED CONCRETE BOX CULVERT
RCP	REINFORCED CONCRETE PIPE
REQ'D	REQUIRED
RET	RETAINING
ROW, R.O.W.	RIGHT-OF-WAY
Q	RUN OFF
SS	SANITARY SEWER LINE
SW	SIDEWALK
SL	SLOPE
STD	STANDARD
STA	STATION
SF	SQUARE FEET
SY	SQUARE YARDS
TEMP	TEMPORARY
TC	TOP OF CURB
TG	TOP OF GRATE
THC	TOP OF HEADER CURB
TP	TOP OF PAVEMENT
TW	TOP OF WALL
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
VEL	VELOCITY IN FEET PER SECOND
VERT	VERTICAL
W, WL	WATER LINE
WM	WATER METER
WS	WATERSHED
WV	WATER VALVE
WWM	WELDED WIRE MESH
∠	ANGLE
∅	DIAMETER
☐	SQUARE TUBE

WARNING! BEFORE YOU DIG

COORDINATION WITH UTILITIES

CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES PRIOR TO ANY EXCAVATION AND/OR RELOCATION OF EXISTING UTILITIES ENCOUNTERED DURING CONSTRUCTION WORK.

EL PASO ELECTRIC CO.	543-5720
AT&T	1-800-DIG-TESS
TEXAS GAS SERVICE	544-6300
EMERGENCY HOTLINE	562-8411/562-2003
PUBLIC SERVICE BOARD (WATER & SEWER)	1-800-DIG-TESS
TEXAS EXCAVATION SAFETY SYSTEM	1-800-344-8377
SPECTRUM/CHARTER COMMUNICATION	775-7414
KINDER-MORGAN EPNG PIPELINES	1-800-238-3764
EPDOT LINE SPOT	621-6750
EL PASO STREETS AND MAINTENANCE	212-0151
EL PASO TRAFFIC SIGNAL STREETS AND MAINTENANCE	linespots@elpasotexas.gov

LEGEND

- LOT LINE
- UTILITY & SIDEWALK EASEMENT
- CENTER LINE OF STREET
- STREET R.O.W.
- DRAINAGE & UTILITY R.O.W.
- 4" ROLLED CURB & GUTTER
- FLOW LINE
- SUBDIVISION BOUNDARY LINE
- DRAINAGE AREA BOUNDARY
- DRAINAGE SUB-AREA
- FLOOD ZONE BOUNDARY
- 4010 — BASE FLOOD ELEVATION (NAVD 88 SHOWN)
- 4010 — PROPOSED CONTOUR
- 4010 — EXISTING CONTOUR
- SWALE
- ROCK RETAINING WALL BY DEVELOPER UNLESS NOTED OTHERWISE
- 4' or 6' ROCK WALL FROM HIGH SIDE BY DEVELOPER UNLESS NOTED OTHERWISE
- RETAINING WALL BY BUILDER UNLESS NOTED OTHERWISE
- DIRECTION OF RUNOFF FLOW
- HIGH POINT
- LOW POINT
- POINT OF VERTICAL INTERSECTION
- 50' PAVEMENT TRANSITION
- PROPOSED CITY MONUMENT
- 66 / FG= 75.72 / FF= 76.22 — PROPOSED BUILDING PAD W/ FINISHED GRADE AND FINISHED FLOOR ELEVATION
- DA#1 — DRAINAGE AREA
- POINT OF RUN OFF CONCENTRATION
- 3728.85 — PROPOSED TOP OF CURB FINISHED GRADES
- x 75.72TC — PROPOSED TOP OF CURB
- (3729.2) — EXISTING GRADE
- TC=08.09 — PROPOSED TOP OF CURB ELEVATION
- PVMT=08.65 — PROPOSED PAVEMENT ELEVATION
- 99.35 . . . . .3999.35
- 00.35 . . . . .4000.35
- 09.35 . . . . .4009.35
- 10.35 . . . . .4010.35

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EL PASO WATER UTILITIES (WATER & SEWER) AFTER HOURS EMERGENCY (EPW)	1-800-DIG-TESS
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03/15/2021

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SUBDIVISION
CIMARRON CANYON UNIT TWO SUBDIVISION

SHEET TITLE
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SHEET NO. 3
SHEET SEQUENCE 3 OF 82

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GENERAL NOTES: WATER AND SANITARY SEWER CONSTRUCTION

1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE TO THE MOST STRINGENT OF THE REQUIREMENTS OF THE CITY OF EL PASO, EL PASO WATER (EPWater), THE TCEQ OR THE PROJECT SPECIFICATIONS. AT A MINIMUM, THIS WATER DISTRIBUTION SYSTEM MUST BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ) RULES AND REGULATIONS FOR PUBLIC WATER SYSTEMS 30 TEXAS ADMINISTRATIVE CODE (TAC) CHAPTER 290 SUBCHAPTER D.

2. THIS WATER DISTRIBUTION SYSTEM MUST BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ) AND EPWater RULES AND REGULATIONS FOR PUBLIC WATER SYSTEMS 30 TEXAS ADMINISTRATIVE CODE (TAC) CHAPTER 290 SUBCHAPTER D. PRIOR TO BEGINNING CONSTRUCTION, THE OWNER OR HIS/HER AUTHORIZED REPRESENTATIVE SHALL CONVENE A PRECONSTRUCTION CONFERENCE BETWEEN THE CONSULTING ENGINEERS REPRESENTATIVE, CONTRACTOR(s), EPWater, TCEQ, THE CITY OF EL PASO 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.

3. THE CONTRACTOR SHALL GIVE THE ENGINEER, CITY OF EL PASO ENGINEERING DIVISION, A MINIMUM OF 48 HOURS NOTICE BEFORE BEGINNING EACH PHASE OF CONSTRUCTION.

4. ANY EXISTING PAVEMENT, CURBS AND/OR SIDEWALKS DAMAGED OR REMOVED DURING CONSTRUCTION WILL BE REPAIRED BY THE CONTRACTOR AT THEIR OWN EXPENSE BEFORE ACCEPTANCE OF THE WORK.

5. THE LOCATION AND DEPTHS OF ANY EXISTING WATER AND/OR WASTEWATER LINES TO BE CROSSED OR CONNECTED TO SHALL BE VERIFIED BY THE CONTRACTOR AT THE TIME OF COMMENCEMENT OF CONSTRUCTION.

6. CONTRACTORS SHALL VERIFY EXACT DEPTH AND LOCATION OF ALL UTILITIES PRIOR TO BEGINNING CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES, DRIVEWAYS, PAVEMENT, CURB AND GUTTER, SIDEWALKS, ETC., SHALL BE REPAIRED BY THE CONTRACTOR, OR THE UTILITY, AT UTILITIES OPTION, AND SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

7. EL PASO WATER (EPWater), THE DESIGN ENGINEER AND ANY OTHER CONCERNED PARTIES SHALL BE CONTACTED A MINIMUM OF 48 HOURS PRIOR TO CONNECTING TO EXISTING WATER AND/OR WASTEWATER LINES.

8. ALL FILL AREAS OVER ALL UTILITIES, SHALL BE COMPACTED TO 95% MODIFIED PROCTOR DENSITY IN ACCORDANCE WITH ASTM D-1557.

9. WATER AND WASTEWATER ALIGNMENTS SHOWN ON THE PLANS SHOULD BE ACHIEVED BY FLEXURE WITHIN THE MANUFACTURER'S SPECIFICATIONS, EXCEPT WHERE SPECIFIC FITTINGS ARE CALLED FOR THE PLANS.

10. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE AND PROTECT ALL EXISTING UTILITIES SUCH AS GAS LINES, ELECTRIC LINES, WATER LINES, VALVE BOXES, FIRE HYDRANTS, STRUCTURES, AND ANY 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, OR 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.

11. ALL CONSTRUCTION ACTIVITIES, INCLUDING ACCESS, EGRESS, TRAVEL, STOCKPILING, ETC., ARE TO BE CONFINED TO AREAS IDENTIFIED BY THE ENGINEER.

12. DISPOSAL OF ALL SPOIL OFFSITE WILL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

13. PIPE FITTINGS AND JOINTS: WATER-PVC OR 18, C-900, CL-235 WITH BOLTLESS GASKETED JOINTS AND M.J. OR FLANGED FITTINGS UNLESS OTHERWISE SHOWN ON THE PLANS; FLUSHING VALVE / FIRE HYDRANTS LEAD – DUCTILE IRON, CLASS 350, 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. IN PROJECT SPECIFICATIONS OR ON THE DRAWINGS.

14. AT ALL LOCATIONS WHERE A WATERLINE CROSSES A WASTEWATER LINE, THE CONSTRUCTION SHALL STRICTLY COMPLY WITH ALL APPLICABLE RULES AND REGULATIONS OF THE TCEQ AND EPWater.

15. 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.

16. THE EPWater AND THE ENGINEER SHALL BE GIVEN 48 HOURS NOTICE PRIOR TO ANY TESTING PHASE. (DENSITY, PRESSURE, LEAKAGE, ETC.)

17. ALL NEWLY INSTALLED PIPES AND RELATED PRODUCTS MUST CONFORM TO AMERICAN NATIONAL STANDARDS INSTITUTE / NATIONAL SANITATION FOUNDATION (ANSI/NSF) STANDARD 61 AND MUST BE CERTIFIED BY AN ORGANIZATION ACCREDITED BY ANSI.

18. PLASTIC PIPE FOR USE IN PUBLIC WATER SYSTEMS MUST BEAR THE NATIONAL SANITATION FOUNDATION SEAL OF APPROVAL (NSF-PW) AND HAVE AN ASTM DESIGN PRESSURE RATING OF AT LEAST 235 PSI OR A STANDARD DIMENSION RATIO OF 26 OR LESS.

19. NO PIPE WHICH HAS BEEN USED FOR ANY PURPOSE OTHER THAN THE CONVEYANCE OF DRINKING WATER SHALL BE ACCEPTED OR RELOCATED FOR USE IN ANY PUBLIC DRINKING WATER SUPPLY.

20. WATER TRANSMISSION AND DISTRIBUTION LINES MUST BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS HOWEVER; THE TOP OF THE WATER LINE MUST BE LOCATED BELOW THE FROST LINE AND IN NO CASE SHALL THE TOP OF THE WATER LINE BE LESS THAN 24 INCHES BELOW GROUND SURFACE.

21. THE HYDROSTATIC LEAKAGE RATE FOR PVC PIPE, DUCTILE IRON PIPE, AND APPURTENANCES SHALL NOT EXCEED THE AMOUNT ALLOWED OR RECOMMENDED BY FORMULAS IN AMERICAN WATER ASSOCIATION (AWWA) STANDARD C605 AND STANDARD C600, AS REQUIRED IN 30 TAC §290.44(a)(5). PLEASE ENSURE THAT THE FORMULA FOR THIS CALCULATION IS CORRECT AND IN USE;

$$Q = \frac{LD\sqrt{P}}{148{,}000}$$

WHERE:

- Q=THE QUANTITY OF MAKEUP WATER, IN GALLONS PER HOUR;
- L=THE LENGTH OF PIPE BEING TESTED, IN FEET;
- D=THE NOMINAL DIAMETER OF THE PIPE, IN INCHES; AND
- P=THE AVERAGE TEST PRESSURE DURING THE HYDROSTATIC TEST, IN PSI.

22. PROJECTS CONSTRUCTED ON OR AFTER JANUARY 4, 2014 MUST COMPLY WITH CHANGES TO THE SAFE DRINKING WATER ACT THAT REDUCE THE MAXIMUM ALLOWABLE LEAD CONTENT OF PIPES, PIPE FITTINGS, PLUMBING FITTINGS, AND FIXTURES TO 0.25 PERCENT.

23. THE CONTRACTOR SHALL INSTALL APPROPRIATE AIR RELEASE DEVICES IN THE DISTRIBUTION SYSTEM AT ALL POINTS WHERE TOPOGRAPHY OR OTHER FACTORS MAY CREATE AIR LOCKS IN THE LINES. ALL VENT OPENINGS TO THE ATMOSPHERE SHALL BE COVERED WITH 16-MESH OR FINER, CORROSION RESISTANT SCREENING MATERIAL OR AN ACCEPTABLE EQUIVALENT.

24. THE SYSTEM SHALL BE DESIGNED TO AFFORD EFFECTIVE CIRCULATION OF WATER WITH A MINIMUM OF DEAD ENDS. ALL DEAD END MAINS SHALL BE PROVIDED WITH ACCEPTABLE FLUSH VALVES AND DISCHARGE PIPING. ALL DEAD END LINES LESS THAN TWO INCHES IN DIAMETER WILL NOT REQUIRE FLUSH VALVES IF THEY END AT A CUSTOMER SERVICE. WHERE DEAD ENDS ARE NECESSARY AS A STAGE IN THE GROWTH OF THE SYSTEM, THEY SHALL BE LOCATED AND ARRANGED TO ULTIMATELY CONNECT THE ENDS TO PROVIDE CIRCULATION.

25. THE CONTRACTOR SHALL NOT PLACE THE PIPE IN WATER OR WHERE IT CAN BE FLOODED WITH WATER OR SEWAGE DURING ITS STORAGE OR INSTALLATION.

26. THE CONTRACTOR SHALL DISINFECT THE NEW WATER MAINS IN ACCORDANCE WITH AWWA STANDARD C651 AND THEN FLUSH AND SAMPLE THE LINES BEFORE BEING PLACED INTO SERVICE. SAMPLES SHALL BE COLLECTED FOR MICROBIOLOGICAL ANALYSIS TO CHECK THE EFFECTIVENESS OF THE DISINFECTION PROCEDURE WHICH SHALL BE REPEATED IF CONTAMINATION PERSISTS. A MINIMUM OF ONE SAMPLE FOR EACH 1,000 FEET OF COMPLETED WATER LINE WILL BE REQUIRED OR AT THE NEXT AVAILABLE SAMPLING POINT BEYOND 1,000 FEET AS DESIGNATED BY THE DESIGN ENGINEER.

27. WATER LINE / NEW SEWER LINE SEPARATION: WHEN NEW SANITARY SEWERS ARE INSTALLED, THEY SHALL BE INSTALLED NO CLOSER TO WATER LINES THAN NINE (9) FEET IN ALL DIRECTIONS. SEWERS THAT PARALLEL WATER LINES MUST BE INSTALLED IN SEPARATE TRENCHES. WHERE THE NINE (9) FOOT SEPARATION DISTANCE CANNOT BE ARCHIVED. THE FOLLOWING GUIDELINES APPLY:

A. WHERE A SANITARY SEWER PARALLELS A WATERLINE, 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 (4) FEET BETWEEN OUTSIDE DIAMETERS. THE SEWER SHALL BE LOCATED BELOW THE WATER LINE.

B. 30 TAC §290.44(e)(4)(B)(v) REQUIRES THAT WHERE A NEW POTABLE WATERLINE CROSSES A NEW, PRESSURE RATED WASTEWATER LINE, ALL OF THE FOLLOWING CONDITIONS MUST BE MET:

- ONE SEGMENT OF THE WATERLINE PIPE SHALL BE CENTERED OVER THE WATERLINE SUCH THAT THE JOINTS OF THE WATERLINE PIPE ARE EQUIDISTANT AND AT LEAST NINE FEET HORIZONTALLY FROM THE CENTER LINE OF THE WASTEWATER LINE;
- THE POTABLE WATERLINE SHALL BE AT LEAST 6 INCHES ABOVE THE WASTEWATER LINE;
- WHENEVER POSSIBLE, THE CROSSING SHALL BE CENTERED BETWEEN THE JOINTS OF THE WASTEWATER LINE;
- THE WASTEWATER LINE SHALL HAVE A MINIMUM PRESSURE RATING OF AT LEAST 150 PSI; AND
- THE WASTEWATER LINE SHALL BE EMBEDDED IN CEMENT STABILIZED SAND (CONTAINING AT LEAST 2.5 BAGS OF CEMENT PER CUBIC YARD OF MIXTURE) FOR THE TOTAL LENGTH OF ONE PIPE SEGMENT PLUS 12 INCHES BEYOND THE JOINT ON EACH END.

C. WHERE A SANITARY 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 BAGS OF CEMENT PER CUBIC YARD OF SAND) FOR ALL SECTIONS OF SEWER WITHIN NINE (9) 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 TWELVE (12) INCHES) ABOVE THE TOP OF THE PIPE.

D. 30 TAC §290.44(e)(4)(B)(iv)(III) REQUIRES THAT WHEN A NEW WATERLINE CROSSES UNDER A WASTEWATER LINE, AN ABSOLUTE MINIMUM SEPARATION DISTANCE OF ONE FOOT BETWEEN THE WATERLINE SHALL BE PROVIDED. BOTH THE WATERLINE AND WASTEWATER LINE MUST PASS A PRESSURE AND LEAKAGE TEST AS SPECIFIED IN AWWA C600 STANDARDS AND ONE OF THE FOLLOWING CONDITIONS MUST BE MET:

a. THE WATERLINE SHALL BE ENCASED IN AN 18-FOOT (OR LONGER) SECTION OF PIPE. THE ENCASING PIPE SHALL HAVE A MINIMUM PIPE STIFFNESS OF 115 PSI AT 5.0% DEFLECTION (e.g., SDR-26 PVC), AND SHALL BE AT LEAST TWO NOMINAL PIPE DIAMETERS LARGER THAN THE WATERLINE PIPE. THE SPACE AROUND THE CARRIER SHALL BE SUPPORTED AT FIVE FOOT (OR LESS) INTERVALS WITH SPACERS OR BE FILLED TO THE SPRINGLINE WITH WASHED SAND. EACH END OF THE CASING SHALL BE SEALED WITH WATERTIGHT NON-SHRINK CEMENT GROUT OR A MANUFACTURED WATERTIGHT SEAL; OR

b. THE WATERLINE SHALL BE CONSTRUCTED OF DUCTILE IRON OR STEEL PIPE WITH MECHANICAL OR WELDED JOINTS AS APPROPRIATE.

E. WATER LINE / MANHOLE SEPARATION, UNLESS MANHOLES CAN BE MADE WATER TIGHT AND TESTED FOR NO LEAKAGE THEY MUST BE INSTALLED SO AS TO PROVIDE A MINIMUM OF NINE (9) FEET OF HORIZONTAL CLEARANCE FROM AN EXISTING OR PROPOSED WATER LINE. IF THE NINE (9) FOOT SEPARATION DISTANCE CANNOT BE ACHIEVED, THE WATERLINE MUST BE ENCASED IN A JOINT OF 150 PSI PRESSURE CLASS PIPE AT LEAST EIGHTEEN (18) FEET LONG AND TWO NOMINAL SIZES LARGER THAN THE WATERLINE. THE SPACE AROUND THE CARRIER PIPE SHALL BE SUPPORTED AT FIVE (5) FOOT INTERVALS WITH SPACERS OR BE FILLED TO THE SPRINGLINE WITH WASHED SAND. THE ENCASEMENT PIPE SHALL BE CENTERED ABOVE CROSSING AND BOTH ENDS SEALED WITH CEMENT GROUT OR MANUFACTURED SEAL.

28. MANHOLE CONSTRUCTION AND REHABILITATION: ALL MANHOLES SHALL BE 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 217.55 (F). 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.

29. ALL SEWER LINES SHALL BE TESTED USING THE FOLLOWING METHOD:

A. ALL LOW PRESSURE AIR TESTS 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 217.57 (A)(1)(B) DESCRIBED BELOW:

- FOR SECTIONS OF PIPE UP TO 36 INCHES AVERAGE INSIDE DIAMETER, THE MINIMUM TIME ALLOWABLE FOR THE PRESSURE TO DROP FROM 3.5 POUNDS 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); WHERE
  T=TIME FOR PRESSURE TO DROP 1.0 POUND PER SQUARE INCH GAUGE IN SECONDS.
  K=0.000419(D)(L), BUT NOT LESS THAN 1.0
  D=AVERAGE INSIDE DIAMETER IN INCHES
  L=LENGTH OF LINE IN FEET OF SAME SIZE BEING TESTED
  Q=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 OUT LINED 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)

LINES WITH A 36 INCH AVERAGE INSIDE DIAMETER AND LARGER MAY BE TESTED AT EACH JOINT. THE MINIMUM TIME ALLOWABLE FOR THE PRESSURE TO DROP FROM 3.5 PSIG TO 2.5 PSIG DURING A JOINT TEST, REGARDLESS OF PIPE SIZE, SHALL BE 20 SECONDS.

B. 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 217.57(A) (2).

C. 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 (5) 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 217.57 (B).

30. THE BEDDING AND BACKFILL FOR FLEXIBLE PIPE SHALL COMPLY WITH THE STANDARDS OF ASTM D-2321, CLASSES I OR II. FOR RIGID PIPE THE BEDDING SHALL COMPLY WITH THE REQUIREMENTS OF ASTM C-12 CLASSES A OR B. REFERENCE 30 TAC SECTION 217.54(A).

31. SEWER LINES SHALL BE TESTED FROM MANHOLE TO MANHOLE OR WHEN A NEW SEWER LINE IS CONNECTED TO AN EXISTING STUB OR CLEANOUT, IT SHALL BE TESTED FROM AN EXISTING MANHOLE TO A NEW MANHOLE.

32. ALL FORCE AND GRAVITY SANITARY SEWER LINES SHALL HAVE A MINIMUM 48 INCHES OF COVER FROM FINISHED GRADE OR 36 INCHES BELOW ACTUAL SUBGRADE UNLESS OTHERWISE DENOTED ON PLANS.

33. INCLUDE ADDITIONAL FLUSHING VALVES, GATE VALVES AND TEST CONNECTIONS NECESSARY TO PERFORM TEST AND STERILIZATION OPERATION.

34. ALL GATE VALVES SHALL HAVE RESILIENT VALVE SEATS.

35. ALL MANHOLES AND WET WELLS MUST BE TESTED SEPARATELY AND INDEPENDENTLY OF THE COLLECTION LINES.

36. AFTER A FORCE MAIN HAS BEEN INSTALLED AND BACKFILLED AND ALL OTHER APPURTENANCES INSTALLED AND CONNECTED, A PRESSURE TEST, FOLLOWED BY A LEAKAGE TEST, WILL BE CONDUCTED BY THE CONTRACTOR UNDER THE OBSERVATION BY THE DISTRICT. THE CONTRACTOR SHALL BE PRESENT AND SHALL FURNISH ALL NECESSARY LABOR AND EQUIPMENT FOR CONDUCTING THE TESTS. THE SPECIFIED TEST PRESSURES WILL BE BASED ON THE ELEVATION OF THE LOWEST POINT OF THE LINE OR SECTION UNDER TEST. BEFORE APPLYING THE SPECIFIED TEST PRESSURE, ALL AIR SHALL BE EXPELLED FROM THE PIPE. IF PERMANENT AIR VENTS ARE NOT LOCATED AT ALL HIGH POINTS, THE CONTRACTOR SHALL INSTALL CORPORATION COCKS AT SUCH POINTS.

A. PRESSURE TEST: THE ENTIRE PROJECT OR EACH VALVED SECTION SHALL BE TESTED, AT A PRESSURE OF 200 PSI FOR A SUFFICIENT PERIOD (APPROXIMATELY 10 MINUTES) TO DISCOVER ALL LEAKING OR DEFECTIVE MATERIALS. REPAIRS SHALL BE MADE BY THE CONTRACTOR TO CORRECT ANY LEAKING OR DEFECTIVE MATERIALS.

B. PRESSURE PIPE LEAKAGE TEST: A LEAKAGE TEST WILL FOLLOW THE PRESSURE TEST AND BE CONDUCTED ON THE ENTIRE PROJECT OR EACH VALVED SECTION. THE LEAKAGE TEST SHALL BE AT 150 PSI FOR AT LEAST ONE HOUR.

- ALLOWABLE LEAKAGE: LEAKAGE SHALL BE DEFINED AS THE QUANTITY OF WATER THAT MUST BE SUPPLIED INTO ANY TEST SECTION OF PIPE TO MAINTAIN THE SPECIFIED LEAKAGE TEST PRESSURE AFTER THE AIR IN THE PIPELINE HAS BEEN EXPELLED AND THE PIPE HAS BEEN FILLED WITH WATER. NO PIPE INSTALLATION WILL BE ACCEPTED IF THE LEAKAGE EXCEEDS 25 GALLONS/24 HOURS/MILE OF PIPE/ INCH NOMINAL PIPE DIAMETER.

  (25 GDP)/(IN.-MI.)

- LOCATION AND CORRECTION OF LEAKAGE: IN SUCH TESTING DISCLOSES LEAKAGE IN EXCESS OF THIS SPECIFIED ALLOWABLE, THE CONTRACTOR, AT THEIR EXPENSE, SHALL LOCATE AND CORRECT ALL DEFECTS IN THE PIPE LINE UNTIL THE LEAKAGE IS WITHIN THE INDICATED ALLOWANCE. ALL VISIBLE LEAKAGE IN PIPE SHALL ALSO BE CORRECTED BY THE CONTRACTOR AT THEIR OWN EXPENSE.

37. 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. GENERAL NOTES FOR CURVED SEWER LINES:

A. ALL CURVATURE OF SEWER PIPE WILL BE ACHIEVED BY PIPE FLEXURE PER RECOMMENDED PROCEDURE:

- IN-PLACE DEFLECTION TESTS (MANDREL TEST) MUST BE PERFORMED ON ALL FLEXIBLE AND SEMI-RIGID PIPE IN ACCORDANCE WITH 30 TAC SECTION 217.57(B) (i).

B. INFILTRATION TEST SHALL BE CONDUCTED IN ACCORDANCE WITH 30 TAC SECTION 217.57(A) (2) (C) – 50 GALLONS PER INCH OF DIAMETER PER MILE OF PIPE.

- SPECIFIC CARE SHALL BE TAKEN TO ENSURE THAT THE JOINT IS PLACED IN THE CENTER OF THE TRENCH AND PROPERLY BEDDED IN ACCORDANCE WITH 30 TAC SECTION 217.54 (A).

38. THE ASTM, ANSI OR AWWA SPECIFICATION NUMBERS FOR THE PIPE AND JOINTS ARE ASTM D-3034 AND ASTM 2241. THE PIPE MATERIAL, THE PRESSURE CLASSES AND THE SDR AND/OR DR DESIGNATIONS ARE SDR 35 AND SDR 26.

39. THE DIAMETER OF THE MANHOLES SHALL BE A MINIMUM OF FOUR (4) FEET AND THE MANHOLE OPENING SHALL HAVE A MINIMUM NOMINAL DIAMETER OF THIRTY (30) INCHES. THESE DIMENSIONS ARE LABELED ON THE MANHOLE DRAWING ON THE DETAIL SHEET. THE MANHOLE DETAILS SHALL INSURE THAT THE TCEQ RULES CONCERNING SEWER INVERTS HAVE BEEN COMPILED WITH AS DESCRIBED IN SECTION 217.55(L) (2).

40. A CROSS SECTION OF THE TRENCH DETAILS IS INCLUDED IN THE PLANS WHICH SHOW THE DIMENSIONS OF THE TRENCH AND PIPE AND THE CLASS OF BEDDING MATERIAL REQUIRED.

TRENCH SAFETY NOTES:

1. IN ACCORDANCE WITH THE LAWS OF THE STATE OF TEXAS AND THE U.S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION REGULATIONS, ALL TRENCHES, OVER FIVE (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 FIVE (5) FEET IN DEPTH SHALL ALSO BE EFFECTIVELY PROTECTED WHERE HAZARDOUS GROUND MOVEMENT MAY BE EXPECTED.

2. IN ACCORDANCE WITH THE U.S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION REGULATIONS, WHEN EMPLOYEES ARE REQUIRED TO BE IN TRENCHES FOUR (4) FEET IN DEPTH OR GREATER, ADEQUATE MEAN EXIT, SUCH AS A LADDER OR STEPS, MUST BE PROVIDED AND LOCATED SO AS TO REQUIRE NO MORE THAN TEWNTY-FIVE (25) FEET OF LATERAL TRAVEL.

3. A TRENCH SAFETY SYSTEM MUST BE UTILIZED FOR TRENCHES FIVE (5) FEET OR MORE IN DEPTH OR FOR TRENCHES LESS THAN FIVE (5) FEET IN DEPTH IN AN AREA WHERE HAZARDOUS GROUND MOVEMENT IS EXPECTED. IF A TRENCH SAFETY SYSTEM IS NOT IN PLACE AS REQUIRED, OR IS DEEMED TO BE UNSAFE, ALL CONSTRUCTION SHALL CEASE, THE TRENCHED AREA SHALL BE BARRICADED AND THE ENGINEER NOTIFIED IMMEDIATELY. CONSTRUCTION SHALL NOT RESUME UNTIL APPROPRIATE TRENCH SYSTEMS ARE IMPLEMENTED.

4. STACKING OF TRENCH BOXES SHALL NOT BE PERMITTED IN SOILS WITH PLASTICITY INDICES LESS THAN 25. CONTRACTOR SHALL MAINTAIN A BENCH 24" IN WIDTH MINIMUM, 18" BELOW THE RIM OF ALL TRENCH BOXES WHERE CUT SLOPES INTERSECT THE BOX. SLOPES SHALL BE 1.5 TO 1.5 FEET AT THE STEEPEST POINT, OR SHALL BE STEPPED WITH CUT BENCHES 3'X3' MINIMUM.

5. OPEN TRENCHES MUST BE PROTECTED TO WITHSTAND A 10-YEAR STORM EVENT MINIMUM. WORK IN TRENCHES IS PROHIBITED DURING A RAINFALL EVENT EXCEPT THAT WORK MAY PROCEED IN LIGHT TO MODERATE EVENTS IF TRENCH BOXES ARE IN USE, AND ONLY WITHIN THE CONFINES OF THE TRENCH BOXES.

6. CONTRACTOR SHALL PROVIDE TO THE BUILDING OFFICIAL OF THE CITY OF EL PASO, A TRENCH SAFETY PLAN FOR ALL WORK FIVE (5) FEET IN DEPTH OR GREATER. IN ACCORDANCE WITH THE U.S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION REGULATIONS, A TRENCH SAFETY PLAN MUST BE SEALED BY A REGISTERED ENGINEER FOR ALL WORK TWENTY (20) FEET IN DEPTH OR GREATER, OR FOR ALL WORK AT ANY DEPTH WHERE HAZARDOUS GROUND MOVEMENT IS EXPECTED.

WARNING! BEFORE YOU DIG

COORDINATION WITH UTILITIES

CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES PRIOR TO ANY EXCAVATION AND/OR RELOCATION OF EXISTING UTILITIES ENCOUNTERED DURING CONSTRUCTION WORK.

EL PASO ELECTRIC CO.	543-5720
AT&T	1-800-DIG-TESS
TEXAS GAS SERVICE	544-6300
EMERGENCY HOTLINE	562-8411/562-2003
PUBLIC SERVICE BOARD (WATER & SEWER)	1-800-DIG-TESS
TEXAS EXCAVATION SAFETY SYSTEM	1-800-344-8377
SPECTRUM/CHARTER COMMUNICATION	775-7414
KINDER-MORGAN EPNG PIPELINES	1-800-238-3764
EPDOT LINE SPOT	621-6750
EL PASO STREETS AND MAINTENANCE	212-0151
EL PASO TRAFFIC SIGNAL STREETS AND MAINTENANCE	linespots@elpasotexas.gov

TEN COMMANDMENTS OF TRENCHING

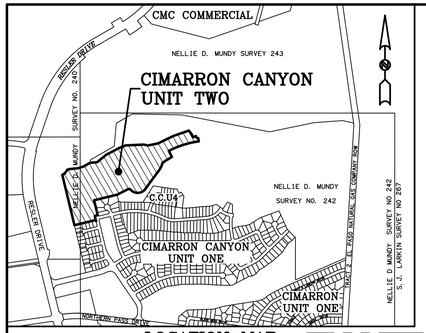
1. A COMPETENT PERSON MUST INSPECT THE TRENCH PRIOR TO THE START OF WORK AND PRIOR TO EMPLOYEE ENTRANCE.
2. PROPER SLOPING OR TRENCH PROTECTION MUST EXIST AT 5 FEET OR DEEPER.
3. SPOILS MUST BE AT LEAST 2 FEET FROM EDGE TO TRENCH.
4. LADDERS OR RAMPS ARE REQUIRED WHEN TRENCHES ARE 4 FEET OR MORE IN DEPTH.
5. 25 FEET IS THE MAXIMUM DISTANCE A PERSON CAN BE FROM A LADDER OR RAMP.
6. LADDERS MUST BE TIED OFF.
7. TRENCH BOXES MUST EXTEND TO THE TOP OF THE EXCAVATION.
8. A TRENCH SHIELD MUST BE WITHIN 2 FEET OF BOTTOM OF THE TRENCH.
9. CLASS B SOILS MUST BE SLOPED 1 : 1.
10. CLASS C SOILS MUST BE SLOPED 1.50 : 1.

GENERAL NOTES

1. THE CONTRACTOR SHALL VISIT AND FAMILIARIZE THEMSELVES WITH THE PROJECT SITE PRIOR TO SUBMITTING BIDS.
2. CONTRACTOR SHALL MAINTAIN VEHICLE AND PEDESTRIAN ACCESS ALONG PERIMETER OF PROJECT SITE ADJACENT TO PUBLIC RIGHT OF WAY AT ALL TIMES.
3. CONTRACTOR SHALL WATER CONSTRUCTION AREA A MINIMUM OF TWICE A DAY TO KEEP DUST TO A MINIMUM. ONCE IN THE MORNING AND ONCE BEFORE QUITTING TIME. THIS SHALL ALSO BE DONE DURING WEEKENDS AND HOLIDAYS.
4. CONTRACTOR IS RESPONSIBLE TO LOCATE, PROTECT AND PLACE ALL UNDERGROUND UTILITY LINES AT NO EXTRA

CIMARRON CANYON UNIT TWO

BEING A PORTION OF TRACT 1B2, NELLIE D. MUNDY SURVEY 242
AND A PORTION OF TRACTS 4G AND 4G2, NELLIE D. MUNDY
SURVEY 240, CITY OF EL PASO, EL PASO COUNTY, TEXAS.
CONTAINING 30.987 ± ACRES (1,349,777 SQ. FT.)
SHEET 1 OF 2



LOCATION MAP
SCALE: 1" = 1200' ±

SCALE: 1" = 100'
0 50 100 200

NOTE:

1. BASIS OF BEARINGS IS THE MONUMENTED CENTERLINE OF NORTHWESTERN DRIVE FROM THE PLAT OF EL PASO WEST UNIT ONE IN BOOK 57, PAGE 5, PLAT RECORDS, EL PASO COUNTY, TEXAS.
2. NELLIE D. MUNDY SURVEY 242 IS DESCRIBED SEPTEMBER 10, 1949, IN BOOK 945, PAGE 411, DEED RECORDS, EL PASO COUNTY, TEXAS.
3. SET 5/8" REBAR WITH CAP MARKED "RPLS 4178" AT ALL CORNERS UNLESS OTHERWISE INDICATED.
4. CIMARRON CANYON UNIT ONE IS RECORDED IN CLERK'S FILE NO. 20180052184, PLAT RECORDS, EL PASO COUNTY, TEXAS.
5. CIMARRON CANYON UNIT FOUR IS RECORDED IN CLERK'S FILE NO. 20200045035, PLAT RECORDS, EL PASO COUNTY, TEXAS.
6. WATER AND SEWER SERVICES WILL BE PROVIDED TO CIMARRON CANYON UNIT TWO FROM EXISTING FACILITIES ON NORTHERN PASS DRIVE BY THE EL PASO WATER UTILITIES/PUBLIC SERVICE BOARD IN ACCORDANCE WITH THEIR RULES AND REGULATIONS AND WITH SECTION 16.343 OF THE TEXAS WATER CODE.
7. U.S. POSTAL SERVICE DELIVERY WILL BE PROVIDED THROUGH NEIGHBORHOOD DELIVERY AND COLLECTION BOX UNITS.
8. THE SUBJECT PROPERTY LIES WITHIN THE CANUTILLO INDEPENDENT SCHOOL DISTRICT.

CHAPTER 395 OF THE TEXAS LOCAL GOVERNMENT CODE AUTHORIZES THE CITY OF EL PASO TO ADOPT AND IMPOSE WATER AND WASTEWATER IMPACT FEES. THIS PLAT NOTE FULFILLS AN OBLIGATION MANDATED BY CHAPTER 395 AND SETS THE ASSESSMENT OF THE IMPACT FEES IN ACCORDANCE WITH THE IMPACT FEE SCHEDULE ADOPTED BY CITY COUNCIL AS SET FORTH BELOW. THE COLLECTION OF THE IMPACT FEE FOR THIS SUBDIVISION SHALL BE PRIOR TO THE TIME A BUILDING PERMIT IS ISSUED IF DEVELOPMENT IS WITHIN THE CITY LIMITS OR AT THE TIME OF THE METER CONNECTION IF DEVELOPMENT IS OUTSIDE THE CITY LIMITS.

WESTSIDE SERVICE AREA

METER SIZE	METER CAPACITY RATIO	WATER*	WASTEWATER
LESS THAN 1 INCH	1. 00	$659. 00	$927. 00
1 INCH	1. 67	$1, 101. 00	$1, 548. 00
1½ INCH	3. 33	$2, 195. 00	$3, 087. 00
2 INCH	5. 33	$3, 514. 00	$4, 941. 00
3 INCH	10. 00	$6, 593. 00	$9, 270. 00
4 INCH	16. 67	$10, 990. 00	$15, 453. 00
6 INCH	33. 33	$21, 973. 00	$30, 897. 00
8 INCH	53. 33	$35, 158. 00	$49, 437. 00
10 INCH	76. 67	$50, 545. 00	$71, 073. 00
12 INCH	143. 33	$94, 490. 00	$132, 867. 00

*FEES DO NOT APPLY TO WATER METER OR CONNECTIONS MADE FOR STANDBY FIRE PROTECTION SERVICE.

PROPERTY OWNERS:

CIMARRON HUNT COMMUNITIES, LLC
4401 N. MESA STREET
EL PASO TX 79902

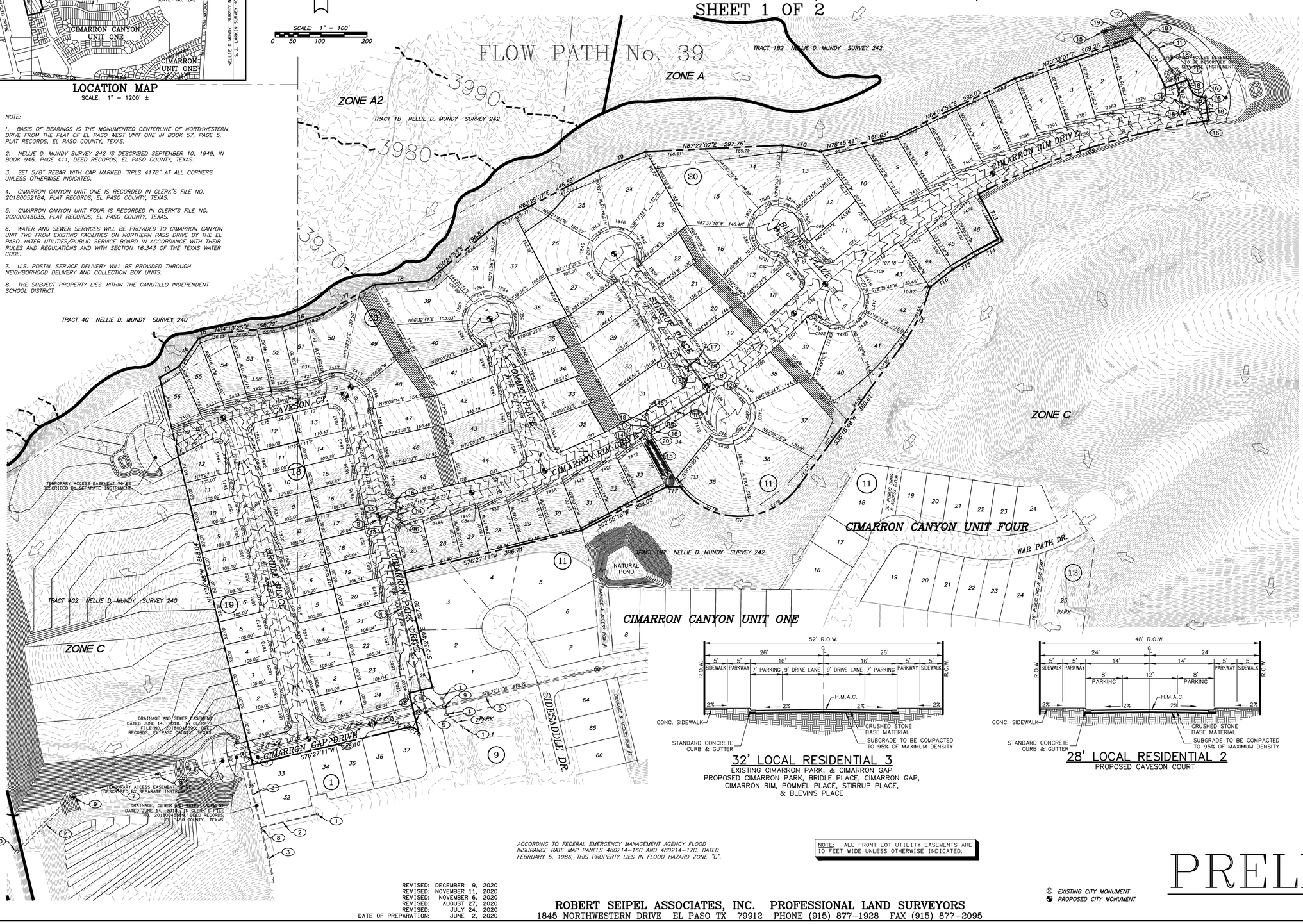
HUNT COMMUNITIES HOLDING, LLC
4401 N. MESA STREET
EL PASO TX 79902

PLAT PREPARED BY: MARK U. BALANSAY
TEXAS RPLS #6489

BENCHMARK:

CITY MONUMENT AT THE CENTERLINE INTERSECTION OF NORTHERN PASS DRIVE AND CIMARRON PARK DRIVE.

ELEVATION = 3976. 53 (CITY OF EL PASO DATUM)



32' LOCAL RESIDENTIAL 3
EXISTING CIMARRON PARK, & CIMARRON GAP
PROPOSED CIMARRON PARK, BRIDLE PLACE, CIMARRON GAP,
CIMARRON RIM, POMMEL PLACE, STIRRUP PLACE,
& BLEVINS PLACE

28' LOCAL RESIDENTIAL 2
PROPOSED CAVESON COURT

DRAINAGE KEY NOTES

1	EXISTING DRAINAGE INLET
2	EXISTING 18" STORM SEWER
3	EXISTING 24" STORM SEWER
4	EXISTING 36" STORM SEWER
5	EXISTING 60" STORM SEWER
6	EXISTING 66" STORM SEWER
7	EXISTING 72" STORM SEWER
8	EXISTING MANHOLE
9	EXISTING JUNCTION BOX
10	EXISTING OUTFALL STRUCTURE
11	PROPOSED 48" MANHOLE
12	PROPOSED 60" MANHOLE
13	PROPOSED 72" MANHOLE
14	PROPOSED 84" MANHOLE
15	PROPOSED OUTFALL STRUCTURE
16	PROPOSED BEEHIVE DRAINAGE INLET
17	PROPOSED TYPE I DRAINAGE INLET
18	PROPOSED 24" STORM SEWER
19	PROPOSED 30" STORM SEWER
20	PROPOSED 42" STORM SEWER

EXISTING DRAINAGE FLOW
PROPOSED DRAINAGE FLOW
PROPOSED HIGH POINT

ACCORDING TO FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAP PANELS 480214-16C AND 480214-17C, DATED FEBRUARY 5, 1986, THIS PROPERTY LIES IN FLOOD HAZARD ZONE "C".

NOTE: ALL FRONT LOT UTILITY EASEMENTS ARE 10 FEET WIDE UNLESS OTHERWISE INDICATED.

EXISTING CITY MONUMENT
PROPOSED CITY MONUMENT

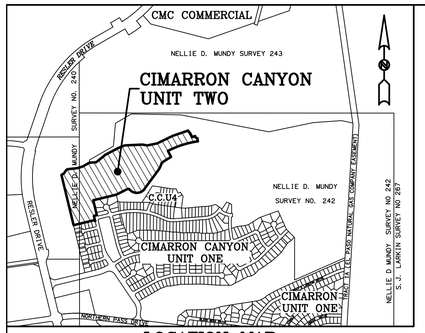
PRELIMINARY

REVISED: DECEMBER 9, 2020
REVISED: NOVEMBER 11, 2020
REVISED: NOVEMBER 6, 2020
REVISED: AUGUST 27, 2020
REVISED: JULY 24, 2020
DATE OF PREPARATION: JUNE 2, 2020

ROBERT SEIPEL ASSOCIATES, INC. PROFESSIONAL LAND SURVEYORS
1845 NORTHWESTERN DRIVE EL PASO TX 79912 PHONE (915) 877-1928 FAX (915) 877-2095

CIMARRON CANYON UNIT TWO

BEING A PORTION OF TRACT 1B2, NELLIE D. MUNDY SURVEY 242
AND A PORTION OF TRACTS 4G AND 4G2, NELLIE D. MUNDY
SURVEY 240, CITY OF EL PASO, EL PASO COUNTY, TEXAS.
CONTAINING 30.987 ± ACRES (1,349,777 SQ. FT.)
SHEET 2 OF 2



LOCATION MAP
SCALE: 1" = 1200' ±

LOT TABLE		
LOT NUMBER	SQ FT	ACRES
Lot 25 Block 11	7064	0. 162
Lot 26 Block 11	6809	0. 156
Lot 27 Block 11	6824	0. 157
Lot 28 Block 11	7355	0. 169
Lot 29 Block 11	7573	0. 174
Lot 30 Block 11	7995	0. 184
Lot 31 Block 11	8052	0. 185
Lot 32 Block 11	7746	0. 178
Lot 33 Block 11	7587	0. 174
Lot 34 Block 11	10387	0. 238
Lot 35 Block 11	18284	0. 420
Lot 36 Block 11	21066	0. 484
Lot 37 Block 11	22014	0. 505
Lot 38 Block 11	10710	0. 246
Lot 39 Block 11	8494	0. 195
Lot 40 Block 11	16299	0. 374
Lot 41 Block 11	9947	0. 228
Lot 42 Block 11	10614	0. 244
Lot 43 Block 11	9730	0. 223
Lot 44 Block 11	7688	0. 176
Lot 45 Block 11	6969	0. 160
Lot 46 Block 11	8039	0. 185

LOT TABLE		
LOT NUMBER	SQ FT	ACRES
25' Public Drainage & Access ROW Block 11	3054	0. 070

LOT TABLE		
LOT NUMBER	SQ FT	ACRES
Lot 1 Block 19	6214	0. 143
Lot 2 Block 19	5460	0. 125
Lot 3 Block 19	5460	0. 125
Lot 4 Block 19	5460	0. 125
Lot 5 Block 19	5460	0. 125
Lot 6 Block 19	5460	0. 125
Lot 7 Block 19	5460	0. 125
Lot 8 Block 19	5460	0. 125
Lot 9 Block 19	5460	0. 125
Lot 10 Block 19	5460	0. 125
Lot 11 Block 19	5460	0. 125
Lot 12 Block 19	7586	0. 174

LOT TABLE		
LOT NUMBER	SQ FT	ACRES
Lot 1 Block 18	6214	0. 143
Lot 2 Block 18	5775	0. 133
Lot 3 Block 18	5775	0. 133
Lot 4 Block 18	5775	0. 133
Lot 5 Block 18	5775	0. 133
Lot 6 Block 18	5775	0. 133
Lot 7 Block 18	5775	0. 133
Lot 8 Block 18	5775	0. 133
Lot 9 Block 18	5775	0. 133
Lot 10 Block 18	5775	0. 133
Lot 11 Block 18	5775	0. 133
Lot 12 Block 18	6574	0. 151
Lot 13 Block 18	6909	0. 159
Lot 14 Block 18	6039	0. 139
Lot 15 Block 18	5972	0. 137
Lot 16 Block 18	5905	0. 136
Lot 17 Block 18	5843	0. 134
Lot 18 Block 18	5832	0. 134
Lot 19 Block 18	5832	0. 134
Lot 20 Block 18	5832	0. 134
Lot 21 Block 18	5832	0. 134
Lot 22 Block 18	5832	0. 134
Lot 23 Block 18	5832	0. 134
Lot 24 Block 18	6277	0. 144

LOT TABLE		
LOT NUMBER	SQ FT	ACRES
Lot 1 Block 20	12776	0. 293
Lot 2 Block 20	10290	0. 236
Lot 3 Block 20	10029	0. 230
Lot 4 Block 20	9979	0. 229
Lot 5 Block 20	9849	0. 226
Lot 6 Block 20	9638	0. 221
Lot 7 Block 20	9638	0. 221
Lot 8 Block 20	9849	0. 226
Lot 9 Block 20	10987	0. 252
Lot 10 Block 20	15062	0. 346
Lot 11 Block 20	9730	0. 223
Lot 12 Block 20	8996	0. 207
Lot 13 Block 20	12572	0. 289
Lot 14 Block 20	14378	0. 330
Lot 15 Block 20	26103	0. 599
Lot 16 Block 20	10665	0. 245
Lot 17 Block 20	8169	0. 188
Lot 18 Block 20	8420	0. 193
Lot 19 Block 20	11165	0. 256
Lot 20 Block 20	9280	0. 213
Lot 21 Block 20	8757	0. 201
Lot 22 Block 20	9559	0. 219
Lot 23 Block 20	9885	0. 227
Lot 24 Block 20	16712	0. 384
Lot 25 Block 20	13675	0. 314
Lot 26 Block 20	14242	0. 327
Lot 27 Block 20	9267	0. 213
Lot 28 Block 20	9103	0. 209
Lot 29 Block 20	9672	0. 222
Lot 30 Block 20	10241	0. 235
Lot 31 Block 20	12196	0. 280
Lot 32 Block 20	12196	0. 280
Lot 33 Block 20	10241	0. 235
Lot 34 Block 20	9672	0. 222
Lot 35 Block 20	9103	0. 209
Lot 36 Block 20	9267	0. 213
Lot 37 Block 20	14242	0. 327
Lot 38 Block 20	10877	0. 250
Lot 39 Block 20	16290	0. 374
Lot 40 Block 20	12336	0. 283
Lot 41 Block 20	9337	0. 214
Lot 42 Block 20	9202	0. 211
Lot 43 Block 20	9673	0. 222
Lot 44 Block 20	11517	0. 264
Lot 45 Block 20	10903	0. 250
Lot 46 Block 20	10279	0. 236
Lot 47 Block 20	10269	0. 236
Lot 48 Block 20	11598	0. 266
Lot 49 Block 20	17947	0. 412
Lot 50 Block 20	12770	0. 293
Lot 51 Block 20	7763	0. 178
Lot 52 Block 20	7868	0. 181
Lot 53 Block 20	8869	0. 204
Lot 54 Block 20	9604	0. 220
Lot 55 Block 20	8436	0. 194
Lot 56 Block 20	7423	0. 170

LINE TABLE		
LINE #	*BEARING*	*DISTANCE*
T1	*S76°27'11"W*	*52.00'*
T2	*S13°32'49"E*	*92.00'*
T3	*N60°08'16"E*	*48.63'*
T4	*N35°01'13"E*	*74.73'*
T5	*N70°06'39"E*	*28.98'*
T6	*N72°30'11"E*	*93.40'*
T7	*N60°07'58"E*	*128.30'*
T8	*N85°52'20"E*	*118.00'*
T9	*N68°25'07"E*	*111.55'*
T10	*S81°02'09"E*	*84.00'*
T11	*N70°13'27"E*	*52.00'*
T12	*S8°11'00"E*	*52.00'*
T13	*S27°18'10"E*	*114.91'*
T14	*S61°18'20"W*	*67.13'*
T15	*S58°55'05"W*	*58.21'*
T16	*S51°59'14"W*	*62.97'*
T17	*S89°26'57"W*	*30.00'*
T18	*N60°17'06"E*	*4.46'*
T19	*N60°17'06"E*	*113.63'*
T20	*N76°27'11"E*	*113.63'*
T21	*N76°27'11"E*	*57.26'*
T22	*N12°16'34"W*	*57.26'*
T23	*S9°53'39"E*	*12.71'*
T24	*N35°15'09"W*	*75.63'*
T25	*N41°17'39"W*	*46.00'*
T26	*S12°16'21"E*	*31.62'*
T27	*S13°32'49"E*	*23.38'*
T28	*N76°27'11"E*	*22.69'*
T29	*N41°17'39"W*	*18.28'*
T30	*S41°17'39"E*	*14.61'*
T31	*N29°06'44"W*	*115.00'*
T32	*N29°06'44"W*	*110.00'*
T33	*S33°08'42"E*	*19.19'*

CURVE TABLE					
CURVE #	*DELTA*	*RADIUS*	*ARC*	*CHORD BEARING*	*CHORD*
C1	*89°51'14"*	*20.00'*	*31.37'*	*N58°28'27"W*	*28.25'*
C2	*27°42'43"*	*276.00'*	*133.49'*	*S33°37'54"E*	*132.19'*
C3	*3°04'31"*	*328.00'*	*17.61'*	*S18°14'17"E*	*17.60'*
C4	*81°20'35"*	*30.00'*	*42.59'*	*S57°22'19"E*	*39.10'*
C5	*19°15'50"*	*1574.00'*	*529.21'*	*S72°19'45"W*	*526.72'*
C6	*21°15'21"*	*385.23'*	*142.91'*	*S25°41'07"W*	*142.10'*
C7	*107°06'10"*	*160.01'*	*299.11'*	*S89°52'00"W*	*257.42'*
C8	*9°16'22"*	*800.00'*	*129.47'*	*S64°55'17"W*	*129.33'*
C9	*6°53'44"*	*800.00'*	*96.28'*	*S73°00'19"W*	*96.22'*
C10	*91°16'15"*	*56.00'*	*89.21'*	*N57°54'41"W*	*80.07'*
C11	*6°21'48"*	*1500.00'*	*166.59'*	*N73°16'17"E*	*166.51'*
C12	*15°20'32"*	*1500.00'*	*401.66'*	*N62°25'07"E*	*400.46'*
C13	*9°23'38"*	*1500.00'*	*245.93'*	*N50°03'02"E*	*245.66'*
C14	*3°21'08"*	*1600.00'*	*93.61'*	*S47°01'47"W*	*93.60'*
C15	*15°42'00"*	*1600.00'*	*438.43'*	*S56°33'21"W*	*437.06'*
C16	*15°42'00"*	*1600.00'*	*438.43'*	*S72°15'21"W*	*437.06'*
C17	*1°51'10"*	*1600.00'*	*51.74'*	*S81°01'57"W*	*51.74'*
C18	*9°52'54"*	*302.00'*	*52.09'*	*N14°50'06"W*	*52.02'*
C19	*5°20'18"*	*776.00'*	*72.30'*	*S62°57'15"W*	*72.28'*
C20	*100°49'47"*	*20.00'*	*35.20'*	*N63°57'42"W*	*30.83'*
C21	*90°00'00"*	*20.00'*	*31.42'*	*N31°27'11"E*	*28.28'*
C22	*89°59'59"*	*20.00'*	*31.42'*	*N31°27'11"E*	*28.28'*
C23	*90°00'00"*	*20.00'*	*31.42'*	*S58°32'49"E*	*28.28'*
C24	*86°12'16"*	*20.00'*	*30.09'*	*S29°33'19"W*	*27.33'*
C25	*3°47'44"*	*776.00'*	*51.41'*	*S74°33'19"W*	*51.40'*
C26	*91°16'28"*	*30.00'*	*47.79'*	*N57°54'35"W*	*42.90'*
C27	*5°02'16"*	*824.00'*	*72.45'*	*S62°58'40"W*	*72.43'*
C28	*3°44'01"*	*824.00'*	*53.70'*	*S67°21'48"W*	*53.69'*
C29	*3°44'01"*	*824.00'*	*53.70'*	*S71°05'50"W*	*53.69'*
C30	*3°29'21"*	*824.00'*	*50.18'*	*S74°42'31"W*	*50.17'*
C31	*21°36'46"*	*20.00'*	*7.54'*	*N65°38'48"E*	*7.50'*
C32	*45°37'57"*	*65.00'*	*51.77'*	*S77°39'24"W*	*50.41'*
C33	*40°21'42"*	*65.00'*	*45.79'*	*N59°20'47"W*	*44.85'*
C34	*44°29'13"*	*65.00'*	*50.47'*	*N16°55'20"W*	*49.21'*
C35	*17°35'37"*	*20.00'*	*6.14'*	*S3°28'32"E*	*6.12'*
C36	*91°16'28"*	*20.00'*	*31.86'*	*S57°54'35"E*	*28.60'*
C37	*4°33'01"*	*1474.00'*	*117.06'*	*N74°10'41"E*	*117.03'*
C38	*91°48'47"*	*20.00'*	*32.05'*	*N25°59'47"E*	*28.73'*
C39	*48°55'04"*	*20.00'*	*17.08'*	*N44°22'08"W*	*16.56'*
C40	*65°22'21"*	*50.00'*	*57.05'*	*S36°08'29"E*	*54.00'*
C41	*49°01'48"*	*50.00'*	*42.79'*	*S21°03'35"W*	*41.49'*
C42	*49°01'48"*	*50.00'*	*42.79'*	*S70°05'23"W*	*41.49'*
C43	*49°01'48"*	*50.00'*	*42.79'*	*N60°52'48"W*	*41.49'*
C44	*65°22'21"*	*50.00'*	*57.05'*	*N3°40'44"W*	*54.00'*
C45	*48°55'04"*	*20.00'*	*17.08'*	*S4°32'55"W*	*16.56'*
C46	*91°48'47"*	*20.00'*	*32.05'*	*S65°49'00"E*	*28.73'*
C47	*5°51'29"*	*1474.00'*	*150.71'*	*N65°20'52"E*	*150.64'*
C48	*5°51'29"*	*1474.00'*	*150.71'*	*N59°29'23"E*	*150.64'*
C49	*91°48'47"*	*20.00'*	*32.05'*	*N10°39'15"E*	*28.73'*
C50	*48°55'04"*	*20.00'*	*17.08'*	*N59°42'41"W*	*16.56'*
C51	*65°22'21"*	*50.00'*	*57.05'*	*S51°29'02"E*	*54.00'*
C52	*49°01'48"*	*50.00'*	*42.79'*	*S5°43'03"W*	*41.49'*
C53	*49°01'48"*	*50.00'*	*42.79'*	*S54°44'51"W*	*41.49'*
C54	*49°01'48"*	*50.00'*	*42.79'*	*N76°13'21"W*	*41.49'*
C55	*65°22'21"*	*50.00'*	*57.05'*	*N19°01'16"W*	*54.00'*
C56	*48°55'04"*	*20.00'*	*17.08'*	*S10°47'37"E*	*16.56'*
C57	*91°48'47"*	*20.00'*	*32.05'*	*S81°09'32"E*	*28.73'*
C58	*5°14'49"*	*1474.00'*	*134.98'*	*N50°18'40"E*	*134.93'*
C59	*2°20'03"*	*1474.00'*	*60.05'*	*N46°31'14"E*	*60.04'*

CURVE TABLE					
CURVE #	*DELTA*	*RADIUS*	*ARC*	*CHORD BEARING*	*CHORD*
C60	*1°45'03"*	*1626.00'*	*49.69'*	*S46°13'45"W*	*49.69'*
C61	*88°23'55"*	*20.00'*	*30.86'*	*N2°54'19"E*	*27.89'*
C62	*48°55'04"*	*20.00'*	*17.08'*	*N65°45'11"W*	*16.56'*
C63	*46°53'41"*	*50.00'*	*40.92'*	*S66°45'52"E*	*39.79'*
C64	*45°41'52"*	*50.00'*	*39.88'*	*S20°28'06"E*	*38.83'*
C65	*45°41'55"*	*50.00'*	*39.88'*	*S25°13'47"W*	*38.83'*
C66	*45°41'55"*	*50.00'*	*39.88'*	*S70°55'42"W*	*38.83'*
C67	*45°41'55"*	*50.00'*	*39.88'*	*N63°22'23"W*	*38.83'*
C68	*48°08'51"*	*50.00'*	*42.02'*	*N16°27'00"W*	*40.79'*
C69	*48°55'04"*	*20.00'*	*17.08'*	*S16°50'07"E*	*16.56'*
C70	*88°23'55"*	*20.00'*	*30.86'*	*S85°29'36"E*	*27.89'*
C71	*4°07'58"*	*1626.00'*	*117.28'*	*S52°22'25"W*	*117.26'*
C72	*2°38'44"*	*1626.00'*	*75.08'*	*S55°45'46"W*	*75.07'*
C73	*2°19'56"*	*1626.00'*	*66.19'*	*S58°15'06"W*	*66.18'*
C74	*2°19'56"*	*1626.00'*	*66.19'*	*S60°35'02"W*	*66.18'*
C75	*2°19'56"*	*1626.00'*	*66.19'*	*S62°54'58"W*	*66.18'*
C76	*2°19'56"*	*1626.00'*	*66.19'*	*S65°14'54"W*	*66.18'*
C77	*2°19'56"*	*1626.00'*	*66.19'*	*S67°34'50"W*	*66.18'*
C78	*2°19'56"*	*1626.00'*	*66.19'*	*S69°54'45"W*	*66.18'*
C79	*2°19'56"*	*1626.00'*	*66.19'*	*S72°14'41"W*	*66.18'*
C80	*2°19'56"*	*1626.00'*	*66.19'*	*S74°34'37"W*	*66.18'*
C81	*2°17'55"*	*1626.00'*	*65.23'*	*S76°53'33"W*	*65.23'*
C82	*97°49'03"*	*30.00'*	*51.22'*	*N29°07'59"E*	*45.22'*
C83	*90°00'00"*	*20.00'*	*31.42'*	*S31°27'11"W*	*28.28'*
C84	*0°13'27"*	*1526.00'*	*5.97'*	*N76°20'28"E*	*5.97'*
C85	*2°24'32"*	*1526.00'*	*64.16'*	*N75°01'28"E*	*64.15'*
C86	*2°24'32"*	*1526.00'*	*64.16'*	*N72°36'56"E*	*64.15'*
C87	*2°24'32"*	*1526.00'*	*64.16'*	*N70°12'24"E*	*64.15'*
C88	*2°24'32"*	*1526.00'*	*64.16'*	*N67°47'52"E*	*64.15'*
C89	*2°24'32"*	*1526.00'*	*64.16'*	*N65°23'20"E*	*64.15'*
C90	*2°21'29"*	*1526.00'*	*62.80'*	*N63°00'19"E*	*62.80'*
C91	*0°56'19"*	*1526.00'*	*25.00'*	*N61°21'25"E*	*25.00'*
C92	*3°48'42"*	*1526.00'*	*101.52'*	*N58°58'55"E*	*101.50'*
C93	*113°52'10"*	*20.00'*	*39.75'*	*N65°59'22"W*	*33.52'*
C94	*42°26'35"*	*50.00'*	*37.04'*	*S30°16'34"E*	*36.20'*
C95	*50°44'52"*	*50.00'*	*44.29'*	*S76°52'17"E*	*42.85'*
C96	*50°44'52"*	*50.00'*	*44.29'*	*N52°22'51"E*	*42.85'*
C97	*50°44'52"*	*50.00'*	*44.29'*	*N1°37'59"E*	*42.85'*
C98	*37°42'35"*	*50.00'*	*32.91'*	*N42°35'44"W*	*32.32'*
C99	*113°52'10"*	*20.00'*	*39.75'*	*S4°30'56"E*	*33.52'*
C100	*4°23'38"*	*1526.00'*	*117.03'*	*N50°13'20"E*	*117.00'*
C101	*2°40'18"*	*1526.00'*	*71.16'*	*N46°41'22"E*	*71.15'*
C102	*0°35'12"*	*1574.00'*	*16.12'*	*S45°38'49"W*	*16.12'*
C103	*91°22'58"*	*20.00'*	*31.90'*	*N88°22'06"W*	*28.62'*
C104	*28°30'22"*	*55.00'*	*27.36'*	*S56°55'47"E*	*27.08'*
C105	*40°04'27"*	*55.00'*	*38.47'*	*N88°46'48"E*	*37.69'*
C106	*40°04'27"*	*55.00'*	*38.47'*	*N48°42'21"E*	*37.69'*
C107	*40°04'27"*	*55.00'*	*38.47'*	*N8°37'54"E*	*37.69'*
C108	*28°30'22"*	*55.00'*	*27.36'*	*N25°39'30"W*	*27.08'*
C109	*91°22'58"*	*20.00'*	*31.90'*	*S5°46'48"W*	*28.62'*
C110	*3°50'03"*	*1574.00'*	*105.33'*	*S53°23'19"W*	*105.31'*
C111	*2°28'10"*	*1574.00'*	*67.84'*	*S56°32'25"W*	*67.83'*
C112	*2°17'09"*	*1574.00'*	*62.80'*	*S58°55'05"W*	*62.79'*
C113	*2°38'11"*	*1574.00'*	*72.42'*	*S61°22'45"W*	*72.42'*
C114	*61°32'36"*	*160.01'*	*171.87'*	*S67°21'13"E*	*163.73'*
C115	*45°33'34"*	*160.01'*	*127.23'*	*N59°05'41"E*	*123.91'*
C116	*3°21'39"*	*385.23'*	*22.60'*	*N34°37'59"E*	*22.59'*
C117	*17°53'43"*	*385.23'*	*120.32'*	*N24°00'18"E*	*119.83'*

REVISED: DECEMBER 9, 2020
REVISED: NOVEMBER 11, 2020
REVISED: NOVEMBER 6, 2020
REVISED: AUGUST 27, 2020
REVISED: JULY 24, 2020
DATE OF PREPARATION: JUNE 2, 2020

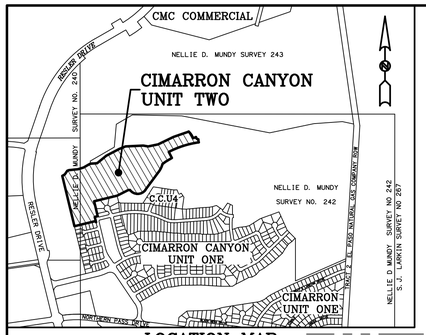
ROBERT SEIPEL ASSOCIATES, INC. PROFESSIONAL LAND SURVEYORS
1845 NORTHWESTERN DRIVE EL PASO TX 79912 PHONE (915) 877-1928 FAX (915) 877-2095

CIMARRON CANYON UNIT TWO

BEING A PORTION OF TRACT 1B2, NELLIE D. MUNDY SURVEY 242 AND A PORTION OF TRACTS 4G AND 4G2, NELLIE D. MUNDY SURVEY 240, CITY OF EL PASO, EL PASO COUNTY, TEXAS.

CONTAINING 30.987 ± ACRES (1,349,777 SQ. FT.)

SHEET 1 OF 2

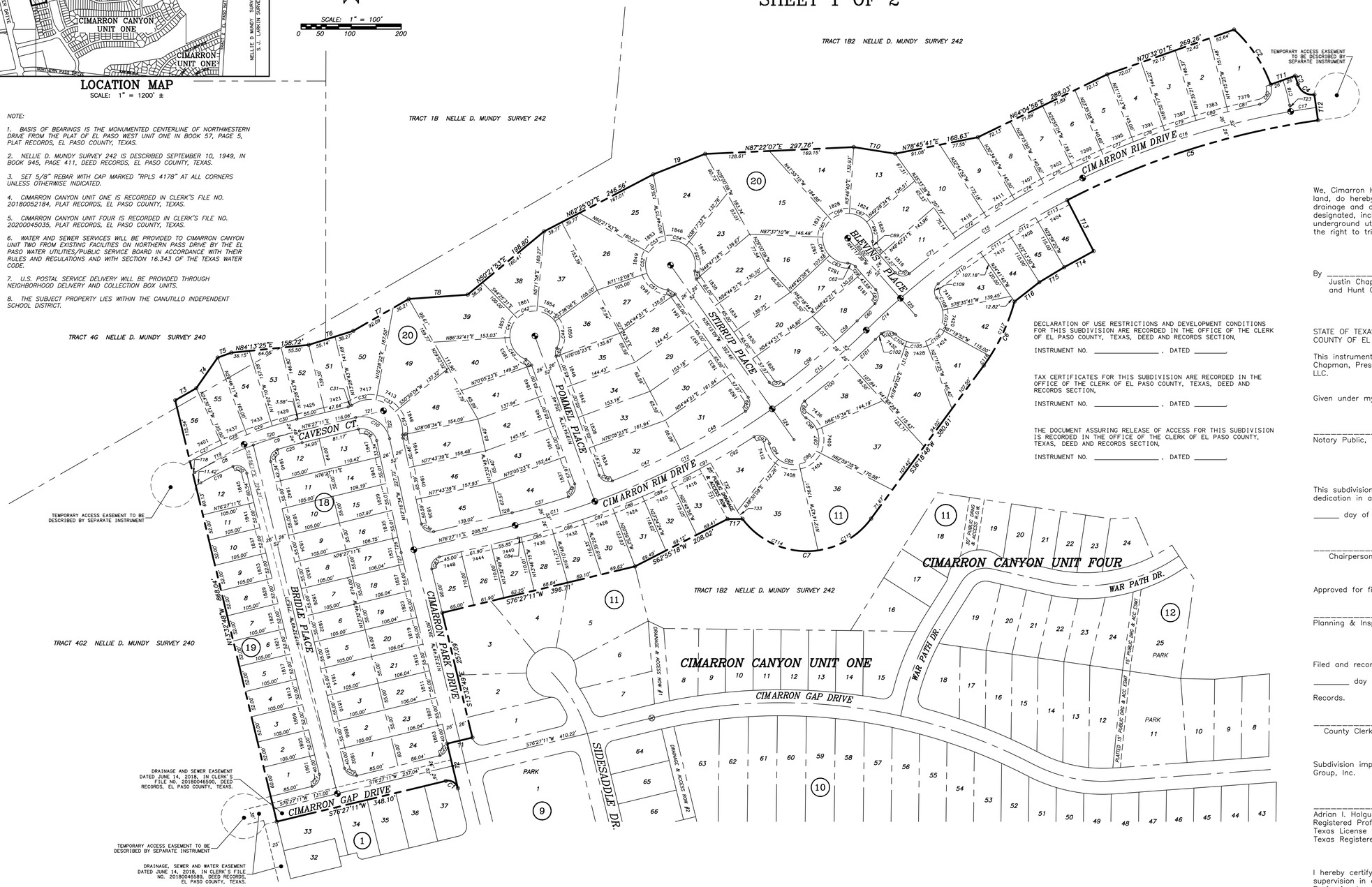


LOCATION MAP
SCALE: 1" = 1200' ±

SCALE: 1" = 100'
0 50 100 200

NOTE:

1. BASIS OF BEARINGS IS THE MONUMENTED CENTERLINE OF NORTHWESTERN DRIVE FROM THE PLAT OF EL PASO WEST UNIT ONE IN BOOK 57, PAGE 5, PLAT RECORDS, EL PASO COUNTY, TEXAS.
2. NELLIE D. MUNDY SURVEY 242 IS DESCRIBED SEPTEMBER 10, 1949, IN BOOK 945, PAGE 411, DEED RECORDS, EL PASO COUNTY, TEXAS.
3. SET 5/8" REBAR WITH CAP MARKED "RPLS 4178" AT ALL CORNERS UNLESS OTHERWISE INDICATED.
4. CIMARRON CANYON UNIT ONE IS RECORDED IN CLERK'S FILE NO. 20180052184, PLAT RECORDS, EL PASO COUNTY, TEXAS.
5. CIMARRON CANYON UNIT FOUR IS RECORDED IN CLERK'S FILE NO. 20200045035, PLAT RECORDS, EL PASO COUNTY, TEXAS.
6. WATER AND SEWER SERVICES WILL BE PROVIDED TO CIMARRON CANYON UNIT TWO FROM EXISTING FACILITIES ON NORTHERN PASS DRIVE BY THE EL PASO WATER UTILITIES/PUBLIC SERVICE BOARD IN ACCORDANCE WITH THEIR RULES AND REGULATIONS AND WITH SECTION 16.343 OF THE TEXAS WATER CODE.
7. U.S. POSTAL SERVICE DELIVERY WILL BE PROVIDED THROUGH NEIGHBORHOOD DELIVERY AND COLLECTION BOX UNITS.
8. THE SUBJECT PROPERTY LIES WITHIN THE CANUTILLO INDEPENDENT SCHOOL DISTRICT.



TEMPORARY ACCESS EASEMENT TO BE DESCRIBED BY SEPARATE INSTRUMENT

DIRECT VEHICULAR ACCESS TO:
LOT 1, BLOCK 19, AND LOTS 1 AND 24, BLOCK 18, SHALL NOT BE PERMITTED DRIVEWAY ACCESS FROM CIMARRON GAP DRIVE; LOT 12, BLOCK 19, AND LOTS 12 AND 13, BLOCK 18, SHALL NOT BE PERMITTED DRIVEWAY ACCESS FROM CAVESON COURT; LOT 25, BLOCK 11, SHALL NOT BE PERMITTED DRIVEWAY ACCESS FROM CIMARRON PARK DRIVE; LOTS 34, 38, 39, 43, BLOCK 11, AND LOTS 11, 18, 19, 31, 32, 44 AND 45, BLOCK 20, SHALL NOT BE PERMITTED DRIVEWAY ACCESS FROM CIMARRON RIM DRIVE; AND LOT 1, BLOCK 20, (ALONG CURVE LABELED C2) SHALL NOT BE PERMITTED DRIVEWAY ACCESS FROM PROPOSED STREET IN PROPOSED ADJOINING SUBDIVISION.

ACCORDING TO FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAP PANELS 480214-16C AND 480214-17C, DATED FEBRUARY 5, 1986, THIS PROPERTY LIES IN FLOOD HAZARD ZONE "C".

NOTE: ALL FRONT LOT UTILITY EASEMENTS ARE 10 FEET WIDE UNLESS OTHERWISE INDICATED.

REVISED: DECEMBER 9, 2020
REVISED: NOVEMBER 11, 2020
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ROBERT SEIPEL ASSOCIATES, INC. PROFESSIONAL LAND SURVEYORS
1845 NORTHWESTERN DRIVE EL PASO TX 79912 PHONE (915) 877-1928 FAX (915) 877-2095

⊗ EXISTING CITY MONUMENT
◒ PROPOSED CITY MONUMENT

CHAPTER 395 OF THE TEXAS LOCAL GOVERNMENT CODE AUTHORIZES THE CITY OF EL PASO TO ADOPT AND IMPOSE WATER AND WASTEWATER IMPACT FEES. THIS PLAT NOTE FULFILLS AN OBLIGATION MANDATED BY CHAPTER 395 AND SETS THE ASSESSMENT OF THE IMPACT FEES IN ACCORDANCE WITH THE IMPACT FEE SCHEDULE ADOPTED BY CITY COUNCIL AS SET FORTH BELOW. THE COLLECTION OF THE IMPACT FEE FOR THIS SUBDIVISION SHALL BE PRIOR TO THE TIME A BUILDING PERMIT IS ISSUED IF DEVELOPMENT IS WITHIN THE CITY LIMITS OR AT THE TIME OF THE METER CONNECTION IF DEVELOPMENT IS OUTSIDE THE CITY LIMITS.

WESTSIDE SERVICE AREA

METER SIZE	METER CAPACITY RATIO	WATER*	WASTEWATER
LESS THAN 1 INCH	1.00	$659.00	$927.00
1 INCH	1.67	$1,101.00	$1,548.00
1½ INCH	3.33	$2,195.00	$3,087.00
2 INCH	5.33	$3,514.00	$4,941.00
3 INCH	10.00	$6,593.00	$9,270.00
4 INCH	16.67	$10,990.00	$15,453.00
6 INCH	33.33	$21,973.00	$30,897.00
8 INCH	53.33	$35,158.00	$49,437.00
10 INCH	76.67	$50,545.00	$71,073.00
12 INCH	143.33	$94,490.00	$132,867.00

*FEES DO NOT APPLY TO WATER METER OR CONNECTIONS MADE FOR STANDBY FIRE PROTECTION SERVICE.

DECLARATION OF USE RESTRICTIONS AND DEVELOPMENT CONDITIONS FOR THIS SUBDIVISION ARE RECORDED IN THE OFFICE OF THE CLERK OF EL PASO COUNTY, TEXAS, DEED AND RECORDS SECTION,

INSTRUMENT NO. _____, DATED _____.

TAX CERTIFICATES FOR THIS SUBDIVISION ARE RECORDED IN THE OFFICE OF THE CLERK OF EL PASO COUNTY, TEXAS, DEED AND RECORDS SECTION,

INSTRUMENT NO. _____, DATED _____.

THE DOCUMENT ASSURING RELEASE OF ACCESS FOR THIS SUBDIVISION IS RECORDED IN THE OFFICE OF THE CLERK OF EL PASO COUNTY, TEXAS, DEED AND RECORDS SECTION,

INSTRUMENT NO. _____, DATED _____.

DEDICATION

We, Cimarron Hunt Communities, LLC and Hunt Communities Holding, LLC, owners of this land, do hereby present this plat and dedicate to the use of the public the streets, drainage and access rights-of-way and utility easements as hereon laid down and designated, including easements for overhang of service wires, conduits and pipes for underground utilities, the right to ingress and egress for service and construction, and the right to trim interfering trees and shrubs.

By _____
Justin Chapman, President, Cimarron Hunt Communities, LLC and Hunt Communities Holding, LLC

ACKNOWLEDGMENT

STATE OF TEXAS
COUNTY OF EL PASO

This instrument was acknowledged before me on _____ by Justin Chapman, President of Cimarron Hunt Communities, LLC and Hunt Communities Holding, LLC.

Given under my hand and seal of office this _____ day of _____ 2020.

_____ _____
Notary Public, State of Texas My Commission Expires

CITY PLAN COMMISSION

This subdivision is hereby approved as to the platting and as to the conditions of the dedication in accordance with Chapter 212 of the Local Government Code of Texas this _____ day of _____, 2020.

_____ _____
Chairperson Executive Secretary

Approved for filing this _____ day of _____, 2020.

_____
Planning & Inspections Director

FILING

Filed and recorded in the office of the County Clerk of El Paso County, Texas, this _____ day of _____, 2020, in File No. _____, Plat Records.

_____ _____
County Clerk By Deputy

Subdivision improvement plans prepared by and under the supervision of CSA Design Group, Inc.

_____
Adrian I. Holguin-Ontiveros, P.E.
Registered Professional Engineer
Texas License No. 124089
Texas Registered Engineering Firm F-9997

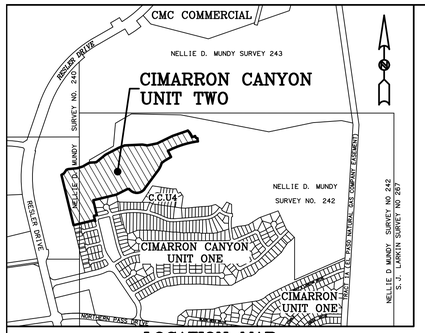
I hereby certify that this plat represents an on-the-ground survey made under my supervision in compliance with current Texas Board of Professional Land Surveying Professional and Technical Standards.

Robert Seipel Associates, Inc.
Professional Land Surveyors

_____
Mark U. Balansay
Registered Professional Land Surveyor
Texas License No. 6489
Texas Registered Surveying Firm 10060500

CIMARRON CANYON UNIT TWO

BEING A PORTION OF TRACT 1B2, NELLIE D. MUNDY SURVEY 242
AND A PORTION OF TRACTS 4G AND 4G2, NELLIE D. MUNDY
SURVEY 240, CITY OF EL PASO, EL PASO COUNTY, TEXAS.
CONTAINING 30.987 ± ACRES (1,349,777 SQ. FT.)
SHEET 2 OF 2



LOCATION MAP
SCALE: 1" = 1200' ±

LOT TABLE		
LOT NUMBER	SQ FT	ACRES
Lot 25 Block 11	7064	0. 162
Lot 26 Block 11	6809	0. 156
Lot 27 Block 11	6824	0. 157
Lot 28 Block 11	7355	0. 169
Lot 29 Block 11	7573	0. 174
Lot 30 Block 11	7995	0. 184
Lot 31 Block 11	8052	0. 185
Lot 32 Block 11	7746	0. 178
Lot 33 Block 11	7587	0. 174
Lot 34 Block 11	10387	0. 238
Lot 35 Block 11	18284	0. 420
Lot 36 Block 11	21066	0. 484
Lot 37 Block 11	22014	0. 505
Lot 38 Block 11	10710	0. 246
Lot 39 Block 11	8494	0. 195
Lot 40 Block 11	16299	0. 374
Lot 41 Block 11	9947	0. 228
Lot 42 Block 11	10614	0. 244
Lot 43 Block 11	9730	0. 223
Lot 44 Block 11	7688	0. 176
Lot 45 Block 11	6969	0. 160
Lot 46 Block 11	8039	0. 185

LOT TABLE		
LOT NUMBER	SQ FT	ACRES
25' Public Drainage & Access ROW Block 11	3054	0. 070

LOT TABLE		
LOT NUMBER	SQ FT	ACRES
Lot 1 Block 19	6214	0. 143
Lot 2 Block 19	5460	0. 125
Lot 3 Block 19	5460	0. 125
Lot 4 Block 19	5460	0. 125
Lot 5 Block 19	5460	0. 125
Lot 6 Block 19	5460	0. 125
Lot 7 Block 19	5460	0. 125
Lot 8 Block 19	5460	0. 125
Lot 9 Block 19	5460	0. 125
Lot 10 Block 19	5460	0. 125
Lot 11 Block 19	5460	0. 125
Lot 12 Block 19	7586	0. 174

LOT TABLE		
LOT NUMBER	SQ FT	ACRES
Lot 1 Block 18	6214	0. 143
Lot 2 Block 18	5775	0. 133
Lot 3 Block 18	5775	0. 133
Lot 4 Block 18	5775	0. 133
Lot 5 Block 18	5775	0. 133
Lot 6 Block 18	5775	0. 133
Lot 7 Block 18	5775	0. 133
Lot 8 Block 18	5775	0. 133
Lot 9 Block 18	5775	0. 133
Lot 10 Block 18	5775	0. 133
Lot 11 Block 18	5775	0. 133
Lot 12 Block 18	6574	0. 151
Lot 13 Block 18	6909	0. 159
Lot 14 Block 18	6039	0. 139
Lot 15 Block 18	5972	0. 137
Lot 16 Block 18	5905	0. 136
Lot 17 Block 18	5843	0. 134
Lot 18 Block 18	5832	0. 134
Lot 19 Block 18	5832	0. 134
Lot 20 Block 18	5832	0. 134
Lot 21 Block 18	5832	0. 134
Lot 22 Block 18	5832	0. 134
Lot 23 Block 18	5832	0. 134
Lot 24 Block 18	6277	0. 144

LOT TABLE		
LOT NUMBER	SQ FT	ACRES
Lot 1 Block 20	12776	0. 293
Lot 2 Block 20	10290	0. 236
Lot 3 Block 20	10029	0. 230
Lot 4 Block 20	9979	0. 229
Lot 5 Block 20	9849	0. 226
Lot 6 Block 20	9638	0. 221
Lot 7 Block 20	9638	0. 221
Lot 8 Block 20	9849	0. 226
Lot 9 Block 20	10987	0. 252
Lot 10 Block 20	15062	0. 346
Lot 11 Block 20	9730	0. 223
Lot 12 Block 20	8996	0. 207
Lot 13 Block 20	12572	0. 289
Lot 14 Block 20	14378	0. 330
Lot 15 Block 20	26103	0. 599
Lot 16 Block 20	10665	0. 245
Lot 17 Block 20	8169	0. 188
Lot 18 Block 20	8420	0. 193
Lot 19 Block 20	11165	0. 256
Lot 20 Block 20	9280	0. 213
Lot 21 Block 20	8757	0. 201
Lot 22 Block 20	9559	0. 219
Lot 23 Block 20	9885	0. 227
Lot 24 Block 20	16712	0. 384
Lot 25 Block 20	13675	0. 314
Lot 26 Block 20	14242	0. 327
Lot 27 Block 20	9267	0. 213
Lot 28 Block 20	9103	0. 209
Lot 29 Block 20	9672	0. 222
Lot 30 Block 20	10241	0. 235
Lot 31 Block 20	12196	0. 280
Lot 32 Block 20	12196	0. 280
Lot 33 Block 20	10241	0. 235
Lot 34 Block 20	9672	0. 222
Lot 35 Block 20	9103	0. 209
Lot 36 Block 20	9267	0. 213
Lot 37 Block 20	14242	0. 327
Lot 38 Block 20	10877	0. 250
Lot 39 Block 20	16290	0. 374
Lot 40 Block 20	12336	0. 283
Lot 41 Block 20	9337	0. 214
Lot 42 Block 20	9202	0. 211
Lot 43 Block 20	9673	0. 222
Lot 44 Block 20	11517	0. 264
Lot 45 Block 20	10903	0. 250
Lot 46 Block 20	10279	0. 236
Lot 47 Block 20	10269	0. 236
Lot 48 Block 20	11598	0. 266
Lot 49 Block 20	17947	0. 412
Lot 50 Block 20	12770	0. 293
Lot 51 Block 20	7763	0. 178
Lot 52 Block 20	7868	0. 181
Lot 53 Block 20	8869	0. 204
Lot 54 Block 20	9604	0. 220
Lot 55 Block 20	8436	0. 194
Lot 56 Block 20	7423	0. 170

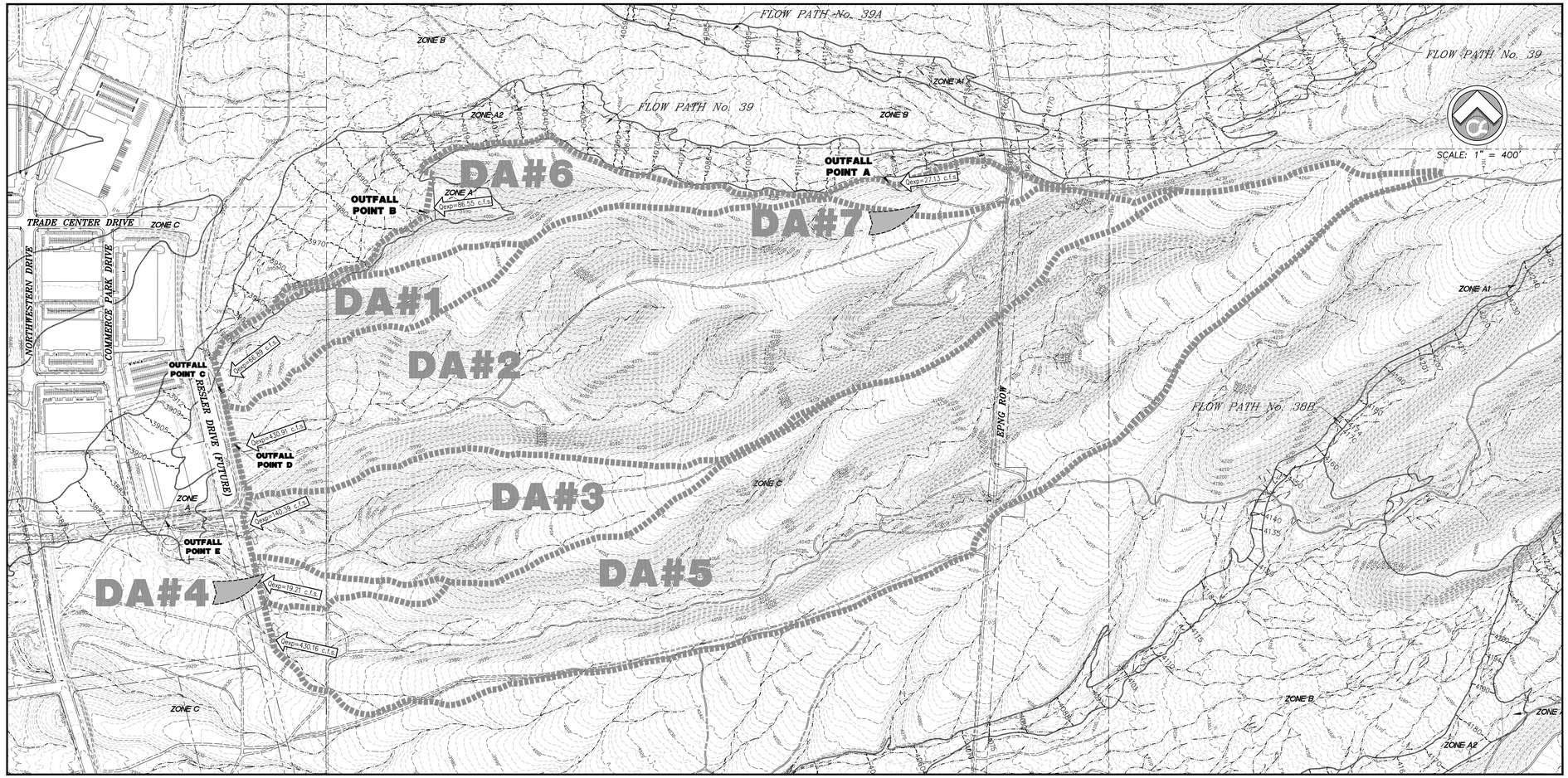
LINE TABLE		
LINE #	*BEARING*	*DISTANCE*
T1	*S76°27'11"W*	*52.00'*
T2	*S13°32'49"E*	*92.00'*
T3	*N60°08'16"E*	*48.63'*
T4	*N35°01'13"E*	*74.73'*
T5	*N70°06'39"E*	*28.98'*
T6	*N72°30'11"E*	*93.40'*
T7	*N60°07'58"E*	*128.30'*
T8	*N85°52'20"E*	*118.00'*
T9	*N68°25'07"E*	*111.55'*
T10	*S81°02'09"E*	*84.00'*
T11	*N70°13'27"E*	*52.00'*
T12	*S8°11'00"E*	*52.00'*
T13	*S27°18'10"E*	*114.91'*
T14	*S61°18'20"W*	*67.13'*
T15	*S58°55'05"W*	*58.21'*
T16	*S51°59'14"W*	*62.97'*
T17	*S89°26'57"W*	*30.00'*
T18	*N60°17'06"E*	*4.46'*
T19	*N60°17'06"E*	*113.63'*
T20	*N76°27'11"E*	*113.63'*
T21	*N76°27'11"E*	*57.26'*
T22	*N12°16'34"W*	*57.26'*
T23	*S9°53'39"E*	*12.71'*
T24	*N35°15'09"W*	*75.63'*
T25	*N41°17'39"W*	*46.00'*
T26	*S12°16'21"E*	*31.62'*
T27	*S13°32'49"E*	*23.38'*
T28	*N76°27'11"E*	*22.69'*
T29	*N41°17'39"W*	*18.28'*
T30	*S41°17'39"E*	*14.61'*
T31	*N29°06'44"W*	*115.00'*
T32	*N29°06'44"W*	*110.00'*
T33	*S33°08'42"E*	*19.19'*

CURVE TABLE					
CURVE #	*DELTA*	*RADIUS*	*ARC*	*CHORD BEARING*	*CHORD*
C1	*89°51'14"*	*20.00'*	*31.37'*	*N58°28'27"W*	*28.25'*
C2	*27°42'43"*	*276.00'*	*133.49'*	*S33°37'54"E*	*132.19'*
C3	*3°04'31"*	*328.00'*	*17.61'*	*S18°14'17"E*	*17.60'*
C4	*81°20'35"*	*30.00'*	*42.59'*	*S57°22'19"E*	*39.10'*
C5	*19°15'50"*	*1574.00'*	*529.21'*	*S72°19'45"W*	*526.72'*
C6	*21°15'21"*	*385.23'*	*142.91'*	*S25°41'07"W*	*142.10'*
C7	*107°06'10"*	*160.01'*	*299.11'*	*S89°52'00"W*	*257.42'*
C8	*9°16'22"*	*800.00'*	*129.47'*	*S64°55'17"W*	*129.33'*
C9	*6°53'44"*	*800.00'*	*96.28'*	*S73°00'19"W*	*96.22'*
C10	*91°16'15"*	*56.00'*	*89.21'*	*N57°54'41"W*	*80.07'*
C11	*6°21'48"*	*1500.00'*	*166.59'*	*N73°16'17"E*	*166.51'*
C12	*15°20'32"*	*1500.00'*	*401.66'*	*N62°25'07"E*	*400.46'*
C13	*9°23'38"*	*1500.00'*	*245.93'*	*N50°03'02"E*	*245.66'*
C14	*3°21'08"*	*1600.00'*	*93.61'*	*S47°01'47"W*	*93.60'*
C15	*15°42'00"*	*1600.00'*	*438.43'*	*S56°33'21"W*	*437.06'*
C16	*15°42'00"*	*1600.00'*	*438.43'*	*S72°15'21"W*	*437.06'*
C17	*1°51'10"*	*1600.00'*	*51.74'*	*S81°01'57"W*	*51.74'*
C18	*9°52'54"*	*302.00'*	*52.09'*	*N14°50'06"W*	*52.02'*
C19	*5°20'18"*	*776.00'*	*72.30'*	*S62°57'15"W*	*72.28'*
C20	*100°49'47"*	*20.00'*	*35.20'*	*N63°57'42"W*	*30.83'*
C21	*90°00'00"*	*20.00'*	*31.42'*	*N31°27'11"E*	*28.28'*
C22	*89°59'59"*	*20.00'*	*31.42'*	*N31°27'11"E*	*28.28'*
C23	*90°00'00"*	*20.00'*	*31.42'*	*S58°32'49"E*	*28.28'*
C24	*86°12'16"*	*20.00'*	*30.09'*	*S29°33'19"W*	*27.33'*
C25	*3°47'44"*	*776.00'*	*51.41'*	*S74°33'19"W*	*51.40'*
C26	*91°16'28"*	*30.00'*	*47.79'*	*N57°54'35"W*	*42.90'*
C27	*5°02'16"*	*824.00'*	*72.45'*	*S62°58'40"W*	*72.43'*
C28	*3°44'01"*	*824.00'*	*53.70'*	*S67°21'48"W*	*53.69'*
C29	*3°44'01"*	*824.00'*	*53.70'*	*S71°05'50"W*	*53.69'*
C30	*3°29'21"*	*824.00'*	*50.18'*	*S74°42'31"W*	*50.17'*
C31	*21°36'46"*	*20.00'*	*7.54'*	*N65°38'48"E*	*7.50'*
C32	*45°37'57"*	*65.00'*	*51.77'*	*S77°39'24"W*	*50.41'*
C33	*40°21'42"*	*65.00'*	*45.79'*	*N59°20'47"W*	*44.85'*
C34	*44°29'13"*	*65.00'*	*50.47'*	*N16°55'20"W*	*49.21'*
C35	*17°35'37"*	*20.00'*	*6.14'*	*S3°28'32"E*	*6.12'*
C36	*91°16'28"*	*20.00'*	*31.86'*	*S57°54'35"E*	*28.60'*
C37	*4°33'01"*	*1474.00'*	*117.06'*	*N74°10'41"E*	*117.03'*
C38	*91°48'47"*	*20.00'*	*32.05'*	*N25°59'47"E*	*28.73'*
C39	*48°55'04"*	*20.00'*	*17.08'*	*N44°22'08"W*	*16.56'*
C40	*65°22'21"*	*50.00'*	*57.05'*	*S36°08'29"E*	*54.00'*
C41	*49°01'48"*	*50.00'*	*42.79'*	*S21°03'35"W*	*41.49'*
C42	*49°01'48"*	*50.00'*	*42.79'*	*S70°05'23"W*	*41.49'*
C43	*49°01'48"*	*50.00'*	*42.79'*	*N60°52'48"W*	*41.49'*
C44	*65°22'21"*	*50.00'*	*57.05'*	*N3°40'44"W*	*54.00'*
C45	*48°55'04"*	*20.00'*	*17.08'*	*S4°32'55"W*	*16.56'*
C46	*91°48'47"*	*20.00'*	*32.05'*	*S65°49'00"E*	*28.73'*
C47	*5°51'29"*	*1474.00'*	*150.71'*	*N65°20'52"E*	*150.64'*
C48	*5°51'29"*	*1474.00'*	*150.71'*	*N59°29'23"E*	*150.64'*
C49	*91°48'47"*	*20.00'*	*32.05'*	*N10°39'15"E*	*28.73'*
C50	*48°55'04"*	*20.00'*	*17.08'*	*N59°42'41"W*	*16.56'*
C51	*65°22'21"*	*50.00'*	*57.05'*	*S51°29'02"E*	*54.00'*
C52	*49°01'48"*	*50.00'*	*42.79'*	*S5°43'03"W*	*41.49'*
C53	*49°01'48"*	*50.00'*	*42.79'*	*S54°44'51"W*	*41.49'*
C54	*49°01'48"*	*50.00'*	*42.79'*	*N76°13'21"W*	*41.49'*
C55	*65°22'21"*	*50.00'*	*57.05'*	*N19°01'16"W*	*54.00'*
C56	*48°55'04"*	*20.00'*	*17.08'*	*S10°47'37"E*	*16.56'*
C57	*91°48'47"*	*20.00'*	*32.05'*	*S81°09'32"E*	*28.73'*
C58	*5°14'49"*	*1474.00'*	*134.98'*	*N50°18'40"E*	*134.93'*
C59	*2°20'03"*	*1474.00'*	*60.05'*	*N46°31'14"E*	*60.04'*

CURVE TABLE					
CURVE #	*DELTA*	*RADIUS*	*ARC*	*CHORD BEARING*	*CHORD*
C60	*1°45'03"*	*1626.00'*	*49.69'*	*S46°13'45"W*	*49.69'*
C61	*88°23'55"*	*20.00'*	*30.86'*	*N2°54'19"E*	*27.89'*
C62	*48°55'04"*	*20.00'*	*17.08'*	*N65°45'11"W*	*16.56'*
C63	*46°53'41"*	*50.00'*	*40.92'*	*S66°45'52"E*	*39.79'*
C64	*45°41'52"*	*50.00'*	*39.88'*	*S20°28'06"E*	*38.83'*
C65	*45°41'55"*	*50.00'*	*39.88'*	*S25°13'47"W*	*38.83'*
C66	*45°41'55"*	*50.00'*	*39.88'*	*S70°55'42"W*	*38.83'*
C67	*45°41'55"*	*50.00'*	*39.88'*	*N63°22'23"W*	*38.83'*
C68	*48°08'51"*	*50.00'*	*42.02'*	*N16°27'00"W*	*40.79'*
C69	*48°55'04"*	*20.00'*	*17.08'*	*S16°50'07"E*	*16.56'*
C70	*88°23'55"*	*20.00'*	*30.86'*	*S85°29'36"E*	*27.89'*
C71	*4°07'58"*	*1626.00'*	*117.28'*	*S52°22'25"W*	*117.26'*
C72	*2°38'44"*	*1626.00'*	*75.08'*	*S55°45'46"W*	*75.07'*
C73	*2°19'56"*	*1626.00'*	*66.19'*	*S58°15'06"W*	*66.18'*
C74	*2°19'56"*	*1626.00'*	*66.19'*	*S60°35'02"W*	*66.18'*
C75	*2°19'56"*	*1626.00'*	*66.19'*	*S62°54'58"W*	*66.18'*
C76	*2°19'56"*	*1626.00'*	*66.19'*	*S65°14'54"W*	*66.18'*
C77	*2°19'56"*	*1626.00'*	*66.19'*	*S67°34'50"W*	*66.18'*
C78	*2°19'56"*	*1626.00'*	*66.19'*	*S69°54'45"W*	*66.18'*
C79	*2°19'56"*	*1626.00'*	*66.19'*	*S72°14'41"W*	*66.18'*
C80	*2°19'56"*	*1626.00'*	*66.19'*	*S74°34'37"W*	*66.18'*
C81	*2°17'55"*	*1626.00'*	*65.23'*	*S76°53'33"W*	*65.23'*
C82	*97°49'03"*	*30.00'*	*51.22'*	*N29°07'59"E*	*45.22'*
C83	*90°00'00"*	*20.00'*	*31.42'*	*S31°27'11"W*	*28.28'*
C84	*0°13'27"*	*1526.00'*	*5.97'*	*N76°20'28"E*	*5.97'*
C85	*2°24'32"*	*1526.00'*	*64.16'*	*N75°01'28"E*	*64.15'*
C86	*2°24'32"*	*1526.00'*	*64.16'*	*N72°36'56"E*	*64.15'*
C87	*2°24'32"*	*1526.00'*	*64.16'*	*N70°12'24"E*	*64.15'*
C88	*2°24'32"*	*1526.00'*	*64.16'*	*N67°47'52"E*	*64.15'*
C89	*2°24'32"*	*1526.00'*	*64.16'*	*N65°23'20"E*	*64.15'*
C90	*2°21'29"*	*1526.00'*	*62.80'*	*N63°00'19"E*	*62.80'*
C91	*0°56'19"*	*1526.00'*	*25.00'*	*N61°21'25"E*	*25.00'*
C92	*3°48'42"*	*1526.00'*	*101.52'*	*N58°58'55"E*	*101.50'*
C93	*113°52'10"*	*20.00'*	*39.75'*	*N65°59'22"W*	*33.52'*
C94	*42°26'35"*	*50.00'*	*37.04'*	*S30°16'34"E*	*36.20'*
C95	*50°44'52"*	*50.00'*	*44.29'*	*S76°52'17"E*	*42.85'*
C96	*50°44'52"*	*50.00'*	*44.29'*	*N52°22'51"E*	*42.85'*
C97	*50°44'52"*	*50.00'*	*44.29'*	*N1°37'59"E*	*42.85'*
C98	*37°42'35"*	*50.00'*	*32.91'*	*N42°35'44"W*	*32.32'*
C99	*113°52'10"*	*20.00'*	*39.75'*	*S4°30'56"E*	*33.52'*
C100	*4°23'38"*	*1526.00'*	*117.03'*	*N50°13'20"E*	*117.00'*
C101	*2°40'18"*	*1526.00'*	*71.16'*	*N46°41'22"E*	*71.15'*
C102	*0°35'12"*	*1574.00'*	*16.12'*	*S45°38'49"W*	*16.12'*
C103	*91°22'58"*	*20.00'*	*31.90'*	*N88°22'06"W*	*28.62'*
C104	*28°30'22"*	*55.00'*	*27.36'*	*S56°55'47"E*	*27.08'*
C105	*40°04'27"*	*55.00'*	*38.47'*	*N88°46'48"E*	*37.69'*
C106	*40°04'27"*	*55.00'*	*38.47'*	*N48°42'21"E*	*37.69'*
C107	*40°04'27"*	*55.00'*	*38.47'*	*N8°37'54"E*	*37.69'*
C108	*28°30'22"*	*55.00'*	*27.36'*	*N25°39'30"W*	*27.08'*
C109	*91°22'58"*	*20.00'*	*31.90'*	*S5°46'48"W*	*28.62'*
C110	*3°50'03"*	*1574.00'*	*105.33'*	*S53°23'19"W*	*105.31'*
C111	*2°28'10"*	*1574.00'*	*67.84'*	*S56°32'25"W*	*67.83'*
C112	*2°17'09"*	*1574.00'*	*62.80'*	*S58°55'05"W*	*62.79'*
C113	*2°38'11"*	*1574.00'*	*72.42'*	*S61°22'45"W*	*72.42'*
C114	*61°32'36"*	*160.01'*	*171.87'*	*S67°21'13"E*	*163.73'*
C115	*45°33'34"*	*160.01'*	*127.23'*	*N59°05'41"E*	*123.91'*
C116	*3°21'39"*	*385.23'*	*22.60'*	*N34°37'59"E*	*22.59'*
C117	*17°53'43"*	*385.23'*	*120.32'*	*N24°00'18"E*	*119.83'*

REVISED: DECEMBER 9, 2020
REVISED: NOVEMBER 11, 2020
REVISED: NOVEMBER 6, 2020
REVISED: AUGUST 27, 2020
REVISED: JULY 24, 2020
DATE OF PREPARATION: JUNE 2, 2020

ROBERT SEIPEL ASSOCIATES, INC. PROFESSIONAL LAND SURVEYORS
1845 NORTHWESTERN DRIVE EL PASO TX 79912 PHONE (915) 877-1928 FAX (915) 877-2095



COMPUTATIONS BASED ON RATIONAL FORMULA Q=CIA						
ONE-HUNDRED YEAR STORM FREQUENCY						
DRAINAGE AREA No.	ACRES	TIME OF CONCENTRATION	COEFFICIENT	INTENSITY (I)	PEAK DISCHARGE (Q) IN C.F.S.	OUTFALL POINT
DA #1	18.59	10.0	0.69	5.21	66.89	C
DA #2	155.02	21.7	0.69	4.03	430.91	D
DA #3	43.96	15.0	0.69	4.63	140.39	E
DA #4	5.34	10.0	0.69	5.21	19.21	E
DA #5	172.81	27.8	0.69	3.61	430.16	E
DA #6	24.36	10.5	0.69	5.15	86.55	B
DA #7	7.54	10.0	0.69	5.21	27.13	A

NOTE: PEAK DISCHARGE IS BASED ON A MAXIMUM 10 MINUTE TIME OF CONCENTRATION AND ASSOCIATE INTENSITY FOR WEST SIDE OF EL PASO, TEXAS

THE USE OF C=0.69 IS BASED ON SOIL CONDITIONS, VEGETATIVE LAND COVER, AND SLOPE OF THE TERRAIN (< 10%). THE SOIL IS IN THE CLASS D HYDROLOGIC SOIL CLASSIFICATION THAT EXHIBITS A LOWER PERMEABILITY AND THEREFORE A HIGH RUNOFF RESPONSE CONSISTENT WITH "PASSIVE OPEN SPACE" OF MOUNTAIN PRESERVES AND WASHES. SEE TABLE 4-5 OF THE JUNE 2008 DRAINAGE DESIGN MANUAL.

LEGEND

- DRAINAGE AREA LIMITS
- 3920 EXISTING CONTOURS
- FLOOD ZONE BOUNDARY
- 4204 BASE FLOOD ELEVATION

KIRPICH METHOD

L = 2256.33 ft	Up El. 4046		
S = 0.059 ft/ft	Dn /El. 3914		
Tc = 8.9 min.			
DA#1			

L = 6609.19 ft	Up El. 4234		
S = 0.050 ft/ft	Dn /El. 3906		
Tc = 21.7 min.			
DA#2			

L = 4127.85 ft	Up El. 4120		
S = 0.050 ft/ft	Dn /El. 3912		
Tc = 15.0 min.			
DA#3			

L = 1291.92 ft	Up El. 4000		
S = 0.060 ft/ft	Dn /El. 3922		
Tc = 5.7 min.			
DA#4			

L = 8591.57 ft	Up El. 4300		
S = 0.044 ft/ft	Dn /El. 3922		
Tc = 27.8 min.			
DA#5			

L = 2659.63 ft	Up El. 4120		
S = 0.053 ft/ft	Dn /El. 3980		
Tc = 10.5 min.			
DA#6			

L = 1204.71 ft	Up El. 4172		
S = 0.033 ft/ft	Dn /El. 4132		
Tc = 6.8 min.			
DA#7			

BENCHMARK: CITY MONUMENT AT THE CENTERLINE INTERSECTION OF MESA PASS DRIVE AND CIMARRON PARK DRIVE.
ELEVATION = 3978.53 (EL PASO CITY DATUM)

NO.	DATE	DESCRIPTION	BY
3	03/15/2021	3rd City Submittal	AHO
2	01/22/2021	2nd City Submittal	AHO
1	11/25/2020	1st City Submittal	AHO

BEFORE YOU DIG - CALL

EL PASO ELECTRIC COMPANY	543-5720
ALL PROJECT AREA CONTRACTORS	1-800-922-1699
TEXAS GAS SERVICE	544-6300
TGS EMERGENCY HOTLINE	562-8411/562-2603
EL PASO WATER UTILITIES (WATER & SEWER)	1-800-592-1155
AFTER HOURS EMERGENCY (EPW)	594-5775
SPECTRUM	775-7414
TEXAS DEPARTMENT OF TRANSPORTATION	1-800-735-2777
EL PASO STREETS AND MAINTENANCE	1-800-238-3764
KINDER-MORGAN: EPNG PIPELINES	212-0151
EL PASO TRAFFIC SIGNAL STREETS AND MAINTENANCE	trenapp@elpasotexas.gov

WARNING! BEFORE YOU DIG ON PROJECT AREA CONTRACTORS SHALL FIELD LOCATE EXISTING UNDERGROUND IMPROVEMENTS

Texas811 Know what's below Call before you dig.

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05/15/2021

STATE OF TEXAS
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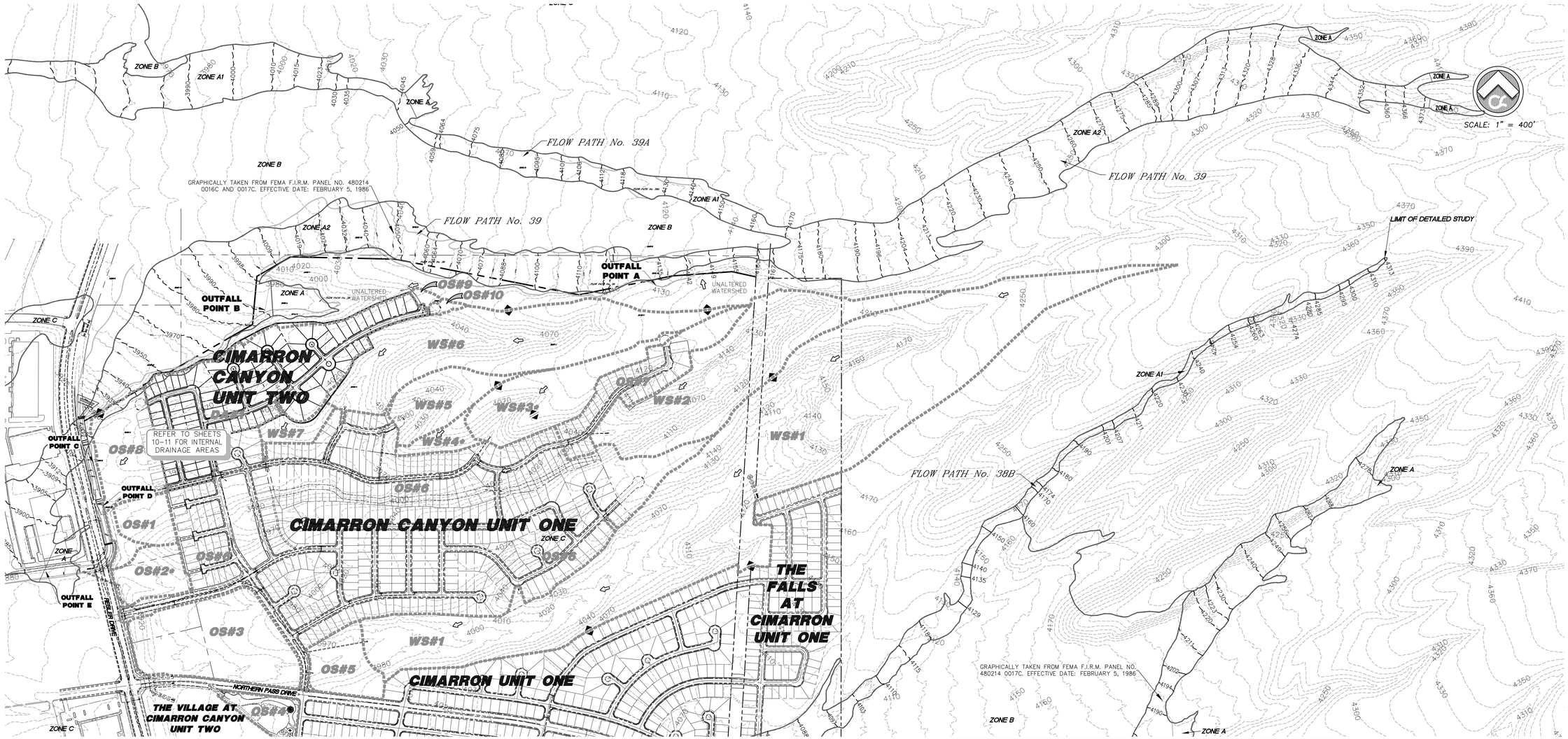
SUBDIVISION
CIMARRON CANYON UNIT TWO SUBDIVISION

SHEET TITLE
HISTORICAL FLOW

GOB DESIGN BY	1908 JOB NO.
GOB-DG-SM DRAWN BY	12/20/2019 DATE OF SUBMISSION
AHO CHECKED BY	AS NOTED SCALE

SHEET NO. 9
SHEET SEQUENCE 9 OF 82

© CSA DESIGN GROUP, INC. — Mar 12, 2021 - 11:52am
S:\Shared\1908 Cimarron Canyon Unit Two\1908 3rd Submittal\1908 SH 9 (Historical Flow).dwg
dgordon



EXISTING CONDITIONS

COMPUTATIONS BASED ON RATIONAL FORMULA Q = CIA

100 YEAR 24 HOUR DURATION RUNOFF VOLUME ~ [AREA (ACRES) X 4.18 (IN.) X C] / 12 = AC-FT.

100 YEAR STORM FREQUENCY CALCULATIONS

DRAINAGE AREA NO.	AREA (ACRES)	RUNOFF VOLUME (AC.-FT.)	TIME OF CONCENTRATION (MINUTES)	RUNOFF COEFICIENT C	INTENSITY (I) IN/HR.	PEAK DISCHARGE (Q) C.F.S.
DA #1	29.728	7.15	11.1	0.69	5.07	104.00
WS #1	97.902	23.53	22.7	0.69	3.95	266.83
WS #2	25.964	6.24	10	0.69	5.21	93.34
WS #3	11.896	3.94	10	0.95*	5.21	58.88
WS #4	2.416	0.80	10	0.95*	5.21	11.96
WS #5	7.410	1.78	10	0.69	5.21	26.64
WS #6	29.571	7.11	11.3	0.69	5.05	103.04
WS #7	2.631	0.63	10	0.69	5.21	9.46
OS #1	3.635	0.87	10	0.69	5.21	13.07
OS #2	4.897	1.62	10	0.95*	5.21	24.24
OS #3	17.498	4.21	10	0.69	5.21	62.90
OS #4	3.461	0.48	10	0.40	5.21	7.21
OS #5	5.780	1.39	10	0.69	5.21	20.78
OS #6	111.627	26.83	17.8	0.69	4.36	335.82
OS #7	9.691	2.33	10	0.69	5.21	34.84
OS #8	10.375	2.49	10	0.69	5.21	37.30
OS #9	0.514	0.12	10	0.69	5.21	1.85
OS #10	0.510	0.12	10	0.69	5.21	1.83
EXISTING NORTHERN PASS CULVERT CROSSING	3.956	1.17	10	0.85	4.43	14.90**
EXISTING THE VILLAGE AT CIMARRON UNIT TWO OF#1	7.728	2.56	10	0.95	5.21	38.25***
EXISTING THE FALLS AT CIMARRON UNIT ONE PRIVATE SS	5.416	1.13	10	0.60	5.21	16.93****
TOTAL	392.606	96.50			TOTAL RUNOFF RATE	1284.05

DEVELOPED CONDITIONS UNIT ONE ONLY

COMPUTATIONS BASED ON RATIONAL FORMULA Q = CIA

100 YEAR 24 HOUR DURATION RUNOFF VOLUME ~ [AREA (ACRES) X 4.18 (IN.) X C] / 12 = AC-FT.

100 YEAR STORM FREQUENCY CALCULATIONS

DRAINAGE AREA NO.	AREA (ACRES)	RUNOFF VOLUME (AC.-FT.)	TIME OF CONCENTRATION (MINUTES)	RUNOFF COEFICIENT C	INTENSITY (I) IN/HR.	PEAK DISCHARGE (Q) C.F.S.
DA #1	29.728	6.21	11.1	0.60	5.07	90.43
WS #1	97.902	23.53	22.7	0.69	3.95	266.83
WS #2	25.964	6.24	10	0.69	5.21	93.34
WS #3	11.896	3.94	10	0.95*	5.21	58.88
WS #4	2.416	0.80	10	0.95*	5.21	11.96
WS #5	7.410	1.78	10	0.69	5.21	26.64
WS #6	29.571	7.11	11.3	0.69	5.05	103.04
WS #7	2.631	0.63	10	0.69	5.21	9.46
OS #1	3.635	0.87	10	0.69	5.21	13.07
OS #2	4.897	1.62	10	0.95*	5.21	24.24
OS #3	17.498	4.21	10	0.69	5.21	62.90
OS #4	3.461	0.48	10	0.40	5.21	7.21
OS #5	5.780	1.39	10	0.69	5.21	20.78
OS #6	111.627	23.33	17.8	0.60	4.36	292.02
OS #7	9.691	2.03	10	0.60	5.21	30.29
OS #8	10.375	2.49	10	0.69	5.21	37.30
OS #9	0.514	0.12	10	0.69	5.21	1.85
OS #10	0.510	0.12	10	0.69	5.21	1.83
EXISTING NORTHERN PASS CULVERT CROSSING	3.956	1.17	10	0.85	4.43	14.90**
EXISTING THE VILLAGE AT CIMARRON UNIT TWO OF#1	7.728	2.56	10	0.95	5.21	38.25***
EXISTING THE FALLS AT CIMARRON UNIT ONE PRIVATE SS	5.416	1.13	10	0.60	5.21	16.93****
TOTAL	392.606	91.77			TOTAL RUNOFF RATE	1222.14

**** PER FALLS AT CIMARRON UNIT ONE PRIVATE STORM SEWER BY KIMLEY-HORN ASSOCIATES DATED JAN. 2011

*** PER THE VILLAGE AT CIMARRON UNIT TWO OVERFLOW INLET #1 BY CSA APPROVED 7-29-16

** PER CIMARRON ONE RECORD DRAWINGS BY CSA DATED 10-15-07

FLOOD ZONES AS SHOWN ARE NAVD 88 (11.57' DIFFERENCE)

THE USE OF C=0.69 IS BASED ON SOIL CONDITIONS, VEGETATIVE LAND COVER, AND SLOPE OF THE TERRAIN (< 10%). THE SOIL IS IN THE CLASS D HYDROLOGIC SOIL CLASSIFICATION THAT EXHIBITS A LOWER PERMEABILITY AND THEREFORE A HIGH RUNOFF RESPONSE CONSISTENT WITH "PASSIVE OPEN SPACE" OF MOUNTAIN PRESERVES AND WASHES. SEE TABLE 4-5 OF THE JUNE 2008 DRAINAGE DESIGN MANUAL.

SUMMARY OF 100 YEAR 24 HOUR DURATION EVENT (RUNOFF RATE AND VOLUME) AT OUTFALL POINT A		
	VOLUME (AC-FT)	RATE (CFS)
EXISTING CONDITION	96.50	1284.05
PROPOSED CONDITION (UNIT ONE)	91.77 (SEE NOTE 4)	1222.14 (SEE NOTE 4)

NOTE 1: THIS AREA LIES WITHIN FLOOD HAZARD ZONE B AND C, AS DESIGNATED BY THE FLOOD INSURANCE RATE MAP (F.I.R.M.), CITY OF EL PASO PANEL NUMBER 480214 0016 C DATED FEBRUARY 05, 1986, AND AMENDED PER A LETTER OF MAP REVISION, EFFECTIVE DATE AUGUST 04, 2011; AND LIES WITHIN FLOOD HAZARD ZONE C AS DESIGNATED BY THE F.I.R.M. CITY OF EL PASO PANEL NUMBER 480214 0017 C DATED FEBRUARY 05, 1986.

