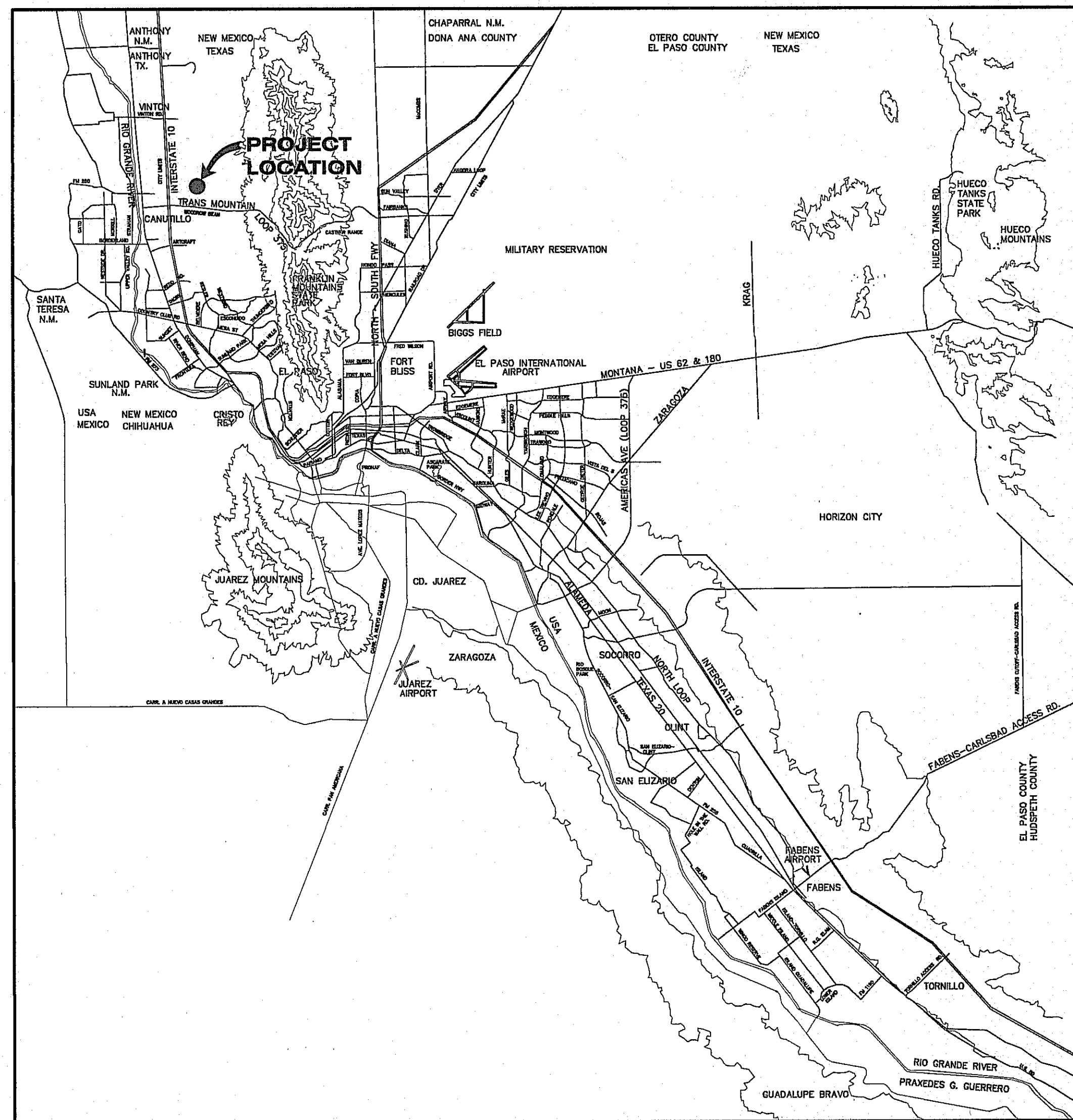


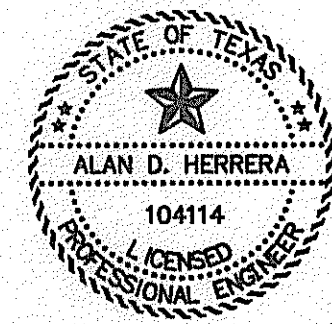
DESERT SPRINGS UNIT FOUR SUBDIVISION IMPROVEMENTS

A PORTION OF NELLIE D. MUNDY SURVEY No. 244,
PARCEL 2, CITY OF EL PASO, EL PASO COUNTY, TEXAS
APPROXIMATELY 63.076 ACRES±



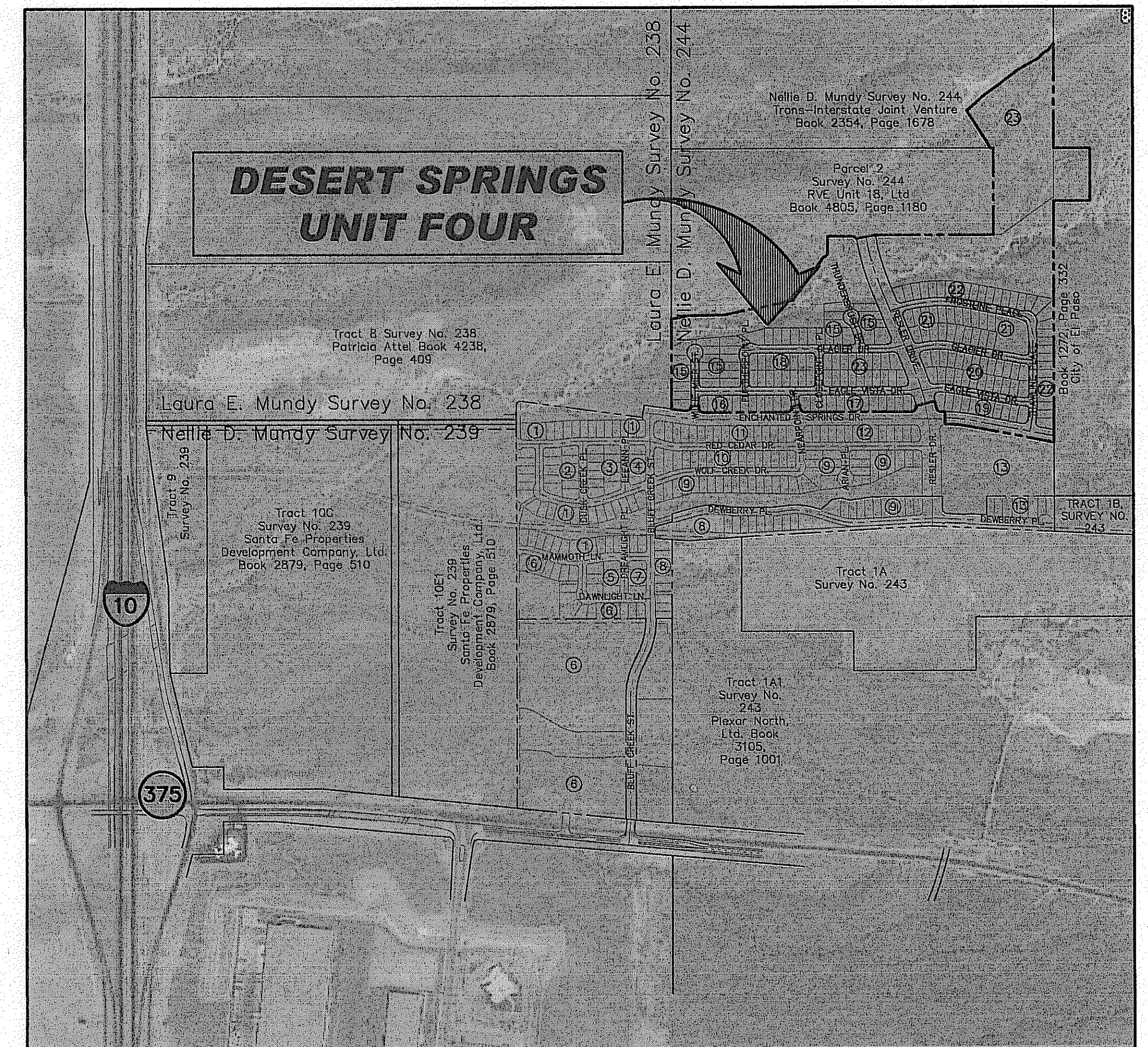
VICINITY MAP
APPROXIMATE SCALE:
1" = 2 MILES

SHEET NUMBER	SHEET TITLE
CVR	COVER SHEET
C1.1-C1.2	GENERAL INFORMATION
C2.1-C2.2	FINAL PLAT
C3.0-C3.2	CONSTRUCTION PHASING & GRADING PLANS
C4.1-C4.5	DRAINAGE PLANS
C5.1-C5.3	GRADING SECTIONS
C6.1-C6.13	STREET PLAN & PROFILES
C7.1-C7.5	STORM SEWER PLAN & PROFILES
C8.1	POND DESIGN PLAN
C9.1-C9.12	CHANNEL DESIGN AND CULVERT DESIGN PLANS
C10.1-C10.5	STANDARD DETAILS
C11.1-C11.7	DRAINAGE DETAILS
C12.1-C12.3	ILLUMINATION, SIGNAGE AND STRIPING PLANS
C13.1-C13.4	STORM WATER POLLUTION PREVENTION PLANS
C14.1-C14.2	WATER INDEX / GENERAL INFORMATION
C15.1-C15.3	WATER PLANS
C16.1-C16.4	WATER DETAILS
C17.1	SANITARY SEWER INDEX / GENERAL INFORMATION
C18.1-C18.8	SANITARY SEWER PLAN & PROFILES
C19.1-C19.3	SANITARY SEWER DETAILS



Alan D. Herrera 2/17/2015
ALAN D. HERRERA, P.E. PROJECT MANAGER

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



LOCATION MAP
APPROXIMATE SCALE: 1" = 600'

PRINCIPAL CONTACTS:

	NAME	ADDRESS	CITY & ZIP	PHONE	FAX
OWNER:	RPW DEVELOPMENT	7910 GATEWAY EAST, SUITE 102	EL PASO, TX 79915	(915) 591-6319	(915) 591-5451
OWNER:	DVEP LAND LLC	7910 GATEWAY EAST, SUITE 102	EL PASO, TX 79915	(915) 591-6319	(915) 591-5451
ENGINEER:	CEA GROUP	4712 WOODROW BEAN DR. STE. F	EL PASO, TX 79924	(915) 544-5232	(915) 544-5233
SURVEYOR:	BARRAGAN & ASSOCIATES	10950 PELLICANO DR. BUILDING F	EL PASO, TX 79936	(915) 591-5709	(915) 591-5706

CITY DEVELOPMENT DEPARTMENT

- Reviewed For Conformance For Condition Related To:
- Easements
 - Grading & Drainage
 - Wheelchair Ramps
 - On Site Parking Layout
 - Detouring
 - Retaining Wall Width
 - On Site Parking of Storm Water

Contractor Must Call 24 Hours Prior To Construction For Inspections
Alan D. Herrera 2/19/2015

GENERAL NOTES

- THE CONTRACTOR SHALL VISIT AND FAMILIARIZE HIMSELF WITH THE PROJECT SITE PRIOR TO SUBMITTING BIDS.
- IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE AUTOMOBILE AND PEDESTRIAN ACCESS TO THE USER AT ALL TIMES, INCLUDING SATURDAYS, SUNDAYS, AND HOLIDAYS. THIS INCLUDES, BUT IS NOT LIMITED TO DRIVEWAYS, STREETS, PARKING, AND WALKWAYS. THIS REQUIREMENT SHALL BE FULFILLED AT NO EXTRA COST TO THE OWNER.
- CONTRACTOR SHALL WATER CONSTRUCTION AREA A MINIMUM OF TWICE A DAY TO KEEP DUST TO A MINIMUM - ONCE IN THE MORNING AND BEFORE QUITTING TIME. THIS SHALL ALSO BE DONE DURING WEEKENDS AND HOLIDAYS.
- IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE, PROTECT, AND REPLACE ALL UNDERGROUND UTILITY LINES AT NO EXTRA COST TO THE OWNER WHEN LINES ARE DISTURBED AS A RESULT OF THE WORK. SERVICE SHALL BE PROVIDED TO USER AT ALL TIMES.
- IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO SCHEDULE AND PERFORM WORK SO AS TO ASSURE PROPER PASSAGE OF STORM RUNOFF DURING THE COURSE OF THE OPERATIONS. ALL LABOR, TOOLS, EQUIPMENT, AND SUPERVISION REQUIRED TO ASSURE SUCH PROPER PASSAGE OF RUNOFF WATER AND ANY REMOVAL OR HANDLING OF WATER IN ORDER TO MAINTAIN DRY CONDITIONS SHALL BE CONSIDERED INCIDENTAL TO THE WORK, AND SHALL BE AT THE EXPENSE OF THE CONTRACTOR.
- THE CONTRACTOR SHALL COORDINATE THE CONSTRUCTION SCHEDULE WITH THE USER, ALL UTILITIES, AND ALL OTHER AGENCIES WITH JURISDICTION OVER THE PROJECT.
- ALL EXISTING PAVEMENT, ADJACENT UTILITIES, STRUCTURES, ETC. DISTURBED AS A RESULT OF THE NEW CONSTRUCTION, SHALL BE REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
- THE OWNER WILL FURNISH HORIZONTAL AND VERTICAL CONTROL REFERENCED POINTS ONLY. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND GRADES BEFORE PROCEEDING WITH THE WORK. ANY DISCREPANCIES FOUND SHALL BE REPORTED IMMEDIATELY TO THE ENGINEER, OTHERWISE THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR THEIR CORRECTNESS.
- FOR ELEVATIONS, REFERENCE BENCHMARK IN TITLE BLOCK FOR ADDITIONAL INFORMATION.
- VIBRATORY ROLLERS WILL NOT BE PERMITTED ON ANY PHASE OF THIS PROJECT, UNLESS APPROVED IN WRITING BY THE ENGINEER AND CITY OF EL PASO.
- ALL WORK REQUIRED BY THESE PLANS SHALL BE CONDUCTED IN CONFORMANCE WITH CURRENT SAFETY CODES AND STANDARDS WITH JURISDICTION OVER THE PROJECT.
- THE LOCATION OF THE FLUMES AND INLETS SHALL BE AT THE FIELD LOW POINT AND APPROVED BY THE ENGINEER PRIOR TO PAVING AND PLACEMENT OF STRUCTURES.
- IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN THE FINAL CITY OF EL PASO APPROVED SUBDIVISION PLANS PRIOR TO COMMENCING ANY CONSTRUCTION WORK. IT IS THE CONTRACTOR'S RESPONSIBILITY TO REPLACE ANY WORK NOT PERFORMED AS PER THE CITY APPROVED PLANS. THE CONTRACTOR IS RESPONSIBLE TO ENSURE THAT THE CITY OF EL PASO APPROVED PLANS ARE ALWAYS ACCESSIBLE AT THE JOB SITE FOR REVIEW BY SUB-CONTRACTORS, THE OWNER, THE ENGINEER AND CITY STAFF.
- SIDEWALKS SHALL BE BUILT BY BUILDER UNLESS SPECIFIED ELSEWHERE IN PLANS.
- NO BLASTING SHALL BE PERMITTED.
- THE CONTRACTOR SHALL FIELD VERIFY ELEVATIONS, MEASUREMENTS AND EXISTING CONDITIONS PRIOR TO COMMENCING CONSTRUCTION ACTIVITIES. NOTIFY THE ENGINEER PROMPTLY OF ANY OMISSIONS, ERRORS, OR DISCREPANCIES FOUND SO THAT NECESSARY CORRECTIONS AND INTERPRETATIONS BE MADE PRIOR TO CONSTRUCTION.
- ALL CONSTRUCTION PRACTICES AND PROCEDURES WILL COMPLY WITH THE PERTINENT PROVISIONS OF THE OCCUPATIONAL SAFETY AND HEALTH STANDARD (TITLE 29, CODE OF FEDERAL REGULATIONS) PUBLISHED BY THE OSHA, DEPARTMENT OF LABOR.
- BEGIN CONSTRUCTION ACTIVITIES AT PONDING AREAS. PONDING AREAS ARE TO BE EIGHTY-FIVE (85%) PERCENT COMPLETE PRIOR TO COMMENCING CONSTRUCTION ACTIVITIES FOR THE REMAINING OF SUBDIVISION.

LEGEND

	SUBDIVISION BOUNDARY		4000.00
	ROW LINE		FG. 56.00
	CURB LINE		TC. 4000.00
	PROPERTY LINE		TP. 4000.00
	STREET CENTERLINE		1 2
	EASEMENT LINE		→
	MATCH LINE		→
	STORM SEWER LINE		→
	HIGH WATER MARK		→
	CURB AND GUTTER DROP INLET		→
	STORM SEWER MANHOLE		→
	PROPOSED MAJOR CONTOUR (CITY DATUM)		→
	PROPOSED MINOR CONTOUR (CITY DATUM)		→
	EXISTING MAJOR CONTOUR (CITY DATUM)		→
	EXISTING MINOR CONTOUR (CITY DATUM)		→
	NEW 4' RETAINING ROCKWALL (0'-2' IN HEIGHT)		→
	NEW 4' RETAINING ROCKWALL (2'-3' IN HEIGHT)		→
	NEW 4' RETAINING ROCKWALL (3'-9' IN HEIGHT)		→
	NEW 6' RETAINING ROCKWALL (0'-2' IN HEIGHT)		→
	NEW 6' RETAINING ROCKWALL (2'-3' IN HEIGHT)		→
	NEW 6' RETAINING ROCKWALL (3'-9' IN HEIGHT)		→
	2' ROCKWALL WITH 2' WROUGHT IRON FENCE		→
	2' ROCKWALL WITH 4' WROUGHT IRON FENCE		→
	6' WROUGHT IRON FENCE		→

2(H):1(V) SLOPE HORIZONTAL:VERTICAL SLOPE RATIO

APPROXIMATE AREA OF 100 YEAR FLOOD, AS PER FIRM PANEL NO. 480214-0016-C (FEBRUARY 5, 1986)

APPROXIMATE BASE FLOOD ELEVATION (NATIONAL GEODETIC VERTICAL DATUM, NGVD), TO CONVERT TO CITY OF EL PASO DATUM FROM NGVD, SUBTRACT 9.85'-FEET.

WHEELCHAIR RAMP

X STANDARD DETAIL/SECTION NUMBER
X SHEET NUMBER WHERE STANDARD/SECTION DETAIL IS LOCATED

GRADING SPECIFICATIONS

- CLEARING AND GRUBBING: CLEAR SITE OF TREES, SHRUBS AND OTHER VEGETATION; COMPLETELY REMOVE STUMPS, ROOTS AND OTHER DEBRIS PROTRUDING THROUGH GROUND SURFACE; FILL DEPRESSIONS CAUSED BY CLEARING AND GRUBBING OPERATIONS WITH SATISFACTORY FILL MATERIAL, UNLESS FURTHER EXCAVATION OF EARTHWORK IS INDICATED; REMOVE EXISTING ABOVE-GRADE AND BELOW-GRADE IMPROVEMENTS AS INDICATED AND AS NECESSARY TO FACILITATE NEW CONSTRUCTION. BURNING IS NOT PERMITTED ON OWNER'S PROPERTY. REMOVE WASTE MATERIALS FROM OWNER'S PROPERTY.
- SATISFACTORY FILL MATERIALS: FILL MATERIALS SHALL BE FREE OF ANY ORGANIC OR DELETERIOUS SUBSTANCE AND SHALL NOT CONTAIN ROCKS OR LUMPS OVER THREE (3) INCHES IN GREATEST DIMENSION AND SHALL BE DEFINED AS THOSE COMPLYING WITH ASTM D2487 SOIL CLASSIFICATION GROUPS OW, GP, GM, GC, SM, SP, SC, AND SC OR UNLESS OTHERWISE APPROVED BY THE DESIGN ENGINEER, GEOTECHNICAL ENGINEER OR CITY ENGINEER.
- 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 TWELVE (12)
- EXCAVATION: IS UNCLASSIFIED AND INCLUDES EXCAVATION TO ELEVATIONS INDICATED, REGARDLESS OF CHARACTER OF MATERIAL AND OBSTRUCTIONS ENCOUNTERED.
- GROUND SURFACE PREPARATION FOR FILL: REMOVE VEGETATION, DEBRIS, UNSATISFACTORY SOIL MATERIAL, OBSTRUCTIONS, AND DELETERIOUS MATERIAL FROM GROUND SURFACE UPON WHICH THE FILL IS TO BE PLACED. THE SURFACE SHALL THEN BE SCARIFIED TO A DEPTH OF AT LEAST SIX (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 ONE (1) VERTICAL TO FOUR (4) HORIZONTAL SO THAT FILL MATERIAL WILL BOND WITH EXISTING SURFACE. AFTER PLOWING AND SCARIFYING FILL AREA, IT SHALL THEN BE DISCED OR BLADED UNTIL IT IS UNIFORM AND FREE FROM LARGE CLODS, BROUGHT TO OPTIMUM MOISTURE, AND COMPACTED TO 95% OF MAXIMUM DENSITY IN ACCORDANCE WITH ASTM D-1557.
- PLACEMENT OF FILL: PLACE BACKFILL AND FILL MATERIALS IN LAYERS NOT MORE THAN EIGHT (8) INCHES IN LOOSE DEPTH FOR MATERIAL COMPACTED BY HEAVY COMPACTION EQUIPMENT, AND NOT MORE THAN FOUR (4) INCHES IN LOOSE DEPTH FOR MATERIAL COMPACTED BY HAND-OPERATED TAMPERS. BEFORE COMPACTION, MOISTEN OR AERATE EACH LAYER AS NECESSARY TO PROVIDE OPTIMUM MOISTURE CONTENT. PLACE FILL MATERIALS EVENLY ADJACENT TO SITE APPURTENANCES, PIPING, OR CONDUIT TO REQUIRED ELEVATIONS. PREVENT WEDGING ACTION OF BACKFILL AGAINST SITE APPURTENANCES OR DISPLACEMENT OF PIPING OR CONDUIT BY CARRYING MATERIAL UNIFORMLY AROUND SITE APPURTENANCES, PIPING, OR CONDUIT TO APPROXIMATELY SAME ELEVATION IN EACH LIFT. COMPACT SOIL TO NOT LESS THAN 95% OF MAXIMUM DENSITY, IN ACCORDANCE WITH ASTM D1557.
- 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 TWO (2%) PERCENTAGE POINTS OF OPTIMUM MOISTURE CONTENT. REMOVE AND REPLACE, OR SCARIFY AND AIR DRY SOIL MATERIAL THAT IS TOO WET TO PERMIT COMPACTION TO SPECIFIED DENSITY.
- QUALITY CONTROL: THE OWNER SHALL PROVIDE A GEOTECHNICAL ENGINEER TO PERFORM FIELD DENSITY TEST OF THE COMPACTION OF EACH LAYER OF FILL. DENSITY TESTS SHALL BE TAKEN IN THE COMPACTED MATERIAL BELOW THE DISTURBED SURFACE. WHEN THESE TESTS INDICATE THAT THE DENSITY OF ANY LAYER OF FILL OR PORTION THEREOF IS BELOW THE REQUIRED DENSITY, THE PARTICULAR LAYER OR PORTION SHALL BE REWORKED UNTIL THE REQUIRED DENSITY HAS BEEN OBTAINED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ADDITIONAL TESTING AND WHEN REQUIRED DENSITIES ARE NOT MET, SUPERVISION BY THE GEOTECHNICAL ENGINEER IS REQUIRED 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
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
RCP	REINFORCED CONCRETE PIPE
Q	QUANTITY
CAP	CAPACITY
EXP	EXPECTED
INV	INVERT
CFS	CUBIC FEET PER SECOND
A	AREA
DA	DRAINAGE AREA
LF	LINEAR FEET
STD	STANDARD
CONC	CONCRETE
PC	POINT OF CURVATURE
PI	POINT OF INTERSECTION
PT	POINT OF TANGENT
L	LENGTH
S	SLOPE
TEMP	TEMPORARY
V	VELOCITY IN FEET PER SECOND
HGL	HYDRAULIC GRADE LINE
HWSE	HIGH WATER SURFACE ELEVATION

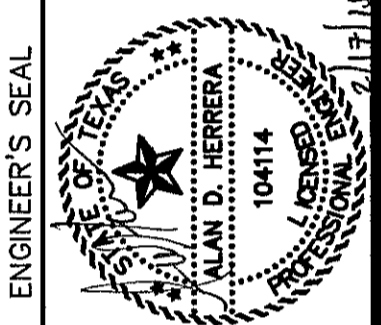
UTILITY LOCATOR SERVICES	
EL PASO ELECTRIC COMPANY	(915) 543-5720
EL PASO ENERGY CORPORATION	(915) 496-5244
EL PASO WATER UTILITIES	(915) 594-5500
MCI SURVEILLANCE	(800) MCI-WORK
TIME WARNER COMMUNICATIONS	(915) 772-1123
TEXAS GAS SERVICE	(915) 680-7200
ONEOK PARTNERS	(915) 595-8918
AT&T	(800) 852-3786
U.S. SPRINT TELECOMM	(915) 521-0579
CITY OF EL PASO DEPARTMENT OF TRANSPORTATION (AFTER HOURS)	(915) 621-6750 (915) 240-3220

WARNING I BEFORE YOU DIG

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

REFERENCES - BENCHMARKS	
FOUND N.G.S. SURVEY MARKER STAMPED "CHINO 1980"	ELEVATION: 3935.93 (CITY OF EL PASO VERTICAL DATUM)
3945.91 (NAVD 88 DATUM)	
3945.78 (NAVD 29 DATUM)	
TIE TO THE PROJECT BENCHMARK IS N5370909"W, 4.008.83	
CORNER OF TRACT 11, HELLER D. MUNDY SURVEY, NO. 1238	
DATE	REVISIONS
BY	

CS&A
engineers • architects • planners
TEXAS REGISTERED ENGINEERING FIRM F-454
4712 Woodrow Bean, Ste. F, El Paso, TX 79924
Office: 915.544.8322 Fax: 915.544.8203 www.csandap.com



SCALE	
Horizontal:	N/A
Vertical:	N/A
Contour Interval:	N/A
DATE:	DECEMBER 2014
DESIGN BY:	A.H.
DRAWN BY:	J.H.
CHKD. BY:	J.L.A.
APP'D. BY:	J.L.A.
JOB No.	2080-028-1D

**DESERT SPRINGS UNIT FOUR
SUBDIVISION IMPROVEMENTS**

SHEET TITLE
GENERAL INFORMATION
(SHEET 1 OF 2)
SHEET NO.

C1.1



C:\2080-028-1D\2080-028-1D\2080-028-1D.dwg, 12/15/14, 10:14:44 AM, 12/15/14, 10:14:44 AM, 12/15/14, 10:14:44 AM

INDEX OF DRAWINGS

DRAWING NAME	SHEET NO.
STORM SEWER PLAN AND PROFILE - LINE A FROM STA. 0+00.00 TO STA 1+85.15	C7.1
STORM SEWER PLAN AND PROFILE - LINE C FROM STA. 0+00.00 TO STA 1+10.11	C7.1
STORM SEWER PLAN AND PROFILE - LINE B FROM STA. 0+00.00 TO STA 8+21.33	C7.2
STORM SEWER PLAN AND PROFILE - LINE D FROM STA. 0+00.00 TO STA 1+21.11	C7.3
STORM SEWER PLAN AND PROFILE - LINE E FROM STA. 0+00.00 TO STA 1+54.42	C7.3
STORM SEWER PLAN AND PROFILE - LINE F FROM STA. 0+00.00 TO STA 3+99.30	C7.4
STORM SEWER PLAN AND PROFILE - LINE G FROM STA. 0+00.00 TO STA 0+80.45	C7.4
STORM SEWER PLAN AND PROFILE - LINE H FROM STA. 0+00.00 TO STA 1+77.26	C7.5
STORM SEWER PLAN AND PROFILE - LINE I FROM STA. 0+00.00 TO STA 0+44.01	C7.5
POND #3 ENLARGEMENT PLAN	C8.1
HYBRID CHANNEL #2 PLAN AND PROFILE - FROM STA. 0+00.00 TO STA 8+00.00	C9.1
HYBRID CHANNEL #2 PLAN - FROM STA. 8+00.00 TO STA 15+00.00	C9.2
HYBRID CHANNEL #2 PROFILE - FROM STA. 8+00.00 TO STA 15+00.00	C9.3
HYBRID CHANNEL #2 PLAN - FROM STA. 15+00.00 TO STA 23+00.00	C9.4
HYBRID CHANNEL #2 PROFILE - FROM STA. 15+00.00 TO STA 23+00.00	C9.5
HYBRID CHANNEL #2 PLAN AND PROFILE - FROM STA. 23+00.00 TO STA 25+95.58	C9.6
CULVERT DESIGN PLAN (SHEET 1 OF 2)	C9.7
CULVERT DESIGN PLAN (SHEET 2 OF 2)	C9.8
HYBRID CHANNEL #2 CROSS SECTIONS (SHEET 1 OF 8)	C9.9
HYBRID CHANNEL #2 CROSS SECTIONS (SHEET 2 OF 8)	C9.10
HYBRID CHANNEL #2 CROSS SECTIONS (SHEET 3 OF 8)	C9.11
HYBRID CHANNEL #2 CROSS SECTIONS (SHEET 4 OF 8)	C9.12
HYBRID CHANNEL #2 CROSS SECTIONS (SHEET 5 OF 8)	C9.13
HYBRID CHANNEL #2 CROSS SECTIONS (SHEET 6 OF 8)	C9.14
HYBRID CHANNEL #2 CROSS SECTIONS (SHEET 7 OF 8)	C9.15
HYBRID CHANNEL #2 CROSS SECTIONS (SHEET 8 OF 8)	C9.16
STANDARD DETAILS (SHEET 1 OF 5)	C10.1
STANDARD DETAILS (SHEET 2 OF 5)	C10.2
STANDARD DETAILS (SHEET 3 OF 5)	C10.3
STANDARD DETAILS (SHEET 4 OF 5)	C10.4
STANDARD DETAILS (SHEET 5 OF 5)	C10.5
DRAINAGE DETAILS (SHEET 1 OF 7)	C11.1
DRAINAGE DETAILS (SHEET 2 OF 7)	C11.2
DRAINAGE DETAILS (SHEET 3 OF 7)	C11.3
DRAINAGE DETAILS (SHEET 4 OF 7)	C11.4
DRAINAGE DETAILS (SHEET 5 OF 7)	C11.5
DRAINAGE DETAILS (SHEET 6 OF 7)	C11.6
DRAINAGE DETAILS (SHEET 7 OF 7)	C11.7

INDEX OF DRAWINGS

DRAWING NAME	SHEET NO.
ILLUMINATION PLAN (SHEET 1 OF 3)	C12.1
ILLUMINATION PLAN (SHEET 2 OF 3)	C12.2
ILLUMINATION PLAN (SHEET 3 OF 3)	C12.3
SW3P NOTES (SHEET 1 OF 4)	C13.1
SW3P SITE (SHEET 2 OF 4)	C13.2
SW3P SITE (SHEET 3 OF 4)	C13.3
SW3P DETAILS (SHEET 4 OF 4)	C13.4
WATER LINE INDEX (SHEET 1 OF 2)	C14.1
WATER LINE INDEX (SHEET 2 OF 2)	C14.2
WATER PLAN VIEWS - ENCHANTED SPRINGS DRIVE, WILLIE MIER PLACE, NEARPOINT DRIVE & EAGLE VISTA DRIVE	C15.1
WATER PLAN VIEWS - FARPOINT PLACE, GLACIER DRIVE, THUNDERBUSH DRIVE & FROSTLINE PLACE	C15.2
WATER PLAN VIEWS - THAWLINE PLACE & RESLER DRIVE	C15.3
WATER DETAILS (SHEET 1 OF 4)	C16.1
WATER DETAILS (SHEET 2 OF 4)	C16.2
WATER DETAILS (SHEET 3 OF 4)	C16.3
WATER DETAILS (SHEET 4 OF 4)	C16.4
SANITARY SEWER INDEX (SHEET 1 OF 2)	C17.1
SANITARY SEWER PLAN & PROFILE - LINE "A" AND LINE "B"	C18.1
SANITARY SEWER PLAN & PROFILE - LINE "C"	C18.2
SANITARY SEWER PLAN & PROFILE - LINE "C"	C18.3
SANITARY SEWER PLAN & PROFILE - LINE "D" AND LINE "G"	C18.4
SANITARY SEWER PLAN & PROFILE - LINE "D"	C18.5
SANITARY SEWER PLAN & PROFILE - LINE "D" AND LINE "E"	C18.6
SANITARY SEWER PLAN & PROFILE - LINE "F"	C18.7
SANITARY SEWER PLAN & PROFILE - LINE "H" AND LINE "I"	C18.8
SANITARY SEWER DETAILS (SHEET 1 OF 3)	C19.1
SANITARY SEWER DETAILS (SHEET 2 OF 3)	C19.2
SANITARY SEWER DETAILS (SHEET 3 OF 3)	C19.3

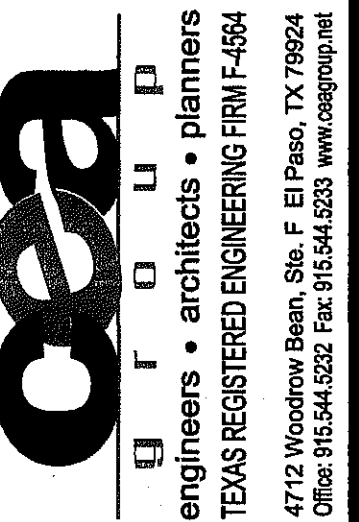
UTILITY LOCATOR SERVICES	
EL PASO ELECTRIC COMPANY	(915) 543-5720
EL PASO ENERGY CORPORATION	(915) 498-5244
EL PASO WATER UTILITIES	(915) 594-5500
MCI SURVEILLANCE	(800) MCI-WORK
TIME WARNER COMMUNICATIONS	(915) 772-1123
TEXAS GAS SERVICE	(915) 680-7200
ONEOK PARTNERS	(915) 595-6919
AT&T	(800) 852-3786
U.S. SPRINT TELECOMM	(800) 521-0579
CITY OF EL PASO DEPARTMENT OF TRANSPORTATION	(915) 621-6750
(AFTER HOURS)	(915) 240-3220

WARNING!
BEFORE YOU DIG

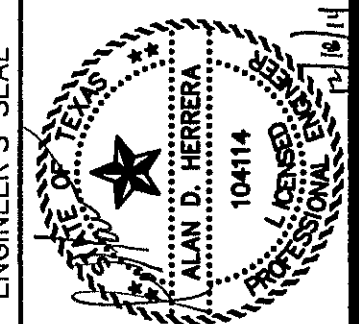
CALL
1-800-DIG-TESS
1-800-344-8377

FOR FIELD LOCATING EXISTING UTILITIES

REFERENCES - BENCHMARKS	DATE	REVISIONS	BY
FOUND N.G.S. SURVEY MARKER STAMPED "CHNO 1980" ELEVATION: 3946.11 (NAVD 88 DATUM) 3945.78 (NAVD 29 DATUM)			
SHOWS CITY OF EL PASO VERTICAL DATUM			
SEE TO THE PROJECT "DESIGN" 4, 6, 8, 9, 10 FEET FROM A 1/2 INCH REBAR FOUND FOR THE NORTHWEST CORNER OF TRACT 11, NELLIE D. MUNDY SURVEY No. 239			



OSEA
Engineers • architects • planners
TEXAS REGISTERED ENGINEERING FIRM F-464
4712 Woodrow Bean, Ste. F, El Paso, TX 79924
Office: 915-534-4322 Fax: 915-534-4328 www.osesa.com



ENGINEER'S SEAL
ALAN D. HERRERA
10414
LICENSED PROFESSIONAL ENGINEER
CIVIL
STATE OF TEXAS

SCALE	DATE
Horizontal: N/A	December 2014
Vertical: N/A	Design By: A.H.
Contour Interval: N/A	Drawn By: J.H.
	Checked By: J.L.A.
	Approved By: J.L.A.
	Job No. 2010-028-1D

PROJECT TITLE
DESERT SPRINGS UNIT FOUR
SUBDIVISION IMPROVEMENTS

SHEET TITLE
GENERAL INFORMATION
(SHEET 2 OF 2)
SHEET NO.



C1.2

DESERT SPRINGS UNIT FOUR

A PORTION OF NELLIE D. MUNDY SURVEY NO. 244,
AND A PORTION OF SECTION 10, BLOCK 82, TOWNSHIP 1,
T&P R.R. Co SURVEYS, IN THE CITY OF EL PASO,
EL PASO COUNTY, TEXAS
CONTAINING 63.076 ACRES±

SHEET 1 OF 2

DEDICATION

DVEP LAND LLC, as the managing partners, and THE CITY OF EL PASO, owners of the 63.076 acre tract land encompassed within the proposed Desert Springs Unit Four, do hereby present this map and dedicate their respective portions of property to the use of the public, streets, park, ponding area, drainage right-of-ways, PSS easements, drainage easements, and utility easements as herein laid down and designated, including easements for overhead of service wires for pole type utilities and the right for installation of service poles alongside lot lines as may be required, easements for buried service wires, conduits and pipes for underground utilities, and the right to ingress and egress for service and construction, and the right to trim interfering trees and shrubs.

