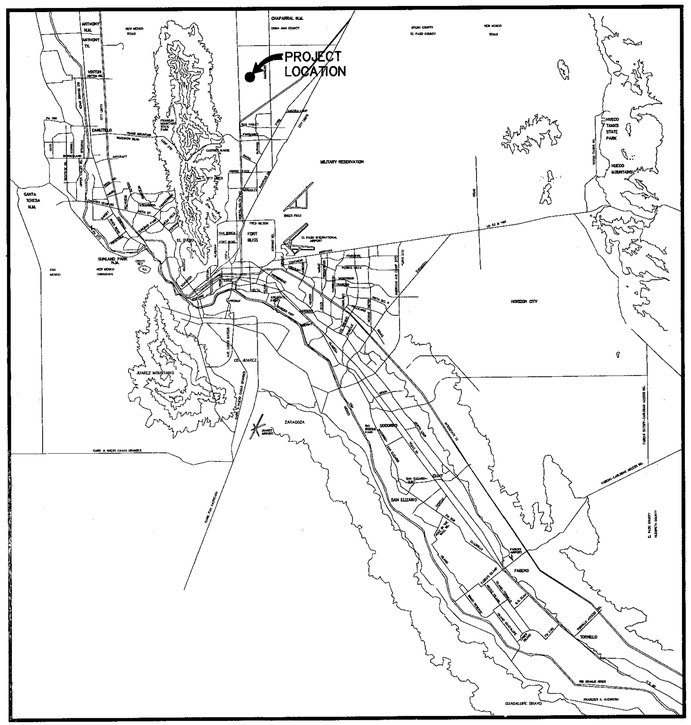
SANDSTONE RANCH UNIT TWO
SUBDIVISION IMPROVEMENTS



VICINITY MAP
APPROXIMATE SCALE: 1" = 2 MILES

SHEET NUMBER	SHEET TITLE
CVR,1	COVER SHEET, GENERAL INFORMATION
2	FINAL PLAT
3,5	GRADING PLAN AND GRADING SECTIONS.
4	DRAINAGE PLAN.
6-12	STREET PLAN & PROFILES
13,14	STORM SEWER PLAN & PROFILES
15-17	STANDARD DETAILS
18	DRAINAGE DETAILS
19	ILLUMINATION PLAN
20-22	SWPPP

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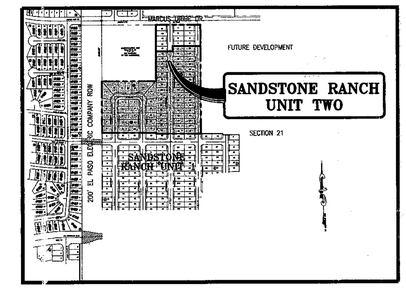


LOCATION MAP
APPROXIMATE SCALE: 1" = 600'

STATE OF TEXAS
JORGE L. AZCARATE
65075
LICENSED
PROFESSIONAL ENGINEER

9/28/06
JORGE L. AZCARATE, P.E. PROJECT MANAGER

cea engineering group
1204 Montana Ave., El Paso, Texas 79902
Office 915.544.5232 Fax 915.544.5233
www.ceagroup.net

DEVELOPMENT SERVICES DEPARTMENT

Reviewing by the City of El Paso shall neither constitute approval nor have responsibilty of the adequacy of design and plans.

DEVELOPMENT SERVICES DEPARTMENT

THE CITY IS NOT PRECLUDED FROM IMPOSING REQUIREMENTS THAT MAY ARISE UPON FURTHER REVIEW OF THE PLANS

DEVELOPMENT SERVICES DEPARTMENT
SITE PLAN REVIEW
Reviewed For Conformance For Conditions Related To:

__Demolition Only
__Grading & Drainage
__Wheelchair Ramps
__On Site Parking Layout
__Sidewalks
__Driveways
__Retaining Rock Walls
__On-Site Ponding of Storm Waters

Contractor Must Call 24 Hours Prior To Construction For Inspection

BY DATE OCT 04 2006
LAND DEVELOPMENT

SANDSTONE RANCH #2

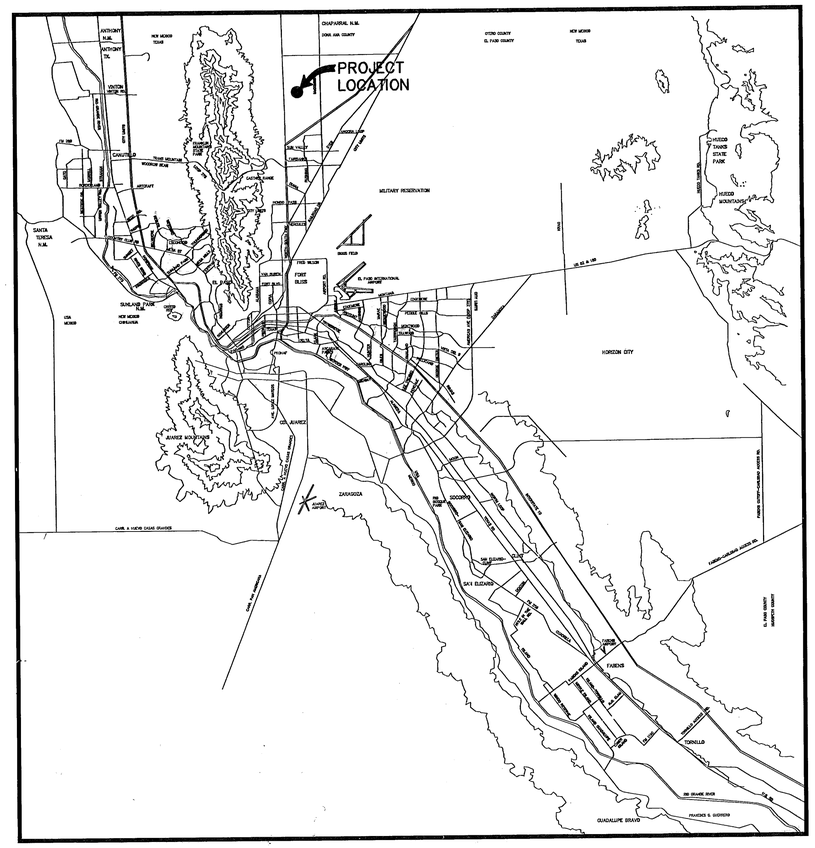
PRINCIPAL CONTACTS:

	NAME	ADDRESS	CITY & ZIP	PHONE	FAX
OWNER:	TROPICANA DEVELOPMENT CORPORATION	4655 COHEN AVE.	EL PASO, 79924	(915) 821-3550	(915) 821-3556
ENGINEER:	CEA ENGINEERING GROUP	1204 MONTANA AVE.	EL PASO, 79902	(915) 544-5232	(915) 544-5233
SURVEYOR:	CAD CONSULTING COMPANY	1790 N. LEE TREVINO SUITE 503	EL PASO, 79936	(915) 633-6422	(915) 633-6424

SANDSTONE RANCH UNIT TWO				
COVER SHEET				
DATE PREPARED	DRAWN BY:	DESIGN BY:	CHECKED BY:	APPROVED BY:
AUGUST 2006	R.O.	R.O.	J.L.A.	J.L.A.
REVISION NUMBER	SHEET NAME OR NUMBER	DESCRIPTION OF REVISION	DATE OF REVISION	REVISION APPROVED BY:

SEPTEMBER 2006

SANDSTONE RANCH UNIT TWO
SUBDIVISION IMPROVEMENTS



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APPROXIMATE SCALE:
1" = 2 MILES

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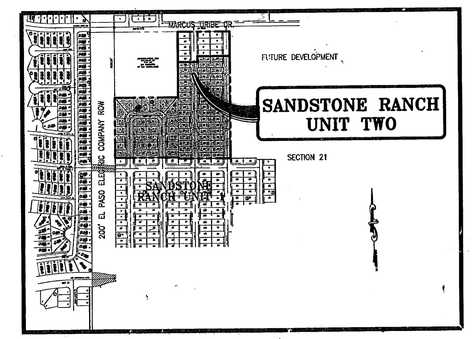

LOCATION MAP
APPROXIMATE SCALE:
1" = 600'

4/19/07
JORGE L. AZCARATE, P.E. PROJECT MANAGER

STATE OF TEXAS
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LICENSED
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4/13/07

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SURVEYOR:	CAD CONSULTING COMPANY	1790 N. LEE TREVINO SUITE 503	EL PASO, 79936	(915) 633-6422	(915) 633-6424

SANDSTONE RANCH UNIT TWO
COVER SHEET

DATE PREPARED	DRAWN BY:	DESIGN BY:	CHECKED BY:	APPROVED BY:
AUGUST 2006	R.O.	R.O.	J.L.A.	J.L.A.
REVISION NUMBER	SHEET NAME OR NUMBER	DESCRIPTION OF REVISION	DATE OF REVISION	REVISION APPROVED BY:

SEPTEMBER 2006

600755

GENERAL NOTES

1. THE CONTRACTOR SHALL VISIT AND FAMILIARIZE HIMSELF WITH THE PROJECT SITE PRIOR TO SUBMITTING BIDS.
2. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE AUTOMOBILE AND PEDESTRIAN ACCESS TO THE USER AT ALL TIMES, INCLUDING SATURDAYS, SUNDAYS, AND HOLIDAYS. THIS INCLUDES, BUT IS NOT LIMITED TO DRIVEWAYS, STREETS, PARKING, AND WALKWAYS. THIS REQUIREMENT SHALL BE FULFILLED AT NO EXTRA COST TO THE OWNER.
3. CONTRACTOR SHALL WATER CONSTRUCTION AREA A MINIMUM OF TWICE A DAY TO KEEP DUST TO A MINIMUM – ONCE IN THE MORNING AND BEFORE QUITTING TIME. THIS SHALL ALSO BE DONE DURING WEEKENDS AND HOLIDAYS.
4. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE, PROTECT, AND REPLACE ALL UNDERGROUND UTILITY LINES AT NO EXTRA COST TO THE OWNER WHEN LINES ARE DISTURBED AS A RESULT OF THE WORK. SERVICE SHALL BE PROVIDED TO USER AT ALL TIMES.
5. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO SCHEDULE AND PERFORM HIS WORK SO AS TO ASSURE PROPER PASSAGE OF STORM RUNOFF DURING THE COURSE OF HIS OPERATIONS. ALL LABOR, TOOLS, EQUIPMENT, AND SUPERVISION REQUIRED TO ASSURE SUCH PROPER PASSAGE OF RUNOFF WATER AND ANY REMOVAL OR HANDLING OF WATER IN ORDER TO MAINTAIN DRY CONDITIONS SHALL BE CONSIDERED INCIDENTAL TO THE WORK, AND SHALL BE AT THE EXPENSE OF THE CONTRACTOR.
6. THE CONTRACTOR SHALL COORDINATE THE CONSTRUCTION SCHEDULE WITH THE USER, ALL UTILITIES, AND ALL OTHER AGENCIES WITH JURISDICTION OVER THE PROJECT.
7. ALL EXISTING PAVEMENT, ADJACENT UTILITIES, STRUCTURES, ETC., DISTURBED AS A RESULT OF THE NEW CONSTRUCTION, SHALL BE REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
8. THE OWNER WILL FURNISH HORIZONTAL AND VERTICAL CONTROL REFERENCED POINTS ONLY. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND GRADES BEFORE PROCEEDING WITH THE WORK. ANY DISCREPANCIES FOUND SHALL BE REPORTED IMMEDIATELY TO THE ENGINEER, OTHERWISE THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR THEIR CORRECTNESS.
9. ALL ELEVATIONS ARE TO CITY OF EL PASO DATUM, UNLESS OTHERWISE NOTED.
10. VIBRATORY ROLLERS WILL NOT BE PERMITTED ON ANY PHASE OF THIS PROJECT, UNLESS APPROVED IN WRITING BY THE ENGINEER.
11. ALL WORK REQUIRED BY THESE PLANS SHALL BE CONDUCTED IN CONFORMANCE WITH CURRENT SAFETY CODES AND STANDARDS WITH JURISDICTION OVER THE PROJECT.
12. THE LOCATION OF THE FLUMES AND INLETS SHALL BE AT THE FIELD LOW POINT AND APPROVED BY THE ENGINEER.
13. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN THE FINAL APPROVED SUBDIVISION PLANS PRIOR TO COMMENCING ANY CONSTRUCTION WORK.

GRADING SPECIFICATIONS

1. CLEARING AND GRUBBING: CLEAR SITE OF TREES, SHRUBS AND OTHER VEGETATION; COMPLETELY REMOVE STUMPS, ROOTS AND OTHER DEBRIS PROTRUDING THROUGH GROUND SURFACE; FILL DEPRESSIONS CAUSED BY CLEARING AND GRUBBING OPERATIONS WITH SATISFACTORY FILL MATERIAL, UNLESS FURTHER EXCAVATION OF EARTHWORK IS INDICATED; REMOVE EXISTING ABOVE–GRADE AND BELOW–GRADE IMPROVEMENTS AS INDICATED AND AS NECESSARY TO FACILITATE NEW CONSTRUCTION. BURNING IS NOT PERMITTED ON OWNER'S PROPERTY. REMOVE WASTE MATERIALS FROM OWNER'S PROPERTY.
2. SATISFACTORY FILL MATERIALS: FILL MATERIALS SHALL BE FREE OF ANY ORGANIC OR DELETERIOUS SUBSTANCE AND SHALL NOT CONTAIN ROCKS OR LUMPS OVER 3 INCHES IN GREATEST DIMENSION AND SHALL BE DEFINED AS THOSE COMPLYING WITH ASTM D2487 SOIL CLASSIFICATION GROUPS GW, GP,GM, GC, SM, SP, SM, AND SC. OR UNLESS OTHERWISE APPROVED BY THE DESIGN ENGINEER, GEO–TECH ENGINEER OR CITY ENGINEER.
3. UNSATISFACTORY FILL MATERIAL: ARE DEFINED AS THOSE COMPLYING WITH ASTM D2487 SOIL CLASSIFICATION GROUPS ML, MH, CL, CH, OL, OH, AND PT, OR WHERE THE PLASTICITY INDEX EXCEEDS 12.
4. EXCAVATION: IS UNCLASSIFIED AND INCLUDES EXCAVATION TO ELEVATIONS INDICATED, REGARDLESS OF CHARACTER OF MATERIAL AND OBSTRUCTIONS ENCOUNTERED.
5. GROUND SURFACE PREPARATION FOR FILL: REMOVE VEGETATION, DEBRIS, UNSATISFACTORY SOIL MATERIAL, OBSTRUCTIONS, AND DELETERIOUS MATERIAL FROM GROUND SURFACE UPON WHICH THE FILL IS TO BE PLACED. THE SURFACE SHALL THEN BE SCARIFIED TO A DEPTH OF AT LEAST 6–INCHES, AND UNTIL THE SURFACE IS FREE FROM RUTS, HUMMOCKS OR OTHER UNEVEN FEATURES WHICH WOULD PREVENT UNIFORM COMPACTION. PLOW STRIP, OR BREAK UP SLOPED SURFACES STEEPER THAN 1 VERTICAL TO 4 HORIZONTAL SO THAT FILL MATERIAL WILL BOND WITH EXISTING SURFACE. AFTER PLOWING AND SCARIFYING FILL AREA, IT SHALL THEN BE DISCED OR BLADED UNTIL IT IS UNIFORM AND FREE FROM LARGE CLODS, BROUGHT TO OPTIMUM MOISTURE, AND COMPACTEID TO 95% OF MAXIMUM DENSITY IN ACCORDANCE WITH ASTM D–1557.
6. PLACEMENT OF FILL: PLACE BACKFILL AND FILL MATERIALS IN LAYERS NOT MORE THAN 8 INCHES IN LOOSE DEPTH FOR MATERIAL COMPACTED BY HEAVY COMPACTION EQUIPMENT, AND NOT MORE THAN 4 INCHES IN LOOSE DEPTH FOR MATERIAL COMPACTED BY HAND–OPERATED TAMPERS. BEFORE COMPACTION, MOISTEN OR AERATE EACH LAYER AS NECESSARY TO PROVIDE OPTIMUM MOISTURE CONTENT. PLACE FILL MATERIALS EVENLY ADJACENT TO SITE APPURTENANCES, PIPING, OR CONDUIT TO REQUIRED ELEVATIONS. PREVENT WEDGING ACTION OF BACKFILL AGAINST SITE APPURTENANCES OR DISPLACEMENT OF PIPING OR CONDUIT BY CARRYING MATERIAL UNIFORMLY AROUND SITE APPURTENANCES, PIPING, OR CONDUIT TO APPROXIMATELY SAME ELEVATION IN EACH LIFT. COMPACT SOIL TO NOT LESS THAN 95% OF MAXIMUM DENSITY, IN ACCORDANCE WITH ASTM D1557.
7. MOISTURE CONTROL: WHERE SUBGRADE OR LAYER OF SOIL MATERIAL MUST BE CONDITIONED FOR OPTIMUM MOISTURE BEFORE COMPACTION, UNIFORMLY APPLY WATER TO SURFACE OF SUBGRADE OR LAYER OF SOIL MATERIAL. APPLY WATER IN MINIMUM QUANTITY AS NECESSARY TO PREVENT FREE WATER FROM APPEARING ON SURFACE DURING OR SUBSEQUENT TO COMPACTION OPERATIONS. WATER CONTENT SHALL BE WITHIN 2 PERCENTAGE POINTS OF OPTIMUM MOISTURE CONTENT. REMOVE AND REPLACE, OR SCARIFY AND AIR DRY SOIL MATERIAL THAT IS TOO WET TO PERMIT COMPACTION TO SPECIFIED DENSITY.
8. QUALITY CONTROL: THE OWNER SHALL PROVIDE A GEOTECHNICAL ENGINEER TO PERFORM FIELD DENSITY TEST OF THE COMPACTION OF EACH LAYER OF FILL. DENSITY TESTS SHALL BE TAKEN IN THE COMPACTED MATERIAL BELOW THE DISTURBED SURFACE. WHEN THESE TESTS INDICATE THAT THE DENSITY OF ANY LAYER OF FILL OR PORTION THEREOF IS BELOW THE REQUIRED DENSITY, THE PARTICULAR LAYER OR PORTION SHALL BE REWORKED UNTIL THE REQUIRED DENSITY HAS BEEN OBTAINED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ADDITIONAL TESTING AND WHEN REQUIRED DENSITIES ARE NOT MET, SUPERVISION BY THE GEOTECHNICAL ENGINEER IS REQUIRED DURING THE GRADING OPERATIONS TO ENSURE GRADING WORK IN ACCORDANCE WITH THIS PLAN AND SPECIFICATIONS.

LEGEND

- SUBDIVISION BOUNDARY
- ROW LINE
- CURB LINE
- PROPERTY LINE
- STREET CENTERLINE
- EASEMENT LINE
- MATCH LINE
- STORM SEWER LINE
- HIGH WATER MARK
- CURB AND GUTTER DROP INLET
- STORM SEWER MANHOLE
- 4000 — FINISHED GROUND CONTOUR ELEVATION (INDEX)
- FINISHED GROUND CONTOUR ELEVATION (INTERMEDIATE)
- 4000 — EXISTING GROUND CONTOUR ELEVATION (INDEX)
- EXISTING GROUND CONTOUR ELEVATION (INTERMEDIATE)
- NEW RETAINING ROCKWALL (3'–9' IN HEIGHT)
- EXISTING RETAINING ROCKWALL
- NEW RETAINING ROCKWALL (2'–3' IN HEIGHT)
- EXISTING ELECTRICAL LINE
- X / X — STANDARD DETAIL/SECTION NUMBER / SHEET NUMBER WHERE STANDARD/ SECTION DETAIL IS LOCATED
- 4000.00 — FINISHED SPOT ELEVATION
- FG. 56.00 — LOT FINISHED GROUND ELEVATION
- TC 4000.00 — TOP OF CURB ELEVATION
- TP 4000.00 — TOP OF PAVEMENT ELEVATION
- 1 (2) — SUBDIVISION LOT AND BLOCK NUMBER
- DRAINAGE FLOW
- STORM SEWER LINE FLOW
- HIGH POINT
- LOW POINT
- EXISTING HIGH POINT
- EXISTING LOW POINT
- HEADWALL WITH WINGWALLS
- DA–4 — DRAINAGE AREA
- 2:1 SLOPE — HORIZONTAL: VERTICAL SLOPE RATIO
- 3980 — APPROXIMATE BASE FLOOD ELEVATION (NATIONAL GEODETIC VERTICAL DATUM, NGVD). TO CONVERT TO CITY OF EL PASO DATUM FROM NGVD, SUBTRACT 8.462–FEET.
- APPROXIMATE AREA OF 100 YEAR FLOOD, AS PER FIRM PANEL NO. 480214–0016–C (FEBRUARY 5, 1986)
- WHEELCHAIR RAMP

ABBREVIATIONS

LP	LOW POINT
HP	HIGH POINT
ELEV	ELEVATION
STA	STATION
VCS	VERTICAL CURVE STATION
VCE	VERTICAL CURVE ELEVATION
TC	TOP OIF CURB
TP	TOP OIF PAVEMENT
TYP	TYPICAL
PVC	POINT OF VERTICAL CURVE
PVI	POINT OF VERTICAL INTERSECTION
PVT	POINT OF VERTICAL TANGENT
AD	ALGEBRAIC DIFFERENCE
CR	CURVE RETURN
ROW	RIGHT OF WAY
CL	CENTEIR LINE
PL	PROPERTY LINE
FG	FINISH GRADE
FF	FINISH FLOOR
EG	EXISTING GRADE
MIN.	MINIMUM
RCP	REINFORCED CONCRETE PIPE
Q	QUANTITY
CAP	CAPACITY
EXP	EXPECTED
INV	INVERT
CFS	CUBIC FEET PER SECOND
A	AREA
DA	DRAINAGE AREA
LF	LINEAR FEET
STD	STANDARD
CONC	CONCRETE
PC	POINT OF CURVATURE
PI	POINT OF INTERSECTION
PT	POINT OF TANGENT
L	LENGTH
S	SLOPE
TEMP	TEMPORARY
V	VELOCITY IN FEET PER SECOND
HGL	HYDRAULIC GRADE LINE
HWE	HIGH WATER ELEVATION

UTILITY LOCATOR SERVICES	
EL PASO ELECTRIC COMPANY	(915) 543–5720
EL PASO ENERGY CORPORATION	(915) 496–5244
EL PASO WATER UTILITIES	(915) 594–5500
MCI SURVEILLANCE	(800) MCI–WORK
TIME WARNER COMMUNICATIONS	(915) 772–1123
TEXAS GAS SERVICE	(915) 680–7200
SBC	(800) 545–6005
AT&T	(800) 852–3786
U.S. SPRINT TELECOMM	(800) 521–0579
STREET DEPT. – SIGNAL & SIGN	(915) 621–6750
(AFTER HOURS)	(915) 240–3220

WARNING ! BEFORE YOU DIG
CALL
1–800–DIG–TESS
1–800–344–8377
FOR FIELD LOCATING EXISTING UTILITIES

RECORD DRAWINGS
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4/13/07

INDEX OF DRAWINGS

DRAWING NAME	SHEET NO.
COVER	–
GENERAL INFORMATION	1
FINAL PLAT	2
GRADING PLAN	3
DRAINAGE PLAN	4
GRADING SECTIONS	5
PLAN AND PROFILE – DUSTER DRIVE FROM STA. 3+42.15 TO STA 5+78.55	6
PLAN AND PROFILE – DUSTER DRIVE FROM STA. 5+78.55 TO STA 9+19.93	7
PLAN AND PROFILE – ACOMA STREET FROM STA. 0+00.00 TO STA. 7+00.00	8
PLAN AND PROFILE – ACOMA STREET FROM STA. 7+00.00 TO STA. 8+26.67	9
PLAN AND PROFILE – BULLSEYE STREET FROM STA. 0+00.00 TO STA. 7+00.00	10
PLAN AND PROFILE – BULLSEYE STREET FROM STA. 7+00.00 TO STA. 8+50.00	11
STANDARD DETAILS (SHEET 1 OF 3)	12
STANDARD DETAILS (SHEET 2 OF 3)	13
STANDARD DETAILS (SHEET 3 OF 3)	14
ILLUMINATION PLAN	15
STORM DRAIN POLLUTION CONTROL PLAN – GENERAL NOTES	16
STORM DRAIN POLLUTION CONTROL PLAN – SITE PLAN	17
STORM DRAIN POLLUTION CONTROL PLAN – DETAILS	18

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

DATE	REVISIONS	BY

cea engineering group
1204 Montana Ave., El Paso, Texas 79902
Office 915.544.5232 Fax 915.544.5233
www.ceagroup.net

ENGINEER'S SEAL
CERTIFICATE OF AUTHORITY
85076
REGISTERED PROFESSIONAL ENGINEER
4/13/07

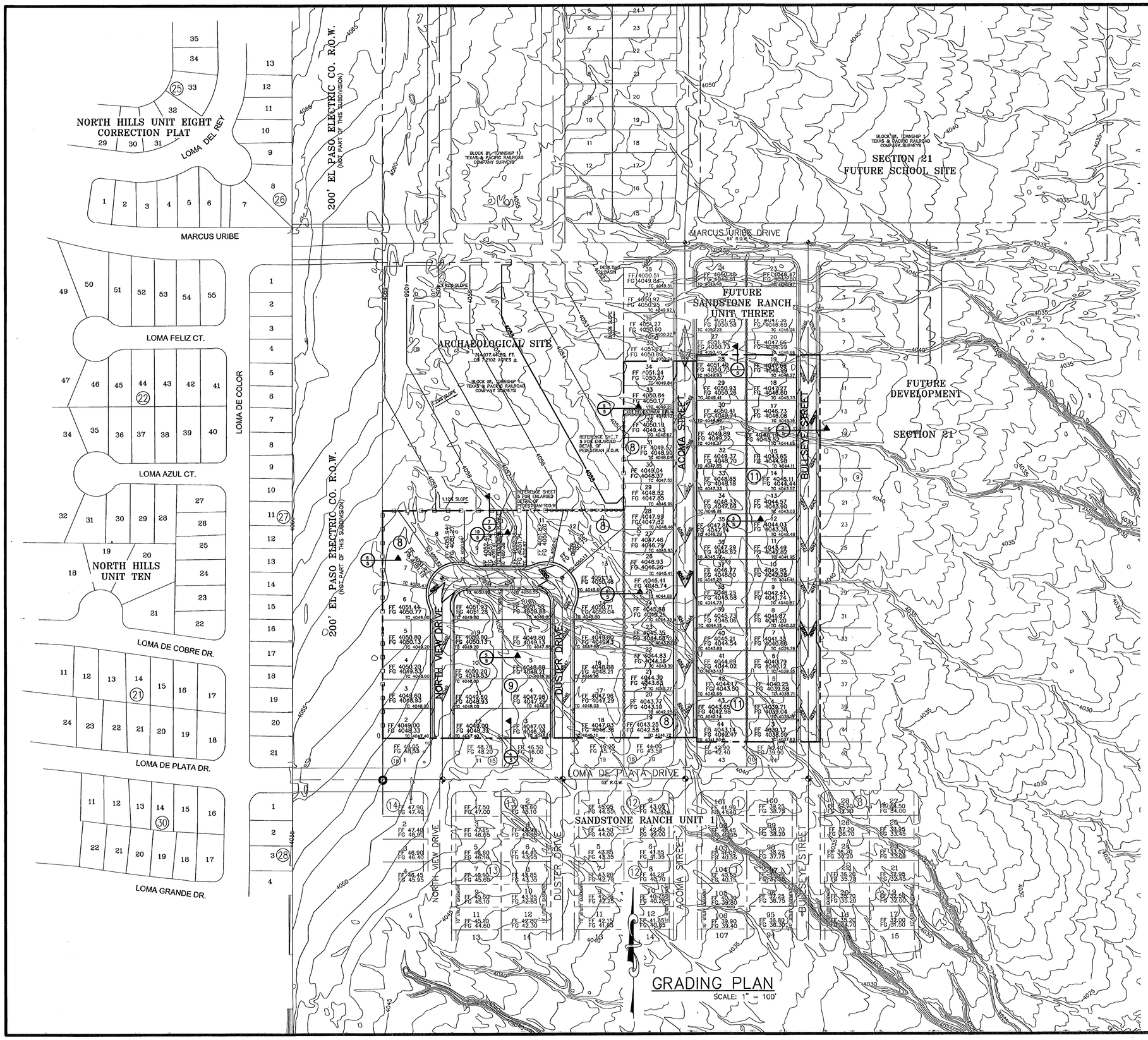
SCALE N/A
Horizontal: N/A
Vertical: 1"=1'
Contour Interval: N/A
DATE: SEPTEMBER, 2006
DESIGN BY: R.O.
DRAWN BY: R.O.
CHKD. BY: J.L.A.
APPVD. BY: J.L.A.
JOB No. 2000–077

PROJECT TITLE
SANDSTONE RANCH UNIT TWO SUBDIVISION IMPROVEMENTS

SHEET TITLE
GENERAL INFORMATION

SHEET NO.
1
OF 18

600755



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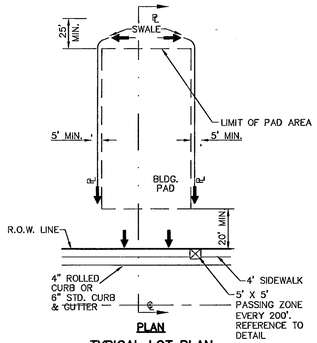
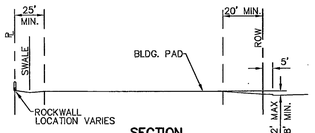


PLAN

TYPICAL LOT PLAN
SCALE: 1"=30'



SECTION

NOTES:

1. DRIVEWAY SLOPES MUST BE 10% MAX. FROM GUTTER FOR FIRST 12 FEET AND 14% MAX. THEREAFTER (DRIVEWAY SHALL BE LOCATED @ HIGH SIDE OF LOT UNLESS OTHERWISE COORDINATED WITH COUNTY OF EL PASO)

LEGEND:

- NEW RETAINING ROCKWALL (2'-3' IN HEIGHT)
- NEW RETAINING ROCKWALL (3'-9' IN HEIGHT)
- 5' X 5' WHEELCHAIR PASSING

NOTES:

1. RETAINING WALLS SHALL BE CONSTRUCTED FOR VERTICAL GRADES GREATER THAN 2-FEET.
2. SLOPED AREAS WHITHIN RESIDENTIAL LOTS SHALL BE MAINTAINED BY THE PROPERTY OWNERS.
3. ALL RETAINING WALLS NOT SPECIFIED TO BE CONSTRUCTED BY DEVELOPER, SHALL BE BUILT BY BUILDER.
4. DEVELOPER SHALL COMPLY WITH SECTION 13.08.170 (EXCESSIVE PAVING CUTS) OF THE EL PASO MUNICIPAL CODE.
5. IMPROVEMENTS SHALL NOT BE PLACED ON SIDEWALK (NDBCU's, SIGNS, POLES, FIRE HYDRANTS, ETC.)
6. IMPROVEMENTS SHALL COMPLY WITH T.A.S./A.D.A. STANDARDS

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)

FLOOD ZONE:

THIS SUBDIVISION LIES WITHIN ZONE XX AS DESIGNATED IN PANEL NO. 480214-0014D, DATED AUGUST 5, 1991, OF THE FLOOD INSURANCE RATE MAPS, EL PASO COUNTY, TEXAS.

REFERENCES – BENCHMARKS

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

DATE	REVISIONS	BY

cea
engineering group
1204 Montana Ave., El Paso, Texas 79902
Office 915.544.5232 Fax 915.544.5233
www.ceagroup.net

ENGINEER'S SEAL: JORGE L. ACUAVITE, 85075, LICENSED PROFESSIONAL ENGINEER, TEXAS, 4/16/07

SCALE: Horizontal: N/A; Vertical: N/A; Contour Interval: N/A

DATE: SEPTEMBER 2006
DESIGN BY: R.O.
DRAWN BY: R.O.
CHKD. BY: J.L.A.
APPVD. BY: J.L.A.
JOB No. 2000-077

PROJECT TITLE

SANDSTONE RANCH UNIT TWO SUBDIVISION IMPROVEMENTS

SHEET TITLE

GRADING PLAN

SHEET NO.

3

OF 18

600755

SANDSTONE RANCH UNIT TWO

BEING A PORTION OF SECTION 22
BLOCK 81, TOWNSHIP 1,
TEXAS AND PACIFIC RAILROAD COMPANY SURVEYS
CITY OF EL PASO, EL PASO COUNTY, TX.
14.50 ACRES ±

GENERAL NOTES:

1. RESTRICTIVE COVENANTS FOR THIS SUBDIVISION ARE FILED IN THE OFFICE OF THE COUNTY CLERK, DEED AND RECORD SECTION,
   INSTRUMENT NO. 20070010708 BOOK _____,
   PAGE NO. _____, DATE 2/2/07
2. TAX CERTIFICATE(S) FOR THIS SUBDIVISION ARE FILED IN THE OFFICE OF THE COUNTY CLERK, DEED AND RECORDS SECTION,
   INSTRUMENT NO. 20070010708 BOOK _____,
   PAGE NO. _____, DATE 2/2/07
3. THIS IS TO CERTIFY THAT WATER AND SEWER SERVICES WILL BE PROVIDED TO SANDSTONE RANCH UNIT TWO SUBDIVISION BY THE EL PASO WATER UTILITIES COMPANY IN ACCORDANCE WITH ITS REGULATIONS AND WATER AND SEWER SERVICES WILL BE EXTENDED TO THE SUBDIVISION FROM EXISTING FACILITIES LOCATED ON LOMA DE PLATA DRIVE AND WILL BE CONSTRUCTED TO SERVE THE SUBDIVISION.
4. SET 5/8" REBAR AT ALL EXTERIOR BOUNDARY CORNERS.
5. ALL UTILITY EASEMENTS ARE 10-FEET WIDE UNLESS OTHERWISE SPECIFIED.
6. THIS SUBDIVISION LIES WITHIN ZONE "C" AS DESIGNATED IN PANEL NO. 480214-0014 D, DATED AUGUST 5, 1991, OF THE FLOOD INSURANCE RATE MAPS, EL PASO COUNTY, TEXAS. ZONE "C" INDICATES AREAS OF MINIMAL FLOODING.
7. LOT CORNERS WILL BE SET UPON COMPLETION OF CONSTRUCTION OF ROADWAYS AND UTILITIES.
8. VEHICULAR ACCESS TO THESE RESIDENTIAL LOTS ABUTTING MARCUS URIBE DRIVE SHALL BE FROM OTHER DEDICATED STREETS ONLY. THE INSTRUMENT ASSURING RELEASE OF ACCESS IS FILED IN THE OFFICE OF THE COUNTY CLERK, DEED AND RECORD SECTION.
   INSTRUMENT NO. _____ BOOK _____,
   PAGE NO. _____, DATE_____
9. U.S. POSTAL SERVICE DELIVERY WILL BE PROVIDED THROUGH NEIGHBORHOOD DELIVERY AND COLLECTION BOX UNITS.