NOTE 2: RUNOFF COEFFICIENT FOR EXISTING CONDITION IS 0.69 (MOUNTAIN PERSERVE AND WASHES) AND 0.60 FOR PROPOSED CONDITION (SINGLE FAMILY RESIDENTIAL) PER TABLE4-5 FROM CITY OF EL PASO ENGINEERING DEPARTMENT DRAINAGE DESIGN MANUAL, JUNE 2008.

NOTE 3: PEAK DISCHARGE BASED ON A MAXIMUM 10 MINUTE TIME OF CONCENTRATION FOR DEVELOPED AREAS AND SMALL WATERSHEDS

NOTE 4: EXCLUDES REDUCTION OF FLOW ASSOCIATED WITH TEMPORARY AND PERMANENT RETENTION AND DETENTION FACILITIES, SEE DRAINAGE PLAN SHEETS 10-11

KIRPICH METHOD

L = 6881.31 ft, Up El. 4307; S = 0.048 ft/ft, Dn /El. 3979; Tc = 22.7 min. — WS#1	L = 2537.26 ft, Up El. 4238; S = 0.071 ft/ft, Dn /El. 4058; Tc = 9.0 min. — WS#2	L = 1604.6 ft, Up El. 4149; S = 0.081 ft/ft, Dn /El. 4019; Tc = 6.0 min. — WS#3	L = 742.73 ft, Up El. 4081; S = 0.104 ft/ft, Dn /El. 4004; Tc = 3.0 min. — WS#4
L = 1225.46 ft, Up El. 4110; S = 0.089 ft/ft, Dn /El. 4001; Tc = 4.7 min. — WS#5	L = 3214.74 ft, Up El. 4174; S = 0.064 ft/ft, Dn /El. 3969; Tc = 11.3 min. — WS#6	L = 165.15 ft, Up El. 4000; S = 0.291 ft/ft, Dn /El. 3952; Tc = 0.6 min. — WS#7	L = 338.17 ft, Up El. 3965; S = FALSE ft/ft, Dn /El. 3910; Tc = #DIV/0! min. — OS#1
L = 379.85 ft, Up El. 3965; S = 0.147 ft/ft, Dn /El. 3909; Tc = 1.6 min. — OS#2	L = 1079.64 ft, Up El. 3979; S = 0.061 ft/ft, Dn /El. 3913; Tc = 5.0 min. — OS#3	L = 711.94 ft, Up El. 3973; S = 0.032 ft/ft, Dn /El. 3950; Tc = 4.6 min. — OS#4	L = 611.2 ft, Up El. 4007; S = 0.062 ft/ft, Dn /El. 3969; Tc = 3.2 min. — OS#5
L = 5005.71 ft, Up El. 4148; S = 0.048 ft/ft, Dn /El. 3909; Tc = 17.8 min. — OS#6	L = 1869.64 ft, Up El. 4177; S = 0.063 ft/ft, Dn /El. 4060; Tc = 7.5 min. — OS#7	L = 747.04 ft, Up El. 3956; S = 0.027 ft/ft, Dn /El. 3936; Tc = 5.1 min. — OS#8	L = 136.48 ft, Up El. 4050; S = 0.029 ft/ft, Dn /El. 4046; Tc = 1.3 min. — OS#9
L = 307.65 ft, Up El. 4078; S = 0.101 ft/ft, Dn /El. 4047; Tc = 1.6 min. — OS#10	L = 2575.22 ft, Up El. 4047; S = 0.043 ft/ft, Dn /El. 3937; Tc = 11.1 min. — DA#1		

LEGEND

- EXISTING DIRECTION OF FLOW
- DA#1 — DRAINAGE AREA
- DRAINAGE AREA BOUNDARY
- 4010 — EXISTING CONTOUR
- HIGH POINT
- FLOOD ZONE BOUNDARY
- 4204 — BASE FLOOD ELEVATION

NO.	DATE	DESCRIPTION	BY
3	03/15/2021	3rd City Submittal	AHO
2	01/22/2021	2nd City Submittal	AHO
1	11/25/2020	1st City Submittal	AHO

WARNING! BEFORE YOU DIG ANY PROJECT AREA CONTRACTOR SHALL LOCATE ALL UNDERGROUND IMPROVEMENTS

Texas 811 Know what's below Call before you dig.

BEFORE YOU DIG - CALL

EL PASO ELECTRIC COMPANY	543-5720
ATMOS ENERGY	1-800-460-2663
TEXAS GAS SERVICE	544-6300
TGS EMERGENCY HOTLINE	562-8411/562-2603
AFTER HOURS EMERGENCY (WATER & SEWER)	1-800-457-1177
AFTER HOURS EMERGENCY (EPW)	594-5775
SPECTRUM	775-7414
EXCAVATION SAFETY SYSTEM	1-800-344-8377
KINDER-MORGAN EPNG PIPELINES	1-800-238-3764
EL PASO STREETS AND MAINTENANCE	212-0151
EL PASO TRAFFIC SIGNAL STREETS AND MAINTENANCE	(tregan@elpasotexas.gov)

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03/15/21

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SUBDIVISION

CIMARRON CANYON UNIT TWO SUBDIVISION

SHEET TITLE

MASTER DRAINAGE PLAN

GOB (DESIGN BY)	1908 (JOB NO.)
GOB-DG-SM (DRAWN BY)	12/20/2019 (DATE OF SUBMISSION)
AHO (CHECKED BY)	AS NOTED (SCALE)

SHEET NO. 10

SHEET SEQUENCE 10 OF 82

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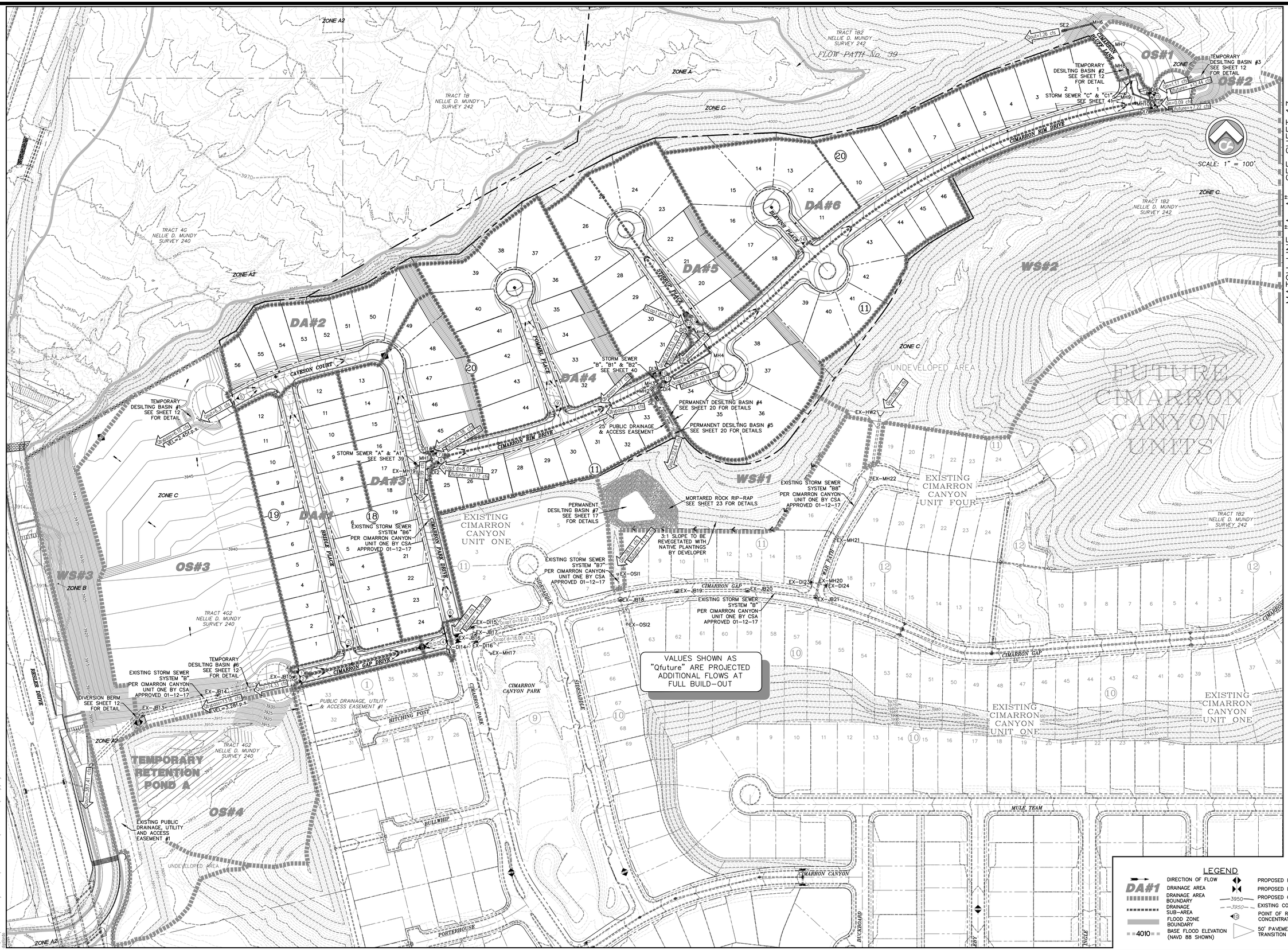
S:\Civil\1908 Cimarron Canyon Unit Two\PDB 3rd Submittal\1908 SHT 10 (Master Drainage).dwg
AHO



MATCH LINE "A-A" SEE SHEET 13

BENCHMARK: CITY MONUMENT AT THE CENTERLINE INTERSECTION OF CAVESON COURT AND CIMARRON PARK DRIVE. ELEVATION = 3978.53 (EL PASO CITY DATUM)

NO.	DATE	DESCRIPTION	BY
3	03/15/2021	3rd City Submittal	AHO
2	01/22/2021	2nd City Submittal	AHO
1	11/25/2020	1st City Submittal	AHO

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TCG EMERGENCY HOTLINE	562-8411/562-2603
EL PASO WATER UTILITIES (WATER & SEWER)	1-800-592-1645
AFTER HOURS EMERGENCY (EPW)	594-5775
SPECTRUM	775-7414
TRAFFIC EXCAVATION SAFETY SYSTEM	1-800-344-7077
KINDER-MORGAN EPNG PIPELINES	1-800-238-3764
EL PASO STREETS AND MAINTENANCE	212-0151
EL PASO TRAFFIC SIGNAL STREETS AND MAINTENANCE	transportation@elpasotexas.gov

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03/15/2021

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SUBDIVISION
CIMARRON CANYON UNIT TWO SUBDIVISION

SHEET TITLE
DRAINAGE PLAN

LEGEND

DA#1	DRAINAGE AREA
	DRAINAGE AREA BOUNDARY
	DRAINAGE SUB-AREA
	FLOOD ZONE BOUNDARY
4010	BASE FLOOD ELEVATION (NAVD 88 SHOWN)
	DIRECTION OF FLOW
	PROPOSED HIGH POINT
	PROPOSED LOW POINT
3950	PROPOSED CONTOUR
3950	EXISTING CONTOUR
C6	POINT OF RUN OFF CONCENTRATION
	50' PAVEMENT TRANSITION

GOB	1908
DESIGN BY	JOB NO.
GOB-DG-SM	12/20/2019
DRAWN BY	DATE OF COMMISSION
AHO	AS NOTED
CHECKED BY	SCALE

SHEET NO. 11

SHEET SEQUENCE 11 OF 82

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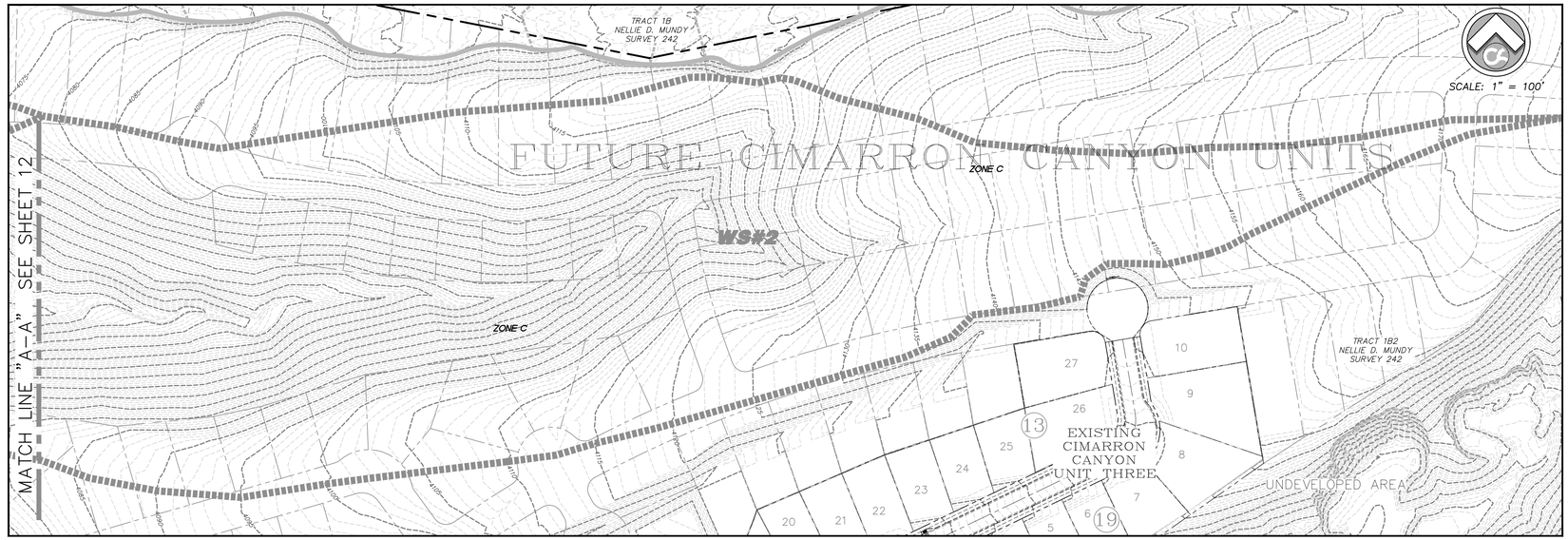
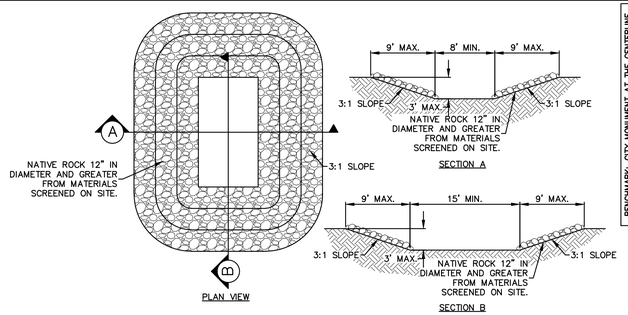
J:\CSA\1908 Cimarron Canyon Unit Two\1908 Dwg Submittal\1908 Sht 11-13 (Drainage).dwg
ZONE A2

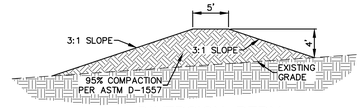




TEMPORARY DESILTING BASIN

SCALE: 1" = 10'

BENCHMARK: CITY MONUMENT AT THE CENTERLINE INTERSECTION OF CIMARRON PASS DRIVE AND CIMARRON PARK DRIVE.
ELEVATION = 3978.53 (EL PASO CITY DATUM)



DIVERSION BERM

SCALE: 1" = 10'

NO.	DATE	DESCRIPTION	BY
3	03/15/2021	3rd City Submittal	AHO
2	01/22/2021	2nd City Submittal	AHO
1	11/25/2020	1st City Submittal	AHO

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AFTER HOURS EMERGENCY (EPW)	594-5775
SPECTRUM	775-7414
EXCAVATION SAFETY SYSTEM	1-800-248-3255
KINDER-MORGAN EPNG PIPELINES	1-800-238-3764
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05/15/21

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SUBDIVISION
CIMARRON CANYON UNIT TWO SUBDIVISION

SHEET TITLE
TABLES AND CALCULATIONS

GOB	1908
DESIGN BY	JOB NO.
GOB-DG-SM	12/20/2019
DRAWN BY	DATE OF SUBMISSION
AHO	AS NOTED
CHECKED BY	SCALE

SHEET NO. 12
SHEET SEQUENCE 12 OF 82

STREET CARRYING CAPACITY COMPUTATIONS

(FOR FULLY DEVELOPED CONDITIONS AND INCLUDING THE FUTURE SUBDIVISION UNITS)

SPOT	STREET NAME	STATION	DESIGN AREA (Ac)	ROUGHNESS "C"	AVERAGE LAND USE "C"	VELOCITY (fps)	L (ft.)	TC (MINUTES)	I 100 (IN/HR)	Q 100 (CFS)	ADDITIONAL FLOW (CFS)	Q 100 (TOTAL CFS)	SLOPE (FT/FT)	Q Cap (CFS)	DEPTH (FT)	MOMENTUM (FT/FT)
1	CIMARRON GAP DRIVE	-3+64.95	0.201	0.016	0.95	5.96	245.14	10.0	5.21	0.99	SPOT 3	13.41	0.0600	59.16	0.30	0.149
2	CIMARRON GAP DRIVE	-3+64.95	0.185	0.016	0.95	3.04	245.14	10.0	5.21	0.92	NONE	0.92	0.0600	59.16	0.11	0.028
3	BRIDLE PLACE	6+82.21	3.970	0.016	0.60	4.34	653.41	10.0	5.21	12.41	NONE	12.41	0.0400	125.20	0.13	0.047
4	CIMARRON GAP DRIVE	-0+16.00	0.098	0.016	0.95	0.51	103.81	10.0	5.21	0.49	NONE	0.49	0.0100	91.88	0.03	0.001
5	CAVESON COURT	30+44.81	2.020	0.016	0.60	4.45	395.57	10.0	5.21	6.31	NONE	6.31	0.0600	88.65	0.19	0.070
6	CIMARRON PARK DRIVE	19+81.56	3.650	0.016	0.60	4.31	667.68	10.0	5.21	11.41	BYPASS FROM DI #1 & #2	12.41	0.0700	243.10	0.09	0.032
6 future	CIMARRON PARK DRIVE	19+81.56	3.650	0.016	0.60	4.61	667.68	10.0	5.21	11.41	BYPASS FROM DI #1 future & #2 future	13.29	0.0700	243.10	0.09	0.035
7	CIMARRON RIM DRIVE	0+86.00	0.360	0.016	0.95	6.58	572.71	10.0	5.21	1.78	SPOT 9 & BYPASS FROM DI #3	21.96	0.0500	54.00	0.36	0.197
7 future	CIMARRON RIM DRIVE	0+86.00	0.360	0.016	0.95	7.10	572.71	10.0	5.21	1.78	SPOT 9 & BYPASS FROM DI #3 future	23.85	0.0500	54.00	0.37	0.219
8	CIMARRON RIM DRIVE	0+86.00	1.810	0.016	0.60	4.96	572.71	10.0	5.21	5.66	BYPASS FROM DI #4	8.39	0.0500	54.00	0.26	0.107
8 future	CIMARRON RIM DRIVE	0+86.00	1.810	0.016	0.60	5.07	572.71	10.0	5.21	5.66	BYPASS FROM DI #4 future	8.57	0.0500	54.00	0.26	0.110
9	POMMEL PLACE	0+36.33	3.680	0.016	0.60	4.36	316.13	10.0	5.21	11.50	NONE	11.50	0.0500	140.00	0.12	0.044
10	CIMARRON RIM DRIVE	6+58.70	3.310	0.016	0.60	7.15	1386.34	10.0	5.21	10.35	SPOT 13 & 14 & OS #1 & BYPASS FROM DI #5 & #6	26.30	0.0500	53.61	0.39	0.232
10 future	CIMARRON RIM DRIVE	6+58.70	3.310	0.016	0.60	7.67	1386.34	10.0	5.21	10.35	SPOT 13 & 14 & OS #1 & BYPASS FROM DI #5 & #6 future	30.66	0.0500	53.61	0.41	0.262
11	CIMARRON RIM DRIVE	6+58.70	4.500	0.016	0.60	5.86	1386.34	10.0	5.21	14.07	NONE	14.07	0.0500	53.61	0.31	0.151
11 future	CIMARRON RIM DRIVE	6+58.70	4.500	0.016	0.60	5.63	1386.34	10.0	5.21	14.07	BYPASS FROM DI #7 future	14.41	0.0500	53.61	0.32	0.150
12	STIRRUP PLACE	1+05.69	1.780	0.016	0.60	3.86	246.76	10.0	5.21	5.56	NONE	5.56	0.0350	45.18	0.24	0.077
13	STIRRUP PLACE	1+05.69	1.820	0.016	0.60	3.95	246.76	10.0	5.21	5.69	NONE	5.69	0.0350	45.18	0.24	0.079
14	BLEVINS PLACE	0+35.71	2.349	0.016	0.60	4.01	124.29	10.0	5.21	7.31	NONE	7.31	0.0300	41.83	0.27	0.090
15	CIMARRON RIM DRIVE	20+45.15	0.140	0.016	0.60	2.77	69.04	10.0	5.21	0.44	OS #2	1.17	0.0450	51.23	0.13	0.030
15 future	CIMARRON RIM DRIVE	20+45.15	5.750	0.016	0.60	5.91	1182.50	10.0	5.21	17.97	NONE	17.97	0.0450	51.23	0.35	0.172
16	CIMARRON RIM DRIVE	20+45.15	0.030	0.016	0.60	1.44	69.04	10.0	5.21	0.09	NONE	0.09	0.0450	51.23	0.05	0.006
16 future	CIMARRON RIM DRIVE	20+45.15	2.446	0.016	0.60	4.53	1202.49	10.0	5.21	7.65	NONE	7.65	0.0450	51.23	0.26	0.098

DRAINAGE INLET DATA

DRAINAGE INLET #	TYPE	NO. OF GRATES	PAVEMENT DESIGN	REQUIRED FLOW CAPACITY Q OF WATERSHED (CFS)	INLET BYPASS FLOW FROM	REQUIRED FLOW CAPACITY Q TOTAL W/BYPASS (CFS)	INLET FLOW CAPTURE (CFS)	FLOW BYPASS (CFS)	INLET BYPASS FLOW TO	DEPTH OF FLOW AT INLET (IN.)	APPROACH VELOCITY (FPS)	FLOW SPREAD AT INLET (FT.)	ROADWAY WIDTH AT INLET (FT.)
DI # 1	BEEHIVE	4	ON GRADE	13.29	DI #3	21.06	20.38	0.68	EX-DI #14	8.72	3.60	23.80	16.00
DI # 1 future	BEEHIVE	4	ON GRADE	13.29	DI # 3 future	23.85	22.41	1.44	EX-DI #14 future	9.00	3.70	25.01	16.00
DI # 2	BEEHIVE	2	ON GRADE	5.66	DI #4	8.39	8.01	0.38	EX-DI #14	5.71	5.75	11.28	16.00
DI # 2 future	BEEHIVE	2	ON GRADE	5.66	DI # 4 future	8.57	8.13	0.44	EX-DI #14 future	5.74	5.77	11.40	16.00
DI # 3	BEEHIVE	4	ON GRADE	24.76	DI #5	26.30	18.53	7.77	DI #1	7.13	8.38	17.18	16.00
DI # 3 future	BEEHIVE	4	ON GRADE	24.76	DI #5 & #6 future	30.66	20.10	10.56	DI #1 future	7.40	8.65	18.32	16.00
DI # 4	BEEHIVE	3	ON GRADE	14.07	NONE	14.07	11.34	2.73	DI #2	6.14	7.42	13.07	16.00
DI # 4 future	BEEHIVE	3	ON GRADE	14.07	DI # 7 future	14.41	11.50	2.91	DI #2 future	6.18	7.45	13.22	16.00
DI # 5	I	3	ON GRADE	5.56	NONE	5.56	4.02	1.54	DI #5	5.17	5.57	9.01	16.00
DI # 6	BEEHIVE	3	ON GRADE	1.17	NONE	1.17	1.17	NONE	NONE	3.20	6.15	1.43	16.00
DI # 6 future	BEEHIVE	3	ON GRADE	17.97	NONE	17.97	13.61	4.36	DI # 3 future	6.59	7.44	14.93	16.00
DI # 7	BEEHIVE	2	ON GRADE	0.09	NONE	0.09	0.09	NONE	NONE	1.22	3.24	0.55	16.00
DI # 7 future	BEEHIVE	2	ON GRADE	7.65	NONE	7.65	7.31	0.34	DI # 4 future	5.40	6.46	9.99	16.00
EX-DI #14	I (MODIFIED)	5	SAG	14.22	EX-DI #15 & #16 & DI #1 & #2	27.69	27.69	NONE	NONE	6.09	N/A	61.93	82.41
EX-DI #14 future	I (MODIFIED)	5	SAG	14.22	EX-DI #15 & #16 & DI #1 future & #2 future	29.39	29.39	NONE	NONE	6.33	N/A	64.22	82.41
EX-OSI #1	H	1	SAG	9.45	NONE	28.03	28.03	NONE	NONE	9.63	N/A	8.66	30.00
EX-OSI #1 future	H	1	SAG	9.45	NONE	29.76	29.76	NONE	NONE	10.02	N/A	8.85	30.00

DESILTING BASIN #1 CAPACITY BY ELEVATION

BASIN ELEVATION	AREA (ACRES)	CUMMULATIVE AVERAGE VOLUME (AC-FT)	CUMMULATIVE CONIC VOLUME (AC-FT)	DESCRIPTION
3951.00	0.0123	0.0146	0.0143	BASIN RIM
3950.00	0.0070	0.0049	0.0048	
3949.00	0.0029	0.0000	0.0000	BASIN BOTTOM

DESILTING BASIN #2 CAPACITY BY ELEVATION

BASIN ELEVATION	AREA (ACRES)	CUMMULATIVE AVERAGE VOLUME (AC-FT)	CUMMULATIVE CONIC VOLUME (AC-FT)	DESCRIPTION
4046.00	0.0189	0.0300	0.0296	BASIN RIM
4045.00	0.0121	0.0145	0.0142	
4044.00	0.0070	0.0049	0.0048	
4043.00	0.0029	0.0000	0.0000	BASIN BOTTOM

DESILTING BASIN #3 CAPACITY BY ELEVATION

BASIN ELEVATION	AREA (ACRES)	CUMMULATIVE AVERAGE VOLUME (AC-FT)	CUMMULATIVE CONIC VOLUME (AC-FT)	DESCRIPTION
4051.00	0.0189	0.0302	0.0298	BASIN RIM
4050.00	0.0123	0.0146	0.0143	
4049.00	0.0070	0.0049	0.0048	
4048.00	0.0029	0.0000	0.0000	BASIN BOTTOM

DESILTING BASIN #4 CAPACITY BY ELEVATION

BASIN ELEVATION	AREA (ACRES)	CUMMULATIVE AVERAGE VOLUME (AC-FT)	CUMMULATIVE CONIC VOLUME (AC-FT)	DESCRIPTION
3985.00	0.0316	0.0810	0.0808	BASIN RIM
3984.00	0.0250	0.0527	0.0526	
3983.00	0.0198	0.0304	0.0302	
3982.00	0.0151	0.0129	0.0129	
3981.00	0.0108	0.0000	0.0000	BASIN BOTTOM

DESILTING BASIN #5 CAPACITY BY ELEVATION

BASIN ELEVATION	AREA (ACRES)	CUMMULATIVE AVERAGE VOLUME (AC-FT)	CUMMULATIVE CONIC VOLUME (AC-FT)	DESCRIPTION
3985.00	0.0036	0.0026	0.0026	BASIN RIM
3984.00	0.0016	0.0000	0.0000	BASIN BOTTOM

DESILTING BASIN #6 CAPACITY BY ELEVATION

BASIN ELEVATION	AREA (ACRES)	CUMMULATIVE AVERAGE VOLUME (AC-FT)	CUMMULATIVE CONIC VOLUME (AC-FT)	DESCRIPTION
3933.00	0.0189	0.0302	0.0298	BASIN RIM
3932.00	0.0123	0.0146	0.0143	
3931.00	0.0070	0.0049	0.0048	
3930.00	0.0030	0.0000	0.0000	BASIN BOTTOM

DESILTING BASIN #7 CAPACITY BY ELEVATION

BASIN ELEVATION	AREA (ACRES)	CUMMULATIVE AVERAGE VOLUME (AC-FT)	CUMMULATIVE CONIC VOLUME (AC-FT)	DESCRIPTION
3952.00	0.2053	0.9394	0.9390	BASIN RIM
3951.00	0.1879	0.7427	0.7424	
3950.00	0.1713	0.5631	0.5629	
3949.00	0.1554	0.3998	0.3996	
3948.00	0.1402	0.2520	0.2518	
3947.00	0.1258	0.1190	0.1189	
3946.00	0.1121	0.0000	0.0000	BASIN BOTTOM

TEMPORARY RETENTION POND A CAPACITY BY ELEVATION

BASIN ELEVATION	AREA (ACRES)	CUMMULATIVE AVERAGE VOLUME (AC-FT)	CUMMULATIVE CONIC VOLUME (AC-FT)	DESCRIPTION
3910.00	0.9368	3.8407	3.8318	POND RIM
3909.97	0.9321	3.8126	3.8030	HIGH WATER
3909.00	0.7932	2.9757	2.9677	
3908.00	0.6498	2.2542	2.2474	
3907.00	0.5412	1.6587	1.6527	
3906.00	0.4384	1.1689	1.1639	
3905.00	0.3431	0.7781	0.7741	
3904.00	0.2587	0.4772	0.4742	
3903.00	0.1858	0.2550	0.2529	
3902.00	0.1246	0.0998	0.0987	
3901.00	0.0749	0.0000	0.0000	POND BOTTOM

DESILTING BASIN #2 (TEMPORARY)

ARC = AREA * RATE * COEFFICIENT
OS#1 = 0.514 * 4.18 * 0.69
ARC = 1.482
$\frac{ARC}{12} = VOL_{TOP} - \frac{1.482}{12} = 0.124$ AcFt
AcFt BYPASS TO SPOT 10
$VOL_{REQUIRED} - VOL_{BYPASS} = VOL_{TRAP}$
0.124−0.0296=0.0939 AcFt
AcFt TO CFS BYPASS
AREA = AcFt * 12 / RATE / COEFFICIENT
AREA = 0.0939 * 12 / 4.18 / 0.69
AREA = 0.3908 Ac
CFS = AREA * RATE * COEFFICIENT
CFS = 0.3908 * 5.21 * 0.69
CFS = 1.41

DESILTING BASIN #3 (TEMPORARY)

ARC = AREA * RATE * COEFFICIENT
OS#2 = 0.326 * 4.18 * 0.69
ARC = 0.940
$\frac{ARC}{12} = VOL_{TOP} - \frac{0.940}{12} = 0.078$ AcFt
AcFt BYPASS TO DI #7 & #8
$VOL_{REQUIRED} - VOL_{BYPASS} = VOL_{TRAP}$
0.078−0.0298=0.0485 AcFt
AcFt TO CFS BYPASS
AREA = AcFt * 12 / RATE / COEFFICIENT
AREA = 0.0485 * 12 / 4.18 / 0.69
AREA = 0.2019 Ac
CFS = AREA * RATE * COEFFICIENT
CFS = 0.2019 * 5.21 * 0.69
CFS = 0.73

DESILTING BASIN #4 (PERMANENT)

CAPTURED AcFt OF BASIN = CAPTURED CFS OF BASIN
AREA = AcFt * 12 / RATE / COEFFICIENT
AREA = 0.0808 * 12 / 4.18 / 0.60
AREA = 0.3866 Ac
CFS = AREA * RATE * COEFFICIENT
CFS = 0.3866 * 5.21 * 0.60
CFS = 1.21

OUTFALL CFS OF STORM B − CAPTURED CFS = BYPASS TO BASIN #5
33.89 − 1.21 = 32.68 CFS BYPASS

DESILTING BASIN #5 (PERMANENT)

CAPTURED AcFt OF BASIN = CAPTURED CFS OF BASIN
AREA = AcFt * 12 / RATE / COEFFICIENT
AREA = 0.0026 * 12 / 4.18 / 0.60
AREA = 0.0124 Ac
CFS = AREA * RATE * COEFFICIENT
CFS = 0.0124 * 5.21 * 0.60
CFS = 0.039

BYPASS CFS OF BASIN 4 − CAPTURED CFS = BYPASS TO BASIN #7
32.68 − 0.039 = 32.64 CFS BYPASS

DESILTING BASIN #7 (PERMANENT)

ARC = AREA * RATE * COEFFICIENT
WS#1 = 2.630 * 4.18 * 0.69
ARC = 7.585
$\frac{ARC}{12} = VOL_{TOP} - \frac{7.585}{12} = 0.632$ AcFt
CAPTURED AcFt OF BASIN = CAPTURED CFS OF BASIN
AREA = AcFt * 12 / RATE / COEFFICIENT
AREA = 0.9390 * 12 / 4.18 / 0.60
AREA = 4.4928 Ac
CFS = AREA * RATE * COEFFICIENT
CFS = 4.4928 * 5.21 * 0.60
CFS = 14.04

CFS OF WS#1 + BYPASS CFS OF BASIN 5 − CAPTURED CFS = BYPASS TO EX-OSI #1
9.45 + 32.64 − 14.04 = 28.03 CFS BYPASS

RETENTION POND A (TEMPORARY)

ARC = AREA * RATE * COEFFICIENT
OS#3 = 7.396 * 4.18 * 0.69
OS#4 = 3.529 * 4.18 * 0.69
ARC = 31.510
$\frac{ARC}{12} = VOL_{TOP} - \frac{31.510}{12} = 2.626$ AcFt

DESILTING BASIN #1 (TEMPORARY)

ARC = AREA * RATE * COEFFICIENT
DA#2 = 2.020 * 4.18 * 0.60
ARC = 5.066
$\frac{ARC}{12} = VOL_{TOP} - \frac{5.066}{12} = 0.422$ AcFt
AcFt BYPASS TO RETENTION POND A
$VOL_{REQUIRED} - VOL_{BYPASS} = VOL_{TRAP}$
0.422−0.0143=0.4079 AcFt
AcFt TO CFS BYPASS
AREA = AcFt * 12 / RATE / COEFFICIENT
AREA = 0.4079 * 12 / 4.18 / 0.60
AREA = 1.9516 Ac
CFS = AREA * RATE * COEFFICIENT
CFS = 1.9516 * 5.21 * 0.60
CFS = 6.10

DESILTING BASIN #6 (TEMPORARY)

ARC = AREA * RATE * COEFFICIENT
DA#1 = 4.354 * 4.18 * 0.60
ARC = 10.920
$\frac{ARC}{12} = VOL_{TOP} - \frac{10.920}{12} = 0.910$ AcFt
AcFt BYPASS TO RETENTION POND A
$VOL_{REQUIRED} - VOL_{BYPASS} = VOL_{TRAP}$
0.910−0.0298=0.8802 AcFt
AcFt TO CFS BYPASS
AREA = AcFt * 12 / RATE / COEFFICIENT
AREA = 0.8802 * 12 / 4.18 / 0.60
AREA = 4.2114 Ac
CFS = AREA * RATE * COEFFICIENT
CFS = 4.2114 * 5.21 * 0.60
CFS = 13.16

OS#3 + OS#4 + BASIN #1 BYPASS + BASIN #6 BYPASS = PONDING AREA A AcFt
2.515 + 0.408 + 0.880 = 3.803 AcFt

ALL PONDS AND BASINS NOT BEING DEDICATED SHALL BE PRIVATELY MAINTAINED BY THE DEVELOPER

CIMARRON CANYON UNIT TWO

COMPUTATIONS BASED ON RATIONAL FORMULA Q = CIA

RUNOFF VOLUME = [AREA (ACRES) X RAINFALL/FREQUENCY (IN.) X C] / 12 = AC-FT. FOR 24 HOUR DURATION

RUNOFF RATE= [AREA (ACRES) X RAINFALL/FREQUENCY (IN.) X C]

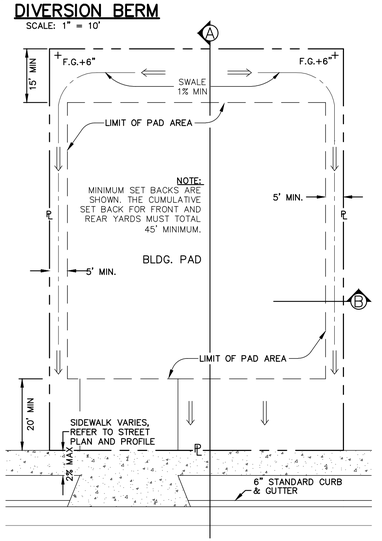
DRAINAGE AREA NO.	AREA (ACRES)	TIME OF CONCENTRATION (MINUTES)	RUNOFF COEFICIENT C	INTENSITY (I)	DISCHARGE (Q) C.F.S.
DA #1	4.354	10	0.60	5.21	13.61
DA #2	2.020	10	0.60	5.21	6.31
DA #3	3.751	10	0.60	5.21	11.73
DA #4	5.852	10	0.60	5.21	18.29
DA #5	3.601	10	0.60	5.21	11.26
DA #6	10.335	10	0.60	5.21	32.31
OS #1	0.514	10	0.69	5.21	1.85
OS #2	0.326	10	0.69	5.21	1.17
OS #3	7.396	10	0.69	5.21	26.59
OS #4	3.529	10	0.69	5.21	12.69
WS #1	2.630	10	0.69	5.21	9.45
WS #2	29.571	10	0.69	5.21	106.31
WS #3	3.502	10	0.69	5.21	12.59
TOTAL DISCHARGE OFFSITE = DA #1, #2, #3, #4, #5, #6, OS #1, #2					96.53

THE USE OF C=0.69 IS BASED ON SOIL CONDITIONS, VEGETATIVE LAND COVER, AND SLOPE OF THE TERRAIN (< 10%). THE SOIL IS IN THE CLASS D HYDROLOGIC SOIL CLASSIFICATION THAT EXHIBITS A LOWER PERMEABILITY AND THEREFORE A HIGH RUNOFF RESPONSE CONSISTENT WITH "PASSIVE OPEN SPACE" OF MOUNTAIN PRESERVES AND WASHES. SEE TABLE 4−5 OF THE JUNE 2008 DRAINAGE DESIGN MANUAL.

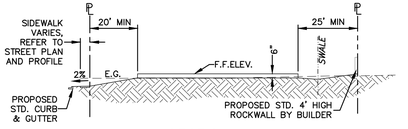
THE USE OF C=0.60 IS BASED ON SOIL CONDITIONS, VEGETATIVE LAND COVER, AND SLOPE OF THE TERRAIN. THE USE OF THIS VALUE IS BASED ON A PROPOSED LAND USE OF "SINGLE FAMILY RESIDENTIAL". SEE TABLE 4−5 OF THE JUNE 2008 DRAINAGE DESIGN MANUAL.

FOR INFORMATION REGARDING SOILS, REFER TO THE PRELIMINARY SOILS EVALUATION REPORT FOR CIMARRON CANYON UNIT ONE SUBDIVISION (PROJECT No. SPG1178 DATED OCT 3, 2011; AND THE STREET PAVEMENT DESIGN (PROJECT No. SPG11043 DATED APR 4, 2011) PREPARED BY SPEESOIL, INC.

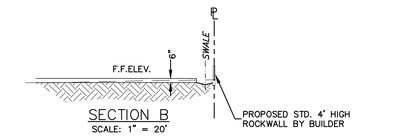
NOTE: THIS AREA LIES WITHIN FLOOD HAZARD ZONE AND C, AS DESIGNATED BY THE FLOOD INSURANCE RATE MAP (F.I.R.M.), CITY OF EL PASO PANEL NUMBER 480214 0016 C DATED FEBRUARY 05, 1986, AND AMENDED PER A LETTER OF MAP REVISION, EFFECTIVE DATE AUGUST 04, 2011; AND LIES WITHIN FLOOD HAZARD ZONE C AS DESIGNATED BY THE F.I.R.M. CITY OF EL PASO PANEL NUMBER 480214 0017 C DATED FEBRUARY 05, 1986.



NOTE: DRIVEWAY SLOPES MUST BE 10% MAX. FROM GUTTER FOR FIRST 12' AND 14% MAX. THEREAFTER.



SECTION A
SCALE: 1" = 20'



SECTION B
SCALE: 1" = 20'

ALL FINISHED GRADING OF LOTS SHALL BE PERFORMED BY BUILDER. ANY ADDITIONAL REGRADING OF LOTS SHALL BE BY SEPARATE PERMIT

TYPICAL LOT DRAINAGE

SCALE: 1" = 20'

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dgallardo

GENERAL NOTES:

1. LOCATIONS OF ALL UTILITIES SHOWN ON THIS PLAN ARE APPROXIMATE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONTACT ALL UTILITY COMPANIES FOR THE EXACT LOCATION OF UNDERGROUND AND OVERHEAD UTILITIES INCLUDING UTILITIES NOT SHOWN ON PLANS. THE CONTRACTOR SHALL PROTECT ALL EXISTING UNDERGROUND AND OVERHEAD UTILITIES AND ANY UTILITIES NOT SHOWN ON THIS PLAN DURING CONSTRUCTION. THE CONTRACTOR WILL PERFORM ALL UTILITY INSTALLATION, REMOVAL AND RELOCATION'S AS PER LOCAL UTILITY CONSTRUCTION SPECIFICATIONS. ANY UTILITIES DAMAGED DURING CONSTRUCTION SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
2. CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL DIMENSIONS AND ELEVATIONS ON SITE AND SHALL CONTACT THE DESIGN ENGINEER AND REPORT ANY DISCREPANCIES, OMISSIONS AND/OR ERRORS ON PLANS PRIOR TO COMMENCING WORK.
3. ALL CONSTRUCTION TO BE COMPLETED IN ACCORDANCE WITH THE CITY OF EL PASO STANDARD SPECIFICATIONS AND DETAILS.
4. CONTRACTOR SHALL PERFORM ALL EARTHWORK REQUIREMENTS AS PER GEOTECHNICAL STUDY REPORT.
5. GRADING SHALL BE PERFORMED WITHOUT MAJOR ALTERATION OF WATERSHEDS AND DRAINAGE PATTERNS UNLESS APPROPRIATE AND ADEQUATE MEANS OF WATER RETAINAGE OR CONTROL ARE UTILIZED AND SHOWN OF THE GRADING PLAN.
6. NO ON-SITE PROCESSING OF MATERIAL FOR COMMERCIAL OR RETAIL SALES SHALL BE ALLOWED, ON-SITE PROCESSING OF MATERIALS TO BE USED FOR PREPARATION OR CONSTRUCTION IMPROVEMENTS WITHIN THE SITE COVERED BY THE GRADING PERMIT SHALL BE ALLOWED.
7. WORK SHALL BE CONDUCTED IN A MANNER THAT PRESERVES AND DOES NOT OBSTRUCT, IMPEDE, OR INTERFERE WITH THE FLOW OF STORM WATER IN NATURAL DRAINAGE WAYS, UNIMPROVED CHANNELS OR WATERCOURSES, OR IMPROVED DITCHES, CHANNELS, OR CANALS IN SUCH A MANNER AS TO CAUSE FLOODING WHERE IT WOULD NOT OTHERWISE OCCUR.
8. CONSTRUCTION EQUIPMENT SHALL BE KEPT OUT OF WATERCOURSES EXCEPT WHEN NECESSARY TO TO PERFORM WORK ON THE APPROVED PLANS. WHERE IN-CHANNEL WORK IS DESIGNATED ON THE APPROVED PLANS, PRECAUTIONS SHALL BE TAKEN TO STABILIZE THE WORK AREA DURING CONSTRUCTION TO MINIMIZE EROSION AS SHOWN ON THE PLANS. THE CHANNEL, INCLUDING THE BED AND THE BANKS, SHALL ALWAYS BE RE-STABILIZED IMMEDIATELY AFTER THE IN-CHANNEL WORK IS COMPLETED.
9. WHERE A DRAINAGE WAY WILL BE CROSSED BY CONSTRUCTION VEHICLES REGULARLY DURING CONSTRUCTION, A TEMPORARY CROSSING SHALL BE CONSTRUCTED AS REQUIRED IN THE APPROVED GRADING PLANS.
10. MATERIAL STOCKPILING SHALL BE LIMITED TO FOUR (4) FEET HIGH WHEN GRADING OPERATIONS ARE IDLE FOR MORE THAN SEVEN (7) CONSECUTIVE CALENDAR DAYS. STOCKPILING SHALL BE LIMITED TO TEN (10) FEET HIGH WHEN GRADING OPERATIONS ARE BEING CONDUCTED.
11. A TRAFFIC CONTROL PERMIT SHALL BE REQUIRED IF GRADING OPERATIONS WILL IMPACT TRAFFIC. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ACQUIRE SAID PERMIT IF NOT SUPPLIED BY THE DEVELOPER OR HIS DESIGNEE.
12. ANY USE OF VIBRATORY EQUIPMENT SHALL BE APPROVED IN WRITING BY THE CITY ENGINEER IN ADVANCE OF SUCH USE.
13. THE CITY ENGINEER MUST BE NOTIFIED NO LATER THAN 4:00 PM ONE DAY PRIOR TO ANY GRADING WORK. BACKFILL DENSITIES, INSPECTIONS AND/OR CONSTRUCTION OPERATIONS SUCH AS PLACEMENT OF CURB AND GUTTER, PAVEMENT, AND STORM SEWER STRUCTURES. ADDITIONAL ACTIVITY REQUIREMENTS/RESTRICTIONS MAY BE SPECIFIED BY THE DESIGN ENGINEER OF RECORD.
14. A BORROW OR WASTE PERMIT SHALL BE REQUIRED FOR ANY SITE THAT HAS AN UNBALANCED EARTHWORK OF GREATER THAN TEN PERCENT (10%). AN APPROVED HAUL ROUTE SHALL BE REQUIRED FOR MATERIALS ENTERING OR LEAVING THE SITE UTILIZING CITY RIGHTS-OF-WAY FOR TRANSPORT. A WASTE/BORROW PERMIT SHALL NOT BE REQUIRED FOR TRANSPORT OF MATERIALS TO AN ADJACENT SITE OWNED OR UNDER DEVELOPMENT BY THE SAME PROPERTY OWNER.
15. A COPY OF ALL CURRENT PERMITS REQUIRED FOR CONSTRUCTION SHALL BE MAINTAINED ON-SITE. THESE PERMITS MUST BE DISPLAYED IN A COMMON AND INCONSPICUOUS LOCATION ON-SITE.
16. NO GRADING OF ANY KIND WILL BE CONDUCTED ON LEGAL HOLIDAYS OR WEEKENDS (7:00 PM FRIDAY THROUGH 7:00 AM ON THE FOLLOWING MONDAY) UNLESS THE DEVELOPER OR HIS AUTHORIZED AGENT HAS NOTIFIED THE CITY'S ENGINEERING DEPARTMENT BY NOON THE DAY BEFORE THE HOLIDAY, OR BY NOON ON FRIDAY. GRADING SHALL NOT BE PERMITTED WITHIN THREE HUNDRED (300) FEET OF A RESIDENTIALLY ZONED AREA BEFORE 7:00 AM OR AFTER 7:00 PM ON WEEKENDS OR HOLIDAYS.
17. INSTALLATION OF A TRENCH SAFETY SYSTEM IS REQUIRED FOR ALL TRENCHES EXCEEDING A DEPTH OF FIVE FEET (5') AND MUST CONFORM TO THE CITY OF EL PASO DESIGN STANDARDS AS WELL AS OSHA REQUIREMENTS.
18. ALL ORGANIC MATERIAL SHALL BE CLEARED AND GRUBBED TO A DEPTH OF A MINIMUM OF SIX (6) INCHES AND RESERVED PER GRADING STABILIZATION PLAN. REFER TO SHEETS 49-51 FOR DETAILS.
19. SLOPES WHICH ARE TO RECEIVE FILL MUST BE CLEARED OF ALL VEGETATION. OVERSPILL ON NATURAL SLOPES CAUSED BY GRADING OPERATIONS SHALL NOT BE ALLOWED.
20. POSITIVE DRAINAGE SHALL BE PROVIDED BY CONTRACTOR DURING ALL PHASES OF CONSTRUCTION AND GRADING. ALL LOTS SHOULD DRAIN TOWARD STREET UNLESS OTHERWISE INDICATED ON THE GRADING PLAN.
21. THE DEVELOPER SHALL BE RESPONSIBLE FOR THE PREPARATION AND SUBMITTAL OF ALL PERMITTING NECESSARY FOR EARTHWORK OPERATIONS AND STORM WATER POLLUTION CONTROL.
22. THE DEVELOPER SHALL BE RESPONSIBLE FOR THE INSTALLATION OF ALL BOUNDARY PERIMETER WALLS AS WELL AS ROCK WALLS RETAINING FOUR (4) FEET OR MORE. ALL OTHER WALLS SHALL BE INSTALLED BY THE BUILDER. NOTE TO BUILDERS: RETAINING WALLS MUST BE PROVIDED WHENEVER THE GRADE DIFFERENTIAL BETWEEN LOT GRADES IS GREATER THAN TWO (2) FEET. WALLS MUST BE DESIGNED AND CERTIFIED BY A CIVIL ENGINEER (FOR APPROVAL) WHEN APPLYING FOR A BUILDING PERMIT.

- OVERSPILL ON NATURAL SLOPES CAUSED BY GRADING OPERATIONS SHALL NOT BE ALLOWED.
- DEVELOPER SHALL STABILIZE SLOPES, IF DISTURBED, TO MINIMIZE EROSION.
- ALL SLOPES SHALL BE 3' HORIZONTAL TO 1' VERTICAL MAXIMUM UNLESS NOTED OTHERWISE.
- NO CONCENTRATED RUNOFF OVER UNPROTECTED SLOPES SHALL BE ALLOWED.
- DEVELOPER SHALL COMPLY WITH SECTION 13.08.170 OF THE SUBDIVISION ORDINANCE; "EXCESSIVE CUTS ON STREETS MAY RESULT IN REPAVING THE ENTIRE STREET."
- REFER TO DRAINAGE PLAN, SHEET 11, FOR LOT DESIGN
- ALL ACCESSIBLE RAMPS WITHIN THE CITY RIGHT-OF-WAY SHALL BE INSTALLED BY THE DEVELOPER. SIDEWALKS SHALL BE INSTALLED BY BUILDER UNLESS NOTED OTHERWISE.
- 6' ROCK WALLS, RETAINING AS REQUIRED, SHALL BE INSTALLED ABUTTING ALL DRAINAGE RIGHTS-OF-WAY BY DEVELOPER.
- THE DEVELOPER SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF ALL OFF SITE IMPROVEMENTS.

18.44.220 — PERMIT CLOSEOUT PROCEDURE

AFTER THE PERMITTEE COMPLETES THE GRADING UNDER THE PERMIT, THE PERMIT SHALL BE CLOSED. AS A PART OF THE CLOSEOUT PROCEDURE, THE APPLICANT MUST SUBMIT THE FOLLOWING TO THE CITY:

A. A STATEMENT FROM THE ENGINEER OF RECORD STATING THAT STATES, "THE GRADING OPERATION HAS BEEN SUBSTANTIALLY COMPLETED AND GENERALLY CONFORMS TO THE APPROVED SET OF PLANS." THE PERMITTEE SHALL CALL THE PERMIT OFFICIAL TO ESTABLISH THE BEGINNING OF THE WARRANTY PERIOD AND TO NOTIFY THE PERMIT OFFICIAL THAT THE GSP HAS BEEN IMPLEMENTED.

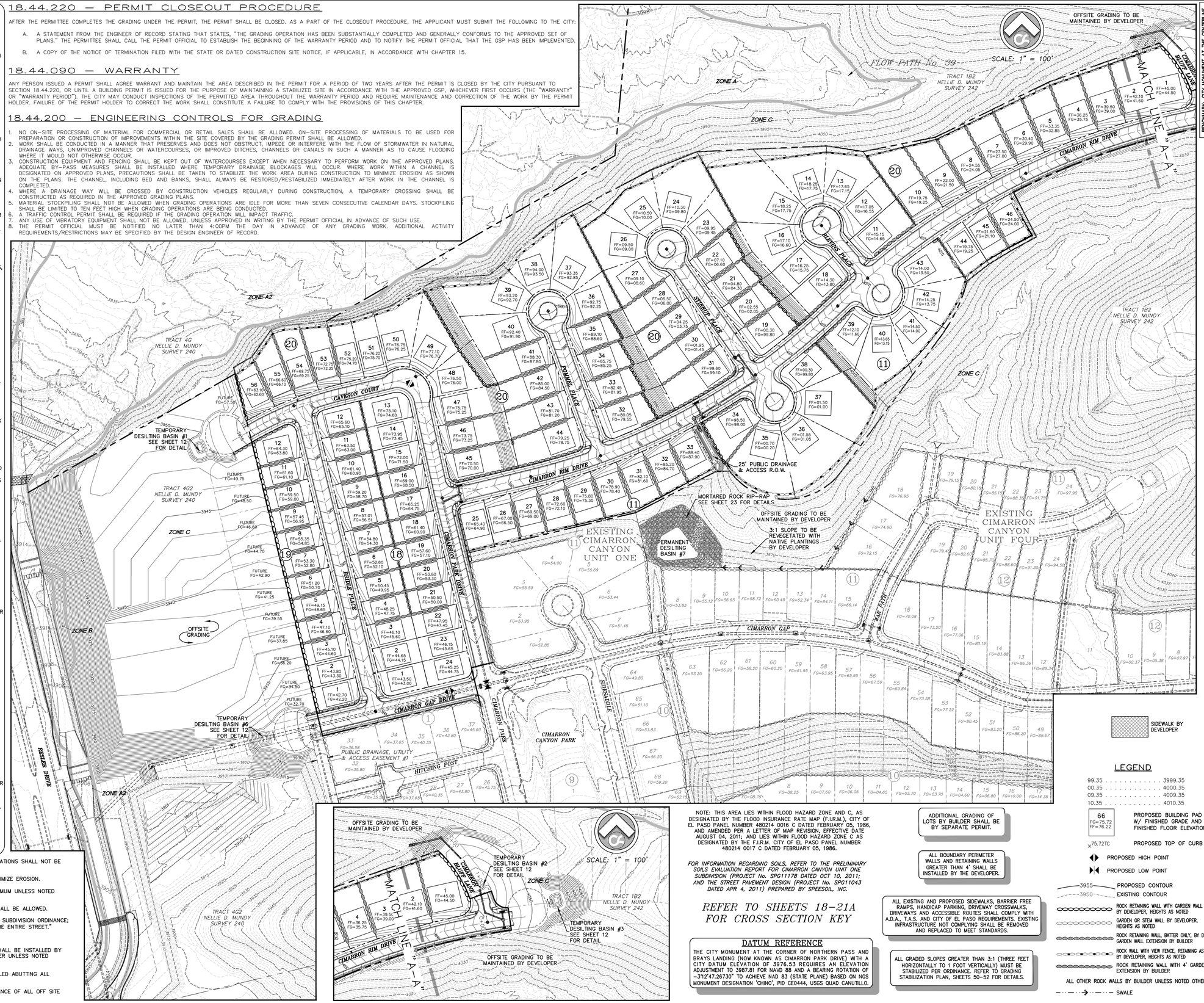
B. A COPY OF THE NOTICE OF TERMINATION FILED WITH THE STATE OR DATED CONSTRUCTION SITE NOTICE, IF APPLICABLE, IN ACCORDANCE WITH CHAPTER 15.

18.44.090 — WARRANTY

ANY PERSON ISSUED A PERMIT SHALL AGREE WARRANT AND MAINTAIN THE AREA DESCRIBED IN THE PERMIT FOR A PERIOD OF TWO YEARS AFTER THE PERMIT IS CLOSED BY THE CITY PURSUANT TO SECTION 18.44.220, OR UNTIL A BUILDING PERMIT IS ISSUED FOR THE PURPOSE OF MAINTAINING A STABILIZED SITE IN ACCORDANCE WITH THE APPROVED GSP, WHICHEVER FIRST OCCURS (THE "WARRANTY" OR "WARRANTY PERIOD"). THE CITY MAY CONDUCT INSPECTIONS OF THE PERMITTED AREA THROUGHOUT THE WARRANTY PERIOD AND REQUIRE MAINTENANCE AND CORRECTION OF THE WORK BY THE PERMIT HOLDER. FAILURE OF THE PERMIT HOLDER TO CORRECT THE WORK SHALL CONSTITUTE A FAILURE TO COMPLY WITH THE PROVISIONS OF THIS CHAPTER.

18.44.200 — ENGINEERING CONTROLS FOR GRADING

1. NO ON-SITE PROCESSING OF MATERIAL FOR COMMERCIAL OR RETAIL SALES SHALL BE ALLOWED. ON-SITE PROCESSING OF MATERIALS TO BE USED FOR PREPARATION OR CONSTRUCTION OF IMPROVEMENTS WITHIN THE SITE COVERED BY THE GRADING PERMIT SHALL BE ALLOWED.
2. WORK SHALL BE CONDUCTED IN A MANNER THAT PRESERVES AND DOES NOT OBSTRUCT, IMPEDE OR INTERFERE WITH THE FLOW OF STORMWATER IN NATURAL DRAINAGE WAYS, UNIMPROVED CHANNELS OR WATERCOURSES, OR IMPROVED DITCHES, CHANNELS OR CANALS IN SUCH A MANNER AS TO CAUSE FLOODING WHERE IT WOULD NOT OTHERWISE OCCUR.
3. CONSTRUCTION EQUIPMENT AND FENCING SHALL BE KEPT OUT OF WATERCOURSES EXCEPT WHEN NECESSARY TO PERFORM WORK ON THE APPROVED PLANS. ADEQUATE BY-PASS MEASURES SHALL BE INSTALLED WHERE TEMPORARY DRAINAGE BLOCKAGES WILL OCCUR. WHERE WORK WITHIN A CHANNEL IS DESIGNATED ON APPROVED PLANS, PRECAUTIONS SHALL BE TAKEN TO STABILIZE THE WORK AREA DURING CONSTRUCTION TO MINIMIZE EROSION AS SHOWN ON THE PLANS. THE CHANNEL, INCLUDING BED AND BANKS, SHALL ALWAYS BE RESTORED/RESTABILIZED IMMEDIATELY AFTER WORK IN THE CHANNEL IS COMPLETED.
4. WHERE A DRAINAGE WAY WILL BE CROSSED BY CONSTRUCTION VEHICLES REGULARLY DURING CONSTRUCTION, A TEMPORARY CROSSING SHALL BE CONSTRUCTED AS REQUIRED IN THE APPROVED GRADING PLANS.
5. MATERIAL STOCKPILING SHALL NOT BE ALLOWED WHEN GRADING OPERATIONS ARE IDLE FOR MORE THAN SEVEN CONSECUTIVE CALENDAR DAYS. STOCKPILING SHALL BE LIMITED TO TEN FEET HIGH WHEN GRADING OPERATIONS ARE BEING CONDUCTED.
6. A TRAFFIC CONTROL PERMIT SHALL BE REQUIRED IF THE GRADING OPERATION WILL IMPACT TRAFFIC.
7. ANY USE OF VIBRATORY EQUIPMENT SHALL NOT BE ALLOWED, UNLESS APPROVED IN WRITING BY THE PERMIT OFFICIAL IN ADVANCE OF SUCH USE.
8. THE PERMIT OFFICIAL MUST BE NOTIFIED NO LATER THAN 4:00PM THE DAY IN ADVANCE OF ANY GRADING WORK. ADDITIONAL ACTIVITY REQUIREMENTS/RESTRICTIONS MAY BE SPECIFIED BY THE DESIGN ENGINEER OF RECORD.



BENCHMARK: CITY MONUMENT AT THE CENTERLINE INTERSECTION OF NORTHERN PASS DRIVE AND CIMARRON PARK DRIVE.
ELEVATION = 3976.53 (EL PASO CITY DATUM)

SIDEWALK BY DEVELOPER

LEGEND

99.35 . . . . . 3999.35
00.35 . . . . . 4000.35
09.35 . . . . . 4009.35
10.35 . . . . . 4010.35

66 FG=75.72 FF=76.22 — PROPOSED BUILDING PAD W/ FINISHED GRADE AND FINISHED FLOOR ELEVATION
×75.72TC — PROPOSED TOP OF CURB
PROPOSED HIGH POINT
PROPOSED LOW POINT
3955 — PROPOSED CONTOUR
3950 — EXISTING CONTOUR
ROCK RETAINING WALL WITH GARDEN WALL EXTENSION BY DEVELOPER, HEIGHTS AS NOTED
GARDEN OR STEM WALL BY DEVELOPER, HEIGHTS AS NOTED
ROCK RETAINING WALL, BATTER ONLY, BY DEVELOPER, GARDEN WALL EXTENSION BY BUILDER
ROCK WALL WITH VIEW FENCE, RETAINING AS REQUIRED, BY DEVELOPER, HEIGHTS AS NOTED
ROCK RETAINING WALL WITH 4' GARDEN WALL EXTENSION BY BUILDER
ALL OTHER ROCK WALLS BY BUILDER UNLESS NOTED OTHERWISE
SWALE

NOTE: THIS AREA LIES WITHIN FLOOD HAZARD ZONE AND C, AS DESIGNATED BY THE FLOOD INSURANCE RATE MAP (F.I.R.M.), CITY OF EL PASO PANEL NUMBER 480214 0016 C DATED FEBRUARY 05, 1986, AND AMENDED PER A LETTER OF MAP REVISION, EFFECTIVE DATE AUGUST 04, 2011; AND LIES WITHIN FLOOD HAZARD ZONE C AS DESIGNATED BY THE F.I.R.M. CITY OF EL PASO PANEL NUMBER 480214 0017 C DATED FEBRUARY 05, 1986.

FOR INFORMATION REGARDING SOILS, REFER TO THE PRELIMINARY SOILS EVALUATION REPORT FOR CIMARRON CANYON UNIT ONE SUBDIVISION (PROJECT No. SPO11178 DATED OCT 10, 2011; AND THE STREET PAVEMENT DESIGN (PROJECT No. SPO11043 DATED APR 4, 2011) PREPARED BY SPEESOIL, INC.

REFER TO SHEETS 18-21A FOR CROSS SECTION KEY

DATUM REFERENCE

THE CITY MONUMENT AT THE CORNER OF NORTHERN PASS AND BRAYS LANDING (NOW KNOWN AS CIMARRON PARK DRIVE) WITH A CITY DATUM ELEVATION OF 3976.53 REQUIRES AN ELEVATION ADJUSTMENT TO 3987.81 FOR NAVD 88 AND A BEARING ROTATION OF -3°12'47.26730" TO ACHIEVE NAD 83 (STATE PLANE) BASED ON NGS MONUMENT DESIGNATION 'CHINO', PID CE0444, USGS QUAD CANUTILLO.

ADDITIONAL GRADING OF LOTS BY BUILDER SHALL BE BY SEPARATE PERMIT.

ALL BOUNDARY PERIMETER WALLS AND RETAINING WALLS GREATER THAN 4' SHALL BE INSTALLED BY THE DEVELOPER.

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ALL GRADED SLOPES GREATER THAN 3:1 (THREE FEET HORIZONTALLY TO 1 FOOT VERTICALLY) MUST BE STABILIZED PER ORDINANCE. REFER TO GRADING STABILIZATION PLAN, SHEETS 50-52 FOR DETAILS.

NO.	DATE	DESCRIPTION	BY
3	03/15/2021	3rd City Submittal	AHO
2	01/22/2021	2nd City Submittal	AHO
1	11/25/2020	1st City Submittal	AHO

WARNING! BEFORE YOU DIG SPA PROJECT AREA CONTRACTING STRUCTURES, ELEVATIONS, UNDERGROUND IMPROVEMENTS

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POS EMERGENCY HOTLINE (WATER & SEWER)	562-8411/562-2003
SPECTRUM	1-800-275-7903
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SPECTRUM	775-7414
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KINDER-MORGAN EPNG PIPELINES	1-800-238-3764
EL PASO STREETS AND MAINTENANCE	212-0151
EL PASO TRAFFIC SIGNAL STREETS AND MAINTENANCE	(tmesparza@elpasotexas.gov)

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05/15/2021

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El Paso, Texas 79912
tel [915] 877.4155
fax [915] 877.4334
www.csaengineers.com

SUBDIVISION
CIMARRON CANYON UNIT TWO SUBDIVISION

SHEET TITLE
GRADING PLAN

GOB (DESIGN BY)	1908 (JOB NO.)
GOB-DG-SM (DRAWN BY)	12/20/2019 (DATE OF SUBMISSION)
AHO (CHECKED BY)	AS NOTED (SCALE)

SHEET NO. 13
SHEET SEQUENCE 13 OF 82

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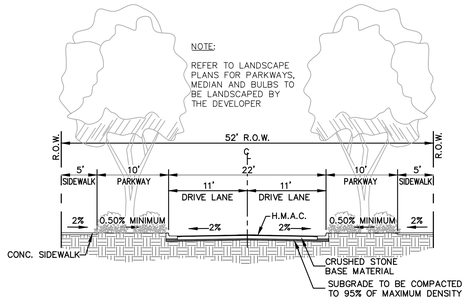
G:\CSA 1908 Cimarron Canyon Two\1908 as Submitted\1908 Sht 13-14 (Grading & Typ Section).dwg



32' LOCAL RESIDENTIAL 3 (MODIFIED)

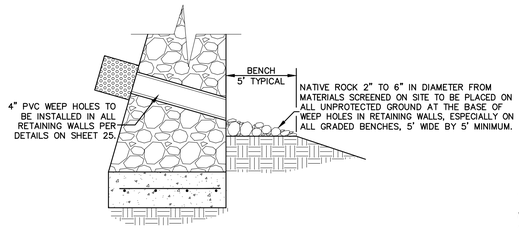
CHOKERS ON SOUTH SIDE OF BRIDLE PLACE AT CIMARRON GAP DRIVE, POMMEL PLACE AT CIMARRON RIM DRIVE, STIRRUP PLACE AT CIMARRON RIM DRIVE, BELVINS PLACE AT CIMARRON RIM DRIVE AND CIMARRON BLUFF LANE AT CIMARRON RIM DRIVE.

DESIGN ALTERNATIVES APPROVED BY CITY PLAN COMMISSION FOR TRAFFIC CALMING ALONG CIMARRON GAP DRIVE

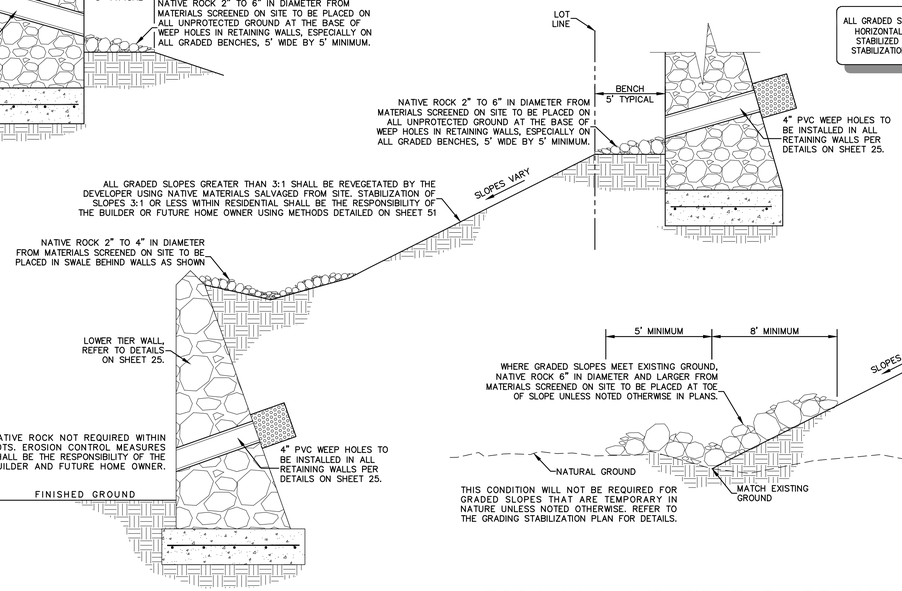
SCALE: 1" = 10'

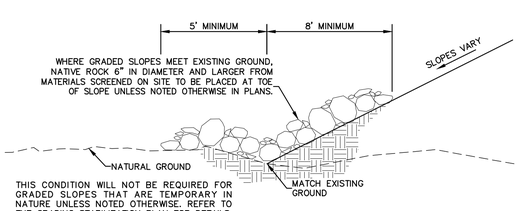
REFER TO PRELIMINARY PLAT SHEET 5 FOR TYPICAL CROSS STREET SECTIONS

ALL EXISTING AND PROPOSED SIDEWALKS, BARRIER FREE RAMPS, HANDICAP PARKING, DRIVEWAY CROSSWALKS, DRIVEWAYS AND ACCESSIBLE ROUTES SHALL COMPLY WITH A.D.A., T.A.S. AND CITY OF EL PASO REQUIREMENTS. EXISTING INFRASTRUCTURE NOT COMPLYING SHALL BE REMOVED AND REPLACED TO MEET STANDARDS.



ALL GRADED SLOPES GREATER THAN 3:1 (THREE FEET HORIZONTALLY TO 1 FOOT VERTICALLY) MUST BE STABILIZED PER ORDINANCE. REFER TO GRADING STABILIZATION PLAN, SHEETS 50-52 FOR DETAILS.



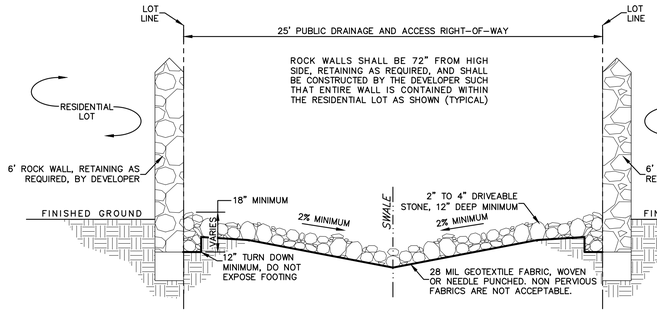


THIS CONDITION WILL NOT BE REQUIRED FOR GRADED SLOPES THAT ARE TEMPORARY IN NATURE UNLESS NOTED OTHERWISE. REFER TO THE GRADING STABILIZATION PLAN FOR DETAILS.

ROCK WALL AND RIP-RAP APPLICATIONS

NOT TO SCALE

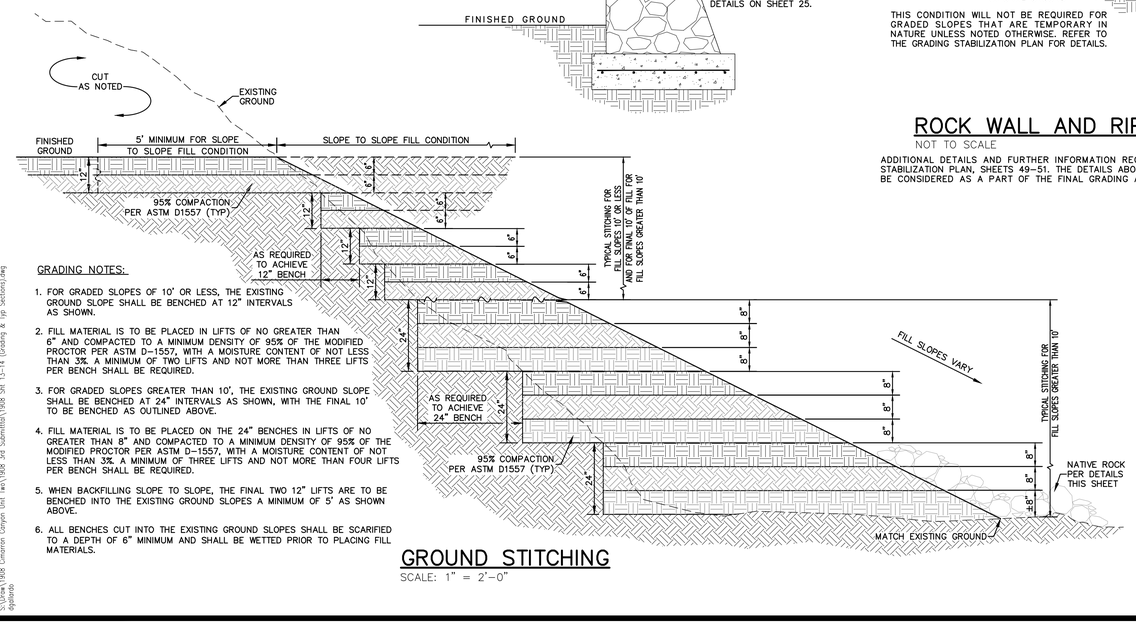
ADDITIONAL DETAILS AND FURTHER INFORMATION REGARDING GRADING CAN BE FOUND ON THE GRADING STABILIZATION PLAN, SHEETS 49-51. THE DETAILS ABOVE ARE ALSO SHOWN ON THOSE SHEETS AND SHOULD BE CONSIDERED AS A PART OF THE FINAL GRADING AND OF THE OVERALL GRADING STABILIZATION PLAN.



DRIVEABLE SURFACE

NOT TO SCALE

REFER TO SHEET 25 FOR ADDITIONAL ROCK WALL DETAILS.

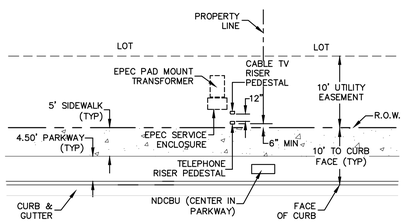


GRADING NOTES:

1. FOR GRADED SLOPES OF 10' OR LESS, THE EXISTING GROUND SLOPE SHALL BE BENCHED AT 12" INTERVALS AS SHOWN.
2. FILL MATERIAL IS TO BE PLACED IN LIFTS OF NO GREATER THAN 6" AND COMPACTED TO A MINIMUM DENSITY OF 95% OF THE MODIFIED PROCTOR PER ASTM D-1557, WITH A MOISTURE CONTENT OF NOT LESS THAN 3% A MINIMUM OF TWO LIFTS AND NOT MORE THAN THREE LIFTS PER BENCH SHALL BE REQUIRED.
3. FOR GRADED SLOPES GREATER THAN 10', THE EXISTING GROUND SLOPE SHALL BE BENCHED AT 24" INTERVALS AS SHOWN, WITH THE FINAL 10' TO BE BENCHED AS OUTLINED ABOVE.
4. FILL MATERIAL IS TO BE PLACED ON THE 24" BENCHES IN LIFTS OF NO GREATER THAN 8" AND COMPACTED TO A MINIMUM DENSITY OF 95% OF THE MODIFIED PROCTOR PER ASTM D-1557, WITH A MOISTURE CONTENT OF NOT LESS THAN 3%. A MINIMUM OF THREE LIFTS AND NOT MORE THAN FOUR LIFTS PER BENCH SHALL BE REQUIRED.
5. WHEN BACKFILLING SLOPE TO SLOPE, THE FINAL TWO 12" LIFTS ARE TO BE BENCHED INTO THE EXISTING GROUND SLOPES A MINIMUM OF 5' AS SHOWN ABOVE.
6. ALL BENCHES CUT INTO THE EXISTING GROUND SLOPES SHALL BE SCARIFIED TO A DEPTH OF 6" MINIMUM AND SHALL BE WETTED PRIOR TO PLACING FILL MATERIALS.

GROUND STITCHING

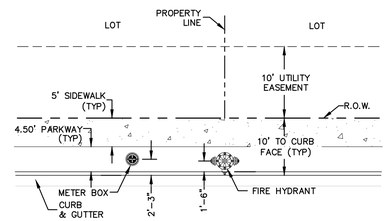
SCALE: 1" = 2'-0"



TRANSFORMERS, JUNCTION BOXES, UTILITY PEDESTALS, ETC. SHALL NOT BE LOCATED IN UTILITY EASEMENTS LOCATED WITHIN PROPOSED CITY OF EL PASO PARKS. CONTRACTOR SHALL COORDINATE WITH PROPER ENTITY PRIOR TO INSTALLATION OF UTILITIES FOR EXACT OFFSETS AND LOCATIONS.

TYPICAL LOCATION OF TRANSFORMERS, POSTAL SERVICE NDCBU's TELEPHONE & CABLE JUNCTION BOXES

1" = 10'-0"



TYPICAL LOCATION OF METER BOX AND FIRE HYDRANT

1" = 10'-0"

METER BOX NOTES:

1. SET TOP OF METER BOX SLIGHTLY HIGHER THAN SURROUNDING GROUND OR AT CURB LEVEL.
2. ANGLE VALVE SHALL BE IN LINE WITH THE INLET/OUTLET PORTS OF THE METER BOX.
3. METER BOXES SHALL NOT BE INSTALLED UNDER SIDEWALKS, DRIVEWAYS, OR PROPOSED ABOVE GROUND STRUCTURES.
4. WHERE NO CURB EXISTS, INSTALL BOXES IN ACCESSIBLE LOCATIONS BEYOND LIMITS OF STREET SURFACING, WALKS AND DRIVEWAYS.

FIRE HYDRANT NOTES:

1. FIRE HYDRANT SHALL BE LOCATED AT THE PROPERTY LINE COMMON TO ADJOINING LOTS.
2. A MINIMUM CLEARANCE OF 3 FT SHALL BE PROVIDED BETWEEN A FIRE HYDRANT AND A PERMANENT OBSTRUCTION (UTILITY POLE, LIGHT STANDARD, TRAFFIC SIGNAL, WHEEL CHAIR RAMP, FENCE PROTECTIVE POSTS, etc.)

BENCHMARK: CITY MONUMENT AT THE CENTERLINE INTERSECTION OF CIMARRON GAP DRIVE AND CIMARRON PARK DRIVE. ELEVATION = 3978.53 (EL PASO CITY DATUM)

NO.	DATE	DESCRIPTION	BY
3	03/15/2021	3rd City Submittal	AHO
2	01/22/2021	2nd City Submittal	AHO
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PUBLIC SERVICE BOARD (WATER & SEWER)	1-800-DIG-TESS
AFTER HOURS EMERGENCY (EPW)	594-5775
SPECTRUM	775-7414
TEXAS EXCAVATION SAFETY SYSTEM	1-800-344-8377
KINDER-MORGAN EPNG PIPELINES	1-800-238-3764
EL PASO STREETS AND MAINTENANCE	212-0151
EL PASO TRAFFIC SIGNAL STREETS AND MAINTENANCE	transportation@elpasotexas.gov

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03/15/21

STATE OF TEXAS
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www.csaengineers.com

SUBDIVISION
CIMARRON CANYON UNIT TWO SUBDIVISION

SHEET TITLE
TYPICAL CROSS SECTIONS

GDB	1908
DESIGN BY	JOB NO.
GDB-DG-SM	12/20/2019
DRAWN BY	DATE OF CONSTRUCTION
AHO	AS NOTED
CHECKED BY	SCALE

SHEET NO. **14**

SHEET SEQUENCE 14 OF 82

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S:\Civil\1908 Cimarron Canyon Unit Two\1908 3rd Submittal\1908 3rd Submittal Plans\Sheets\Grading & Typ Sections.dwg
aguilardo

SCALE: 1" = 50'

ZONE A2

ZONE B

ZONE C

TRACT 4G
NELLIE D. MUNDY
SURVEY 240

TRACT 4G2
NELLIE D. MUNDY
SURVEY 240

RESLER DRIVE

CAVESON COURT

BRIDLE PLACE

CIMARRON RIM DRIVE

CIMARRON PARK DRIVE

CIMARRON GAP DRIVE

MATCH LINE SEE SHEET 17

EXISTING CIMARRON CANYON UNIT ONE

LOWER TIER WALL

TEMPORARY DESILTING BASIN #1: SEE SHEET 12 FOR DETAIL

TEMPORARY DESILTING BASIN #2: SEE SHEET 12 FOR DETAIL

EXISTING PUBLIC DRAINAGE, UTILITY & ACCESS EASEMENT #1

OFFSITE GRADING

3:1 SLOPE

5' SIDEWALK BY DEVELOPER

REFER TO GRADING STABILIZATION PLAN FOR RIP-RAP AND OTHER EROSION CONTROL DETAILS

REFER TO SHEETS 18-21A FOR CROSS SECTION KEY

LEGEND

99.35 . . . . . 3999.35	
00.35 . . . . . 4000.35	
09.35 . . . . . 4009.35	
10.35 . . . . . 4010.35	
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	ROCK WALL WITH VIEW FENCE, RETAINING AS REQUIRED, BY DEVELOPER, HEIGHTS AS NOTED
	ROCK RETAINING WALL WITH 4' GARDEN WALL EXTENSION BY BUILDER

ALL OTHER ROCK WALLS BY BUILDER UNLESS NOTED OTHERWISE

- OVERSPILL ON NATURAL SLOPES CAUSED BY GRADING OPERATIONS SHALL NOT BE ALLOWED.
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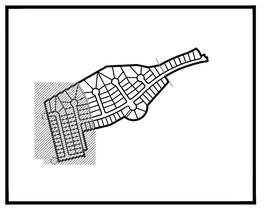
- ALL SLOPES SHALL BE 3' HORIZONTAL TO 1' VERTICAL MAXIMUM UNLESS NOTED OTHERWISE.
- NO CONCENTRATED RUNOFF OVER UNPROTECTED SLOPES SHALL BE ALLOWED.
- DEVELOPER SHALL COMPLY WITH SECTION 13.08.170 OF THE SUBDIVISION ORDINANCE; "EXCESSIVE CUTS ON STREETS MAY RESULT IN REPAVING THE ENTIRE STREET."
- REFER TO DRAINAGE PLAN, SHEETS 11, FOR LOT DESIGN.
- ALL ACCESSIBLE RAMPS WITHIN THE CITY RIGHT-OF-WAY SHALL BE INSTALLED BY THE DEVELOPER. SIDEWALKS SHALL BE INSTALLED BY BUILDER UNLESS NOTED OTHERWISE.
- 6' ROCK WALLS, RETAINING AS REQUIRED, SHALL BE INSTALLED ABUTTING ALL DRAINAGE RIGHTS-OF-WAY BY DEVELOPER.
- THE DEVELOPER SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF ALL OFF SITE IMPROVEMENTS.



KEY MAP

FOR INFORMATION REGARDING SOILS, REFER TO THE PRELIMINARY SOILS EVALUATION REPORT FOR CIMARRON CANYON UNIT ONE SUBDIVISION (PROJECT No. SPG11178 DATED OCT 10, 2011; AND THE STREET PAVEMENT DESIGN (PROJECT No. SPG11043 DATED APR 4, 2011) PREPARED BY SPEESOIL, INC.

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SIDEWALK BY DEVELOPER

BENCHMARK: CITY MONUMENT AT THE CENTERLINE INTERSECTION OF MESA HILLS DRIVE AND CIMARRON PARK DRIVE.
ELEVATION = 3978.53 (EL PASO CITY DATUM)

NO.	DATE	DESCRIPTION	BY
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05/15/21

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SUBDIVISION
CIMARRON CANYON UNIT TWO SUBDIVISION

SHEET TITLE
DETAILED GRADING PLAN

GOB DESIGN BY	1908 JOB NO.
GOB-GO-SM DRAWN BY	12/20/2019 DATE OF SUBMISSION
AHO CHECKED BY	AS NOTED SCALE

SHEET NO. 15
SHEET SEQUENCE 15 OF 82

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dgibbons

BENCHMARK: CITY MONUMENT AT THE CENTERLINE INTERSECTION OF MESA HILLS DRIVE AND CIMARRON PARK DRIVE.
ELEVATION = 3978.53 (EL PASO CITY DATUM)

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SIDEWALK BY DEVELOPER

KEY MAP

FOR INFORMATION REGARDING SOILS, REFER TO THE PRELIMINARY SOILS EVALUATION REPORT FOR CIMARRON CANYON UNIT ONE SUBDIVISION (PROJECT No. SPG11178 DATED OCT 10, 2011; AND THE STREET PAVEMENT DESIGN (PROJECT No. SPG11043 DATED APR 4, 2011) PREPARED BY SPEESOIL, INC.

REFER TO GRADING STABILIZATION PLAN FOR RIP-RAP AND OTHER EROSION CONTROL DETAILS

REFER TO SHEETS 18-21A FOR CROSS SECTION KEY

LEGEND

99.35 . . . . . 3999.35	
00.35 . . . . . 4000.35	
09.35 . . . . . 4009.35	
10.35 . . . . . 4010.35	
	3955 PROPOSED CONTOUR
	3950 EXISTING CONTOUR
PROPOSED BUILDING PAD W/ FINISHED GRADE AND FINISHED FLOOR ELEVATION	SWALE
PROPOSED TOP OF CURB	ROCK RETAINING WALL WITH GARDEN WALL EXTENSION BY DEVELOPER, HEIGHTS AS NOTED
PROPOSED HIGH POINT	GARDEN OR STEM WALL BY DEVELOPER, HEIGHTS AS NOTED
PROPOSED LOW POINT	ROCK RETAINING WALL, BATTER ONLY, BY DEVELOPER, GARDEN WALL EXTENSION BY BUILDER
	ROCK WALL WITH VIEW FENCE, RETAINING AS REQUIRED, BY DEVELOPER, HEIGHTS AS NOTED
	ROCK RETAINING WALL WITH 4' GARDEN WALL EXTENSION BY BUILDER

66 FG= 75.72 FF= 76.22

×75.72TC

ALL OTHER ROCK WALLS BY BUILDER UNLESS NOTED OTHERWISE

NO.	DATE	DESCRIPTION	BY
3	03/15/2021	3rd City Submittal	AHO
2	01/22/2021	2nd City Submittal	AHO
1	11/25/2020	1st City Submittal	AHO

BEFORE YOU DIG - CALL

EL PASO ELECTRIC COMPANY	543-5720
AT&T	1-800-660-6555
TEXAS GAS SERVICE	544-6300
TCG EMERGENCY HOTLINE	562-8411/562-2003
AFTER HOURS EMERGENCY (WATER & SEWER)	1-800-351-1555
SPECTRUM	594-5775
TEXAS DOT EXCAVATION SAFETY SYSTEM	775-7414
KINDER-MORGAN EPNG PIPELINES	1-800-733-2677
EL PASO STREETS AND MAINTENANCE	1-800-238-3764
EL PASO TRAFFIC SIGNAL STREETS AND MAINTENANCE	212-0151

WARNING! BEFORE YOU DIG IN PROJECT AREA CONTRACTOR SHALL LOCATE ALL UNDERGROUND IMPROVEMENTS

Texas811 Know what's below Call before you dig.

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03/15/2021

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El Paso, Texas 79912
tel [915] 877.4155
fax [915] 877.4334
www.csaengineers.com

SUBDIVISION
CIMARRON CANYON UNIT TWO SUBDIVISION

SHEET TITLE
DETAILED GRADING PLAN

GOB DESIGN BY	1908 JOB NO.
GOB-DG-SM DRAWN BY	12/20/2019 DATE OF COMMISSION
AHO CHECKED BY	AS NOTED SCALE

SHEET NO. 16
SHEET SEQUENCE 16 OF 82

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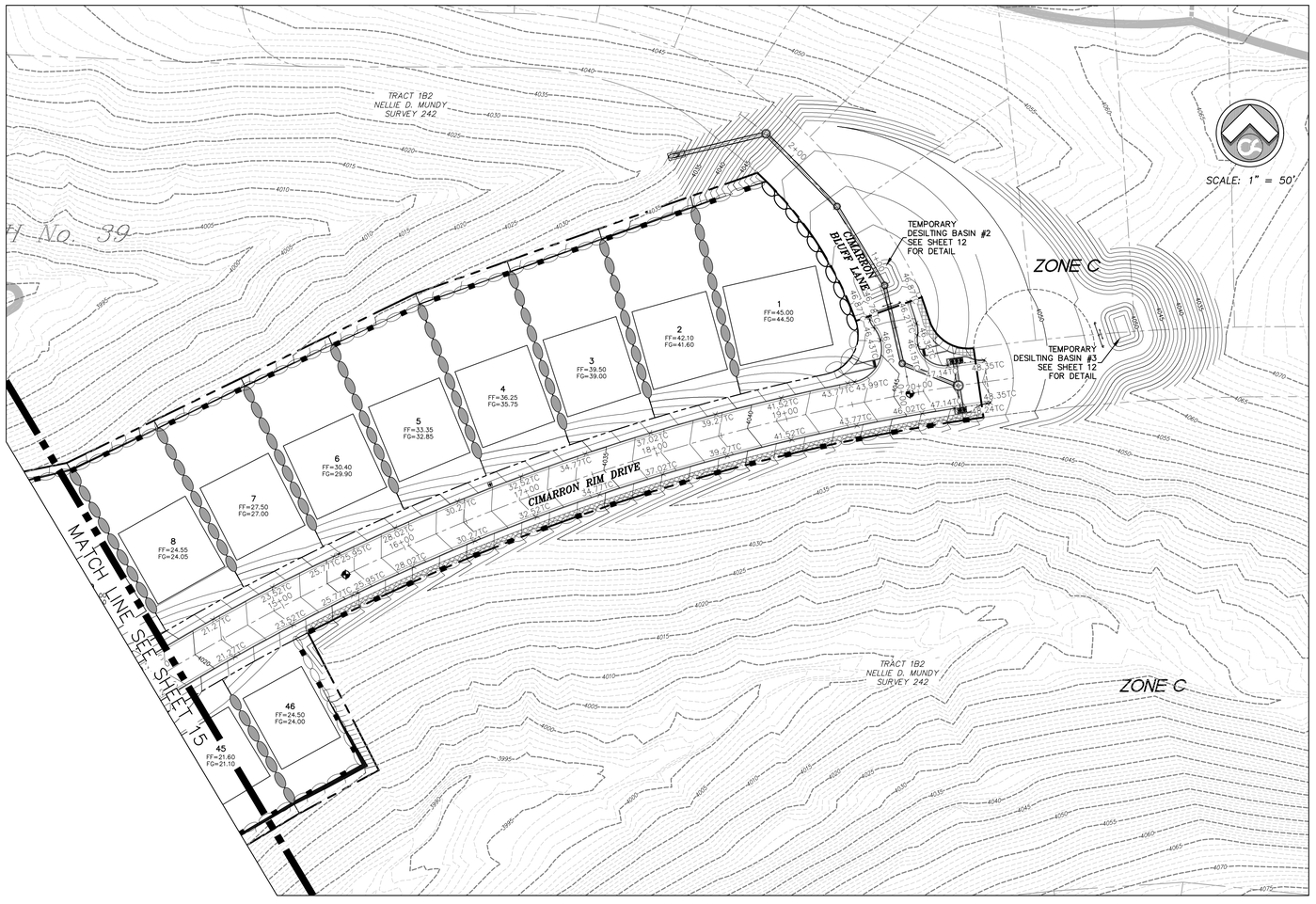
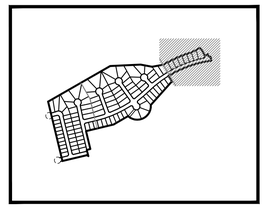
S:\Civil\1908 Cimarron Canyon Unit Two\1908 3rd Submittal\1908 Sht 15-17 (Detailed Grading).dwg
ajohnson



BENCHMARK: CITY MONUMENT AT THE CENTERLINE INTERSECTION OF ARROWHEAD PASS DRIVE AND CIMARRON PARK DRIVE.
ELEVATION = 3978.53 (EL PASO CITY DATUM)



KEY MAP

FOR INFORMATION REGARDING SOILS, REFER TO THE PRELIMINARY SOILS EVALUATION REPORT FOR CIMARRON CANYON UNIT ONE SUBDIVISION (PROJECT No. SPG11178 DATED OCT 10, 2011; AND THE STREET PAVEMENT DESIGN (PROJECT No. SPG11043 DATED APR 4, 2011) PREPARED BY SPEESOIL, INC.

ALL EXISTING AND PROPOSED SIDEWALKS, BARRIER FREE RAMPS, HANDICAP PARKING, DRIVEWAY CROSSWALKS, DRIVEWAYS AND ACCESSIBLE ROUTES SHALL COMPLY WITH A.D.A., T.A.S. AND CITY OF EL PASO REQUIREMENTS. EXISTING INFRASTRUCTURE NOT COMPLYING SHALL BE REMOVED AND REPLACED TO MEET STANDARDS.

ADDITIONAL GRADING OF LOTS BY BUILDER SHALL BE BY SEPARATE PERMIT.

ALL BOUNDARY PERIMETER WALLS AND RETAINING WALLS GREATER THAN 4' SHALL BE INSTALLED BY THE DEVELOPER.

SIDEWALK BY DEVELOPER

- OVERSPILL ON NATURAL SLOPES CAUSED BY GRADING OPERATIONS SHALL NOT BE ALLOWED.
- DEVELOPER SHALL STABILIZE SLOPES, IF DISTURBED, TO MINIMIZE EROSION.
- ALL SLOPES SHALL BE 3' HORIZONTAL TO 1' VERTICAL MAXIMUM UNLESS NOTED OTHERWISE.
- NO CONCENTRATED RUNOFF OVER UNPROTECTED SLOPES SHALL BE ALLOWED.
- DEVELOPER SHALL COMPLY WITH SECTION 13.08.170 OF THE SUBDIVISION ORDINANCE; "EXCESSIVE CUTS ON STREETS MAY RESULT IN REPAVING THE ENTIRE STREET."
- REFER TO DRAINAGE PLAN, SHEETS 11, FOR LOT DESIGN.
- ALL ACCESSIBLE RAMPS WITHIN THE CITY RIGHT-OF-WAY SHALL BE INSTALLED BY THE DEVELOPER. SIDEWALKS SHALL BE INSTALLED BY BUILDER UNLESS NOTED OTHERWISE.
- 6' ROCK WALLS, RETAINING AS REQUIRED, SHALL BE INSTALLED ABUTTING ALL DRAINAGE RIGHTS-OF-WAY BY DEVELOPER.
- THE DEVELOPER SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF ALL OFF SITE IMPROVEMENTS.

REFER TO GRADING STABILIZATION PLAN FOR RIP-RAP AND OTHER EROSION CONTROL DETAILS

REFER TO SHEETS 18-21A FOR CROSS SECTION KEY

99.35 . . . . . 3999.35
00.35 . . . . . 4000.35
09.35 . . . . . 4009.35
10.35 . . . . . 4010.35

66 FG= 75.72 FF= 76.22 — PROPOSED BUILDING PAD W/ FINISHED GRADE AND FINISHED FLOOR ELEVATION

×75.72TC — PROPOSED TOP OF CURB

PROPOSED HIGH POINT

PROPOSED LOW POINT

LEGEND

3955 — PROPOSED CONTOUR

3950 — EXISTING CONTOUR

SWALE

ROCK RETAINING WALL WITH GARDEN WALL EXTENSION BY DEVELOPER, HEIGHTS AS NOTED

GARDEN OR STEM WALL BY DEVELOPER, HEIGHTS AS NOTED

ROCK RETAINING WALL, BATTER ONLY, BY DEVELOPER, GARDEN WALL EXTENSION BY BUILDER

ROCK WALL WITH VIEW FENCE, RETAINING AS REQUIRED, BY DEVELOPER, HEIGHTS AS NOTED

ROCK RETAINING WALL WITH 4' GARDEN WALL EXTENSION BY BUILDER

ALL OTHER ROCK WALLS BY BUILDER UNLESS NOTED OTHERWISE

NO.	DATE	DESCRIPTION	BY
3	03/15/2021	3rd City Submittal	AHO
2	01/22/2021	2nd City Submittal	AHO
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AT&T	1-800-288-2355
TEXAS GAS SERVICE	544-6300
TGS EMERGENCY HOTLINE	562-8411/562-2603
PEBB ENTERPRISE (WATER & SEWER)	1-800-351-4755
AFTER HOURS EMERGENCY (EPW)	594-5775
SPECTRUM	775-7414
TEXAS EXCAVATION SAFETY SYSTEM	1-800-344-8377
KINDER-MORGAN EPNG PIPELINES	1-800-238-3764
EL PASO STREETS AND MAINTENANCE	212-0151
EL PASO TRAFFIC SIGNAL STREETS AND MAINTENANCE	tmesgun@elpasotexas.gov

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SUBDIVISION
CIMARRON CANYON UNIT TWO SUBDIVISION

SHEET TITLE
DETAILED GRADING PLAN

GOB — DESIGN BY	1908 — JOB NO.
GOB-DG-SM — DRAWN BY	12/20/2019 — DATE OF SUBMISSION
AHO — CHECKED BY	AS NOTED — SCALE

SHEET NO. 17
SHEET SEQUENCE 17 OF 82

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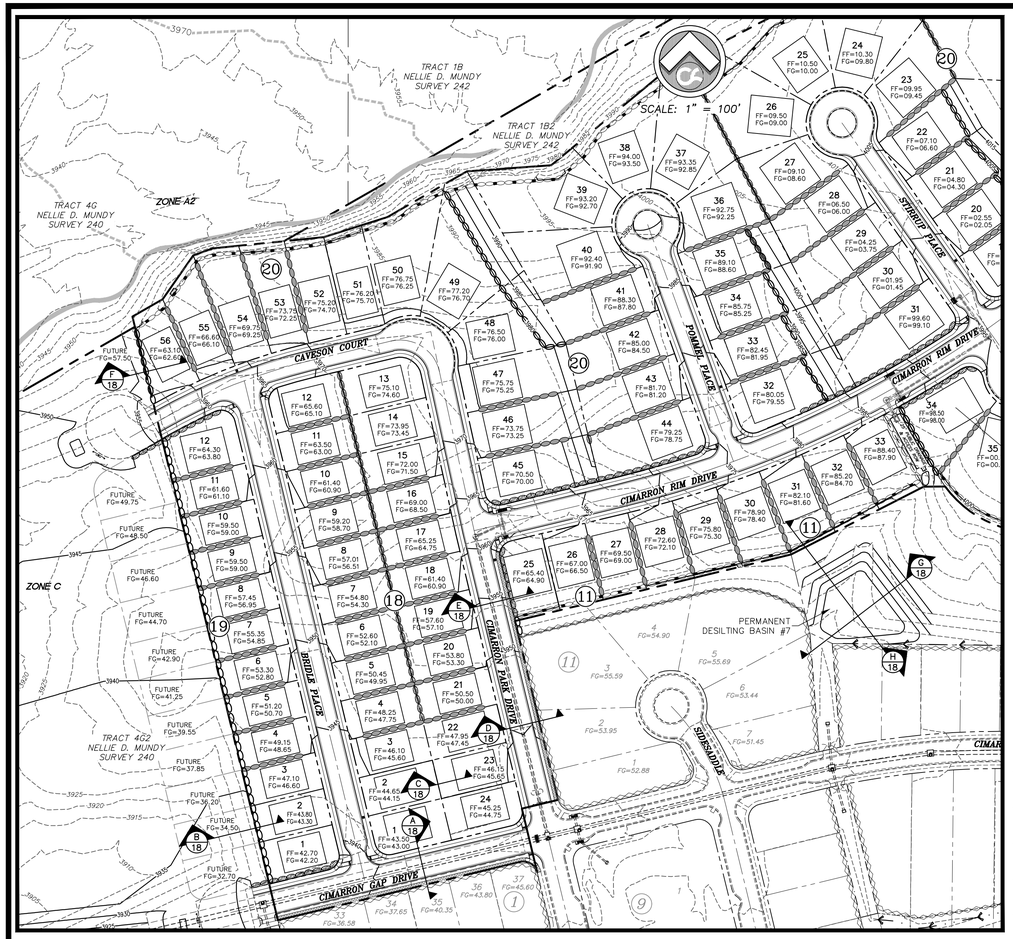
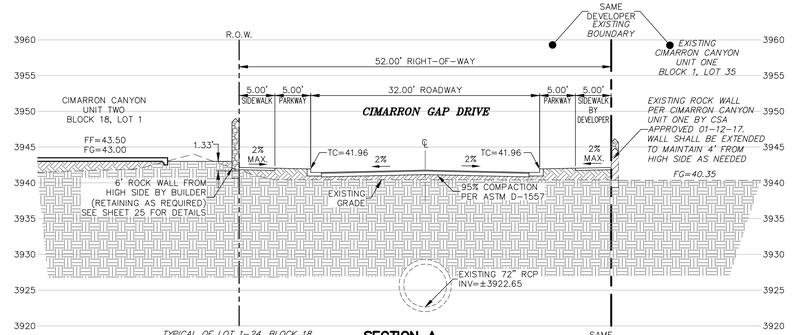
dgallardo





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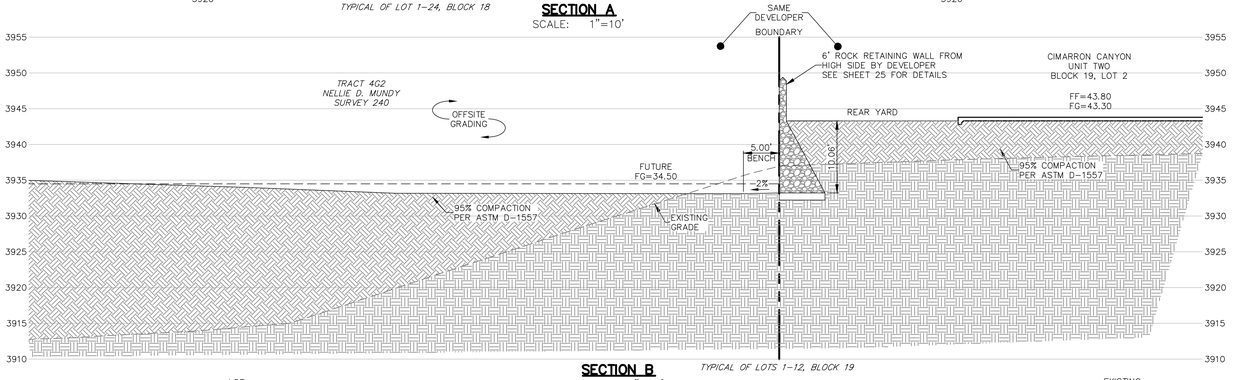

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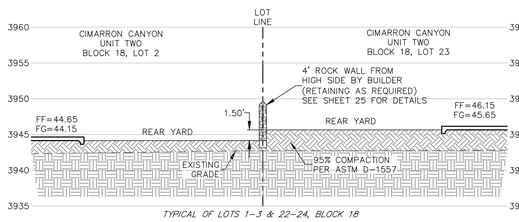

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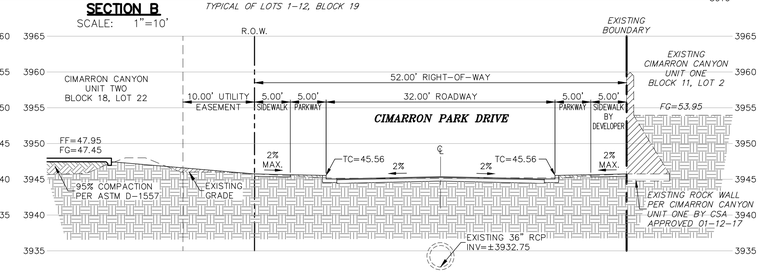

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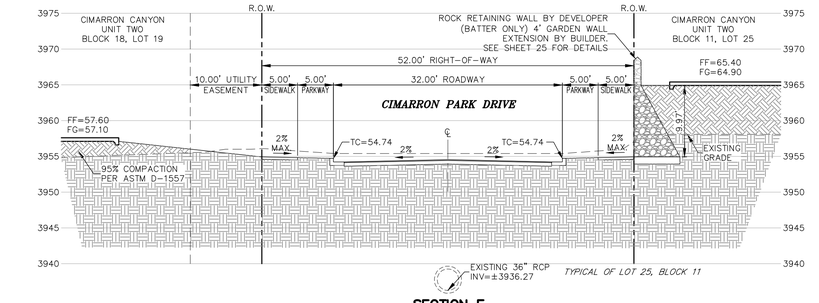

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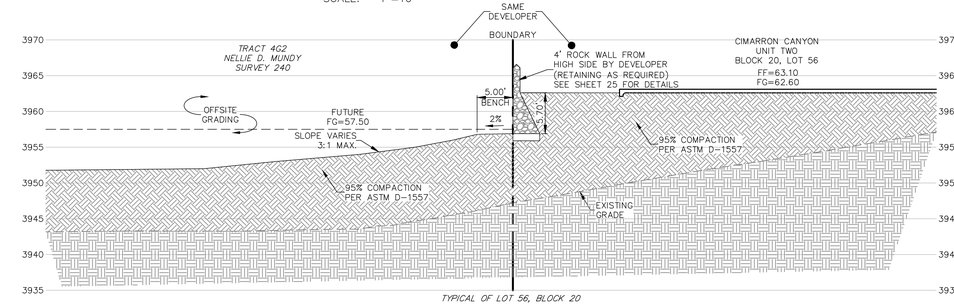

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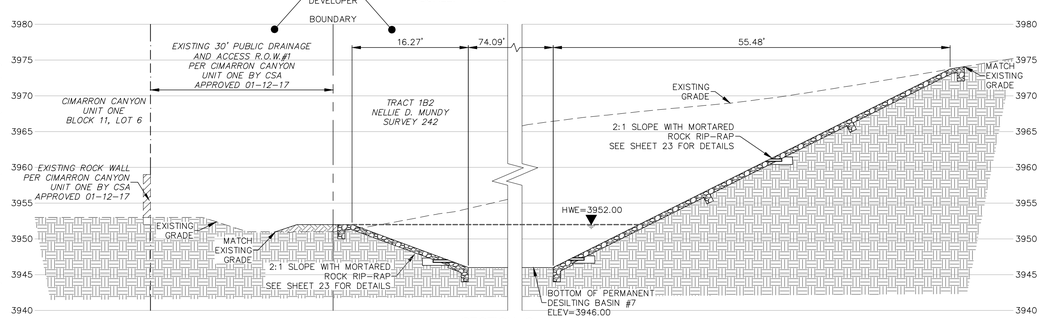

SECTION G
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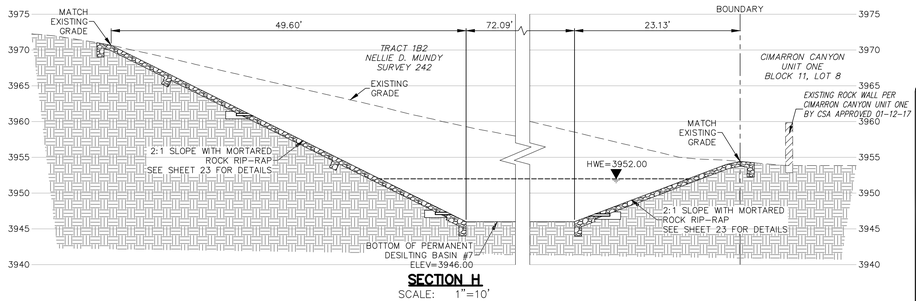

SECTION H
SCALE: 1"=10'

PERMANENT DESILTING BASIN #7
SCALE: AS NOTED

ALL BOUNDARY PERIMETER WALLS AND RETAINING WALLS GREATER THAN 4' SHALL BE INSTALLED BY THE DEVELOPER.

ALL EXISTING AND PROPOSED SIDEWALKS, BARRIER FREE RAMPS, HANDICAP PARKING, DRIVEWAY CROSSWALKS, DRIVEWAYS AND ACCESSIBLE ROUTES SHALL COMPLY WITH A.D.A., T.A.S. AND CITY OF EL PASO REQUIREMENTS. EXISTING INFRASTRUCTURE NOT COMPLYING SHALL BE REMOVED AND REPLACED TO MEET CURRENT CITY OF EL PASO STANDARDS.

ALL ACCESSIBLE RAMPS INSTALLED BY DEVELOPER.

ALL SIDEWALKS WITHIN CITY RIGHT-OF-WAY ARE TO BE INSTALLED BY BUILDER UNLESS SPECIFIED OTHERWISE

ALL CURB AS SHOWN IS 6" STANDARD CURB AND GUTTER UNLESS NOTED OTHERWISE.

ALL OFFSITE GRADED SLOPES SHALL BE MAINTAINED BY THE DEVELOPER. ALL SLOPES WITHIN THE LOTS SHALL BE MAINTAINED BY THE HOME OWNER. ALL SLOPES LEFT NATURAL ARE 3:1 MAXIMUM. SLOPES GREATER THAN 3:1 REQUIRE SLOPE STABILIZATION AS NOTED.

ANY RE-GRADING OF LOTS BY BUILDER SHALL BE BY SEPARATE PERMIT.

BENCHMARK: CITY MONUMENT AT THE CENTERLINE INTERSECTION OF CIMARRON GAP DRIVE AND CIMARRON PARK DRIVE.
ELEVATION = 3978.53 (EL PASO CITY DATUM)

NO.	DATE	DESCRIPTION	BY
3	03/15/2021	3rd City Submittal	AHO
2	01/22/2021	2nd City Submittal	AHO
1	11/25/2020	1st City Submittal	AHO

WARNING! BEFORE YOU DIG ANY PROJECT AREA CONTRACTOR SHALL BE RESPONSIBLE FOR UNDERGROUND IMPROVEMENTS

Texas 811 Know what's below Call before you dig.

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EL PASO ELECTRIC COMPANY	543-5720
	1-800-351-3443
TEXAS GAS SERVICE	544-6300
TGS EMERGENCY HOTLINE	562-8411/562-2603
AFTER HOURS EMERGENCY (WATER & SEWER)	1-800-592-1555
SPECTRUM	594-5775
AFTER HOURS EMERGENCY (EPW)	775-7414
	1-800-351-3427
KINDER-MORGAN EPNG PIPELINES	1-800-238-3764
EL PASO STREETS AND MAINTENANCE	212-0151
EL PASO TRAFFIC SIGNAL	diregion@txdot.gov

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03/15/2021

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tel [915] 877.4155
fax [915] 877.4334
www.csaengineers.com

SUBDIVISION
CIMARRON CANYON UNIT TWO SUBDIVISION

SHEET TITLE
CROSS SECTIONS A-H

GOB	1908
DESIGN BY	JOB NO.
GOB-DG-SM	12/20/2019
DRAWN BY	DATE OF SUBMISSION
AHO	AS NOTED
CHECKED BY	SCALE

SHEET NO. 18
SHEET SEQUENCE 18 OF 82

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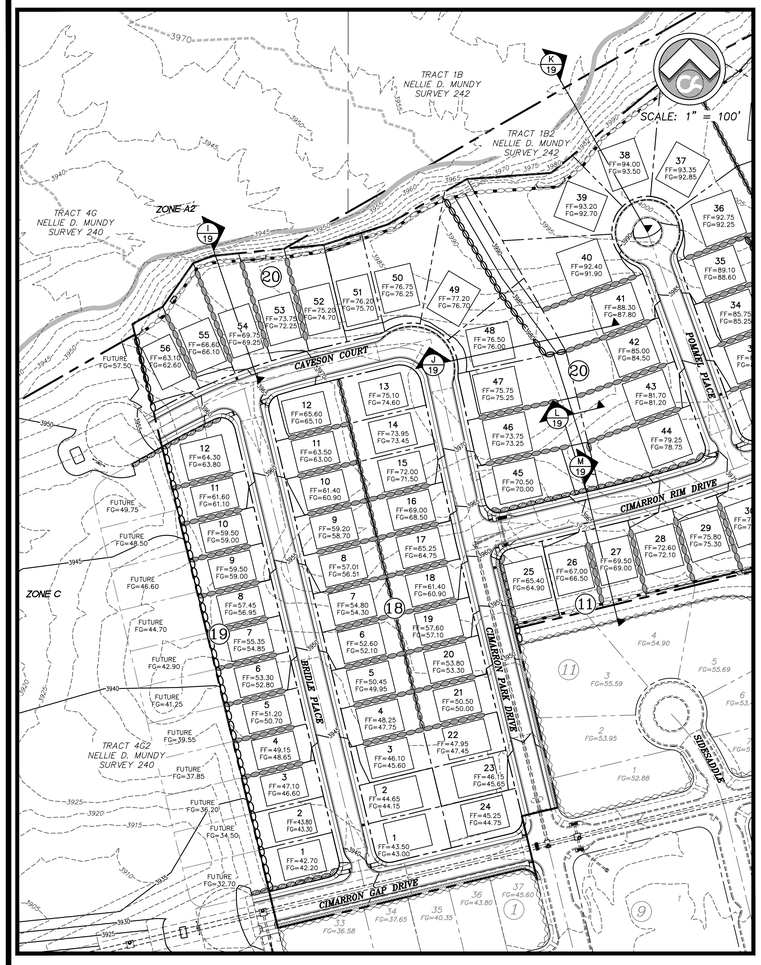

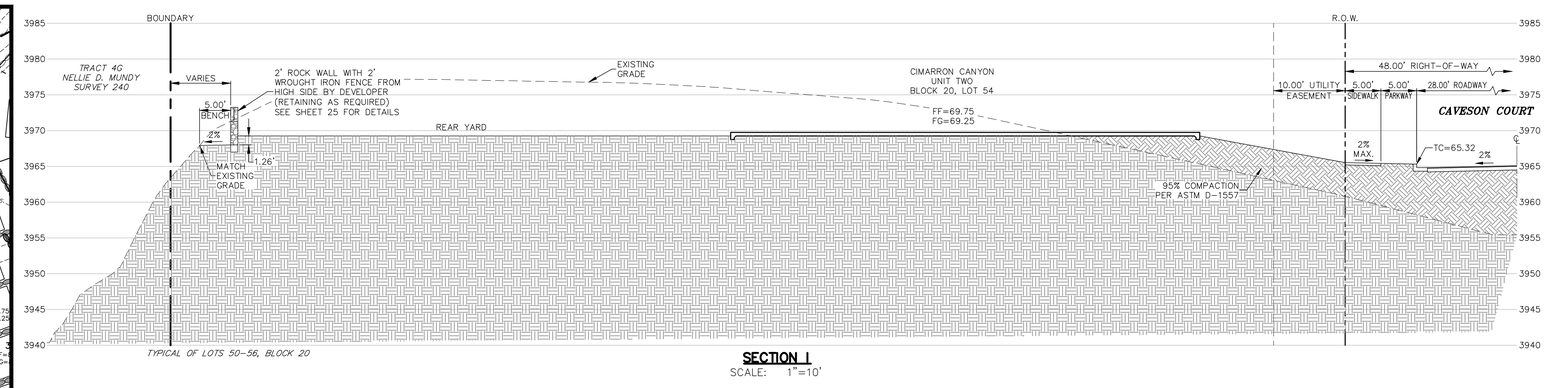

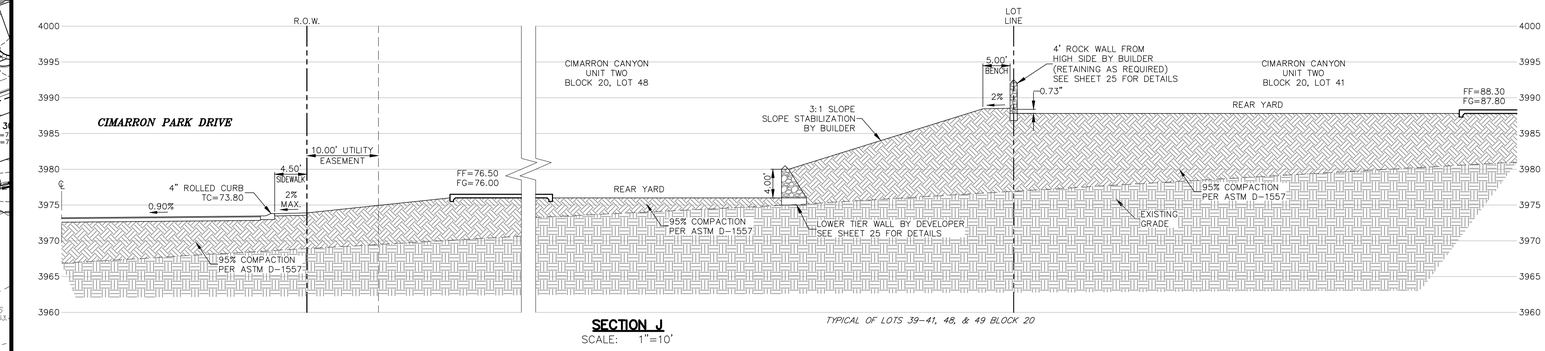

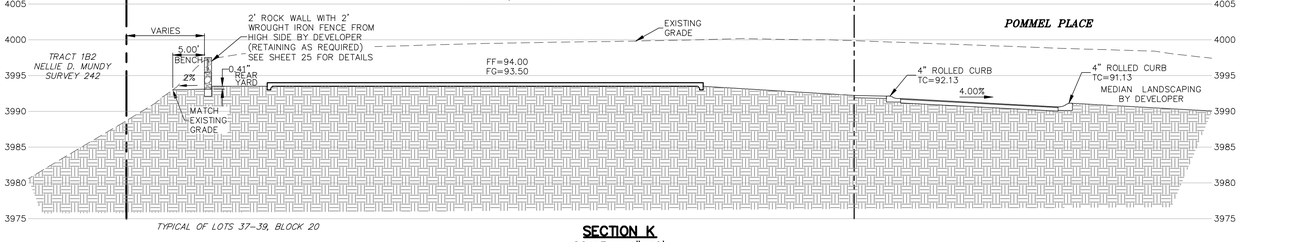

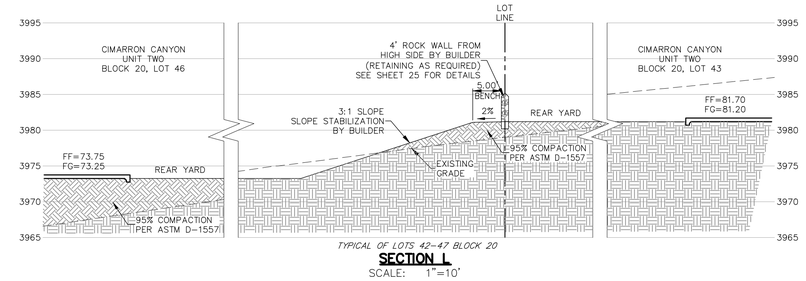

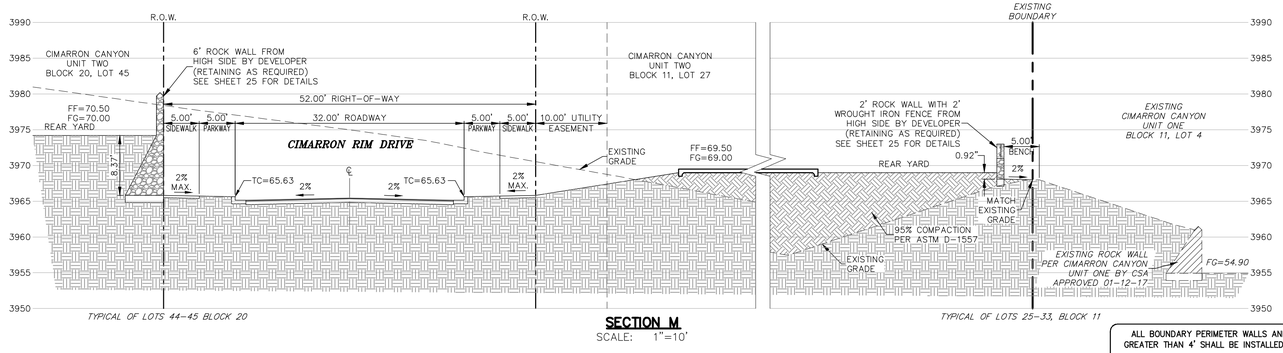

ALL BOUNDARY PERIMETER WALLS AND RETAINING WALLS GREATER THAN 4' SHALL BE INSTALLED BY THE DEVELOPER.

ALL EXISTING AND PROPOSED SIDEWALKS, BARRIER FREE RAMPS, HANDICAP PARKING, DRIVEWAY CROSSWALKS, DRIVEWAYS AND ACCESSIBLE ROUTES SHALL COMPLY WITH A.D.A., T.A.S. AND CITY OF EL PASO REQUIREMENTS. EXISTING INFRASTRUCTURE NOT COMPLYING SHALL BE REMOVED AND REPLACED TO MEET CURRENT CITY OF EL PASO STANDARDS.

