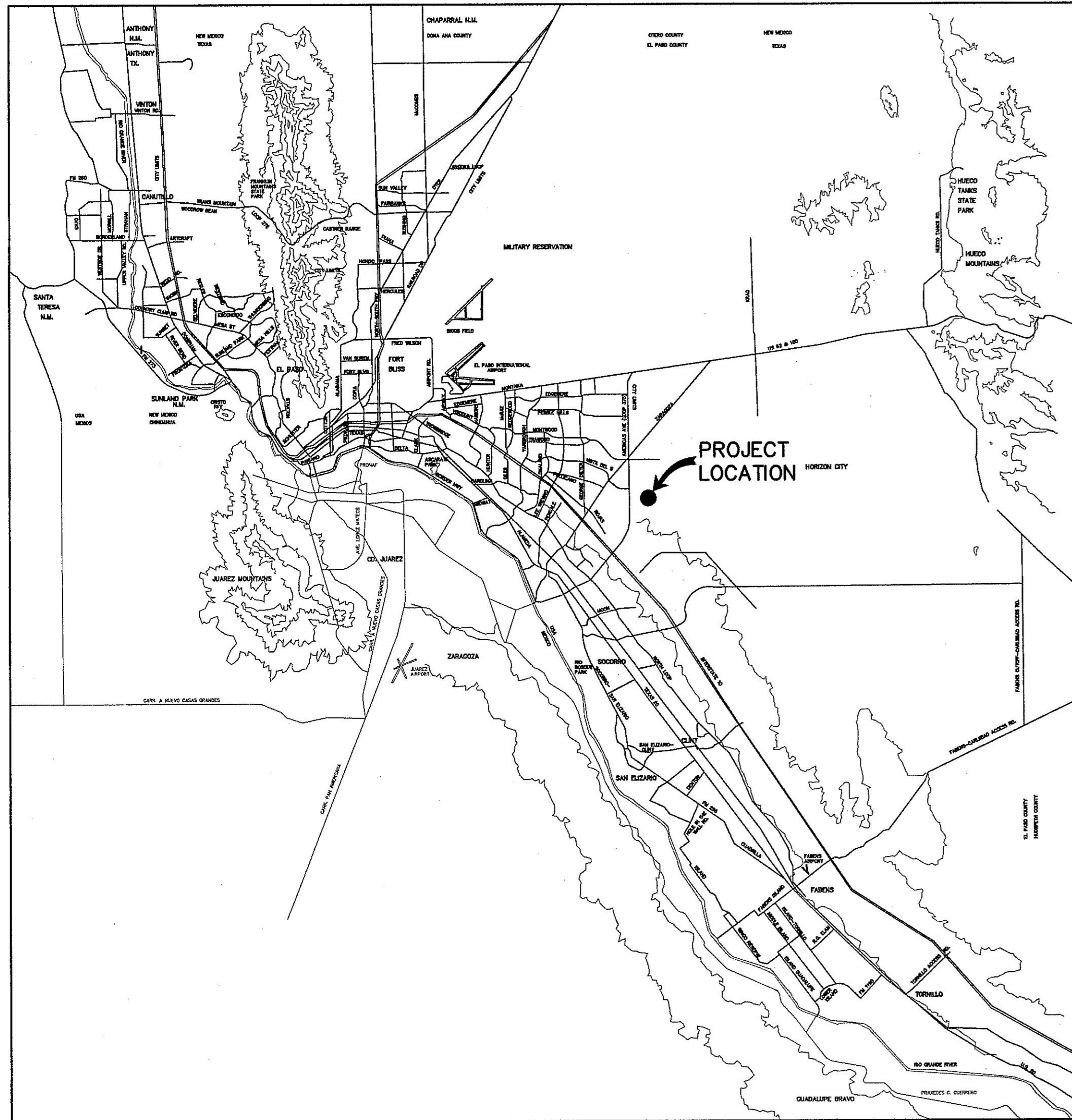




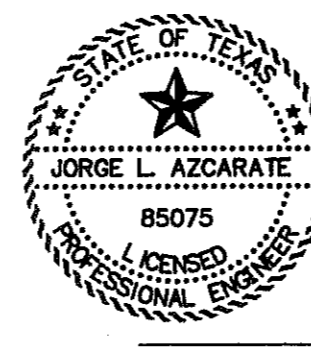
# MESQUITE TRAILS UNIT EIGHT SUBDIVISION IMPROVEMENTS

BEING A PORTION OF SECTION No. 16, BLOCK 79, TOWNSHIP 3,  
TEXAS AND PACIFIC RAILWAY COMPANY SURVEYS  
EL PASO, EL PASO COUNTY, TEXAS  
CONTAINING 16.94± ACRES

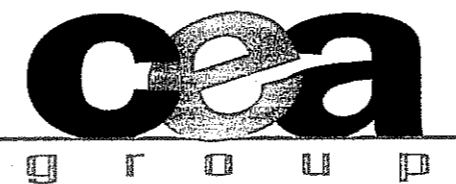


VICINITY MAP  
APPROXIMATE SCALE:  
1" = 2 MILES

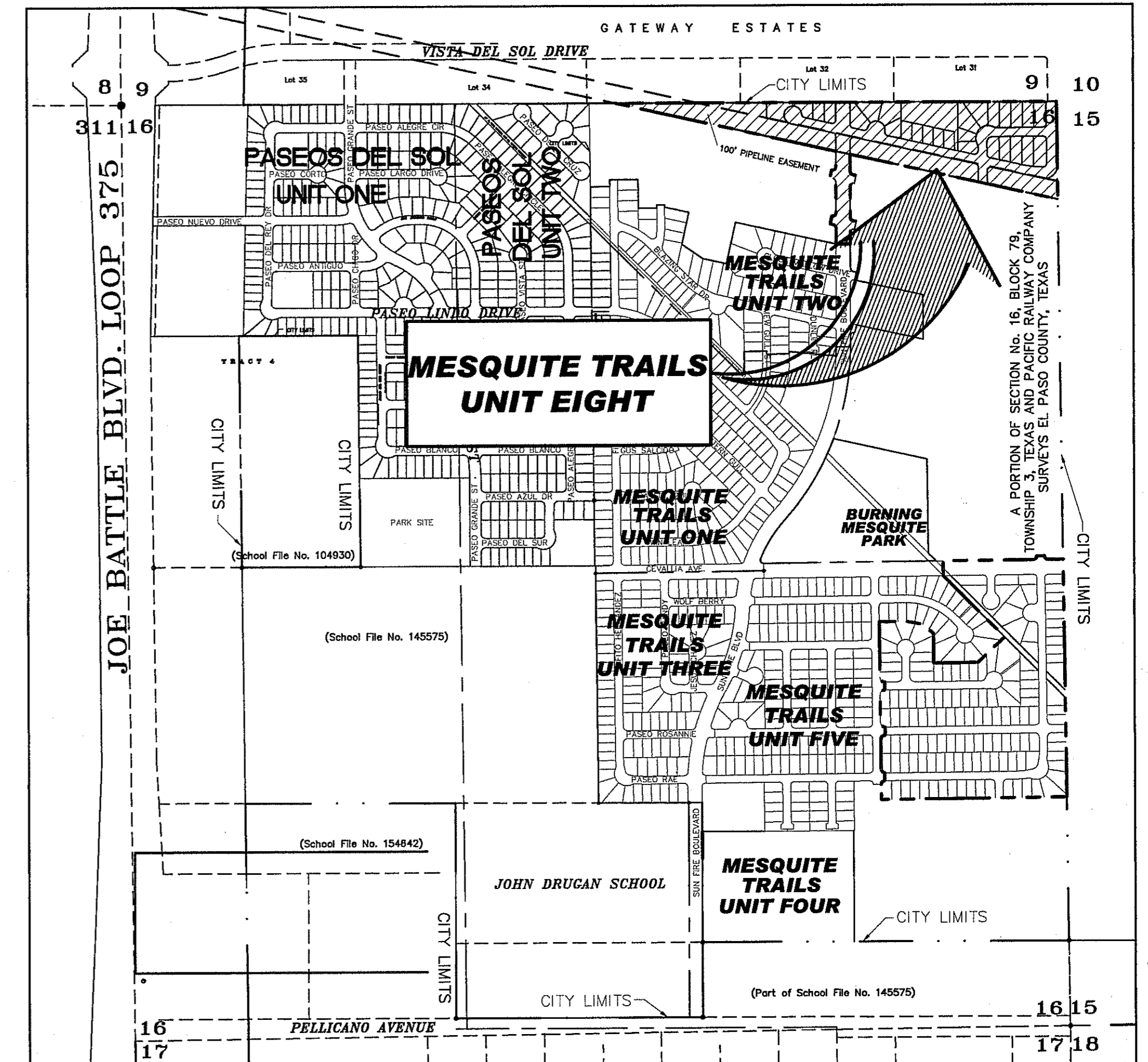
SHEET NUMBER	SHEET TITLE
CVR	COVER SHEET
C1.1	GENERAL INFORMATION
C2.1	PLAT
C3.1	GRADING PLAN
C4.1	DRAINAGE PLAN
C5.1 & C5.2	GRADING SECTIONS
C6. 1 - 5	STREET PLAN & PROFILES
C7.1	STORM DRAIN PLAN & PROFILES
C8.1	POND DESIGN PLAN
C9. 1 - 3	STANDARD DETAILS
C10. 1 - 3	DRAINAGE DETAILS
C11.1	ILLUMINATION PLAN
C12.1	WATER LINE INDEX
C13. 1 - 4	WATER DETAILS
C14.1	SANITARY SEWER INDEX
C15. 1 - 3	SANITARY SEWER PLAN & PROFILES
C16. 1 - 3	SANITARY SEWER DETAILS
C17. 1 - 3	STORM WATER POLLUTION PREVENTION PLANS
L1.0	LANDSCAPE PLAN
L2.0	IRRIGATION PLAN



JORGE L. AZCARATE, P.E. PROJECT MANAGER



engineers • architects • planners  
TEXAS REGISTERED ENGINEERING FIRM F-4564  
4712 Woodrow Bean, Ste. F El Paso, TX 79924  
Office: 915.544.5232 Fax: 915.544.5233 www.ceagroup.net



LOCATION MAP  
APPROXIMATE SCALE: 1" = 600'



CITY DEVELOPMENT  
DEPARTMENT

Reviewed For Conformance for Condition Related To:

- Easements
- Conditions of Drainage
- Wetlands/Ramps
- On Site Parking Layout
- Driveways
- Retaining Rock Walls
- On Site Flooding of Storm Waters

Contractor Must Call 24 Hours Prior To Construction for Inspections  
*E. J. J. J.* 5/20/2013

PRINCIPAL CONTACTS:

	NAME	ADDRESS	CITY & ZIP	PHONE	FAX
OWNER:	AMERICAS LOOP 375 JOINT VENTURE	4655 COHEN AVENUE	EL PASO, 79924	(915) 821-3550	(915) 821-3556
ENGINEER:	CEA GROUP	4712 WOODROW BEAN, STE. F	EL PASO, 79924	(915) 544-5232	(915) 544-5233
SURVEYOR:	BARRAGAN & ASSOCIATES	10950 PELLICANO DR. BLDG. F	EL PASO, 79936	(915) 591-5709	(915) 591-5706

MESQUITE TRAILS UNIT EIGHT

COVER SHEET				
DATE PREPARED	DRAWN BY:	DESIGN BY:	CHECKED BY:	APPROVED BY:
APRIL 2013	J.M.	C.S./J.M.	J.G.	J.L.A.
REVISION NUMBER	SHEET NAME OR NUMBER	DESCRIPTION OF REVISION	DATE OF REVISION	REVISION APPROVED BY:

**GENERAL NOTES**

- THE CONTRACTOR SHALL VISIT AND FAMILIARIZE HIMSELF WITH THE PROJECT SITE PRIOR TO SUBMITTING BIDS.
- 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.
- 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.
- 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.
- THE CONTRACTOR SHALL COORDINATE THE CONSTRUCTION SCHEDULE WITH THE USER, ALL UTILITIES, AND ALL OTHER AGENCIES WITH JURISDICTION OVER THE PROJECT.
- 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.
- 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.
- SEE REFERENCED BENCHMARK ON TITLE BLOCK FOR DATUM ELEVATIONS.
- VIBRATORY ROLLERS WILL NOT BE PERMITTED ON ANY PHASE OF THIS PROJECT, UNLESS APPROVED IN WRITING BY THE CITY ENGINEER.
- ALL WORK REQUIRED BY THESE PLANS SHALL BE CONDUCTED IN CONFORMANCE WITH CURRENT SAFETY CODES AND STANDARDS WITH JURISDICTION OVER THE PROJECT.
- THE LOCATION OF THE INLETS SHALL BE AT THE FIELD LOW POINT AND APPROVED BY THE ENGINEER.

**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 (2'-3' IN HEIGHT)
- ⊖ NEW RETAINING ROCKWALL (3'-9' IN HEIGHT)
- X STANDARD DETAIL/SECTION NUMBER
- X 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
- ▲ HIGH POINT
- ▼ LOW POINT
- ◁ EXISTING HIGH POINT
- ▷ EXISTING LOW POINT
- ◁ HEADWALL WITH WINGWALLS
- DA-4 DRAINAGE AREA
- 3:1 SLOPE HORIZONTAL:VERTICAL SLOPE RATIO
- ◇ WHEELCHAIR RAMP

**GRADING SPECIFICATIONS**

- 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.
- 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.
- 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, UNLESS OTHERWISE APPROVED BY ENGINEER, OR CITY ENGINEER.
- EXCAVATION: IS UNCLASSIFIED AND INCLUDES EXCAVATION TO ELEVATIONS INDICATED, REGARDLESS OF CHARACTER OF MATERIAL AND OBSTRUCTIONS ENCOUNTERED.
- 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 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 COMPACTED TO 95% OF MAXIMUM DENSITY IN ACCORDANCE WITH ASTM D-1557.
- 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 D-1557.
- 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.
- 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 DURING THE GRADING OPERATIONS TO ENSURE GRADING WORK IN ACCORDANCE WITH THIS PLAN AND SPECIFICATIONS.

**ABBREVIATIONS**

- LP LOW POINT
- HP HIGH POINT
- ELEV ELEVATION
- STA STATION
- VCS VERTICAL CURVE STATION
- VCE VERTICAL CURVE ELEVATION
- TC TOP OF CURB
- TM TOP OF MEDIAN
- TP TOP OF 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 CENTER LINE
- PL PROPERTY LINE
- FG FINISH GRADE
- FF FINISH FLOOR
- EG EXISTING GRADE
- MIN. MINIMUM
- MAX. MAXIMUM
- ROP 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
- R RADIUS
- ∇ TANGENT
- ∠ DELTA ANGLE
- 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) 498-5244
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

**WARNING!  
BEFORE YOU DIG**

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

BEING A PORTION OF SECTION No. 16, BLOCK 79, TOWNSHIP 3,  
TEXAS AND PACIFIC RAILWAY COMPANY SURVEYS  
EL PASO, EL PASO COUNTY, TEXAS  
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**INDEX OF DRAWINGS**

DRAWING NAME	SHEET NO.
COVER	-
GENERAL INFORMATION	C1.1
PLAT	C2.1
GRADING PLAN	C3.1
DRAINAGE PLAN	C4.1
GRADING SECTIONS (SHEET 1 OF 2)	C5.1
GRADING SECTIONS (SHEET 2 OF 2)	C5.2
SUN FIRE BOULEVARD PLAN & PROFILE FROM STA. 0+00.00 TO STA. 8+01.76	C6.1
GREG MARTINEZ DRIVE PLAN & PROFILE FROM STA. 0+00.00 TO STA. 8+00.00	C6.2
GREG MARTINEZ DRIVE PLAN & PROFILE FROM STA. 8+00.00 TO STA. 14+91.22	C6.3
CHERRINGTON STREET PLAN & PROFILE FROM STA. 14+91.22 TO STA. 18+78.03	C6.4
HONEY MESQUITE STREET PLAN & PROFILE FROM STA. 0+00.00 TO STA. 6+81.09	C6.5
LINE A PLAN & PROFILE FROM STA. 0+00.00 TO STA. 1+96.29	C7.1
LINE B PLAN & PROFILE FROM STA. 0+00.00 TO STA. 0+27.00	C7.1
LINE C PLAN & PROFILE FROM STA. 0+00.00 TO STA. 2+31.64	C7.1
POND DESIGN PLAN	C8.1
STANDARD DETAILS (SHEET 1 OF 3)	C9.1
STANDARD DETAILS (SHEET 2 OF 3)	C9.2
STANDARD DETAILS (SHEET 3 OF 3)	C9.3
DRAINAGE DETAILS (SHEET 1 OF 3)	C10.1
DRAINAGE DETAILS (SHEET 2 OF 3)	C10.2
DRAINAGE DETAILS (SHEET 3 OF 3)	C10.3
ILLUMINATION PLAN	C11.1
WATER INDEX	C12.1
WATER DETAILS (SHEET 1 OF 4)	C13.1
WATER DETAILS (SHEET 2 OF 4)	C13.2
WATER DETAILS (SHEET 3 OF 4)	C13.3
WATER DETAILS (SHEET 4 OF 4)	C13.4
SANITARY SEWER INDEX	C14.1
SANITARY SEWER PLAN & PROFILE: LINE A, B, & C	C15.1
SANITARY SEWER PLAN & PROFILE: LINE D	C15.2
SANITARY SEWER PLAN & PROFILE: LINE E & F	C15.3
SANITARY SEWER DETAILS (SHEET 1 OF 3)	C16.1
SANITARY SEWER DETAILS (SHEET 2 OF 3)	C16.2
SANITARY SEWER DETAILS (SHEET 3 OF 3)	C16.3
STORM WATER POLLUTION PREVENTION PLAN: GENERAL NOTES	C17.1
STORM WATER POLLUTION PREVENTION PLAN: SITE PLAN	C17.2
STORM WATER POLLUTION PREVENTION PLAN: DETAILS	C17.3
LANDSCAPE PLAN	L1.0
IRRIGATION PLAN	L2.0

DATE	REVISIONS	BY

ENGINEERS SEAL

ENGINEERS • ARCHITECTS • PLANNERS  
TEXAS REGISTERED ENGINEERING FIRM #484  
4712 Woodrow Bess, Ste. F El Paso, TX 79924  
Office: 915.544.5232 Fax: 915.544.5233 www.csga.com

SCALE	N/A
Horizontal:	N/A
Vertical:	N/A
Contour Interval:	N/A
DATE:	APRIL 2013
DESIGN BY:	J.M.
DRAWN BY:	J.L.A.
CHKD. BY:	J.L.A.
APPROV. BY:	J.L.A.
JOB No.	2000-145-LD

PROJECT TITLE

**MESQUITE TRAILS UNIT EIGHT  
SUBDIVISION IMPROVEMENTS**

SHEET TITLE

**GENERAL NOTES**

SHEET NO.

**C1.1**

CITY DEVELOPMENT DEPARTMENT

**REVIEWED**



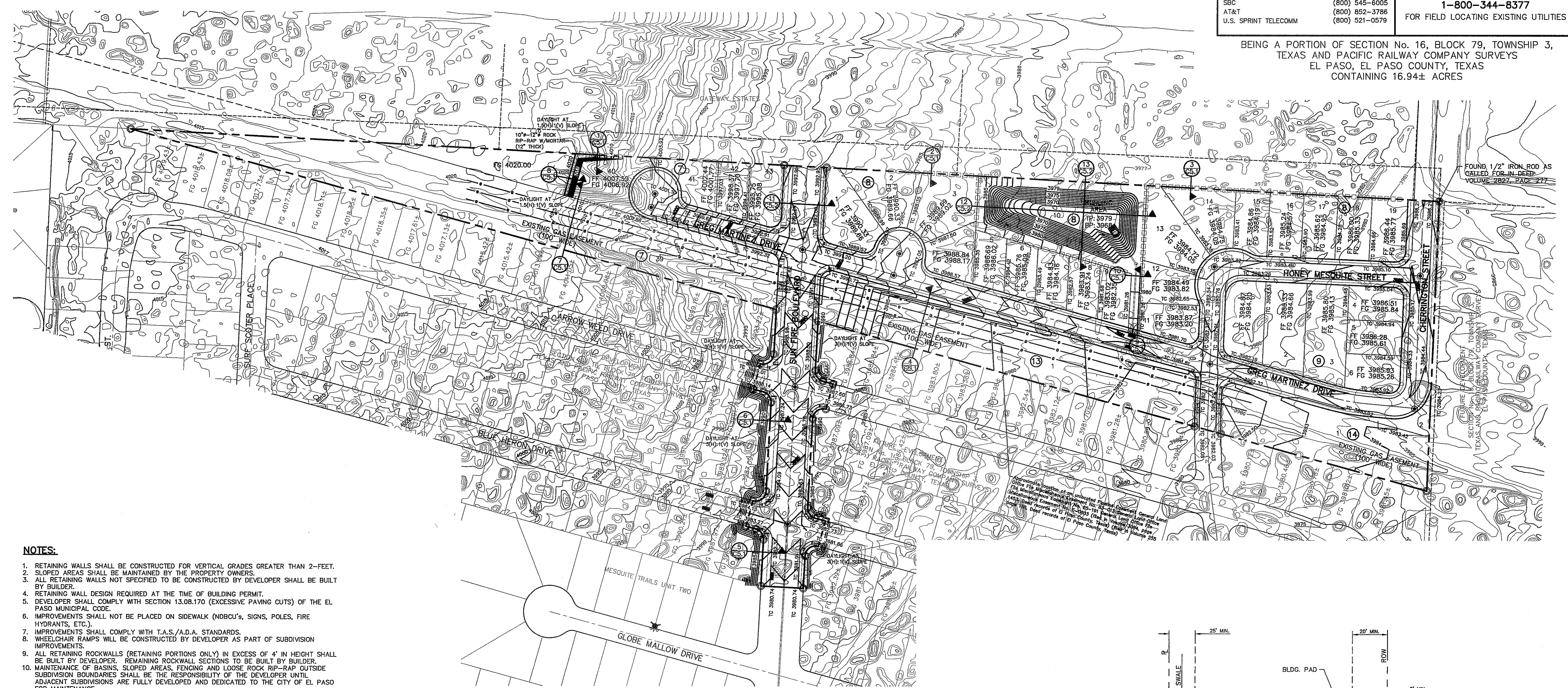
UTILITY LOCATOR SERVICES	
EL PASO ELECTRIC COMPANY	(915) 543-5720
EL PASO ENERGY CORPORATION	(915) 496-5244
EL PASO WATER UTILITIES	(915) 584-5500
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FOR FIELD LOCATING EXISTING UTILITIES

BEING A PORTION OF SECTION No. 16, BLOCK 79, TOWNSHIP 3, TEXAS AND PACIFIC RAILWAY COMPANY SURVEYS EL PASO, EL PASO COUNTY, TEXAS CONTAINING 16.94± ACRES



**NOTES:**

1. RETAINING WALLS SHALL BE CONSTRUCTED FOR VERTICAL GRADES GREATER THAN 2- FEET.
2. SLOPED AREAS SHALL BE MAINTAINED BY THE PROPERTY OWNERS.
3. ALL RETAINING WALLS NOT SPECIFIED TO BE CONSTRUCTED BY DEVELOPER SHALL BE BUILT BY BUILDER.
4. RETAINING WALL DESIGN REQUIRED AT THE TIME OF BUILDING PERMIT.
5. DEVELOPER SHALL COMPLY WITH SECTION 13.08.170 (EXCESSIVE PAVING CUTS) OF THE EL PASO MUNICIPAL CODE.
6. IMPROVEMENTS SHALL NOT BE PLACED ON SIDEWALK (NDBC's, SIGNS, POLES, FIRE HYDRANTS, ETC.).
7. IMPROVEMENTS SHALL COMPLY WITH T.A.S./A.D.A. STANDARDS.
8. WHEELCHAIR RAMPS WILL BE CONSTRUCTED BY DEVELOPER AS PART OF SUBDIVISION IMPROVEMENTS.
9. ALL RETAINING ROCKWALLS (RETAINING PORTIONS ONLY) IN EXCESS OF 4' IN HEIGHT SHALL BE BUILT BY DEVELOPER. REMAINING ROCKWALL SECTIONS TO BE BUILT BY BUILDER.
10. MAINTENANCE OF BASINS, SLOPED AREAS, FENCING AND LOOSE ROCK RIP-RAP OUTSIDE SUBDIVISION BOUNDARIES SHALL BE THE RESPONSIBILITY OF THE DEVELOPER UNTIL ADJACENT SUBDIVISIONS ARE FULLY DEVELOPED AND DEDICATED TO THE CITY OF EL PASO FOR MAINTENANCE.

**BENCHMARK**

EXISTING CITY MONUMENT  
ELEVATION=4003.10 FEET (CITY DATUM)  
LOCATED AT THE CENTERLINE INTERSECTION OF PASEO ALEGRE CIRCLE AND PASEO LINDO DRIVE.

**FLOOD ZONE:**

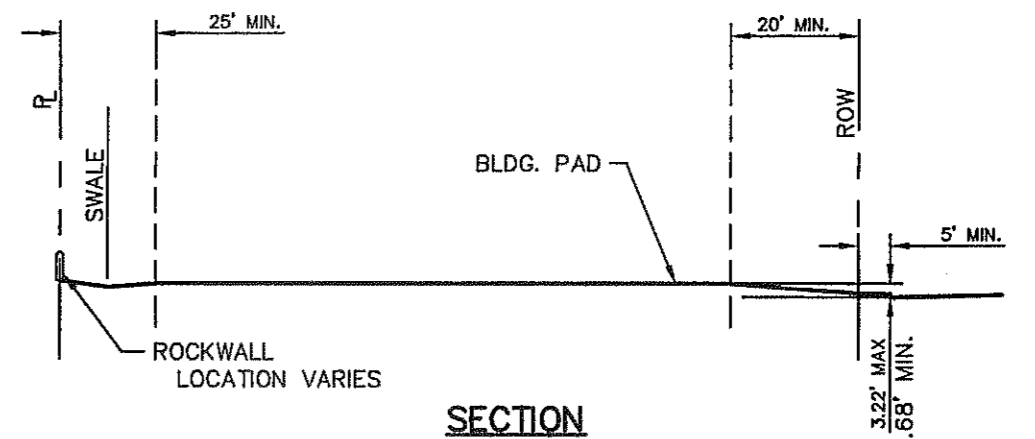
THIS SUBDIVISION LIES WITH IN ZONE "X" AS DESIGNATED IN PANEL NO. 480214 0045 C, DATED FEBRUARY 16, 2006, OF THE FLOOD INSURANCE RATE MAPS, EL PASO COUNTY, TEXAS. ZONE "X" INDICATES AREAS DETERMINED TO BE OUTSIDE 500-YEAR FLOODPLAIN.

**LEGEND:**

- NEW RETAINING ROCKWALL (2'-3' IN HEIGHT)
- NEW RETAINING ROCKWALL (3'-9' IN HEIGHT)
- EXISTING MINOR CONTOUR (CITY DATUM)
- 4075--- EXISTING MAJOR CONTOUR (CITY DATUM)
- PROPOSED MINOR CONTOUR (CITY DATUM)
- 4075--- PROPOSED MAJOR CONTOUR (CITY DATUM)
- EXISTING GAS LINES
- TC 4075.00 TOP OF CURB ELEVATION
- FG 4075.00 FINISH GROUND ELEVATION
- FF 4075.00 FINISH FLOOR ELEVATION

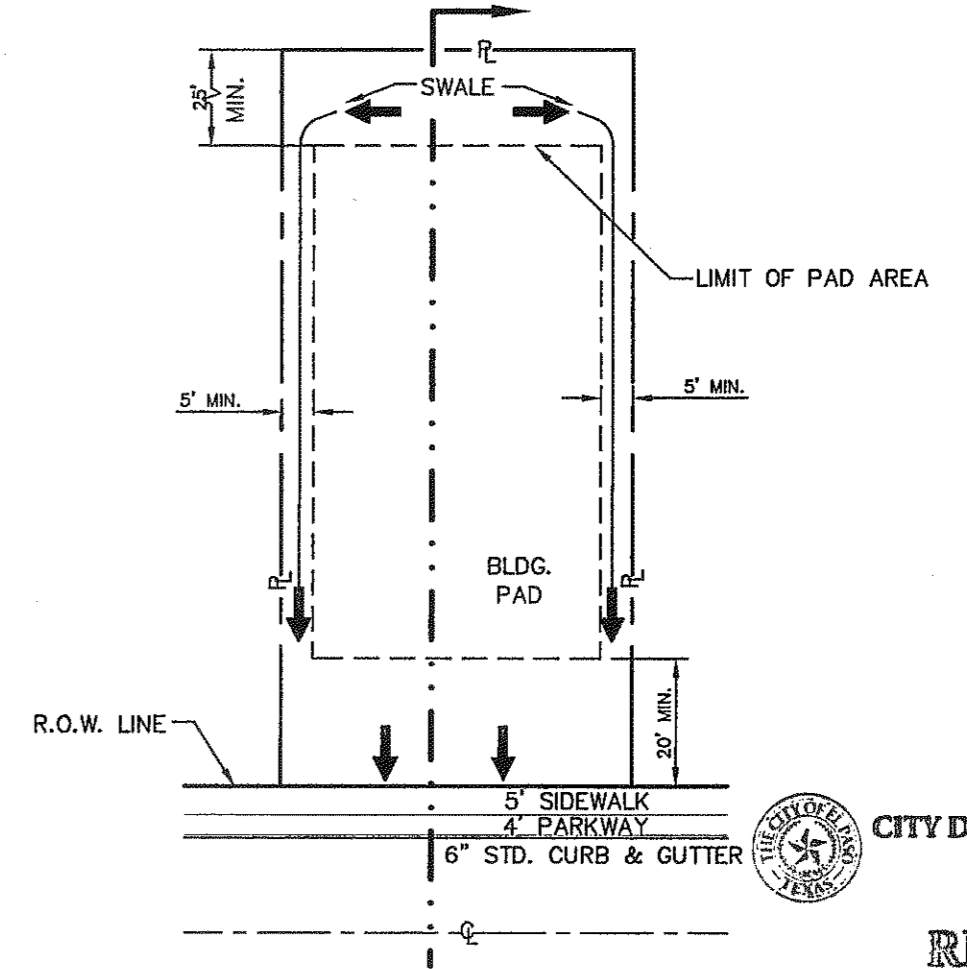


**GRADING PLAN**  
SCALE: 1" = 100'



**NOTES:**

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



CITY DEVELOPMENT DEPARTMENT  
**REVIEWED**

REFERENCES - BENCHMARKS  
EXISTING CITY MONUMENT  
ELEVATION=4003.10 FEET (CITY DATUM)  
LOCATED AT THE CENTERLINE INTERSECTION OF PASEO ALEGRE CIRCLE AND PASEO LINDO DRIVE

ENGINEER'S SEAL  
CASA ENGINEERS & ARCHITECTS PLANNERS  
TEXAS REGISTERED ENGINEERING FIRM F-4664  
4712 Woodrow Bann, Ste. F, El Paso, TX 79924  
Office: 915.544.5232 Fax: 915.544.5233 www.casaplan.com

SCALE: 1"=100'  
Horizontal: N/A  
Vertical: Interval: N/A  
DATE: APRIL 2013  
DESIGN BY: J.M.  
DRAWN BY: J.M.  
CHKD. BY: J.L.A.  
APP'D. BY: J.L.A.  
JOB No. 2000-145-LD

PROJECT TITLE  
**MESQUITE TRAILS UNIT EIGHT  
SUBDIVISION IMPROVEMENTS**

SHEET TITLE  
**GRADING PLAN**

SHEET NO.  
**C3.1**

**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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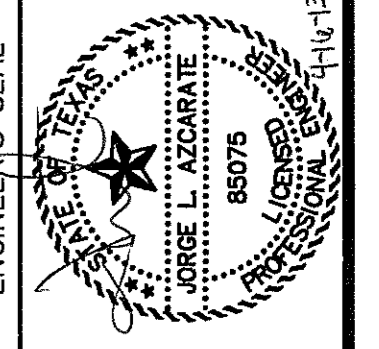
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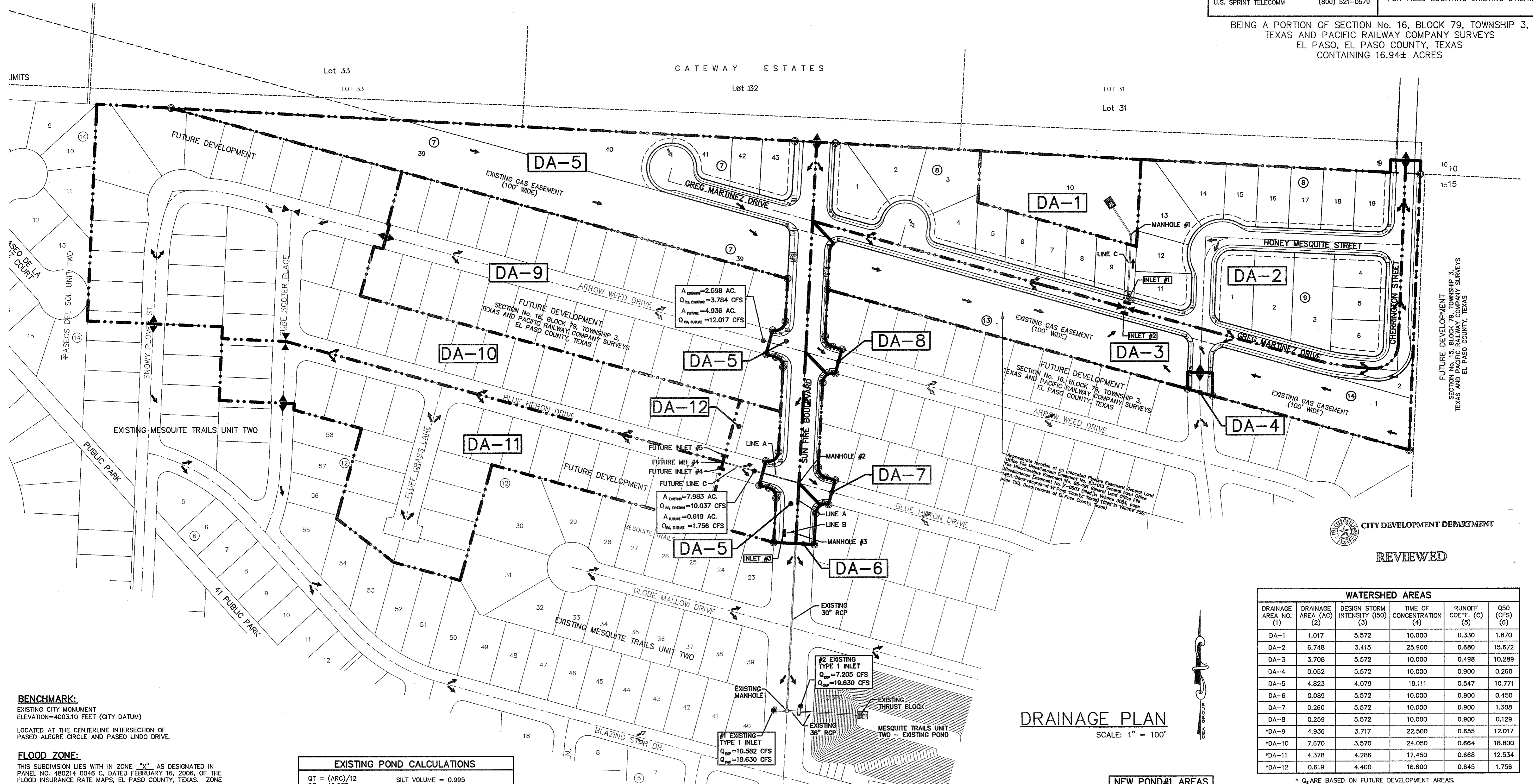
REFERENCES - BENCHMARKS  
 EXISTING CITY MONUMENT  
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 LOCATED AT THE CENTERLINE INTERSECTION OF PASEO ALEGRE CIRCLE AND PASEO LINDO DRIVE

DATE \_\_\_\_\_ REVISIONS \_\_\_\_\_ BY \_\_\_\_\_

**CSA**  
 engineers • architects • planners  
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 4712 Woodrow Wilson, Ste. F El Paso, TX 79924  
 Office: 915.544.5232 Fax: 915.544.5233 www.csaonline.com



SCALE: 1" = 100'  
 Horizontal: N/A  
 Vertical: N/A  
 Contour Interval: N/A  
 DATE: APRIL 2013  
 DESIGN BY: J.M.  
 DRAWN BY: J.M.  
 CHKD. BY: J.L.A.  
 APP'D. BY: J.L.A.  
 JOB No. 2000-145-1D



**BENCHMARK:**  
 EXISTING CITY MONUMENT  
 ELEVATION=4003.10 FEET (CITY DATUM)  
 LOCATED AT THE CENTERLINE INTERSECTION OF PASEO ALEGRE CIRCLE AND PASEO LINDO DRIVE.

**FLOOD ZONE:**  
 THIS SUBDIVISION LIES WITH IN ZONE "X" AS DESIGNATED IN PANEL NO. 480214 0046 C, DATED FEBRUARY 16, 2006, OF THE FLOOD INSURANCE RATE MAPS, EL PASO COUNTY, TEXAS. ZONE "X" INDICATES AREAS DETERMINED TO BE OUTSIDE 500-YEAR FLOODPLAIN.

- LEGEND:**
- DRAINAGE AREA BOUNDARY
  - DRAINAGE FLOW
  - ▲ HIGH POINT
  - ▼ LOW POINT
  - DROP INLET
  - STORM DRAIN MANHOLE
  - RCP
  - THRUST BLOCK STRUCTURE

**DA-1** DRAINAGE AREA

**EXISTING POND CALCULATIONS**

POND #1 MESQUITE TRAILS UNIT TWO

$$QT = (ARC)/12$$

$$QT = 15.007$$

$$A = 82.913$$

$$R = 4"$$

$$C = 0.543$$

$$QT \times 25\% = 3.752$$

$$15.007 + 3.752 = 18.759$$

SILT VOLUME = 0.995  
 0.012 AC-Ft/AC  
 18.759 + 0.995 = 19.754 AC-Ft  
**TOTAL<sub>req</sub> = 19.754 AC-Ft**

**EXISTING DROP INLETS**

NO.	REQ. FLOW CAPACITY Q REQ (CFS)	AVAIL. FLOW CAPACITY Q AVAIL. (CFS)	ADDITIONAL FLOW (CFS)	FLOW BYPASS GRATES (CFS)	# OF GRATES	TYPE OF INLET
#1 EXISTING	10.582	19.630	3.093	0.000	2	I
#2 EXISTING	7.205	19.630	0.000	0.000	2	I

**MOMENTUM COMPUTATION**

LOCATION INLET (1)	DEPTH (2)	VELOCITY (3)	PRODUCT NUMBER (4)
1	0.347	4.296	1.491
2	0.296	3.867	1.144
3	0.394	4.644	1.829
FUTURE 4	0.269	5.723	1.539
FUTURE 5	0.313	6.333	6.646

**DROP INLETS**

NO.	REQ. FLOW CAPACITY Q REQ (CFS)	AVAIL. FLOW CAPACITY Q AVAIL. (CFS)	ADDITIONAL FLOW (CFS)	FLOW BYPASS GRATES (CFS)	# OF GRATES	TYPE OF INLET
1	15.672	17.748	0.000	0.000	2	I
2	10.289	19.267	0.000	0.000	2	I
3	28.033	24.940	3.489	3.093	5	I
FUTURE 4	12.534	10.223	0.000	2.311	3	I
FUTURE 5	18.800	17.622	0.000	1.178	5	I

**NEW POND #1 CALCULATIONS**

$$QT = (ARC)/12$$

$$QT = 2.253$$

$$A = 11.473$$

$$R = 4"$$

$$C = 0.5894$$

$$QT \times 25\% = 0.563$$

$$2.253 + 0.563 = 2.816 \text{ AC-Ft}$$

SILT VOLUME = 0.012 x A  
 0.138  
 2.816 + 0.138 = 2.954 AC-Ft  
**TOTAL<sub>req</sub> = 2.954 AC-Ft**

RETENTION BASIN # 1 CONTAINS DRAINAGE AREAS 1, 2 AND 3.

**NEW RETENTION BASIN #1**

BASIN NO.	REQUIRED CAPACITY (AC.-FT.)	AVAILABLE CAPACITY (AC.-FT.)	PEAK INFLOW (CFS)	OUTLET TOWER FLOW (CFS)	HIGH WATER SURFACE ELEV. (FT.)	BOTTOM ELEVATION (FT.)	FREE BOARD (FT.)
1	2.948	4.015	27.831	0	3977.15±	3968.00	1.85

NOTE:  
 1. THE HWSE REFLECTS THE ELEVATION AS REQUIRED BY THE CITY OF EL PASO.

HWSE = QT + SILT VOLUME + 25% EMERGENCY STORAGE  
 HWSE = 2.253 + 0.138 + 0.563 = 2.954 FT  
 CONTOUR 3979, ACCUMULATED VOLUME = 4.015 AC-Ft  
 CONTOUR 3978, ACCUMULATED VOLUME = 3.420 AC-Ft  
 CONTOUR 3977, ACCUMULATED VOLUME = 2.816 AC-Ft  
 HIGH WATER SURFACE ELEVATION = 3977.15±

**NEW POND #1 AREAS**

CONTOUR	ACCUMULATED VOLUME (AC.-FT.)
3979	4.015
3978	3.420
3977	2.875
3976	2.379
3975	1.929
3974	1.525
3973	1.166
3972	0.849
3971	0.576
3970	0.344
3969	0.154
3968	0.000

**WATERSHED AREAS**

DRAINAGE AREA NO. (1)	DRAINAGE AREA (AC) (2)	DESIGN STORM INTENSITY (ISO) (3)	TIME OF CONCENTRATION (4)	RUNOFF COEFF. (C) (5)	Q50 (CFS) (6)
DA-1	1.017	5.572	10.000	0.330	1.870
DA-2	6.748	3.415	25.900	0.680	15.672
DA-3	3.708	5.572	10.000	0.498	10.289
DA-4	0.052	5.572	10.000	0.900	0.260
DA-5	4.823	4.079	19.111	0.547	10.771
DA-6	0.089	5.572	10.000	0.900	0.450
DA-7	0.260	5.572	10.000	0.900	1.308
DA-8	0.259	5.572	10.000	0.900	0.129
*DA-9	4.936	3.717	22.500	0.655	12.017
*DA-10	7.670	3.570	24.050	0.664	18.800
*DA-11	4.378	4.286	17.450	0.668	12.534
*DA-12	0.619	4.400	16.600	0.645	1.756

\* Q<sub>s</sub> ARE BASED ON FUTURE DEVELOPMENT AREAS.

- NOTES:**
- \* Q<sub>xx</sub> IS BASED ON DEVELOPED RUNOFF (50-yr)
  - REFERENCE: CITY OF EL PASO SUBDIVISION STANDARDS (3-11-97)
  - (1) WATERSHED AREA IDENTIFICATION
  - (2) AREA FROM DRAINAGE PLAN
  - (3) RAINFALL INTENSITY, HYDROLOGY - LOCATED IN THE WESTSIDE REGION
  - (4) TIME OF CONCENTRATION: TC = T (OVERLAND) + T (GUTTER)
  - (5) RATIONAL METHOD DEVELOPED CONDITIONS RUNOFF COEFFICIENT, PLATE No. 2-10 TABLE A
- |                          |             |
|--------------------------|-------------|
| BASIN AREA SPACE =       | COEFFICIENT |
| PARK AREA SPACE =        | 0.33        |
| RESIDENTIAL AREA SPACE = | 0.40        |
| PAVEMENT AREA SPACE =    | 0.60        |
|                          | 0.90        |
- (6) Q<sub>xx</sub> = C X A X I<sub>xx</sub> 50-yr
  - C = RATIONAL COEFFICIENT
  - A = COMPUTED CONTRIBUTING WATERSHED AREA, acres
  - I = RAINFALL INTENSITY, inch per hour

PROJECT TITLE  
**MESQUITE TRAILS UNIT EIGHT  
 SUBDIVISION IMPROVEMENTS**

SHEET TITLE  
**DRAINAGE PLAN**

SHEET NO.  
**C4.1**

CITY DEVELOPMENT DEPARTMENT  
 REVIEWED

UTILITY LOCATOR SERVICES	
EL PASO ELECTRIC COMPANY	(915) 543-5720
EL PASO ENERGY CORPORATION	(915) 498-5244
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) 545-6065
AT&T	(800) 859-3786
U.S. SPRINT TELECOMM	(800) 521-0579

**WARNING I BEFORE YOU DIG**

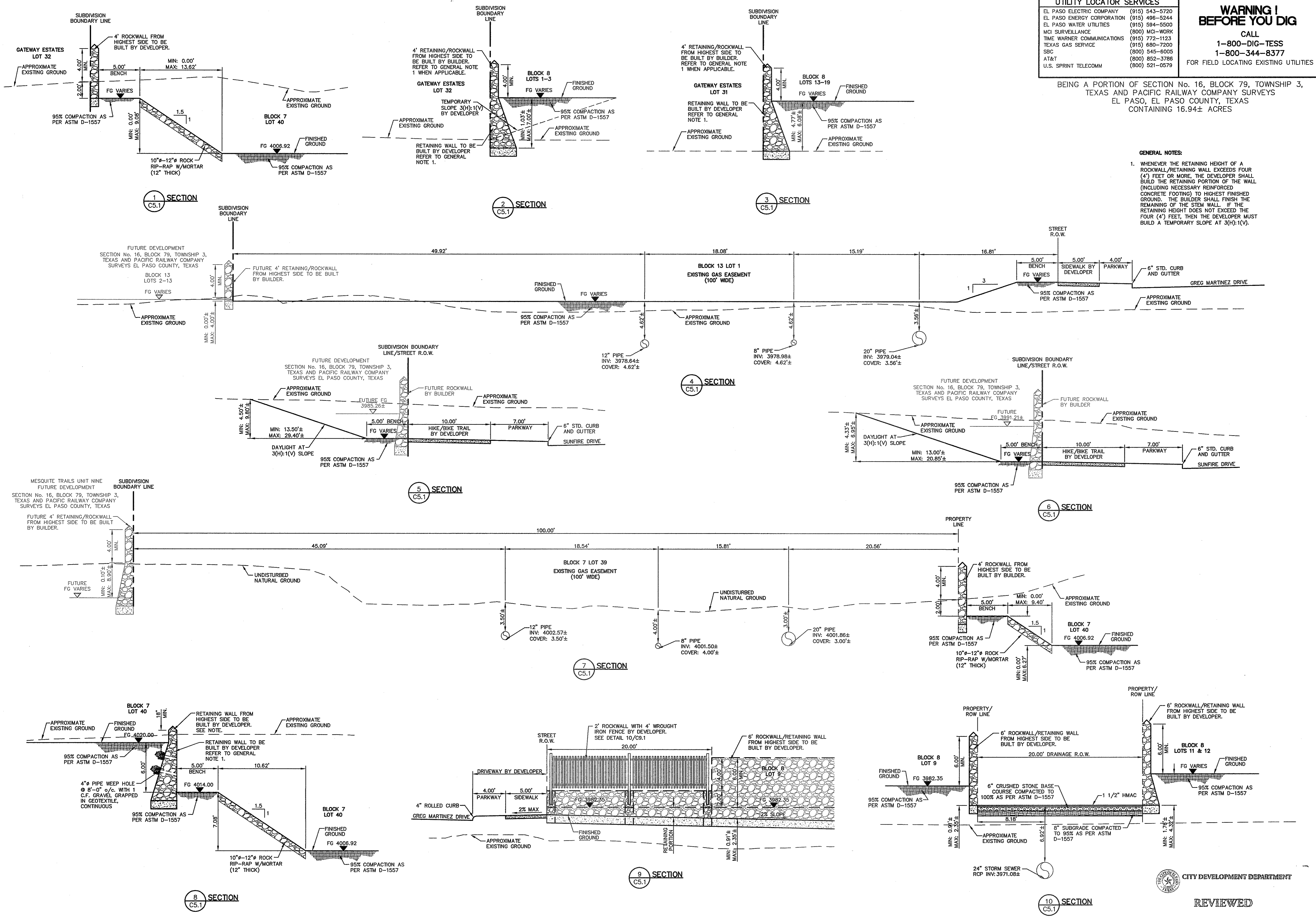
CALL  
1-800-DIG-TESS  
1-800-344-8377

FOR FIELD LOCATING EXISTING UTILITIES

BEING A PORTION OF SECTION No. 16, BLOCK 79, TOWNSHIP 3, TEXAS AND PACIFIC RAILWAY COMPANY SURVEYS EL PASO, EL PASO COUNTY, TEXAS CONTAINING 16.94± ACRES

**GENERAL NOTES:**

1. WHENEVER THE RETAINING HEIGHT OF A ROCKWALL/RETAINING WALL EXCEEDS FOUR (4) FEET OR MORE, THE DEVELOPER SHALL BUILD THE RETAINING PORTION OF THE WALL (INCLUDING NECESSARY REINFORCED CONCRETE FOOTING) TO HIGHEST FINISHED GROUND. THE BUILDER SHALL FINISH THE REMAINING OF THE STEM WALL. IF THE RETAINING HEIGHT DOES NOT EXCEED THE FOUR (4) FEET, THEN THE DEVELOPER MUST BUILD A TEMPORARY SLOPE AT 3(H):1(V).



DATE	REVISIONS	BY

REFERENCES - BENCHMARKS

EXISTING CITY MONUMENT  
ELEVATION=403.00 FEET (CITY DATUM)  
P.O. BOX 10000  
PASADENA, TEXAS 77401-0000

**CSA**

engineers • architects • planners

TEXAS REGISTERED ENGINEERING FIRM F-4654

4712 Woodrow Bean, Ste. F El Paso, TX 79924  
Office: 915.544.5222 Fax: 915.544.5233 www.csaengr.com

ENGINEER'S SEAL

SCALE: 1"=5'

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

DATE: APRIL 2013  
DESIGN BY: J.M.  
DRAWN BY: J.M.  
CHKD. BY: J.L.A.  
APPD. BY: J.L.A.

J. L. A. 80075

JOB No. 2000-145-LD

PROJECT TITLE

**MESQUITE TRAILS UNIT EIGHT  
SUBDIVISION IMPROVEMENTS**

SHEET TITLE

GRADING SECTIONS

SHEET NO.

**C5.1**

CITY DEVELOPMENT DEPARTMENT  
REVIEWED

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

**WARNING I BEFORE YOU DIG**

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**1-800-DIG-TESS**  
**1-800-344-8377**

FOR FIELD LOCATING EXISTING UTILITIES

BEING A PORTION OF SECTION No. 16, BLOCK 79, TOWNSHIP 3, TEXAS AND PACIFIC RAILWAY COMPANY SURVEYS EL PASO, EL PASO COUNTY, TEXAS CONTAINING 16.94± ACRES

DATE	REVISIONS	BY

ENGINEER'S SEAL

engineers • architects • planners  
 TEXAS REGISTERED ENGINEERING FIRM F-664  
 4712 Woodrow Blinn, Ste. F, El Paso, TX 79924  
 Office: 915.544.5332 Fax: 915.544.5283 www.cesa.com

SCALE	
Horizontal:	1" = 50'
Vertical:	1" = 2'
Contour Interval:	N/A
DATE:	APRIL 2013
DESIGN BY:	J.M.
DRAWN BY:	J.M.
CHKD. BY:	J.L.A.
APPVD. BY:	J.L.A.
JOB No.	2000-145-LD

PROJECT TITLE

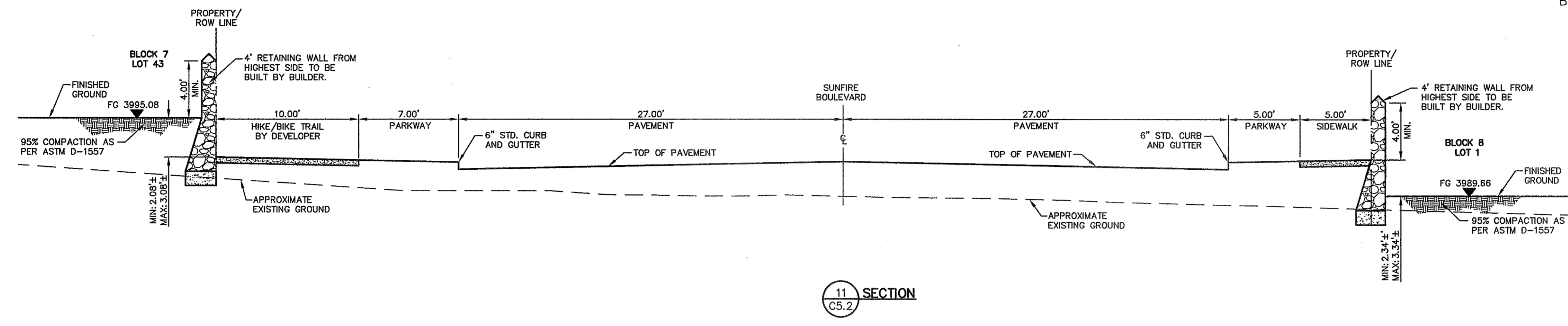
**MESQUITE TRAILS UNIT EIGHT**  
**SUBDIVISION IMPROVEMENTS**

SHEET TITLE

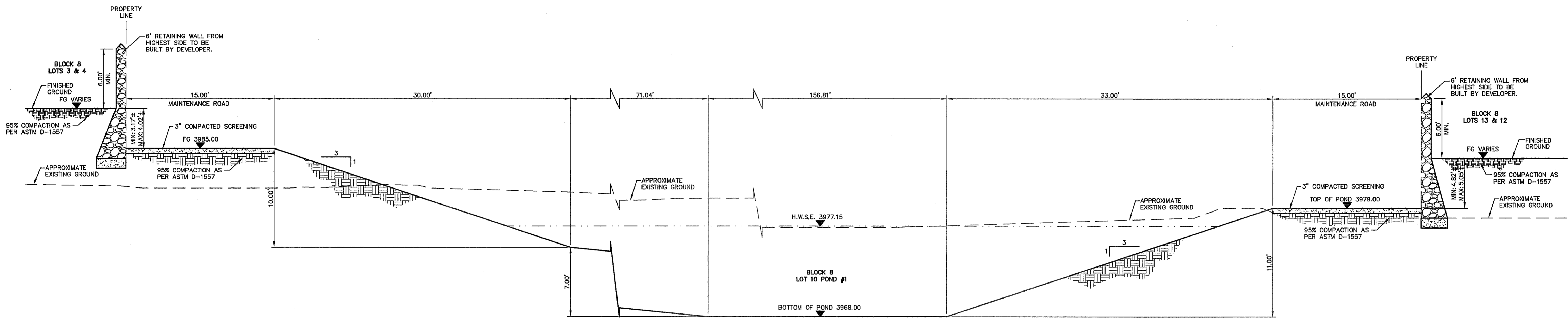
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SHEET NO.

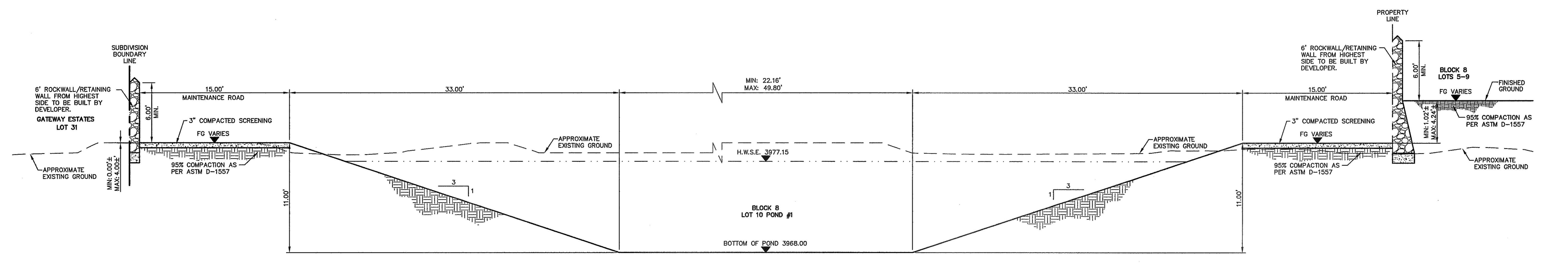
C5.2



11 SECTION  
 CS.2



12 SECTION  
 CS.2



13 SECTION  
 CS.2

CITY DEVELOPMENT DEPARTMENT  
 REVIEWED



GATEWAY ESTATES  
Lot 32

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

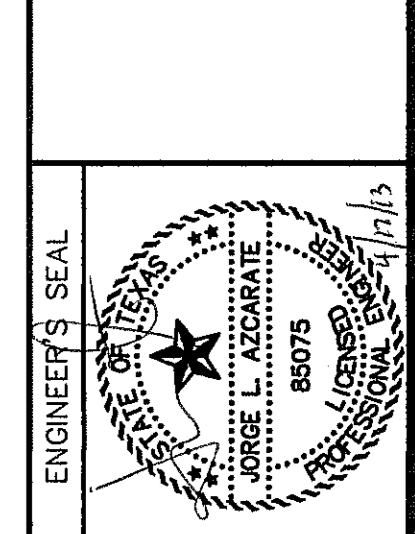
**WARNING I  
BEFORE YOU DIG**

CALL  
1-800-DIG-TESS  
1-800-344-8377

FOR FIELD LOCATING EXISTING UTILITIES

DATE	REVISIONS	BY

ENGINEERS & ARCHITECTS PLANNERS  
TEXAS REGISTERED ENGINEERING FIRM F-664  
4712 Woodrow Blinn, Ste. F, El Paso, TX 79904  
Office: 915.544.8322 Fax: 915.544.8323 www.cesaonline.com



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

DATE: APRIL 2013  
DESIGN BY: J.M.  
DRAWN BY: J.M.  
CHKD. BY: J.L.A.  
APPD. BY: J.L.A.  
JOB NO.: 2000-145-LD

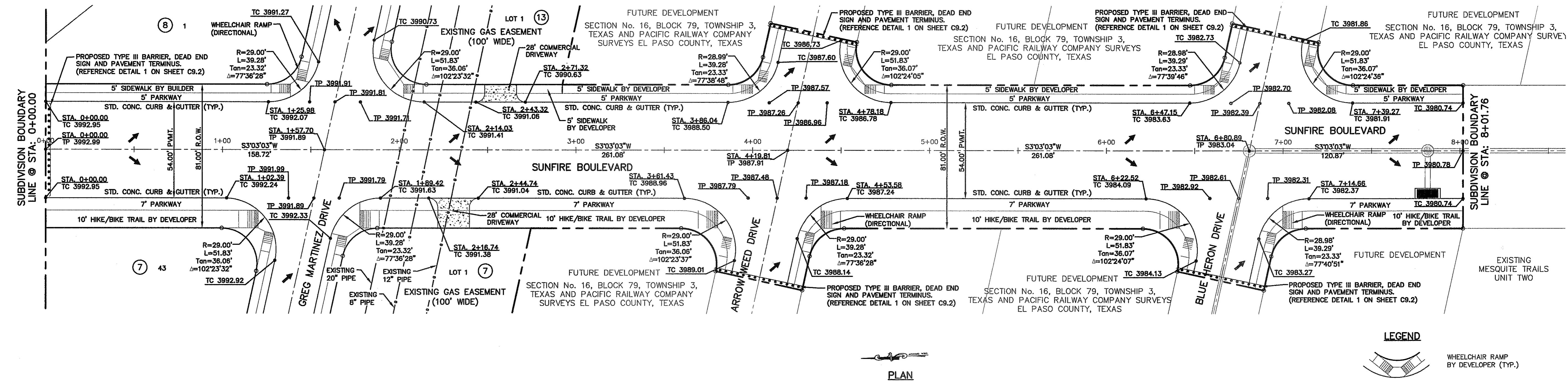
PROJECT TITLE  
**MESQUITE TRAILS UNIT EIGHT  
SUBDIVISION IMPROVEMENTS**

SHEET TITLE

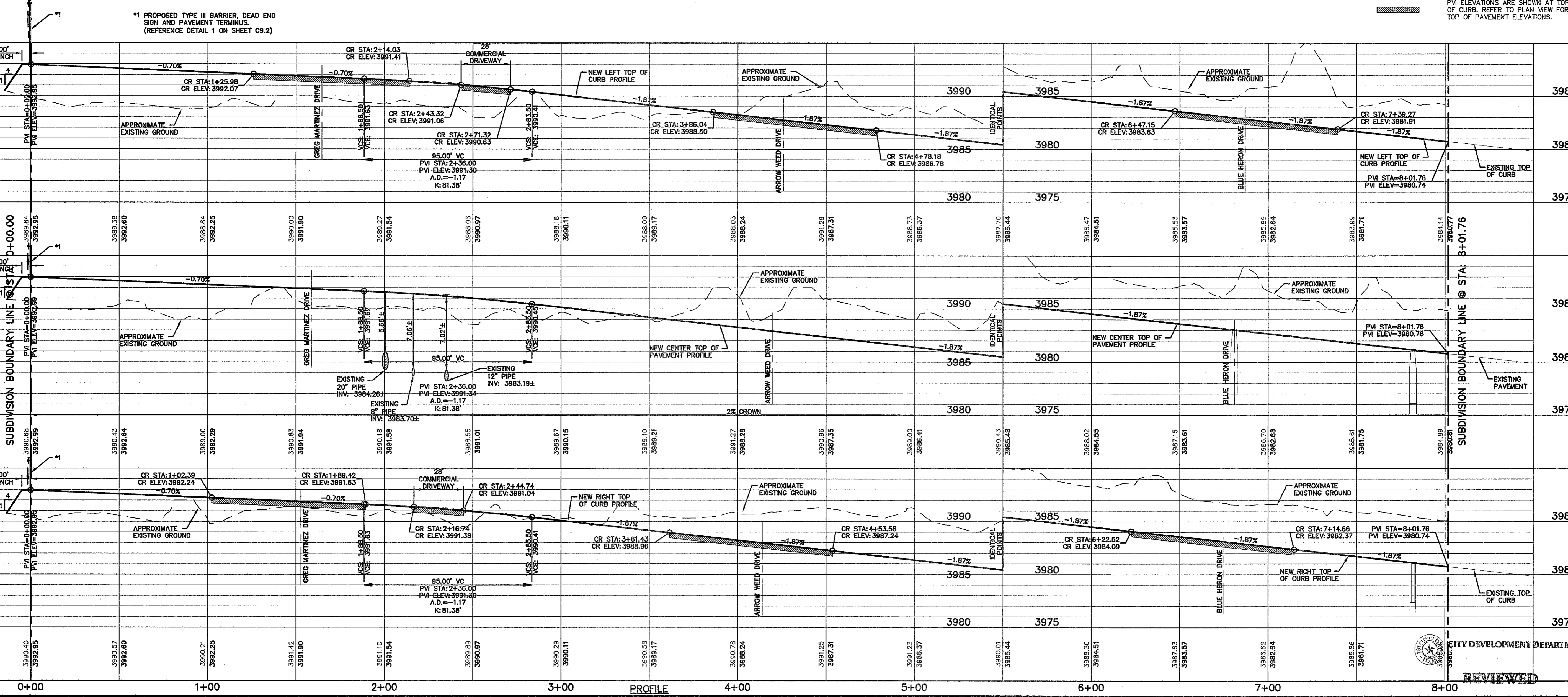
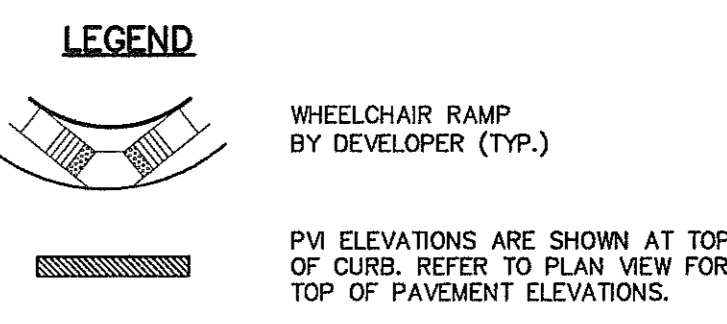
SUNFIRE BOULEVARD  
PLAN & PROFILE  
FROM STA: 0+00.00  
TO STA: 8+01.76

SHEET NO.

CITY DEVELOPMENT DEPARTMENT  
**C6.1**



PLAN



0+00 1+00 2+00 3+00 4+00 5+00 6+00 7+00 8+00

REVIEWED

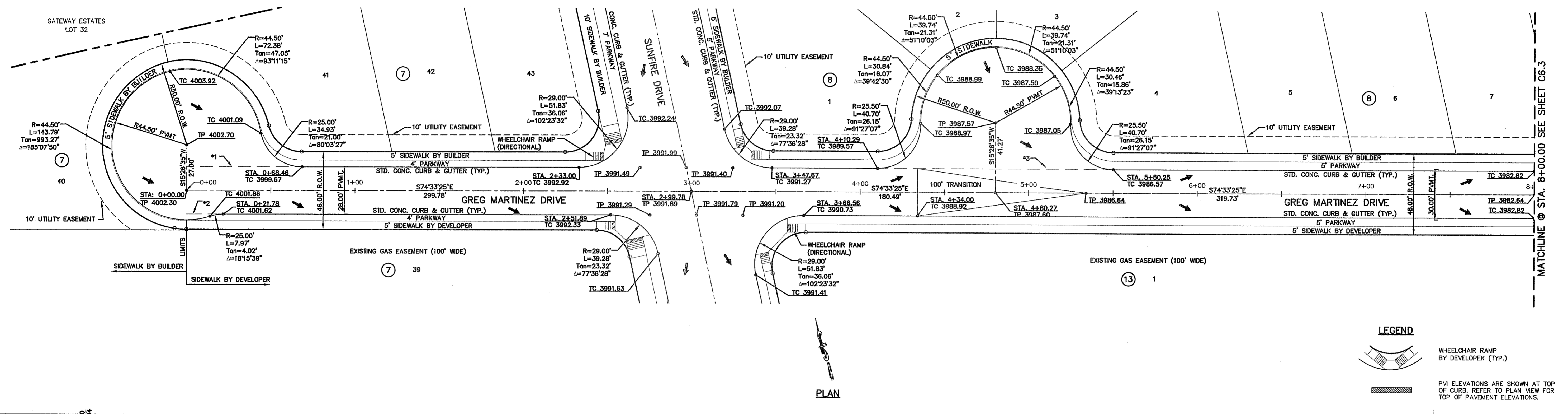
UTILITY LOCATOR SERVICES	
EL PASO ELECTRIC COMPANY	(915) 543-5720
EL PASO ENERGY CORPORATION	(915) 496-5244
EL PASO WATER UTILITIES	(915) 594-5500
MCI SURVEILLANCE	(800) MCI-WORK
TIME WARNER COMMUNICATIONS	(915) 772-1123
TEXAS GAS SERVICE	(915) 680-7200
SBC	(800) 545-8005
AT&T	(800) 852-3786
U.S. SPRINT TELECOMM	(800) 521-0579

**WARNING I BEFORE YOU DIG**

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1-800-344-8377

FOR FIELD LOCATING EXISTING UTILITIES

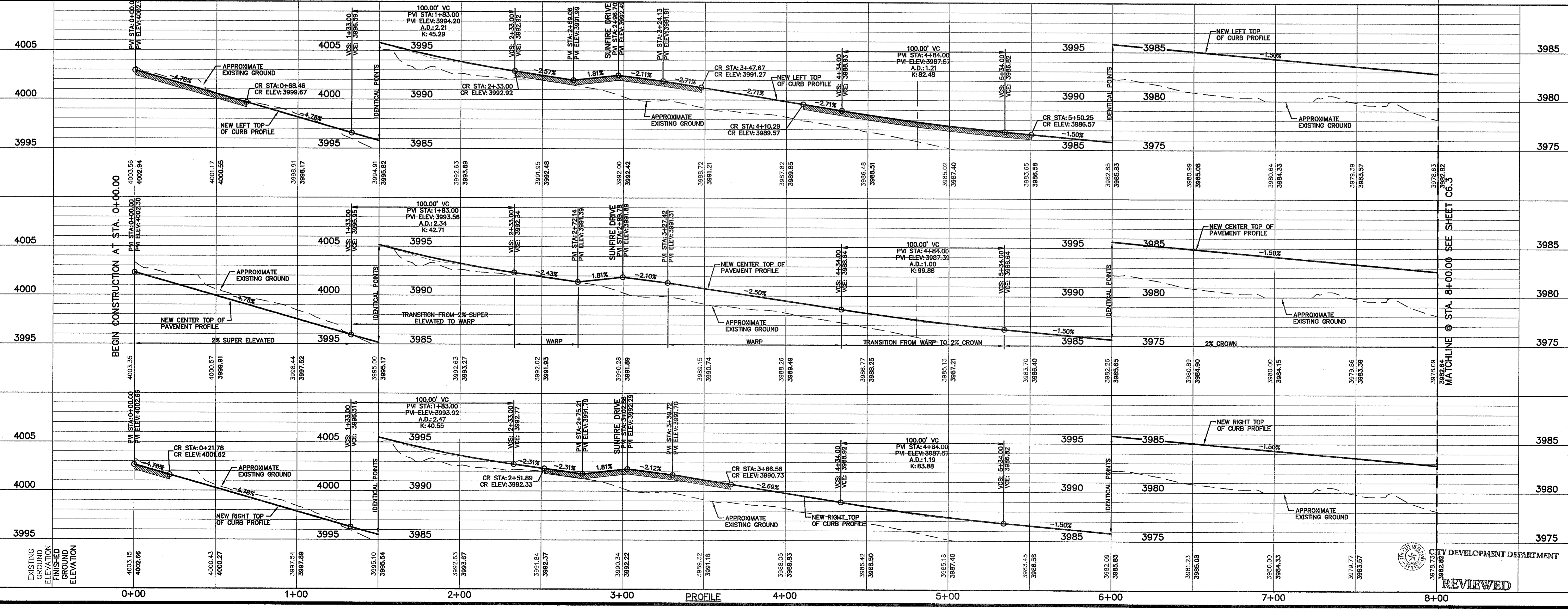
DATE	REVISIONS	BY



PLAN

**LEGEND**

- WHEELCHAIR RAMP BY DEVELOPER (TYP.)
- PM ELEVATIONS ARE SHOWN AT TOP OF CURB. REFER TO PLAN VIEW FOR TOP OF PAVEMENT ELEVATIONS.



PROFILE

REFERENCES - BENCHMARKS  
EXISTING CITY MONUMENT ELEVATION=4003.10 FEET (GTY DATA)  
LOCATED AT THE CENTERLINE INTERSECTION OF PARKWAY ALIBRIS CIRCLE AND PASO LINDO DRIVE

**ca**  
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4712 Woodrow Beam, Ste. F, El Paso, TX 79904  
Office: 915.544.5232 Fax: 915.544.5233 www.ca-group.net

ENGINEER'S SEAL  
JAMES L. AZCABARTE  
85075  
J.L.A.