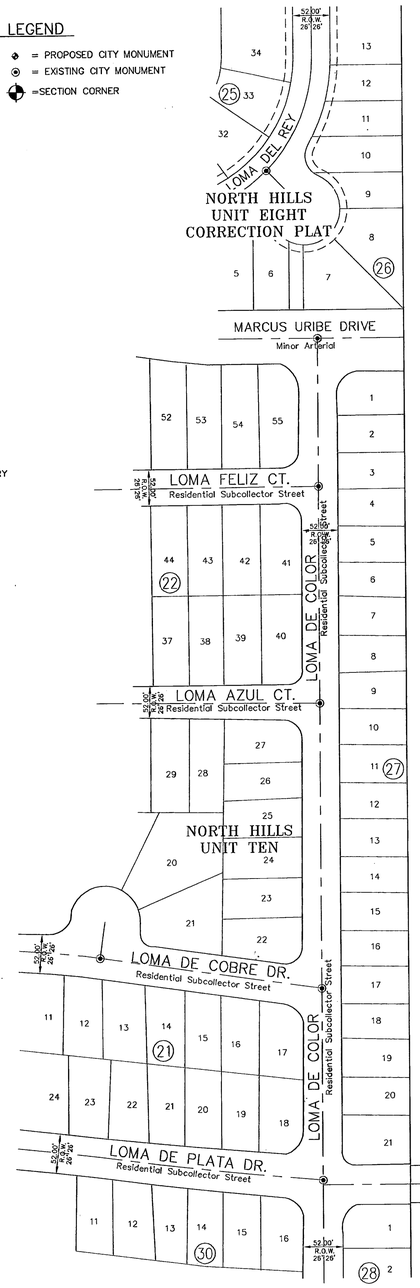
LEGEND

- = PROPOSED CITY MONUMENT
- = EXISTING CITY MONUMENT
- =SECTION CORNER

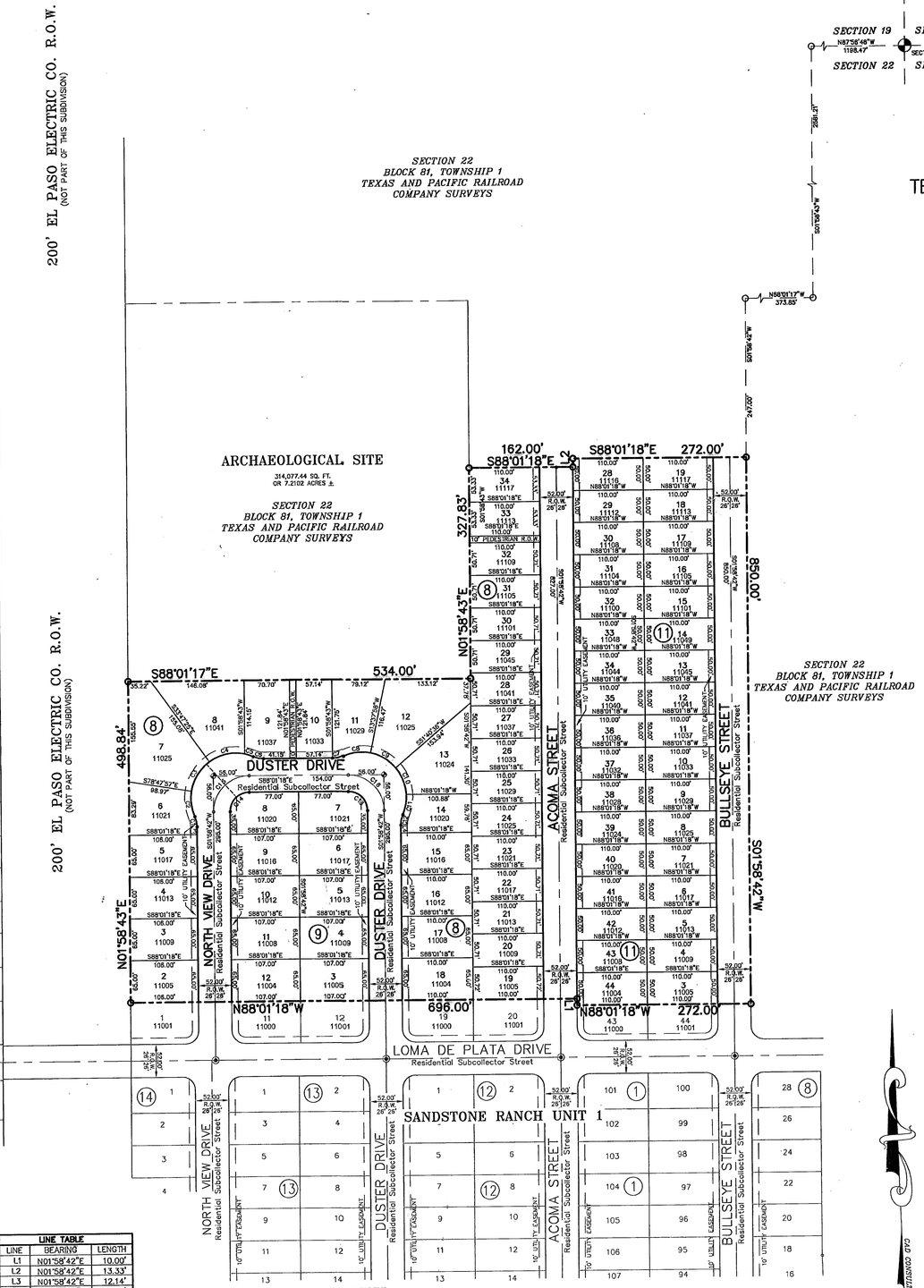
LOT AREA TABLE	
BLOCK 16	AREA: 236,231
LOT	SQUARE FEET
2	6,890
3	6,890
4	6,890
5	6,890
6	7,600
7	14,263
8	12,126
9	8,518
10	6,962
11	8,088
12	13,755
13	10,288
14	6,319
15	7,150
16	7,150
17	7,150
18	7,150
21	5,579
22	5,579
23	5,579
24	5,579
25	5,579
26	5,579
27	5,579
28	5,579
29	5,579
30	5,579
31	5,579
32	5,579
33	5,579
34	5,579
35	5,887
36	5,887
PED ROW	1,218
PED.ROW	1,100

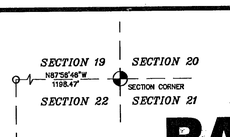
LOT AREA TABLE	
BLOCK 10	AREA: 188,999
LOT	SQUARE FEET
9	5,500
10	5,500
11	5,500
12	5,500
13	5,500
14	5,500
15	5,500
16	5,500
17	5,500
18	5,500
19	5,500
20	5,500
21	5,500
22	5,500
23	5,500
24	5,500
25	5,500
26	5,500
27	5,500
28	5,500
29	5,500
30	5,500
31	5,500
32	5,500
33	5,500
34	5,500
35	5,500
36	5,500
37	5,500
38	5,500
39	5,500
40	5,500
41	5,500
42	5,500

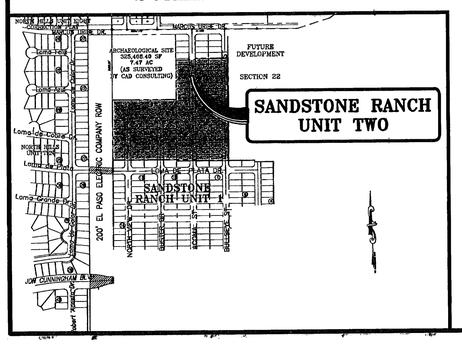
LOT AREA TABLE	
BLOCK 15	AREA: 69,164
LOT	SQUARE FEET
1	6,762
2	6,762
3	6,955
4	6,955
5	6,955
6	6,955
7	6,955
8	6,955
9	6,955
10	6,955



LOCATION MAP
SCALE 1"= 600'







CURVE TABLE						
CURVE	LENGTH	RADIUS	TANGENT	DELTA	BEARING	CHORD
C1	18.49'	40.00'	8.36'	23°37'02"	N09°49'49"W	18.37'
C2	40.12'	70.00'	20.63'	32°50'23"	S09°13'08"E	39.57'
C3	54.99'	70.00'	29.00'	45°00'32"	S33°42'19"W	53.59'
C4	58.32'	70.00'	30.97'	47°44'08"	S80°04'39"W	56.65'
C5	14.23'	70.00'	7.14'	11°39'01"	N70°13'48"W	14.21'
C6	18.49'	40.00'	8.36'	23°37'01"	S78°12'48"E	18.37'
C7	18.49'	40.00'	8.36'	23°37'01"	N80°10'12"E	18.37'
C8	43.09'	70.00'	22.25'	35°16'16"	S85°59'50"W	42.41'
C9	46.48'	70.00'	24.13'	38°02'39"	N57°20'43"W	45.63'
C10	45.69'	70.00'	23.69'	37°23'55"	N19°37'28"W	44.88'
C11	32.40'	70.00'	16.50'	26°31'13"	N12°20'08"E	32.11'
C12	18.49'	40.00'	8.36'	23°37'02"	S13°47'13"W	18.37'
C13	47.12'	30.00'	30.00'	90°00'00"	N43°01'18"W	42.43'
C14	47.12'	30.00'	30.00'	90°00'00"	S46°58'42"W	42.43'
C15	87.96'	56.00'	56.00'	90°00'00"	S46°58'42"W	79.20'
C16	87.96'	56.00'	56.00'	90°00'00"	N43°01'18"W	79.20'

LINE TABLE		
LINE	BEARING	LENGTH
L1	N01°58'42"E	10.00'
L2	N01°58'42"E	13.33'
L3	N01°58'42"E	12.14'
L4	N01°58'42"E	12.14'

DEDICATION

NORTHTOWNE VILLAGE JOINT VENTURE, property owner of this land does hereby present this plat and dedicates, if not previously dedicated, its respective portion of said property to the use of the public, the streets, drives, pedestrian right of way and utility easements, as hereon laid down and designated, including easements for overhang of service wires, conduits and pipes for underground utilities, the right to ingress and egress for service and construction, and the right to trim interfering trees and shrubs.

Witness our signature this 2ND day of NOVEMBER, 2006.

NORTHTOWNE VILLAGE JOINT VENTURE

ROBERT BOWLING III, President

ATTEST: NOT REQUIRED

ACKNOWLEDGEMENT

STATE OF TEXAS
COUNTY OF EL PASO

Before me, the undersigned authority, on this day personally appeared Robert Bowling, President of Tropicana Development, Inc., known 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 2ND day of NOVEMBER, 2006.

MARCELA FOURZAN
MY COMMISSION EXPIRES
October 7, 2010

Notary Public in and for El Paso County — My Commission Expires OCTOBER 7, 2010

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 1ST day of JUNE 2006, A.D.

Secretary — Chairperson

Approved for filing this 6TH day of NOVEMBER, 2006.

DEVELOPMENT SERVICES DIRECTOR

FILING

Filed and recorded in the office of the County Clerk of El Paso County, Texas, this 2 day of FEBRUARY, 2006, A.D. in Volume _____, of the Plat Record, Page _____, File No. 20070010407

County Clerk — By Deputy SANDRA ACEVEDO

subdivision improvement plans prepared by and under the supervision of CEA Engineering Group.

Jorge L. Azcarate, P.E. TX 85075

STATE OF TEXAS
JORGE L. AZCARATE
85075
LICENSED
PROFESSIONAL ENGINEER
10/31/06

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.

Carlos M. Jimenez, R.P.L.S.
Registered Professional Land Surveyor
Texas License No. 3950

ENGINEER
ceagroup engineering group
1204 Montana., El Paso, Texas 79902
Office 915.544.5232 Fax 915.544.5233
www.ceagroup.net
CONTACT: JORGE L. AZCARATE, P.E.

SURVEYOR

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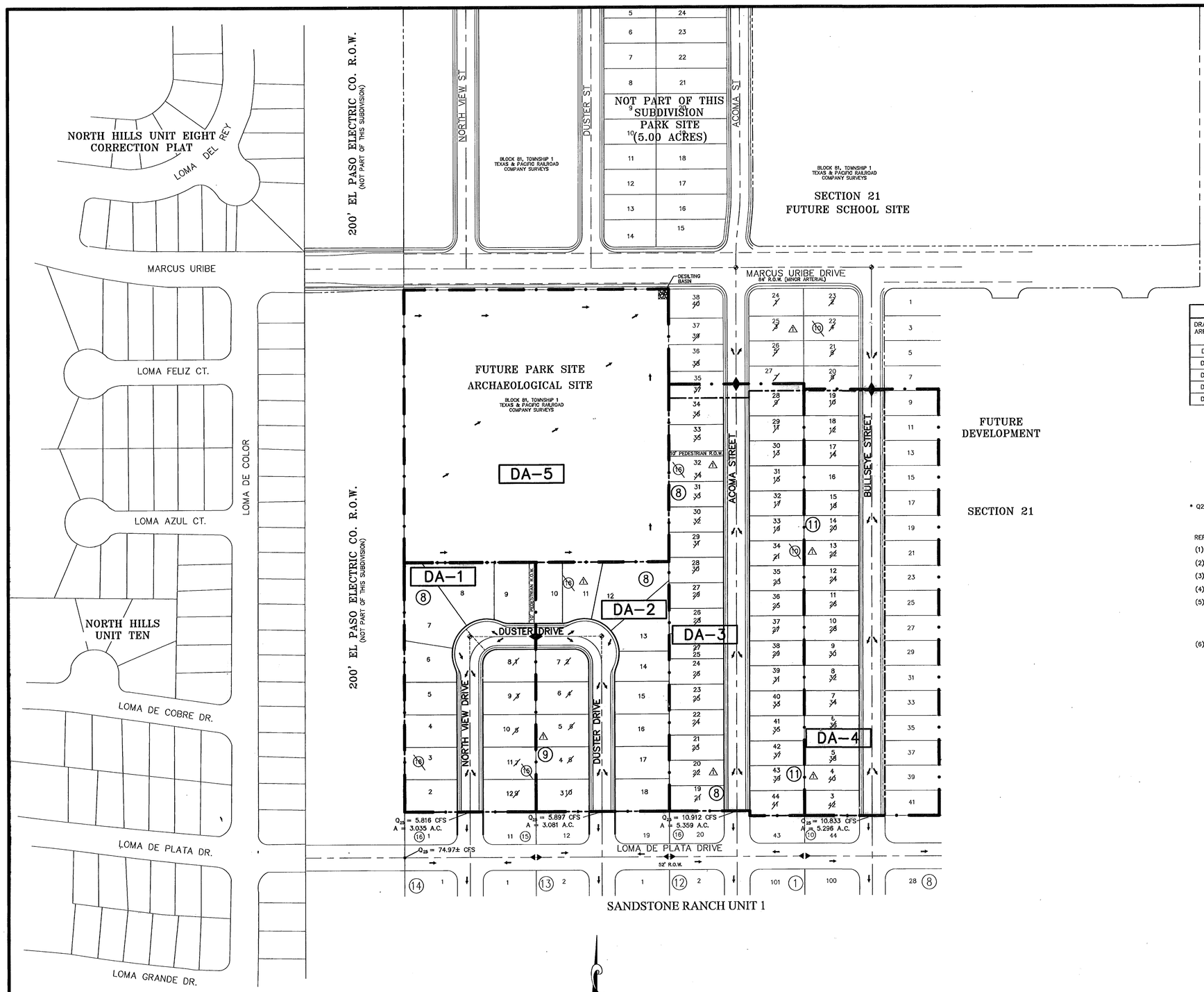
CAD CONSULTING COMPANY
1790 N. LEE TREVINO DR. SUITE 503
EL PASO, TEXAS 79936
TEL (915) 633-6422
CONTACT: CARLOS M. JIMENEZ R.P.L.S.

GRAPHIC SCALE
100 0 50 100 200 400
(IN FEET)
1 inch = 100 ft.

DATE OF REVISION: JULY 21, 2006
DATE OF PREPARATION: APRIL 11, 2006

600755



DRAINAGE PLAN

SCALE: 1" = 100'

UTILITY LOCATOR SERVICES	
EL PASO ELECTRIC COMPANY	(915) 543-5720
EL PASO ENERGY CORPORATION	(915) 496-5244
EL PASO WATER UTILITIES	(915) 594-5500
MCI SURVEILLANCE	(800) MCI-WORK
TIME WARNER COMMUNICATIONS	(915) 772-1123
TEXAS GAS SERVICE	(915) 680-7200
SBC	(800) 545-6005
AT&T	(800) 852-3788
U.S. SPRINT TELECOMM	(800) 521-0579
STREET DEPT. – SIGNAL & SIGN	(915) 621-6750
(AFTER HOURS)	(915) 240-3220

WARNING ! BEFORE YOU DIG
CALL
1-800-DIG-TESS
1-800-344-8377
FOR FIELD LOCATING EXISTING UTILITIES

RECORD DRAWINGS

THESE RECORD DOCUMENTS HAVE BEEN PREPARED BASED ON INFORMATION PROVIDED BY OTHERS. CEA ENGINEERING GROUP HAS NOT VERIFIED THE ACCURACY AND/OR COMPLETENESS OF THIS INFORMATION AND SHALL NOT BE RESPONSIBLE FOR ANY ERRORS OR OMISSIONS THAT MAY BE INCORPORATED AS A RESULT OF ERRONEOUS INFORMATION PROVIDED BY OTHERS.

4/13/07

WATERSHED AREAS					
DRAINAGE AREA NO. (1)	DRAINAGE AREA (AC) (2)	DESIGN STORM INTENSITY (I25) (3)	TIME OF CONCENTRATION (4)	RUNOFF COEFF. (C) (5)	Q25 (CFS) (6)
DA-1	3.035	2.908	24.25	0.659	5.816
DA-2	3.081	2.908	24.25	0.658	5.897
DA-3	5.359	3.099	21.62	0.657	10.912
DA-4	5.296	3.110	21.48	0.658	10.833
DA-5	6.670	2.146	40.00	0.400	5.725

* Q25 IS BASED ON DEVELOPED RUNOFF

REFERENCE: CITY OF EL PASO SUBDIVISION STANDARDS (3-11-97)

(1) WATERSHED AREA IDENTIFICATION

(2) AREA FROM DRAINAGE PLAN

(3) RAINFALL INTENSITY, 25 YEAR STORM => PLATE NO. 2-14

(4) TIME OF CONCENTRATION: TC= T (OVERLAND) + T (GUTTER)

(5) RUNOFF COEFFICIENT => PLATE NO. 2-10 TABLE A
RESIDENTIAL AREA = 0.60
PAVEMENT AREA = 0.90
PARK AREA = 0.40
COMMERCIAL AREA = 0.85

(6) $Q_{25} = C \times A \times I_{25}$

NOTE:

MAINTENANCE OF ALL DRAINAGE STRUCTURES OUTSIDE OF THE SUBDIVISION, SHALL BE THE DEVELOPERS RESPONSIBILITY UNTIL ACCEPTED BY THE CITY OF EL PASO FOR MAINTENANCE.

REFERENCES – BENCHMARKS

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

DATE	REVISIONS	BY
4/13/07	REVISED LOT AND BLOCK NUMBERS	

cea engineering group
1204 Montana Ave., El Paso, Texas 79902
Office 915.544.5232 Fax 915.544.5233
www.ceagroup.net

ENGINEER'S SEAL
JORGE L. ACHAVAL
86075
LICENSED PROFESSIONAL ENGINEER
4/13/07

SCALE
Horizontal: N/A
Vertical: N/A
Contour Interval: N/A

DATE: SEPTEMBER 2006
DESIGN BY: R.O.
DRAWN BY: R.O.
CHKD. BY: J.L.A.
APPVD. BY: J.L.A.
JOB No. 2000-077

PROJECT TITLE

SANDSTONE RANCH UNIT TWO SUBDIVISION IMPROVEMENTS

SHEET TITLE

DRAINAGE PLAN

SHEET NO.

4

OF 18

600755

UTILITY LOCATOR SERVICES	
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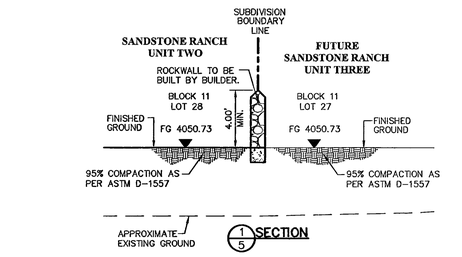
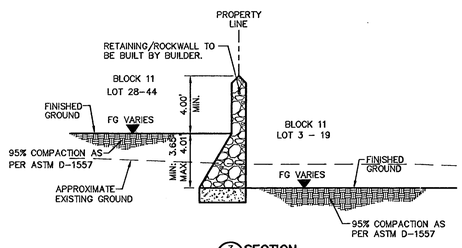
4/13/07



1/5 SECTION



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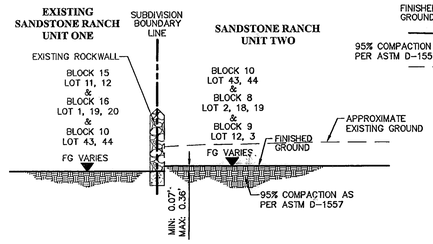

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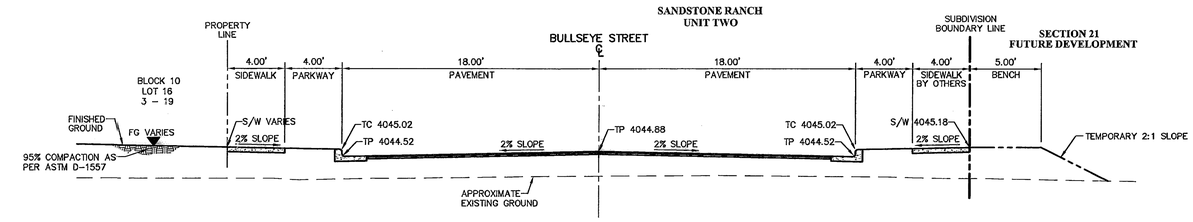
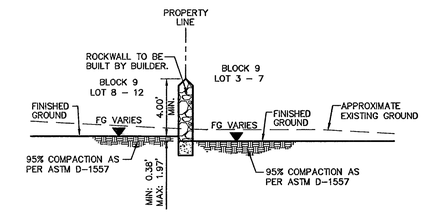
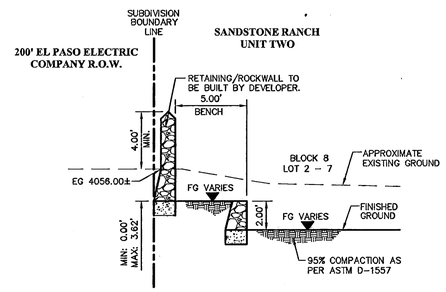


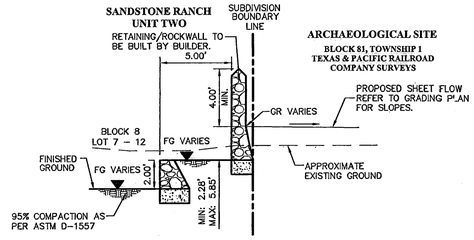
2/5 SECTION



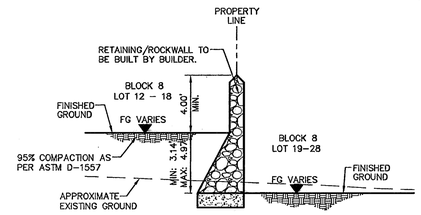
5/5 SECTION



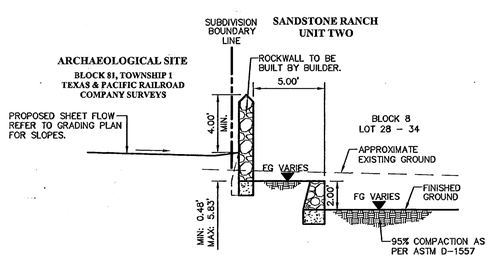
6/5 SECTION



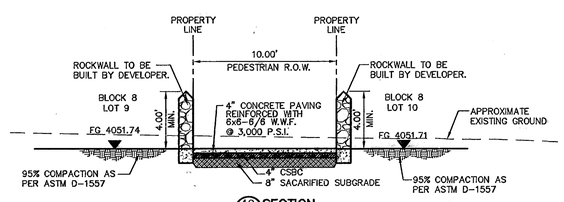
7/5 SECTION



8/5 SECTION

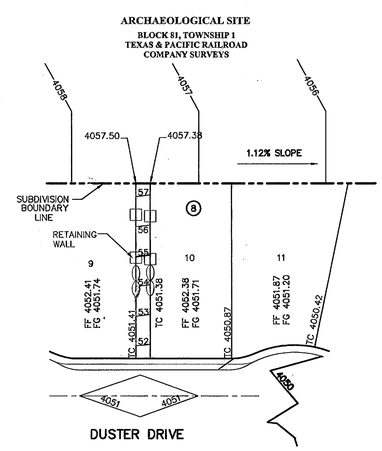


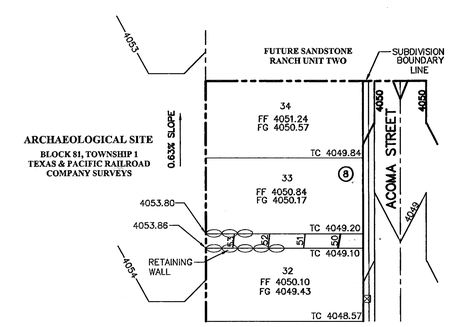
9/5 SECTION



10/5 SECTION

NOTE:
THIS CROSS-SECTION APPLIES TO BOTH PEDESTRIAN RIGHTS-OF-WAY.





PEDESTRIAN R.O.W. ENLARGEMENT DETAILS
SCALE: 1"=50'

REFERENCES – BENCHMARKS
FOUND TXDOT BRASS CAP SECTION CORNERS 19, 20, 22 AND 21 ELEVATION = 4047.32 (NAVD 88 DATUM) (SUBTRACT 8.462 TO CONVERT TO CITY DATUM)

DATE	REVISIONS	BY

cea engineering group
1204 Montana Ave., El Paso, Texas 79902
Office 915.544.5232 Fax 915.544.5233
www.ceagroup.net

ENGINEER'S SEAL
JORGE L. AZCARATE
85075
LICENSED PROFESSIONAL ENGINEER
4/13/07

SCALE
Horizontal: 1"=5'
Vertical: N/A
Contour Interval: N/A

DATE: SEPTEMBER 2006
DESIGN BY: R.O.
DRAWN BY: R.O.
CHKD. BY: J.L.A.
APPVD. BY: J.L.A.
JOB No. 2000-077

PROJECT TITLE
SANDSTONE RANCH UNIT TWO SUBDIVISION IMPROVEMENTS

SHEET TITLE
TYPICAL GRADING SECTIONS

SHEET NO.
5
OF 18

600755

UTILITY LOCATOR SERVICES	
EL PASO ELECTRIC COMPANY	(915) 543-5720
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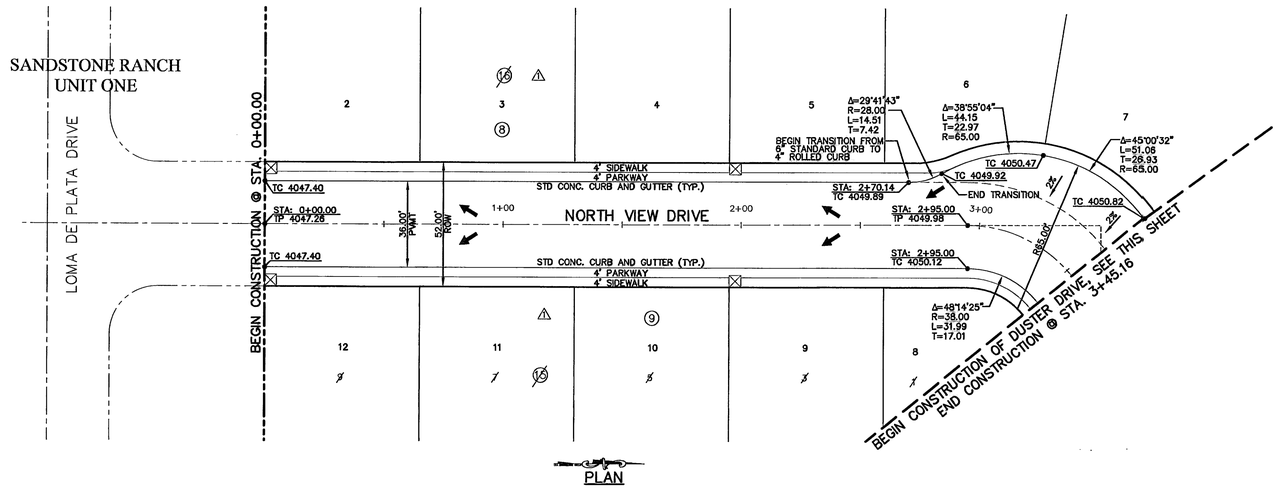
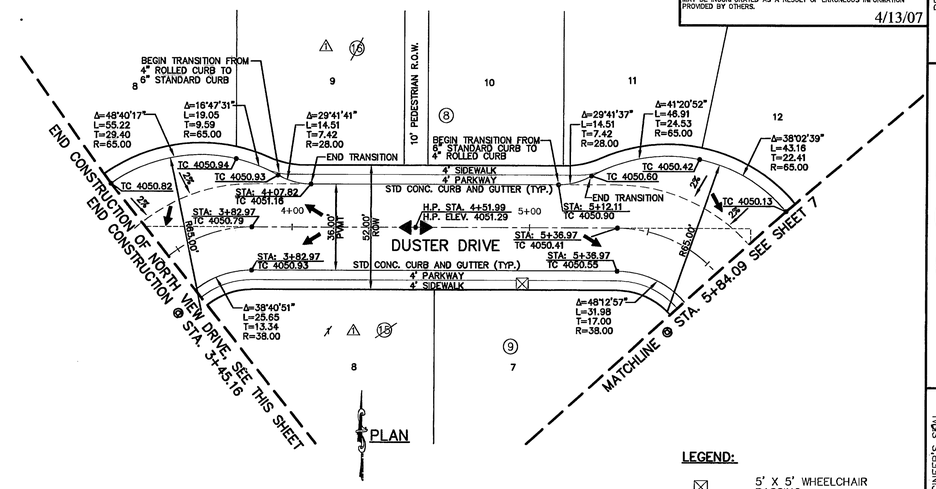
4/13/07

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

DATE	REVISIONS	BY
4/13/07	REVISED LOT AND BLOCK NUMBERS	



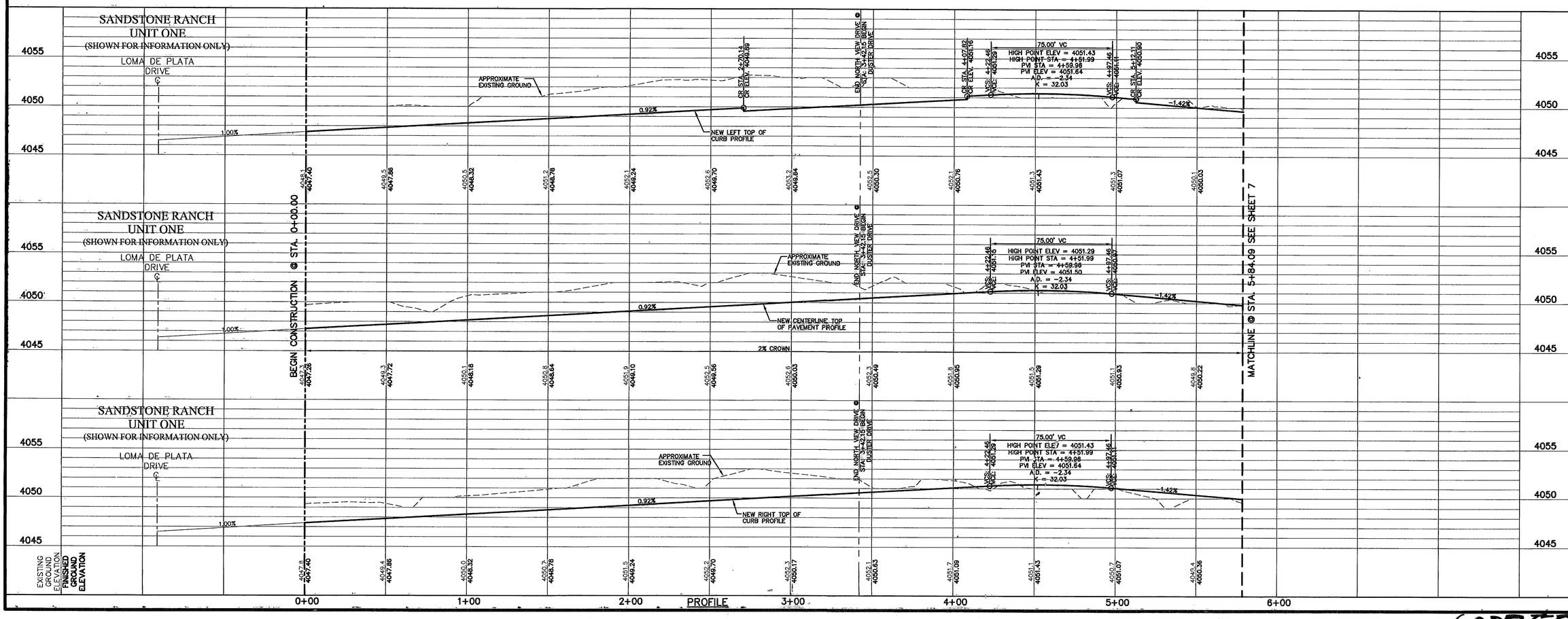
PLAN



PLAN

LEGEND:

☒ 5' X 5' WHEELCHAIR PASSING



ENGINEER'S SEAL
JORGE L. AZCARATE
85075
4/13/07

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1204 Montana Ave., El Paso, Texas 79902
Office 915.544.5232 Fax 915.544.5233
www.ceagroup.net

SCALE
Horizontal: 1"=30'
Vertical: 1"=5'
Contour Interval: N/A

DATE: AUGUST 2006
DESIGN BY: R.O.
DRAWN BY: R.O.
CHKD. BY: J.L.A.
APPVD. BY: J.L.A.
JOB No. 2000-077

PROJECT TITLE
SANDSTONE RANCH UNIT TWO SUBDIVISION IMPROVEMENTS

SHEET TITLE
NORTH VIEW DRIVE PLAN & PROFILE FROM STA. 0+00.00 TO STA. 3+45.16
DUSTER DRIVE PLAN & PROFILE FROM STA. 3+45.16 TO STA. 5+84.09

SHEET NO.
6
OF 18

600755

UTILITY LOCATOR SERVICES	
EL PASO ELECTRIC COMPANY	(915) 543-5720
EL PASO ENERGY CORPORATION	(915) 496-5244
EL PASO WATER UTILITIES	(915) 594-5500
MCI SURVEILLANCE	(800) MCI-WORK
TIME WARNER COMMUNICATIONS	(915) 772-1123
TEXAS GAS SERVICE	(915) 680-7200
SBC	(800) 545-6005
AT&T	(800) 852-3786
U.S. SPRINT TELECOMM	(800) 521-0579
STREET DEPT. - SIGNAL & SIGN	(915) 621-6750
(AFTER HOURS)	(915) 240-3220

WARNING !
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CALL
1-800-DIG-TESS
1-800-344-8377
FOR FIELD LOCATING EXISTING UTILITIES

RECORD DRAWINGS
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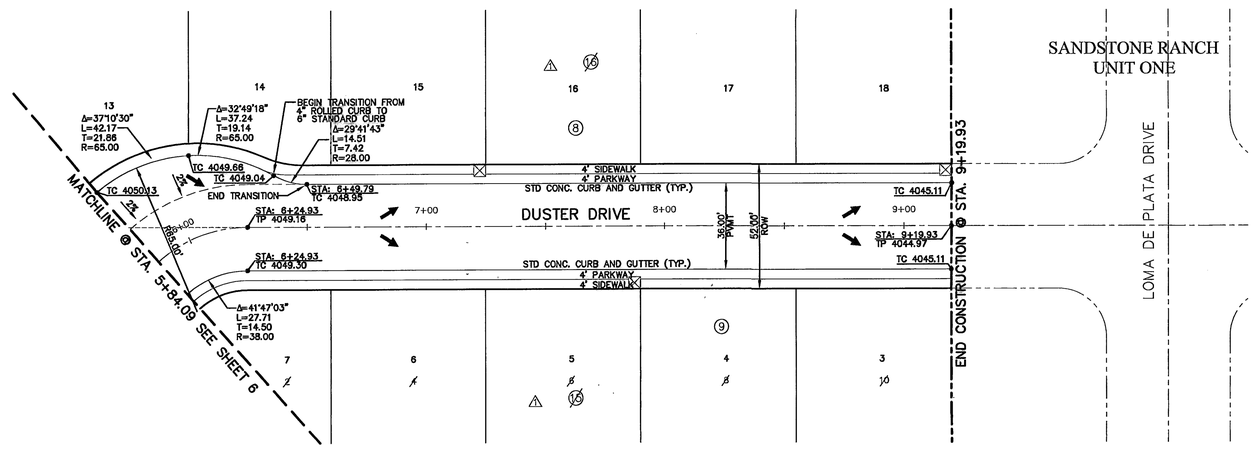
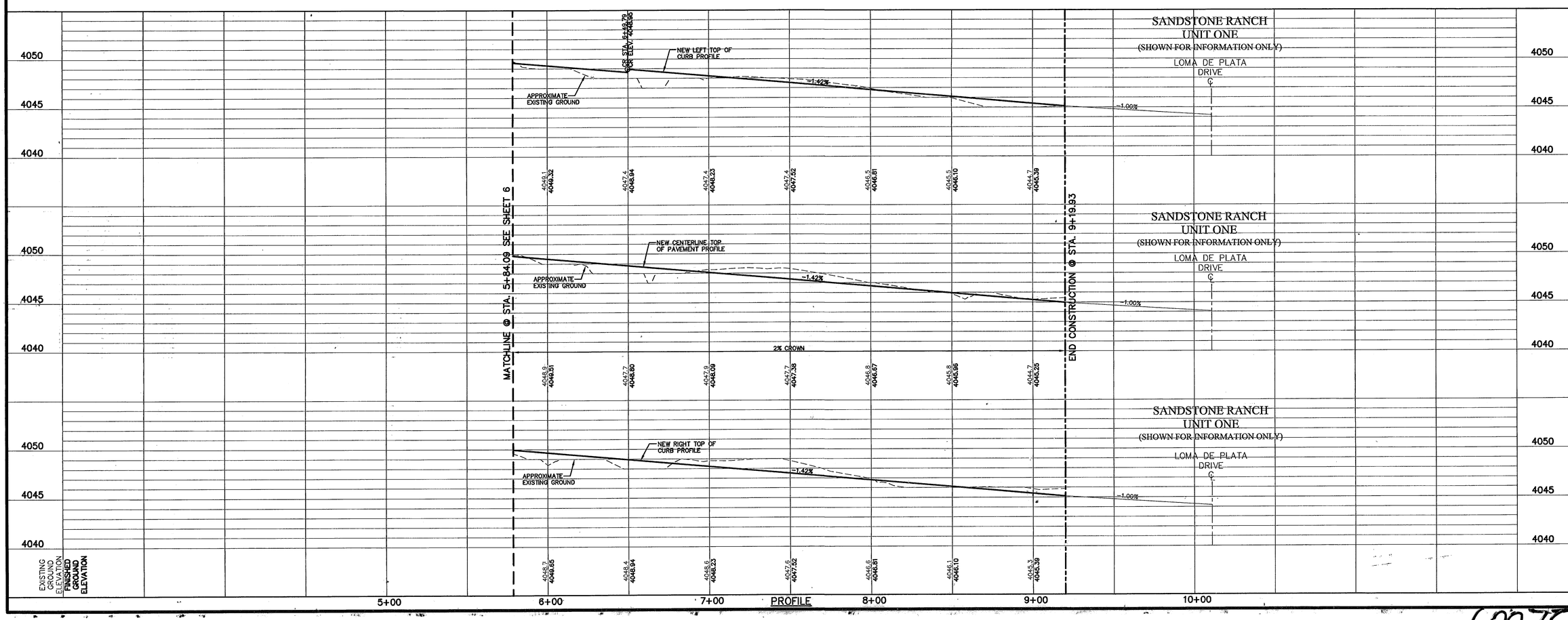
4/13/07