Witness my signature this 15th day of March, 2016.
Pat Woods, Managing Partners
DVEP LAND LLC

Witness my signature this 15th day of March, 2016.
Tommy Gonzalez, City Manager
CITY OF EL PASO

ACKNOWLEDGEMENT

STATE OF TEXAS
COUNTY OF EL PASO
Before me, the undersigned authority, on this day personally appeared Pat Woods, as Managing Partner of DVEP LAND LLC, known to me to be the person whose name is subscribed to the foregoing instrument and acknowledged to me that he executed the same as the act and deed for the purpose and consideration herein expressed.
Given under my hand and seal of office this 15th day of February, 2016.
Armeda R. Martinez
Notary Public in and for El Paso County, My Commission Expires 3-22-18

Before me, the undersigned authority, on this day personally appeared Tommy Gonzalez, as City Manager of THE CITY OF EL PASO, known to me to be the person whose name is subscribed to the foregoing instrument and acknowledged to me that he executed the same as the act and deed for the purpose and consideration herein expressed.
Given under my hand and seal of office this 15th day of March, 2016.
Armeda R. Martinez
Notary Public in and for El Paso County, My Commission Expires January 22, 2019

CITY PLAN COMMISSION

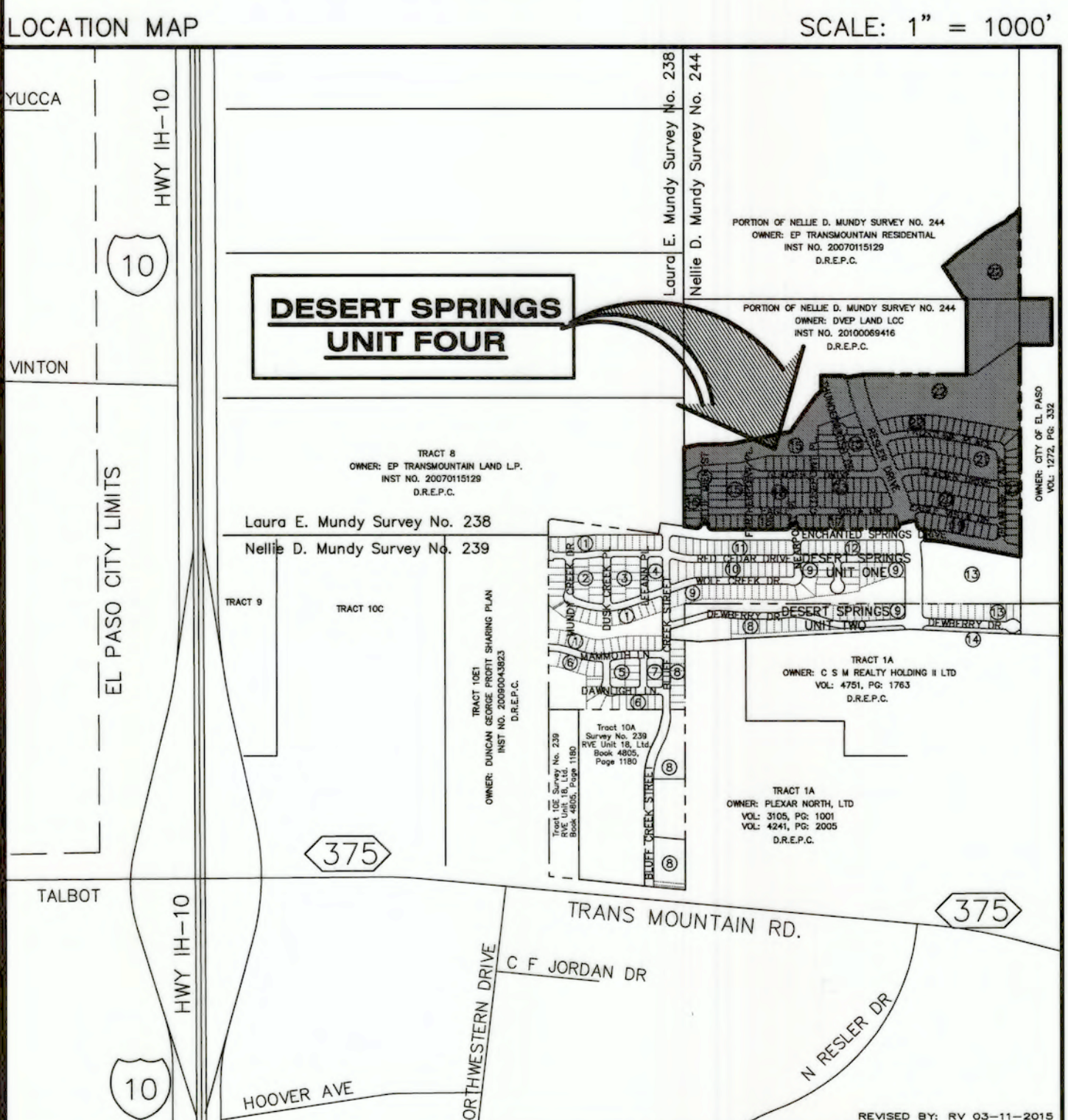
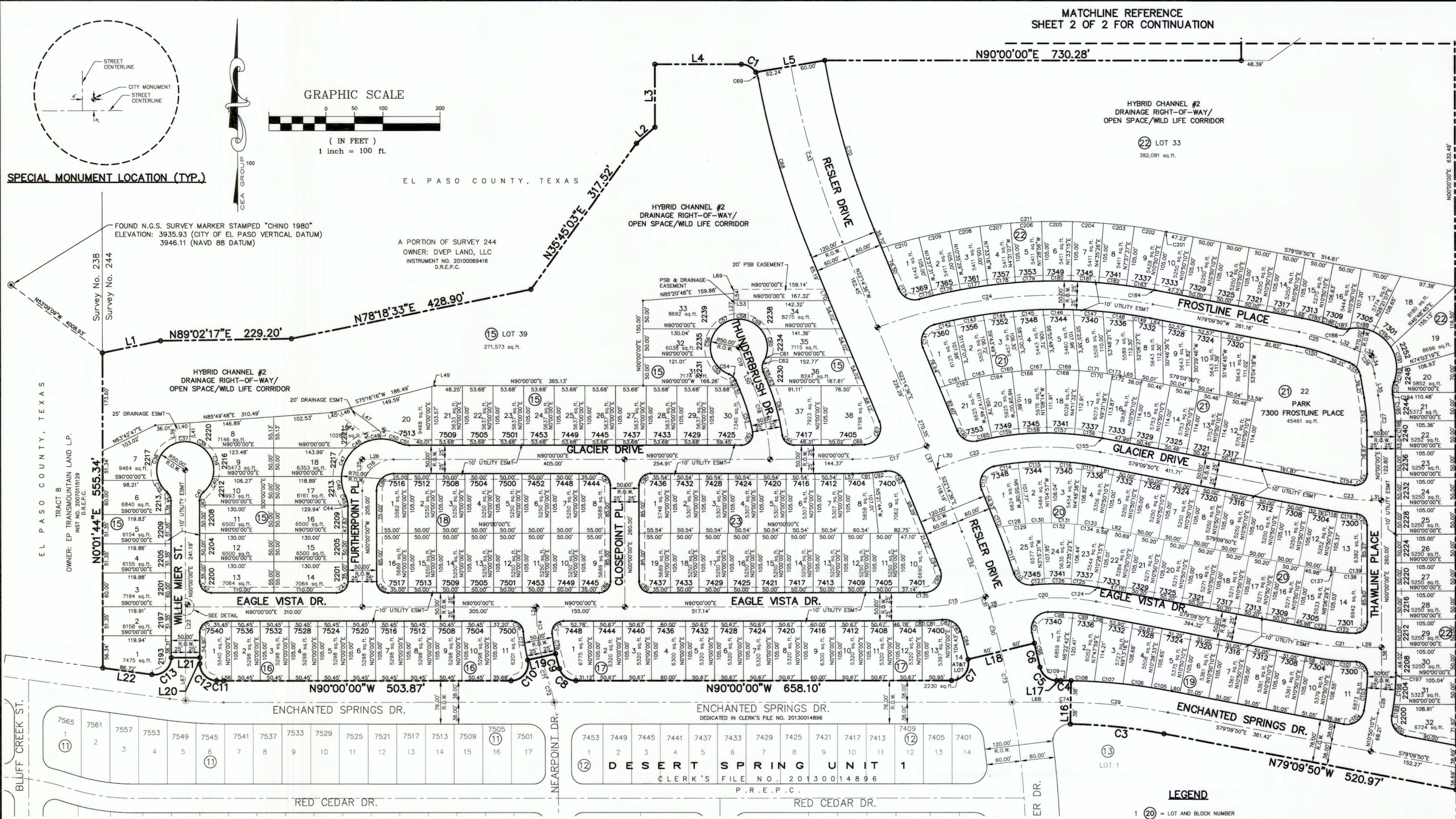
This subdivision is hereby approved as to the plotting and as to the condition of the dedication in accordance with Chapter 212 of the Local Government Code of Texas this 25 day of February, 2016.

Approved for filing this 20th day of March, 2016.
Chairperson
Executive Secretary

FILING
Filed and recorded in the office of the County Clerk of El Paso County, Texas, this 2nd day of March, 2016, in File No. 20160014584 of the Plat Records.
Debra Dimes County Clerk
Debra Kraft by Deputy

Subdivision improvement plans prepared by and under the supervision of CEA Group.
ALAN D. HERRERA, P.E.
Licensed Professional Engineer
Texas License No. 104114
BENITO BARRAGAN
LAND SURVEYOR
104114
2/16/2016
Benito Barragan TX, R.P.L.S. No. 5615

ENGINEER
cea group
engineers • architects • planners
Castner Center at Transmountain
4712 Woodrow Bean, Ste. F El Paso, TX 79924
Office: 915.544.5232 Fax: 915.544.5233 www.ceagroup.net
TEXAS FIRM REGISTRATION NO. 4564
SURVEYOR
Barragan & Associates Inc.
LAND PLANNING & LAND SURVEYING
10950 Pellicano Dr. Bldg. F - El Paso TX 79935
Phone (915) 591-5709 Fax (915) 591-5706
CONTACT: BENITO BARRAGAN, R.P.L.S.
DATE OF REVISION: FEBRUARY, 2016



BENCHMARK:
FOUND N.G.S. SURVEY MARKER STAMPED "CHINO 1980"
ELEVATION: 3935.93 (CITY OF EL PASO VERTICAL DATUM SHOWN)
3946.11 (NAVD 88 DATUM)
3945.78 (NGVD 29 DATUM)
TIE TO THE PROJECT BENCHMARK IS N53°09'09"W, 4,008.93' FEET FROM A 1/2 INCH REBAR FOUND FOR THE NORTHWEST CORNER OF TRACT 11, NELLIE D. MUNDY SURVEY NO. 239

OWNER:
DVEP LAND LLC
7910 Gateway East Suite 102
EL PASO, TEXAS 79915
(915) 591-6319
CONTACT: MR. RANDAL O'LEARY

- PLAT NOTES AND RESTRICTIONS:**
- THIS IS TO CERTIFY THAT WATER AND SEWER SERVICES WILL BE PROVIDED TO DESERT SPRINGS UNIT FOUR BY THE EL PASO WATER UTILITIES/PUBLIC SERVICE BOARD IN ACCORDANCE WITH THEIR RULES AND REGULATIONS AND WITH SECTION 16.343 OF THE TEXAS WATER CODE. WATER AND SEWER SERVICES WILL BE EXTENDED TO THE SUBDIVISION FROM EXISTING FACILITIES LOCATED ON ENCHANTED SPRINGS DRIVE AND TRANS MOUNTAIN ROAD AND WILL BE CONSTRUCTED TO SERVE THE SUBDIVISION WITHIN TWO (2) YEARS OF THE DATE OF FILING THE FINAL SUBDIVISION PLAT.
 - THIS PROPERTY LIES WITHIN CANUTILLO INDEPENDENT SCHOOL DISTRICT.
 - U. S. POSTAL SERVICE WILL BE PROVIDED THROUGH NEIGHBORHOOD DELIVERY AND COLLECTION BOX UNITS
 - INTERIOR LOT CORNERS WILL BE SET UPON COMPLETION OF CONSTRUCTION OF ROADWAYS AND UTILITIES.
 - ⊙ DENOTES PROPOSED CITY MONUMENT (MAY BE SUBJECT TO RELOCATION AT TIME OF CONSTRUCTION). FOR EXACT LOCATION PLEASE CONTACT THE CITY OF EL PASO.
 - ⊙ DENOTES EXISTING CITY MONUMENT.
 - RESTRICTIVE COVENANTS FOR THIS SUBDIVISION ARE FILED IN THE OFFICE OF THE COUNTY CLERK, DEED AND RECORD SECTION. INSTRUMENT No. 20140014587, DATE 3/2/14
 - TAX CERTIFICATE(S) FOR THIS SUBDIVISION ARE FILED IN THE OFFICE OF THE COUNTY CLERK, DEED AND RECORD SECTION. INSTRUMENT No. 20160014585-86, DATE 3/2/14
 - SUBDIVISION AGREEMENT AND GUARANTEE LETTER ARE FILED IN THE OFFICE OF THE COUNTY CLERK, DEED AND RECORD SECTION. INSTRUMENT No. _____, DATE _____
 - VEHICULAR ACCESS TO THOSE RESIDENTIAL LOTS ABUTTING ENCHANTED SPRINGS DRIVE AND RESLER DRIVE SHALL BE FROM OTHER DEDICATED STREETS ONLY. THE INSTRUMENT ASSURING RELEASE OF ACCESS IS FILED IN THE OFFICE OF THE COUNTY CLERK, DEED AND RECORD SECTION. INSTRUMENT No. 20140014588, DATE 3/2/14
 - THIS SUBDIVISION LIES WITHIN ZONE "A1, A2 & C" AS DESIGNATED IN PANEL NO. 480214-0012 C, DATED FEBRUARY 5, 1986, OF THE FLOOD INSURANCE RATE MAPS, CITY OF EL PASO, EL PASO COUNTY, TEXAS. ZONE "A1" & "A2" INDICATE AREAS OF 100-YEAR FLOOD; BASE FLOOD ELEVATIONS AND FLOOD HAZARDS DETERMINED. ZONE "C" INDICATES AREAS OF MINIMAL FLOODING. BASE FLOOD ELEVATIONS SHOWN ARE REFERENCED TO THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (TO CONVERT TO CITY DATUM SUBTRACT 9.85 FT).
 - LOT 14 ON BLOCK 17 SHALL BE IDENTIFIED AS AT&T LOT. LOT SHALL BE DEDICATED TO AT&T FOR NON RESIDENTIAL PURPOSES.

- ALL OF THE WALKWAYS SHALL BE PUBLIC AND ARE TO BE MAINTAINED BY THE CITY OF EL PASO.
- THE FOLLOWING MONUMENTS SHALL BE INSTALLED AT A SPECIAL LOCATION (REFER TO TYPICAL DETAIL) FOUR (4)' FEET FROM STREET CENTERLINES IN THE NORTHEAST QUADRANT OF THE FOLLOWING INTERSECTIONS:
WILLIE MIER STREET AND EAGLE VISTA DRIVE
(TO VERIFY EXACT LOCATION CONTACT THE CITY OF EL PASO)
- ALL EASEMENTS SHALL BE TEN (10)' FEET UNLESS OTHERWISE NOTED.
- THIS PROPERTY IS SUBJECT TO IMPACT FEES. THE TABLE AND RESPECTIVE LANGUAGE SHALL BE INCLUDED ON THE FACE OF THE FINAL APPROVED AND RECORDED PLAT. IMPACT FEES SHALL BE CALCULATED BASED ON THE TABLE BELOW:
CHAPTER 395 OF THE TEXAS LOCAL GOVERNMENT CODE AUTHORIZES THE CITY OF EL PASO TO ADOPT AND IMPOSE WATER AND WASTEWATER IMPACT FEES. THIS PLAT NOTE FULFILLS AN OBLIGATION MANDATED BY CHAPTER 395 AND SETS THE ASSESSMENT OF THE IMPACT FEES IN ACCORDANCE WITH THE IMPACT FEE SCHEDULE ADOPTED BY CITY COUNCIL AS SET FORTH BELOW. THE COLLECTION OF THE IMPACT FEE FOR THIS SUBDIVISION SHALL BE PRIOR TO THE TIME A BUILDING PERMIT IS ISSUED IF DEVELOPMENT IS WITHIN THE CITY LIMITS OR AT THE TIME OF THE METER CONNECTION IF DEVELOPMENT IS OUTSIDE THE CITY LIMITS. SEE THIS SHEET FOR IMPACT FEES TABLE.

METER SIZE	METER CAPACITY RATIO	WATER*	WASTEWATER
Less than 1 inch	1.00	\$ 659.00	\$ 927.00
1 inch	1.67	\$ 1,101.00	\$ 1,548.00
1 1/2 inch	3.33	\$ 2,195.00	\$ 3,087.00
2 inch	5.33	\$ 3,514.00	\$ 4,941.00
3 inch	10.00	\$ 6,593.00	\$ 9,270.00
4 inch	16.67	\$ 10,890.00	\$ 15,453.00
6 inch	33.33	\$ 21,973.00	\$ 30,897.00
8 inch	53.33	\$ 35,158.00	\$ 49,437.00
10 inch	76.67	\$ 50,545.00	\$ 71,073.00
12 inch	143.33	\$ 94,490.00	\$ 132,867.00

- SET 1/2" REBAR WITH CAP STAMPED "B&A INC" AT ALL EXTERIOR CORNERS UNLESS OTHERWISE SHOWN.
- SLOPED OPEN SPACE AREA NORTH OF BLOCK 22 SHALL REMAIN UNDISTURBED.
- DEED REFERENCE: INSTRUMENT NO. 20100069416 AND 20150060548 DEED RECORD OF EL PASO COUNTY, TEXAS.
- DESERT SPRINGS UNIT FOUR SHALL COMPLY WITH THE APPROVED CONDITIONAL LETTER OF MAP REVISION (CLMR) DRAINAGE PLAN AND DRAINAGE MODELS. A CLMR HAS BEEN APPROVED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) WHERE FLOW PATHS 40, 41, AND 41A HAVE BEEN ANALYZED REFLECTING THE PROPOSED IMPROVEMENTS. THE CASE NUMBER IDENTIFYING THIS APPROVAL IS 11-06-2380R. A LOMR HAS BEEN APPROVED BY FEMA WHERE FLOW PATHS 41 AND 41A HAVE BEEN ANALYZED REFLECTING THE EXISTING IMPROVEMENTS. THE CASE NUMBER IDENTIFYING THIS APPROVAL IS 14-06-0412P.

DESERT SPRINGS UNIT FOUR

A PORTION OF NELLIE D. MUNDY SURVEY NO. 244,
PARCEL 2, AND A PORTION OF SECTION 10, BLOCK 82,
TOWNSHIP 1, T&P R.R. Co SURVEYS, CITY OF EL PASO,
EL PASO COUNTY, TEXAS
CONTAINING 63.076 ACRES±

SHEET 1 OF 2

DEDICATION

DVEP LAND LLC, as the managing partner, EP TRANSMOUNTAIN RESIDENTIAL LLC and THE CITY OF EL PASO, owners of the 63.076 acre tract land encompassed within the proposed Desert Springs Unit Four, do hereby present this map and dedicate their respective portions of property to the use of the public, streets, park, ponding area, drainage right-of-ways, drainage easements, AT&T lot and utility easements as hereon laid down and designated, including easements for overhead of service wires for pole type utilities and the right for installation of service poles alongside lot lines as may be required, easements for buried service wires, conduits and pipes for underground utilities, and the right to ingress and egress for service and construction, and the right to trim interfering trees and shrubs.

Witness my signature this _____ day of _____, 2015.

Pat Woods, Managing partner
DVEP LAND LLC
Witness my signature this _____ day of _____, 2015.

Douglas Schwartz, Owner
EP TRANSMOUNTAIN RESIDENTIAL LLC
Witness my signature this _____ day of _____, 2015.

Tommy Gonzalez, City Manager
CITY OF EL PASO

ACKNOWLEDGEMENT

STATE OF TEXAS COUNTY OF EL PASO

Before me, the undersigned authority, on this day personally appeared Pat Woods, as managing partner of DVEP LAND LLC, known to me to be the person whose name is subscribed to the foregoing instrument and acknowledged to me that he executed the same as the act and deed for the purpose and consideration herein expressed.

Given under my hand and seal of office this _____ day of _____, 2015.

Notary Public in and for El Paso County My Commission Expires _____

Before me, the undersigned authority, on this day personally appeared Douglas Schwartz, as managing partner of EP TRANSMOUNTAIN RESIDENTIAL LLC, known to me to be the person whose name is subscribed to the foregoing instrument and acknowledged to me that he executed the same as the act and deed for the purpose and consideration herein expressed.

Given under my hand and seal of office this _____ day of _____, 2015.

Notary Public in and for El Paso County My Commission Expires _____

Before me, the undersigned authority, on this day personally appeared Tommy Gonzalez, as City Manager of the CITY OF EL PASO, known to me to be the person whose name is subscribed to the foregoing instrument and acknowledged to me that he executed the same as the act and deed for the purpose and consideration herein expressed.

Given under my hand and seal of office this _____ day of _____, 2015.

Notary Public in and for El Paso County My Commission Expires _____

CITY PLAN COMMISSION

This subdivision is hereby approved as to the plotting and as to the condition of the dedication in accordance with Chapter 212 of the Local

Government Code of Texas this _____ day of _____, 2015.

Chairperson Executive Secretary

Approved for filing this _____ day of _____, 2015.

City Development Director

FILING

Filed and recorded in the office of the County Clerk of El Paso County, Texas, this _____ day of _____, 2015, in File No. _____ of the Plat Records,

County Clerk by Deputy

Subdivision Improvement plans prepared by and under the supervision of CEA Group.

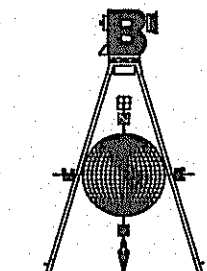
This plat represents a survey made on the ground by me or under my supervision and complies with the current Texas Board of Professional Land Survey Professional and Technical Standards.

ALAN D. HERRERA, P.E.
Licensed Professional Engineer
Texas License No. 104114

Benito Barragan TX, R.P.L.S. No. 9515

ENGINEER

cea
group



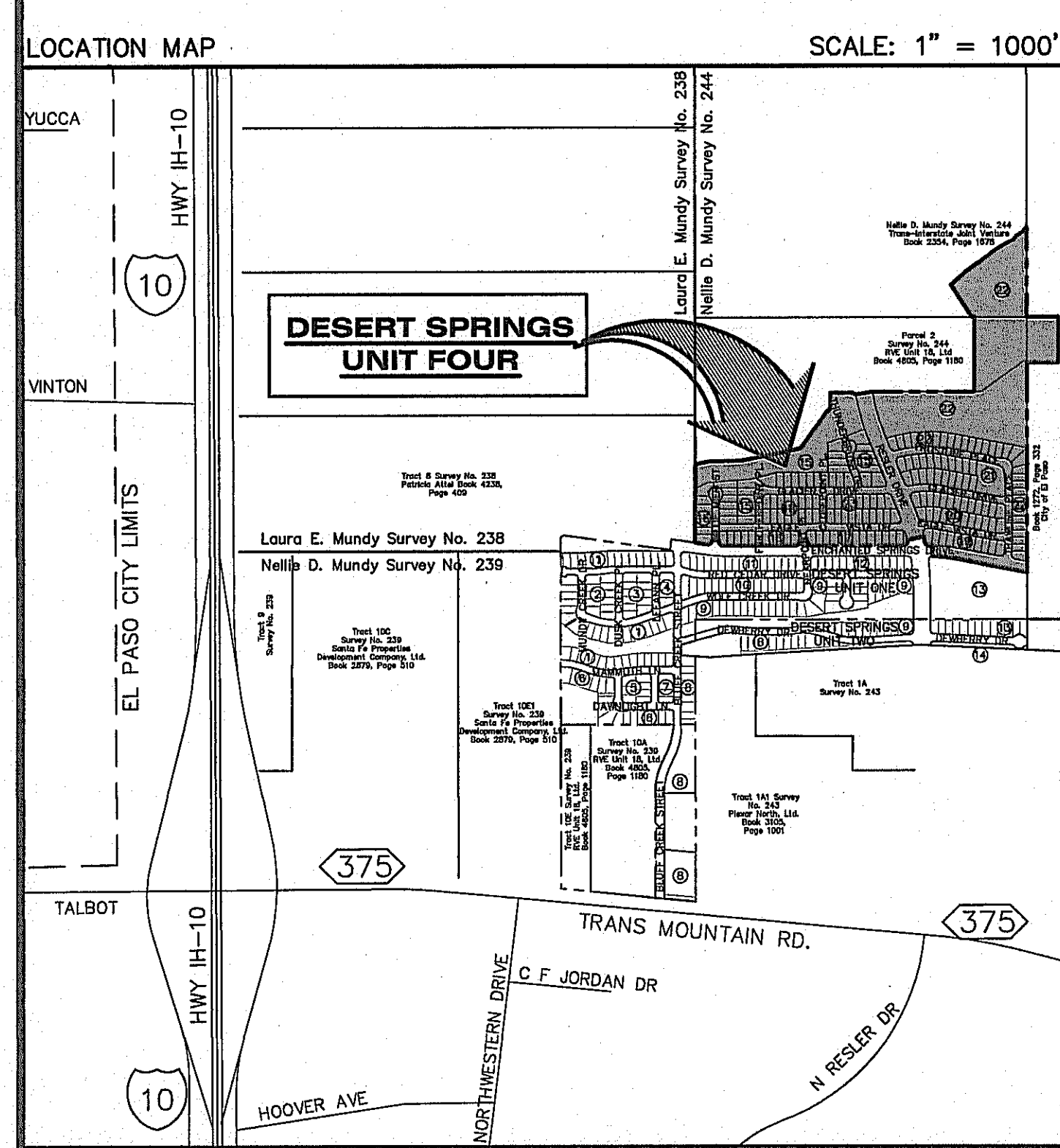
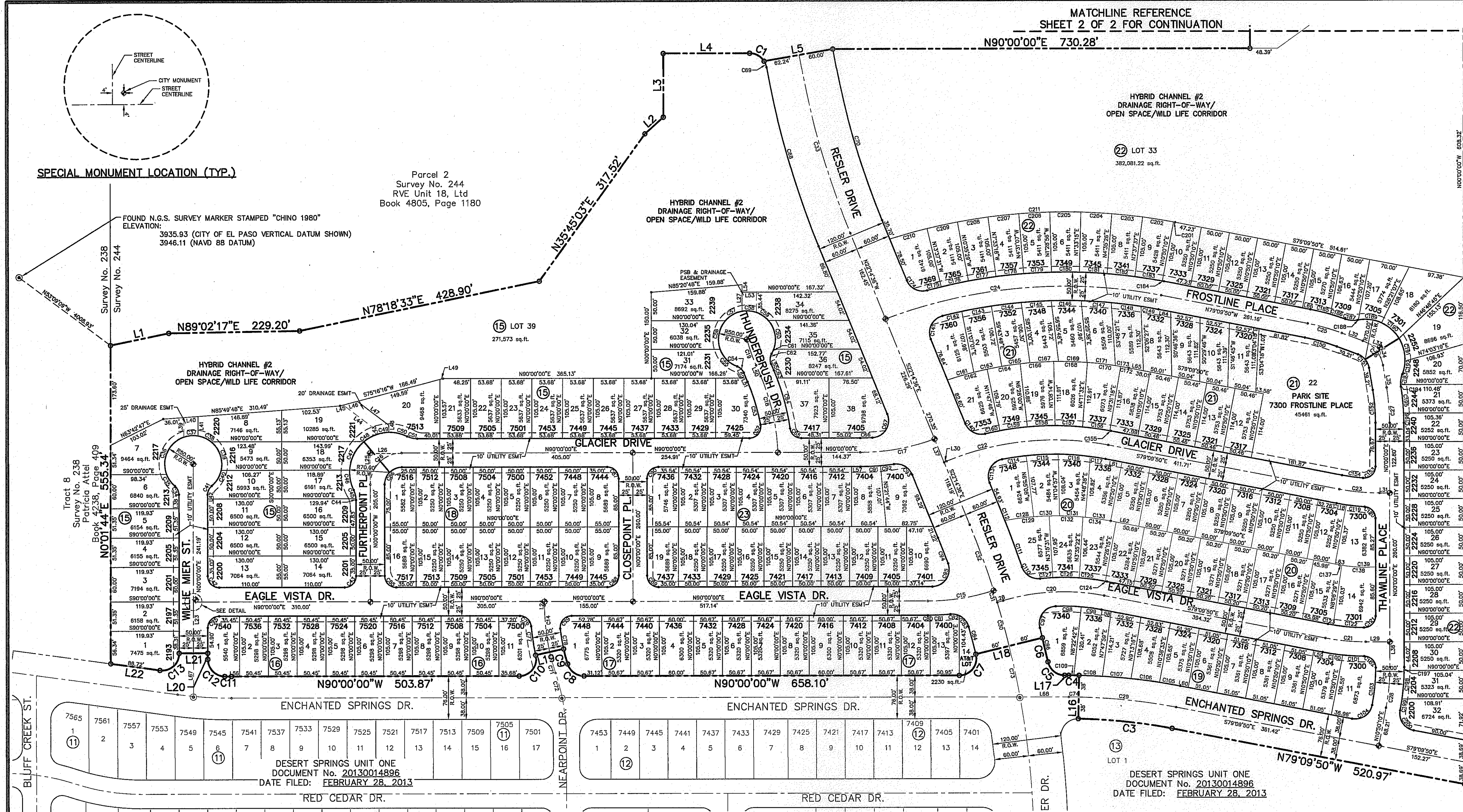
Barragan & Associates Inc.

engineers • architects • planners
Caster Center @ Transmountain
4712 Woodrow Bean, Ste. F El Paso, TX 79924
Office: 915.544.5232 Fax: 915.544.5233 www.ceagroup.net
TEXAS FIRM REGISTRATION NO. 4884

CONTACT: BENITO BARRAGAN, R.P.L.S.

CONTACT: ALAN D. HERRERA, P.E.

DATE OF COMPLETION: OCTOBER 2014
DATE OF REVISION: DECEMBER 2014



BENCHMARK:

FOUND N.G.S. SURVEY MARKER STAMPED "CHINO 1980" ELEVATION: 3935.93 (CITY OF EL PASO VERTICAL DATUM SHOWN) 3946.11 (NAVD 88 DATUM) 3945.78 (NGVD 29 DATUM)
TIE TO THE PROJECT BENCHMARK IS N53°09'09"W 4,008.93' FEET FROM A 1/2 INCH REBAR FOUND FOR THE NORTHWEST CORNER OF TRACT 11, NELLIE D. MUNDY SURVEY NO. 239

PLAT NOTES AND RESTRICTIONS:

- THIS IS TO CERTIFY THAT WATER AND SEWER SERVICES WILL BE PROVIDED TO DESERT SPRINGS UNIT FOUR BY THE CITY OF EL PASO WATER UTILITIES/PUBLIC SERVICE BOARD IN ACCORDANCE WITH THEIR RULES AND REGULATIONS AND WITH SECTION 16.343 OF THE TEXAS WATER CODE. WATER AND SEWER SERVICES WILL BE EXTENDED TO THE SUBDIVISION FROM EXISTING FACILITIES LOCATED ON ENCHANTED SPRINGS DRIVE AND TRANS MOUNTAIN ROAD AND WILL BE CONSTRUCTED TO SERVE THE SUBDIVISION WITHIN TWO (2) YEARS OF THE DATE OF FILING THE FINAL SUBDIVISION PLAT.
- THIS PROPERTY LIES WITHIN CANUTILLO INDEPENDENT SCHOOL DISTRICT.
- U. S. POSTAL SERVICE WILL BE PROVIDED THROUGH NEIGHBORHOOD DELIVERY AND COLLECTION BOX UNITS
- INTERIOR LOT CORNERS WILL BE SET UPON COMPLETION OF CONSTRUCTION OF ROADWAYS AND UTILITIES.
- ⊕ DENOTES PROPOSED CITY MONUMENT (MAY BE SUBJECT TO RELOCATION AT TIME OF CONSTRUCTION. FOR EXACT LOCATION PLEASE CONTACT THE CITY OF EL PASO.
- ⊙ DENOTES EXISTING CITY MONUMENT.
- RESTRICTIVE COVENANTS FOR THIS SUBDIVISION ARE FILED IN THE OFFICE OF THE COUNTY CLERK, DEED AND RECORD SECTION, INSTRUMENT No. _____, DATE _____
- TAX CERTIFICATE(S) FOR THIS SUBDIVISION ARE FILED IN THE OFFICE OF THE COUNTY CLERK, DEED AND RECORD SECTION, INSTRUMENT No. _____, DATE _____
- SUBDIVISION AGREEMENT AND GUARANTEE LETTER ARE FILED IN THE OFFICE OF THE COUNTY CLERK, DEED AND RECORD SECTION, INSTRUMENT No. _____, DATE _____
- VEHICULAR ACCESS TO THOSE RESIDENTIAL LOTS ADJACENT ENCHANTED SPRINGS DRIVE AND RESLER DRIVE SHALL BE FROM OTHER DEDICATED STREETS ONLY. THE INSTRUMENT ASSURING RELEASE OF ACCESS IS FILED IN THE OFFICE OF THE COUNTY CLERK, DEED AND RECORD SECTION, INSTRUMENT No. _____, DATE _____
- THIS SUBDIVISION LIES WITHIN ZONE "A1, A2 & C" AS DESIGNATED IN PANEL NO. 480214-0012 C, DATED FEBRUARY 5, 1986, OF THE FLOOD INSURANCE RATE MAPS, CITY OF EL PASO, EL PASO COUNTY, TEXAS. ZONE "A1" & "A2" INDICATE AREAS OF 100-YEAR FLOOD; BASE FLOOD ELEVATIONS AND FLOOD HAZARDS DETERMINED. ZONE "C" INDICATES AREAS OF MINIMAL FLOODING.
- BASE FLOOD ELEVATIONS SHOWN ARE REFERENCED TO THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (TO CONVERT TO CITY DATUM SUBTRACT 9.85 FT).
- LOT 14 ON BLOCK 17 SHALL BE IDENTIFIED AS AT&T LOT. LOT SHALL BE DEDICATED TO AT&T FOR NON RESIDENTIAL PURPOSES.

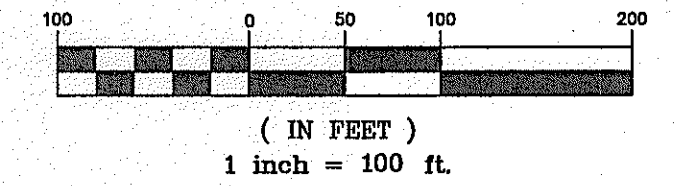
OWNER

DVEP LAND LLC
7910 Gateway East Suite 102
EL PASO, TEXAS 79915
(915) 591-6319
CONTACT: MR. PAT WOODS

OWNER

EP TRANSMOUNTAIN RESIDENTIAL LLC
6080 Surety Dr Suite 300
EL PASO, TEXAS 79905
(915) 592-0290
CONTACT: MR. DOUGLAS SCHWARTZ

GRAPHIC SCALE



WESTSIDE SERVICE AREA			
METER SIZE	METER CAPACITY RATIO	WATER*	WASTEWATER
Less than 1 inch	1.00	\$ 659.00	\$ 927.00
1 inch	1.67	\$ 1,101.00	\$ 1,548.00
1 1/2 inch	3.33	\$ 2,195.00	\$ 3,087.00
2 inch	5.33	\$ 3,514.00	\$ 4,941.00
3 inch	10.00	\$ 6,593.00	\$ 9,270.00
4 inch	16.67	\$ 10,980.00	\$ 15,433.00
6 inch	33.33	\$ 21,973.00	\$ 30,897.00
8 inch	53.33	\$ 35,158.00	\$ 49,437.00
10 inch	76.67	\$ 50,945.00	\$ 71,073.00
12 inch	143.33	\$ 94,490.00	\$ 132,887.00

- SET 1/2" REBAR WITH CAP STAMPED "B&A INC" AT ALL EXTERIOR CORNERS UNLESS OTHERWISE SHOWN.
- SLOPED OPEN SPACE AREA NORTH OF BLOCK 22 SHALL REMAIN UNDISTURBED.



Final Approval

UTILITY LOCATOR SERVICES	
EL PASO ELECTRIC COMPANY	(915) 543-5720
EL PASO ENERGY CORPORATION	(915) 496-5244
EL PASO WATER UTILITIES	(915) 584-5500
MCI SURVEILLANCE	(800) MCI-WORK
TIME WARNER COMMUNICATIONS	(915) 772-1123
TEXAS GAS SERVICE	(915) 680-7200
ONECK PARTNERS	(915) 595-6918
AT&T	(800) 852-3786
U.S. SPRINT TELECOMM	(800) 521-0579
CITY OF EL PASO DEPARTMENT OF TRANSPORTATION	(915) 621-6750
(AFTER HOURS)	(915) 240-3220

WARNING I BEFORE YOU DIG

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

FOR FIELD LOCATING EXISTING UTILITIES

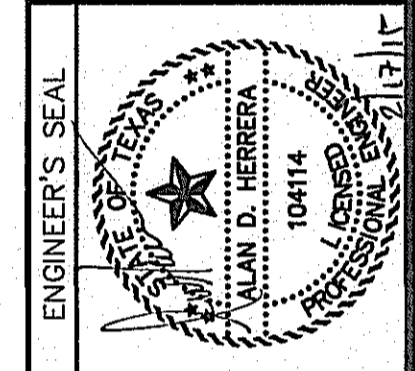
REFERENCES - BENCHMARKS	REVISIONS
FOUND N.G.S. SURVEY MARKER STAMPED "CHINO 1980" ELEVATION: 3935.93 (CITY OF EL PASO VERTICAL DATUM SHOWN) 3945.11 (NAVD 88 DATUM) 3945.78 (NGVD 29 DATUM)	DATE
TIE TO THE PROJECT BENCHMARK IS N53°09'09"W 4008.93' FEET FROM A 1/2 INCH REBAR FOUND FOR THE NORTHWEST CORNER OF TRACT 11, NELLIE D. MUNDY SURVEY No. 239	BY

BENCHMARK:
 FOUND N.G.S. SURVEY MARKER STAMPED "CHINO 1980"
 ELEVATION: 3935.93 (CITY OF EL PASO VERTICAL DATUM SHOWN)
 3945.11 (NAVD 88 DATUM)
 3945.78 (NGVD 29 DATUM)
 TIE TO THE PROJECT BENCHMARK IS N53°09'09"W 4008.93' FEET FROM A 1/2 INCH REBAR FOUND FOR THE NORTHWEST CORNER OF TRACT 11, NELLIE D. MUNDY SURVEY No. 239

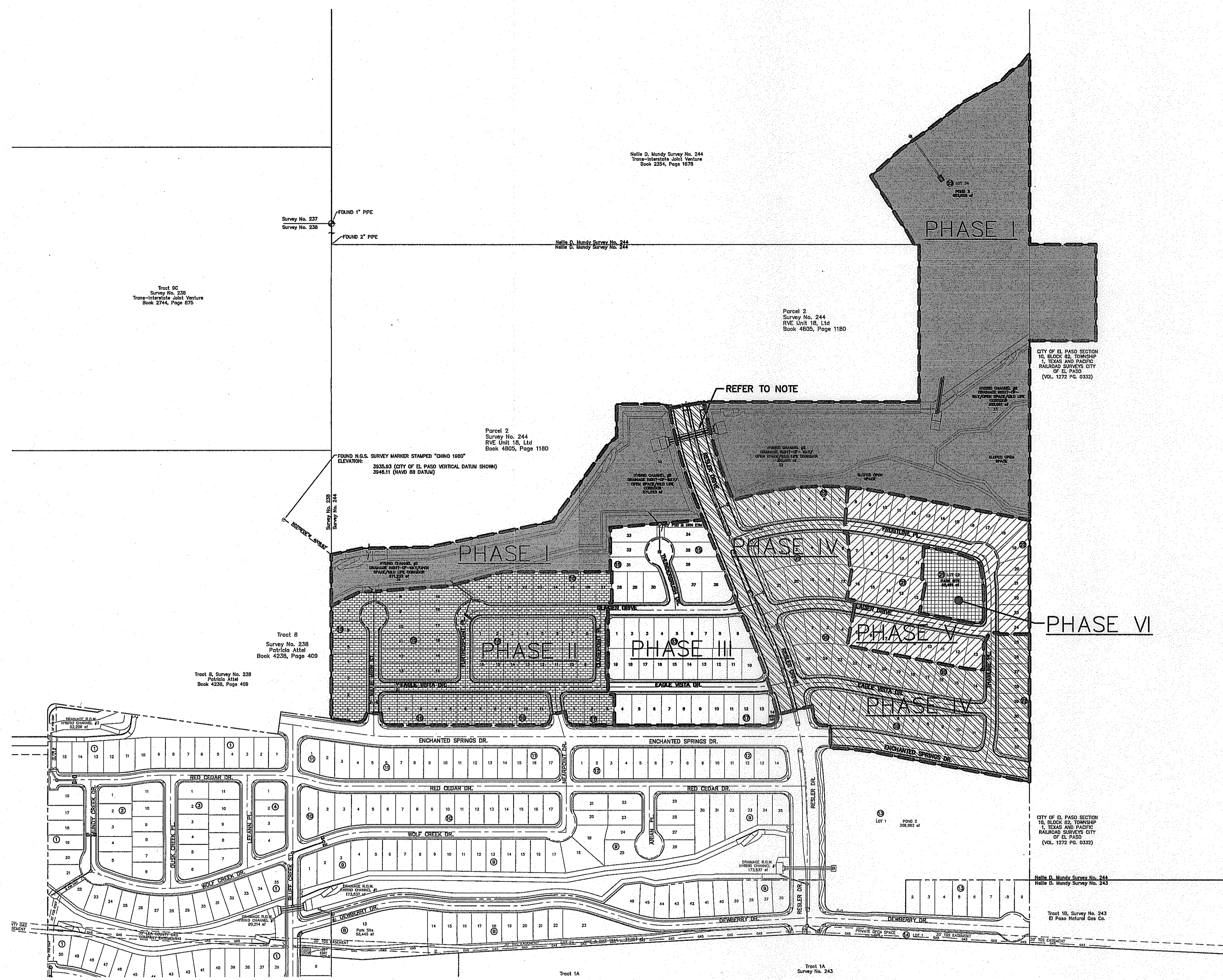
FLOOD ZONE:
 THIS SUBDIVISION LIES WITHIN ZONE "A1, A2, & C" AS DESIGNATED IN PANEL NO. 480214-0012.G, DATED FEBRUARY 5, 1986, OF THE FLOOD INSURANCE RATE MAPS, CITY OF EL PASO, EL PASO COUNTY, TEXAS. ZONE "A1" & "A2" INDICATES AREAS OF 100-YEAR FLOOD; BASE FLOOD ELEVATIONS AND FLOOD HAZARDS DETERMINED. ZONE "C" INDICATES AREAS OF MINIMAL FLOODING.
 BASE FLOOD ELEVATIONS SHOWN ARE REFERENCED TO THE NATIONAL GEODETIC VERTICAL DATUM OF 1929

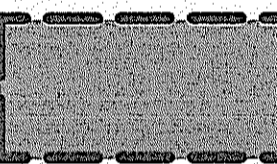
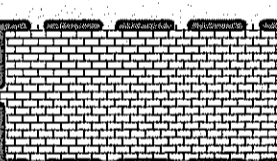

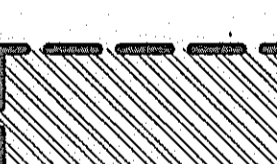
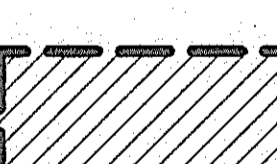
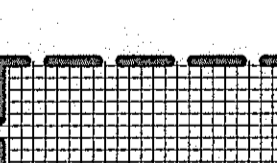
NOTE:
 CULVERT/INFRASTRUCTURE CROSSING AT RESLER DRIVE SHALL BE PART OF PHASE I. STORM SEWER INFRASTRUCTURE CONNECTING TO THIS SYSTEM SHALL BE PART OF PHASE IV.