SCALE: "1"=30'  
Horizontal: "1"=5'  
Vertical: "1"=5'  
Contour Interval: 1V/4'  
DATE: APRIL 2013  
DESIGN BY: J.M.  
DRAWN BY: J.M.  
CHKD. BY: J.L.A.  
APP'D. BY: J.L.A.  
JOB No. 2000-145-1D

PROJECT TITLE  
**MESQUITE TRAILS UNIT EIGHT SUBDIVISION IMPROVEMENTS**

SHEET TITLE  
**GREG MARTINEZ DRIVE PLAN & PROFILE FROM STA. 0+00.00 TO STA. 8+00.00**

SHEET NO.  
**C6.2**

REVIEWED  
CITY DEVELOPMENT DEPARTMENT

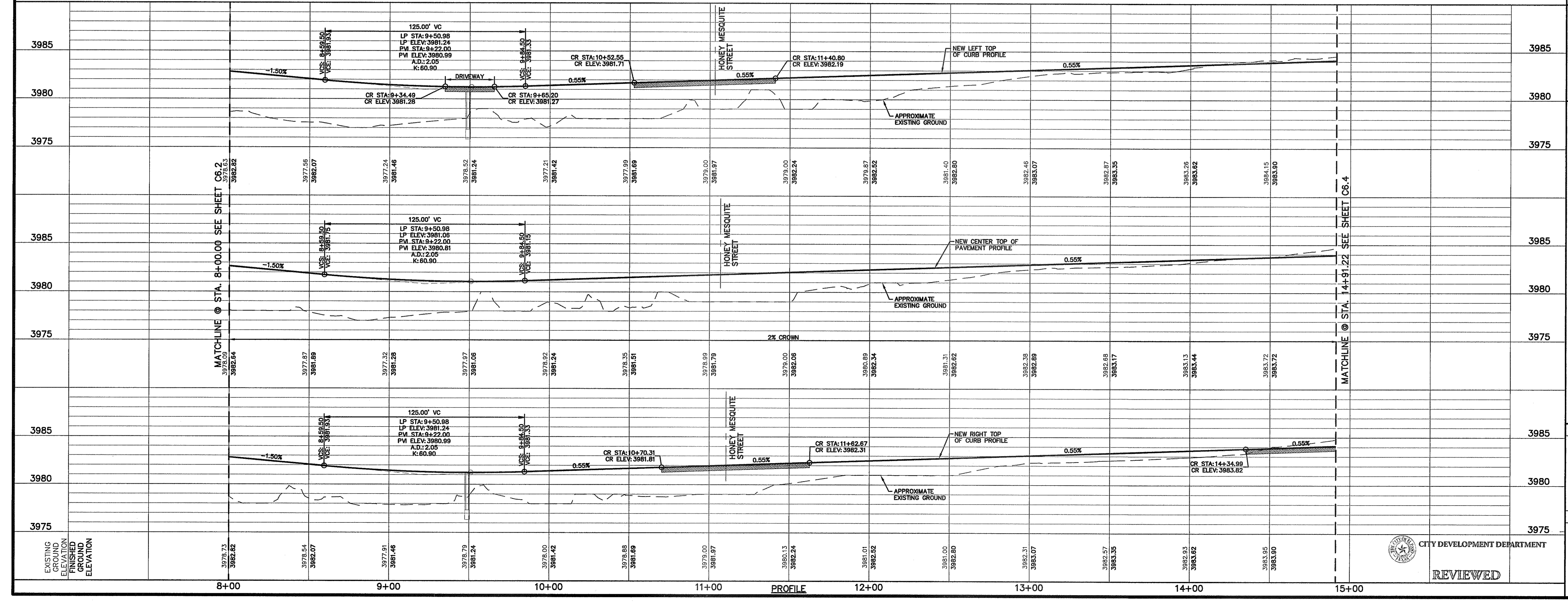
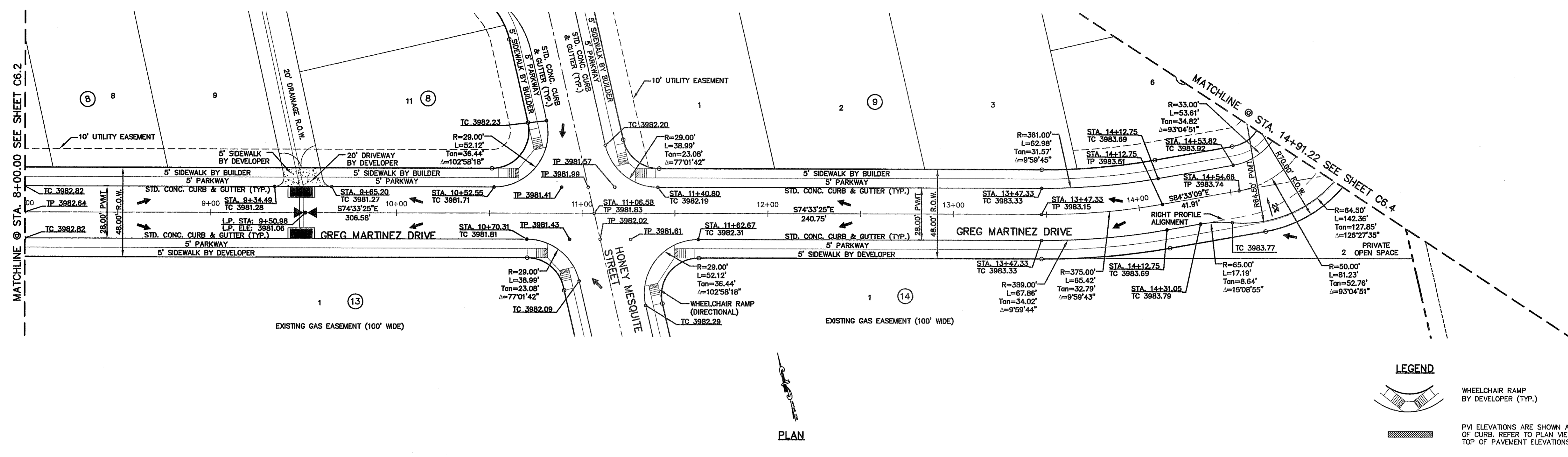
UTILITY LOCATOR SERVICES	
EL PASO ELECTRIC COMPANY	(915) 543-5720
EL PASO ENERGY CORPORATION	(915) 496-5244
EL PASO WATER UTILITIES	(915) 594-5500
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TIME WARNER COMMUNICATIONS	(915) 772-1123
TEXAS GAS SERVICE	(915) 680-7200
SBC	(800) 545-6005
AT&T	(800) 852-3786
U.S. SPRINT TELECOMM	(800) 521-0579

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**1-800-344-8377**

FOR FIELD LOCATING EXISTING UTILITIES

DATE	REVISIONS	BY



REFERENCES - BENCHMARKS

EXISTING CITY MONUMENT  
 ELEVATION=403.10 FEET (CITY DATA)  
 LOCATED AT THE CENTERLINE INTERSECTION OF  
 PASEO ALBUQUERQUE AND PASEO UNDO DRIVE

ENGINEER'S SEAL

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

DESIGN BY: J.M.  
 DATE: APRIL 2013  
 DRAWN BY: J.M.  
 CHKD. BY: J.L.A.  
 APPVD. BY: J.L.A.  
 JOB No. 2000-145-ID

PROJECT TITLE

**MESQUITE TRAILS UNIT EIGHT  
 SUBDIVISION IMPROVEMENTS**

SHEET TITLE

GREG MARTINEZ DRIVE PLAN & PROFILE FROM STA. 8+00.00 TO STA. 14+91.22

SHEET NO.

CITY DEVELOPMENT DEPARTMENT

REVIEWED

C6.3

CS&A

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4712 Woodrow Bann, Ste. F, El Paso, TX 79824

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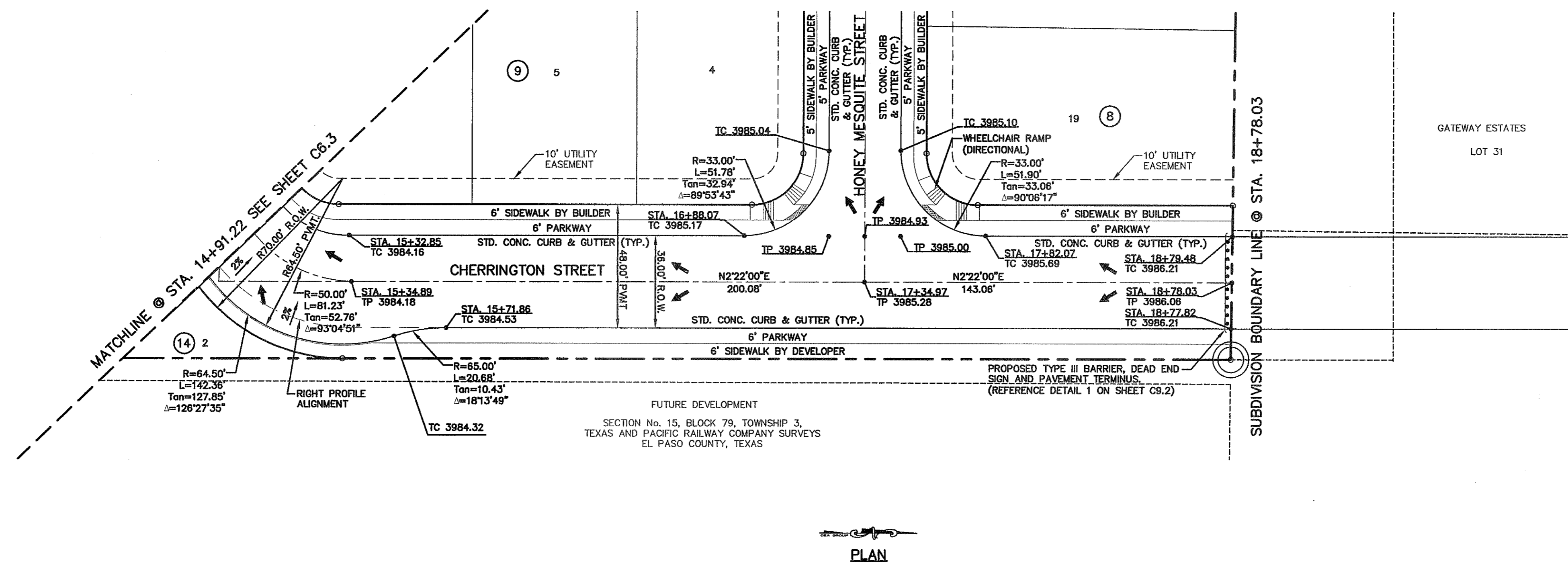
UTILITY LOCATOR SERVICES	
EL PASO ELECTRIC COMPANY	(915) 543-5720
EL PASO ENERGY CORPORATION	(915) 496-8244
EL PASO WATER UTILITIES	(915) 594-5500
MCI SURVEILLANCE	(800) MCI-WORK
TIME WARNER COMMUNICATIONS	(915) 772-1123
TEXAS GAS SERVICE	(915) 680-7200
SBC	(800) 545-8005
AT&T	(800) 852-3786
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**WARNING I BEFORE YOU DIG**

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1-800-344-8377

FOR FIELD LOCATING EXISTING UTILITIES

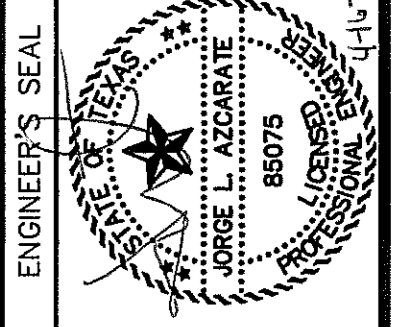
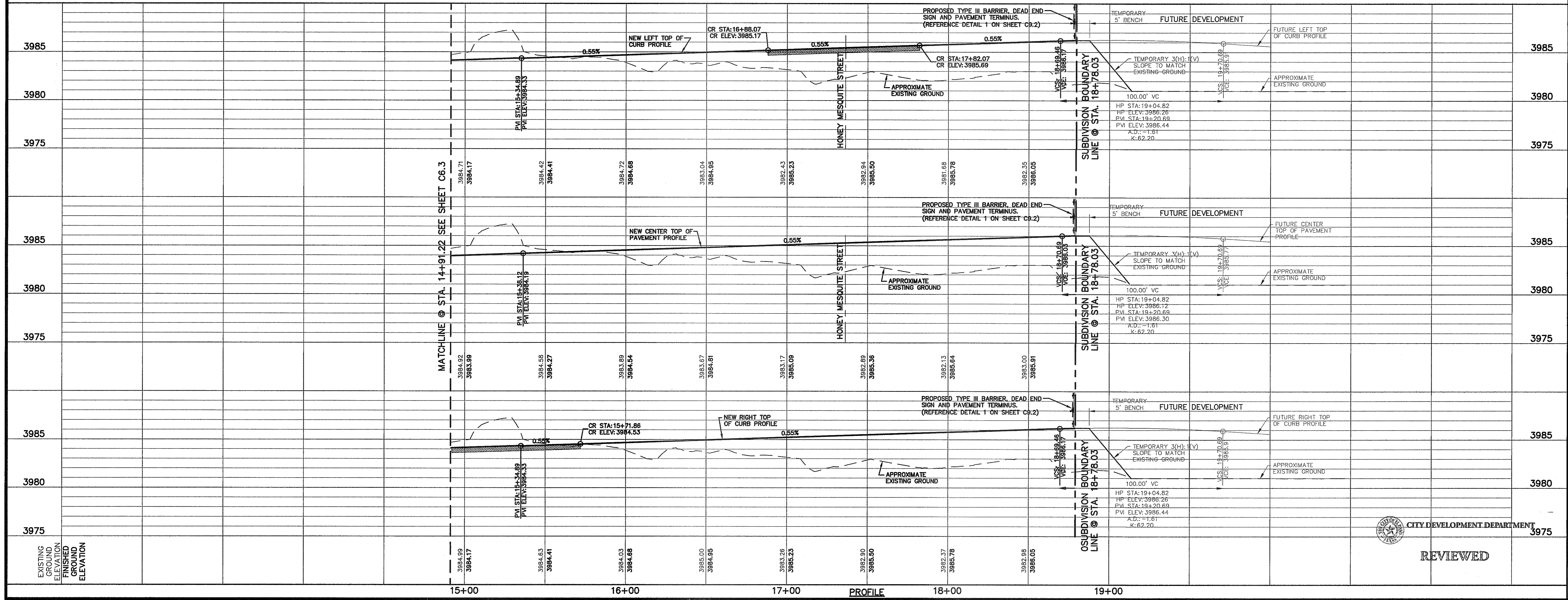
DATE	REVISIONS	BY



**LEGEND**

WHEELCHAIR RAMP BY DEVELOPER (TYP.)

PVI ELEVATIONS ARE SHOWN AT TOP OF CURB. REFER TO PLAN VIEW FOR TOP OF PAVEMENT ELEVATIONS.



ENGINEER'S SEAL

J. L. A.

86075

STATE OF TEXAS

PROFESSIONAL ENGINEER

4712 Woodrow Bham, Suite F, El Paso, TX 79924

Office: 915.544.5232 Fax: 915.544.6233 www.cadgroup.net

PROJECT TITLE

**MESQUITE TRAILS UNIT EIGHT**

**SUBDIVISION IMPROVEMENTS**

SHEET TITLE

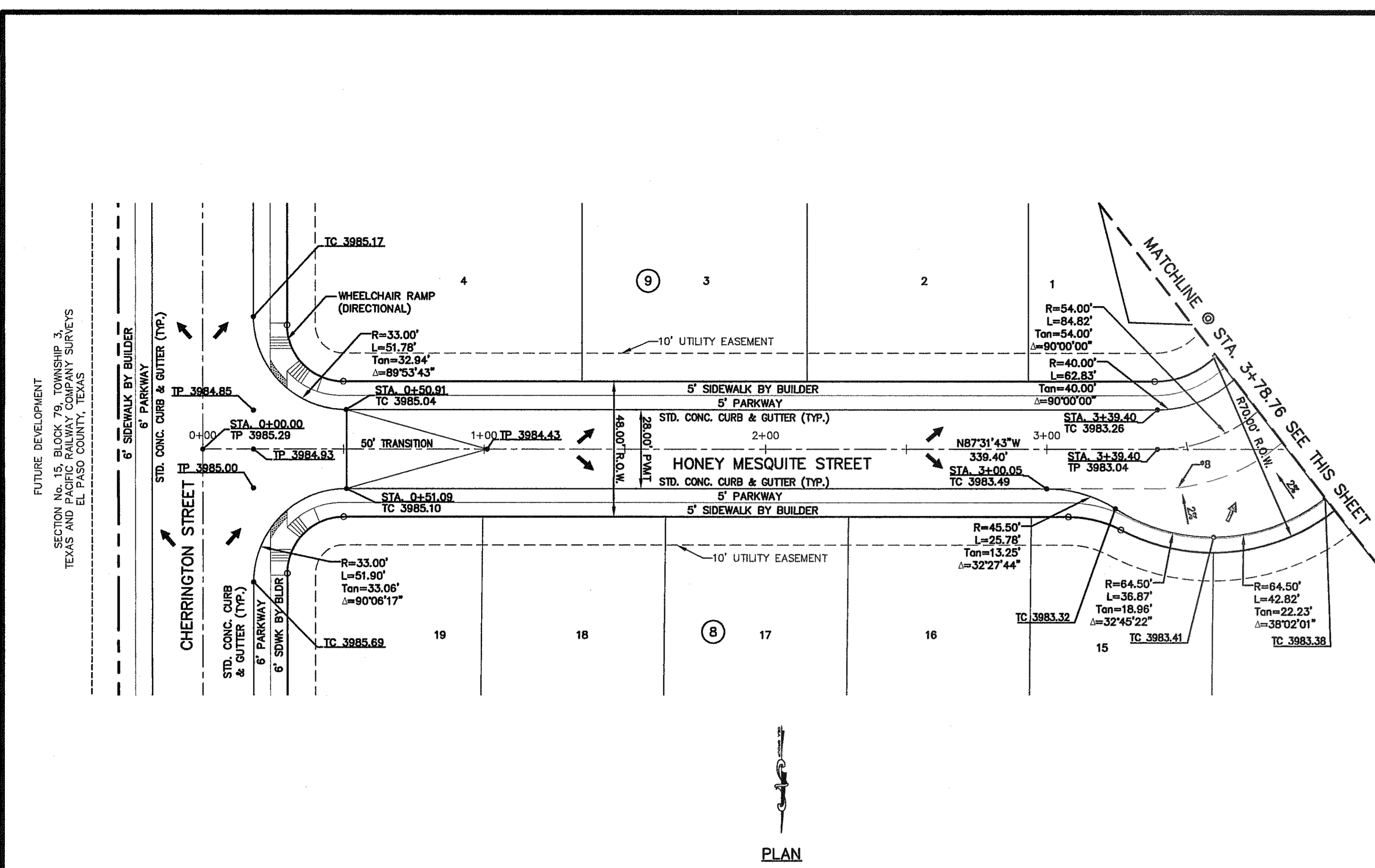
**CHERRINGTON STREET PLAN & PROFILE FROM STA. 14+91.22 TO STA. 18+78.03**

SHEET NO.

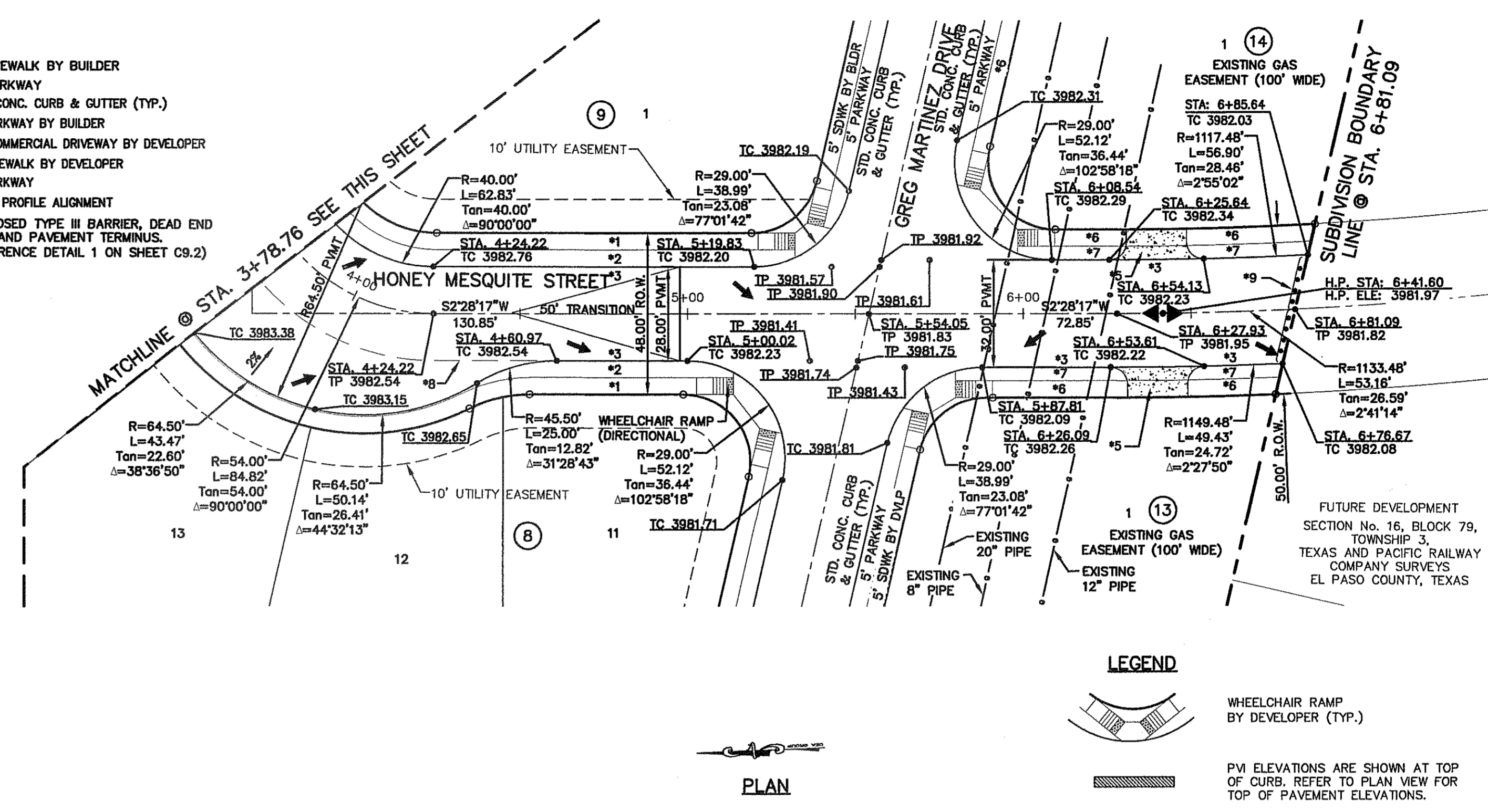
**C6.4**

CITY DEVELOPMENT DEPARTMENT

REVIEWED



- \*1 5' SIDEWALK BY BUILDER
- \*2 5' PARKWAY
- \*3 STD. CONC. CURB & GUTTER (TYP.)
- \*4 4' PARKWAY BY BUILDER
- \*5 28' COMMERCIAL DRIVEWAY BY DEVELOPER
- \*6 5' SIDEWALK BY DEVELOPER
- \*7 4' PARKWAY
- \*8 RIGHT PROFILE ALIGNMENT
- \*9 PROPOSED TYPE III BARRIER, DEAD END SIGN AND PAVEMENT TERMINUS. (REFERENCE DETAIL 1 ON SHEET C9.2)

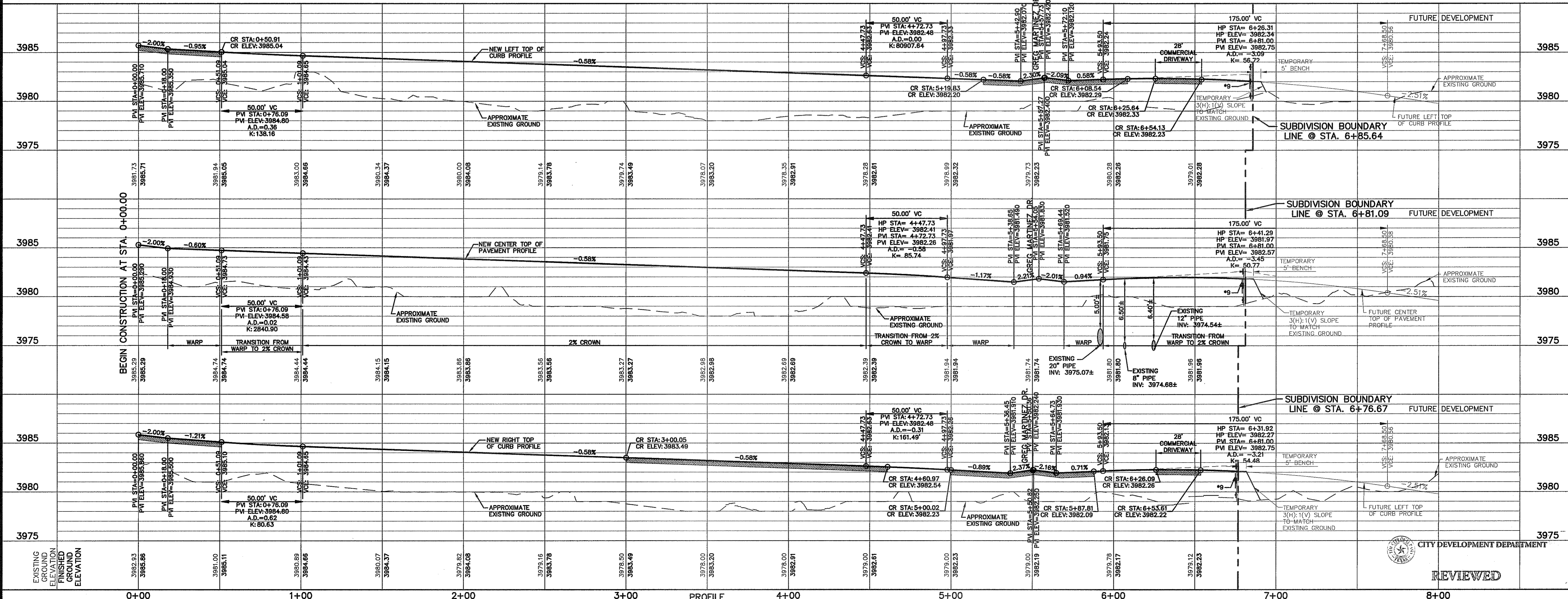


UTILITY LOCATOR SERVICES	
EL PASO ELECTRIC COMPANY	(915) 543-5720
EL PASO ENERGY CORPORATION	(915) 496-5244
EL PASO WATER UTILITIES	(915) 594-5500
MCI SURVEILLANCE	(800) MCI-WORK
TIME WARNER COMMUNICATIONS	(915) 772-1123
TEXAS GAS SERVICE	(915) 680-7200
SBC	(800) 545-6905
AT&T	(800) 852-3766
U.S. SPRINT TELECOMM	(800) 521-0579

**WARNING I BEFORE YOU DIG**

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1-800-DIG-TESS  
1-800-344-8377

FOR FIELD LOCATING EXISTING UTILITIES



EL PASO COUNTY, TEXAS  
SECTION No. 15, BLOCK 79, TOWNSHIP 3, TEXAS AND PACIFIC RAILWAY COMPANY SURVEYS

**ENGINEER'S SEAL**  
  
 ENGINEER - BENCHMARKS  
 EXISTING CITY MONUMENT  
 ELEVATION=400.10 FEET (CITY DATUM)  
 LOCATED AT THE EXTERIOR INTERSECTION OF  
 PARKWAY CURVE AND PAVED ROAD DRIVE

**PROJECT TITLE**  
**MESQUITE TRAILS UNIT EIGHT**  
**SUBDIVISION IMPROVEMENTS**

**SHEET TITLE**  
**HONEY MESQUITE STREET**  
**PLAN & PROFILE**  
**FROM STA. 0+00.00 TO**  
**STA. 6+81.09**

**SHEET NO.**  
**C6.5**

**SCALE**  
 Horizontal: 1"=30'  
 Vertical: 1"=5'  
 Contour Interval: 1.0'/A.

**DATE:** APRIL 2013  
**DESIGN BY:** J.M.  
**DRAWN BY:** J.M.  
**CHKD. BY:** J.L.A.  
**APPD. BY:** J.L.A.

**REVISIONS**

DATE	REVISIONS	BY

**REFERENCES - BENCHMARKS**

**LEGEND**  
  
 WHEELCHAIR RAMP BY DEVELOPER (TYP.)  
  
 PW ELEVATIONS ARE SHOWN AT TOP OF CURB. REFER TO PLAN VIEW FOR TOP OF PAVEMENT ELEVATIONS.

**CITY DEVELOPMENT DEPARTMENT**  
  
**REVIEWED**

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

**WARNING I BEFORE YOU DIG**

CALL  
1-800-DIG-TESS  
1-800-344-8377

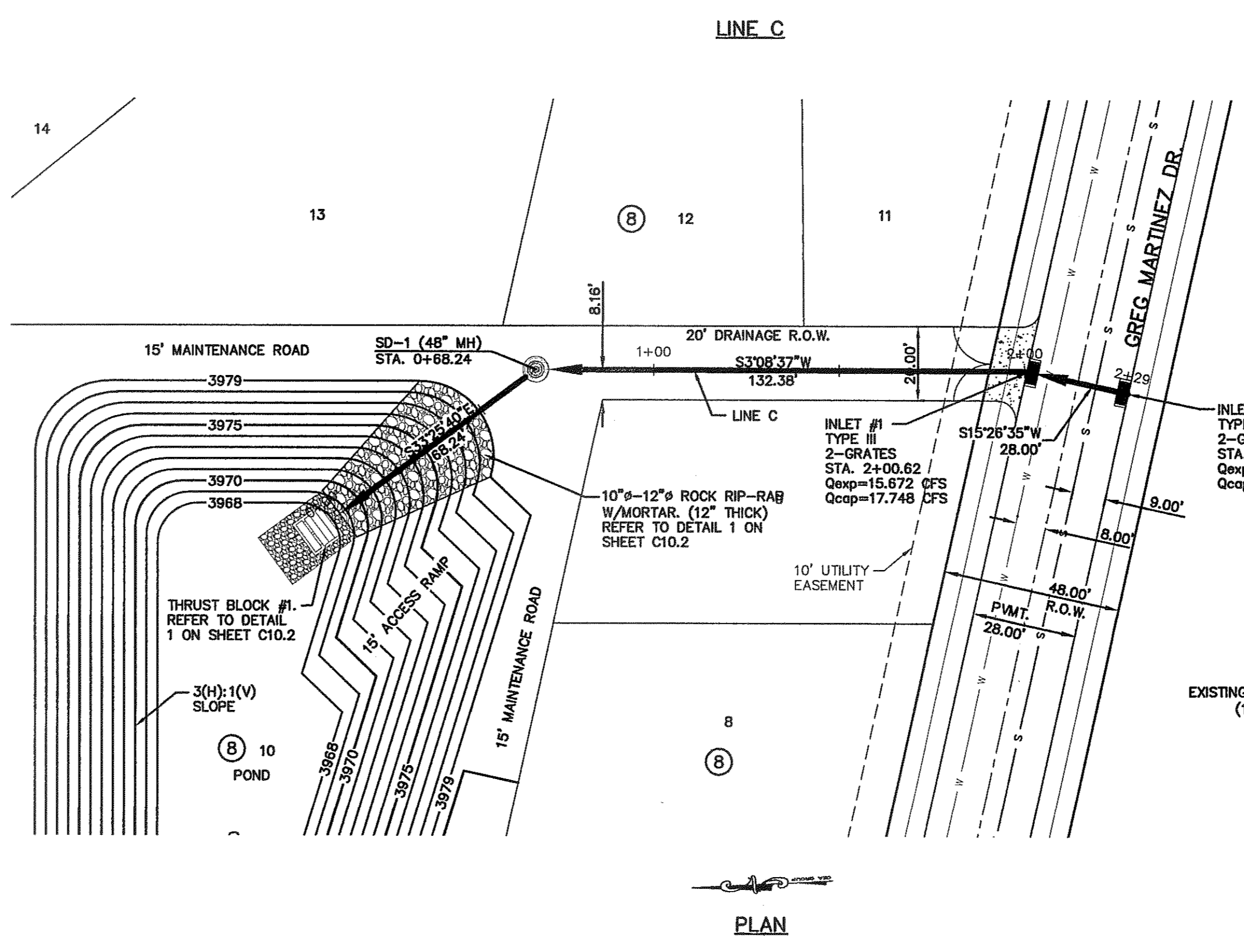
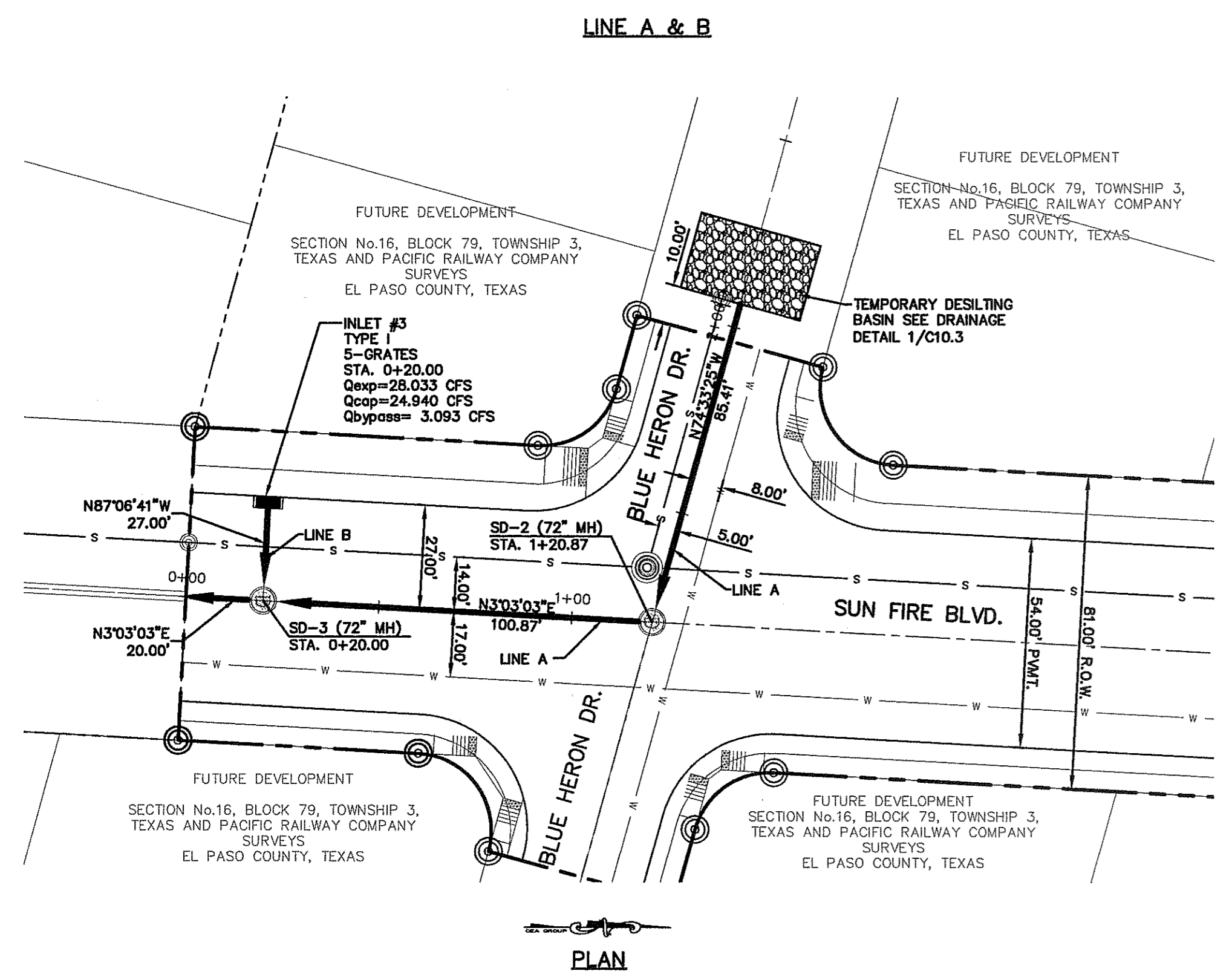
FOR FIELD LOCATING EXISTING UTILITIES

DATE	REVISIONS	BY

REFERENCES - BENCHMARKS  
EXISTING CITY MONUMENT  
ELEVATION=603.10 FEET (GTY DATA)  
EASTING=1000.00 FEET  
NORTHING=1000.00 FEET

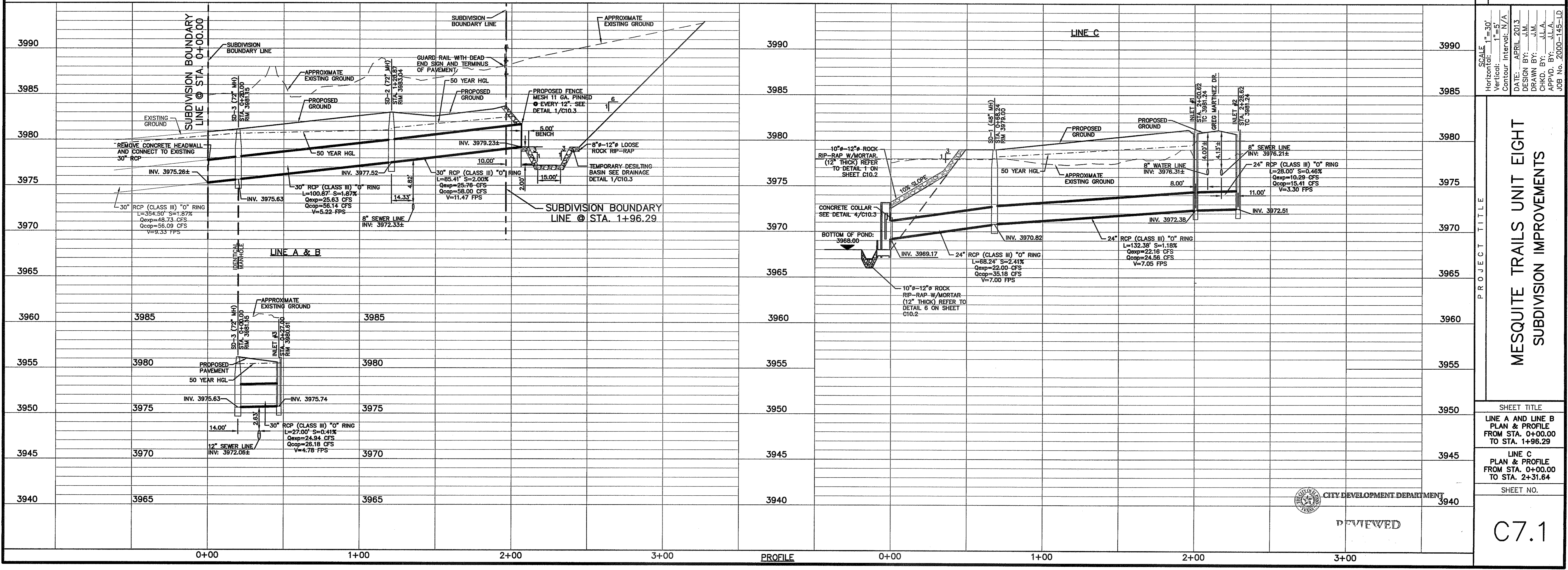
**CSA**  
engineers • architects • planners  
TEXAS REGISTERED ENGINEERING FIRM F-464  
4712 Woodrow Bann, Ste. F, El Paso, TX 79924  
Office: 915.544.5322 Fax: 915.544.5233 www.csaonline.net

ENGINEER'S SEAL  
J. L. ACARATE  
80075  
REGISTERED PROFESSIONAL ENGINEER  
NO. 11113



**LEGEND:**

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



**PROJECT TITLE**

MESQUITE TRAILS UNIT EIGHT  
SUBDIVISION IMPROVEMENTS

**SHEET TITLE**

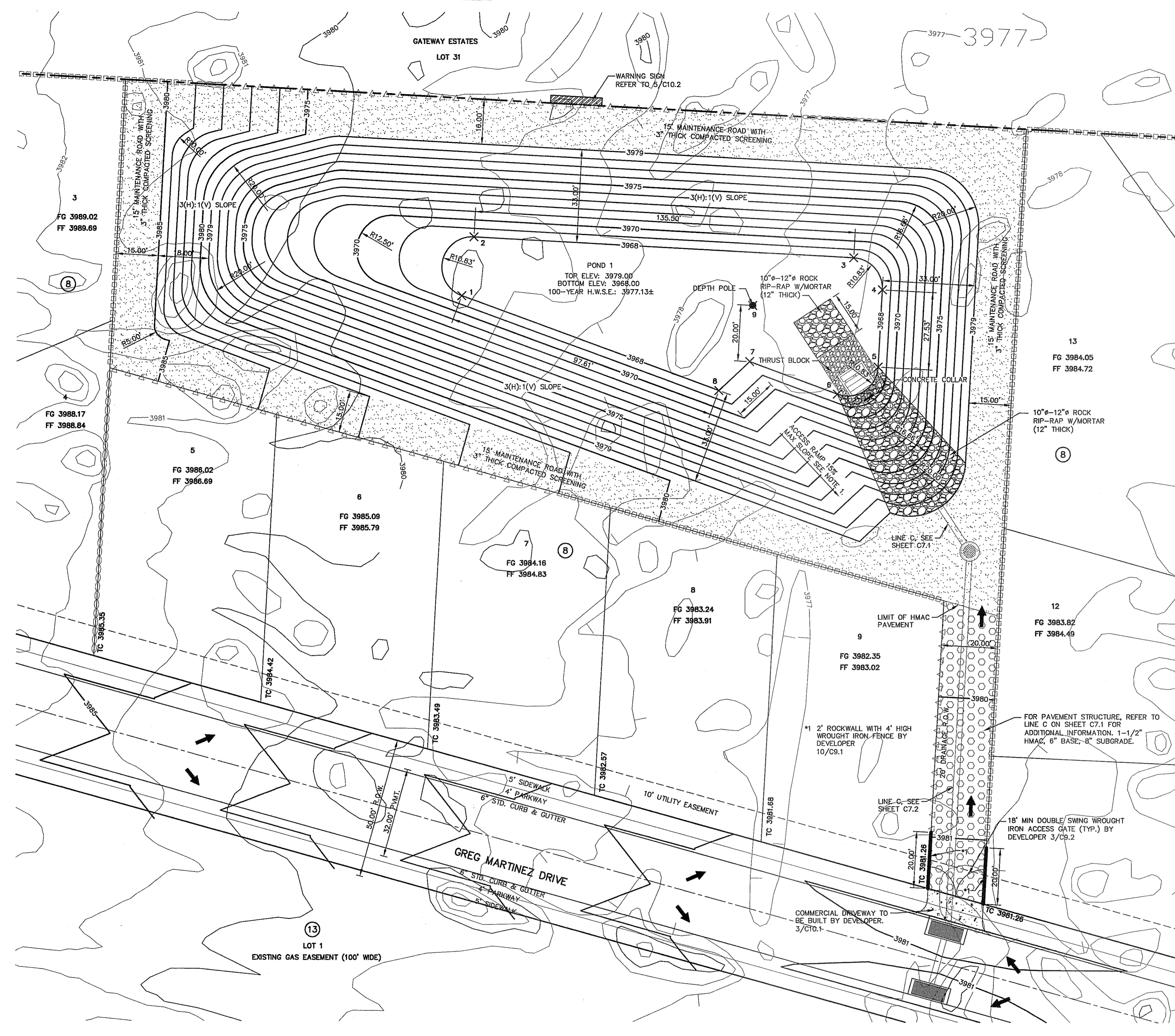
LINE A AND LINE B  
PLAN & PROFILE  
FROM STA. 0+00.00  
TO STA. 1+96.29

LINE C  
PLAN & PROFILE  
FROM STA. 0+00.00  
TO STA. 2+31.64

**SHEET NO.**

C7.1

CITY DEVELOPMENT DEPARTMENT  
REVIEWED



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

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

BEING A PORTION OF SECTION No. 16, BLOCK 79, TOWNSHIP 3, TEXAS AND PACIFIC RAILWAY COMPANY SURVEYS EL PASO, EL PASO COUNTY, TEXAS CONTAINING 16.94± ACRES

**GENERAL NOTES**

- REFERENCE SHEETS C5.1 FOR ADDITIONAL INFORMATION ON CROSS SECTIONS.
- REFERENCE SHEETS C6.3 FOR ADDITIONAL INFORMATION ON TOP OF CURB ELEVATIONS.
- A PERCOLATION TEST WITHIN THE PROPOSED POND SHALL BE PERFORMED AT THE TIME OF EXCAVATION ACCORDING TO ASTM D-5126. THIS PERCOLATION TEST SHALL BE SUBMITTED FOR REVIEW AND APPROVAL TO AND BY EPWJ STORMWATER ENGINEERING. SUBSURFACE SOIL PROFILES SHALL BE PROVIDED TO A MINIMUM OF FIVE (5') FEET BELOW THE PROPOSED POND INVERT. STORMWATER SHALL PERCOLATE WITHIN SEVENTY-TWO (72) HOURS IN ACCORDANCE TO SECTION 11.4.3 OF THE CITY OF EL PASO'S DRAINAGE DESIGN MANUAL.

**NOTES:**

- 15' WIDE POND ACCESS RAMP SHALL HAVE A MINIMUM P.I. OF 8 WITH NO LOOSE MATERIAL AND A MINIMUM 95% COMPACTION PER ASTM-D1557.
2. POND ROCKWALL/RETAINING WALL SHALL BE BUILT TO A 6' MIN. HEIGHT FROM THE HIGHEST GROUND.
3. PROPOSED ROCKWALLS & RETAINING WALL LOCATIONS SHALL BE CONSTRUCTED ACCORDING TO GRADING SECTIONS.

**LEGEND:**

- △-△-△-△-△-△-△ NEW 6' HIGH ROCKWALL
- NEW 6' HIGH RETAINING ROCKWALL (2'-3' RETAINING HEIGHT) BY DEVELOPER
- NEW 6' HIGH RETAINING ROCKWALL (3'-9' RETAINING HEIGHT) BY DEVELOPER
- ▨ 3" THICK COMPACTED SCREENING
- ▩ WARNING SIGN
- ⊠ 10'-12" ROCK RIP-RAP W/MORTAR (12" THICK)
- ◻ HMAC PAVEMENT

NEW POND #1 AREAS	
CONTOUR	ACCUMULATED VOLUME (AC.-FT.)
3979	4.015
3978	3.420
3977	2.875
3976	2.379
3975	1.929
3974	1.525
3973	1.166
3972	0.849
3971	0.576
3970	0.344
3969	0.154
3968	0.000

COORDINATE TABLE		
Point #	Northing	Easting
1	10645678.6877	457202.4137
2	10645699.6790	457206.7120
3	10645692.4673	457342.0210
4	10645681.0731	457352.2621
5	10645653.5808	457350.7968
6	10645643.9864	457336.2614
7	10645655.4125	457305.0278
8	10645645.1515	457294.0863
9	10645675.3842	457306.0920

NEW POND #1 CALCULATIONS	
QT = (ARC)/12	SILT VOLUME = 0.012 x A
QT = 2.253	SILT VOLUME = 0.138
A = 11.473	2.816 + 0.138 = 2.954 AC-FT
R = 4"	
C = 0.5894	TOTAL <sub>req</sub> = 2.954 AC-FT
QT x 25% = 0.563	
2.253 + 0.563 = 2.816 AC-FT	

NEW RETENTION BASIN #1							
BASIN NO.	REQUIRED CAPACITY (AC.-FT.)	AVAILABLE CAPACITY (AC.-FT.)	PEAK INFLOW (CFS)	OUTLET TOWER FLOW (CFS)	HIGH WATER SURFACE ELEV. (FT.)	BOTTOM ELEVATION (FT.)	FREE BOARD (FT.)
1	2.948	4.015	27.831	0	3977.15±	3968.00	1.85

NOTE:  
 1. THE HWSE REFLECTS THE ELEVATION AS REQUIRED BY THE CITY OF EL PASO.  
 HWSE = QT + SILT VOLUME + 25% EMERGENCY STORAGE  
 HWSE = 2.253 + 0.138 + 0.563 = 2.948 FT.  
 CITY DEVELOPMENT DEPARTMENT  
 CONTOUR 3979, ACCUMULATED VOLUME = 4.015 AC-FT  
 CONTOUR 3978, ACCUMULATED VOLUME = 3.420 AC-FT  
 HIGH WATER SURFACE ELEVATION = 3977.15±

**POND DESIGN PLAN**  
 SCALE: 1" = 20'

REFERENCES - BENCHMARKS  
 EXISTING CITY MONUMENT ELEVATION=403.10 FEET (CITY DATUM)  
 LOCATED AT THE CENTERLINE INTERSECTION OF  
 PAVED 4' WIDE DRIVE AND PAVED DRIVE DRIVE

ENGINEER'S SEAL

SCALE  
 Horizontal: 1"=20'  
 Vertical: N/A  
 Contour Interval: N/A

DESIGN BY: J.M.  
 DATE: APRIL 2013  
 DRAWN BY: J.M.  
 CHKD. BY: J.L.A.  
 APPVD. BY: J.L.A.  
 JOB No. 2000-145-ID

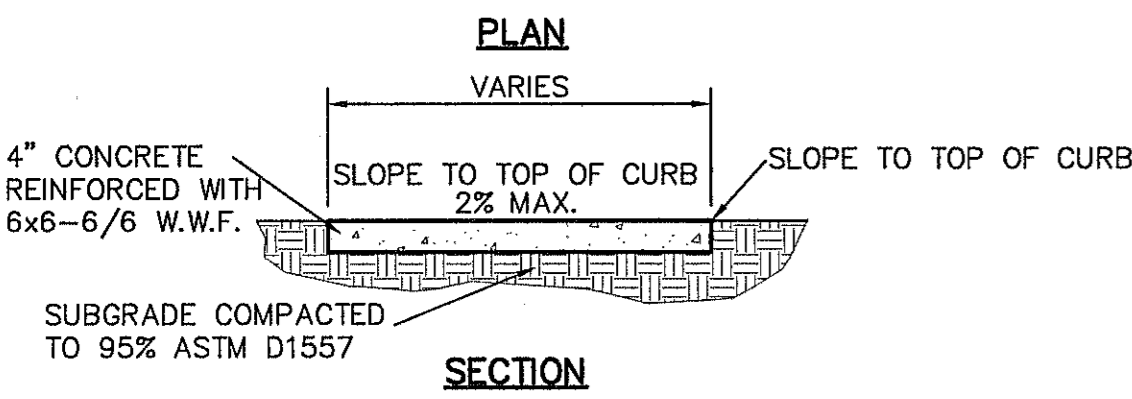
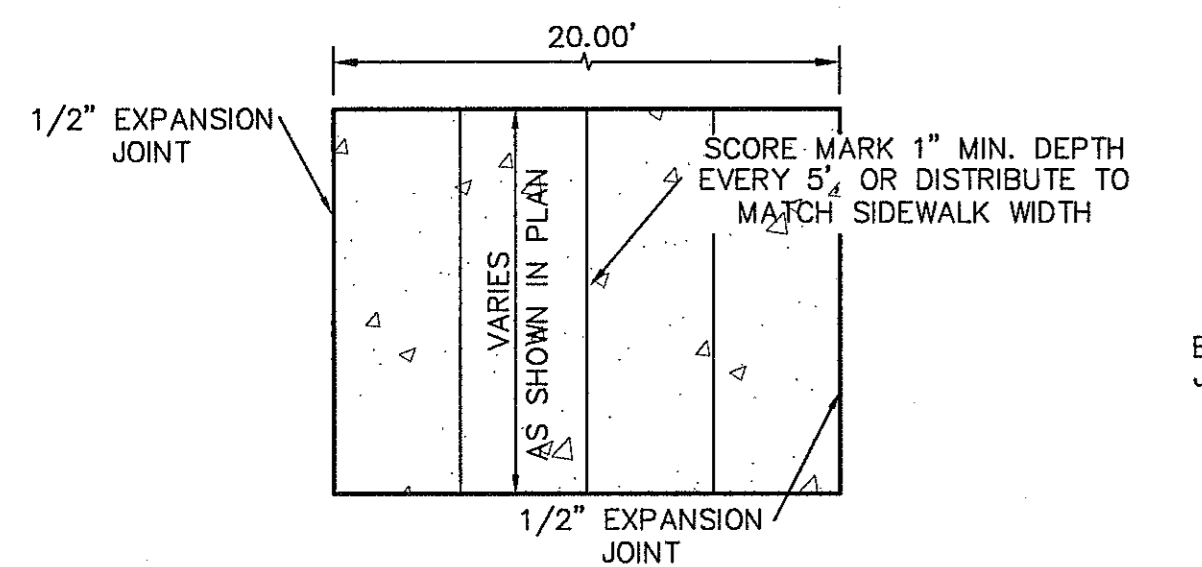
PROJECT TITLE  
**MESQUITE TRAILS UNIT EIGHT  
 SUBDIVISION IMPROVEMENTS**

SHEET TITLE  
**POND DESIGN PLAN**

SHEET NO.  
**C8.1**

REVISIONS  
 DATE  
 BY

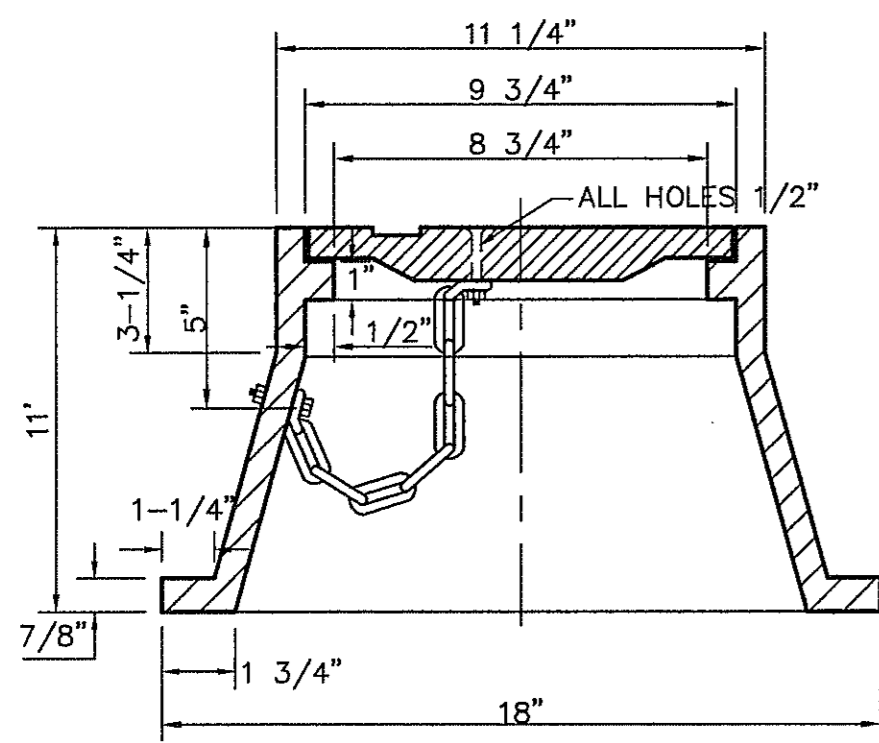
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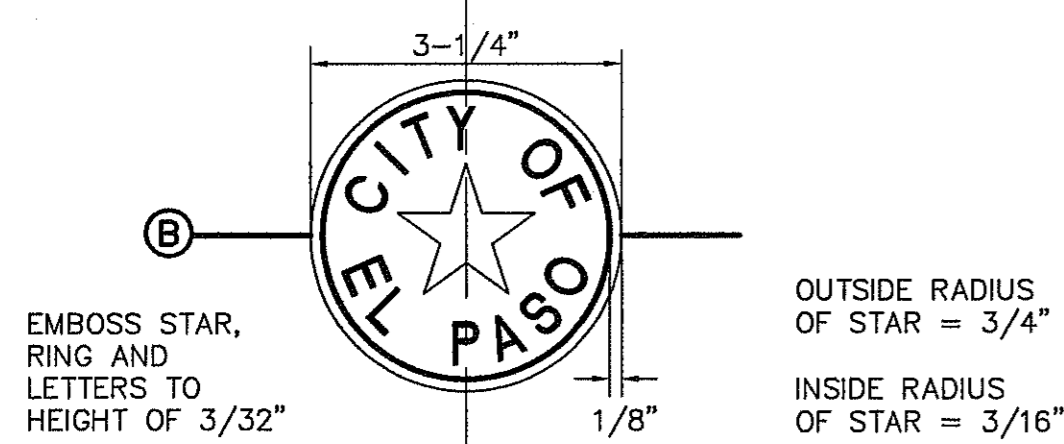
**SIDEWALK NOTES:**

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" PREMOULDED 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.

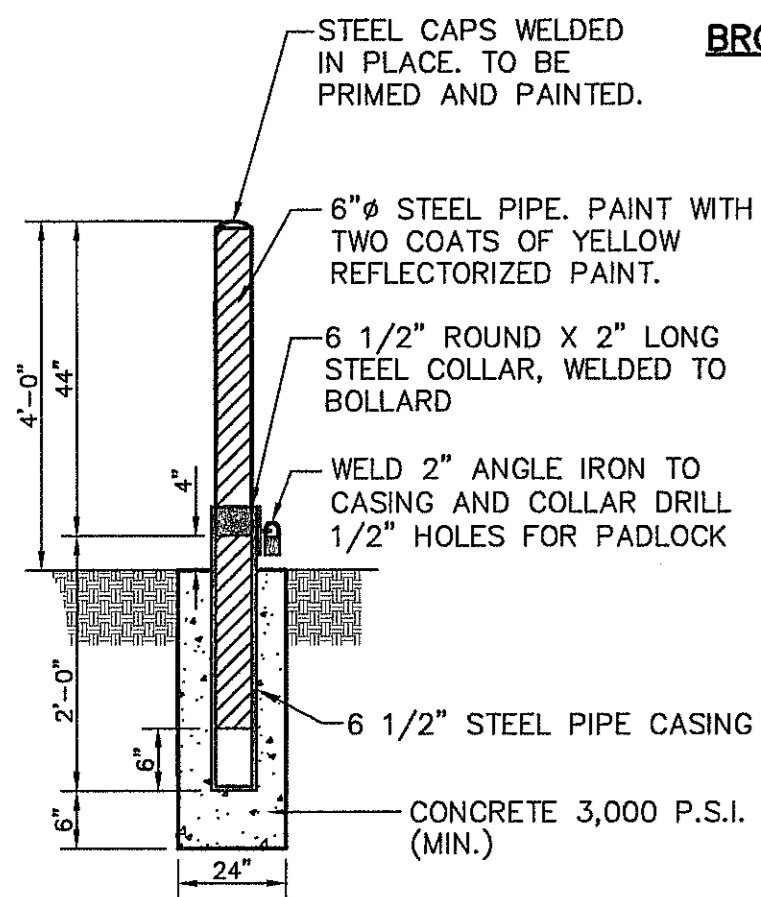
1 SECTION-SIDEWALK/SLAB  
SCALE: 1/2"=1'-0"



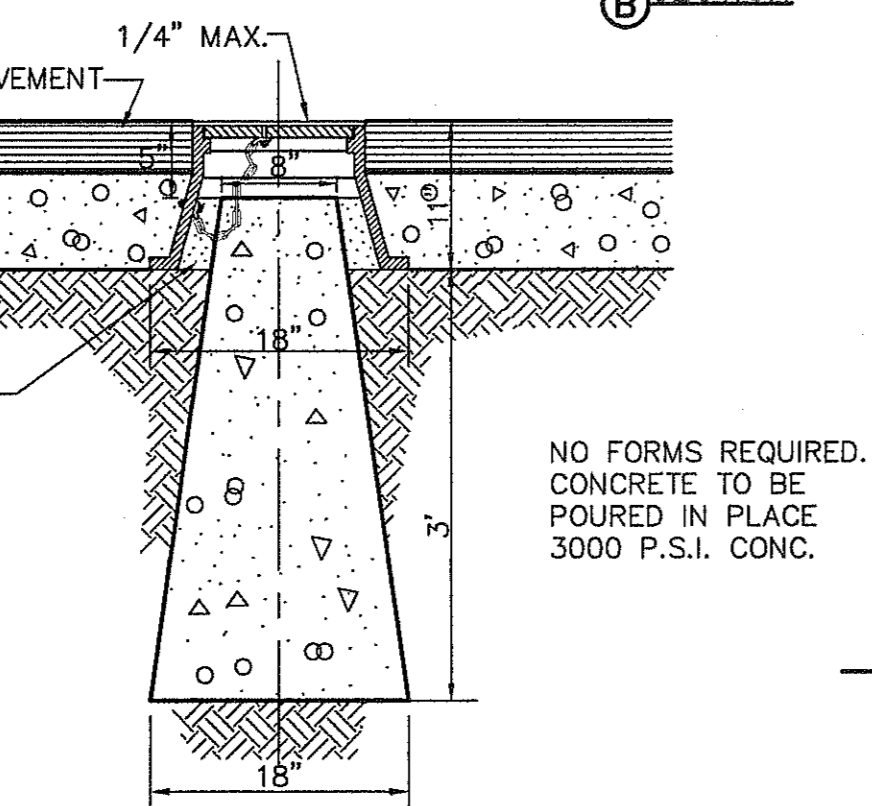
FRAME SECTION



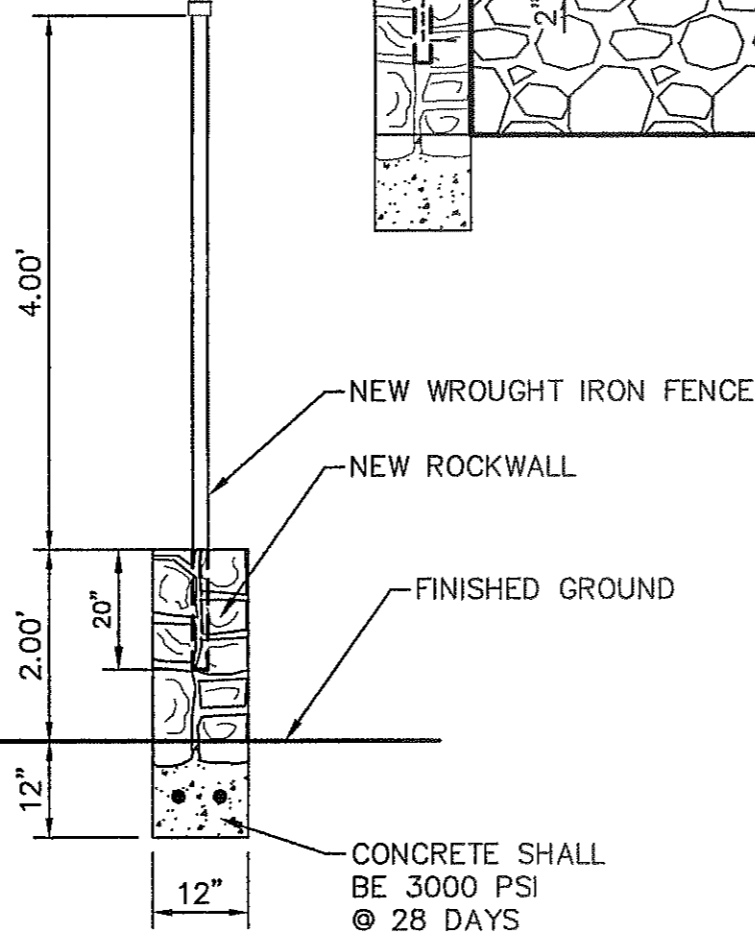
BRONZE MONUMENT CAP



9 CITY SURVEY MONUMENT DETAILS  
SCALE: N.T.S.

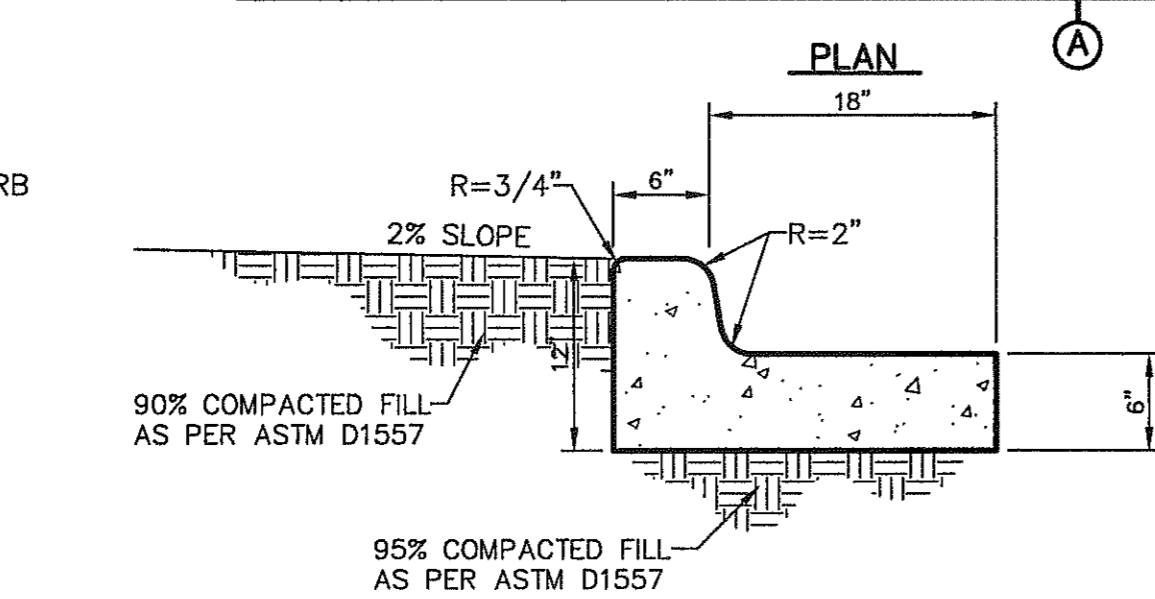
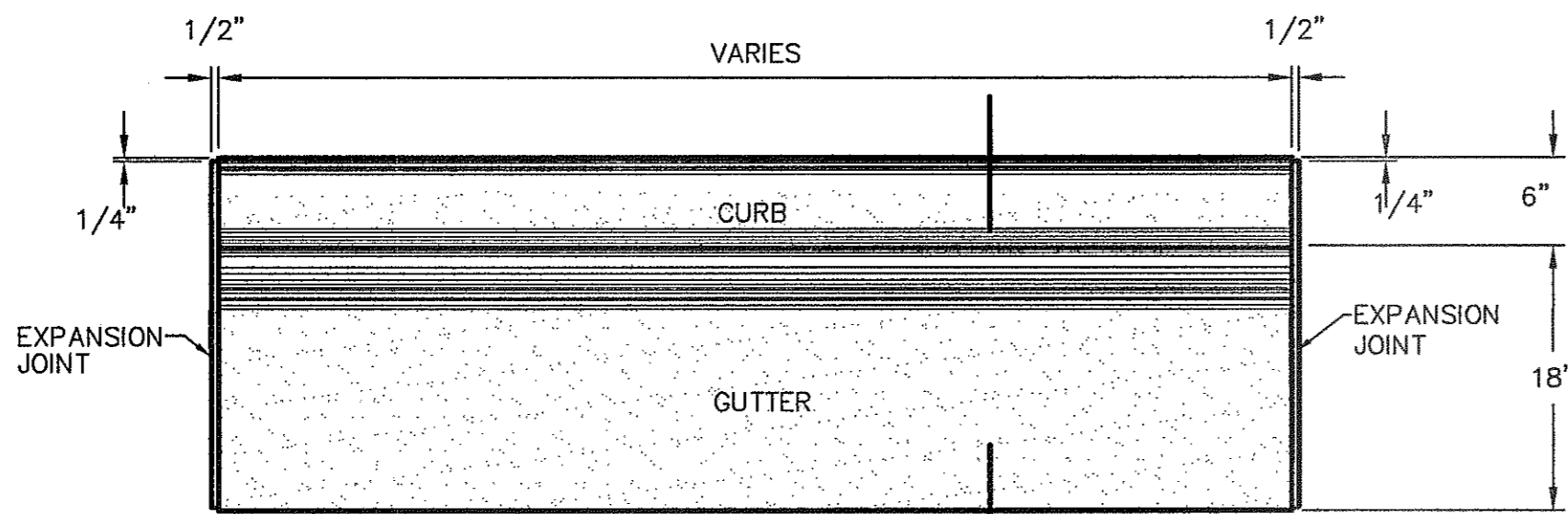


10 TYPICAL ROCKWALL W/ WROUGHT IRON FENCE DETAILS  
SCALE: 1/2"=1'-0"



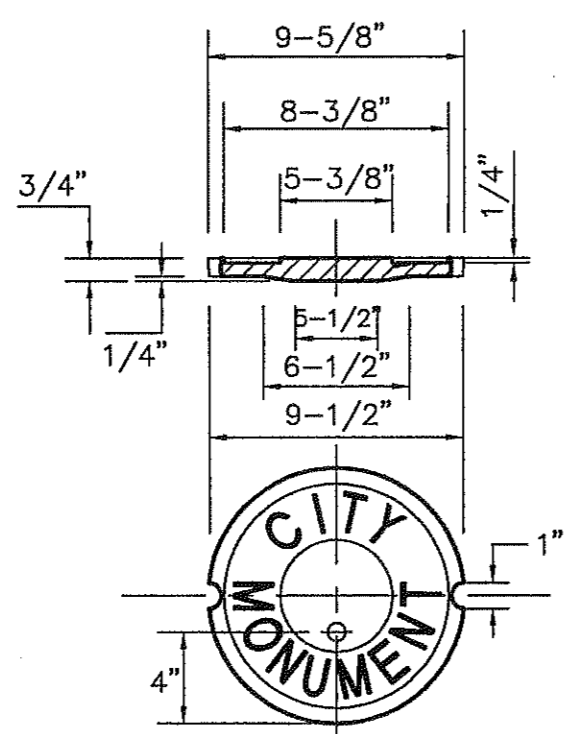
**KEY NOTES**

1. 3" x 3" x 3/16" SQUARE STEEL TUBING
  2. 2" x 1" x 14 GA. RECTANGULAR STEEL TUBING
  3. 1 1/2" x 1/2" x 16 GA. RECTANGULAR STEEL TUBING
  4. STEEL CAPS TO BE COMPLETELY WELDED.
  5. 2" x 1" x 10 GA. RECTANGULAR STEEL TUBING
  6. 1' x 1' DEEP 3000 PSI CONCRETE POST FOOTING
  7. 5" x 5" x 3/8" SQUARE STEEL SLEEVE W/7" x 7" x 3/8" BASE PLATE
- \* ALL ASSEMBLY TO HAVE COMPLETE WELDS FOR RAILS AND SLATS ONTO EACH OTHER AND POST.



- 2 CURB & GUTTER DETAIL  
SCALE: 1"=1'-0"
- NOTES:
1. CONCRETE SHALL BE 3,000 P.S.I. MIN.
  2. DUMMY JOINT REQUIRED AT 10' O.C. FOR CURB & GUTTER, AND 5' O.C. FOR SIDEWALK
  3. EXPANSION MATERIAL REQUIRED AT CURB RETURNS AND AT 20' ON CENTER FOR SIDEWALKS WITH 1/2" PREMOULDED ASPHALT IMPREGNATED EXPANSION MATERIAL OR EQUAL.
  4. EXPANSION JOINTS REQUIRED AT 50' O.C. WHEN FORMING FOR CURBS.