PLAN

LEGEND:

⊠ 5' X 5' WHEELCHAIR PASSING



PROFILE

REFERENCES - BENCHMARKS
FOUND TXDOT BRASS CAP SECTION CORNERS 19, 20, 22 AND 21, ELEVATION 4033.22 (NVGD DATUM) (SUBTRACT 8.462 TO CONVERT TO CITY DATUM)

DATE	REVISIONS	BY
4/13/07	REVISED LOT AND BLOCK NUMBERS	

cea engineering group
1204 Montana Ave., El Paso, Texas 79902
Office 915.544.5232 Fax 915.544.5233
www.ceagroup.net

ENGINEER'S SEAL
STATE OF TEXAS
JORGE L. ACCARATE
85075
LICENSED PROFESSIONAL ENGINEER
4/13/07

SCALE
Horizontal: 1" = 30'
Vertical: 1" = 5'
Contour interval: N/A

DATE: AUGUST 2006
DESIGN BY: R.O.
DRAWN BY: R.O.
CHKD. BY: J.L.A.
APPVD. BY: J.L.A.
JOB No. 2000-077

PROJECT TITLE
SANDSTONE RANCH UNIT TWO SUBDIVISION IMPROVEMENTS

SHEET TITLE
DUSTER DRIVE PLAN & PROFILE FROM STA. 5+84.09 TO STA. 9+19.93

SHEET NO.
7
OF 18

600735

UTILITY LOCATOR SERVICES	
EL PASO ELECTRIC COMPANY	(915) 543-5720
EL PASO ENERGY CORPORATION	(915) 496-5244
EL PASO WATER UTILITIES	(915) 594-5500
MCI SURVEILLANCE	(800) MCI-WORK
TIME WARNER COMMUNICATIONS	(915) 772-1123
TEXAS GAS SERVICE	(915) 680-7200
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AT&T	(800) 852-3786
U.S. SPRINT TELECOMM	(800) 521-0579
STREET DEPT. - SIGNAL & SIGN	(915) 621-6750
(AFTER HOURS)	(915) 240-3220

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1-800-344-8377
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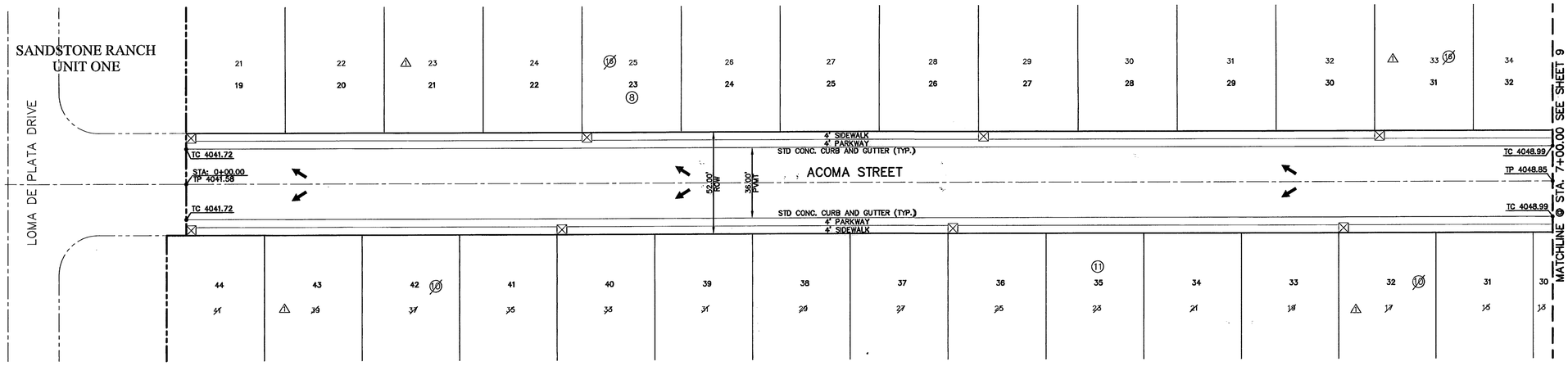
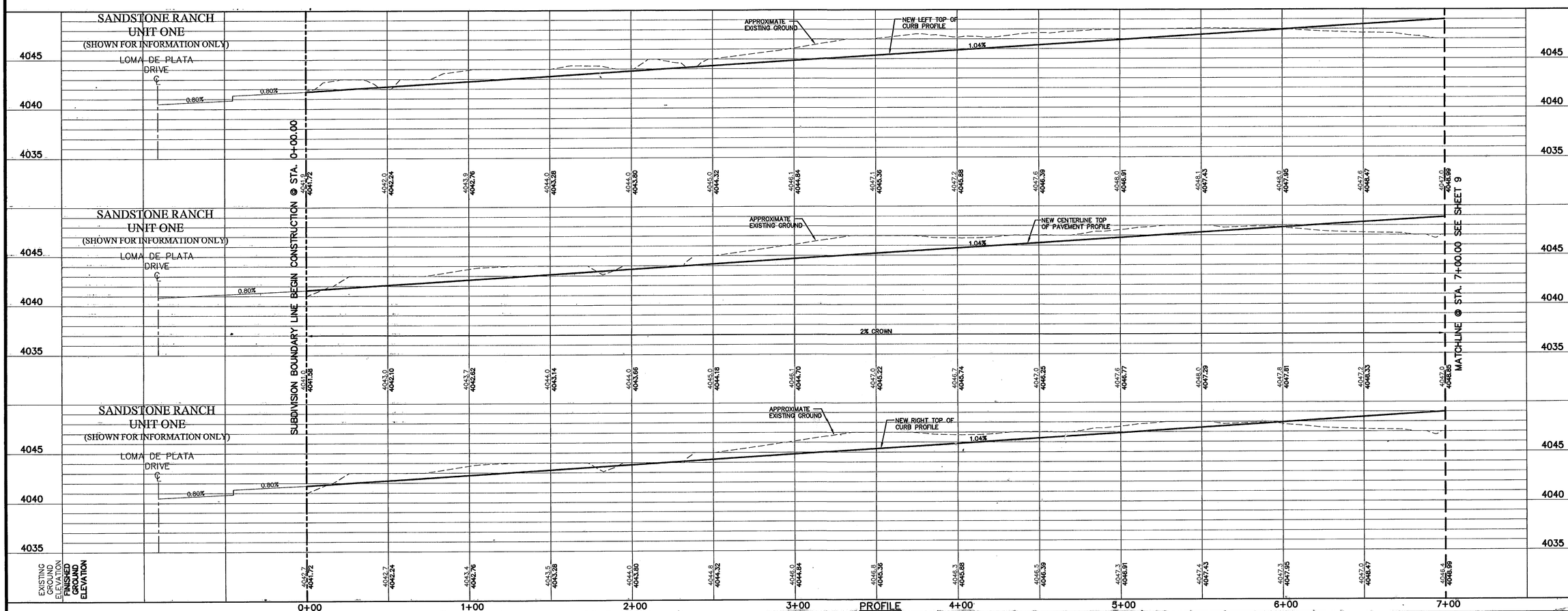
4/13/07



PLAN

LEGEND:

⊠ 5' X 5' WHEELCHAIR PASSING



PROFILE

REFERENCES - BENCHMARKS

FOUND TXDOT BRASS CAP SECTION CORNERS 19, 20, 22 AND 21. ELEVATION: 4033.72 (NVGD DATUM) (SUBTRACT 4.42' TO CONVERT TO CITY DATUM)

DATE	REVISIONS	BY
4/13/07	REVISED LOT AND BLOCK NUMBERS	

cea engineering group
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www.ceagroup.net

ENGINEER'S SEAL

JORGE L. ACCARATE 86075 CIVIL 4/19/07

SCALE
Horizontal: 1"=30'
Vertical: 1"=5'
Contour Interval: N/A

DATE: AUGUST 2006
DESIGN BY: R.O.
DRAWN BY: R.O.
CHKD. BY: J.L.A.
APPVD. BY: J.L.A.
JOB No. 2000-077

PROJECT TITLE

SANDSTONE RANCH UNIT TWO SUBDIVISION IMPROVEMENTS

SHEET TITLE

ACOMA STREET PLAN & PROFILE FROM STA. 0+00.00 TO STA. 7+00.00

SHEET NO.

8

OF 18

600755

UTILITY LOCATOR SERVICES	
EL PASO ELECTRIC COMPANY	(915) 543-5720
EL PASO ENERGY CORPORATION	(915) 496-5244
EL PASO WATER UTILITIES	(915) 594-5500
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STREET DEPT. – SIGNAL & SIGN	(915) 621-6750
(AFTER HOURS)	(915) 240-3220

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REFERENCES – BENCHMARKS
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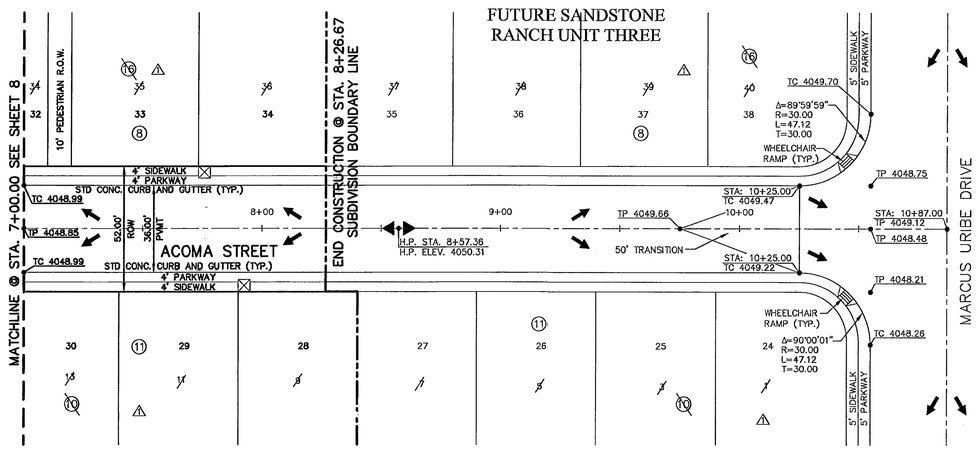
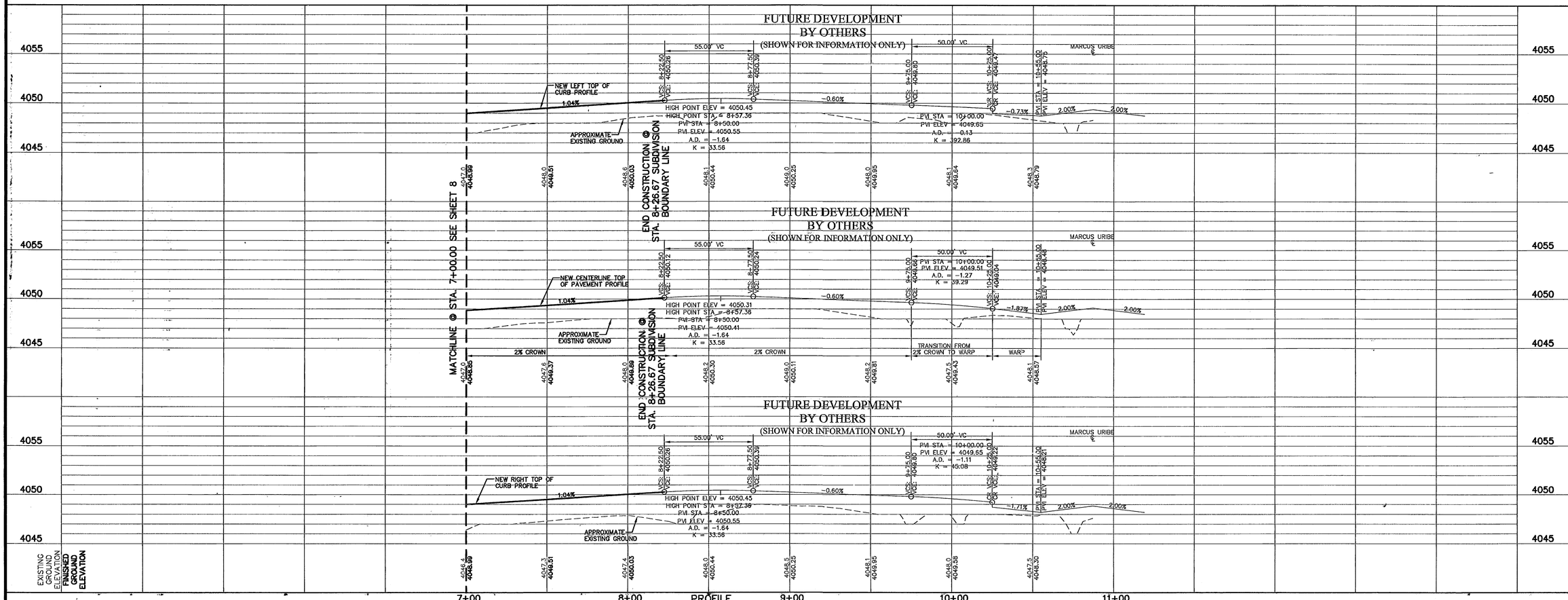
DATE	REVISIONS	BY
1	REVISED LOT AND BLOCK NUMBERS	



PLAN

LEGEND:

⊠ 5' X 5' WHEELCHAIR PASSING



ENGINEER'S SEAL
JORGE L. ACARATE 85075 LICENSED PROFESSIONAL ENGINEER 4/13/07

cea engineering group
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www.ceagroup.net

SCALE
Horizontal: 1"=30'
Vertical: 1"=5'
Contour Interval: N/A

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DESIGN BY: R.O.
DRAWN BY: R.O.
CHKD. BY: J.L.A.
APPVD. BY: J.L.A.
JOB No. 2000-077

PROJECT TITLE
SANDSTONE RANCH UNIT TWO
SUBDIVISION IMPROVEMENTS

SHEET TITLE
ACOMA STREET
PLAN & PROFILE
FROM STA. 7+00.00
TO STA. 8+26.67

SHEET NO.
9
OF 18

600755

UTILITY LOCATOR SERVICES	
EL PASO ELECTRIC COMPANY	(915) 543-5720
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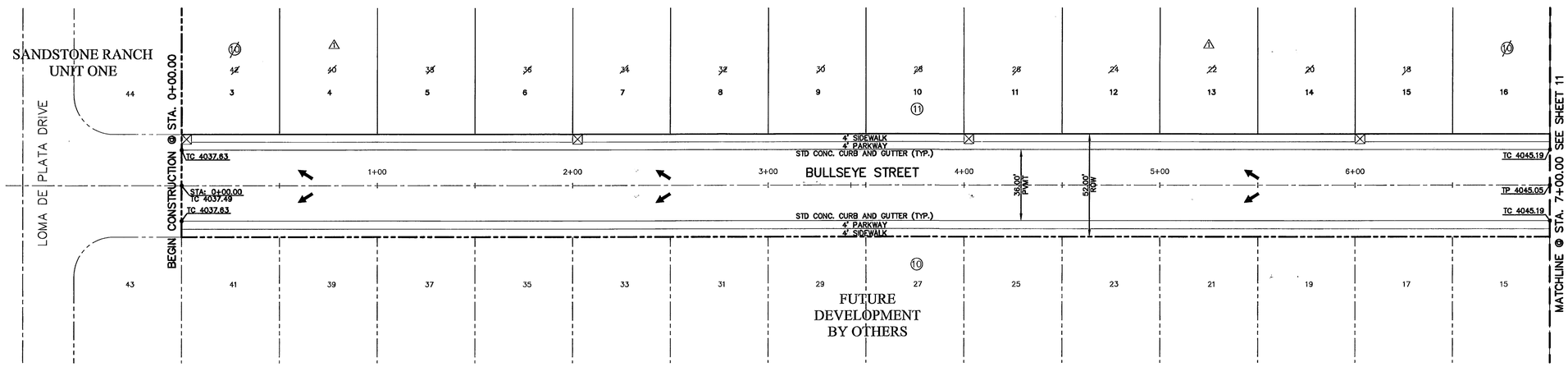
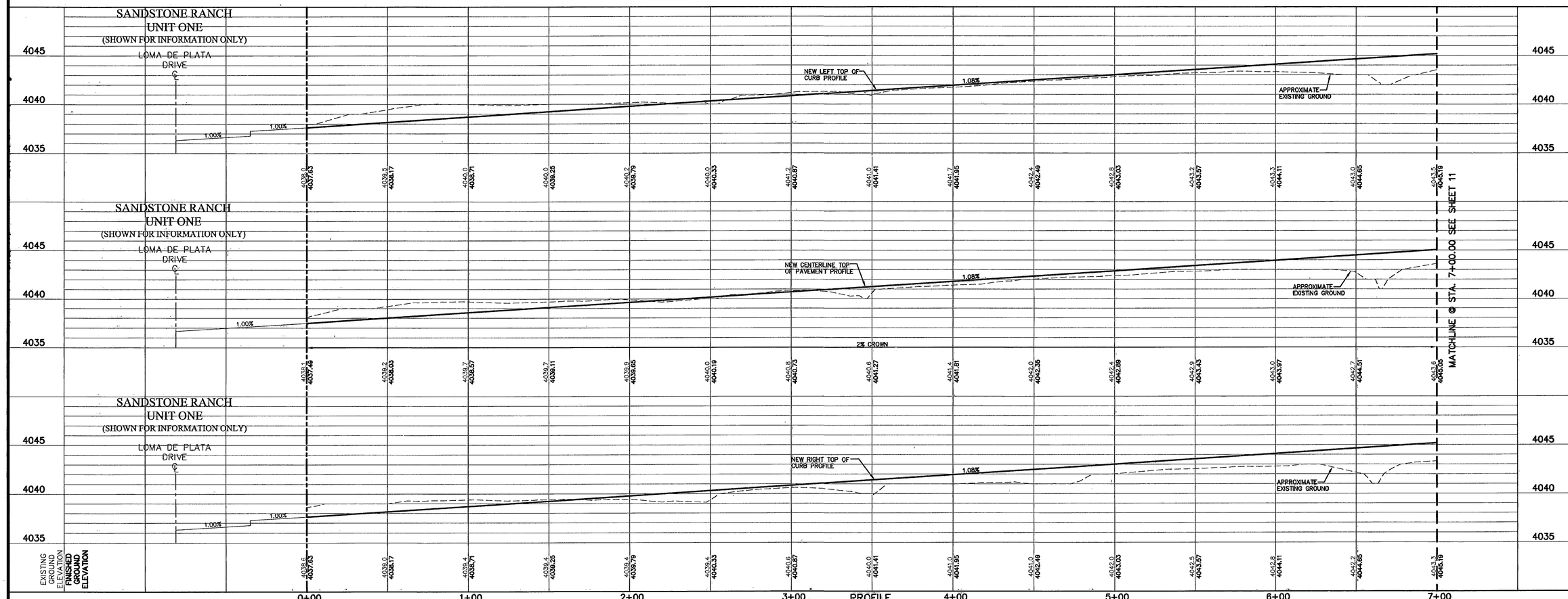


PLAN

LEGEND:

⊠ 5' X 5' WHEELCHAIR PASSING



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1204 Montana Ave., El Paso, Texas 79902
Office 915.544.5232 Fax 915.544.5233
www.ceagroup.net

ENGINEER'S SEAL
JORGE L. AZCARATE 85075 CONSULTING ENGINEER STATE OF TEXAS 4/13/07

SCALE
Horizontal: 1"=30'
Vertical: 1"=5'
Contour Interval: N/A

DATE: AUGUST 2006
DESIGN BY: R.O.
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CHKD. BY: J.L.A.
APPVD. BY: J.L.A.
JOB No. 2000-077

PROJECT TITLE
SANDSTONE RANCH UNIT TWO SUBDIVISION IMPROVEMENTS

SHEET TITLE
BULLSEYE STREET PLAN & PROFILE FROM STA. 0+00.00 TO STA. 7+00.00

SHEET NO.
10
OF 18

600755

UTILITY LOCATOR SERVICES	
EL PASO ELECTRIC COMPANY	(915) 543-5720
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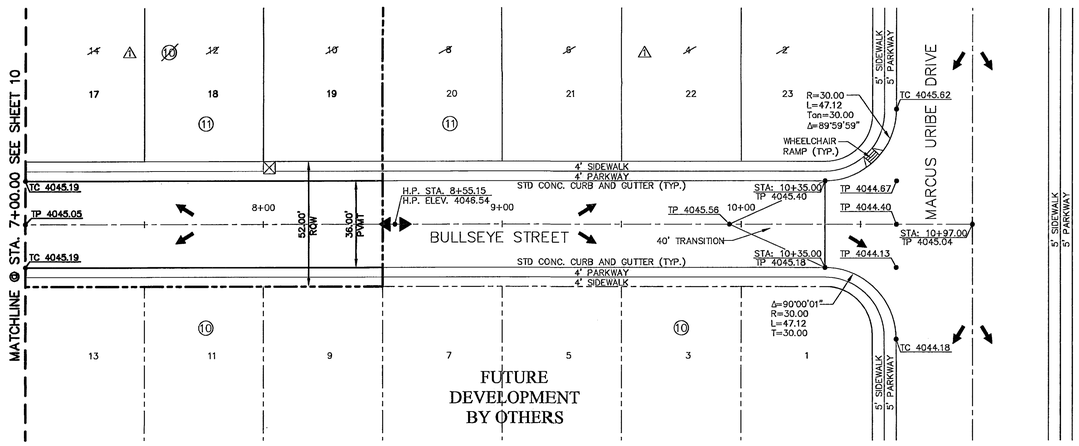
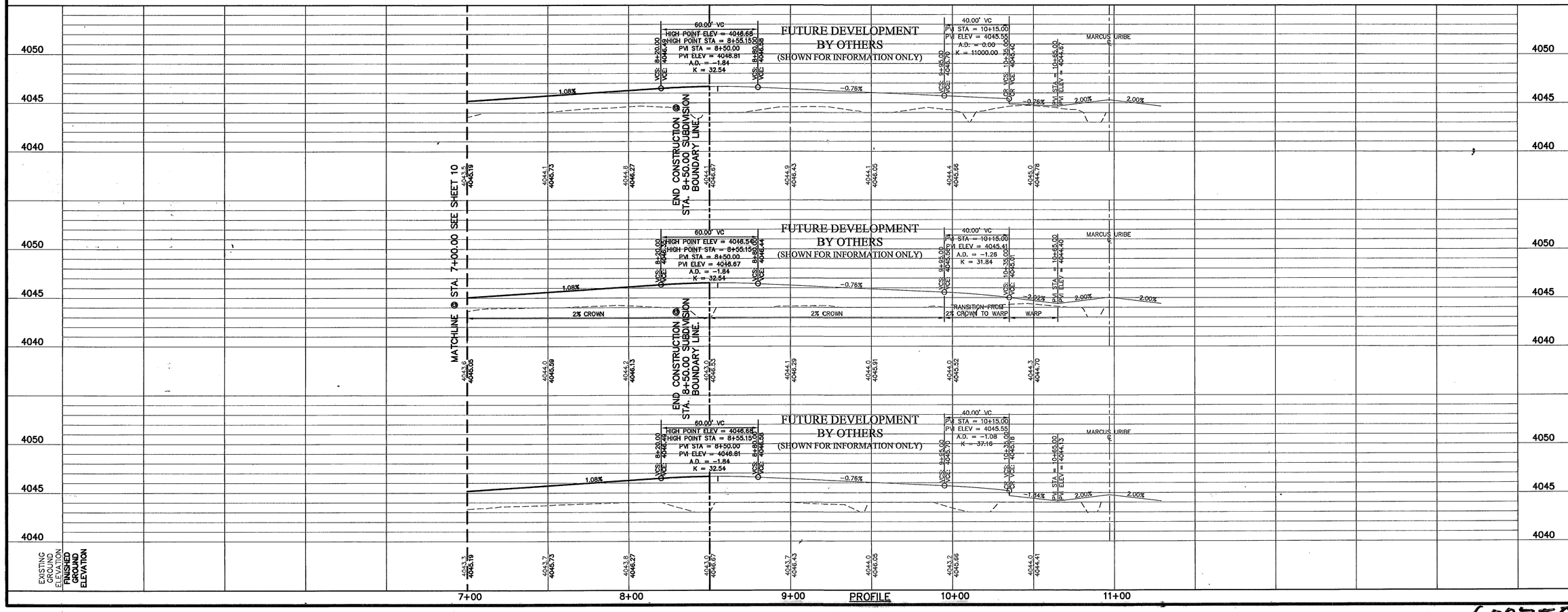


PLAN

LEGEND:

⊠ 5' X 5' WHEELCHAIR PASSING



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4/13/07

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Contour Interval: N/A

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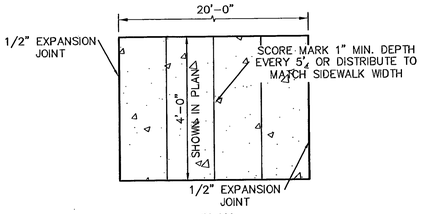
SUBDIVISION IMPROVEMENTS

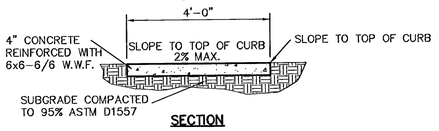
SHEET TITLE
BULLSEYE PLAN & PROFILE FROM STA. 7+00.00 TO STA. 8+50.00

SHEET NO.
11
OF 18

600755



PLAN

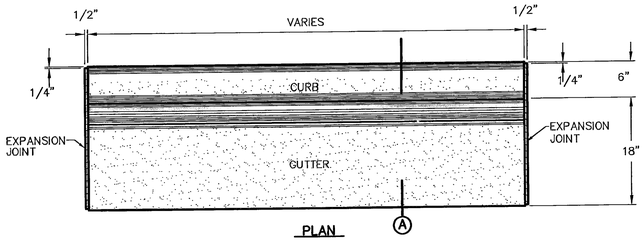


SECTION

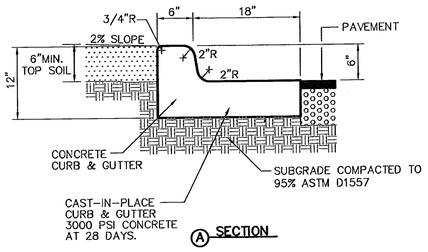
SIDEWALK NOTES:

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.

1/12 SECTION-SIDEWALK/SLAB
SCALE: 1/2"=1'-0"



PLAN

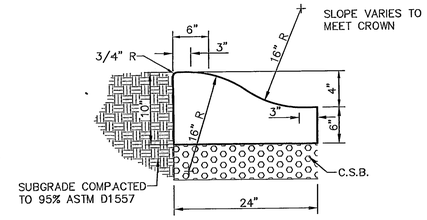


A SECTION

NOTES:

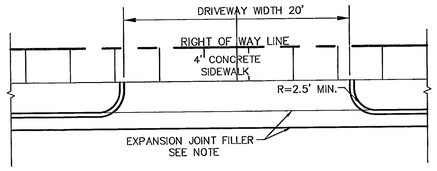
1. CONCRETE CURB, GUTTER, AND RETURNS SHALL BE 3,000 P.S.I. MIN.
2. DUMMY JOINTS REQUIRED AT 10' O.C.
3. 1/2" PREMOLDED BITUMINOUS EXPANSION JOINT (AASHTO M-33) IS REQUIRED FOR ALL CURBS RETURNS. TRIM BITUMINOUS MATERIAL 1/4" LESS THAN NEAT CURB & GUTTER DIMENSION.
4. SUBGRADE UNDER CURBS MUST BE FORMED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

2/12 CURB & GUTTER DETAIL
SCALE: 1"=1'-0"

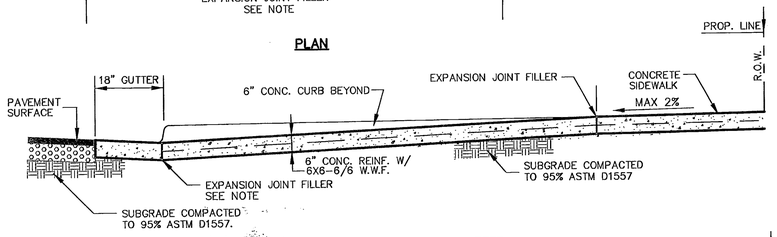


1. CONCRETE TO BE 3000 PSI MIN.
2. DUMMY JOINTS REQUIRED AT 10' O.C. FOR HEADERS AND 5' O.C. FOR SIDEWALK
3. EXPANSION MATERIAL REQUIRED AT CURB RETURNS WITH 1/2" PREMOLDED ASPHALT IMPREGNATED EXPANSION MATERIAL OR EQUAL.
4. EXPANSION JOINTS REQUIRED AT 50' O.C. WHEN FORMING FOR HEADERS.
5. EXPANSION JOINTS REQUIRED FOR SIDEWALK AT 20' O.C.
6. * FOR "T" CUL-DE-SAC HEELS ONLY.

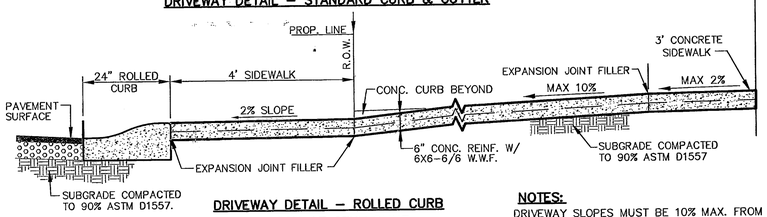
3/12 4" CONCRETE ROLLED CURB DETAIL
SCALE: 1"=1'-0"



PLAN



DRIVEWAY DETAIL - STANDARD CURB & GUTTER

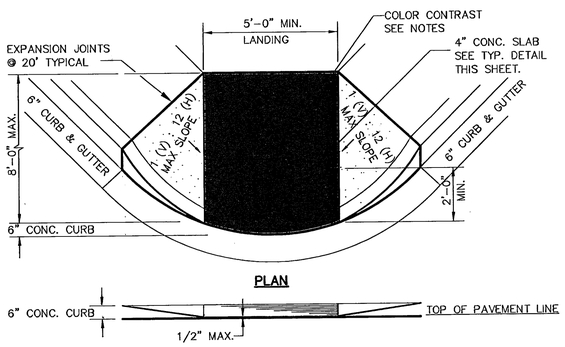


DRIVEWAY DETAIL - ROLLED CURB SECTION AT CENTERLINE

NOTES:

DRIVEWAY SLOPES MUST BE 10% MAX. FROM GUTTER FOR FIRST 12 FEET AND 14% MAX. THEREAFTER (DRIVEWAY SHALL BE LOCATED @ HIGH SIDE OF LOT UNLESS OTHERWISE COORDINATED WITH CITY OF EL PASO)

4/12 TYPICAL DRIVEWAY DETAIL
SCALE: NTS



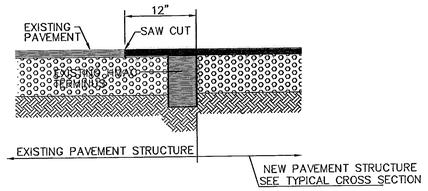
PLAN

ELEVATION

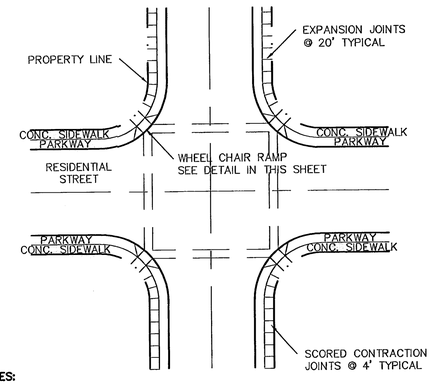
NOTES:

1. RAMP SHALL HAVE CONTRASTING COLOR TO SIDEWALK. COLOR SHALL BE BRICK RED, OR AS APPROVED BY THE CITY OF EL PASO.
2. ALL NEW RAMPS SHALL COMPLY WITH T.A.S. AND A.D.A. REQUIREMENTS. ANY SECTIONS NOT CONFORMING WILL BE REMOVED AT THE CONTRACTORS EXPENSE.

5/12 TYPICAL WHEELCHAIR RAMP DETAIL
SCALE: NTS



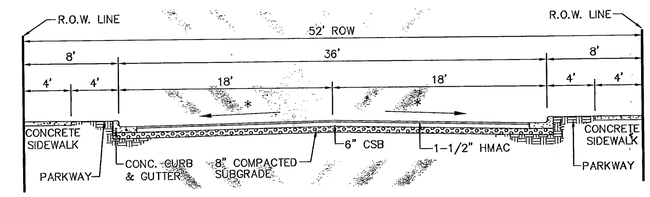
6/12 TYPICAL PAVEMENT JOINT SECTION
SCALE: N.T.S.



NOTES:

1. RAMPS MAY BE PLACED AS SUGGESTED, HOWEVER EXISTING LIGHT POLES, FIRE HYDRANTS, DROP INLETS, ETC., MAY AFFECT PLACEMENT.
2. THE CONCRETE SURFACE SHALL HAVE A ROUGH, NONSKID TYPE FINISH.
3. CONSTRUCTION METHODS SHALL CONFORM WITH THE CITY OF EL PASO SPECIFICATIONS.
4. ALL PARKING AND PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH CURRENT CITY OF EL PASO STANDARDS.

7/12 WHEELCHAIR RAMP STREET PLAN
SCALE: 1" = 30'

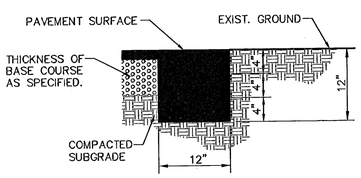


(*) STREET TRANSVERSE SLOPE AS SHOWN IN PLANS

NOTE:

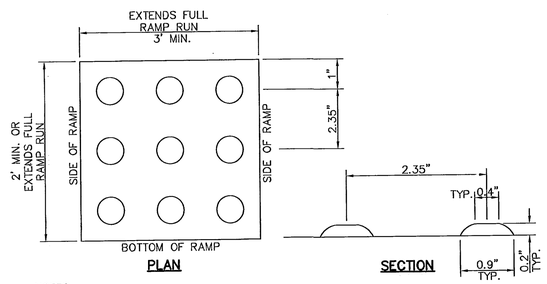
STREET IMPROVEMENTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH CURRENT CITY OF EL PASO PAVING CONSTRUCTION DETAILS AND STANDARD SPECIFICATIONS: CBR @ EVERY 500' RESULTS TO BE SUBMITTED TO DEVELOPMENT SERVICES OF CITY OF EL PASO FOR REVIEW AND APPROVAL PRIOR TO PLACEMENT OF PAVEMENT

8/12 TYPICAL 52' ROW STREET SECTIONS DETAIL
SCALE: 1"=6'



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

9/12 TERMINUS OF STREET
SCALE: 1"=1'-0"

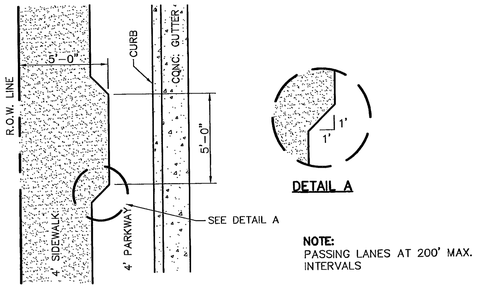


PLAN SECTION

NOTES:

1. ALL CONCRETE SHALL BE 3,000 P.S.I. MIN. AT 28 DAYS.
2. CONCRETE SLABS SHALL BE A MIN. 4" THICK.
3. DETECTABLE WARNING SURFACE SHALL CONSIST OF RAISED TRUNCATED DOMES WITH A NOMINAL DIAMETER OF 0.9 IN, A NOMINAL HEIGHT OF 0.2 IN AND A CENTER TO CENTER NOMINAL SPACING OF 2.35 IN, AND SHALL NOT BE STAGGERED. THE SURFACE SHALL HAVE A COLOR CONTRAST VISUALLY WITH ADJOINING SURFACES.
4. ALL NEW RAMPS SHALL COMPLY WITH T.A.S. AND A.D.A. REQUIREMENTS. ANY SECTIONS NOT CONFORMING WILL BE REMOVED AT THE CONTRACTORS EXPENSE.

