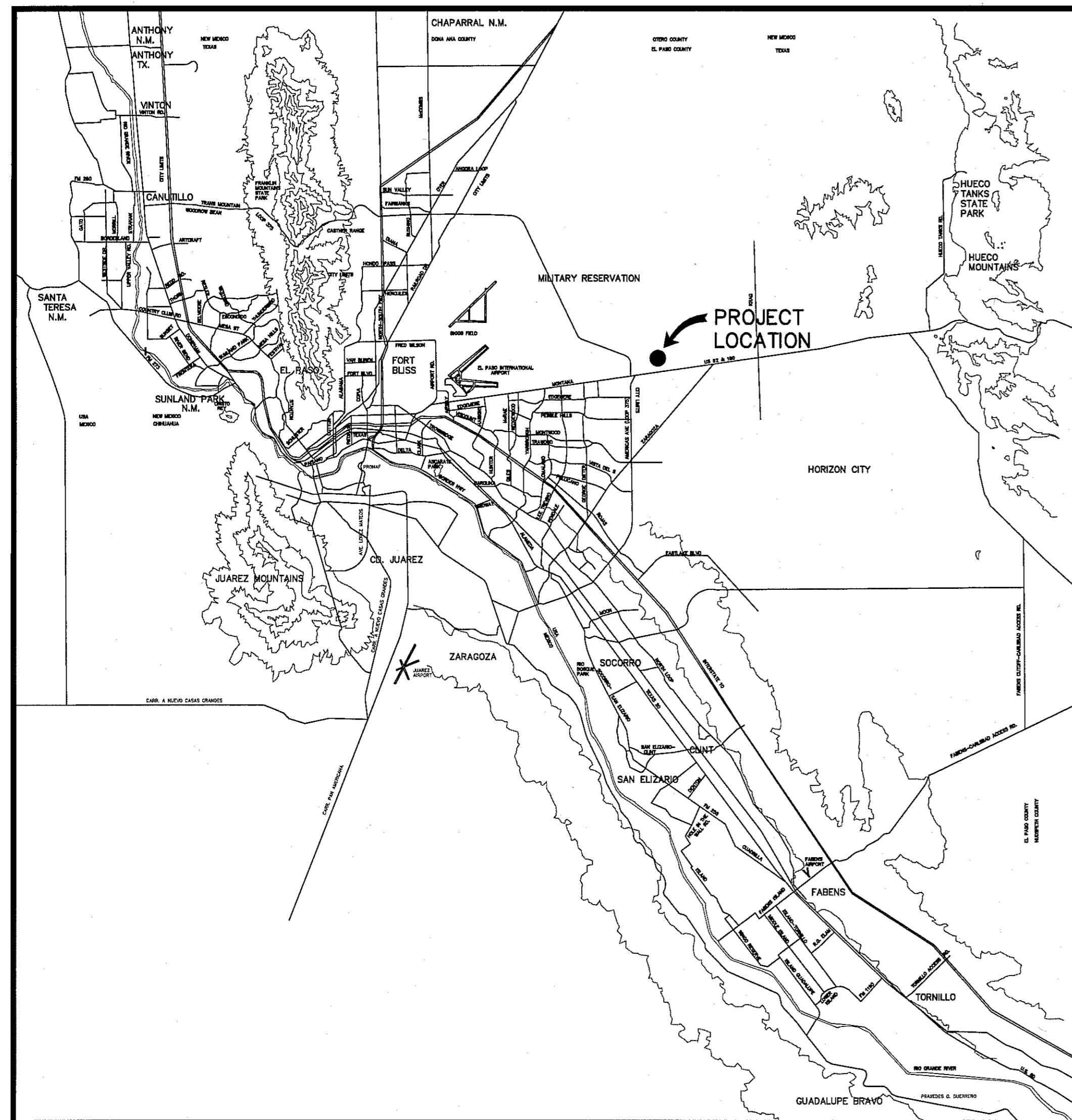


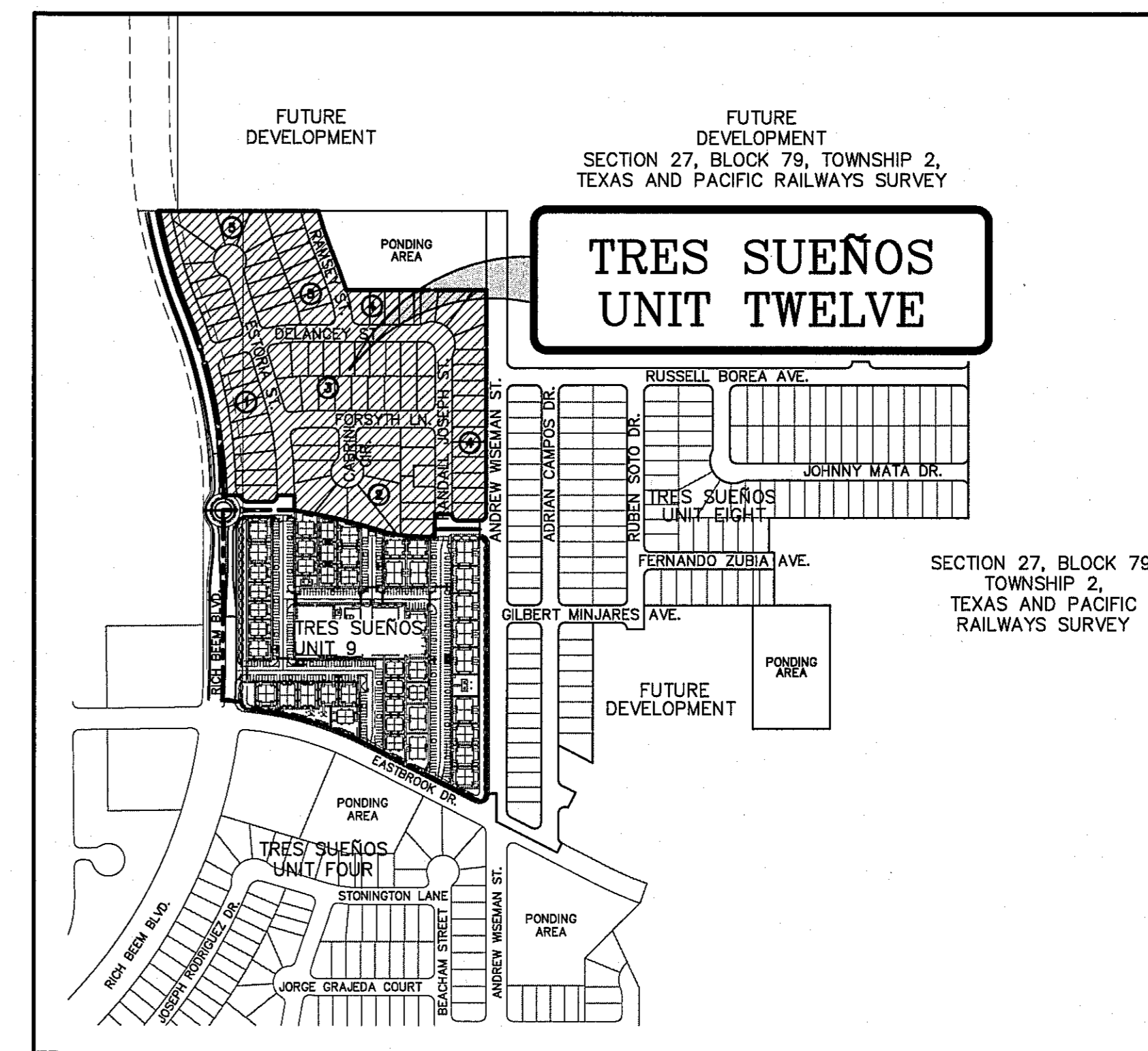
TRES SUEÑOS UNIT TWELVE SUBDIVISION IMPROVEMENTS

BEING A REPLAT OF A PORTION OF RICH BEEM BOULEVARD,
AND JAMIE NICOLE STREET, WITHIN TRES SUEÑOS UNIT NINE,
AND A PORTION OF SECTION 27,
BLOCK 79, TOWNSHIP 2, TEXAS AND PACIFIC RAILWAY CO. SURVEYS,
CITY OF EL PASO, EL PASO COUNTY, TEXAS.
CONTAINING 17.10 ACRES ±

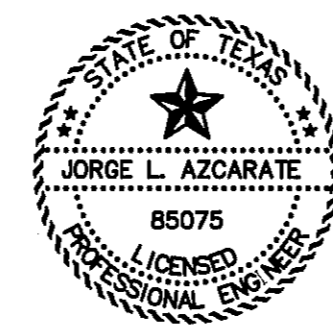


VICINITY MAP
APPROXIMATE SCALE:
1" = 2 MILES

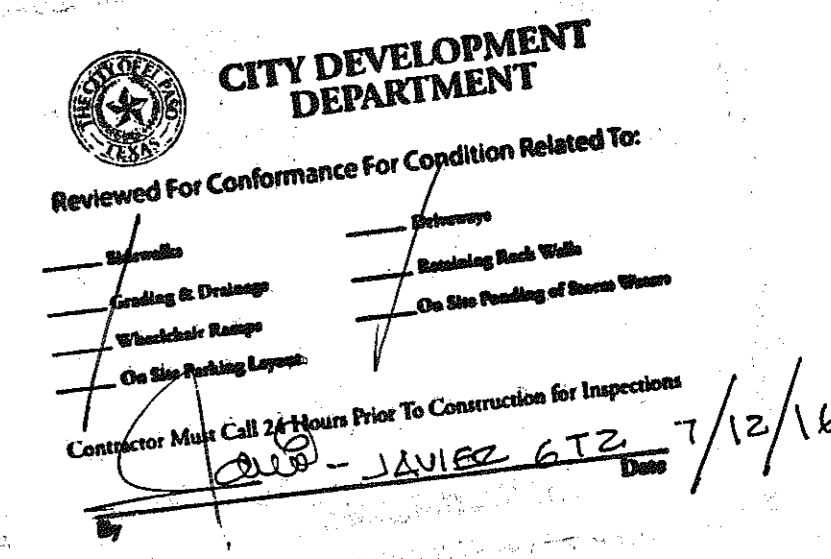
SHEET NUMBER	SHEET TITLE
CVR	COVER SHEET
C1.1	GENERAL INFORMATION
C2.1, C2.2	FINAL PLAT
C3.1	GRADING PLAN
C4.1	DRAINAGE PLAN
C5.1	GRADING SECTIONS
C6.1-C6.7	STREET PLAN & PROFILES
C7.1	STORM SEWER PLAN & PROFILES
C8.1-C8.2	STANDARD DETAILS
C9.1-C9.2	DRAINAGE DETAILS
C10.1	ILLUMINATION PLAN
C11.1	WATER INDEX / GENERAL INFORMATION
C11.2-C11.5	WATER DETAILS
C12.1	SANITARY SEWER INDEX / GENERAL INFORMATION
C12.2-C12.3	SANITARY SEWER PLAN & PROFILES
C12.4-C12.6	SANITARY SEWER DETAILS
C13.1-C13.3	STORM WATER POLLUTION PREVENTION PLAN
L1	LANDSCAPE PLAN
L2	LANDSCAPE PLAN
L3	IRRIGATION PLAN
L4	IRRIGATION AND LANDSCAPE DETAILS



LOCATION MAP
APPROXIMATE SCALE: 1" = 600'



JL
6-19-16
JORGE L. AZCARATE, P.E. PROJECT MANAGER



PRINCIPAL CONTACTS:

	NAME	ADDRESS	CITY & ZIP	PHONE	FAX
OWNER:	TROPICANA DEVELOPMENT INC.	4712 WOODROW BEAN STE. A	EL PASO, 79924	(915) 757-1802	(915) 757-1827
ENGINEER:	CEA GROUP	4712 WOODROW BEAN STE. F	EL PASO, 79924	(915) 544-5232	(915) 544-5233
SURVEYOR:	BARRAGAN & ASSOCIATES	10950 PELLICANO DR. SUITE F	EL PASO, 79935	(915) 591-5709	(915) 591-5706

GENERAL NOTES

1. THE CONTRACTOR SHALL VISIT AND FAMILIARIZE HIMSELF WITH THE PROJECT SITE PRIOR TO SUBMITTING BIDS.
2. 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.
3. 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.
4. 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.
5. THE CONTRACTOR SHALL COORDINATE THE CONSTRUCTION SCHEDULE WITH THE USER, ALL UTILITIES, AND ALL OTHER AGENCIES WITH JURISDICTION OVER THE PROJECT.
6. 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.
7. 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.
8. SEE REFERENCED BENCHMARK ON TITLE BLOCK FOR DATUM ELEVATIONS.
9. VIBRATORY ROLLERS WILL NOT BE PERMITTED ON ANY PHASE OF THIS PROJECT, UNLESS APPROVED IN WRITING BY THE ENGINEER.
10. ALL WORK REQUIRED BY THESE PLANS SHALL BE CONDUCTED IN CONFORMANCE WITH CURRENT SAFETY CODES AND STANDARDS WITH JURISDICTION OVER THE PROJECT.
11. THE LOCATION OF THE INLETS SHALL BE AT THE FIELD LOW POINT AND APPROVED BY THE ENGINEER.

GRADING SPECIFICATIONS

1. CLEARING AND GRUBBING: CLEAR SITE OF TREES, SHRUBS AND OTHER VEGETATION; COMPLETELY REMOVE STUMPS, ROOTS AND OTHER DEBRIS PROTRUDING THROUGH GROUND SURFACE; FILL DEPRESSIONS CAUSED BY CLEARING AND GRUBBING OPERATIONS WITH SATISFACTORY FILL MATERIAL, UNLESS FURTHER EXCAVATION OF EARTHWORK IS INDICATED; REMOVE EXISTING ABOVE-GRADE AND BELOW-GRADE IMPROVEMENTS AS INDICATED AND AS NECESSARY TO FACILITATE NEW CONSTRUCTION. BURNING IS NOT PERMITTED ON OWNER'S PROPERTY. REMOVE WASTE MATERIALS FROM OWNER'S PROPERTY.
2. SATISFACTORY FILL MATERIALS: FILL MATERIALS SHALL BE FREE OF ANY ORGANIC OR DELETERIOUS SUBSTANCE AND SHALL NOT CONTAIN ROCKS OR LUMPS OVER 3 INCHES IN GREATEST DIMENSION AND SHALL BE DEFINED AS THOSE COMPLYING WITH ASTM D2487 SOIL CLASSIFICATION GROUPS GW, GP, GM, GC, SM, SP, SM, AND SC.
3. UNSATISFACTORY FILL MATERIAL: ARE DEFINED AS THOSE COMPLYING WITH ASTM D2487 SOIL CLASSIFICATION GROUPS ML, MH, CL, CH, OL, OH, AND PT, OR WHERE THE PLASTICITY INDEX EXCEEDS 12, UNLESS OTHERWISE APPROVED BY ENGINEER, OR CITY ENGINEER.
4. EXCAVATION: IS UNCLASSIFIED AND INCLUDES EXCAVATION TO ELEVATIONS INDICATED, REGARDLESS OF CHARACTER OF MATERIAL AND OBSTRUCTIONS ENCOUNTERED.
5. GROUND SURFACE PREPARATION FOR FILL: REMOVE VEGETATION, DEBRIS, UNSATISFACTORY SOIL MATERIAL, OBSTRUCTIONS, AND DELETERIOUS MATERIAL FROM GROUND SURFACE UPON WHICH THE FILL IS TO BE PLACED. THE SURFACE SHALL THEN BE SCARIFIED TO A DEPTH OF AT LEAST 6-INCHES, AND UNTIL THE SURFACE IS FREE FROM RUTS, HUMMOCKS OR OTHER UNEVEN FEATURES WHICH WOULD PREVENT UNIFORM COMPACTION. PLOW STRIP, OR BREAK UP SLOPED SURFACES STEEPER THAN 1 VERTICAL TO 4 HORIZONTAL SO THAT FILL MATERIAL WILL BOND WITH 1 VERTICAL TO 4 HORIZONTAL SO THAT FILL MATERIAL WILL BOND WITH EXISTING SURFACE. AFTER PLOWING AND SCARIFYING FILL AREA, IT SHALL THEN BE DISCD 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.
6. PLACEMENT OF FILL: PLACE BACKFILL AND FILL MATERIALS IN LAYERS NOT MORE THAN 8 INCHES IN LOOSE DEPTH FOR MATERIAL COMPACTED BY HEAVY COMPACTION EQUIPMENT, AND NOT MORE THAN 4 INCHES IN LOOSE DEPTH FOR MATERIAL COMPACTED BY HAND-OPERATED TAMPERS. BEFORE COMPACTION, MOISTEN OR AERATE EACH LAYER AS NECESSARY TO PROVIDE OPTIMUM MOISTURE CONTENT. PLACE FILL MATERIALS EVENLY ADJACENT TO SITE APPURTENANCES, PIPING, OR CONDUIT TO REQUIRED ELEVATIONS. PREVENT WEDGING ACTION OF BACKFILL AGAINST SITE APPURTENANCES OR DISPLACEMENT OF PIPING OR CONDUIT BY CARRYING MATERIAL UNIFORMLY AROUND SITE APPURTENANCES, PIPING, OR CONDUIT TO APPROXIMATELY SAME ELEVATION IN EACH LIFT. COMPACT SOIL TO NOT LESS THAN 95% OF MAXIMUM DENSITY, IN ACCORDANCE WITH ASTM D-1557.
7. MOISTURE CONTROL: WHERE SUBGRADE OR LAYER OF SOIL MATERIAL MUST BE CONDITIONED FOR OPTIMUM MOISTURE BEFORE COMPACTION, UNIFORMLY APPLY WATER TO SURFACE OF SUBGRADE OR LAYER OF SOIL MATERIAL. APPLY WATER IN MINIMUM QUANTITY AS NECESSARY TO PREVENT FREE WATER FROM APPEARING ON SURFACE DURING OR SUBSEQUENT TO COMPACTION OPERATIONS. WATER CONTENT SHALL BE WITHIN 2 PERCENTAGE POINTS OF OPTIMUM MOISTURE CONTENT. REMOVE AND REPLACE, OR SCARIFY AND AIR DRY SOIL MATERIAL THAT IS TOO WET TO PERMIT COMPACTION TO SPECIFIED DENSITY.
8. QUALITY CONTROL: THE OWNER SHALL PROVIDE A GEOTECHNICAL ENGINEER TO PERFORM FIELD DENSITY TEST OF THE COMPACTION OF EACH LAYER OF FILL. DENSITY TESTS SHALL BE TAKEN IN THE COMPACTED MATERIAL BELOW THE DISTURBED SURFACE. WHEN THESE TESTS INDICATE THAT THE DENSITY OF ANY LAYER OF FILL OR PORTION THEREOF IS BELOW THE REQUIRED DENSITY, THE PARTICULAR LAYER OR PORTION SHALL BE REWORKED UNTIL THE REQUIRED DENSITY HAS BEEN OBTAINED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ADDITIONAL TESTING AND WHEN REQUIRED DENSITIES ARE NOT MET, SUPERVISION BY THE GEOTECHNICAL ENGINEER 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
RCP	REINFORCED CONCRETE PIPE
Q	QUANTITY
CAP	CAPACITY
EXP	EXPECTED
INV	INVERT
CFS	CUBIC FEET PER SECOND
A	AREA
DA	DRAINAGE AREA
LF	LINEAR FEET
STD	STANDARD
CONC	CONCRETE
PC	POINT OF CURVATURE
PI	POINT OF INTERSECTION
PT	POINT OF TANGENT
L	LENGTH
R	RADIUS
Δ	TANGENT
Δ	DELTA ANGLE
S	SLOPE
TEMP	TEMPORARY
V	VELOCITY IN FEET PER SECOND
HGL	HYDRAULIC GRADE LINE
HWE	HIGH WATER ELEVATION

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

UTILITY LOCATOR SERVICES	
EL PASO ELECTRIC COMPANY	(915) 543-5720
EL PASO ENERGY CORPORATION	(915) 486-5244
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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PLAT (SHEET 2 OF 2)	C2.2
GRADING PLAN	C3.1
DRAINAGE PLAN	C4.1
GRADING SECTIONS	C5.1
JOSEPH RANDALL STREET PLAN & PROFILE FROM STA. 0+00.00 TO STA. 5+45.43	C6.1
DELANCEY STREET PLAN & PROFILE FROM STA. 5+45.43 TO STA. 7+25.00	C6.2
DELANCEY STREET PLAN & PROFILE FROM STA. 7+25.00 TO STA. 12+74.36	C6.2
CABRINI CIRCLE PLAN & PROFILE FROM STA. 0+00.00 TO STA. 1+80.35	C6.3
CYNTHIA FARAH STREET PLAN & PROFILE FROM STA. 0+00.00 TO STA. 7+43.27	C6.3
GINGER FRANCIS LANE PLAN & PROFILE FROM STA. 0+00.00 TO STA. 5+02.72	C6.4
RAMSEY STREET PLAN & PROFILE FROM STA. 0+00.00 TO STA. 3+88.36	C6.5
RICH BEEM BLVD. PLAN & PROFILE FROM STA. 16+71.56 TO STA. 20+50.00	C6.6
RICH BEEM BLVD. PLAN & PROFILE FROM STA. 20+50.00 TO STA. 26+24.84	C6.7
STORM SEWER PLAN & PROFILE LINE A FROM STA. 0+00.00 TO STA. 4+72.63	C7.1
STANDARD DETAILS (SHEET 1 OF 2)	C8.1
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SANITARY SEWER DETAILS (SHEET 2 OF 3)	C12.5
SANITARY SEWER DETAILS (SHEET 3 OF 3)	C12.6
STORM WATER POLLUTION PREVENTION PLAN: GENERAL NOTES	C13.1
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LANDSCAPE PLAN	L1
LANDSCAPE PLAN	L2
IRRIGATION PLAN	L3
IRRIGATION AND LANDSCAPE DETAILS	L4

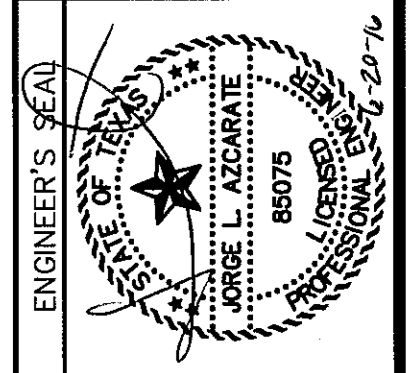
SPECIAL CONDITIONS

1. CONTRACTOR SHALL HAVE A QUALIFIED PROJECT SUPERINTENDENT AT THE PROJECT SITE AT ALL TIMES DURING THE CONSTRUCTION DURATION.
2. CONTRACTOR SHALL PREPARE CURB GRADES WITHIN 0.10- FEET.
3. CONTRACTOR TO INSTALL AND MAINTAIN SW3P BEST MANAGEMENT PRACTICES AS INDICATED ON THE PLANS. CONTRACTOR SHALL COMPLY WITH THE SW3P SPECIFICATIONS, AND TCEQ RULES AND REGULATIONS. CONTRACTOR SHALL BE RESPONSIBLE FOR CONFORMING TO ALL SW3P REGULATIONS.
4. CONTRACTOR SHALL CONSTRUCT TEMPORARY SLOPES BETWEEN LOTS THAT HAVE A VERTICAL GRADE DIFFERENTIAL OF OVER 4- FEET.



DATE	REVISIONS	BY

ceegroup
TEXAS REGISTERED ENGINEERING FIRM # 6684
4712 Woodrow Bean, Ste. F El Paso, TX 79924
915.544.5232 | www.ceegroup.net



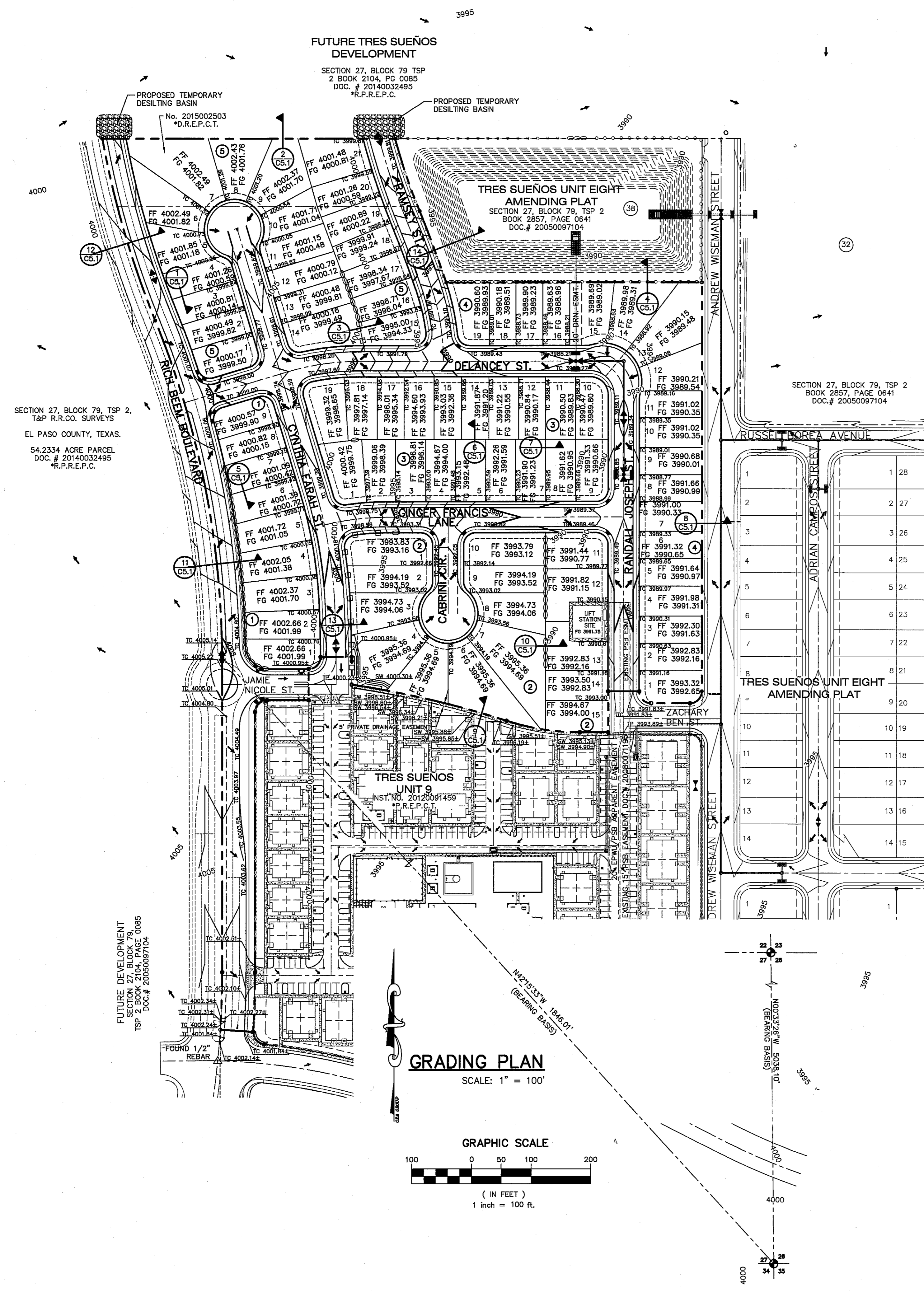
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DATE	JUNE 2016
DESIGN BY	R.O.
DRAWN BY	J.L.A.
CHECKED BY	J.L.A.
APP'D BY	J.L.A.
JOB No.	2000-194LD

TRES SUEÑOS UNIT TWELVE
SUBDIVISION IMPROVEMENTS

SHEET TITLE
GENERAL INFORMATION
SHEET NO.

C1.1

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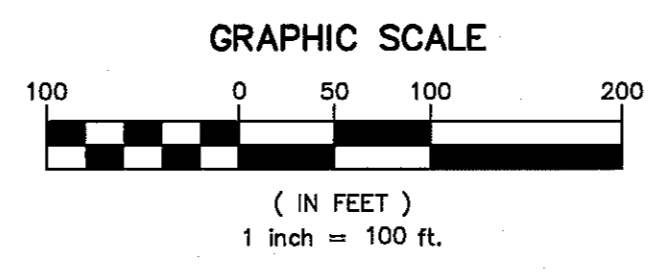


SECTION 27, BLOCK 79, TSP 2,
T&P R.R.CO. SURVEYS
EL PASO COUNTY, TEXAS.
54.2334 ACRE PARCEL
DOC. # 20140032495
R.P.R.E.P.C.

**FUTURE TRES SUEÑOS
DEVELOPMENT**

SECTION 27, BLOCK 79, TSP
2 BOOK 2104, PG 0085
DOC. # 20140032495
R.P.R.E.P.C.

GRADING PLAN
SCALE: 1" = 100'



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

**WARNING !
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NOTES:

- RETAINING WALLS SHALL BE CONSTRUCTED FOR VERTICAL GRADES GREATER THAN 2-FEET.
- SLOPED AREAS SHALL BE MAINTAINED BY THE PROPERTY OWNERS.
- ALL RETAINING WALLS NOT SPECIFIED TO BE CONSTRUCTED BY DEVELOPER, SHALL BE BUILT BY BUILDER.
- RETAINING ROCKWALLS (RETAINING PORTIONS ONLY) IN EXCESS OF 4' HIGH TO BE BUILT BY DEVELOPER.
- DEVELOPER SHALL COMPLY WITH SECTION 13.08.170 (EXCESSIVE PAVING CUTS) OF THE EL PASO MUNICIPAL CODE.
- IMPROVEMENTS SHALL NOT BE PLACED ON SIDEWALK (NDBOU'S, SIGNS, POLES, FIRE HYDRANTS, ETC.) REFER TO STANDARD DETAIL SHEETS.
- IMPROVEMENTS SHALL COMPLY WITH T.A.S./A.D.A.
- WHEELCHAIR RAMPS WILL BE CONSTRUCTED BY DEVELOPER AS PART OF SUBDIVISION IMPROVEMENTS.

BENCHMARK

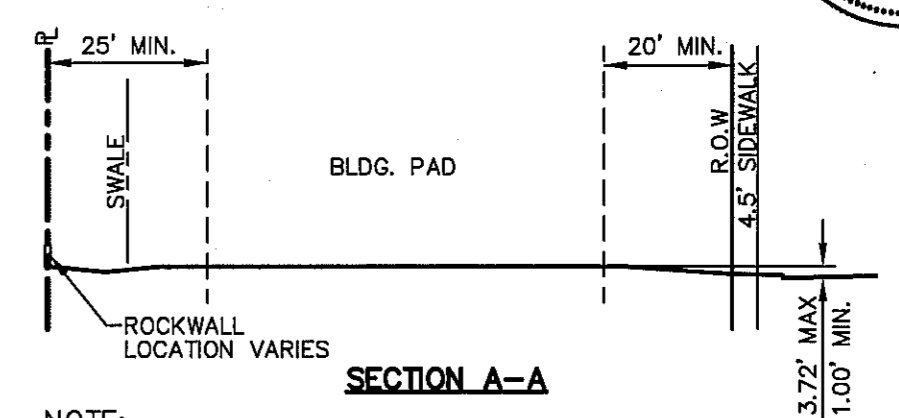
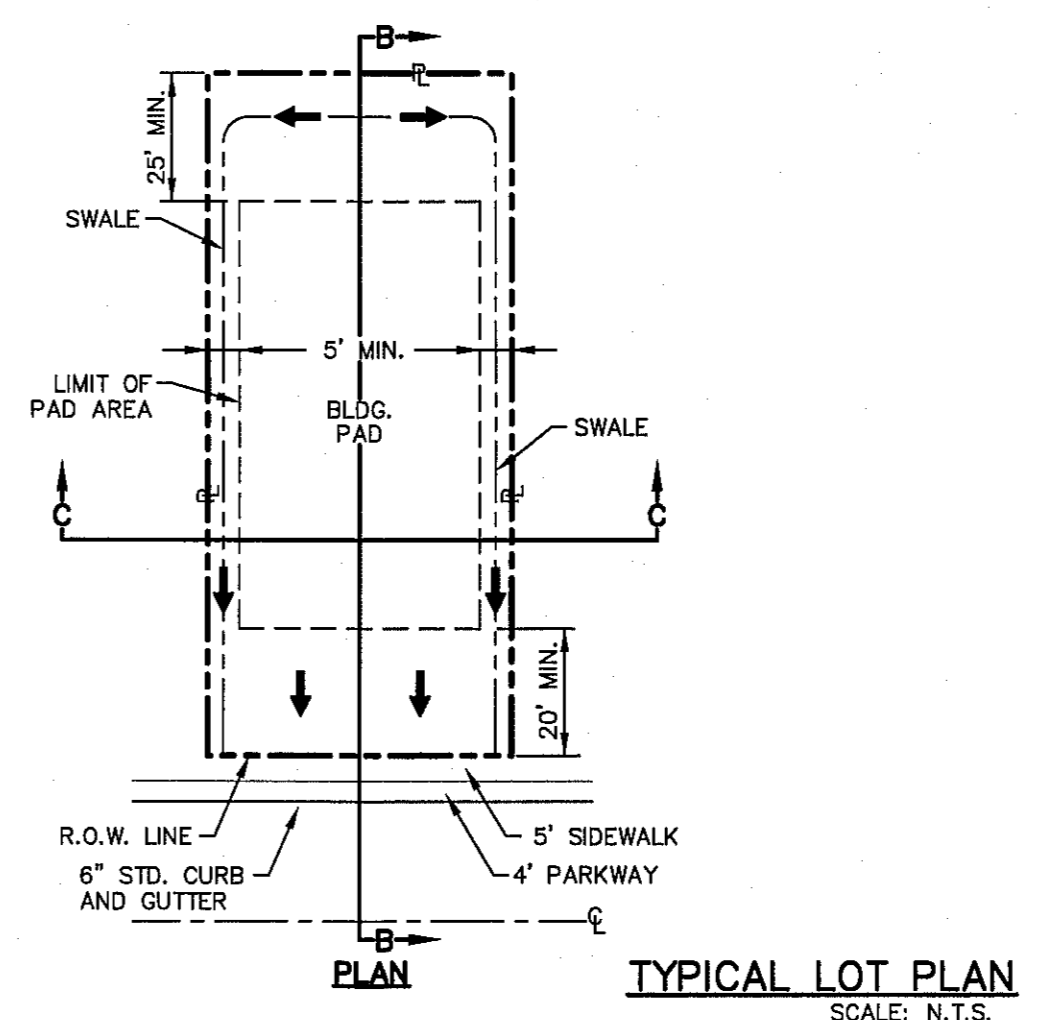
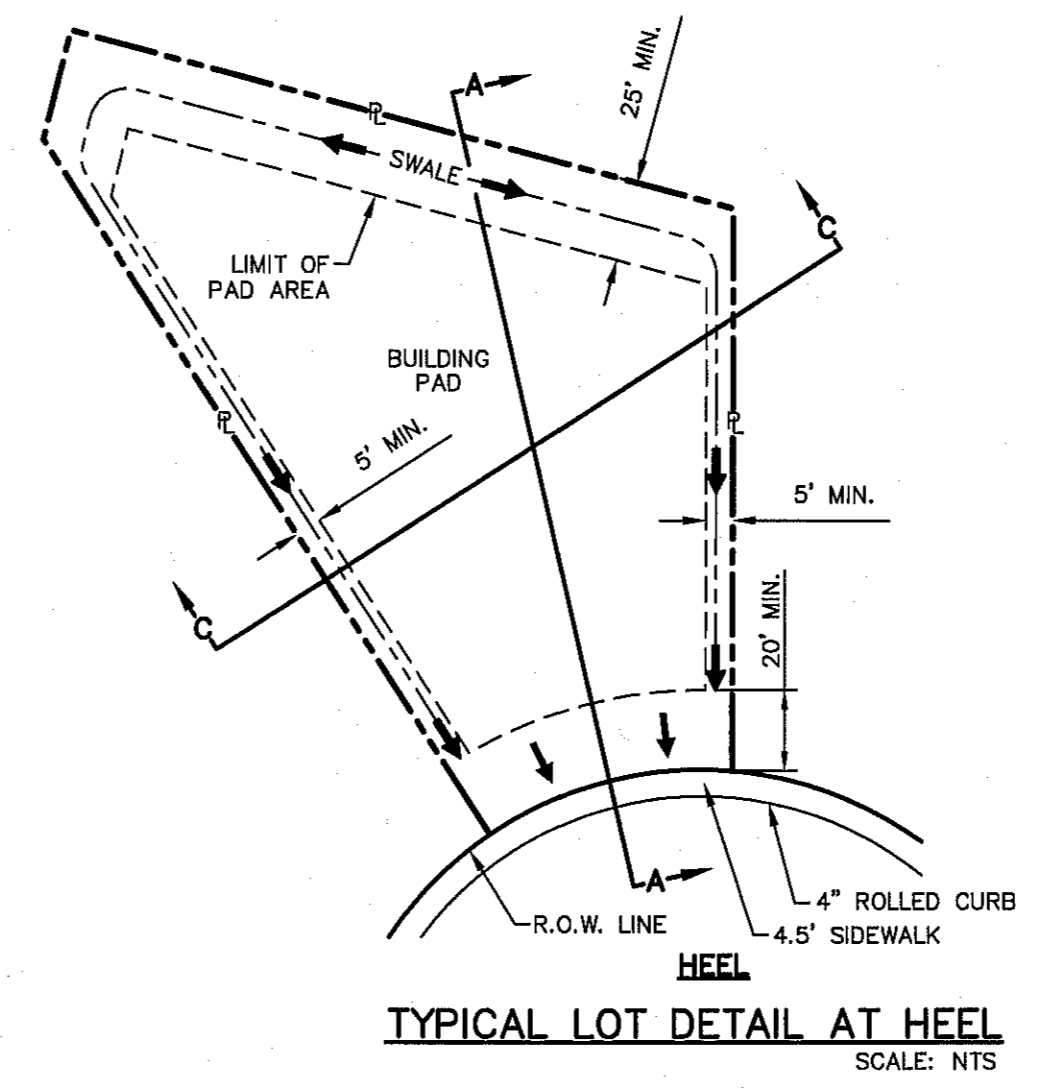
CITY MONUMENT AT POINT OF CURVE CENTERLINE RICH BEEM BLVD., S08°43'31"E A DISTANCE OF 467.58 FEET FROM THE SOUTHERLY RIGHT OF WAY LINE OF MONTANA AVENUE CITY DATUM. ELEVATION.....4005.40

FLOOD ZONE:

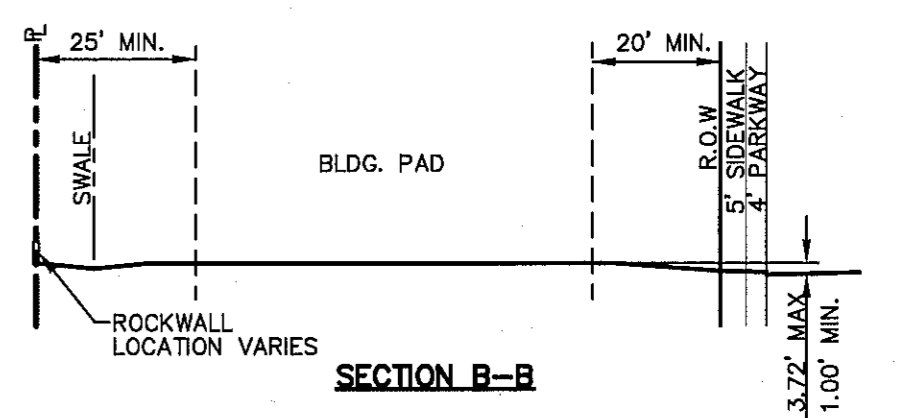
THIS SUBDIVISION LIES WITH IN ZONE "X" AS DESIGNATED IN PANEL NO. 480212 0173 9, DATED SEPTEMBER 4, 1991, OF THE FLOOD INSURANCE RATE MAPS, EL PASO COUNTY, TEXAS. ZONE "X" INDICATES AREAS DETERMINED TO BE OUTSIDE 500-YEAR FLOOD PLAIN.

LEGEND:

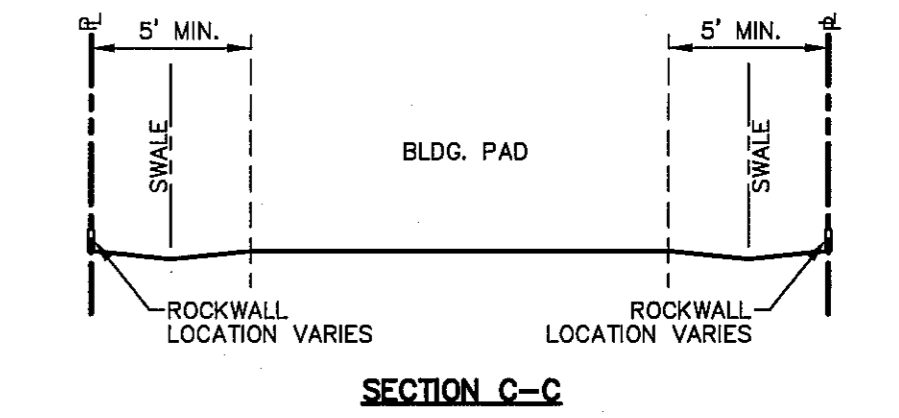
- EXISTING RETAINING ROCKWALL (2'-3' IN HEIGHT)
- EXISTING RETAINING ROCKWALL (3'-9' IN HEIGHT)
- NEW 4' HIGH RETAINING ROCKWALL (2'-3' RETAINING HEIGHT) SEE DETAIL 2/CB.2
- NEW 4' HIGH RETAINING ROCKWALL (3'-9' RETAINING HEIGHT) SEE DETAIL 2/CB.2
- PROPOSED MAJOR CONTOURS
- PROPOSED MINOR CONTOURS
- EXISTING MAJOR CONTOURS
- EXISTING MINOR CONTOURS
- PROPOSED TEMPORARY DESILTING BASIN



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

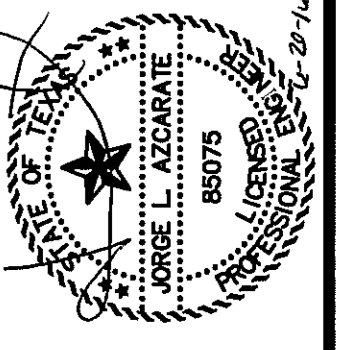


NOTE:
DRIVEWAY SLOPES MUST BE 10% MAX. FROM GUTTER FOR FIRST 12 FEET AND 14% MAX. THEREAFTER (DRIVEWAY SHALL BE LOCATED @ HIGH SIDE OF LOT UNLESS OTHERWISE COORDINATED WITH CITY OF EL PASO)



DATE	REVISIONS	BY

CSA GROUP
TEXAS REGISTERED ENGINEERING FIRM F-4664
4712 Woodrow Bean, Ste. F El Paso, TX 79924
915.544.5232 | www.csaengr.com



SCALE: 1"=100'
Horizontal: N/A
Vertical: N/A
Contour Interval: N/A
DATE: JUNE 2016
DESIGN BY: R.O.
DRAWN BY: J.L.A.
CHKD. BY: J.L.A.
APPVD. BY: J.L.A.
JOB No. 2000-1941D

**TRES SUEÑOS UNIT TWELVE
SUBDIVISION IMPROVEMENTS**

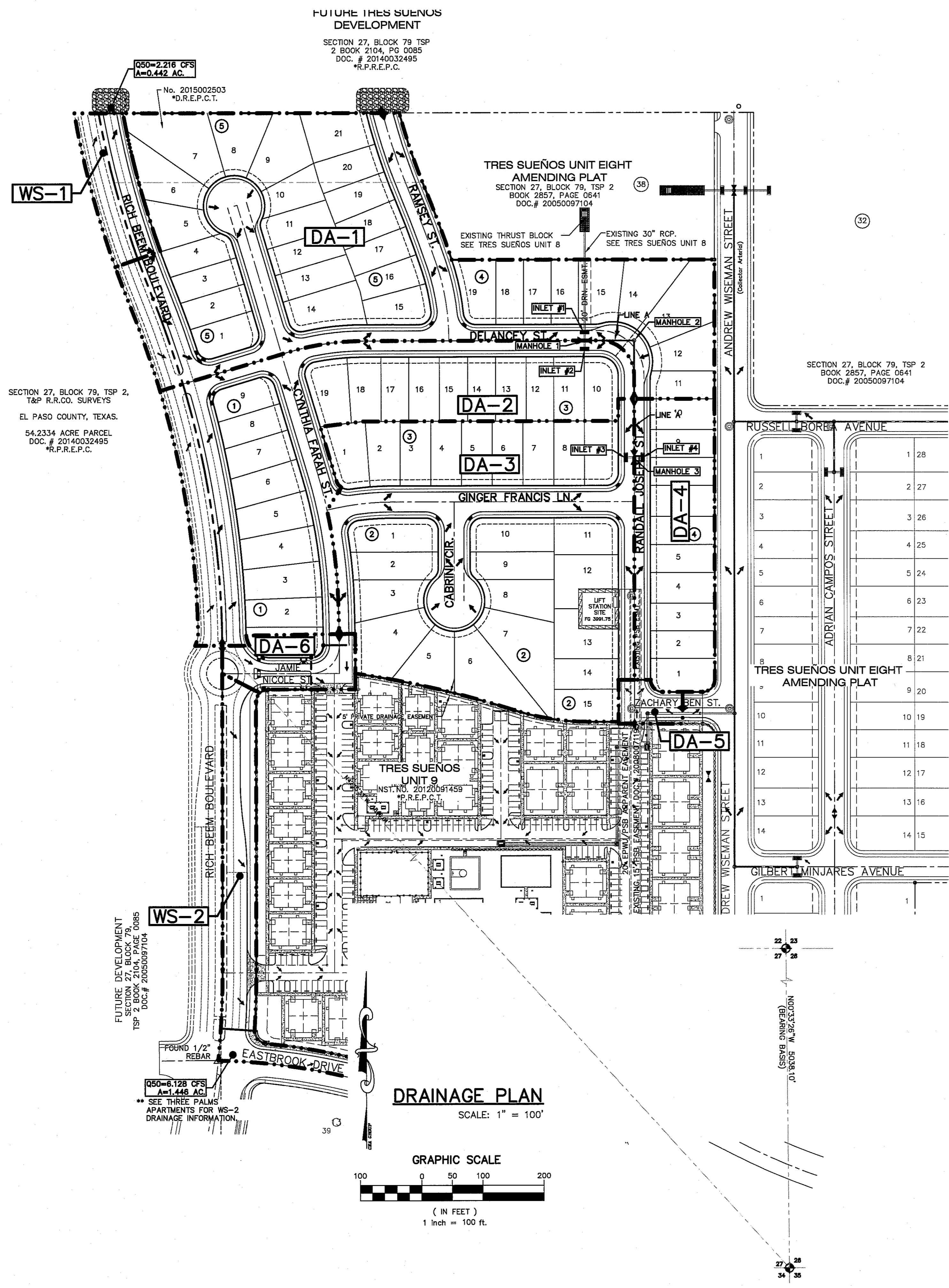
SHEET TITLE

GRADING PLAN

SHEET NO.

C3.1

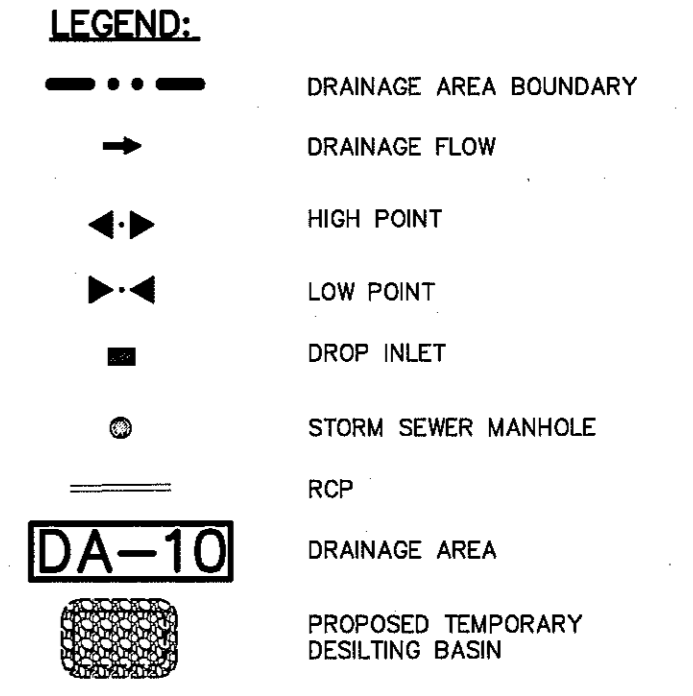
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UTILITY LOCATOR SERVICES	
EL PASO ELECTRIC COMPANY	(915) 543-5720
EL PASO ENERGY CORPORATION	(915) 496-5244
EL PASO WATER UTILITIES	(915) 594-5500
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FOR FIELD LOCATING EXISTING UTILITIES



SHOWN FOR INFORMATION ONLY. REFERENCE TRES SUEÑOS UNIT EIGHT

RETENTION POND No.1 CALCULATIONS

QT = (ARC)/12	SILT VOLUME = 0.012 AC-FT/AC
QT = 17.219	77.761 X 0.012 = 0.933 AC-FT
A = 77.761	21.524 + 0.933 = 22.457 AC-FT
R = 4"	
C = 0.654	
QT X 25% = 4.305	TOTAL = 22.457 AC-FT
17.219 + 4.305 = 21.524	

RETENTION POND No.1

POND NO.	REQUIRED CAPACITY (AC.-FT.)	AVAILABLE CAPACITY (AC.-FT.)	PEAK INFLOW (CFS)	OUTLET PIPE FLOW (CFS)	HIGH WATER SURFACE ELEV. (FT.)	BOTTOM ELEVATION (FT.)	FREE BOARD (FT.)
1	22.457 (1)	25.065	217.583	0	3986.73± (1)	3970.00	1.27

- THE TOTAL STORAGE HWSE REFLECTS THE ELEVATION AS REQUIRED BY THE CITY OF EL PASO AND INCLUDES 25% EMERGENCY STORAGE.
HWSE = QT + SILT VOLUME + 25%
HWSE = 17.219 + 0.933 + 4.305 = 22.457 AC-FT
CONTOUR 3986.00, ACCUMULATED VOLUME = 21.001 AC-FT
CONTOUR 3987.00, ACCUMULATED VOLUME = 22.988 AC-FT
HIGH WATER SURFACE ELEVATION = 3986.73±
- RETENTION POND No.1 WAS DESIGNED TO ACCOMMODATE DEVELOPED RUN-OFF FROM DA-1, DA-2, DA-3, DA-4, DA-5, DA-6, DA-7, DA-8, DA-9, DA-10, DA-11, DA-12, DA-13, DA-14, DA-15, DA-16, DA-17, DA-18, DA-19, DA-20, DA-21, DA-22, DA-23, DA-24 & OFFSITE WS-1. IT WILL ALSO ACCOMMODATE FUTURE DEVELOPED RUN-OFF FROM DA-4, DA-6, DA-7, DA-14, DA-15, AND DA-19.

DROP INLETS:

NO.	REQ. FLOW CAPACITY (CFS)	AVAIL. FLOW CAPACITY (CFS)	ADDITIONAL FLOW (CFS)	FLOW BYPASS (CFS)	# OF GRATES	TYPE OF INLET	INLET LOCATION
16	30.253	29.141	0	0	3	OFF-STREET	SUMP

NOTE:
1. AVAILABLE FLOW CAPACITY SHOWN AT ON-GRADE INLETS REFLECTS CAPACITIES WITH INLET GRATE EFFICIENCIES.

TRES SUEÑOS UNIT 8--STORM PIPE LINE G OUTPUT INFORMATION

PIPE	DOWNSTREAM INVERT ELEVATION (ft)	UPSTREAM INVERT ELEVATION (ft)	PIPE SIZE RCP	PIPE SLOPE	PIPE VELOCITY FT/S	Q(50) Expected (cfs)	Q(50) Capacity (cfs)
P-1	3971.17	3976.68	30"	2.97%	8.17	30.253	40.120

DROP INLETS

NO.	REQ. FLOW Q (CFS)	ADDITIONAL FLOW Q (CFS) FROM INLET	Q(CFS) OVERTOP AT CROWN	Q EXP. (CFS)	AVAIL. FLOW CAPACITY Q (CFS)	Q(CFS) BYPASS TO INLET	# OF GRATES	TYPE OF INLET	INLET LOCATION
1	14.409	0	2.218	12.191	26.644	0	3	3	ON SUMP
2	9.973	FROM #1 (2.218 CFS)	0	12.191	29.141	0	3	1	ON SUMP
3	12.157	FROM DA-5 (0.38 CFS)	3.524	9.013	19.287	0	2	1	ON SUMP
4	3.337	FROM #3 (3.524 CFS) + DA-5 (0.38 CFS)	0	7.241	19.287	0	2	1	ON SUMP

NOTE: THESE CAPACITIES CORRESPOND TO A CLOGGING FACTOR OF 0.5 AVAILABLE FLOW CAPACITIES SHOWN AT ON-GRADE INLETS REFLECTS CAPACITIES WITH INLET GRATE EFFICIENCIES.

50 YEAR STORM CALCULATIONS FOR 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	6.010	3.490	25,000	0.687	14,409
DA-2	3.960	3.577	24,000	0.704	9,972
DA-3	5.050	3.577	24,000	0.673	12,157
DA-4	1.420	3.577	24,000	0.657	3,337
DA-5	0.151	5.572	10,000	0.900	0,757
DA-6	0.416	5.572	10,000	0.900	2,086
**WS-1	0.442	5.572	10,000	0.900	2,216
**WS-2	0.442	5.572	10,000	0.900	2,216

**WS FUTURE WATERSHED CONTRIBUTIONS OFF-SITE; NOT PART OF SUBDIVISION IMPROVEMENT PLANS
**WS EXISTING WATERSHED CONTRIBUTIONS OFF-SITE; NOT PART OF SUBDIVISION IMPROVEMENT PLANS
REFERENCE THREE PALMS APARTMENTS FOR ADDITIONAL DRAINAGE INFORMATION

MOMENTUM COMPUTATION

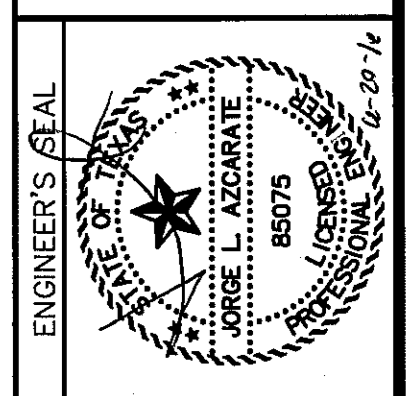
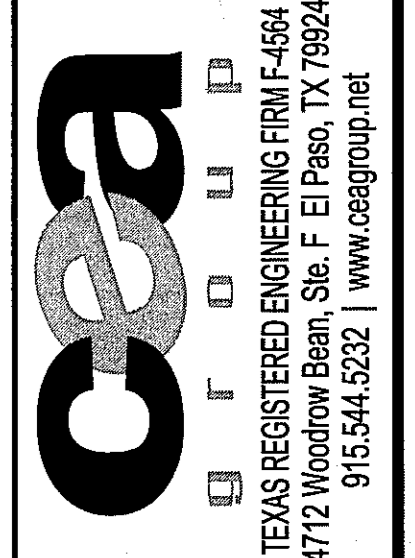
LOCATION @ INLET (1)	DEPTH (2)	VELOCITY (3)	PRODUCT NUMBER (4)
1	0.375	2.861	1.073
2	0.375	2.861	1.073
3	0.320	2.781	0.890
4	0.294	2.626	0.771

- (1) LOCATION
(2) DEPTH
(3) VELOCITY
(4) PRODUCT NUMBER = DEPTH X VELOCITY

- NOTES:**
REFERENCE: CITY OF EL PASO SUBDIVISION STANDARDS (3-11-97)
- WATERSHED AREA IDENTIFICATION
 - AREA FROM DRAINAGE PLAN
 - RAINFALL INTENSITY, 50 YEAR STORM => PLATE NO. 2-14
 - TIME OF CONCENTRATION: TC= T (OVERLAND) + T (GUTTER)
 - RUNOFF COEFFICIENT => PLATE NO. 2-10 TABLE A
RESIDENTIAL AREA = 0.60
PAVEMENT AREA = 0.90
 - Q₅₀ = C X A X I₅₀

REFERENCES - BENCHMARKS

DATE	REVISIONS	BY



SCALE: 1" = 100'
Horizontal: N/A
Vertical: N/A
Contour Interval: N/A
DATE: JUNE 2018
DESIGN BY: R.O.
DRAWN BY: J.L.A.
CHECKED BY: J.L.A.
APPROVED BY: J.L.A.
JOB No. 2000-194LD

PROJECT TITLE
**TRES SUEÑOS UNIT TWELVE
SUBDIVISION IMPROVEMENTS**

SHEET TITLE
DRAINAGE PLAN

SHEET NO.

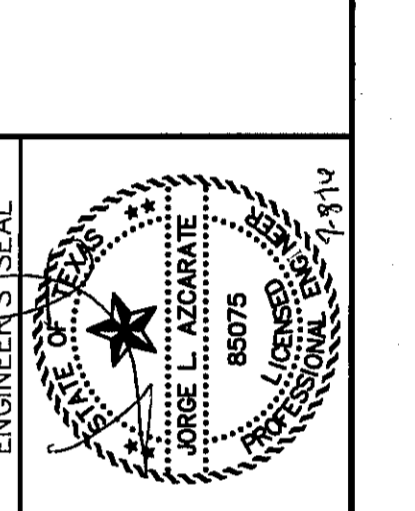
C4.1

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!
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FOR FIELD LOCATING EXISTING UTILITIES

DATE	REVISIONS	BY

REFERENCES - BENCHMARKS
CITY MONUMENT AT POINT OF CURVE CENTERLINE RICH BEEM BOULEVARD FROM THE SOUTHERLY RIGHT OF WAY LINE OF MONTANA AVENUE CITY DATUM ELEVATION.....4005.40

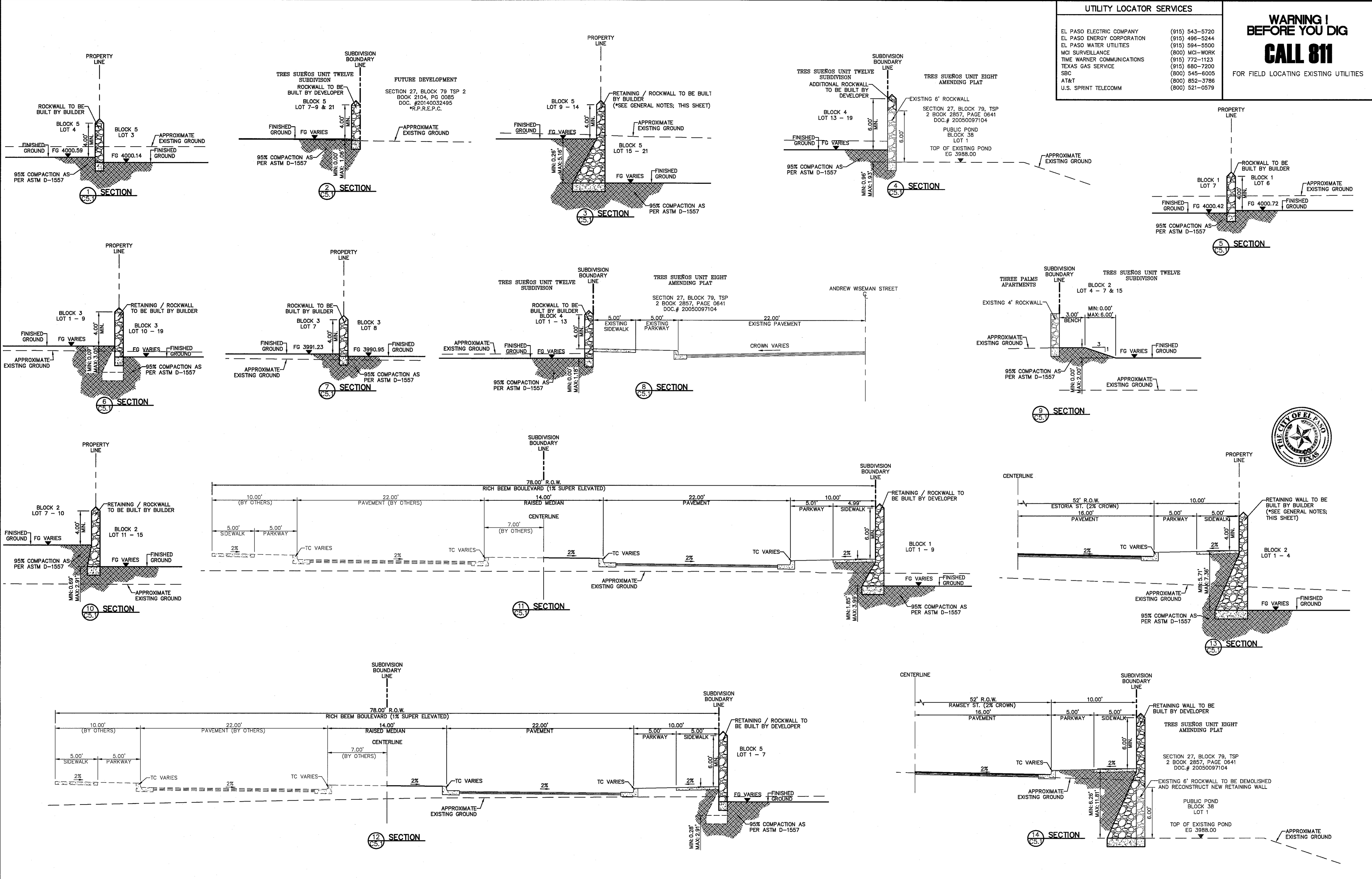


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DATE: JULY 2016
DESIGN BY: R.O.
DRAWN BY: R.O.
CHKD. BY: J.L.A.
APPVD. BY: J.L.A.
JOB No.: 2000-194LD

PROJECT TITLE
**TRES SUEÑOS UNIT TWELVE
SUBDIVISION IMPROVEMENTS**

SHEET TITLE
GRADING SECTIONS

SHEET NO.
C5.1

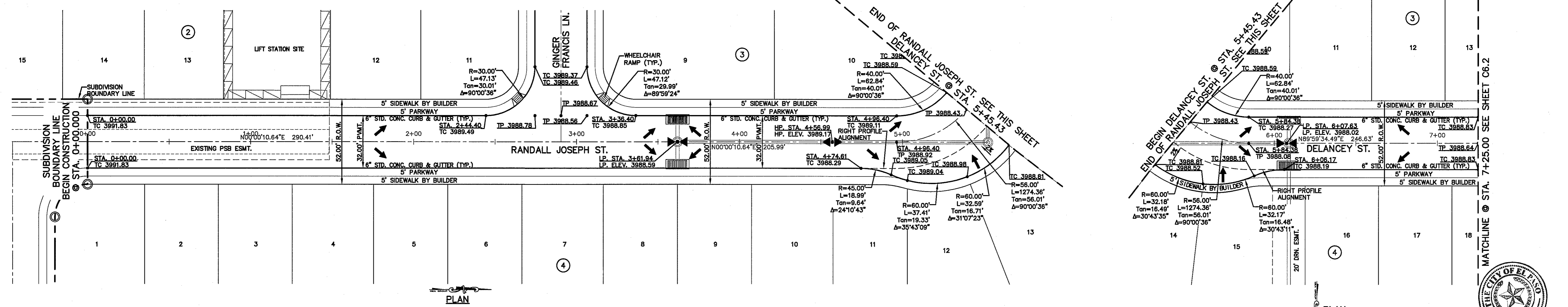


GENERAL NOTES:
1. WHENEVER THE RETAINING HEIGHT OF A ROCKWALL/RETAINING WALL EXCEEDS FOUR (4') FEET OR MORE, THE DEVELOPER SHALL BUILD THE RETAINING PORTION OF THE WALL (INCLUDING NECESSARY REINFORCED CONCRETE FOOTING) TO HIGHEST FINISHED GROUND. THE BUILDER SHALL FINISH THE REMAINING OF THE STEM WALL.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

UTILITY LOCATOR SERVICES	
EL PASO ELECTRIC COMPANY	(915) 543-5720
EL PASO ENERGY CORPORATION	(915) 498-5244
EL PASO WATER UTILITIES	(915) 594-5500
MC 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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DATE	REVISIONS	BY

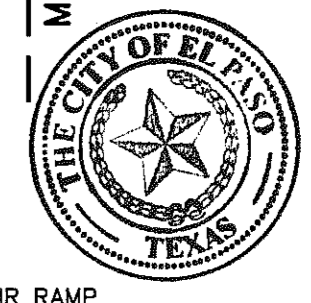


PLAN

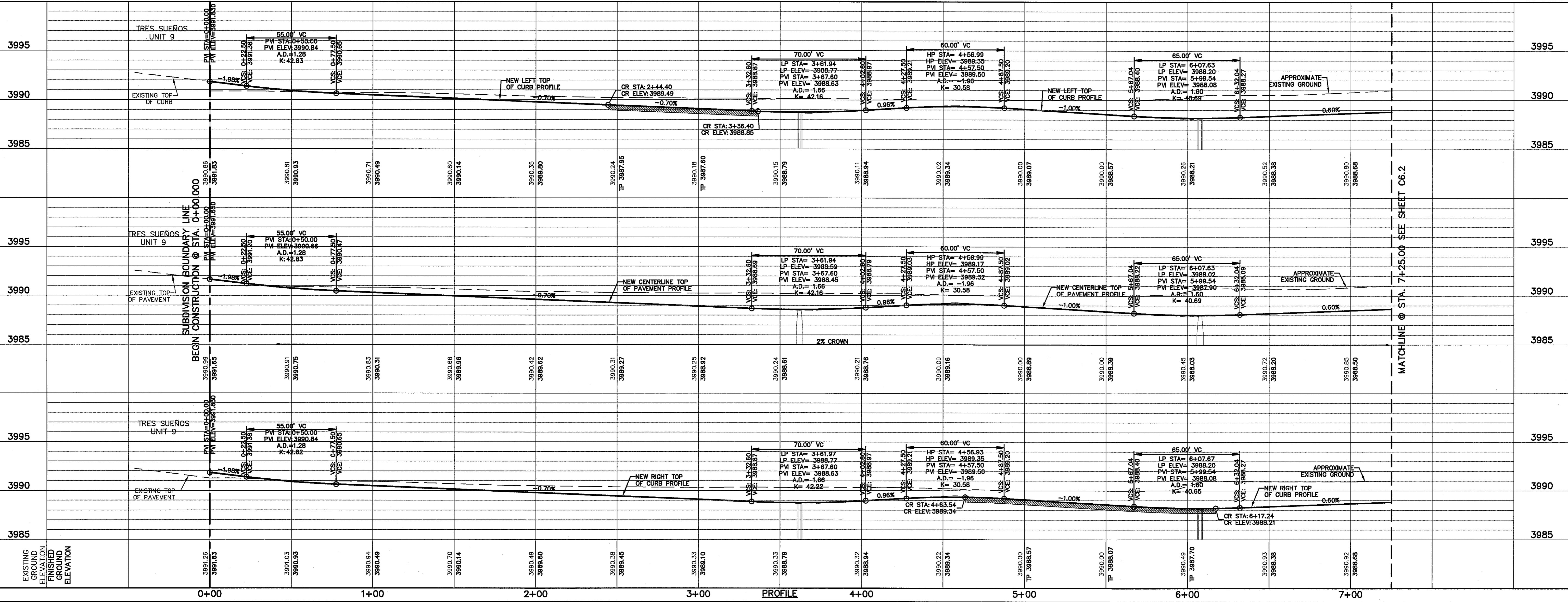
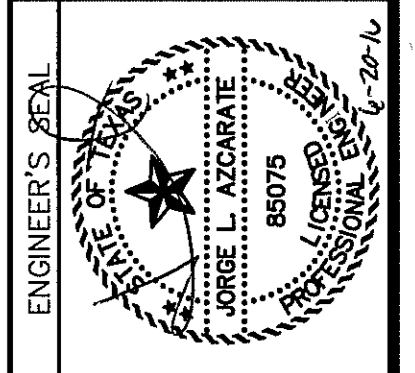
PLAN

LEGEND

- WHEELCHAIR RAMP BY BUILDER (TYP.)
- CURB & GUTTER (TYP.)
- SIDEWALK BY BUILDER
- APPROXIMATE EXISTING GROUND



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915.544.5232 www.csaengr.com



PROFILE

SCALE: Horizontal: 1"=30'
Vertical: 1"=5'
Contour Interval: N/A
DATE: JUNE 2016
DESIGN BY: R.O.
DRAWN BY: J.L.A.
CHKD BY: J.L.A.
APPVD BY: J.L.A.
JOB No. 2000-194LD

PROJECT TITLE
TRES SUEÑOS UNIT TWELVE
SUBDIVISION IMPROVEMENTS

SHEET TITLE
RANDALL JOSEPH ST. PLAN & PROFILE FROM STA. 0+00.00 TO STA. 5+45.43
DELANCEY ST. PLAN & PROFILE FROM STA. 5+45.43 TO STA. 7+25.00

SHEET NO.
C6.1

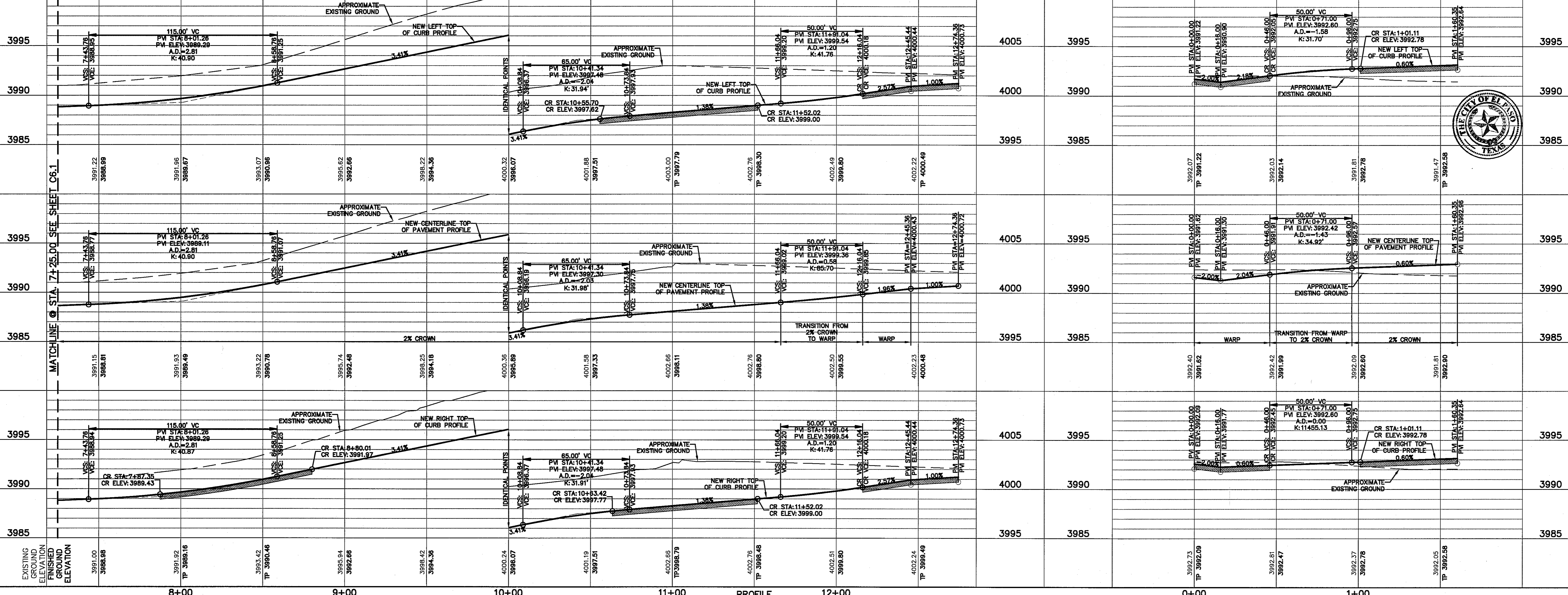
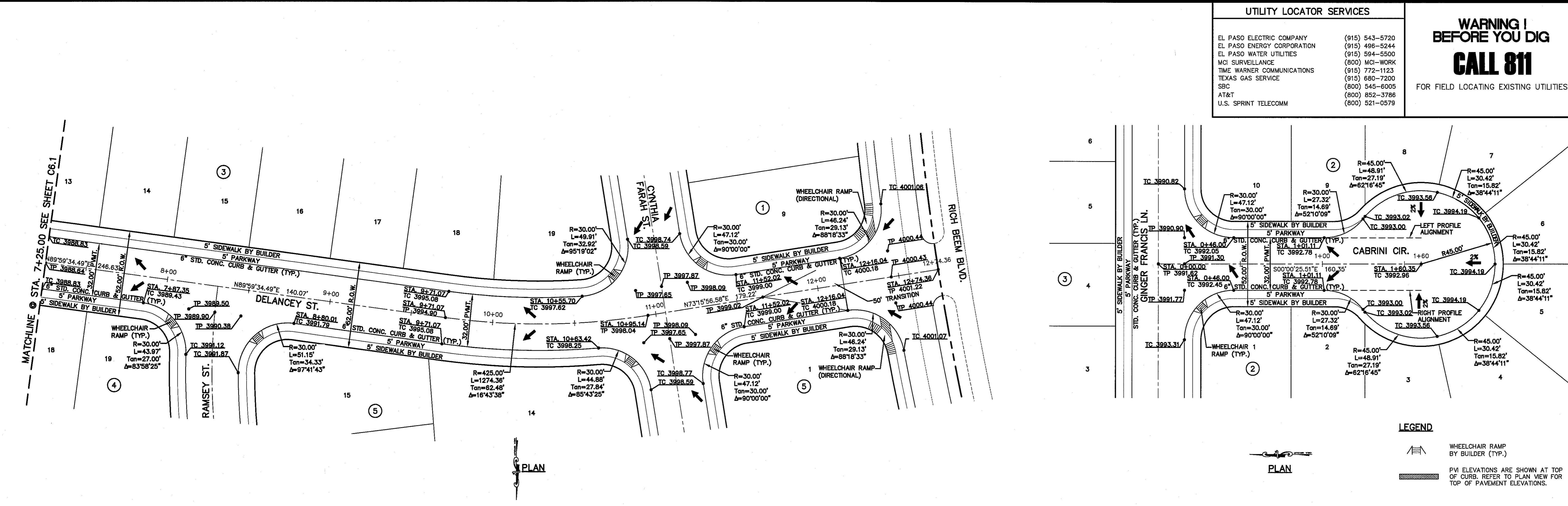
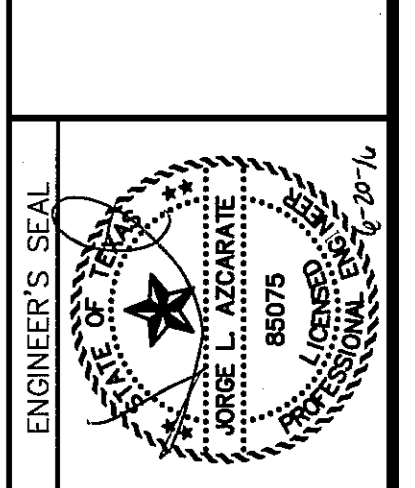
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UTILITY LOCATOR SERVICES		
EL PASO ELECTRIC COMPANY	(915) 543-5720	
EL PASO ENERGY CORPORATION	(915) 496-5244	
EL PASO WATER UTILITIES	(915) 594-5500	
MCI SURVEILLANCE	(800) MCI-WORK	
TMC WARNER COMMUNICATIONS	(915) 772-1123	
TEXAS GAS SERVICE	(915)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

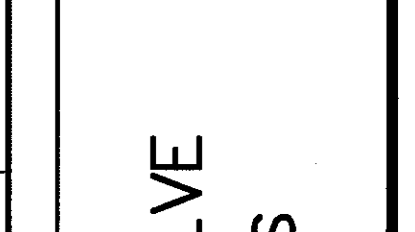
WARNING!
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DATE	REVISIONS	BY

REFERENCES - BENCHMARKS
CITY MONUMENT AT POINT OF CURVE CENTERLINE RICH BEAM BLVD. FROM THE SOUTHERLY END OF WAY LINE OF MONTANA AVENUE CITY DATUM ELEVATION.....4005.40



SCALE: 1"=30'
Horizontal: 1"=5'
Vertical: Contour Interval: N/A
DATE: JUNE 2016
DESIGN BY: R.O.
DRAWN BY: J.L.A.
CHKD. BY: J.L.A.
APPVD. BY: J.L.A.
JOB No. 2000-194LD



PROJECT TITLE
TRES SUEÑOS UNIT TWELVE
SUBDIVISION IMPROVEMENTS

SHEET TITLE
DELANCEY ST. PLAN & PROFILE FROM STA. 7+25.00 TO STA. 12+74.36
CABRINI CIR. PLAN & PROFILE FROM STA. 0+00.00 TO STA. 1+60.35
SHEET NO.

