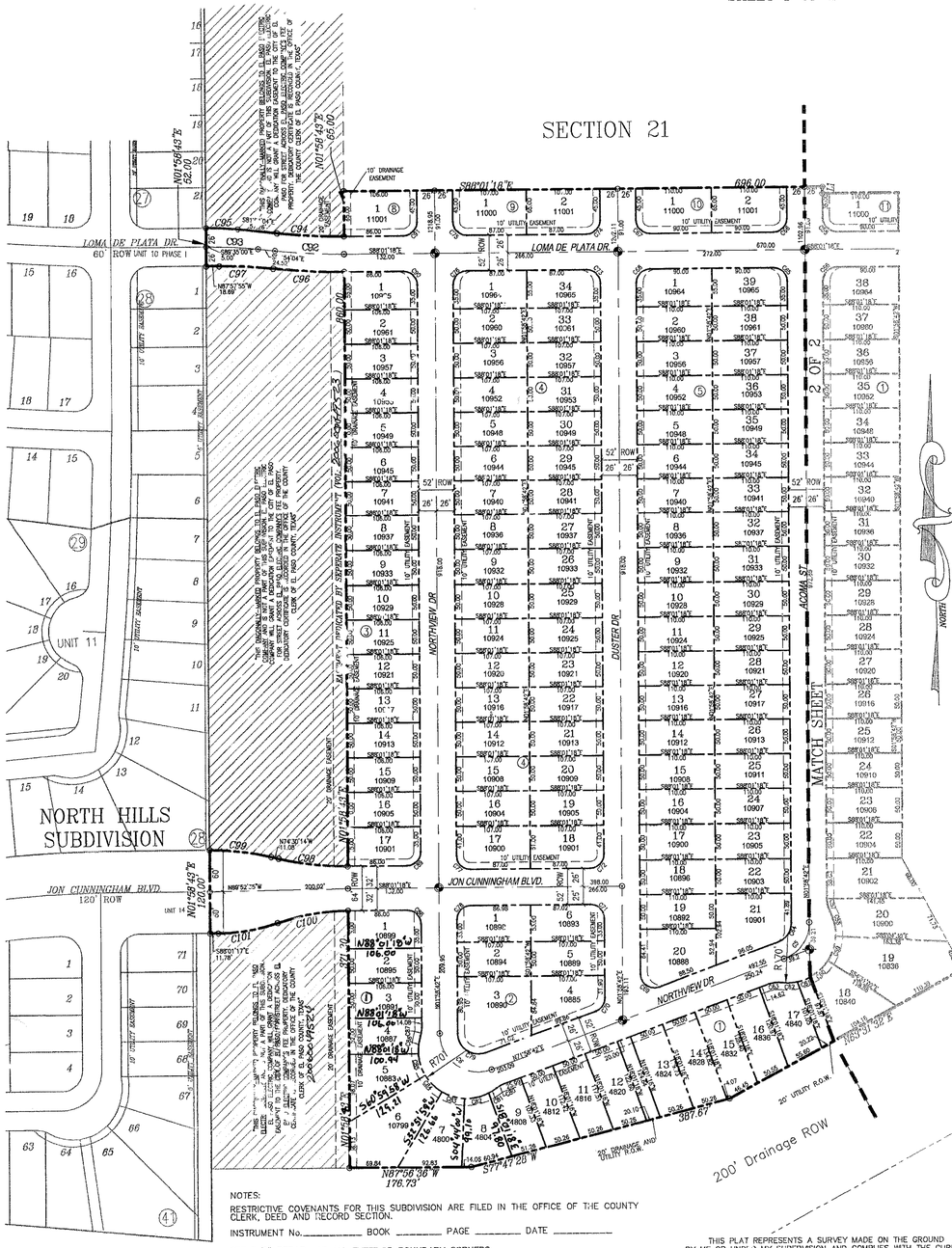
SANDSTONE RANCH UNIT 1

BEING A PORTION OF SECTIONS 21,
BLOCK 81, TOWNSHIP 1,
TEXAS AND PACIFIC RAILROAD COMPANY SURVEY,
CITY OF EL PASO, EL PASO COUNTY, TEXAS
38.76 ± ACRES
SHEET 1 OF 2

GRAPHIC SCALE

100 0 50 100 200 400

(IN FEET)
1 inch = 100 ft.



NOTES:

RESTRICTIVE COVENANTS FOR THIS SUBDIVISION ARE FILED IN THE OFFICE OF THE COUNTY CLERK, DEED AND RECORD SECTION.

INSTRUMENT No._____ BOOK _____ PAGE _____ DATE _____

SET 5/8" REBAR AT ALL EXTERIOR BOUNDARY CORNERS.

TAX CERTIFICATE FOR THIS SUBDIVISION ARE FILED IN THE OFFICE OF THE COUNTY CLERK, DEED AND RECORD SECTION.

INSTRUMENT No. 2006005494 BOOK _____ PAGE _____ DATE _____

LOT CORNERS WILL BE SET UPON COMPLETION OF CONSTRUCTION OF ROADWAYS AND UTILITIES.

THIS PROPERTY LIES IN ZONE "C", AS DESIGNATED BY F.E.M.A.; CITY OF EL PASO, AUGUST 5, 1991, COMMUNITY PANEL NO. 480214-0014 D.

PROPERTY OWNERS OF ADJOINING LOTS HAVING A COMMON DRAINAGE EASEMENT SHALL BE LIABLE FOR ANY ROCK WALL OR LANDSCAPING REPAIRS AND COSTS INCURRED BY ANY NECESSARY MAINTENANCE TO DRAINAGE STRUCTURES WITHIN THE EASEMENT

DATE OF PREPARATION:
JULY 21, 2005
REV. 3/30/06 (Updated Addresses)
REV. 4/03/06 (MODIFIED DEDICATION)

THIS PLAT REPRESENTS A SURVEY MADE ON THE GROUND BY ME OR UNDER MY SUPERVISION AND COMPLIES WITH THE CURRENT TEXAS BOARD OF PROFESSIONAL LAND SURVEY PROFESSIONAL AND TECHNICAL STANDARDS.

STATE OF TEXAS
CARLOS M. JIMENEZ
3950
REGISTERED PROFESSIONAL LAND SURVEYOR

CARLOS M. JIMENEZ, R.P.L.S.
REGISTERED PROFESSIONAL LAND
SURVEYOR TEXAS LICENSE NO. 3950

CURVE TABLE

CURVE	DELTA	RADIUS	ARC	CHORD BEARING	CHORD
C1	28°27'10"	557.00'	276.60'	S12°14'53"E	273.77'
C2	28°27'10"	426.00'	211.55'	S12°14'53"E	209.38'
C3	110°00'00"	56.00'	107.51'	S61°28'28"E	91.75'
C4	08°27'10"	600.00'	88.52'	S02°14'53"E	88.44'
C5	70°00'00"	56.00'	68.42'	N36°58'42"E	64.24'
C6	110°00'00"	56.00'	107.51'	S53°01'18"E	91.75'
C7	03°01'37"	400.00'	21.13'	S00°27'53"W	21.13'
C8	08°19'05"	400.00'	58.07'	S05°12'28"E	58.02'
C9	08°19'24"	400.00'	58.11'	S13°31'42"E	58.06'
C10	08°47'04"	400.00'	61.33'	S22°04'56"E	61.27'
C11	90°00'00"	20.00'	31.42'	N71°28'28"W	28.28'
C12	90°00'00"	20.00'	31.42'	N18°31'32"E	28.28'
C13	03°44'04"	452.00'	29.46'	S24°36'26"E	29.46'
C14	06°04'10"	452.00'	47.88'	S19°42'19"E	47.86'
C15	06°04'10"	452.00'	47.88'	S13°38'08"E	47.86'
C16	06°04'10"	452.00'	47.88'	S07°33'58"E	47.86'
C17	06°04'10"	452.00'	47.88'	S01°29'48"E	47.86'
C18	00°26'25"	452.00'	3.47'	S01°45'29"W	3.47'
C19	90°00'00"	20.00'	31.42'	S43°01'18"E	28.28'
C20	90°00'00"	20.00'	31.42'	S46°58'42"W	28.28'
C21	02°04'10"	600.00'	21.67'	N00°56'37"E	21.67'
C22	05°39'36"	600.00'	59.27'	N02°55'16"W	59.25'
C23	05°38'47"	600.00'	59.13'	N08°34'27"W	59.11'
C24	05°38'15"	600.00'	59.04'	N14°12'59"W	59.01'
C15	05°38'01"	600.00'	58.99'	N19°51'06"W	58.97'
C26	03°48'21"	600.00'	39.86'	N24°34'17"W	39.85'
C27	06°25'20"	600.00'	67.25'	S23°15'48"E	67.22'
C28	11°45'45"	600.00'	123.18'	S14°10'15"E	122.96'
C29	02°53'42"	600.00'	30.32'	S06°50'32"E	30.31'
C30	05°18'13"	600.00'	55.54'	S02°44'34"E	55.52'
C31	02°04'10"	600.00'	21.67'	N00°56'37"E	21.67'
C32	90°00'00"	20.00'	31.42'	N43°01'18"W	28.28'
C33	90°00'00"	20.00'	31.42'	N46°58'42"E	28.28'
C34	73°09'03"	20.00'	25.53'	S34°35'49"E	23.84'
C35	28°09'03"	49.00'	24.07'	S57°05'49"E	23.83'
C36	45°00'00"	49.00'	38.48'	S20°31'18"E	37.50'
C37	45°00'00"	49.00'	38.48'	S24°28'42"W	37.50'
C38	28°09'03"	49.00'	24.07'	S61°03'13"W	23.83'
C39	73°09'03"	20.00'	25.53'	S38°33'13"W	23.84'
C40	08°27'10"	574.00'	84.68'	S02°14'53"E	84.60'
C41	110°00'00"	30.00'	57.60'	S61°28'28"E	49.15'
C42	17°42'00"	40.00'	12.36'	N54°40'32"E	12.31'
C43	22°02'44"	70.00'	26.93'	N56°50'54"E	26.77'
C45	37°16'33"	70.00'	45.54'	N86°30'32"E	44.74'
C46	31°49'52"	70.00'	38.89'	S58°56'15"E	38.39'
C47	31°49'52"	70.00'	38.89'	S27°06'24"E	38.39'
C48	22°25'00"	70.00'	27.39'	S00°01'02"W	27.21'
C49	17°42'00"	40.00'	12.36'	S02°22'32"W	12.31'
C50	02°17'52"	626.00'	25.10'	S05°19'32"E	25.10'
C51	05°29'00"	626.00'	59.91'	S01°26'06"E	59.89'
C52	00°40'18"	626.00'	7.34'	S01°38'33"W	7.34'
C53	90°00'00"	20.00'	31.42'	S43°01'18"E	28.28'
C54	90°00'00"	20.00'	31.42'	S46°58'42"W	28.28'
C55	90°00'00"	20.00'	31.42'	N43°01'18"W	28.28'
C56	90°00'00"	20.00'	31.42'	S46°58'42"W	28.28'
C57	27°39'50"	40.00'	19.31'	N11°51'13"W	19.13'
C58	30°36'39"	70.00'	37.40'	N10°22'40"W	36.95'
C59	30°33'28"	70.00'	37.33'	N20°21'14"E	36.89'
C60	28°51'08"	70.00'	35.25'	N49°54'32"E	34.88'
C61	16°25'38"	70.00'	20.07'	N72°32'55"E	20.00'
C62	18°52'46"	70.00'	23.07'	S67°47'52"E	22.96'
C63	27°39'50"	40.00'	19.31'	N85°48'37"E	19.13'
C64	70°00'00"	30.00'	36.65'	N36°58'42"E	34.41'
C65	90°00'00"	20.00'	31.42'	N43°01'18"W	28.28'
C66	90°00'00"	20.00'	31.42'	S46°58'42"W	28.28'
C67	90°00'00"	20.00'	31.42'	N43°01'18"W	28.28'
C68	90°00'00"	20.00'	31.42'	N46°58'42"E	28.28'
C69	110°00'00"	20.00'	38.40'	S53°01'18"E	32.77'
C70	70°00'00"	20.00'	24.43'	N36°58'42"E	22.94'
C71	90°00'00"	20.00'	31.42'	S43°01'18"E	28.28'
C72	90°00'00"	20.00'	31.42'	N46°58'42"E	28.28'
C73	90°00'00"	20.00'	31.42'	S43°01'18"E	28.28'
C74	90°00'00"	20.00'	31.42'	S46°58'42"W	28.28'
C75	90°00'00"	20.00'	31.42'	N43°01'18"W	28.28'
C76	90°00'00"	20.00'	31.42'	N46°58'42"E	28.28'
C77	90°00'00"	20.00'	31.42'	S43°01'18"E	28.28'
C78	90°00'00"	20.00'	31.42'	N46°58'42"E	28.28'
C79	110°00'00"	30.00'	57.60'	S53°01'18"E	49.15'
C80	17°42'00"	40.00'	12.36'	N63°07'42"E	12.31'
C81	10°46'54"	70.00'	13.17'	N59°40'09"E	13.15'
C82	29°40'21"	70.00'	36.25'	N73°53'46"E	35.85'
C83	28°07'43"	70.00'	34.37'	S71°12'12"E	34.02'
C84	28°07'48"	70.00'	34.37'	S43°04'27"E	34.02'
C85	27°19'04"	70.00'	33.38'	S15°21'01"E	33.06'
C86	21°22'11"	70.00'	26.11'	S08°59'37"W	25.96'
C87	17°42'00"	40.00'	12.36'	S10°49'42"W	12.31'
C88	90°00'00"	20.00'	31.42'	S43°01'18"E	28.28'
C89	90°00'00"	20.00'	31.42'	S46°58'42"W	28.28'
C90	90°00'00"	20.00'	31.42'	S43°01'18"E	28.28'
C91	90°00'00"	20.00'	31.42'	S46°58'42"W	28.28'
C92	06°07'15"	937.97'	100.20'	S84°57'41"E	100.16'
C93	06°03'51"	668.37'	70.74'	N84°55'59"W	70.71'
C94	06°07'15"	911.97'	97.43'	S84°57'41"E	97.38'
C95	06°03'51"	433.87'	45.92'	N84°55'59"W	45.90'
C96	06°05'21"	968.96'	102.98'	S84°57'12"E	102.93'
C97	06°04'49"	741.42'	78.68'	N84°55'30"W	78.64'
C98	12°56'32"	445.70'	100.94'	S81°15'46"E	100.72'
C99	13°31'03"	381.64'	90.04'	N81°15'46"W	89.83'
C100	18°41'50"	317.93'	103.75'	S82°37'49"W	103.29'
C101	18°41'45"	269.25'	99.65'	N82°37'51"E	87.47'
C102	02°45'01"	557.00'	26.74'	N00°00'00"E	26.74'
C103	04°54'01"	557.00'	47.64'	N03°13'23"W	47.62'
C104	04°57'54"	557.00'	48.27'	N08°09'21"W	48.25'
C105	04°57'54"	557.00'	48.27'	N13°07'15"W	48.25'
C106	03°55'49"	557.00'	38.21'	N21°49'24"W	38.35'
C107	06°07'09"	557.00'	58.49'	N23°24'54"W	59.46'

LEGEND
- PROPOSED CITY MONUMENT
- EXISTING CITY MONUMENT
- PROPERTY CORNERS

CONSULTING COMPANY
1790 N. LEE TREVINO DR. SUITE 503
EL PASO, TEXAS 79936
TEL (915) 633-6422 FAX (915) 633-6424

DEDICATION

EL PASO ELECTRIC COMPANY, PROPERTY OWNER OF THIS LAND HEREBY PRESENT THIS PLAT AND BY SEPARATE RECORDED DOCUMENT (TITLED DEDICATORY CERTIFICATE, WHICH IS FULLY INCORPORATED HEREIN BY THIS REFERENCE, AND IS RECORDED IN THE EL PASO COUNTY REAL PROPERTY RECORDS BOOK _____, VOLUME _____, DOCUMENT NUMBER 20060049524), PROVIDES A DEDICATION TO THE CITY OF EL PASO FOR USE OF TWO (2) DESIGNATED AREAS AS STREETS, AS HEREON LAID DOWN AND DESIGNATED; INCLUDING USE FOR OVERHANG SERVICE WIRES FOR POLE TYPE UTILITIES, AND BURIED SERVICE WIRES, CONDUITS AND PIPES FOR UNDERGROUND UTILITIES, AND THE RIGHT TO INGRESS AND EGRESS FOR SERVICE AND CONSTRUCTION AND THE RIGHT TO TRIM INTERFERING TREES AND SHRUBS.

WITNESS OUR SIGNATURE THIS 30th DAY OF MAY, 2006.

HECTOR R. PUENTE
VICE-PRESIDENT – DISTRIBUTION
EL PASO ELECTRIC COMPANY

ATTEST: NOT REQUIRED

ACKNOWLEDGEMENT

STATE OF TEXAS
COUNTY OF EL PASO

BEFORE ME, THE UNDERSIGNED AUTHORITY, ON THIS DAY PERSONALLY APPEARED HECTOR R. PUENTE, VICE PRESIDENT – DISTRIBUTION OF EL PASO ELECTRIC COMPANY, KNOW TO ME TO BE THE PERSON WHOSE NAME IS SUBSCRIBED TO THE FOREGOING INSTRUMENT AND ACKNOWLEDGED TO ME THAT HE EXECUTED THE SAME AS THE ACT AND DEED OF SAID CORPORATION FOR THE PURPOSE AND CONSIDERATIONS HEREIN EXPRESSED.

GIVEN UNDER MY HAND AND SEAL OF OFFICE THIS 30th DAY OF MAY, 2006.

MARTHA A. VELASCO
NOTARY PUBLIC
In and for the State of Texas
My Commission Expires
06-29-2007

NOTARY PUBLIC IN AND FOR EL PASO COUNTY — MY COMMISSION EXPIRES

BLOCK # 1		
LOT No.	AREA (SF)	AREA (AC)
1	5744	0.1319
2	5300	0.1217
3	5300	0.1217
4	5394	0.1238
5	6981	0.1603
6	10343	0.2374
7	6637	0.1524
8	5364	0.1231
9	5289	0.1214
10	5493	0.1261
11	5748	0.1320
12	6002	0.1378
13	6359	0.1460
14	6613	0.1518
15	6603	0.1516
16	6234	0.1431
17	6208	0.1425

BLOCK # 2		
LOT No.	AREA (SF)	AREA (AC)
1	5584	0.1282
2	5349	0.1228
3	10710	0.2466
4	6959	0.1598
5	5350	0.1228
6	5585	0.1282

BLOCK # 3		
LOT No.	AREA (SF)	AREA (AC)
1	5744	0.1319
2	5300	0.1217
3	5300	0.1217
4	5300	0.1217
5	5300	0.1217
6	5300	0.1217
7	5300	0.1217
8	5300	0.1217
9	5300	0.1217
10	5300	0.1217
11	5300	0.1217
12	5300	0.1217
13	5300	0.1217
14	5300	0.1217
15	5300	0.1217
16	5300	0.1217
17	5744	0.1319

BLOCK # 4		
LOT No.	AREA (SF)	AREA (AC)
1	5799	0.1331
2	5350	0.1228
3	5350	0.1228
4	5350	0.1228
5	5350	0.1228
6	5350	0.1228
7	5350	0.1228
8	5350	0.1228
9	5350	0.1228
10	5350	0.1228
11	5350	0.1228
12	5350	0.1228
13	5350	0.1228
14	5350	0.1228
15	5350	0.1228
16	5350	0.1228
17	6441	0.1479
18	6441	0.1479
19	5350	0.1228
20	5350	0.1228
21	5350	0.1228
22	5350	0.1228
23	5350	0.1228
24	5350	0.1228
25	5350	0.1228
26	5350	0.1228
27	5350	0.1228
28	5350	0.1228
29	5350	0.1228
30	5350	0.1228
31	5350	0.1228
32	5350	0.1228
33	5350	0.1228
34	5799	0.1331

BLOCK # 8		
LOT No.	AREA (SF)	AREA (AC)
1	6804	0.1562

BLOCK # 9		
LOT No.	AREA (SF)	AREA (AC)
1	6869	0.1577
2	6869	0.1577

BLOCK # 5		
LOT No.	AREA (SF)	AREA (AC)
1	5964	0.1369
2	5500	0.1263
3	5500	0.1263
4	5500	0.1263
5	5500	0.1263
6	5500	0.1263
7	5500	0.1263
8	5500	0.1263
9	5500	0.1263
10	5500	0.1263
11	5500	0.1263
12	5500	0.1263
13	5500	0.1263
14	5500	0.1263
15	5500	0.1263
16	5500	0.1263
17	5500	0.1263
18	5500	0.1263
19	5500	0.1263
20	7837	0.1799
21	9040	0.2075
22	5500	0.1263
23	5500	0.1263
24	5500	0.1263
25	5500	0.1263
26	5500	0.1263
27	5500	0.1263
28	5500	0.1263
29	5500	0.1263
30	5500	0.1263
31	5500	0.1263
32	5500	0.1263
33	5500	0.1263
34	5500	0.1263
35	5500	0.1263
36	5500	0.1263
37	5500	0.1263
38	5500	0.1263
39	5964	0.1369

BLOCK # 10		
LOT No.	AREA (SF)	AREA (AC)
1	7064	0.1622
2	7064	0.1622

SUBDIVISION IMPROVEMENT PLANS WERE PREPARED BY AND UNDER THE SUPERVISION OF S.B. MASOUD, REGISTERED PROFESSIONAL ENGINEER # 70774

6/8/06

S.B. MASOUD, P.E. #70774

ENGINEERS

DRE Del Rio Engineering, Inc.
P.O. Box 220251 El Paso, Texas 79913 915/833-2400

CONTACT: Sol B. Masoud, P.E. #70774

DEDICATION

TROPICANA DEVELOPMENT, INC., PROPERTY OWNER OF THIS LAND, HEREBY PRESENT THIS PLAT AND DEDICATE TO THE USE OF THE PUBLIC, EASEMENTS, UTILITY AND DRAINAGE RIGHT OF WAYS, STREETS, DRIVES, AND UTILITY EASEMENT, AS HEREON LAID DOWN AND DESIGNATED, INCLUDING EASEMENTS FOR OVERHANG SERVICE WIRES FOR POLE TYPE UTILITIES, AND BURIED SERVICE WIRES, CONDUITS AND PIPES FOR UNDERGROUND UTILITIES, AND THE RIGHT TO INGRESS AND EGRESS FOR SERVICE AND CONSTRUCTION AND THE RIGHT TO TRIM INTERFERING TREES AND SHRUBS.

WITNESS OUR SIGNATURE THIS 18 DAY OF April, 2006.

ROBERT BOWLING, PRESIDENT

ATTEST: NOT REQUIRED

ACKNOWLEDGEMENT

STATE OF TEXAS
COUNTY OF EL PASO

BEFORE ME, THE UNDERSIGNED AUTHORITY, ON THIS DAY PERSONALLY APPEARED ROBERT BOWLING, KNOW TO ME TO BE THE PERSON WHOSE NAME IS SUBSCRIBED TO THE FOREGOING INSTRUMENT AND ACKNOWLEDGED TO ME THAT HE EXECUTED THE SAME FOR THE PURPOSES AND CONSIDERATIONS HEREIN EXPRESSED.

GIVEN UNDER MY HAND AND SEAL OF OFFICE THIS 18 DAY OF April, 2006.

NOTARY PUBLIC IN AND FOR EL PASO COUNTY — MY COMMISSION EXPIRES [redacted] 7, 2006

CITY PLAN COMMISSION

THIS SUBDIVISION IS HEREBY APPROVED AS TO THE PLATTING AND AS TO THE CONDITION OF THE DEDICATION IN ACCORDANCE WITH CHAPTER 212 OF THE LOCAL GOVERNMENT CODE OF TEXAS THIS 8th DAY OF SEPTEMBER, 2006 A.D.

SECRETARY — CHAIRPERSON

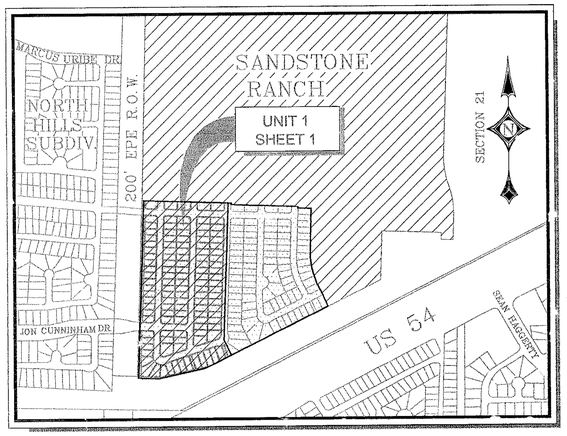
APPROVED FOR FILING THIS 8th DAY OF June, 2006.

For DEVELOPMENT SERVICES DIRECTOR

FILING

FILED AND RECORDED IN THE OFFICE OF THE COUNTY CLERK OF EL PASO COUNTY, TEXAS, THIS 12 DAY OF June, 2006, A.D. IN VOLUME _____ OF THE PLAT RECORD, PAGE _____, FILE NO. 20060058413

COUNTY CLERK — BY DEPUTY



LOCATION MAP

SCALE: 1"=600'

SANDSTONE RANCH UNIT 1

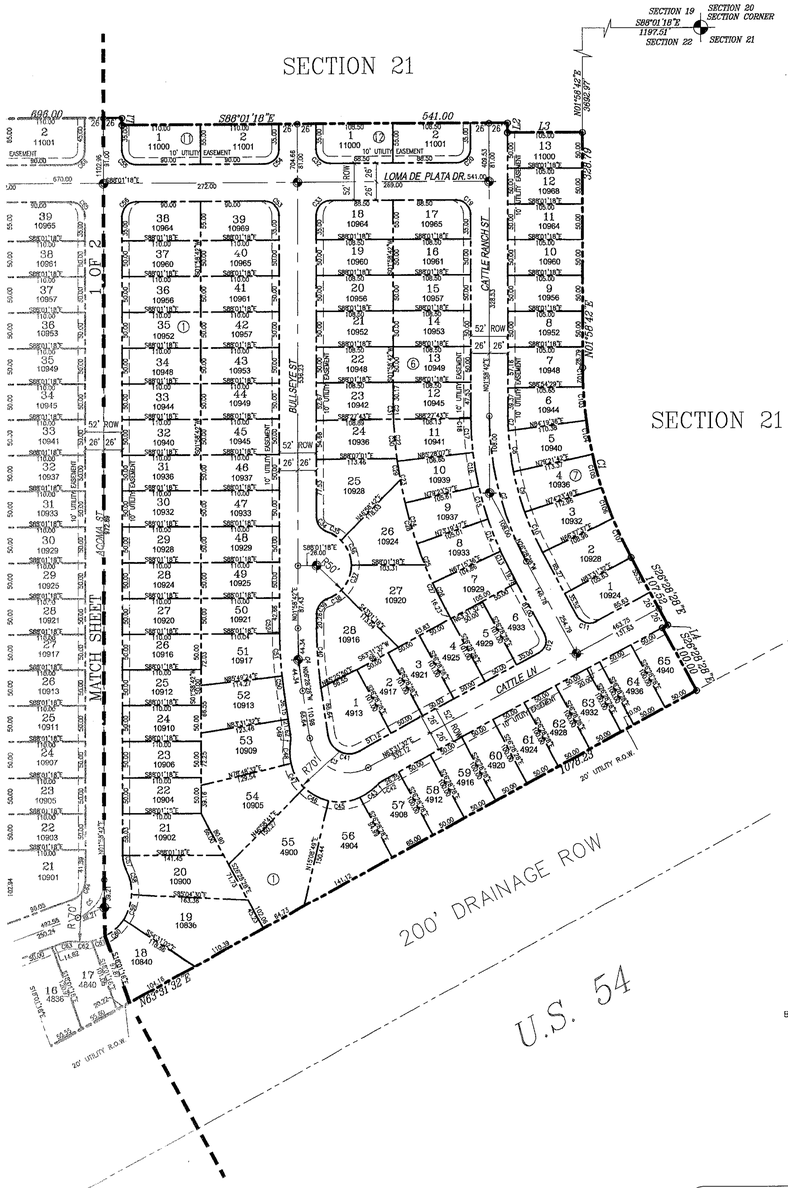
SANDSTONE RANCH UNIT 1

BEING A PORTION OF SECTIONS 21,
BLOCK 81, TOWNSHIP 1,
TEXAS AND PACIFIC RAILROAD COMPANY SURVEY,
CITY OF EL PASO, EL PASO COUNTY, TEXAS
38.76 ± ACRES
SHEET 2 OF 2

GRAPHIC SCALE

100 0 50 100 200 400

(IN FEET)
1 inch = 100 ft.



CURVE TABLE					
CURVE	DELTA	RADIUS	ARC	CHORD BEARING	CHORD
C1	28°27'10"	557.00'	276.60'	S12°14'53"E	273.77'
C2	28°27'10"	426.00'	211.55'	S12°14'53"E	209.38'
C3	110°00'00"	56.00'	107.51'	S61°28'28"E	91.75'
C4	08°27'10"	600.00'	88.52'	S02°14'53"E	88.44'
C5	70°00'00"	56.00'	68.42'	N36°58'42"E	64.24'
C6	110°00'00"	56.00'	107.51'	S53°01'18"E	91.75'
C7	03°01'37"	400.00'	21.13'	S00°27'53"W	21.13'
C8	08°19'05"	400.00'	58.07'	S05°12'28"E	58.02'
C9	08°19'24"	400.00'	58.11'	S13°31'42"E	58.06'
C10	08°47'04"	400.00'	61.33'	S22°04'56"E	61.27'
C11	90°00'00"	20.00'	31.42'	N71°28'28"W	28.28'
C12	90°00'00"	20.00'	31.42'	N18°31'32"E	28.28'
C13	03°44'04"	452.00'	29.46'	S24°36'26"E	29.46'
C14	06°04'10"	452.00'	47.88'	S19°42'19"E	47.86'
C15	06°04'10"	452.00'	47.88'	S13°38'08"E	47.86'
C16	06°04'10"	452.00'	47.88'	S07°33'58"E	47.86'
C17	06°04'10"	452.00'	47.88'	S01°29'48"E	47.86'
C18	00°26'25"	452.00'	3.47'	S01°45'29"W	3.47'
C19	90°00'00"	20.00'	31.42'	S43°01'18"E	28.28'
C20	90°00'00"	20.00'	31.42'	S46°58'42"W	28.28'
C21	02°04'10"	600.00'	21.67'	N00°56'37"E	21.67'
C22	05°39'36"	600.00'	59.27'	N02°55'16"W	59.25'
C23	05°38'47"	600.00'	59.13'	N08°34'27"W	59.11'
C24	05°38'15"	600.00'	59.04'	N14°12'59"W	59.01'
C25	05°38'01"	600.00'	58.99'	N19°51'06"W	58.97'
C26	03°48'21"	600.00'	39.86'	N24°34'17"W	39.85'
C27	06°25'20"	600.00'	67.25'	S23°15'48"E	67.22'
C28	11°45'45"	600.00'	123.18'	S14°10'15"E	122.96'
C29	02°53'42"	600.00'	30.32'	S06°50'32"E	30.31'
C30	05°18'13"	600.00'	55.54'	S02°44'34"E	55.52'
C31	02°04'10"	600.00'	21.67'	N00°56'37"E	21.67'
C32	90°00'00"	20.00'	31.42'	N43°01'18"W	28.28'
C33	90°00'00"	20.00'	31.42'	N46°58'42"E	28.28'
C34	73°09'03"	20.00'	25.53'	S34°35'49"E	23.84'
C35	28°09'03"	49.00'	24.07'	S57°05'49"E	23.83'
C36	45°00'00"	49.00'	38.48'	S20°31'18"E	37.50'
C37	45°00'00"	49.00'	38.48'	S24°28'42"W	37.50'
C38	28°09'03"	49.00'	24.07'	S61°03'13"W	23.83'
C39	73°09'03"	20.00'	25.53'	S38°33'13"W	23.84'
C40	08°27'10"	574.00'	84.68'	S02°14'53"E	84.60'
C41	110°00'00"	30.00'	57.60'	S61°28'28"E	49.15'
C42	17°42'00"	40.00'	12.36'	N54°40'32"E	12.31'
C43	22°02'44"	70.00'	26.93'	N56°50'54"E	26.77'
C45	37°16'33"	70.00'	45.54'	N86°30'32"E	44.74'
C46	31°49'52"	70.00'	38.89'	S58°56'15"E	38.39'
C47	31°49'52"	70.00'	38.89'	S27°06'24"E	38.39'
C48	22°25'00"	70.00'	27.39'	S00°01'02"W	27.21'
C49	17°42'00"	40.00'	12.36'	S02°22'32"W	12.31'
C50	02°17'52"	626.00'	25.10'	S05°19'32"E	25.10'
C51	05°29'00"	626.00'	59.91'	S01°26'06"E	59.89'
C52	00°40'18"	626.00'	7.34'	S01°38'33"W	7.34'
C53	90°00'00"	20.00'	31.42'	S43°01'18"E	28.28'
C54	90°00'00"	20.00'	31.42'	S46°58'42"W	28.28'
C55	90°00'00"	20.00'	31.42'	N43°01'18"W	28.28'
C56	90°00'00"	20.00'	31.42'	S46°58'42"W	28.28'
C57	27°39'50"	40.00'	19.31'	N11°51'13"W	19.13'
C58	50°36'59"	70.00'	37.40'	N10°22'49"W	36.85'
C59	30°33'28"	70.00'	37.33'	N20°12'14"E	36.89'
C60	28°51'08"	70.00'	35.25'	N49°54'32"E	34.88'
C61	16°25'38"	70.00'	20.07'	N72°32'55"E	20.00'
C62	18°52'48"	70.00'	23.07'	S89°47'52"E	22.96'
C63	27°39'50"	40.00'	19.31'	N85°48'37"E	19.13'
C64	70°00'00"	30.00'	36.65'	N36°58'42"E	34.41'
C65	90°00'00"	20.00'	31.42'	N43°01'18"W	28.28'
C66	90°00'00"	20.00'	31.42'	S46°58'42"W	28.28'
C67	90°00'00"	20.00'	31.42'	N43°01'18"W	28.28'
C68	90°00'00"	20.00'	31.42'	N46°58'42"E	28.28'
C69	110°00'00"	20.00'	38.40'	S53°01'18"E	32.77'
C70	70°00'00"	20.00'	24.43'	N36°58'42"E	22.94'
C71	90°00'00"	20.00'	31.42'	S43°01'18"E	28.28'
C72	90°00'00"	20.00'	31.42'	N46°58'42"E	28.28'
C73	90°00'00"	20.00'	31.42'	S43°01'18"E	28.28'
C74	90°00'00"	20.00'	31.42'	S46°58'42"W	28.28'
C75	90°00'00"	20.00'	31.42'	N43°01'18"W	28.28'
C76	90°00'00"	20.00'	31.42'	N46°58'42"E	28.28'
C77	90°00'00"	20.00'	31.42'	S43°01'18"E	28.28'
C78	90°00'00"	20.00'	31.42'	N46°58'42"E	28.28'
C79	110°00'00"	30.00'	57.60'	S53°01'18"E	49.15'
C80	17°42'00"	40.00'	12.36'	N63°07'42"E	12.31'
C81	10°46'54"	70.00'	13.17'	N59°40'09"E	13.15'
C82	29°40'21"	70.00'	36.25'	N79°53'46"E	35.85'
C83	28°07'43"	70.00'	34.37'	S71°12'12"E	34.02'
C84	28°07'48"	70.00'	34.37'	S43°04'27"E	34.02'
C85	27°19'04"	70.00'	33.38'	S15°21'01"E	33.06'
C86	21°22'11"	70.00'	26.11'	S08°59'37"W	25.96'
C87	17°42'00"	40.00'	12.36'	S10°49'42"W	12.31'
C88	90°00'00"	20.00'	31.42'	S43°01'18"E	28.28'
C89	90°00'00"	20.00'	31.42'	S46°58'42"W	28.28'
C90	90°00'00"	20.00'	31.42'	S43°01'18"E	28.28'
C91	90°00'00"	20.00'	31.42'	S46°58'42"W	28.28'
C92	06°07'15"	937.97'	100.20'	S84°57'41"E	100.16'
C93	06°03'51"	668.37'	70.74'	N84°55'59"W	70.71'
C94	06°07'15"	911.97'	97.43'	S84°57'41"E	97.38'
C95	06°03'51"	433.87'	45.92'	N84°55'59"W	45.90'
C96	06°05'21"	968.96'	102.98'	S84°57'12"E	102.93'
C97	06°04'49"	741.42'	78.68'	N84°55'30"W	78.64'
C98	12°58'32"	445.70'	100.94'	S81°15'46"E	100.72'
C99	13°31'03"	381.64'	90.04'	N81°15'46"W	89.83'
C100	18°41'50"	317.83'	103.75'	S82°37'42"W	103.29'
C101	18°41'45"	269.25'	99.65'	N82°37'51"E	87.47'
C102	02°45'01"	557.00'	26.74'	N00°00'00"E	26.74'
C103	04°54'01"	557.00'	47.64'	N03°13'23"W	47.62'
C104	04°57'54"	557.00'	48.27'	N08°09'21"W	48.25'
C105	04°57'54"	557.00'	48.27'	N13°07'15"W	48.25'
C106	03°55'49"	557.00'	38.21'	N21°49'24"W	38.35'
C107	06°07'09"	557.00'	59.49'	N23°24'54"W	59.46'

BLOCK # 1		
LOT No.	AREA (SF)	AREA (AC)
18	7003	0.1608
19	12399	0.2846
20	8811	0.2023
21	7295	0.1675
22	5500	0.1263
23	5500	0.1263
24	5500	0.1263
25	5500	0.1263
26	5500	0.1263
27	5500	0.1263
28	5500	0.1263
29	5500	0.1263
30	5500	0.1263
31	5500	0.1263
32	5500	0.1263
33	5500	0.1263
34	5500	0.1263
35	5500	0.1263
36	5500	0.1263
37	5500	0.1263
38	5964	0.1369
39	5964	0.1369
40	5500	0.1263
41	5500	0.1263
42	5500	0.1263
43	5500	0.1263
44	5500	0.1263
45	5500	0.1263
46	5500	0.1263
47	5500	0.1263
48	5500	0.1263
49	5500	0.1263
50	5500	0.1263
51	7352	0.1688
52	7550	0.1733
53	8337	0.1914
54	10984	0.2522
55	14746	0.3385
56	9781	0.2245
57	6378	0.1464
58	5000	0.1148
59	5000	0.1148
60	5000	0.1148
61	5000	0.1148
62	5000	0.1148
63	5000	0.1148
64	5000	0.1148
65	5000	0.1148

BLOCK # 6		
LOT No.	AREA (SF)	AREA (AC)
1	7257	0.1668
2	5050	0.1159
3	5050	0.1159
4	5050	0.1159
5	5050	0.1159
6	5469	0.1256
7	5526	0.1269
8	5605	0.1287
9	5627	0.1292
10	5676	0.1303
11	5750	0.1320
12	5575	0.1280
13	5425	0.1245
14	5425	0.1245
15	5425	0.1245
16	5425	0.1245
17	5881	0.1350
18	5881	0.1350
19	5425	0.1245
20	5425	0.1245
21	5425	0.1245
22	5425	0.1245
23	5672	0.1302
24	6092	0.1399
25	9394	0.2157
26	7753	0.1780
27	11196	0.2570
28	8910	0.2045

BLOCK # 7		
LOT No.	AREA (SF)	AREA (AC)
1	5778	0.1326
2	6655	0.1528
3	5976	0.1372
4	6033	0.1385
5	5958	0.1368
6	5818	0.1336
7	5922	0.1360
8	5250	0.1205
9	5250	0.1205
10	5250	0.1205
11	5250	0.1205
12	5250	0.1205
13	5250	0.1205

BLOCK # 11		
LOT No.	AREA (SF)	AREA (AC)
1	5964	0.1369
2	5964	0.1369

BLOCK # 12		
LOT No.	AREA (SF)	AREA (AC)
1	5381	0.1350
2	5881	0.1350

LINE TABLE		
LINE	LENGTH	BEARING
L1	10.00	N01°58'42"E
L2	13.00	N01°58'42"E
L3	105.00	N88°01'18"W
L4	8.63	S63°31'32"W

THIS PLAT REPRESENTS A SURVEY MADE ON THE GROUND BY ME OR UNDER MY SUPERVISION AND COMPLIES WITH THE CURRENT TEXAS BOARD OF PROFESSIONAL LAND SURVEY PROFESSIONAL AND TECHNICAL STANDARDS.

STATE OF TEXAS REGISTERED CARLOS M. JIMENEZ 3950 PROFESSIONAL SURVEYOR

CARLOS M. JIMENEZ, R.P.L.S.
REGISTERED PROFESSIONAL LAND
SURVEYOR TEXAS LICENSE NO. 3950

SUBDIVISION IMPROVEMENT PLANS WERE PREPARED BY AND UNDER THE SUPERVISION OF S.B. MASOUD, REGISTERED PROFESSIONAL ENGINEER # 70774

4-13-06

STATE OF TEXAS S.B. MASOUD 70774 REGISTERED PROFESSIONAL ENGINEER

S.B. MASOUD, P.E. #70774

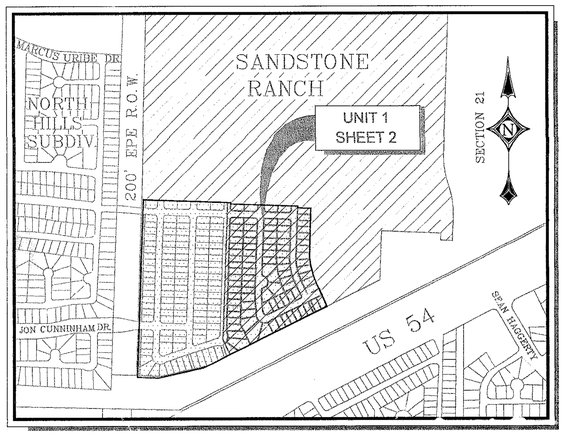
ENGINEERS

DRE Del Rio Engineering, Inc.
P.O. Box 220251 El Paso, Texas 79913 915/833-2400

CONTACT: Sol B. Masoud, P.E. #70774

LEGEND
- PROPOSED CITY MONUMENT
- EXISTING CITY MONUMENT
- PROPERTY CORNERS

CONSULTING COMPANY
1790 N. LEE TREVINO DR. SUITE 503
EL PASO, TEXAS 79936
TEL (915) 633-6422 FAX (915) 633-6424



LOCATION MAP

SCALE: 1"=600'

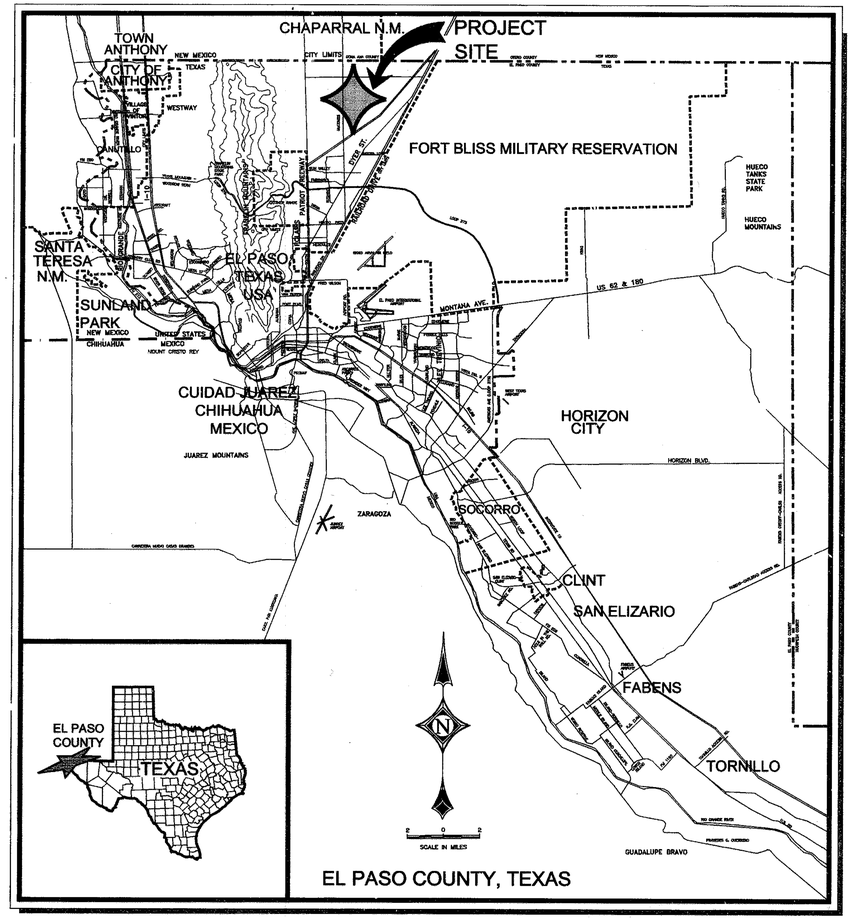
DATE OF PREPARATION:
JULY 21, 2005
REV. 3/30/06 (Updated Addresses)

SANDSTONE RANCH UNIT 1

SANDSTONE RANCH UNIT 1

BEING A PORTION OF SEC. 22. BLOCK 81, TOWNSHIP 1, TEXAS AND PACIFIC RAILROAD COMPANY SURVEY CITY OF EL PASO, EL PASO COUNTY, TEXAS 38.76± ACRES

VICINITY MAP



LAND SURVEYOR

INDEX SHEET

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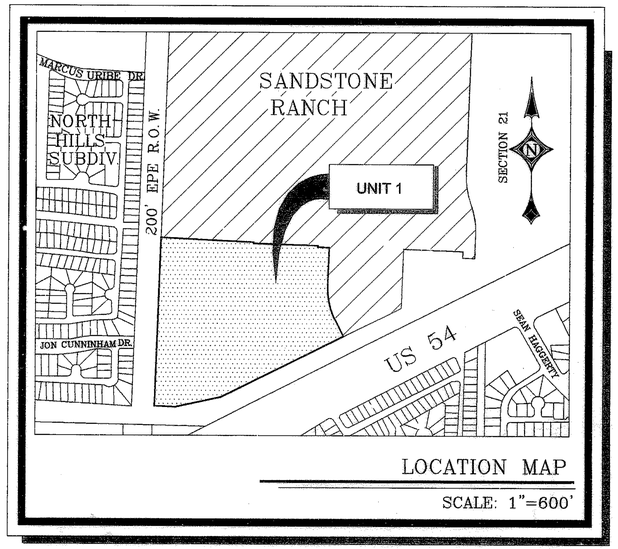


SANDSTONE RANCH UNIT 1 (J05-067)

Plans prepared by:
CIVIL ENGINEER

1/31/07

CAD CONSULTING COMPANY
1790 N. LEE TREVINO DR. SUITE 503
EL PASO, TEXAS 79936
TEL (915) 633-6422 FAX (915) 633-6424

NOTES:
THESE RECORDS DRAWINGS HAVE BEEN PREPARED BY DEL RIO ENGINEERING INC. BASED ON PERIODIC CONSTRUCTION OBSERVATIONS AND INFORMATION PROVIDED BY OTHERS AND REFLECTS CHANGES MADE DURING CONSTRUCTION. THE ACCURACY AND/OR COMPLETENESS OF THIS INFORMATION HAVE BEEN VERIFIED BY CAD CONSULTING COMPANY SUMITTED ON 1/11/07. THOSE RELYING ON THIS RECORD DRAWING ARE ADVISED TO OBTAIN INDEPENDENT VERIFICATION OF ITS ACCURACY BEFORE APPLYING IT FOR ANY PURPOSE.

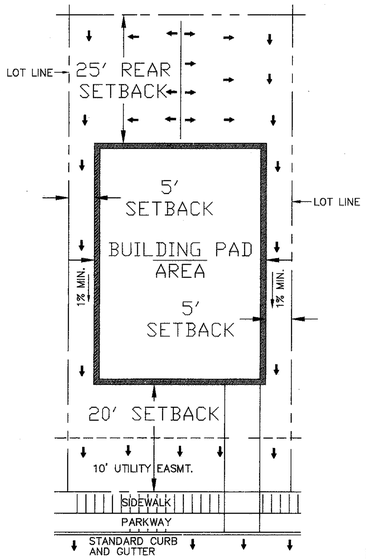
BY: _____

DATE: 1/31/07

DRE Del Rio Engineering, Inc.
P.O. Box 220251 El Paso, Texas 79913 915/833-2400

Z:\J05-WORK DIRECTORY\J05-067 SANDSTONE RANCH UNIT 1\dwg\AS BUILTS\ J05-067 CO-COVER.dwg – Jan 30,2007 4:00pm

LAYOUT: C01 GRADING PLAN KEY



TYPICAL LOT LAYOUT

SCALE: N.T.S.

NOTE:

SETBACK FOR SIDE YARD ABUTTING STREET = 10 FEET.

DRIVEWAY NOTE:

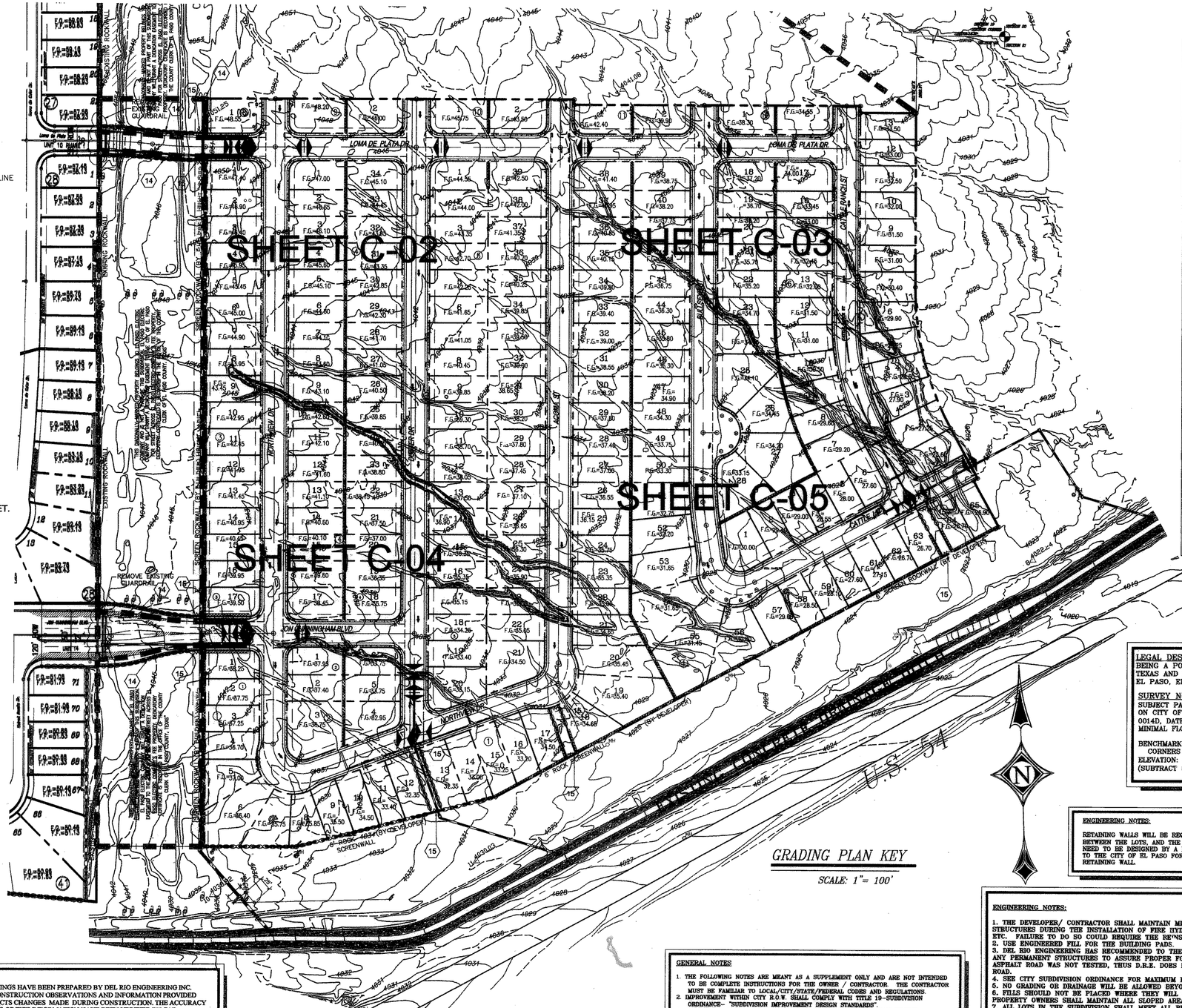
DRIVEWAY SLOPES MUST BE 10% MAX. FROM GUTTER FOR FIRST 12 FT. AND 14% MAX. THEREAFTER (BLDG. CD. 18.08.060 C)

KEYNOTE LEGEND

1. PROPOSED TOP OF CURB (6" STANDARD CURB AND GUTTER) SEE TYP. DETAILS
2. PROPOSED GUTTER LINE (6" STANDARD CURB AND GUTTER) SEE TYP. DETAILS
3. EXISTING GRADE LINE
4. PROPOSED TOP OF PAVEMENT SEE TYP. DETAILS
5. PROPOSED TEMPORARY EARTHEN BERM SEE TYP. DETAILS
6. TYPICAL DEAD END SIGN W/ GUARDRAIL (SEE TYP. DETAILS)
7. PROPOSED TOP OF CURB (4" STANDARD ROLLED CURB) SEE TYP. DETAILS
8. PROPOSED GUTTER LINE (4" STANDARD ROLLED CURB) SEE TYP. DETAILS
9. PROPOSED HANDICAP RAMP SEE TYP. DETAILS
10. 4' SIDEWALK SEE TYP. DETAILS
11. 5' SIDEWALK SEE TYP. DETAILS
12. TYPICAL PAVEMENT SECTION SEE TYP. DETAILS
13. 50' TRANSITION FROM 2% CROWN TO MATCH PAVEMENT
14. 6' ROCK SCREENWALL BY DEVELOPER (SEE TYP. DETAILS)
15. 18' WIDE WROUGHT IRON GATE (SEE TYP. DETAILS)
16. HIGH POINT
17. LOW POINT

47.45 PROPOSED TOP OF CURB @ PC,PT (FG @ BACK OF SIDEWALK)

46.67 PV PROPOSED TOP OF PAVEMENT



GRADING PLAN KEY

SCALE: 1"= 100'

LEGEND

11.56 SW – SPOT ELEVATIONS

TP– TOP OF PAVEMENT
GU– GUTTER
FL– FLOW LINE
FG– FINISHED GRADE
TC– TOP OF CURB
WA– ELEVATION TOP OF WALL
CO– TOP OF CONCRETE
SW– TOP OF SIDEWALK
EG– EXISTING GRADE
NG– NATURAL GRADE (EXISTING)
TRW– TOP OF RETAINING ON WALL
BW– FG @ BOTTOM OF WALL
TW– TOP OF WALL

- EXISTING MINOR CONTOUR
- 3775 – EXISTING MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- 3780 PROPOSED MAJOR CONTOUR
- RETAINING WALL
- SILT FENCE
- WATERSHED
- SURFACE DRAINAGE
- "X" POINT FLOW
- HIGH POINT
- LOW POINT
- PERM. ELEV. MARKER
- (SIZE) STORM DRAINAGE PIPE
- PROPERTY LINE
- EASEMENT
- RCL ROAD CENTERLINE
- WAT WATER LINE
- SS SEWER LINE
- GAS GAS LINE
- ELT ELECTRIC SERVICE
- TEL TELEPHONE SERVICE
- SWD STORMWATER DRAIN
- CHAINLINK FENCE
- BARBWIRE FENCE
- GUARDRAIL FENCE
- ROCKWALL (Non–Retain.)
- IRRIGATION VALVE
- FIRE HYDRANT
- LIGHT POLE
- TELEPHONE MANHOLE
- TB TELEPHONE BOX
- UTILITY POLE
- GP GUARD POST
- EB ELECTRIC BOX
- SIGN POST
- SURVEY MONU. SURVEY MONUMENT
- CITY MONU. CITY MONUMENT
- MBDU MAIL BOX DELIVERY UNIT

LEGAL DESCRIPTION:
BEING A PORTION OF SEC. 21, BLOCK 81, TOWNSHIP 1, TEXAS AND PACIFIC RAILWAY COMPANY SURVEYS, CITY OF EL PASO, EL PASO COUNTY, TEXAS 38.73± ACRES

SURVEY NOTES:
SUBJECT PARCELS ARE LOCATED WITHIN ZONE "C" AS DETAILED ON CITY OF EL PASO FLOOD INSURANCE RATE MAP NO. 480214 0014D, DATED AUGUST 5, 1991. ZONE "C" INDICATES AREAS OF MINIMAL FLOODING.

BENCHMARK: FOUND TXDOT BRASS CAP SECTION CORNERS 19, 20, 22, AND 21.
ELEVATION: 4033.22 (NVGD DATUM)
(SUBTRACT 3.462 TO CONVERT TO CITY DATUM)

ENGINEERING NOTES:

RETAINING WALLS WILL BE REQUIRED WHERE THERE IS A 2' OR MORE DIFFERENCE BETWEEN THE LOTS, AND THE LOTS AND THE STREET. RETAINING WALLS OVER 4' WILL NEED TO BE DESIGNED BY A REGISTERED CIVIL ENGINEER AND MUST BE SUBMITTED TO THE CITY OF EL PASO FOR APPROVAL PRIOR TO THE CONSTRUCTION OF THE RETAINING WALL.

NOTES:

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BY: _____

DATE: 1/31/07

CONSTRUCTION NOTES:

1. SIGHT DISTANCE INFORMATION:
   NOTE: AREAS WITHIN THE SAFETY TRIANGLE ARE TO BE CLEAR OF LANDSCAPING, SIGNS, OR OTHER VISIBILITY OBSTRUCTIONS WITH A HEIGHT GREATER THAN THREE (3) FEET. TREES WITHIN THE SAFETY TRIANGLE SHALL HAVE A CANOPY THAT BEGINS AT SEVEN (7) FEET IN HEIGHT.
2. SIGNS REQUIRE SEPARATE APPROVALS AND PERMITS.
3. ALL CONCRETE FOR STRUCTURES SHALL BE 3000 P.S.I. UNLESS OTHERWISE NOTED.
4. MINIMUM COVER FOR REINFORCING STEEL SHALL BE 2" UNLESS OTHERWISE NOTED.
5. REINFORCING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A615 GRADE 60.