10/12 TRUNCATED DOME
SCALE: NTS



NOTE:
PASSING LANES AT 200' MAX. INTERVALS

11/12 ACCESSIBLE PASSING SPACE DETAIL
SCALE: 1/4" = 1'-0"

RECORD DRAWINGS

THESE RECORD DOCUMENTS HAVE BEEN PREPARED BASED ON INFORMATION PROVIDED BY OTHERS. CEA ENGINEERING GROUP HAS NOT VERIFIED THE ACCURACY AND/OR COMPLETENESS OF THIS INFORMATION AND SHALL NOT BE RESPONSIBLE FOR ANY ERRORS OR OMISSIONS THAT MAY BE INCORPORATED AS A RESULT OF ERRONEOUS INFORMATION PROVIDED BY OTHERS.

4/13/07

REFERENCES - BENCHMARKS
FOUND TXDOT BRASS CAP SECTION CORNERS 19, 20, 22 AND 21 (GRID: 4372.0000 NAD 83 DATUM) (SUBTRACT 6,462 TO CONVERT TO CITY DATUM)

DATE	REVISIONS	BY

cea engineering group
1204 Montana Ave., El Paso, Texas 79902
Office 915.544.5232 Fax 915.544.5233
www.ceagroup.net

ENGINEER'S SEAL
JORGE L. ACUARTE 85075 LICENSED PROFESSIONAL ENGINEER 4/13/07

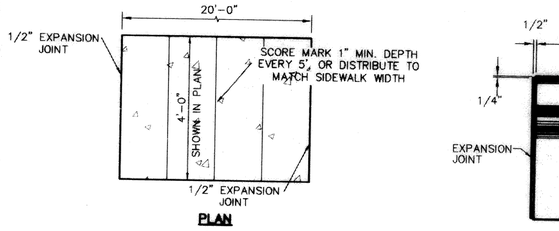
SCALE
Horizontal: N/A
Vertical: N/A
Contour Interval: N/A
DATE: AUGUST 2006
DESIGN BY: R.O.
DRAWN BY: R.O./J.M.
CHKD. BY: J.L.A.
APPV'D. BY: J.L.A.
JOB No. 2000-077

PROJECT TITLE
SANDSTONE RANCH UNIT TWO
SUBDIVISION IMPROVEMENTS

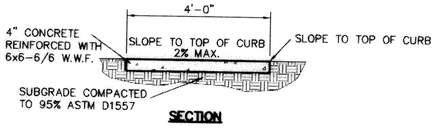
SHEET TITLE
STANDARD DETAILS
(SHEET 1 OF 3)

SHEET NO.
12
OF 18

600755



PLAN

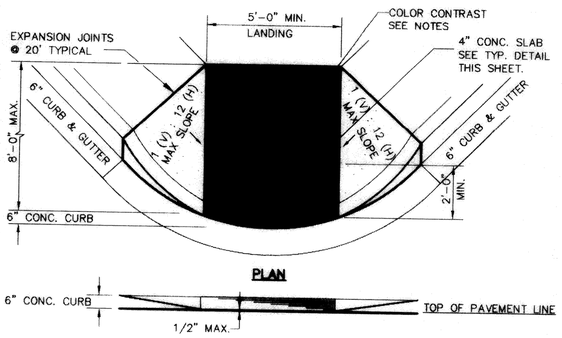


SECTION

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.

1/12 SECTION-SIDEWALK/SLAB
SCALE: 1/2"=1'-0"



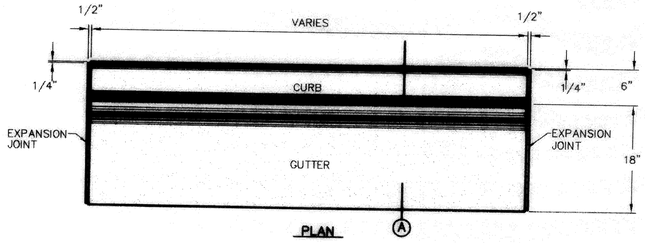
PLAN

ELEVATION

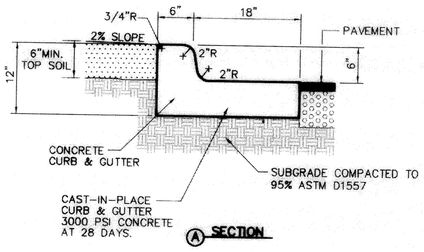
NOTES:

1. RAMP SHALL HAVE CONTRASTING COLOR TO SIDEWALK. COLOR SHALL BE BRICK RED, OR AS APPROVED BY THE CITY OF EL PASO.
2. ALL NEW RAMPS SHALL COMPLY WITH T.A.S. AND A.D.A. REQUIREMENTS. ANY SECTIONS NOT CONFORMING WILL BE REMOVED AT THE CONTRACTORS EXPENSE.

5/12 TYPICAL WHEELCHAIR RAMP DETAIL
SCALE: NTS



PLAN

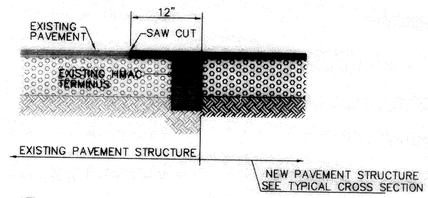


A SECTION

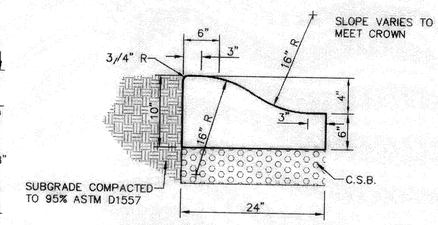
NOTES:

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

2/12 CURB & GUTTER DETAIL
SCALE: 1"=1'-0"

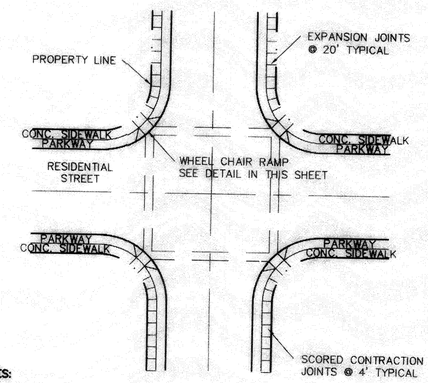


6/12 TYPICAL PAVEMENT JOINT SECTION
SCALE: N.T.S.



1. CONCRETE TO BE 3000 PSI MIN.
2. DUMMY JOINTS REQUIRED AT 10' O.C. FOR HEADERS AND 5' O.C. FOR SIDEWALK
3. EXPANSION MATERIAL REQUIRED AT CURB RETURNS WITH 1/2" PREMOLDED ASPHALT IMPREGNATED EXPANSION MATERIAL OR EQUAL.
4. EXPANSION JOINTS REQUIRED AT 50' O.C. WHEN FORMING FOR HEADERS.
5. EXPANSION JOINTS REQUIRED FOR SIDEWALK AT 20' O.C.
6. * FOR "T" CUL-DE-SAC HEELS ONLY.

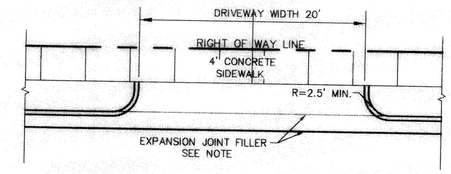
3/12 4" CONCRETE ROLLED CURB DETAIL
SCALE: 1"=1'-0"



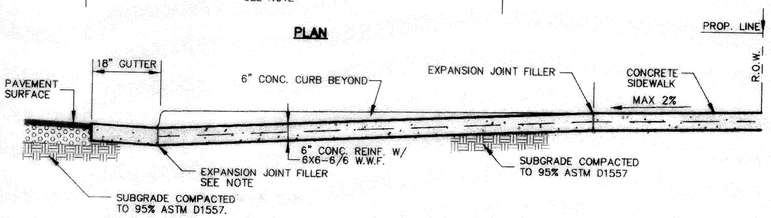
NOTES:

1. RAMPS MAY BE PLACED AS SUGGESTED, HOWEVER EXISTING LIGHT POLES, FIRE HYDRANTS, DROP INLETS, ETC., MAY AFFECT PLACEMENT.
2. THE CONCRETE SURFACE SHALL HAVE A ROUGH, NONSKID TYPE FINISH.
3. CONSTRUCTION METHODS SHALL CONFORM WITH THE CITY OF EL PASO SPECIFICATIONS.
4. ALL PARKING AND PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH CURRENT CITY OF EL PASO STANDARDS.

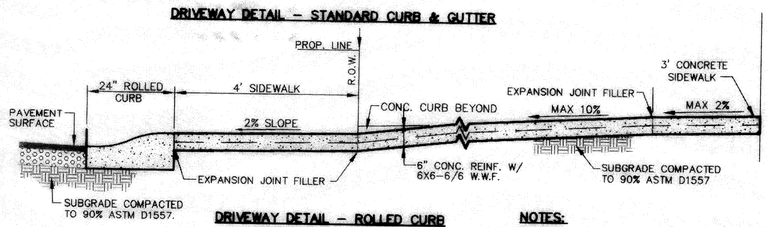
7/12 WHEELCHAIR RAMP STREET PLAN
SCALE: 1" = 30'



PLAN



DRIVEWAY DETAIL - STANDARD CURB & GUTTER

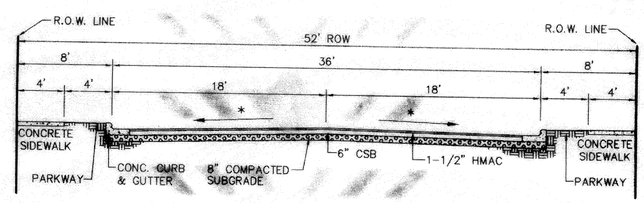


DRIVEWAY DETAIL - ROLLED CURB SECTION AT CENTERLINE

4/12 TYPICAL DRIVEWAY DETAIL
SCALE: NTS

NOTES:

DRIVEWAY SLOPES MUST BE 10% MAX. FROM GUTTER FOR FIRST 12 FEET AND 14% MAX. THEREAFTER (DRIVEWAY SHALL BE LOCATED @ HIGH SIDE OF LOT UNLESS OTHERWISE COORDINATED WITH CITY OF EL PASO)



(*) STREET TRANSVERSE SLOPE AS SHOWN IN PLANS

NOTE:

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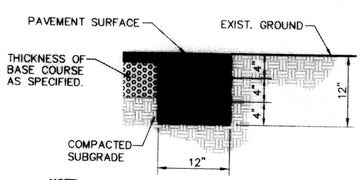
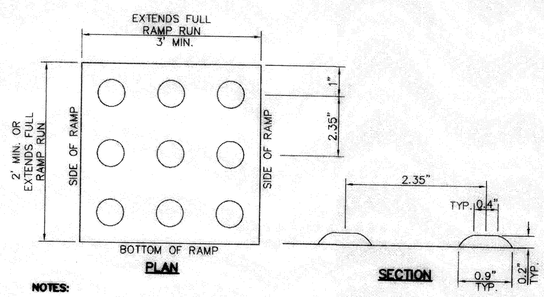
8/12 TYPICAL 52' ROW STREET SECTIONS DETAIL
SCALE: 1"=6'



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

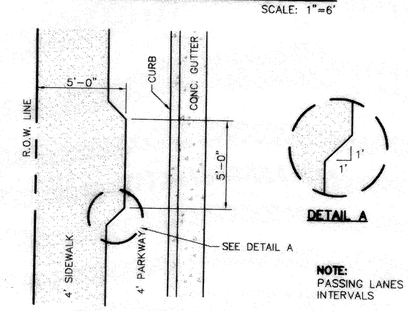
9/12 TERMINUS OF STREET
SCALE: 1"=1'-0"



NOTES:

1. ALL CONCRETE SHALL BE 3,000 P.S.I. MIN. AT 28 DAYS.
2. CONCRETE SLABS SHALL BE A MIN. 4" THICK.
3. DETECTABLE WARNING SURFACE SHALL CONSIST OF RAISED TRUNCATED DOMES WITH A NOMINAL DIAMETER OF 0.9 IN, A NOMINAL HEIGHT OF 0.2 IN AND A CENTER TO CENTER NOMINAL SPACING OF 2.35 IN, AND SHALL NOT BE STAGGERED. THE SURFACE SHALL HAVE A COLOR CONTRAST VISUALLY WITH ADJOINING SURFACES.
4. ALL NEW RAMPS SHALL COMPLY WITH T.A.S. AND A.D.A. REQUIREMENTS. ANY SECTIONS NOT CONFORMING WILL BE REMOVED AT THE CONTRACTORS EXPENSE.

10/12 TRUNCATED DOME
SCALE: NTS



NOTE:
PASSING LANES AT 200' MAX. INTERVALS

11/12 ACCESSIBLE PASSING SPACE DETAIL
SCALE: 1/4" = 1'-0"

RECORD DRAWINGS

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4/13/07

REFERENCES - BENCHMARKS

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

DATE	REVISIONS	BY

cea engineering group
1204 Montana Ave., El Paso, Texas 79902
Office 915.544.5232 Fax 915.544.5233
www.ceagroup.net

ENGINEER'S SEAL
JAMES L. MCCRARY 85075 CONSULTING ENGINEER 4/13/07

SCALE
Horizontal: N/A
Vertical: N/A
Contour Interval: N/A
DATE: AUGUST 2006
DESIGN BY: R.O.
DRAWN BY: R.O./J.M.
CHKD. BY: JLA
APPV'D. BY: JLA
JOB No. 2000-077

PROJECT TITLE

SANDSTONE RANCH UNIT TWO SUBDIVISION IMPROVEMENTS

SHEET TITLE

STANDARD DETAILS

(SHEET 1 OF 3)

SHEET NO.

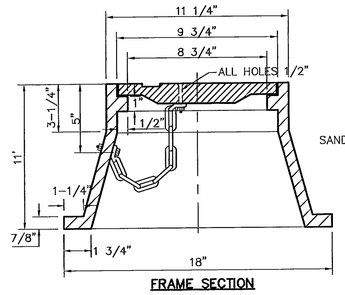
12

OF 18

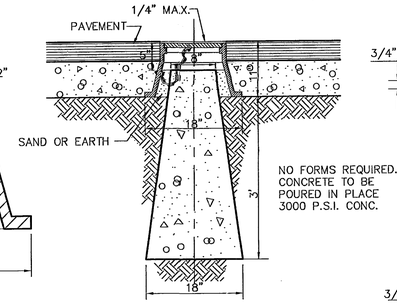
600755

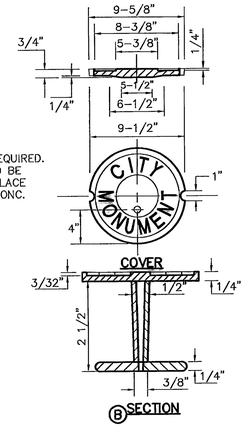
ROCK WALL NOTES

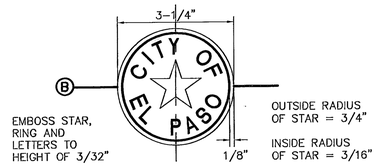
1. STONE FOR ROCKWALL SHALL BE AS NEARLY UNIFORM IN SECTIONS AS IN PRACTICABLE THE STONE SHALL BE DENSE AND RESISTANT OF AIR AND WATER
2. MORTAR MUST BE TYPE "S: 1800 P.S.I. AS PER ASTM C270
3. MASONRY WALL OVER SIX (6) FEET IN HEIGHT AND THOSE USED FOR EARTH RETENTION OVER TWO (2) FEET MUST BE DESIGNED AS STRUCTURAL WALLS.
4. WALLS ADJACENT TO PONDING AREAS OR DRAINAGE DITCHES MAY BE CONSTRUCTED OF BRICK OR CINDER BLOCK AND SHALL NOT BE LESS THAN SIX (6) FEET HIGH.
5. ROCKWALL MORTAR JOINTS MUST NOT EXCEED TWO (2) INCHES
6. PROVIDE ONE (1) 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 OR ROUND ROCK, NO RIVER ROCK SHALL BE ALLOWED.
9. REINFORCING STEEL SHALL BE ASTM A615 GRADE 40.
10. ALLOWABLE SOIL BEARING PRESSURE = 2,500 PSI (MINIMUM)
11. BACKFILL MATERIALS SHALL CONSIST OF COARSE GRAINED, WELL-DRAINED SOILS (WITH NO CLAY CONTENT).



FRAME SECTION

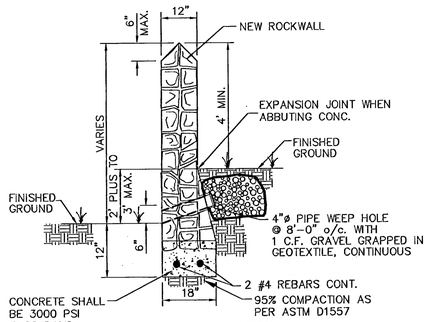




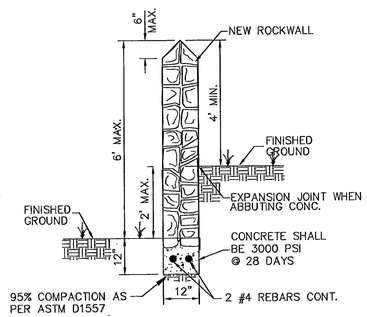


BRONZE MONUMENT CAP

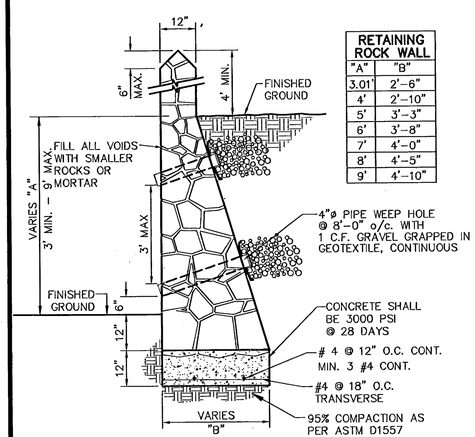
1/13 CITY SURVEY MONUMENT DETAILS
SCALE: N.T.S.



RETAINING WALL SECTION (2' PLUS TO 3' MAX.)

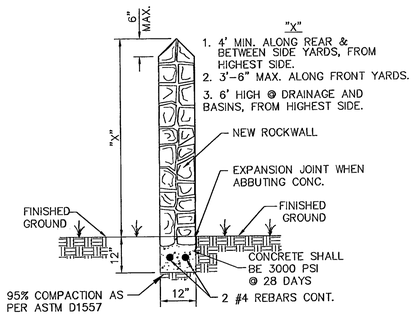


GARDEN WALL SECTION (2' MAX.)



RETAINING ROCK WALL	
"A"	"B"
3.01'	2'-6"
4'	2'-10"
5'	3'-3"
6'	3'-8"
7'	4'-0"
8'	4'-5"
9'	4'-10"

RETAINING WALL SECTION (3' MIN. TO 9' MAX.)

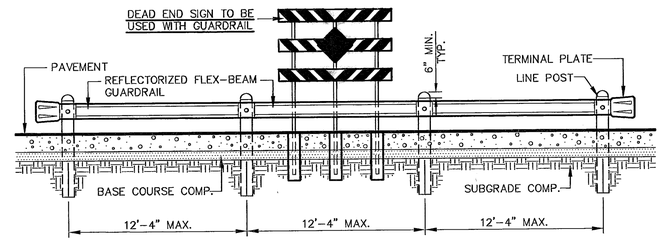


GARDEN WALL SECTION

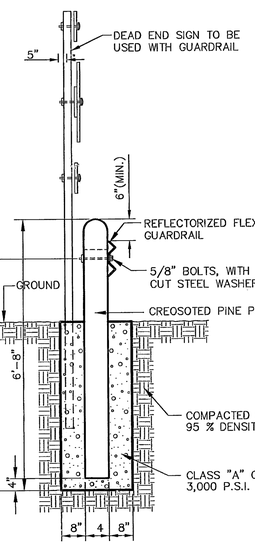
NOTES

1. 4' MIN. ALONG REAR & 4' MIN. BETWEEN SIDE YARDS.
2. 3'-6" MAX. ALONG FRONT YARDS.
3. 6' HIGH @ DRAINAGE AND BASINS.

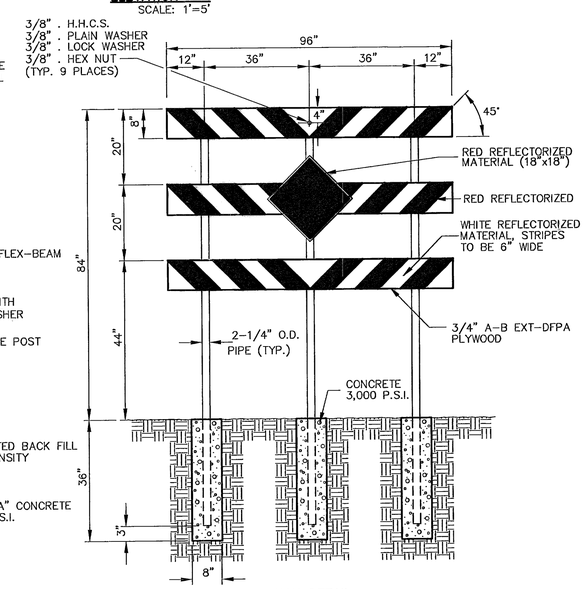
2/13 TYPICAL ROCKWALL DETAILS
SCALE: 1/2" = 1'-0"



ELEVATION
SCALE: 1'=5'

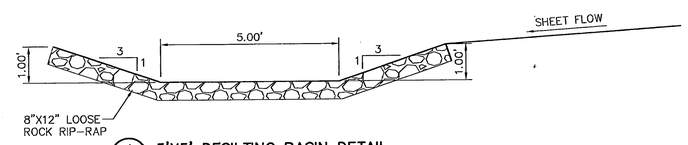


POST AND SIGN DETAIL
SCALE: N.T.S.



DEAD END SIGN DETAIL
SCALE: 1" = 2'-0"

3/13 GUARD RAIL/SIGN ASSEMBLY AT DEAD END STREET DETAIL
SCALE: AS SHOWN



4/13 5'X5' DESILTING BASIN DETAIL
SCALE: 1/2" = 1'-0"

RECORD DRAWINGS

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4/13/07

REFERENCES - BENCHMARKS

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

DATE	REVISIONS	BY

cea engineering group
1204 Montana Ave. El Paso, Texas 79902
Office 915.544.5232 Fax 915.544.5233
www.ceagroup.net

ENGINEER'S SEAL
86075 LICENSED PROFESSIONAL ENGINEER TEXAS
4/13/07

SCALE
Horizontal: N/A
Vertical: N/A
Contour Interval: N/A
DATE: AUGUST, 2006
DESIGN BY: R.O.
DRAWN BY: R.O.
CHKD. BY: J.L.A.
APPV'D. BY: J.L.A.
JOB No. 2000-007

PROJECT TITLE
SANDSTONE RANCH UNIT TWO
SUBDIVISION IMPROVEMENTS

SHEET TITLE
STANDARD DETAILS
(SHEET 2 OF 3)

SHEET NO.
13
OF 18

600755

UTILITY LOCATOR SERVICES	
EL PASO ELECTRIC COMPANY	(915) 543-5720
EL PASO ENERGY CORPORATION	(915) 496-5244
EL PASO WATER UTILITIES	(915) 594-5500
MCI SURVEILLANCE	(800) MCI-WORK
TIME WARNER COMMUNICATIONS	(915) 772-1123
TEXAS GAS SERVICE	(915) 680-7200
SBC	(800) 545-6005
AT&T	(800) 852-3786
U.S. SPRINT TELECOMM	(800) 521-0579
STREET DEPT. - SIGNAL & SIGN	(915) 621-8750
(AFTER HOURS)	(915) 240-3220

WARNING !
BEFORE YOU DIG
CALL
1-800-DIG-TESS
1-800-344-8377
FOR FIELD LOCATING EXISTING UTILITIES

RECORD DRAWINGS
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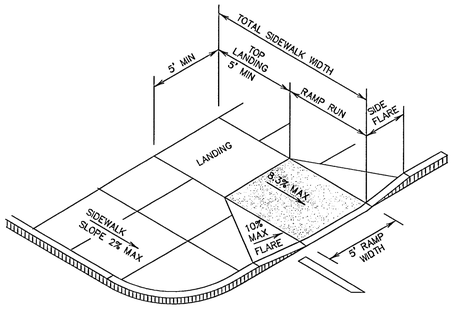
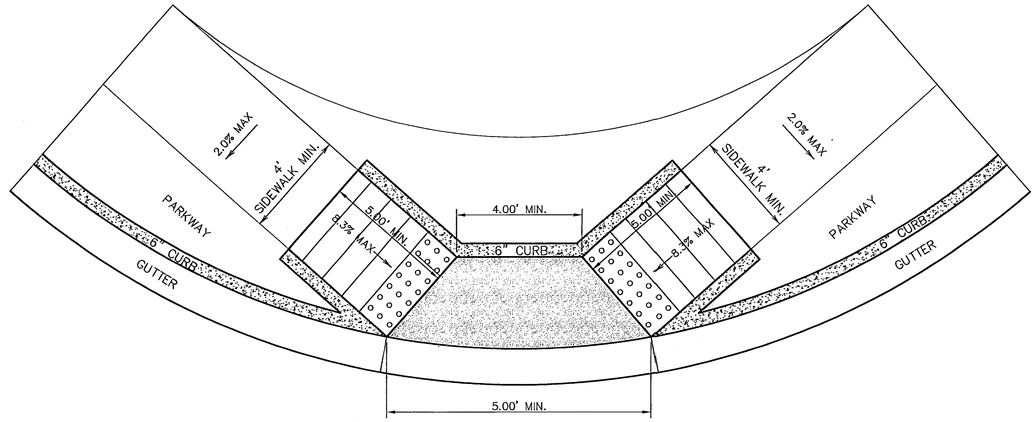
4/13/07

REFERENCES - BENCHMARKS
FOUND TXDOT BRASS CAP SECTION CORNERS 19, 20, 22 AND 23 (NAVD 88 VERTICAL DATUM) (SUBTRACT 8.462 TO CONVERT TO CITY DATUM)

DATE	REVISIONS	BY



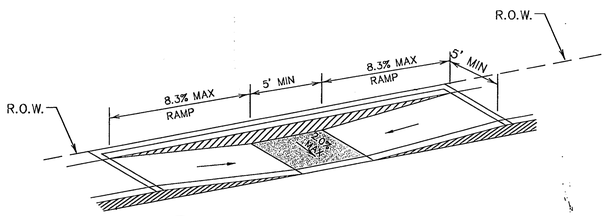
1/14 PERPENDICULAR CURB RAMP (TYPE I)
SCALE: NTS



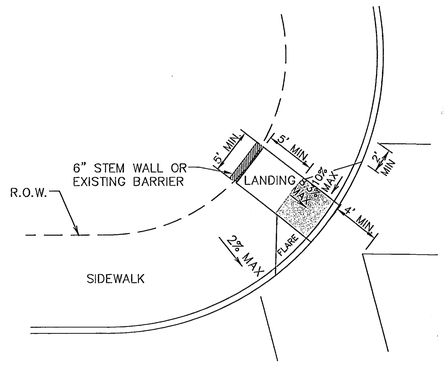
4/14 DIRECTIONAL RAMP @ INTERSECTION
SCALE: NTS

LEGEND
DETECTABLE WARNING SURFACE SHALL CONSIST OF RAISED TRUNCATED DOMES WITH A NOMINAL DIAMETER OF 0.9 IN, A NOMINAL HEIGHT OF 0.2 IN AND A CENTER TO CENTER NOMINAL SPACING OF 2.35 IN, AND SHALL NOT BE STAGGERED. THE SURFACE SHALL HAVE A COLOR CONTRAST VISUALLY WITH ADJOINING SURFACES.

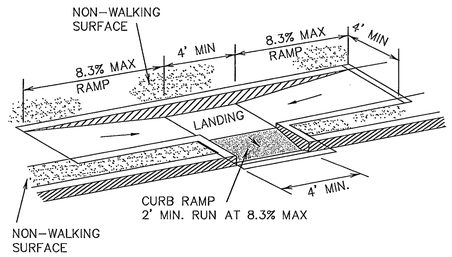
1. ALL SLOPES ARE MAXIMUM ALLOWABLE. THE LEAST POSSIBLE SLOPE THAT WILL STILL DRAIN PROPERLY SHOULD BE USED. RAMP LENGTH OR GRADE OF APPROACH SIDEWALKS MAY BE ADJUSTED AS DIRECTED BY THE ENGINEER.
2. THE MINIMUM SIDEWALK WIDTH IS 4'. WHERE A 5' SIDEWALK CAN NOT BE PROVIDED DUE TO SITE CONSTRAINTS, A MINIMUM 3' SIDEWALK WITH 5'X 5' PASSING AREAS AT INTERVALS NOT TO EXCEED 200 FT IS REQUIRED.
3. LANDINGS SHALL BE 5' X 5' MINIMUM WITH A MAXIMUM 2% SLOPE IN ANY DIRECTION.
4. MANEUVERING SPACE AT THE BOTTOM OF CURB RAMPS SHALL BE A MINIMUM OF 4'X 4' WHOLLY CONTAINED WITHIN THE CROSSWALK AND WHOLLY OUTSIDE THE PARALLEL VEHICULAR TRAVEL PATH.
5. CURB RAMPS WITH RETURNED CURBS MAY BE USED ONLY WHERE PEDESTRIANS WOULD NOT NORMALLY WALK ACROSS THE RAMP. OTHERWISE, FLARED SIDES SHALL BE PROVIDED.
6. ALL CONCRETE SIDEWALK SURFACES SHALL RECEIVE A LIGHT BROOM FINISH UNLESS NOTED OTHERWISE IN THE PLANS.
7. RAMP TEXTURES MUST CONSIST OF TRUNCATED DOMED SURFACES. TEXTURES ARE REQUIRED TO BE DETECTABLE UNDERFOOT. SURFACES THAT WOULD ALLOW WATER TO ACCUMULATE ARE PROHIBITED. REFER TO TRUNCATED DOME DETAIL.
8. CROSSWALK DIMENSIONS, CROSSWALK MARKINGS AND STOP BAR LOCATIONS SHALL BE AS SHOWN ELSEWHERE IN THE PLANS. AT INTERSECTIONS WHERE CROSSWALK MARKINGS ARE NOT REQUIRED, RAMPS SHALL BE ALIGNED WITH THEORETICAL CROSSWALKS, OR AS DIRECTED BY THE ENGINEER.
9. MAXIMUM ALLOWABLE CROSS SLOPE ON SIDEWALK AND RAMP SURFACES IS 2%.
10. ADDITIONAL INFORMATION ON CURB RAMP LOCATION, DESIGN, LIGHT REFLECTIVE VALUE AND TEXTURE MAY BE FOUND IN THE CURRENT EDITION OF THE TEXAS ACCESSIBILITY STANDARDS (TAS) PREPARED AND ADMINISTERED BY THE TEXAS DEPARTMENT OF LICENSING AND REGULATION (TDLR).