C6.2

S:\2020\2020-194LD-12-Subdiv-Improvements\Drawings\2020-194LD-12-Subdiv-Improvements\Plan\CGE-2-DELANCEY-C-ElPaso.dwg, ST: RJA, 6/20/2016, 8:27:16 AM

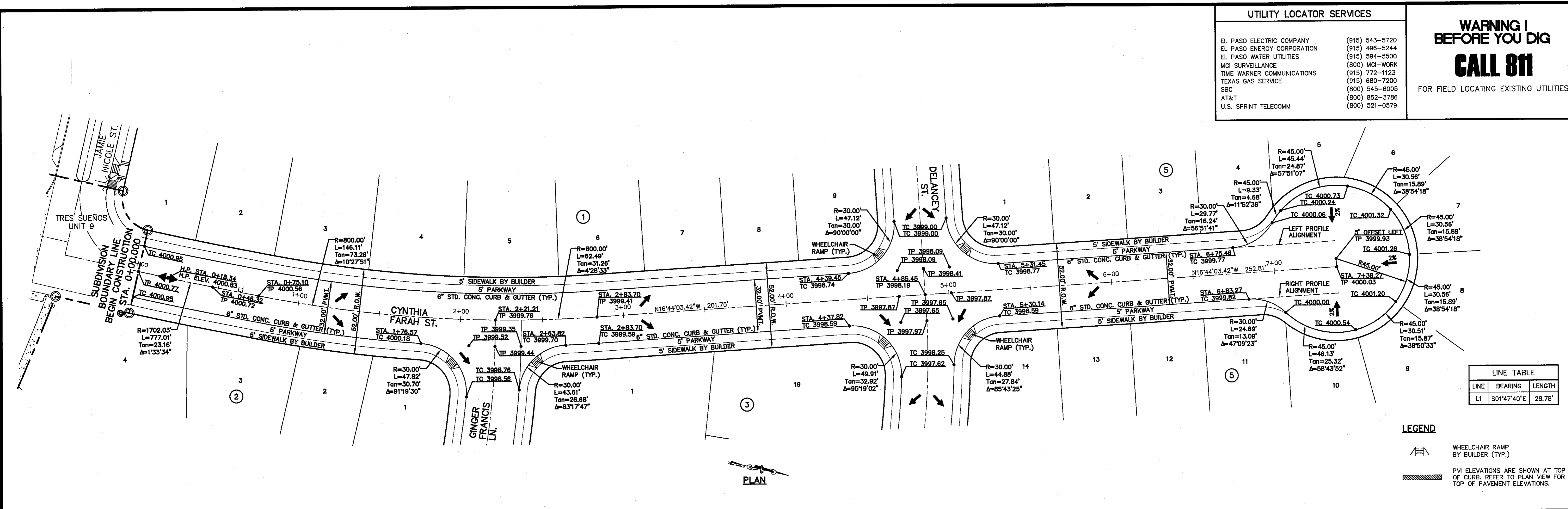
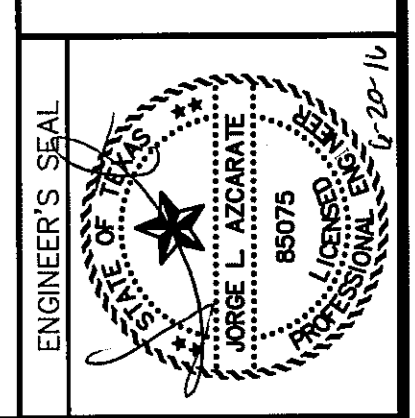
UTILITY LOCATOR SERVICES		
EL PASO ELECTRIC COMPANY	(915) 543-5720	
EL PASO ENERGY CORPORATION	(915) 496-5244	
EL PASO WATER UTILITIES	(915) 594-5500	
MCI SURVEILLANCE	(800) MCI-WORK	
TIME WARNER COMMUNICATIONS	(915) 772-1123	
TEXAS GAS SERVICE	(915) 680-7200	
SBC	(800) 545-6005	
AT&T	(800) 852-3786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

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FOR FIELD LOCATING EXISTING UTILITIES

DATE	REVISIONS	BY

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CORPORATION
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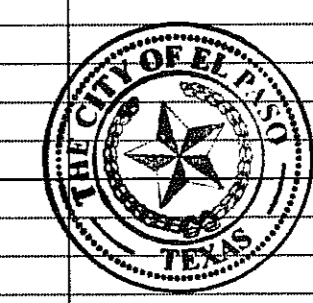
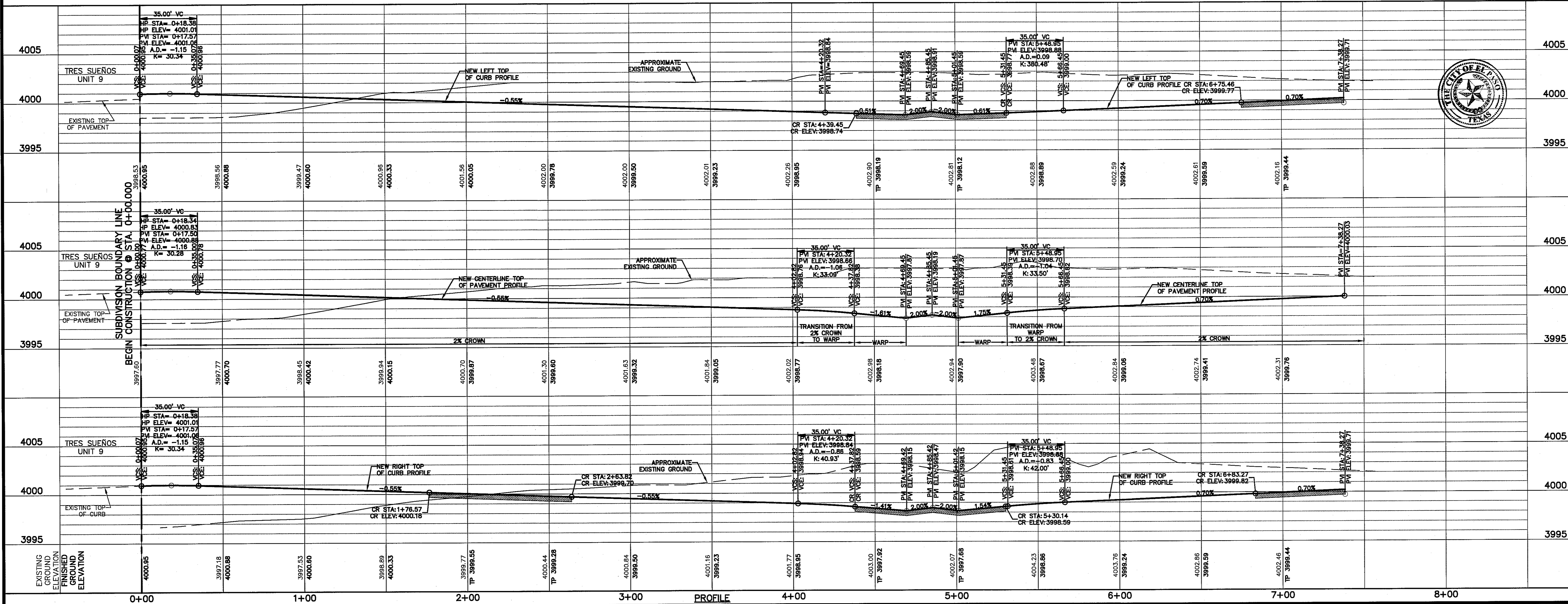


LINE TABLE		
LINE	BEARING	LENGTH
L1	S01°47'40"E	28.78'

LEGEND

WHEELCHAIR RAMP BY BUILDER (TYP.)

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



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

DATE: JUNE 2016
DESIGN BY: R.C.
DRAWN BY: J.L.A.
APP'D. BY: J.L.A.
JOB No.: 2000-194LD

PROJECT TITLE
**TRES SUEÑOS UNIT TWELVE
SUBDIVISION IMPROVEMENTS**

SHEET TITLE
**CYNTHIA FARAH ST.
PLAN & PROFILE
FROM STA. 0+00.00
TO STA. 7+43.27**

SHEET NO.
C6.3

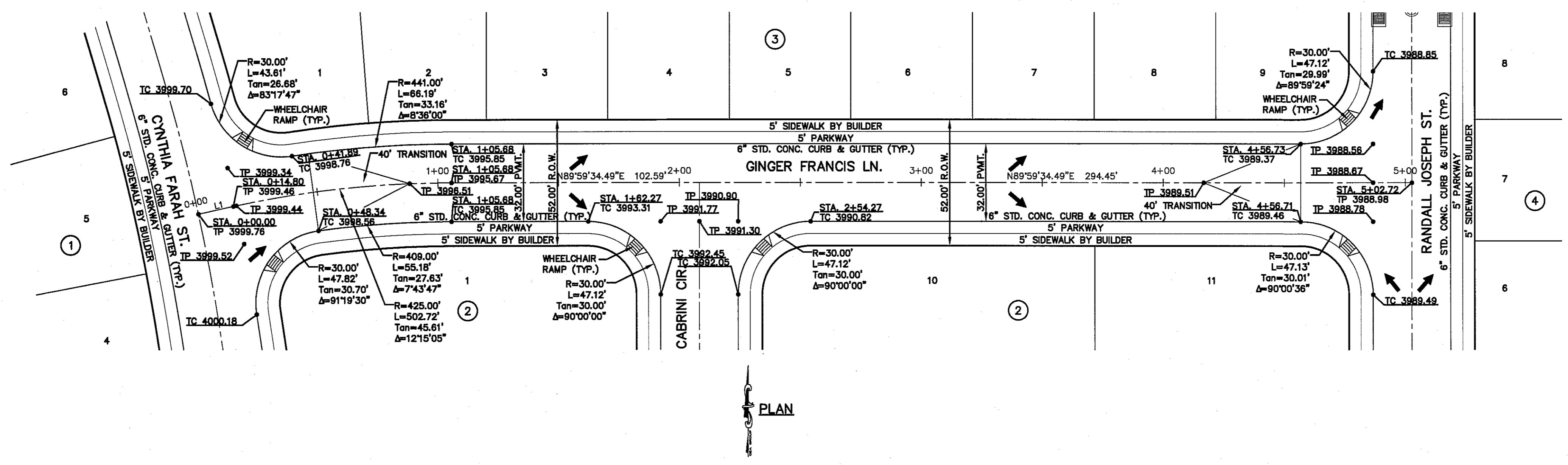
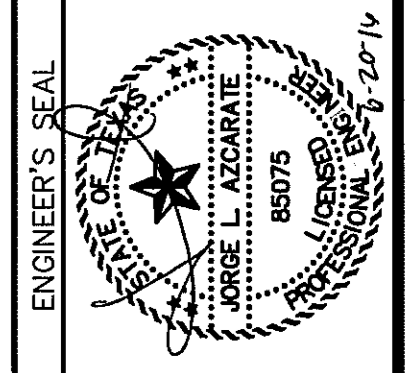
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UTILITY LOCATOR SERVICES	
EL PASO ELECTRIC COMPANY	(915) 543-5720
EL PASO ENERGY CORPORATION	(915) 496-5244
EL PASO WATER UTILITIES	(915) 594-5560
MO SURVEILLANCE	(800) MO-WORK
TIME WARNER COMMUNICATIONS	(915) 772-1123
TEXAS GAS SERVICE	(915) 680-7200
SBC	(800) 545-6005
AT&T	(800) 852-3786
U.S. SPRINT TELECOMM	(800) 521-0579

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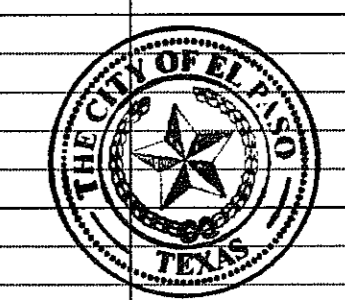
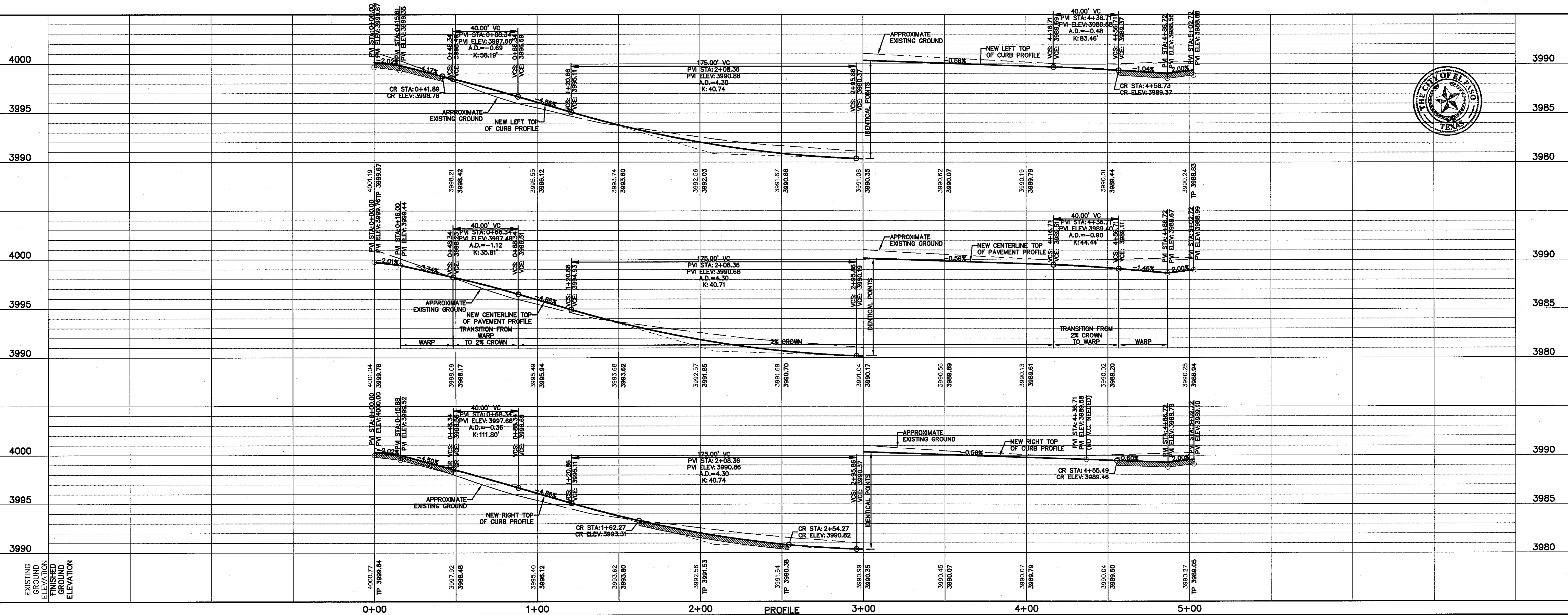
DATE	REVISIONS	BY

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4712 Woodrow Bean, Ste. F El Paso, TX 79924
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LINE	BEARING	LENGTH
L1	N77°44'29"E	14.80'

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



SCALE: 1"=30'
Horizontal: 1"=5'
Vertical: Contour Interval: N/A
DATE: JUNE 2016
DESIGN BY: R.O.
DRAWN BY: R.O.
CHKD. BY: J.L.A.
APP'D. BY: J.L.A.
JOB No. 2000-194LD

PROJECT TITLE
**TRES SUEÑOS UNIT TWELVE
SUBDIVISION IMPROVEMENTS**

SHEET TITLE
**GINGER FRANCIS LN.
PLAN & PROFILE
FROM STA. 0+00.00
TO STA. 5+02.72**

SHEET NO.

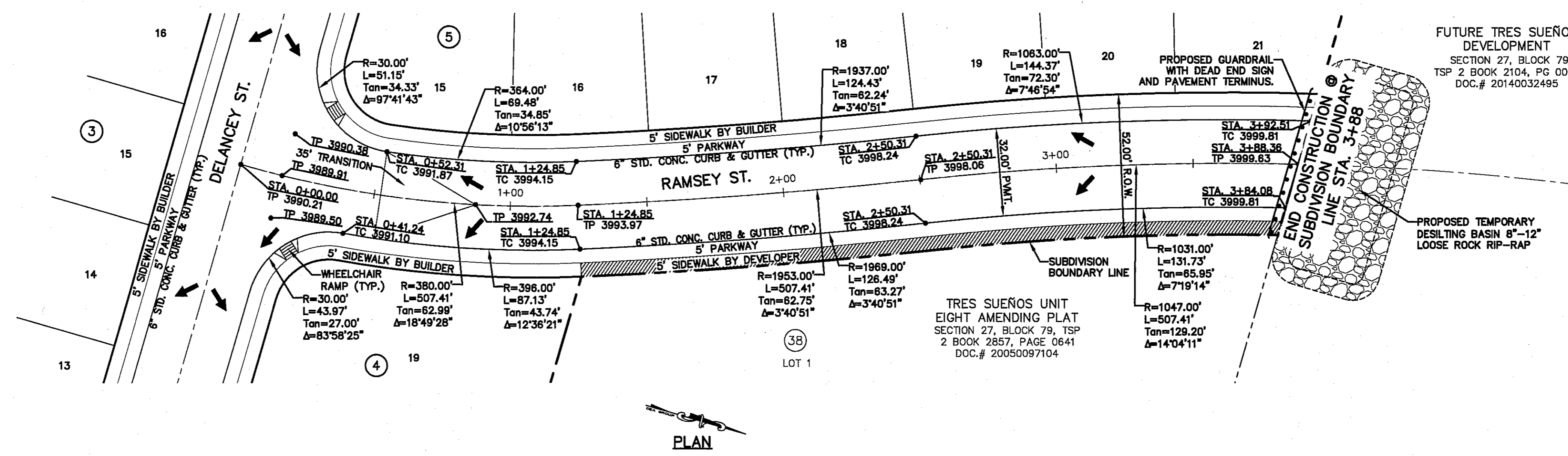
C6.4

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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!
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FOR FIELD LOCATING EXISTING UTILITIES

DATE	REVISIONS	BY



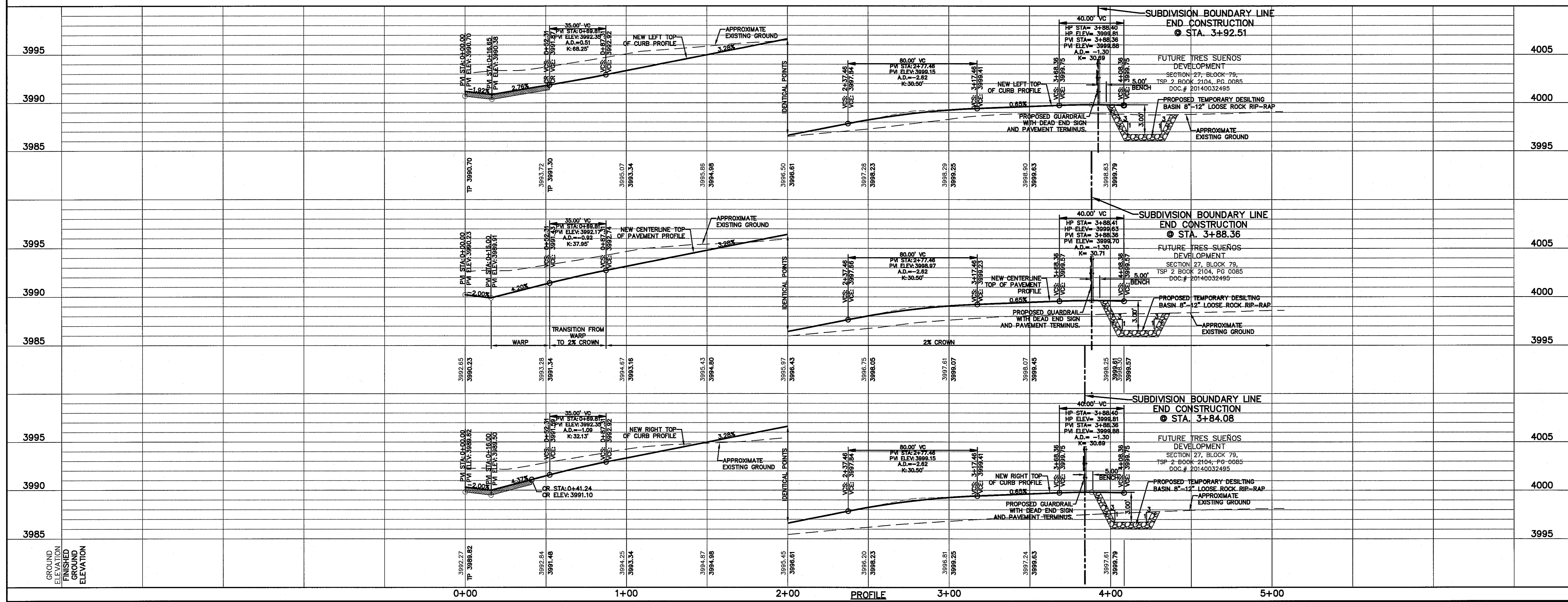
FUTURE TRES SUEÑOS DEVELOPMENT
SECTION 27, BLOCK 79,
TSP 2 BOOK 2104, PG 0085
DOC.# 20140032495



- LEGEND**
- WHEELCHAIR RAMP BY BUILDER (TYP.)
 - SIDEWALK TO BE BUILT BY DEVELOPER
 - PAVEMENT ELEVATIONS ARE SHOWN AT TOP OF CURB. REFER TO PLAN VIEW FOR TOP OF PAVEMENT ELEVATIONS.

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ENGINEER'S SEAL



PROJECT TITLE	SHEET TITLE	SHEET NO.
TRES SUEÑOS UNIT TWELVE SUBDIVISION IMPROVEMENTS	RAMSEY ST. PLAN & PROFILE FROM STA. 0+00.00 TO STA. 3+88.36	C6.5

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

DATE: JUNE 2016
DESIGN BY: R.O.
DRAWN BY: J.L.A.
CHKD. BY: J.L.A.
APPVD. BY: J.L.A.
JOB No. 2000-1941D

REFERENCES - BENCHMARKS
CITY MONUMENT AT POINT OF CURVE CENTERLINE RICH
FROM THE SOUTHERLY RIGHT OF WAY LINE OF MONTANA
AVENUE CITY DATUM ELEVATION.....4005.40

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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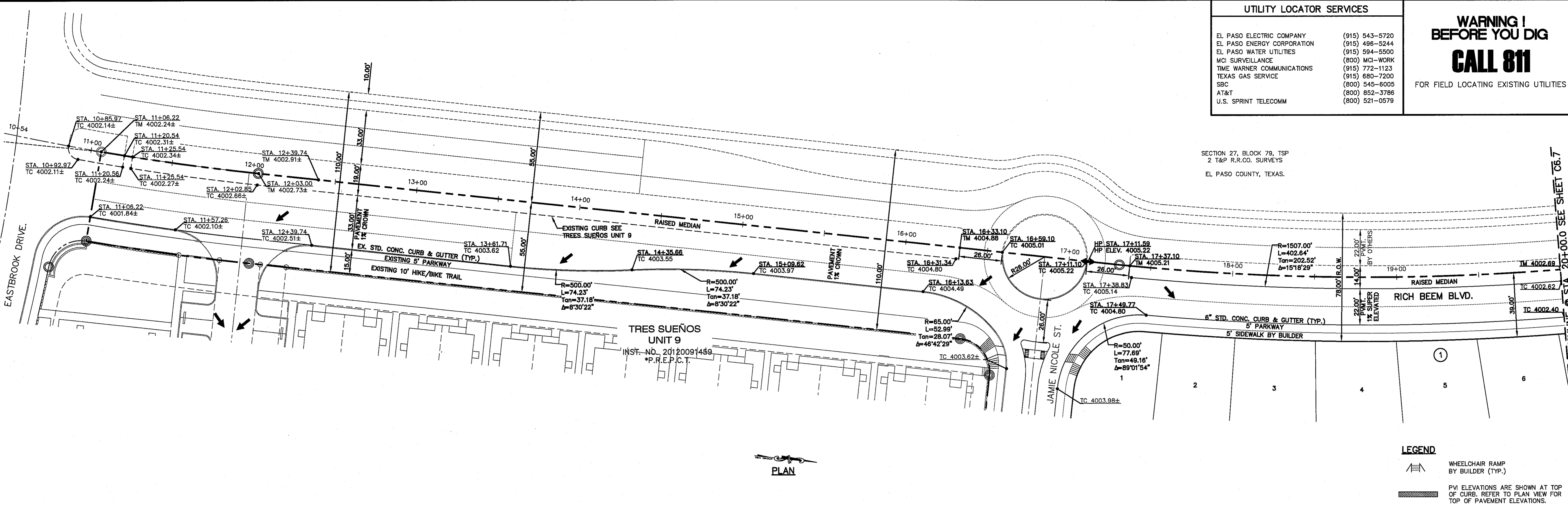
WARNING!
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CALL 811
FOR FIELD LOCATING EXISTING UTILITIES

DATE	REVISIONS	BY

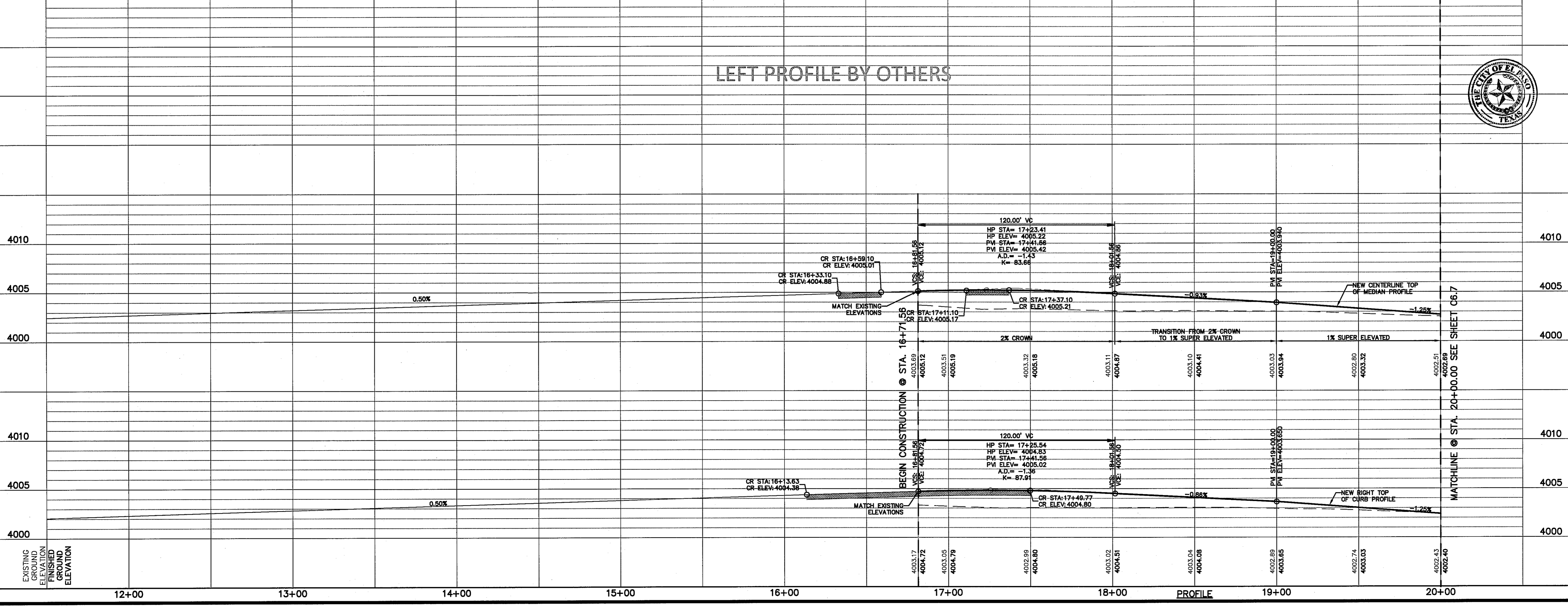
REFERENCES - BENCHMARKS
CITY MONUMENT AT POINT OF CURVE CENTERLINE RICH BEEM BLVD. 325' N. 15' E. 100' FROM THE SOUTHERLY RIGHT OF WAY LINE OF MONTANA AVENUE CITY DATUM ELEVATION.....4005.40

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ENGINEER'S SEAL
SCALE
Horizontal: 1"=30'
Vertical: 1"=5'
Contour Interval: N/A
DATE: JUNE 2016
DESIGN BY: R.O.
DRAWN BY: R.O.
CHKD. BY: J.L.A.
APPVD. BY: J.L.A.
JOB No. 20000-194LD



LEFT PROFILE BY OTHERS



PROJECT TITLE
TRES SUEÑOS UNIT TWELVE
SUBDIVISION IMPROVEMENTS

SHEET TITLE
RICH BEEM
PLAN & PROFILE
FROM STA. 16+71.56
TO STA. 20+50.00

SHEET NO.

C6.6

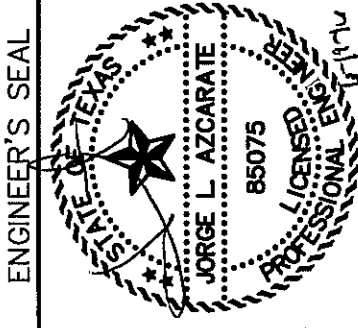
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UTILITY LOCATOR SERVICES	
EL PASO ELECTRIC COMPANY	(915) 543-5720
EL PASO ENERGY CORPORATION	(915) 498-5244
EL PASO WATER UTILITIES	(915) 594-5500
MCI SURVEILLANCE	(800) MCI-WORK
TIME WARNER COMMUNICATIONS	(915) 772-1123
TEXAS GAS SERVICE	(915) 680-7200
SBC	(800) 545-6005
AT&T	(800) 852-3786
U.S. SPRINT TELECOMM	(800) 521-0579

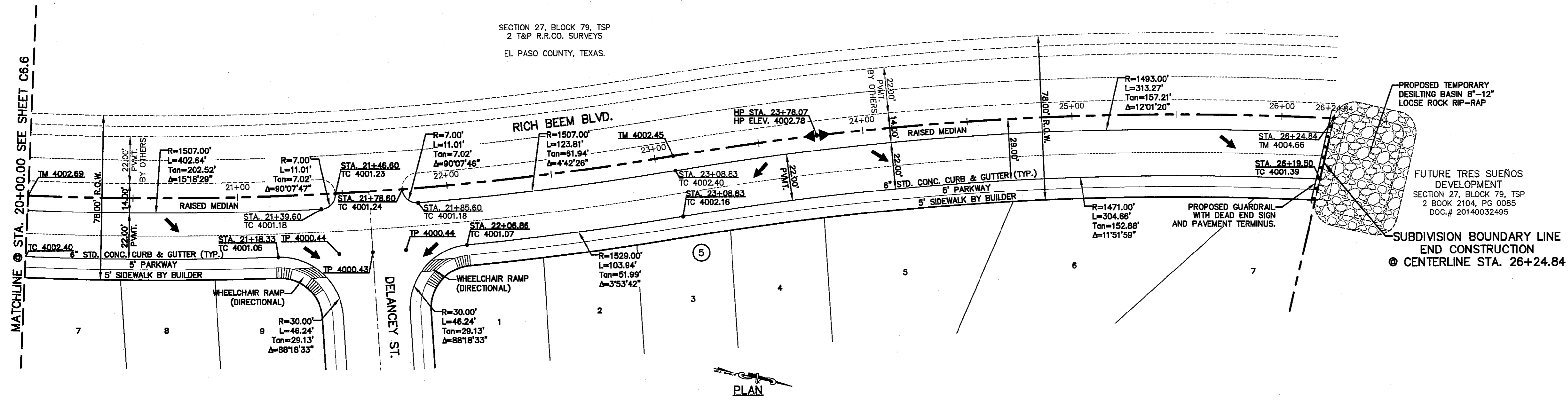
WARNING!
BEFORE YOU DIG
CALL 811
FOR FIELD LOCATING EXISTING UTILITIES

DATE	REVISIONS	BY

CSA
REGISTERED ENGINEERING FIRM
4712 Woodrow Bess, Ste F El Paso, TX 79924
915.544.5232 www.csaengr.com



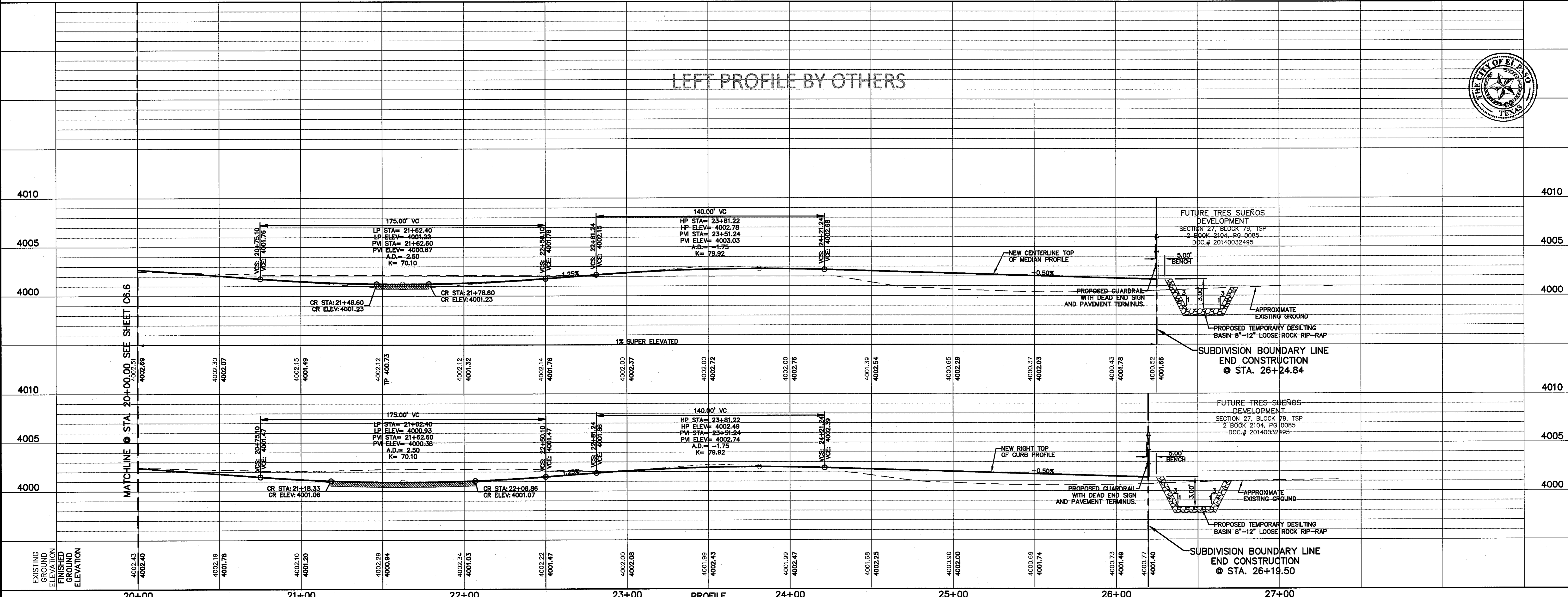
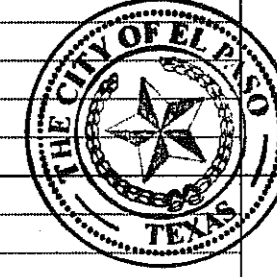
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Contour Interval: N/A
DATE: JUNE 2016
DESIGN BY: R.O.
DRAWN BY: J.L.A.
CHKD. BY: J.L.A.
APPVD. BY: J.L.A.
JOB No. 2000-194LD



LEGEND

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

LEFT PROFILE BY OTHERS



TRES SUEÑOS UNIT TWELVE
SUBDIVISION IMPROVEMENTS

SHEET TITLE

RICH BEEM
PLAN & PROFILE
FROM STA. 20+50.00
TO STA. 26+24.84

SHEET NO.

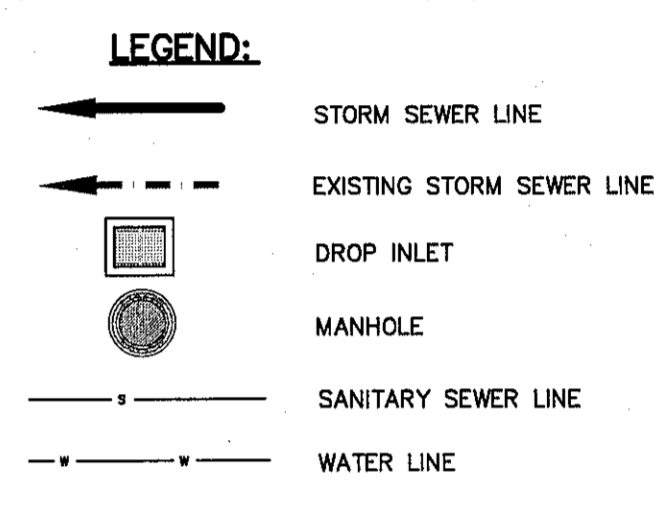
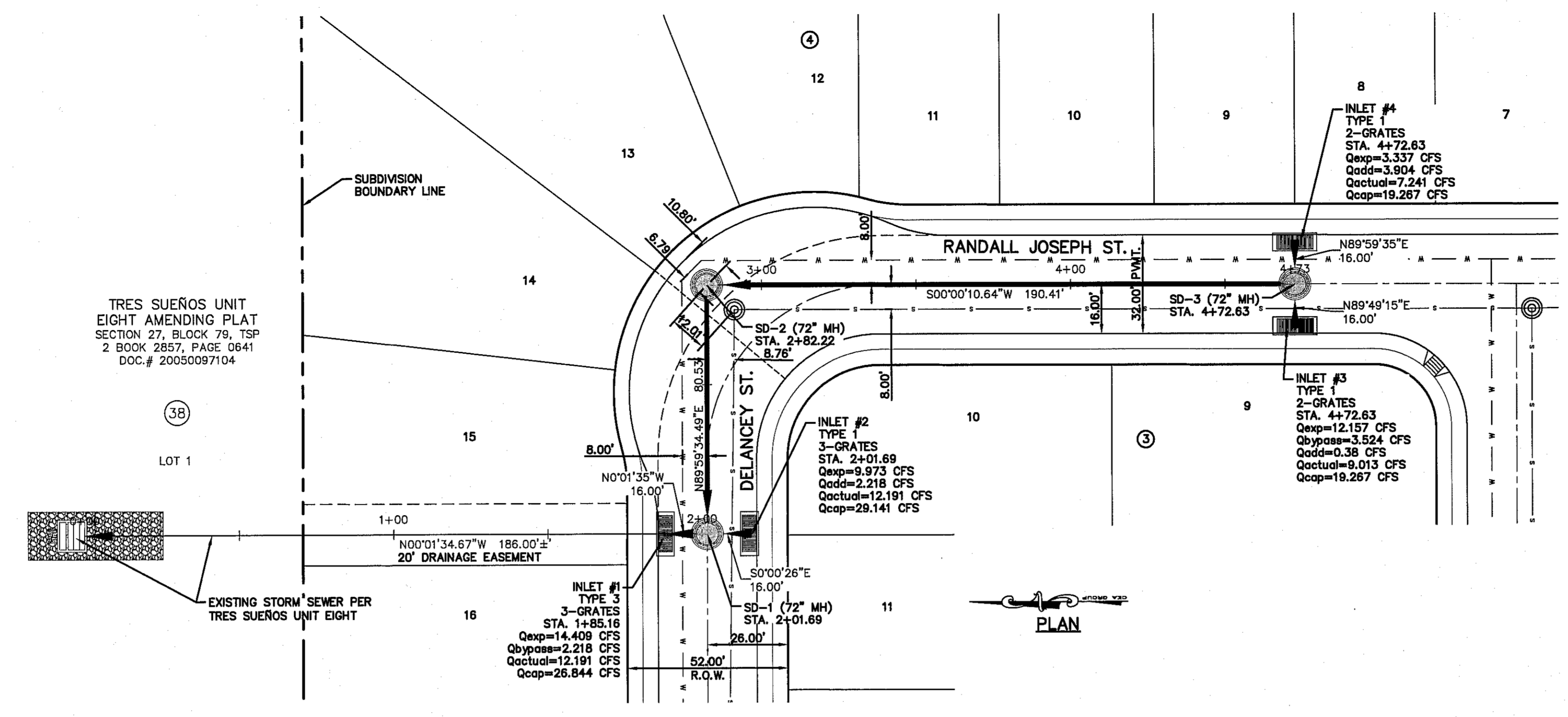
C6.7

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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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SBC	(800) 545-6005
AT&T	(800) 852-3786
U.S. SPRINT TELECOMM	(800) 521-0579

WARNING!
BEFORE YOU DIG
CALL 811
 FOR FIELD LOCATING EXISTING UTILITIES

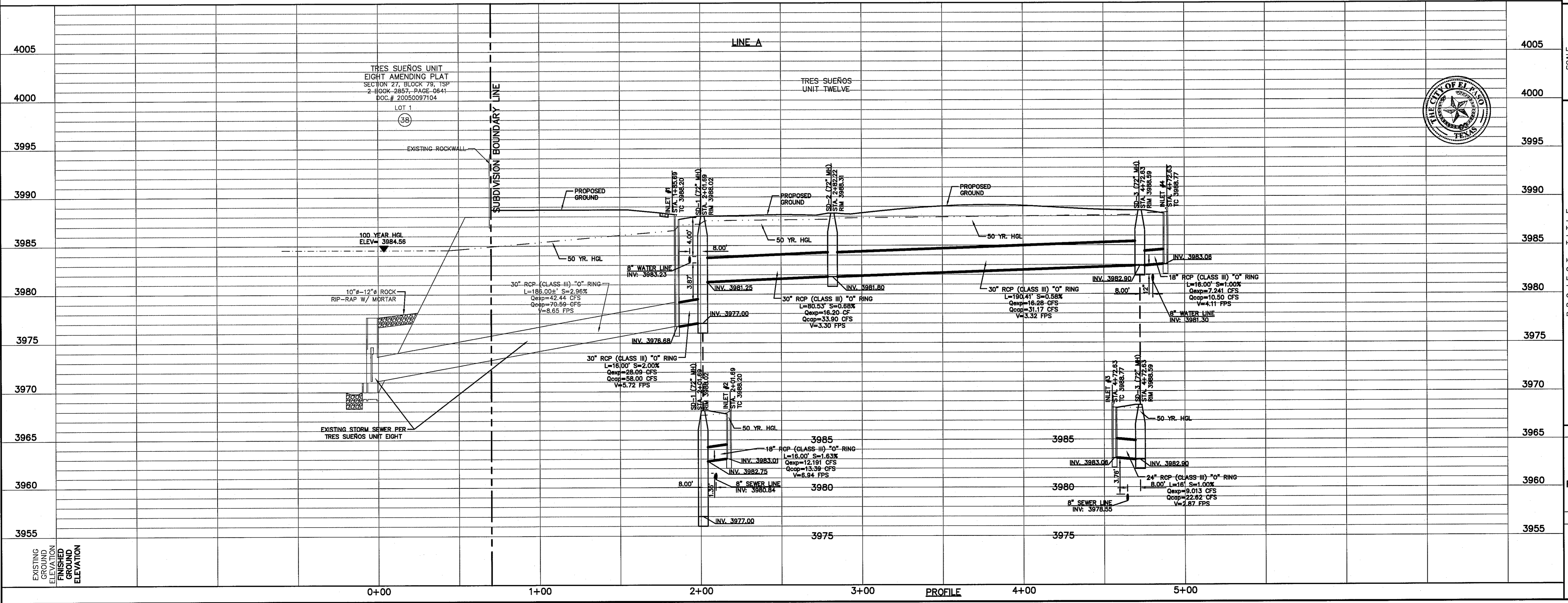
DATE	REVISIONS	BY



REFERENCES - BENCHMARKS

CITY MONUMENT AT POINT OF CURVE CENTERLINE HIGH POINT OF CURVE CENTERLINE FROM THE SOUTHERLY RIGHT OF WAY LINE OF MONTANA AVENUE CITY DATUM ELEVATION: 4005.40

TEXAS REGISTERED ENGINEERING FIRM F-6684
 4772 Woodrow Bean, Ste. F El Paso, TX 79924
 915.544.5232 www.ceagroup.net



SCALE: Horizontal: 1"=30'
 Vertical: 1"=5'
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DATE: JUNE 2016
 DESIGN BY: R.O.
 DRAWN BY: J.L.A.
 CHECKED BY: J.L.A.
 APP'D BY: J.L.A.
 JOB No. 2000-1941D

PROJECT TITLE

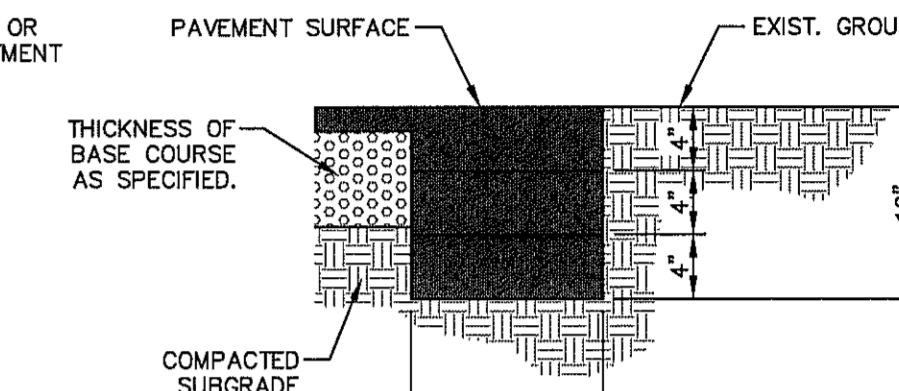
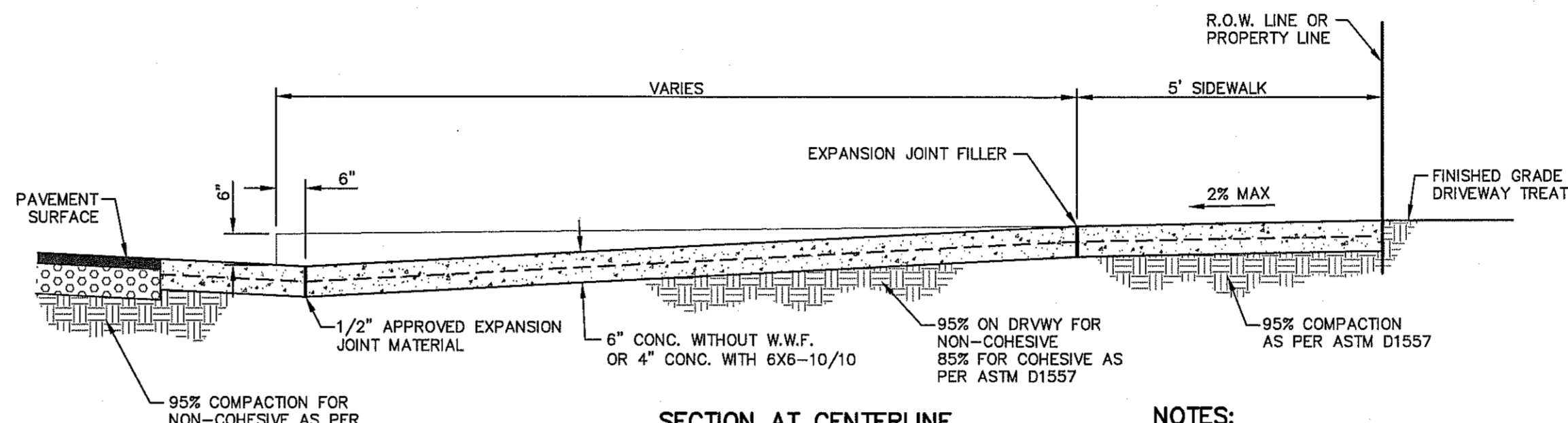
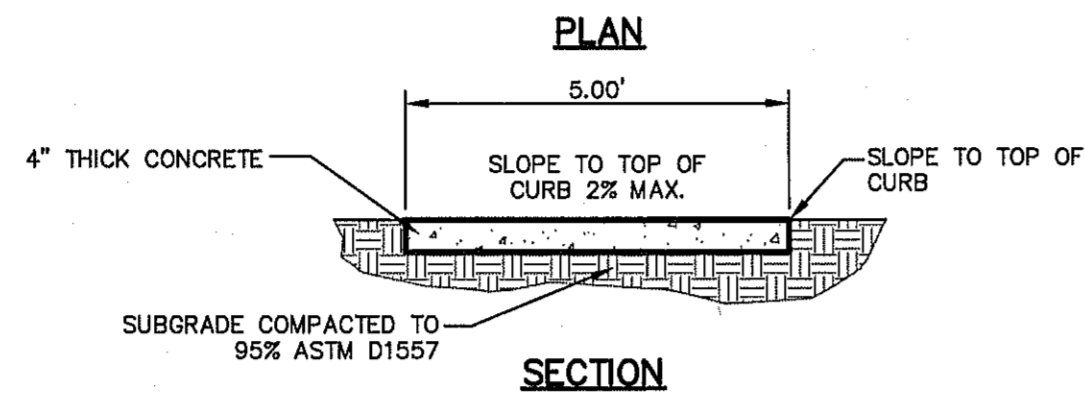
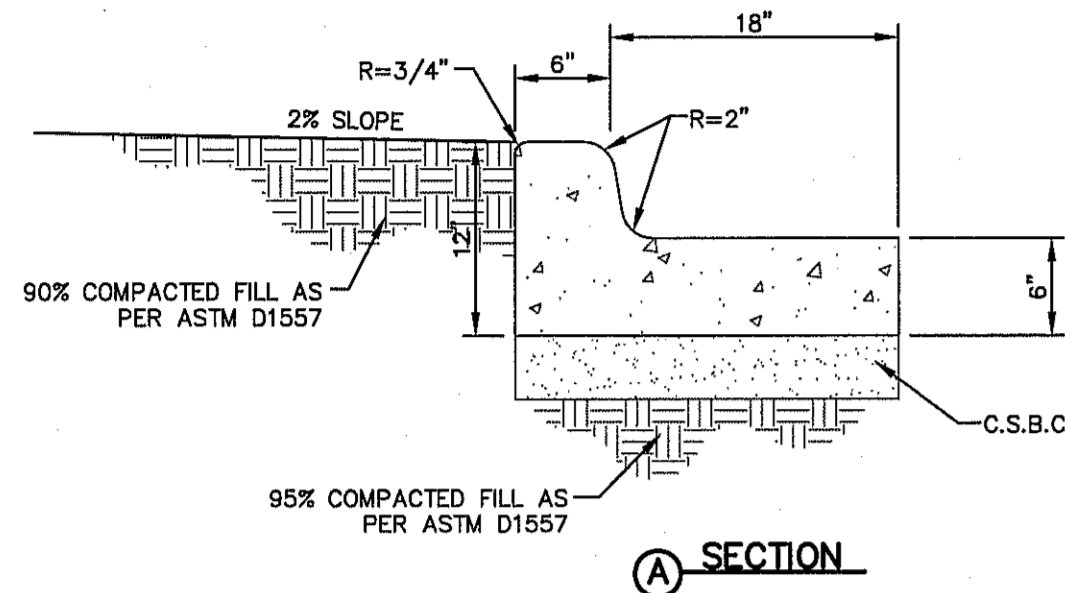
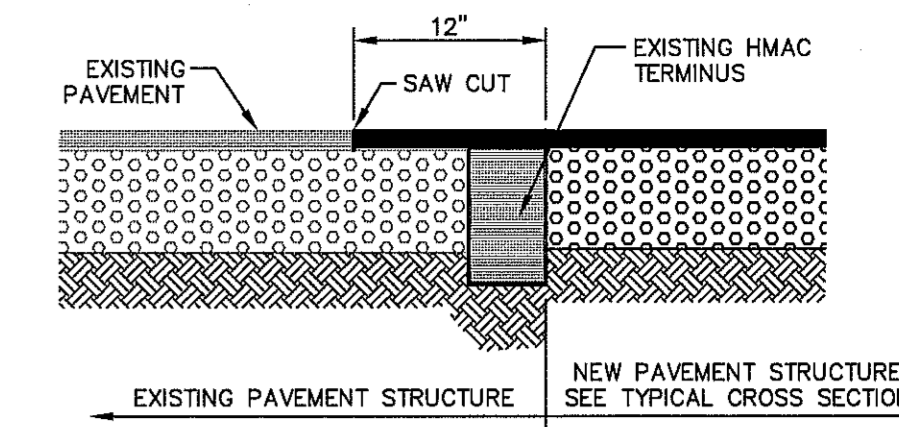
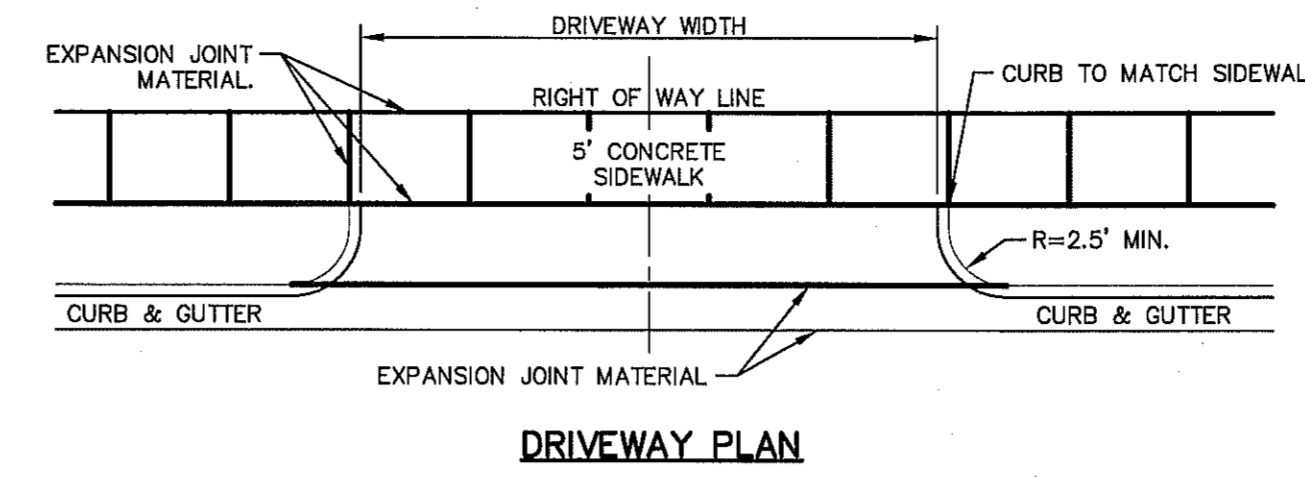
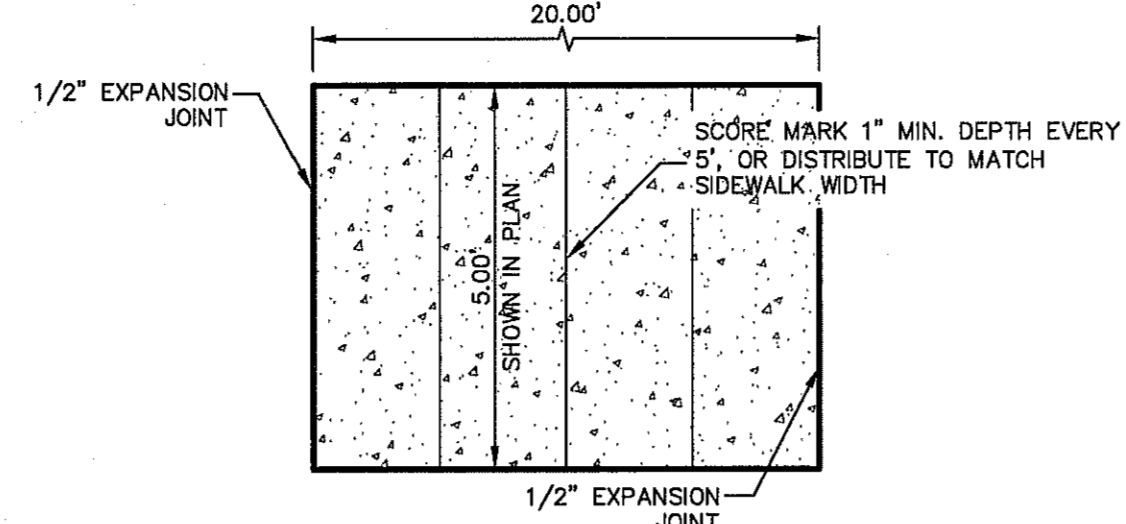
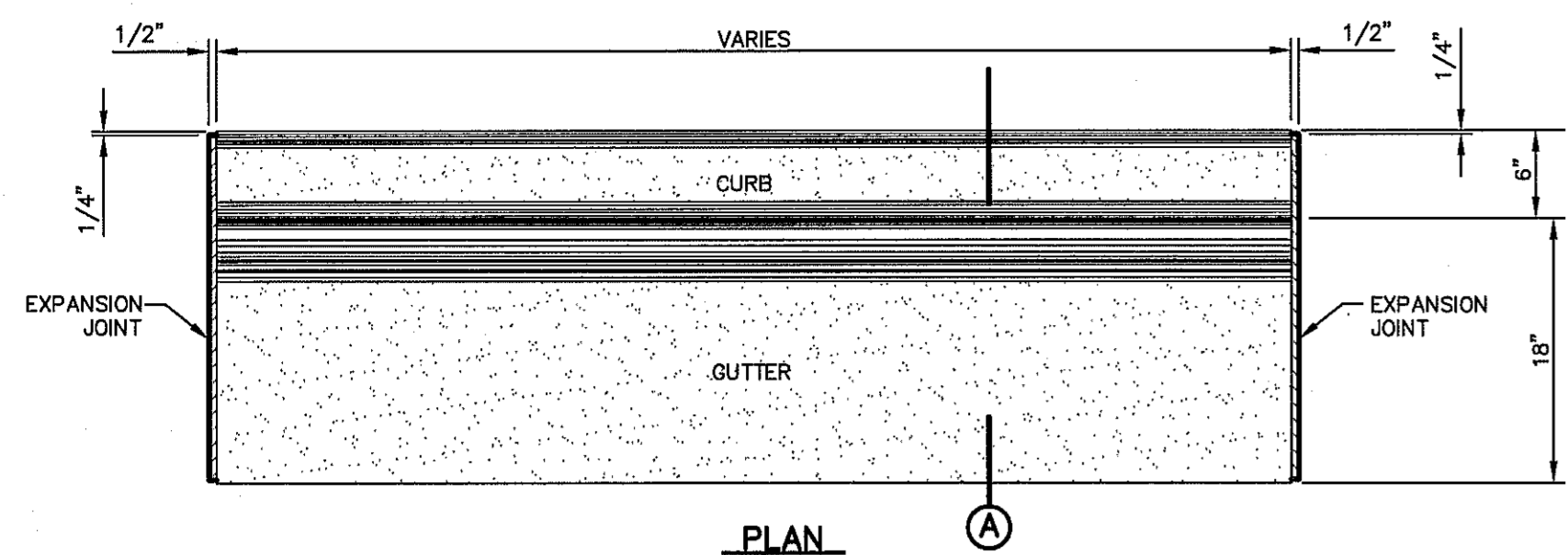
**TRES SUEÑOS UNIT TWELVE
 SUBDIVISION IMPROVEMENTS**

SHEET TITLE

**STORM SEWER
 PLAN & PROFILE
 LINE A
 FROM STA. 0+00.00
 TO STA. 4+72.63**

SHEET NO.

C7.1



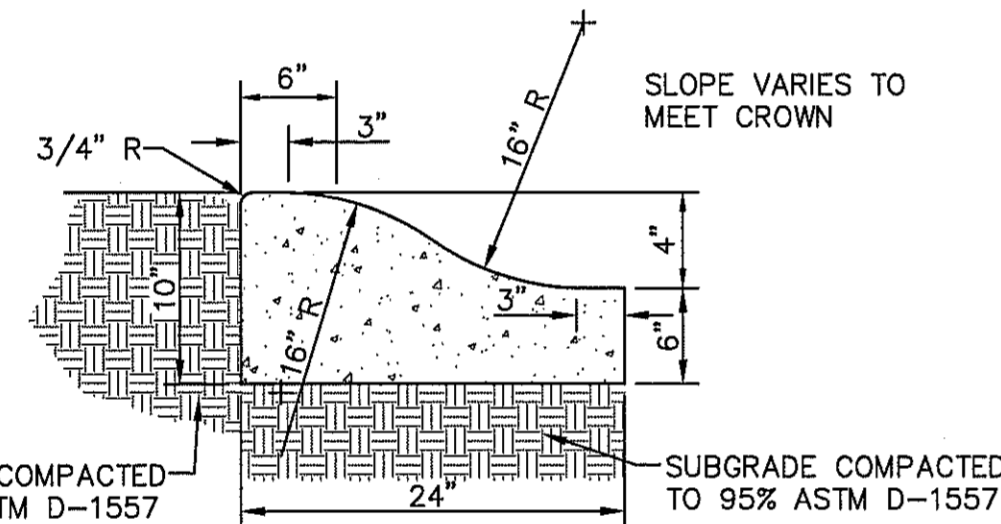
- NOTES:**
- CONCRETE SHALL BE 3,000 P.S.I. MIN.
 - DUMMY JOINT REQUIRED AT 10' O.C. FOR CURB & GUTTER, AND 5' O.C. FOR SIDEWALK
 - EXPANSION MATERIAL REQUIRED AT CURB RETURNS AND AT 20' ON CENTER FOR SIDEWALKS WITH 1/2" PREMOLDED ASPHALT IMPREGNATED EXPANSION MATERIAL OR EQUAL
 - EXPANSION JOINTS REQUIRED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

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

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

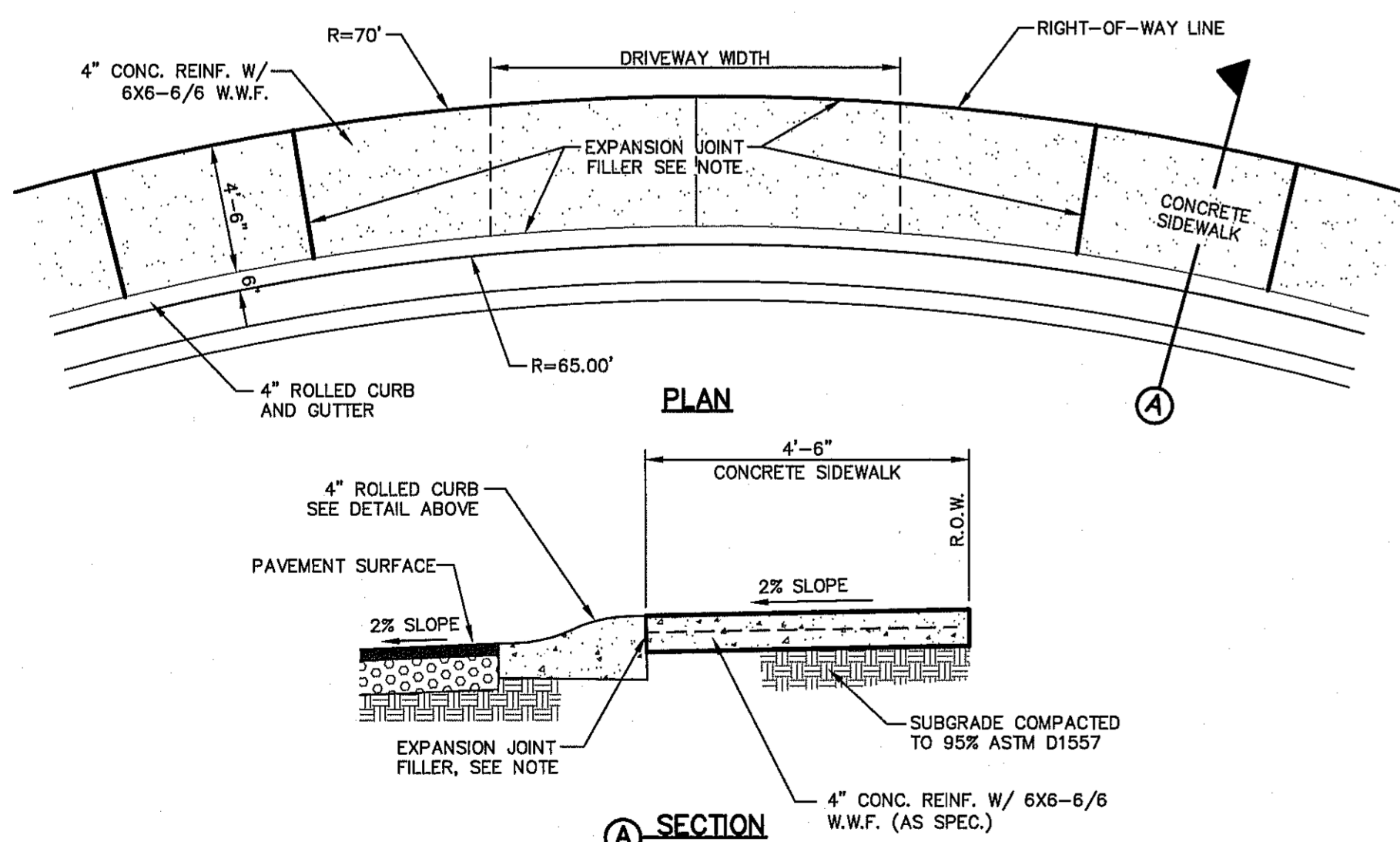
- NOTES:**
- DRIVEWAY SLOPES MUST BE 10% MAX. FROM GUTTER FOR FIRST 12 FEET AND 14% MAX. THEREAFTER (DRIVEWAY SHALL BE LOCATED ON HIGH SIDE OF LOT UNLESS OTHERWISE COORDINATED WITH CITY OF EL PASO)
 - RESIDENTIAL
6" CONC. WITHOUT W.W.F.
4" CONC. WITH 6X6-10/10
 - COMMERCIAL
6" CONC. WITH 6X6-6/6 W.W.F.