CS&A
 CONSULTING SURVEYORS & ARCHITECTS
 ENGINEERS • ARCHITECTS • PLANNERS
 TEXAS REGISTERED ENGINEERING FIRM F-454
 4712 Woodrow Bean, Ste. F, El Paso, TX 79924
 Office: 915.544.5222 Fax: 915.544.5233 www.csandagroup.com



SCALE: 1" = 200'	
Horizontal: 1" = 200'	Vertical: 1" = 40'
Contour Interval: 1' / 4"	DATE: JULY 2013
DESIGN BY: A.H.	DRAWN BY: J.H.
CHKD. BY: J.L.A.	APPVD. BY: J.L.A.
JOB No. 2050-013-I.D.	



-  PHASE I
-  PHASE II
-  PHASE III
-  PHASE IV
-  PHASE V
-  PHASE VI

PHASE	AREA (ACRES)	RESIDENTIAL LOTS	COMMERCIAL LOTS	APARTMENT LOTS	DRAINAGE R.O.W.	SPECIAL LOT
I	25.348	0	0	0	3	0
II	10.433	57	0	0	0	0
III	7.186	40	0	0	0	1 AT&T LOT
IV	12.975	53	0	0	0	0
V	6.090	36	0	0	0	0
VI	1.044	0	0	0	0	1 PARK AREA

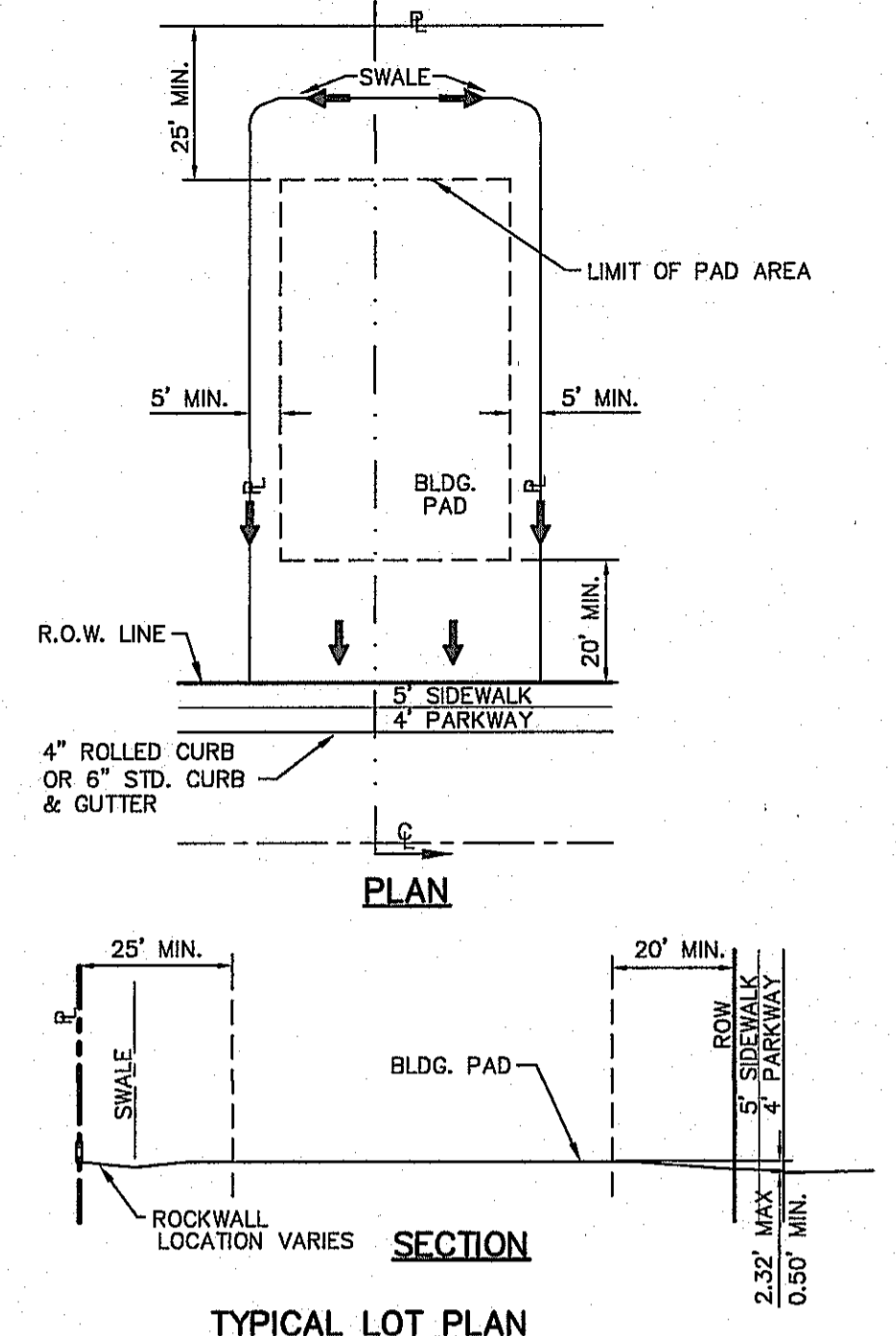
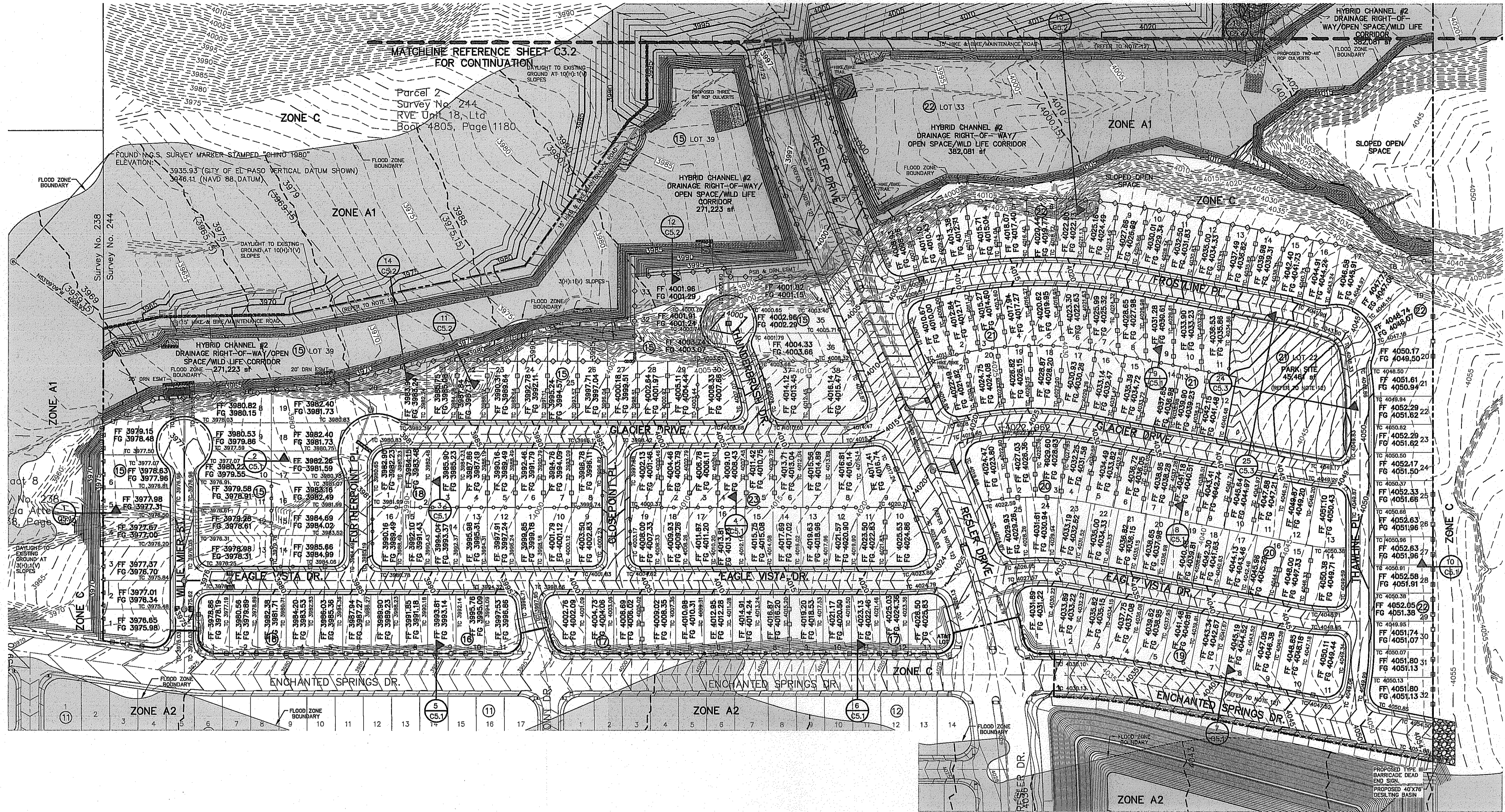


CONSTRUCTION PHASING PLAN
 SCALE: 1" = 200'

PROJECT TITLE
DESERT SPRINGS UNIT FOUR
SUBDIVISION IMPROVEMENTS

SHEET TITLE
CONSTRUCTION PHASING PLAN

SHEET NO.
C3.0



TYPICAL LOT PLAN
SCALE: 1" = 30'

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

- LEGEND:**
- NEW 4" RETAINING ROCKWALL (2'-3" IN HEIGHT)
 - NEW 4" RETAINING ROCKWALL (3'-12" IN HEIGHT)
 - NEW 6" RETAINING ROCKWALL (0'-2" IN HEIGHT)
 - NEW 6" RETAINING ROCKWALL (3'-12" IN HEIGHT)
 - 2" ROCKWALL WITH 2" WROUGHT IRON FENCE
 - 2" ROCKWALL WITH 4" WROUGHT IRON FENCE
 - 6" WROUGHT IRON FENCE
 - 4000 PROPOSED MAJOR CONTOUR (CITY DATUM)
 - 4000 PROPOSED MINOR CONTOUR (CITY DATUM)
 - 4000 EXISTING MAJOR CONTOUR (CITY DATUM)
 - 4000 EXISTING MINOR CONTOUR (CITY DATUM)
 - FLOOD ZONE A1
 - FLOOD ZONE C (NO HATCHING)
 - 4043 (4033.15) EFFECTIVE BASE FLOOD ELEVATION IN NGVD 29 DATUM (CITY DATUM)
 - 4043 (4033.15) PROPOSED BASE FLOOD ELEVATION IN NGVD 29 DATUM (CITY DATUM)

CLOMR REFERENCE
A CONDITIONAL LETTER OF MAP REVISION (CLOMR) HAS BEEN APPROVED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) WHERE FLOOD PATHS 40, 41, AND 41A HAVE BEEN ANALYZED REFLECTING THE PROPOSED IMPROVEMENTS. THE CASE NUMBER IDENTIFYING THIS APPROVAL IS 11-06-2380R.

BENCHMARK:
TOPOGRAPHIC SURVEY DATA:
FOUND N.G.S. SURVEY MARKER STAMPED "CHINO 1980"
ELEVATION: 3935.93 (CITY OF EL PASO VERTICAL DATUM SHOWN)
3946.11 (NAVD 88 DATUM)
3945.79 (NGVD 29 DATUM)
TIE TO THE PROJECT BENCHMARK IS N00°50'52"E, 3,020.83 FEET FROM A 1/2 INCH REBAR FOUND FOR THE NORTHWEST CORNER OF TRACT 11, NELLIE D. MUNDY SURVEY No. 239
TO CONVERT TO CITY OF EL PASO DATUM SUBTRACT 9.85 FEET FROM NGVD 29 ELEVATION.
TO CONVERT TO NGVD 29 SUBTRACT 0.33 FEET FROM NAVD 88

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
ONEOK PARTNERS	(915) 595-6918
AT&T	(800) 852-3786
U.S. SPRINT TELECOMM	(800) 521-0579
CITY OF EL PASO DEPARTMENT OF TRANSPORTATION	(915) 621-6750
(AFTER HOURS)	(915) 240-3220

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

- NOTES:**
- RETAINING WALLS SHALL BE CONSTRUCTED FOR VERTICAL GRADES GREATER THAN 2-FEET.
 - SLOPED AREAS WITHIN RESIDENTIAL LOTS SHALL BE MAINTAINED BY THE PROPERTY OWNERS.
 - ALL RETAINING WALLS NOT SPECIFIED TO BE CONSTRUCTED BY DEVELOPER, SHALL BE BUILT BY BUILDER.
 - DEVELOPER SHALL COMPLY WITH SECTION 13.08.170 (EXCESSIVE PAVING CUTS) OF THE EL PASO MUNICIPAL CODE.
 - IMPROVEMENTS SHALL NOT BE PLACED ON SIDEWALK (NDBCUS, SIGNS, POLES, FIRE HYDRANTS, ETC.)
 - IMPROVEMENTS SHALL COMPLY WITH T.A.S./A.D.A. STANDARDS
 - U.S. POSTAL SERVICE DELIVERY WILL BE PROVIDED THROUGH NEIGHBORHOOD DELIVERY AND COLLECTION BOX UNITS.
 - ALL WHEELCHAIR RAMP WILL BE CONSTRUCTED BY DEVELOPER AS PART OF SUBDIVISION IMPROVEMENTS.
 - TO CONVERT FROM NGVD 29 DATUM TO CITY OF EL PASO DATUM SUBTRACT 9.85'
 - 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.
 - SLOPED OPEN SPACE AREA NORTH OF BLOCK 22 SHALL REMAIN UNDISTURBED.
 - REFER TO LANDSCAPING AND IRRIGATION PLANS FOR ADDITIONAL INFORMATION ON ANY LANDSCAPING AND RELATED APPEARANCES WITHIN THIS SUBDIVISION.
 - NO SIGNS, FIRE HYDRANTS, LIGHTS, NDBCUS, ELECTRICAL/WATER BOXES, TELEPHONE PEDESTALS, NO OBSTRUCTIONS IN GENERAL, SHALL BE PLACED INTO PROPOSED PERIMETER SIDEWALK, NOR SHALL ANY UTILITY CONDUITS BE PLACED ALONG THE PARK SITE. ANY UTILITIES WITHIN THE PARKWAY NEED TO BE UNDERNEATH THE PROPOSED SIDEWALK AND BURIED AT A FIVE (5') FOOT MINIMUM COVER.

FLOOD ZONE:
THIS SUBDIVISION LIES WITHIN ZONE "A1, A2, & C" AS DESIGNATED IN PANEL NO. 480214-0012 D DATED FEBRUARY 5, 1996, OF THE FLOOD INSURANCE RATE MAPS, CITY OF EL PASO, EL PASO COUNTY, TEXAS. ZONE "A1" & "A2" INDICATES AREAS OF 100-YEAR FLOOD; BASE FLOOD ELEVATIONS AND FLOOD HAZARDS DETERMINED. ZONE "C" INDICATES AREAS OF MINIMAL FLOODING.
BASE FLOOD ELEVATIONS SHOWN ARE REFERENCED TO THE NATIONAL GEODETIC VERTICAL DATUM OF 1929

GRADING PLAN
SCALE: 1" = 100'

ENGINEER'S SEAL
ALAN D. HERRERA
10414
REGISTERED PROFESSIONAL ENGINEER
NO. 10414
EXPIRES 12/31/14

PROJECT TITLE
DESERT SPRINGS UNIT FOUR
SUBDIVISION IMPROVEMENTS

SHEET TITLE
GRADING PLAN
(SHEET 1 OF 2)
SHEET NO.
C3.1

Final Approval

REFERENCES - BENCHMARKS
FOUND N.G.S. SURVEY MARKER STAMPED "CHINO 1980"
ELEVATION: 3935.93 (CITY OF EL PASO VERTICAL DATUM SHOWN)
3946.11 (NAVD 88 DATUM)
3945.79 (NGVD 29 DATUM)
TIE TO THE PROJECT BENCHMARK IS N00°50'52"E, 3,020.83 FEET FROM A 1/2 INCH REBAR FOUND FOR THE NORTHWEST CORNER OF TRACT 11, NELLIE D. MUNDY SURVEY No. 239

REVISIONS

DATE	REVISIONS	BY

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

DATE: DECEMBER 2014
DESIGN BY: A.H.
DRAWN BY: J.H.
CHKD. BY: J.L.A.
APP'D. BY: J.L.A.
JOB NO.: 2060-028-1D

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
- ONEOK PARTNERS (915) 595-6918
- AT&T (800) 852-3786
- U.S. SPRINT TELECOMM (800) 521-0579
- CITY OF EL PASO DEPARTMENT OF TRANSPORTATION (915) 621-6750 (AFTER HOURS)
- (915) 240-3220

WARNING I BEFORE YOU DIG

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

REFERENCES - BENCHMARKS	BY
FOUND N.G.S. SURVEY MARKER STAMPED "CHINO 1980"	
ELEVATION: 3945.11 (CITY OF EL PASO VERTICAL DATUM)	
3945.11 (NAVD 88 DATUM)	
TIE TO THE PROJECT BENCHMARK IS N00°50'52"E, 3,020.83 FEET FROM A 1/2 INCH REBAR FOUND FOR THE NORTHWEST CORNER OF TRACT 11, NELLIE D. MUNDY SURVEY No. 239	
DATE	REVISIONS

o&a
 engineers • architects • planners
 TEXAS REGISTERED ENGINEERING FIRM #484
 1710 N. W. 10th Street, Suite 100, El Paso, TX 79904
 Phone: 915.544.2222 Fax: 915.544.2222 www.oandae.com

ENGINEER'S SEAL

SCALE: 1" = 100'

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

DATE: DECEMBER, 2014
 DESIGN BY: A.H.
 DRAWN BY: J.H.A.
 CHECKED BY: J.H.A.
 APPROVED BY: J.H.A.
 JOB No. 2009-0228-LD

PROJECT TITLE

DESERT SPRINGS UNIT FOUR

SUBDIVISION IMPROVEMENTS

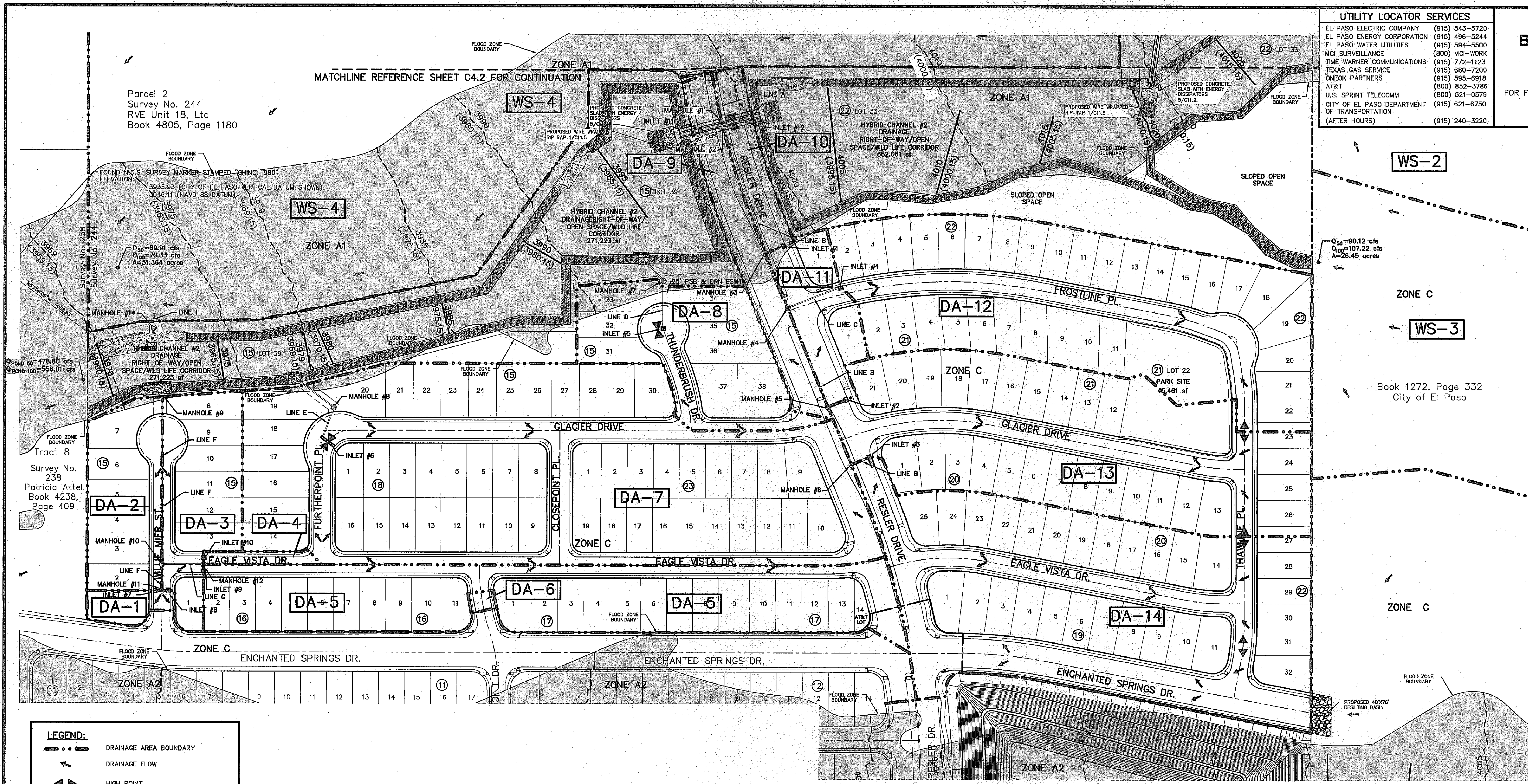
SHEET TITLE

DRAINAGE PLAN

(SHEET 1 OF 2)

SHEET NO.

C4.1



LEGEND:

[Symbol]	DRAINAGE AREA BOUNDARY
[Symbol]	DRAINAGE FLOW
[Symbol]	HIGH POINT
[Symbol]	LOW POINT
[Symbol]	DROP INLET
[Symbol]	STORM DRAIN MANHOLE
[Symbol]	RCP
[Symbol]	THRUST BLOCK STRUCTURE
[Symbol]	DRAINAGE AREA
[Symbol]	FLOOD ZONE A1
[Symbol]	FLOOD ZONE C (NO HATCHING)
[Symbol]	EFFECTIVE BASE FLOOD ELEVATION IN NGVD 29 DATUM (CITY DATUM)
[Symbol]	PROPOSED BASE FLOOD ELEVATION IN NGVD 29 DATUM (CITY DATUM)

CLOMR REFERENCE

A CONDITIONAL LETTER OF MAP REVISION (CLOMR) HAS BEEN APPROVED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) WHERE FLOW PATHS 40, 41, AND 41A HAVE BEEN ANALYZED REFLECTING THE PROPOSED IMPROVEMENTS. THE CASE NUMBER IDENTIFYING THIS APPROVAL IS 11-06-2380R.

BENCHMARK:

TOPOGRAPHIC SURVEY DATA:

FOUND N.G.S. SURVEY MARKER STAMPED "CHINO 1980"

ELEVATION: 3935.93 (CITY OF EL PASO VERTICAL DATUM SHOWN)
 3945.11 (NAVD 88 DATUM)
 3945.78 (NGVD 29 DATUM)

TIE TO THE PROJECT BENCHMARK IS N00°50'52"E, 3,020.83 FEET FROM A 1/2 INCH REBAR FOUND FOR THE NORTHWEST CORNER OF TRACT 11, NELLIE D. MUNDY SURVEY No. 239

TO CONVERT TO CITY OF EL PASO DATUM SUBTRACT 9.85 FEET FROM NGVD 29 ELEVATION.
 TO CONVERT TO NGVD 29 SUBTRACT 0.33 FEET FROM NAVD 88

FLOOD ZONE:

THIS SUBDIVISION LIES WITHIN ZONE "A1, A2, & C" AS DESIGNATED IN PANEL NO. 480214-0012 C, DATED FEBRUARY 5, 1986, OF THE FLOOD INSURANCE RATE MAPS, CITY OF EL PASO, EL PASO COUNTY, TEXAS. ZONE "A1" & "A2" INDICATES AREAS OF 100-YEAR FLOOD; BASE FLOOD ELEVATIONS AND FLOOD HAZARDS DETERMINED. ZONE "C" INDICATES AREAS OF MINIMAL FLOODING.

BASE FLOOD ELEVATIONS SHOWN ARE REFERENCED TO THE NATIONAL GEODETIC VERTICAL DATUM OF 1929

DRAINAGE PLAN

SCALE: 1" = 100'



POND 3 CALCULATIONS

10-YEAR STORM EVENT

A total = 951.84 acres
Q inflow = 1162.51 cfs
Q outflow = 126.72 cfs
Q storage = 89.2 ac-ft
Q elevation = 4013.70

TOPOGRAPHIC SURVEY DATA:

FOUND N.G.S. SURVEY MARKER STAMPED "CHINO 1980"
 ELEVATION: 3935.93 (CITY OF EL PASO VERTICAL DATUM SHOWN)
 3945.11 (NAVD 88 DATUM)
 3945.78 (NGVD 29 DATUM)
 TIE TO THE PROJECT BENCHMARK IS N00°50'52"E, 3,020.83 FEET
 FROM A 1/2 INCH REBAR FOUND FOR THE NORTHWEST CORNER OF
 TRACT 11, NELLIE D. MUNDY SURVEY No. 239
 TO CONVERT TO CITY OF EL PASO DATUM SUBTRACT 9.85 FEET
 FROM NGVD 29 ELEVATION.
 TO CONVERT TO NGVD 29 SUBTRACT 0.33 FEET FROM NAVD 88

CLOMR REFERENCE

A CONDITIONAL LETTER OF MAP REVISION (CLOMR) HAS BEEN
 APPROVED BY THE FEDERAL EMERGENCY MANAGEMENT
 AGENCY (FEMA) WHERE FLOW PATHS 40, 41, AND 41A HAVE
 BEEN ANALYZED REFLECTING THE PROPOSED IMPROVEMENTS.
 THE CASE NUMBER IDENTIFYING THIS APPROVAL IS
 11-06-2380R.

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
ONEOK PARTNERS	(915) 595-0918
AT&T	(800) 852-3782
U.S. SPRINT TELECOMM	(800) 521-0579
CITY OF EL PASO DEPARTMENT OF TRANSPORTATION (AFTER HOURS)	(915) 621-8750 (915) 240-3220

WARNING I BEFORE YOU DIG

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

POND 3 CALCULATIONS

50-YEAR STORM EVENT

A total = 951.84 acres
Q inflow = 1577.14 cfs
Q outflow = 292.87 cfs
Q storage = 116.3 ac-ft
Q elevation = 4018.46

POND 3 CALCULATIONS

100-YEAR STORM EVENT

A total = 951.84 acres
Q inflow = 1777.49 cfs
Q outflow = 306.01 cfs
Q storage = 119.5 ac-ft
Q elevation = 4019.00

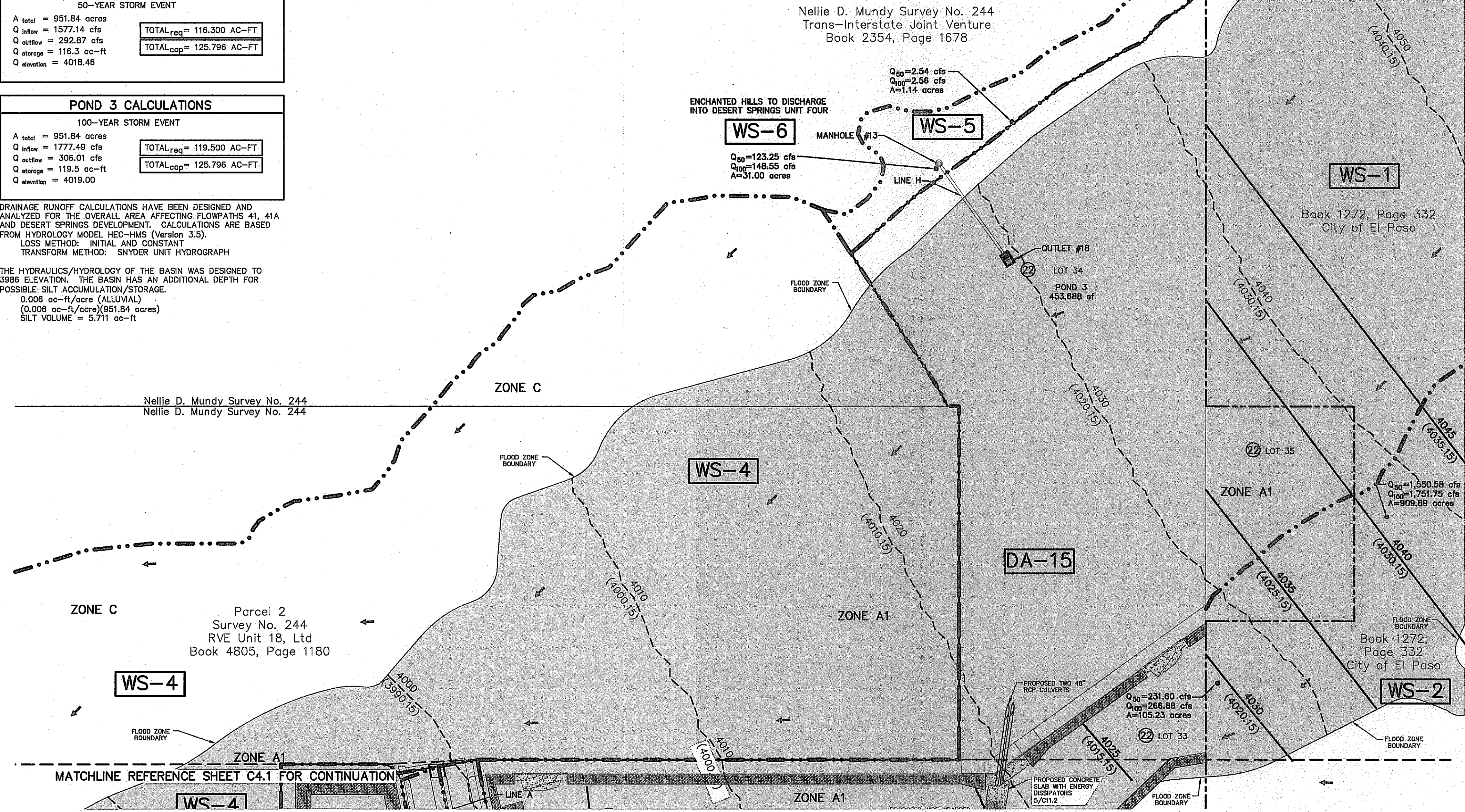
DRAINAGE RUNOFF CALCULATIONS HAVE BEEN DESIGNED AND ANALYZED FOR THE OVERALL AREA AFFECTING FLOWPATHS 41, 41A AND DESERT SPRINGS DEVELOPMENT. CALCULATIONS ARE BASED FROM HYDROLOGY MODEL HEC-HMS (Version 3.5).
 LOSS METHOD: INITIAL AND CONSTANT
 TRANSFORM METHOD: SNYDER UNIT HYDROGRAPH
 THE HYDRAULICS/HYDROLOGY OF THE BASIN WAS DESIGNED TO 3986 ELEVATION. THE BASIN HAS AN ADDITIONAL DEPTH FOR POSSIBLE SILT ACCUMULATION/STORAGE.
 0.006 ac-ft/acre (ALLUVIAL)
 (0.006 ac-ft/acre)(951.84 acres)
 SILT VOLUME = 5.711 ac-ft

BENCHMARK:

FOUND SURVEY "CHINO" MARK, 3020.83 FEET TO A 1/2 INCH REBAR LOCATED ON THE EAST SIDE R.O.W. OF INTERSTATE HIGHWAY 10 ELEVATION: 3946.11 (NAVD 88 DATUM) 3935.93 (CITY DATUM).

FLOOD ZONE:

THIS SUBDIVISION LIES WITHIN ZONE "A1, A2, & C" AS DESIGNATED IN PANEL NO. 480214-0012 C, DATED FEBRUARY 5, 1986, OF THE FLOOD INSURANCE RATE MAPS, CITY OF EL PASO, EL PASO COUNTY, TEXAS. ZONE "A1" & "A2" INDICATES AREAS OF 100-YEAR FLOOD; BASE FLOOD ELEVATIONS AND FLOOD HAZARDS DETERMINED. ZONE "C" INDICATES AREAS OF MINIMAL FLOODING.
 BASE FLOOD ELEVATIONS SHOWN ARE REFERENCED TO THE NATIONAL GEODETIC VERTICAL DATUM OF 1929



WATERSHED AREAS

DRAINAGE AREA No.	DRAINAGE AREA (ac)	DESIGN STORM INTENSITY (I ₆₀)	TIME OF CONCENTRATION (4)	RUNOFF COEFF. (C)	Q ₅₀ (CFS)	DESIGN STORM INTENSITY (I ₁₀₀)	Q ₁₀₀ (CFS)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
DA-1	0.216	4.184	18.25	0.661	0.598	4.190	0.598
DA-2	1.188	3.742	22.25	0.658	2.926	3.750	2.932
DA-3	1.320	3.646	23.25	0.668	3.214	3.655	3.222
DA-4	0.126	5.573	10.00	0.900	0.632	5.606	0.636
DA-5	3.949	4.120	18.77	0.675	10.990	4.128	11.006
DA-6	0.042	5.573	10.00	0.900	0.211	5.606	0.212
DA-7	9.398	4.169	18.37	0.679	26.523	4.175	26.662
DA-8	2.019	3.742	22.25	0.673	5.087	3.750	5.099
DA-9	0.979	5.573	10.00	0.900	4.910	5.606	4.939
DA-10	0.612	5.573	10.00	0.900	3.069	5.606	3.088
DA-11	0.800	4.083	19.25	0.794	2.582	4.089	2.586
DA-12	5.742	4.233	17.86	0.659	16.026	4.240	16.050
DA-13	5.220	4.180	18.45	0.671	14.580	4.186	14.581
DA-14	6.675	4.070	19.19	0.734	19.938	4.076	19.968
DA-15	8.737	5.573	10.00	0.930	16.067	5.606	16.163

EXTERNAL WATERSHED AREAS

DRAINAGE AREA No.	DRAINAGE AREA (ac)	DESIGN STORM INTENSITY (I ₆₀)	TIME OF CONCENTRATION (4)	RUNOFF COEFF. (C)	Q ₅₀ (CFS)	DESIGN STORM INTENSITY (I ₁₀₀)	Q ₁₀₀ (CFS)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
WS-4	31.364	5.573	10.00	0.400	89.912	5.606	70.328
WS-5	1.140	5.573	10.00	1.000	6.363	5.606	2.556

NOTES:

Q_{XX} IS BASED ON DEVELOPED RUNOFF (50-yr or 100-yr)
 REFERENCE: CITY OF EL PASO SUBDIVISION STANDARDS (3-11-97)
 (1) WATERSHED AREA IDENTIFICATION
 (2) AREA FROM DRAINAGE PLAN
 (3) RAINFALL INTENSITY, HYDROLOGY - LOCATED IN THE WESTSIDE REGION
 (4) TIME OF CONCENTRATION: TC = T (OVERLAND) + T (GUTTER)
 (5) RATIONAL METHOD DEVELOPED CONDITIONS RUNOFF COEFFICIENT, PLATE No. 2-10 TABLE A
 COEFFICIENT
 BASIN AREA SPACE = 0.33
 PARK AREA SPACE = 0.40
 RESIDENTIAL AREA SPACE = 0.60
 CHANNEL AREA SPACE = 0.67
 ALLUVIAL AND OUTWASH SLOPES = 0.67
 PAVEMENT AREA SPACE = 0.90
 (6) Q_{XX} = C X A X I_{XX} (50-yr or 100-yr)
 C = RATIONAL COEFFICIENT
 A = COMPUTED CONTRIBUTING WATERSHED AREA, acres
 I = RAINFALL INTENSITY, inch per hour

EXTERNAL WATERSHED AREAS

DRAINAGE AREA No.	DRAINAGE AREA (ac)	INITIAL LOSS (3)	CONSTANT LOSS (4)	STANDARD LAG TIME (5)	PEAKING COEFF. (C)	Q ₅₀ (CFS)	Q ₁₀₀ (CFS)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
WS-1	909.890	0.50	0.25	0.461	0.6125	1550.58	1751.75
WS-2	105.228	0.50	0.25	0.307	0.6125	231.60	266.88
WS-3	26.453	0.50	0.25	0.144	0.6125	90.12	107.22
WS-6	31.000	0.50	0.25	0.100	0.6125	123.25	148.55

DRAINAGE RUNOFF CALCULATIONS HAVE BEEN DESIGNED AND ANALYZED FOR THE OVERALL AREA AFFECTING FLOWPATHS 41, 41A AND DESERT SPRINGS DEVELOPMENT. CALCULATIONS ARE BASED FROM HYDROLOGY MODEL HEC-HMS (Version 3.5).
 LOSS METHOD: INITIAL AND CONSTANT
 TRANSFORM METHOD: SNYDER UNIT HYDROGRAPH
 (1) WATERSHED AREA IDENTIFICATION
 (2) AREA FROM DRAINAGE PLAN, acres
 (3) INITIAL LOSS, inches
 (4) CONSTANT RATE LOSS, inches per hour
 (5) STANDARD LAG TIME, hours
 (6) PEAKING COEFFICIENT FOR EL PASO AREA
 (7) 50-yr PEAK DISCHARGE RUNOFF, cfs
 (8) 100-yr PEAK DISCHARGE RUNOFF, cfs

POND 3 AREAS

CONTOUR	ACCUMULATED VOLUME (ac-ft)
4020	125.796
4019	119.550
4018	113.474
4017	107.565
4016	101.822
4015	96.243
4014	90.827
4013	85.570
* 4012	80.472
4011	75.530
4010	70.743
4009	66.109
4008	61.625
4007	57.291
4006	53.104
4005.1	49.466
4005	49.081
4004	45.418
4003	41.893
4002	38.505
4001	35.252
4000	32.131
3999	29.142
3998	26.281
3997	23.548
3996	20.941
3995	18.457
3994	16.095
3993	13.853
3992	11.728
3991	9.720
3990	7.826
3989	6.044
3988	4.372
3987	2.809
3986	1.352
* 3985	0.000

DRAINAGE PLAN

SCALE: 1" = 100'

* THE CENTER ELEVATION OF THE OUTLET CONDUITS IS LOCATED AT ELEVATION 4012.60. THE OUTLET CONSISTS OF TWO (2) - 48" RCP CULVERTS. INVERT ELEVATION = 4010.60

** EFFECTIVE HYDRAULICS/HYDROLOGY BOTTOM OF THE BASIN. THE BASIN HAS AN ACTUAL BOTTOM ELEVATION OF 3990. THE BASIN HAS EXTRA CAPACITY FOR POSSIBLE SILT/DEBRIS STORAGE ACCUMULATION WITHOUT AFFECTING THE EFFICIENCY OF THE HYDRAULICS/HYDROLOGY DESIGN OF THE BASIN.