EARTHWORK NOTES

1. ALL GRADING SHALL CONFORM TO ALL APPLICABLE MUNICIPALITY ORDINANCES.
2. 95% COMPACTION REQUIRED ON CUTS AND 95% COMPACTION REQUIRED ON FILLS AND FOR STRUCTURES AS PER ASTM D1557.
3. THE CONTRACTOR SHALL CARRY ON HIS WORK WITH SPECIAL CARE AT ALL TIMES TO MAINTAIN THE NATURAL SURROUNDINGS AND EXISTING STRUCTURES IN AN UNDAMAGED CONDITION.
4. NATURAL SUBGRADES TO SUPPORT STRUCTURAL FILL OR PAVEMENTS SHOULD BE STRIPPED OF ALL VEGETATION OR ORGANIC TOPSOIL. THE EXPOSED SUBGRADE SHOULD BE SCARIFIED JUST PRIOR TO FILL PLACEMENT TO A MINIMUM DEPTH OF 6 INCHES AND RECOMPACTED TO A MINIMUM OF 95% OF MAXIMUM DENSITY AS PER ASTM D–1557. ALL BACKFILL MATERIAL TO BE PLACED IN HORIZONTAL LAYERS NOT TO EXCEED EIGHT (8") INCH LIFTS AND COMPACTED AS BEFORE.
5. TEMPORARY DUST EROSION CONTROL MEASURES SHALL BE PROVIDED FOR AT ALL TIMES.
6. ANY EROSION OF THE GRADED SITE DURING THE COURSE OF THE PROJECT SHALL BE CORRECTED PRIOR TO FINALIZATION OF THE PROJECT AT NO COST TO THE OWNER.
7. DRIVEWAYS SHALL NOT OBSTRUCT RUNOFF.

GENERAL NOTES

1. THE FOLLOWING NOTES ARE MEANT AS A SUPPLEMENT ONLY AND ARE NOT INTENDED TO BE COMPLETE INSTRUCTIONS FOR THE OWNER / CONTRACTOR. THE CONTRACTOR MUST BE FAMILIAR TO LOCAL/CITY/STATE/FEDERAL CODES AND REGULATIONS.
2. IMPROVEMENT WITHIN CITY R.O.W. SHALL COMPLY WITH TITLE 19–SUBDIVISION ORDINANCE– "SUBDIVISION IMPROVEMENT DESIGN STANDARDS".
3. CONTRACTOR SHALL PROVIDE TEMPORARY MEASURES FOR THE MANAGEMENT OF STORM WATER RUNOFF ENTERING, EXITING AND ON SITE DURING THE COURSE OF THE CONSTRUCTION. TEMPORARY BERMS, DESILTING BASIN, CHECK DAMS, AND PIPING ETC. SHALL BE PROVIDED AS NECESSARY.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION AND NOTIFICATION WITH ALL PERTINENT UTILITY COMPANIES WHOSE LINES ARE WITHIN THE CONSTRUCTION CONTRACT AREA. THE CONTRACTOR SHALL NOTIFY UTILITY COMPANIES 48 HOURS PRIOR TO ANY CONSTRUCTION ON SITE. THE CONTRACTOR WILL BE RESPONSIBLE PHYSICALLY AND FINANCIALLY FOR ANY DISRUPTION TO SERVICE EITHER ON SITE OR OFF SITE DUE TO BREAKAGE OF UTILITY LINES
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL DATA SHOWN ON THE PLANS. IF DISCREPANCIES ARE FOUND THE CONTRACTOR SHALL NOTIFY THE OWNER OR ENGINEER IMMEDIATELY SO THAT PROPER CORRECTIONS CAN BE MADE.
6. ALL ELEVATIONS ARE TO NVGD DATUM UNLESS OTHERWISE NOTED.
7. ALL WASTE MATERIALS INCLUDING EXCAVATION, CURBING, PAVEMENT, ETC. SHALL BE DISPOSED OF AS DESIGNATED BY THE OWNER OR HIS REPRESENTATIVE.
8. THE CONTRACTOR SHALL NOTIFY THE OWNER, OR HIS REPRESENTATIVE, IN SUFFICIENT TIME IN ADVANCE OF DELIVERY OF MATERIALS TO BE SUPPLIED BY HIM UNDER THIS PROJECT, IN ORDER THAT THE OWNER MAY ARRANGE, IF DESIRED, INSPECTION AND TESTING FOR SAME.
9. SAFE AND REASONABLE ACCESS FOR THIS SITE MUST BE MAINTAINED AT ALL TIMES DURING THE LIFE OF THE PROJECT.
10. ANY CAVITY REMAINING OPEN DURING NON–WORKING HOURS MUST BE GUARDED BY FLASHER TYPE BARRICADES WITH STRINGERS PLACED BETWEEN THE TOPS OF THE BARRICADES
11. ALL DRAINAGE EASEMENTS AND DRAINAGE INFRASTRUCTURES WILL BE DEDICATED AND MAINTAINED PER MUNICIPALITY REQUIREMENTS.

ENGINEERING NOTES:

1. THE DEVELOPER/ CONTRACTOR SHALL MAINTAIN MINIMUM ADA PASSING REQUIREMENTS ON ALL SIDEWALK STRUCTURES DURING THE INSTALLATION OF FIRE HYDRANTS, STOP SIGNS, STREET SIGNS, UTILITY BOXES, ETC. FAILURE TO DO SO COULD REQUIRE THE RE-INSTALLATION OF THE OFFENDING STRUCTURES.
2. USE ENGINEERED FILL FOR THE BUILDING PADS.
3. DEL RIO ENGINEERING HAS RECOMMENDED TO THE OWNER TO OBTAIN A SOILS REPORT BEFORE PLACING ANY PERMANENT STRUCTURES TO ASSURE PROPER FOUNDATION AND ASPHALT DESIGN. THE EXISTING ASPHALT ROAD WAS NOT TESTED, THUS D.R.E. DOES NOT WARRANT THE STRUCTURAL STABILITY OF THE ROAD.
4. SEE CITY SUBDIVISION ORDINANCE FOR MAXIMUM DRIVEWAY SLOPES.
5. NO GRADING OR DRAINAGE WILL BE ALLOWED BEYOND THE LIMITS OF THE SUBDIVISION.
6. FILLS SHOULD NOT BE PLACED WHERE THEY WILL SLIDE OR WASH ONTO THE PROPERTY OF OTHERS PROPERTY OWNERS SHALL MAINTAIN ALL SLOPED AREAS.
7. ALL LOTS IN THE SUBDIVISION SHALL MEET ALL REQUIREMENTS SET FORTH IN THE CITY SUBDIVISION REQUIREMENTS
8. SINCE FINAL HOUSE FOOT PRINT IS NOT AVAILABLE, TYPICAL GRADING IS SHOWN. ACTUAL HOUSE PAD WILL BE USED AT TIME OF BUILDING USING THE TYPICAL GRADING CRITERIA. NO ADDITIONAL GRADING PERMIT SHALL BE REQUIRED.

SITE PREPARATION:

1) REMOVE VEGETATION, DEBRIS, UNSATISFACTORY MATERIALS, OBSTRUCTIONS AND DELETERIOUS MATERIALS FROM GROUND SURFACE PRIOR TO PLACEMENT OF FILLS.
2) THE EXPOSED SUBGRADE SHOULD BE SCARIFIED JUST PRIOR TO FILL PLACEMENT TO A MINIMUM DEPTH OF 8" AND RECOMPACTED TO A MINIMUM OF 95% OF THE MAXIMUM DENSITY AS DETERMINED BY ASTM D–1557 COMPACTION TEST.
3) THE WATER CONTENT OF THE SUBGRADE SHOULD BE MAINTAINED SLIGHTLY ABOVE OPTIMUM MOISTURE CONTENT UNTIL PERMANENTLY COVERED. SUBGRADE COMPACTED WETTER THAN 3 PERCENTAGE POINTS ABOVE THE OPTIMUM WATER CONTENT SHOULD NOT BE ACCEPTED WITHOUT INSPECTION BY THE GEOTECHNICAL ENGINEER.

SITE FILL:

1) MATERIALS USED AS FILL SHALL BE GRANULAR, FREE OF DELETERIOUS MATERIALS AND HAVE A LIQUID LIMIT LESS THAN 40 AND A PLASTICITY INDEX LESS THAN 12.
2) FILL SOIL SHOULD BE PLACED IN 12" THICK LOOSE LIFTS AND IMPACTED TO AT LEAST 95% MAXIMUM DENSITY AS DETERMINED BY ASTM D–1557 COMPACTION TEST
3) HOUSE PADS MUST BE OF THE ABOVE MATERIAL.

Release Dates:
9/19/05
Revisions:
10/28/05 -0.3
-

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1/31/07 STATE OF TEXAS S.B. MASOUD 70774

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GRADING PLAN KEY

SANDSTONE RANCH UNIT 1

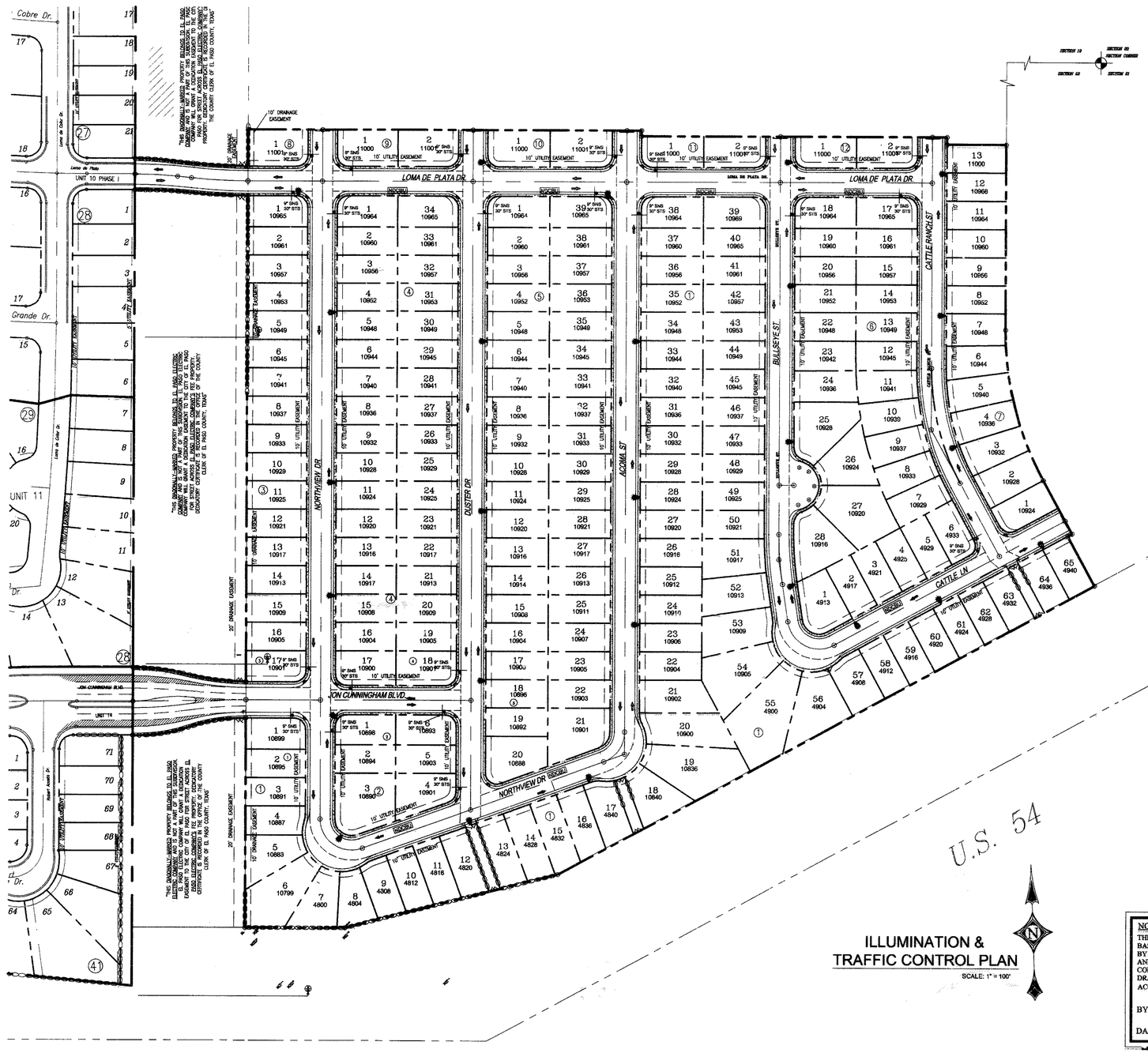
BEING A PORTION OF SEC. 21, BLOCK 81, TOWNSHIP 1
TEXAS AND PACIFIC RAILROAD CO. SURVEY
CITY OF EL PASO, EL PASO COUNTY, TEXAS

Project #: J05-067	Design By: AFJ		
Plot Date: 1/29/07	Drawn By: JM		
SHEET: C-01	Scale: 1"=100'		

FILE: Z:\J05-WORK DIRECTORY\J05-067 SANDSTONE RANCH UNIT 1\dwg\AS BUILTS\J05-067 C01-MASTER GRADING.dwg

LAYOUT: ILLUMINATION PLAN

FILE: Z:\J05-WORK DIRECTORY\J05-067 SANDSTONE RANCH UNIT 1\dwg\AS BUILTS\J05-067 C10-ILLUMINATION PLAN.dwg



ILLUMINATION &
TRAFFIC CONTROL PLAN

SCALE: 1" = 100'

LEGEND

- RESIDENTIAL STREET LIGHT LOCATION
- PROPOSED STOP SIGN LOCATION WITH STREET NAME SIGN
- TRAFFIC FLOW ARROWS
- NDCBU MAIL BOX DELIVERY UNIT
- DEAD END SIGN W/ GUARDRAIL (SEE TYPICAL DETAILS)

NOTES:

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BY: _____

DATE: 4/31/07

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10/28/05
Revisions:
11/28/05 (CEP REDS)
12/12/05 (CEP REDS)

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1-31-07

STATE OF TEXAS
S.B. MASOUD
70774
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PROFESSIONAL ENGINEER

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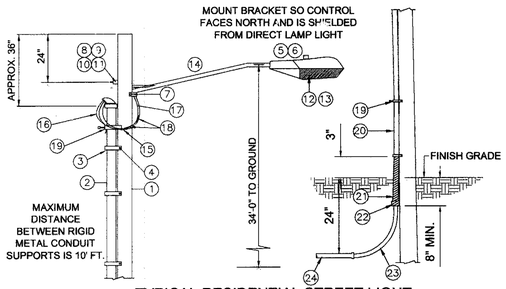
ILLUMINATION PLAN

SANDSTONE RANCH UNIT 1

BEING A PORTION OF SEC. 21, BLOCK 81, TOWNSHIP 1
TEXAS AND PACIFIC RAILROAD CO. SURVEY
CITY OF EL PASO, EL PASO COUNTY, TEXAS

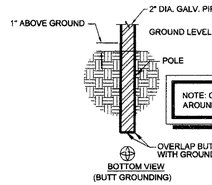
Project #: J05-067	Design By: AFJ		
Plot Date: 1/29/07	Drawn By: JM		
SHEET: C-10	Scale: 1" = 60'		

LAYOUT: ILLUMINATION DETAILS



TYPICAL RESIDENTIAL STREET LIGHT WOOD POLE DETAIL

SCALE : N.T.S.

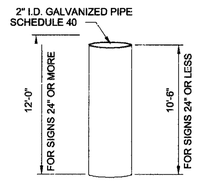


DISTRIBUTION DETAIL

SCALE: N.T.S.

POST SLEEVE DETAIL

SCALE: N.T.S.



NOTES:
1. WELD ALONG ITS LENGTH TO FORM VIRTUALLY SEAMLESS.
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 ACRYLIC COATING TO PROVIDE RESISTANCE TO RUSTING AND CORROSION.
4. THE INSIDE OF THE POST SHALL BE COATED WITH AN ORGANIC MATERIAL FOR PROTECTION AGAINST RUST.
5. BOTH ENDS ARE TO BE SQUARELY CUT WITHOUT FLARE.
6. POST SHALL BE FREE OF WARPS, CORROSION, OR OTHER DEFECTS.
7. RING WELDS OR SPLICES WILL NOT BE ACCEPTABLE.
8. BENDING STRENGTH AS SPECIFIED BY AASHTO FOR SCHEDULE 40 PIPE.
9. POST SHALL BE BUNDLE WITH METAL STRAPS AND SHALL NOT EXCEED 37 POST PER BUNDLE.

SIGN POSTS SPECIFICATIONS

SCALE: N.T.S.

Release Dates:
07/06/05
Revisions:
08/11/05
-

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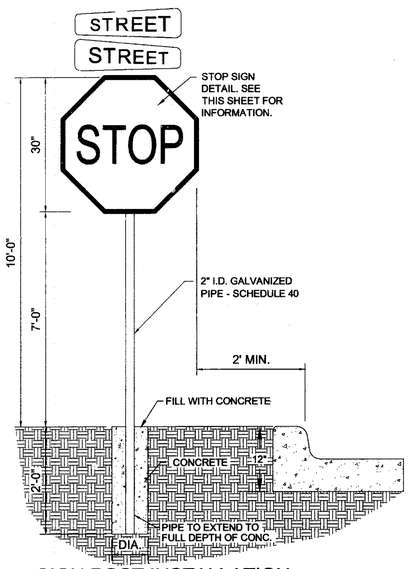
1/31/07

STATE OF TEXAS
S.B. MASOUD
70774
PROFESSIONAL ENGINEER

RESIDENTIAL STREET LIGHT POLE SCHEDULE

ITEM NO.	DESCRIPTION	QTY. PER LIGHT
1	POLE, PENTA TREATED PINE 40' CLASS III	1
2	1/2" RIGID GALVANIZED STEEL CONDUIT	27
3	TWO HOLE STEEL PIPE STRAP FOR 1/2" CONDUIT	4
4	1/4" X 1" LAG BOLT	8
5	PHOTO CELL RECEPTACLE WITH 1/2" THREADED BASE AND MOUNTING BRACKET	1
6	PHOTO CELL 240V.	1
7	1/2" X 4" LAG BOLT	4
8	MACHINE BOLT, 5/8" X 8"	1
9	WASHER, SQUARE GALV. 2 1/4" X2 1/4"	1
10	WASHER, COIL-SPRING 5/8"	1
11	LOCKNUT 5/8"	1
12	LUMINAIRE 100W H.P.S.	1
13	HPS LAMP, 100W	1
14	STEEL LUMINARE SUPPORT (10' OR 8') UNION METAL MANUF. CO. DESIGN 348 OR EQUIVALENT.	1
15	2- #12 COPPER WIRES WITH THW INSULATION	
16	2- #12 COPPER WIRES WITH THW INSULATION	
17	CABLE, #10, 2 CONDUCTOR, 600V, UF	
18	SLEEVES, #12-10	2
19	GROUNDING CLAMP FOR 1/2" RIGID CONDUIT	1
20	1/2" PVC COATED RIGID STEEL, COUPLING	1
21	1/2" X 8" PVC COATED RIGID STEEL CONDUIT NIPPLE	1
22	1/2" SCHEDULE 40 PVC FEMALE ADAPTER	1
23	1/2" SCHEDULE 40 PVC 18" RADIAL BEND	1
24	1/2" SCHEDULE 40 PVC COUPLING	1



SIGN POST INSTALLATION

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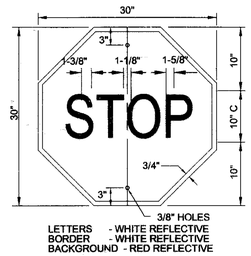
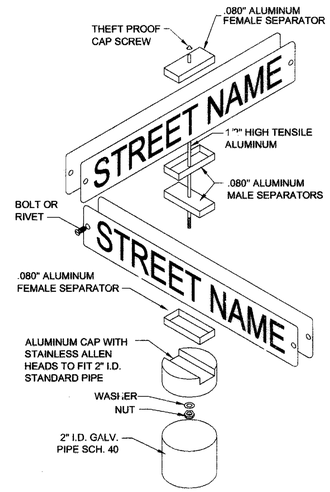
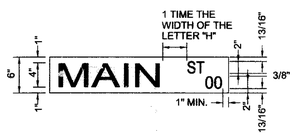


STOP SIGN DETAIL

SCALE 1" = 5'





SIGN CLASS	SIGN LENGTH	PRIMARY LETTERS SIZE & SERIES	SUFFIX & BLOCK NUMBER SIZE AND SERIES
6"	24"	4" C,D, SERIES	2" C SERIES
ARTERIAL	30"	4" C,D, SERIES	2" C SERIES
STREETS	36"	4" A,B,C,D, SERIES	2" C SERIES

STREET SIGN

SCALE : N.T.S.

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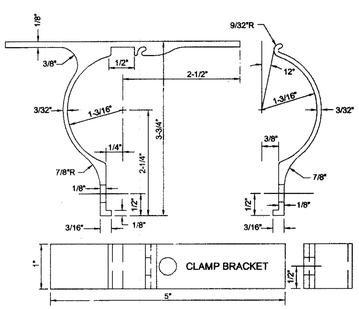
BY: _____

DATE: 1/31/07



ALUMINUM SIGN CLAMP BRACKET

SCALE: N.T.S.

NOTES:
1. ALL HOLES 3/8" PUNCH.
2. FILLETS & ROUNDS 1/16"= R.
3. FURNISH THE FOLLOWING HARDWARE FOR EACH BRACKET :
1 -5/16" X 3/4" BOLTS
1 -5/16" X 1 1/4" BOLT
2 -5/16" X NUTS & WASHERS
2 -FLAT WASHERS
4. THE BRACKET IS TO BE MADE FROM HIGH STRENGHT ALUMINUM ALLOY. THE BRACKET IS TO EMPLOY AN EXTRUDED INTERLOCKING FEATURE OFFERING A RIGID MEANS OF ATTACHING A FLAT SIGN TO A STANDARD 2" I.D. TUBULAR POST.

CITY OF EL PASO SPECIFICATION FOR REFLECTORIZED STREET NAME SIGNS

1. COLOR OF SIGN: THE FINISHED SIGN MUST HAVE A REFLECTORIZED GREEN BACKGROUND. THE GREEN MUST CONFORM WITH THE BUREAU OF PUBLIC ROADS HIGHWAY GREEN. THE LEGEND MUST BE REFLECTORIZED SILVER WHITE (GREEN REVERSE SCREENED BACKGROUND WITH SILVER COPY).
2. LETTER DESIGN: THE LETTERING OF ALL LEGENDS MUST BE UPPER CASE LETTERS IN ACCORDANCE WITH "STANDARD ALPHABETS FOR HIGHWAY SIGN PUBLISHED BY THE FEDERAL HIGHWAY ADMINISTRATION.
3. LETTER SPACING: THE CONTROL FOR THE SPACING VALUES IN TRAFFIC LAYOUT IS THE DISTANCE RECOGNIZED AS AESTHETIC SPACING BETWEEN TWO STRAIGHT LETTERS (HN). A SPACING CONTROL OF TWO TIMES THE WIDTH OF THE STROKE OF THE LETTER SERIES TO BE USED MUST BE THE AESTHETIC CONTROL (100%). TWO AND ONE-HALF TIMES (2-1/2") THIS CONTROL MUST BE USED AS THE AESTHETIC WORD SPACE BETWEEN ELEMENTS IN THE PRIMARY LEGEND.
4. LAYOUT: THE MAXIMUM NUMBER OF LETTERS TO BE ACCOMMODATED ON GIVEN LENGTH STREET NAME FACE MUST BE DETERMINED BY THE WIDEST LETTER SERIES POSSIBLE FOR THAT LEGEND AND THE SPACING CONTROL (100%) FOR THE SERIES USED MUST BE EXPANDED OR CONDENSED UP TO 25% IN 5% INCREMENTS.
5. THE SPACING CONTROL (100%) FOR THE SERIES USED MUST BE EXPANDED OR CONDENSED UP TO 25% IN 5% INCREMENTS FOR THE END MARGIN WITH MIN. OF 1"
6. THE WORD SPACE MUST BE EXPANDED UP TO 25% IN 5% INCREMENTS BUT NOT CONDENSED.
7. SPACE BETWEEN PRIMARY AND BLOCK NUMBER AREA MUST BE 1/2 THE AESTHETIC WORK SPACE USED IN THE PRIMARY LEGEND.
8. SIZE OF LEGEND: FOR 6" STREET NAME SIGNS THE PRIMARY LEGEND OR STREET NAME MUST HAVE CAPITAL LETTERS FOUR INCHES (4") HIGH AND ALL SECONDARY LEGENDS, INCLUDING THE SUFFIX, AND CLOCK NUMBERS MUST HAVE UPPER CASE LETTERS TWO INCHES (2") HIGH.
9. SUFFIX LETTER SIZE FOR ALL LENGTHS MUST BE 2" CAPITAL, C SERIES, EXCEPT THAT SERIES A OR B WHERE SUFFIX ABBREVIATION EXCEEDS TWO LETTERS, MAY BE USED.
10. SIZE OF LEGEND: FOR 9" STREET NAME SIGNS, THE PRIMARY LEGEND, OR STREET NAME MUST HAVE CAPITAL LETTERS SIX INCHES (6") HIGH AND ALL SECONDARY LEGENDS, INCLUDING THE SUFFIX, BLOCK NUMBERS, MUST HAVE UPPER CASE LETTERS TWO AND ONE-HALF INCHES (2 1/2") HIGH.
11. SUFFIX LETTER SIZE FOR ALL LENGTH MUST BE 2 1/2" CAPITALS, C SERIES, EXCEPT THAT SERIES A OR B WHERE SUFFIX ABBREVIATION EXCEEDS TWO LETTERS BE USED.
12. POSITION OF LEGEND: EACH SIGN FACE WILL CONSIST OF THE STREET NAME, SUFFIX AND TWO ZEROS OF THE BLOCK NUMBER. THE ADDITIONAL NUMBERS OF THE BLOCK NUMBER WILL BE APPLIED BY THE CITY OF SOCORRO. THE SUFFIX WILL BE LOCATED IN THE UPPER RIGHT CORNER AND THE BLOCK NUMBER IN THE LOWER RIGHT CORNER OF THE SIGN FACE AND THE STREET NAME CENTERED IN THE REMAINING SPACE.
13. SIGN FABRICATION: THE SIGN FACE MUST BE FABRICATED BY REVERSE SCREENING GREEN TRANSPARENT COLOR OVER SILVER REFLECTIVE SHEETING. TRANSPARENT PROCESS COLORS MUST BE AS RECOMMENDED BY THE SHEETING MANUFACTURER. CUT-OUT OR APPLIED LEGENDS ARE NOT PERMITTED. SIGN FACE MUST BE COMPRISED OR ONE PIECE OR PANEL OF REFLECTIVE SHEETING.
14. TYPE OF SHEETING: ENGINEER GRADE REFLECTIVE SHEETING MUST BE USED IN THE FABRICATION OF THE STREET NAME SIGN FACES.

SPECIFICATIONS FOR ALUMINUM SIGN BLANKS

THESE SPECIFICATIONS DESCRIBE DETAILS AND MINIMUM REQUIREMENTS FOR ALUMINUM SIGN BLANKS, TO WHICH REFLECTIVE SHEETING WILL BE APPLIED.

1. ALL MATERIALS SHALL BE NEW AND UNWEATHERED AND SHALL BE OF DOMESTIC ORIGIN, MILLED, ROLLED AND FINISHED IN DOMESTIC MILLS.
2. SIGN BLANKS SHALL BE .080 GAUGE ALODIZED TREATED ALUMINUM, 5052-H38 ALLOY FREE OF BURRS, CORROSION, WHITE RUST AND DIRT, SUITABLE FOR APPLICATION OF REFLECTIVE SHEETING WITHOUT FURTHER PREPARATION.
3. EDGES OF BLANKS SHALL BE CUT TRUE AND SQUARE, CORNER RADII, HOLE DIA. AND HOLE LOCATIONS AS DESCRIBED IN THE ALUMINUM SIGN BLANK BID D.H.T. STANDARD.
4. ALL SIGN BLANKS WILL BE TREATED AS FELLOWS:

A. DEGREASING
(1) VAPOR DEGREASING - BY TOTAL IMMERSION OF SIGN BLANK IN A SATURATED VAPOR OF TRICHLORETHYLENE OR PERCHLOROETHYLENE. TRADEMARK PRINTING SHALL BE REMOVE WITH LACQUER THINNER BEFORE DEGREASING.
OR
(2) ALKALINE DEGREASING - BY TOTAL IMMERSION OF THE SIGN BLANK IN A TANK CONTAINING ALKALINE SOLUTIONS, CONTROLLED AND TITRATED TO THE SOLUTION MANUFACTURER'S SPECIFICATION FOR TIME, TEMPERATURE AND CONCENTRATION. IMMERSION TIME SHALL DEPEND UPON THE AMOUNT OF SOIL PRESENT, GAUGE OF THE METAL AND SOLUTION STRENGTH, RINSE THOROUGHLY WITH RUNNING WATER.

B. ETCHING
(1) ACID ETCH - ETCH WELL IN 6-8% PHOSPHORIC ACID SOLUTION AT 100° OF PROPRIETARY ACID ETCHING SOLUTION. RINSE WITH RUNNING WATER.
OR
(2) ALKALINE ETCH - ELTCH WELL THE PRE-CLEANED ALUMINUM SURFACE IN AN ALKALINE ETCHING MATERIAL THAT IS CONTROLLED BY TITRATION. USE TIME, TEMPERATURE, AND CONCENTRATION SPECIFIED BY THE SOLUTION MANUFACTURER. RINSE THOROUGHLY. REMOVE SMUT WITH AN ACIDIC CHROMIUM COMPOUND-TYPE SOLUTION AS SPECIFIED BY THE SOLUTION MANUFACTURER AND THE RINSE.

C. CHROMATE CONVERSION COATING
COAT THE ALUMINUM BLANKS ACCORDING TO THE CHROMATE CONVERSAION COATING MANUFACTURER'S INSTRUCTIONS. THE COATING SHALL CONFORM TO ASTM-B449067, CLASS 2, AND SHALL ROANGE IN COLOR FROM SILVERY IRIDESCENT TO PALE YELLOW. THE COATING WEIGHT SHALL BE QO TO 35 MG PER SQ. FT. WITH A MEDIAN OF 25 MG PER SQ. FT. AS THE OPTIMUM COATING WEIGHT.

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ILLUMINATION DETAILS

SANDSTONE RANCH UNIT 1
BEING A PORTION OF SEC. 21, BLOCK 81, TOWNSHIP 1
TEXAS AND PACIFIC RAILROAD CO. SURVEY
CITY OF EL PASO, EL PASO COUNTY, TEXAS

Project #: J05-067	Design By: AFJ
Plot Date: 1/29/07	Drawn By: JM
SHEET: C-11	Scale: 1" = 80'

FILE: Z:\J05-WORK DIRECTORY\J05-067 SANDSTONE RANCH UNIT 1\dwg\AS BUILTS\J05-067 C11-ILLUMINATION DETAILS.dwg

LAYOUT: C-12 JON CUNNINGHAM BLVD. STATION 19+67.73 THRU 25+84.18

TRENCH EXCAVATION PROTECTION

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

KEYNOTE LEGEND

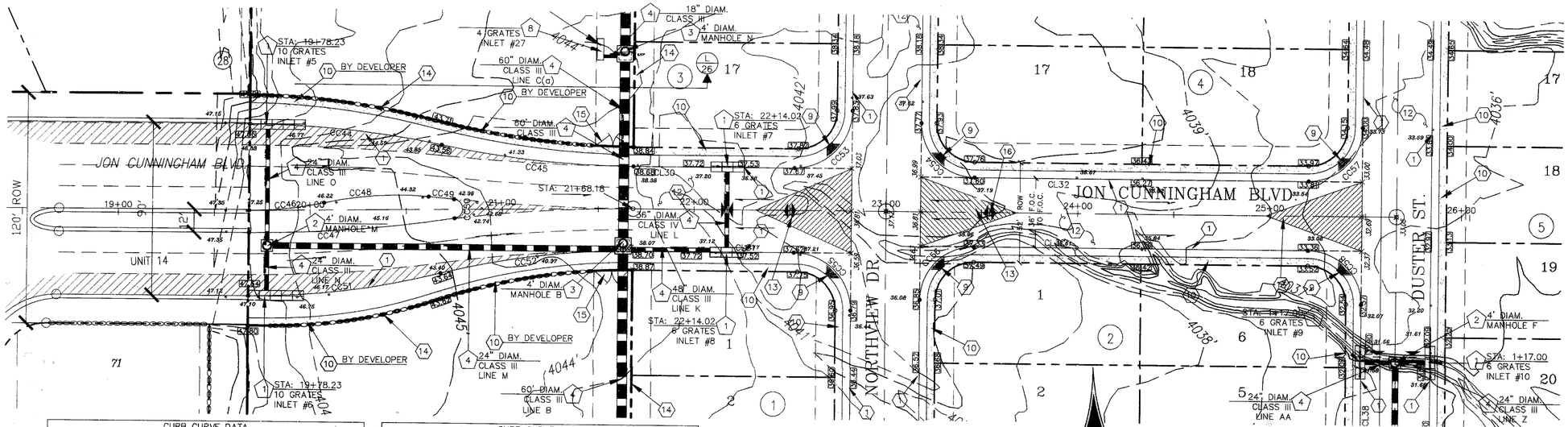
1. PROPOSED TOP OF CURB (6" STANDARD CURB AND GUTTER) SEE TYP. DETAILS
2. PROPOSED GUTTER LINE (6" STANDARD CURB AND GUTTER) SEE TYP. DETAILS
3. EXISTING GRADE LINE
4. PROPOSED TOP OF PAVEMENT SEE TYP. DETAILS
5. PROPOSED TEMPORARY EARTHEN BERM SEE TYP. DETAILS
6. TYPICAL DEAD END SIGN W/ GUARDRAIL (SEE TYP. DETAILS)
7. PROPOSED TOP OF CURB (4" STANDARD ROLLED CURB) SEE TYP. DETAILS
8. PROPOSED GUTTER LINE (4" STANDARD ROLLED CURB) SEE TYP. DETAILS
9. PROPOSED HANDICAP RAMP SEE TYP. DETAILS
10. 4' SIDEWALK SEE TYP. DETAILS
11. 5' SIDEWALK SEE TYP. DETAILS
12. TYPICAL PAVEMENT SECTION SEE TYP. DETAILS
13. 50' TRANSITION FROM 2% CROWN TO MATCH PAVEMENT
14. ROCK SCREENWALL BY BUILDER-HEIGHT VARIES (SEE TYP. DET N15)
15. 18' WIDE WROUGHT IRON GATE (SEE TYP. DETAILS)
16. HIGH POINT
17. LOW POINT

47.43 PROPOSED TOP OF CURB @ PC,PT (FG @ BACK OF SIDEWALK)

46.67 PV × PROPOSED TOP OF PAVEMENT

KEYNOTE LEGEND (DRAINAGE)

1. PROPOSED DROP INLET TYPE I, # DENOTES NUMBER OF GRATES (SEE TYP. DETAILS)
2. STORMWATER MANHOLE TYPE I (SEE TYP. DETAILS)
3. STORMWATER MANHOLE TYPE II (SEE TYP. DETAILS)
4. TYPICAL REINFORCED CONCRETE PIPE (# DENOTES DIAMETER)
5. TYPICAL PIPE EXIT (PIPE TO EXIT AT A 30 DEGREE ANGLE FROM THE EXISTING DRAINAGE CHANNEL CENTERLINE)
6. HEADWALL PIPE EXIT (SEE TYP. DETAILS)
7. CAP PROPOSED 48" R.C.P. STORMDRAIN PIPE FOR FUTURE EXTENSION
8. PROPOSED DROP INLET TYPE II, # DENOTES NUMBER OF GRATES (SEE TYP. DETAILS)



CURB CURVE DATA					
CURVE	DELTA	RADIUS	ARC	CHORD BEARING	CHORD
CC44	11°28'03"	502.99'	100.67'	N82°17'17"W	100.50'
CC45	11°28'03"	502.99'	100.67'	S82°17'17"E	100.50'
CC46	12°37'49"	178.74'	39.40'	N85°39'48"E	39.32'
CC47	09°01'16"	682.40'	107.44'	N87°28'04"E	107.33'
CC48	17°32'17"	178.74'	54.71'	S88°07'02"W	54.50'
CC49	00°41'52"	1092.40'	13.30'	N82°45'54"W	13.30'
CC50	165°22'24"	5.00'	14.43'	N00°16'14"E	9.92'
CC51	14°31'50"	398.57'	101.08'	N84°42'47"E	101.81'
CC52	14°31'50"	398.57'	101.08'	S84°42'47"W	100.81'

CURB CURVE DATA					
CURVE	DELTA	RADIUS	ARC	CHORD BEARING	CHORD
CC53	90°00'00"	30.00'	47.12'	N46°58'42"E	42.43'
CC54	90°00'00"	28.00'	43.98'	S43°01'18"E	39.60'
CC55	90°00'00"	30.00'	47.12'	N43°01'18"W	42.43'
CC56	90°00'00"	28.00'	43.98'	S46°58'42"W	39.60'
CC57	90°00'00"	28.00'	43.98'	N46°58'42"E	39.60'
CC58	90°00'00"	28.00'	43.98'	N43°01'18"W	39.60'

PLAN VIEW

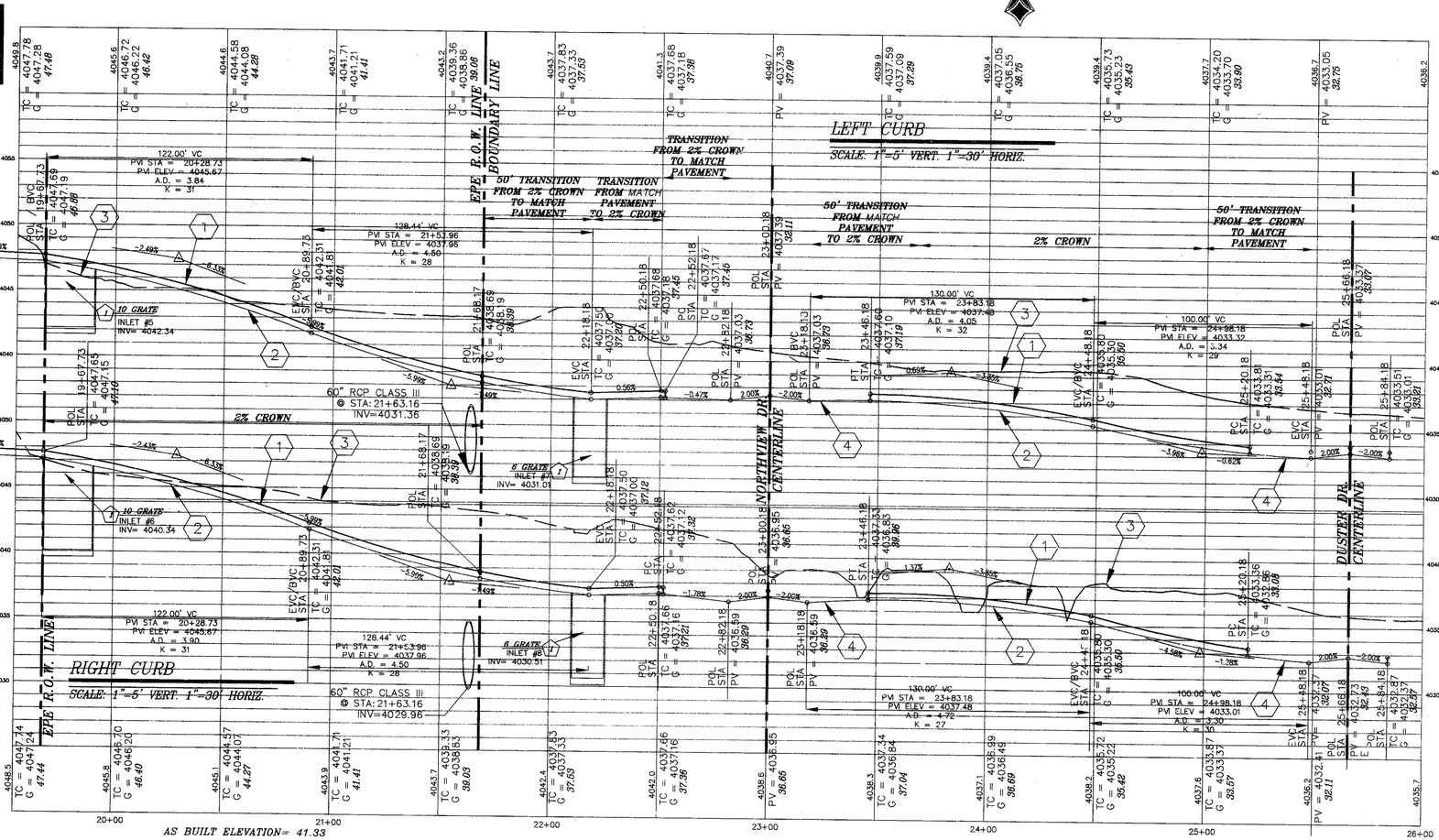
SCALE: 1"=30'

0 30' 60' 90'

0 1" 2" 3"

CURB LINE DATA		
LINE	BEARING	DISTANCE
CL22	S01°58'42"W	826.00'
CL23	N01°58'42"E	999.41'
CL30	N88°01'18"W	84.00'
CL31	N88°01'18"W	84.00'
CL32	N88°01'18"W	174.00'
CL33	N88°01'18"W	174.00'
CL38	S01°58'42"W	114.90'

ALL ELEVATIONS ARE NVGD DATUM
BENCHMARK: FOUND TXDOT BRASS CAP SECTION CORNERS 19, 20, 22 AND 21
ELEVATION: 4033.22 (NVGD DATUM)
(SUBTRACT 8.462 TO CONVERT TO CITY DATUM)



TOP OF CURB AS BUILT ELEVATION= 41.33

AS BUILT ELEVATION= 41.33

NOTES:
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BY: _____

DATE: 1/31/07

Release Dates:
10/28/05
Revisions:
11/28/05
-

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1/31/07
STATE OF TEXAS
S.B. MASOUD
70774

Del Rio Engineering, Inc.
P.O. Box 220251 El Paso, Texas 79913 915/833-2400

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JON CUNNINGHAM BLVD. STATION 19+67.73 THRU 25+84.18

SANDSTONE RANCH UNIT 1

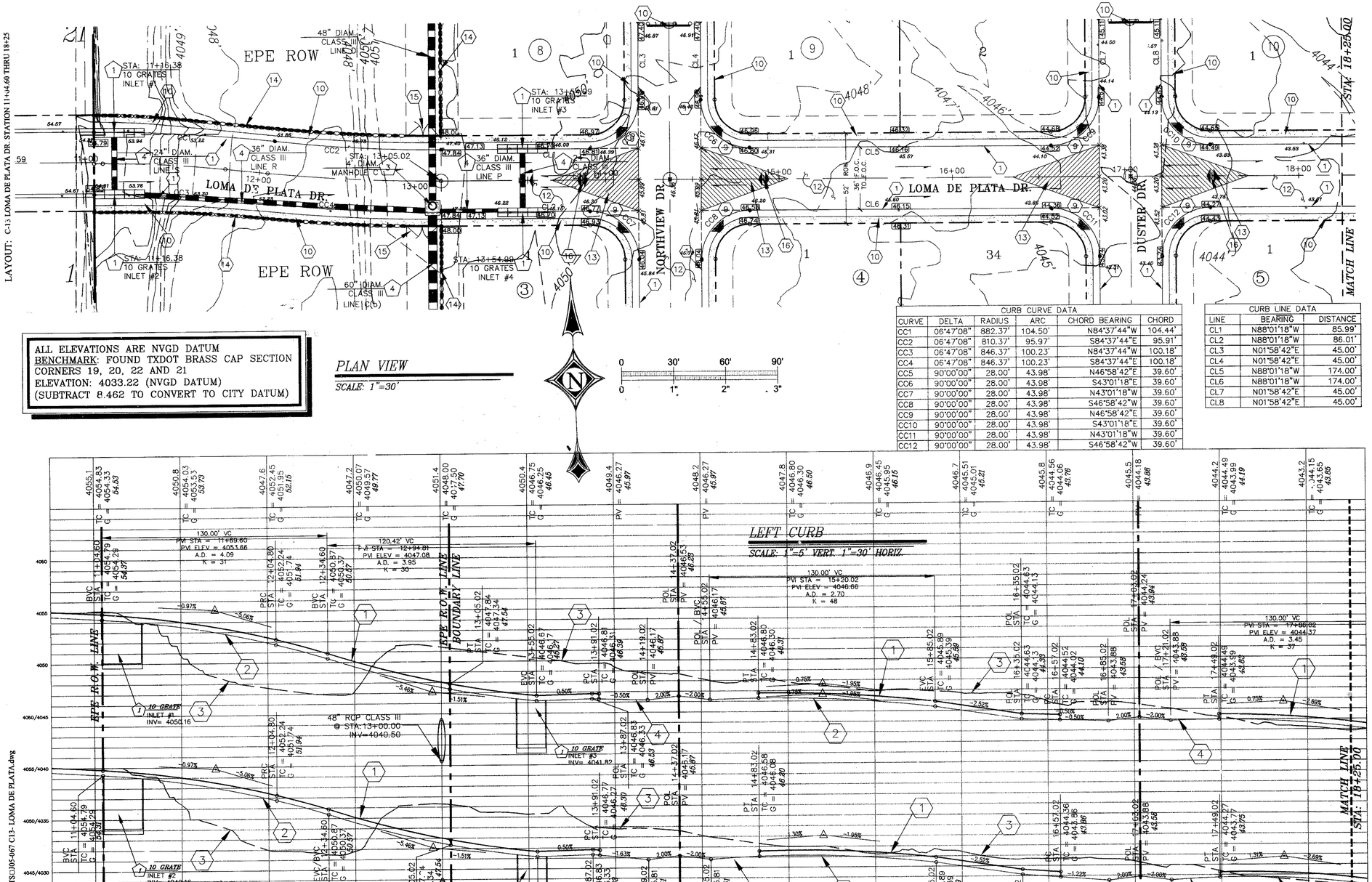
BEING A PORTION OF SEC. 21, BLOCK 81, TOWNSHIP 1
TEXAS AND PACIFIC RAILROAD CO. SURVEY
CITY OF EL PASO, EL PASO COUNTY, TEXAS

Project #: J05-067	Design By: AFJ		
Plot Date: 1/30/07	Drawn By: JM		
SHEET: C-12	Scale: 1" = 30'		

FILE: Z:\J05-WORK DIRECTORY\J05-067 SANDSTONE RANCH UNIT 1\dwg\CAS BUILTS\J05-067 C12-JON CUNNINGHAM.dwg

JON CUNNINGHAM BLVD. STATION 19+67.73 THRU 25+84.18

LAYOUT: C-13 LOMA DE PLATA DR. STATION 11+04.60 THRU 18+25



ALL ELEVATIONS ARE NVGD DATUM
BENCHMARK: FOUND TXDOT BRASS CAP SECTION CORNERS 19, 20, 22 AND 21
ELEVATION: 4033.22 (NVGD DATUM)
(SUBTRACT 8.462 TO CONVERT TO CITY DATUM)

PLAN VIEW

SCALE: 1"=30'

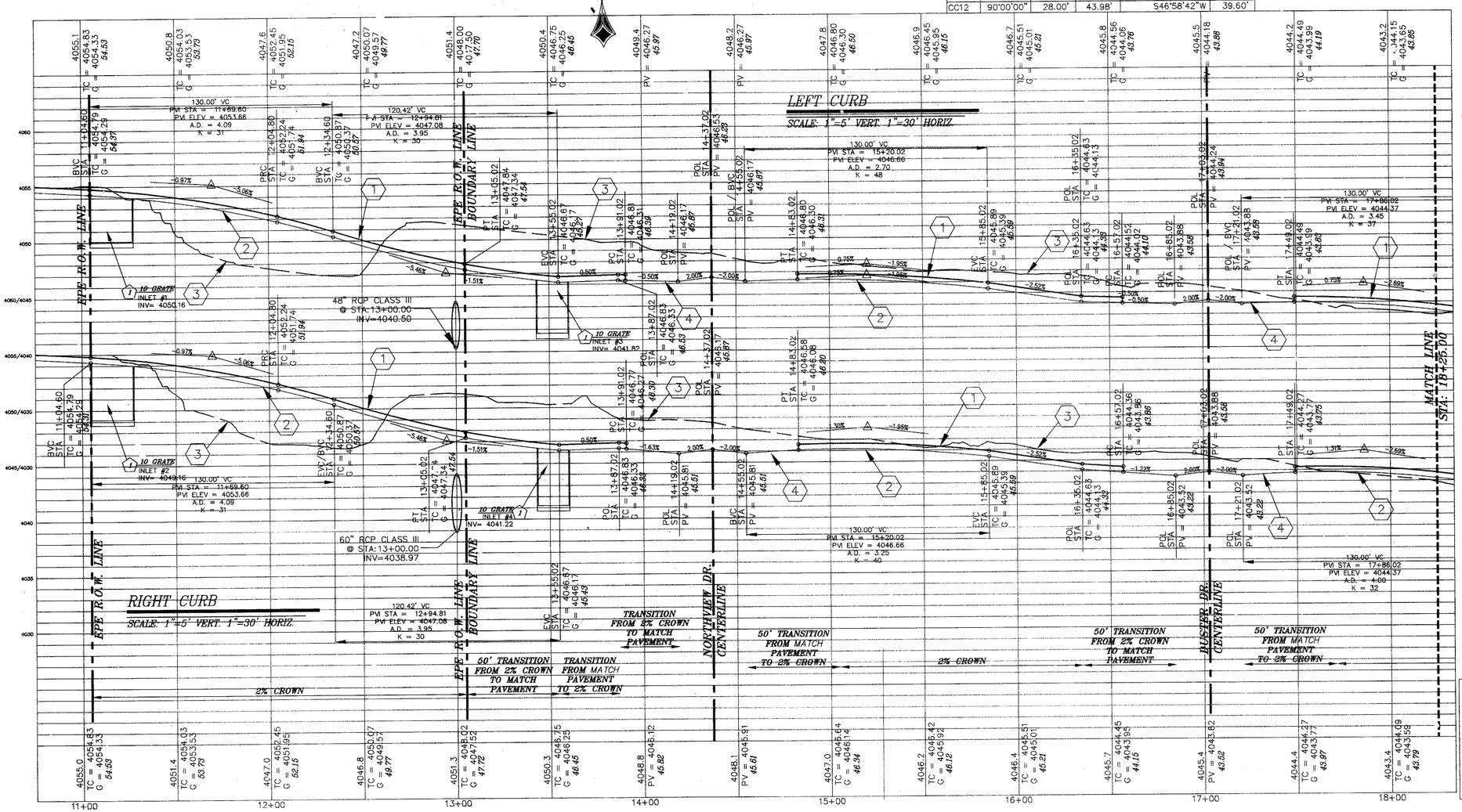
0 30' 60' 90'
0 1" 2" 3"

CURB CURVE DATA					
CURVE	DELTA	RADIUS	ARC	CHORD BEARING	CHORD
CC1	06°47'08"	882.37'	104.50'	N84°37'44"W	104.44'
CC2	06°47'08"	810.37'	95.97'	S84°37'44"E	95.91'
CC3	06°47'08"	846.37'	100.23'	N84°37'44"W	100.18'
CC4	06°47'08"	846.37'	100.23'	S84°37'44"E	100.18'
CC5	90°00'00"	28.00'	43.98'	N46°58'42"E	39.60'
CC6	90°00'00"	28.00'	43.98'	S43°01'18"E	39.60'
CC7	90°00'00"	28.00'	43.98'	N43°01'18"W	39.60'
CC8	90°00'00"	28.00'	43.98'	S46°58'42"W	39.60'
CC9	90°00'00"	28.00'	43.98'	N46°58'42"E	39.60'
CC10	90°00'00"	28.00'	43.98'	S43°01'18"E	39.60'
CC11	90°00'00"	28.00'	43.98'	N43°01'18"W	39.60'
CC12	90°00'00"	28.00'	43.98'	S46°58'42"W	39.60'

CURB LINE DATA		
LINE	BEARING	DISTANCE
CL1	N88°01'18"W	85.99'
CL2	N88°01'18"W	86.01'
CL3	N01°58'42"E	45.00'
CL4	N01°58'42"E	45.00'
CL5	N88°01'18"W	174.00'
CL6	N88°01'18"W	174.00'
CL7	N01°58'42"E	45.00'
CL8	N01°58'42"E	45.00'

LEFT CURB

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



RIGHT CURB

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

TRENCH EXCAVATION PROTECTION

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KEYNOTE LEGEND

1. PROPOSED TOP OF CURB (6" STANDARD CURB AND GUTTER) SEE TYP. DETAILS
2. PROPOSED GUTTER LINE (6" STANDARD CURB AND GUTTER) SEE TYP. DETAILS
3. EXISTING GRADE LINE
4. PROPOSED TOP OF PAVEMENT SEE TYP. DETAILS
5. PROPOSED TEMPORARY EARTHEN BERM SEE TYP. DETAILS
6. TYPICAL DEAD END SIGN W/ GUARDRAIL (SEE TYP. DETAILS)
7. PROPOSED TOP OF CURB (4" STANDARD ROLLED CURB) SEE TYP. DETAILS
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9. PROPOSED HANDICAP RAMP SEE TYP. DETAILS
10. 4' SIDEWALK SEE TYP. DETAILS
11. 5' SIDEWALK SEE TYP. DETAILS
12. TYPICAL PAVEMENT SECTION SEE TYP. DETAILS
13. 50' TRANSITION FROM 2% CROWN TO MATCH PAVEMENT
14. ROCK SCREENWALL BY BUILDER-HEIGHT VARIES (SEE TYP DETAILS)
15. 18' WIDE WROUGHT IRON GATE (SEE TYP. DETAILS)
16. HIGH POINT
17. LOW POINT

4060
4055
4050
4060/4045
4055/4040 — 47.45 PROPOSED TOP OF CURB @ PC,PT (FG @ BACK OF SIDEWALK)
46.67 PV — PROPOSED TOP OF PAVEMENT
4050/4035

KEYNOTE LEGEND (DRAINAGE)

4045/4030
1. PROPOSED DROP INLET TYPE I, # DENOTES NUMBER OF GRATES (SEE TYP. DETAILS)
2. STORMWATER MANHOLE TYPE I (SEE TYP. DETAILS)
4040
3. STORMWATER MANHOLE TYPE II (SEE TYP. DETAILS)
4. TYPICAL REINFORCED CONCRETE PIPE (# DENOTES DIAMETER)
4035
5. TYPICAL PIPE EXIT (PIPE TO EXIT AT A 30 DEGREE ANGLE FROM THE EXISTING DRAINAGE CHANNEL CENTERLINE)
6. HEADWALL PIPE EXIT (SEE TYP. DETAILS)
4030
7. CAP PROPOSED 48" R.C.P. STORMDRAIN PIPE FOR FUTURE EXTENSION
8. PROPOSED DROP INLET TYPE II, # DENOTES NUMBER OF GRATES (SEE TYP. DETAILS)

TOP OF CURB AS BUILT ELEVATION= 41.33

NOTES:
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BY: _____
DATE: 1/31/07

Release Dates:
10/28/05
Revisions:
11/28/05
-

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1/31/07
STATE OF TEXAS
S.B. MASOUD
70774
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PROFESSIONAL ENGINEER

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P.O. Box 220251 El Paso, Texas 79913 915/833-2400

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LOMA DE PLATA DR. STATION 11+04.60 THRU 18+25

SANDSTONE RANCH UNIT 1

BEING A PORTION OF SEC. 21, BLOCK 81, TOWNSHIP 1
TEXAS AND PACIFIC RAILROAD CO. SURVEY
CITY OF EL PASO, EL PASO COUNTY, TEXAS

Design By:	AFJ
Drawn By:	JM
Scale:	1" = 30'
Project #:	J05-067
Plot Date:	1/30/07
SHEET:	C-13

FILE: Z:\J05-WORK DIRECTORY\J05-067 SANDSTONE RANCH UNIT 1\dwg\AS BUILTS\J05-067 C13 - LOMA DE PLATA.dwg

LOMA DE PLATA DR. STATION 11+04.60 THRU 18+25

LAYOUT: C-14 LOMA DE PLATA DR. STATION 18+25 THRU 25+34.02

TRENCH EXCAVATION PROTECTION

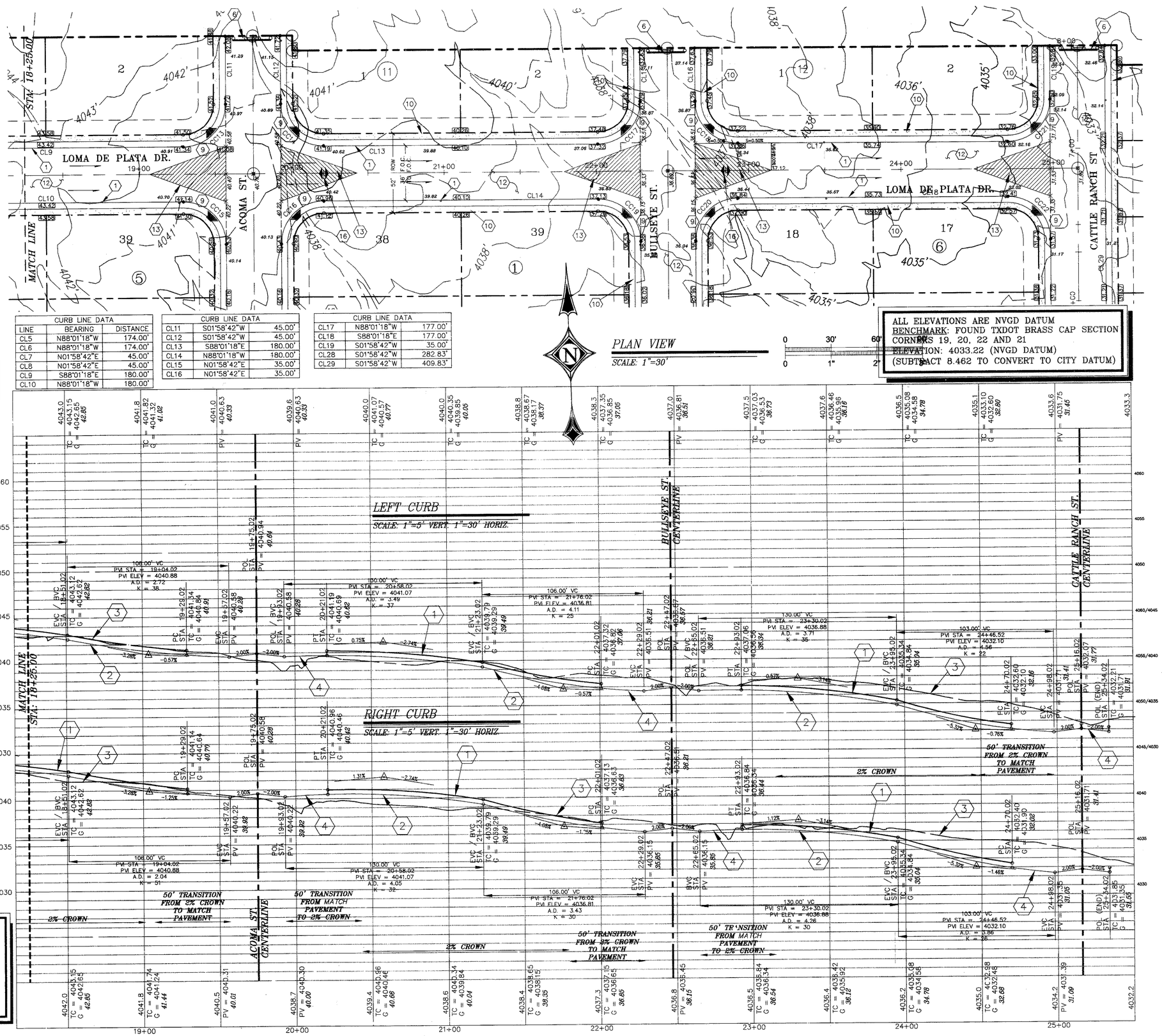
CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/ GEOTECHNICAL/ SAFETY/ EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S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