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



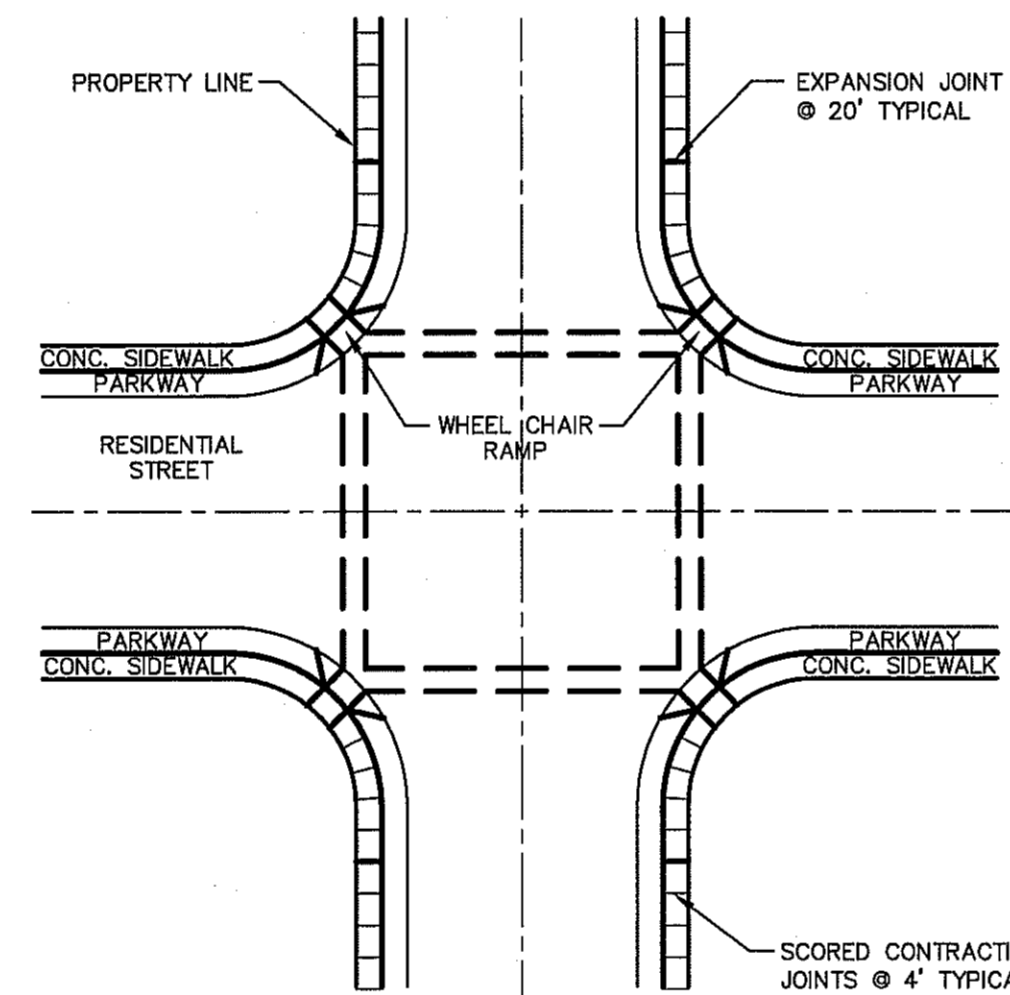
- NOTES:**
- CONCRETE TO BE 3000 PSI MIN.
 - DUMMY JOINTS REQUIRED AT 10' O.C. FOR HEADERS AND 5' O.C. FOR SIDEWALK.
 - EXPANSION MATERIAL REQUIRED AT CURB RETURNS WITH 1/2" PREMOLDED ASPHALT IMPREGNATED EXPANSION MATERIAL OR EQUAL.
 - EXPANSION JOINTS REQUIRED AT 50' O.C. WHEN FORMING FOR HEADERS.
 - EXPANSION JOINTS REQUIRED FOR SIDEWALK AT 20' O.C.
 - * FOR CUL-DE-SAC AND HEEL ONLY.

6 4" CONCRETE ROLLED CURB DETAIL
SCALE: 1" = 1'-0"



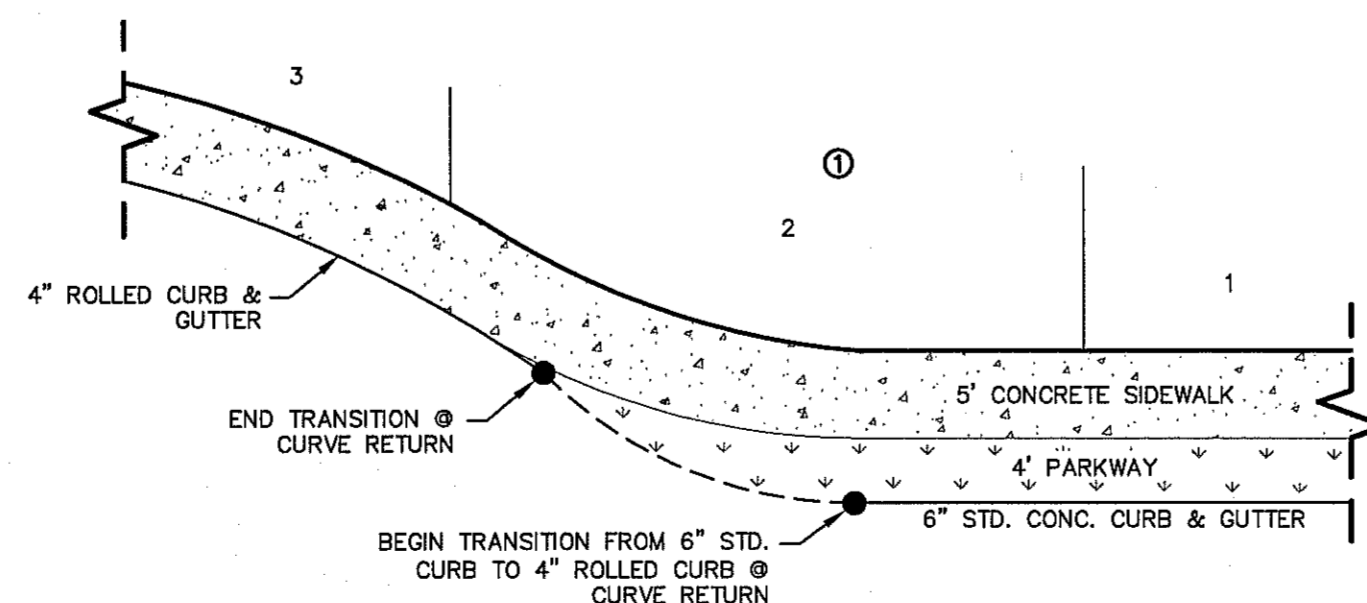
NOTE:
EXPANSION MATERIAL SHALL BE 1/2" PREMOLDED ASPHALT IMPREGNATED EXPANSION MATERIAL OR EQUAL.

8 HEEL (70' R) DRIVEWAY DETAIL
SCALE: N.T.S.

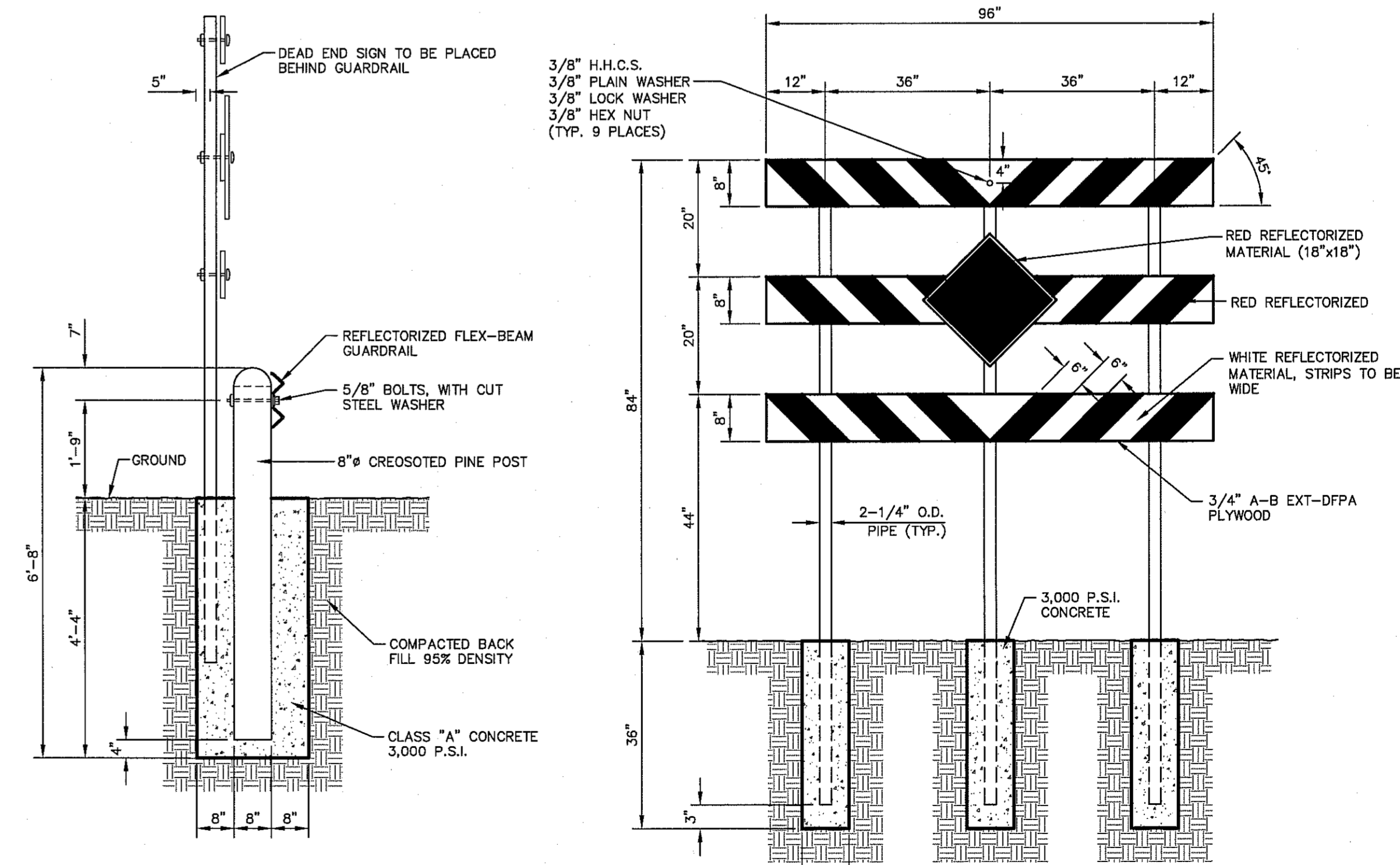
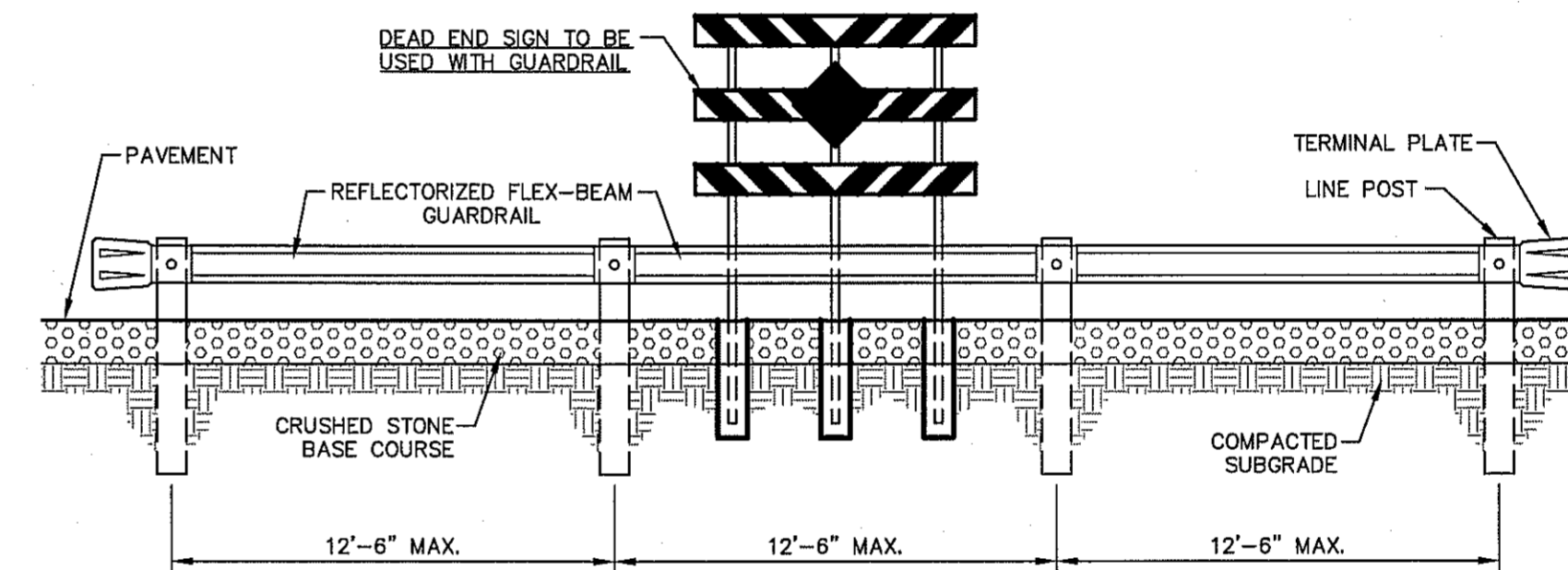


- NOTES:**
- RAMPS MAY BE PLACED AS SUGGESTED, HOWEVER EXISTING LIGHT POLES, FIREHYDRANTS, DROP INLETS, ETC., MAY AFFECT PLACEMENT.
 - THE CONCRETE SURFACE SHALL HAVE A ROUGH, NONSKID TYPE FINISH.
 - CONSTRUCTION METHODS SHALL CONFORM WITH THE CITY OF EL PASO SPECIFICATIONS.
 - ALL PARKING AND PAVEMENT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

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



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



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

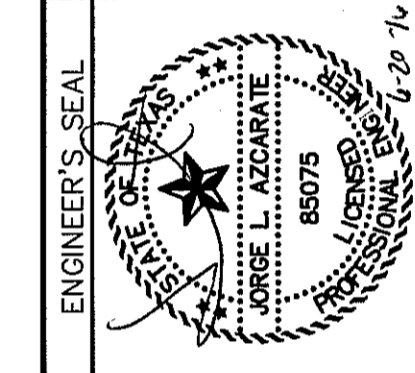
REFERENCES - BENCHMARKS

CITY MONUMENT AT POINT OF CURVE CENTERLINE RICH FROM THE SOUTHERLY RIGHT OF WAY LINE OF MONTANA AVENUE CITY DATUM ELEVATION.....4005.40

DATE	REVISIONS	BY

ceeg

TEXAS REGISTERED ENGINEERING FIRM F-4664
4712 Woodrow Bean, Ste. F El Paso, TX 79924
915.544.5232 | www.ceegroup.net



SCALE	N/A
Horizontal	N/A
Vertical	N/A
Contour Interval	N/A
DATE	JUNE 2016
DESIGN BY	R.O.
DRAWN BY	R.O.
CHECK BY	J.L.A.
APPROV. BY	J.L.A.
JOB No.	2000-194LD

PROJECT TITLE

TRES SUEÑOS UNIT TWELVE
SUBDIVISION IMPROVEMENTS

SHEET TITLE

STANDARD DETAILS

(SHEET 1 OF 2)

SHEET NO.

C8.1

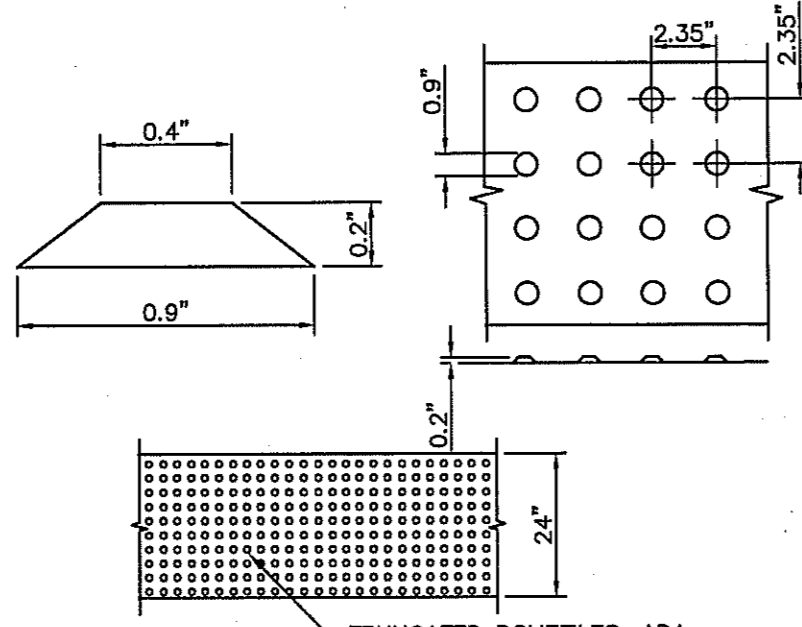
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LEGEND

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

GENERAL NOTES

- 1. ALL SLOPES ARE MAXIMUM ALLOWABLE. THE LEAST POSSIBLE SLOPE THAT WILL STILL DRAIN PROPERLY SHOULD BE USED. RAMP LENGTH OR GRADE OF APPROACH SIDEWALKS MAY BE ADJUSTED AS DIRECTED BY THE ENGINEER.
2. THE MINIMUM SIDEWALK WIDTH IS 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 RAMP SHALL BE A MINIMUM OF 4' X 4' WHOLLY CONTAINED WITHIN THE CROSSWALK AND WHOLLY OUTSIDE THE PARALLEL VEHICULAR TRAVEL PATH.
5. CURB RAMP 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, RAMP 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 (TLDR).



TRUNCATED 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.

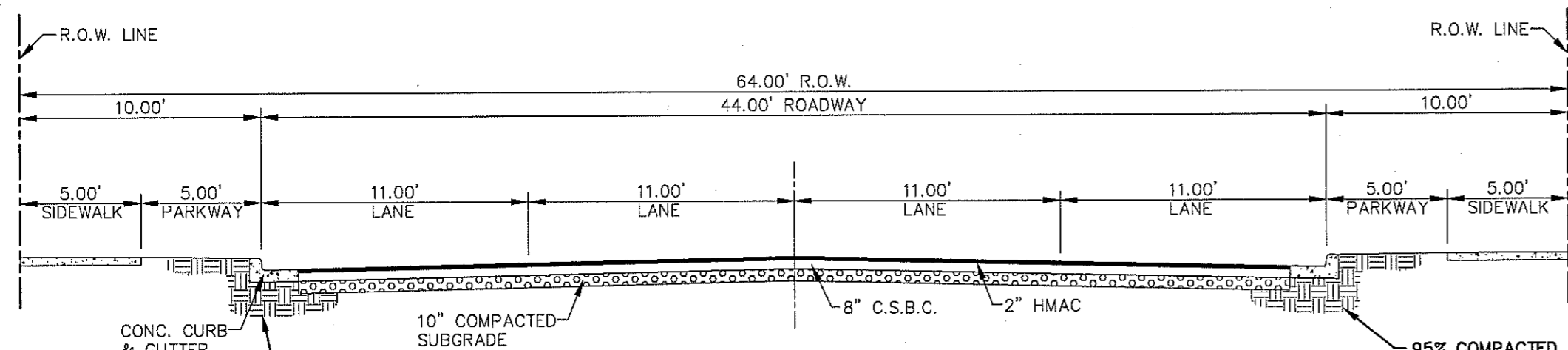
DOME ALIGNMENT. DOMES SHALL BE ALIGNED ON A SQUARE GRID IN THE PREDOMINANT DIRECTION OF TRAVEL TO PERMIT WHEELS TO ROLL BETWEEN DOMES. DETECTABLE WARNING SURFACES SHALL EXTEND 24 INCHES (610 mm) MINIMUM IN THE DIRECTION OF TRAVEL AND THE FULL WIDTH OF THE CURB RAMP, LANDING, OR BLENDED TRANSITION.

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.

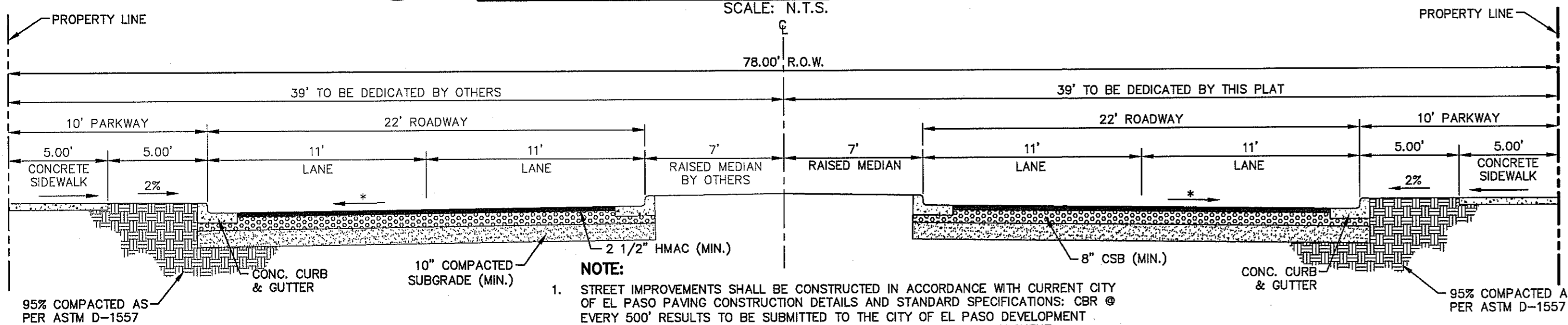
1 TRUNCATED DOME SIZE AND SPACING SCALE: N.T.S.

NOTE:

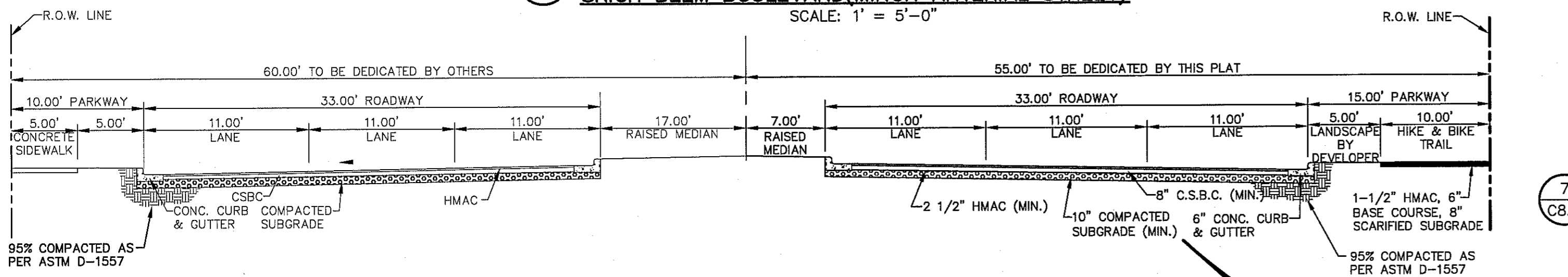
WITHIN SUBDIVISION LIMITS: ALL EXISTING AND PROPOSED SIDEWALKS, BARRIER FREE RAMP, HANDICAP PARKING, DRIVEWAY CROSSWALKS, DRIVEWAYS AND ACCESSIBLE ROUTES SHALL COMPLY WITH A.D.A., T.A.S. AND CITY OF EL PASO REQUIREMENTS. EXISTING INFRASTRUCTURE NOT COMPLYING SHALL BE REMOVED AND REPLACED TO MEET STANDARDS.



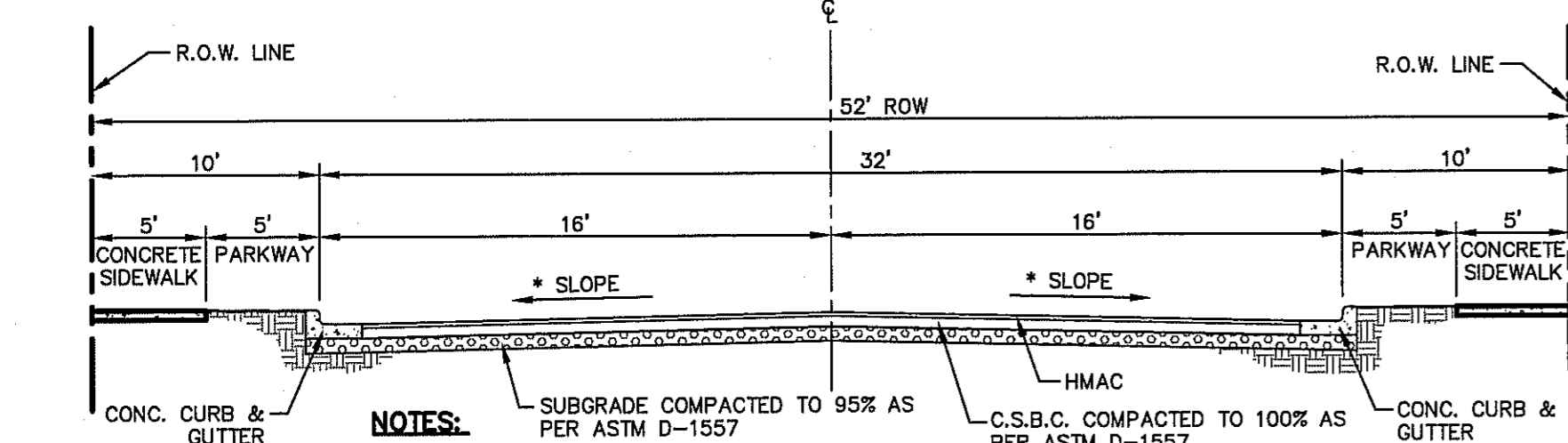
3 ANDREW WISEMAN STREET SECTION DETAIL COLLECTOR ARTERIAL 64' R.O.W. SCALE: N.T.S.



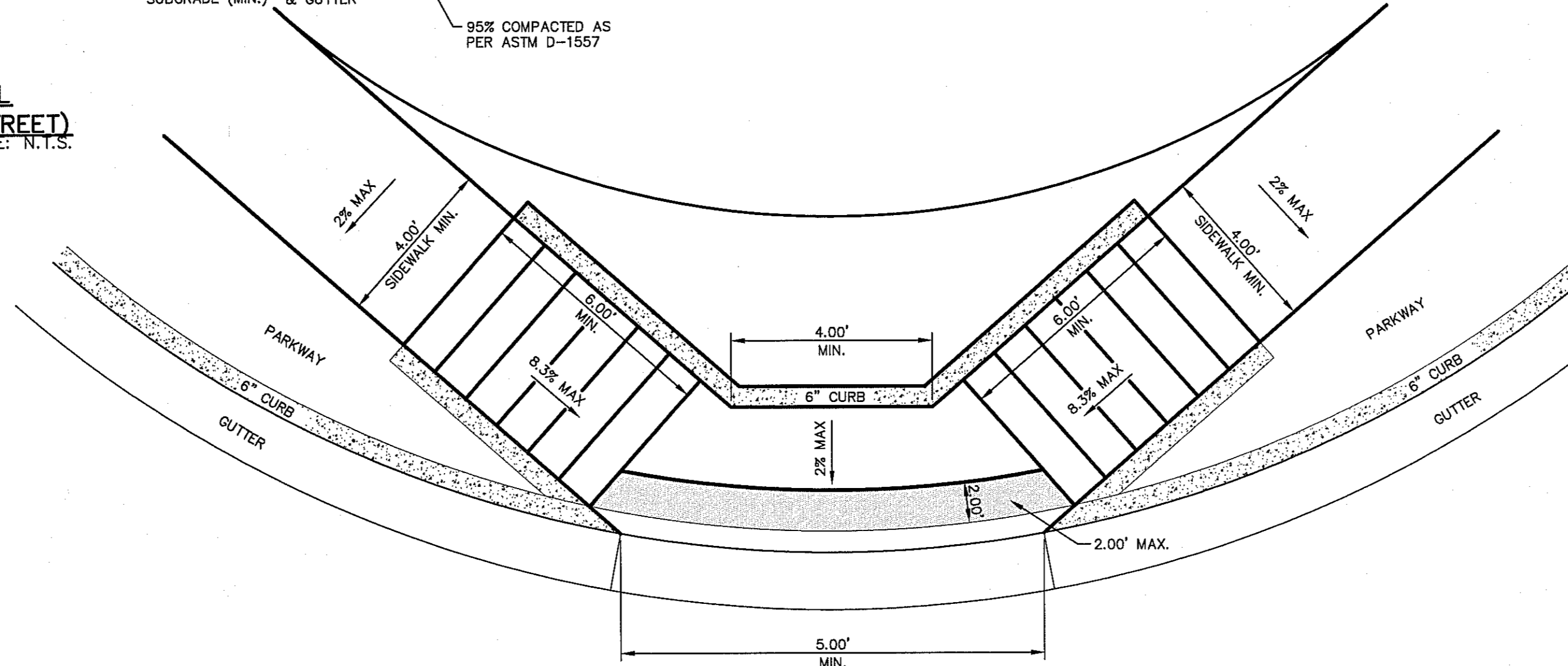
4 TYPICAL 78' ROW STREET SECTION DETAIL @ RICH BEEM BOULEVARD (MINOR ARTERIAL STREET) SCALE: 1" = 5'-0"



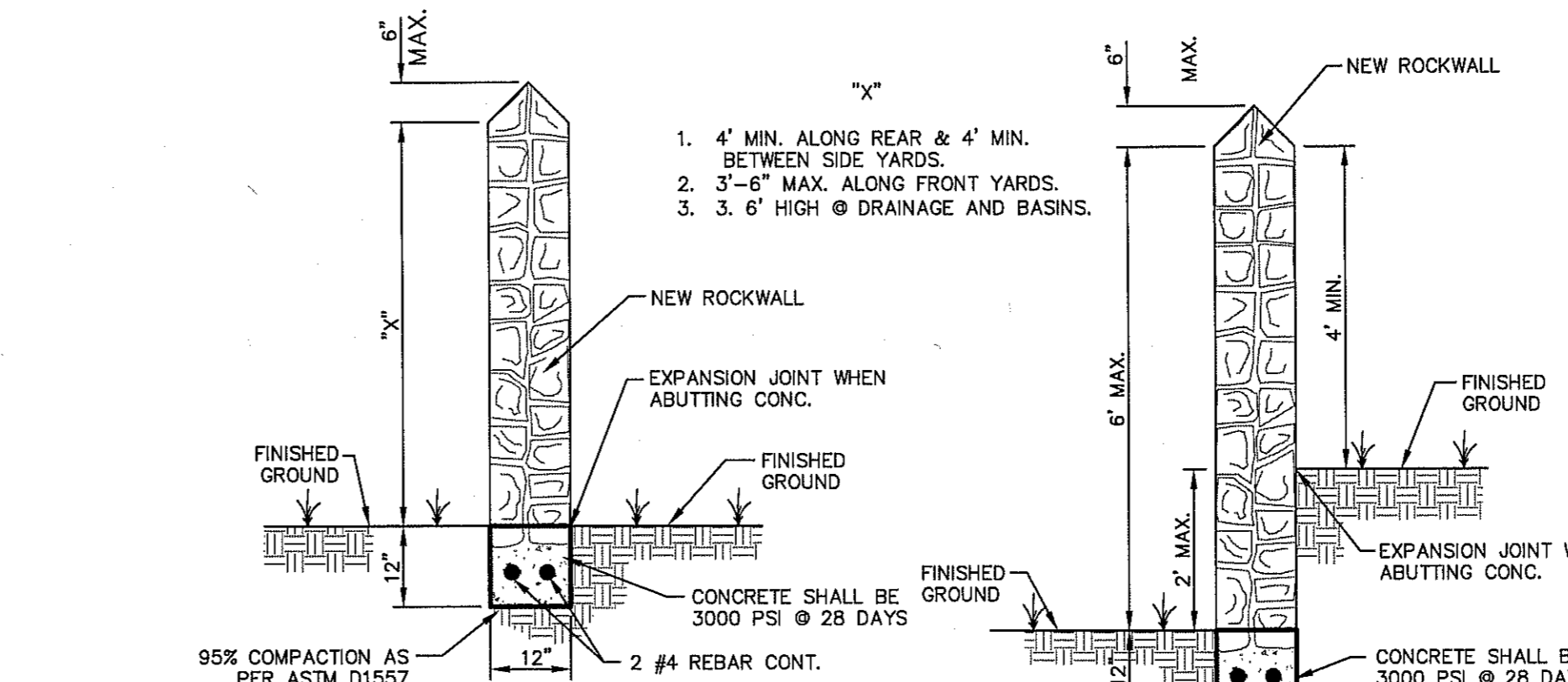
5 TYPICAL 115' ROW STREET SECTION DETAIL @ RICH BEEM BOULEVARD (MAJOR ARTERIAL STREET) SCALE: N.T.S.



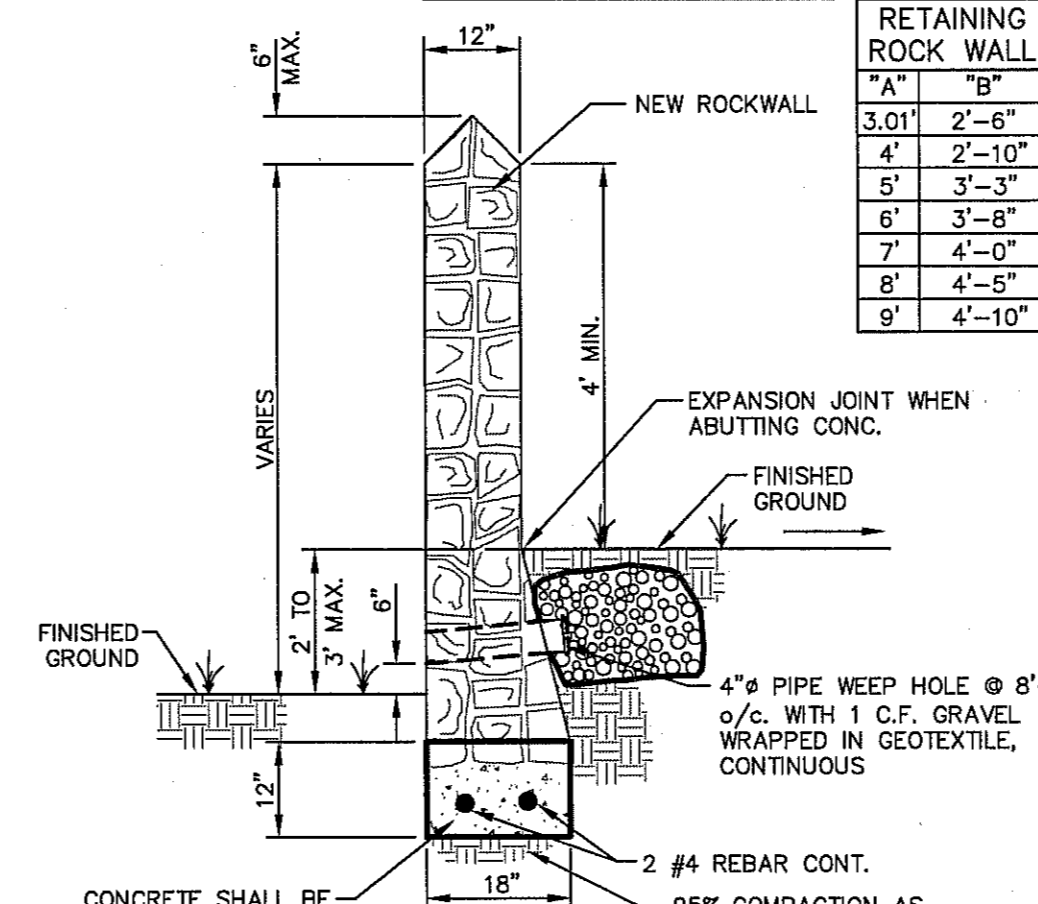
6 TYPICAL 52' ROW STREET SECTIONS DETAIL SCALE: N.T.S.



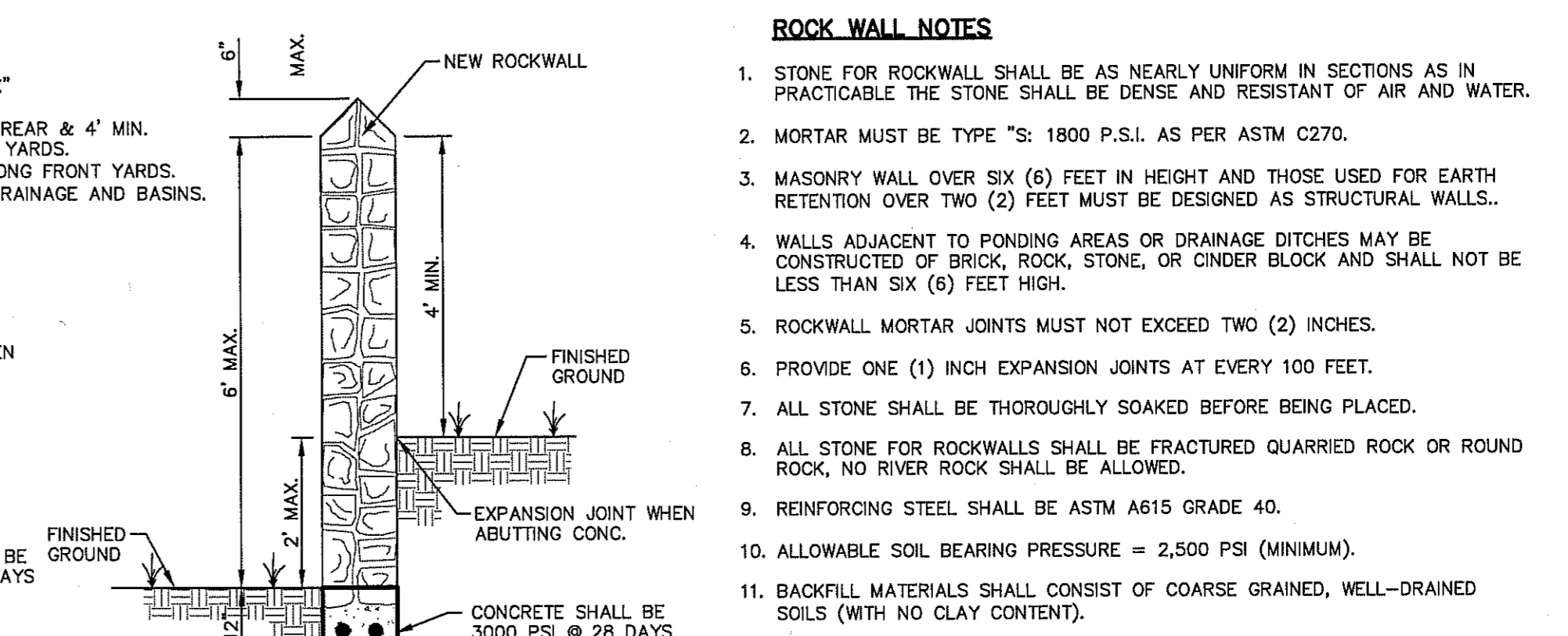
8 DIRECTIONAL RAMP @ INTERSECTION SCALE: N.T.S.



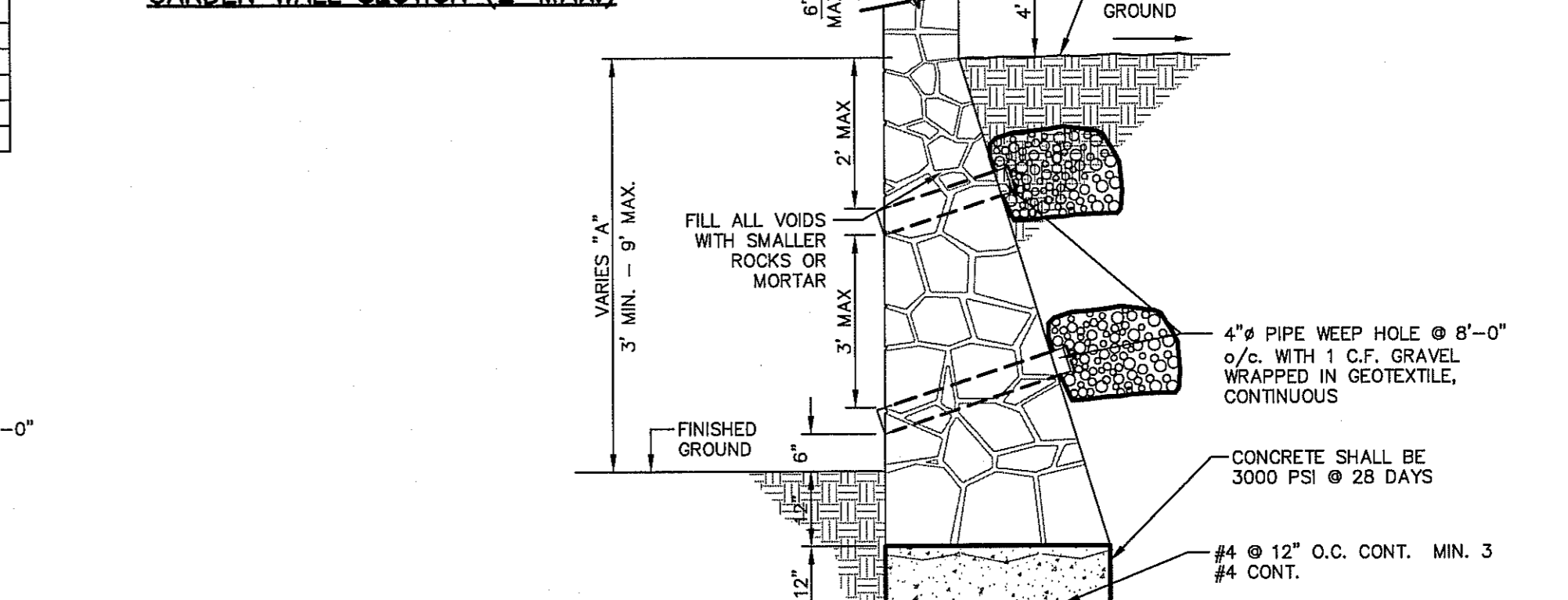
GARDEN WALL SECTION



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

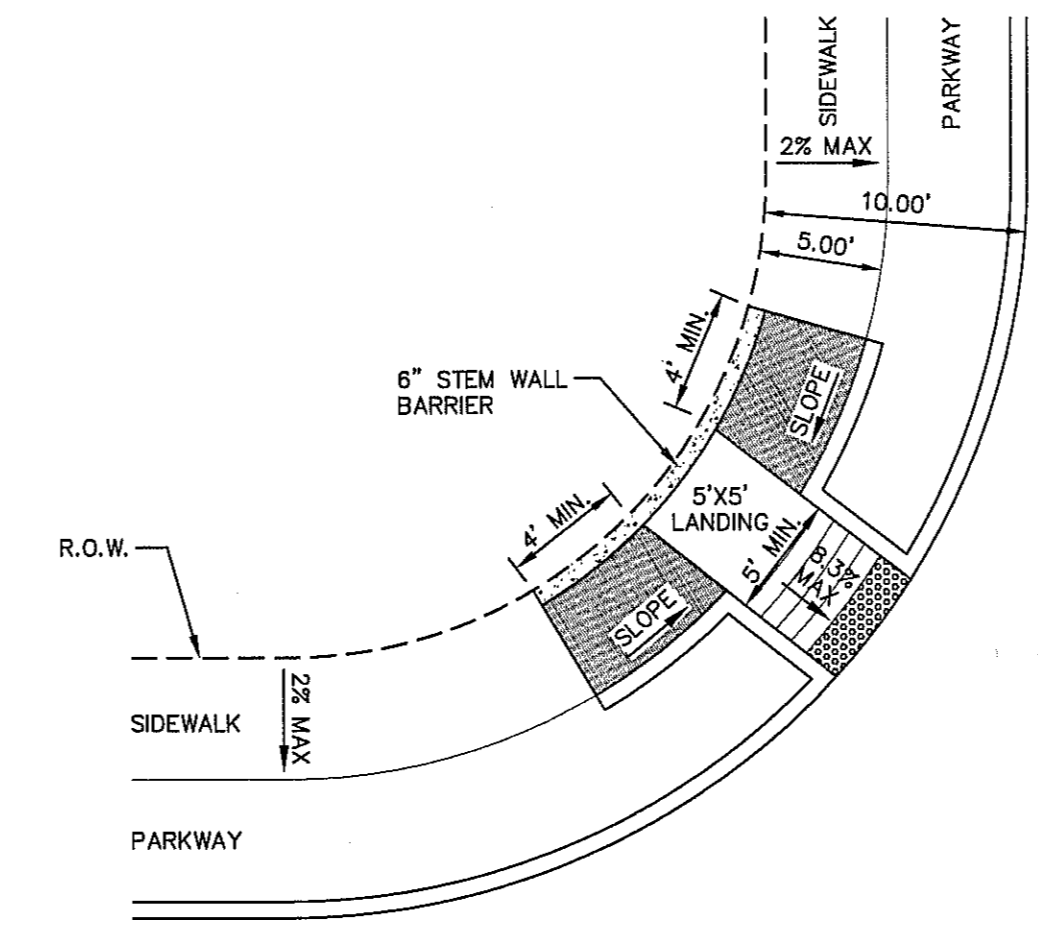


GARDEN WALL SECTION (2' MAX.)

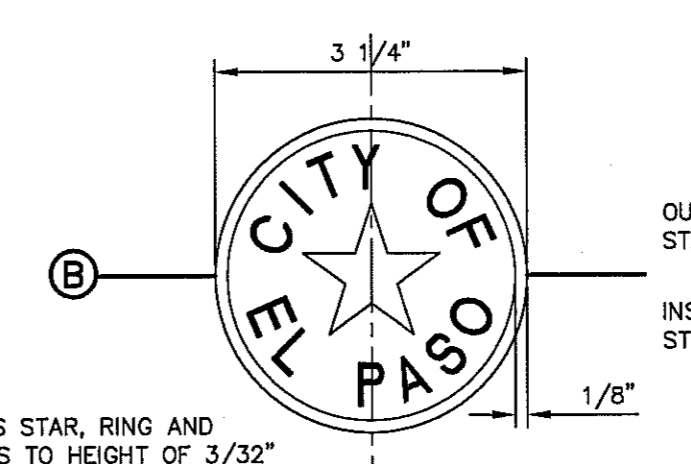


RETAINING WALL SECTION (3' MIN. TO 9' MAX.)

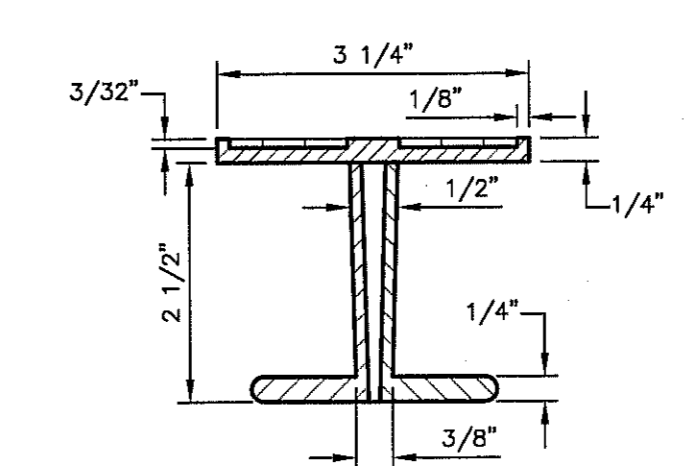
2 TYPICAL ROCKWALL DETAILS SCALE: 1" = 2'-0"



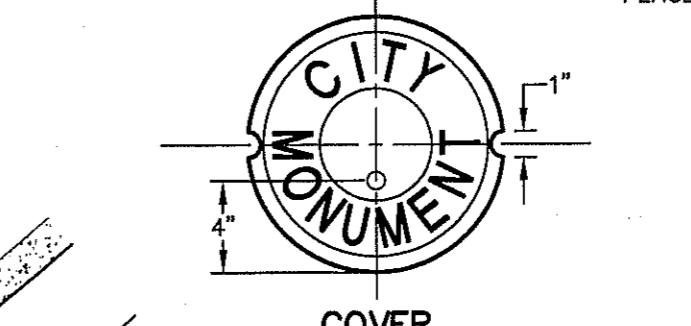
7 DIAGONAL CURB RAMP (FLARED SIDES) (TYPE V) SCALE: N.T.S.



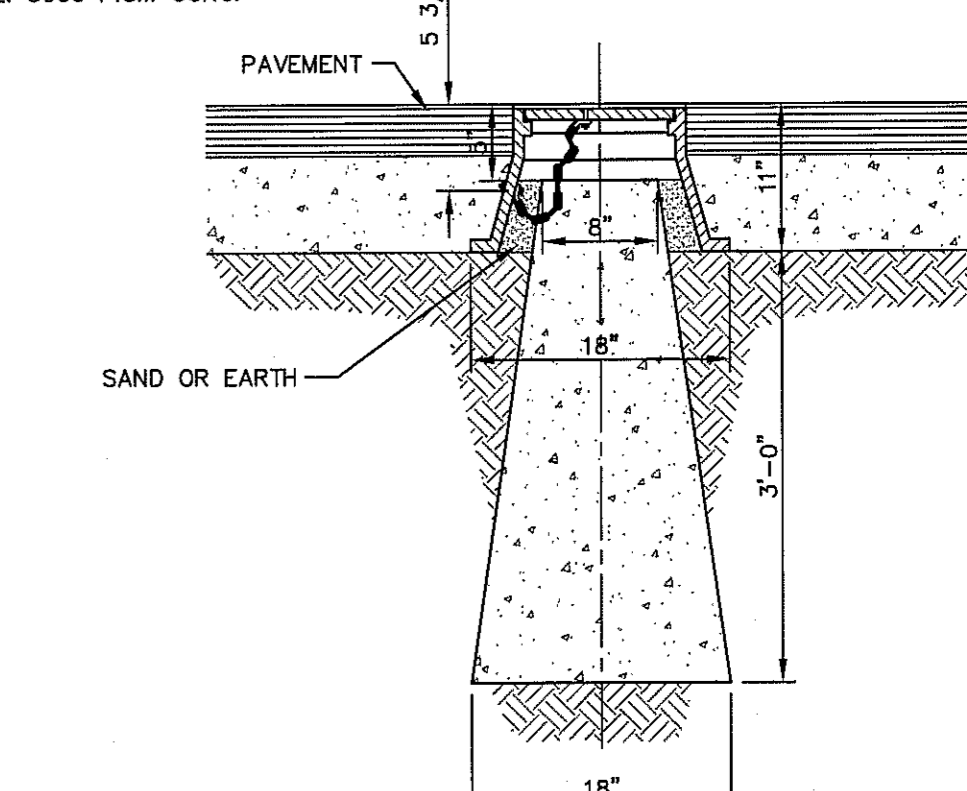
BRONZE MONUMENT CAP



MONUMENT BOX



COVER



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

- ROCK WALL NOTES
1. STONE FOR ROCKWALL SHALL BE AS NEARLY UNIFORM IN SECTIONS AS IN PRACTICABLE THE STONE SHALL BE DENSE AND RESISTANT OF AIR AND WATER.
2. MORTAR MUST BE TYPE "S" 1800 P.S.I. AS PER ASTM C270.
3. MASONRY WALL OVER SIX (6) FEET IN HEIGHT AND THOSE USED FOR EARTH RETENTION OVER TWO (2) FEET MUST BE DESIGNED AS STRUCTURAL WALLS.
4. WALLS ADJACENT TO PONDING AREAS OR DRAINAGE DITCHES MAY BE CONSTRUCTED OF BRICK, ROCK, STONE, OR CONCRETE BLOCK AND SHALL NOT BE LESS THAN SIX (6) FEET HIGH.
5. ROCKWALL MORTAR JOINTS MUST NOT EXCEED TWO (2) INCHES.
6. PROVIDE ONE (1) INCH EXPANSION JOINTS AT EVERY 100 FEET.
7. ALL STONE SHALL BE THOROUGHLY SOAKED BEFORE BEING PLACED.
8. ALL STONE FOR ROCKWALLS SHALL BE FRACTURED QUARRIED ROCK OR ROUND ROCK, NO RIVER ROCK SHALL BE ALLOWED.
9. REINFORCING STEEL SHALL BE ASTM A615 GRADE 40.
10. ALLOWABLE SOIL BEARING PRESSURE = 2,500 PSI (MINIMUM).
11. BACKFILL MATERIALS SHALL CONSIST OF COARSE GRAINED, WELL-DRAINED SOILS (WITH NO CLAY CONTENT).

Table with columns: BY, DATE, REVISIONS. Includes project name and location.

ceaa logo and contact information: TEXAS REGISTERED ENGINEERING FIRM #14584 4712 Woodrow Bean, Ste. F El Paso, TX 79924 915.544.5232 | www.ceagroup.net

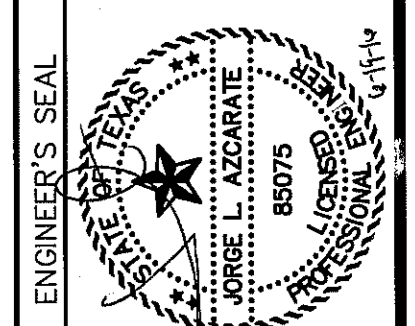


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PROJECT TITLE: TRES SUEÑOS UNIT TWELVE SUBDIVISION IMPROVEMENTS

Table with columns: SHEET TITLE, STANDARD DETAILS, SHEET NO.

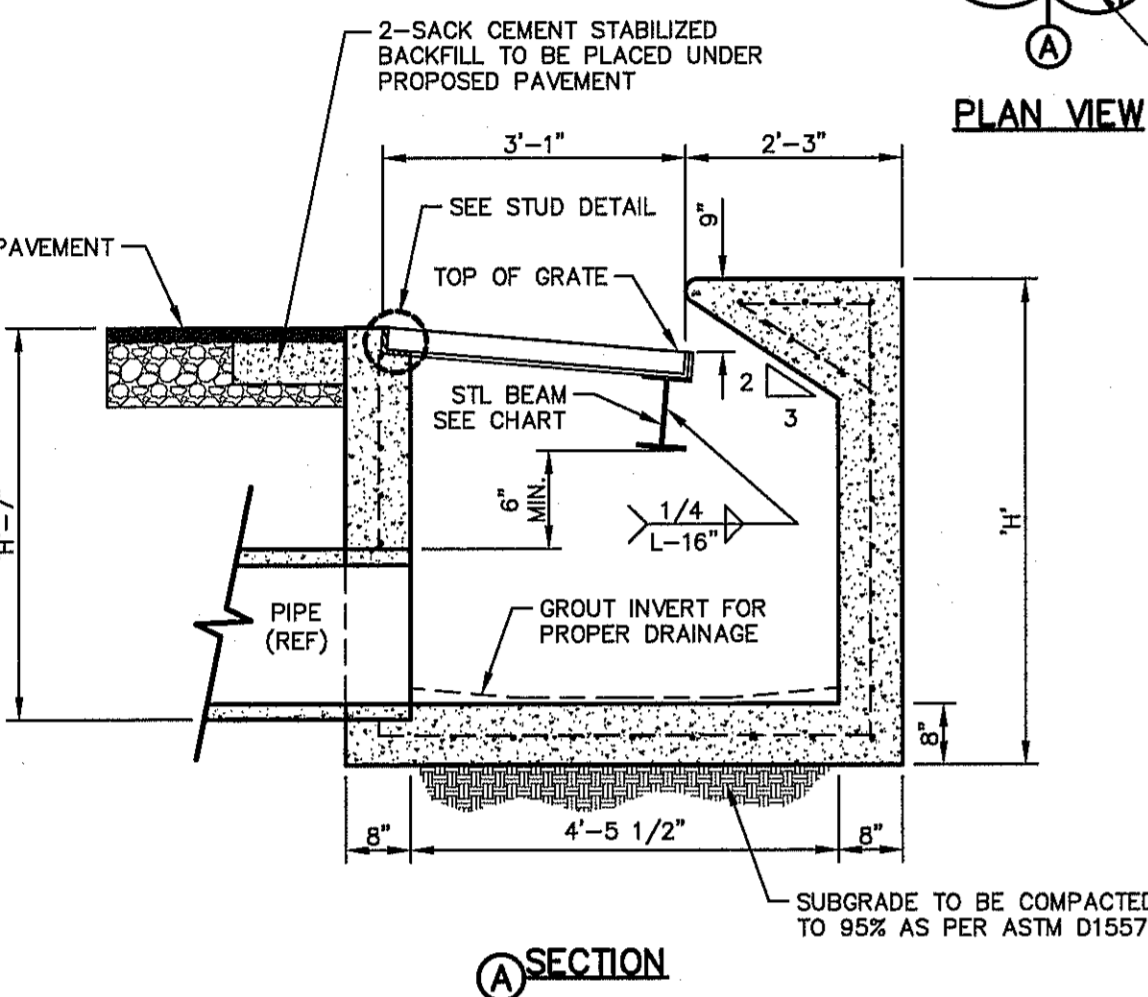
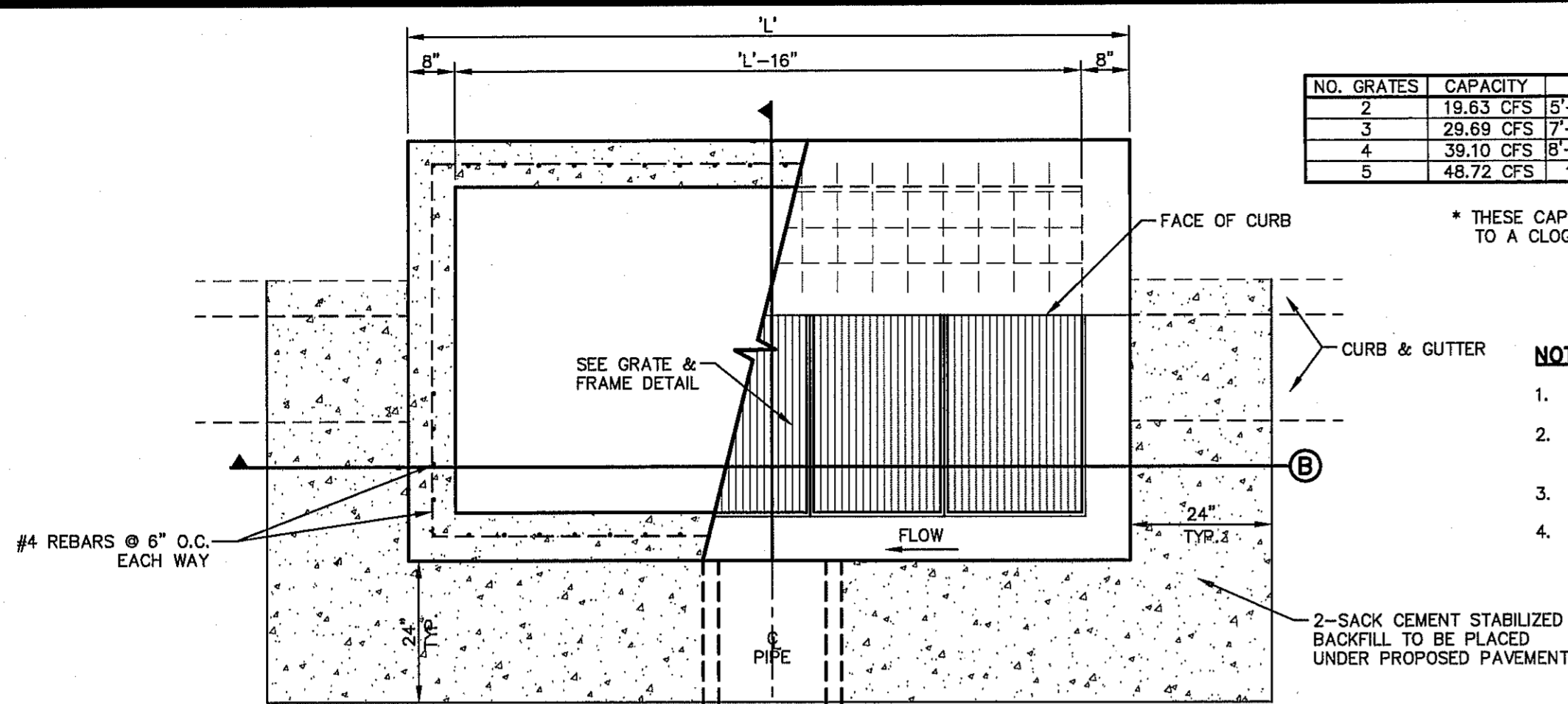
C8.2

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

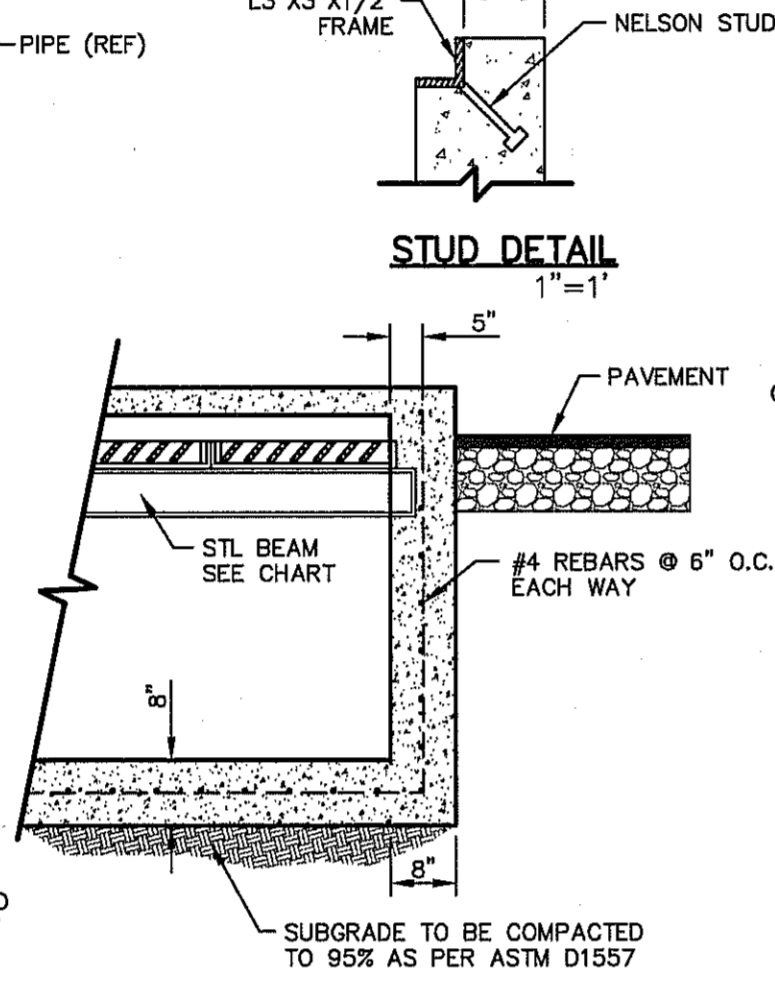
* THESE CAPACITIES CORRESPOND TO A CLOGGING FACTOR OF 0.5

NOTES:

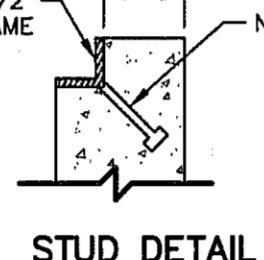
1. GRATES TO BE PERPENDICULAR TO TRAFFIC
2. CONCRETE TO BE 3,000 PSI (MIN.) CORE TEST @ 28 DAYS.
3. H=20" MAXIMUM
4. SEE STORM SEWER PLAN & PROFILES FOR APPROVED PIPE DIAMETER.



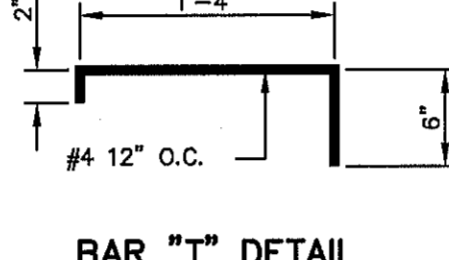
1 DROP INLET (TYPE I) DETAILS
SCALE: 1" = 2'-0"



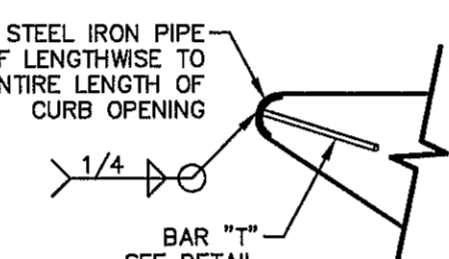
B SECTION



STUD DETAIL
1" = 1"



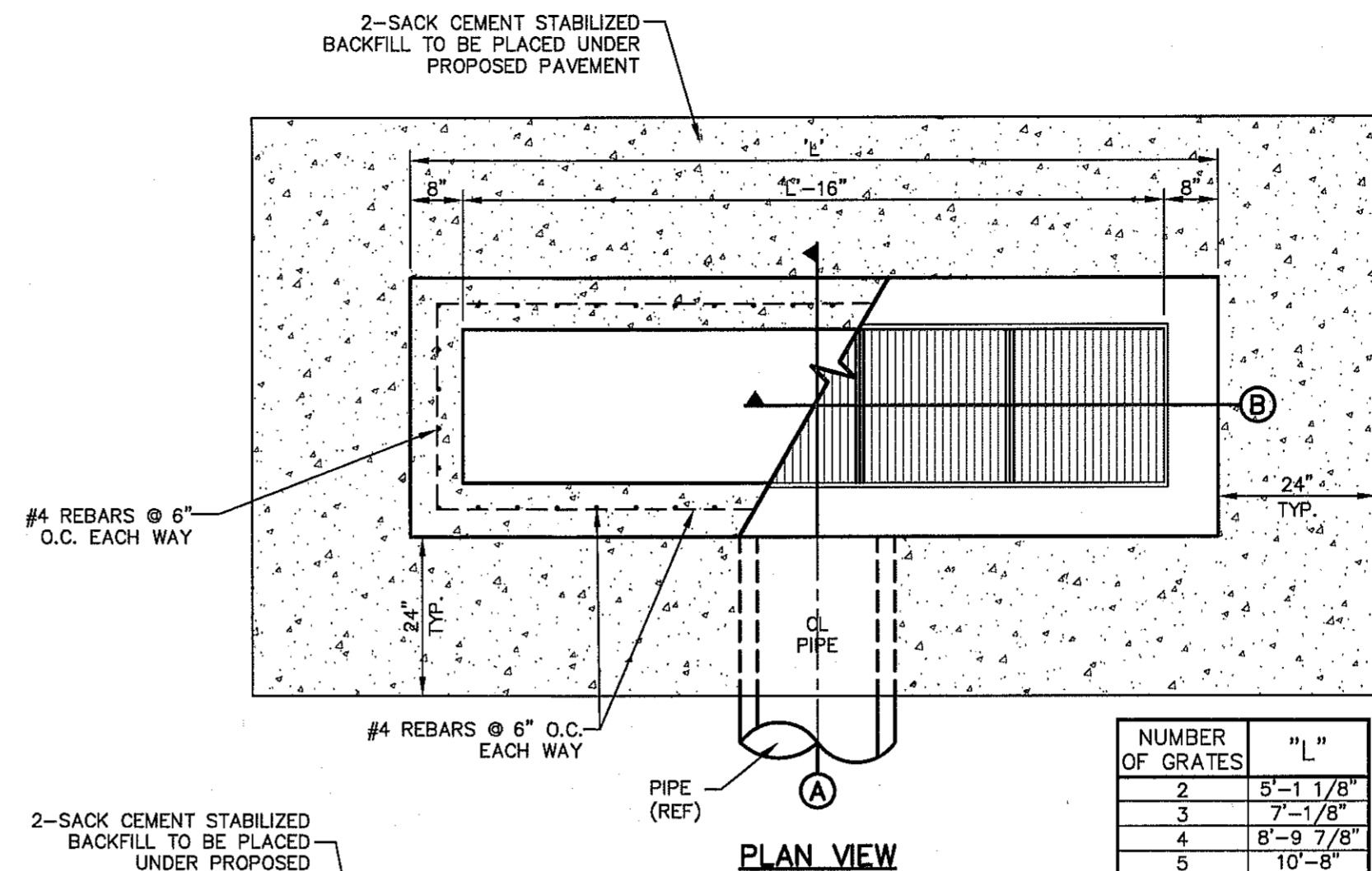
BAR "T" DETAIL
1" = 1"



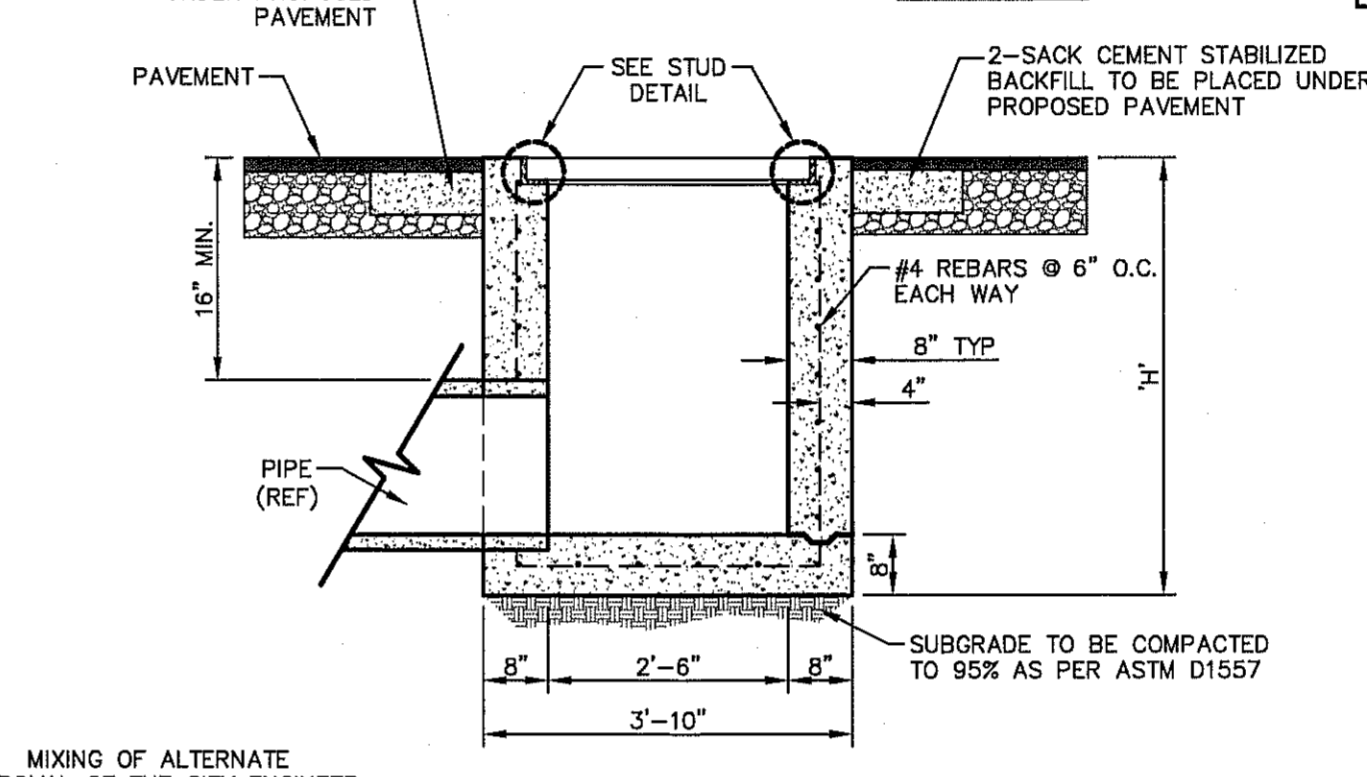
DETAIL "B"
1" = 1"

DROP INLET GENERAL NOTES:

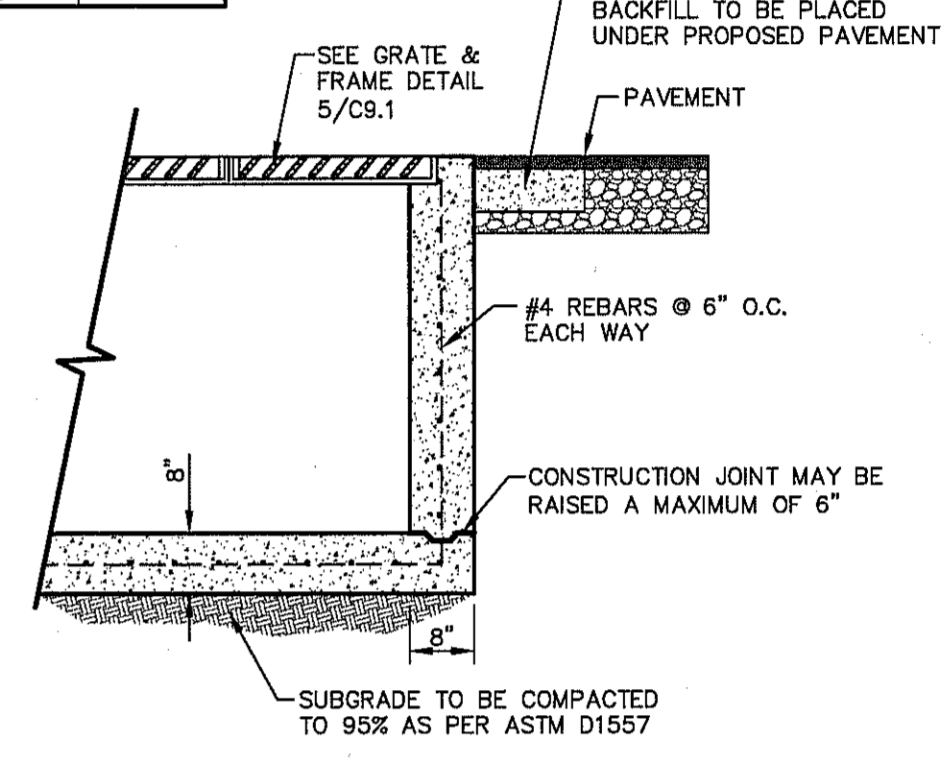
1. WELDED STEEL OR CAST GRATES AS DETAILED ARE ALL ACCEPTABLE GRATES. MIXING OF ALTERNATE TYPES OF GRATES ON THE SAME PROJECT WILL BE PERMITTED WITH THE APPROVAL OF THE CITY ENGINEER.
2. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE CURRENT STANDARD SPECIFICATIONS.
3. SHARP EDGES RESULTING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



PLAN VIEW



A SECTION



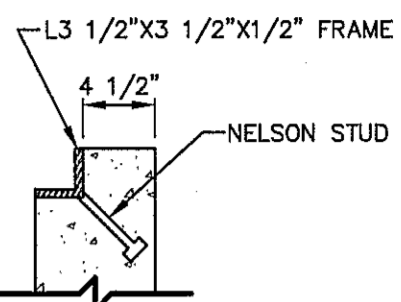
B SECTION

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

NUMBER OF GRATES	"L"
2	5'-1 1/8"
3	7'-1 1/8"
4	8'-9 7/8"
5	10'-8"

NOTES:

1. GRATES TO BE PERPENDICULAR TO TRAFFIC
2. CONCRETE TO BE 3,000 PSI (MIN.) CORE TEST @ 28 DAYS.
3. H=20" MAXIMUM
4. SEE STORM SEWER PLAN & PROFILES FOR APPROVED PIPE DIAMETER.