DROP INLETS

INLET ID	REQ. FLOW EXPECTED Q _{REQ} (CFS)	REQ. FLOW ADDITIONAL Q _{REQ} (CFS)	STREET CAPACITY AT CROWN Q _{CAP} (CFS)	STREET CAPACITY EQUALIZER Q _{CAP} (CFS)	FINAL FLOW EXPECTED AT INLET Q _{TOTAL} (CFS)	AVAIL. FLOW CAPACITY AT INLET Q _{AVAIL} (CFS)	BYPASS FLOW (CFS)	NUMBER OF GRATES	TYPE OF INLET	LOCATION OF INLET
1	2.592	10.624	49.280	0.000	13.206	12.113	1.093	2	1	ON-GRADE
2	14.560	1.699	65.473	0.000	16.257	10.739	5.519	3	1	ON-GRADE
3	19.938	0.000	56.929	0.000	19.938	18.240	1.698	5	1	ON-GRADE
4	16.026	0.000	18.737	0.000	16.026	10.921	5.105	2	1	ON-GRADE
5	5.087	0.000	21.045	0.000	5.087	17.748	0.000	2	3	SAG
6	26.623	0.000	6.927	0.000	6.927	100.148	0.000	10	3	SAG
7	2.926	0.000	6.927	0.000	2.926	4.361	0.000	2	1	ON-GRADE
8	3.214	2.486	6.927	0.000	5.700	7.752	0.000	2	1	ON-GRADE
9	10.990	0.000	17.015	0.000	10.990	8.503	2.486	2	1	ON-GRADE
10	0.632	0.000	17.015	0.000	0.632	0.959	0.000	2	1	ON-GRADE
11	4.910	0.000	22.772	0.000	4.910	19.267	0.000	2	1	SAG
12	3.069	1.093	22.772	0.000	4.163	19.267	0.000	2	1	SAG

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

MOMENTUM COMPUTATIONS

LOCATION AT INLET (1)	DEPTH (2)	VELOCITY (3)	PRODUCT NUMBER (4)
1	0.305	4.679	1.428
2	0.297	6.099	1.809
3	0.337	5.779	1.950
4	0.302	5.805	1.752
5	0.194	4.470	0.866
6	0.320	2.232	0.714
7	0.232	1.799	0.417
8	0.297	2.126	0.632
9	0.272	4.914	1.335
10	0.632	2.408	0.224
11	0.281	2.048	0.576
12	0.264	1.965	0.519

(1) LOCATION
 (2) DEPTH, ft
 (3) VELOCITY, fps
 (4) PRODUCT NUMBER = DEPTH X VELOCITY, ft³/sec

REFERENCES - BENCHMARKS
 FOUND N.G.S. SURVEY MARKER STAMPED "CHINO 1980"
 ELEVATION: 3935.93 (CITY OF EL PASO VERTICAL DATUM)
 3946.11 (NAVD 88 DATUM)
 3945.78 (NGVD 29 DATUM)
 TIE TO THE PROJECT BENCHMARK IS N00°50'52"E, 3,020.83 FEET FROM A 1/2 INCH REBAR FOUND FOR THE NORTHWEST CORNER OF TRACT 11, NELLIE D. MUNDY SURVEY No. 239

ENGINEER'S SEAL

 engineers • architects • planners
 TEXAS REGISTERED ENGINEERING FIRM F-654
 4712 Woodrow Bean, Ste. F, El Paso, TX 79904
 (915) 755-6222 Fax: (915) 755-6223 www.asepa.com

SCALE: 1" = 100'
 Horizontal: N/A
 Vertical: N/A
 Contour Interval: N/A
 DATE: DECEMBER 2014
 DESIGN BY: A.H.
 DRAWN BY: J.H.
 CHECKED BY: J.L.A.
 APP'D. BY: J.L.A.
 JOB No. 2060-028-1D

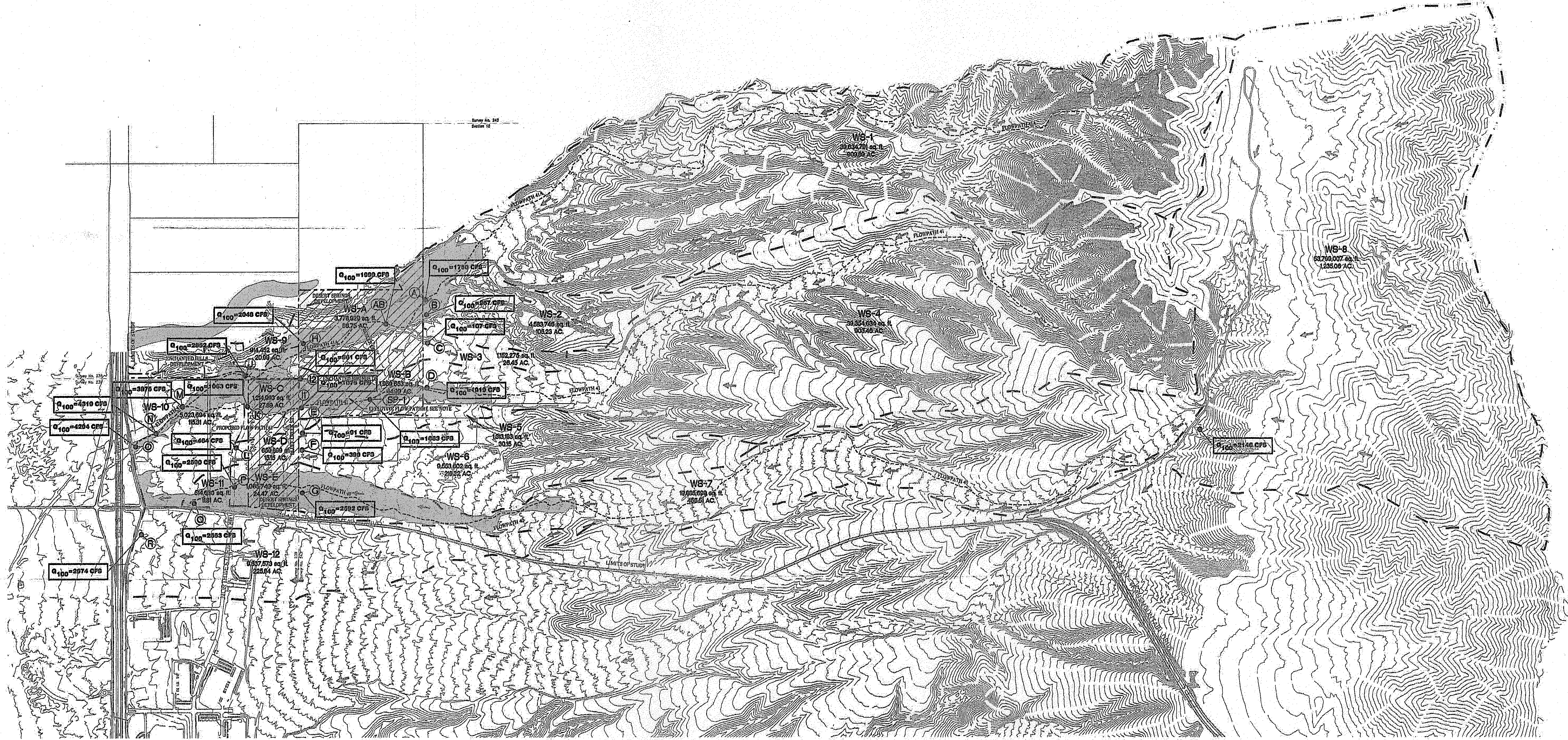
PROJECT TITLE
DESERT SPRINGS UNIT FOUR
SUBDIVISION IMPROVEMENTS

SHEET TITLE
DRAINAGE PLAN

(SHEET 2 OF 2)
 SHEET NO.
C4.2

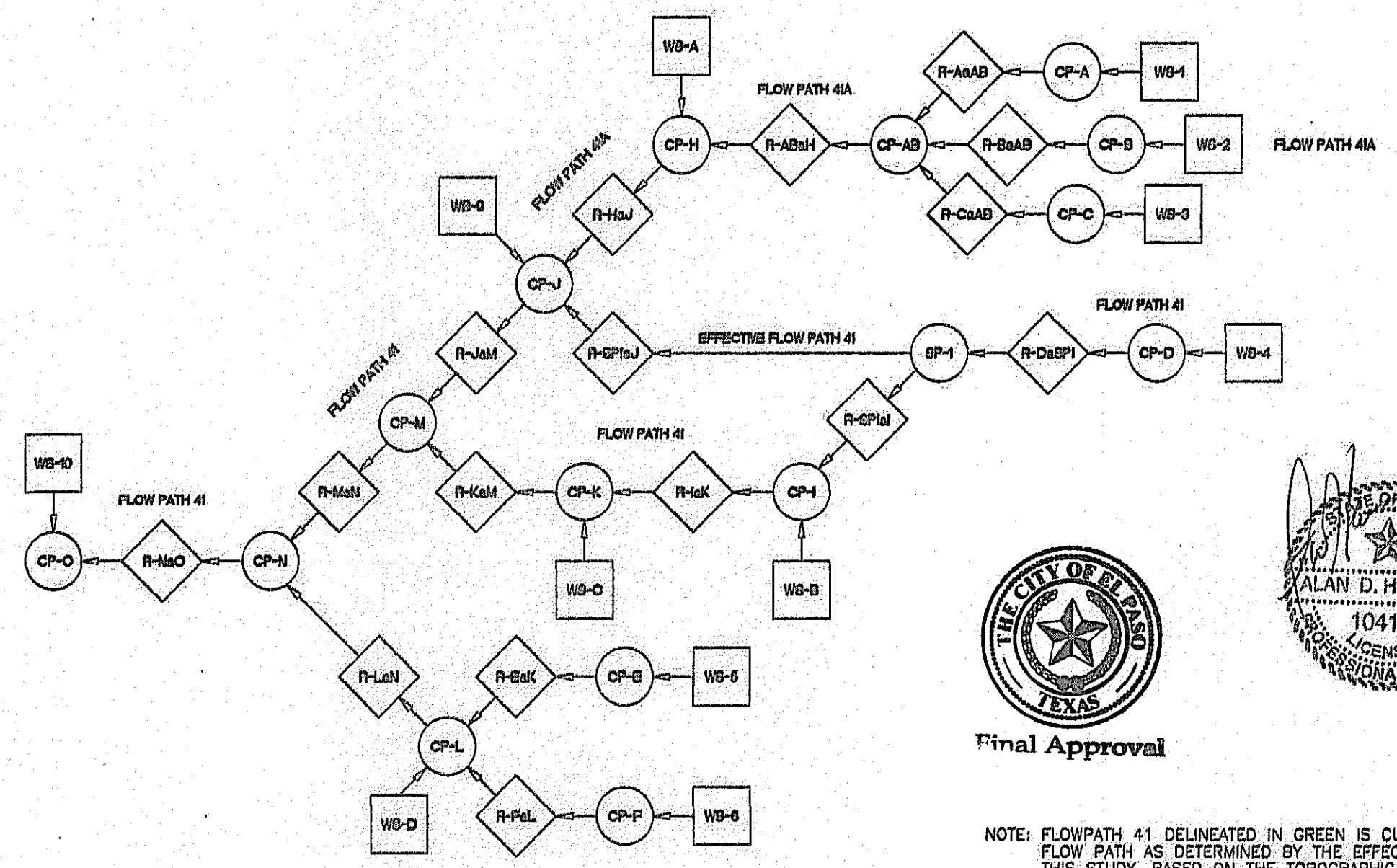
Final Approval

S:\2015\2060-028-1D-UD\055\Construction_DrainageImprovement_Plan\Title_4\2060-028-1D_C4.dwg, Drawing 2, 12/16/2014, 9:16:16 AM



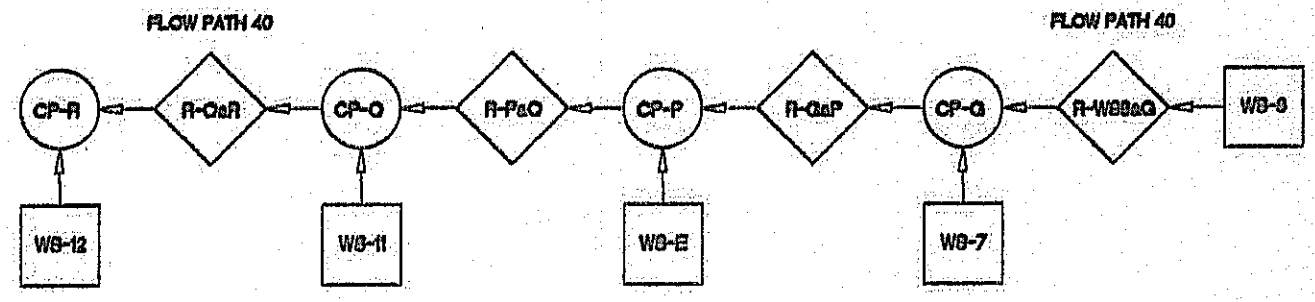
SCALE: 1"=1000'

FLOW PATH No. 41 AND 41A



TOPOGRAPHIC SURVEY DATA:
 BENCHMARK: FOUND SURVEY "CHINO" MARK, 3020.83 FEET TO A 1/2 INCH REBAR LOCATED ON THE EAST SIDE R.O.W. OF INTERSTATE HIGHWAY 10.
 CONTOUR INFORMATION SHOWN IS ON NGVD 29 DATUM.
 ELEVATION: 3948.11 (NAVD 88 DATUM)
 3848.78 (NGVD 29 DATUM) - PLANS USED DATUM.
 3935.93 (CITY DATUM)
 TO CONVERT TO CITY OF EL PASO DATUM SUBTRACT 9.85 FEET FROM NGVD 29 ELEVATION.
 TO CONVERT TO NAVD 88 ADD 0.33 FEET TO NGVD 29 ELEVATION.
 KDOOLE & POULS ENGINEERING MAPPING REFERENCING THE STATE PLANE COORDINATE SYSTEM

FLOW PATH No. 40

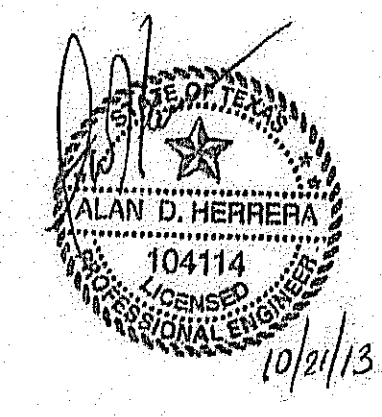


LEGEND

- WB-1 WATERSHED ID
- (A) CONCENTRATION POINT
- SUBDIVISION BOUNDARY
- - - WATERSHED BOUNDARY
- ▭ FLOOD BOUNDARY
- WB-1 WATERSHED HYDROGRAPH
- ◇ REACH 0
- ◇ COMB 0
- ← DRAINAGE FLOW

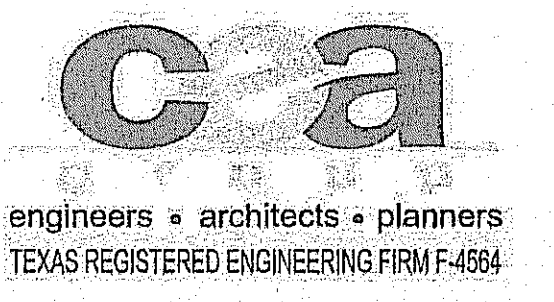


Final Approval

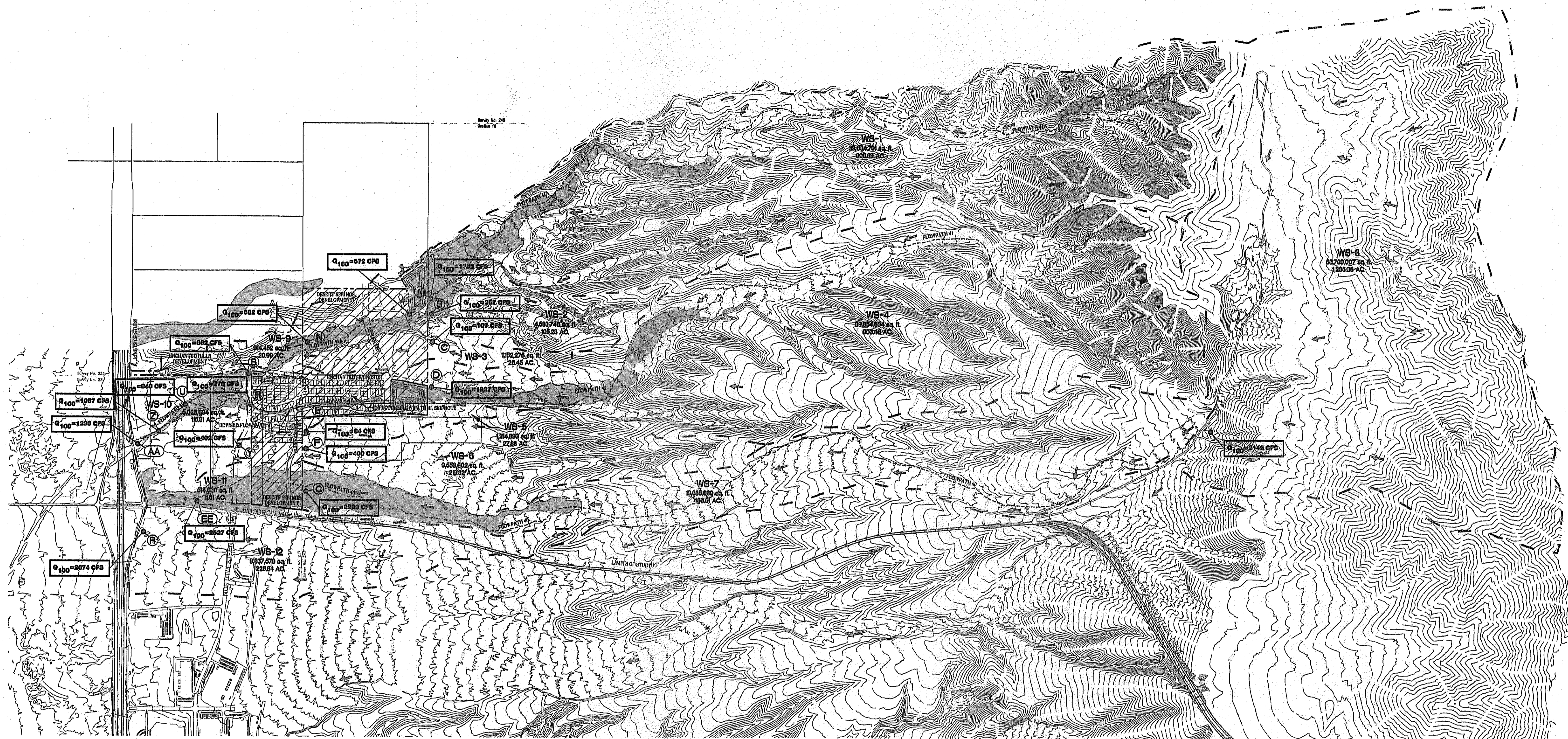


NOTE: FLOWPATH 41 DELINEATED IN GREEN IS CURRENTLY THE EFFECTIVE FLOW PATH AS DETERMINED BY THE EFFECTIVE FIRM MAPS. IN THIS STUDY, BASED ON THE TOPOGRAPHIC CONDITIONS AND FINDINGS, FLOW PATH 41 HAS BEEN REALIGNED.

EXISTING DRAINAGE CONDITIONS
 PRE-PROJECT CONDITIONS
 DESERT SPRINGS CHANNEL
 No. 1



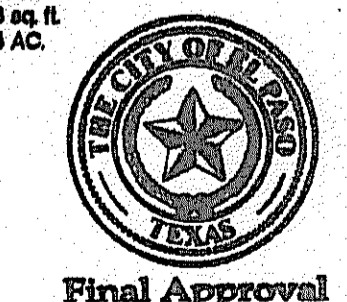
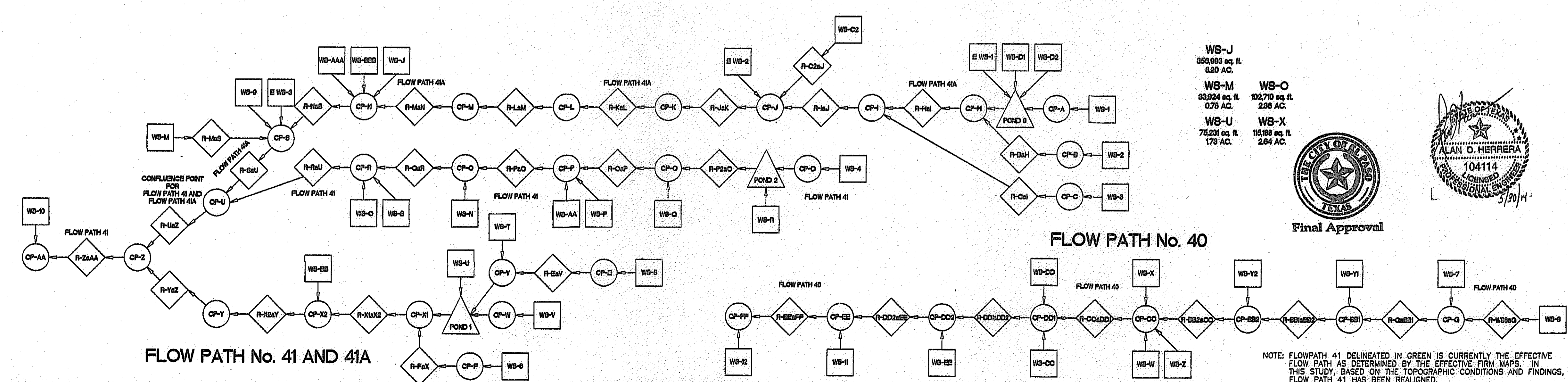
3/1/2010 10:52:53 AM \\P:\MAPPING\Projects\41 & 41A\DWG\41.dwg User: jh... Date: 02/27/2013 3:10:33 PM



SCALE: 1"=1000'

TOPOGRAPHIC SURVEY DATA:
 BENCHMARK: FOUND SURVEY "CHINO" MARK, 3020.83 FEET TO A 1/2 INCH REBAR LOCATED ON THE EAST SIDE R.O.W. OF INTERSTATE HIGHWAY 10.
 CONTOUR INFORMATION SHOWN IS ON NGVD 29 DATUM.
 ELEVATION: 3945.11 (NAVD 88 DATUM) - PLANS USED DATUM
 3945.78 (NGVD 29 DATUM) - PLANS USED DATUM
 3935.93 (CITY DATUM)
 TO CONVERT TO CITY OF EL PASO DATUM SUBTRACT 9.85 FEET FROM NGVD 29 ELEVATION.
 TO CONVERT TO NAVD 88 ADD 0.33 FEET TO NGVD 29 ELEVATION.

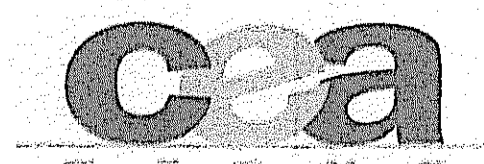
- LEGEND**
- WB-1 WATERSHED ID
 - (A) CONCENTRATION POINT
 - SUBDIVISION BOUNDARY
 - WATERSHED BOUNDARY
 - FLOOD BOUNDARY
 - WB-1 WATERSHED HYDROGRAPH
 - ◇ REACH 0 ROUTE HYDROGRAPH
 - COMB 0 COMBINE HYDROGRAPH
 - ← DRAINAGE FLOW



Final Approval

REVISED DRAINAGE FULL CONDITIONS
 POST-PROJECT CONDITIONS

LOMR DESERT SPRINGS
 CHANNEL No. 1



engineers • architects • planners
 TEXAS REGISTERED ENGINEERING FIRM F-4584

S:\2000\1060-4372\1060-4372.dwg (Rev. 04/11/04) by: [unreadable] Date: 05/12/04 10:01 AM

TOPOGRAPHIC SURVEY DATA:
 BENCHMARK: FOUND SURVEY "CHINO" MARK, 3020.83 FEET TO A
 1/2" INCH REBAR LOCATED ON THE EAST SIDE R.O.W. OF
 INTERSTATE HIGHWAY 10.
 CONTOUR INFORMATION SHOWN IS ON NGVD 29 DATUM.
 ELEVATION: 3948.11 (NAVD 88 DATUM)
 3948.78 (NGVD 29 DATUM) - PLANS USED DATUM
 3935.93 (CITY DATUM)
 TO CONVERT TO CITY OF EL PASO DATUM SUBTRACT 9.85 FEET
 FROM NGVD 29 ELEVATION.
 TO CONVERT TO NAVD 88 ADD 0.33 FEET TO NGVD 29 ELEVATION.
 KODGLE & POLLS ENGINEERING MAPPING REFERENCING THE STATE
 PLANE COORDINATE SYSTEM

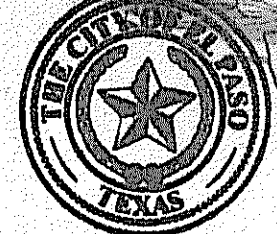
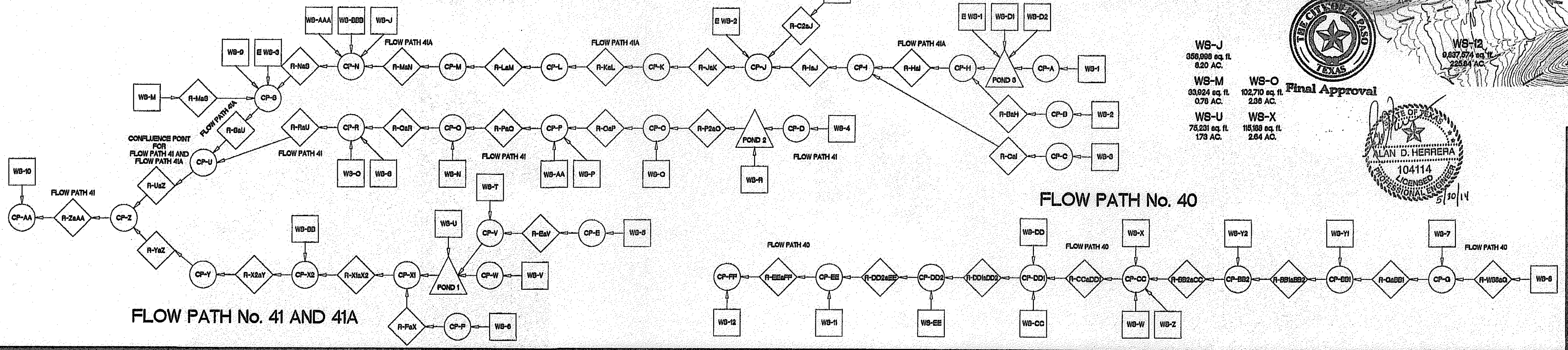
NOTE: FLOWPATH 41 DELINEATED IN GREEN IS CURRENTLY THE EFFECTIVE
 FLOW PATH AS DETERMINED BY THE EFFECTIVE FIRM MAPS. IN
 THIS STUDY, BASED ON THE TOPOGRAPHIC CONDITIONS AND FINDINGS,
 FLOW PATH 41 HAS BEEN REALIGNED.

SCALE: 1" = 300'



LEGEND

- WB-1 WATERSHED ID
- (A) CONCENTRATION POINT
- SUBDIVISION BOUNDARY
- WATERSHED BOUNDARY
- █ FLOOD BOUNDARY
- WB-1 WATERSHED HYDROGRAPH
- ◇ REACH 0 ROUTE HYDROGRAPH
- COMB 0 COMBINE HYDROGRAPH
- ← DRAINAGE FLOW



Final Approval
 ALAN D. HERNANDEZ
 LICENSED PROFESSIONAL ENGINEER
 104114

REVISED DRAINAGE CONDITIONS
 POST-PROJECT CONDITIONS
 LOMR DESERT SPRINGS
 CHANNEL No. 1

cea
 engineers • architects • planners
 TEXAS REGISTERED ENGINEERING FIRM F-4564

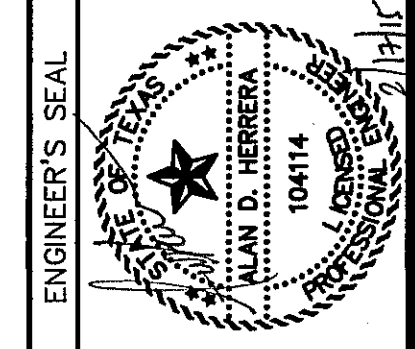
GENERAL NOTES:
 1. WHENEVER THE RETAINING HEIGHT OF A ROCKWALL/RETAINING WALL EXCEEDS FOUR (4') FEET OR MORE, THE DEVELOPER SHALL BUILD THE RETAINING PORTION OF THE WALL (INCLUDING NECESSARY REINFORCED CONCRETE FOOTING) TO HIGHEST FINISHED GROUND. THE BUILDER SHALL FINISH THE REMAINING OF THE STEM WALL.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

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
ONEOK PARTNERS	(915) 595-8918
AT&T	(800) 852-3786
U.S. SPRINT TELECOMM	(800) 521-0579
CITY OF EL PASO DEPARTMENT OF TRANSPORTATION	(915) 621-6750
(AFTER HOURS)	(915) 240-3220

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

REFERENCES - BENCHMARKS
 FOUND N.G.S. SURVEY MARKER STAMPED "CHNO 1980"
 ELEVATION: 3955.83 (CITY OF EL PASO VERTICAL DATUM)
 SHOWING (NAVD 88 DATUM)
 3945.78 (NOV. 29 DATUM)
 TIE TO THE PROJECT BENCHMARK IS N3539.09"W, 4.008.93 FEET FROM A 1/2" INCH REBAR FOUND FOR THE NORTHWEST CORNER OF TRACT 11, WELLS CO. ADJUT. SURVEY, INC. 259

CSA
 ENGINEERS • ARCHITECTS • PLANNERS
 TEXAS REGISTERED ENGINEERING FIRM #4684
 4712 Woodrow Blank, Ste. F, El Paso, TX 79924
 Office: 915.544.5222 Fax: 915.544.5225 www.csaengineers.com