ALL ACCESSIBLE RAMPS INSTALLED BY DEVELOPER.

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BENCHMARK: CITY MONUMENT AT THE CENTERLINE INTERSECTION OF CAVESON COURT AND CIMARRON PARK DRIVE. ELEVATION = 3978.53 (EL PASO CITY DATUM)

NO.	DATE	DESCRIPTION	BY
3	03/15/2021	3rd City Submittal	AHO
2	01/22/2021	2nd City Submittal	AHO
1	11/25/2020	1st City Submittal	AHO

WARNING! BEFORE YOU DIG SAN PEDRO AREA CONTRACTING SHALL CONTACT ALL UNDERGROUND IMPROVEMENTS

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BEFORE YOU DIG - CALL

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	1-800-351-4755
TEXAS GAS SERVICE	544-6300
TGS EMERGENCY HOTLINE	562-8411/562-2603
AFTER HOURS EMERGENCY (WATER & SEWER)	1-800-457-1177
SPECTRUM	594-5775
KINDER-MORGAN EPNG PIPELINES	775-7414
EL PASO STREETS AND MAINTENANCE	1-800-238-3764
EL PASO TRAFFIC SIGNAL STREETS AND MAINTENANCE	212-0151

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05/15/2021

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fax [915] 877.4334
www.csaengineers.com

SUBDIVISION
CIMARRON CANYON UNIT TWO SUBDIVISION

SHEET TITLE
CROSS SECTIONS I-M

GOB — DESIGN BY	1908 — JOB NO.
GOB-DG-SM — DRAWN BY	12/20/2019 — DATE OF SUBMISSION
AHO — CHECKED BY	AS NOTED — SCALE

SHEET NO. **19**
SHEET SEQUENCE **19** OF **82**

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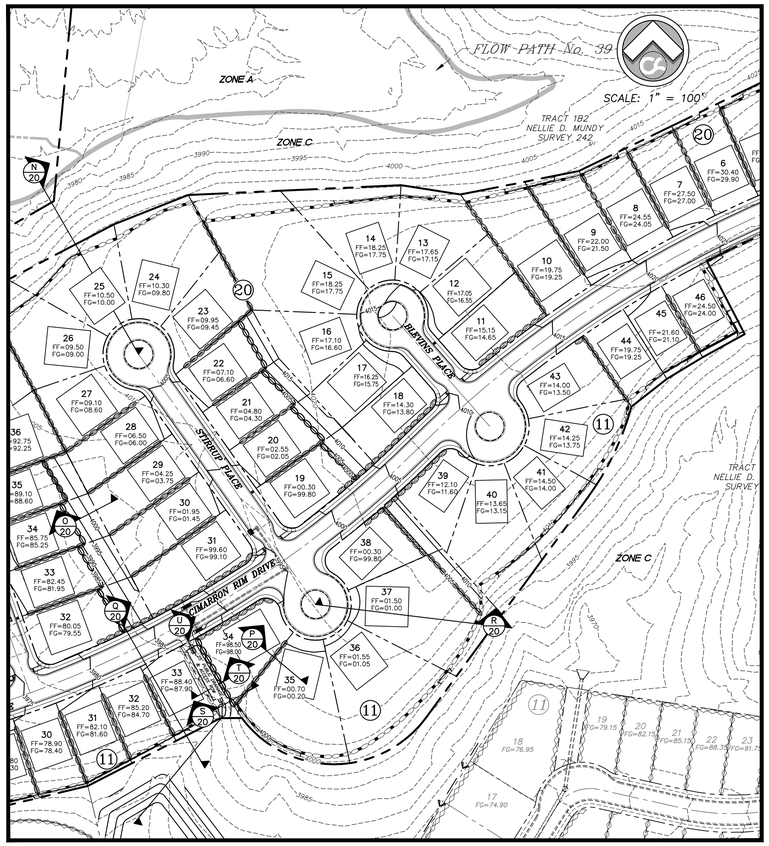
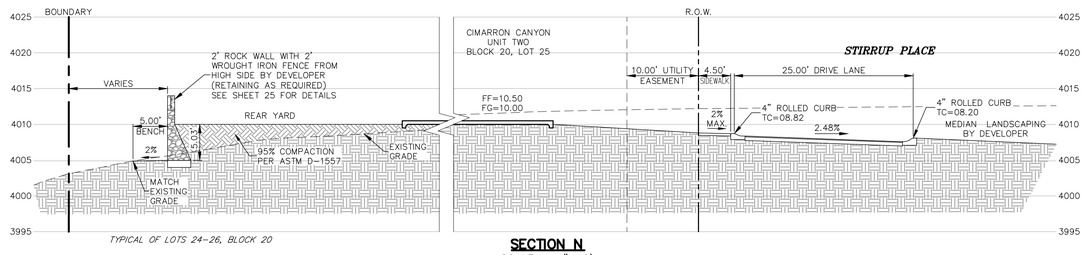
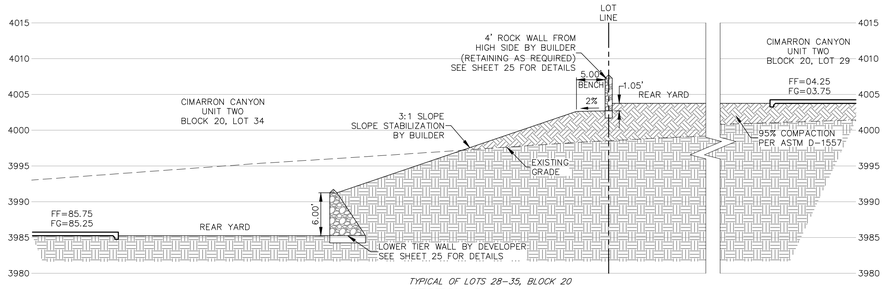
dgallardo





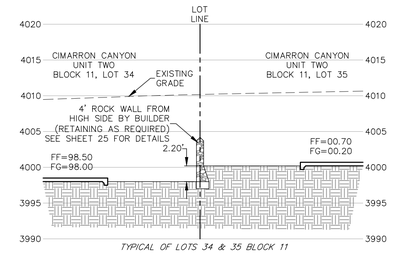
TYPICAL OF LOTS 24-26, BLOCK 20

SECTION N
SCALE: 1"=10'



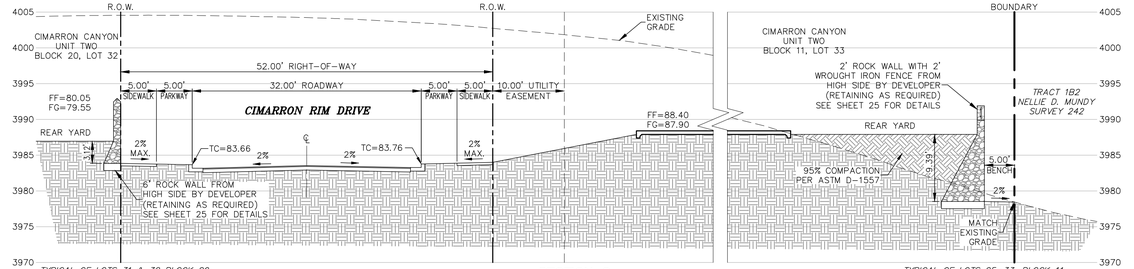
TYPICAL OF LOTS 28-35, BLOCK 20

SECTION O
SCALE: 1"=10'



TYPICAL OF LOTS 34 & 35 BLOCK 11

SECTION P
SCALE: 1"=10'



TYPICAL OF LOTS 31 & 32 BLOCK 20

SECTION Q
SCALE: 1"=10'

TYPICAL OF LOTS 25-33, BLOCK 11

ALL BOUNDARY PERIMETER WALLS AND RETAINING WALLS GREATER THAN 4' SHALL BE INSTALLED BY THE DEVELOPER.

ALL EXISTING AND PROPOSED SIDEWALKS, BARRIER FREE RAMPS, HANDICAP PARKING, DRIVEWAY CROSSWALKS, DRIVEWAYS AND ACCESSIBLE ROUTES SHALL COMPLY WITH A.D.A., T.A.S. AND CITY OF EL PASO REQUIREMENTS. EXISTING INFRASTRUCTURE NOT COMPLYING SHALL BE REMOVED AND REPLACED TO MEET CURRENT CITY OF EL PASO STANDARDS.

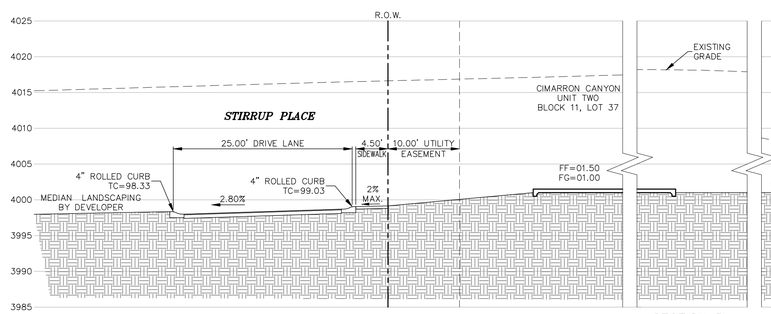
ALL ACCESSIBLE RAMPS INSTALLED BY DEVELOPER.

ALL SIDEWALKS WITHIN CITY RIGHT-OF-WAY ARE TO BE INSTALLED BY BUILDER UNLESS SPECIFIED OTHERWISE

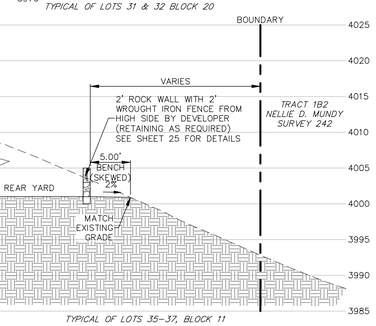
ALL CURB AS SHOWN IS 6" STANDARD CURB AND GUTTER UNLESS NOTED OTHERWISE.

ALL OFFSITE GRADED SLOPES SHALL BE MAINTAINED BY THE DEVELOPER. ALL SLOPES WITHIN THE LOTS SHALL BE MAINTAINED BY THE HOME OWNER. ALL SLOPES LEFT NATURAL ARE 3:1 MAXIMUM. SLOPES GREATER THAN 3:1 REQUIRE SLOPE STABILIZATION AS NOTED.

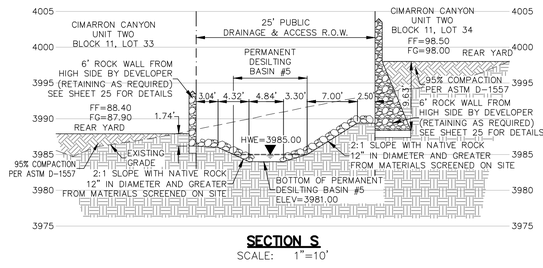
ANY RE-GRADING OF LOTS BY BUILDER SHALL BE BY SEPARATE PERMIT.



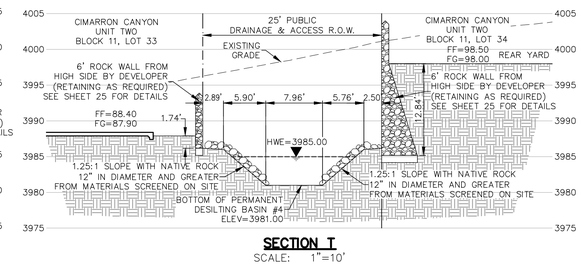
SECTION R
SCALE: 1"=10'



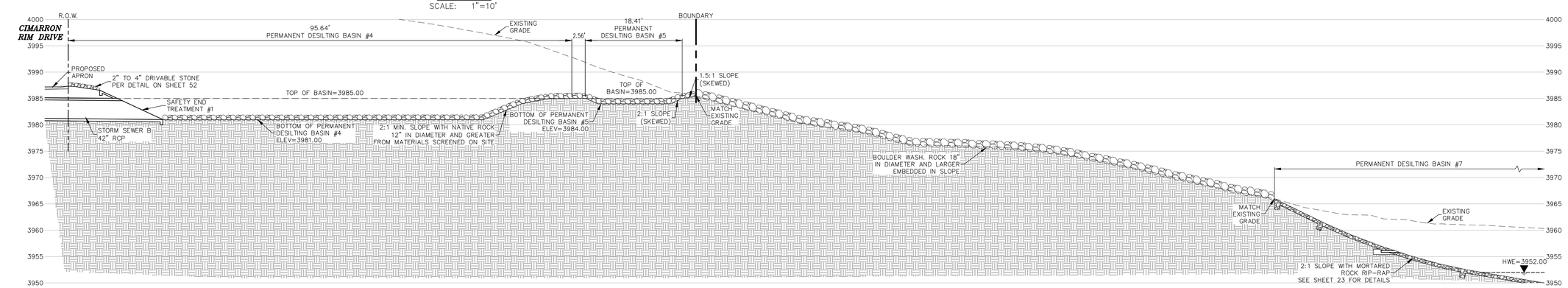
TYPICAL OF LOTS 35-37, BLOCK 11



SECTION S
SCALE: 1"=10'



SECTION T
SCALE: 1"=10'



SECTION U
SCALE: 1"=10'

PERMANENT DESILTING BASIN #4 & #5 (SECTIONS S, T & U)
SCALE: AS NOTED

BENCHMARK: CITY MONUMENT AT THE CENTERLINE INTERSECTION OF STIRRUP PLACE AND CIMARRON PARK DRIVE. ELEVATION = 3978.53 (EL PASO CITY DATUM)

NO.	DATE	DESCRIPTION	BY
3	03/15/2021	3rd City Submittal	AHO
2	01/22/2021	2nd City Submittal	AHO
1	11/25/2020	1st City Submittal	AHO

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AT&T	1-800-464-7928
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TCI EMERGENCY HOTLINE	562-8411/562-2603
PUB (WATER, WASTEWATER & SEWER)	1-800-594-7275
AFTER HOURS EMERGENCY (EPW)	594-5775
SPECTRUM	775-7414
EXCAVATION SAFETY SYSTEM	1-800-344-7233
KINDER-MORGAN EPNG PIPELINES	1-800-238-3764
EL PASO STREETS AND MAINTENANCE	212-0151
EL PASO TRAFFIC SIGNAL STREETS AND MAINTENANCE	transportation@elpasotexas.gov

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05/15/2021

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fax [915] 877.4334
www.csaengineers.com

SUBDIVISION
CIMARRON CANYON UNIT TWO SUBDIVISION

SHEET TITLE
CROSS SECTIONS N-U

GOB (DESIGN BY)	1908 (JOB NO.)
GOB-DG-SM (DRAWN BY)	12/20/2019 (DATE OF SUBMISSION)
AHO (CHECKED BY)	AS NOTED (SCALE)

SHEET NO. 20
SHEET SEQUENCE 20 OF 82

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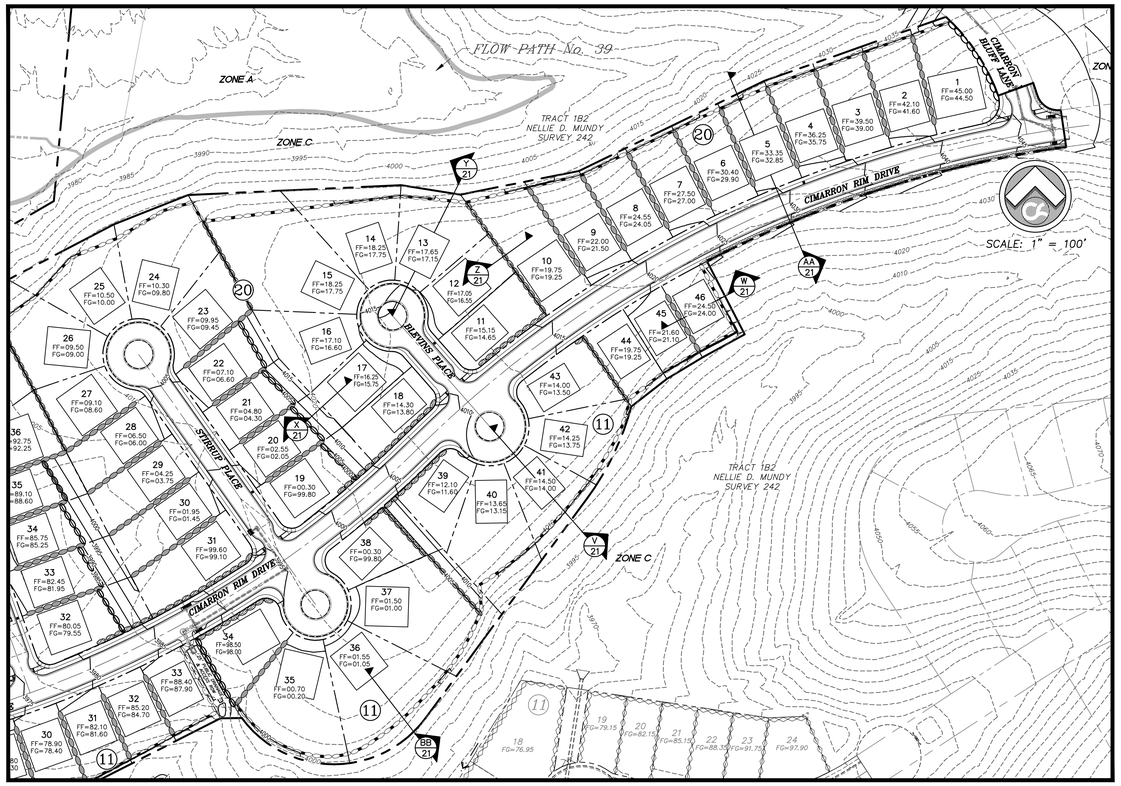
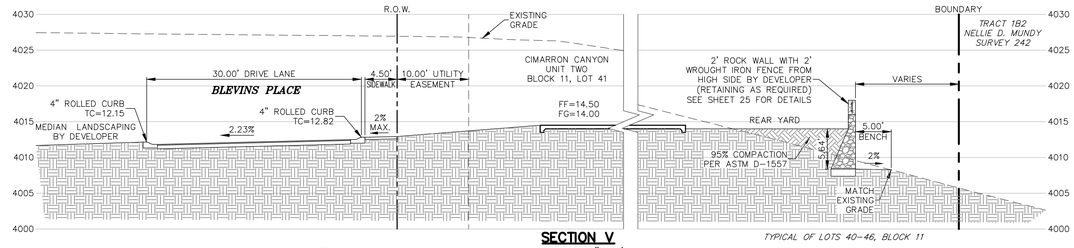
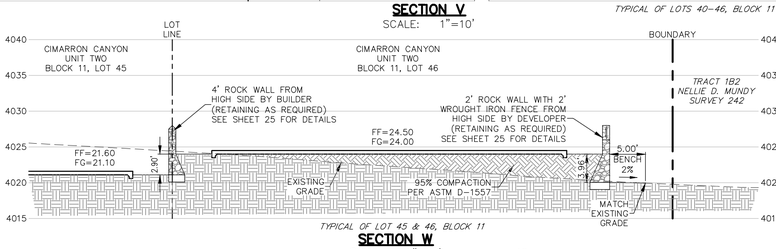
S:\Land\1908 Cimarron Canyon Unit Two\1908 3rd Submittal\1908 SH 18-21A (X-Sections).dwg
smckay





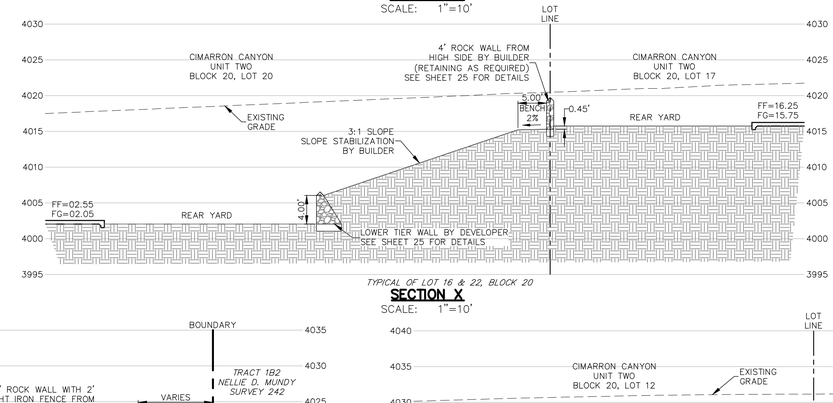
SECTION V
SCALE: 1"=10'

TYPICAL OF LOTS 40-46, BLOCK 11



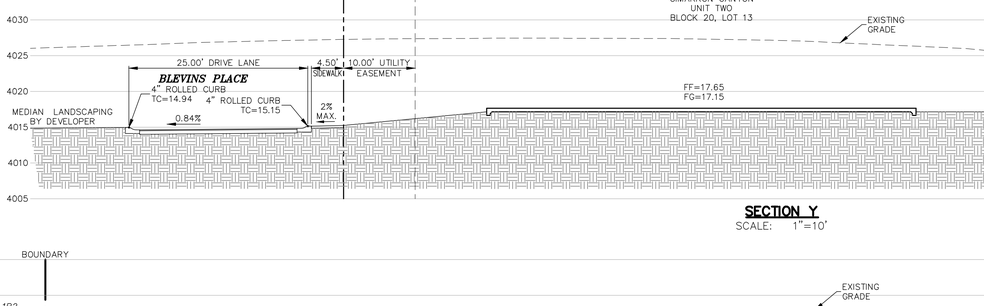
TYPICAL OF LOT 45 & 46, BLOCK 11

SECTION W
SCALE: 1"=10'



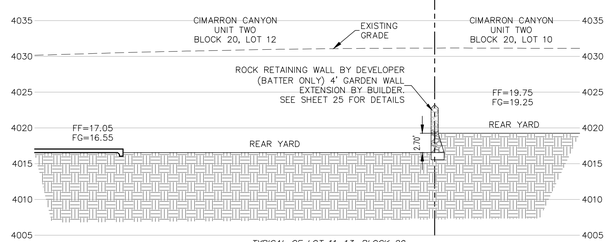
TYPICAL OF LOT 16 & 22, BLOCK 20

SECTION X
SCALE: 1"=10'



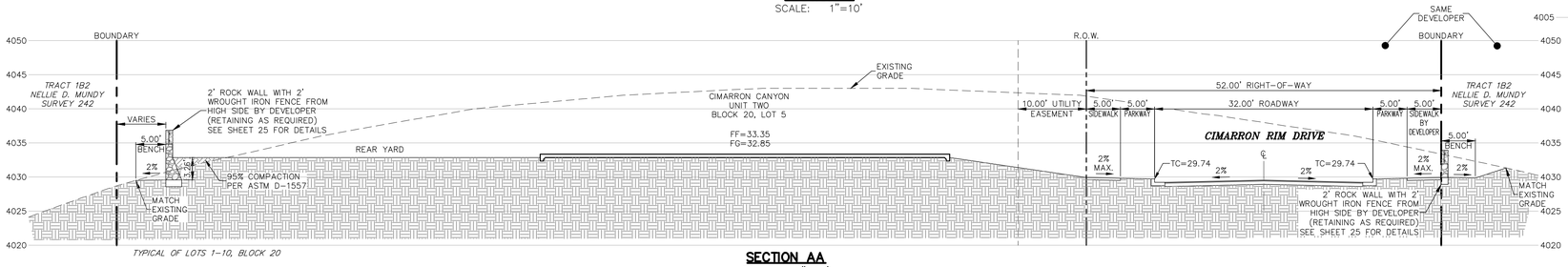
SECTION Y
SCALE: 1"=10'

TYPICAL OF LOT 13 & 15, BLOCK 20



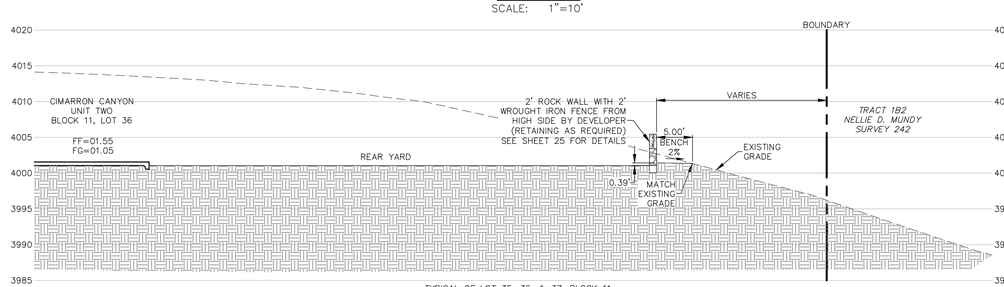
TYPICAL OF LOT 11-13, BLOCK 20

SECTION Z
SCALE: 1"=10'



TYPICAL OF LOTS 1-10, BLOCK 20

SECTION AA
SCALE: 1"=10'



TYPICAL OF LOT 35, 36, & 37, BLOCK 11

SECTION BB
SCALE: 1"=10'

ALL BOUNDARY PERIMETER WALLS AND RETAINING WALLS GREATER THAN 4' SHALL BE INSTALLED BY THE DEVELOPER.

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BENCHMARK: CITY MONUMENT AT THE CENTERLINE INTERSECTION OF CIMARRON BLUFF DRIVE AND CIMARRON PARK DRIVE.
ELEVATION = 3978.53 (EL PASO CITY DATUM)

NO.	DATE	DESCRIPTION	BY
3	03/15/2021	3rd City Submittal	AHO
2	01/22/2021	2nd City Submittal	AHO
1	11/25/2020	1st City Submittal	AHO

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EL PASO WATER UTILITIES (WATER & SEWER)	594-5775
AFTER HOURS EMERGENCY (EPW)	1-800-592-1555
SPECTRUM	775-7414
SKY X EXCAVATION SAFETY SYSTEM	1-800-238-3764
KINDER-MORGAN EPNG PIPELINES	212-0151
EL PASO TRAFFIC SIGNAL STREETS AND MAINTENANCE	transportation@elpasotexas.gov

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06/15/21

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SUBDIVISION
CIMARRON CANYON UNIT TWO SUBDIVISION

SHEET TITLE
CROSS SECTIONS V-BB

GOB DESIGN BY	1908 JOB NO.
GOB-DC-SM DRAWN BY	12/20/2019 DATE OF COMMISSION
AHO CHECKED BY	AS NOTED SCALE

SHEET NO. 21
SHEET SEQUENCE 21 OF 82

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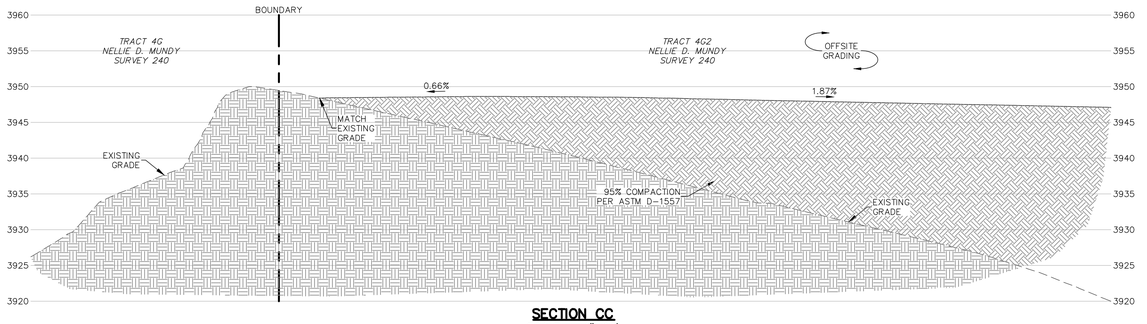
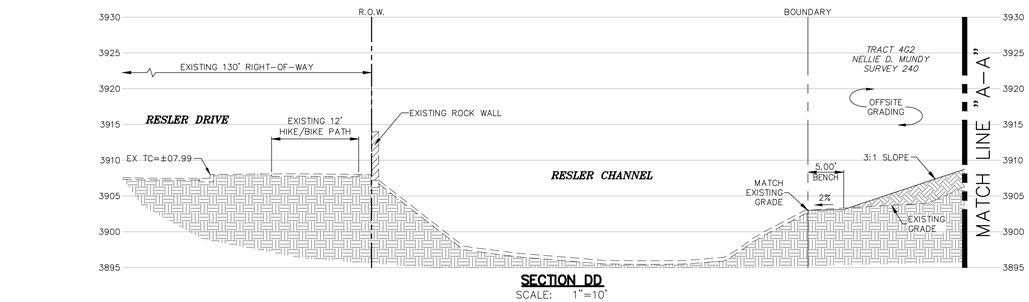
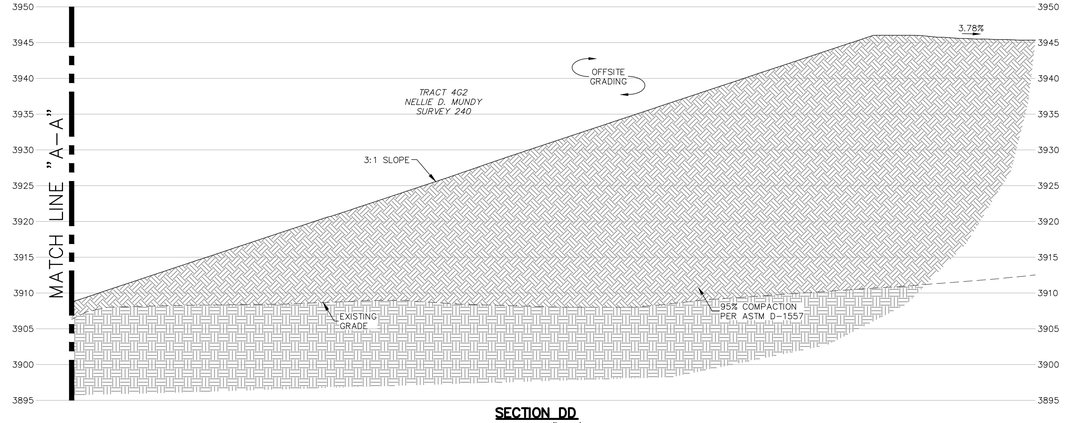
S:\Data\1908 Cimarron Canyon Unit Two\1908 3rd Submittal\1908 3rd 18-21A (V-Sections).dwg
dgalindo



SECTION CC
SCALE: 1"=10'



SECTION DD
SCALE: 1"=10'



SECTION DD
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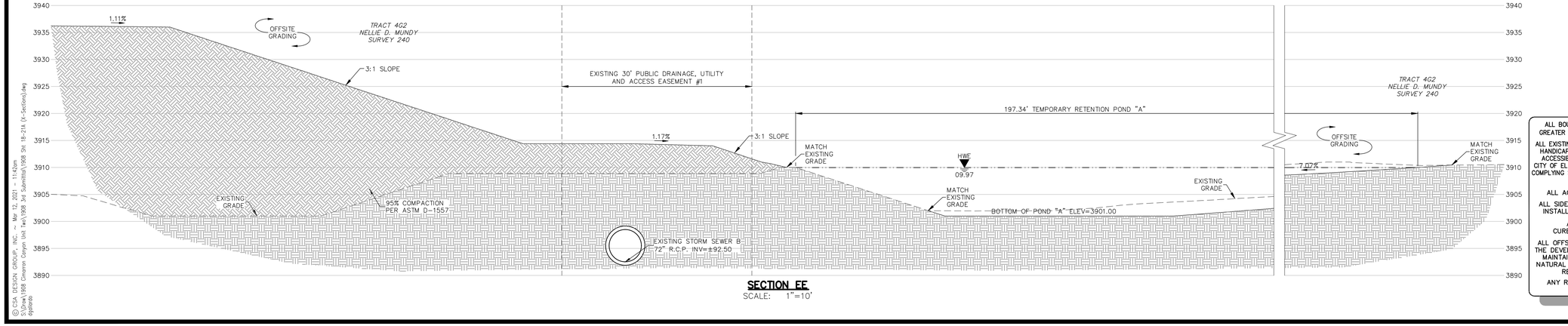

SECTION EE
SCALE: 1"=10'

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BENCHMARK: CITY MONUMENT AT THE CENTERLINE INTERSECTION OF RESLER DRIVE AND CIMARRON PARK DRIVE.
ELEVATION = 3978.53 (EL PASO CITY DATUM)

NO.	DATE	DESCRIPTION	BY
3	03/15/2021	3rd City Submittal	AHO
2	01/22/2021	2nd City Submittal	AHO
1	11/25/2020	1st City Submittal	AHO

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TEXAS GAS SERVICE	544-6300
TOS EMERGENCY HOTLINE	562-8411/562-2003
EL PASO WATER UTILITIES (WATER & SEWER)	1-800-592-1555
AFTER HOURS EMERGENCY (EPW)	594-5775
	775-7414
SPECTRUM	1-800-238-3764
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SUBDIVISION
CIMARRON CANYON UNIT TWO SUBDIVISION

SHEET TITLE
CROSS SECTIONS CC-EE

GOB — DESIGN BY	1908 — JOB NO.
GOB-DG-SM — DRAWN BY	12/20/2019 — DATE OF SUBMISSION
AHO — CHECKED BY	AS NOTED — SCALE

SHEET NO.
21A
SHEET SEQUENCE
22 OF 82

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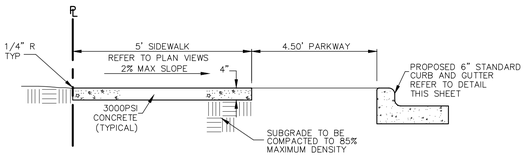
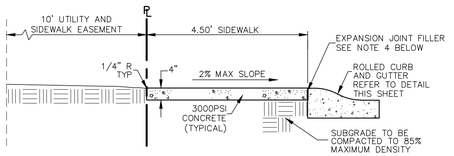


TYPICAL SIDEWALK



SIDEWALK AT TURNING HEELS AND CUL-DE-SACS

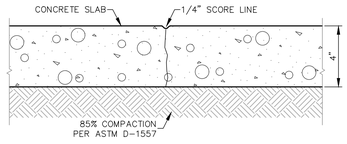
ALL EXISTING AND PROPOSED SIDEWALKS, BARRIER FREE RAMPS, HANDICAP PARKING, DRIVEWAY CROSSWALKS, DRIVEWAYS AND ACCESSIBLE ROUTES SHALL COMPLY WITH A.D.A., T.A.S. AND CITY OF EL PASO REQUIREMENTS. EXISTING INFRASTRUCTURE NOT COMPLYING SHALL BE REMOVED AND REPLACED TO MEET STANDARDS.

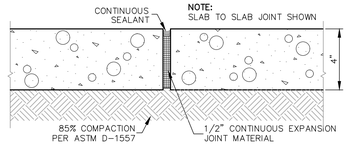
NOTES:

1. PROVIDE TRANSVERSE CONTRACTION JOINTS AT INTERVALS NOT EXCEEDING 5'-0" O.C.
2. PROVIDE EXPANSION JOINTS AT INTERVALS NOT EXCEEDING 20'-0" O.C. AND ALONG FEATURES THAT PROJECT THROUGH OR ADJACENT TO SIDEWALK
3. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS
4. EXPANSION JOINT FILLER SHALL BE 1/2" BITUMINOUS TYPE PREFORMED JOINT FILLER, AASHTO M-33.
5. WHEREVER SIDEWALK ABUTS ROCK OR MASONRY STRUCTURES SUCH AS CURBS OR BUILDINGS, EXPANSION JOINT FILLER SHALL BE PLACED IN ACCORDANCE WITH STANDARD SPECIFICATIONS.
6. ALL SIDEWALKS FRONTING LOTS, AND ALL SIDEWALKS ADJACENT TO THE SIDES OF LOTS SHALL BE INSTALLED BY THE BUILDER OF THAT LOT UNLESS SPECIFIED OTHERWISE IN THE PLANS.

SIDEWALK DETAILS

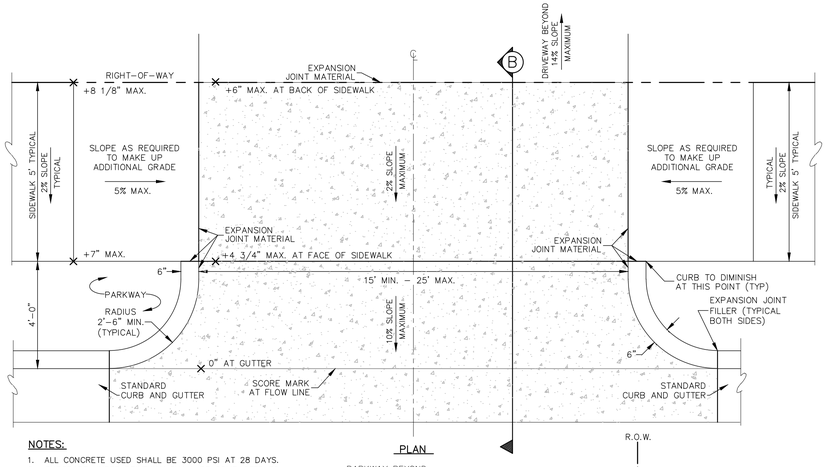
SCALE: 1"=2'



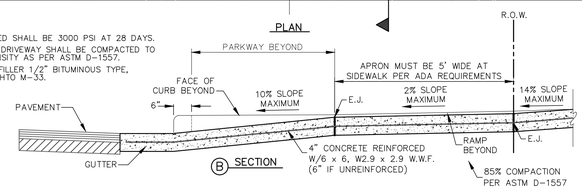


TYPICAL SIDEWALK JOINTS

NOT TO SCALE



PLAN

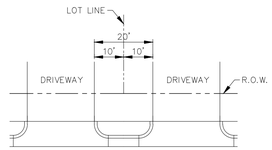


NOTES:

1. ALL CONCRETE USED SHALL BE 3000 PSI AT 28 DAYS.
2. SUBGRADE UNDER DRIVEWAY SHALL BE COMPACTED TO 95% MAXIMUM DENSITY AS PER ASTM D-1557.
3. EXPANSION JOINT FILLER 1/2" BITUMINOUS TYPE, PRE-FORMED, AASHTO M-33.

TYPICAL RESIDENTIAL DRIVEWAY BY BUILDER

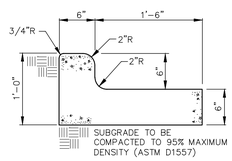
SCALE: 1"=2'-0"



MINIMUM EDGE TO EDGE SPACING FOR TYPE 1 DRIVEWAYS INSTALLED IN SINGLE FAMILY LOTS LESS THAN 60' IN WIDTH

NOTES:

1. CONCRETE FOR CURBS, GUTTERS, & RETURNS SHALL BE 3000 P.S.I. MINIMUM.
2. DUMMY JOINT REQUIRED AT 10' O.C.
3. EXPANSION JOINTS REQUIRED AT CURB RETURNS. JOINTS TO BE PACKED WITH 1/2" PRE MOLDED ASPHALT IMPREGNATED EXPANSION MATERIAL OR EQUAL.

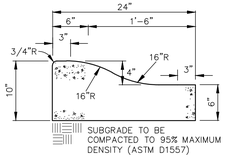


STANDARD 6" CURB & GUTTER DETAIL

SCALE: 1" = 1'-0"

NOTES:

1. CONCRETE FOR CURBS, GUTTERS, & RETURNS SHALL BE 3000 P.S.I. MINIMUM.
2. DUMMY JOINT REQUIRED AT 10' O.C.
3. EXPANSION JOINTS REQUIRED AT CURB RETURNS. JOINTS TO BE PACKED WITH 1/2" PRE MOLDED ASPHALT IMPREGNATED EXPANSION MATERIAL OR EQUAL.

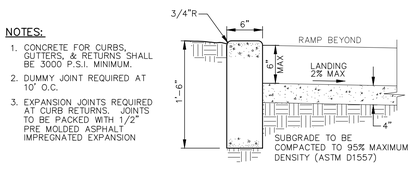


4" ROLLED CURB TURNING HEEL & CUL-DE-SACS

SCALE: 1" = 1'-0"

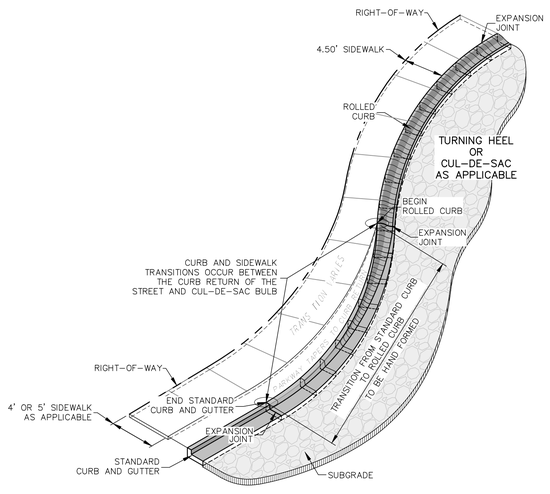
NOTES:

1. CONCRETE FOR CURBS, GUTTERS, & RETURNS SHALL BE 3000 P.S.I. MINIMUM.
2. DUMMY JOINT REQUIRED AT 10' O.C.
3. EXPANSION JOINTS REQUIRED AT CURB RETURNS. JOINTS TO BE PACKED WITH 1/2" PRE MOLDED ASPHALT IMPREGNATED EXPANSION MATERIAL OR EQUAL.



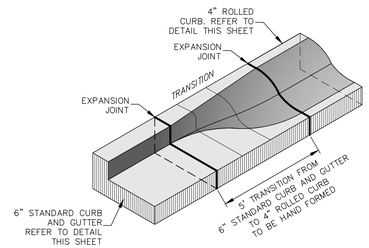
STANDARD CURB DETAIL

SCALE: 1" = 1'-0"



TRANSITION FROM STANDARD CURB & GUTTER TO ROLLED CURB

NTS



TRANSITION FROM 6" STANDARD CURB & GUTTER TO 4" ROLLED CURB

SCALE: 1/2" = 1'-0"

OFFSTREET BEEHIVE INLETS HAVE SPECIAL CURB & GUTTER REQUIREMENTS REFER TO SHEET 45 FOR DETAILS

BENCHMARK: CITY MONUMENT AT THE CENTERLINE INTERSECTION OF ALAMO PASS DRIVE AND CIMARRON PARK DRIVE. ELEVATION = 3976.53 (EL PASO CITY DATUM)

NO.	DATE	DESCRIPTION	BY
3	03/15/2021	3rd City Submittal	AHO
2	01/22/2021	2nd City Submittal	AHO
1	11/25/2020	1st City Submittal	AHO

WARNING! BEFORE YOU DIG IN PROJECT AREA CONTRACTING SHALL NOTIFY ALL UNDERGROUND IMPROVEMENTS

Texas 811 Know what's below Call before you dig.

BEFORE YOU DIG - CALL

EL PASO ELECTRIC COMPANY	543-5720
	1-800-351-3555
TEXAS GAS SERVICE	544-6300
PUB. EMERGENCY HOTLINE	562-8411/562-2003
AFTER HOURS EMERGENCY (WATER & SEWER)	1-800-592-1555
AFTER HOURS EMERGENCY (EPW)	594-5775
SPECTRUM	775-7414
AT&T NETWORK PROTECTION SAFETY SYSTEM	1-800-344-7277
KINDER-MORGAN EPNG PIPELINES	1-800-238-3764
EL PASO STREETS AND MAINTENANCE	212-0151
EL PASO TRAFFIC SIGNAL STREETS AND MAINTENANCE	tlresponse@elpasotexas.gov

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03/15/21

STATE OF TEXAS
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El Paso, Texas 79912
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www.csaengineers.com

SUBDIVISION
CIMARRON CANYON UNIT TWO SUBDIVISION

SHEET TITLE
STANDARD DETAILS

GOB (DESIGN BY)	1908 (JOB NO.)
GOB-DG-SM (DRAWN BY)	12/20/2019 (DATE OF SUBMISSION)
AHO (CHECKED BY)	AS NOTED (SCALE)

SHEET NO. 22

SHEET SEQUENCE 23 OF 82

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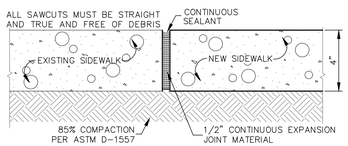
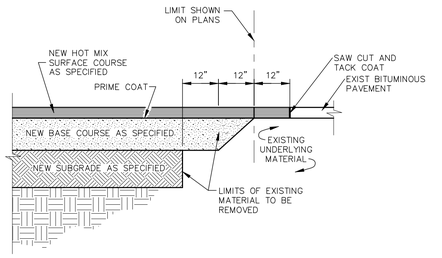
S:\Civil\1908 Cimarron Canyon Unit Two\1908 3rd Submittal\1908 Sht 22-24 (Standard Details).dwg
dgallardo



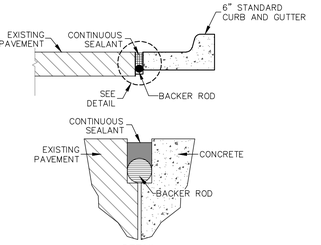
JUNCTURE OF EXISTING SIDEWALK AND NEW SIDEWALK

NOT TO SCALE



JUNCTURE OF NEW FLEXIBLE AND EXISTING FLEXIBLE PAVEMENT

SCALE: 1"=2'-0"



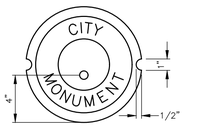
DETAIL
NTS

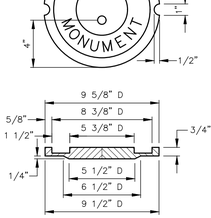
NOTES:

1. DOW CORNING 890-SL SELF-LEVELING SILICONE JOINT SEALANT OR APPROVED EQUAL.
2. JOINT WIDTH MUST BE OF SUFFICIENT WIDTH SO AS TO ALLOW MOVEMENT.
3. SEALANT SHOULD BE RECESSED A MINIMUM OF 3/8" BELOW THE FINISHED SURFACE.
4. JOINT SHALL BE SAWED DEEP ENOUGH TO ALLOW CORRECT PLACEMENT OF BACKER ROD AND SEALANT.
5. SUFFICIENT ROOM SHALL BE ALLOWED BELOW THE BACKER ROD FOR DEBRIS IN JOINT TO PUMP UP AND NOT DISTURB THE NEW SEALANT.

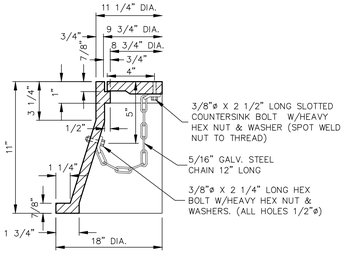
JUNCTURE OF EXISTING PAVEMENT AND NEW CURB & GUTTER

SCALE: 1"=2"

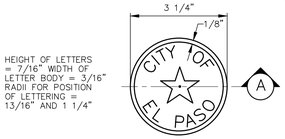


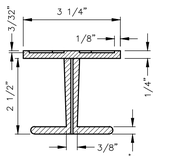


CITY MONUMENT COVER
SCALE: 1 1/2"=1'-0"



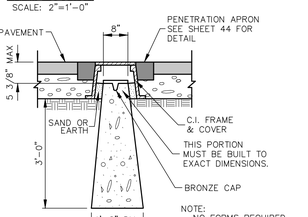
FRAME SECTION
SCALE: 2"=1'-0"





A SECTION

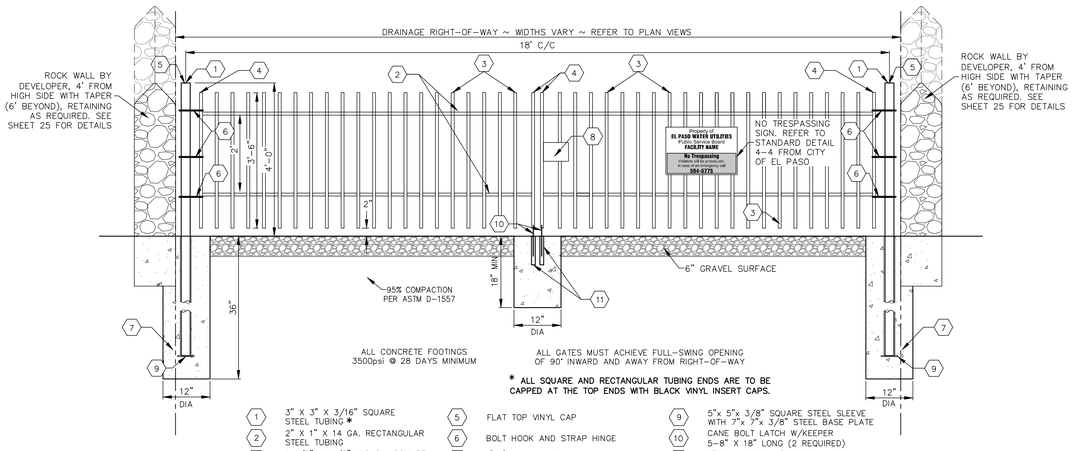
BRONZE MONUMENT CAP
SCALE: 1"=5'-0"



MONUMENT ASSY
SCALE: 1/2"=1'-0"

CITY MONUMENT DETAIL

AS NOTED

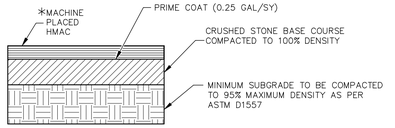


* ALL SQUARE AND RECTANGULAR TUBING ENDS ARE TO BE CAPPED AT THE TOP ENDS WITH BLACK VINYL INSERT CAPS.

1. 3" X 3" X 3/16" SQUARE STEEL TUBING *
2. 2" X 1" X 14 GA. RECTANGULAR STEEL TUBING
3. 1 1/2"X 1 1/2"X 16 GA. SQUARE STEEL TUBING @ 4" C/C *
4. 2" X 1" X 10 GA. RECTANGULAR STEEL TUBING *
5. FLAT TOP VINYL CAP
6. BOLT HOOK AND STRAP HINGE
7. 1'X3' DEEP 3500 PSI CONCRETE POST FOOTING
8. DOUBLE GATE HEAVY DUTY INDUSTRIAL LATCH W/PAD LOCK
9. 5"x 5"x 3/8" SQUARE STEEL SLEEVE WITH 7"x 7"x 3/8" STEEL BASE PLATE
10. CANE BOLT LATCH W/KEEPER 5-8" X 18" LONG (2 REQUIRED)
11. 1" DIAMETER x 6" PIPE, GALVANIZED (2 REQUIRED)

WROUGHT IRON GATE

NOT TO SCALE

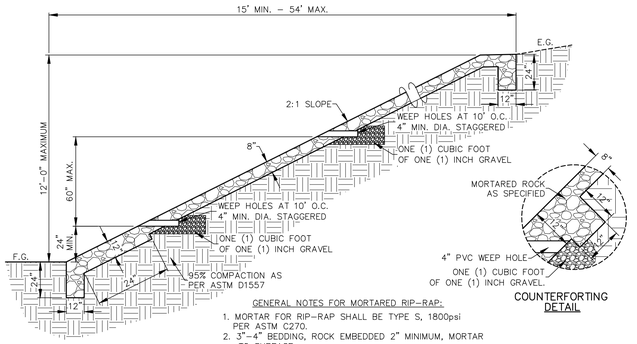


GENERAL H.M.A.C. PAVING NOTES:

1. FOR RECOMMENDATIONS REFER TO THE STANDARD PAVEMENT DESIGN BY SPEESOIL INC. PROJECT NO. SPG11043, DATED 04 APRIL 2011
2. BASE COURSE SHALL MEET THE REQUIREMENTS FOR TYPE "A", GRADE 1 OR 2 MATERIAL ACCORDING TO ITEM 247, FLEXIBLE BASE, AS DESCRIBED IN THE TEXAS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS, AND BRIDGES. ALL THE REQUIREMENTS OF THIS DOCUMENT SHALL BE MET, EXCEPT WHERE DENSITY IS SPECIFIED. THE DENSITY SHALL BE NOT LESS THAN 100% OF ASTM D1557.
3. THE SURFACE COARSE SHALL MEET THE REQUIREMENTS FOR (HMAC), TXDOT TYPE "C" AS SPECIFIED IN ITEM 340 HMAC (HOT MIX ASPHALTIC CONCRETE PAVEMENT), AS DESCRIBED IN THE TEXAS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS, AND BRIDGES. STABILITY SHALL BE NOT LESS THAN 1500 POUNDS, WHEN COMPACTED AT 75 BLOWS. FURTHERMORE, THE MIX SHALL HAVE A FLOW BETWEEN 0.08" AND 0.16", ACCORDING TO THE MARSHALL STABILITY ANALYSIS.
4. SUBGRADE TO BE COMPACTED IN 8" LIFTS TO 95% MAXIMUM DENSITY AS PER ASTM D1557.
5. FINAL PAVEMENT DESIGN TO BE DETERMINED BASED UPON FINAL CBR TEST RESULTS (REFER TO APPLICABLE SUBDIVISION ORDINANCE–PAVEMENT THICKNESS DESIGN PROCEDURE).
6. ***IF THE THICKNESS FOR "CBR" VALUES ARE HIGHER THAN MINIMUM PAVEMENT THICKNESS SPECIFIED PER ORDINANCE, THE HIGHER VALUE SHALL BE USED.**

TYPICAL HMAC PAVEMENT SECTION

N.T.S.

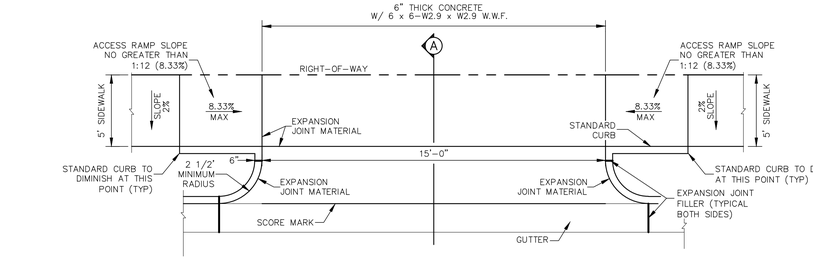


GENERAL NOTES FOR MORTARED RIP-RAP:

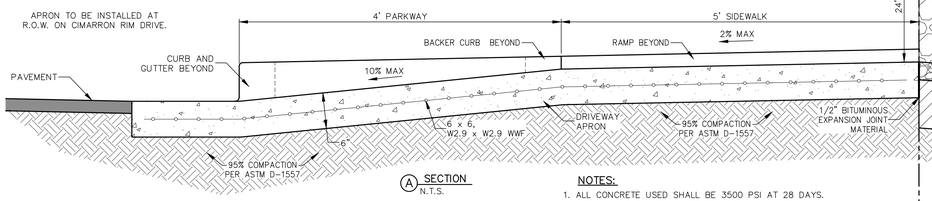
1. MORTAR FOR RIP-RAP SHALL BE TYPE S, 1800psi PER ASTM C270.
2. 3"-4" BEDDING, ROCK EMBEDDED 2" MINIMUM, MORTAR TO SURFACE.
3. ONE INCH EXPANSION JOINTS SHALL BE PROVIDED AT EVERY FIFTY (50) FEET AND DUMMY JOINTS SHALL BE PROVIDED AT EVERY TEN (10) FEET ON CENTER.
4. COUNTERFORTING REQUIRED ON ALL RIP-RAP SLOPES WITH A VERTICAL RISE OF 6' OR MORE 20' ON CENTER. SEE DETAIL THIS SHEET.

MORTARED ROCK RIP-RAP (SLOPE)

1"=4'-0"



PLAN VIEW
SCALE: 1" = 5'-0"



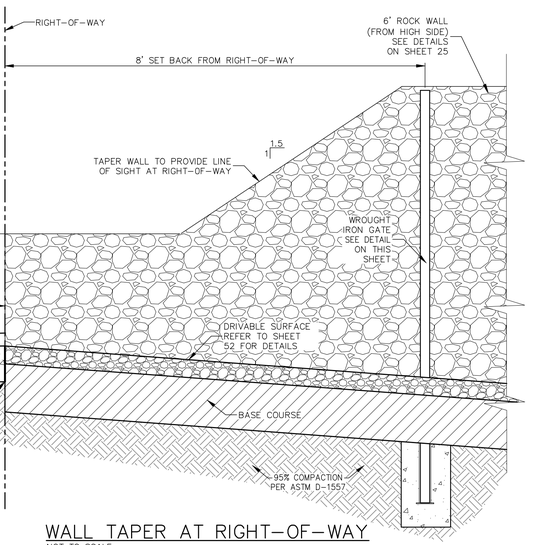
A SECTION
N.T.S.

DRIVEWAY APRON

SCALE AS NOTED

NOTES:

1. ALL CONCRETE USED SHALL BE 3500 PSI AT 28 DAYS.
2. SUBGRADE UNDER DRIVEWAY SHALL BE COMPACTED TO 95% MAXIMUM DENSITY AS PER ASTM D-1557.
3. EXPANSION JOINT FILLER 1/2" BITUMINOUS TYPE PREFORMED, AASHTO M-33.
4. CONTRACTOR SHALL USE SONOMERIC SEALANT WHERE DRIVEWAY MEETS ASPHALTIC SURFACES.



WALL TAPER AT RIGHT-OF-WAY

NOT TO SCALE

BENCHMARK: CITY MONUMENT AT THE CENTERLINE INTERSECTION OF CIMARRON PARK DRIVE AND CIMARRON PARK DRIVE
ELEVATION = 3976.53 (EL PASO CITY DATUM)

NO.	DATE	DESCRIPTION	BY
3	03/15/2021	3rd City Submittal	AHO
2	01/22/2021	2nd City Submittal	AHO
1	11/25/2020	1st City Submittal	AHO

WARNING! BEFORE YOU DIG ANY HOLE, POST OR FENCE, SHALL FIELD LOCATE ALL EXISTING UNDERGROUND IMPROVEMENTS

Texas811 Know what's below. Call before you dig.

BEFORE YOU DIG - CALL

EL PASO ELECTRIC COMPANY	1-800-351-7555
AT&T	1-800-310-4777
TEXAS GAS SERVICE	544-6300
EL PASO WATER UTILITIES	594-5175
PUBLIC SERVICE BOARD (WATER & SEWER)	562-8411, 1-800-DIG-TESS
AFTER HOURS EMERGENCY (EPW)	594-5175
TEXAS EXCAVATION SAFETY SYSTEM	1-800-344-8377
EL PASO STREET LIGHTS MAINTENANCE	212-0151
EL PASO TRAFFIC SIGNAL SYSTEMS AND MAINTENANCE	212-0151

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05/15/21

STATE OF TEXAS
ADRIAN L. ONTIVEROS
124089
LICENSED PROFESSIONAL ENGINEER

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Texas Registered Engineering Firm F-6997
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El Paso, Texas 79912
tel [915] 877.4155
fax [915] 877.4334
www.csaengineers.com

SUBDIVISION
CIMARRON CANYON UNIT TWO SUBDIVISION

SHEET TITLE
STANDARD DETAILS

GOB DESIGN BY:	1908 JOB NO.
GOB-DO-SM DRAWN BY:	12/20/2019 DATE OF SUBMISSION
AHO CHECKED BY:	AS NOTED SCALE

SHEET NO. 23
SHEET SEQUENCE 24 OF 82

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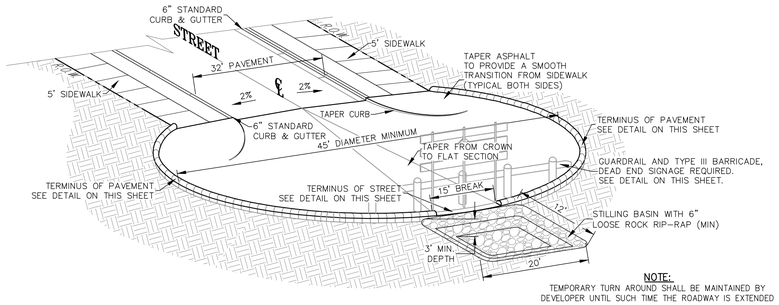
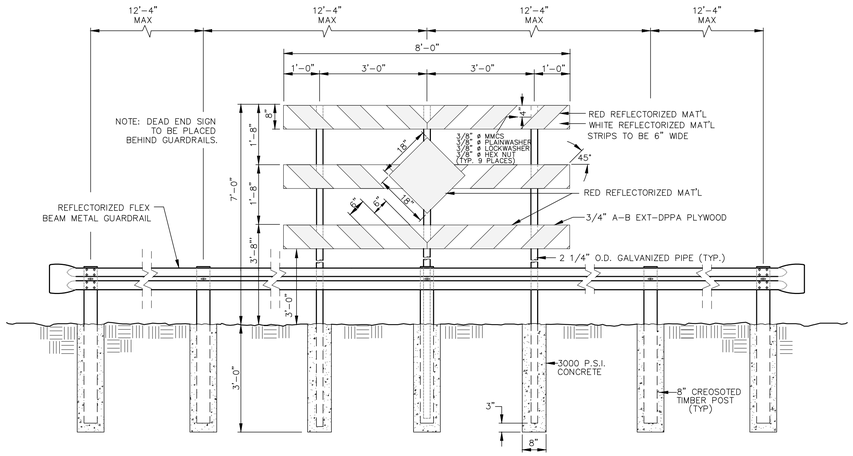
ahoday

BENCHMARK: CITY MONUMENT AT THE CENTERLINE INTERSECTION OF ALAMEDA PASS DRIVE AND CIMARRON PARK DRIVE.
ELEVATION = 3978.53 (EL PASO CITY DATUM)

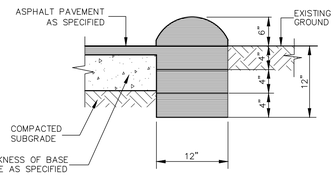


NOTE:
TEMPORARY TURN AROUND SHALL BE MAINTAINED BY DEVELOPER UNTIL SUCH TIME THE ROADWAY IS EXTENDED

TEMPORARY TURN AROUND
SCALE 1"=12'-0"

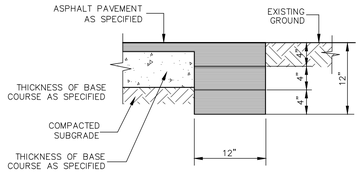


GUARD POSTS WITH RAIL AND DEAD END SIGN
SCALE: 1"=2'-0"



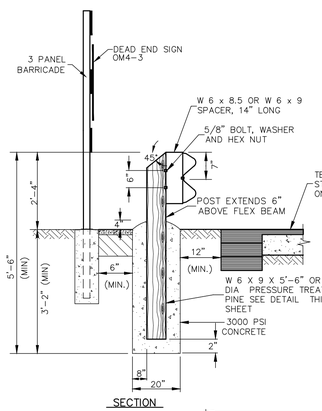
NOTE:
TERMINUS MUST BE CONSTRUCTED IN 4" LIFTS.
FINAL LIFT MUST BE PLACED WITH FINAL PAVEMENT COURSE.

TERMINUS OF PAVEMENT
SCALE 1"=1'-0"

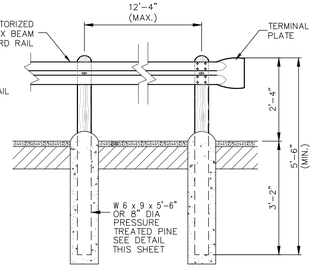


NOTE:
TERMINUS MUST BE CONSTRUCTED IN 4" LIFTS.
FINAL LIFT MUST BE PLACED WITH FINAL PAVEMENT COURSE.

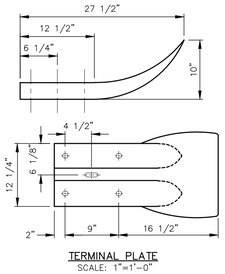
TERMINUS OF STREET
SCALE 1"=1'-0"



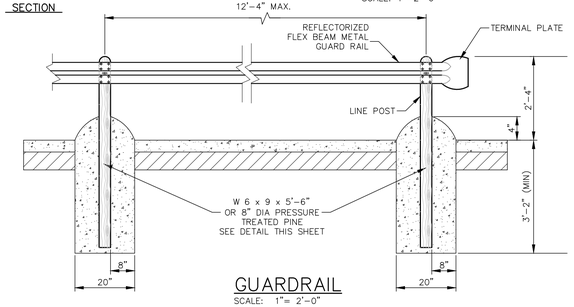
SECTION



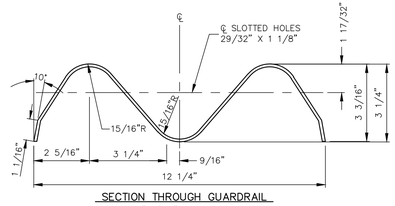
GUARD POSTS WITH RAIL
SCALE: 1"=2'-0"



TERMINAL PLATE
SCALE: 1"=1'-0"



GUARDRAIL
SCALE: 1"= 2'-0"



SECTION THROUGH GUARDRAIL
SCALE: 1"=4'-0"

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S:\Drawings\1908 Cimarron Canyon Unit Two\1908 SH 22-24 (Standard Details).dwg
Layouts

NO.	DATE	DESCRIPTION	BY
3	03/15/2021	3rd City Submittal	AHO
2	01/22/2021	2nd City Submittal	AHO
1	11/25/2020	1st City Submittal	AHO

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SPECTRUM	775-7414
TEXAS EXCAVATION SAFETY SYSTEM	1-800-344-8377
KINDER-MORGAN EPNG PIPELINES	1-800-238-3764
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05/15/21

STATE OF TEXAS
ADRIAN I. ONTIVEROS
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El Paso, Texas 79912
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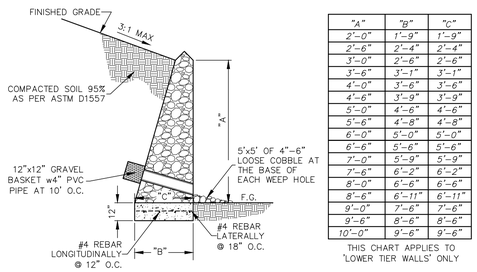
SUBDIVISION
CIMARRON CANYON UNIT TWO SUBDIVISION

SHEET TITLE
STANDARD DETAILS

GOB (DESIGN BY)	1908 (JOB NO.)
GOB-DG-SM (DRAWN BY)	12/20/2019 (DATE OF SUBMISSION)
AHO (CHECKED BY)	AS NOTED (SCALE)

SHEET NO. **24**
SHEET SEQUENCE **25** OF **82**



"A"	"B"	"C"
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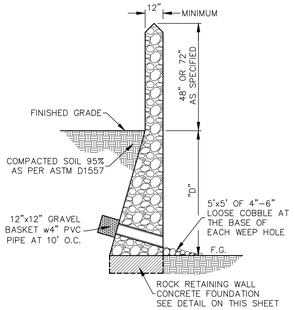
2'-6"	2'-4"	2'-4"
3'-0"	2'-6"	2'-6"
3'-6"	3'-1"	3'-1"
4'-0"	3'-6"	3'-6"
4'-6"	3'-9"	3'-9"
5'-0"	4'-6"	4'-6"
5'-6"	4'-8"	4'-8"
6'-0"	5'-0"	5'-0"
6'-6"	5'-6"	5'-6"
7'-0"	5'-9"	5'-9"
7'-6"	6'-2"	6'-2"
8'-0"	6'-6"	6'-6"
8'-6"	6'-11"	6'-11"
9'-0"	7'-6"	7'-6"
9'-6"	8'-6"	8'-6"
10'-0"	9'-6"	9'-6"

THIS CHART APPLIES TO 'LOWER TIER WALLS' ONLY

SLOPE CONDITION

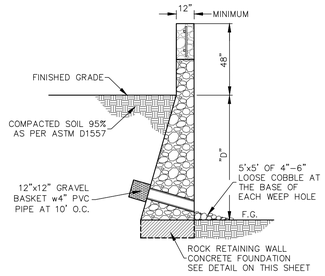
LOWER TIER WALL (RETAINING) BY DEVELOPER

SCALE: NTS



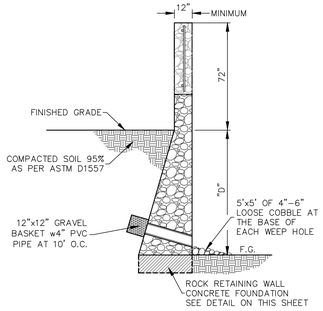
ROCK RETAINING WALL WITH GARDEN WALL EXTENSION

SCALE: NTS



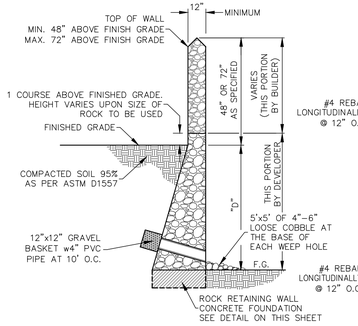
ROCK RETAINING WALL WITH 2' GARDEN WALL AND 2' VIEW FENCE

SCALE: NTS



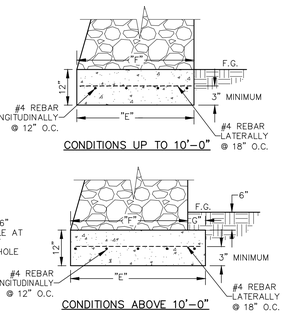
ROCK RETAINING WALL WITH 2' GARDEN WALL AND 4' VIEW FENCE

SCALE: NTS



ROCK RETAINING WALL BY DEVELOPER WITH GARDEN WALL EXTENSION BY BUILDER

SCALE: NTS



"D"	"E"	"F"	"G"
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2'-6"	1'-10"	1'-10"	–
3'-0"	2'-3"	2'-3"	–
3'-6"	2'-4"	2'-4"	–
4'-0"	2'-9"	2'-9"	–
4'-6"	2'-11"	2'-11"	–
5'-0"	3'-3"	3'-3"	–
5'-6"	3'-5"	3'-5"	–
6'-0"	3'-9"	3'-9"	–
6'-6"	4'-0"	4'-0"	–
7'-0"	4'-4"	4'-4"	–
7'-6"	4'-9"	4'-9"	–
8'-0"	5'-0"	5'-0"	–
8'-6"	5'-4"	5'-4"	–
9'-0"	5'-9"	5'-9"	–
9'-6"	6'-0"	6'-0"	–
10'-0"	6'-5"	6'-5"	–
10'-6"	6'-9"	6'-9"	–
11'-0"	7'-2"	7'-2"	–
11'-6"	7'-8"	7'-8"	–
12'-0"	8'-6"	8'-6"	–
12'-6"	8'-8"	8'-2"	0'-6"
13'-0"	8'-11"	8'-5"	0'-6"
13'-6"	9'-2"	8'-8"	0'-6"
14'-0"	10'-0"	9'-6"	0'-6"
14'-6"	11'-0"	10'-6"	0'-6"
15'-0"	12'-0"	11'-6"	0'-6"
15'-6"	13'-2"	12'-8"	0'-6"
16'-0"	13'-1"	12'-4"	0'-9"
16'-6"	12'-10"	11'-10"	1'-0"
17'-0"	12'-9"	11'-3"	1'-6"
17'-6"	13'-0"	11'-6"	1'-6"
18'-0"	13'-9"	12'-0"	1'-9"

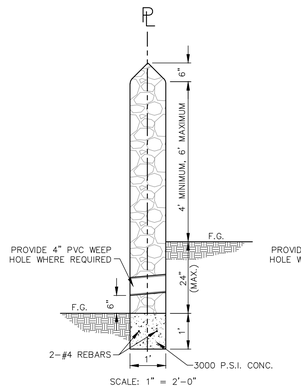
GENERAL NOTES:

1. Footing shall be placed on subgrade compacted to a minimum of 95% of its maximum dry density in accordance with the Modified Proctor per the specifications of ASTM D 1557.
2. Backfill shall be placed in 8" loose lifts and compacted to 95% in accordance with the Modified Proctor per ASTM D 1557. Compaction utilizing vehicular methods shall be prohibited within 8' of any rock wall.
3. All rebar shall be covered a minimum of 2" or as specified in details. EXCEPTION: Where the footings are to be extended and cold joints are formed, rebar shall be 'left long' a minimum of 12" and shall be lapped and tied for the continuation of the foundation footings. Lap and tie in all rebar in accordance with all A.C.I. Standards for Reinforcement Steel.
4. Stem of wall, if required, to be constructed in 3' courses maximum. Successive courses may be placed only when the next lower course has achieved its 28 day specified mortar strength.
5. All rebar used for foundation footings shall be Grade 60 or better.
6. All concrete for footings shall be 3,000 PSI minimum at 28 days. Contractor shall provide a minimum of three cylinders for testing per 100 linear feet of footing foundations installed.
7. The first course of rock for the construction of the rock walls shall be embedded in the wet concrete a minimum of 4" to a maximum of 6" and allowed to cure a minimum of 24 hours before adding additional courses to the walls.

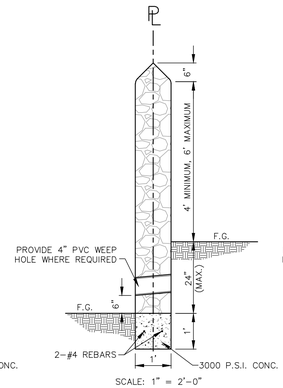
ROCK RETAINING WALL CONCRETE FOUNDATIONS

SCALE: NTS

RETAINING WALLS GREATER THAN 4' SHALL BE INSTALLED BY THE DEVELOPER.



SCALE: 1" = 2'-0"



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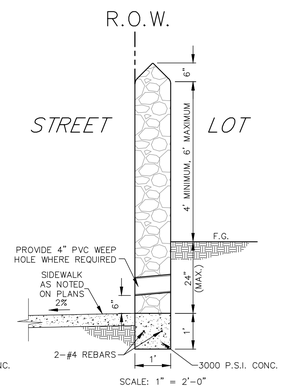

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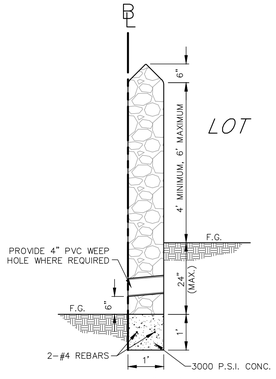
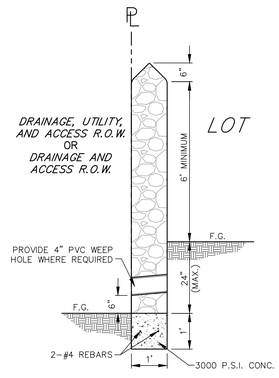
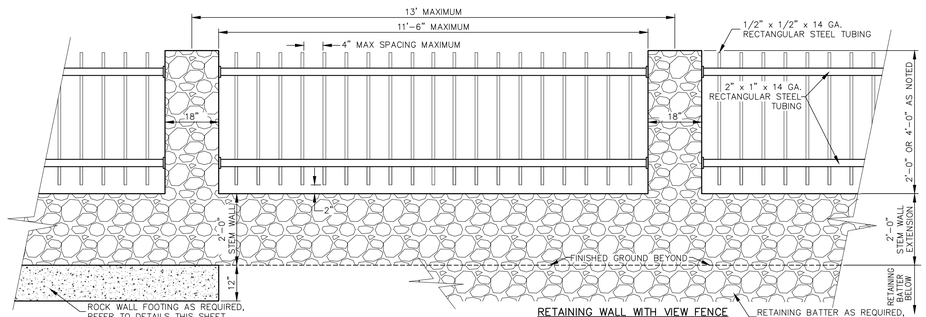


SCALE: 1" = 2'-0"



SCALE: 1" = 2'-0"

DESIGNS SHOWN SHALL BE CONSIDERED 'TYPICAL'. VIEW FENCE MAY BE SUBSTITUTED TO MAKE UP OVERALL HEIGHT. SEE DETAIL BELOW.



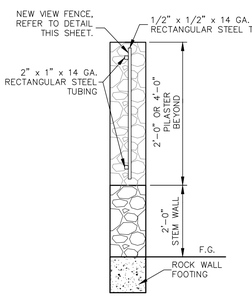
GARDEN WALL WITH VIEW FENCE

LOCATIONS AS NOTED ON GRADING PLAN

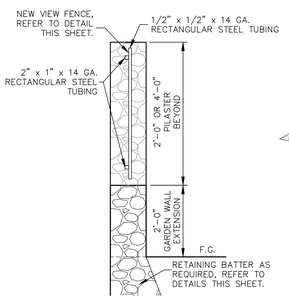
RETAINING WALL WITH VIEW FENCE

VIEW FENCE

SCALE: 1"=2'-0"



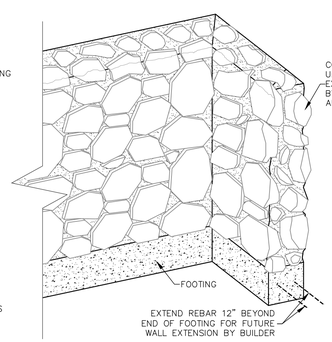
GARDEN WALL WITH VIEW FENCE SECTION



RETAINING WALL WITH VIEW FENCE SECTION

SCALE: 1" = 2'-0"

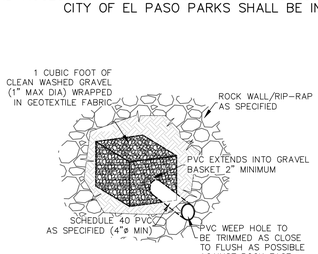
ALL ROCK WALLS AT THE SUBDIVISION BOUNDARY AND ROCK WALLS ABUTTING DRAINAGE AND ACCESS OR DRAINAGE, UTILITY AND ACCESS RIGHTS-OF-WAY, AND WALLS ABUTTING CITY OF EL PASO PARKS SHALL BE INSTALLED BY THE DEVELOPER.



THIS DETAIL IS REPRESENTATIONAL ONLY. IT DOES NOT REFLECT ROCK WALL TYPE, ROCK WALL HEIGHT OR PROPOSED GRADE ELEVATIONS.

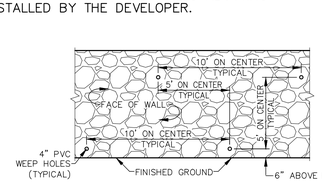
UNFINISHED ROCK WALL EDGE

SCALE: 1"=2'-0"



WEEP HOLES

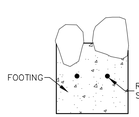
N.T.S.



WEEP HOLE STAGGER

NTS

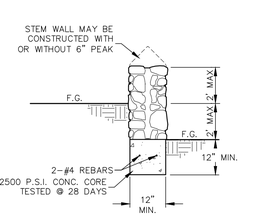
ALL PVC FOR WEEP HOLES SHALL BE 4" DIAMETER SCHEDULE 40 MINIMUM, BLACK OR GRAY. WHITE OR OTHER COLORED PVC SHALL NOT BE ACCEPTED.



THE FIRST COURSE OF ROCK FOR ALL ROCK WALLS SHALL BE EMBEDDED IN THE FOUNDATION FOOTING OF THE WALL AT THE TIME CONCRETE IS POURED. EMBEDMENT SHALL BE A MINIMUM OF 4" UP TO A MAXIMUM OF 6", AND SHALL BE ALLOWED TO CURE FOR AT LEAST 24 HOURS BEFORE ADDING ADDITIONAL COURSES TO THE WALL. DETAILS ON THIS SHEET ARE DRAWN GEOMETRICALLY FOR CLARITY AND DO NOT REPRESENT THIS STEP IN CONSTRUCTION.

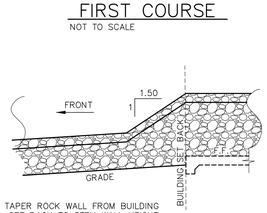
FIRST COURSE

NOT TO SCALE



2' STEM WALL DETAIL

SCALE: 1/2" = 1'-0"



TAPER ROCK WALL FROM BUILDING SET BACK TO STEM WALL HEIGHT

TAPER TO STEMWALL

SCALE: 1/4"= 1'-0"

ROCK WALLS

MATERIALS: Stone for rock walls shall consist of quarried limestone as nearly uniform in section as is practicable. Field stone or salvaged stone from rock walls shall be used only here directed by the Engineer. The stone shall be dense, resistant to the action of air and water, clean of and dirt, debris, or old mortar and suitable in all respects for the purpose intended.

Mortar for the rock walls shall consist by volumes of one (1) part Portland cement, one-quarter to one-half (1/4 to 1/2) part hydrated lime, and three (3) parts clean, hard, durable sand (2 1/4 to 3 times the sum of the volumes of cement and lime combined, per City Building Code). Mortar for walls shall be Type S, ASTM Specification C270-73. Compressive strength = 1800 p.s.i. (28 days). Reinforcing steel shall conform to ASTM A 615, Grade 60 and shall be lapped and tied per the A.C.I. Standards for Reinforcing Steel. If rock wall is frequently exposed to water, lime shall not be used and the portions shall be one part Portland cement and three parts sand.

CONSTRUCTION METHODS: Prior to placing the concrete foundation, the excavation for the rock walls shall be made to the proper section, and compacted to 95% of the maximum density per ASTM D 1557, modified proctor. If considered necessary by the Engineer, the bottom of excavation shall be hand-tamped and sprinkled prior to placing concrete. The excavated area for rock walls shall be moist when the concrete is placed. Reinforcing steel shall be placed continuously as shown on the plans and properly supported throughout the placement of concrete. The surface of the concrete shall not be troweled. The first course of stone is to be embedded 4" minimum to 6" maximum into the fresh concrete and cured a minimum of 24 hours before any additional stone or mortar is placed on the foundation. The concrete shall be allowed to cure a minimum of 48 hours before more than 300 pounds per square foot of stone and mortar is placed on the foundation.

Stone shall be selected as to size and shape in order to secure fairly large, flat surfaced stone which may be erected with true and even surface faces and a minimum of exposed mortar. All stones shall be thoroughly cleaned, wetted, hand-placed and embedded in mortar so that no stones shall touch each other or the concrete foundation but shall be firmly bound together with mortar. The finished surfaces shall present a neat, clean, workmanlike and true-to-line appearance. The interior of the rock wall shall be completely filled with spalls and pieces of the specified stone, completely embedded and surrounded by mortar with no voids.

The erection of the rock wall shall not be more than three feet in height for every 24-hour period to allow for the lower portions to become sufficiently set. All stones shall be thoroughly wetted before being placed in fresh mortar. The last layer of rock prior to break of construction phase shall not have any mortar on top. Fresh mortar must be used for continuation of work following erection break. Voids within the interior of the wall construction shall not be left open to the elements during an erection break. All voids shall be filled, or the top of the wall may be protected with a tarp of plastic or other waterproof covering.

Weep holes shall be placed on the rock wall as shown on the plans. The weep holes shall not be more than ten (10) feet apart on-center horizontally and not more than five (5) feet apart horizontally and staggered. The weep holes shall consist of four-inch PVC pipe, Schedule 40 or better, or other pipe as approved by the Engineer, neatly cut to the exposed surface of the rock wall. Gray, black, or other dark neutral colored PVC pipe shall be installed, white or colored PVC shall not be accepted. No less than one cubic foot of one-inch to 3/4-inch of graded gravel shall be placed at the inlet (back side of wall) of each weep hole as shown on the plans.

Where discrepancies may exist between these and other notes and specifications in other details on this or other sheets within this plan set, the notes on the other details shall govern. All rock walls installed shall conform to the notes and details contained within the City of El Paso Design Standards for Construction.

ALL SLOPE PROTECTION WITHIN THE BOUNDS OF THIS SUBDIVISION SHALL BE INSTALLED BY THE BUILDER UNLESS NOTED OTHERWISE IN THE PLANS. METHODS FOR PROTECTION ARE LISTED BUT NOT LIMITED TO THOSE SHOWN IN THE NOTE BELOW. BUILDER MUST RECEIVE APPROVAL FROM DEVELOPMENT SERVICES FOR METHOD(S) PROPOSED PRIOR TO INSTALLATION. SLOPE PROTECTION FOR OFFSITE GRADING SHALL BE INSTALLED AND MAINTAINED BY THE DEVELOPER.

GRADED SLOPES AS SHOWN ON THE GRADING PLAN HAVE BEEN ENGINEERED, BASED ON A GEOTECHNICAL SOILS INVESTIGATION REPORT, TO STAND AT THE SLOPE INDICATED. HOWEVER, EROSION IS INEVITABLE ON ANY SLOPE, EVEN IN HIGHLY COHESIVE SOILS. PROPERTY OWNERS ARE RESPONSIBLE FOR THE MAINTENANCE OF SLOPES WITHIN THEIR LOTS. IF NO MEASURES HAVE BEEN TAKEN PRIOR TO PURCHASE, IT IS HIGHLY RECOMMENDED THAT THE PROPERTY OWNER PROVIDE ANTI-EROSION CONTROLS ON GRADED SLOPES WITHIN THE BOUNDS OF THEIR LOT. THESE MAY INCLUDE BUT ARE NOT LIMITED TO CONCRETE RIP-RAP, MORTARED ROCK RIP-RAP (REQUIRED ON SLOPES 1:1 OR GREATER), LOOSE ROCK RIP-RAP OF A SPECIFIED DIAMETER, SOIL RETENTION BLANKETS, PLANTINGS OF NATIVE SPECIES. (SOD AND OTHER GRASSES ARE NOT RECOMMENDED ON SLOPES GREATER THAN 4:1). BEFORE PERFORMING ANY WORK, PROPERTY OWNERS SHOULD CONSULT A LICENSED, PROFESSIONAL CIVIL ENGINEER. ADDITIONALLY, IT IS THE RESPONSIBILITY OF THE PROPERTY OWNER TO CLEAN AND MAINTAIN ANY WEEP HOLES THAT HAVE BEEN INSTALLED IN WALLS OR RIP-RAP. WEEP HOLES ARE AN INTEGRAL COMPONENT OF DRAINAGE SO AS TO PREVENT GROUND SATURATION BEHIND WALLS AND RIP-RAP THAT COULD CAUSE STRUCTURAL FAILURES. PROPERTY OWNERS SHOULD PERFORM REGULAR INSPECTIONS, ESPECIALLY AFTER HEAVY RAINS, AND CLEAR WEEP HOLES OF ANY SILT AND DEBRIS. PROPERLY INSTALLED WEEP HOLES SHOULD ALLOW THE PASSAGE OF ANY STORM WATER RUN OFF THAT MAY ACCUMULATE BEHIND WALLS OR BENEATH RIP-RAP AS A RESULT OF INFILTRATION. WIRE ENCASED GRAVEL FILTERS WRAPPED IN A GEOTEXTILE FABRIC SHOULD PREVENT LARGE DEBRIS FROM BLOCKING THE WEEP HOLE. HOWEVER, THE PASSAGE OF SILT, SAND, AND OTHER FINE PARTICULATE MATERIAL UP TO ONE-QUARTER INCH IN DIAMETER SHOULD BE CONSIDERED NORMAL. UNDER NO CIRCUMSTANCES SHOULD THE WEEP HOLES BE INTENTIONALLY BLOCKED TO PREVENT PASSAGE OF STORM WATER.

GRADED SLOPES

BENCHMARK: CITY MONUMENT AT THE CENTERLINE INTERSECTION OF ROJAS DRIVE AND CIMARRON PARK DRIVE.
ELEVATION = 3978.53 (EL. PASO CITY DATUM)

NO.	DATE	DESCRIPTION	BY
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03/15/2021

STATE OF TEXAS
ADRIAN I. ONTIVEROS
124089
LICENSED PROFESSIONAL ENGINEER

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SUBDIVISION
CIMARRON CANYON UNIT TWO SUBDIVISION

SHEET TITLE
ROCK WALL DETAILS

GOB	1908
DESIGN BY	JOB NO.
GOB-DG-SM	12/20/2019
DRAWN BY	DATE OF SUBMISSION
AHO	AS NOTED
CHECKED BY	SCALE

SHEET NO.
25
SHEET SEQUENCE
26 OF 82

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S:\CSA\1908 Cimarron Canyon Unit Two\1908 3rd Submittal\1908 Sht 25 (Rock Wall Details).dwg
dgilstrap

BENCHMARK: CITY MONUMENT AT THE CENTERLINE INTERSECTION OF ARDEN PASS DRIVE AND CIMARRON PARK DRIVE.
ELEVATION = 3978.53 (EL PASO CITY DATUM)

NO.	DATE	DESCRIPTION	BY
3	03/15/2021	3rd City Submittal	AHO
2	01/22/2021	2nd City Submittal	AHO
1	11/25/2020	1st City Submittal	AHO

WARNING! BEFORE YOU DIG ANY PROJECT AREA CONTRACTOR SHALL CALL FOR EXISTING UNDERGROUND IMPROVEMENTS

Texas 811 Know what's below. Call before you dig.

BEFORE YOU DIG - CALL

EL PASO ELECTRIC COMPANY	543-5720
	1-800-351-3555
TEXAS GAS SERVICE	544-6300
TGS EMERGENCY HOTLINE	562-8411/562-2603
AFTER HOURS EMERGENCY (WATER & SEWER)	1-800-351-3555
AFTER HOURS EMERGENCY (EPW)	594-5775
SPECTRUM	775-7414
NEW MEXICO ONE-CALL SYSTEM	1-800-321-2537
KINDER-MORGAN/EPNG PIPELINES	1-800-238-3764
EL PASO STREETS AND MAINTENANCE	212-0151
EL PASO TRAFFIC SIGNAL STREETS AND MAINTENANCE	tlengsanitation@elpasotexas.gov

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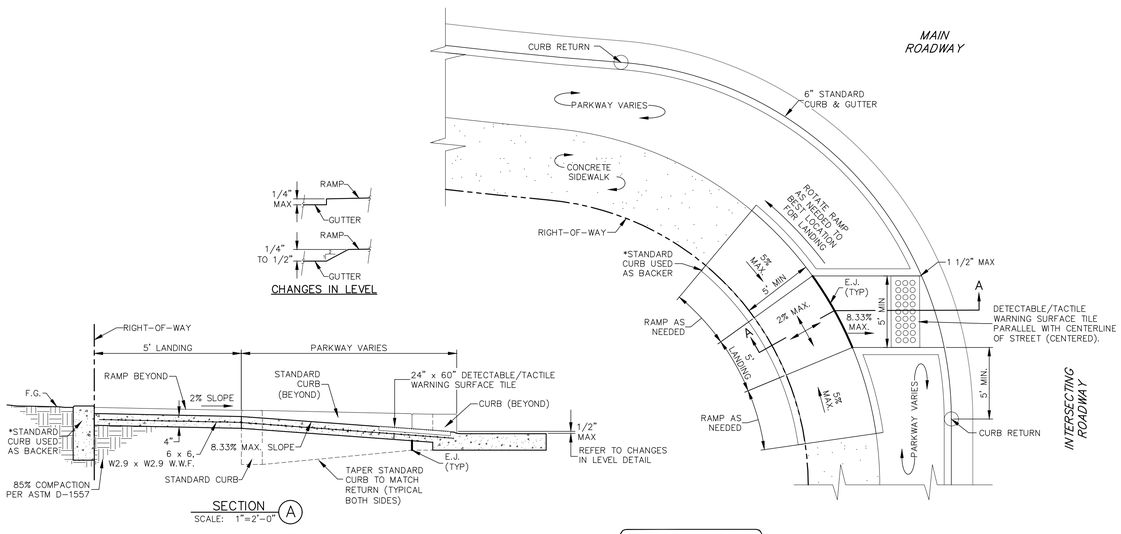
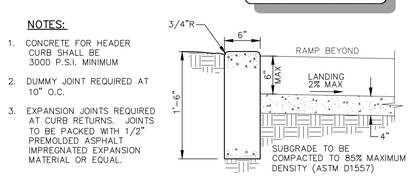


SECTION (A)
SCALE: 1"=2'-0"

DIRECTIONAL RAMPS
SCALE: AS NOTED

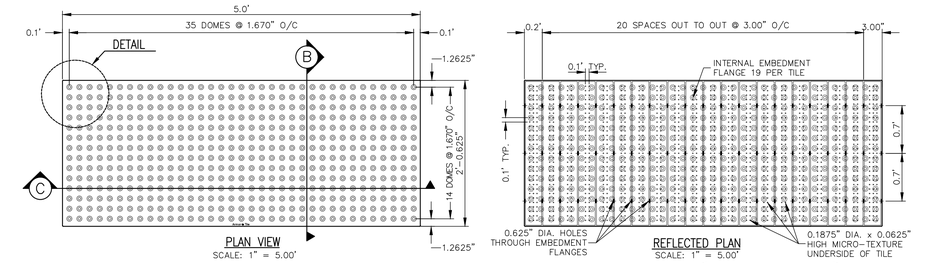
*WHERE ROCK WALL IS TO BE INSTALLED ADJACENT TO ACCESSIBLE RAMPS, BACKER CURB IS NOT REQUIRED.

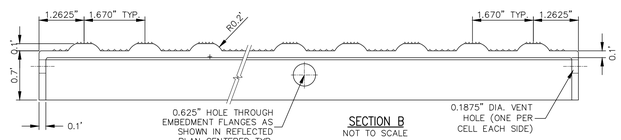


NOTES:

1. CONCRETE FOR HEADER CURB SHALL BE 3000 P.S.I. MINIMUM
2. DUMMY JOINT REQUIRED AT 10" O.C.
3. EXPANSION JOINTS REQUIRED AT CURB RETURNS. JOINTS TO BE PACKED WITH 1/2" PREMOLDED ASPHALT IMPREGNATED EXPANSION MATERIAL OR EQUAL.

STANDARD CURB DETAIL
SCALE: 1" = 1'-0"

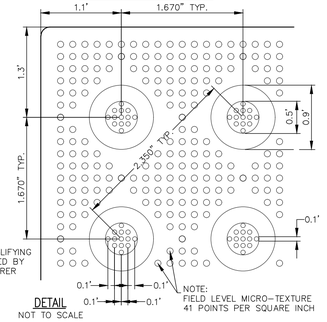


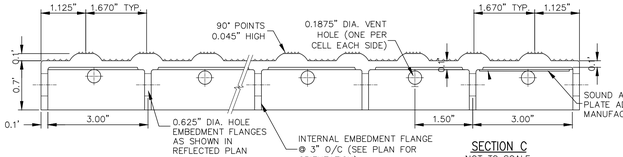


SECTION B
NOT TO SCALE

Armor-Tile
DETECTABLE/TACTILE WARNING SURFACE TILE 24" x 60" CAST IN PLACE INLINE DOME TACTILE TILE

ARMOR-TILE MODEL ADA-C-2460





SECTION C
NOT TO SCALE

DETAIL
NOT TO SCALE

CAST IN PLACE DETECTABLE/TACTILE WARNING SURFACE TILE, 24" x 60" TO BE INSTALLED WITH ALL ACCESSIBLE RAMPS WITHIN THE RIGHTS-OF-WAY. ARMOR-TILE ADA-C-2460 OR APPROVED EQUAL SHALL BE UTILIZED. INSTALLATION SHALL BE PER MANUFACTURER'S DETAILS AND SPECIFICATIONS.

DETECTABLE/TACTILE WARNING SURFACE TILE
SCALE: AS NOTED

ALL ACCESSIBLE RAMPS WITHIN THE PUBLIC RIGHT-OF-WAY SHALL BE INSTALLED BY DEVELOPER

ALL EXISTING AND PROPOSED SIDEWALKS, BARRIER FREE RAMPS, HANDICAP PARKING, DRIVEWAY CROSSWALKS, DRIVEWAYS AND ACCESSIBLE ROUTES SHALL COMPLY WITH A.D.A., T.A.S. AND CITY OF EL PASO REQUIREMENTS. EXISTING INFRASTRUCTURE NOT COMPLYING SHALL BE REMOVED AND REPLACED TO MEET STANDARDS.

05/15/21

STATE OF TEXAS
ADRIAN I. ONTIVEROS
124089
LICENSED
PROFESSIONAL ENGINEER

csa design group, inc.
Texas Registered Engineering Firm F-9997
1845 Northwestern Dr. Ste C
El Paso, Texas 79912
tel [915] 877.4155
fax [915] 877.4334
www.csaengineers.com

SUBDIVISION
CIMARRON CANYON UNIT TWO SUBDIVISION

SHEET TITLE
ACCESSIBILITY DETAILS

GOB (DESIGN BY)	1908 (JOB NO.)
GOB-DG-SM (DRAWN BY)	12/20/2019 (DATE OF COMMISSION)
AHO (CHECKED BY)	AS NOTED (SCALE)

SHEET NO. 26
SHEET SEQUENCE 27 OF 82

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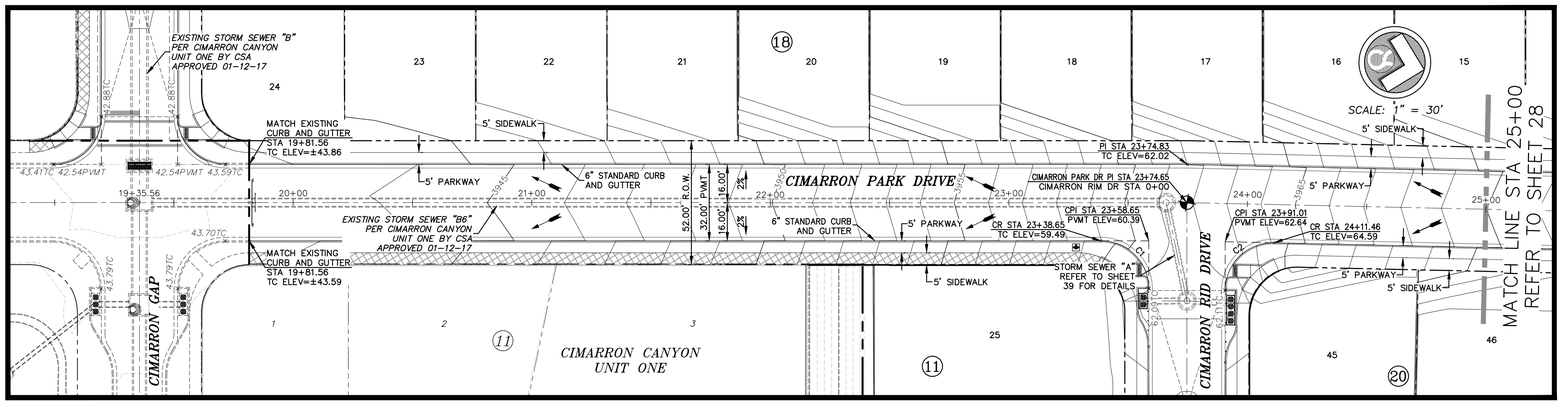
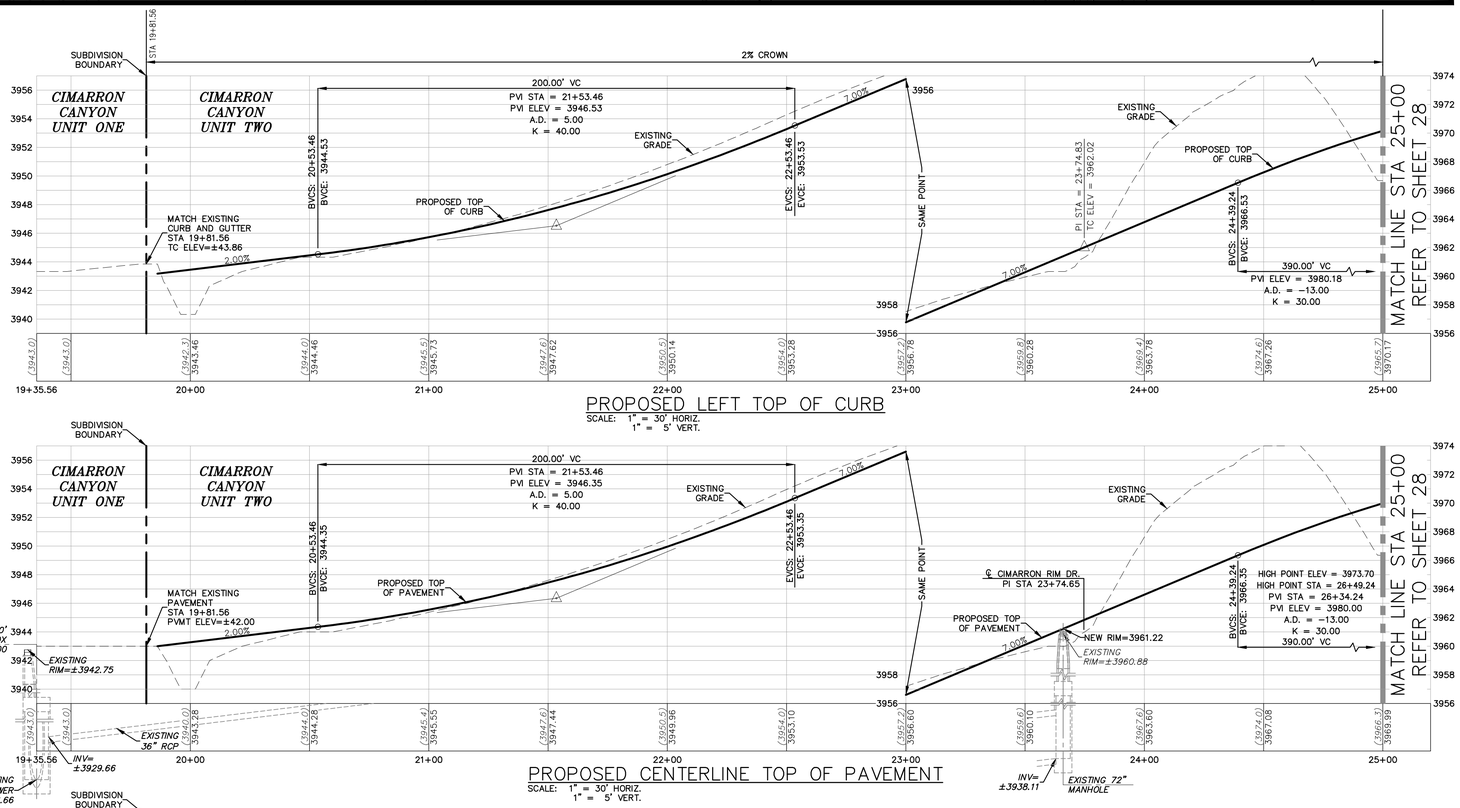
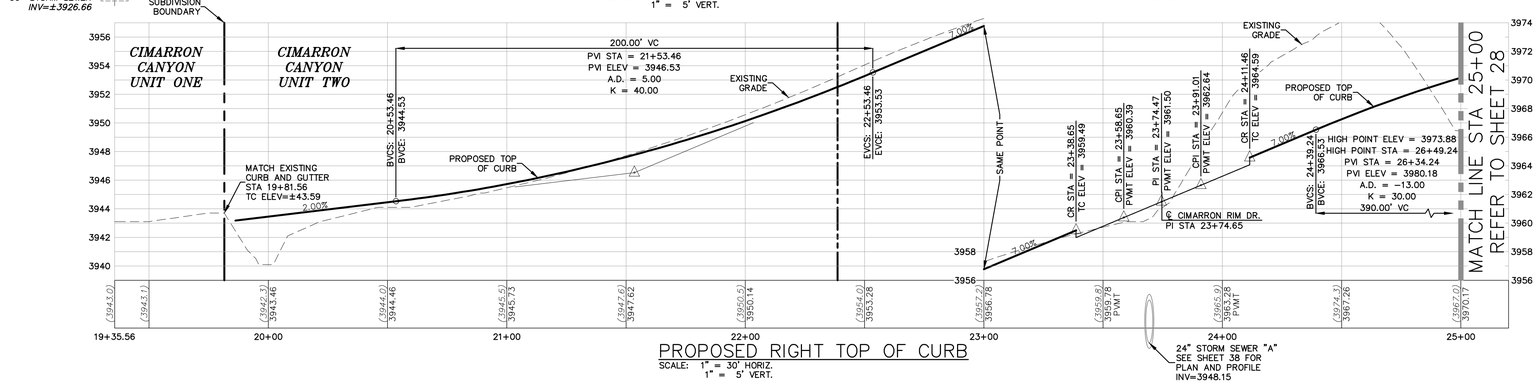
Q:\Dwg\1908 Cimarron Canyon Unit Two\1908 Sht Submittal\1908 Sht 26 (Accessibility Details).dwg
dgallardo





PROPOSED LEFT TOP OF CURB
SCALE: 1" = 30' HORIZ.
1" = 5' VERT.

PROPOSED CENTERLINE TOP OF PAVEMENT
SCALE: 1" = 30' HORIZ.
1" = 5' VERT.



PROPOSED RIGHT TOP OF CURB
SCALE: 1" = 30' HORIZ.
1" = 5' VERT.

ALL EXISTING AND PROPOSED SIDEWALKS, BARRIER FREE RAMPS, HANDICAP PARKING, DRIVEWAY CROSSWALKS, DRIVEWAYS AND ACCESSIBLE ROUTES SHALL COMPLY WITH A.D.A., T.A.S. AND CITY OF EL PASO REQUIREMENTS. EXISTING INFRASTRUCTURE NOT COMPLYING SHALL BE REMOVED AND REPLACED TO MEET STANDARDS.

ALL SIDEWALKS TO BE INSTALLED BY BUILDER UNLESS NOTED OTHERWISE

ALL ACCESSIBLE RAMPS WITHIN THE RIGHT-OF-WAY TO BE INSTALLED BY THE DEVELOPER

REFER TO SHEET 26 FOR ACCESSIBLE RAMP DETAILS

SIDEWALK BY DEVELOPER

CURVE TABLE						
CURVE	RADIUS	LENGTH	TANGENT	CHORD	BEARING	DELTA
C1	20.00	31.42	20.00	28.28	S76°27'11"W	90°00'00"
C2	20.00	31.86	20.45	28.60	S12°16'21"E	91°16'28"

BENCHMARK: CITY MONUMENT AT THE CENTERLINE INTERSECTION OF MESA HILLS DRIVE AND CIMARRON PARK DRIVE.
ELEVATION = 3978.53 (EL PASO CITY DATUM)

NO.	DATE	DESCRIPTION	BY
3	03/15/2021	3rd City Submittal	AHO
2	01/22/2021	2nd City Submittal	AHO
1	11/25/2020	1st City Submittal	AHO

BEFORE YOU DIG - CALL

EL PASO ELECTRIC COMPANY	543-5720
AT&T	1-800-252-1133
TEXAS GAS SERVICE	544-6300
TGS EMERGENCY HOTLINE	562-8411/562-2603
PUBLIC SERVICE BOARD (WATER & SEWER)	1-800-656-1555
AFTER HOURS EMERGENCY (EPW)	594-5775
SPECTRUM	775-7414
TEXAS 811 EXCAVATION SAFETY SYSTEM	1-800-344-8377
KINDER-MORGAN EPNG PIPELINES	1-800-238-3764
EL PASO TRAFFIC SIGNAL STREETS AND MAINTENANCE	212-0151

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03/15/2021
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SUBDIVISION
CIMARRON CANYON UNIT TWO SUBDIVISION

SHEET TITLE
CIMARRON PARK DRIVE PLAN AND PROFILE

GOB DESIGN BY	1908 JOB NO.
GOB-DG-SM DRAWN BY	12/20/2019 DATE OF COMMISSION
AHO CHECKED BY	AS NOTED SCALE

SHEET NO.
27
SHEET SEQUENCE
28 OF 82

LEGEND

- LOT LINE
- UTILITY & SIDEWALK EASEMENT
- CENTER LINE OF STREET
- STREET R.O.W.
- DRAINAGE & UTILITY R.O.W.
- 4" ROLLED CURB & GUTTER
- SUBDIVISION BOUNDARY LINE
- 3728.85 PROPOSED TOP OF CURB FINISHED GRADES
- (3729.2) EXISTING GRADE
- TC=08.09 PROPOSED TOP OF CURB ELEVATION
- PVMT=08.65 PROPOSED PAVEMENT ELEVATION
- DIRECTION OF RUNOFF FLOW
- HIGH POINT
- LOW POINT
- POINT OF VERTICAL INTERSECTION
- 50' TRANSITION AT INTERSECTION
- PROPOSED CITY MONUMENT

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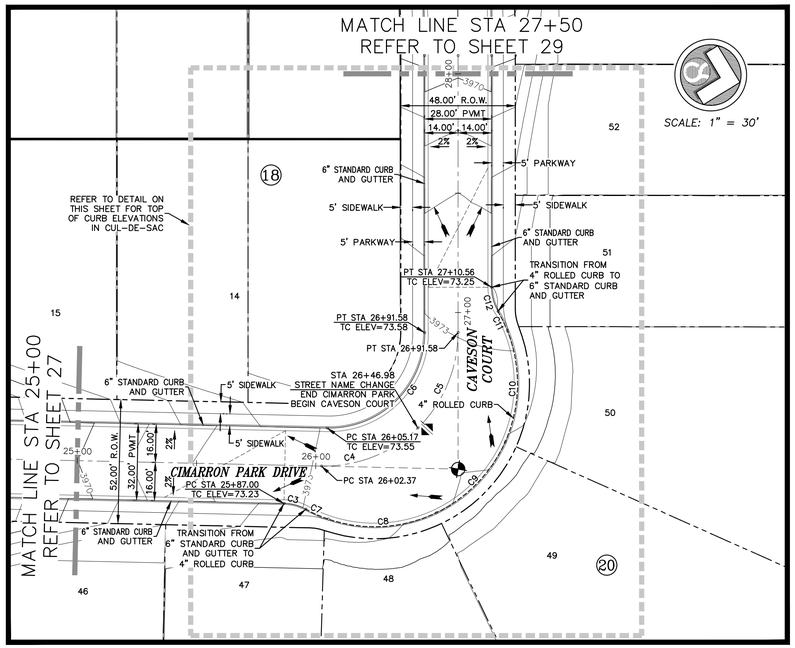
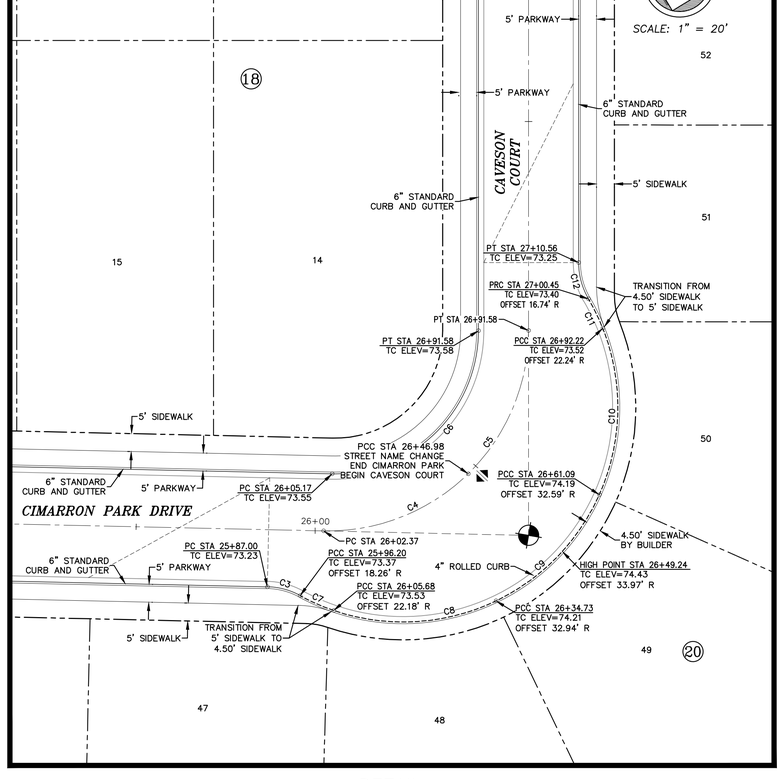
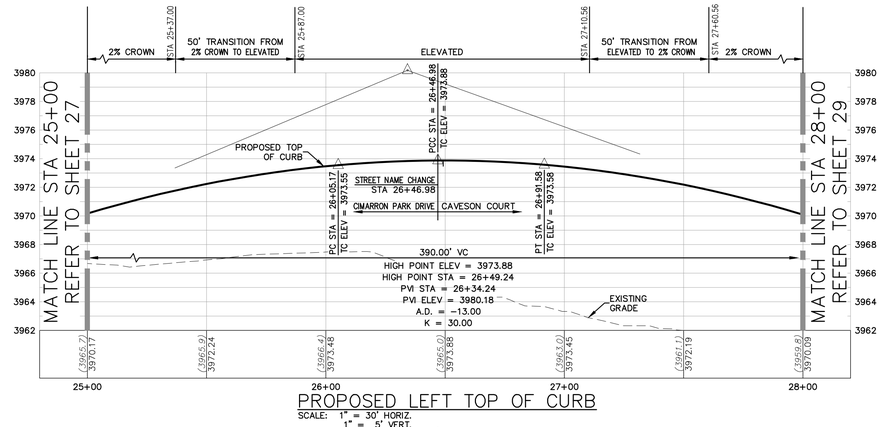
dgolinski

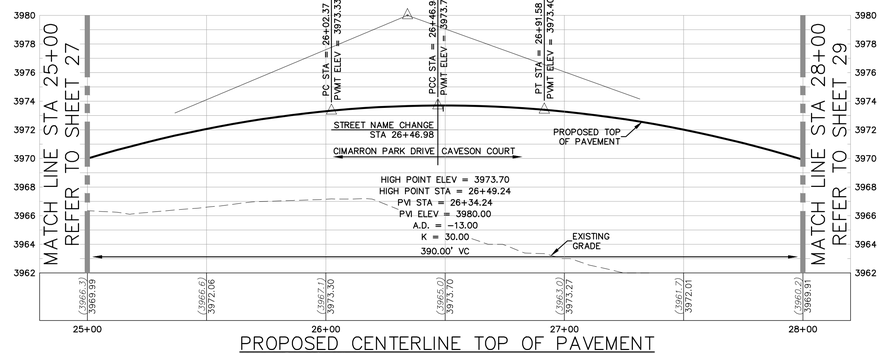




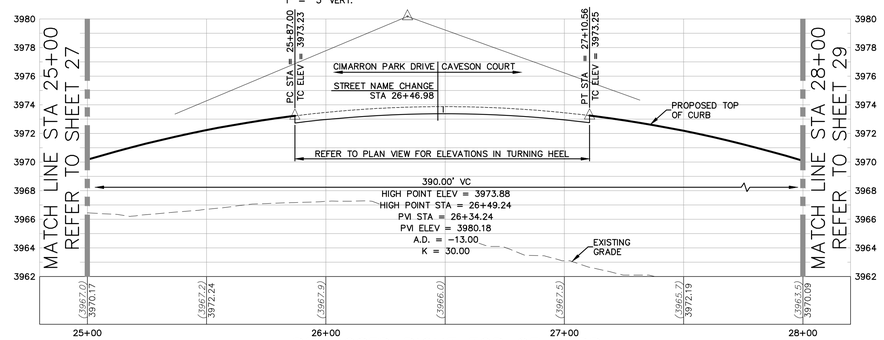
DETAIL
SCALE: 1" = 20'



PROPOSED LEFT TOP OF CURB
SCALE: 1" = 30' HORIZ.
1" = 5' VERT.



PROPOSED CENTERLINE TOP OF PAVEMENT
SCALE: 1" = 30' HORIZ.
1" = 5' VERT.



PROPOSED RIGHT TOP OF CURB
SCALE: 1" = 30' HORIZ.
1" = 5' VERT.

BENCHMARK: CITY MONUMENT AT THE CENTERLINE INTERSECTION OF MONTWOOD DRIVE AND CIMARRON PARK DRIVE.
ELEVATION = 3978.53 (EL PASO CITY DATUM)

ALL EXISTING AND PROPOSED SIDEWALKS, BARRIER FREE RAMPS, HANDICAP PARKING, DRIVEWAY CROSSWALKS, DRIVEWAYS AND ACCESSIBLE ROUTES SHALL COMPLY WITH A.D.A., T.A.S. AND CITY OF EL PASO REQUIREMENTS. EXISTING INFRASTRUCTURE NOT COMPLYING SHALL BE REMOVED AND REPLACED TO MEET STANDARDS.

ALL SIDEWALKS TO BE INSTALLED BY BUILDER UNLESS NOTED OTHERWISE

ALL ACCESSIBLE RAMPS WITHIN THE RIGHT-OF-WAY TO BE INSTALLED BY THE DEVELOPER

REFER TO SHEET 26 FOR ACCESSIBLE RAMP DETAILS

SIDEWALK BY DEVELOPER

CURVE TABLE

CURVE	RADIUS	LENGTH	TANGENT	CHORD	BEARING	DELTA
C3	20.00	9.57	4.88	9.47	S15°07'46"W	27°24'07"
C4	56.00	44.60	23.56	43.43	N12°16'34"W	45°38'08"
C5	56.00	44.60	23.56	43.43	N57°54'41"W	45°38'08"
C6	40.00	63.72	40.90	57.19	N12°16'21"W	91°16'28"
C7	60.00	10.27	5.15	10.26	N15°07'46"E	9°48'29"
C8	60.00	46.59	24.54	45.43	N51°19'15"E	44°29'13"
C9	60.00	42.27	22.05	41.40	N39°09'56"W	40°21'42"
C10	60.00	47.79	25.24	46.53	N79°31'38"W	45°37'57"
C11	60.00	9.17	4.59	9.16	S54°50'25"W	8°45'17"
C12	20.00	10.60	5.43	10.48	N76°27'11"E	30°22'03"

LEGEND

- LOT LINE
- UTILITY & SIDEWALK EASEMENT
- CENTER LINE OF STREET
- STREET R.O.W.
- DRAINAGE & UTILITY R.O.W.
- 4" ROLLED CURB & GUTTER
- SUBDIVISION BOUNDARY LINE
- 3728.85 PROPOSED TOP OF CURB FINISHED GRADES
- (3729.2) EXISTING GRADE
- TC=08.09 PROPOSED TOP OF CURB ELEVATION
- PVMT=08.65 PROPOSED PAVEMENT ELEVATION
- DIRECTION OF RUNOFF FLOW
- HIGH POINT
- LOW POINT
- POINT OF VERTICAL INTERSECTION
- 50' TRANSITION AT INTERSECTION
- PROPOSED CITY MONUMENT

NO.	DATE	DESCRIPTION	BY
3	03/15/2021	3rd City Submittal	AHO
2	01/22/2021	2nd City Submittal	AHO
1	11/25/2020	1st City Submittal	AHO

WARNING! BEFORE YOU DIG SAN PEDRO ASSOCIATES, INC. SHALL NOT BE LIABLE FOR DAMAGES TO UNDERGROUND IMPROVEMENTS

Texas 811 Know what's below. Call before you dig.