CURB CURVE DATA					
CURVE	DELTA	RADIUS	ARC	CHORD BEARING	CHORD
CC9	90°00'00"	28.00'	43.98'	N46°58'42"E	39.60'
CC10	90°00'00"	28.00'	43.98'	S43°01'18"E	39.60'
CC11	90°00'00"	28.00'	43.98'	N43°01'18"W	39.60'
CC12	90°00'00"	28.00'	43.98'	S46°58'42"W	39.60'
CC13	90°00'00"	28.00'	43.98'	N46°58'42"E	39.60'
CC14	90°00'00"	28.00'	43.98'	S43°01'18"E	39.60'
CC15	90°00'00"	28.00'	43.98'	N43°01'18"W	39.60'
CC16	90°00'00"	28.00'	43.98'	S46°58'42"W	39.60'
CC17	90°00'00"	28.00'	43.98'	N46°58'42"E	39.60'
CC18	90°00'00"	28.00'	43.98'	S43°01'18"E	39.60'
CC19	90°00'00"	28.00'	43.98'	N43°01'18"W	39.60'
CC20	90°00'00"	28.00'	43.98'	S46°58'42"W	39.60'
CC21	90°00'00"	28.00'	43.98'	N46°58'42"E	39.60'
CC22	90°00'00"	28.00'	43.98'	N43°01'18"W	39.60'

CURB LINE DATA		
LINE	BEARING	DISTANCE
CL5	N88°01'18"W	174.00'
CL6	N88°01'18"W	174.00'
CL7	N01°58'42"E	45.00'
CL8	N01°58'42"E	45.00'
CL9	S88°01'18"E	180.00'
CL10	N88°01'18"W	180.00'

CURB LINE DATA		
CL11	S01°58'42"W	45.00'
CL12	S01°58'42"W	45.00'
CL13	S88°01'18"E	180.00'
CL14	N88°01'18"W	180.00'
CL15	N01°58'42"E	35.00'
CL16	N01°58'42"E	35.00'

CURB LINE DATA		
CL17	N88°01'18"W	177.00'
CL18	S88°01'18"E	177.00'
CL19	S01°58'42"W	35.00'
CL28	S01°58'42"W	282.83'
CL29	S01°58'42"W	409.83'



ALL ELEVATIONS ARE NVGD DATUM
BENCHMARK: FOUND TXDOT BRASS CAP SECTION CORNERS 19, 20, 22 AND 21
ELEVATION: 4033.22 (NVGD DATUM)
(SUBTRACT 8.462 TO CONVERT TO CITY DATUM)

KEYNOTE LEGEND

1. PROPOSED TOP OF CURB (6" STANDARD CURB AND GUTTER) SEE TYP. DETAILS
2. PROPOSED GUTTER LINE (6" STANDARD CURB AND GUTTER) SEE TYP. DETAILS
3. EXISTING GRADE LINE
4. PROPOSED TOP OF PAVEMENT SEE TYP. DETAILS
5. PROPOSED TEMPORARY EARTHEN BERM SEE TYP. DETAILS
6. TYPICAL DEAD END SIGN W/ GUARDRAIL (SEE TYP. DETAILS)
7. PROPOSED TOP OF CURB (4" STANDARD ROLLED CURB) SEE TYP. DETAILS
8. PROPOSED GUTTER LINE (4" STANDARD ROLLED CURB) SEE TYP. DETAILS
9. PROPOSED HANDICAP RAMP SEE TYP. DETAILS
10. 4' SIDEWALK SEE TYP. DETAILS
11. 5' SIDEWALK SEE TYP. DETAILS
12. TYPICAL PAVEMENT SECTION SEE TYP. DETAILS
13. 50' TRANSITION FROM 2% CROWN TO MATCH PAVEMENT
14. 6' ROCK SCREENWALL BY DEVELOPER (SEE TYP. DETAILS)
15. 18' WIDE WROUGHT IRON GATE (SEE TYP. DETAILS)
16. HIGH POINT
17. LOW POINT

47.45 PROPOSED TOP OF CURB @ PC,PT (FG @ BACK OF SIDEWALK)

46.67 PV PROPOSED TOP OF PAVEMENT

TOP OF CURB AS BUILT ELEVATION= 41.33

NOTES:
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BY: _____

DATE: 1/31/07

FILE: Z:\J05-WORK DIRECTORY\J05-067 SANDSTONE RANCH UNIT 1\dwg\CAS BUILTS\J05-067 C14- LOMA DE PLATA.dwg

Release Dates:
10/28/05
Revisions:
11/28/05
12/12/05 (CEP REDS)

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1/31/07
STATE OF TEXAS
S.B. MASOUD
70774
PROFESSIONAL ENGINEER

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LOMA DE PLATA DR. STATION 18+25 THRU 25+34.02

SANDSTONE RANCH UNIT 1

BEING A PORTION OF SEC. 21, BLOCK 81, TOWNSHIP 1
TEXAS AND PACIFIC RAILROAD CO. SURVEY
CITY OF EL PASO, EL PASO COUNTY, TEXAS

Project #:	Design By:	Scale:
J05-067	AFJ	1" = 30'
Plot Date: 1/30/07	Drawn By: JM	
SHEET: C-14		

LOMA DE PLATA DR. STATION 18+25 THRU 25+34.02

LAYOUT: C-15 NORTHVIEW 0+00 THRU 5+75.00

TRENCH EXCAVATION PROTECTION

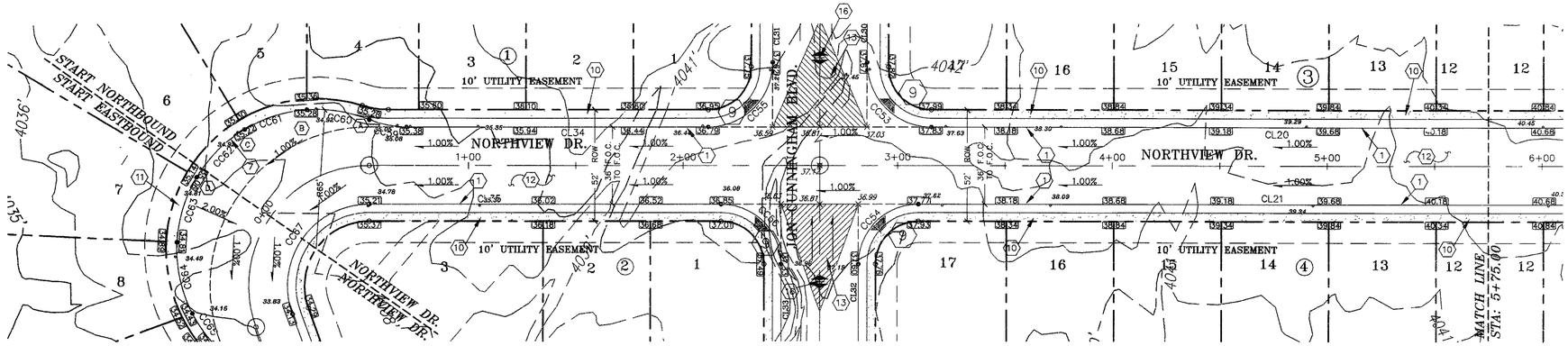
CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/ GEOTECHNICAL/ SAFETY/ EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S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

KEYNOTE LEGEND

1. PROPOSED TOP OF CURB (6" STANDARD CURB AND GUTTER) SEE TYP. DETAILS
2. PROPOSED GUTTER LINE (6" STANDARD CURB AND GUTTER) SEE TYP. DETAILS
3. EXISTING GRADE LINE
4. PROPOSED TOP OF PAVEMENT SEE TYP. DETAILS
5. PROPOSED TEMPORARY EARTHEN BERM SEE TYP. DETAILS
6. TYPICAL DEAD END SIGN W/ GUARDRAIL (SEE TYP. DETAILS)
7. PROPOSED TOP OF CURB (4" STANDARD ROLLED CURB) SEE TYP. DETAILS
8. PROPOSED GUTTER LINE (4" STANDARD ROLLED CURB) SEE TYP. DETAILS
9. PROPOSED HANDICAP RAMP SEE TYP. DETAILS
10. 4' SIDEWALK SEE TYP. DETAILS
11. 5' SIDEWALK SEE TYP. DETAILS
12. TYPICAL PAVEMENT SECTION SEE TYP. DETAILS
13. 50' TRANSITION FROM 2% CROWN TO MATCH PAVEMENT
14. 6' ROCK SCREENWALL BY DEVELOPER (SEE TYP. DETAILS)
15. 18' WIDE WROUGHT IRON GATE (SEE TYP. DETAILS)
16. HIGH POINT
17. LOW POINT

47.45 PROPOSED TOP OF CURB @ PC,PT (FG @ BACK OF SIDEWALK)

46.67 PV PROPOSED TOP OF PAVEMENT



CURB CURVE DATA					
CURVE	DELTA	RADIUS	ARC	CHORD BEARING	CHORD
CC53	90°00'00"	30.00'	47.12'	N46°58'42"E	42.43'
CC54	90°00'00"	28.00'	43.98'	S43°01'18"E	39.60'
CC55	90°00'00"	30.00'	47.12'	N43°01'18"W	42.43'
CC56	90°00'00"	28.00'	43.98'	S46°58'42"W	39.60'
CC57	90°00'00"	28.00'	43.98'	N46°58'42"E	39.60'
CC58	90°00'00"	28.00'	43.98'	N43°01'18"W	39.60'
CC59	22°10'16"	46.00'	17.80'	N13°03'50"E	17.69'
CC60	26°07'25"	65.00'	29.64'	S11°05'16"W	29.38'
CC61	27°02'09"	65.00'	30.67'	S15°29'31"E	30.39'
CC62	28°07'47"	65.00'	31.91'	S43°04'29"E	31.59'
CC63	28°07'42"	65.00'	31.91'	S71°12'13"E	31.59'
CC64	30°12'27"	65.00'	34.27'	N79°37'43"E	33.87'
CC65	14°43'04"	65.00'	16.70'	N57°09'58"E	16.65'
CC67	110°00'00"	38.00'	72.95'	S53°01'18"E	62.26'

N

PLAN VIEW

SCALE: 1"=30'

0 30' 60' 90'
0 1" 2" 3"

ALL ELEVATIONS ARE NVGD DATUM
BENCHMARK: FOUND TXDOT BRASS CAP SECTION CORNERS 19, 20, 22 AND 21
ELEVATION: 4033.22 (NVGD DATUM)
(SUBTRACT 8.462 TO CONVERT TO CITY DATUM)

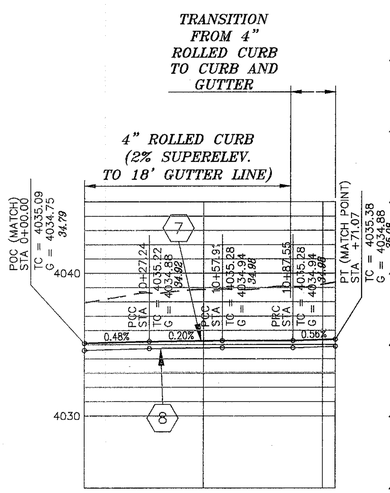
CURB LINE DATA		
LINE	BEARING	DISTANCE
CL20	S01°58'42"W	820.00'
CL21	N01°58'42"E	826.00'
CL30	N88°01'18"W	84.00'
CL31	N88°01'18"W	84.00'
CL32	N88°01'18"W	174.00'
CL33	N88°01'18"W	174.00'
CL34	N01°58'42"E	140.63'
CL35	S01°58'42"W	163.95'

TOP OF CURB AS BUILT ELEVATION= 41.33

NOTES:
THESE RECORDS DRAWINGS HAVE BEEN PREPARED BY DEL RIO ENGINEERING INC. BASED ON PERIODIC CONSTRUCTION OBSERVATIONS AND INFORMATION PROVIDED BY OTHERS AND REFLECTS CHANGES MADE DURING CONSTRUCTION. THE ACCURACY AND/OR COMPLETENESS OF THIS INFORMATION HAVE BEEN VERIFIED BY CAD CONSULTING COMPANY SUMITTED ON 1/31/07. THOSE RELYING ON THIS RECORD DRAWING ARE ADVISED TO OBTAIN INDEPENDENT VERIFICATION OF ITS ACCURACY BEFORE APPLYING IT FOR ANY PURPOSE.

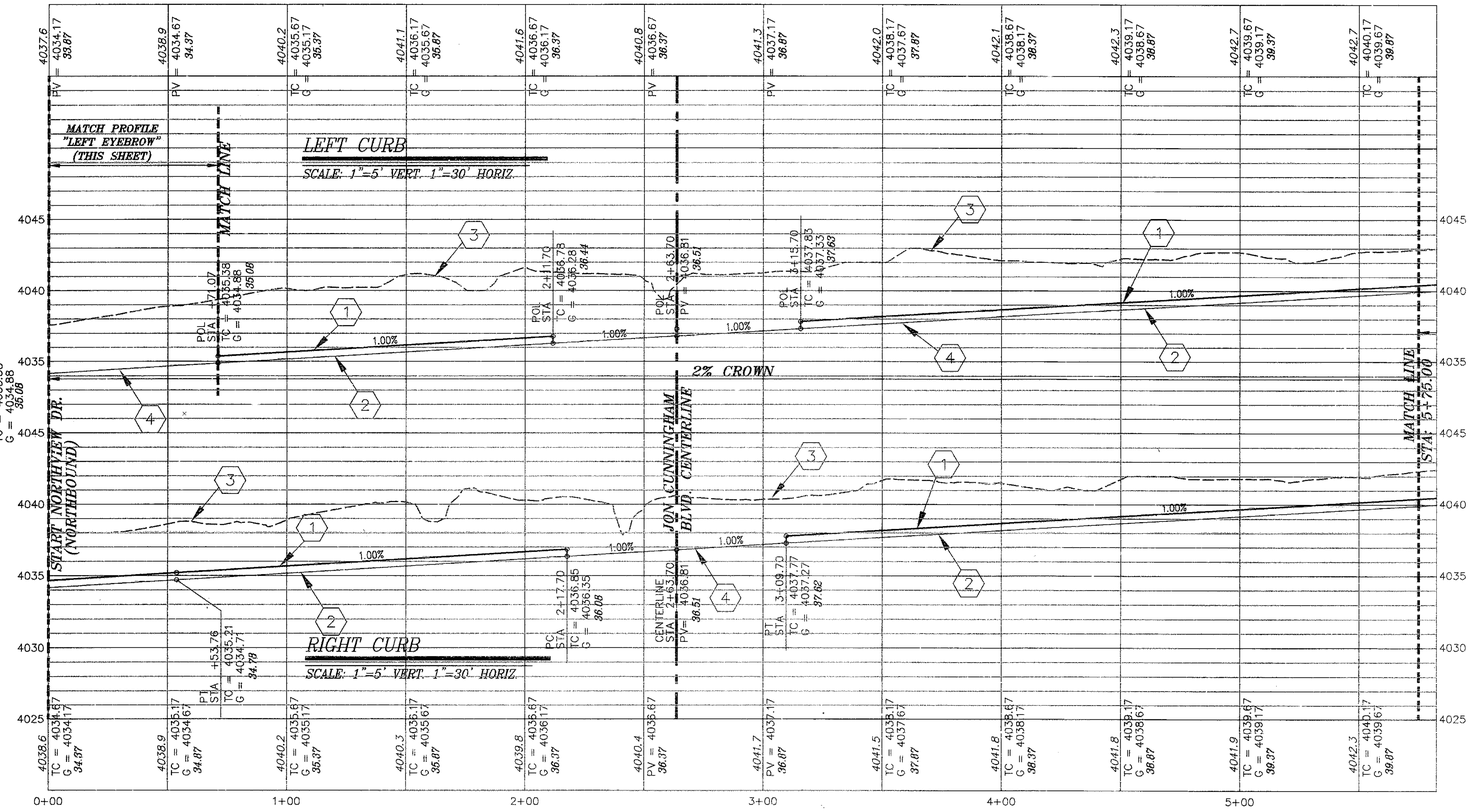
BY: _____

DATE: 1/31/07



LEFT EYEBROW

MATCH FROM STA: 0+00 TO 0+71.07
SCALE: 1"=5' VERT. 1"=30' HORIZ.



Release Dates:
10/27/05

Revisions:
11/28/05 (CEP REDS)
12/12/05 (CEP REDS)

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1/31/07
STATE OF TEXAS
S.B. MASOUD
70774
PROFESSIONAL ENGINEER

DRE Del Rio Engineering, Inc.
P.O. Box 220251 El Paso, Texas 79913 915/833-2400

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NORTHVIEW DR. STATION 0+00 THRU 5+75.00

SANDSTONE RANCH UNIT 1

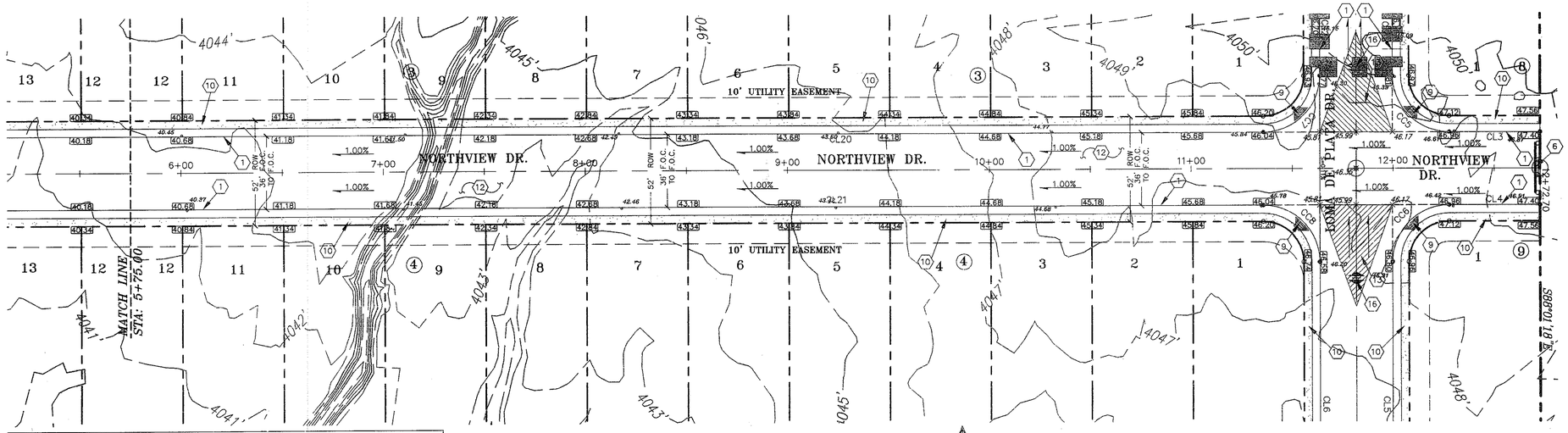
BEING A PORTION OF SEC. 21, BLOCK 81, TOWNSHIP 1
TEXAS AND PACIFIC RAILROAD CO. SURVEY
CITY OF EL PASO, EL PASO COUNTY, TEXAS

Project #: J05-067	Design By: AFJ	
Plot Date: 1/31/07	Drawn By: JM	
SHEET: C-15	Scale: 1" = 30'	

NORTHVIEW DR. STATION 0+00 THRU 5+75.00

FILE: Z:\J05-WORK DIRECTORY\J05-067 SANDSTONE RANCH UNIT 1.dwg\CAS BUILTS\J05-067 C15- NORTHVIEW.dwg

LAYOUT: C-16 NORTHVIEW 5+75.00 THRU 12+72.70



TRENCH EXCAVATION PROTECTION

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CURB CURVE DATA

CURVE	DELTA	RADIUS	ARC	CHORD BEARING	CHORD
CC5	90°00'00"	28.00'	43.98'	N46°58'42"E	39.60'
CC6	90°00'00"	28.00'	43.98'	S43°01'18"E	39.60'
CC7	90°00'00"	28.00'	43.98'	N43°01'18"W	39.60'
CC8	90°00'00"	28.00'	43.98'	S46°58'42"W	39.60'

ALL ELEVATIONS ARE NVGD DATUM
BENCHMARK: FOUND TXDOT BRASS CAP SECTION CORNERS 19, 20, 22 AND 21
ELEVATION: 4033.22 (NVGD DATUM)
(SUBTRACT 8.462 TO CONVERT TO CITY DATUM)

PLAN VIEW

SCALE: 1"=30'

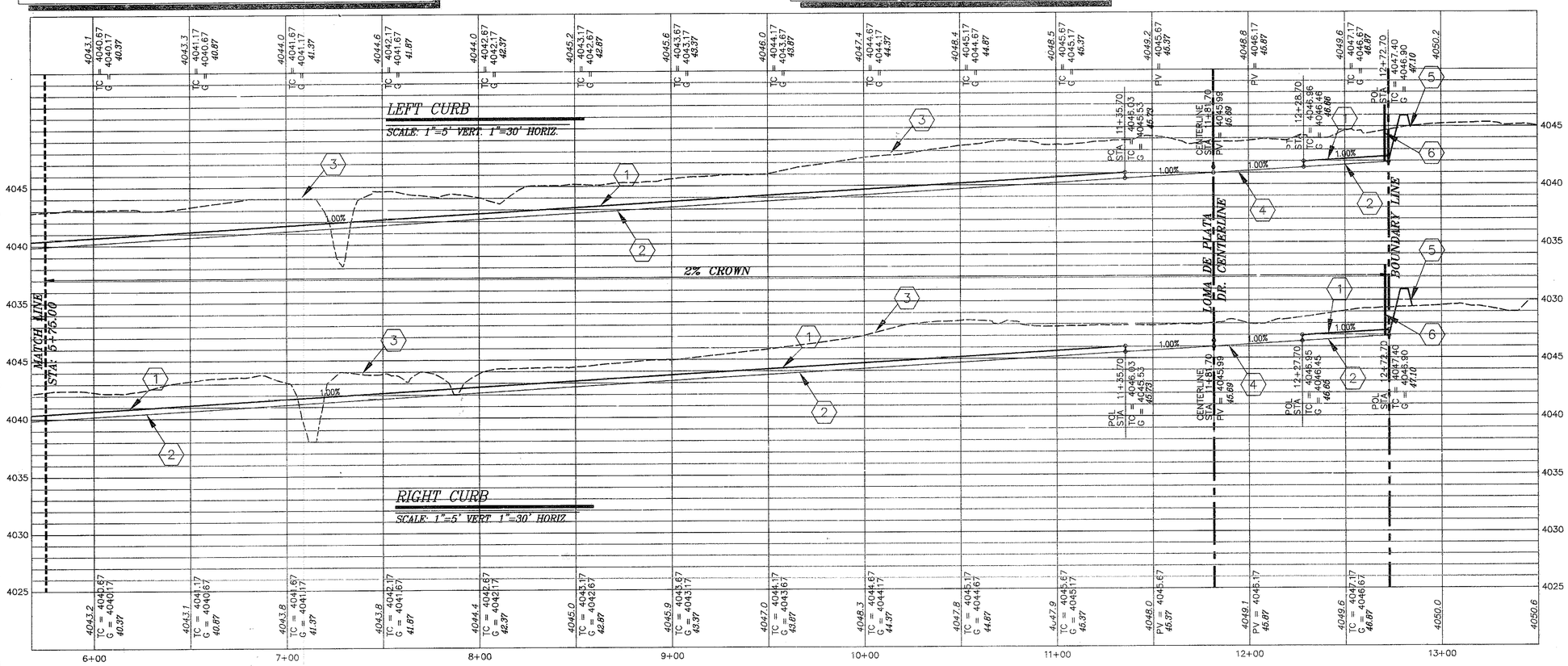
0 30' 60' 90'
0 1" 2" 3"

KEYNOTE LEGEND

1. PROPOSED TOP OF CURB (6" STANDARD CURB AND GUTTER) SEE TYP. DETAILS
2. PROPOSED GUTTER LINE (6" STANDARD CURB AND GUTTER) SEE TYP. DETAILS
3. EXISTING GRADE LINE
4. PROPOSED TOP OF PAVEMENT SEE TYP. DETAILS
5. PROPOSED TEMPORARY EARTHEN BERM SEE TYP. DETAILS
6. TYPICAL DEAD END SIGN W/ GUARDRAIL (SEE TYP. DETAILS)
7. PROPOSED TOP OF CURB (4" STANDARD ROLLED CURB) SEE TYP. DETAILS
8. PROPOSED GUTTER LINE (4" STANDARD ROLLED CURB) SEE TYP. DETAILS
9. PROPOSED HANDICAP RAMP SEE TYP. DETAILS
10. 4' SIDEWALK SEE TYP. DETAILS
11. 5' SIDEWALK SEE TYP. DETAILS
12. TYPICAL PAVEMENT SECTION SEE TYP. DETAILS
13. 50' TRANSITION FROM 2% CROWN TO MATCH PAVEMENT
14. 6' ROCK SCREENWALL BY DEVELOPER (SEE TYP. DETAILS)
15. 18' WIDE WROUGHT IRON GATE (SEE TYP. DETAILS)
16. HIGH POINT
17. LOW POINT

47.45 PROPOSED TOP OF CURB @ PC,PT (FG @ BACK OF SIDEWALK)

46.67 PV PROPOSED TOP OF PAVEMENT



CURB LINE DATA		
LINE	BEARING	DISTANCE
CL1	N88°01'18"W	85.99'
CL2	N88°01'18"W	86.01'
CL3	N01°58'42"E	45.00'
CL4	N01°58'42"E	45.00'
CL5	N88°01'18"W	174.00'
CL6	N88°01'18"W	174.00'
CL20	S01°58'42"W	820.00'
CL21	N01°58'42"E	826.00'

TOP OF CURB AS BUILT ELEVATION= 41.33

NOTES:
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BY: _____

DATE: 1/31/07

Release Dates:
10/27/05

Revisions:
11/27/05 (CEP REDS)
12/12/05 (CEP REDS)

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1/31/07
TEXAS
S.B. MASOUD
70774
LICENSED
PROFESSIONAL ENGINEER

Del Rio Engineering, Inc.
P.O. Box 220251 El Paso, Texas 79913 915/833-2400

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NORTHVIEW DR. STATION 5+75.00 THRU 12+72.70

SANDSTONE RANCH UNIT 1

BEING A PORTION OF SEC. 21, BLOCK 81, TOWNSHIP 1
TEXAS AND PACIFIC RAILROAD CO. SURVEY
CITY OF EL PASO, EL PASO COUNTY, TEXAS

Project #: J05-067	Design By: AFJ
Plot Date: 1/30/07	Drawn By: JM
SHEET: C-16	Scale: 1" = 30'

NORTHVIEW DR. STATION 5+75.00 THRU 12+72.70

FILE: Z:□J05-WORK DIRECTORY□J05-067 SANDSTONE RANCH UNIT 1□dwg□AS BUILTS□J05-067 C16- NORTHVIEW.dwg

TRENCH EXCAVATION PROTECTION

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

KEYNOTE LEGEND

1. PROPOSED TOP OF CURB (6" STANDARD CURB AND GUTTER) SEE TYP. DETAILS
2. PROPOSED GUTTER LINE (6" STANDARD CURB AND GUTTER) SEE TYP. DETAILS
3. EXISTING GRADE LINE
4. PROPOSED TOP OF PAVEMENT SEE TYP. DETAILS
5. PROPOSED TEMPORARY EARTHEN BERM SEE TYP. DETAILS
6. TYPICAL DEAD END SIGN W/ GUARDRAIL (SEE TYP. DETAILS)
7. PROPOSED TOP OF CURB (4" STANDARD ROLLED CURB) SEE TYP. DETAILS
8. PROPOSED GUTTER LINE (4" STANDARD ROLLED CURB) SEE TYP. DETAILS
9. PROPOSED HANDICAP RAMP SEE TYP. DETAILS
10. 4' SIDEWALK SEE TYP. DETAILS
11. 5' SIDEWALK SEE TYP. DETAILS
12. TYPICAL PAVEMENT SECTION SEE TYP. DETAILS
13. 50' TRANSITION FROM 2% CROWN TO MATCH PAVEMENT
14. 6' ROCK SCREENWALL BY DEVELOPER (SEE TYP. DETAILS)
15. 18' WIDE WROUGHT IRON GATE (SEE TYP. DETAILS)
16. HIGH POINT
17. LOW POINT

47.45 PROPOSED TOP OF CURB @ PC,PT (FG @ BACK OF SIDEWALK)

46.67 PV PROPOSED TOP OF PAVEMENT

CURB CURVE DATA						
CURVE	DELTA	RADIUS	ARC	CHORD BEARING	CHORD
CC59	22°10'16"	46.00'	17.80'	N13°03'50"E	17.69'
CC60	26°07'25"	65.00'	29.64'	S11°05'16"W	29.38'
CC61	27°02'09"	65.00'	30.67'	S15°29'31"E	30.39'
CC62	28°07'47"	65.00'	31.91'	S43°04'29"E	31.59'
CC63	28°07'42"	65.00'	31.91'	S71°12'13"E	31.59'
CC64	30°12'27"	65.00'	34.27'	N79°37'43"E	33.87'
CC65	14°43'04"	65.00'	16.70'	N57°09'58"E	16.65'
CC66	22°10'16"	46.00'	17.80'	S60°53'34"W	17.69'
CC67	110°00'00"	38.00'	72.95'	S53°01'18"E	62.26'
CC68	70°00'00"	28.00'	34.21'	N36°58'42"E	32.12'
CC69	110°00'00"	28.00'	53.76'	S53°01'18"E	45.87'
CC70	70°00'00"	38.00'	46.43'	N36°58'42"E	43.59'
CC71	30°43'06"	46.00'	24.66'	S87°20'15"W	24.37'
CC72	21°15'10"	65.00'	24.11'	S87°55'47"E	23.97'
CC73	17°42'03"	65.00'	20.08'	N72°35'37"E	20.00'
CC74	28°15'37"	65.00'	32.06'	N49°36'47"E	31.74'
CC75	30°33'28"	65.00'	34.67'	N20°12'14"E	34.26'
CC76	33°39'54"	65.00'	38.19'	N11°54'27"W	37.64'
CC77	30°43'06"	46.00'	24.66'	S13°22'51"E	24.37'

TOP OF CURB AS BUILT ELEVATION= 41.33

NOTES:

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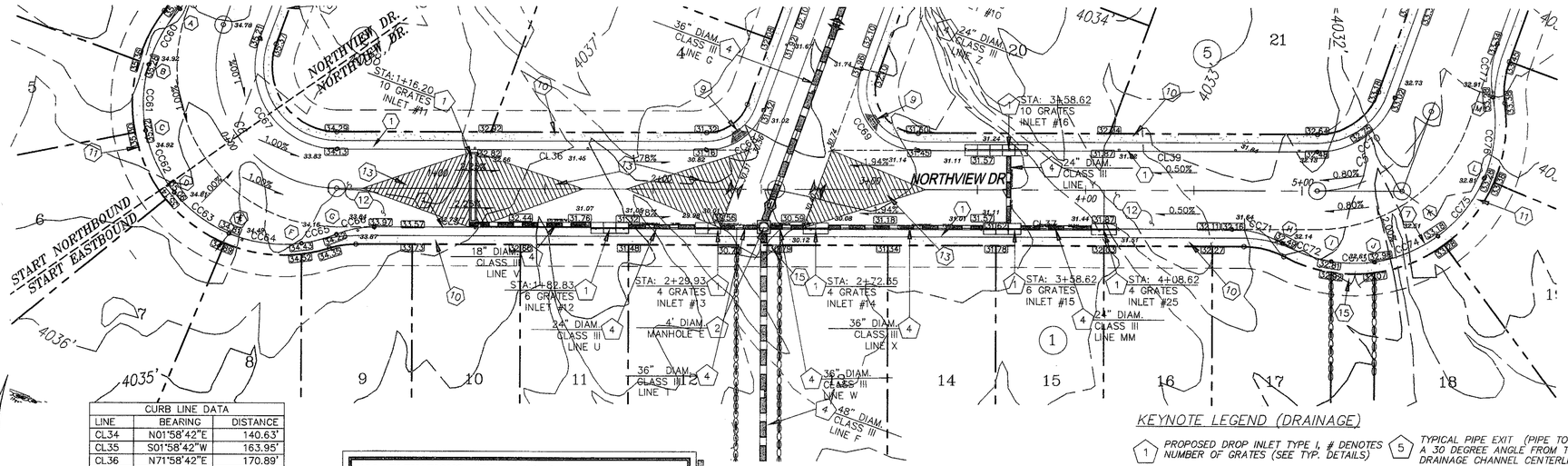
BY:

DATE: 1/31/07



CURB LINE DATA		
LINE	BEARING	DISTANCE
CL34	N01°58'42"E	140.63'
CL35	S01°58'42"W	163.95'
CL36	N71°58'42"E	170.89'
CL37	S71°58'42"W	396.53'
CL38	S01°58'42"W	114.90'
CL39	S71°58'42"W	184.55'
CL40	N06°28'28"W	49.32'
CL41	N06°28'28"W	66.64'
CL42	N01°58'42"E	24.57'

ALL ELEVATIONS ARE NVGD DATUM
BENCHMARK: FOUND TXDOT BRASS CAP SECTION CORNERS 19, 20, 22 AND 21
ELEVATION: 4033.22 (NVGD DATUM)
(SUBTRACT 8.462 TO CONVERT TO CITY DATUM)

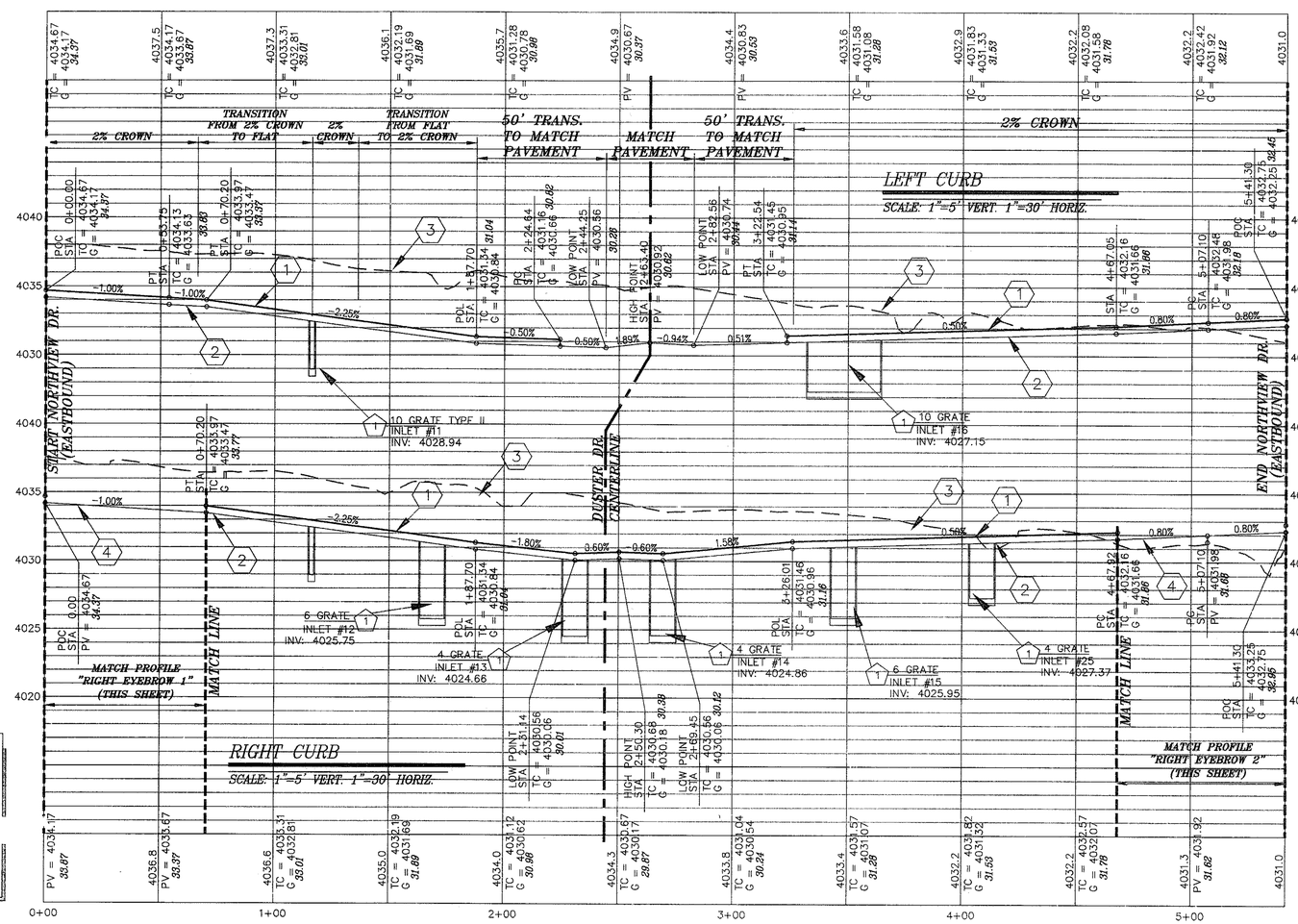
PLAN VIEW

SCALE: 1"=30'

0 30' 60' 90'
0 1" 2" 3"

KEYNOTE LEGEND (DRAINAGE)

1. PROPOSED DROP INLET TYPE I, # DENOTES NUMBER OF GRATES (SEE TYP. DETAILS)
2. STORMWATER MANHOLE TYPE I (SEE TYP. DETAILS)
3. STORMWATER MANHOLE TYPE II (SEE TYP. DETAILS)
4. TYPICAL REINFORCED CONCRETE PIPE (# DENOTES DIAMETER)
5. TYPICAL PIPE EXIT (PIPE TO EXIT AT A 30 DEGREE ANGLE FROM THE EXISTING DRAINAGE CHANNEL CENTERLINE)
6. HEADWALL PIPE EXIT (SEE TYP. DETAILS)
7. CAP PROPOSED 48" R.C.P. STORMDRAIN PIPE FOR FUTURE EXTENSION
8. PROPOSED DROP INLET TYPE II, # DENOTES NUMBER OF GRATES (SEE TYP. DETAILS)

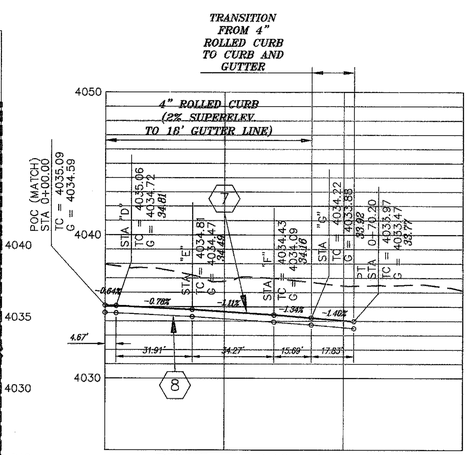


RIGHT CURB

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

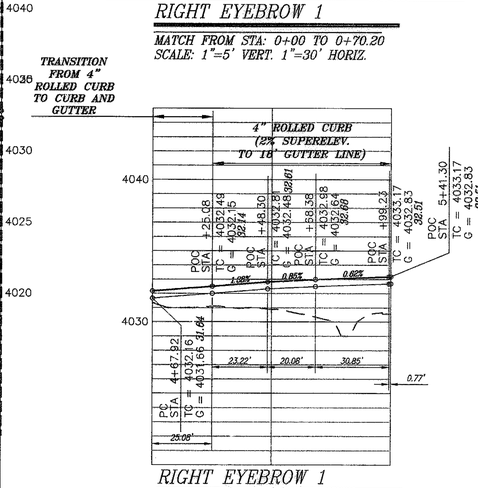
LEFT CURB

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



RIGHT EYEBROW 1

MATCH FROM STA: 0+00 TO 0+70.20
SCALE: 1"=5' VERT. 1"=30' HORIZ.



RIGHT EYEBROW 1

MATCH FROM STA: 4+67.92 TO 5+41.30
SCALE: 1"=5' VERT. 1"=30' HORIZ.

NORTHVIEW DR. STATION 10+00 THRU 15+41.30

Release Dates:
10/28/05
Revisions:
11/28/05
3/29/06

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1/31/07
STATE OF TEXAS
S.B. MASOUD
70774
LICENSED PROFESSIONAL ENGINEER

Del Rio Engineering, Inc.
P.O. Box 220251 El Paso, Texas 79913 915/833-2400

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NORTHVIEW DR. STATION 10+00 THRU 15+41.30

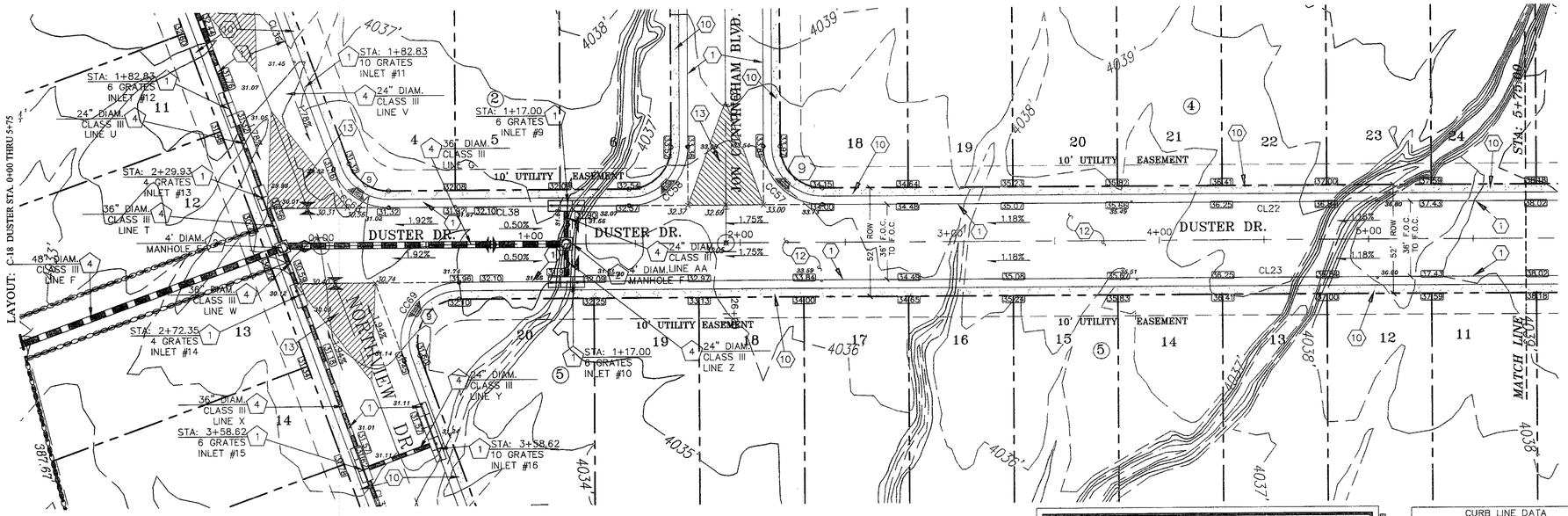
SANDSTONE RANCH UNIT 1

BEING A PORTION OF SEC. 21, BLOCK 81, TOWNSHIP 1
TEXAS AND PACIFIC RAILROAD CO. SURVEY
CITY OF EL PASO, EL PASO COUNTY, TEXAS

Design By:	AFJ
Drawn By:	JM
Scale:	1" = 30'
Project #:	J05-067
Plot Date:	1/30/07
SHEET:	C-17

LAYOUT: C-17 NORTHVIEW 10+00 THRU 15+41.30

FILE: Z:\J05-WORK DIRECTORY\J05-067 SANDSTONE RANCH UNIT 1\dwg\AS BUILTS\J05-067 C17-NORTHVIEW.dwg



CURB CURVE DATA					
CURVE	DELTA	RADIUS	ARC	CHORD BEARING	CHORD
CC57	90°00'00"	28.00'	43.98'	N46°58'42"E	39.60'
CC58	90°00'00"	28.00'	43.98'	N43°01'18"W	39.60'
CC68	70°00'00"	28.00'	34.21'	N36°58'42"E	32.12'
CC69	110°00'00"	28.00'	53.76'	S53°01'18"E	45.87'

PLAN VIEW

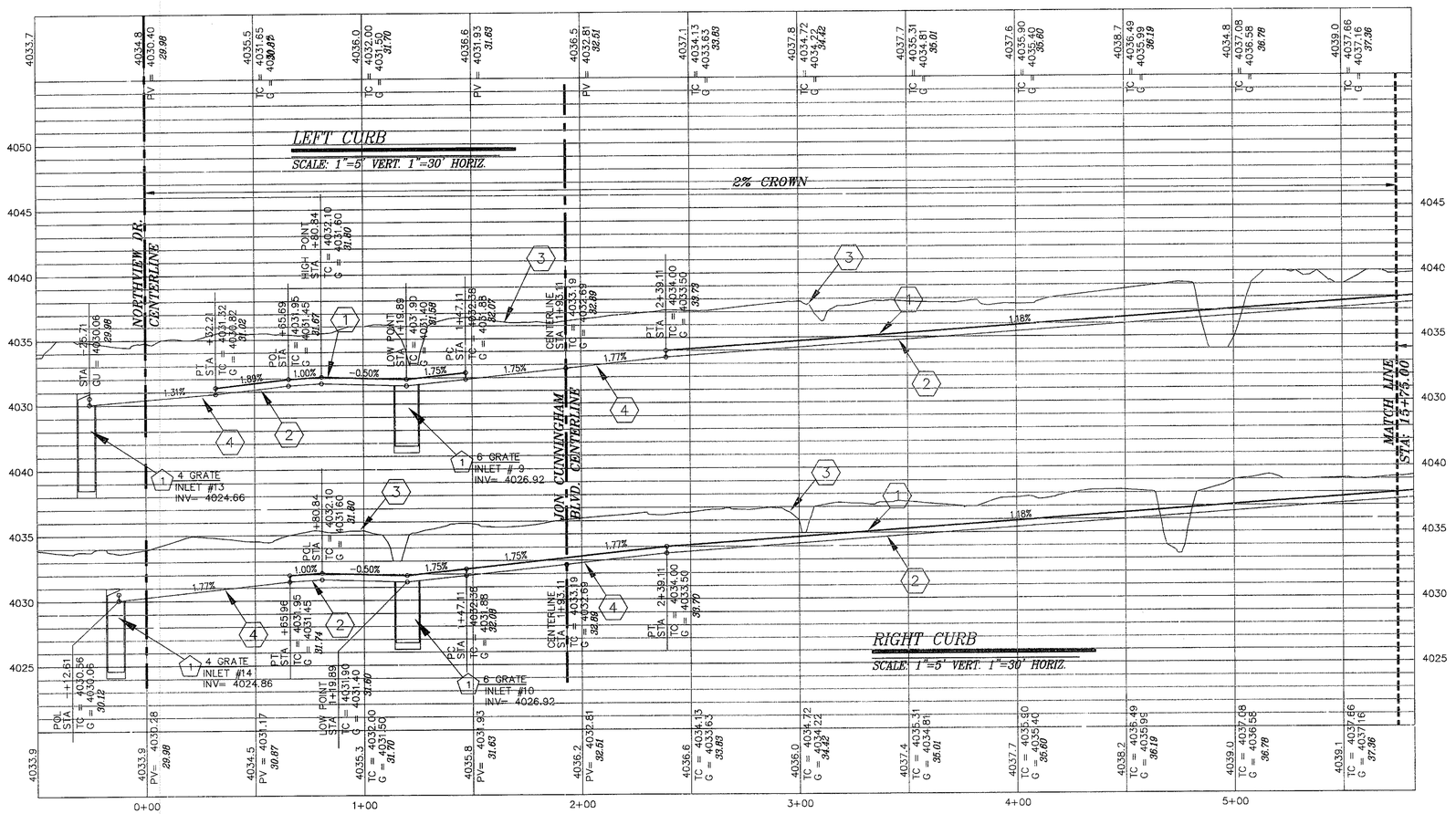
SCALE: 1"=30'

0 30' 60' 90'

0 1" 2" 3"

ALL ELEVATIONS ARE NVGD DATUM
BENCHMARK: FOUND TXDOT BRASS CAP SECTION CORNERS 19, 20, 22 AND 21
ELEVATION: 4033.22 (NVGD DATUM)
(SUBTRACT 8.462 TO CONVERT TO CITY DATUM)

CURB LINE DATA		
LINE	BEARING	DISTANCE
CL22	S01°58'42"W	826.00'
CL23	N01°58'42"E	999.41'
CL36	N71°58'42"E	170.89'
CL37	S71°58'42"W	396.53'
CL38	S01°58'42"W	114.90'
CL39	S71°58'42"W	184.55'



TRENCH EXCAVATION PROTECTION

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

KEYNOTE LEGEND

1. PROPOSED TOP OF CURB (6" STANDARD CURB AND GUTTER) SEE TYP. DETAILS
2. PROPOSED GUTTER LINE (6" STANDARD CURB AND GUTTER) SEE TYP. DETAILS
3. EXISTING GRADE LINE
4. PROPOSED TOP OF PAVEMENT SEE TYP. DETAILS
5. PROPOSED TEMPORARY EARTHEN BERM SEE TYP. DETAILS
6. TYPICAL DEAD END SIGN W/ GUARDRAIL (SEE TYP. DETAILS)
7. PROPOSED TOP OF CURB (4" STANDARD ROLLED CURB) SEE TYP. DETAILS
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10. 4' SIDEWALK SEE TYP. DETAILS
11. 5' SIDEWALK SEE TYP. DETAILS
12. TYPICAL PAVEMENT SECTION SEE TYP. DETAILS
13. 50' TRANSITION FROM 2% CROWN TO MATCH PAVEMENT
14. 6' ROCK SCREENWALL BY DEVELOPER (SEE TYP. DETAILS)
15. 18' WIDE WROUGHT IRON GATE (SEE TYP. DETAILS)
16. HIGH POINT
17. LOW POINT

47.45 PROPOSED TOP OF CURB @ PC,PT (FG @ BACK OF SIDEWALK)

46.67 BV PROPOSED TOP OF PAVEMENT

KEYNOTE LEGEND (DRAINAGE)

1. PROPOSED DROP INLET TYPE I, # DENOTES NUMBER OF GRATES (SEE TYP. DETAILS)
2. STORMWATER MANHOLE TYPE I (SEE TYP. DETAILS)
3. STORMWATER MANHOLE TYPE II (SEE TYP. DETAILS)
4. TYPICAL REINFORCED CONCRETE PIPE (# DENOTES DIAMETER)
5. TYPICAL PIPE EXIT (PIPE TO EXIT AT A 30 DEGREE ANGLE FROM THE EXISTING DRAINAGE CHANNEL CENTERLINE)
6. HEADWALL PIPE EXIT (SEE TYP. DETAILS)
7. CAP PROPOSED 48" R.C.P. STORMDRAIN PIPE FOR FUTURE EXTENSION
8. PROPOSED DROP INLET TYPE II, # DENOTES NUMBER OF GRATES (SEE TYP. DETAILS)

TOP OF CURB AS BUILT ELEVATION= 41.33

NOTES:
THESE RECORDS DRAWINGS HAVE BEEN PREPARED BY DEL RIO ENGINEERING INC. BASED ON PERIODIC CONSTRUCTION OBSERVATIONS AND INFORMATION PROVIDED BY OTHERS AND REFLECTS CHANGES MADE DURING CONSTRUCTION. THE ACCURACY AND/OR COMPLETENESS OF THIS INFORMATION HAVE BEEN VERIFIED BY CAD CONSULTING COMPANY SUMITTED ON 1/11/07. THOSE RELYING ON THIS RECORD DRAWING ARE ADVISED TO OBTAIN INDEPENDENT VERIFICATION OF ITS ACCURACY BEFORE APPLYING IT FOR ANY PURPOSE.