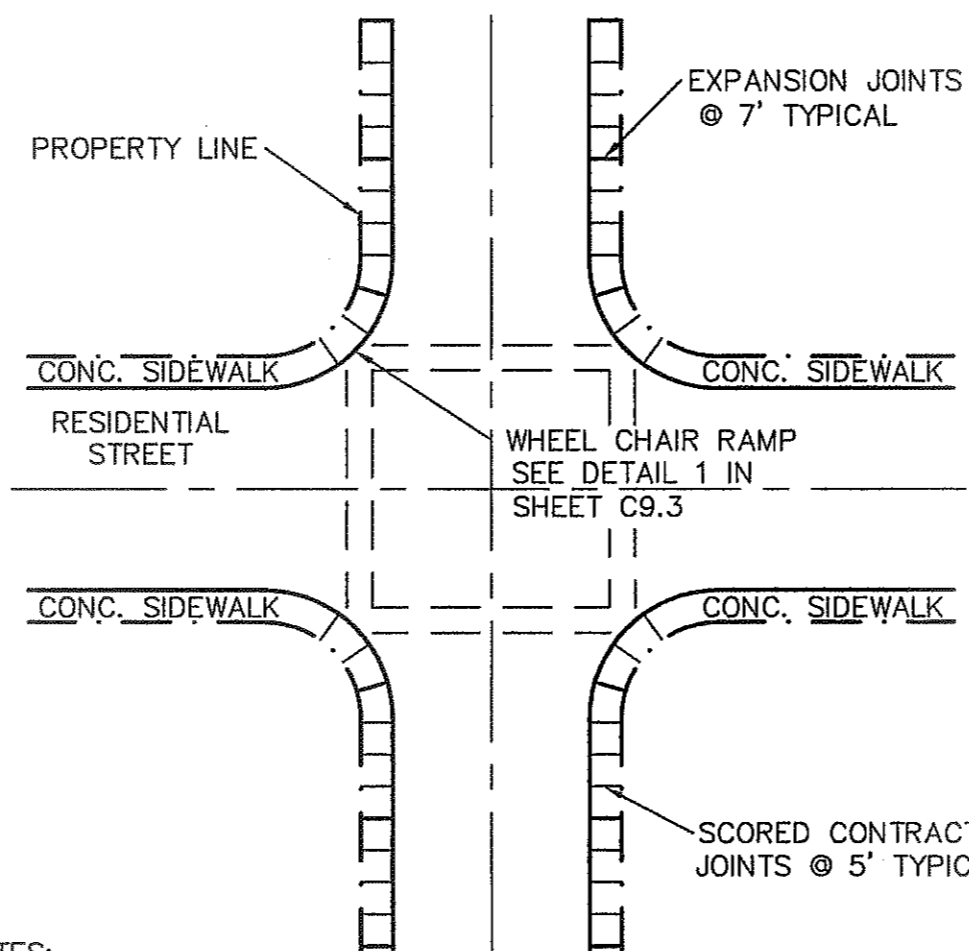
2 CURB & GUTTER DETAIL  
SCALE: 1"=1'-0"



5 WHEELCHAIR RAMP STREET PLAN  
SCALE: 1"=30'-0"

**NOTES:**

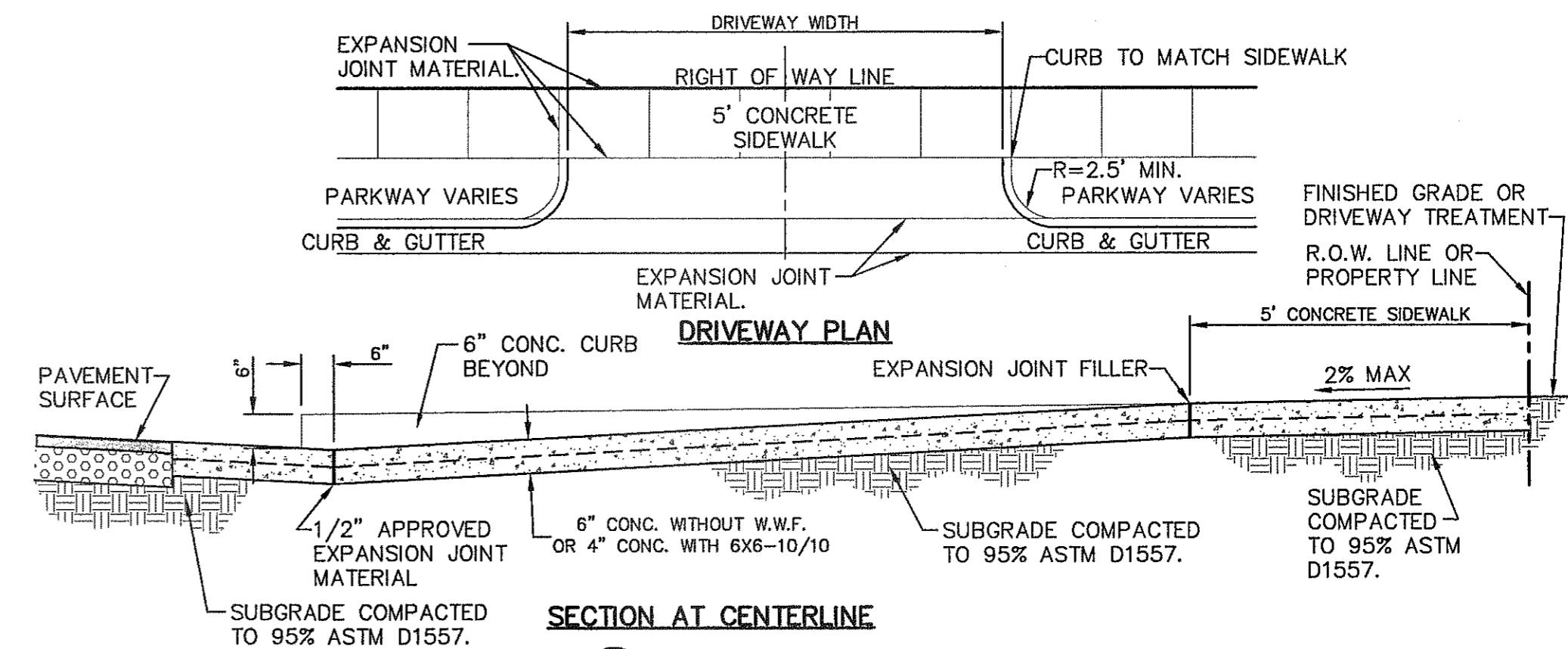
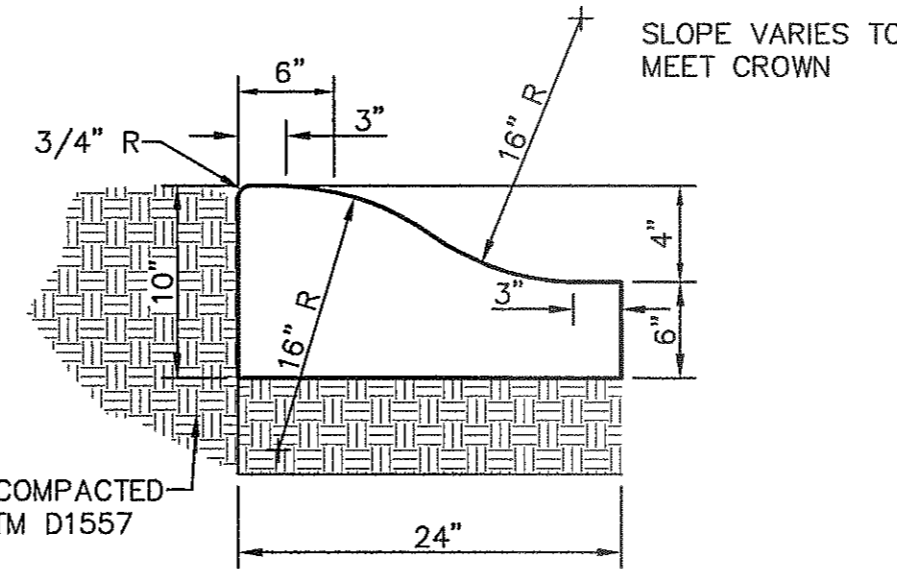
1. RAMPS MAY BE PLACED AS SUGGESTED, HOWEVER EXISTING LIGHT POLES, FIRE HYDRANTS, DROP INLETS, ETC., MAY AFFECT PLACEMENT.
2. THE CONCRETE SURFACE SHALL HAVE A ROUGH, NONSKID TYPE FINISH.
3. CONSTRUCTION METHODS SHALL CONFORM WITH THE CITY OF EL PASO SPECIFICATIONS.
4. ALL PARKING AND PAVEMENT MARKINGS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



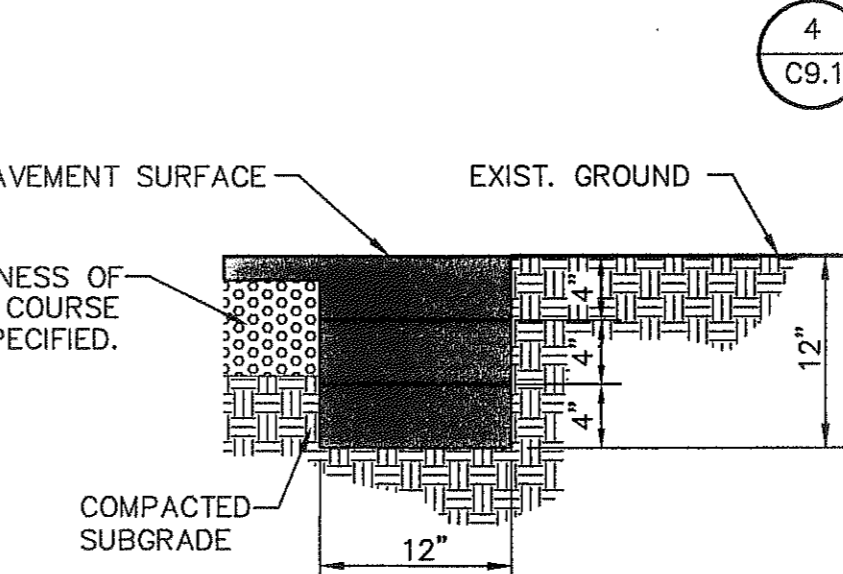
5 WHEELCHAIR RAMP STREET PLAN  
SCALE: 1"=30'-0"

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" PREMOULDED 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 7' O.C.
6. \* FOR CUL-DE-SAC AND HEEL ONLY.

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

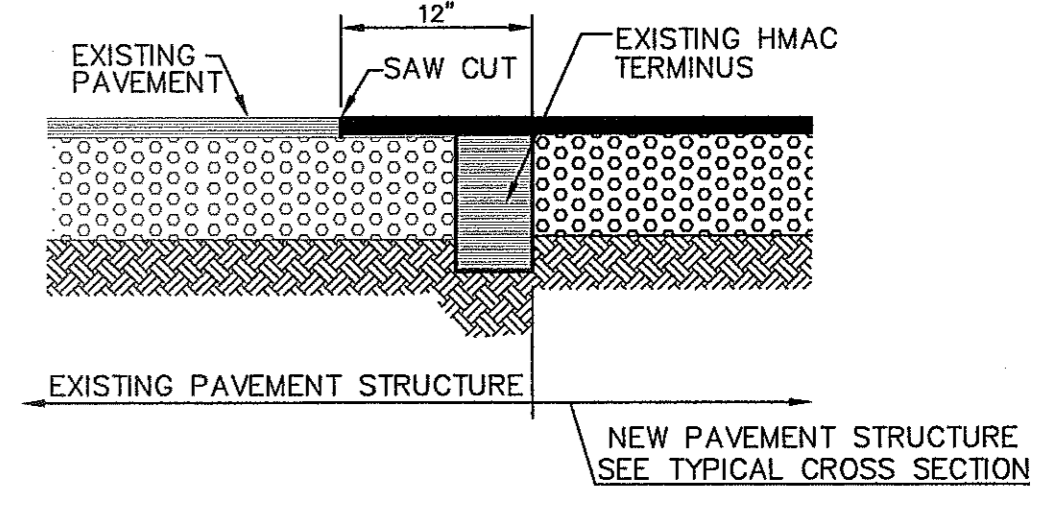


4 TYPICAL DRIVEWAY DETAIL  
SCALE: N.T.S.

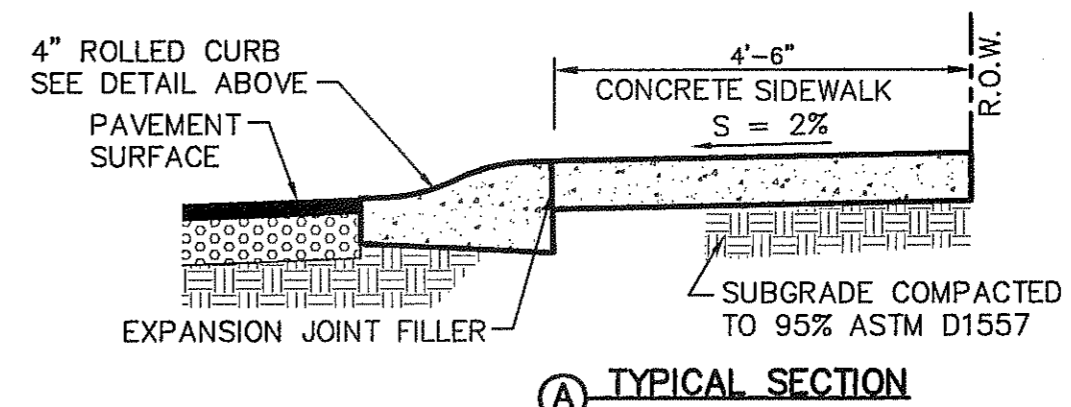
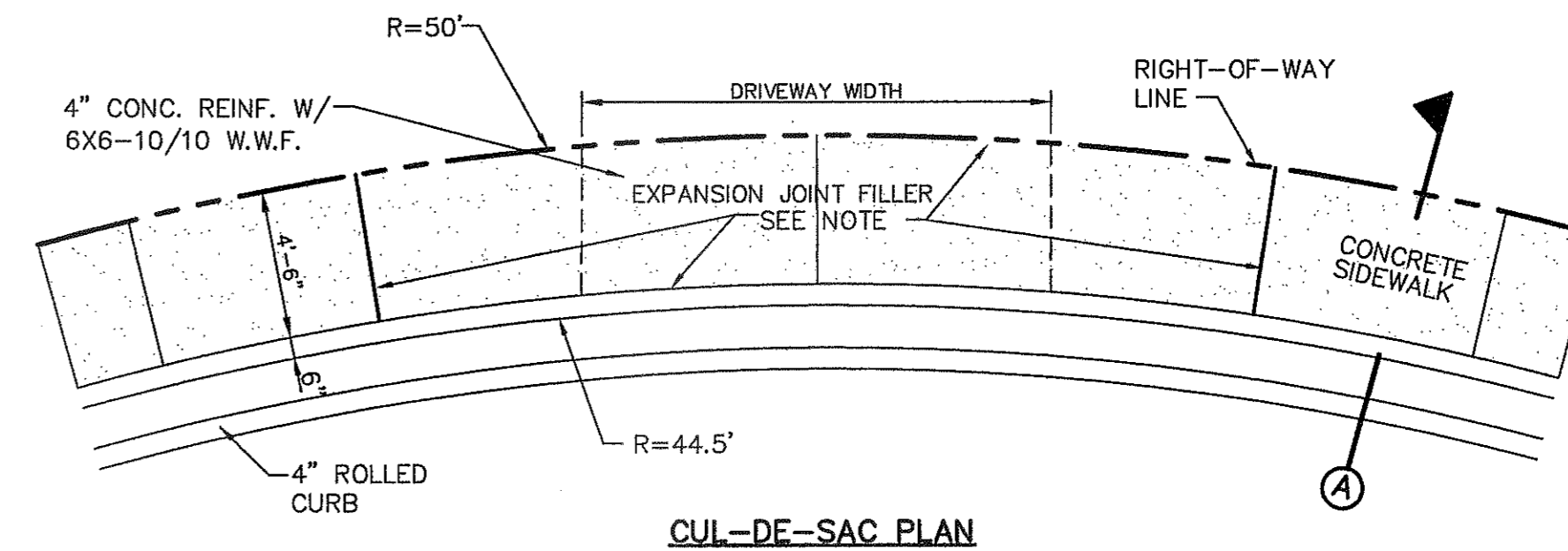
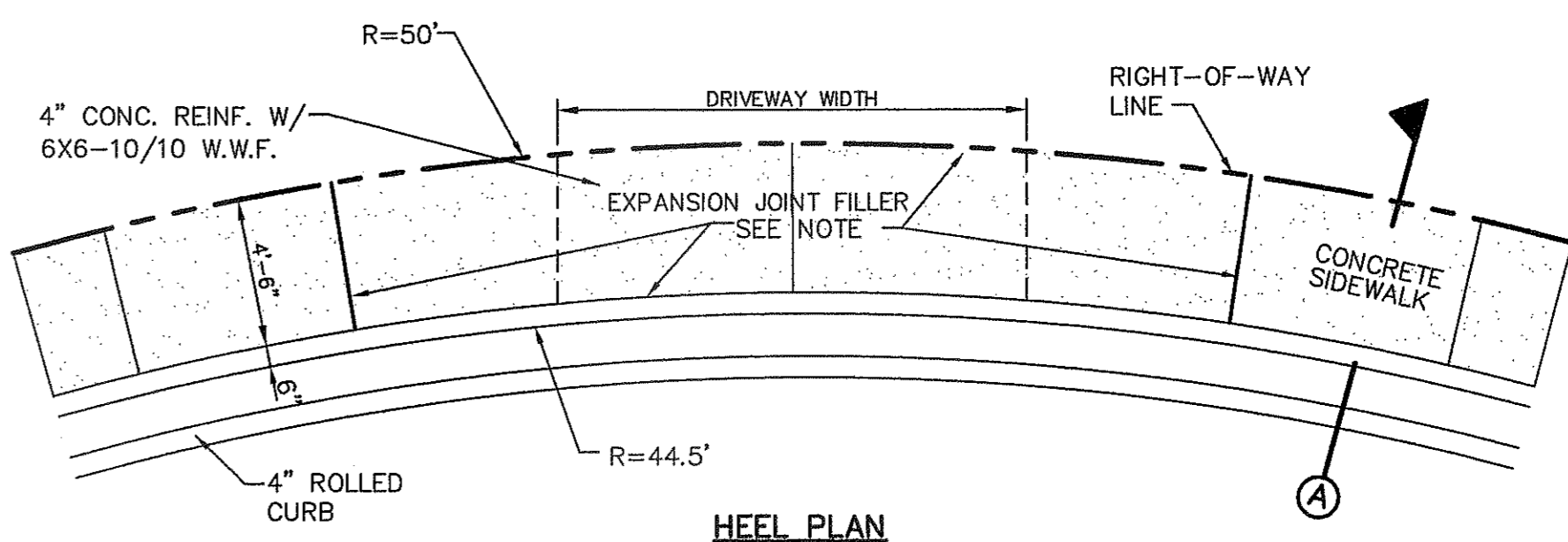


- NOTE:
- TERMINUS MUST BE CONSTRUCTED IN 4" LIFTS. FINAL LIFT MUST BE PLACED WITH FINAL PAVEMENT COURSE.

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



7 TYPICAL PAVEMENT JOINT SECTION  
SCALE: N.T.S.

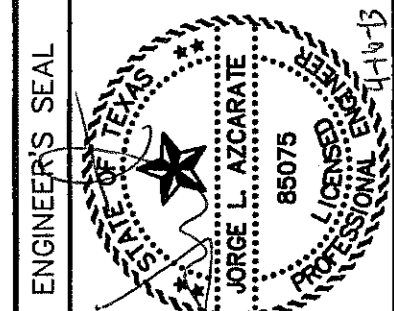


- NOTE: EXPANSION JOINT FILLER SHALL CONSIST OF 1/2" BITUMINOUS TYPE PREFORMED (AASHTO M-33)

11 HEEL/CUL-DE-SAC DRIVEWAY DETAIL  
SCALE: N.T.S.

REFERENCES - BENCHMARKS	BY
EXISTING CITY MONUMENT ELEVATION=403.10 FEET (CITY DATUM) LOCATED AT THE CENTERLINE INTERSECTION OF PASEO ALBUQUERQUE AND PASEO UNO DRIVE	REVISIONS
DATE	DATE

**CSA**  
engineers • architects • planners  
TEXAS REGISTERED ENGINEERING FIRM F-4694  
4712 Woodrow Bess, Ste. F El Paso, TX 79924  
Office: 915.544.5232 Fax: 915.544.5233 www.csaonline.com



SCALE	N/A
Horizontal:	N/A
Vertical:	N/A
Contour Interval:	N/A
DATE:	APRIL 2013
DESIGN BY:	J.M.
DRAWN BY:	J.L.A.
CHKD. BY:	J.L.A.
APPD. BY:	J.L.A.
JOB NO.	2000-145-LD

PROJECT TITLE  
**MESQUITE TRAILS UNIT EIGHT  
SUBDIVISION IMPROVEMENTS**

SHEET TITLE

STANDARD DETAILS

(SHEET 1 OF 3)

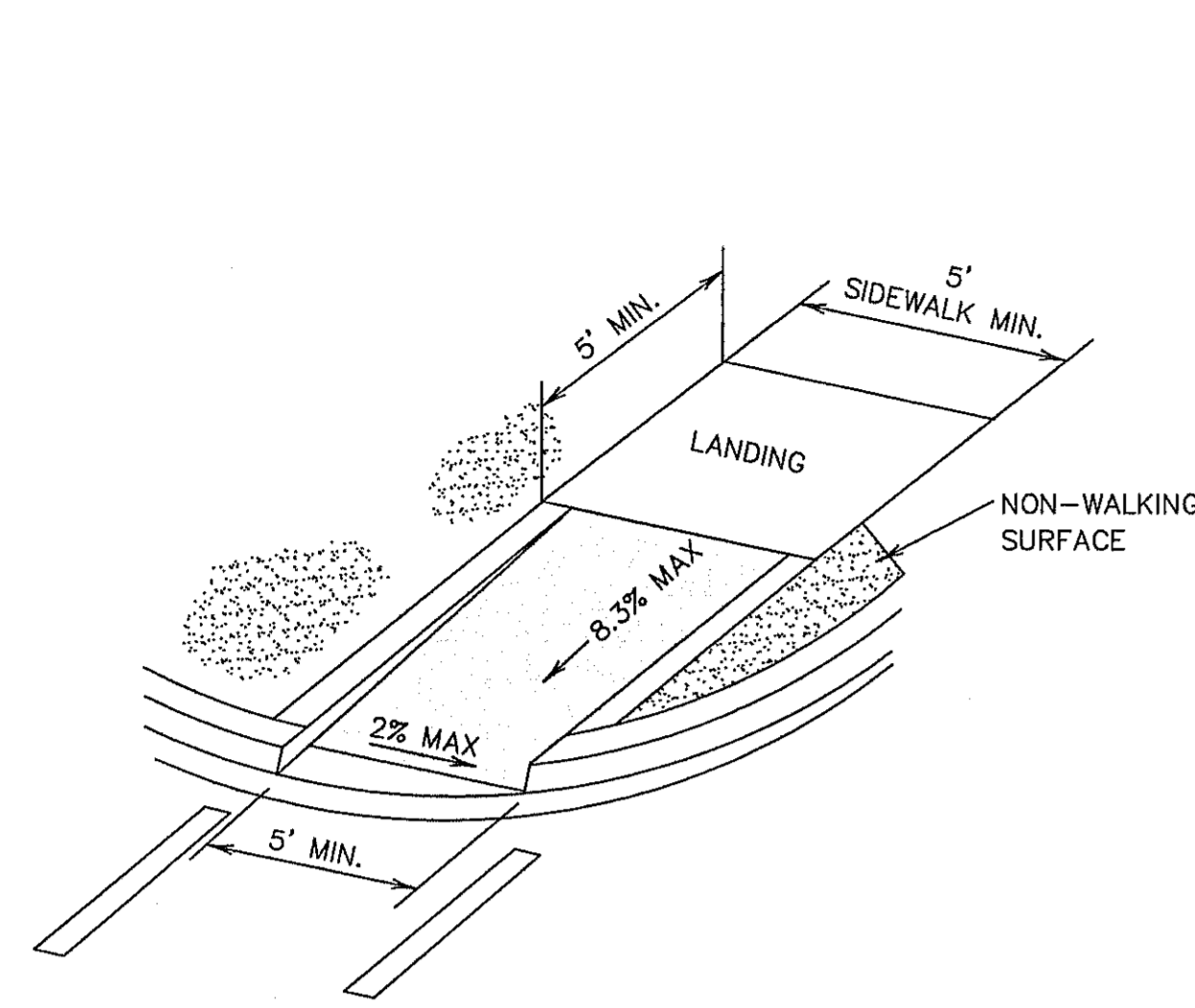
SHEET NO.

C9.1

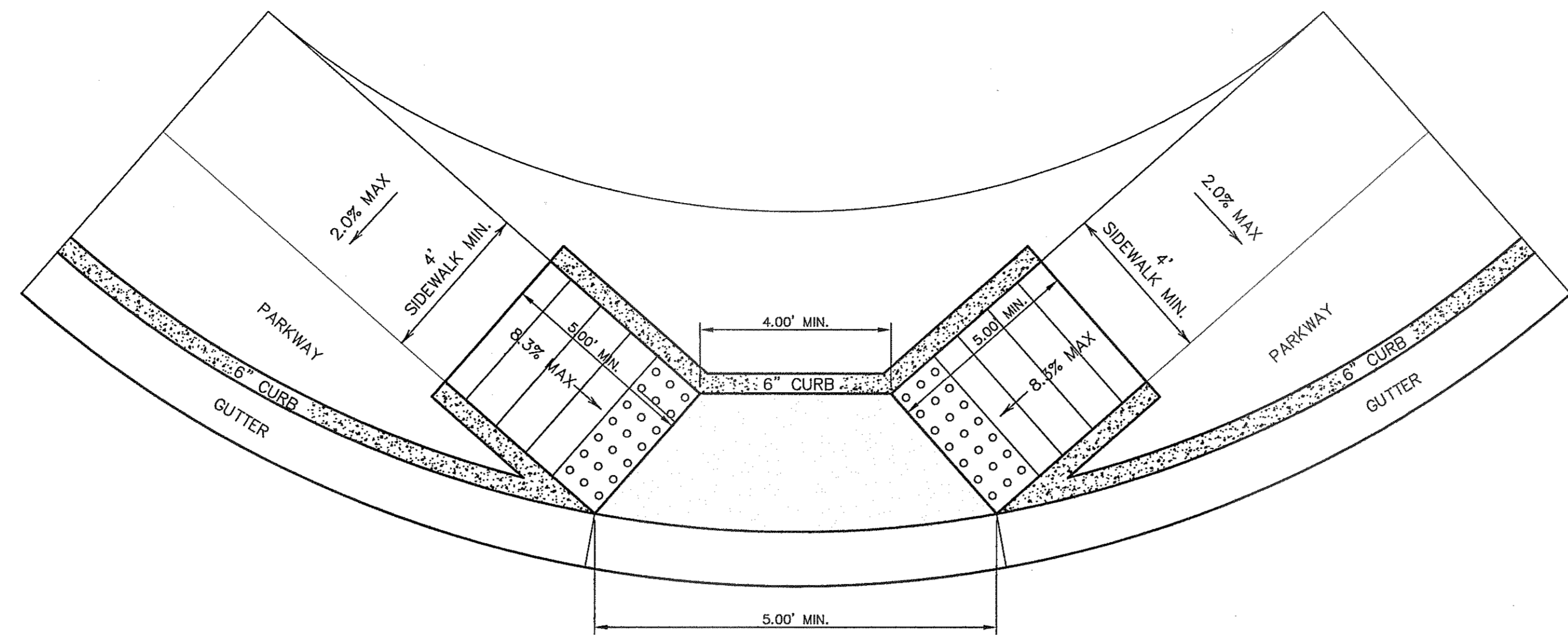
REVIEWED

CITY DEVELOPMENT DEPARTMENT

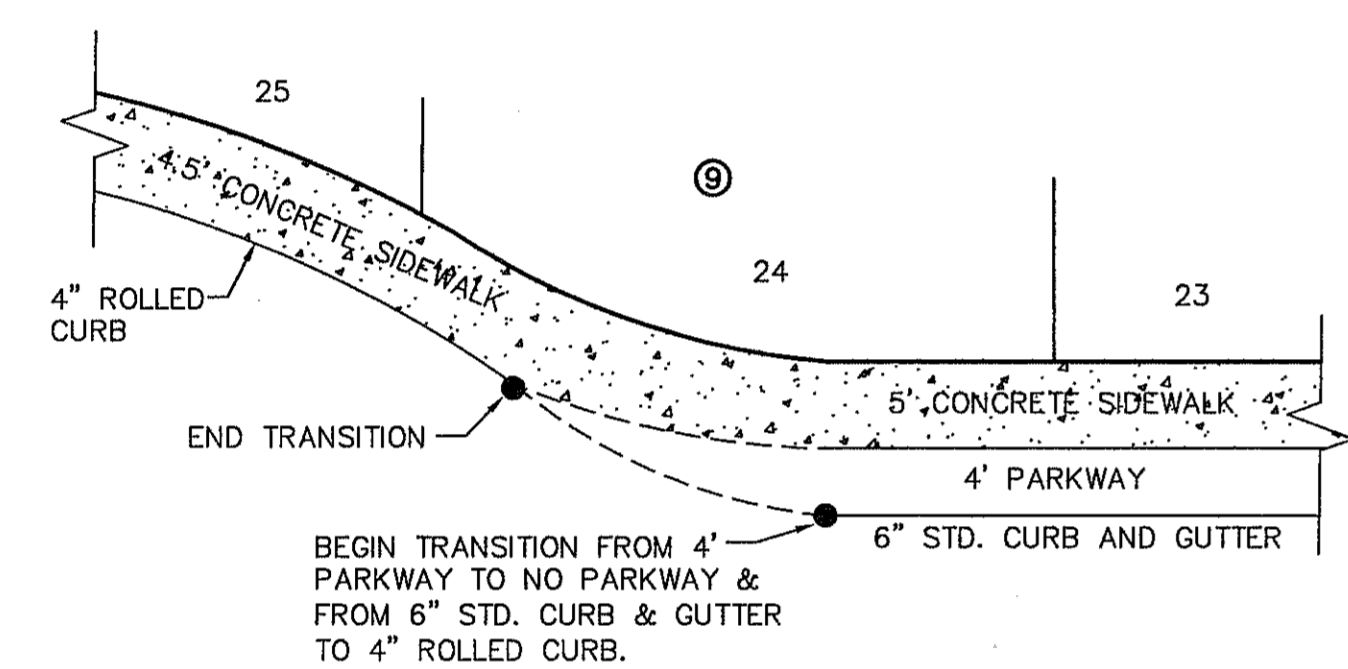




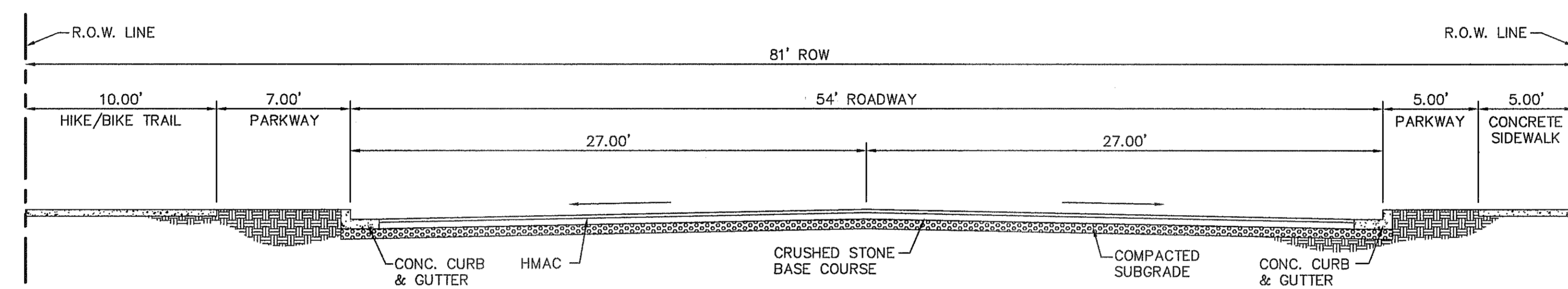
1 DIRECTIONAL RAMP WITHIN RADIUS (TYPE IV)  
C9.3 SCALE: N.T.S.



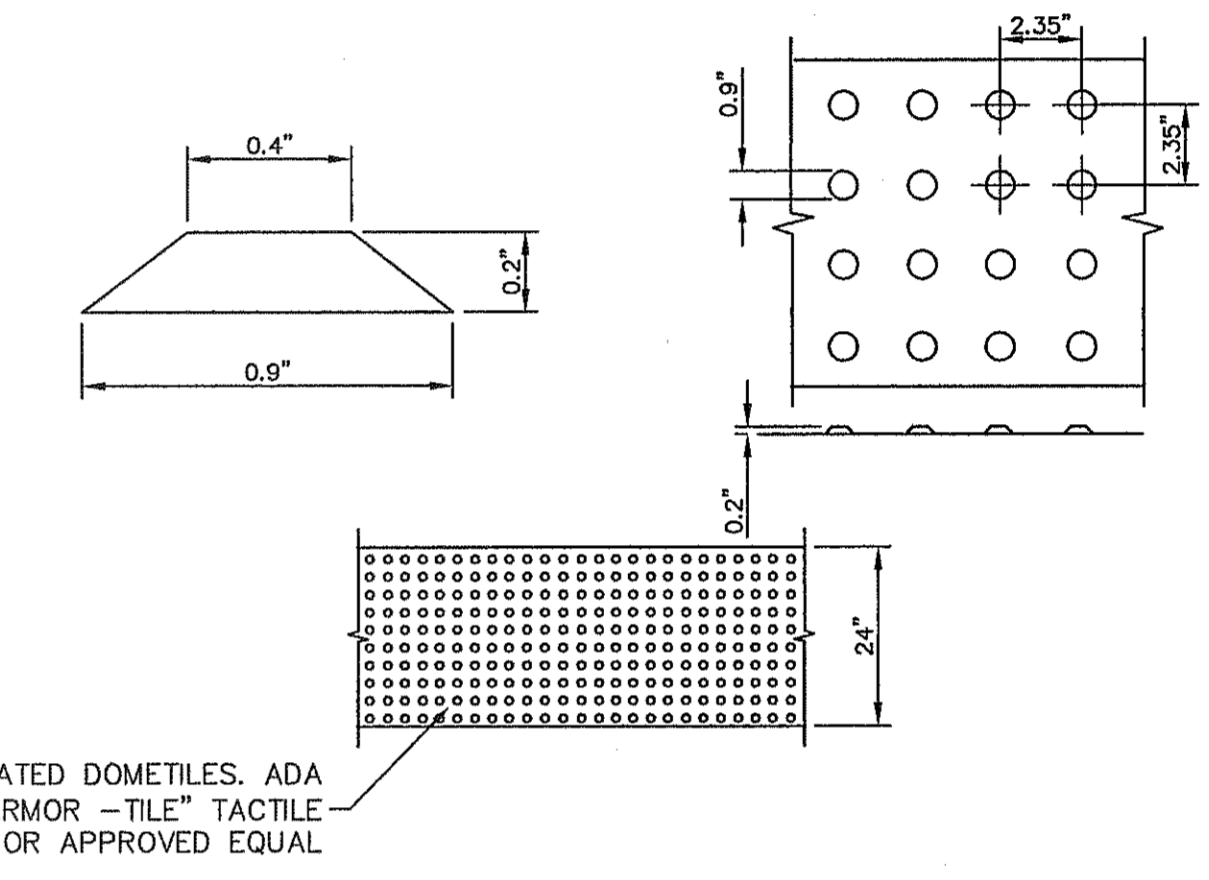
2 DIRECTIONAL RAMP @ INTERSECTION  
C9.3 SCALE: N.T.S.



3 TYPICAL HEEL/CUL-DE-SAC SIDEWALK TRANSITION  
C9.3 SCALE: N.T.S.



5 TYPICAL 81' ROW STREET SECTION DETAIL  
C9.3 SCALE: 1"=5'

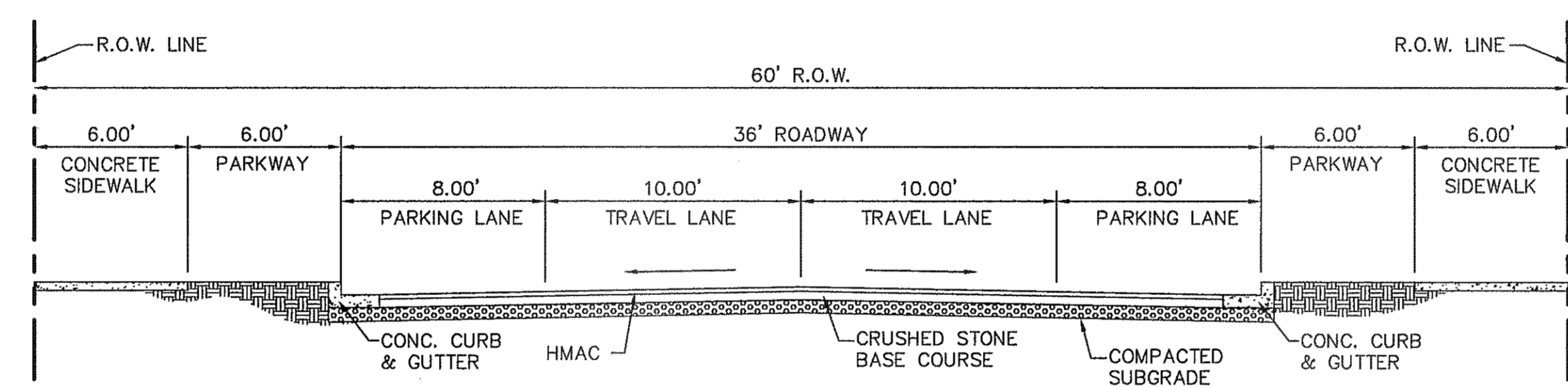


DOME SIZE AND SPACING. TRUNCATED DOMES SHALL HAVE A DIAMETER OF NOMINAL 0.9 INCHES (23 mm) AT THE BOTTOM, A DIAMETER OF 0.4 INCH (10 mm) AT THE TOP, A HEIGHT OF NOMINAL 0.2 INCHES (5 mm), AND A CENTER-TO-CENTER SPACING OF NOMINAL 2.35 INCHES (60 mm) MEASURED ALONG ONE SIDE OF A SQUARE ARRANGEMENT.

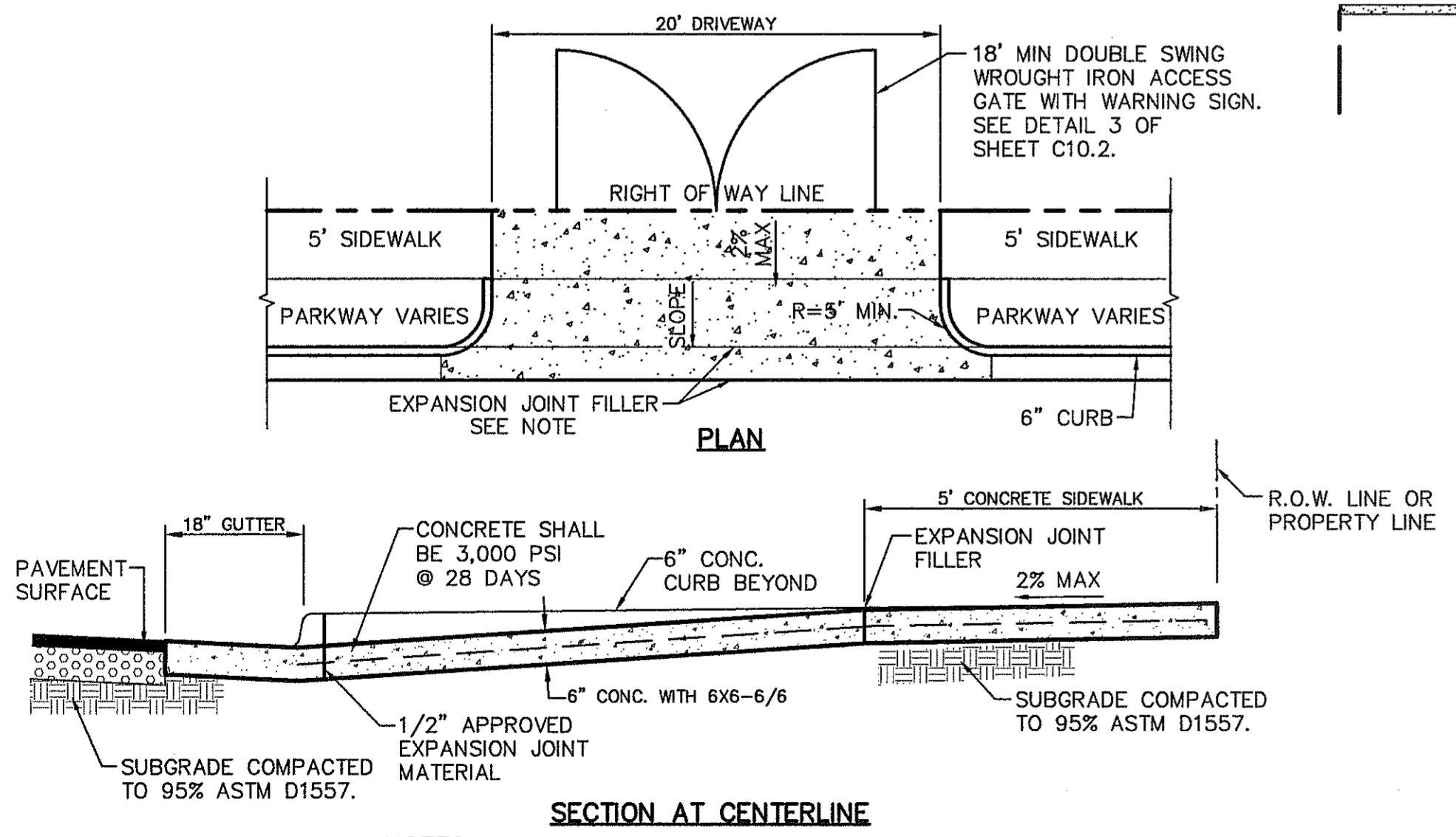
DOME ALIGNMENT. DOMES SHALL BE ALIGNED ON A SQUARE GRID IN THE PREDOMINANT DIRECTION OF TRAVEL TO PERMIT WHEELS TO ROLL BETWEEN DOMES. DETECTABLE WARNING SURFACES SHALL EXTEND 24 INCHES (610 mm) MINIMUM IN THE DIRECTION OF TRAVEL AND THE FULL WIDTH OF THE CURB RAMP, LANDING, OR BLENDED TRANSITION.

CONTRAST. THERE SHALL BE A MINIMUM OF 70 PERCENT CONTRAST IN LIGHT REFLECTANCE BETWEEN THE DETECTABLE WARNING AND AN ADJOINING SURFACE, OR THE DETECTABLE WARNING SHALL BE "RED BRICK" COLOR, UNLESS OTHERWISE DIRECTED BY THE OWNER. THE MATERIAL USED TO PROVIDE VISUAL CONTRAST SHALL BE AN INTEGRAL PART OF THE DETECTABLE WARNING SURFACE. CONTRAST SHALL BE PROVIDED BY PLACING AND MIXING TINT IN THE PLASTIC CONCRETE USED FOR THE DETECTABLE WARNING SURFACE. NO PAINTING OF SURFACE SHALL BE PERMITTED.

8 TRUNCATED DOME SIZE AND SPACING  
C9.3 SCALE: N.T.S.

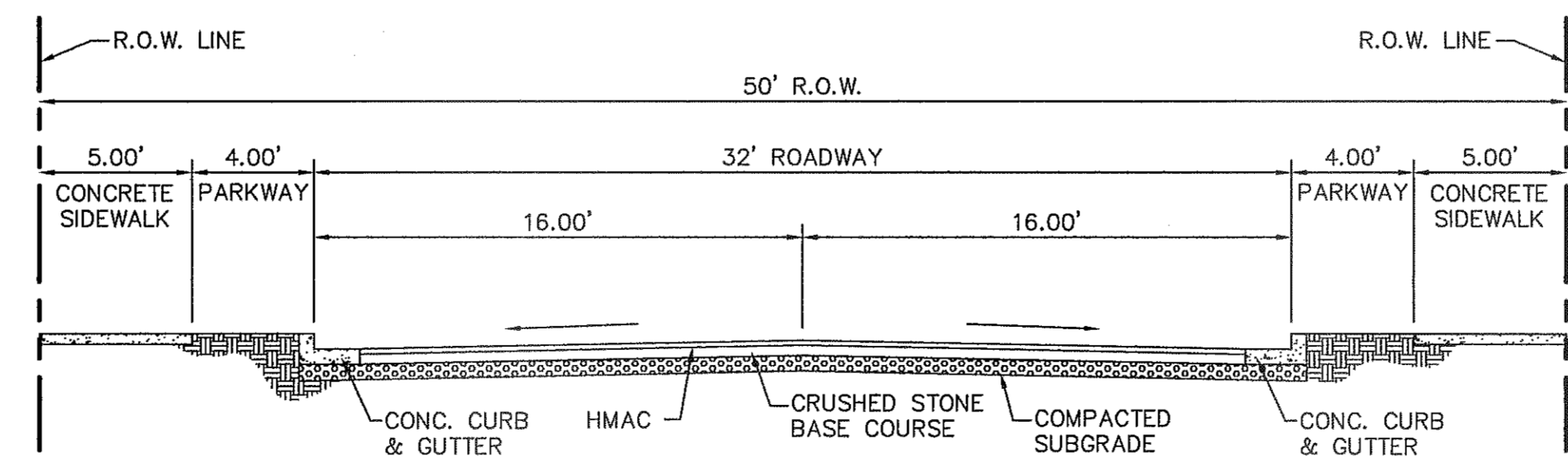


6 TYPICAL 60' ROW STREET SECTION DETAIL  
C9.3 SCALE: 1"=5'



NOTES:  
1. DRIVEWAY SLOPES MUST BE TEN (10%) PERCENT MAXIMUM SLOPE FROM GUTTER FOR THE FIRST TWELVE (12') FEET, FOURTEEN (14%) PERCENT MAXIMUM THEREAFTER.

4 COMMERCIAL DRIVEWAY DETAIL  
C9.3 SCALE: N.T.S.



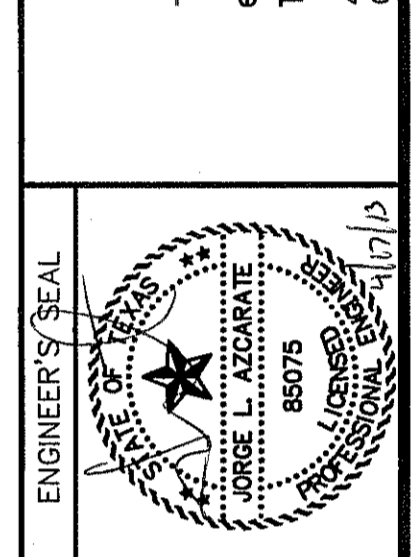
7 TYPICAL 50' ROW STREET SECTION DETAIL  
C9.3 SCALE: 1"=5'

GENERAL NOTES:  
LEGEND

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 5'. 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).
11. ALL ADA RAMPS TO BE BUILT BY DEVELOPER.

REFERENCES - BENCHMARKS	BY
EXISTING CITY MONUMENT	
REARVIEW MIRROR FEET (CITY CENTER)	
PASADENA	
PASADENA	
PASADENA	
DATE	REVISIONS

**CEA**  
engineers • architects • planners  
TEXAS REGISTERED ENGINEERING FIRM F-464  
4712 Woodrow Biers, Ste. F, El Paso, TX 79924  
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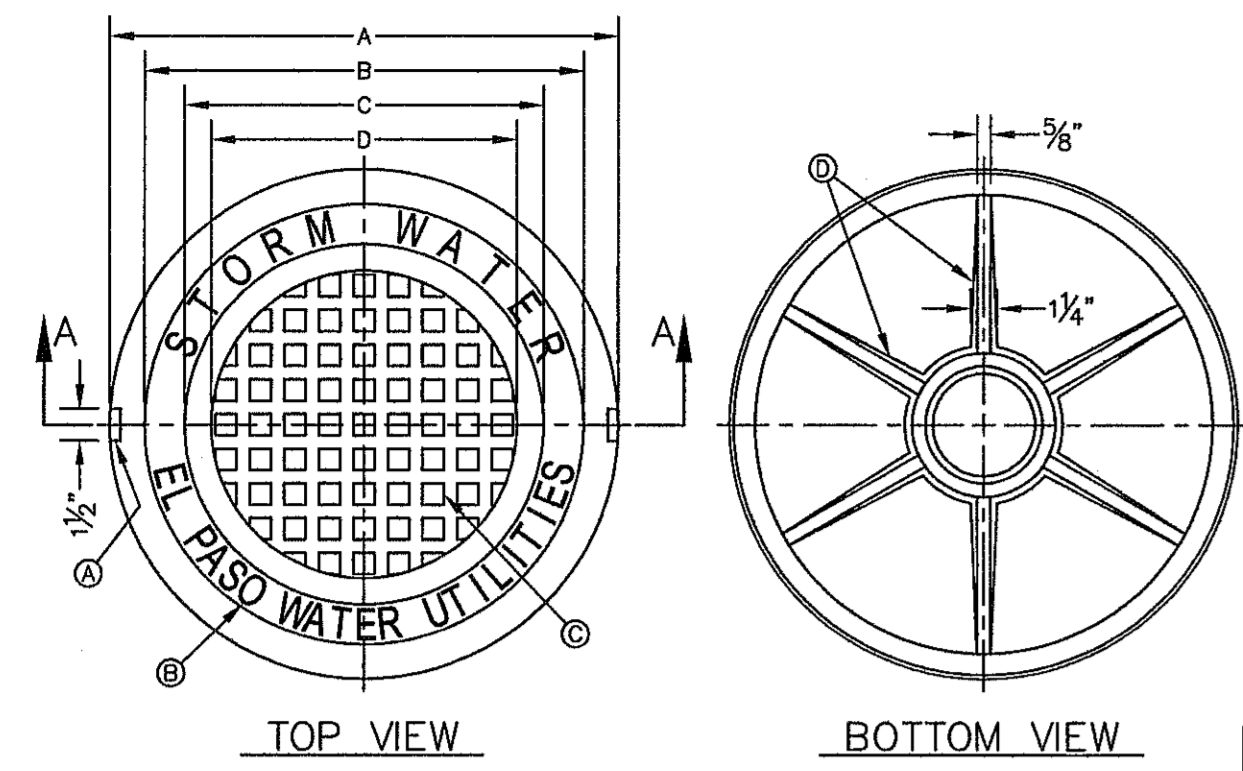
SCALE	N/A
Horizontal	N/A
Vertical	N/A
Contour Interval	N/A
DATE	APRIL 2013
DESIGN BY	J.M.
DRAWN BY	J.L.A.
CHECKED BY	J.L.A.
APP'D. BY	J.L.A.
JOB No.	2000-145-LD

PROJECT TITLE  
**MESQUITE TRAILS UNIT EIGHT  
SUBDIVISION IMPROVEMENTS**

SHEET TITLE  
STANDARD DETAILS  
(SHEET 3 OF 3)  
SHEET NO.

CITY DEVELOPMENT DEPARTMENT  
**REVIEWED**

C9.3

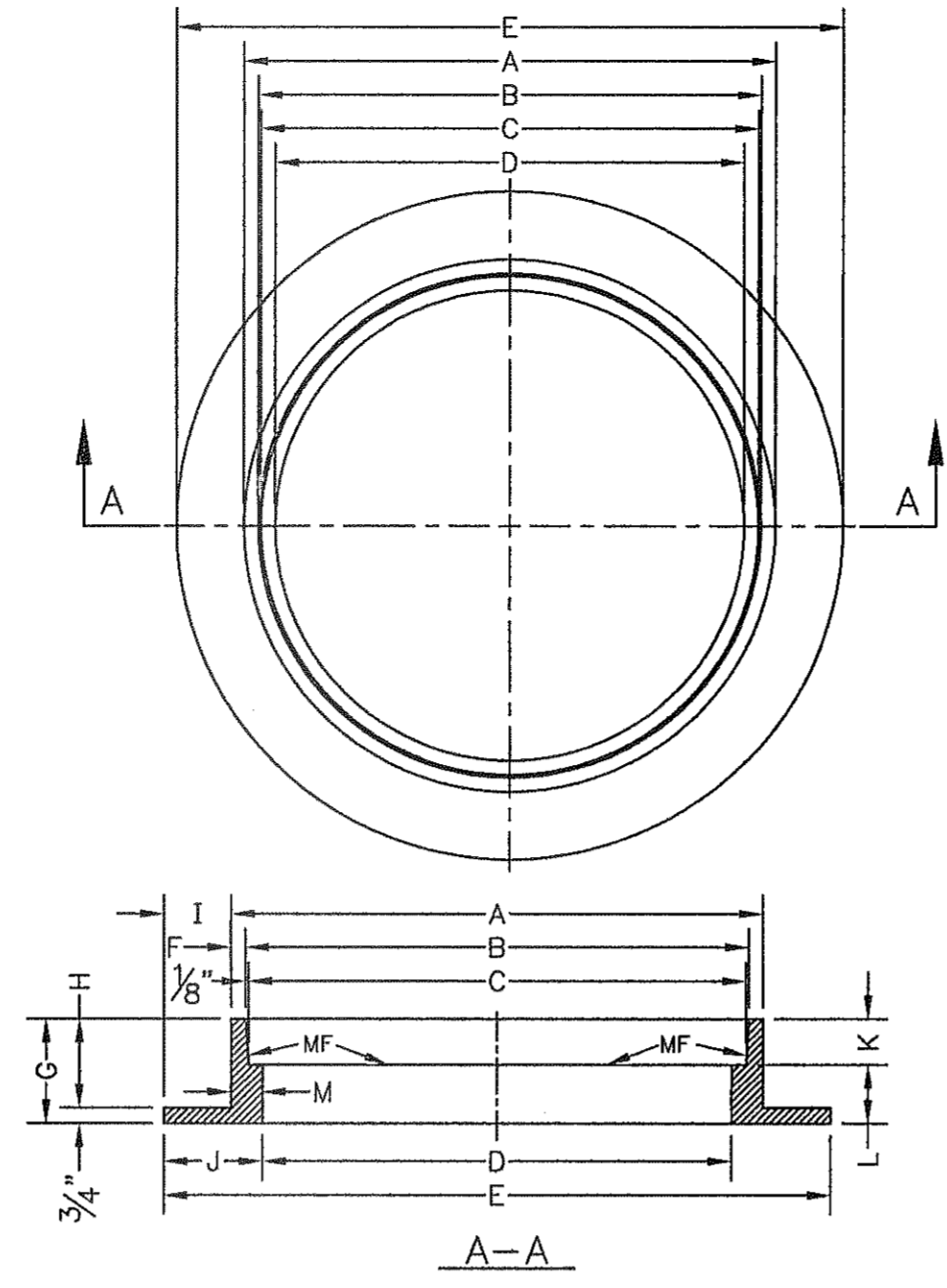


- GENERAL NOTES:**
1. MATCHING SURFACES MARKED "MF" TO BE FINISHED TO PREVENT A SNUG FIT.
  2. CASTING TO BE SMOOTH & VOID OF AIR HOLES.
  3. CASTING MUST MEET REQUIREMENTS OF AASHTO M306-07.
  4. AS-CAST DIMENSIONS MAY VARY  $\frac{1}{16}$ " PER FOOT (AASHTO M306-07).
  5. WEIGHT MAY VARY 5% (AASHTO M306-07).
  6. SHADED DIMENSIONS IN TABLE FOR REFERENCE ONLY. SOURCE: CITY OF EL PASO DESIGN STANDARDS FOR CONSTRUCTION, DETAIL 2-17.

- CONSTRUCTION KEY NOTES:**
- A. LIFTING NOTCH.
  - B.  $\frac{3}{16}$ " RAISED LETTERING.
  - C. 1" SQUARES ( $\frac{3}{16}$ " TALL) WITH  $\frac{3}{16}$ " SPACE BETWEEN.
  - D. REINFORCING RIBS.
  - E. SLOT.

SEE NOTE 6

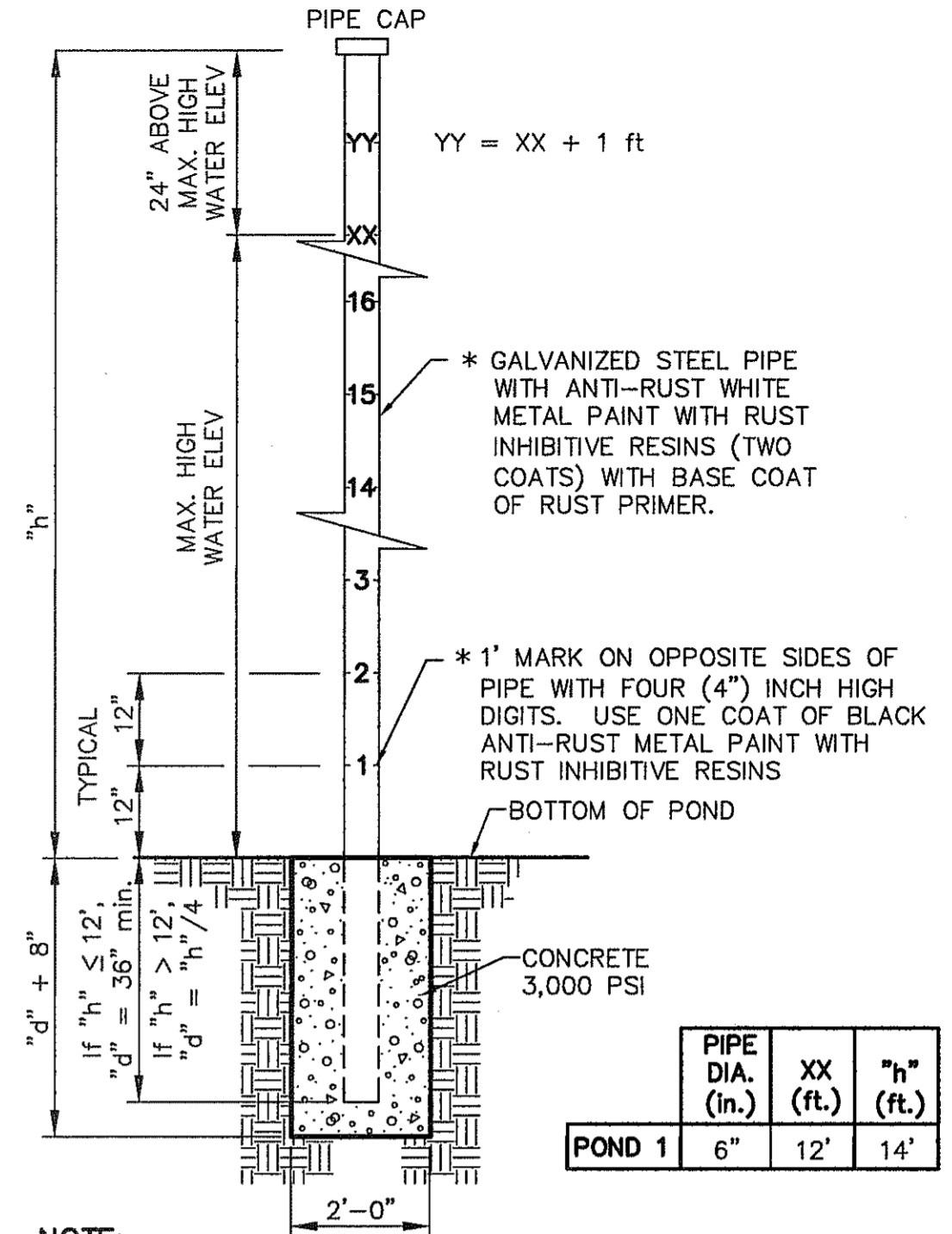
MANHOLE COVER	MANHOLE - ALL TYPES	MANHOLE TYPE 48"	MANHOLE TYPE 72"
A	31 3/4"	23 3/4"	31 3/4"
B	28 3/8"	20 3/8"	28 3/8"
C	24 3/8"	16 3/8"	24 3/8"
D	21 3/4"	14 3/8"	21 3/4"
E	2 3/8"	3"	3"
F	1/4"	1 1/4"	1 1/4"
G	3 3/8"	3"	3"
H	1 3/8"	1"	1"
WEIGHT	265 lbs.	175 lbs.	310 lbs.



- GENERAL NOTES:**
1. MATCHING SURFACES MARKED "MF" TO BE FINISHED TO PREVENT A SNUG FIT.
  2. CASTING TO BE SMOOTH & VOID OF AIR HOLES.
  3. CASTING MUST MEET REQUIREMENTS OF AASHTO M306-07.
  4. AS-CAST DIMENSIONS MAY VARY  $\frac{1}{16}$ " PER FOOT (AASHTO M306-07).
  5. WEIGHT MAY VARY 5% (AASHTO M306-07).
  6. SHADED DIMENSIONS IN TABLE FOR REFERENCE ONLY. SOURCE: CITY OF EL PASO DESIGN STANDARDS FOR CONSTRUCTION, DETAIL 2-16.

SEE NOTE 6

MANHOLE RING	MANHOLE - ALL TYPES	MANHOLE TYPE 48"	MANHOLE TYPE 72"
A	33"	25 1/2"	32 1/2"
B	31 3/4"	23 3/8"	31 3/8"
C	31 1/2"	23 3/8"	31 3/8"
D	30"	22 1/2"	30"
E	39 1/2"	34 1/2"	42"
F	5/8"	1 1/8"	1 1/8"
G	5"	6"	6"
H	4 1/4"	5 1/4"	5 1/4"
I	3 3/4"	4 1/8"	4 1/8"
J	4 3/4"	6"	6"
K	2 3/8"	3 3/8"	3 3/8"
L	2 1/8"	2 1/8"	2 1/8"
M	1 1/2"	1 3/8"	1 3/8"
WEIGHT	220 lbs.	165 lbs.	225 lbs.



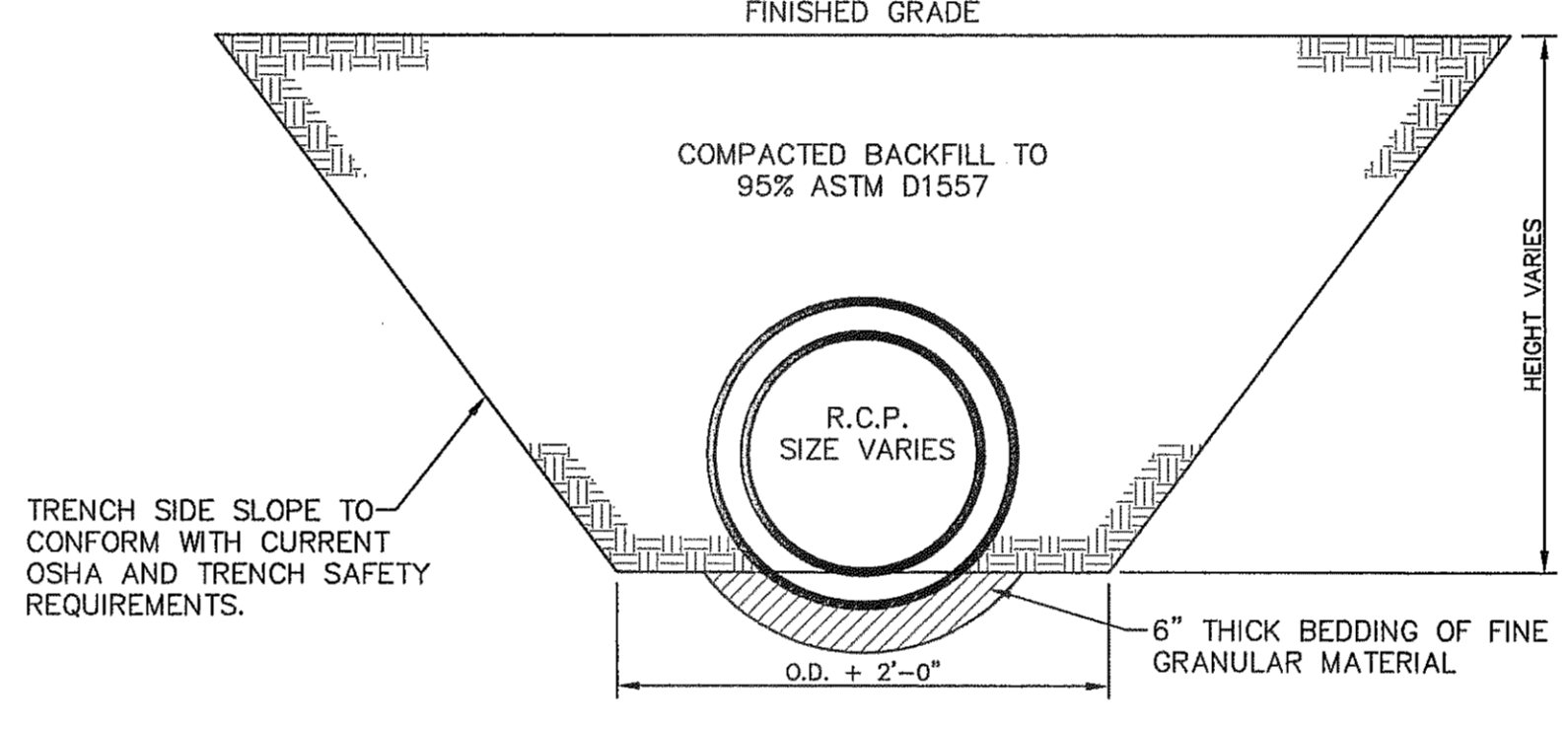
- NOTE:**
1. CONSULT WITH PAINT MANUFACTURER FOR PRODUCTS THAT CAN SUSTAIN LONG PERIODS OF MOISTURE.
  2. GAUGE REQUIRED IN PONDS OF GREATER THAN FIVE (5') FOOT DEPTH ONLY.
  3. "h" = Height
  4. XX = MAXIMUM HIGH WATER ELEVATION BASED ON A 100-YR STORM EVENT ROUNDED TO NEAREST WHOLE NUMBER. ALTERNATES WILL BE ALLOWED WITH THE PRIOR REVIEW AND APPROVAL OF THE CITY ENGINEER.

1 MANHOLE RING AND COVER DETAILS SCALE: N.T.S.

2 WATER DEPTH POLE DETAIL SCALE: N.T.S.

CONCRETE APRON FOR CIRCULAR PENETRATIONS IN ASPHALT PAVEMENTS

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



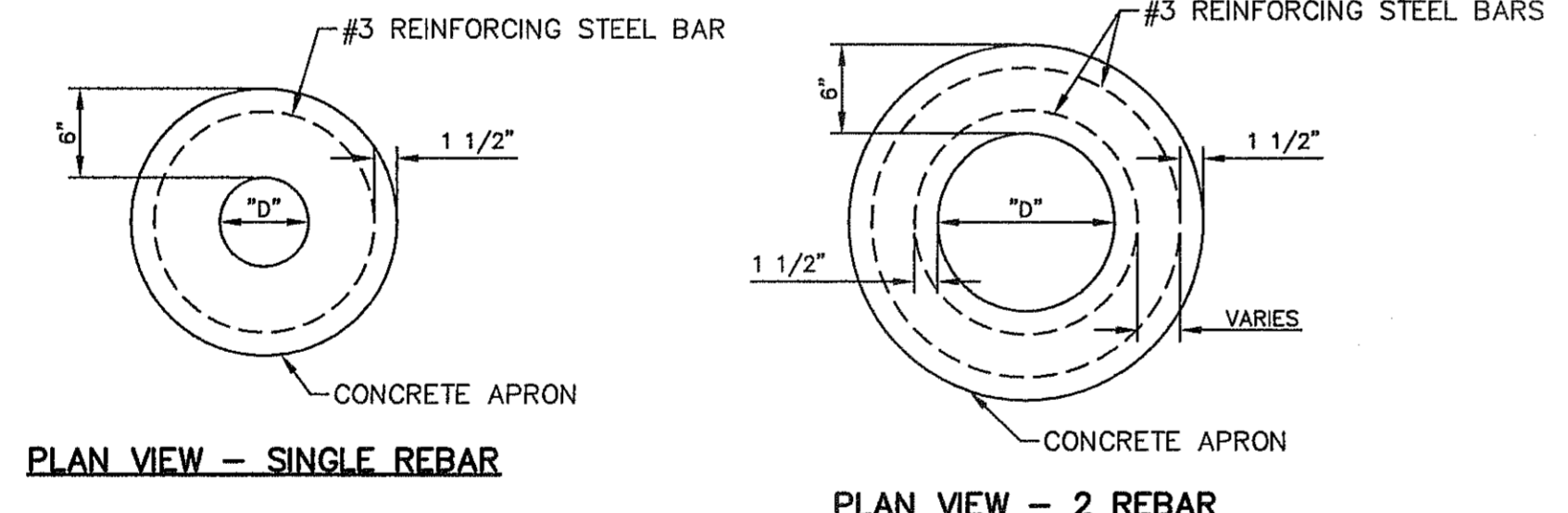
4 STORM SEWER BEDDING DETAIL SCALE: 1/2" = 1'-0"

**CONSTRUCTION NOTES:**

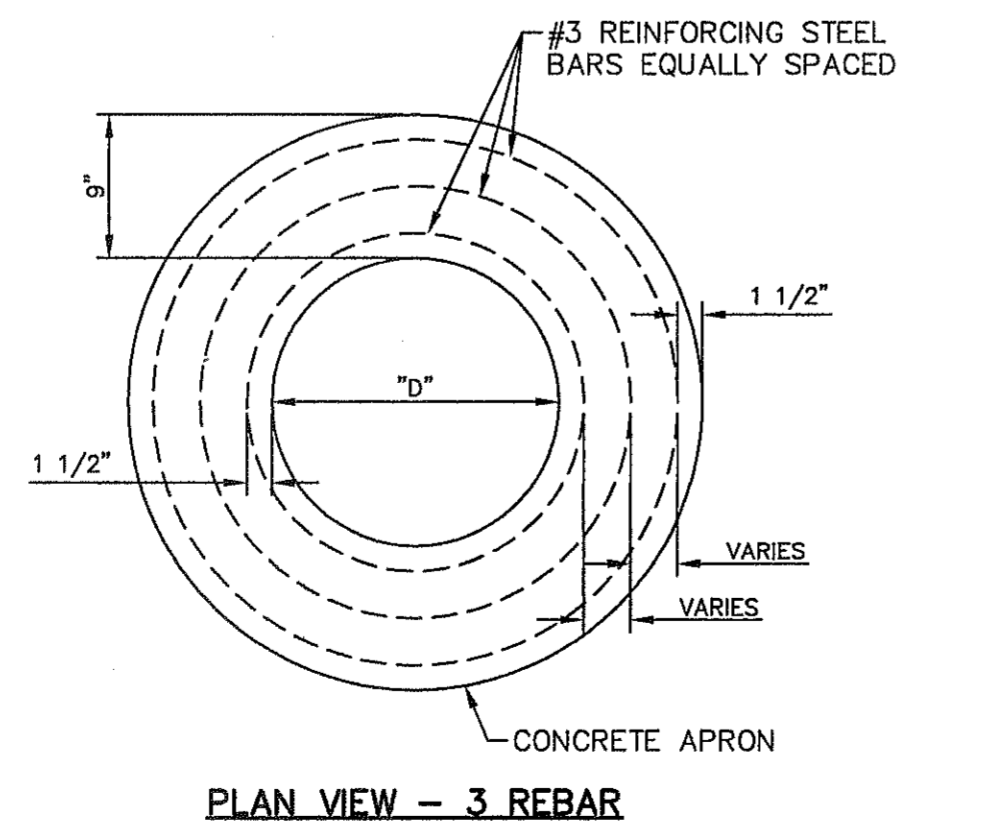
1. ANY DISTURBED SUBGRADE UNDER THE CONCRETE APRON SHALL BE COMPACTED TO 95% DENSITY  $\pm$  3% OPTIMUM MOISTURE CONTENT IN ACCORDANCE WITH ASTM D-1557.
2. ANY DISTURBED COARSE UNDER THE CONCRETE APRON SHALL BE COMPACTED TO 100% DENSITY  $\pm$  2% OPTIMUM MOISTURE CONTENT IN ACCORDANCE WITH ASTM D-1557.
3. PROVIDE A MINIMUM OF 1 1/2" OF CONCRETE COVER FOR ALL REINFORCEMENT STEEL.
4. REINFORCING SHALL MEET ASTM C-478 AND TRAFFIC LOADING (HS-20).
5. NO. 3 REINFORCING STEEL HOOPS SHALL BE SPACED EQUALLY.

**GENERAL NOTES:**

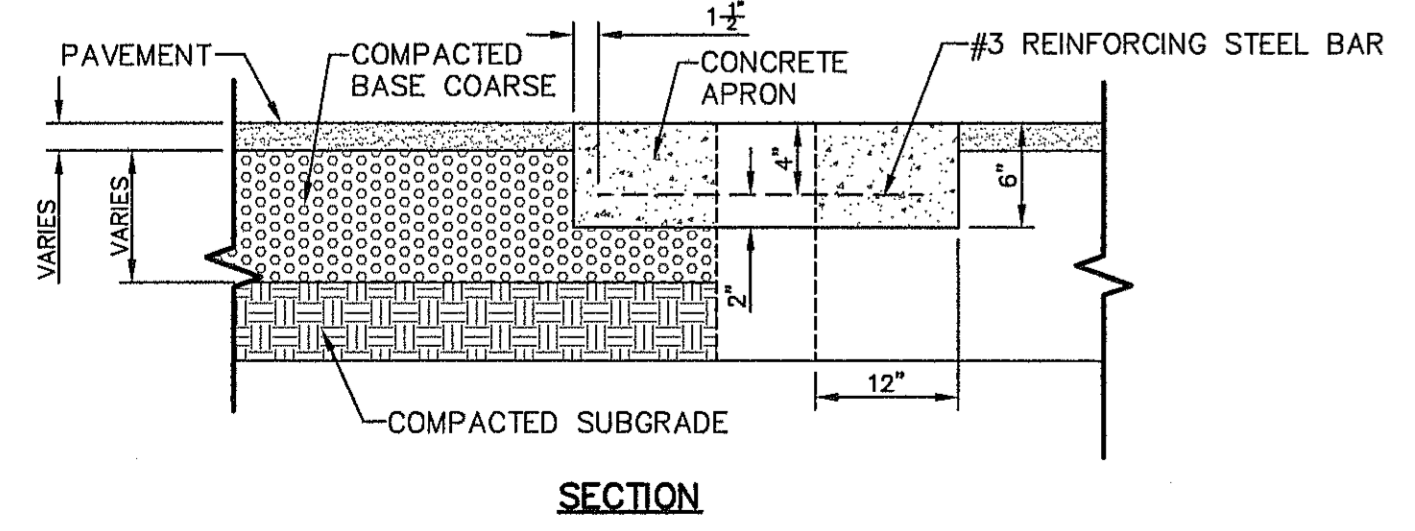
1. THE PENETRATION APRON SHOULD BE CAST IN-PLACE CONCRETE. (MINIMUM 28 DAY COMPRESSIVE STRENGTH 4000 PSI. HIGH EARLY CONCRETE IS REQUIRED).
2. TOPS OF PENETRATION APRON SHALL BE FLUSH WITH ROADWAY SURFACE OR FINISHED GRADE UNLESS OTHERWISE SPECIFIED BY THE CITY ENGINEER.