STUD DETAIL
N.T.S.

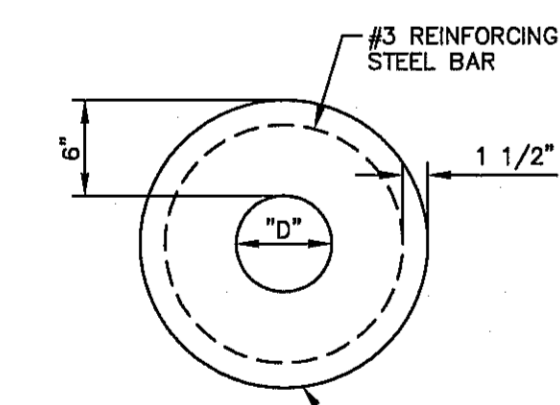
"D" DIAMETER OF PENETRATION (INCHES)	"A" CONCRETE HORIZONTAL DIMENSION FROM PENETRATION (INCHES)	NUMBER OF NO. 3 REINFORCING STEEL BARS (QUANTITY)	"B" MINIMUM CLEARANCE FROM EDGE OF CONCRETE APRON TO CENTER OF NEAREST REBAR (INCHES)	"C" MINIMUM CLEARANCE FROM PENETRATION EDGE TO CENTER OF NEAREST REBAR (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

CONSTRUCTION NOTES:

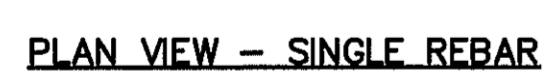
1. ANY DISTURBED SUBGRADE UNDER THE CONCRETE APRON SHALL BE COMPACTED TO 95% DENSITY ±3% OPTIMUM MOISTURE CONTENT IN ACCORDANCE WITH ASTM D-1557.
2. ANY DISTURBED COARSE UNDER THE CONCRETE APRON SHALL BE COMPACTED TO 100% DENSITY ±2% OPTIMUM MOISTURE CONTENT IN ACCORDANCE WITH ASTM D-1557.
3. PROVIDE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

GENERAL NOTES:

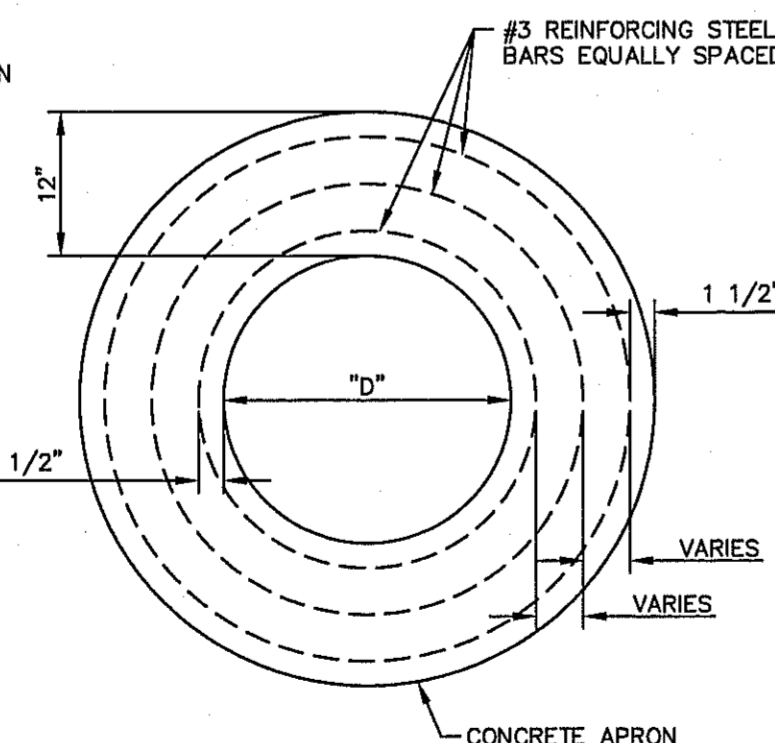
1. THE PENETRATION APRON SHOULD BE CAST IN-PLACE CONCRETE, (MINIMUM 28 DAY COMPRESSIVE STRENGTH 4000 PSI, HIGH EARLY CONCRETE IS REQUIRED).
2. TOPS OF PENETRATION APRON SHALL BE FLUSH WITH ROADWAY SURFACE OR FINISHED GRADE UNLESS OTHERWISE SPECIFIED BY THE CITY ENGINEER.



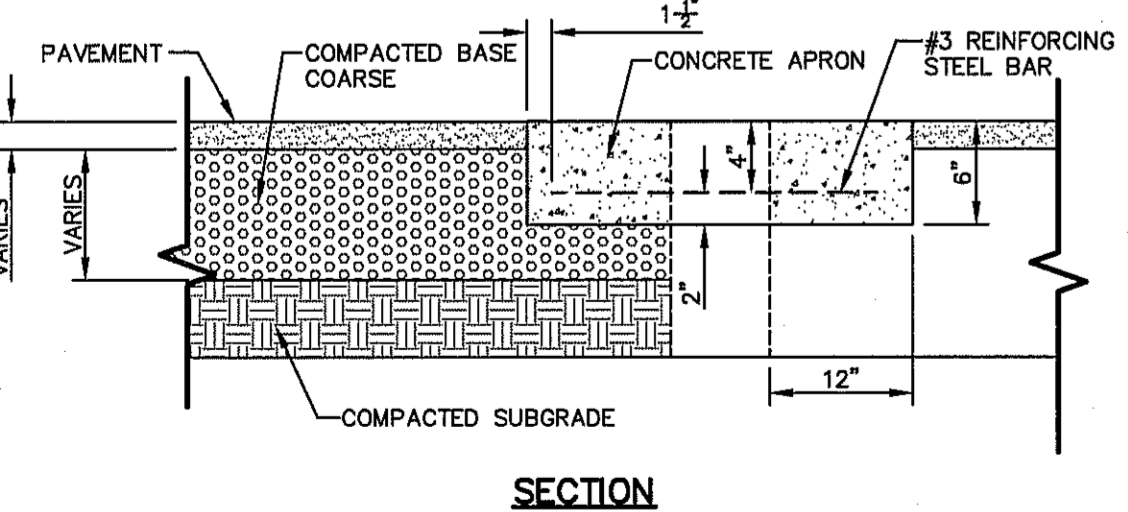
PLAN VIEW - 2 REBAR



PLAN VIEW - SINGLE REBAR

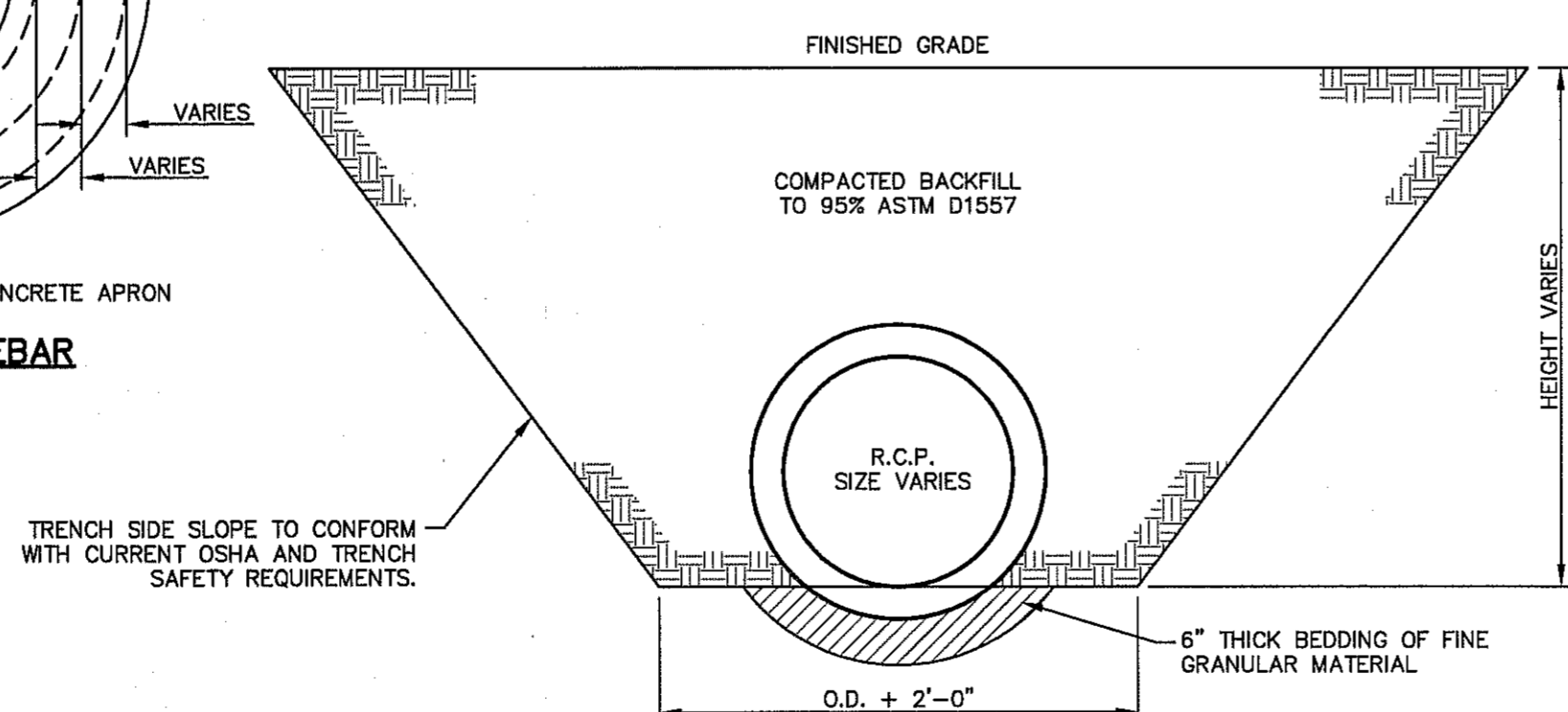


PLAN VIEW - 3 REBAR

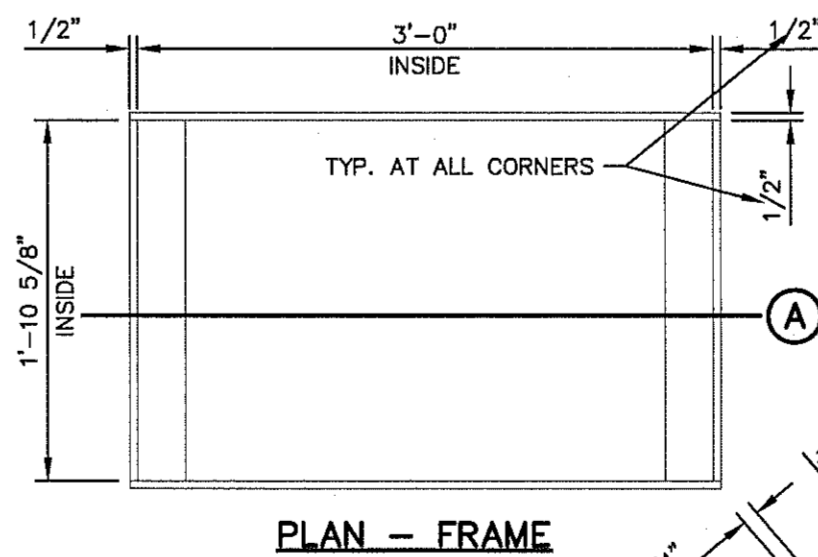


SECTION

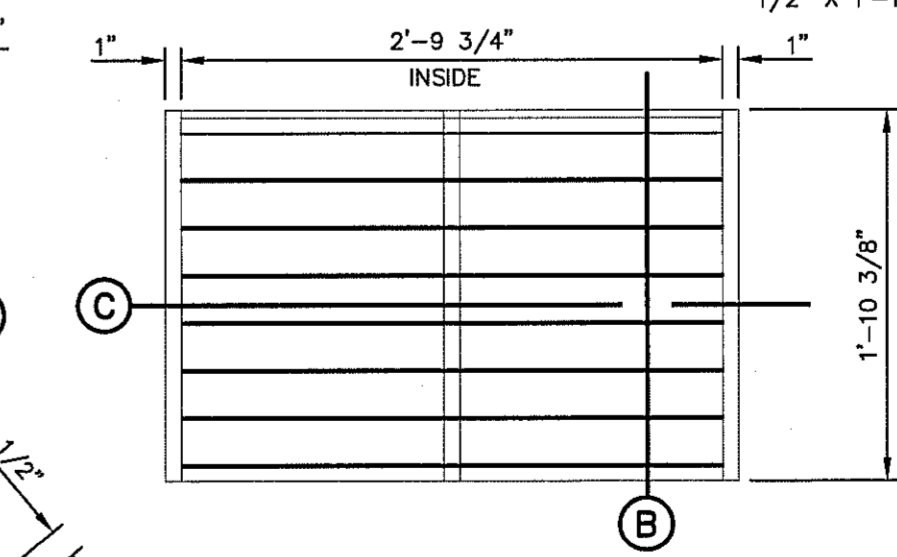
3 PENETRATION APRON DETAILS
SCALE: N.T.S.



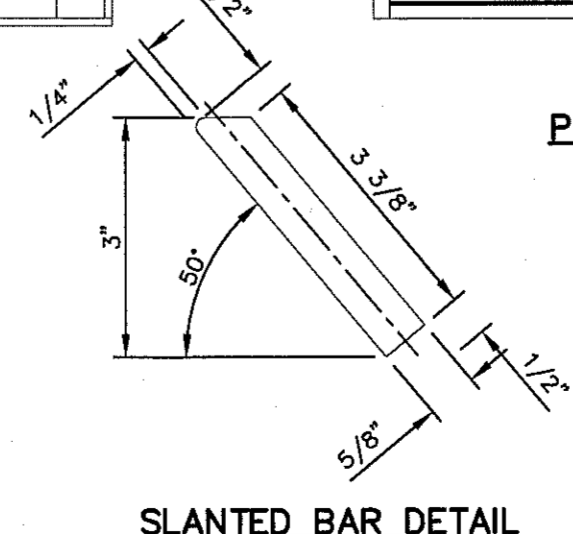
4 STORM SEWER BEDDING DETAIL
SCALE: 1/2" = 1'-0"



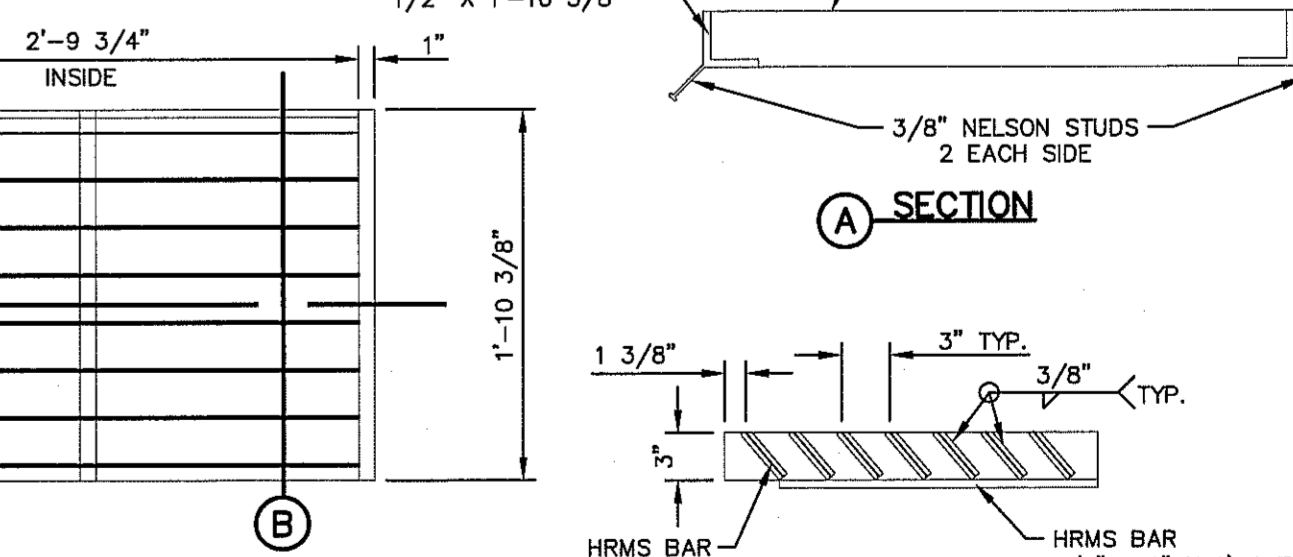
PLAN - FRAME



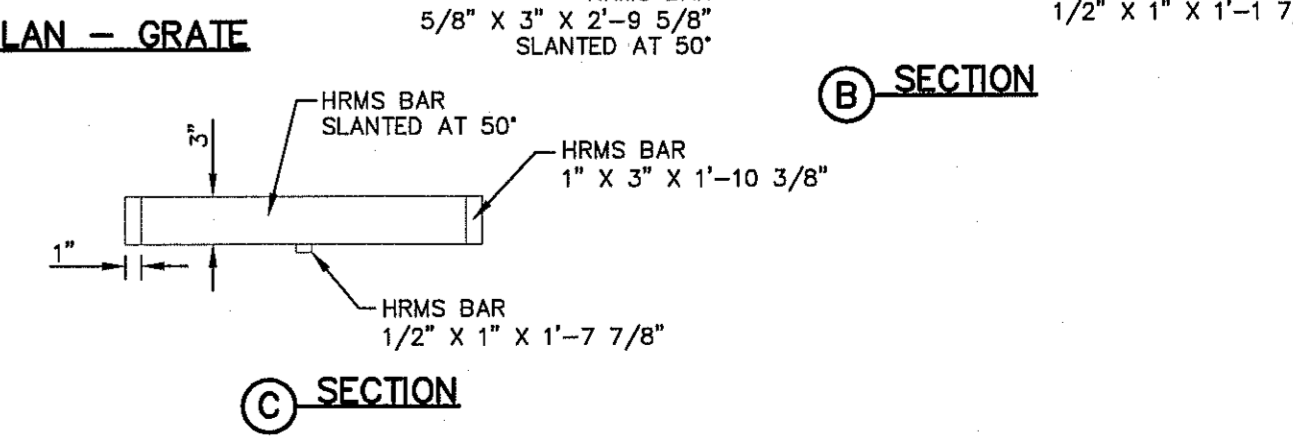
PLAN - GRATE



SLANTED BAR DETAIL



A SECTION



B SECTION

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

REVISIONS	DATE	BY

REFERENCES - BENCHMARKS
CITY MONUMENT AT POINT OF CURVE CENTERLINE RICH BEEN BEING USED BY THE CITY ENGINEER. THE BENCHMARK IS A DISTANCE OF 66.58 FEET FROM THE MONUMENT TO THE CENTERLINE OF THE SEWER MAIN AT AVENUE CITY DATUM ELEVATION.....4005.40

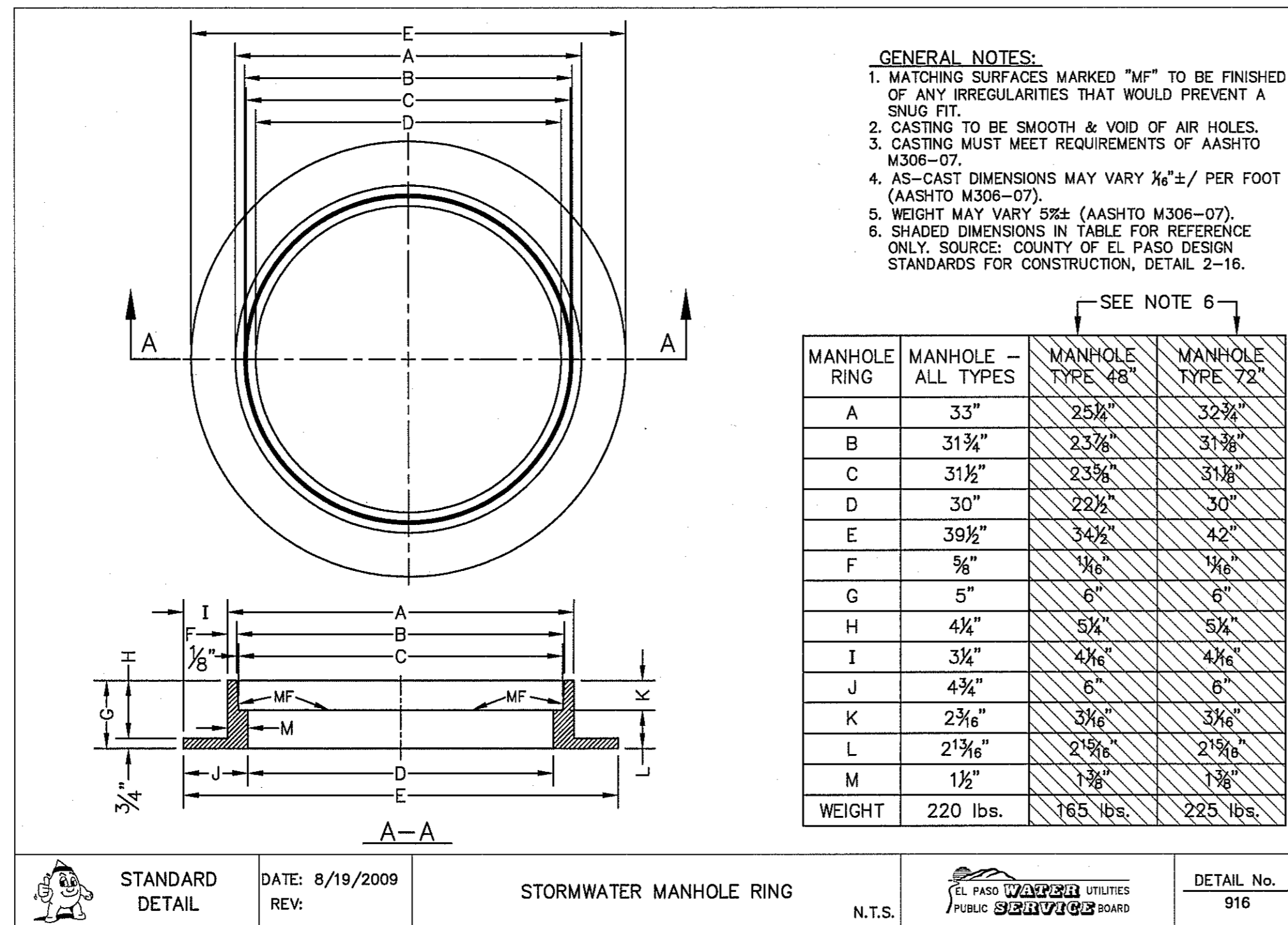


SCALE: N/A
Horizontal: N/A
Vertical: N/A
Contour Interval: N/A
DATE: JUNE 2016
DESIGN BY: R.O.
DRAWN BY: R.O.
CHECK BY: J.L.A.
APPROV. BY: J.L.A.
JOB No. 2-000-194LD

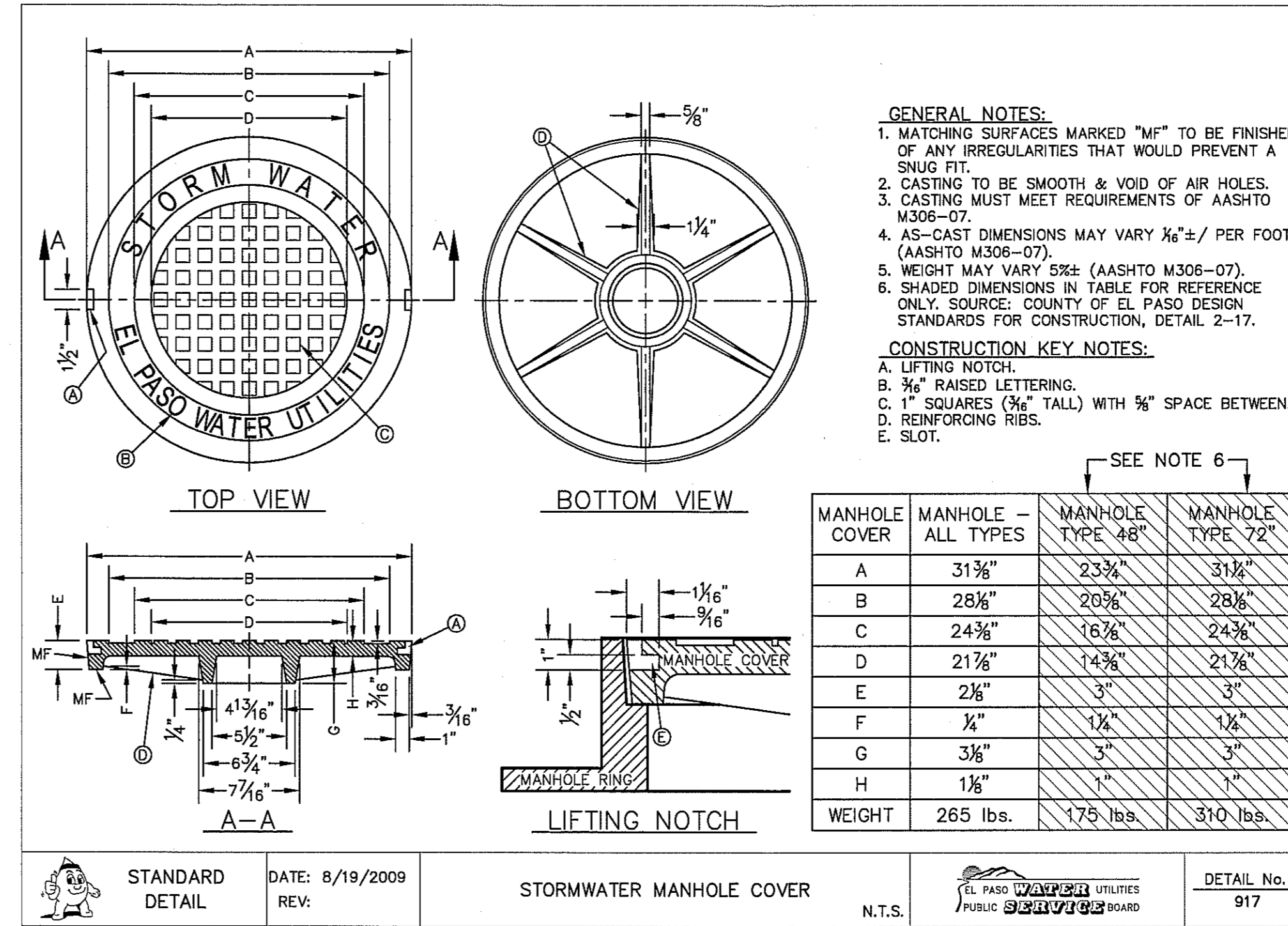
PROJECT TITLE
**TRES SUEÑOS UNIT TWELVE
SUBDIVISION IMPROVEMENTS**

SHEET TITLE
DRAINAGE DETAILS

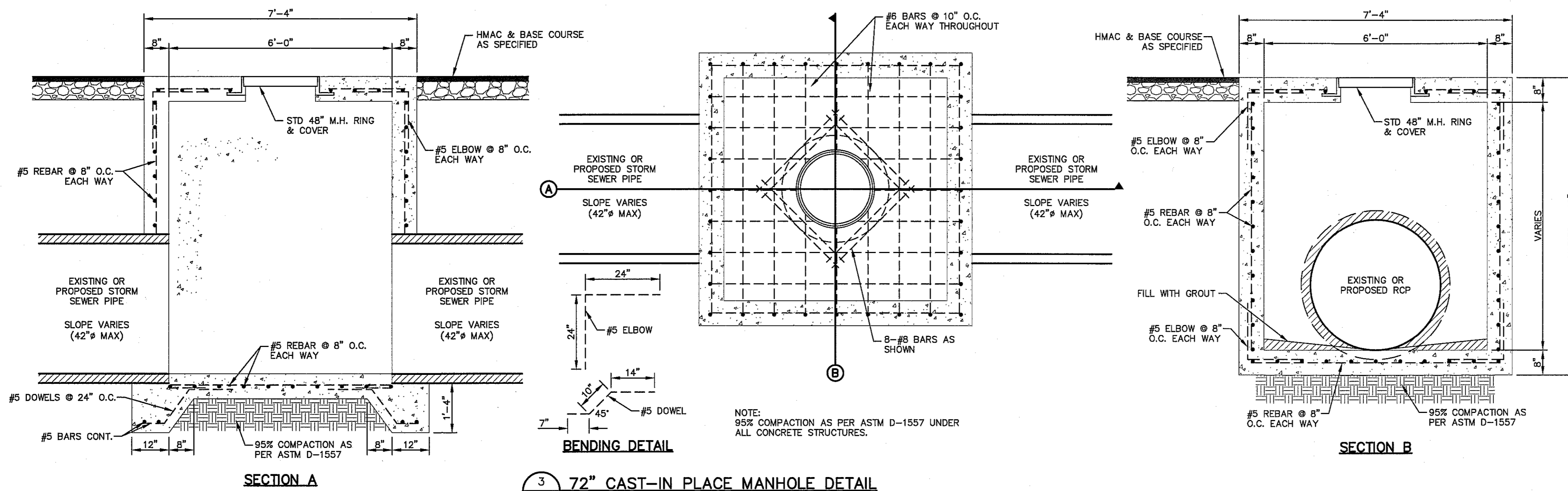
(SHEET 1 OF 2)
SHEET NO.
C9.1



1 STORMWATER MANHOLE RING N.T.S.



2 STORMWATER MANHOLE COVER N.T.S.



3 72" CAST-IN PLACE MANHOLE DETAIL SCALE: 1" = 2'-0"

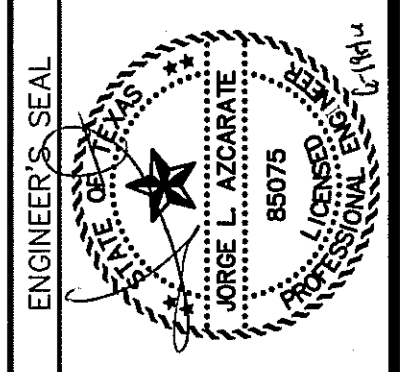
REFERENCES - BENCHMARKS

CITY MONUMENT AT POINT OF CURVE CENTERLINE HIGH FROM THE SOUTHERLY RIGHT OF WAY LINE OF MONTANA AVENUE CITY DATUM ELEVATION.....4005.40

DATE	REVISIONS	BY

ceag

TEXAS REGISTERED ENGINEERING FIRM F-4664
4712 Woodrow Bean, Ste. F, El Paso, TX 79924
915.544.5232 www.ceagroup.net



SCALE: N/A

Horizontal: N/A

Vertical: N/A

Contour Interval: N/A

DATE: JUNE 2016

DESIGN BY: R.O.

DRAWN BY: J.L.A.

CHKD. BY: J.L.A.

APPVD. BY: J.L.A.

JOB No. 2000-1941D

PROJECT TITLE

TRES SUEÑOS UNIT TWELVE

SUBDIVISION IMPROVEMENTS

SHEET TITLE

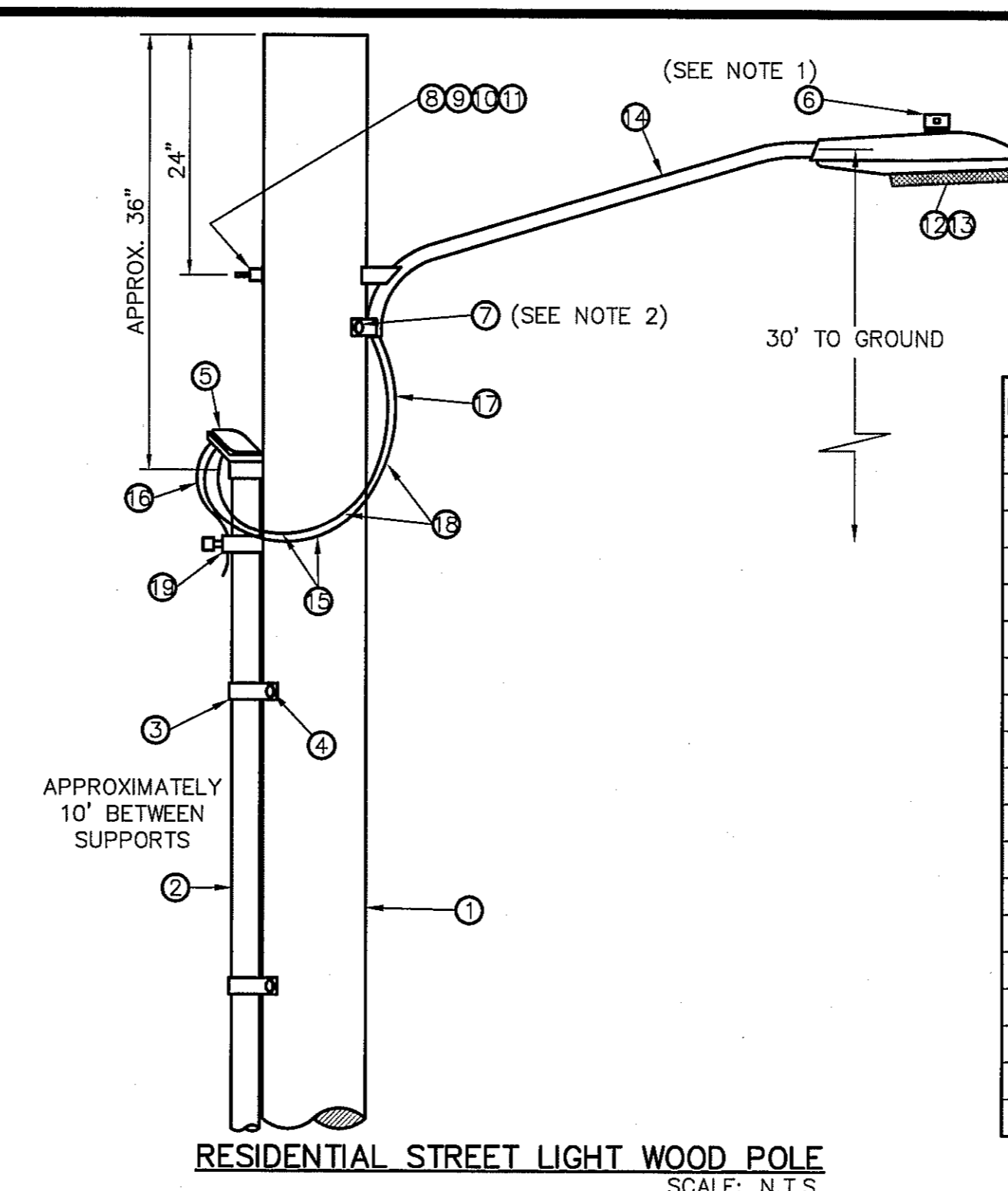
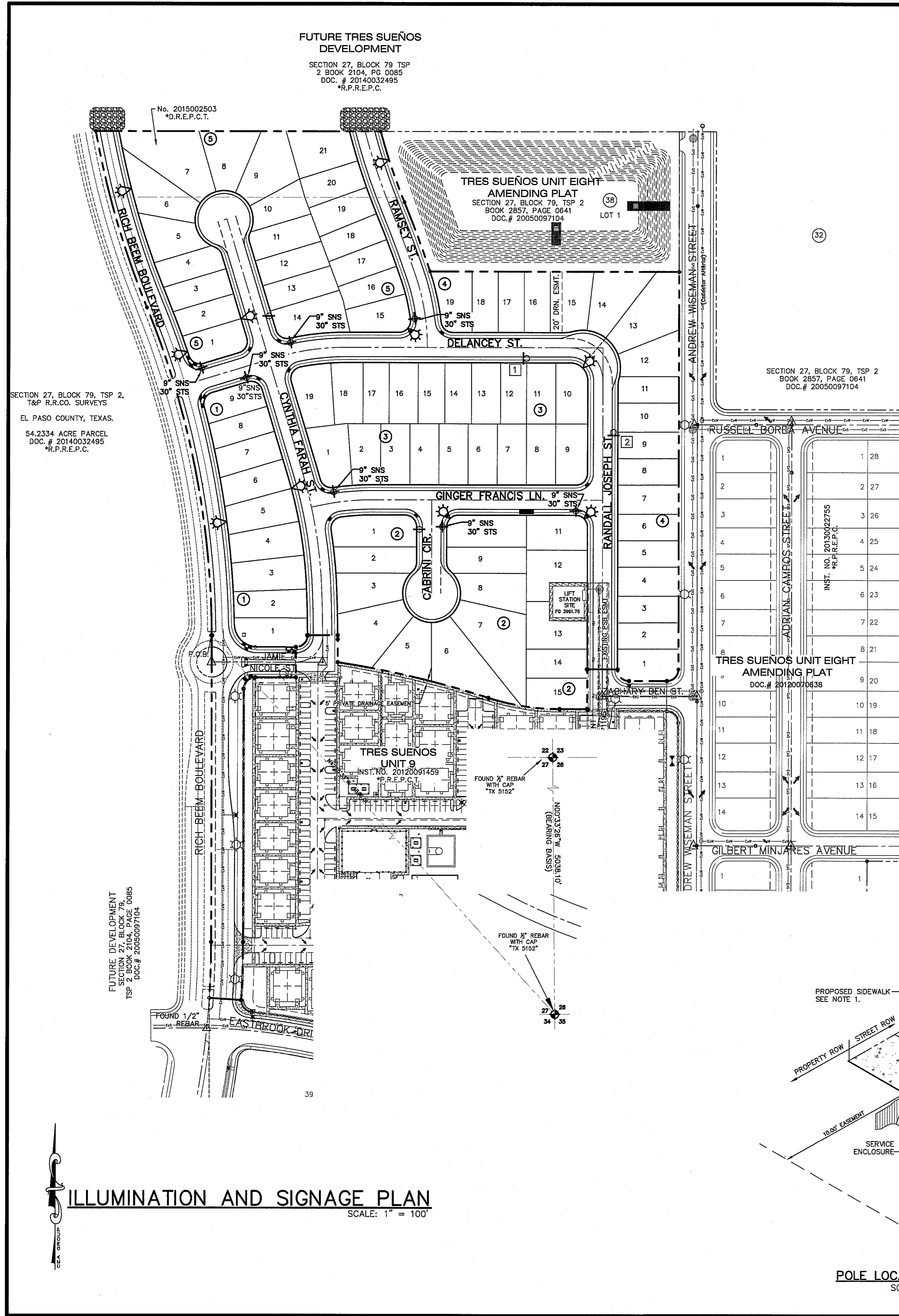
DRAINAGE

DETAILS

(SHEET 2 OF 2)

SHEET NO.

C9.2



UTILITY LOCATOR SERVICES

EL PASO ELECTRIC COMPANY	(915) 543-5720
EL PASO ENERGY CORPORATION	(915) 496-5244
EL PASO WATER UTILITIES	(915) 534-5500
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 811

FOR FIELD LOCATING EXISTING UTILITIES

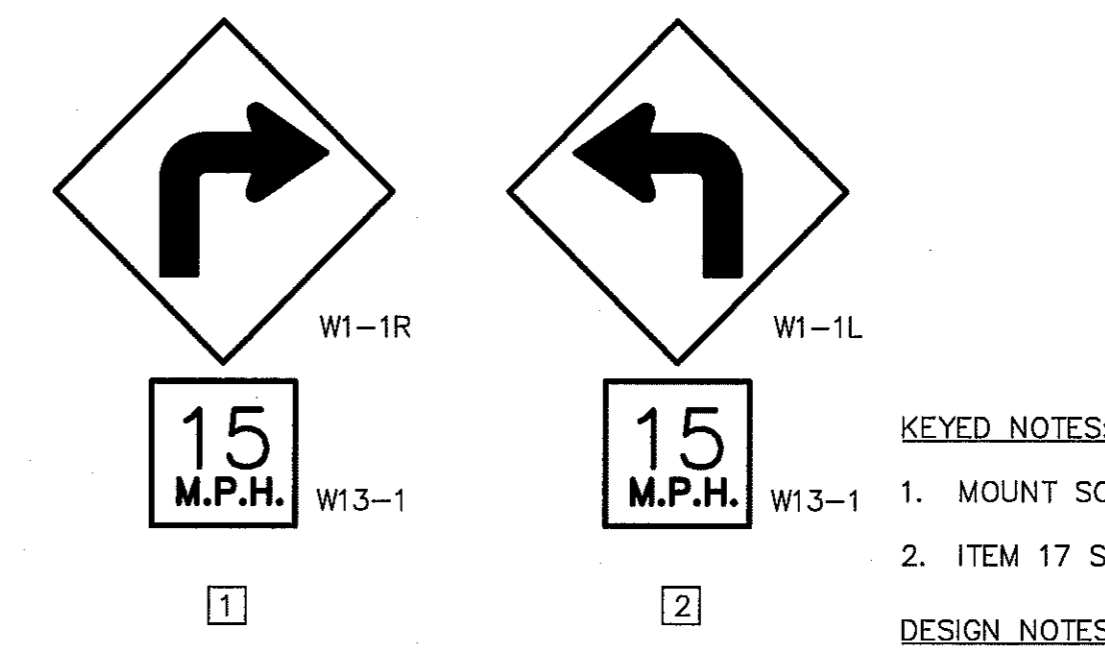
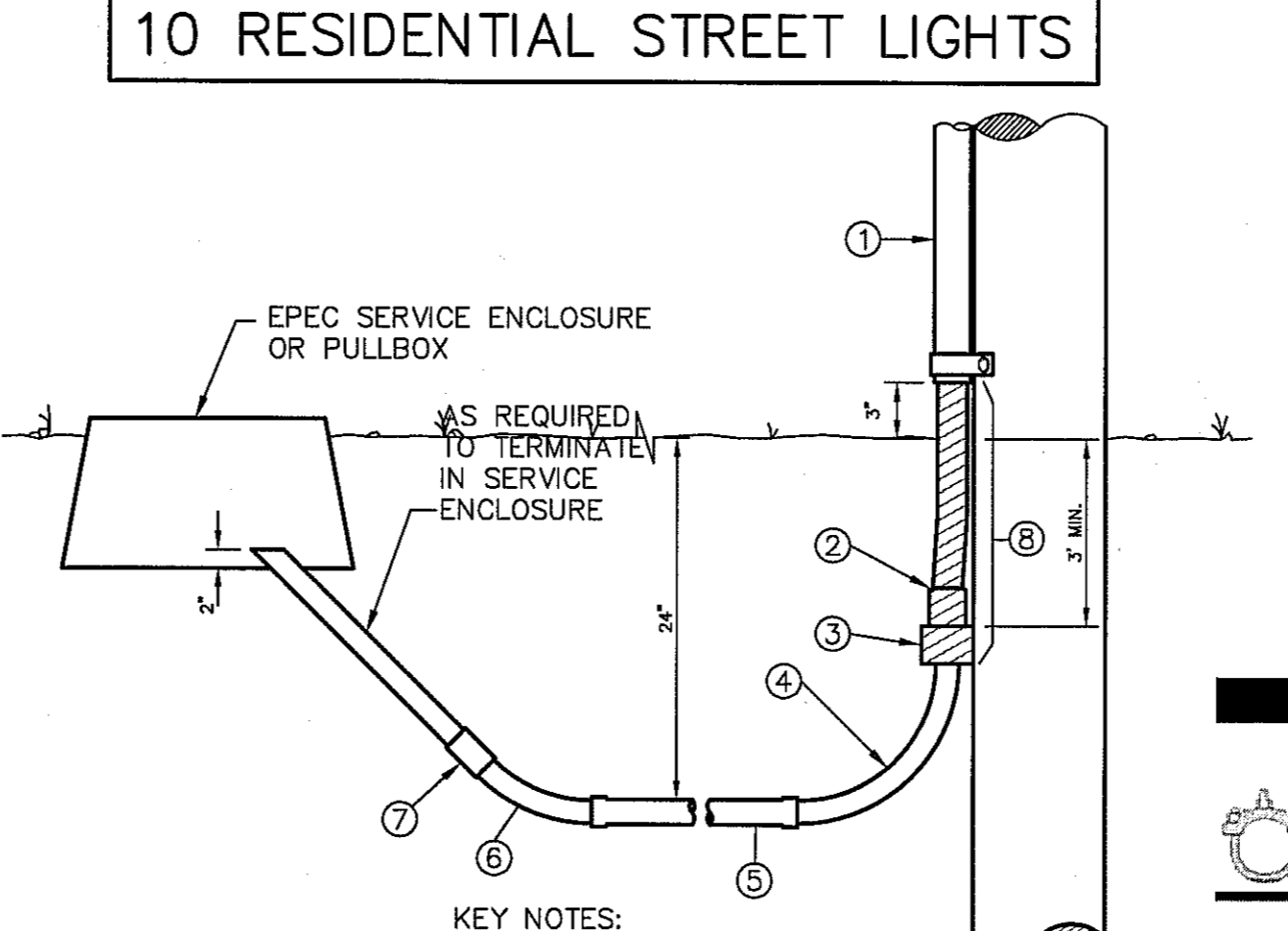
ITEM No.	DESCRIPTION	STOCK No.	QTY.
1	POLE, 35 FT.-CLASS IV	ITEM NO.	1
2	GALVANIZED RIGID 1/2" CONDUIT	ITEM NO.	1
3	PIPE STRAP FOR 1/2" CONDUIT, 2-HOLE	ITEM NO.	1
4	LAG BOLT, 1/4" x 2"	ITEM NO.	1
5	WEATHERHEAD, 1/2" CONDUIT	ITEM NO.	1
6	PHOTOCELL, 240V-SEE NOTE 1	ITEM NO.	1
7	LAG BOLT, 1/2" x 4"	ITEM NO.	1
8	MACHINE BOLT, 5/8" x 8"	ITEM NO.	1
9	SQUARE GALV. WASHER, 2-1/4"x2"-1/4"	ITEM NO.	1
10	COIL-SPRING WASHER, 5/8"	ITEM NO.	1
11	LOCKNUT, 5/8"	ITEM NO.	1
12	LUMINAIRE, 100W H. P. S.	ITEM NO.	1
13	HPS LAMP, 100W	ITEM NO.	1
14	MAST ARM, 6' x 1-1/4"	ITEM NO.	1
15	COPPER CABLE, #12, 19 STRAND, 600 V GREEN	ITEM NO.	1
16	COPPER CABLE, #12, SOLID, 600 V, UF	ITEM NO.	1
17	CABLE #10, 2 CONDUCTOR, 600 V, UF	ITEM NO.	1
18	SLEEVES, #12-10	ITEM NO.	1
19	GROUNDING CLAMP	ITEM NO.	1

LEGEND:

- PROPOSED RESIDENTIAL STREET LIGHT
- EXISTING RESIDENTIAL STREET LIGHT
- PROPOSED 9" STREET NAME SIGN (TWO SIGNS) AND 30" STOP SIGN
- NO OUTLET SIGN
- PROPOSED N.D.B.C.U. MAIL BOX

NOTE:

- POSTS MUST BE BREAK-AWAY TYPE AS SHOWN ON THIS SHEET.
- TRAFFIC STREET SIGNS MUST BE OF HIGH INTENSITY REFLECTIVE SHEETING.

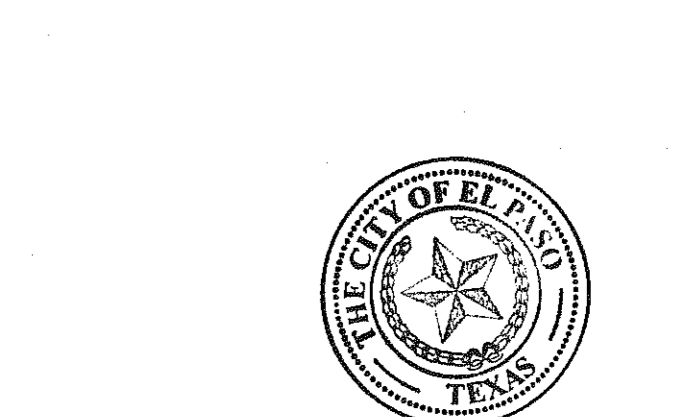
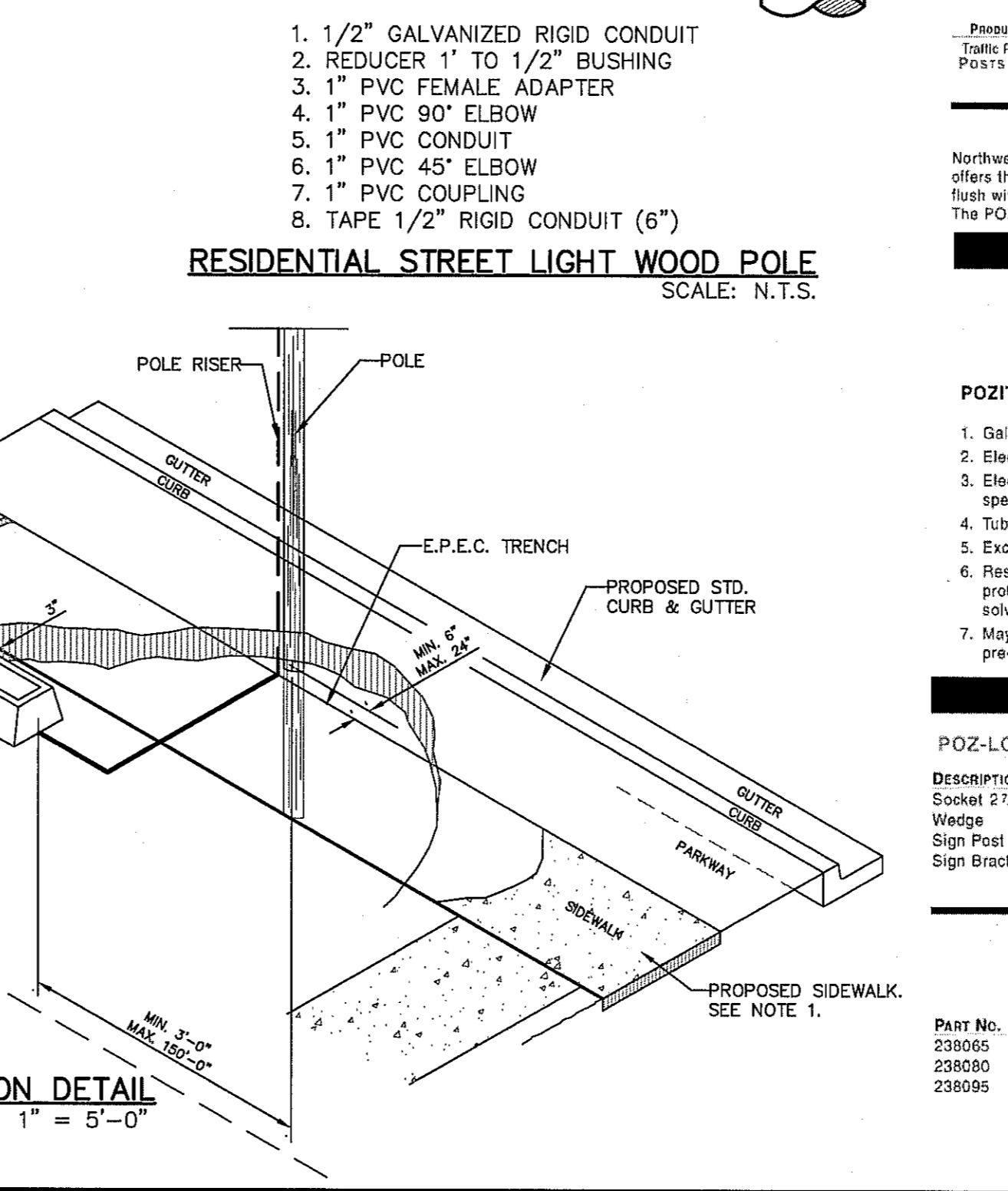
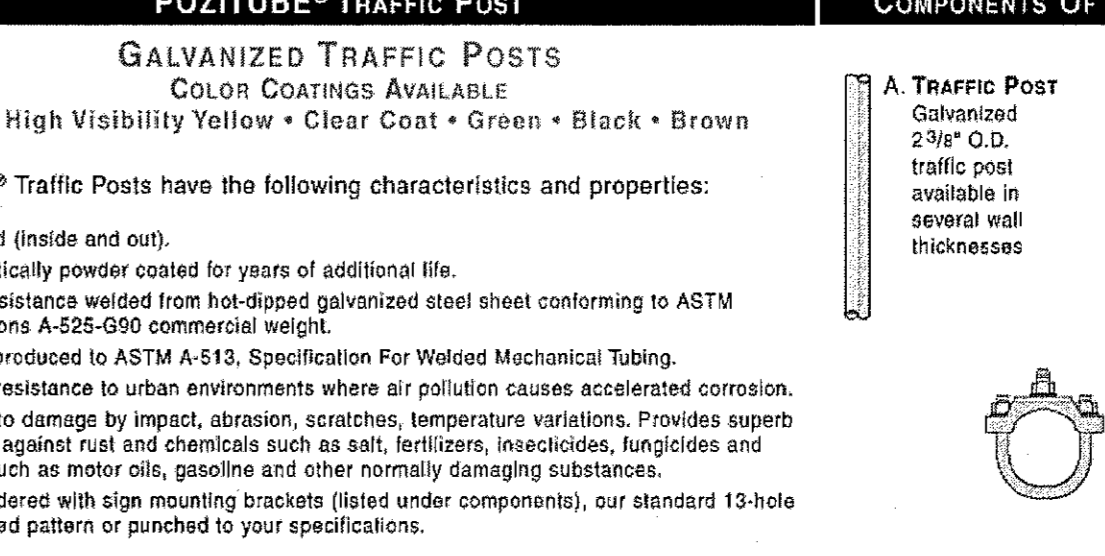
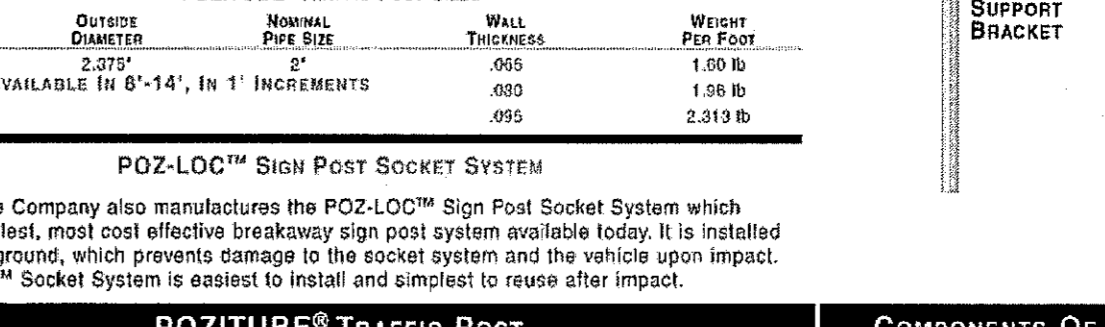
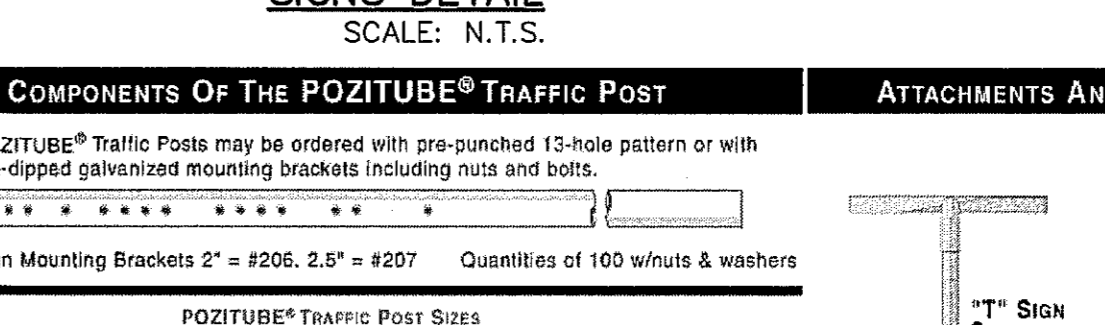


KEYED NOTES:

- MOUNT SO THAT CONTROL FACES NORTH
- ITEM 17 SHALL NOT BE SPLICED INSIDE ITEM 14

DESIGN NOTES:

- INSTALLATION SHALL COMPLY WITH ALL LOCAL CODE REQUIREMENTS.
- FOR ANY CLARIFICATION, EXCEPTIONS, OR QUESTIONS REGARDING CODE INTERPRETATION, CALL THE EL PASO ELECTRIC CO. DISTRIBUTION DEVELOPMENT DEPARTMENT.



ENGINEER'S SEAL

THESE PLANS WERE PREPARED BY ME OR UNDER MY CLOSE PERSONAL SUPERVISION AND I AM A LICENSED PROFESSIONAL ENGINEER IN THE STATE OF TEXAS. I AM NOT PROVIDING CONTRACT ADMINISTRATION SERVICES. THESE PLANS ARE NOT TO BE USED FOR CONSTRUCTION WITHOUT THE SIGNATURE OF THE ENGINEER.

DATE: JUNE 2016
DESIGN BY: R.O.
DRAWN BY: R.O.
CHKD. BY: J.L.A.
APPVD. BY: J.L.A.

SCALE: 1"=100'
Horizontal: N/A
Vertical: N/A
Contour Interval: N/A

PROJECT TITLE: TRES SUEÑOS UNIT TWELVE SUBDIVISION IMPROVEMENTS

SHEET TITLE: ILLUMINATION PLAN

SHEET NO.: C10.1

REFERENCES - BENCHMARKS

CITY MONUMENT AT POINT OF CURVE CENTERLINE RICH BEEM BOULEVARD FROM THE SOUTHERLY RIGHT OF WAY LINE OF MONTANA AVENUE CITY DATUM ELEVATION:.....4005.40

BY: _____

REVISIONS

DATE

TECHNICAL STAFF

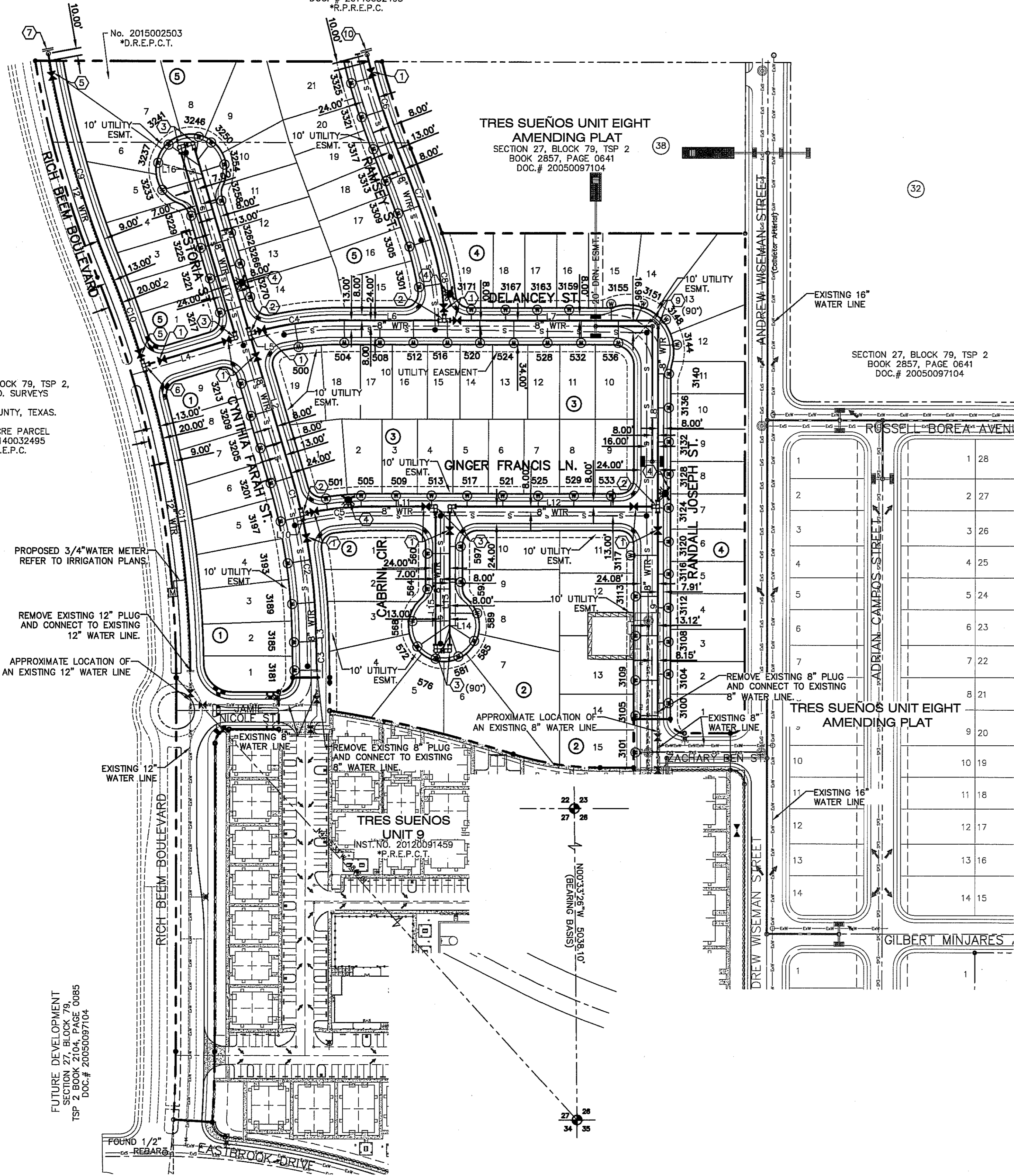
REGISTERED ENGINEERING FIRM #4664
4712 Woodrow Bean, Ste. F El Paso, TX 79924
915.544.5232 | www.ceegroup.net

ILLUMINATION PLAN

SHEET NO. C10.1

FUTURE THES SUEÑOS DEVELOPMENT

SECTION 27, BLOCK 79 TSP
2 BOOK 2104, PG 0085
DOC. # 20140032495
R.P.R.E.P.C.



CURVE TABLE

CURVE	RADIUS	LENGTH	TANGENT	CHORD	BEARING	DELTA
C1	808.00'	55.12'	27.57'	55.11'	N14°46'48"W	003°54'31"
C2	808.00'	155.57'	78.03'	155.33'	N07°18'36"W	011°01'53"
C3	3240.84'	36.54'	18.27'	36.54'	N01°17'23"W	000°38'46"
C4	433.00'	126.41'	63.66'	125.96'	S81°37'46"W	016°43'38"
C5	433.00'	92.59'	46.47'	92.41'	S83°52'02"W	012°15'05"
C6	1039.00'	144.89'	72.56'	144.77'	S18°19'31"E	007°59'23"
C7	1961.00'	125.98'	63.01'	125.95'	N20°28'47"W	003°40'51"
C8	388.00'	119.45'	60.20'	118.98'	N09°49'11"W	017°38'21"
C9	1480.00'	311.53'	156.35'	310.96'	S16°01'57"E	012°03'38"
C10	1523.43'	146.83'	73.47'	146.78'	N19°47'23"W	005°31'20"
C11	1523.43'	435.62'	219.31'	434.14'	N08°50'12"W	016°23'01"

LINE TABLE

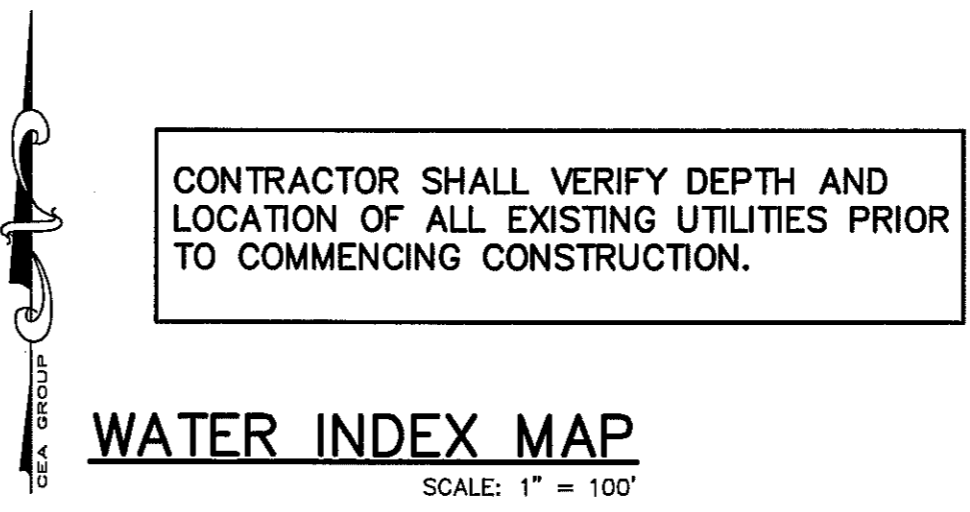
LINE	BEARING	LENGTH
L1	S16°44'03"E	279.81'
L2	S16°44'03"E	209.75'
L3	S01°47'40"E	28.78'
L4	S73°15'57"W	136.36'
L5	S73°15'57"W	2.88'
L6	S89°59'34"W	148.01'
L7	S89°59'34"W	302.69'
L8	N00°00'11"E	262.00'
L9	N00°02'22"W	288.41'
L10	N77°44'29"E	6.84'
L11	N89°59'34"E	90.59'
L12	N89°59'34"E	294.45'
L13	S00°00'26"E	203.07'
L14	S89°59'34"W	20.00'
L15	N00°00'26"W	203.07'
L16	S73°15'57"W	20.00'
L17	S16°44'03"E	279.81'

WATER QUANTITIES

DESCRIPTION	QUANTITY	UNIT
8" PVC WATER LINE	3633	LF
8" GATE VALVE	13	EA
FIRE HYDRANT	4	EA
12" PVC WATER LINE	894	LF
12" GATE VALVE	2	EA
3/4" WATER CONNECTION	83	EA
3/4" IRRIGATION SERVICE CONNECTION	1	EA

WATER KEYED NOTES

①	8" GATE VALVE
②	8" TEE
③	8" BEND (90°)
④	FIRE HYDRANT
⑤	12" GATE VALVE
⑥	12" X 8" TEE
⑦	12" PLUG
⑧	12" X 8" REDUCER
⑨	8" BEND (45°)
⑩	8" PLUG



INDEX

SHEET NO. DESCRIPTION

- C11.1 (TRES SUEÑOS UNIT TWELVE) WATER MAIN PIPE LAYOUT
- C11.2 WATER DETAILS
- C11.3 WATER DETAILS
- C11.4 WATER DETAILS
- C11.5 WATER DETAILS

NOTES:

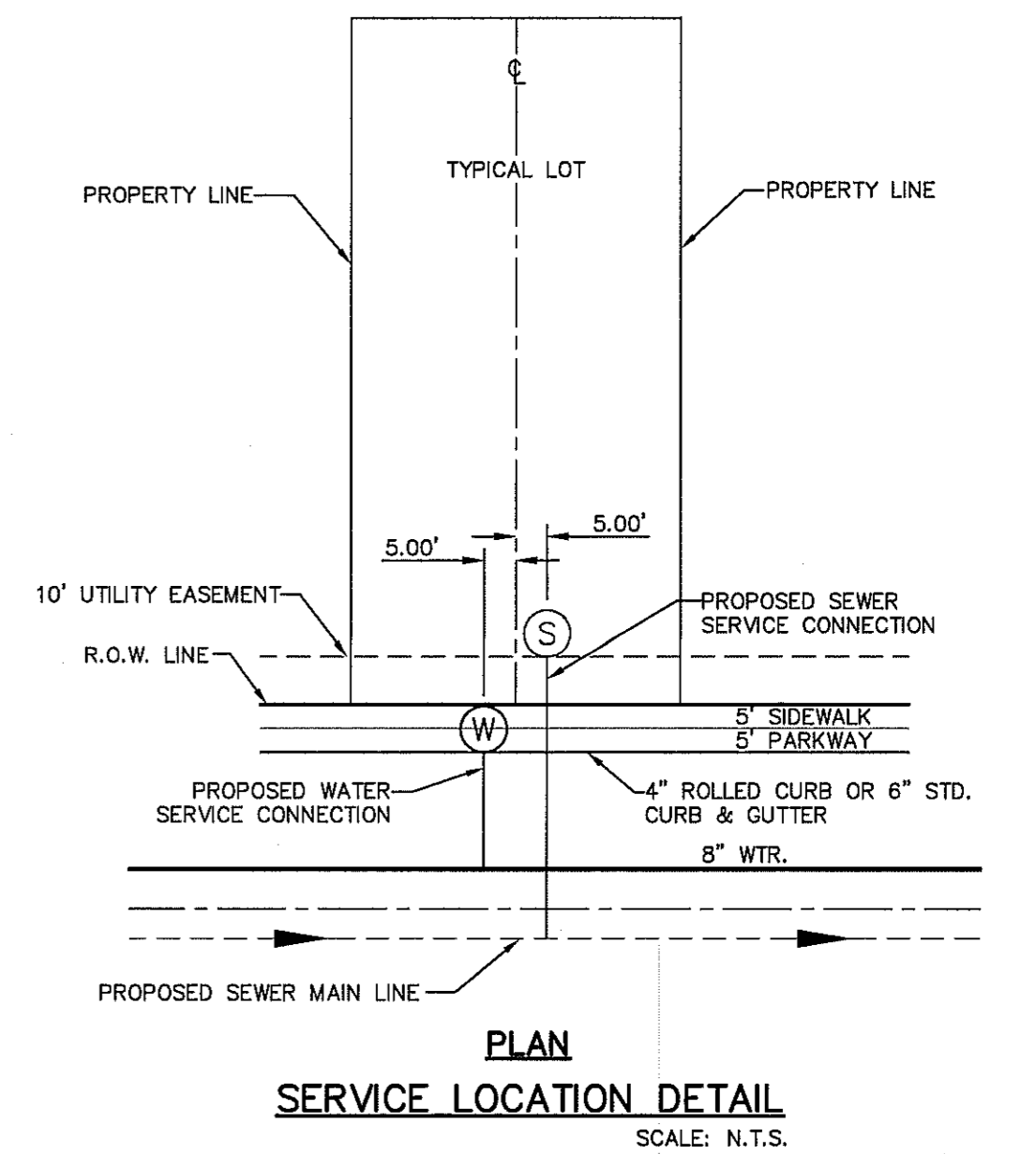
1. ALL LOTS SHALL BE PROVIDED WITH ONE SERVICE CONNECTION TO BE INSTALLED AT THE LOCATION AS SHOWN ON THE SERVICE LOCATION DETAIL.
2. ALL WATER LINES SHALL BE PVC C-900, CLASS 150.
3. REFERENCE WATER DETAILS FOR TYPICAL VALVE AND WATER LOCATIONS AT STREET INTERSECTIONS.
4. REFERENCE WATER DETAILS FOR WATER LINE CROSSING STORM SEWER.