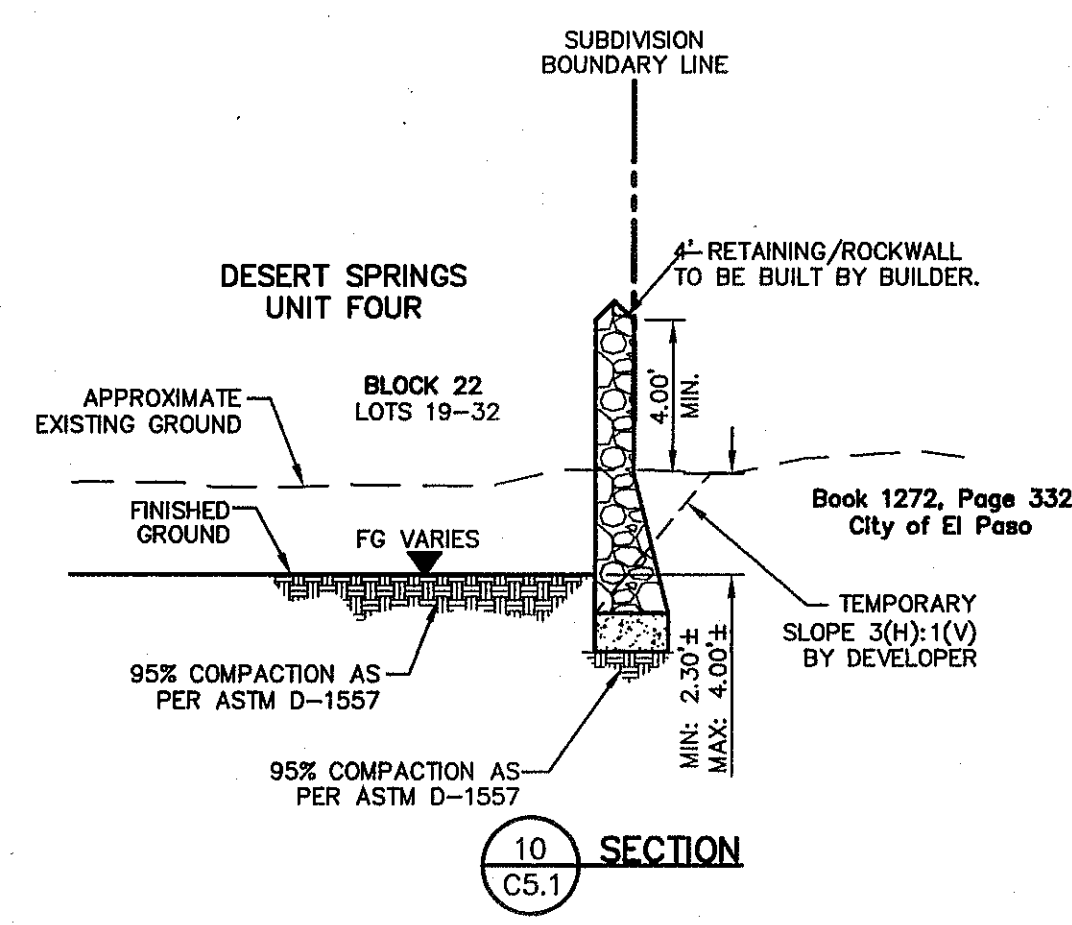
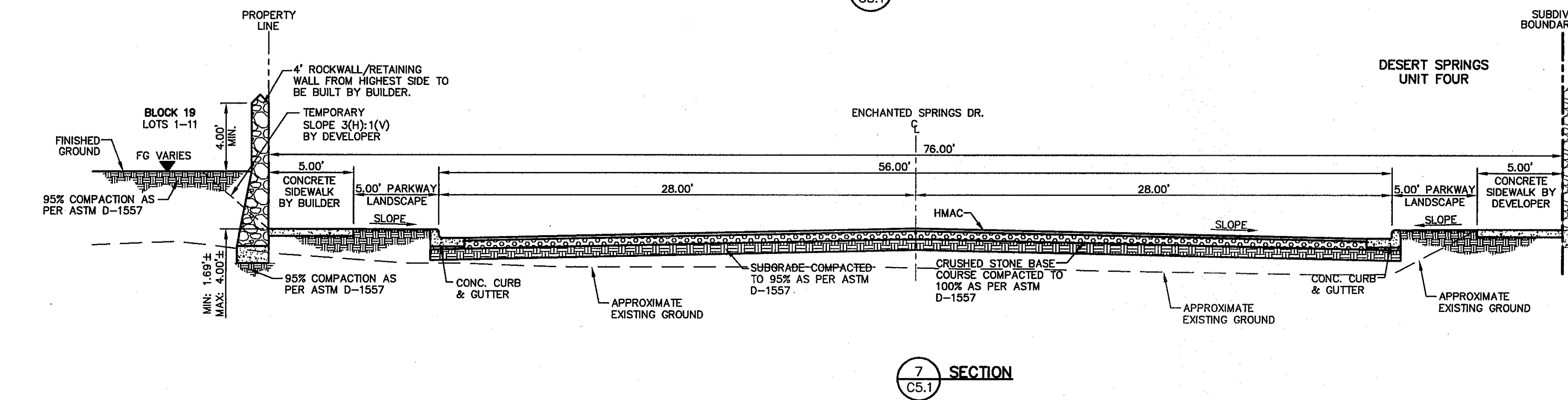
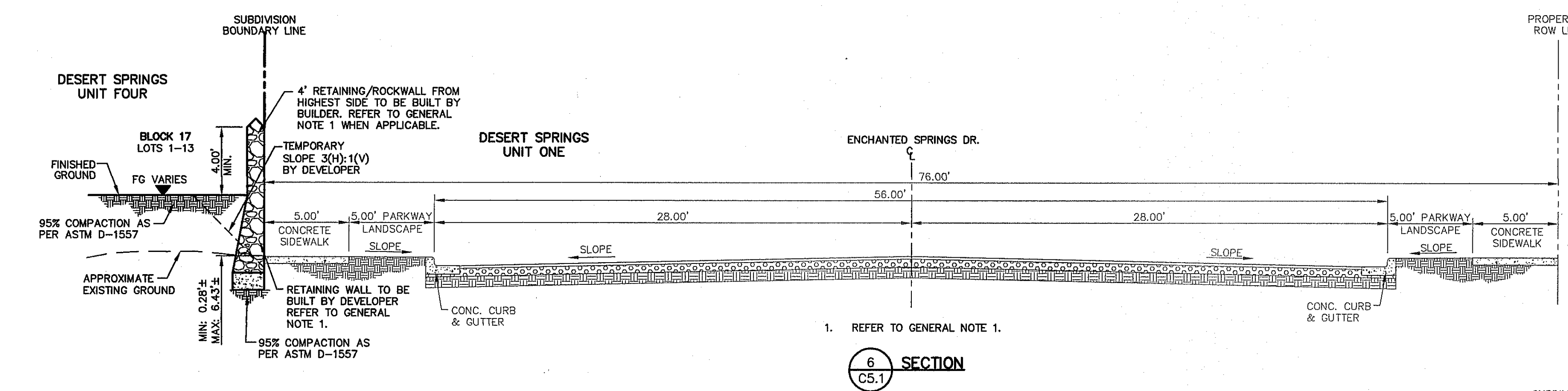
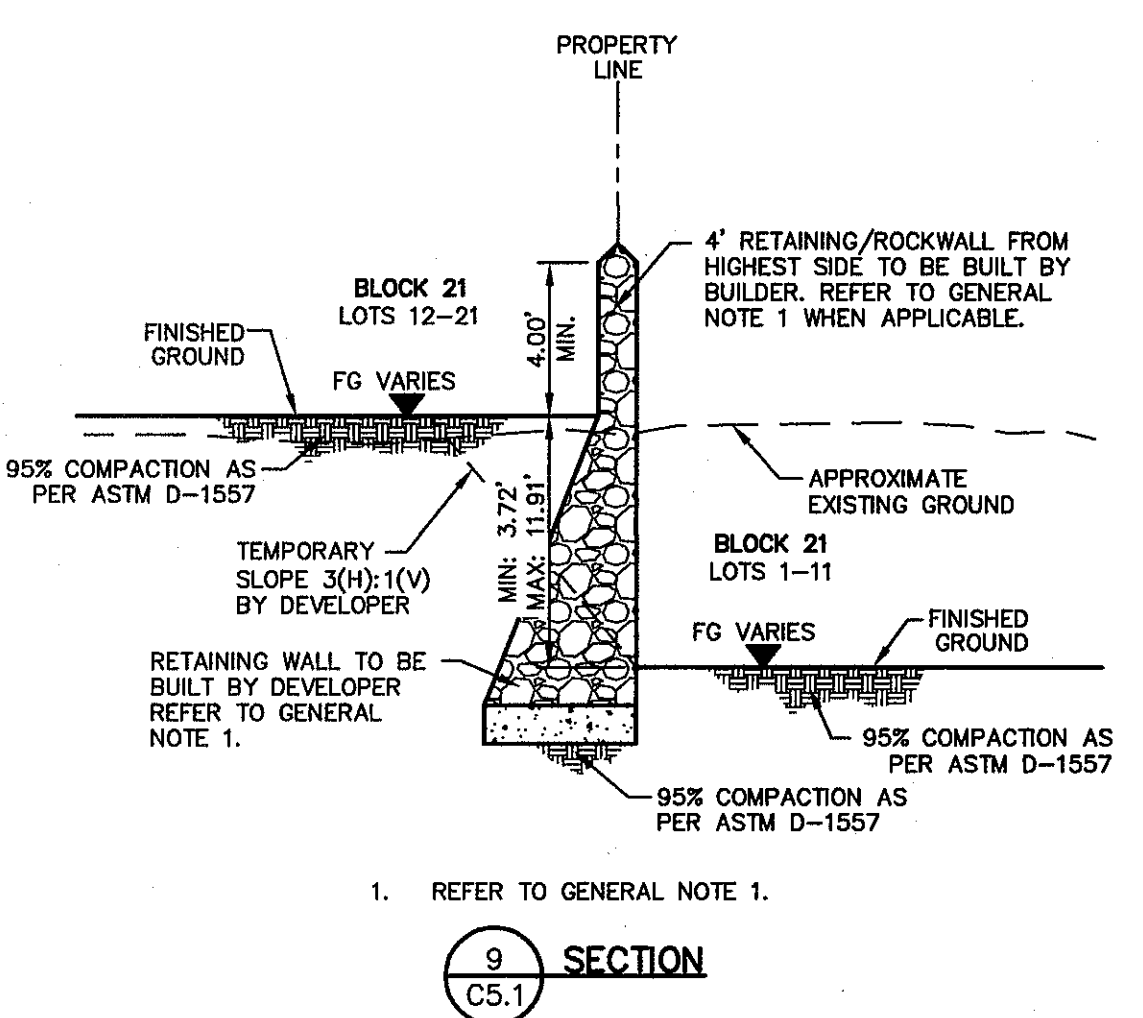
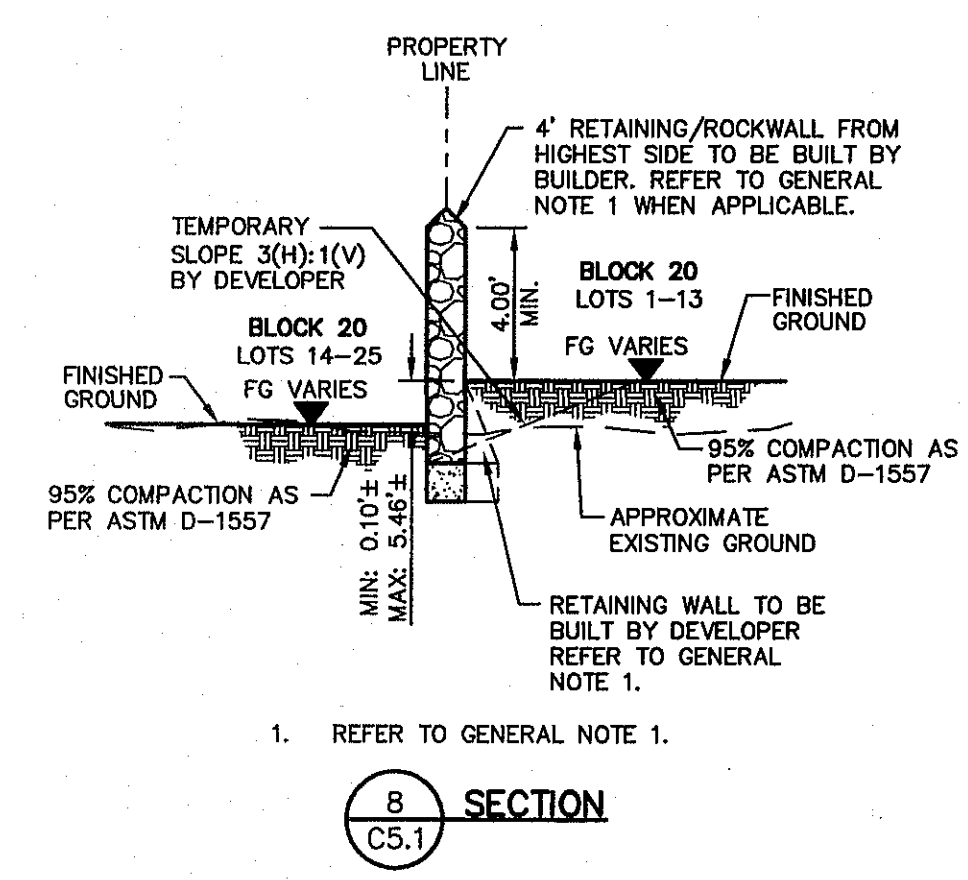
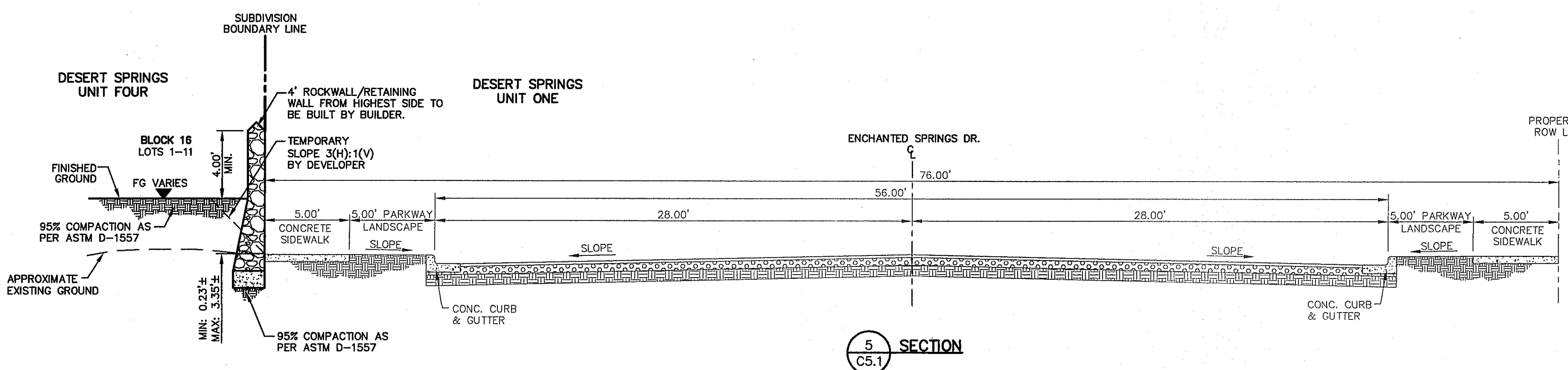
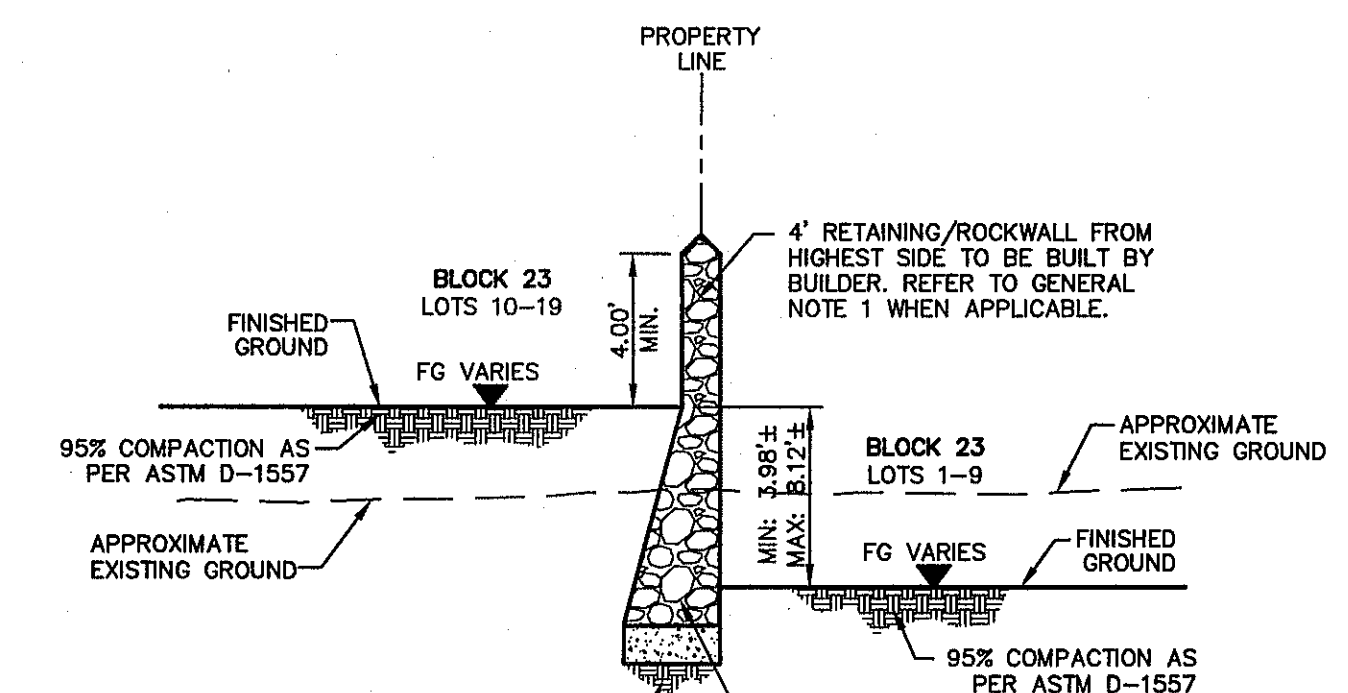
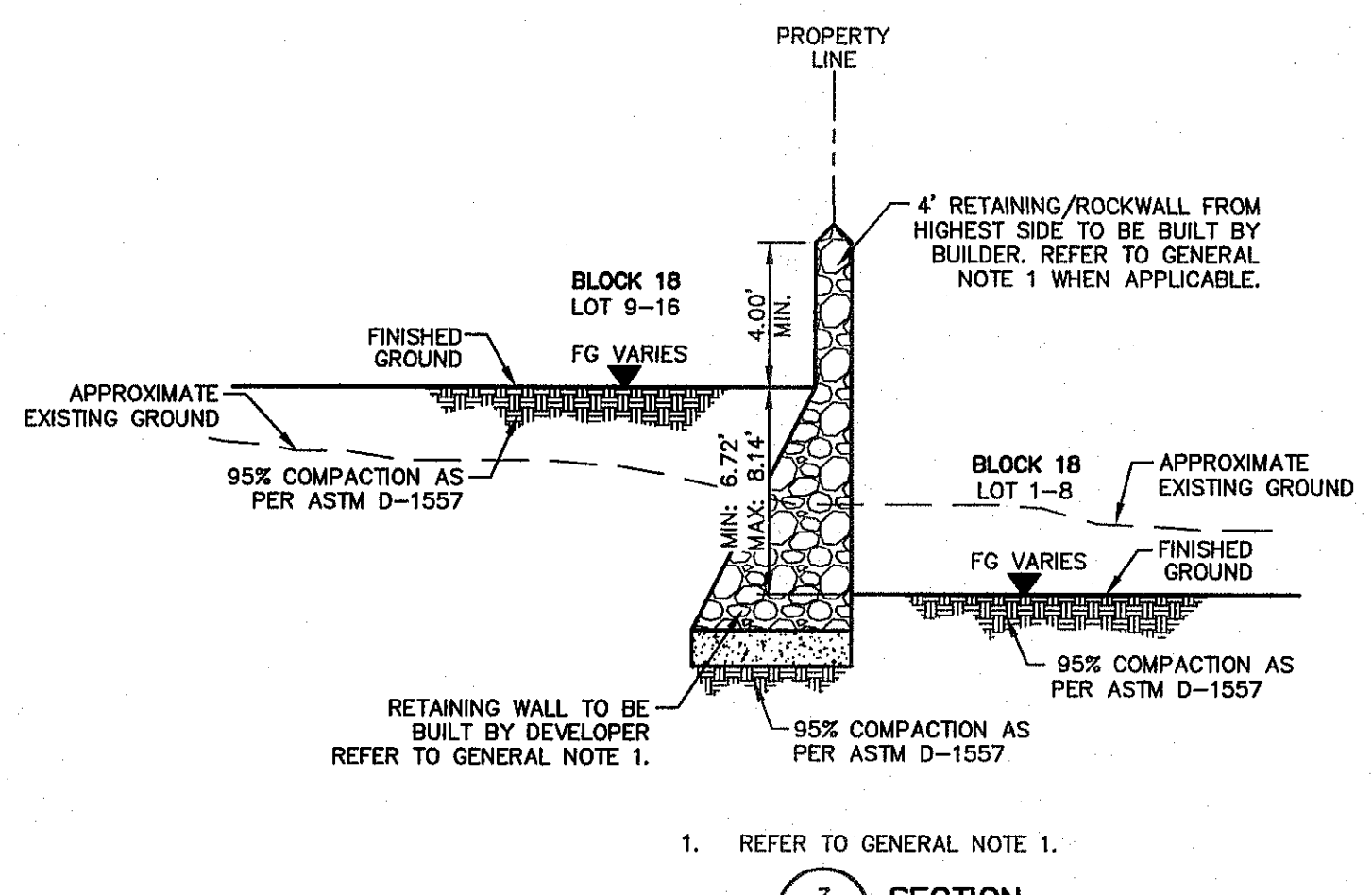
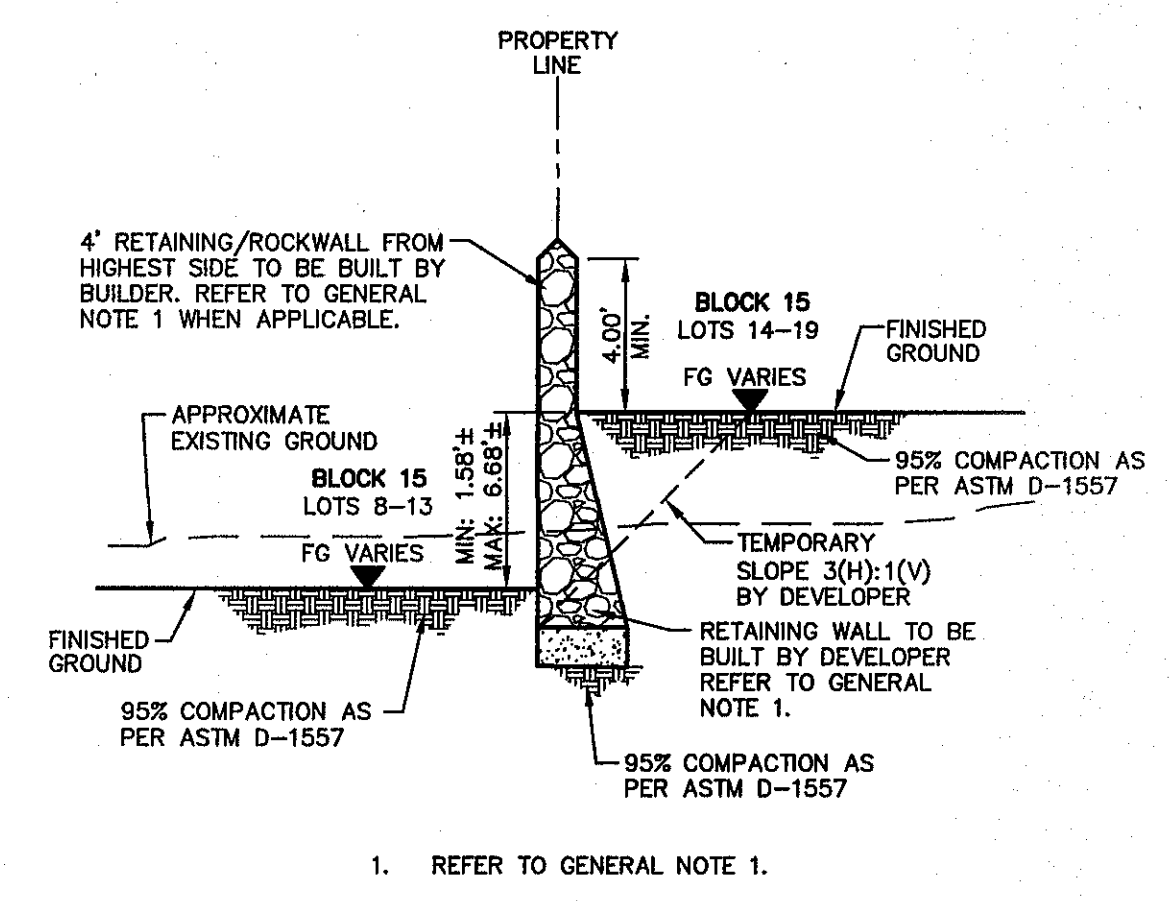
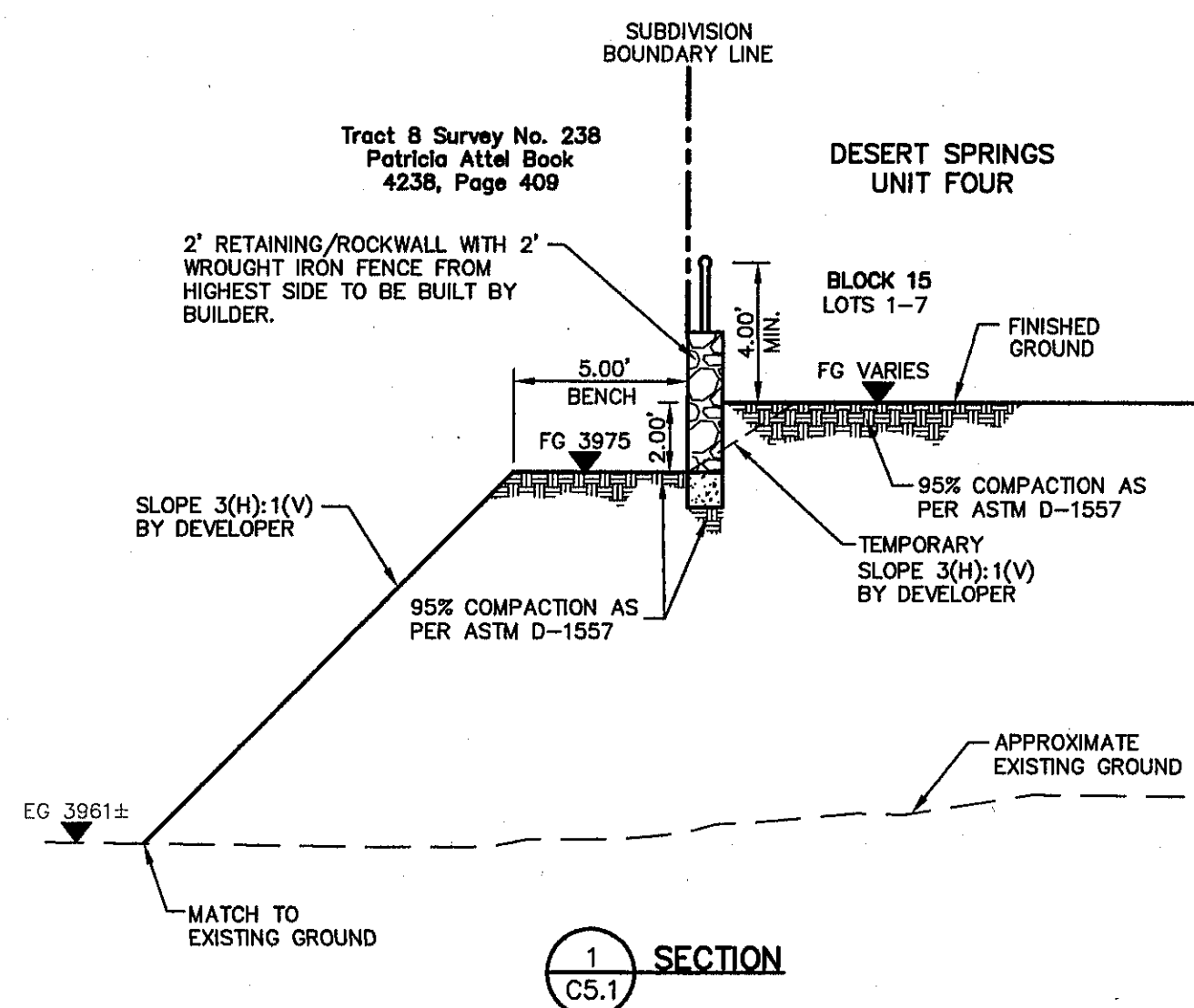


SCALE: 1" = 5'
 Horizontal: N/A
 Vertical: N/A
 Contour Interval: 1/4'
 DATE: DECEMBER 2014
 DESIGN BY: A.H.
 DRAWN BY: J.H.
 CHKD. BY: J.L.A.
 APPVD. BY: J.L.A.
 JOB NO. 2060-028-I.D.

PROJECT TITLE
DESERT SPRINGS UNIT FOUR
 SUBDIVISION IMPROVEMENTS

SHEET TITLE
TYPICAL GRADING SECTIONS
 (SHEET 1 OF 3)
 SHEET NO.

C5.1



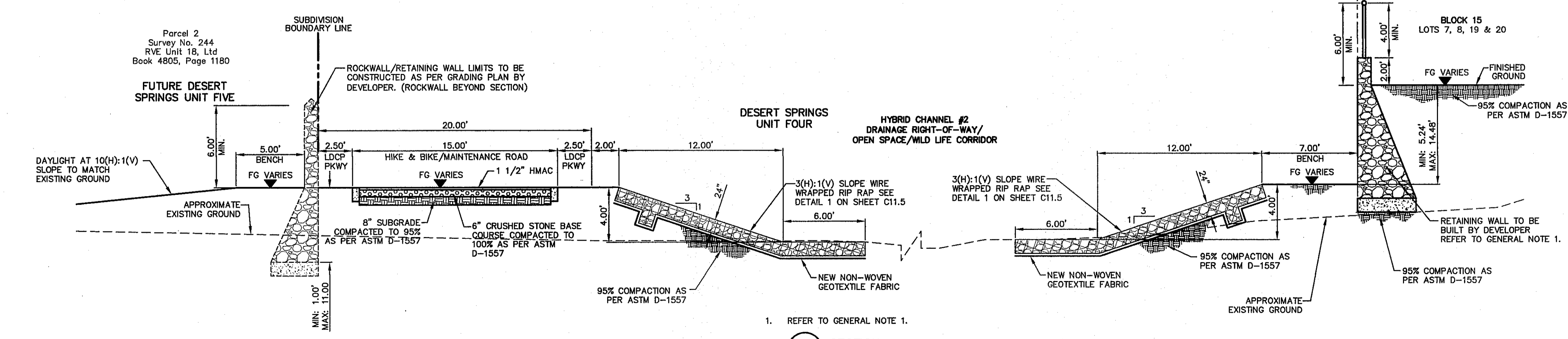
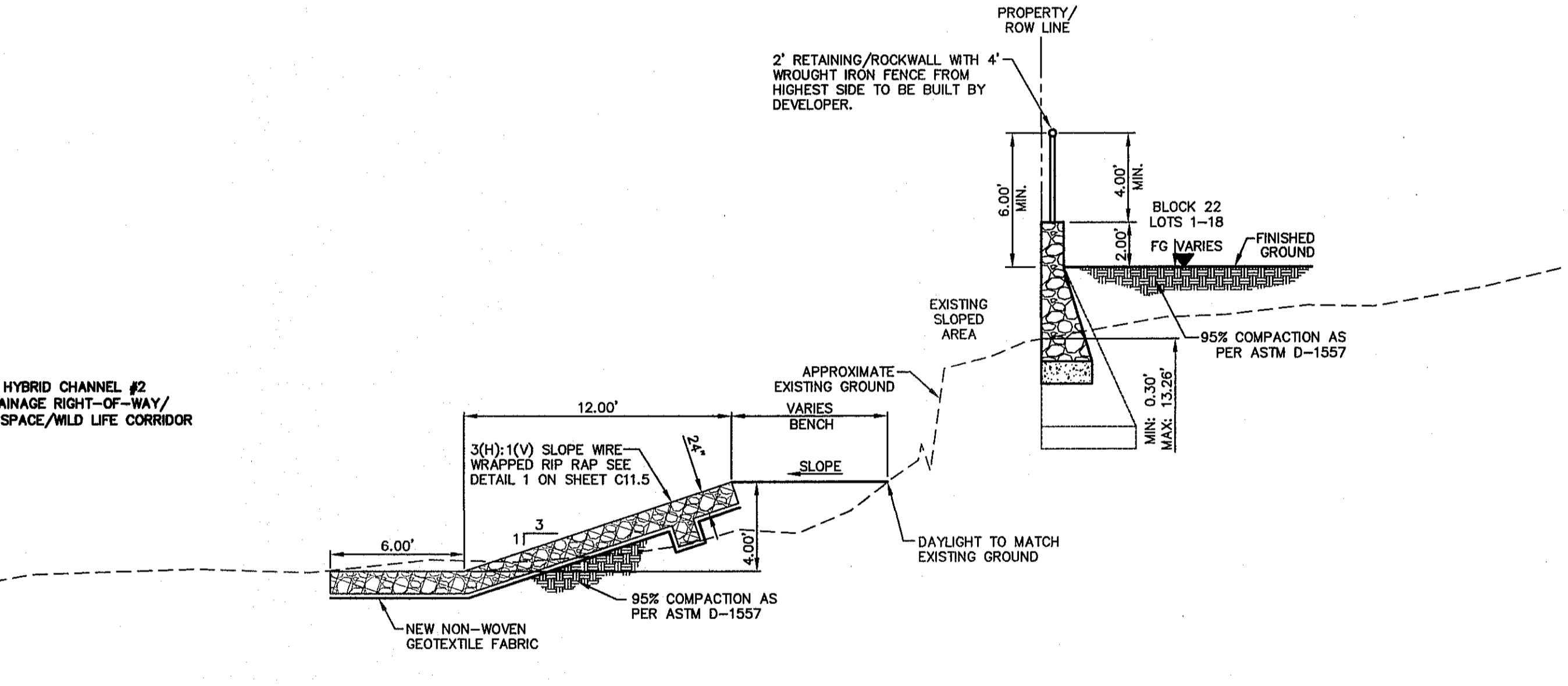
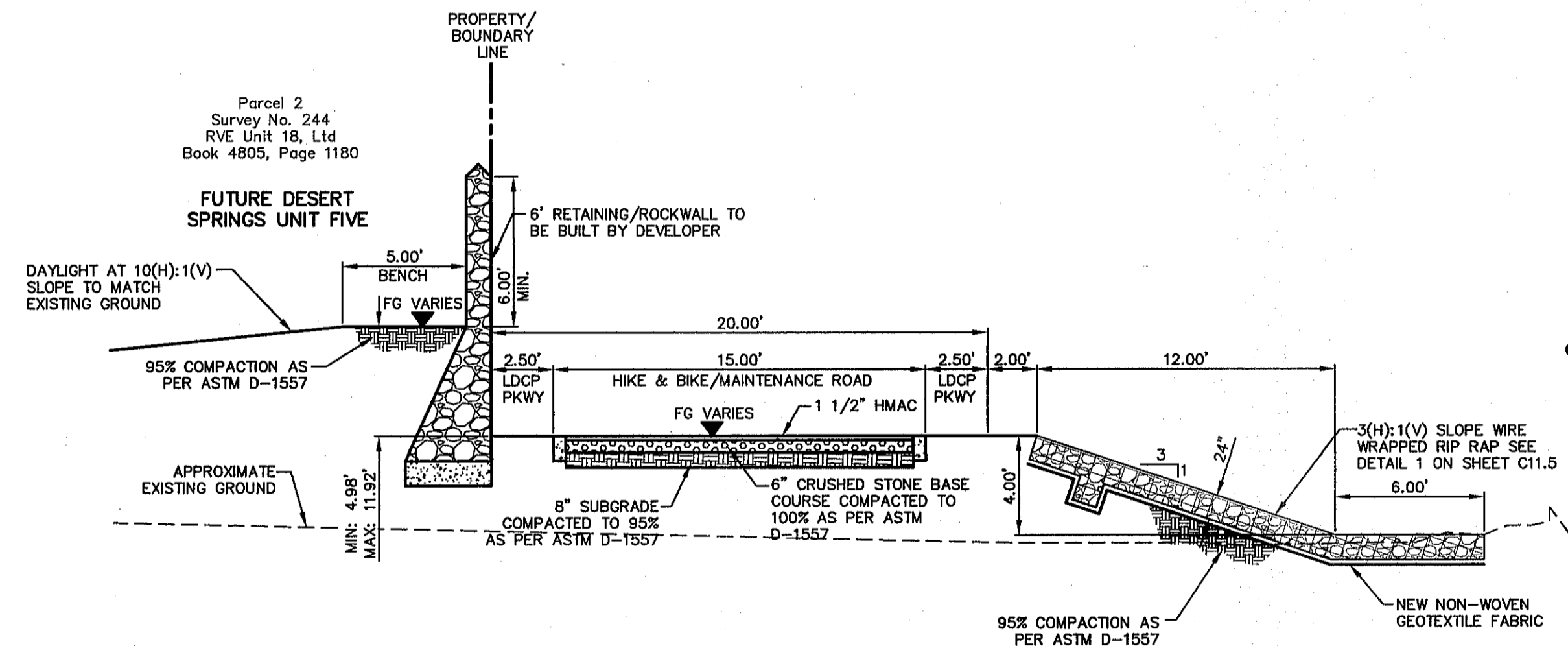
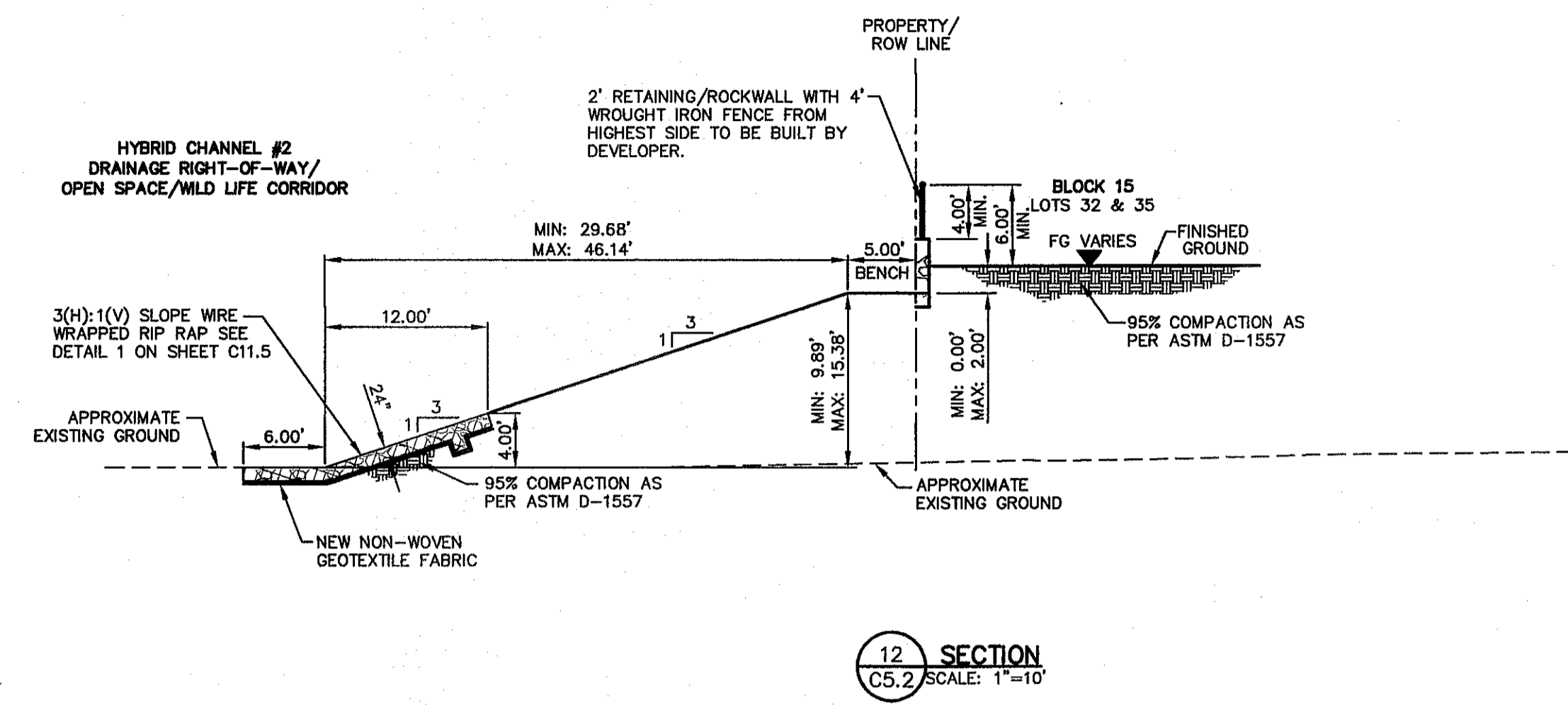
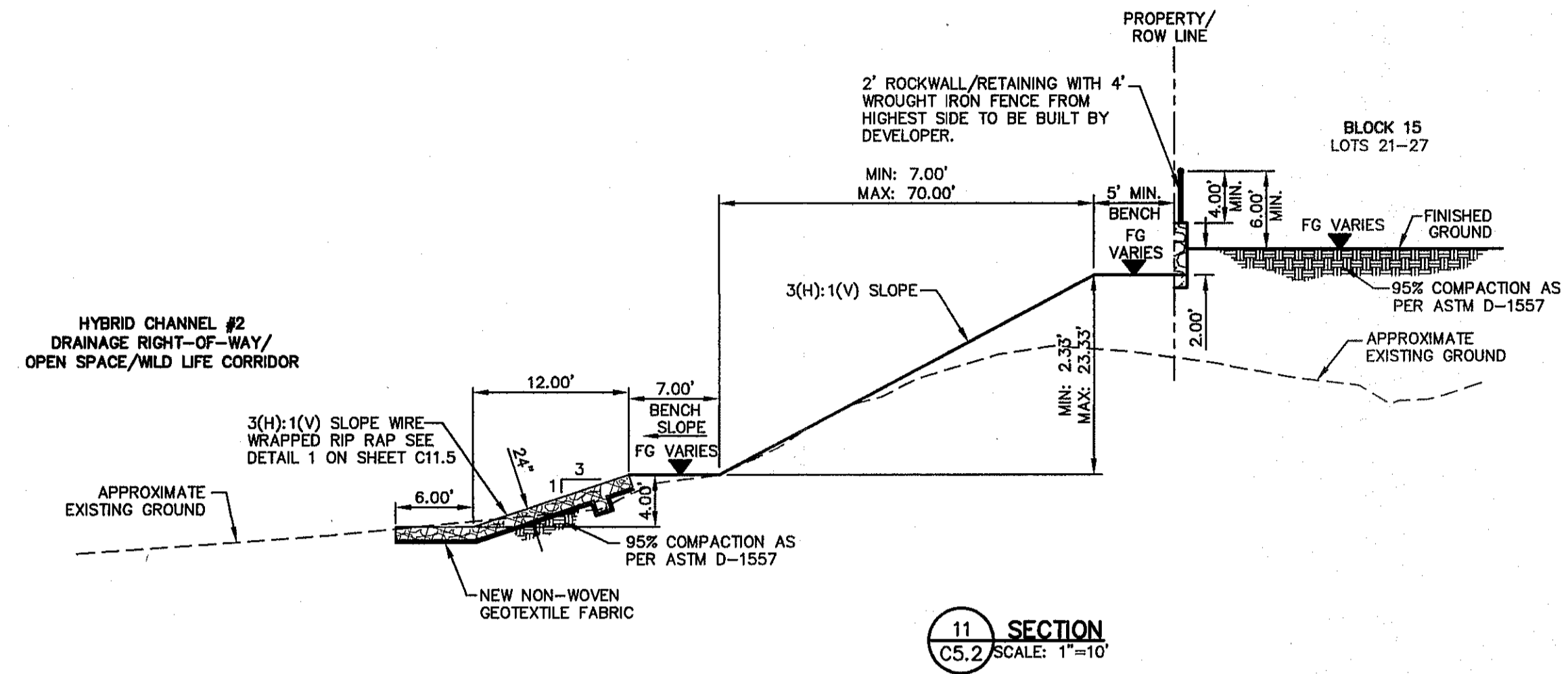
S:\3050_2004-01-10\DWG\CONSTRUCTION\DESIGN\Improvements\DESIGN\Sheet\CS.1-3.dwg, Model: 2/17/2015, 9:35:03 AM

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

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) 880-7200
ONECK PARTNERS	(915) 595-6918
AT&T	(800) 852-3786
U.S. SPRINT TELECOMM	(800) 521-0579
CITY OF EL PASO DEPARTMENT OF TRANSPORTATION (AFTER HOURS)	(915) 621-6750
	(915) 240-3220

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

REFERENCES - BENCHMARKS	
FOUND N.G.S. SURVEY MARKER STAMPED "CHINO 1987"	ELEVATION: 3905.83 (CITY OF EL PASO VERTICAL DATUM)
3945.78 (NAVD 88 DATUM)	
TIE TO THE PROJECT BENCHMARK IS N537909"W, 4.008.83	
CORNER OF TRACT 11, HEULEL D. MANDY SURVEY, NO. 238	
DATE	REVISIONS
BY	



CS&A
 engineers • architects • planners
 TEXAS REGISTERED ENGINEERING FIRM F-654
 4712 Woodrow Bean, Ste. F El Paso, TX 79924
 Office: 915.544.8322 Fax: 915.544.5203 www.csandpa.com

ENGINEER'S SEAL
 ALAN D. HERRERA
 10414

SCALE:
 Horizontal: AS SHOWN
 Vertical: 1"=4'
 Contour Interval: 1' / 4'
 DATE: DECEMBER 2014
 DESIGN BY: A.H.
 DRAWN BY: J.H.
 CHKD. BY: J.L.A.
 APP'D. BY: J.L.A.
 JOB No. 2060-028-1D

PROJECT TITLE
 DESERT SPRINGS UNIT FOUR
 SUBDIVISION IMPROVEMENTS

SHEET TITLE
 TYPICAL GRADING SECTIONS
 (SHEET 2 OF 3)
 SHEET NO.