BEFORE YOU DIG - CALL

EL PASO ELECTRIC COMPANY	543-5720
AT&T	1-800-344-5555
TEXAS GAS SERVICE	544-6300
TCG EMERGENCY HOTLINE	562-8411/562-2603
TCG LOCATE REQUEST (WATER & SEWER)	1-800-344-5555
AFTER HOURS EMERGENCY (EPW)	594-5775
SPECTRUM	775-7414
TEXAS DOT TRANSPORTATION SAFETY SYSTEM	1-800-452-9292
KINDER-MORGAN EPNG PIPELINES	1-800-238-3764
EL PASO STREETS AND MAINTENANCE	212-0151
EL PASO TRAFFIC SIGNAL STREETS AND MAINTENANCE	tlresponse@elpasotexas.gov

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SUBDIVISION
CIMARRON CANYON UNIT TWO SUBDIVISION

SHEET TITLE
CIMARRON PARK DRIVE/ CAVESON COURT PLAN AND PROFILE

GOB DESIGN BY	1908 JOB NO.
GOB-DG-SM DRAWN BY	12/20/2019 DATE OF SUBMISSION
AHO CHECKED BY	AS NOTED SCALE

SHEET NO.
28
SHEET SEQUENCE
29 OF 82

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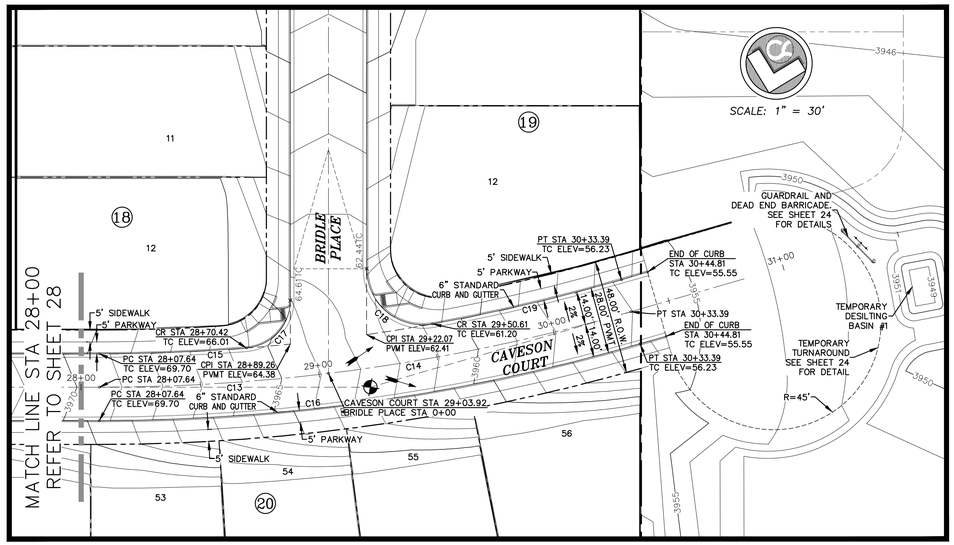
S:\Civil\1908 Cimarron Canyon Unit Two\1908 3rd Submittal\1908 SH 27-29 (Cim. Park Dr-Caveson Ct Street Plat).dwg

BENCHMARK: CITY MONUMENT AT THE CENTERLINE INTERSECTION OF MONTWOOD PASS DRIVE AND CIMARRON PARK DRIVE.
ELEVATION = 3978.53 (EL PASO CITY DATUM)



CURVE TABLE						
CURVE	RADIUS	LENGTH	TANGENT	CHORD	BEARING	DELTA
C13	800.00	96.28	48.20	96.22	S76°27'11"W	6°53'44"
C14	800.00	129.47	64.88	129.33	S69°33'28"W	9°16'22"
C15	786.00	61.68	30.85	61.66	S78°27'11"W	4°29'46"
C16	814.00	229.70	115.62	228.94	S76°27'11"W	16°10'05"
C17	20.00	29.85	18.49	27.15	S71°57'26"W	85°30'14"
C18	23.50	41.11	28.13	36.07	N13°32'49"W	100°14'23"
C19	786.00	81.33	40.70	81.29	S66°12'49"W	5°55'43"

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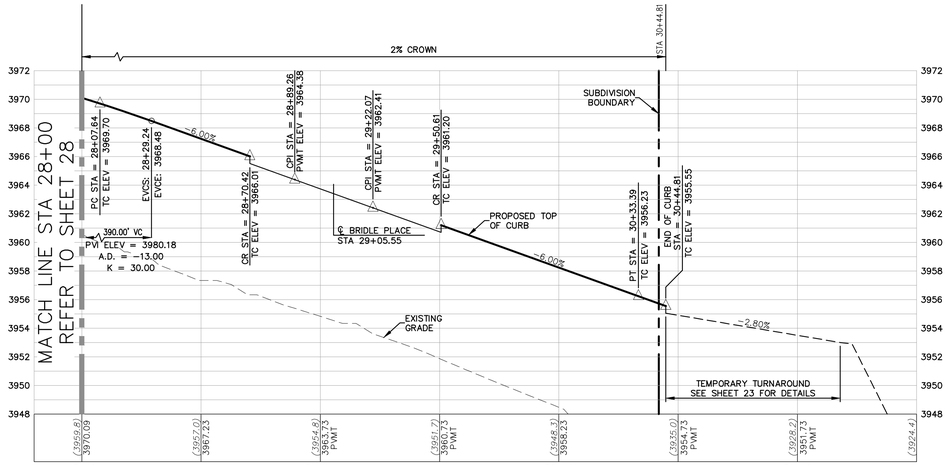
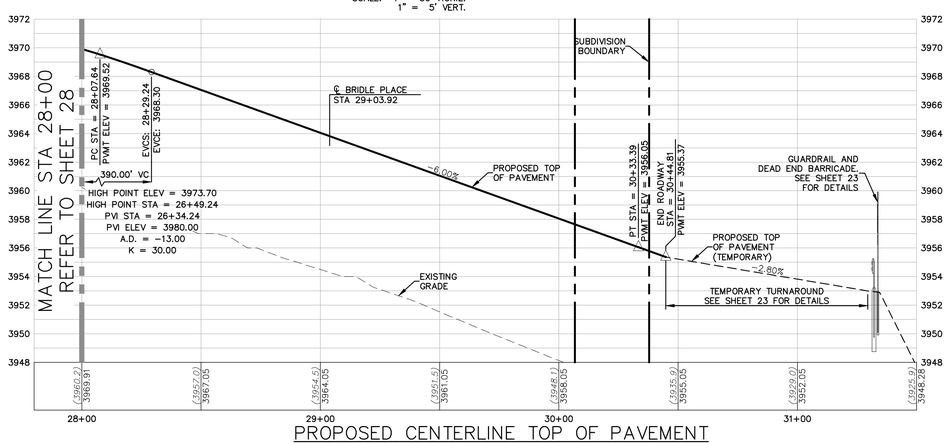
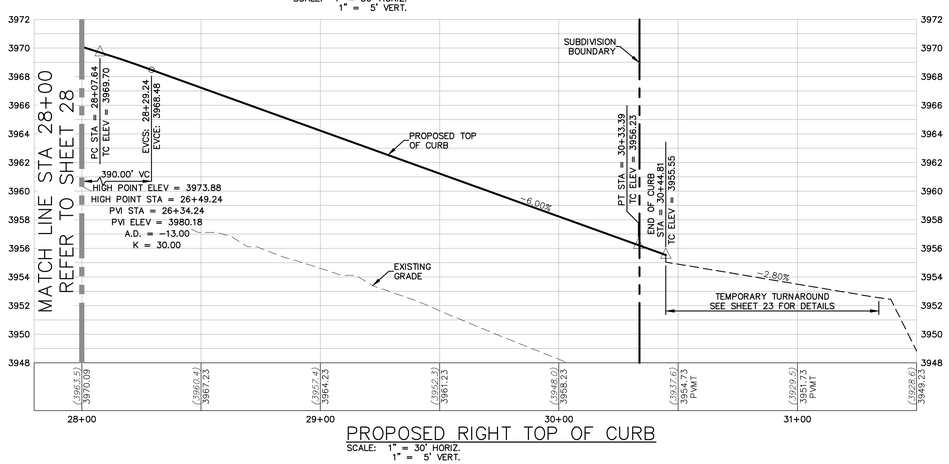
SIDEWALK BY DEVELOPER



PROPOSED LEFT TOP OF CURB
SCALE: 1" = 30' HORIZ.
1" = 5' VERT.



PROPOSED CENTERLINE TOP OF PAVEMENT
SCALE: 1" = 30' HORIZ.
1" = 5' VERT.



PROPOSED RIGHT TOP OF CURB
SCALE: 1" = 30' HORIZ.
1" = 5' VERT.

LEGEND

- LOT LINE
- UTILITY & SIDEWALK EASEMENT
- CENTER LINE OF STREET
- STREET R.O.W.
- DRAINAGE & UTILITY R.O.W.
- 4" ROLLED CURB & GUTTER
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- 3728.85 PROPOSED TOP OF CURB FINISHED GRADES
- (3729.2) EXISTING GRADE
- TC=08.09 PROPOSED TOP OF CURB ELEVATION
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- DIRECTION OF RUNOFF FLOW
- HIGH POINT
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- 50' TRANSITION AT INTERSECTION
- PROPOSED CITY MONUMENT

NO.	DATE	DESCRIPTION	BY
3	03/15/2021	3rd City Submittal	AHO
2	01/22/2021	2nd City Submittal	AHO
1	11/25/2020	1st City Submittal	AHO

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BEFORE YOU DIG - CALL

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TGS EMERGENCY HOTLINE	562-8411/562-2603
EL PASO WATER UTILITIES (WATER & SEWER)	1-800-592-1555
AFTER HOURS EMERGENCY (EPW)	594-5775
SPECTRUM	775-7414
TIME WARNER CABLE	1-800-251-4477
KINDER-MORGAN EPNG PIPELINES	1-800-238-3764
EL PASO TRAFFIC SIGNAL STREETS AND MAINTENANCE	212-0151

tlregion@txonecall.com

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03/15/2021

STATE OF TEXAS
ADRIAN I. ONTIVEROS
124089
LICENSED
PROFESSIONAL ENGINEER

csa design group, inc.
Texas Registered Engineering Firm F-9997
1845 Northwestern Dr. Ste C
El Paso, Texas 79912
tel [915] 877.4155
fax [915] 877.4334
www.csaengineers.com

SUBDIVISION
CIMARRON CANYON UNIT TWO SUBDIVISION

SHEET TITLE
CAVESON COURT PLAN AND PROFILE

GOB (DESIGN BY)	1908 (JOB NO.)
GOB-DG-SM (DRAWN BY)	12/20/2019 (DATE OF SUBMISSION)
AHO (CHECKED BY)	AS NOTED (SCALE)

SHEET NO. 29
SHEET SEQUENCE 30 OF 82

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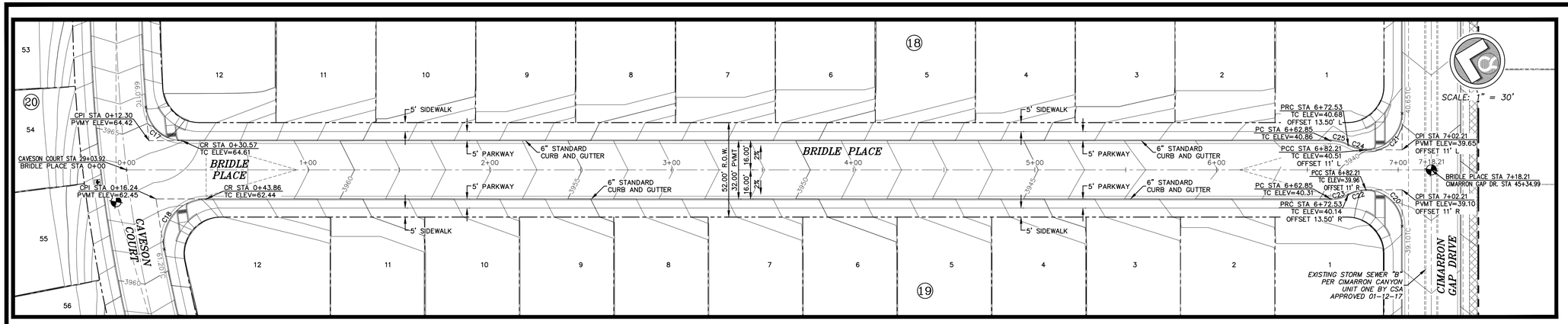
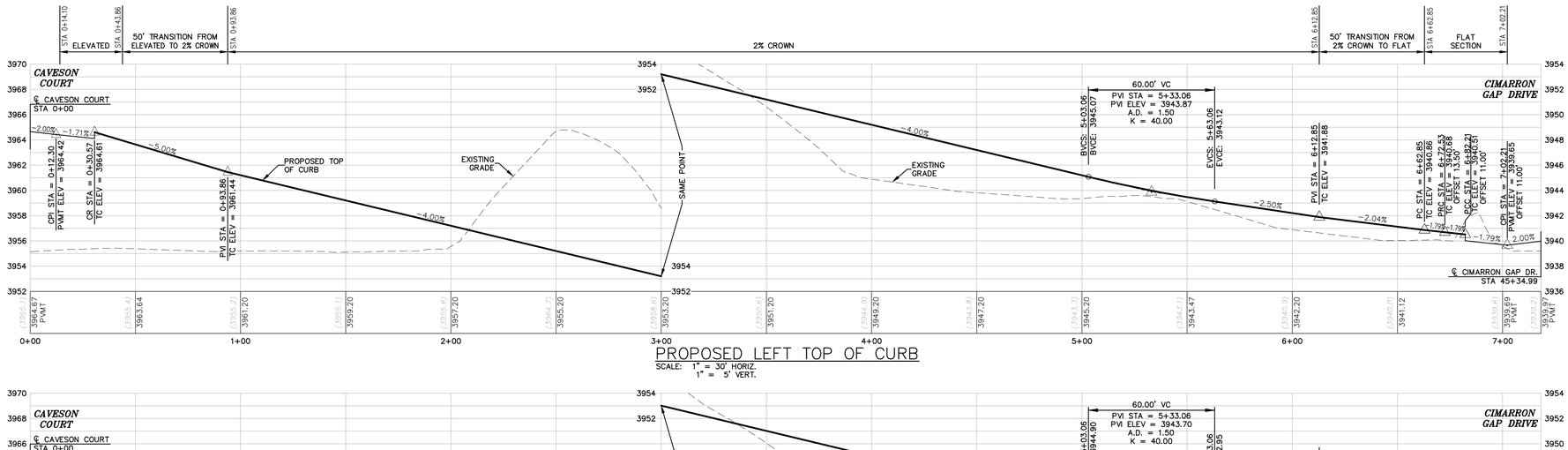
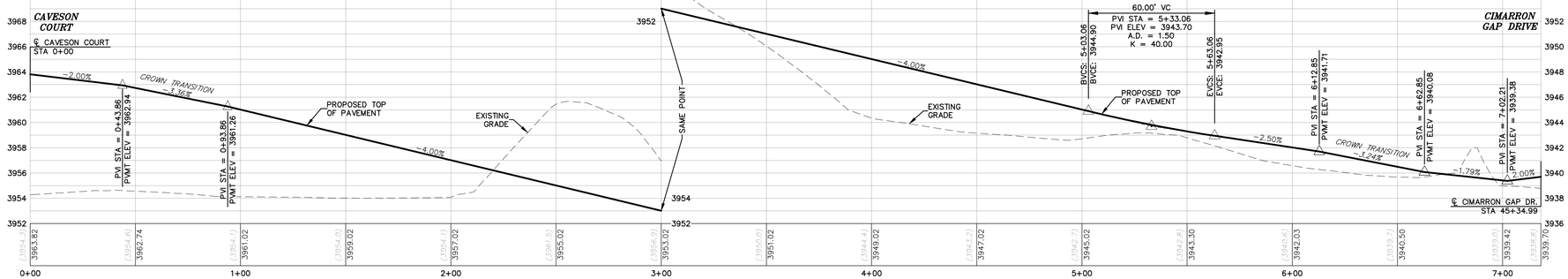
S:\Civil\1908 Cimarron Canyon Unit Two\1908 3rd Submittal\1908 3rd 27-29 (Cim Park Dr-Caveson Ct Sheet PM).DWG
dgallardo





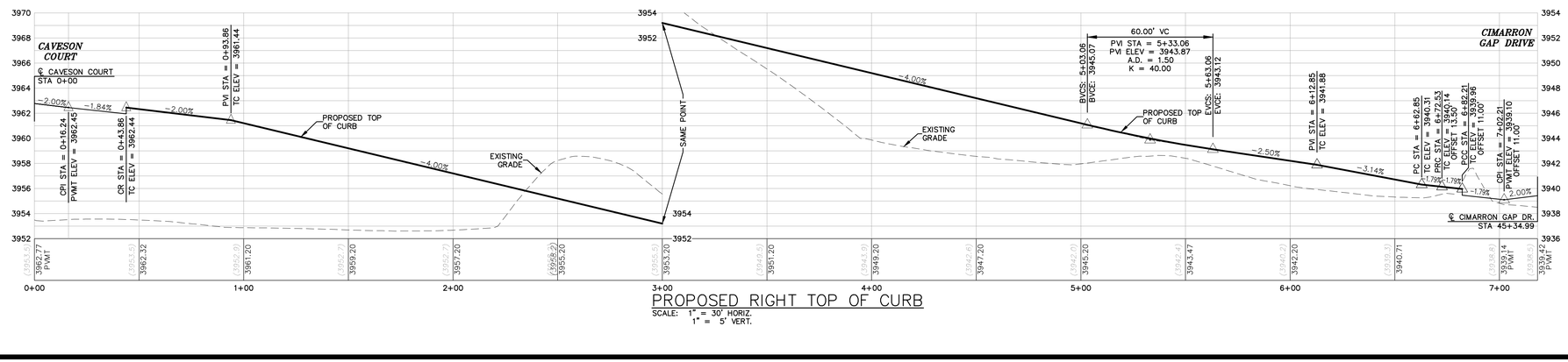
PROPOSED LEFT TOP OF CURB

SCALE: 1" = 30' HORIZ.
1" = 5' VERT.



PROPOSED CENTERLINE TOP OF PAVEMENT

SCALE: 1" = 30' HORIZ.
1" = 5' VERT.



PROPOSED RIGHT TOP OF CURB

SCALE: 1" = 30' HORIZ.
1" = 5' VERT.

ALL EXISTING AND PROPOSED SIDEWALKS, BARRIER FREE RAMPS, HANDICAP PARKING, DRIVEWAY CROSSWALKS, DRIVEWAYS AND ACCESSIBLE ROUTES SHALL COMPLY WITH A.D.A., T.A.S. AND CITY OF EL PASO REQUIREMENTS. EXISTING INFRASTRUCTURE NOT COMPLYING SHALL BE REMOVED AND REPLACED TO MEET STANDARDS.

ALL SIDEWALKS TO BE INSTALLED BY BUILDER UNLESS NOTED OTHERWISE

ALL ACCESSIBLE RAMPS WITHIN THE RIGHT-OF-WAY TO BE INSTALLED BY THE DEVELOPER

REFER TO SHEET 26 FOR ACCESSIBLE RAMP DETAILS

SIDEWALK BY DEVELOPER

CURVE TABLE						
CURVE	RADIUS	LENGTH	TANGENT	CHORD	BEARING	DELTA
C17	20.00	29.85	18.49	27.15	S71°57'26"W	85°30'14"
C18	23.50	41.11	28.13	36.07	N13°32'49"W	100°14'23"
C20	20.00	31.42	20.00	28.28	N76°27'11"E	90°00'00"
C21	20.00	31.42	20.00	28.28	S13°32'49"E	90°00'00"
C22	20.00	10.11	5.16	10.00	N13°32'49"W	28°57'18"
C23	20.00	10.11	5.16	10.00	S13°32'49"E	28°57'18"
C24	20.00	10.11	5.16	10.00	S15°24'29"W	28°57'18"
C25	20.00	10.11	5.16	10.00	N15°24'29"E	28°57'18"

LEGEND

- LOT LINE
- UTILITY & SIDEWALK EASEMENT
- CENTER LINE OF STREET
- STREET R.O.W.
- DRAINAGE & UTILITY R.O.W.
- 4" ROLLED CURB & GUTTER
- SUBDIVISION BOUNDARY LINE
- 3728.85 PROPOSED TOP OF CURB FINISHED GRADES
- (3729.2) EXISTING GRADE
- TC=08.09 PROPOSED TOP OF CURB ELEVATION
- PVMT=08.65 PROPOSED PAVEMENT ELEVATION
- DIRECTION OF RUNOFF FLOW
- HIGH POINT
- LOW POINT
- POINT OF VERTICAL INTERSECTION
- 50' TRANSITION AT INTERSECTION
- PROPOSED CITY MONUMENT

BENCHMARK: CITY MONUMENT AT THE CENTERLINE INTERSECTION OF BRIDLE PLACE DRIVE AND CIMARRON PARK DRIVE.
ELEVATION = 3978.53 (EL PASO CITY DATUM)

NO.	DATE	DESCRIPTION	BY
3	03/15/2021	3rd City Submittal	AHO
2	01/22/2021	2nd City Submittal	AHO
1	11/25/2020	1st City Submittal	AHO

WARNING! BEFORE YOU DIG IN PROJECT AREA CONTRACTOR SHALL FIELD LOCATE ALL UNDERGROUND IMPROVEMENTS

Texas 811 Know what's below. Call before you dig.

BEFORE YOU DIG - CALL

EL PASO ELECTRIC COMPANY	543-5720
	1-800-540-2555
TEXAS GAS SERVICE	544-6300
TGS EMERGENCY HOTLINE	1-800-700-2443
(GAS, WATER & SEWER)	562-8411/562-2603
AFTER HOURS EMERGENCY (EPW)	1-800-592-1645
SPECTRUM	594-5775
TEXAS EXCAVATION SAFETY SYSTEM	775-7414
KINDER-MORGAN EPNG PIPELINES	1-800-733-2677
EL PASO STREETS AND MAINTENANCE	1-800-238-3764
EL PASO TRAFFIC SIGNAL STREETS AND MAINTENANCE	212-0151

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SUBDIVISION
CIMARRON CANYON UNIT TWO SUBDIVISION

SHEET TITLE
BRIDLE PLACE PLAN AND PROFILE

GOB	1908
DESIGN BY	JOB NO.
GOB-DG-SM	12/20/2019
DRAWN BY	DATE OF SUBMISSION
AHO	AS NOTED
CHECKED BY	SCALE

SHEET NO. 30
SHEET SEQUENCE 31 OF 82

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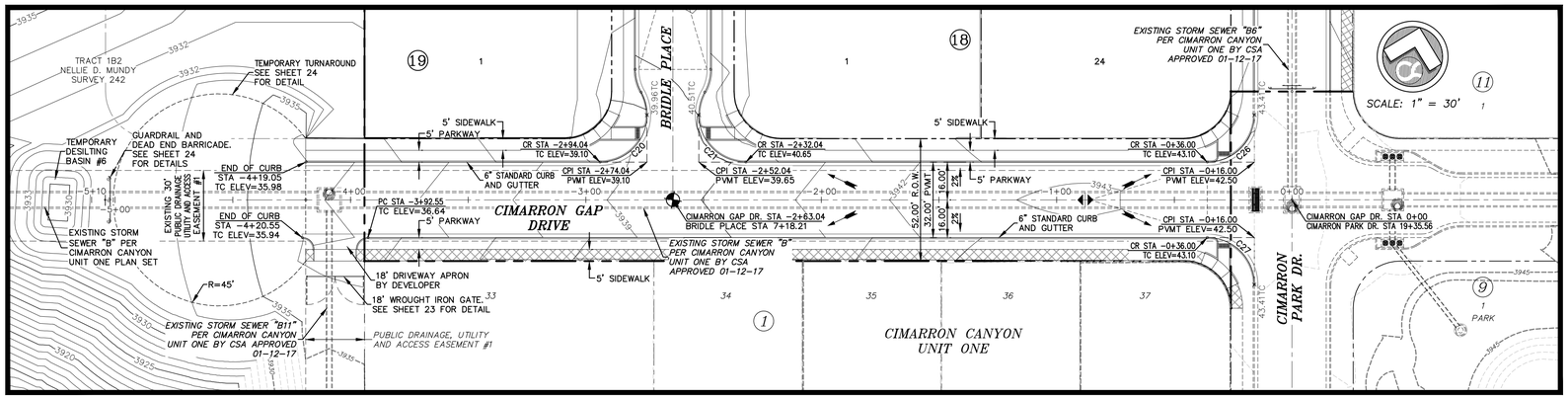
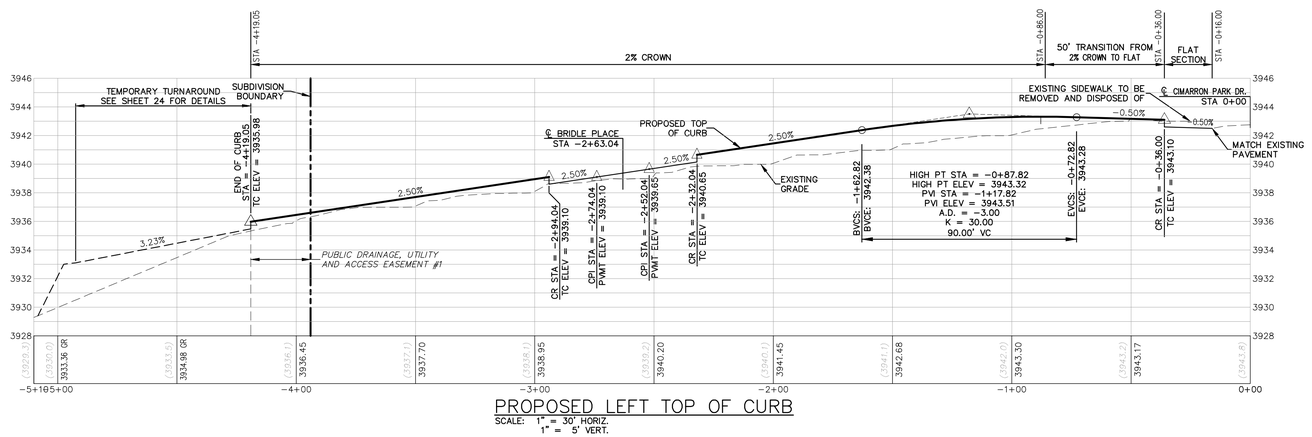
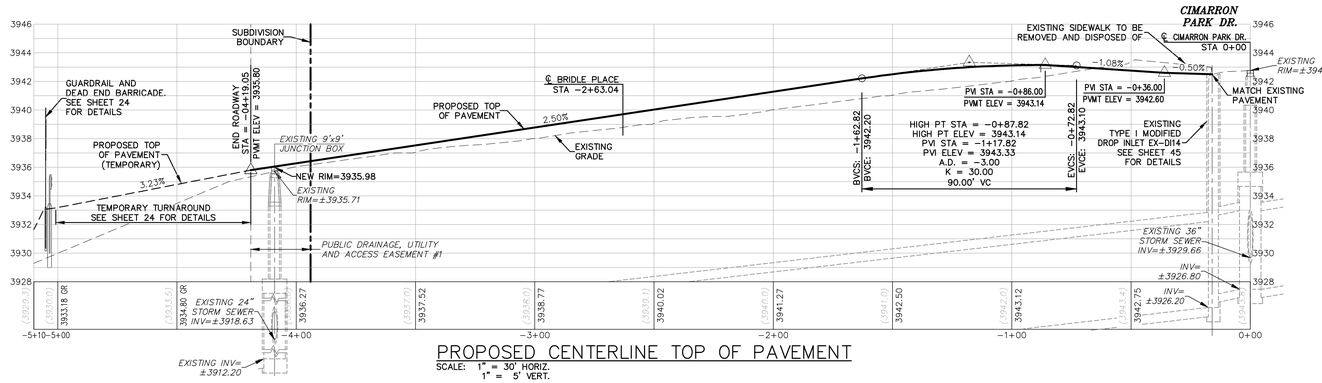
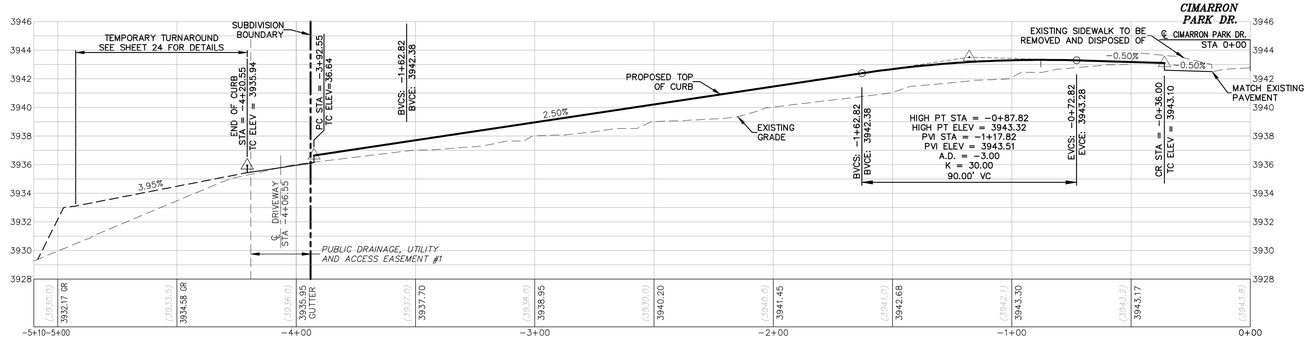




PROPOSED LEFT TOP OF CURB
SCALE: 1" = 30' HORIZ.
1" = 5' VERT.



PROPOSED CENTERLINE TOP OF PAVEMENT
SCALE: 1" = 30' HORIZ.
1" = 5' VERT.



PROPOSED RIGHT TOP OF CURB
SCALE: 1" = 30' HORIZ.
1" = 5' VERT.

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REFER TO SHEET 26 FOR ACCESSIBLE RAMP DETAILS

SIDEWALK BY DEVELOPER

CURVE TABLE

CURVE	RADIUS	LENGTH	TANGENT	CHORD	BEARING	DELTA
C20	20.00	31.42	20.00	28.28	N76°27'11"E	90°00'00"
C21	20.00	31.42	20.00	28.28	S13°32'49"E	90°00'00"
C26	20.00	31.42	20.00	28.28	N76°27'11"E	90°00'00"
C27	20.00	31.42	20.00	28.28	N13°32'49"W	90°00'00"

BENCHMARK: CITY MONUMENT AT THE CENTERLINE INTERSECTION OF BRIDLE PLACE AND CIMARRON PARK DRIVE.
ELEVATION = 3978.53 (EL PASO CITY DATUM)

NO.	DATE	DESCRIPTION	BY
3	03/15/2021	3rd City Submittal	AHO
2	01/22/2021	2nd City Submittal	AHO
1	11/25/2020	1st City Submittal	AHO

WARNING! BEFORE YOU DIG IN PROJECT AREA CONTRACTOR SHALL FIELD LOCATE ALL UNDERGROUND IMPROVEMENTS

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	1-800-540-4505
TEXAS GAS SERVICE	544-6300
TGS EMERGENCY HOTLINE	562-8411/562-2603
EL PASO WATER UTILITIES (WATER & SEWER)	1-800-592-1555
AFTER HOURS EMERGENCY (EPW)	594-5775
SPECTRUM	775-7414
TEXAS EXCAVATION SAFETY SYSTEM	1-800-344-8377
KINDER-MORGAN EPNG PIPELINES	1-800-238-3764
EL PASO TRAFFIC SIGNAL STREETS AND MAINTENANCE	212-0151

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www.csaengineers.com

SUBDIVISION
CIMARRON CANYON UNIT TWO SUBDIVISION

SHEET TITLE
CIMARRON GAP DRIVE PLAN AND PROFILE

GOB (DESIGN BY)	1908 (JOB NO.)
GOB-DG-SM (DRAWN BY)	12/20/2019 (DATE OF CONVERSION)
AHO (CHECKED BY)	AS NOTED (SCALE)

SHEET NO. 31
SHEET SEQUENCE 32 OF 82

LEGEND

- LOT LINE
- UTILITY & SIDEWALK EASEMENT
- CENTER LINE OF STREET
- STREET R.O.W.
- DRAINAGE & UTILITY R.O.W.
- 4" ROLLED CURB & GUTTER
- SUBDIVISION BOUNDARY LINE
- 3728.85 PROPOSED TOP OF CURB FINISHED GRADES
- (3729.2) EXISTING GRADE
- TC=08.09 PROPOSED TOP OF CURB ELEVATION
- PVMT=08.65 PROPOSED PAVEMENT ELEVATION
- DIRECTION OF RUNOFF FLOW
- HIGH POINT
- LOW POINT
- POINT OF VERTICAL INTERSECTION
- 50' TRANSITION AT INTERSECTION
- PROPOSED CITY MONUMENT

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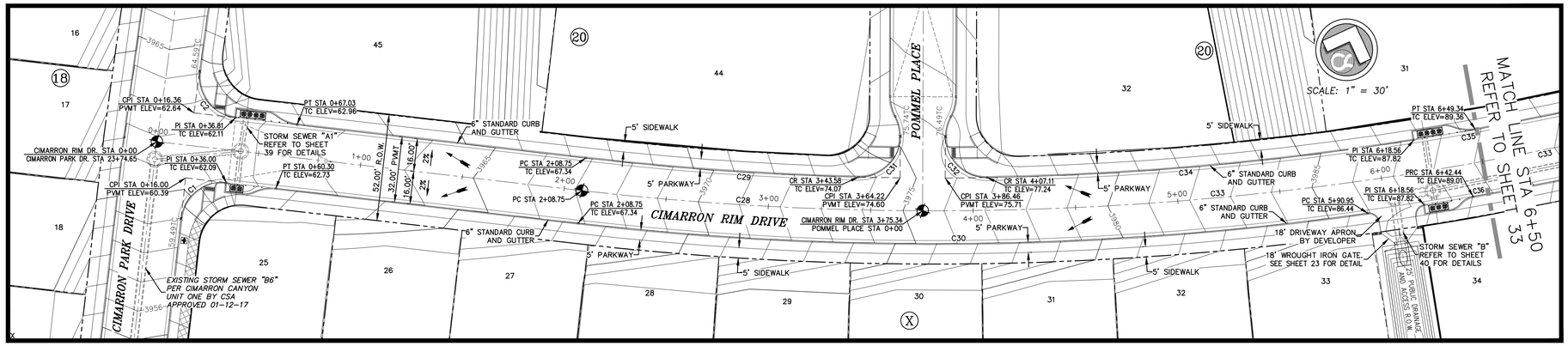
dgallardo



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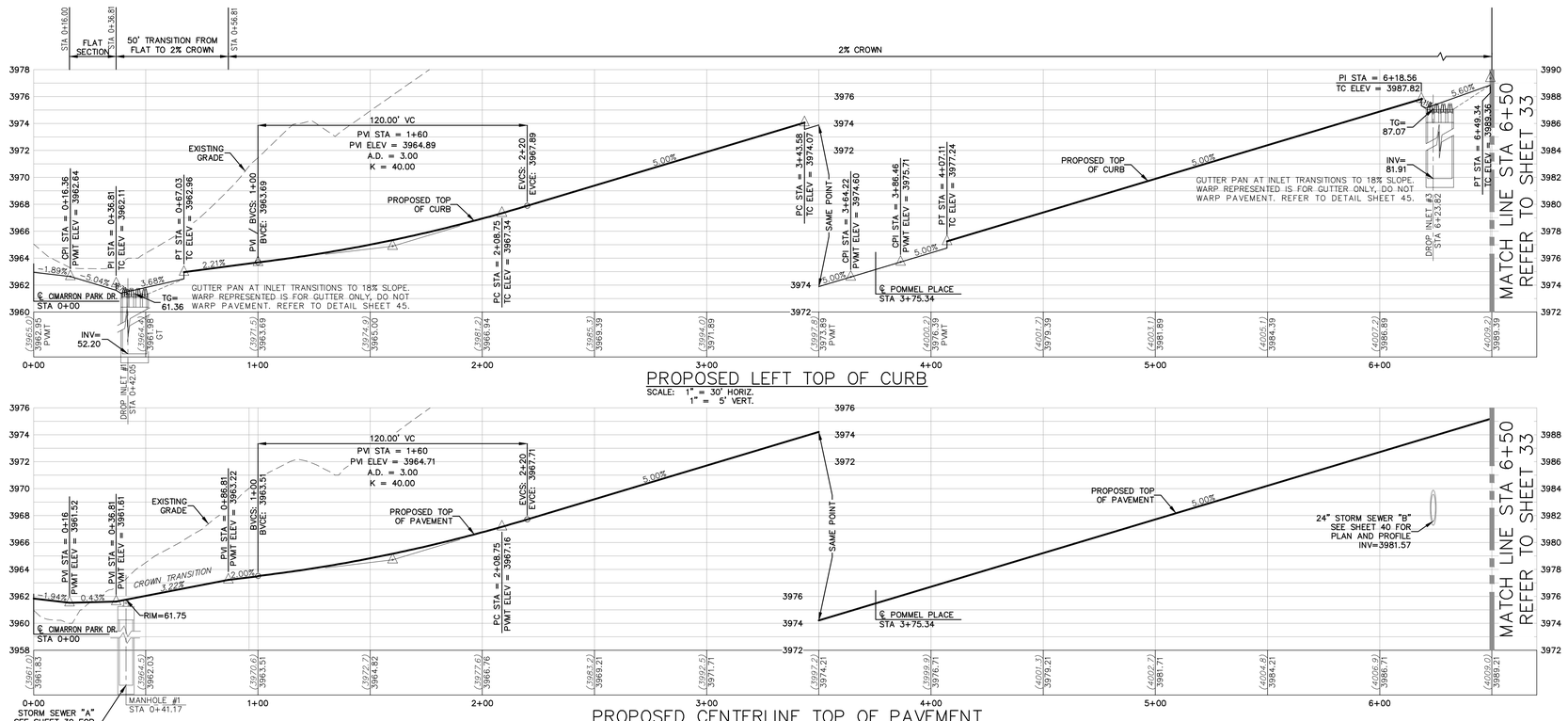
REFER TO SHEET 26 FOR ACCESSIBLE RAMP DETAILS

SIDEWALK BY DEVELOPER

CURVE TABLE						
CURVE	RADIUS	LENGTH	TANGENT	CHORD	BEARING	DELTA
C1	20.00	31.42	20.00	28.28	S76°27'11"W	90°00'00"
C2	20.00	31.86	20.45	28.60	S12°16'21"E	91°16'28"
C28	1500.00	166.59	83.38	166.51	N76°27'11"E	6°21'48"
C29	1484.00	153.39	76.74	153.34	N76°27'11"E	5°55'00"
C30	1516.00	386.28	194.19	385.23	N76°27'11"E	14°35'56"
C31	20.00	31.84	20.43	28.58	N71°18'11"E	91°12'48"
C32	20.00	31.84	20.43	28.58	S19°54'37"E	91°12'48"
C33	1500.00	401.66	202.04	400.46	N70°05'23"E	15°20'32"
C34	1484.00	209.20	104.78	209.03	N68°52'35"E	8°04'38"
C35	1484.00	98.09	49.06	98.08	N59°44'53"E	3°47'14"
C36	1516.00	85.78	42.90	85.77	N59°53'14"E	3°14'31"

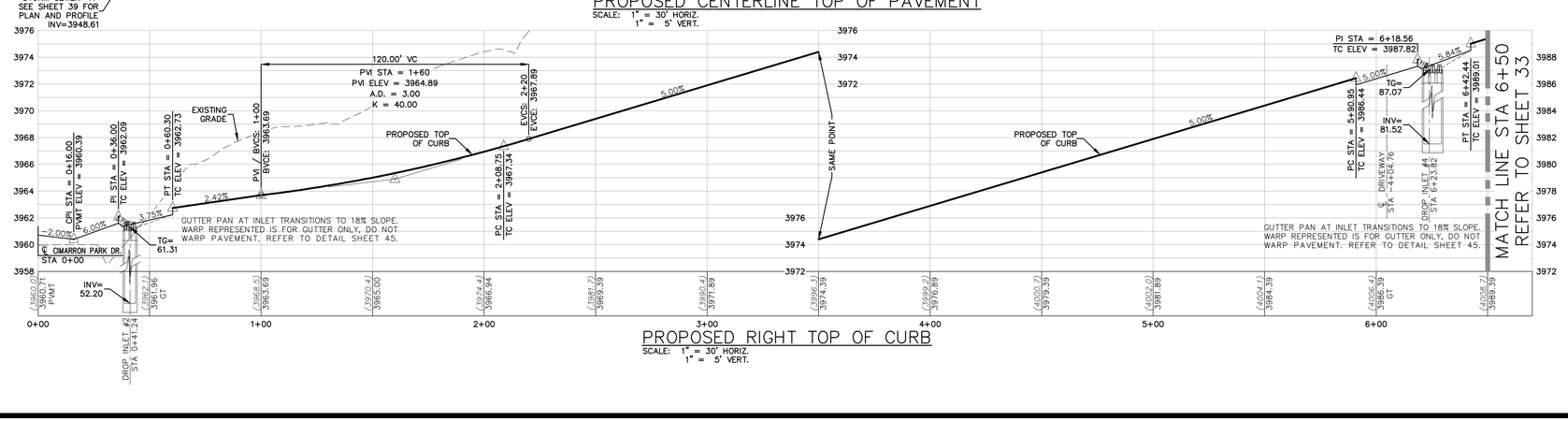
BENCHMARK: CITY MONUMENT AT THE CENTERLINE INTERSECTION OF CIMARRON CANYON DRIVE AND CIMARRON PARK DRIVE.
ELEVATION = 3978.53 (EL PASO CITY DATUM)

NO.	DATE	DESCRIPTION	BY
3	03/15/2021	3rd City Submittal	AHO
2	01/22/2021	2nd City Submittal	AHO
1	11/25/2020	1st City Submittal	AHO



PROPOSED LEFT TOP OF CURB
SCALE: 1" = 30' HORIZ.
1" = 5' VERT.

PROPOSED CENTERLINE TOP OF PAVEMENT
SCALE: 1" = 30' HORIZ.
1" = 5' VERT.



PROPOSED RIGHT TOP OF CURB
SCALE: 1" = 30' HORIZ.
1" = 5' VERT.

LEGEND

- LOT LINE
- UTILITY & SIDEWALK EASEMENT
- CENTER LINE OF STREET
- STREET R.O.W.
- DRAINAGE & UTILITY R.O.W.
- 4" ROLLED CURB & GUTTER
- SUBDIVISION BOUNDARY LINE
- 3728.85 PROPOSED TOP OF CURB FINISHED GRADES
- (3729.2) EXISTING GRADE
- TC=08.09 PROPOSED TOP OF CURB ELEVATION
- PVMT=08.65 PROPOSED PAVEMENT ELEVATION
- DIRECTION OF RUNOFF FLOW
- HIGH POINT
- LOW POINT
- POINT OF VERTICAL INTERSECTION
- 50' TRANSITION AT INTERSECTION
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TGS EMERGENCY HOTLINE	562-8411/562-2603
EL PASO WATER UTILITIES	1-800-592-1555
AFTER HOURS EMERGENCY (EPW)	594-5775
SPECTRUM	775-7414
EL PASO IRRIGATION SAFETY SYSTEM	1-800-922-1707
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EL PASO TRAFFIC SIGNAL STREETS AND MAINTENANCE	212-0151

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www.csaengineers.com

SUBDIVISION
CIMARRON CANYON UNIT TWO SUBDIVISION

SHEET TITLE
CIMARRON RIM DRIVE PLAN AND PROFILE

GOB DESIGN BY	1908 JOB NO.
GOB~DG~SM DRAWN BY	12/20/2019 DATE OF COMMISSION
AHO CHECKED BY	AS NOTED SCALE

SHEET NO. 32
SHEET SEQUENCE 33 OF 82

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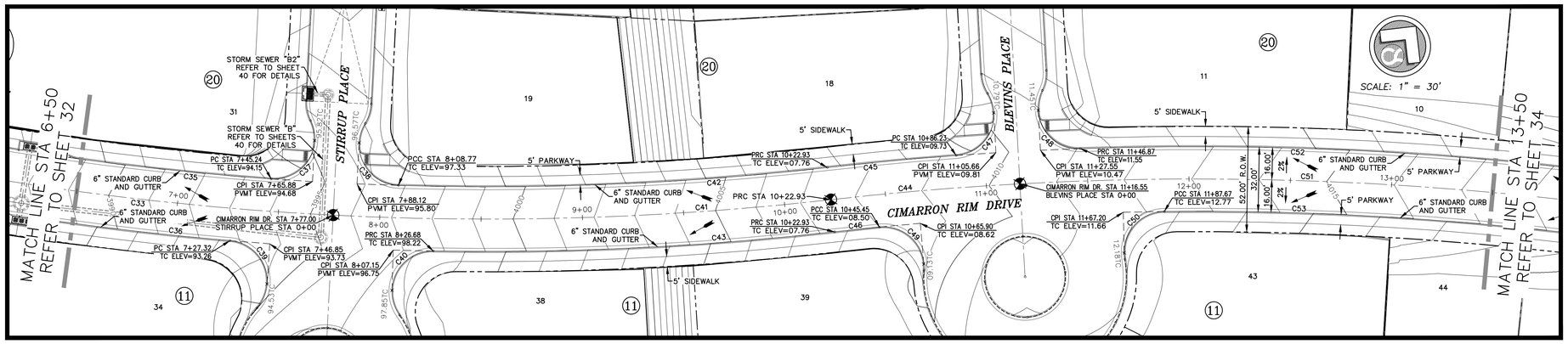
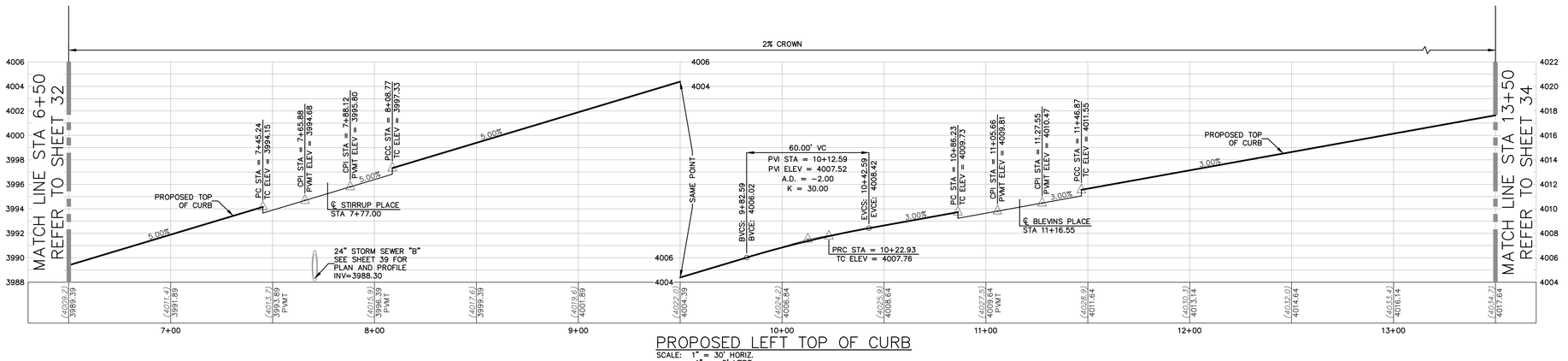
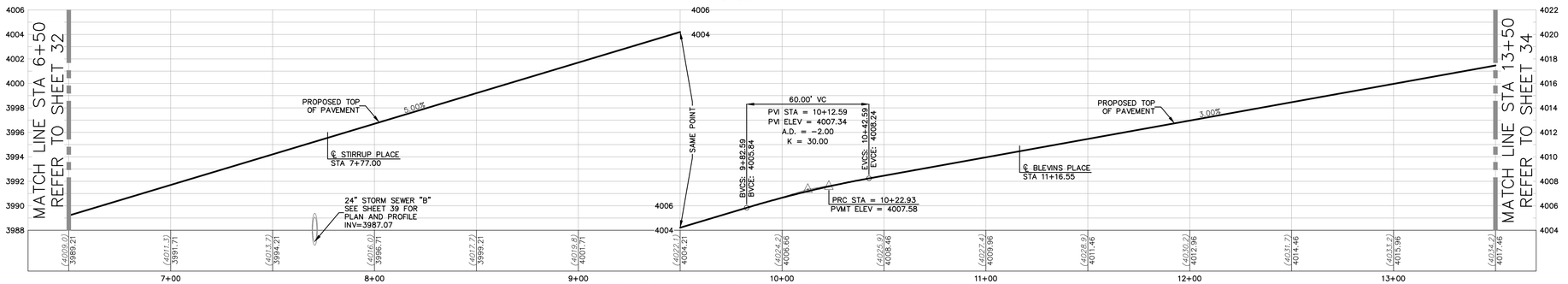
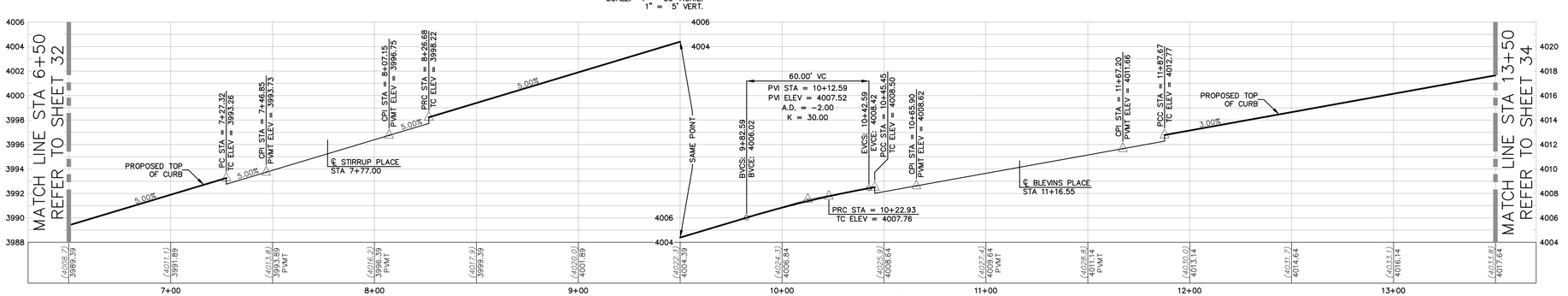




PROPOSED LEFT TOP OF CURB
SCALE: 1" = 30' HORIZ.
1" = 5' VERT.



PROPOSED CENTERLINE TOP OF PAVEMENT
SCALE: 1" = 30' HORIZ.
1" = 5' VERT.



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REFER TO SHEET 26 FOR ACCESSIBLE RAMP DETAILS

SIDEWALK BY DEVELOPER

CURVE TABLE						
CURVE	RADIUS	LENGTH	TANGENT	CHORD	BEARING	DELTA
C33	1500.00	401.66	202.04	400.46	N70°05'23"E	15°20'32"
C35	1484.00	98.09	49.06	98.08	N59°44'53"E	3°47'14"
C36	1516.00	85.78	42.90	85.77	N59°53'14"E	3°14'31"
C37	20.00	31.84	20.43	28.58	N55°57'39"E	91°12'48"
C38	20.00	31.84	20.43	28.58	S35°15'09"E	91°12'48"
C39	20.00	31.16	19.74	28.10	N34°06'03"W	89°15'14"
C40	20.00	31.16	19.74	28.10	S52°50'59"W	89°15'14"
C41	1500.00	245.93	123.24	245.66	N54°44'51"E	9°23'38"
C42	1484.00	211.88	106.12	211.70	N53°32'03"E	8°10'50"
C43	1516.00	198.34	99.31	198.20	N52°50'59"E	7°29'46"
C44	1600.00	93.61	46.82	93.60	S48°42'21"W	3°21'08"
C45	1616.00	63.93	31.97	63.92	S47°37'13"W	2°16'00"
C46	1584.00	22.28	11.14	22.28	S46°09'34"W	0°48'21"
C47	20.00	31.04	19.62	28.02	N47°17'13"E	88°54'51"
C48	20.00	31.04	19.62	28.02	S41°17'39"E	88°54'51"
C49	20.00	31.67	20.26	28.46	N43°06'28"W	90°43'58"
C50	20.00	31.67	20.26	28.46	S51°15'08"W	90°43'58"
C51	1600.00	435.55	219.13	434.21	S64°18'11"W	15°35'50"
C52	1616.00	411.19	206.71	410.08	S64°22'13"W	14°34'44"
C53	1584.00	362.66	182.13	361.87	S64°22'13"W	13°07'05"

BENCHMARK: CITY MONUMENT AT THE CENTERLINE INTERSECTION OF BLEVINS PLACE AND CIMARRON PARK DRIVE.
ELEVATION = 3978.53 (EL PASO CITY DATUM)

NO.	DATE	DESCRIPTION	BY
3	03/15/2021	3rd City Submittal	AHO
2	01/22/2021	2nd City Submittal	AHO
1	11/25/2020	1st City Submittal	AHO

WARNING! BEFORE YOU DIG IN PROJECT AREA CONTRACTOR SHALL LOCATE ALL UNDERGROUND IMPROVEMENTS

Texas 811 Know what's below. Call before you dig.

BEFORE YOU DIG - CALL

EL PASO ELECTRIC COMPANY	543-5720
AT&T	1-800-464-7928
TEXAS GAS SERVICE	544-6300
TGS EMERGENCY HOTLINE	562-8411/562-2603
EPWU (WATER, WASTEWATER & SEWER)	1-800-469-4518
AFTER HOURS EMERGENCY (EPW)	594-5775
SPECTRUM	775-7414
EL PASO IRRIGATION SAFETY SYSTEM	1-800-331-8777
KINDER-MORGAN EPNG PIPELINES	1-800-238-3764
EL PASO (MPE) SIGNAL STREETS AND MAINTENANCE	212-0151

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05/15/2021

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SUBDIVISION
CIMARRON CANYON UNIT TWO SUBDIVISION

SHEET TITLE
CIMARRON RIM DRIVE PLAN AND PROFILE

GOB (DESIGN BY)	1908 (JOB NO.)
GOB-DG-SM (DRAWN BY)	12/20/2019 (DATE OF CONVERSION)
AHO (CHECKED BY)	AS NOTED (SCALE)

SHEET NO. 33
SHEET SEQUENCE 34 OF 82

LEGEND

- LOT LINE
- UTILITY & SIDEWALK EASEMENT
- CENTER LINE OF STREET
- STREET R.O.W.
- DRAINAGE & UTILITY R.O.W.
- 4" ROLLED CURB & GUTTER
- SUBDIVISION BOUNDARY LINE
- 3728.85 PROPOSED TOP OF CURB FINISHED GRADES
- (3729.2) EXISTING GRADE
- TC=08.09 PROPOSED TOP OF CURB ELEVATION
- PVMT=08.65 PROPOSED PAVEMENT ELEVATION
- DIRECTION OF RUNOFF FLOW
- HIGH POINT
- LOW POINT
- POINT OF VERTICAL INTERSECTION
- 50' TRANSITION AT INTERSECTION
- PROPOSED CITY MONUMENT

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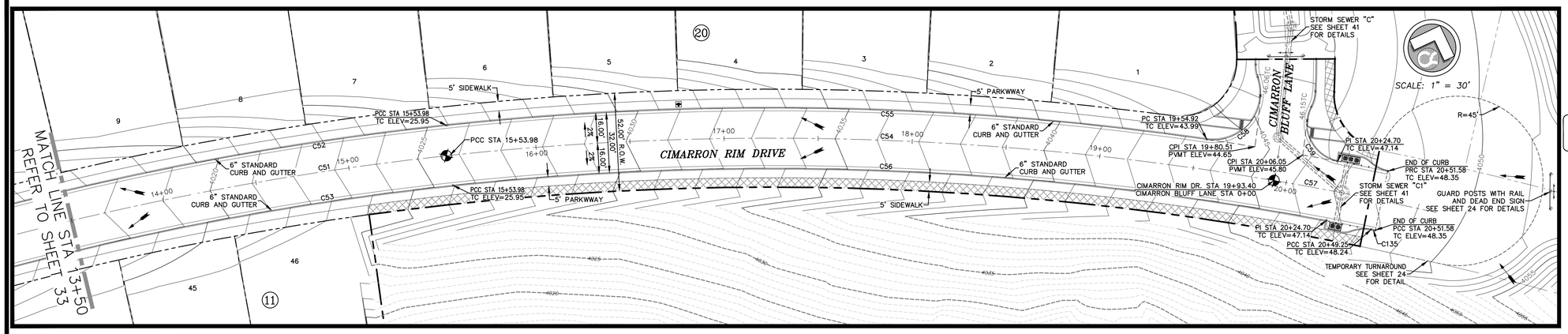
Q:\Drawings\1908 Cimarron Canyon Unit Two\1908 3rd Submittal\1908 3rd 32-34 (Cimarron Rim Dr Sheet P&P).DWG
dgallardo



ALL EXISTING AND PROPOSED SIDEWALKS, BARRIER FREE RAMPS, HANDICAP PARKING, DRIVEWAY CROSSWALKS, DRIVEWAYS AND ACCESSIBLE ROUTES SHALL COMPLY WITH A.D.A., T.A.S. AND CITY OF EL PASO REQUIREMENTS. EXISTING INFRASTRUCTURE NOT COMPLYING SHALL BE REMOVED AND REPLACED TO MEET STANDARDS.

ALL SIDEWALKS TO BE INSTALLED BY BUILDER UNLESS NOTED OTHERWISE

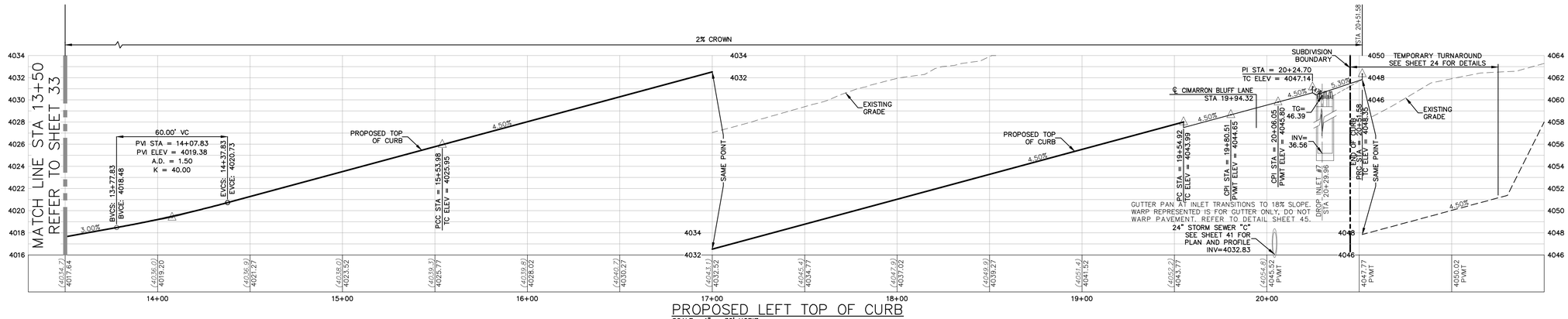
ALL ACCESSIBLE RAMPS WITHIN THE RIGHT-OF-WAY TO BE INSTALLED BY THE DEVELOPER

REFER TO SHEET 26 FOR ACCESSIBLE RAMP DETAILS

SIDEWALK BY DEVELOPER

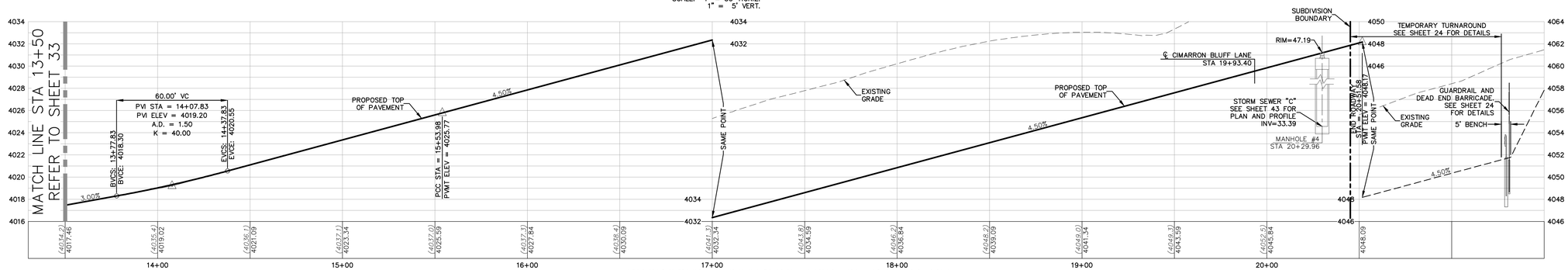
BENCHMARK: CITY MONUMENT AT THE CENTERLINE INTERSECTION OF CIMARRON PASS DRIVE AND CIMARRON PARK DRIVE.
ELEVATION = 3978.53 (EL PASO CITY DATUM)

CURVE TABLE						
CURVE	RADIUS	LENGTH	TANGENT	CHORD	BEARING	DELTA
C51	1600.00	435.55	219.13	434.21	S64°18'11"W	15°35'50"
C52	1616.00	411.19	206.71	410.08	S64°22'13"W	14°34'44"
C53	1584.00	362.66	182.13	361.87	S64°22'13"W	13°07'05"
C54	1600.00	441.30	222.06	439.90	S80°06'21"W	15°48'11"
C55	1616.00	404.94	203.54	403.88	S78°43'40"W	14°21'26"
C56	1584.00	466.01	234.70	464.33	S81°13'36"W	16°51'23"
C57	1600.00	51.74	25.87	51.74	S81°52'32"W	1°51'10"
C58	25.00	41.31	27.13	36.77	N78°43'40"E	94°40'13"
C59	20.00	29.61	18.27	26.98	S13°56'15"E	84°50'09"
C135	1584.00	2.30	1.15	2.30	S82°11'21"W	0°05'00"



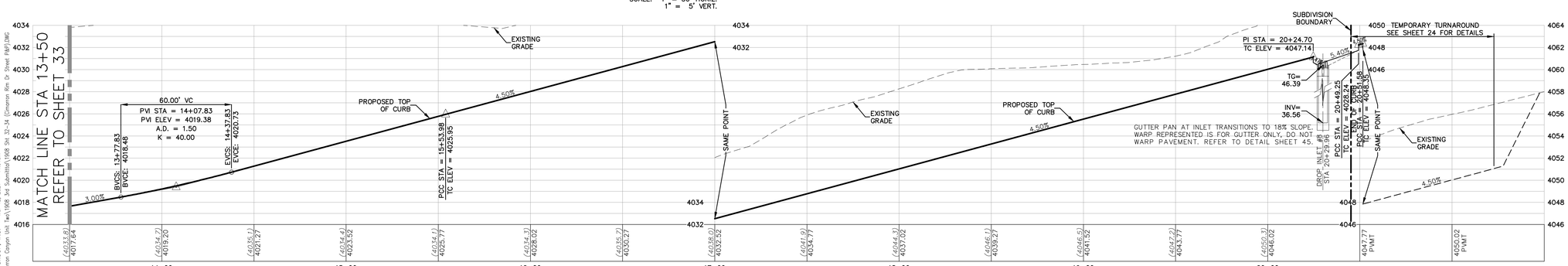
PROPOSED LEFT TOP OF CURB

SCALE: 1" = 30' HORIZ.
1" = 5' VERT.



PROPOSED CENTERLINE TOP OF PAVEMENT

SCALE: 1" = 30' HORIZ.
1" = 5' VERT.



PROPOSED RIGHT TOP OF CURB

SCALE: 1" = 30' HORIZ.
1" = 5' VERT.

LEGEND

- LOT LINE
- UTILITY & SIDEWALK EASEMENT
- CENTER LINE OF STREET
- STREET R.O.W.
- DRAINAGE & UTILITY R.O.W.
- 4" ROLLED CURB & GUTTER
- SUBDIVISION BOUNDARY LINE
- 3728.85 PROPOSED TOP OF CURB FINISHED GRADES
- (3729.2) EXISTING GRADE
- TC=08.09 PROPOSED TOP OF CURB ELEVATION
- PVMT=08.65 PROPOSED PAVEMENT ELEVATION
- DIRECTION OF RUNOFF FLOW
- HIGH POINT
- LOW POINT
- POINT OF VERTICAL INTERSECTION
- 50' TRANSITION AT INTERSECTION
- PROPOSED CITY MONUMENT

NO.	DATE	DESCRIPTION	BY
3	03/15/2021	3rd City Submittal	AHO
2	01/22/2021	2nd City Submittal	AHO
1	11/25/2020	1st City Submittal	AHO

WARNING! BEFORE YOU DIG IN PROJECT AREA CONTRACTING SHALL EXPOSE ALL UNDERGROUND IMPROVEMENTS

Texas811 Know what's below. Call before you dig.

BEFORE YOU DIG - CALL

EL PASO ELECTRIC COMPANY	543-5720
AT&T	1-800-246-2355
TEXAS GAS SERVICE	1-800-700-9960
TGS EMERGENCY HOTLINE	544-6300
EPWU (EL PASO WATER UTILITIES - WATER & SEWER)	562-8411/562-2003
AFTER HOURS EMERGENCY (EPW)	1-800-592-1240
SPECTRUM	594-5775
TEXAS EXCAVATION SAFETY SYSTEM	775-7414
KINDER-MORGAN EPNG PIPELINES	1-800-733-2677
EL PASO STREETS AND MAINTENANCE	1-800-238-3764
EL PASO TRAFFIC SIGNAL STREETS AND MAINTENANCE	212-0151

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05/15/2021

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SUBDIVISION
CIMARRON CANYON UNIT TWO SUBDIVISION

SHEET TITLE
CIMARRON RIM DRIVE PLAN AND PROFILE

GOB DESIGN BY	1908 JOB NO.
GOB-DG-SM DRAWN BY	12/20/2019 DATE OF COMMISSION
AHO CHECKED BY	AS NOTED SCALE

SHEET NO. 34
SHEET SEQUENCE 35 OF 82

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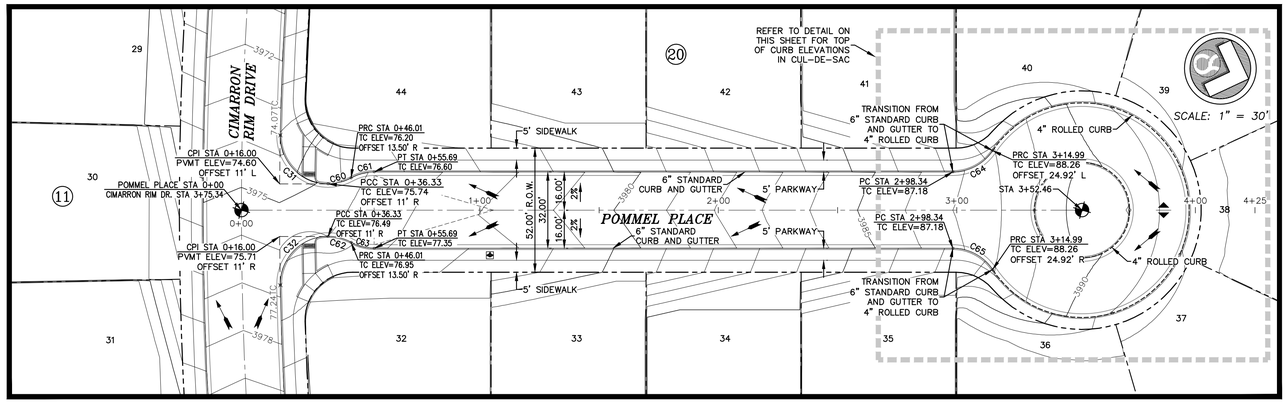
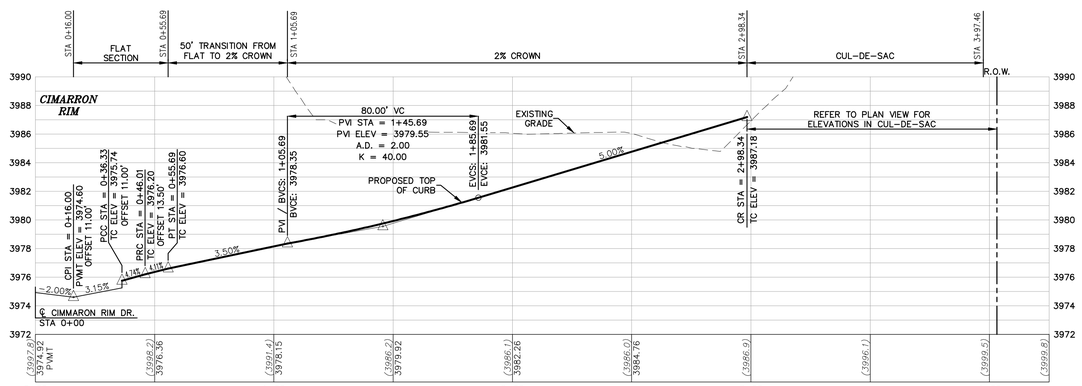
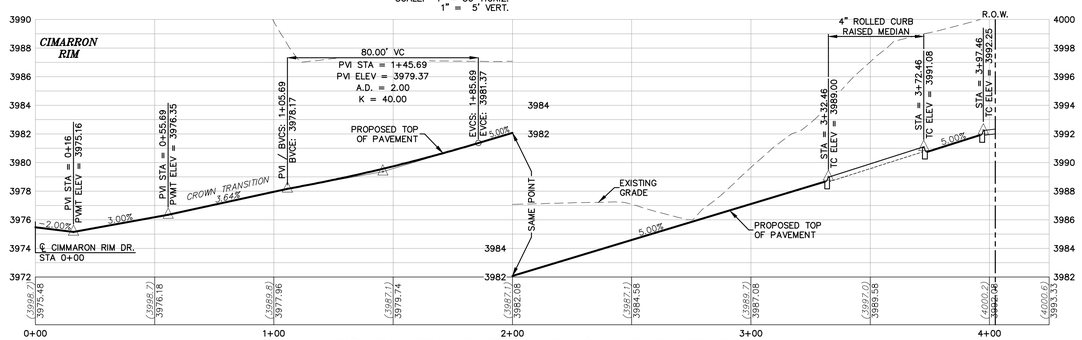
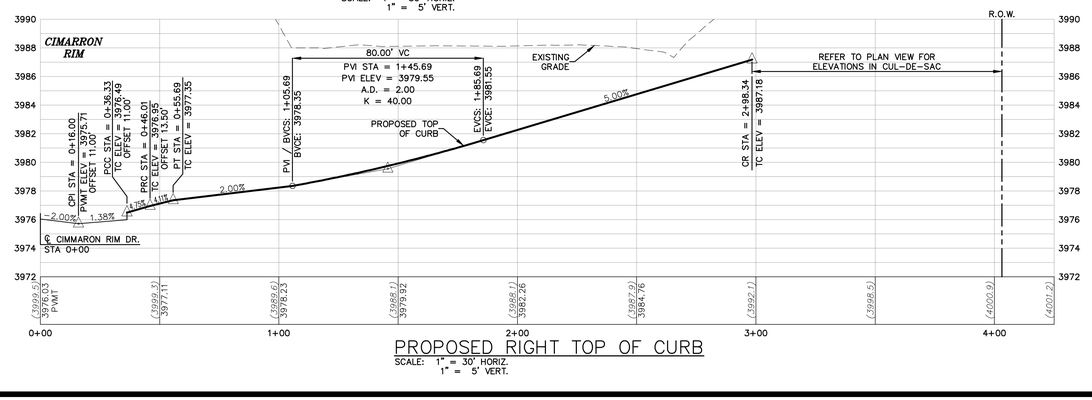
Applicants









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ALL SIDEWALKS TO BE INSTALLED BY BUILDER UNLESS NOTED OTHERWISE

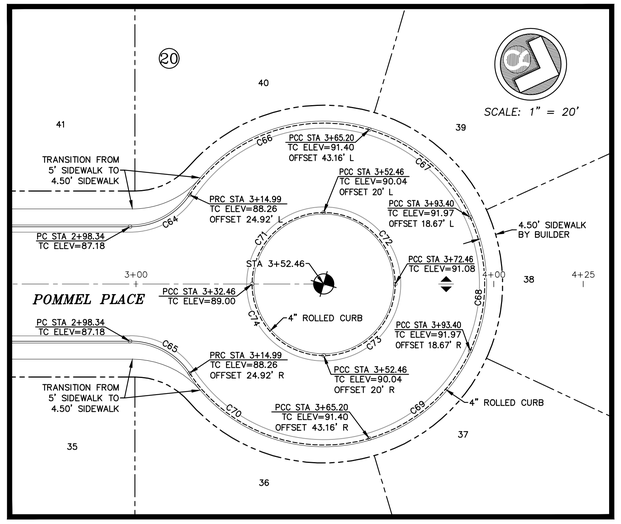
ALL ACCESSIBLE RAMPS WITHIN THE RIGHT-OF-WAY TO BE INSTALLED BY THE DEVELOPER

REFER TO SHEET 26 FOR ACCESSIBLE RAMP DETAILS

SIDEWALK BY DEVELOPER

CURVE TABLE

CURVE	RADIUS	LENGTH	TANGENT	CHORD	BEARING	DELTA
C31	20.00	31.84	20.43	28.58	N71°18'11"E	91°12'48"
C32	20.00	31.84	20.43	28.58	S19°54'37"E	91°12'48"
C60	20.00	10.11	5.16	10.00	N19°54'37"W	28°57'18"
C61	20.00	10.11	5.16	10.00	S19°54'37"E	28°57'18"
C62	20.00	10.11	5.16	10.00	S9°02'42"W	28°57'18"
C63	20.00	10.11	5.16	10.00	N9°02'42"E	28°57'18"
C64	20.00	19.68	10.72	18.89	N19°54'37"W	56°22'07"
C65	20.00	19.68	10.72	18.89	S36°27'31"W	56°22'07"
C66	45.00	57.20	33.19	53.42	S37°17'19"E	72°49'25"
C67	45.00	38.51	20.52	37.34	S45°54'29"W	49°01'48"
C68	45.00	38.51	20.52	37.34	N85°23'42"W	49°01'48"
C69	45.00	38.51	20.52	37.34	N36°21'54"W	49°01'48"
C70	45.00	57.20	33.19	53.42	N36°27'31"E	72°49'25"
C71	20.00	31.42	20.00	28.28	S19°54'37"E	90°00'00"
C72	20.00	31.42	20.00	28.28	S70°05'23"W	90°00'00"
C73	20.00	31.42	20.00	28.28	N19°54'37"W	90°00'00"
C74	20.00	31.42	20.00	28.28	N70°05'23"E	90°00'00"



DETAIL
SCALE: 1" = 20'

LEGEND

- LOT LINE
- UTILITY & SIDEWALK EASEMENT
- CENTER LINE OF STREET
- STREET R.O.W.
- DRAINAGE & UTILITY R.O.W.
- 4" ROLLED CURB & GUTTER
- SUBDIVISION BOUNDARY LINE
- 3728.85 PROPOSED TOP OF CURB FINISHED GRADES
- (3729.2) EXISTING GRADE
- TC=08.09 PROPOSED TOP OF CURB ELEVATION
- PVMT=08.65 PROPOSED PAVEMENT ELEVATION
- DIRECTION OF RUNOFF FLOW
- HIGH POINT
- LOW POINT
- POINT OF VERTICAL INTERSECTION
- 50' TRANSITION AT INTERSECTION
- PROPOSED CITY MONUMENT

BENCHMARK: CITY MONUMENT AT THE CENTERLINE INTERSECTION OF MESA HILLS DRIVE AND CIMARRON PARK DRIVE. ELEVATION = 3978.53 (EL PASO CITY DATUM)

NO.	DATE	DESCRIPTION	BY
3	03/15/2021	3rd City Submittal	AHO
2	01/22/2021	2nd City Submittal	AHO
1	11/25/2020	1st City Submittal	AHO

WARNING! BEFORE YOU DIG IN PROJECT AREA CONTRACTING SHALL CALL TEXAS 811 FOR UNDERGROUND IMPROVEMENTS

Texas 811 Know what's below. Call before you dig.

BEFORE YOU DIG - CALL

EL PASO ELECTRIC COMPANY	543-5720
	1-800-351-3555
TEXAS GAS SERVICE	544-6300
TGS EMERGENCY HOTLINE	562-8411/562-2603
AFTER HOURS EMERGENCY (WATER & SEWER)	1-800-669-1518
AFTER HOURS EMERGENCY (EPW)	594-5775
SPECTRUM	775-7414
EL PASO WATER	1-800-351-3577
KINDER-MORGAN EPNG PIPELINES	1-800-238-3764
EL PASO STREETS AND MAINTENANCE	212-0151

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03/15/21

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SUBDIVISION
CIMARRON CANYON UNIT TWO SUBDIVISION

SHEET TITLE
POMMEL PLACE PLAN AND PROFILE

GOB DESIGN BY	1908 JOB NO.
GOB-DG-SM DRAWN BY	12/20/2019 DATE OF COMMISSION
AHO CHECKED BY	AS NOTED SCALE

SHEET NO. 35
SHEET SEQUENCE 36 OF 82

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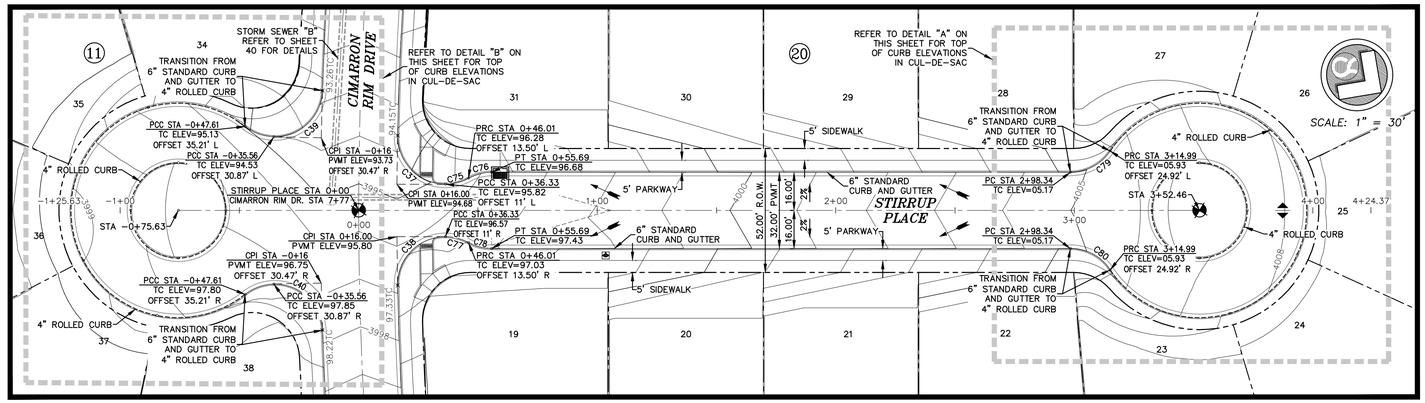


CURVE TABLE						
CURVE	RADIUS	LENGTH	TANGENT	CHORD	BEARING	DELTA
C37	20.00	31.84	20.43	28.58	N55°57'39"E	91°12'48"
C38	20.00	31.84	20.43	28.58	S35°15'09"E	91°12'48"
C39	20.00	31.16	19.74	28.10	N34°06'03"W	89°15'14"
C40	20.00	31.16	19.74	28.10	S52°50'59"W	89°15'14"
C79	20.00	19.68	10.72	18.89	N35°15'09"W	56°22'07"
C80	20.00	19.68	10.72	18.89	S21°06'59"W	56°22'07"
C81	45.00	57.20	33.19	53.42	S18°47'51"E	72°49'25"
C82	45.00	38.51	20.52	37.34	S30°13'57"W	49°01'48"
C83	45.00	38.51	20.52	37.34	S79°15'45"W	49°01'48"
C84	45.00	38.51	20.52	37.34	N51°42'27"W	49°01'48"
C85	45.00	57.20	33.19	53.42	N21°06'59"E	72°49'25"
C86	20.00	31.42	20.00	28.28	S35°15'09"E	90°00'00"
C87	20.00	31.42	20.00	28.28	S54°44'51"W	90°00'00"
C88	20.00	31.42	20.00	28.28	N35°15'09"W	90°00'00"
C89	20.00	31.42	20.00	28.28	N54°44'51"E	90°00'00"
C90	20.00	13.04	6.76	12.81	S36°24'16"E	37°21'17"
C91	45.00	39.28	20.99	38.05	N23°44'26"W	50°01'05"
C92	45.00	39.86	21.34	38.57	N27°00'25"E	50°44'52"
C93	45.00	39.86	21.34	38.57	N77°45'17"E	50°44'52"
C94	45.00	39.86	21.34	38.57	S51°29'51"E	50°44'52"
C95	45.00	43.00	23.30	41.38	S31°51'14"W	54°45'06"
C96	20.00	13.04	6.76	12.81	N31°51'14"E	37°21'17"
C97	20.00	31.42	20.00	28.28	N35°15'09"W	90°00'00"
C98	20.00	31.42	20.00	28.28	N54°44'51"E	90°00'00"
C99	20.00	31.42	20.00	28.28	S35°15'09"E	90°00'00"
C100	20.00	31.42	20.00	28.28	S54°44'51"W	90°00'00"

ALL EXISTING AND PROPOSED SIDEWALKS, BARRIER FREE RAMPS, HANDICAP PARKING, DRIVEWAY CROSSWALKS, DRIVEWAYS AND ACCESSIBLE ROUTES SHALL COMPLY WITH A.D.A., T.A.S. AND CITY OF EL PASO REQUIREMENTS. EXISTING INFRASTRUCTURE NOT COMPLYING SHALL BE REMOVED AND REPLACED TO MEET STANDARDS.

ALL SIDEWALKS TO BE INSTALLED BY BUILDER UNLESS NOTED OTHERWISE

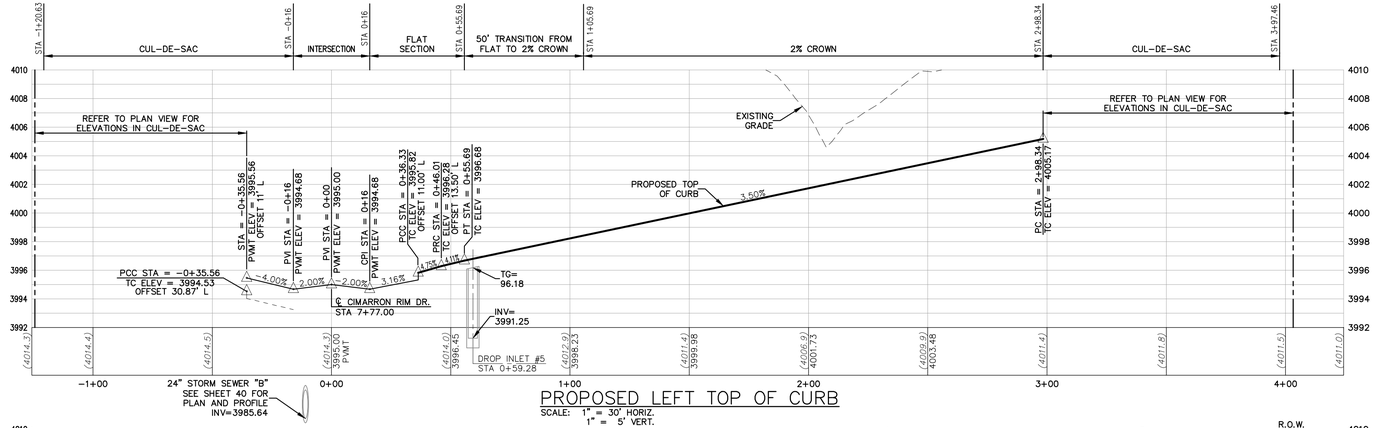
ALL ACCESSIBLE RAMPS WITHIN THE RIGHT-OF-WAY TO BE INSTALLED BY THE DEVELOPER

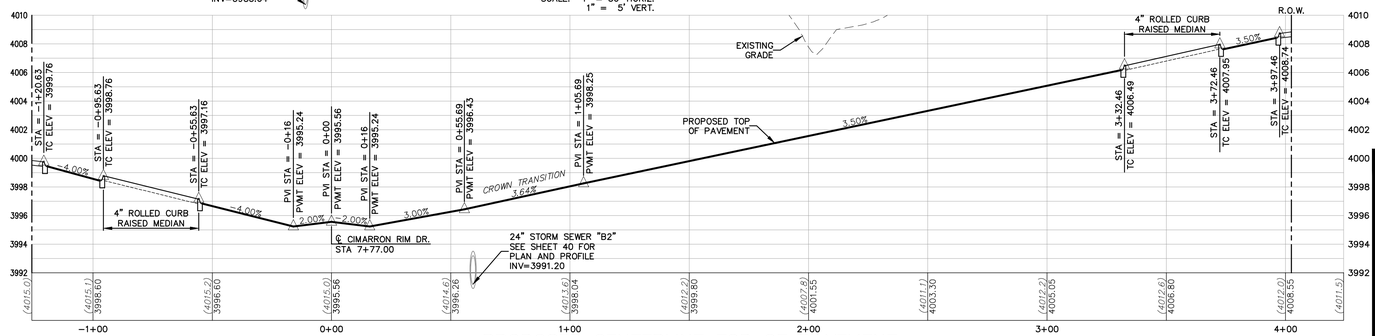
REFER TO SHEET 26 FOR ACCESSIBLE RAMP DETAILS

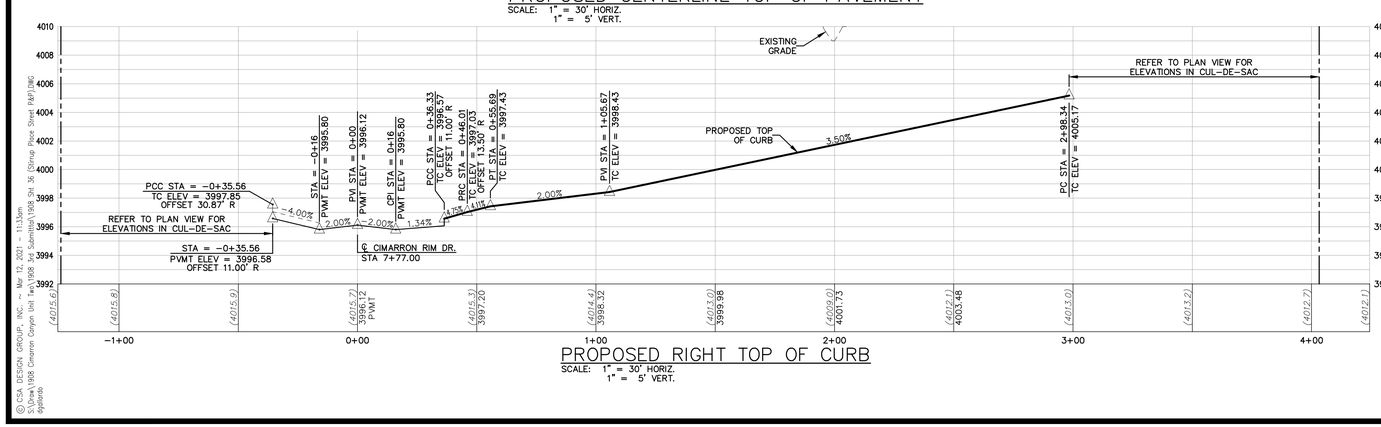
SIDEWALK BY DEVELOPER

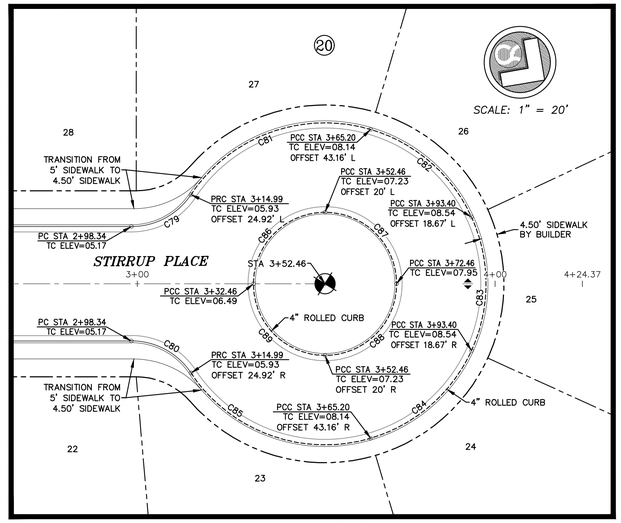
BENCHMARK: CITY MONUMENT AT THE CENTERLINE INTERSECTION OF CIMARRON PASS DRIVE AND CIMARRON PARK DRIVE.
ELEVATION = 3978.53 (EL PASO CITY DATUM)

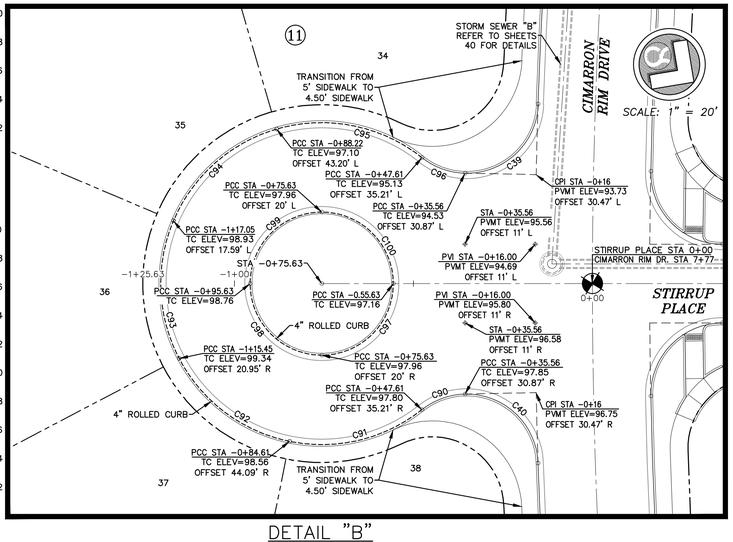
NO.	DATE	DESCRIPTION	BY
3	03/15/2021	3rd City Submittal	AHO
2	01/22/2021	2nd City Submittal	AHO
1	11/25/2020	1st City Submittal	AHO











LEGEND

- LOT LINE
- UTILITY & SIDEWALK EASEMENT
- CENTER LINE OF STREET
- STREET R.O.W.
- DRAINAGE & UTILITY R.O.W.
- 4" ROLLED CURB & GUTTER
- SUBDIVISION BOUNDARY LINE
- 3728.85 PROPOSED TOP OF CURB FINISHED GRADES
- (3729.2) EXISTING GRADE
- TC=08.09 PROPOSED TOP OF CURB ELEVATION
- PVMT=08.65 PROPOSED PAVEMENT ELEVATION
- DIRECTION OF RUNOFF FLOW
- HIGH POINT
- LOW POINT
- POINT OF VERTICAL INTERSECTION
- 50' TRANSITION AT INTERSECTION
- PROPOSED CITY MONUMENT

BEFORE YOU DIG - CALL

EL PASO ELECTRIC COMPANY	543-5720
	1-800-351-3555
TEXAS GAS SERVICE	544-6300
TCI EMERGENCY HOTLINE	562-8411/562-2603
TCI (FIBER OPTIC, POWER, WATER & SEWER)	1-800-669-7705
AFTER HOURS EMERGENCY (EPW)	594-5775
SPECTRUM	775-7414
TEXAS EXCAVATION SAFETY SYSTEM	1-800-344-8377
KINDER-MORGAN EPNG PIPELINES	1-800-238-3764
EL PASO STREETS AND MAINTENANCE	212-0151
EL PASO TRAFFIC SIGNAL STREETS AND MAINTENANCE	tlresponse@elpasotexas.gov

WARNING! BEFORE YOU DIG IN PROJECT AREA CONTRACTOR SHALL LOCATE EXISTING UNDERGROUND IMPROVEMENTS

Texas 811 Know what's below. Call before you dig.

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03/15/2021

STATE OF TEXAS
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124089
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El Paso, Texas 79912
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fax [915] 877.4334
www.csaengineers.com

SUBDIVISION
CIMARRON CANYON UNIT TWO SUBDIVISION

SHEET TITLE
STIRRUP PLACE PLAN AND PROFILE

GOB	1908
DESIGN BY	JOB NO.
GOB-DG-SM	12/20/2019
DRAWN BY	DATE OF COMMISSION
AHO	AS NOTED
CHECKED BY	SCALE

SHEET NO. 36
SHEET SEQUENCE 37 OF 82

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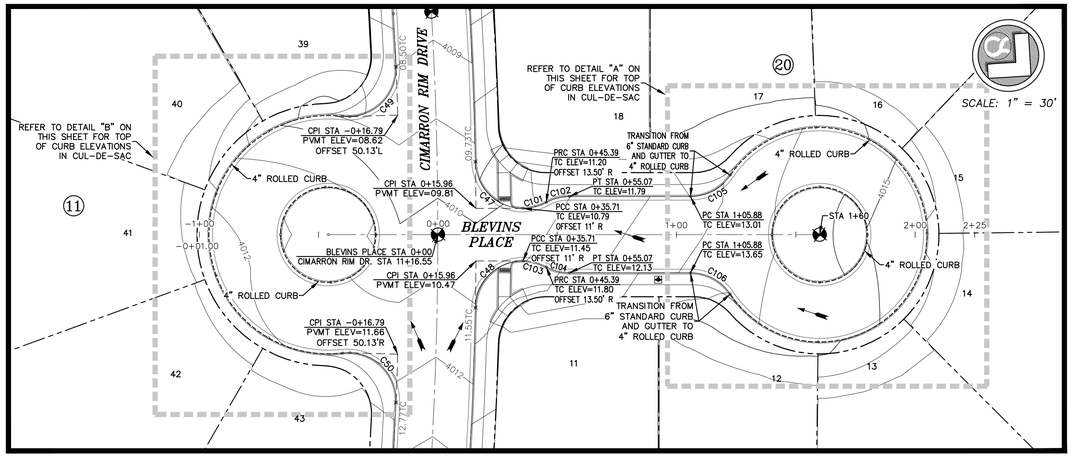
S:\Cimarron 1908 Cimarron Canyon Unit 1 & 1908 ACS Submittal\1908 St 36 Stirrup Place Street Plan.dwg



CURVE TABLE						
CURVE	RADIUS	LENGTH	TANGENT	CHORD	BEARING	DELTA
C47	20.00	31.04	19.62	28.02	N47°37'13"E	88°54'51"
C48	20.00	31.04	19.62	28.02	S41°17'39"E	88°54'51"
C49	20.00	31.67	20.26	28.46	N43°06'28"W	90°43'58"
C50	20.00	31.67	20.26	28.46	S51°15'08"W	90°43'58"
C101	20.00	10.11	5.16	10.00	N41°17'39"W	28°57'18"
C102	20.00	10.11	5.16	10.00	S41°17'39"E	28°57'18"
C103	20.00	10.11	5.16	10.00	S12°20'21"E	28°57'18"
C104	20.00	10.11	5.16	10.00	N12°20'21"W	28°57'18"
C105	20.00	19.68	10.72	18.89	N41°17'39"W	56°22'07"
C106	20.00	19.68	10.72	18.89	S15°04'29"W	56°22'07"
C107	45.00	42.68	23.10	41.10	S43°19'02"E	54°20'44"
C108	45.00	35.89	18.96	34.95	S22°52'50"W	45°41'52"
C109	45.00	35.89	18.96	34.95	S48°04'45"W	45°41'55"
C110	45.00	35.89	18.96	34.95	N86°13'20"W	45°41'55"
C111	45.00	35.89	18.96	34.95	N40°31'26"W	45°41'55"
C112	45.00	43.67	23.73	41.97	N15°04'29"E	55°35'54"
C113	20.00	31.42	20.00	28.28	S41°17'39"E	90°00'00"
C114	20.00	31.42	20.00	28.28	S48°42'21"E	90°00'00"
C115	20.00	31.42	20.00	28.28	N41°17'39"W	90°00'00"
C116	20.00	31.42	20.00	28.28	N48°42'21"E	90°00'00"
C117	20.00	3.05	1.53	3.05	S39°28'49"E	8°45'06"
C118	50.00	32.14	16.65	31.59	N11°24'19"W	36°49'36"
C119	50.00	34.97	18.24	34.26	N28°40'08"E	40°04'27"
C120	50.00	34.97	18.24	34.26	N68°44'35"E	40°04'27"
C121	50.00	34.97	18.24	34.26	S71°10'58"E	40°04'27"
C122	50.00	32.14	16.65	31.59	S34°21'22"E	36°49'36"
C123	20.00	3.05	1.53	3.05	N34°21'22"W	8°45'06"
C124	20.00	30.25	18.86	27.44	N44°38'46"W	86°38'53"
C125	20.00	32.59	21.21	29.10	N48°42'21"E	93°21'07"
C126	20.00	30.25	18.86	27.44	S44°38'46"E	86°38'53"
C127	20.00	32.59	21.21	29.10	S48°42'21"W	93°21'07"

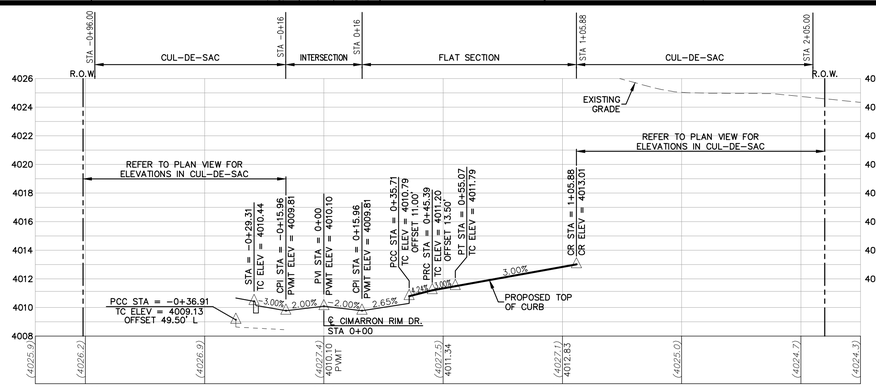
ALL EXISTING AND PROPOSED SIDEWALKS, BARRIER FREE RAMPS, HANDICAP PARKING, DRIVEWAY CROSSWALKS, DRIVEWAYS AND ACCESSIBLE ROUTES SHALL COMPLY WITH A.D.A., T.A.S. AND CITY OF EL PASO REQUIREMENTS. EXISTING INFRASTRUCTURE NOT COMPLYING SHALL BE REMOVED AND REPLACED TO MEET STANDARDS.

ALL SIDEWALKS TO BE INSTALLED BY BUILDER UNLESS NOTED OTHERWISE

ALL ACCESSIBLE RAMPS WITHIN THE RIGHT-OF-WAY TO BE INSTALLED BY THE DEVELOPER

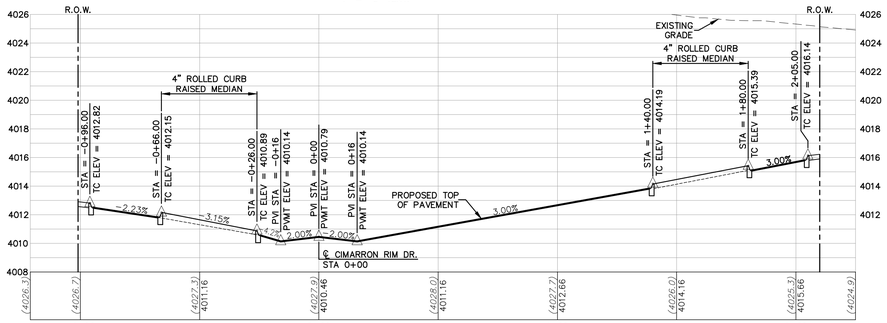
REFER TO SHEET 26 FOR ACCESSIBLE RAMP DETAILS

SIDEWALK BY DEVELOPER



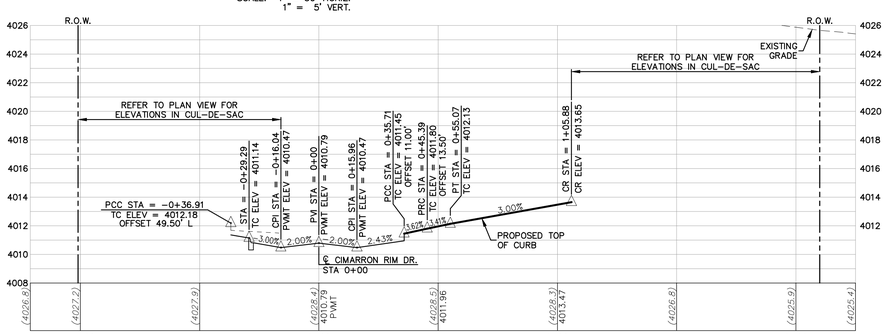
PROPOSED LEFT TOP OF CURB

SCALE: 1" = 30' HORIZ.
1" = 5' VERT.



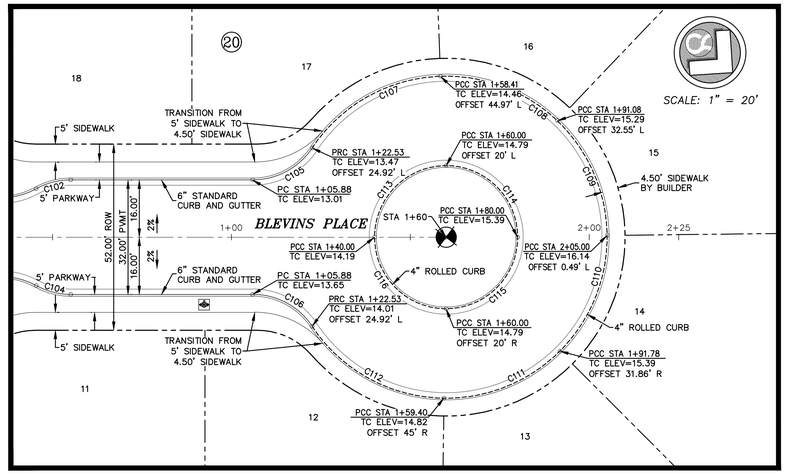
PROPOSED CENTERLINE TOP OF PAVEMENT

SCALE: 1" = 30' HORIZ.
1" = 5' VERT.



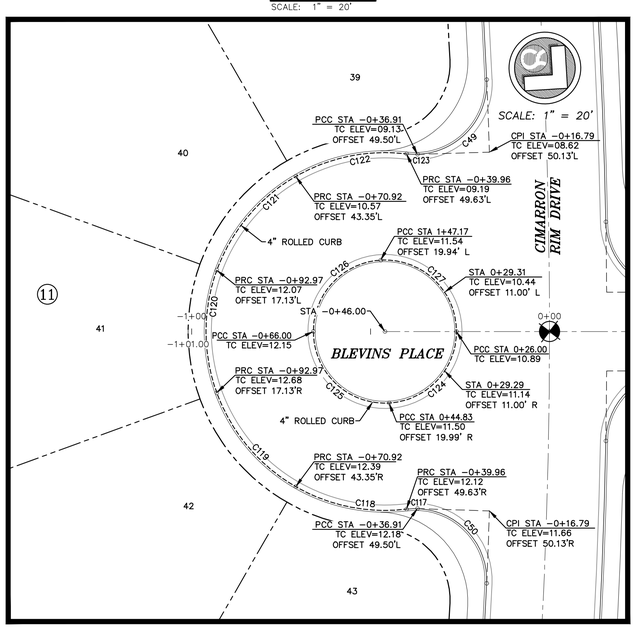
PROPOSED RIGHT TOP OF CURB

SCALE: 1" = 30' HORIZ.
1" = 5' VERT.



DETAIL "A"

SCALE: 1" = 20'



DETAIL "B"

SCALE: 1" = 20'

LEGEND

- LOT LINE
- UTILITY & SIDEWALK EASEMENT
- CENTER LINE OF STREET
- STREET R.O.W.
- DRAINAGE & UTILITY R.O.W.
- 4" ROLLED CURB & GUTTER
- SUBDIVISION BOUNDARY LINE
- 3728.85 PROPOSED TOP OF CURB FINISHED GRADES
- (3729.2) EXISTING GRADE
- TC=08.09 PROPOSED TOP OF CURB ELEVATION
- PVMT=08.65 PROPOSED PAVEMENT ELEVATION
- DIRECTION OF RUNOFF FLOW
- HIGH POINT
- LOW POINT
- POINT OF VERTICAL INTERSECTION
- 50' TRANSITION AT INTERSECTION
- PROPOSED CITY MONUMENT

BENCHMARK: CITY MONUMENT AT THE CENTERLINE INTERSECTION OF MESA HILLS DRIVE AND CIMARRON PARK DRIVE.
ELEVATION = 3976.53 (EL PASO CITY DATUM)

NO.	DATE	DESCRIPTION	BY
3	03/15/2021	3rd City Submittal	AHO
2	01/22/2021	2nd City Submittal	AHO
1	11/25/2020	1st City Submittal	AHO

WARNING! BEFORE YOU DIG IN PROJECT AREA CONTRACTOR SHALL FIELD LOCATE ALL UNDERGROUND IMPROVEMENTS

Texas 811 Know what's below. Call before you dig.

BEFORE YOU DIG - CALL

EL PASO ELECTRIC COMPANY	543-5720
AT&T	1-800-288-2355
TEXAS GAS SERVICE	1-800-700-2443
TGS EMERGENCY HOTLINE	544-6300
AFTER HOURS EMERGENCY (WATER & SEWER)	562-8411/562-2003
AFTER HOURS EMERGENCY (EPW)	1-800-592-1301
SPECTRUM	594-5775
TEXAS 811 EXCAVATION SAFETY SYSTEM	775-7414
KINDER-MORGAN EPNG PIPELINES	1-800-733-2317
EL PASO STREETS AND MAINTENANCE	1-800-238-3764
EL PASO TRAFFIC SIGNAL STREETS AND MAINTENANCE	212-0151

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05/15/2021

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fax [915] 877.4334
www.csaengineers.com

SUBDIVISION
CIMARRON CANYON UNIT TWO SUBDIVISION

SHEET TITLE
BLEVINS PLACE PLAN AND PROFILE

GOB DESIGN BY	1908 JOB NO.
GOB-DG-SM DRAWN BY	12/20/2019 DATE OF COMMISSION
AHO CHECKED BY	AS NOTED SCALE

SHEET NO. **37**
SHEET SEQUENCE 38 OF 82

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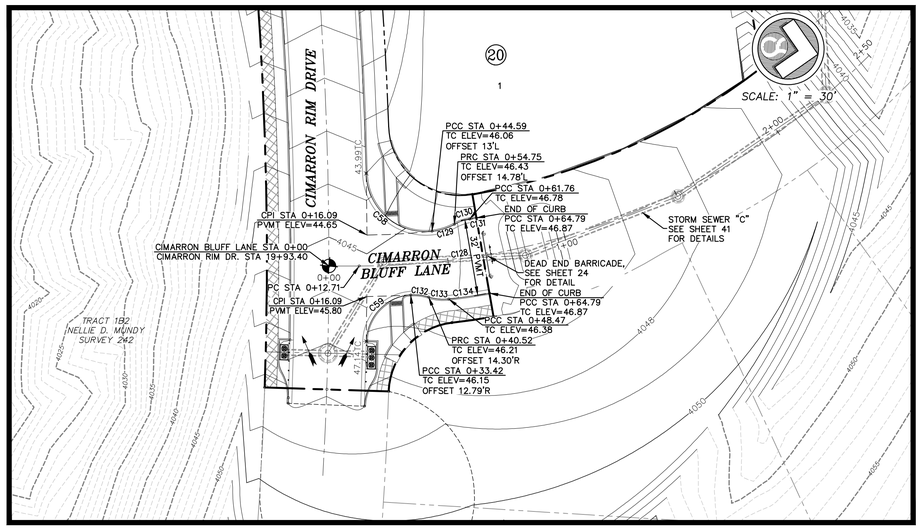
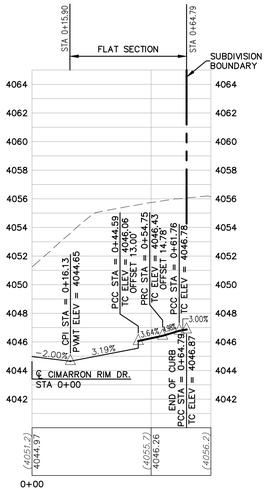
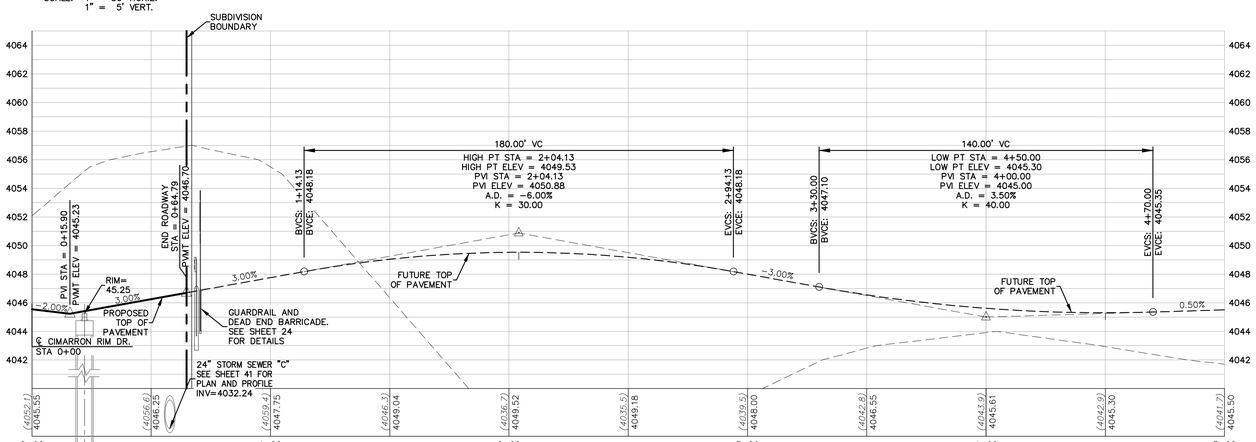
S:\CSA\1908 Cimarron Canyon Unit Two\1908 3rd Submittal\1908 SH. 37 (Blevins Place Street Plan).dwg
dgilardo





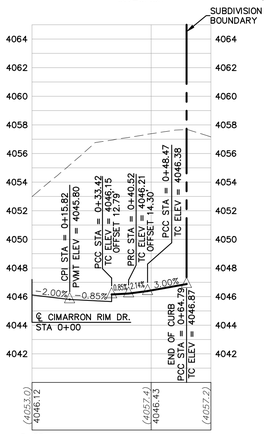
PROPOSED LEFT TOP OF CURB

SCALE: 1" = 30' HORIZ.
1" = 5' VERT.



PROPOSED CENTERLINE TOP OF PAVEMENT

SCALE: 1" = 30' HORIZ.
1" = 5' VERT.



PROPOSED RIGHT TOP OF CURB

SCALE: 1" = 30' HORIZ.
1" = 5' VERT.

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ALL ACCESSIBLE RAMPS WITHIN THE RIGHT-OF-WAY TO BE INSTALLED BY THE DEVELOPER

REFER TO SHEET 26 FOR ACCESSIBLE RAMP DETAILS

SIDEWALK BY DEVELOPER

CURVE TABLE						
CURVE	RADIUS	LENGTH	TANGENT	CHORD	BEARING	DELTA
C58	25.00	41.31	27.13	36.77	N78°43'40"E	94°40'13"
C59	20.00	29.61	18.27	26.98	S13°56'15"E	84°50'09"
C128	302.00	52.09	26.11	52.02	N9°53'39"W	9°52'54"
C129	25.00	9.92	5.02	9.85	N15°56'33"W	22°43'41"
C130	20.00	6.80	3.43	6.76	S19°11'59"E	19°28'16"
C131	286.00	2.88	1.44	2.88	N19°11'59"W	0°34'34"
C132	20.00	7.62	3.86	7.58	S7°54'16"W	21°50'31"
C133	20.00	8.58	4.36	8.52	N7°54'16"E	24°35'00"
C134	318.00	17.19	8.60	17.19	N16°40'44"W	3°05'49"

BENCHMARK: CITY MONUMENT AT THE CENTERLINE INTERSECTION OF CIMARRON PASS DRIVE AND CIMARRON PARK DRIVE.
ELEVATION = 3978.53 (EL PASO CITY DATUM)

NO.	DATE	DESCRIPTION	BY
3	03/15/2021	3rd City Submittal	AHO
2	01/22/2021	2nd City Submittal	AHO
1	11/25/2020	1st City Submittal	AHO

WARNING! BEFORE YOU DIG ON PROJECT AREA CONTRACTOR SHALL FIELD LOCATE ALL UNDERGROUND IMPROVEMENTS

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BEFORE YOU DIG - CALL

EL PASO ELECTRIC COMPANY	543-5720
1-800-DIG-TESS	1-800-344-8377
TEXAS GAS SERVICE	544-6300
TCI EMERGENCY HOTLINE	562-8411/562-2603
AFTER HOURS EMERGENCY (WATER & SEWER)	1-800-351-8333
AFTER HOURS EMERGENCY (EPW)	594-5775
SPECTRUM	775-7414
OPERATION SAFETY SYSTEM	1-800-343-8377
KINDER-MORGAN EPNG PIPELINES	1-800-238-3764
EL PASO STREETS AND MAINTENANCE	212-0151
EL PASO TRAFFIC SIGNAL STREETS AND MAINTENANCE	transportation@elpasotexas.gov

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05/15/21

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fax [915] 877.4334
www.csaengineers.com

SUBDIVISION
CIMARRON CANYON UNIT TWO SUBDIVISION

SHEET TITLE
CIMARRON BLUFF LANE PLAN AND PROFILE

GOB (DESIGN BY)	1908 (JOB NO.)
GOB-DG-SM (DRAWN BY)	12/20/2019 (DATE OF SUBMISSION)
AHO (CHECKED BY)	AS NOTED (SCALE)

SHEET NO. **38**

SHEET SEQUENCE 39 OF 82

LEGEND

- LOT LINE
- UTILITY & SIDEWALK EASEMENT
- CENTER LINE OF STREET
- STREET R.O.W.
- DRAINAGE & UTILITY R.O.W.
- 4" ROLLED CURB & GUTTER
- SUBDIVISION BOUNDARY LINE
- 3728.85 — PROPOSED TOP OF CURB FINISHED GRADES
- (3729.2) — EXISTING GRADE
- TC=08.09 — PROPOSED TOP OF CURB ELEVATION
- PVMT=08.65 — PROPOSED PAVEMENT ELEVATION
- DIRECTION OF RUNOFF FLOW
- HIGH POINT
- LOW POINT
- POINT OF VERTICAL INTERSECTION
- 50' TRANSITION AT INTERSECTION
- PROPOSED CITY MONUMENT

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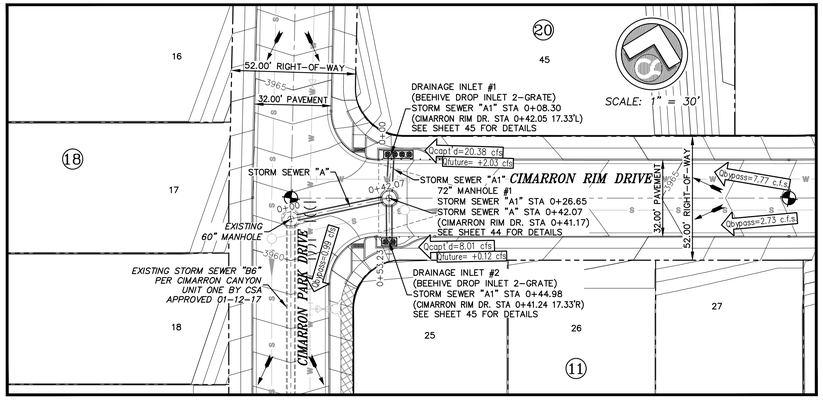
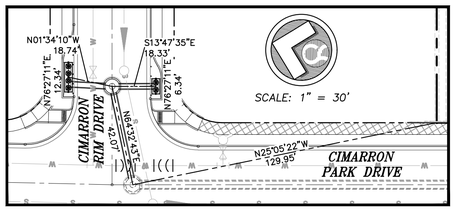
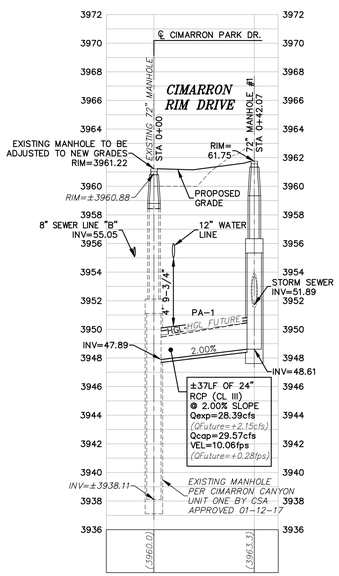
G:\Drawings\1908 Cimarron Canyon Unit Two\1908 3rd Submittal\1908 SH_38 (Cimarron Bluff Lane Street Plan).dwg
dgallardo







STORM SEWER "A"
SCALE: 1"=30' HORIZ.
SCALE: 1"=5' VERT.

STORM SEWER "A1"
SCALE: 1"=30' HORIZ.
SCALE: 1"=5' VERT.

VALUES SHOWN AS "Qfuture" ARE PROJECTED ADDITIONAL FLOWS AT FULL BUILD-OUT

SANITITE HP (PLASTIC PIPE) MANUFACTURED BY ADVANCED DRAINAGE SYSTEMS (ADS) HAS BEEN APPROVED BY EPWU STORMWATER MANAGEMENT AS AN "APPROVED EQUAL" TO REINFORCED CONCRETE PIPE (RCP) WITH EXCEPTION TO PIPES AT THE END OF A SYSTEM THAT OUTFALL TO A POND, BASIN, ETC. SANITITE HP IS AVAILABLE IN DIAMETERS UP TO 60 INCHES

INLETS ARE STATIONED TO THE CENTER OF THE STRUCTURE AT THE CURB LINE UNLESS NOTED OTHERWISE. ALL OTHER STATIONING IS TO THE CENTER OF THE STRUCTURES. BEARINGS AND DISTANCES ARE FOR FIELD LOCATION OF STRUCTURES ONLY. REFER TO PROFILE FOR ACTUAL PIPE LENGTHS.

HYDRAULIC GRADE LINE (HGL) REPRESENTED ON THIS SHEET IS 100-YEAR EVENT

ALL RUN OFF CALCULATIONS ARE BASED ON THE 100-YEAR STORM FREQUENCY.

INLET CAPACITY AND BYPASS IS PRESENTED ON SHEET 12 AND BY SEPERATE REPORT TO ENGINEERING FILES ON SUBDIVISION.

DRAINAGE INLET DATA

DRAINAGE INLET #	TYPE	NO. OF GRATES	PAVEMENT DESIGN	REQUIRED FLOW CAPACITY Q OF WATERSHED (CFS)	INLET BYPASS FLOW FROM	REQUIRED FLOW CAPACITY Q TOTAL W/BYPASS (CFS)	INLET FLOW CAPTURE (CFS)	FLOW BYPASS (CFS)	INLET BYPASS FLOW TO	DEPTH OF FLOW AT INLET (IN.)	APPROACH VELOCITY (FPS)	FLOW SPREAD AT INLET (FT.)	ROADWAY WIDTH AT INLET (FT.)
DI # 1	BEEHIVE	4	ON GRADE	13.29	DI #3	13.29	20.38	-7.09	EX-DI #14	8.72	3.60	23.80	16.00
DI # 1 future	BEEHIVE	4	ON GRADE	13.29	DI # 3 future	13.29	22.41	-9.12	EX-DI #14 future	9.00	3.70	25.01	16.00
DI # 2	BEEHIVE	2	ON GRADE	5.66	DI #4	5.66	8.01	-2.35	EX-DI #14	5.71	5.75	11.28	16.00
DI # 2 future	BEEHIVE	2	ON GRADE	5.66	DI # 4 future	5.66	8.13	-2.47	EX-DI #14 future	5.74	5.77	11.40	16.00

PROPOSED

CONDUIT TABLE

Pipe	Section Size	Length (ft)	Constructed Slope (ft/ft)	Upstream Invert Elevation (ft)	Downstream Invert Elevation (ft)	Inlet C Coefficient	Inlet CA (acres)	Total CA (acres)	System Flow Time (min)	Discharge (cfs)	Capacity (cfs)	Average Velocity (ft/s)	Downstream Node	Downstream Rim Elevation (ft)	Downstream HGL (ft)	Upstream Node	Upstream Rim Elevation (ft)	Upstream HGL (ft)
PA-1	24 inch	37	0.0200	3,948.61	3,947.89	N/A	N/A	5.85	10.07	28.39	29.57	10.06	EX-MH19	3,961.22	3,949.46	MH1	3,961.75	3,950.45
PA1-1	24 inch	15	0.0200	3,952.20	3,951.89	0.60	4.04	4.04	10.03	20.38	30.20	8.90	MH1	3,961.75	3,953.09	DI-1	3,961.36	3,953.82
PA1-2	24 inch	15	0.0200	3,951.25	3,950.96	0.95	1.81	1.81	10.04	8.01	29.39	6.51	MH1	3,961.75	3,951.67	DI-2	3,961.31	3,952.26

FUTURE

CONDUIT TABLE

Pipe	Section Size	Length (ft)	Constructed Slope (ft/ft)	Upstream Invert Elevation (ft)	Downstream Invert Elevation (ft)	Inlet C Coefficient	Inlet CA (acres)	Total CA (acres)	System Flow Time (min)	Discharge (cfs)	Capacity (cfs)	Average Velocity (ft/s)	Downstream Node	Downstream Rim Elevation (ft)	Downstream HGL (ft)	Upstream Node	Upstream Rim Elevation (ft)	Upstream HGL (ft)
PA-1	24 inch	37	0.0200	3,948.61	3,947.89	N/A	N/A	5.85	10.07	30.54	29.57	10.34	EX-MH19	3,961.22	3,949.60	MH1	3,961.75	3,950.48
PA1-1	24 inch	15	0.0200	3,952.20	3,951.89	0.60	4.04	4.04	10.03	22.41	30.20	9.23	MH1	3,961.75	3,953.17	DI-1	3,961.36	3,953.89
PA1-2	24 inch	15	0.0200	3,951.25	3,950.96	0.95	1.81	1.81	10.04	8.13	29.39	6.54	MH1	3,961.75	3,951.68	DI-2	3,961.31	3,952.27

BENCHMARK: CITY MONUMENT AT THE CENTERLINE INTERSECTION OF CIMARRON PASS DRIVE AND CIMARRON PARK DRIVE.
ELEVATION = 3978.53 (EL PASO CITY DATUM)

NO.	DATE	DESCRIPTION	BY
3	03/15/2021	3rd City Submittal	AHO
2	01/22/2021	2nd City Submittal	AHO
1	11/25/2020	1st City Submittal	AHO

WARNING! BEFORE YOU DIG IN PROJECT AREA CONTRACTOR SHALL FIELD LOCATE ALL UNDERGROUND IMPROVEMENTS

Texas811 Know what's below. Call before you dig.