LEGEND

SYMBOL	DESCRIPTION
8" WTR.	PROPOSED 8" C-900, CLASS 150 P.V.C. PIPE
12" WTR.	PROPOSED 12", C-900 P.V.C. PIPE, UNLESS OTHERWISE SPECIFIED
---	SUBDIVISION BOUNDARY LINE
---	PROPERTY LINE
---	STREET CENTER LINE
8" SWR	PROPOSED SEWER LINE (PLAN VIEW)
---	PROPOSED STORM SEWER
+	PROPOSED WATER CROSS CONNECTION
+	PROPOSED WATER TEE CONNECTION
+	PROPOSED WATER BEND CONNECTION (90°)
+	PROPOSED WATER BEND CONNECTION (45°)
+	PROPOSED 3/4" SERVICE CONNECTION (PLAN VIEW)
+	PROPOSED FIRE HYDRANT, KENNEDY OR MUELLER MODEL
+	PROPOSED 8" PLUG
+	PROPOSED GATE VALVE
+	POINT OF TANGENCY
+	REDUCER
+	EXISTING GATE VALVE
+	EXISTING FIRE HYDRANT
+	EXISTING PLUG
+	EXISTING SEWER LINE
+	EXISTING WATER LINE
M	3/4" METER - CONTRACTOR TO COORDINATE WITH EPWU. (REFER TO IRRIGATION PLANS FOR MORE INFORMATION).

- GENERAL NOTES**
1. UNLESS OTHERWISE SHOWN ON THE DRAWINGS, THE PROPOSED WATER MAINS SHALL BE INSTALLED NO LESS THAN TEN (10') FEET AWAY FROM EXISTING SEWER LINE. SEPARATIONS DISTANCES SHALL FOLLOW TCEQ STANDARD REQUIREMENTS (§290.44).
 2. THE INTENT OF THE OWNER IS TO HAVE THE WATER MAINS INSTALLED TO SUCH A DEPTH THAT THEY WILL HAVE AT LEAST SIXTY (60") INCHES FROM TOP OF PIPELINE TO VERIFIED ELEVATIONS AT ALL LOCATIONS. THE PIPELINES SHALL HAVE NO DIPS, ELEVATIONS 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.
 3. 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 CITY OF EL PASO.
 4. TRENCH SAFETY REQUIREMENTS SHALL BE AS REQUIRED BY OSHA.
 5. 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.
 6. THE EL PASO WATER UTILITIES AND CITY OF EL PASO MUST BE NOTIFIED FORTY-EIGHT (48) HOURS PRIOR TO COMMENCING ANY WORK IN AREAS WITHIN THEIR JURISDICTION.
 7. EXISTING STREETS, DRIVEWAYS, PARKING LOTS, MAILBOXES, SIGNS, CHAIN-LINK FENCES, 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.
 8. TRAFFIC CONTROL SHALL BE IN PLACE PRIOR TO INITIATING WORK.
 9. ALL TIE-INS SHALL BE CLOSELY COORDINATED WITH THE EL PASO WATER UTILITIES AT LEAST FORTY-EIGHT (48) HOURS PRIOR TO ACTUAL CONSTRUCTION.
 10. CONTRACTOR SHALL PROVIDE THE REQUIRED COUPLINGS, ELBOWS AND NECESSARY PIPING APPURTENANCES FOR A COMPLETE AND OPERATIONAL WATER SYSTEM.
 11. ALL NEW VALVES SHALL BE ALIGNED PERPENDICULAR TO PROPERTY LINES.
 12. CONSTRUCTION OF THE PUBLIC WATER AND SEWER SYSTEM INCLUDING MATERIALS AND TESTING SHALL CONFORM EPWU-PSB SPECIFICATIONS FOR THE INSTALLATION OF WATER MAINS, SEWER MAINS AND RELATED APPURTENANCES.
 13. FIRE HYDRANTS SHALL BE INSTALLED AS PER EL PASO WATER UTILITIES STANDARD DETAIL 282.
 14. THE WATER METERS FOR THE PROPOSED WATER SERVICE CONNECTIONS SHALL BE INSTALLED AS PER EL PASO WATER UTILITIES STANDARD DETAIL. SYMBOLS ARE ONLY SHOWN FOR DEPICTION PURPOSES ONLY.

- GENERAL UTILITIES:**
TEXAS EXCAVATION SAFETY SERVICE
11884 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
- FIBER OPTICS:**
MCI TELECOMMUNICATIONS CORP.
4045 DONIPHAN PARK CIRCLE
EL PASO, TX 79922
(915) 542-2770 EXT. 201
- WATER & SEWER:**
EL PASO WATER UTILITIES
1154 HAWKINS BOULEVARD
DALLAS, TX 75243
(915) 594-5530
- ELECTRIC:**
CITY OF EL PASO
501 W. SAN ANTONIO ST.
EL PASO, TX 79902
(915) 543-2076
- EL PASO STREETS**
CITY OF EL PASO
STREET & MAINTENANCE
DEPARTMENT 7969 SAN PABLO
DRIVE
EL PASO, TX 79907
(915) 621-6750
- 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
- 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
- WARNING!**
BEFORE YOU DIG
CALL
1-800-DIG-TESS
1-800-344-8377
FOR FIELD LOCATING EXISTING UTILITIES



REFERENCES - BENCHMARKS
CITY MONUMENT AT POINT OF CURVE CENTERLINE RICH BEAM BOULEVARD, DISTANCE OF 467.89 FEET FROM THE CENTERLINE OF RICH BEAM BOULEVARD TO THE CITY DATUM ELEVATION 4095.40

REVISIONS

DATE	BY	REVISIONS

CEA GROUP
TEXAS REGISTERED ENGINEERING FIRM F-4564
4712 Woodrow Bean, Ste. F, El Paso, TX 79924
915.544.5232 | www.ceagroup.net

ENGINEER'S SEAL
JORGE L. AZCARATE
REGISTERED PROFESSIONAL ENGINEER
NO. 88075
EXPIRES 12/31/2018

SCALE
Horizontal: N/A
Vertical: Interval: N/A
Contour: Interval: 1/4"

DATE: JULY 2016
DESIGN BY: R.C.O.
DRAWN BY: R.C.O.
CHKD. BY: J.L.A.
APPVD. BY: J.L.A.
JOB NO.: 2000-1941D

PROJECT TITLE
TRES SUEÑOS UNIT TWELVE
SUBDIVISION IMPROVEMENTS

SHEET TITLE
WATER INDEX/
GENERAL INFORMATION

SHEET NO.
C11.1

GENERAL NOTES:

- REFERENCE CENTERLINE SHALL BE CENTERLINE OF RIGHT OF WAY.
- WATER LINES SHALL BE LOCATED ON NORTH OR EAST SIDES OF DEDICATED STREETS OR ALLEYS.
- SEWER LINES SHALL BE LOCATED ON SOUTH OR WEST SIDES OF DEDICATED STREETS OR ALLEYS.
- RECLAIMED LINES SHALL BE LOCATED ON SOUTH OR WEST SIDES OF DEDICATED STREETS OR ALLEYS.

CONSTRUCTION KEY NOTES:

A. DISTANCES FROM CENTERLINE VARY AND SHALL BE ACCORDING TO THE FOLLOWING:

PIPELINE LOCATION WITHIN NEW RIGHT-OF-WAY				
RIGHT-OF-WAY WIDTH*	WATER	SEWER	RECLAIMED	
36 FT.	9 FT.	1 FT.	6 FT.	
44 FT.	8 FT.	3 FT.	8 FT.	
52 FT.	8 FT.	5 FT.	10 FT.	
64 FT.	10 FT.	5 FT.	10 FT.	
72 FT.	10 FT.	5 FT.	10 FT.	
76 FT.	10 FT.	5 FT.	10 FT.	
84 FT.	20 FT.	5 FT.	10 FT.	
110 FT.	25 FT.	15 FT.	20 FT.	

*RIGHT OF WAY WIDTH SUBJECT TO CHANGE. VERIFY WITH CITY SUBDIVISION ORDINANCE.
 **DISTANCES MAY BE MODIFIED AS NEEDED TO MEET TCEQ SEPARATION REQUIREMENTS. REFER TO DETAILS 160 THRU 163 FOR ADDITIONAL INFORMATION.

STANDARD DETAIL DATE: 03/1994 REV: 3/28/2007 LOCATION FOR UTILITY LINES N.T.S. EL PASO UTILITIES PUBLIC UTILITIES BOARD DETAIL No. 140

1 LOCATION FOR UTILITY LINES SCALE: N.T.S.

GENERAL NOTES:

- BEDDING FOR PRESSURE AND GRAVITY PIPE IN DRY CONDITIONS.
- PROVIDE TRENCH SAFETY SYSTEM FOR TRENCH DEPTHS GREATER THAN 5 FEET.
- IF THE NATIVE MATERIAL EXCAVATED FROM THE TRENCH IS UNSUITABLE AS BACKFILL MATERIAL, OR THE REQUIRED COMPACTION IS UNATTAINABLE, THE CONTRACTOR SHALL, AT HIS EXPENSE, IMPORT SELECT MATERIAL TO BE MIXED WITH OR USED IN PLACE OF THE NATIVE MATERIAL. SELECT MATERIAL MUST BE APPROVED BY EPWU. SUBSTITUTE SOIL CEMENT SLURRY (1-SACK) IF REQUIRED IN SPECS.

CONSTRUCTION KEY NOTES:

- APPROVED MARKING TAPE.
- UNDISTURBED STABLE MATERIAL.
- NATIVE MATERIAL BACKFILL. PAVED CONDITION: COMPACT TO 90% DENSITY PER ASTM D-1557 MODIFIED PROCTOR. UNPAVED CONDITION: COMPACT TO 85% DENSITY PER ASTM D-1557 MODIFIED PROCTOR. (*SEE NOTE #3 IF THESE PREVIOUS CONDITIONS CANNOT BE MET.)
- SLOPE TRENCH IN SANDY SOIL CONDITIONS.
- USE CLASS II OR CLASS III SAND PER ASTM D-2487. NATIVE MATERIAL OR IMPORTED SELECT MATERIAL MEETING OR EXCEEDING THIS REQUIREMENT MAY BE USED. COMPACT TO 85% DENSITY PER ASTM D-1557 MODIFIED PROCTOR (OR 90% D-698 STANDARD PROCTOR).
- APPROVED PIPE.
- TRENCH DIMENSIONS AS FOLLOWS:

PIPE DIAMETER	"H"
6" - 30"	4"
GREATER THAN 30"	6"
PIPE DIAMETER	"W"
6" - 30"	8"
GREATER THAN 30"	12"

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

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

GENERAL NOTES:

- ALL ASPHALT CUTS MUST BE SAW CUT.
- SOIL CEMENT SLURRY SHALL BE ALLOWED TO CURE BEFORE PAVING OR OPENING TO ALL TRAFFIC.

CONSTRUCTION KEY NOTES:

- REFER TO SPECS FOR LIMIT OF PAVING WIDTH.
- DIMENSION VARIES, WHERE CUTTER FACE, ETC. IS WITHIN 3' OF SAW CUT EDGE, CONTRACTOR SHALL REMOVE & REPLACE EXISTING HMA/C IN THIS AREA. C. 2" ASPHALT MIN.
- 12" THICK SOIL CEMENT BACKFILL (2 SACK PER CY OF SOIL).
- EXISTING HMA/C THICKNESS MAY VARY.
- EXISTING BASE COURSE THICKNESS MAY VARY.
- EXISTING CUTTER FACE, EDGE OF PAVEMENT OR BEGINNING OF SHOULDER.
- BACKFILL DEPTH VARIES, REFER TO REQUIREMENTS LISTED IN EMBEDMENT DETAILS (DETAIL 171 THRU DETAIL 173).
- PIPE BEDDING AS SPECIFIED, REFER TO APPROPRIATE EMBEDMENT DETAIL (DETAIL 171 THRU DETAIL 173).
- APPROVED PIPE.

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

3 PAVEMENT REPLACEMENT SCALE: N.T.S.

GENERAL NOTES:

- REFER TO UTILITY DETAIL FOR PAVEMENT REPLACEMENT AND BACKFILL REQUIREMENTS.
- TRENCH SAFETY SYSTEMS SHALL BE USED WHEN TRENCH DEPTH EXCEEDS 5 FEET.

CONSTRUCTION KEY NOTES:

A. COVER FOR WATER MAINS SHALL DEPEND ON THE PIPE SIZE AND THE FOLLOWING INSTALLATION CONDITIONS,

CONDITION A - NORMAL LINE INSTALLATION, STREET AND DRAINAGE PROJECTS, WATERLINE RELOCATION

CONDITION B - NEW SUBDIVISIONS, NON-PAVED AREA

AND SHALL BE AS FOLLOWS.

PIPE SIZE	CONDITION	DIMENSION
6", 8"	A	D1 = 4'
6", 8"	B	D1 = 4'
12" & LARGER	A OR B	D1 = 5'

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

4 COVER FOR WATER MAINS SCALE: N.T.S.

GENERAL NOTES:

- VALVE TYPE AND VALVE ENDS SHALL BE AS SHOWN ON THE PLANS.
- ALL BURIED VALVES 5' AND DEEPER SHALL BE PROVIDED WITH SOLID EXTENSION STEM OPERATOR WITH 2" SQUARE ANWA NUT WITHIN 36" OF VALVE BOX COVER. NUT IS TO INDICATE DIRECTION OF ROTATION TO OPEN VALVE.
- 8" DIA. MINIMUM VITRIFIED CLAY OR SDR 35 P.V.C. PIPE, PIPE SHALL NOT REST ON VALVE BODY.
- 1/2" THICK STEEL TRASH RING VALVE BOX INSIDE DIAMETER MINUS 1/2".
- MINIMUM 2" CONCRETE OR BRICK ALL AROUND.
- CLEAN BONNET BOX OF ALL DEBRIS AND SOIL.
- COAT BURIED PIPE AND BONNET BOX PER SPECIFICATIONS, VALVE SHALL BE WRAPPED IN POLYETHYLENE IN ACCORDANCE WITH SPECIFICATIONS.

CONSTRUCTION KEY NOTES:

- BONNET BOX (SEE DETAIL 268).
- BONNET BOX COVER (SEE DETAILS 269-1 & 269-2).
- FINAL EXTENSION TO BONNET BOX SHALL BE WITH BELL AND SPIGOT ENDS (CLAY OR SDR 35 P.V.C. SPOUL).
- CONCRETE VALVE ANCHOR (SEE DETAIL 271).
- CONCRETE COLLAR (SEE DET 184-1) FLUSH WITH TOP OF H.M.A.C.
- BONNET BOX FLUSH WITH TOP OF CONCRETE, CONCRETE COLLAR NOT NEEDED.
- CONCRETE APRON (SEE DETAIL 184-2) FLUSH WITH BONNET BOX AND 2" ABOVE NATURAL GROUND.

STANDARD DETAIL DATE: 5/1994 REV: 6/22/2009 GATE VALVE INSTALLATION N.T.S. EL PASO UTILITIES PUBLIC UTILITIES BOARD DETAIL No. 260

5 GATE VALVE INSTALLATION SCALE: N.T.S.

GENERAL NOTES:

- TABLE IS BASED ON 2000#/SQ. FT. SOIL. IF CONDITIONS ARE FOUND TO INDICATE SOIL BEARING IS LESS, THE AREAS SHALL BE INCREASED ACCORDINGLY.
- AREAS FOR PIPE LARGER THAN 18" SHALL BE CALCULATED.
- CONCRETE SHALL HAVE A MINIMUM COMPRESSION STRENGTH OF 2500 PSI.
- THRUST BLOCK IS TO EXTEND TO UNDISTURBED SOIL.
- SIZE MAY BE DECREASED FOR LESSER DEGREE BENDS AS DETERMINED BY ENGINEER.
- KEEP CONCRETE CLEAR OF M.J. OR BELL AND SPIGOT JOINTS.
- BLOCK IN A SIMILAR MANNER AT TEES, HYDRANTS, PLUG OR OTHER LOCATIONS AS REQUIRED.
- WHEN NECESSARY ADDITIONAL THRUST RESTRAINT METHODS MAY BE USED, SUCH AS MECHANICAL JOINT RESTRAINTS, TIE-RODS (INSTALLED PER MANUFACTURERS' RECOMMENDATIONS) OR OTHER APPROVED METHODS.

CONSTRUCTION KEY NOTES:

- LENGTH "Y" & "W" AS REQUIRED TO OBTAIN BEARING AREA AGAINST UNDISTURBED SOIL.
- ADDITIONAL EXCAVATION IF NECESSARY TO OBTAIN REQUIRED BEARING AREA.
- MINIMUM THRUST BLOCK AREA REQUIREMENTS FOR (Y & W) AS FOLLOWS:

PIPE SIZE	WATER PIPE	
	TEE, DEAD END	45° AND 90° BEND
4" & LESS	3 SQ. FEET	3 SQ. FEET
6"	4 SQ. FEET	3 SQ. FEET
8"	6 SQ. FEET	3 SQ. FEET
10"	9 SQ. FEET	5 SQ. FEET
12"	13 SQ. FEET	7 SQ. FEET
16"	23 SQ. FEET	12 SQ. FEET
18"	29 SQ. FEET	15 SQ. FEET

STANDARD DETAIL DATE: 2/1994 REV: 8/7/2006 CONCRETE THRUST BLOCKING N.T.S. EL PASO UTILITIES PUBLIC UTILITIES BOARD DETAIL No. 270

6 CONCRETE THRUST BLOCKING SCALE: N.T.S.

REFERENCES - BENCHMARKS
 CITY MONUMENT AT POINT OF CURVE CENTERLINE RICH BEEN BLVD. SUBDIVISION A DISTANCE OF 467.56 FEET FROM MONUMENT TO CENTERLINE. MONUMENT TO AVENUE CITY DATUM ELEVATION: 4005.40

ENGINEERS SEAL
 CEA CONSULTING ENGINEERS
 TEXAS REGISTERED ENGINEERING FIRM F-4584
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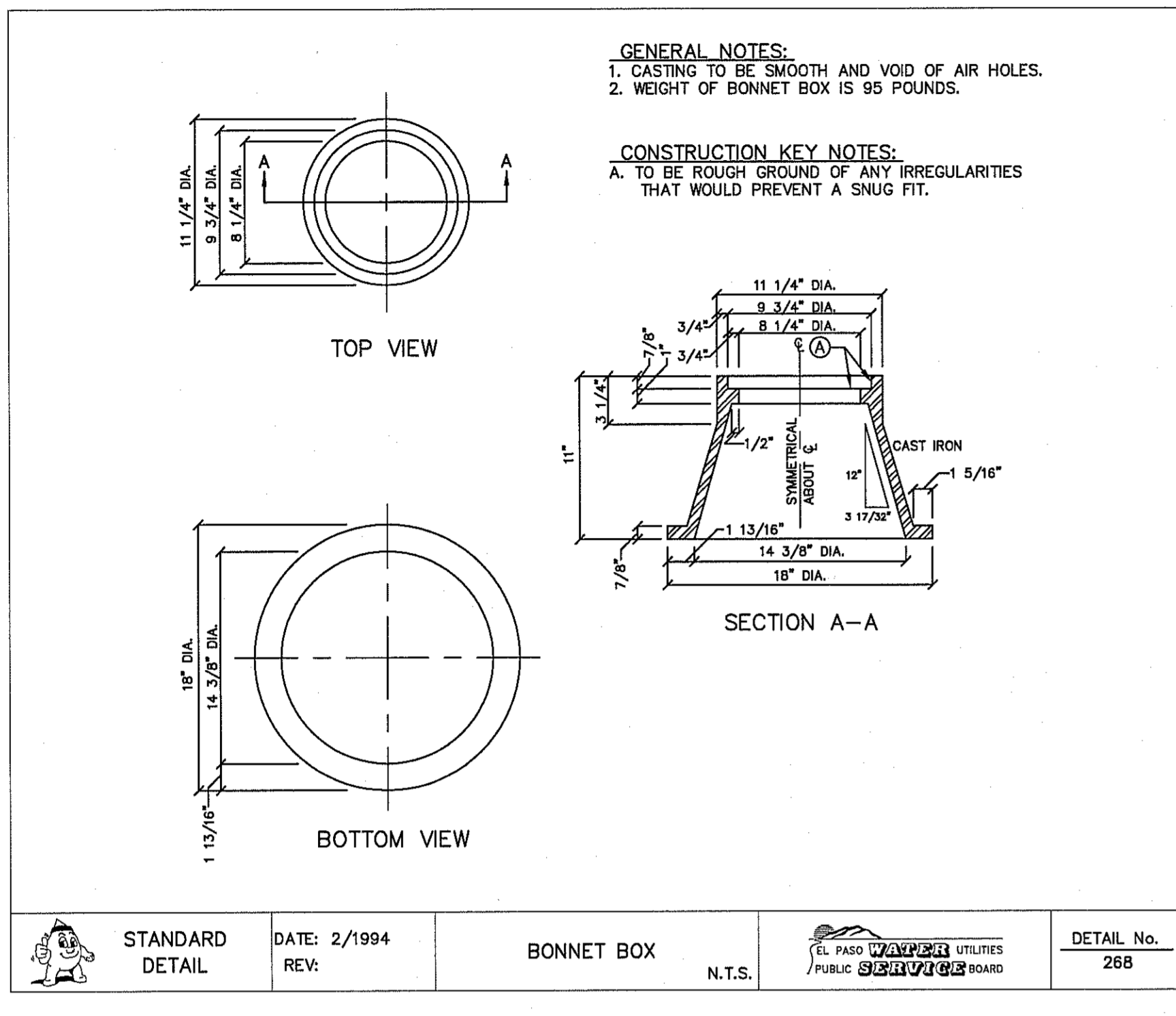
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 DESIGN BY: R.O.
 DRAWN BY: J.L.A.
 CHECKED BY: J.L.A.
 APPROVED BY: J.L.A.
 JOB No. 2000-1941D

PROJECT TITLE
 TRES SUEÑOS UNIT TWELVE
 SUBDIVISION IMPROVEMENTS

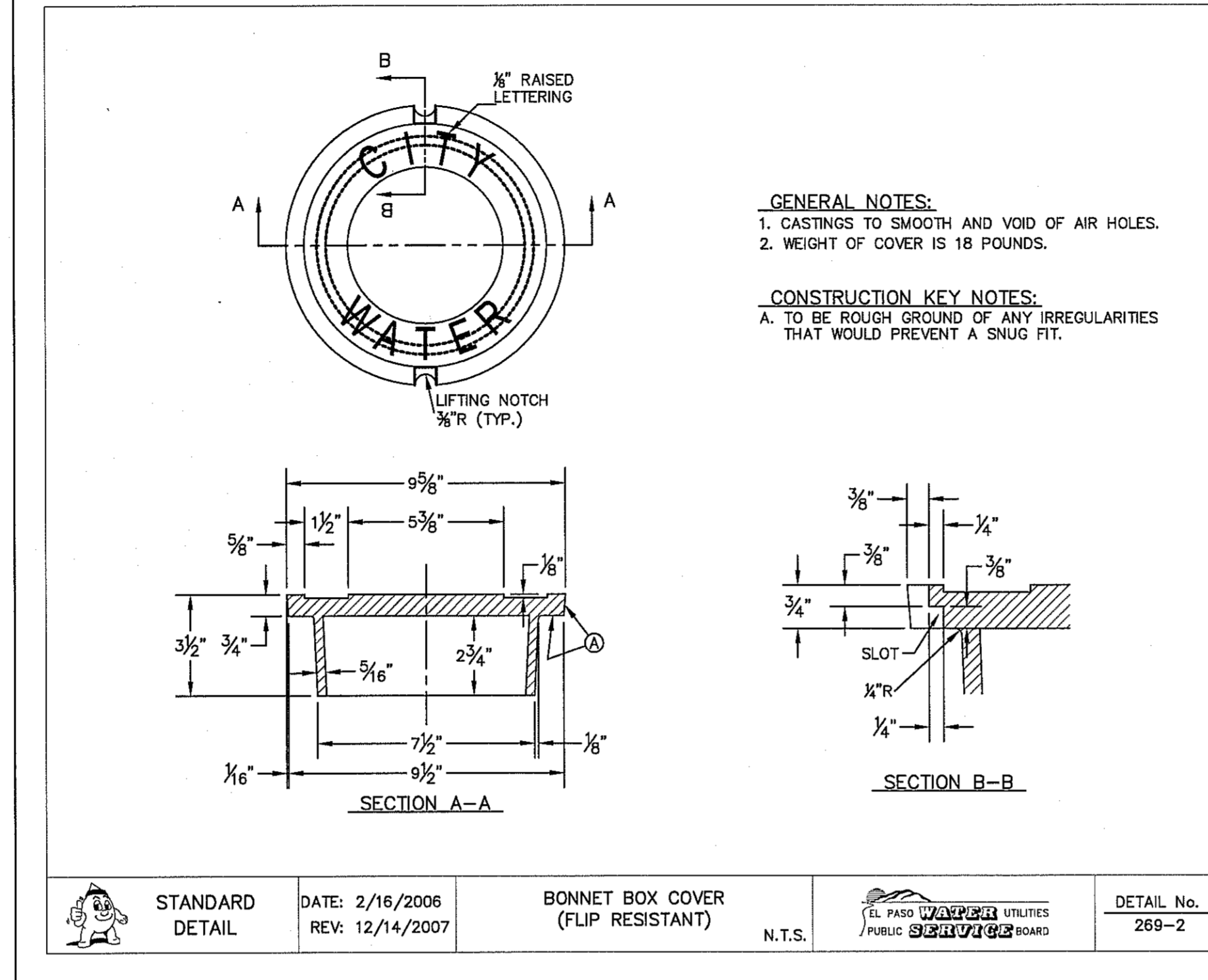
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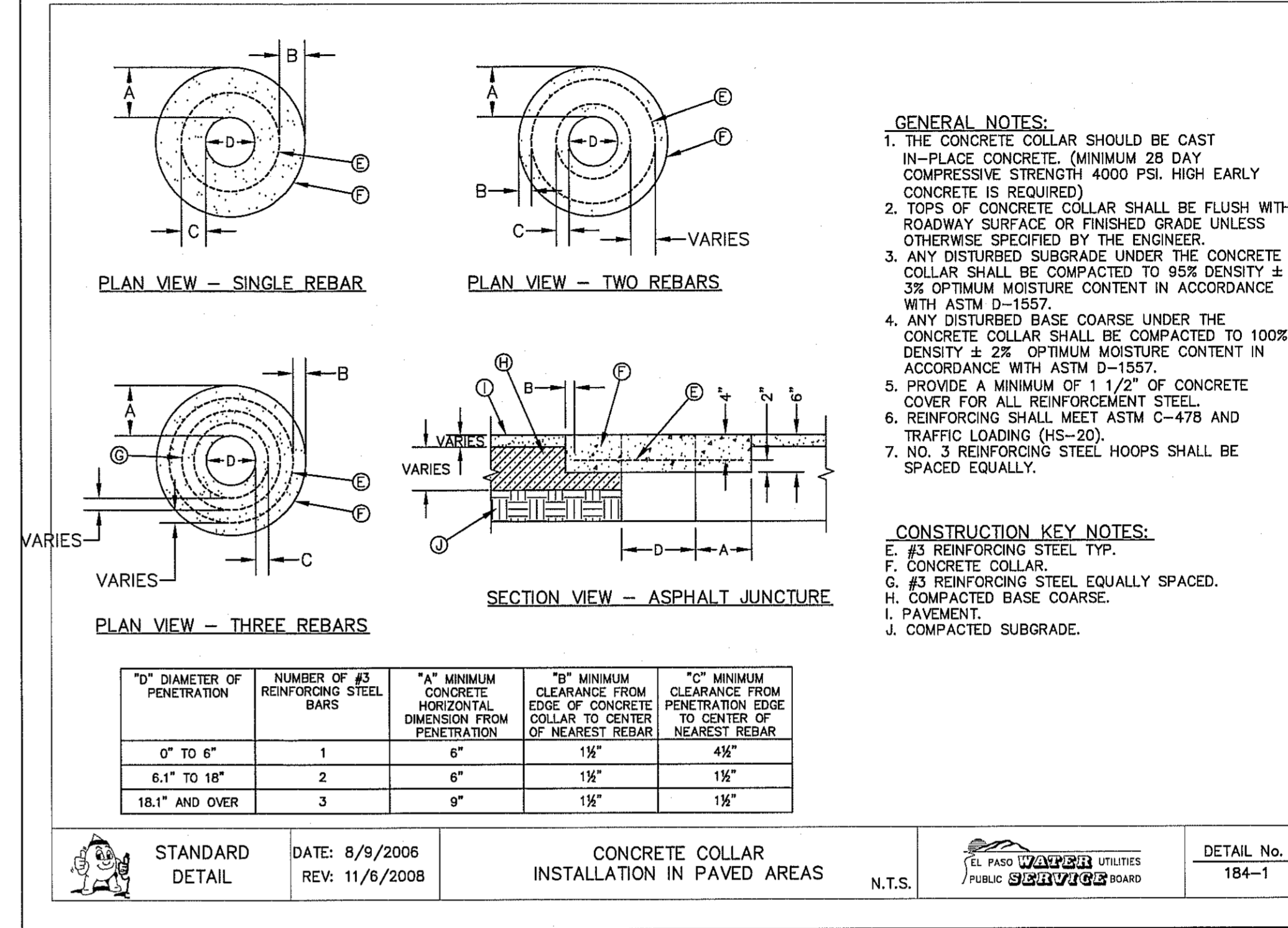
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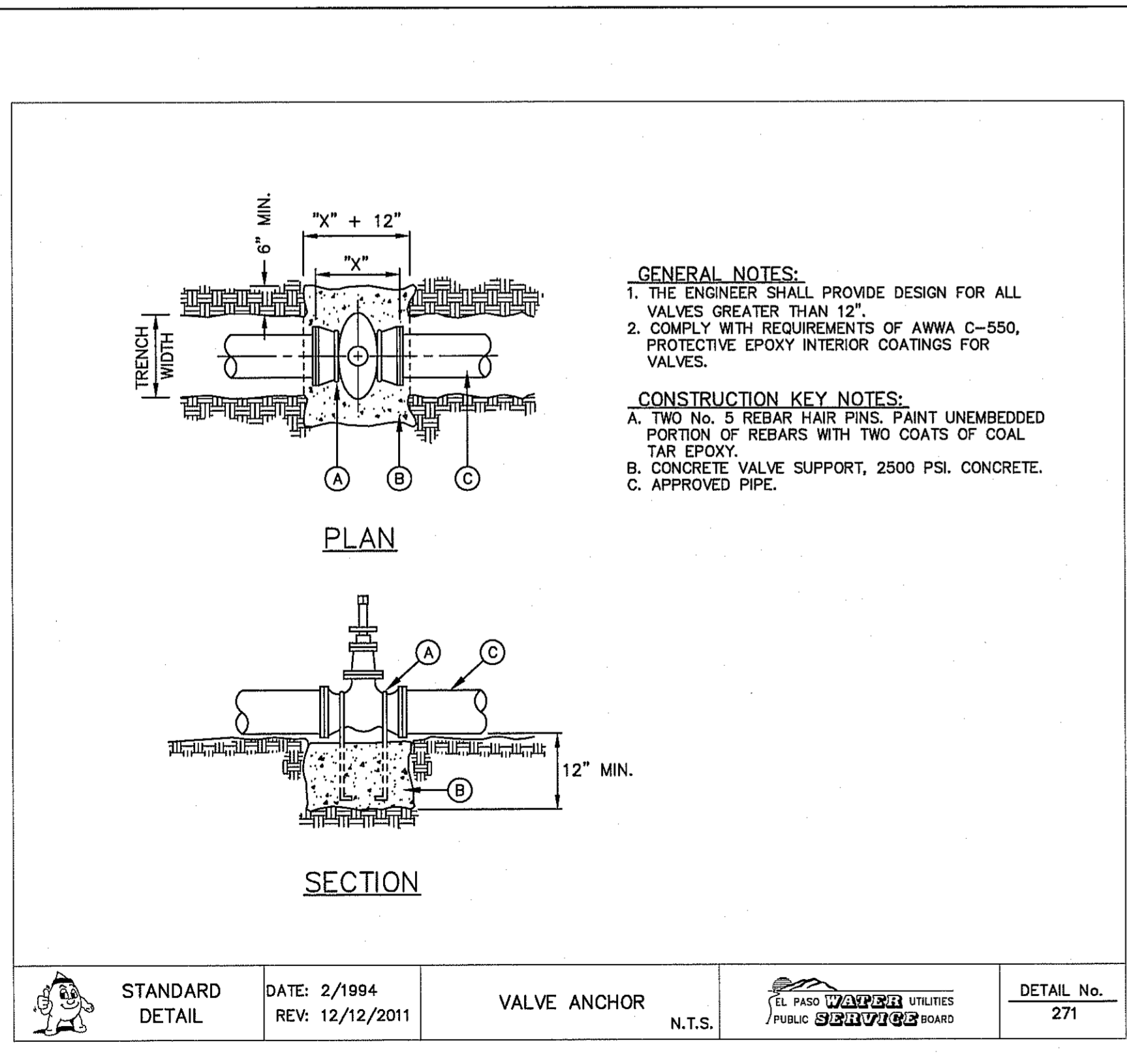
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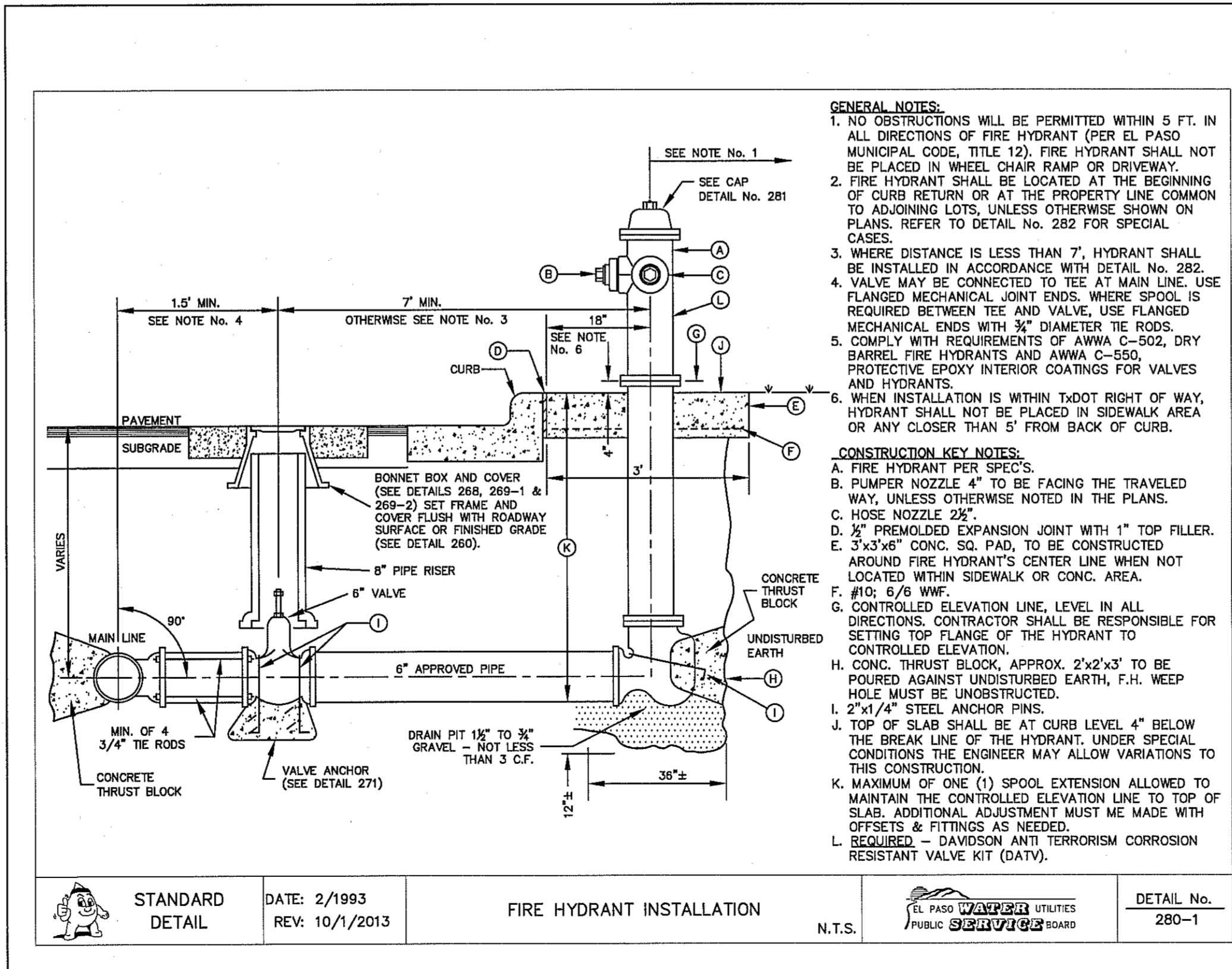
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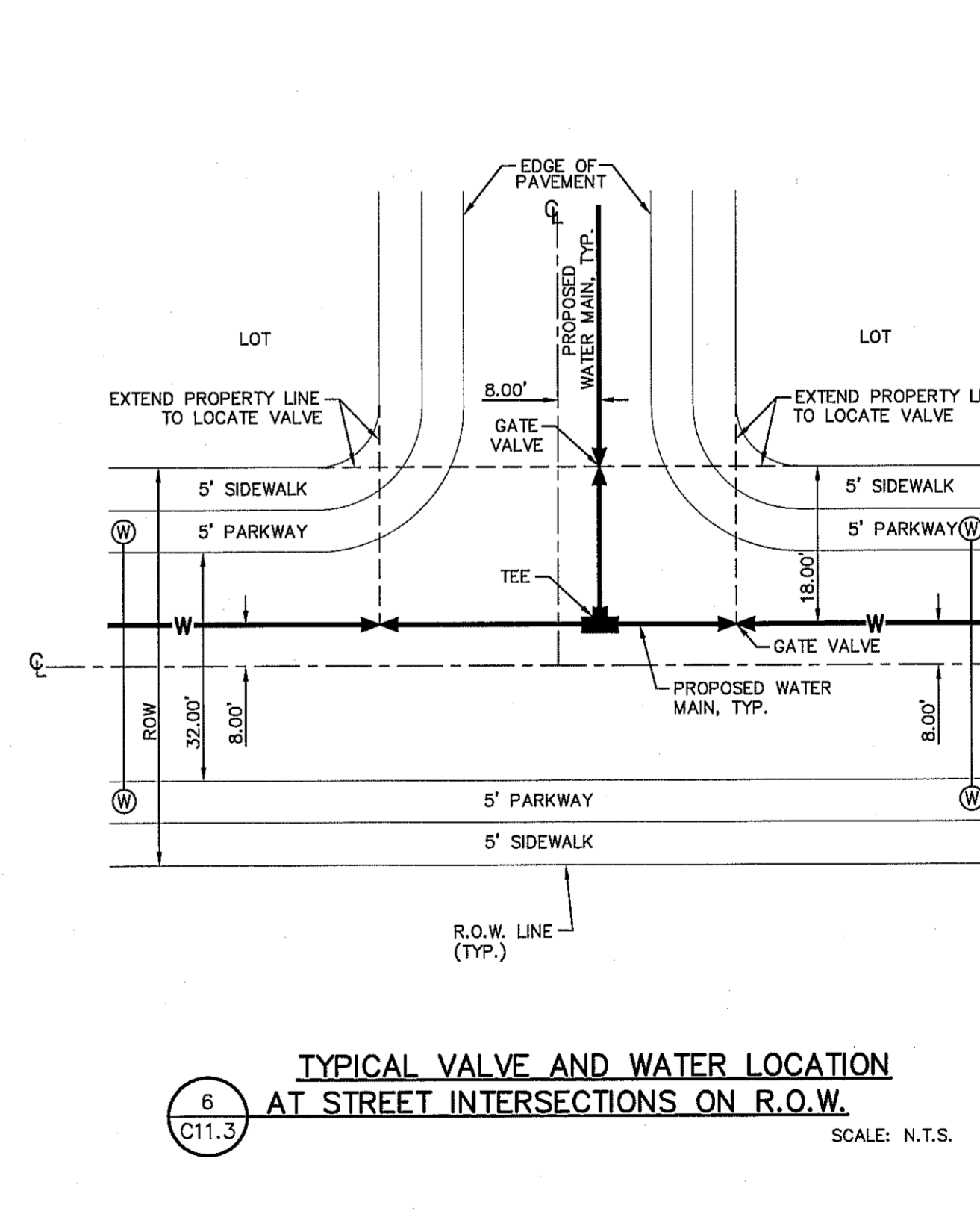
3 CONCRETE COLLAR INSTALLATION IN PAVED AREAS
 C11.3 SCALE: N.T.S.



4 VALVE ANCHOR
 C11.3 SCALE: N.T.S.



5 FIRE HYDRANT INSTALLATION
 C11.3 SCALE: N.T.S.



6 TYPICAL VALVE AND WATER LOCATION AT STREET INTERSECTIONS ON R.O.W.
 C11.3 SCALE: N.T.S.

REFERENCES - BENCHMARKS
 CITY MONUMENT AT POINT OF CURVE, CENTERLINE RIGHT OF WAY, CENTERLINE BUS STOP, CENTERLINE FROM THE SOUTHERLY RIGHT OF WAY LINE OF MONTANA AVENUE CITY DATUM ELEVATION.....4005.40

DATE: REVISIONS: BY:

EL PASO UTILITIES PUBLIC SERVICE BOARD

TEXAS REGISTERED ENGINEERING FIRM #4684
 4712 Woodrow Beegh, S.C. F. El Paso, TX 79924
 915.544.5232 www.cesgroup.net

ENGINEER'S SEAL

SCALE: Horizontal: N/A Vertical: N/A Contour Interval: N/A
 DATE: JUNE 2016
 DESIGN BY: R.O.
 DRAWN BY: J.L.A.
 APP'D. BY: J.L.A.
 JOB No. 2000-194LD

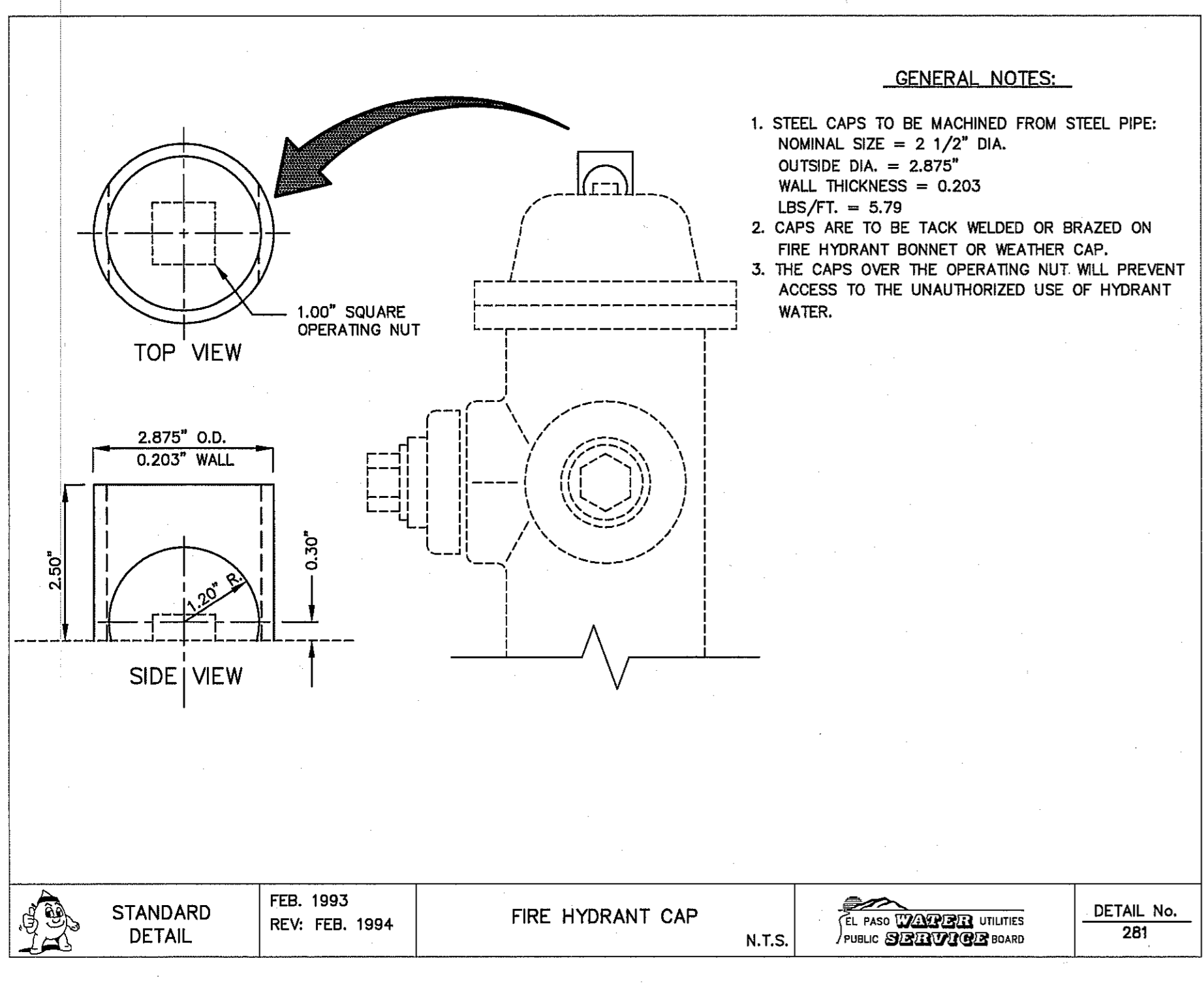
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TRES SUEÑOS UNIT TWELVE SUBDIVISION IMPROVEMENTS

SHEET TITLE
WATER DETAILS

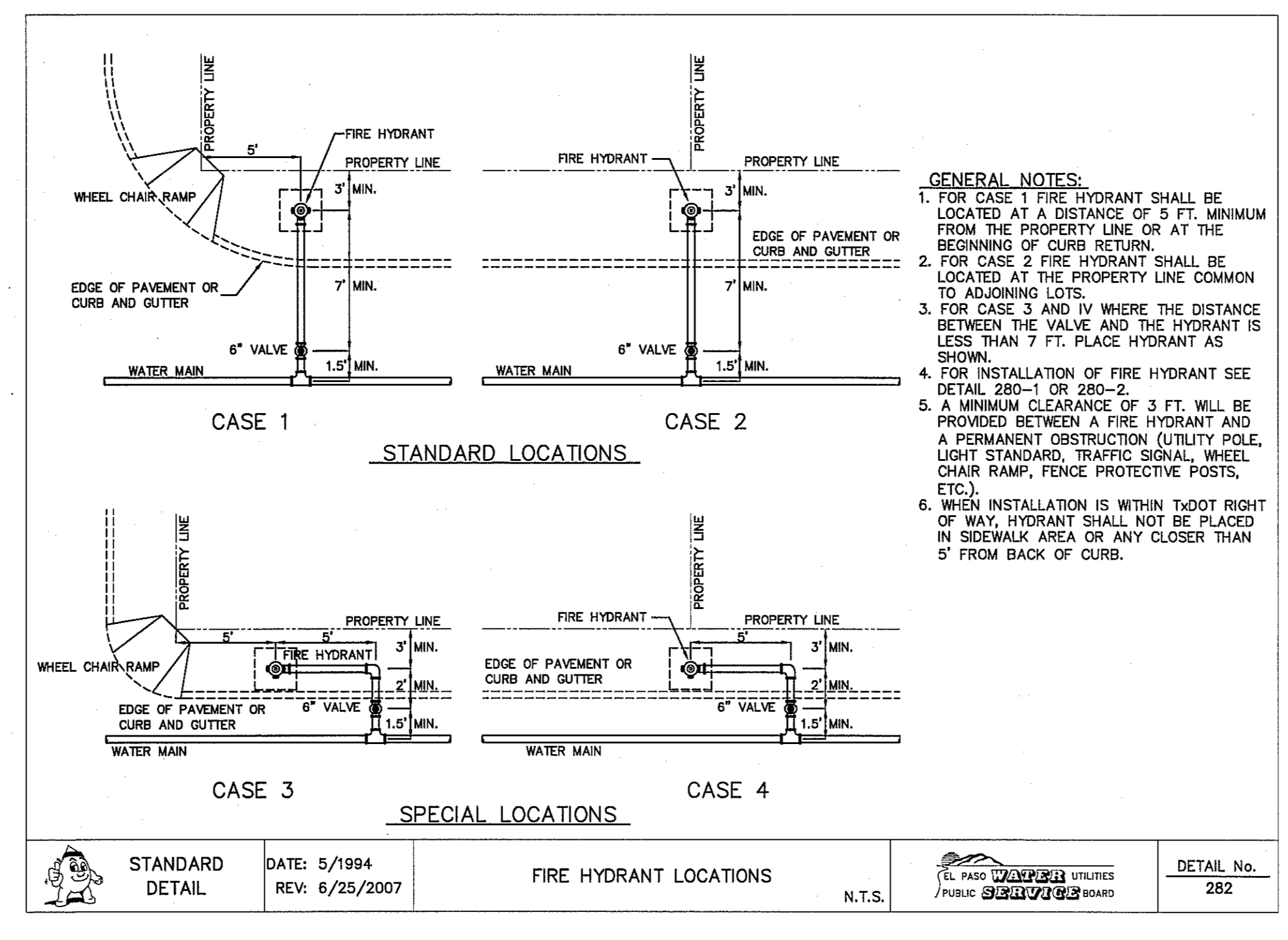
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 SHEET NO.

C11.3

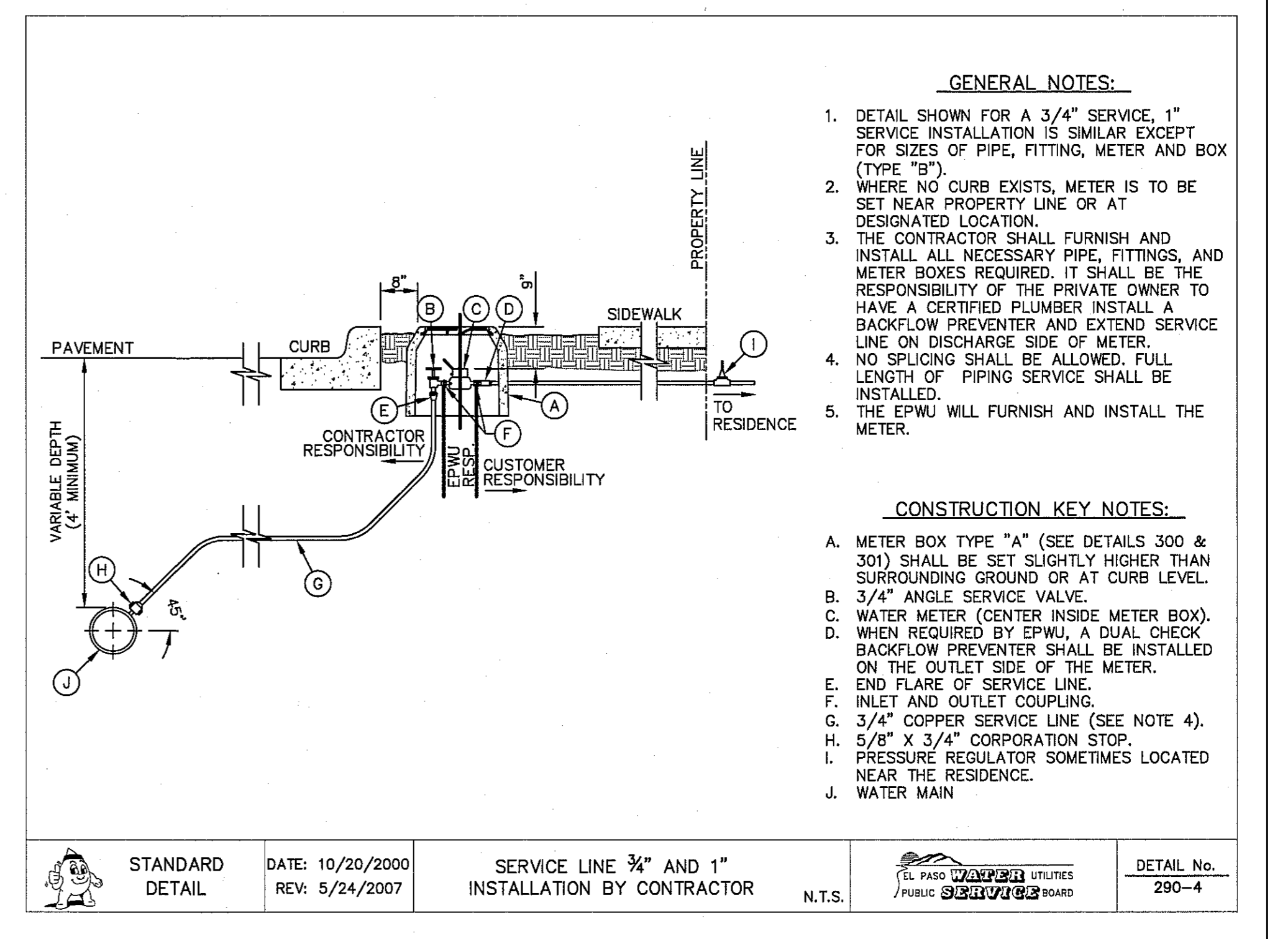
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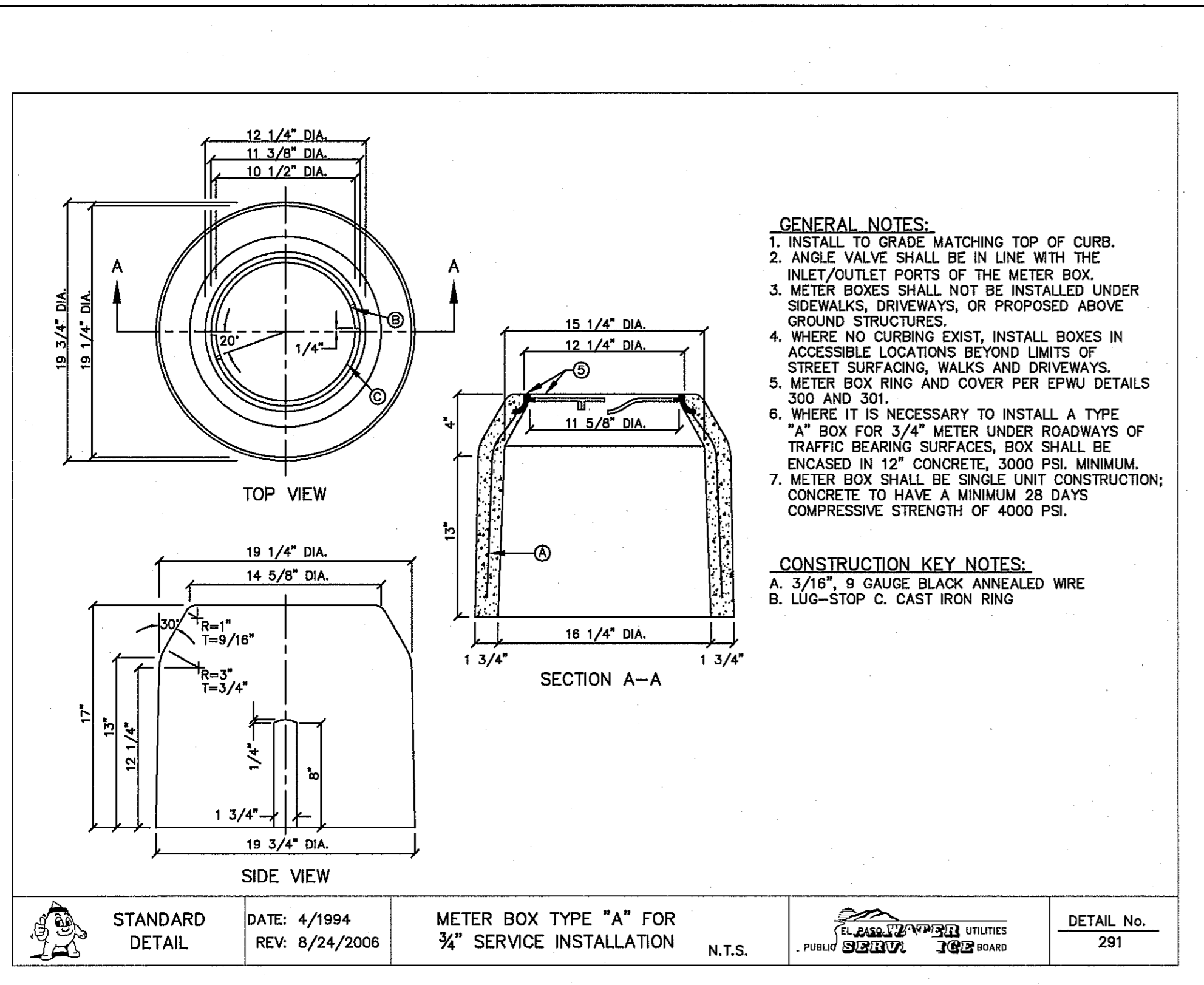
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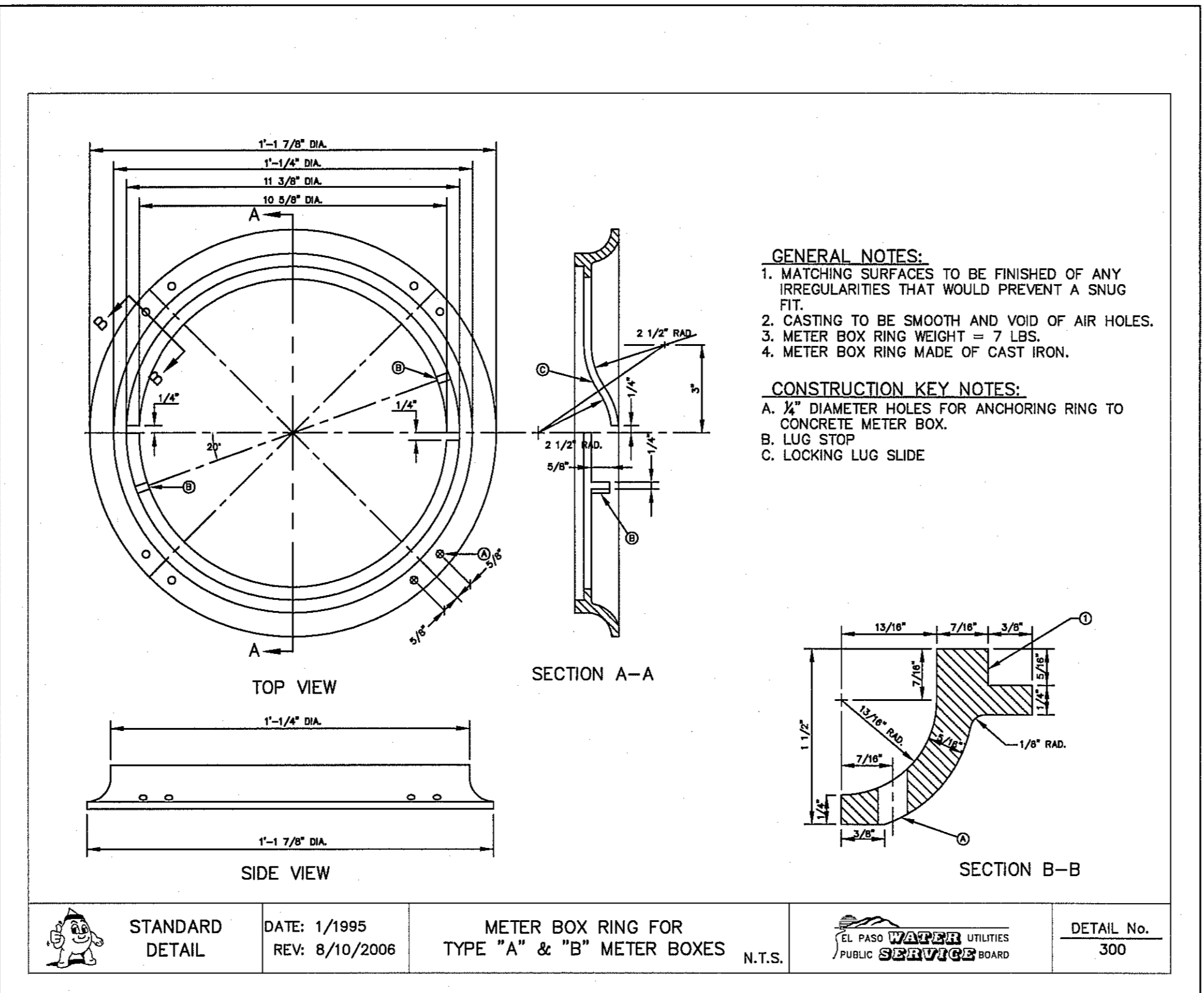
2 FIRE HYDRANT LOCATIONS SCALE: N.T.S.



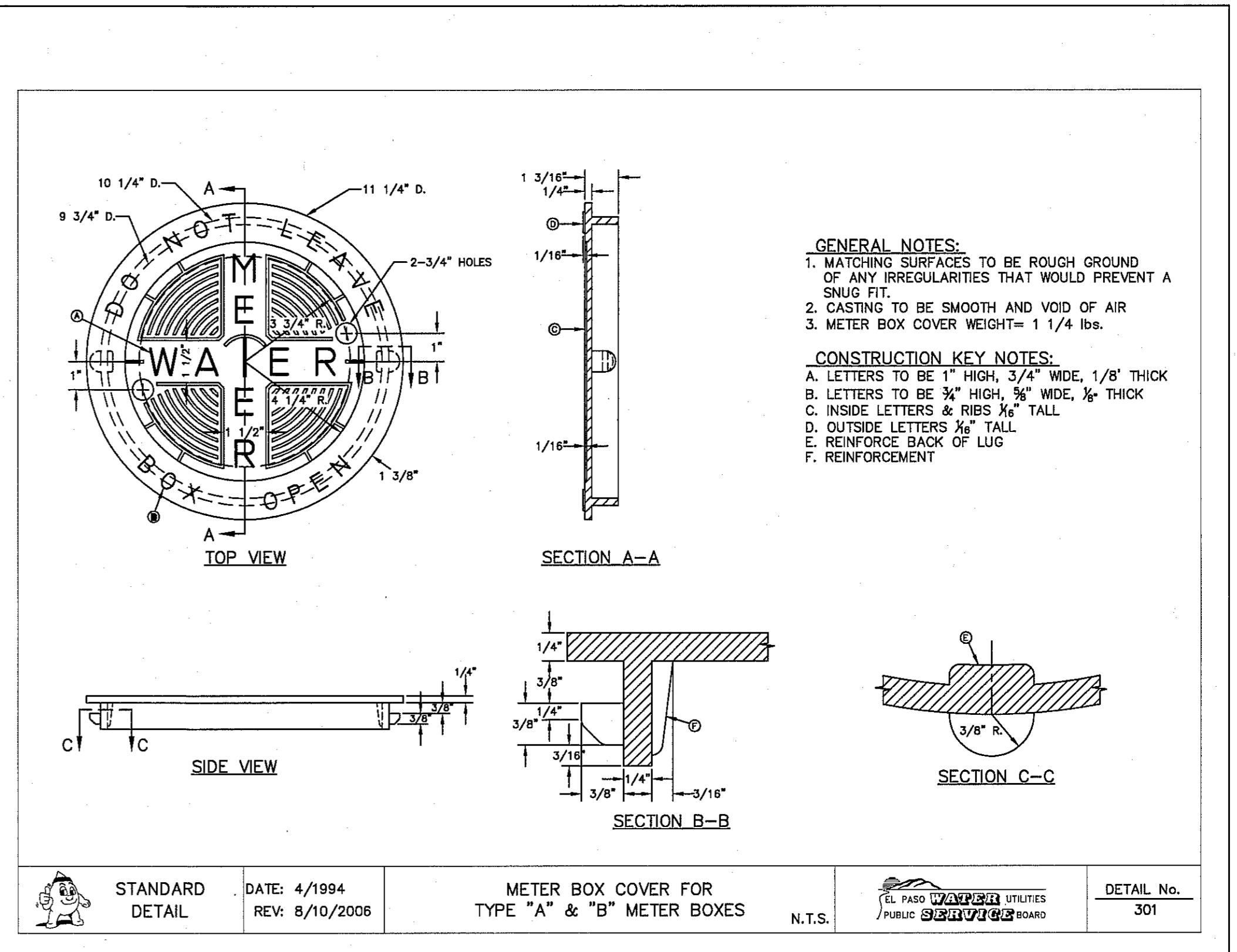
3 SERVICE LINE 3/4" AND 1" INSTALLATION SCALE: N.T.S.