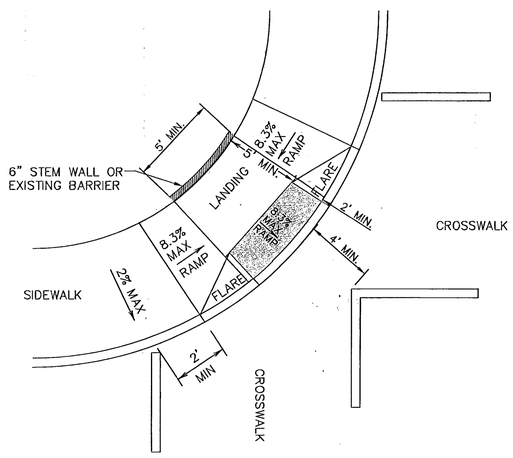
2/14 PARALLEL CURB RAMP (TYPE II)
SCALE: NTS



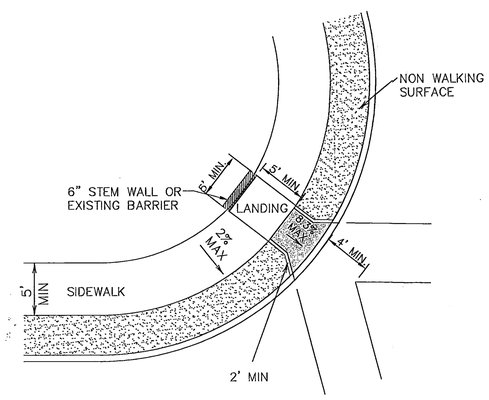
5/14 DIAGONAL CURB RAMP (FLARED SIDES) (TYPE V)
SCALE: NTS



7/14 COMBINATION CURB RAMPS (TYPE VII)
SCALE: NTS

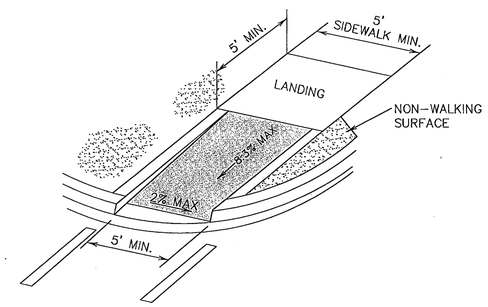


3/14 DIAGONAL COMBINATION CURB RAMP (TYPE III)
SCALE: NTS



6/14 DIAGONAL CURB RAMP (RETURNED CURB) (TYPE VI)
SCALE: NTS

GENERAL NOTES:



8/14 DIRECTIONAL RAMP WITHIN RADIUS (TYPE IV)
SCALE: NTS

cea engineering group
1204 Montana Ave., El Paso, Texas 79902
Office 915.544.5232 Fax 915.544.5233
www.ceagroup.net

ENGINEER'S SEAL
JORGE L. AZCURATE 85075 4/13/07

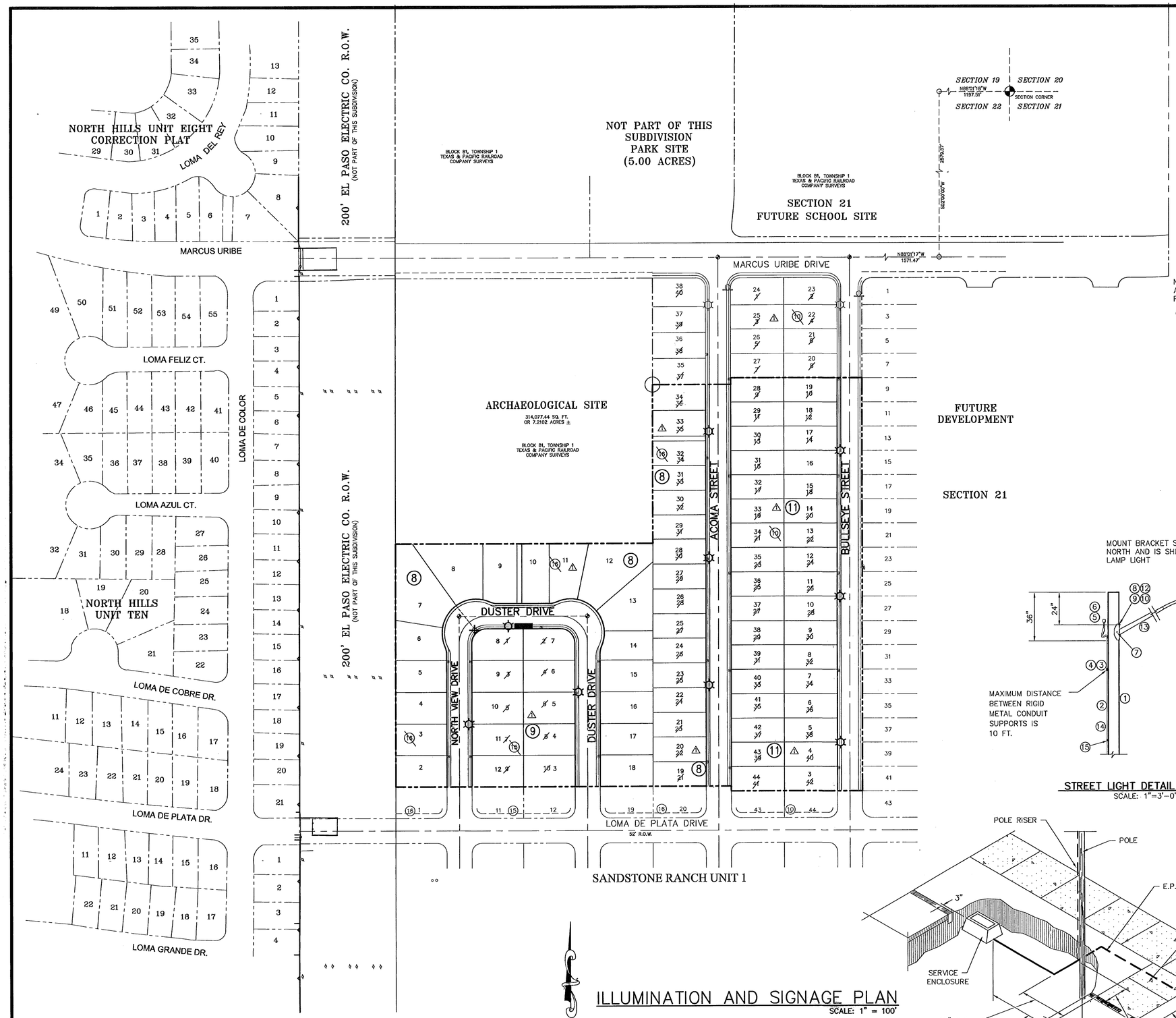
SCALE
Horizontal: N/A
Vertical: N/A
Contour Interval: N/A
DATE: AUGUST 2006
DESIGN BY: R.O.
DRAWN BY: J.M.
CHKD. BY: J.L.A.
APPVD. BY: J.L.A.
JOB No. 2000-077

PROJECT TITLE
SANDSTONE RANCH UNIT TWO
SUBDIVISION IMPROVEMENTS

SHEET TITLE
STANDARD DETAILS
(SHEET 3 OF 3)

SHEET NO.
14
OF 18

600755



ILLUMINATION AND SIGNAGE PLAN
SCALE: 1" = 100'

UTILITY LOCATOR SERVICES	
EL PASO ELECTRIC COMPANY	(915) 543-5720
EL PASO ENERGY CORPORATION	(915) 496-5244
EL PASO WATER UTILITIES	(915) 594-5500
MCI SURVEILLANCE	(800) MCI-WORK
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4/13/07

LEGEND:
- PROPOSED RESIDENTIAL STREET LIGHT
- PROPOSED 9" STREET NAME AND 30" STOP SIGN
- PROPOSED 9" STREET NAME SIGN (TWO SIGNS)
- PROPOSED N.D.B.C.U. MAIL BOX

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

DATE	REVISIONS	BY
1	REVISED LOT AND BLOCK NUMBERS	

cea engineering group
1204 Montana Ave., El Paso, Texas 79902
Office 915.544.5232 Fax 915.544.5233
www.ceagroup.net

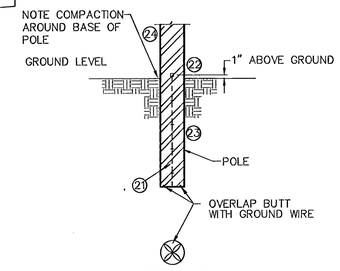
ENGINEER'S SEAL: JORGE L. AZCARATE 85075 CIVIL 4/16/07

SCALE: Horizontal: 1"=100'; Vertical: N/A; Contour Interval: N/A
DATE: AUGUST 2006
DESIGN BY: R.O.
DRAWN BY: J.M.
CHKD. BY: J.L.A.
APPVD. BY: J.L.A.
JOB No. 2000-077

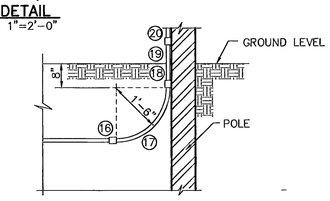
PROJECT TITLE
SANDSTONE RANCH UNIT TWO SUBDIVISION IMPROVEMENTS

SHEET TITLE
ILLUMINATION AND SIGNAGE PLAN

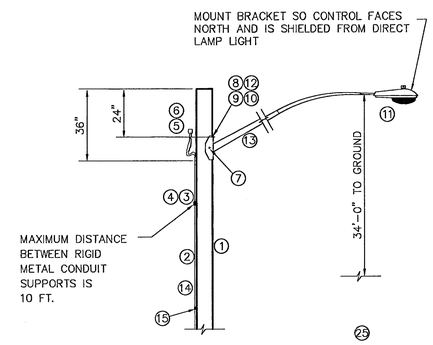
SHEET NO. 15 OF 18



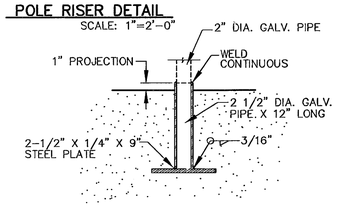
(BUTT GROUNDING) DISTRIBUTION DETAIL
SCALE: 1"=2'-0"



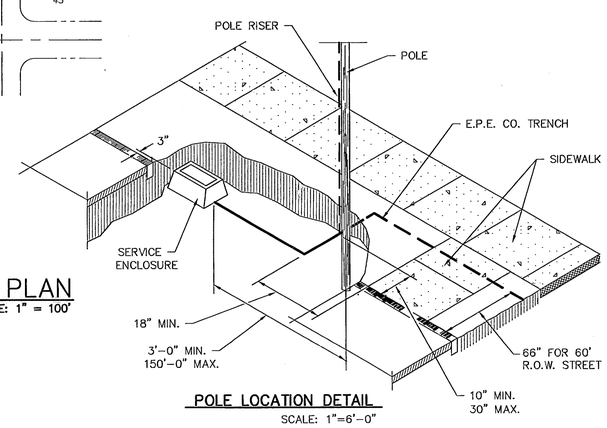
POLE RISER DETAIL
SCALE: 1"=2'-0"



STREET LIGHT DETAIL
SCALE: 1"=3'-0"



POST SLEEVE DETAIL
SCALE: 1"=1'-0"



POLE LOCATION DETAIL
SCALE: 1"=6'-0"

ITEM	QTY.	DESCRIPTION
1	1	POLE, PENTA TREATED PINE 40' CLASS III
2	27	1/2" RIGID GALVANIZED STEEL CONDUIT
3	4	TWO HOLE STEEL PIPE STRAP FOR 1/2" CONDUIT
4	8	1/4" x 1" LAG BOLT
5	1	PHOTO CELL RECEPTACLE WITH 1/2" THREADED BASE AND MOUNTING BRACKET
6	1	PHOTO CELL 240V.
7	4	1/2" x 4" LAG BOLT
8	1	WASHER, SQ. GALV. 2-1/4" x 2-1/4"
9	1	MACHINE BOLT 5/8" x 8"
10	1	LOCKNUT 5/8"
11	1	LUMINARE 100W H.P.S.
12	1	WASHER, COIL SPRING 5/8"
13	1	STEEL LUMINAIRE SUPPORT (10' OR 8') UNION METAL MANUF. CO. DESIGN 348 OR EQUIVALENT
14	2	- #12 COPPER WIRES WITH THW INSULATION
15	1	GROUND CLAMP FOR 1/2" RIGID CONDUIT
16	1	1/2" SCHEDULE 40 PVC COUPLING
17	1	1/2" SCHEDULE 40 PVC 18" RADIAL BEND
18	1	1/2" SCHEDULE 40 PVC FEMALE ADAPTER
*19	1	1/2" x 8" PVC COATED RIGID STEEL CONDUIT NIPPLE
*20	1	1/2" PVC COATED RIGID STEEL COUPLING
21		COPPER WIRE, #6 BARE SOLID HARD DRAWN
22		ALUMINUM WIRE, #4 BARE SOLID HARD DRAWN
23	1/2#	STAPLE, GALV. 1-1/2" NO. 9
24	1	SPLICE, #4 SOLID ALUM. TO #6 SOLID CU.
25	1	PHOTOCELL, 240V

* MUST MEET OCCIDENTAL COATING CO. SPECS. 600755

600755

SITE DESCRIPTION

PROJECT NAME AND LIMITS: SANDSTONE RANCH UNIT TWO
BLOCK 81, TOWNSHIP 1 TEXAS & PACIFIC RAIL ROAD COMPANY SURVEYS (FUTURE SCHOOL SITE) TO THE NORTH, AN ARCHEOLOGIGAL SITE TO AND A 200' EPEC R.O.W TOTHE WEST, SANDSTONE RANCH UNIT ONE TO THE SOUTH AND FUTURE DEVELOPMENT TO THE EAST.

PROJECT DESCRIPTION: THE SITE FOR THE NEW SUBDIVISION WILL ENCOMPASS APPROXIMATELY 14.497± ACRES, AND WILL CONTAIN 89 RESIDENTIAL LOTS

EXISTING CONDITIONS: THE SITE IS CLEAR OF SITE IMPROVEMENTS AND IS COVERED WITH ITS NATURAL SURROUNDINGS.

MAJOR SOIL DISTURBING ACTIVITIES: MAJOR SOIL DISTURBING ACTIVITIES WILL CONSIST OF CLEARING AND GRUBBING, GRADING FOR BUILDING PAD ELEVATIONS, CONSTRUCTION OF STREETS AND EXCAVATION FOR UTILITIES.

TOTAL PROJECT AREA: 14.497± A.C.

TOTAL AREA TO BE DISTURBED: 14.497± A.C.

WEIGHTED RUNOFF COEFFICIENT
(AFTER CONSTRUCTION): 0.637

EXISTING CONDITION OF SOIL AND VEGETATIVE
COVER AND % OF EXISTING VEGETATIVE COVER: THE PROJECT SITE IS LOCATED IN THE VICINITY OF THE TURNEY–BERINO ASSOCIATION: NEARLY LEVEL AND GENTLY SLOPING SOILS THAT HAVE A CLAY LOAM SUBSOIL AND ARE MODERRATELY DEEP OVER; IN THE HUECO BOLSON.

NAME OF RECEIVING WATERS: STORM RUNOFF FROM THE NEW SUBDIVISION WILL BE CONVEYED BY STREET SHEET FLOW TO ULTIMATELY BE DISCHARGED TO THE NORTH–EAST FREEWAY CHANNEL.

EROSION AND SEDIMENT CONTROL

SOIL STABILIZATION PRACTICES

- ____ TEMPORARY SEEDING
- X PERMANENT PLANTING, SODDING, OR SEEDING
- ____ MULCHING
- ____ SOIL RETENTION BLANKET
- ____ BUFFER ZONES
- ____ PRESERVATION OF NATURAL RESOURCES

OTHER:

STRUCTURAL PRACTICES:

- X SILT FENCES
- ____ HAY BALES
- ____ ROCK BERMS
- ____ DIVERSION, INTERCEPTOR, OR PERIMETER DIKES
- ____ DIVERSION, INTERCEPTOR, OR PERIMETER SWALES
- ____ DIVERSION DIKE AND SWALE COMBINATION
- ____ PIPE SLOPE DRAINS
- ____ CONCRETE FLUMES
- X ROCK BEDDING AT CONSTRUCTION EXIT
- ____ TIMBER MATTING AT CONSTRUCTION EXIT
- ____ CHANNEL LINERS
- ____ SEDIMENT TRAPS
- ____ SEDIMENT BASINS
- ____ STORM INLET SEDIMENT TRAP
- ____ STONE OUTLET STRUCTURES
- X CURBS AND GUTTERS
- ____ STORM DRAINS
- X VELOCITY CONTROL DEVICES
- ____ VEGETATED SWALES & NATURAL DEPRESSIONS

OTHER:

NARRATIVE – SEQUENCE OF CONSTRUCTION (STORM WATER MANAGEMENT) ACTIVITIES:

1. INSTALL TEMPORARY EROSION AND SEDIMENT CONTROLS (e.g. SILT FENCE AND/OR EARTHERN BERM, AND STABILIZED CONSTRUCTION ENTRANCE) ;
2. PERFORM CLEARING AND GRUBBING;
3. EXCAVATION FOR UTILITIES;
4. COMPLETE STREET AND LOT GRADING;
5. CONSTRUCTION OF SUBDIVISION IMPROVEMENTS; AND,
6. WHEN ALL CONSTRUCTION ACTIVITY RELATED IN DEVELOPMENT OF THE SITE IS COMPLETE, REMOVE TEMPORARY CONTROLS IN 1. ABOVE.

SWPPP GENERAL NOTES:

1. PLACEMENT OF SILT FENCE SHALL BE ADJUSTED AS NECESSARY TO PREVENT THE BLOCKING OF DRIVEWAYS OR DRIVING LANES.
2. THE SWPPP MANUAL IDENTIFIES THE DUTIES AND RESPONSIBILITIES OF THE GENERAL CONTRACTOR IN COMPLIANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS. THIS ITEM SHALL BE SUBSIDIARY TO THE SWPP BEST MANAGEMENT PRACTICES (COMPLETE IN PLACE) ITEMS. THE SWPPP PROJECT MANUAL IS AVAILABLE FOR REVIEWING AT THE CITY OF EL PASO–ENGINEERING DEPARTMENT. UPON SELECTION, THE CONTRACTOR WILL BE PROVIDED AN SWPPP MANUAL. THE CONTRACTOR SHALL MAINTAIN THIS MANUAL AT THE CONSTRUCTION SITE AT ALL TIMES THROUGHOUT THE CONSTRUCTION PERIOD.
3. THE CONTRACTOR SHALL COMPLETE AND SUBMIT ALL REGULATORY FORMS AND APPLICATIONS, AS PROVIDED IN THE SWPPP MANUAL, INCLUDING, BUT NOT LIMITED TO; NOI, NOT, SDPCP, AND ANY OTHER FORM REQUIRED BY THE CITY OF EL PASO AND TCEQ.
4. ALLOWABLE STORM WATER AND NON–STORMWATER DISCHARGE SHALL COMPLY WITH 15.20.080 (GENERAL PROHIBITION) AND 15.20.090 (SPECIFIC PROHIBITIONS AND REQUIREMENTS) OF THE CITY OF EL PASO STORM DRAIN POLLUTION CONTROL PLAN ORDINANCE. NON–STORMWATER DISCHARGES MAY CONSIST OF, BUT ARE NOT LIMITED TO, THE DISCHARGE RESULTING FROM FIREFIGHTING, LAWN WATERING, LANDSCAPE IRRIGATION, NATURAL SPRING, AND/OR AGRICULTURAL STORM WATER RUNOFF.
5. REFER TO DRAINAGE PLAN SHEET 6, FOR DETAILED INFORMATION ON WATERSHED AREAS AND RUNOFF QUANTITIES (Q).
6. THE FOLLOWING HAVE BEEN IDENTIFIED AS POTENTIAL CONTAMINATION SOURCES: CLEARED AND GRADED AREAS; CONSTRUCTION SITE ENTRANCE AND ASPHALT PARKING AREA CONSTRUCTION; ASPHALT LOADING/UNLOADING AREAS; CONCRETE LOADING/UNLOADING AREAS; AND, ALL UNDISTURBED AREAS.
7. THE FOLLOWING IS A LIST OF POTENTIAL CONSTRUCTION SITE STORM WATER POLLUTANTS: ASPHALT; CONCRETE; GLUE/ADHESIVE; PAINTS; CURING COMPOUNDS; WASTEWATER FROM CONSTRUCTION EQUIPMENT WASHING; HYDRAULIC OIL/FLUIDS; ;GASOLINE; DIESEL FUEL; KEROSENE; ANTIFREEZE/COOLANT; AND EROSION.

BEST MANAGEMENT PRACTICES CONTROLS

I. WASTE MATERIALS:

ALL WASTE MATERIALS, INCLUDING CONSTRUCTION DEBRIS, SHALL BE COLLECTED AND STORED IN A SECURELY LIDDED METAL DUMPSTER. NO CONSTRUCTION WASTE MATERIAL SHALL BE BURIED ON SITE. THE TRANSIT DUMPSTER SHALL COMPLY WITH ORDINANCE 18.52.010 (ENCLOSURE AND REMOVAL OF WASTE MATERIALS DURING CONSTRUCTION). THE DUMPSTER SHALL BE EMPTIED AS NECESSARY OR AS REQUIRED BY ORDINANCE 9.04 (SOLID WASTE MANAGEMENT) AND THE TRASH SHALL BE HAULED TO A LICENSED LANDFILL.

II. HAZARDOUS WASTE:

AT A MINIMUM, ANY PRODUCTS IN THE FOLLOWING CATEGORIES SHALL BE CONSIDERED HAZARDOUS: PAINT, ACIDS FOR CLEANING MASONRY SURFACES, CLEANING SOLVENTS, ASPHALT PRODUCTS, CHEMICAL ADDITIVES FOR SPILL STABILIZATION, CURING COMPOUNDS AND ADDITIVES. IN THE EVENT OF A SPILL WHICH MAY BE HAZARDOUS, THE CONTRACTOR SHALL TAKE IMMEDIATE ACTION AND CONTACT THE FIRE DEPT. AND TNRCC.

III. SANITARY WASTE:

ALL SANITARY WASTE SHALL BE COLLECTED FROM THE CONSTRUCTION PORTABLE UNITS AS NECESSARY OR AS REQUIRED, CHAPTER 18.08 (BUILDING CODE), BY A LICENSED SANITARY WASTE MANAGEMENT CONTRACTOR. ALL WASTE MATERIAL SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

IV. SPILL PREVENTION:

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

V. GOOD HOUSEKEEPING:

A. STORE ONLY ENOUGH PRODUCTS REQUIRED TO DO THE JOB
B. NEATLY STORE MATERIALS ON–SITE IN AN ORDERLY MANNER
C. KEEP PRODUCTS IN THEIR ORIGINAL CONTAINER
D. DO NOT MIX SUBSTANCES WITH ONE ANOTHER, UNLESS OTHERWISE RECOMMENDED BY THE MANUFACTURER
E. USE ENTIRE CONTENTS OF A PRODUCT BEFORE DISPOSING THE CONTAINER
F. FOLLOW MANUFACTURER'S RECOMMENDATIONS FOR PROPER USE AND DISPOSAL

VI. HAZARDOUS PRODUCTS:

PRACTICES USED TO REDUCE RISKS:

A. KEEP PRODUCTS IN THEIR ORIGINAL CONTAINER IF AT ALL POSSIBLE
B. RETAIN ORIGINAL LABELS, PRODUCT INFORMATION AND MATERIAL SAFETY DATA SHEETS (MSDS)
C. DISPOSE SURPLUS PRODUCT IN ACCORDANCE WITH MANUFACTURER'S OR LOCAL & STATE RECOMMENDED METHODS

VII. PETROLEUM PRODUCTS:

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

VIII. SPILL CONTROL PRACTICES:

A. MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEANUP SHALL BE CLEARLY POSTED AND SITE PERSONNEL SHALL BE MADE AWARE OF THE PROCEDURES:
B. MATERIALS AND EQUIPMENT NECESSARY FOR 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

IX. MAINTENANCE AND INSPECTION PROCEDURES:

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. 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.

X. REMARKS:

DISPOSAL AREAS, STOCKPILES, AND HAUL ROADS SHALL BE CONSTRUCTED IN A MANNER THAT WILL MINIMIZE AND CONTROL THE AMOUNT OF SEDIMENT THAT MAY ENTER RECEIVING WATERS. DISPOSAL AREAS SHALL NOT BE LOCATED IN ANY WETLAND, WATERBODY OR STREAMBED. CONSTRUCTION STAGING AREAS AND VEHICLE MAINTENANCE AREAS SHALL BE CONSTRUCTED BY THE CONTRACTOR IN A MANNER TO MINIMIZE THE RUNOFF OF POLLUTANTS. ALL WATERWAYS SHALL BE CLEANED AS SOON AS PRACTICABLE OF TEMPORARY EMBANKMENT, TEMPORARY BRIDGES, MATTING, FALSEWORK, PILING DEBRIS OR OTHER OBSTRUCTIONS PLACED DURING CONSTRUCTION OPERATIONS THAT ARE NOT A PART OF THE FINISHED WORK.

XI. OFFSITE VEHICLE TRACKING:

IN ADDITION TO THE STABILIZED CONSTRUCTION ENTRANCES, THE FOLLOWING MEASURES SHALL BE OBSERVED DURING CONSTRUCTION:

- 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:

RECORD DRAWINGS
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4/13/07

SDPCP #: 06–035
SDPCP DATE: 06–08–06

600755

REFERENCES – BENCHMARKS
FOUND TXDOT BRASS CAP SECTION CORNERS 19, 20, 22 AND 21, ELEVATION: 4033.22 (NVGD DATUM) (SUBTRACT 6.492 TO CONVERT TO CITY DATUM)

DATE	REVISIONS	BY

cea engineering group
1204 Montana Ave., El Paso, Texas 79902
Office 915.544.5232 Fax 915.544.5233
www.ceagroup.net

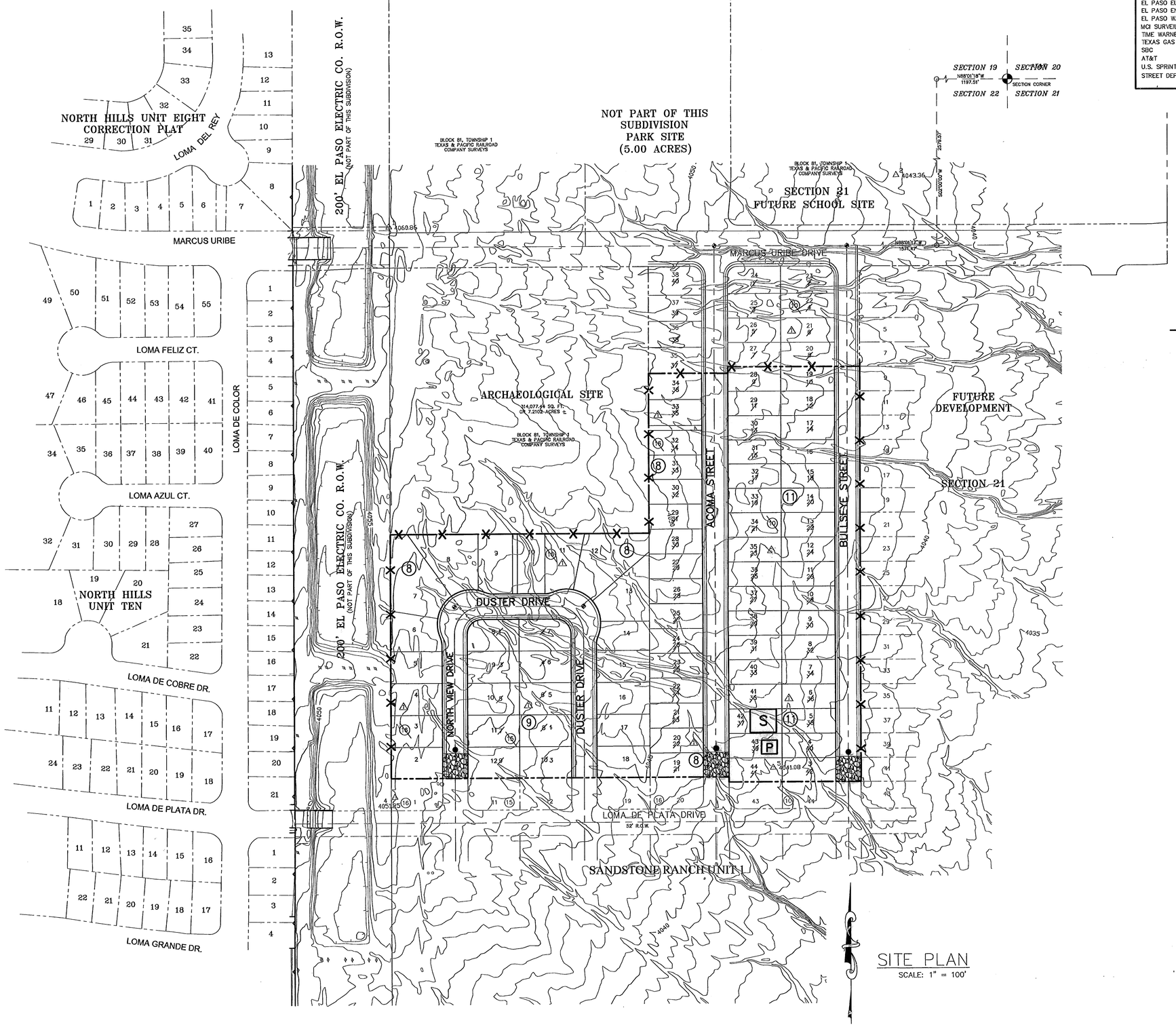
ENGINEER'S SEAL
JORGE L. ACUARTE 86075 CENSED

SCALE
Horizontal: N/A
Vertical: N/A
Contour Interval: N/A
DATE: AUGUST 2006
DESIGN BY: R.O.
DRAWN BY: R.O.
CHKD. BY: J.L.A.
APPVD. BY: J.L.A.
JOB No. 2000–077

PROJECT TITLE
SANDSTONE RANCH UNIT TWO
SUBDIVISION IMPROVEMENTS

SHEET TITLE
STORM DRAIN POLLUTION CONTROL PLAN: GENERAL NOTES

SHEET NO.
16
OF 18



SITE PLAN
SCALE: 1" = 100'

UTILITY LOCATOR SERVICES	
EL PASO ELECTRIC COMPANY	(915) 543-5720
EL PASO ENERGY CORPORATION	(915) 496-5244
EL PASO WATER UTILITIES	(915) 594-5500
MCI SURVEILLANCE	(800) MCI-WORK
TIME WARNER COMMUNICATIONS	(915) 772-1123
TEXAS GAS SERVICE	(915) 680-7200
SBC	(800) 545-6005
AT&T	(800) 852-3788
U.S. SPRINT TELECOMM	(800) 521-0579
STREET DEPT. – SIGNAL & SIGN (AFTER HOURS)	(915) 621-6750 (915) 240-3220

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1-800-344-8377
FOR FIELD LOCATING EXISTING UTILITIES

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4/13/07

LEGEND

- —X—X— SILT FENCE OR EARTHERN BERM
- STABILIZED CONSTRUCTION ENTRANCE
- S STAGING AREA
- P PORTABLE TOILETS
- • OUTFALL

REFERENCES – BENCHMARKS
FOUND TXDOT BRASS CAP SECTION CORNERS 19, 20, 22 AND 21, ELEVATION: 4033.22 (NVGD DATUM) (SUBTRACT 5.462 TO CONVERT TO CITY DATUM)

DATE	REVISIONS	BY
1	REVISED LOT AND BLOCK NUMBERS	

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ENGINEER'S SEAL
JORGE L. ACCARATE 65075 Texas 8/14/07

SCALE
Horizontal: 1"=100'
Vertical: N/A
Contour Interval: N/A
DATE: AUGUST 2006
DESIGN BY: R.O.
DRAWN BY: JM
CHKD. BY: J.L.A.
APPVD. BY: J.L.A.
JOB No. 2000-077

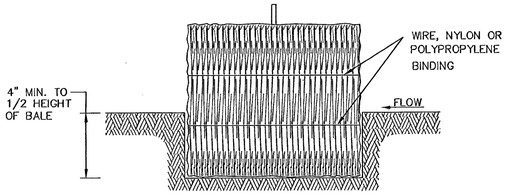
PROJECT TITLE
SANDSTONE RANCH UNIT TWO SUBDIVISION IMPROVEMENTS

SHEET TITLE
STORM DRAIN POLLUTION CONTROL PLAN: SITE PLAN

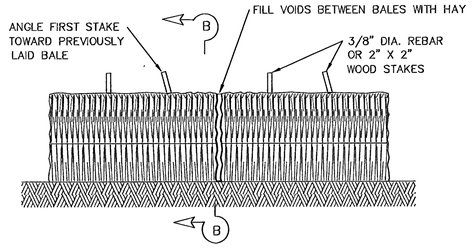
SHEET NO.
17
OF 18

SDPCP #: 06-035
SDPCP DATE: 06-08-06

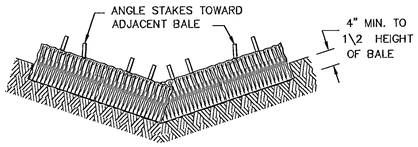
600755



SECTION B–B



BALED HAY FOR EROSION CONTROL



PROFILE VIEW

BALED HAY USAGE GUIDELINES

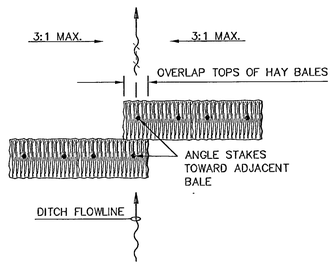
A BALED HAY INSTALLATION MAY BE CONSTRUCTED NEAR THE DOWNSTREAM PERIMETER OF A DISTURBED AREA ALONG A CONTOUR TO INTERCEPT SEDIMENT FROM OVERLAND RUNOFF. A TWO YEAR STORM FREQUENCY MAY BE USED TO CALCULATE THE FLOW RATE TO BE FILTERED. THE INSTALLATION SHOULD BE SIZED TO FILTER A MAXIMUM FLOW THRU RATE OF 5 GPM/FT^2 OF CROSS SECTIONAL AREA. BALED HAY MAY BE USED AT THE FOLLOWING LOCATIONS:

1. WHERE THE RUNOFF APPROACHING THE BALED HAY FLOWS OVER DISTURBED SOIL FOR LESS THAN 100'. IF THE SLOPE OF THE DISTURBED SOIL EXCEEDS 10%, THE LENGTH OF SLOPE UPSTREAM THE BALED HAY SHOULD BE LESS THAN 50'.
2. WHERE THE INSTALLATION WILL BE REQUIRED FOR LESS THAN 3 MONTHS.
3. WHERE THE CONTRIBUTING DRAINAGE AREA IS LESS THAN 1/2 ACRE.

FOR BALED HAY INSTALLATIONS IN SMALL DITCHES, THE ADDITIONAL FOLLOWING CONSIDERATIONS APPLY:

1. THE DITCH SIDESLOPES SHOULD BE GRADED AS FLAT AS POSSIBLE TO MAXIMIZE THE DRAINAGE FLOWRATE THRU THE HAY.
2. THE DITCH SHOULD BE GRADED LARGE ENOUGH TO CONTAIN THE OVERTOPPING DRAINAGE WHEN SEDIMENT HAS FILLED TO THE TOP OF THE BALED HAY.

BALES SHOULD BE REPLACED USUALLY EVERY 2 MONTHS OR MORE OFTEN DURING WET WEATHER WHEN LOSS OF STRUCTURAL INTEGRITY IS ACCELERATED.

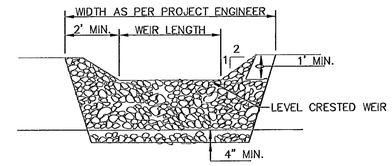


PLAN VIEW

GENERAL NOTES

1. HAY BALES SHALL BE A MINIMUM OF 30" IN LENGTH AND WEIGH A MINIMUM OF 50 LBS.
2. HAY BALES SHALL BE BOUND BY EITHER WIRE OR NYLON OR POLYPROPYLENE STRING. THE BALES SHALL BE COMPOSED ENTIRELY OF VEGETABLE MATTER.
3. HAY BALES SHALL BE EMBEDDED IN THE SOIL A MINIMUM OF 4" AND WHERE POSSIBLE 1/2 THE HIEGHT OF THE BALE.
4. HAY BALES SHALL BE PLACED IN A ROW WITH ENDS TIGHTLY ABUTTING THE ADJACENT BALES. THE BALES SHALL BE PLACED WITH BINDINGS PARALLEL TO THE GROUND.
5. HAY BALES SHALL BE SECURELY ANCHORED IN PLACE WITH 3/8" DIA. REBAR OR 2" X 2" WOOD STAKES, DRIVEN THROUGH THE BALES. THE FIRST STAKE SHALL BE ANGLED TOWARDS THE PREVIOUSLY LAID BALE TO FORCE THE BALES TOGETHER.
6. THE GUIDELINES SHOWN HEREON ARE SUGGESTIONS ONLY AND MAY BE MODIFIED BY THE ENGINEER.

BALED HAY FOR EROSION CONTROL



PROFILE

ROCK FILTER DAM USAGE GUIDELINES

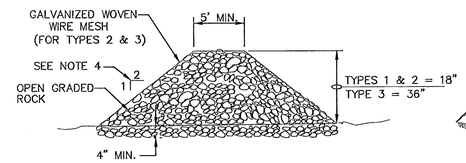
ROCK FILTER DAMS SHOULD BE CONSTRUCTED DOWNSTREAM FROM DISTURBED AREAS TO INTERCEPT SEDIMENT FROM OVERLAND RUNOFF AND/OR CONCENTRATED FLOW. THE DAMS SHOULD BE SIZED TO FILTER A MAXIMUM FLOW THROUGH RATE OF 60 GPM/FT^2 OF CROSS SECTIONAL AREA. A 2 YEAR STORM FREQUENCY MAY BE USED TO CALCULATE THE FLOW RATE.

TYPE 1 (18" HIGH WITH NO WIRE MESH): TYPE 1 MAY BE USED AT THE TOE OF SLOPES, AROUND INLETS, IN SMALL DITCHES, AND AT DIKE OR SWALE OUTLETS. THIS TYPE OF DAM IS RECOMMENDED TO CONTROL EROSION FROM A DRAINAGE AREA OF 5 ACRES OR LESS. TYPE 1 MAY NOT BE USED IN CONCENTRATED HIGH VELOCITY FLOWS (APPROX. 8 FT/SEC OR MORE) IN WHICH AGGREGATE WASH OUT MAY OCCUR. SANDBAGS MAY BE USED AT THE EMBEDDED FOUNDATION (4" DEEP MIN.) FOR BETTER FILTERING EFFICIENCY OF LOW FLOWS IF CALLED FOR ON THE PLANS OR DIRECTED BY THE ENGINEER.

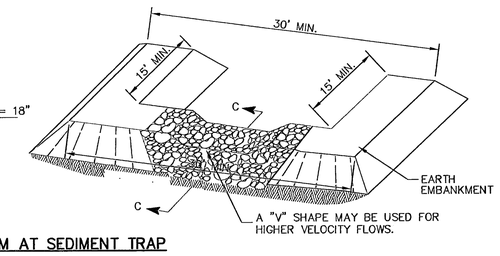
TYPE 2 (18" HIGH WITH WIRE MESH): TYPE 2 MAY BE USED IN DITCHES AND AT DIKE OR SWALE OUTLETS.

TYPE 3 (36" HIGH WITH WIRE MESH): TYPE 3 MAY BE USED IN STREAM FLOW AND SHOULD BE SECURED TO THE STREAM BED.

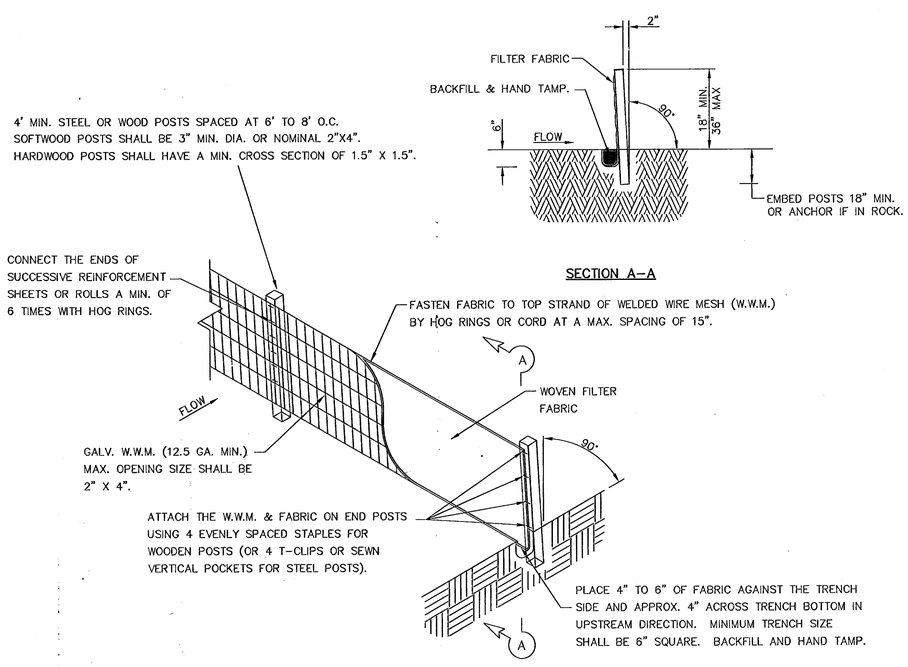
TYPE 4 (SACK GABIONS): TYPE 4 MAY BE USED IN DITCHES AND SMALLER CHANNELS TO FORM AN EROSION CONTROL DAM.