PLAN VIEW - SINGLE REBAR PLAN VIEW - 2 REBAR

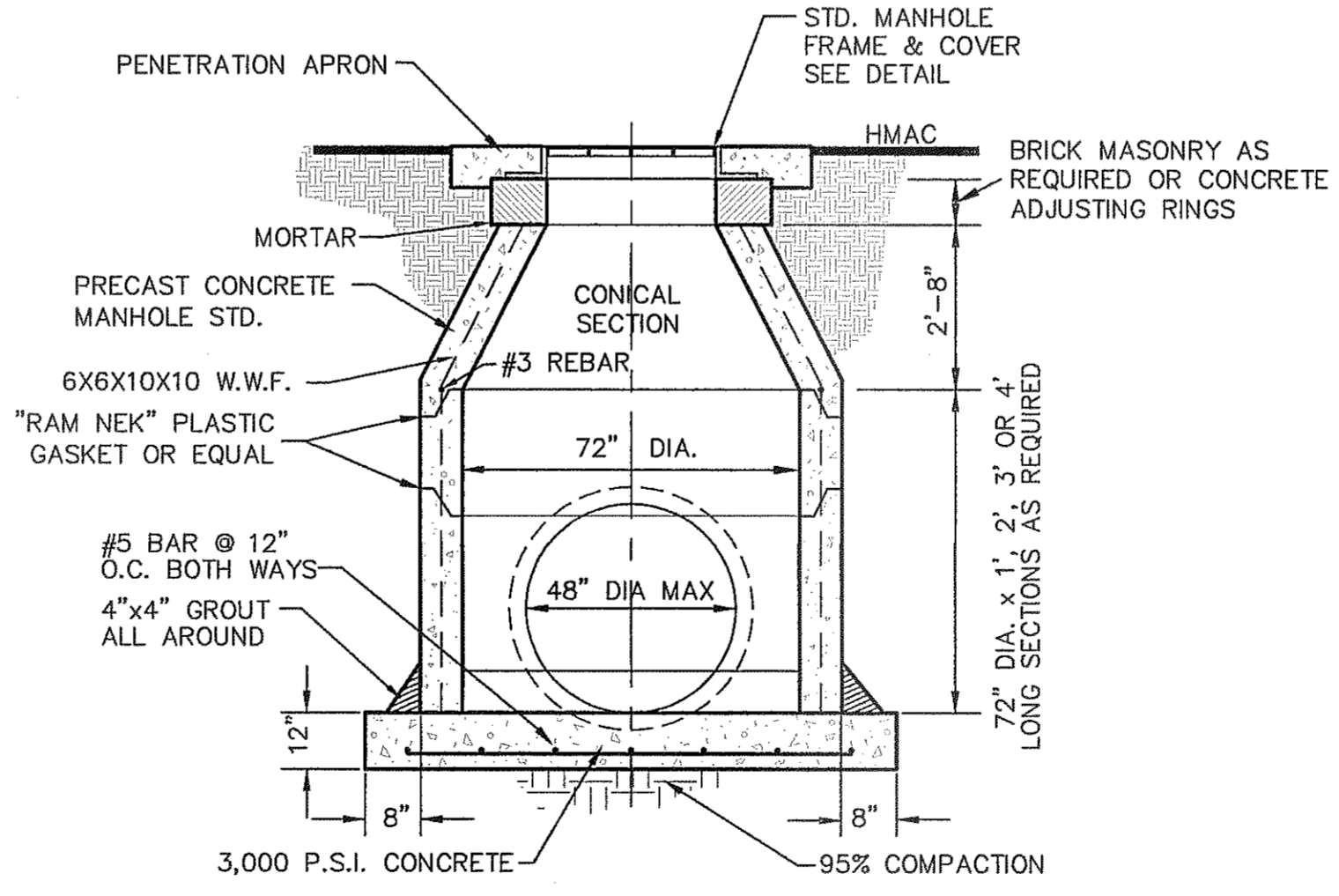


PLAN VIEW - 3 REBAR



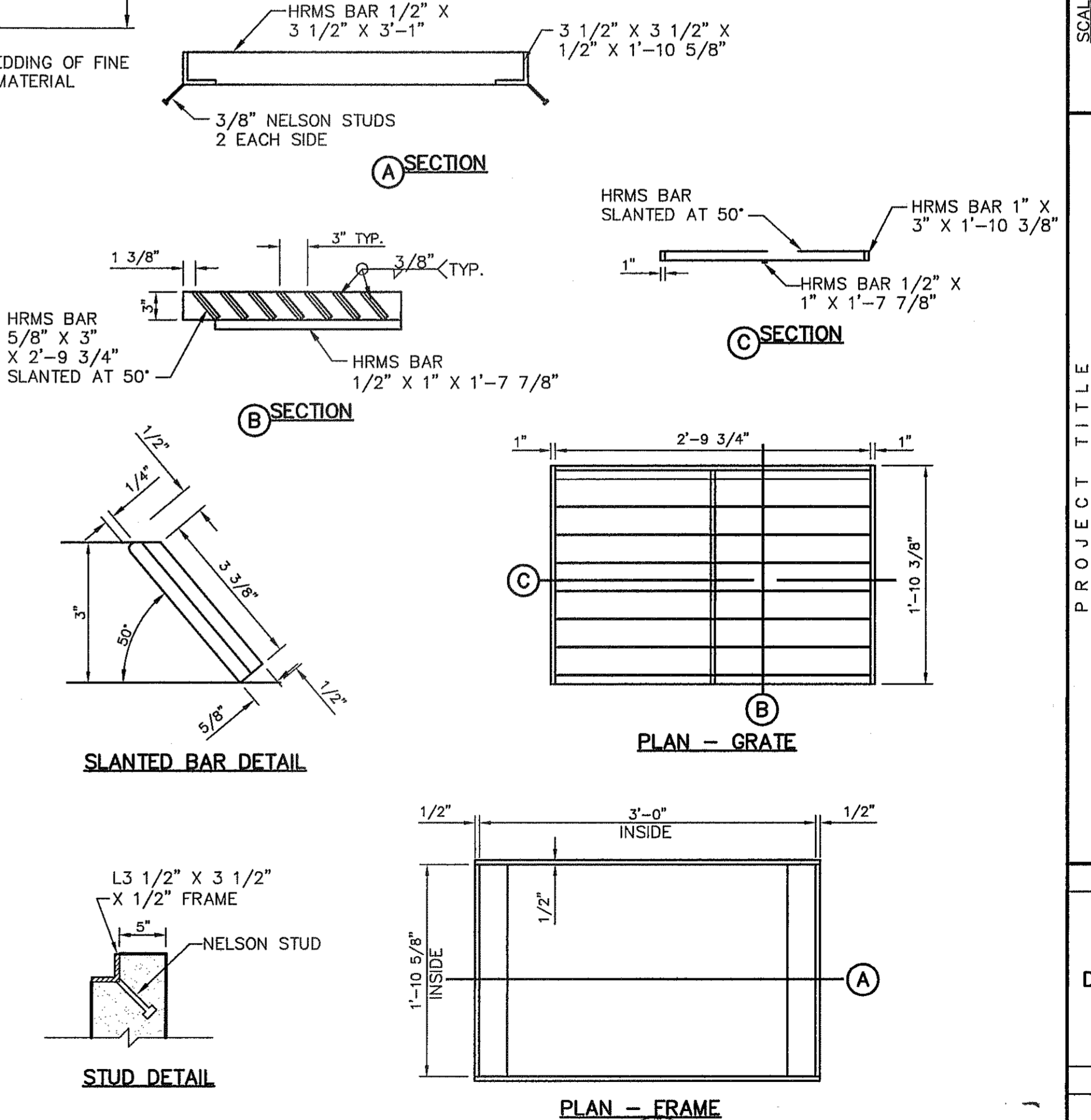
SECTION

3 PENETRATION APRON DETAILS SCALE: N.T.S.



- NOTE:**
1. ALL CONCRETE SHALL HAVE 3,000 PSI MIN. @ 28 DAYS.
  2. NINETY-FIVE (95%) PERCENT COMPACTION AS PER ASTM D-1557 UNDER ALL CONCRETE STRUCTURES.
  3. REINFORCED STEEL SHALL BE DEFORMED AND A MINIMUM OF GRADE 40.

5 72" STANDARD MANHOLE DETAIL SCALE: N.T.S.



6 GRATE AND FRAME DETAILS SCALE: 1" = 1'-0" REVIEWED

REFERENCES - BENCHMARKS  
EXISTING CITY MONUMENT  
ELEVATION=600.0 FEET (CITY DATUM)  
LOCATED AT THE CENTRAL INTERSECTION OF  
PASO ALERE CIRCLE AND PASO ALERE DRIVE

ENGINEER'S SEAL  
CITY OF EL PASO  
JORG L. ACOSTA  
REGISTERED PROFESSIONAL ENGINEER  
NO. 88075  
4712 Woodrow Bann, Ste. F, El Paso, TX 79924  
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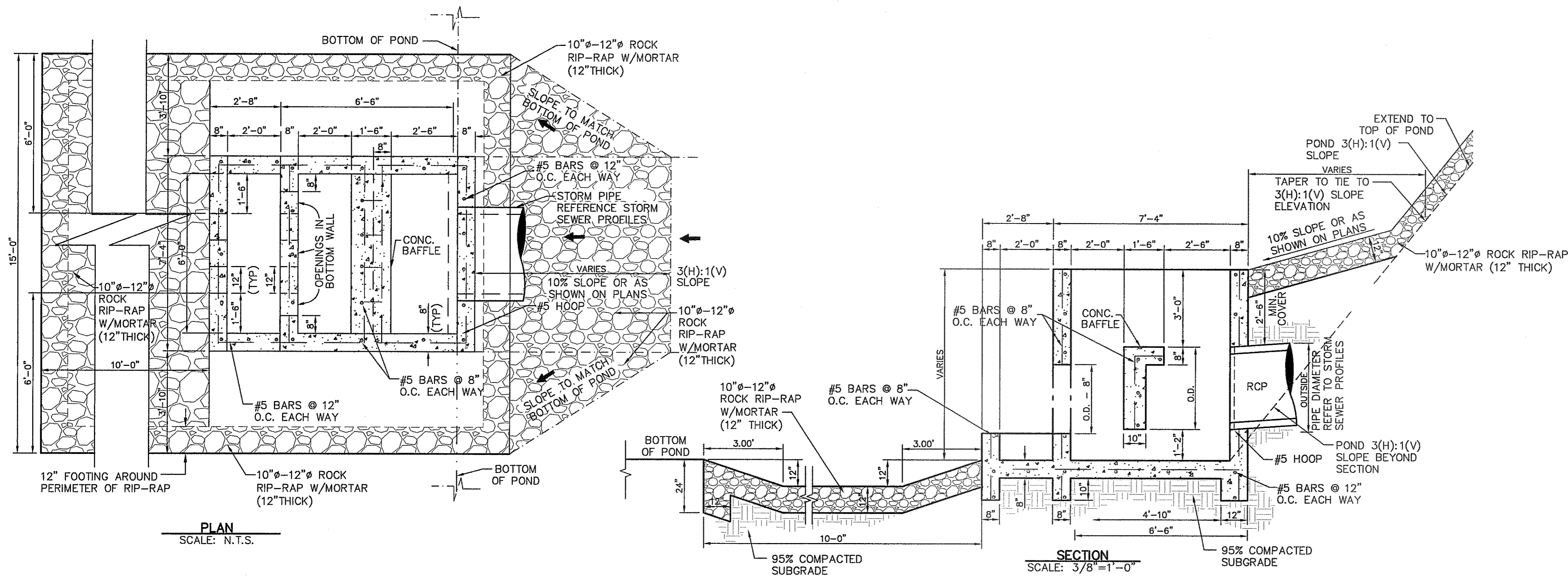
PROJECT TITLE  
MESQUITE TRAILS UNIT EIGHT  
SUBDIVISION IMPROVEMENTS

SHEET TITLE  
DRAINAGE DETAILS  
(SHEET 1 OF 3)  
SHEET NO.

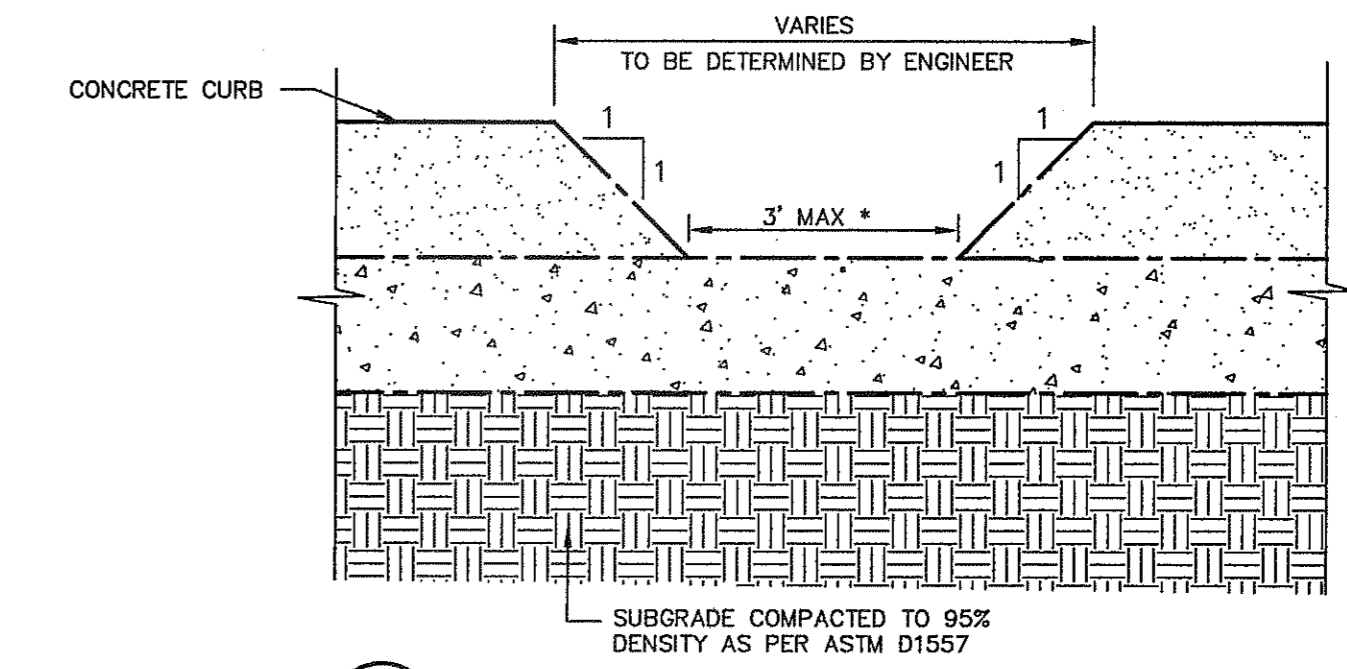
SCALE  
Horizontal: N/A  
Vertical: N/A  
Contour Interval: N/A  
DATE: APRIL 2013  
DESIGN BY: J.M.  
DRAWN BY: J.M.  
CHKD. BY: J.L.A.  
APPVD. BY: J.L.A.  
JOB No. 2000-145-LD

REVISIONS  
DATE  
BY

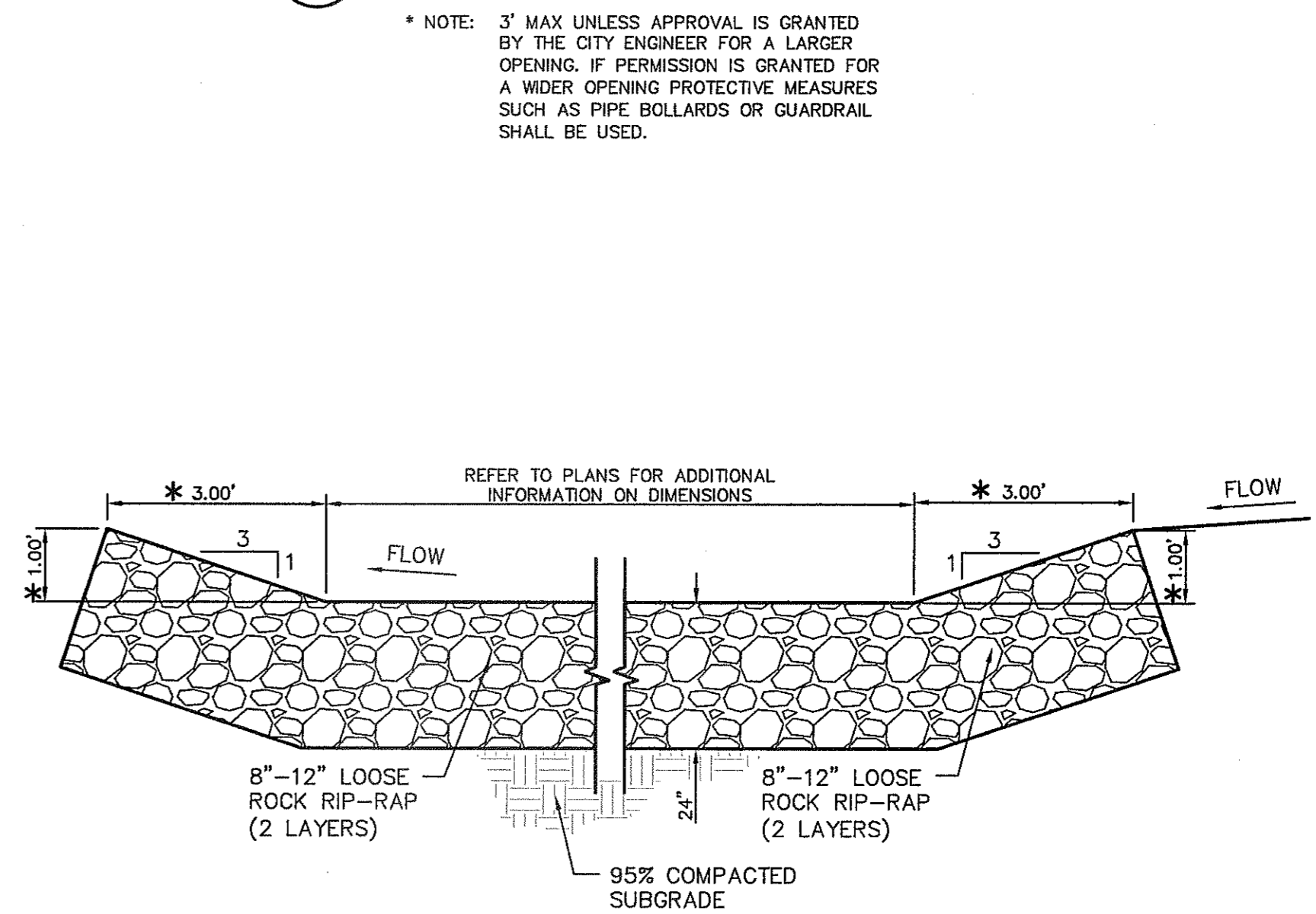
C10.1



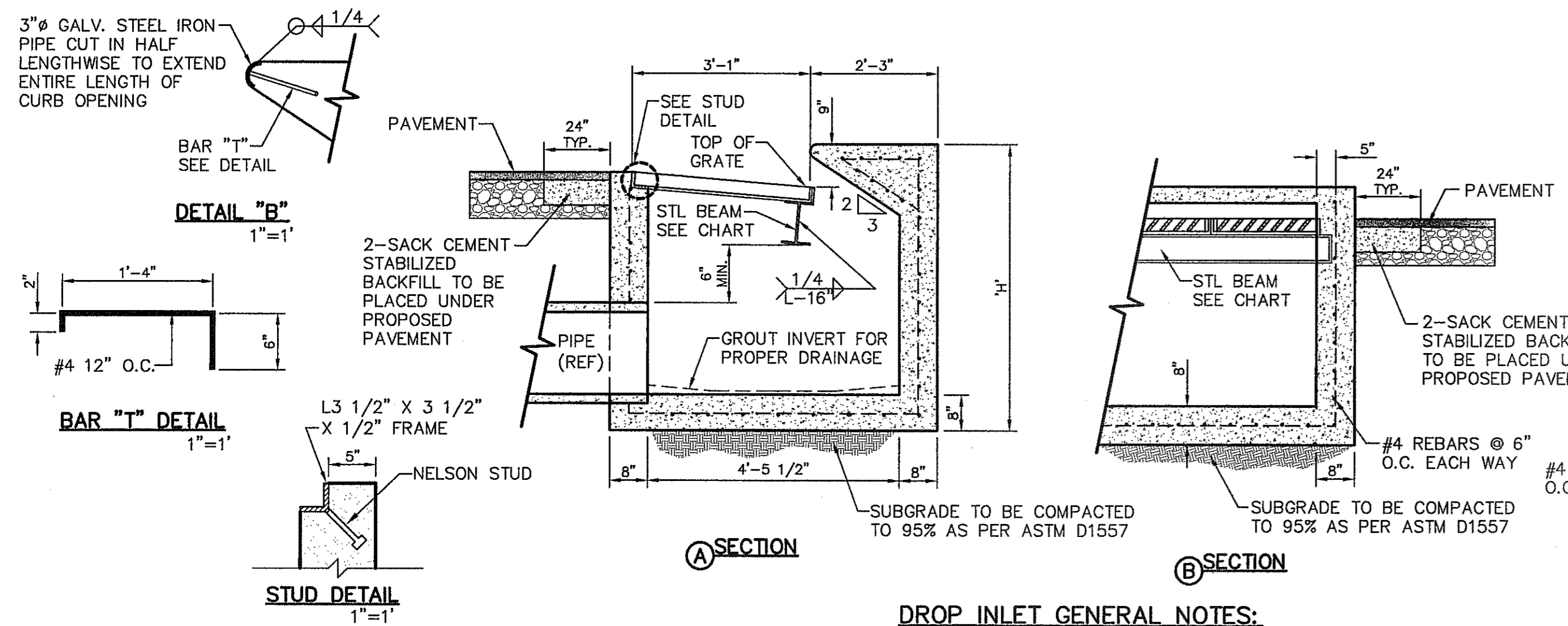
1 CONCRETE THRUST BLOCK STRUCTURE @ PONDING AREA DETAIL  
SCALE: N.T.S.



2 CURB OPENING FOR DRAINAGE DETAIL  
SCALE: N.T.S.



4 DESILTING BASIN DETAIL  
SCALE: 1" = 2'-0"



DROP INLET GENERAL NOTES:

- 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 DEVELOPMENT SERVICES.
- ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE CURRENT STANDARD SPECIFICATIONS.
- SHARP EDGES RESULTING FROM FABRICATION SHALL BE DULLED BY ANY ACCEPTABLE METHOD FOR SAFETY IN HANDLING.
- GRATES SHALL BE INSTALLED IN FRAME WITH FLOW ARROW POINTING DOWNSTREAM OR TOWARD THE LOW POINT IN A SUMP.
- 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.
- 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.
- 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.
- 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.
- 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.
- ALL CASTING SHALL BE MANUFACTURED TRUE TO PATTERN. COMPONENT PARTS SHALL FIT TOGETHER IN A SATISFACTORY MANNER.
- ALL CONCRETE TO BE 3,000 PSI. CHAMFER ALL EXPOSED EDGES 3/4". ALL DIMENSIONS RELATING TO REINFORCING STEEL ARE TO CENTER OF BARS.
- MINIMUM CONCRETE COVER SHALL BE 1 1/2" FOR STEEL REINFORCING.
- 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.
- STRUCTURAL STEEL SHALL BE SHOP PAINTED IN ACCORDANCE WITH TxDOT ITEM 446 "PAINT AND PAINTING."
- SURFACE OF ALL EXPOSED CONCRETE SHALL CONFORM IN SLOPE AND GRADE TO EXISTING OR PROPOSED CURB AND WALK ADJACENT TO INLETS.
- GRATES WILL BE DEPRESSED 1" BELOW PROPOSED OR EXISTING GRADE.
- ALL REINFORCING BARS TO BE #4 BARS AT 6" O.C. GRADE 60. BEND BARS AROUND PIPE OPENINGS.
- LOCATION OF SEWER PIPES SHOWN ELSEWHERE IN PLANS.
- TWO 3/8"x4" LONG CONCRETE ANCHOR STUDS REQUIRED FOR EACH SIDE OF FRAME, WHERE RESTING ON CONCRETE, USE NELSON STUDS OR EQUAL.
- THE GRATES OF ALL INLETS WITHIN THE STREET PAVEMENT MUST BE CONSTRUCTED WITH THE GRATE BARS PERPENDICULAR TO THE CURB.
- INLETS TO BE DESIGNATED IN PLANS BY II OF GRATES REQUIREMENTS

3 DROP INLET (TYPE I) DETAILS  
SCALE: 1" = 2'-0"

NO. GRATES	CAPACITY	"L"	BEAM LENGTH	BEAM (MIN. SIZES)
2	19.63 CFS	5'-1 1/8"	4'-7 1/8"	W8x12, 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

\* THESE CAPACITIES CORRESPOND TO A CLOGGING FACTOR OF 0.5

- NOTES:
- GRATES TO BE PERPENDICULAR TO TRAFFIC
  - CONCRETE TO BE 3,000 PSI (MIN.) CORE TEST @ 28 DAYS.
  - H=20' MAXIMUM
  - SEE STORM SEWER PLAN & PROFILES FOR APPROVED PIPE DIAMETER.
  - EDGE OF INLET SHALL BE TRANSITION TO THE EDGE OF THE CONCRETE GUTTER.



5 NO TRESPASSING WARNING SIGN  
SCALE: N.T.S.

PROJECT TITLE  
**MESQUITE TRAILS UNIT EIGHT SUBDIVISION IMPROVEMENTS**

ENGINEER'S SEAL

SCALE  
 Horizontal: N/A  
 Vertical: N/A  
 Contour Interval: N/A  
 DATE: APRIL 2013  
 DESIGN BY: J.M.  
 DRAWN BY: J.M.  
 CHKD. BY: J.L.A.  
 APPVD. BY: J.L.A.  
 JOB No. 2000-145-LD

REFERENCES - BENCHMARKS  
 EXISTING CITY MONUMENT  
 ELEVATION=4033.10 FEET (CITY DATUM)  
 LOCATED AT THE INTERSECTION OF  
 PASO ALPINE CIRCLE AND PASO ALPINE DRIVE

DATE \_\_\_\_\_  
 REVISIONS \_\_\_\_\_  
 BY \_\_\_\_\_

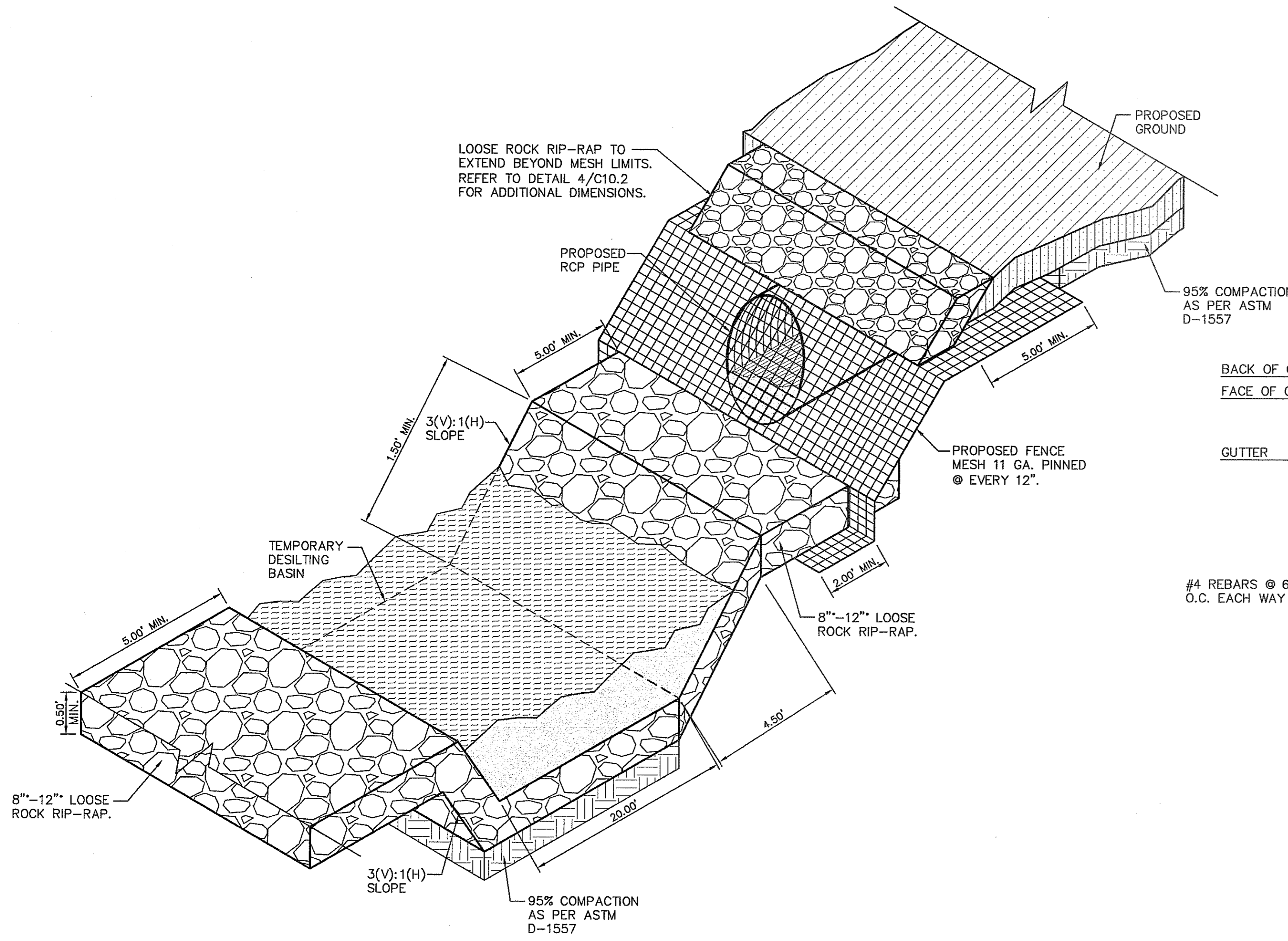
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**CSA**  
 TEXAS REGISTERED ENGINEERING FIRM #464  
 4712 Woodrow Bean, Ste. F, El Paso, TX 79924  
 Office: 915.544.5232 Fax: 915.544.0233 www.csagroup.net

SHEET TITLE  
**DRAINAGE DETAILS**

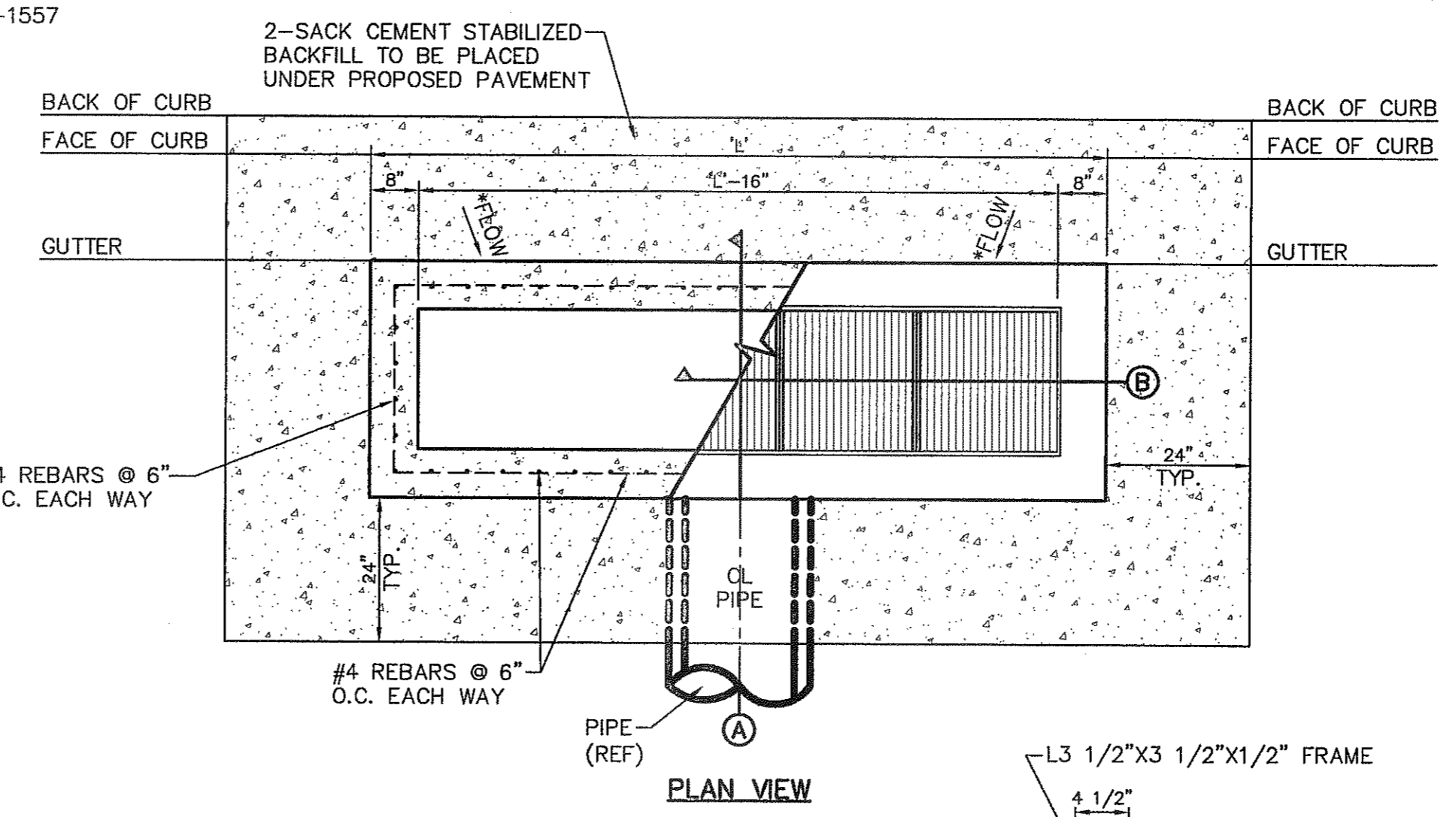
(SHEET 2 OF 3)  
SHEET NO.

**C10.2**

REVIEWED



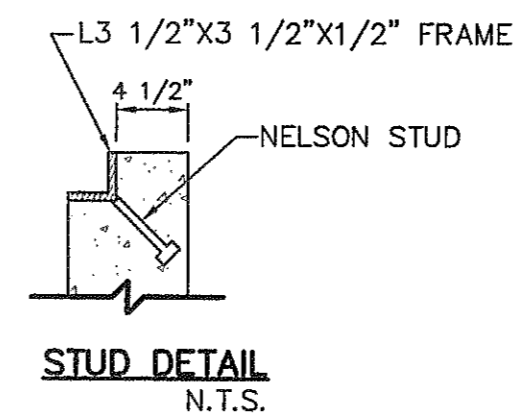
1 STORM PIPE MESH DETAIL  
SCALE: N.T.S.



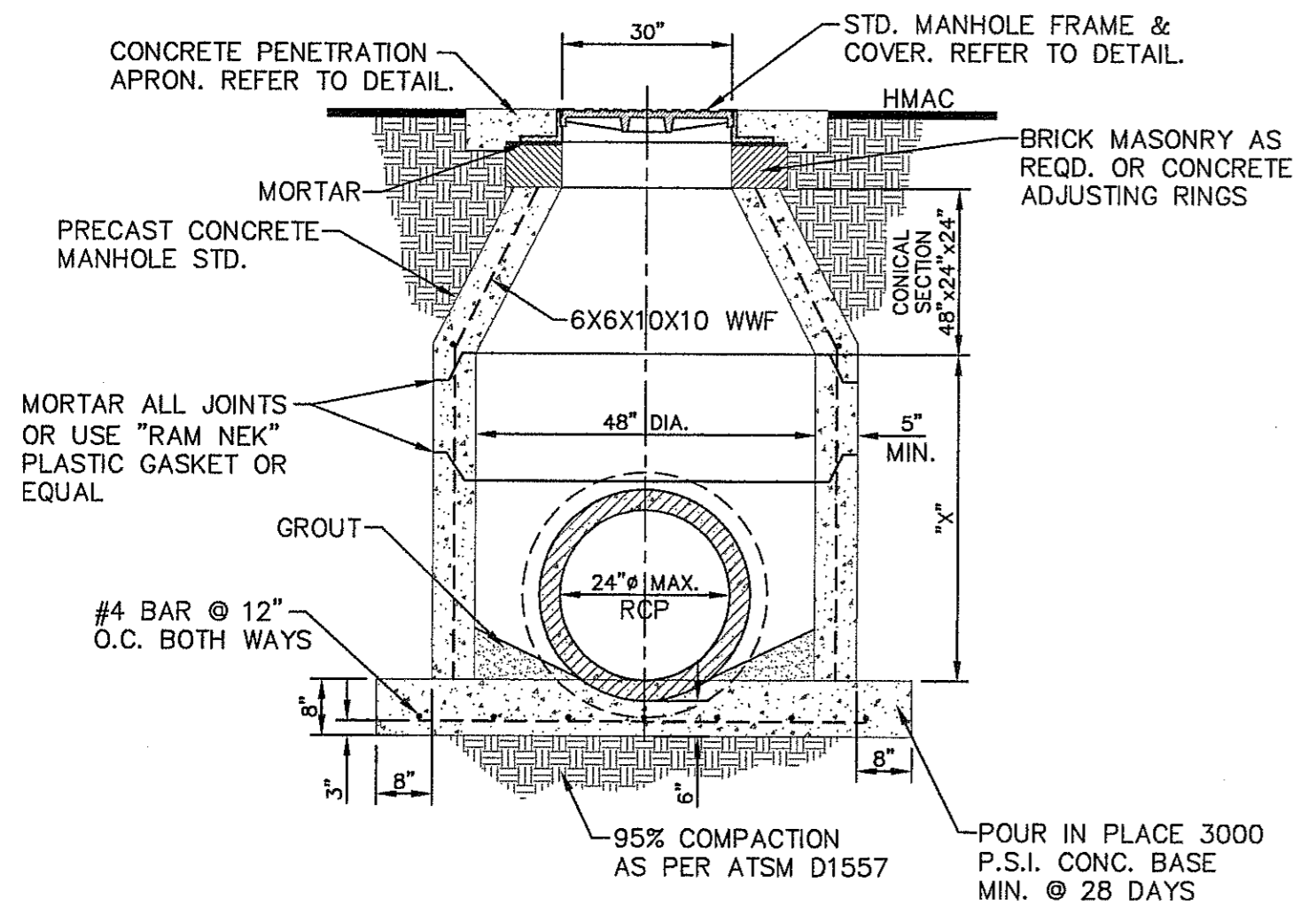
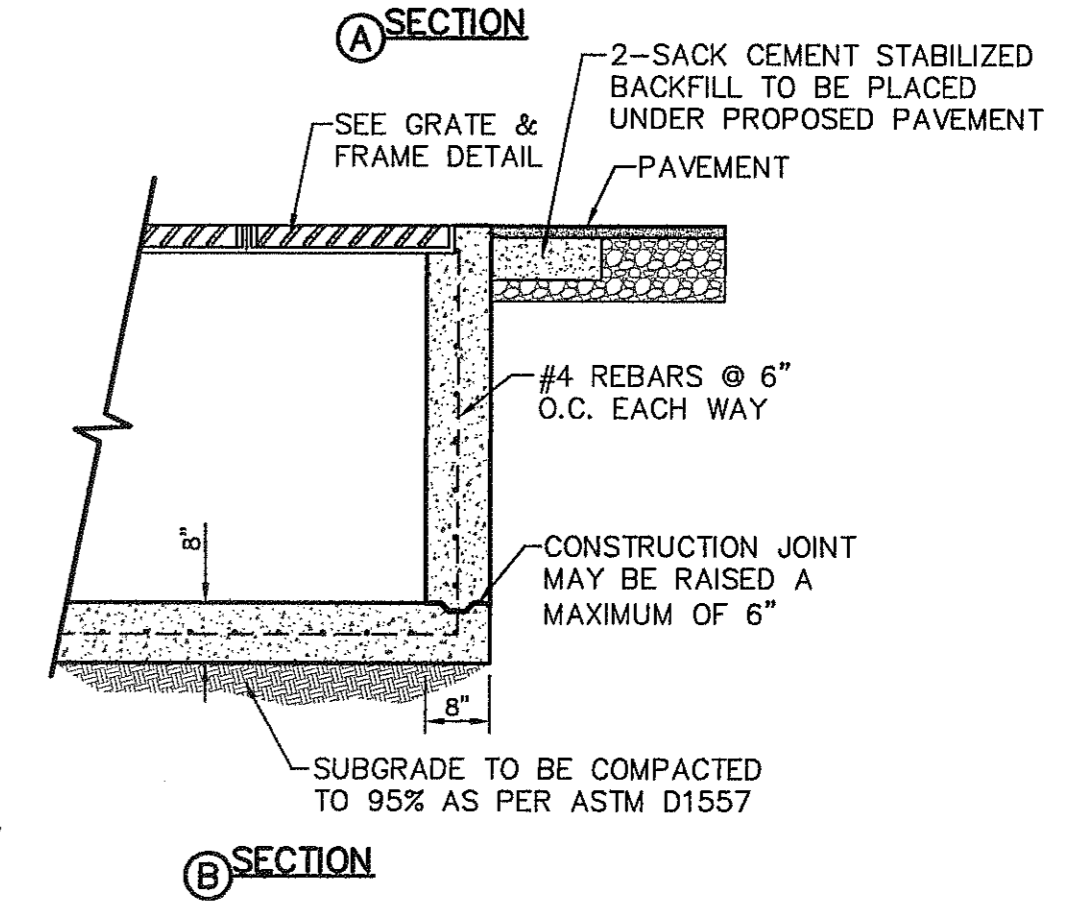
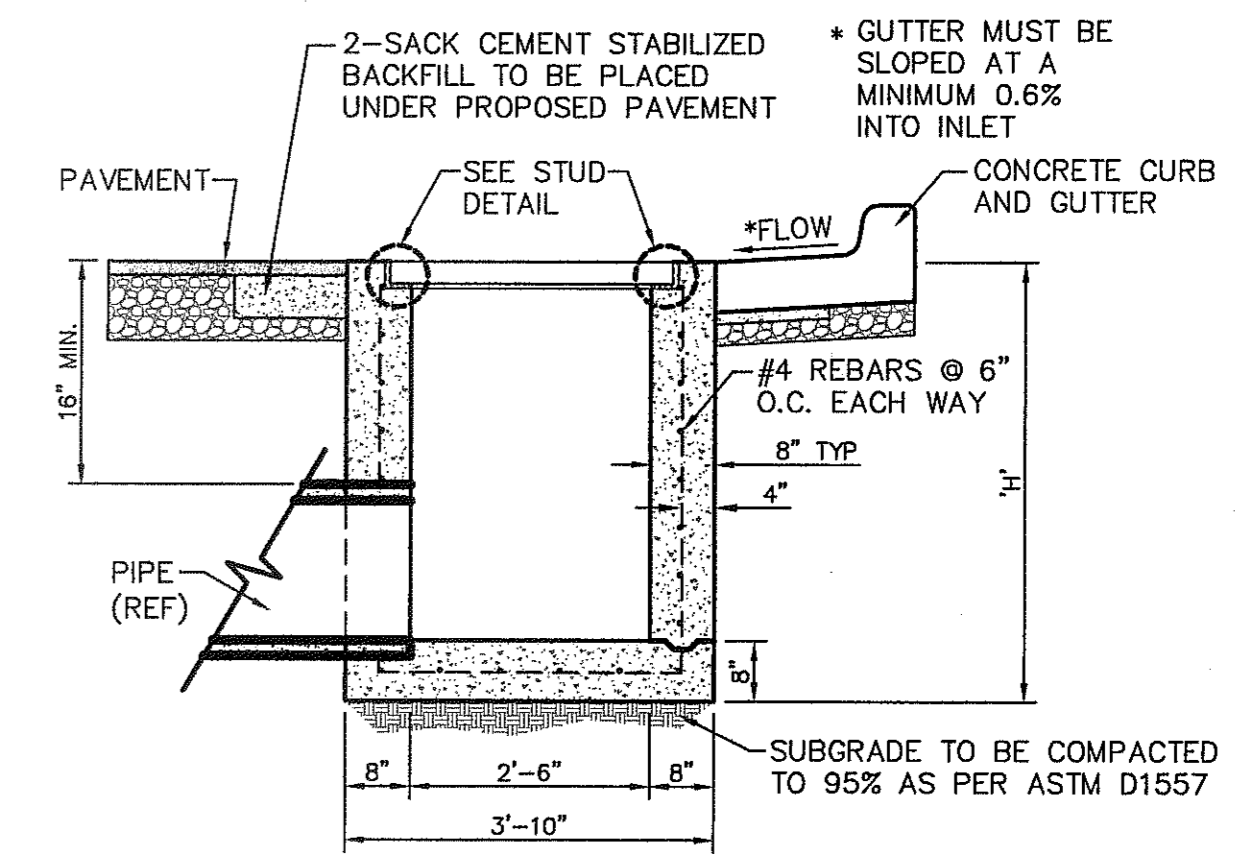
- NOTES:
- GRATES TO BE PERPENDICULAR TO TRAFFIC
  - CONCRETE TO BE 3,000 PSI (MIN.) CORE TEST @ TWENTY-EIGHT (28) DAYS.
  - H=20' MAXIMUM
  - SEE STORM SEWER PLAN & PROFILES FOR APPROVED PIPE DIAMETER.

NUMBER OF GRATES	"L"	CAPACITY*
2	5'-1 1/8"	9.436 CFS
3	7'-1/8"	14.155 CFS
4	8'-9 7/8"	18.873 CFS
5	10'-8"	23.592 CFS

\* THESE CAPACITIES CORRESPOND TO A CLOGGING FACTOR OF 0.5



2 DROP INLET (TYPE III) DETAILS  
SCALE: 1" = 2'-0"



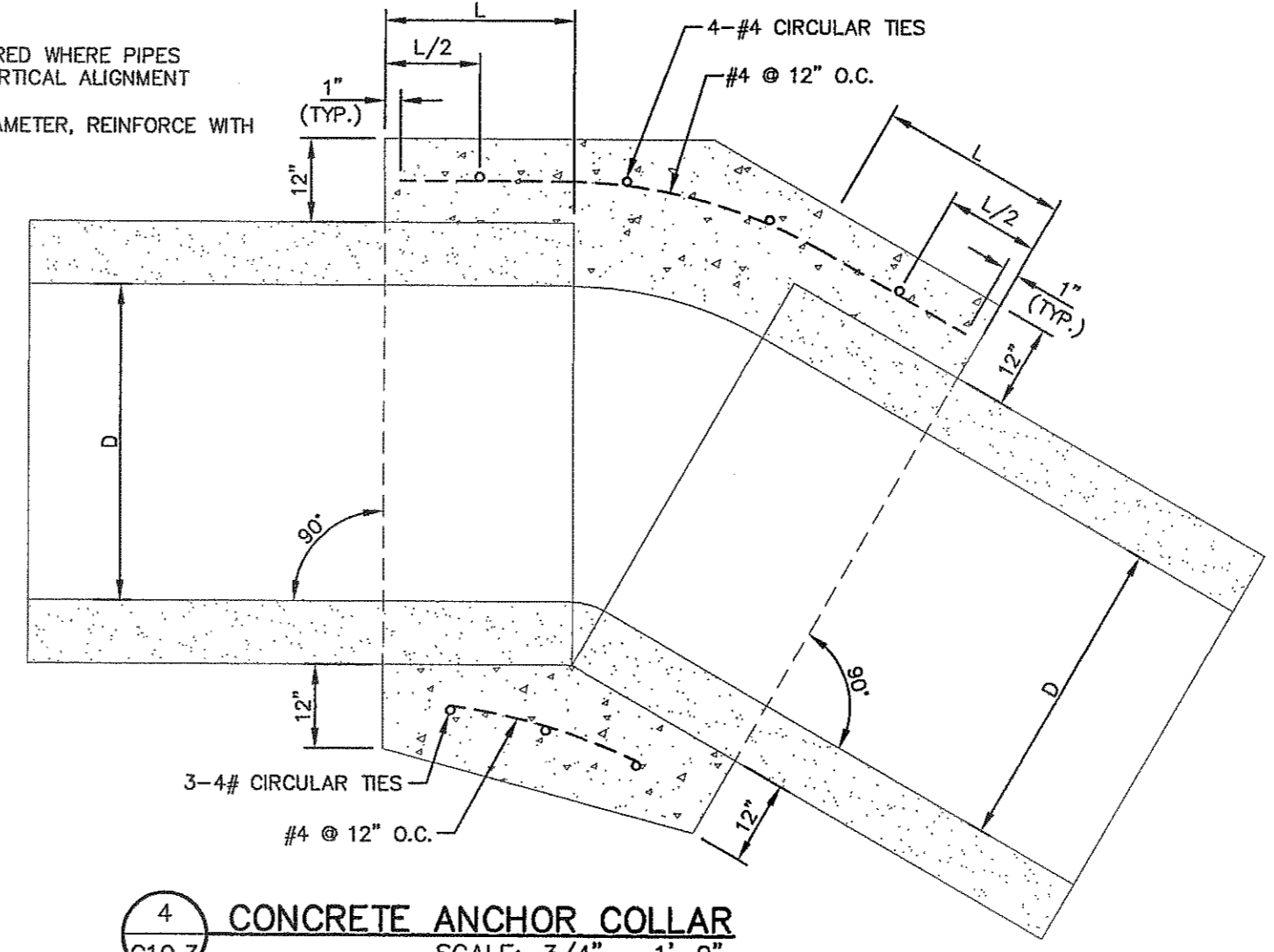
"X" = 48" DIA. x 12", 24", 36", OR 48" PRE-CAST LONG SECTIONS AS REQUIRED

NOTE:  
95% COMPACTION AS PER ASTM D-1557 UNDER ALL CONCRETE STRUCTURES.

3 48" STANDARD MANHOLE DETAIL  
SCALE: N.T.S.

- NOTES:
- A CONCRETE COLLAR IS REQUIRED WHERE PIPES CHANGE IN HORIZONTAL OR VERTICAL ALIGNMENT
  - FOR PIPES 24" OR LESS IN DIAMETER, REINFORCE WITH W.W.M.

D	L
12"	12"
18"	12"
24"	12"
30"	18"
36"	18"
48"	18"
54"	18"
60"	21"
66"	21"



REFERENCES - BENCHMARKS

EXISTING CITY MONUMENT  
ELEVATION=403.10 FEET (GTY DATUM)  
LOCATED AT THE CENTERLINE INTERSECTION OF  
PARSONS AVE. AND PASEO DURO DRIVE.

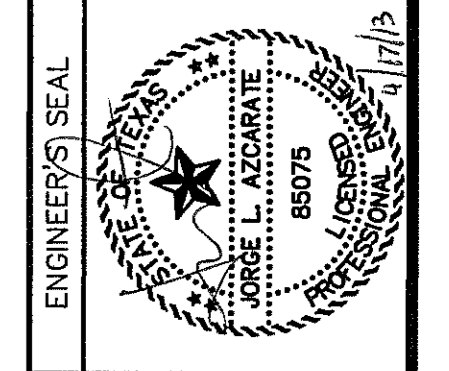
DATE	REVISIONS	BY

**ca**

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TEXAS REGISTERED ENGINEERING FIRM 1-4664

4712 Woodrow Bean, Ste. F, El Paso, TX 79924  
Office: 915.544.5232 Fax: 915.544.5233 www.caeng.com



ENGINEER'S SEAL

SCALE: N/A

Horizontal: N/A

Vertical: N/A

Contour Interval: N/A

DATE: APRIL 2013

DESIGN BY: J.M.

DRAWN BY: J.M.

CHKD. BY: J.L.A.

APPVD. BY: J.L.A.

JOB No. 2000-145-1-D

PROJECT TITLE

MESQUITE TRAILS UNIT EIGHT  
SUBDIVISION IMPROVEMENTS

SHEET TITLE

DRAINAGE DETAILS

(SHEET 3 OF 3)

SHEET NO.

CITY DEVELOPMENT DEPARTMENT

REVIEWED

C10.3

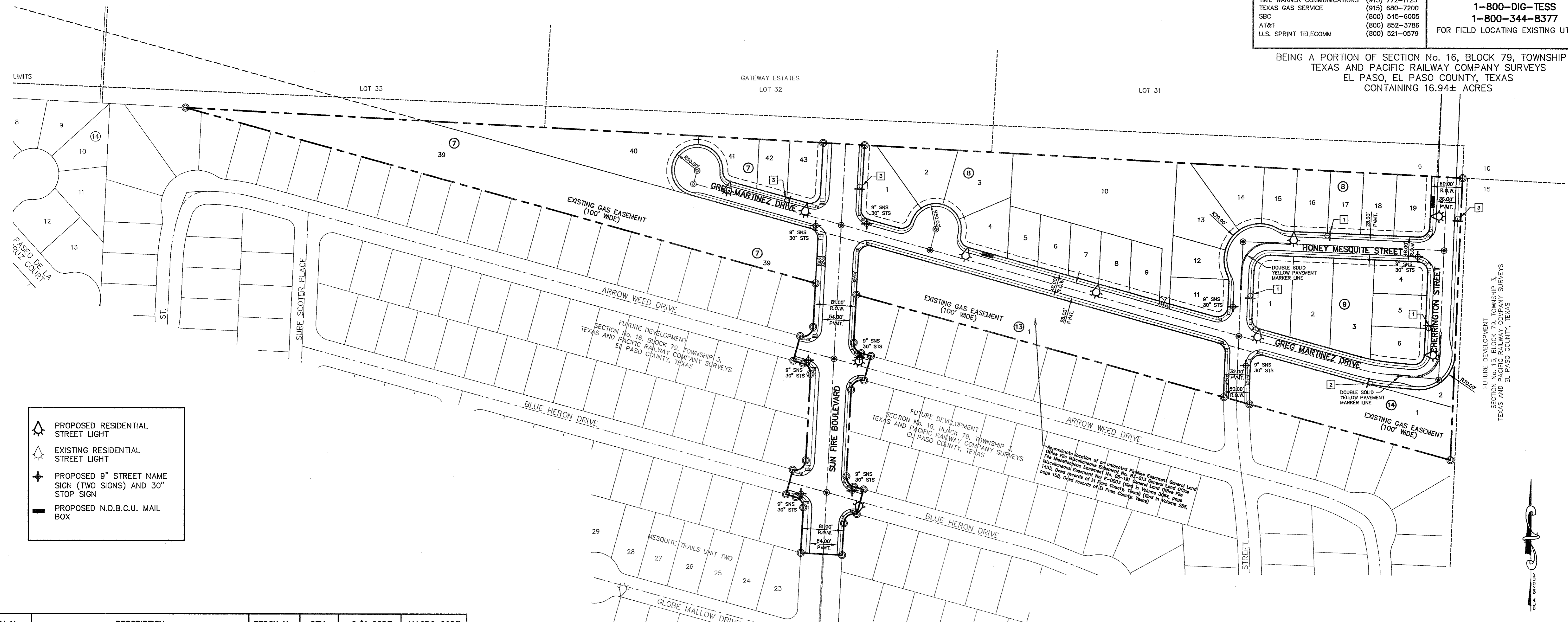
UTILITY LOCATOR SERVICES	
EL PASO ELECTRIC COMPANY	(915) 543-5720
EL PASO ENERGY CORPORATION	(915) 496-5244
EL PASO WATER UTILITIES	(915) 594-5500
MCI SURVEILLANCE	(800) MCI-WORK
TIME WARNER COMMUNICATIONS	(915) 772-1123
TEXAS GAS SERVICE	(915) 680-7200
SBC	(800) 545-6005
AT&T	(800) 852-3786
U.S. SPRINT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

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CALL  
**1-800-DIG-TESS**  
**1-800-344-8377**

FOR FIELD LOCATING EXISTING UTILITIES

BEING A PORTION OF SECTION No. 16, BLOCK 79, TOWNSHIP 3, TEXAS AND PACIFIC RAILWAY COMPANY SURVEYS EL PASO, EL PASO COUNTY, TEXAS CONTAINING 16.94± ACRES



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

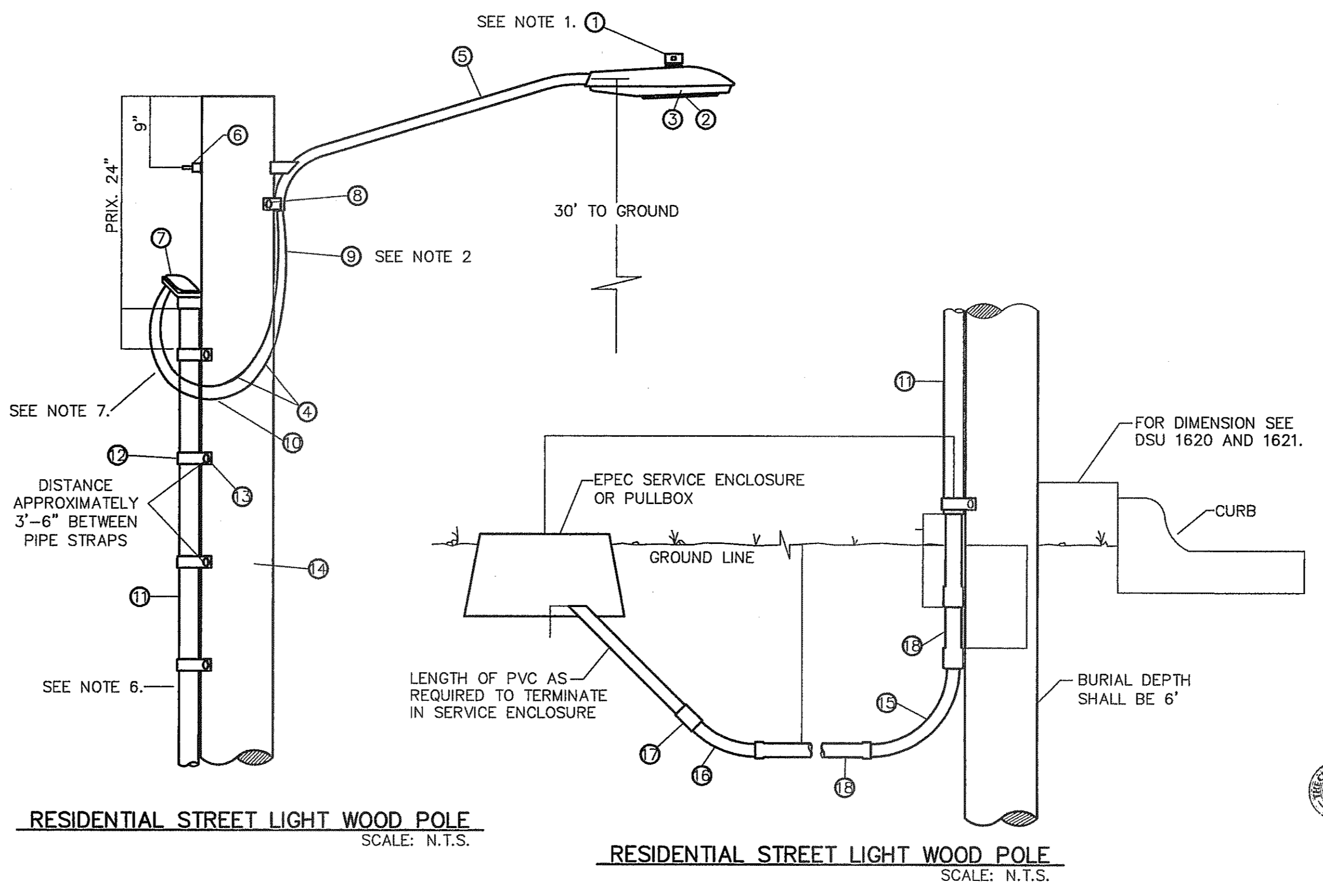
DATE	REVISIONS	BY

**ca**  
 engineers • architects • planners  
 TEXAS REGISTERED ENGINEERING FIRM F-464  
 4712 Woodrow Bean, Ste. F, El Paso, TX 79924  
 Office: 915.544.5532 Fax: 915.544.5233 www.caep.com

SCALE: 1"=100'
Horizontal: N/A
Vertical: N/A
Contour Interval: N/A
DATE: APRIL 2013
DESIGN BY: J.M.
DRAWN BY: J.M.
CHKD. BY: J.L.A.
APPVD. BY: J.L.A.
JOB No. 2000-145-LD

ITEM No.	DESCRIPTION	STOCK No.	QTY.	C/U CODE	MACRO CODE
1	PHOTOCELL, 240V-SEE NOTE 1	21-225	1		
2	HPS LAMP, 100W	21-085	1	LCOBRAHD	
3	LUMINAIRE, 100W H. P. S.	21-335	1		
4	SLEEVES, #12-10	05-140	2	LSLV1210	
5	MAST ARM, 6" x 1-1/4"	21-200	1	LBRKT1*6	
6	MACHINE BOLT, 5/8" x 12"	02-470	1		
	SQUARE GALV. WASHER, 2-1/4" x 2-1/4"	02-760	1	LMB5/812	
	COIL-SPRING WASHER, 5/8"	02-786	1		
	LOCKNUT, 5/8"	02-705	1		
7	SERVICE ENTRANCE CAP FOR 1" PVC CONDUIT	17-281	1	LSVCCAP1	LCOBRAUG
8	LAG BOLT, 3/8" x 3"	02-343	2	LLAG38*3	
9	CABLE #10, 2 CONDUCTOR, 600 V, UF	13-600	8'	L2C#10S	
10	COPPER CABLE, #12, SOLID, 600 V, BLUE	13-702	60'	LC#12CU	
11	SCHEDULE 80 1" PVC CONDUIT	17-280	30'	LSCH801	
12	PIPE STRAP FOR 1" PVC CONDUIT, 2-HOLE	17-283	9	LPVCSTRP	
13	NAIL, STAINLESS STEEL SCREW 2.5 IN.	14-427	.25#	LNAL14*2	
14	POLE, 35 FT.-CLASS IV	09-035	1	L354UG	
15	1" PVC 90 DEGREE ELBOW	17-297	1	LEL901	
16	1" PVC 45 DEGREE ELBOW	17-298	1	LEL451	
17	1" PVC COUPLING	17-296	1	LOPLG1	
18	1" PVC CONDUIT	17-299	AS REQ	LPVC1	

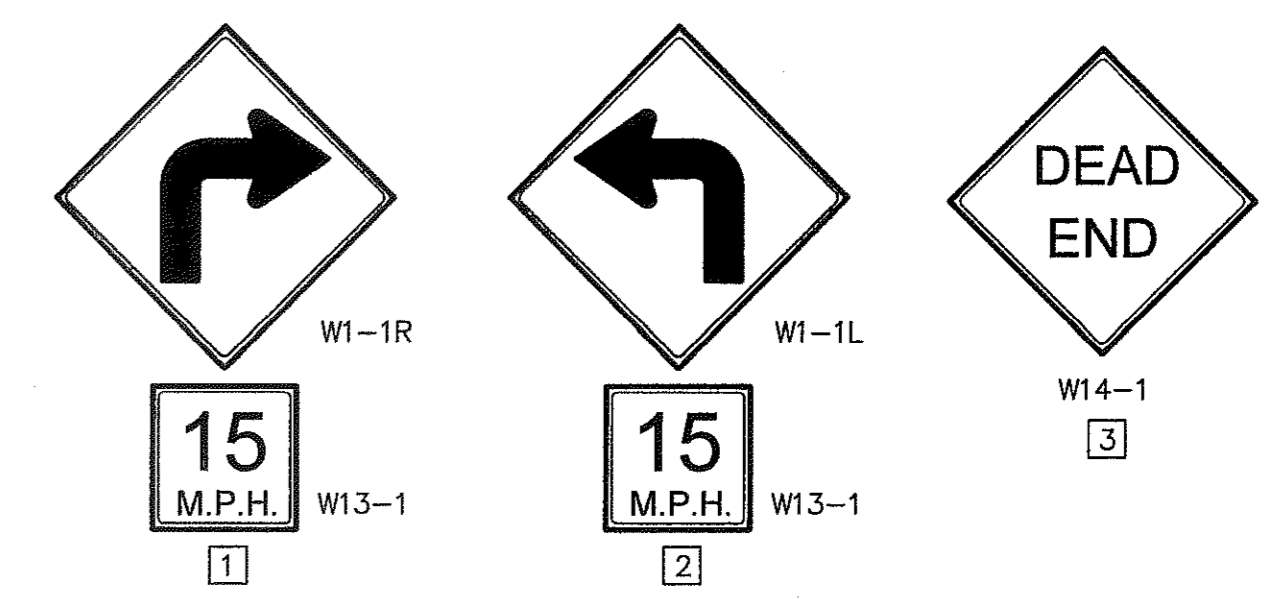
- KEYED NOTES:**
- MOUNT SO THAT PHOTO CELL IS FACING NORTH.
  - ITEM #9 SHALL NOT BE SPLICED INSIDE ITEM #5.
  - INSTALLATION MUST COMPLY WITH LOCAL CODE REQUIREMENTS.
  - FOR ANY CLARIFICATION, EXCEPTIONS OR QUESTIONS REGARDING THIS STANDARD, CALL THE EL PASO ELECTRIC COMPANY DISTRIBUTION DESIGN DEPARTMENT.
  - ON STREETS WHERE SIDEWALK IS ADJACENT TO CURB, STREET LIGHT POLE SHALL BE INSTALLED IN THE SIDEWALK NEXT TO PROPERTY LINE. THIRTY-SIX (36") INCHES REQUIRED FROM BACK OF CURB TO COMPLY WITH AMERICAN DISABILITY'S ACT AND LOCAL CODES.
  - THE CONDUIT RISER SHALL BE INSTALLED ON THE BACK OF THE WOOD POLE (AWAY FROM THE STREET).
  - THE WIRE LEADS FROM THE WEATHER HEAD TO THE MAST ARM SHALL HAVE A MINIMUM 4" DRIP LOOP BELOW THE WEATHER HEAD.



**ILLUMINATION PLAN**  
 SCALE: 1" = 100'

**NOTES**

- TRAFFIC STREET SIGNS MUST BE OF HIGH INTENSITY REFLECTIVE SHEETING.
- TEXT SIZES, FONTS, COLORS, ETC. MUST BE AS PER MUTCD STANDARDS & REQUIREMENTS
- SIGNS & STRIPING SHOULD COMPLY WITH THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
- ANY STRIPING, SIGNS, ETC WITHIN TxDOT ROW SHALL COMPLY W/TxDOT STANDARDS & REQUIREMENTS
- POSTS MUST BE BREAK-AWAY TYPE AS SHOWN ON THIS SHEET



CITY DEVELOPMENT DEPARTMENT

REVIEWED

SIGNS DETAIL  
 SCALE: N.T.S.

PROJECT TITLE  
**MESQUITE TRAILS UNIT EIGHT  
 SUBDIVISION IMPROVEMENTS**

SHEET TITLE

ILLUMINATION PLAN

SHEET NO.

C11.1

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

**INDEX**

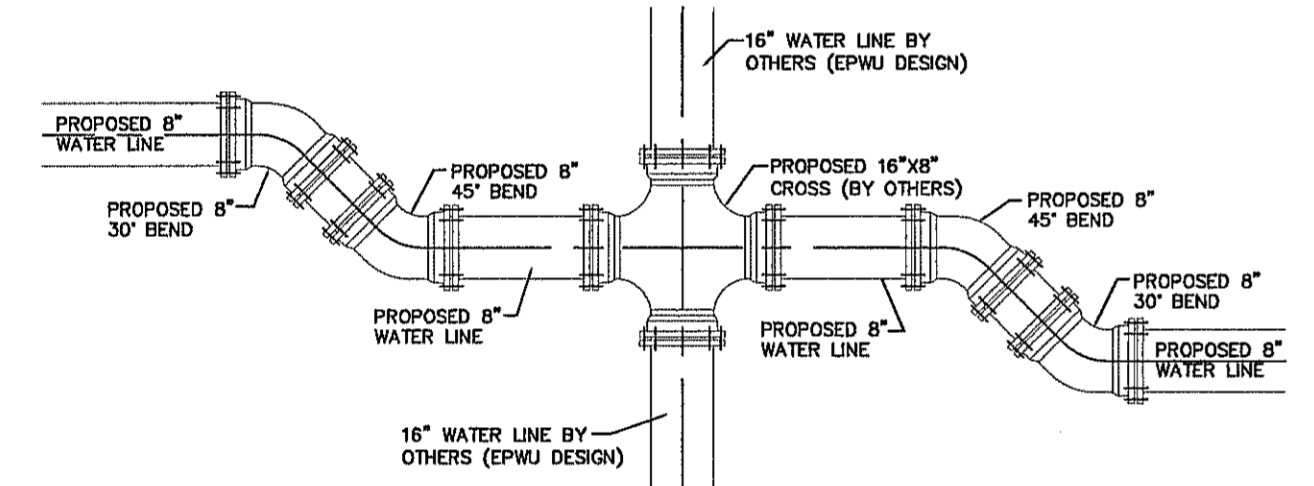
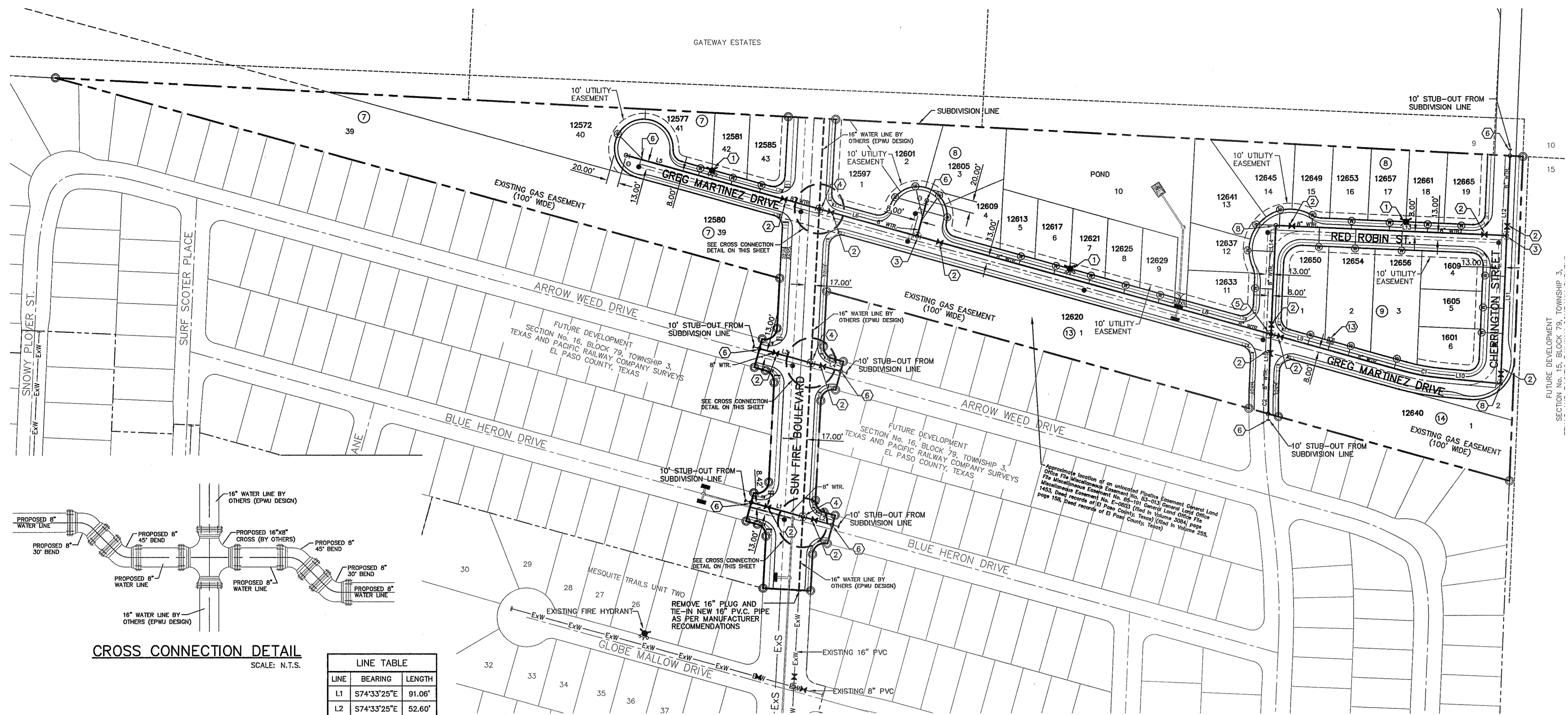
SHEET NO.	DESCRIPTION
C12.1	MESQUITE TRAILS UNIT EIGHT WATER MAIN PIPE LAYOUT
C13.1	WATER DETAILS
C13.2	WATER DETAILS
C13.3	WATER DETAILS
C13.4	WATER DETAILS

- NOTES:**
- ALL LOTS SHALL BE PROVIDED WITH ONE SERVICE CONNECTION TO BE INSTALLED AT THE LOCATION AS SHOWN ON THE SERVICE LOCATION DETAIL.
  - ALL WATER LINES SHALL BE PVC C-900, CLASS 150.
  - REFERENCE WATER DETAILS FOR TYPICAL VALVE AND WATER LOCATION AT STREET INTERSECTIONS.