4 METER BOX TYPE "A" FOR 3/4" SERVICE INSTALLATION SCALE: N.T.S.



5 METER BOX RING FOR TYPE "A" & "B" METER BOXES SCALE: N.T.S.



6 METER BOX COVER FOR TYPE "A" & "B" METER BOXES SCALE: N.T.S.

REFERENCES - BENCHMARKS
 CITY MONUMENT AT POINT OF CURVE CENTERLINE RICH COUNTY, TEXAS
 MONUMENT AT POINT OF BEGINNING OF MONTANA FROM THE SOUTHERLY RIGHT OF WAY LINE OF MONTANA AVENUE CITY DATUM ELEVATION: 4005.40

REVISIONS
 DATE
 BY

TECHNICAL
 ENGINEER
 PROJECT TITLE
TRES SUEÑOS UNIT TWELVE SUBDIVISION IMPROVEMENTS

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

DATE: JUNE 2016
 DESIGN BY: R.O.
 DRAWN BY: J.L.A.
 CHKD. BY: J.L.A.
 APPVD. BY: J.L.A.
 JOB No.: 2000-194LD

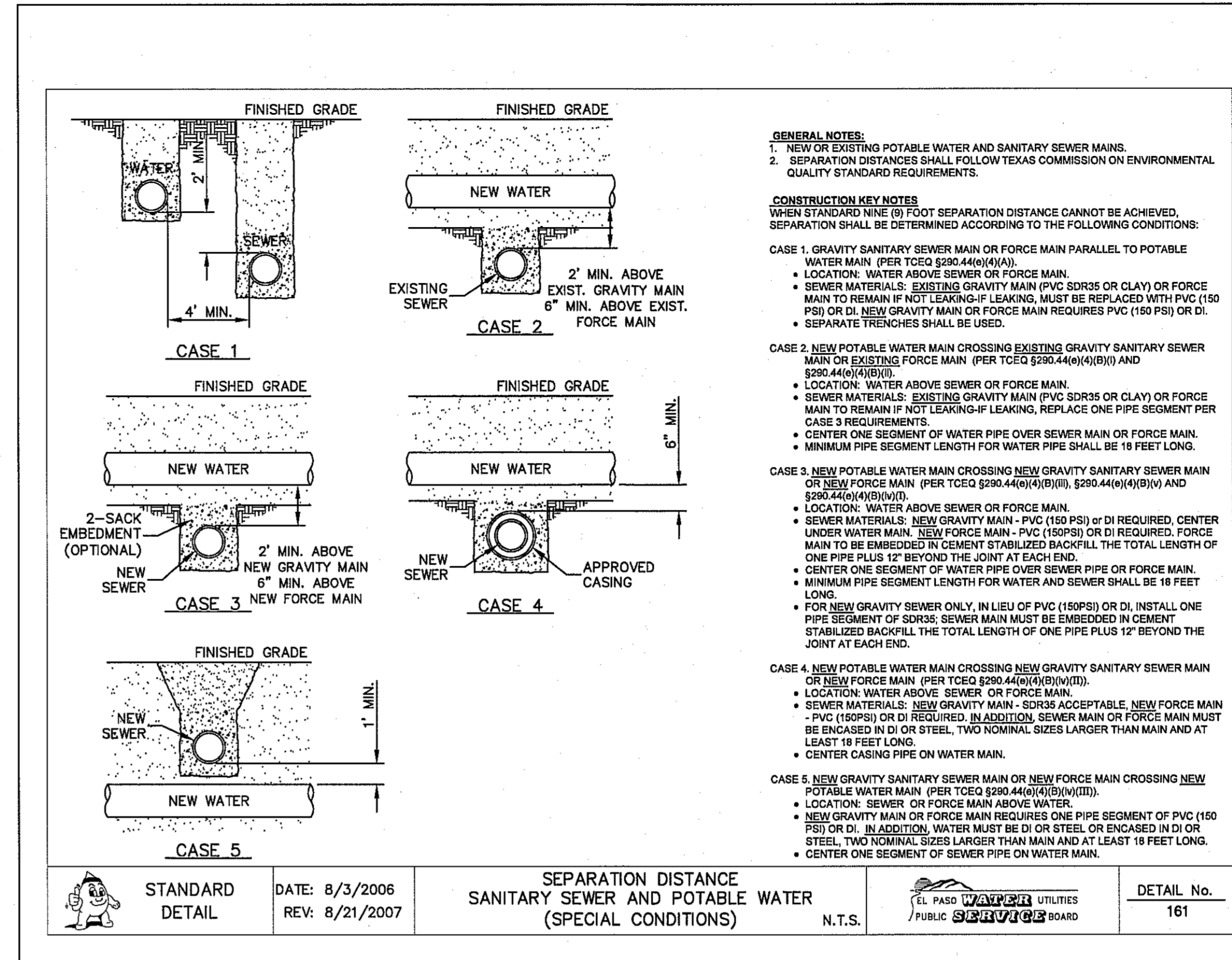
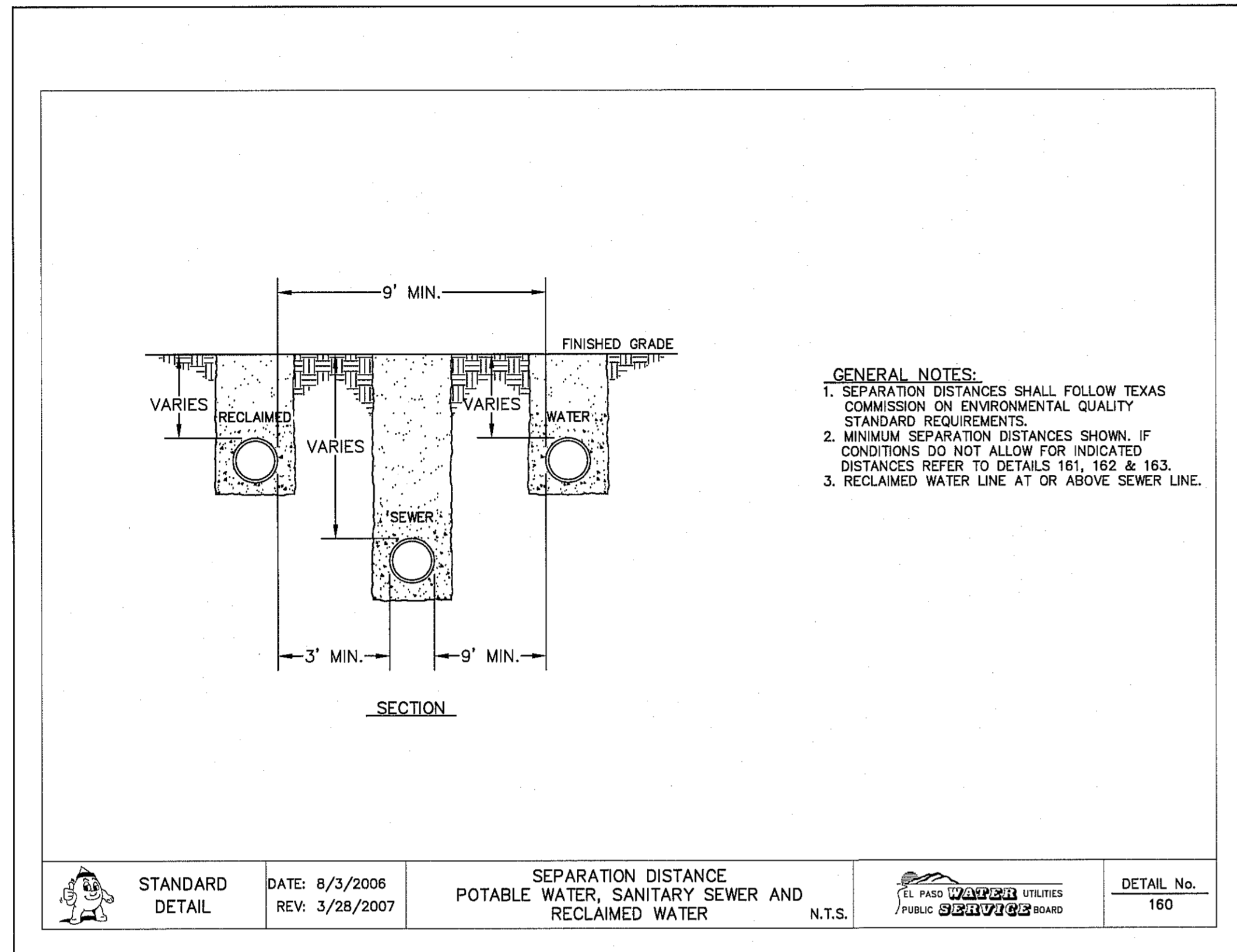
EL PASO WATER UTILITIES PUBLIC UTILITIES BOARD
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PROJECT TITLE
TRES SUEÑOS UNIT TWELVE SUBDIVISION IMPROVEMENTS

SHEET TITLE
WATER DETAILS

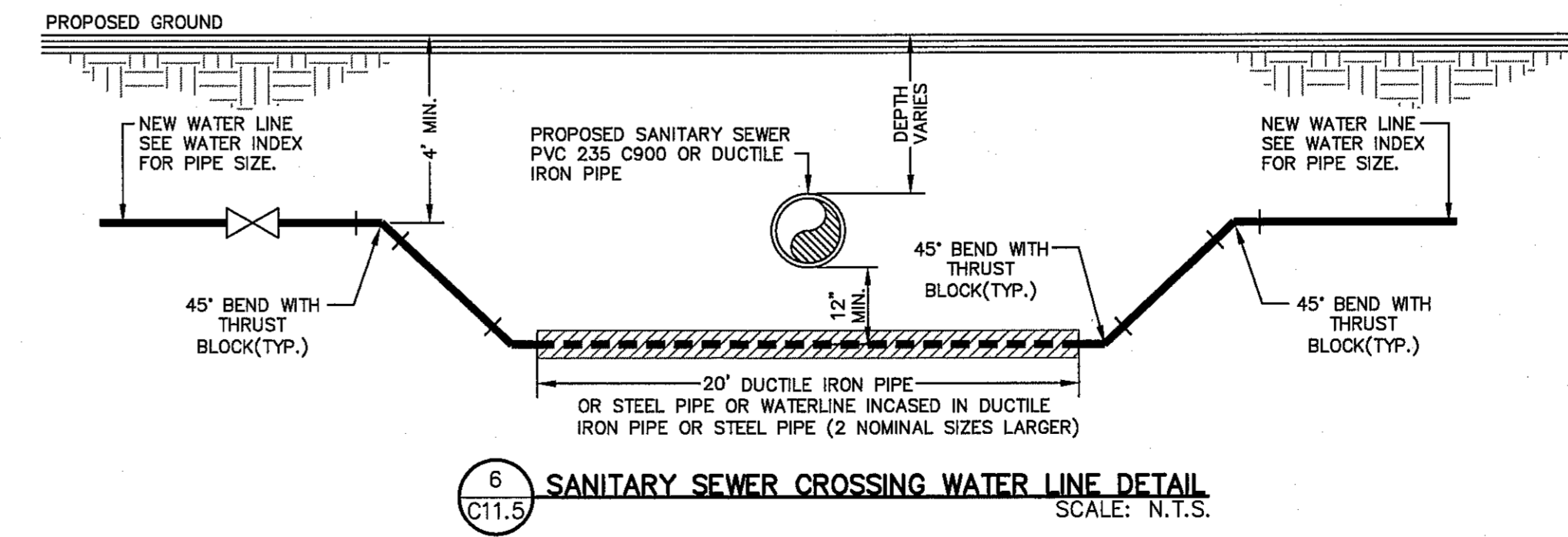
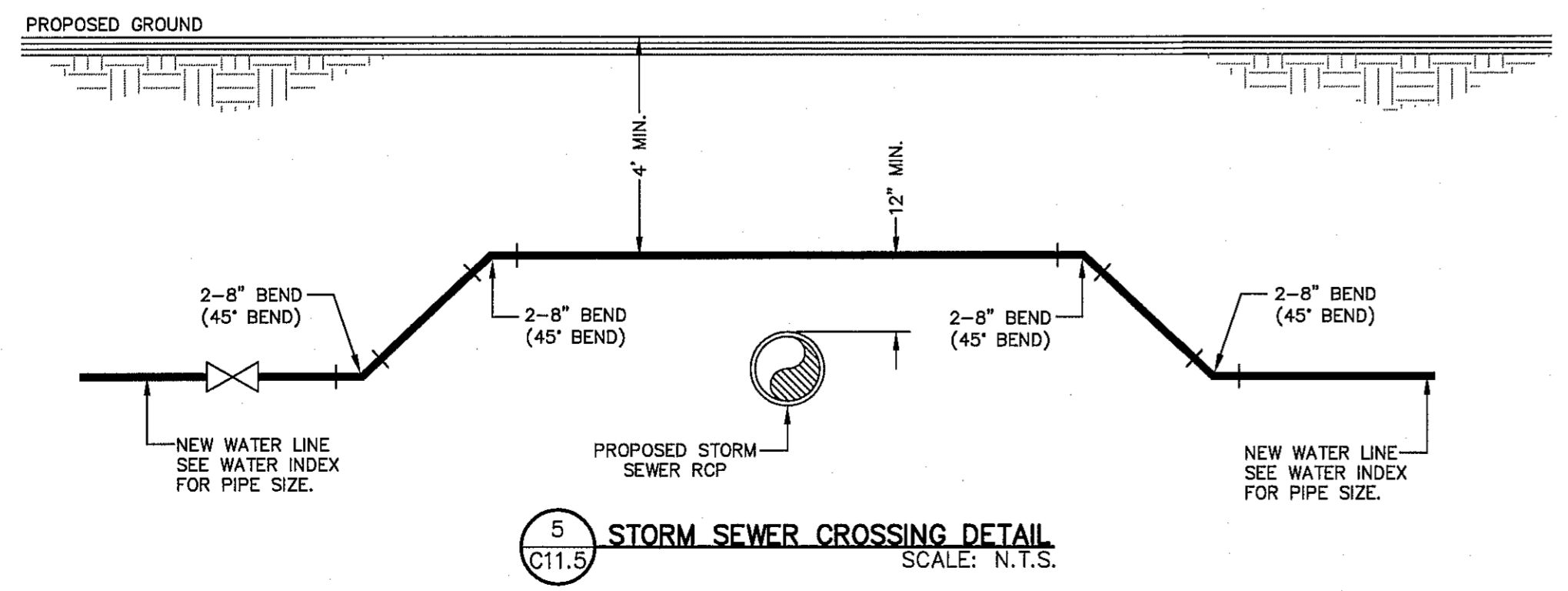
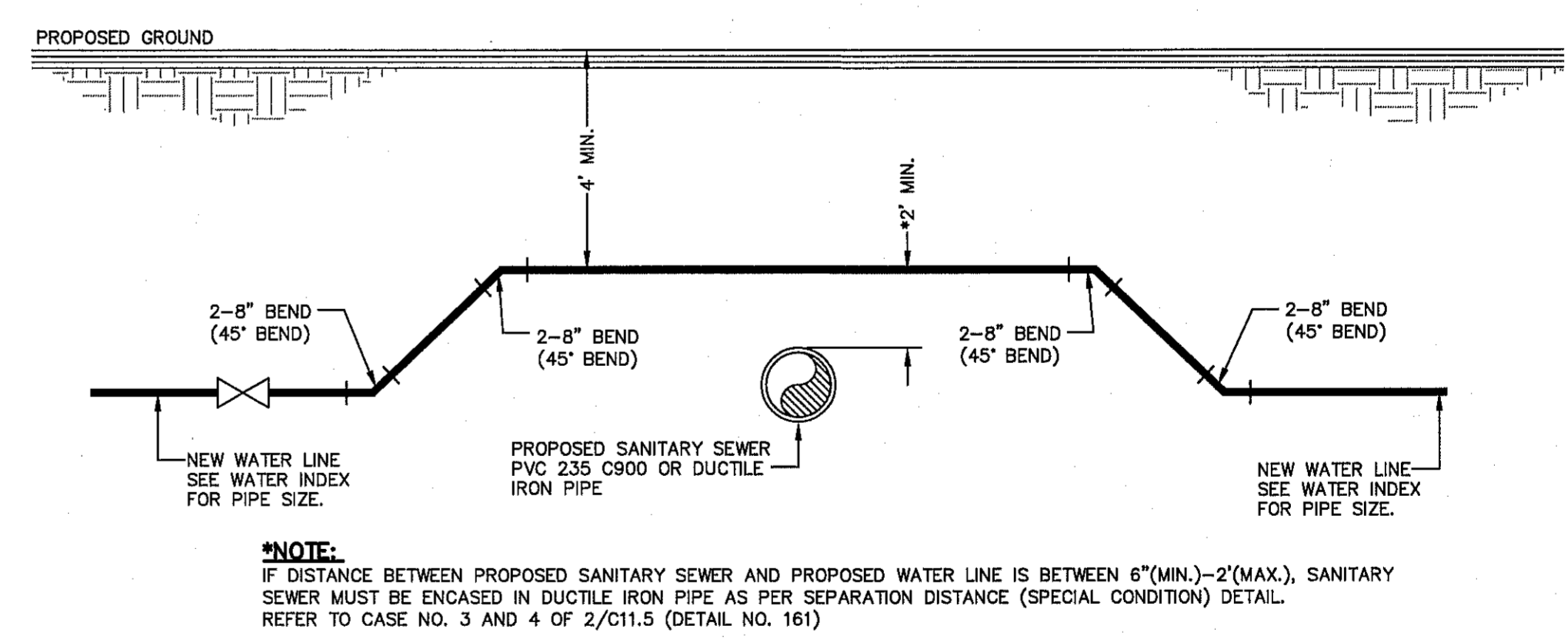
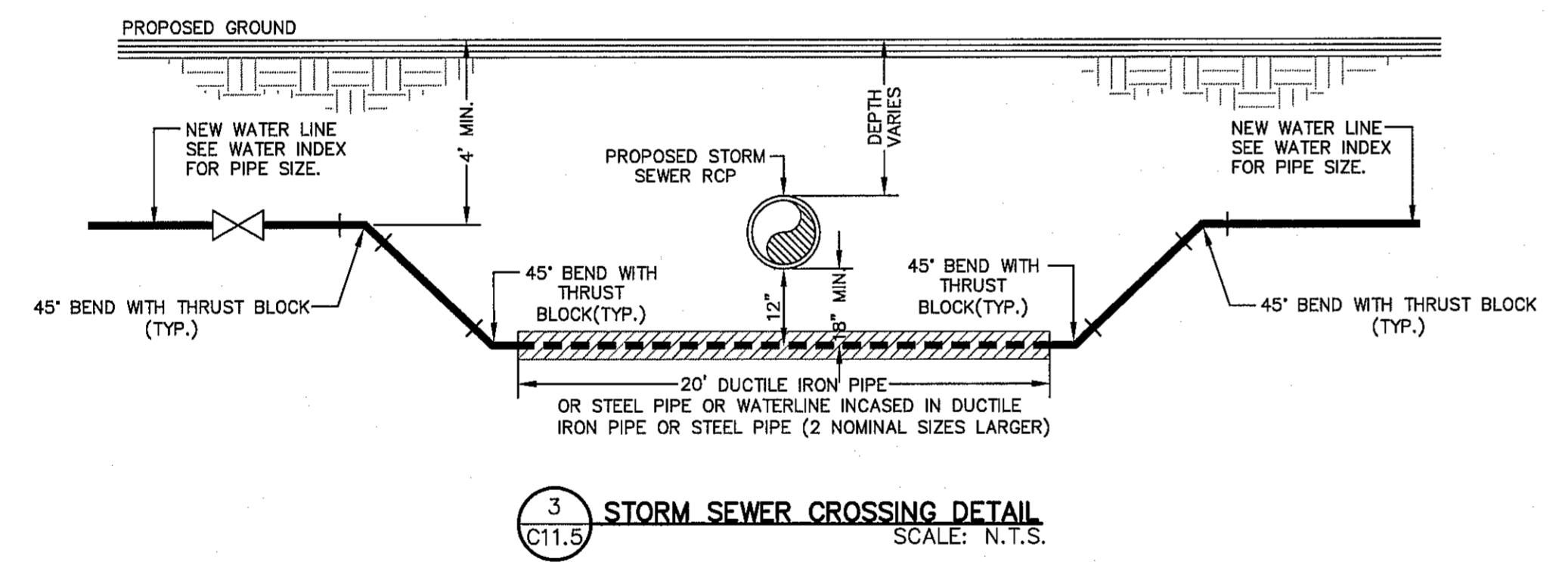
(SHEET 3 OF 4)
 SHEET NO.

C11.4



1 SEPARATION DISTANCE POTABLE WATER, SANITARY SEWER AND RECLAIMED WATER SCALE: N.T.S.

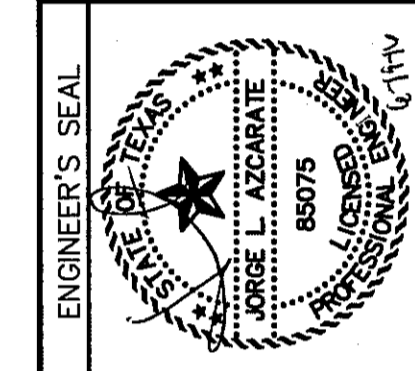
2 SEPARATION DISTANCE SANITARY SEWER AND POTABLE WATER (SPECIAL CONDITIONS) SCALE: N.T.S.



REFERENCES - BENCHMARKS

CITY QUANTITY AT POINT OF CURVE	CENTERLINE RICH	BY
BELT RAILROAD SUBDIVISION	DISTANCE OF CENTERLINE	REVISIONS
FROM THE SOUTHERLY RIGHT OF WAY LINE OF MONTANA	AVENUE CITY DATUM ELEVATION.....	DATE

TEXAS REGISTERED ENGINEERING FIRM #4684
 4712 Woodrow Behm, Ste. F El Paso, TX 79924
 915.544.3232 | www.oesgroup.net



SCALE: N/A

Horizontal:	N/A
Vertical:	N/A
Contour Interval:	N/A
DATE:	JUNE 2016
DESIGN BY:	R.O.
DRAWN BY:	R.O.
CHKD. BY:	J.L.A.
APPVD. BY:	J.L.A.
JOB No.	2000-194LD

PROJECT TITLE

TRES SUEÑOS UNIT TWELVE
 SUBDIVISION IMPROVEMENTS

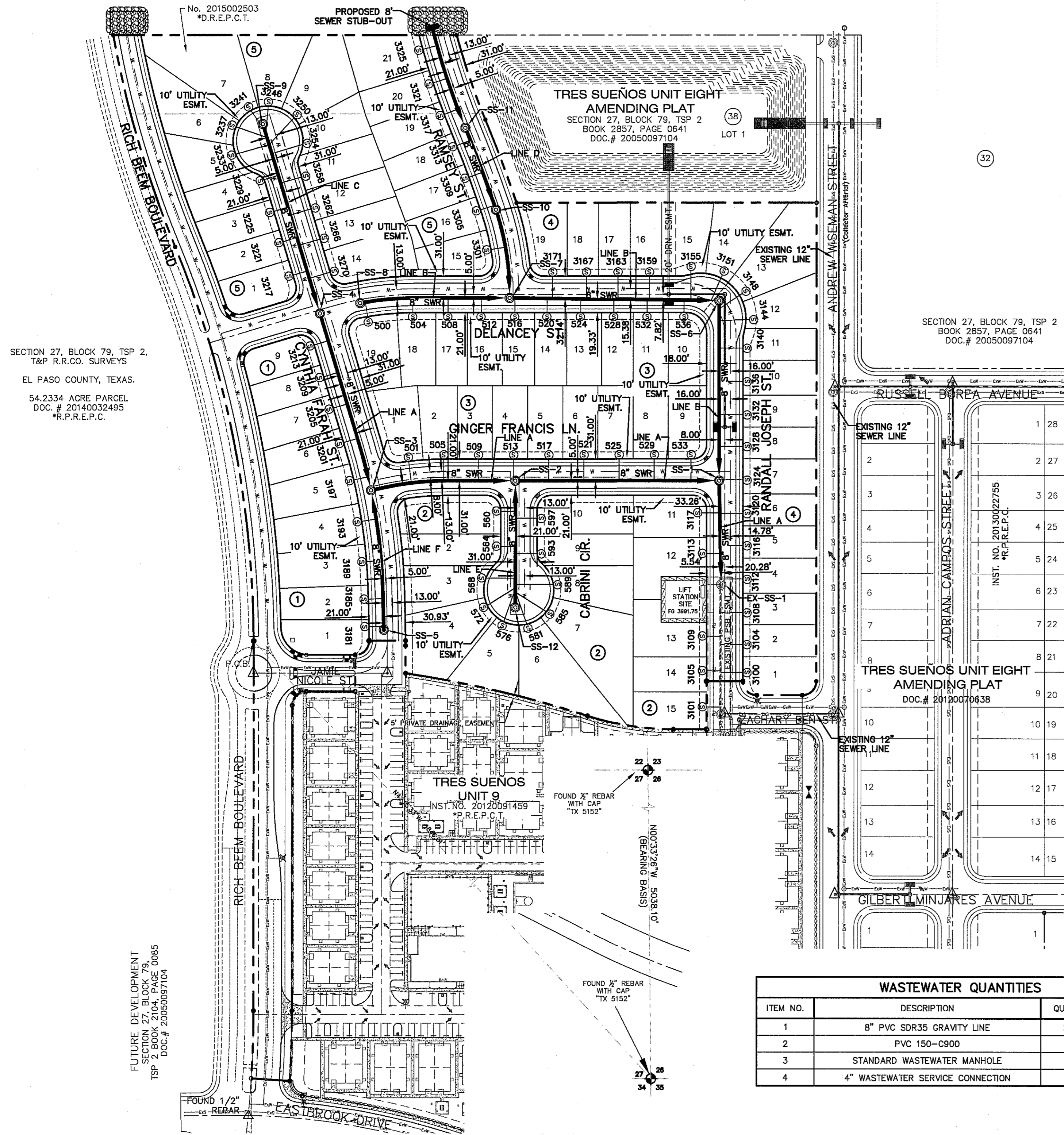
SHEET TITLE

WATER DETAILS

(SHEET 4 OF 4)
 SHEET NO.

C11.5

FUTURE TRES SUEÑOS DEVELOPMENT
SECTION 27, BLOCK 79 TSP
2 BOOK 2104, PG. 0085
DOC. # 20140032495
*R.P.R.E.P.C.



SECTION 27, BLOCK 79, TSP 2,
T&P R.R.CO. SURVEYS
EL PASO COUNTY, TEXAS.
54.2334 ACRE PARCEL
DOC. # 20140032485
*R.P.R.E.P.C.

FUTURE DEVELOPMENT
SECTION 27, BLOCK 79,
TSP 2, BOOK 2104, PAGE 0085
DOC. # 20050097104

SECTION 27, BLOCK 79, TSP 2
BOOK 2857, PAGE 0641
DOC. # 20050097104

TRES SUEÑOS UNIT EIGHT
AMENDING PLAT
DOC. # 2010070438

ITEM NO.	DESCRIPTION	QUANTITY	UNIT
1	8" PVC SDR35 GRAVITY LINE	2285	LINEAR FEET
2	PVC 150-C900	463	LINEAR FEET
3	STANDARD WASTEWATER MANHOLE	12	EACH
4	4" WASTEWATER SERVICE CONNECTION	83	EACH

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

SANITARY SEWER INDEX MAP
SCALE: 1" = 100'

- GENERAL NOTES**
- UNLESS OTHERWISE SHOWN ON THE DRAWINGS, THE PROPOSED SEWER MAINS AND SEWER MANHOLES SHALL BE INSTALLED NO LESS THAN TEN (10') FEET 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 FORTY-EIGHT (48") INCHES 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 FORTY-EIGHT (48) DAYS 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
11884 GREENVILLE AVENUE.
DALLAS, TX 75243
(800) 344-8377

WATER & SEWER:
EL PASO WATER UTILITIES
1154 HAWKINS BOULEVARD
EL PASO, TX 79961
(915) 595-5151
(915) 594-5530

TELEPHONE:
SBC
11200 PELICANO
EL PASO, TX 79935
(915) 595-5151
MR. TIM BROWN

ENGINEER:
CEA GROUP
CASTNER CENTER @ TRANSMOUNTAIN
4712 WOODROW BEAN, STE. F
EL PASO, TX 79924
(915) 544-5232
MR. JORGE L. AZCARATE, P.E.

ELECTRIC:
EL PASO ELECTRIC CO.
501 W. SAN ANTONIO ST.
EL PASO, TX 79902
(915) 543-2078
MR. FRANK WIGEL (DISTRIBUTION)

FIBER OPTICS:
AT&T
P.O. BOX 1650
EL PASO, TX 79949
(800) 852-3786
MS. DARLENE NORIS

FIBER OPTICS:
U.S. SPRINT
151 N. BOONE ST.
EL PASO, TX 79905
(915) 534-7919
MR. RICK DERAGISCH

EL PASO STREETS
CITY OF EL PASO
STREET & MAINTENANCE
DEPARTMENT
7969 SAN PAULO DRIVE
EL PASO, TX 79907
(915) 621-6750
MR. DARYL W. COLE

RESIDENTIAL GAS LINES:
TEXAS GAS SERVICE
4700 POLLARD ST.
EL PASO, TX 79930
(915) 680-7218

FIBER OPTICS:
MCI TELECOMMUNICATIONS CORP.
4045 DONIPHAN PARK CIRCLE
EL PASO, TX 79922
(915) 542-2770 EXT. 201
MR. DANIEL HERNANDEZ

CABLE TELEVISION:
TIME WARNER COMMUNICATIONS
7010 AIRPORT ROAD
EL PASO, TX 79906
(915) 772-1123

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

INDEX

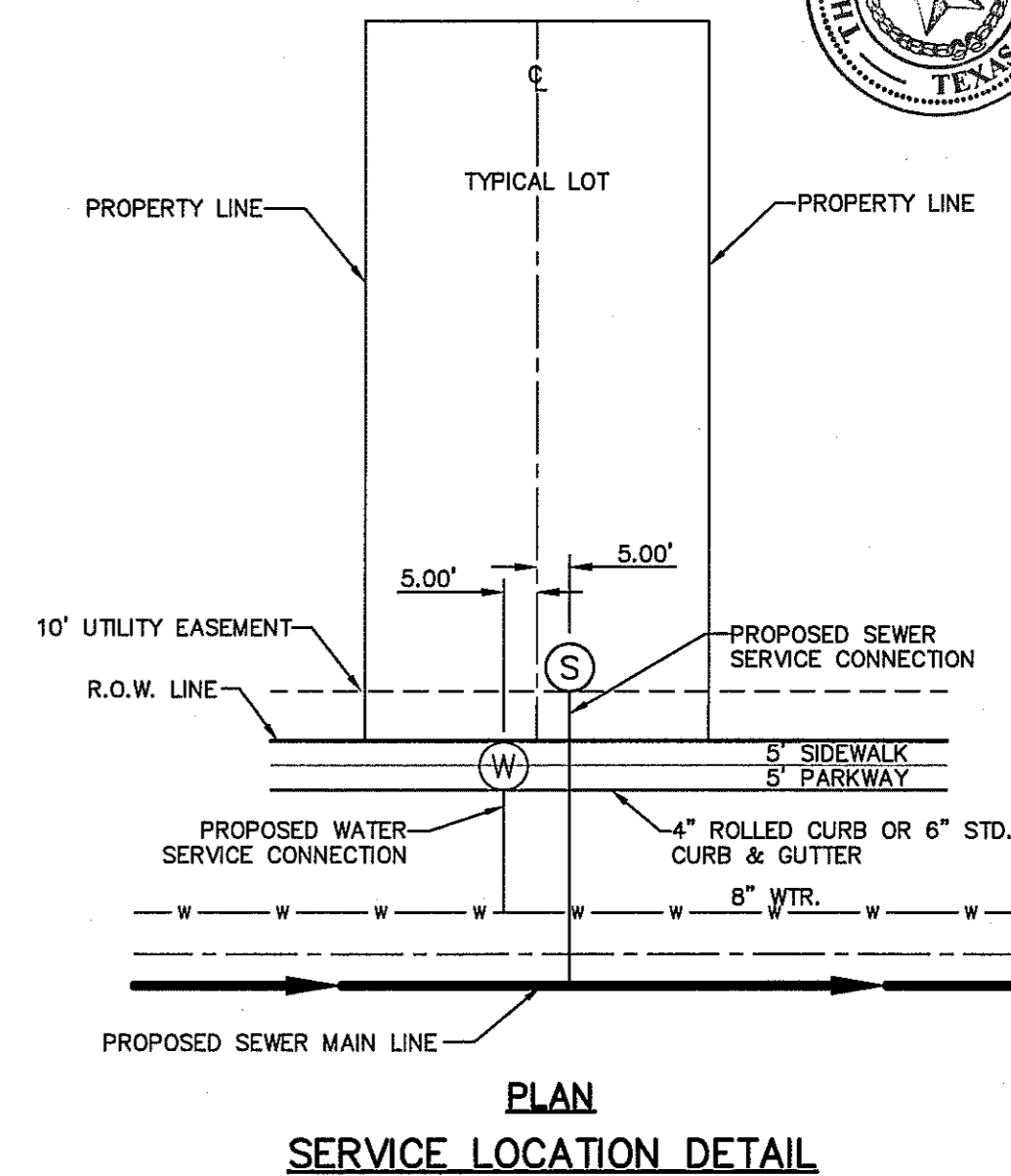
SHEET NO.	DESCRIPTION
C12.1	(TRES SUEÑOS UNIT TWELVE) LEGEND INDEX / GENERAL INFORMATION
C12.2	LINE A & B
C12.3	LINE C, D, E, & F
C12.4	SANITARY SEWER DETAILS
C12.5	SANITARY SEWER DETAILS
C12.6	SANITARY SEWER DETAILS

NOTES:

- ALL LOTS SHALL BE PROVIDED WITH ONE SERVICE CONNECTION TO BE INSTALLED AT THE LOCATION AS SHOWN ON THE SERVICE LOCATION DETAIL.
- ALL SANITARY SEWER PIPES SHALL BE PVC, SDR 35, (D 3034), UNLESS OTHERWISE SHOWN, AS REQUIRED BY THE EPWU/PSB RULES AND REGULATIONS AND DESIGN STANDARDS.
- REFERENCE SANITARY SEWER DETAILS FOR SEWER CROSSINGS AT STORM SEWER.

LEGEND

SYMBOL	DESCRIPTION
	PROPOSED STORM SEWER
	EXISTING WATER LINE
	EXISTING SEWER LINE
	SUBD. BOUNDARY LINE
	PROPERTY LINE
	CENTER LINE
	PROPOSED WATER LINE
	PROPOSED DOUBLE SEWER LINE (REFER TO PLAN & PROFILE) 12" LOWER LINE / 8" UPPER LINE
	PROPOSED SEWER LINE (PLAN VIEW)
	PROPOSED SEWER LINE ON ANOTHER SHEET (PLAN VIEW)
	PROPOSED SEWER LINE (PROFILE VIEW)
	PROPOSED SEWER LINE (PROFILE VIEW)
	PROPOSED SERVICE CONNECTION (PLAN VIEW)
	EXISTING MANHOLE (PLAN VIEW)
	PROPOSED MANHOLE (PROFILE VIEW)
	EXISTING MANHOLE (PROFILE VIEW)

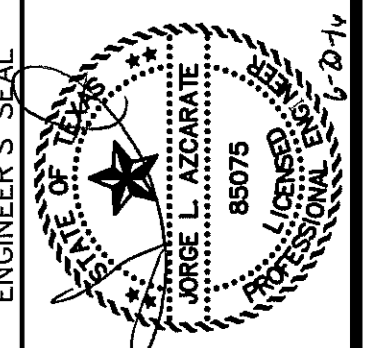


REFERENCES - BENCHMARKS

CITY MONUMENT AT POINT OF CURVE CENTERLINE RICH BEEM BOULEVARD FROM THE SOUTHERLY RIGHT OF WAY LINE OF MONTANA AVENUE CITY DATUM ELEVATION.....4005.40

DATE	REVISIONS	BY

CEA GROUP
TEXAS REGISTERED ENGINEERING FIRM F-4664
4712 Woodrow Bean, Ste. F El Paso, TX 79924
915.544.5232 | www.ceagroup.net

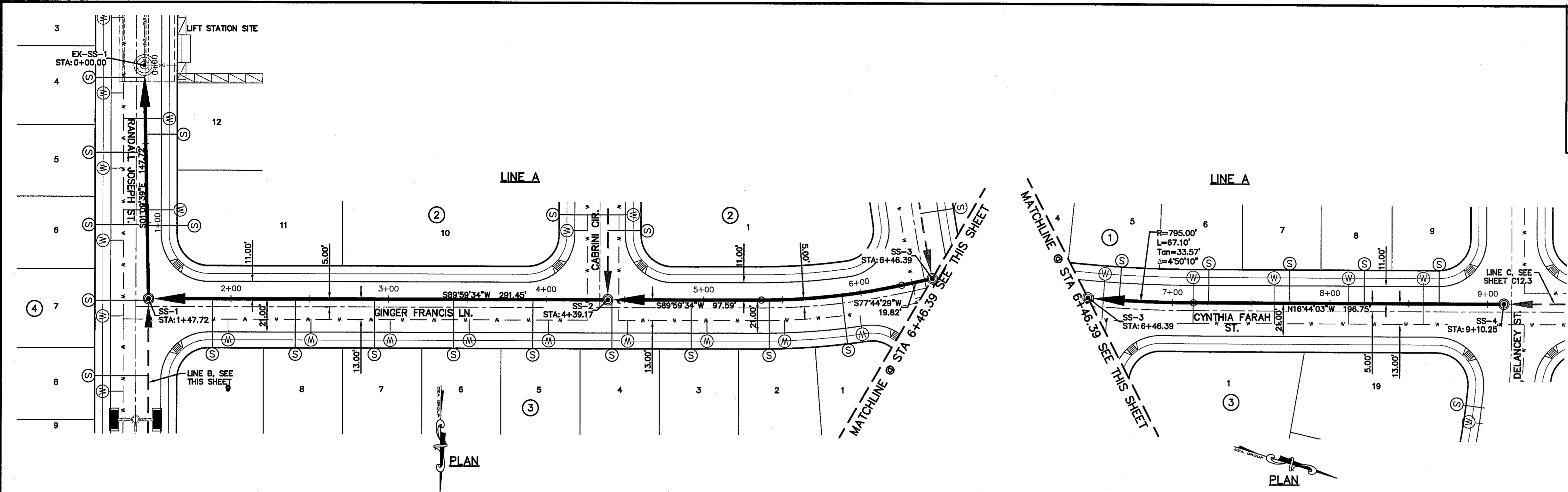


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Contour: N/A
DATE: JUNE 2016
DESIGN BY: R.O.
DRAWN BY: J.L.A.
CHKD. BY: J.L.A.
APPVD. BY: J.L.A.
JOB No. 2000-194LD

**TRES SUEÑOS UNIT TWELVE
SUBDIVISION IMPROVEMENTS**

SHEET TITLE
SANITARY SEWER INDEX/GENERAL INFORMATION

SHEET NO.
C12.1



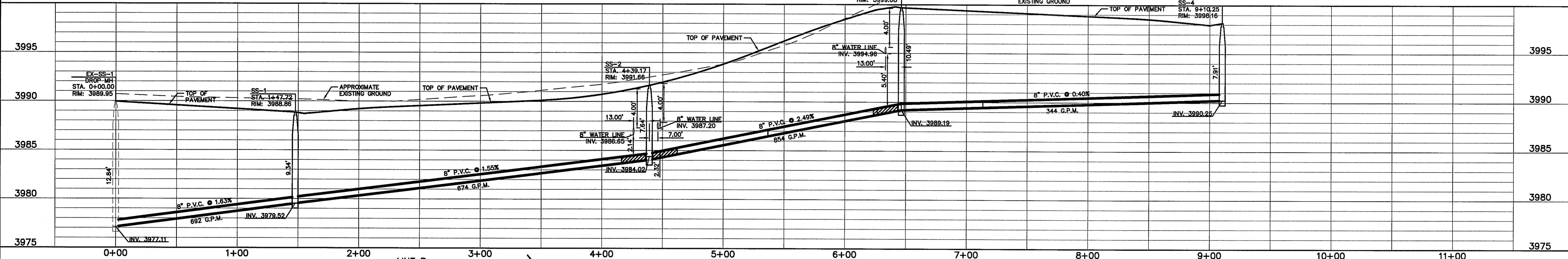
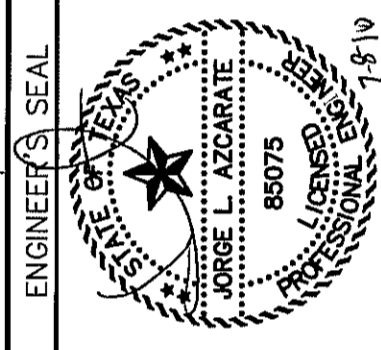
UTILITY LOCATOR SERVICES	
EL PASO ELECTRIC COMPANY	(915) 543-5720
EL PASO ENERGY CORPORATION	(915) 496-5244
EL PASO WATER UTILITIES	(915) 594-5500
MO SURVEILLANCE	(800) MO-WORK
TIME WARNER COMMUNICATIONS	(915) 772-1123
TEXAS GAS SERVICE	(915) 680-7200
SBC	(800) 545-6005
AT&T	(800) 852-3786
U.S. SPRINT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

WARNING!
BEFORE YOU DIG
CALL 811
 FOR FIELD LOCATING EXISTING UTILITIES

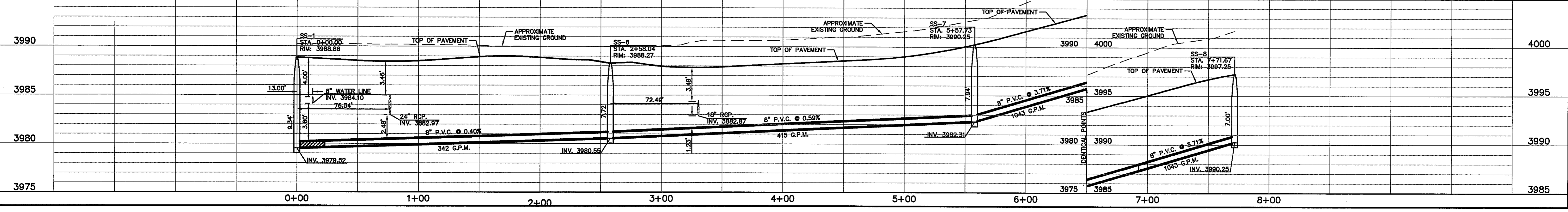
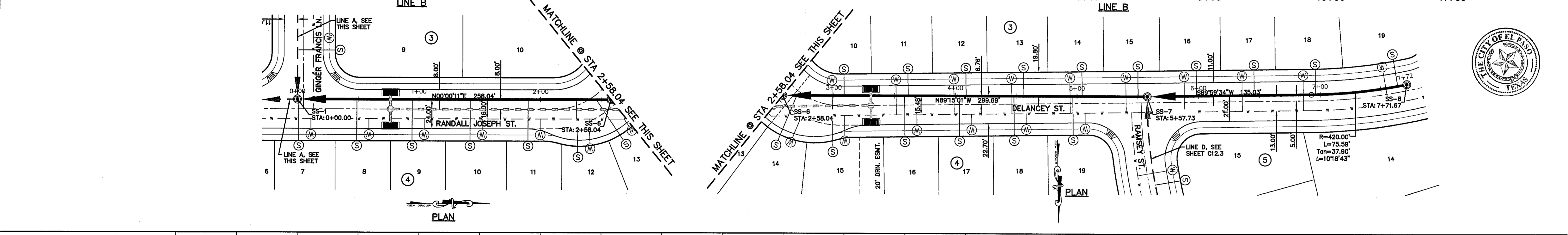
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- PROPOSED STORM SEWER LINE
 - PROPOSED WATER LINE
 - PROPOSED SEWER LINE ON ANOTHER SHEET (PLAN VIEW)
 - PROPOSED SEWER LINE
 - PROPOSED WATER SERVICE
 - PROPOSED SEWER SERVICE
 - PROPOSED SEWER MANHOLE
 - ▨ 2-SACK CEMENT ON ALL WATER CROSSING

DATE	REVISIONS	BY

REFERENCES - BENCHMARKS
 CITY MONUMENT AT POINT OF CURVE CENTERLINE RICH
 FROM BELLEVILLE TO A POINT 100' N 87° 50' 00" W
 FROM BELLEVILLE TO A POINT 100' N 87° 50' 00" W
 AVENUE CITY DATUM ELEVATION.....4055.40



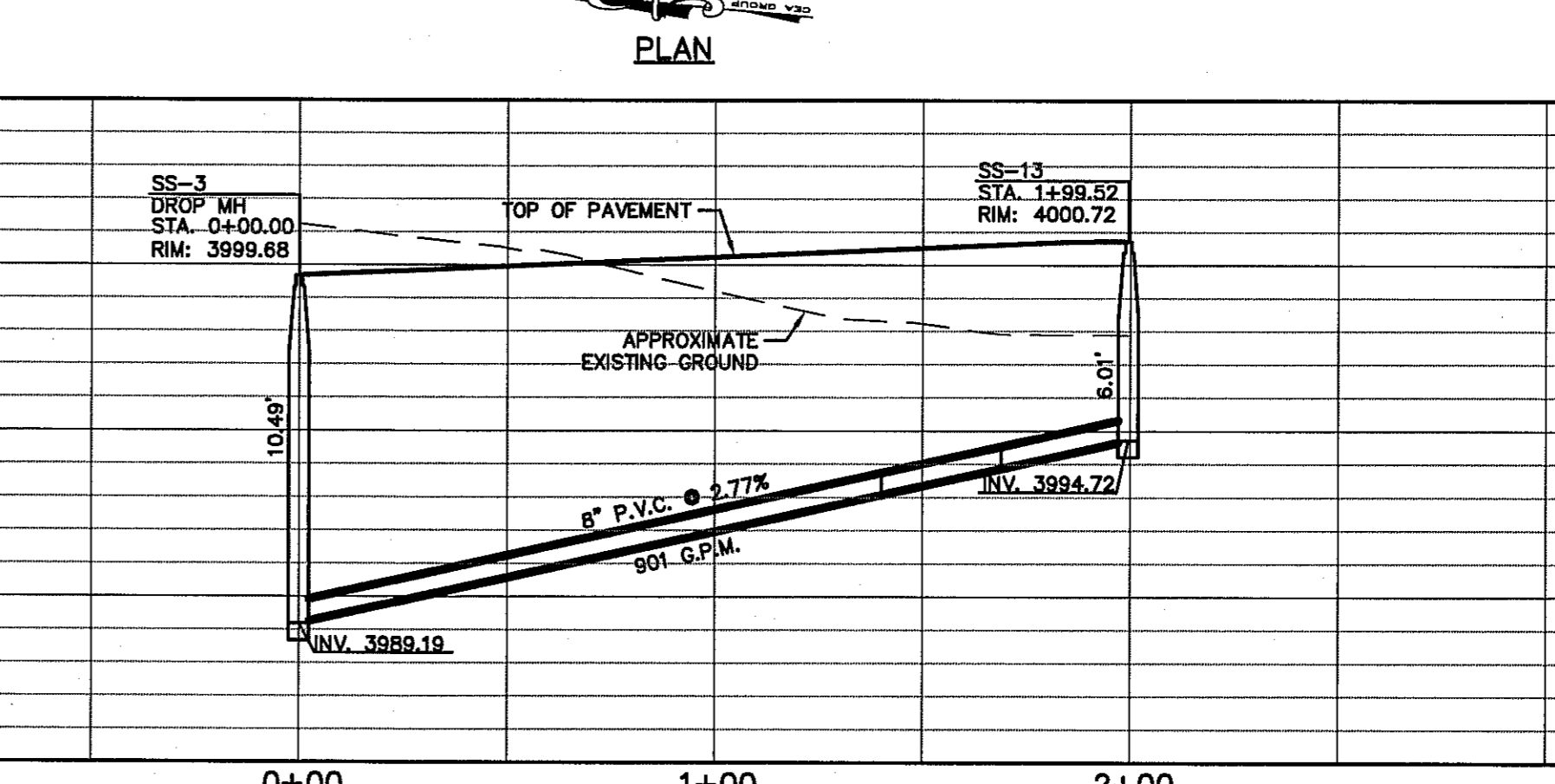
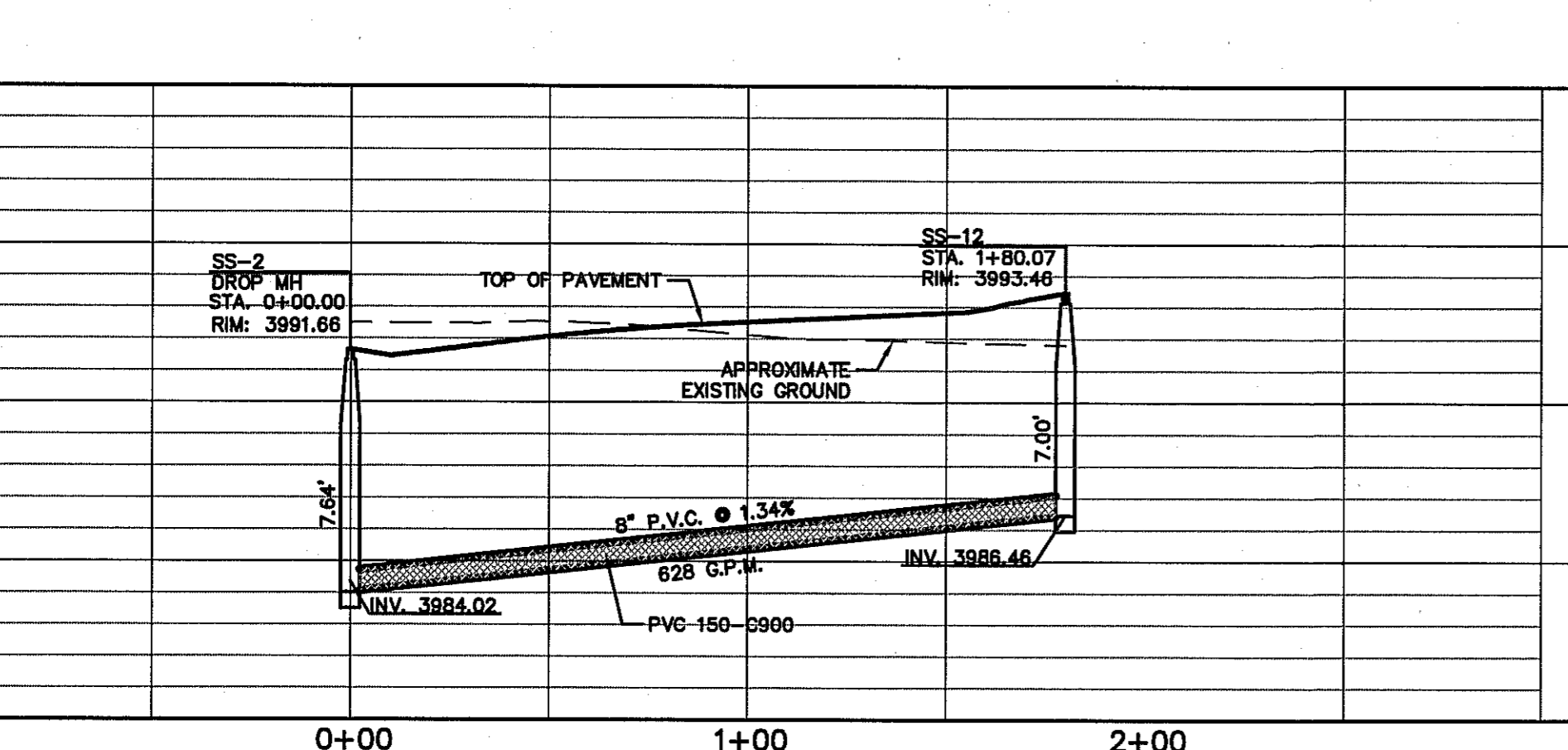
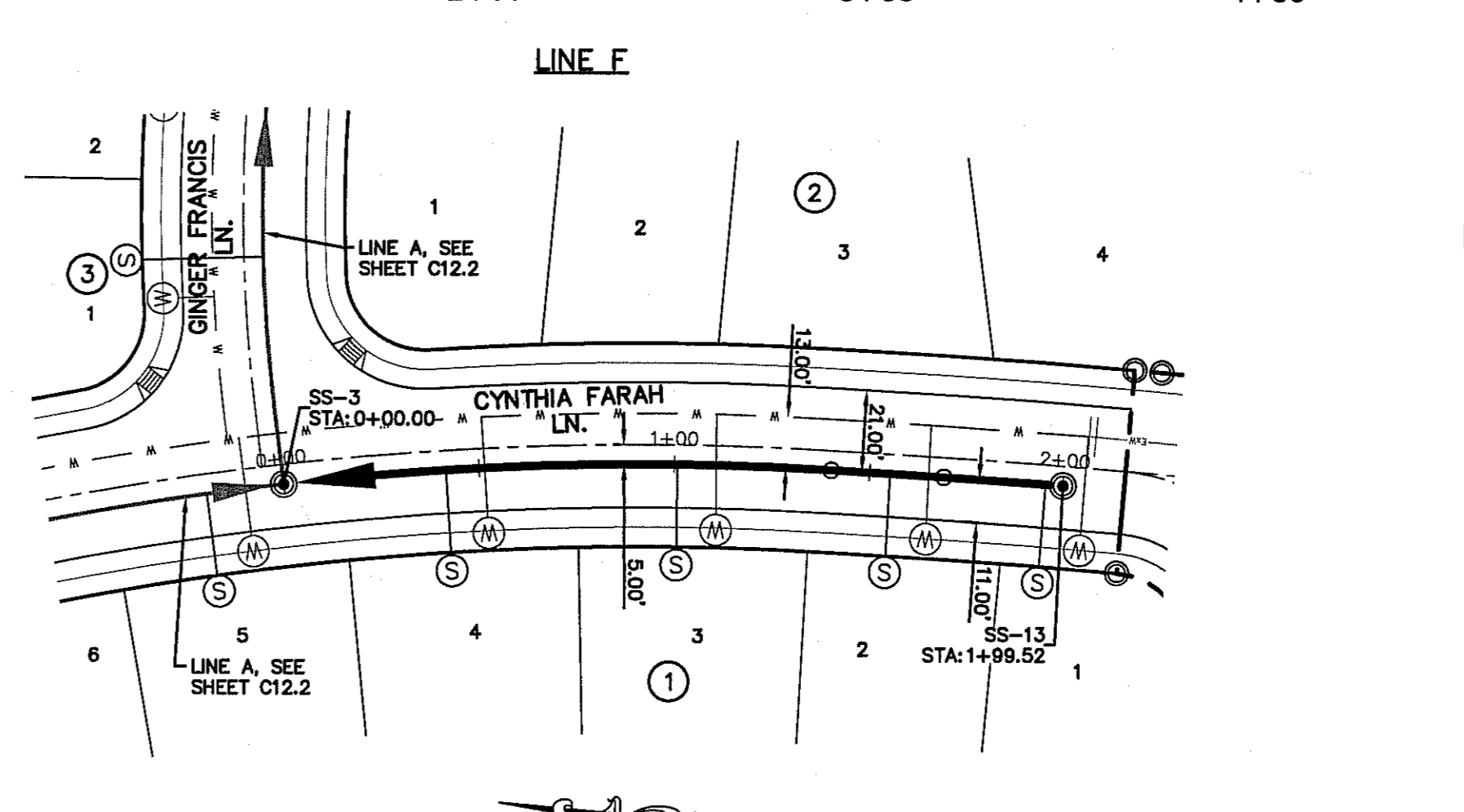
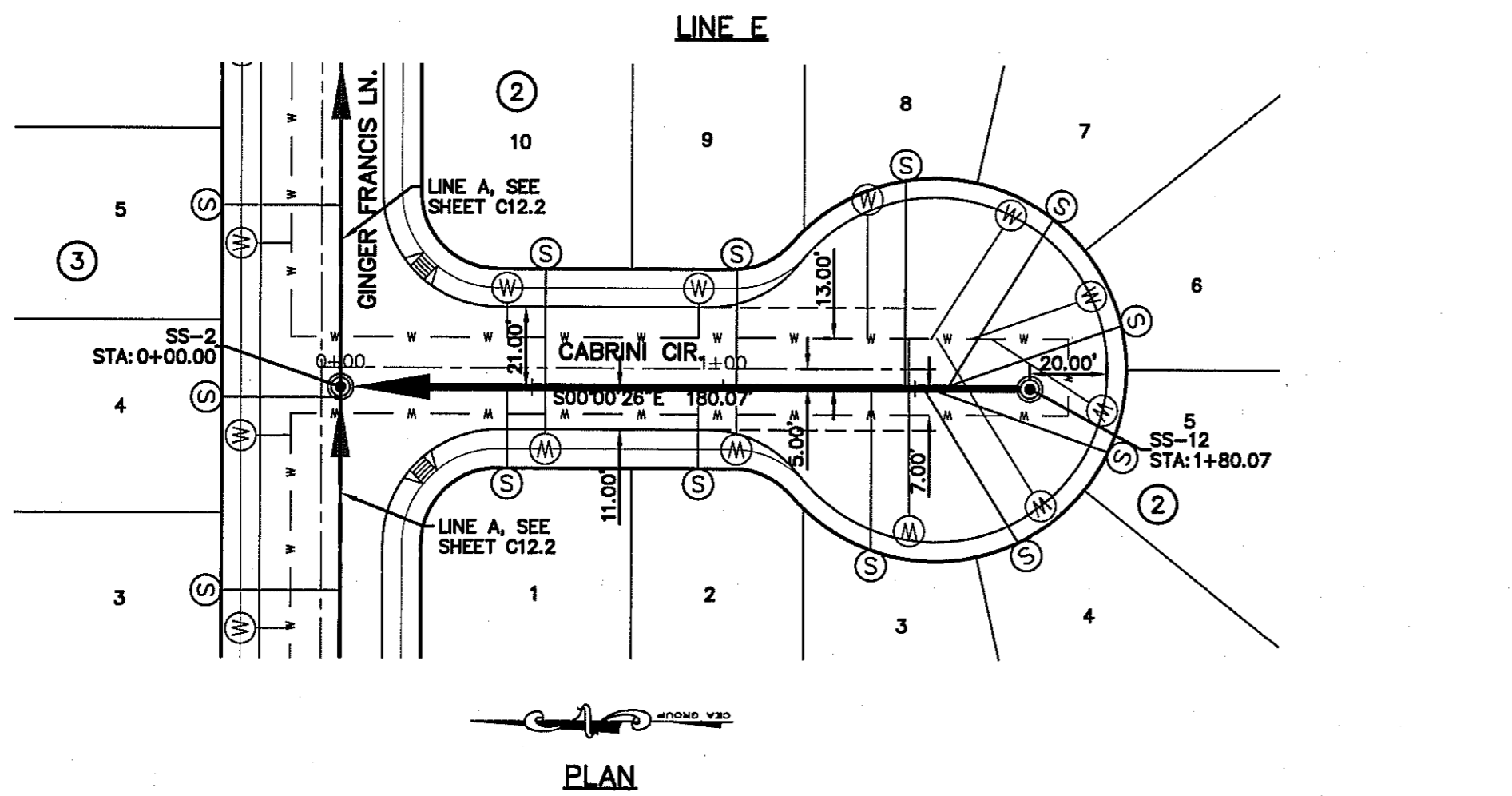
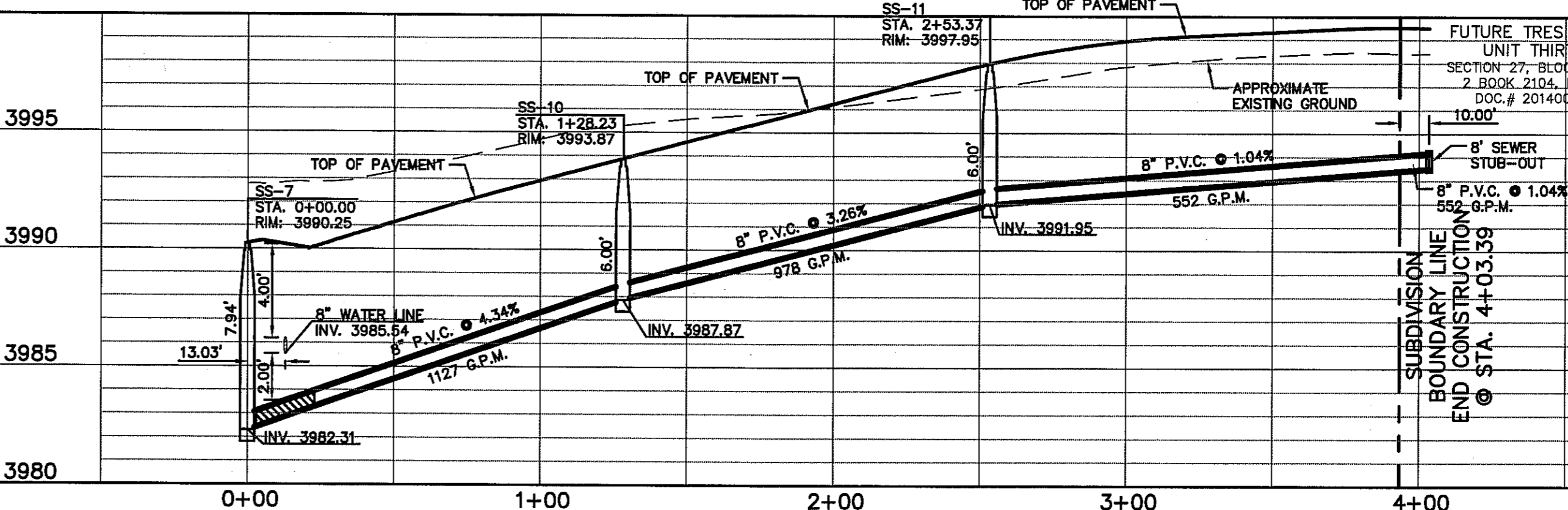
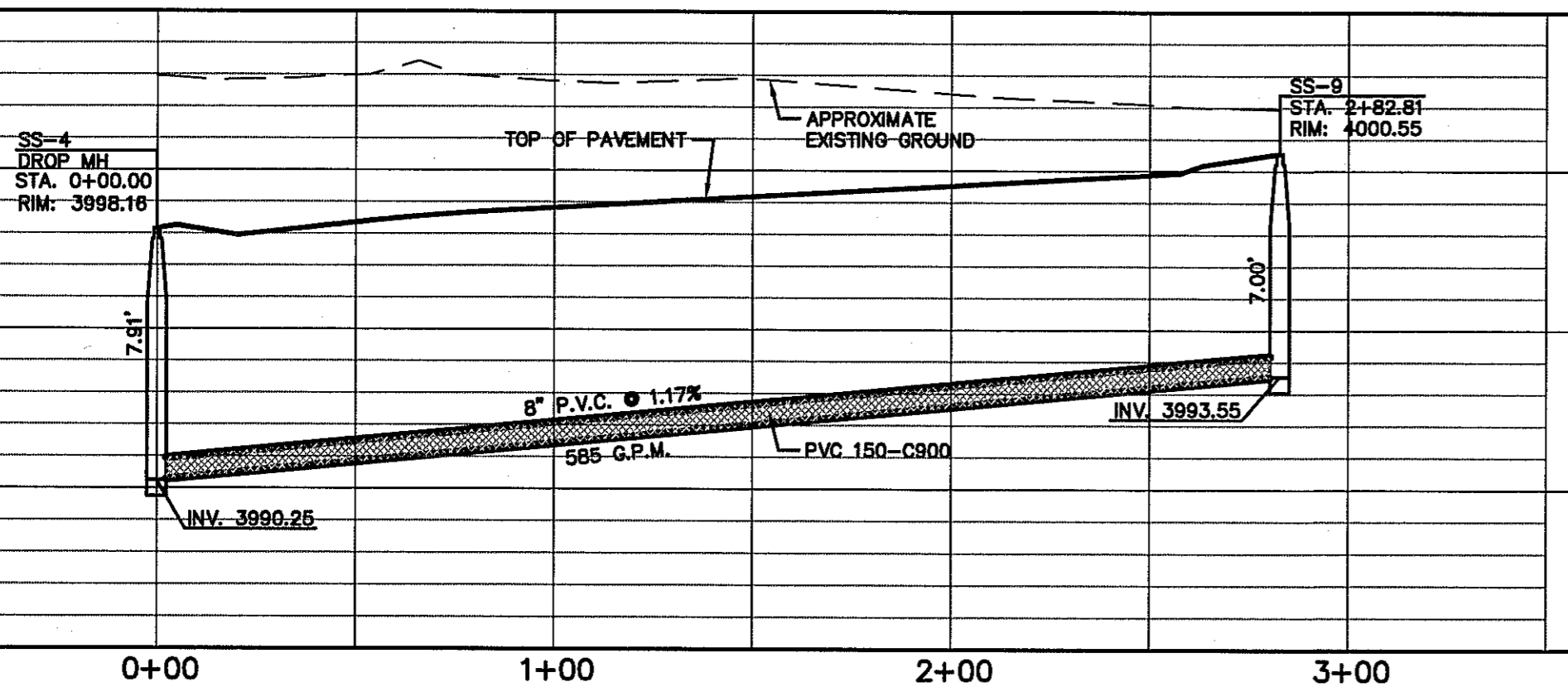
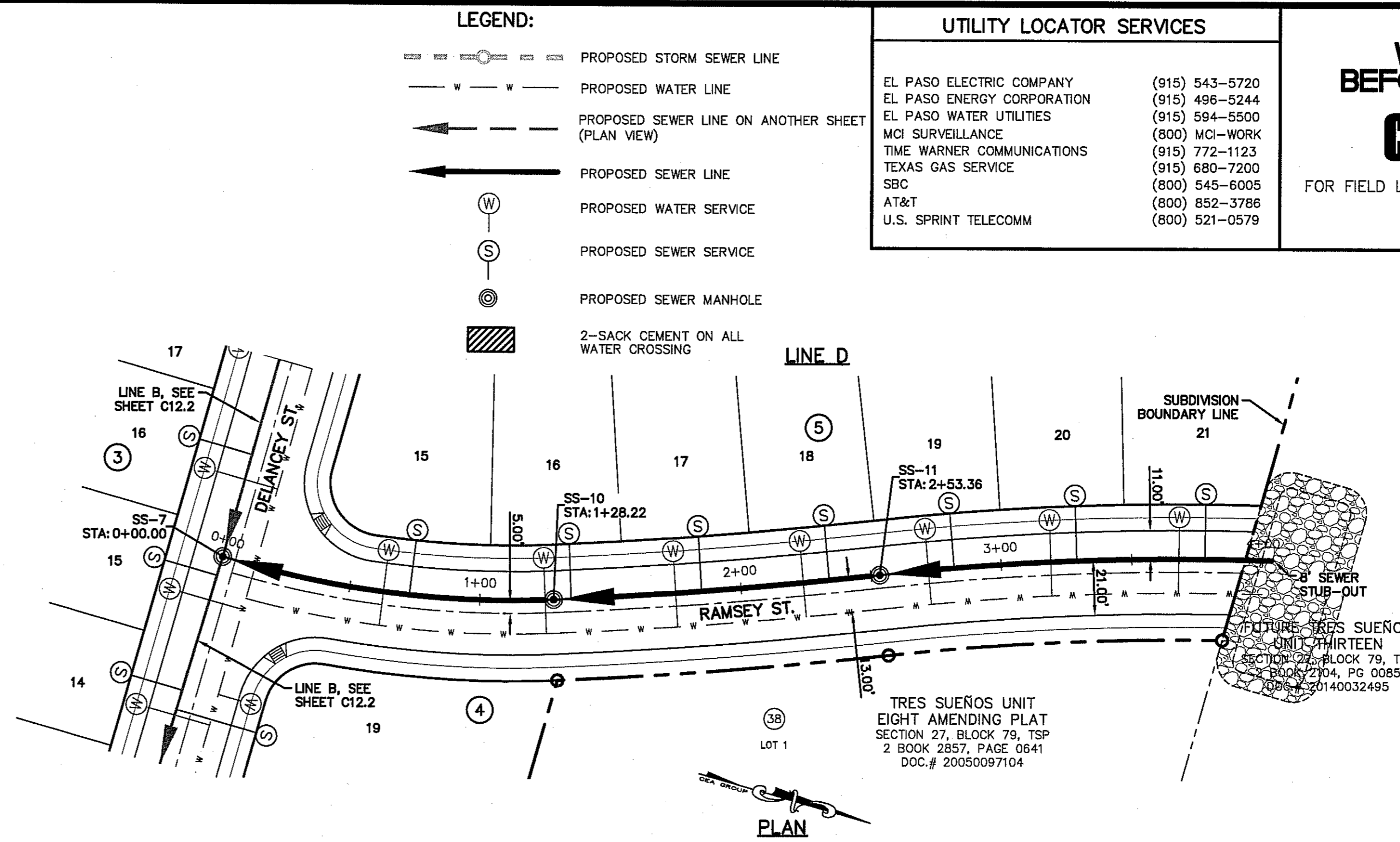
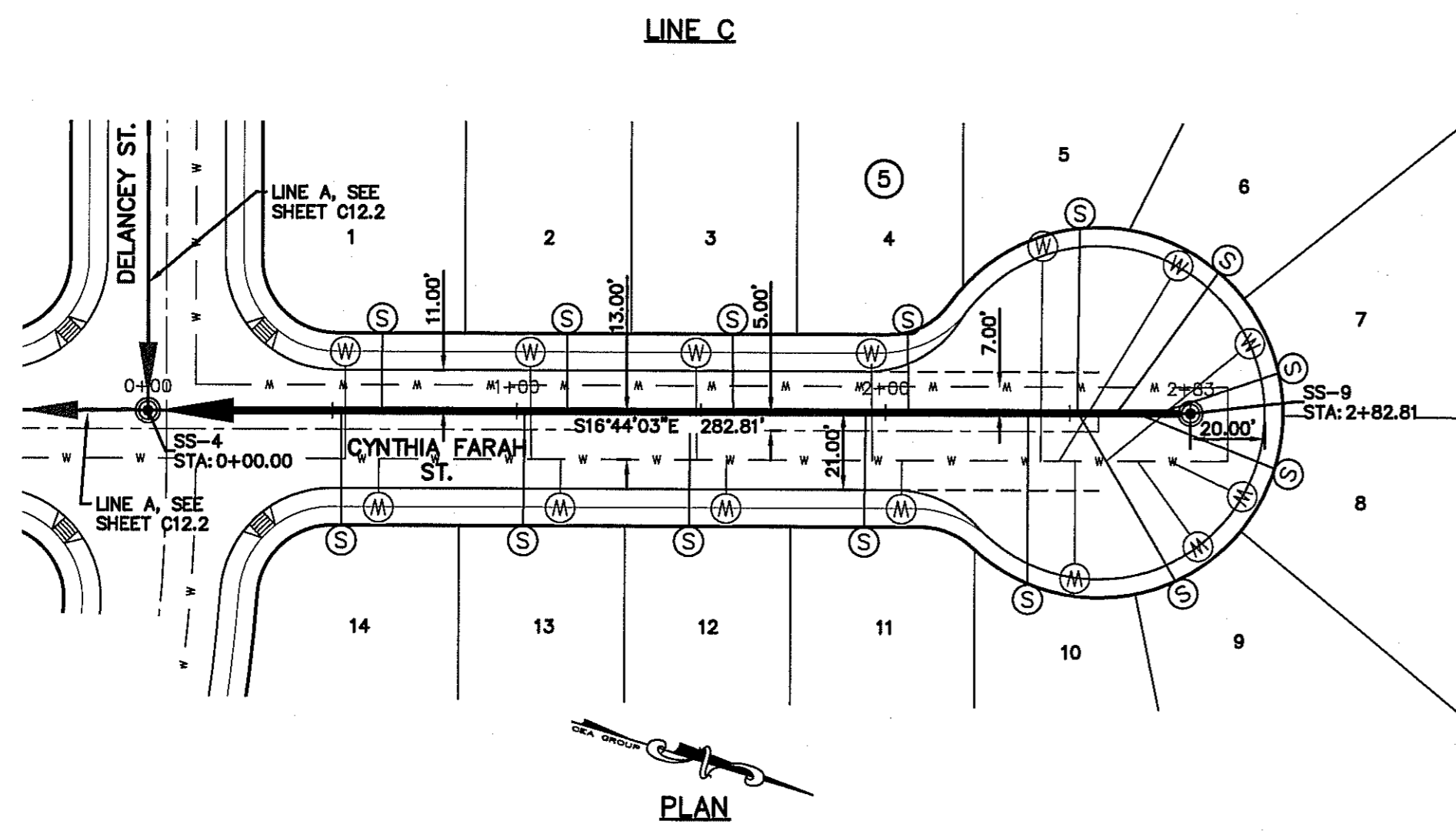
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 DESIGN BY: R.O.
 DRAWN BY: J.L.A.
 CHECKED BY: J.L.A.
 APPVD. BY: J.L.A.
 JOB No. 2000-194LD



PROJECT TITLE
TRES SUEÑOS UNIT TWELVE
SUBDIVISION IMPROVEMENTS

SHEET TITLE
 SANITARY SEWER
 PLAN & PROFILE
 LINE "A" & LINE "B"

SHEET NO.
C12.2



- 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
 - ▨ 2-SACK CEMENT ON ALL WATER CROSSING

UTILITY LOCATOR SERVICES

EL PASO ELECTRIC COMPANY	(915) 543-5720
EL PASO ENERGY CORPORATION	(915) 496-5244
EL PASO WATER UTILITIES	(915) 594-5500
MCI SURVEILLANCE	(800) MCI-WORK
TIME WARNER COMMUNICATIONS	(915) 772-1123
TEXAS GAS SERVICE	(915) 680-7200
SBC	(800) 545-6005
AT&T	(800) 852-3788
U.S. SPRINT TELECOMM	(800) 521-0579

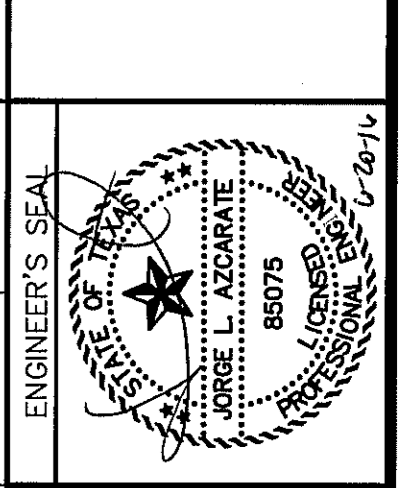
WARNING!
BEFORE YOU DIG
CALL 811
FOR FIELD LOCATING EXISTING UTILITIES

REFERENCES - BENCHMARKS

CITY MONUMENT AT POINT OF CURVE CENTERLINE RICH BELLEVILLE DISTANCE 467.08 FEET FROM THE SOUTHWEST CORNER OF THE AVENUE CITY DATUM ELEVATION.....4095.40

DATE	REVISIONS	BY

TEXAS REGISTERED ENGINEERING FIRM #4684
4712 Woodrow Bean, Ste. F, El Paso, TX 79924
915.544.5232 | www.cagroup.net



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Contour Interval: N/A
DATE: JUNE 2016
DESIGN BY: R.O.
DRAWN BY: J.L.A.
CHKD. BY: J.L.A.
APPROV. BY: J.L.A.
JOB No. 2000-1944.D