BY: _____

DATE: 1/31/07

Release Dates:
10/28/05
Revisions:
11/28/05
-

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1/31/07
STATE OF TEXAS
S.B. MASOUD
70774
LICENSED PROFESSIONAL ENGINEER

DRE Del Rio Engineering, Inc.
P.O. Box 220251 El Paso, Texas 79913 915/833-2400

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DUSTER DR. STATION 0+00 THRU 5+75.00

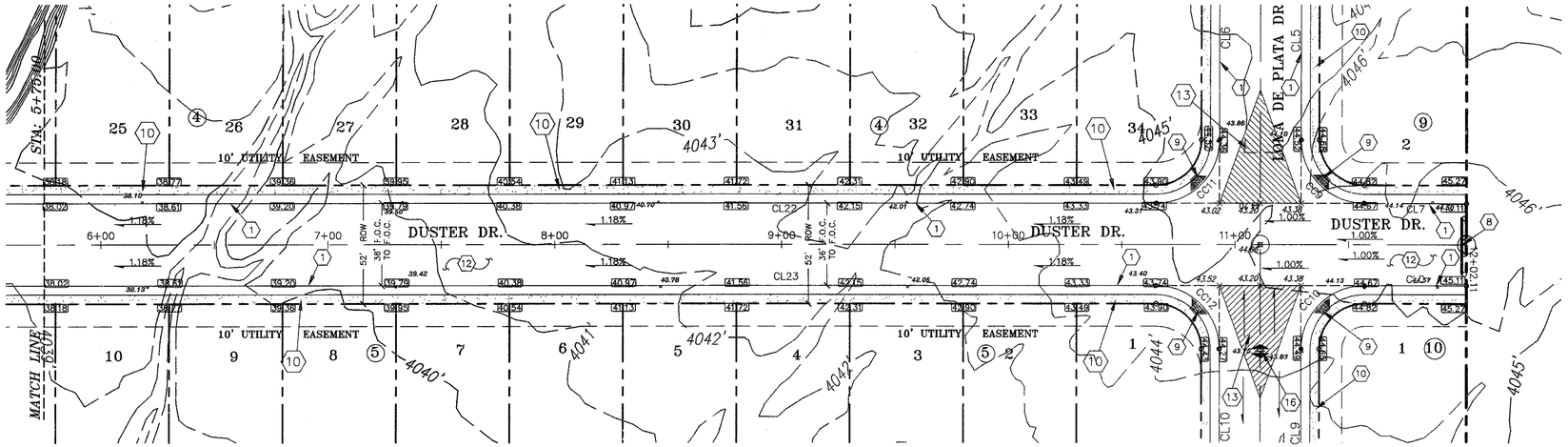
SANDSTONE RANCH UNIT 1

BEING A PORTION OF SEC. 21, BLOCK 81, TOWNSHIP 1
TEXAS AND PACIFIC RAILROAD CO. SURVEY
CITY OF EL PASO, EL PASO COUNTY, TEXAS

Project #: J05-067	Design By: AFJ	
Plot Date: 1/30/07	Drawn By: JM	
SHEET: C-18	Scale: 1" = 30'	

FILE: Z:\05-WORK DIRECTORY\005-067 SANDSTONE RANCH UNIT 1\dwg\AS BUILTS\005-067 C18-DUSTER.dwg

DUSTER DR. STATION 0+00 THRU 5+75.00



TOP OF CURB AS BUILT ELEVATION= 41.33

PLAN VIEW

SCALE: 1"=30'

0 30' 60' 90'
0 1" 2" 3"

NOTES:

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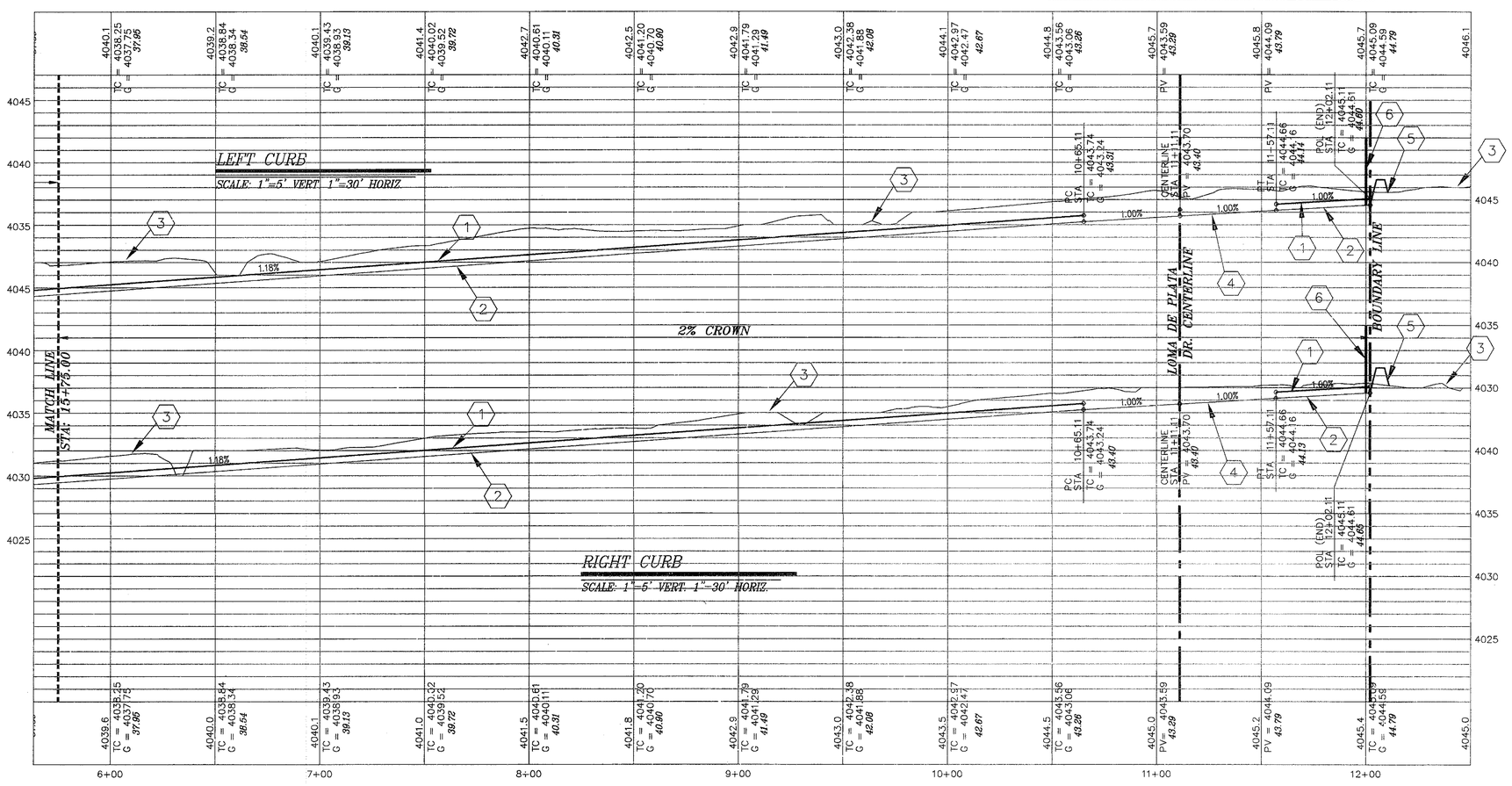
BY: _____

DATE: 1/31/07



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KEYNOTE LEGEND

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2. PROPOSED GUTTER LINE (6" STANDARD CURB AND GUTTER) SEE TYP. DETAILS
3. EXISTING GRADE LINE
4. PROPOSED TOP OF PAVEMENT SEE TYP. DETAILS
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6. TYPICAL DEAD END SIGN W/ GUARDRAIL (SEE TYP. DETAILS)
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14. 6' ROCK SCREENWALL BY DEVELOPER (SEE TYP. DETAILS)
15. 18' WIDE WROUGHT IRON GATE (SEE TYP. DETAILS)
16. HIGH POINT
17. LOW POINT

47.45 PROPOSED TOP OF CURB @ PC,PT (FG @ BACK OF SIDEWALK)

46.67 PV PROPOSED TOP OF PAVEMENT

CURB CURVE DATA					
CURVE	DELTA	RADIUS	ARC	CHORD BEARING	CHORD
CC9	90°00'00"	28.00'	43.98'	N46°58'42"E	39.60'
CC10	90°00'00"	28.00'	43.98'	S43°01'18"E	39.60'
CC11	90°00'00"	28.00'	43.98'	N43°01'18"W	39.60'
CC12	90°00'00"	28.00'	43.98'	S46°58'42"W	39.60'

CURB LINE DATA		
LINE	BEARING	DISTANCE
CL5	N88°01'18"W	174.00'
CL6	N88°01'18"W	174.00'
CL7	N01°58'42"E	45.00'
CL8	N01°58'42"E	45.00'
CL9	S88°01'18"E	180.00'
CL10	N88°01'18"W	180.00'
CL22	S01°58'42"W	826.00'
CL23	N01°58'42"E	999.41'

ALL ELEVATIONS ARE NVGD DATUM
BENCHMARK: FOUND TXDOT BRASS CAP SECTION CORNERS 19, 20, 22 AND 21
ELEVATION: 4033.22 (NVGD DATUM)
(SUBTRACT 8.462 TO CONVERT TO CITY DATUM)

Release Dates:
10/28/05
Revisions:
11/28/05 (CEP REDS)
12/12/05 (CEP REDS)

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1/31/07
STATE OF TEXAS
S.B. MASOUD
70774
LICENSED PROFESSIONAL ENGINEER

DRE Del Rio Engineering, Inc.
P.O. Box 220251 El Paso, Texas 79913 915/833-2400

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DUSTER DR. STATION 5+75.00 THRU 12+21.26

SANDSTONE RANCH UNIT 1

BEING A PORTION OF SEC. 21, BLOCK 81, TOWNSHIP 1
TEXAS AND PACIFIC RAILROAD CO. SURVEY
CITY OF EL PASO, EL PASO COUNTY, TEXAS

Design By:	AFJ
Drawn By:	JM
Scale:	1" = 30'
Project #:	J05-067
Plot Date:	1/31/07
SHEET:	C-19

DUSTER DR. STATION 5+75.00 THRU 12+21.26

LAYOUT: C-19 DUSTER STA. 5+75 THRU 12+21.26

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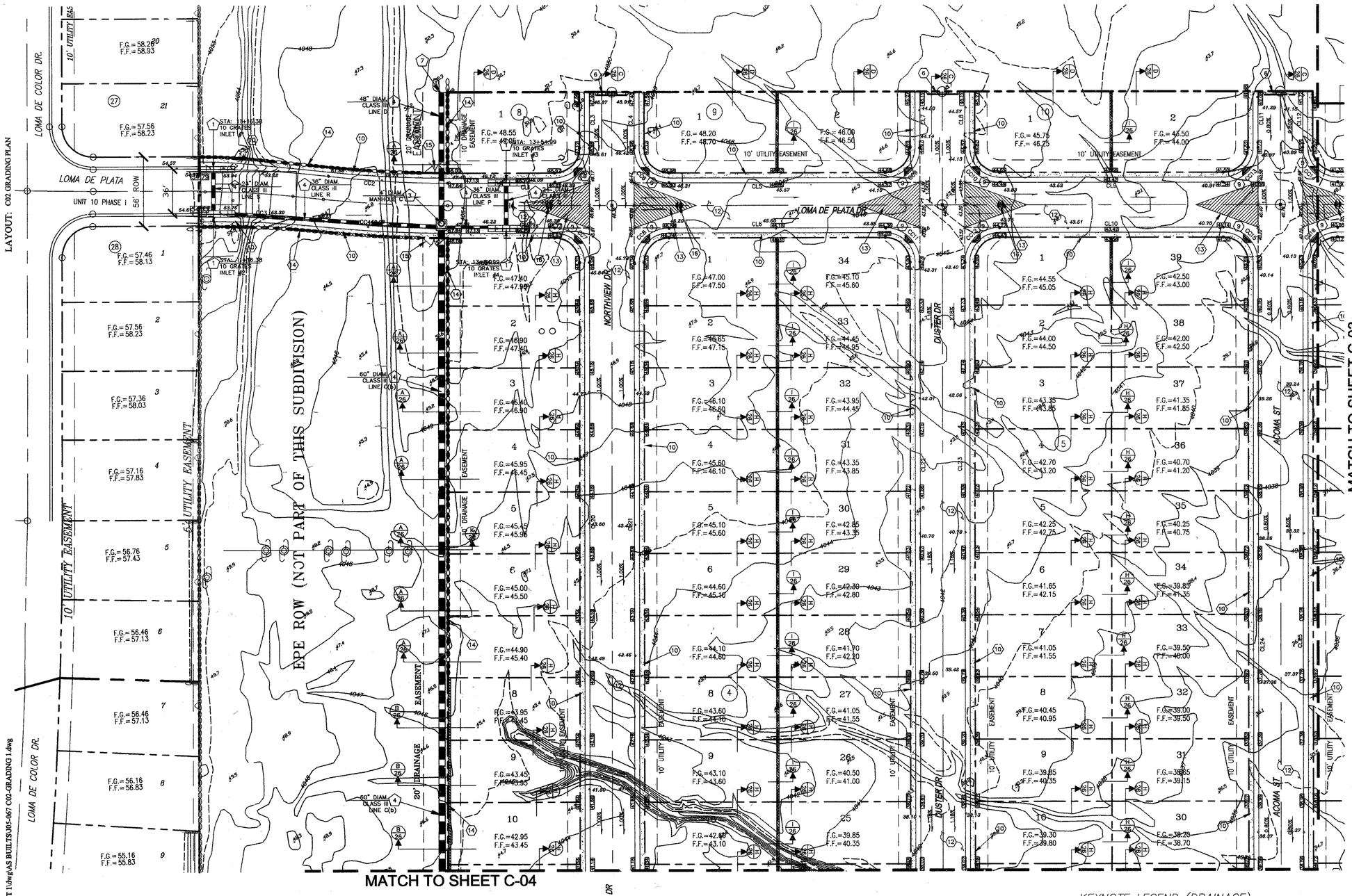

LEGEND

- 11.56 SW – SPOT ELEVATIONS
- TP– TOP OF PAVEMENT
- GU– GUTTER
- FL– FLOW LINE
- FG– FINISHED GRADE
- TC– TOP OF CURB
- WA– ELEVATION TOP OF WALL
- CO– TOP OF CONCRETE
- SW– TOP OF SIDEWALK
- EG– EXISTING GRADE
- NG– NATURAL GRADE (EXISTING)
- TRW– TOP OF RETAINING ON WALL
- BW– FG @ BOTTOM OF WALL
- TW– TOP OF WALL
- 3775 – EXISTING MINOR CONTOUR
- EXISTING MAJOR CONTOUR
- 3780 – PROPOSED MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- RETAINING WALL
- SILT FENCE
- WATERSHED
- SURFACE DRAINAGE
- "X" – POINT FLOW
- HIGH POINT
- LOW POINT
- P.E.M. 1000.00 – PERM. ELEV. MARKER
- 36" – STORM DRAINAGE PIPE
- PROPERTY LINE
- EASEMENT
- RCL – ROAD CENTERLINE
- WAT – WATER LINE
- SS – SEWER LINE
- GAS – GAS LINE
- ELT – ELECTRIC SERVICE
- TEL – TELEPHONE SERVICE
- SWD – STORMWATER DRAIN
- CHAINLINK FENCE
- X – BARBWIRE FENCE
- GUARDRAIL FENCE
- ROCKWALL (Non–Retain.)
- IRRIGATION VALVE
- FIRE HYDRANT
- LIGHT POLE
- TELEPHONE MANHOLE
- TB – TELEPHONE BOX
- UTILITY POLE
- GP – GUARD POST
- EB – ELECTRIC BOX
- SIGN POST
- SURVEY MONUMENT
- CITY MONUMENT
- MBDU – MAIL BOX DELIVERY UNIT

KEYNOTE LEGEND

1. PROPOSED TOP OF CURB (6" STANDARD CURB AND GUTTER) SEE TYP. DETAILS
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12. TYPICAL PAVEMENT SECTION SEE TYP. DETAILS
13. 50' TRANSITION FROM 2% CROWN TO MATCH PAVEMENT
14. ROCK SCREENWALL BY BUILDER-HEIGHT VARIES (SEE TYPICAL DETAILS)
15. 18' WIDE WROUGHT IRON GATE (SEE TYP. DETAILS)
16. HIGH POINT
17. LOW POINT

47.42 PROPOSED TOP OF CURB @ PC,PT (FG @ BACK OF SIDEWALK)

46.67 PV – PROPOSED TOP OF PAVEMENT

KEYNOTE LEGEND (DRAINAGE)

1. PROPOSED DROP INLET TYPE I, # DENOTES NUMBER OF GRATES (SEE TYP. DETAILS)
2. STORMWATER MANHOLE TYPE I (SEE TYP. DETAILS)
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AS BUILT ELEVATION= 41.33

NOTES:

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BY: _____

DATE: 1/31/07

LEGAL DESCRIPTION:
BEING A PORTION OF SEC. 21, BLOCK 81, TOWNSHIP 1, TEXAS AND PACIFIC RAILWAY COMPANY SURVEYS, CITY OF EL PASO, EL PASO COUNTY, TEXAS 38.73± ACRES

SURVEY NOTES:
SUBJECT PARCELS ARE LOCATED WITHIN ZONE "C" 'S DETAILED ON CITY OF EL PASO FLOOD INSURANCE RATE MAP NO. 480214 0014D, DATED AUGUST 5, 1991. ZONE "C" INDICATES AREAS OF MINIMAL FLOODING.

BENCHMARK: FOUND TXDOT BRASS CAP SECTION CORNERS 19, 20, 22, AND 21.
ELEVATION: 4033.22 (NVGD DATUM)
(SUBTRACT 6.462 TO CONVERT TO CITY DATUM)

N

GRADING PLAN

SCALE: 1"= 40'

Release Dates:
9/2/05
Revisions:
10/28/05
11/28/05 (CEP REDS)

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1/31/07
STATE OF TEXAS
S. B. MASOUD
70774

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GRADING PLAN (SHEET 2 OF 5)

SANDSTONE RANCH UNIT 1

BULLSEYE ST

BEING A PORTION OF SEC. 21, BLOCK 81, TOWNSHIP 1
TEXAS AND PACIFIC RAILROAD CO. SURVEY
CITY OF EL PASO, EL PASO COUNTY, TEXAS

Design By:	AFJ
Drawn By:	JM
Scale:	1" = 40'
Project #:	J05-067
Plot Date:	1/30/07
SHEET:	C-02

FILE: Z:\J05-WORK DIRECTORY\J05-067 SANDSTONE RANCH UNIT 1\dwg\AS BUILTS\J05-067 C02-GRADING 1.dwg

LAYOUT: C-20 ACOMA STA. 5+41.30 THRU 10+75

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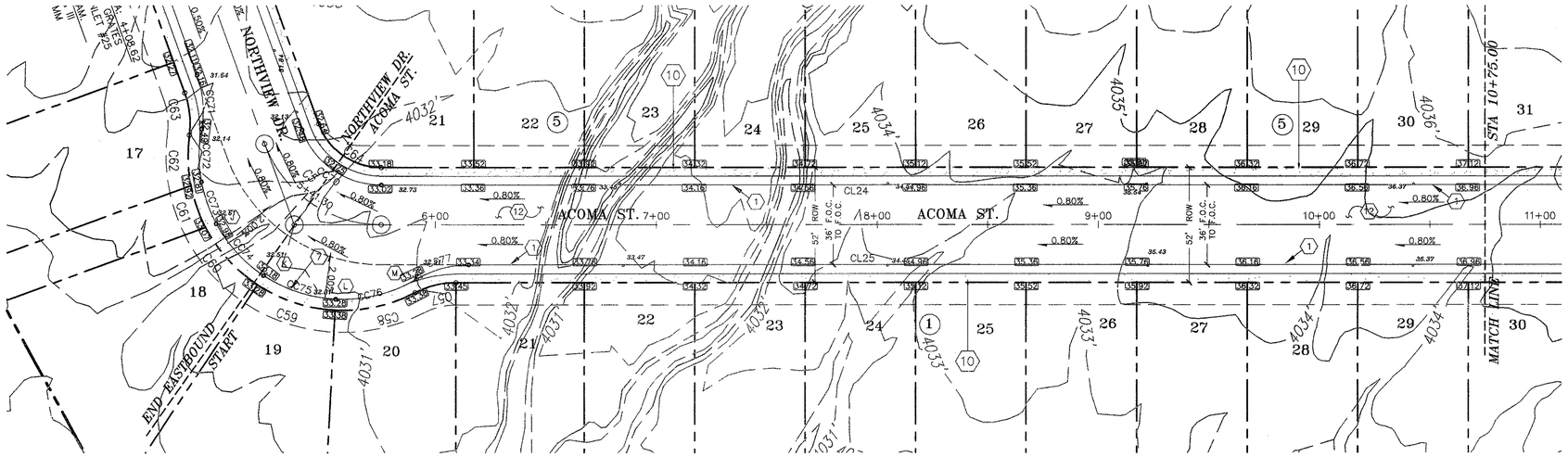
46.67 BV PROPOSED TOP OF PAVEMENT



CURB CURVE DATA					
CURVE	DELTA	RADIUS	ARC	CHORD BEARING	CHORD
CC70	70°00'00"	38.00'	46.43'	N36°58'42"E	43.59'
CC71	30°43'06"	46.00'	24.66'	S87°20'15"W	24.37'
CC72	21°15'10"	65.00'	24.11'	S87°55'47"E	23.97'
CC73	17°42'03"	65.00'	20.08'	N72°35'37"E	20.00'
CC74	28°15'37"	65.00'	32.06'	N49°36'47"E	31.74'
CC75	30°33'28"	65.00'	34.67'	N20°12'14"E	34.26'
CC76	33°39'54"	65.00'	38.19'	N11°54'27"W	37.64'
CC77	30°43'06"	46.00'	24.66'	S13°22'51"E	24.37'

N

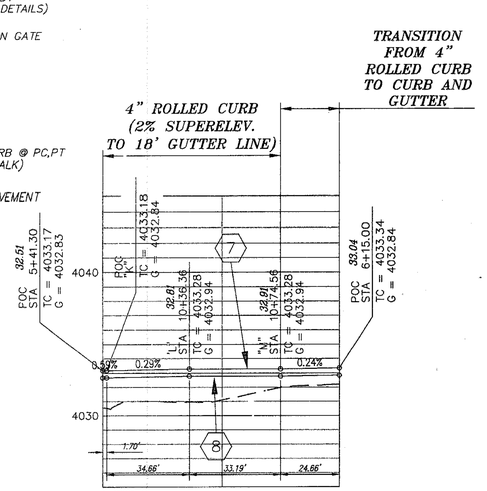
PLAN VIEW

SCALE: 1"=30'

0 30' 60' 90'
0 1" 2" 3"

CURB LINE DATA		
LINE	BEARING	DISTANCE
CL24	S01°58'42"W	926.89'
CL25	S01°58'42"W	887.40'

ALL ELEVATIONS ARE NVGD DATUM
BENCHMARK: FOUND TXDOT BRASS CAP SECTION CORNERS 19, 20, 22 AND 21
ELEVATION: 4033.22 (NVGD DATUM)
(SUBTRACT 8.462 TO CONVERT TO CITY DATUM)



LEFT EYEBROW

MATCH FROM STA: 5+41.30 TO 6+15.00
SCALE: 1"=5' VERT. 1"=30' HORIZ.

TOP OF CURB AS BUILT ELEVATION= 41.33

NOTES:

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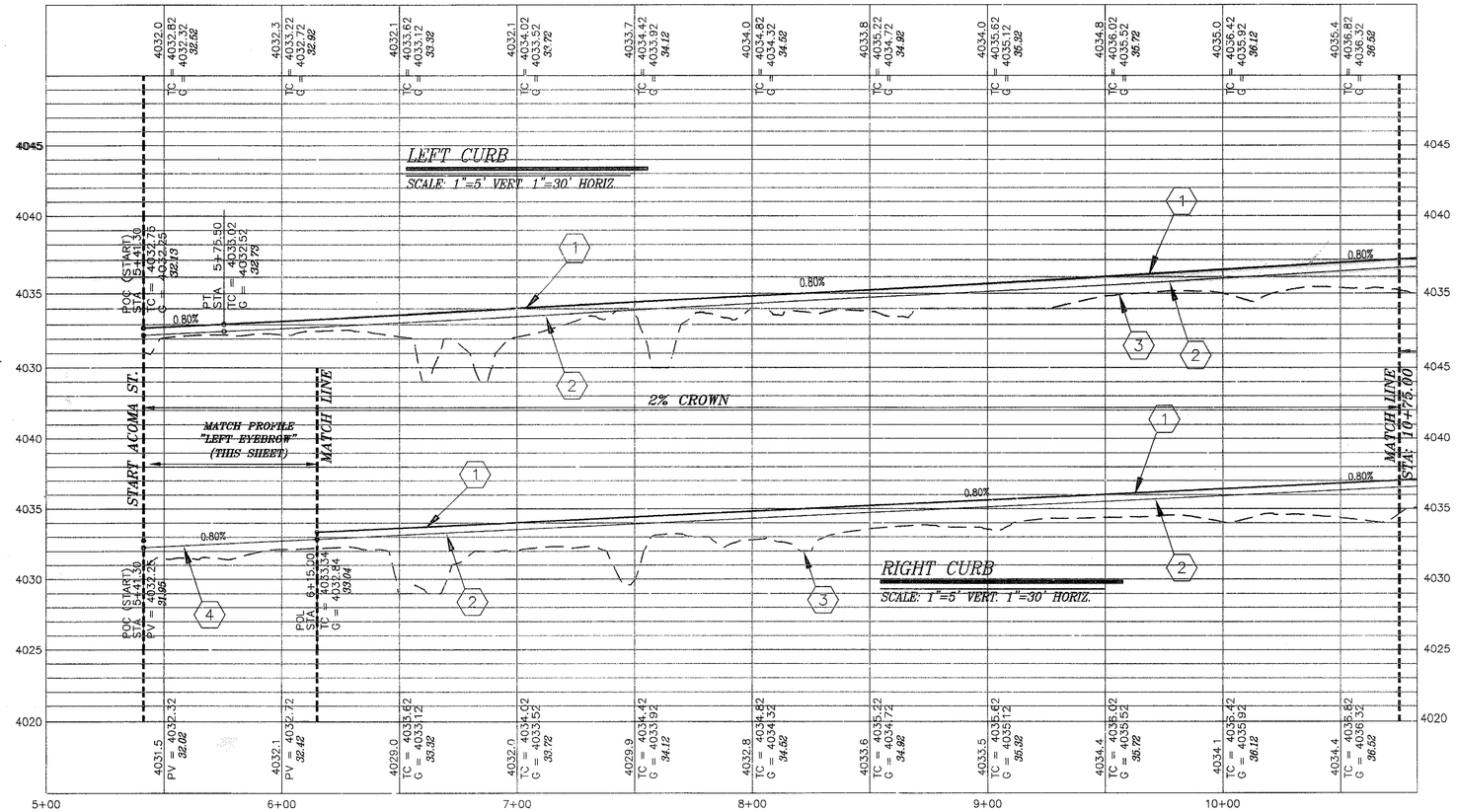
BY: _____

DATE: 1/31/07



ACOMA ST. STATION 5+41.30 THRU 10+75

Release Dates:
10/28/05
Revisions:
11/28/05 (CEP REDS)
12/12/05 (CEP REDS)

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1/31/07
STATE OF TEXAS
S.B. MASOUD
70774
PROFESSIONAL ENGINEER

DRE Del Rio Engineering, Inc.
P.O. Box 220251 El Paso, Texas 79913 915/833-2400

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ACOMA ST. STATION 5+41.30 THRU 10+75.00

SANDSTONE RANCH UNIT 1

BEING A PORTION OF SEC. 21, BLOCK 81, TOWNSHIP 1
TEXAS AND PACIFIC RAILROAD CO. SURVEY
CITY OF EL PASO, EL PASO COUNTY, TEXAS

Project #: J05-067	Design By: AFJ	Scale: 1" = 30'
Plot Date: 1/30/07	Drawn By: JM	
SHEET: C-20		

FILE: Z:\J05-WORK DIRECTORY\J05-067 SANDSTONE RANCH UNIT 1\dwg\AS BUILTS\J05-067 C20- ACOMA.dwg

LAYOUT: C-21 ACOMA STA. 10+75.00 THRU 16+39.40

TRENCH EXCAVATION PROTECTION

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

KEYNOTE LEGEND

1. PROPOSED TOP OF CURB (6" STANDARD CURB AND GUTTER) SEE TYP. DETAILS
2. PROPOSED GUTTER LINE (6" STANDARD CURB AND GUTTER) SEE TYP. DETAILS
3. EXISTING GRADE LINE
4. PROPOSED TOP OF PAVEMENT SEE TYP. DETAILS
5. PROPOSED TEMPORARY EARTHEN BERM SEE TYP. DETAILS
6. TYPICAL DEAD END SIGN W/ GUARDRAIL (SEE TYP. DETAILS)
7. PROPOSED TOP OF CURB (4" STANDARD ROLLED CURB) SEE TYP. DETAILS
8. PROPOSED GUTTER LINE (4" STANDARD ROLLED CURB) SEE TYP. DETAILS
9. PROPOSED HANDICAP RAMP SEE TYP. DETAILS
10. 4' SIDEWALK SEE TYP. DETAILS
11. 5' SIDEWALK SEE TYP. DETAILS
12. TYPICAL PAVEMENT SECTION SEE TYP. DETAILS
13. 50' TRANSITION FROM 2% CROWN TO MATCH PAVEMENT
14. 6' ROCK SCREENWALL BY DEVELOPER (SEE TYP. DETAILS)
15. 18' WIDE WROUGHT IRON GATE (SEE TYP. DETAILS)
16. HIGH POINT
17. LOW POINT

47.45 PROPOSED TOP OF CURB @ PC,PT (FG @ BACK OF SIDEWALK)

46.67 PV × PROPOSED TOP OF PAVEMENT

TOP OF CURB AS BUILT ELEVATION= 41.33

NOTES:

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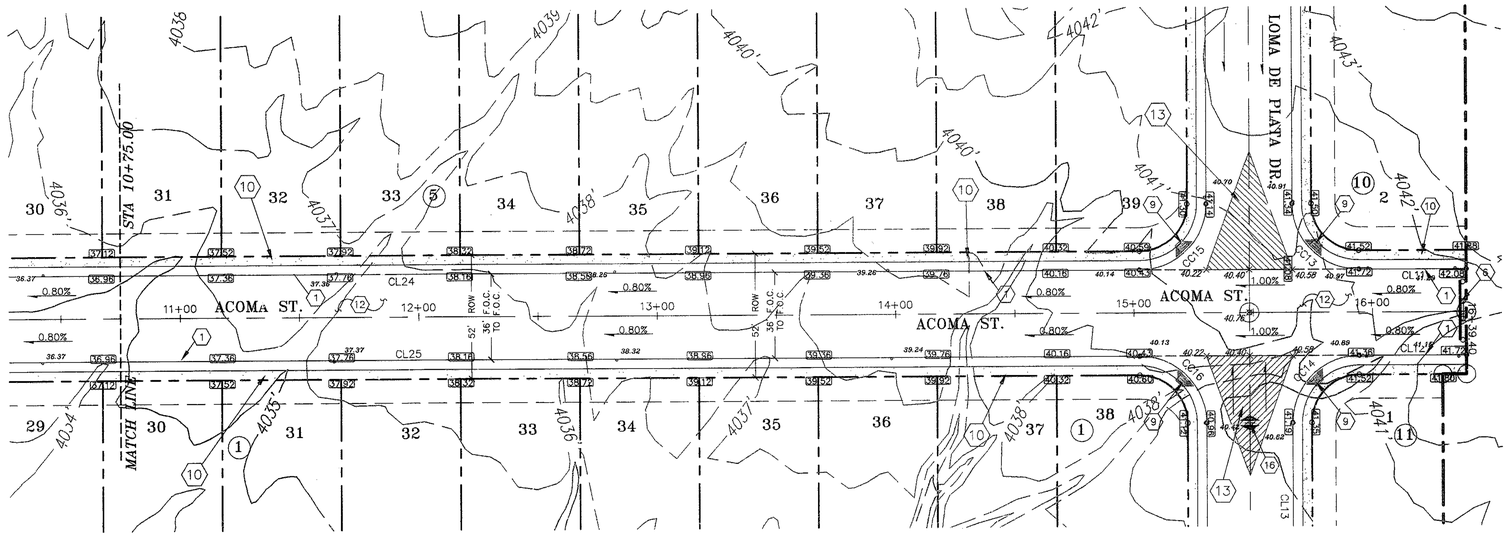
BY: _____

DATE: 1/31/07



CURB LINE DATA		
LINE	BEARING	DISTANCE
CL9	S88°01'18"E	180.00'
CL10	N88°01'18"W	180.00'
CL11	S01°58'42"W	45.00'
CL12	S01°58'42"W	45.00'
CL13	S88°01'18"E	180.00'
CL14	N88°01'18"W	180.00'
CL24	S01°58'42"W	926.89'
CL25	S01°58'42"W	887.40'

N

0 30' 60' 90'

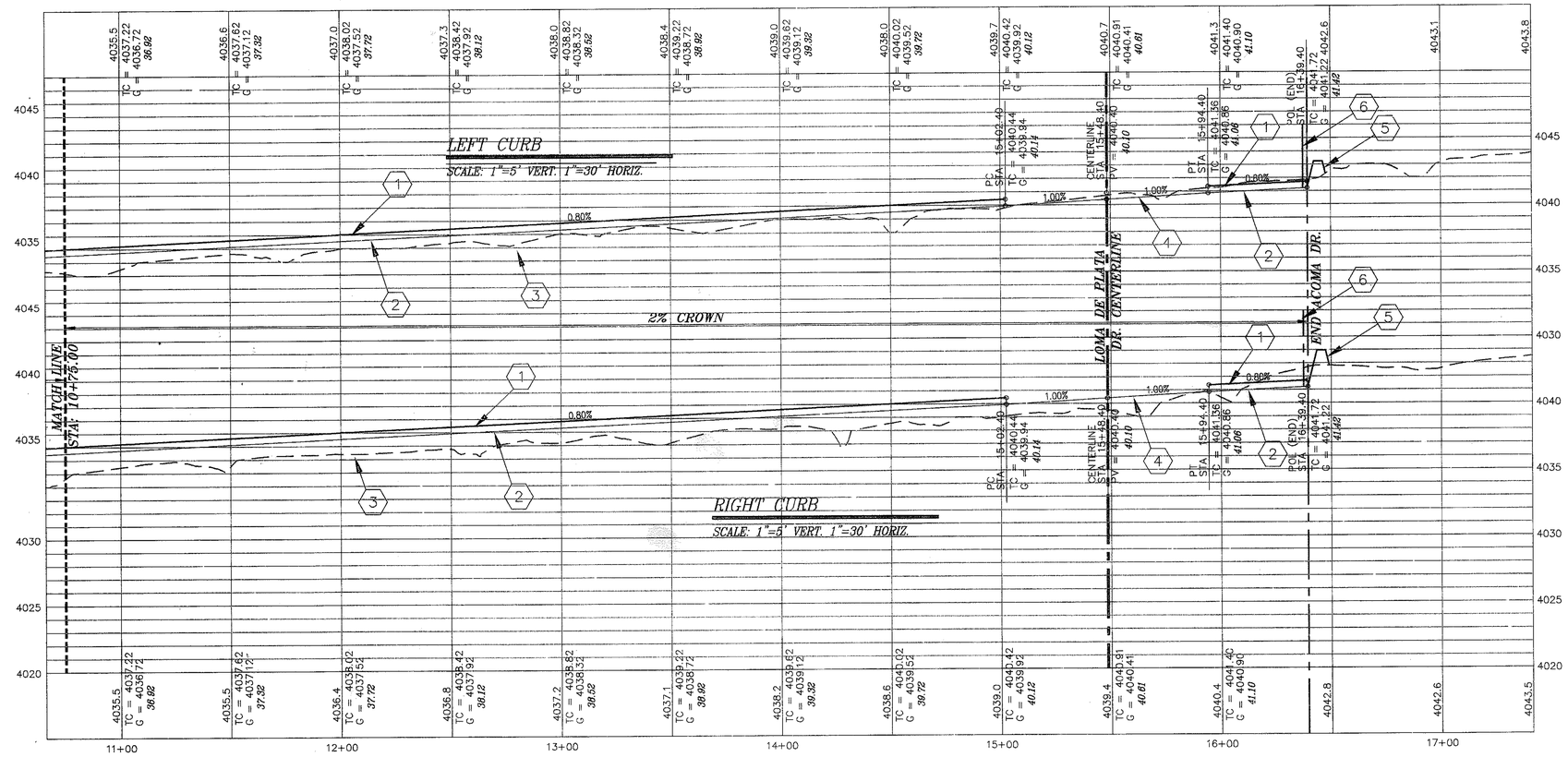
0 1" 2" 3"

PLAN VIEW

SCALE: 1"=30'

ALL ELEVATIONS ARE NVGD DATUM
BENCHMARK: FOUND TXDOT BRASS CAP SECTION CORNERS 19, 20, 22 AND 21
ELEVATION: 4033.22 (NVGD DATUM)
(SUBTRACT 8.462 TO CONVERT TO CITY DATUM)

CURB CURVE DATA					
CURVE	DELTA	RADIUS	ARC	CHORD BEARING	CHORD
CC13	90°00'00"	28.00'	43.98'	N46°58'42"E	39.60'
CC14	90°00'00"	28.00'	43.98'	S43°01'18"E	39.60'
CC15	90°00'00"	28.00'	43.98'	N43°01'18"W	39.60'
CC16	90°00'00"	28.00'	43.98'	S46°58'42"W	39.60'



FILE: Z:\J05-WORK DIRECTORY\J05-067 SANDSTONE RANCH UNIT 1\dwg\AS BUILTS\J05-067 C21- ACOMA.dwg

Release Dates:
10/28/05
Revisions:
11/28/05 (CEP REDS)
12/12/05 (CEP REDS)

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1/31/07

STATE OF TEXAS S.B. MASOUD 70774

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P.O. Box 220251 El Paso, Texas 79913 915/833-2400

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ACOMA ST. STATION 10+75.00 THRU 16+39.40

SANDSTONE RANCH UNIT 1

BEING A PORTION OF SEC. 21, BLOCK 81, TOWNSHIP 1
TEXAS AND PACIFIC RAILROAD CO. SURVEY
CITY OF EL PASO, EL PASO COUNTY, TEXAS

Project #: J05-067	Design By: AFJ		
Plot Date: 1/30/07	Drawn By: JM		
SHEET: C-21	Scale: 1"= 30'		

LAYOUT: C-22 BULLSEYE 0+00 THRU 4+25.00

TRENCH EXCAVATION PROTECTION

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KEYNOTE LEGEND

1. PROPOSED TOP OF CURB (6" STANDARD CURB AND GUTTER) SEE TYP. DETAILS
2. PROPOSED GUTTER LINE (6" STANDARD CURB AND GUTTER) SEE TYP. DETAILS
3. EXISTING GRADE LINE
4. PROPOSED TOP OF PAVEMENT SEE TYP. DETAILS
5. PROPOSED TEMPORARY EARTHEN BERM SEE TYP. DETAILS
6. TYPICAL DEAD END SIGN W/ GUARDRAIL (SEE TYP. DETAILS)
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11. 5' SIDEWALK SEE TYP. DETAILS
12. TYPICAL PAVEMENT SECTION SEE TYP. DETAILS
13. 50' TRANSITION FROM 2% CROWN TO MATCH PAVEMENT
14. 6' ROCK SCREENWALL BY DEVELOPER (SEE TYP. DETAILS)
15. 18' WIDE WROUGHT IRON GATE (SEE TYP. DETAILS)
16. HIGH POINT
17. LOW POINT

47.43 PROPOSED TOP OF CURB @ PC,PT (FG @ BACK OF SIDEWALK)

46.67 PV PROPOSED TOP OF PAVEMENT

TOP OF CURB AS BUILT ELEVATION= 41.33

NOTES:
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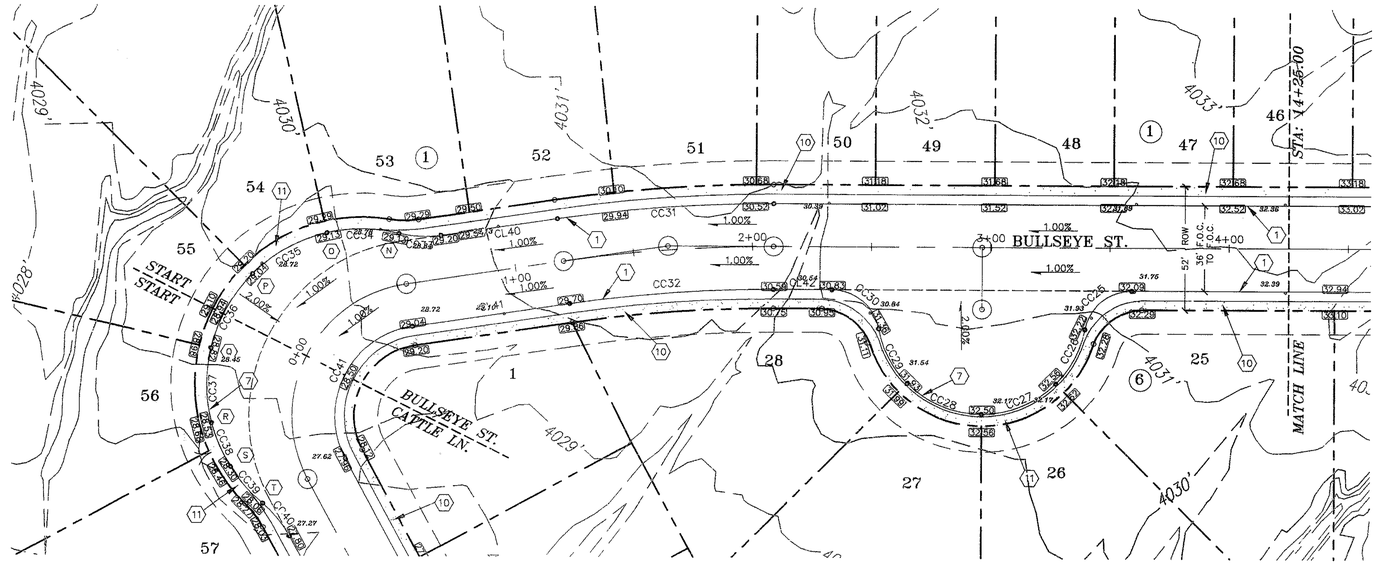
BY: [signature]

DATE: 1/31/07

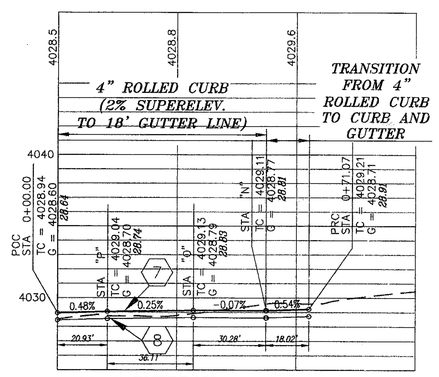


PLAN VIEW

SCALE: 1"=30'

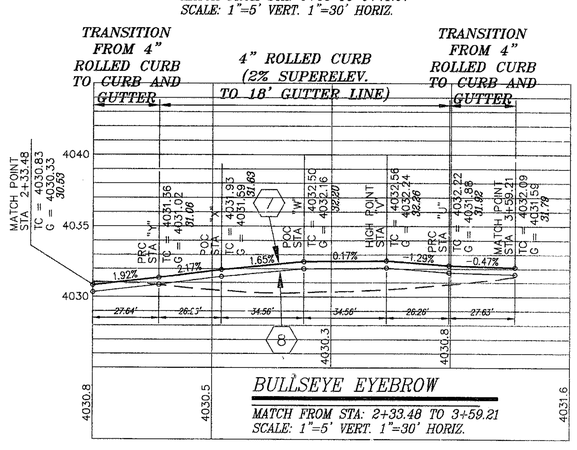
0 30' 60' 90'
0 1" 2" 3"

ALL ELEVATIONS ARE NVGD DATUM
BENCHMARK: FOUND TXDOT BRASS CAP SECTION CORNERS 19, 20, 22 AND 21
ELEVATION: 4033.22 (NVGD DATUM)
(SUBTRACT 8.462 TO CONVERT TO CITY DATUM)



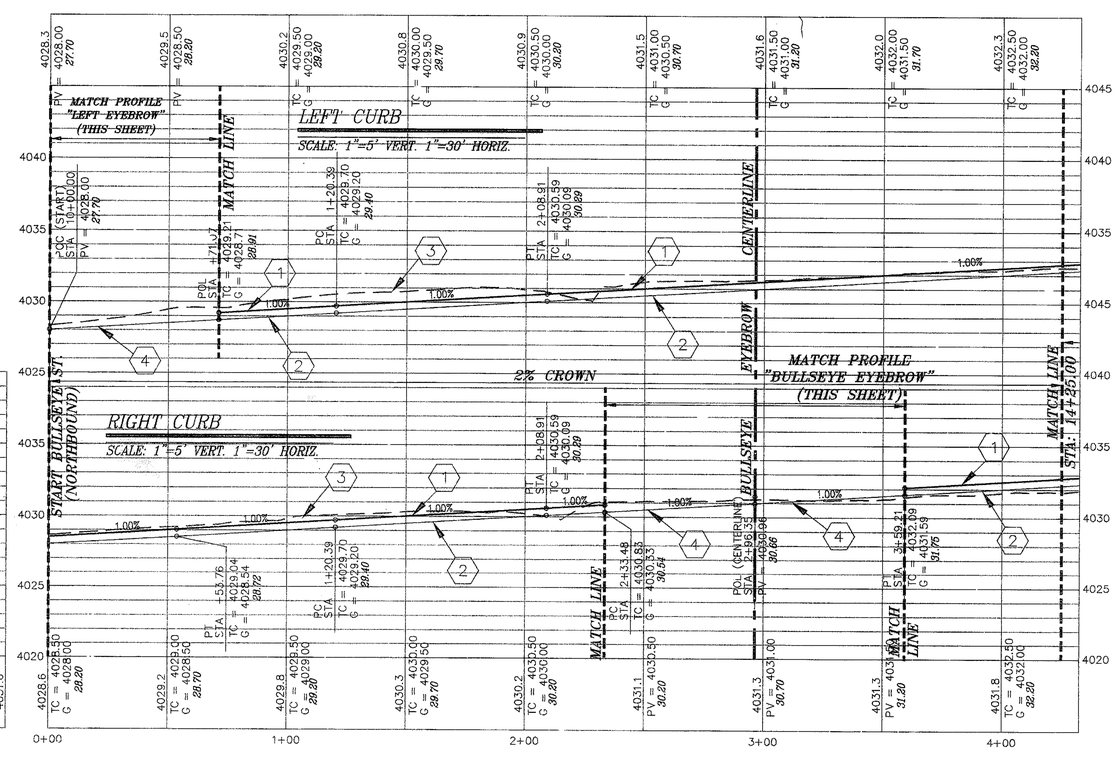
LEFT EYEBROW

MATCH FROM STA: 0+00 TO 0+71.07
SCALE: 1"=5' VERT. 1"=30' HORIZ.



BULLSEYE EYEBROW

MATCH FROM STA: 2+33.48 TO 3+59.21
SCALE: 1"=5' VERT. 1"=30' HORIZ.



CURB CURVE DATA					
CURVE	DELTA	RADIUS	ARC	CHORD BEARING	CHORD
CC25	79°11'35"	20.00'	27.64'	S37°37'06"E	25.50'
CC26	34°11'35"	44.00'	26.26'	N60°07'06"W	25.87'
CC27	45°00'00"	44.00'	34.56'	N20°31'18"W	33.68'
CC28	45°00'00"	44.00'	34.56'	N24°28'42"E	33.68'
CC29	34°11'35"	44.00'	26.26'	N64°04'30"E	25.87'
CC30	79°11'35"	20.00'	27.64'	S41°34'30"W	25.50'
CC31	08°27'10"	618.00'	91.17'	S02°14'53"E	91.09'
CC32	08°27'10"	582.00'	85.86'	S02°14'53"E	85.78'
CC33	22°10'16"	46.00'	17.80'	N04°36'40"E	17.69'
CC34	26°53'16"	65.00'	30.50'	S02°15'10"W	30.22'
CC35	31°49'52"	65.00'	36.11'	S27°06'24"E	35.65'
CC36	31°49'52"	65.00'	36.11'	S58°56'15"E	35.65'
CC37	28°00'12"	65.00'	31.77'	S88°51'17"E	31.45'
CC38	17°45'39"	65.00'	20.15'	N68°15'47"E	20.07'
CC39	18°01'41"	65.00'	20.45'	N50°22'06"E	20.37'
CC40	22°10'16"	46.00'	17.80'	S52°26'24"W	17.69'
CC41	110°00'00"	38.00'	72.95'	S61°28'28"E	62.26'

CURB LINE DATA		
LINE	BEARING	DISTANCE
CL26	N01°58'42"E	577.66'
CL27	N01°58'42"E	427.36'
CL40	N06°28'28"W	49.32'
CL41	N06°28'28"W	66.64'
CL42	N01°58'42"E	24.57'
CL43	S63°31'32"W	286.12'

Release Dates:
10/28/05
Revisions:
11/28/05 (CEP REDS)
12/12/05 (CEP REDS)

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BULLSEYE ST. STATION 0+00 THRU 4+25.00

SANDSTONE RANCH UNIT 1

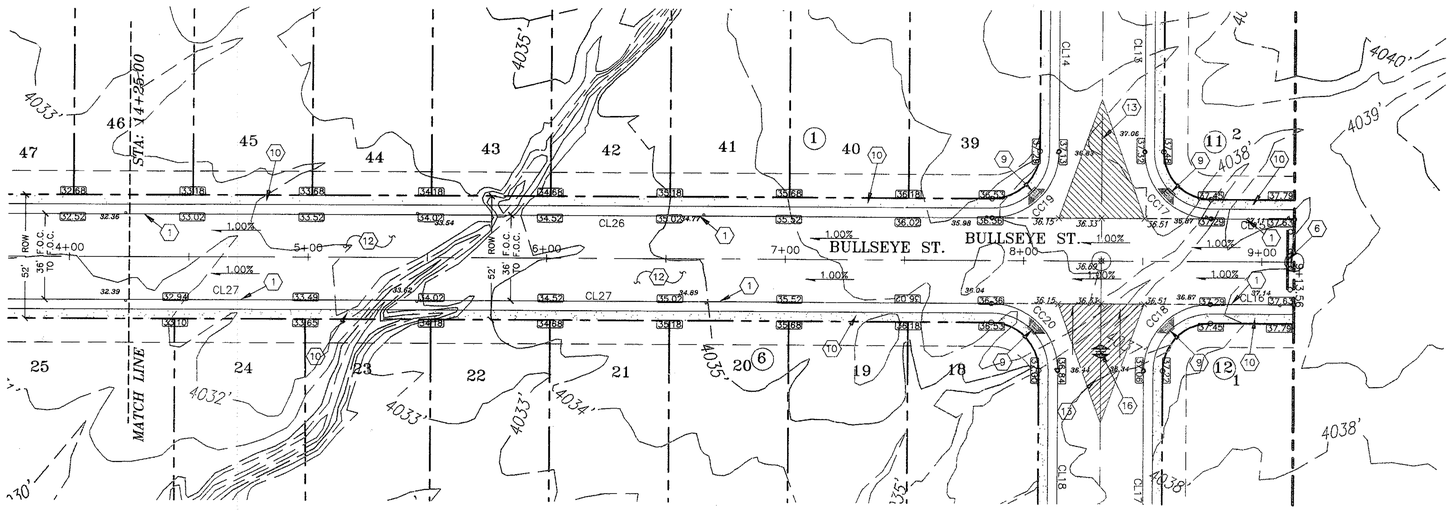
BEING A PORTION OF SEC. 21, BLOCK 81, TOWNSHIP 1
TEXAS AND PACIFIC RAILROAD CO. SURVEY
CITY OF EL PASO, EL PASO COUNTY, TEXAS

Project #: J05-067	Design By: AFJ
Plot Date: 1/30/07	Drawn By: JM
SHEET: C-22	Scale: 1" = 30'

BULLSEYE ST. STATION 0+00 THRU 4+25.00

FILE: Z:\J05-WORK DIRECTORY\J05-067 SANDSTONE RANCH UNIT 1\dwg\AS BUILTS\J05-067 C22- BULLSEYE.dwg

LAYOUT: C-023 BULLSEYE 4+25 THRU 9+13.57



N

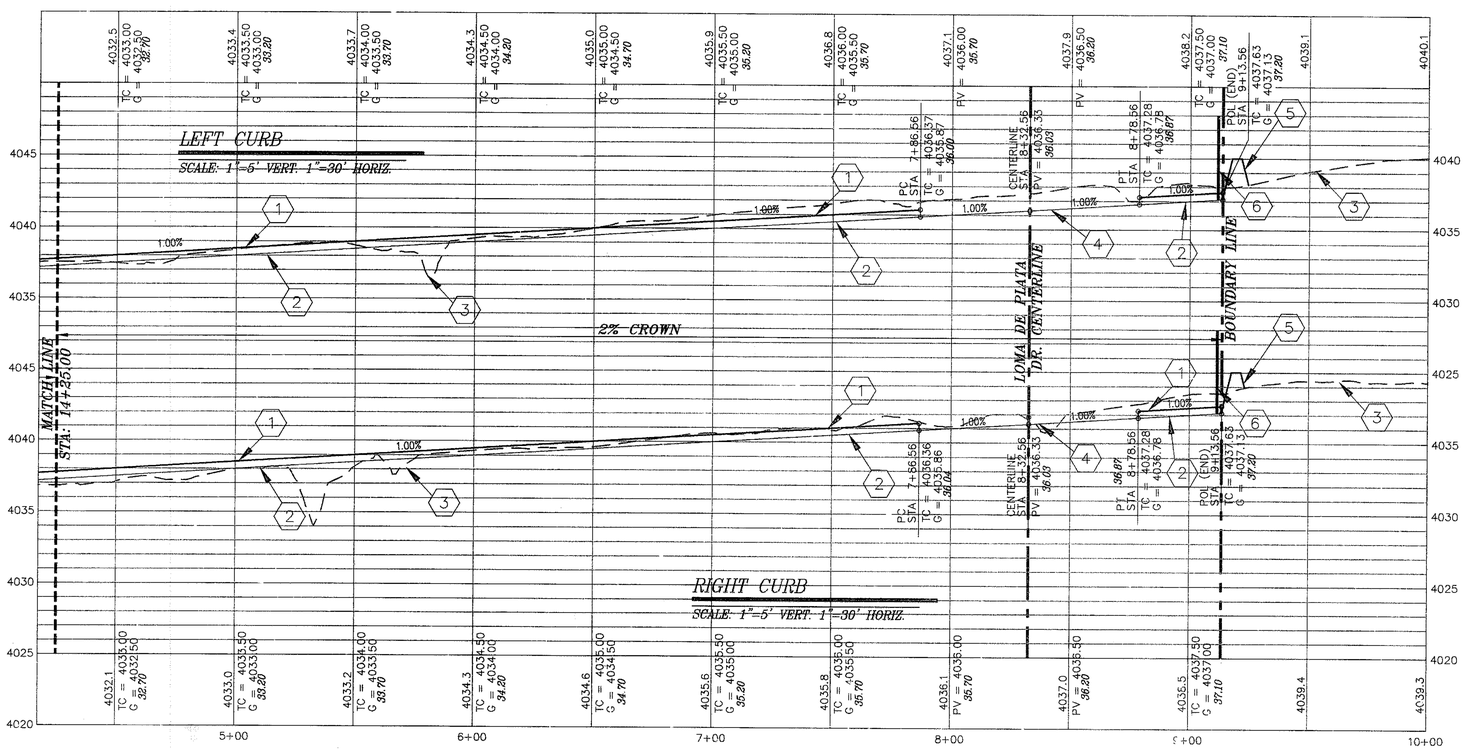
PLAN VIEW

SCALE: 1"=30'

0 30' 60' 90'

0 1" 2" 3"

ALL ELEVATIONS ARE NVGD DATUM
BENCHMARK: FOUND TXDOT BRASS CAP SECTION CORNERS 19, 20, 22 AND 21
ELEVATION: 4033.22 (NVGD DATUM)
(SUBTRACT 8.462 TO CONVERT TO CITY DATUM)



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KEYNOTE LEGEND

1. PROPOSED TOP OF CURB (6" STANDARD CURB AND GUTTER) SEE TYP. DETAILS
2. PROPOSED GUTTER LINE (6" STANDARD CURB AND GUTTER) SEE TYP. DETAILS
3. EXISTING GRADE LINE
4. PROPOSED TOP OF PAVEMENT SEE TYP. DETAILS
5. PROPOSED TEMPORARY EARTHEN BERM SEE TYP. DETAILS
6. TYPICAL DEAD END SIGN W/ GUARDRAIL (SEE TYP. DETAILS)
7. PROPOSED TOP OF CURB (4" STANDARD ROLLED CURB) SEE TYP. DETAILS
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9. PROPOSED HANDICAP RAMP SEE TYP. DETAILS
10. 4' SIDEWALK SEE TYP. DETAILS
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15. 18' WIDE WROUGHT IRON GATE (SEE TYP. DETAILS)
16. HIGH POINT
17. LOW POINT

47.45 PROPOSED TOP OF CURB @ PC,PT (FG @ BACK OF SIDEWALK)

46.67 PV PROPOSED TOP OF PAVEMENT

CURB CURVE DATA					
CURVE	DELTA	RADIUS	ARC	CHORD BEARING	CHORD
CC17	90°00'00"	28.00'	43.98'	N46°58'42"E	39.60'
CC18	90°00'00"	28.00'	43.98'	S43°01'18"E	39.60'
CC19	90°00'00"	28.00'	43.98'	N43°01'18"W	39.60'
CC20	90°00'00"	28.00'	43.98'	S46°58'42"W	39.60'

CURB LINE DATA		
LINE	BEARING	DISTANCE
CL13	S88°01'18"E	180.00'
CL14	N88°01'18"W	180.00'
CL15	N01°58'42"E	35.00'
CL16	N01°58'42"E	35.00'
CL17	N88°01'18"W	177.00'
CL18	S88°01'18"E	177.00'
CL26	N01°58'42"E	577.66'
CL27	N01°58'42"E	427.36'

TOP OF CURB AS BUILT ELEVATION= 41.33

NOTES:

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BY: _____

DATE: 1/31/07

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BULLSEYE ST. STATION 4+25.00 THRU 9+13.57

SANDSTONE RANCH UNIT 1

BEING A PORTION OF SEC. 21, BLOCK 81, TOWNSHIP 1
TEXAS AND PACIFIC RAILROAD CO. SURVEY
CITY OF EL PASO, EL PASO COUNTY, TEXAS

Project #: J05-067	Design By: AFJ		
Plot Date: 1/30/07	Drawn By: JM		
SHEET: C-23	Scale: 1" = 30'		

FILE: Z:\J05-WORK DIRECTORY\J05-067 SANDSTONE RANCH UNIT 1\dwg\AS BUILTS\J05-067 C23- BULLSEYE.dwg

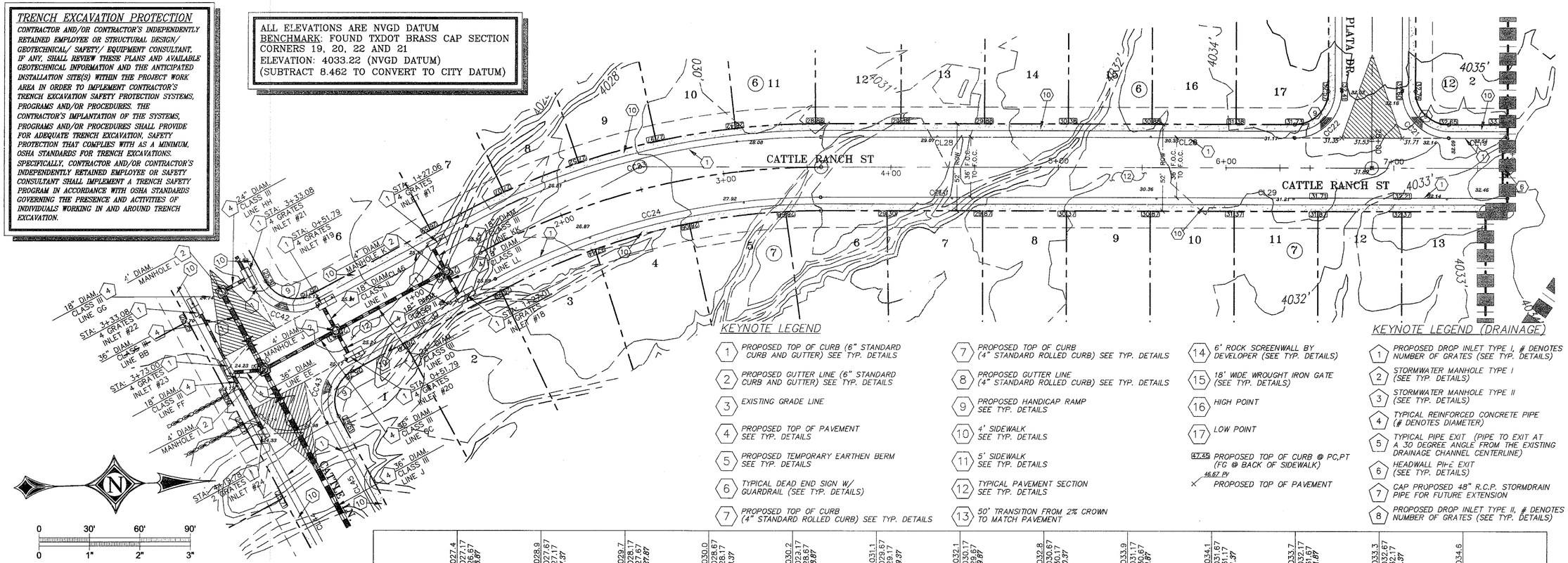
BULLSEYE ST. STATION 4+25.00 THRU 9+13.57

LAYOUT: C-24 CATTLE 10+00 THRU 17+85.86

TRENCH EXCAVATION PROTECTION

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

ALL ELEVATIONS ARE NVGD DATUM
BENCHMARK: FOUND TXDOT BRASS CAP SECTION CORNERS 19, 20, 22 AND 21
ELEVATION: 4033.22 (NVGD DATUM)
(SUBTRACT 8.462 TO CONVERT TO CITY DATUM)



PLAN VIEW
SCALE: 1"=30'