BEFORE YOU DIG - CALL

EL PASO ELECTRIC COMPANY	543-5720
AT&T	1-800-246-1555
TEXAS GAS SERVICE	544-6300
TGS EMERGENCY HOTLINE	562-8411/562-2003
PUBLIC SERVICE BOARD (WATER & SEWER)	1-800-656-1555
AFTER HOURS EMERGENCY (EPW)	594-5775
SPECTRUM	775-7414
TEXAS EXCAVATION SAFETY SYSTEM	1-800-344-8377
KINDER-MORGAN EPNG PIPELINES	1-800-238-3764
EL PASO STREETS AND MAINTENANCE	212-0151
EL PASO TRAFFIC SIGNAL STREETS AND MAINTENANCE	tlresponse@elpasotexas.gov

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03/15/2021

STATE OF TEXAS
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fax [915] 877.4334
www.csaengineers.com

SUBDIVISION
CIMARRON CANYON UNIT TWO SUBDIVISION

SHEET TITLE
STORM SEWER "A", & "A1" PLAN AND PROFILE

GOB	1908
DESIGN BY	JOB NO.
GOB~DG~SM	12/20/2019
DRAWN BY	DATE OF SUBMISSION
AHO	AS NOTED
CHECKED BY	SCALE

SHEET NO.
39
SHEET SEQUENCE
40 OF 82

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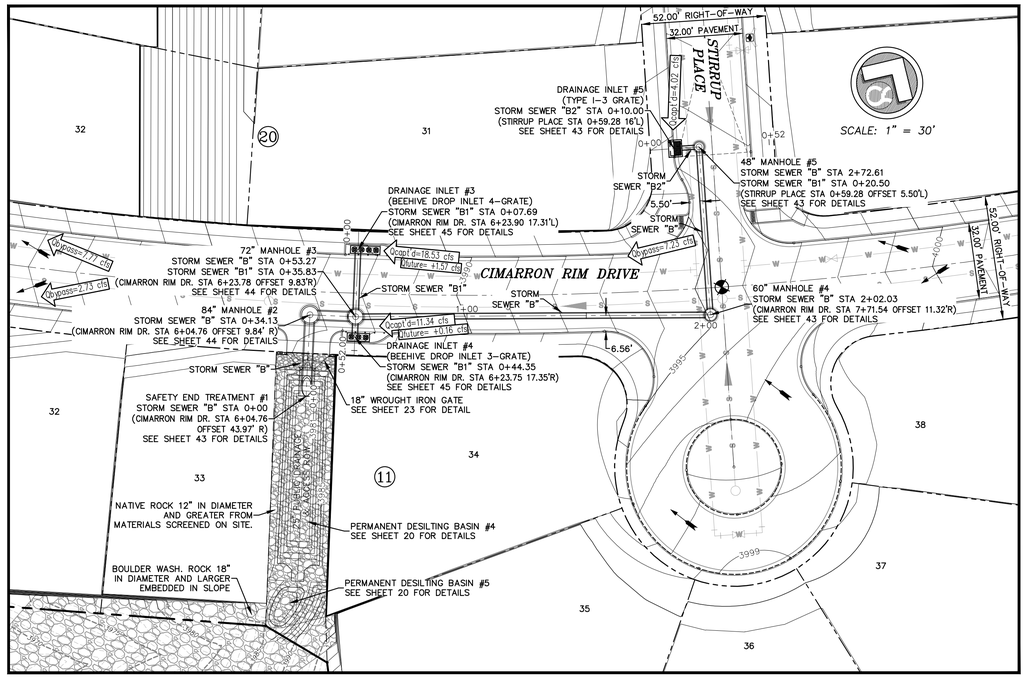
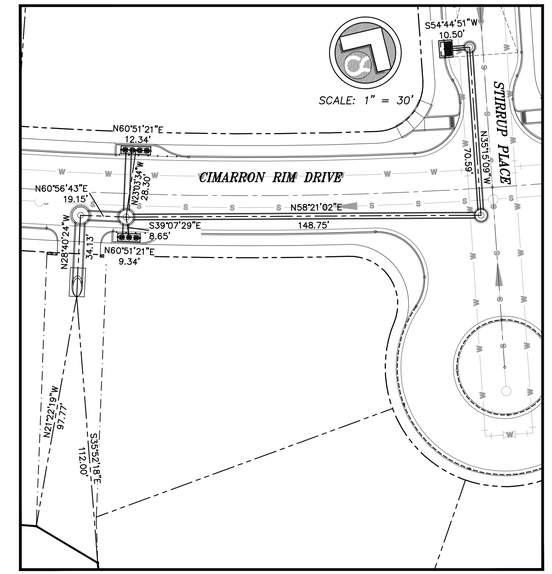
S:\Cimarron Canyon Unit Two\1908 3rd Submittal\1908 St 39 Storm Sewer A & A1 PMP.DWG
dgilstrap





SANITITE HP (PLASTIC PIPE) MANUFACTURED BY ADVANCED DRAINAGE SYSTEMS (ADS) HAS BEEN APPROVED BY EPWU STORMWATER MANAGEMENT AS AN "APPROVED EQUAL" TO REINFORCED CONCRETE PIPE (RCP) WITH EXCEPTION TO PIPES AT THE END OF A SYSTEM THAT OUTFALL TO A POND, BASIN, ETC. SANITITE HP IS AVAILABLE IN DIAMETERS UP TO 60 INCHES

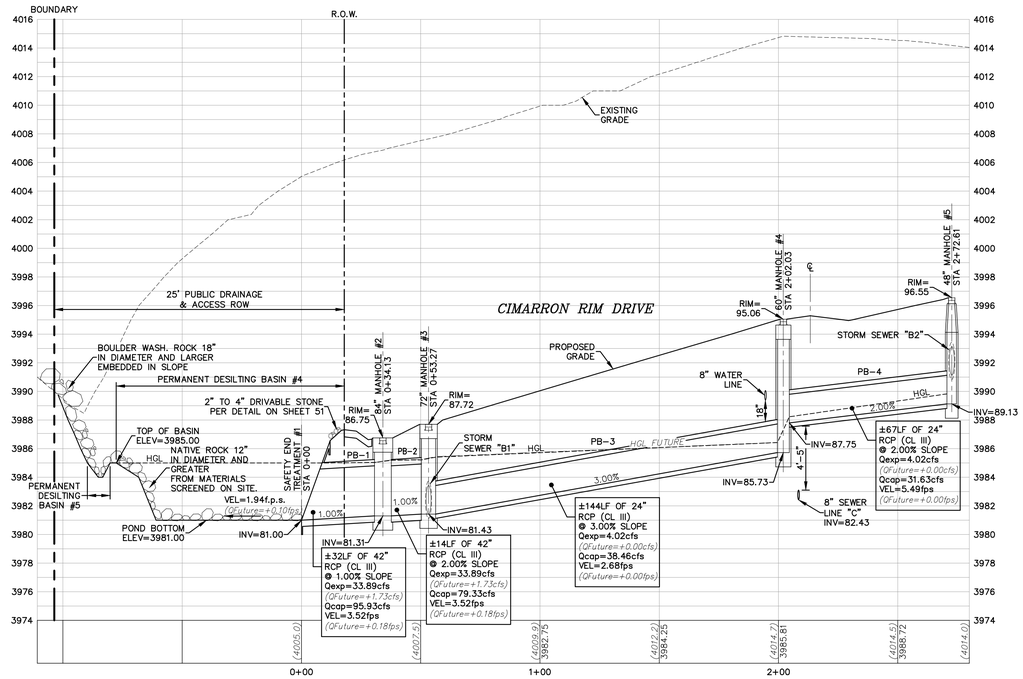
INLETS ARE STATIONED TO THE CENTER OF THE STRUCTURE AT THE CURB LINE UNLESS NOTED OTHERWISE. ALL OTHER STATIONING IS TO THE CENTER OF THE STRUCTURES. BEARINGS AND DISTANCES ARE FOR FIELD LOCATION OF STRUCTURES ONLY. REFER TO PROFILE FOR ACTUAL PIPE LENGTHS.

VALUES SHOWN AS "Qfuture" ARE PROJECTED ADDITIONAL FLOWS AT FULL BUILD-OUT

HYDRAULIC GRADE LINE (HGL) REPRESENTED ON THIS SHEET IS 100-YEAR EVENT

ALL RUN OFF CALCULATIONS ARE BASED ON THE 100-YEAR STORM FREQUENCY.

INLET CAPACITY AND BYPASS IS PRESENTED ON SHEET 12 AND BY SEPERATE REPORT TO ENGINEERING FILES ON SUBDIVISION.



STORM SEWER "B"

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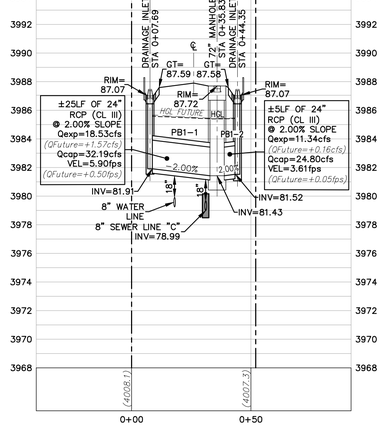
SCALE: 1"=5' VERT.



STORM SEWER "B1"

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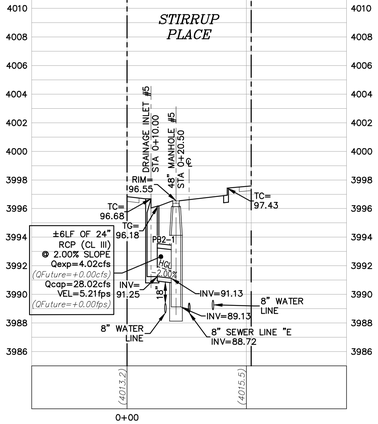
SCALE: 1"=5' VERT.



STORM SEWER "B2"

SCALE: 1"=30' HORIZ.
SCALE: 1"=5' VERT.

DRAINAGE INLET DATA

DRAINAGE INLET #	TYPE	NO. OF GRATES	PAVEMENT DESIGN	REQUIRED FLOW CAPACITY Q OF WATERSHED (CFS)	INLET BYPASS FLOW FROM	REQUIRED FLOW CAPACITY Q TOTAL W/BYPASS (CFS)	INLET FLOW CAPTURE (CFS)	FLOW BYPASS (CFS)	INLET BYPASS FLOW TO	DEPTH OF FLOW AT INLET (IN.)	APPROACH VELOCITY (FPS)	FLOW SPREAD AT INLET (FT.)	ROADWAY WIDTH AT INLET (FT.)
DI # 3	BEEHIVE	4	ON GRADE	24.76	DI #5	26.30	18.53	7.77	DI #1	7.13	8.38	17.18	16.00
DI # 3 future	BEEHIVE	4	ON GRADE	24.76	DI #5 & #6 future	26.30	20.10	6.20	DI #1 future	7.40	8.65	18.32	16.00
DI # 4	BEEHIVE	3	ON GRADE	14.07	NONE	14.07	11.34	2.73	DI #2	6.14	7.42	13.07	16.00
DI # 4 future	BEEHIVE	3	ON GRADE	14.07	DI # 7 future	14.07	11.50	2.57	DI #2 future	6.18	7.45	13.22	16.00
DI # 5	I	3	ON GRADE	5.56	NONE	5.56	4.02	1.54	DI #5	5.17	5.57	9.01	16.00

PROPOSED

CONDUIT TABLE

Pipe	Section Size	Length (ft)	Constructed Slope (ft/ft)	Upstream Invert Elevation (ft)	Downstream Invert Elevation (ft)	Inlet C Coefficient	Inlet CA (acres)	Total CA (acres)	System Flow Time (min)	Discharge (cfs)	Capacity (cfs)	Average Velocity (ft/s)	Downstream Node	Downstream Rim Elevation (ft)	Downstream HGL (ft)	Upstream Node	Upstream Rim Elevation (ft)	Upstream HGL (ft)
PB-1	42 inch	32	0.0100	3,981.31	3,981.00	N/A	N/A	13.75	10.16	33.89	95.93	3.52	SE1	3,986.50	3,985.00	MH2	3,986.75	3,985.04
PB-2	42 inch	14	0.0100	3,981.43	3,981.31	N/A	N/A	13.75	10.09	33.89	79.33	3.52	MH2	3,986.75	3,985.19	MH3	3,987.62	3,985.22
PB-3	24 inch	144	0.0300	3,985.74	3,981.43	N/A	N/A	1.78	10.92	4.02	38.46	2.68	MH3	3,987.62	3,985.41	MH4	3,995.06	3,986.43
PB-4	24 inch	67	0.0200	3,989.13	3,987.75	N/A	N/A	1.78	10.21	4.02	31.63	5.49	MH4	3,995.06	3,988.23	MH5	3,996.55	3,989.83
PB1-1	24 inch	25	0.0200	3,981.98	3,981.43	0.60	7.47	7.47	10.08	18.53	32.19	5.90	MH3	3,987.62	3,985.41	DI-3	3,987.07	3,985.59
PB1-2	24 inch	5	0.0200	3,981.52	3,981.43	0.60	4.50	4.50	10.03	11.34	24.80	3.61	MH3	3,987.62	3,985.41	DI-4	3,987.07	3,985.43
PB2-1	24 inch	6	0.0200	3,991.25	3,991.13	0.60	1.78	1.78	10.03	4.02	28.02	5.21	MH5	3,996.55	3,991.64	DI-5	3,996.18	3,991.95

FUTURE

CONDUIT TABLE

Pipe	Section Size	Length (ft)	Constructed Slope (ft/ft)	Upstream Invert Elevation (ft)	Downstream Invert Elevation (ft)	Inlet C Coefficient	Inlet CA (acres)	Total CA (acres)	System Flow Time (min)	Discharge (cfs)	Capacity (cfs)	Average Velocity (ft/s)	Downstream Node	Downstream Rim Elevation (ft)	Downstream HGL (ft)	Upstream Node	Upstream Rim Elevation (ft)	Upstream HGL (ft)
PB-1	42 inch	32	0.0100	3,981.31	3,981.00	N/A	N/A	13.75	10.15	35.62	95.93	3.70	SE1	3,986.50	3,985.00	MH2	3,986.75	3,985.04
PB-2	42 inch	14	0.0100	3,981.43	3,981.31	N/A	N/A	13.75	10.09	35.62	79.33	3.70	MH2	3,986.75	3,985.21	MH3	3,987.62	3,985.24
PB-3	24 inch	144	0.0300	3,985.74	3,981.43	N/A	N/A	1.78	10.92	4.02	38.46	2.68	MH3	3,987.62	3,985.45	MH4	3,995.06	3,986.43
PB-4	24 inch	67	0.0200	3,989.13	3,987.75	N/A	N/A	1.78	10.21	4.02	31.63	5.49	MH4	3,995.06	3,988.23	MH5	3,996.55	3,989.83
PB1-1	24 inch	25	0.0200	3,981.98	3,981.43	0.60	7.47	7.47	10.07	20.10	32.19	6.40	MH3	3,987.62	3,985.45	DI-3	3,987.07	3,985.67
PB1-2	24 inch	5	0.0200	3,981.52	3,981.43	0.60	4.50	4.50	10.03	11.50	24.80	3.66	MH3	3,987.62	3,985.45	DI-4	3,987.07	3,985.47
PB2-1	24 inch	6	0.0200	3,991.25	3,991.13	0.60	1.78	1.78	10.03	4.02	28.02	5.21	MH5	3,996.55	3,991.64	DI-5	3,996.18	3,991.95

BENCHMARK: CITY MONUMENT AT THE CENTERLINE INTERSECTION OF CIMARRON PASS DRIVE AND CIMARRON PARK DRIVE.
ELEVATION = 3978.53 (EL PASO CITY DATUM)

NO.	DATE	DESCRIPTION	BY
3	03/15/2021	3rd City Submittal	AHO
2	01/22/2021	2nd City Submittal	AHO
1	11/25/2020	1st City Submittal	AHO

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EL PASO ELECTRIC COMPANY	543-5720
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TGS EMERGENCY HOTLINE	562-8411/562-2603
EPWU (WATER, WASTEWATER & SEWER)	1-800-592-1155
AFTER HOURS EMERGENCY (EPW)	594-5775
SPECTRUM	775-7414
TEXAS EXCAVATION SAFETY SYSTEM	1-800-344-8377
KINDER-MORGAN EPNG PIPELINES	1-800-238-3764
EL PASO STREETS AND MAINTENANCE	212-0151
EL PASO TRAFFIC SIGNAL STREETS AND MAINTENANCE	tlengsan@elpasotexas.gov

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05/15/2021

STATE OF TEXAS
ADRIAN I. ONTIVEROS
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tel [915] 877.4155
fax [915] 877.4334
www.csaengineers.com

SUBDIVISION
CIMARRON CANYON UNIT TWO SUBDIVISION

SHEET TITLE
STORM SEWER "B", B1 & "B2" PLAN AND PROFILE

GOB DESIGN BY	1908 JOB NO.
GOB-DC-SM DRAWN BY	12/20/2019 DATE OF SUBMISSION
AHO CHECKED BY	AS NOTED SCALE

SHEET NO. 40
SHEET SEQUENCE 41 OF 82

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BENCHMARK: CITY MONUMENT AT THE CENTERLINE INTERSECTION OF ARMIJO PASS DRIVE AND CIMARRON PARK DRIVE.
ELEVATION = 3978.53 (EL PASO CITY DATUM)

NO.	DATE	DESCRIPTION	BY
3	03/15/2021	3rd City Submittal	AHO
2	01/22/2021	2nd City Submittal	AHO
1	11/25/2020	1st City Submittal	AHO

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TEXAS GAS SERVICE	1-800-700-2443
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AFTER HOURS EMERGENCY (WATER & SEWER)	562-8411/562-2003
SPECTRUM	1-800-492-2253
TIME WARNER CABLE	594-5775
KINDER-MORGAN EPNG PIPELINES	775-7414
EL PASO STREETS AND MAINTENANCE	1-800-877-7877
EL PASO TRAFFIC SIGNAL STREETS AND MAINTENANCE	1-800-238-3764
	212-0151

tlengel@epelectric.com

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05/15/2021

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fax [915] 877.4334
www.csaengineers.com

SUBDIVISION
CIMARRON CANYON UNIT TWO SUBDIVISION

SHEET TITLE
STORM SEWER "C" & "C1" PLAN AND PROFILE

GOB	1908
DESIGN BY	JOB NO.
GOB-DG-SM	12/20/2019
DRAWN BY	DATE OF SUBMISSION
AHO	AS NOTED
CHECKED BY	SCALE

SHEET NO.
41
SHEET SEQUENCE
42 OF 82

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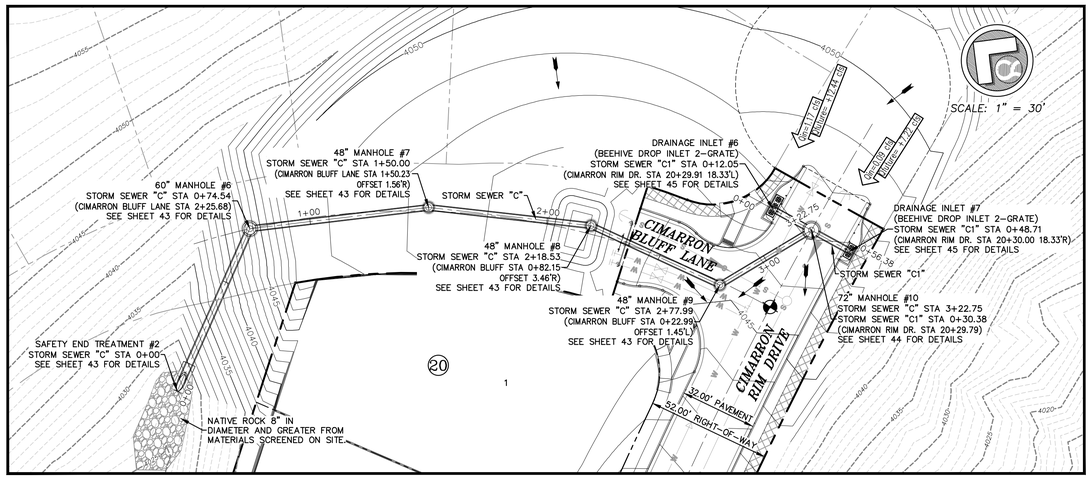
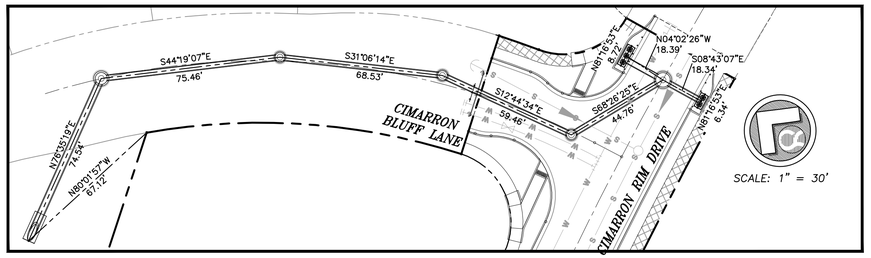
dgallardo





VALUES SHOWN AS "Qfuture" ARE PROJECTED ADDITIONAL FLOWS AT FULL BUILD-OUT

SANITITE HP (PLASTIC PIPE) MANUFACTURED BY ADVANCED DRAINAGE SYSTEMS (ADS) HAS BEEN APPROVED BY EPWU STORMWATER MANAGEMENT AS AN "APPROVED EQUAL" TO REINFORCED CONCRETE PIPE (RCP) WITH EXCEPTION TO PIPES AT THE END OF A SYSTEM THAT OUTFALL TO A POND, BASIN, ETC. SANITITE HP IS AVAILABLE IN DIAMETERS UP TO 60 INCHES.

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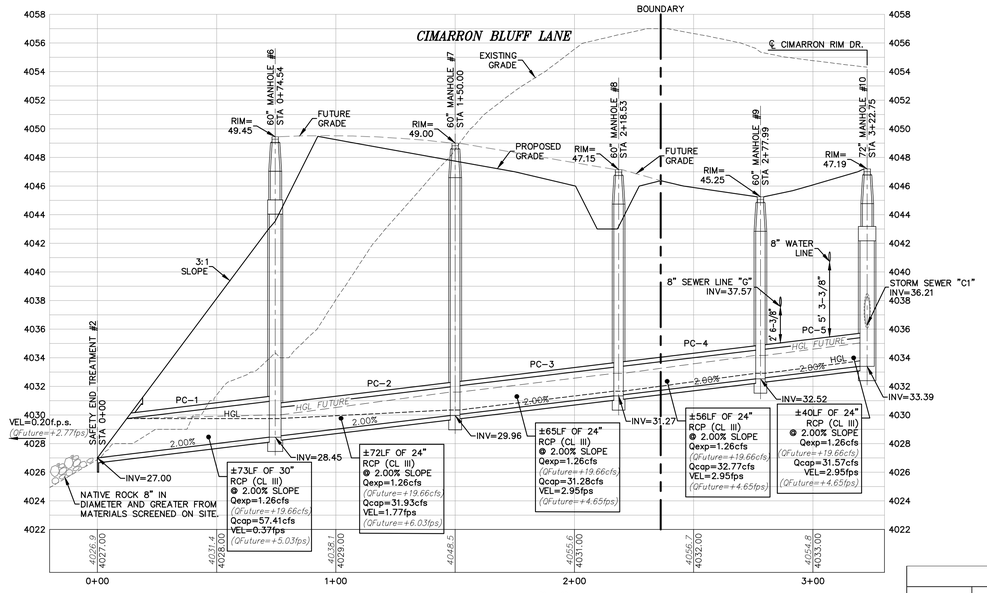
HYDRAULIC GRADE LINE (HGL) REPRESENTED ON THIS SHEET IS 100-YEAR EVENT

ALL RUN OFF CALCULATIONS ARE BASED ON THE 100-YEAR STORM FREQUENCY.

INLET CAPACITY AND BYPASS IS PRESENTED ON SHEET 12 AND BY SEPERATE REPORT TO ENGINEERING FILES ON SUBDIVISION.



STORM SEWER "C"
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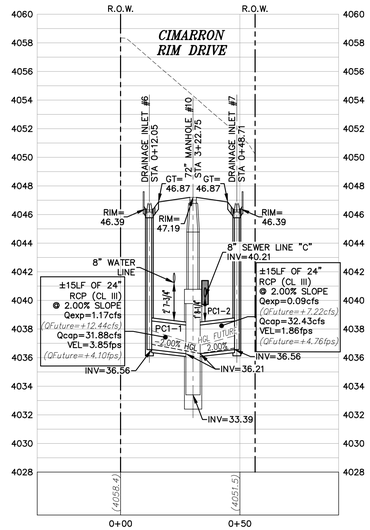
SCALE: 1"=5' VERT.



STORM SEWER "C1"
SCALE: 1"=30' HORIZ.
SCALE: 1"=5' VERT.

DRAINAGE INLET DATA

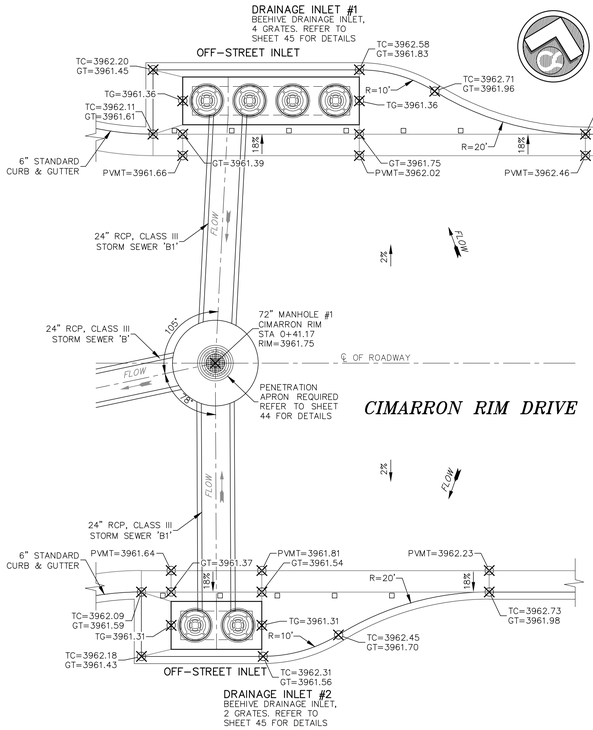
DRAINAGE INLET #	TYPE	NO. OF GRATES	PAVEMENT DESIGN	REQUIRED FLOW CAPACITY Q OF WATERSHED (CFS)	INLET BYPASS FLOW FROM	REQUIRED FLOW CAPACITY Q TOTAL W/BYPASS (CFS)	INLET FLOW CAPTURE (CFS)	FLOW BYPASS (CFS)	INLET BYPASS FLOW TO	DEPTH OF FLOW AT INLET (IN.)	APPROACH VELOCITY (FPS)	FLOW SPREAD AT INLET (FT.)	ROADWAY WIDTH AT INLET (FT.)
DI # 6	BEEHIVE	3	ON GRADE	1.17	NONE	1.17	1.17	NONE	NONE	3.20	6.15	1.43	16.00
DI # 6 future	BEEHIVE	3	ON GRADE	17.97	NONE	17.97	13.61	4.36	DI # 3 future	6.59	7.44	14.93	16.00
DI # 7	BEEHIVE	2	ON GRADE	0.09	NONE	0.09	0.09	NONE	NONE	1.22	3.24	0.55	16.00
DI # 7 future	BEEHIVE	2	ON GRADE	7.65	NONE	7.65	7.31	0.34	DI # 4 future	5.40	6.46	9.99	16.00

PROPOSED

CONDUIT TABLE																		
Pipe	Section Size	Length (ft)	Constructed Slope (ft/ft)	Upstream Invert Elevation (ft)	Downstream Invert Elevation (ft)	Inlet C Coefficient	Inlet CA (acres)	Total CA (acres)	System Flow Time (min)	Discharge (cfs)	Capacity (cfs)	Average Velocity (ft/s)	Downstream Node	Downstream Rim Elevation (ft)	Downstream HGL (ft)	Upstream Node	Upstream Rim Elevation (ft)	Upstream HGL (ft)
PC-1	30 inch	73	0.0200	4,028.45	4,027.00	N/A	N/A	0.17	12.73	1.26	57.41	0.37	SE2	4,032.00	4,029.75	MH6	4,049.45	4,029.75
PC-2	24 inch	72	0.0200	4,029.96	4,028.45	N/A	N/A	0.17	10.68	1.26	31.93	1.77	MH6	4,049.45	4,029.75	MH7	4,049.00	4,030.35
PC-3	24 inch	65	0.0200	4,031.27	4,029.96	N/A	N/A	0.17	10.39	1.26	31.28	2.95	MH7	4,049.00	4,030.35	MH8	4,047.15	4,031.66
PC-4	24 inch	56	0.0200	4,032.52	4,031.27	N/A	N/A	0.17	10.34	1.26	32.77	2.95	MH8	4,047.15	4,031.66	MH9	4,045.25	4,032.91
PC-5	24 inch	40	0.0200	4,033.39	4,032.52	N/A	N/A	0.17	10.25	1.26	31.57	2.95	MH9	4,045.25	4,032.91	MH10	4,047.19	4,033.78
PC1-1	15 inch	15	0.0200	4,036.56	4,036.21	0.60	0.14	0.14	10.08	1.17	31.88	3.85	MH10	4,047.19	4,036.47	DI-6	4,046.39	4,036.93
PC1-2	24 inch	15	0.0200	4,036.56	4,036.21	0.60	0.03	0.03	10.15	0.09	32.43	1.86	MH10	4,047.19	4,036.29	DI-7	4,046.39	4,036.66

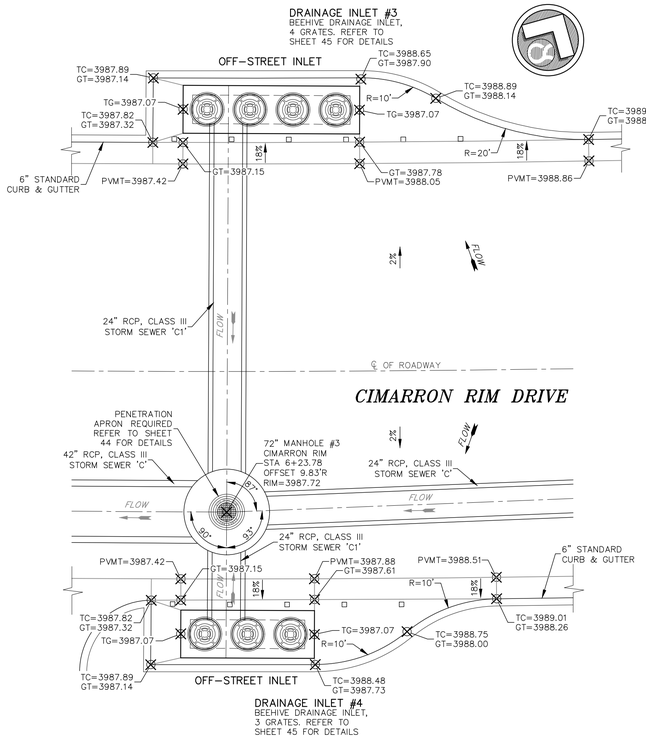
FUTURE

CONDUIT TABLE																		
Pipe	Section Size	Length (ft)	Constructed Slope (ft/ft)	Upstream Invert Elevation (ft)	Downstream Invert Elevation (ft)	Inlet C Coefficient	Inlet CA (acres)	Total CA (acres)	System Flow Time (min)	Discharge (cfs)	Capacity (cfs)	Average Velocity (ft/s)	Downstream Node	Downstream Rim Elevation (ft)	Downstream HGL (ft)	Upstream Node	Upstream Rim Elevation (ft)	Upstream HGL (ft)
PC-1	30 inch	73	0.0200	4,028.45	4,027.00	N/A	N/A	8.20	10.23	20.92	57.41	5.40	SE2	4,032.00	4,029.75	MH6	4,049.45	4,030.00
PC-2	24 inch	72	0.0200	4,029.96	4,028.45	N/A	N/A	8.20	10.16	20.92	31.93	7.80	MH6	4,049.45	4,030.00	MH7	4,049.00	4,031.60
PC-3	24 inch	65	0.0200	4,031.27	4,029.96	N/A	N/A	8.20	10.15	20.92	31.28	7.60	MH7	4,049.00	4,031.60	MH8	4,047.15	4,032.91
PC-4	24 inch	56	0.0200	4,032.52	4,031.27	N/A	N/A	8.20	10.13	20.92	32.77	7.60	MH8	4,047.15	4,032.91	MH9	4,045.25	4,034.16
PC-5	24 inch	40	0.0200	4,033.39	4,032.52	N/A	N/A	8.20	10.10	20.92	31.57	7.60	MH9	4,045.25	4,034.16	MH10	4,047.19	4,035.03
PC1-1	15 inch	15	0.0200	4,036.56	4,036.21	0.60	5.75	5.75	10.04	13.61	31.88	7.95	MH10	4,047.19	4,037.12	DI-6	4,046.39	4,037.89
PC1-2	24 inch	15	0.0200	4,036.56	4,036.21	0.60	2.45	2.45	10.04	7.31	32.43	6.62	MH10	4,047.19	4,036.86	DI-7	4,046.39	4,037.52



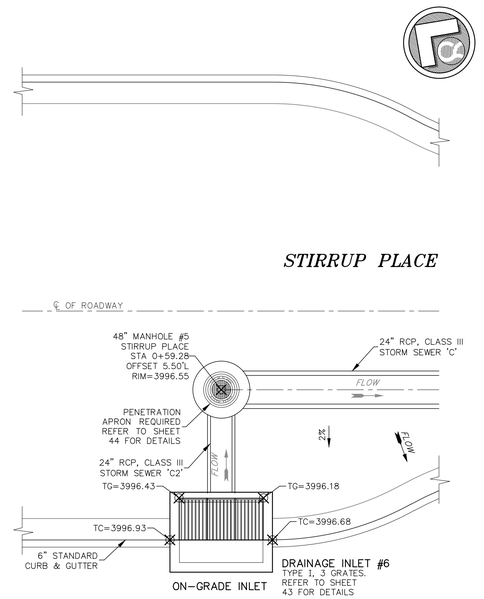
DRAINAGE INLET #1 AND #2

SCALE: 1" = 5'-0"



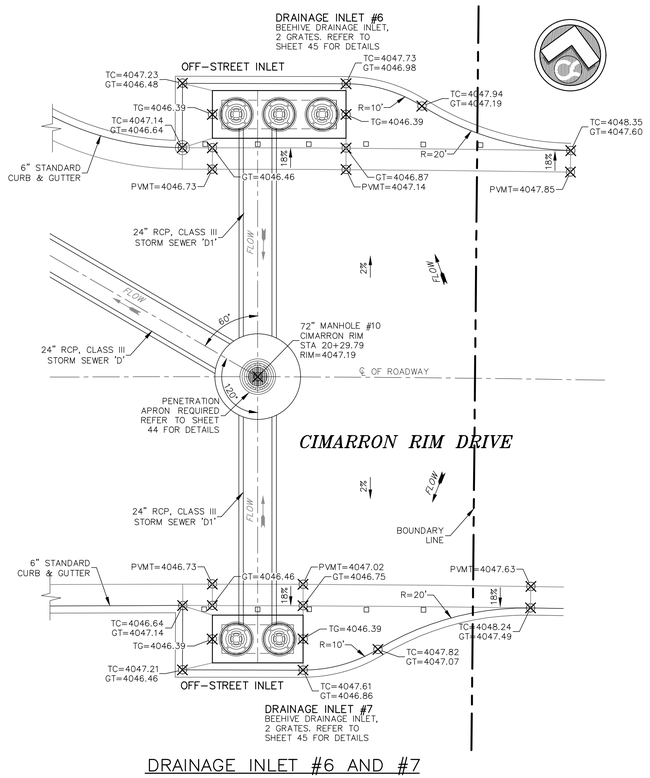
DRAINAGE INLET #3 AND #4

SCALE: 1" = 5'-0"



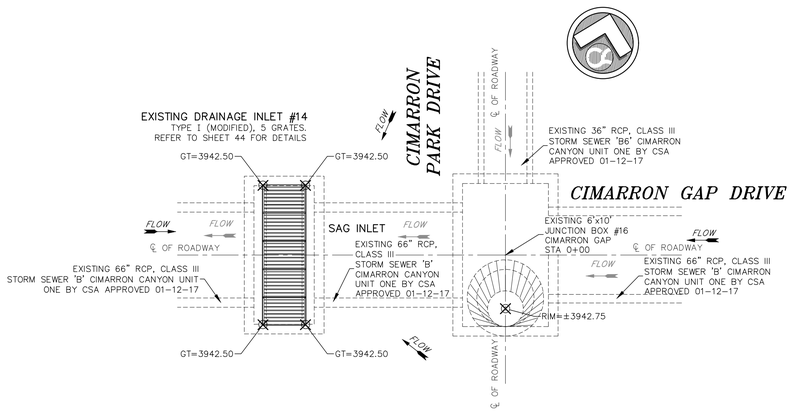
DRAINAGE INLET #5

SCALE: 1" = 5'-0"



DRAINAGE INLET #6 AND #7

SCALE: 1" = 5'-0"



EXISTING TYPE I MODIFIED DROP INLET EX-DI14

SCALE: 1" = 5'-0"

SEE SHEET 12 FOR HYDRAULIC DATA AND CALCULATIONS RELATIVE TO CAPACITY, BYPASS AND CLOGGING FOR INLETS.

BENCHMARK: CITY MONUMENT AT THE CENTERLINE INTERSECTION OF CIMARRON PASS DRIVE AND CIMARRON PARK DRIVE. ELEVATION = 3978.53 (EL PASO CITY DATUM)

NO.	DATE	DESCRIPTION	BY
3	03/15/2021	3rd City Submittal	AHO
2	01/22/2021	2nd City Submittal	AHO
1	11/25/2020	1st City Submittal	AHO

BEFORE YOU DIG - CALL

EL PASO ELECTRIC COMPANY	543-5720
AT&T	1-800-246-5555
TEXAS GAS SERVICE	1-800-544-6300
TGS EMERGENCY HOTLINE	562-8411/562-2603
EL PASO WATER UTILITIES (WATER & SEWER)	1-800-592-1555
AFTER HOURS EMERGENCY (EPW)	594-5775
SPECTRUM	775-7414
TEXAS 811 EXCAVATION SAFETY SYSTEM	1-800-344-8377
KINDER-MORGAN EPNG PIPELINES	1-800-238-3764
EL PASO STREETS AND MAINTENANCE	212-0151
EL PASO TRAFFIC SIGNAL STREETS AND MAINTENANCE	tlresponse@elpasotexas.gov

WARNING! BEFORE YOU DIG IN PROJECT AREA CONTRACTOR SHALL CALL TEXAS 811 FOR UNDERGROUND IMPROVEMENTS

Texas811 Know what's below. Call before you dig.

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05/15/2021

STATE OF TEXAS
ADRIAN I. ONTIVEROS
124089
LICENSED PROFESSIONAL ENGINEER

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Texas Registered Engineering Firm F-9997
1845 Northwestern Dr. Ste C
El Paso, Texas 79912
tel [915] 877.4155
fax [915] 877.4334
www.csaengineers.com

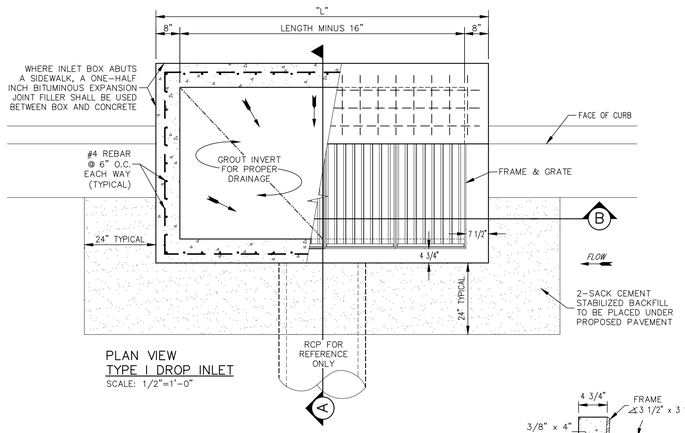
SUBDIVISION
CIMARRON CANYON UNIT TWO SUBDIVISION

SHEET TITLE
DRAINAGE INLETS 1-8

GOB DESIGN BY	1908 JOB NO.
GOB-DG-SM DRAWN BY	12/20/2019 DATE OF SUBMISSION
AHO CHECKED BY	AS NOTED SCALE

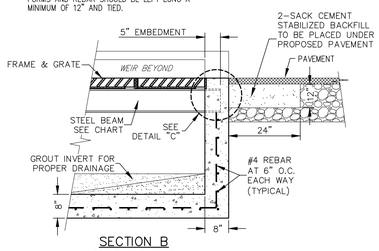
SHEET NO. 42
SHEET SEQUENCE 43 OF 82

© CSA DESIGN GROUP, INC. — Mar 12, 2021 - 11:18am
S:\Cimarron Canyon Unit Two\1908 3rd Submittal\1908 Sht 42 (Drainage Inlets).dwg
dgalindo

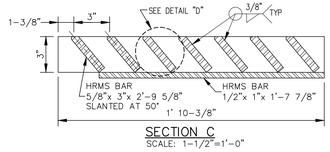


PLAN VIEW
TYPE I DROP INLET
SCALE: 1/2"=1'-0"

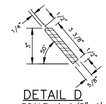
NOTES
1. HEIGHT SHALL NOT EXCEED 20'-0"
2. CONCRETE TO BE 3000 psi MIN CORE TEST @ 28 DAYS.
3. GRATE TO BE INSTALLED PERPENDICULAR TO FLOW OF TRAFFIC.
4. INLET BOXES IN EXCESS OF 12'-0" SHOULD NOT BE ATTEMPTED IN ONE POUR. A MINIMUM OF 72 HOURS SHOULD PASS BEFORE REMOVING FORMS AND REBAR SHOULD BE LEFT LONG A MINIMUM OF 12" AND TIED.



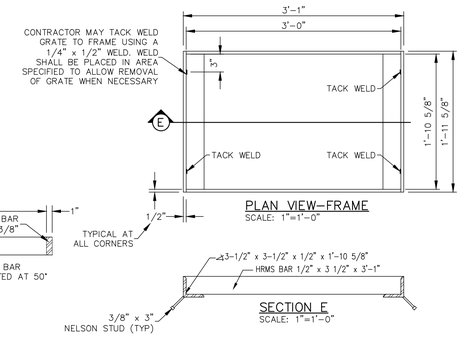
SECTION B
SCALE: 1/2"=1'-0"



SECTION C
SCALE: 1-1/2"=1'-0"

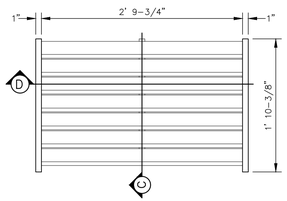


DETAIL D
SCALE: 1-1/2"=1'-0"

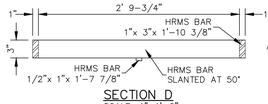


PLAN VIEW-FRAME
SCALE: 1"=1'-0"

SECTION E
SCALE: 1"=1'-0"



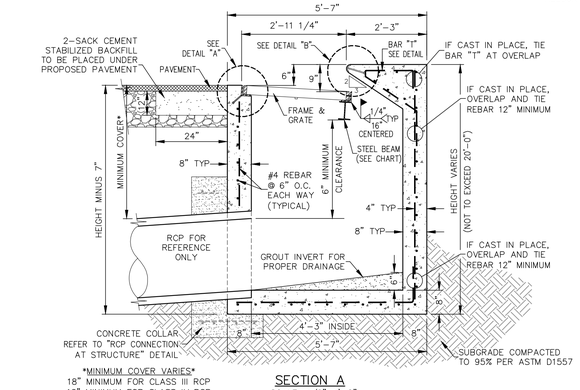
PLAN VIEW-GRATE
SCALE: 1"=1'-0"



SECTION D
SCALE: 1"=1'-0"

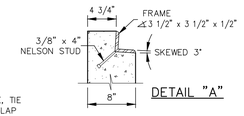
TYPICAL WELDED STEEL FRAME GRATE FOR TYPE I INLETS

SCALE: AS NOTED

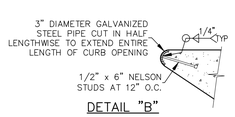


SECTION A
SCALE: 1/2"=1'-0"

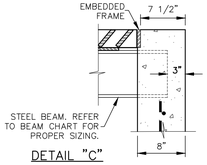
MINIMUM COVER VARIES
18" MINIMUM FOR CLASS III RCP
12" MINIMUM FOR CLASS IV RCP
6" MINIMUM FOR CLASS V RCP
(REQUIRES CITY APPROVAL)



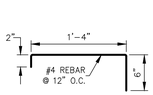
DETAIL "A"



DETAIL "B"



DETAIL "C"



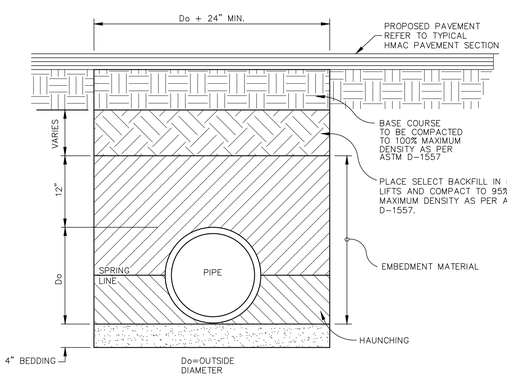
BAR "T"

BEAM CHART

NO. OF GRATES	'L'	B E A M	
		LENGTH	MINIMUM SIZES
2	5'- 2 1/4"	4'- 8 1/4"	W6x12, S6x12.5, MC6x15.1
3	7'- 1 7/8"	6'- 7 7/8"	W8x15, S7x18.4, MC7x19.1
4	9'- 1 1/2"	8'- 7 1/2"	W10x19, S8x18.4, MC10x22
5	11'- 1 1/8"	10'- 7 1/8"	W12x16, S8x23, MC10x22
6	13'- 0 3/4"	12'- 6 3/4"	W12x19, S8x23, MC10x25

DROP INLET TYPE I

AS NOTED

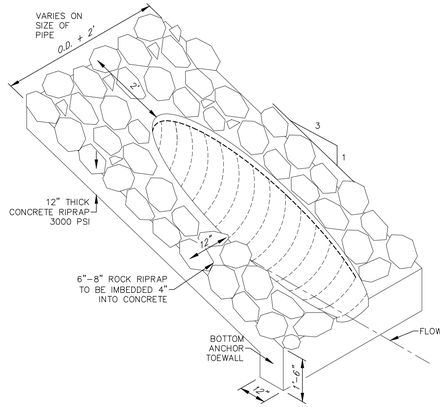


Do=OUTSIDE DIAMETER

NOTE:
1. PIPE INSTALLATION AND COMPACTION SHALL BE PERFORMED IN ACCORDANCE WITH PIPE MANUFACTURER AND GEOTECHNICAL REQUIREMENTS.

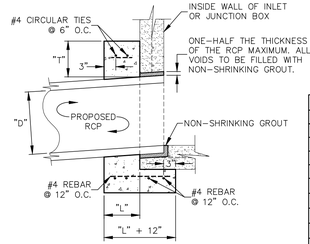
TYPICAL TRENCH BACKFILL FOR STORM SEWER INSTALLATION

SCALE: 1" = 1'-0"



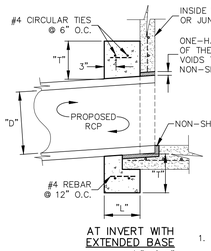
SAFETY END TREATMENT

NTS



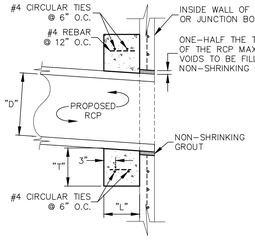
AT INVERT WITH FLUSH BASE
SCALE: 1/2"=1'-0"

TABLE		
"D"	"L"	"T"
18"	12"	12"
24"	12"	12"
30"	12"	12"
36"	18"	18"
42"	18"	18"
48"	18"	18"
54"	20"	24"
60"	20"	24"
66"	24"	24"
72"	24"	30"
78"	24"	30"
84"	30"	30"

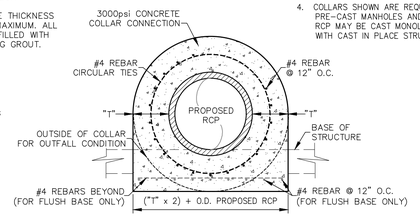


AT INVERT WITH EXTENDED BASE
SCALE: 1/2"=1'-0"

NOTES:
1. ALL CONCRETE 3000psi MINIMUM.
2. HAND HELD VIBRATORS SHALL BE USED TO SETTLE CONCRETE AND ENSURE THE COLLAR IS CAST WITH NO VOIDS.
3. ALL COMPACTION AROUND THE FINISHED COLLAR SHALL BE A MINIMUM OF 95% PER ASTM D-1557.
4. COLLARS SHOWN ARE REQUIRED FOR PRE-CAST MANHOLES AND BOXES ONLY. RCP MAY BE CAST MONOLITHICALLY WITH CAST IN PLACE STRUCTURES.



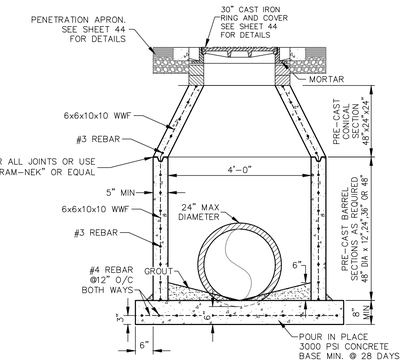
OUTFALL CONDITION
SCALE: 1/2"=1'-0"



FRONT VIEW
SCALE: 1/2"=1'-0"

RCP CONNECTION AT STRUCTURE

SCALE: AS NOTED



JUNCTION BOX NOTES

1. STANDARD STRUCTURAL DESIGN SHALL BE BASED ON AASHTO HS20 WHEEL LOADING.
2. THE PRE-CAST MANHOLE RISER AND CONICAL SECTIONS SHALL CONFORM TO ASTM SPECIFICATIONS C-478.
3. THE CONICAL SECTIONS SHALL BE ECCENTRIC WHERE LADDER RUNGS ARE REQUIRED.
4. THE PRE-CAST CONCRETE SHALL HAVE A MINIMUM ALLOWABLE COMPRESSIVE STRENGTH AT 28 DAYS OF 4000 POUNDS PER SQUARE INCH FOR THE RISER AND CONICAL SECTIONS.
5. THE RISER SECTIONS SHALL BE REINFORCED WITH STEEL WIRE MESH 6x6,10-10 AND THE CONICAL SECTION SHALL HAVE 6x6,10-10 STEEL WIRE MESH REINFORCEMENT AND 3/8" ROD AT TOP AND BOTTOM (SEE ASTM STANDARDS PART 16-C-478). REINFORCING STEEL SHALL COMPLY WITH ASTM A615 GRADE 60, A706 GRADE 60 OR A497 GRADE 70. BAR BENDING AND PLACEMENT SHALL COMPLY WITH THE LATEST ACI SPECIFICATIONS.
6. REINFORCING STEEL FOR CAST IN PLACE JUNCTION BOX SHALL COMPLY WITH ASTM A615 GRADE 60, A706 GRADE 60 OR A497 GRADE 70. BAR BENDING AND PLACEMENT SHALL COMPLY WITH THE LATEST ACI SPECIFICATIONS.
7. ALL CAST IN PLACE CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS.
8. ALL JUNCTION BOXES GREATER THAN 18' IN DEPTH MUST BE PRE-CAST.

48" PRE-CAST MANHOLE

SCALE: 1" = 2'-0"

DROP INLET NOTES

1. WELDED STEEL OR CAST GRATES AS DETAILED ARE ALL ACCEPTABLE GRATES. MIXING OF ALTERNATE TYPES OF GRATES ON THE SAME PROJECT WILL BE PERMITTED WITH THE APPROVAL OF THE CITY ENGINEER.
2. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE CURRENT STANDARD SPECIFICATIONS.
3. SHARP EDGES RESULTING FROM FABRICATION SHALL BE DULLED BY ANY ACCEPTABLE METHOD FOR SAFETY AND HANDLING.
4. GRATES SHALL BE INSTALLED IN FRAME WITH FLOW ARROW POINTING DOWNSTREAM OR TOWARD THE LOW POINT IN A SUMP.
5. WELDED GRATES SHALL BE STRUCTURAL STEEL CONFORMING TO THE REQUIREMENTS OF AASHTO M-183 OR OF CORROSION RESISTANT STRUCTURAL STEEL CONFORMING TO THE REQUIREMENTS OF AASHTO M-161 OR M-222 OR BE MADE OF OTHER APPROVED STEELS OF EQUAL QUALITY. MIXING GRATES OF STEEL ON THE SAME GRATE WILL NOT BE PERMITTED.
6. GRATES MADE OF M-183 STEEL SHALL BE GALVANIZED IN ACCORDANCE WITH AASHTO M-111 SPECIFICATIONS OR SHALL BE PAINTED WITH INORGANIC ZINC PAINTS, MEETING THE REQUIREMENTS OF CURRENT STANDARD SPECIFICATIONS.
7. ALL WELDS SHALL BE A MINIMUM OF 1/4" FILLET AND SHALL CONFORM TO THE SPECIFICATIONS FOR HIGHWAY CONSTRUCTION AND TO THE AWS STRUCTURAL WELDING CODE. ELECTRODES SHALL BE COMPATIBLE TO THE DIFFERENT GRADES OF STEEL THAT COMPRISE THE GRATE MEMBERS.
8. CAST GRATES SHALL BE CAST STEEL CONFORMING TO THE REQUIREMENTS OF AASHTO M-103, GRADE 65-35 OR OF DUCTILE IRON CONFORMING TO THE REQUIREMENTS OF ASTM A-536, SPECIAL GRADE 60-45, OR OF GRAY IRON CONFORMING TO THE REQUIREMENTS OF AASHTO M-105, CLASS 35B OR ASTM A-48 CLASS 35B. THE SPECIFICATIONS OF GENERAL APPLICATION FOR CAST STEEL GRATES SHALL BE AASHTO M-103 SCOPE 1.2.1, GRADE N-1.
9. FERROUS CASTINGS SHALL BE OF UNIFORM QUALITY, FREE OF BLOWHOLES, POROSITY, HARD SPOTS, SHRINKAGE DISTORTION OR OTHER DEFECTS. THEY SHALL BE SMOOTH AND WELL CLEANED BY SHOT BLASTING OR OTHER APPROVED CLEANING METHOD. AFTER CLEANING THEY SHALL BE COATED WITH ASPHALT BASE PAINT RESULTING IN A SMOOTH COATING, TOUGH AND TENACIOUS WHEN COLD, NOT TACKY NOR BRITTLE.
10. ALL CASTINGS SHALL BE MANUFACTURED TRUE TO PATTERN. COMPONENT PARTS SHALL FIT TOGETHER IN A SATISFACTORY MANNER.
11. ALL CONCRETE TO BE 3000 p.s.i. CHAMFER ALL EXPOSED EDGES 3/4". ALL DIMENSIONS RELATING TO REINFORCING STEEL ARE TO CENTER OF BARS.
12. MINIMUM CONCRETE COVER SHALL BE 1 1/2" FOR STEEL REINFORCING.
13. EXPANSION MATERIAL TO BE 1/2" BITUMINOUS FIBER AND TO BE PLACED WHERE PROPOSED CONCRETE COMES IN CONTACT WITH ANY EXISTING OR PROPOSED CONCRETE OR MASONRY STRUCTURE.
14. STRUCTURAL STEEL SHALL BE SHOP PAINTED IN ACCORDANCE WITH T.H.D. ITEM 446 "PAINT AND PAINTING".
15. SURFACE OF ALL EXPOSED CONCRETE SHALL CONFORM IN SLOPE AND GRADE TO EXISTING OR PROPOSED CURB AND WALK ADJACENT TO INLETS.
16. ALL REINFORCING BARS TO BE # 4 BARS AT 6" O.C. (UNLESS NOTED OTHERWISE) GRADE 60. BEND BARS AROUND PIPE OPENINGS.
17. INLETS TO BE DESIGNATED IN PLANS BY NUMBER OF GRATES REQUIRED.
18. LOCATION OF SEWER PIPES SHOWN ELSEWHERE IN PLANS.
19. 2 - 3/8" DIA. x 4" LONG CONC. ANCHOR STUDS REQUIRED FOR EACH SIDE OF FRAME, WHERE RESTING ON CONCRETE, USE NELSON STUDS OR EQUAL.
20. THE GRATES OF ALL INLETS WITHIN THE STREET PAVEMENT MUST BE CONSTRUCTED WITH THE GRATE BARS PERPENDICULAR TO THE CURB.
21. EXCAVATION WHICH WILL EXCEED FIVE (5) FEET IN DEPTH SHALL PROVIDE FOR TRENCH SAFETY AS PER OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) GUIDELINES.

BENCHMARK: CITY MONUMENT AT THE CENTERLINE INTERSECTION OF MONTWOOD DRIVE AND CIMARRON PARK DRIVE.
ELEVATION = 3976.53 (EL PASO CITY DATUM)

NO.	DATE	DESCRIPTION	BY
3	03/15/2021	3rd City Submittal	AHO
2	01/22/2021	2nd City Submittal	AHO
1	11/25/2020	1st City Submittal	AHO

BEFORE YOU DIG - CALL
EL PASO ELECTRIC COMPANY 543-5720
1-800-351-1355
TEXAS GAS SERVICE 544-6300
TCG EMERGENCY HOTLINE 562-8411/562-2603
AFTER HOURS EMERGENCY (WATER & SEWER) 1-800-592-1555
SPECTRUM 594-5775
AT&T CABLE 775-4414
EL PASO STREETS AND MAINTENANCE 1-800-238-3764
EL PASO TRAFFIC SIGNAL STREETS AND MAINTENANCE 212-0151
Utilities@epstreets.org

WARNING! BEFORE YOU DIG ON THIS PROJECT AREA CONTRACTOR SHALL NOTIFY ALL EXISTING UNDERGROUND IMPROVEMENTS

Texas 811 Know what's below Call before you dig.

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03/15/21

STATE OF TEXAS
ADRIAN I. ONTIVEROS
124089
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PROFESSIONAL ENGINEER

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Texas Registered Engineering Firm F-9997
1845 Northwestern Dr. Ste C
El Paso, Texas 79912
tel [915] 877.4155
fax [915] 877.4334
www.csaengineers.com

SUBDIVISION
CIMARRON CANYON UNIT TWO SUBDIVISION

SHEET TITLE
STORM SEWER DETAILS

GOB	1908
DESIGN BY	JOB NO.
GOB-DG-SM	12/20/2019
DRAWN BY	DATE OF SUBMISSION
AHO	AS NOTED
CHECKED BY	SCALE

SHEET NO. 43
SHEET SEQUENCE 44 OF 82

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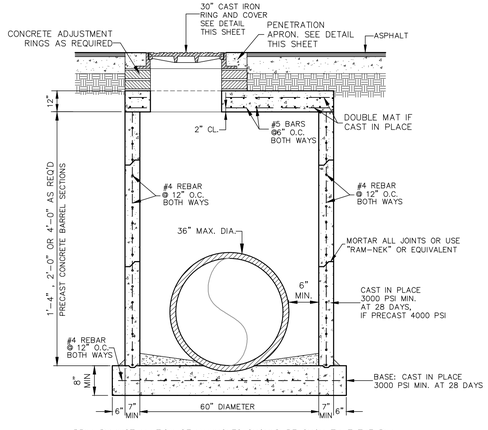
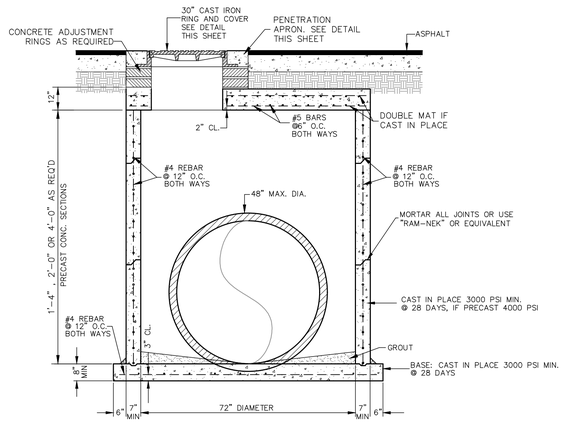
G:\Civil\1908 Cimarron Canyon Unit Two (Ph8 3rd Submittal)\Ph8 3rd Submittal\Ph8 SH 43-45 (Storm Sewer Details).dwg
Applicants



PRIMARY INSTALLATION OF MANHOLES SHOULD BE SUCH THAT THE RIM ELEVATION IS 2" – 16" BELOW THE RIM ELEVATION SHOWN ON THE PLAN AND PROFILES. FINAL ADJUSTMENT TO THE FINISHED PAVEMENT ELEVATION SHALL BE MADE WITH CONCRETE ADJUSTMENT RINGS AND LOCKED INTO PLACE WITH THE INSTALLATION OF THE PENETRATION APRON. PRE-FABRICATED CONCRETE ADJUSTMENT RINGS ARE AVAILABLE FROM 2"-8" IN HEIGHT.

60" PRE-CAST MANHOLE

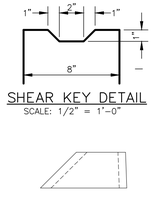
SCALE: 1"=2'-0"



PRIMARY INSTALLATION OF MANHOLES SHOULD BE SUCH THAT THE RIM ELEVATION IS 2" – 16" BELOW THE RIM ELEVATION SHOWN ON THE PLAN AND PROFILES. FINAL ADJUSTMENT TO THE FINISHED PAVEMENT ELEVATION SHALL BE MADE WITH CONCRETE ADJUSTMENT RINGS AND LOCKED INTO PLACE WITH THE INSTALLATION OF THE PENETRATION APRON. PRE-FABRICATED CONCRETE ADJUSTMENT RINGS ARE AVAILABLE FROM 2"-8" IN HEIGHT.

72" PRE-CAST MANHOLE

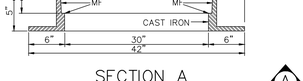
SCALE: 1"=2'-0"



SHEAR KEY DETAIL

SCALE: 1/2" = 1'-0"

ECCENTRIC CONES MAY BE SUBSTITUTED. HOWEVER, THE RIM ELEVATIONS IN THIS PLAN SET ARE BASED ON STANDARD MANHOLE CONES UNLESS NOTED OTHERWISE. IF ECCENTRIC CONES ARE USED, THE CONTRACTOR MUST FIELD ADJUST THE RIM ELEVATION.

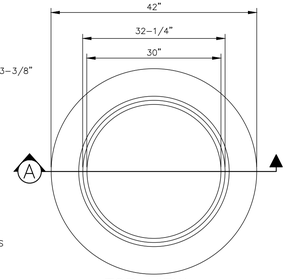


SECTION A

SCALE: 1"=1'

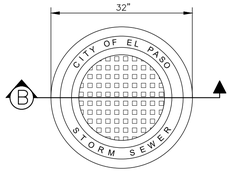
NOTE:

1. MATCHING SURFACES MARKED "MF" TO BE MACHINE FINISHED OF ANY IRREGULARITIES THAT WOULD PREVENT A SNUG FIT.
2. CASTING TO BE SMOOTH AND VOID OF AIR HOLES.



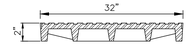
TOP VIEW

SCALE: 1"=1'



TOP VIEW

SCALE: 1"=1'



SECTION B

SCALE: 1"=1'

30" MANHOLE RING AND COVER

SCALE: AS NOTED

STORM WATER MANAGEMENT REQUIRES ALL MANHOLE RING AND COVERS TO BE 30" DIAMETER MINIMUM.

BENCHMARK: CITY MONUMENT AT THE CENTERLINE INTERSECTION OF MONTWOOD DRIVE AND CIMARRON PARK DRIVE. ELEVATION = 3978.53 (EL PASO CITY DATUM)

NO.	DATE	DESCRIPTION	BY
3	03/15/2021	3rd City Submittal	AHO
2	01/22/2021	2nd City Submittal	AHO
1	11/25/2020	1st City Submittal	AHO

WARNING! BEFORE YOU DIG IN PROJECT AREA CONTRACTOR SHALL CALL FOR LOCATING UNDERGROUND IMPROVEMENTS

Texas 811 Know what's below. Call before you dig.

BEFORE YOU DIG - CALL

EL PASO ELECTRIC	543-5720
USO ELECTRIC COMPANY	1-800-672-7555
TEXAS GAS SERVICE	544-6300
TGS EMERGENCY HOTLINE	562-8411/562-2603
AFTER HOURS EMERGENCY (WATER & SEWER)	1-800-351-4951
AFTER HOURS EMERGENCY (EPW)	594-5775
SPECTRUM	775-7414
ZIA EXCAVATION SAFETY SYSTEM	1-800-248-4077
KINDER-MORGAN EPNG PIPELINES	1-800-238-3764
EL PASO STREETS AND MAINTENANCE	212-0151
EL PASO TRAFFIC SIGNAL STREETS AND MAINTENANCE	tlresponse@elpasotexas.gov

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06/15/21

STATE OF TEXAS
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PROFESSIONAL ENGINEER

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Texas Registered Engineering Firm F-9997
1845 Northwestern Dr. Ste C
El Paso, Texas 79912
tel [915] 877.4155
fax [915] 877.4334
www.csaengineers.com

SUBDIVISION

CIMARRON CANYON UNIT TWO SUBDIVISION

SHEET TITLE

STORM SEWER DETAILS

GOB (DESIGN BY)	1908 (JOB NO.)
GOB-OG-SM (DRAWN BY)	12/20/2019 (DATE OF SUBMISSION)
AHO (CHECKED BY)	AS NOTED (SCALE)

SHEET NO. 44

SHEET SEQUENCE 45 OF 82

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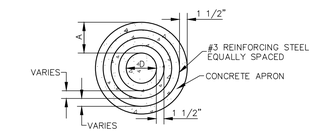
CONCRETE APRON FOR CIRCULAR PENETRATIONS IN ASPHALT PAVEMENT				
"D" DIAMETER OF PENETRATION (INCHES)	"A" CONCRETE HORIZONTAL DIMENSION FROM PENETRATION (INCHES)	NUMBER OF NO. 3 REINFORCING STEEL BARS (INCHES)	"B" MINIMUM CLEARANCE FROM EDGE OF CONCRETE APRON TO CENTER OF NEAREST REBAR (INCHES)	"C" MINIMUM CLEARANCE FROM PENETRATION EDGE TO CENTER OF NEAREST REBAR (INCHES)
0 TO 6.00	6	1	1 1/2	1 1/2
6.01 TO 18.00	8	2	1 1/2	1 1/2
18.01 AND OVER	12	3	1 1/2	1 1/2

CONSTRUCTION NOTES:

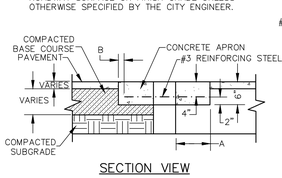
1. ANY DISTURBED SUBGRADE UNDER THE CONCRETE APRON SHALL BE COMPACTED TO 95% DENSITY ± 3% OPTIMUM MOISTURE CONTENT IN ACCORDANCE WITH ASTM D-1557.
2. ANY DISTURBED COARSE UNDER THE CONCRETE APRON SHALL BE COMPACTED TO 100% DENSITY ± 2% OPTIMUM MOISTURE CONTENT IN ACCORDANCE WITH ASTM D-1557.
3. PROVIDE 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 REINFORCING STEEL HOOPS SHALL BE SPACED EQUALLY.

GENERAL NOTES:

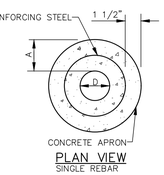
1. THE PENETRATION APRON SHOULD BE CAST IN-PLACE CONCRETE. (MINIMUM 28 DAY COMPRESSIVE STRENGTH 4000 PSI. HIGH EARLY CONCRETE IS REQUIRED)
2. TOPS OF PENETRATION APRON SHALL BE FLUSH WITH ROADWAY SURFACE OR FINISH GRADE UNLESS OTHERWISE SPECIFIED BY THE CITY ENGINEER.



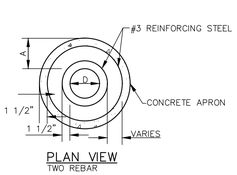
PLAN VIEW
THREE REBAR



SECTION VIEW



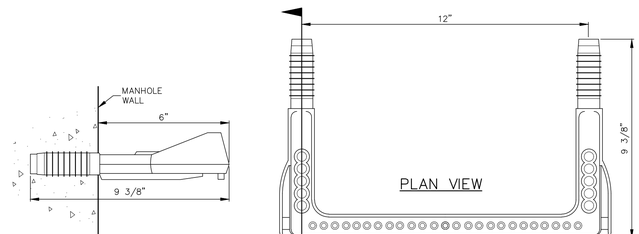
PLAN VIEW
SINGLE REBAR



PLAN VIEW
TWO REBAR

PENETRATION APRON

SCALE: N.T.S.



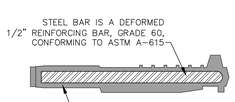
PRIMARY INSTALLATION OF MANHOLES SHOULD BE SUCH THAT THE RIM ELEVATION IS 2" – 16" BELOW THE RIM ELEVATION SHOWN ON THE PLAN AND PROFILES. FINAL ADJUSTMENT TO THE FINISHED PAVEMENT ELEVATION SHALL BE MADE WITH CONCRETE ADJUSTMENT RINGS AND LOCKED INTO PLACE WITH THE INSTALLATION OF THE PENETRATION APRON. PRE-FABRICATED CONCRETE ADJUSTMENT RINGS ARE AVAILABLE FROM 2"-8" IN HEIGHT.

84" PRE-CAST MANHOLE

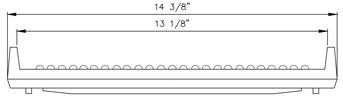
SCALE: 1"=2'-0"

SIDE VIEW

PLAN VIEW



CROSS SECTION



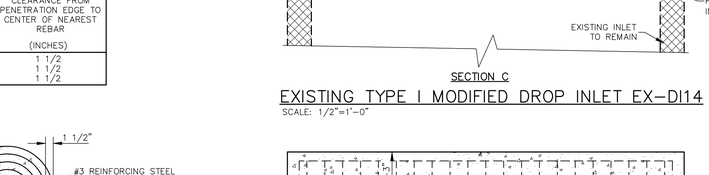
REAR VIEW

MANHOLE STEPS SHALL CONFORM TO ALL REQUIREMENTS OF ASTM C-478, C-497, D-4101, AND A-615 AND ARE REQUIRED FOR MANHOLES WITH DEPTHS OF 16' AND GREATER.

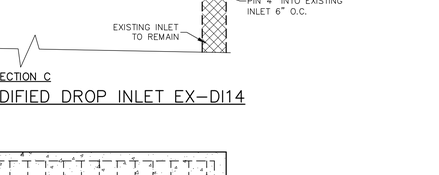
STEP SHOWN IS *COPOLYMER POLYPROPYLENE PLASTIC MANHOLE STEP No. 9.3812R* BY BOWCO INDUSTRIES, INC.

MANHOLE LADDER RUNG

SCALE: 4" = 1.00'



EXISTING INLET



PLAN VIEW

SHEAR KEY DETAIL

SCALE: 1/2" = 1'-0"

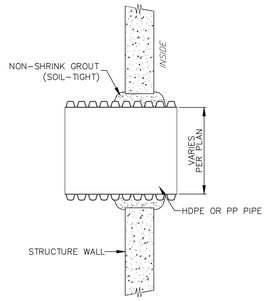
SECTION C

EXISTING TYPE I MODIFIED DROP INLET EX-DI14

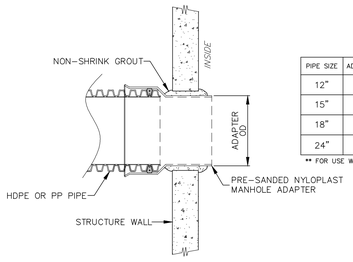
SCALE: 1/2"=1'-0"

CONCRETE LID EX-DI14

SCALE: 1/2"=1'-0"



12"–60" HDPE OR PP SOIL–TIGHT
GROUTED MANHOLE CONNECTION
ADS DETAIL 202



12" – 24" HDPE SOIL–TIGHT GROUTED
MANHOLE CONNECTION w/NYLOPLAST
(SANDED) MANHOLE ADAPTER
ADS DETAIL 202A

PIPE SIZE	ADAPTER OD	ADS PRODUCT CODES	A-LOK®**
12"	12.5"	1277AGU	410
15	15.3"	1577AGU	490
18"	18.7"	1877AGU	610
24"	24.8"	2477AGU	800

** THIRD PARTY – CODES AS SUPPLIED BY MANUFACTURER
A-LOK is a registered trademark of A-LOK Products, Inc. (www.a-lok.com)

12"–24" HDPE WATERTIGHT CONNECTION
USING A PRE–CAST COMPRESSION GASKET
WITH NYLOPLAST MANHOLE ADAPTER
ADS DETAIL 202C

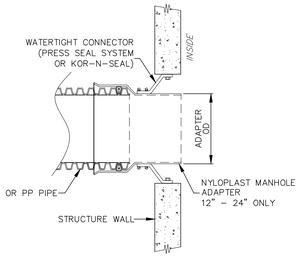
NOTES:
PERFORMANCE HIGHLY DEPENDENT ON INSTALLATION. CONTRACTOR MUST ENSURE MANHOLE GASKET IS UNIFORMLY SEATED AROUND STRUCTURE ADAPTER. EXTRA PRECAUTIONS MUST BE TAKEN TO PREVENT DIFFERENTIAL SETTLEMENT BETWEEN THE PIPE AND MANHOLE.

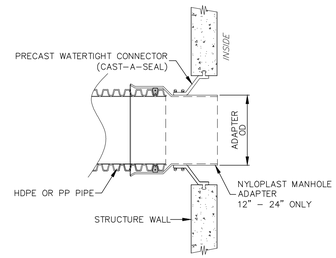
SEE STANDARD DETAIL STD–201 AND TECHNICAL NOTE: 5.04 HDPE CONNECTIONS TO MANHOLES AND STRUCTURES FOR INSTALLATION RECOMMENDATIONS.

CONNECTION OPTIONS
NTS

PIPE SIZE	PRESS SEAL SYSTEMS®*		KOR-N-SEAL®*	
	PSX: DIRECT DRIVE	CAST-A-SEAL	SERIES I OR II	SERIES 306
12"	16M	CAS 802	S106-16AWS	N/A
15"	18M OR 20Y	CAS 802	S106-20BWS	N/A
18"	22M	CAS 802	S206-24A	S306-22
24"	28A	CAS 802	S206-28	S306-28

* THIRD PARTY – CODES AS SUPPLIED BY MANUFACTURER
PSX Systems are a product of PRESS-SEAL GASKET CORPORATION. (www.press-seal.com)
CAST-A-SEAL is a registered trademark of PRESS-SEAL GASKET CORPORATION. (www.press-seal.com)
KOR-N-SEAL is a registered trademark of NPC, Inc. (www.npc.com)

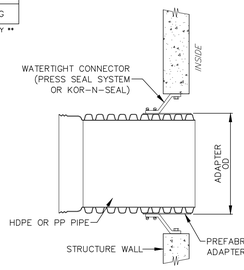


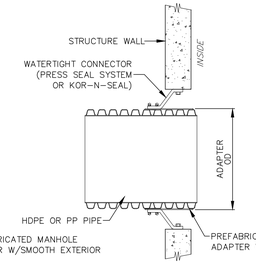


PIPE SIZE	ADAPTER OD	ADS PRODUCT CODES
12"	12.5"	1277AG
15"	15.3"	1577AG
18"	18.7"	1877AG
24"	24.8"	2477AG

** FOR USE WITH A PROFILE PIPE ONLY **

12"–24" HDPE WATERTIGHT CONNECTION
USING A BOOT (CORED HOLE OR PRECAST)
WITH NYLOPLAST MANHOLE ADAPTER
ADS DETAIL 202F





PIPE SIZE	ADS PRODUCT CODES									
	ADAPTER OD		BELL END		PLAIN END		PRESS SEAL SYSTEMS®*		KOR-N-SEAL®*	
	A-PROFILE	H-PROFILE	A-PROFILE	H-PROFILE	A-PROFILE	H-PROFILE	PSX: DIRECT DRIVE	CAST-A-SEAL	SERIES I OR II	SERIES 306
12"	14.73"	N/A	1222ANB	N/A	1222AN	N/A	18M OR 20Y	CAS 802	S106-20BWS	N/A
15"	17.98"	N/A	1522ANB	N/A	1522AN	N/A	22L	CAS 802	S106-20WS	S306-22
18"	21.71"	N/A	1822ANB	N/A	1822AN	N/A	26L	CAS 802	S206-26	S306-26
24"	28.52"	N/A	2422ANB	N/A	2422AN	N/A	32L	CAS 802	S206-32	S306-32
30"	35.92"	N/A	3022ANB	N/A	3022AN	N/A	40S	CAS 802	S206-40	S306-40
36"	42.06"	42.15"	3622ANB	3622ANBH	3622AN	3622ANH	46S	CAS 802	S206-46	S306-46
36" BNQ/CSA	43.1"		3622ANEAB		3622ANEA		N/A	CAS 802	S206-46L	S306-46L
42"	48.54"	48.75"	4222ANB	4222ANBH	4222AN	4222ANH	N/A	CAS 802	S206-52L	N/A
48"	54.53"	55.75"	4822ANB	4822ANBH	4822AN	4822ANH	N/A	CAS 802	N/A	N/A
54"	N/A	61.75"	N/A	CUSTOM	N/A	CUSTOM	N/A	CAS 802	N/A	N/A
60"	67.3"	68.05"	6022ANB	6022ANBH	6022AN	6022ANH	N/A	CAS 802	N/A	N/A

* THIRD PARTY – CODES AS SUPPLIED BY MANUFACTURER
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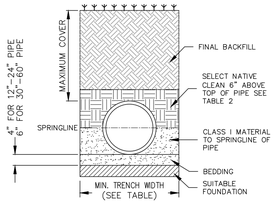
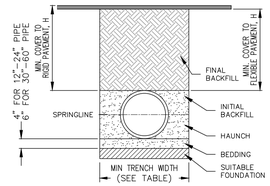
12"–60" HDPE WATERTIGHT CONNECTION USING A MANHOLE BOOT
(CORED HOLE OR PRE–CAST) WITH PREFABRICATED ADAPTER
ADS DETAIL 202B



UNPAVED CONDITION



PAVED CONDITION

TABLE 1, RECOMMENDED MINIMUM TRENCH WIDTHS

PIPE DIA.	MIN. TRENCH WIDTH
12"	30"
15"	34"
18"	39"
24"	48"
30"	56"
36"	64"
42"	72"
48"	80"
60"	96"

TABLE 3, MINIMUM RECOMMENDED COVER BASED ON VEHICLE LOADING CONDITIONS

PIPE DIA.	SURFACE LIVE LOADING CONDITION	
	H-25	HEAVY CONSTRUCTION (75T AXLE LOAD) *
12" – 48"	12"	48"
60"	24"	60"

* VEHICLES IN EXCESS OF 75T MAY REQUIRE ADDITIONAL COVER

TABLE 2, MAXIMUM COVER FOR ADS HP STORM PIPE (γ_s=120)

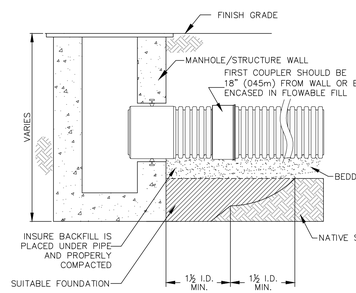
PIPE DIA.	SELECT NATIVE CLEAN MATERIAL CLASSIFICATION COMPACTED 95%		
	CLASS II	CLASS III	CLASS IV
12"	17'	14'	11'
15"	17'	14'	10'
18"	16'	13"	10'
24"	14'	12'	9'
30"	13'	12'	8'
36"	11'	11'	7'
42"	11'	11'	7'
48"	11'	10'	6'
60"	11'	10'	6'

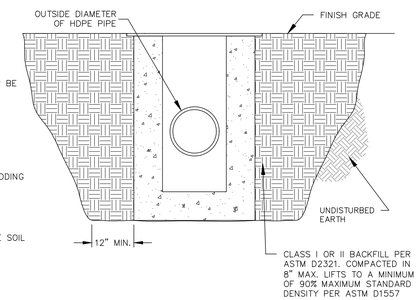
FILL HEIGHT TABLE GENERATED ASSUMING DRY CONDITIONS, OUTSIDE OF WATER TABLE. FOR INSTALLATION WITHIN THE WATER TABLE, CONTACT APPLICATIONS ENGINEERING.

HP STORM TRENCH INSTALLATION DETAILS
NTS
ADS DETAIL 101D AND 101E

NOTES:

1. ALL PIPE SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321, " STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS", LATEST ADDITION,WITH THE EXCEPTION THAT THE INITIAL BACKFILL MAY EXTEND TO THE CROWN OF THE PIPE. SOIL CLASSIFICATIONS ARE PER THE LATEST VERSION OF ASTM D2321. CLASS IVB MATERIALS (MH, CH) AS DEFINED IN PREVIOUS VERSIONS OF ASTM D2321 ARE NOT APPROPRIATE BACKFILL MATERIALS.
2. MEASURES SHOULD BE TAKEN TO PREVENT MIGRATION OF NATIVE FINES INTO BACKFILL MATERIAL, WHEN REQUIRED.
3. FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH SUITABLE MATERIAL AS SPECIFIED BY THE ENGINEER. AS AN ALTERNATIVE AND AT THE DISCRETION OF THE DESIGN ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A GEOTEXTILE MATERIAL.
4. BEDDING: SUITABLE MATERIAL SHALL BE CLASS I, II, III, OR IV. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. COMPACTION SHALL BE SPECIFIED BY THE ENGINEER IN ACCORDANCE WITH TABLE 3 FOR THE APPLICABLE FILL HEIGHTS LISTED. UNLESS OTHERWISE NOTED BY THE ENGINEER, MINIMUM BEDDING THICKNESS SHALL BE 4" FOR 12"–24" DIAMETER PIPE; 6" FOR 30"–60" DIAMETER PIPE. THE MIDDLE 1/3 BENEATH THE PIPE INVERT SHALL BE LOOSELY PLACED. PLEASE NOTE, CLASS IV MATERIAL HAS LIMITED APPLICATION AND CAN BE DIFFICULT TO PLACE AND COMPACT; USE ONLY WITH THE APPROVAL OF A SOIL EXPERT.
5. INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE CLASS I, II, III, OR IV IN THE PIPE ZONE EXTENDING TO THE CROWN OF THE PIPE. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION. COMPACTION SHALL BE SPECIFIED BY THE ENGINEER IN ACCORDANCE WITH TABLE 3 FOR THE APPLICABLE FILL HEIGHTS LISTED. PLEASE NOTE, CLASS IV MATERIAL HAS LIMITED APPLICATION AND CAN BE DIFFICULT TO PLACE AND COMPACT; USE ONLY WITH THE APPROVAL OF A SOIL EXPERT.
6. MINIMUM COVER: MINIMUM COVER, H, IN NON–TRAFFIC APPLICATIONS (NATIVE GROUND, GRASS OR LANDSCAPE AREAS) IS 12" FROM THE TOP OF PIPE TO GROUND SURFACE. ADDITIONAL COVER MAY BE REQUIRED TO PREVENT FLOTATION. FOR TRAFFIC APPLICATIONS; CLASS I OR II MATERIAL COMPACTED TO 90% SPD, AND CLASS III COMPACTED TO 95% SPD IS REQUIRED.FOR TRAFFIC APPLICATIONS, MINIMUM COVER, H, IS 12" UP TO 48" DIAMETER PIPE AND 24" OF COVER FOR 60" DIAMETER PIPE, MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TO TOP OF RIGID PAVEMENT.
7. SELECT NATIVE CLEAN BACKFILL SHALL BE WELL PLACED, MODERATELY COMPACTED (85% SPD) CLASS IV OR BETTER PER ASTM D2321 WITH NO FOREIGN DEBRIS INCLUDING ROCKS, LARGE CLUMPS ORGANIC MATERIAL, OR FROZEN MATERIAL.



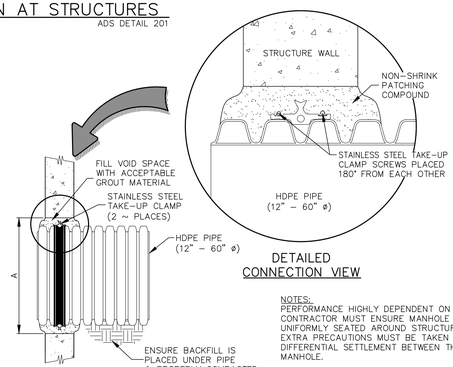


NOTES:

1. MAXIMUM INSERTION ANGLE SHALL NOT EXCEED REQUIREMENTS AS SPECIFIED BY THE MANUFACTURER.
2. SEE STANDARD DETAILS STD–202 AND 202A THROUGH STD–204 (A–F) FOR STRUCTURE CONNECTIONS, PRODUCT INFORMATION AND DIMENSIONAL PIPE DATA. INSTALLATION RECOMMENDATIONS ARE ALSO SPECIFIED IN TECHNICAL NOTE 5.04: HDPE CONNECTIONS TO MANHOLES AND STRUCTURES.
3. PERFORMANCE HIGHLY DEPENDENT ON INSTALLATION. CONTRACTOR MUST INSURE MANHOLE GASKET IS UNIFORMLY SEATED AROUND STRUCTURE ADAPTER. EXTRA PRECAUTIONS MUST BE TAKEN TO PREVENT DIFFERENTIAL SETTLEMENT BETWEEN THE PIPE AND MANHOLE.

STORM CONNECTION AT STRUCTURES
NTS
ADS DETAIL 201

PIPE SIZE	PIPE OD		"A" MIN. HOLE DIA.	MIN. DISTANCE PIPE INVERT TO STRUCTURE INVERT	ADS PRODUCT CODES
	A-PROFILE	H-PROFILE			
12"	14.5"	N/A	19.5"	3.7"	1202PS
15"	17.6"	N/A	23.00"	4.0"	1502PS
18"	21.2"	N/A	26.50"	4.2"	1802PS
24"	27.8"	N/A	33.25"	4.5	2402PS
30"	35.1"	N/A	40.50"	5.2"	3002PS
36"	41.1"	41.1"	47.00"	5.5"	3602PS
42"	47.7"	48.0"	53.00"	5.7"	4202PS
48"	53.6"	54.0"	59.00"	5.7"	4802PS
60"	66.3"	67.3"	72.00"	6.4"	6002PS



DETAILED
CONNECTION VIEW

NOTES:
PERFORMANCE HIGHLY DEPENDENT ON INSTALLATION. CONTRACTOR MUST ENSURE MANHOLE GASKET IS UNIFORMLY SEATED AROUND STRUCTURE ADAPTER. EXTRA PRECAUTIONS MUST BE TAKEN TO PREVENT DIFFERENTIAL SETTLEMENT BETWEEN THE PIPE AND MANHOLE.

SEE STANDARD DETAIL STD–201 AND INSTALLATION GUIDE 1.05: WATERSTOP INSTALLATION FOR INSTALLATION RECOMMENDATIONS.

HDPE GROUTED WATERSTOP CONNECTION
NTS
ADS DETAIL 203

ADS
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BENCHMARK: CITY MONUMENT AT THE CENTERLINE INTERSECTION OF ASPEN DRIVE AND CIMARRON PARK DRIVE.
ELEVATION = 3978.53 (EL PASO CITY DATUM)

NO.	DATE	DESCRIPTION	BY
3	03/15/2021	3rd City Submittal	AHO
2	01/22/2021	2nd City Submittal	AHO
1	11/25/2020	1st City Submittal	AHO

WARNING! BEFORE YOU DIG IN PROJECT AREA CONTRACTOR SHALL CALL TEXAS 811 FOR EXISTING UNDERGROUND IMPROVEMENTS
Texas811 Know what's below Call before you dig.

BEFORE YOU DIG - CALL
EL PASO ELECTRIC COMPANY 543–5720
AT&T 1–800–545–5555
TEXAS GAS SERVICE 544–6300
PUB. SERVICE BOARD (WATER & SEWER) 562–8411/562–2003
PUBLIC SERVICE BOARD 1–800–466–7745
AFTER HOURS EMERGENCY (EPW) 594–5775
SPECTRUM 775–7414
EL PASO EXCAVATION SAFETY SYSTEM 1–800–344–8377
KINDER–MORGAN EPNG PIPELINES 1–800–238–3764
EL PASO TRAFFIC SIGNAL STREETS AND MAINTENANCE 212–0151

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03/15/2021
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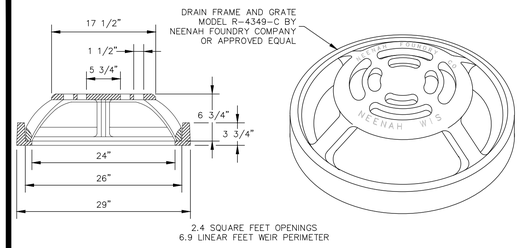
SUBDIVISION
CIMARRON CANYON
UNIT TWO
SUBDIVISION

SHEET TITLE
STORM SEWER DETAILS

GOB DESIGN BY	1908 JOB NO.
GOB-DG-SM DRAWN BY	12/20/2019 DATE OF COMMISSION
AHO CHECKED BY	AS NOTED SCALE

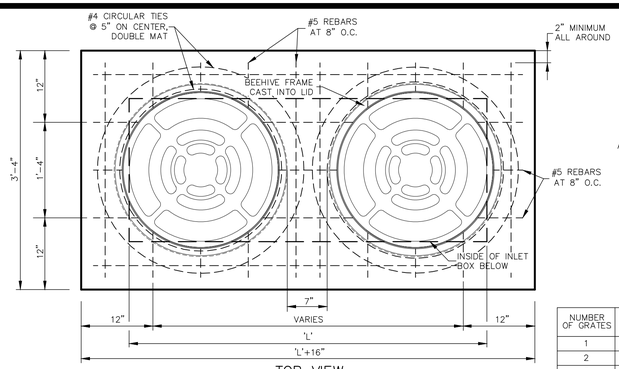
SHEET NO. 44A
SHEET SEQUENCE 46 OF 82

© CSA DESIGN GROUP, INC. — Mar 12, 2021 - 11:17am
S:\Civil\1908 Cimarron Canyon Unit Two\1908 3rd Submittal\1908 Sht 43-45 (Storm Sewer Details).dwg
ajohnson



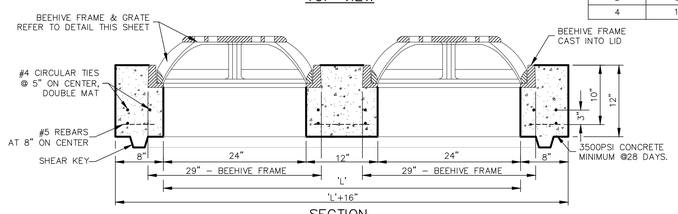
BEEHIVE FRAME AND GRATE FOR DROP INLETS

SCALE: 1" = 1'-0"



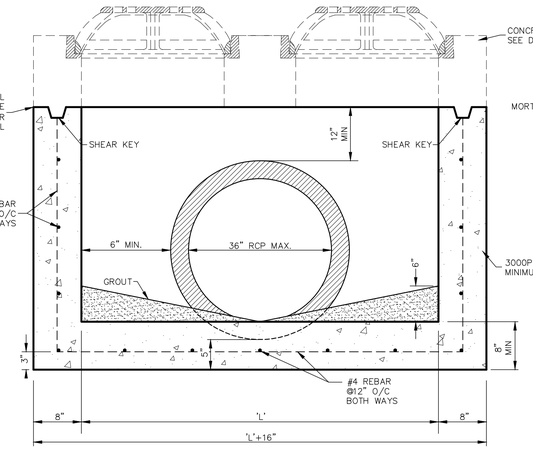
NUMBER OF GRATES	'L'
1	3'-8"
2	5'
3	8'
4	11'

TOP VIEW



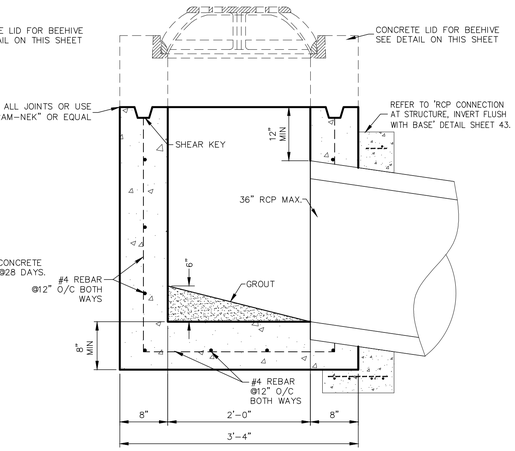
SECTION
INLET BOX LID

SCALE: 1" = 1'-0"



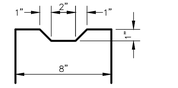
CAST IN PLACE INLET BOX

SCALE: 1" = 1'-0"



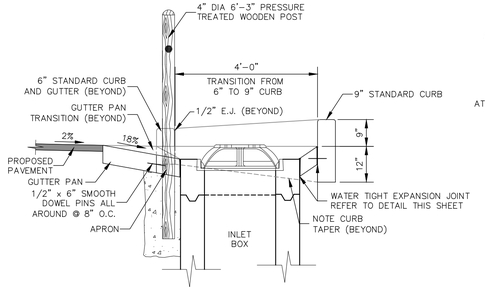
PRE-CAST NOTES:

WHILE CAST IN PLACE DETAILS ARE SHOWN, IT IS STRONGLY RECOMMENDED THAT THE INLET BOX AND LID BE CONTRACTED AS PRE-CAST. FOR PRECAST, SUBSTITUTE 6 x 6, W4.0 x W4.0 IN PLACE OF #4 REBARS. FOR THE INLET BOX LID, SUBSTITUTE 6 x 6, W4.0 X W4.0, DOUBLE MATT, IN PLACE OF #4 REBARS, AND #3 REBAR CIRCULAR TIES MAY BE SUBSTITUTED FOR #4 CIRCULAR TIES SHOWN. RING FOR NEENAH BEEHIVE INLET SHALL BE CAST INTO LID AND ALL KNOCKOUTS SHALL BE PERFORMED AT FACTORY. INSTALL #3 REBAR CIRCULAR TIES AT ALL KNOCKOUTS, 4" GREATER IN DIAMETER THAN THE SIZE OF EACH KNOCKOUT, AND TIED CENTER TO THE WIRE MESH. ALL CONCRETE FOR PRE-CAST INLET BOXES SHALL BE 4000 PSI MINIMUM AT 28 DAYS PER ACI 308. DETAILED SHOP DRAWINGS MUST BE SUBMITTED TO DESIGN ENGINEER FOR REVIEW AND APPROVAL PRIOR TO ORDER OF PRE-CAST UNITS.



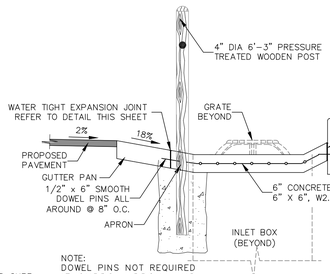
SHEAR KEY DETAIL

SCALE: 1/2" = 1'-0"



SECTION A
CURB & GUTTER AND
APRON POURED SEPARATELY

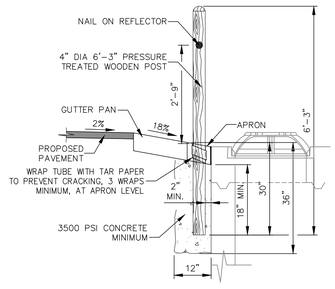
SCALE: 1/2" = 1'-0"



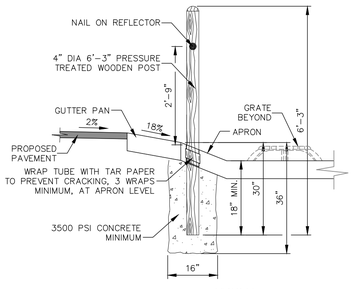
NOTE:
DOWEL PINS NOT REQUIRED IF CURBS, APRON, AND APRON GUTTER ARE POURED AND FORMED MONOLITHICALLY AS SHOWN IN SECTION A.

SECTION B

SCALE: 1/2" = 1'-0"



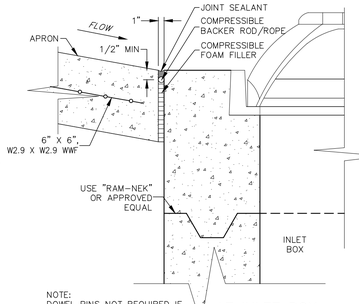
ADJACENT TO INLET BOX



TYPICAL

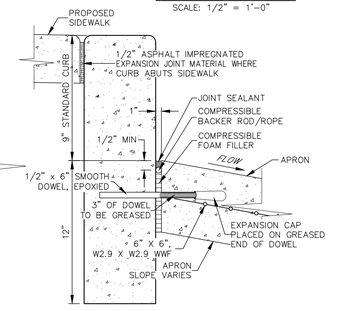
POST INSTALLATION

SCALE: 1/2" = 1'-0"

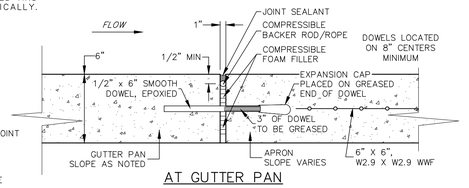


NOTE:
DOWEL PINS NOT REQUIRED IF CURBS, APRON, AND APRON GUTTER ARE POURED AND FORMED MONOLITHICALLY.

AT INLET BOX



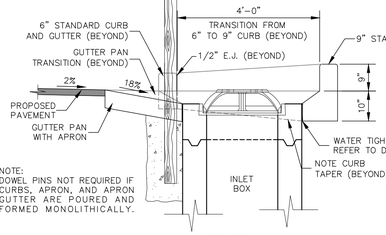
AT CURB



AT GUTTER PAN

WATER TIGHT EXPANSION JOINTS

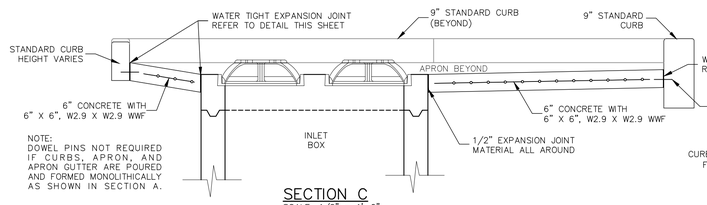
N.T.S



NOTE:
DOWEL PINS NOT REQUIRED IF CURBS, APRON, AND APRON GUTTER ARE POURED AND FORMED MONOLITHICALLY.

SECTION A
CURB & GUTTER AND
APRON POURED MONOLITHICALLY

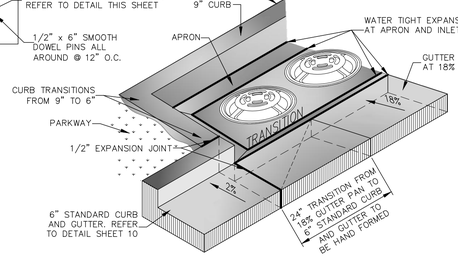
SCALE: 1/2" = 1'-0"



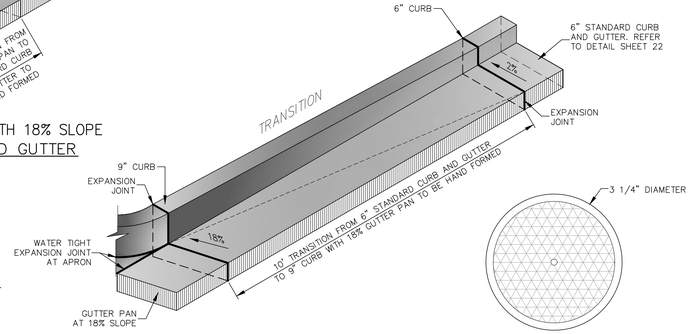
NOTE:
DOWEL PINS NOT REQUIRED IF CURBS, APRON, AND APRON GUTTER ARE POURED AND FORMED MONOLITHICALLY AS SHOWN IN SECTION A.

SECTION C

SCALE: 1/2" = 1'-0"



TRANSITION FROM GUTTER PAN WITH 18% SLOPE
TO 6" STANDARD CURB AND GUTTER



TRANSITION FROM 6" STANDARD CURB & GUTTER
TO 9" CURB WITH 18% GUTTER PAN

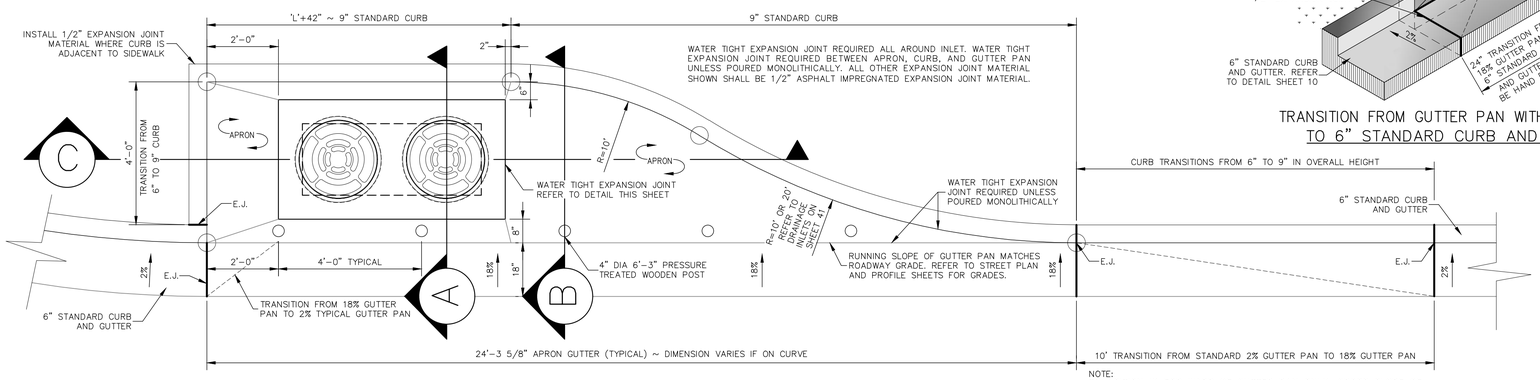
CURB AND GUTTER TRANSITIONS

SCALE: 1/2" = 1'-0"

3 1/4" REFLECTOR, RED
McMASTER-CARR PART NO. 5953T18

NOTE:
1. SHALL BE MOUNTED ON ALL POSTS AND FACED TOWARD TRAFFIC FLOW.
2. SHALL BE MOUNTED 2'-9" ABOVE FINISHED GRADE

NAIL ON POST REFLECTOR



NOTE:
TRANSITION IS FOR WARP OF GUTTER PAN ONLY. CROSS SLOPE OF PAVEMENT SHALL REMAIN 2% PER DESIGN. DO NOT WARP PAVEMENT.

PLAN VIEW ~ TYPICAL INLET INSTALLATION

SCALE: 1/2" = 1'-0"

ALL POURED CONCRETE 3500 PSI MINIMUM
APRON MUST BE 'HAND FORMED'

BEEHIVE DROP INLET DETAIL

SCALE: AS NOTED

BENCHMARK: CITY MONUMENT AT THE CENTERLINE INTERSECTION OF CIMARRON PARK DRIVE AND CIMARRON PARK DRIVE.
ELEVATION = 3976.53 (EL PASO CITY DATUM)

NO.	DATE	DESCRIPTION	BY
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2	01/22/2021	2nd City Submittal	AHO
1	11/25/2020	1st City Submittal	AHO

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Texas 811 Know what's below. Call before you dig.

BEFORE YOU DIG - CALL

EL PASO ELECTRIC COMPANY	543-5720
AT&T	1-800-464-7928
TEXAS GAS SERVICE	544-6300
TDS EMERGENCY HOTLINE	562-8411/562-2603
EL PASO WATER UTILITIES (WATER & SEWER)	1-800-592-1645
AFTER HOURS EMERGENCY (EPW)	594-5775
SPECTRUM	775-7414
AMERICAN SURVEYING & MAPPING	1-800-238-3764
KINDER-MORGAN EPNG PIPELINES	212-0151
EL PASO STREETS AND MAINTENANCE	llregan@elpasotexas.gov

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03/15/21

STATE OF TEXAS
ADRIAN I. ONTIVEROS
124089
LICENSED PROFESSIONAL ENGINEER

csa design group, inc.
Texas Registered Engineering Firm F-9997
1845 Northwestern Dr. Ste C
El Paso, Texas 79912
tel [915] 877.4155
fax [915] 877.4334
www.csaengineers.com

SUBDIVISION
CIMARRON CANYON UNIT TWO SUBDIVISION

SHEET TITLE
STORM SEWER DETAILS

GOB (DESIGN BY)	1908 (JOB NO.)
GOB-DG-SM (DRAWN BY)	12/20/2019 (DATE OF SUBMISSION)
AHO (CHECKED BY)	AS NOTED (SCALE)

SHEET NO. 45
SHEET SEQUENCE 47 OF 82

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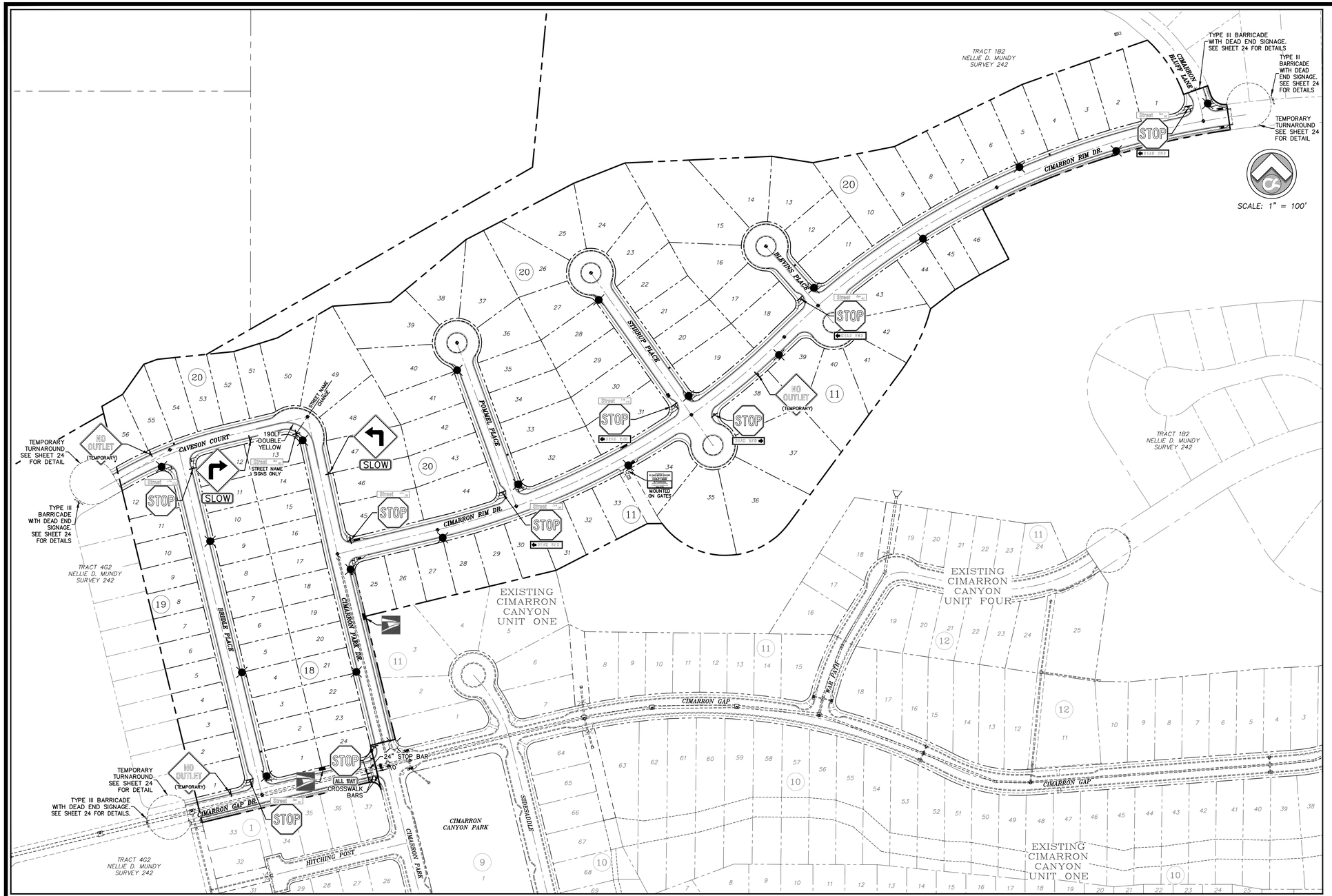
G:\Drawings\1908 Cimarron Canyon Unit Two\1908 3rd Submittal\1908 SW 43-45 (Storm Sewer Details).dwg
dgallardo



ESTIMATED QUANTITY INSTALLATION OF TRAFFIC CONTROL DEVICES (SIGNAGE)	
DESCRIPTION	QTY
30" STOP	10
9" STREET NAME	16
STREET NAME BRACKET AND CAP	8
TRAFFIC CONTROL SIGN BRACKETS	38
36"x8" W14–1pR	4
36"x8" W14–1pL	4
18"x6" R1–4	2
30"x30" W1–1R	1
30"x30" W1–1L	1
30"x30" W14–2	3
24"x10" SLOW PLAQUE	2
2" I.D. GALVANIZED STEEL SIGN POST	16
18"x18" DEAD END SIGN WITH 3 PANEL BARRICADE, 3 POSTS AND 18ft OF GUARDRAIL	4

ESTIMATED QUANTITY INSTALLATION OF TRAFFIC CONTROL DEVICES (PAVEMENT MARKINGS)	
DESCRIPTION	QTY
STOP BAR	15 LF
CROSSWALK BARS	65 LF
CROSSWALK STRIPING	
4" BROKEN WHITE STRIPING	
4" SOLID WHITE STRIPING	
4" CENTER LINE STRIPING	380 LF
YIELD BARS	
"STOP"	
"AHEAD"	
"SLOW"	
"ONLY"	
"VAN"	
HANDICAP SYMBOL	
TURN LANE–USE ARROW (L)	
TURN LANE–USE ARROW (R)	
TURN AND THROUGH LANE–USE ARROW	
THROUGH LANE–USE ARROW	
ACCESSIBLE ROUTE STRIPING	
PARALLEL PARKING HASH MARKINGS	
PAINTED CURB (YELLOW)	
PAINTED CURB (RED)	
PAINTED CURB (ADA BLUE)	

SIGN PLACEMENT IS CRITICAL. IN ORDER TO MAINTAIN ADA COMPLIANCE, A MINIMUM OF 36" UNOBSTRUCTED PASSAGE MUST BE MAINTAINED BETWEEN ANY STRUCTURES OR FIXTURES AND THE FACE OF CURB AND/OR BACK OF SIDEWALK.

NOTE:
ALL PAVEMENT MARKINGS SHALL BE THERMOPLASTIC AND SHALL BE APPLIED ACCORDING TO THE MANUFACTURER'S SPECIFICATIONS.

ALL SIGNAGE AND STRIPING COMPLIES WITH THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, 2012 EDITION.

ALL ROADWAYS INTERSECTING EXISTING PUBLIC ROADWAYS SHALL REMAIN COMPLETELY CLOSED FOR PUBLIC USE UNTIL ACCEPTED FOR MAINTENANCE BY THE COUNTY.

LEGEND

- PROPOSED STREET LIGHTS 58 REQUIRED AS PER ORDINANCE
- EXISTING STREET LIGHTS
- PROPOSED SIGN LOCATION
- NEIGHBORHOOD DELIVERY AND COLLECTION BOX UNIT (NDCBU)

BENCHMARK: CITY MONUMENT AT THE CENTERLINE INTERSECTION OF CIMARRON PASS DRIVE AND CIMARRON PARK DRIVE.
ELEVATION = 3978.53 (EL PASO CITY DATUM)

NO.	DATE	DESCRIPTION	BY
3	03/15/2021	3rd City Submittal	AHO
2	01/22/2021	2nd City Submittal	AHO
1	11/25/2020	1st City Submittal	AHO

WARNING! BEFORE YOU DIG ANY PROJECT AREA CONTRACTOR SHALL NOTIFY ALL EXISTING UNDERGROUND IMPROVEMENTS

Texas811 Know what's below. Call before you dig.

BEFORE YOU DIG - CALL

EL PASO ELECTRIC COMPANY	543–5720
	1–800–351–3355
TEXAS GAS SERVICE	544–6300
PUB. EMERGENCY HOTLINE	562–8411/562–2603
PUB. SERVICE BOARD (WATER & SEWER)	1–800–466–7755
AFTER HOURS EMERGENCY (EPW)	594–5775
SPECTRUM	775–7414
TEXAS EXCAVATION SAFETY SYSTEM	1–800–344–8377
KINDER–MORGAN EPNG PIPELINES	1–800–238–3764
EL PASO STREETS AND MAINTENANCE	212–0151
EL PASO TRAFFIC SIGNAL STREETS AND MAINTENANCE	tlengel@elpasotexas.gov

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03/15/2021

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SUBDIVISION
CIMARRON CANYON UNIT TWO SUBDIVISION

SHEET TITLE
SIGNAGE STRIPING & ILLUMINATION

GOB	1908
DESIGN BY	JOB NO.
GOB–DG–SM	12/20/2019
DRAWN BY	DATE OF COMMISSION
AHO	AS NOTED
CHECKED BY	SCALE

SHEET NO.
46
SHEET SEQUENCE
48 OF 82

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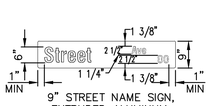
dgalindo



9" STREET NAME SIGN, EXTRUDED ALUMINUM.

R1–1
STOP SIGN
30" x 30" – STREET

TO BE MOUNTED BELOW 30" STOP SIGNS AS INDICATED IN PLAN VIEW, ONE EACH DIRECTION

W14–1pR
36"x 8"
DEAD END

W14–1pL
36"x 8"
DEAD END

R1–4
18" x 6"

W14–2
30" X 30"

W1–1R
30" X 30"

W1–1L
30" X 30"

CENTER LINE STRIPING, SOLID YELLOW.
STRIPES 4" WIDE SPACED 4" APART.
PERMANENT PAVEMENT MARKINGS TO BE USED MUST CONFORM TO CITY SPECIFICATIONS

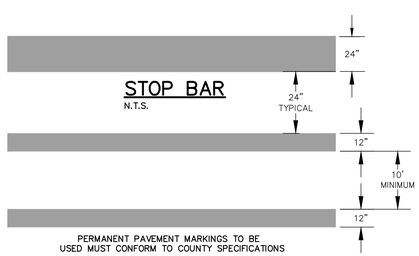
4" CENTER LINE STRIPING
SCALE: 1" = 8'–0"

SLOW PLAQUE
24" x 10"

Property of
EL PASO WATER UTILITIES
Public Service Board
FACILITY NAME
No Trespassing
Violators will be prosecuted.
In case of an emergency call:
594-5775

CITY OF EL PASO
STANDARD DETAIL 4–4
30" x 20"
SITE SIGN
NO TRESPASSING
FOR USE ON PUBLIC POND ONLY

EPWU NO TRESPASSING
NOT TO SCALE



STOP BAR
N.T.S.

PERMANENT PAVEMENT MARKINGS TO BE USED MUST CONFORM TO COUNTY SPECIFICATIONS

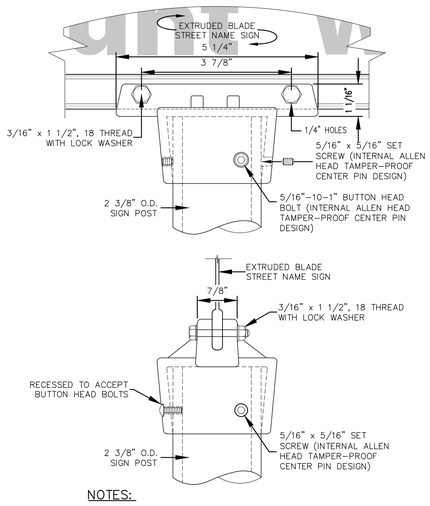
CROSSWALK BARS
N.T.S.

THE SUBDIVIDER SHALL BE RESPONSIBLE FOR THE MAINTENANCE AND ASSOCIATED COST OF ELECTRICAL ENERGY OF THE STREET LIGHTS UNTIL SUCH LIGHTS ARE ACCEPTED BY THE CITY OR COUNTY FOR MAINTENANCE AS PROVIDED IN SECTION 19.36.010. THE CITY OR COUNTY SHALL ACCEPT THE STREET LIGHT FOR MAINTENANCE AND ELECTRICAL ENERGY COSTS AT THE TIME IT ACCEPTS THE STREET AND OTHER PUBLIC IMPROVEMENTS WITHIN THE SUBDIVISION FOR MAINTENANCE.

PRIOR TO THE ACCEPTANCE OF THE STREET LIGHTS FOR MAINTENANCE BY THE CITY OR COUNTY, AN AMENDED ILLUMINATION PLAN SHOWING THE FINAL LOCATION OF THE STREET LIGHT INSTALLED BY THE SUBDIVIDER SHALL BE SUBMITTED TO THE DEPUTY DIRECTOR FOR ENGINEERING OR COUNTY ENGINEER.

UNITED STATES POSTAL SERVICE

THIS SUBDIVISION SHALL RECEIVE MAIL DELIVERIES VIA NEIGHBORHOOD DELIVERY AND COLLECTION BOX UNITS (NDCBU) AS INDICATED IN THE PLAN VIEW. THE NUMBER, STYLE, AND FINAL LOCATION OF THE NDCBU'S SHALL BE DETERMINED AT A LATER DATE BY PERSONNEL WITH THE U.S. POSTAL SERVICE.