TRES SUEÑOS UNIT TWELVE
SUBDIVISION IMPROVEMENTS

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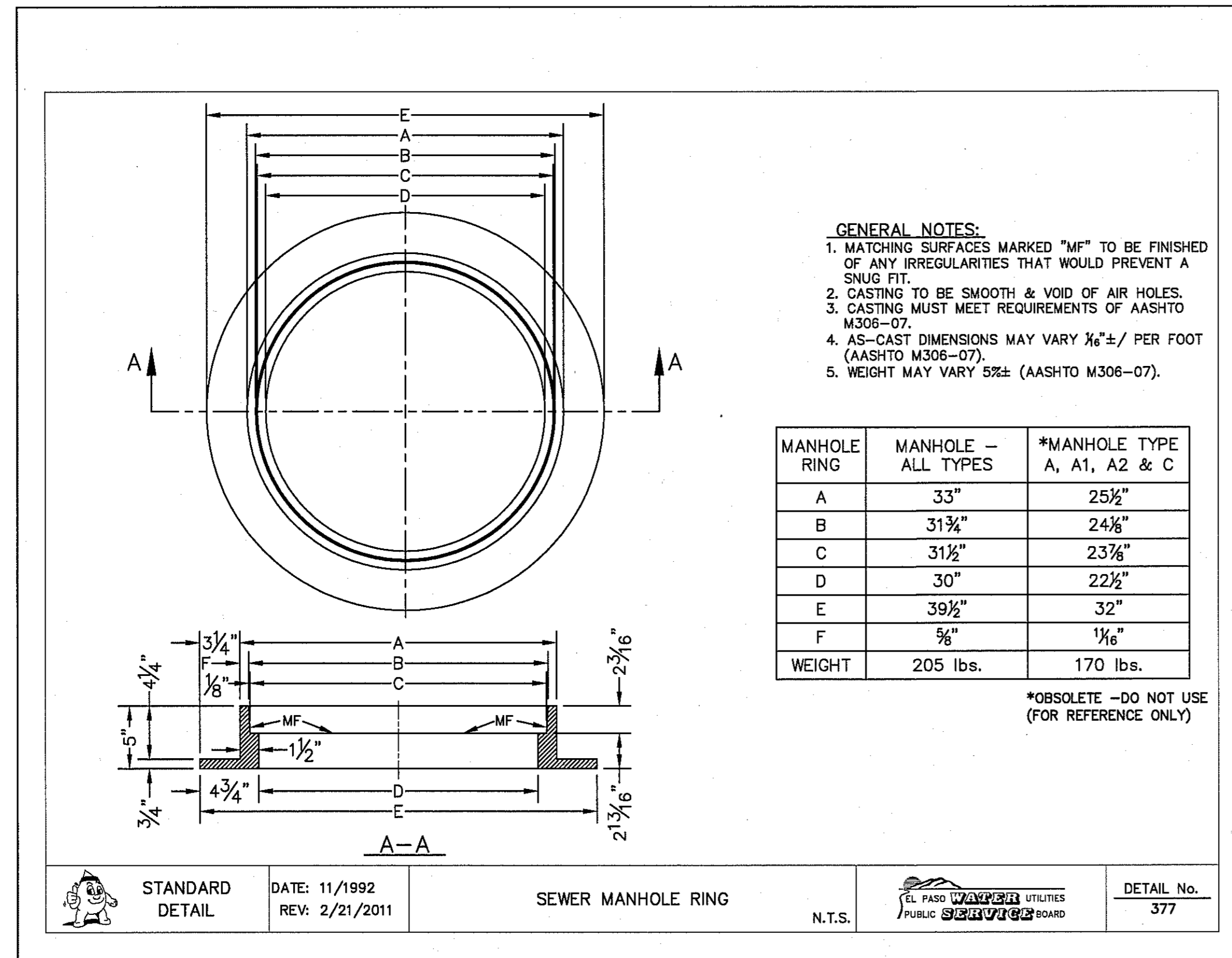
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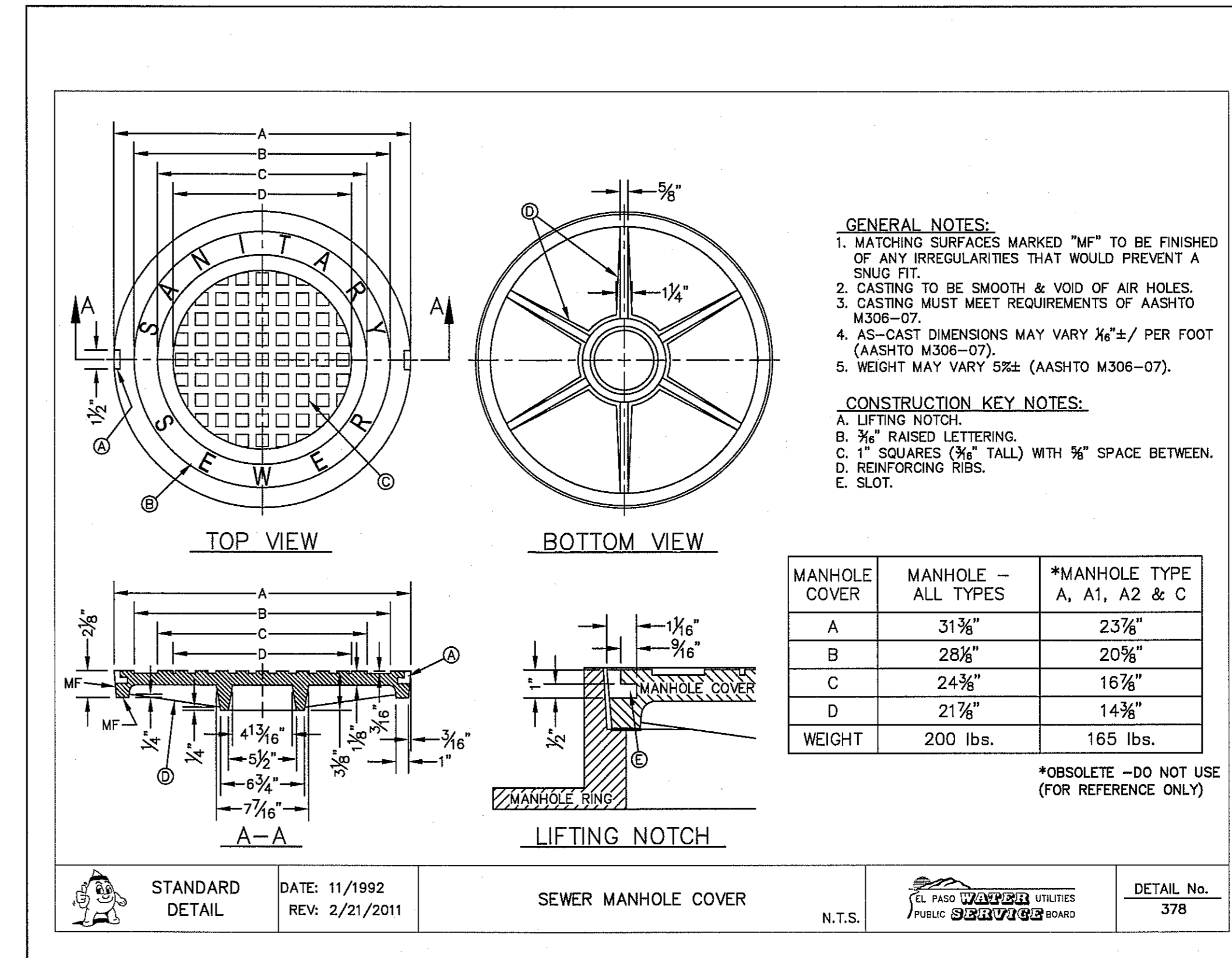
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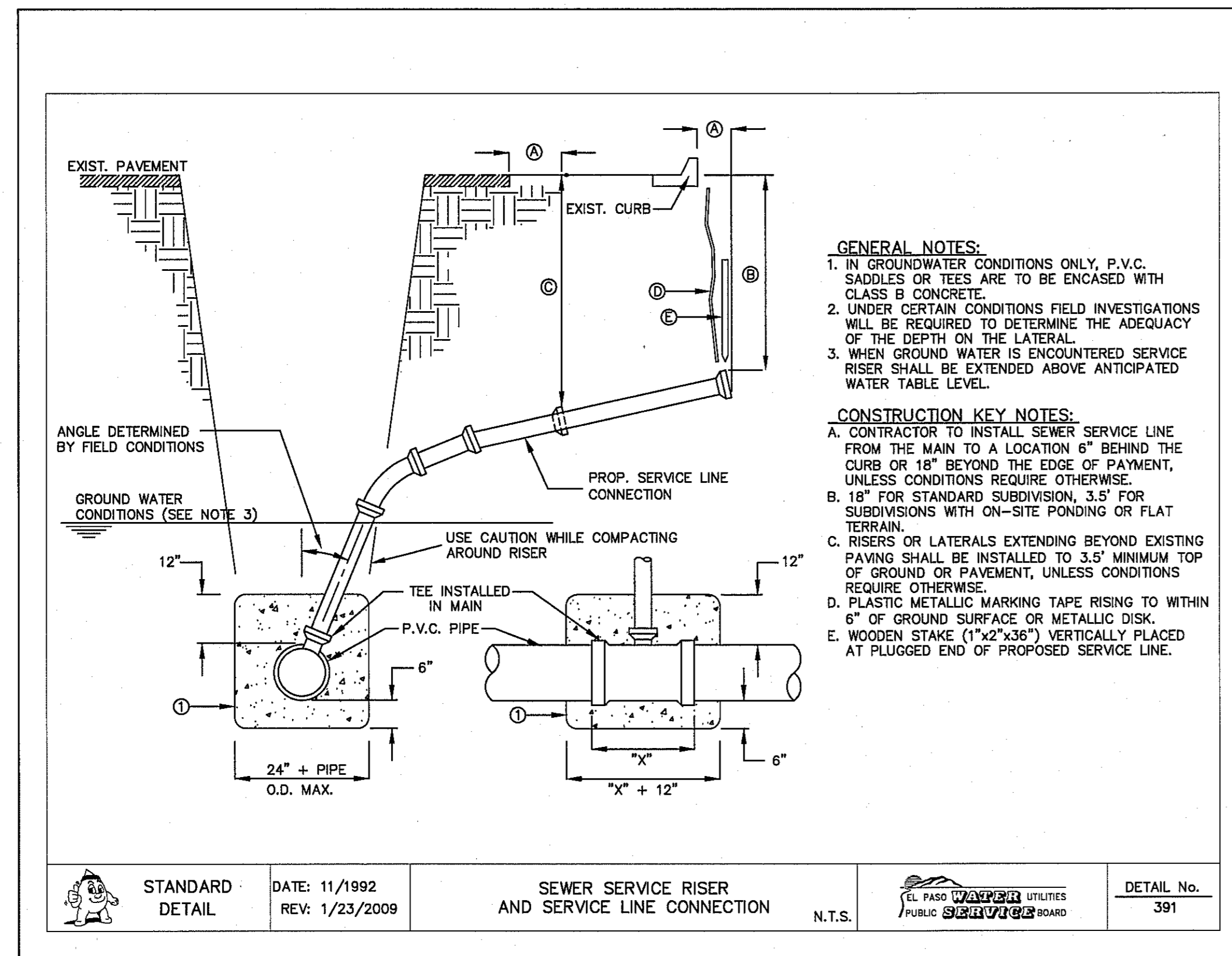
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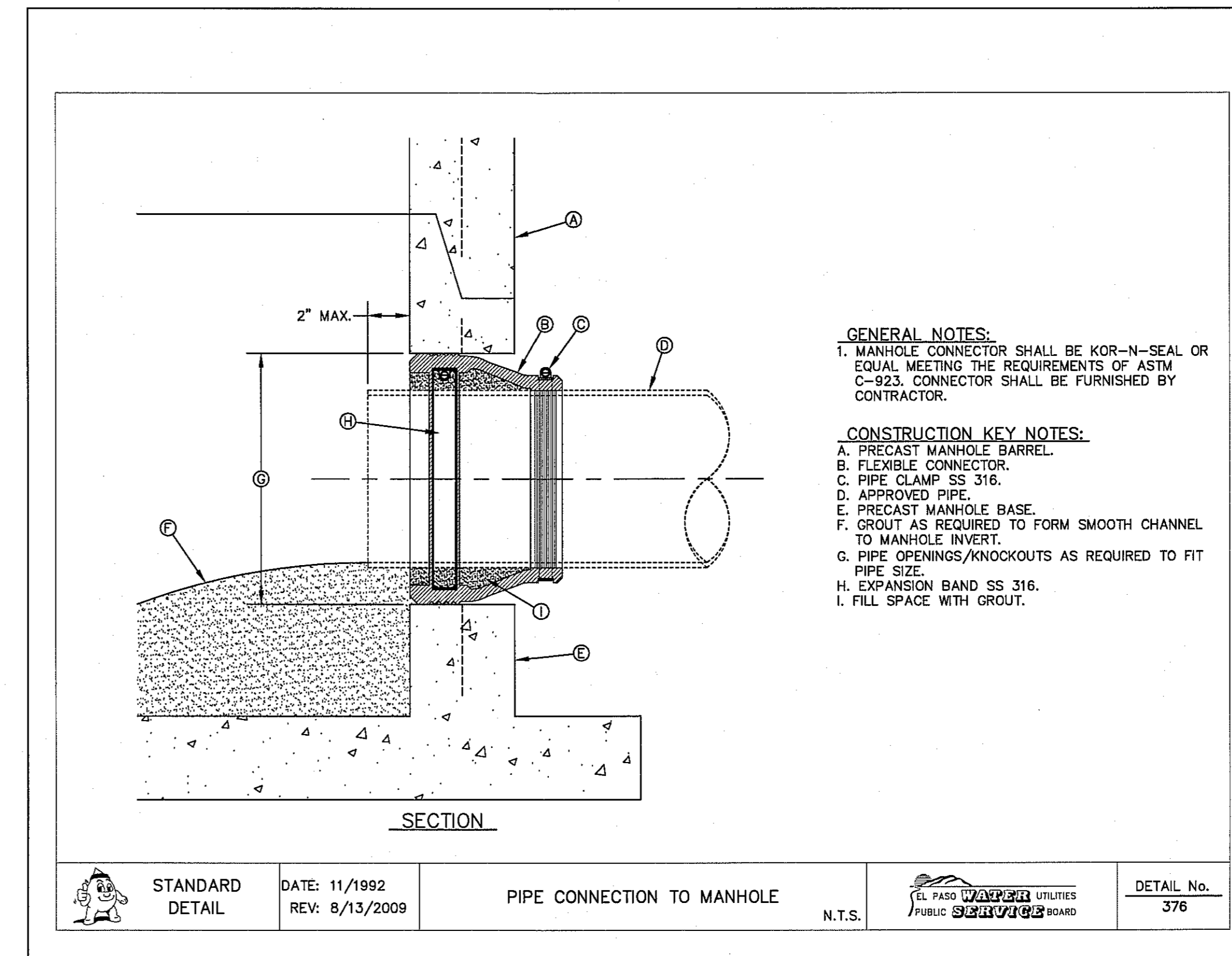
1 STANDARD MANHOLE RING
SCALE: N.T.S.



2 STANDARD COVER DETAIL
SCALE: N.T.S.



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



4 PIPE CONNECTION TO MANHOLE
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REFERENCES - BENCHMARKS

CITY MONUMENT AT POINT OF CURVE CENTERLINE RICH CITY, TEXAS
 MONUMENT AT POINT OF CURVE CENTERLINE RICH CITY, TEXAS
 FROM THE SOUTHERLY RIGHT OF WAY LINE OF MONTANA AVENUE CITY DATUM ELEVATION.....4005.40

DATE	REVISIONS	BY

TEXAS REGISTERED ENGINEERING FIRM F-4664
 4712 Woodrow Behm, Ste. F El Paso, TX 79924
 915.544.5232 | www.cesgroup.net

SCALE: N/A

Horizontal: N/A
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Contour Interval: N/A

DATE: JUNE 2016
 DESIGN BY: R.O.
 DRAWN BY: R.O.
 CHKD. BY: J.L.A.
 APPVD. BY: J.L.A.

JOB No. 2000-194LD



PROJECT TITLE

TRES SUEÑOS UNIT TWELVE
 SUBDIVISION IMPROVEMENTS

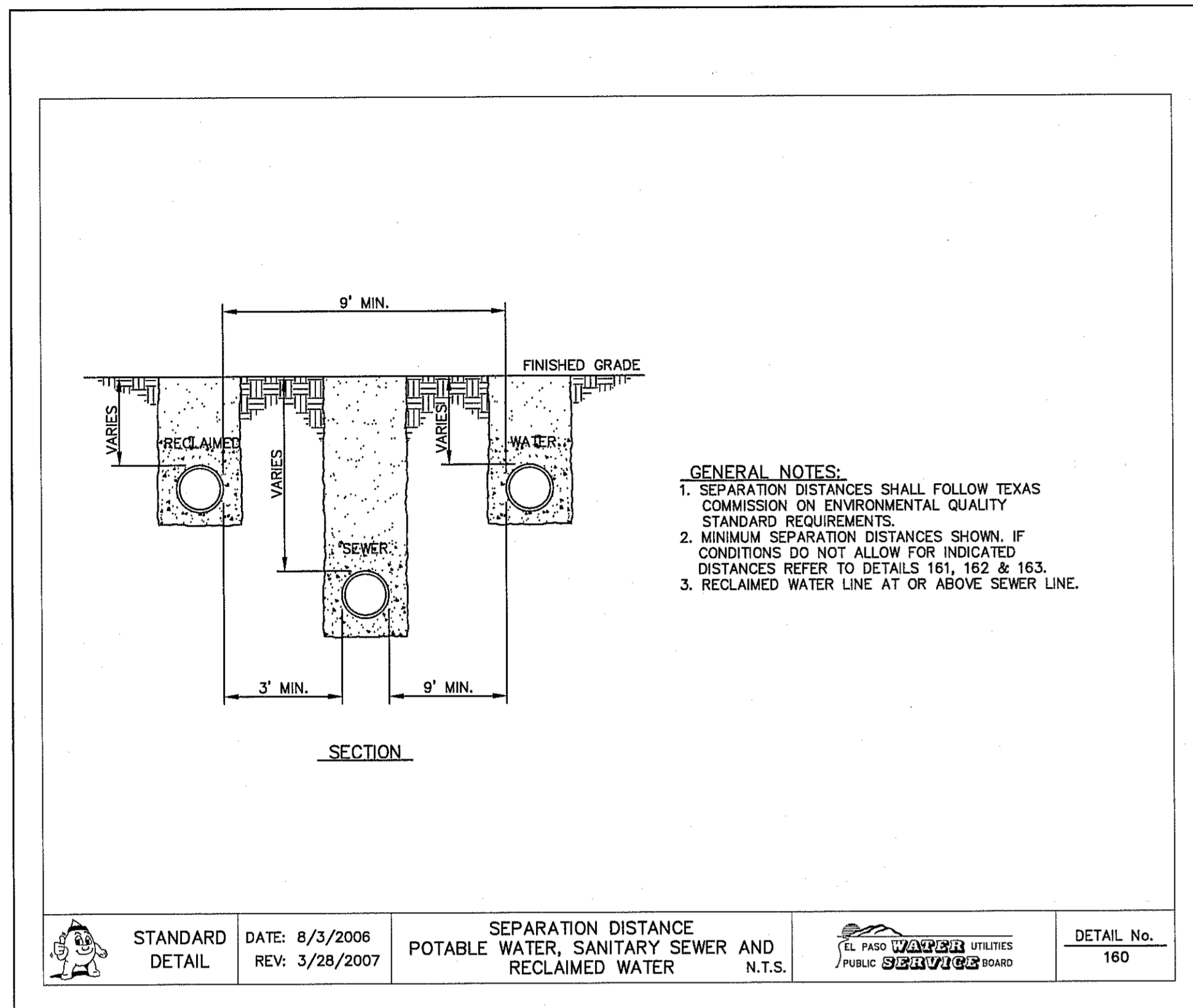
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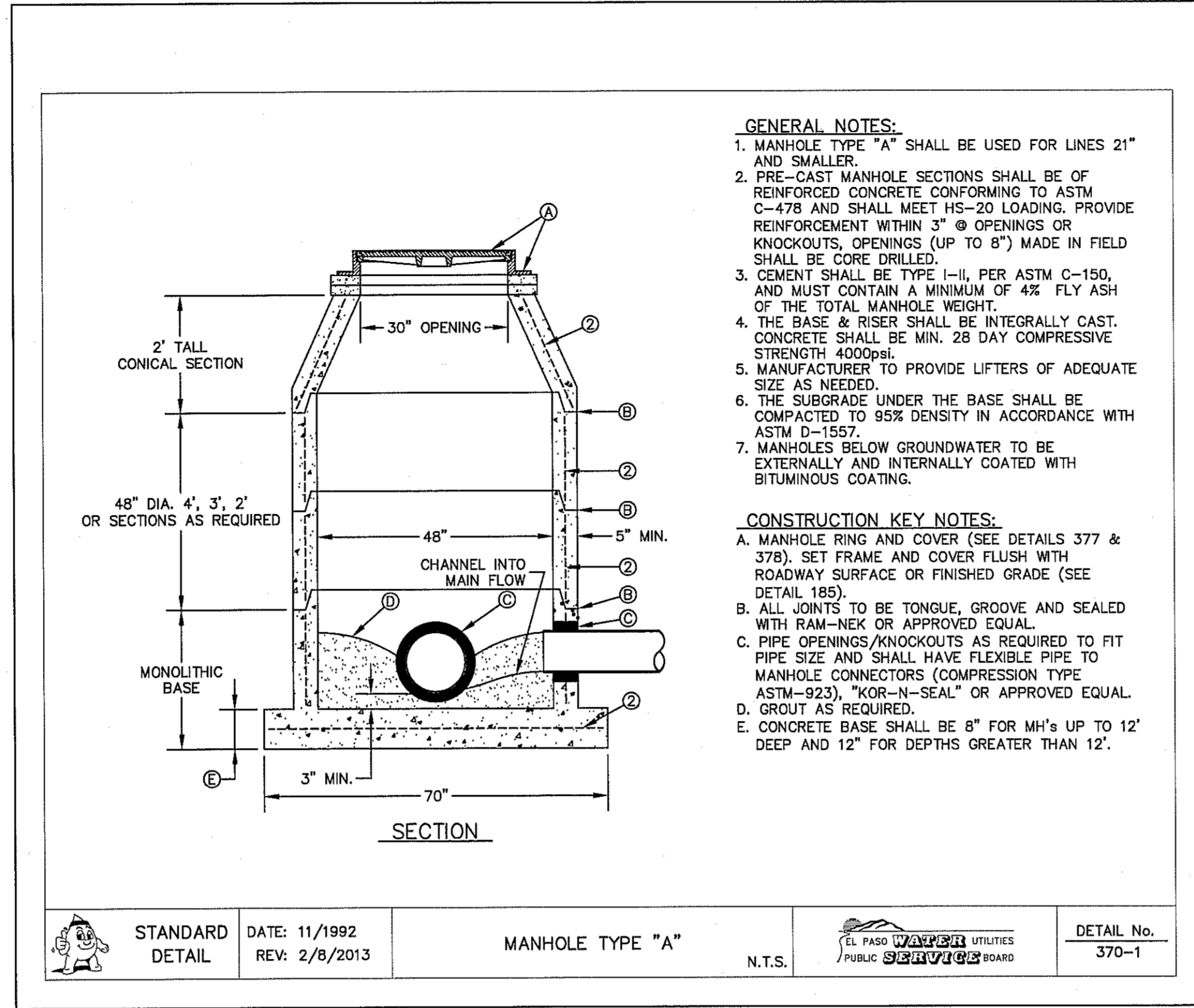
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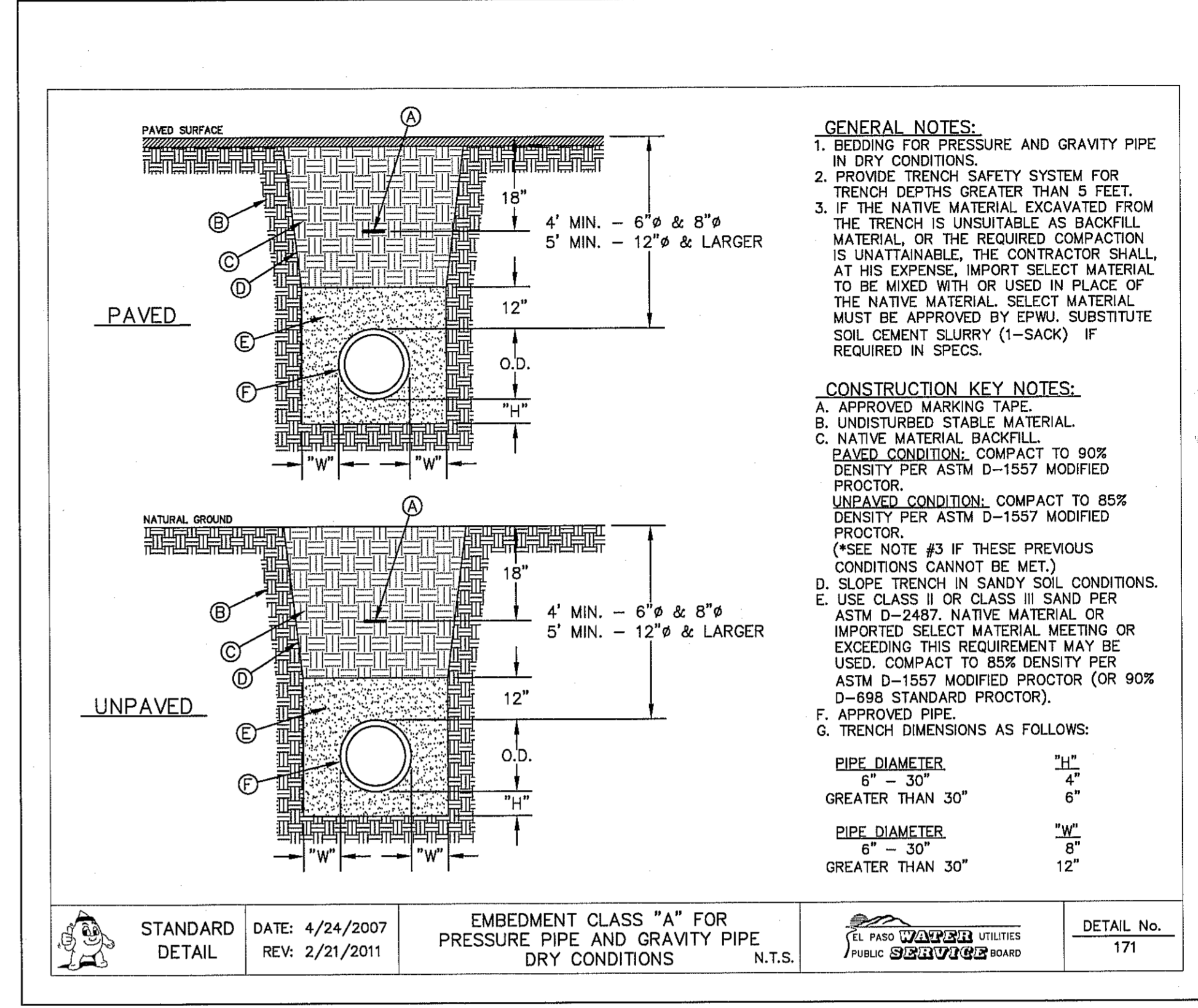
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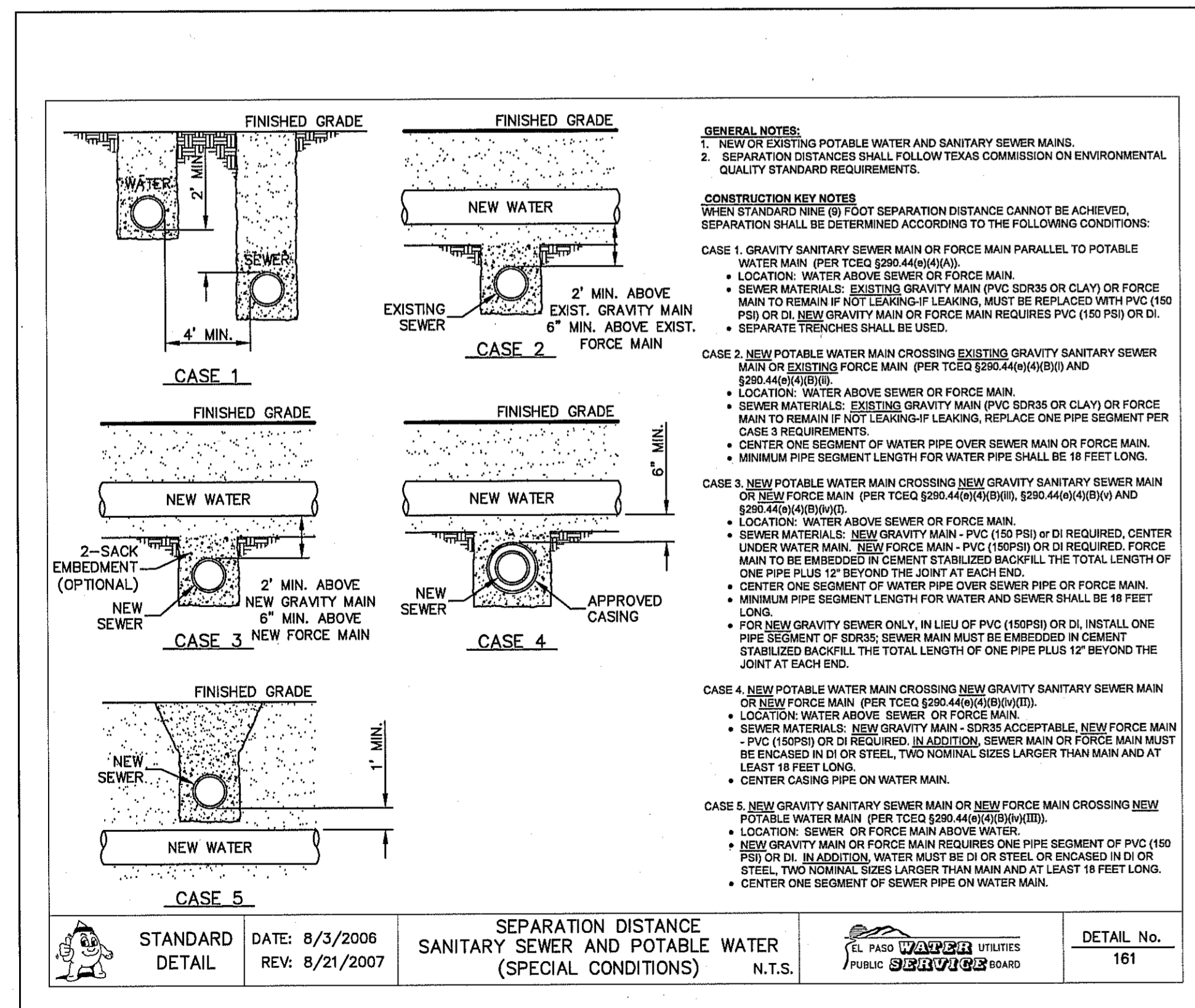
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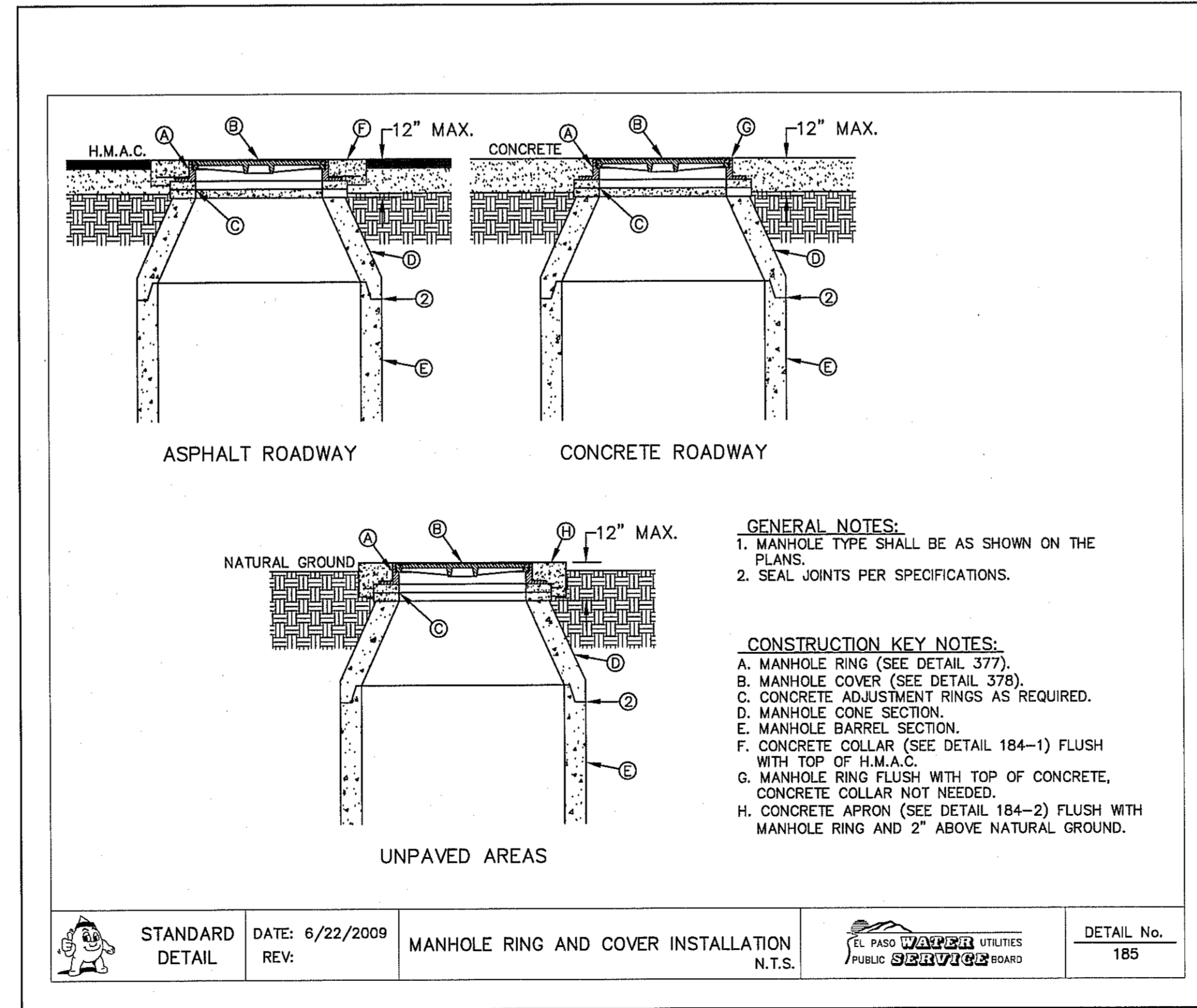
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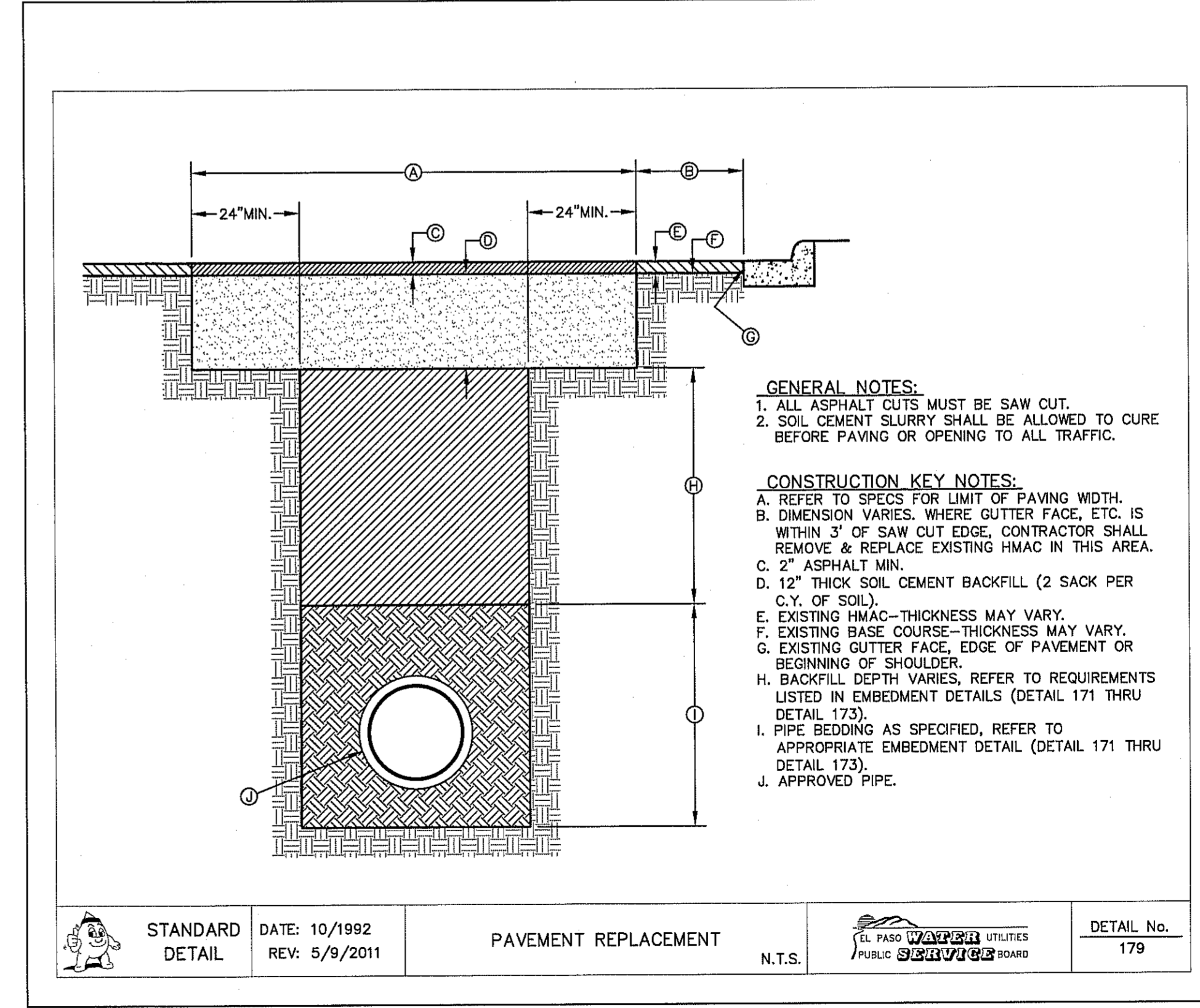
3 BEDDING CLASS DETAILS FOR P.V.C. PRESSURE PIPE SCALE: N.T.S.



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



5 STANDARD MANHOLE RING AND COVER INSTALLATION SCALE: N.T.S.



6 PAVEMENT REPAIR DETAIL SCALE: N.T.S.

REFERENCES - BENCHMARKS
CITY MONUMENT AT POINT OF CURVE CENTERLINE RICH BEND BELOW OTHER RIGHT OF WAY LINE OF MONTANA AVENUE CITY DATUM ELEVATION.....4005.40

DATE REVISIONS BY

CS&A
TEXAS REGISTERED ENGINEERING FIRM F-4984
4712 Woodrow Bean, Ste. F El Paso, TX 79924
915.544.6232 | www.csagroup.net

ENGINEER'S SEAL
JAMES L. ADAMANT
88075
Professional Engineer
State of Texas

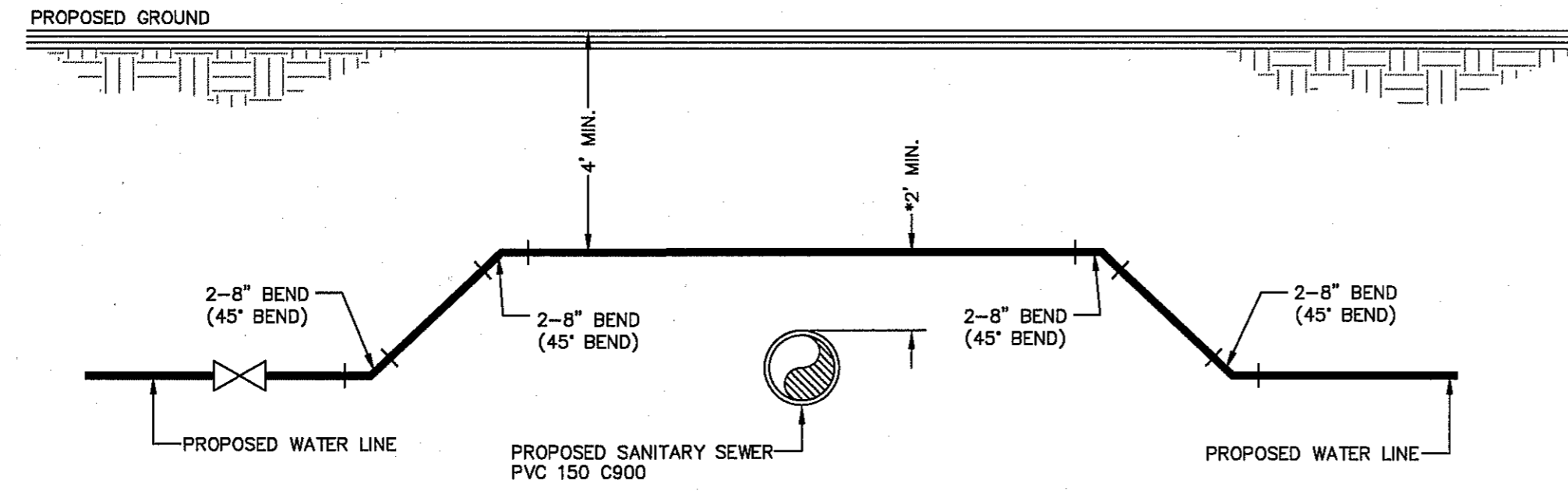
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DATE: JUNE 2016
DESIGN BY: R.O.
DRAWN BY: R.O.
CHECKED BY: J.L.A.
APPROVED BY: J.L.A.
JOB No. - 2000-194LD.

PROJECT TITLE
TRES SUEÑOS UNIT TWELVE
SUBDIVISION IMPROVEMENTS

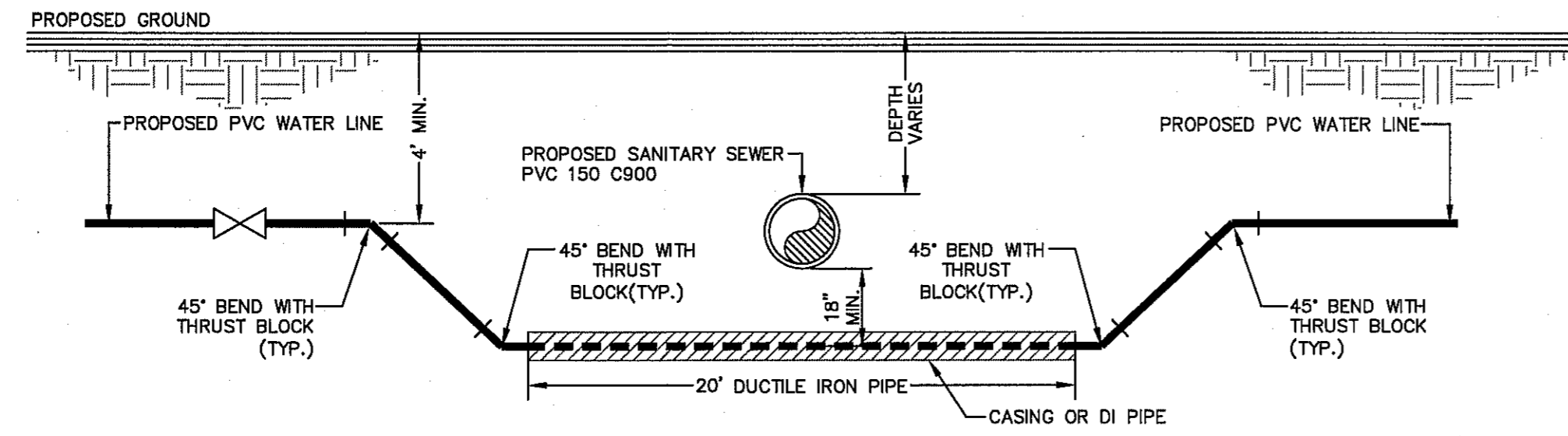
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SANITARY SEWER
DETAILS
(SHEET 2 OF 3)

SHEET NO.
C12.5

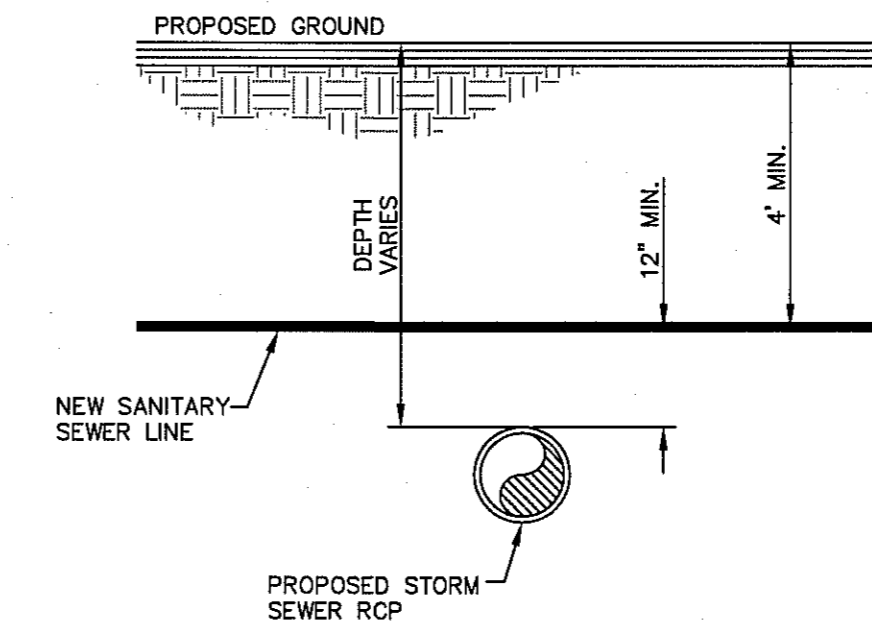


***NOTE:**
IF DISTANCE BETWEEN PROPOSED SANITARY SEWER AND PROPOSED WATER LINE IS BETWEEN 6"(MIN.)-2"(MAX.), SANITARY SEWER MUST BE ENCASED IN DUCTILE IRON PIPE AS PER SEPARATION DISTANCE (SPECIAL CONDITION) DETAIL.

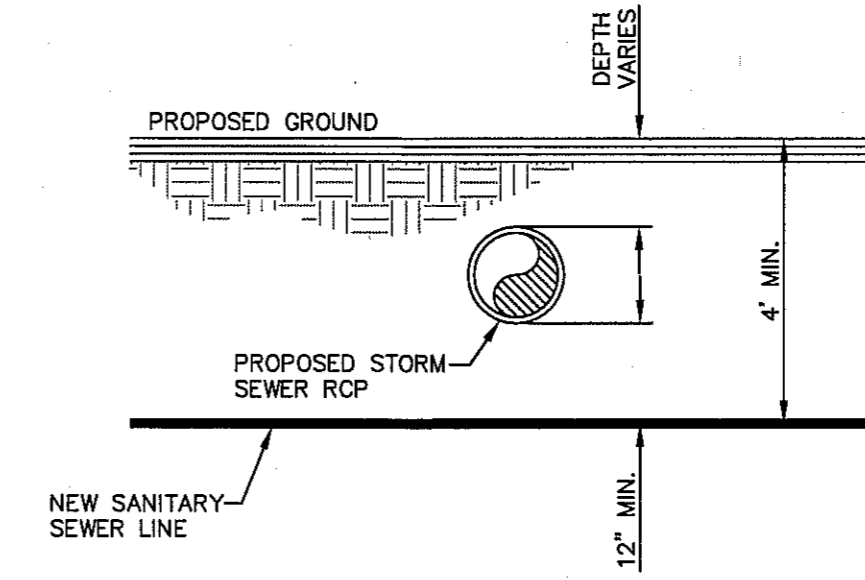
1 SANITARY SEWER CROSSING WATER LINE DETAIL
C12.6 SCALE: N.T.S.



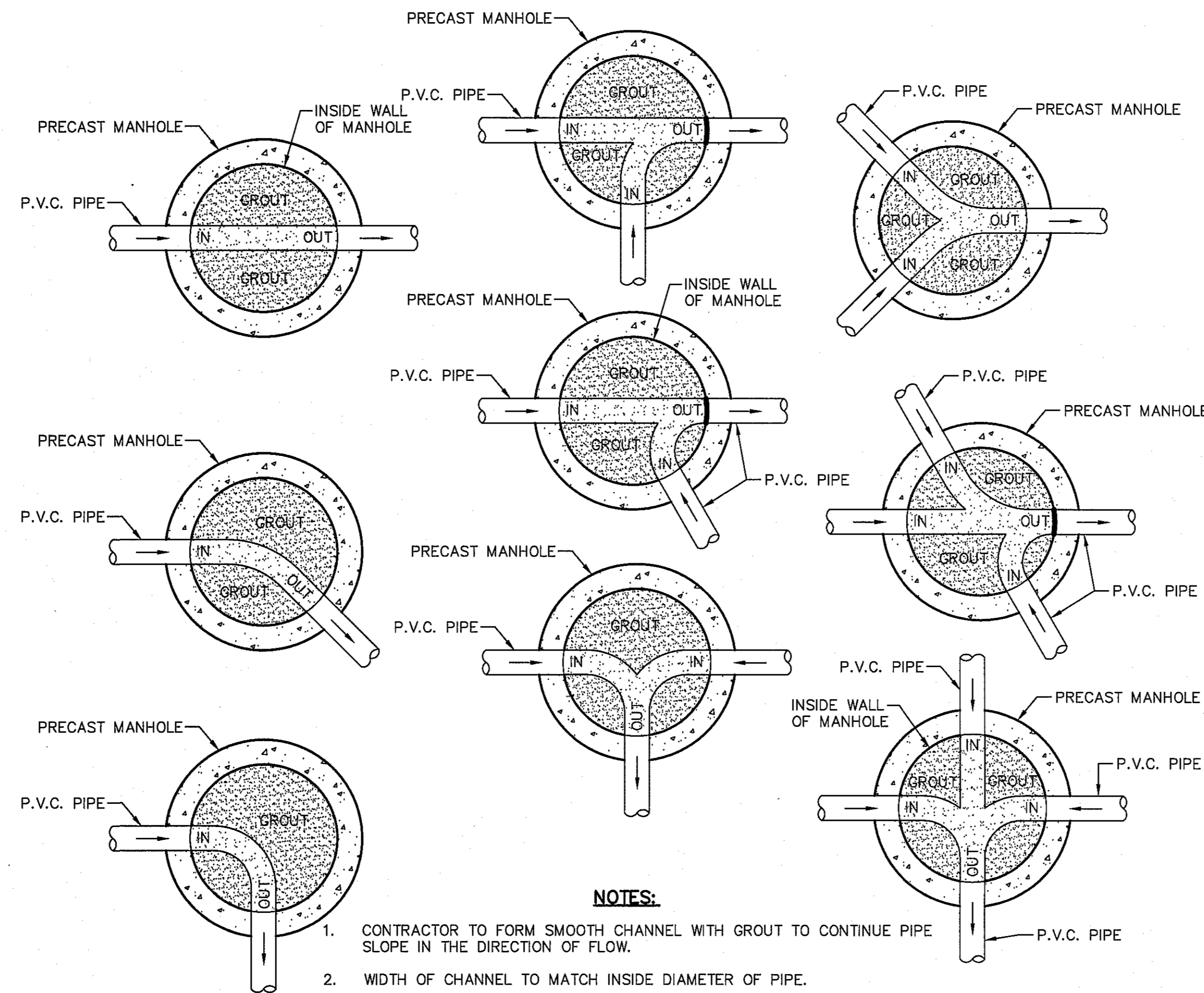
3 SANITARY SEWER CROSSING WATER LINE DETAIL
C12.6 SCALE: N.T.S.



2 STORM SEWER CROSSING UNDER SANITARY LINE DETAIL
C12.6 SCALE: N.T.S.



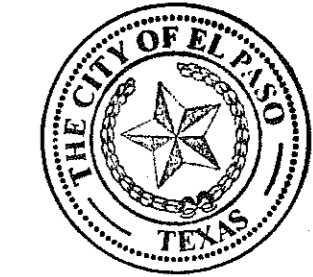
4 STORM SEWER CROSSING OVER SANITARY LINE DETAIL
C12.6 SCALE: N.T.S.



NOTES:

1. CONTRACTOR TO FORM SMOOTH CHANNEL WITH GROUT TO CONTINUE PIPE SLOPE IN THE DIRECTION OF FLOW.
2. WIDTH OF CHANNEL TO MATCH INSIDE DIAMETER OF PIPE.
3. WHEN DIFFERENT SIZES OF PIPE ARE CONNECTING TO MANHOLE, TAPER WIDTH OF CHANNEL TO TOTAL LENGTH OF INSIDE DIAMETER OF MANHOLE.
4. GROUT TO BE USED FOR BOTH MANHOLES AND DROP MANHOLES. NO P.V.C. PIPE SHALL BE INSTALLED IN MANHOLE.
5. REFER TO PLAN & PROFILE SHEETS FOR SIZE OF PIPES AND MANHOLES.

5 TYPICAL MANHOLE INVERT PLANS
C12.6 SCALE: N.T.S.



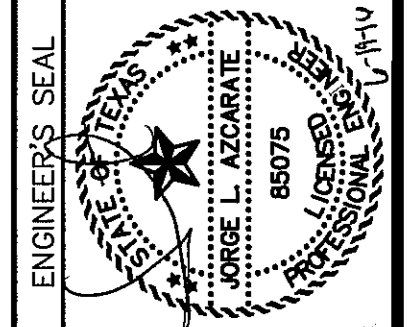
REFERENCES - BENCHMARKS

CITY MONUMENT AT POINT OF CURVE CENTERLINE RICH BEEM BLVD. STATION 43+37.16 A DISTANCE OF 467.98 FEET FROM THE POINT OF CURVE TO POINT OF TANGENCY. AVENUE CITY DATUM ELEVATION.....4003.40

DATE	BY	REVISIONS

CSA

TEXAS REGISTERED ENGINEERING FIRM F-4664
4712 Woodrow Bean, Ste. F El Paso, TX 79924
915.544.5232 | www.cesgroup.net



SCALE: N/A

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

DATE: JUNE 2016
DESIGN BY: R.O.
DRAWN BY: J.L.A.
CHECKED BY: J.L.A.
APPROVED BY: J.L.A.
JOB No. 2000-1941D

PROJECT TITLE

**TRES SUEÑOS UNIT TWELVE
SUBDIVISION IMPROVEMENTS**

SHEET TITLE

**SANITARY SEWER
DETAILS**

(SHEET 3 OF 3)

SHEET NO.

C12.6

SITE DESCRIPTION

PROJECT NAME AND LIMITS: TRES SUEÑOS UNIT TWELVE IS BORDERED BY A PORTION OF SECTION 27, BLOCK 79 TOWNSHIP 2, TEXAS AND PACIFIC RAILWAYS SURVEY TO THE NORTH & TO THE WEST, THREE PALMS APARTMENTS TO THE SOUTH AND TRES SUEÑOS UNIT EIGHT SUBDIVISION TO THE EAST.

PROJECT DESCRIPTION: THE SITE FOR THE NEW SUBDIVISION WILL ENCOMPASS APPROXIMATELY 17.10± ACRES, AND WILL CONTAIN A TOTAL OF 83 RESIDENTIAL LOTS

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

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

TOTAL PROJECT AREA: 17.10±

TOTAL AREA TO BE DISTURBED: 17.10±

WEIGHTED RUNOFF COEFFICIENT (AFTER CONSTRUCTION): 0.658

EXISTING CONDITION OF SOIL AND VEGETATIVE COVER AND % OF EXISTING VEGETATIVE COVER: HUECO-WINK ASSOCIATION; 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: TRES SUEÑOS UNIT TWELVE SUBDIVISION WILL DISCHARGE INTO PROPOSED ON-SITE STORM INLETS AND CONVEYED VIA PROPOSED STORM SEWER INFRASTRUCTURE TO ULTIMATELY BE DISCHARGED INTO AN OFF-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 BERM
- 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. EXCAVATION FOR UTILITIES;
4. COMPLETE STREET AND LOT GRADING;
5. CONSTRUCTION OF SUBDIVISION IMPROVEMENTS; AND,
6. WHEN ALL CONSTRUCTION ACTIVITY RELATED IN DEVELOPMENT OF THE SITE IS COMPLETE, REMOVE TEMPORARY CONTROLS IN 1. ABOVE.

SWPPP GENERAL NOTES:

1. PLACEMENT OF SILT FENCE SHALL BE ADJUSTED AS NECESSARY TO PREVENT THE BLOCKING OF DRIVEWAYS OR DRIVING LANES.
2. THE SWPPP MANUAL IDENTIFIES THE DUTIES AND RESPONSIBILITIES OF THE GENERAL CONTRACTOR IN COMPLIANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS. THIS ITEM SHALL BE SUBSIDIARY TO THE SWPPP 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 DETAILED INFORMATION ON WATERSHED AREAS AND RUNOFF QUANTITIES (Q).
6. THE FOLLOWING HAVE BEEN IDENTIFIED AS POTENTIAL CONTAMINATION SOURCES: CLEARED AND GRADED AREAS; CONSTRUCTION SITE ENTRANCE AND ASPHALT PARKING AREA CONSTRUCTION; ASPHALT LOADING/UNLOADING AREAS; CONCRETE LOADING/UNLOADING AREAS; AND, ALL UNDISTURBED AREAS.
7. THE FOLLOWING IS A LIST OF POTENTIAL CONSTRUCTION SITE STORM WATER POLLUTANTS: ASPHALT; CONCRETE; GLUE/ADHESIVE; PAINTS; CURING COMPOUNDS; WASTEWATER FROM CONSTRUCTION EQUIPMENT WASHING; HYDRAULIC OIL/FLUIDS; ;GASOLINE; DIESEL FUEL; KEROSENE; ANTIFREEZE/COOLANT; AND EROSION.

BEST MANAGEMENT PRACTICES CONTROLS

I. WASTE MATERIALS:

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

II. HAZARDOUS WASTE:

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

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:

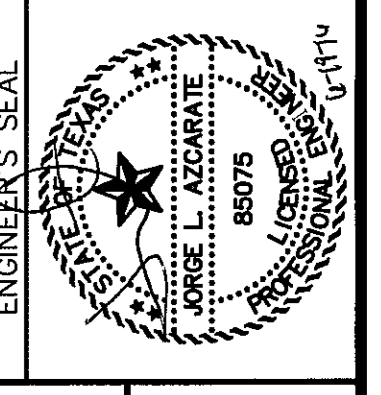
DISPOSAL AREAS, STOCKPILES, AND HAUL ROADS SHALL BE CONSTRUCTED IN A MANNER THAT WILL MINIMIZE AND CONTROL THE AMOUNT OF SEDIMENT THAT MAY ENTER RECEIVING WATERS. DISPOSAL AREAS SHALL NOT BE LOCATED IN ANY WETLAND, WATERBODY OR STREAMBED. CONSTRUCTION STAGING AREAS AND VEHICLE MAINTENANCE AREAS SHALL 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: _____

REFERENCES - BENCHMARKS	CITY MONUMENT AT POINT OF CURVE CENTERLINE RICH CROWN CANYON, 135.51' US NAD 83; US NAD 83 BENCH MARK BEING CALIBERED HEAT LINE # 408.40; 408.40 AVENUE CITY DATUM ELEVATION.....408.40
DATE	REVISIONS
BY	



SCALE	N/A
Horizontal:	N/A
Vertical:	N/A
Contour Interval:	N/A
DATE:	JUNE 2016
DESIGN BY:	R.O.
DRAWN BY:	J.L.A.
CHKD BY:	J.L.A.
APPVD BY:	J.L.A.
JOB No.	2000-194LD

PROJECT TITLE

TRES SUEÑOS UNIT TWELVE SUBDIVISION IMPROVEMENTS

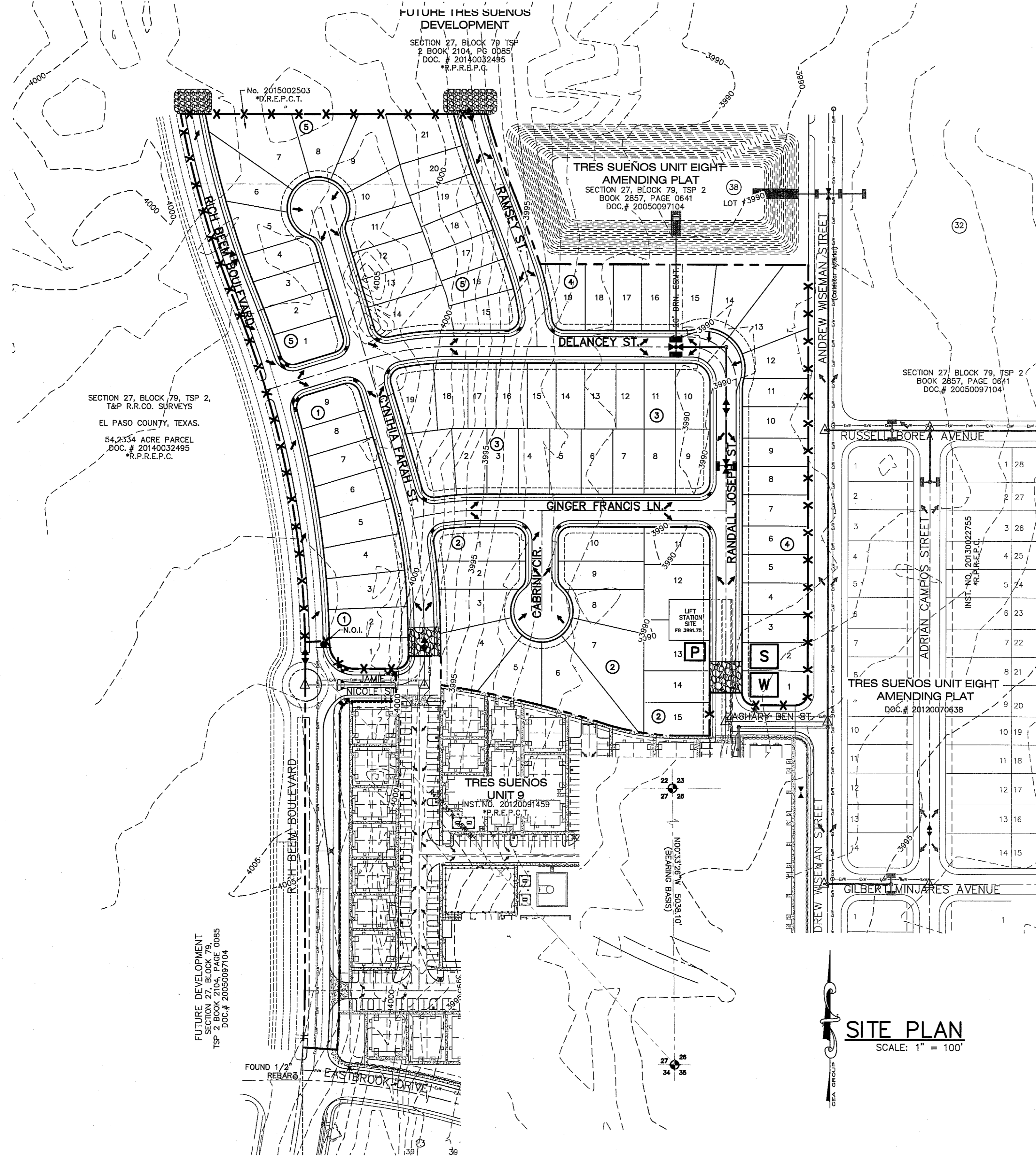
SHEET TITLE

STORM WATER POLLUTION PREVENTION PLAN: GENERAL NOTES

SHEET NO.

C13.1

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SITE PLAN
SCALE: 1" = 100'

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

WARNING!
BEFORE YOU DIG
CALL 811
FOR FIELD LOCATING EXISTING UTILITIES

LEGEND:

	SILT FENCE OR EARTHEN BERM
	STABILIZED CONSTRUCTION ENTRANCE
	STAGING AREA
	PORTABLE TOILETS
	WASH OUT
	LOCATION OF NOTICE OF INTENT (NOI)
	INLET PROTECTION



DATE	REVISIONS	BY

REFERENCES - BENCHMARKS
CITY MONUMENT AT POINT OF CURVE CENTERLINE RICH FROM THE SOUTHERLY RIGHT OF WAY LINE OF MONTANA AVENUE CITY DATUM ELEVATION.....4005.40

ENGINEER'S SEAL

 TEXAS REGISTERED ENGINEERING FIRM F-4664
 4712 Woodrow Bean, Ste. F El Paso, TX 79924
 915.544.5232 | www.eagroup.net

Horizontal: 1" = 100'
Vertical: N/A
Contour Interval: N/A
DATE: JUNE 2016
DESIGN BY: R.O.
DRAWN BY: R.O.
CHKD. BY: J.L.A.
APPVD. BY: J.L.A.
JOB No. 2000-1941D

PROJECT TITLE
TRES SUENOS UNIT TWELVE
SUBDIVISION IMPROVEMENTS

SHEET TITLE
STORM WATER POLLUTION PREVENTION PLAN: SITE PLAN

SHEET NO.

C13.2

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

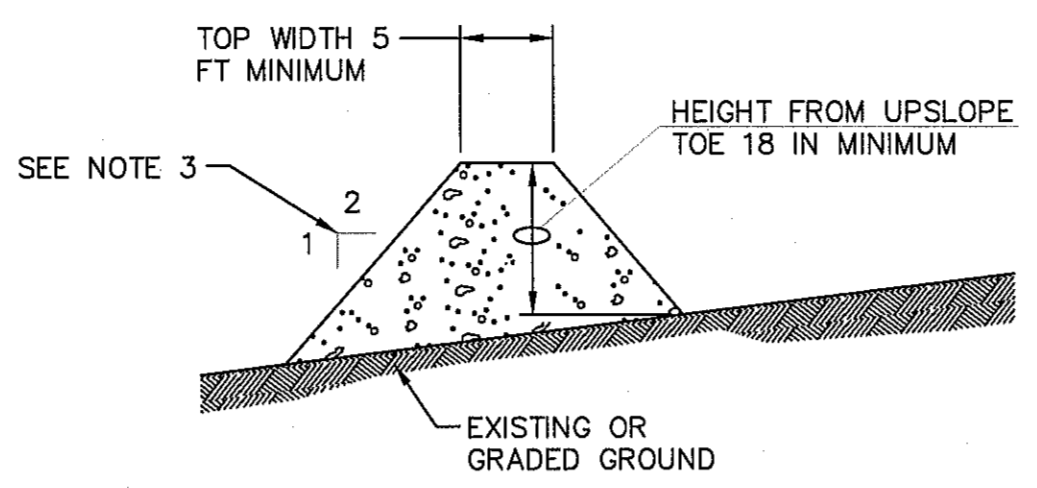
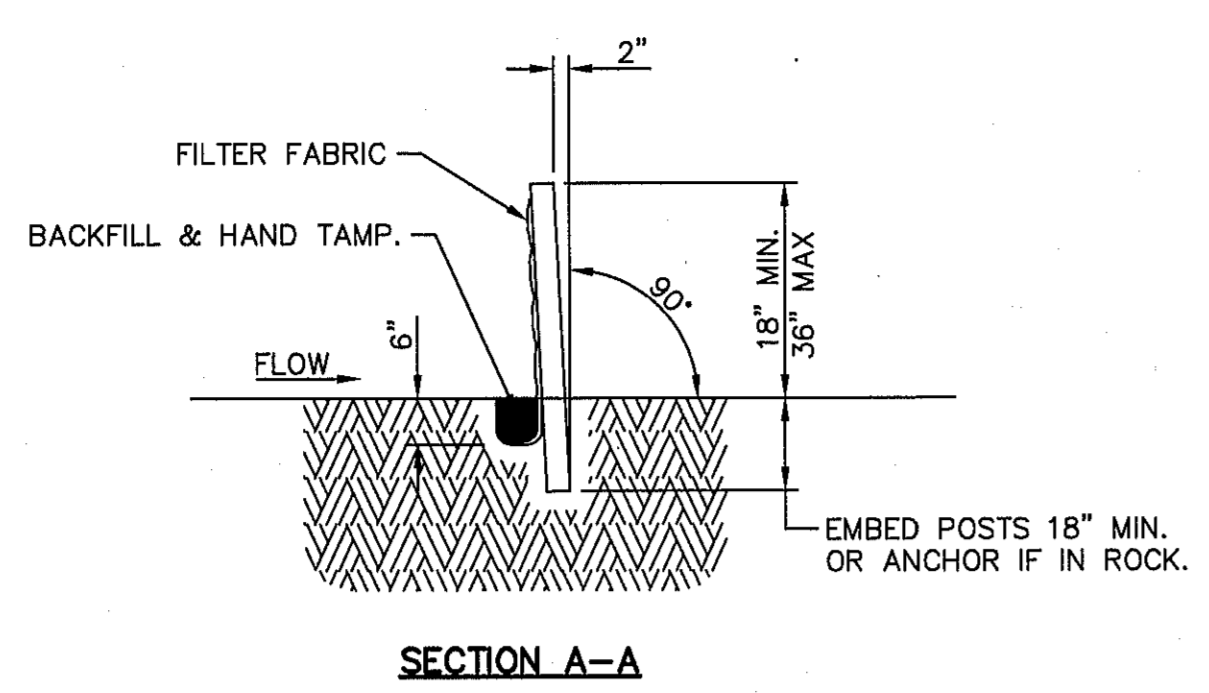
CONNECT THE ENDS OF SUCCESSIVE REINFORCEMENT SHEETS OR ROLLS A MIN. OF 6 TIMES WITH HOG RINGS.

GALV. W.W.M. (12.5 GA. MIN.) MAX. OPENING SIZE SHALL BE 2" X 4".

ATTACH THE W.W.M. & FABRIC ON END POSTS USING 4 EVENLY SPACED STAPLES FOR WOODEN POSTS (OR 4 T-CLIPS OR SEWN VERTICAL POCKETS FOR STEEL POSTS).

PLACE 4" TO 6" OF FABRIC AGAINST THE TRENCH SIDE AND APPROX. 4" ACROSS TRENCH BOTTOM IN UPSTREAM DIRECTION. MINIMUM TRENCH SIZE SHALL BE 6" SQUARE. BACKFILL AND HAND TAMP.