**NOTE:**  
 THE WATER INDEX PLAN SHALL DICTATE THE LOCATIONS OF WATER VALVES AND FIRE HYDRANTS.

**LEGEND**

SYMBOL	DESCRIPTION
---	SUBDIVISION BOUNDARY LINE
---	PROPERTY LINE
---	CENTER LINE
8" WTR.	PROPOSED 8", C-900 P.V.C. PIPE CL 150
16" WTR.	16" WATER LINE BY OTHERS (EPWJ DESIGN)
---	PROPOSED SEWER LINE (PLAN VIEW)
ExW	EXISTING WATER LINE
ExS	EXISTING SEWER LINE
---	PROPOSED STORM SEWER
---	PROPOSED SERVICE CONNECTION (PLAN VIEW)
---	PROPOSED FIRE HYDRANT, KENNEDY OR MUELLER MODEL
---	EXISTING FIRE HYDRANT
---	PROPOSED GATE VALVE
---	EXISTING GATE VALVE
---	PROPOSED WATER LINE PLUG
---	EXISTING PLUG
---	PROPOSED POINT OF TANGENCY
---	EXISTING POINT OF TANGENCY
---	5/8" METER (BY OWNER)



**CROSS CONNECTION DETAIL**  
 SCALE: N.T.S.

**LINE TABLE**

LINE	BEARING	LENGTH
L1	S74°33'25"E	91.06'
L2	S74°33'25"E	52.60'
L3	S74°33'25"E	91.06'
L4	S74°33'25"E	52.60'
L5	S74°33'25"E	341.68'
L6	S74°33'25"E	172.84'
L7	S15°26'35"W	62.63'
L8	S74°33'25"E	624.68'
L9	S74°33'27"E	234.38'
L10	S84°33'09"E	102.26'
L11	N02°22'00"E	252.25'
L12	N02°22'00"E	134.99'
L13	S87°31'43"E	393.38'
L14	N02°28'17"E	185.46'
L15	N02°28'17"E	80.25'

**CURVE TABLE**

CURVE	RADIUS	LENGTH	TANGENT	CHORD	BEARING	DELTA
C1	367.72'	64.03'	32.09'	63.95'	S79°33'10"E	009°58'35"
C2	1125.48'	55.03'	27.52'	55.02'	S01°04'14"W	002°48'05"

**WATER KEYED NOTES**

1	FIRE HYDRANT
2	8" Ø GATE VALVE
3	8" TEE
4	16" X 8" CROSS
5	8" CROSS
6	8" PLUG
7	16" X 8" X 8" TEE
8	8" 90° BEND
9	8" DUCTILE IRON PIPE
10	16" PLUG
11	16" X 8" X 8" TEE
12	16" Ø GATE VALVE
13	5/8" METER (BY OWNER)

**WATER QUANTITIES**

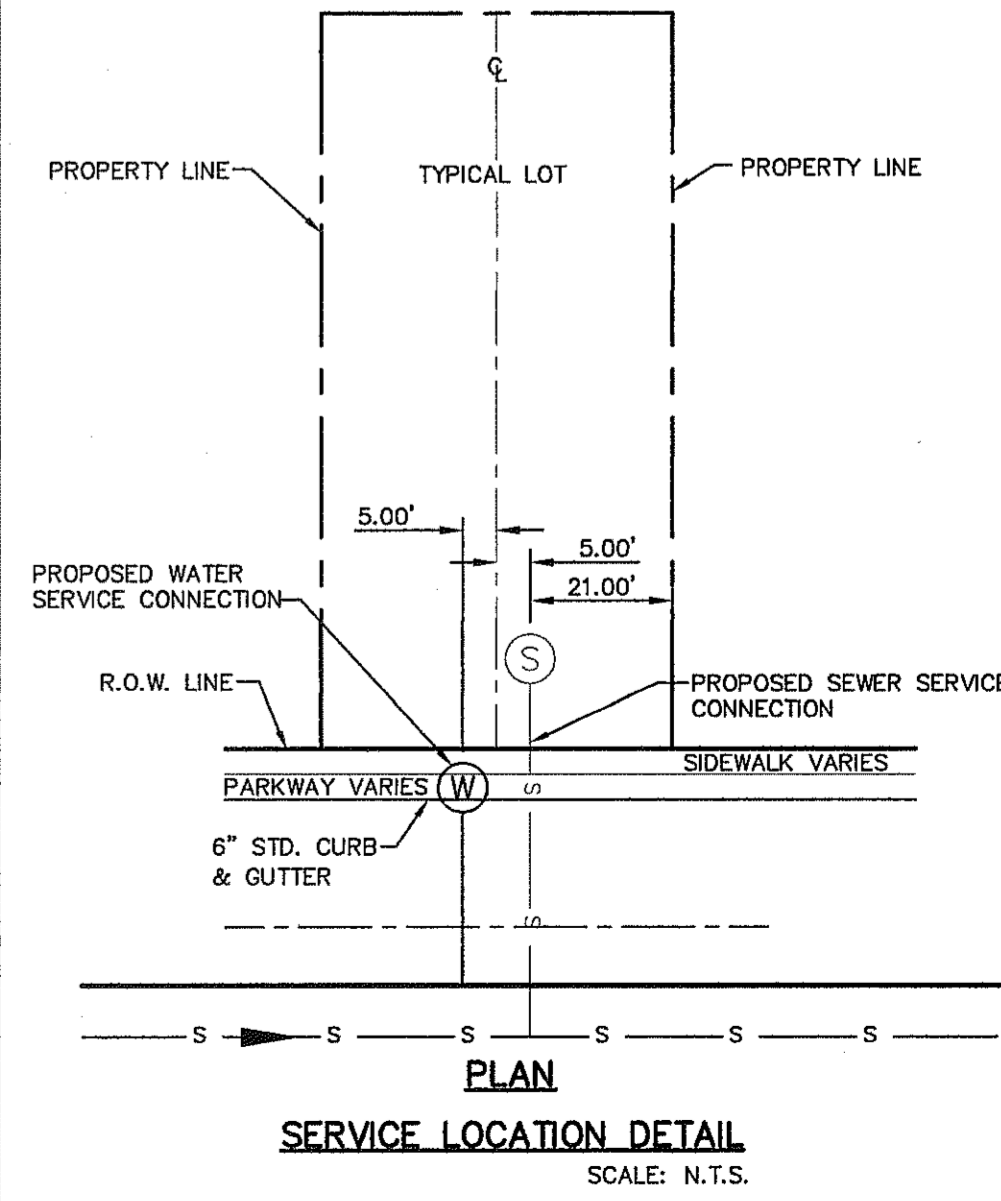
DESCRIPTION	QUANTITY	UNIT
8" PVC WATER LINE	2,833.51'	LF
8" DIP WATER LINE	120'	LF
8" GATE VALVE	13	EA
8" PLUG	8	EA
FIRE HYDRANT	3	EA

CONTRACTOR SHALL VERIFY DEPTH AND LOCATION OF ALL EXISTING UTILITIES PRIOR TO COMMENCING CONSTRUCTION.

CITY DEVELOPMENT DEPARTMENT  
 REVIEWED  
**WATER INDEX MAP**  
 SCALE: 1" = 100'

- GENERAL NOTES**
- UNLESS OTHERWISE SHOWN ON THE DRAWINGS, THE PROPOSED WATER MAINS SHALL BE INSTALLED NO LESS THAN 10' AWAY FROM EXISTING SEWER LINE. SEPARATION DISTANCES SHALL FOLLOW T.C.E.Q. REQUIREMENTS (290-44).
  - THE INTENT OF THE OWNER IS TO HAVE THE WATER MAINS INSTALLED TO SUCH A DEPTH THAT THEY WILL HAVE AT LEAST 48" OF COVER BELOW PROPOSED GROUND AT ALL LOCATIONS. THE PIPELINES SHALL HAVE NO DIPS, SAGS OR HUMPS OR OTHER IRREGULARITIES IN VERTICAL ALIGNMENT. THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL EXISTING UTILITIES PRIOR TO INSTALLING THE WATER PIPELINE SO THAT AN ACCEPTABLE PROFILE CAN BE ESTABLISHED PRIOR TO INSTALLATION OF THE PIPELINE.
  - IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD LOCATE ALL UNDERGROUND UTILITIES, SHOWN OR NOT SHOWN IN THE PLANS, AND COORDINATE WORK WITH ALL UTILITY COMPANIES, EL PASO WATER UTILITIES, AND THE CITY OF EL PASO DEPARTMENT OF TRANSPORTATION PRIOR TO CONSTRUCTION. ALL EXISTING UTILITY DEPTHS ARE UNKNOWN. THE CONTRACTOR SHALL BE ULTIMATELY RESPONSIBLE FOR ACQUIRING FIELD DEPTHS OF ALL UTILITIES WITHIN THE PROJECT AREAS.
  - TRENCH SAFETY REQUIREMENTS SHALL COMPLY WITH CURRENT OSHA REGULATIONS.
  - AS-BUILT STATIONING, OFFSET FROM R.O.W. AND INVERT ELEVATIONS SHALL BE ACCURATELY RECORDED BY THE CONTRACTOR ON A CLEAN SET OF PLANS FOR EACH VALVE, FIRE HYDRANT, ELBOW, SERVICE CONNECTION AND/OR STUB-OUT, WITH RESPECT TO THE APPROPRIATE PROJECT CONTROL POINT.
  - THE CITY OF EL PASO AND EL PASO WATER UTILITIES MUST BE NOTIFIED 48 HOURS PRIOR TO COMMENCING ANY WORK IN AREAS WITHIN THEIR JURISDICTION.
  - EXISTING STREETS, DRIVEWAYS, SIGNS, AND ALL OTHER MISCELLANEOUS STRUCTURES DAMAGE OR REMOVED BY CONSTRUCTION ACTIVITIES SHALL BE RESTORED TO ORIGINAL OR BETTER THAN ORIGINAL CONDITION AT NO COST TO OWNER.
  - TRAFFIC CONTROL SHALL BE IN PLACE PRIOR TO INITIATING WORK.
  - ALL TIE-INS SHALL BE CLOSELY COORDINATED WITH THE EL PASO WATER UTILITIES AT LEAST 48 HOURS PRIOR TO ACTUAL CONSTRUCTION.
  - CONSTRUCTION OF THE PUBLIC WATER AND SEWER SYSTEM INCLUDING MATERIALS AND TESTING SHALL CONFORM WITH E.P.W.U. - P.S.B. STANDARD SPECIFICATIONS FOR THE INSTALLATION OF WATER MAINS, SEWER MAINS AND RELATED APPURTENANCES.

- GENERAL UTILITIES:**  
 TEXAS EXCAVATION SAFETY SERVICE  
 11884 GREENVILLE AVENUE,  
 DALLAS, TX. 75243  
 (800) 344-8377
- WATER & SEWER:**  
 PASEO DEL ESTE MUD #1  
 12429 ROJAS DRIVE, STE. A2  
 EL PASO, TX. 79928  
 (915) 543-2076  
 MR. JOHN DIXON
- TELEPHONE:**  
 SBC  
 11200 PELICANO  
 EL PASO, TX. 79935  
 (915) 595-0151
- ELECTRIC:**  
 EL PASO ELECTRIC CO.  
 501 W. SAN ANTONIO ST.  
 EL PASO, TX. 79902  
 (915) 543-2076  
 MR. FRANK VIGEL (DISTRIBUTION)
- EL PASO STREETS**  
 CITY OF EL PASO  
 DEPARTMENT OF TRANSPORTATION  
 7969 SAN PAULO DRIVE  
 EL PASO, TX. 79907  
 (915) 621-6750  
 MR. TED MARQUEZ
- FIBER OPTICS:**  
 U.S. SPRINT  
 151 N. BOONIE ST.  
 EL PASO, TX. 79905  
 (915) 534-7910
- FIBER OPTICS:**  
 MCI TELECOMMUNICATIONS CORP.  
 4045 DONIPHAN PARK CIRCLE  
 EL PASO, TX. 79922  
 (915) 542-2770 EXT. 201
- CABLE TELEVISION:**  
 TIME WARNER COMMUNICATIONS 7010  
 AIRPORT ROAD  
 EL PASO, TX. 79906  
 (915) 772-1123
- FIBER OPTICS:**  
 AT&T  
 P.O. BOX 1650  
 EL PASO, TX. 79949  
 (800) 852-3786
- RESIDENTIAL GAS LINES:**  
 TEXAS GAS SERVICE  
 4700 POLLARD ST.  
 EL PASO, TX. 79930  
 (915) 680-7218  
 MR. JOSE DE ALBA



**PLAN**  
**SERVICE LOCATION DETAIL**  
 SCALE: N.T.S.

REFERENCES - BENCHMARKS  
 EXISTING CITY MONUMENT  
 ELEVATION=403.0 FEET (CITY DATUM)  
 MONUMENT LOCATION: 100' WEST OF GREG MARTINEZ DRIVE  
 MONUMENT TYPE: CONCRETE PIPER  
 MONUMENT OWNER: EL PASO COUNTY

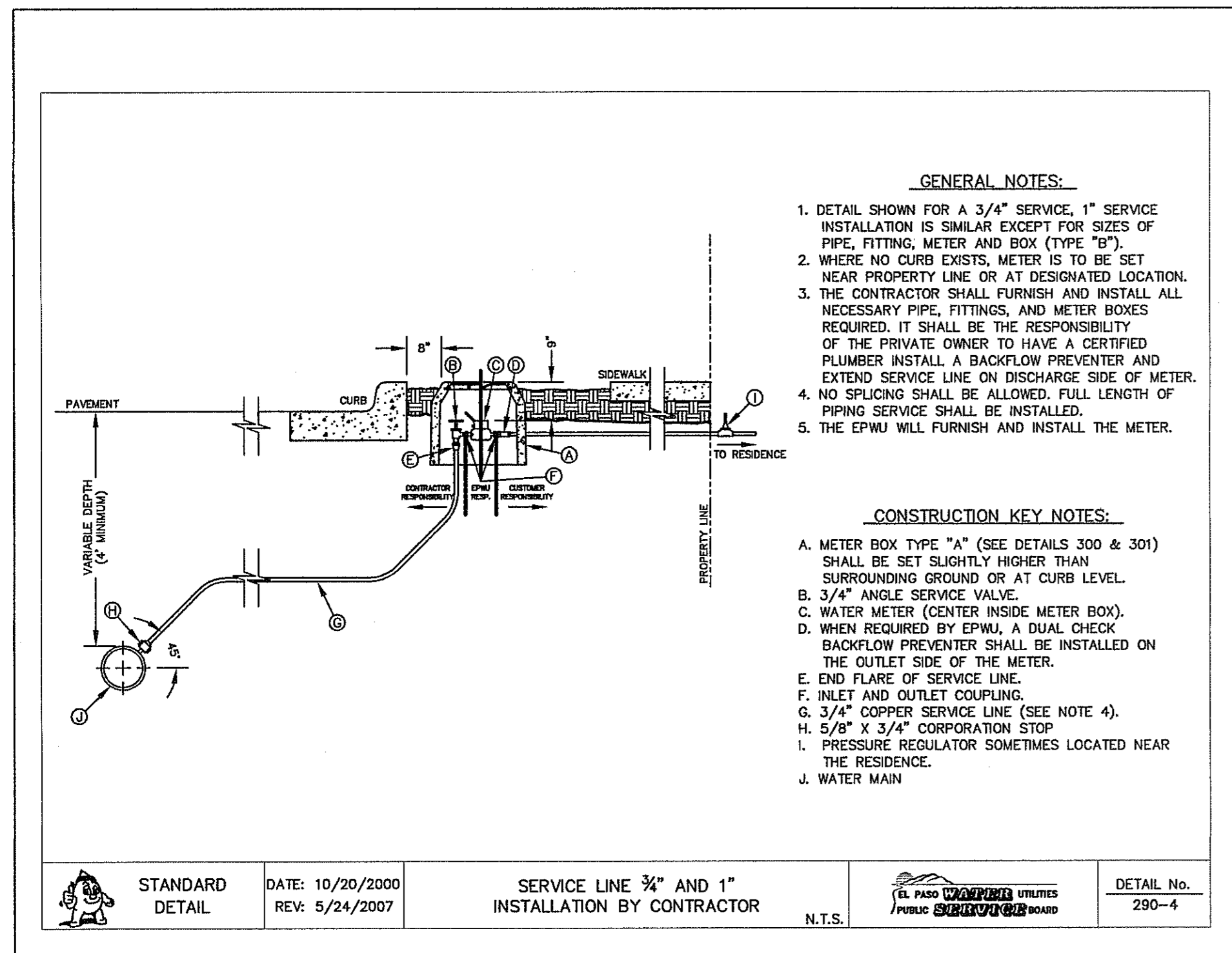
ENGINEER'S SEAL  
 ENGINEERS • ARCHITECTS • PLANNERS  
 TEXAS REGISTERED ENGINEERING FIRM F-464  
 4712 Woodrow Bean, Ste. F, El Paso, TX 79924  
 Office: 915.544.8222 Fax: 915.544.5233 www.cesapl.com

SCALE  
 Horizontal: Vertical: Interval: N/A  
 DATE: APRIL 2013  
 DESIGN BY: J.M.  
 DRAWN BY: J.M.  
 CHKD. BY: J.L.A.  
 APPD. BY: J.L.A.  
 JOB No. 2000-145-LD

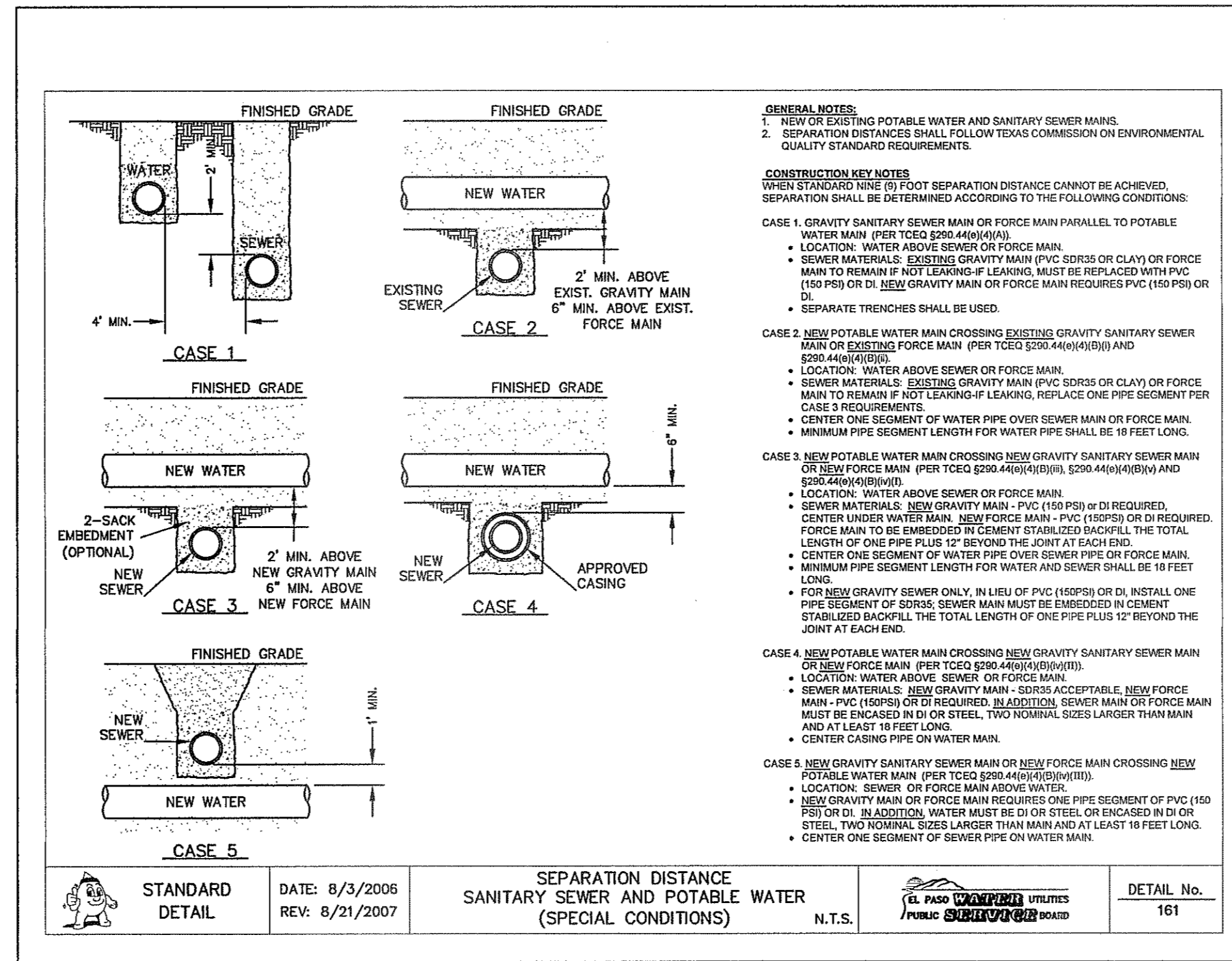
PROJECT TITLE  
**MESQUITE TRAILS UNIT EIGHT  
 SUBDIVISION IMPROVEMENTS**

SHEET TITLE  
**WATER INDEX**

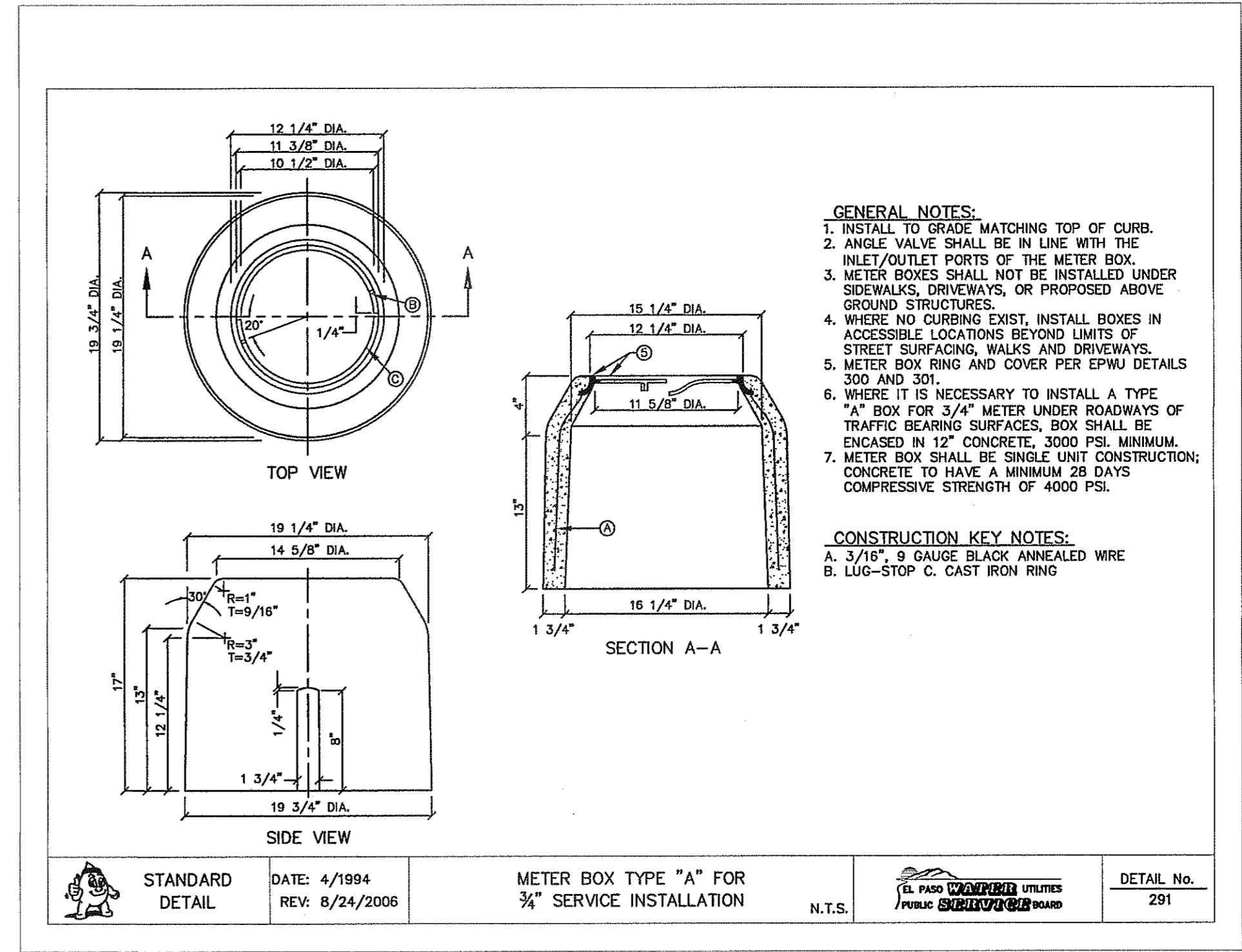
SHEET NO.  
**C12.1**



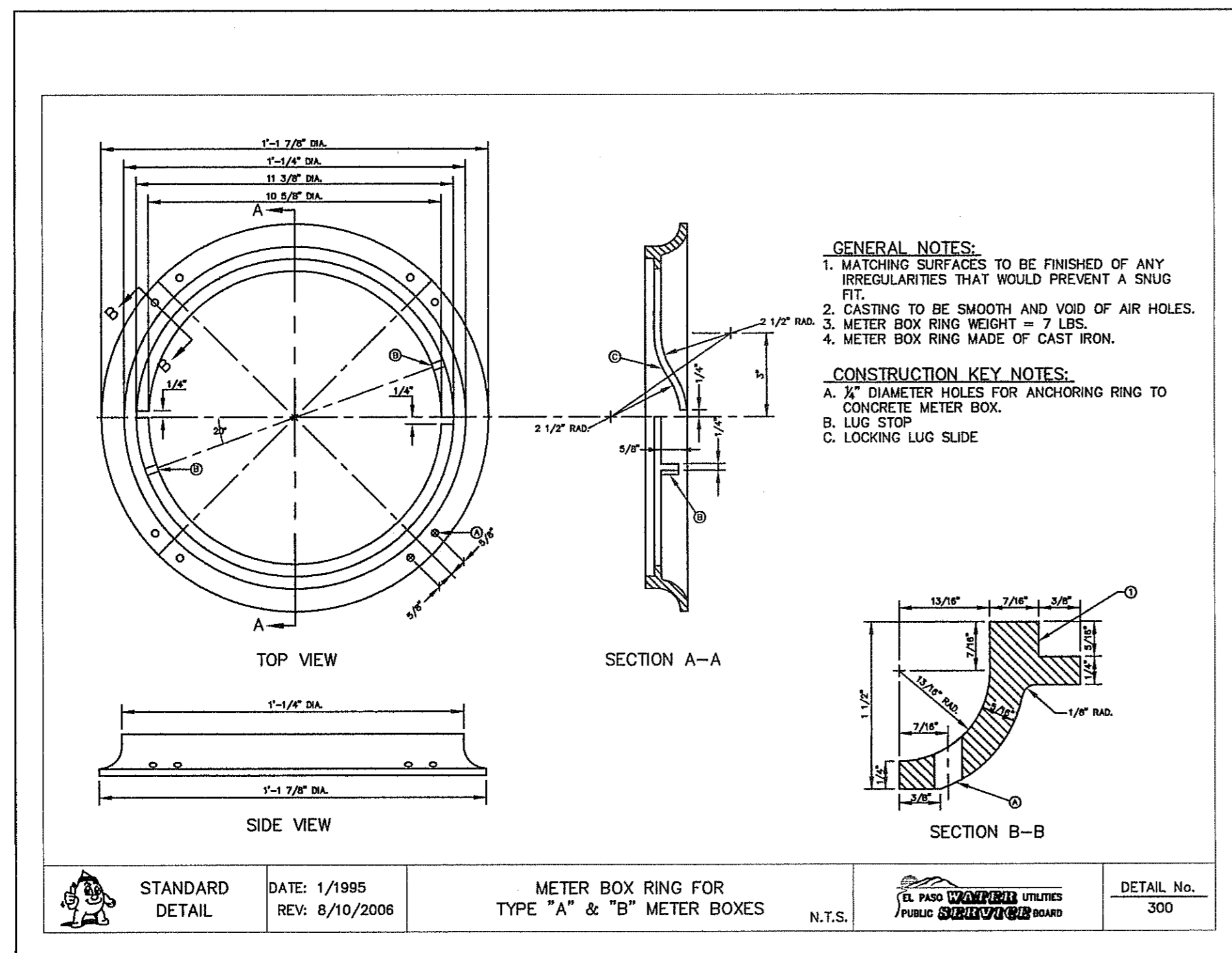
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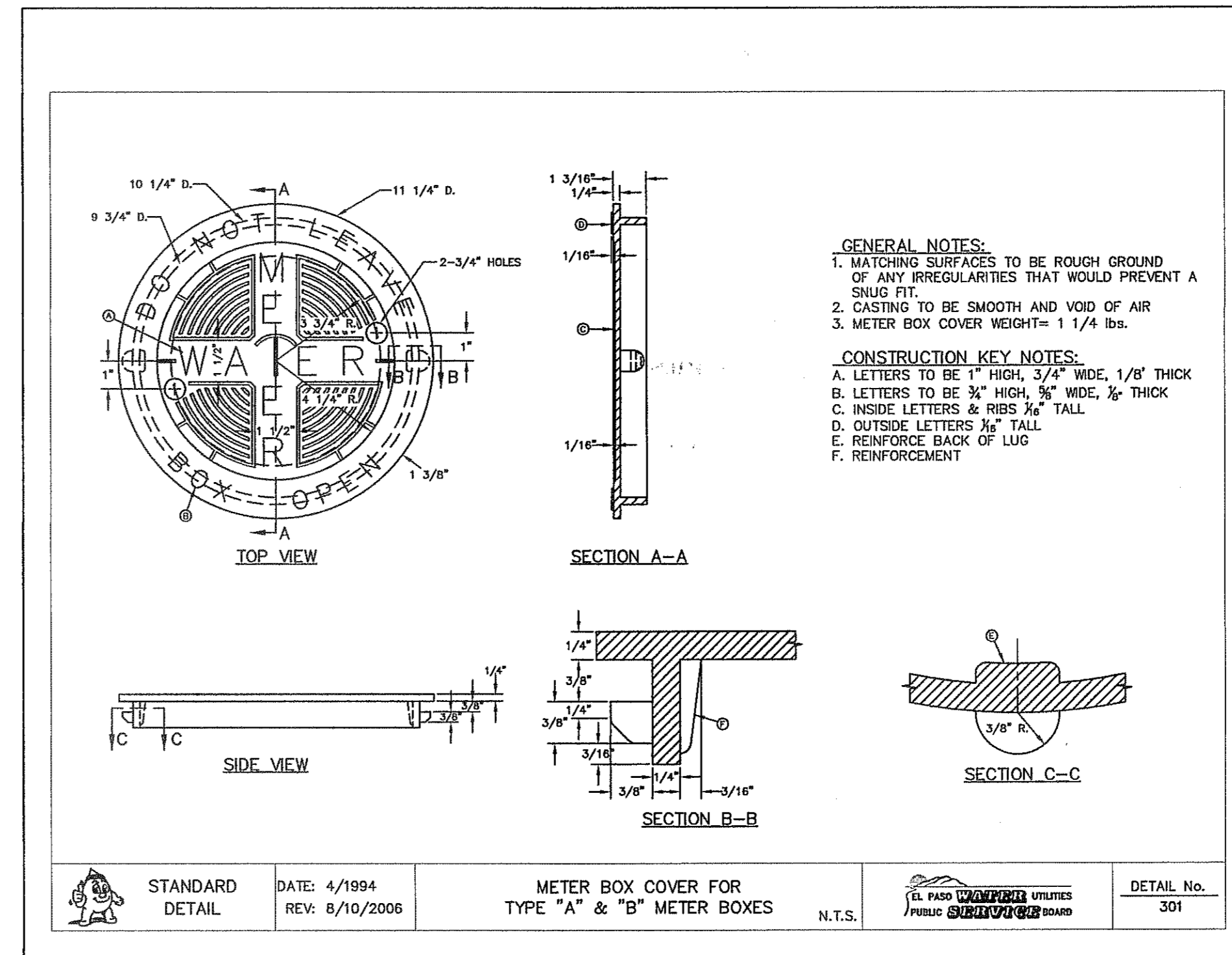
2 SEPARATION DISTANCE POTABLE WATER AND SANITARY SEWER (SPECIAL CONDITIONS) SCALE: N.T.S. C13.1



3 METER BOX DETAIL N.T.S. C13.1



4 METER BOX RING DETAIL N.T.S. C13.1



4 METER BOX COVER DETAIL N.T.S. C13.1

REFERENCES - BENCHMARKS

EXISTING CITY MONUMENT (CITY CENTER)  
 4712 WOODROW DR. (CITY CENTER)  
 4712 WOODROW DR. (CITY CENTER)  
 4712 WOODROW DR. (CITY CENTER)  
 4712 WOODROW DR. (CITY CENTER)

DATE: \_\_\_\_\_ REVISIONS: \_\_\_\_\_ BY: \_\_\_\_\_

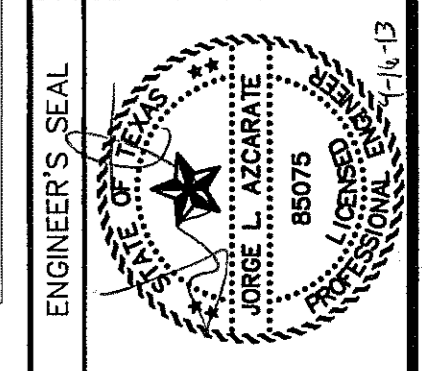
**CSA**

engineers • architects • planners

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4712 Woodrow Drive, Ste. F El Paso, TX 79924

Office: 915.544.6222 Fax: 915.544.6203 www.csaonline.com



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

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DRAWN BY: J.M.

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APPROV. BY: J.L.A.

JOB No. 2000-145-LD

PROJECT TITLE

**MESQUITE TRAILS UNIT EIGHT**

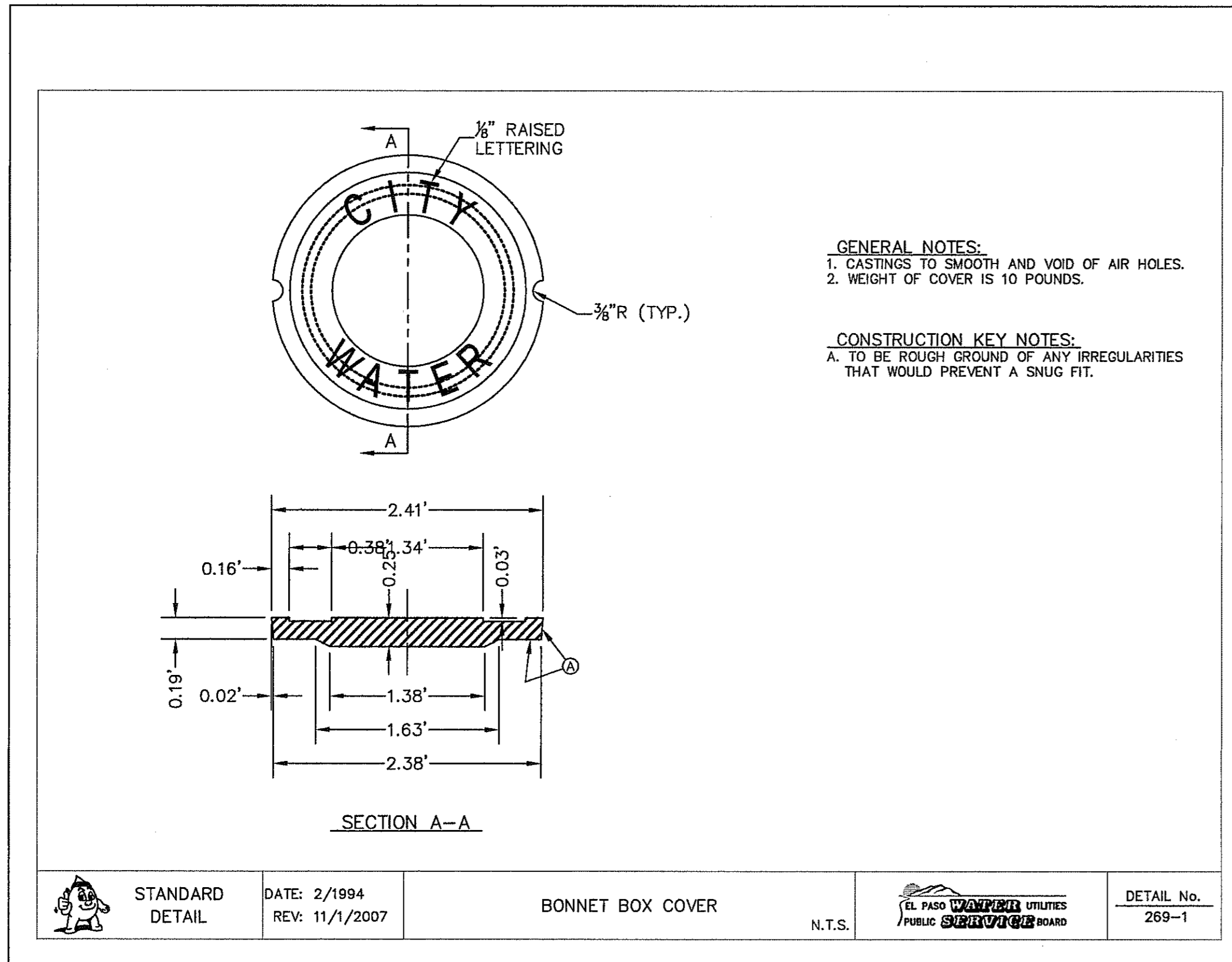
**SUBDIVISION IMPROVEMENTS**

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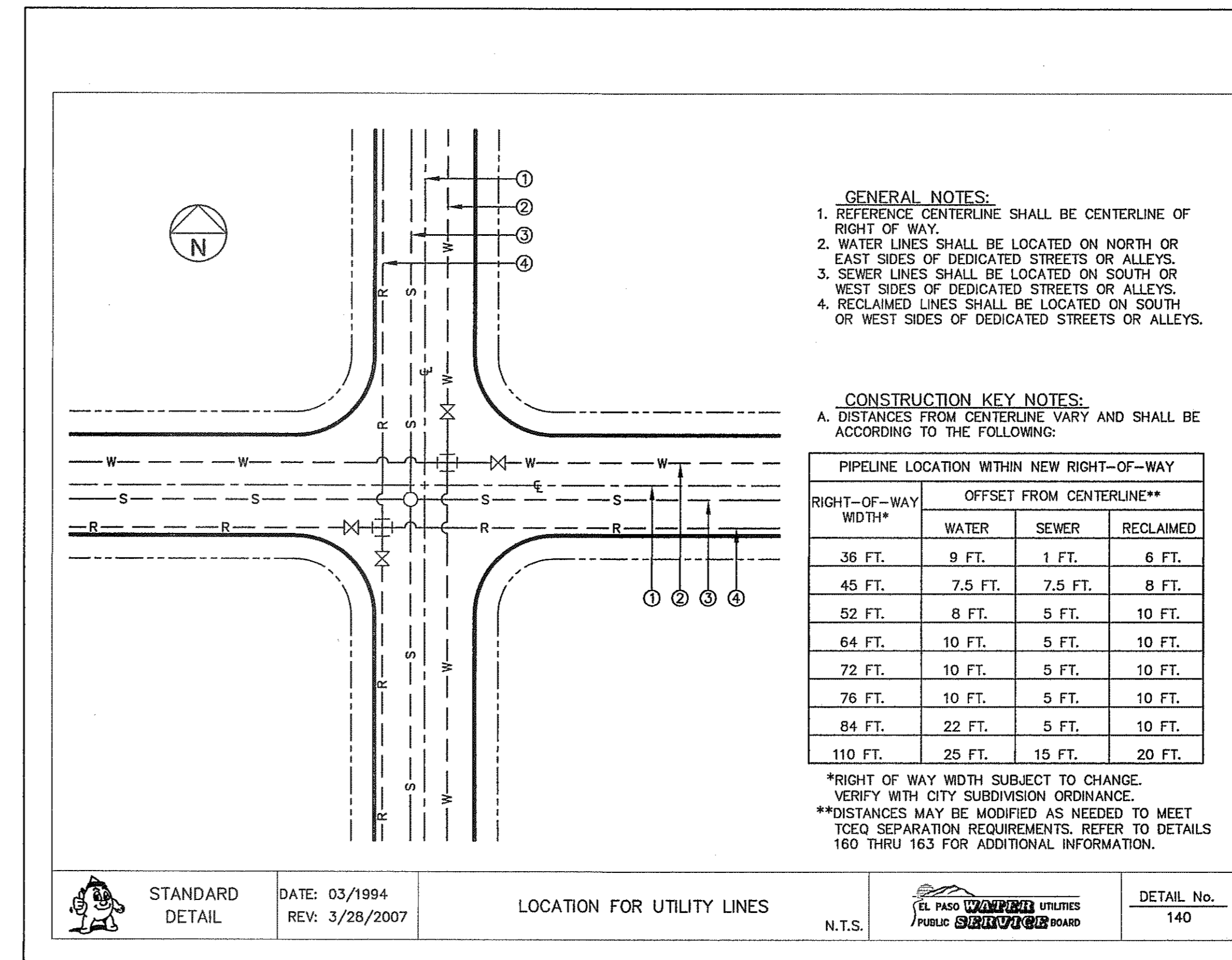
**WATER DETAILS**

(SHEET 1 OF 4)

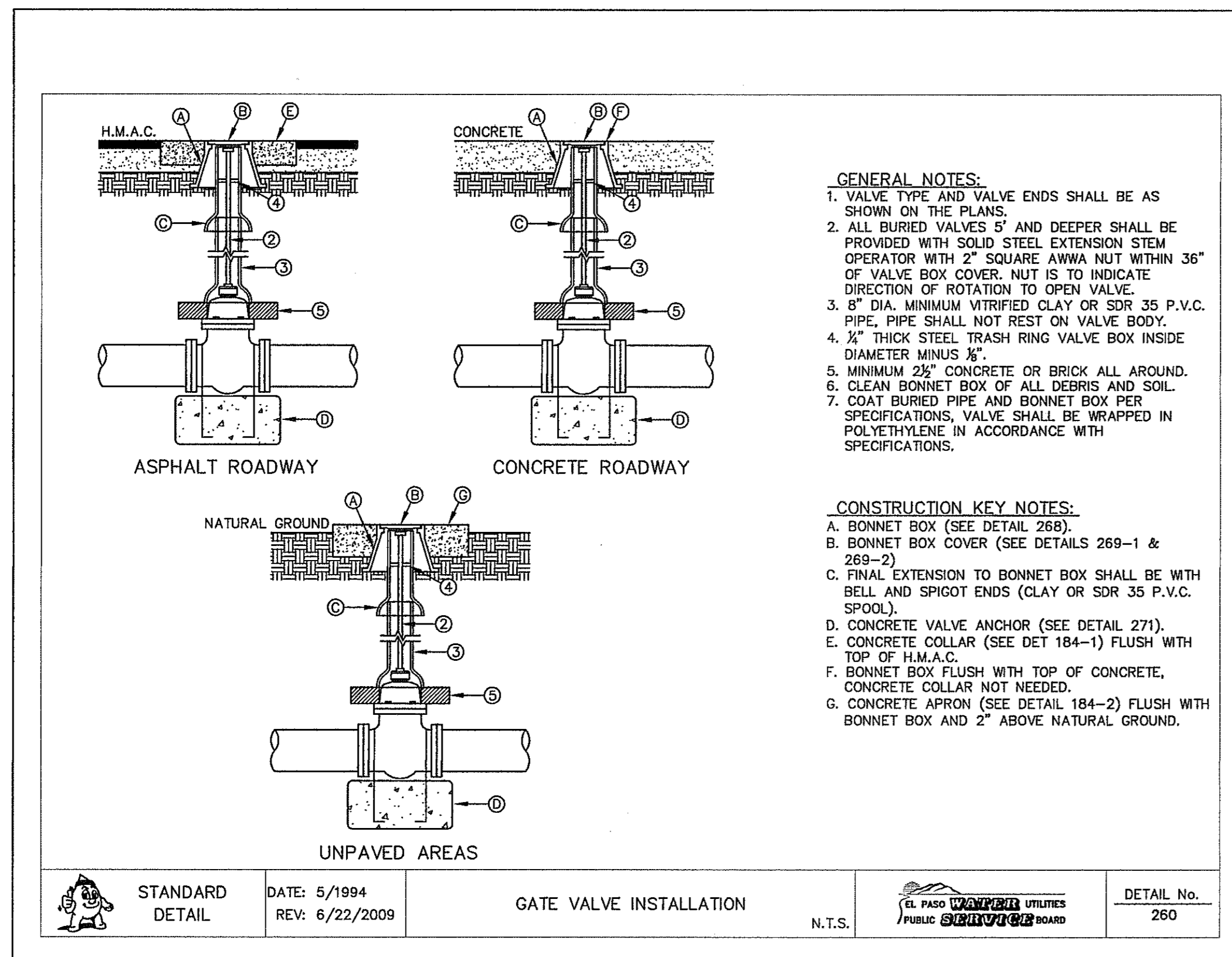
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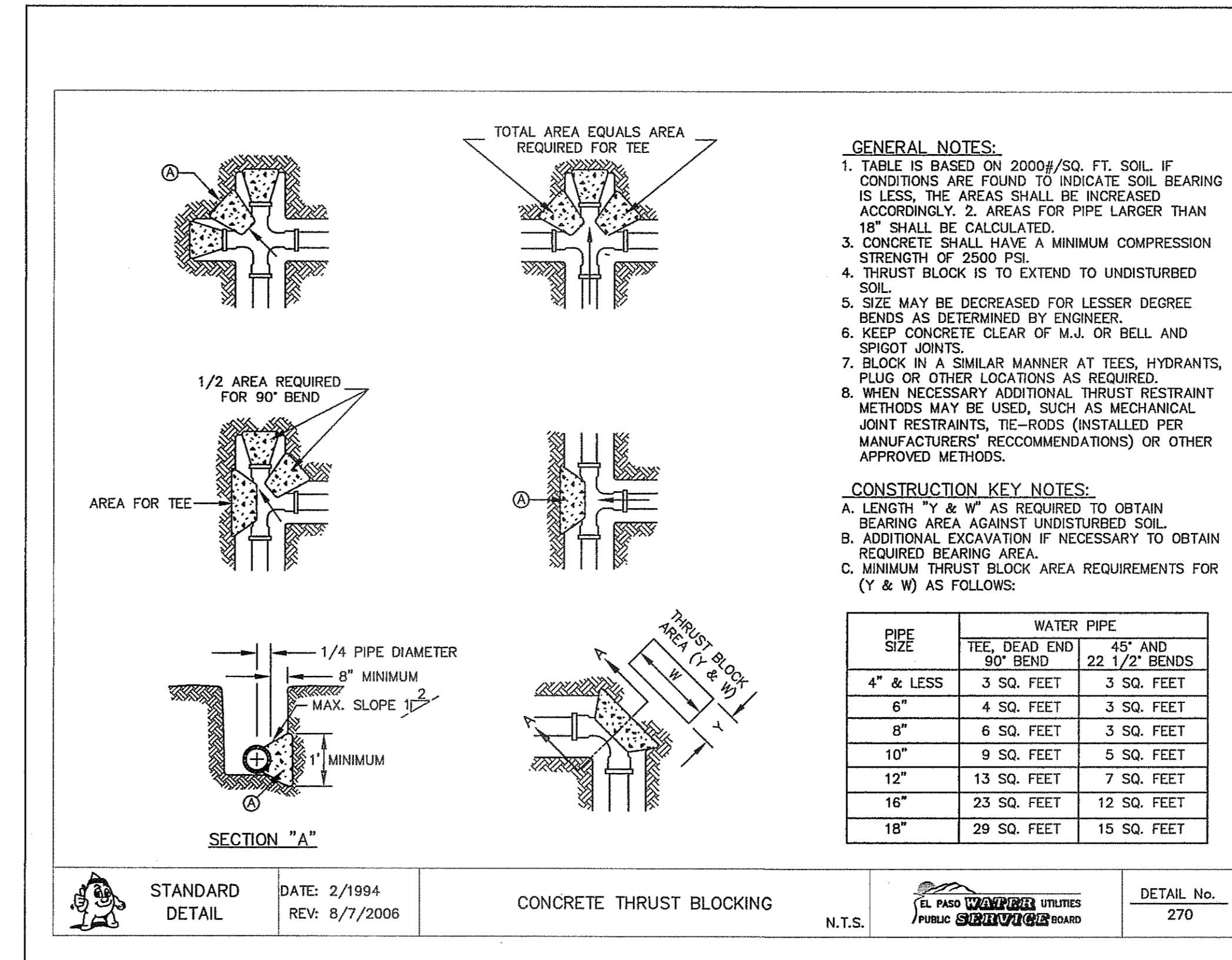
1 BONNET BOX COVER & EXTENSION  
 C13.2 N.T.S.



2 STANDARD LOCATION FOR EXTENSIONS DETAIL  
 C13.2 N.T.S.



3 GATE VALVE INSTALLATION  
 C13.2 N.T.S.



4 THRUST BLOCKING  
 C13.2 N.T.S.

REFERENCES - BENCHMARKS  
 EXISTING CITY MONUMENT ELEVATIONS TO FEET (GTY. DATA)  
 PASADENA BENCH MARK AND PASADENA BENCH MARK

ENGINEER'S SEAL  
 JORGE L. AZCARATE  
 88075  
 TEXAS REGISTERED ENGINEERING FIRM F-4564  
 4712 Woodrow Bean, Ste. F, El Paso, TX 79924  
 Office: 915.544.5232 Fax: 915.544.5233 www.megaproject.com

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

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JOB No. 2000-145-LD

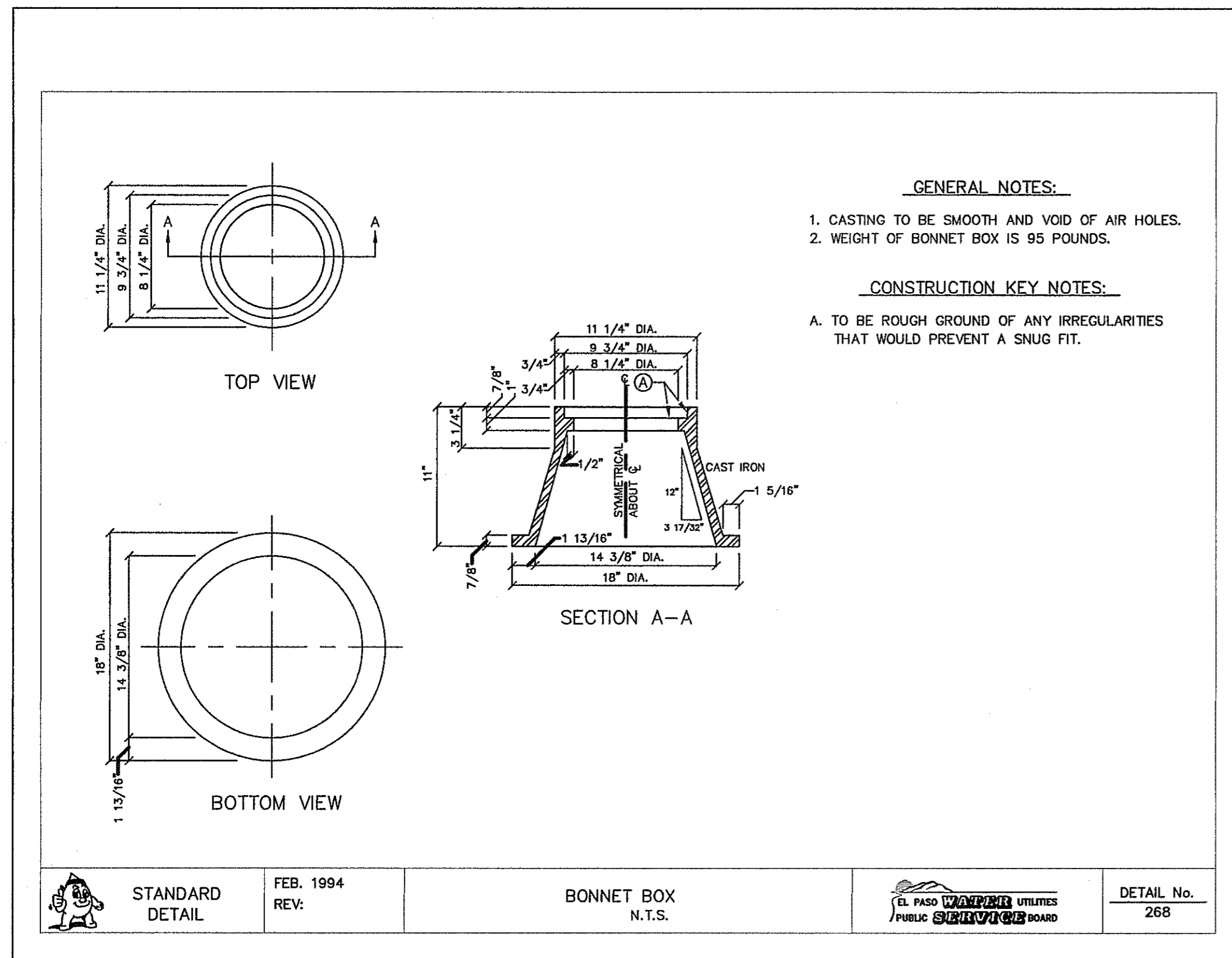
PROJECT TITLE  
 MESQUITE TRAILS UNIT EIGHT  
 SUBDIVISION IMPROVEMENTS

SHEET TITLE  
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 SHEET NO.

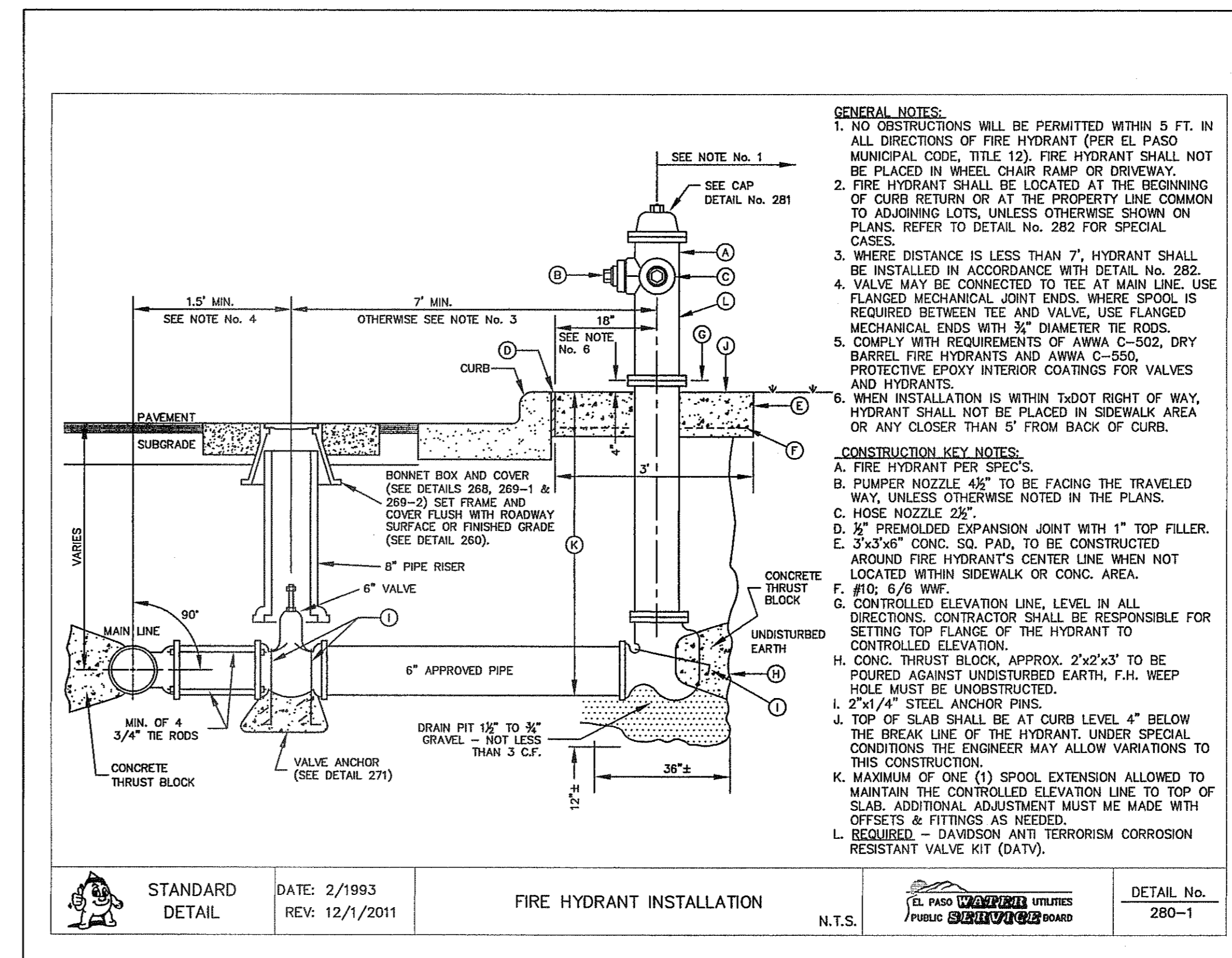
CITY DEVELOPMENT DEPARTMENT  
 REVIEWED

C13.2

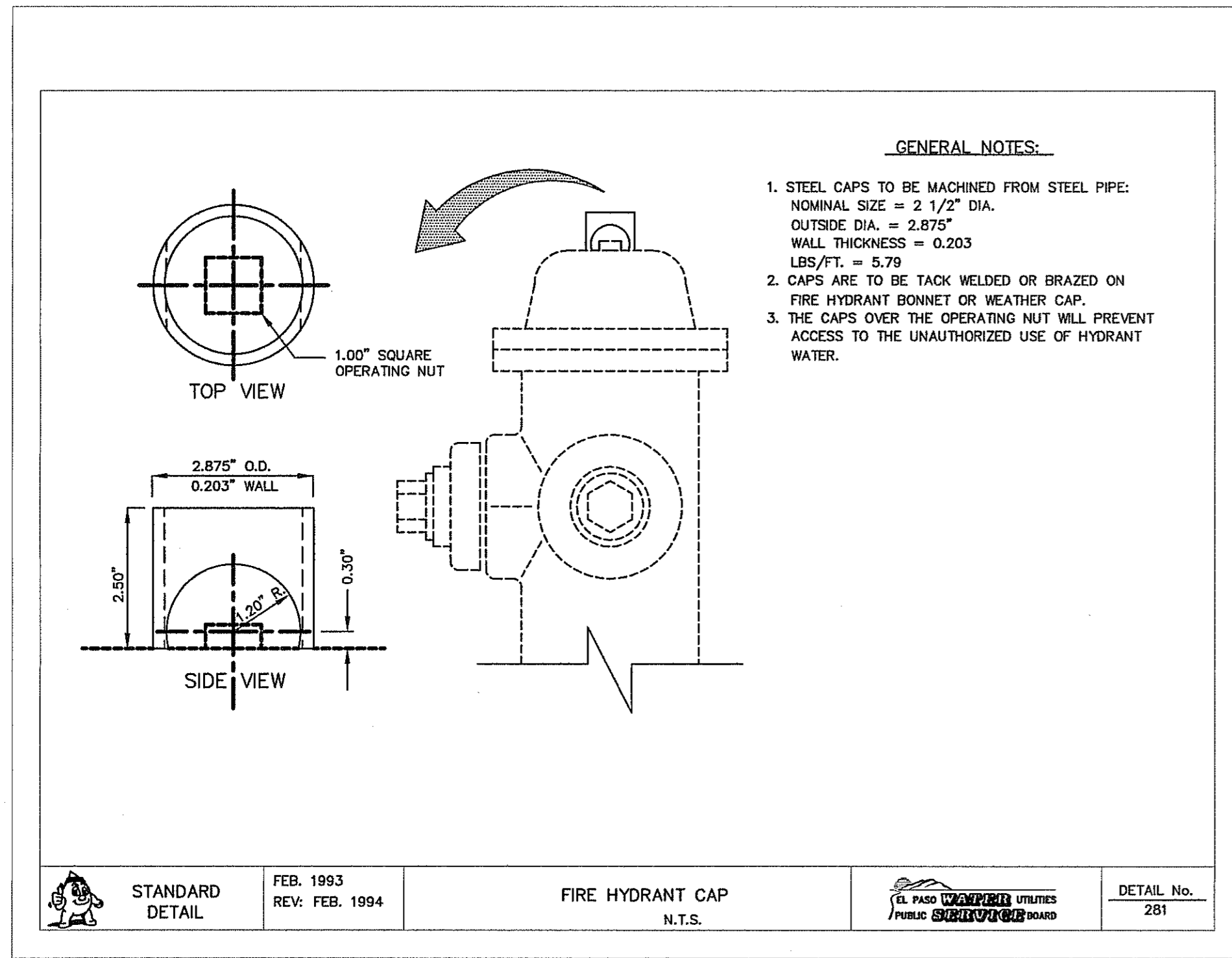




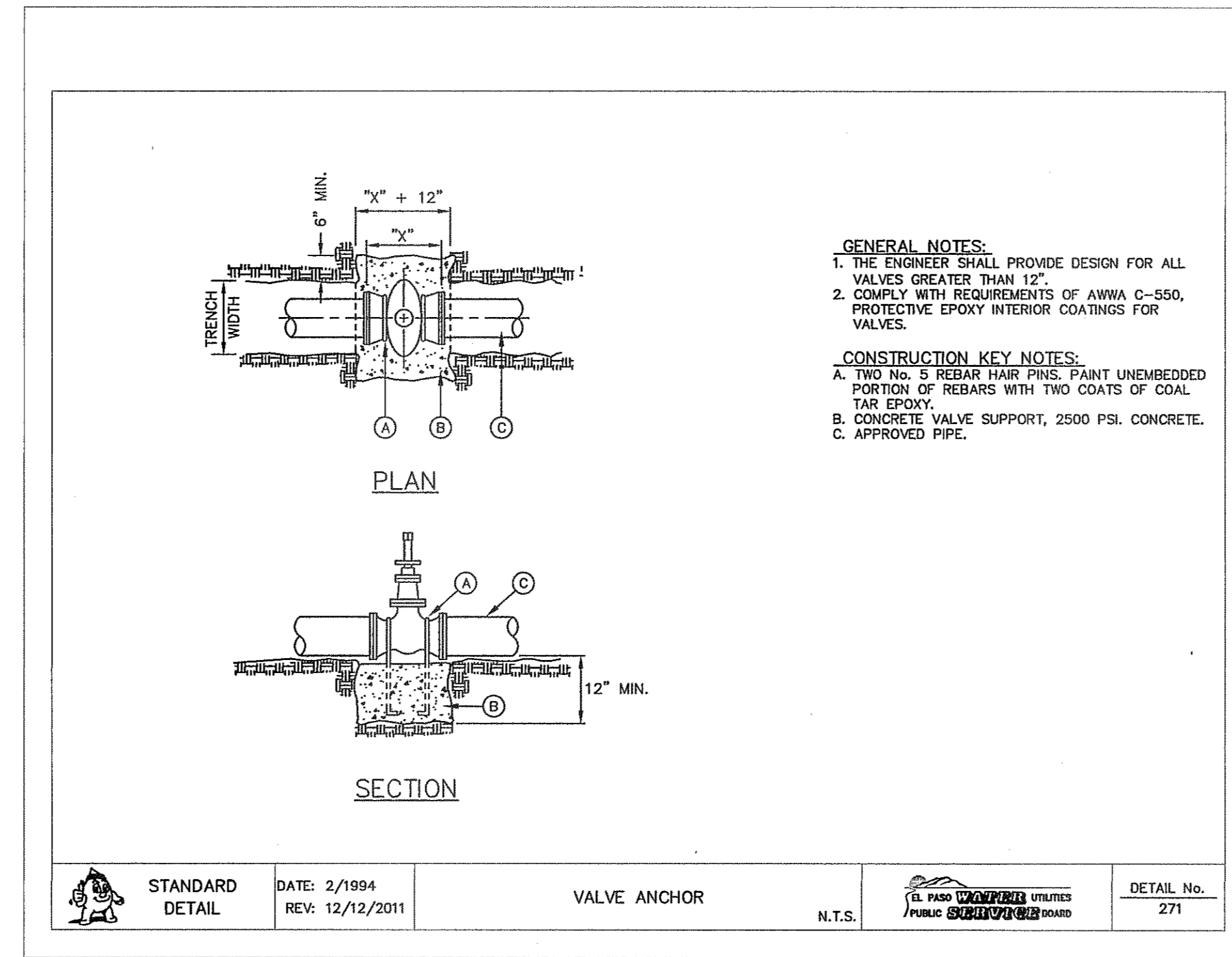
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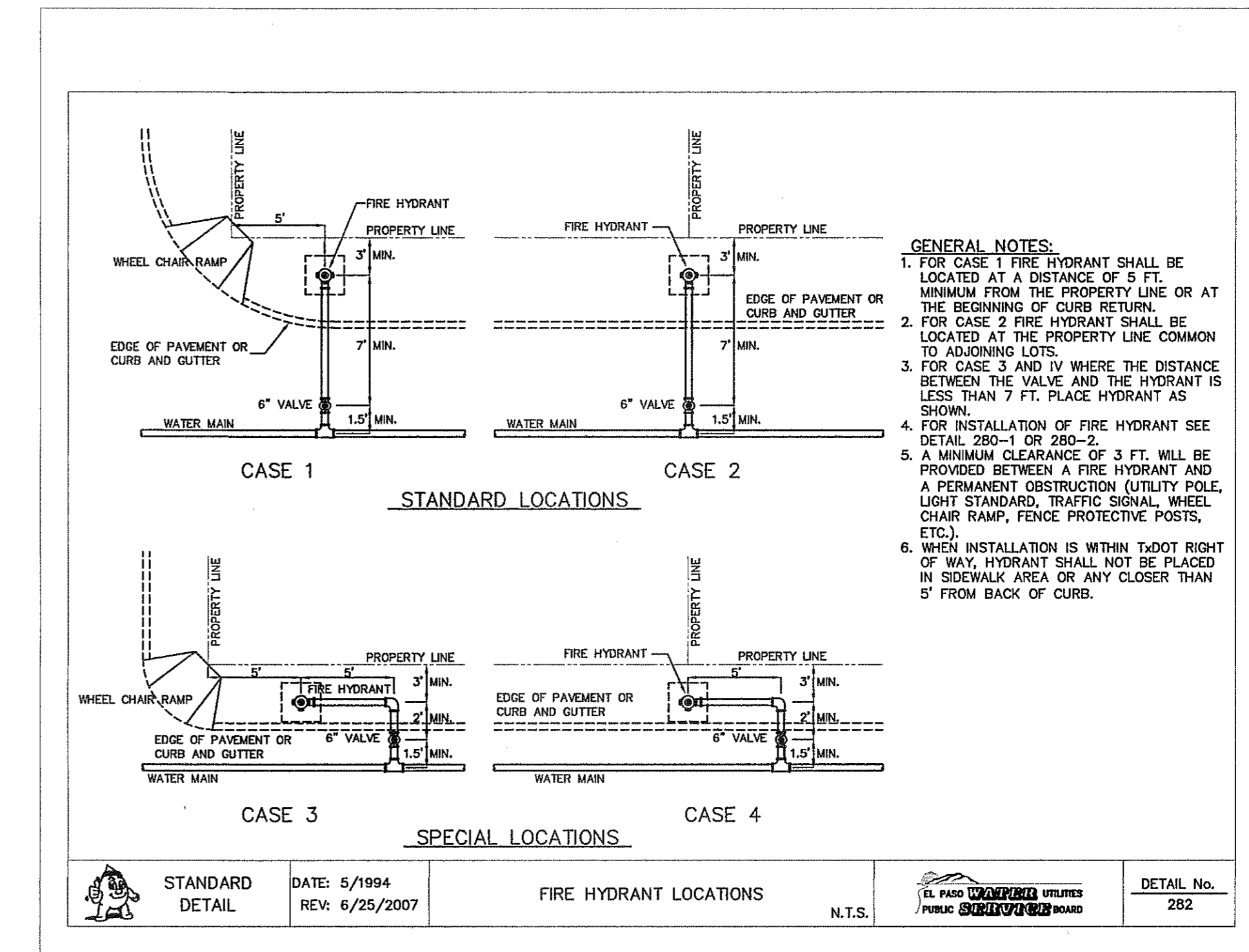
2 STANDARD FIRE HYDRANT INSTALLATION  
 C13.3 N.T.S.