SECTION C–C

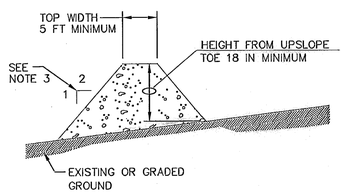


FILTER DAM AT SEDIMENT TRAP



SECTION A–A

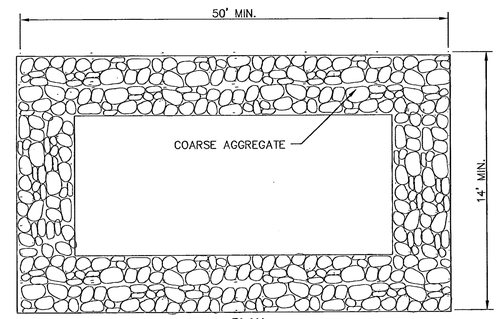
TEMPORARY SEDIMENT CONTROL FENCE



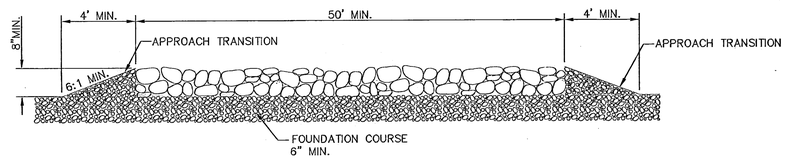
GENERAL NOTES:

1. SOIL USED IN BERM CONSTRUCTION SHALL BE MACHINE COMPACTED.
2. TOP WIDTH AND HEIGHT OF BERM MAY BE MODIFIED WITH PRIOR APPROVAL OF THE ENGINEER.
3. SIDE SLOPES WITHIN THE SAFETY CLEAR ZONE OF A ROADWAY SHALL BE 6:1 OR FLATTER.
4. GRADING SHALL BE SHOWN ELSEWHERE IN THE PLANS OR AS DIRECTED BY THE ENGINEER.
5. THE ENGINEER RESERVES THE RIGHT TO MODIFY THE DIMENSIONS SHOWN FOR THE BERM DEPENDENT ON RUNOFF VOLUME CHARACTERISTICS.
6. BERM THAT ARE IN PLACE FOR MORE THAN 14 CALENDAR DAYS SHOULD BE STABILIZED TO PREVENT SEDIMENT RUNOFF.
7. THE GUIDELINES SHOWN HEREON ARE SUGGESTIONS ONLY AND MAY BE MODIFIED BY THE ENGINEER.

TYPICAL BERM CONFIGURATION



PLAN



PROFILE

GENERAL NOTES

1. THE LENGTH OF THE TYPE 1 CONSTRUCTION EXIT SHALL BE AS INDICATED ON THE PLANS, BUT NOT LESS THAN 50'.
2. THE COARSE AGGREGATE SHOULD BE OPEN GRADED WITH A SIZE OF 4" TO 8".
3. THE APPROACH TRANSITIONS SHOULD BE NO STEEPER THAN 6:1 AND CONSTRUCTED AS DIRECTED BY THE ENGINEER.
4. THE CONSTRUCTION EXIT FOUNDATION COURSE SHALL BE FLEXIBLE BASE, BITUMINOUS CONCRETE, PORTLAND CEMENT CONCRETE OR OTHER MATERIAL AS APPROVED BY THE ENGINEER.
5. THE CONSTRUCTION EXIT SHALL BE GRADED TO ALLOW DRAINAGE TO A SEDIMENT TRAPPING DEVICE.
6. THE GUIDELINES SHOWN HEREON ARE SUGGESTIONS ONLY AND MAY BE MODIFIED BY THE ENGINEER.

CONSTRUCTION EXIT (TYPE 1)

RECORD DRAWINGS

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4/13/07

SDPCP #: 06–035
SDPCP DATE: 06–08–06

600755

REFERENCES – BENCHMARKS

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

DATE	REVISIONS	BY

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www.ceagroup.net

ENGINEER'S SEAL: JORGE L. ACARATE 85075 Licensed 4/13/07

SCALE
Horizontal: N/A
Vertical: N/A
Contour Interval: N/A

DATE: AUGUST 2006
DESIGN BY: R.O.
DRAWN BY: R.O.
CHKD. BY: J.L.A.
APPVD. BY: J.L.A.
JOB No. 2000–077

PROJECT TITLE

SANDSTONE RANCH UNIT TWO
SUBDIVISION IMPROVEMENTS

SHEET TITLE

STORM DRAIN POLLUTION CONTROL PLAN: DETAILS

SHEET NO.

18

OF 18

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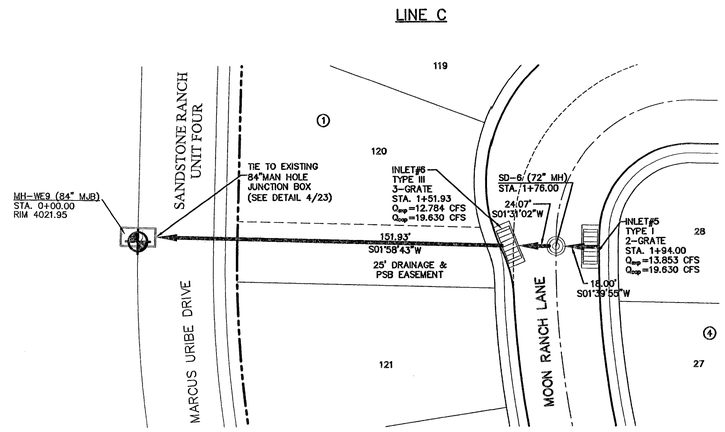
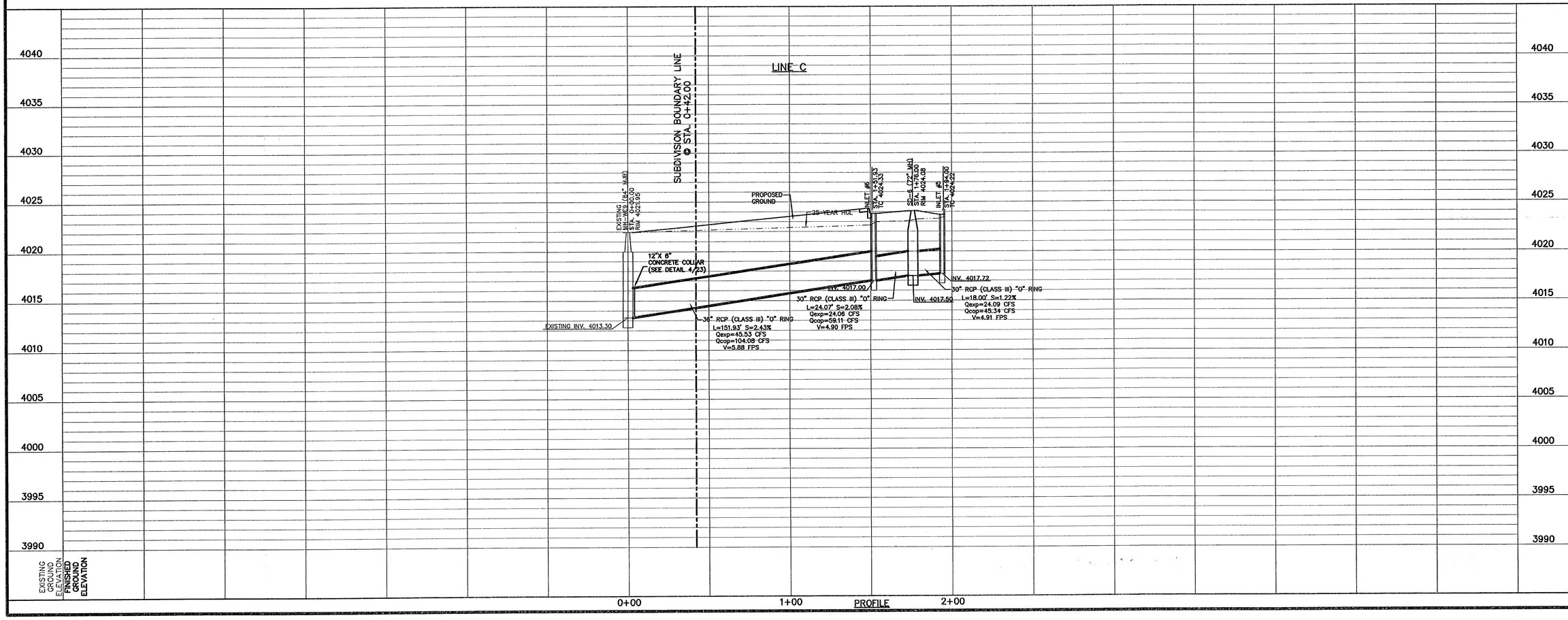
DATE	REVISIONS	BY



LEGEND:

- STORM SEWER LINE
- PROPOSED STORM SEWER LINE ON OTHER STREETS
- EXISTING STORM SEWER LINE
- DROP INLET
- MANHOLE



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JORGE L. LAZARUTE
85075
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REGISTERED
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1/29/08

SCALE
Horizontal: 1"=30'
Vertical: 1"=5'
Contour Interval: N/A

DATE: JANUARY 2008
DESIGN BY: J.L.A.
DRAWN BY: J.L.A.
CHKD. BY: J.L.A.
APPVD. BY: J.L.A.
JOB No. 2000-089-LD

PROJECT TITLE

SANDSTONE RANCH UNIT SEVEN SUBDIVISION IMPROVEMENTS

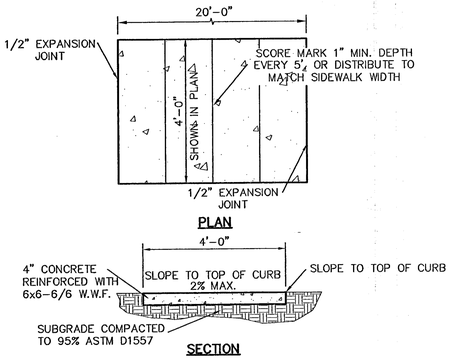
SHEET TITLE

LINE C
PLAN & PROFILE
FROM STA. 0+00.00
TO STA. 1+94.00

SHEET NO.

18

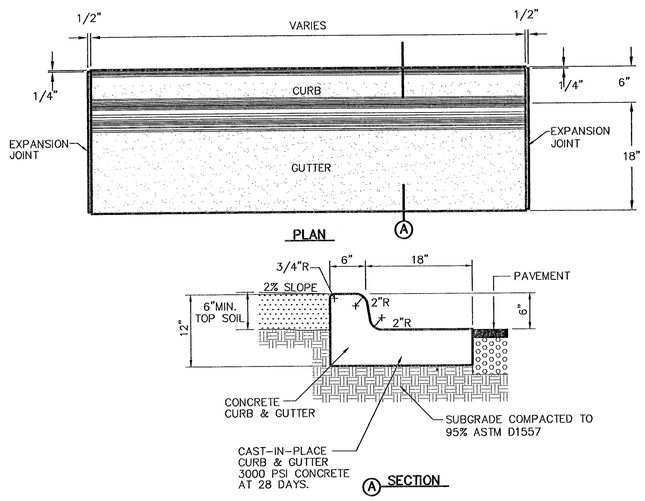
OF 27



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.

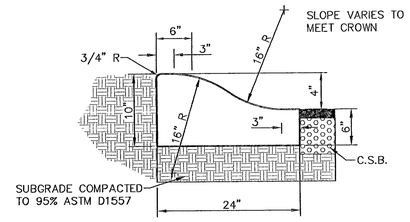
1/19 SECTION-SIDEWALK/SLAB
SCALE: 1" = 2'-0"



NOTES:

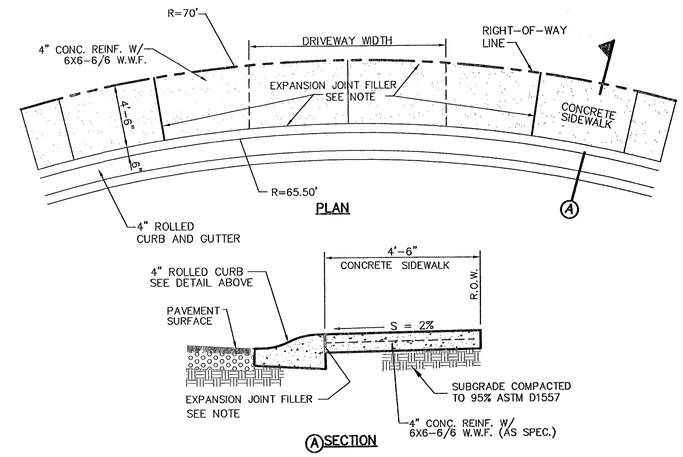
1. CONCRETE CURB, GUTTER, AND RETURNS SHALL BE 3,000 P.S.I. MIN.
2. DUMMY JOINTS REQUIRED AT 10' O.C.
3. 1/2" PREMOLDED BITUMINOUS EXPANSION JOINT (AASHTO M-33) IS REQUIRED FOR ALL CURBS RETURNS. TRIM BITUMINOUS MATERIAL 1/4" LESS THAN NEAT CURB & GUTTER DIMENSION.
4. SUBGRADE UNDER CURBS MUST BE FORMED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

2/19 CURB & GUTTER DETAIL
SCALE: 1" = 1'-0"

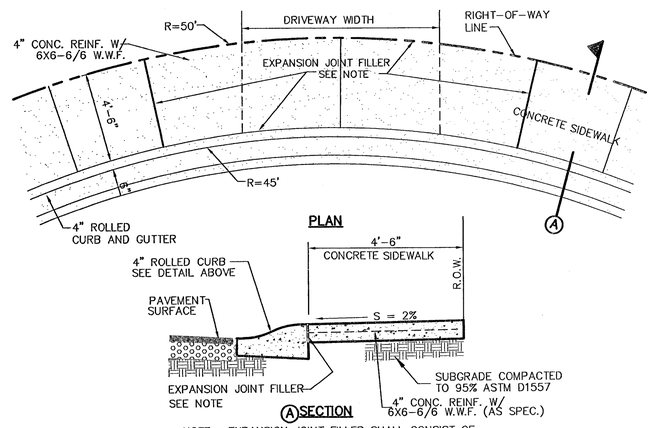


1. CONCRETE TO BE 3000 PSI MIN.
2. DUMMY JOINTS REQUIRED AT 10' O.C. FOR HEADERS AND 5' O.C. FOR SIDEWALK
3. EXPANSION MATERIAL REQUIRED AT CURB RETURNS WITH 1/2" PREMOLDED ASPHALT IMPREGNATED EXPANSION MATERIAL OR EQUAL.
4. EXPANSION JOINTS REQUIRED AT 50' O.C. WHEN FORMING FOR HEADERS.
5. EXPANSION JOINTS REQUIRED FOR SIDEWALK AT 20' O.C.

3/19 4" CONCRETE ROLLED CURB DETAIL
SCALE: 1" = 1'-0"

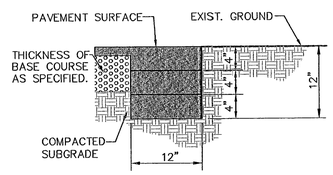


4/19 HEEL (70' R) DRIVEWAY DETAIL
SCALE: NTS



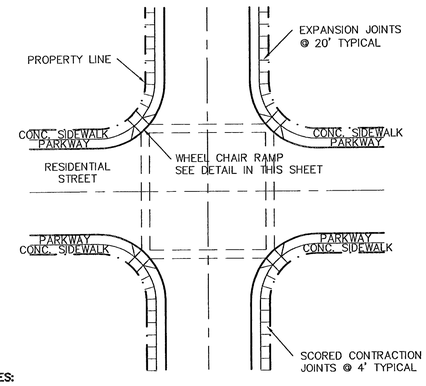
NOTE: EXPANSION JOINT FILLER SHALL CONSIST OF 1/2" BITUMINOUS TYPE PREFORMED (AASHTO M-33)

5/19 CUL-DE-SAC (50' R) DRIVEWAY DETAIL
SCALE: N.T.S.



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

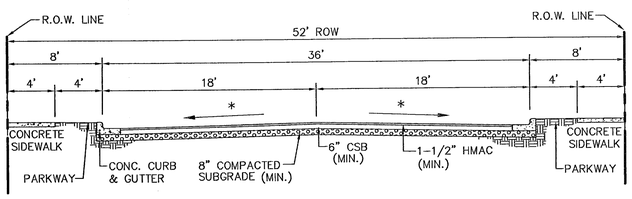
6/19 TERMINUS OF STREET
SCALE: 1" = 1'-0"



NOTES:

1. RAMPS MAY BE PLACED AS SUGGESTED, HOWEVER EXISTING LIGHT POLES, FIRE HYDRANTS, DROP INLETS, ETC., MAY AFFECT PLACEMENT.
2. THE CONCRETE SURFACE SHALL HAVE A ROUGH, NONSKID TYPE FINISH.
3. CONSTRUCTION METHODS SHALL CONFORM WITH THE COUNTY OF EL PASO SPECIFICATIONS.
4. ALL PARKING AND PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH CURRENT CITY OF EL PASO STANDARDS.

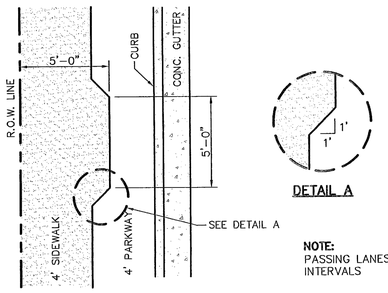
7/19 WHEELCHAIR RAMP STREET PLAN
SCALE: 1" = 30'-0"



(*) STREET TRANSVERSE SLOPE AS SHOWN IN PLANS

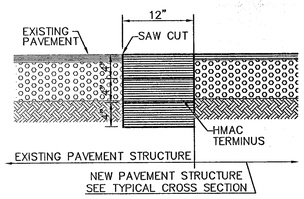
NOTE:
STREET IMPROVEMENTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH CURRENT CITY OF EL PASO PAVING CONSTRUCTION DETAILS AND STANDARD SPECIFICATIONS: CBR @ EVERY 500' RESULTS TO BE SUBMITTED TO DEVELOPMENT SERVICES OF CITY OF EL PASO FOR REVIEW AND APPROVAL PRIOR TO PLACEMENT OF PAVEMENT

8/19 TYPICAL 52' ROW STREET SECTIONS DETAIL
SCALE: 1" = 6'-0"



NOTE:
PASSING LANES AT 200' MAX. INTERVALS

9/19 ACCESSIBLE PASSING SPACE DETAIL
SCALE: 1" = 4'-0"



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

10/19 TYPICAL PAVEMENT JOINT SECTION
SCALE: 1" = 1'-0"

REFERENCES - BENCHMARKS

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

DATE	REVISIONS	BY

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ENGINEER'S SEAL
JORGE L. ACCARATE
85075
STATE OF TEXAS
REGISTERED PROFESSIONAL ENGINEER

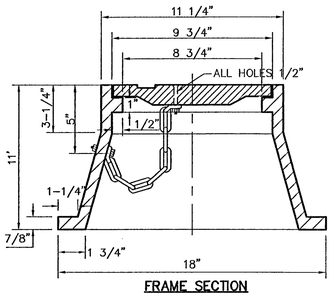
SCALE
Horizontal: AS SHOWN
Vertical: N/A
Contour Interval: N/A

DATE: JANUARY 2008
DESIGN BY: J.L.A.
DRAWN BY: J.L.A.
CHKD. BY: J.L.A.
APPVD. BY: J.L.A.
JOB No. 2000-069-D

PROJECT TITLE
SANDSTONE RANCH UNIT SEVEN
SUBDIVISION IMPROVEMENTS

SHEET TITLE
STANDARD DETAILS
(SHEET 1 OF 3)

SHEET NO.
19
OF 27



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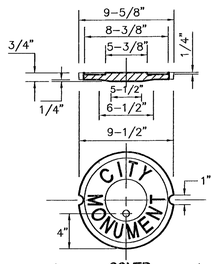
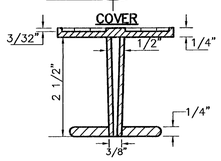
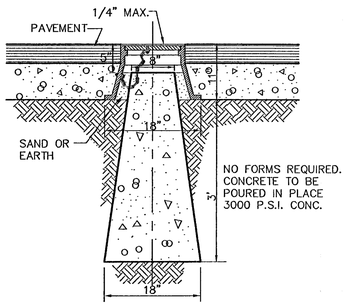
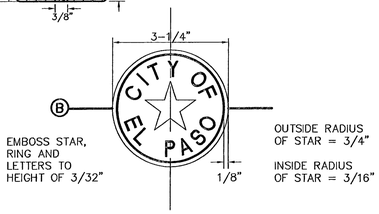


COVER

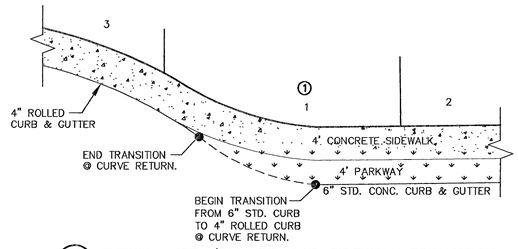




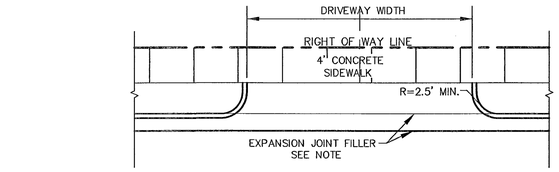


BRONZE MONUMENT CAP

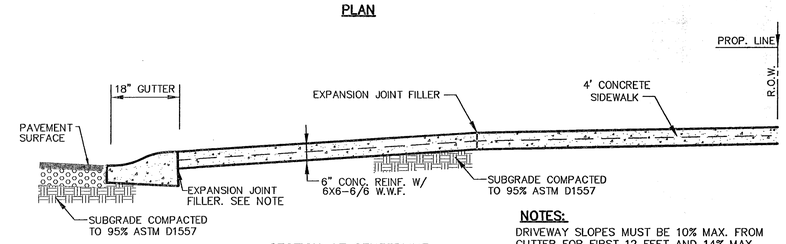
1/20 CITY SURVEY MONUMENT DETAILS
SCALE: N.T.S.



2/20 TYPICAL HEEL/CUL-DE-SAC SIDEWALK TRANSITION
SCALE: N.T.S.



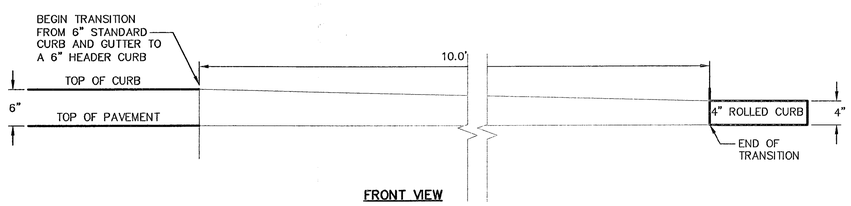
PLAN



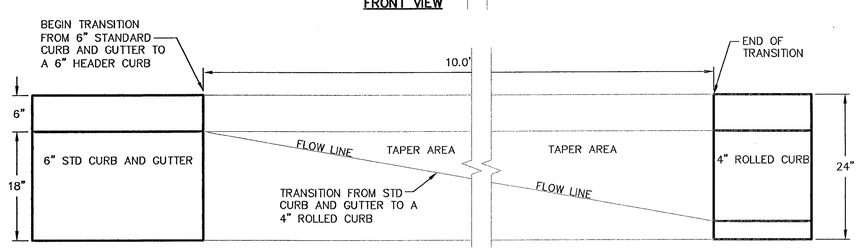
SECTION AT CENTERLINE

NOTES:
DRIVEWAY SLOPES MUST BE 10% MAX. FROM GUTTER FOR FIRST 12 FEET AND 14% MAX. THEREAFTER (DRIVEWAY SHALL BE LOCATED @ HIGH SIDE OF LOT UNLESS OTHERWISE COORDINATED WITH COUNTY OF EL PASO)

3/20 TYPICAL DRIVEWAY DETAIL
SCALE: N.T.S.

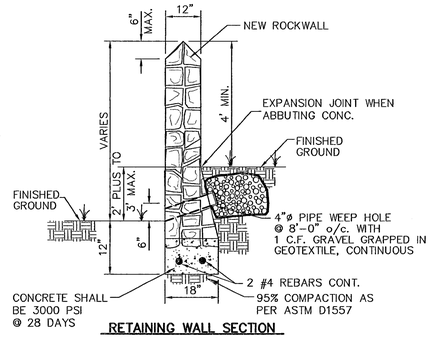


FRONT VIEW

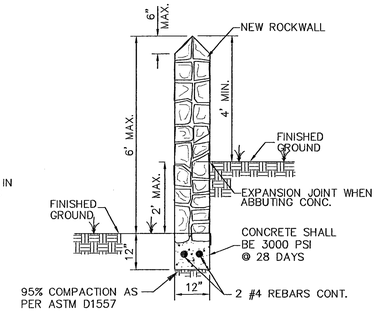


TOP VIEW

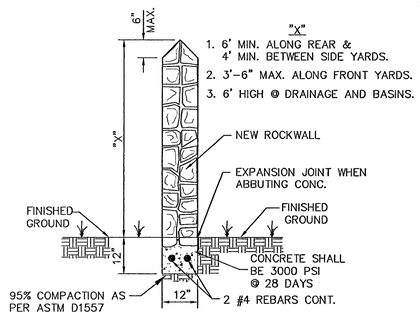
4/20 CURB TRANSITION DETAIL
SCALE: 1" = 1'-0"



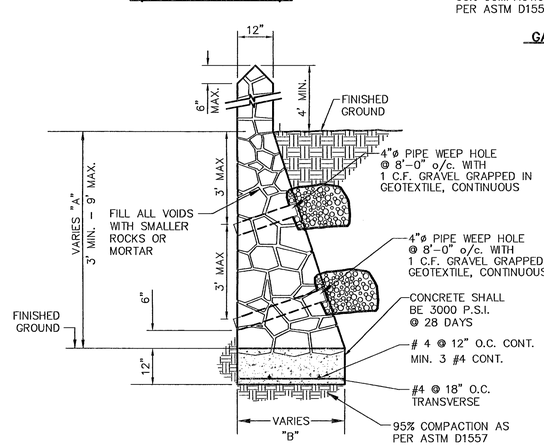
RETAINING WALL SECTION
(2' PLUS TO 3' MAX.)



GARDEN WALL SECTION (2' MAX.)



GARDEN WALL SECTION



RETAINING WALL SECTION (3' MIN. TO 9' MAX.)

NOTES

1. 4' MIN. ALONG REAR & 4' MIN. BETWEEN SIDE YARDS.
2. 3'-6" MAX. ALONG FRONT YARDS.
3. 6' HIGH @ DRAINAGE AND BASINS.

RETAINING ROCK WALL	
"A"	"B"
3.01'	2'-6"
4'	2'-10"
5'	3'-3"
6'	3'-8"
7'	4'-0"
8'	4'-5"
9'	4'-10"

ROCKWALL/RETAINING WALL NOTES

1. STONE FOR ROCKWALL SHALL BE AS NEARLY UNIFORM IN SECTIONS AS IN PRACTICABLE 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 WALL OVER SIX (6) FEET IN HEIGHT AND THOSE USED FOR EARTH RETENTION OVER TWO (2) FEET MUST BE DESIGNED AS STRUCTURAL WALLS.
4. WALLS ADJACENT TO PONDING AREAS OR DRAINAGE DITCHES MAY BE CONSTRUCTED OF BRICK OR CINDER BLOCK AND SHALL NOT BE LESS THAN SIX (6) FEET HIGH.
5. ROCKWALL MORTAR JOINTS MUST NOT EXCEED TWO (2) INCHES.
6. PROVIDE ONE (1) 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 OR ROUND ROCK, NO RIVER ROCK SHALL BE ALLOWED.
9. REINFORCING STEEL SHALL BE ASTM A615 GRADE 40.
10. ALLOWABLE SOIL BEARING PRESSURE = 2,500 PSI (MINIMUM)
11. BACKFILL MATERIALS SHALL CONSIST OF COARSE GRAINED, WELL-DRAINED SOILS (WITH NO CLAY CONTENT).

5/20 TYPICAL ROCKWALL/RETAINING WALL DETAILS
SCALE: 1" = 2'-0"

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

DATE	REVISIONS	BY

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LICENSED
PROFESSIONAL ENGINEER
12/12/07

SCALE
Horizontal: AS SHOWN
Vertical: N/A
Contour Interval: N/A
DATE: JANUARY 2008
DESIGN BY: J.L.A.
DRAWN BY: A.B.
CHKD. BY: J.L.A.
APPVD. BY: J.L.A.
JOB No. 2000-089-LD

PROJECT TITLE
SANDSTONE RANCH UNIT SEVEN
SUBDIVISION IMPROVEMENTS

SHEET TITLE
STANDARD DETAILS
(SHEET 2 OF 3)

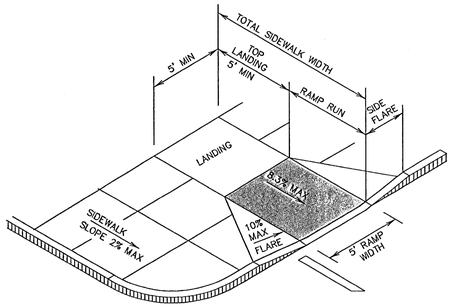
SHEET NO.
20
OF 27

103088

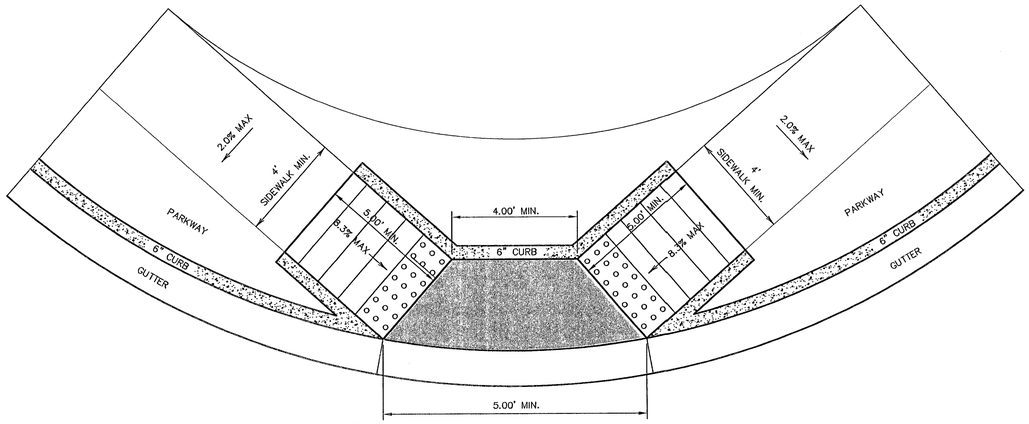
UTILITY LOCATOR SERVICES	
EL PASO ELECTRIC COMPANY	(915) 543-5720
EL PASO ENERGY CORPORATION	(915) 496-5244
EL PASO WATER UTILITIES	(915) 594-5500
MCI SURVEILLANCE	(800) MCI-WORK
TIME WARNER COMMUNICATIONS	(915) 772-1123
TEXAS GAS SERVICE	(915) 680-7200
SBC	(800) 545-6005
AT&T	(800) 852-3786
U.S. SPRINT TELECOMM	(800) 521-0579
STREET DEPT. - SIGNAL & SIGN	(915) 621-6750
(AFTER HOURS)	(915) 240-3220

WARNING ! BEFORE YOU DIG

CALL
1-800-DIG-TESS
1-800-344-8377
FOR FIELD LOCATING EXISTING UTILITIES



1/21 PERPENDICULAR CURB RAMP (TYPE I)
SCALE: N.T.S.



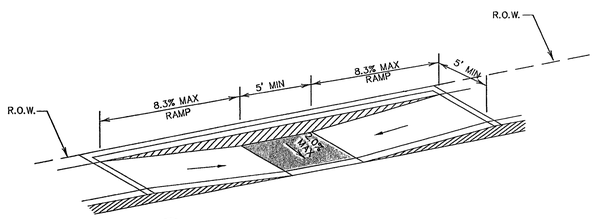
4/21 DIRECTIONAL RAMP @ INTERSECTION
SCALE: N.T.S.

LEGEND

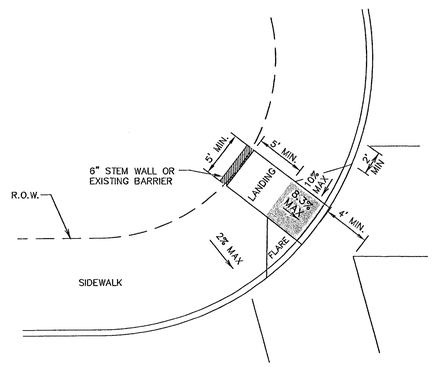
DETECTABLE WARNING SURFACE SHALL CONSIST OF RAISED TRUNCATED DOMES WITH A NOMINAL DIAMETER OF 0.9 IN, A NOMINAL HEIGHT OF 0.2 IN AND A CENTER TO CENTER NOMINAL SPACING OF 2.35 IN, AND SHALL NOT BE STAGGERED. THE SURFACE SHALL HAVE A COLOR CONTRAST VISUALLY WITH ADJOINING SURFACES.

GENERAL NOTES:

1. ALL SLOPES ARE MAXIMUM ALLOWABLE. THE LEAST POSSIBLE SLOPE THAT WILL STILL DRAIN PROPERLY SHOULD BE USED. RAMP LENGTH OR GRADE OF APPROACH SIDEWALKS MAY BE ADJUSTED AS DIRECTED BY THE ENGINEER.
2. THE MINIMUM SIDEWALK WIDTH IS 4'. WHERE A 5' SIDEWALK CAN NOT BE PROVIDED DUE TO SITE CONSTRAINTS, A MINIMUM 3' SIDEWALK WITH 5'X 5' PASSING AREAS AT INTERVALS NOT TO EXCEED 200 FT IS REQUIRED.
3. LANDINGS SHALL BE 5' X 5' MINIMUM WITH A MAXIMUM 2% SLOPE IN ANY DIRECTION.
4. MANEUVERING SPACE AT THE BOTTOM OF CURB RAMPS SHALL BE A MINIMUM OF 4'X 4' WHOLLY CONTAINED WITHIN THE CROSSWALK AND WHOLLY OUTSIDE THE PARALLEL VEHICULAR TRAVEL PATH.
5. CURB RAMPS WITH RETURNED CURBS MAY BE USED ONLY WHERE PEDESTRIANS WOULD NOT NORMALLY WALK ACROSS THE RAMP. OTHERWISE, FLARED SIDES SHALL BE PROVIDED.
6. ALL CONCRETE SIDEWALK SURFACES SHALL RECEIVE A LIGHT BROOM FINISH UNLESS NOTED OTHERWISE IN THE PLANS.
7. RAMP TEXTURES MUST CONSIST OF TRUNCATED DOMED SURFACES. TEXTURES ARE REQUIRED TO BE DETECTABLE UNDERFOOT. SURFACES THAT WOULD ALLOW WATER TO ACCUMULATE ARE PROHIBITED. REFER TO TRUNCATED DOME DETAIL.
8. CROSSWALK DIMENSIONS, CROSSWALK MARKINGS AND STOP BAR LOCATIONS SHALL BE AS SHOWN ELSEWHERE IN THE PLANS. AT INTERSECTIONS WHERE CROSSWALK MARKINGS ARE NOT REQUIRED, RAMPS SHALL BE ALIGNED WITH THEORETICAL CROSSWALKS, OR AS DIRECTED BY THE ENGINEER.
9. MAXIMUM ALLOWABLE CROSS SLOPE ON SIDEWALK AND RAMP SURFACES IS 2%.
10. ADDITIONAL INFORMATION ON CURB RAMP LOCATION, DESIGN, LIGHT REFLECTIVE VALUE AND TEXTURE MAY BE FOUND IN THE CURRENT EDITION OF THE TEXAS ACCESSIBILITY STANDARDS (TAS) PREPARED AND ADMINISTERED BY THE TEXAS DEPARTMENT OF LICENSING AND REGULATION (TDLR).