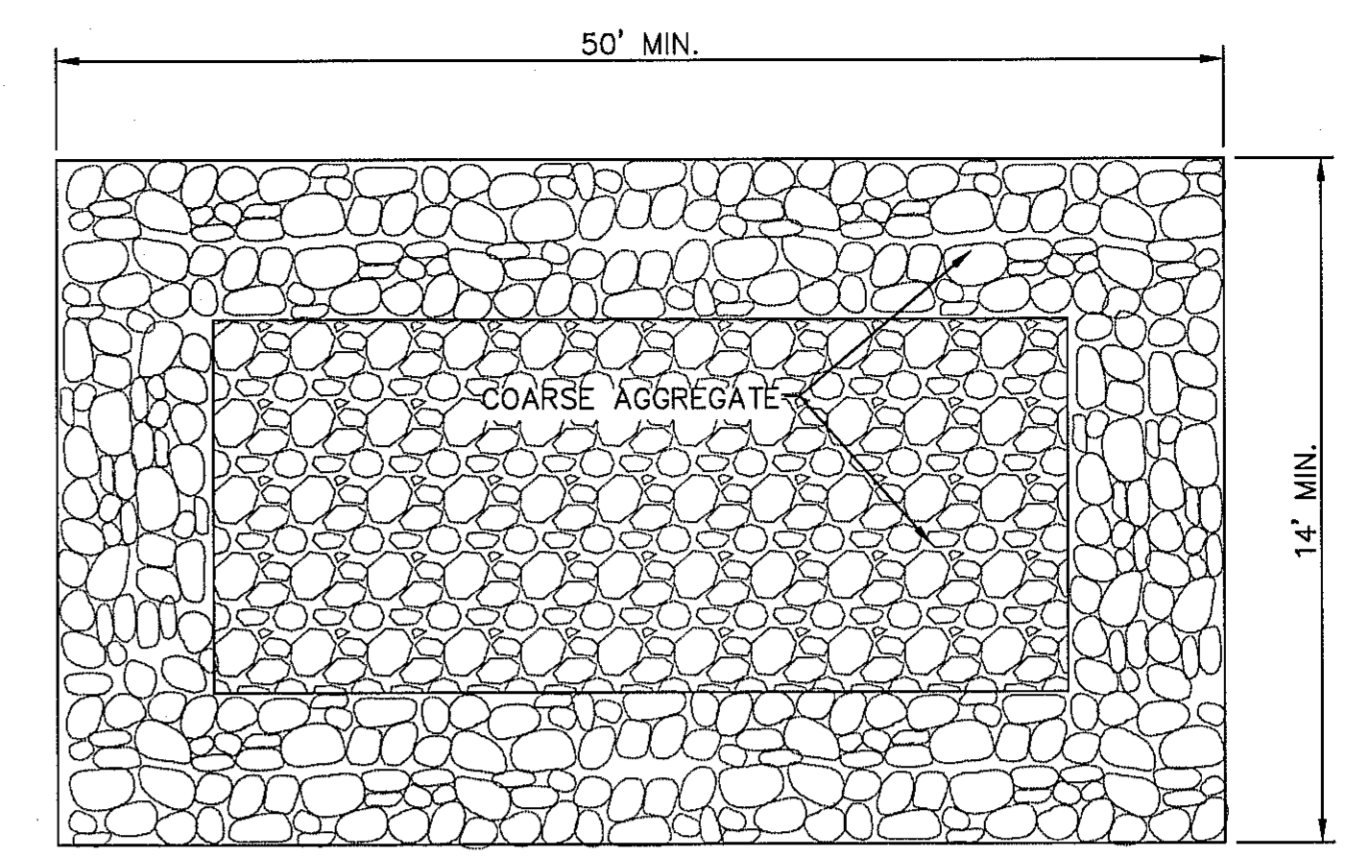
TEMPORARY SEDIMENT CONTROL FENCE



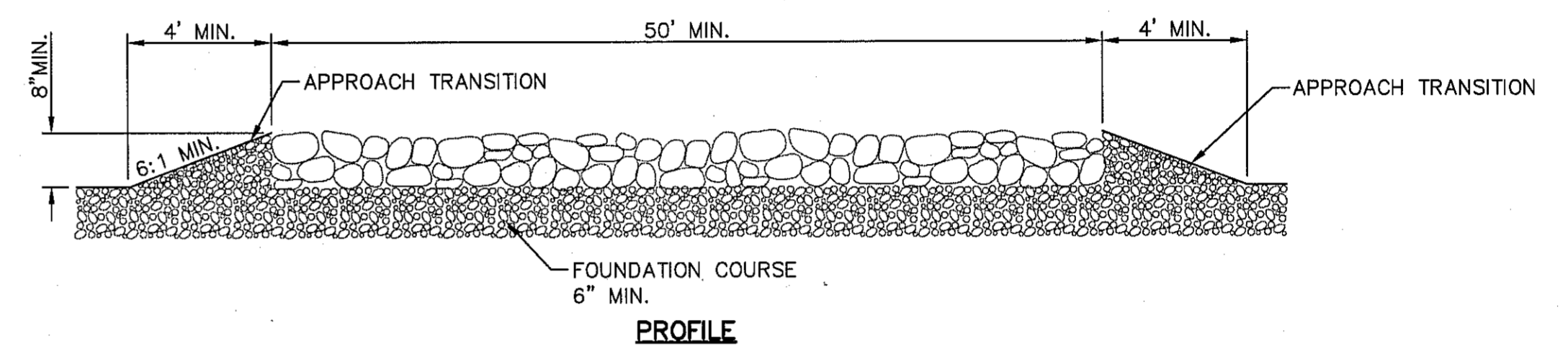
GENERAL NOTES:

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



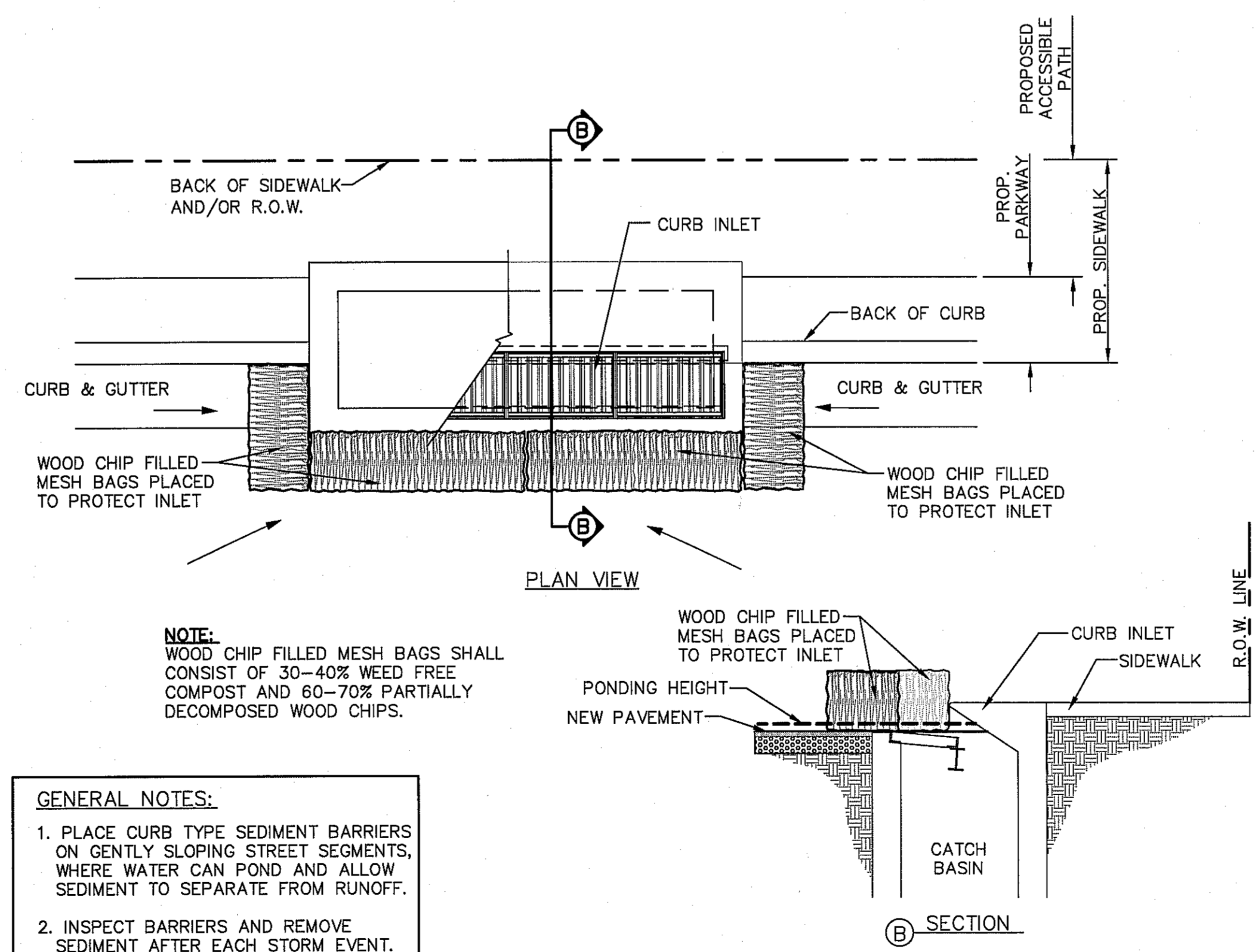
PLAN



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.



NOTE: WOOD CHIP FILLED MESH BAGS SHALL CONSIST OF 30-40% WEED FREE COMPOST AND 60-70% PARTIALLY DECOMPOSED WOOD CHIPS.

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

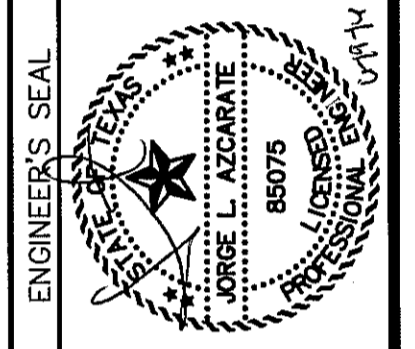


REFERENCES - BENCHMARKS

CITY MONUMENT AT POINT OF CURVE CENTERLINE FROM THE SOUTHERLY RIGHT OF WAY LINE OF MONTANA AVENUE CITY DATUM ELEVATION.....4005.40

DATE	REVISIONS	BY

TEXAS REGISTERED ENGINEERING FIRM #4684
4712 Woodrow Bean, Ste. F El Paso, TX 79924
915.544.5232 | www.cagroup.net



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

Contour Interval: N/A

DATE: JUNE 2016

DESIGN BY: R.O.

DRAWN BY: J.L.A.

CHKD. BY: J.L.A.

APPVD. BY: J.L.A.

JOB No. 2000-1941D

PROJECT TITLE

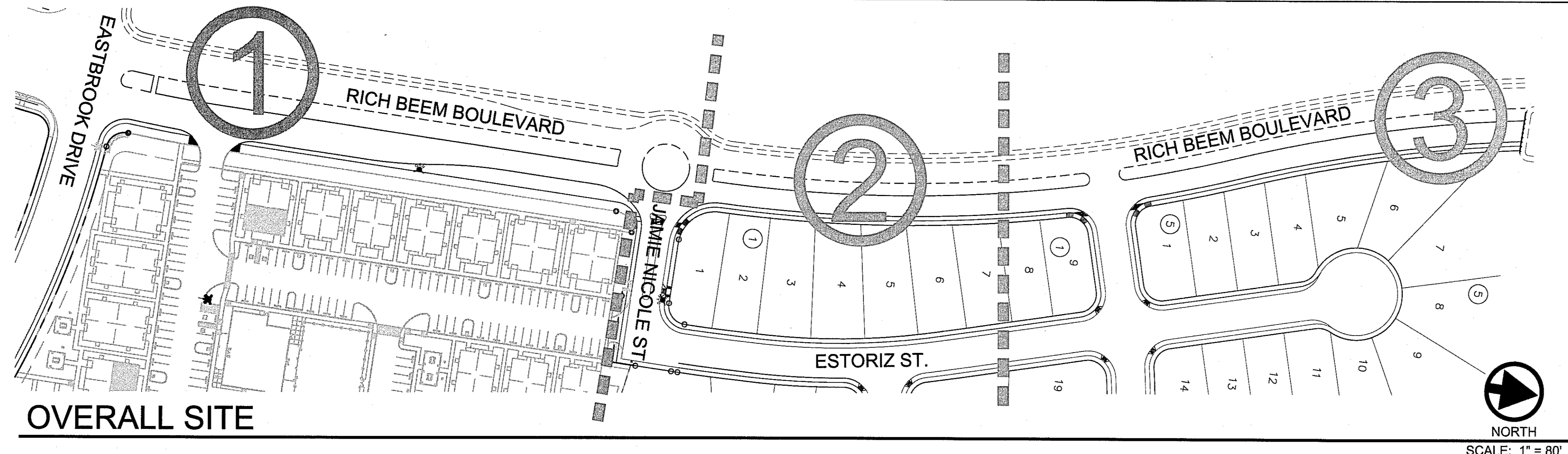
**TRES SUEÑOS UNIT TWELVE
SUBDIVISION IMPROVEMENTS**

SHEET TITLE

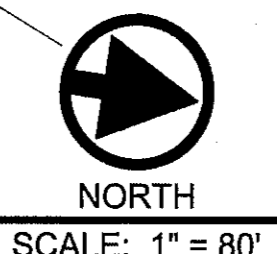
**STORM WATER
POLLUTION
PREVENTION PLAN:
DETAILS**

SHEET NO.

C13.3



OVERALL SITE



LANDSCAPE NOTES

- ALL UTILITY EASEMENTS SHALL BE MARKED PRIOR TO EXCAVATION, AND PARTICULAR ATTENTION PAID TO TREE PLACEMENT WITHIN AND THROUGHOUT SITE.
- CONTRACTOR SHALL PROVIDE ROCK SAMPLES AND OBTAIN APPROVAL FROM OWNER PRIOR TO FINAL DELIVERY OF QUARRIED MATERIALS.
- ALL TREES SHALL BE SINGLE LEADER TRUNK.
- ALL TREES TO BE CONTAINER GROWN. NO B&B ACCEPTED.
- TREES SHALL NOT HAVE BEEN TOPPED, HEADED OR SKINNED.
- TREES GROWN REGIONALLY IN DESERT AREAS ARE PREFERRED, AND TYPICALLY HAVE A MORE SUCCESSFUL TRANSPLANT RATE. TREES PURCHASED IN AREAS RECEIVING > 15" RAINFALL/YEAR TO BE ACCLIMATED IN EL PASO 30 DAYS PRIOR TO PLANTING. CONTRACTOR TO PROVIDE INVOICE INDICATING PROVENANCE TO OWNER.
- ALL BRANCHING SHALL CLEAR THE SIDEWALK BY 7".

SITE OBSERVATION SCHEDULE

CONTRACTOR SHALL CONTACT DESERT ELEMENTS FOR INSPECTION ON THE FOLLOWING ITEMS:

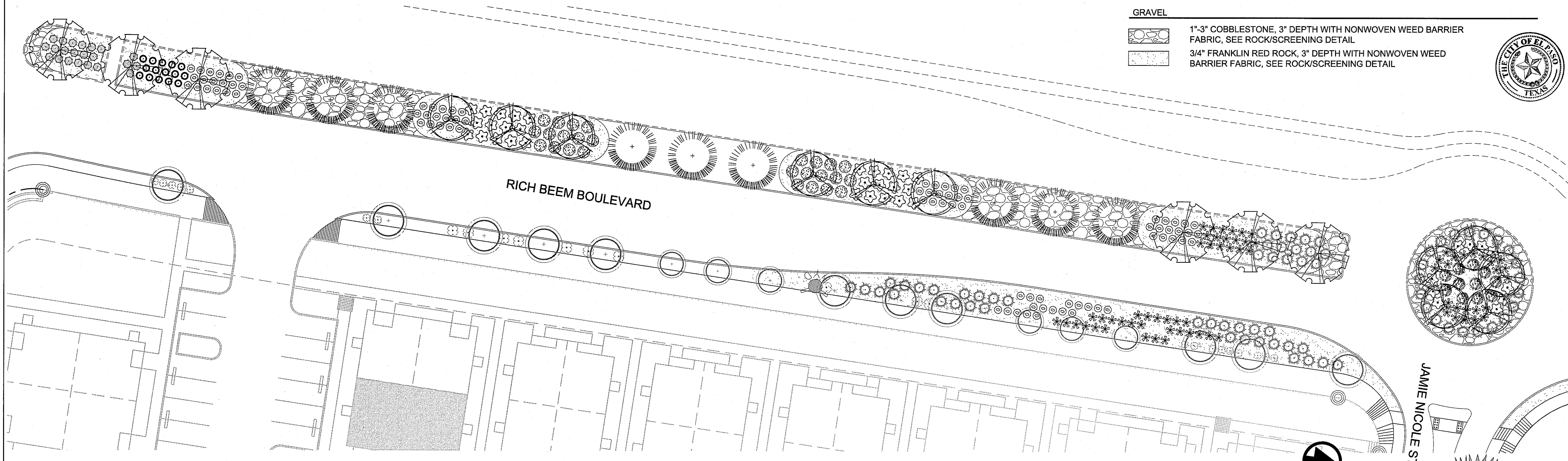
- TREE REVIEW, PRIOR TO INSTALLATION (AT NURSERY OR ON SITE).
- ONSITE TREE PLACEMENT, PRIOR TO PLANTING

LANDSCAPE LEGEND

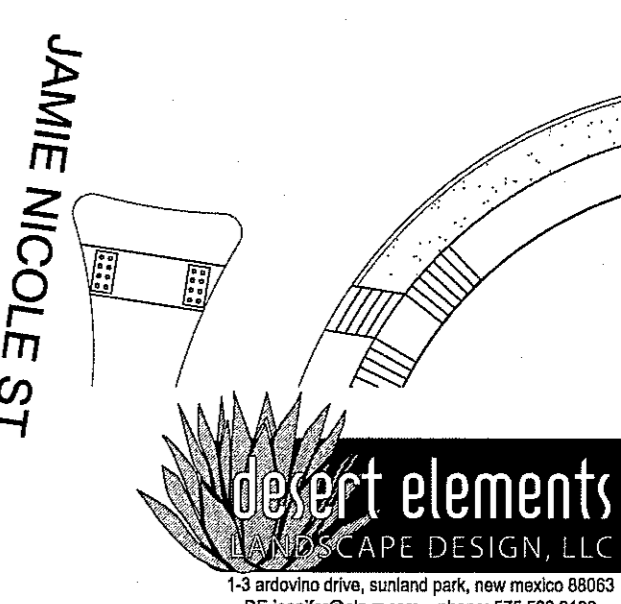
SYMBOL	COMMON NAME	BOTANICAL NAME	QTY
	EXISTING TREE TO REMAIN		
	EXISTING SHRUB TO REMAIN		
2" CALIPER TREE - 10' HEIGHT MINIMUM - SINGLE LEADER UNLESS OTHERWISE INDICATED			
	HONEY MESQUITE	PROSOPIS GLANDULOSA	28
	PALO VERDE	CERCIDIUM X PARKINSONIA	30
	CHINESE PISTACHE	PISTACIA CHINENSIS	13
	MONDEL PINE	PINUS ELДАРICA	23

SYMBOL	COMMON NAME	BOTANICAL NAME	QTY
5 GALLON SHRUB - 18" HEIGHT MINIMUM UNLESS OTHERWISE INDICATED			
	YELLOW BELLS	TECOMA STANS	31
	CHIHUAHUAN SAGE	LEUCOPHYLLUM LAEVIGATUM	27
	RED BIRD OF PARADISE	CAESALPINIA PULCHERRIMA	50
	TRAILING INDIGO BUSH	DALEA GREGGII	82
	TEXAS BEAR GRASS	NOLINA TEXANA	58
	RED YUCCA	HESPERALOE PARVIFLORA	132
	AGUIRRE TURPENTINE BUSH	ERICAMERIA LARICIFOLIA AGUIRRE	132
	REGAL MIST	MUHLENBERGIA CAPILLARIS	50
3 GALLON SUCCULENCE			
	SPINELESS PRICKLY PEAR	OPUNTIA CACANAPA 'ELLISIANA'	58

GRAVEL	
	1"-3" COBBLESTONE, 3" DEPTH WITH NONWOVEN WEED BARRIER FABRIC, SEE ROCK/SCREENING DETAIL
	3/4" FRANKLIN RED ROCK, 3" DEPTH WITH NONWOVEN WEED BARRIER FABRIC, SEE ROCK/SCREENING DETAIL



LANDSCAPE PLAN



WARNING!
BEFORE YOU DIG
CALL 811
FOR FIELD LOCATING EXISTING UTILITIES

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

REFERENCES - BENCHMARKS

CITY MONUMENT AT POINT OF CURVE CENTERLINE RICH BEEM BLVD. S084°37'E A DISTANCE OF 467.58 FEET FROM THE SOUTHERLY RIGHT OF WAY LINE OF MONTANA AVENUE CITY DATUM ELEVATION.....4005.40

DATE	REVISIONS	BY

cea

TEXAS REGISTERED ENGINEERING FIRM F-4584
4712 Woodrow Bean, Ste. F El Paso, TX 79924
915.544.6232 | www.ceagroup.net

ENGINEER'S SEAL

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SCALE

Horizontal: N/A
Vertical: N/A
Contour Interval: N/A
DATE: APRIL 2016
DESIGN BY: S.A.
DRAWN BY: J.B. & C.H.
CHKD. BY: J.B. & C.H.
APPROV. BY: J.B. & C.H.
JOB No. 2000-1941.D

PROJECT TITLE

TRES SUEÑOS UNIT TWELVE
SUBDIVISION IMPROVEMENTS

SHEET TITLE

LANDSCAPE PLAN

SHEET NO.

L1.0

**WARNING !
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CALL 811**

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UTILITY LOCATOR SERVICES

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U.S. SPRINT TELECOMM	(800) 521-0579

REFERENCES - BENCHMARKS

CITY MONUMENT AT POINT OF CURVE CENTERLINE RICH BEEM BLVD., S08°43'31"E A DISTANCE OF 467.58 FEET FROM THE SOUTHERLY RIGHT OF WAY LINE OF MONTANA AVENUE CITY DATUM ELEVATION.....4005.40

DATE	REVISIONS	BY

cea

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4712 Woodrow Bean, Ste. F El Paso, TX 79924
915.544.5232 | www.ceagroup.net

ENGINEER'S SEAL

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SCALE

Horizontal: N/A
Vertical: N/A
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DATE: APRIL 2016
DESIGN BY: S.A.
DRAWN BY: S.A.
CHKD. BY: J.E. & C.H.
APPVD. BY: _____
JOB No. 2000-1941.D

PROJECT TITLE

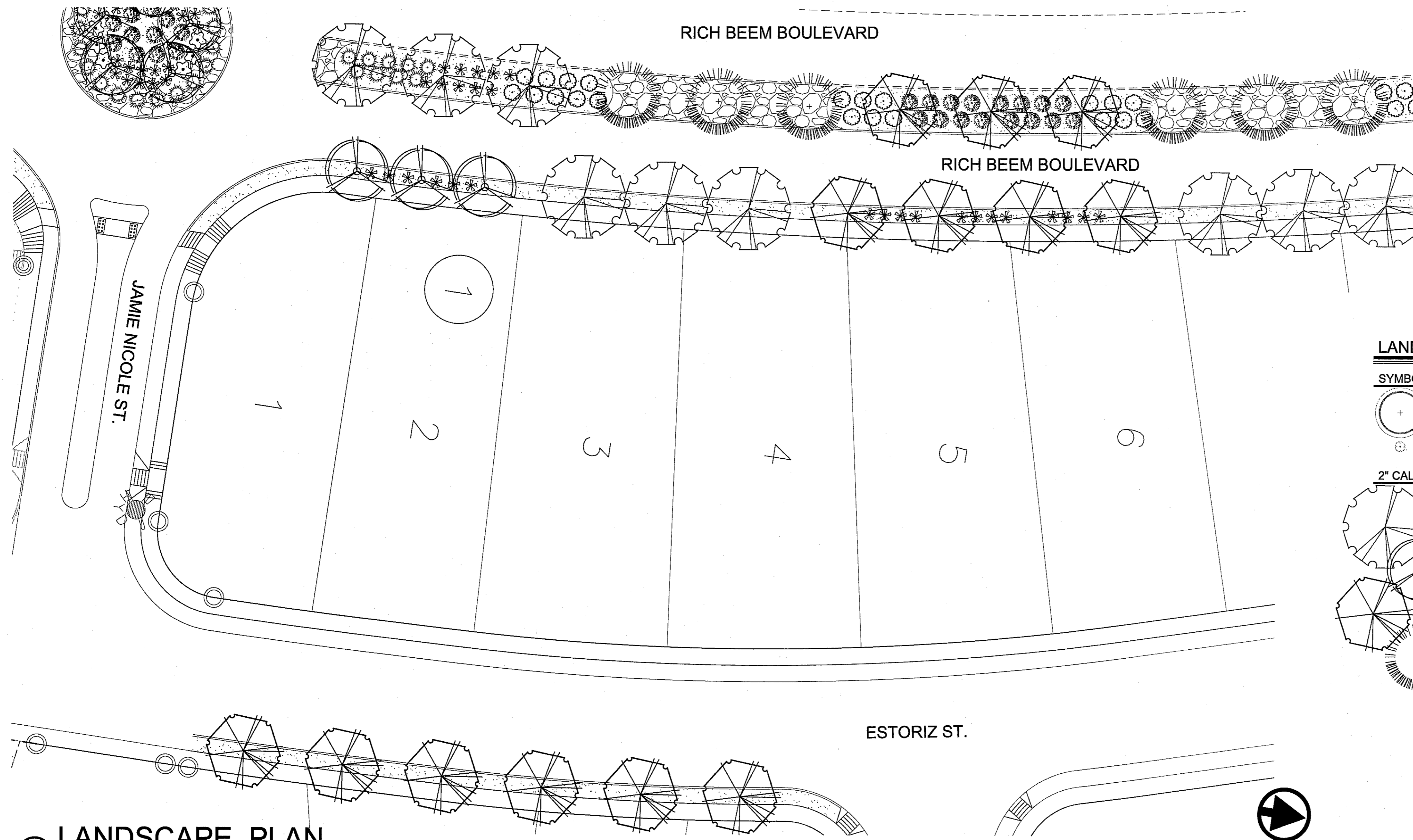
TRES SUEÑOS UNIT TWELVE
SUBDIVISION IMPROVEMENTS

SHEET TITLE

LANDSCAPE PLAN

SHEET NO.

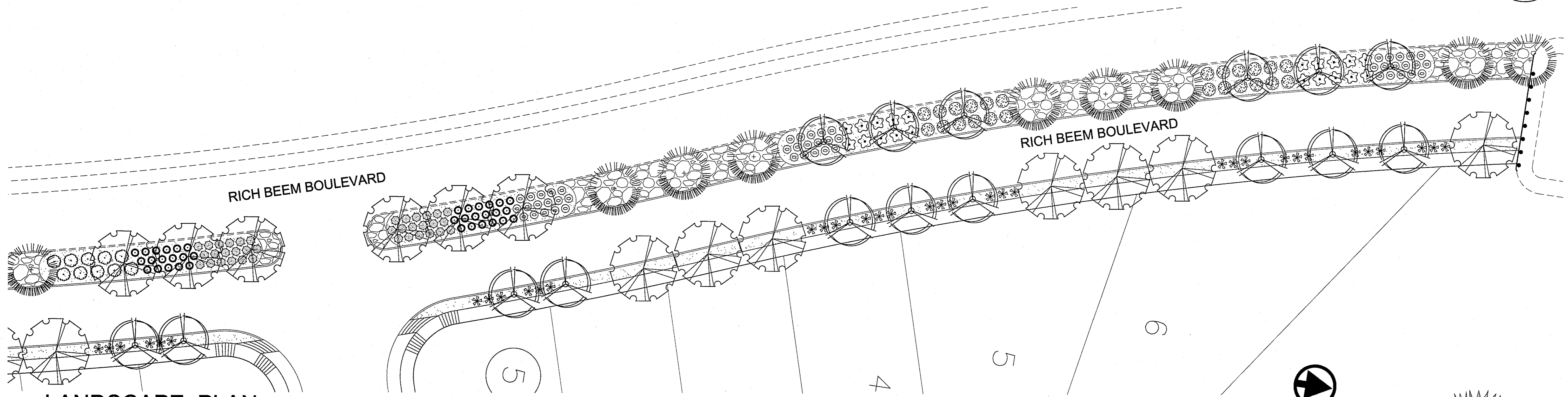
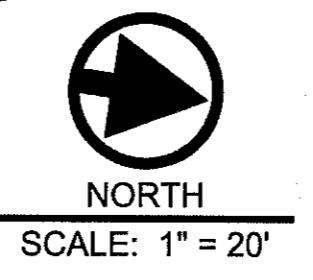
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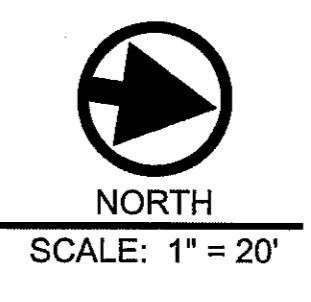
LANDSCAPE LEGEND

SYMBOL	COMMON NAME	SYMBOL	COMMON NAME
	EXISTING TREE TO REMAIN		5 GALLON SHRUB
	EXISTING SHRUB TO REMAIN		YELLOW BELLS
	2" CALIPER TREE		CHIHUAHUA SAGE
	HONEY MESQUITE		RED BIRD OF PARADISE
	PALO VERDE		TRAILING INDIGO BUSH
	CHINESE PISTACHE		TEXAS BEAR GRASS
	MONDEL PINE		RED YUCCA
			AGUIRRE TURPENTINE BUSH
			REGAL MIST
			3 GALLON SUCCULENCE
			SPINELESS PRICKLY PEAR
			GRAVEL
			1"-3" COBBLESTONE
			3/4" FRANKLIN RED ROCK

2 LANDSCAPE PLAN



3 LANDSCAPE PLAN



**WARNING !
BEFORE YOU DIG
CALL 811**

FOR FIELD LOCATING EXISTING UTILITIES

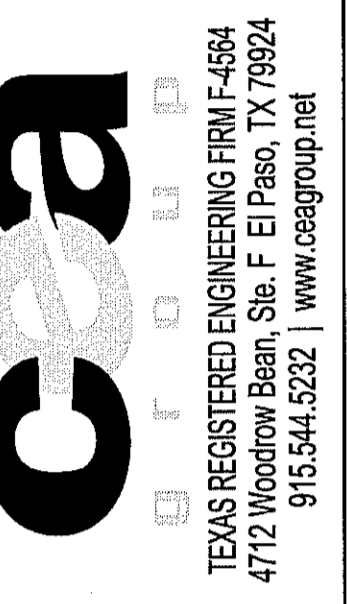
UTILITY LOCATOR SERVICES

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EL PASO ENERGY CORPORATION	(915) 496-5244
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U.S. SPRINT TELECOMM	(800) 521-0579

REFERENCES - BENCHMARKS

CITY MONUMENT AT POINT OF CURVE CENTERLINE RICH BEEM BLVD., S08°43'31"E, A DISTANCE OF 467.58 FEET FROM THE SOUTHERLY RIGHT OF WAY LINE OF AVENUE CITY DATUM ELEVATION.....4055.40

DATE	BY
REVISIONS	



TEXAS REGISTERED ENGINEERING FIRM #4864
4712 Woodrow Bean, Ste. F, El Paso, TX 79924
915.544.5232 | www.ceagroup.net

ENGINEER'S SEAL

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SCALE

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

DATE: APRIL 2016
DESIGN BY: S.A.
DRAWN BY: S.A. & C.H.
CHKD. BY: J.B. & C.H.
APPV. BY: _____
JOB No. 2000-194LD.

PROJECT TITLE

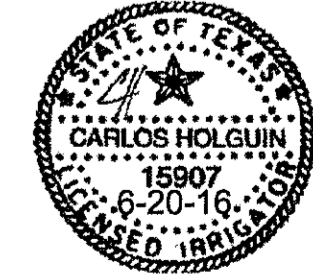
**TRES SUEÑOS UNIT TWELVE
SUBDIVISION IMPROVEMENTS**

SHEET TITLE

IRRIGATION PLAN

SHEET NO.







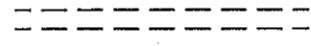



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1 IRRIGATION PLAN

NORTH
SCALE: 1" = 30'

IRRIGATION LEGEND

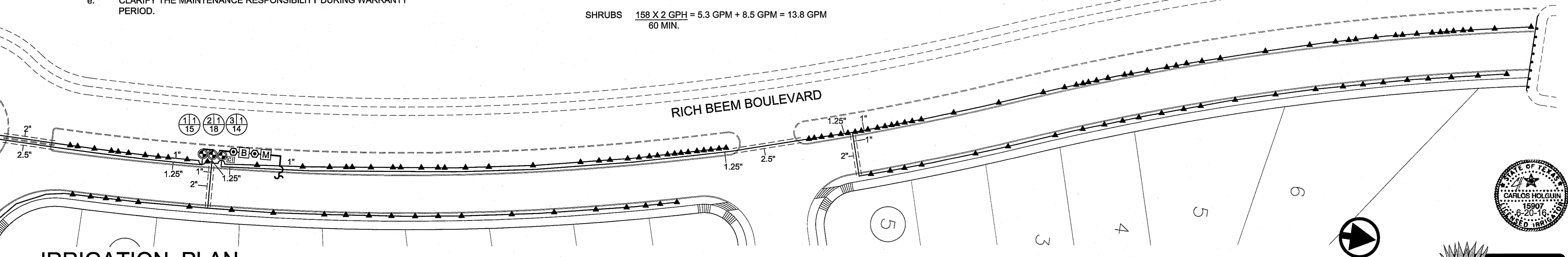
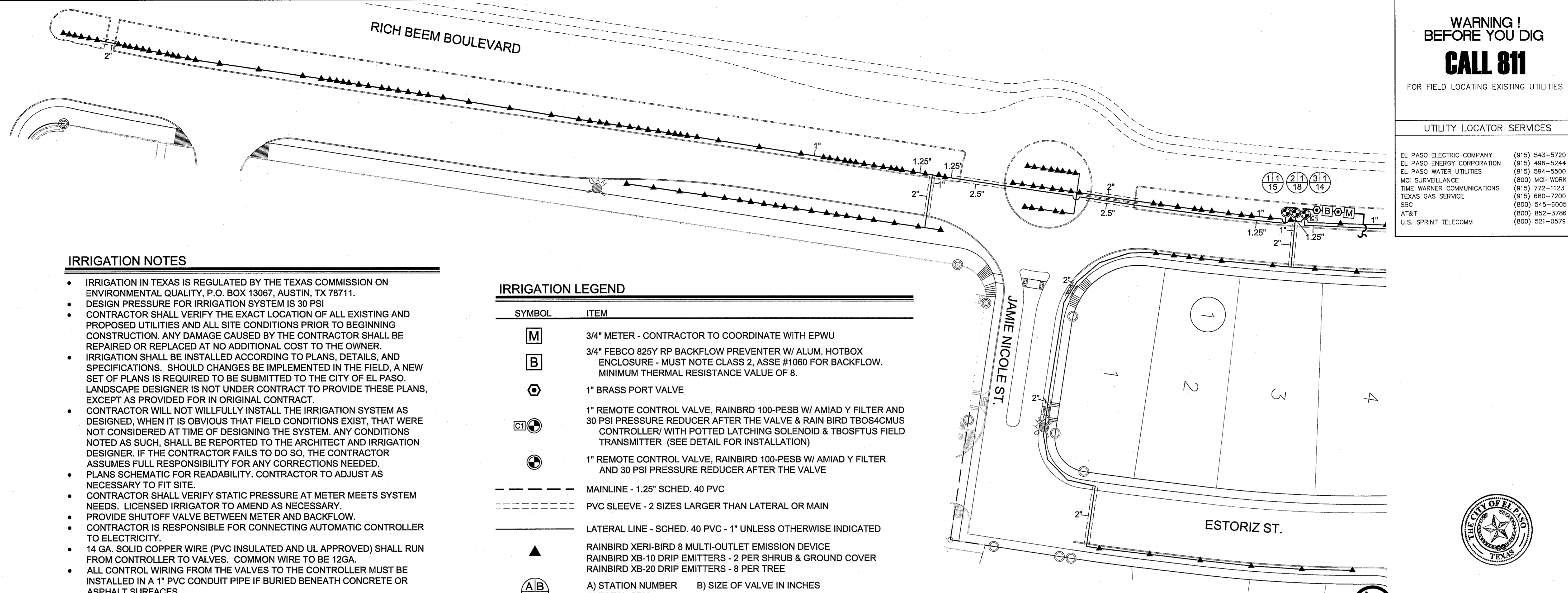
SYMBOL	ITEM
	3/4" METER - CONTRACTOR TO COORDINATE WITH EPWU
	3/4" FEBCO 825Y RP BACKFLOW PREVENTER W/ ALUM. HOTBOX ENCLOSURE - MUST NOTE CLASS 2, ASSE #1060 FOR BACKFLOW. MINIMUM THERMAL RESISTANCE VALUE OF 8.
	1" BRASS PORT VALVE
	1" REMOTE CONTROL VALVE, RAINBRD 100-PESB W/ AMIAD Y FILTER AND 30 PSI PRESSURE REDUCER AFTER THE VALVE & RAIN BIRD TBOS4CMUS CONTROLLER/ WITH POTTED LATCHING SOLENOID & TBOSFTUS FIELD TRANSMITTER (SEE DETAIL FOR INSTALLATION)
	1" REMOTE CONTROL VALVE, RAINBRD 100-PESB W/ AMIAD Y FILTER AND 30 PSI PRESSURE REDUCER AFTER THE VALVE
	MAINLINE - 1.25" 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-10 DRIP EMITTERS - 2 PER SHRUB & GROUND COVER RAINBIRD XB-20 DRIP EMITTERS - 8 PER TREE
	A) STATION NUMBER B) SIZE OF VALVE IN INCHES C) TOTAL GPM

HYDRAULIC CALCULATIONS

VALVE #1	TREES	SHRUBS
	21 X 16 GPH = 5.6 GPM 60 MIN.	272 X 2 GPH = 9.1 GPM + 5.6 GPM = 14.7 GPM 60 MIN.
VALVE #2	TREES	SHRUBS
	41 X 16 GPH = 10.9 GPM 60 MIN.	190 X 2 GPH = 6.3 GPM + 10.9 GPM = 17.2 GPM 60 MIN.
VALVE #3	TREES	SHRUBS
	32 X 16 GPH = 8.5 GPM 60 MIN.	158 X 2 GPH = 5.3 GPM + 8.5 GPM = 13.8 GPM 60 MIN.

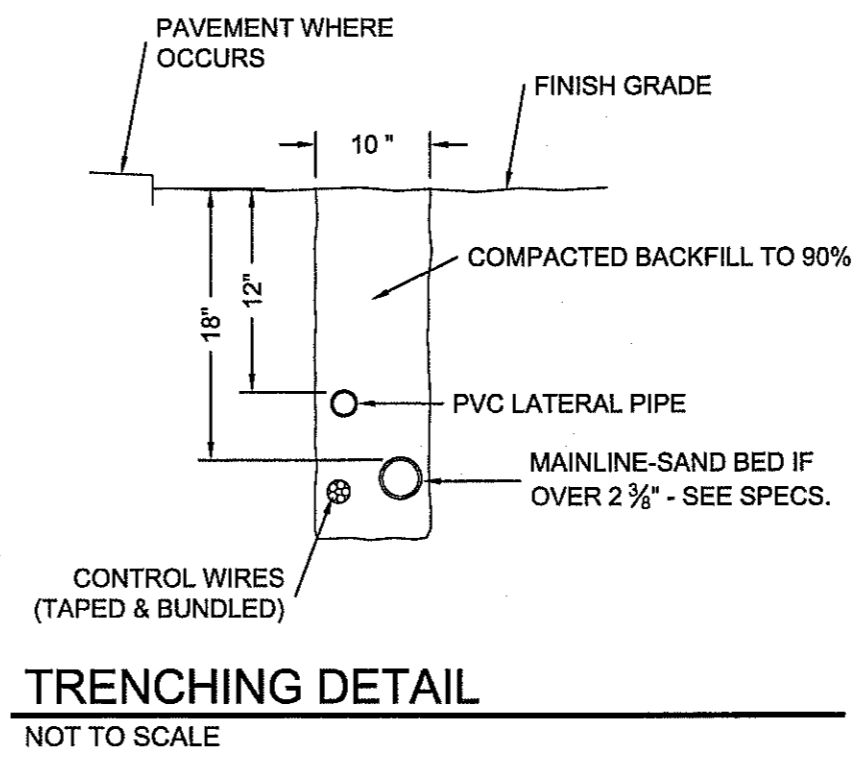
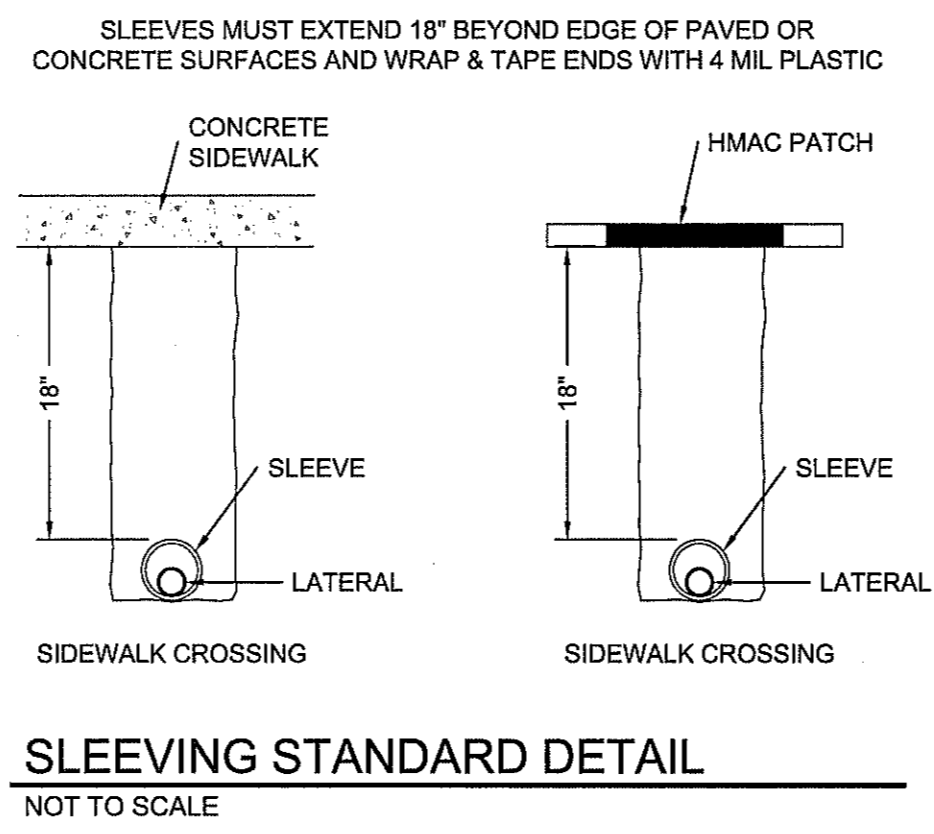
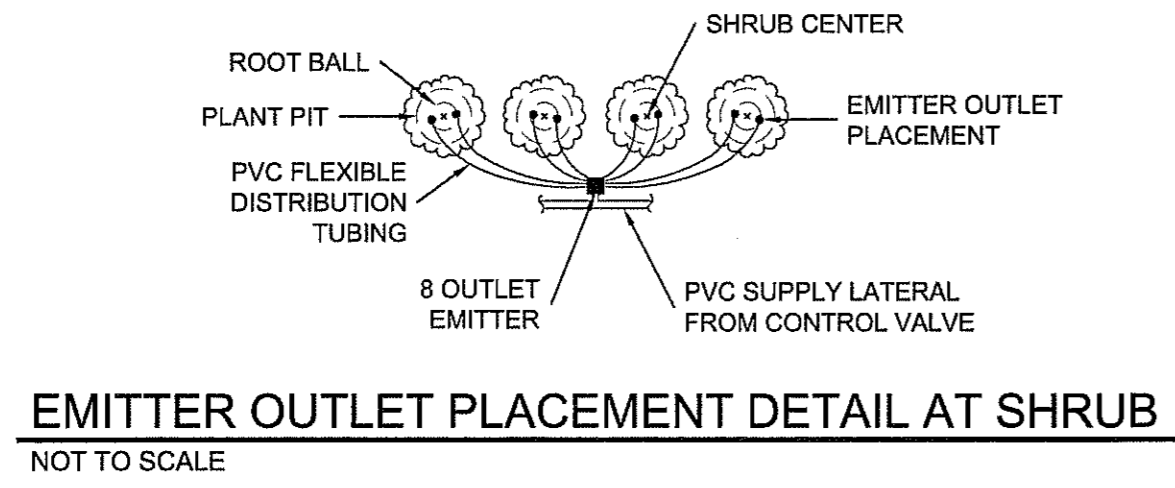
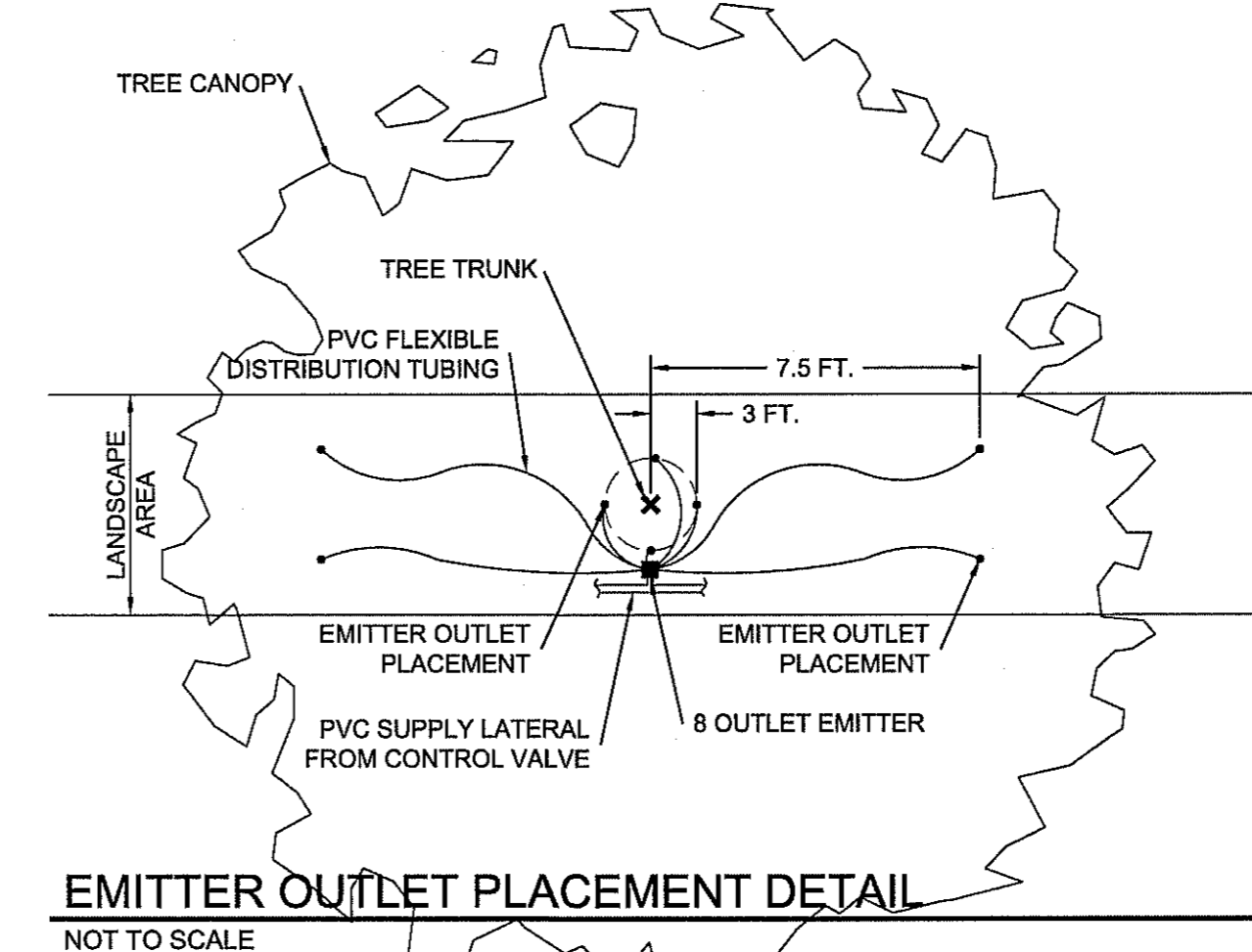
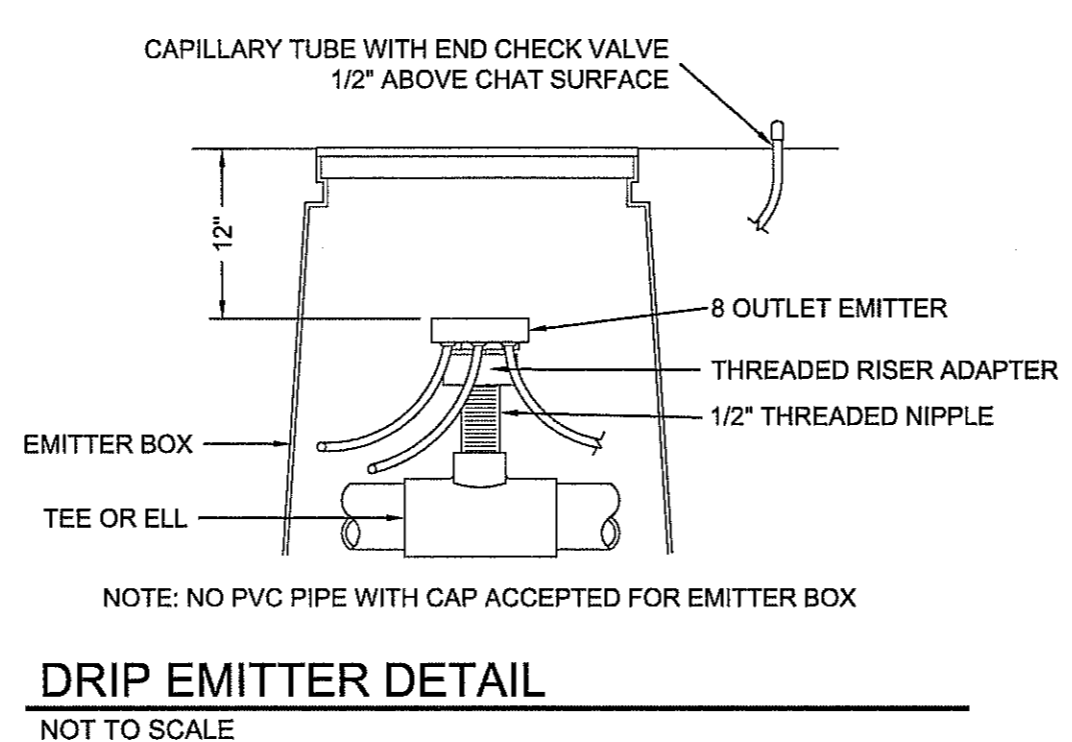
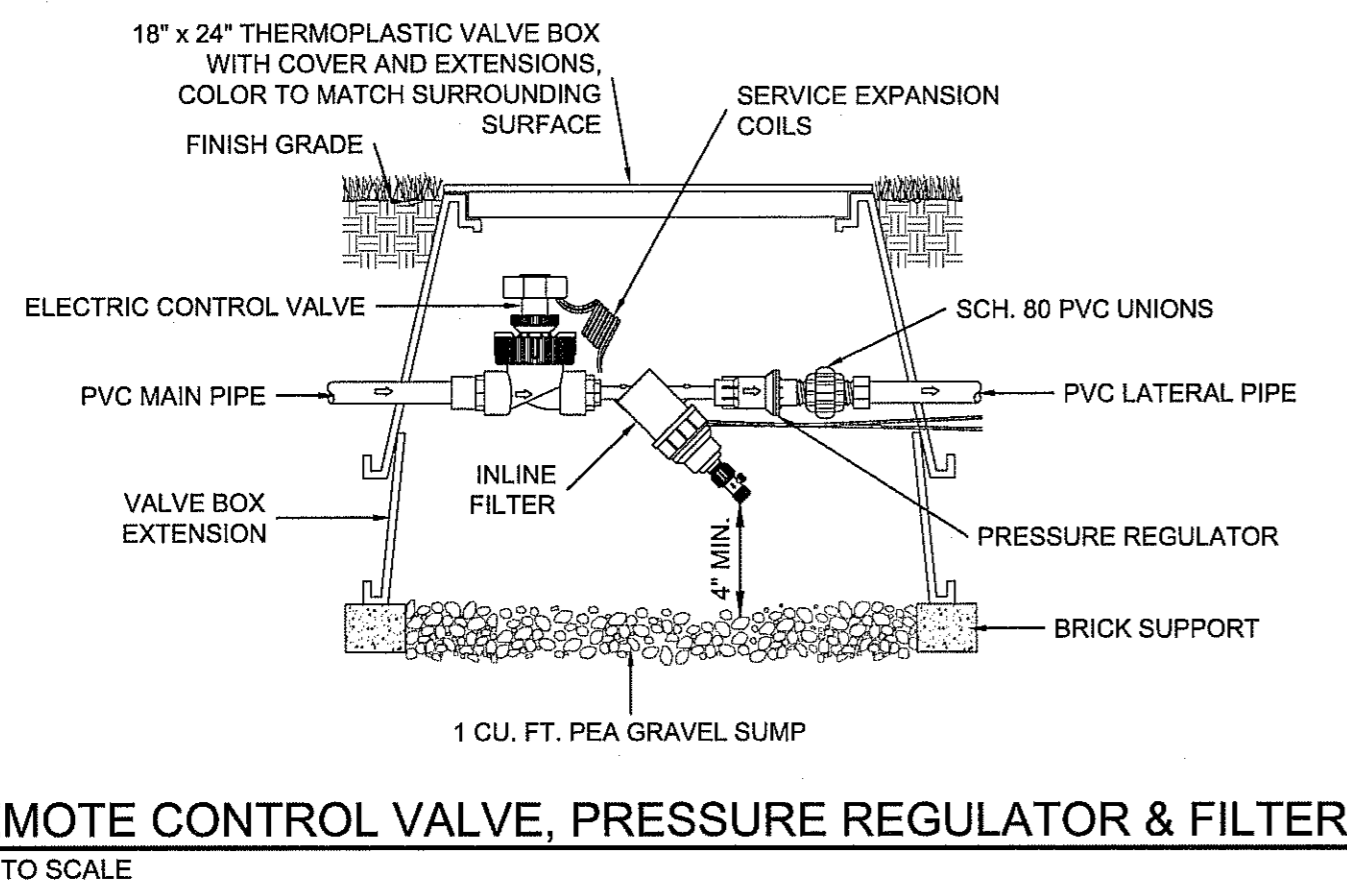
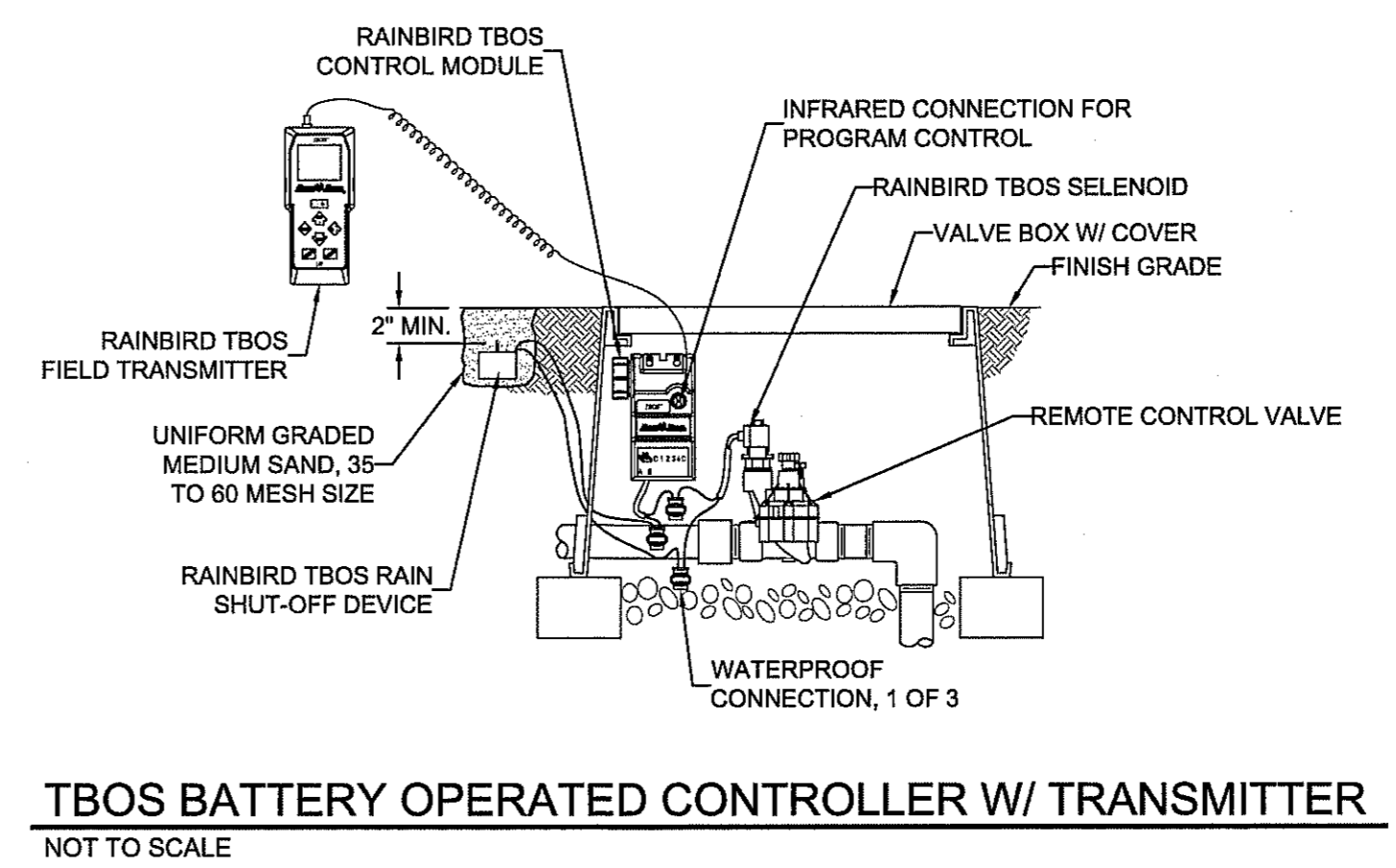
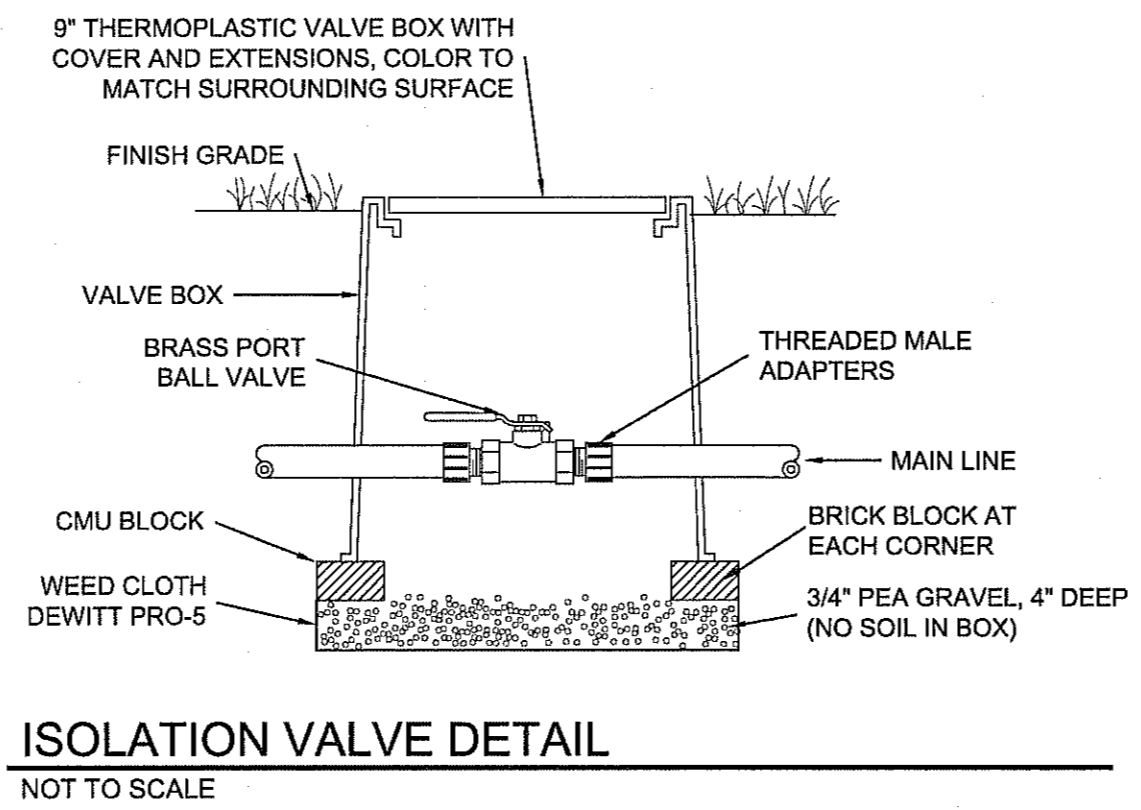
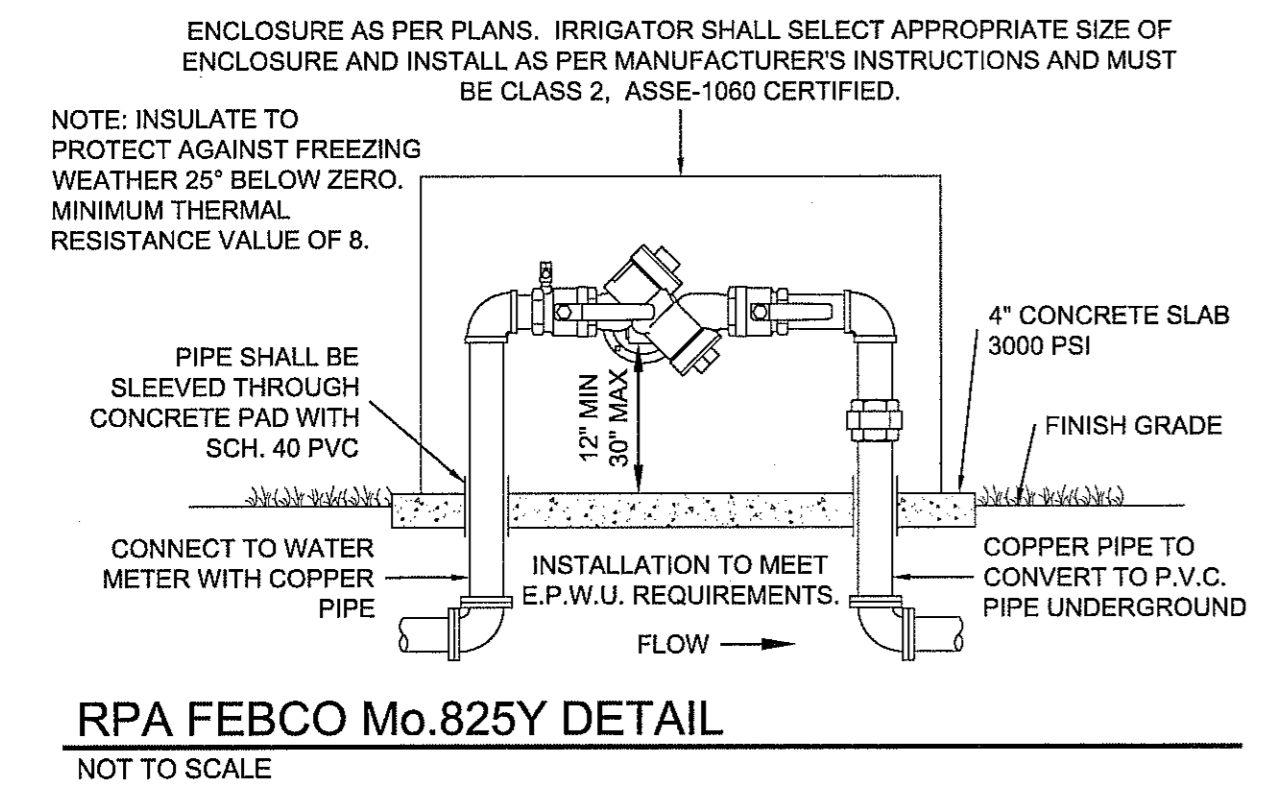
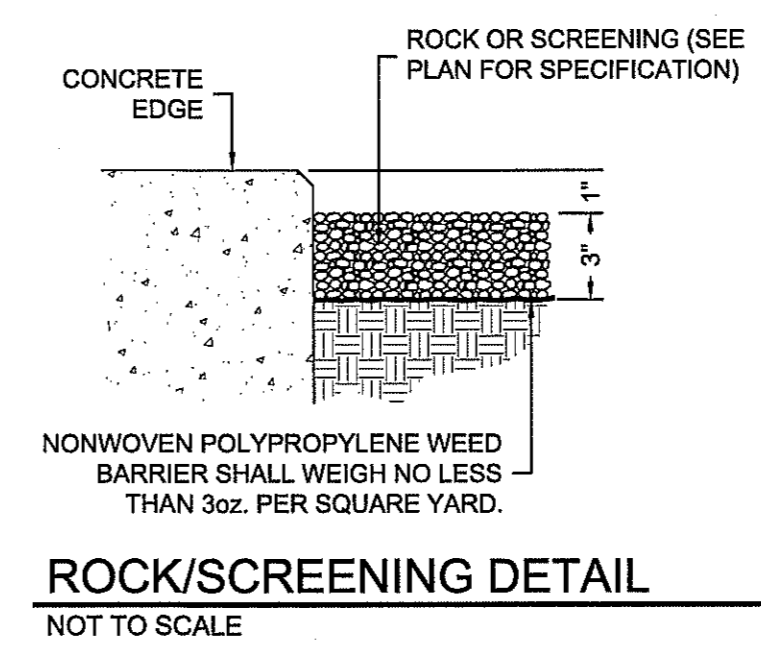
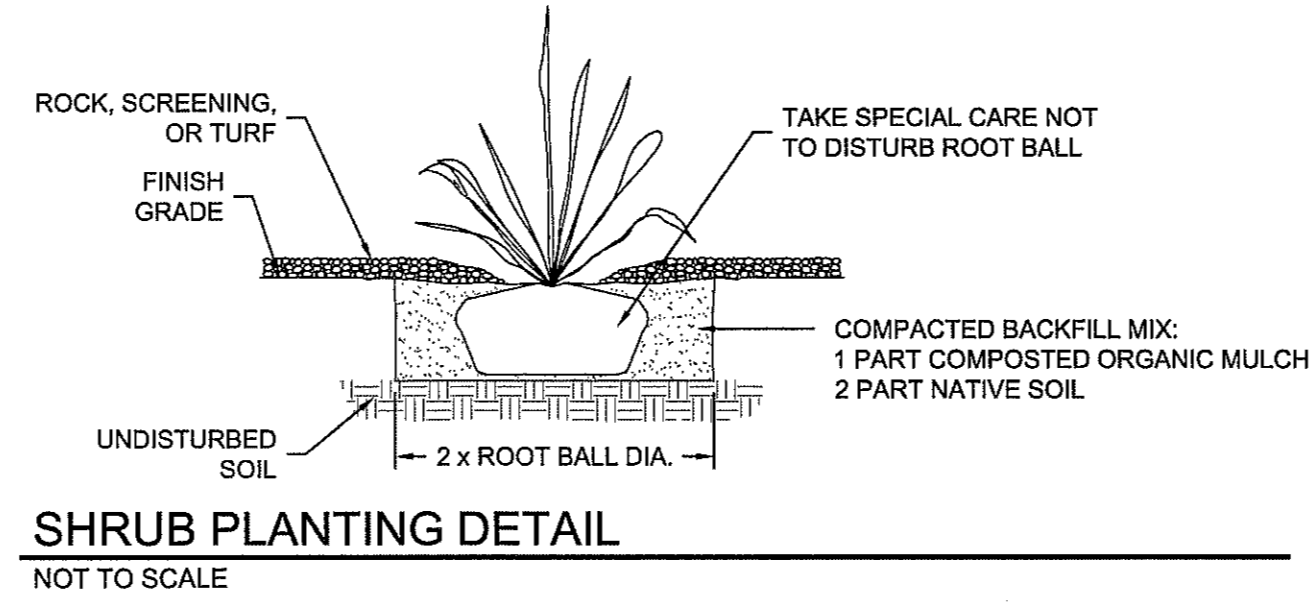
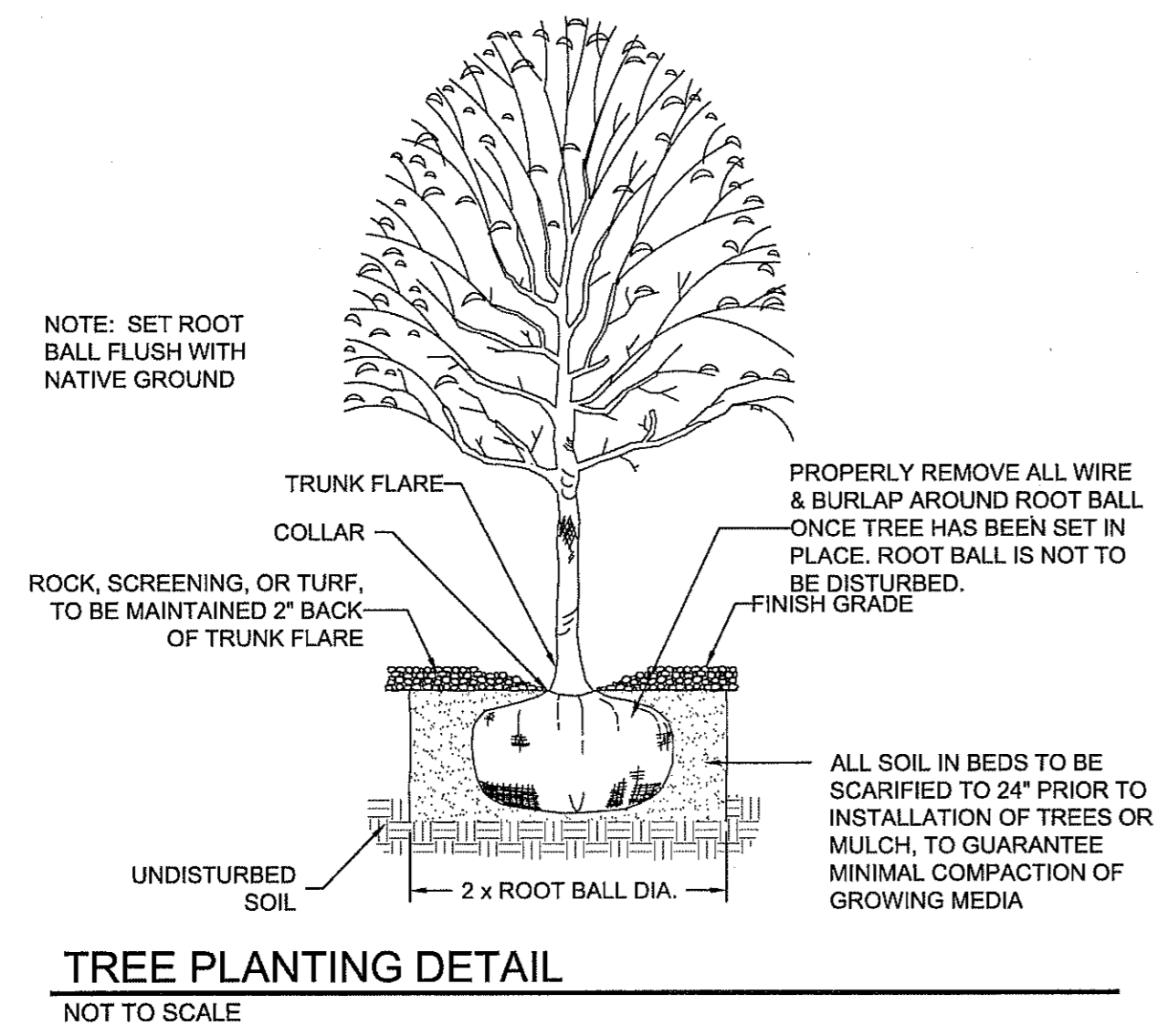
IRRIGATION NOTES

- 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.
- 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.
- 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.
- AT TIME OF WALK THROUGH INSPECTION FOR ACCEPTANCE THE FOLLOWING SHALL BE PROVIDED TO EPDOT - MEDIANS SECTION
 - AS-BUILT DRAWINGS.
 - TOBOSFTUS FIELD TRANSMITTER.
 - BACK FLOW TEST RESULTS.
 - ALL DOCUMENTATION FOR THE TRANSFER OF WATER METER(S).
 - CLARIFY THE MAINTENANCE RESPONSIBILITY DURING WARRANTY PERIOD.



2 IRRIGATION PLAN

NORTH
SCALE: 1" = 30'



WARNING!
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AT&T	(800) 852-3786
U.S. SPRINT TELECOMM	(800) 521-0579

REFERENCES - BENCHMARKS

CITY MONUMENT AT POINT OF CURVE CENTERLINE RICH
ELEVATION 4005.40
CITY MONUMENT AT POINT OF CURVE CENTERLINE RICH
FROM THE SOUTHERLY RIGHT OF WAY LINE OF MONTANA
AVENUE CITY DATUM ELEVATION.....4005.40

DATE	REVISIONS	BY

cea

TEXAS REGISTERED ENGINEERING FIRM F-4664
4712 Woodrow Bear, Ste. F, El Paso, TX 79924
915.544.5232 | www.ceagroup.net

ENGINEER'S SEAL

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CEA GROUP, UNDER THE
SUPERVISION OF THE LICENSED
AZARARATE P.E., TX P.E. LICENSE
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CONSTRUCTION UNLESS THE
SHALL HOLD HARMLESS CEA
AND/OR THE ENGINEER.

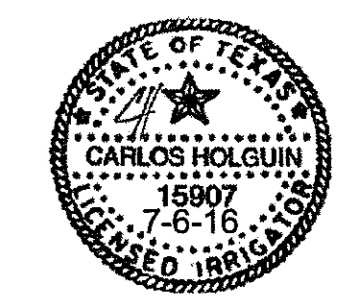
SCALE

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

DATE: APRIL 2016
DESIGN BY: S.A.
DRAWN BY: S.A.
CHKD. BY: J.B. & C.H.
APPRD. BY: -
JOB No. 2000-194LD

PROJECT TITLE

TRES SUEÑOS UNIT TWELVE
SUBDIVISION IMPROVEMENTS



SHEET TITLE

IRRIGATION AND LANDSCAPE DETAILS

SHEET NO.

L4.0