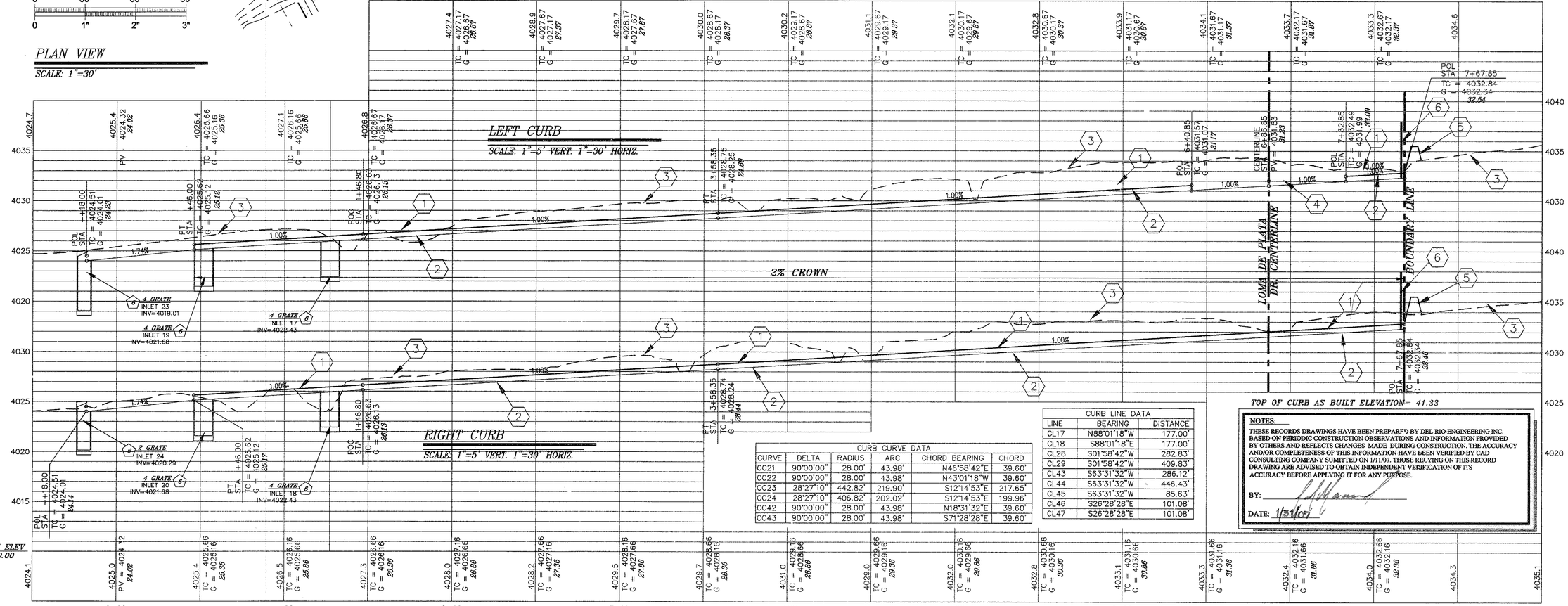
KEYNOTE LEGEND

1. PROPOSED TOP OF CURB (6" STANDARD CURB AND GUTTER) SEE TYP. DETAILS
2. PROPOSED GUTTER LINE (6" STANDARD CURB AND GUTTER) SEE TYP. DETAILS
3. EXISTING GRADE LINE
4. PROPOSED TOP OF PAVEMENT SEE TYP. DETAILS
5. PROPOSED TEMPORARY EARTHEN BERM SEE TYP. DETAILS
6. TYPICAL DEAD END SIGN W/ GUARDRAIL (SEE TYP. DETAILS)
7. PROPOSED TOP OF CURB (4" STANDARD ROLLED CURB) SEE TYP. DETAILS
7. PROPOSED TOP OF CURB (4" STANDARD ROLLED CURB) SEE TYP. DETAILS
8. PROPOSED GUTTER LINE (4" STANDARD ROLLED CURB) SEE TYP. DETAILS
9. PROPOSED HANDICAP RAMP SEE TYP. DETAILS
10. 4' SIDEWALK SEE TYP. DETAILS
11. 5' SIDEWALK SEE TYP. DETAILS
12. TYPICAL PAVEMENT SECTION SEE TYP. DETAILS
13. 50' TRANSITION FROM 2% CROWN TO MATCH PAVEMENT
14. 6' ROCK SCREENWALL BY DEVELOPER (SEE TYP. DETAILS)
15. 18' WIDE WROUGHT IRON GATE (SEE TYP. DETAILS)
16. HIGH POINT
17. LOW POINT

47.45 PROPOSED TOP OF CURB @ PC,PT (FG @ BACK OF SIDEWALK)
46.67 PV PROPOSED TOP OF PAVEMENT

KEYNOTE LEGEND (DRAINAGE)

1. PROPOSED DROP INLET TYPE I, # DENOTES NUMBER OF GRATES (SEE TYP. DETAILS)
2. STORMWATER MANHOLE TYPE I (SEE TYP. DETAILS)
3. STORMWATER MANHOLE TYPE II (SEE TYP. DETAILS)
4. TYPICAL REINFORCED CONCRETE PIPE (# DENOTES DIAMETER)
5. TYPICAL PIPE EXIT (PIPE TO EXIT AT A 30 DEGREE ANGLE FROM THE EXISTING DRAINAGE CHANNEL CENTERLINE)
6. HEADWALL PIPE EXIT (SEE TYP. DETAILS)
7. CAP PROPOSED 48" R.C.P. STORMDRAIN PIPE FOR FUTURE EXTENSION
8. PROPOSED DROP INLET TYPE II, # DENOTES NUMBER OF GRATES (SEE TYP. DETAILS)



CURB CURVE DATA

CURVE	DELTA	RADIUS	ARC	CHORD BEARING	CHORD
CC21	90°00'00"	28.00'	43.98'	N46°58'42"E	39.60'
CC22	90°00'00"	28.00'	43.98'	N43°01'18"W	39.60'
CC23	28°27'10"	442.82'	219.90'	S12°14'53"E	217.65'
CC24	28°27'10"	406.82'	202.02'	S12°14'53"E	199.96'
CC42	90°00'00"	28.00'	43.98'	N18°31'32"E	39.60'
CC43	90°00'00"	28.00'	43.98'	S71°28'28"E	39.60'

CURB LINE DATA

LINE	BEARING	DISTANCE
CL17	N88°01'18"W	177.00'
CL18	S88°01'18"E	177.00'
CL28	S01°58'42"W	282.83'
CL29	S01°58'42"W	409.83'
CL43	S63°31'32"W	286.12'
CL44	S63°31'32"W	446.43'
CL45	S63°31'32"W	85.63'
CL46	S26°28'28"E	101.08'
CL47	S26°28'28"E	101.08'

TOP OF CURB AS BUILT ELEVATION= 41.33

NOTES:
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BY: _____
DATE: 1/31/07

CATTLE RANCH ST. STATION 0+00 THRU 7+85.86

Release Dates:
10/28/05
Revisions:
11/28/05
-
-

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1/31/07
STATE OF TEXAS
S.B. MASOUD
70774
LICENSED PROFESSIONAL ENGINEER

DRE Del Rio Engineering, Inc.
P.O. Box 220251 El Paso, Texas 79913 915/833-2400

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CATTLE RANCH ST. STATION 0+00 THRU 7+85.86

SANDSTONE RANCH UNIT 1

BEING A PORTION OF SEC. 21, BLOCK 81, TOWNSHIP 1
TEXAS AND PACIFIC RAILROAD CO. SURVEY
CITY OF EL PASO, EL PASO COUNTY, TEXAS

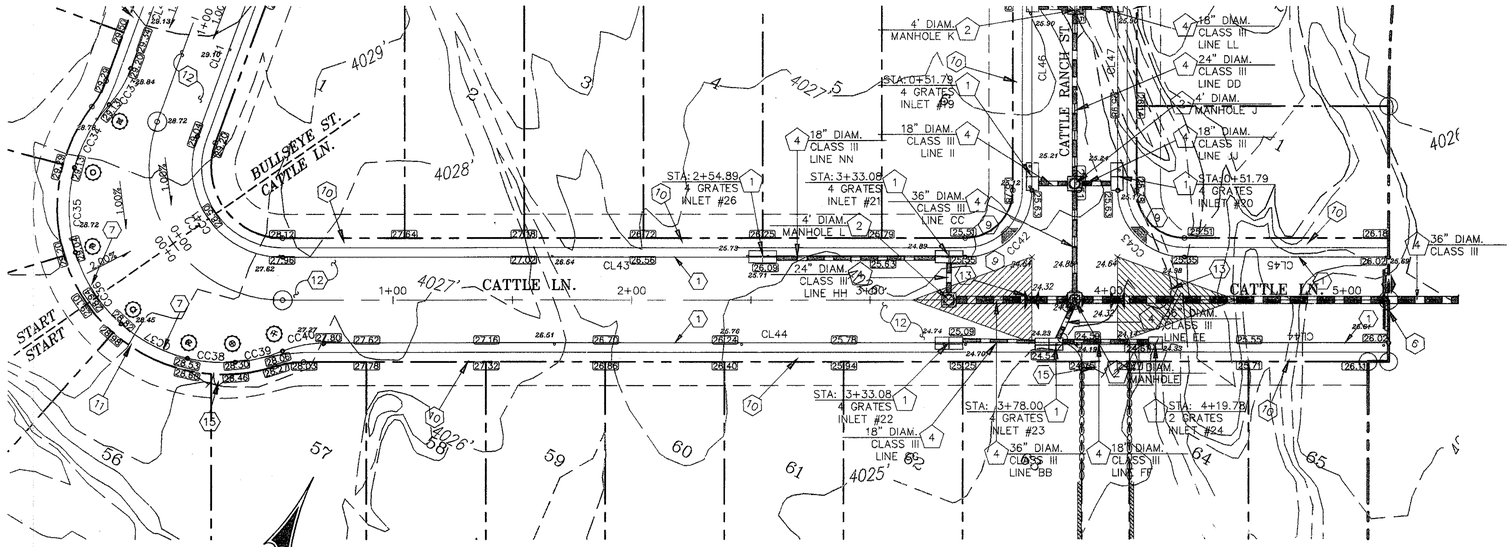
Design By: AFJ	Drawn By: JM
Scale: 1" = 30'	
Project #: J05-067	Plot Date: 1/30/07
SHEET: C-24	

FILE: Z:\WORK DIRECTORY\J05-067 SANDSTONE RANCH UNIT 1\dwg\CIVIL\102105\J05-067 C24-^ATTLE RANCH.dwg

LAYOUT: C-25 CATTLE STA. 0+00 THRU 5+17.50

TRENCH EXCAVATION PROTECTION

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



PLAN VIEW

SCALE: 1"=30'

0 30' 60' 90'
0 1" 2" 3"

ALL ELEVATIONS ARE NVGD DATUM
BENCHMARK: FOUND TXDOT BRASS CAP SECTION CORNERS 19, 20, 22 AND 21
ELEVATION: 4033.22 (NVGD DATUM)
(SUBTRACT 8.462 TO CONVERT TO CITY DATUM)

KEYNOTE LEGEND

1. PROPOSED TOP OF CURB (6" STANDARD CURB AND GUTTER) SEE TYP. DETAILS
2. PROPOSED GUTTER LINE (6" STANDARD CURB AND GUTTER) SEE TYP. DETAILS
3. EXISTING GRADE LINE
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10. 4' SIDEWALK SEE TYP. DETAILS
11. 5' SIDEWALK SEE TYP. DETAILS
12. TYPICAL PAVEMENT SECTION SEE TYP. DETAILS
13. 50' TRANSITION FROM 2% CROWN TO MATCH PAVEMENT
14. 6' ROCK SCREENWALL BY DEVELOPER (SEE TYP. DETAILS)
15. 18' WIDE WROUGHT IRON GATE (SEE TYP. DETAILS)
16. HIGH POINT
17. LOW POINT

47.43 PROPOSED TOP OF CURB @ PC,PT (FG @ BACK OF SIDEWALK)

46.67 PV × PROPOSED TOP OF PAVEMENT

KEYNOTE LEGEND (DRAINAGE)

1. PROPOSED DROP INLET TYPE I, # DENOTES NUMBER OF GRATES (SEE TYP. DETAILS)
2. STORMWATER MANHOLE TYPE I (SEE TYP. DETAILS)
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6. HEADWALL PIPE EXIT (SEE TYP. DETAILS)
7. CAP PROPOSED 48" R.C.P. STORMDRAIN PIPE FOR FUTURE EXTENSION
8. PROPOSED DROP INLET TYPE II, # DENOTES NUMBER OF GRATES (SEE TYP. DETAILS)

CURB LINE DATA

LINE	BEARING	DISTANCE
CL40	N06°28'28"W	49.32'
CL41	N06°28'28"W	66.64'
CL42	N01°58'42"E	24.57'
CL43	S63°31'32"W	286.12'
CL44	S63°31'32"W	446.43'
CL45	S63°31'32"W	85.63'
CL46	S26°28'28"E	101.08'
CL47	S26°28'28"E	101.08'

CURB CURVE DATA

CURVE	DELTA	RADIUS	ARC	CHORD BEARING	CHORD
CC33	22°10'16"	46.00'	17.80'	N04°36'40"E	17.69'
CC34	26°53'16"	65.00'	30.50'	S02°15'10"W	30.22'
CC35	31°49'52"	65.00'	36.11'	S27°06'24"E	35.65'
CC36	31°49'52"	65.00'	36.11'	S58°56'15"E	35.65'
CC37	28°00'12"	65.00'	31.77'	S88°51'17"E	31.45'
CC38	17°45'39"	65.00'	20.15'	N68°15'47"E	20.07'
CC39	18°01'41"	65.00'	20.45'	N50°22'06"E	20.37'
CC40	22°10'16"	46.00'	17.80'	S52°26'24"W	17.69'
CC41	110°00'00"	38.00'	72.95'	S61°28'28"E	62.26'
CC42	90°00'00"	28.00'	43.98'	N18°31'32"E	39.60'
CC43	90°00'00"	28.00'	43.98'	S71°28'28"E	39.60'

TOP OF CURB AS BUILT ELEVATION= 41.33

NOTES:
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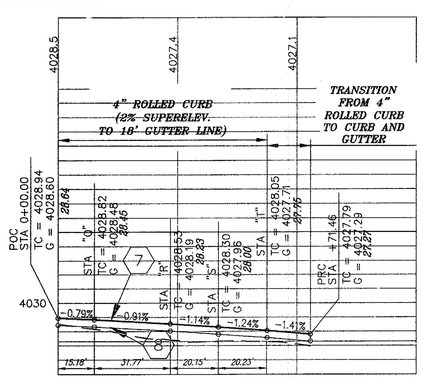
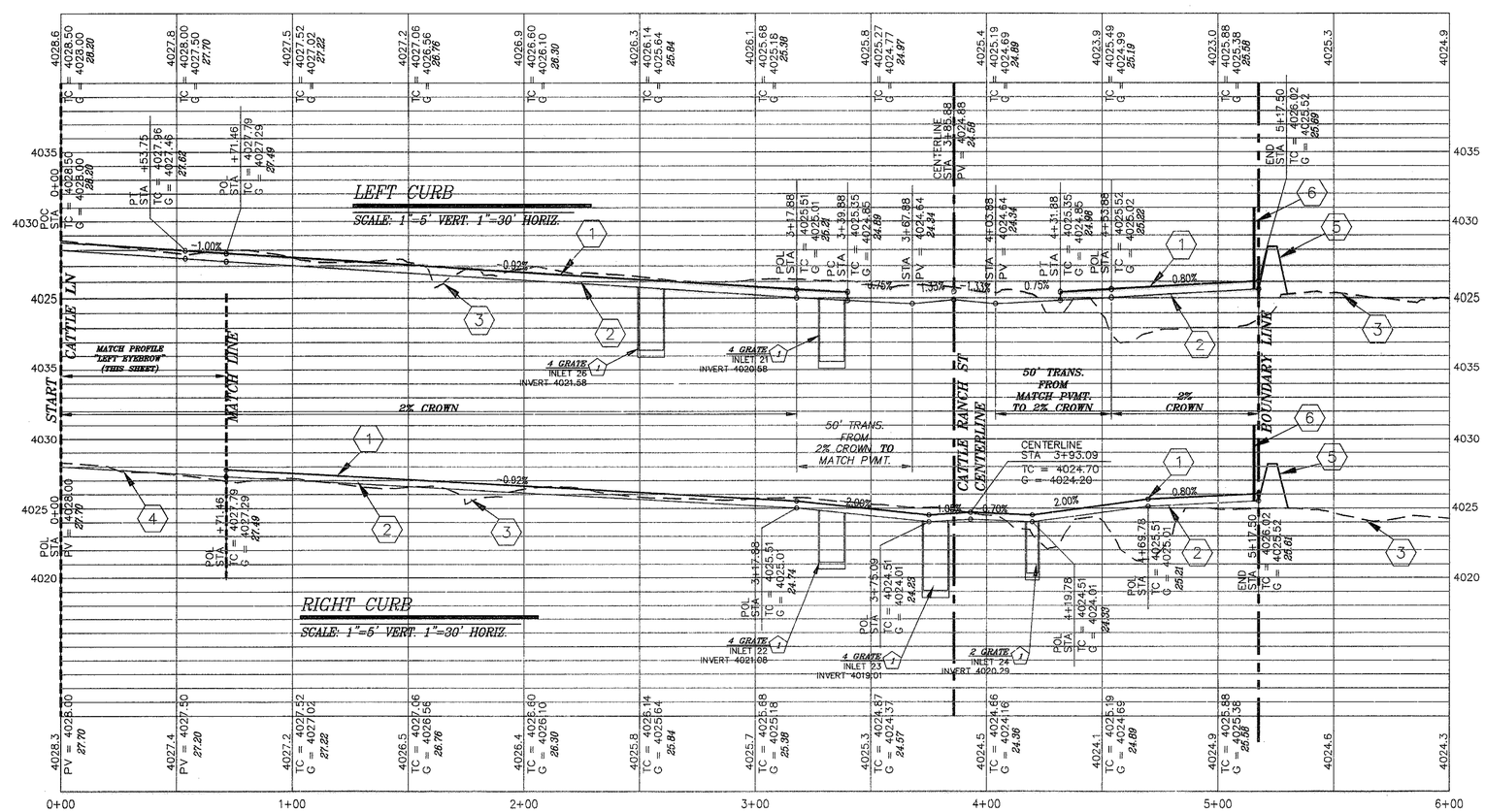
BY: _____

DATE: 1/31/07



LEFT EYEBROW

MATCH FROM STA: 0+00 TO 0+71.07
SCALE: 1"=5' VERT. 1"=30' HORIZ.



CATTLE LN. STATION 0+00 THRU 5+17.50

Release Dates:
10/28/05
Revisions:
11/28/05
-

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70774

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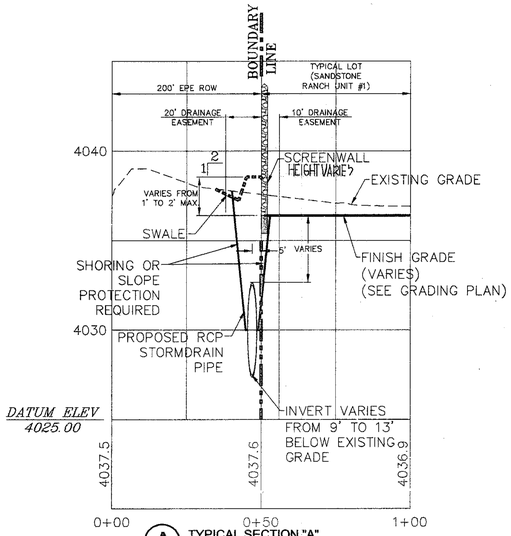
CATTLE LN. STATION 0+00 THRU 5+17.50

SANDSTONE RANCH UNIT 1

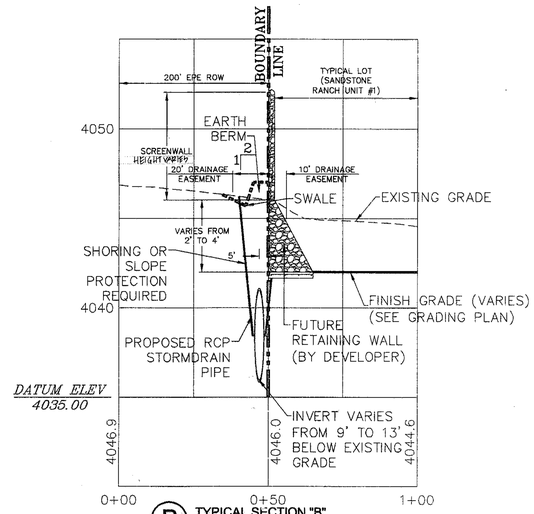
BEING A PORTION OF SEC. 21, BLOCK 81, TOWNSHIP 1
TEXAS AND PACIFIC RAILROAD CO. SURVEY
CITY OF EL PASO, EL PASO COUNTY, TEXAS

Project #: J05-067
Design By: AFJ
Plot Date: 1/30/07
Drawn By: JM
SHEET: C-25
Scale: 1" = 30'

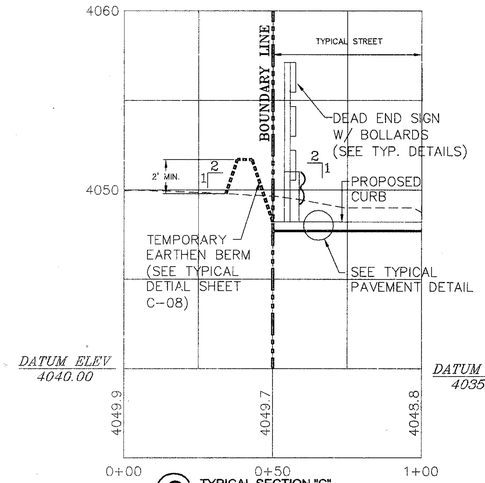
FILE: Z:□J05-WORK DIRECTORY□J05-067 SANDSTONE RANCH UNIT 1.dwg□AS BUILTS□J05-067 C25- CATTLE LN.dwg



A TYPICAL SECTION "A"
SCALE: HORIZ. 1" = 40' VERT. 1"=4'



B TYPICAL SECTION "B"
SCALE: HORIZ. 1" = 40' VERT. 1"=4'



C TYPICAL SECTION "C"
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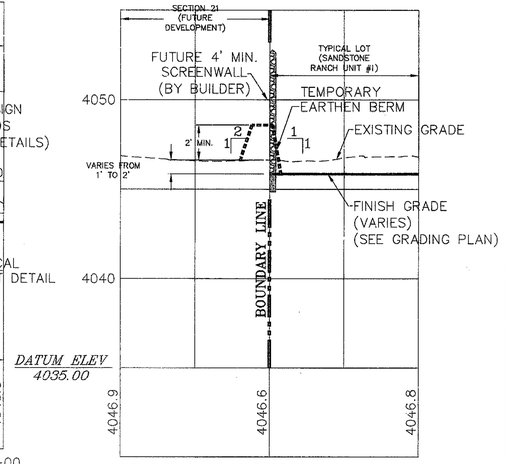

D TYPICAL SECTION "D"
SCALE: HORIZ. 1" = 40' VERT. 1"=4'

NOTES:
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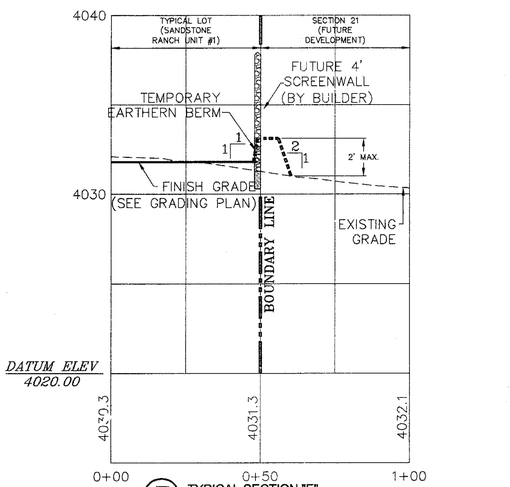
BY:

DATE: 1/31/07



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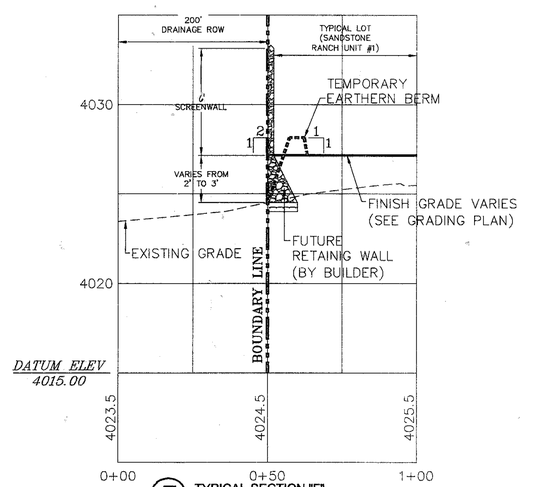

F TYPICAL SECTION "F"
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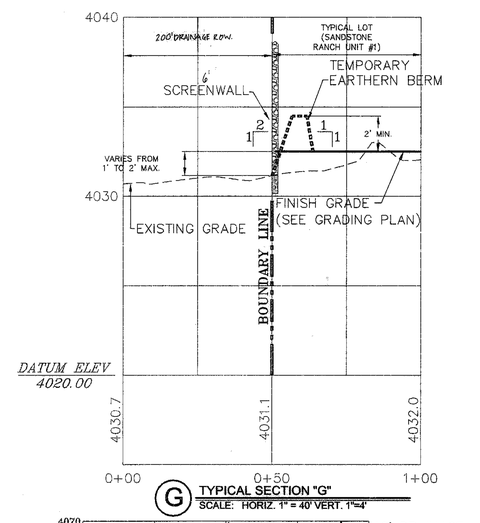
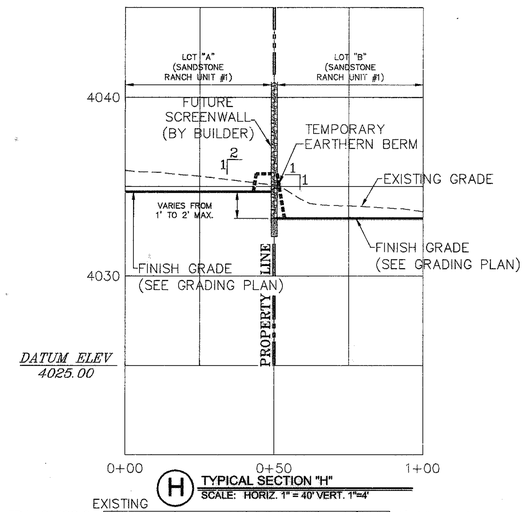
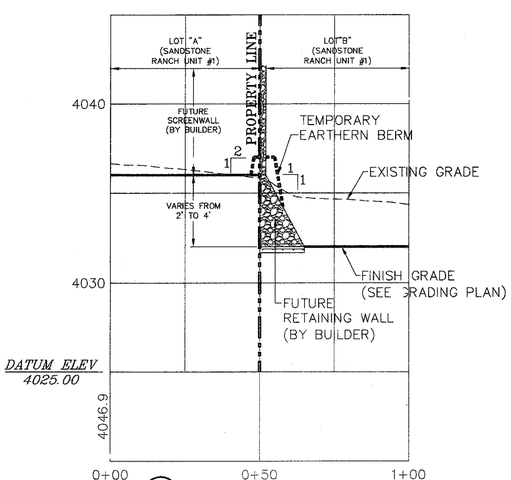


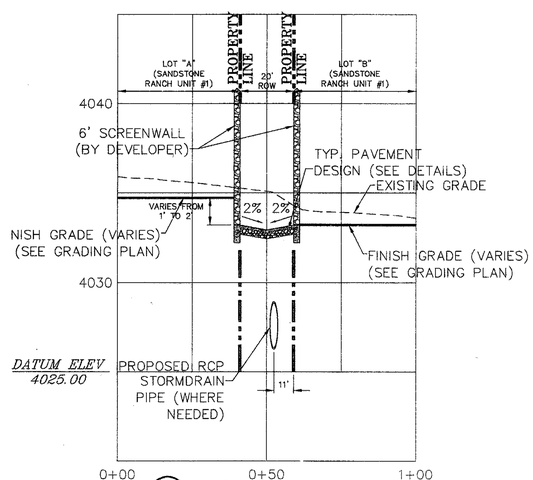
G TYPICAL SECTION "G"
SCALE: HORIZ. 1" = 40' VERT. 1"=4'



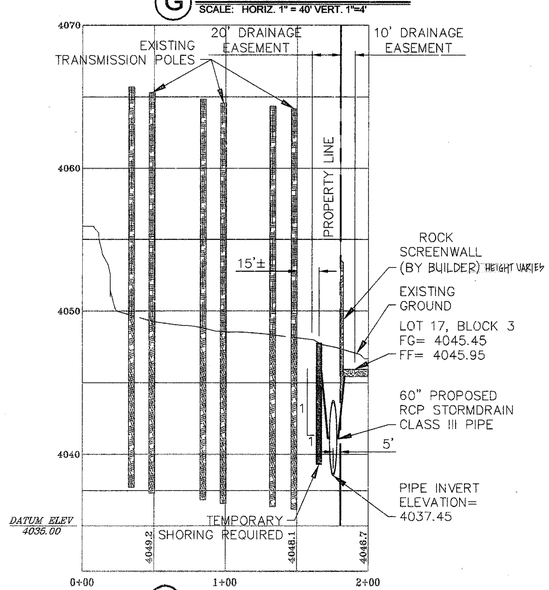
H TYPICAL SECTION "H"
SCALE: HORIZ. 1" = 40' VERT. 1"=4'



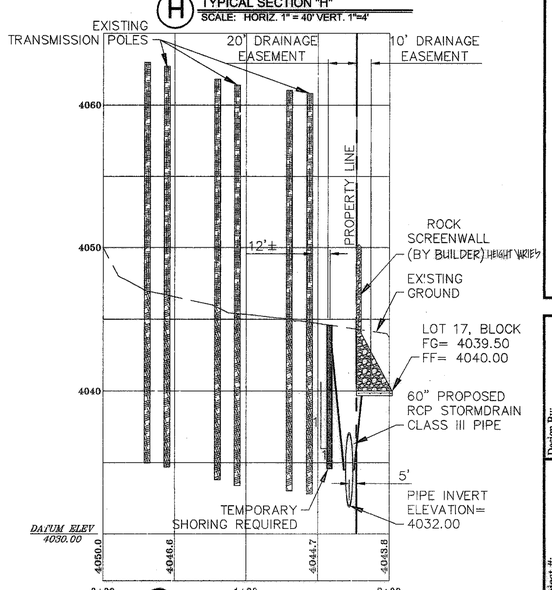
I TYPICAL SECTION "I"
SCALE: HORIZ. 1" = 40' VERT. 1"=4'



J TYPICAL SECTION "J"
SCALE: HORIZ. 1" = 40' VERT. 1"=4'



K SECTION "K"
SCALE: HORIZ. 1" = 50' VERT. 1"=5'



L SECTION "L"
SCALE: HORIZ. 1" = 50' VERT. 1"=5'

Release Dates:

Revisions:

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1/31/07
STATE OF TEXAS
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P.O. Box 220251 El Paso, Texas 79913 915/833-2400

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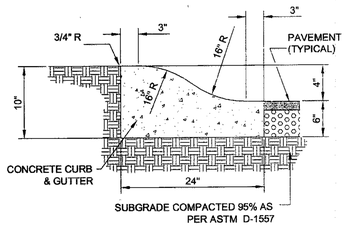
TYPICAL SECTIONS

SANDSTONE RANCH UNIT 1
BEING A PORTION OF SEC. 21, BLOCK 81, TOWNSHIP 1
TEXAS AND PACIFIC RAILROAD CO. SURVEY
CITY OF EL PASO, EL PASO COUNTY, TEXAS

Project #: J05-067	Design By: AFJ
Plot Date: 1/29/07	Drawn By: JM
SHEET: C-26	Scale: AS NOTED

LAYOUT: C-26 - TYPICAL SECTIONS

FILE: Z:\J05-WORK DIRECTORY\J05-067 SANDSTONE RANCH UNIT 1\dwg\AS BUILTS\J05-067 C26-TYPICAL SECTIONS.dwg

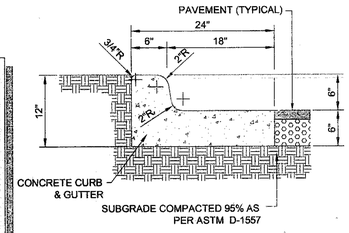


ROLLED CURB SECTION

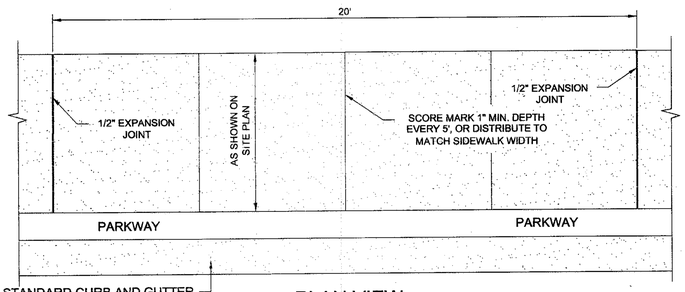
NOTES:

1. CONCRETE CURB, GUTTER, AND RETURNS SHALL BE 3,000 P.S.I. MIN.
2. DUMMY JOINT REQUIRED AT 10' O.C.
3. 1/2" PREMOLDED BITUMINOUS EXPANSION JOINT (AASHTO M-33) IS REQUIRED FOR ALL CURB RETURNS. TRIM BITUMINOUS MATERIAL 1/4" LESS THAN NEAT CURB & GUTTER DIMENSION.
4. SUBGRADE UNDER CURB MUST BE FORMED AND COMPACTED TO 95% ASTM D1557.
5. EXPANSION JOINTS REQUIRED AT 50' O.C. WHEN FORMING FOR CURBS.

A / C-27 CONCRETE CURB DETAILS
SCALE: NTS



STANDARD CURB & GUTTER SECTION

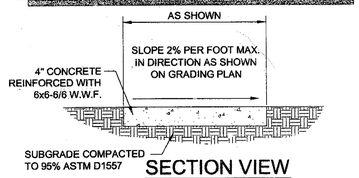


PLAN VIEW

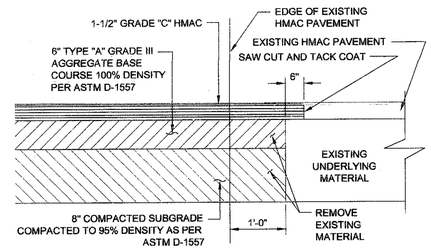
C / C-27 TYPICAL SIDEWALK DETAIL
SCALE: NTS

SIDEWALK NOTES:

1. CONCRETE SIDEWALK SHALL BE 3,000 P.S.I.
2. DUMMY JOINTS REQUIRED AT 5' O.C.
3. EXPANSION JOINTS SHALL BE AT 20' O.C. MAXIMUM, USE 1/2" PREMOLDED BITUMINOUS EXPANSION JOINTS (AASHTO M-33)
4. EXPANSION JOINT FILLER SHALL BE PLACED WHEREVER SIDEWALK ABUTS ROCK OR MASONRY STRUCTURES SUCH AS CURBS OR BUILDINGS.
5. SUBGRADE TO BE COMPACTED TO 95% ASTM D1557.

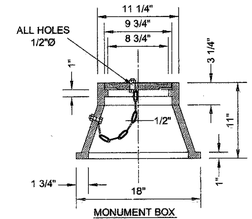


SECTION VIEW

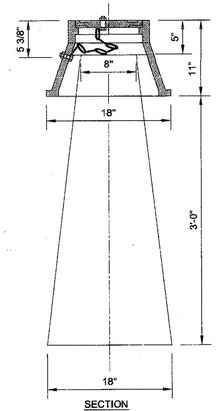


JUNCTURE OF NEW HMAC PAVEMENT AND EXISTING HMAC PAVEMENT

D / C-27
SCALE: NTS

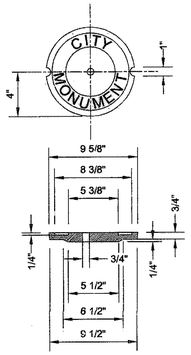


MONUMENT BOX



SECTION

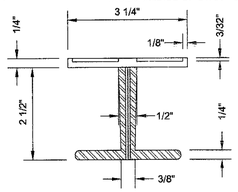
NO FORMS REQUIRED.
3000 PSI CONCRETE TO BE POURED INTO PLACE.



BOX COVER

EMBOSS STAR, RING, AND LETTERS TO A HEIGHT OF 3/32"

OUTSIDE RADIUS OF STAR = 3/4"
INSIDE RADIUS OF STAR = 3/16"



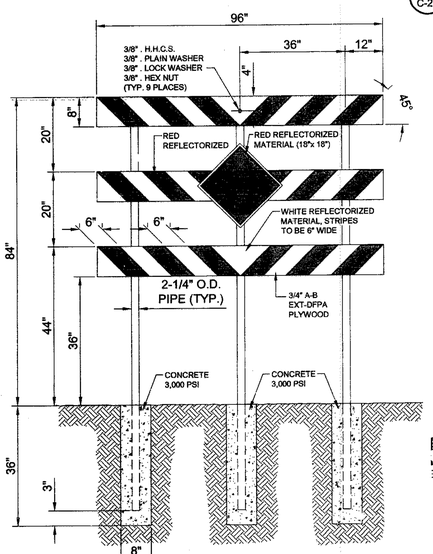
BRONZE MONUMENT CAP

B / C-27 CITY SURVEY MONUMENT
SCALE: NTS

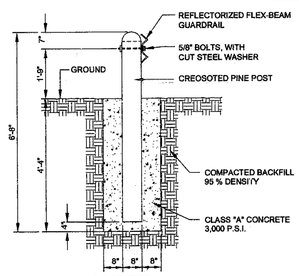
NOTES:
THESE RECORDS DRAWINGS HAVE BEEN PREPARED BY DEL RIO ENGINEERING INC. BASED ON INFORMATION PROVIDED BY OTHERS. DRE HAS NOT VERIFIED THE INFORMATION PROVIDED BY OTHERS AND REFLECTS CHANGES MADE DURING CONSTRUCTION. THE ACCURACY AND/OR COMPLETENESS OF THIS INFORMATION HAVE BEEN VERIFIED BY CAD CONSULTING COMPANY SUBMITTED ON 1/11/07. THOSE RELYING ON THIS RECORD DRAWING MUST ASSUME THE RESPONSIBILITY FOR THE VERIFICATION OF ITS ACCURACY BEFORE APPLYING IT FOR ANY PURPOSE.

BY: _____

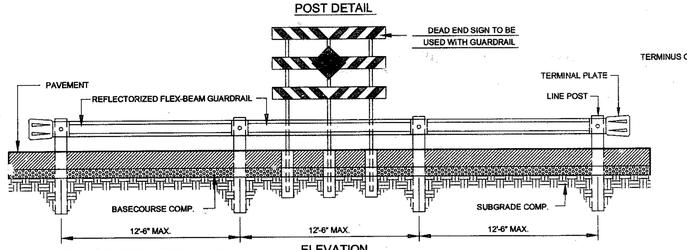
DATE: 1/31/07



DEAD END SIGN DETAIL

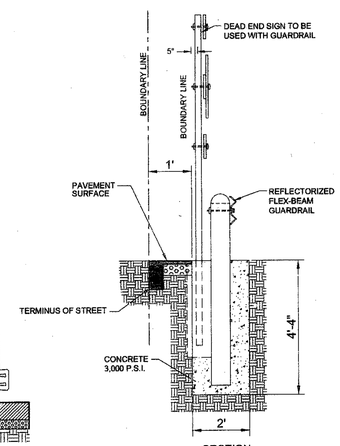


POST DETAIL

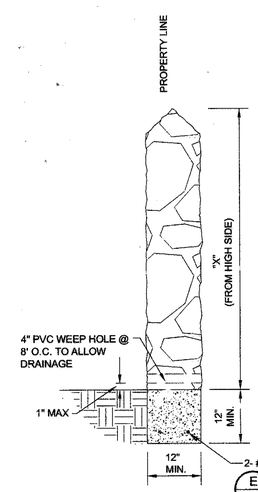


ELEVATION

F / C-27 GUARD RAIL/SIGN ASSEMBLY AT DEAD END STREET DETAIL
Scale: NTS



SECTION

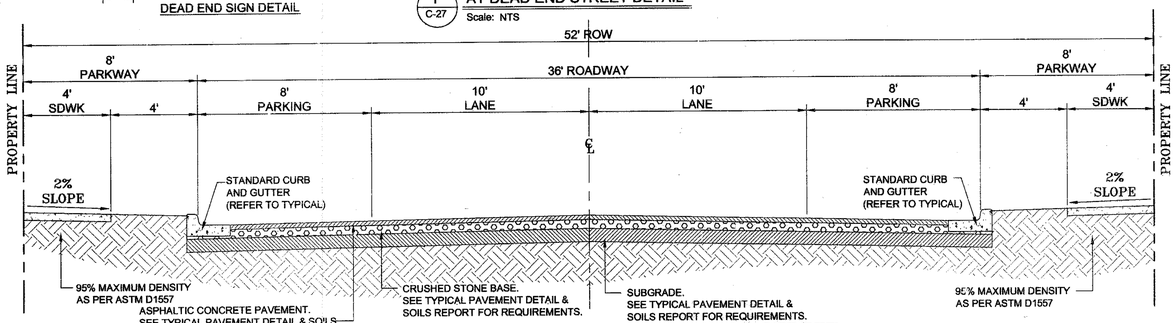


E / C-27 ROCK SCREENING WALL DETAIL
SCALE: NTS

ROCKWALL NOTES

1. STONE FOR THE ROCKWALL SHALL BE AS NEARLY UNIFORM IN SECTIONS AS POSSIBLE. THE STONE SHALL BE DENSE AND RESISTANT OF AIR AND WATER.
2. MORTAR MUST BE TYPE "S" 1800 P.S.I. AS PER ASTM C270
3. MASONRY WALLS OVER 6 FEET IN HEIGHT AND THOSE USED FOR EARTH RETENTION OVER TWO FEET MUST BE DESIGNED AS STRUCTURAL WALLS BY A STRUCTURAL ENGINEER.
4. WALLS ADJACENT TO PONDING AREA OR DRAINAGE DITCHES MAY BE CONSTRUCTED OF BRICK OR CINDER BLOCK AND SHALL NOT BE LESS THAN SIX FEET HIGH.
5. ROCKWALL MORTAR JOINTS MUST NOT EXCEED TWO INCHES.
6. PROVIDE ONE INCH EXPANSION JOINTS AT EVERY 100 FEET.
7. ALL STONE SHALL BE THOROUGHLY SOAKED BEFORE BEING PLACED.
8. ALL STONE FOR ROCKWALLS SHALL BE FRACTURED QUARRIED ROCK, NO RIVER ROCK SHALL BE ALLOWED.
9. CONCRETE F(C)= 3,000 PSI @ 28 DAYS.
10. REINFORCING STEEL SHALL BE ASTM 615 GRADE 40, F(Y)= 40 KSI.
11. WALL FOOTING SHALL BE ON COMPACTED OR FIRM UNDISTURBED GROUND. DRE RECOMMENDS THE OWNER/CONTRACTOR OBTAIN A PROPER SOILS REPORT PRIOR TO THE COMMENCEMENT OF CONSTRUCTION TO ASSURE THAT THE SOIL HAS SUFFICIENT BEARING CAPACITY FOR THE ROCK WALL AND FOUNDATION.

"X"
1. 6' HIGH @ DRAINAGE AND BASINS.

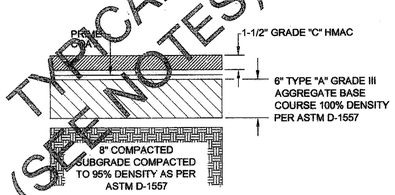


G(1) / C-27 STD. RESIDENTIAL SUBCOLLECTOR STREET
SCALE: NTS

NOTES:

1. STREETS TO BE MAINTAINED BY CITY.
2. PRIME COAT TO BE 0.25 GALLON PER SQUARE YARD. (MIN. COVERAGE)
3. FINAL PAVEMENT DESIGN TO BE APPROVED BY CITY ENGINEERING BASED ON C.B.R. TEST RESULTS.
4. WHERE SIDEWALKS ARE NOT REQUIRED OR ARE PERMITTED TO BE LOCATED ADJACENT TO AND PARALLEL WITH THE CURBLINE, THE TOTAL STREET RIGHT-OF-WAY SHALL BE REDUCED BY DEDUCTING 3'-6" FROM THE PARKWAY ON EACH AFFECTED SIDE OF THE LOCAL STREET.

TYPICAL (SEE NOTES)



G(2) / C-27 TYPICAL PAVEMENT DETAIL (52' ROW)
SCALE: NTS

MISC. NOTES:

A. STREETS TO BE DEDICATED AND MAINTAINED BY CITY OF EL PASO UPON COMPLETION AND ACCEPTANCE.
B. SOIL IS TYPICAL PAVEMENT DESIGN. A C.B.R. AND SOILS TEST MUST BE COMPLETED AND SUBMITTED TO CITY OF EL PASO PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. IF THE C.B.R. TEST RESULTS DIFFER THAT WHAT IS SHOWN, THE CONTRACTOR/ OWNER MUST NOTIFY D.R.E. IMMEDIATELY. FINAL APPROVED C.B.R. TEST RESULTS SUPERSEDE ALL DIMENSIONS SHOWN HERE.

Release Dates:
10/28/05
Revisions:
11/28/05
12/12/05 (CEP REDS)

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Del Rio Engineering, Inc.
P.O. Box 220251 El Paso, Texas 79913 915/833-2400

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TYPICAL DETAILS

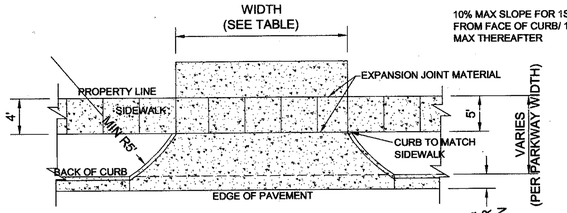
SANDSTONE RANCH UNIT 1
BEING A PORTION OF SEC. 21, BLOCK 81, TOWNSHIP 1
TEXAS AND PACIFIC RAILROAD CO. SURVEY
CITY OF EL PASO, EL PASO COUNTY, TEXAS

Project #: J05-067	Design By: AFJ
Plot Date: 1/29/07	Drawn By: JM
SHEET: C-27	Scale: AS NOTED

LAYOUT: TYPICAL DETAILS

FILE: Z:\J05-WORK DIRECTORY\J05-067 SANDSTONE RANCH UNIT 1\dwg\AS BUILTS\J05-067 C27-DETAILS.dwg

LAYOUT: TYPICAL DETAILS

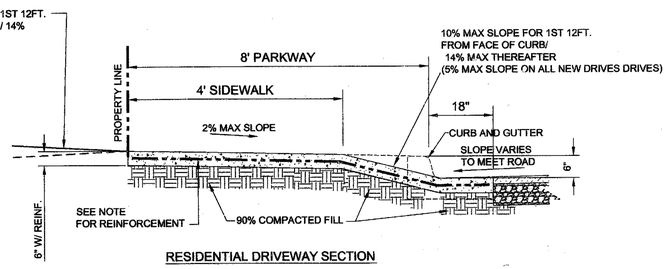


NOTE:

USE ONLY 1/2" APPROVED EXPANSION JOINT MATERIAL

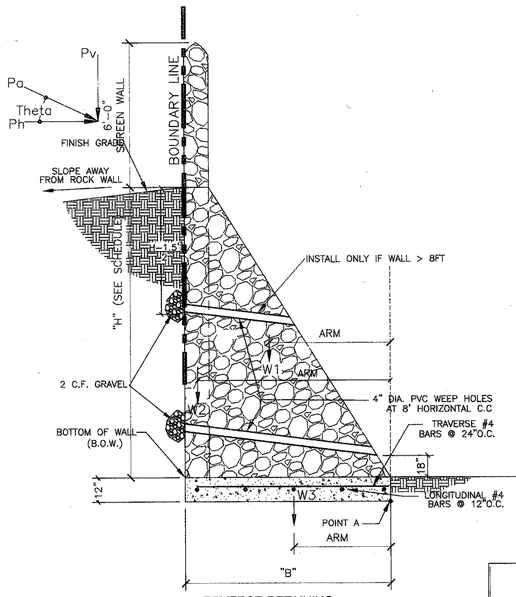
DRIVEWAY WIDTH	MIN	MAX
RESIDENTIAL	12'	24'

RESIDENTIAL REINFORCEMENT REQUIREMENTS:
6" CONC. WITHOUT 6x6/8x6 WWF
4" CONC. WITH 6x6/10x10 WWF



RESIDENTIAL DRIVEWAY SECTION

H / C-28 RESIDENTIAL DRIVEWAY DETAIL
SCALE: NTS



I / C-28 REVERSE RETAINING WALL AT BOUNDARY LINE
SCALE: NTS

ROCK RETAINING WALL STABILITY ANALYSIS

CALCULATIONS

5.75 FOOT RETAINING WALL

Given:

* Unit weights:

Sandy soil:	110 pcf	Cf = 0.5	Course-grained soil
Rock	135 pcf	Cf = 0.45	Mixed-grained soil
Concrete	145 pcf	Cf = 0.4	Fine-grained soil

* Permissumptive safe bearing capacity of supporting soils = 2.5 tons/ft2 — Ka = 0.25 to 0.50 for cohesionless soil

* Coefficient of friction	Cf =	0.45 lb/ft2/ft	Ka = 0.10 for cohesive soil
* Angle of friction	Af =	32 deg	Kp = 3 to 6 for cohesionless soil
* Lateral earth pressure	Ka =	0.310 lb/ft2/ft	Kp = 2 for cohesive soil
* Passive earth pressure	Kp =	3.3 lb/ft2/ft	Kp=tan2(45+Af/2)

* Formulas: B= 4.00 ft

Vertical Loads (W) = Area X unit weight

Lateral pressure (Pa) = 1/2 Ka*W * H^2 — *Coulomb's active force*

Overturning moment (Mo) = Ph (H/3)------around point "A"

Resisting moment (Mr) = vertical loads X moment arm around point "A"

X = Mr - Mo / W total

Calculation:

* Factor of safety against overturning ≥ 2 = Mr/Mo
* Factor of safety against sliding ≥ 1.5 = (R+Pp)/Ph

Lateral pressure Pa = 776.84 lb/LF — Pa=1/2 Ka*W * H^2

Vertical pressure Pv = 0.0 lb/LF

Horizontal pressure Ph = 776.8 lb/LF

Passive pressure Pp = 341.37 lb/LF — Pp= 1/2(Kp*W*D^2 + 2*cf*100*Kp^.5*D

Vertical Loads :

	lb/linear ft	arm	Mr
W1 =	1164.375	2.00	2328.75
W2 =	1586.25	3.5	5551.875
W3 =	580	2.00	1160
W(total) =	3330.625		9040.625

Overturning Moment

Mo = 1748 ft-#

Resisting Moment

Mr = 9041 ft-#

e = 0.1896 — B/6= 0.666667 *This is acceptable with adequate safety factors.*

Ixx= 5.33

Foundation pressures

Sum Moment = Sum Mr-Sum Mo= 7293 ft-lb/ft

Sum V = Wtotal + Pv= 3330.6 ft-lb/ft

d= Sum M/ Sum V= 2.19 ft

e= b/2-d e= 0.19 ft

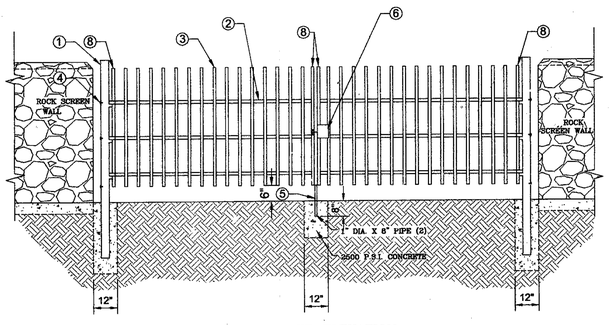
Soil pressure(qmax)

qmax = 1069.5 lb/sqft

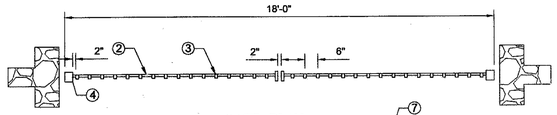
qmin = 595.8 lb/sqft

Factor of safety against overturning = Mr/Mo = 5.17 >2 OK

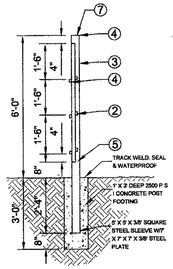
Factor of safety against sliding = (Cf *(Wtotal+Pv)+C*B)+Pp / Ph = 2.37 >1.5 OK Assume Cohesion=0



GATE ELEVATION



GATE PLAN



GATE SECTION

NOTES:

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 1/2" X 16 GA. RECATNGULAR STEEL TUBING
4) BOLT HOOK AND STRAP HINGE
5) CANE BOLT LATCH W/KEEPUP, 8" X 18" LONG (2 REQUIRED)
6) DOUBLE GATE HEAVY DUTY INDUSTRIAM LATCH W/ PAD LOCK
7) FLAT TOP POLYVINYL CAP
8) 2" X 1" 10 GA. RECT. STL. TUBING

J / C-28 WROUGHT IRON GATE DETAIL
SCALE: NTS

ROCK RETAINING WALL STABILITY ANALYSIS

1. THE NATURAL ROCK/STONE SHALL BE SOUND AND FREE OF LOOSE OF FRIABLE INCLUSION AND SHALL MEET REQUIRED STRENGTH AND DURABILITY FOR THE PROPOSED USE.
2. THE MORTAR SHALL BE ASTM C-270 TYPE S AND TO BE PROPORTIONED BY VOLUME AS FOLLOWS:
   -PORTLAND CEMENT----------1 PART
   -HYDRATED LIME----------1/4 PART
   -SAND----------3.5 PARTS
3. THE CONCRETE SHALL BE 3000 psi MINIMUM STRENGTH @ 28 DAYS.
4. REINFORCING STEEL SHALL MEET ASTM A615 GRADE 40--Fy=40,000PSI.
5. THE FOUNDATION SOIL SHALL BE COMPACTED TO 95% MAX. DENSITY AS PER ASTM D1557 OR FIRM UNDISTURBED EARTH.
6. NO VOIDS SHALL BE LEFT INSIDE THE ROCKWALL.
7. ANY CHANGES IN WALL DIRECTION, WALL HIGH OR FOOTING ELEVATION WLL REQUIRE ADDITIONAL DESIGN WORK.
8. THE BACKFILL MATERIAL SHALL BE COMPACTED AND CONSIST OF WELL-DRAINED SANDY-COARSE SOIL OR NATIVE SOIL OF FINE SILTY SANDS WITH LOW PLASTICITY.
9. ADDITIONAL SURCHARGE WILL REQUIRE ADDITIONAL DESIGN (BUILDING, SWIMMING POOLS, ADDITIONAL GRADED SLOPES, ETC.)
10. NO TREES, LANDSCAPING, OR ANY VEGETATION WITHIN FIVE FEET BEHIND THE RETAINING WALL.
11. THE BACKFILL DRAINAGE SHALL BE P/OVIDED BY 4-INCH PVC LCCATED ON A HORIZONTAL DISTANCE OF 8 FEET C.C. AND A VERTICAL DISTANCE OF NO MORE THAN 4 FEET . THE BOTTOM ROW SHOULD BE NO MORE THAN 18" ABOVE THE TOP OF THE LOWER FINISH GRADE.
12. THE TOP ROW OF WEEP HOLES SHALL BE INSTALLED ONLY IF d > 8 FEET AND STAGGER SPACING THE BOTTOM ROW.
13. STONES 12" OR LARGER IN THE FIRST ROCK LAYER SHALL BE PLACED WITH ,, MINIMUM OF 6" EMBEDMENT TO FOUNDATION CONCRETE IN ORDER TO BOND FOUNDATION TO STONE MASONRY, AND MUST HAVE A 0" PROJECTION TO BOND WITH STONE CONSTRUCTION ABOVE.
14. ROCK RETAINING WALLS SHALL BE BUILT IN CONFORMANCE WITH SECTION 1415 AnD OTHER APPLICABLE PARTS OF THE CITY OF EL PASO BUILDING CODE.

GENERAL: The retaining wall shall be designed as a gravity wall and should be proportioned such that there is no tensile stress at any point of the wall under live loading conditions, and in such a way that the overturning moment caused by the lateral pressure from the backfill is stabilized by the weight of the wall and the weight of the soil above the base of the wall.

ROCK RETAINING WALL STABILITY ANALYSIS

CALCULATIONS

4 FOOT RETAINING WALL

Given:

* Unit weights:

Sandy soil:	110 pcf	Cf = 0.5	Course-grained soil
Rock	135 pcf	Cf = 0.45	Mixed-grained soil
Concrete	145 pcf	Cf = 0.4	Fine-grained soil

* Permissumptive safe bearing capacity of supporting soils = 2.5 tons/ft2 — Ka = 0.25 to 0.50 for cohesionless soil

* Coefficient of friction	Cf =	0.45 lb/ft2/ft	Ka = 0.10 for cohesive soil
* Angle of friction	Af =	32 deg	Kp = 3 to 6 for cohesionless soil
* Lateral earth pressure	Ka =	0.310 lb/ft2/ft	Kp = 2 for cohesive soil
* Passive earth pressure	Kp =	3.3 lb/ft2/ft	Kp=tan2(45+Af/2)

* Formulas: B= 2.50 ft

Vertical Loads (W) = Area X unit weight

Lateral pressure (Pa) = 1/2 Ka*W * H^2 — *Coulomb's active force*

Overturning moment (Mo) = Ph (H/3)------around point "A"

Resisting moment (Mr) = vertical loads X moment arm around point "A"

X = Mr - Mo / W total

Calculation:

* Factor of safety against overturning ≥ 2 = Mr/Mo
* Factor of safety against sliding ≥ 1.5 = (R+Pp)/Ph

Lateral pressure Pa = 426.25 lb/LF — Pa=1/2 Ka*W * H^2

Vertical pressure Pv = 0.0 lb/LF

Horizontal pressure Ph = 426.3 lb/LF

Passive pressure Pp = 341.37 lb/LF — Pp= 1/2(Kp*W*D^2 + 2*cf*100*Kp^.5*D

Vertical Loads :

	lb/linear ft	arm	Mr
W1 =	405	1.00	405
W2 =	1356	2	2700
W3 =	362.5	1.25	453.125
W(Total) =	2117.5		3558.125

Overturning Moment

Mo = 710 ft-#

Resisting Moment

Mr = 3558 ft-#

e = 0.0948 — B/6= 0.416667 *This is acceptable with adequate safety factors.*

Ixx= 1.30

Foundation pressures

Sum Moment = Sum Mr-Sum Mo= 2848 ft-lb/ft

Sum V = Wtotal + Pv= 2117.5 ft-lb/ft

d= Sum M/ Sum V= 1.34 ft

e= b/2-d e= 0.09 ft

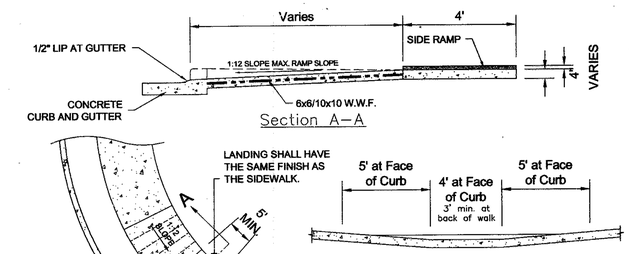
Soil pressure(qmax)

qmax = 1039.8 lb/sqft

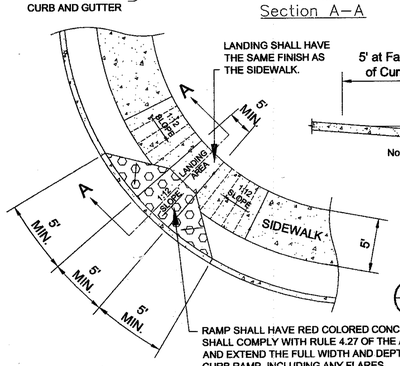
qmin = 654.2 lb/sqft

Factor of safety against overturning = Mr/Mo = 5.01 >2 OK

Factor of safety against sliding = (Cf *(Wtotal+Pv)+C*B)+Pp / Ph = 3.04 >1.5 OK Assume Cohesion=0



Section A-A



Note: All concrete to be 3000 p.s.i. (min.) broom finished.