C5.2



5:2025/2025-2025-2025 Construction Services/Improvements/Plan/Unit 4/2025-01-10 05:14:23 specifications, Model: 2/17/2019 9:26:22 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
ONEOK PARTNERS	(915) 595-6919
AT&T	(800) 852-3786
U.S. SPRINT TELECOMM	(800) 521-0579
CITY OF EL PASO DEPARTMENT OF TRANSPORTATION	(915) 621-6750
(AFTER HOURS)	(915) 240-3220

WARNING I BEFORE YOU DIG

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

FOR FIELD LOCATING EXISTING UTILITIES

GENERAL NOTES:

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

DATE	REVISIONS	BY

DESIGNER'S SEAL

Professional Engineer
Civil Engineering
State of Texas
No. 10414
Valm D. Herrera

ENGINEER'S SEAL

Professional Engineer
Civil Engineering
State of Texas
No. 10414
Valm D. Herrera

SCALE

Horizontal: 1" = 10'
Vertical: 1" = 4'
Contour Interval: 1' / 4'

DATE: DECEMBER 2014
DESIGN BY: A.H.
DRAWN BY: J.H.
CHKD. BY: J.L.A.
APPD. BY: J.L.A.
JOB No. 2060-028-ID

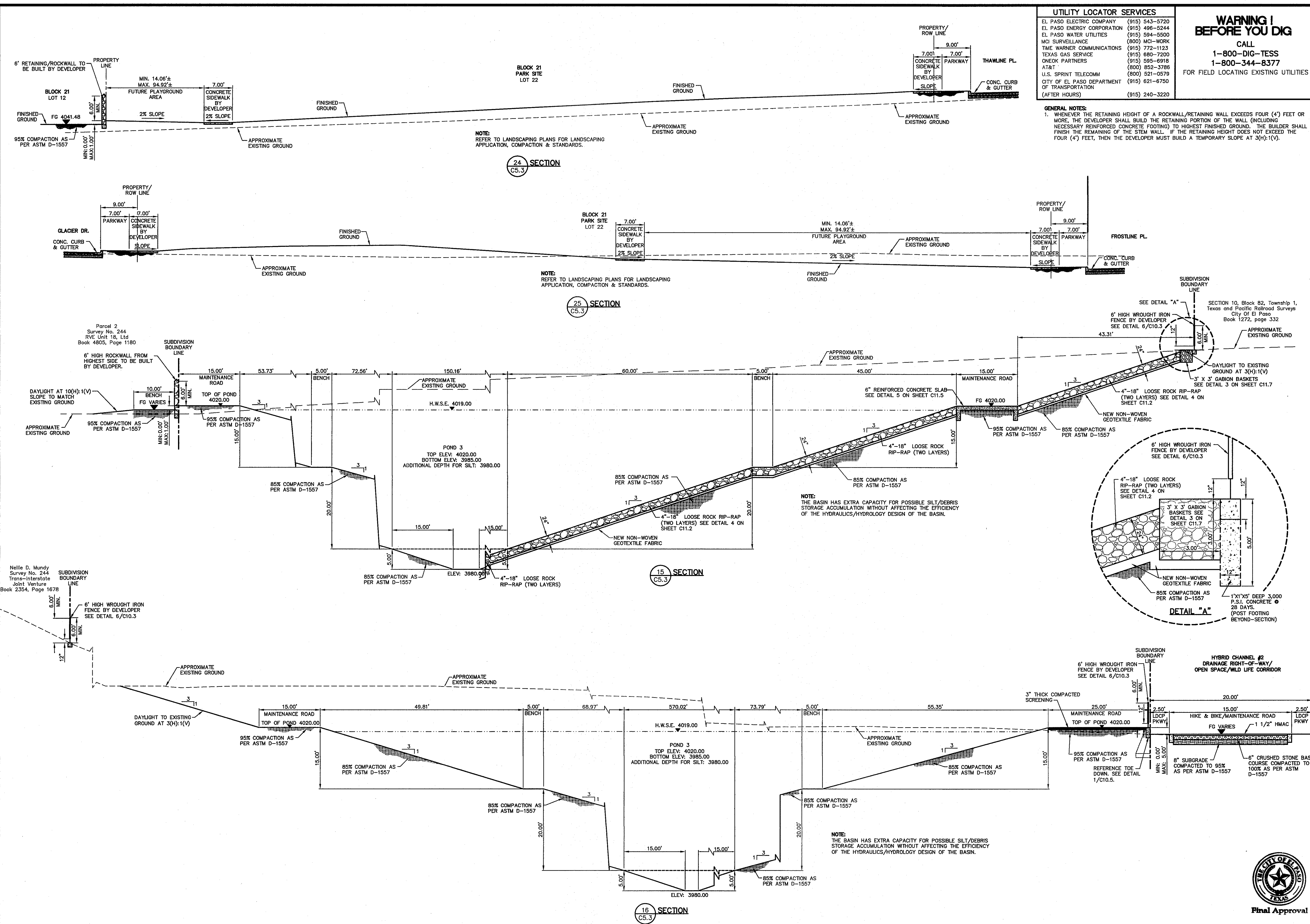
PROJECT TITLE

DESERT SPRINGS UNIT FOUR
SUBDIVISION IMPROVEMENTS

SHEET TITLE

TYPICAL GRADING SECTIONS
(SHEET 3 OF 3)
SHEET NO.

C5.3



A:\2014\2014-01-14\DESIGN\Drawings\Improvements_Plan\Unit 4\C5.3.dwg, Date: 2/17/2015, 9:36:45 AM
 Nellie D. Mundy Survey No. 244 Trans-Interstate Joint Venture Book 2354, Page 1678
 Parcel 2 Survey No. 244 RVE Unit 18, Ltd Book 4805, Page 1180
 FOUND N.G.S. SURVEY MARKER CHNO 1980* ELEVATION: 3935.83 (CITY OF EL PASO VERTICAL DATUM SHOW) (NAVD 88 DATUM) 3945.78 (NAVD 83 DATUM) TIE TO THE PROJECT BENCHMARK IS NESTED 99' W, 4.008' S FEET FROM A 1/2" INCH BENCH FOUND FOR THE NORTHWEST CORNER OF TRACT 11, HELENE D. JORDAN SURVEY NO. 853

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
ONEOK PARTNERS	(915) 595-6918
AT&T	(800) 852-3786
U.S. SPRINT TELECOMM	(800) 521-0579
CITY OF EL PASO DEPARTMENT OF TRANSPORTATION	(915) 621-6750
(AFTER HOURS)	(915) 240-3220

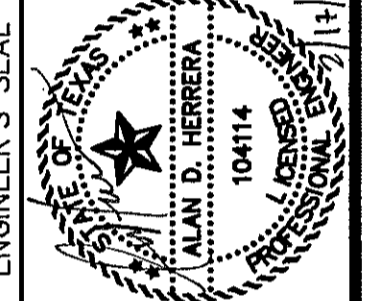
WARNING I BEFORE YOU DIG

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

FOR FIELD LOCATING EXISTING UTILITIES

REFERENCES - BENCHMARKS	DATE	REVISIONS	BY
FOUND N.G.S. SURVEY MARKER STAMPED "CHNO 1980" ELEVATION: 3935.83 (CITY OF EL PASO VERTICAL DATUM SHOWN) (NAVD 88 DATUM) 3945.78 (NGVD 29 DATUM)			
SEE TO THE PROJECT BENCHMARK IS N33°09'09"W, 4008.93 FEET FROM A 1/2 INCH REBAR FOUND FOR THE NORTHWEST CORNER OF TRACT 11, NEBLE D. MURPHY SURVEY NO. 239			

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

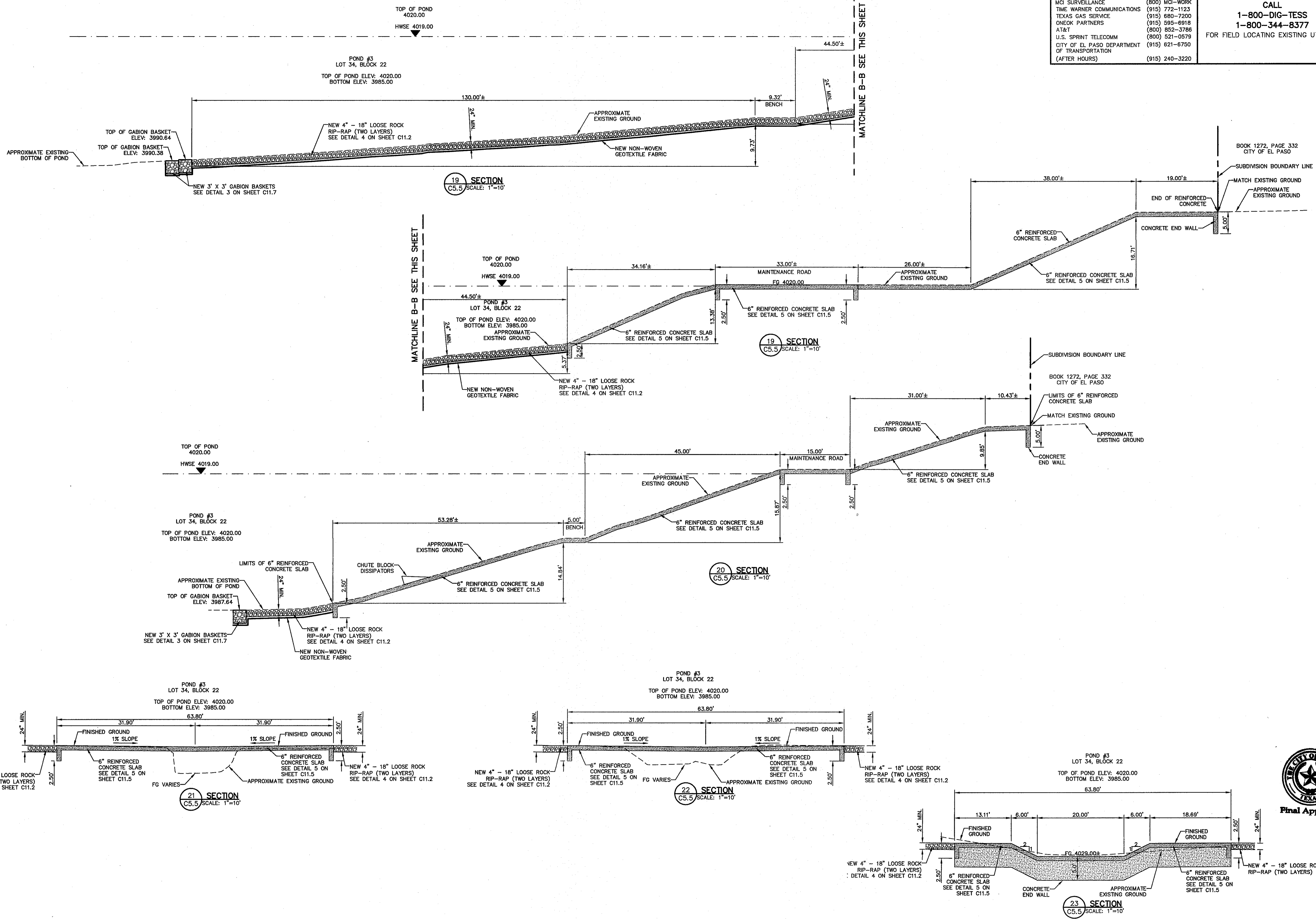


SCALE: AS SHOWN
 Horizontal: AS SHOWN
 Vertical: AS SHOWN
 Contour Interval: N/A
 DATE: DECEMBER 2014
 DESIGN BY: A.H.
 DRAWN BY: J.H.
 CHKD. BY: J.L.A.
 APPVD. BY: J.L.A.
 JOB No. 2060-028-LD

PROJECT TITLE
DESERT SPRINGS UNIT FOUR
SUBDIVISION IMPROVEMENTS

SHEET TITLE
POND GRADING SECTIONS
 (SHEET 2 OF 2)
 SHEET NO.

C5.5



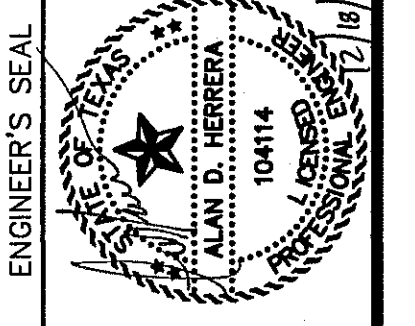
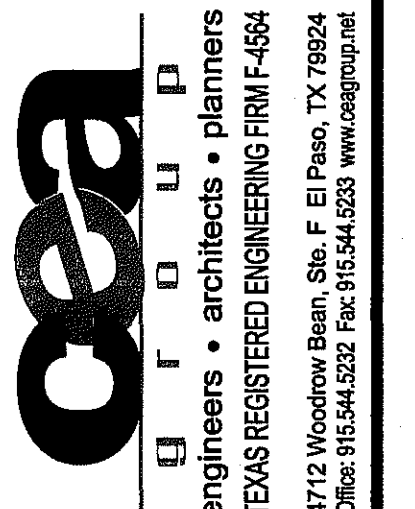
C:\Users\jgibson\Documents\Projects\DesertSprings\SubdivisionImprovements\Drawings\Sheet\SubdivisionImprovements-C5.5.dwg, 2/27/2015 10:32:18 AM

GENERAL NOTES:
1. REFER TO LANDSCAPING PLANS FOR LANDSCAPING APPLICATION, COMPACTION & STANDARDS.

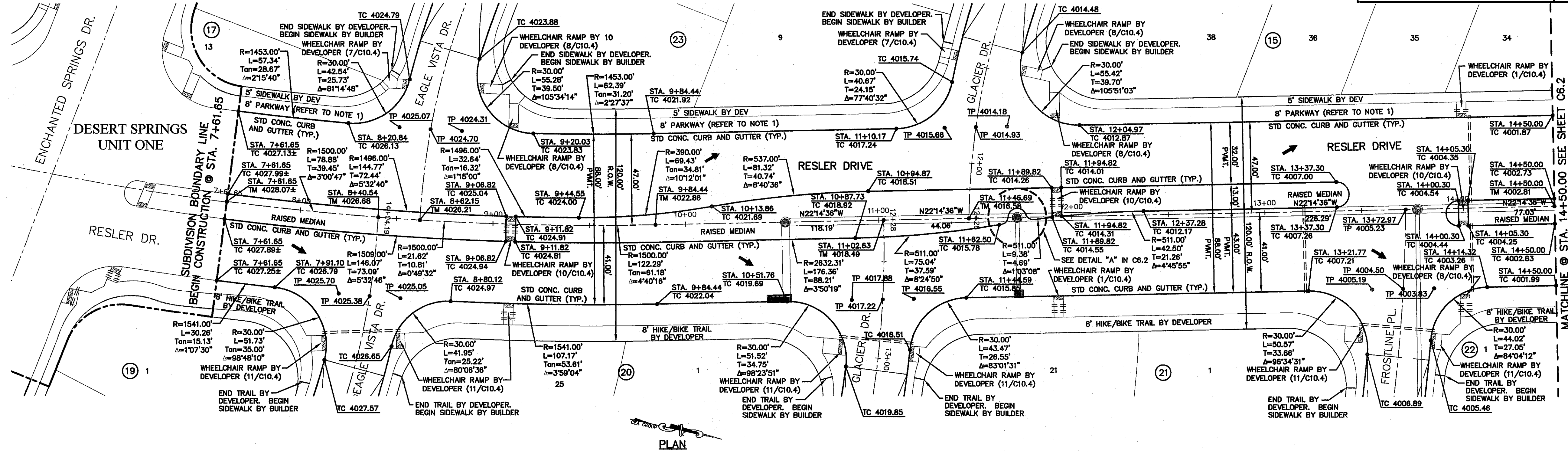
UTILITY LOCATOR SERVICES	
EL PASO ELECTRIC COMPANY	(915) 543-5720
EL PASO ENERGY CORPORATION	(915) 496-5244
EL PASO WATER UTILITIES	(915) 584-5500
MCI SURVEILLANCE	(800) MCI-WORK
TIME WARNER COMMUNICATIONS	(915) 772-1123
TEXAS GAS SERVICE	(915) 880-7200
ONEOK PARTNERS	(915) 595-0918
AT&T	(800) 852-3768
U.S. SPRINT TELECOM	(800) 521-0579
CITY OF EL PASO DEPARTMENT OF TRANSPORTATION (AFTER HOURS)	(915) 621-6750
(915) 240-3220	

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

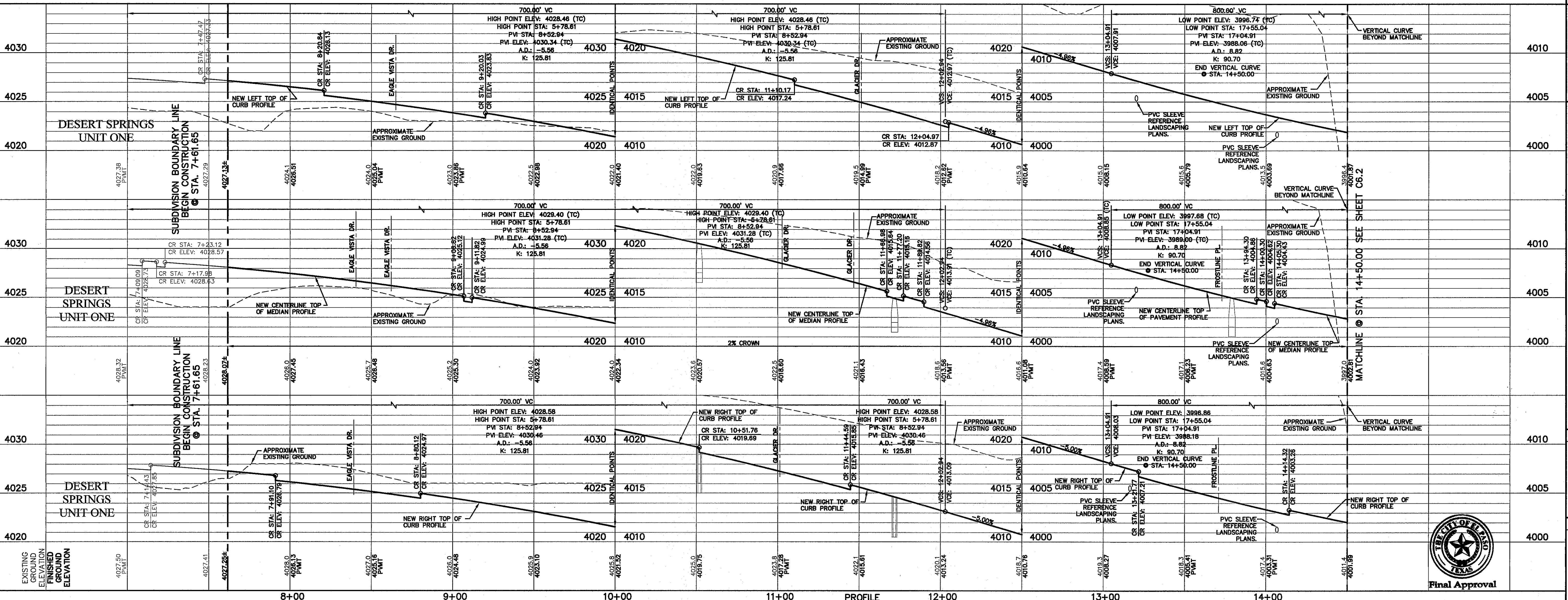
REFERENCES - BENCHMARKS	
FOUND N.G.S. SURVEY MARKER STAMPE "CHNO 1980"	ELEVATION: 3925.93 (CITY OF EL PASO VERTICAL DATUM)
3945.91 (NAVD 88 DATUM)	TIE TO THE PROJECT BENCHMARK IS N53°09'09" W, 4.00853 CORNER OF TRACT 11, HEULE D. MUNDY SURVEY, TR. 238
DATE	REVISIONS



SCALE: 1"=30'
Horizontal: 1"=30'
Vertical: Contour Interval: 1' (2' in V)
DATE: DECEMBER 2014
DESIGN BY: A.H.
DRAWN BY: J.H.
CHKD. BY: J.L.A.
APPROV. BY: J.L.A.
JOB No. 2080-028-1D



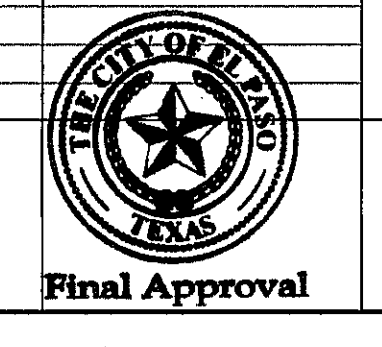
LEGEND:
--- WHEELCHAIR RAMP BY DEVELOPER
- - - - - PVC SLEEVE REFERENCE LANDSCAPING PLANS



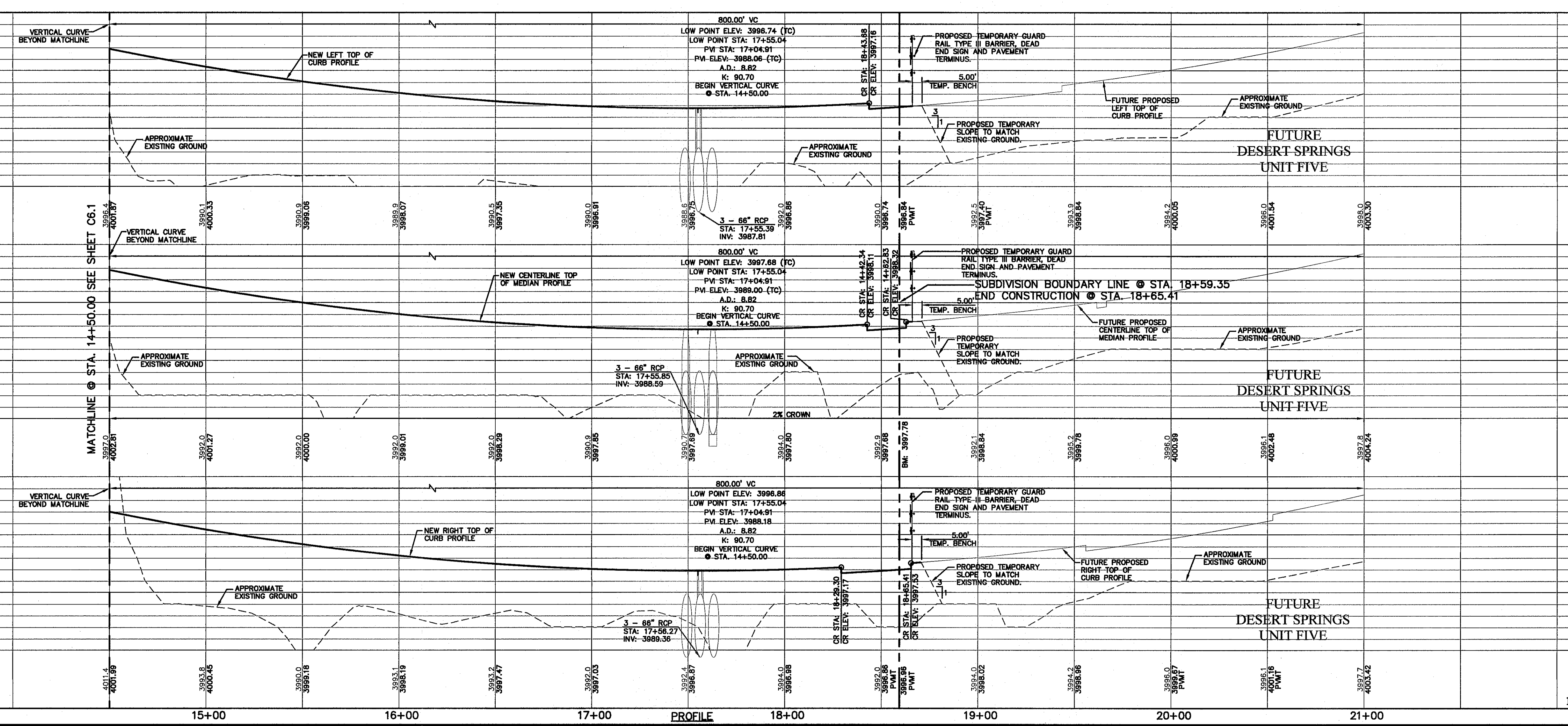
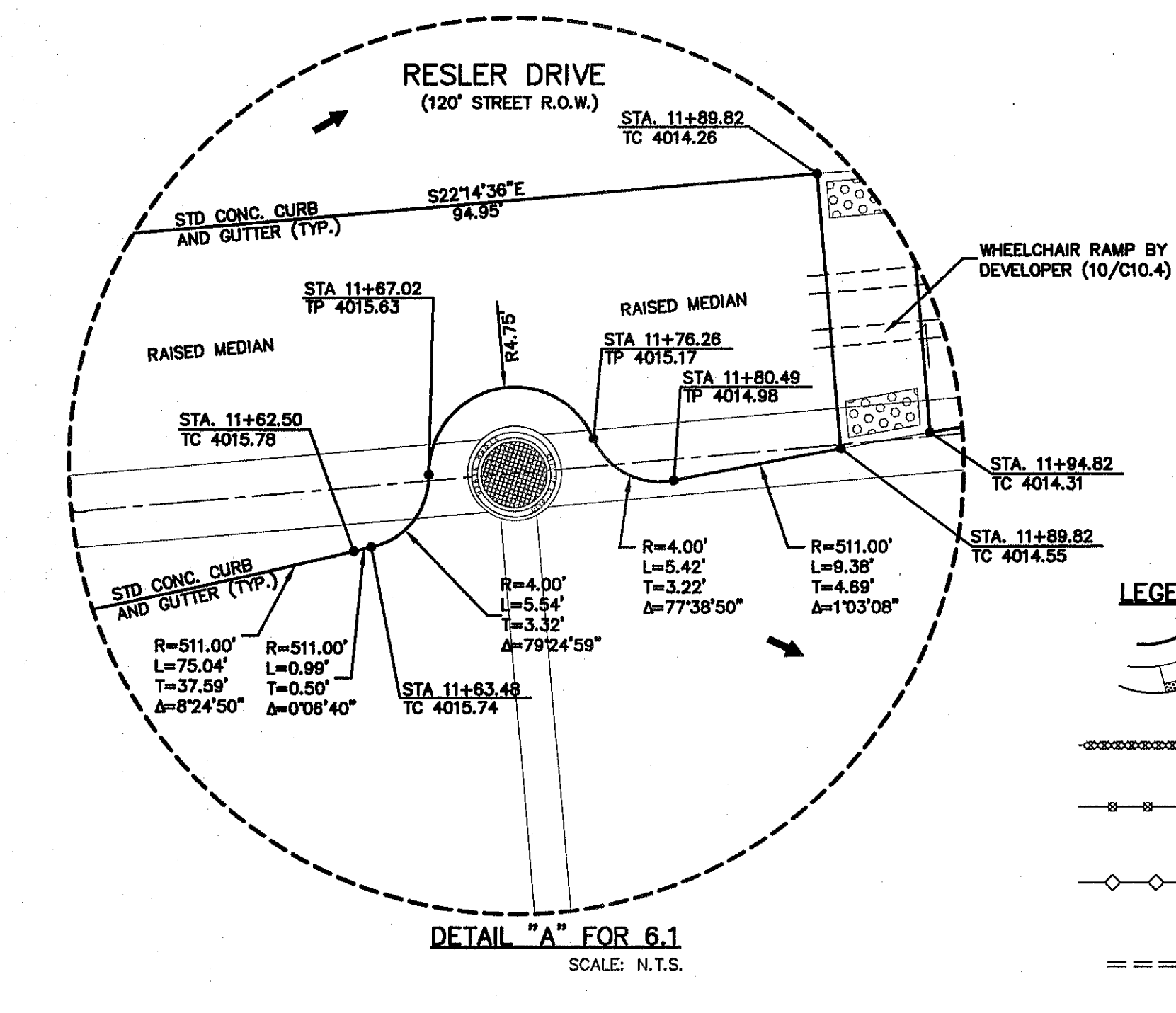
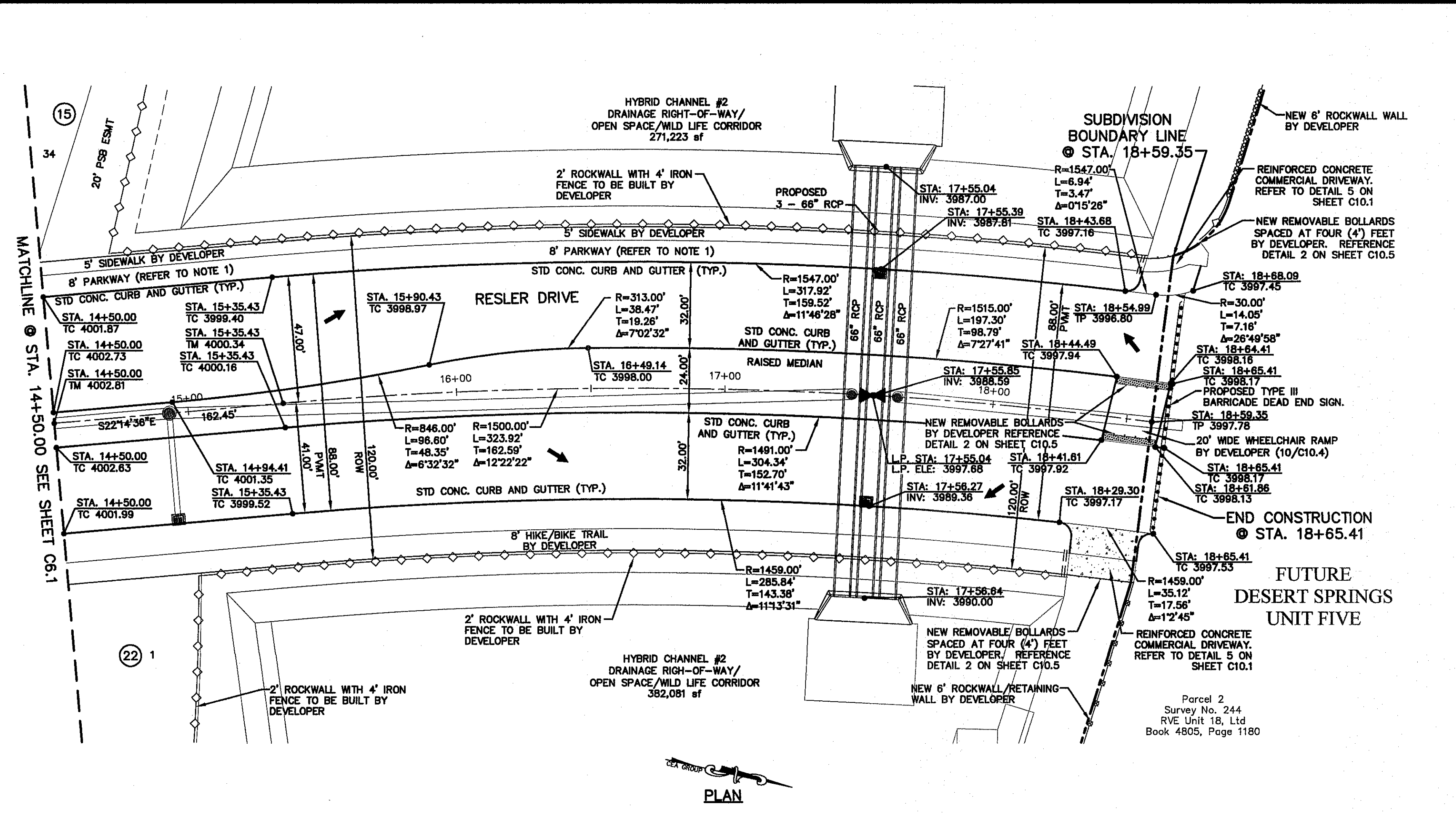
PROJECT TITLE
DESERT SPRINGS UNIT FOUR
SUBDIVISION IMPROVEMENTS

SHEET TITLE
RESLER DR.
PLAN & PROFILE
FROM STA. 7+61.65
TO STA. 14+50.00

SHEET NO.
C6.1



S:\2015\2015-03-10\03-10-13-D_C6.1-2_Plan_Profile.dwg, Model: 12/19/2014, 8:33:03 AM



REFERENCES - BENCHMARKS
 FOUND N.G.S. SURVEY MARKER "CHINO 1980" ELEVATION: 3946.11 (NAVD 88 DATUM)
 3946.11 (NAVD 88 DATUM)
 3945.78 (NAVD 29 DATUM)
 3945.78 (NAVD 29 DATUM)
 100 FEET FROM 1/2" H.P. REBAR FOUND FOR THE NORTHWEST CORNER OF TRACT 11, NELLIE D. MANDY SURVEY NO. 239

ENGINEER'S SEAL
 ALAN D. HERRERA
 10414
 TEXAS REGISTERED ENGINEERING FIRM F-454

DESERT SPRINGS UNIT FOUR
SUBDIVISION IMPROVEMENTS

PROJECT TITLE

SHEET TITLE
 RESLER DR. PLAN & PROFILE FROM STA. 14+50.00 TO STA. 18+59.35

SHEET NO.
 C6.2

DATE: DECEMBER 2014
DESIGN BY: A.H.
DRAWN BY: J.L.A.
CHKD. BY: J.L.A.
APP'D. BY: J.L.A.
 JOB NO. 2060-028-1D

SCALE: 1"=30'
 Horizontal: 1"=50'
 Vertical: 1"=5'
 Contour Interval: N/A

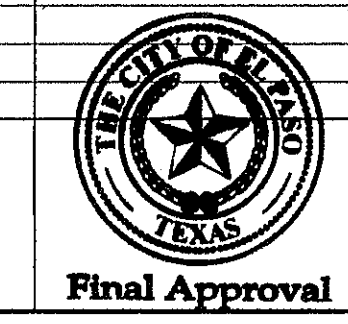
REVISIONS

BY

DATE

REVISIONS

S:\2006\306-01-10\DWG\Construction\Drawings\Improvements\Plan\Resler\17-18-14.dwg, 12/16/2014, 8:33:52 AM



GENERAL NOTES:
 1. REFER TO LANDSCAPING PLANS FOR LANDSCAPING APPLICATION, COMPACTION & STANDARDS.

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
ONEOK PARTNERS	(915) 595-6918
AT&T	(800) 852-3786
U.S. SPRINT TELECOMM	(800) 521-0579
CITY OF EL PASO DEPARTMENT OF TRANSPORTATION	(915) 621-6750
(AFTER HOURS)	(915) 240-3220

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

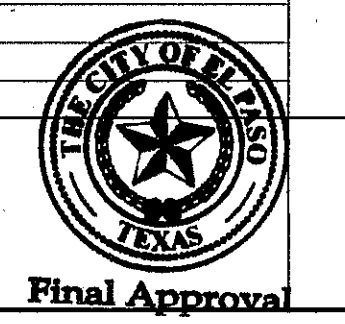
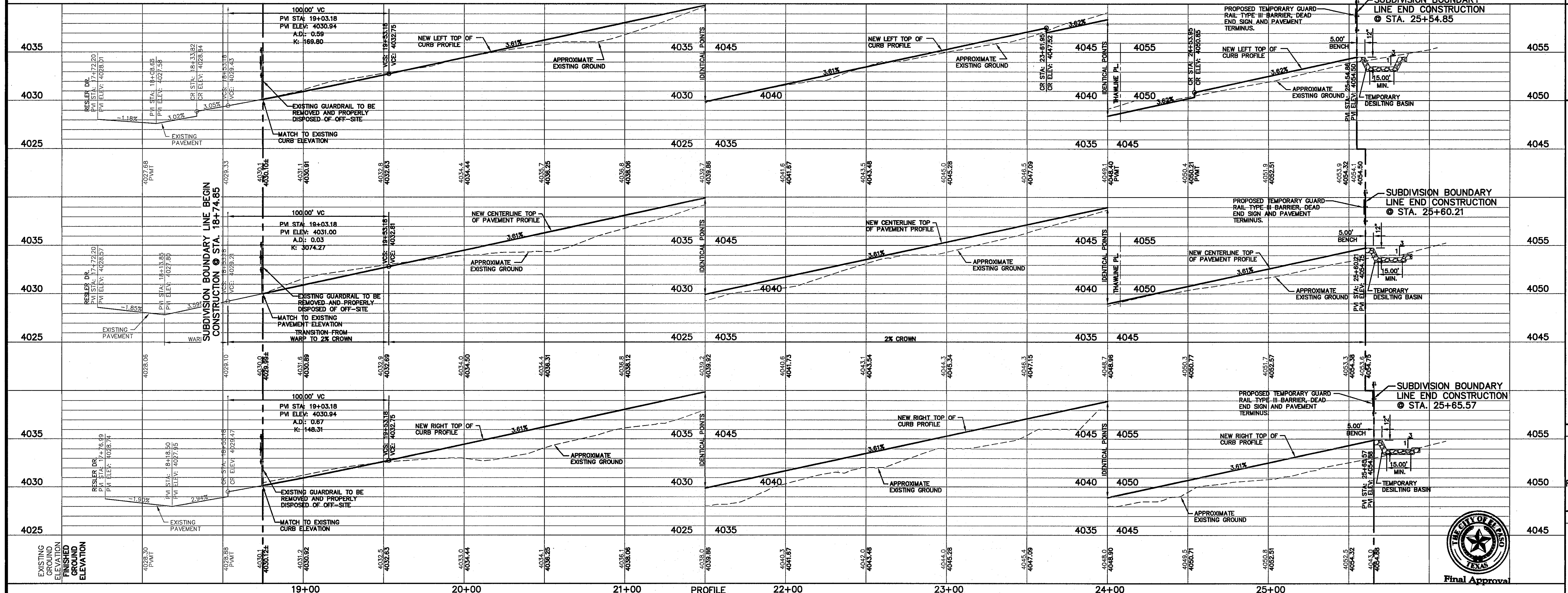
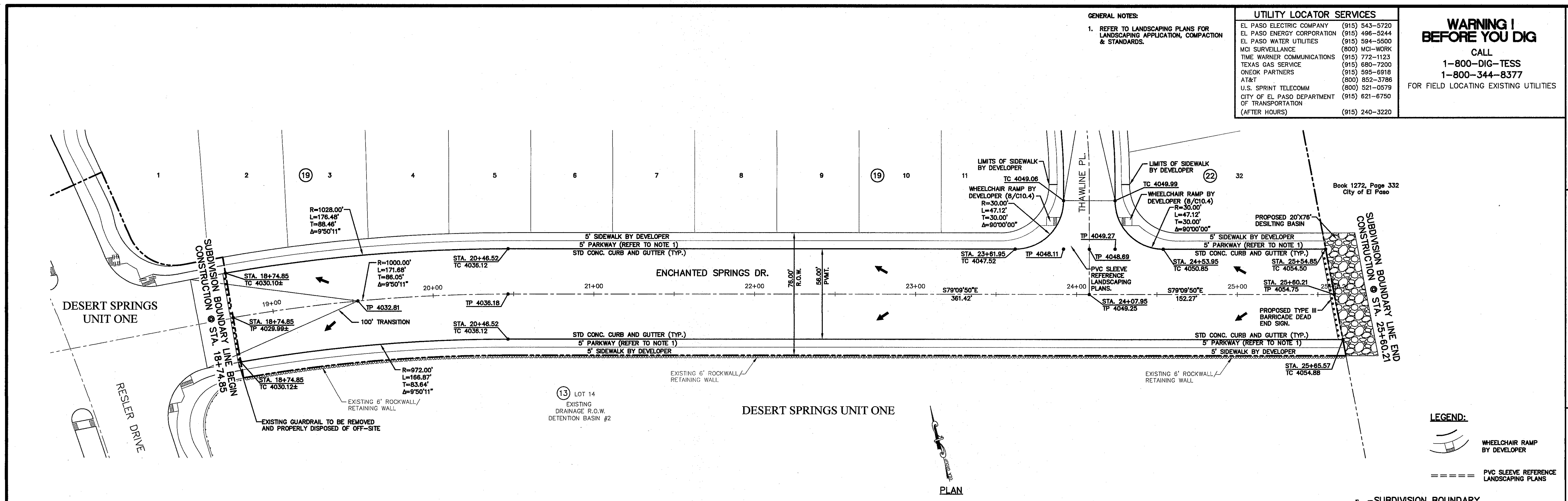
DATE	REVISIONS	BY

REFERENCES - BENCHMARKS
 FOUND N.C.S. SURVEY MARKER "CHINO 1980"
 ELEVATION: 3955.93 (CITY OF EL PASO VERTICAL DATUM)
 3946.71 (NAVD 88 DATUM)
 3945.78 (NAVD 29 DATUM)
 TIE TO THE PROJECT BENCHMARK IS N53°09'09"W, 2,008.93
 CORNER OF TRAG. 11, HELLE D. MUNDY SURVEY NO. 239