3 FIRE HYDRANT CAP  
 C13.3 N.T.S.



4 VALVE ANCHOR  
 C13.3 N.T.S.



5 FIRE HYDRANT LOCATIONS  
 C13.3 N.T.S.

REFERENCES - BENCHMARKS

EXISTING CITY MONUMENT	ELEVATION: 403.0 TO 403.5 (GTY. DATUM)
EXISTING CITY MONUMENT	ELEVATION: 403.0 TO 403.5 (GTY. DATUM)
EXISTING CITY MONUMENT	ELEVATION: 403.0 TO 403.5 (GTY. DATUM)

**CSA**  
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ENGINEER'S SEAL

SCALE

Horizontal:	N/A
Vertical:	N/A
Contour Interval:	N/A
DATE:	APRIL 2013
DESIGN BY:	J.M.
DRAWN BY:	J.L.A.
CHKD. BY:	J.L.A.
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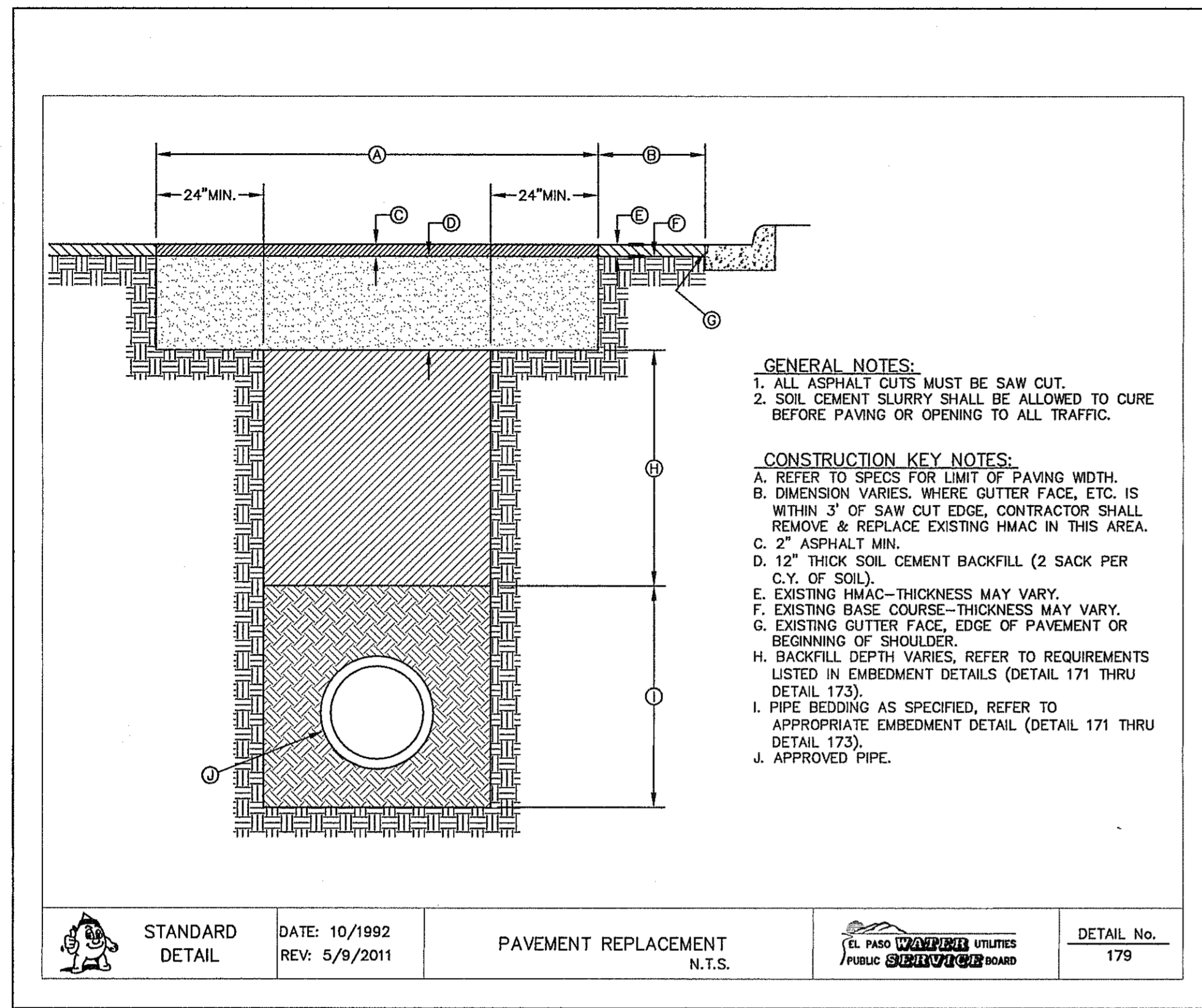
PROJECT TITLE

**MESQUITE TRAILS UNIT EIGHT  
 SUBDIVISION IMPROVEMENTS**

SHEET TITLE

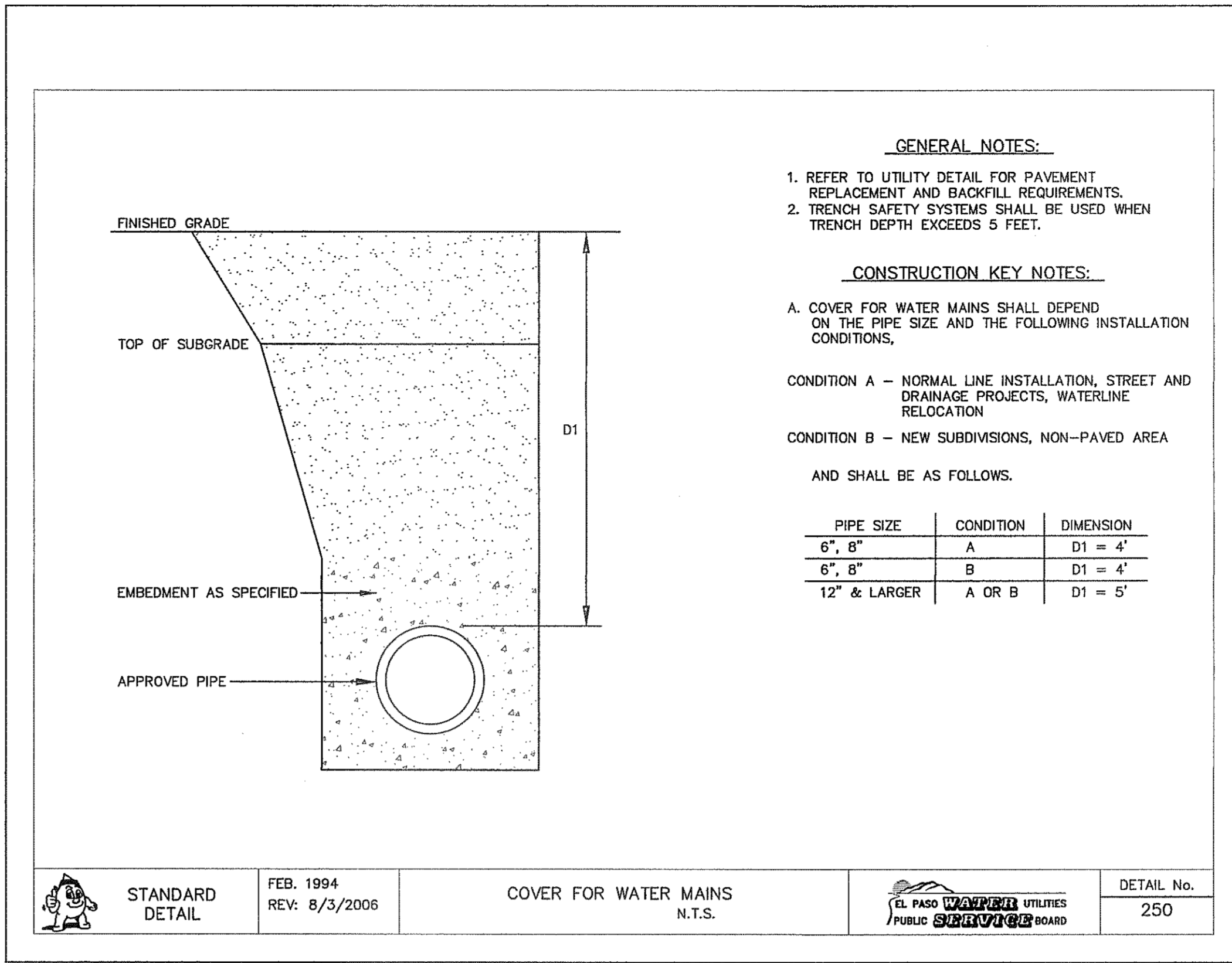
**WATER DETAILS**

(SHEET 3 OF 4)  
 SHEET NO.



STANDARD DETAIL	DATE: 10/1992 REV: 5/9/2011	PAVEMENT REPLACEMENT N.T.S.	EL PASO UTILITIES PUBLIC SERVICE BOARD	DETAIL No. 179
-----------------	--------------------------------	--------------------------------	---	-------------------

1 PAVEMENT REPAIR DETAIL  
N.T.S.

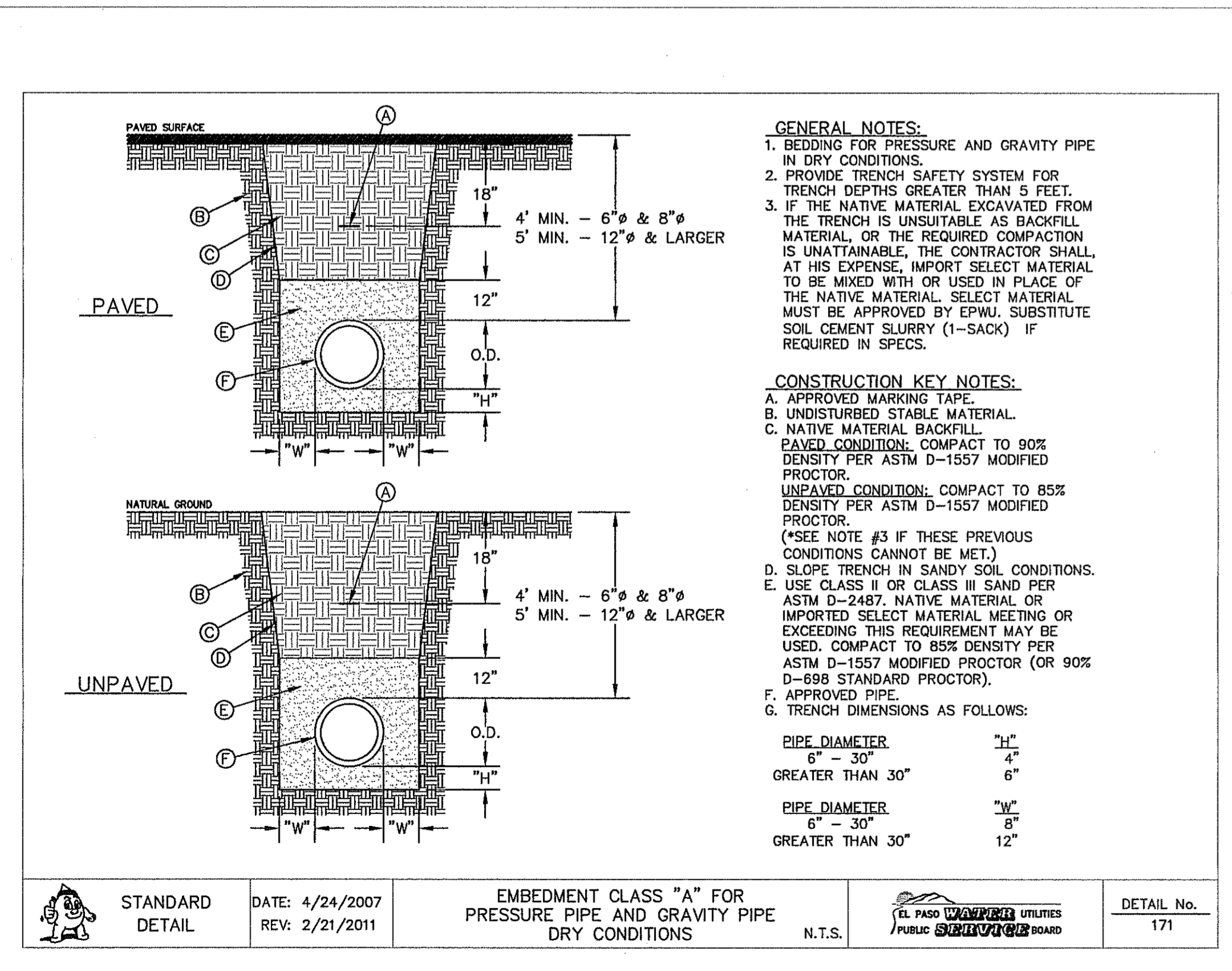


STANDARD DETAIL	FEB. 1994 REV: 8/3/2006	COVER FOR WATER MAINS N.T.S.	EL PASO UTILITIES PUBLIC SERVICE BOARD	DETAIL No. 250
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2 STANDARD COVER FOR WATER MAINS  
N.T.S.

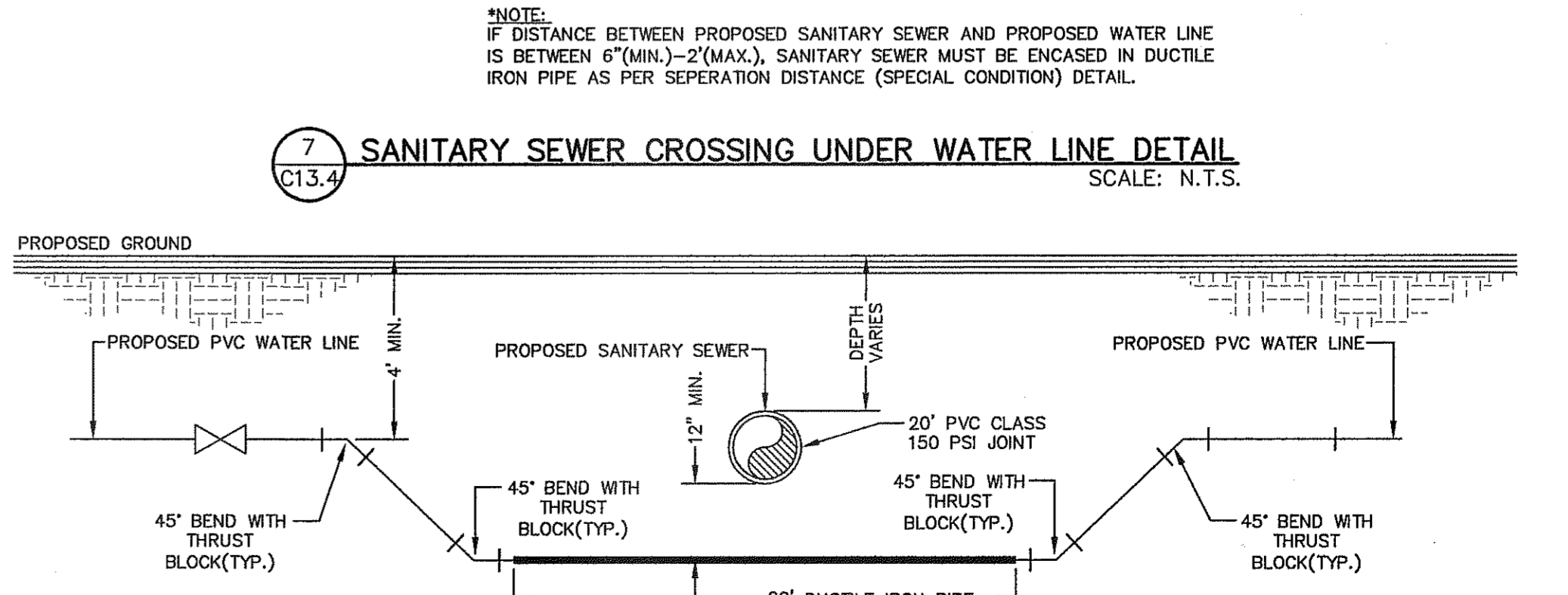
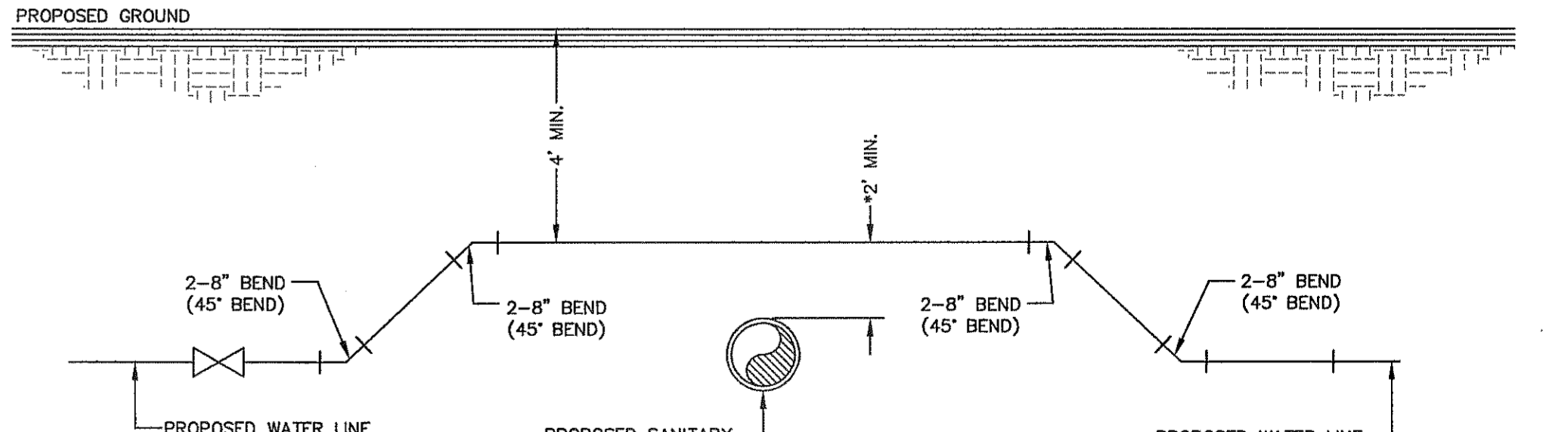
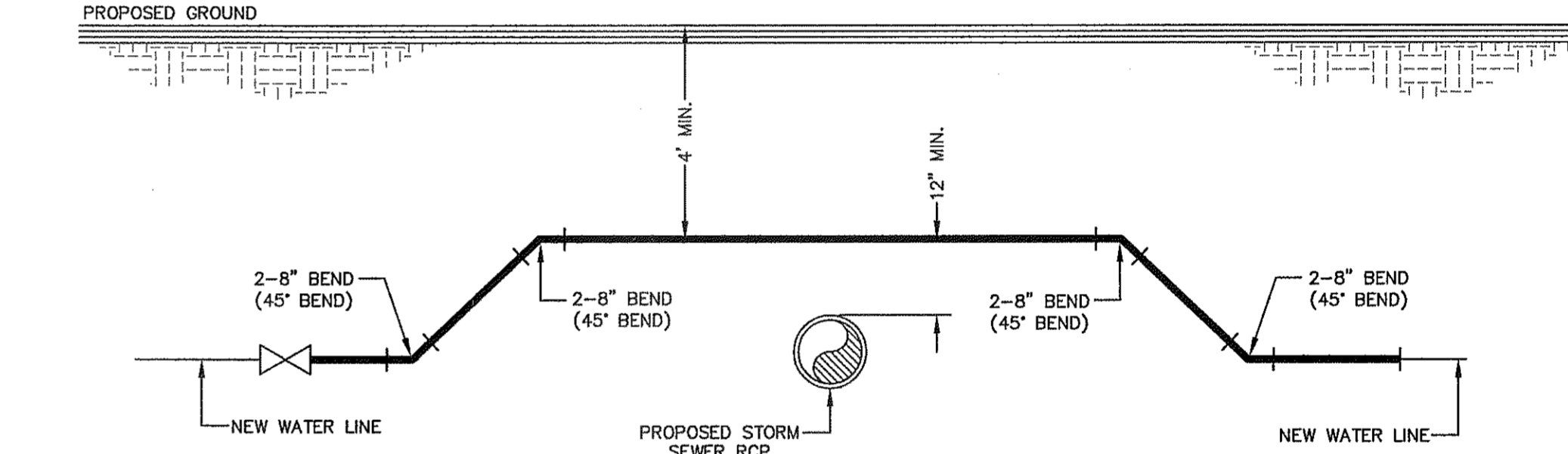
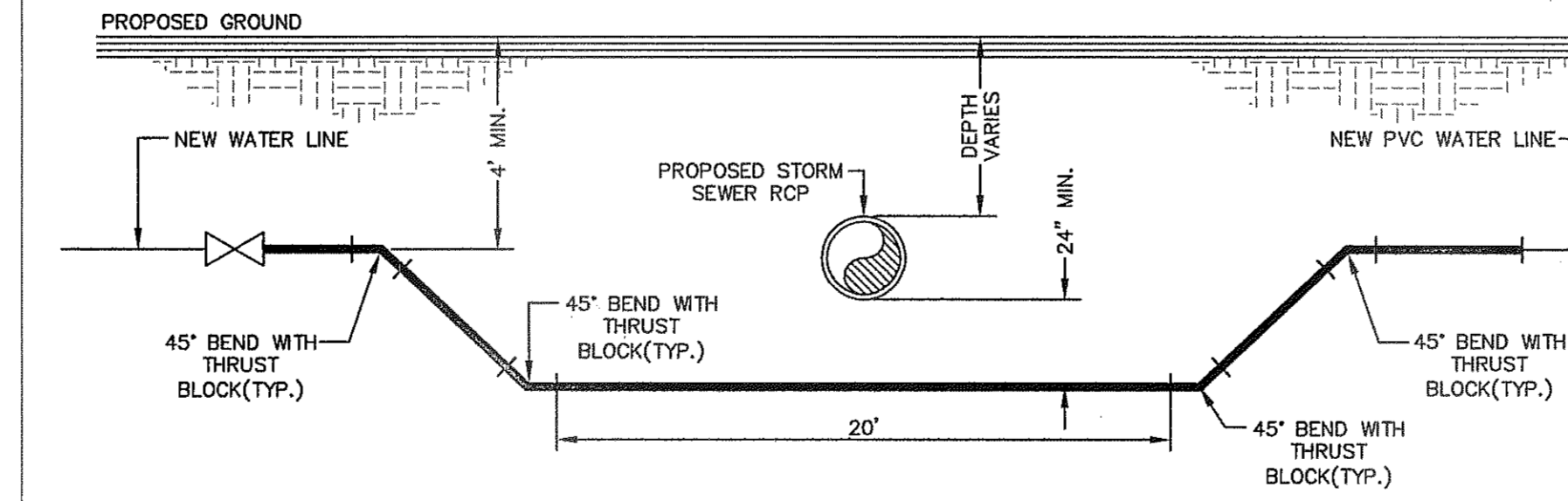
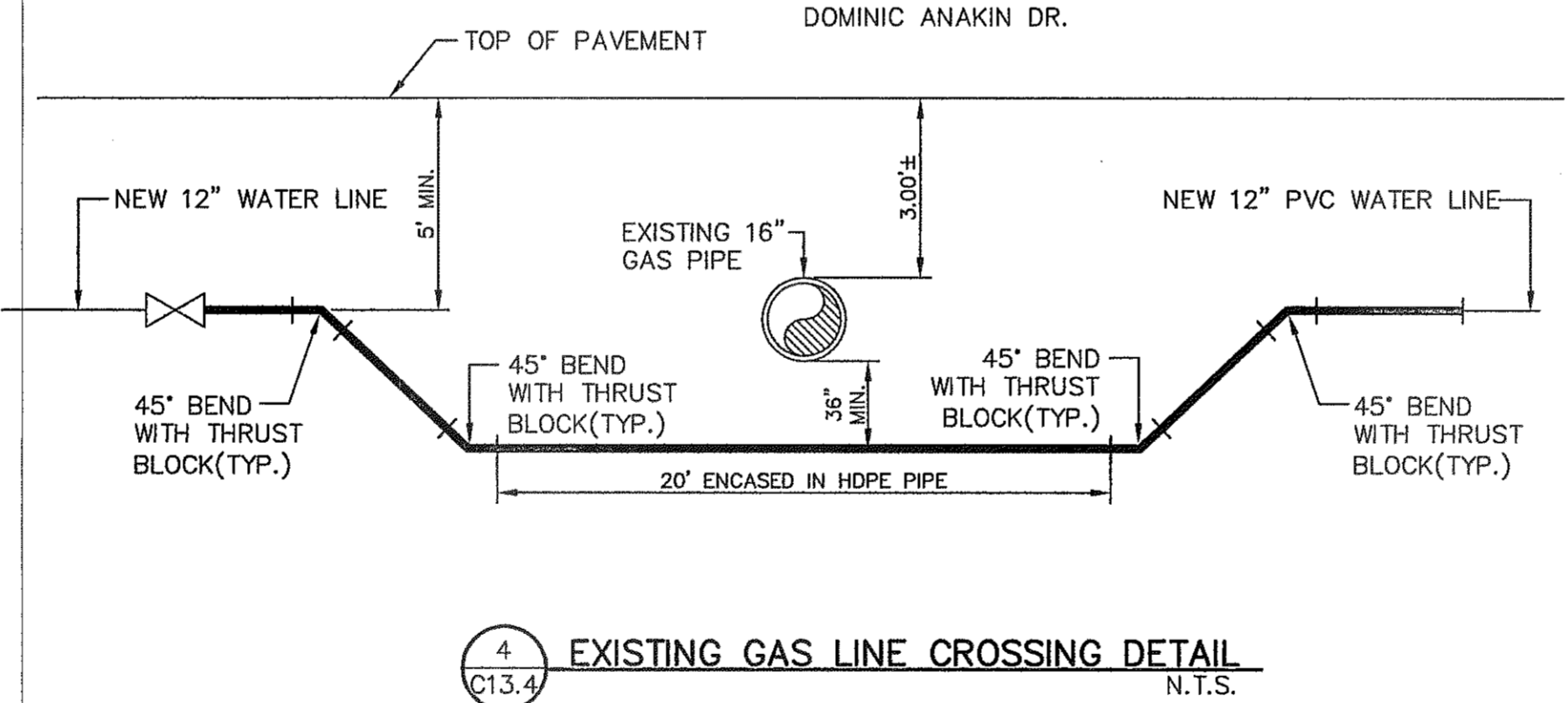
CITY DEVELOPMENT DEPARTMENT

REVIEWED



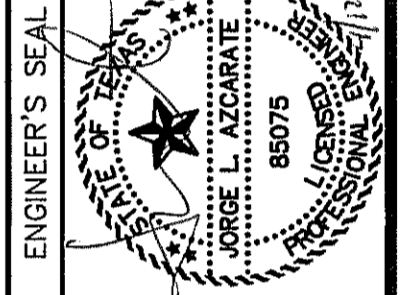
STANDARD DETAIL	DATE: 4/24/2007 REV: 2/21/2011	EMBEDMENT CLASS "A" FOR PRESSURE PIPE AND GRAVITY PIPE DRY CONDITIONS	EL PASO UTILITIES PUBLIC SERVICE BOARD	DETAIL No. 171
-----------------	-----------------------------------	---	---	-------------------

3 BEDDING CLASS DETAILS FOR P.V.C. PRESSURE PIPE  
SCALE: N.T.S.



REFERENCES - BENCHMARKS	EXISTING CITY MONUMENT ELEVATION=10010 FEET (CITY DATUM) LOCATED AT THE CENTER OF INTERSECTION OF PASEO DELO PASO AND PASO DELO PASO
DATE	REVISIONS
BY	

**CSA**  
 engineers • architects • planners  
 TEXAS REGISTERED ENGINEERING FIRM F-664  
 4712 Woodrow Blain, Ste. F, El Paso, TX 79924  
 Office: 915.544.6322 Fax: 915.544.6283 www.csaeng.com

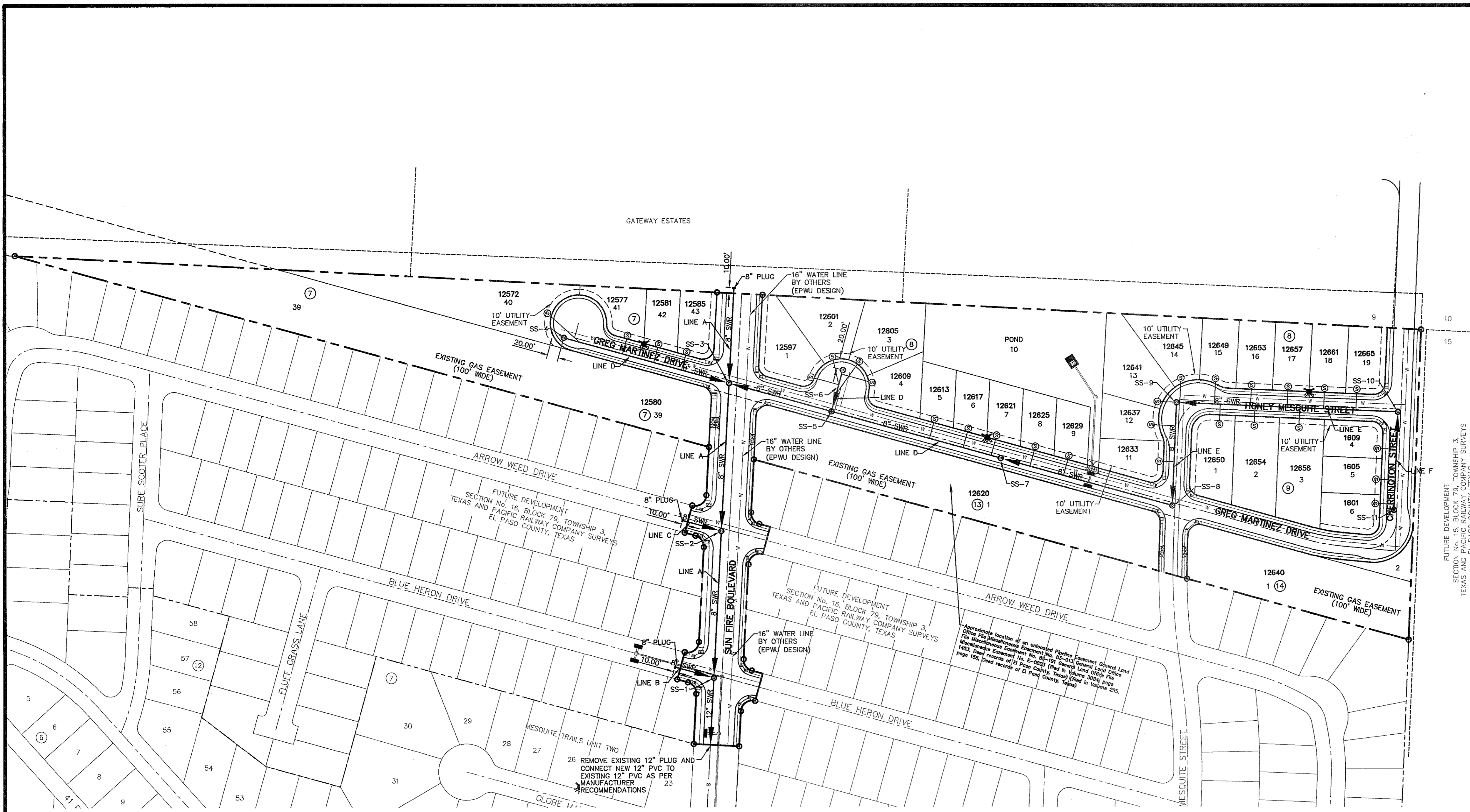


SCALE	N/A
Horizontal:	N/A
Vertical:	N/A
Contour Interval:	N/A
DATE:	APRIL 2013
DESIGN BY:	J.M.
DRAWN BY:	J.M.
CHKD. BY:	J.L.A.
APPVD. BY:	J.L.A.
JOB No.	20000-145-LD

PROJECT TITLE  
**MESQUITE TRAILS UNIT EIGHT  
 SUBDIVISION IMPROVEMENTS**

SHEET TITLE  
**WATER DETAILS**  
 (SHEET 4 OF 4)  
 SHEET NO.

C13.4



PIPE SIZE	LENGTH
8"	2,784.69'
12"	118.83'

PIPE QUANTITIES

M.H. DEPTH	NO. OF M.H.'S
0'-8"	7
8'-12"	2
12'-16"	2

MANHOLE QUANTITIES

CONTRACTOR SHALL VERIFY DEPTH AND LOCATION OF ALL EXISTING UTILITIES PRIOR TO COMMENCING CONSTRUCTION.

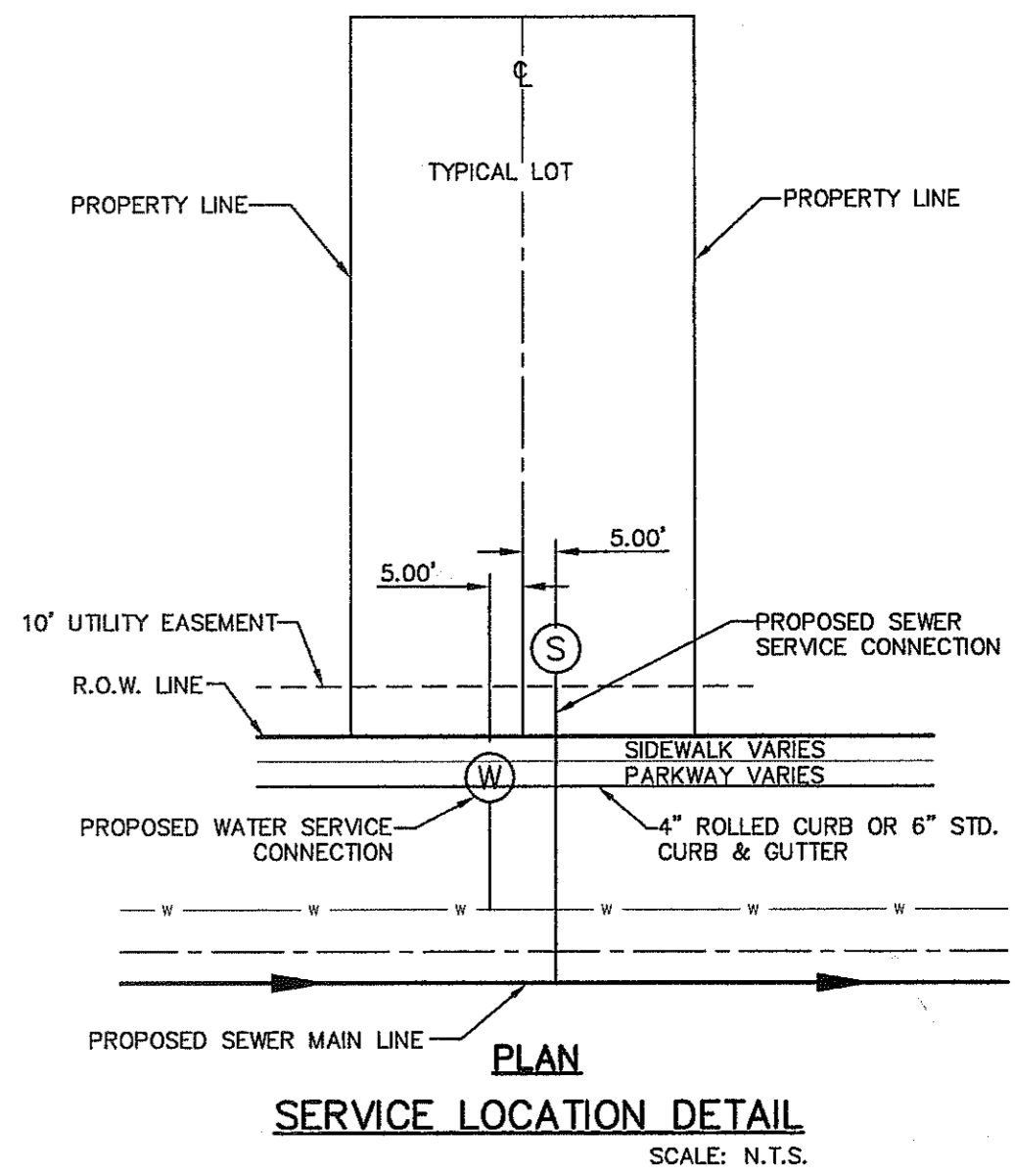
**SANITARY SEWER INDEX MAP**  
SCALE: 1" = 100'

**NOTES:**  
1. ALL SANITARY SEWER PIPES SHALL BE PVC SDR35, UNLESS OTHERWISE REQUIRED BY THE EPWU/PSB RULES AND REGULATIONS AND DESIGN STANDARDS.

**CITY DEVELOPMENT DEPARTMENT**  
**REVIEWED**

**LEGEND**

SYMBOL	DESCRIPTION
	PROPOSED STORM SEWER LINE
	SUBD. BOUNDARY LINE
	PROPERTY LINE
	CENTER LINE
	PROPOSED SEWER LINE (PLAN VIEW)
	PROPOSED SEWER LINE ON ANOTHER SHEET (PLAN VIEW)
	PROPOSED SEWER LINE (PROFILE VIEW)
	PROPOSED SERVICE CONNECTION (PLAN VIEW)
	PROPOSED MANHOLE (PLAN VIEW)
	EXISTING MANHOLE (PLAN VIEW)
	PROPOSED WATER LINE
	EXISTING SEWER LINE
	EXISTING 8" WATER LINE
	EXISTING GAS LINE
	PROPOSED MANHOLE (PROFILE VIEW)
	EXISTING MANHOLE (PROFILE VIEW)



- GENERAL NOTES**
- UNLESS OTHERWISE SHOWN ON THE DRAWINGS, THE PROPOSED SEWER MAINS AND SEWER MANHOLES SHALL BE INSTALLED NO LESS THAN 10' AWAY FROM EXISTING WATER LINE. SEPARATIONS DISTANCES SHALL FOLLOW TCEQ STANDARD REQUIREMENTS (§290.44)
  - THE INTENT OF THE OWNER IS TO HAVE THE SANITARY SEWER PIPELINES INSTALLED TO SUCH A DEPTH THAT THEY WILL HAVE AT LEAST 48" OF COVER BELOW PROPOSED GROUND AT ALL LOCATIONS. THE PIPELINES SHALL HAVE NO DIPS, SAGS OR HUMPS OR OTHER IRREGULARITIES IN VERTICAL ALIGNMENT. CONSIDERING UTILITIES AND OTHER CONDITIONS, VARIANCE FROM GRADE PROFILE IS NOT RECOMMENDED IF OTHER EXISTING UTILITIES OR OBSTRUCTIONS ARE ENCOUNTERED DURING THE WORK. THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL EXISTING UTILITIES PRIOR TO INSTALLING THE SEWER PIPELINE SO THAT AN ACCEPTABLE PROFILE CAN BE ESTABLISHED PRIOR TO INSTALLATION OF THE PIPELINE.
  - IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD LOCATE ALL UNDERGROUND UTILITIES, SHOWN OR NOT SHOWN IN THE PLANS, AND COORDINATE HIS WORK WITH ALL UTILITY COMPANIES, EL PASO WATER UTILITIES AND CITY OF EL PASO PRIOR TO CONSTRUCTION. ALL EXISTING UTILITY DEPTHS ARE UNKNOWN. THE CONTRACTOR SHALL BE ULTIMATELY RESPONSIBLE FOR ACQUIRING FIELD DEPTHS OF ALL UTILITIES WITH THE PROJECT AREAS.
  - TRENCH SAFETY REQUIREMENTS SHALL COMPLY WITH CURRENT OSHA REGULATIONS.
  - AS-BUILT STATIONING, OFFSET FROM R.O.W. AND INVERT ELEVATIONS SHALL BE ACCURATELY RECORDED BY THE CONTRACTOR ON A CLEAN SET OF PLANS FOR EACH MANHOLE, SERVICE CONNECTION AND/OR STUB-OUT, WITH RESPECT TO THE APPROPRIATE PROJECT CONTROL POINT.
  - THE EL PASO WATER UTILITIES AND CITY OF EL PASO MUST BE NOTIFIED 48 HOURS PRIOR TO COMMENCING ANY WORK IN AREAS WITHIN THEIR JURISDICTION. A COPY OF ALL FIELD SOIL DENSITY TESTS WITHIN THEIR RESPECTIVE R.O.W. SHALL BE FORWARDED TO THE DEVELOPER'S ENGINEER AND THE DEVELOPER BY THE CONTRACTOR.
  - EXISTING STREETS, DRIVEWAYS AND ALL OTHER MISCELLANEOUS STRUCTURES DAMAGE OR REMOVED BY CONSTRUCTION ACTIVITIES SHALL BE RESTORED TO ORIGINAL OR BETTER THAN ORIGINAL CONDITION.
  - CONSTRUCTION OF THE PUBLIC WATER AND SEWER SYSTEM INCLUDING MATERIALS AND TESTING SHALL CONFIRM TO EPWU-PSB STANDARD SPECIFICATIONS FOR THE INSTALLATION OF WATER MAINS, SEWER MAINS AND RELATED APPURTENANCES.

- GENERAL UTILITIES:**  
TEXAS EXCAVATION SAFETY SERVICE  
1188A GREENVILLE AVENUE,  
DALLAS, TX. 75243  
(800) 344-8377
- ENGINEER:**  
CEA GROUP  
CASTNER CENTER @ TRANSMOUNTAIN  
4712 WOODROW BEAN, STE. F  
EL PASO, TX. 79924  
(915) 544-5232  
MR. JORGE L. AZCARATE, P.E.
- FIBER OPTICS:**  
U.S. SPRINT  
151 N. BOONE ST.  
EL PASO, TX. 79905  
(915) 534-7910  
MR. RICK DERAGISCH
- FIBER OPTICS:**  
MCI TELECOMMUNICATIONS CORP.  
4045 DONIPHAN PARK CIRCLE  
EL PASO, TX. 79922  
(915) 542-2770 EXT. 201  
MR. DANIEL HERNANDEZ
- WATER & SEWER:**  
EL PASO WATER UTILITIES  
1154 HAWKINS BOULEVARD  
EL PASO, TX. 79961  
(915) 594-5530  
MR. FELIPE LOPEZ, JR., P.E.
- ELECTRIC:**  
EL PASO ELECTRIC CO.  
501 W. SAN ANTONIO ST.  
EL PASO, TX. 79902  
(915) 543-2076  
MR. FRANK VIGEL (DISTRIBUTION)
- EL PASO STREETS**  
CITY OF EL PASO  
DEPARTMENT OF TRANSPORTATION  
7969 SAN PAULO DRIVE  
EL PASO, TX. 79907  
(915) 621-6750  
MR. TED MARQUEZ
- CABLE TELEVISION:**  
TIME WARNER COMMUNICATIONS  
7010 AIRPORT ROAD  
EL PASO, TX. 79906  
(915) 772-1123
- TELEPHONE:**  
SBC  
11200 PELICANO  
EL PASO, TX. 79935  
(915) 595-5151  
MR. TIM BROWN
- FIBER OPTICS:**  
AT&T  
P.O. BOX 1650  
EL PASO, TX. 79949  
(800) 852-3786  
MS. DARLENE NORIS
- RESIDENTIAL GAS LINES:**  
TEXAS GAS SERVICE  
4700 POLLARD ST.  
EL PASO, TX. 79930  
(915) 680-7218  
MR. JOSE DE ALBA

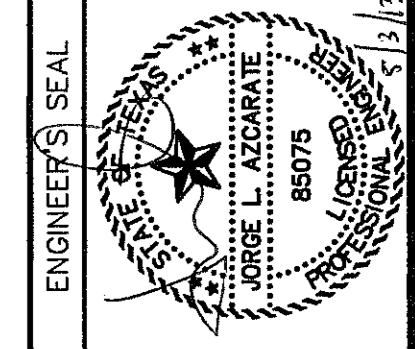
**WARNING!**  
**BEFORE YOU DIG**  
CALL  
1-800-DIG-TESS  
1-800-344-8377  
FOR FIELD LOCATING EXISTING UTILITIES

REFERENCES - BENCHMARKS

EXISTING CITY MONUMENT  
ELEVATION=460.00 FEET (CITY DATUM)  
PROPOSED BENCHM. POINTS AND ELEVATIONS ARE  
BASED UPON THE CITY OF EL PASO DATUM

DATE	REVISIONS	BY

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TEXAS REGISTERED ENGINEERING FIRM F-4684  
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Office: 915.544.5232 Fax: 915.544.6233 www.csaeng.com



SCALE 1"=100'  
Horizontal: 1/4"=10'  
Vertical: 1/8"=10'  
Contour Interval: 1/2'

DATE: APRIL 2013  
DESIGN BY: J.M.  
DRAWN BY: J.M.  
CHKD. BY: J.L.A.  
APPD. BY: J.L.A.  
JOB NO. 2000-145-LD

**MESQUITE TRAILS UNIT EIGHT  
SUBDIVISION IMPROVEMENTS**

SHEET TITLE  
**SANITARY SEWER INDEX**  
SHEET NO.

**C14.1**

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
TEC	(800) 545-6005
AT&T	(800) 852-3788
J.S. SPRINT TELECOMM	(800) 521-0579

**WARNING I BEFORE YOU DIG**

CALL  
1-800-DIG-TESS  
1-800-344-8377

FOR FIELD LOCATING EXISTING UTILITIES

CITY DEVELOPMENT DEPARTMENT

REVIEWED

LEGEND:

- PROPOSED STORM SEWER LINE
- PROPOSED WATER LINE
- PROPOSED SEWER LINE ON ANOTHER SHEET (PLAN VIEW)
- PROPOSED SEWER LINE
- PROPOSED WATER SERVICE
- PROPOSED SEWER SERVICE
- PROPOSED SEWER MANHOLE

ENGINEER'S SEAL

SCALE

Horizontal: 1"=40'

Vertical: 1"=5'

Contour Interval: 1V/4'

DATE: APRIL 2013

DESIGN BY: J.M.

DRAWN BY: J.M.

CHKD. BY: J.L.A.

APP'D. BY: J.L.A.

JOB No. 2000-145-LD

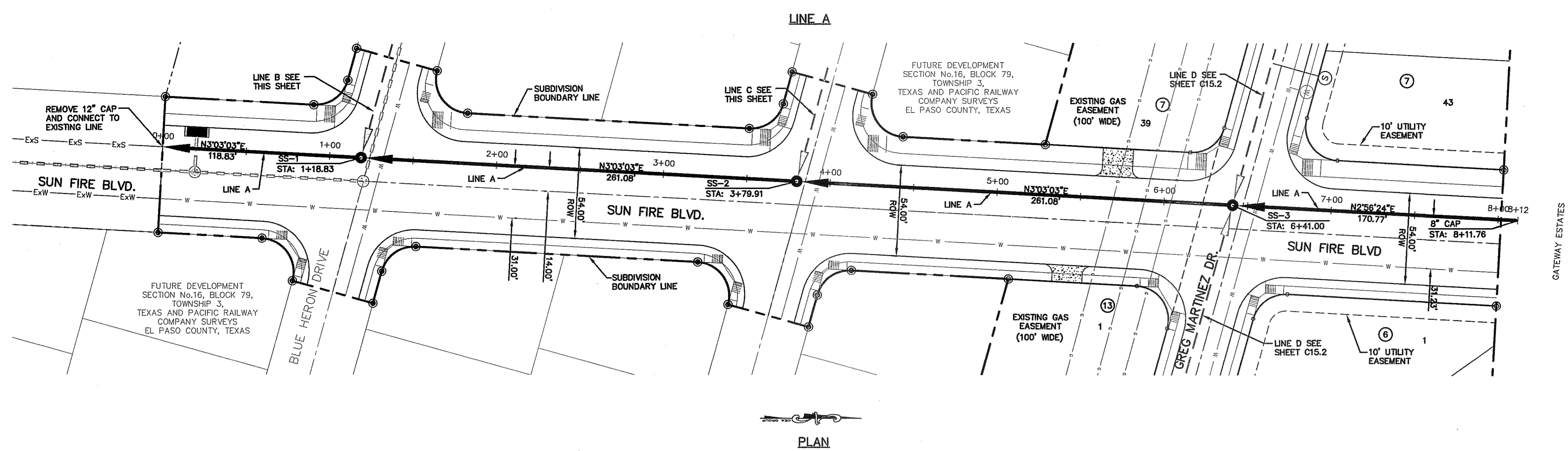
REFERENCES - BENCHMARKS

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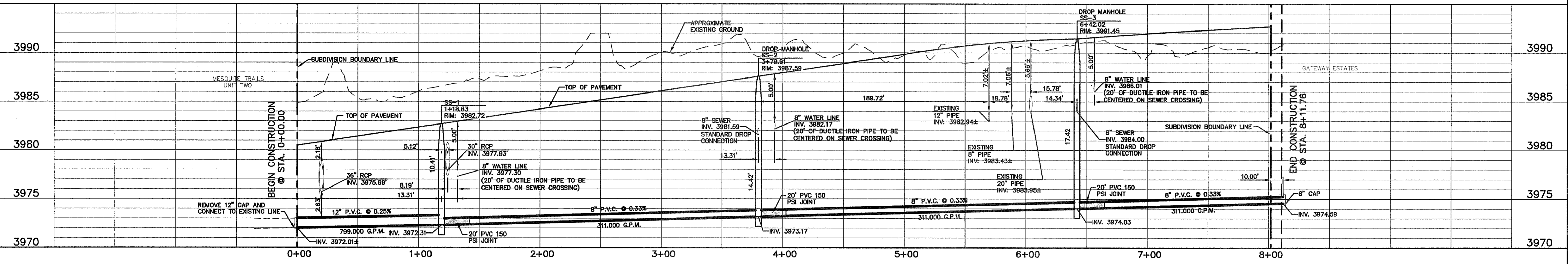
DATE

REVISIONS

BY

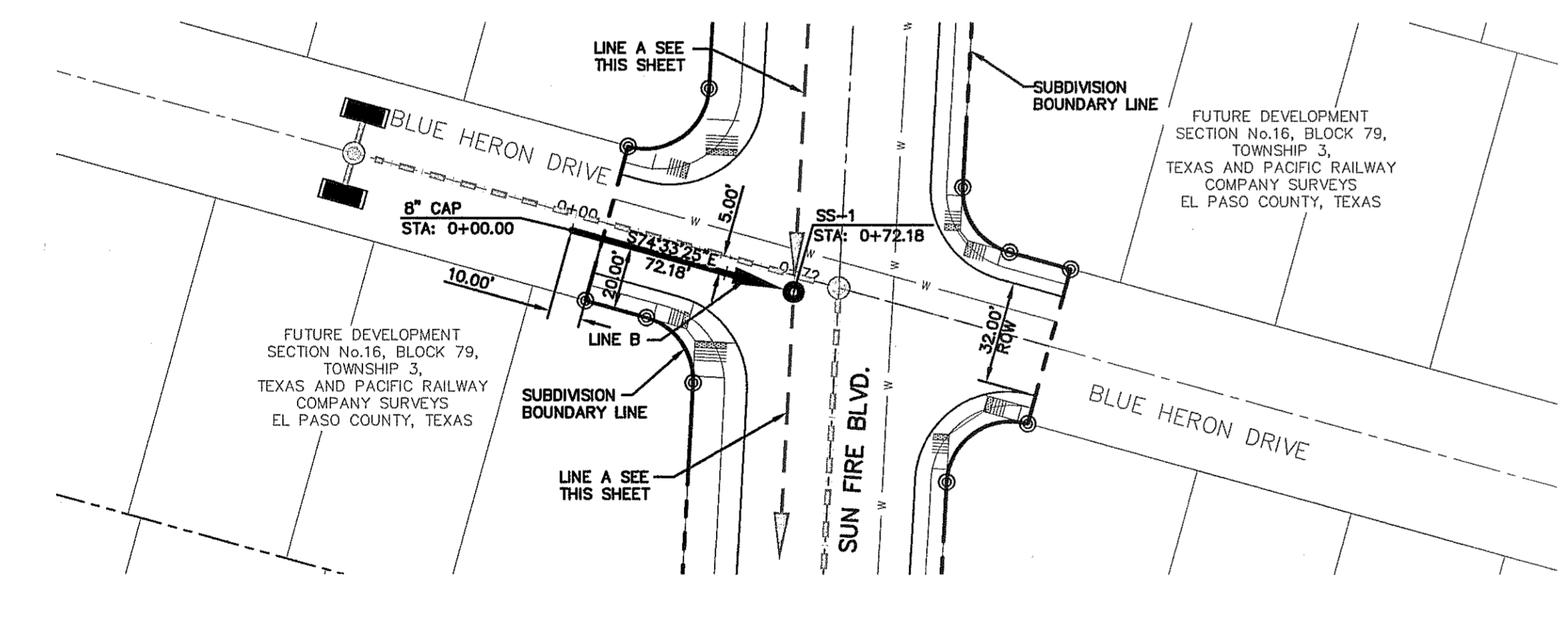


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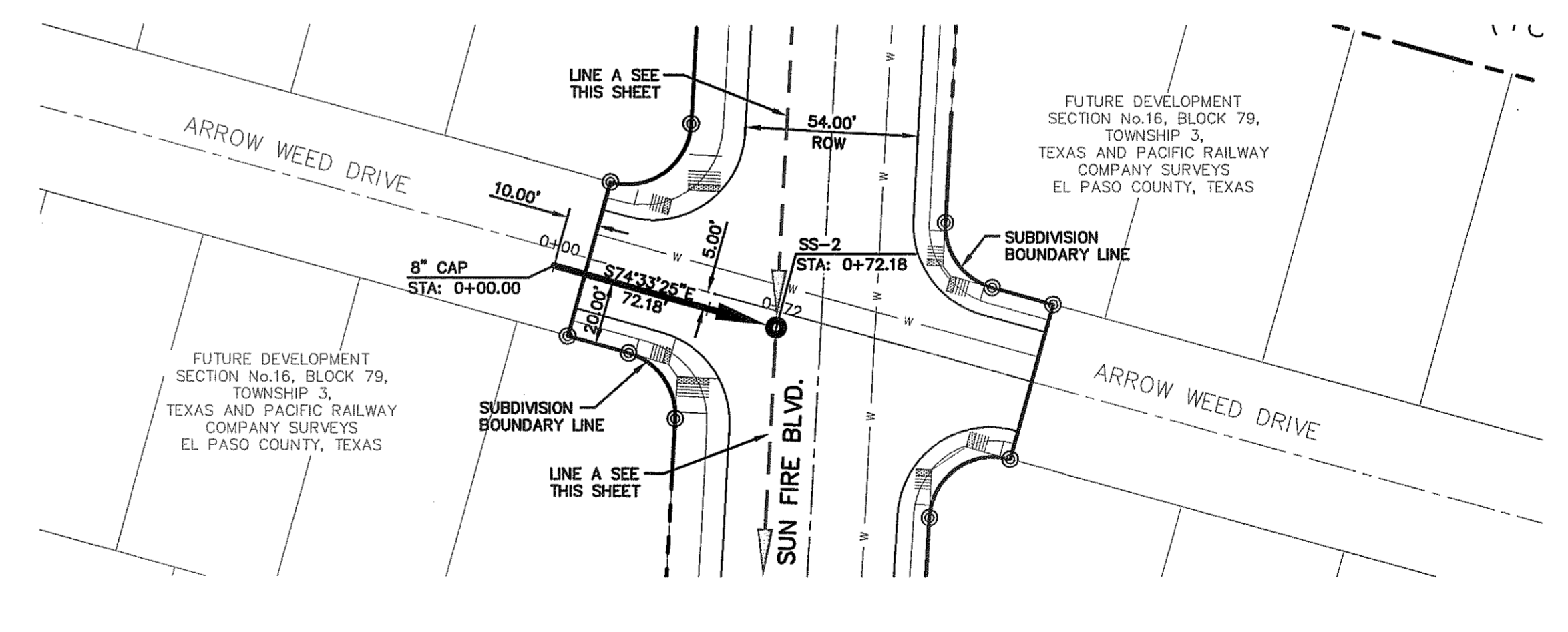


LINE B

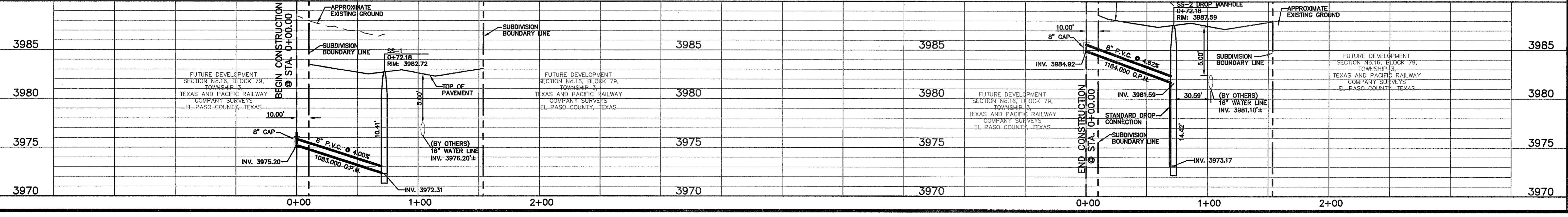
LINE C



PLAN



PLAN



PROJECT TITLE

MESQUITE TRAILS UNIT EIGHT  
SUBDIVISION IMPROVEMENTS

SHEET TITLE

SANITARY SEWER  
PLAN & PROFILE  
LINE A & LINE B  
LINE C

SHEET NO.

C15.1

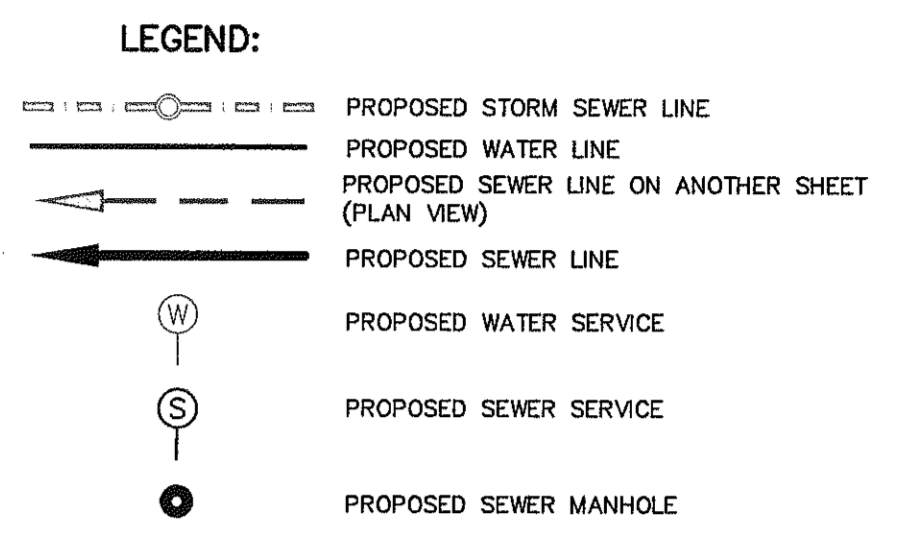
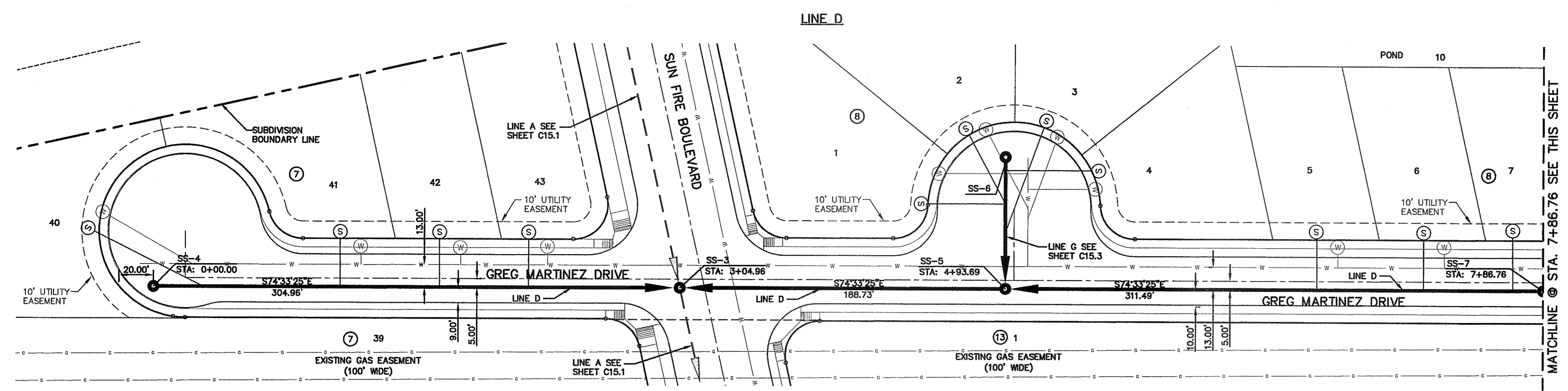
UTILITY LOCATOR SERVICES	
EL PASO ELECTRIC COMPANY	(915) 543-5720
EL PASO ENERGY CORPORATION	(915) 496-5244
EL PASO WATER UTILITIES	(915) 594-5500
MCI SURVEILLANCE	(800) MCI-WORK
TIME WARNER COMMUNICATIONS	(915) 772-1123
TEXAS GAS SERVICE	(915) 680-7200
SBC	(800) 545-6005
AT&T	(800) 852-3786
U.S. SPRINT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

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FOR FIELD LOCATING EXISTING UTILITIES

DATE	REVISIONS	BY



REFERENCES - BENCHMARKS

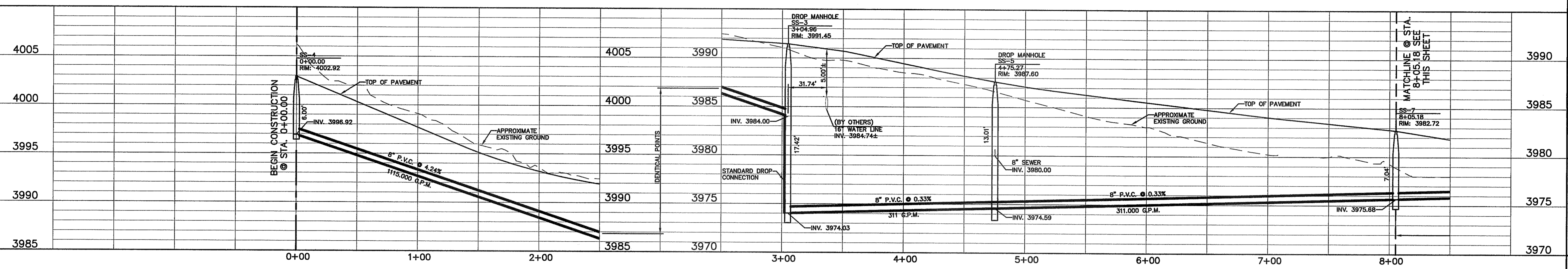
EXISTING CITY MONUMENT  
ELEVATION: 4031.0 FEET (GTY DATUM)  
LOCATED AT THE CENTERLINE INTERSECTION OF  
PASEO ALBARE CIRCLE AND PASEO UNDO DRIVE

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4712 Woodrow Bawn, Ste. F, El Paso, TX 79904  
Office: 915.544.5232 Fax: 915.544.6233 www.csaeng.com

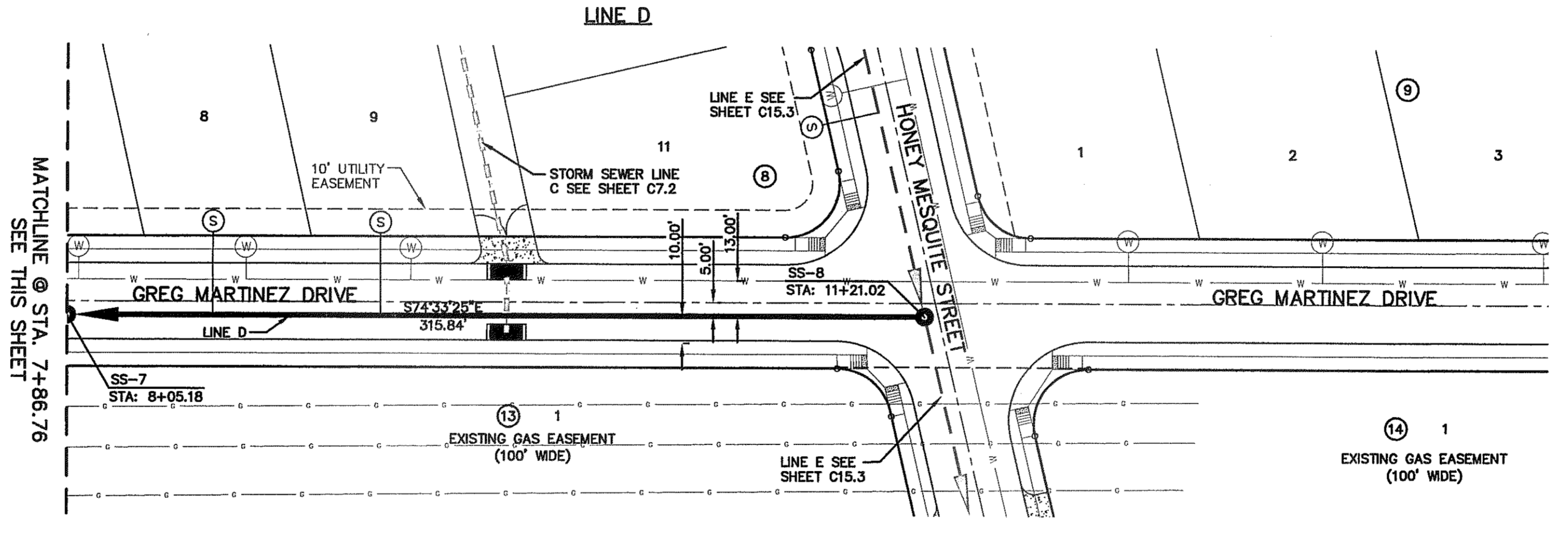


ENGINEER'S SEAL

SCALE: 1"=40'  
Vertical: 1"=5'  
Horizontal: 1"=40'

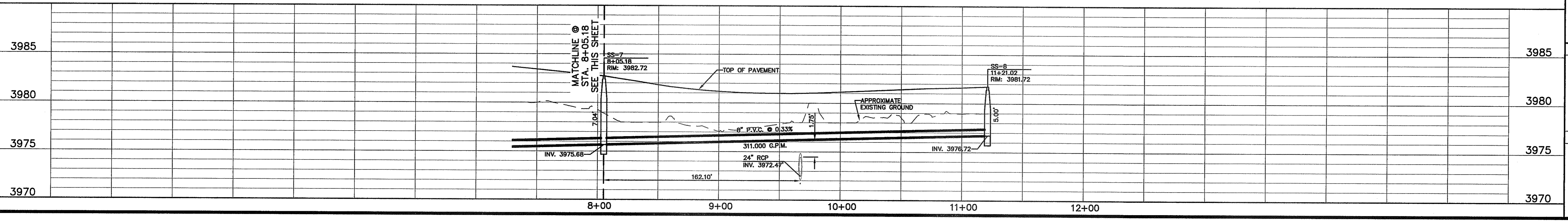
DATE: APRIL 2013  
DESIGN BY: J.M.  
DRAWN BY: J.M.  
CHKD. BY: J.L.A.  
APPD. BY: J.L.A.

JOB No. 2000-145-LD



CITY DEVELOPMENT DEPARTMENT

REVIEWED



PROJECT TITLE

**MESQUITE TRAILS UNIT EIGHT  
SUBDIVISION IMPROVEMENTS**

SHEET TITLE

**SANITARY SEWER  
PLAN & PROFILE  
LINE D**

SHEET NO.