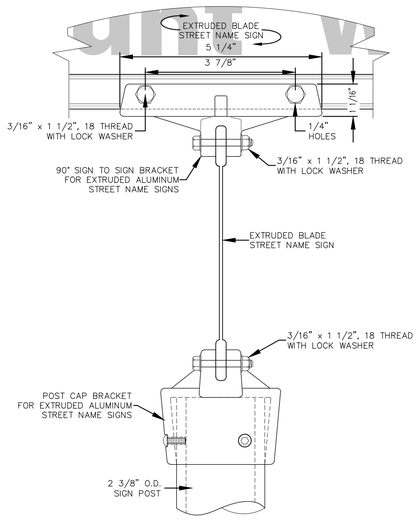


NOTES:

1. BRACKET MATERIALS SHALL BE 385 ALUMINUM ALLOY WITH A TENSILE STRENGTH OF 4900 PSI.
2. DIECAST SHALL BE FREE OF BURRS, PITS, AND HOLES.

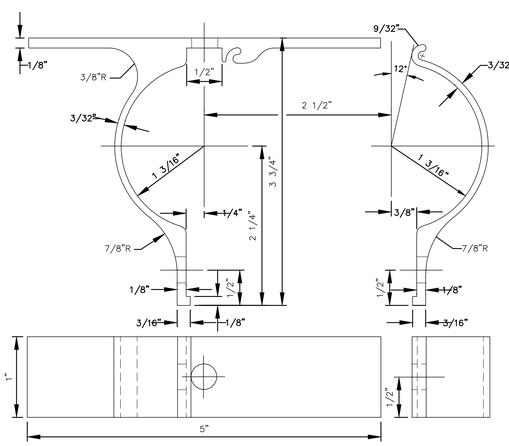
POST CAP BRACKET FOR EXTRUDED STREET NAME SIGNS

SCALE: N.T.S.



90° SIGN TO SIGN BRACKET FOR EXTRUDED STREET NAME SIGNS

SCALE: N.T.S.



NOTES:

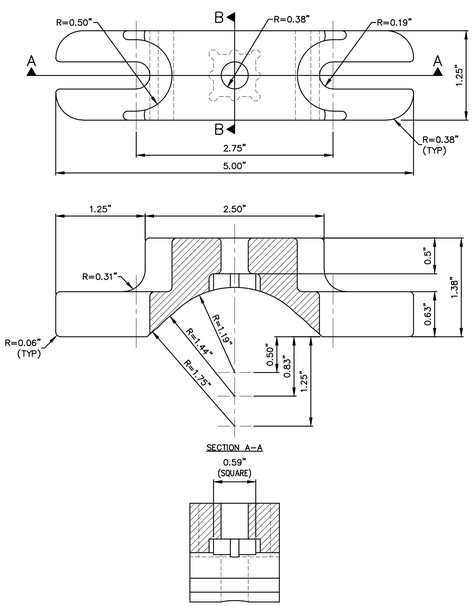
1. ALL HOLES 3/8" PUNCH.
2. FILLETS AND ROUNDS 1/16" RADIUS.
3. FURNISH THE FOLLOWING HARDWARE WITH EACH BRACKET:

   1 EA. 5/16" x 3/4" BOLT
   1 EA. 5/16" x 1/4" BOLT
   2 EA. 5/16" NUTS AND LOCK WASHERS
   2 EA. FLAT WASHERS

4. THE BRACKET IS MADE FROM HIGH STRENGTH ALUMINUM ALLOY. THE BRACKET SHALL EMPLOY AN EXTRUDED INTER-LOCKING FEATURE OFFERING A RIGID MEANS OF ATTACHING A FLAT SIGN TO A STANDARD 2" (2 3/8" O.D.) TUBULAR POST.

ALUMINUM SIGN CLAMP BRACKET FOR TRAFFIC CONTROL SIGNS

SCALE: N.T.S.

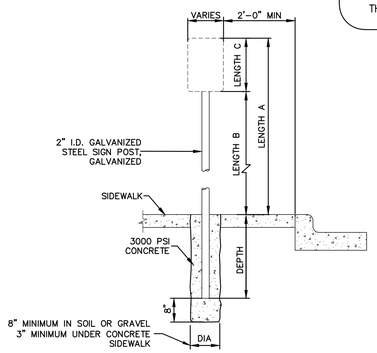


SIGN CLAMP CASTING SHALL MEET ASTM B85 ALLOY 360.0 OR A360.0, ASTM B26 ALLOY 356.0-F, OR ASTM B108 ALLOY 356.0-F OR A444.0-T4.

UNIVERSAL SIGN CLAMP

NOT TO SCALE

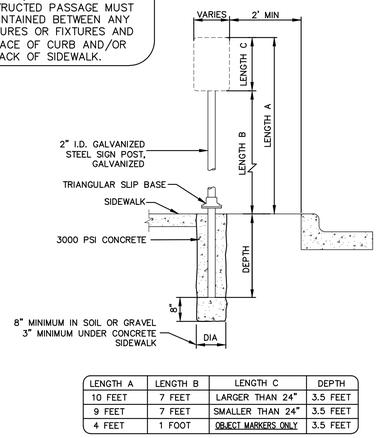
SIGN PLACEMENT IS CRITICAL. IN ORDER TO MAINTAIN ADA COMPLIANCE, A MINIMUM OF 36" UNOBSTRUCTED PASSAGE MUST BE MAINTAINED BETWEEN ANY STRUCTURES OR FIXTURES AND THE FACE OF CURB AND/OR BACK OF SIDEWALK.



LENGTH A	LENGTH B	LENGTH C	DEPTH
10 FEET	7 FEET	LARGER THAN 24"	2 FEET
9 FEET	7 FEET	SMALLER THAN 24"	1.5 FEET

STANDARD SIGN POST INSTALLATION

SCALE: 1/2"=1'-0"

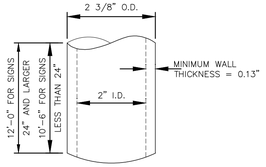


LENGTH A	LENGTH B	LENGTH C	DEPTH
10 FEET	7 FEET	LARGER THAN 24"	3.5 FEET
9 FEET	7 FEET	SMALLER THAN 24"	3.5 FEET
4 FEET	1 FOOT	OBJECT MARKERS ONLY	3.5 FEET

SIGN POST INSTALLATION WITH TRIANGULAR SLIP BASE

SCALE: 1/2"=1'-0"

ALL SIGNAGE INSTALLED WITHIN THE CITY RIGHTS-OF-WAY MUST BE INSTALLED USING THE TEXAS UNIVERSAL TRIANGULAR SLIP BASE (SEE DETAIL THIS SHEET). ALL OTHER SIGNS LOCATED OUTSIDE THE CITY RIGHTS-OF-WAY SUCH AS SIGNAGE AT PARKING AREAS AND WITHIN PARKS OR DRAINAGE AND ACCESS RIGHTS-OF-WAY OR EASEMENTS MAY BE INSTALLED USING THE STANDARD DETAIL SHOWN ON THE LEFT.

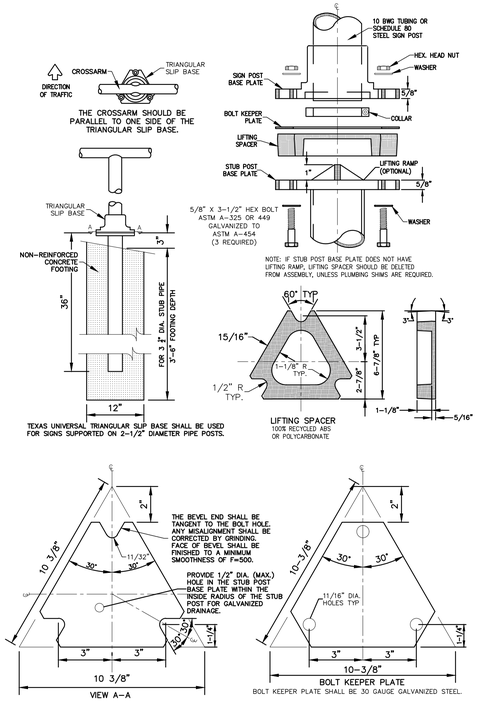


NOTES:

1. WELD ALONG LENGTH TO FORM VIRTUALLY SEAMLESS PIPE.
2. POST SHALL BE HOT-DIPPED ZINC GALVANIZED UNIFORMLY ON THE OUTSIDE WITH A NOMINAL ZINC WEIGHT OF 1.0 OUNCE PER SQUARE FOOT.
3. THE ZINC COATING IS TO BE OVER-COATED WITH A CHROMITE CONVERSION AND AN ACRYLIC TOP COAT TO PROVIDE RESIS-TANCE TO RUST AND CORROSION.
4. THE INSIDE OF THE POST SHALL BE COATED WITH AN ORGANIC MATERIAL FOR PROTECTION AGAINST RUST.
5. BOTH ENDS SHALL BE SQUARELY CUT WITHOUT FLARE.
6. POST SHALL BE FREE OF WARPS, CORROSION, OR OTHER DEFECTS.
7. RING WELDS OR SPLICES SHALL NOT BE ACCEPTABLE.
8. BENDING STRENGTH AS SPECIFIED BY AASHTO FOR SCHEDULE 40 PIPE.
9. POSTS SHALL BE BUNDLED WITH METAL STRAPS AND SHALL NOT EXCEED 37 POSTS PER BUNDLE.

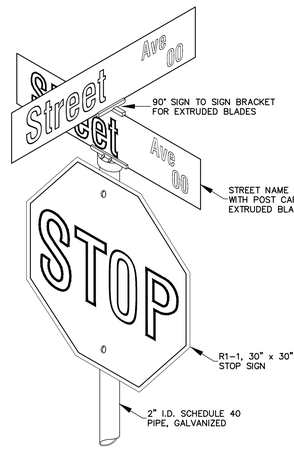
SIGN POST SPECIFICATIONS

SCALE: N.T.S.



TEXAS UNIVERSAL TRIANGULAR SLIP BASE

NOT TO SCALE



STOP SIGN WITH STREET NAME SIGNS

SCALE: N.T.S.

BENCHMARK: CITY MONUMENT AT THE CENTERLINE INTERSECTION OF ALAMEDA PASS DRIVE AND CIMARRON PARK DRIVE.
ELEVATION = 3978.53 (EL PASO CITY DATUM)

NO.	DATE	DESCRIPTION	BY
3	03/15/2021	3rd City Submittal	AHO
2	01/22/2021	2nd City Submittal	AHO
1	11/25/2020	1st City Submittal	AHO

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KINDER-MORGAN EPNG PIPELINES	1-800-238-3764
EL PASO STREETS AND MAINTENANCE	212-0151
EL PASO TRAFFIC SIGNAL STREETS	

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SUBDIVISION
CIMARRON CANYON UNIT TWO SUBDIVISION

SHEET TITLE
SIGNAGE DETAILS

GOB (DESIGN BY)	1908 (JOB NO.)
GOB-OG-SM (DRAWN BY)	12/20/2019 (DATE OF SUBMISSION)
AHO (CHECKED BY)	AS NOTED (SCALE)

SHEET NO. **47**
SHEET SEQUENCE **49** OF **82**

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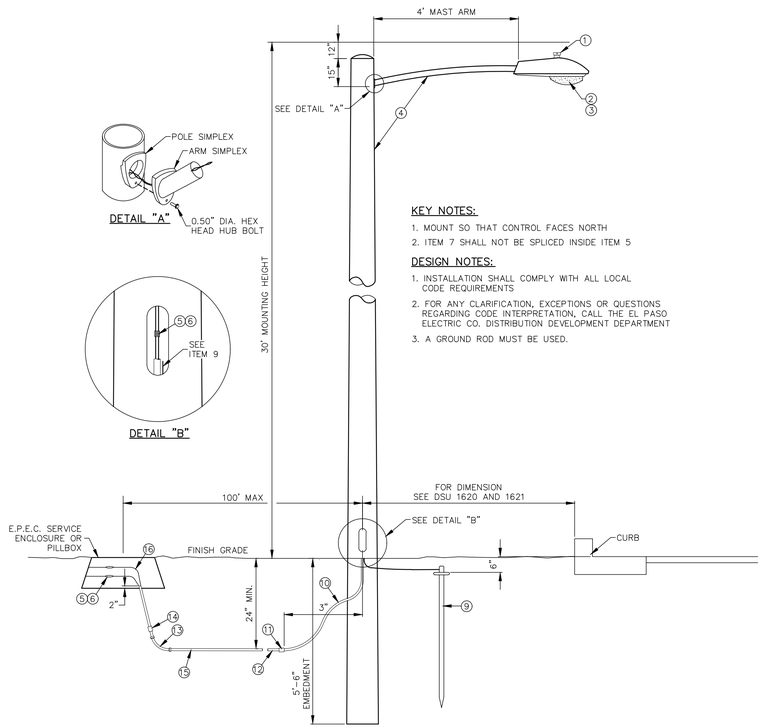
S:\Shared\1908 Cimarron Canyon Unit Two\1908 3rd Submittal\1908 SHT 46-49 (Illumination).dwg
ajohnson

BENCHMARK: CITY MONUMENT AT THE CENTERLINE INTERSECTION OF ARROYO PASS DRIVE AND CIMARRON PARK DRIVE.
ELEVATION = 3978.53 (EL PASO CITY DATUM)

ALL OTHER STREET LIGHTS AS NOTED IN PLAN VIEW

ITEM No.	DESCRIPTION	STOCK/DSU No.	QTY PER UNIT	C/U CODE	MACRO CODE
1	PHOTO CELL, 240v – SEE NOTE 1	21–225	1	LCOBRAHD	LCOBRAUG
2	HPS LAMP, 100W	21–085	1		
3	LUMINAIRE, 100W H.P.S.	21–335	1		
4	SLEEVES, #12–10	05–140	2		
5	MAST ARM, 6' x 1 1/4"	21–200	1	LBRKT1*6	
6	MACHINE BOLT, 5/8" x 12"	02–470	1	LMB5/812	
	SQUARE GALV. WASHER, 2 1/4" x 2 1/4"	02–760	1		
	COIL SPRING WASHER, 5/8"	02–786	1		
	LOCK NUT, 5/8"	02–705	1		
7	SERVICE ENTRANCE CAP FOR 1" PVC CONDUIT	17–281	1	LSVCCAP1	
8	LAG BOLT, 3/8" x 3"	02–343	2	LLAG38*3	
9	CABLE, #10, 2 CONDUCTOR, 600v UF	13–600	8'	L2C#10S	
10	COPPER CABLE, #12, 19 SOLID, 600v, BLUE	13–702	60'	LC#12CU	
11	SCHEDULE 80 1" PVC CONDUIT	17–280	30'	LSCH801	
12	PIPE STRAP FOR 1" PVC CONDUIT, 2 HOLE	17–283	9	LPVCSTRP	
13	NAIL, STAINLESS STEEL SCREW 2.5 IN.	14–247	.25#	LNAL14*2	
14	POLE, 35 FT. – CLASS 4	09–035	1	L354UG	
15	1" PVC 90 DEGREE ELBOW	17–297	1	LEL901	
15	1" PVC 45 DEGREE ELBOW	17–298	1	LEL451	
16	1" PVC COUPLING	17–296	1	LCPLG1	
17	1" PVC CONDUIT	17–299	AS REQ'D	LPVC1	

LED EQUIVALENTS MAY BE SUBSTITUTED FOR THE HIGH PRESSURE SODIUM LUMINAIRES NOTED. COORDINATE SUBSTITUTIONS WITH EL PASO ELECTRIC.



KEY NOTES:

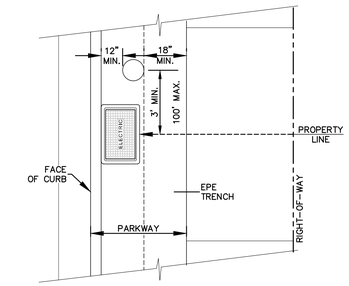
1. MOUNT SO THAT CONTROL FACES NORTH
2. ITEM 7 SHALL NOT BE SPLICED INSIDE ITEM 5

DESIGN NOTES:

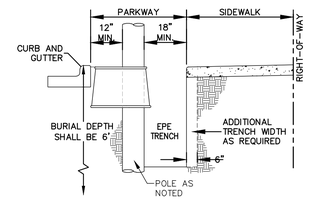
1. INSTALLATION SHALL COMPLY WITH ALL LOCAL CODE REQUIREMENTS
2. FOR ANY CLARIFICATION, EXCEPTIONS OR QUESTIONS REGARDING CODE INTERPRETATION, CALL THE EL PASO ELECTRIC CO. DISTRIBUTION DEVELOPMENT DEPARTMENT
3. A GROUND ROD MUST BE USED.

DIRECT EMBEDDED STANDARD FOR RESIDENTIAL STREET LIGHTING

SCALE: 1" = 2'-0"



PLAN VIEW



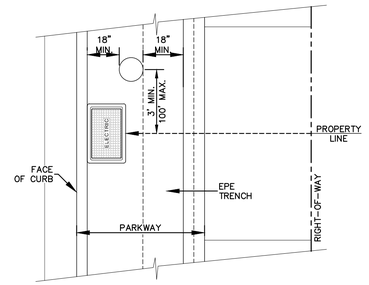
SECTION

LOCAL RESIDENTIAL STREET LIGHT POLE SHALL BE INSTALLED A MINIMUM OF 12" FROM BACK OF CURB TO FACE OF POLE.

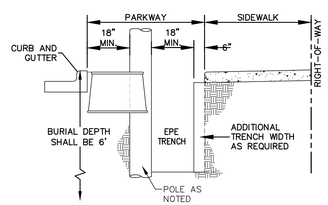
EPEC DISTRIBUTION STANDARD DSU 1620

TYPICAL (PRIMARY) TRENCH LOCATION ON LOCAL RESIDENTIAL STREET

N.T.S.



PLAN VIEW



SECTION

STREET LIGHT POLE ON ARTERIAL ROADWAYS SHALL BE INSTALLED A MINIMUM OF 18" FROM BACK OF CURB TO FACE OF POLE.

EPEC DISTRIBUTION STANDARD DSU 1621

TYPICAL (PRIMARY) TRENCH LOCATION ON ARTERIAL STREET

N.T.S.

NO.	DATE	DESCRIPTION	BY
3	03/15/2021	3rd City Submittal	AHO
2	01/22/2021	2nd City Submittal	AHO
1	11/25/2020	1st City Submittal	AHO

WARNING! BEFORE YOU DIG IN PROJECT AREA CONTRACTOR SHALL FIELD LOCATE ALL EXISTING UNDERGROUND IMPROVEMENTS

Texas 811 Know what's below. Call before you dig.

BEFORE YOU DIG - CALL

EL PASO ELECTRIC COMPANY	543–5720
AT&T	1–800–ONE–CALL
TEXAS GAS SERVICE	544–6300
TGS EMERGENCY HOTLINE	562–8411/562–2003
PUBLIC SERVICE BOARD (WATER & SEWER)	1–800–466–1601
AFTER HOURS EMERGENCY (EPW)	594–5775
SPECTRUM	775–7414
TEXAS EXCAVATION SAFETY SYSTEM	1–800–344–8377
KINDER–MORGAN EPNG PIPELINES	1–800–238–3764
EL PASO STREETS AND MAINTENANCE	212–0151
EL PASO TRAFFIC SIGNAL STREETS AND MAINTENANCE	tlengson@elpasotexas.gov

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03/15/2021

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SUBDIVISION
CIMARRON CANYON UNIT TWO SUBDIVISION

SHEET TITLE
ILLUMINATION DETAILS

GOB DESIGN BY	1908 JOB NO.
GOB~DG~SM DRAWN BY	12/20/2019 DATE OF COMMISSION
AHO CHECKED BY	AS NOTED SCALE

SHEET NO. 48
SHEET SEQUENCE 50 OF 82

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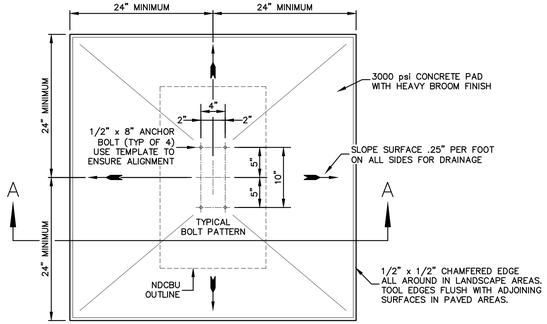
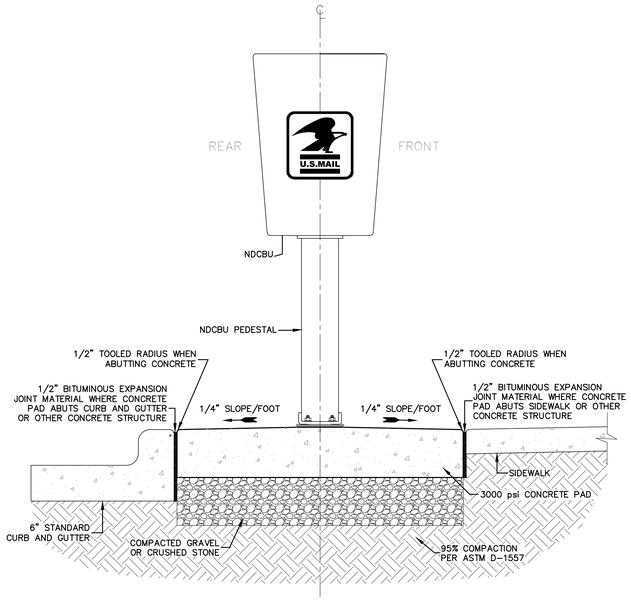
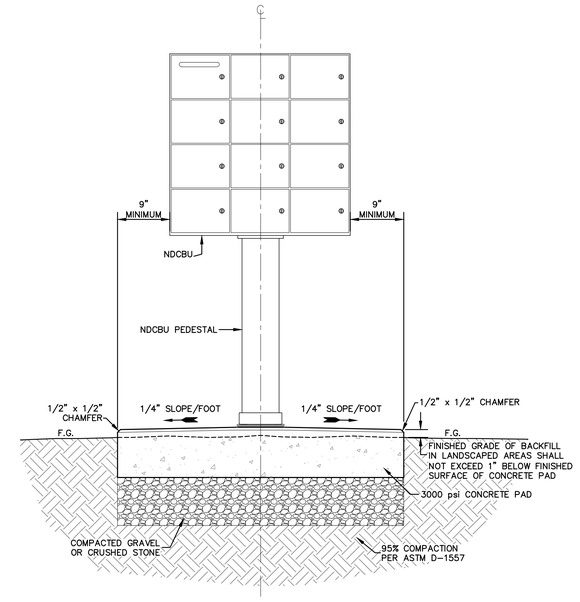
S:\Cimarron 1908 Cimarron Canyon Unit Two\1908 3rd Submittal\1908 Sht 46-49 (Illumination).dwg
dgibbons



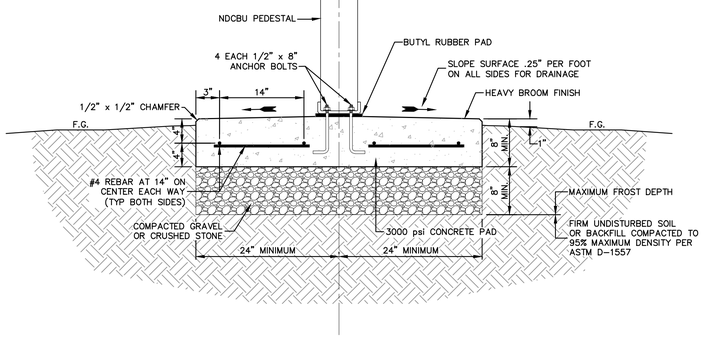
PLAN VIEW



SIDE VIEW
SCALE: 1" = 1'-0"



FRONT VIEW
SCALE: 1" = 1'-0"



SECTION A-A

CONCRETE PAD FOR NDCBU

SCALE: 1" = 1'-0"

THIS SUBDIVISION SHALL RECEIVE MAIL DELIVERIES VIA NEIGHBORHOOD DELIVERY AND COLLECTION BOX UNITS (NDCBU) AS INDICATED IN THE PLAN VIEW. THE NUMBER, STYLE, AND FINAL LOCATION OF THE NDCBU's SHALL BE DETERMINED AT A LATER DATE BY PERSONNEL WITH THE U.S. POSTAL SERVICE.

GENERAL NOTES:

1. CONCRETE SHALL HAVE A COMPRESSIVE STRENGTH OF 3000psi MINIMUM AT 28 DAYS. CONCRETE SHALL CONTAIN 4% MINIMUM, 6% MAXIMUM AIR ENTRAINMENT AND SHALL BE PLACED WITH A SLUMP OF 3.50 – 4.50 SLUMP IN ACCORDANCE WITH ACI 301.
2. STEEL REINFORCING BARS SHALL CONFORM TO ASTM A515, GRADE 60.
3. ANCHOR BOLTS SHALL CONFORM TO ASTM A193, GRADE B8M, TYPE 316 STAINLESS STEEL.
4. CONTRACTOR SHALL CONTACT THE USPS (UNITED STATES POSTAL SERVICE) CUSTOMER SERVICE REPRESENTATIVE IN CHARGE OF NDCBU (NEIGHBORHOOD DELIVERY AND COLLECTION BOX UNITS) PRIOR TO INSTALLATION OF MAIL BOXES.
5. DETAILS SHOWN MEET OR EXCEED USPS APPROVED SPECIFICATIONS.

UNITED STATES POSTAL SERVICE™

BENCHMARK: CITY MONUMENT AT THE CENTERLINE INTERSECTION OF ARMERO PASS DRIVE AND CIMARRON PARK DRIVE.
ELEVATION = 3976.53 (EL PASO CITY DATUM)

NO.	DATE	DESCRIPTION	BY
3	03/15/2021	3rd City Submittal	AHO
2	01/22/2021	2nd City Submittal	AHO
1	11/25/2020	1st City Submittal	AHO

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AT&T	1-800-288-2355
TEXAS GAS SERVICE	544-6300
TGS EMERGENCY HOTLINE	562-8411/562-2603
EPWU (EL PASO WATER UTILITIES)	1-800-466-1555
AFTER HOURS EMERGENCY (EPW)	594-5775
SPECTRUM	775-7414
TEXAS 1-CALL EXCAVATION SAFETY SYSTEM	1-800-344-8377
KINDER-MORGAN EPNG PIPELINES	1-800-238-3764
EL PASO STREETS AND MAINTENANCE	212-0151
EL PASO TRAFFIC SIGNAL STREETS AND MAINTENANCE	transportation@elpasotexas.gov

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03/15/2021

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www.csaengineers.com

SUBDIVISION
CIMARRON CANYON UNIT TWO SUBDIVISION

SHEET TITLE
US POSTAL SERVICE DETAILS

GOB (DESIGN BY)	1908 (JOB NO.)
GOB-DG-SM (DRAWN BY)	12/20/2019 (DATE OF COMMISSION)
AHO (CHECKED BY)	AS NOTED (SCALE)

SHEET NO. 49
SHEET SEQUENCE 51 OF 82

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S:\CSA 1908 Cimarron Canyon Unit Two\1908 3rd Submittal\1908 Sht 46-49 (Illumination).dwg
dgstrado

BENCHMARK: CITY MONUMENT AT THE CENTERLINE INTERSECTION OF CIMARRON PARK DRIVE AND CIMARRON PARK DRIVE.
ELEVATION = 3978.53 (EL PASO CITY DATUM)

NO.	DATE	DESCRIPTION	BY
3	03/15/2021	3rd City Submittal	AHO
2	01/22/2021	2nd City Submittal	AHO
1	11/25/2020	1st City Submittal	AHO

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BEFORE YOU DIG - CALL

EL PASO ELECTRIC COMPANY	543-5720
AT&T	1-800-344-5555
TEXAS GAS SERVICE	544-6300
TCI EMERGENCY HOTLINE	562-8411/562-2003
EL PASO WATER UTILITIES (WATER & SEWER)	1-800-351-2255
AFTER HOURS EMERGENCY (EPW)	594-5775
SPECTRUM	775-7414
EXCAVATION SAFETY SYSTEM	1-800-344-7233
KINDER-MORGAN EPNG PIPELINES	1-800-238-3764
EL PASO DRIPS, SIGNAL STREETS AND MAINTENANCE	212-0151

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06/15/2021

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SUBDIVISION
CIMARRON CANYON UNIT TWO SUBDIVISION

SHEET TITLE
GRADING STABILIZATION PLAN

DESIGN BY: GOB	JOB NO.: 1908
DRAWN BY: GOB-DG-SM	DATE OF SUBMISSION: 12/20/2019
CHECKED BY: AHO	SCALE: AS NOTED

SHEET NO.
50
SHEET SEQUENCE
52 OF 82

18.44.220 — PERMIT CLOSEOUT PROCEDURE

AFTER THE PERMITTEE COMPLETES THE GRADING UNDER THE PERMIT, THE PERMIT SHALL BE CLOSED. AS A PART OF THE CLOSEOUT PROCEDURE, THE APPLICANT MUST SUBMIT THE FOLLOWING TO THE CITY:

A. A STATEMENT FROM THE ENGINEER OF RECORD STATING THAT STATES, "THE GRADING OPERATION HAS BEEN SUBSTANTIALLY COMPLETED AND GENERALLY CONFORMS TO THE APPROVED SET OF PLANS." THE PERMITTEE SHALL CALL THE PERMIT OFFICIAL TO ESTABLISH THE BEGINNING OF THE WARRANTY PERIOD AND TO NOTIFY THE PERMIT OFFICIAL THAT THE GSP HAS BEEN IMPLEMENTED.

B. A COPY OF THE NOTICE OF TERMINATION FILED WITH THE STATE OR DATED CONSTRUCTION SITE NOTICE, IF APPLICABLE, IN ACCORDANCE WITH CHAPTER 15.

18.44.090 — WARRANTY

ANY PERSON ISSUED A PERMIT SHALL AGREE WARRANT AND MAINTAIN THE AREA DESCRIBED IN THE PERMIT FOR A PERIOD OF TWO YEARS AFTER THE PERMIT IS CLOSED BY THE CITY PURSUANT TO SECTION 18.44.220, OR UNTIL A BUILDING PERMIT IS ISSUED FOR THE PURPOSE OF MAINTAINING A STABILIZED SITE IN ACCORDANCE WITH THE APPROVED GSP, WHICHEVER FIRST OCCURS (THE "WARRANTY" OR "WARRANTY PERIOD"). THE CITY MAY CONDUCT INSPECTIONS OF THE PERMITTED AREA THROUGHOUT THE WARRANTY PERIOD AND REQUIRE MAINTENANCE AND CORRECTION OF THE WORK BY THE PERMIT HOLDER. FAILURE OF THE PERMIT HOLDER TO CORRECT THE WORK SHALL CONSTITUTE A FAILURE TO COMPLY WITH THE PROVISIONS OF THIS CHAPTER.

18.44.200 — ENGINEERING CONTROLS FOR GRADING

1. NO ON-SITE PROCESSING OF MATERIAL FOR COMMERCIAL OR RETAIL SALES SHALL BE ALLOWED. ON-SITE PROCESSING OF MATERIALS TO BE USED FOR PREPARATION OR CONSTRUCTION OF IMPROVEMENTS WITHIN THE SITE COVERED BY THE GRADING PERMIT SHALL BE ALLOWED.
2. WORK SHALL BE CONDUCTED IN A MANNER THAT PRESERVES AND DOES NOT OBSTRUCT, IMPEDE OR INTERFERE WITH THE FLOW OF STORMWATER IN NATURAL DRAINAGE WAYS, UNIMPROVED CHANNELS OR WATERCOURSES, OR IMPROVED DITCHES, CHANNELS OR CANALS IN SUCH A MANNER AS TO CAUSE FLOODING WHERE IT WOULD NOT OTHERWISE OCCUR.
3. CONSTRUCTION EQUIPMENT AND FENCING SHALL BE KEPT OUT OF WATERCOURSES EXCEPT WHEN NECESSARY TO PERFORM WORK ON THE APPROVED PLANS. ADEQUATE BY-PASS MEASURES SHALL BE INSTALLED WHERE TEMPORARY DRAINAGE BLOCKAGES WILL OCCUR. WHERE WORK WITHIN A CHANNEL IS DESIGNATED ON APPROVED PLANS, PRECAUTIONS SHALL BE TAKEN TO STABILIZE THE WORK AREA DURING CONSTRUCTION TO MINIMIZE EROSION AS SHOWN ON THE PLANS. THE CHANNEL, INCLUDING BED AND BANKS, SHALL ALWAYS BE RESTORED/RESTABILIZED IMMEDIATELY AFTER WORK IN THE CHANNEL IS COMPLETED.
4. WHERE A DRAINAGE WAY WILL BE CROSSED BY CONSTRUCTION VEHICLES REGULARLY DURING CONSTRUCTION, A TEMPORARY CROSSING SHALL BE CONSTRUCTED AS REQUIRED IN THE APPROVED GRADING PLANS.
5. MATERIAL STOCKPILING SHALL NOT BE ALLOWED WHEN GRADING OPERATIONS ARE IDLE FOR MORE THAN SEVEN CONSECUTIVE CALENDAR DAYS. STOCKPILING SHALL BE LIMITED TO TEN FEET HIGH WHEN GRADING OPERATIONS ARE BEING CONDUCTED.
6. A TRAFFIC CONTROL PERMIT SHALL BE REQUIRED IF THE GRADING OPERATION WILL IMPACT TRAFFIC.
7. ANY USE OF VIBRATORY EQUIPMENT SHALL NOT BE ALLOWED, UNLESS APPROVED IN WRITING BY THE PERMIT OFFICIAL IN ADVANCE OF SUCH USE.
8. THE PERMIT OFFICIAL MUST BE NOTIFIED NO LATER THAN 4:00PM THE DAY IN ADVANCE OF ANY GRADING WORK. ADDITIONAL ACTIVITY REQUIREMENTS/RESTRICTIONS MAY BE SPECIFIED BY THE DESIGN ENGINEER OF RECORD.

EROSION CONTROL NOTES:

1. THE CONTRACTOR SHALL COMPLY WITH ALL FEDERAL, STATE, AND LOCAL EROSION CONSERVATION AND SILTATION ORDINANCES.
2. ALL EROSION CONTROL DEVICES (WITH THE EXCEPTION OF TEMPORARY BERMS AND SWALES) SHALL BE INSTALLED PRIOR TO SITE DISTURBANCE AND SHALL REMAIN IN PLACE UNTIL FINAL GRADING AND THE INSTALLATION OF PROPOSED STORM SEWERS ARE COMPLETE AND A STAND OF NATURAL VEGETATION WITH 70% COVERAGE IS ACHIEVED. TOP SOIL SHOULD BE RESERVED AND STOCKPILED DURING CLEARING AND GRUBBING OPERATIONS. THE RESERVED TOP SOIL SHOULD BE SPREAD EVENLY UPON THE FINISHED SURFACE ONCE GRADING OPERATIONS ARE COMPLETE IN ORDER TO PROMOTE A NATURAL REVEGETATION OF THE DISTURBED AREA.
3. PLACE INLET PROTECTION AROUND ALL PROPOSED DRAINAGE INLETS DURING CONSTRUCTION.
4. THE CONTRACTOR MUST USE SEDIMENT FILTERS OR OTHER MEASURES APPROVED BY THE ENGINEER TO PREVENT SILT AND CONSTRUCTION DEBRIS FROM CLOGGING STORM SEWER LINES AND EXISTING AND/OR PROPOSED DRAINAGE INLETS. LIKEWISE, THE CONTRACTOR MUST USE SEDIMENT FILTERS OR OTHER MEASURES TO PREVENT SILT AND CONSTRUCTION DEBRIS FROM BEING TRANSPORTED TO ADJACENT PROPERTIES.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RE-ESTABLISHING ANY EROSION CONTROL DEVICE WHICH THEY DISTURB. THE CONTRACTOR SHALL CONTACT THE OWNER/DEVELOPER OR THEIR REPRESENTATIVE REGARDING ANY DEFICIENCIES IN THE ESTABLISHED EROSION CONTROL MEASURES WHICH MAY LEAD TO THE UNAUTHORIZED DISCHARGE OF STORM WATER, SEDIMENTATION, OR OTHER POLLUTANTS. THESE INCLUDE, BUT ARE NOT LIMITED TO: EXCESS CONCRETE DUMPING OR CONCRETE RESIDUE, ASPHALT REMAINS, PAINTS, SOLVENTS, GREASES, FUEL AND LUBRICATION OILS, PESTICIDES, AND SOLID WASTE MATERIALS.
6. MAINTENANCE OF THE EROSION CONTROL DEVICES IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR DURING CONSTRUCTION. REGULAR INSPECTION OF THE EROSION CONTROL DEVICES SHOULD BE MADE BY THE CONTRACTOR AND ACCUMULATED SILT IN DEVICES SHOULD BE REMOVED IN A TIMELY FASHION AND SHALL BE DISTRIBUTED ON SITE IN A MANNER THAT SHALL NOT CONTRIBUTE TO ADDITIONAL SILTATION.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING ANY SILT OR CONSTRUCTION DEBRIS FROM OFF-SITE PROPERTIES AND ROADWAYS THAT IS THE RESULT OF THE PROPOSED CONSTRUCTION.
8. THE CONTRACTOR SHALL CONSTRUCT A STABILIZED CONSTRUCTION ENTRANCE AT ALL PRIMARY POINTS OF ACCESS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN THE STABILIZED CONSTRUCTION ENTRANCE AND FOR INSURING THAT ALL CONSTRUCTION TRAFFIC UTILIZES THE STABILIZED ENTRANCE AT ALL TIMES FOR INGRESS/EGRESS TO THE SITE.
9. THE CONTRACTOR SHALL TAKE ALL AVAILABLE PRECAUTIONS TO CONTROL DUST. THE CONTRACTOR MAY WATER DOWN THE SITE ON A REGULAR BASIS, OR UTILIZE OTHER MEANS AS APPROVED BY THE CITY ENGINEER AT NO ADDITIONAL COST TO THE OWNER.
10. CONTRACTOR STAGING AREA TO BE AGREED UPON BY THE OWNER PRIOR TO CONSTRUCTION.
11. BEFORE ANY EARTHWORK COMMENCES, THE CONTRACTOR SHALL STAKE OUT THE LIMITS OF CONSTRUCTION AND ANY OTHER ITEMS ESTABLISHED IN THESE PLANS. THE CONTRACTOR SHALL PROTECT AND PRESERVE THE CONTROL POINTS AT ALL TIMES DURING THE COURSE OF THE PROJECT. THE GRADING CONTRACTOR SHALL PROVIDE ALL NECESSARY ENGINEERING AND SURVEYING FOR LINE AND GRADE CONTROL POINTS RELATED TO EARTHWORKS.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING A CLEAN WORK SITE TO INCLUDE ALL EROSION CONTROL DEVICES UNTIL CONSTRUCTION IS COMPLETE AND THE OWNER/DEVELOPER HAS ACCEPTED THE SITE.
13. THE CITY ENGINEER, OR HIS REPRESENTATIVE, MAY MAKE REGULAR INSPECTIONS OF THE SITE AND RESERVES THE RIGHT TO REQUEST ADDITIONAL MEASURES.
14. IN ADDITION TO THE NOTES ABOVE, THE CONTRACTOR SHALL OBSERVE AND ADHERE TO ALL NOTES FOUND ON THE GRADING AND DRAINAGE PLAN, THE STORM WATER POLLUTION PREVENTION PLAN, OR ELSEWHERE IN THIS PLAN SET, AS WELL AS CHAPTER 15 OF THE ORDINANCE.

OWNER/DEVELOPER RESPONSIBILITY:

1. IT SHALL BE THE RESPONSIBILITY OF THE OWNER/DEVELOPER TO INSURE THAT THE CONTRACTOR ADHERES TO THE NOTES SET FORTH IN THIS PLAN SET. IN THE EVENT THAT A CONTRACTOR DEFAULTS ON THE PROJECT, THE OWNER/DEVELOPER SHALL ASSUME THE RESPONSIBILITIES OF THE CONTRACTOR FOR THE MAINTENANCE OF THE SITE.
2. IT SHALL BE THE RESPONSIBILITY OF THE OWNER/DEVELOPER TO NOTIFY THE CITY IN WRITING WHEN A SITE IS OR WILL BECOME IDLE FOR MORE THAN 180 CONSECUTIVE DAYS. DURING THIS TIME, THE PERMITTEE RESPONSIBLE FOR THE GRADING STABILIZATION PLAN SHALL MAKE REGULAR INSPECTIONS OF THE PROJECT AREA TO INSURE THE SITE IS PROPERLY MAINTAINED AND ADEQUATELY PROTECTED.
3. IT SHALL BE THE RESPONSIBILITY OF THE OWNER/DEVELOPER TO ASSUME THE MAINTENANCE OF THE SITE ONCE THE PROJECT IS CLOSED AND HAS BEEN ACCEPTED AS COMPLETE. THE OWNER/DEVELOPER SHALL ADHERE TO THE NOTES SET FORTH IN THIS PLAN SET AND MAINTAIN THE SITE AT THEIR EXPENSE DURING THE WARRANTY PERIOD.
4. IT SHALL BE THE RESPONSIBILITY OF THE OWNER/DEVELOPER TO WATER THE SITE UNTIL THE ESTABLISHMENT OF VEGETATION AS OUTLINED IN THE EROSION CONTROL NOTES HAS BEEN ACHIEVED. LIKEWISE, THE OWNER/DEVELOPER SHALL WATER AS NECESSARY TO PREVENT WIND EROSION OF THE SITE. THE OWNER/DEVELOPER MAY UTILIZE OTHER MEANS TO CONTROL WIND EROSION AS APPROVED BY THE CITY ENGINEER.
5. THE OWNER/DEVELOPER SHOULD MAKE REGULAR VISITS TO THE SITE (AT LEAST ONCE EVERY SEVEN (7) CALENDAR DAYS) TO INSPECT THE EROSION CONTROL DEVICES DURING THE WARRANTY PERIOD. ADDITIONALLY, SITE VISITS SHOULD BE MADE WITHIN 24 HOURS PRIOR TO AN ANTICIPATED STORM EVENT AND IMMEDIATELY FOLLOWING A RAINFALL EVENT OF ONE-HALF INCH OR MORE, AND LIKEWISE, FOLLOWING A SIGNIFICANT WIND EVENT TO INSPECT THE EROSION CONTROL DEVICES. ANY DEVICES REQUIRING REPAIR OR REPLACEMENT SHOULD BE ADDRESSED WITHIN 24 HOURS FOLLOWING THE VISUAL INSPECTION.
6. THE OWNER/DEVELOPER SHALL MAINTAIN A CLEAN SITE BY REMOVING AND PROPERLY DISPOSING OF ANY TRASH, SOLID WASTE, OR OTHER DEBRIS THAT MAY ACCUMULATE ON THE PROPERTY.
7. THE OWNER/DEVELOPER MUST ADHERE TO TITLE 9 (HEALTH AND SAFETY), CHAPTER 9.04 (SOLID WASTE MANAGEMENT), ARTICLE XVII WEEDS AND VEGETATION, SECTION 9.04.860 (WEEDS AND VEGETATION PROHIBITED) AND MAINTAIN A SITE THAT IS FREE OF WEEDS AND VEGETATION OTHER THAN THOSE DEEMED AS "ACCEPTABLE" PER SECTION 9.04.870 (EXCEPTIONS).
8. THE CITY ENGINEER OR HIS REPRESENTATIVE, AS WELL AS REPRESENTATIVES OF THE SOLID WASTE MANAGEMENT DEPARTMENT MAY MAKE PERIODIC VISITS TO THE SITE DURING THE WARRANTY PERIOD AND RESERVES THE RIGHT TO REQUEST ADDITIONAL MEASURES PER TITLE 9 (HEALTH AND SAFETY) ARTICLE XVII – WEEDS AND VEGETATION, SECTION 9.04.880 (CITY ABATEMENT).

FOR INFORMATION REGARDING SOILS, REFER TO THE PRELIMINARY SOILS EVALUATION REPORT FOR CIMARRON CANYON UNIT ONE SUBDIVISION (PROJECT No. SPG11178 DATED OCT 3, 2011; AND THE STREET PAVEMENT DESIGN (PROJECT No. SPG1104J DATED APR 4, 2011) PREPARED BY SPEESOIL, INC.

ALL GRADED SLOPES GREATER THAN 3:1 (THREE FEET HORIZONTALLY TO 1 FOOT VERTICALLY) MUST BE STABILIZED PER ORDINANCE. REFER TO NOTES AND DETAILS ON SHEETS 51–52.

LEGEND

- PROPOSED HIGH POINT
- PROPOSED LOW POINT
- 3955 — PROPOSED CONTOUR
- 3950 — EXISTING CONTOUR
- ROCK RETAINING WALL WITH GARDEN WALL EXTENSION BY DEVELOPER, HEIGHTS AS NOTED
- GARDEN OR STEM WALL BY DEVELOPER, HEIGHTS AS NOTED
- ROCK RETAINING WALL, BATTER ONLY, BY DEVELOPER, GARDEN WALL EXTENSION BY BUILDER
- ROCK WALL WITH VIEW FENCE, RETAINING AS REQUIRED, BY DEVELOPER, HEIGHTS AS NOTED
- ROCK RETAINING WALL WITH 4' GARDEN WALL EXTENSION BY BUILDER

ALL OTHER ROCK WALLS BY BUILDER UNLESS NOTED OTHERWISE

- SWALE

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smckay

SITE PREPARATION:

1. PRIOR TO GRADING OF THE SITE, NATIVE PLANTS THAT ARE OF A DESIRABLE SPECIES AND THAT ARE OF SUFFICIENT MATURITY WILL BE TAGGED FOR EASE OF IDENTIFICATION. THESE PLANTS WILL BE HARVESTED, REMOVED FROM THE SITE, AND RESERVED FOR THE PURPOSES OF REVEGETATING GRADED SLOPES AND OTHER AREAS THAT ARE IDENTIFIED ON THE PLAN, OR OTHER AREAS THAT MAY HAVE BEEN DISTURBED BY GRADING OPERATIONS AND NOT IDENTIFIED ON THE PLAN.

2. THE SITE SHOULD BE CLEARED OF ALL TRASH, RUBBISH, AND DEBRIS THAT IS NOT OF NATURAL ORIGIN. THIS SHOULD INCLUDE BUT IS NOT LIMITED TO PLASTICS, PAPER, CARDBOARD, CANS AND OTHER METAL CONTAINERS, PACKING MATERIALS, PALLETS, LUMBER AND OTHER CONSTRUCTION DEBRIS, TIRES, DISCARDED FURNISHINGS, APPLIANCES, ETC., AND CONCRETE OR ASPHALT RUBBLE. ALL SHOULD BE PLACED IN APPROPRIATE TRANSPORT CONTAINERS AND REMOVED TO A DISPOSAL SITE AUTHORIZED TO ACCEPT THE REFUSE.

3. ONCE CLEARED OF UNDESIRABLE MATERIALS, TOPSOILS WITHIN THE LIMITS OF DISTURBANCE IS TO BE REMOVED TO A DEPTH OF 6" TO 12" AND RESERVED IN STOCKPILES AT AREAS WITHIN THE SITE AS IDENTIFIED IN IN THE PLAN VIEWS. THE TOPSOILS ARE NOT TO BE SCREENED AND ANY ORGANIC MATERIALS SCRUBBED IN THE GRADING OPERATIONS ARE TO BE LEFT INTERMINGLED WITHIN THE RESERVED MATERIALS. THE MATERIALS THAT ARE RESERVED WILL SERVE AS THE SEED BANK AND WILL BE THE BASE FOR OPERATIONS THAT WILL BE PERFORMED FOLLOWING THE GRADING OF AREAS NOTED FOR REVEGETATION ON THE PLANS.

4. ANY NATIVE ROCK THAT MAY BE GATHERED WITH THE TOPSOILS ARE TO BE LEFT WITH THE MATERIALS RESERVED. THIS NATIVE ROCK IS A CRUCIAL MEMBER OF THE SOILS MAKE UP WILL AND HELP TO INTERLOCK THE SOIL MATERIALS WHEN TRANSFERRED AND PLACED ON NEWLY GRADED AREAS. ONLY LARGER DIAMETER STONES THAT ARE ENCOUNTERED (12" DIAMETER AND LARGER) SHALL BE REMOVED FROM THE MATERIALS THAT ARE TO BE STOCKPILED. THESE LARGER STONES SHOULD BE SET ASIDE AND RESERVED FOR USE ELSEWHERE ON SITE AS SHOWN IN THE DETAILS ON THESE SHEETS.

5. AREAS IDENTIFIED AS STOCKPILES FOR THE SEED BANK ON THE PLANS SHALL BE THOROUGHLY WETTED PRIOR TO PLACING THE TOPSOILS IN RESERVE. MATERIALS SHALL BE SPREAD LOOSELY AND LEFT UNCOMPACTED IN LAYERS NOT GREATER THAN 4" TO 6" IN DEPTH. RESERVED MATERIALS SHALL BE REWETTED PRIOR TO PLACING ADDITIONAL MATERIALS ONTO THE STOCKPILE. MATERIALS STOCKPILED SHALL NOT EXCEED FOUR (4) FEET IN OVERALL HEIGHT. ONCE MATERIALS HAVE BEEN STOCKPILED, THE SEED BANK SHALL BE WATERED ON A FAIRLY REGULAR BASIS, NOT LESS THAN ONCE PER WEEK, UNTIL SUCH TIME THE MATERIALS ARE REMOVED FOR PLACEMENT WITHIN THE GRADED AREAS NOTED ON THE PLANS. FREQUENCY OF WATERING AND WATER VOLUMES SHALL BE AS DIRECTED BY THE BOTANIST.

6. DURING THE PERIOD THAT THE SEED BANK IS IN RESERVE, ONLY UNDESIRABLE GROWTH THAT MAY OCCUR SHALL BE REMOVED. PLANTS SUCH AS TUMBLEWEEDS AND OTHER SPECIES AS IDENTIFIED IN THE CITY CODE AS UNDESIRABLE SHALL BE REMOVED. }Ref: TITLE 9 (HEALTH AND SAFETY), CHAPTER 9.04 (SOLID WASTE MANAGEMENT), SECTION 9.04.860 (WEEDS AND VEGETATION PROHIBITED) AND MAINTAIN A SITE THAT IS FREE OF WEEDS AND VEGETATION OTHER THAN THOSE DEEMED AS 'ACCEPTABLE' PER SECTION 9.04.870 (EXCEPTIONS).}

7. PLANT HARVESTING, RESERVATION AND PRESERVATION OF THE THE SEED BANK, AND THE REVEGETATION OF THE AREAS NOTED IN THE PLAN SHALL BE PERFORMED UNDER THE SUPERVISION OF MICHAEL GAGLIO, BOTANIST AND MANAGING MEMBER OF HIGH DESERT NATIVE PLANTS AND MAY BE CONTACTED VIA EMAIL AT mike@hd-env.com.

GENERAL GRADING NOTES:

1. AREAS NOTED ON THE PLANS AS 'TO BE LEFT UNDISTURBED' SHOULD BE CORDONED OFF USING ORANGE CONSTRUCTION FENCING AND ALL MECHANIZED EQUIPMENT SHOULD BE RESTRICTED FROM OPERATIONS WITHIN THESE AREAS.

2. ON HIGHER GROUND, GRADING OPERATIONS SHOULD BE CATEGORIZED AS 'HILL TOPPING' AND THE LIMITS OF GRADING SHOULD NOT EXTEND BEYOND WHAT IS SHOWN ON THE PLANS, ESPECIALLY THE GRADING SHOWN WITHIN BLOCKS 2, 3 AND 10. INITIAL GRADING CAN BE PERFORMED UTILIZING SCRAPERS, BUT AS THE FINISHED GRADE IS APPROACHED, GRADING AT THE EDGE OF THE LOTS SHOULD BE 'RAKED' IN TOWARD THE LOT. RAKED MATERIALS PULLED IN FROM THE EDGE OF SLOPE CAN BE REMOVED UTILIZING SCRAPERS. LEAVING A CLEAN CUT TO NATURAL GRADE IN THE NOTED AREAS IS CRUCIAL TO THE LOOK DESIRED AS A PART OF THE GRADING DESIGN.

3. WHILE NOT EXPECTED, IT IS POSSIBLE THAT CLAYS OR OTHER SOILS WITH HIGHER PLASTICITY CAN BE ENCOUNTERED, ESPECIALLY WHEN GRADING OPERATIONS ARE PERFORMED WITHIN LOWER AREAS NEAR RESLER DRIVE AND WITHIN WATER COURSES AND WASHES. REMOVAL AND REPLACEMENT OF THESE SOILS WILL ONLY BE NECESSARY WHERE PAVEMENT IS PROPOSED, OR WHERE IT WILL IMPOSE ISSUES UPON THE PLACEMENT OF FOUNDATIONS BY THE BUILDERS. IT WILL NOT BE NECESSARY TO MITIGATE THESE SOILS WHERE FILL IS PROPOSED AND ENCAPSULATION OF THE UNDESIRABLE SOILS WILL OCCUR.

SCREENING OPERATIONS:

1. DURING SCREENING OPERATIONS PERFORMED THROUGHOUT THE DURATION OF CONSTRUCTION, NATIVE ROCK OF ALL SIZES SHALL BE RESERVED AND STOCKPILED FOR FUTURE PLACEMENT ON SITE AS SHOWN ON THE PLAN AND PER THE DETAILS SHOWN ON THESE SHEETS.

2. NATIVE ROCK SHOULD BE SORTED BY SIZE AND KEPT SEPARATED DURING THE PERIOD THE MATERIAL IS STOCKPILED. A SIGNIFICANT AMOUNT OF NATIVE ROCK PLACEMENT IS SPECIFIED AS A PART OF THE STABILIZATION PLAN AND ALL EFFORTS SHOULD BE MADE BY THE CONTRACTOR TO SORT AND RESERVE ALL NATIVE ROCK AS IS PERMITTED BY TIME AND BUDGETARY CONSTRAINTS.

3. IN THE EVENT THAT SIGNIFICANTLY SIZED SANDSTONE CAPS ARE ENCOUNTERED DURING GRADING OPERATIONS, EFFORTS SHOULD BE MADE TO RESERVE SLABS OF THE SANDSTONE INTACT. LARGE SLABS MAY BE INCORPORATED INTO THE PARKS AS PART OF THE NATIVE DESIGN SCHEMES BEING PROPOSED.

GRADED SLOPES:

1. ALL GRADED SLOPES GREATER THAN 3:1 (THREE FEET HORIZONTALLY TO 1 FOOT VERTICALLY) MUST BE STABILIZED PER ORDINANCE. OTHER GRADED SLOPES THAT ARE 3:1 OR LESS SHALL BE STABILIZED PER THE RECOMMENDATIONS OF THE SLOPE STABILITY REPORT PERFORMED BY THE GEOTECHNICAL ENGINEER.

2. AS A STANDARD, THE CONTRACTOR SHOULD MAINTAIN REGULAR CONTACT WITH THE GEOTECHNICAL ENGINEER AND REQUEST TESTING OF SOILS TO BE USED IN THE CONSTRUCTION OF FILL SLOPES. WHENEVER POSSIBLE, IT IS DESIRABLE TO PLACE SOILS WITH HIGHER PLASTICITY LEVELS AT THE LOWER LEVELS OF FILL AND RESERVE THE LESSER COHESIVE SOILS FOR PLACEMENT NEARER THE TOPS OF THE CONSTRUCTED SLOPES, ESPECIALLY WHERE THOSE SOILS WILL BE CONTAINED WITHIN RETAINING WALLS.

3. CONSTRUCTED SLOPES (FILL) SHOULD INCORPORATE A SOILS STITCHING METHODOLOGY WHEN PLACING LIFTS. IN ADDITION TO THE TESTING OF SOILS, FILL SLOPES SHOULD BE INSPECTED ON A REGULAR BASIS BY THE GEOTECHNICAL ENGINEER DURING THE GRADING OPERATIONS. AT A MINIMUM FILL SLOPES SHOULD BE EVALUATED FOR SLOPE STABILITY BY THE ENGINEER UPON COMPLETION OF EVERY FIVE (5) FEET OF VERTICAL FILL.

4. SIGNIFICANT CUT SLOPES ARE PROPOSED AS A PART OF THE GRADING OPERATIONS FOR THIS SUBDIVISION. GRADING CONTRACTOR SHALL PAY VERY CLOSE ATTENTION TO THE MATERIALS THAT ARE ENCOUNTERED WHEN CUTTING SLOPES. WHILE MATERIALS WITH HIGH COHESIVE VALUES ARE DESIRED, IN THE EVENT THAT FLOWABLE MATERIALS SUCH AS DUNE, BLOW, OR SUGAR SANDS ARE DISCOVERED DURING CONSTRUCTION, THE GRADING CONTRACTOR SHALL IMMEDIATELY CONTACT THE GEOTECHNICAL ENGINEER TO INSPECT THE SITE CONDITIONS AND RECOMMEND OPTIONS TO COMPLETE THE SLOPE AS DESIGNED. ALL GRADING OF THE CUT SLOPE SHALL CEASE UNTIL OPTIONS CAN BE OFFERED AND A PLAN IS IMPLEMENTED TO MITIGATE THE POOR SOIL CONDITION.

5. ALL SLOPES WITHIN THESE PLANS SHALL BE RE-INSPECTED BY THE GEOTECHNICAL ENGINEER AND THE DESIGN ENGINEER UPON COMPLETION. AT THAT TIME, FURTHER RECOMMENDATIONS MAY BE MADE TO ENSURE THE FUTURE STABILITY OF THE COMPLETED SLOPES. THESE RECOMMENDATIONS MAY INCLUDE BUT ARE NOT LIMITED TO THE INCORPORATION OF SOIL RETENTION BLANKETS SUCH AS PYRAMAT OR OTHER GEOTEXTILE GRID MATERIALS, APPLICATION OF HAY OR OTHER ORGANIC MULCHES, SPRAY MULCH APPLICATIONS, OR SOILS BLENDING TO ENCAPSULATE AND PRESERVE THE FINISHED GRADE OF THE SLOPES.

6. MOST SLOPES WITHIN THE DISTURBED LIMITS ARE TO BE REVEGETATED BY THE DEVELOPER UNLESS NOTED OTHERWISE IN THE PLANS. THE FIRST STEP IN THE REVEGETATION PROCESS IS THE APPLICATION OF TOPSOILS THAT HAVE BEEN RESERVED HELD IN STOCKPILE. APPLICATION OF THE TOPSOIL CAN BE PERFORMED AS THE SLOPES ARE DEVELOPED BUT ONLY AFTER INSPECTION OF THE PORTION OF THE SLOPE TO RECEIVE THE TOPSOIL HAS BEEN INSPECTED BY THE GEOTECHNICAL ENGINEER AND PASSED FOR STABILITY OF THE SLOPE SPECIFIED. APPLICATION OF THE TOPSOIL SHALL BE PERFORMED PER THE 'REVEGETATION OF SLOPES' NOTES IN THESE PLANS.

7. SLOPES THAT ARE NOT NOTED FOR REVEGETATION IN THESE PLANS ARE TEMPORARY IN NATURE AND WILL BE FURTHER AMENDED BY FUTURE DEVELOPMENT OF THIS AREA. ALTHOUGH TEMPORARY, THESE SLOPES ARE TO BE EVALUATED BY THE GEOTECHNICAL ENGINEER UPON COMPLETION AS NOTED ABOVE, AND IF DEEMED NECESSARY, ADDITIONAL SLOPE STABILITY MEASURES WILL BE IMPLEMENTED PER THE ENGINEER'S RECOMMENDATIONS.

8. ALL SLOPES, WHETHER CONSTRUCTED BY FILL, OR CREATED BY CUT, AND THAT ARE TO BE REVEGETATED OR LEFT NATURAL, SHALL BE REINFORCED AND PROTECTED BY PLACING NATIVE ROCK SCREENED FROM MATERIALS ON SITE AT THE TOE OF ALL SLOPES PER THE DETAILS IN THIS PLAN UNLESS NOTED OTHERWISE.

9. ALL SLOPES THAT ARE NOTED TO BE STABILIZED BY BUILDER SHALL BE COMPLETED AND SHOULD BE CONSIDERED AS A PARAMETER TO BE COMPLETED PRIOR TO RECEIVING A CERTIFICATE OF OCCUPANCY. ALL WORK IS TO BE PERFORMED OR SUBCONTRACTED BY THE INDIVIDUAL BUILDER OF THE LOT IN WHICH A SLOPE IS INDICATED AND SHALL CONFORM TO THE INSTRUCTIONS CONTAINED IN THE 'SLOPE STABILIZATION FOR BUILDERS' NOTE.

REVEGETATION OF SLOPES AND OTHER SCARRED AREAS:

1. WHILE THE EROSION OF LAND IS INEVITABLE AND CAN ONLY BE MITIGATED BUT NEVER ERADICATED. IN THAT RESPECT, THE REVEGETATION OF SLOPES AND OTHER AREAS LEFT SCARRED BY GRADING OPERATIONS IS A CRUCIAL PORTION OF THE GRADING STABILIZATION PROCESS AS DETAILED IN THIS PLAN. AS NOTED, THE REVEGETATION PROCESS IS TO BE PERFORMED BY THE DEVELOPER AS A FINAL STEP IN ABATING THE FUTURE EROSION OF SCARRED AREAS, ESPECIALLY GRADED SLOPES.

2. ONCE GRADED SLOPES ARE COMPLETED, AND HAVE BEEN INSPECTED BY THE GEOTECHNICAL ENGINEER PER THE OTHER NOTES AND DETAILS IN THIS PLAN, TO INCLUDE THE APPLICATION OF ANY ADDITIONAL RECOMMENDATIONS REQUIRED BY THE SLOPE STABILITY ANALYSIS PERFORMED BY THE ENGINEER, THE REVEGETATION PROCESS CAN BEGIN.

3. THE FIRST STEP IN THE REVEGETATION PROCESS IS THE PLACEMENT OF RESERVED TOPSOILS STOCKPILED AS THE SEED BANK UPON SCARRED AREAS LEFT UNPROTECTED TO THE ELEMENTS. IN PREPARATION FOR THIS STEP, THE SCARRED AREA SHOULD BE 'TRACK WALKED' TO PROVIDE A FOOT HOLD FOR THE SOILS TO BE APPLIED. WHERE TRACK WALKING MAY NOT BE POSSIBLE, THE USE OF A SHEEPSFOOT ROLLER DRUM ATTACHED TO AN EXCAVATOR CAN BE AN EFFECTIVE ALTERNATIVE. AT THIS TIME, ANY ADDITIONAL APPLICATION OF MULCHES SUCH AS HAY BEDDING SHALL BE PLACED AND THE SCARRED AREA SHALL BE WETTED THOROUGHLY BEFORE APPLYING THE RESERVED TOPSOILS. HYDROSEEDING SHOULD ONLY BE CONSIDERED IF A NATIVE SEED BLEND CAN BE OBTAINED.

4. PRIOR TO REMOVING TOPSOILS FROM THE SEED BANK, THE STOCKPILE SHALL ALSO BE THOROUGHLY WETTED. IN THE EVENT THAT THE RESERVED MATERIAL HAS SETTLED TO A POINT WHERE IT HAS BECOME HARDPAN, THE MATERIAL SHALL BE SCARIFIED PRIOR TO WETTING. AT THIS TIME, ANY SOIL AMENDMENTS THAT MAY HAVE BEEN RECOMMENDED SHALL BE INCORPORATED INTO THE MATERIAL. THE RESERVED MATERIALS ARE TO BE REMOVED FROM THE SEED BANK IN LIFTS RELATIVE TO THE DEPTH IN WHICH THEY WERE PLACED. THIS SHOULD ENSURE A DEPTH OF SEEDING RELATIVE TO THAT WHICH WAS NATURAL WHEN THE MATERIALS WERE HARVESTED.

5. ONCE THE MATERIALS ARE TRANSPORTED TO THE SITE THAT IS TO BE REVEGETATED, THE MATERIAL SHALL BE PLACED UPON THE EXPOSED SOILS AT A DEPTH OF NOT MORE THAN SIX TO EIGHT INCHES. THE APPLIED MATERIAL SHOULD BE TRACK WALKED BUT SHOULD ONLY BE COMPACTED TO A POINT AT WHICH A FIRM ADHESION TO THE SCARRED AREA IS ACHIEVED. THE TOPSOIL SHALL BE REWETTED AS NECESSARY TO ADDITIONALLY ENSURE A FIRM ADHESION. THE USE OF SPRAY MULCH TACKIFIERS, OR AN UNDERLAYMENT OF JUTE, BURLAP, OR OTHER NATURAL DIAPHANOUS BIODEGRADABLE MATERIAL, OR SYNTHETIC POLYGRIDS, PRIOR TO THE PLACEMENT OF MATERIALS MAY ALSO BE CONSIDERED TO ENSURE ADHESION OF THE TOPSOIL TO THE GRADED SLOPES. THE REVEGETATED AREA SHALL BE REWETTED ONE FINAL TIME ONCE THE APPLICATION OF THE TOPSOIL IS COMPLETE. WATERING SHOULD BE PERFORMED FROM THE TOE OF SLOPE AND UPWARD TO PREVENT POSSIBLE SLIDING OF WETTER SOILS TOWARDS THE TOP OF SLOPE.

6. AREAS THAT HAVE RECEIVED TOPSOILS FROM THE SEED BANK SHALL BE WATERED BY THE DEVELOPER ON A REGULAR BASIS TO PROMOTE NEW GROWTH WITHIN THE APPLIED SOILS. ADDITIONAL SOIL AMENDMENTS MAY BE RECOMMENDED AND APPLIED DURING THIS PROCESS. WHILE IRRIGATION OF THE AREAS SLATED FOR REVEGETATION ARE NOT A PART OF THIS PLAN, A LOW WATERING IRRIGATION SYSTEM MAY BE INSTALLED AS A PERMANENT IN-GROUND APPLICATION, OR INSTALLED AS AN ABOVE-GROUND TEMPORARY MEASURE. IT IS HIGHLY RECOMMENDED THAT A PERMANENT DRIP IRRIGATION SYSTEM BE INSTALLED WITHIN THE COMMON OPEN SPACE AREAS, LOT 31, BLOCK 4 AND LOT 75 BLOCK 10 SINCE THEY WILL BE MAINTAINED BY THE HOME OWNERS ASSOCIATION FOR THE SUBDIVISION. THE USE OF PUMICE WICKS, POLYMER PRODUCTS, OR DIATOMACEOUS EARTH CAN BE CONSIDERED FOR USE TO ENHANCE THE WATER RETENTION OF THE TOPSOILS.

7. ONCE THE APPLIED TOPSOILS HAVE BECOME WELL ESTABLISHED, NATIVE PLANTS THAT WERE HARVESTED FROM THE SITE PRIOR TO THE COMMENCEMENT GRADING OPERATIONS WILL BE RETURNED FOR REPLANTING. THE PLANTING OF THE VEGETATION SHOULD BE SUCH THAT IT APPEARS RANDOM. ANY SOIL AMENDMENTS THAT MAY BE REQUIRED OR THAT HAS BEEN RECOMMENDED WILL BE APPLIED AT THE TIME REPLANTING OCCURS. EXCAVATED PLANTING PITS WILL BE THOROUGHLY WETTED PRIOR TO PLACEMENT OF PLANTS AND WILL BE WETTED AGAIN ONCE COVERED. DEVELOPER WILL KEEP NEWLY REPLANTED VEGETATION WATERED UNTIL THE ROOT SYSTEM HAS BECOME WELL REESTABLISHED. THIS PERIOD MAY VARY AS COULD THE AMOUNT AND FREQUENCY OF WATERING AND SHALL BE PERFORMED PER THE RECOMMENDATIONS OF THE SUPERVISING BOTANIST.

8. ON GRADED SLOPES, PLANTING BENCHES MAY BE INCORPORATED AS AN ADDED ENHANCEMENT. IF USED, THESE AMENITIES SHOULD BE INSTALLED IN A RANDOM PATTERN AND SHALL BE CONSTRUCTED PER THE DETAILS FOUND IN THIS PLAN.

9. AT THE SAME TIME OF THE REPLANTING OF THE HARVESTED PLANTS, SMALLER DIAMETER NATIVE ROCK RETAINED FROM MATERIALS SCREENED ON SITE SHALL BE PLACED RANDOMLY IN REVEGETATED AREAS. ON SLOPE, NATIVE ROCK OF NOT GREATER THAN EIGHT (8) INCHES IN DIAMETER MAY BE PLACED BY SIMPLY TAMPING THE STONE INTO THE SURFACE. LARGER STONE CAN BE INCORPORATED, BUT SHALL BE EMBEDDED PER THE BOULDER EMBEDMENT DETAIL ON THIS PLAN.

10. IN THE EVENT A SOIL RETENTION BLANKET HAS BEEN INSTALLED AS A SLOPE STABILITY MEASURE PER THE RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEER, THE BLANKET SHALL BE CUT AND REPINNED PER THE MANUFACTURER'S DETAILS AND SPECIFICATIONS IN AREAS WHERE PLANTING PITS OR BOULDER EMBEDMENTS ARE REQUIRED.

NATIVE ROCK, BOULDERS, AND RIP-RAP NOTES:

1. WHERE INDICATED IN THE PLAN VIEW, NATIVE ROCK OBTAINED FROM MATERIALS SCREENED ON SITE SHALL BE PLACED PER THE DETAILS CONTAINED IN THIS PLAN. NATIVE ROCK OF SIMILAR AVERAGE DIAMETER SHALL BE USED AS SPECIFIED, AND SMALLER NATIVE ROCK OF NOT LESS THAN ONE HALF THE DIAMETER OF THE COBBLE SPECIFIED CAN BE USED AS INFILL. INFILL NATIVE ROCK SHALL NOT EXCEED THIRTY (30) PERCENT OF THE OVERALL VOLUME OF THE INDICATED COBBLE FIELD. NATIVE ROCK SHALL BE PLACED TO A DEPTH OF AT LEAST ONE AND A HALF TIMES THE SIZE OF THE COBBLE DIAMETER SPECIFIED UNLESS NOTED OTHERWISE.

2. WHERE A MIXTURE OF SIZES IS NOTED, THE MIX SHALL CONSIST OF SIXTY (60) PERCENT OF THE LARGER DIAMETER AND FORTY (40) PERCENT OF THE SMALLER DIAMETER. INFILL NATIVE ROCK USED SHALL NOT BE OF A LESSER DIAMETER OF THE LARGER COBBLE SPECIFIED AND SHALL NOT BE CONSIDERED IN THE CALCULATIONS FOR THE DIAMETER MIXTURE.

3. MOST OF THE LOOSE COBBLE SPECIFIED IS TO BE PLACED ON FINISHED GRADE. THE EXCEPTION TO THIS RULE IS WHERE NATIVE ROCK ARE USED IN SWALES. THE AREAS INDICATED TO FUNCTION AS SWALES SHALL BE OVER EXCAVATED ONE HALF THE DIAMETER OF THE COBBLE SPECIFIED, ONE HALF THE DIAMETER OF THE LARGEST DIAMETER SPECIFIED IF A MIX IS NOTED, AND THE COBBLE IS TO BE PLACED EMBEDDED.

4. THE USE OF SALVAGED COBBLE IS AN EXTENSIVE PART OF THIS PLAN. IN THE EVENT THAT COBBLE RESERVES ARE DEPLETED, ATTEMPTS SHOULD BE MADE BY THE CONTRACTOR TO RECEIVE SCREENED MATERIALS FROM OTHER JOB SITES THAT MIGHT OTHERWISE BE DISCARDED BY ANOTHER DEVELOPER. IN THE EVENT THAT STONE MUST BE PURCHASED FROM A SUPPLIER TO SUPPLEMENT NEEDED COBBLE, THE STONE PURCHASED SHOULD NOT BE A QUARRIED ROCK IF AT ALL POSSIBLE. HOWEVER, WHAT IS GENERALLY MARKETED AS 'RIVER ROCK' BY SUPPLIERS SHOULD BE AVOIDED. AS A NATURAL LOOK TO THE LAND IS THE DESIRED RESULT, PURCHASED ROCK SHOULD BE OF THE SAME APPEARANCE AS THE NATIVE ROCK SCREENED FROM THE SITE. STONE SPOILS THAT A SUPPLIER MAY HAVE SLATED FOR THE ROCK CRUSHER IS LIKELY AN ACCEPTABLE ALTERNATIVE. PURCHASED ROCK SHOULD BE AS INEXPENSIVE AS IS POSSIBLE.

5. GEOTEXTILE FABRIC UNDERLAYMENT IS NOT REQUIRED FOR THE PLACEMENT OF NATIVE ROCK. PLANT GROWTH IS DESIRED WITHIN THE LOOSE COBBLE FIELDS SPECIFIED. RANDOM PLANT GROWTH SHOULD BE ANTICIPATED AND WILL ADD TO THE NATURAL LOOK OF THE COMPLETED INSTALLATIONS.

6. STONE 30" IN DIAMETER AND GREATER SHALL BE CLASSIFIED AS BOULDERS. IN FLAT AREAS, THESE SHALL BE EMBEDDED PER THE DETAIL IN THIS PLAN. ON SLOPES 4:1 (ONE FOOT VERTICALLY TO FOUR FEET HORIZONTALLY) AND GREATER, ALL STONE 12" IN DIAMETER AND GREATER SHALL BE EMBEDDED.

7. WHERE BOULDER WASHES ARE INDICATED ON THIS PLAN, NATIVE ROCK OF THE SPECIFIED DIAMETER SHALL BE USED AND EMBEDDED PER THE DETAIL IN THIS PLAN. NATIVE ROCK NOT LESS THAN TWELVE (12) INCHES IN DIAMETER MAY BE USED AS INFILL IN BOULDER WASHES. AS SPECIFIED ABOVE, THE INFILL SHALL NOT ACCOUNT FOR MORE THAN THIRTY (30) PERCENT OF THE BOULDER FIELD INDICATED.

8. RIP-RAP, AND ROCK NOTED TO BE DRIVABLE STONE SHALL BE CLASSIFIED AS PURCHASED ROCK AND MAY BE QUARRIED STONE. THIS ROCK SHOULD BE GRAY, BROWN, OR OTHER NEUTRAL COLOR UNLESS IT IS SPECIFIED OTHERWISE IN THE PLANS. IF DEPTHS OF PLACEMENT ARE NOT INDICATED, THE DEPTH SHALL BE A MINIMUM OF ONE AND ONE HALF THE DIAMETER OF THE STONE SPECIFIED. AS WITH THE NATIVE ROCK, WHERE A RANGE OF SIZES IS INDICATED, THE MIX SHALL CONSIST OF SIXTY (60) PERCENT OF THE LARGER DIAMETER AND FORTY (40) PERCENT OF THE SMALLER DIAMETER SPECIFIED.

9. GEOTEXTILE UNDERLAYMENT SHALL BE REQUIRED BENEATH ALL RIP-RAP OR DRIVABLE STONE. ONLY PERMEABLE FABRICS SUCH AS WOVEN OR NEEDLE PUNCHED MATERIALS SHALL BE USED. NON PERVIOUS PLASTICS OR OTHER MATERIALS SHALL NOT BE ACCEPTED.

10. SCREENING MAY BE RECOMMENDED BY THE GEOTECHNICAL ENGINEER FOR PLACEMENT ON TRAILS, OR ON BENCHES AS AN ADDITIONAL ANTI-EROSIVE MEASURE. SCREENINGS PLACED ON WALKABLE SURFACES SUCH AS TRAILS SHOULD BE GREATER THAN ONE INCH IN DIAMETER AND PLACED IN A MINIMUM LIFT OF TWO (2) INCHES. NO. 57 STONE SHALL BE CONSIDERED AS AN ACCEPTABLE ALTERNATIVE SHOULD ROCK BE PURCHASED FOR PLACEMENT ON WALKABLE SURFACES.

SLOPE STABILIZATION FOR BUILDERS:

GRADED SLOPES AS SHOWN ON THE GRADING PLAN HAVE BEEN ENGINEERED, BASED ON A GEOTECHNICAL SOILS INVESTIGATION REPORT, TO STAND AT THE SLOPE INDICATED. HOWEVER, EROSION IS INEVITABLE ON ANY SLOPE, EVEN IN HIGHLY COHESIVE SOILS. PROPERTY OWNERS ARE RESPONSIBLE FOR THE MAINTENANCE OF SLOPES WITHIN THEIR LOTS. IF NO MEASURES HAVE BEEN TAKEN PRIOR TO PURCHASE, IT IS HIGHLY RECOMMENDED THAT THE PROPERTY OWNER PROVIDE ANTI-EROSION CONTROLS ON GRADED SLOPES WITHIN THE BOUNDS OF THEIR LOT. THESE MAY INCLUDE BUT ARE NOT LIMITED TO CONCRETE RIP-RAP, MORTARED ROCK RIP-RAP (REQUIRED ON SLOPES 1:1 OR GREATER), LOOSE ROCK RIP-RAP OF A SPECIFIED DIAMETER, SOIL RETENTION BLANKETS, PLANTINGS OF NATIVE SPECIES. (SOD AND OTHER GRASSES ARE NOT RECOMMENDED ON SLOPES GREATER THAN 4:1). BEFORE PERFORMING ANY WORK, PROPERTY OWNERS SHOULD CONSULT A LICENSED, PROFESSIONAL CIVIL ENGINEER. ADDITIONALLY, IT IS THE RESPONSIBILITY OF THE PROPERTY OWNER TO CLEAN AND MAINTAIN ANY WEEP HOLES THAT HAVE BEEN INSTALLED IN WALLS OR RIP-RAP. WEEP HOLES ARE AN INTEGRAL COMPONENT OF DRAINAGE SO AS TO PREVENT GROUND SATURATION BEHIND WALLS AND RIP-RAP THAT COULD CAUSE STRUCTURAL FAILURES. PROPERTY OWNERS SHOULD PERFORM REGULAR INSPECTIONS, ESPECIALLY AFTER HEAVY RAINS, AND CLEAR WEEP HOLES OF ANY SILT AND DEBRIS. PROPERLY INSTALLED WEEP HOLES SHOULD ALLOW THE PASSAGE OF ANY STORM WATER RUN OFF THAT MAY ACCUMULATE BEHIND WALLS OR BENEATH RIP-RAP AS A RESULT OF INFILTRATION. WIRE ENCASED GRAVEL FILTERS WRAPPED IN A GEOTEXTILE FABRIC SHOULD PREVENT LARGE DEBRIS FROM BLOCKING THE WEEP HOLE. HOWEVER, THE PASSAGE OF SILT, SAND, AND OTHER FINE PARTICULATE MATERIAL UP TO ONE-QUARTER INCH IN DIAMETER SHOULD BE CONSIDERED NORMAL. UNDER NO CIRCUMSTANCES SHOULD THE WEEP HOLES BE INTENTIONALLY BLOCKED TO PREVENT PASSAGE OF STORM WATER.

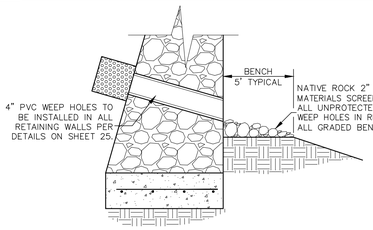
REFERENCE:

DRYLAND SEEDING IS A COMMON TECHNIQUE USED IN ATTEMPTS TO RESTORE VEGETATION ON DISTURBED SITES IN ARID REGIONS. COX AND OTHERS (1982) STUDIED DRYLAND SEEDING ATTEMPTS ON MULTIPLE SITES IN THE CHIHUAHUAN DESERT AND CONCLUDED THAT SIGNIFICANT PLANT ESTABLISHMENT COULD BE EXPECTED ONLY ONCE OUT OF EVERY TEN ATTEMPTS. GRANTZ AND OTHERS (1998) INVESTIGATED THE EFFECTIVENESS OF UTILIZING THE SEED BANK METHOD TO MITIGATE DUST ON RETIRED CROPLAND IN THE MOJAVE DESERT OF CALIFORNIA. THEY CONCLUDED THAT THIS METHOD CAN LEAD TO PLANT ESTABLISHMENT IN YEARS WITH ABOVE AVERAGE RAINFALL BUT IS LIKELY TO YIELD MINIMAL RESULTS IN MOST YEARS. BAINBRIDGE AND OTHERS (1995) STATE THAT REVEGETATION OF LAND WITHOUT SUPPLEMENTAL IRRIGATION CAN BE A COST EFFECTIVE RESTORATION STRATEGY, ALTHOUGH PERFORMED WITH LIMITED RESULTS WHEN ATTEMPTED IN ARID LANDS BECAUSE OF UNPREDICTABLE AND INFREQUENT OCCURRENCE OF CONDITIONS FAVORABLE FOR SEED GERMINATION AND SEEDLING ESTABLISHMENT. TESTING PROVED THAT THE INSTALLATION OF MINIMALIST IRRIGATION SYSTEMS IN AREAS WHERE SEED BANK APPLICATIONS ARE UTILIZED VASTLY IMPROVED THE LIKELIHOOD OF SUCCESS FOR A REESTABLISHMENT OF NATIVE GROWTH IN SCARRED AREAS. WHERE SLOPES WERE THE RESTORATION OF VEGETATION WAS PROPOSED, BAINBRIDGE FOUND THAT A SINGLE DRIP IRRIGATION LINE PLACED IN AN 'ESS' PATTERN AND SPACED ONE PER EVERY TEN FEET OF VERTICAL RISE WAS EFFICIENT ENOUGH TO PROMOTE AN ESTIMATED 50% INCREASE IN THE EXPECTED GROWTH.

SALVAGE EXISTING NATIVE PLANT MATERIAL PRIOR TO CONSTRUCTION. THE SPECIES TO BE SALVAGED DEPENDS ON LOCATION, SOILS AND ANALYSIS OF PLANT VALUE INCLUDING THE POTENTIAL SURVIVAL RATE. SALVAGED PLANTS CAN READILY IMPROVE THE AESTHETICS OF A SITE BY PROVIDING MATURE PLANTS THAT WOULD NORMALLY TAKE MANY YEARS TO ESTABLISH. IN ADDITION, ENSURE NATIVE TOPSOIL IS COLLECTED AND STORED FOR REUSE. NATIVE TOPSOIL PROVIDES A SEED SOURCE AND IMPORTANT BACTERIA FOR DYNAMIC PLANT ESTABLISHMENT AND GROWTH. CAREFULLY REMOVE, STOCKPILE AND STORE THE NATIVE TOP SOIL OF NEW CONSTRUCTION PROJECTS TO BE USED AS FINAL BEDDING MATERIAL. ENSURE NATIVE SOIL STOCKPILES ARE PROTECTED FROM THE WIND TO AVOID EROSION AND THE CREATION OF A DUST HAZARD.

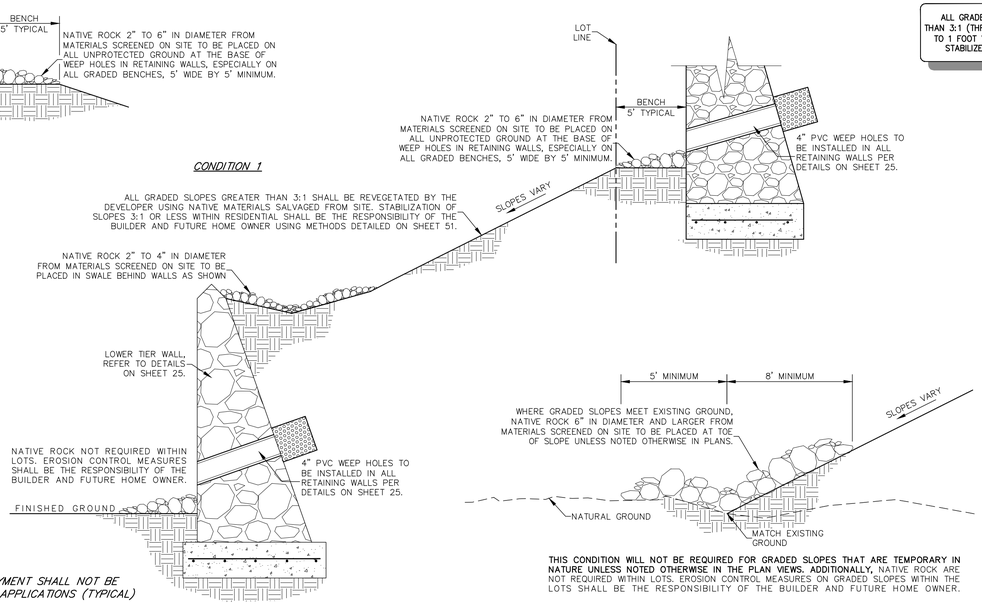
EVERY REVEGETATION PROJECT REQUIRES A PRESCRIBED SOIL TREATMENT. SOIL TREATMENTS INCLUDE PLOWING, DISKING, HARROWING, FURROWING, HYDROSEEDING, APPLYING MULCHES (SUCH AS STRAW), AND USING TACKIFIERS (SUCH AS JUTE OR DARK COLORED NETTING) TO FIRMLY ANCHOR THE MULCHES TO THE SITE. SOILS SHOULD BE ROUGHENED BEFORE AND AFTER PLANTING TO CREATE FAVORABLE SEED SITES, PARTICULARLY FOR GRASS AND FORB SEEDS. IN SILTY CONDITIONS, A SOIL STABILIZER, SUCH AS A HYDROMULCH OR A MATTING MATERIAL, SHOULD BE APPLIED TO REDUCE POTENTIAL DUST PROBLEMS. SOME SITES REQUIRE DEEP RIPPING IN ORDER TO LOOSEN HARDPAN AND IMPROVE SEEDING SUCCESS. IN CONDITIONS OF STEEP CUT AND SLOPES GREATER THAN 40 PERCENT, SLOPE DISKING IS REQUIRED TO CREATE SEED POCKETS.

IN MOST CASES, ORGANIC MATERIAL WILL NEED TO BE ADDED TO THE SITE TO IMPROVE SOIL QUALITY. EACH SITE SHOULD BE CAREFULLY ANALYZED TO DETERMINE



CONDITION 1

ALL GRADED SLOPES GREATER THAN 3:1 (THREE FEET HORIZONTALLY TO 1 FOOT VERTICALLY) MUST BE STABILIZED PER ORDINANCE.



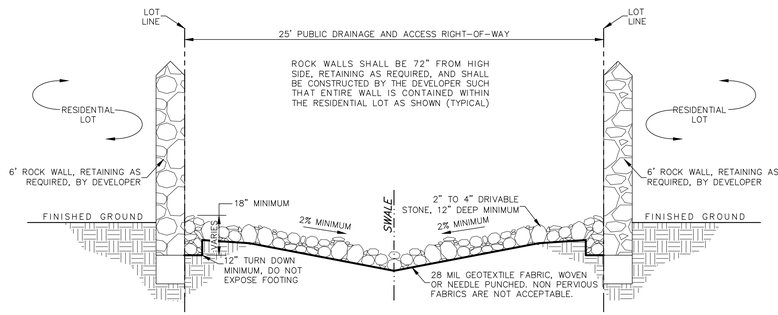
GEOTEXTILE FABRIC UNDERLAYMENT SHALL NOT BE REQUIRED FOR 'LOOSE COBBLE' APPLICATIONS (TYPICAL)

REFER TO SHEET 25 FOR ADDITIONAL ROCK WALL DETAILS.

THIS CONDITION WILL NOT BE REQUIRED FOR GRADED SLOPES THAT ARE TEMPORARY IN NATURE UNLESS NOTED OTHERWISE IN THE PLAN VIEWS. ADDITIONALLY, NATIVE ROCK ARE NOT REQUIRED WITHIN LOTS. EROSION CONTROL MEASURES ON GRADED SLOPES WITHIN THE LOTS SHALL BE THE RESPONSIBILITY OF THE BUILDER AND FUTURE HOME OWNER.

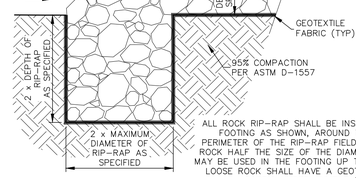
LOOSE COBBLE AND RIP-RAP APPLICATIONS

NOT TO SCALE



DRIVEABLE SURFACE

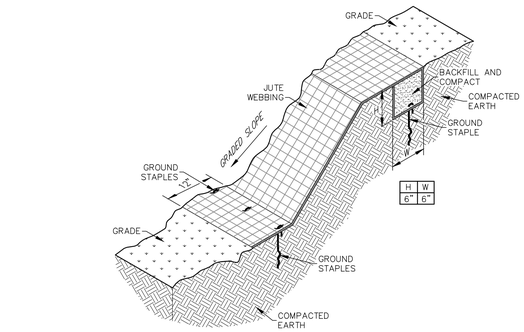
NOT TO SCALE



ALL ROCK RIP-RAP SHALL BE INSTALLED WITH A FOOTING AS SHOWN, AROUND THE ENTIRE PERIMETER OF THE RIP-RAP FIELD AS SPECIFIED. ROCK HALF THE SIZE OF THE DIAMETER SPECIFIED MAY BE USED IN THE FOOTING UP TO THE TOE. ALL LOOSE ROCK SHALL HAVE A GEOTEXTILE FILTER FABRIC UNDERLAYMENT (TYP).

LOOSE ROCK RIP-RAP

N.T.S.



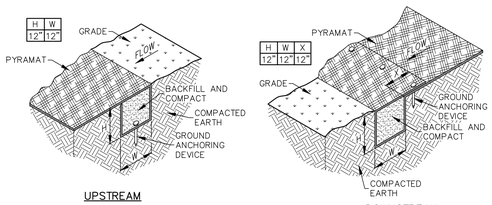
1. PREPARE THE SURFACE TO BE PROTECTED BY THE JUTE WEBBING EROSION CONTROL BLANKET. REMOVE LARGE STONES AND SLOPE THE GROUND TO THE DESIRED GRADE YOU WANT WHEN FINISHED. YOU CAN USE HAND TOOLS FOR A SMALL JOB OR MAY NEED TO USE A TRACTOR OR BOBCAT FOR A LARGE JOB.
2. ADD ANY SOIL AMENDMENTS BEFORE YOU INSTALL THE JUTE WEBBING EROSION CONTROL BLANKET. FOR EXAMPLE, YOU MAY NEED TO AMEND THE SOIL WITH LIME OR ADD FERTILIZER.
3. PLACE RESERVED TOPSOILS ON GROUND PER SPECIFICATIONS AND DETAILS.
4. DIG A SMALL TRENCH ACROSS THE TOP OF THE SLOPE WHERE YOU WILL INSTALL THE ROLLS OF JUTE EROSION CONTROL BLANKET. THE TRENCH ACTS AS AN ANCHOR FOR THE BLANKET. DIG THE TRENCH APPROXIMATELY 6 INCHES WIDE BY 6 INCHES DEEP THE FULL WIDTH OF THE SLOPE.
5. INSTALL THE JUTE ROLL OF EROSION CONTROL BLANKET IN THE TRENCH YOU'VE JUST DUG. PLACE AT LEAST 12 INCHES OF THE BLANKET ABOVE THE TRENCH, EXTENDING UP THE HILL. INSTALL ANCHORING STAPLES THROUGH THE BLANKET AND INTO THE BOTTOM OF THE TRENCH. THE STAPLES SHOULD BE PLACED NO MORE THAN A FOOT APART IN THE TRENCH. THE ANCHORS OR STAPLES ARE USUALLY SOLD WITH THE EROSION CONTROL BLANKET. IF THE SOIL IS LOOSE OR SANDY, MAKE SURE THE ANCHORS ARE LONG ENOUGH TO INSTALL DEEPER IN THE TRENCH.
6. BACKFILL THE TRENCH WITH DIRT AND MAKE SURE IT'S COMPACTED TO HELP HOLD THE JUTE EROSION CONTROL BLANKET IN PLACE. AFTER THE SOIL IN THE TRENCH HAS BEEN COMPACTED, SEED THE DIRT COVERING THE TRENCH. BRING THE 12 INCHES OF BLANKET DOWN OVER THE SEEDED TRENCH AND INSTALL MORE STAKES OR STAPLES, A FOOT APART, ACROSS THE LENGTH OF THE BLANKET.
7. UNROLL THE REMAINING JUTE EROSION CONTROL BLANKET OVER THE SLOPE YOU'VE SEEDED. IF YOU NEED MORE THAN ONE ROLL OF BLANKET, INSTALL IT AS YOU WOULD ROOF SHINGLES, WITH AN OVERLAP OF AT LEAST 3 INCHES.
8. OVERLAP BY AT LEAST 3 INCHES WHEREVER THE JUTE EROSION CONTROL BLANKET ENDS AND ANOTHER BEGINS, WHETHER HORIZONTALLY OR VERTICALLY. OVERLAP ALL SEAMS AS WELL.
9. INSTALL STAPLES OR STAKES AT EVERY SEAM. STAPLES THAT ARE PLACED ACCORDING TO DIRECTIONS HELP DECREASE THE WEIGHT AND PULL ON THE JUTE WEBBING EROSION CONTROL BLANKET.

JUTE WEBBING

N.T.S

TACKIFIERS, HYDROMULCHES, AND NETTING

SPRAY APPLIED TACKIFIERS AND HYDROMULCHES SUCH AS 'EARTHBOUND' PRODUCTS MANUFACTURED BY LSC ENVIRONMENTAL PRODUCTS, LLC / TERRA NOVO OR 'GUARDIAN' AND 'SUPER TACK' BY RANTEC CAN BE CONSIDERED. RANTEC ALSO CARRIES A FULL LINE OF BOTH SYNTHETIC AND NATURAL SOIL WEBBINGS, AND CONWED GLOBAL NETTING SOLUTIONS HAS A FEATURE LINE OF WEBBING AND OTHER PRODUCTS THAT ARE EXCELLENT FOR SOIL STABILIZATION. GROW ORGANIC CARRIES JUTE WEBBING BY THE ROLL THAT IS QUITE INEXPENSIVE AND VERY EFFECTIVE FOR USE IN SOIL STABILIZATION. ENVIROSCAPE ECM, LTD. CARRIES A FULL LINE OF NATURAL EROSION CONTROL BLANKETS THAT INCLUDE AGRICULTURAL STRAW, ASPEN SHAVINGS, AND COCONUT FIBERS. ALL ARE ENCASED IN PHOTO OR BIODEGRADABLE NETTINGS, AND PROVIDE PROTECTION FROM 12 TO 36 MONTHS. THEIR COIR SERIES BLANKETS ARE SPECIFICALLY ENGINEERED FOR SLOPES OF 1:1 OR GREATER AND FOR USE AS LININGS FOR CHANNELS WITH HIGH RATES OF FLOW.



UPSTREAM

DOWNSTREAM

1. SLOPE STABILIZATION FABRIC SHALL BE A HIGH PERFORMANCE TRM MATERIAL SUCH AS PYRAMAT BY SI GEOSOLUTIONS, OR APPROVED EQUAL.
2. PRIOR TO INSTALLATION, SUBGRADE SHALL BE UNIFORM AND SMOOTH. REMOVE ALL ROCKS, CLODS, VEGETATION OR OTHER OBJECTS SO THE INSTALLED MAT WILL HAVE DIRECT CONTACT WITH SOIL SURFACE.
3. EXCAVATE TRENCH AS SHOWN IN DETAIL AND INSTALL TOP END OF MAT INTO TRENCH AND SECURE TO BOTTOM USING GROUND ANCHORING DEVICES SPACED EVERY 12 INCHES MINIMUM. BACKFILL AND COMPACT SOIL INTO TRENCH.
4. OVERLAPS SHALL BE 12" MINIMUM AND ANCHORED EVERY 18 INCHES ALONG THE OVERLAP. SECURE USING GROUND ANCHORING DEVICES. OVERLAPS ARE SHINGLED AWAY FROM PREVAILING WINDS.
5. UNROLL MAT IN A MANNER TO MAINTAIN DIRECT CONTACT WITH SOIL. SECURE MAT TO GROUND SURFACE USING GROUND ANCHORING DEVICES.
6. FOLLOWING INSTALLATION OF SLOPE STABILIZATION FABRIC, MAT SHALL BE COVERED IN A MINIMUM OF TWO (2) FOUR INCH LIFTS OF SOIL AND COMPACTED TO A MINIMUM OF 95% DENSITY, MODIFIED PROCTOR, PER ASTM D1557 EACH LIFT. FILL MATERIALS SHALL NOT CONTAIN NATIVE ROCK GREATER THAN 2" IN DIAMETER.
7. OTHER DETAILS OR SPECIFICATIONS MAY APPLY. CONTRACTOR SHOULD REFER TO LITERATURE PROVIDED BY THE MANUFACTURER FOR MORE INFORMATION.

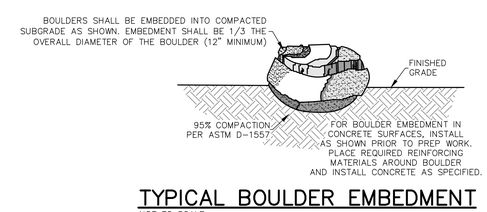
PYRAMAT EROSION CONTROL MATTING

N.T.S

DETAILS SHOWN ARE ACCEPTABLE EXAMPLES OF SLOPE STABILIZATION AND WILL ONLY BE INSTALLED AT THE DIRECTION OF AND PER THE METHOD(S) PRESCRIBED BY THE GEOTECHNICAL AND DESIGN ENGINEERS.

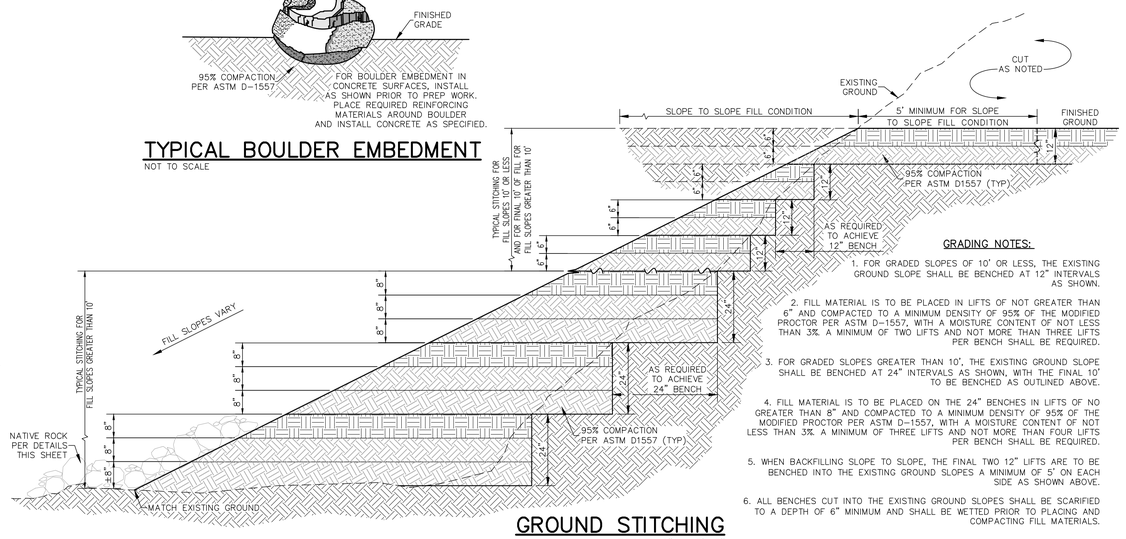
SLOPE STABILIZATION METHODS

N.T.S



TYPICAL BOULDER EMBEDMENT

NOT TO SCALE



GROUND STITCHING

SCALE: 1" = 2'-0"

GRADING NOTES:

1. FOR GRADED SLOPES OF 10' OR LESS, THE EXISTING GROUND SLOPE SHALL BE BENCHED AT 12" INTERVALS AS SHOWN.
2. FILL MATERIAL IS TO BE PLACED IN LIFTS OF NOT GREATER THAN 6" AND COMPACTED TO A MINIMUM DENSITY OF 95% OF THE MODIFIED PROCTOR PER ASTM D-1557, WITH A MOISTURE CONTENT OF NOT LESS THAN 3% A MINIMUM OF TWO LIFTS AND NOT MORE THAN THREE LIFTS PER BENCH SHALL BE REQUIRED.
3. FOR GRADED SLOPES GREATER THAN 10', THE EXISTING GROUND SLOPE SHALL BE BENCHED AT 24" INTERVALS AS SHOWN, WITH THE FINAL 10' TO BE BENCHED AS OUTLINED ABOVE.
4. FILL MATERIAL IS TO BE PLACED ON THE 24" BENCHES IN LIFTS OF NO GREATER THAN 8" AND COMPACTED TO A MINIMUM DENSITY OF 95% OF THE MODIFIED PROCTOR PER ASTM D-1557, WITH A MOISTURE CONTENT OF NOT LESS THAN 3% A MINIMUM OF THREE LIFTS AND NOT MORE THAN FOUR LIFTS PER BENCH SHALL BE REQUIRED.
5. WHEN BACKFILLING SLOPE TO SLOPE, THE FINAL TWO 12" LIFTS ARE TO BE BENCHED INTO THE EXISTING GROUND SLOPES A MINIMUM OF 5' ON EACH SIDE AS SHOWN ABOVE.
6. ALL BENCHES CUT INTO THE EXISTING GROUND SLOPES SHALL BE SCARIFIED TO A DEPTH OF 6" MINIMUM AND SHALL BE WETTED PRIOR TO PLACING AND COMPACTING FILL MATERIALS.

BENCHMARK: CITY MONUMENT AT THE CENTERLINE INTERSECTION OF MISSION PASS DRIVE AND CIMARRON PARK DRIVE.
ELEVATION = 3978.53 (EL PASO CITY DATUM)

NO.	DATE	DESCRIPTION	BY
3	03/15/2021	3rd City Submittal	AHO
2	01/22/2021	2nd City Submittal	AHO
1	11/25/2020	1st City Submittal	AHO

WARNING! BEFORE YOU DIG IN PROJECT AREA CONTRACTOR SHALL CALL FOR LOCATING UNDERGROUND IMPROVEMENTS

Texas811 Know what's below. Call before you dig.

BEFORE YOU DIG - CALL

EL PASO ELECTRIC COMPANY	543-5720
	1-800-351-1531
TEXAS GAS SERVICE	544-6300
TGS EMERGENCY HOTLINE	562-8411/562-2603
AFTER HOURS EMERGENCY (WATER & SEWER)	1-800-592-1555
SPECTRUM	594-5775
EL PASO WATER UTILITIES	775-7414
KINDER-MORGAN EPNG PIPELINES	1-800-344-7077
EL PASO STREETS AND MAINTENANCE	1-800-238-3764
EL PASO TRAFFIC SIGNAL STREETLIGHTS	212-0151

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05/15/2021

STATE OF TEXAS
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SUBDIVISION
CIMARRON CANYON UNIT TWO SUBDIVISION

SHEET TITLE
GRADING STABILIZATION NOTES AND DETAILS

GOB (DESIGN BY)	1908 (JOB NO.)
GOB-DG-SM (DRAWN BY)	12/20/2019 (DATE OF SUBMISSION)
AHO (CHECKED BY)	AS NOTED (SCALE)

SHEET NO. **52**
SHEET SEQUENCE **54** OF **82**

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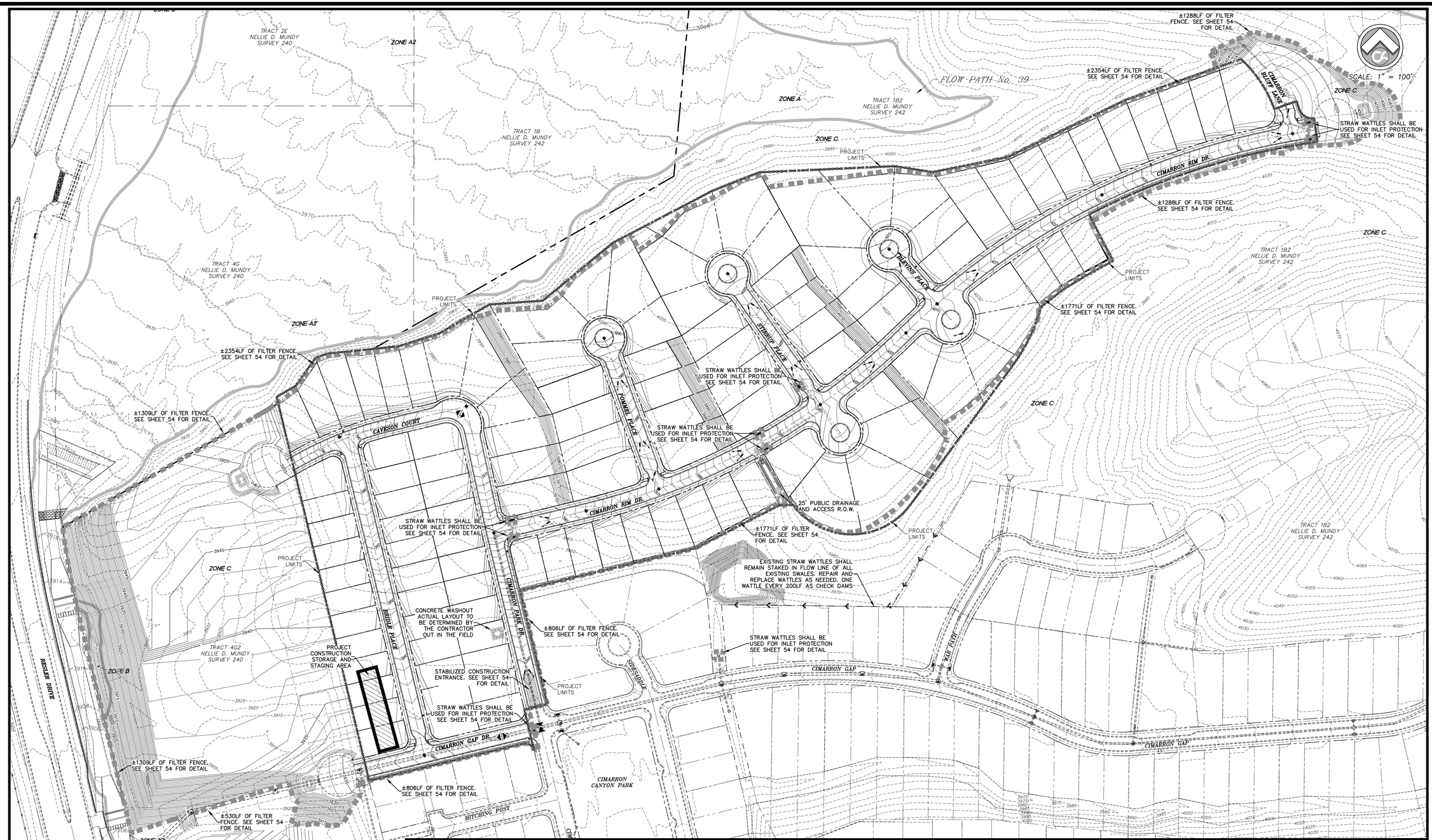
S:\Active\1908 Cimarron Canyon Unit Two\1908 3rd Submittal\1908 SH 50-52 (Grading Stabilization).dwg



PORTABLE RESTROOMS

STORAGE AREA

FUEL TANKS

CONSTRUCTION TRAILER LOCATION

STAGING/STORAGE AREA
CONTRACTOR SHALL LOCATE PORTABLE BATHROOMS, MATERIALS EQUIPMENT MAINTENANCE PRODUCTS WITHIN STAGING/STORAGE AREA.

SCHEMATIC

CONSTRUCTION STAGING/STORAGE AREA

N.T.S.

LEGEND

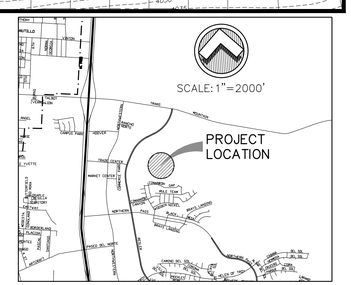
- HIGH POINT
- LOW POINT
- RUNOFF OUTFALL
- PROPOSED SILT FENCE, HAY BALE BARRIER OR STRAW WATTLE
- DIRECTION OF DRAINAGE FLOW
- 4130 — PROPOSED CONTOUR
- LOT LINE
- PROPERTY LINE
- RIGHT-OF-WAY LINE
- DRAINAGE EASEMENT
- DRAINAGE RIGHT-OF-WAY
- PROJECT LIMITS

DRAINAGE NOTE:
REFER TO CIVIL DRAINAGE PLAN FOR DRAINAGE AREAS AND DISCHARGE COMPUTATIONS.

NOTE:
CONTRACTOR SHALL BE RESPONSIBLE FOR THE PREPARATION AND SUBMITTAL OF ALL STORM WATER POLLUTION CONTROL PERMITS. THE CONTRACTOR SHALL SUBMIT A NOI AND SDPCP APPLICATION FORM PRIOR TO CONSTRUCTION. AFTER COMPLETION OF PROJECT, CONTRACTOR SHALL SUBMIT A NOTICE OF TERMINATION FORM TO COMPLETE NPDES REQUIREMENTS.

STAGING AREA SHALL PROVIDE ADEQUATE SPACE FOR TRAILER STORAGE, FUEL/LUBRICANT STORAGE, PORTABLE RESTROOMS, EQUIPMENT STORAGE AND MAINTENANCE, ETC.

DUST AND EROSION CONTROL NOTE:
CONTRACTOR SHALL MAKE PROVISIONS FOR TEMPORARY DUST AND EROSION CONTROL WHERE EXTENSIVE DIRT OR DUST OPERATIONS ARE PERFORMED. USE WATER SPRINKLING AND OTHER METHODS TO LIMIT DUST AND DIRT MIGRATION. COMPLY WITH GOVERNING REGULATIONS PERTAINING TO ENVIRONMENTAL PROTECTION.



VICINITY MAP

Approx. Latitude = 31°53'40"N
Approx. Longitude = 106°34'15"W

BENCHMARK: CITY MONUMENT AT THE CENTERLINE INTERSECTION OF RESLER DRIVE AND CIMARRON PARK DRIVE.
ELEVATION = 3978.53 (EL PASO CITY DATUM)

NO.	DATE	DESCRIPTION	BY
3	03/15/2021	3rd City Submittal	AHO
2	01/22/2021	2nd City Submittal	AHO
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KINDER-MORGAN EPNG PIPELINES	1-800-238-3764
EL PASO STREETS AND MAINTENANCE	212-0151
EL PASO TRAFFIC SIGNAL STREETS AND MAINTENANCE	transportation@elpasotexas.gov

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06/15/21

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SUBDIVISION
CIMARRON CANYON UNIT TWO SUBDIVISION

SHEET TITLE
STORM WATER POLLUTION PREVENTION PLAN

GOB	1908
DESIGN BY	JOB NO.
GOB-DG-SM	12/20/2019
DRAWN BY	DATE OF COMMISSION
AHO	AS NOTED
CHECKED BY	SCALE

SHEET NO.
53
SHEET SEQUENCE
55 OF 82

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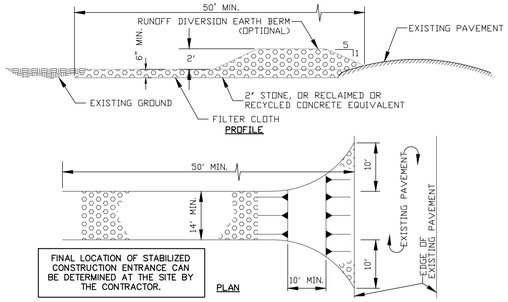
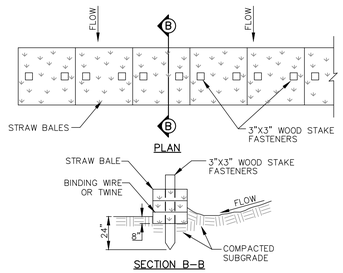


STABILIZED CONSTRUCTION ENTRANCE

SCALE: 1" = 2'-0"

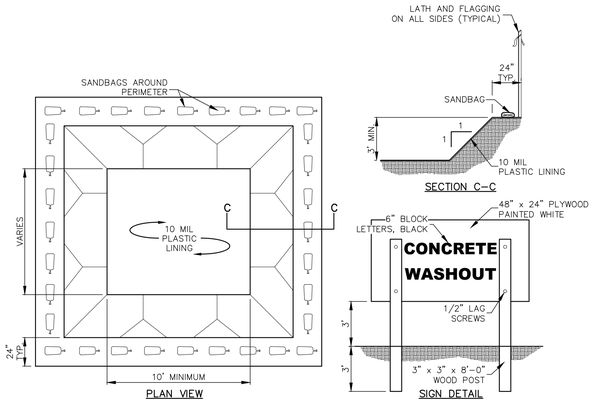


NOTES (BALE BARRIER):

1. BALES TO BE PLACED PERPENDICULAR TO FLOW HAY BALES PLACED IN "V" DITCH MUST BE STAGGERED.
2. BALES MUST BE FIRMLY STAKED INTO THE ENTRENCHMENT AND THE ENTRENCHMENT BE PROPERLY BACKFILLED.
3. BALES MUST BE PLACED END TO END AND THERE CAN BE NO GAPS BETWEEN THE BALES.
4. BARRIERS MUST BE INSPECTED AND REPAIRED IMMEDIATELY AFTER EACH RAINFALL OR DAILY IF THERE IS PROLONGED RAINFALL.
5. DAMAGED STRAW BALES REQUIRE IMMEDIATE REPLACEMENT.
6. TRAPPED SEDIMENTS MUST BE REMOVED AND DISPOSED OF PROPERLY.

STRAW BALE BARRIER

SCALE: 1" = 5'-0"

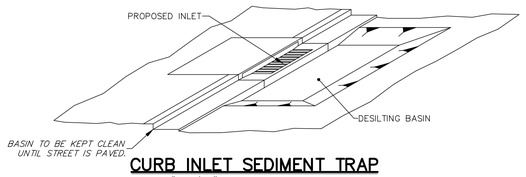


ACTUAL LAYOUT TO BE DETERMINED BY THE CONTRACTOR IN THE FIELD. WASHOUT SHALL BE INSTALLED PRIOR TO ANY CONCRETE WORK.

SIGN SHALL BE LOCATED WITHIN 30' OF THE TEMPORARY CONCRETE WASHOUT FACILITY.

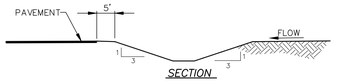
CONCRETE WASHOUT

N.T.S.



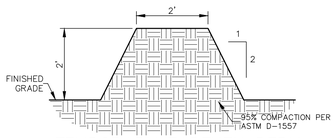
CURB INLET SEDIMENT TRAP

SCALE: 1" = 3'-0"



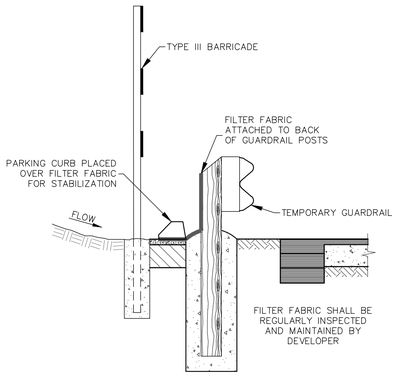
TEMPORARY DESILTING BASIN

SCALE: 1" = 20'-0"



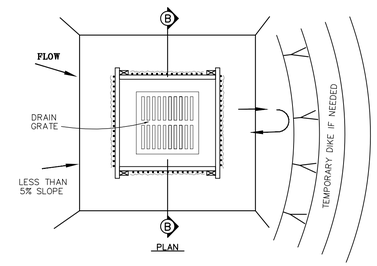
TEMPORARY EARTHEN BERM

SCALE: 1" = 2'



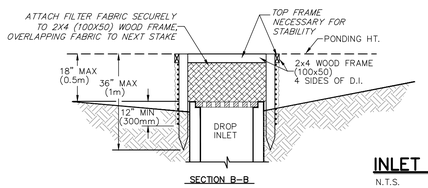
FILTER FABRIC AT GUARDRAIL

SCALE: 1" = 2'-0"



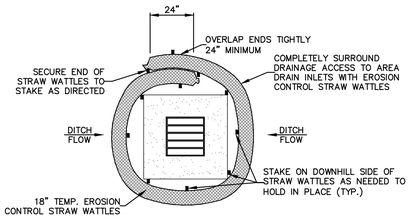
NOTES:

1. THE FENCE REQUIRES FREQUENT INSPECTION AND PROMPT MAINTENANCE TO MAINTAIN ITS EFFECTIVENESS.
2. INSPECT THE FENCE AFTER EACH RAINFALL.
3. CHECK FOR AREAS WHERE RUN-OFF HAS ERODED A CHANNEL BENEATH THE FENCE, OR WHERE THE FENCE WAS CAUSED TO SAG OR COLLAPSE.
4. ALL NEEDED REPAIRS SHALL BE PERFORMED IMMEDIATELY.
5. REMOVE AND PROPERLY DISPOSE OF SEDIMENT WHEN IT IS ONE-THIRD TO ONE-HALF THE HEIGHT OF THE FENCE OR AFTER EACH STORM.
6. 4' MIN. STEEL OR WOOD POSTS SPACED AT 6' O.C. SOFTWOOD POSTS SHALL HAVE A 3" MIN. DIAMETER OR NOMINAL 2"x4". HARDWOOD POSTS SHALL HAVE A MINIMUM CROSS SECTION OF 1.5"x1.5"



INLET PROTECTION

N.T.S.

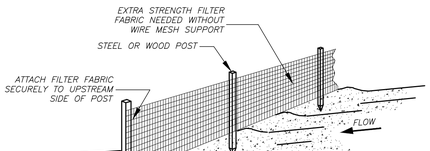


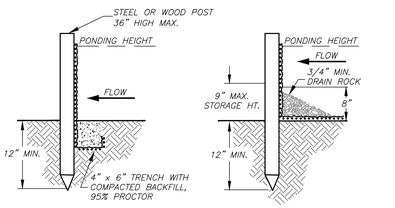
NOTES:

1. LENGTHS OF EROSION CONTROL STRAW WATTLES SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND AS REQUIRED FOR THE PURPOSE INTENDED. MAXIMUM LENGTH OF STRAW WATTLES SHALL BE 60' FOR 18" DIAMETER OR 30' FOR 12" DIAMETER STRAW WATTLES.
2. UNLESS OTHERWISE DIRECTED, USE BIODEGRADABLE OR PHOTODEGRADABLE CONTAINMENT MESH ONLY WHERE STRAW WATTLES WILL REMAIN IN PLACE AS PART OF A VEGETATIVE SYSTEM. FOR TEMPORARY INSTALLATIONS, USE RECYCLABLE CONTAINMENT MESH.
3. STUFF STRAW WATTLES WITH SUFFICIENT FILTER MATERIAL TO ACHIEVE DENSITY THAT WILL HOLD SHAPE WITHOUT EXCESSIVE DEFORMATION.
4. STAKES SHALL BE 2" x 2" WOOD OR #3 REBAR, 4' LONG, EMBEDDED SUCH THAT 2" PROTRUDES ABOVE STRAW WATTLES, OR AS DIRECTED.
5. DO NOT PLACE STAKES THROUGH CONTAINMENT MESH.

STRAW WATTLE PLACED AT AREA DRAIN INLETS

N.T.S.