FRONT VIEW

L / C-28 HANDICAP RAMP DETAIL
SCALE: NTS

NOTES:

1. STREETS TO BE MAINTAINED BY CITY.
2. PRIME COAT TO BE 0.25 GALLON PER SQUARE YARD. (MIN. COVERAGE)
3. FINAL PAVEMENT DESIGN TO BE APPROVED BY CITY ENGINEERING BASED ON C.B.R. TEST RESULTS.
4. WHERE SIDEWALKS ARE NOT REQUIRED OR ARE PERMITTED TO BE LOCATED ADJACENT TO AND PARALLEL WITH THE CURBLINE, THE TOTAL STREET RIGHT-OF-WAY SHALL BE REDUCED BY DEDUCTING 3'-6" FROM THE PARKWAY ON EACH AFFECTED SIDE OF THE LOCAL STREET.

NOTES:

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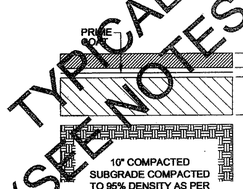
BY: _____

DATE: 1/31/07

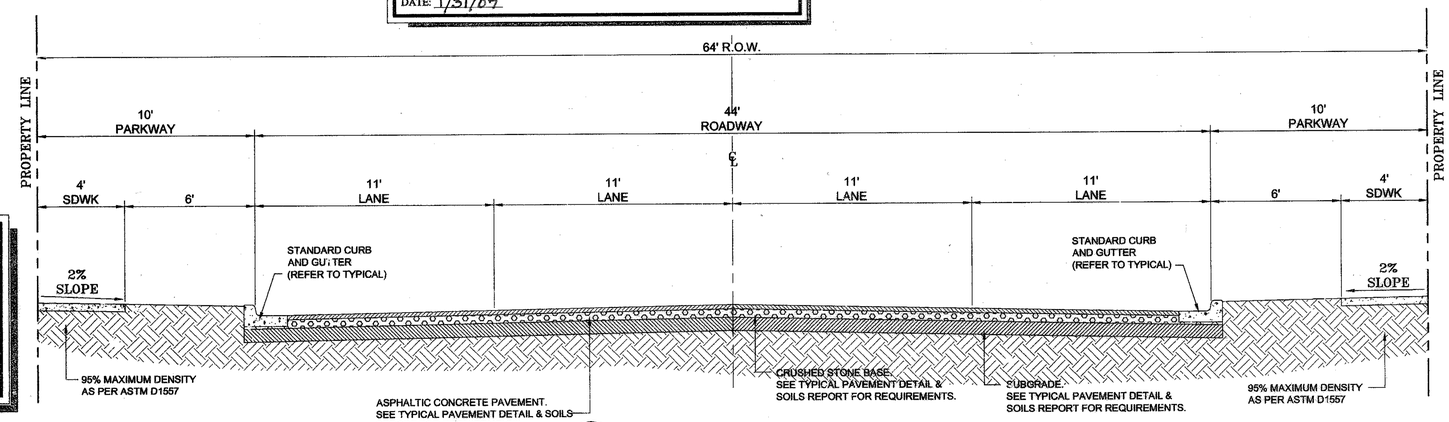
TYPICAL (SEE NOTES)



K(2) / C-28 TYPICAL PAVEMENT DETAIL (64' ROW)
SCALE: NTS

MISC. NOTES:

A. STREETS TO BE DEDICATED AND MAINTAINED BY CITY OF EL PASO UPON COMPLETION AND ACCEPTANCE.
B. SHOW IS TYPICAL PAVEMENT DESIGN. A C.B.R. AND SOILS TEST MUST BE COMPLETED AND SUBMITTED TO CITY OF EL PASO PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. IF THE C.B.R. TEST RESULTS DIFFER THAT WHAT IS SHOWN, THE CONTRACTOR/ OWNER MUST NOTIFY D.R.E. IMMEDIATELY. FINAL APPROVED C.B.R. TEST RESULTS SUPERSEDE ALL DIMENSIONS SHOWN HERE.



K(1) / C-28 64' R.O.W. DETAIL STREET
SCALE: NTS

Release Dates:
10/28/05
Revisions:
11/28/05

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1/31/07

S.B. MASOUD

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P.O. Box 220251 El Paso, Texas 79913 915/833-2400

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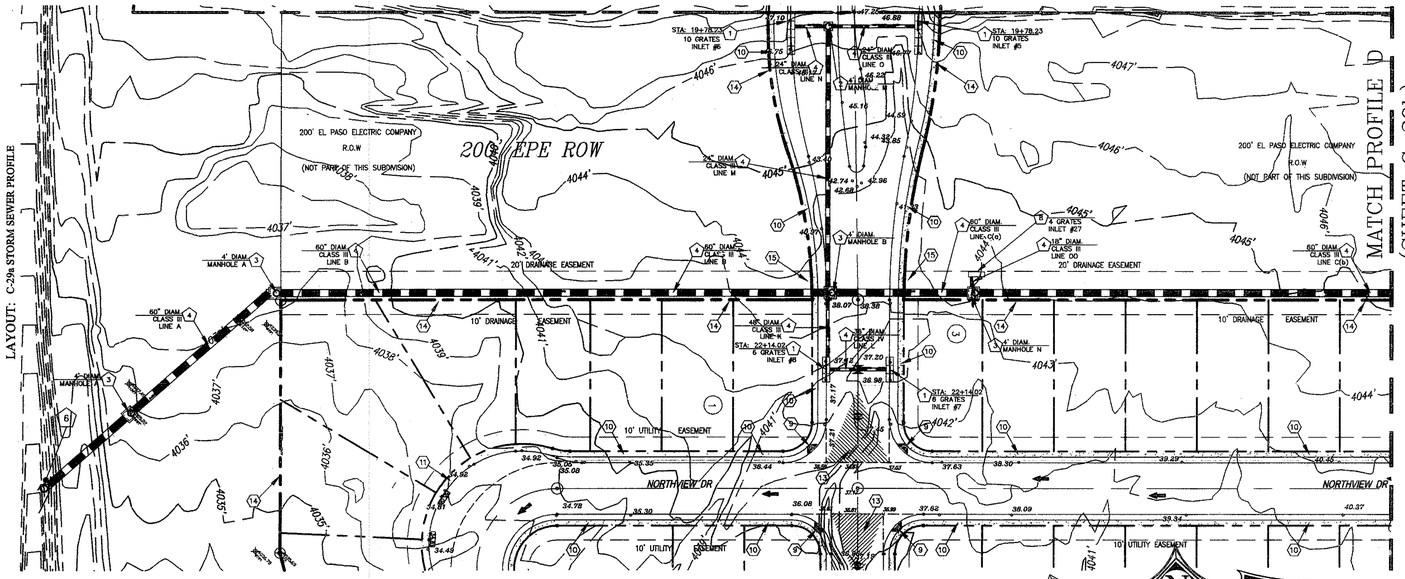
TYPICAL DETAILS

SANDSTONE RANCH UNIT 1
BEING A PORTION OF SEC. 21, BLOCK 81, TOWNSHIP 1
TEXAS AND PACIFIC RAILROAD CO. SURVEY
CITY OF EL PASO, EL PASO COUNTY, TEXAS

Project #: J05-067	Design By: AFJ	
Plot Date: 1/29/07	Drawn By: JM	
SHEET: C-28	Scale: AS NOTED	

FILE: Z:\J05-WORK DIRECTORY\J05-067 SANDSTONE RANCH UNIT 1\dwg\AS BUILTS\J05-067 C28-DETAILS.dwg

LAYOUT: C-29a STORM SEWER PROFILE



KEYNOTE LEGEND (DRAINAGE)

1. PROPOSED DROP INLET TYPE I, # DENOTES NUMBER OF GRATES (SEE TYP. DETAILS)
2. STORMWATER MANHOLE TYPE I (SEE TYP. DETAILS)
3. STORMWATER MANHOLE TYPE II (SEE TYP. DETAILS)
4. TYPICAL REINFORCED CONCRETE PIPE (# DENOTES DIAMETER)
5. TYPICAL PIPE EXIT (PIPE TO EXIT AT A 30 DEGREE ANGLE FROM THE EXISTING DRAINAGE CHANNEL CENTERLINE)
6. HEADWALL PIPE EXIT (SEE TYP. DETAILS)
7. CAP PROPOSED 48" R.C.P. STORMDRAIN PIPE FOR FUTURE EXTENSION
8. PROPOSED DROP INLET TYPE II, # DENOTES NUMBER OF GRATES (SEE TYP. DETAILS)

AS BUILT ELEVATION= 41.33

PLAN VIEW

SCALE: 1"=50'

PIPE TABLE

Line ID	LineLength (ft)	PipeSize (in)	PipeSlope (%)	TotalFlow (cfs)	CapacFull (cfs)	Veloc (ft/s)	Inv ElevUp (ft)	HGLUp (ft)	Inv ElevDn (ft)	HGLDn (ft)	Bearing (d' ")
LINE A	97.30	60.00	1.13	232.85	276.68	12.39	4025.10	4029.42	4024.00	4029.00	N 39d 12' 39" W
LINE A(2)	115.14	60.00	1.65	232.85	334.78	12.52	4027.00	4031.32	4025.10	4029.82	N 39d 12' 39" W
LINE B	390.55	60.00	0.76	232.85	226.76	12.52	4029.96	4034.28	4027.00	4031.73	N 01d 58' 43" E
LINE C(a)	100.00	60.00	0.83	183.74	237.27	11.04	4032.19	4035.97	4031.36	4035.51	N 01d 58' 43" E
LINE C(b)	822.00	60.00	0.58	178.16	198.59	11.40	4038.97	4042.70	4034.19	4037.89	N 01d 58' 43" E
LINE K	54.00	48.00	1.02	13.90	144.98	1.11	4030.51	4036.86	4029.96	4036.85	S 88d 01' 17" E
LINE L	42.22	36.00	1.18	7.65	72.58	1.08	4031.01	4036.89	4030.51	4036.89	N 01d 58' 43" E
LINE M	185.48	24.00	4.90	35.21	50.04	11.31	4042.04	4043.96	4032.96	4034.92	N 88d 01' 17" W
LINE N	28.62	24.00	1.05	18.65	23.16	5.94	4042.34	4045.61	4042.04	4045.42	S 01d 58' 43" W
LINE O	60.36	24.00	0.50	16.56	15.95	5.27	4042.34	4045.86	4042.04	4045.54	N 01d 58' 43" W
LINE OO	12.00	18.00	28.33	5.58	55.90	4.09	4039.00	4039.90	4035.60	4037.88	N 88d 01' 17" W

NOTES:

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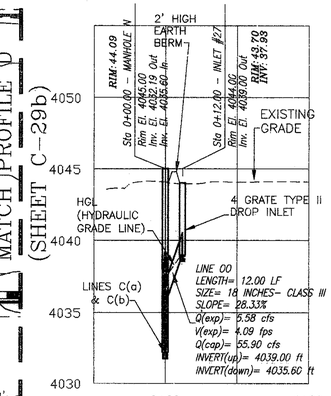
BY: _____

DATE: 1/31/07



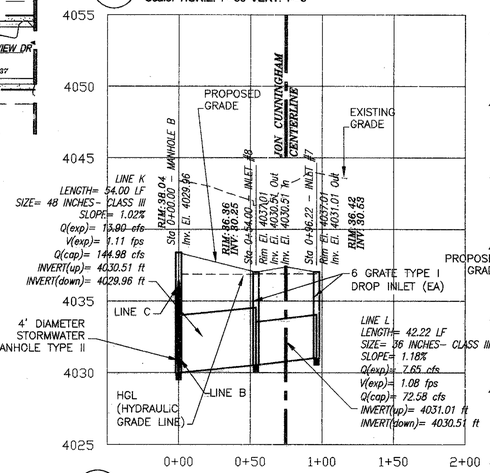
KEYNOTE LEGEND

1. PROPOSED TOP OF CURB (6" STANDARD CURB AND GUTTER) SEE TYP. DETAILS
2. PROPOSED GUTTER LINE (6" STANDARD CURB AND GUTTER) SEE TYP. DETAILS
3. EXISTING GRADE LINE
4. PROPOSED TOP OF PAVEMENT SEE TYP. DETAILS
5. PROPOSED TEMPORARY EARTHEN BERM SEE TYP. DETAILS
6. TYPICAL DEAD END SIGN W/ GUARDRAIL (SEE TYP. DETAILS)
7. PROPOSED TOP OF CURB (4" STANDARD ROLLED CURB) SEE TYP. DETAILS
8. PROPOSED GUTTER LINE (4" STANDARD ROLLED CURB) SEE TYP. DETAILS
9. PROPOSED HANDICAP RAMP SEE TYP. DETAILS
10. 4' SIDEWALK SEE TYP. DETAILS
11. 5' SIDEWALK SEE TYP. DETAILS
12. TYPICAL PAVEMENT SECTION SEE TYP. DETAILS
13. 50' TRANSITION FROM 2% CROWN TO MATCH PAVEMENT
14. ROCK SCREENWALL BY BUILDER (SEE TYP. DETAILS)
15. 18' WIDE WROUGHT IRON GATE (SEE TYP. DETAILS)
16. HIGH POINT
17. LOW POINT

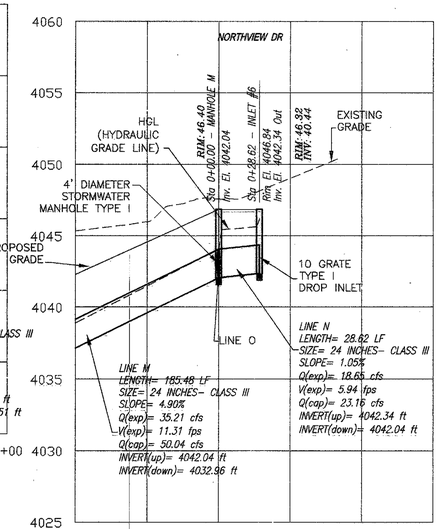
47.45 PROPOSED TOP OF CURB @ PC,PT (FG @ BACK OF SIDEWALK)

46.67 PV PROPOSED TOP OF PAVEMENT

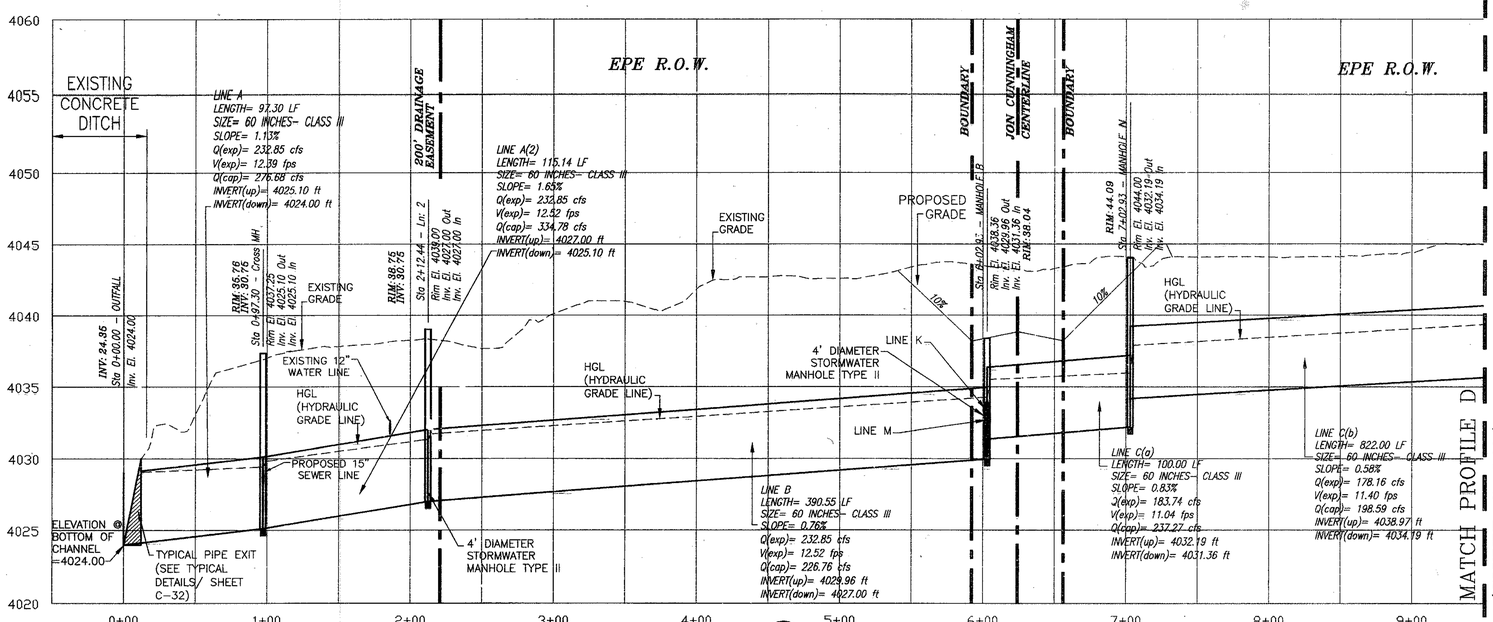
B STORM SEWER PROFILE
Scale: HORIZ. 1"=50' VERT. 1"=5'



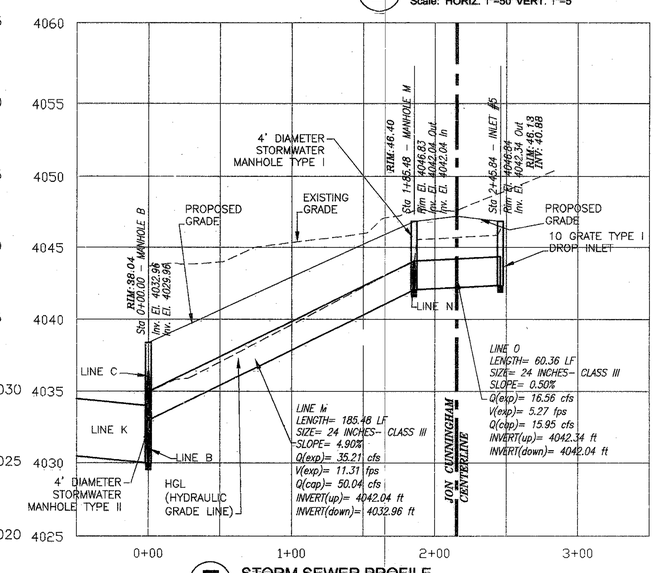
C STORM SEWER PROFILE
Scale: HORIZ. 1"=50' VERT. 1"=5'



D STORM SEWER PROFILE
Scale: HORIZ. 1"=50' VERT. 1"=5'



A STORM SEWER PROFILE
Scale: HORIZ. 1"=50' VERT. 1"=5'



E STORM SEWER PROFILE
Scale: HORIZ. 1"=50' VERT. 1"=5'

Release Dates:

Revisions:

Mod. PSB Redesign

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STORM SEWER PROFILES

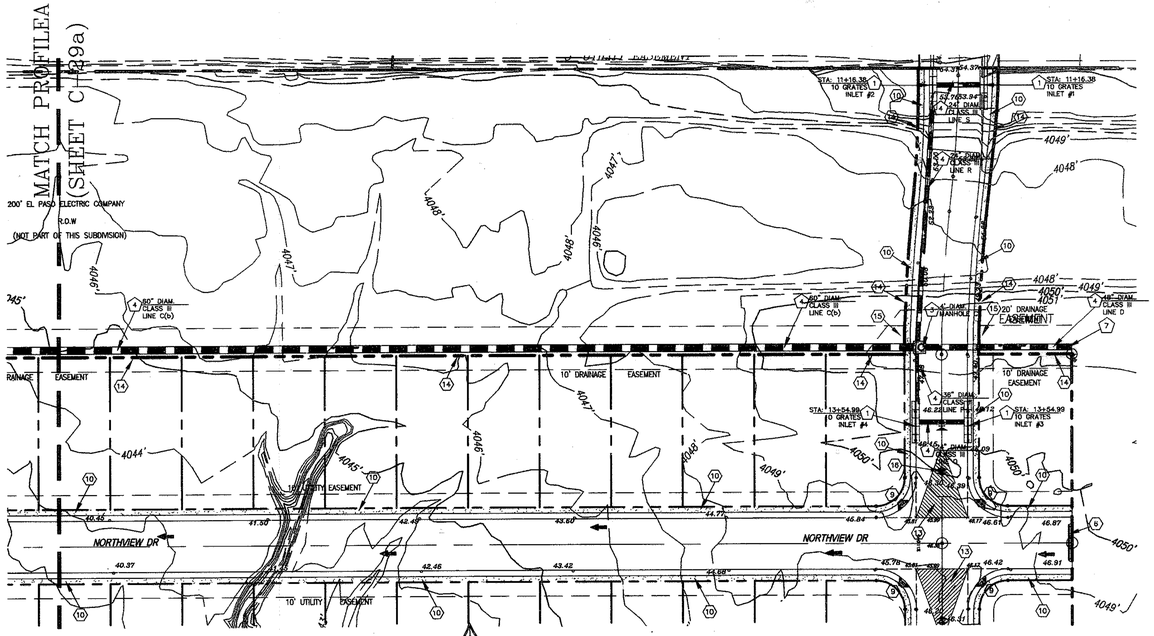
SANDSTONE RANCH UNIT 1

BEING A PORTION OF SEC. 21, BLOCK 81, TOWNSHIP 1 TEXAS AND PACIFIC RAILROAD CO. SURVEY CITY OF EL PASO, EL PASO COUNTY, TEXAS

Project #: J05-067	Design By: AFJ		
Plot Date: 1/30/07	Drawn By: JM		
SHEET: C-29a	Scale: AS NOTED		

FILE: Z:\J05-Work Directory\J05-067 SANDSTONE RANCH UNIT 1.dwg\AS BUILTS\J05-067 C29a- SWP PROFILE3.dwg

LAYOUT: C-29b STORM SEWER PROFILE



PLAN VIEW

SCALE: 1"=50'

KEYNOTE LEGEND (DRAINAGE)

1. PROPOSED DROP INLET TYPE I, # DENOTES NUMBER OF GRATES (SEE TYP. DETAILS)
2. STORMWATER MANHOLE TYPE I (SEE TYP. DETAILS)
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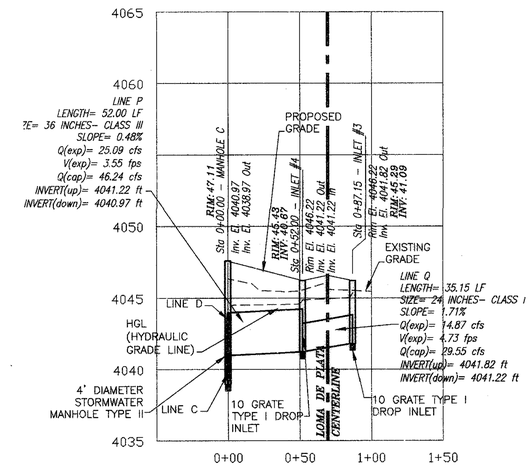
6. HEADWALL PIPE EXIT (SEE TYP. DETAILS)
7. CAP PROPOSED 48" R.C.P. STORMDRAIN PIPE FOR FUTURE EXTENSION
8. PROPOSED DROP INLET TYPE II, # DENOTES NUMBER OF GRATES (SEE TYP. DETAILS)

PIPE TABLE

Line ID	LineLength (ft)	PipeSize (in)	PipeSlope (%)	TotalFlow (cfs)	CapacFull (cfs)	Veloc (ft/s)	Inv ElevUp (ft)	HGLUp (ft)	Inv ElevDn (ft)	HGLDn (ft)	Bearing (d ' ")
LINE C(b)	822.00	60.00	0.58	178.16	198.59	11.40	4038.97	4042.70	4034.19	4037.89	N 01d 58' 43" E
LINE D	1180.00	48.00	1.06	100.00	147.85	9.64	4053.00	4055.96	4040.50	4043.72	N 01d 58' 43" E
LINE P	52.00	36.00	0.48	25.09	46.24	3.55	4041.22	4044.58	4040.97	4044.50	S 88d 09' 01" E
LINE Q	35.15	24.00	1.71	14.87	29.55	4.73	4041.82	4045.02	4041.22	4044.87	N 01d 58' 44" E
LINE R	183.74	36.00	5.55	53.08	157.06	8.28	4049.16	4051.48	4038.97	4043.82	N 84d 57' 16" W
LINE S	39.00	24.00	2.56	26.54	36.22	8.45	4050.16	4052.93	4049.16	4051.64	N 01d 58' 44" E



G STORM SEWER PROFILE

Scale: HORIZ. 1" = 50' VERT. 1"=5'

AS BUILT ELEVATION= 41.33

NOTES:

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BY: _____

DATE: 1/31/07

KEYNOTE LEGEND

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2. PROPOSED GUTTER LINE (6" STANDARD CURB AND GUTTER) SEE TYP. DETAILS
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4. PROPOSED TOP OF PAVEMENT SEE TYP. DETAILS
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8. PROPOSED GUTTER LINE (4" STANDARD ROLLED CURB) SEE TYP. DETAILS
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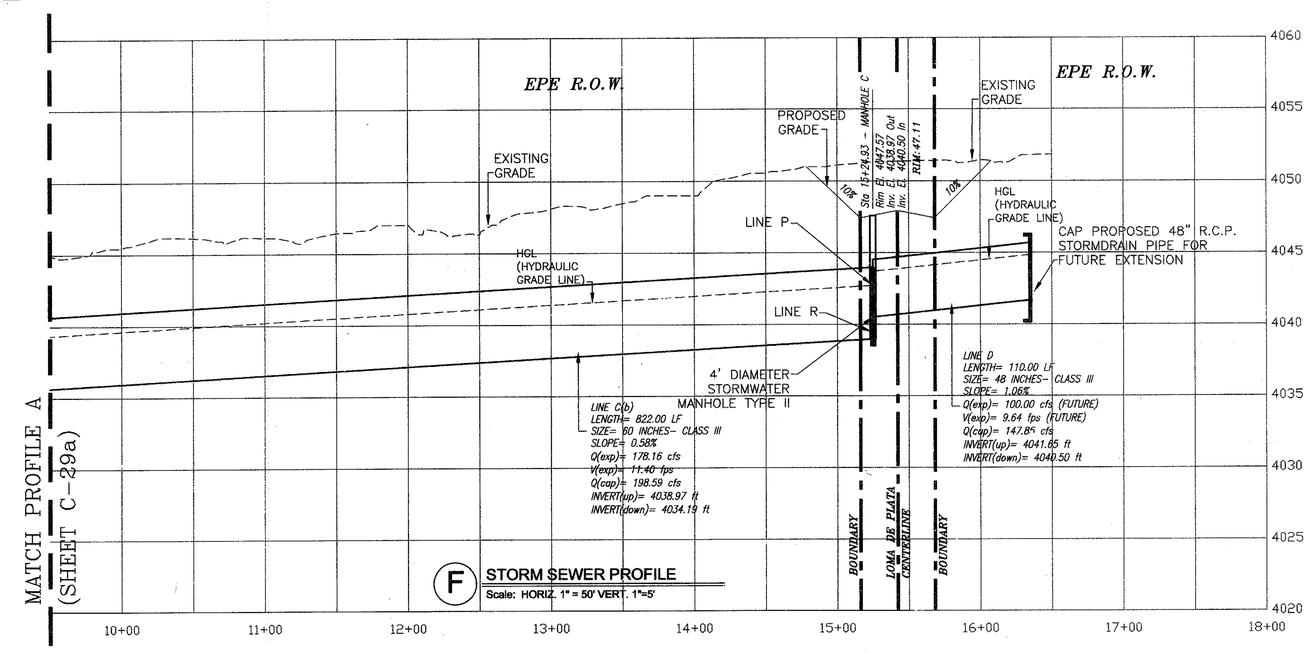
11. 5' SIDEWALK SEE TYP. DETAILS
12. TYPICAL PAVEMENT SECTION SEE TYP. DETAILS
13. 50' TRANSITION FROM 2% CROWN TO MATCH PAVEMENT
14. ROCK SCREENWALL BY BUILDER (SEE TYP. DETAILS)
15. 18' WIDE WROUGHT IRON GATE (SEE TYP. DETAILS)
16. HIGH POINT
17. LOW POINT

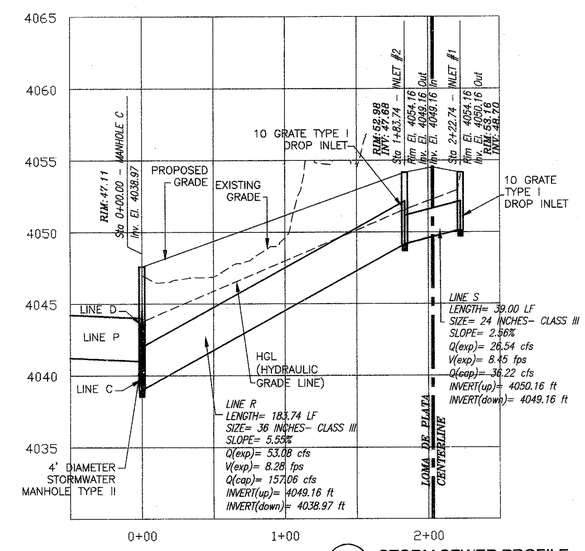
47.45 PROPOSED TOP OF CURB @ PC,PT (FG @ BACK OF SIDEWALK)

46.67 PV PROPOSED TOP OF PAVEMENT



F STORM SEWER PROFILE

Scale: HORIZ. 1" = 50' VERT. 1"=5'



H STORM SEWER PROFILE

Scale: HORIZ. 1" = 50' VERT. 1"=5'

Release Dates:

Revisions:

Mod PSB Redesign

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1/31/07

STATE OF TEXAS S.B. MASOUD

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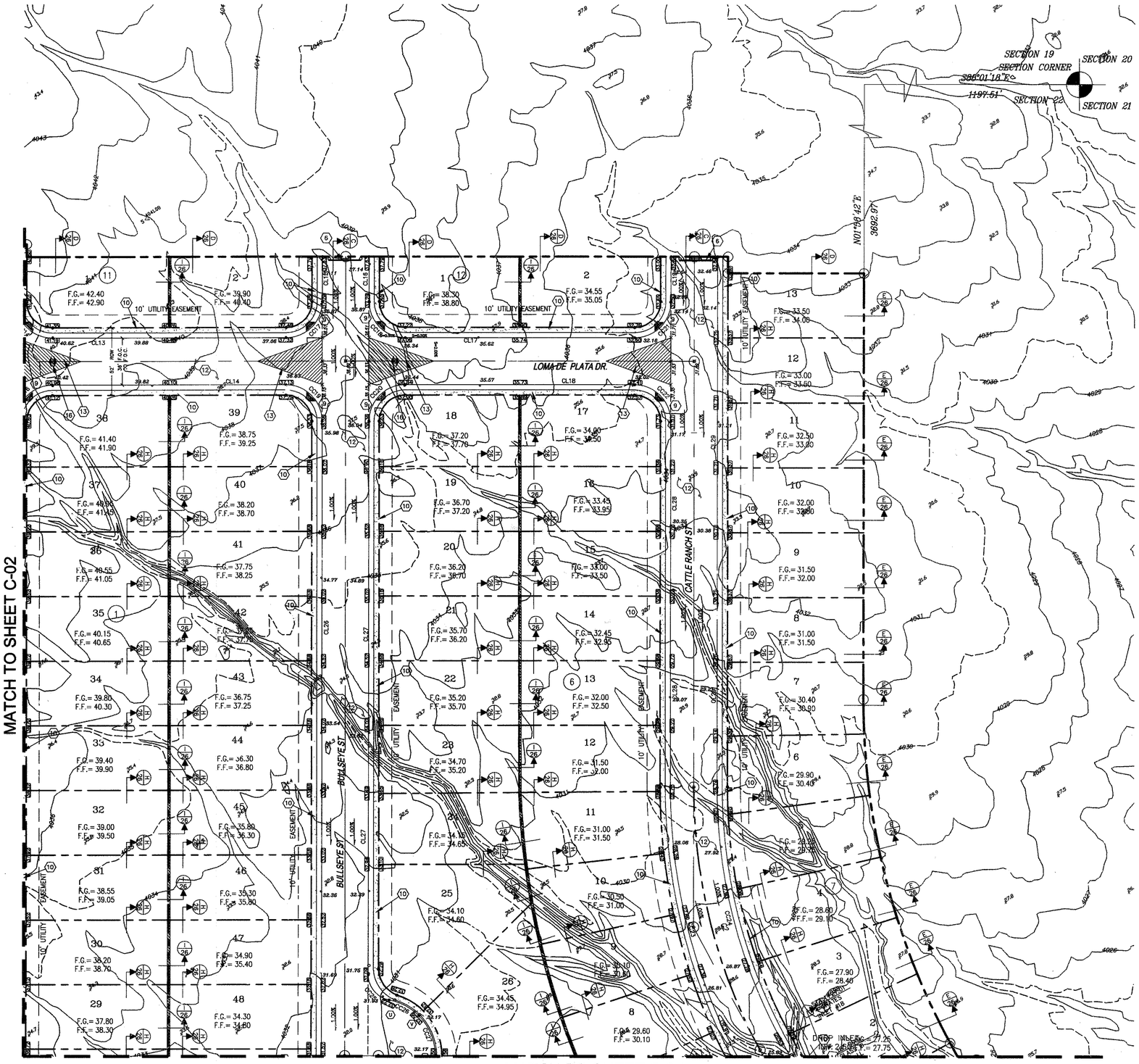
STORM SEWER PROFILES

SANDSTONE RANCH UNIT 1

BEING A PORTION OF SEC. 21, BLOCK 81, TOWNSHIP 1 TEXAS AND PACIFIC RAILROAD CO. SURVEY CITY OF EL PASO, EL PASO COUNTY, TEXAS

Project #: J05-067	Design By: AFJ
Plot Date: 1/30/07	Drawn By: JM
SHEET: C-29b	Scale: AS NOTED

FILE: Z:□J05-Work Directory□J05-067 SANDSTONE RANCH UNIT 1□dwg□AS BUILTS□J05-067 C29b- SWP PROFILE r3.dwg



KEYNOTE LEGEND

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6. TYPICAL DEAD END SIGN W/ GUARDRAIL (SEE TYP. DETAILS)
7. PROPOSED TOP OF CURB (4" STANDARD ROLLED CURB) SEE TYP. DETAILS
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9. PROPOSED HANDICAP RAMP SEE TYP. DETAILS
10. 4' SIDEWALK SEE TYP. DETAILS
11. 5' SIDEWALK SEE TYP. DETAILS
12. TYPICAL PAVEMENT SECTION SEE TYP. DETAILS
13. 50' TRANSITION FROM 2% CROWN TO MATCH PAVEMENT
14. 6' ROCK SCREENWALL BY DEVELOPER (SEE TYP. DETAILS)
15. 18' WIDE WROUGHT IRON GATE (SEE TYP. DETAILS)
16. HIGH POINT
17. LOW POINT

47.45 PROPOSED TOP OF CURB @ PC,PT (FG @ BACK OF SIDEWALK)

46.67 PV PROPOSED TOP OF PAVEMENT

LEGEND

11.56 SW – SPOT ELEVATIONS

TP– TOP OF PAVEMENT
GU– GUTTER
FL– FLOW LINE
FG– FINISHED GRADE
TC– TOP OF CURB
WA– ELEVATION TOP OF WALL
CO– TOP OF CONCRETE
SW– TOP OF SIDEWALK
EG– EXISTING GRADE
NG– NATURAL GRADE (EXISTING)
TRW– TOP OF RETAINING ON WALL
BW– FG @ BOTTOM OF WALL
TW– TOP OF WALL
EXISTING MINOR CONTOUR
3775 EXISTING MAJOR CONTOUR
PROPOSED MINOR CONTOUR
3780 PROPOSED MAJOR CONTOUR
RETAINING WALL
SILT FENCE
WATERSHED
SURFACE DRAINAGE
"X" POINT FLOW
HIGH POINT
LOW POINT
PERM. ELEV. MARKER
STORM DRAINAGE PIPE
PROPERTY LINE
EASEMENT
RCL ROAD CENTERLINE
WAT WATER LINE
SS SEWER LINE
GAS GAS LINE
ELT ELECTRIC SERVICE
TEL TELEPHONE SERVICE
SWD STORMWATER DRAIN
CHAINLINK FENCE
BARBWIRE FENCE
GUARDRAIL FENCE
ROCKWALL (Non-Retain.)
IRRIGATION VALVE
FIRE HYDRANT
LIGHT POLE
TELEPHONE MANHOLE
TEL TELEPHONE BOX
UTILITY POLE
GP GUARD POST
EB ELECTRIC BOX
SIGN POST
SURVEY MONUMENT
CITY MONUMENT
MBDU MAIL BOX DELIVERY UNIT

KEYNOTE LEGEND (DRAINAGE)

1. PROPOSED DROP INLET TYPE I, # DENOTES NUMBER OF GRATES (SEE TYP. DETAILS)
2. STORMWATER MANHOLE TYPE I (SEE TYP. DETAILS)
3. STORMWATER MANHOLE TYPE II (SEE TYP. DETAILS)
4. TYPICAL REINFORCED CONCRETE PIPE (# DENOTES DIAMETER)
5. TYPICAL PIPE EXIT (PIPE TO EXIT AT A 30 DEGREE ANGLE FROM THE EXISTING DRAINAGE CHANNEL CENTERLINE)
6. HEADWALL PIPE EXIT (SEE TYP. DETAILS)
7. CAP PROPOSED 48" R.C.P. STORMDRAIN PIPE FOR FUTURE EXTENSION
8. PROPOSED DROP INLET TYPE II, # DENOTES NUMBER OF GRATES (SEE TYP. DETAILS)

N

GRADING PLAN
SCALE: 1" = 40'

LEGAL DESCRIPTION:
BEING A PORTION OF SEC. 21, BLOCK 81, TOWNSHIP 1, TEXAS AND PACIFIC RAILWAY COMPANY SURVEYS, CITY OF EL PASO, EL PASO COUNTY, TEXAS 38.73± ACRES

SURVEY NOTES:
SUBJECT PARCELS ARE LOCATED WITHIN ZONE "C" AS DETAILED ON CITY OF EL PASO FLOOD INSURANCE RATE MAP NO. 480214 0014D, DATED AUGUST 5, 1991. ZONE "C" INDICATES AREAS OF MINIMAL FLOODING.

BENCHMARK: FOUND TXDOT BRASS CAP SECTION CORNERS 19, 20, 22, AND 21.
ELEVATION: 4033.22 (NVGD DATUM)
(SUBTRACT 8.462 TO CONVERT TO CITY DATUM)

AS BUILT ELEVATION= 41.33

NOTES:
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BY: _____

DATE: 1/31/07

Release Dates:
9/2/05
Revisions:
10/28/05
11/28/05 (CEP REDS)

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1/31/07
S.B. MASOUD
70774

Del Rio Engineering, Inc.
P.O. Box 220251 El Paso, Texas 79913 915/833-2400

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GRADING PLAN (SHEET 3 OF 5)

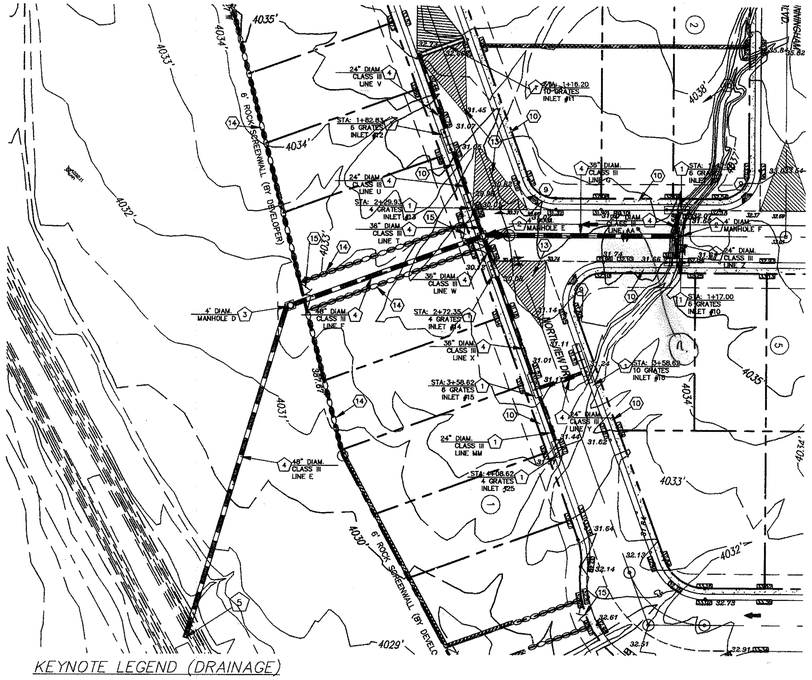
SANDSTONE RANCH UNIT 1

BEING A PORTION OF SEC. 21, BLOCK 81, TOWNSHIP 1
TEXAS AND PACIFIC RAILROAD CO. SURVEY
CITY OF EL PASO, EL PASO COUNTY, TEXAS

Project #:	Design By:
J05-067	AFJ
Plot Date: 1/30/07	Drawn By: JM
SHEET: C-03	Scale: 1" = 40'

FILE: Z:\J05-WORK DIRECTORY\J05-067 SANDSTONE RANCH UNIT 1\dwg\AS BUILTS\J05-067 C03-GRADING 2.dwg
LAYOUT: C03-GRADING PLAN
ACOMA ST

LAYOUT: C-30a PROFILE STORM SEWER



PLAN VIEW

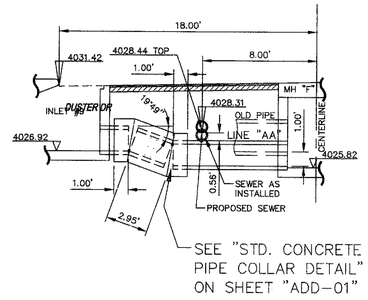
SCALE: 1"=50'

KEYNOTE LEGEND (DRAINAGE)

1. PROPOSED DROP INLET TYPE I, # DENOTES NUMBER OF GRATES (SEE TYP. DETAILS)
2. STORMWATER MANHOLE TYPE I (SEE TYP. DETAILS)
3. STORMWATER MANHOLE TYPE II (SEE TYP. DETAILS)
4. TYPICAL REINFORCED CONCRETE PIPE (# DENOTES DIAMETER)
5. TYPICAL PIPE EXIT (PIPE TO EXIT AT A 30 DEGREE ANGLE FROM THE EXISTING DRAINAGE CHANNEL CENTERLINE)
6. HEADWALL PIPE EXIT (SEE TYP. DETAILS)
7. CAP PROPOSED 48" R.C.P. STORMDRAIN PIPE FOR FUTURE EXTENSION
8. PROPOSED DROP INLET TYPE II, # DENOTES NUMBER OF GRATES (SEE TYP. DETAILS)

PIPE TABLE

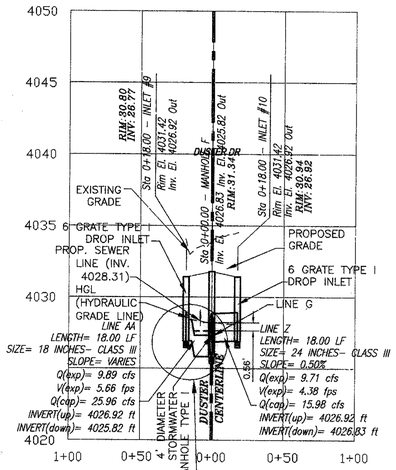
Line ID	LineLength (ft)	PipeSize (in)	PipeSlope (%)	TotalFlow (cfs)	CapacFull (cfs)	Veloc (ft/s)	Inv ElevUp (ft)	HGLUp (ft)	Inv ElevDn (ft)	HGLDn (ft)	Bearing (d' ")
LINE E	241.88	48.00	1.09	108.51	150.10	8.64	4020.64	4024.50	4018.00	4023.50	N 71d 23' 19" W
LINE F	145.65	48.00	1.00	108.51	143.67	9.61	4023.30	4026.38	4021.84	4025.66	N 18d 01' 17" W
LINE G	135.35	36.00	1.86	19.60	91.00	3.16	4025.82	4028.01	4023.30	4027.96	N 01d 58' 24" E
LINE W	21.00	36.00	0.76	48.99	58.24	7.62	4024.86	4027.62	4024.70	4027.33	N 71d 59' 51" E
LINE X	86.41	36.00	1.26	36.34	74.90	5.20	4025.95	4028.78	4024.86	4028.56	N 71d 59' 51" E
LINE Y	36.00	24.00	0.56	19.81	16.86	6.31	4027.15	4029.14	4026.95	4029.48	N 18d 01' 17" W
LINE T	23.00	30.00	1.13	39.92	43.61	8.13	4024.66	4027.56	4024.40	4026.96	S 71d 59' 51" W
LINE U	45.38	24.00	1.52	26.01	27.89	8.28	4026.75	4029.46	4026.06	4028.58	S 71d 59' 51" W
LINE V	62.00	24.00	2.40	13.19	35.06	4.38	4028.94	4030.68	4027.45	4030.52	S 71d 59' 51" W
LINE Z	18.00	24.00	0.50	9.71	15.98	4.18	4026.92	4028.06	4026.83	4028.25	S 88d 01' 17" E
LINE AA	18.00	18.00	6.11	9.89	25.96	5.66	4026.92	4028.44	4025.82	4028.21	N 88d 01' 17" W
LINE MM	50.00	24.00	0.84	9.11	20.73	2.90	4027.37	4029.86	4026.95	4029.77	N 71d 59' 51" E



SEE "STD. CONCRETE PIPE COLLAR DETAIL" ON SHEET "ADD-01"

DROP CONNECTION DETAIL

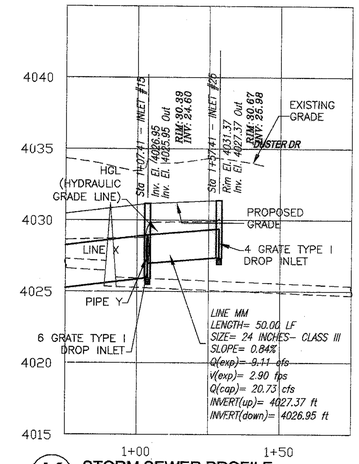
Scale: NTS



SEE DROP CONNECTION DETAIL

J STORM SEWER PROFILE

Scale: HORIZ. 1"=50' VERT. 1"=5'



K STORM SEWER PROFILE

Scale: HORIZ. 1"=50' VERT. 1"=5'

KEYNOTE LEGEND

1. PROPOSED TOP OF CURB (6" STANDARD CURB AND GUTTER) SEE TYP. DETAILS
2. PROPOSED GUTTER LINE (6" STANDARD CURB AND GUTTER) SEE TYP. DETAILS
3. EXISTING GRADE LINE
4. PROPOSED TOP OF PAVEMENT SEE TYP. DETAILS
5. PROPOSED TEMPORARY EARTHEN BERM SEE TYP. DETAILS
6. TYPICAL DEAD END SIGN W/ GUARDRAIL (SEE TYP. DETAILS)
7. PROPOSED TOP OF CURB (4" STANDARD ROLLED CURB) SEE TYP. DETAILS
8. PROPOSED GUTTER LINE (4" STANDARD ROLLED CURB) SEE TYP. DETAILS
9. PROPOSED HANDICAP RAMP SEE TYP. DETAILS
10. 4' SIDEWALK SEE TYP. DETAILS
11. 5' SIDEWALK SEE TYP. DETAILS
12. TYPICAL PAVEMENT SECTION SEE TYP. DETAILS
13. 50' TRANSITION FROM 2% CROWN TO MATCH PAVEMENT
14. ROCK SCREENWALL BY BUILDER (SEE TYP. DETAILS)
15. 18' WIDE WROUGHT IRON GATE (SEE TYP. DETAILS)
16. HIGH POINT
17. LOW POINT

47.45 PROPOSED TOP OF CURB @ PC,PT (FG @ BACK OF SIDEWALK)

46.67 PV / PROPOSED TOP OF PAVEMENT

AS BUILT ELEVATION= 41.33

NOTES:

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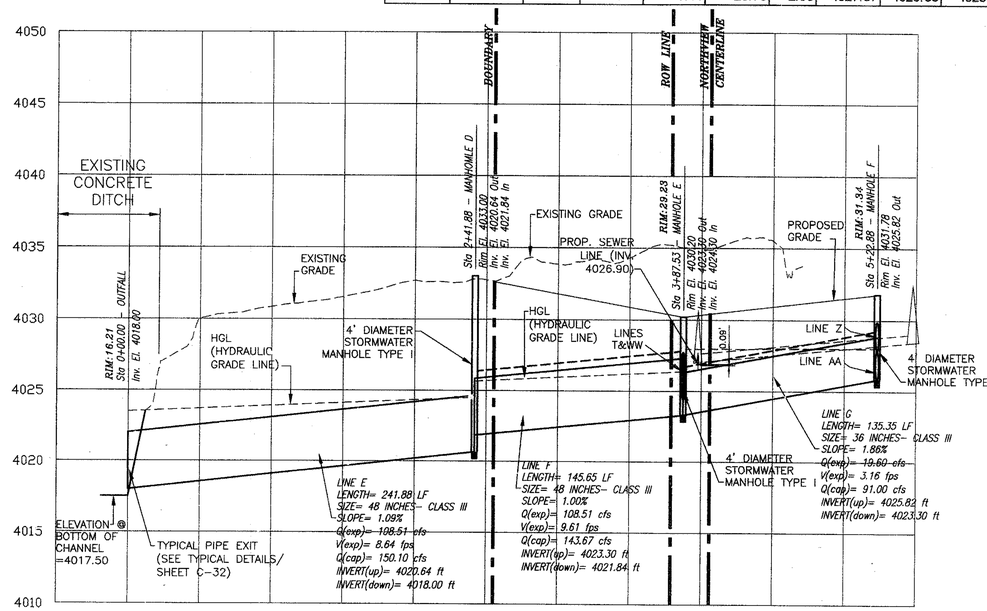
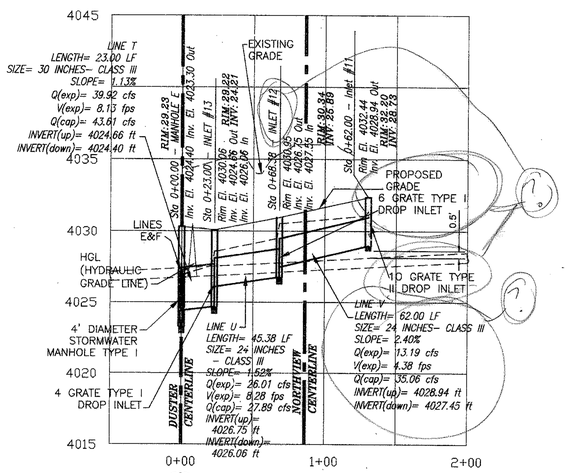
BY: [signature]

DATE: 1/31/07



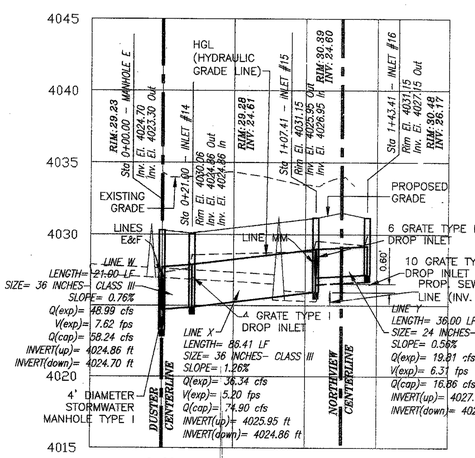
I STORM SEWER PROFILE

Scale: HORIZ. 1"=50' VERT. 1"=5'



L STORM SEWER PROFILE

Scale: HORIZ. 1"=50' VERT. 1"=5'



M STORM SEWER PROFILE

Scale: HORIZ. 1"=50' VERT. 1"=5'

Release Dates:

Revisions:

Mod PSB Redesign (3/29/06)

CITY REDLINES (3/30/06)

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1/31/07

S.B. MASOUD 70774

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STORM SEWER PROFILES

SANDSTONE RANCH UNIT 1

BEING A PORTION OF SEC. 21, BLOCK 81, TOWNSHIP 1

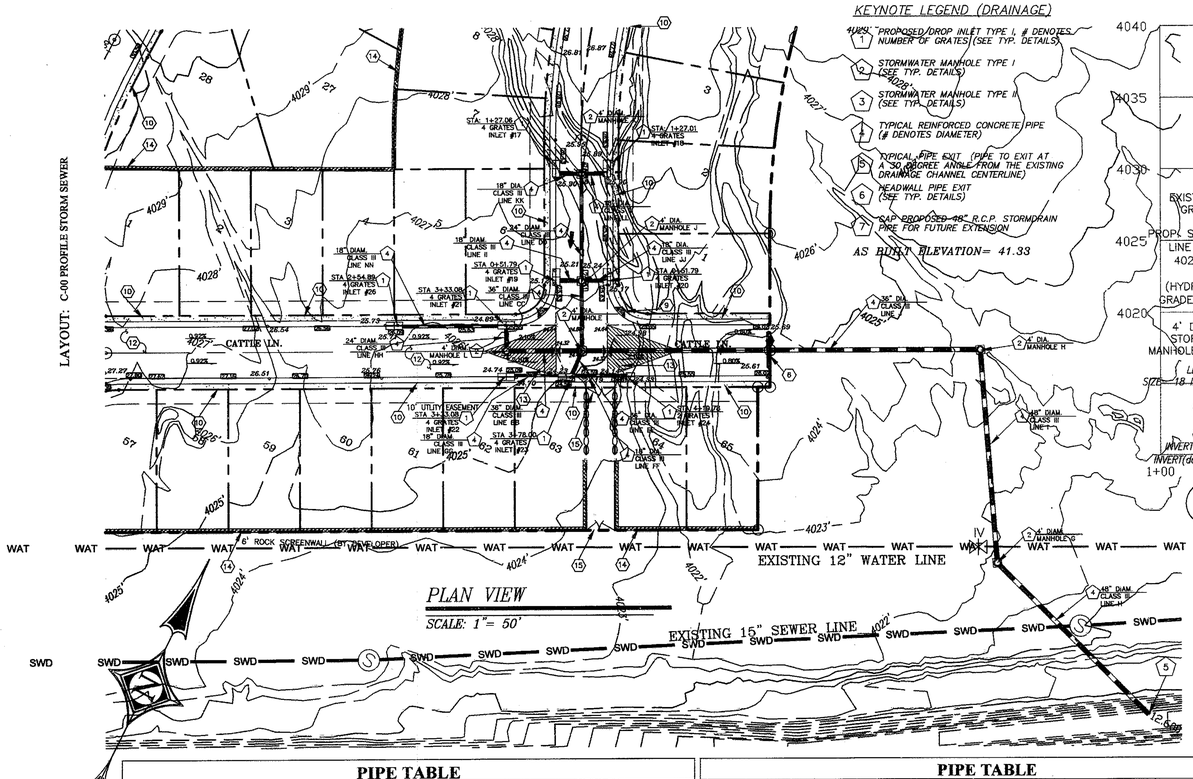
TEXAS AND PACIFIC RAILROAD CO. SURVEY

CITY OF EL PASO, EL PASO COUNTY, TEXAS

Project #:	Design By:	Scale:
J05-067	AFJ	AS NOTED
Plot Date: 1/30/07	Drawn By: JM	
SHEET: C-30a		

FILE: Z:\05-WORK DIRECTORY\05-067 SANDSTONE RANCH UNIT 1\dwg\AS BUILTS\05-067 C30a- SWP PROFILE rev4.dwg

LAYOUT: C-00 PROFILE STORM SEWER



PLAN VIEW

SCALE: 1"= 50'

KEYNOTE LEGEND (DRAINAGE)

4WSL PROPOSED/DROP INLET TYPE I, # DENOTES NUMBER OF GRATES (SEE TYP. DETAILS)

2 STORMWATER MANHOLE TYPE I (SEE TYP. DETAILS)

3 STORMWATER MANHOLE TYPE II (SEE TYP. DETAILS)

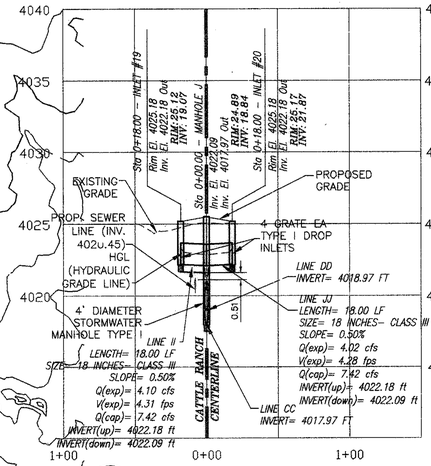
4 TYPICAL REINFORCED CONCRETE PIPE (# DENOTES DIAMETER)

5 TYPICAL PIPE EXIT (PIPE TO EXIT AT A 30° ANGLE FROM THE EXISTING DRAINAGE CHANNEL CENTERLINE)

6 HEADWALL PIPE EXIT (SEE TYP. DETAILS)

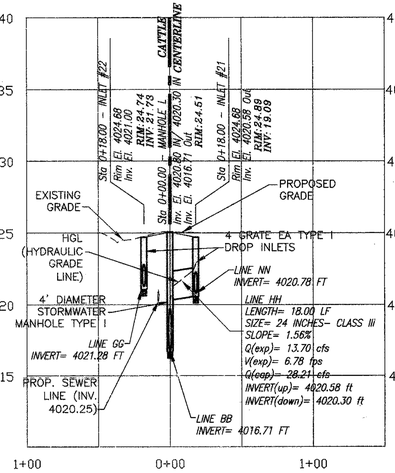
7 CAP PROPOSED 48" R.C.P. STORMDRAIN PIPE FOR FUTURE EXTENSION