2/21 PARALLEL CURB RAMP (TYPE II)
SCALE: N.T.S.



5/21 DIAGONAL CURB RAMP (FLARED SIDES) (TYPE V)
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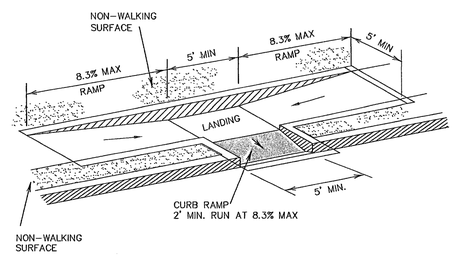
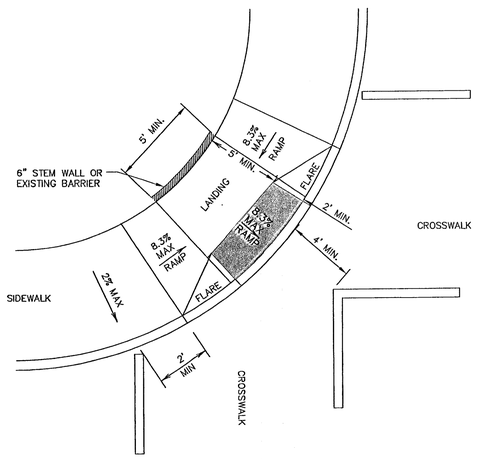


7/21 COMBINATION CURB RAMPS (TYPE VII)
SCALE: N.T.S.



3/21 DIAGONAL COMBINATION CURB RAMP (TYPE III)
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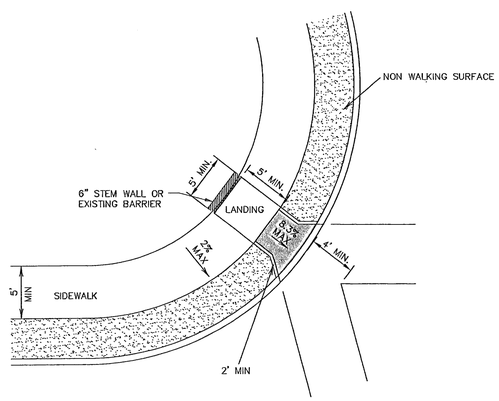

6/21 DIAGONAL CURB RAMP (RETURNED CURB) (TYPE VI)
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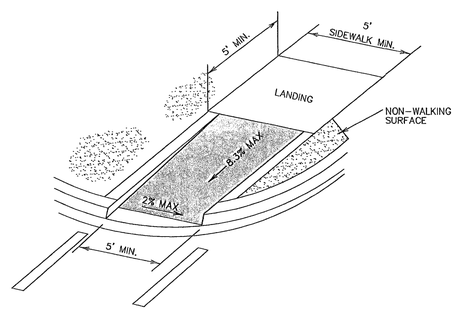
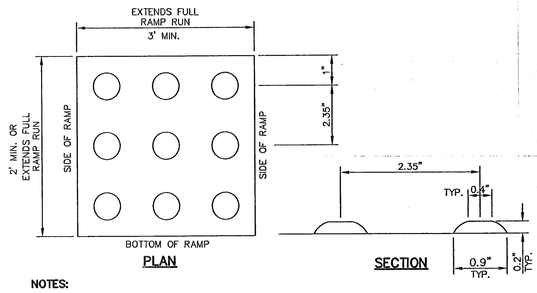


8/21 DIRECTIONAL RAMP WITHIN RADIUS (TYPE IV)
SCALE: N.T.S.



PLAN SECTION

NOTES:

1. ALL CONCRETE SHALL BE 3,000 P.S.I. MIN. AT 28 DAYS.
2. CONCRETE SLABS SHALL BE A MIN. 4" THICK.
3. DETECTABLE WARNING SURFACE SHALL CONSIST OF RAISED TRUNCATED DOMES WITH A NOMINAL DIAMETER OF 0.9 IN, A NOMINAL HEIGHT OF 0.2 IN AND A CENTER TO CENTER NOMINAL SPACING OF 2.35 IN, AND SHALL NOT BE STAGGERED. THE SURFACE SHALL HAVE A COLOR CONTRAST VISUALLY WITH ADJOINING SURFACES.
4. ALL NEW RAMPS SHALL COMPLY WITH T.A.S. AND A.D.A. REQUIREMENTS. ANY SECTIONS NOT CONFORMING WILL BE REMOVED AT THE CONTRACTORS EXPENSE.

9/21 TRUNCATED DOME
SCALE: N.T.S.

REFERENCES - BENCHMARKS

FOUND 7X20OT BRASS CAP SECTION CORNERS 19, 20, 22 AND 21. ELEVATION: 4033.22 (NVGD DATUM) (SUBTRACT 8.462 TO CONVERT TO CITY DATUM)

DATE	REVISIONS	BY

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STATE OF TEXAS
JORGE L. AZCARATE
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LICENSED
PROFESSIONAL ENGINEER

SCALE
Horizontal: AS SHOWN
Vertical: N/A
Contour Interval: N/A

DATE: JANUARY 2008
DESIGN BY: J.L.A.
DRAWN BY: J.L.A.
CHKD. BY: J.L.A.
APPVD. BY: J.L.A.
JOB No. 2000-089-LD

PROJECT TITLE

SANDSTONE RANCH UNIT SEVEN
SUBDIVISION IMPROVEMENTS

SHEET TITLE

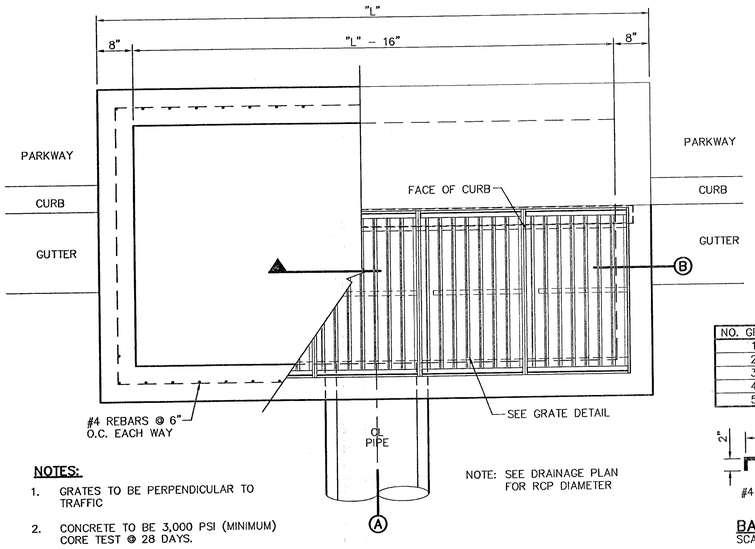
STANDARD DETAILS

(SHEET 3 OF 3)

SHEET NO.

21

OF 27



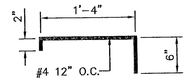
NOTE: SEE DRAINAGE PLAN FOR RCP DIAMETER

NOTES:

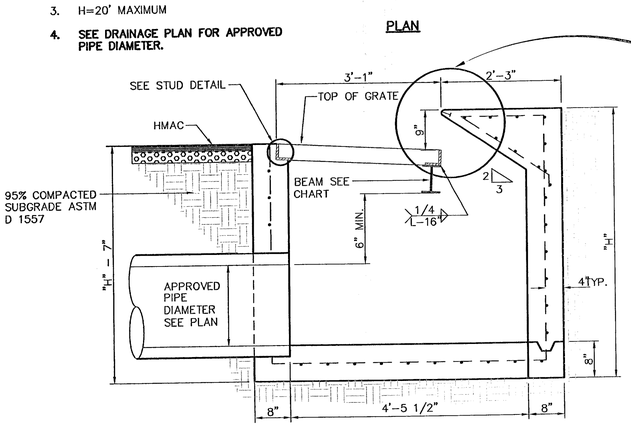
1. GRATES TO BE PERPENDICULAR TO TRAFFIC
2. CONCRETE TO BE 3,000 PSI (MINIMUM) CORE TEST @ 28 DAYS.
3. H=20' MAXIMUM
4. **SEE DRAINAGE PLAN FOR APPROVED PIPE DIAMETER.**

PLAN

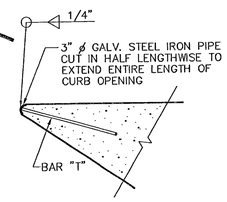
NO. GRATES	CAPACITY	"L"	BEAM LENGTH	BEAM (MIN. SIZES)
1	9.84 CFS	3'–2 5/8"	2'–10"	W6x12, S4x13, MC6x8.2
2	19.63 CFS	5'–1 1/8"	4'–7 1/8"	W6x12, S6x12.5, MC6x15.1
3	29.69 CFS	7'–0 1/4"	6'–5 1/8"	W8x15, S7x15.3, MC7x17.6
4	39.10 CFS	8'–9 7/8"	8'–3 7/8"	W9x18, S8x18.4, MC10x21.9
5	48.72 CFS	10'–8"	10'–2"	W12x16, S8x21, MC10x21.9



BAR "T" DETAIL
SCALE: 1" = 1' – 0"



A SECTION



DETAIL
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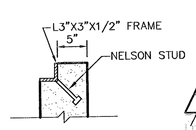
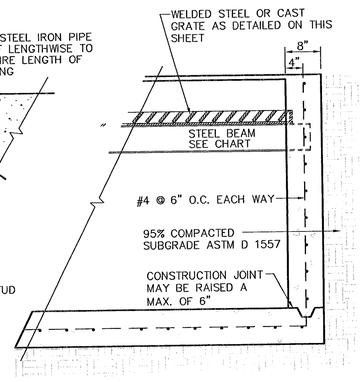
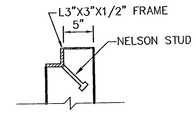


STUD DETAIL
SCALE: N.T.S.

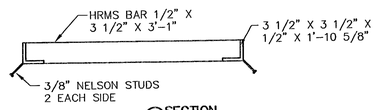


B SECTION

1/22 DROP INLET (TYPE 1) DETAILS
SCALE: 3" = 4'–0"



STUD DETAIL



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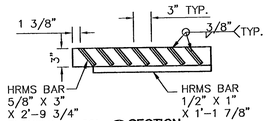

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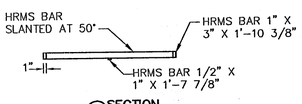
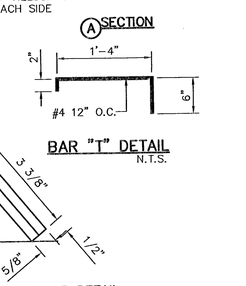


C SECTION



BAR "T" DETAIL
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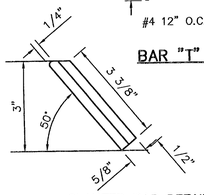
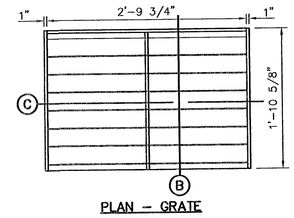
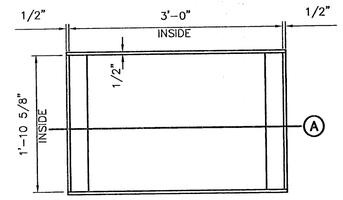


SLANTED BAR DETAIL



PLAN – GRATE

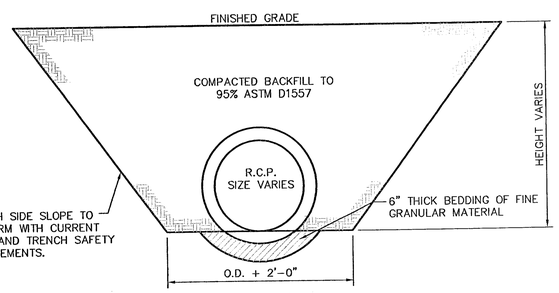


PLAN – FRAME

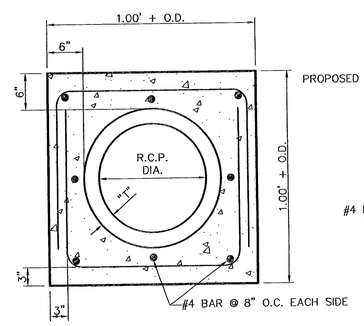
2/22 GRATE AND FRAME DETAILS
SCALE: 1" = 1'–0"

DROP INLET GENERAL NOTES:

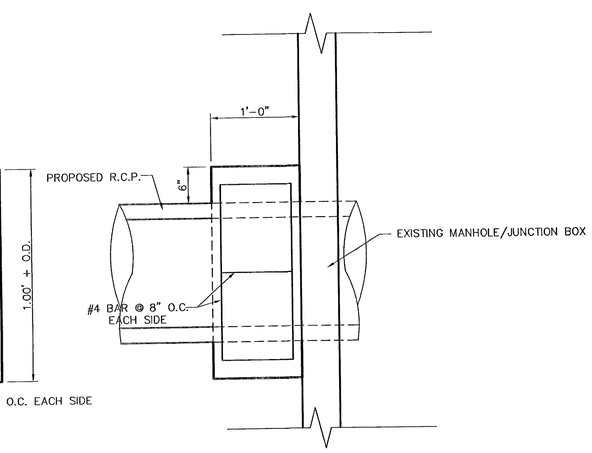
1. WELDED STEEL OR CAST GRATES AS DETAILED ARE ALL ACCEPTABLE GRATES. MIXING OF ALTERNATE TYPES OF GRATES ON THE SAME PROJECT WILL BE PERMITTED WITH THE APPROVAL OF THE CITY ENGINEER.
2. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE CURRENT STANDARD SPECIFICATIONS.
3. SHARP EDGES RESULTING FROM FABRICATION SHALL BE DULLED BY ANY ACCEPTABLE METHOD FOR SAFETY IN HANDLING.
4. GRATES SHALL BE INSTALLED IN FRAME WITH FLOW ARROW POINTING DOWNSTREAM OR TOWARD THE LOW POINT IN A SUMP.
5. WELDED GRATES SHALL BE STRUCTURAL STEEL CONFORMING TO THE REQUIREMENTS OF AASHTO M–183 OR OF CORROSION RESISTANT STRUCTURAL STEEL CONFORMING TO THE REQUIREMENTS OF AASHTO M–161 OR M–222 OR BE MADE OF OTHER APPROVED STEELS OF EQUAL QUALITY. MIXING GRADES OF STEEL ON THE SAME GRATE WILL NOT BE PERMITTED.
6. GRATES MADE OF M–183 STEEL SHALL BE GALVANIZED IN ACCORDANCE WITH AASHTO M–111 SPECIFICATIONS OR SHALL BE PAINTED WITH INORGANIC ZINC PAINTS, MEETING THE REQUIREMENTS OF CURRENT STANDARD SPECIFICATIONS.
7. ALL WELDS SHALL HAVE A MINIMUM OF 1/4" FILLET AND SHALL CONFORM TO THE SPECIFICATIONS FOR HIGHWAY CONSTRUCTION AND TO THE AWS STRUCTURAL WELDING CODE. ELECTRODES SHALL BE COMPATIBLE TO THE DIFFERENT GRADES OF STEEL THAT COMPRISE THE GRATE MEMBERS.
8. CAST GRATES SHALL BE CAST STEEL CONFORMING TO THE REQUIREMENTS OF AASHTO M–103, GRADE 65–35 OR OF DUCTILE IRON CONFORMING TO THE REQUIREMENTS OF ASTM A–536, SPECIAL GRADE 60–45, OR OF GRAY IRON CONFORMING TO THE REQUIREMENTS OF AASHTO M–105, CLASS 35B OR ASTM A–48 CLASS 35B. THE SPECIFICATIONS OF GENERAL APPLICATION FOR CAST STEEL GRATES SHALL BE AASHTO M–103 SCOPE 1.2.1, GRADE N–1.
9. FERROUS CASTINGS SHALL BE OF UNIFORM QUALITY, FREE OF BLOWHOLES, POROSITY, HARD SPOTS, SHRINKAGE DISTORTION OR OTHER DEFECTS. THEY SHALL BE SMOOTH AND WELL CLEANED BY SHOT BLASTING OR OTHER APPROVED CLEANING METHOD. AFTER CLEANING THEY SHALL BE COATED WITH ASPHALT BASE PAINT RESULTING IN A SMOOTH COATING, TOUGH AND TENACIOUS WHEN COLD, NOT TACKY OR BRITTLE.
10. ALL CASTING SHALL BE MANUFACTURED TRUE TO PATTERN. COMPONENT PARTS SHALL FIT TOGETHER IN A SATISFACTORY MANNER.
11. ALL CONCRETE TO BE 3000 PSI. CHAMFER ALL EXPOSED EDGES 3/4". ALL DIMENSIONS RELATING TO REINFORCING STEEL ARE TO CENTER OF BARS.
12. MINIMUM CONCRETE COVER SHALL BE 1 1/2" FOR STEEL REINFORCING.
13. EXPANSION MATERIAL TO BE 1/2" BITUMINOUS FIBER AND PLACED WHERE PROPOSED CONCRETE COMES IN CONTACT WITH ANY EXISTING OR PROPOSED CONCRETE OR MASONRY STRUCTURE.
14. STRUCTURAL STEEL SHALL BE SHOP PAINTED IN ACCORDANCE WITH TxDOT. ITEM 446 "PAINT AND PAINTING"
15. SURFACE OF ALL EXPOSED CONCRETE SHALL CONFORM IN SLOPE AND GRADE TO EXISTING OR PROPOSED CURB AND WALK ADJACENT TO INLETS.
16. GRATES WILL BE DEPRESSED 1" BELOW PROPOSED OR EXISTING GRADE.
17. ALL REINFORCING BARS TO BE #4 BARS AT 6" O.C. GRADE 60. BEND BARS AROUND PIPE OPENINGS.
18. INLETS TO BE DESIGNATED IN PLANS BY NUMBER OF GRATES REQUIRED.
19. LOCATION OF SEWER PIPES SHOWN ELSEWHERE IN PLANS.
20. TWO 1/2"øX4" LONG CONCRETE ANCHOR STUDS REQUIRED FOR EACH SIDE OF FRAME, WHERE RESTING ON CONCRETE, USE NELSON STUDS OR EQUAL.
21. THE GRATES OF ALL INLETS WITHIN THE STREET PAVEMENT MUST BE CONSTRUCTED WITH THE GRATE BARS PERPENDICULAR TO THE CURB.



3/22 STORM SEWER BEDDING DETAIL
SCALE: 1" = 2'–0"



FRONT SECTION



SIDE VIEW

NOTES:

1. CONCRETE COLLARS SHALL BE USED AT LOCATIONS AS SHOWN ON PLANS, OR AS DIRECTED BY THE ENGINEER, IN ORDER TO ENSURE A PROPER WATER TIGHT SEAL ON ALL REINFORCED CONCRETE PIPE CONNECTIONS AS DIRECTED BY ENGINEER.
2. CONCRETE TO BE 3,000 PSI (MINIMUM) CORE TEST @ 28 DAYS.

4/22 CONCRETE COLLAR DETAIL
SCALE: N.T.S.

REFERENCES – BENCHMARKS

FOUND TXDOT BRASS CAP SECTION CORNERS 19, 20, 22 AND 21, ELEVATION: 4033.22 (NVGD DATUM) (SUBTRACT 8.482 TO CONVERT TO CITY DATUM)

DATE	REVISIONS	BY

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Office 915.544.5233
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ENGINEER'S SEAL
JORGE L. AZCARATE
85075
LICENSED
STATE OF TEXAS
7/3/08

SCALE
Horizontal: AS SHOWN
Vertical: N/A
Contour Interval: N/A

DATE: DECEMBER 2007
DESIGN BY: J.L.A.
DRAWN BY: A.B.
CHKD. BY: J.L.A.
APPVD. BY: J.L.A.
JOB No. 2000–089–LD

PROJECT TITLE

SANDSTONE RANCH UNIT SEVEN
SUBDIVISION IMPROVEMENTS

SHEET TITLE

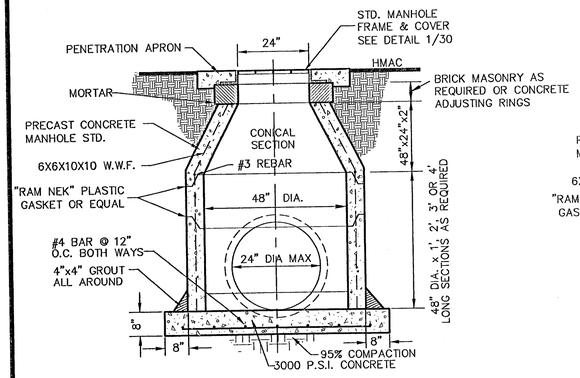
DRAINAGE DETAILS

(SHEET 1 OF 2)

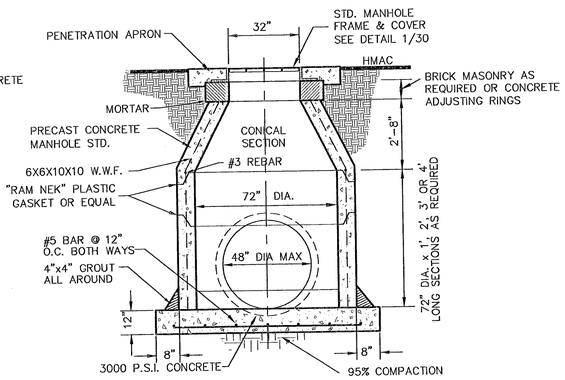
SHEET NO.

22

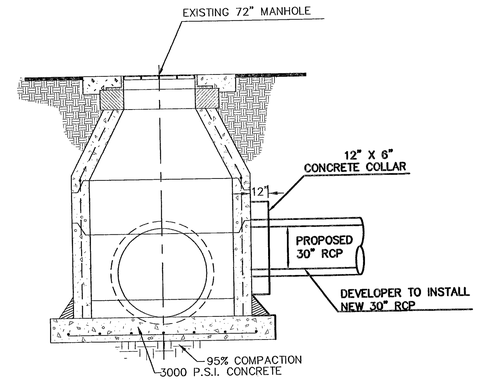
OF 27



1/23 48" STANDARD MANHOLE DETAIL
SCALE: N.T.S.

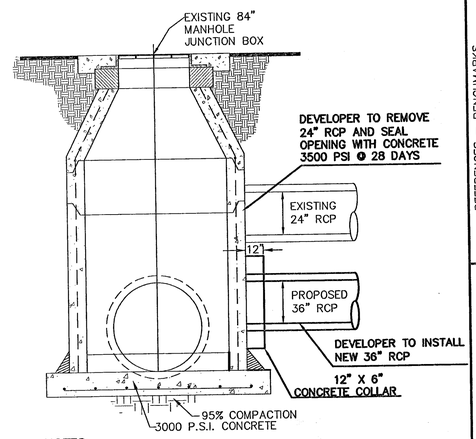


2/23 72" STANDARD MANHOLE DETAIL
SCALE: N.T.S.



NOTES:
1. SEE DETAIL 4/22 FOR REINFORCEMENT DETAILS

3/23 12"X 6" CONCRETE COLLAR DETAIL FOR SD-4
SCALE: N.T.S.

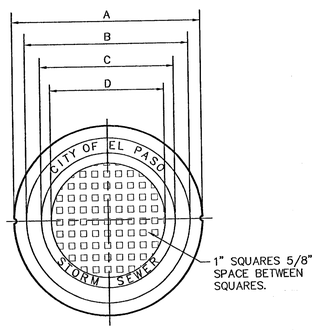


NOTES:
1. SEE DETAIL 4/22 FOR REINFORCEMENT DETAILS

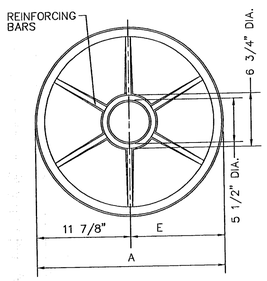
4/23 12"X 6" CONCRETE COLLAR DETAIL FOR MH-WE9
SCALE: N.T.S.

MANHOLE COVER	48" MANHOLE	72" MANHOLE
WEIGHT	175 LBS.	310 LBS.
A	1'-11 3/4"	2'-7 1/4"
B	1'-8 5/8"	2'-4 1/8"
C	1'-4 7/8"	2'- 3/8"
D	1'-2 3/8"	1'-9 7/8"
E	11 7/8"	1'-3 5/8"

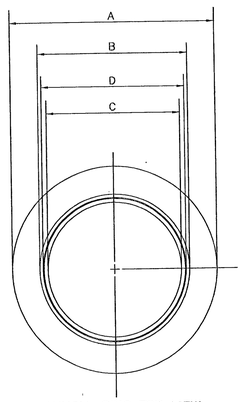
MANHOLE RING	48" MANHOLE	72" MANHOLE
WEIGHT	165 LBS.	225 LBS.
A	2'-10 1/2"	3'-6"
B	2'-1 1/4"	2'-8 3/4"
C	1'-10 1/2"	2'-6"
D	1'-11 7/8"	2'-7 3/8"



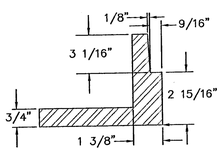
MANHOLE COVER TOP VIEW
SCALE: NTS



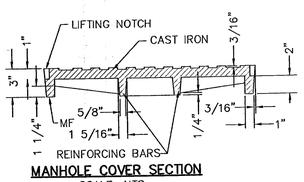
MANHOLE COVER BOTTOM VIEW
SCALE: NTS



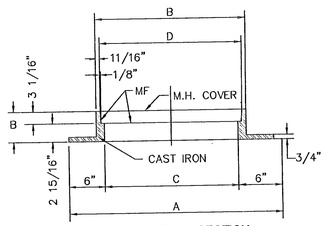
MANHOLE RING TOP VIEW
SCALE: NTS



DETAIL
SCALE: NTS



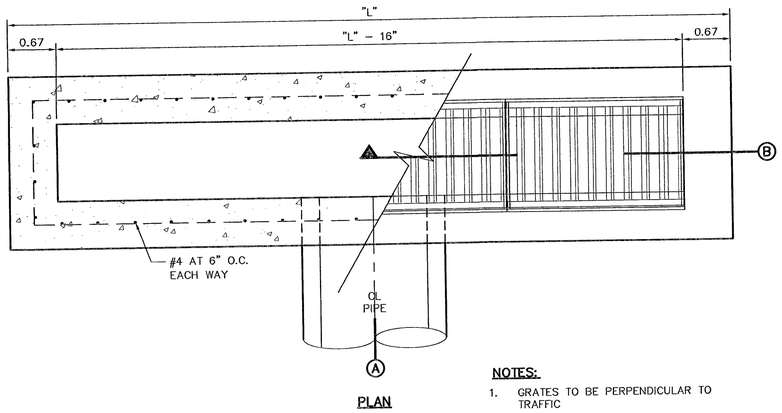
MANHOLE COVER SECTION
SCALE: NTS



MANHOLE RING SECTION
SCALE: NTS

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

5/23 MANHOLE RING AND COVER DETAILS
SCALE: AS SHOWN

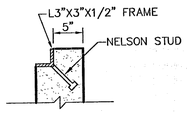


PLAN

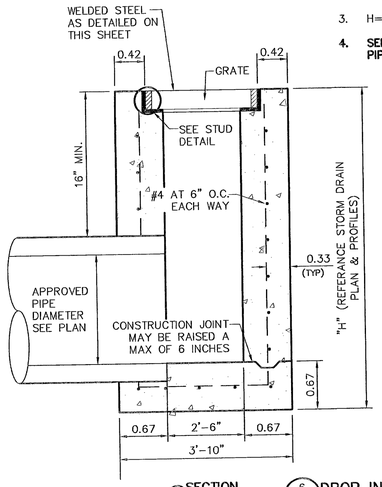
NUMBER OF GRATES	"L"	CAPACITY*
1	3'-2 5/8"	4.718 CFS
2	5'-2 1/4"	9.436 CFS
3	7'-1 7/8"	14.155 CFS
4	9'-1 1/2"	18.873 CFS
5	11'-1 1/8"	23.592 CFS

* THESE CAPACITIES CORRESPOND TO A CLOGGING FACTOR OF 0.5

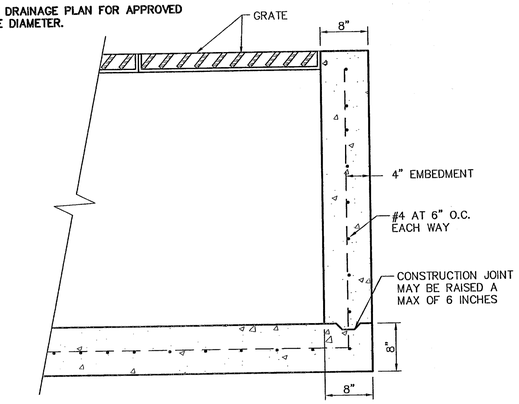
NOTES:
1. GRATES TO BE PERPENDICULAR TO TRAFFIC
2. CONCRETE TO BE 3,000 PSI (MINIMUM) CORE TEST @ 28 DAYS.
3. H=20' MAXIMUM
4. **SEE DRAINAGE PLAN FOR APPROVED PIPE DIAMETER.**



STUD DETAIL
N.T.S.



A SECTION



B SECTION

6/23 DROP INLET (TYPE III) DETAILS
SCALE: N.T.S.

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

DATE	REVISIONS	BY

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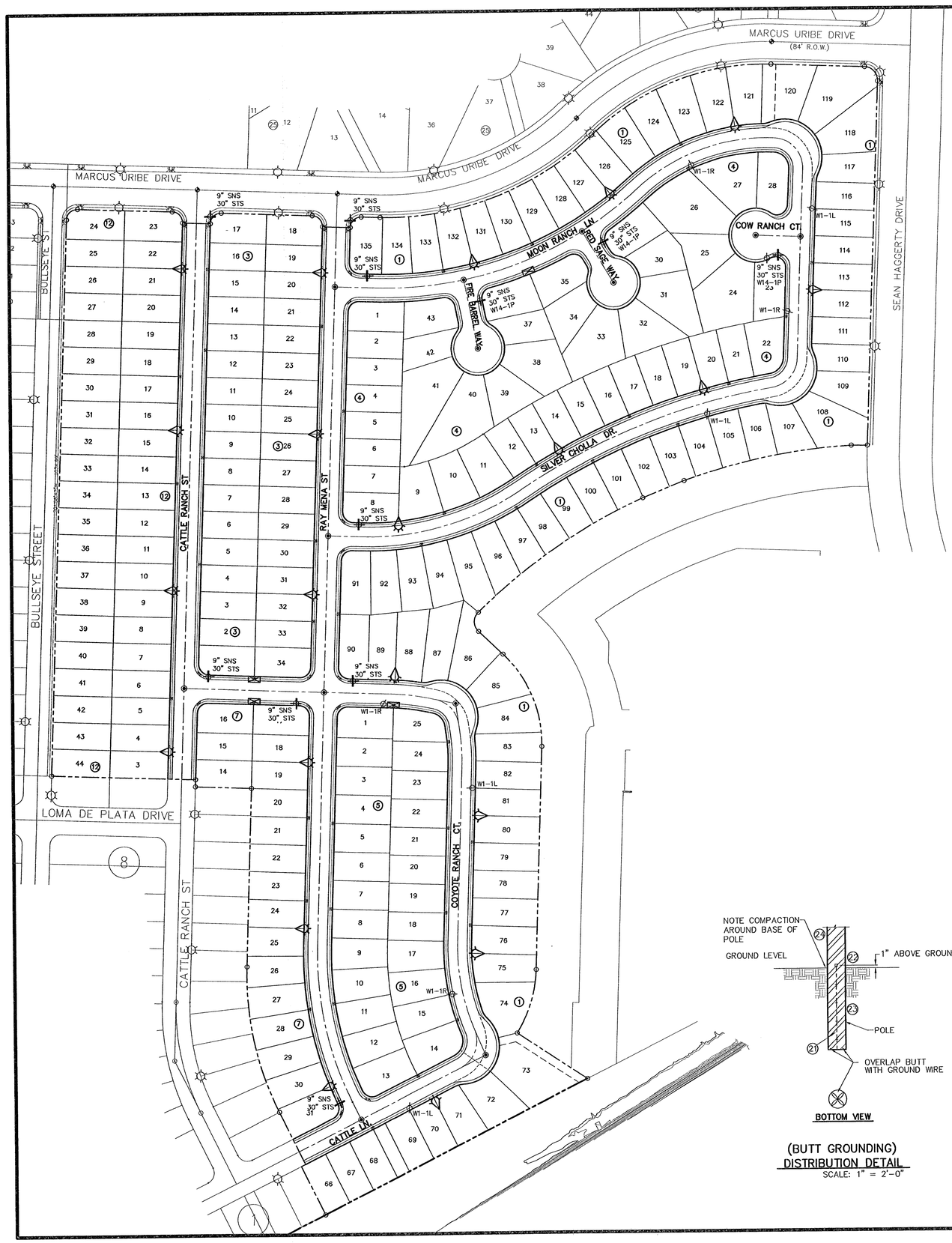
ENGINEER'S SEAL
JORGE L. AZCARATE
85075
STATE OF TEXAS
9/08

SCALE
Horizontal: AS SHOWN
Vertical: N/A
Contour Interval: N/A
DATE: JANUARY 2008
DESIGN BY: J.L.A.
DRAWN BY: A.B.
CHKD. BY: J.L.A.
APPVD. BY: J.L.A.
JOB No. 2000-089-LD

PROJECT TITLE
SANDSTONE RANCH UNIT SEVEN
SUBDIVISION IMPROVEMENTS

SHEET TITLE
DRAINAGE DETAILS
(SHEET 2 OF 2)

SHEET NO.
23
OF 27



UTILITY LOCATOR SERVICES	
EL PASO ELECTRIC COMPANY	(915) 543-5720
EL PASO ENERGY CORPORATION	(915) 496-5244
EL PASO WATER UTILITIES	(915) 594-5500
MCI SURVEILLANCE	(800) MCI-WORK
TIME WARNER COMMUNICATIONS	(915) 772-1123
TEXAS GAS SERVICE	(915) 680-7200
SBC	(800) 545-6005
AT&T	(800) 852-3786
U.S. SPRINT TELECOMM	(800) 521-0579
STREET DEPT. - SIGNAL & SIGN	(915) 621-6750
(AFTER HOURS)	(915) 240-3220

WARNING !
BEFORE YOU DIG
CALL
1-800-DIG-TESS
1-800-344-8377
FOR FIELD LOCATING EXISTING UTILITIES

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

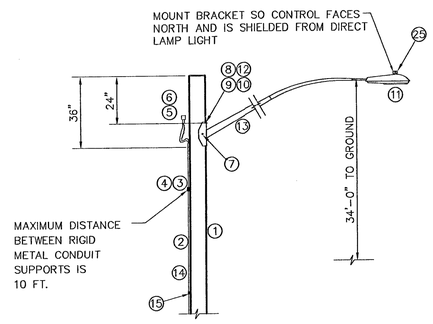
DATE	REVISIONS	BY

GENERAL NOTES:

1. A MINIMUM 3' CLEARANCE SHALL BE PROVIDED ON THE SIDEWALK AFTER THE LIGHT POLES & FIRE HYDRANTS ARE PLACED. SIDEWALK SHALL COMPLY WITH A.D.A AND T.D.L.R. STANDARDS.
2. U.S. POSTAL SERVICE DELIVERY WILL BE PROVIDED THROUGH NEIGHBORHOOD DELIVERY AND COLLECTION BOX UNITS (NDCBU) THAT WILL BE PLACED OUTSIDE SUBDIVISION BOUNDARY LIMITS DUE TO THE SUBDIVISION PRIVATE LOCATION.