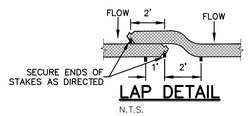


NOTES:

1. THE FENCE REQUIRES FREQUENT INSPECTION AND PROMPT MAINTENANCE TO MAINTAIN ITS EFFECTIVENESS.
2. INSPECT THE FENCE AFTER EACH RAINFALL.
3. CHECK FOR AREAS WHERE RUN-OFF HAS ERODED A CHANNEL BENEATH THE FENCE, OR WHERE THE FENCE WAS CAUSED TO SAG OR COLLAPSE.
4. ALL NEEDED REPAIRS SHALL BE PERFORMED IMMEDIATELY.
5. REMOVE AND PROPERLY DISPOSE OF SEDIMENT WHEN IT IS ONE-THIRD TO ONE-HALF THE HEIGHT OF THE FENCE OR AFTER EACH STORM.
6. 4' MIN. STEEL OR WOOD POSTS SPACED AT 6' O.C. SOFTWOOD POSTS SHALL HAVE A 3" MIN. DIAMETER OR NOMINAL 2"x4". HARDWOOD POSTS SHALL HAVE A MINIMUM CROSS SECTION OF 1.5"x1.5"

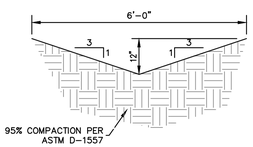
FILTER FENCE

SCALE: 1" = 5'-0"



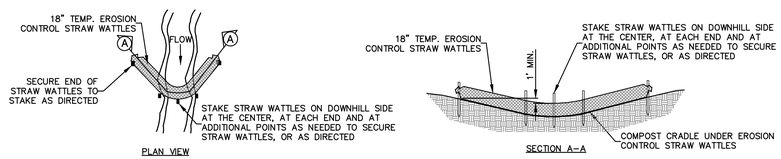
LAP DETAIL

N.T.S.



12" DEEP SWALE

SCALE: 1" = 2'-0"



EROSION CONTROL STRAW WATTLE CHECK DAM

N.T.S.

BENCHMARK: CITY MONUMENT AT THE CENTERLINE INTERSECTION OF MESA PASS DRIVE AND CIMARRON PARK DRIVE.
ELEVATION = 3978.53 (EL PASO CITY DATUM)

NO.	DATE	DESCRIPTION	BY
3	03/15/2021	3rd City Submittal	AHO
2	01/22/2021	2nd City Submittal	AHO
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	1-800-351-3555
TEXAS GAS SERVICE	544-6300
PUB EMERGENCY HOTLINE	562-8411/562-2603
PUB SERVICE BOARD (WATER & SEWER)	1-800-466-1555
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SPECTRUM	775-7414
EXCAVATION SAFETY SYSTEM	1-800-344-7233
KINDER-MORGAN EPNG PIPELINES	1-800-238-3764
EL PASO STREETS AND MAINTENANCE	212-0151
EL PASO TRAFFIC SIGNAL STREETS AND MAINTENANCE	tlresponse@elpasotexas.gov

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05/15/2021

STATE OF TEXAS
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SUBDIVISION
CIMARRON CANYON UNIT TWO SUBDIVISION

SHEET TITLE
STORM WATER POLLUTION PREVENTION PLAN DETAILS

GOB (DESIGN BY)	1908 (JOB NO.)
GOB-DG-SM (DRAWN BY)	12/20/2019 (DATE OF CONVERSION)
AHO (CHECKED BY)	AS NOTED (SCALE)

SHEET NO. 54
SHEET SEQUENCE 56 OF 82

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NARRATIVE:

CIMARRON CANYON UNIT TWO
SUBDIVISION
EL PASO, TEXAS

LEGAL DESCRIPTION

BEING A PORTION OF TRACT 1B2
NELLIE D. MUNDY SURVEY 242 AND A PORTION
OF TRACTS 4G AND 4G2,
NELLIE D. MUNDY SURVEY 240
CITY OF EL PASO, EL PASO COUNTY, TEXAS.
CONTAINING ±30.987 ACRES (1,349,777 SQ. FT.)

EROSION AND SEDIMENT CONTROL

SOIL STABILIZATION PRACTICES

_____ TEMPORARY SEEDING
__X__ PERMANENT PLANTING, SODDING, OR SEEDING
_____ MULCHING
_____ SOIL RETENTION BLANKET
_____ BUFFER ZONES
__X__ PRESERVATION OF NATURAL RESOURCES

OTHER:_____

STRUCTURAL PRACTICES: (P=PERMANENT T=TEMPORARY)

__T__ SILT FENCES
__T__ HAY BALES
__T__ ROCK BERMS
__T__ DIVERSION, INTERCEPTOR, OR PERIMETER BERMS
T&P DIVERSION, INTERCEPTOR, OR PERIMETER SWALES
_____ DIVERSION DIKE AND SWALE COMBINATIONS
_____ PIPE SLOPE DRAINS
_____ CONCRETE FLUMES
__T__ ROCK BEDDING AT CONSTRUCTION EXIT
_____ TIMBER MATTING AT CONSTRUCTION EXIT
__P__ CHANNEL LINERS
__T__ SEDIMENT TRAPS
T&P SEDIMENT BASINS
__T__ STORM INLET SEDIMENT TRAP
_____ STONE OUTLET STRUCTURES
__P__ CURBS AND GUTTERS
__P__ STORM DRAINS
__P__ VELOCITY CONTROL DEVICES
__P__ NATURAL SWALES & NATURAL DEPRESSIONS

OTHER:_____

POST CONSTRUCTION CONTROLS

INLETS, STILLING BASINS, DESILTING BASINS, NATURAL PONDING AREAS, EARTHEN BERMS AND EARTHEN SWALES AS PER PLAN

ESTIMATED TOTAL SIZE, DISTURBED AREA

PROJECT SITE APPROX. 30.987 ACRES
ESTIMATED DISTURBED AREA 44.13 ACRES

CONSTRUCTION START DATE: **AUG 2020** CONSTRUCTION END DATE: **AUG. 2021**

NARRATIVE – SEQUENCE OF CONSTRUCTION (STORM WATER MANAGEMENT) ACTIVITIES:

1. BEGIN CONSTRUCTION/MOBOLIZATION (5 DAYS).
2. INSTALL INITIAL STORMWATER POLLUTION PREVENTIONS (SWPP) MEASURES AS INDICATED ON SWPP PLAN (3 DAYS).
3. CLEAR AND GRUB (2 WEEKS).
4. SITE GRADING (2 MONTHS).
5. PERFORM PERIODIC INSPECTIONS OF THE SWPP STRUCTURES. PERFORM MAINTENANCE AND REPLACEMENTS AS NEEDED (DURATION OF CONSTRUCTION).
6. EXCAVATION FOR SITE UTILITIES AND STORM SEWER (3 MONTHS).
7. CONSTRUCTION OF SITE IMPROVEMENTS AND STORM SEWER (3 MONTHS).
8. END CONSTRUCTION – FINAL STABILIZATION, DEMOBILIZATION, REMOVAL OF SWPP CONTROLS, AND SUBMIT NOTICE OF TERMINATION.

GENERAL CONTRACTOR CERTIFICATION

I CERTIFY UNDER PENALTY OF LAW THAT I UNDERSTAND THE TERMS AND CONDITIONS OF THE TEXAS POLLUTANT DISCHARGE ELIMINATION SYSTEM (TPDES) GENERAL PERMIT THAT AUTHORIZES STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY FROM THE CONSTRUCTION SITE IDENTIFIED AS PART OF THIS CERTIFICATION.

SIGNED: _____ COMPANY: HUNT COMMUNITIES GP, LLC
NAME: MICHAEL S. VIRAMONTES ADDRESS: 4401 N. MESA
TITLE: VICE PRESIDENT TELEPHONE: (915)-298-4252
DATE: _____

SUB – CONTRACTOR CERTIFICATION

I CERTIFY UNDER PENALTY OF LAW THAT I WILL COORDINATE, EITHER THROUGH THE GENERAL CONTRACTOR, OWNER, OR DIRECTLY, WITH THE CONTRACTOR(S) AND/OR SUBCONTRACTOR(S) IDENTIFIED IN THE POLLUTION PREVENTION PLAN HAVING RESPONSIBILITY FOR IMPLEMENTING STORM WATER CONTROL MEASURES TO MINIMIZE ANY IMPACT MY ACTIONS MAY HAVE ON THE EFFECTIVENESS OF THESE STORM WATER CONTROLS MEASURES.

SIGNED: _____ SIGNED: _____
NAME: _____ NAME: _____
TITLE: _____ TITLE: _____
COMPANY: _____ COMPANY: _____
ADDRESS: _____ ADDRESS: _____
TELEPHONE: _____ TELEPHONE: _____
DATE: _____ DATE: _____

OPERATOR

SIGNED: _____ COMPANY: _____
NAME: _____ ADDRESS: _____
TITLE: _____ TELEPHONE: _____
DATE: _____

SOIL CONDITIONS

THE EXPLORATORY BORINGS WERE DRILLED TO DEPTHS RANGING FROM 1 TO 30 FEET BELOW THE EXISTING GROUND SURFACE. THE SOIL UNDERLYING THE SITE GENERALLY CONSISTS OF THREE MAJOR SOIL TYPES. THE NEAR SUBSURFACE SOILS CONSIST OF (1) GRAVELLY, SILTS SANDS (2) POORLY GRADED OR WELL GRADED GRAVEL WITH VARYING AMOUNTS OF CLAY, SILT, SAND AND CALCAREOUS MATERIAL AND (3) AND ALSO CONTAINED INTERBEDDED COBBLE AND BOULDER SIZE MATERIALS.

ENDANGERED SPECIES ACT

NOT LIKELY TO ADVERSELY AFFECT ANY CURRENTLY LISTED FEDERAL THREATENED OR ENDANGERED SPECIES.

HISTORIC PROPERTY SITE

NO KNOWN SITES ELIGIBLE FOR HISTORIC RECORD

AUTHORIZED STORM WATER DISCHARGES

1. STORM WATER ASSOCIATED WITH CONSTRUCTION ACTIVITY.

2. DISCHARGES OF STORM WATER ASSOCIATED WITH CONSTRUCTION SUPPORT ACTIVITIES INCLUDING CONCRETE AND ASPHALT BATCH PLANTS, EQUIPMENT STAGING AREAS, MATERIAL STORAGE YARDS, MATERIAL BORROW AREAS, AND EXCAVATED MATERIAL DISPOSAL AREAS MAY BE AUTHORIZED AS PER TPDES PERMIT NO. TXR1500000, PART II, SECTION A.

AUTHORIZED NON-STORM WATER DISCHARGES

THE FOLLOWING NON-STORM WATER DISCHARGES AREA AUTHORIZED AS PER TPDES PERMIT NO. TXR150000, PART II, SECTION A.

1. DISCHARGES FROM FIRE FIGHTING ACTIVITIES.

2. FIRE HYDRANT FLUSHING.

3. WATER USED TO CONTROL DUST.

4. WATER LINE FLUSHING.

5. VEHICLE, EXTERNAL BUILDING AND PAVEMENT WASH WATER, FREE OF DETERGENTS AND SOAPS.

6. AIR CONDITIONING CONDENSATE.

PROHIBITED POLLUTANTS DISCHARGES

1. CONCRETE
2. DETERGENTS
3. PAINTS
4. CLEANING SOLVENTS
5. FUELS
6. ELECTRICAL EQUIPMENT AND MATERIALS
7. LUBRICANTS
8. WOOD
9. FERTILIZERS
10. ASPHALT AND ASPHALT RELATED PRODUCTS
11. STEEL PRODUCTS

BEST MANAGEMENT PRACTICES

1. STRUCTURAL MEASURES SHALL BE MAINTAINED THROUGHOUT THE LIFE OF THE PROJECT IN EFFECTIVE OPERATING CONDITION.

2. DOCUMENTATION OF MAINTENANCE ACTIVITIES INCLUDING FREQUENCY, LOT DESIGNATION, INSPECTION OF STRUCTURAL CONTROLS, MATERIAL STORAGE AREAS VEHICLES ENTRANCE AND EXITS: ACTIONS TAKEN AND INSPECTORS NAME.

3. CONSTRUCTION SITE NOTICE WILL BE MAINTAINED ON SITE.

4. COPY OF SWPPP SHALL BE KEPT ON SITE.

5. PERIMETER MUST RETAIN THE SWPS NOI AND INSPECTION LOG FOR A MINIMUM OF 3 YEARS FROM THE TERMINATION AND FINAL STABILIZATION OF PROJECT.

BEST MANAGEMENT PRACTICES CONTROLS

I WASTE MATERIALS:

ALL WASTE MATERIALS, INCLUDING CONSTRUCTION DEBRIS, SHALL BE COLLECTED AND STORED IN A SECURELY LIDDED METAL DUMPSTER. NO CONSTRUCTION WASTE MATERIAL SHALL BE BURIED ON SITE. THE TRANSIT DUMPSTER SHALL COMPLY WITH ORDINANCE 18.52.010 (ENCLOSURE & REMOVAL OF WASTE MATERIALS DURING CONSTRUCTION). THE DUMPSTER SHALL BE EMPTIED AS NECESSARY OR AS REQUIRED BY ORDINANCE 9.04 (SOLID WASTE MANAGEMENT) AND THE TRASH SHALL BE HAULED TO A LICENSED LANDFILL.

II HAZARDOUS WASTE:

AT A MINIMUM, ANY PRODUCTS IN THE FOLLOWING CATEGORIES SHALL BE CONSIDERED HAZARDOUS: PAINT, ACIDS FOR CLEANING MASONRY SURFACES, CLEANING SOLVENTS, ASPHALT PRODUCTS, CHEMICAL ADDITIVES FOR SPILL STABILIZATION, CURING COMPOUNDS AND ADDITIVES. IN THE EVENT OF A SPILL WHICH MAY BE HAZARDOUS, THE CONTRACTOR SHALL TAKE IMMEDIATE ACTION AND CONTACT THE FIRE DEPT. AND TNRCC.

III SANITARY WASTE:

ALL SANITARY WASTE SHALL BE COLLECTED FROM THE CONSTRUCTION PORTABLE UNITS AS NECESSARY OR AS REQUIRED, CHAPTER 18.08 (BUILDING CODE), BY A LICENSED SANITARY WASTE MANAGEMENT CONTRACTOR. ALL WASTE MATERIAL SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

IV SPILL PREVENTION:

THE FOLLOWING PRACTICES SHALL BE USED TO REDUCE THE RISK OF SPILLS OR OTHER ACCIDENTAL EXPOSURES OF MATERIALS TO STORM WATER RUNOFF.

V GOOD HOUSEKEEPING:

A. STORE ONLY ENOUGH PRODUCTS REQUIRED TO DO THE JOB
B. NEATLY STORE MATERIALS ON-SITE IN AN ORDERLY MANNER
C. KEEP PRODUCTS IN THEIR ORIGINAL CONTAINER
D. DO NOT MIX SUBSTANCES WITH ONE ANOTHER, UNLESS OTHERWISE RECOMMENDED BY THE MANUFACTURER
E. USE ENTIRE CONTENTS OF A PRODUCT BEFORE DISPOSING THE CONTAINER
F. FOLLOW MANUFACTURER'S RECOMMENDATIONS FOR PROPER USE AND DISPOSAL

VI HAZARDOUS PRODUCTS:

PRACTICES USED TO REDUCE RISKS:

A. KEEP PRODUCTS IN THEIR ORIGINAL CONTAINER IF AT ALL POSSIBLE
B. RETAIN ORIGINAL LABELS, PRODUCT INFORMATION AND MATERIAL SAFETY DATA SHEETS (MSDS)
C. DISPOSE SURPLUS PRODUCT IN ACCORDANCE WITH MANUFACTURER'S OR LOCAL & STATE RECOMMENDED METHODS

POSSIBLE POLLUTANTS ON-SITE

A. GAS TANK CONTAINERS
   1. INSPECT CONTAINERS FOR LEAKS AND ENSURE LIDS AND CAPS ARE PROPERLY SEALED. DAMAGED TANKS OR CONTAINERS SHALL BE PROPERLY REMOVED/REPLACED AND DISPOSED OF.
B. LUBRICATING GREASE CONTAINERS
   1. ALL ON-SITE VEHICLES SHALL BE MONITORED FOR LEAKS AND RECEIVE REGULAR PREVENTATIVE MAINTENANCE TO REDUCE CHANCE OF LEAKAGE; DRIP PANS SHALL BE UTILIZED FOR LEAKING VEHICLES AND FOR FLUID DRAINING.
C. CEMENT DISCHARGE INTO EXISTING STORM SYSTEM
   1. ONSITE INSPECTIONS OF CONCRETE POUR AREAS SHALL BE DONE TO ENSURE THAT CEMENT DOES NOT RUNOFF AND DISCHARGE INTO EXISTING STORM SEWER SYSTEM.

VII PETROLEUM PRODUCTS:

ALL ON-SITE VEHICLES SHALL BE MONITORED FOR LEAKS AND RECEIVE REGULAR PREVENTIVE MAINTENANCE TO REDUCE THE CHANCE OF LEAKAGE. PETROLEUM PRODUCTS SHALL BE STORED IN TIGHTLY SEALED CONTAINERS WHICH ARE CLEARLY LABELED. ANY ASPHALT SUBSTANCES USED ON-SITE SHALL BE APPLIED ACCORDING TO THE MANUFACTURER'S RECOMMENDATION.

VIII SPILL CONTROL PRACTICES:

A. MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEANUP SHALL BE CLEARLY POSTED AND SITE PERSONNEL SHALL BE MADE AWARE OF THE PROCEDURES:
B. MATERIALS AND EQUIPMENT NECESSARY FOR SPILL CLEANUP SHALL BE KEPT IN THE MATERIAL STORAGE AREA ON-SITE:
C. ALL SPILLS SHALL BE CLEANED UP IMMEDIATELY AFTER DISCOVERY
D. SPILL AREA SHALL BE WELL VENTILATED AND APPROPRIATE CLOTHING WILL BE WORN:
E. ANY SPILL SHALL BE REPORTED TO THE APPROPRIATE GOVERNMENTAL AGENCY
F. MEASURES SHALL BE TAKEN TO PREVENT A SPILL FROM REOCCURRING

BEST MANAGEMENT PRACTICES CONTROLS

IX MAINTENANCE AND INSPECTION PROCEDURES:

ALL POLLUTION PREVENTION MEASURES SHALL BE INSPECTED AT LEAST ONCE EVERY 7 DAYS AND FOLLOWING A STORM EVENT OF 0.5 INCHES OR MORE. INSPECTION IN FINAL STABILIZED AREAS OR DURING ARID PERIODS WILL BE CONDUCTED BI-WEEKLY. BEST MANAGEMENT PRACTICES AND POLLUTION CONTROL PROCEDURES SHALL BE INSPECTED FOR ADEQUACY. A REPORT SUMMARIZING THE SCOPE OF INSPECTION SHALL BE DONE & RETAINED ALONG WITH THE SDPCP.

X REMARKS:

DISPOSAL AREAS, STOCKPILES, AND HAUL ROADS SHALL BE CONSTRUCTED IN A MANNER THAT WILL MINIMIZE AND CONTROL THE AMOUNT OF SEDIMENT THAT MAY ENTER RECEIVING WATERS. DISPOSAL AREAS SHALL NOT BE LOCATED IN ANY WETLAND, WATERBODY OR STREAMBED. CONSTRUCTION STAGING AREAS AND VEHICLE MAINTENANCE AREAS SHALL BE CONSTRUCTED BY THE CONTRACTOR IN A MANNER TO MINIMIZE THE RUNOFF OF POLLUTANTS. ALL WATERWAYS SHALL BE CLEANED AS SOON AS PRACTICABLE OF TEMPORARY EMBANKMENT, TEMPORARY BRIDGES, MATTING, FALSEWORK, PILING DEBRIS OR OTHER OBSTRUCTIONS PLACED DURING CONSTRUCTION OPERATIONS THAT ARE NOT A PART OF THE FINISHED WORK.

XI OFFSITE VEHICLE TRACKING:

IN ADDITION TO THE STABILIZED CONSTRUCTION ENTRANCES, THE FOLLOWING MEASURES SHALL BE OBSERVED DURING CONSTRUCTION:

__X__ HAUL ROADS SHALL BE DAMPENED FOR DUST CONTROL
__X__ LOADED HAUL TRUCKS SHALL BE COVERED WITH TARPAULIN
__X__ EXCESS DIRT ON ROAD SHALL BE REMOVED IMMEDIATELY
__X__ STABILIZED CONSTRUCTION ENTRANCE
_____ OTHER:_____

MATERIALS WITH CONSTRUCTION SITE:

____ HAS BATCH PLANT WITH PROJECT
____ HAS ASPHALT PLANT WITH PROJECT
__X__ DOES NOT HAVE BATCH PLANT WITH PROJECT
__X__ DOES NOT HAVE ASPHALT PLANT WITH PROJECT

OWNER CERTIFICATION

I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHERED AND EVALUATED THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.

_____
OWNER : SIGNED DATE

MICHAEL S. VIRAMONTES
OWNER : NAME DATE

VICE PRESIDENT
TITLE DATE

GENERAL NOTES

1. CONTRACTOR TO PROVIDE A CONSTRUCTION SIGN ONSITE, CONSPICUOUSLY NEAR MAIN ENTRANCE, WITH A COPY OF N.O.I. POSTED.
2. CONTRACTOR TO DESIGNATE A QUALIFIED COMPETENT PERSON TO INSPECT AND RECORD SW3P AND BMP INSPECTION IN ACCORDANCE TO SITE INSPECTION REPORT.
3. CONTRACTOR TO KEEP ORIGINAL N.O.I. AND INSPECTION REPORTS ON SITE AT ALL TIMES.
4. CONTRACTOR SHALL BE RESPONSIBLE TO MAINTAIN A CLEAN WORK SITE.
5. CONTRACTOR MUST KEEP RECORD OF IMPORTANCE DATES SUCH AS, BUT NOT LIMITED TO, MAJOR GRADING ACTIVITIES, CONSTRUCTION TEMPORARILY OR PERMANENTLY WORK CEASED, STABILIZATION MEASURES INITIATED.
6. CONTRACTOR SHALL KEEP A COPY OF TPDES PERMIT TXR 15000 ONSITE

NOTE:
CONTRACTOR SHALL ENSURE COMPLIANCE WITH SW3P AND TPDES PERMIT TXR 15000. PERMIT TXR 15000 IS LOCATED AND CAN BE VIEWED WITH THE CIVIL ENGINEER – CSA CONSULTING ENGINEERS, 1845 NORTHWESTERN DR, SUITE C, EL PASO, TX. 79912.

BENCHMARK: CITY MONUMENT AT THE CENTERLINE INTERSECTION OF MESA HILLS DRIVE AND CIMARRON PARK DRIVE.
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05/15/2021

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SUBDIVISION
CIMARRON CANYON UNIT TWO SUBDIVISION

SHEET TITLE
STORM WATER POLLUTION PREVENTION PLAN NOTES

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SHEET NO. **55**
SHEET SEQUENCE **57** OF **82**

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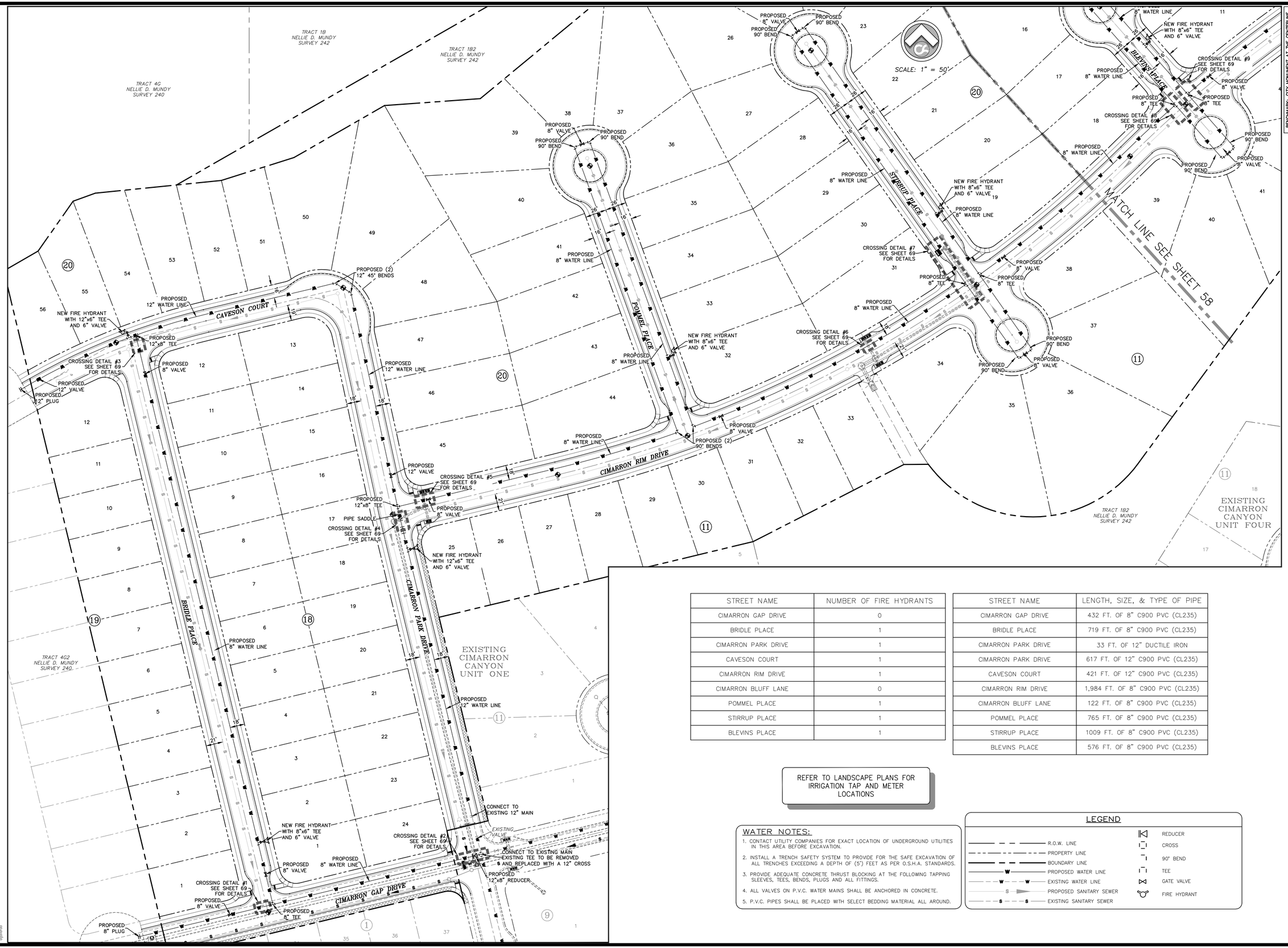
dgolomb



STREET NAME	NUMBER OF FIRE HYDRANTS
CIMARRON GAP DRIVE	0
BRIDLE PLACE	1
CIMARRON PARK DRIVE	1
CAVESON COURT	1
CIMARRON RIM DRIVE	1
CIMARRON BLUFF LANE	0
POMMEL PLACE	1
STIRRUP PLACE	1
BLEVINS PLACE	1

STREET NAME	LENGTH, SIZE, & TYPE OF PIPE
CIMARRON GAP DRIVE	432 FT. OF 8" C900 PVC (CL235)
BRIDLE PLACE	719 FT. OF 8" C900 PVC (CL235)
CIMARRON PARK DRIVE	33 FT. OF 12" DUCTILE IRON
CIMARRON PARK DRIVE	617 FT. OF 12" C900 PVC (CL235)
CAVESON COURT	421 FT. OF 12" C900 PVC (CL235)
CIMARRON RIM DRIVE	1,984 FT. OF 8" C900 PVC (CL235)
CIMARRON BLUFF LANE	122 FT. OF 8" C900 PVC (CL235)
POMMEL PLACE	765 FT. OF 8" C900 PVC (CL235)
STIRRUP PLACE	1009 FT. OF 8" C900 PVC (CL235)
BLEVINS PLACE	576 FT. OF 8" C900 PVC (CL235)

REFER TO LANDSCAPE PLANS FOR IRRIGATION TAP AND METER LOCATIONS

WATER NOTES:

1. CONTACT UTILITY COMPANIES FOR EXACT LOCATION OF UNDERGROUND UTILITIES IN THIS AREA BEFORE EXCAVATION.
2. INSTALL A TRENCH SAFETY SYSTEM TO PROVIDE FOR THE SAFE EXCAVATION OF ALL TRENCHES EXCEEDING A DEPTH OF (5') FEET AS PER O.S.H.A. STANDARDS.
3. PROVIDE ADEQUATE CONCRETE THRUST BLOCKING AT THE FOLLOWING TAPPING SLEEVES, TEES, BENDS, PLUGS AND ALL FITTINGS.
4. ALL VALVES ON P.V.C. WATER MAINS SHALL BE ANCHORED IN CONCRETE.
5. P.V.C. PIPES SHALL BE PLACED WITH SELECT BEDDING MATERIAL ALL AROUND.

LEGEND

- R.O.W. LINE
- PROPERTY LINE
- BOUNDARY LINE
- PROPOSED WATER LINE
- EXISTING WATER LINE
- PROPOSED SANITARY SEWER
- EXISTING SANITARY SEWER
- REDUCER
- CROSS
- 90° BEND
- TEE
- GATE VALVE
- FIRE HYDRANT

NO.	DATE	DESCRIPTION	BY
3	03/15/2021	3rd City Submittal	AHO
2	01/22/2021	2nd City Submittal	AHO
1	11/25/2020	1st City Submittal	AHO

BEFORE YOU DIG - CALL

EL PASO ELECTRIC COMPANY	543-5720
AT&T	1-800-246-2355
TEXAS GAS SERVICE	1-800-700-2443
TGS EMERGENCY HOTLINE	544-6300
EL PASO WATER UTILITIES (WATER & SEWER)	562-8411/562-2003
AFTER HOURS EMERGENCY (EPW)	1-800-592-1555
SPECTRUM	594-5775
EL PASO EXCAVATION SAFETY SYSTEM	775-7414
KINDER-MORGAN EPNG PIPELINES	1-800-733-2077
EL PASO TRAFFIC SIGNAL STREETS AND MAINTENANCE	1-800-238-3764
	212-0151

WARNING! BEFORE YOU DIG ANY PROJECT AREA CONTRACTORS SHALL BE AWARE OF EXISTING UNDERGROUND IMPROVEMENTS

Texas811 Know what's below. Call before you dig.

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05/15/2021

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Texas Registered Engineering Firm F-9997
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El Paso, Texas 79912
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fax [915] 877.4334
www.csaengineers.com

SUBDIVISION
CIMARRON CANYON UNIT TWO SUBDIVISION

SHEET TITLE
POTABLE WATER DISTRIBUTION PLAN

GOB DESIGN BY	1908 JOB NO.
GOB-DG-SM DRAWN BY	12/20/2019 DATE OF COMMISSION
AHO CHECKED BY	AS NOTED SCALE

SHEET NO. 56
SHEET SEQUENCE 58 OF 82

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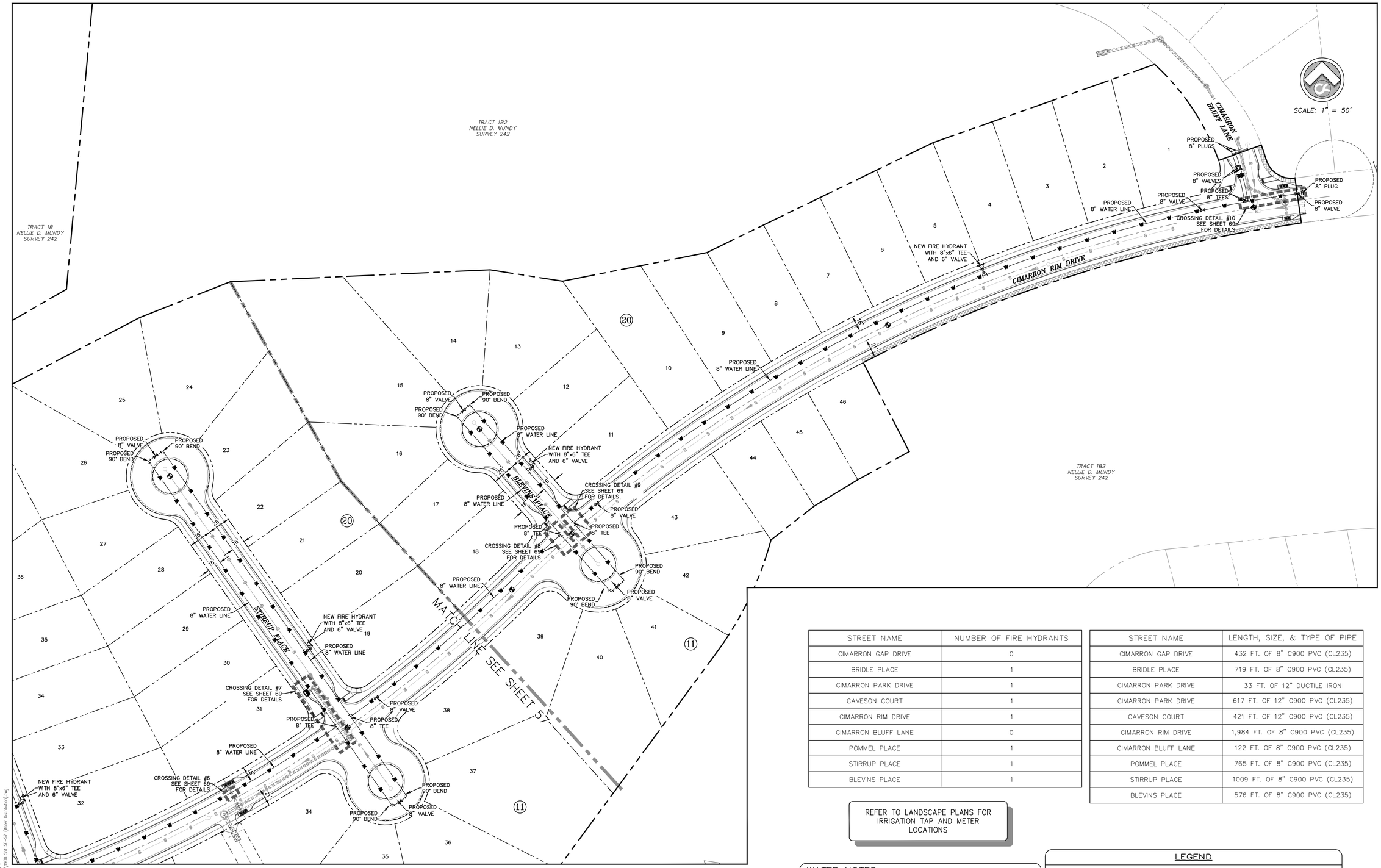
S:\Drawings\1908 Cimarron Canyon Unit Two\1908 3rd Submittal\1908 SH 55-57 (Water Distribution).dwg
dgalindo



BENCHMARK: CITY MONUMENT AT THE CENTERLINE INTERSECTION OF ARDEN PASS DRIVE AND CIMARRON PARK DRIVE.
ELEVATION = 3978.53 (EL PASO CITY DATUM)

NO.	DATE	DESCRIPTION	BY
3	03/15/2021	3rd City Submittal	AHO
2	01/22/2021	2nd City Submittal	AHO
1	11/25/2020	1st City Submittal	AHO

WARNING! BEFORE YOU DIG IN PROJECT AREA CONTRACTOR SHALL FIELD LOCATE ALL UNDERGROUND IMPROVEMENTS

Texas811 Know what's below. Call before you dig.

BEFORE YOU DIG - CALL

EL PASO ELECTRIC COMPANY	543-5720
AT&T	1-800-ATT-LINE
TEXAS GAS SERVICE	544-6300
TGS EMERGENCY HOTLINE	562-8411/562-2003
EL PASO WATER UTILITIES (WATER & SEWER)	1-800-592-1555
AFTER HOURS EMERGENCY (EPW)	594-5775
SPECTRUM	775-7414
TEXAS ONE EXCAVATION SAFETY SYSTEM	1-800-344-8377
KINDER-MORGAN EPNG PIPELINES	1-800-238-3764
EL PASO TRAFFIC SIGNAL STREETS AND MAINTENANCE	212-0151

tlengel@csaengineers.com

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1845 Northwestern Dr. Ste C
El Paso, Texas 79912
tel [915] 877.4155
fax [915] 877.4334
www.csaengineers.com

SUBDIVISION
CIMARRON CANYON UNIT TWO SUBDIVISION

SHEET TITLE
POTABLE WATER DISTRIBUTION PLAN

GOB (DESIGN BY)	1908 (JOB NO.)
GOB-DG-SM (DRAWN BY)	12/20/2019 (DATE OF COMMISSION)
AHO (CHECKED BY)	AS NOTED (SCALE)

SHEET NO. 57
SHEET SEQUENCE 59 OF 82

STREET NAME	NUMBER OF FIRE HYDRANTS
CIMARRON GAP DRIVE	0
BRIDLE PLACE	1
CIMARRON PARK DRIVE	1
CAVESON COURT	1
CIMARRON RIM DRIVE	1
CIMARRON BLUFF LANE	0
POMMEL PLACE	1
STIRRUP PLACE	1
BLEVINS PLACE	1

STREET NAME	LENGTH, SIZE, & TYPE OF PIPE
CIMARRON GAP DRIVE	432 FT. OF 8" C900 PVC (CL235)
BRIDLE PLACE	719 FT. OF 8" C900 PVC (CL235)
CIMARRON PARK DRIVE	33 FT. OF 12" DUCTILE IRON
CIMARRON PARK DRIVE	617 FT. OF 12" C900 PVC (CL235)
CAVESON COURT	421 FT. OF 12" C900 PVC (CL235)
CIMARRON RIM DRIVE	1,984 FT. OF 8" C900 PVC (CL235)
CIMARRON BLUFF LANE	122 FT. OF 8" C900 PVC (CL235)
POMMEL PLACE	765 FT. OF 8" C900 PVC (CL235)
STIRRUP PLACE	1009 FT. OF 8" C900 PVC (CL235)
BLEVINS PLACE	576 FT. OF 8" C900 PVC (CL235)

REFER TO LANDSCAPE PLANS FOR IRRIGATION TAP AND METER LOCATIONS

WATER NOTES:

1. CONTACT UTILITY COMPANIES FOR EXACT LOCATION OF UNDERGROUND UTILITIES IN THIS AREA BEFORE EXCAVATION.
2. INSTALL A TRENCH SAFETY SYSTEM TO PROVIDE FOR THE SAFE EXCAVATION OF ALL TRENCHES EXCEEDING A DEPTH OF (5') FEET AS PER O.S.H.A. STANDARDS.
3. PROVIDE ADEQUATE CONCRETE THRUST BLOCKING AT THE FOLLOWING TAPPING SLEEVES, TEES, BENDS, PLUGS AND ALL FITTINGS.
4. ALL VALVES ON P.V.C. WATER MAINS SHALL BE ANCHORED IN CONCRETE.
5. P.V.C. PIPES SHALL BE PLACED WITH SELECT BEDDING MATERIAL ALL AROUND.

LEGEND

- R.O.W. LINE
- PROPERTY LINE
- BOUNDARY LINE
- PROPOSED WATER LINE
- EXISTING WATER LINE
- PROPOSED SANITARY SEWER
- EXISTING SANITARY SEWER
- REDUCER
- CROSS
- 90° BEND
- TEE
- GATE VALVE
- FIRE HYDRANT

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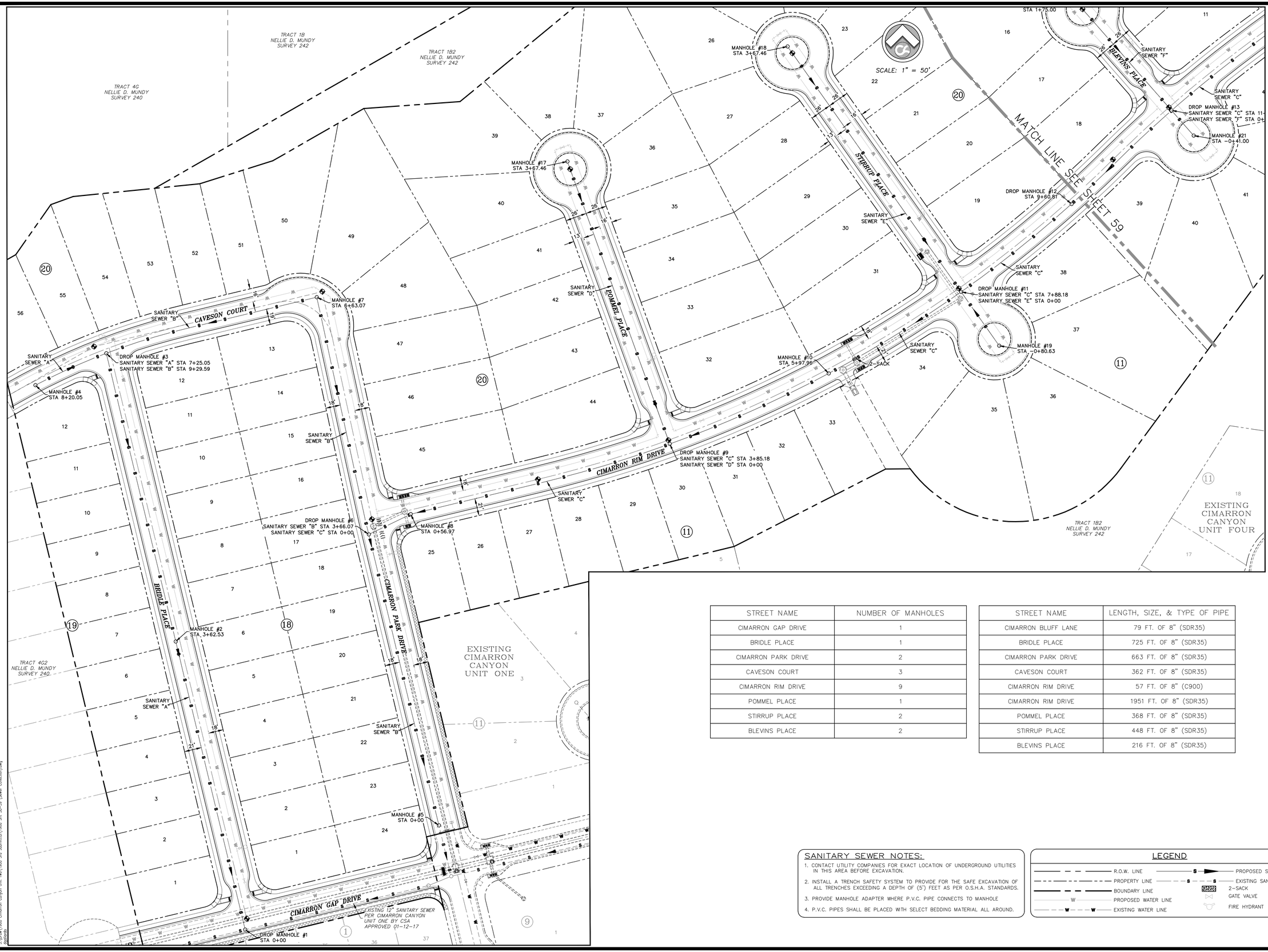

BENCHMARK: CITY MONUMENT AT THE CENTERLINE INTERSECTION OF MESA HILLS DRIVE AND CIMARRON PARK DRIVE.
ELEVATION = 3978.53 (EL PASO CITY DATUM)

NO.	DATE	DESCRIPTION	BY
3	03/15/2021	3rd City Submittal	AHO
2	01/22/2021	2nd City Submittal	AHO
1	11/25/2020	1st City Submittal	AHO

BEFORE YOU DIG - CALL

EL PASO ELECTRIC COMPANY	543-5720
AT&T	1-800-252-1133
TEXAS GAS SERVICE	544-6300
PDS EMERGENCY HOTLINE	562-8411/562-2003
EL PASO WATER UTILITIES (WATER & SEWER)	1-800-592-1645
AFTER HOURS EMERGENCY (EPW)	594-5775
SPECTRUM	775-7414
TEXAS EXCAVATION SAFETY SYSTEM	1-800-344-8377
KINDER-MORGAN EPNG PIPELINES	1-800-238-3764
EL PASO STREETS AND MAINTENANCE	212-0151
EL PASO TRAFFIC SIGNAL STREETS AND MAINTENANCE	tlresponse@elpasotexas.gov

WARNING! BEFORE YOU DIG IN PROJECT AREA CONTRACTOR SHALL NOTIFY ALL EXISTING UNDERGROUND IMPROVEMENTS

Texas811 Know what's below. Call before you dig.

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fax [915] 877.4334
www.csaengineers.com

SUBDIVISION
CIMARRON CANYON UNIT TWO SUBDIVISION

SHEET TITLE
SANITARY SEWER COLLECTION PLAN

GOB	1908
DESIGN BY	JOB NO.
GOB~DG~SM	12/20/2019
DRAWN BY	DATE OF COMMISSION
AHO	AS NOTED
CHECKED BY	SCALE

SHEET NO. 58
SHEET SEQUENCE 60 OF 82

STREET NAME	NUMBER OF MANHOLES
CIMARRON GAP DRIVE	1
BRIDLE PLACE	1
CIMARRON PARK DRIVE	2
CAVESON COURT	3
CIMARRON RIM DRIVE	9
POMMEL PLACE	1
STIRRUP PLACE	2
BLEVINS PLACE	2

STREET NAME	LENGTH, SIZE, & TYPE OF PIPE
CIMARRON BLUFF LANE	79 FT. OF 8" (SDR35)
BRIDLE PLACE	725 FT. OF 8" (SDR35)
CIMARRON PARK DRIVE	663 FT. OF 8" (SDR35)
CAVESON COURT	362 FT. OF 8" (SDR35)
CIMARRON RIM DRIVE	57 FT. OF 8" (C900)
CIMARRON RIM DRIVE	1951 FT. OF 8" (SDR35)
POMMEL PLACE	368 FT. OF 8" (SDR35)
STIRRUP PLACE	448 FT. OF 8" (SDR35)
BLEVINS PLACE	216 FT. OF 8" (SDR35)

SANITARY SEWER NOTES:

1. CONTACT UTILITY COMPANIES FOR EXACT LOCATION OF UNDERGROUND UTILITIES IN THIS AREA BEFORE EXCAVATION.
2. INSTALL A TRENCH SAFETY SYSTEM TO PROVIDE FOR THE SAFE EXCAVATION OF ALL TRENCHES EXCEEDING A DEPTH OF (5') FEET AS PER O.S.H.A. STANDARDS.
3. PROVIDE MANHOLE ADAPTER WHERE P.V.C. PIPE CONNECTS TO MANHOLE
4. P.V.C. PIPES SHALL BE PLACED WITH SELECT BEDDING MATERIAL ALL AROUND.

LEGEND

- R.O.W. LINE
- PROPERTY LINE
- BOUNDARY LINE
- PROPOSED WATER LINE
- EXISTING WATER LINE
- PROPOSED SANITARY SEWER
- EXISTING SANITARY SEWER
- 2-SACK
- GATE VALVE
- FIRE HYDRANT

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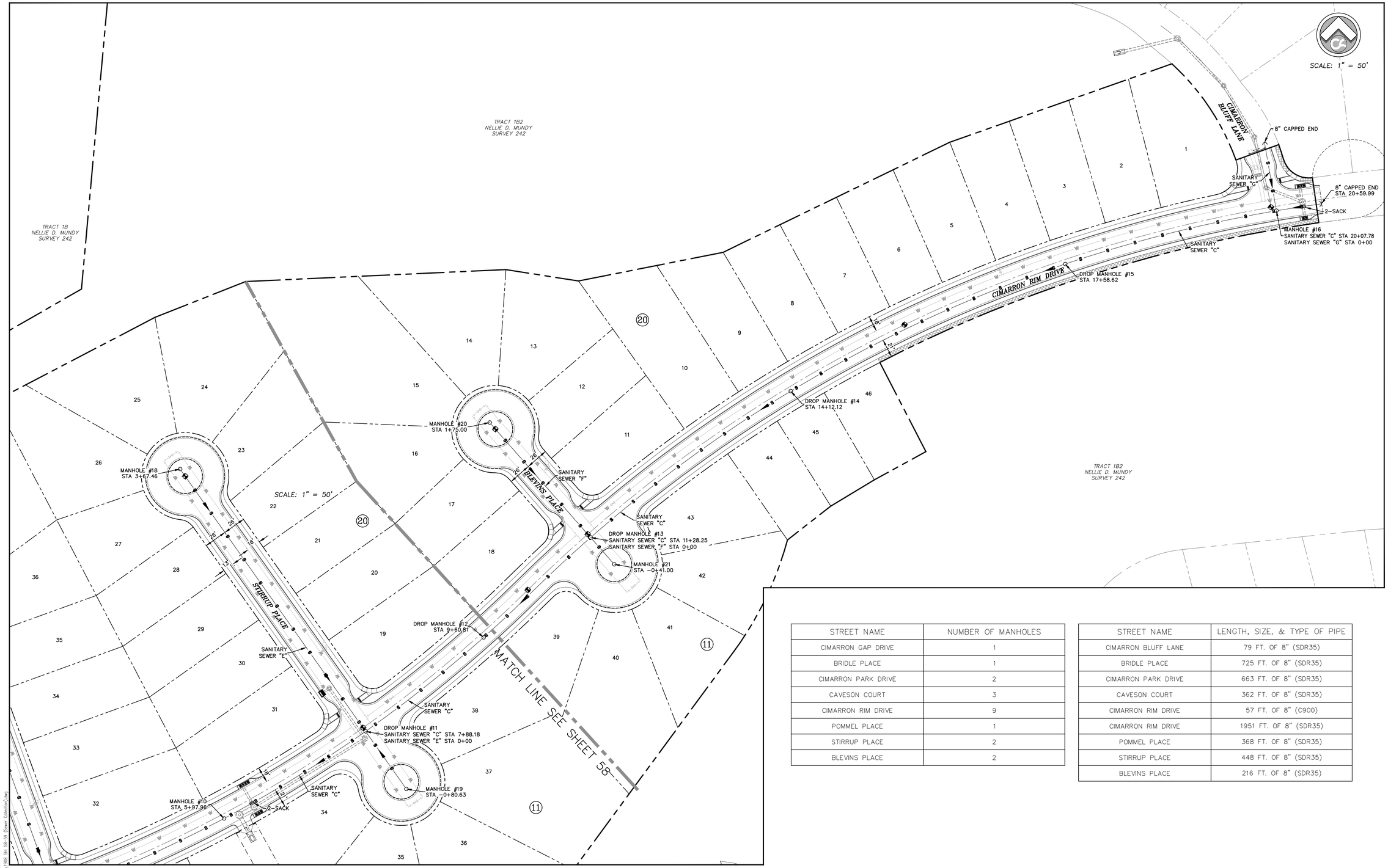
S:\CSA DESIGN\1908 Cimarron Canyon Unit Two\1908 3rd Submittal\1908 3rd SS-59 (Sewer Collection).dwg
ADRIAN ONTIVEROS

BENCHMARK: CITY MONUMENT AT THE CENTERLINE INTERSECTION OF ARMIJO PASS DRIVE AND CIMARRON PARK DRIVE.
ELEVATION = 3978.53 (EL PASO CITY DATUM)



STREET NAME	NUMBER OF MANHOLES
CIMARRON GAP DRIVE	1
BRIDLE PLACE	1
CIMARRON PARK DRIVE	2
CAVESON COURT	3
CIMARRON RIM DRIVE	9
POMMEL PLACE	1
STIRRUP PLACE	2
BLEVINS PLACE	2

STREET NAME	LENGTH, SIZE, & TYPE OF PIPE
CIMARRON BLUFF LANE	79 FT. OF 8" (SDR35)
BRIDLE PLACE	725 FT. OF 8" (SDR35)
CIMARRON PARK DRIVE	663 FT. OF 8" (SDR35)
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CIMARRON RIM DRIVE	57 FT. OF 8" (C900)
CIMARRON RIM DRIVE	1951 FT. OF 8" (SDR35)
POMMEL PLACE	368 FT. OF 8" (SDR35)
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BLEVINS PLACE	216 FT. OF 8" (SDR35)

SANITARY SEWER NOTES:

1. CONTACT UTILITY COMPANIES FOR EXACT LOCATION OF UNDERGROUND UTILITIES IN THIS AREA BEFORE EXCAVATION.
2. INSTALL A TRENCH SAFETY SYSTEM TO PROVIDE FOR THE SAFE EXCAVATION OF ALL TRENCHES EXCEEDING A DEPTH OF (5') FEET AS PER O.S.H.A. STANDARDS.
3. PROVIDE MANHOLE ADAPTER WHERE P.V.C. PIPE CONNECTS TO MANHOLE
4. P.V.C. PIPES SHALL BE PLACED WITH SELECT BEDDING MATERIAL ALL AROUND.

LEGEND

- R.O.W. LINE
- PROPERTY LINE
- BOUNDARY LINE
- PROPOSED WATER LINE
- EXISTING WATER LINE
- PROPOSED SANITARY SEWER
- EXISTING SANITARY SEWER
- 2-SACK
- GATE VALVE
- FIRE HYDRANT

NO.	DATE	DESCRIPTION	BY
3	03/15/2021	3rd City Submittal	AHO
2	01/22/2021	2nd City Submittal	AHO
1	11/25/2020	1st City Submittal	AHO

WARNING! BEFORE YOU DIG
ANY PROJECT AREA CONTRACTOR SHALL NOTIFY ALL OWNERS OF UNDERGROUND IMPROVEMENTS

Texas811 Know what's below. Call before you dig.

BEFORE YOU DIG - CALL

EL PASO ELECTRIC COMPANY	543-5720
	1-800-542-5555
TEXAS GAS SERVICE	544-6300
TGS EMERGENCY HOTLINE	562-8411/562-2003
AFTER HOURS EMERGENCY (WATER & SEWER)	1-800-351-8333
AFTER HOURS EMERGENCY (EPW)	594-5775
SPECTRUM	775-7414
TEXAS EXCAVATION SAFETY SYSTEM	1-800-344-8377
KINDER-MORGAN EPNG PIPELINES	1-800-238-3764
EL PASO STREETS AND MAINTENANCE	212-0151
EL PASO TRAFFIC SIGNAL STREETS AND MAINTENANCE	transportation@elpasotexas.gov

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03/15/21

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Texas Registered Engineering Firm F-9997
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tel [915] 877.4155
fax [915] 877.4334
www.csaengineers.com

SUBDIVISION
CIMARRON CANYON UNIT TWO SUBDIVISION

SHEET TITLE
SANITARY SEWER COLLECTION PLAN

GOB (DESIGN BY)	1908 (JOB NO.)
GOB-DG-SM (DRAWN BY)	12/20/2019 (DATE OF COMMISSION)
AHO (CHECKED BY)	AS NOTED (SCALE)

SHEET NO. **59**
SHEET SEQUENCE **61** OF **82**

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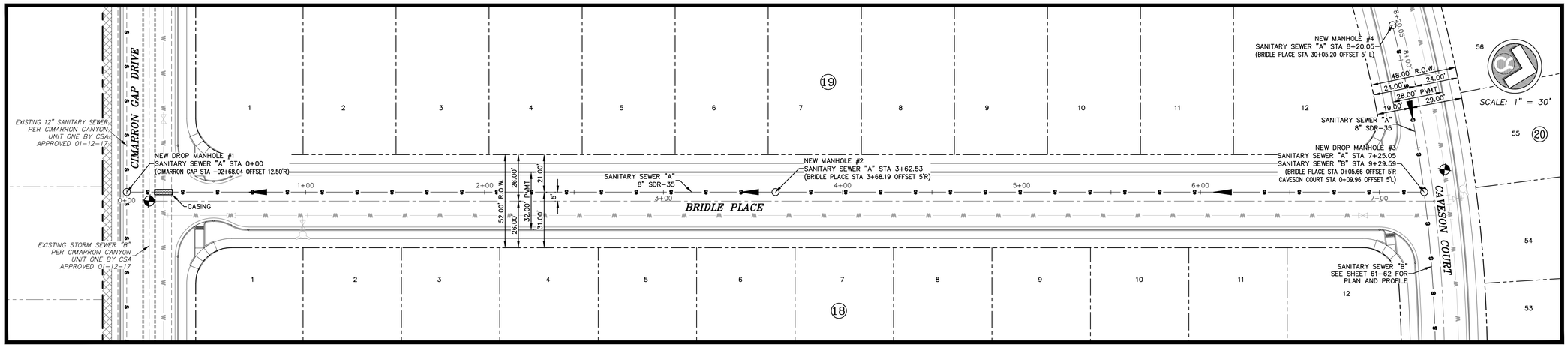
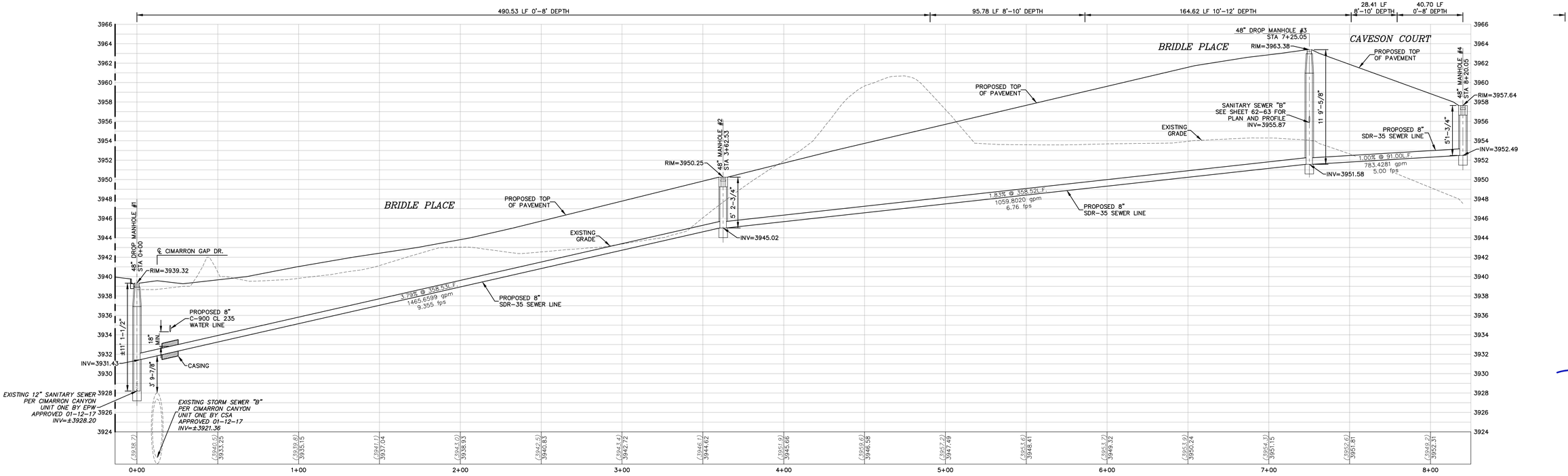
Layouts: Sht 58-59 Sanitary Sewer Collection Plan, Xrefs: Sht 58-59 (Sewer Collection).dwg





SANITARY SEWER "A"

SCALE: 1" = 30' HORIZ.
1" = 5' VERT.

LEGEND

- W — PROPOSED WATER LINE
- S — PROPOSED SANITARY SEWER LINE
- S — EXISTING SANITARY SEWER LINE
- BOUNDARY LINE
- RIGHT-OF-WAY LINE
- STREET CENTERLINE

SEWER NOTES

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

INSTALL A TRENCH SAFETY SYSTEM TO PROVIDE FOR THE SAFE EXCAVATION OF ALL TRENCHES EXCEEDING A DEPTH OF (5') FEET AS PER O.S.H.A. STANDARDS.

PROVIDE MANHOLE ADAPTER WHERE P.V.C. PIPE CONNECTS TO MANHOLE.

P.V.C. PIPE SHALL BE PLACED WITH SELECT BEDDING MATERIAL ALL AROUND.

BENCHMARK: CITY MONUMENT AT THE CENTERLINE INTERSECTION OF BRIDLE PLACE DRIVE AND CIMARRON PARK DRIVE.
ELEVATION = 3978.53 (EL PASO CITY DATUM)

NO.	DATE	DESCRIPTION	BY
3	03/15/2021	3rd City Submittal	AHO
2	01/22/2021	2nd City Submittal	AHO
1	11/25/2020	1st City Submittal	AHO

WARNING! BEFORE YOU DIG IN PROJECT AREA CONTRACTOR SHALL LOCATE EXISTING UNDERGROUND IMPROVEMENTS

Texas 811 Know what's below. Call before you dig.

BEFORE YOU DIG - CALL

EL PASO ELECTRIC COMPANY	543-5720
	1-800-351-3555
TEXAS GAS SERVICE	544-6300
TCI (BROADBAND, WATER & SEWER)	562-8411/562-2603
AFTER HOURS EMERGENCY (EPW)	1-800-592-1065
SPECTRUM	594-5775
KINDER-MORGAN EPNG PIPELINES	775-7414
TEXAS EXCAVATION SAFETY SYSTEM	1-800-344-8377
EL PASO STREETS AND MAINTENANCE	1-800-238-3764
EL PASO TRAFFIC SIGNAL STREETS AND MAINTENANCE	212-0151

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03/15/2021

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tel [915] 877.4155
fax [915] 877.4334
www.csaengineers.com

SUBDIVISION
CIMARRON CANYON UNIT TWO SUBDIVISION

SHEET TITLE
SANITARY SEWER "A" PLAN AND PROFILE

GOB — DESIGN BY	1908 — JOB NO.
GOB-DG-SM — DRAWN BY	12/20/2019 — DATE OF COMMISSION
AHO — CHECKED BY	AS NOTED — SCALE

SHEET NO. 60
SHEET SEQUENCE 62 OF 82

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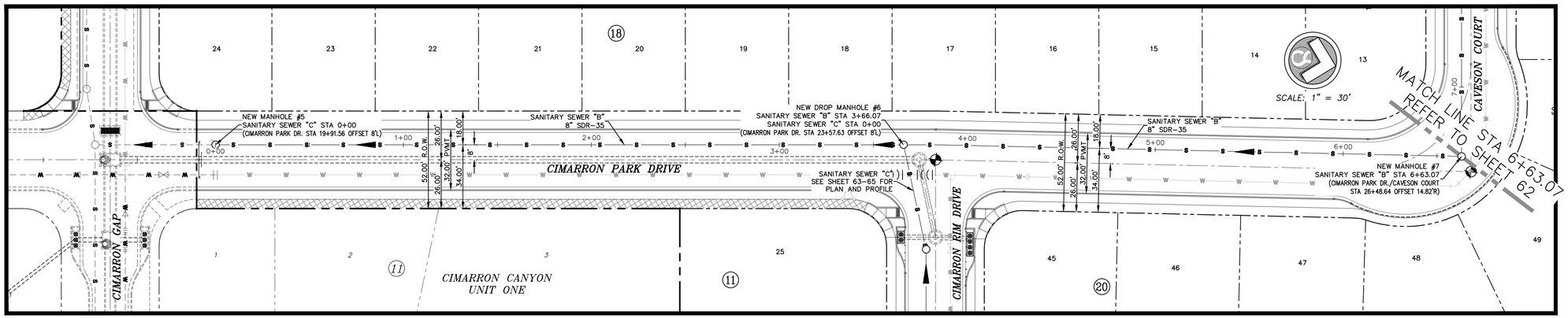
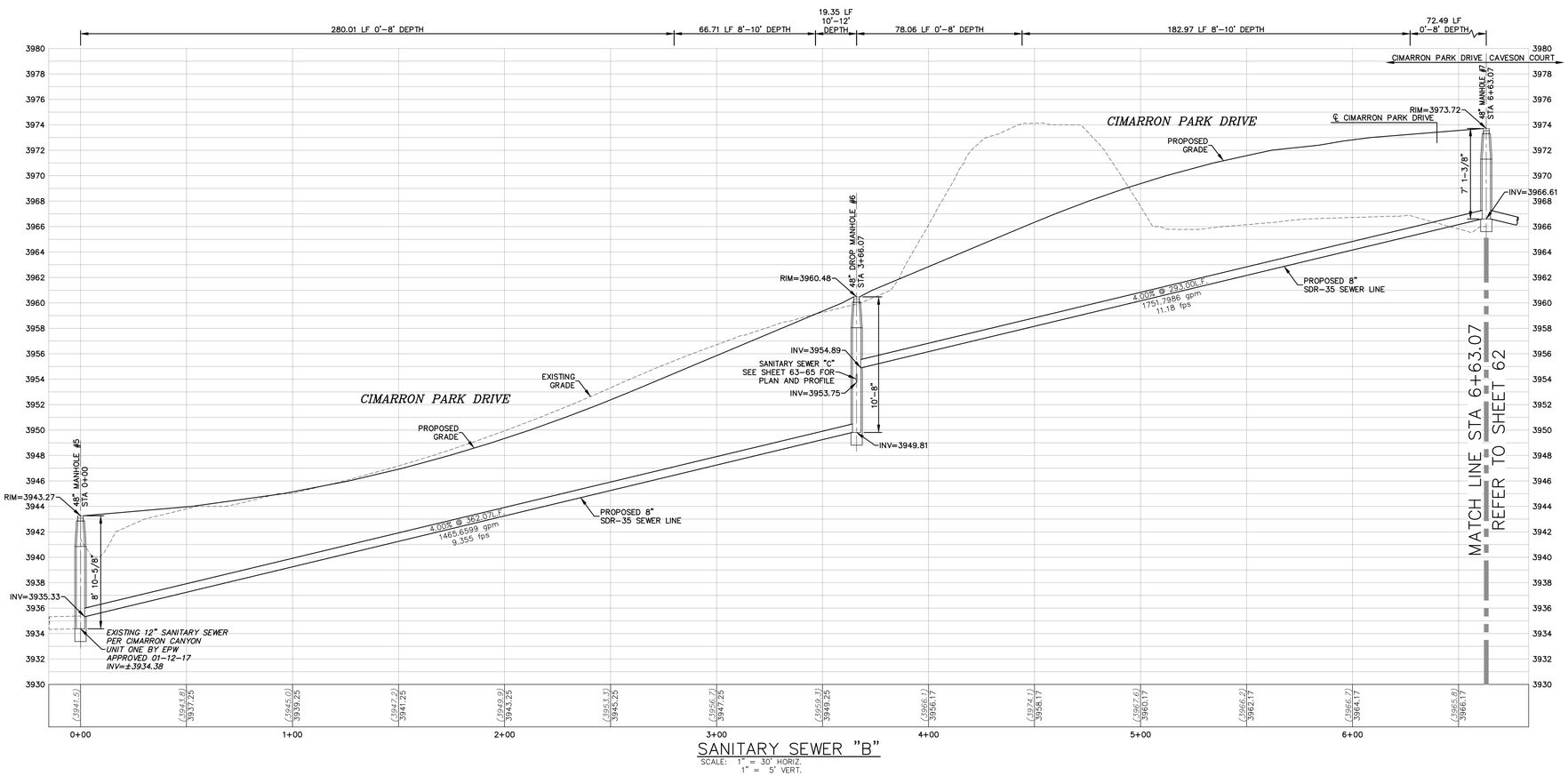
S:\Drawings\1908 Cimarron Canyon Unit Two\1908 3rd Submittal\1908 Sht 60 (Sanitary Sewer A)-dwg
dgstreets





SANITARY SEWER "B"

SCALE: 1" = 30' HORIZ.
1" = 5' VERT.

LEGEND

- W — PROPOSED WATER LINE
- S — PROPOSED SANITARY SEWER LINE
- S — S — EXISTING SANITARY SEWER LINE
- BOUNDARY LINE
- RIGHT-OF-WAY LINE
- STREET CENTERLINE

SEWER NOTES

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

INSTALL A TRENCH SAFETY SYSTEM TO PROVIDE FOR THE SAFE EXCAVATION OF ALL TRENCHES EXCEEDING A DEPTH OF (5') FEET AS PER O.S.H.A. STANDARDS.

PROVIDE MANHOLE ADAPTER WHERE P.V.C. PIPE CONNECTS TO MANHOLE.

P.V.C. PIPE SHALL BE PLACED WITH SELECT BEDDING MATERIAL ALL AROUND.

BENCHMARK: CITY MONUMENT AT THE CENTERLINE INTERSECTION OF CIMARRON PASS DRIVE AND CIMARRON PARK DRIVE.
ELEVATION = 3978.53 (EL PASO CITY DATUM)

NO.	DATE	DESCRIPTION	BY
3	03/15/2021	3rd City Submittal	AHO
2	01/22/2021	2nd City Submittal	AHO
1	11/25/2020	1st City Submittal	AHO

WARNING! BEFORE YOU DIG IN PROJECT AREA CONTRACTOR SHALL LOCATE ALL UNDERGROUND IMPROVEMENTS

Texas 811 Know what's below. Call before you dig.

BEFORE YOU DIG - CALL

EL PASO ELECTRIC COMPANY	543-5720
AT&T	1-800-288-2355
TEXAS GAS SERVICE	1-800-700-2443
TGS EMERGENCY HOTLINE	544-6300
PEBBLE ISSUES (WATER & SEWER)	562-8411/562-2003
AFTER HOURS EMERGENCY (EPW)	1-800-351-1555
	594-5775
SPECTRUM	775-7414
TEXAS EXCAVATION SAFETY SYSTEM	1-800-344-8377
KINDER-MORGAN EPNG PIPELINES	1-800-238-3764
EL PASO STREETS AND MAINTENANCE	212-0151
EL PASO TRAFFIC SIGNAL STREETS AND MAINTENANCE	tlresponse@elpasotexas.gov

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05/15/2021

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El Paso, Texas 79912
tel [915] 877.4155
fax [915] 877.4334
www.csaengineers.com

SUBDIVISION
CIMARRON CANYON UNIT TWO SUBDIVISION

SHEET TITLE
SANITARY SEWER "B" PLAN AND PROFILE

GOB — DESIGN BY	1908 — JOB NO.
GOB-DG-SM — DRAWN BY	12/20/2019 — DATE OF COMMISSION
AHO — CHECKED BY	AS NOTED — SCALE

SHEET NO. 61
SHEET SEQUENCE 63 OF 82

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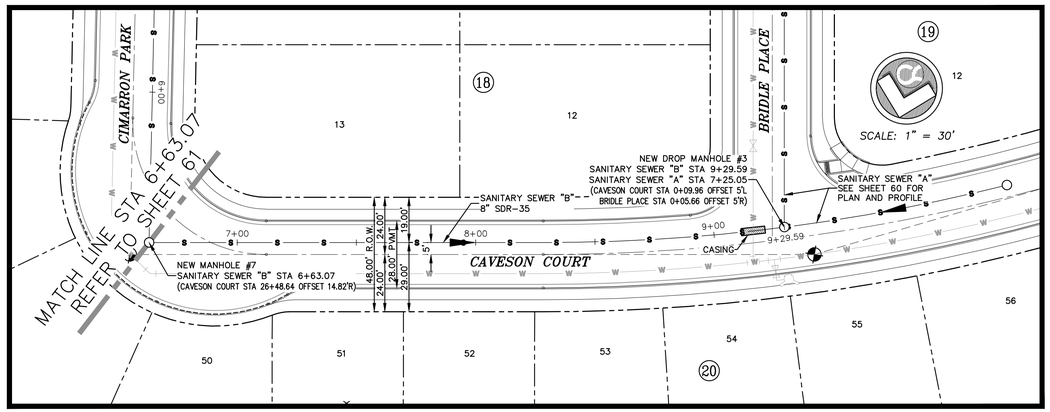
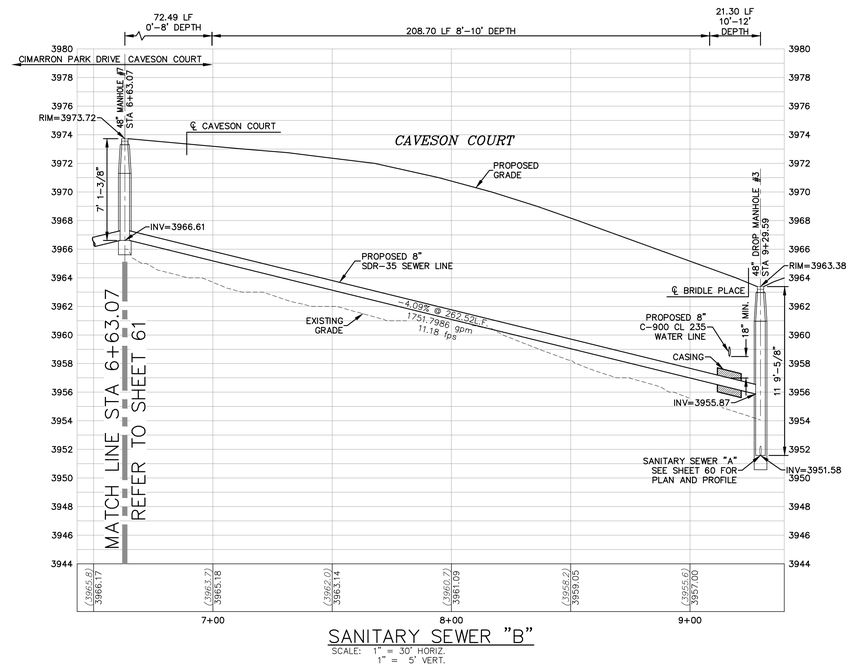
S:\Dwg\1908 Cimarron Canyon Unit Two\1908 3rd Submittal\1908 Sht 61-62 (Sanitary Sewer B).dwg
dgallardo





SANITARY SEWER "B"

SCALE: 1" = 30' HORIZ.
1" = 5' VERT.

LEGEND

W	PROPOSED WATER LINE
S	PROPOSED SANITARY SEWER LINE
S	EXISTING SANITARY SEWER LINE
	BOUNDARY LINE
	RIGHT-OF-WAY LINE
	STREET CENTERLINE

SEWER NOTES

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

INSTALL A TRENCH SAFETY SYSTEM TO PROVIDE FOR THE SAFE EXCAVATION OF ALL TRENCHES EXCEEDING A DEPTH OF (5') FEET AS PER O.S.H.A. STANDARDS.

PROVIDE MANHOLE ADAPTER WHERE P.V.C. PIPE CONNECTS TO MANHOLE.

P.V.C. PIPE SHALL BE PLACED WITH SELECT BEDDING MATERIAL ALL AROUND.

BENCHMARK: CITY MONUMENT AT THE CENTERLINE INTERSECTION OF ARDMORE PASS DRIVE AND CIMARRON PARK DRIVE.
ELEVATION = 3978.53 (EL PASO CITY DATUM)

NO.	DATE	DESCRIPTION	BY
3	03/15/2021	3rd City Submittal	AHO
2	01/22/2021	2nd City Submittal	AHO
1	11/25/2020	1st City Submittal	AHO

WARNING! BEFORE YOU DIG IN PROJECT AREA CONTRACTOR SHALL FIELD LOCATE ALL EXISTING UNDERGROUND IMPROVEMENTS

Texas811 Know what's below. Call before you dig.

BEFORE YOU DIG - CALL

EL PASO ELECTRIC COMPANY	543-5720
AT&T	1-800-ATT-BOYS
TEXAS GAS SERVICE	544-6300
TGS EMERGENCY HOTLINE	562-8411/562-2003
PUBLIC SERVICE BOARD (WATER & SEWER)	1-800-466-0096
AFTER HOURS EMERGENCY (EPW)	594-5775
SPECTRUM	775-7414
TEXAS EXCAVATION SAFETY SYSTEM	1-800-344-8377
KINDER-MORGAN EPNG PIPELINES	1-800-238-3764
EL PASO STREETS AND MAINTENANCE	212-0151
EL PASO TRAFFIC SIGNAL STREETS AND MAINTENANCE	transportation@elpasotexas.gov

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03/15/21

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fax [915] 877.4334
www.csaengineers.com

SUBDIVISION
CIMARRON CANYON UNIT TWO SUBDIVISION

SHEET TITLE
SANITARY SEWER "B" PLAN AND PROFILE

GOB DESIGN BY	1908 JOB NO.
GOB-DG-SM DRAWN BY	12/20/2019 DATE OF CONVERSION
AHO CHECKED BY	AS NOTED SCALE

SHEET NO. **62**
SHEET SEQUENCE **64** OF **82**

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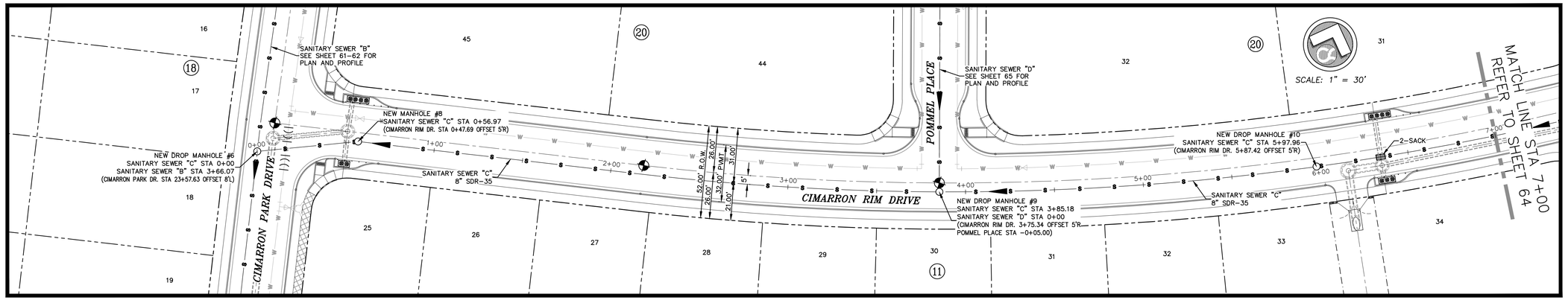
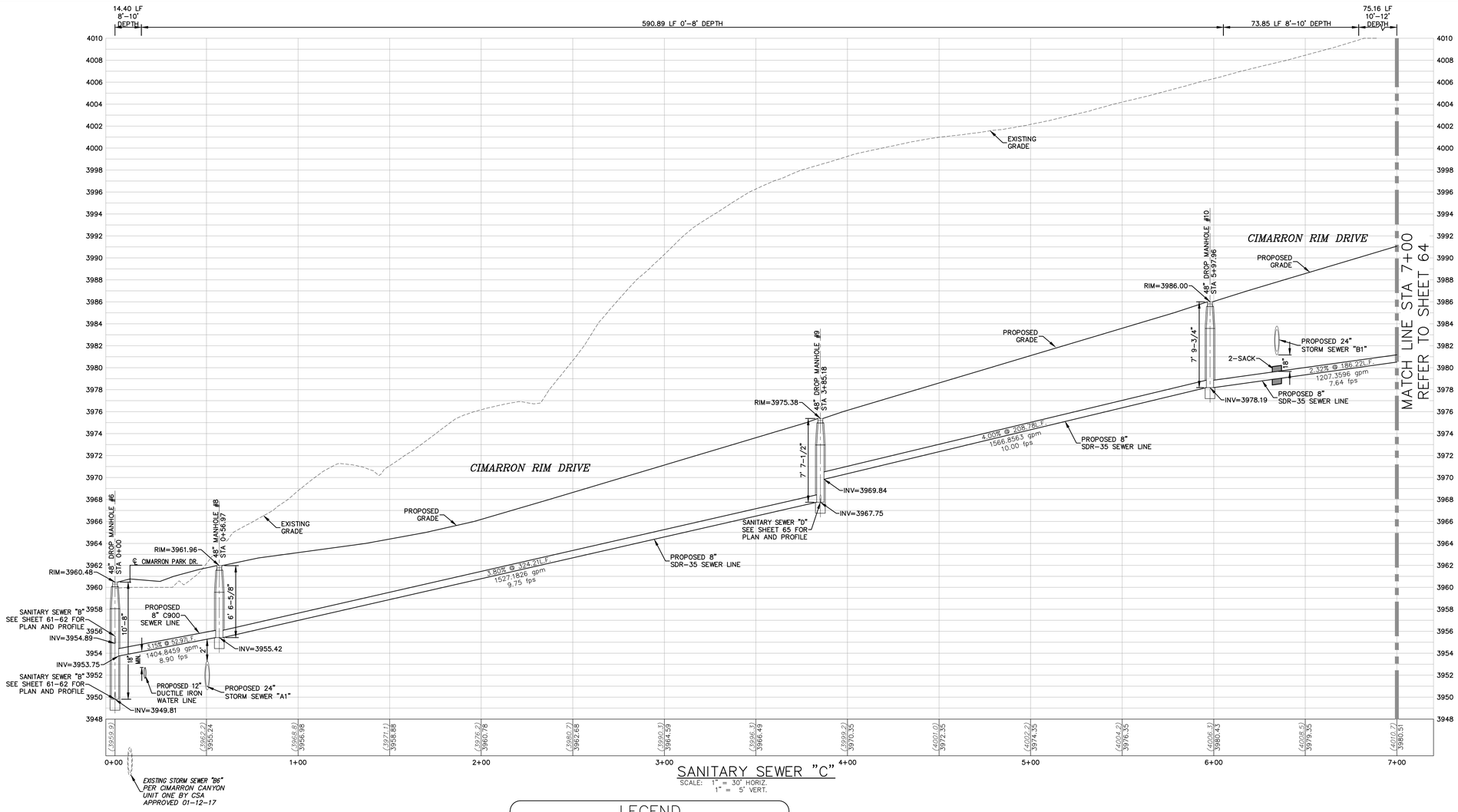
dgolomb





SANITARY SEWER "C"

SCALE: 1" = 30' HORIZ.
1" = 5' VERT.

LEGEND

- W — PROPOSED WATER LINE
- 8 — PROPOSED SANITARY SEWER LINE
- S — S — EXISTING SANITARY SEWER LINE
- BOUNDARY LINE
- RIGHT-OF-WAY LINE
- STREET CENTERLINE

SEWER NOTES

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

INSTALL A TRENCH SAFETY SYSTEM TO PROVIDE FOR THE SAFE EXCAVATION OF ALL TRENCHES EXCEEDING A DEPTH OF (5') FEET AS PER O.S.H.A. STANDARDS.

PROVIDE MANHOLE ADAPTER WHERE P.V.C. PIPE CONNECTS TO MANHOLE.

P.V.C. PIPE SHALL BE PLACED WITH SELECT BEDDING MATERIAL ALL AROUND.

BENCHMARK: CITY MONUMENT AT THE CENTERLINE INTERSECTION OF MONTWOOD DRIVE AND CIMARRON PARK DRIVE.
ELEVATION = 3976.53 (EL PASO CITY DATUM)

NO.	DATE	DESCRIPTION	BY
3	03/15/2021	3rd City Submittal	AHO
2	01/22/2021	2nd City Submittal	AHO
1	11/25/2020	1st City Submittal	AHO

WARNING! BEFORE YOU DIG
IN PROJECT AREA CONTRACTOR
SHALL FIELD LOCATE ALL
UNDERGROUND IMPROVEMENTS

Texas811 Know what's below. Call before you dig.

BEFORE YOU DIG - CALL

EL PASO ELECTRIC COMPANY	543-5720
AT&T	1-800-ONE-CALL
TEXAS GAS SERVICE	544-6300
TGS EMERGENCY HOTLINE	562-8411/562-2003
PUBLIC SERVICE BOARD (WATER & SEWER)	1-800-466-1555
AFTER HOURS EMERGENCY (EPW)	594-5775
SPECTRUM	775-7414
TEXAS EXCAVATION SAFETY SYSTEM	1-800-344-8377
KINDER-MORGAN EPNG PIPELINES	1-800-238-3764
EL PASO STREETS AND MAINTENANCE	212-0151
EL PASO TRAFFIC SIGNAL STREETS AND MAINTENANCE	transportation@elpasotexas.gov

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www.csaengineers.com

SUBDIVISION
CIMARRON CANYON
UNIT TWO
SUBDIVISION

SHEET TITLE
SANITARY SEWER "C" PLAN AND PROFILE

GOB — DESIGN BY	1908 — JOB NO.
GOB-DC-SM — DRAWN BY	12/20/2019 — DATE OF COMMISSION
AHO — CHECKED BY	AS NOTED — SCALE

SHEET NO. 63
SHEET SEQUENCE 65 OF 82

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S:\Dwg\1908 Cimarron Canyon Unit Two\1908 3rd Submittal\1908 SH 61-65 (Sanitary Sewer C&D).dwg
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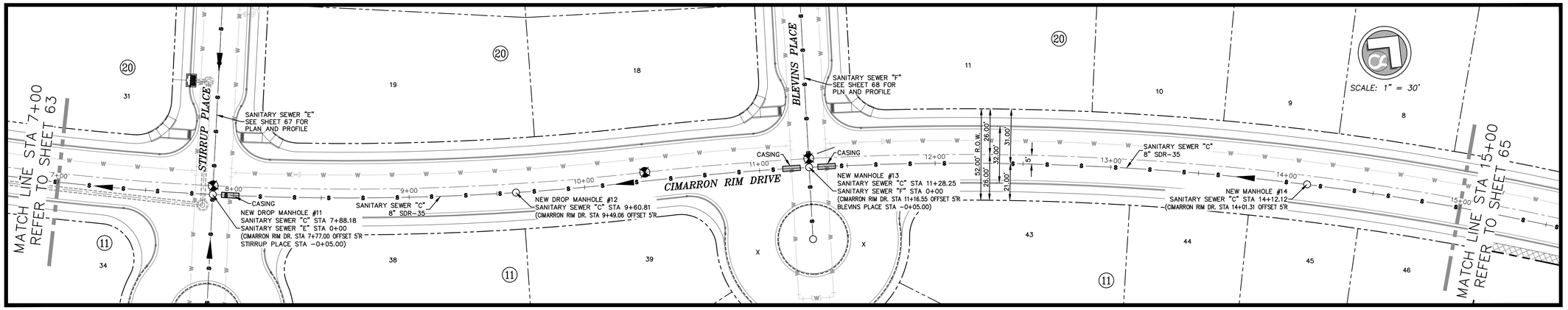

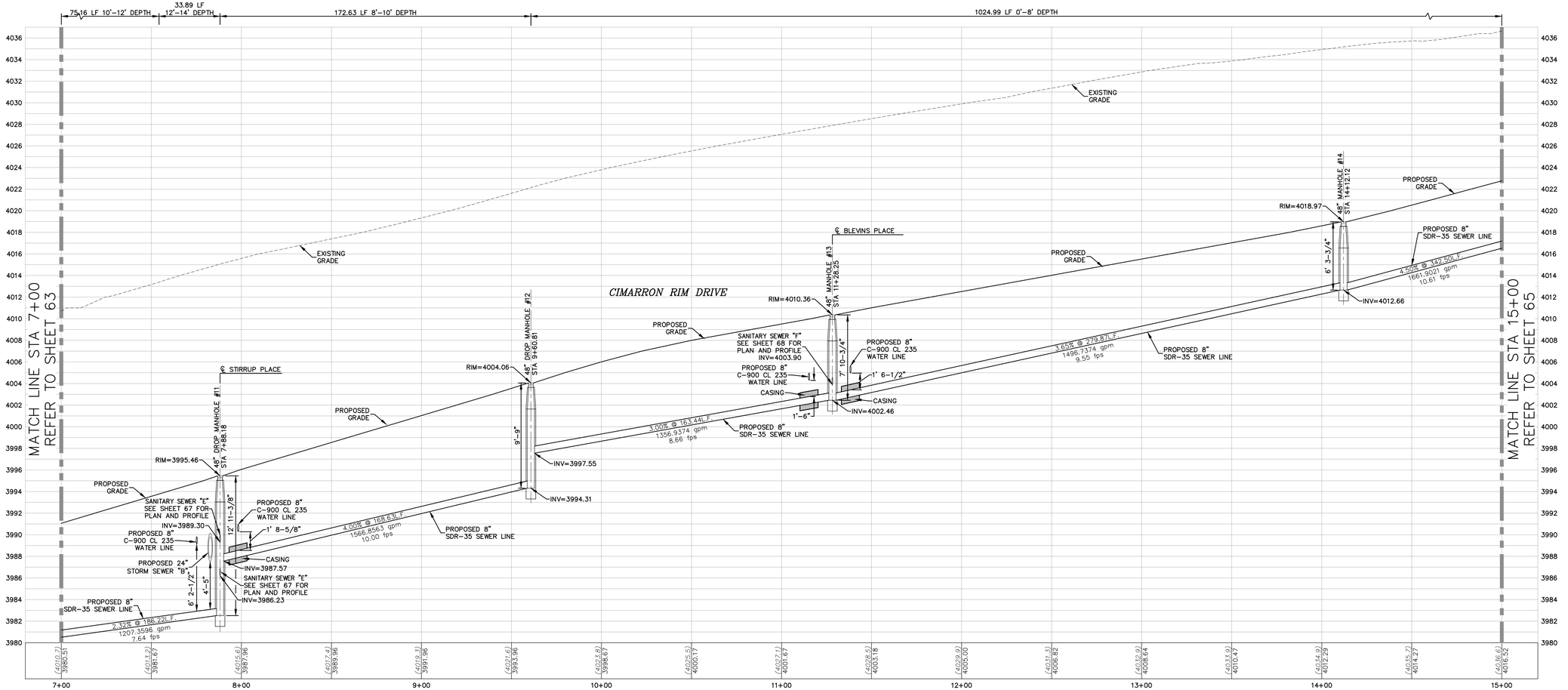

SANITARY SEWER "C"

SCALE: 1" = 30' HORIZ.
1" = 5' VERT.

LEGEND

- W — PROPOSED WATER LINE
- S — PROPOSED SANITARY SEWER LINE
- S — EXISTING SANITARY SEWER LINE
- BOUNDARY LINE
- RIGHT-OF-WAY LINE
- STREET CENTERLINE

SEWER NOTES

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

INSTALL A TRENCH SAFETY SYSTEM TO PROVIDE FOR THE SAFE EXCAVATION OF ALL TRENCHES EXCEEDING A DEPTH OF (5') FEET AS PER O.S.H.A. STANDARDS.

PROVIDE MANHOLE ADAPTER WHERE P.V.C. PIPE CONNECTS TO MANHOLE.

P.V.C. PIPE SHALL BE PLACED WITH SELECT BEDDING MATERIAL ALL AROUND.

BENCHMARK: CITY MONUMENT AT THE CENTERLINE INTERSECTION OF MESA HILLS DRIVE AND CIMARRON PARK DRIVE.
ELEVATION = 3976.53 (EL PASO CITY DATUM)

NO.	DATE	DESCRIPTION	BY
3	03/15/2021	3rd City Submittal	AHO
2	01/22/2021	2nd City Submittal	AHO
1	11/25/2020	1st City Submittal	AHO

WARNING! BEFORE YOU DIG ON PROJECT AREA CONTRACTOR SHALL FIELD LOCATE ALL UNDERGROUND IMPROVEMENTS

Texas811 Know what's below. Call before you dig.

BEFORE YOU DIG - CALL

EL PASO ELECTRIC COMPANY	543-5720
	1-800-540-2555
TEXAS GAS SERVICE	544-6300
TGS EMERGENCY HOTLINE	562-8411/562-2603
EL PASO WATER UTILITIES (WATER & SEWER)	1-800-466-7755
AFTER HOURS EMERGENCY (EPW)	594-5775
SPECTRUM	775-7414
TEXAS EXCAVATION SAFETY SYSTEM	1-800-344-8377
KINDER-MORGAN EPNG PIPELINES	1-800-238-3764
EL PASO STREETS AND MAINTENANCE	212-0151
EL PASO TRAFFIC SIGNAL STREETS AND MAINTENANCE	transportation@elpasotexas.gov

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tel [915] 877.4155
fax [915] 877.4334
www.csaengineers.com

SUBDIVISION
CIMARRON CANYON UNIT TWO SUBDIVISION

SHEET TITLE
SANITARY SEWER "C" PLAN AND PROFILE

GOB — DESIGN BY	1908 — JOB NO.
GOB-GG-SM — DRAWN BY	12/20/2019 — DATE OF SUBMISSION
AHO — CHECKED BY	AS NOTED — SCALE

SHEET NO. 64
SHEET SEQUENCE 66 OF 82

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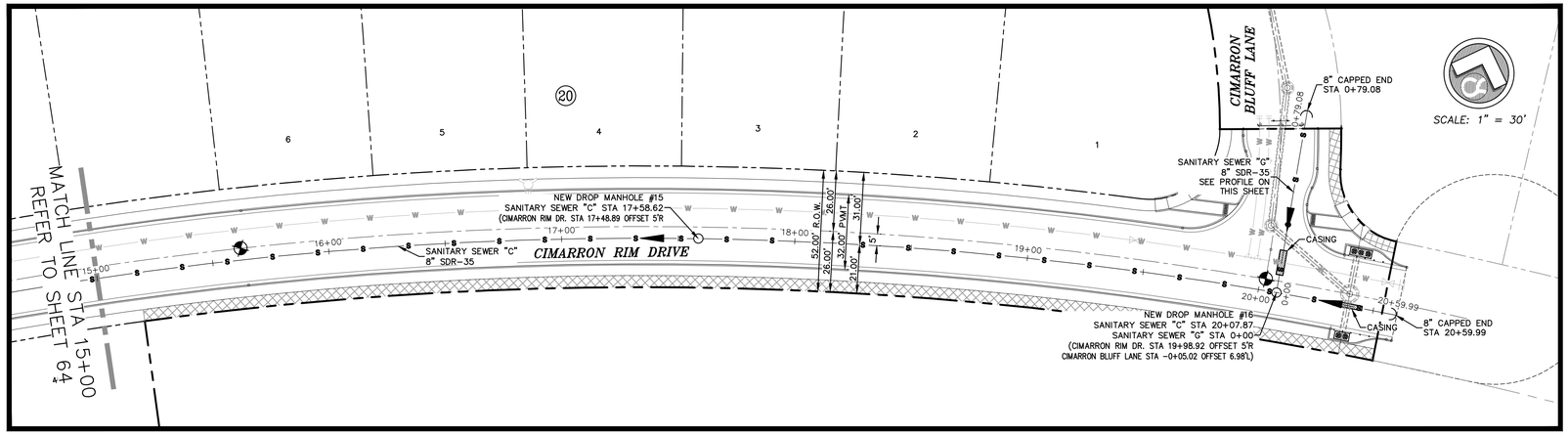
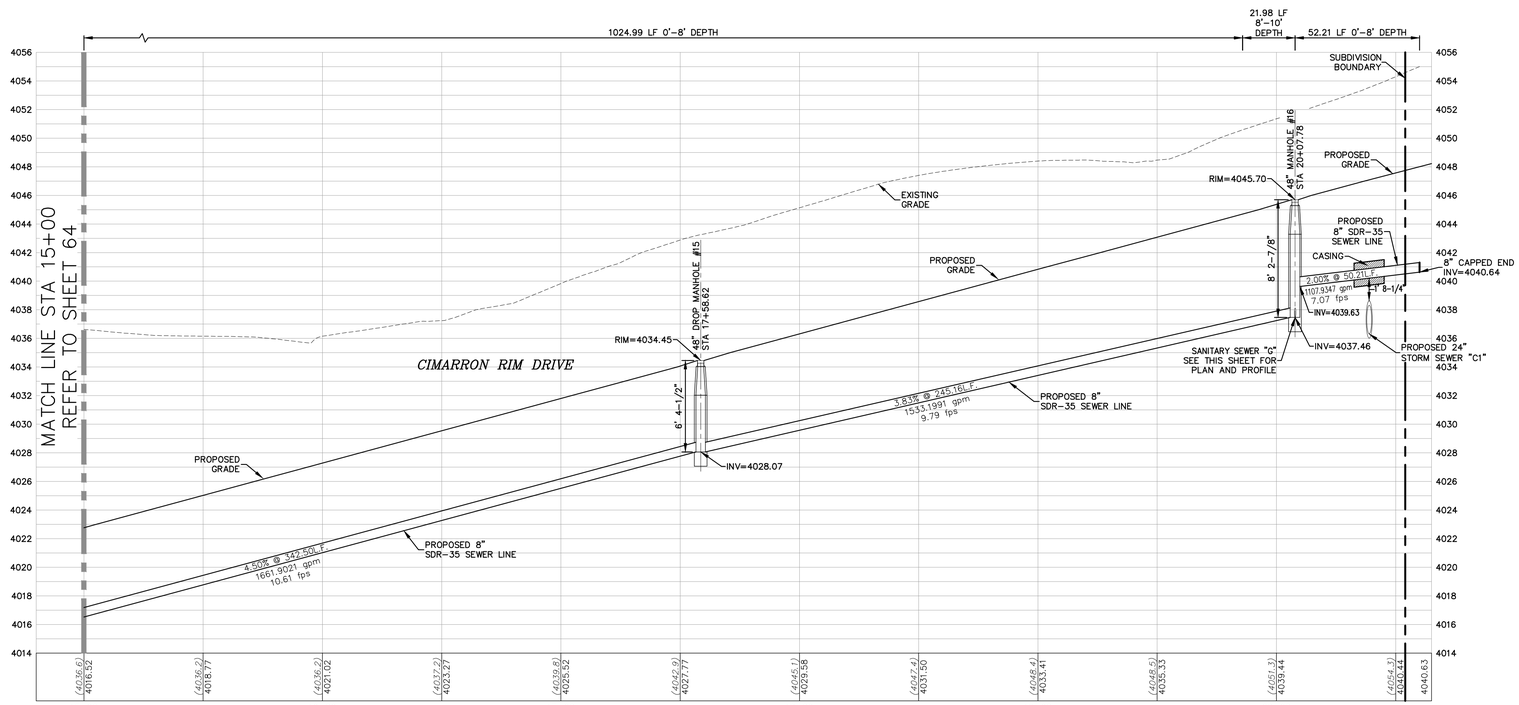
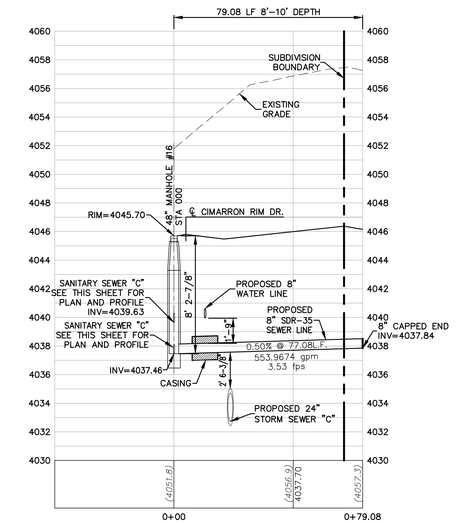
S:\Work\1908 Cimarron Canyon Unit Two\1908 3rd Submittal\1908 SHT 63-65 (Sanitary Sewer C&D).dwg
dgibbons





SANITARY SEWER "C"
SCALE: 1" = 30' HORIZ.
1" = 5' VERT.



SANITARY SEWER "G"
SCALE: 1" = 30' HORIZ.
1" = 5' VERT.

LEGEND

- W — PROPOSED WATER LINE
- S — PROPOSED SANITARY SEWER LINE
- S — S — EXISTING SANITARY SEWER LINE
- BOUNDARY LINE
- RIGHT-OF-WAY LINE
- STREET CENTERLINE

SEWER NOTES

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

INSTALL A TRENCH SAFETY SYSTEM TO PROVIDE FOR THE SAFE EXCAVATION OF ALL TRENCHES EXCEEDING A DEPTH OF (5') FEET AS PER O.S.H.A. STANDARDS.

PROVIDE MANHOLE ADAPTER WHERE P.V.C. PIPE CONNECTS TO MANHOLE.

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BENCHMARK: CITY MONUMENT AT THE CENTERLINE INTERSECTION OF ARMIJO PASS DRIVE AND CIMARRON PARK DRIVE.
ELEVATION = 3978.53 (EL PASO CITY DATUM)

NO.	DATE	DESCRIPTION	BY
3	03/15/2021	3rd City Submittal	AHO
2	01/22/2021	2nd City Submittal	AHO
1	11/25/2020	1st City Submittal	AHO

WARNING! BEFORE YOU DIG
IN PROJECT AREA CONTRACTOR
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UNDERGROUND IMPROVEMENTS

Texas811 Know what's below. Call before you dig.

BEFORE YOU DIG - CALL

EL PASO ELECTRIC COMPANY	543-5720
	1-800-351-1531
TEXAS GAS SERVICE	544-6300
TGS EMERGENCY HOTLINE	562-8411/562-2003
PUBLIC SERVICE BOARD (WATER & SEWER)	1-800-606-6105
AFTER HOURS EMERGENCY (EPW)	594-5775
SPECTRUM	775-7414
TEXAS EXCAVATION SAFETY SYSTEM	1-800-344-8377
KINDER-MORGAN EPNG PIPELINES	1-800-238-3764
EL PASO STREETS AND MAINTENANCE	212-0151
EL PASO TRAFFIC SIGNAL STREETS AND MAINTENANCE	transportation@elpasotexas.gov

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www.csaengineers.com

SUBDIVISION
CIMARRON CANYON
UNIT TWO
SUBDIVISION

SHEET TITLE
SANITARY SEWER "C" & "G" PLAN AND PROFILE

GOB	1908
DESIGN BY	JOB NO.
GOB-DG-SM	12/20/2019
DRAWN BY	DATE OF COMMISSION
AHO	AS NOTED
CHECKED BY	SCALE

SHEET NO.
65
SHEET SEQUENCE
67 OF **82**

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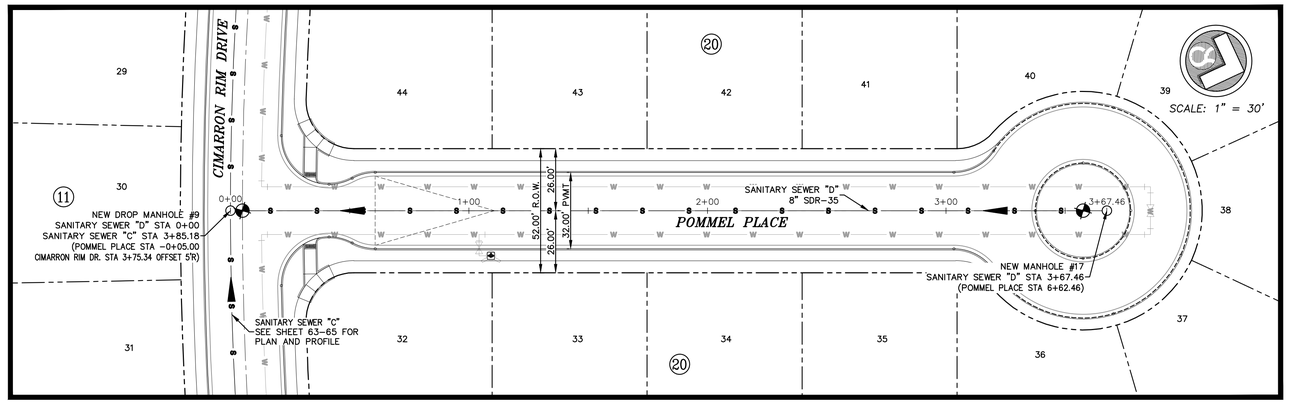
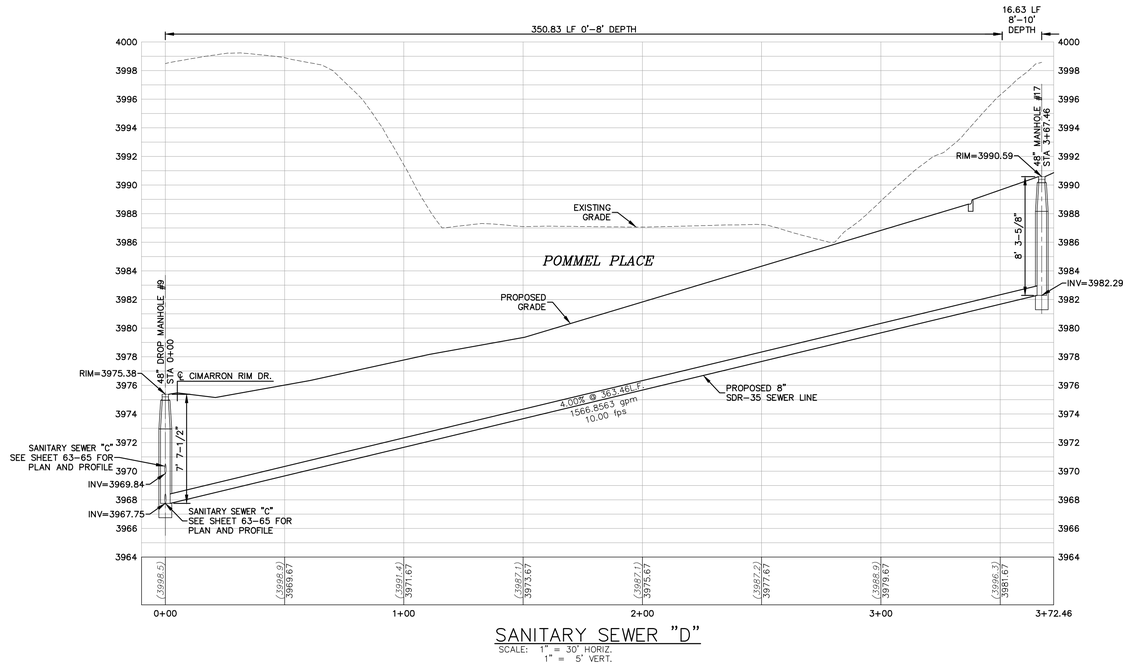
dgilpatrick





SANITARY SEWER "D"

SCALE: 1" = 30' HORIZ.
1" = 5' VERT.

LEGEND

W	PROPOSED WATER LINE
S	PROPOSED SANITARY SEWER LINE
S	EXISTING SANITARY SEWER LINE
	BOUNDARY LINE
	RIGHT-OF-WAY LINE
	STREET CENTERLINE

SEWER NOTES

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PROVIDE MANHOLE ADAPTER WHERE P.V.C. PIPE CONNECTS TO MANHOLE.

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BENCHMARK: CITY MONUMENT AT THE CENTERLINE INTERSECTION OF ARDEN PASS DRIVE AND CIMARRON PARK DRIVE.
ELEVATION = 3978.53 (EL PASO CITY DATUM)

NO.	DATE	DESCRIPTION	BY
3	03/15/2021	3rd City Submittal	AHO
2	01/22/2021	2nd City Submittal	AHO
1	11/25/2020	1st City Submittal	AHO

WARNING! BEFORE YOU DIG
IN PROJECT AREA CONTRACTOR SHALL FIELD LOCATE ALL EXISTING UNDERGROUND IMPROVEMENTS

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BEFORE YOU DIG - CALL

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TEXAS GAS SERVICE	544-6300
TGS EMERGENCY HOTLINE	562-8411/562-2603
PUBLIC SERVICE BOARD (WATER & SEWER)	1-800-466-7745
AFTER HOURS EMERGENCY (EPW)	594-5775
SPECTRUM	775-7414
TEXAS EXCAVATION SAFETY SYSTEM	1-800-344-8377
KINDER-MORGAN EPNG PIPELINES	1-800-238-3764
EL PASO STREETS AND MAINTENANCE	212-0151
EL PASO TRAFFIC SIGNAL STREETS AND MAINTENANCE	transportation@elpasotexas.gov

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fax [915] 877.4334
www.csaengineers.com

SUBDIVISION
CIMARRON CANYON UNIT TWO SUBDIVISION

SHEET TITLE
SANITARY SEWER "D" PLAN AND PROFILE

GOB (DESIGN BY)	1908 (JOB NO.)
GOB-OG-SM (DRAWN BY)	12/20/2019 (DATE OF SUBMISSION)
AHO (CHECKED BY)	AS NOTED (SCALE)

SHEET NO.
66
SHEET SEQUENCE
68 OF 82

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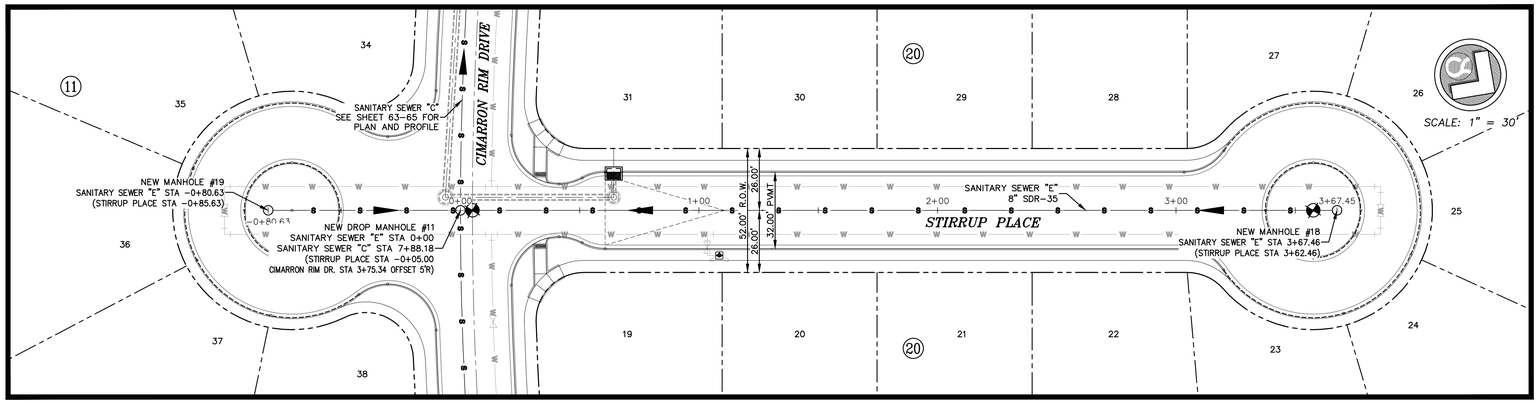
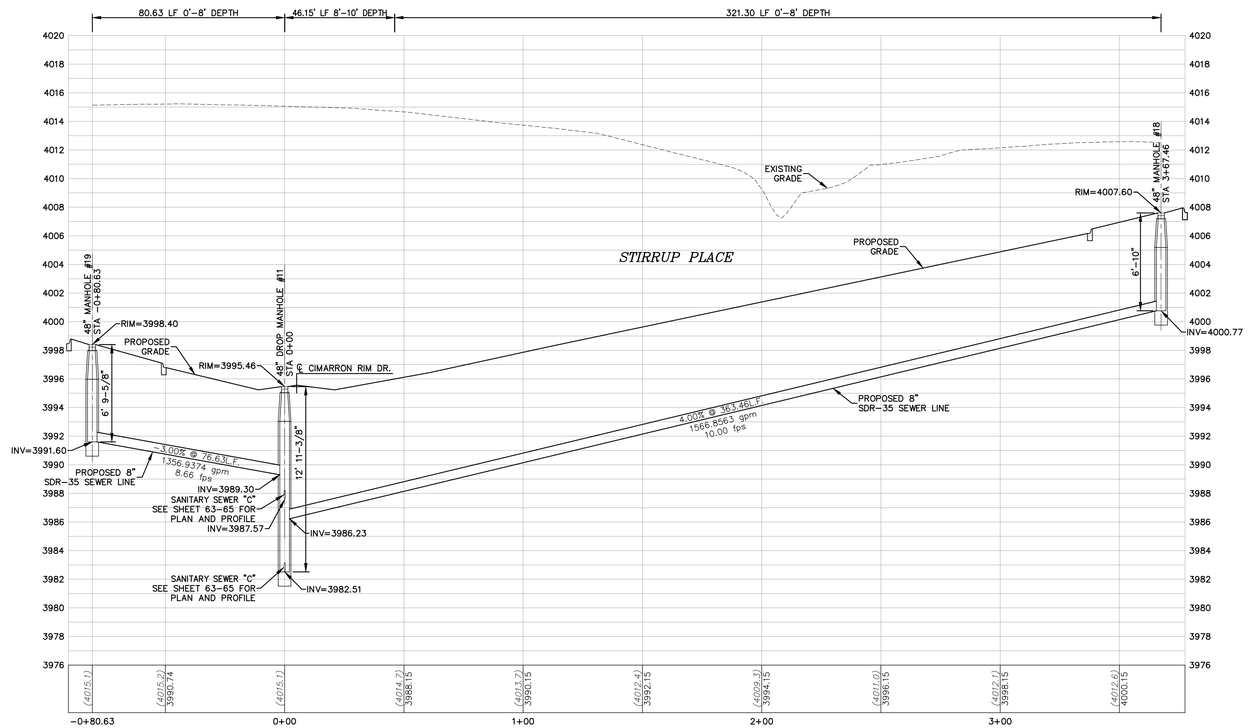
dgallardo





SANITARY SEWER "E"

SCALE: 1" = 30' HORIZ.
1" = 5' VERT.

LEGEND

- W — PROPOSED WATER LINE
- S — PROPOSED SANITARY SEWER LINE
- S — EXISTING SANITARY SEWER LINE
- BOUNDARY LINE
- RIGHT-OF-WAY LINE
- STREET CENTERLINE

SEWER NOTES

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

INSTALL A TRENCH SAFETY SYSTEM TO PROVIDE FOR THE SAFE EXCAVATION OF ALL TRENCHES EXCEEDING A DEPTH OF (5') FEET AS PER O.S.H.A. STANDARDS.

PROVIDE MANHOLE ADAPTER WHERE P.V.C. PIPE CONNECTS TO MANHOLE.

P.V.C. PIPE SHALL BE PLACED WITH SELECT BEDDING MATERIAL ALL AROUND.

BENCHMARK: CITY MONUMENT AT THE CENTERLINE INTERSECTION OF ARDEN PASS DRIVE AND CIMARRON PARK DRIVE.
ELEVATION = 3978.53 (EL PASO CITY DATUM)

NO.	DATE	DESCRIPTION	BY
3	03/15/2021	3rd City Submittal	AHO
2	01/22/2021	2nd City Submittal	AHO
1	11/25/2020	1st City Submittal	AHO

WARNING! BEFORE YOU DIG
IN PROJECT AREA CONTRACTOR
SHALL FIELD LOCATE ALL
UNDERGROUND IMPROVEMENTS

Texas811 Know what's below. Call before you dig.

BEFORE YOU DIG - CALL

EL PASO ELECTRIC COMPANY	543-5720
AT&T	1-800-246-2355
TEXAS GAS SERVICE	544-6300
TGS EMERGENCY HOTLINE	562-8411/562-2603
PUBLIC SERVICE BOARD (WATER & SEWER)	1-800-466-7745
AFTER HOURS EMERGENCY (EPW)	594-5775
SPECTRUM	775-7414
TEXAS EXCAVATION SAFETY SYSTEM	1-800-344-8377
KINDER-MORGAN EPNG PIPELINES	1-800-238-3764
EL PASO STREETS AND MAINTENANCE	212-0151
EL PASO TRAFFIC SIGNAL STREETS AND MAINTENANCE	transportation@elpasotexas.gov

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03/15/2021

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tel [915] 877.4155
fax [915] 877.4334
www.csaengineers.com

SUBDIVISION
CIMARRON CANYON UNIT TWO SUBDIVISION

SHEET TITLE
SANITARY SEWER "E" PLAN AND PROFILE

GOB — DESIGN BY	1908 — JOB NO.
GOB-DG-SM — DRAWN BY	12/20/2019 — DATE OF COMMISSION
AHO — CHECKED BY	AS NOTED — SCALE

SHEET NO. 67
SHEET SEQUENCE 69 OF 82

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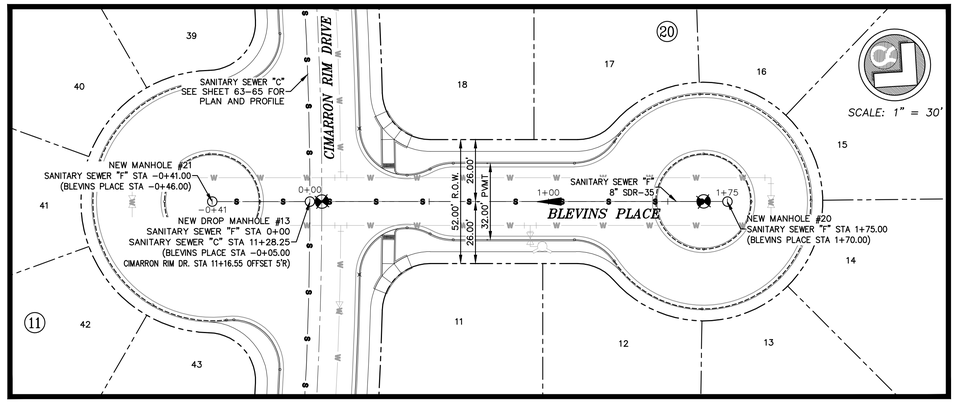
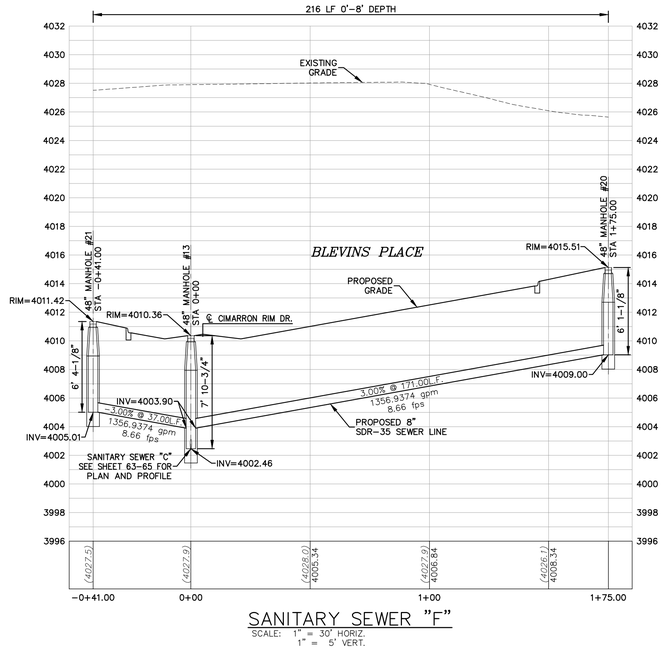
S:\Drawings\1908 Cimarron Canyon Unit Two\1908 3rd Submittal\1908 Sht 67 (Sanitary Sewer E).dwg
dgobando





SANITARY SEWER "F"

SCALE: 1" = 30' HORIZ.
1" = 5' VERT.

LEGEND

W	PROPOSED WATER LINE
S	PROPOSED SANITARY SEWER LINE
S S	EXISTING SANITARY SEWER LINE
	BOUNDARY LINE
	RIGHT-OF-WAY LINE
	STREET CENTERLINE

SEWER NOTES

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P.V.C. PIPE SHALL BE PLACED WITH SELECT BEDDING MATERIAL ALL AROUND.