**C15.2**

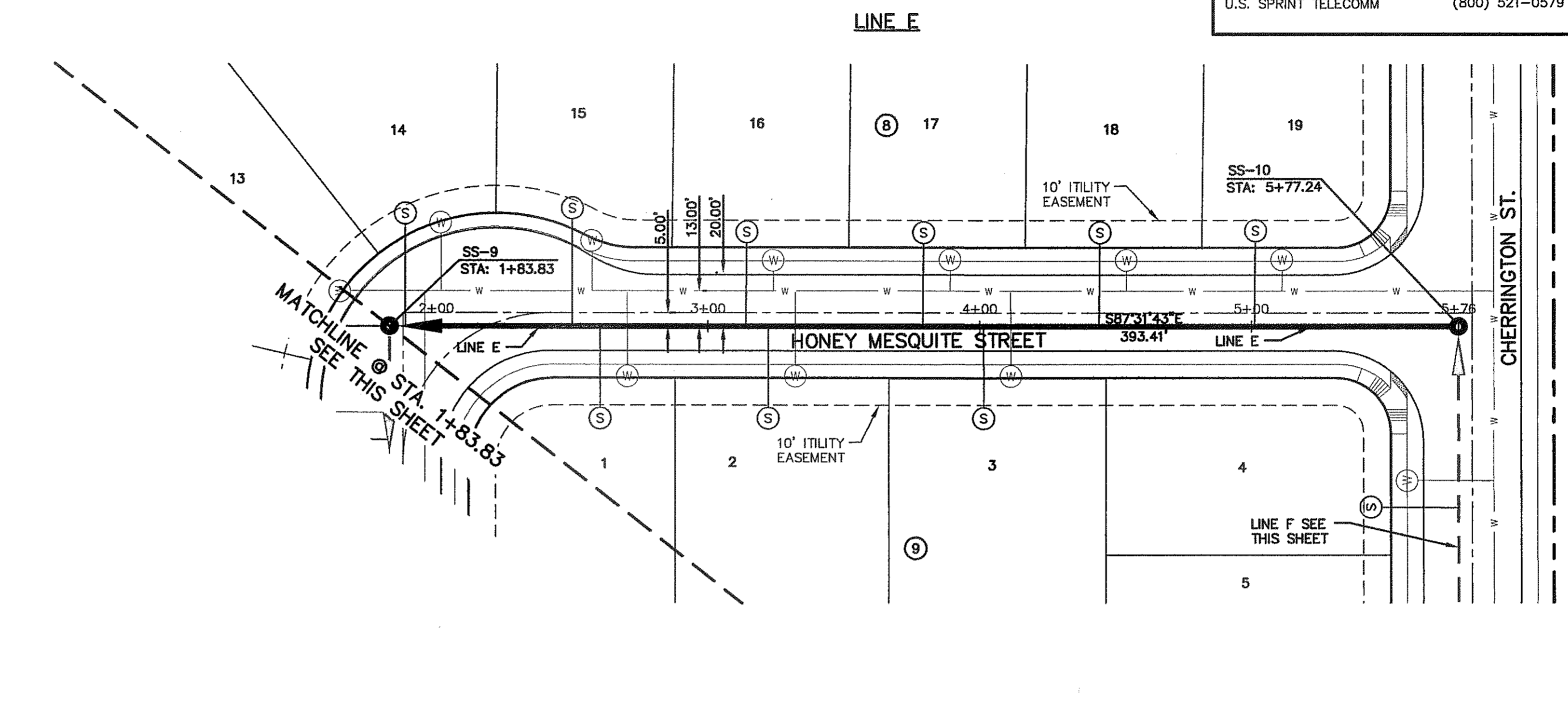
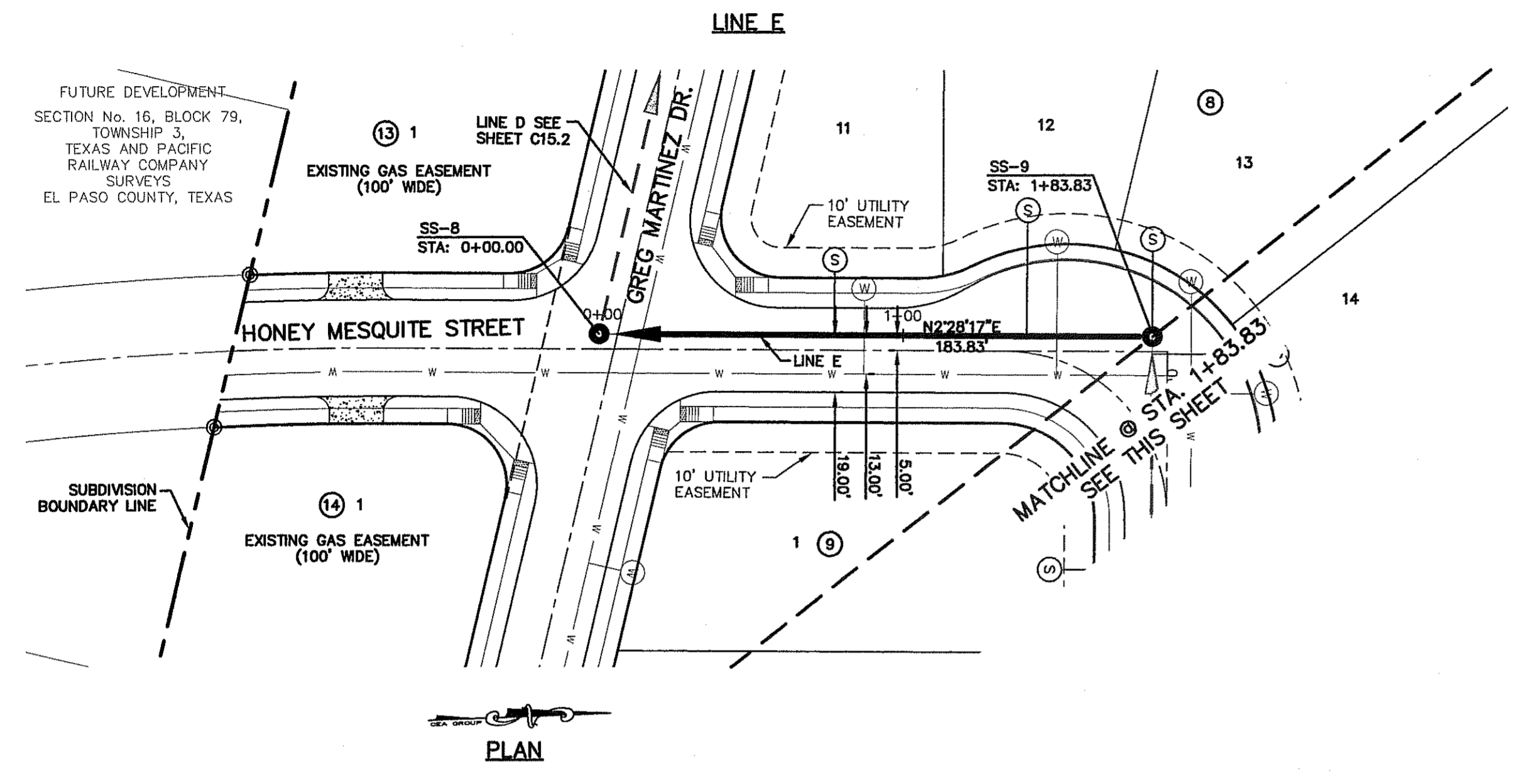
UTILITY LOCATOR SERVICES	
EL PASO ELECTRIC COMPANY	(915) 543-5720
EL PASO ENERGY CORPORATION	(915) 496-5244
EL PASO WATER UTILITIES	(915) 594-5500
MCI SURVEILLANCE	(800) MCI-WORK
TIME WARNER COMMUNICATIONS	(915) 772-1123
TEXAS GAS SERVICE	(915) 680-7200
SBC	(800) 545-6005
AT&T	(800) 852-3786
U.S. SPRINT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

**WARNING I BEFORE YOU DIG**

CALL  
**1-800-DIG-TESS**  
**1-800-344-8377**

FOR FIELD LOCATING EXISTING UTILITIES

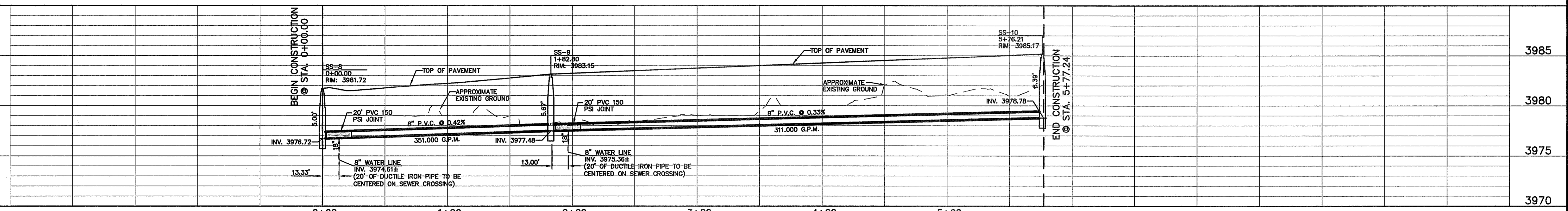
DATE	REVISIONS	BY



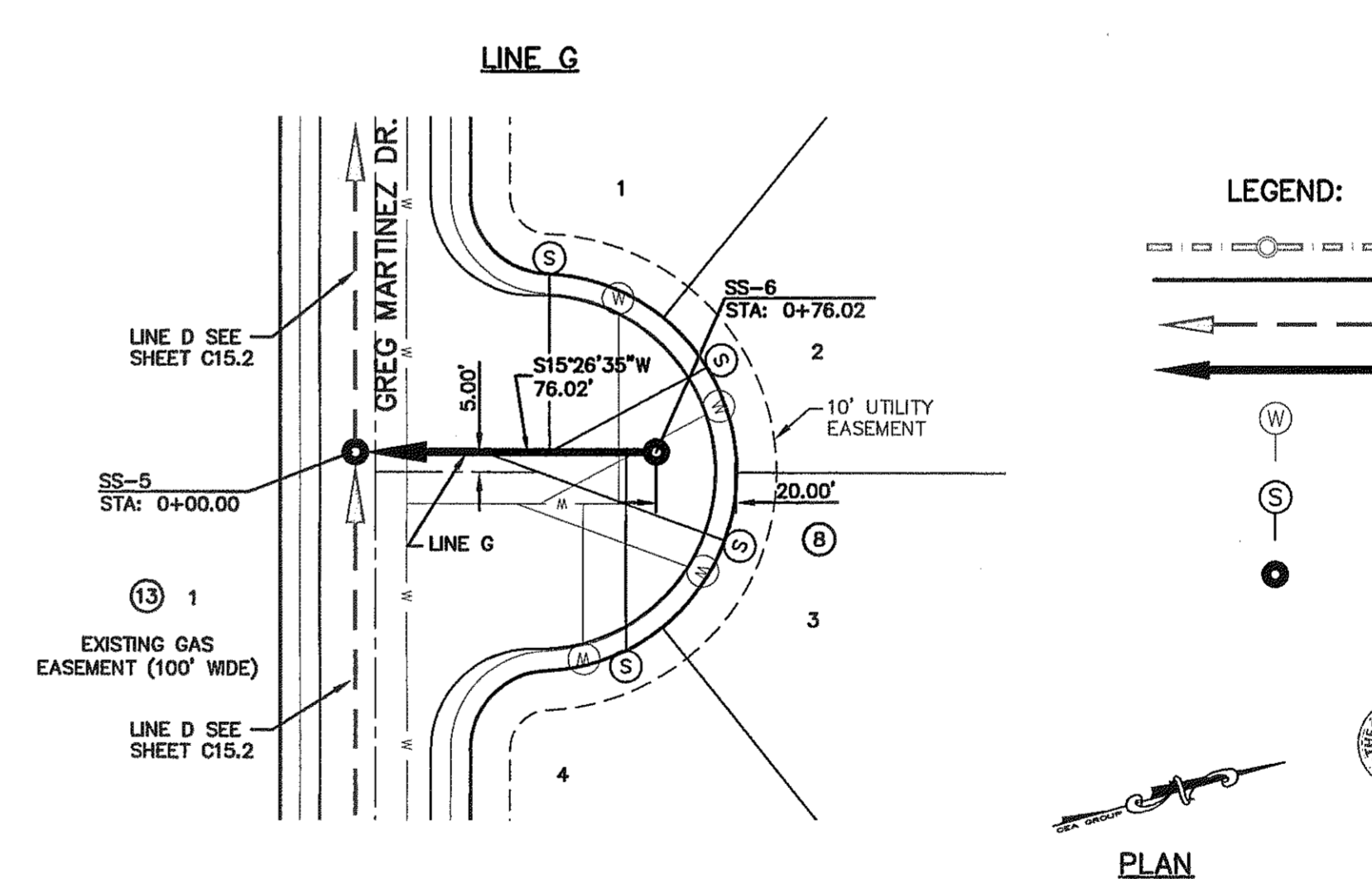
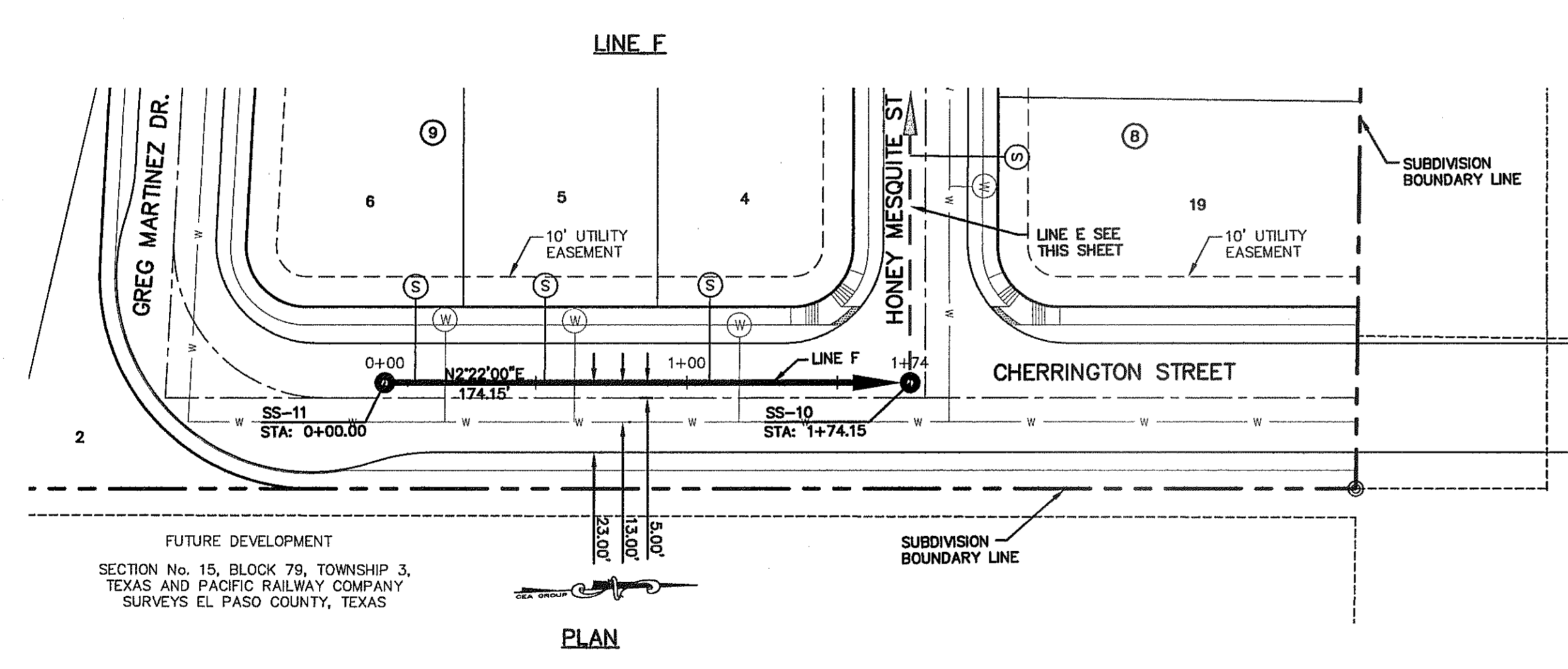
FUTURE DEVELOPMENT  
SECTION No. 15, BLOCK 79, TOWNSHIP 3,  
TEXAS AND PACIFIC RAILWAY COMPANY  
SURVEYS EL PASO COUNTY, TEXAS



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4712 Woodrow Blain, Ste. F, El Paso, TX 79924  
Office: 915.544.6222 Fax: 915.544.6233 www.csaengr.com

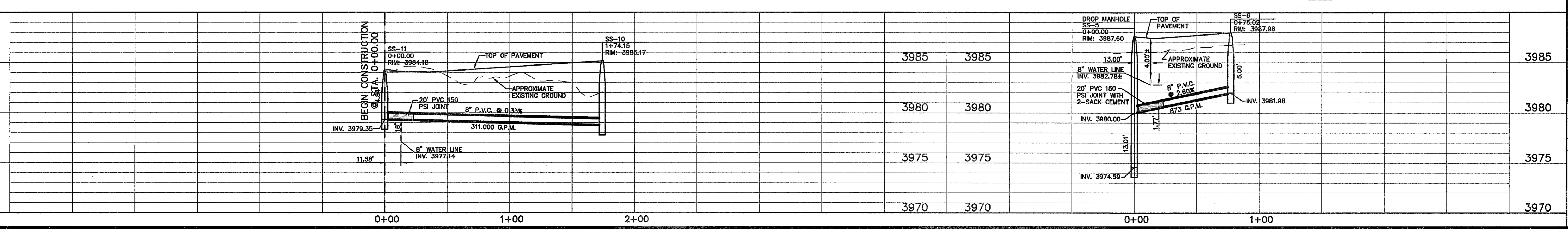


ENGINEER'S SEAL  
  
SCALE  
Horizontal: 1" = 40'  
Vertical: 1" = 5'  
Contour Interval: N/A  
DATE: APRIL 2013  
DESIGN BY: J.M.  
DRAWN BY: J.M.  
CHKD. BY: J.L.A.  
APPD. BY: J.L.A.  
JOB No. 2000-145-LD



- LEGEND:**
- PROPOSED STORM SEWER LINE
  - PROPOSED WATER LINE
  - ▲— PROPOSED SEWER LINE ON ANOTHER SHEET (PLAN VIEW)
  - PROPOSED SEWER LINE
  - PROPOSED WATER SERVICE
  - PROPOSED SEWER SERVICE
  - PROPOSED SEWER MANHOLE

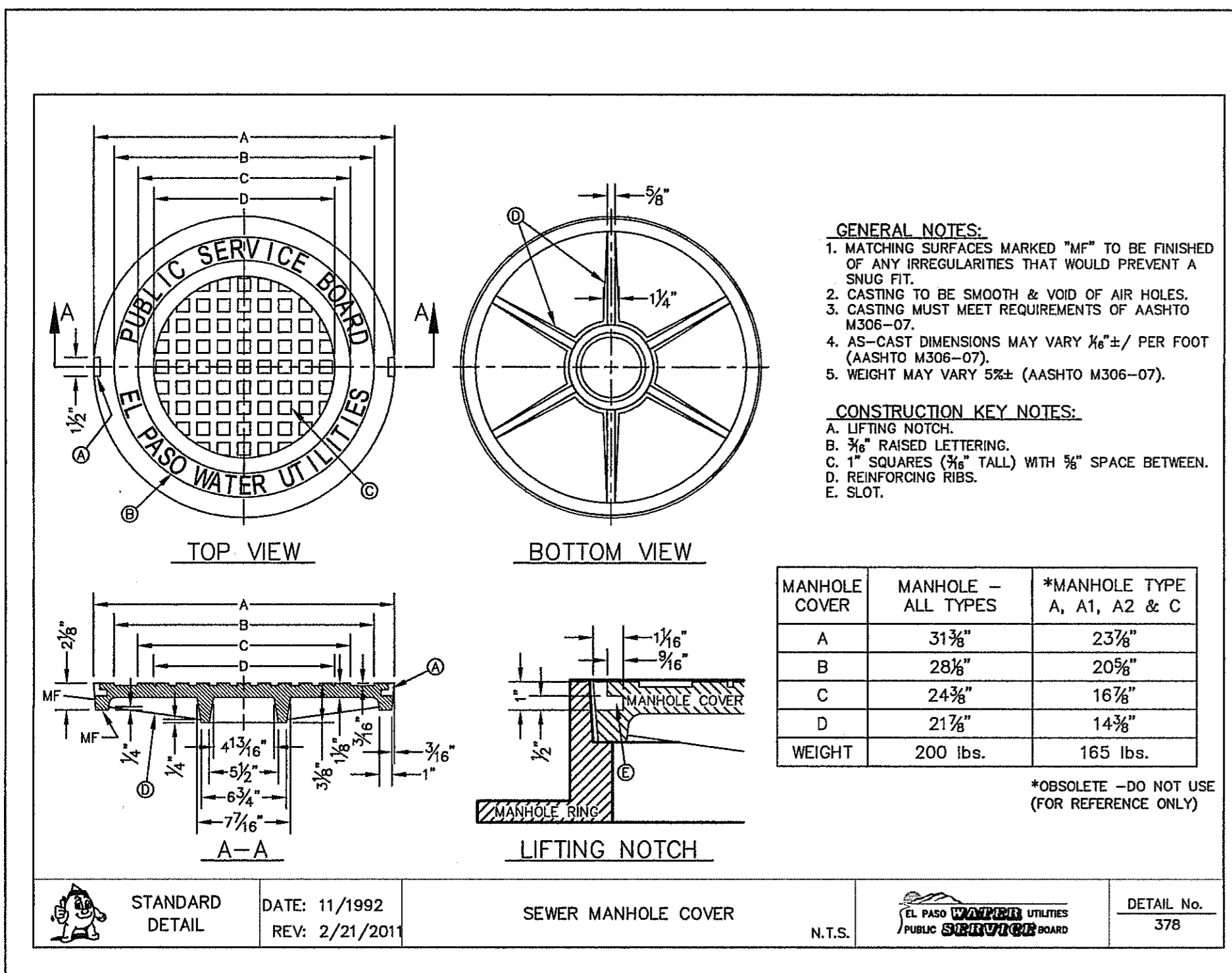
CITY DEVELOPMENT DEPARTMENT  
  
**REVIEWED**



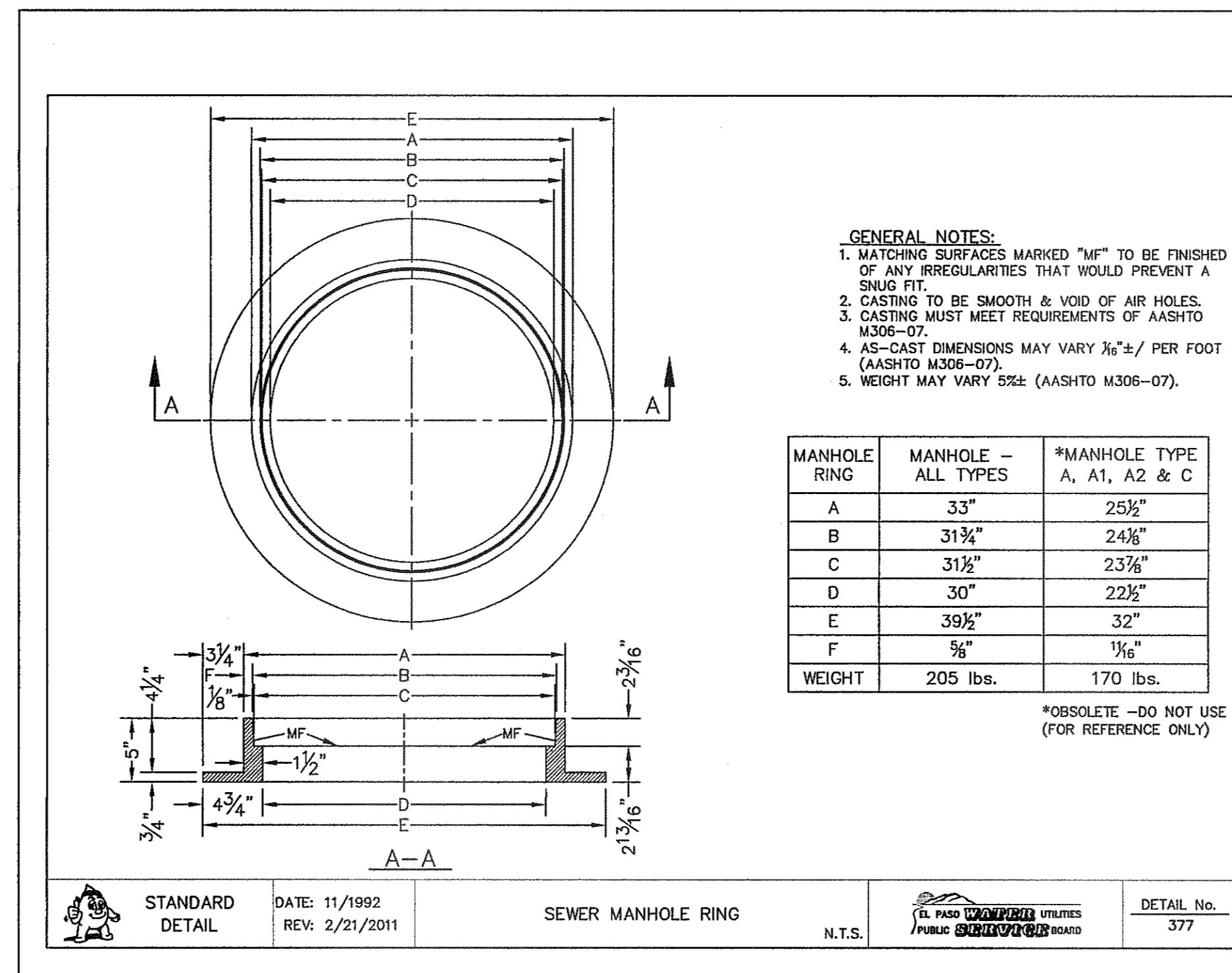
PROJECT TITLE  
**MESQUITE TRAILS UNIT EIGHT**  
**SUBDIVISION IMPROVEMENTS**

SHEET TITLE  
**SANITARY SEWER PLAN & PROFILE LINE F, G AND LINE G**

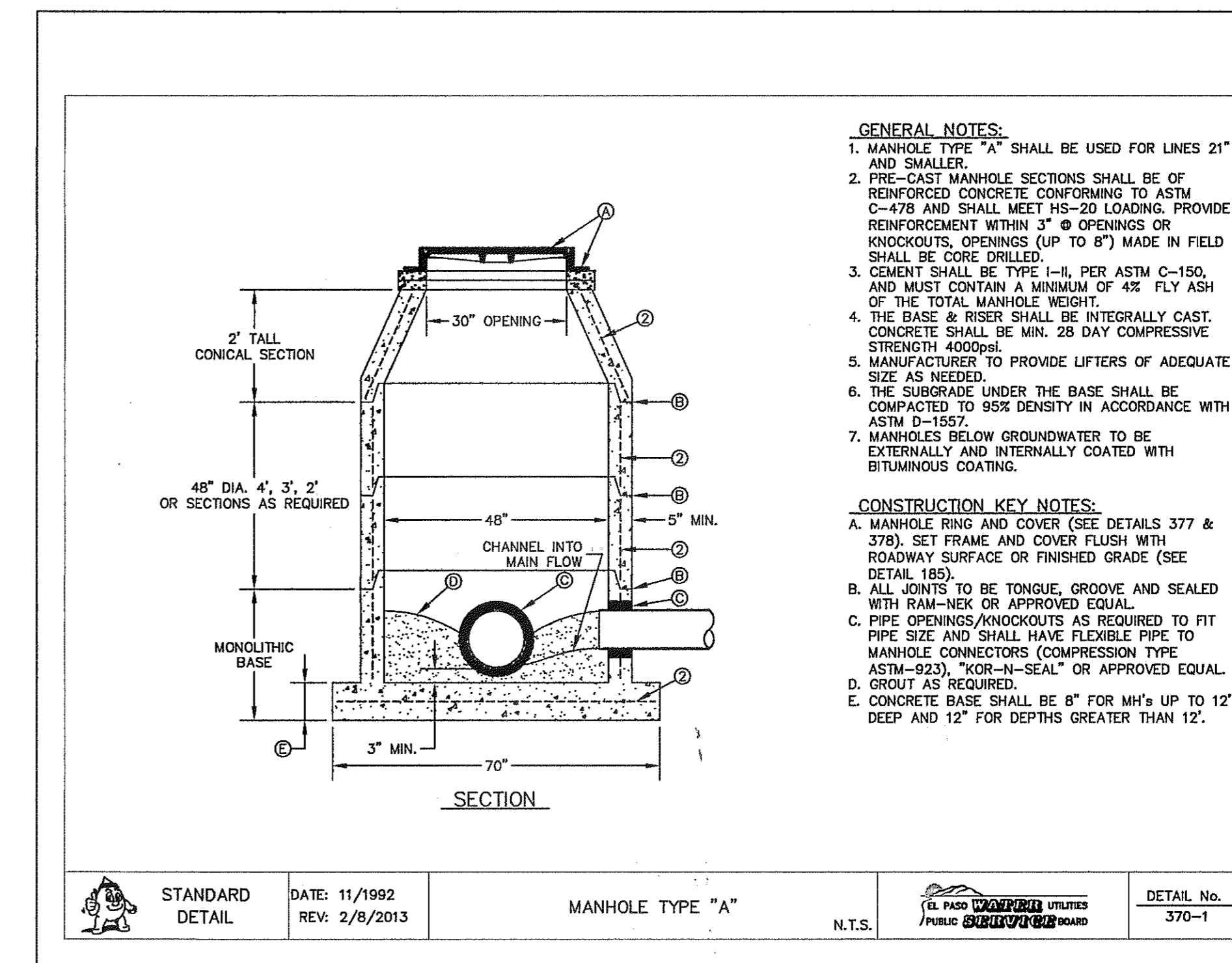
SHEET NO.  
**C15.3**



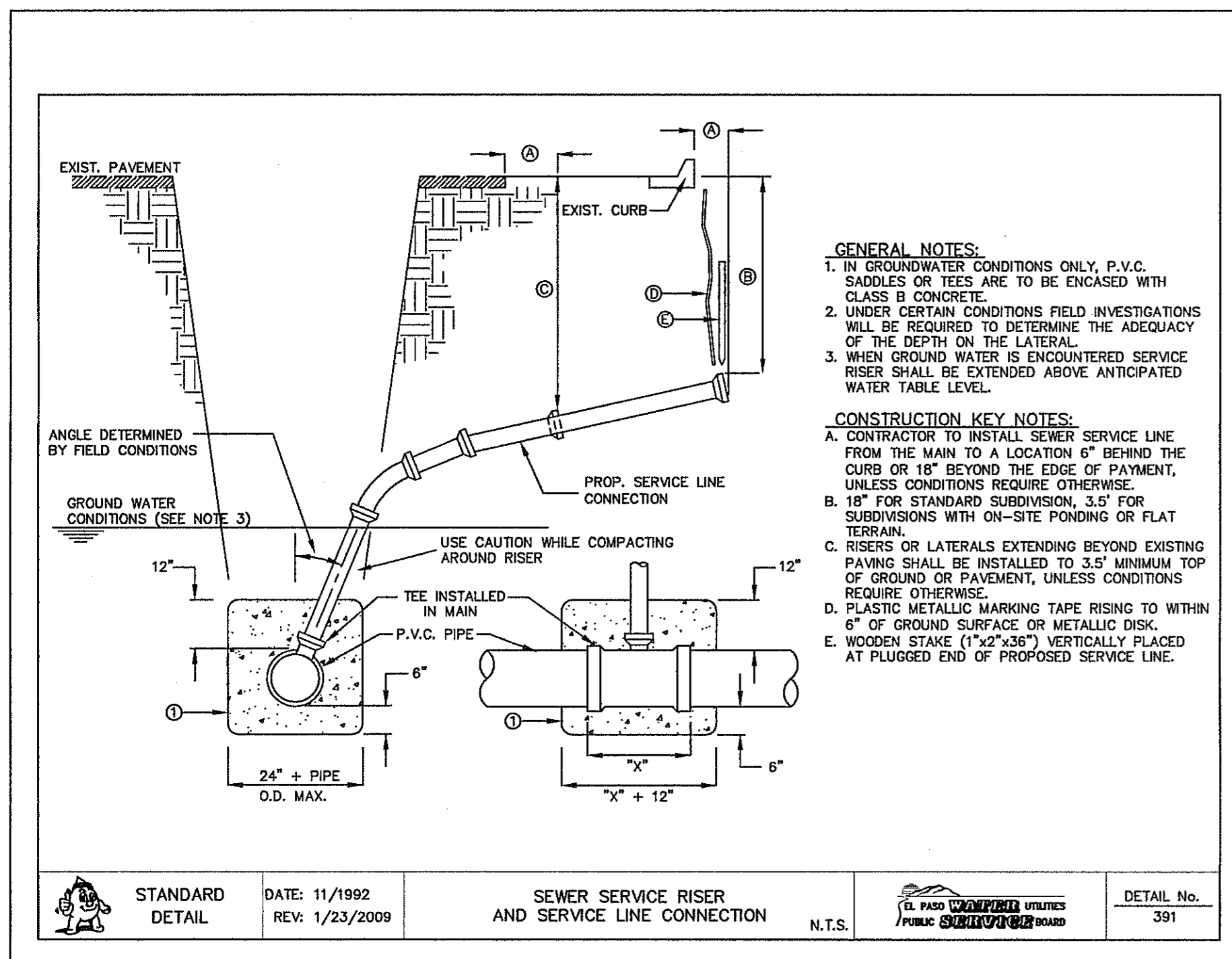
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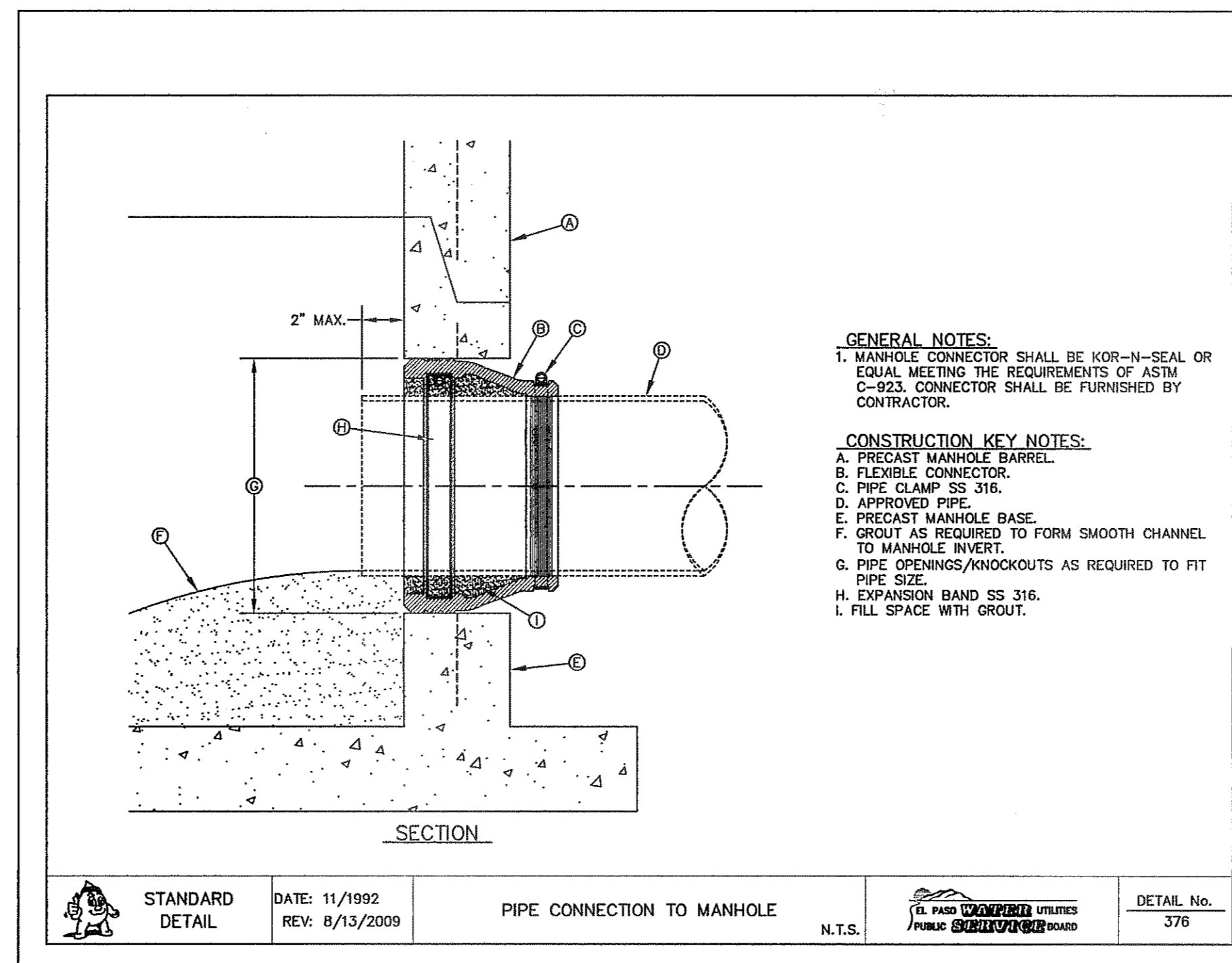
2 STANDARD SEWER MANHOLE RING DETAIL SCALE: N.T.S.



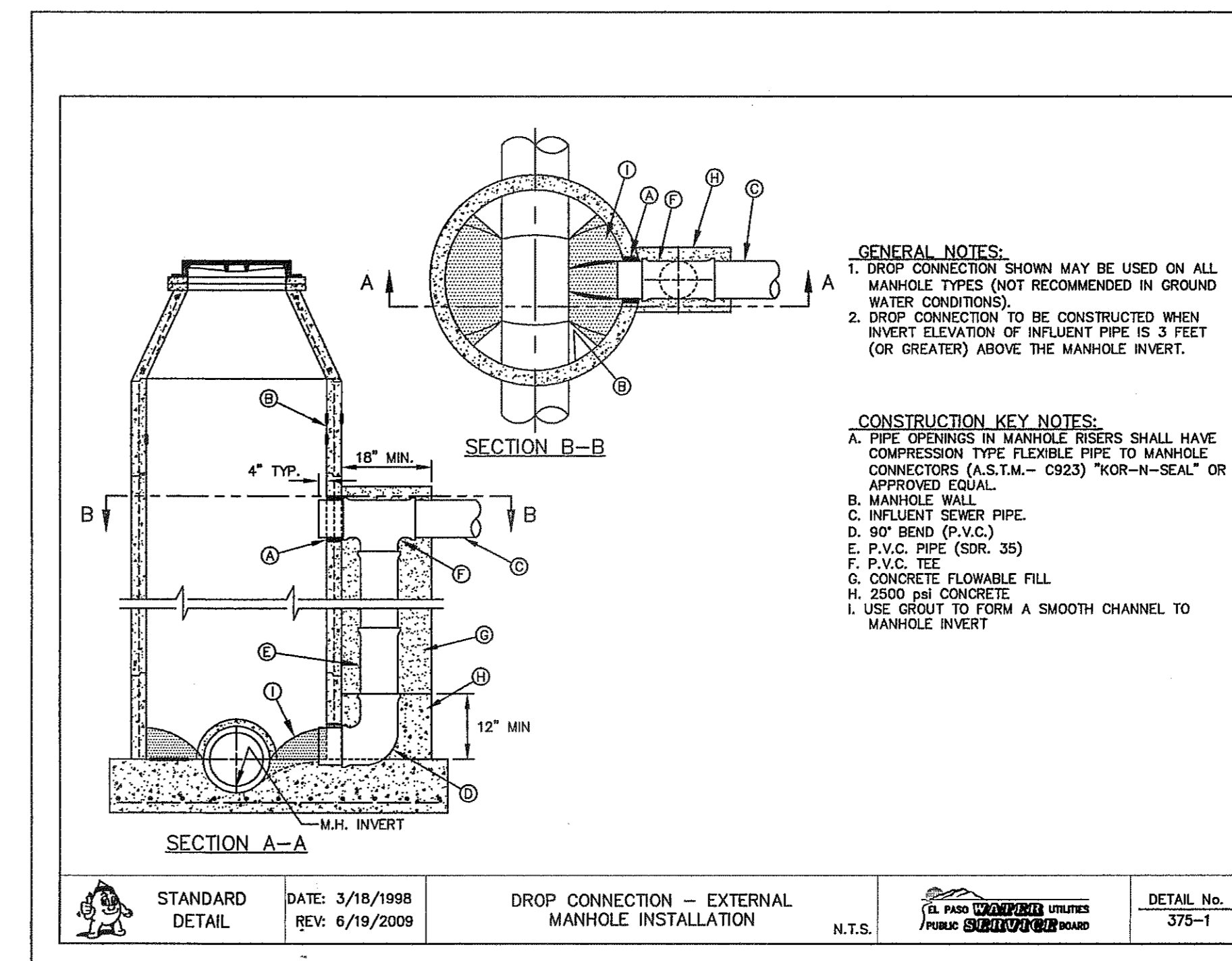
3 STANDARD MANHOLE TYPE "A" SCALE: N.T.S.



4 SEWER SERVICE RISER AND SERVICE LINE CONNECTION SCALE: N.T.S.



5 PIPE CONNECTION TO MANHOLE SCALE: N.T.S.



6 DROP CONNECTION - EXTERNAL MANHOLE INSTALLATION SCALE: N.T.S.

REFERENCES - BENCHMARKS

EXISTING CITY MONUMENT ELEVATION: 683.0 TO 100.0 FEET (GRT DATUM)

UTILITY MONUMENTS TO BE USED FOR ALL UTILITY LOCATIONS AND PAVED ROAD DRIVE

DATE	REVISIONS	BY

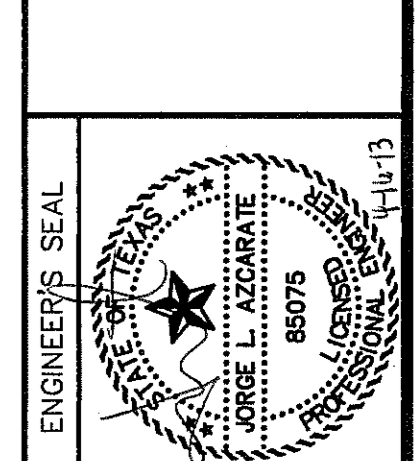
**ca**

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TEXAS REGISTERED ENGINEERING FIRM F-654

4712 Woodrow Bean, Ste. F El Paso, TX 79924

Office: 915.544.6222 Fax: 915.544.5233 www.caep.com



SCALE: N/A

Vertical: N/A

Horizontal: N/A

Contour Interval: N/A

DATE: APRIL 2013

DESIGN BY: J.M.

DRAWN BY: J.M.

CHKD. BY: J.L.A.

APPRD. BY: J.L.A.

JOB No. 20000-145-LD

CITY DEVELOPMENT DEPARTMENT

REVIEWED

PROJECT TITLE

MESQUITE TRAILS UNIT EIGHT

SUBDIVISION IMPROVEMENTS

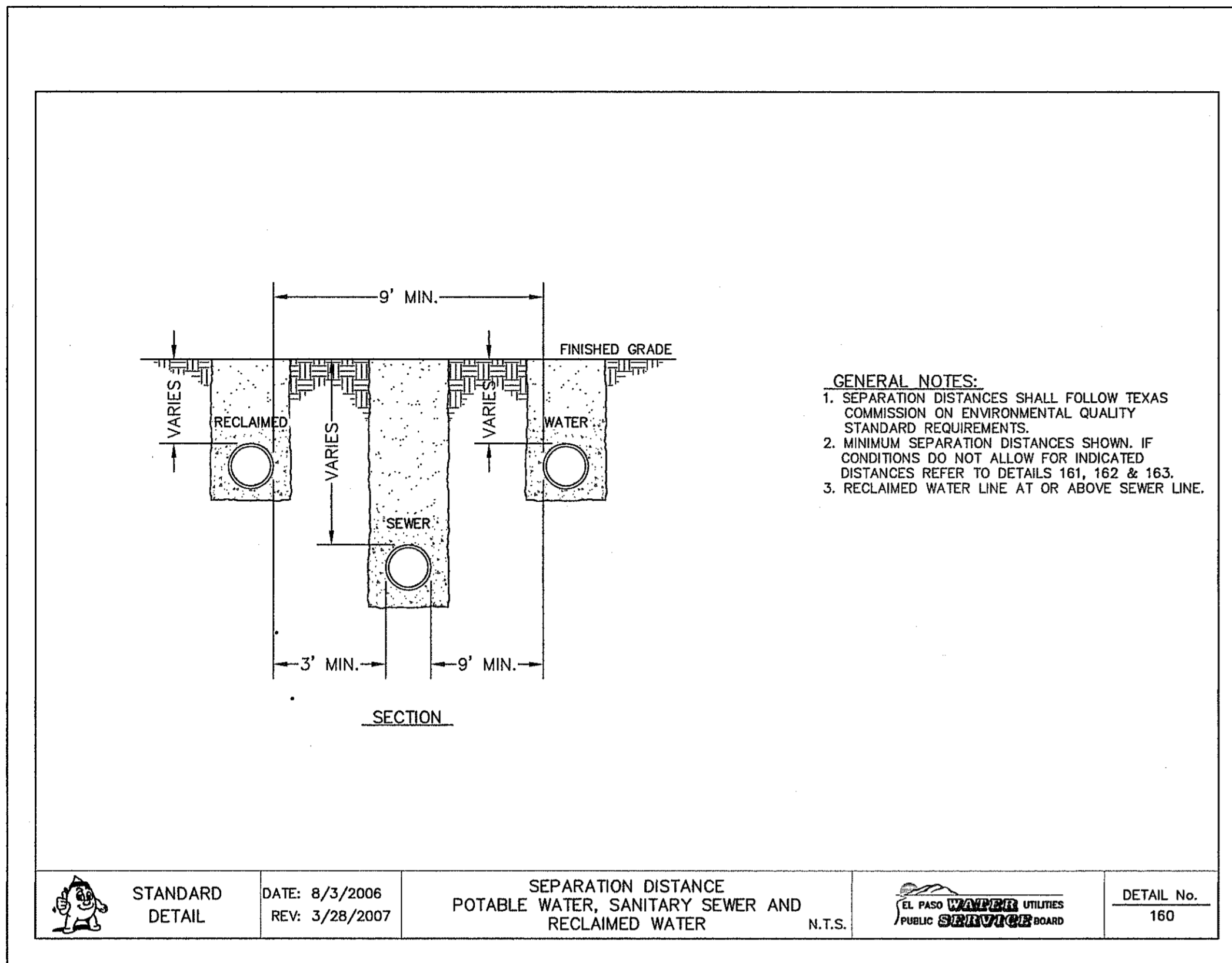
SHEET TITLE

SANITARY SEWER DETAILS

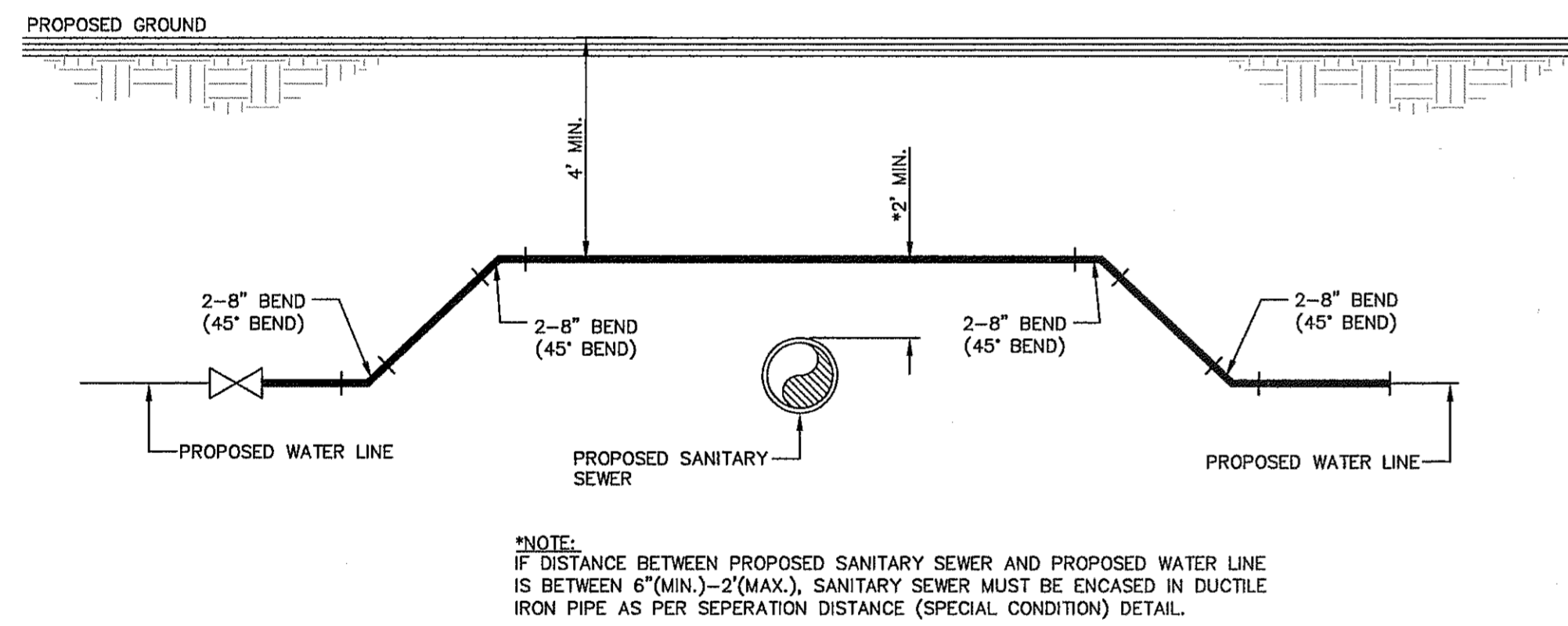
(SHEET 1 OF 3)

SHEET NO.

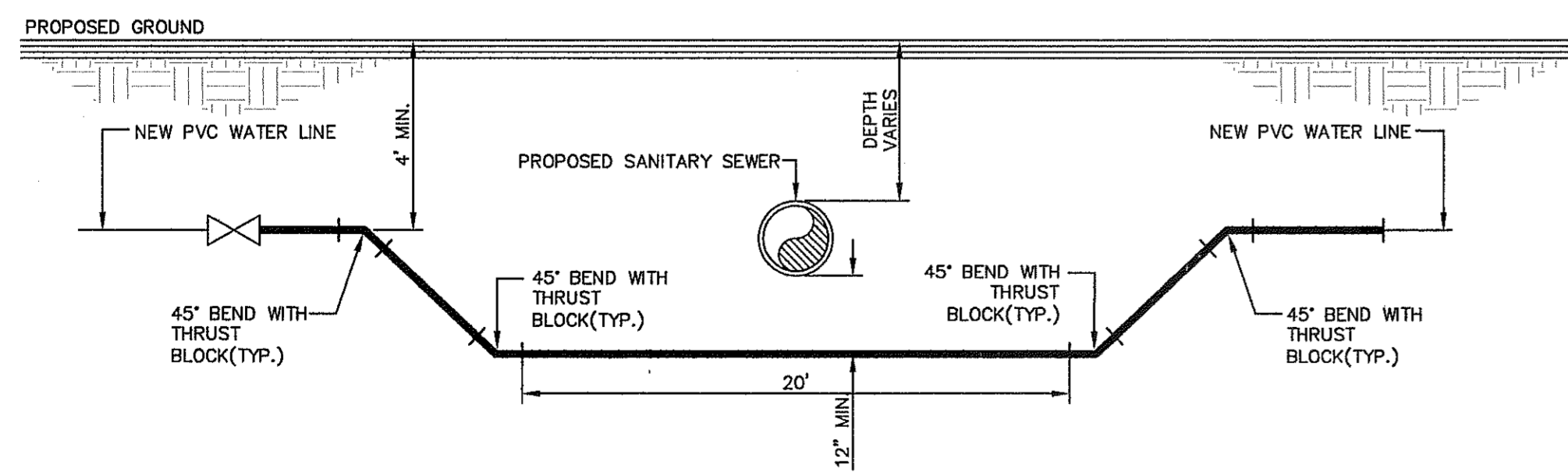
C16.1



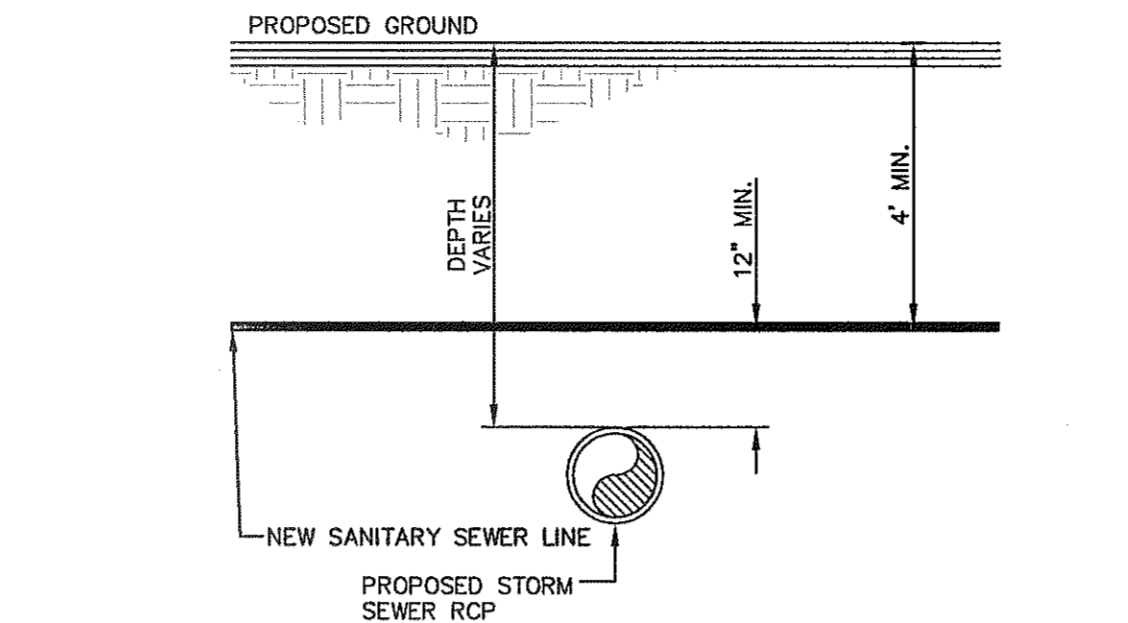
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 SCALE: N.T.S.



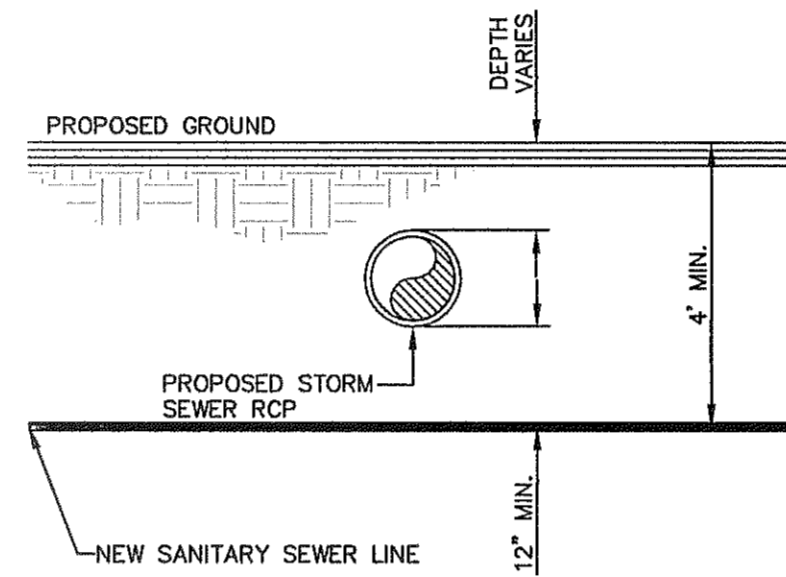
5 SANITARY SEWER CROSSING UNDER WATER LINE DETAIL  
 SCALE: N.T.S.



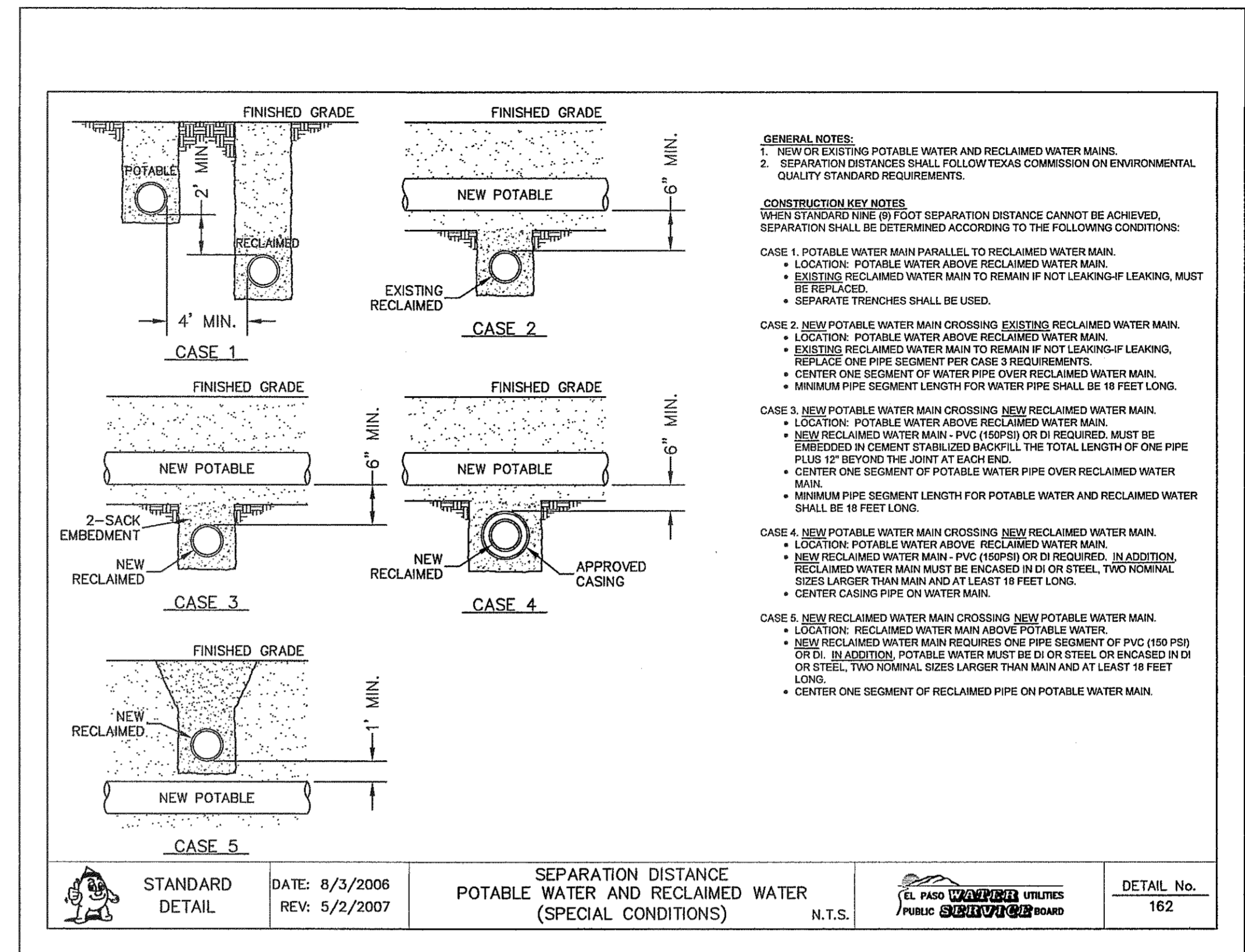
6 SANITARY SEWER CROSSING OVER WATER LINE DETAIL  
 N.T.S.



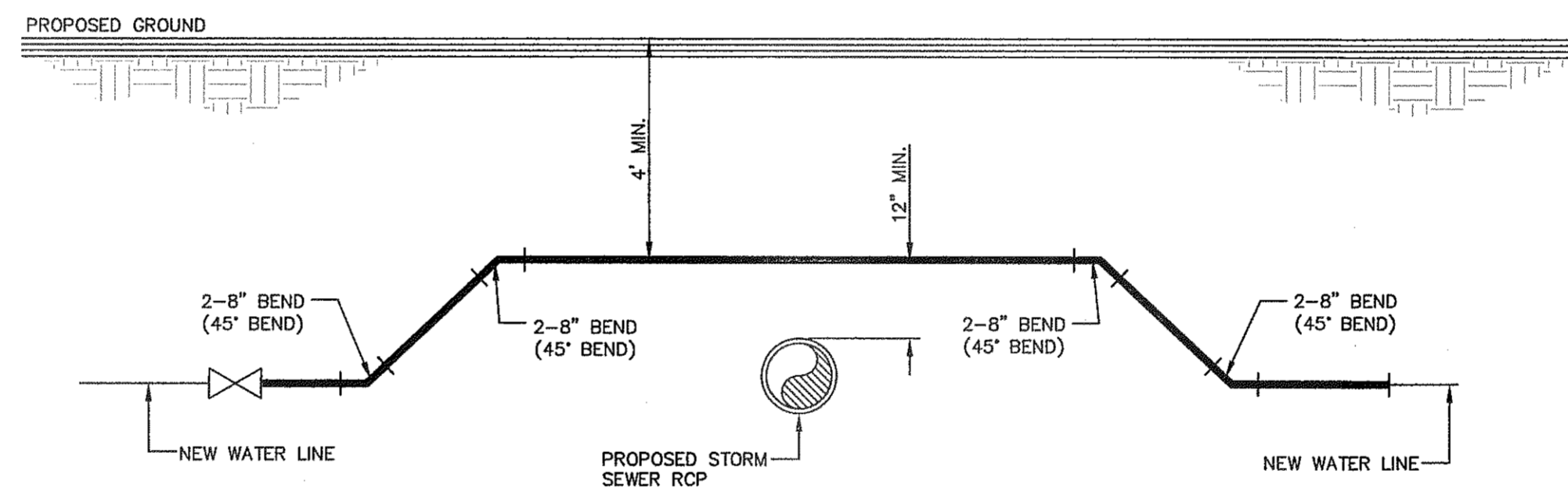
2 STORM SEWER CROSSING UNDER SANITARY LINE DETAIL  
 N.T.S.



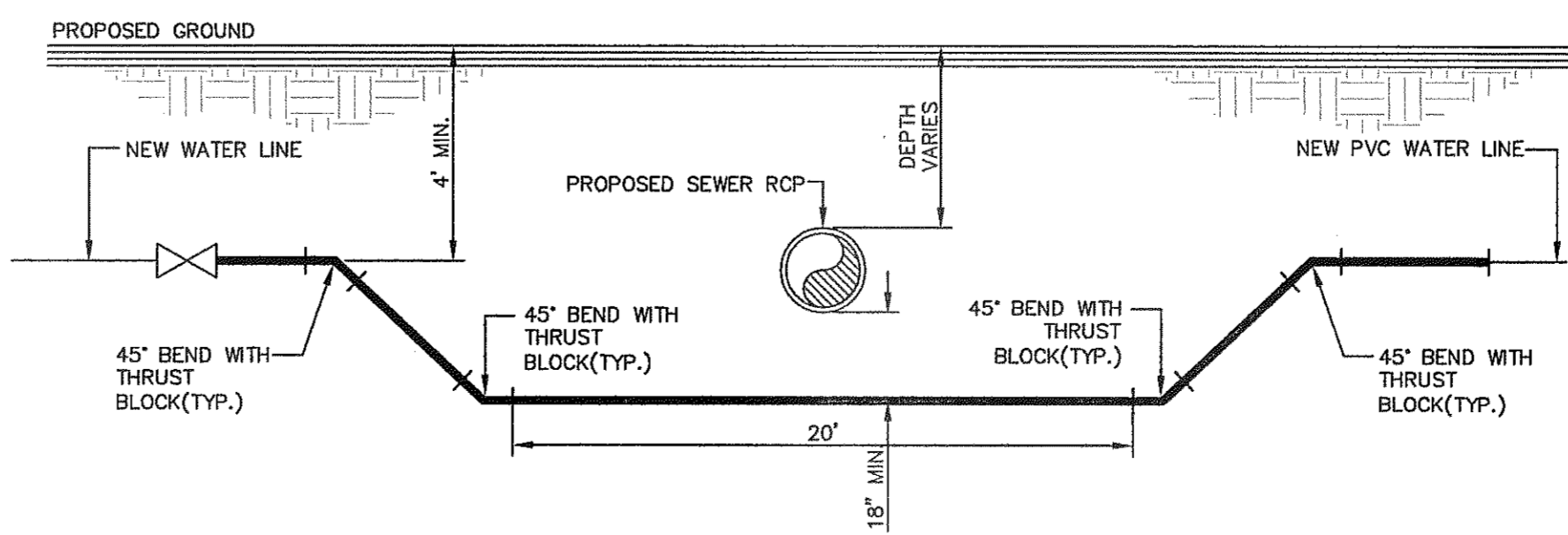
3 STORM SEWER CROSSING OVER SANITARY LINE DETAIL  
 N.T.S.



4 SEPARATION DISTANCE-EXISTING WATER AND NEW SEWER  
 SCALE: N.T.S.



7 STORM SEWER CROSSING UNDER WATER LINE DETAIL  
 N.T.S.



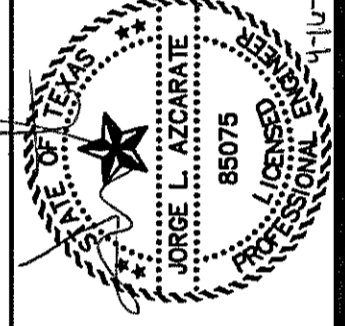
8 STORM SEWER CROSSING OVER WATER LINE DETAIL  
 N.T.S.

REFERENCES - BENCHMARKS

EXISTING CITY MONUMENT  
 ELEVATION=1033.10 FEET  
 MONUMENT LOCATION: 1033.10 FEET  
 PASSED BY: 1033.10 FEET

DATE	REVISIONS	BY
------	-----------	----

**CSA**  
 engineers • architects • planners  
 TEXAS REGISTERED ENGINEERING FIRM F-464  
 4712 Woodrow Bean, Ste. F El Paso, TX 79924  
 Office: 915.544.5232 Fax: 915.544.5233 www.csaonline.com



SCALE	N/A
Horizontal:	N/A
Vertical:	N/A
Contour Interval:	N/A
DATE:	APRIL 2013
DESIGN BY:	J.M.
DRAWN BY:	J.M.
CHKD. BY:	J.L.A.
APPVD. BY:	J.L.A.
JOB No.	20000-145-LD

PROJECT TITLE

**MESQUITE TRAILS UNIT EIGHT  
 SUBDIVISION IMPROVEMENTS**

SHEET TITLE

**SANITARY SEWER  
 DETAILS**

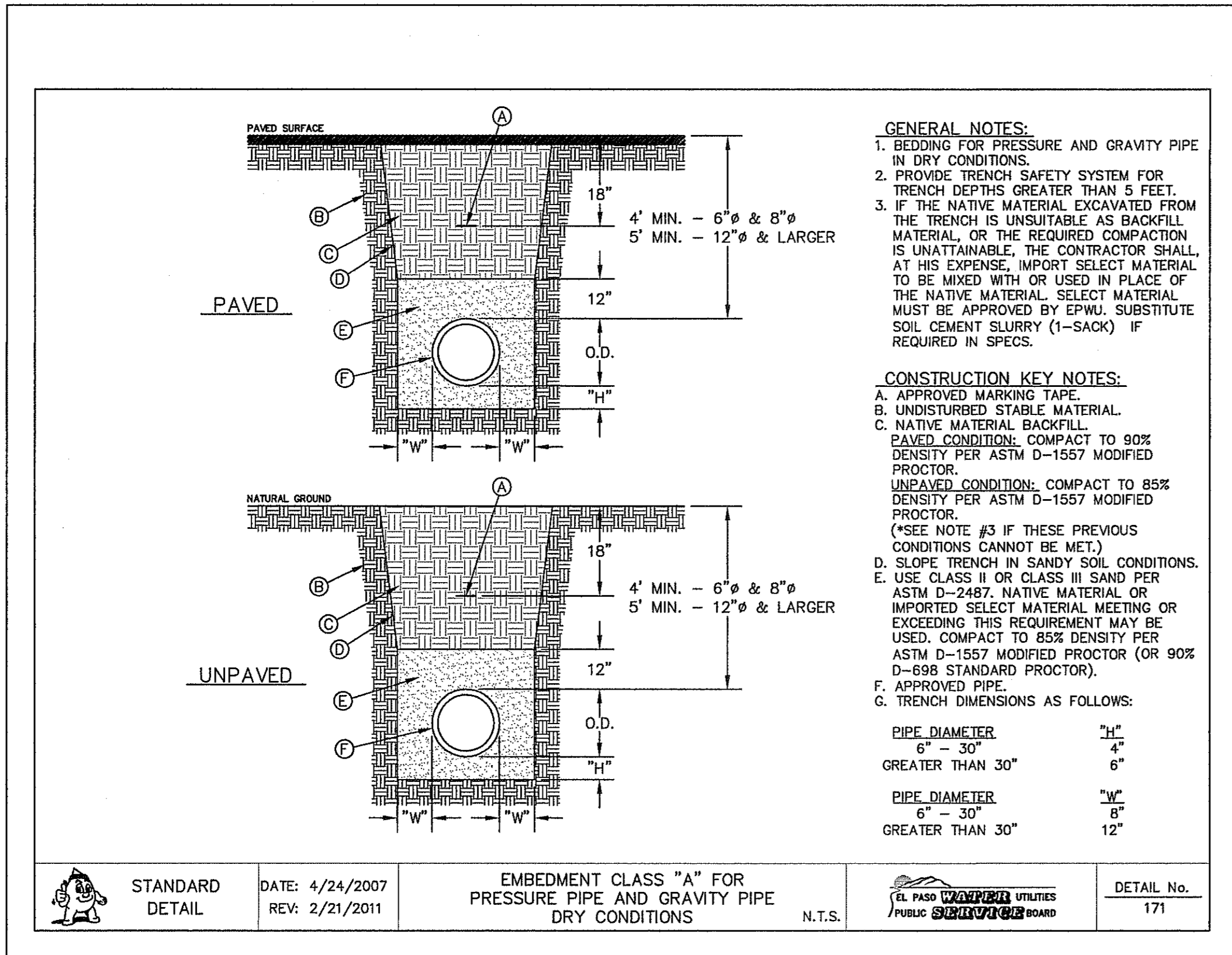
(SHEET 2 OF 3)  
 SHEET NO.

CITY DEVELOPMENT DEPARTMENT

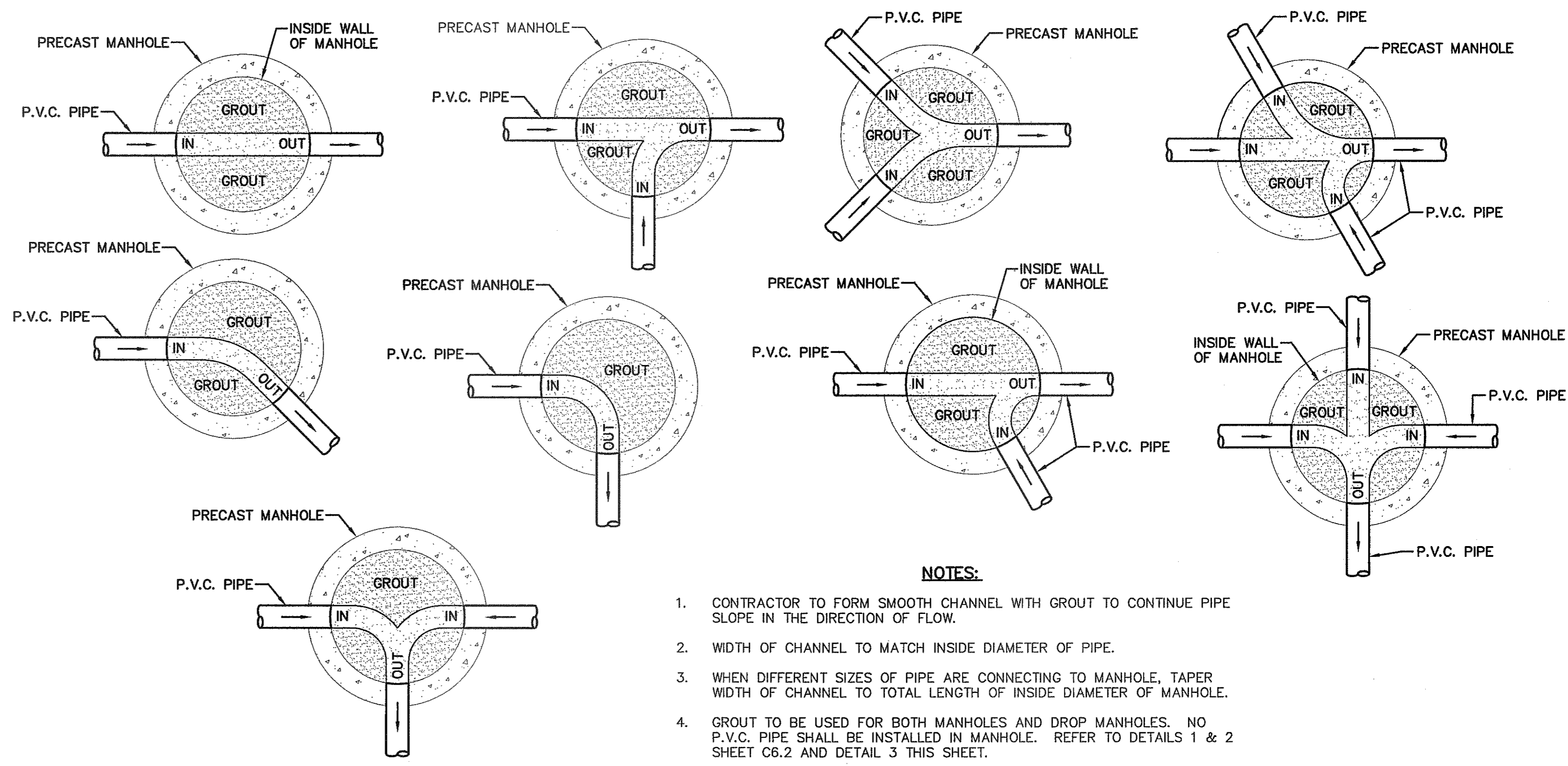
**REVIEWED**

C16.2

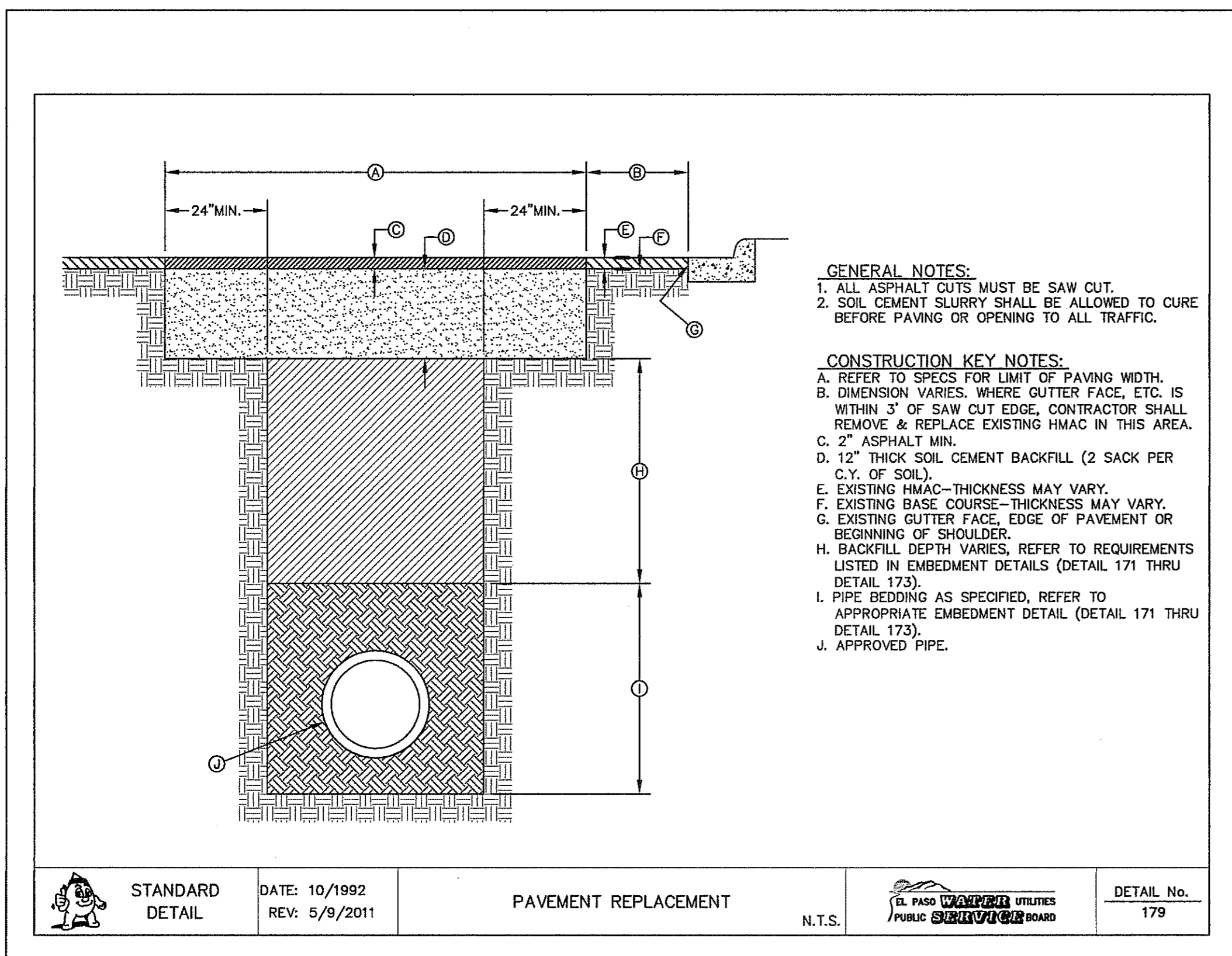




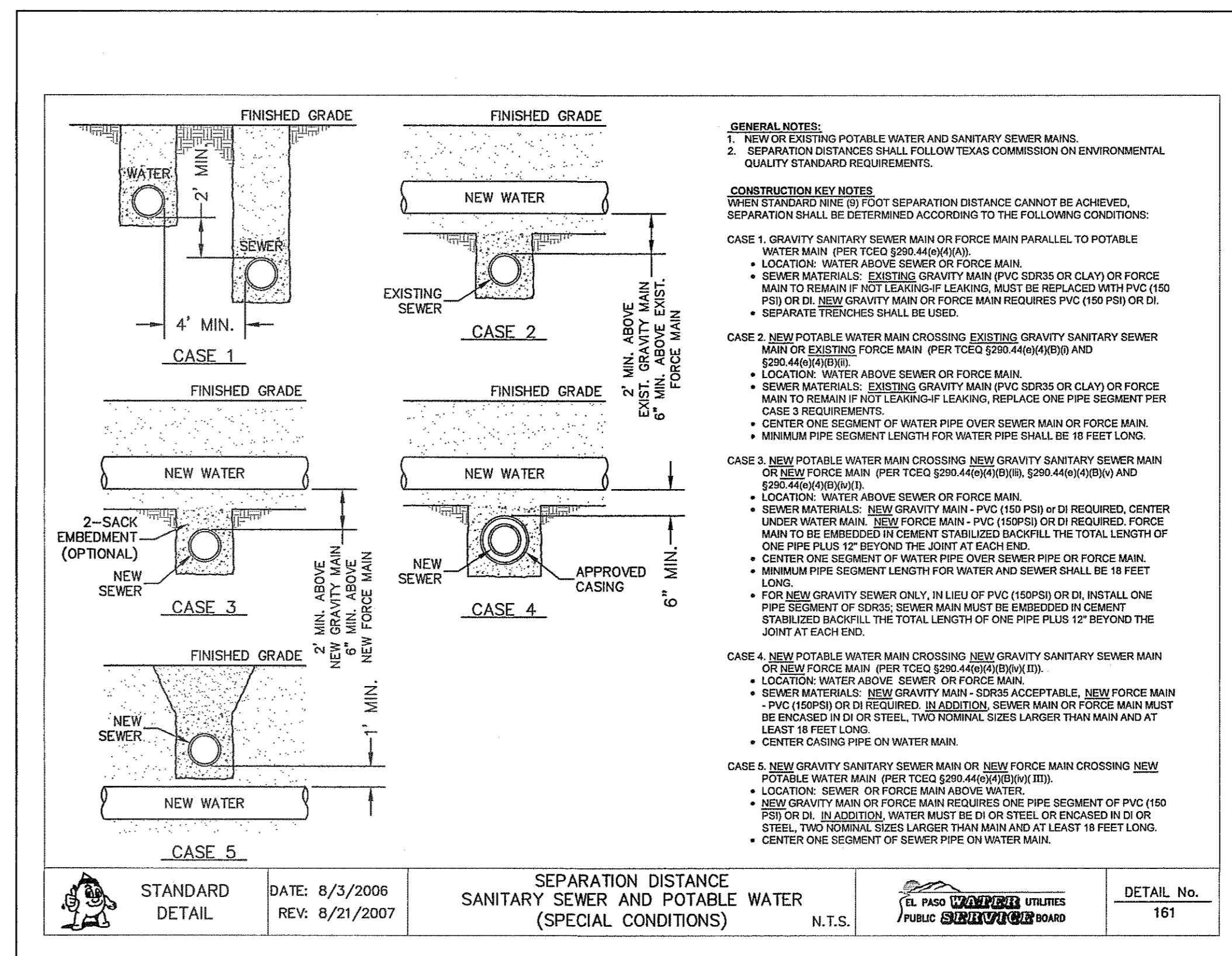
1 BEDDING CLASS DETAILS FOR P.V.C. PRESSURE PIPE SCALE: N.T.S.