CS&A
 engineers • architects • planners
 TEXAS REGISTERED ENGINEERING FIRM F-454
 4712 Woodrow Bess, Ste. F, El Paso, TX 79904
 Office: 915.544.6222 Fax: 915.544.6228 www.csandapl.com

ENGINEER'S SEAL
 SCALE: Horizontal: 1"=30'
 Vertical: 1"=5'
 Contour Interval: N/A
 DATE: DECEMBER 2014
 DESIGN BY: A.H.
 DRAWN BY: J.H.
 CHECKED BY: J.L.A.
 APPROVED BY: J.L.A.
 JOB No. 2060-028-ID

PROJECT TITLE
DESERT SPRINGS UNIT FOUR
SUBDIVISION IMPROVEMENTS
 SHEET TITLE
ENCHANTED SPRINGS DR. PLAN & PROFILE FROM STA. 18+74.85 TO STA. 25+60.21
 SHEET NO.
C6.3



S:\2014\2060-028-ID\0603\Construction - Drawings\Improvements - Plans\Plan - C6.3.dwg - Enchanted Springs.dwg, Mod: 12/18/2014 9:37:24 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
ONEOK PARTNERS	(915) 595-6918
AT&T	(800) 852-3786
U.S. SPRINT TELECOMM	(800) 521-0579
CITY OF EL PASO DEPARTMENT OF TRANSPORTATION	(915) 621-6750
(AFTER HOURS)	(915) 240-3220

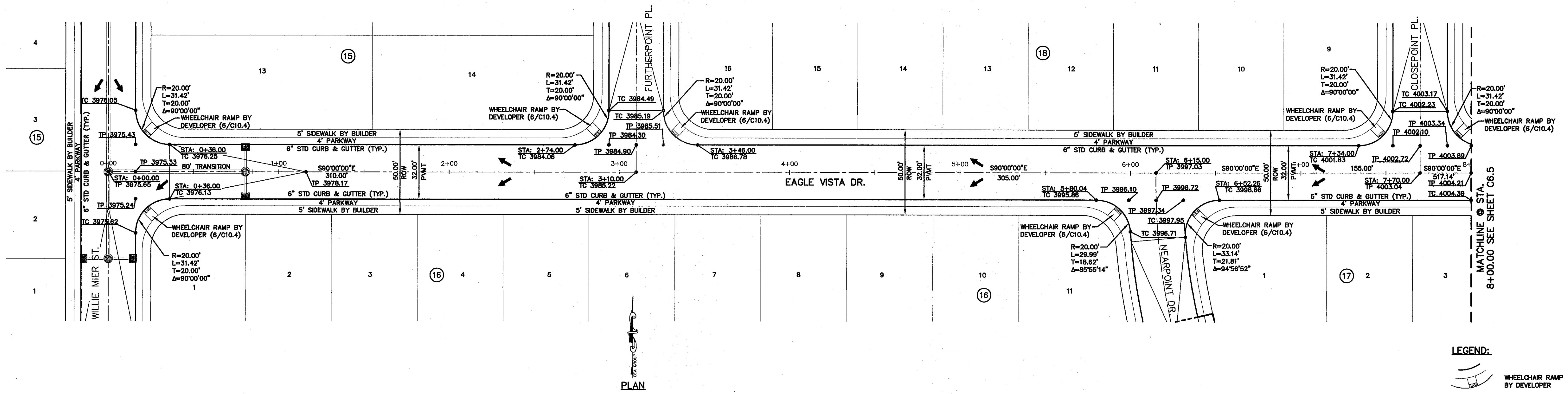
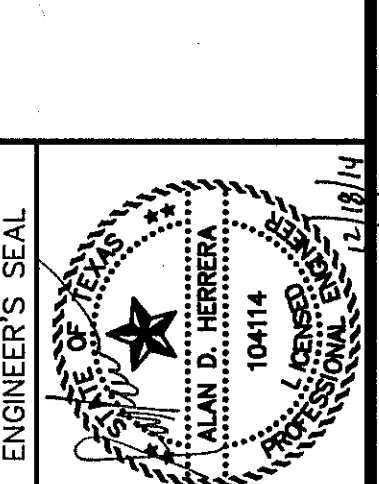
WARNING!
BEFORE YOU DIG

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

FOR FIELD LOCATING EXISTING UTILITIES

DATE	REVISIONS	BY

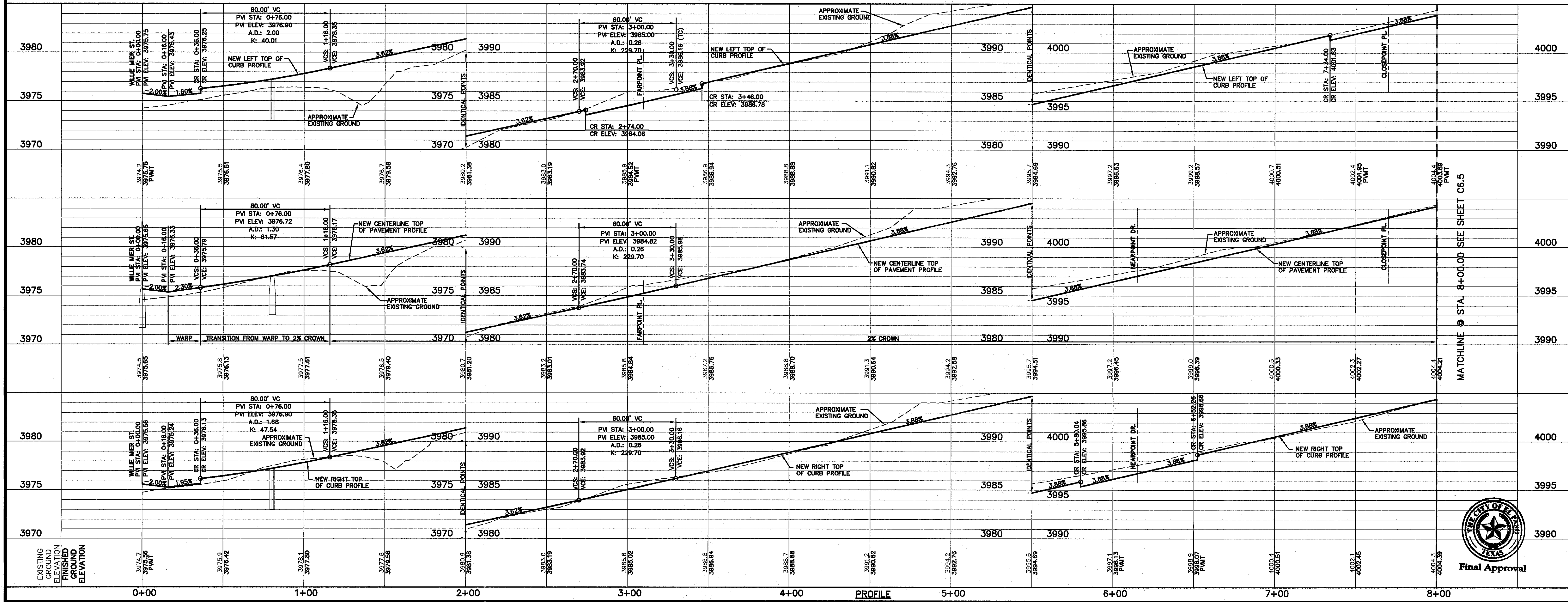
FOUND N.G.S. SURVEY MARKER "CHINO 1980"
ELEVATION: 3953.83 (CITY OF EL PASO VERTICAL DATUM)
3946.71 (NAVD 88 DATUM)
3945.78 (NAVD 29 DATUM)
TIE TO THE PROJECT BENCHMARK IS N353°09'W, 2088.93
CORNER OF TRACT 11, NELLE D. MUNDY SURVEY NO. 239



LEGEND:

WHEELCHAIR RAMP BY DEVELOPER

PLAN



SCALE: 1"=30'
Horizontal: 1"=50'
Vertical: 1"=5'
Contour Interval: N/A

DATE: DECEMBER 2014
DESIGN BY: A.H.
DRAWN BY: J.H.
APP'D. BY: J.L.A.
JOB NO. 2060-028-LD

PROJECT TITLE
DESERT SPRINGS UNIT FOUR
SUBDIVISION IMPROVEMENTS

SHEET TITLE
EAGLE VISTA DR.
PLAN & PROFILE
FROM STA. 0+00.00
TO STA. 8+00.00

SHEET NO.

C6.4



Final Approval

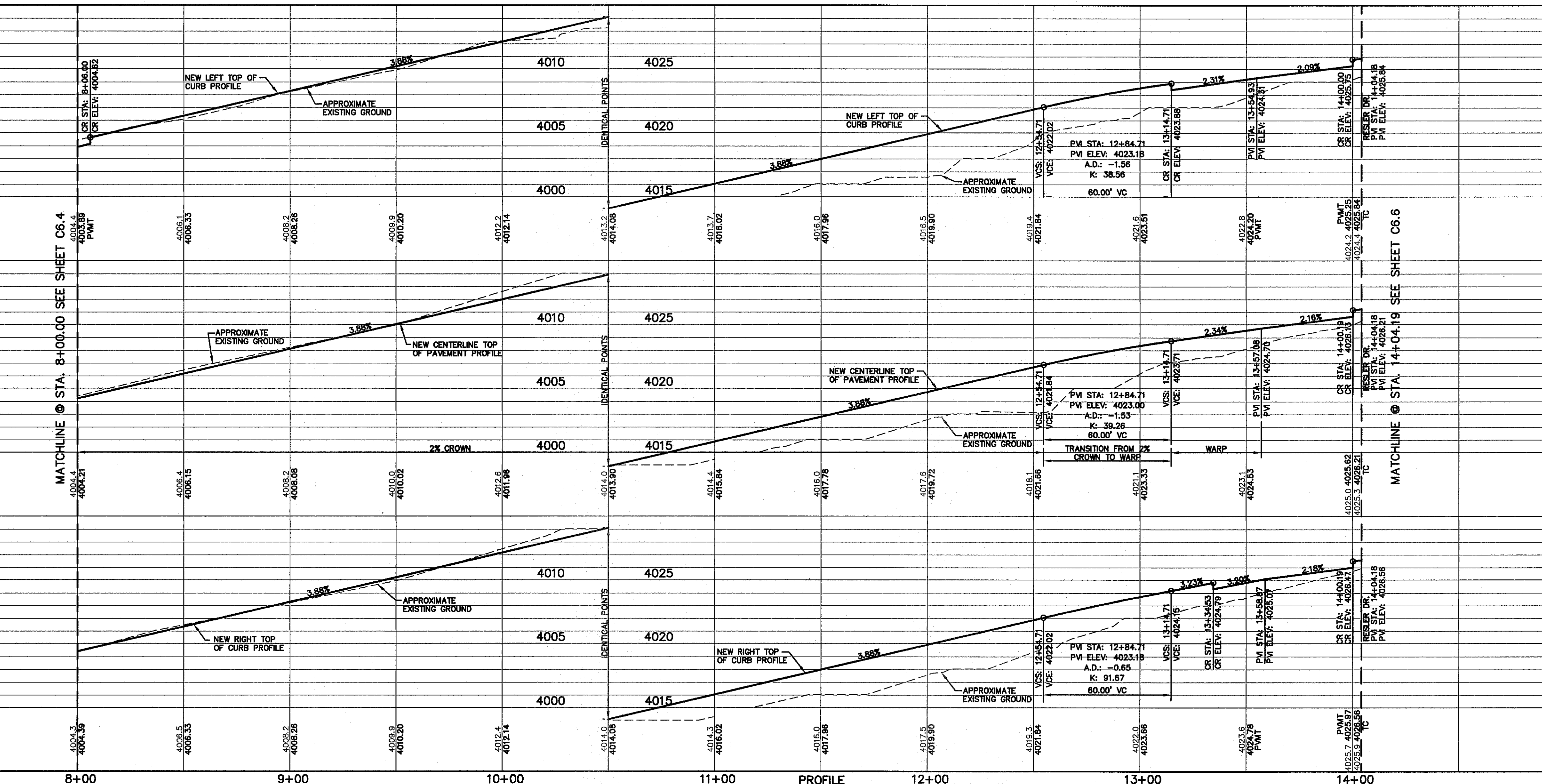
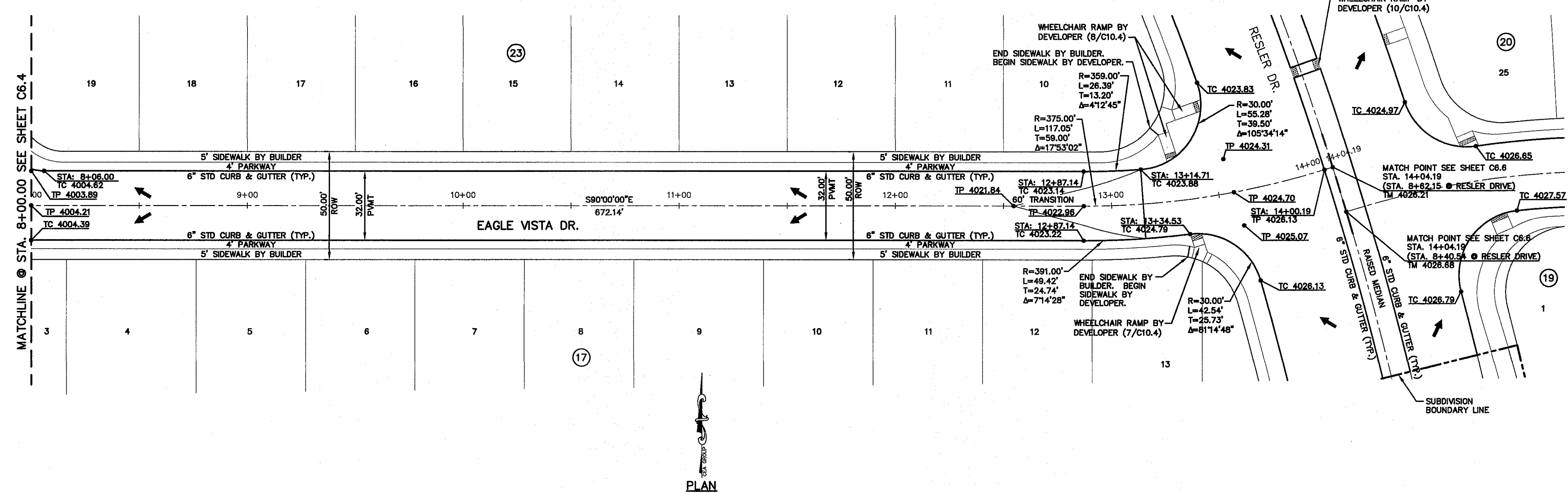
A:\2010\2010-01-10\01003\Construction\Drawings\Improvement Plans\Unit 4\2010-01-10_01-04-C6.4-Profile.dwg, Model: 12/18/2014, 9:40:17 AM

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
ONEOK PARTNERS	(915) 595-0918
AT&T	(800) 859-3786
U.S. SPRINT TELECOMM	(800) 521-0579
CITY OF EL PASO DEPARTMENT OF TRANSPORTATION	(915) 621-6750
(AFTER HOURS)	(915) 240-3220

**WARNING !
BEFORE YOU DIG**

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

FOR FIELD LOCATING EXISTING UTILITIES



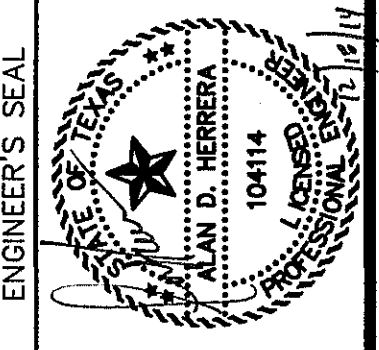
REFERENCES - BENCHMARKS	DATE	REVISIONS	BY
FOUND N.G.S. SURVEY MARKER STAMPED "CHINO 1980" ELEVATION: 3946.11 (NAVD 88 DATUM)			
3946.78 (NAVD 88 DATUM)			
3945.78 (NAVD 88 DATUM)			
SEE TO THE PROJECT BENCHMARK IS NEARBY NO. 239			
CORNER OF TRACT 11, NELLE D. MANDY SURVEY NO. 239			

ceea

engineers • architects • planners

TEXAS REGISTERED ENGINEERING FIRM F-4684

4712 Woodrow Bean, Ste. F, El Paso, TX 79924
 Office: 915.594.8322 Fax: 915.594.8325 www.ceea.com



SCALE: 1"=30'
 Horizontal: 1"=5'
 Vertical: N/A
 Contour Interval: N/A
 DATE: DECEMBER 2014
 DESIGN BY: A.H.
 DRAWN BY: J.H.A.
 CHECKED BY: J.L.A.
 APPROVED BY: J.L.A.
 JOB NO. 2009-028-1D

PROJECT TITLE

**DESERT SPRINGS UNIT FOUR
SUBDIVISION IMPROVEMENTS**

SHEET TITLE

**EAGLE VISTA DR.
PLAN & PROFILE
FROM STA. 8+00.00
TO STA. 14+04.19**

SHEET NO.

C6.5

Final Approval

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
DNEOK PARTNERS	(915) 595-6918
AT&T	(800) 852-3766
U.S. SPRINT TELECOMM	(800) 521-0579
CITY OF EL PASO DEPARTMENT OF TRANSPORTATION	(915) 621-6750
(AFTER HOURS)	(915) 240-3220

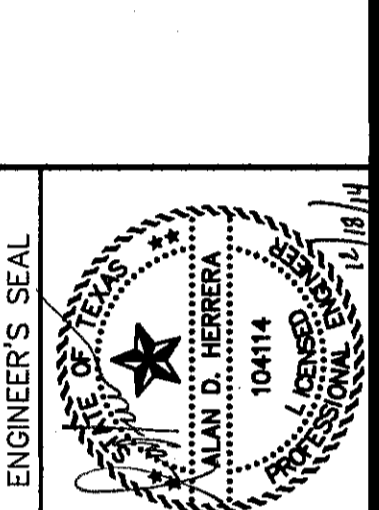
**WARNING !
BEFORE YOU DIG**

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

FOR FIELD LOCATING EXISTING UTILITIES

DATE	REVISIONS	BY

REFERENCES - BENCHMARKS
FOUND N.G.S. SURVEY MARKER STAMPED "CHINO 1980"
ELEVATION: 3925.93 (CITY OF EL PASO VERTICAL DATUM)
3945.71 (NAVD 88 DATUM)
3945.78 (NAVD 29 DATUM)
TIE TO THE PROJECT BENCHMARK IS N63399.09°W, 4.00R.83
CORNER OF TRACT 11, HELLIE D. MUNDY SURVEY, NO. 239



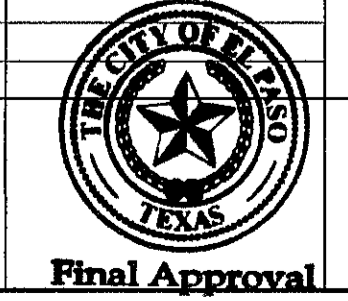
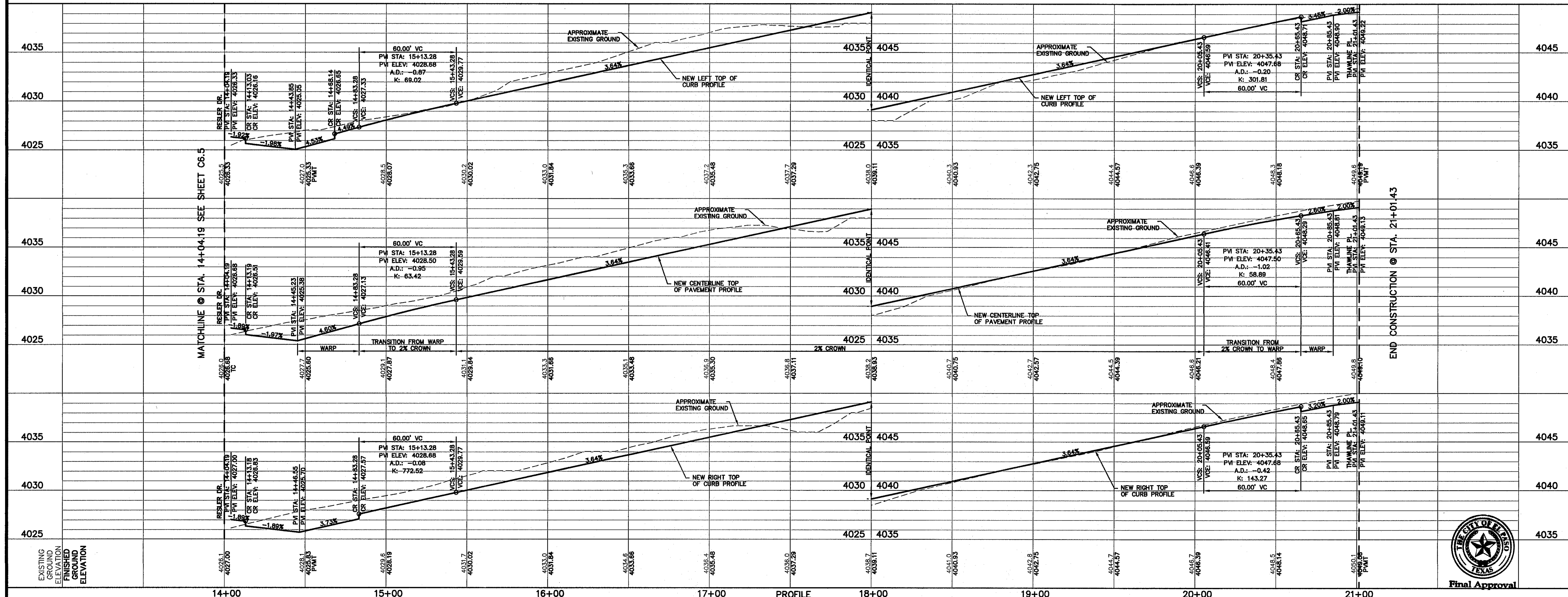
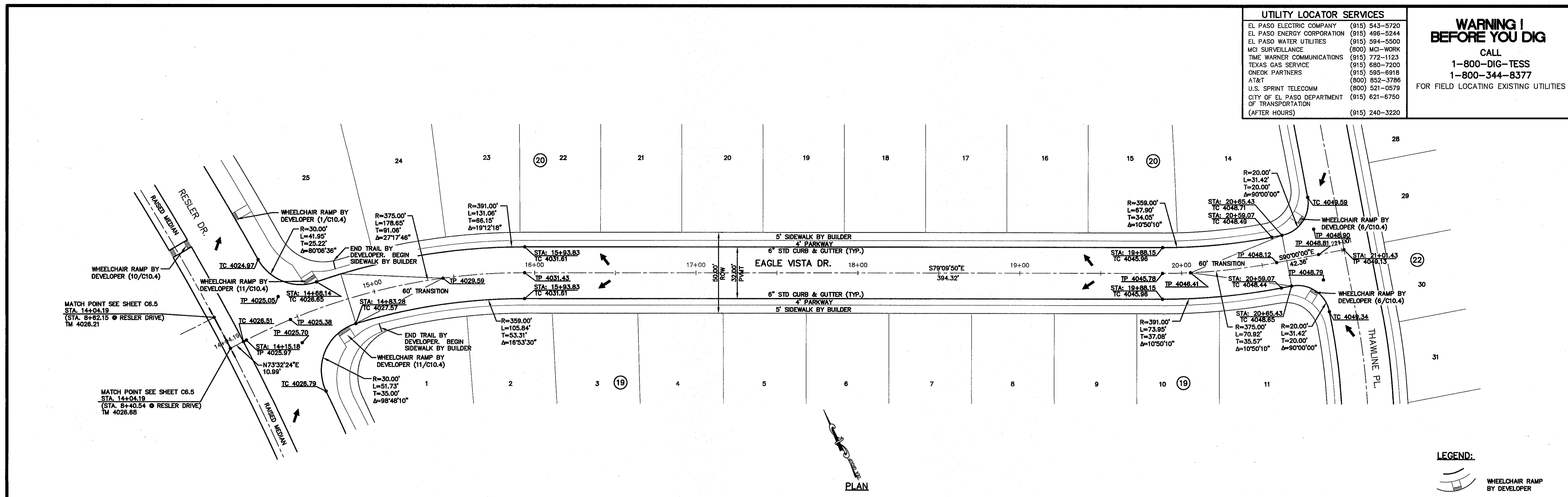
SCALE
Horizontal: 1" = 30'
Vertical: 1" = 5'
Contour Interval: N/A

DATE: DECEMBER 2014
DESIGN BY: A.H.
DRAWN BY: J.H.
CHKD. BY: J.L.A.
APPROV. BY: J.L.A.
JOB No. 2080-028-1D

PROJECT TITLE
DESERT SPRINGS UNIT FOUR
SUBDIVISION IMPROVEMENTS

SHEET TITLE
**EAGLE VISTA DR.
PLAN & PROFILE
FROM STA. 14+04.19
TO STA. 21+01.43**

SHEET NO.
C6.6



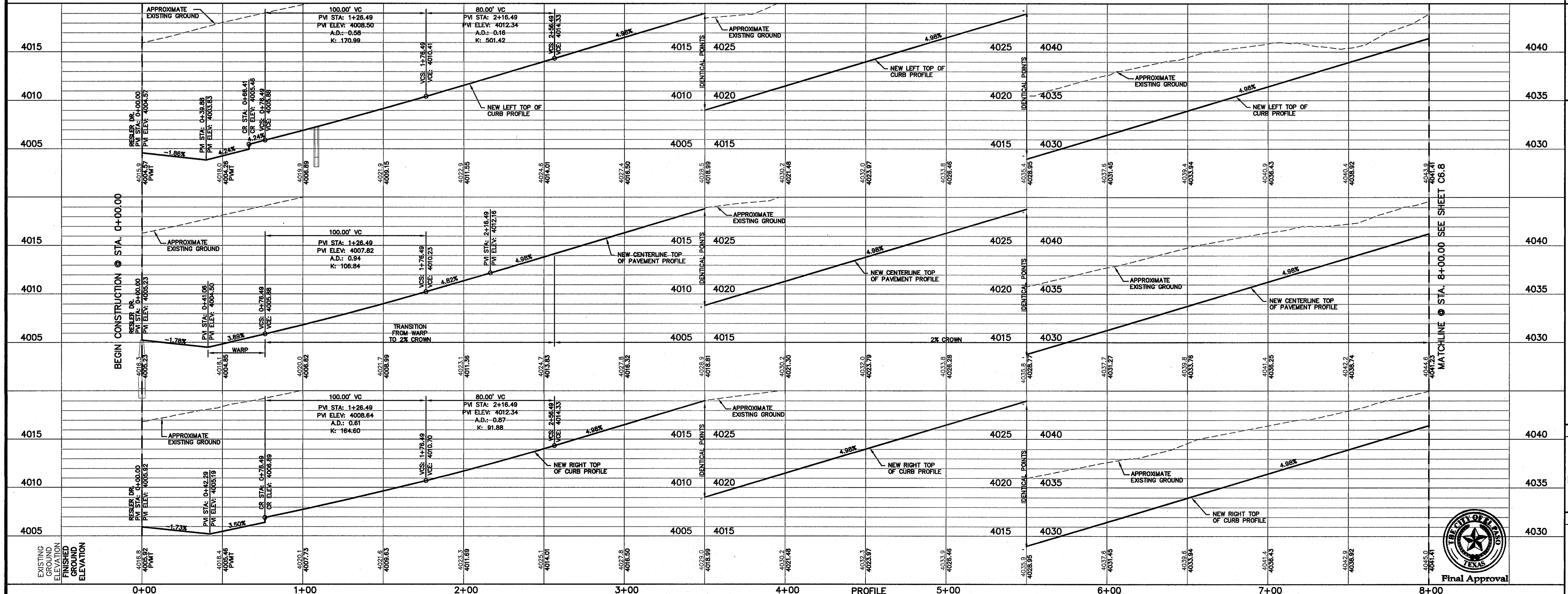
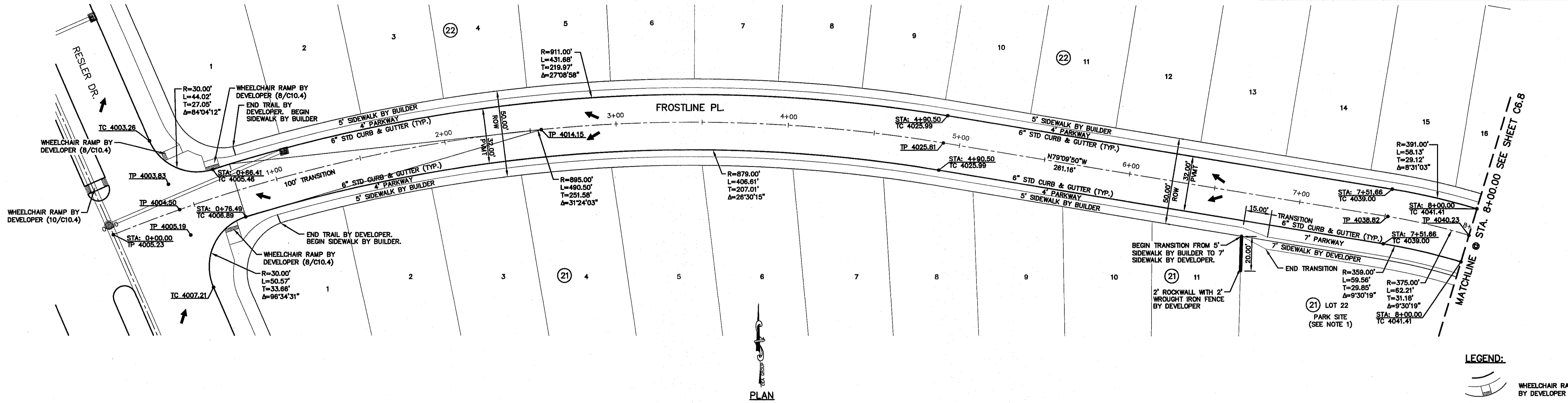
S:\2015\2080-015-1D\Drawings\Construction\Drawings\Improvement\Plan\Unit 4\2080-015-1D_56.6_pds.dwg - Eagle Vista, Unit 4, 12/19/2014 9:48:59 AM

GENERAL NOTES:
1. REFER TO LANDSCAPING PLANS FOR LANDSCAPING APPLICATION, COMPACTION & STANDARDS.

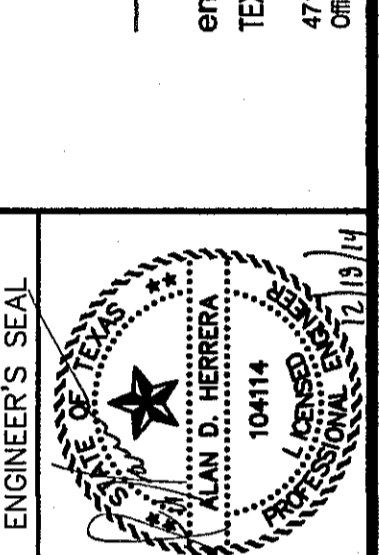
UTILITY LOCATOR SERVICES	
EL PASO ELECTRIC COMPANY	(915) 543-5720
EL PASO ENERGY CORPORATION	(915) 496-5244
EL PASO WATER UTILITIES	(915) 594-5500
MCI SURVEILLANCE	(800) MCI-WORK
TIME WARNER COMMUNICATIONS	(915) 772-1123
TEXAS GAS SERVICE	(915) 680-7200
ONEOK PARTNERS	(915) 995-6916
AT&T	(800) 852-3786
U.S. SPRINT TELECOMM	(800) 521-0579
CITY OF EL PASO DEPARTMENT OF TRANSPORTATION	(915) 621-6750
(AFTER HOURS)	(915) 240-3220

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

REFERENCES - BENCHMARKS
FOUND N.G.S. SURVEY MARKER STAMPED "CHINO 1980"
ELEVATION: 3955.93 (CITY OF EL PASO VERTICAL DATUM)
3946.11 (NAVD 88 DATUM)
3945.78 (NAVD 29 DATUM)
TIE TO THE PROJECT BENCHMARK IS N353°09'09"W, 4.008.83
CORNER OF TRACT 11, NELLE D. MUNDY SURVEY NO. 239
DATE _____ BY _____
REVISIONS _____



DESIGN BY: A.H.
DRAWN BY: J.H.
CHKD. BY: J.L.A.
APP'D. BY: J.L.A.
JOB No. 2060-028-1D



SCALE: 1"=30'
Horizontal: 1"=5'
Vertical: N/A
Contour Interval: N/A
DATE: DECEMBER 2014
DESIGN BY: A.H.
DRAWN BY: J.H.
CHKD. BY: J.L.A.
APP'D. BY: J.L.A.
JOB No. 2060-028-1D

PROJECT TITLE
DESERT SPRINGS UNIT FOUR
SUBDIVISION IMPROVEMENTS

SHEET TITLE
FROSTLINE PL. PLAN & PROFILE FROM STA. 0+00.00 TO STA. 8+00.00

SHEET NO.
C6.7

Final Approval

S:\2060\2060-028-1D\028\Construction Drawings\Improvement Plans\Unit 4\2060-028-1D_C6.7-C6.8_Frostline & Benchmarks.dwg, 12/16/2014 9:51:04 AM

GENERAL NOTES:
1. REFER TO LANDSCAPING PLANS FOR LANDSCAPING APPLICATION, COMPACTION & STANDARDS.

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
ONEOK PARTNERS	(915) 585-8918
AT&T	(800) 852-3786
U.S. SPRINT TELECOMM	(800) 521-0579
CITY OF EL PASO DEPARTMENT OF TRANSPORTATION (AFTER HOURS)	(915) 621-6750
	(915) 240-3220

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

REFERENCES - BENCHMARKS
FOUND N.G.S. SURVEY MARKER STATION "CHINO 1980"
ELEVATION: 3945.93 (CITY OF EL PASO VERTICAL DATUM)
3945.11 (NAVD 88 DATUM)
3945.78 (NAVD 29 DATUM)
TIE TO THE PROJECT BENCHMARK IS N35399.99°W, 4008.83 CORNER OF TRACT 11, NELLE D. MANDY SURVEY NO. 239

DESERT SPRINGS UNIT ONE
DESERT SPRINGS UNIT TWO
DESERT SPRINGS UNIT THREE
DESERT SPRINGS UNIT FOUR
DESERT SPRINGS UNIT FIVE
DESERT SPRINGS UNIT SIX
DESERT SPRINGS UNIT SEVEN
DESERT SPRINGS UNIT EIGHT
DESERT SPRINGS UNIT NINE
DESERT SPRINGS UNIT TEN
DESERT SPRINGS UNIT ELEVEN
DESERT SPRINGS UNIT TWELVE
DESERT SPRINGS UNIT THIRTEEN
DESERT SPRINGS UNIT FOURTEEN
DESERT SPRINGS UNIT FIFTEEN
DESERT SPRINGS UNIT SIXTEEN
DESERT SPRINGS UNIT SEVENTEEN
DESERT SPRINGS UNIT EIGHTEEN
DESERT SPRINGS UNIT NINETEEN
DESERT SPRINGS UNIT TWENTY

DESERT SPRINGS UNIT FOUR
SUBDIVISION IMPROVEMENTS

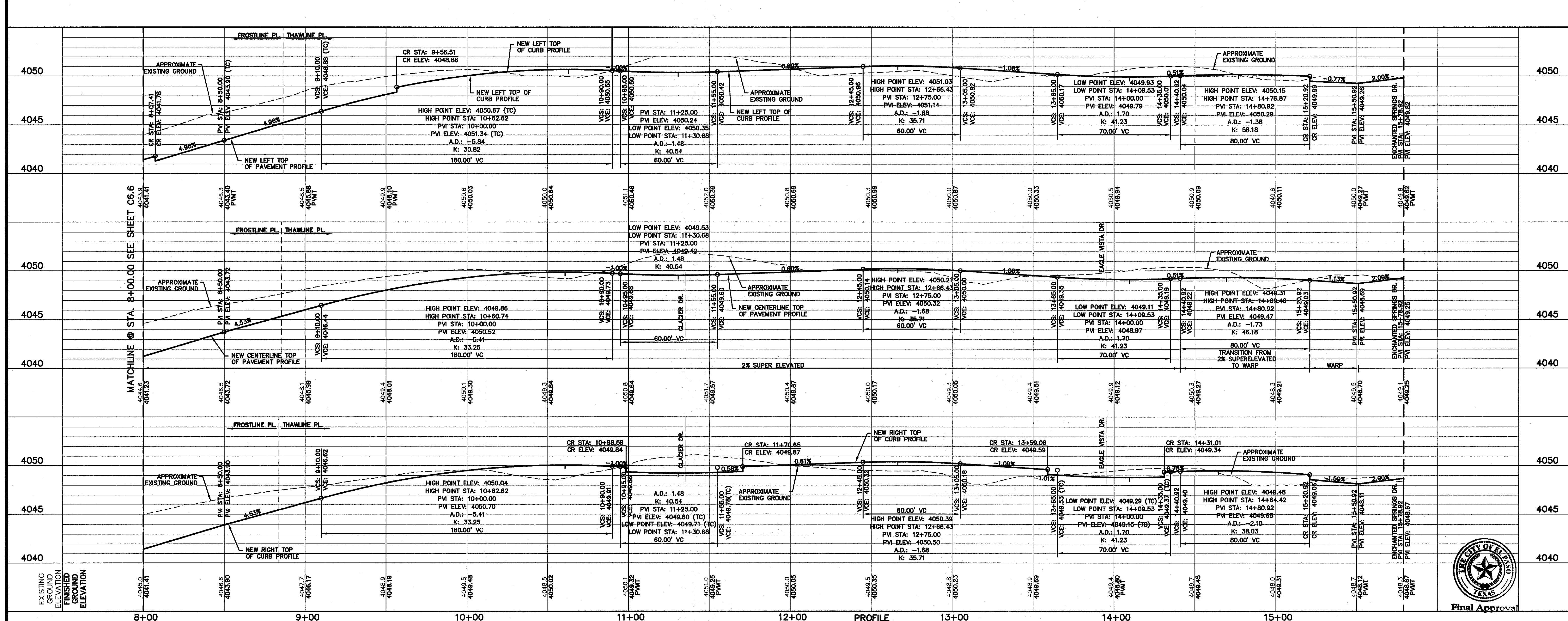
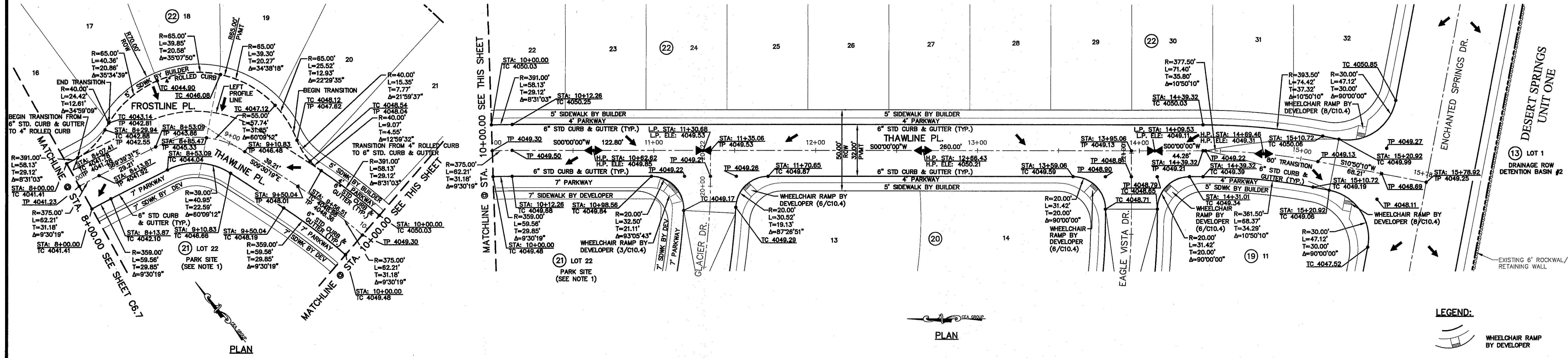
DESIGN BY: A.H.
DRAWN BY: J.H.
CHKD. BY: J.L.A.
APPD. BY: J.L.A.