BENCHMARK: CITY MONUMENT AT THE CENTERLINE INTERSECTION OF NORTHERN PASS DRIVE AND CIMARRON PARK DRIVE.
ELEVATION = 3976.53 (EL PASO CITY DATUM)

NO.	DATE	DESCRIPTION	BY
3	03/15/2021	3rd City Submittal	AHO
2	01/22/2021	2nd City Submittal	AHO
1	11/25/2020	1st City Submittal	AHO

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PDS EMERGENCY HOTLINE	562-8417/962-2003
EL PASO WATER UTILITIES (WATER & SEWER)	594-5555
AFTER HOURS EMERGENCY (EPW)	594-5775
SPECTRUM	775-7414
TEXAS EXCAVATION SAFETY SYSTEM	1-800-344-8377
KINDER-MORGAN EPNG PIPELINES	1-800-238-3764
EL PASO STREETS AND MAINTENANCE	212-0151

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05/15/21

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fax [915] 877.4334
www.csaengineers.com

SUBDIVISION
CIMARRON CANYON
UNIT TWO
SUBDIVISION

SHEET TITLE
SANITARY SEWER "F" PLAN AND PROFILE

GOB — DESIGN BY	1908 — JOB NO.
GOB-DG-SM — DRAWN BY	12/20/2019 — DATE OF SUBMISSION
AHO — CHECKED BY	AS NOTED — SCALE

SHEET NO. **68**
SHEET SEQUENCE **70** OF **82**

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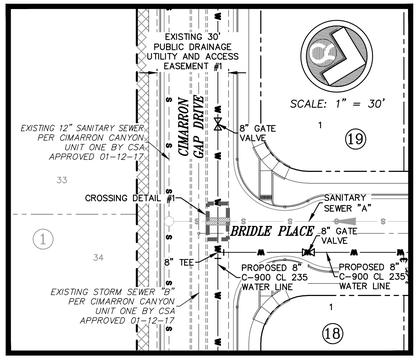
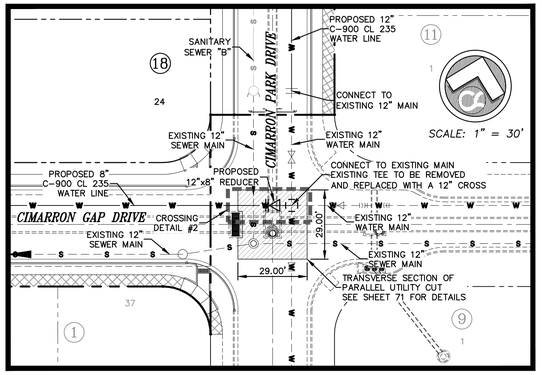
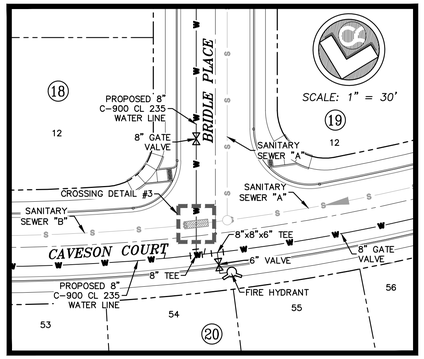
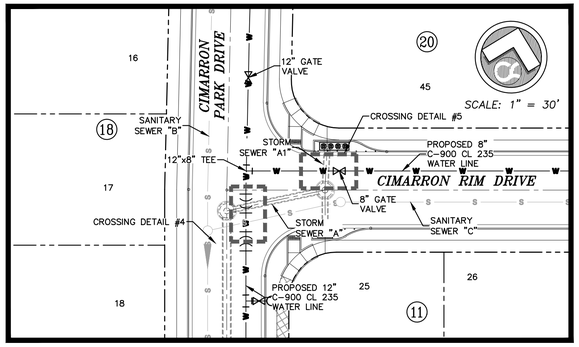
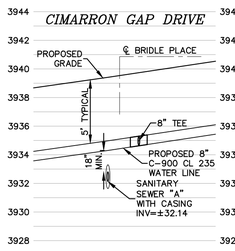
dgallardo



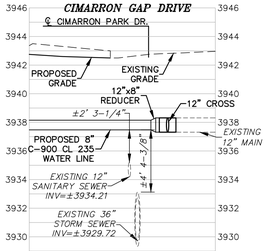




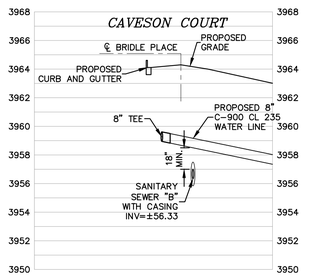




CROSSING DETAIL #1
SCALE: 1" = 30' HORIZ.
1" = 5' VERT.



CROSSING DETAIL #2
SCALE: 1" = 30' HORIZ.
1" = 5' VERT.



CROSSING DETAIL #3
SCALE: 1" = 30' HORIZ.
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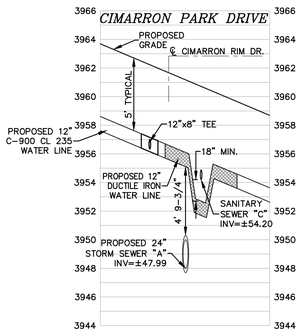
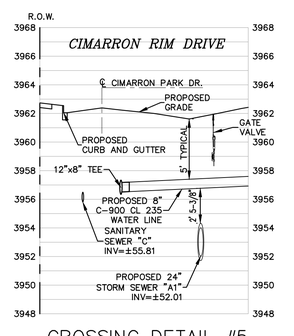
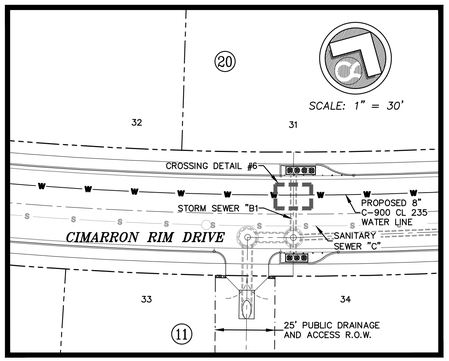
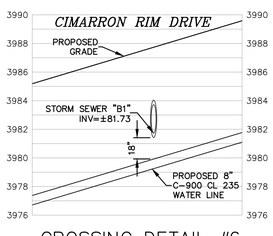


CROSSING DETAIL #4
SCALE: 1" = 30' HORIZ.
1" = 5' VERT.

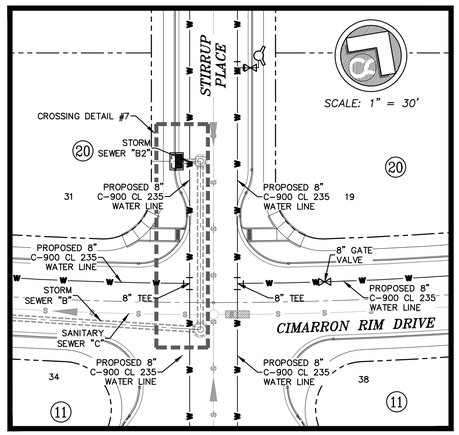


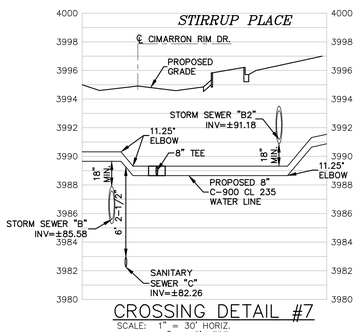
CROSSING DETAIL #5
SCALE: 1" = 30' HORIZ.
1" = 5' VERT.





CROSSING DETAIL #6
SCALE: 1" = 30' HORIZ.
1" = 5' VERT.





CROSSING DETAIL #7
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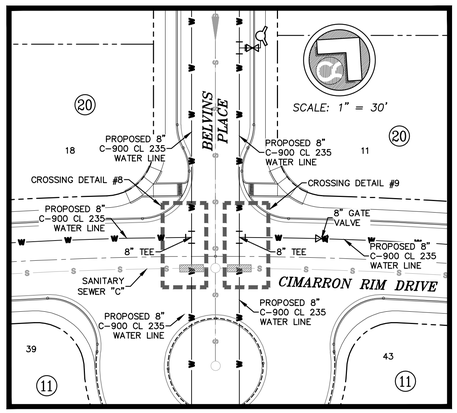

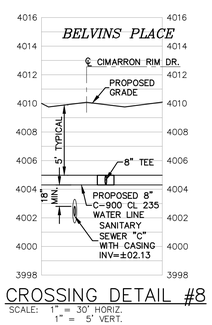

CROSSING DETAIL #8
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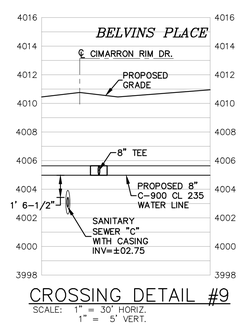
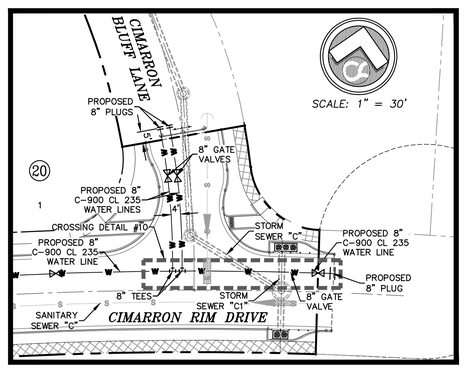
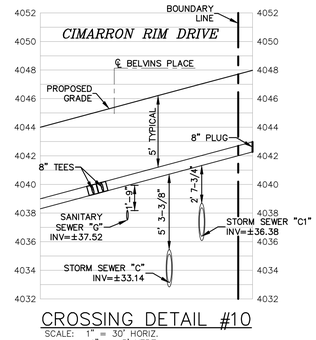
1" = 5' VERT.



CROSSING DETAIL #9
SCALE: 1" = 30' HORIZ.
1" = 5' VERT.





CROSSING DETAIL #10
SCALE: 1" = 30' HORIZ.
1" = 5' VERT.

BENCHMARK: CITY MONUMENT AT THE CENTERLINE INTERSECTION OF CIMARRON PARK DRIVE AND CIMARRON PARK DRIVE.
ELEVATION = 3976.53 (EL PASO CITY DATUM)

NO.	DATE	DESCRIPTION	BY
3	03/15/2021	3rd City Submittal	AHO
2	01/22/2021	2nd City Submittal	AHO
1	11/25/2020	1st City Submittal	AHO

BEFORE YOU DIG - CALL
EL PASO ELECTRIC COMPANY 543-5720
AT&T TELECOM 1-800-344-5555
TEXAS GAS SERVICE 544-6300
TGS EMERGENCY HOTLINE 562-8411/562-2603
EPWU (EL PASO WATER & SEWER) 1-800-592-1555
AFTER HOURS EMERGENCY (EPW) 594-5775
SPECTRUM 775-7414
TOUCH AMERICA EXCAVATION SAFETY SYSTEM 1-800-344-8377
KINDER-MORGAN EPNG PIPELINES 1-800-238-3764
EL PASO STREETS AND MAINTENANCE 212-0151
EL PASO TRAFFIC SIGNAL STREETS AND MAINTENANCE tlresponse@elpasotexas.gov

WARNING! BEFORE YOU DIG IN PROJECT AREA CONTRACTING SHALL NOTIFY ALL KNOWN UNDERGROUND IMPROVEMENTS

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03/15/21
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SUBDIVISION
CIMARRON CANYON UNIT TWO SUBDIVISION

SHEET TITLE
UTILITY CROSSINGS

GOB DESIGN BY	1908 JOB NO.
GOB-DG-SM DRAWN BY	12/20/2019 DATE OF SUBMISSION
AHO CHECKED BY	AS NOTED SCALE

SHEET NO. 69
SHEET SEQUENCE 71 OF 82

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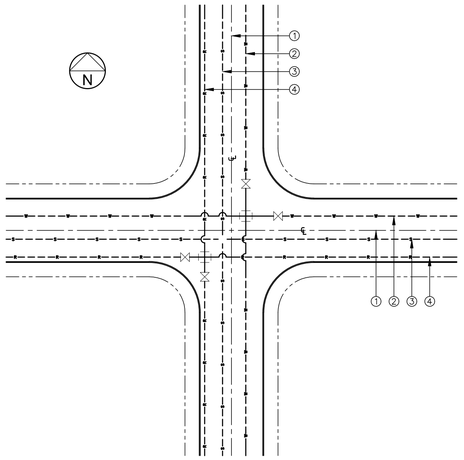
Applicants



GENERAL NOTES:

1. REFERENCE CENTERLINE SHALL BE CENTERLINE OF RIGHT OF WAY.
2. WATER LINES SHALL BE LOCATED ON NORTH OR EAST SIDES OF DEDICATED STREETS OR ALLEYS.
3. SEWER LINES SHALL BE LOCATED ON SOUTH OR WEST SIDES OF DEDICATED STREETS OR ALLEYS.
4. RECLAIMED LINES SHALL BE LOCATED ON SOUTH OR WEST SIDES OF DEDICATED STREETS OR ALLEYS.

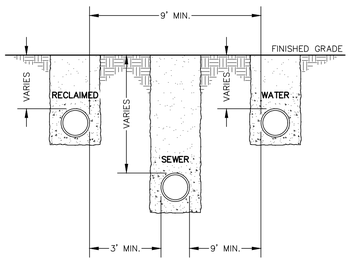
CONSTRUCTION KEY NOTES:

A. DISTANCES FROM CENTERLINE VARY AND SHALL BE ACCORDING TO THE FOLLOWING:

PIPELINE LOCATION WITHIN NEW RIGHT-OF-WAY			
RIGHT-OF-WAY WIDTH*	OFFSET FROM CENTERLINE**		
	WATER	SEWER	RECLAIMED
36 FT.	9 FT.	1 FT.	6 FT.
44 FT.	8 FT.	3 FT.	8 FT.
52 FT.	8 FT.	5 FT.	10 FT.
64 FT.	10 FT.	5 FT.	10 FT.
72 FT.	10 FT.	5 FT.	10 FT.
76 FT.	10 FT.	5 FT.	10 FT.
84 FT.	20 FT.	5 FT.	10 FT.
110 FT.	25 FT.	15 FT.	20 FT.

*RIGHT OF WAY WIDTH SUBJECT TO CHANGE. VERIFY WITH CITY SUBDIVISION ORDINANCE.
**DISTANCES MAY BE MODIFIED AS NEEDED TO MEET TCEQ SEPARATION REQUIREMENTS. REFER TO DETAILS 160 THRU 163 FOR ADDITIONAL INFORMATION.

STANDARD DETAIL	DATE: 03/1994 REV: 3/28/2007	LOCATION FOR UTILITY LINES N.T.S.	el paso WATER	DETAIL No. 140

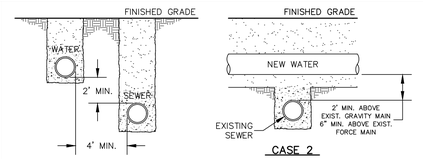


SECTION

GENERAL NOTES:

1. SEPARATION DISTANCES SHALL FOLLOW TEXAS COMMISSION ON ENVIRONMENTAL QUALITY STANDARD REQUIREMENTS.
2. MINIMUM SEPARATION DISTANCES SHOWN. IF CONDITIONS DO NOT ALLOW FOR INDICATED DISTANCES REFER TO DETAILS 161, 162 & 163.
3. RECLAIMED WATER LINE AT OR ABOVE SEWER LINE.

STANDARD DETAIL	DATE: 8/3/2006 REV: 3/28/2007	SEPARATION DISTANCE POTABLE WATER, SANITARY SEWER AND RECLAIMED WATER N.T.S.	el paso WATER	DETAIL No. 160



GENERAL NOTES:

1. NEW OR EXISTING POTABLE WATER AND SANITARY SEWER MAINS.
2. SEPARATION DISTANCES SHALL FOLLOW TEXAS COMMISSION ON ENVIRONMENTAL QUALITY STANDARD REQUIREMENTS.

CONSTRUCTION KEY NOTES

WHEN STANDARD NINE (9) FOOT SEPARATION DISTANCE CANNOT BE ACHIEVED, SEPARATION SHALL BE DETERMINED ACCORDING TO THE FOLLOWING CONDITIONS:

CASE 1, GRAVITY SANITARY SEWER MAIN OR FORCE MAIN PARALLEL TO POTABLE WATER MAIN (PER TCEQ §290.44(e)(4)(A)).
- LOCATION: WATER ABOVE SEWER OR FORCE MAIN.
- SEWER MATERIALS: EXISTING GRAVITY MAIN (PVC SDR35 OR CLAY) OR FORCE MAIN TO REMAIN IF NOT LEAKING-IF LEAKING, MUST BE REPLACED WITH PVC (150 PSI) OR DI. NEW GRAVITY MAIN OR FORCE MAIN REQUIRES PVC (150 PSI) OR DI.
- SEPARATE TRENCHES SHALL BE USED.

CASE 2, NEW POTABLE WATER MAIN CROSSING EXISTING GRAVITY SANITARY SEWER MAIN OR EXISTING FORCE MAIN (PER TCEQ §290.44(e)(4)(B)(i) AND §290.44(e)(4)(B)(vi)).
- LOCATION: WATER ABOVE SEWER OR FORCE MAIN.
- SEWER MATERIALS: EXISTING GRAVITY MAIN (PVC SDR35 OR CLAY) OR FORCE MAIN TO REMAIN IF NOT LEAKING-IF LEAKING, REPLACE ONE PIPE SEGMENT PER CASE 3 REQUIREMENTS.
- CENTER ONE SEGMENT OF WATER PIPE OVER SEWER MAIN OR FORCE MAIN.
- MINIMUM PIPE SEGMENT LENGTH FOR WATER PIPE SHALL BE 18 FEET LONG.

CASE 3, NEW POTABLE WATER MAIN CROSSING NEW GRAVITY SANITARY SEWER MAIN OR NEW FORCE MAIN. (PER TCEQ §290.44(e)(4)(B)(iii), §290.44(e)(4)(B)(v) AND §290.44(e)(4)(B)(vii)).
- LOCATION: WATER ABOVE SEWER OR FORCE MAIN.
- SEWER MATERIALS: NEW GRAVITY MAIN - PVC (150 PSI) or DI REQUIRED, CENTER UNDER WATER MAIN. NEW FORCE MAIN - PVC (150PSI) OR DI REQUIRED, FORCE MAIN TO BE EMBEDDED IN CEMENT STABILIZED BACKFILL THE TOTAL LENGTH OF ONE PIPE PLUS 12" BEYOND THE JOINT AT EACH END.
- CENTER ONE SEGMENT OF WATER PIPE OVER SEWER PIPE OR FORCE MAIN.
- MINIMUM PIPE SEGMENT LENGTH FOR WATER AND SEWER SHALL BE 18 FEET LONG.
- FOR NEW GRAVITY SEWER ONLY, IN LIEU OF PVC (150PSI) OR DI, INSTALL ONE PIPE SEGMENT OF SDR35. SEWER MAIN MUST BE EMBEDDED IN CEMENT STABILIZED BACKFILL THE TOTAL LENGTH OF ONE PIPE PLUS 12" BEYOND THE JOINT AT EACH END.

CASE 4, NEW POTABLE WATER MAIN CROSSING NEW GRAVITY SANITARY SEWER MAIN OR NEW FORCE MAIN. (PER TCEQ §290.44(e)(4)(B)(iv)(II)).
- LOCATION: WATER ABOVE SEWER OR FORCE MAIN.
- SEWER MATERIALS: NEW GRAVITY MAIN - SDR35 ACCEPTABLE, NEW FORCE MAIN - PVC (150PSI) OR DI REQUIRED, IN ADDITION, SEWER MAIN OR FORCE MAIN MUST BE ENCASED IN DI OR STEEL, TWO NOMINAL SIZES LARGER THAN MAIN AND AT LEAST 18 FEET LONG.
- CENTER CASING PIPE ON WATER MAIN.

CASE 5, NEW GRAVITY SANITARY SEWER MAIN OR NEW FORCE MAIN CROSSING NEW POTABLE WATER MAIN (PER TCEQ §290.44(e)(4)(B)(iv)(III)).
- LOCATION: SEWER OR FORCE MAIN ABOVE WATER.
- NEW GRAVITY MAIN OR FORCE MAIN REQUIRES ONE PIPE SEGMENT OF PVC (150 PSI) OR DI. IN ADDITION, WATER MUST BE DI OR STEEL OR ENCASED IN DI OR STEEL, TWO NOMINAL SIZES LARGER THAN MAIN AND AT LEAST 18 FEET LONG.
- CENTER ONE SEGMENT OF SEWER PIPE ON WATER MAIN.

STANDARD DETAIL	DATE: 8/3/2006 REV: 8/21/2007	SEPARATION DISTANCE SANITARY SEWER AND POTABLE WATER (SPECIAL CONDITIONS) N.T.S.	el paso WATER	DETAIL No. 161

BENCHMARK: CITY MONUMENT AT THE CENTERLINE INTERSECTION OF MONTWOOD DRIVE AND CIMARRON PARK DRIVE.
ELEVATION = 3976.53 (EL PASO CITY DATUM)

NO.	DATE	DESCRIPTION	BY
3	03/15/2021	3rd City Submittal	AHO
2	01/22/2021	2nd City Submittal	AHO
1	11/25/2020	1st City Submittal	AHO

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SPECTRUM	775-7414
TEXAS EXCAVATION SAFETY SYSTEM	1-800-344-8377
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03/15/2021

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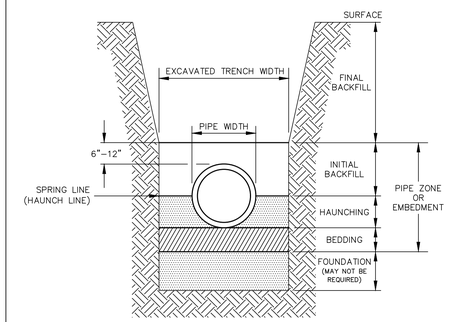
SUBDIVISION
CIMARRON CANYON UNIT TWO SUBDIVISION

SHEET TITLE
UTILITY DETAILS

GOB DESIGN BY	1908 JOB NO.
GOB-DG-SM DRAWN BY	12/20/2019 DATE OF COMMISSION
AHO CHECKED BY	AS NOTED SCALE

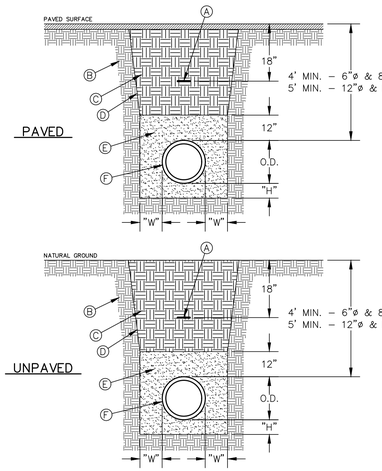
SHEET NO. 70
SHEET SEQUENCE 72 OF 82



GENERAL NOTES:

1. DETAIL DRAWING TERMINOLOGY IS IN ACCORDANCE WITH ASTM D-2321.
2. UNLESS OTHERWISE PERMITTED BY THE ENGINEER, ALL MATERIAL IN THE EMBEDMENT ZONE SHALL BE HOMOGENOUS.

STANDARD DETAIL	DATE: 11/1992 REV: 3/28/2007	TRENCH CROSS SECTION TERMINOLOGY N.T.S.	el paso WATER	DETAIL No. 170



GENERAL NOTES:

1. BEDDING FOR PRESSURE AND GRAVITY PIPE IN DRY CONDITIONS.
2. PROVIDE TRENCH SAFETY SYSTEM FOR TRENCH DEPTHS GREATER THAN 5 FEET.
3. IF THE NATIVE MATERIAL EXCAVATED FROM THE TRENCH IS UNSUITABLE AS BACKFILL MATERIAL, OR THE REQUIRED COMPACTION IS UNATTAINABLE, THE CONTRACTOR SHALL, AT HIS EXPENSE, IMPORT SELECT MATERIAL TO BE MIXED WITH OR USED IN PLACE OF THE NATIVE MATERIAL. SELECT MATERIAL MUST BE APPROVED BY EPWU. SUBSTITUTE SOIL CEMENT SLURRY (1-SACK) IF REQUIRED IN SPECS.

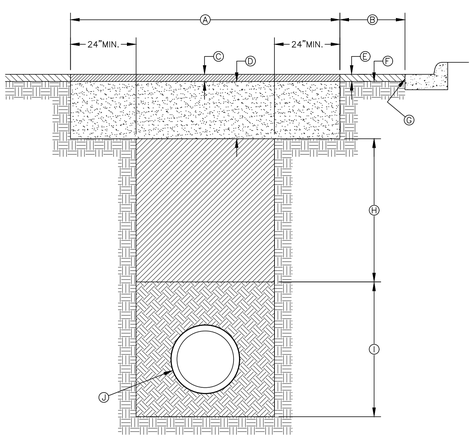
CONSTRUCTION KEY NOTES:

A. APPROVED MARKING TAPE.
B. UNDISTURBED STABLE MATERIAL.
C. NATIVE MATERIAL BACKFILL.
PAVED CONDITION: COMPACT TO 90% DENSITY PER ASTM D-1557 MODIFIED PROCTOR.
UNPAVED CONDITION: COMPACT TO 85% DENSITY PER ASTM D-1557 MODIFIED PROCTOR.
(*SEE NOTE #3 IF THESE PREVIOUS CONDITIONS CANNOT BE MET.)
D. SLOPE TRENCH IN SANDY SOIL CONDITIONS.
E. USE CLASS II OR CLASS III SAND PER ASTM D-2487. NATIVE MATERIAL OR IMPORTED SELECT MATERIAL MEETING OR EXCEEDING THIS REQUIREMENT MAY BE USED. COMPACT TO 85% DENSITY PER ASTM D-1557 MODIFIED PROCTOR (OR 90% D-698 STANDARD PROCTOR).
F. APPROVED PIPE.
G. TRENCH DIMENSIONS AS FOLLOWS:

PIPE DIAMETER	"H"
6" - 30"	4"
GREATER THAN 30"	6"

PIPE DIAMETER	"W"
6" - 30"	8"
GREATER THAN 30"	12"

STANDARD DETAIL	DATE: 4/24/2007 REV: 2/21/2011	EMBEDMENT CLASS "A" FOR PRESSURE PIPE AND GRAVITY PIPE DRY CONDITIONS N.T.S.	el paso WATER	DETAIL No. 171



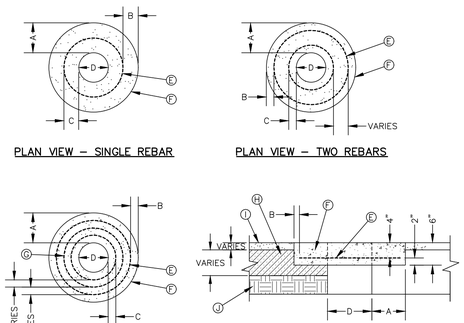
GENERAL NOTES:

1. ALL ASPHALT CUTS MUST BE SAW CUT.
2. SOIL CEMENT SLURRY SHALL BE ALLOWED TO CURE BEFORE PAVING OR OPENING TO ALL TRAFFIC.

CONSTRUCTION KEY NOTES:

A. REFER TO SPECS FOR LIMIT OF PAVING WIDTH.
B. DIMENSION VARIES. WHERE GUTTER FACE, ETC. IS WITHIN 3' OF SAW CUT EDGE, CONTRACTOR SHALL REMOVE & REPLACE EXISTING HMAC IN THIS AREA.
C. 2" ASPHALT MIN.
D. 12" THICK SOIL CEMENT BACKFILL (2 SACK PER C.Y. OF SOIL).
E. EXISTING HMAC-THICKNESS MAY VARY.
F. EXISTING BASE COURSE-THICKNESS MAY VARY.
G. EXISTING GUTTER FACE, EDGE OF PAVEMENT OR BEGINNING OF SHOULDER.
H. BACKFILL DEPTH VARIES, REFER TO REQUIREMENTS LISTED IN EMBEDMENT DETAILS (DETAIL 171 THRU DETAIL 173).
I. PIPE BEDDING AS SPECIFIED, REFER TO APPROPRIATE EMBEDMENT DETAIL (DETAIL 171 THRU DETAIL 173).
J. APPROVED PIPE.

STANDARD DETAIL	DATE: 10/1992 REV: 5/9/2011	PAVEMENT REPLACEMENT N.T.S.	el paso WATER	DETAIL No. 179



GENERAL NOTES:

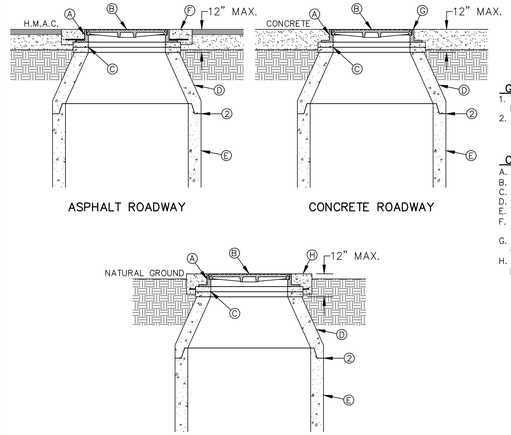
1. THE CONCRETE COLLAR SHOULD BE CAST IN-PLACE CONCRETE. (MINIMUM 28 DAY COMPRESSIVE STRENGTH 4000 PSI. HIGH EARLY CONCRETE IS REQUIRED)
2. TOPS OF CONCRETE COLLAR SHALL BE FLUSH WITH ROADWAY SURFACE OR FINISHED GRADE UNLESS OTHERWISE SPECIFIED BY THE ENGINEER.
3. ANY DISTURBED SUBGRADE UNDER THE CONCRETE COLLAR SHALL BE COMPACTED TO 95% DENSITY ± 3% OPTIMUM MOISTURE CONTENT IN ACCORDANCE WITH ASTM D-1557.
4. ANY DISTURBED BASE COARSE UNDER THE CONCRETE COLLAR SHALL BE COMPACTED TO 100% DENSITY ± 2% OPTIMUM MOISTURE CONTENT IN ACCORDANCE WITH ASTM D-1557.
5. PROVIDE A MINIMUM OF 1 1/2" OF CONCRETE COVER FOR ALL REINFORCEMENT STEEL.
6. REINFORCING SHALL MEET ASTM C-478 AND TRAFFIC LOADING (HS-20).
7. NO. 3 REINFORCING STEEL HOOPS SHALL BE SPACED EQUALLY.

CONSTRUCTION KEY NOTES:

E. #3 REINFORCING STEEL TYP.
F. CONCRETE COLLAR.
G. #3 REINFORCING STEEL EQUALLY SPACED.
H. COMPACTED BASE COARSE.
I. PAVEMENT.
J. COMPACTED SUBGRADE.

"D" DIAMETER OF PENETRATION	NUMBER OF #3 REINFORCING STEEL BARS	"A" MINIMUM CONCRETE HORIZONTAL DIMENSION FROM PENETRATION	"B" MINIMUM CLEARANCE FROM EDGE OF CONCRETE COLLAR TO CENTER OF NEAREST REBAR	"C" MINIMUM CLEARANCE FROM PENETRATION EDGE TO CENTER OF NEAREST REBAR
0" TO 6"	1	6"	1½"	4½"
6.1" TO 18"	2	6"	1½"	1½"
18.1" AND OVER	3	9"	1½"	1½"

STANDARD DETAIL	DATE: 8/9/2006 REV: 11/6/2008	CONCRETE COLLAR INSTALLATION IN PAVED AREAS N.T.S.	el paso WATER	DETAIL No. 184-1



GENERAL NOTES:

1. MANHOLE TYPE SHALL BE AS SHOWN ON THE PLANS.
2. SEAL JOINTS PER SPECIFICATIONS.

CONSTRUCTION KEY NOTES:

A. MANHOLE RING (SEE DETAIL 377).
B. MANHOLE COVER (SEE DETAIL 378).
C. CONCRETE ADJUSTMENT RINGS AS REQUIRED.
D. MANHOLE CONE SECTION.
E. MANHOLE BARREL SECTION.
F. CONCRETE COLLAR (SEE DETAIL 184-1) FLUSH WITH TOP OF H.M.A.C.
G. MANHOLE RING FLUSH WITH TOP OF CONCRETE, CONCRETE COLLAR NOT NEEDED.
H. CONCRETE APRON (SEE DETAIL 184-2) FLUSH WITH MANHOLE RING AND 2" ABOVE NATURAL GROUND.

STANDARD DETAIL	DATE: 6/22/2009 REV:	MANHOLE RING AND COVER INSTALLATION N.T.S.	el paso WATER	DETAIL No. 185

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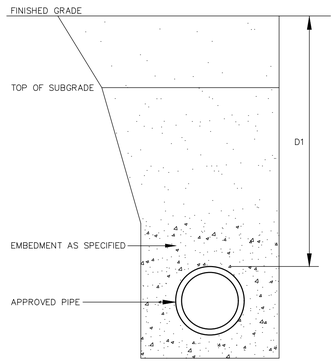


GENERAL NOTES:

1. REFER TO UTILITY DETAIL FOR PAVEMENT REPLACEMENT AND BACKFILL REQUIREMENTS.
2. TRENCH SAFETY SYSTEMS SHALL BE USED WHEN TRENCH DEPTH EXCEEDS 5 FEET.

CONSTRUCTION KEY NOTES:

A. COVER FOR WATER MAINS SHALL DEPEND ON THE PIPE SIZE AND THE FOLLOWING INSTALLATION CONDITIONS,

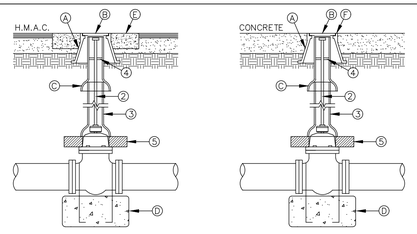
CONDITION A – NORMAL LINE INSTALLATION, STREET AND DRAINAGE PROJECTS, WATERLINE RELOCATION

CONDITION B – NEW SUBDIVISIONS, NON–PAVED AREA

AND SHALL BE AS FOLLOWS.

PIPE SIZE	CONDITION	DIMENSION
6", 8"	A	D1 = 4'
6", 8"	B	D1 = 4'
12" & LARGER	A OR B	D1 = 5'

STANDARD DETAIL	DATE: 2/1994 REV: 8/3/2006	COVER FOR WATER MAINS N.T.S.	el paso WATER	DETAIL No. 250



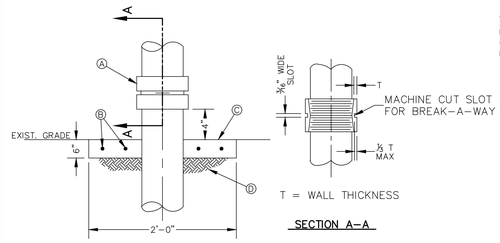
GENERAL NOTES:

1. VALVE TYPE AND VALVE ENDS SHALL BE AS SHOWN ON THE PLANS.
2. ALL BURIED VALVES 5' AND DEEPER SHALL BE PROVIDED WITH SOLID STEEL EXTENSION STEM OPERATOR WITH 2" SQUARE AWWA NUT WITHIN 36" OF VALVE BOX COVER. NUT IS TO INDICATE DIRECTION OF ROTATION TO OPEN VALVE.
3. 8" DIA. MINIMUM VITRIFIED CLAY OR SDR 35 P.V.C. PIPE, PIPE SHALL NOT REST ON VALVE BODY.
4. ¼" THICK STEEL TRASH RING VALVE BOX INSIDE DIAMETER MINUS ⅛".
5. MINIMUM 2½" CONCRETE OR BRICK ALL AROUND.
6. CLEAN BONNET BOX OF ALL DEBRIS AND SOIL.
7. COAT BURIED PIPE AND BONNET BOX PER SPECIFICATIONS, VALVE SHALL BE WRAPPED IN POLYETHYLENE IN ACCORDANCE WITH SPECIFICATIONS.

CONSTRUCTION KEY NOTES:

A. BONNET BOX (SEE DETAIL 268).
B. BONNET BOX COVER (SEE DETAILS 269–1 & 269–2).
C. FINAL EXTENSION TO BONNET BOX SHALL BE WITH BELL AND SPIGOT ENDS (CLAY OR SDR 35 P.V.C. SPOOL).
D. CONCRETE VALVE ANCHOR (SEE DETAIL 271).
E. CONCRETE COLLAR (SEE DET 184–1) FLUSH WITH TOP OF H.M.A.C.
F. BONNET BOX FLUSH WITH TOP OF CONCRETE, CONCRETE COLLAR NOT NEEDED.
G. CONCRETE APRON (SEE DETAIL 184–2) FLUSH WITH BONNET BOX AND 2" ABOVE NATURAL GROUND.

STANDARD DETAIL	DATE: 5/1994 REV: 6/22/2009	GATE VALVE INSTALLATION N.T.S.	el paso WATER	DETAIL No. 260



CONSTRUCTION KEY NOTES:

A. SCHEDULE 40 THREADED STEEL COUPLING
B. 2 – No. 4 REBAR CONTINUOUS, EACH WAY.
C. MINIMUM 3500psi CONCRETE 2'x2' SQUARE COLLAR.
D. 12" SUBGRADE @ 95% PER ASTM D–1557.

STANDARD DETAIL	DATE: 8/21/2006 REV:	BREAK–A–WAY COUPLING N.T.S.	el paso WATER	DETAIL No. 263–5

BENCHMARK: CITY MONUMENT AT THE CENTERLINE INTERSECTION OF DESERT PASS DRIVE AND CIMARRON PARK DRIVE.
ELEVATION = 3978.53 (EL PASO CITY DATUM)

NO.	DATE	DESCRIPTION	BY
3	03/15/2021	3rd City Submittal	AHO
2	01/22/2021	2nd City Submittal	AHO
1	11/25/2020	1st City Submittal	AHO

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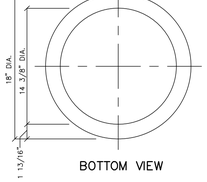
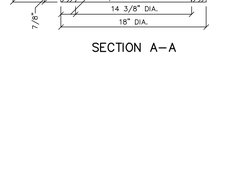
SHEET TITLE
UTILITY DETAILS

GOB DESIGN BY	1908 JOB NO.
GOB–DG–SM DRAWN BY	12/20/2019 DATE OF SUBMISSION
AHO CHECKED BY	AS NOTED SCALE

SHEET NO. 71
SHEET SEQUENCE 73 OF 82





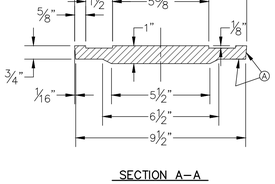
GENERAL NOTES:

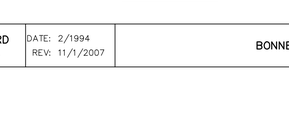
1. CASTING TO BE SMOOTH AND VOID OF AIR HOLES.
2. WEIGHT OF BONNET BOX IS 95 POUNDS.

CONSTRUCTION KEY NOTES:

A. TO BE ROUGH GROUND OF ANY IRREGULARITIES THAT WOULD PREVENT A SNUG FIT.

STANDARD DETAIL	DATE: 2/1994 REV:	BONNET BOX N.T.S.	el paso WATER	DETAIL No. 268





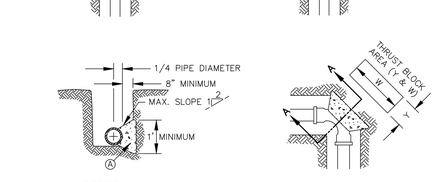
GENERAL NOTES:

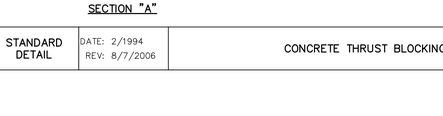
1. CASTINGS TO BE SMOOTH AND VOID OF AIR HOLES.
2. WEIGHT OF COVER IS 10 POUNDS.

CONSTRUCTION KEY NOTES:

A. TO BE ROUGH GROUND OF ANY IRREGULARITIES THAT WOULD PREVENT A SNUG FIT.

STANDARD DETAIL	DATE: 2/1994 REV: 11/1/2007	BONNET BOX COVER N.T.S.	el paso WATER	DETAIL No. 269–1





GENERAL NOTES:

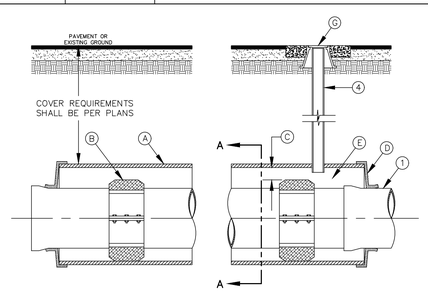
1. TABLE IS BASED ON 2000#/SQ. FT. SOIL. IF CONDITIONS ARE FOUND TO INDICATE SOIL BEARING IS LESS, THE AREAS SHALL BE INCREASED ACCORDINGLY.
2. AREAS FOR PIPE LARGER THAN 18" SHALL BE CALCULATED.
3. CONCRETE SHALL HAVE A MINIMUM COMPRESSION STRENGTH OF 2500 PSI.
4. THRUST BLOCK IS TO EXTEND TO UNDISTURBED SOIL.
5. SIZE MAY BE DECREASED FOR LESSER DEGREE BENDS AS DETERMINED BY ENGINEER.
6. KEEP CONCRETE CLEAR OF M.J. OR BELL AND SPIGOT JOINTS.
7. BLOCK IN A SIMILAR MANNER AT TEES, HYDRANTS, PLUG OR OTHER LOCATIONS AS REQUIRED.
8. WHEN NECESSARY ADDITIONAL THRUST RESTRAINT METHODS MAY BE USED, SUCH AS MECHANICAL JOINT RESTRAINTS, TIE–RODS (INSTALLED PER MANUFACTURERS' RECOMMENDATIONS) OR OTHER APPROVED METHODS.

CONSTRUCTION KEY NOTES:

A. LENGTH "Y & W" AS REQUIRED TO OBTAIN BEARING AREA AGAINST UNDISTURBED SOIL.
B. ADDITIONAL EXCAVATION IF NECESSARY TO OBTAIN REQUIRED BEARING AREA.
C. MINIMUM THRUST BLOCK AREA REQUIREMENTS FOR (Y & W) AS FOLLOWS:

PIPE SIZE	WATER PIPE	
	TEE, DEAD END 90° BEND	45° AND 22 1/2° BENDS
4" & LESS	3 SQ. FEET	3 SQ. FEET
6"	4 SQ. FEET	3 SQ. FEET
8"	6 SQ. FEET	3 SQ. FEET
10"	9 SQ. FEET	5 SQ. FEET
12"	13 SQ. FEET	7 SQ. FEET
16"	23 SQ. FEET	12 SQ. FEET
18"	29 SQ. FEET	15 SQ. FEET

STANDARD DETAIL	DATE: 8/7/2006 REV: 8/7/2006	CONCRETE THRUST BLOCKING N.T.S.	el paso WATER	DETAIL No. 270



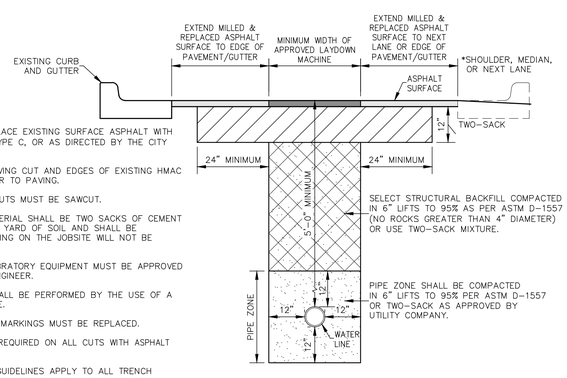
GENERAL NOTES:

1. INSTALLATION FOR APPROVED CARRIER PIPE.
2. CASING SHALL BE INSTALLED USING EITHER JACKING, BORING OR TUNNELING METHODS FROM THE END WHICH CREATES A MINIMUM OF ACCESS AND RELOCATION PROBLEMS.
3. INSULATED SPACERS SHALL BE USED WHEN SPECIFIED, TO PROVIDE CORROSION PROTECTION.
4. PRECAUTIONARY OUTLET (6") WITH BONNET BOX AND COVER SHALL BE USED WHEN REQUIRED BY OTHER GOVERNING AGENCIES.

CONSTRUCTION KEY NOTES:

A. STEEL CASING MINIMUM YIELD 36000 PSI, SIZE AND LENGTH AS SPECIFIED.
B. CASING INSULATORS, SPACING AND LOCATION PER MANUFACTURES RECOMMENDATIONS. INSULATORS SHALL FIT SNUG OVER THE CARRIER PIPE.
C. POSITION CARRIER PIPE APPROXIMATELY IN CENTER OF CASING. MINIMUM SPACING BETWEEN INSULATOR AND CARRIER PIPE SHALL BE 1", MAXIMUM SPACING SHALL BE 2".
D. END SHALL BE SEALED WITH BRICK AND MORTAR, BULKHEAD AND GROUT, OR WITH SYNTHETIC RUBBER SEAL, AS SPECIFIED.
E. ANNULAR SPACE SHALL BE LEFT OPEN FOR CATHODICALLY PROTECTED SYSTEM WHERE BOTH CASING AND CARRIER PIPE ARE METALLIC MATERIAL, OR AS OTHERWISE SPECIFIED.
F. PRESSURE GROUT ANNULAR SPACE OUTSIDE CASING AFTER CASING IS INSTALLED.
G. BONNET BOX AND COVER (SEE DETAILS 268 & 269–2) SET FRAME AND COVER FLUSH WITH ROADWAY SURFACE OR FINISHED GRADE (SEE DETAIL 260).

STANDARD DETAIL	DATE: 3/1994 REV: 3/12/2020	CARRIER PIPE INSTALLATION WITH CASING INSULATORS N.T.S.		DETAIL No. 180



NOTES:

1. *MILL AND REPLACE EXISTING SURFACE ASPHALT WITH 2" OF HMAC, TYPE C, OR AS DIRECTED BY THE CITY ENGINEER.
2. TACK COAT PAVING CUT AND EDGES OF EXISTING HMAC 24 HOURS PRIOR TO PAVING.
3. ALL ASPHALT CUTS MUST BE SAWCUT.
4. TWO–SACK MATERIAL SHALL BE TWO SACKS OF CEMENT PER ONE CUBIC YARD OF SOIL AND SHALL BE PRE–MIXED. MIXING ON THE JOBSITE WILL NOT BE ALLOWED.
5. THE USE OF VIBRATORY EQUIPMENT MUST BE APPROVED BY THE CITY ENGINEER.
6. ALL PAVING SHALL BE PERFORMED BY THE USE OF A PAVING MACHINE.
7. ALL PAVEMENT MARKINGS MUST BE REPLACED.
8. STEEL PLATES REQUIRED ON ALL CUTS WITH ASPHALT TRANSITIONS.
9. OSHA SAFETY GUIDELINES APPLY TO ALL TRENCH EXCAVATIONS.

TRANSVERSE SECTION OF PARALLEL UTILITY CUT

SCALE: 1/2" = 1'

PER 3–599 OF THE DESIGN STANDARDS FOR CONSTRUCTION

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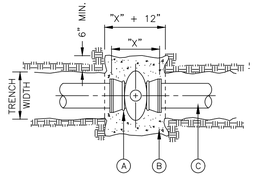
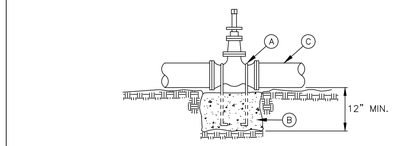
G:\Civil\1908 Cimarron Canyon Unit Two\1908 As Submitted\1908 Sht 70–73 Utility Details.dwg
dgallardo



PLAN



SECTION

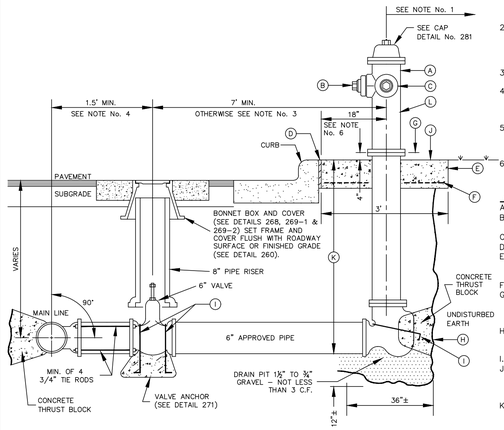
GENERAL NOTES:

1. THE ENGINEER SHALL PROVIDE DESIGN FOR ALL VALVES GREATER THAN 12".
2. COMPLY WITH REQUIREMENTS OF AWWA C-550, PROTECTIVE EPOXY INTERIOR COATINGS FOR VALVES.

CONSTRUCTION KEY NOTES:

A. TWO No. 5 REBAR HAIR PINS. PAINT UNEMBEDDED PORTION OF REBARS WITH TWO COATS OF COAL TAR EPOXY.
B. CONCRETE VALVE SUPPORT, 2500 PSI. CONCRETE.
C. APPROVED PIPE.

STANDARD DETAIL	DATE: 2/1994 REV: 12/12/2011	VALVE ANCHOR N.T.S.	el paso WATER	DETAIL No. 271



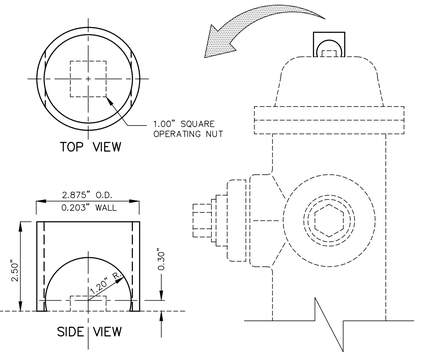
GENERAL NOTES:

1. NO OBSTRUCTIONS WILL BE PERMITTED WITHIN 5 FT. IN ALL DIRECTIONS OF FIRE HYDRANT (PER EL PASO MUNICIPAL CODE, TITLE 12). FIRE HYDRANT SHALL NOT BE PLACED IN WHEEL CHAIR RAMP OR DRIVEWAY.
2. FIRE HYDRANT SHALL BE LOCATED AT THE BEGINNING OF CURB RETURN OR AT THE PROPERTY LINE COMMON TO ADJOINING LOTS, UNLESS OTHERWISE SHOWN ON PLANS. REFER TO DETAIL No. 282 FOR SPECIAL CASES.
3. WHERE DISTANCE IS LESS THAN 7', HYDRANT SHALL BE INSTALLED IN ACCORDANCE WITH DETAIL No. 282.
4. VALVE MAY BE CONNECTED TO TEE AT MAIN LINE. USE FLANGED MECHANICAL JOINT ENDS. WHERE SPOOL IS REQUIRED BETWEEN TEE AND VALVE, USE FLANGED MECHANICAL ENDS WITH ¾" DIAMETER TIE RODS.
5. COMPLY WITH REQUIREMENTS OF AWWA C-502, DRY BARREL FIRE HYDRANTS AND AWWA C-550, PROTECTIVE EPOXY INTERIOR COATINGS FOR VALVES AND HYDRANTS.
6. WHEN INSTALLATION IS WITHIN TxDOT RIGHT OF WAY, HYDRANT SHALL NOT BE PLACED IN SIDEWALK AREA OR ANY CLOSER THAN 5' FROM BACK OF CURB.

CONSTRUCTION KEY NOTES:

A. FIRE HYDRANT PER SPEC'S.
B. PUMPER NOZZLE 4" TO BE FACING THE TRAVELED WAY, UNLESS OTHERWISE NOTED IN THE PLANS.
C. HOSE NOZZLE 2½".
D. ½" PREMOLDED EXPANSION JOINT WITH 1" TOP FILLER.
E. 3'x3'x6" CONC. SQ. PAD, TO BE CONSTRUCTED AROUND FIRE HYDRANT'S CENTER LINE WHEN NOT LOCATED WITHIN SIDEWALK OR CONC. AREA.
F. #10; 6/6 WWF.
G. CONTROLLED ELEVATION LINE, LEVEL IN ALL DIRECTIONS. CONTRACTOR SHALL BE RESPONSIBLE FOR SETTING TOP FLANGE OF THE HYDRANT TO CONTROLLED ELEVATION.
H. CONC. THRUST BLOCK, APPROX. 2'x2'x3' TO BE POURED AGAINST UNDISTURBED EARTH, F.H. WEEP HOLE MUST BE UNOBSTRUCTED.
I. 2"x1/4" STEEL ANCHOR PINS.
J. TOP OF SLAB SHALL BE AT CURB LEVEL 4" BELOW THE BREAK LINE OF THE HYDRANT. UNDER SPECIAL CONDITIONS THE ENGINEER MAY ALLOW VARIATIONS TO THIS CONSTRUCTION.
K. MAXIMUM OF ONE (1) SPOOL EXTENSION ALLOWED TO MAINTAIN THE CONTROLLED ELEVATION LINE TO TOP OF SLAB. ADDITIONAL ADJUSTMENT MUST ME MADE WITH OFFSETS & FITTINGS AS NEEDED.
L. REQUIRED – DAVIDSON ANTI TERRORISM CORROSION RESISTANT VALVE KIT (DATV).

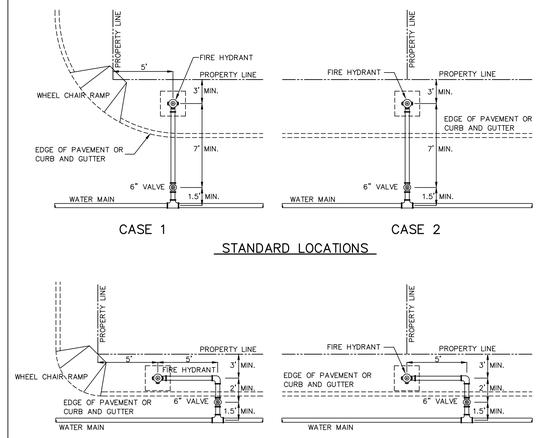
STANDARD DETAIL	DATE: 2/1993 REV: 10/1/2013	FIRE HYDRANT INSTALLATION N.T.S.	el paso WATER	DETAIL No. 280-1



GENERAL NOTES:

1. STEEL CAPS TO BE MACHINED FROM STEEL PIPE: NOMINAL SIZE = 2 1/2" DIA. OUTSIDE DIA. = 2.875" WALL THICKNESS = 0.203 LBS/FT. = 5.79
2. CAPS ARE TO BE TACK WELDED OR BRAZED ON FIRE HYDRANT BONNET OR WEATHER CAP.
3. THE CAPS OVER THE OPERATING NUT WILL PREVENT ACCESS TO THE UNAUTHORIZED USE OF HYDRANT WATER.

STANDARD DETAIL	FEB. 1993 REV: FEB. 1994	FIRE HYDRANT CAP N.T.S.	el paso WATER	DETAIL No. 281



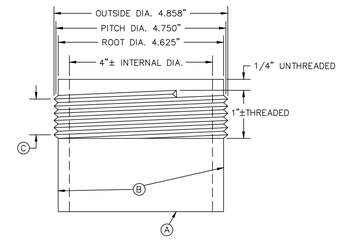
STANDARD LOCATIONS

SPECIAL LOCATIONS

GENERAL NOTES:

1. FOR CASE 1 FIRE HYDRANT SHALL BE LOCATED AT A DISTANCE OF 5 FT. MINIMUM FROM THE PROPERTY LINE OR AT THE BEGINNING OF CURB RETURN.
2. FOR CASE 2 FIRE HYDRANT SHALL BE LOCATED AT THE PROPERTY LINE COMMON TO ADJOINING LOTS.
3. FOR CASE 3 AND IV WHERE THE DISTANCE BETWEEN THE VALVE AND THE HYDRANT IS LESS THAN 7 FT. PLACE HYDRANT AS SHOWN.
4. FOR INSTALLATION OF FIRE HYDRANT SEE DETAIL 280-1 OR 280-2.
5. A MINIMUM CLEARANCE OF 3 FT. WILL BE PROVIDED BETWEEN A FIRE HYDRANT AND A PERMANENT OBSTRUCTION (UTILITY POLE, LIGHT STANDARD, TRAFFIC SIGNAL, WHEEL CHAIR RAMP, FENCE PROTECTIVE POSTS, ETC.).
6. WHEN INSTALLATION IS WITHIN TxDOT RIGHT OF WAY, HYDRANT SHALL NOT BE PLACED IN SIDEWALK AREA OR ANY CLOSER THAN 5' FROM BACK OF CURB.

STANDARD DETAIL	DATE: 5/1994 REV: 6/25/2007	FIRE HYDRANT LOCATIONS N.T.S.	el paso WATER	DETAIL No. 282



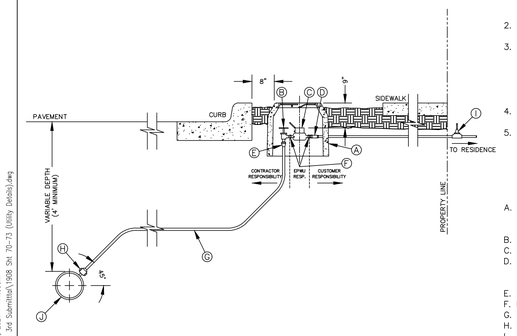
GENERAL NOTES:

1. CITY OF EL PASO STANDARD THREADS FOR PUMPER NOZZLE
2. HOSE COUPLING FEMALE THREADS TO BE NO LESS THAN 0.045" LARGER IN DIAMETER
3. THREAD DIAMETER REDUCED AND CHANGED TO 6 THREADS/INCH TO ACCOMMODATE FIRE DEPARTMENT HOSE COUPLINGS

CONSTRUCTION KEY NOTES:

A. MATERIAL: BRONZE
B. THIS SECTION ADAPTED TO CAULKING OR THREADING MATERIAL
C. 6 THREADS/INCH

STANDARD DETAIL	JAN. 1995 REV:	FIRE HYDRANT STEAMER NOZZLE N.T.S.	el paso WATER	DETAIL No. 283



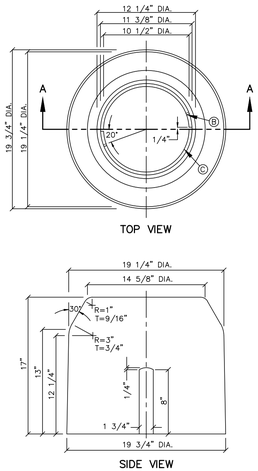
GENERAL NOTES:

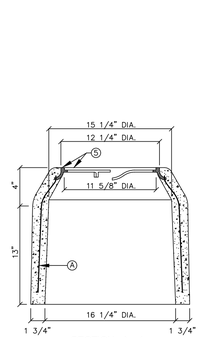
1. DETAIL SHOWN FOR A 3/4" SERVICE, 1" SERVICE INSTALLATION IS SIMILAR EXCEPT FOR SIZES OF PIPE, FITTING, METER AND BOX (TYPE "B").
2. WHERE NO CURB EXISTS, METER IS TO BE SET NEAR PROPERTY LINE OR AT DESIGNATED LOCATION.
3. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL NECESSARY PIPE, FITTINGS, AND METER BOXES REQUIRED. IT SHALL BE THE RESPONSIBILITY OF THE PRIVATE OWNER TO HAVE A CERTIFIED PLUMBER INSTALL A BACKFLOW PREVENTER AND EXTEND SERVICE LINE ON DISCHARGE SIDE OF METER.
4. NO SPLICING SHALL BE ALLOWED. FULL LENGTH OF PIPING SERVICE SHALL BE INSTALLED.
5. THE EPWU WILL FURNISH AND INSTALL THE METER.

CONSTRUCTION KEY NOTES:

A. METER BOX TYPE "A" (SEE DETAILS 291 & 292) SHALL BE SET SLIGHTLY HIGHER THAN SURROUNDING GROUND OR AT CURB LEVEL.
B. 3/4" ANGLE SERVICE VALVE.
C. WATER METER (CENTER INSIDE METER BOX).
D. WHEN REQUIRED BY EPWU, A DUAL CHECK BACKFLOW PREVENTER SHALL BE INSTALLED ON THE OUTLET SIDE OF THE METER.
E. END FLARE OF SERVICE LINE.
F. INLET AND OUTLET COUPLING.
G. 3/4" COPPER SERVICE LINE (SEE NOTE 4).
H. 5/8" X 3/4" CORPORATION STOP
I. PRESSURE REGULATOR SOMETIMES LOCATED NEAR THE RESIDENCE.
J. WATER MAIN

STANDARD DETAIL	DATE: 10/20/2000 REV: 5/24/2007	SERVICE LINE ¾" AND 1" INSTALLATION BY CONTRACTOR N.T.S.	el paso WATER	DETAIL No. 290-4





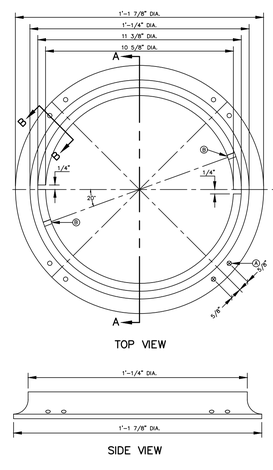
GENERAL NOTES:

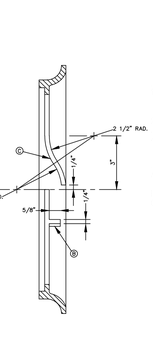
1. INSTALL TO GRADE MATCHING TOP OF CURB.
2. ANGLE VALVE SHALL BE IN LINE WITH THE INLET/OUTLET PORTS OF THE METER BOX.
3. METER BOXES SHALL NOT BE INSTALLED UNDER SIDEWALKS, DRIVEWAYS, OR PROPOSED ABOVE GROUND STRUCTURES.
4. WHERE NO CURBING EXIST, INSTALL BOXES IN ACCESSIBLE LOCATIONS BEYOND LIMITS OF STREET SURFACING, WALKS AND DRIVEWAYS.
5. METER BOX RING AND COVER PER EPWU DETAILS 300 AND 301.
6. WHERE IT IS NECESSARY TO INSTALL A TYPE "A" BOX FOR 3/4" METER UNDER ROADWAYS OF TRAFFIC BEARING SURFACES, BOX SHALL BE ENCASED IN 12" CONCRETE, 3000 PSI. MINIMUM.
7. METER BOX SHALL BE SINGLE UNIT CONSTRUCTION; CONCRETE TO HAVE A MINIMUM 28 DAYS COMPRESSIVE STRENGTH OF 4000 PSI.

CONSTRUCTION KEY NOTES:

A. 3/16", 9 GAUGE BLACK ANNEALED WIRE
B. LUG-STOP C. CAST IRON RING

STANDARD DETAIL	DATE: 4/1994 REV: 8/24/2006	METER BOX TYPE "A" FOR ¾" SERVICE INSTALLATION N.T.S.	el paso WATER	DETAIL No. 291



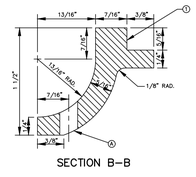


GENERAL NOTES:

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. ¾" DIAMETER HOLES FOR ANCHORING RING TO CONCRETE METER BOX.
B. LUG STOP
C. LOCKING LUG SLIDE



STANDARD DETAIL	DATE: 1/1995 REV: 8/10/2006	METER BOX RING FOR TYPE "A" & "B" METER BOXES N.T.S.	el paso WATER	DETAIL No. 300

BENCHMARK: CITY MONUMENT AT THE CENTERLINE INTERSECTION OF MESA HILLS DRIVE AND CIMARRON PARK DRIVE.
ELEVATION = 3976.53 (EL PASO CITY DATUM)

NO.	DATE	DESCRIPTION	BY
3	03/15/2021	3rd City Submittal	AHO
2	01/22/2021	2nd City Submittal	AHO
1	11/25/2020	1st City Submittal	AHO

WARNING! BEFORE YOU DIG IN PROJECT AREA CONTRACTING SHALL CALL ALL EXISTING UNDERGROUND IMPROVEMENTS

Texas811 Know what's below. Call before you dig.

BEFORE YOU DIG - CALL

EL PASO ELECTRIC COMPANY	543-5720
	1-800-540-4555
TEXAS GAS SERVICE	544-6300
TGS EMERGENCY HOTLINE	562-8411/562-2603
AFTER HOURS EMERGENCY (WATER & SEWER)	1-800-592-0045
AFTER HOURS EMERGENCY (EPW)	594-5775
SPECTRUM	775-7414
TEXAS NEW MEXICO POWER	1-800-344-8377
KINDER-MORGAN EPNG PIPELINES	1-800-238-3764
EL PASO STREETS AND MAINTENANCE	212-0151
EL PASO TRAFFIC SIGNAL STREETS AND MAINTENANCE	tlresponse@elpasotexas.gov

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03/15/2021

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SUBDIVISION
CIMARRON CANYON UNIT TWO SUBDIVISION

SHEET TITLE
UTILITY DETAILS

GOB	1908
DESIGN BY	JOB NO.
GOB-DG-SM	12/20/2019
DRAWN BY	DATE OF COMMISSION
AHO	AS NOTED
CHECKED BY	SCALE

SHEET NO. 72
SHEET SEQUENCE 74 OF 82

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S:\CSA 1908 Cimarron Canyon Unit Two\1908 2nd Submittal\1908 SH 70-73 Utility Details1.dwg
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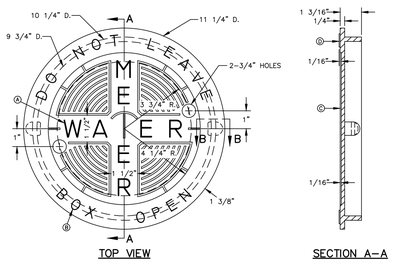
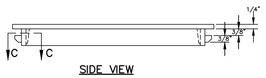
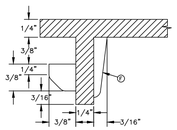


TOP VIEW

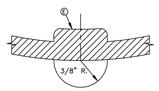
SECTION A–A



SIDE VIEW



SECTION B–B

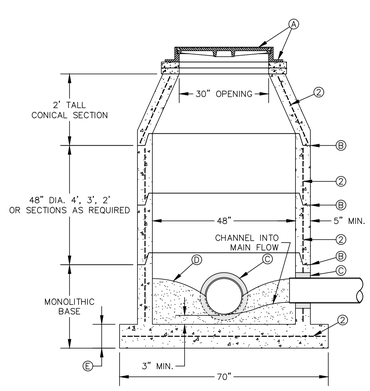


SECTION C–C

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
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 ¾" HIGH, ⅝" WIDE, ⅛" THICK
C. INSIDE LETTERS & RIBS 1/16" TALL
D. OUTSIDE LETTERS 1/16" TALL
E. REINFORCE BACK OF LUG
F. REINFORCEMENT

STANDARD DETAIL	DATE: 4/1994 REV: 8/10/2006	METER BOX COVER FOR TYPE "A" & "B" METER BOXES N.T.S.	el paso WATER	DETAIL No. 301

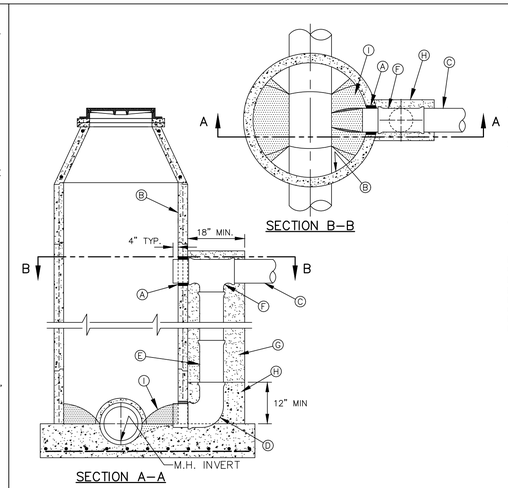


SECTION

GENERAL NOTES:
1. MANHOLE TYPE "A" SHALL BE USED FOR LINES 21" AND SMALLER.
2. PRE–CAST MANHOLE SECTIONS SHALL BE OF REINFORCED CONCRETE CONFORMING TO ASTM C–478 AND SHALL MEET HS–20 LOADING. PROVIDE REINFORCEMENT WITHIN 3" Ø OPENINGS OR KNOCKOUTS, OPENINGS (UP TO 8") MADE IN FIELD SHALL BE CORE DRILLED.
3. CEMENT SHALL BE TYPE I–II, PER ASTM C–150, AND MUST CONTAIN A MINIMUM OF 4% FLY ASH OF THE TOTAL MANHOLE WEIGHT.
4. THE BASE & RISER SHALL BE INTEGRALLY CAST. CONCRETE SHALL BE MIN. 28 DAY COMPRESSIVE STRENGTH 4000psi.
5. MANUFACTURER TO PROVIDE LIFTERS OF ADEQUATE SIZE AS NEEDED.
6. THE SUBGRADE UNDER THE BASE SHALL BE COMPACTED TO 95% DENSITY IN ACCORDANCE WITH ASTM D–1557.
7. MANHOLES BELOW GROUNDWATER TO BE EXTERNALLY AND INTERNALLY COATED WITH BITUMINOUS COATING.

CONSTRUCTION KEY NOTES:
A. MANHOLE RING AND COVER (SEE DETAILS 377 & 378). SET FRAME AND COVER FLUSH WITH ROADWAY SURFACE OR FINISHED GRADE (SEE DETAIL 185).
B. ALL JOINTS TO BE TONGUE, GROOVE AND SEALED WITH RAM–NEK OR APPROVED EQUAL.
C. PIPE OPENINGS/KNOCKOUTS AS REQUIRED TO FIT PIPE SIZE AND SHALL HAVE FLEXIBLE PIPE TO MANHOLE CONNECTORS (COMPRESSION TYPE ASTM–923), "KOR–N–SEAL" OR APPROVED EQUAL.
D. GROUT AS REQUIRED.
E. CONCRETE BASE SHALL BE 8" FOR MH's UP TO 12' DEEP AND 12" FOR DEPTHS GREATER THAN 12'.

STANDARD DETAIL	DATE: 11/1992 REV: 2/8/2013	MANHOLE TYPE "A" N.T.S.	el paso WATER	DETAIL No. 370–1



GENERAL NOTES:
1. DROP CONNECTION SHOWN MAY BE USED ON ALL MANHOLE TYPES (NOT RECOMMENDED IN GROUND WATER CONDITIONS).
2. DROP CONNECTION TO BE CONSTRUCTED WHEN INVERT ELEVATION OF INFLUENT PIPE IS 3 FEET (OR GREATER) ABOVE THE MANHOLE INVERT.

CONSTRUCTION KEY NOTES:
A. PIPE OPENINGS IN MANHOLE RISERS SHALL HAVE COMPRESSION TYPE FLEXIBLE PIPE TO MANHOLE CONNECTORS (A.S.T.M.– C923) "KOR–N–SEAL" OR APPROVED EQUAL.
B. MANHOLE WALL
C. INFLUENT SEWER PIPE.
D. 90° BEND (P.V.C.)
E. P.V.C. PIPE (SDR. 35)
F. P.V.C. TEE
G. CONCRETE FLOWABLE FILL
H. 2500 psi CONCRETE
I. USE GROUT TO FORM A SMOOTH CHANNEL TO MANHOLE INVERT

STANDARD DETAIL	DATE: 3/18/1998 REV: 6/19/2009	DROP CONNECTION – EXTERNAL MANHOLE INSTALLATION N.T.S.	el paso WATER	DETAIL No. 375–1

BENCHMARK: CITY MONUMENT AT THE CENTERLINE INTERSECTION OF MESA DRIVE AND CIMARRON PARK DRIVE. ELEVATION = 3976.53 (EL PASO CITY DATUM)

NO.	DATE	DESCRIPTION	BY
3	03/15/2021	3rd City Submittal	AHO
2	01/22/2021	2nd City Submittal	AHO
1	11/25/2020	1st City Submittal	AHO

WARNING! BEFORE YOU DIG IN PROJECT AREA CONTRACTOR SHALL CALL ALL LOCAL UNDERGROUND IMPROVEMENTS

Texas 811 Know what's below Call before you dig.

BEFORE YOU DIG - CALL

EL PASO ELECTRIC COMPANY	543–5720
	1–800–351–3555
TEXAS GAS SERVICE	544–6300
TCI EMERGENCY HOTLINE	562–8411/562–2003
AFTER HOURS EMERGENCY (WATER & SEWER)	1–800–592–1555
AFTER HOURS EMERGENCY (EPW)	594–5775
SPECTRUM	775–7414
TEXAS EXCAVATION SAFETY SYSTEM	1–800–344–8377
KINDER–MORGAN EPNG PIPELINES	1–800–238–3764
EL PASO STREETS AND MAINTENANCE	212–0151
EL PASO TRAFFIC SIGNAL	tlregion1@txdottexas.gov

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05/15/21

STATE OF TEXAS
ADRIAN I. ONTIVEROS
124089
LICENSED
PROFESSIONAL ENGINEER

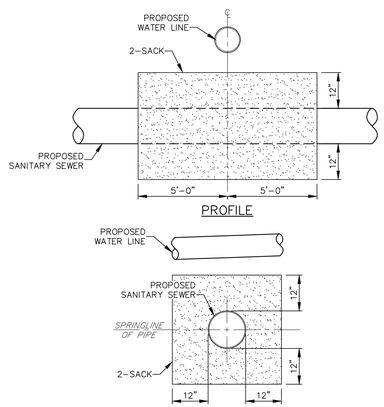
csa design group, inc.
Texas Registered Engineering Firm F-9997
1845 Northwestern Dr. Ste C
El Paso, Texas 79912
tel [915] 877.4155
fax [915] 877.4334
www.csaengineers.com

SUBDIVISION
CIMARRON CANYON UNIT TWO SUBDIVISION

SHEET TITLE
UTILITY DETAILS

DESIGN BY	JOB NO.
GOB	1908
DRAWN BY	DATE OF SUBMISSION
GOB–DG–SM	12/20/2019
CHECKED BY	SCALE
AHO	AS NOTED

SHEET NO. 73
SHEET SEQUENCE 75 OF 82

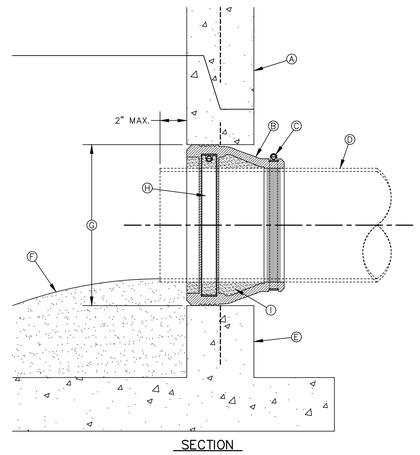


PROFILE

CROSS SECTION

WHERE PROPOSED WATER LINES CROSS EXISTING SANITARY SEWER LINES, 2–SACK WILL BE INSTALLED AS SHOWN. 2–SACK MIX SHALL NOT BE LESS THAN 188 POUNDS OF CEMENT PER CUBIC YARD AND SHALL REACH A COMPRESSIVE STRENGTH OF NOT LESS THAN 100PSI WHEN TESTED AT 28 DAYS PER ASTM D4832.

2–SACK DETAIL
N.T.S.

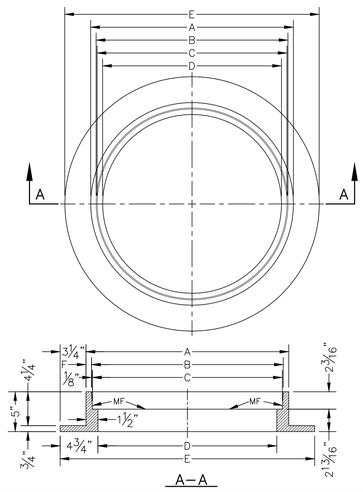


SECTION

GENERAL NOTES:
1. MANHOLE CONNECTOR SHALL BE KOR–N–SEAL OR EQUAL MEETING THE REQUIREMENTS OF ASTM C–923. CONNECTOR SHALL BE FURNISHED BY CONTRACTOR.

CONSTRUCTION KEY NOTES:
A. PRECAST MANHOLE BARREL.
B. FLEXIBLE CONNECTOR.
C. PIPE CLAMP SS 316.
D. APPROVED PIPE.
E. PRECAST MANHOLE BASE.
F. GROUT AS REQUIRED TO FORM SMOOTH CHANNEL TO MANHOLE INVERT.
G. PIPE OPENINGS/KNOCKOUTS AS REQUIRED TO FIT PIPE SIZE.
H. EXPANSION BAND SS 316.
I. FILL SPACE WITH GROUT.

STANDARD DETAIL	DATE: 11/1992 REV: 8/13/2009	PIPE CONNECTION TO MANHOLE N.T.S.	el paso WATER	DETAIL No. 376



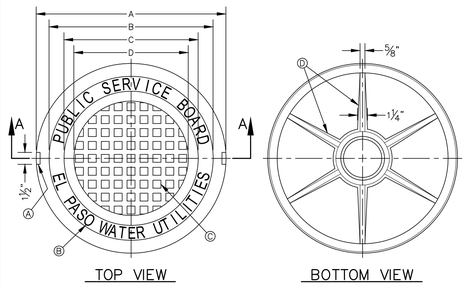
A–A

GENERAL NOTES:
1. MATCHING SURFACES MARKED "MF" TO BE FINISHED OF ANY IRREGULARITIES THAT WOULD PREVENT A SNUG FIT.
2. CASTING TO BE SMOOTH & VOID OF AIR HOLES.
3. CASTING MUST MEET REQUIREMENTS OF AASHTO M306–07.
4. AS–CAST DIMENSIONS MAY VARY 1/16"±/ PER FOOT (AASHTO M306–07).
5. WEIGHT MAY VARY 5%± (AASHTO M306–07).

MANHOLE RING	MANHOLE – ALL TYPES	*MANHOLE TYPE A, A1, A2 & C
A	33"	25½"
B	31¼"	24⅛"
C	31½"	23⅞"
D	30"	22½"
E	39½"	32"
F	⅝"	1 1/16"
WEIGHT	205 lbs.	170 lbs.

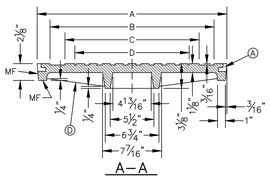
*OBSOLETE –DO NOT USE (FOR REFERENCE ONLY)

STANDARD DETAIL	DATE: 11/1992 REV: 2/21/2011	SEWER MANHOLE RING N.T.S.	el paso WATER	DETAIL No. 377

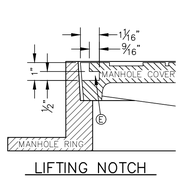


TOP VIEW

BOTTOM VIEW



A–A



LIFTING NOTCH

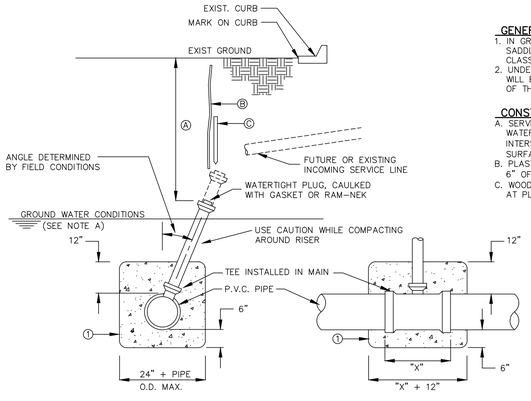
GENERAL NOTES:
1. MATCHING SURFACES MARKED "MF" TO BE FINISHED OF ANY IRREGULARITIES THAT WOULD PREVENT A SNUG FIT.
2. CASTING TO BE SMOOTH & VOID OF AIR HOLES.
3. CASTING MUST MEET REQUIREMENTS OF AASHTO M306–07.
4. AS–CAST DIMENSIONS MAY VARY 1/16"±/ PER FOOT (AASHTO M306–07).
5. WEIGHT MAY VARY 5%± (AASHTO M306–07).

CONSTRUCTION KEY NOTES:
A. LIFTING NOTCH.
B. ⅜" RAISED LETTERING.
C. 1" SQUARES (⅜" TALL) WITH ⅝" SPACE BETWEEN.
D. REINFORCING RIBS.
E. SLOT.

MANHOLE COVER	MANHOLE – ALL TYPES	*MANHOLE TYPE A, A1, A2 & C
A	31⅜"	23⅞"
B	28⅜"	20⅝"
C	24⅜"	16⅞"
D	21⅞"	14⅜"
WEIGHT	200 lbs.	165 lbs.

*OBSOLETE –DO NOT USE (FOR REFERENCE ONLY)

STANDARD DETAIL	DATE: 11/1992 REV: 2/21/2011	SEWER MANHOLE COVER N.T.S.	el paso WATER	DETAIL No. 378

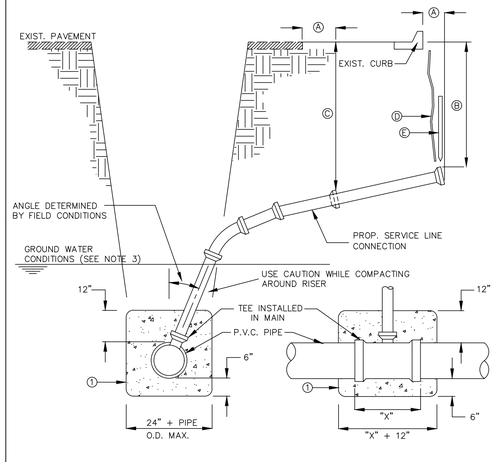


SECTION

GENERAL NOTES:
1. IN GROUNDWATER CONDITIONS ONLY, P.V.C. SADDLES OR TEES ARE TO BE ENCASED WITH CLASS B CONCRETE.
2. UNDER CERTAIN CONDITIONS FIELD INVESTIGATIONS WILL BE REQUIRED TO DETERMINE THE ADEQUACY OF THE DEPTH ON THE LATERAL.

CONSTRUCTION KEY NOTES:
A. SERVICE LINE TO BE EXTENDED ABOVE GROUND WATER LEVEL OR TO A DEPTH OF THE INTERSECTING SERVICE LINE, OR TO WITHIN 6" OF SURFACE (WHICH EVER IS APPROPRIATE & SAFER).
B. PLASTIC METALLIC MARKING TAPE RISING TO WITHIN 6" OF GROUND SURFACE OR METALLIC DISK.
C. WOODEN STAKE (1"x2"x36") VERTICALLY PLACED AT PLUGGED END OF RISER.

STANDARD DETAIL	DATE: 11/1992 REV: 1/23/2009	SEWER SERVICE RISER CONNECTION N.T.S.	el paso WATER	DETAIL No. 390



GENERAL NOTES:
1. IN GROUNDWATER CONDITIONS ONLY, P.V.C. SADDLES OR TEES ARE TO BE ENCASED WITH CLASS B CONCRETE.
2. UNDER CERTAIN CONDITIONS FIELD INVESTIGATIONS WILL BE REQUIRED TO DETERMINE THE ADEQUACY OF THE DEPTH ON THE LATERAL.
3. WHEN GROUND WATER IS ENCOUNTERED SERVICE RISER SHALL BE EXTENDED ABOVE ANTICIPATED WATER TABLE LEVEL.

CONSTRUCTION KEY NOTES:
A. CONTRACTOR TO INSTALL SEWER SERVICE LINE FROM THE MAIN TO A LOCATION 6" BEHIND THE CURB OR 18" BEYOND THE EDGE OF PAYMENT, UNLESS CONDITIONS REQUIRE OTHERWISE.
B. 18" FOR STANDARD SUBDIVISION, 3.5' FOR SUBDIVISIONS WITH ON–SITE PONDING OR FLAT TERRAIN.
C. RISERS OR LATERALS EXTENDING BEYOND EXISTING PAVING SHALL BE INSTALLED TO 3.5' MINIMUM TOP OF GROUND OR PAVEMENT, UNLESS CONDITIONS REQUIRE OTHERWISE.
D. PLASTIC METALLIC MARKING TAPE RISING TO WITHIN 6" OF GROUND SURFACE OR METALLIC DISK.
E. WOODEN STAKE (1"x2"x36") VERTICALLY PLACED AT PLUGGED END OF PROPOSED SERVICE LINE.

STANDARD DETAIL	DATE: 11/1992 REV: 1/23/2009	SEWER SERVICE RISER AND SERVICE LINE CONNECTION N.T.S.	el paso WATER	DETAIL No. 391

© CSA DESIGN GROUP, INC. – Mar 12, 2021 – 11:10am
G:\Civil\1908 Cimarron Canyon Unit Two\1908 SH 70-73 (Utility Details).dwg

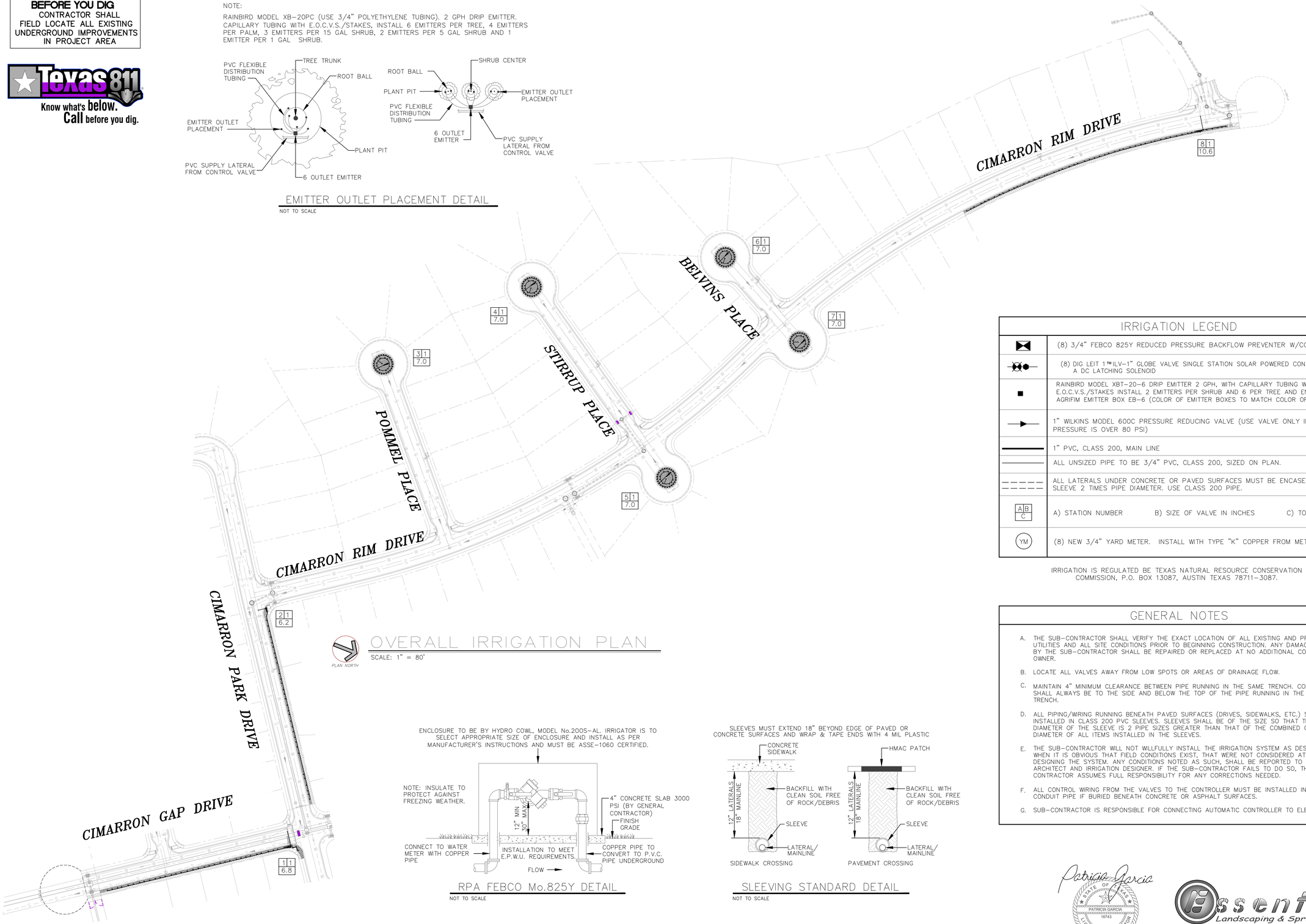
WARNING !
BEFORE YOU DIG
CONTRACTOR SHALL FIELD LOCATE ALL EXISTING UNDERGROUND IMPROVEMENTS IN PROJECT AREA

Texas811 Know what's below. Call before you dig.

NOTE:

RAINBIRD MODEL XB-20PC (USE 3/4" POLYETHYLENE TUBING). 2 GPH DRIP EMITTER. CAPILLARY TUBING WITH E.O.C.V.S./STAKES, INSTALL 6 EMITTERS PER TREE, 4 EMITTERS PER PALM, 3 EMITTERS PER 15 GAL SHRUB, 2 EMITTERS PER 5 GAL SHRUB AND 1 EMITTER PER 1 GAL SHRUB.

EMITTER OUTLET PLACEMENT DETAIL
NOT TO SCALE



OVERALL IRRIGATION PLAN
SCALE: 1" = 80'

IRRIGATION LEGEND

	(8) 3/4" FEBCO 825Y REDUCED PRESSURE BACKFLOW PREVENTER W/COVER AS PER DETAIL
	(8) DIG LEIT 1"ILV-1" GLOBE VALVE SINGLE STATION SOLAR POWERED CONTROLLER WITH A DC LATCHING SOLENOID
	RAINBIRD MODEL XBT-20-6 DRIP EMITTER 2 GPH, WITH CAPILLARY TUBING WITH E.O.C.V.S./STAKES INSTALL 2 EMITTERS PER SHRUB AND 6 PER TREE AND ENCLOSE IN AGRIFIM EMITTER BOX EB-6 (COLOR OF EMITTER BOXES TO MATCH COLOR OF ROCK)
	1" WILKINS MODEL 600C PRESSURE REDUCING VALVE (USE VALVE ONLY IF STATIC PRESSURE IS OVER 80 PSI)
	1" PVC, CLASS 200, MAIN LINE
	ALL UNSIZED PIPE TO BE 3/4" PVC, CLASS 200, SIZED ON PLAN.
	ALL LATERALS UNDER CONCRETE OR PAVED SURFACES MUST BE ENCASED IN A PVC SLEEVE 2 TIMES PIPE DIAMETER. USE CLASS 200 PIPE.
A|B C	A) STATION NUMBER B) SIZE OF VALVE IN INCHES C) TOTAL GPM
YM	(8) NEW 3/4" YARD METER. INSTALL WITH TYPE "K" COPPER FROM METER TO BACKFLOW

IRRIGATION IS REGULATED BE TEXAS NATURAL RESOURCE CONSERVATION COMMISSION, P.O. BOX 13087, AUSTIN TEXAS 78711-3087.

GENERAL NOTES

A. THE SUB-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 SUB-CONTRACTOR SHALL BE REPAIRED OR REPLACED AT NO ADDITIONAL COST TO THE OWNER.

B. LOCATE ALL VALVES AWAY FROM LOW SPOTS OR AREAS OF DRAINAGE FLOW.

C. MAINTAIN 4" MINIMUM CLEARANCE BETWEEN PIPE RUNNING IN THE SAME TRENCH. CONTROL WIRE SHALL ALWAYS BE TO THE SIDE AND BELOW THE TOP OF THE PIPE RUNNING IN THE SAME TRENCH.

D. ALL PIPING/WRING RUNNING BENEATH PAVED SURFACES (DRIVES, SIDEWALKS, ETC.) SHALL BE INSTALLED IN CLASS 200 PVC SLEEVES. SLEEVES SHALL BE OF THE SIZE SO THAT THE INSIDE DIAMETER OF THE SLEEVE IS 2 PIPE SIZES GREATER THAN THAT OF THE COMBINED OUTER DIAMETER OF ALL ITEMS INSTALLED IN THE SLEEVES.

E. THE SUB-CONTRACTOR WILL NOT WILLFULLY INSTALL THE IRRIGATION SYSTEM AS DESIGNED, WHEN IT IS OBVIOUS THAT FIELD CONDITIONS EXIST, THAT WERE NOT CONSIDERED AT TIME OF DESIGNING THE SYSTEM. ANY CONDITIONS NOTED AS SUCH, SHALL BE REPORTED TO THE ARCHITECT AND IRRIGATION DESIGNER. IF THE SUB-CONTRACTOR FAILS TO DO SO, THE CONTRACTOR ASSUMES FULL RESPONSIBILITY FOR ANY CORRECTIONS NEEDED.

F. ALL CONTROL WIRING FROM THE VALVES TO THE CONTROLLER MUST BE INSTALLED IN A 1" PVC CONDUIT PIPE IF BURIED BENEATH CONCRETE OR ASPHALT SURFACES.

G. SUB-CONTRACTOR IS RESPONSIBLE FOR CONNECTING AUTOMATIC CONTROLLER TO ELECTRICITY.

RPA FEBCO Mo.825Y DETAIL
NOT TO SCALE

SLEEVING STANDARD DETAIL
NOT TO SCALE

Patricia Garcia
STATE OF TEXAS
PATRICIA GARCIA
10743
LICENSED IRRIGATOR
FEBRUARY 28, 2020

Essential Landscaping & Sprinklers, INC.
5505 Rosa El Paso, Tx 79905
Phone: 533-4111 essentials@att.net

NO.	DATE	DESCRIPTION	BY
1	11/20/2020	1st City Submittal	AHO

WARNING ! BEFORE YOU DIG CONTRACTOR SHALL FIELD LOCATE ALL EXISTING UNDERGROUND IMPROVEMENTS IN PROJECT AREA

Texas811 Know what's below. Call before you dig.

BEFORE YOU DIG - CALL

EL PASO ELECTRIC COMPANY	541-5720
AT&T	1-800-DIG-TESS
TEXAS GAS SERVICE	1-800-DIG-TESS
EL PASO WATER UTILITIES	594-5500
PUBLIC SERVICE BOARD (WATER & SEWER)	562-8411 / 544-4000
EL PASO COUNTY EMERGENCY (EPW)	1-800-DIG-TESS
SPECTRUM	775-7414
TEXAS KOMATSU PIPE SYSTEM	1-800-344-8377
MEMBERS ACROSS THE STATE	1-800-245-4545
EL PASO STREETS AND MAINTENANCE	212-0151
EL PASO TRAFFIC SIGNAL STREETS AND MAINTENANCE	trespol@elpasotexas.gov

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Texas Registered Engineering Firm F-9907
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El Paso, Texas 79912
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fax [915] 877.4334
www.csaengineers.com

SUBDIVISION
CIMARRON CANYON UNIT TWO SUBDIVISION

SHEET TITLE
IRRIGATION PLAN OVERALL

P.G.A. DESIGN BY	1908 JOB NO.
P.G.A. DRAWN BY	08/28/2019 DATE OF CONSTRUCTION
P.G.A. CHECKED BY	AS NOTED SCALE

SHEET NO. IR1
SHEET SEQUENCE 83 OF 85

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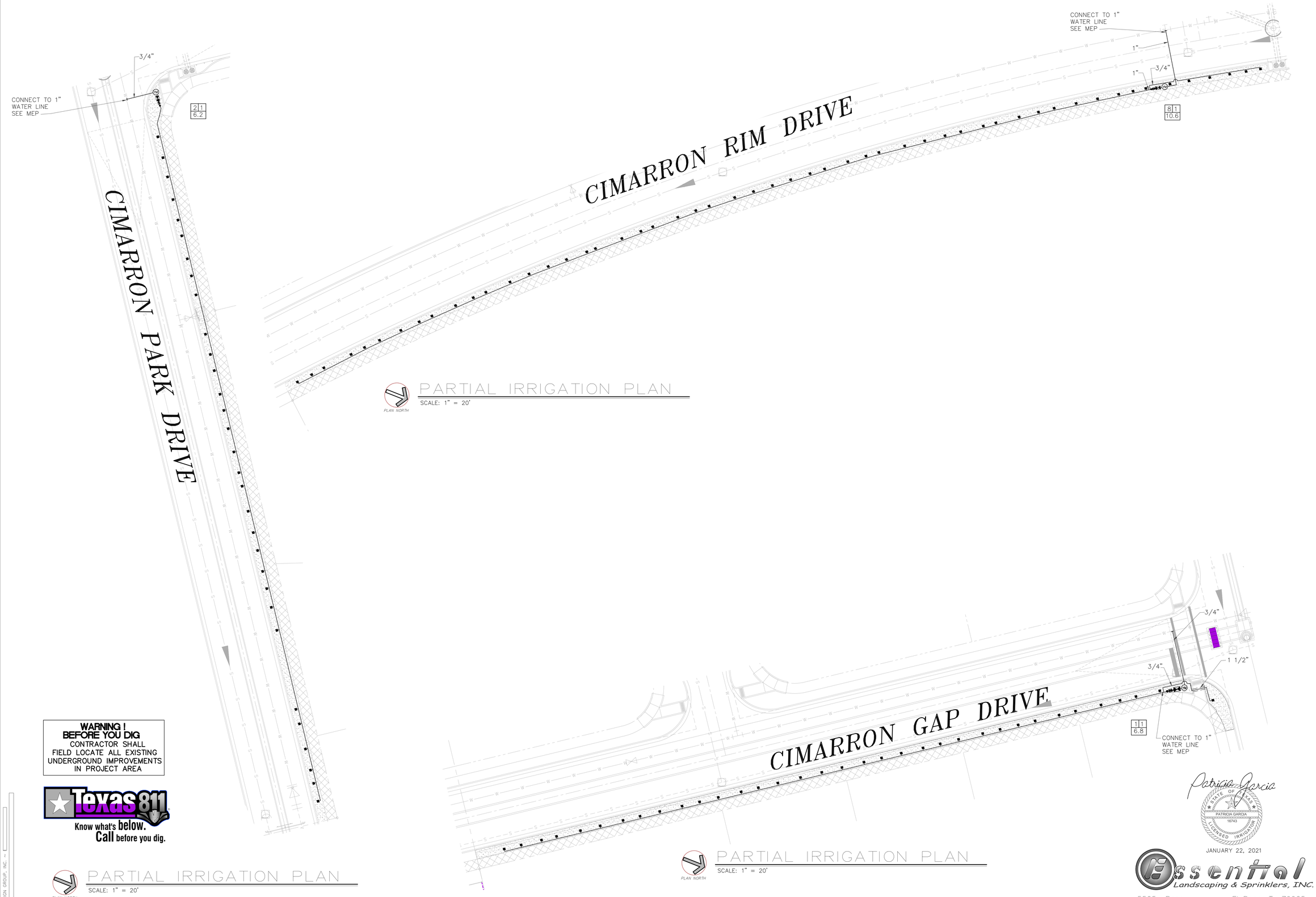

PARTIAL IRRIGATION PLAN
SCALE: 1" = 20'

PARTIAL IRRIGATION PLAN
SCALE: 1" = 20'

PARTIAL IRRIGATION PLAN
SCALE: 1" = 20'

PLAN NORTH

WARNING ! BEFORE YOU DIG
CONTRACTOR SHALL FIELD LOCATE ALL EXISTING UNDERGROUND IMPROVEMENTS IN PROJECT AREA

Texas 811 Know what's below. Call before you dig.

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NO.	DATE	DESCRIPTION	BY
1	11/20/2020	1st City Submittal	AHO

WARNING! BEFORE YOU DIG IN PROJECT AREA, CONTRACTOR SHALL FIELD LOCATE ALL EXISTING UNDERGROUND IMPROVEMENTS

Texas 811 Know what's below. Call before you dig.

BEFORE YOU DIG - CALL

EL PASO ELECTRIC COMPANY	543-5720
AT&T	1-800-DIG-TESS
TEXAS GAS SERVICE HOTLINE	1-800-DIG-TESS
PUBLIC SERVICE BOARD (WATER & SEWER)	562-8411 / 584-6300
FOR WATER LEAKS EMERGENCY (EPW)	1-800-DIG-TESS
SPECTRUM	775-7414
TEXAS-NEW MEXICO POWER	1-800-344-8377
KINDER MORGAN PIPELINES	1-800-231-0708
EL PASO STREETS AND MAINTENANCE	212-0151
EL PASO TRAFFIC SIGNAL STREETS AND MAINTENANCE	treeprotection@epcitydesignreviews.com

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El Paso, Texas 79912
tel [915] 877.4155
fax [915] 877.4334
www.csaengineers.com

SUBDIVISION
CIMARRON CANYON UNIT TWO SUBDIVISION

SHEET TITLE
LANDSCAPE PLAN STREETS

Patricia Garcia
STATE OF TEXAS
PATRICIA GARCIA
16743
LICENSED IRRIGATOR
JANUARY 22, 2021

essential Landscaping & Sprinklers, INC.
5505 Rosa El Paso, Tx 79905
Phone: 533-4111 essentialls@att.net

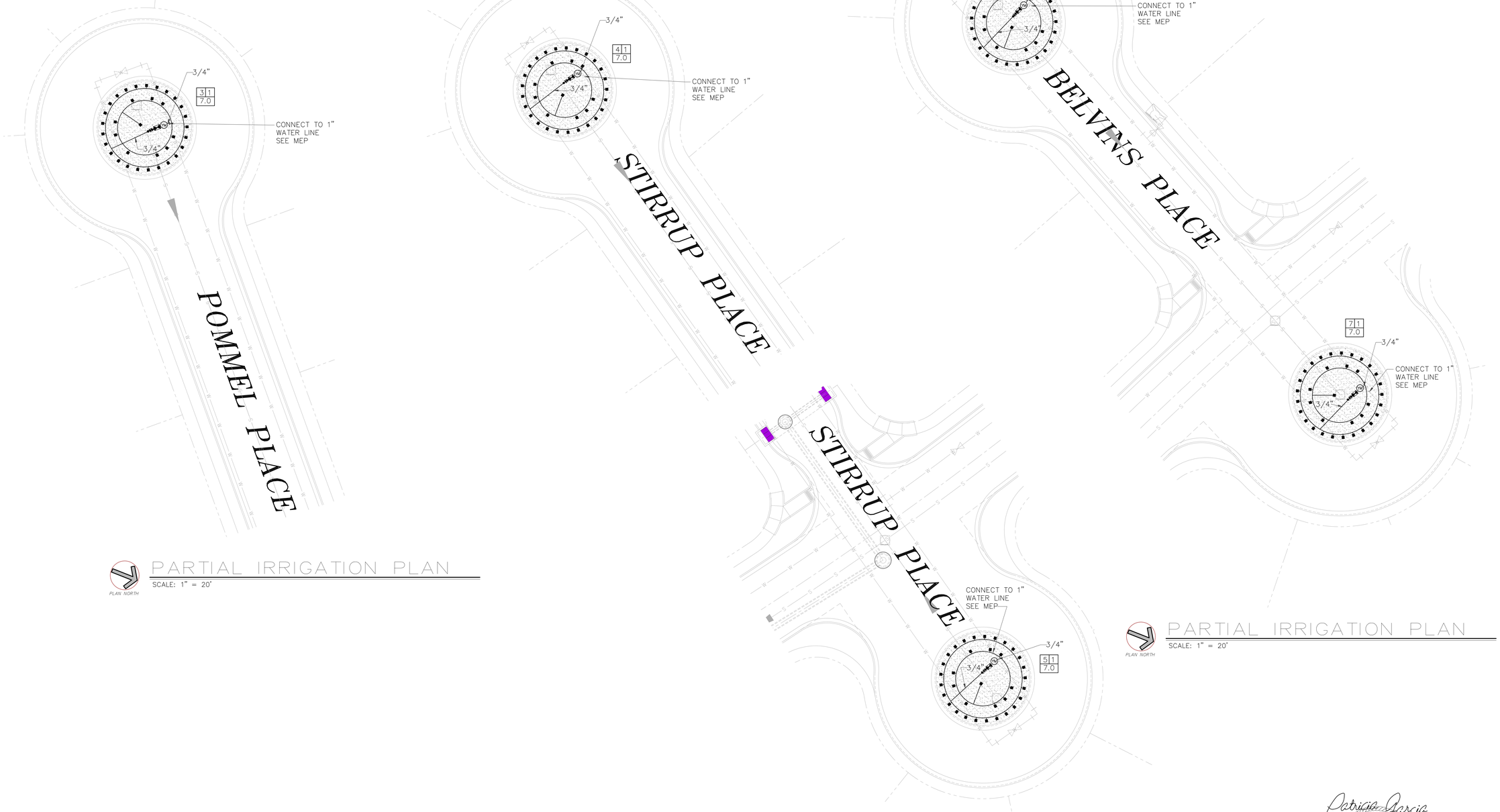
P.G.A. DESIGN BY	1908 JOB NO.
P.G.A. DRAWN BY	08/28/2019 DATE OF CONSTRUCTION
P.G.A. CHECKED BY	AS NOTED SCALE

SHEET NO.
IR3

SHEET SEQUENCE
84 of 85

WARNING !
BEFORE YOU DIG
CONTRACTOR SHALL
FIELD LOCATE ALL EXISTING
UNDERGROUND IMPROVEMENTS
IN PROJECT AREA

Texas811
Know what's below.
Call before you dig.



PLAN NORTH

PARTIAL IRRIGATION PLAN
SCALE: 1" = 20'

PARTIAL IRRIGATION PLAN
SCALE: 1" = 20'

PARTIAL IRRIGATION PLAN
SCALE: 1" = 20'

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NO.	DATE	DESCRIPTION	BY
1	11/20/2020	1st City Submittal	AHO

WARNING ! BEFORE YOU DIG
IN PROJECT AREA, CONTRACTOR
SHALL FIELD LOCATE ALL EXISTING
UNDERGROUND IMPROVEMENTS

Texas811
Know what's below.
Call before you dig.

BEFORE YOU DIG - CALL

EL PASO ELECTRIC COMPANY	543-5720
AT&T	1-800-DIG-TESS
TEXAS GAS SERVICE	564-5000
TEXAS EMERGENCY HOTLINE	1-800-DIG-TESS
PUBLIC SERVICE BOARD (WATER & SEWER)	562-8411 / 564-5000
EL PASO WATER EMERGENCY (EPW)	1-800-DIG-TESS
SPECTRUM	775-7414
TEXAS - MEXICAN PIPELINE SYSTEM	1-800-344-8377
MCKENZIE PIPELINE	1-800-364-7474
EL PASO STREETS AND MAINTENANCE	212-0151
EL PASO TRAFFIC SIGNAL STREETS AND MAINTENANCE	trmpcd@elpasotexas.gov

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Texas Registered Engineering Firm F-9997
1845 Northwestern Dr. Ste C
El Paso, Texas 79912
tel [915] 877.4155
fax [915] 877.4334
www.csaengineers.com

SUBDIVISION
CIMARRON CANYON
UNIT TWO
SUBDIVISION

SHEET TITLE
IRRIGATION
PLAN
CUL-DE-SACS

Patricia Garcia
STATE OF TEXAS
PATRICIA GARCIA
16743
LICENSED IRRIGATOR

JANUARY 22, 2021

Essential Landscaping & Sprinklers, INC.
5505 Rosa
Phone: 533-4111
El Paso, Tx 79905
essentialls@att.net

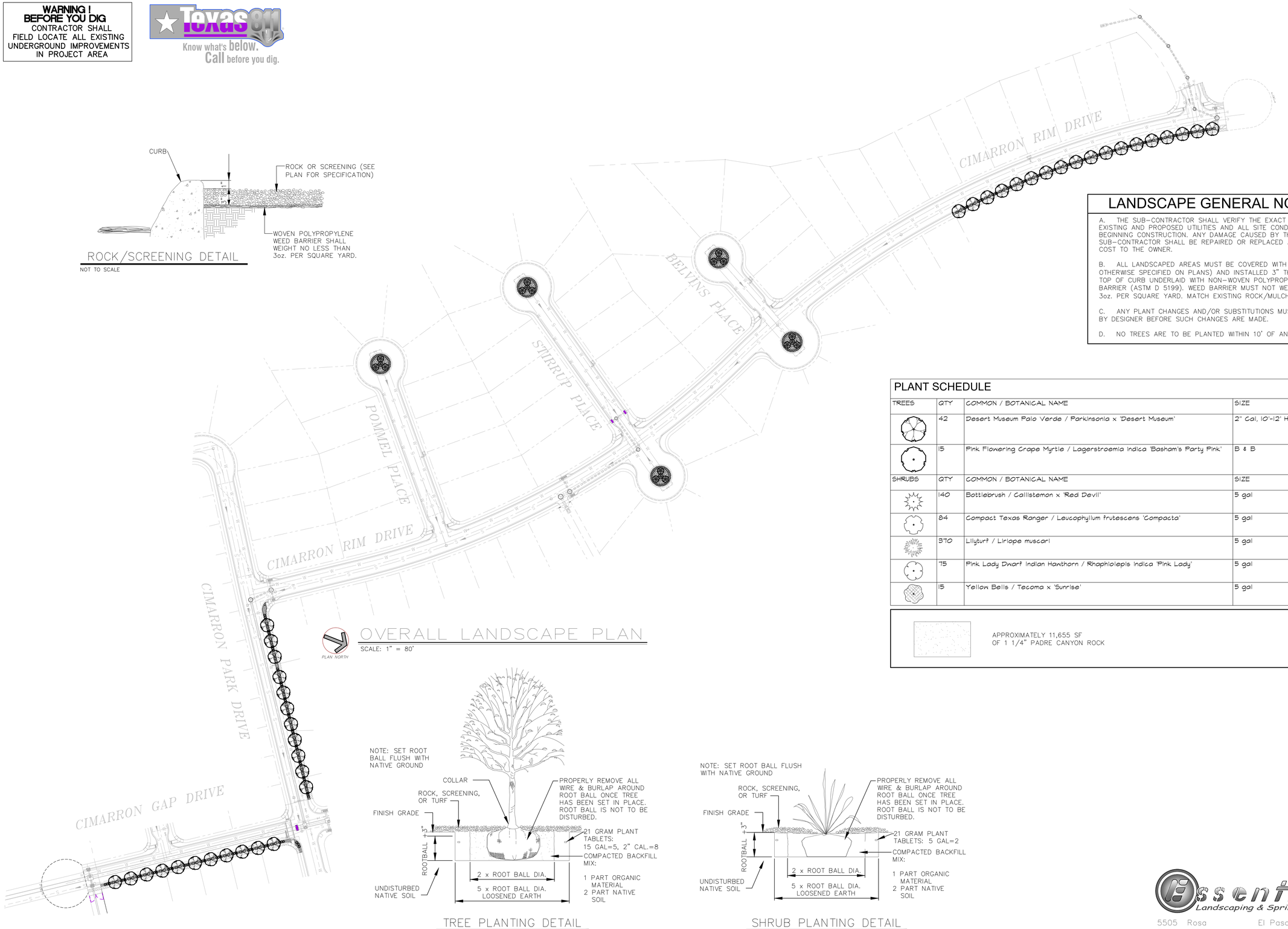
P.G.A. DESIGN BY	1908 JOB NO.
P.G.A. DRAWN BY	08/28/2019 DATE OF COMPLETION
P.G.A. CHECKED BY	AS NOTED SCALE

SHEET NO.
IR3
SHEET SEQUENCE
85 OF 85

WARNING !
BEFORE YOU DIG
CONTRACTOR SHALL
FIELD LOCATE ALL EXISTING
UNDERGROUND IMPROVEMENTS
IN PROJECT AREA

Texas811
Know what's below.
Call before you dig.

ROCK/SCREENING DETAIL
NOT TO SCALE



OVERALL LANDSCAPE PLAN
SCALE: 1" = 80'

LANDSCAPE GENERAL NOTES

A. THE SUB-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 SUB-CONTRACTOR SHALL BE REPAIRED OR REPLACED AT NO ADDITIONAL COST TO THE OWNER.

B. ALL LANDSCAPED AREAS MUST BE COVERED WITH ROCK (UNLESS OTHERWISE SPECIFIED ON PLANS) AND INSTALLED 3" THICK, 1" BELOW TOP OF CURB UNDERLAID WITH NON-WOVEN POLYPROPYLENE WEED BARRIER (ASTM D 5199). WEED BARRIER MUST NOT WEIGH LESS THAN 3oz. PER SQUARE YARD. MATCH EXISTING ROCK/MULCH.

C. ANY PLANT CHANGES AND/OR SUBSTITUTIONS MUST BE APPROVED BY DESIGNER BEFORE SUCH CHANGES ARE MADE.

D. NO TREES ARE TO BE PLANTED WITHIN 10' OF ANY UTILITY LINES.

PLANT SCHEDULE

TREES	QTY	COMMON / BOTANICAL NAME	SIZE	CONTAINER
	42	Desert Museum Palo Verde / Parkinsonia x 'Desert Museum'	2" Cal, 10'-12' H	B&B
	15	Pink Flowering Crape Myrtle / Lagerstroemia Indica 'Basham's Party Pink'	B & B	2"Cal
SHRUBS	**QTY**	**COMMON / BOTANICAL NAME**	**SIZE**	**CONTAINER**
	140	Bottlebrush / Callistemon x 'Red Devil'	5 gal	18"-24"H
	84	Compact Texas Ranger / Leucophyllum frutescens 'Compacta'	5 gal	18"-24"H
	370	Lilyturf / Liriope muscari	5 gal	18"-24"H
	75	Pink Lady Dwarf Indian Hawthorn / Rhaphiolepis Indica 'Pink Lady'	5 gal	18"-24"H
	15	Yellow Bells / Tecoma x 'Sunrise'	5 gal	18"-24"H

APPROXIMATELY 11,655 SF
OF 1 1/4" PADRE CANYON ROCK

TREE PLANTING DETAIL
NOT TO SCALE

SHRUB PLANTING DETAIL
NOT TO SCALE

Essential Landscaping & Sprinklers, INC.
5505 Rosa El Paso, Tx 79905
Phone: 533-4111 essentialls@att.net

NO.	DATE	DESCRIPTION	BY
1	11/20/2020	1st City Submittal	AHO

WARNING ! BEFORE YOU DIG IN PROJECT AREA, CONTRACTOR SHALL FIELD LOCATE ALL EXISTING UNDERGROUND IMPROVEMENTS
Texas811 Know what's below. Call before you dig.

BEFORE YOU DIG - CALL
EL PASO ELECTRIC COMPANY 541-5720
AT&T 1-800-DIG-TESS
TEXAS GAS SERVICE 584-6300
TEXAS EXCHANGE HOTLINE 1-800-DIG-TESS
EL PASO WATER EMERGENCY (EPW) 562-8411/584-6300
SPECTRUM 775-7414
TEXAS-NEW MEXICO POWER 1-800-344-8377
KINDER MORGAN SFPP PIPELINE 212-0151
PUBLIC SERVICE BOARD (WATER & SEWER)
EL PASO STREETS AND MAINTENANCE
EL PASO TRAFFIC SIGNAL STREETS AND MAINTENANCE

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Texas Registered Engineering Firm F-9997
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fax [915] 877.4334
www.csaengineers.com

SUBDIVISION
CIMARRON CANYON UNIT TWO SUBDIVISION

SHEET TITLE
LANDSCAPE PLAN OVERALL

P.G.A. DESIGN BY	1908 JOB NO.
P.G.A. DRAWN BY	08/28/2019 DATE OF SUBMISSION
P.G.A. CHECKED BY	AS NOTED SCALE
SHEET NO. L1	
SHEET SEQUENCE 80 OF 85	

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CIMARRON RIM DRIVE

PARTIAL LANDSCAPE PLAN
SCALE: 1" = 20'

CIMARRON PARK DRIVE

CIMARRON GAP DRIVE

PARTIAL LANDSCAPE PLAN
SCALE: 1" = 20'

PARTIAL LANDSCAPE PLAN
SCALE: 1" = 20'

NO.	DATE	DESCRIPTION	BY
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BEFORE YOU DIG - CALL

EL PASO ELECTRIC COMPANY	543-5720
AT&T	1-800-DIG-TESS
TEXAS GAS SERVICE	772-2222
EL PASO UTILITIES LOCATION HOTLINE	562-8411/564-5000
TEXAS GAS SERVICE EMERGENCY (EFW)	1-800-DIG-TESS
	1-800-441-7345
SPECTRUM	775-7414
TEXAS-NEW MEXICO POWER	1-800-344-8377
KINDER MORGAN PIPELINES	1-800-324-3104
EL PASO STREETS AND MAINTENANCE	212-0151
EL PASO TRAFFIC SIGNAL STREETS AND MAINTENANCE	(texpo1@elpasotexas.gov)

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SUBDIVISION
CIMARRON CANYON
UNIT TWO
SUBDIVISION

SHEET TITLE
LANDSCAPE
PLAN
STREETS

P.G.A. DESIGN BY	1908 JOB NO.
P.G.A. DRAWN BY	08/28/2019 DATE OF SUBMISSION
P.G.A. CHECKED BY	AS NOTED SCALE

SHEET NO.
L2

SHEET SEQUENCE
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UNDERGROUND IMPROVEMENTS
IN PROJECT AREA

Texas811
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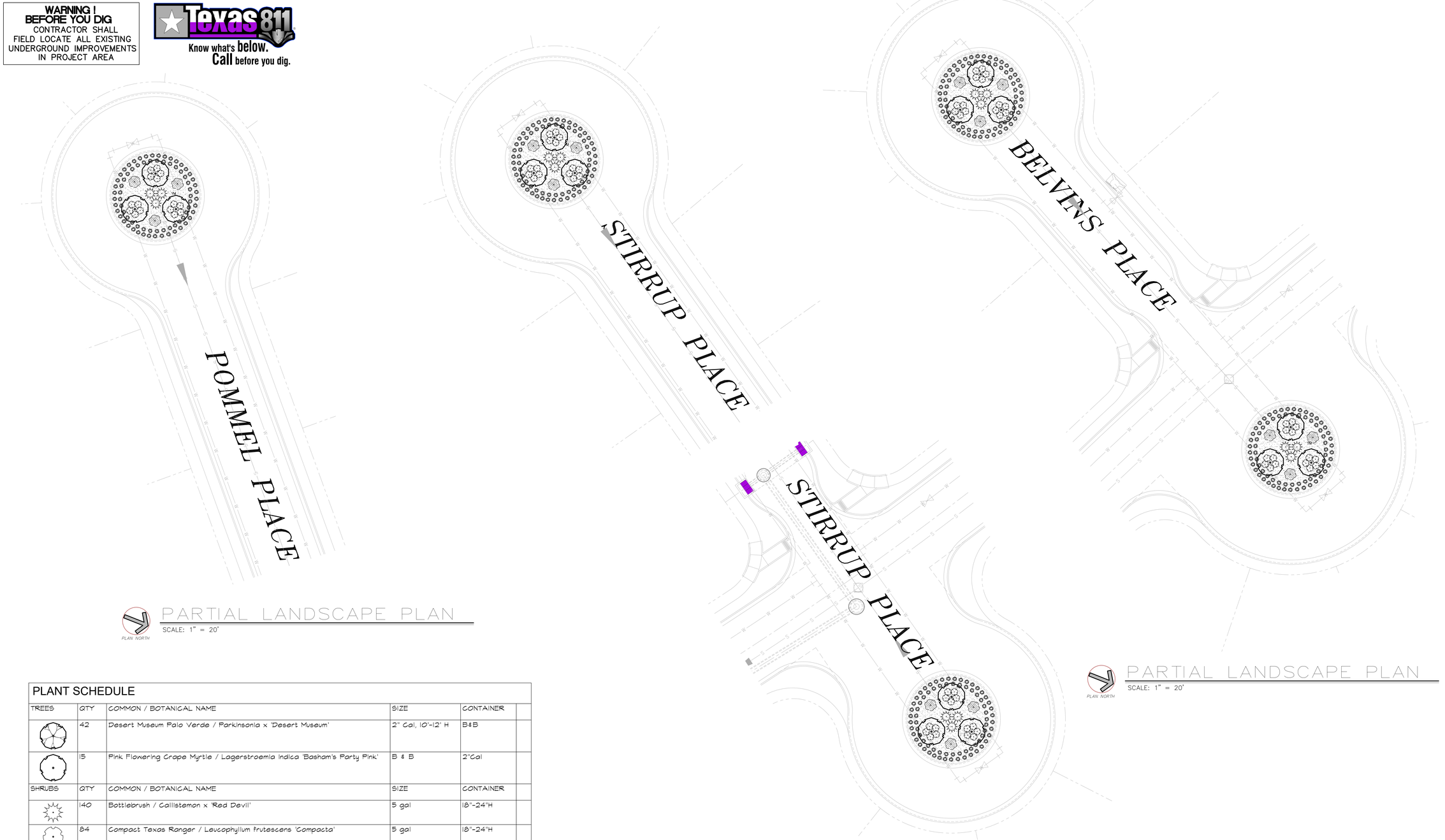

PARTIAL LANDSCAPE PLAN
SCALE: 1" = 20'

PARTIAL LANDSCAPE PLAN
SCALE: 1" = 20'

PARTIAL LANDSCAPE PLAN
SCALE: 1" = 20'

PLANT SCHEDULE

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APPROXIMATELY 11,655 SF
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El Paso, Tx 79905
essentialls@att.net

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TEXAS GAS SERVICE	544-6300
TGS EMERGENCY HOTLINE	562-8411/562-2003
PUBLIC SERVICE BOARD (WATER & SEWER)	1-800-DIG-TESS
AFTER HOURS EMERGENCY (EPW)	594-5775
SPECTRUM	775-7414
TEXAS EXCAVATION SAFETY SYSTEM	1-800-344-8377
KINDER-MORGAN EPNG PIPELINES	1-800-238-3764
EL PASO STREETS AND MAINTENANCE	212-0151
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SUBDIVISION
CIMARRON CANYON
UNIT TWO
SUBDIVISION

SHEET TITLE
LANDSCAPE
PLAN
CUL-DE-SACS

P.G.A.	1908
DESIGN BY	JOB NO.
P.G.A.	08/28/2019
DRAWN BY	DATE OF COMMISSION
P.G.A.	AS NOTED
CHECKED BY	SCALE

SHEET NO.
L3
SHEET SEQUENCE
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