LEGEND:

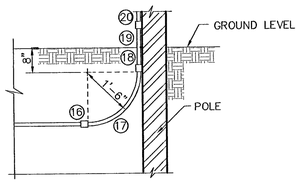
- EXISTING RESIDENTIAL STREET LIGHT
- PROPOSED RESIDENTIAL STREET LIGHT
- PROPOSED 9" STREET NAME SIGN (TWO SIGNS) AND 30" STOP SIGN
- W14-1P DEAD END SIGN
- PROPOSED N.D.B.C.U. MAIL BOX



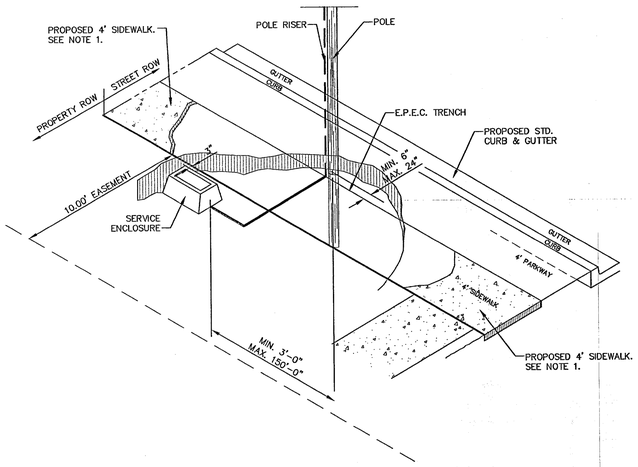
STREET LIGHT DETAIL
SCALE: 1" = 3'-0"

ITEM	QTY.	DESCRIPTION
1	1	POLE, PENTA TREATED PINE 40' CLASS III
2	27	1/2" RIGID GALVANIZED STEEL CONDUIT
3	4	TWO HOLE STEEL PIPE STRAP FOR 1/2" CONDUIT
4	8	1/4" x 1" LAG BOLT
5	1	PHOTO CELL RECEPTACLE WITH 1/2" THREADED BASE AND MOUNTING BRACKET
6	1	PHOTO CELL 240V.
7	4	1/2" x 4" LAG BOLT
8	1	WASHER, SQ. GALV. 2-1/4" x 2-1/4"
9	1	MACHINE BOLT 5/8" x 8"
10	1	LOCKNUT 5/8"
11	1	LUMINARE 100W H.P.S.
12	1	WASHER, COIL SPRING 5/8"
13	1	STEEL LUMINAIRE SUPPORT (10' OR 8') UNION METAL MANUF. CO. DESIGN 348 OR EQUIVALENT
14		2 - #12 COPPER WIRES WITH THW INSULATION
15	1	GROUND CLAMP FOR 1/2" RIGID CONDUIT
16	1	1/2" SCHEDULE 40 PVC COUPLING
17	1	1/2" SCHEDULE 40 PVC 18" RADIAL BEND
18	1	1/2" SCHEDULE 40 PVC FEMALE ADAPTER
*19	1	1/2" x 8" PVC COATED RIGID STEEL CONDUIT NIPPLE
*20	1	1/2" PVC COATED RIGID STEEL COUPLING
21		COPPER WIRE, #6 BARE SOLID HARD DRAWN
22		ALUMINUM WIRE, #4 BARE SOLID HARD DRAWN
23	1/2#	STAPLE, GALV. 1-1/2" NO. 9
24	1	SPLICE, #4 SOLID ALUM. TO #6 SOLID CU.
25	1	PHOTOCELL, 240V

* MUST MEET OCCIDENTAL COATING CO. SPECS.

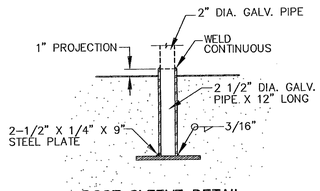


POLE RISER DETAIL
SCALE: 1" = 2'-0"



POLE LOCATION DETAIL
SCALE: 1" = 5'-0"

(BUTT GROUNDING)
DISTRIBUTION DETAIL
SCALE: 1" = 2'-0"



POST SLEEVE DETAIL
SCALE: 1" = 1'-0"

ACCEPTED:
BY: _____ DATE: 4 Feb 08
ENGINEERING TRAFFIC DIVISION
CITY OF EL PASO

ILLUMINATION PLAN
SCALE: 1" = 100'

SCALE
Horizontal: 1"=100'
Vertical: N/A
Contour Interval: N/A
DATE: JANUARY 2008
DESIGN BY: J.L.A.
DRAWN BY: J.L.A.
CHKD. BY: J.L.A.
APPV'D. BY: J.L.A.
JOB No. 2000-089-LD

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Cogdill Center @ Transmountain
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Office: 915.544.5233 Fax: 915.544.5233 www.esagroup.net

PROJECT TITLE
SANDSTONE RANCH UNIT SEVEN
SUBDIVISION IMPROVEMENTS

SHEET TITLE
ILLUMINATION PLAN

SHEET NO.
24
OF 27

SITE DESCRIPTION

PROJECT NAME AND LIMITS: SANDSTONE RANCH UNIT SEVEN
THE PROJECT IS BORDERED BY SANDSTONE RANCH UNIT FOUR, AND SIX TO THE NORTH, SANDSTONE RANCH UNIT ONE, AND TWO TO THE WEST, SANDSTONE RANCH UNIT FIVE TO THE EAST, AND THE WESTERN FREEWAY CHANNEL TO THE SOUTH

PROJECT DESCRIPTION: THE SITE FOR THE NEW SUBDIVISION WILL ENCOMPASS APPROXIMATELY 40.405± ACRES, AND WILL CONTAIN 232 RESIDENTIAL LOTS

EXISTING CONDITIONS: THE SITE IS CLEAR OF SITE IMPROVEMENTS AND IS COVERED WITH ITS NATURAL SURROUNDINGS.

MAJOR SOIL DISTURBING ACTIVITIES: MAJOR SOIL DISTURBING ACTIVITIES WILL CONSIST OF CLEARING AND GRUBBING, GRADING FOR BUILDING PAD ELEVATIONS, CONSTRUCTION OF STREETS AND EXCAVATION FOR UTILITIES.

TOTAL PROJECT AREA: 40.405± A.C.

TOTAL AREA TO BE DISTURBED: 40.405± A.C.

WEIGHTED RUNOFF COEFFICIENT (AFTER CONSTRUCTION): 0.670

EXISTING CONDITION OF SOIL AND VEGETATIVE COVER AND % OF EXISTING VEGETATIVE COVER: THE PROJECT SITE IS LOCATED IN THE VICINITY OF THE TURNEY-BERINO ASSOCIATION: NEARLY LEVEL AND GENTLY SLOPING SOILS THAT HAVE A CLAY LOAM SUBSOIL AND ARE MODERRATELY DEEP OVER; IN THE HUECO BOLSON.

NAME OF RECEIVING WATERS: STORM RUNOFF FROM THE NEW SUBDIVISION WILL BE CONVEYED BY STREET SHEET FLOW TO ULTIMATELY BE DISCHARGED TO THE WESTERN FREEWAY CHANNEL.

EROSION AND SEDIMENT CONTROL

SOIL STABILIZATION PRACTICES

- ____ TEMPORARY SEEDING
- X PERMANENT PLANTING, SODDING, OR SEEDING
- ____ MULCHING
- ____ SOIL RETENTION BLANKET
- ____ BUFFER ZONES
- ____ PRESERVATION OF NATURAL RESOURCES

OTHER:

STRUCTURAL PRACTICES:

- X SILT FENCES
- ____ HAY BALES
- ____ ROCK BERMS
- ____ DIVERSION, INTERCEPTOR, OR PERIMETER DIKES
- ____ DIVERSION, INTERCEPTOR, OR PERIMETER SWALES
- ____ DIVERSION DIKE AND SWALE COMBINATION
- ____ PIPE SLOPE DRAINS
- ____ CONCRETE FLUMES
- X ROCK BEDDING AT CONSTRUCTION EXIT
- ____ TIMBER MATTING AT CONSTRUCTION EXIT
- ____ CHANNEL LINERS
- ____ SEDIMENT TRAPS
- ____ SEDIMENT BASINS
- ____ STORM INLET SEDIMENT TRAP
- ____ STONE OUTLET STRUCTURES
- X CURBS AND GUTTERS
- ____ STORM DRAINS
- X VELOCITY CONTROL DEVICES
- ____ VEGETATED SWALES & NATURAL DEPRESSIONS

OTHER:

NARRATIVE – SEQUENCE OF CONSTRUCTION (STORM WATER MANAGEMENT) ACTIVITIES:

1. INSTALL TEMPORARY EROSION AND SEDIMENT CONTROLS (e.g. SILT FENCE AND/OR EARTHERN BERM, AND STABILIZED CONSTRUCTION ENTRANCE) ;
2. PERFORM CLEARING AND GRUBBING;
3. EXCAVATION FOR UTILITIES;
4. COMPLETE STREET AND LOT GRADING;
5. CONSTRUCTION OF SUBDIVISION IMPROVEMENTS; AND,
6. WHEN ALL CONSTRUCTION ACTIVITY RELATED IN DEVELOPMENT OF THE SITE IS COMPLETE, REMOVE TEMPORARY CONTROLS IN 1. ABOVE.

SWPPP GENERAL NOTES:

1. PLACEMENT OF SILT FENCE SHALL BE ADJUSTED AS NECESSARY TO PREVENT THE BLOCKING OF DRIVEWAYS OR DRIVING LANES.
2. THE SWPPP MANUAL IDENTIFIES THE DUTIES AND RESPONSIBILITIES OF THE GENERAL CONTRACTOR IN COMPLIANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS. THIS ITEM SHALL BE SUBSIDIARY TO THE SWPP BEST MANAGEMENT PRACTICES (COMPLETE IN PLACE) ITEMS. THE SWPPP PROJECT MANUAL IS AVAILABLE FOR REVIEWING AT THE CITY OF EL PASO – ENGINEERING DEPARTMENT. UPON SELECTION, THE CONTRACTOR WILL BE PROVIDED AN SWPPP MANUAL. THE CONTRACTOR SHALL MAINTAIN THIS MANUAL AT THE CONSTRUCTION SITE AT ALL TIMES THROUGHOUT THE CONSTRUCTION PERIOD.
3. THE CONTRACTOR SHALL COMPLETE AND SUBMIT ALL REGULATORY FORMS AND APPLICATIONS, AS PROVIDED IN THE SWPPP MANUAL, INCLUDING, BUT NOT LIMITED TO; NOI, NOT, SDPCP, AND ANY OTHER FORM REQUIRED BY THE CITY OF EL PASO AND TCEQ.
4. ALLOWABLE STORM WATER AND NON-STORMWATER DISCHARGE SHALL COMPLY WITH 15.20.080 (GENERAL PROHIBITION) AND 15.20.090 (SPECIFIC PROHIBITIONS AND REQUIREMENTS) OF THE CITY OF EL PASO STORM DRAIN POLLUTION CONTROL PLAN ORDINANCE. NON-STORMWATER DISCHARGES MAY CONSIST OF, BUT ARE NOT LIMITED TO, THE DISCHARGE RESULTING FROM FIREFIGHTING, LAWN WATERING, LANDSCAPE IRRIGATION, NATURAL SPRING, AND/OR AGRICULTURAL STORM WATER RUNOFF.
5. REFER TO DRAINAGE PLAN SHEET 5, FOR ADDITIONAL INFORMATION ON WATERSHED AREAS AND RUNOFF QUANTITIES (Q).
6. THE FOLLOWING HAVE BEEN IDENTIFIED AS POTENTIAL CONTAMINATION SOURCES: CLEARED AND GRADED AREAS; CONSTRUCTION SITE ENTRANCE AND ASPHALT PARKING AREA CONSTRUCTION; ASPHALT LOADING/UNLOADING AREAS; CONCRETE LOADING/UNLOADING AREAS; AND, ALL UNDISTURBED AREAS.
7. THE FOLLOWING IS A LIST OF POTENTIAL CONSTRUCTION SITE STORM WATER POLLUTANTS: ASPHALT; CONCRETE; GLUE/ADHESIVE; PAINTS; CURING COMPOUNDS; WASTEWATER FROM CONSTRUCTION EQUIPMENT WASHING; HYDRAULIC OIL/FLUIDS; GASOLINE; DIESEL FUEL; KEROSENE; ANTIFREEZE/COOLANT; AND EROSION.

BEST MANAGEMENT PRACTICES CONTROLS

I. WASTE MATERIALS:

ALL WASTE MATERIALS, INCLUDING CONSTRUCTION DEBRIS, SHALL BE COLLECTED AND STORED IN A SECURELY LIDDED METAL DUMPSTER. NO CONSTRUCTION WASTE MATERIAL SHALL BE BURIED ON SITE. THE TRANSIT DUMPSTER SHALL COMPLY WITH ORDINANCE 18.52.010 (ENCLOSURE AND REMOVAL OF WASTE MATERIALS DURING CONSTRUCTION). THE DUMPSTER SHALL BE EMPTIED AS NECESSARY OR AS REQUIRED BY ORDINANCE 9.04 (SOLID WASTE MANAGEMENT) AND THE TRASH SHALL BE HAULED TO A LICENSED LANDFILL.

II. HAZARDOUS WASTE:

AT A MINIMUM, ANY PRODUCTS IN THE FOLLOWING CATEGORIES SHALL BE CONSIDERED HAZARDOUS: PAINT, ACIDS FOR CLEANING MASONRY SURFACES, CLEANING SOLVENTS, ASPHALT PRODUCTS, CHEMICAL ADDITIVES FOR SPILL STABILIZATION, CURING COMPOUNDS AND ADDITIVES. IN THE EVENT OF A SPILL WHICH MAY BE HAZARDOUS, THE CONTRACTOR SHALL TAKE IMMEDIATE ACTION AND CONTACT THE FIRE DEPT. AND TNRCC.

III. SANITARY WASTE:

ALL SANITARY WASTE SHALL BE COLLECTED FROM THE CONSTRUCTION PORTABLE UNITS AS NECESSARY OR AS REQUIRED, CHAPTER 18.08 (BUILDING CODE), BY A LICENSED SANITARY WASTE MANAGEMENT CONTRACTOR. ALL WASTE MATERIAL SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

IV. SPILL PREVENTION:

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

V. GOOD HOUSEKEEPING:

A. STORE ONLY ENOUGH PRODUCTS REQUIRED TO DO THE JOB
B. NEATLY STORE MATERIALS ON-SITE IN AN ORDERLY MANNER
C. KEEP PRODUCTS IN THEIR ORIGINAL CONTAINER
D. DO NOT MIX SUBSTANCES WITH ONE ANOTHER, UNLESS OTHERWISE RECOMMENDED BY THE MANUFACTURER
E. USE ENTIRE CONTENTS OF A PRODUCT BEFORE DISPOSING THE CONTAINER
F. FOLLOW MANUFACTURER'S RECOMMENDATIONS FOR PROPER USE AND DISPOSAL

VI. HAZARDOUS PRODUCTS:

PRACTICES USED TO REDUCE RISKS:

A. KEEP PRODUCTS IN THEIR ORIGINAL CONTAINER IF AT ALL POSSIBLE
B. RETAIN ORIGINAL LABELS, PRODUCT INFORMATION AND MATERIAL SAFETY DATA SHEETS (MSDS)
C. DISPOSE SURPLUS PRODUCT IN ACCORDANCE WITH MANUFACTURER'S OR LOCAL & STATE RECOMMENDED METHODS

VII. PETROLEUM PRODUCTS:

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

VIII. SPILL CONTROL PRACTICES:

A. MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEANUP SHALL BE CLEARLY POSTED AND SITE PERSONNEL SHALL BE MADE AWARE OF THE PROCEDURES:
B. MATERIALS AND EQUIPMENT NECESSARY FOR 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

IX. MAINTENANCE AND INSPECTION PROCEDURES:

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. 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.

X. REMARKS:

DISPOSAL AREAS, STOCKPILES, AND HAUL ROADS SHALL BE CONSTRUCTED IN A MANNER THAT WILL MINIMIZE AND CONTROL THE AMOUNT OF SEDIMENT THAT MAY ENTER RECEIVING WATERS. DISPOSAL AREAS SHALL NOT BE LOCATED IN ANY WETLAND, WATERBODY OR STREAMBED. CONSTRUCTION STAGING AREAS AND VEHICLE MAINTENANCE AREAS SHALL BE CONSTRUCTED BY THE CONTRACTOR IN A MANNER TO MINIMIZE THE RUNOFF OF POLLUTANTS. ALL WATERWAYS SHALL BE CLEANED AS SOON AS PRACTICABLE OF TEMPORARY EMBANKMENT, TEMPORARY BRIDGES, MATTING, FALSEWORK, PILING DEBRIS OR OTHER OBSTRUCTIONS PLACED DURING CONSTRUCTION OPERATIONS THAT ARE NOT A PART OF THE FINISHED WORK.

XI. OFFSITE VEHICLE TRACKING:

IN ADDITION TO THE STABILIZED CONSTRUCTION ENTRANCES, THE FOLLOWING MEASURES SHALL BE OBSERVED DURING CONSTRUCTION:

- 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:

XII. REFER TO SWPPP REPORT FOR ADDITIONAL INFORMATION

SDPCP #: ___-____
SDPCP DATE: ___-___-__

REFERENCES – BENCHMARKS

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

DATE	REVISIONS	BY

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Office: 915.544.5222 Fax: 915.544.5233 www.ceagroup.net

ENGINEER'S SEAL

JORGE L. AZCARATE
85075
LICENSED PROFESSIONAL ENGINEER
STATE OF TEXAS

SCALE
Horizontal: N/A
Vertical: N/A
Contour Interval: N/A
DATE: JANUARY 2008
DESIGN BY: J.L.A.
DRAWN BY: A.B.
CHKD. BY: J.L.A.
APPVD. BY: J.L.A.
JOB No. 2000-059-D

PROJECT TITLE

SANDSTONE RANCH UNIT SEVEN
SUBDIVISION IMPROVEMENTS

SHEET TITLE

STORM WATER POLLUTION PREVENTION PLAN: GENERAL NOTES

SHEET NO.

25

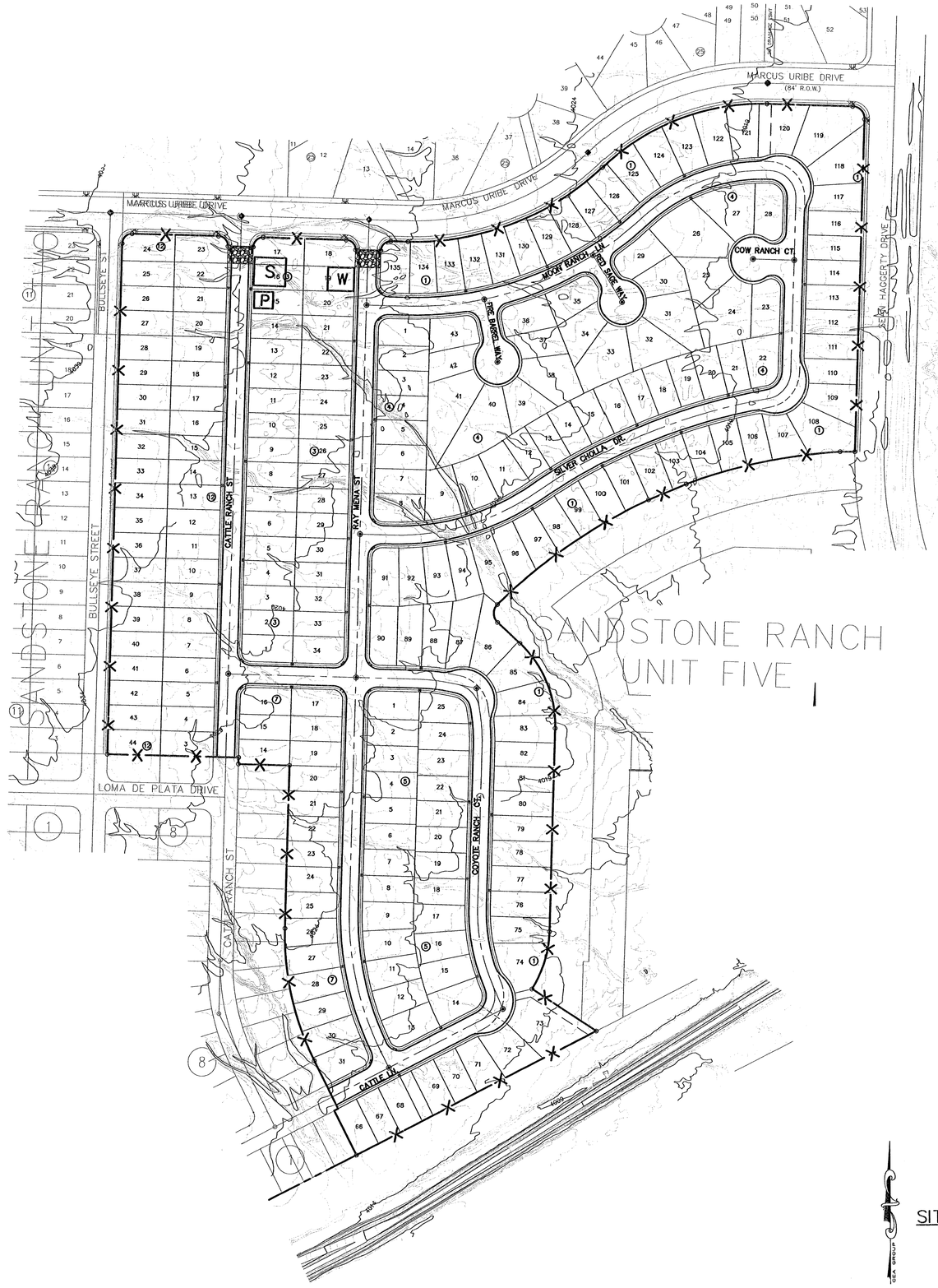
OF 27

103088

UTILITY LOCATOR SERVICES	
EL PASO ELECTRIC COMPANY	(915) 543-5720
EL PASO ENERGY CORPORATION	(915) 496-5244
EL PASO WATER UTILITIES	(915) 594-5500
MCI SURVEILLANCE	(800) MCI-WORK
TIME WARNER COMMUNICATIONS	(915) 772-1123
TEXAS GAS SERVICE	(915) 680-7200
SBC	(800) 545-6005
AT&T	(800) 852-3788
U.S. SPRINT TELECOMM	(800) 521-0579
STREET DEPT. – SIGNAL & SIGN	(915) 621-6750
(AFTER HOURS)	(915) 240-3220

WARNING ! BEFORE YOU DIG

CALL
1-800-DIG-TESS
1-800-344-8377
FOR FIELD LOCATING EXISTING UTILITIES



LEGEND

—X—X—	SILT FENCE OR EARTHERN BERM
	STABILIZED CONSTRUCTION ENTRANCE
S	STAGING AREA
P	PORTABLE TOILETS
W	WASHOUT SITE

SITE PLAN

SCALE: 1" = 120'

SDPCP #: ___-____
SDPCP DATE: ___-___-___

REFERENCES – BENCHMARKS

FOUND TXDOT BRASS CAP SECTION CORNERS 19, 20, 22 & 21 ELEVATION = 4172.21 (NAVD DATUM) (SUBTRACT 8.492 TO CONVERT TO CITY DATUM)

DATE	REVISIONS	BY

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Office 915.544.0222 Fax 915.544.0233 www.ceagroup.net

ENGINEER'S SEAL
JORGE L. AZCARATE
85075
Licensed
Professional Engineer
8/4/08

SCALE
Horizontal: N/A
Vertical: N/A
Contour Interval: N/A

DATE: JANUARY 2008
DESIGN BY: J.L.A.
DRAWN BY: J.L.A.
CHKD. BY: J.L.A.
APPVD. BY: J.L.A.
JOB No. 2000-089-LD

PROJECT TITLE

SANDSTONE RANCH UNIT SEVEN SUBDIVISION IMPROVEMENTS

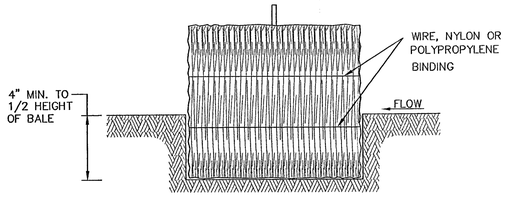
SHEET TITLE

STORM WATER POLLUTION PREVENTION PLAN: SITE PLAN

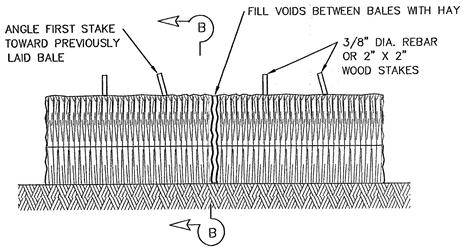
SHEET NO.

26

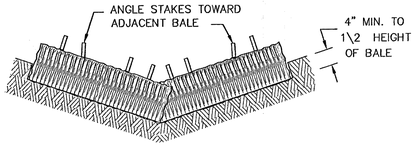
OF 27



SECTION B–B



BALED HAY FOR EROSION CONTROL



PROFILE VIEW

BALED HAY USAGE GUIDELINES

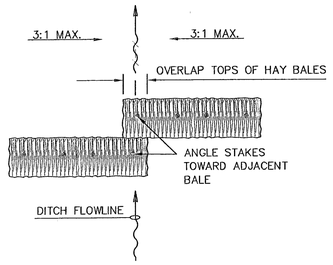
A BALED HAY INSTALLATION MAY BE CONSTRUCTED NEAR THE DOWNSTREAM PERIMETER OF A DISTURBED AREA ALONG A CONTOUR TO INTERCEPT SEDIMENT FROM OVERLAND RUNOFF. A TWO YEAR STORM FREQUENCY MAY BE USED TO CALCULATE THE FLOW RATE TO BE FILTERED. THE INSTALLATION SHOULD BE SIZED TO FILTER A MAXIMUM FLOW THRU RATE OF 5 GPM/FT^2 OF CROSS SECTIONAL AREA. BALED HAY MAY BE USED AT THE FOLLOWING LOCATIONS:

1. WHERE THE RUNOFF APPROACHING THE BALED HAY FLOWS OVER DISTURBED SOIL FOR LESS THAN 100'. IF THE SLOPE OF THE DISTURBED SOIL EXCEEDS 10%, THE LENGTH OF SLOPE UPSTREAM THE BALED HAY SHOULD BE LESS THAN 50'.
2. WHERE THE INSTALLATION WILL BE REQUIRED FOR LESS THAN 3 MONTHS.
3. WHERE THE CONTRIBUTING DRAINAGE AREA IS LESS THAN 1/2 ACRE.

FOR BALED HAY INSTALLATIONS IN SMALL DITCHES, THE ADDITIONAL FOLLOWING CONSIDERATIONS APPLY:

1. THE DITCH SIDESLOPES SHOULD BE GRADED AS FLAT AS POSSIBLE TO MAXIMIZE THE DRAINAGE FLOWRATE THRU THE HAY.
2. THE DITCH SHOULD BE GRADED LARGE ENOUGH TO CONTAIN THE OVERTOPPING DRAINAGE WHEN SEDIMENT HAS FILLED TO THE TOP OF THE BALED HAY.

BALES SHOULD BE REPLACED USUALLY EVERY 2 MONTHS OR MORE OFTEN DURING WET WEATHER WHEN LOSS OF STRUCTURAL INTEGRITY IS ACCELERATED.

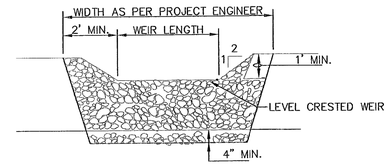


PLAN VIEW

GENERAL NOTES

1. HAY BALES SHALL BE A MINIMUM OF 30" IN LENGTH AND WEIGH A MINIMUM OF 50 LBS.
2. HAY BALES SHALL BE BOUND BY EITHER WIRE OR NYLON OR POLYPROPYLENE STRING. THE BALES SHALL BE COMPOSED ENTIRELY OF VEGETABLE MATTER.
3. HAY BALES SHALL BE EMBEDDED IN THE SOIL A MINIMUM OF 4" AND WHERE POSSIBLE 1/2 THE HIEGHT OF THE BALE.
4. HAY BALES SHALL BE PLACED IN A ROW WITH ENDS TIGHTLY ABUTTING THE ADJACENT BALES. THE BALES SHALL BE PLACED WITH BINDINGS PARALLEL TO THE GROUND.
5. HAY BALES SHALL BE SECURELY ANCHORED IN PLACE WITH 3/8" DIA. REBAR OR 2" X 2" WOOD STAKES, DRIVEN THROUGH THE BALES. THE FIRST STAKE SHALL BE ANGLED TOWARDS THE PREVIOUSLY LAID BALE TO FORCE THE BALES TOGETHER.
6. THE GUIDELINES SHOWN HEREON ARE SUGGESTIONS ONLY AND MAY BE MODIFIED BY THE ENGINEER.

BALED HAY FOR EROSION CONTROL



PROFILE

ROCK FILTER DAM USAGE GUIDELINES

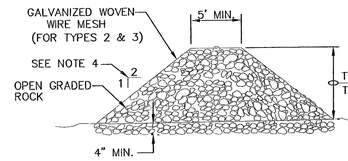
ROCK FILTER DAMS SHOULD BE CONSTRUCTED DOWNSTREAM FROM DISTURBED AREAS TO INTERCEPT SEDIMENT FROM OVERLAND RUNOFF AND/OR CONCENTRATED FLOW. THE DAMS SHOULD BE SIZED TO FILTER A MAXIMUM FLOW THROUGH RATE OF 60 GPM/FT^2 OF CROSS SECTIONAL AREA. A 2 YEAR STORM FREQUENCY MAY BE USED TO CALCULATE THE FLOW RATE.

TYPE 1 (18" HIGH WITH NO WIRE MESH): TYPE 1 MAY BE USED AT THE TOE OF SLOPES, AROUND INLETS, IN SMALL DITCHES, AND AT DIKE OR SWALE OUTLETS. THIS TYPE OF DAM IS RECOMMENDED TO CONTROL EROSION FROM A DRAINAGE AREA OF 5 ACRES OR LESS. TYPE 1 MAY NOT BE USED IN CONCENTRATED HIGH VELOCITY FLOWS (APPROX. 8 FT/SEC OR MORE) IN WHICH AGGREGATE WASH OUT MAY OCCUR. SANDBAGS MAY BE USED AT THE EMBEDDED FOUNDATION (4" DEEP MIN.) FOR BETTER FILTERING EFFICIENCY OF LOW FLOWS IF CALLED FOR ON THE PLANS OR DIRECTED BY THE ENGINEER.

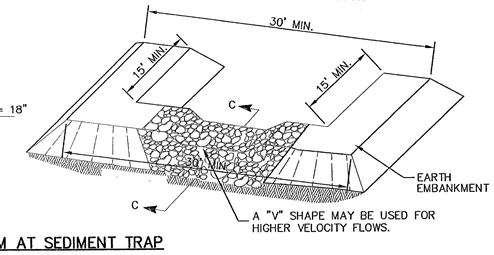
TYPE 2 (18" HIGH WITH WIRE MESH): TYPE 2 MAY BE USED IN DITCHES AND AT DIKE OR SWALE OUTLETS.

TYPE 3 (36" HIGH WITH WIRE MESH): TYPE 3 MAY BE USED IN STREAM FLOW AND SHOULD BE SECURED TO THE STREAM BED.

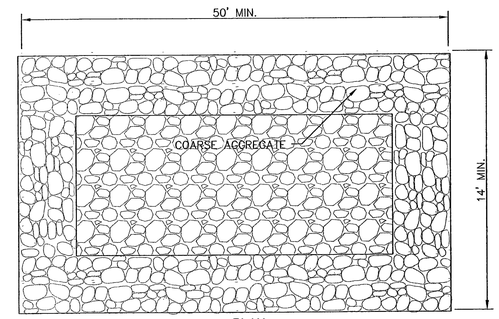
TYPE 4 (SACK GABIONS): TYPE 4 MAY BE USED IN DITCHES AND SMALLER CHANNELS TO FORM AN EROSION CONTROL DAM.



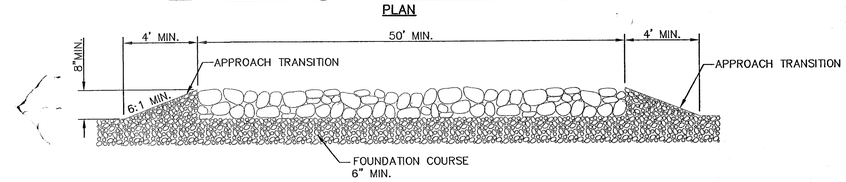
SECTION C–C



FILTER DAM AT SEDIMENT TRAP



PLAN

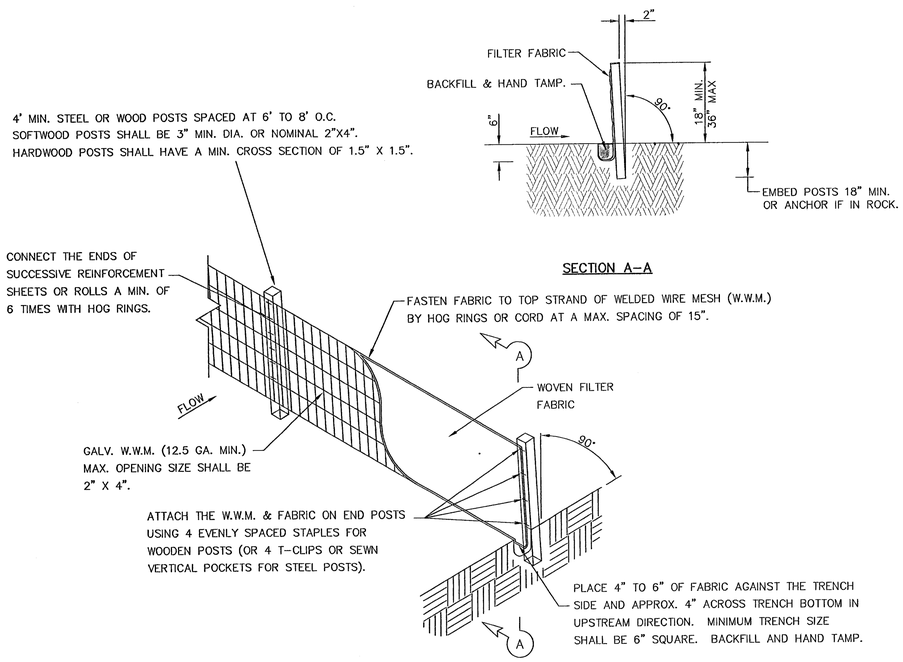


PROFILE

GENERAL NOTES

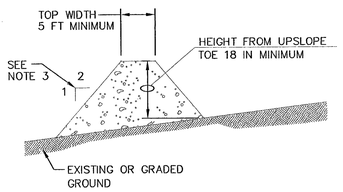
1. THE LENGTH OF THE TYPE 1 CONSTRUCTION EXIT SHALL BE AS INDICATED ON THE PLANS, BUT NOT LESS THAN 50'.
2. THE COARSE AGGREGATE SHOULD BE OPEN GRADED WITH A SIZE OF 4" TO 8".
3. THE APPROACH TRANSITIONS SHOULD BE NO STEEPER THAN 6:1 AND CONSTRUCTED AS DIRECTED BY THE ENGINEER.
4. THE CONSTRUCTION EXIT FOUNDATION COURSE SHALL BE FLEXIBLE BASE, BITUMINOUS CONCRETE, PORTLAND CEMENT CONCRETE OR OTHER MATERIAL AS APPROVED BY THE ENGINEER.
5. THE CONSTRUCTION EXIT SHALL BE GRADED TO ALLOW DRAINAGE TO A SEDIMENT TRAPPING DEVICE.
6. THE GUIDELINES SHOWN HEREON ARE SUGGESTIONS ONLY AND MAY BE MODIFIED BY THE ENGINEER.

CONSTRUCTION EXIT (TYPE 1)



SECTION A–A

TEMPORARY SEDIMENT CONTROL FENCE



GENERAL NOTES:

1. SOIL USED IN BERM CONSTRUCTION SHALL BE MACHINE COMPACTED.
2. TOP WIDTH AND HEIGHT OF BERM MAY BE MODIFIED WITH PRIOR APPROVAL OF THE ENGINEER.
3. SIDE SLOPES WITHIN THE SAFETY CLEAR ZONE OF A ROADWAY SHALL BE 6:1 OR FLATTER.
4. GRADING SHALL BE SHOWN ELSEWHERE IN THE PLANS OR AS DIRECTED BY THE ENGINEER.
5. THE ENGINEER RESERVES THE RIGHT TO MODIFY THE DIMENSIONS SHOWN FOR THE BERM DEPENDENT ON RUNOFF VOLUME CHARACTERISTICS.
6. BERM THAT ARE IN PLACE FOR MORE THAN 14 CALENDAR DAYS SHOULD BE STABILIZED TO PREVENT SEDIMENT RUNOFF.
7. THE GUIDELINES SHOWN HEREON ARE SUGGESTIONS ONLY AND MAY BE MODIFIED BY THE ENGINEER.

TYPICAL BERM CONFIGURATION

REFERENCES – BENCHMARKS

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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ENGINEER'S SEAL

JORGE L. AZCARATE
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SCALE
Horizontal: N/A
Vertical: N/A
Contour Interval: N/A

DATE: JANUARY 2008
DESIGN BY: J.L.A.
DRAWN BY: J.L.A.
CHKD. BY: J.L.A.
APPVD. BY: J.L.A.
JOB No. 2000-089-LD

PROJECT TITLE

SANDSTONE RANCH UNIT SEVEN
SUBDIVISION IMPROVEMENTS

SHEET TITLE

STORM WATER POLLUTION PREVENTION PLAN: DETAILS

SHEET NO.

27

OF 27

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