AS BUILT ELEVATION= 41.33



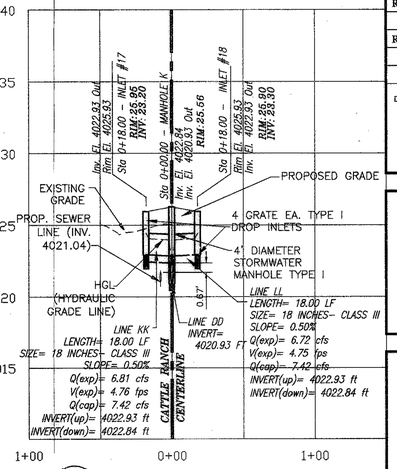
O STORM SEWER PROFILE

Scale: HORIZ. 1"=50' VERT. 1"=5'



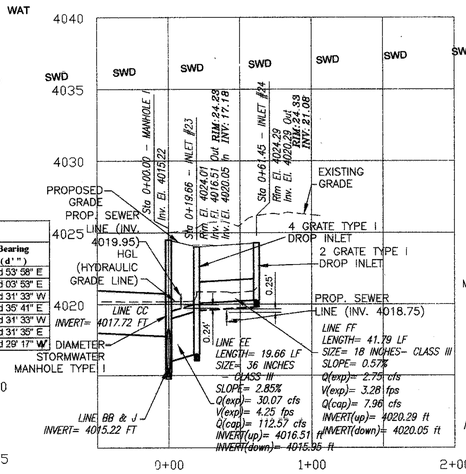
P STORM SEWER PROFILE

Scale: HORIZ. 1"=50' VERT. 1"=5'



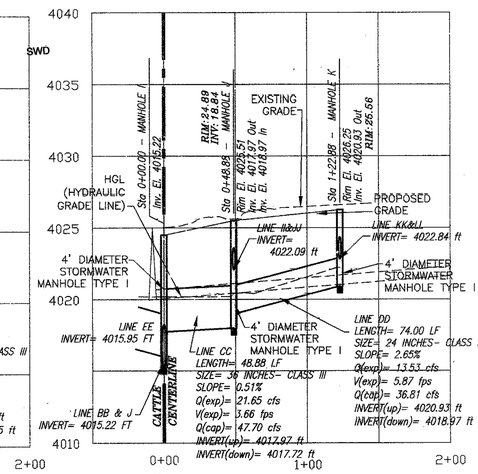
S STORM SEWER PROFILE

Scale: HORIZ. 1"=50' VERT. 1"=5'



Q STORM SEWER PROFILE

Scale: HORIZ. 1"=50' VERT. 1"=5'



R STORM SEWER PROFILE

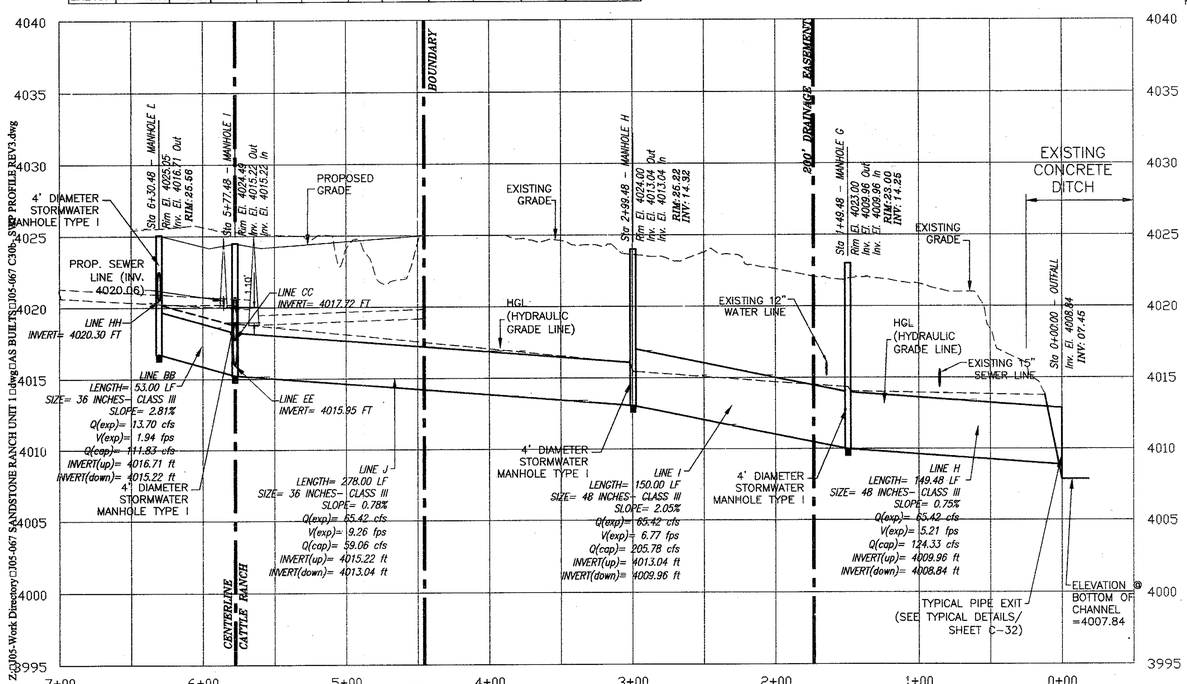
Scale: HORIZ. 1"=50' VERT. 1"=5'

PIPE TABLE

Line ID	LineLength (ft)	PipeSize (in)	PipeSlope (%)	TotalFlow (cfs)	CapacFull (cfs)	Veloc (ft/s)	Inv ElevUp (ft)	HGLUp (ft)	Inv ElevDn (ft)	HGLDn (ft)	Bearing (d' " ")
LINE H	149.48	48.00	0.75	65.42	124.33	5.21	4009.96	4014.03	4008.84	4013.72	N 71d 23' 19" W
LINE I	150.00	48.00	2.05	65.42	205.78	6.77	4013.04	4015.43	4009.96	4014.33	N 30d 56' 14" W
LINE J	278.00	36.00	0.78	65.42	59.06	9.26	4015.22	4018.85	4013.04	4016.04	S 63d 31' 25" W
LINE CC	48.88	36.00	0.51	21.65	47.70	3.66	4017.97	4020.20	4017.72	4020.18	N 26d 28' 27" W
LINE DD	74.00	24.00	2.65	13.53	36.81	5.87	4020.93	4022.23	4018.97	4020.43	N 26d 28' 27" W
LINE BB	53.00	36.00	2.81	13.70	111.83	1.94	4016.71	4020.21	4015.22	4020.18	S 63d 31' 29" W
LINE GG	45.43	18.00	1.06	10.07	10.79	6.76	4021.28	4022.49	4020.80	4021.95	N 64d 03' 53" E
LINE HH	18.00	24.00	1.56	13.70	28.21	6.78	4020.58	4022.35	4020.30	4021.28	N 26d 28' 25" W

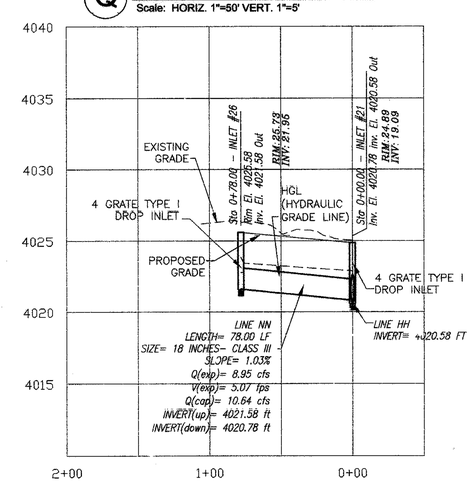
PIPE TABLE

Line ID	LineLength (ft)	PipeSize (in)	PipeSlope (%)	TotalFlow (cfs)	CapacFull (cfs)	Veloc (ft/s)	Inv ElevUp (ft)	HGLUp (ft)	Inv ElevDn (ft)	HGLDn (ft)	Bearing (d' " ")
LINE EE	19.66	36.00	2.85	30.07	112.57	4.25	4016.51	4020.22	4015.95	4020.18	S 01d 53' 58" E
LINE FF	41.79	18.00	0.57	2.75	7.96	3.28	4020.29	4020.93	4020.05	4020.89	N 64d 03' 53" E
LINE II	18.00	18.00	0.50	4.10	7.42	4.31	4022.18	4023.04	4022.09	4022.88	S 63d 31' 33" W
LINE JJ	18.00	18.00	0.50	4.02	7.42	4.28	4022.18	4023.03	4022.09	4022.88	N 63d 35' 41" E
LINE KK	18.00	18.00	0.50	6.81	7.42	4.76	4022.93	4024.06	4022.84	4023.97	S 63d 31' 33" W
LINE LL	18.00	18.00	0.50	6.72	7.42	4.75	4022.93	4024.05	4022.84	4023.96	N 63d 31' 35" E
LINE NN	78.00	18.00	1.03	8.95	10.64	5.07	4021.58	4023.42	4020.78	4022.86	S 63d 29' 17" W



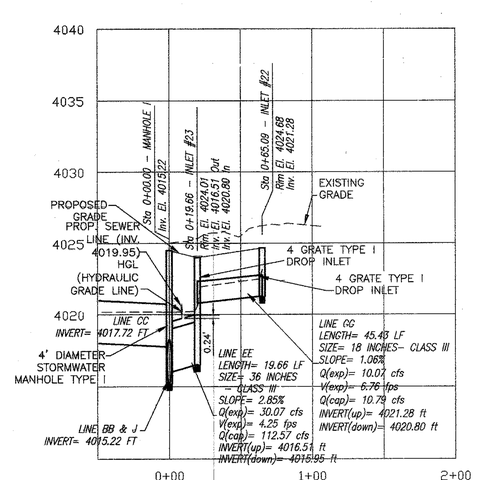
N STORM SEWER PROFILE

Scale: HORIZ. 1"=50' VERT. 1"=5'



T STORM SEWER PROFILE

Scale: HORIZ. 1"=50' VERT. 1"=5'



U STORM SEWER PROFILE

Scale: HORIZ. 1"=50' VERT. 1"=5'

Release Dates:

Revisions:

Mod PSB Redesign

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1/31/07

STATE OF TEXAS 70774 S.B. MASOUD

Del Rio Engineering, Inc.

P.O. Box 220251 El Paso, Texas 79913 915/833-2400

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BY: _____

DATE: 1/31/07

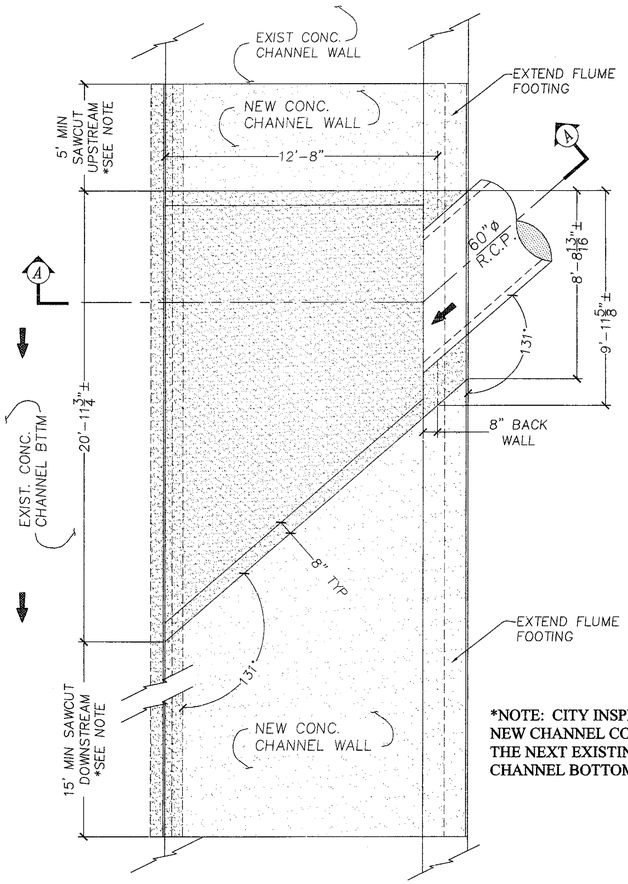
STORM SEWER PROFILES

SANDSTONE RANCH UNIT 1

BEING A PORTION OF SEC. 21, BLOCK 81, TOWNSHIP 1
TEXAS AND PACIFIC RAILROAD CO. SURVEY
CITY OF EL PASO, EL PASO COUNTY, TEXAS

Proje. #: J05-067	Design By: AFJ		
Plot Date: 1/30/07	Drawn By: JM		
SHEET: C-30 b	Scale: AS NOTED		

FILE: Z:\J05-Work Directory\J05-067 SANDSTONE RANCH UNIT 1\dwg\AS BUILTS\J05-067 C30b SWR PROFILE REV3.dwg



*NOTE: CITY INSPECTOR MAY REQUIRE THAT THE NEW CHANNEL CONCRETE BE EXTENDED TO THE NEXT EXISTING JOINT IN THE CHANNEL BOTTOM OR SIDEWALL

FLUME OUTLET PLAN VIEW

SCALE: NTS

Inlet ID	Invert Elev. (ft)	Rim Elev. (ft)	Depth (ft)
INLET 4	4041.22	4046.22	5.00
INLET 3	4041.82	4046.22	4.40
INLET 8	4030.51	4037.01	6.50
INLET 7	4031.01	4037.01	6.00
INLET 6	4042.34	4046.84	4.50
INLET 2	4049.16	4054.16	5.00
INLET 1	4050.16	4054.16	4.00
INLET 5	4042.34	4046.84	4.50
INLET 27	4039.00	4044.00	5.00
INLET 14	4024.86	4030.06	5.20
INLET 15	4025.95	4031.15	5.20
INLET 16	4027.15	4031.15	4.00
INLET 13	4024.66	4030.06	5.40
INLET 12	4026.75	4030.95	4.20
INLET 11	4026.95	4030.95	4.00
INLET 10	4026.92	4031.42	4.50
INLET 9	4026.92	4031.42	4.50
INLET 25	4027.37	4031.37	4.00
INLET 22	4021.08	4024.68	3.60
INLET 21	4020.58	4024.68	4.10
INLET 23	4016.51	4024.01	7.50
INLET 24	4020.29	4024.29	4.00
INLET 19	4021.68	4025.18	3.50
INLET 20	4021.68	4025.18	3.50
INLET 17	4022.43	4025.93	3.50
INLET 18	4022.43	4025.93	3.50
INLET 26	4021.58	4025.58	4.00

Inlet ID	Invert Elev. (ft)	Rim Elev. (ft)	Depth (ft)
MANHOLE A	4027.00	4039.00	12.00
MANHOLE B	4029.96	4038.36	8.40
MANHOLE N	4032.19	4044.00	11.81
MANHOLE M	4042.04	4046.83	4.79
MANHOLE D	4020.64	4033.00	12.36
MANHOLE E	4023.30	4030.20	6.90
MANHOLE F	4024.78	4031.78	7.00
MANHOLE G	4009.96	4023.00	13.04
MANHOLE H	4013.74	4024.00	10.26
MANHOLE I	4015.22	4024.49	9.27
MANHOLE J	4017.97	4025.51	7.54
MANHOLE K	4020.93	4026.25	5.32
MANHOLE L	4016.71	4025.05	8.34

NOTES:

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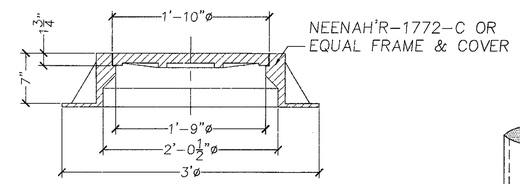
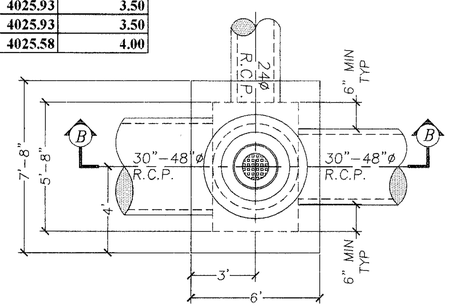
BY: _____

DATE: 1/31/07



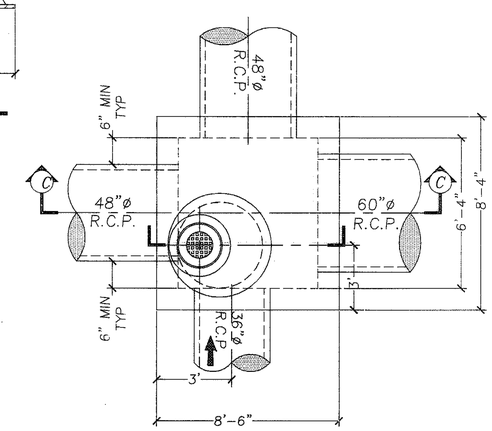
MANHOLE FRAME & COVER

SCALE: NTS



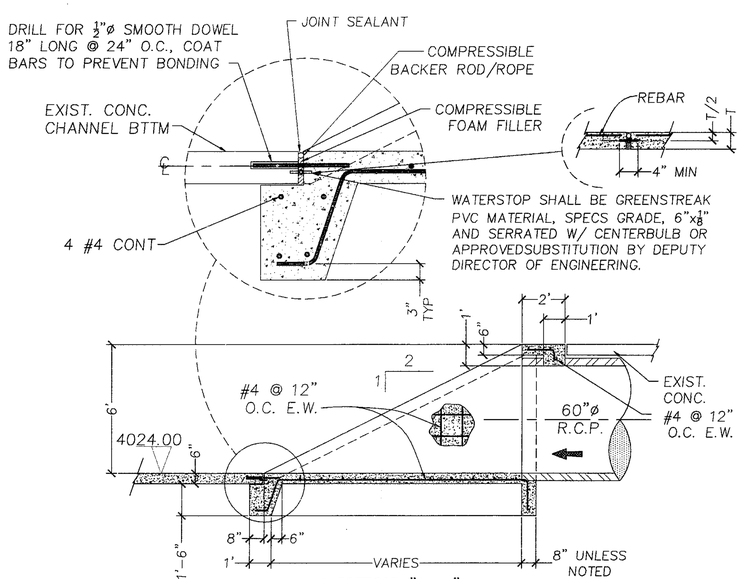
MANHOLE TYPE I PLAN VIEW

SCALE: NTS



MANHOLE TYPE II PLAN VIEW

SCALE: NTS



SECTION "A-A"

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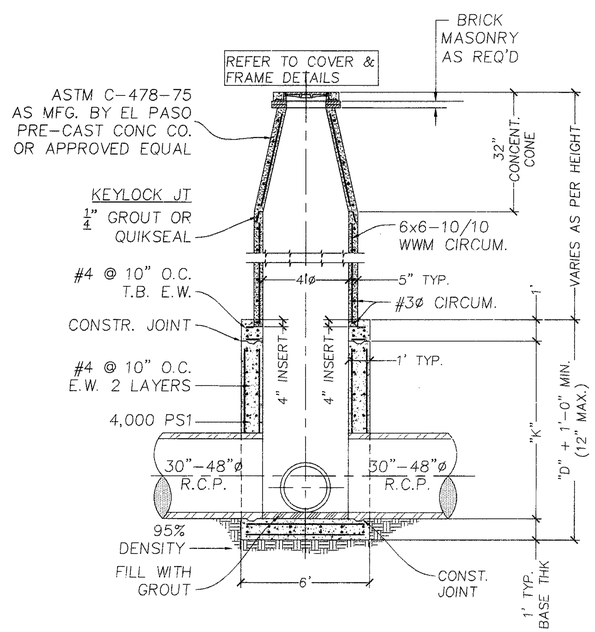
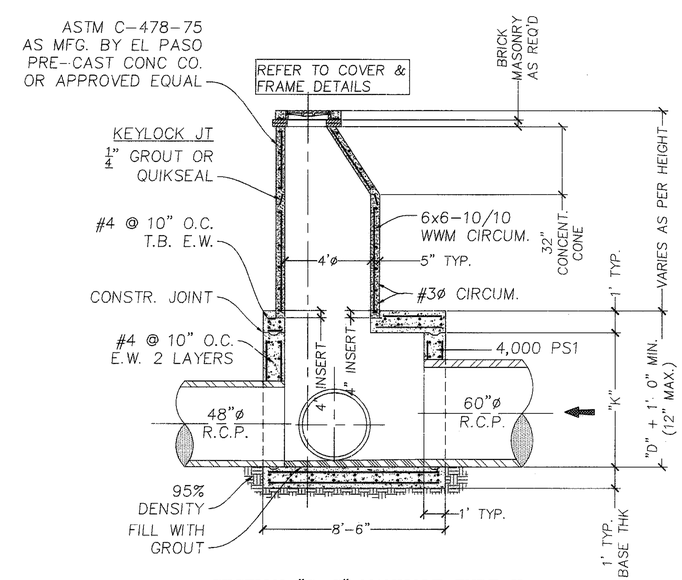


SECTION "B-B" MANHOLE TYPE I

SCALE: NTS



SECTION "C-C" MANHOLE TYPE II

SCALE: NTS

Release Dates:
10-27-05
Revisions:
12/12/05
-

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1/31/07

STATE OF TEXAS S.B. MASOUD 70774 PROFESSIONAL ENGINEER

DRE Del Rio Engineering, Inc.
P.O. Box 220251 El Paso, Texas 79913 915/833-2400

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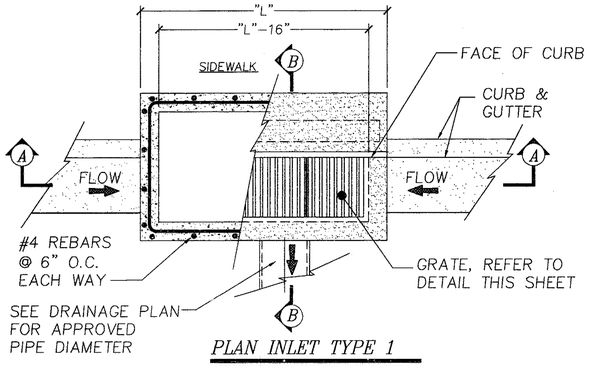
MANHOLE DETAILS

SANDSTONE RANCH UNIT 1
BEING A PORTION OF SEC. 21, BLOCK 61, TOWNSHIP 1, TEXAS AND PACIFIC RAILROAD COMPANY SURVEY
CITY OF EL PASO, EL PASO COUNTY, TEXAS

Project #: JO5-067	Design By: AFJ
Plot Date:	Drawn By: RAY
SHEET: C-31	Scale: NTS

LAYOUT:

FILE:



PLAN INLET TYPE 1

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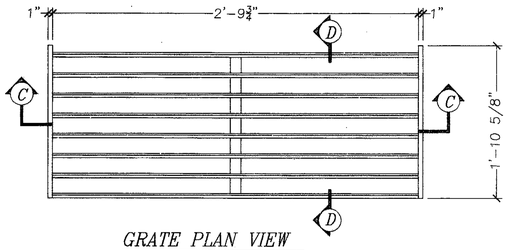
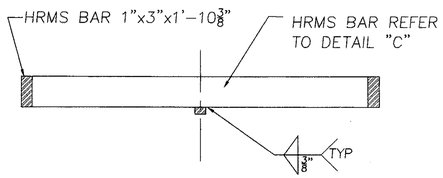


GRATE PLAN VIEW

SCALE: NTS

NO. OF GRATES	"L"	CAPACITY	BEAM	
			LENGTH	MINIMUM SIZES
1	3'-2 5/8"	9.84 CFS	2'-10"	W6X12, S4X13, MC 6X8.2
2	5'-1 1/8"	19.63 CFS	4'-7 1/8"	W6X12, S6X12.5 MC 6X15.1
3	7'-0 1/4"	29.69 CFS	6'-5 1/8"	W8X15, S7X15.3, MC 7X17.6
4	8'-9 7/8"	39.10 CFS	8'-3 7/8"	W9X18, S8X18.4, MC 10X21.9
5	10'-8"	48.72 CFS	10'-2"	W12X16, S8X21, MC 10X21.9
6	12'-6 5/8"	--	12'-0 5/8"	W12X19, S8X23, MC 10X25



SECTION "C-C"

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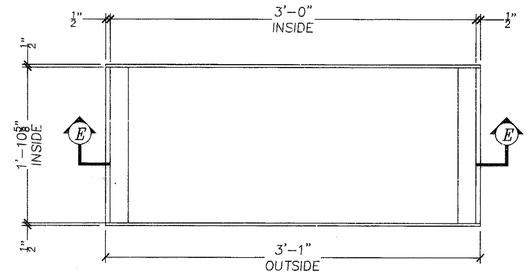
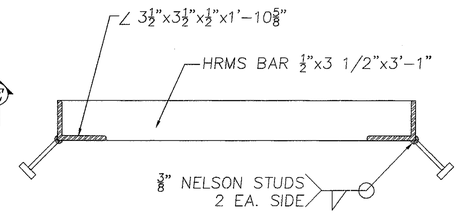


FRAME PLAN VIEW

SCALE: NTS



SECTION "E-E"

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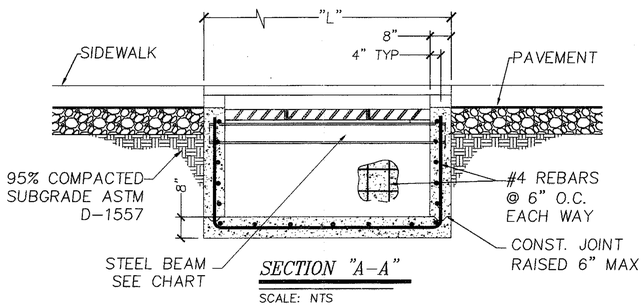
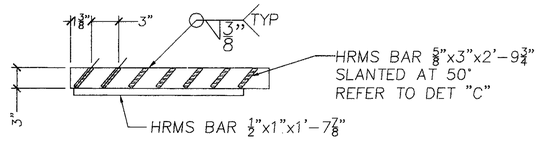


SECTION "A-A"

SCALE: NTS



SECTION "D-D"

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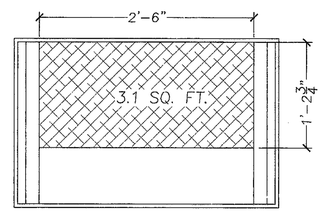
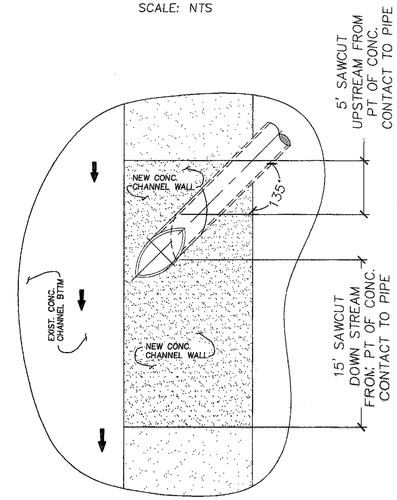


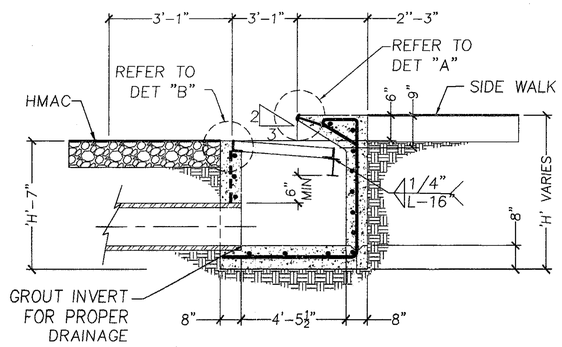
DRAIN OPENING PER GRATE

SCALE: NTS



PLAN VIEW

SCALE: NTS



SECTION "B-B"

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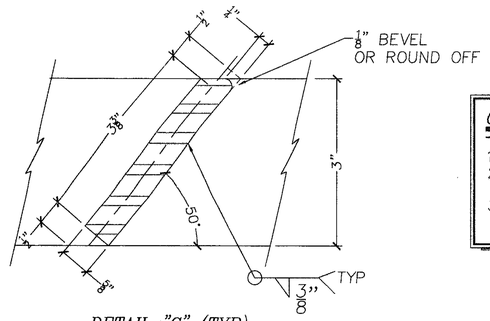
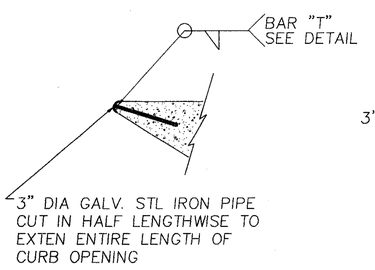


DETAIL "C" (TYP)

SCALE: NTS

GENERAL NOTES:

1. H = 20' MAXIMUM.
2. CONCRETE TO BE 3,000 PSI MIN. CORE TEST @ 28 DAYS.
3. GRATE TO BE PERPENDICULAR TO TRAFFIC.



DETAIL "A"

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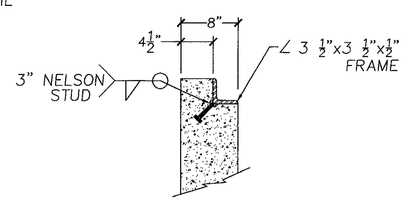

DETAIL "B"

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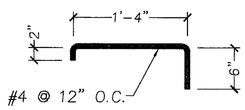
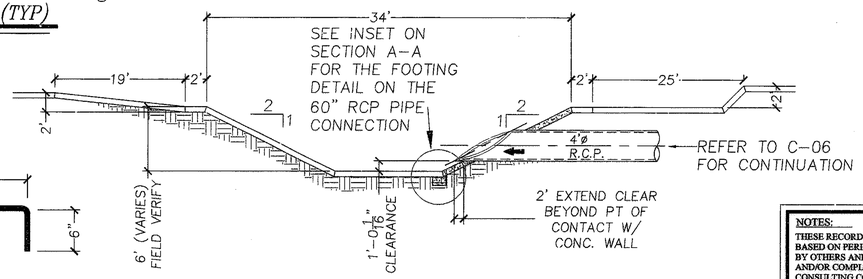


BAR "T"

SCALE: NTS



RCP PIPE DAYLIGHT INTO EXISTING CONCRETE DITCH

SCALE: NTS

NOTES:

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BY: _____

DATE: 1/31/07

Release Dates:
10-27-05
Revisions:
10-27-05
-

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1/31/07
STATE OF TEXAS
S.B. MASOUD
70774

DRE Del Rio Engineering, Inc.
P.O. Box 220251 El Paso, Texas 79913 915/833-2400

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STORM SEWER DETAILS

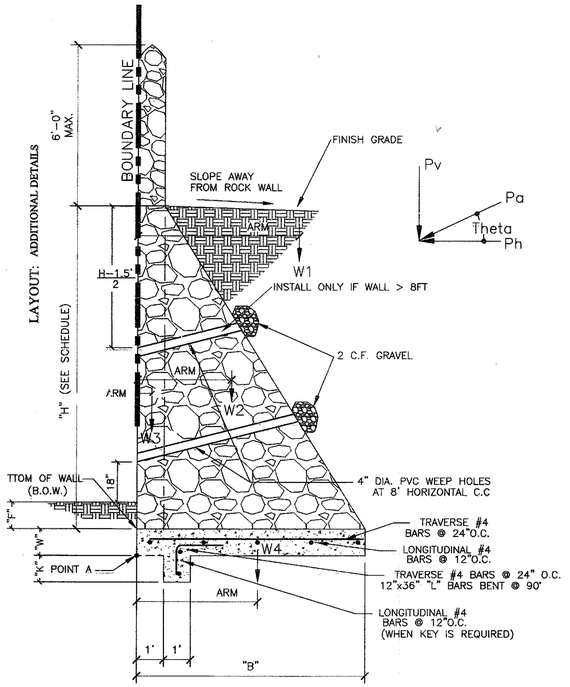
SANDSTONE RANCH UNIT 1

BEING A PORTION OF SEC. 21, BLOCK 61, TOWNSHIP 1, TEXAS AND PACIFIC RAILROAD COMPANY SURVEY
CITY OF EL PASO, EL PASO COUNTY, TEXAS

Project #: JO5-067	Design By: AFJ	Scale: NTS
Plot Date:	Drawn By: RAY	
SHEET: C-32		

LAYOUT:

FILE:



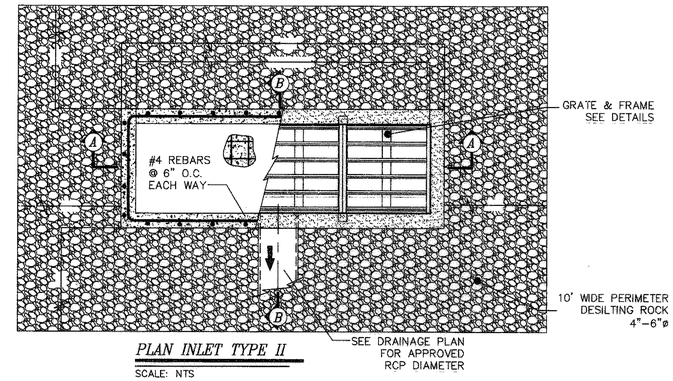
RETAINING WALL AT BOUNDARY LINE

SCALE: NTS

ROCK RETAINING WALL STABILITY ANALYSIS

1. THE NATURAL ROCK/STONE SHALL BE SOUND AND FREE OF LOOSE OF FRIABLE INCLUSION AND SHALL MEET REQUIRED STRENGTH AND DURABILITY FOR THE PROPOSED USE.
2. THE MORTAR SHALL BE ASTM C-270 TYPE S AND TO BE PROPORTIONED BY VOLUME AS FOLLOWS:
   - -PORTLAND CEMENT———1 PART
   - -HYDRATED LIME———1/4 PART
   - -SAND———3.5 PARTS
3. THE CONCRETE SHALL BE 3000 psi MINIMUM STRENGTH @ 28 DAYS.
4. REINFORCING STEEL SHALL MEET ASTM A615 GRADE 40–Fy=40,000PSI.
5. THE FOUNDATION SOIL SHALL BE COMPACTED TO 95% MAX. DENSITY AS PER ASTM D1557 OR FIRM UNDISTURBED EARTH.
6. NO VOIDS SHALL BE LEFT INSIDE THE ROCKWALL.
7. ANY CHANGES IN WALL DIRECTION, WALL HEIGHT OR FOOTING ELEVATION WILL REQUIRE ADDITIONAL DESIGN WORK.
8. THE BACKFILL MATERIAL SHALL BE COMPACTED AND CONSIST OF WELL-DRAINED SANDY-COARSE SOIL OR NATIVE SOIL OF FINE SILTY SANDS WITH LOW PLASTICITY.
9. ADDITIONAL SURCHARGE WILL REQUIRE ADDITIONAL DESIGN (BUILDING, SWIMMING POOLS, ADDITIONAL GRADED SLOPES, ETC.)
10. NO TREES, LANDSCAPING, OR ANY VEGETATION WITHIN FIVE FEET BEHIND THE RETAINING WALL.
11. THE BACKFILL DRAINAGE SHALL BE PROVIDED BY 4-INCH PVC LOCATED ON A HORIZONTAL DISTANCE OF 8 FEET O.C. AND A VERTICAL DISTANCE OF NO MORE THAN 4 FEET . THE BOTTOM ROW SHOULD BE NO MORE THAN 18" ABOVE THE TOP OF THE LOWER FINISH GRADE.
12. THE TOP ROW OF WEEP HOLES SHALL BE INSTALLED ONLY IF d > 8 FEET AND STAGGER SPACING THE BOTTOM ROW.
13. STONES 12" OR LARGER IN THE FIRST ROCK LAYER SHALL BE PLACED WITH A MINIMUM OF 6" EMBEDMENT TO FOUNDATION CONCRETE IN ORDER TO BOND FOUNDATION TO STONE MASONRY, AND MUST HAVE A 6" PROJECTION TO BOND WITH STONE CONSTRUCTION ABOVE.
14. ROCK RETAINING WALLS SHALL BE BUILT IN CONFORMANCE WITH SECTION 1415 AND OTHER APPLICABLE PARTS OF THE CITY OF EL PASO BUILDING CODE.

GENERAL: The retaining wall shall be designed as a gravity wall and should be proportioned such that there is no tensile stress at any point of the wall under the loading conditions, and in such a way that the overturning moment caused by the lateral pressure from the backfill is stabilized by the weight of the wall and the weight of the soil above the base of the wall.



PLAN INLET TYPE II

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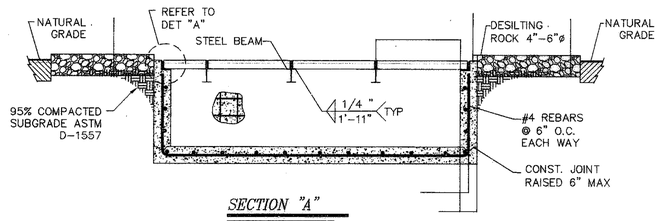
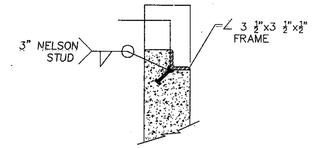


SECTION "A"

SCALE: NTS

TYPE II DROP INLET IN E.P.E. R.O.W.

SCALE: NTS



DETAIL "B"

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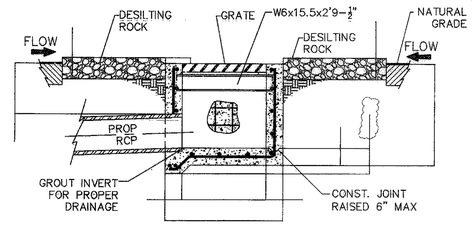

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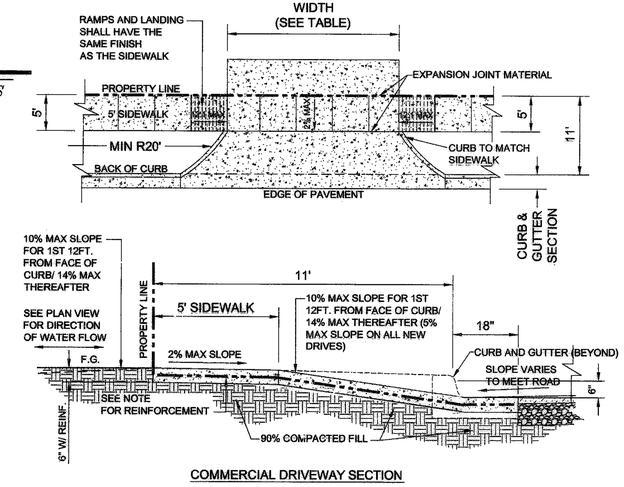

COMMERCIAL DRIVEWAY SECTION

NOTE:

USE ONLY 1/2" APPROVED EXPANSION JOINT MATERIAL

DRIVEWAY WIDTH	MIN	MAX
COMERCIAL/INDUSTRIAL	25'	35'

COMERCIAL/INDUSTRIAL REINFORCEMENT REQUIREMENTS:
6" CONC. WITH 6x6-6/6

COMMERCIAL DRIVEWAY DETAIL

SCALE: NTS

NOTES:

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BY: [signature]

DATE: 1/31/07

RETAINING WALL STABILITY ANALYSIS

CALCULATIONS

2.00 FOOT RETAINING WALL

Variables:

H=	2.00	(RETAINING HEIGHT) FT
B=	1.5	(BASE WIDTH) FT
SCREEN WALL HEIGHT=	6	FT
W=	1	(BASE HEIGHT) FT
F=	0	(BACKFILL HEIGHT) FT
K=	0	(KEY DEPTH) FT
Theta=	30	(Angle of Pressure) DEG
Coefficient of friction C(f)=	0.45	lb/ft2/ft

TABLE: C(f)= 0.5 Course-grained soil; C(f) = 0.45 Mixed-grained soil; C(f) = 0.4 Fine-grained soil

Angle of friction A(f) =	32	deg
Lateral earth pressure K(a) =	0.31	lb/ft2/ft

TABLE: K(a) = 0.25 to 0.50 for cohesionless soi; K(a) = 0.10 for cohesive soil

Passive earth pressure K(p) =	3.3	lb/ft2/ft

Kp=tan2(45+A/f/2)

TABLE: K(p) = 3 to 6 for cohesionless soil; K(p) = 2 for cohesive soil

Unit weights:

Sandy soil:	110.0	pcf
Rock:	135.0	pcf
Concrete:	145.0	pcf

Permsumptive safe bearing capacity of supporting soils = 2,500 PSF

Calculation:

Lateral pressure:	Pa =	153.6	lb/LF	Pa=1/2 Ka*W' H^2
Vertical pressure:	Pv =	76.7	lb/LF	
Horizontal pressure:	Ph =	132.9	lb/LF	
Passive pressure:	Pp =	341.37	lb/LF	Pp= 1/2(Kp*W'D^2 + 2*c1*100*Kp^.5*D

Vertical Loads:

	lb/liner ft	arm	Mo
W1 =	55.00	1.33	73.33
W2 =	67.50	1.17	78.75
W3 =	1,080.00	0.5	540.00
W4 =	217.50	0.75	163.13
W(Total) =	1,420.00		855.21

Overturning Moment

Mo = 132.89 ft-#

Resisting Moment

Mr = 970.30 ft-#

e = 0.19 B/6= 0.2500

Ixx= 0.28

This is acceptable with adequate safety factors.

Foundation pressures

Sum M at heel= Sum Mr-Sum Mo= 837.40 ft-lb/ft

Sum V = Wtotal + Pv= 1,496.73 ft-lb/ft

d= Sum M/ Sum V= 0.56 ft

e= 0.19 ft

Soil pressure(qmax) qmax qmin

qtoe(max)= 1758.19 lb/sqft

qheel(min)= 237.44 lb/sqft

Factor of safety against overturning = Mr/Mo = 7.30 >2 OK

Factor of safety against sliding =

(Cf *(Wtotal+Pv)+C*B)+Pp / Ph = 7.64 >1.5 OK Assume Cohesion=0

RETAINING WALL STABILITY ANALYSIS

CALCULATIONS

4.00 FOOT RETAINING WALL

Variables:

H=	4.00	(RETAINING HEIGHT) FT
B=	2.5	(BASE WIDTH) FT
SCREEN WALL HEIGHT=	6	FT
W=	1	(BASE HEIGHT) FT
F=	1	(BACKFILL HEIGHT) FT
K=	0	(KEY DEPTH) FT
Theta=	30	(Angle of Pressure) DEG
Coefficient of friction C(f)=	0.45	lb/ft2/ft

TABLE: C(f)= 0.5 Course-grained soil; C(f) = 0.45 Mixed-grained soil; C(f) = 0.4 Fine-grained soil

Angle of friction A(f) =	32	deg
Lateral earth pressure K(a) =	0.31	lb/ft2/ft

TABLE: K(a) = 0.25 to 0.50 for cohesionless soi; K(a) = 0.10 for cohesive soil

Passive earth pressure K(p) =	3.3	lb/ft2/ft

Kp=tan2(45+A/f/2)

TABLE: K(p) = 3 to 6 for cohesionless soil; K(p) = 2 for cohesive soil

Unit weights:

Sandy soil:	110.0	pcf
Rock:	135.0	pcf
Concrete:	145.0	pcf

Permsumptive safe bearing capacity of supporting soils = 2,500 PSF

Calculation:

Lateral pressure:	Pa =	613.8	lb/LF	Pa=1/2 Ka*W' H^2
Vertical pressure:	Pv =	306.9	lb/LF	
Horizontal pressure:	Ph =	531.6	lb/LF	
Passive pressure:	Pp =	1040.74	lb/LF	Pp= 1/2(Kp*W'D^2 + 2*c1*100*Kp^.5*D

Vertical Loads:

	lb/liner ft	arm	Mo
W1 =	330.00	2.00	660.00
W2 =	405.00	1.50	607.50
W3 =	1,350.00	0.5	675.00
W4 =	362.50	1.25	453.13
W(Total) =	2,447.50		2,395.63

Overturning Moment

Mo = 1,053.13 ft-#

Resisting Moment

Mr = 3,162.88 ft-#

e = 0.49 B/6= 0.4167

Ixx= 1.30

This is acceptable with adequate safety factors.

Foundation pressures

Sum M at heel= Sum Mr-Sum Mo= 2,099.74 ft-lb/ft

Sum V = Wtotal + Pv= 2,764.40 ft-lb/ft

d= Sum M/ Sum V= 0.76 ft

e= 0.49 ft

Soil pressure(qmax) qmax qmin

qtoe(max)= 2391.29 lb/sqft

qheel(min)= -187.77 lb/sqft

Factor of safety against overturning = Mr/Mo = 2.98 >2 OK

Factor of safety against sliding =

(Cf *(Wtotal+Pv)+C*B)+Pp / Ph = 4.29 >1.5 OK Assume Cohesion=0

RETAINING WALL STABILITY ANALYSIS

CALCULATIONS

5.00 FOOT RETAINING WALL

Variables:

H=	5.00	(RETAINING HEIGHT) FT
B=	3.5	(BASE WIDTH) FT
SCREEN WALL HEIGHT=	6	FT
W=	1	(BASE HEIGHT) FT
F=	1	(BACKFILL HEIGHT) FT
K=	1	(KEY DEPTH) FT
Theta=	30	(Angle of Pressure) DEG
Coefficient of friction C(f)=	0.45	lb/ft2/ft

TABLE: C(f)= 0.5 Course-grained soil; C(f) = 0.45 Mixed-grained soil; C(f) = 0.4 Fine-grained soil

Angle of friction A(f) =	32	deg
Lateral earth pressure K(a) =	0.31	lb/ft2/ft

TABLE: K(a) = 0.25 to 0.50 for cohesionless soi; K(a) = 0.10 for cohesive soil

Passive earth pressure K(p) =	3.3	lb/ft2/ft

Kp=tan2(45+A/f/2)

TABLE: K(p) = 3 to 6 for cohesionless soil; K(p) = 2 for cohesive soil

Unit weights:

Sandy soil:	110.0	pcf
Rock:	135.0	pcf
Concrete:	145.0	pcf

Permsumptive safe bearing capacity of supporting soils = 2,500 PSF

Formulas:

Vertical Loads (W) = Area X unit weight

Lateral pressure (Pa) = 1/2 Ka*W'H^2 (Coulomb's active force)

Overturning moment (Mo) = Pa (H/3)------ around point "A"

Resisting moment (Mr) = vertical loads X moment arm around point "A"

X = Mr - Mo / W total

Soil pressure= W/ B (1+6e/B)

" Factor of safety against overturning ≥ 2 = Mr/Mo

" Factor of safety against sliding ≥ 1.5 = (R+Pp)/Pa

Calculation:

Lateral pressure:	Pa =	935.5	lb/LF	Pa=1/2 Ka*W' H^2
Vertical pressure:	Pv =	417.7	lb/LF	
Horizontal pressure:	Ph =	723.5	lb/LF	
Passive pressure:	Pp =	2088.11	lb/LF	Pp= 1/2(Kp*W'D^2 + 2*c1*100*Kp^.5*D

Vertical Loads:

	lb/liner ft	arm	Mo
W1 =	687.50	2.67	1,833.33
W2 =	843.75	1.83	1,546.88
W3 =	1,485.00	0.5	742.50
W4 =	652.50	1.75	1,141.88
W(Total) =	3,668.75		5,264.58

Overturning Moment

Mo = 1,698.22 ft-#

Resisting Moment

Mr = 6,726.62 ft-#

e = 0.52 B/6= 0.5833

Ixx= 3.57

This is acceptable with adequate safety factors.

Foundation pressures

Sum M at heel= Sum Mr-Sum Mo= 5,028.41 ft-lb/ft

Sum V = Wtotal + Pv= 4,086.48 ft-lb/ft

d= Sum M/ Sum V= 1.23 ft

e= 0.52 ft

Soil pressure(qmax) qmax qmin

qtoe(max)= 2202.47 lb/sqft

qheel(min)= 132.66 lb/sqft

Factor of safety against overturning = Mr/Mo = 3.98 >2 OK

Factor of safety against sliding =

(Cf *(Wtotal+Pv)+C*B)+Pp / Ph = 5.44 >1.5 OK Assume Cohesion=0

Release Dates:
10/28/05
Revisions:
11/28/05
-

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1/31/07

SAL B. MASOUD 70774

Del Rio Engineering, Inc.
P.O. Box 220251 El Paso, Texas 79913 915/833-2400

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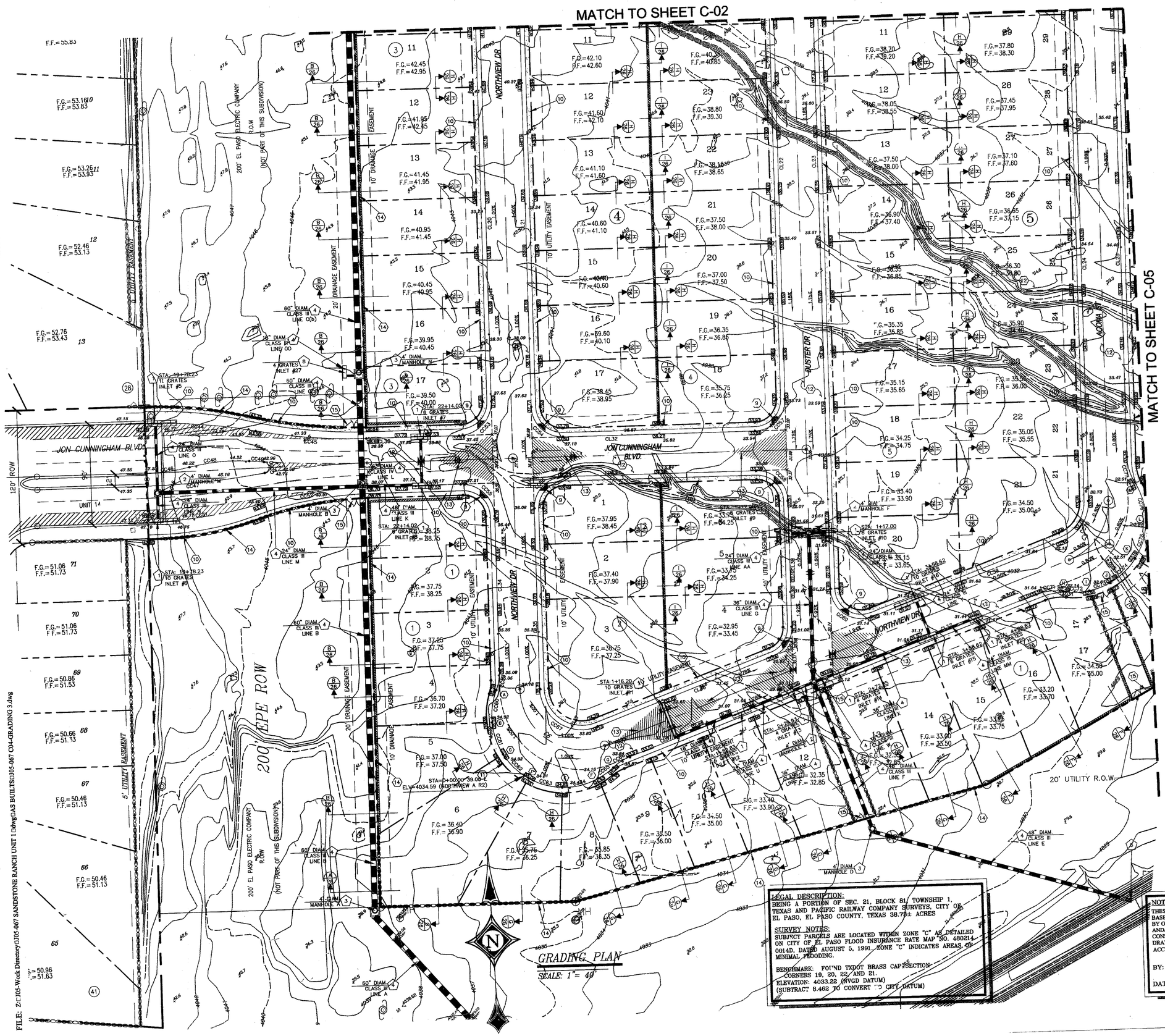
ADDITIONAL DETAILS

SANDSTONE RANCH UNIT 1

BEING A PORTION OF SEC. 21, BLOCK 81, TOWNSHIP 1
TEXAS AND PACIFIC RAILROAD CO. SURVEY
CITY OF EL PASO, EL PASO COUNTY, TEXAS

Project #: J05-067	Design By: AFJ	
Plot Date: 1/29/07	Drawn By: JM	
SHEET: C-33	Scale: AS NOTED	

FILE: Z:\J05-WORK DIRECTORY\J05-067 SANDSTONE RANCH UNIT 1\dwg\AS BUILTS\J05-067 C33-ADDITIONAL DETAILS.dwg



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LEGEND

11.56 SW – SPOT ELEVATIONS

TP– TOP OF PAVEMENT
GU– GUTTER
FL– FLOW LINE
FG– FINISHED GRADE
TC– TOP OF CURB
WA– ELEVATION TOP OF WALL
CO– TOP OF CONCRETE
SW– TOP OF SIDEWALK
EG– EXISTING GRADE
NG– NATURAL GRADE (EXISTING)
TRW– TOP OF RETAINING ON WALL
BW– FG @ BOTTOM OF WALL
TW– TOP OF WALL

- EXISTING MINOR CONTOUR
- 3775 – EXISTING MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- 3780 – PROPOSED MAJOR CONTOUR
- RETAINING WALL
- SILT FENCE
- WATERSHED
- SURFACE DRAINAGE
- "X" POINT FLOW
- HIGH POINT
- LOW POINT
- B.M. 3000CKG – PERM. ELEV. MARKER
- 36"RCP – STORM DRAINAGE PIPE
- PROPERTY LINE
- EASEMENT
- SWD – STORMWATER DRAIN
- CHAINLINK FENCE
- X – BARBWIRE FENCE
- GUARDRAIL FENCE
- ROCKWALL (Non-Retain.)
- IRRIGATION VALVE
- FIRE HYDRANT
- LIGHT POLE
- TELEPHONE MANHOLE
- TELEPHONE BOX
- UTILITY POLE
- GUARD POST
- EB – ELECTRIC BOX
- SIGN POST
- SURVEY MONUMENT
- CITY MONUMENT
- MBDU – MAIL BOX DELIVERY UNIT

KEYNOTE LEGEND

1. PROPOSED TOP OF CURB (6" STANDARD CURB AND GUTTER) SEE TYP. DETAILS
2. PROPOSED GUTTER LINE (6" STANDARD CURB AND GUTTER) SEE TYP. DETAILS
3. EXISTING GRADE LINE
4. PROPOSED TOP OF PAVEMENT SEE TYP. DETAILS
5. PROPOSED TEMPORARY EARTH'N BERM SEE TYP. DETAILS
6. TYPICAL DEAD END SIGN W/ GUARDRAIL (SEE TYP. DETAILS)
7. PROPOSED TOP OF CURB (4" STANDARD ROLLED CURB) SEE TYP. DETAILS
8. PROPOSED GUTTER LINE (4" STANDARD ROLLED CURB) SEE TYP. DETAILS
9. PROPOSED HANDICAP RAMP SEE TYP. DETAILS
10. 4' SIDEWALK SEE TYP. DETAILS
11. 5' SIDEWALK SEE TYP. DETAILS
12. TYPICAL PAVEMENT SECTION SEE TYP. DETAILS
13. 50' TRANSITION FROM 2% CROWN TO MATCH PAVEMENT
14. ROCK SCREENWALL BY BUILDER-HEIGHT VARIES (SEE TYPICAL DETAILS)
15. 18' WIDE WROUGHT IRON GATE (SEE TYP. DETAILS)
16. HIGH POINT
17. LOW POINT

37.45 PROPOSED TOP OF CURB @ PC,PT (FG @ BACK OF SIDEWALK)
46.67 PV PROPOSED TOP OF PAVEMENT

KEYNOTE LEGEND (DRAINAGE)

1. PROPOSED DROP INLET TYPE I, # DENOTES NUMBER OF GRATES (SEE TYP. DETAILS)
2. STORMWATER MANHOLE TYPE I (SEE TYP. DETAILS)
3. STORMWATER MANHOLE TYPE II (SEE TYP. DETAILS)
4. TYPICAL REINFORCED CONCRETE PIPE (# DENOTES DIAMETER)
5. TYPICAL PIPE EXIT (PIPE TO EXIT AT A 30 DEGREE ANGLE FROM THE EXISTING DRAINAGE CHANNEL CENTERLINE)
6. HEADWALL PIPE EXIT (SEE TYP. DETAILS)
7. CAP PROPOSED 48" R.C.P. STORMDRAIN PIPE FOR FUTURE EXTENSION
8. PROPOSED DROP INLET TYPE II, # DENOTES NUMBER OF GRATES (SEE TYP. DETAILS)

AS BUILT ELEVATION= 41.33

LEGAL DESCRIPTION:
BEING A PORTION OF SEC. 21, BLOCK 81, TOWNSHIP 1, TEXAS AND PACIFIC RAILWAY COMPANY SURVEYS, CITY OF EL PASO, EL PASO COUNTY, TEXAS 38.732 ACRES

SURVEY NOTES:
SUBJECT PARCELS ARE LOCATED WITHIN ZONE "C" AS DETAILED ON CITY OF EL PASO FLOOD INSURANCE RATE MAP NO. 480214 0014D, DATED AUGUST 5, 1991. ZONE "C" INDICATES AREAS OF MINIMAL FLOODING.

BENCHMARK: FOUND TXDOT BRASS CAP SECTION CORNERS 19, 20, 22, AND 21.
ELEVATION: 4033.22 (NVGD DATUM)
(SUBTRACT 8.462 TO CONVERT TO CITY DATUM)

NOTES:
THESE RECORDS DRAWINGS HAVE BEEN PREPARED BY DEL RIO ENGINEERING INC. BASED ON PERIODIC CONSTRUCTION OBSERVATIONS AND INFORMATION PROVIDED BY OTHERS AND REFLECTS CHANGES MADE DURING CONSTRUCTION. THE ACCURACY AND/OR COMPLETENESS OF THIS INFORMATION HAVE BEEN VERIFIED BY CAD CONSULTING COMPANY SUMITTED ON 1/11/07. THOSE RELYING ON THIS RECORD DRAWING ARE ADVISED TO OBTAIN INDEPENDENT VERIFICATION OF ITS ACCURACY BEFORE APPLYING IT FOR ANY PURPOSE.