2 TYPICAL MANHOLE INVERT PLANS SCALE: N.T.S.



3 PAVEMENT REPLACEMENT DETAIL N.T.S.



4 SEPARATION DISTANCE SANITARY SEWER AND POTABLE WATER N.T.S.

REFERENCES - BENCHMARKS

EXISTING CITY MONUMENT  
 1000 FT. (300 M) (CITY CENTER)  
 LOCATION AT THE INTERSECTION OF  
 PASSED ALBERTA DRIVE AND PASSED LINDO DRIVE

DATE \_\_\_\_\_ REVISIONS \_\_\_\_\_ BY \_\_\_\_\_

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ENGINEER'S SEAL

EL PASO COUNTY, TEXAS  
 JORGE L. AZCARRATE  
 88075  
 LICENSED PROFESSIONAL ENGINEER  
 11-11-13

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

DATE: APRIL 2013  
 DESIGN BY: J.M.  
 DRAWN BY: J.M.  
 CHKD. BY: J.L.A.  
 APP'D. BY: J.L.A.  
 JOB No. 22000-145-UD

PROJECT TITLE

MESQUITE TRAILS UNIT EIGHT  
 SUBDIVISION IMPROVEMENTS

SHEET TITLE

SANITARY SEWER DETAILS  
 (SHEET 3 OF 3)  
 SHEET NO.

CITY DEVELOPMENT DEPARTMENT

REVIEWED

C16.3

**SITE DESCRIPTION**

PROJECT NAME AND LIMITS: MESQUITE TRAILS UNIT EIGHT  
THE PROJECT IS BORDERED BY MESQUITE TRAILS UNIT TWO SUBDIVISION AND A PORTION  
OF SECTION 16, BLOCK 79 TO THE SOUTH, SECTION 9 LOTS 31,32 & 33 TO THE NORTH,  
A PORTION OF SECTION 15, BLOCK 79, TO THE EAST, AND PASEO DEL SOL UNIT TWO  
SUBDIVISION TO THE WEST.

PROJECT DESCRIPTION: THE SITE FOR THE NEW SUBDIVISION WILL ENCOMPASS APPROXIMATELY  
16.94± ACRES, AND WILL CONTAIN 28 RESIDENTIAL LOTS. PROJECT IMPROVEMENTS  
SHALL CONSIST OF STREET, LOT AND POND GRADING.

EXISTING CONDITIONS: THE SITE IS CLEAR OF SITE IMPROVEMENTS AND IS COVERED WITH ITS  
NATURAL SURROUNDINGS. EXISTING RUNOFF GENERALL FLOWS IN A WESTERLY DIRECTION.

MAJOR SOIL DISTURBING ACTIVITIES: MAJOR SOIL DISTURBING ACTIVITIES WILL CONSIST OF CLEARING  
AND GRUBBING, GRADING FOR LOT POND GRADING, PAD ELEVATIONS, AND CONSTRUCTION OF  
STREETS.

TOTAL PROJECT AREA: 16.94± ac.

TOTAL AREA TO BE DISTURBED: 16.94± ac.

WEIGHTED RUNOFF COEFFICIENT  
(AFTER CONSTRUCTION): 0.615

EXISTING CONDITION OF SOIL AND VEGETATIVE  
COVER AND % OF EXISTING VEGETATIVE COVER: THE PROJECT SITE IS LOCATED IN THE VICINITY OF THE  
HUECO-WINK ASSOCIATION. THE SOILS IN THESE AREA ARE GENERALLY DESCRIBED AS  
NEARLY LEVEL AND GENTLY SLOPING SOILS THAT HAVE A FINE SANDY LOAM SUBSOIL  
AND ARE MODERATELY DEEP OVER CALICHE; IN THE HUECO BOLSON.

NAME OF RECEIVING WATERS: STORM RUNOFF FROM THE NEW SUBDIVISION WILL BE CONVEYED THROUGH A  
NEW STORM SEWER INFRASTRUCTURE AND ULTIMATELY BE DISCHARGED INTO AN ON-SITE  
RETENTION BASIN.

**EROSION AND SEDIMENT CONTROL**

**SOIL STABILIZATION PRACTICES**

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

OTHER: \_\_\_\_\_

**STRUCTURAL PRACTICES:**

- SILT FENCES OR EARTHEN BERMS
- HAY BALES
- ROCK BERMS
- DIVERSION, INTERCEPTOR, OR PERIMETER DIKES
- DIVERSION, INTERCEPTOR, OR PERIMETER SWALES
- DIVERSION DIKE AND SWALE COMBINATION
- PIPE SLOPE DRAINS
- CONCRETE FLUMES
- ROCK BEDDING AT CONSTRUCTION EXIT
- TIMBER MATTING AT CONSTRUCTION EXIT
- CHANNEL LINERS
- SEDIMENT TRAPS
- SEDIMENT BASINS
- STORM INLET SEDIMENT TRAP
- STONE OUTLET STRUCTURES
- CURBS AND GUTTERS
- STORM DRAINS
- 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  
EARTHEN BERM, AND STABILIZED CONSTRUCTION ENTRANCE) ;
2. PERFORM CLEARING AND GRUBBING;
3. COMPLETE STREET, LOT AND POND GRADING;
4. 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 C4.1, 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 TCEQ.
- 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 TARPULIN
  - EXCESS DIRT ON ROAD SHALL BE REMOVED IMMEDIATELY
  - STABILIZED CONSTRUCTION ENTRANCE
  - OTHER: \_\_\_\_\_

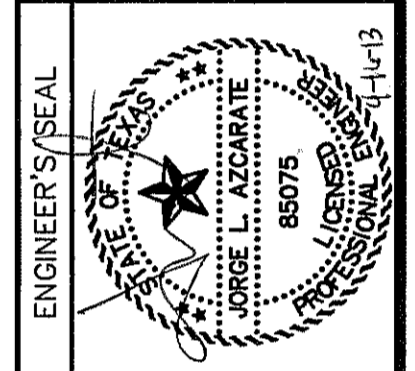


CITY DEVELOPMENT DEPARTMENT

REVIEWED

REFERENCES -- BENCHMARKS	DATE	BY
EXISTING CITY MONUMENT		
LOCATED AT THE CENTER LINE INTERSECTION OF		
PASEO ALFREO CIRCLE AND PASEO LINDO DRIVE		

**CSA**  
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TEXAS REGISTERED ENGINEERING FIRM F-4584  
4712 Woodrow Bean, Ste. F, El Paso, TX 79924  
Office: 915.544.5222 Fax: 915.544.5203 www.csaonline.net



SCALE	N/A
Horizontal:	N/A
Vertical:	N/A
Contour Interval:	N/A
DATE:	APRIL 2013
DESIGN BY:	J.M.
DRAWN BY:	J.M.
CHKD. BY:	J.L.A.
APP'D. BY:	J.L.A.
JOB No.	2000-145-UD

PROJECT TITLE  
**MESQUITE TRAILS UNIT EIGHT**  
**SUBDIVISION IMPROVEMENTS**

SHEET TITLE

**STORM WATER POLLUTION PREVENTION PLAN: NOTES**

SHEET NO.


C17.1

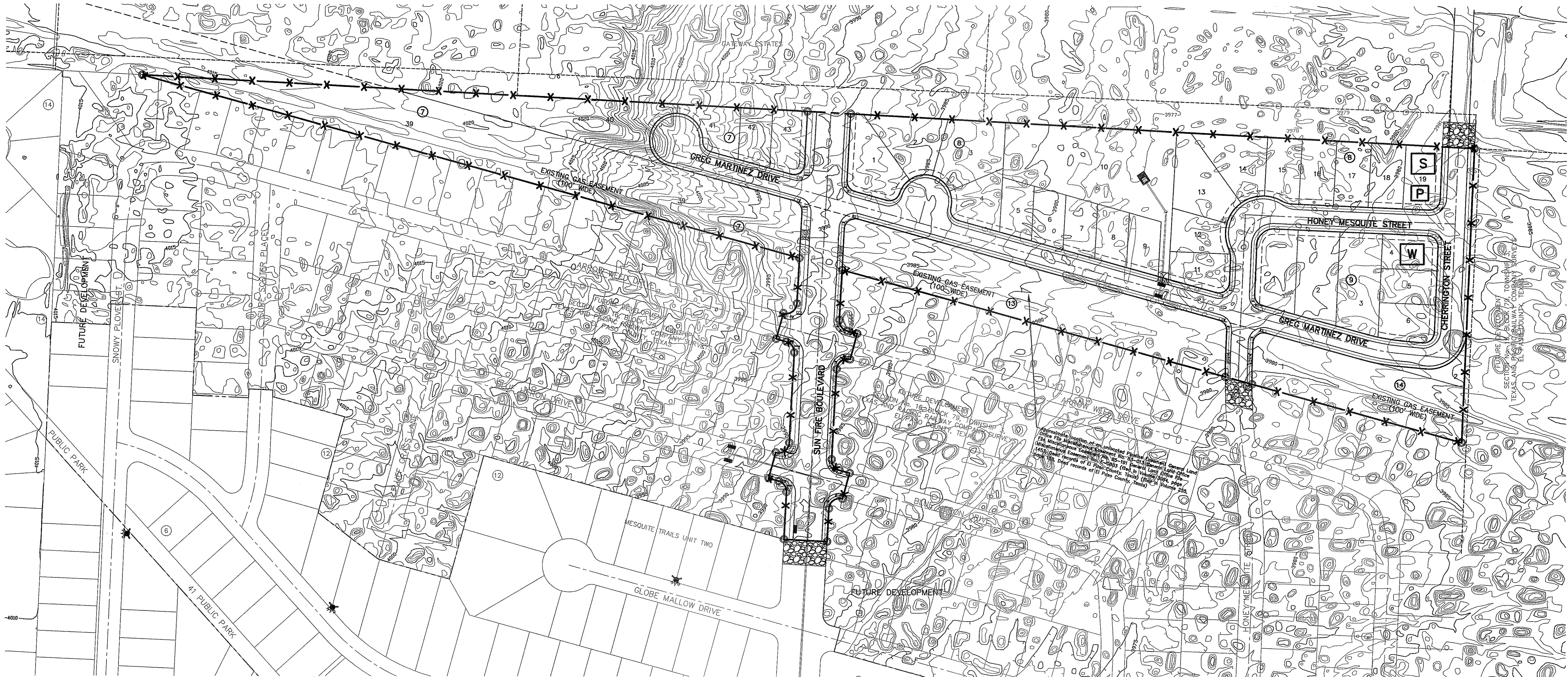
UTILITY LOCATOR SERVICES	
EL PASO ELECTRIC COMPANY	(915) 543-5720
EL PASO ENERGY CORPORATION	(915) 496-5244
EL PASO WATER UTILITIES	(915) 594-5500
MCI SURVEILLANCE	(800) MCI-WORK
TIME WARNER COMMUNICATIONS	(915) 772-1123
TEXAS GAS SERVICE	(915) 680-7200
SBC	(800) 545-6005
AT&T	(800) 852-3786
U.S. SPRINT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

**WARNING!**  
**BEFORE YOU DIG**

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

BEING A PORTION OF SECTION No. 16, BLOCK 79, TOWNSHIP 3,  
TEXAS AND PACIFIC RAILWAY COMPANY SURVEYS  
EL PASO, EL PASO COUNTY, TEXAS  
CONTAINING 16.94± ACRES


- X — X — SILT FENCE OR EARTHEN BERM
-  STABILIZED CONSTRUCTION ENTRANCE
- S** STAGING AREA
- P** PORTABLE TOILETS
- W** WASH OUT



DATE	REVISIONS	BY

REFERENCES — BENCHMARKS  
 BEING CITY ACCOUNT  
 EXISTING UTILITY DATA  
 LOCATED AT THE CENTRAL INTERSECTION OF  
 PASEO ALBUQUE CRUISE AND PASEO LINDO DRIVE

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 4712 Woodrow Bean, Ste. F, El Paso, TX 79924  
 Circle 915-544-5232 Fax 915-544-5233 www.cea.com

ENGINEER'S SEAL  


SCALE 1" = 100'	
Horizontal:	N/A
Vertical:	N/A
Contour Interval:	N/A
DATE:	APRIL 2013
DESIGN BY:	JLM
DRAWN BY:	JLM
CHKD BY:	JLA
APP'D BY:	JLA
JOB No.	2000-145-LD

PROJECT TITLE  
**MESQUITE TRAILS UNIT EIGHT  
 SUBDIVISION IMPROVEMENTS**

SHEET TITLE

**STORM WATER  
 POLLUTION  
 PREVENTION PLAN:  
 SITE**

SHEET NO.

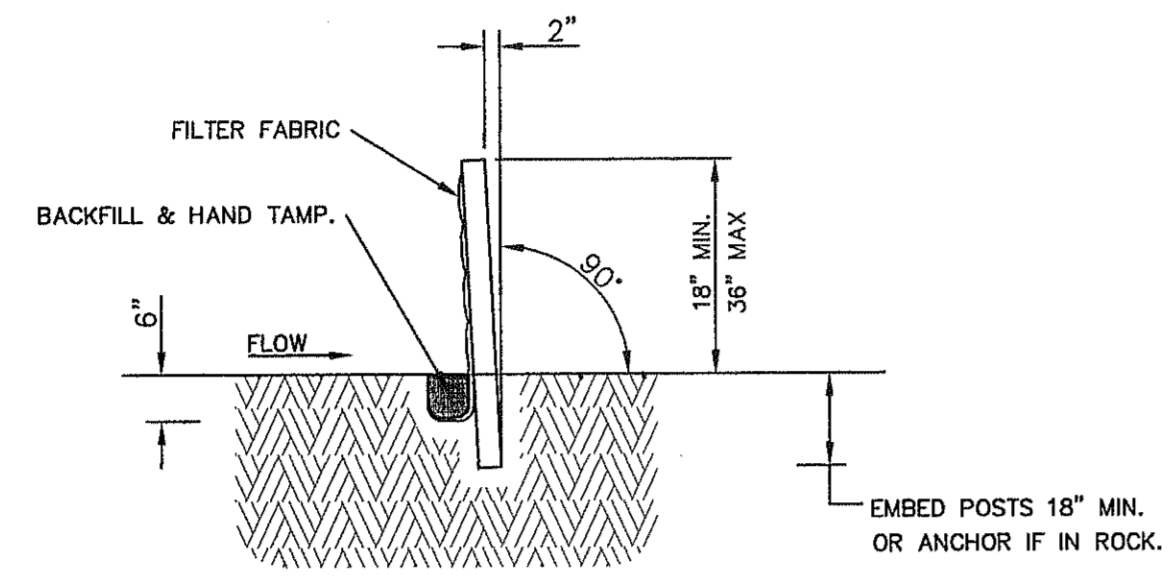
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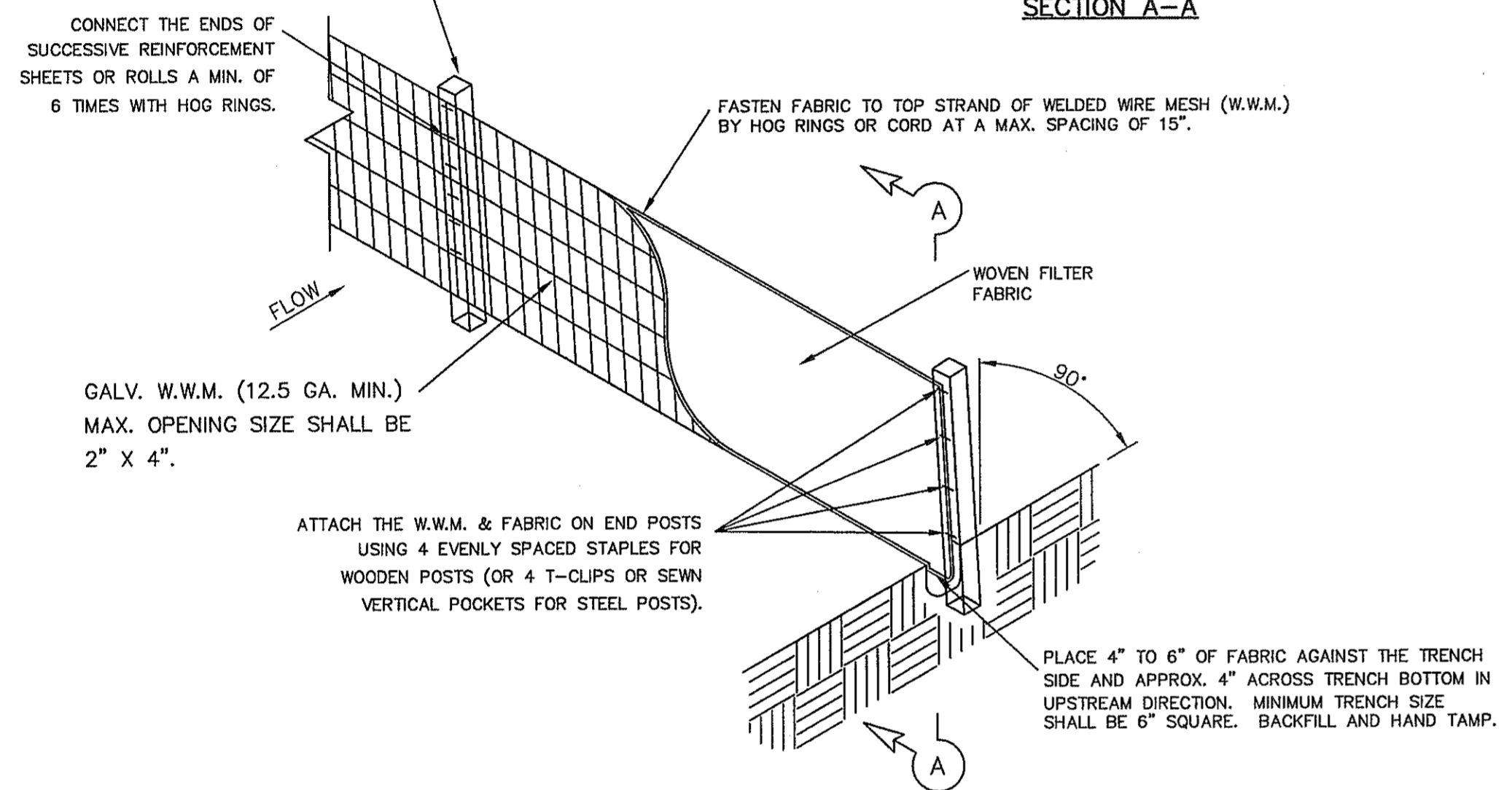
**SITE PLAN**  
 SCALE: 1" = 100'

 CITY DEVELOPMENT DEPARTMENT  
**REVIEWED**

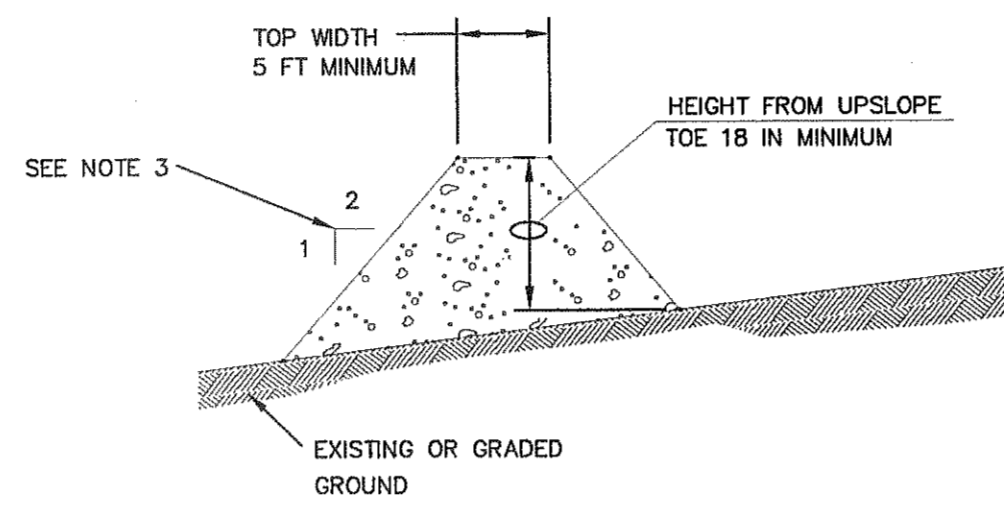
1/2 IN. STEEL OR WOOD POSTS SPACED AT 6' TO 8' O.C. TO POSTS SHALL BE 3" MIN. DIA. OR NOMINAL 2"x4". SHALL HAVE A MIN. CROSS SECTION OF 1.5" X 1.5".



SECTION A-A



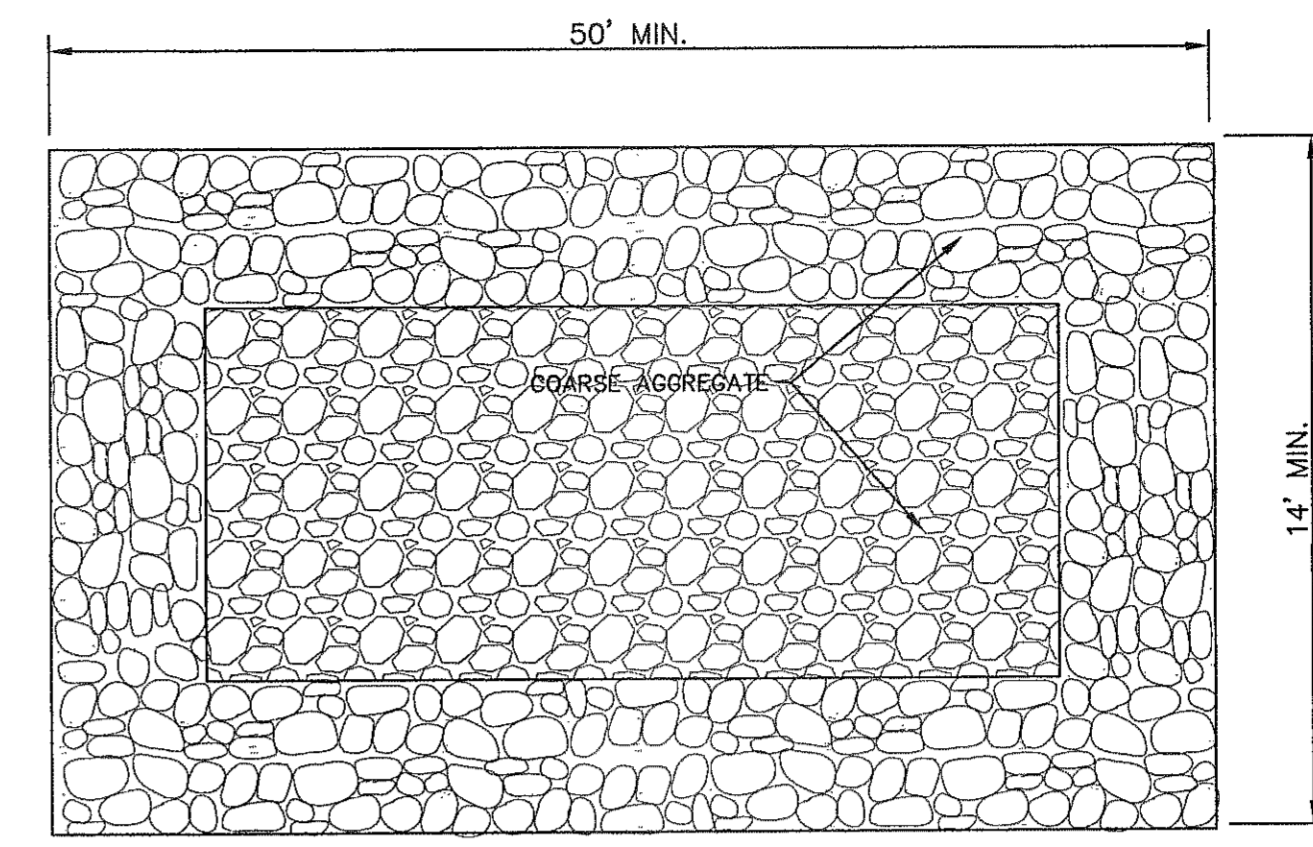
TEMPORARY SEDIMENT CONTROL FENCE



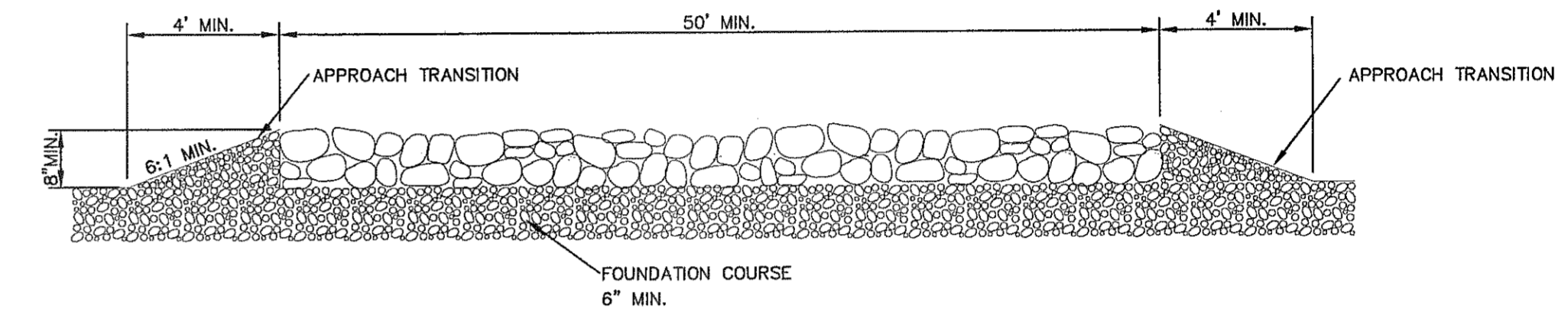
GENERAL NOTES:

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

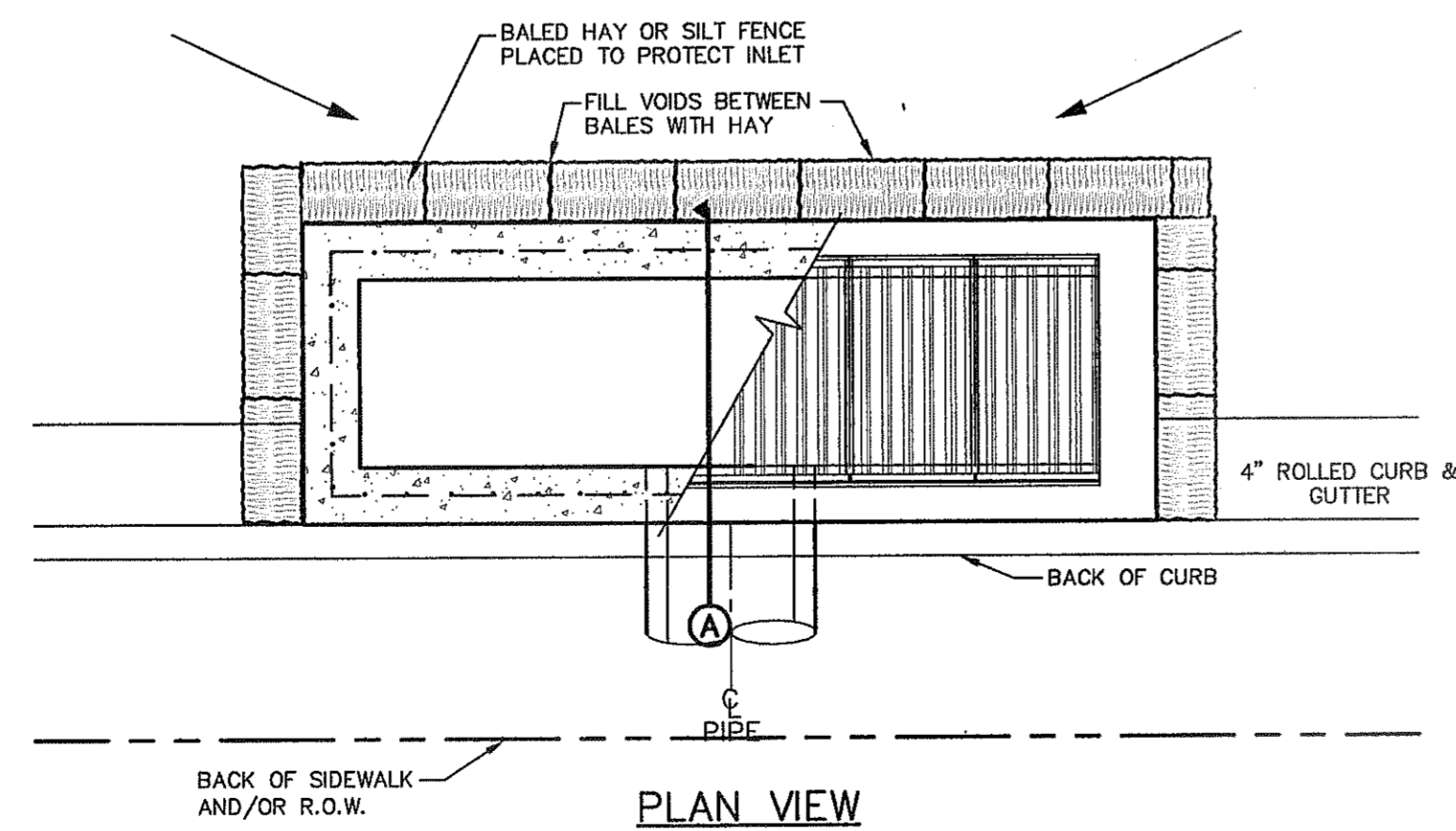


PROFILE

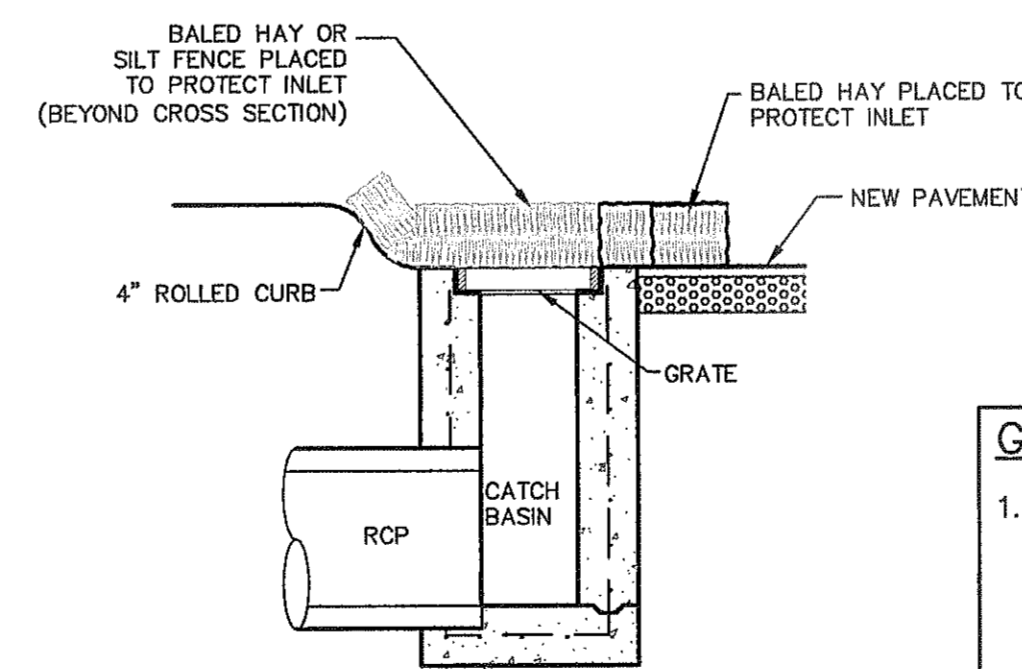
GENERAL NOTES:

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)



PLAN VIEW



SECTION A

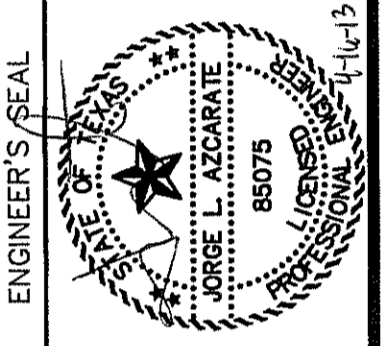
GENERAL NOTES:

1. PLACE CURB TYPE SEDIMENT BARRIERS ON GENTLY SLOPING STREET SEGMENTS, WHERE WATER CAN POND AND ALLOW SEDIMENT TO SEPARATE FROM RUNOFF.
2. INSPECT BARRIERS AND REMOVE SEDIMENT AFTER EACH STORM EVENT. SEDIMENT AND GRAVEL MUST BE REMOVED FROM THE TRAVELED WAY IMMEDIATELY.

TEMPORARY INLET PROTECTION

REFERENCES — BENCHMARKS	EXISTING CITY MONUMENT FOR THE INTERSECTION OF LOCATED AT THE CORNER OF PAVED ALBERE CIRCLE AND PAVED LINDO DRIVE.
DATE	REVISIONS
BY	

**ca**  
engineers • architects • planners  
TEXAS REGISTERED ENGINEERING FIRM F-4884  
4712 Woodrow Bean, Ste. F El Paso, TX 79924  
Office: 915.544.0202 Fax: 915.544.0233 www.caengr.com



SCALE	N/A
Horizontal:	N/A
Vertical:	N/A
Contour Interval:	N/A
DATE:	APRIL 2013
DESIGN BY:	J.M.
DRAWN BY:	J.L.A.
CHKD. BY:	J.L.A.
APPVD. BY:	J.L.A.
JOB NO.	2000-1145-LD

PROJECT TITLE  
**MESQUITE TRAILS UNIT EIGHT  
SUBDIVISION IMPROVEMENTS**

SHEET TITLE

**STORM WATER  
POLLUTION  
PREVENTION PLAN:  
DETAILS**

SHEET NO.

**C17.3**

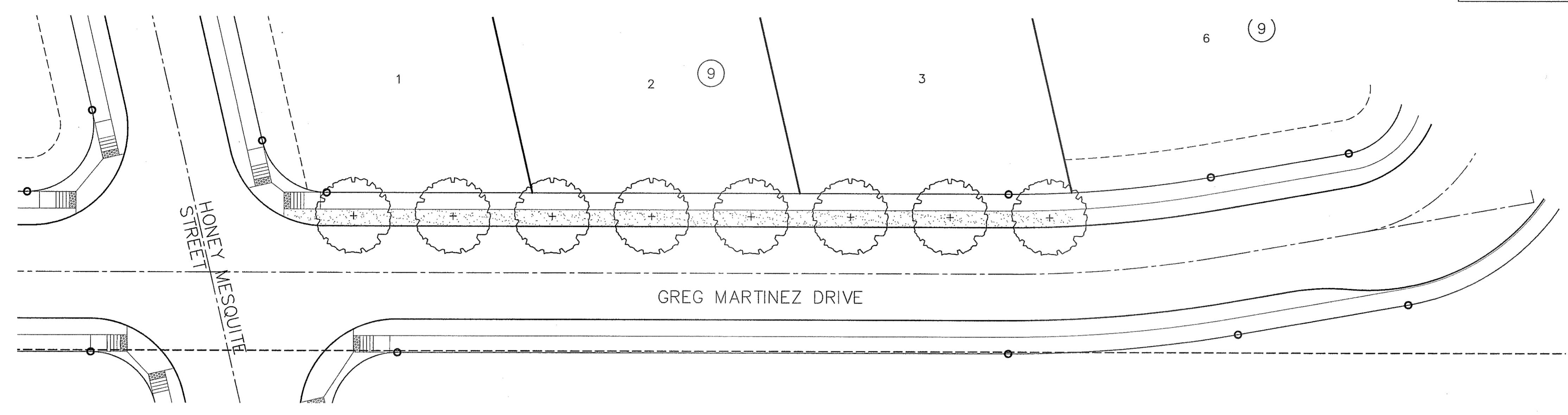
CITY DEVELOPMENT DEPARTMENT  
**REVIEWED**

UTILITY LOCATOR SERVICES	
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EL PASO ENERGY CORPORATION	(915) 496-5244
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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

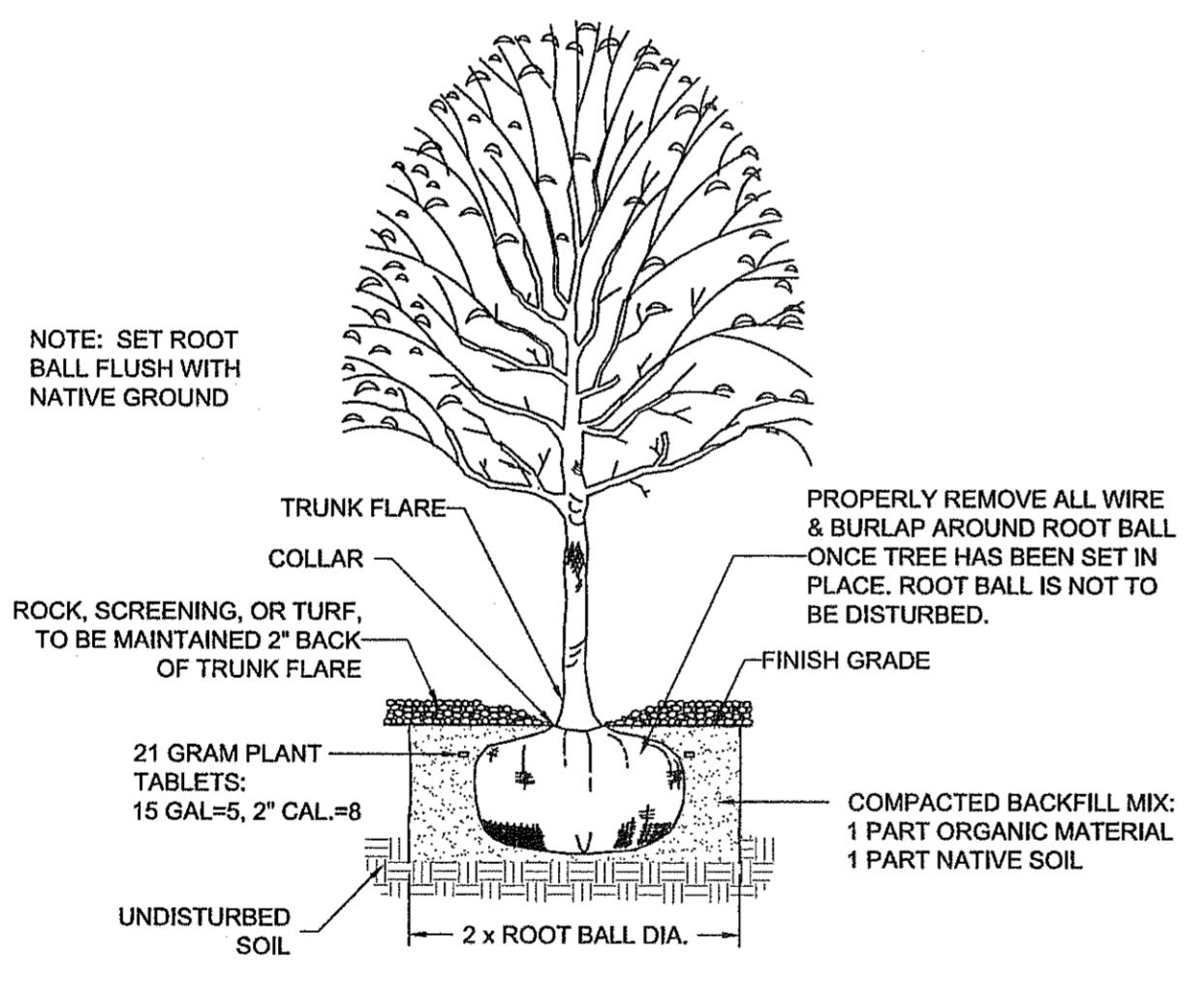
**WARNING !  
BEFORE YOU DIG**

CALL  
1-800-DIG-TESS  
1-800-344-8377

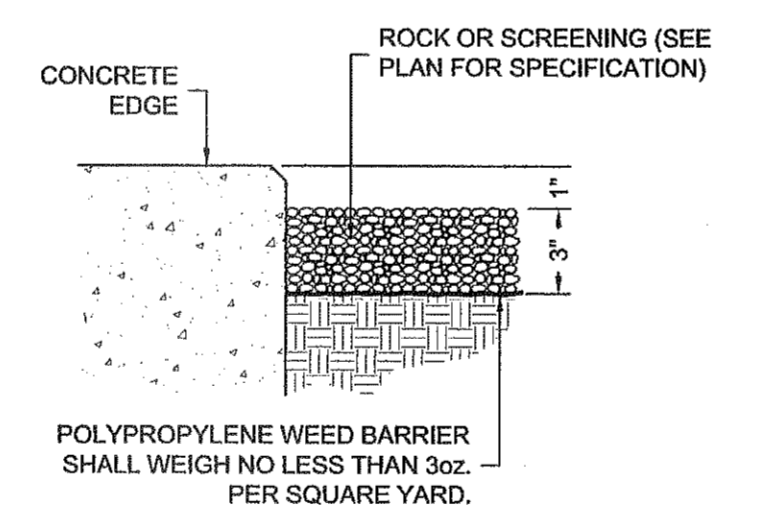
FOR FIELD LOCATING EXISTING UTILITIES



**LANDSCAPE PLAN**



**TREE PLANTING DETAIL**  
NOT TO SCALE



**ROCK/SCREENING DETAIL**  
NOT TO SCALE

**LANDSCAPE LEGEND**

SYMBOL	COMMON NAME	BOTANICAL NAME	QTY
<b>2\" CALIPER TREE - 10' HEIGHT MINIMUM</b>			
	SOUTHERN LIVE OAK	QUERCUS VIRGINIANA	8
<b>TURF, GRAVELS, &amp; MULCHES</b>			
	3/4\" FRANKLIN RED ROCK, 3\" DEPTH W/ MIRAFI 140NC WEED BARRIER		

**LANDSCAPE NOTES**

- ALL UTILITY EASEMENTS SHALL BE MARKED PRIOR TO EXCAVATION, AND PARTICULAR ATTENTION PAID TO TREE PLACEMENT WITHIN AND THROUGHOUT SITE.
- THERE SHALL BE NO STEEL EDGING BETWEEN ROCK TYPES.
- CONTRACTOR SHALL PROVIDE ROCK SAMPLES AND OBTAIN APPROVAL FROM OWNER PRIOR TO FINAL DELIVERY OF QUARRIED MATERIALS.
- CONTRACTOR TO PAY CLOSE ATTENTION TO FINISH GRADES. SHOULD GRAVELLED AREAS EXCEED 4:1 SLOPE, CONTRACTOR TO OBTAIN APPROVAL OF LANDSCAPE DESIGNER PRIOR TO MULCH INSTALLATION.
- ALL TREES SHALL BE SINGLE LEADER TRUNK, UNLESS INDICATED IN PLANS.

DATE	REVISIONS	BY

**CSA**  
engineers • architects • planners  
TEXAS REGISTERED ENGINEERING FIRM F-4954  
4712 Woodchuck Run, Ste. F, Box 79824  
Dallas, TX 75279  
Office: 972.544.8377 Fax: 972.544.8383

SCALE	PROJECT TITLE
Horizontal: N/A Vertical: N/A Contour Interval: N/A	MESQUITE TRAILS UNIT EIGHT SUBDIVISION IMPROVEMENTS
DATE: MARCH 2013 DESIGN BY: CH DRAWN BY: CH CHKD. BY: CH APPVD. BY: CH JOB No.: 2000-145-LD	

**CITY DEVELOPMENT DEPARTMENT**  
REVIEWED



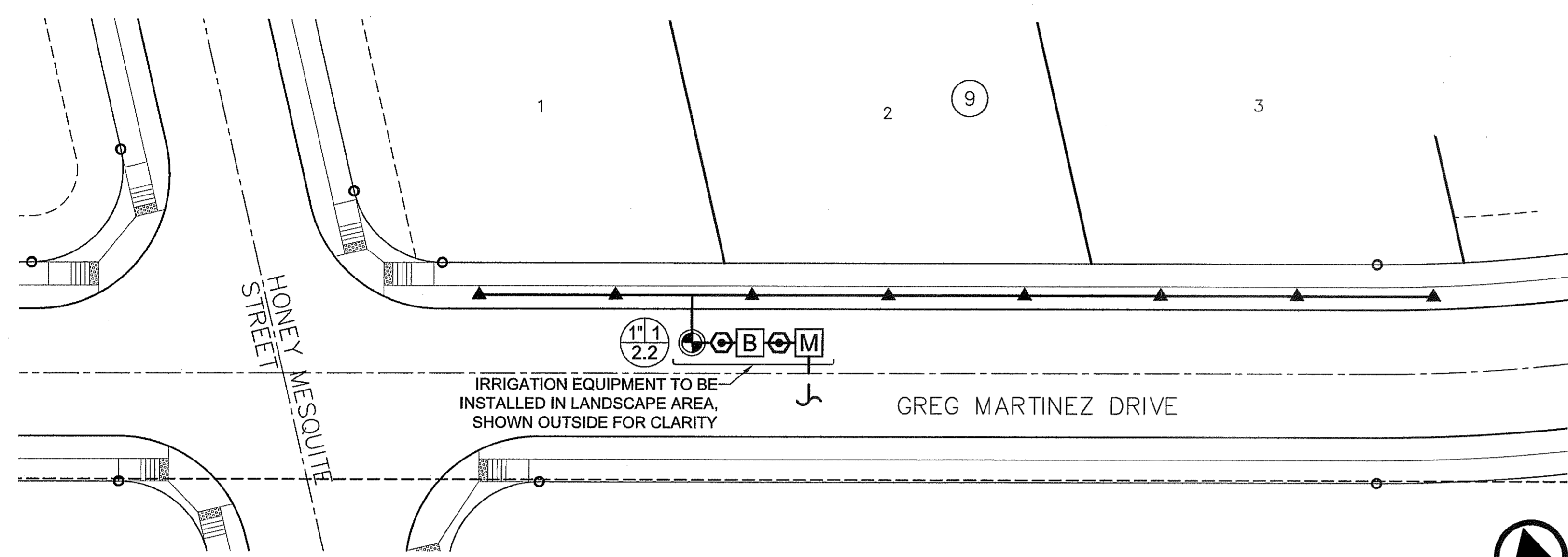
SHEET TITLE
LANDSCAPE PLAN
SHEET NO.
L1.0

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
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1-800-344-8377

FOR FIELD LOCATING EXISTING UTILITIES



**IRRIGATION PLAN**

**NORTH**  
SCALE: 1" = 20'

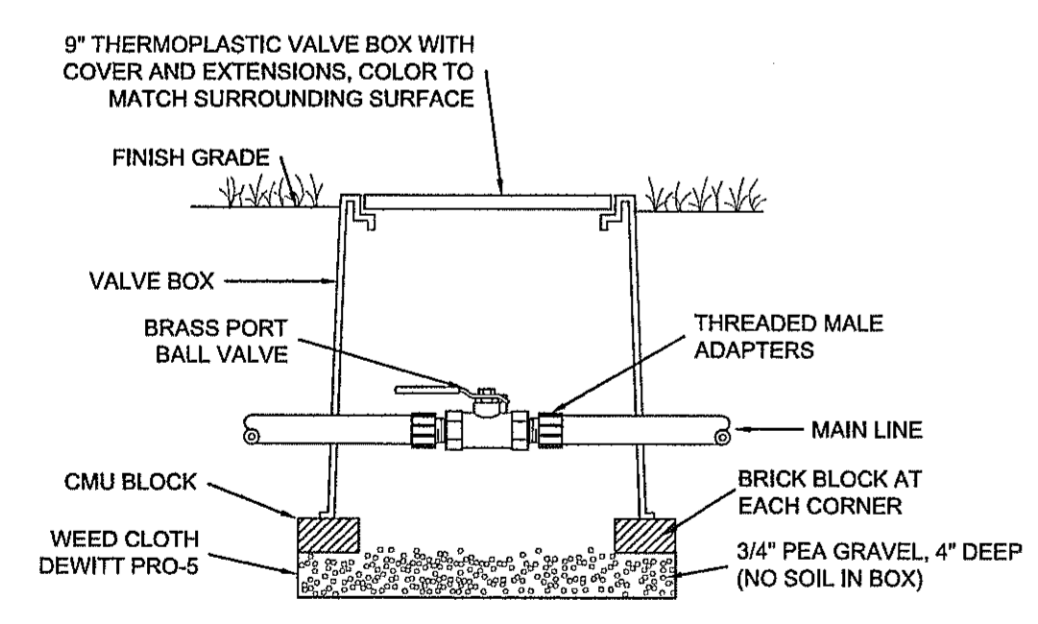
**IRRIGATION LEGEND**

SYMBOL	ITEM
	5/8" METER (BY OWNER)
	3/4" FEBCO 825Y RP BACKFLOW PREVENTER W/ ALUM. HOTBOX ENCLOSURE - MUST NOTE CLASS 2, ASSE #1060 FOR BACKFLOW
	1" BRASS PORT VALVE
	1" REMOTE CONTROL VALVE, RAINBIRD 100-PESB W/ AMIAD Y FILTER AFTER THE VALVE
	RAIN BIRD TBOS CONTROLLER/ WITH POTTED LATCHING SOLENOID & TBOS FIELD TRANSMITTER (SEE DETAIL FOR INSTALLATION)
	MAINLINE - 1" SCHED. 40 PVC
	PVC SLEEVE - 2 SIZES LARGER THAN LATERAL OR MAIN
	LATERAL LINE - SCHED. 40 PVC - 1" UNLESS OTHERWISE INDICATED
	RAINBIRD XERI-BIRD 8 MULTI-OUTLET EMISSION DEVICE RAINBIRD XB-20 DRIP EMITTERS - 8 PER TREE
	A) STATION NUMBER    B) SIZE OF VALVE IN INCHES C) TOTAL GPM

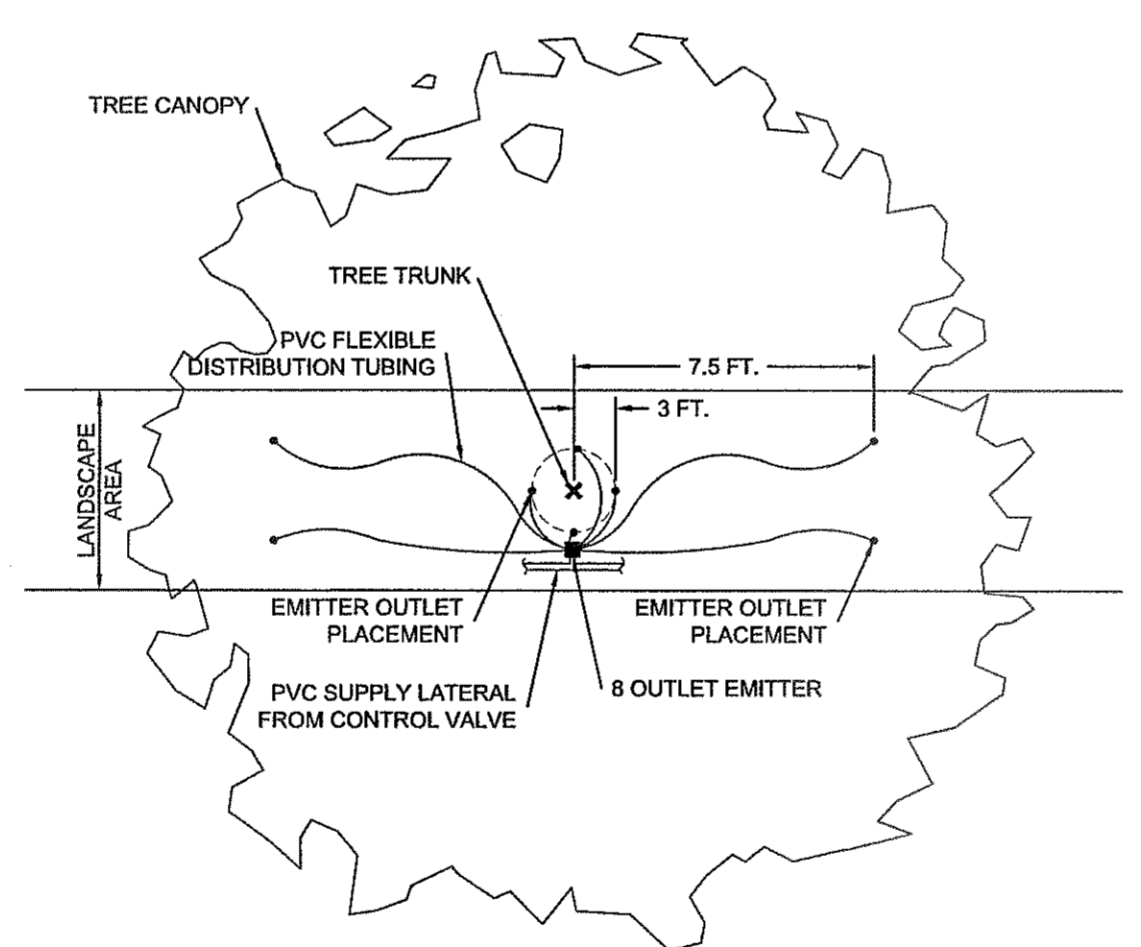
**IRRIGATION NOTES**

- IRRIGATION IN TEXAS IS REGULATED BY THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY, P.O. BOX 13067, AUSTIN, TX 78711.
- DESIGN PRESSURE FOR IRRIGATION SYSTEM IS 30 PSI.
- CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF ALL EXISTING AND PROPOSED UTILITIES AND ALL SITE CONDITIONS PRIOR TO BEGINNING CONSTRUCTION. ANY DAMAGE CAUSED BY THE CONTRACTOR SHALL BE REPAIRED OR REPLACED AT NO ADDITIONAL COST TO THE OWNER.
- IRRIGATION SHALL BE INSTALLED ACCORDING TO PLANS, DETAILS, AND SPECIFICATIONS. SHOULD CHANGES BE IMPLEMENTED IN THE FIELD, A NEW SET OF PLANS IS REQUIRED TO BE SUBMITTED TO THE CITY OF EL PASO. LANDSCAPE DESIGNER IS NOT UNDER CONTRACT TO PROVIDE THESE PLANS, EXCEPT AS PROVIDED FOR IN ORIGINAL CONTRACT.
- CONTRACTOR WILL NOT WILLFULLY INSTALL THE IRRIGATION SYSTEM AS DESIGNED, WHEN IT IS OBVIOUS THAT FIELD CONDITIONS EXIST, THAT WERE NOT CONSIDERED AT TIME OF DESIGNING THE SYSTEM. ANY CONDITIONS NOTED AS SUCH, SHALL BE REPORTED TO THE ARCHITECT AND IRRIGATION DESIGNER. IF THE CONTRACTOR FAILS TO DO SO, THE CONTRACTOR ASSUMES FULL RESPONSIBILITY FOR ANY CORRECTIONS NEEDED.
- PLANS SCHEMATIC FOR READABILITY. CONTRACTOR TO ADJUST AS NECESSARY TO FIT SITE.
- CONTRACTOR SHALL VERIFY STATIC PRESSURE AT METER MEETS SYSTEM NEEDS. LICENSED IRRIGATOR TO AMEND AS NECESSARY.
- PROVIDE SHUTOFF VALVE BETWEEN METER AND BACKFLOW.
- CONTROL VALVE SHALL BE PROVIDED TO MAINLINE AFTER BACKFLOW.
- CONTRACTOR IS RESPONSIBLE FOR CONNECTING AUTOMATIC CONTROLLER TO ELECTRICITY.
- 14 GA. SOLID COPPER WIRE (PVC INSULATED AND UL APPROVED) SHALL RUN FROM CONTROLLER TO VALVES. COMMON WIRE TO BE 12GA.
- ALL CONTROL WIRING FROM THE VALVES TO THE CONTROLLER MUST BE INSTALLED IN A 1" PVC CONDUIT PIPE IF BURIED BENEATH CONCRETE OR ASPHALT SURFACES.
- LOCATE VALVES AWAY FROM LOW SPOTS OR AREAS OF DRAINAGE FLOW.
- VALVE CAPS SHALL MATCH COLOR OF SURROUNDING MATERIAL, AS CLOSELY AS POSSIBLE.
- ALL MAINLINES SHALL BE BURIED MIN. 18", ALL LATERALS 12".
- MAINTAIN 4" MINIMUM CLEARANCE BETWEEN PIPE RUNNING IN THE SAME TRENCH. CONTROL WIRE SHALL ALWAYS BE TO THE SIDE AND BELOW THE TOP OF THE PIPE RUNNING IN THE SAME TRENCH.
- POLYETHYLENE TUBING TO BE PLACED UNDER WEED BARRIER FABRIC. MICROTUBING TO BE STAKED.
- THE CONTRACTOR SHALL PROVIDE THE OWNER WITH AS-BUILT DRAWINGS ON MYLAR PRIOR TO APPROVAL OF FINAL PAYMENT.
- ALL PIPING/WIRING RUNNING BENEATH PAVED SURFACES (DRIVES, SIDEWALKS, ETC.) SHALL BE INSTALLED IN SCH 40 PVC SLEEVES. SLEEVES SHALL BE OF THE SIZE SO THAT THE INSIDE DIAMETER OF THE SLEEVE IS 3 TIMES GREATER THAN THAT OF THE COMBINED OUTER DIAMETER OF ALL ITEMS INSTALLED IN THE SLEEVES.
- PEA GRAVEL SHALL BE INSTALLED AT THE BASE OF ALL VALVE BOXES, WITH A CLEARANCE OF MIN. 2" BETWEEN VALVE AND TOP OF GRAVEL.

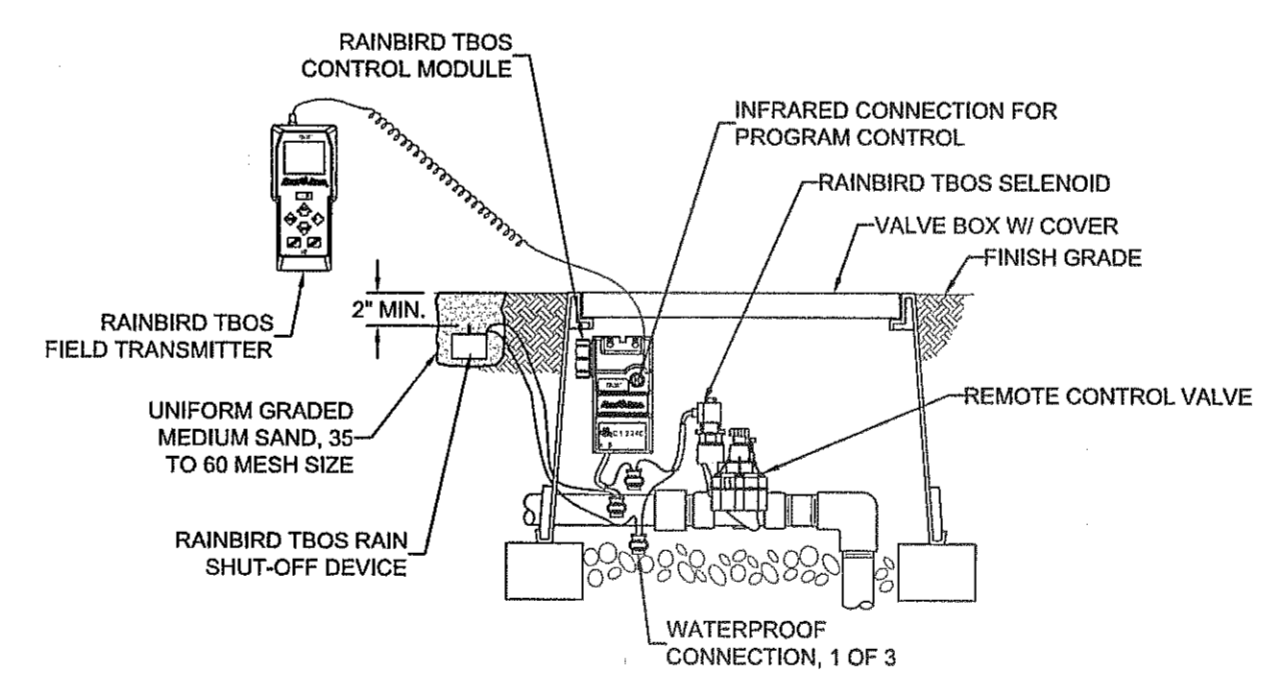
HYDRAULIC CALCULATIONS	
VALVE #1	
TREES	8 X 16 GPH = 2.13 GPM 60 MIN.



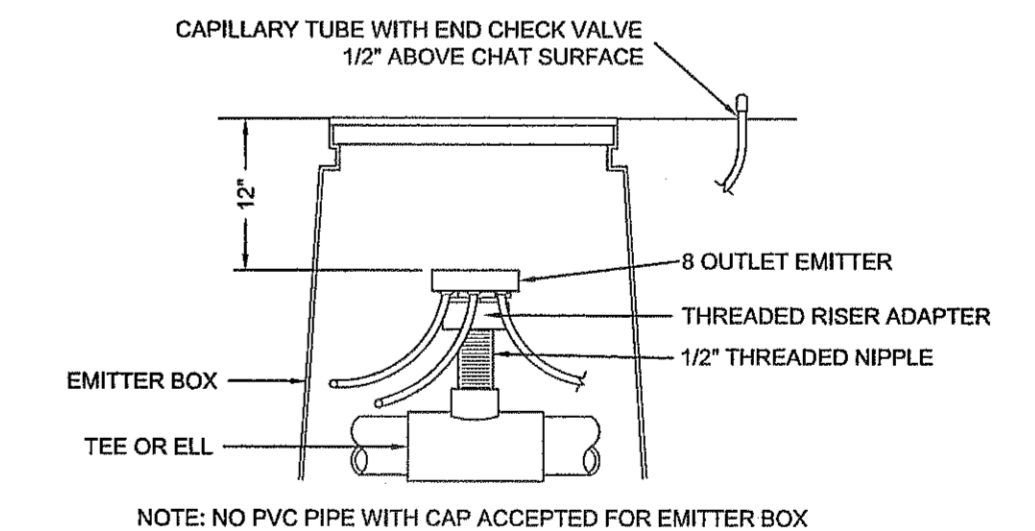
**ISOLATION VALVE DETAIL**  
NOT TO SCALE



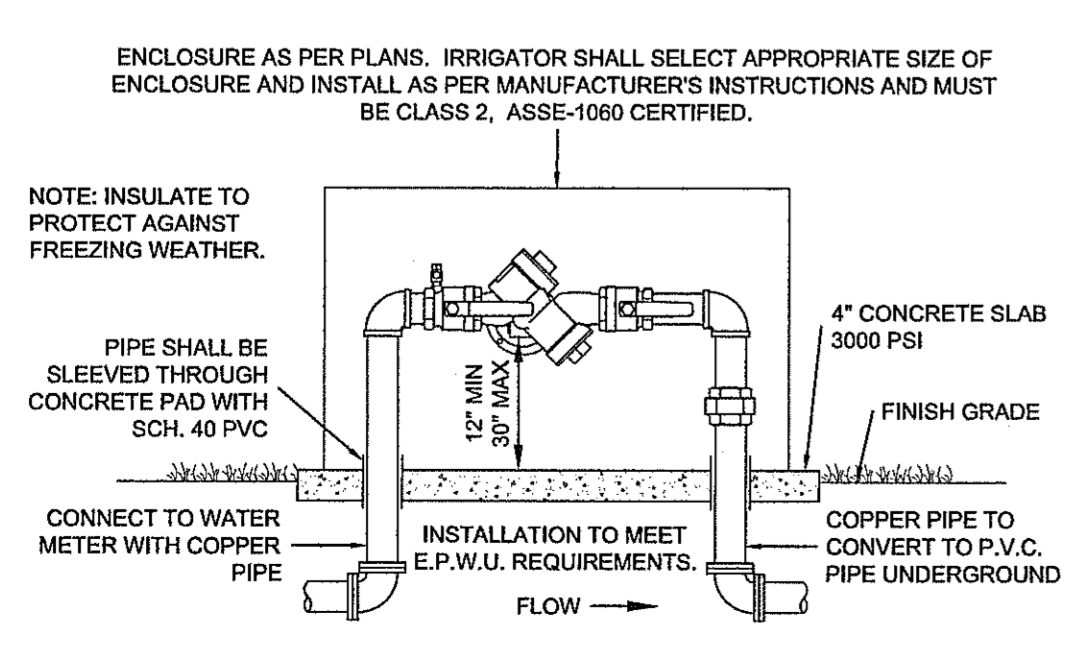
**EMITTER OUTLET PLACEMENT DETAIL**  
NOT TO SCALE



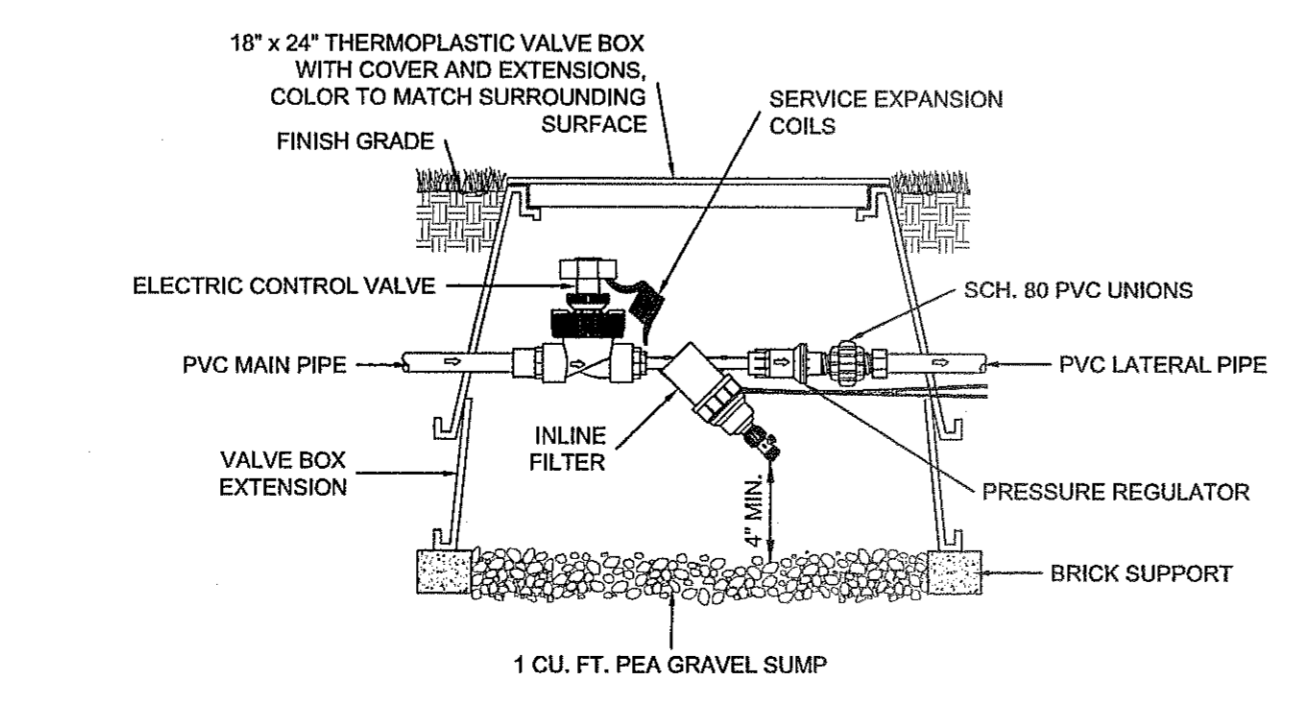
**TBOS BATTERY OPERATED CONTROLLER W/ TRANSMITTER**  
NOT TO SCALE



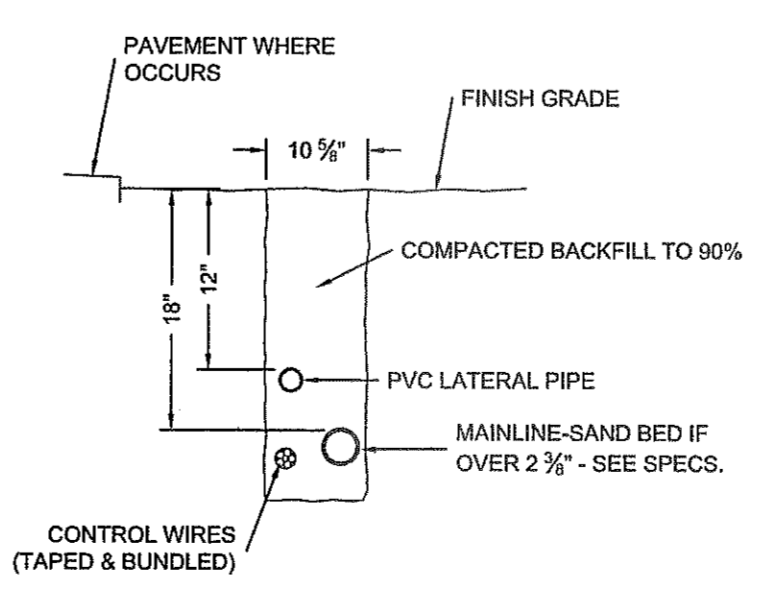
**DRIP EMITTER DETAIL**  
NOT TO SCALE



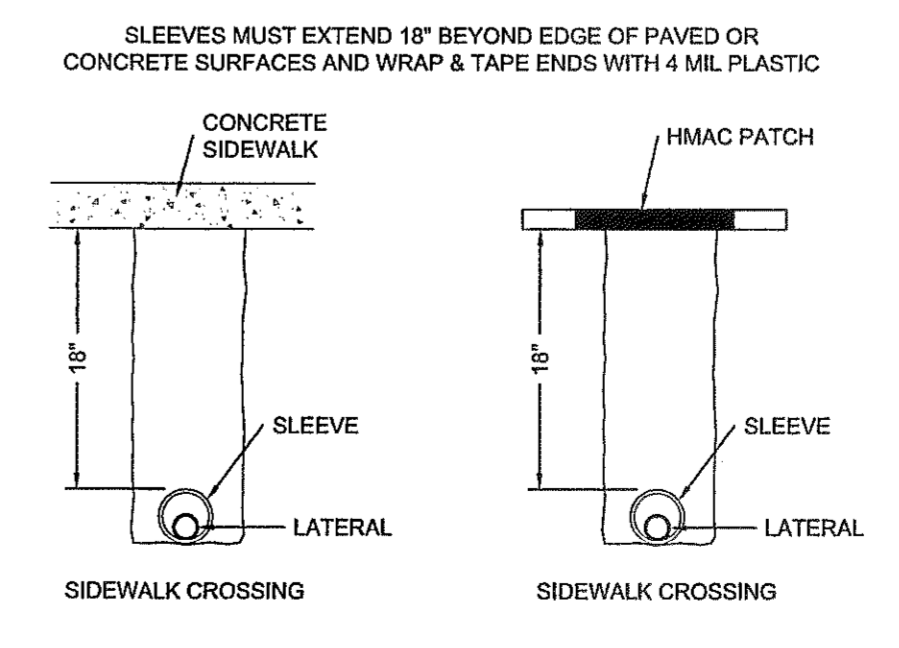
**RPA FEBCO Mo.825Y DETAIL**  
NOT TO SCALE



**REMOTE CONTROL VALVE, PRESSURE REGULATOR & FILTER**  
NOT TO SCALE



**TRENCHING DETAIL**  
NOT TO SCALE



**SLEEVING STANDARD DETAIL**  
NOT TO SCALE

REFERENCES - BENCHMARKS

UTILITY LOCATOR SERVICES

WARNING ! BEFORE YOU DIG

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

engineers • architects • planners  
TEXAS REGISTERED ENGINEERING FIRM F-4564  
4712 Woodchuck Drive, Suite F, El Paso, TX 79964  
Office: 915.544.5232 Fax: 915.544.5233

CONSULTANT'S SEAL

SCALE: Vertical: N/A Horizontal: N/A

DATE: APRIL 2013

DESIGN BY: CH

DRAWN BY: CH

CHECKED BY: CH

APP'D. BY: CH

JOB No. 2000-145-1D

PROJECT TITLE

MESQUITE TRAILS UNIT EIGHT  
SUBDIVISION IMPROVEMENTS

SHEET TITLE

IRRIGATION PLAN

SHEET NO.

L2.0

CITY DEVELOPMENT DEPARTMENT

REVIEWED

desert elements  
LANDSCAPE DESIGN, LLC

1-3 arandino drive, sunland park, new mexico 88063  
DE-jennifer@epur.com • phone: 575.589.9100 • fax: 575.589.9104