BY: _____

DATE: 1/31/07

Release Dates:	9/2/05
Revisions:	-
	-

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1/31/07
STATE OF TEXAS
S.A. MASOUD
70774
LICENSED PROFESSIONAL ENGINEER

DRE
Del Rio Engineering, Inc.
P.O. Box 220251 El Paso, Texas 79913 915/833-2400

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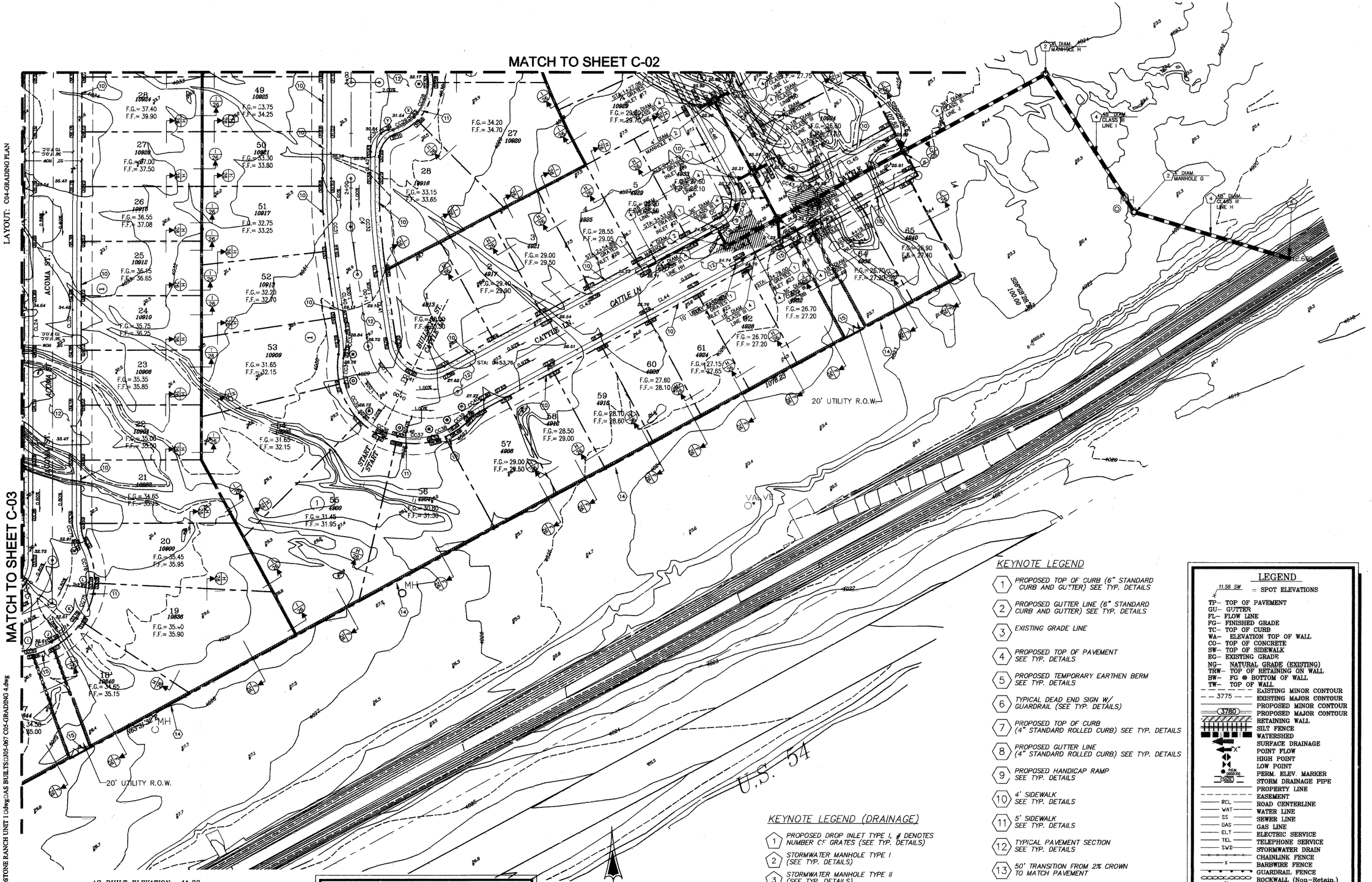
GRADING PLAN (SHEET 4 OF 5)
SANDSTONE RANCH UNIT 1
BEING A PORTION OF SEC. 21, BLOCK 81, TOWNSHIP 1
TEXAS AND PACIFIC RAILROAD CO. SURVEY
CITY OF EL PASO, EL PASO COUNTY, TEXAS

Design By:	AFJ
Drawn By:	JM
Scale:	1" = 40'
Project #:	J05-067
Plot Date:	1/30/07
SHEET:	C-04



NOTES:

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BY: _____

DATE: 1/31/07

LEGAL DESCRIPTION:
BEING A PORTION OF SEC. 21, BLOCK 81, TOWNSHIP 1, TEXAS AND PACIFIC RAILWAY COMPANY SURVEYS, CITY OF EL PASO, EL PASO COUNTY, TEXAS 38.73± ACRES

SURVEY NOTES:
SUBJECT PARCELS ARE LOCATED WITHIN ZONE "C" AS DETAILED ON CITY OF EL PASO FLOOD INSURANCE RATE MAP NO. 480214 0014D, DATED AUGUST 5, 1991. ZONE "C" INDICATES AREAS OF MINIMAL FLOODING.

BENCHMARK: FOUND TXDOT BRASS CAP SECTION CORNERS 19, 20, 22, AND 21.
ELEVATION: 4033.22 (NVGD DATUM)
(SUBTRACT 8.462 TO CONVERT TO CITY DATUM)

GRADING PLAN

SCALE: 1"= 4C'

KEYNOTE LEGEND (DRAINAGE)

1. PROPOSED DROP INLET TYPE I, # DENOTES NUMBER OF GRATES (SEE TYP. DETAILS)
2. STORMWATER MANHOLE TYPE I (SEE TYP. DETAILS)
3. STORMWATER MANHOLE TYPE II (SEE TYP. DETAILS)
4. TYPICAL REINFORCED CONCRETE PIPE (# DENOTES DIAMETER)
5. TYPICAL PIPE EXIT (PIPE TO EXIT AT A 30 DEGREE ANGLE FROM THE EXISTING DRAINAGE CHANNEL CENTERLINE)
6. HEADWALL PIPE EXIT (SEE TYP. DETAILS)
7. CAP PROPOSED 48" R.C.P. STORMDRAIN PIPE FOR FUTURE EXTENSION
8. PROPOSED DROP INLET TYPE II, # DENOTES NUMBER OF GRATES (SEE TYP. DETAILS)

KEYNOTE LEGEND

1. PROPOSED TOP OF CURB (6" STANDARD CURB AND GUTTER) SEE TYP. DETAILS
2. PROPOSED GUTTER LINE (6" STANDARD CURB AND GUTTER) SEE TYP. DETAILS
3. EXISTING GRADE LINE
4. PROPOSED TOP OF PAVEMENT SEE TYP. DETAILS
5. PROPOSED TEMPORARY EARTHEN BERM SEE TYP. DETAILS
6. TYPICAL DEAD END SIGN W/ GUARDRAIL (SEE TYP. DETAILS)
7. PROPOSED TOP OF CURB (4" STANDARD ROLLED CURB) SEE TYP. DETAILS
8. PROPOSED GUTTER LINE (4" STANDARD ROLLED CURB) SEE TYP. DETAILS
9. PROPOSED HANDICAP RAMP SEE TYP. DETAILS
10. 4' SIDEWALK SEE TYP. DETAILS
11. 5' SIDEWALK SEE TYP. DETAILS
12. TYPICAL PAVEMENT SECTION SEE TYP. DETAILS
13. 50' TRANSITION FROM 2% CROWN TO MATCH PAVEMENT
14. 6' ROCK SCREENWALL BY DEVELOPER (SEE TYP. DETAILS)
15. 18' WIDE WROUGHT IRON GATE (SEE TYP. DETAILS)
16. HIGH POINT
17. LOW POINT

+7.48 PROPOSED TOP OF CURB @ PC,PT (FG @ BACK OF SIDEWALK)

46.67 PV PROPOSED TOP OF PAVEMENT

LEGEND

11.56 SW = SPOT ELEVATIONS

TP– TOP OF PAVEMENT
GU– GUTTER
FL– FLOW LINE
FG– FINISHED GRADE
TC– TOP OF CURB
WA– ELEVATION TOP OF WALL
CO– TOP OF CONCRETE
SW– TOP OF SIDEWALK
EG– EXISTING GRADE
NG– NATURAL GRADE (EXISTING)
TRW– TOP OF RETAINING ON WALL
BW– FG @ BOTTOM OF WALL
TW– TOP OF WALL

- EXISTING MINOR CONTOUR
- 3775 EXISTING MAJOR CONTOUR
- 3780 PROPOSED MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- RETAINING WALL
- SILT FENCE
- WATERSHED
- SURFACE DRAINAGE
- POINT FLOW
- HIGH POINT
- LOW POINT
- P.E.M. 2000000 PERM. ELEV. MARKER
- 48"RCP STORM DRAINAGE PIPE
- PROPERTY LINE
- EASEMENT
- RCL ROAD CENTERLINE
- WAT WATER LINE
- SS SEWER LINE
- GAS GAS LINE
- ELT ELECTRIC SERVICE
- TEL TELEPHONE SERVICE
- SWD STORMWATER DRAIN
- CHAINLINK FENCE
- BARBWIRE FENCE
- GUARDRAIL FENCE
- ROCKWALL (Non-Retain.)
- IRRIGATION VALVE
- FIRE HYDRANT
- LIGHT POLE
- TELEPHONE MANHOLE
- TEB TELEPHONE BOX
- UTILITY POLE
- GUARD POST
- EB ELECTRIC BOX
- SIGN POST
- SURVEY MONU. SURVEY MONUMENT
- CITY MONU. CITY MONUMENT
- MBDU MAIL BOX DELIVERY UNIT

Release Dates:
9/2/05
Revisions:
10/28/05
11/28/05 (CEP REDs)

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1/31/07

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GRADING PLAN (SHEET 5 OF 5)

SANDSTONE RANCH UNIT 1

BEING A PORTION OF SEC. 21, BLOCK 81, TOWNSHIP 1
TEXAS AND PACIFIC RAILROAD CO. SURVEY
CITY OF EL PASO, EL PASO COUNTY, TEXAS

Project #:	Design By:	Drawn By:	Scale:	SHEET:
J05-067	AFJ	JM	1"=40'	C-05

Plot Date: 1/30/07

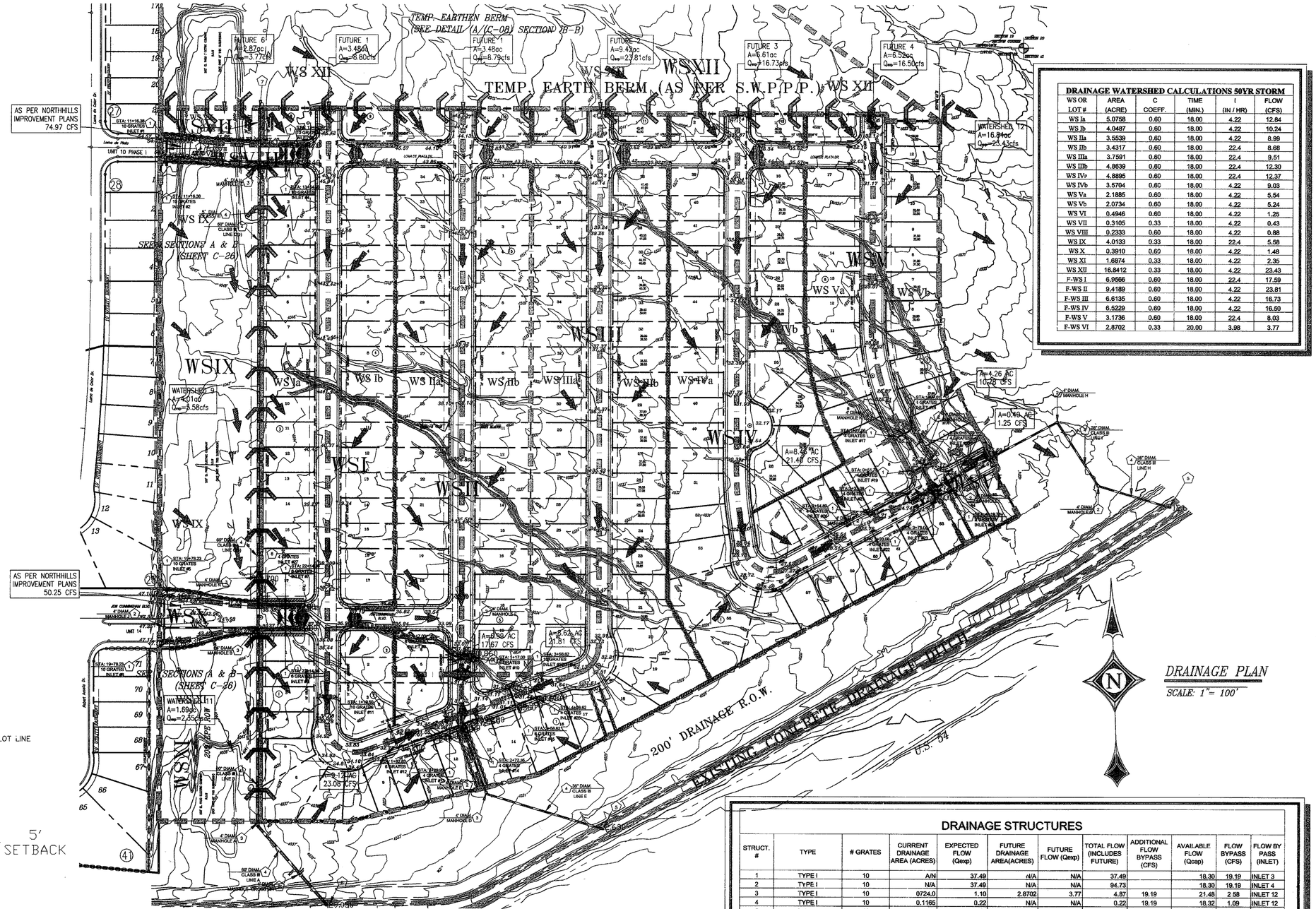
LAYOUT: C06-MASTER DRAINAGE PLAN

LEGEND

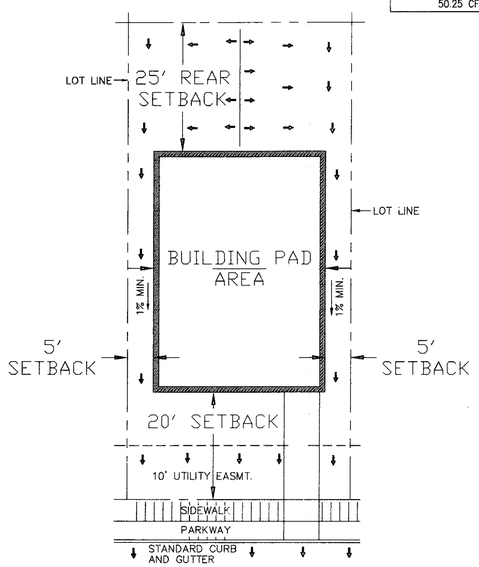
11.56 SW – SPOT ELEVATIONS

TP– TOP OF PAVEMENT
GU– GUTTER
FL– FLOW LINE
FG– FINISHED GRADE
TC– TOP OF CURB
WA– ELEVATION TOP OF WALL
CO– TOP OF CONCRETE
SW– TOP OF SIDEWALK
EG– EXISTING GRADE
NG– NATURAL GRADE (EXISTING)
TRW– TOP OF RETAINING ON WALL
BW– FG @ BOTTOM OF WALL
TW– TOP OF WALL

- EXISTING MINOR CONTOUR
- 3775 – EXISTING MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- 3780 – PROPOSED MAJOR CONTOUR
- RETAINING WALL
- SILT FENCE
- WS – WATERSHED
- SURFACE DRAINAGE
- "X" – POINT FLOW
- HIGH POINT
- LOW POINT
- P.E.M. 0000.00 – PERM. ELEV. MARKER
- 15"CP – STORM DRAINAGE PIPE
- PROPERTY LINE
- EASEMENT
- RCL – ROAD CENTERLINE
- WAT – WATER LINE
- SS – SEWER LINE
- GAS – GAS LINE
- ELT – ELECTRIC SERVICE
- TEL – TELEPHONE SERVICE
- SWD – STORMWATER DRAIN
- CHAINLINK FENCE
- BARBWIRE FENCE
- GUARDRAIL FENCE
- ROCKWALL (Non-Retain.)
- IV – IRRIGATION VALVE
- FIRE HYDRANT
- LIGHT POLE
- TELEPHONE MANHOLE
- TEL – TELEPHONE BOX
- UTILITY POLE
- GP – GUARD POST
- EB – ELECTRIC BOX
- SIGN POST
- SURVEY MONU. – SURVEY MONUMENT
- CITY MONU. – CITY MONUMENT
- MBDU – MAIL BOX DELIVERY UNIT



DRAINAGE WATERSHED CALCULATIONS 50YR STORM					
WS OR LOT #	AREA (ACRE)	C COEFF.	TIME (MIN.)	I (IN / HR)	FLOW (CFS)
WS Ia	5.0758	0.60	18.00	4.22	12.84
WS Ib	4.0487	0.60	18.00	4.22	10.24
WS IIa	3.5539	0.60	18.00	4.22	8.99
WS IIb	3.4317	0.60	18.00	22.4	8.68
WS IIIa	3.7591	0.60	18.00	22.4	9.51
WS IIIb	4.8639	0.60	18.00	22.4	12.30
WS IVa	4.8895	0.60	18.00	22.4	12.37
WS IVb	3.5704	0.60	18.00	4.22	9.03
WS Va	2.1885	0.60	18.00	4.22	5.54
WS Vb	2.0734	0.60	18.00	4.22	5.24
WS VI	0.4946	0.60	18.00	4.22	1.25
WS VII	0.3105	0.33	18.00	4.22	0.43
WS VIII	0.2333	0.60	18.00	4.22	0.88
WS IX	4.0133	0.33	18.00	22.4	5.58
WS X	0.3910	0.60	18.00	4.22	1.48
WS XI	1.6874	0.33	18.00	4.22	2.35
WS XII	16.8412	0.33	18.00	4.22	23.43
F-WS I	6.9566	0.60	18.00	22.4	17.59
F-WS II	9.4189	0.60	18.00	4.22	23.81
F-WS III	6.6135	0.60	18.00	4.22	16.73
F-WS IV	6.5229	0.60	18.00	4.22	16.50
F-WS V	3.1736	0.60	18.00	22.4	8.03
F-WS VI	2.8702	0.33	20.00	3.98	3.77



TYPICAL LOT LAYOUT
SCALE: N.T.S.

NOTE:
SETBACK FOR SIDE YARD ABUTTING STREET = 10 FEET.

DRIVEWAY NOTE:
DRIVEWAY SLOPES MUST BE 10% MAX.
FROM GUTTER FOR FIRST 12 FT. AND
14% MAX. THEREAFTER (BLDG. CD. 18.08.060 C)

NOTES

SEE STORMDRAIN PROFILES FOR STORMDRAIN SIZING

NOTES:
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BY: _____

DATE: 1/31/07

KEYNOTE LEGEND (DRAINAGE)

1. PROPOSED DROP INLET TYPE I, # DENOTES NUMBER OF GRATES (SEE TYP. DETAILS)
2. STORMWATER MANHOLE TYPE I (SEE TYP. DETAILS)
3. STORMWATER MANHOLE TYPE II (SEE TYP. DETAILS)
4. TYPICAL REINFORCED CONCRETE PIPE (# DENOTES DIAMETER)
5. TYPICAL PIPE EXIT (PIPE TO EXIT AT A 30 DEGREE ANGLE FROM THE EXISTING DRAINAGE CHANNEL CENTERLINE)
6. HEADWALL PIPE EXIT (SEE TYP. DETAILS)
7. CAP PROPOSED 48" R.C.P. STORMDRAIN PIPE FOR FUTURE EXTENSION
8. PROPOSED DROP INLET TYPE II, # DENOTES NUMBER OF GRATES (SEE TYP. DETAILS)

DRAINAGE STRUCTURES

STRUCT. #	TYPE	# GRATES	CURRENT DRAINAGE AREA (ACRES)	EXPECTED FLOW (Qexp)	FUTURE DRAINAGE AREA(ACRES)	FUTURE FLOW (Qexp)	TOTAL FLOW (INCLUDES FUTURE)	ADDITIONAL FLOW BYPASS (CFS)	AVAILABLE FLOW (Qcap)	FLOW BYPASS (CFS)	FLOW BY PASS (INLET)
1	TYPE I	10	A/N	37.49	N/A	N/A	37.49		18.30	19.19	INLET 3
2	TYPE I	10	N/A	37.49	N/A	N/A	94.73		18.30	19.19	INLET 4
3	TYPE I	10	0724.0	1.10	2.8702	3.77	4.87	19.19	21.48	2 58	INLET 12
4	TYPE I	10	0.1165	0.22	N/A	N/A	0.22	19.19	18.32	1.09	INLET 12
5	TYPE I	10	N/A	25.13	N/A	N/A	25.13		13.44	1.69	INLET 7
6	TYPE I	10	N/A	25.13	N/A	N/A	25.13		13.44	11.69	INLET 8
7	TYPE I	6	0.1955	0.74	N/A	N/A	0.74	11.69	12.01	0.42	INLET 12
8	TYPE I	6	0.1955	0.74	N/A	N/A	0.74	11.69	12.01	0.42	INLET 12
9	TYPE I	6	3.5539	8.99	1.7400	4.40	13.39		13.39	0	INLET 13
10	TYPE I	6	3.4317	3.68	1.7400	4.40	13.08		13.08	0	INLET 14
11	TYPE II	10	4.0487	10.24	1.7400	4.40	14.64		9.27	5.37	INLET 13
12	TYPE I	6	5.0758	12.84	1.7400	4.40	17.24	4.51	9.51	12.24	INLET 13
13	TYPE I	4	BYPASS	0.00	N/A	N/A	0.00	17.61	17.61	X	N/A
14	TYPE I	4	BYPASS	0.00	N/A	N/A	0.00	16.85	16.85	X	N/A
15	TYPE I	6	BYPASS	0.00	N/A	N/A	0.00	11.93	6.23	5.7	INLET 14
16	TYPE I	10	3.7591	9.51	6.1230	15.48	99.42		13.84	11.15	INLET 14
17	TYPE I	4	2.1885	5.54	3.2600	8.25	97.31		6.55	7.24	INLET 19
18	TYPE I	4	2.0734	5.24	3.2600	8.25	13.49		6.47	7.02	INLET 20
19	TYPE I	4	BYPASS	0.00	N/A	N/A	00.0	7.24	4.17	3.07	INLET 23
20	TYPE I	4	BYPASS	0.00	N/A	N/A	0.00	7.02	4.10	2.92	INLET 24
21	TYPE I	4	BYPASS	0.00	N/A	N/A	0.00	7.85	4.44	3.41	INLET 23
22	TYPE I	4	4.8895	12.37	3.3068	8.37	20.74		8.70	12.04	INLET 23
23	TYPE I	4	BYPASS	0.00	N/A	N/A	0.00	18.52	18.52	0	MANH. I
24	TYPE I	2	0.4946	1.25	N/A	N/A	1.25	2.92	4.17	X	N/A
25	TYPE I	4	4.8639	12.30	3.2970	8.33	36.02		8.70	11.93	INLET 15
26	TYPE I	4	3.5704	9.03	3.3068	8.37	17.40		9.55	7.85	INLET 21
27	TYPE II	4	4.0133	5.58	N/A	N/A	5.58		5.58	0	N/A

Release Dates:
9/19/05
Revisions:
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-

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1/31/07
STATE OF TEXAS
S.B. MASOUD
70774
LICENSED
PROFESSIONAL ENGINEER

DRE Del Rio Engineering, Inc.
P.O. Box 220251 El Paso, Texas 79913 915/833-2400

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MASTER DRAINAGE PLAN

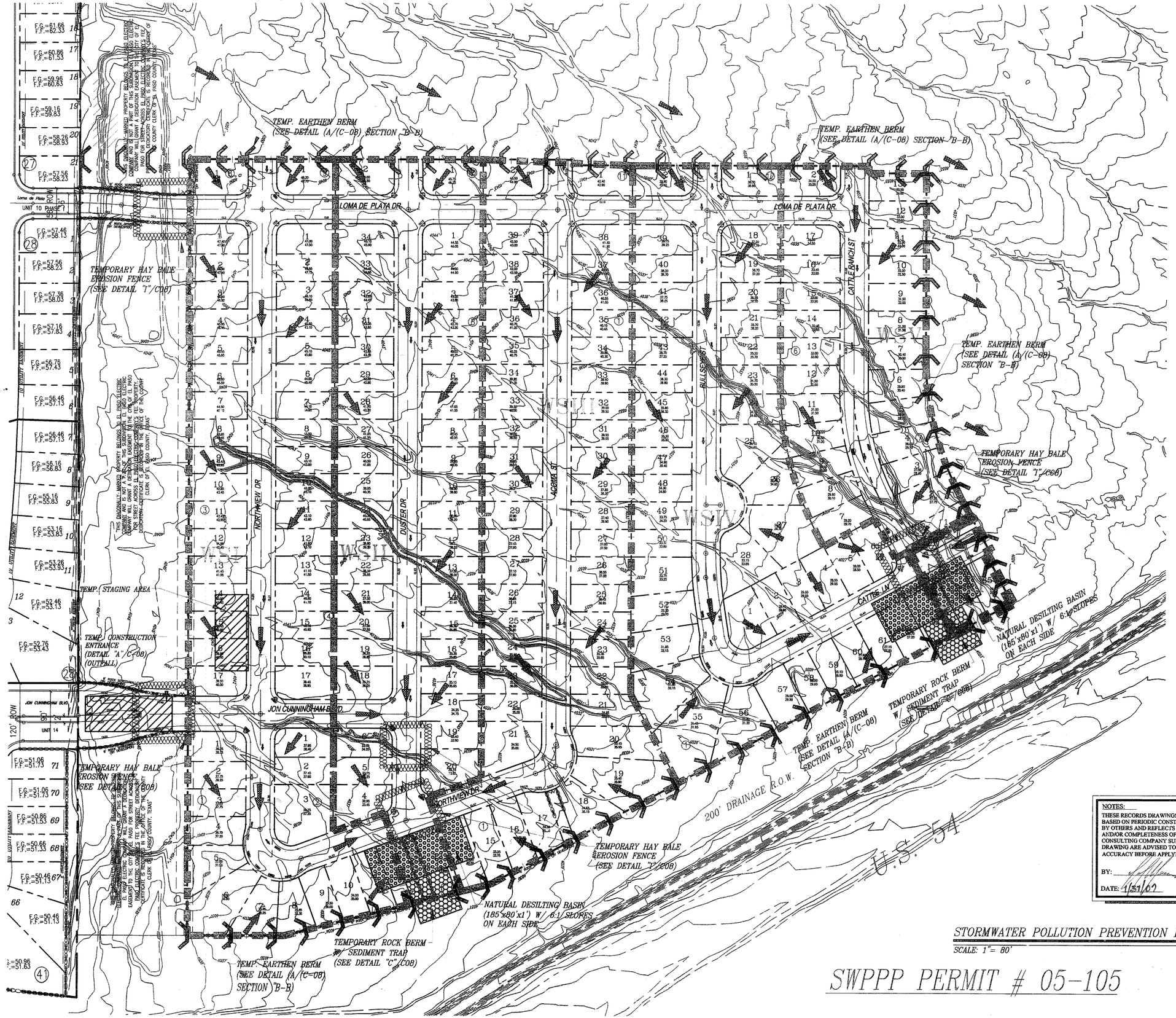
SANDSTONE RANCH UNIT 1

BEING A PORTION OF SEC. 21, BLOCK 81, TOWNSHIP 1
TEXAS AND PACIFIC RAILROAD CO. SURVEY
CITY OF EL PASO, EL PASO COUNTY, TEXAS

Project #: J05-067	Design By: AFJ	
Plot Date: 1/30/07	Drawn By: JM	
SHEET: C-06	Scale: 1"=100'	

FILE: Z:\J05-WORK DIRECTORY\J05-067 SANDSTONE RANCH UNIT 1\dwg\AS BUILTS\J05-067 C06-DRAINAGE.dwg

LAYOUT: STORMWATER POLLUTION PREVENTION PLAN



LEGEND:

- TEMP. STABILIZED CONSTRUCTION ENTRANCE
- TEMP. SEDIMENT CONTROL FENCE
- TEMP. EARTHEN BERM
- TEMPORARY HAY BALE EROSION FENCE
- DESILTING BASIN
- TEMP. ROCK BERM W/ SEDIMENT TRAP
- TEMP SOIL STABILIZATION
- PERMANENT SOIL STABILIZATION

NOTES:

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BY: _____

DATE: 1/31/07

STORMWATER POLLUTION PREVENTION PLAN

SCALE: 1"= 80'

SWPPP PERMIT # 05-105

Release Dates:
07/06/05
Revisions:
08/11/05
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STORMWATER POLLUTION PLAN

SANDSTONE RANCH UNIT 1

BEING A PORTION OF SEC. 21, BLOCK 81, TOWNSHIP 1
TEXAS AND PACIFIC RAILROAD CO. SURVEY
CITY OF EL PASO, EL PASO COUNTY, TEXAS

Project #:	Design By:	Drawn By:	Scale:
J05-067	AFJ	JM	1" = 80'
Plot Date: 1/29/07			
SHEET: C-07			

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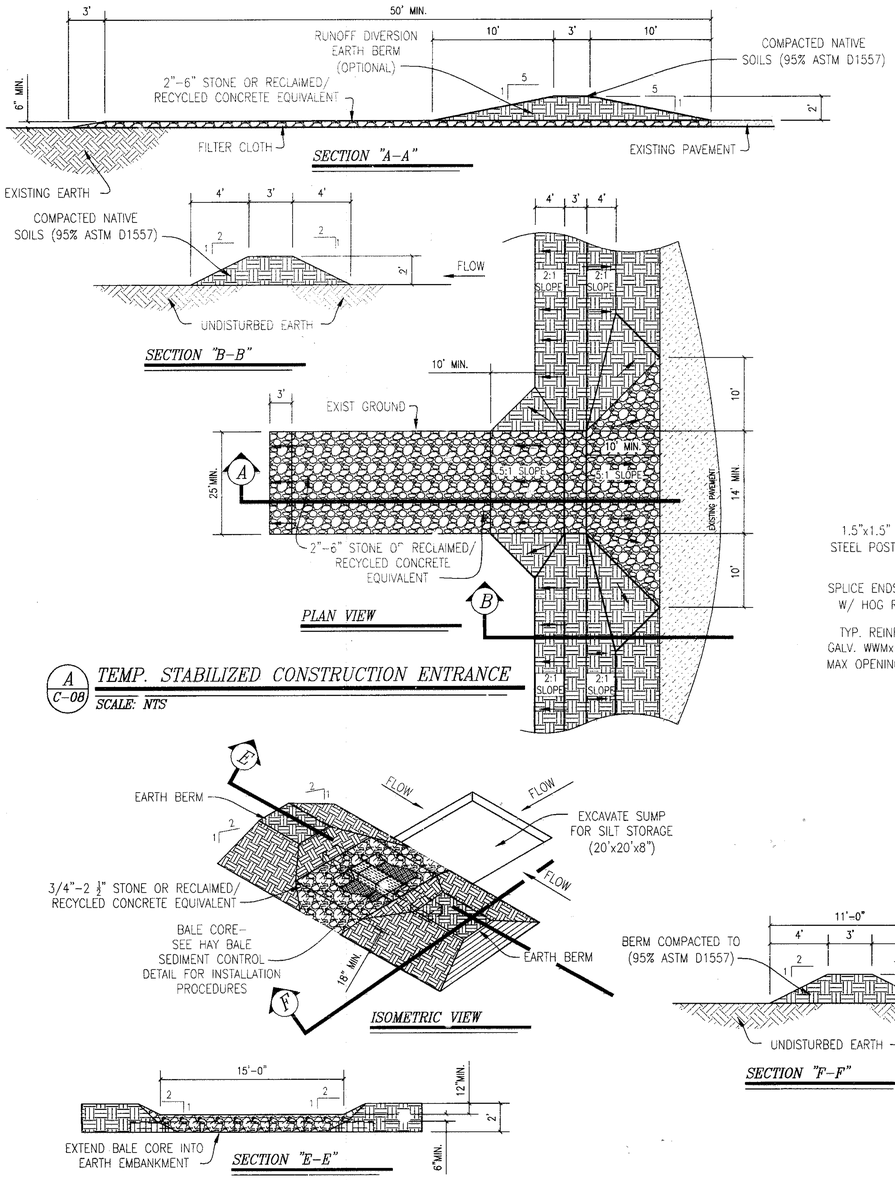
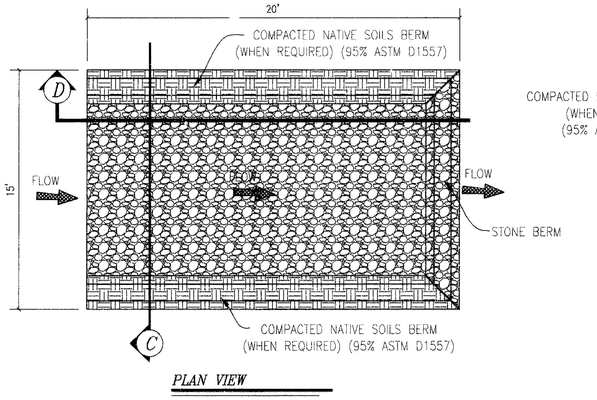
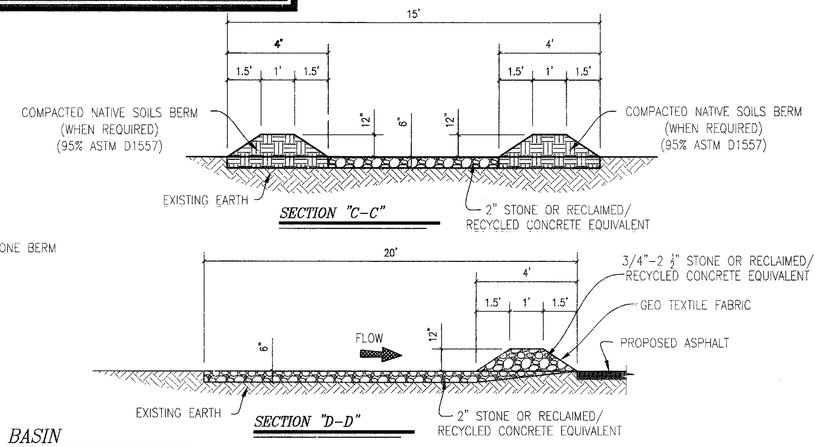


A C-08 TEMP. STABILIZED CONSTRUCTION ENTRANCE

SCALE: NTS

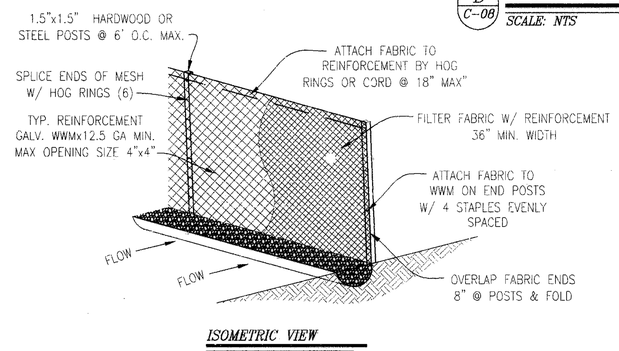
NOTE:
~SEE S.W.P.P. PLAN NOTES FOR APPROPRIATE AND REQUIRED STRUCTURES.~
(STRUCTURES SHOWN MAY NOT BE REQUIRED FOR THIS PROJECT)



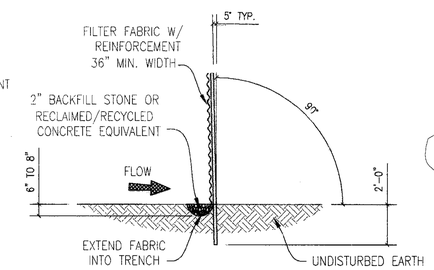


B C-08 DESILTING BASIN

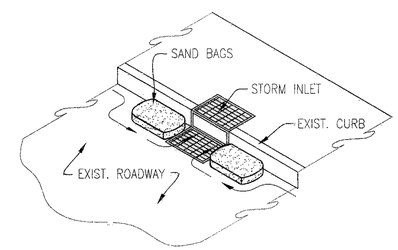
SCALE: NTS



ISOMETRIC VIEW



SECTION VIEW



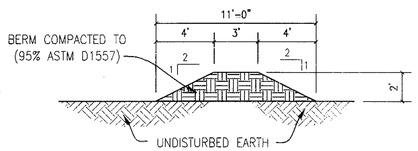
E C-08 INLET PROTECTION BARRIER

SCALE: NTS

NOTE:
REINFORCEMENT AND FILTER FABRIC TO BE DIRECTED BY THE ENGINEER.
POULTRY NETTING SHALL NOT BE ALLOWED AS A REINFORCEMENT MATERIAL.

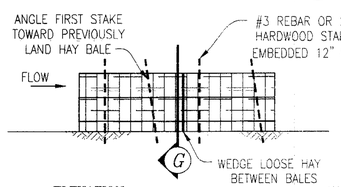
D C-08 TEMPORARY SEDIMENT CONTROL FENCE

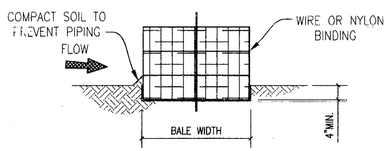
SCALE: NTS



C C-08 TEMPORARY ROCK BERM W/ SEDIMENT TRAP

SCALE: NTS



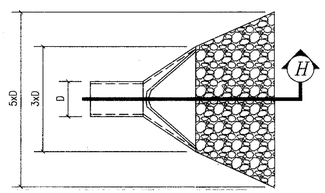


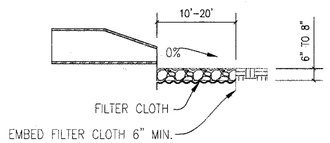
HAY BALE NOTES:

1. HAY BALES SHALL BE A MIN. OF 30" IN LENGTH.
2. HAY BALES SHALL BE PLACED IN A ROW W/ ENDS TIGHTLY ABUTTING THE ADJACENT BALES. THE BALES SHALL BE PLACED W/ BINDINGS PARALLEL TO THE GROUND.
3. THOROUGHLY COMPACT THE GROUND ON THE UPSIDE OF THE HAY BALES.

F C-08 TEMPORARY HAY BALE EROSION FENCE

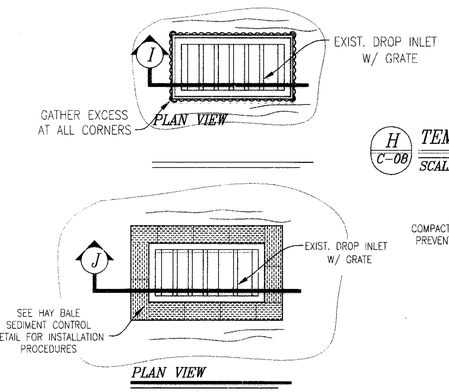
SCALE: NTS





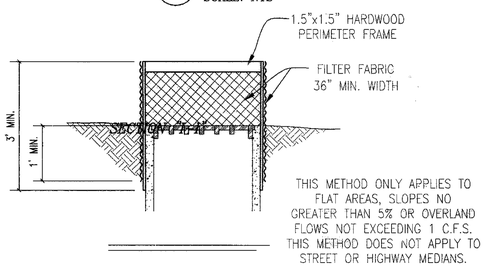
G C-08 TEMPORARY PIPE OUTLET EROSION CONTROL

SCALE: NTS



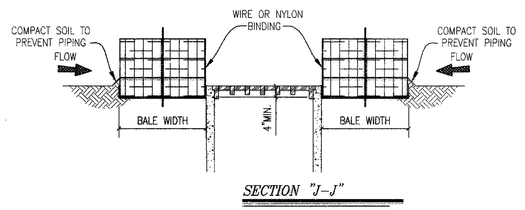
I C-08 TEMPORARY INLET PROTECTION STRAW BALES

SCALE: NTS



H C-08 TEMPORARY INLET PROTECTION BARRIER FENCE

SCALE: NTS



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BY: _____

DATE: 1/31/07

Release Dates:
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STORMWATER POLLUTION CONTROL DETAILS

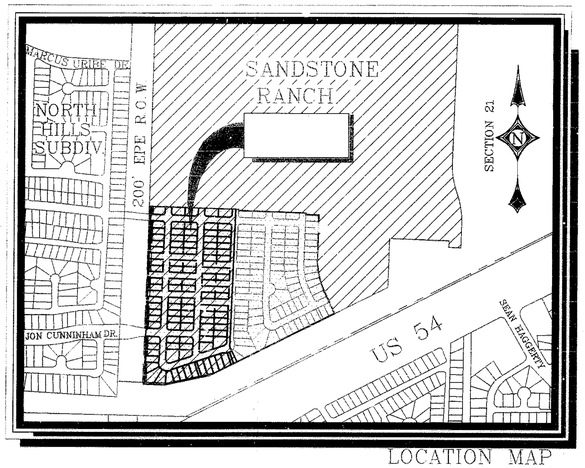
SANDSTONE RANCH UNIT 1
BEING A PORTION OF SEC. 21, BLOCK 81, TOWNSHIP 1
TEXAS AND PACIFIC RAILROAD CO. SURVEY
CITY OF EL PASO, EL PASO COUNTY, TEXAS

Project #:	Design By:	Scale:
J05-067	AFJ	AS NOTED
Plot Date:	Drawn By:	
1/29/07	JM	
SHEET:		
C-08		

LAYOUT: C08 SWPP DETAILS

FILE: Z:\J05-WORK DIRECTORY\J05-067 SANDSTONE RANCH UNIT 1\dwg\CAS BUILTS\J05-067 C08-STORMWATER DETAILS.dwg

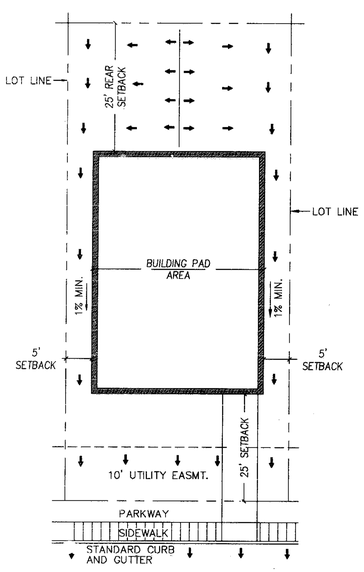
LAYOUT: STORMWATER POLLUTION PREVENTION PLAN



LOCATION MAP

SCALE: 1"=600'

WARNING BEFORE YOU DIG !!
THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING UNDERGROUND UTILITIES WITHIN THE PROJECT AREA AND CONTACT THE RESPECTIVE AGENCIES PRIOR TO DIGGING.



TYPICAL LOT LAYOUT

NOTE: SCALE: N.T.S.

SETBACK FOR SIDE YARD ABUTTING STREET = 10 FEET.

DRIVEWAY NOTE:

DRIVEWAY SLOPES MUST BE 10% MAX.
FROM GUTTER FOR FIRST 12 FT. AND
14% MAX. THEREAFTER (BLDG. CD. 18.08.060 C)

FILE: Z:\05-WORK DIRECTORY\J05-067 SANDSTONE RANCH UNIT 1\dwg\CAS BUILTS\J05-067 C09-STORMWATER CONTROL DETA.dwg

DRAINAGE WATERSHED CALCULATIONS 50YR STORM

WS OR LOT #	AREA (ACRE)	C COEFF.	TIME (MIN.)	I (IN / HR)	FLOW (CFS)
WS Ia	5.0758	0.60	18.00	4.22	12.84
WS Ib	4.0487	0.60	18.00	4.22	10.24
WS IIa	3.5539	0.60	18.00	4.22	8.99
WS IIb	3.4317	0.60	18.00	22.4	8.68
WS IIIa	3.7591	0.60	18.00	22.4	9.51
WS IIIb	4.8639	0.60	18.00	22.4	12.30
WS IVa	4.8895	0.60	18.00	22.4	12.37
WS IVb	3.5704	0.60	18.00	4.22	9.03
WS Va	2.1885	0.60	18.00	4.22	5.54
WS Vb	2.0734	0.60	18.00	4.22	5.24
WS VI	0.4946	0.60	18.00	4.22	1.25
WS VII	0.3105	0.33	18.00	4.22	0.43
WS VIII	0.2333	0.60	18.00	4.22	0.88
WS IX	4.0133	0.33	18.00	22.4	5.58
WS X	0.3910	0.60	18.00	4.22	1.48
WS XI	1.6874	0.33	18.00	4.22	2.35
WS XII	16.8412	0.33	18.00	4.22	23.43
F-WS I	6.9566	0.60	18.00	22.4	17.59
F-WS II	9.4189	0.60	18.00	4.22	23.81
F-WS III	6.6135	0.60	18.00	4.22	16.73
F-WS IV	6.5229	0.60	18.00	4.22	16.50
F-WS V	3.1736	0.60	18.00	22.4	8.03
F-WS VI	2.8702	0.33	20.00	3.98	3.77

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BY: _____

DATE: 1/31/07

SITE DESCRIPTION:
THIS CONSTRUCTION SITE WILL BE A RESIDENTIAL SUBDIVISION UPON COMPLETION. ALL ACTIVITY INVOLVED TO COMPLETE THIS CONSTRUCTION SHALL INCLUDE GRADING THE EXISTING LAND, INSTALLATION OF ALL REQUIRED UTILITIES, AND CONSTRUCTION OF CITY APPROVED STREETS AS PER THE CONSTRUCTION PLANS. THIS LAND IS VACANT DESERT LAND, WITH AN APPROXIMATE 1% SLOPE FROM NORTHWEST TO SOUTHEAST. THE FINAL GRADING OF THE LOTS WILL MAINTAIN THIS SLOPED TERRAIN. ALL STORMWATER RUNOFF DURING CONSTRUCTION SHALL BE ROUTED TO CITY DRAINAGE STRUCTURES THROUGH PROPER STORMWATER POLLUTION PREVENTION DEVICES.

REFER TO THE GRADING AND DRAINAGE PLANS FOR DESIGN CRITERIA (INCLUDING THE DESIGN COEFFICIENT FOR RUNOFF). SHOWN IN THIS PLAN IS A TYPICAL LOT GRADING DESIGN FOR REFERENCE PURPOSES. ALL POTENTIAL SILT DURING CONSTRUCTION ACTIVITY WILL BE CONTAINED IN THE LOT PONDING AREAS, AND THE LOTS WILL BE DESILTED DURING FINAL GRADING.

ALL POTENTIAL POLLUTANTS FROM THE CONSTRUCTION ACTIVITIES INCLUDE ALL FLUIDS ASSOCIATED WITH HEAVY EQUIPMENT, AND SOILS TRANSPORTED OFF-SITE BY THE CONSTRUCTION VEHICLES. ALL PROCEDURES AS SHOWN IN THIS SWPPP PLAN AND FOLLOWING EPA, TCEQ, AND CITY OF EL PASO REGULATIONS WILL MINIMIZE THE POLLUTION POTENTIAL.

WASTE MATERIALS:
A. ALL WASTE MATERIALS, INCLUDING CONSTRUCTION MATERIALS, SHALL BE COLLECTED AND STORED IN A SECURELY LIDDED METAL DUMPSTER. NO CONSTRUCTION WASTE MATERIAL SHALL BE BURIED ON SITE.

B. 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.

HAZARDOUS WASTE: (LISTED POLLUTANTS NON-ALLOWABLE)
A. 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.
B. IN THE EVENT OF A SPILL WHICH MAY BE HAZARDOUS, THE CONTRACTOR SHALL TAKE IMMEDIATE ACTION AND CONTACT THE FIRE DEPT. AND TCEQ.

SANITARY WASTE:
A. ALL SANITARY WASTE SHALL BE COLLECTED FROM THE CONSTRUCTION PORTABLE UNITS AS NECESSARY OR AS REQUIRED, CHAPTER 18.06 (BUILDING CODE) BY A LICENSED SANITARY WASTE MANAGEMENT CONTRACTOR.
B. ALL WASTE MATERIAL SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

SPILL PREVENTION:
A. THE FOLLOWING PRACTICES SHALL BE USED TO REDUCE THE RISK OF SPILLS OR OTHER ACCIDENTAL EXPOSURES OF MATERIALS TO STORM WATER RUNOFF.

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

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 SAFELY DATA SHEETS (MSDS)
C. DISPOSE SURPLUS PRODUCT IN ACCORDANCE WITH MANUFACTURER'S OR LOCAL & STATE RECOMMENDED METHODS

PETROLEUM PRODUCTS:
A. ALL ON-SITE VEHICLES SHALL BE MONITORED FOR LEAKS AND RECEIVE REGULAR PREVENTIVE MAINTENANCE TO REDUCE THE CHANCE OF LEAKAGE.
B. PETROLEUM PRODUCTS SHALL BE STORED IN LIGHTLY SEALED CONTAINERS WHICH ARE CLEARLY LABELED. ANY ASPHALT SUBSTANCES USED ON-SITE SHALL BE APPLIED ACCORDING TO THE MANUFACTURER'S RECOMMENDATION.

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

MAINTENANCE AND INSPECTION PROCEDURES:
A. ALL POLLUTION PREVENTION MEASURES SHALL BE INSPECTED AT LEAST ONCE A MONTH OR WITHIN 24-HOURS PRIOR TO ANTICIPATED STORM EVENT AND FOLLOWING A STORM EVENT OF 0.5 INCHES OR MORE.
B. INSPECTION IN FINAL STABILIZED AREAS OR DURING ARID PERIODS WILL BE CONDUCTED MONTHLY. BEST MANAGEMENT PRACTICES AND POLLUTION CONTROL PROCEDURES SHALL BE INSPECTED FOR ADEQUACY.
C. A REPORT SUMMARIZING THE SCOPE OF INSPECTION SHALL BE DONE AND RETAINED ALONG WITH THE SWPPP. THE CONTRACTOR MUST MAINTAIN A LOG OF ALL MAINTENANCE AND INSPECTIONS PERFORMED ON-SITE WITH THE SWPPP PLAN AND PERMIT AS PER EPA, TCEQ AND CITY OF EL PASO REGULATIONS. THE DESIGN ENGINEER AND TCEQ MUST BE NOTIFIED IMMEDIATELY AS TO ANY MODIFICATIONS TO THE SWPPP PLAN IN WRITING.

ALLOWABLE NON-STORMWATER:
A) WATER FROM LINE FLUSHINGS
B) PAVEMENT WASH WATERS (WHERE NO SPILLS HAVE OCCURRED)
C) UNCONTAMINATED GROUND WATER (FROM DEWATERING)
D) FIRE FIGHTING

ASPHALT BATCH PLANT:
THERE WILL BE NO ASPHALT BATCH PLANT LOCATED ON THIS PROPERTY.

ENDANGERED SPECIES NOTE:
THERE ARE NO ENDANGERED SPECIES LOCATED ON THE PROPERTY AT THE TIME OF CONSTRUCTION.

HISTORICAL SURVEY:
ARCHEOLOGICAL SITES ARE NOT LOCATED IN THIS SITE

REMARKS:
A. 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 @ ANY WETLAND, WATERBODY OR STREAMLINE.

B. INSPECTION IN FINAL STABILIZED AREAS OR DURING ARID PERIODS WILL BE CONDUCTED MONTHLY. BEST MANAGEMENT PRACTICES AND POLLUTION CONTROL PROCEDURES SHALL BE INSPECTED FOR ADEQUACY.

C. CONSTRUCTION STAGING AREAS AND VEHICLE MAINTENANCE AREAS SHALL BE CONSTRUCTED BY THE CONTRACTOR IN A MANNER TO MINIMIZE THE RUNOFF OF POLLUTANTS. ALL SERVICES TO THE VEHICLES MUST BE PERFORMED IN THIS AREA. ALL POTENTIAL POLLUTANTS AND RUNOFF MUST BE CONFINED IN THIS STAGING AREA. FOLLOW ALL EPA AND TCEQ GUIDELINES WHEN CONSTRUCTING THIS AREA.

D. ALL WATERWAYS SHALL BE CLEANED AS SOON AS PRACTICABLE OF TEMPORARY EMBANKMENT, TEMPORARY BRIDGES, MATTING, FALSE WORK, FILING DEBRIS OR OTHER OBSTRUCTIONS PLACED DURING CONSTRUCTION OPERATIONS THAT ARE NOT A PART OF THE FINISHED WORK.

OFFSITE VEHICLE TRACKING
In addition to the stabilized construction entrances, the following measures shall be observed during construction:
_____ Haul roads shall be dampened for dust control.
_____ Loaded haul trucks shall be covered with tarpaulin.
_____ Excess dirt on road shall be removed immediately.
_____ Stabilized construction entrance.
_____ Other:

NARRATIVE – SEQUENCE OF CONSTRUCTION (STORM WATER MANAGEMENT) ACTIVITIES:
1. INSTALL TEMPORARY EROSION AND SEDIMENT CONTROLS (E.G. TEMPORARY DESILTING BASINS AND STABILIZED CONSTRUCTION ENTRANCE);----------TIME FRAME: 4 DAYS.
2. PERFORM CLEARING AND GRUBBING;----------TIME FRAME: 4 WEEKS.
3. EXCAVATION FOR UTILITIES;----------TIME FRAME: 10 WEEKS.
4. COMPLETE SITE GRADING;----------TIME FRAME: 12 WEEKS.
5. CONSTRUCTION OF SITE IMPROVEMENTS----------TIME FRAME: 8 WEEKS.
6. WHEN ALL CONSTRUCTION ACTIVITY RELATED TO DEVELOPMENT OF THE SITE IS COMPLETE, REMOVE TEMPORARY CONTROLS IN #1 ABOVE AND SUBMIT NOTICE OF TERMINATION FORM TO EPA, TCEQ, AND CITY OF EL PASO ENGINEERING.

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 NAME: _____ SIGNED DATE: _____

OWNER NAME PRINTED: _____ TITLE: _____

GENERAL CONTRACTOR CERTIFICATION:
I CERTIFY, UNDER PENALTY OF LAW, THAT I UNDERSTAND THE TERMS AND CONDITIONS OF THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) GENERAL PERMIT THAT AUTHORIZES STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY FROM THE CONSTRUCTION SITE IDENTIFIED AS PART OF THIS CERTIFICATION.

SIGNED: _____ COMPANY: _____

NAME: _____ ADDRESS: _____

TITLE: _____

DATE: _____ TELEPHONE: _____

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 CONTROL MEASURES.

SIGNED: _____ COMPANY: _____

NAME: _____ ADDRESS: _____

TITLE: _____

DATE: _____ TELEPHONE: _____

EROSION CONTROL ELEMENTS NOTES:
THE CONTRACTOR SHALL ERECT THIS EROSION CONTROL ELEMENTS PRIOR TO THE COMMENCEMENT OF ANY SITE IMPROVEMENTS. DURING CONSTRUCTION THE CONTRACTOR SHALL INSPECT THE EROSION CONTROL ELEMENTS REGULARLY & SPECIALLY AFTER EA. STORM IN ORDER THAT THEY MAINTAIN THEIR EFFECTIVENESS. THE CONTRACTOR SHALL IMMEDIATELY REPAIR THE ELEMENT THAT HAS BEEN DAMAGED OR THAT SHOWS SIGNS OF EROSION OR POTENTIAL FAILURE. (THIS INCLUDES REMOVING SEDIMENT WHEN IT HAS ACCUMULATED TO 1/3 THE HEIGHT OF THE SILT FENCE & REPLACING ANY DAMAGED HAY HALES IMMEDIATELY.)

WIND EROSION: WATER DURING & AFTER COMPLETION OF GRADING. THE PROJECT AREA SHALL BE COMPLETELY WATERED AS NEEDED TO CONTROL WIND EROSION (OR AS DIRECTED BY THE DEPUTY DIRECTOR ENGINEER.

DURING CONSTRUCTION THE CONTRACTOR SHALL CONSTRUCT A 50'x25'x8' TEMPORARY GRAVEL ROADBED @ POINTS OF EXIT UNTO PUBLIC ROADWAYS.

THE CONTRACTOR IS ALSO RESPONSIBLE FOR MAINTAINING PROPER DRAINAGE DURING CONSTRUCTION & NOT ALLOWING SEDIMENT RUNOFF TO ENTER UNTO PUBLIC STREETS.

EROSION & SEDIMENT CONTROL:
SOIL STABILIZATION PRACTICES:
_____TEMPORARY SEEDING.
_____PERMANENT PLANTING, SODDING, OR SEEDING.
_____MULCHING.
_____SOIL RETENTION BLANKET.
_____BUFFER ZONES.
_____RESERVATION OF NATURAL RESOURCES.
OTHER:_____.
_____.

STRUCTURAL PRACTICES:
X TEMP. STABILIZED CONSTRUCTION ENTRANCE (STONE).
_____DESILTING BASIN.
X TEMP. SEDIMENT CONTROL FENCE.
_____TEMP. HAY BALE EROSION FENCE.
_____ROCK BERM W/ SEDIMENT TRAP.
X DIVERSION, INTERCEPTION, OR PERIMETER DIKES.
_____DIVERSION, INTERCEPTION, OR PERIMETER SWALES.
_____DIVERSION DIKES & SWALE COMBINATION.
_____PIPE SLOPE DRAINS.
_____CONCRETE FLUMES.
_____TIMBER MATTING @ CONST. EXIT.
_____CHANNEL LINERS.
X STORM INLET PROTECTION BARRIER.
_____STORM INLET SEDIMENT TRAP.
_____STONE PIPE OUTLET STRUCTURES.
_____CURBS & GUTTERS.
_____STORM DRAINS.
_____VELOCITY CONTROL DEVICES.
_____VEGETATED SWALES & NATURAL DEPRESSIONS.
OTHERS:_____.
_____.
_____.

Release Dates:
07/06/05
Revisions:
08/11/05
-

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY SAL B. MASOUD, P.E. 70774. ALTERATIONS OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT.

01/31/07
STATE OF TEXAS
S.B. MASOUD
70774

Del Rio Engineering, Inc.
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STORMWATER POLLUTION CONTROL PLAN

SANDSTONE RANCH UNIT 1
BEING A PORTION OF SEC. 21, BLOCK 81, TOWNSHIP 1
TEXAS AND PACIFIC RAILROAD CO. SURVEY
CITY OF EL PASO, EL PASO COUNTY, TEXAS

Project #: J05-067	Design By: AFJ
Plot Date: 1/29/07	Drawn By: JM
SHEET: C-09	Scale: 1" = 80'