DATE: DECEMBER 2014
JOB No. 2060-028-1D

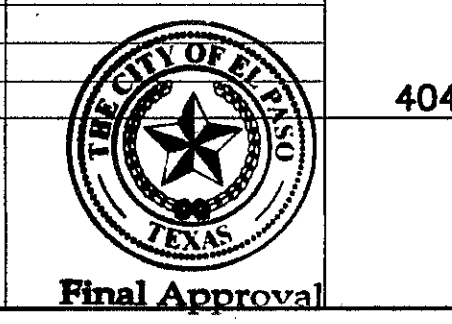
PROJECT TITLE
DESERT SPRINGS UNIT FOUR
SUBDIVISION IMPROVEMENTS

SHEET TITLE
FROSTLINE PL.
PLAN & PROFILE
FROM STA. 8+00.00
TO STA. 8+85.47

SHEET NO.
C6.8



LEGEND:
WHEELCHAIR RAMP BY DEVELOPER



S:\2020\2060-028-1D\0605\Construction\Drawings\Improvement\Plan\Unit 4\2060-028-1D-C6.8.pdf - Frostline & Thawline, Work, 12/17/2014 8:52:29 AM

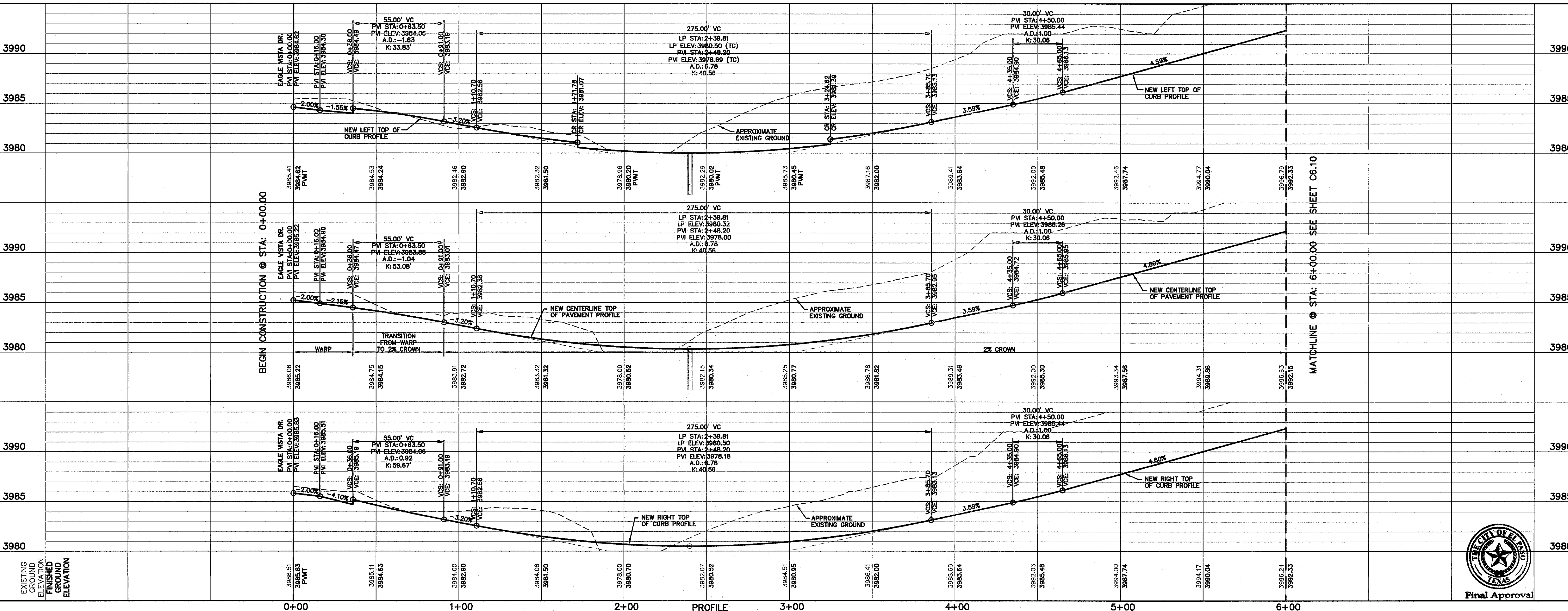
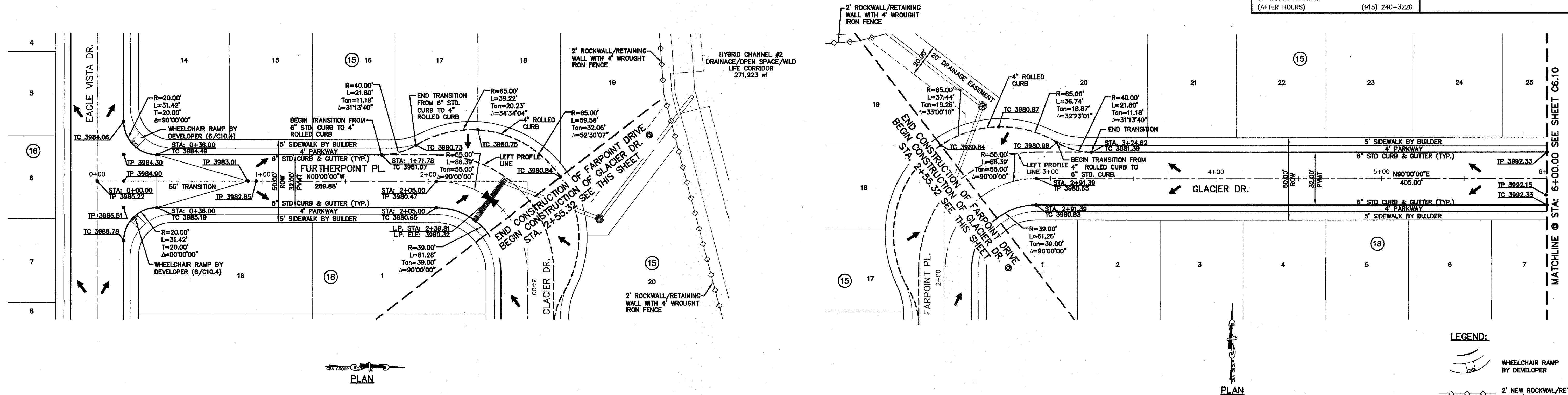
UTILITY LOCATOR SERVICES	
EL PASO ELECTRIC COMPANY	(915) 543-5720
EL PASO ENERGY CORPORATION	(915) 496-5244
EL PASO WATER UTILITIES	(915) 594-5500
MCI SURVEILLANCE	(800) MCI-WORK
TIME WARNER COMMUNICATIONS	(915) 772-1123
TEXAS GAS SERVICE	(915) 680-7200
ONEOK PARTNERS	(915) 595-6919
AT&T	(800) 852-3786
U.S. SPRINT TELECOMM	(800) 521-0579
CITY OF EL PASO DEPARTMENT OF TRANSPORTATION (AFTER HOURS)	(915) 621-6750
	(915) 240-3220

WARNING I BEFORE YOU DIG

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

FOR FIELD LOCATING EXISTING UTILITIES

REFERENCES - BENCHMARKS	DATE	REVISIONS	BY
FOUND N.G.S. SURVEY MARKER "CHND 1980" ELEVATION: 3948.93 (CITY OF EL PASO VERTICAL DATUM) 3948.11 (NAVD 88 DATUM) 3945.78 (NAVD 29 DATUM)			
TIE TO THE PROJECT BENCHMARK IS N353°09'59" W, 4.08853 CORNER OF TRACT 11, NELLE D. MANDY SURVEY NO. 239			



ceea
 engineers • architects • planners
 TEXAS REGISTERED ENGINEERING FIRM F-464
 4712 Woodrow Bean, Ste. F El Paso, TX 79924
 (915) 754-4322 Fax: (915) 754-4325 www.ceeaonline.com

ENGINEER'S SEAL
 ALAN D. HERRERA
 10414
 LICENSED PROFESSIONAL ENGINEER

PROJECT TITLE
DESERT SPRINGS UNIT FOUR
SUBDIVISION IMPROVEMENTS

SHEET TITLE
FURTHERPOINT PL PLAN & PROFILE FROM STA. 0+00.00 TO STA. 2+55.32
GLACIER DR. PLAN & PROFILE FROM STA. 2+55.32 TO STA. 6+00.00

SHEET NO.
C6.9

Final Approval

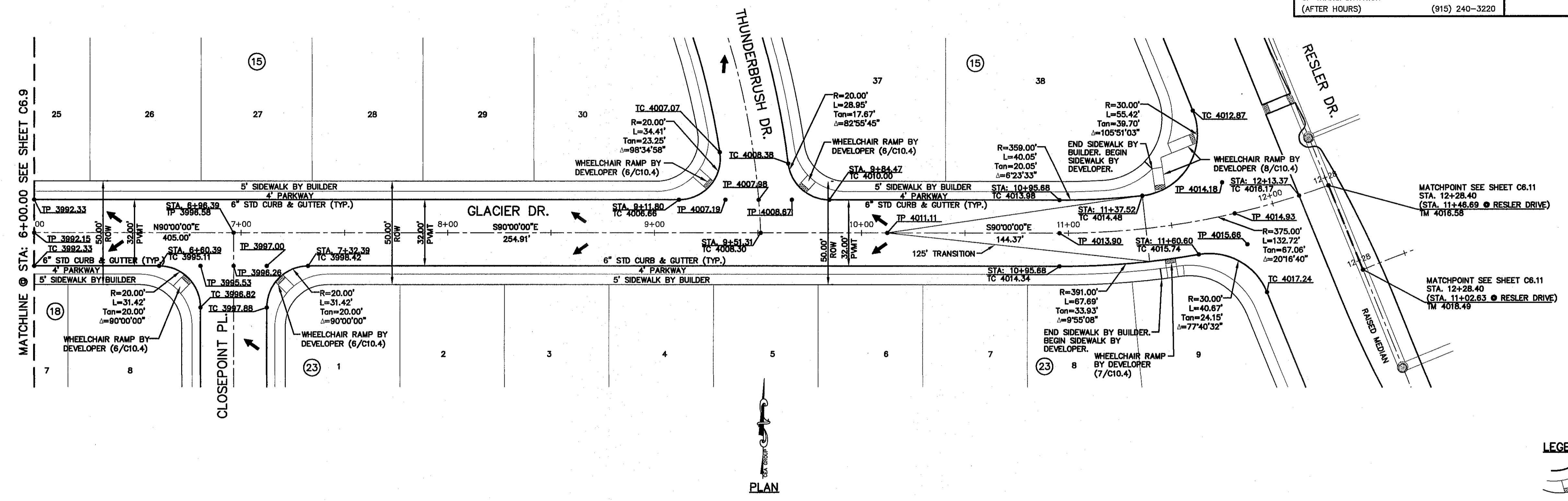
© 2005-2015 URS Corporation. All rights reserved. URS is a registered trademark of URS Corporation. Furtherpoint Pl, Glacier Dr, and Farpoint Dr are trademarks of URS Corporation.

GENERAL NOTES:
 1. REFER TO LANDSCAPING PLANS FOR LANDSCAPING APPLICATION, COMPACTION & STANDARDS.

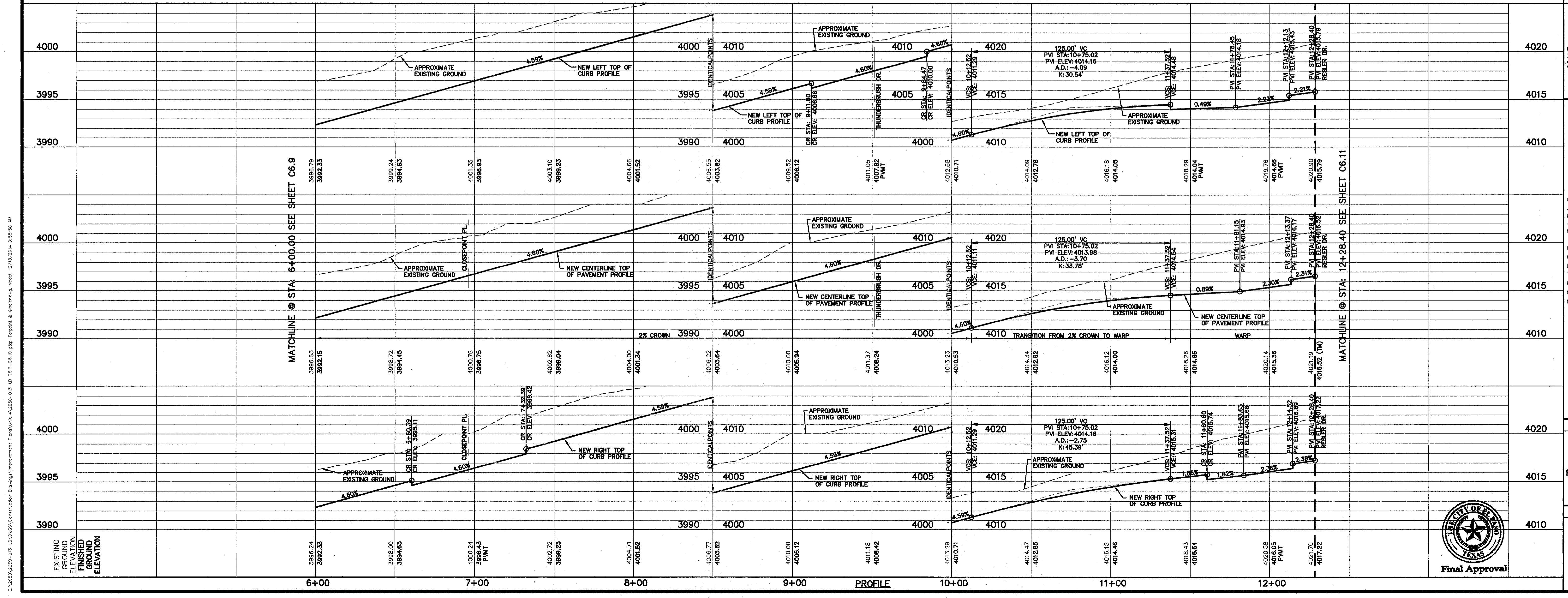
UTILITY LOCATOR SERVICES

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
ONEOK PARTNERS	(915) 595-6918
AT&T	(800) 853-3786
U.S. SPRINT TELECOMM	(800) 521-0579
CITY OF EL PASO DEPARTMENT OF TRANSPORTATION	(915) 621-6750
(AFTER HOURS)	(915) 240-3220

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



LEGEND:
 WHEELCHAIR RAMP BY DEVELOPER



REFERENCES - BENCHMARKS

FOUND N.G.S. SURVEY MARKER STAMPED "CHRD 1980"	ELEVATION:	
3946.11 (NAVD 88 DATUM)		
3945.79 (NAVD 88 DATUM)		
3945.79 (NAVD 88 DATUM)		
FEET FROM A 1/2" INCH REBAR FOUND FOR THE NORTHWEST CORNER OF TRACT 11, NELLE D. MANDY SURVEY NO. 239		

ENGINEER'S SEAL

 ENGINEERS • ARCHITECTS • PLANNERS
 TEXAS REGISTERED ENGINEERING FIRM F-454
 OFFICE: 15000 West Loop South, Suite 1000, Houston, TX 77060
 PHONE: 281.465.5522 FAX: 281.465.5523 WWW: oea.com

PROJECT TITLE

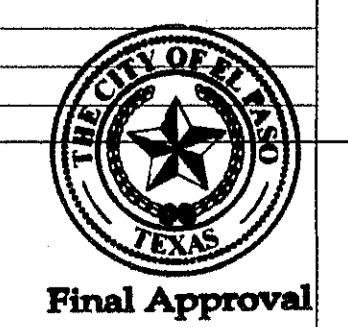
DESERT SPRINGS UNIT FOUR
 SUBDIVISION IMPROVEMENTS

SHEET TITLE

GLACIER DR. PLAN & PROFILE FROM STA. 6+00.00 TO STA. 12+28.40

SHEET NO.

C6.10



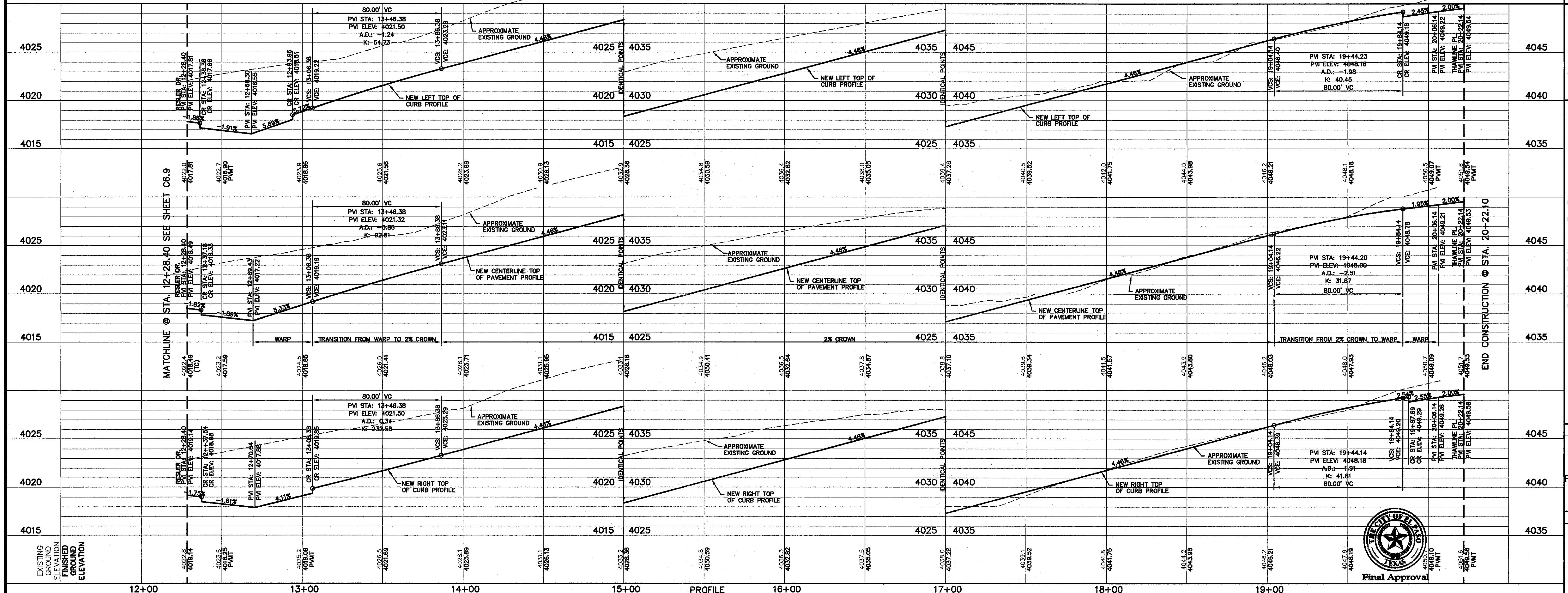
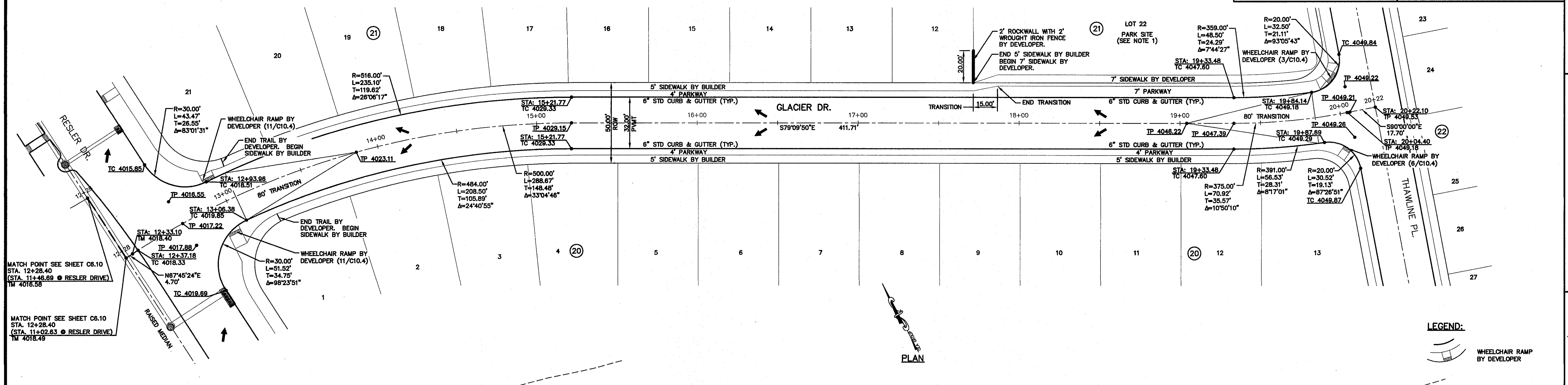
Final Approval

S:\2000\3000-01-10\BDC\Construction\Drawings\Improvement Plans\Unit 4\3000-01-10-01.dwg 01-10-10 01:00:00 AM 12/16/2014 8:30:35 AM

GENERAL NOTES:
1. REFER TO LANDSCAPING PLANS FOR LANDSCAPING APPLICATION, COMPACTION & STANDARDS.

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	
ONEOK PARTNERS	(915) 595-0918	
AT&T	(800) 850-3786	
U.S. SPRINT TELECOMM	(800) 521-0579	
CITY OF EL PASO DEPARTMENT OF TRANSPORTATION	(915) 621-6750	
(AFTER HOURS)	(915) 240-3220	

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



REFERENCES - BENCHMARKS

FOUND N.G.S. SURVEY MARKER "CHINO 1980" ELEVATION: 3946.11 (NAVD 88 DATUM)

ENGINEER'S SEAL

SCALE: 1"=30'
Horizontal: 1"=50'
Vertical: 1"=5'
Contour Interval: N/A

DATE: DECEMBER 2014
DESIGN BY: A.H.
DRAWN BY: J.H.
CHKD. BY: J.L.A.
APP'D. BY: J.L.A.
JOB NO. 2008-028-LD

PROJECT TITLE
**DESERT SPRINGS UNIT FOUR
SUBDIVISION IMPROVEMENTS**

SHEET TITLE
**GLACIER DR.
PLAN & PROFILE
FROM STA. 12+28.40
TO STA. 20+22.10**

SHEET NO.
C6.11

REVISIONS

DATE

BY

A:\2008\2008-028-LD\03\Drawings\Subdivision\Plan\Profile\Sheet C6.11.dwg
 Date: 12/16/2014 9:51:50 AM
 User: jlh
 Plot: 12/16/2014 9:51:50 AM

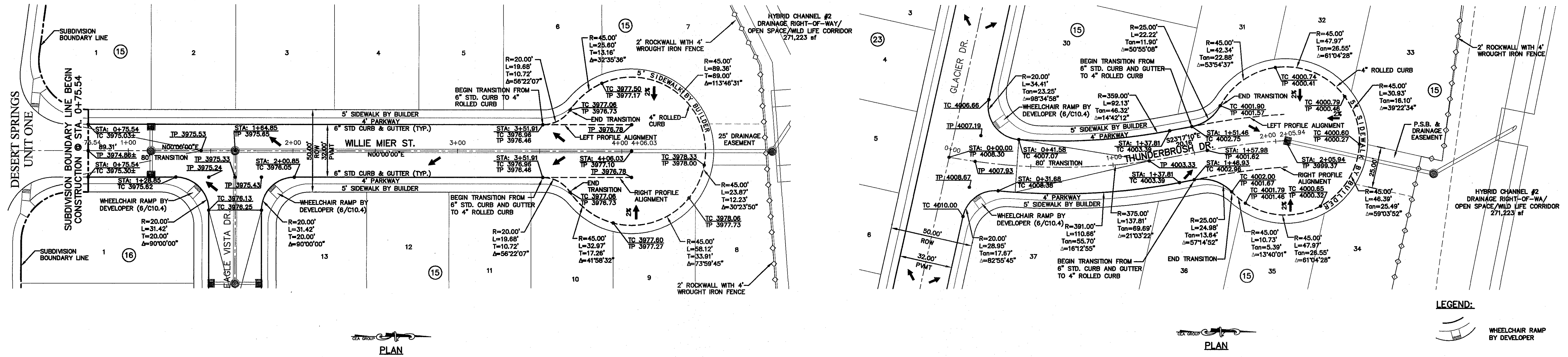
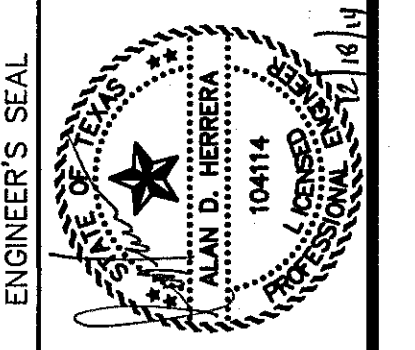
GENERAL NOTES:
 1. REFER TO LANDSCAPING PLANS FOR LANDSCAPING APPLICATION, COMPACTON & STANDARDS.

UTILITY LOCATOR SERVICES	
EL PASO ELECTRIC COMPANY	(915) 543-5720
EL PASO ENERGY CORPORATION	(915) 495-5244
EL PASO WATER UTILITIES	(915) 594-5500
MCI SURVEILLANCE	(800) MCI-WORK
TIME WARNER COMMUNICATIONS	(915) 772-1123
TEXAS GAS SERVICE	(915) 880-7200
ONEOK PARTNERS	(915) 595-6918
AT&T	(800) 852-3786
U.S. SPRINT TELECOMM	(800) 521-0579
CITY OF EL PASO DEPARTMENT OF TRANSPORTATION	(915) 621-6750
(AFTER HOURS)	(915) 240-3220

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

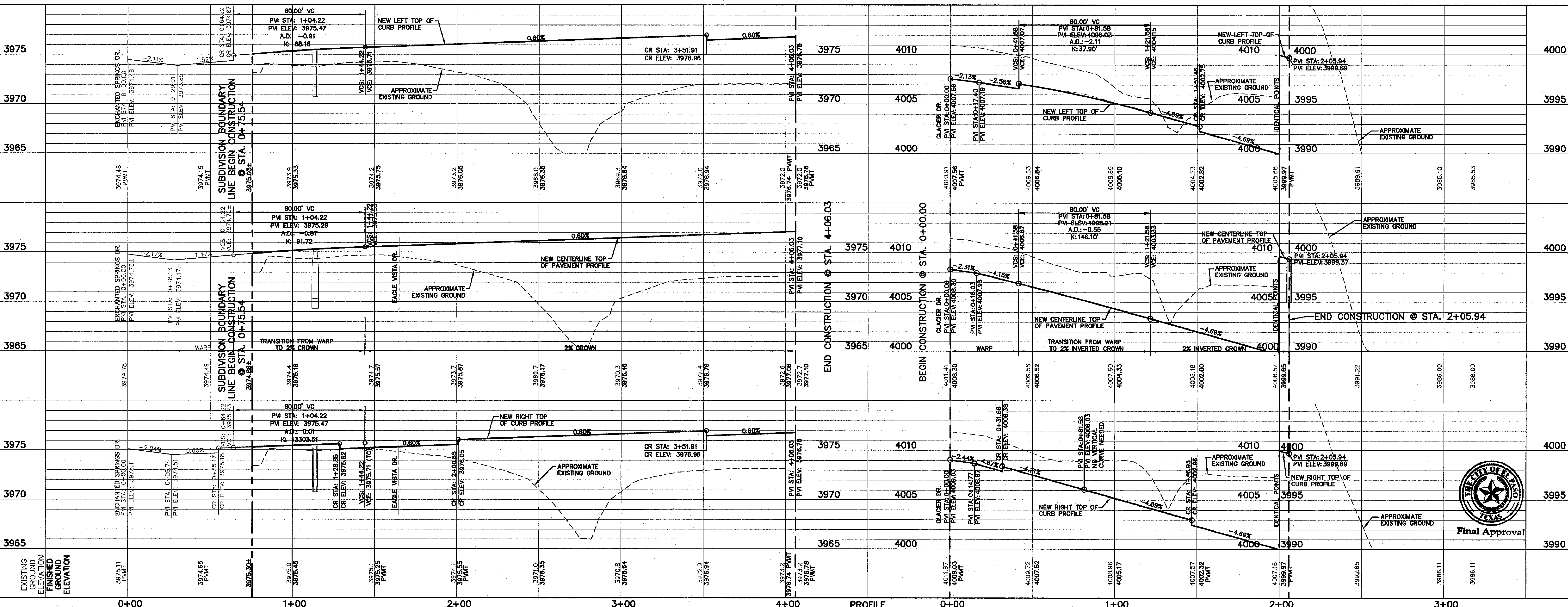
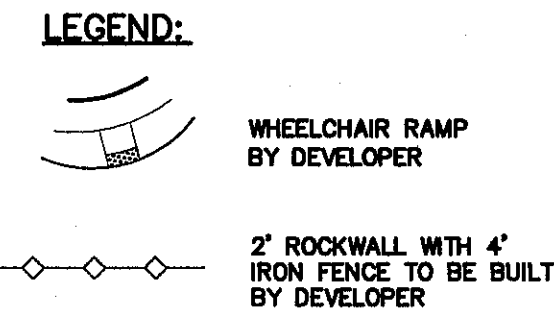
REFERENCES - BENCHMARKS
 FOUND N.G.S. SURVEY MARKER STAMPED "CHINO 1980"
 ELEVATION: 3955.03 (CITY OF EL PASO VERTICAL DATUM)
 3946.71 (NAVD 88 DATUM)
 3945.78 (NAD 83 DATUM)
 SEE TO THE PROJECT BENCHMARK IS IN 3039.00' W, 4.008.93
 CORNER OF TRACT 11, NELLE D. MUNDY SURVEY, NO. 239

ceea
 engineers • architects • planners
 TEXAS REGISTERED ENGINEERING FIRM #484
 4712 Woodrow Wilson, Ste. F, El Paso, TX 79962
 Office: 915.841.5232 Fax: 915.841.5233 www.ceea.com



PLAN

PLAN



PROFILE



SCALE: Horizontal: 1"=30'
 Vertical: 1"=5'
 Contour Interval: N/A
 DATE: DECEMBER 2014
 DESIGN BY: A.H.
 DRAWN BY: J.H.
 CHKD. BY: J.L.A.
 APP'D. BY: J.L.A.
 JOB No. 2008-028-LD

PROJECT TITLE
DESERT SPRINGS UNIT FOUR
SUBDIVISION IMPROVEMENTS

SHEET TITLE
WILLIE MIER ST. PLAN & PROFILE FROM STA. 0+75.54 TO STA. 4+06.03
THUNDERBRUSH DR. PLAN & PROFILE FROM STA. 0+00.00 TO STA. 2+05.94
 SHEET NO.

C6.12

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
ONEOK PARTNERS	(915) 595-5918
AT&T	(800) 852-3786
U.S. SPRINT TELECOMM	(800) 521-0579
CITY OF EL PASO DEPARTMENT OF TRANSPORTATION	(915) 621-6750
(AFTER HOURS)	(915) 240-3220

**WARNING !
BEFORE YOU DIG**

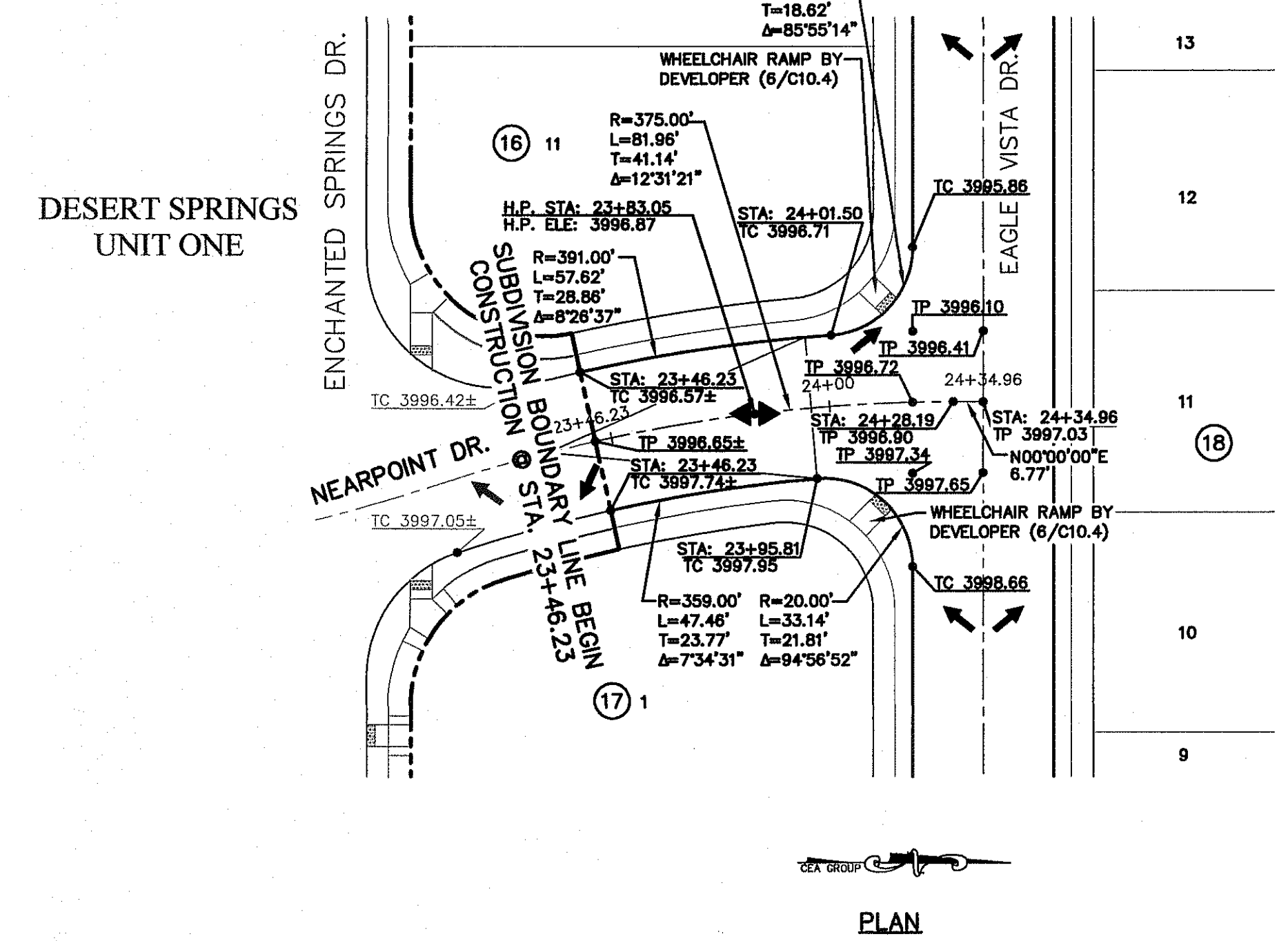
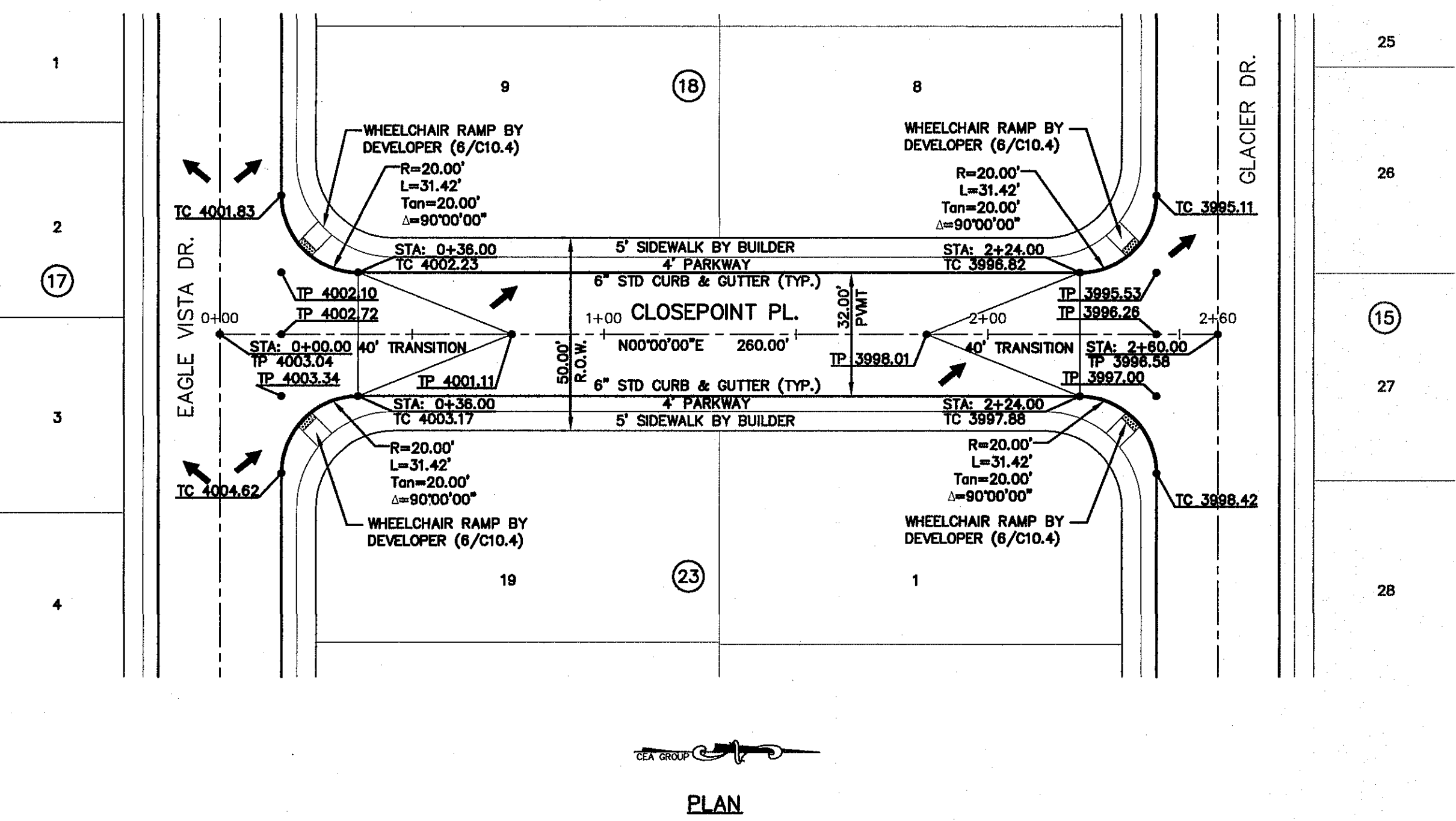
CALL
1-800-DIG-TESS
1-800-344-8377

FOR FIELD LOCATING EXISTING UTILITIES

REFERENCES - BENCHMARKS	DATE	REVISIONS	BY
FOUND N.G.S. SURVEY MARKER STAMPED "CHINO 1987" ELEVATION: 3998.93 (CITY OF EL PASO VERTICAL DATUM) 3946.11 (NAVD 88 DATUM) 3945.78 (NGVD 29 DATUM) TIE TO THE PROJECT BENCHMARK IS NE309°09'W, 4,008.93 CORNER OF TRACT 11, NELLE D. MUNDY SURVEY NO. 239			

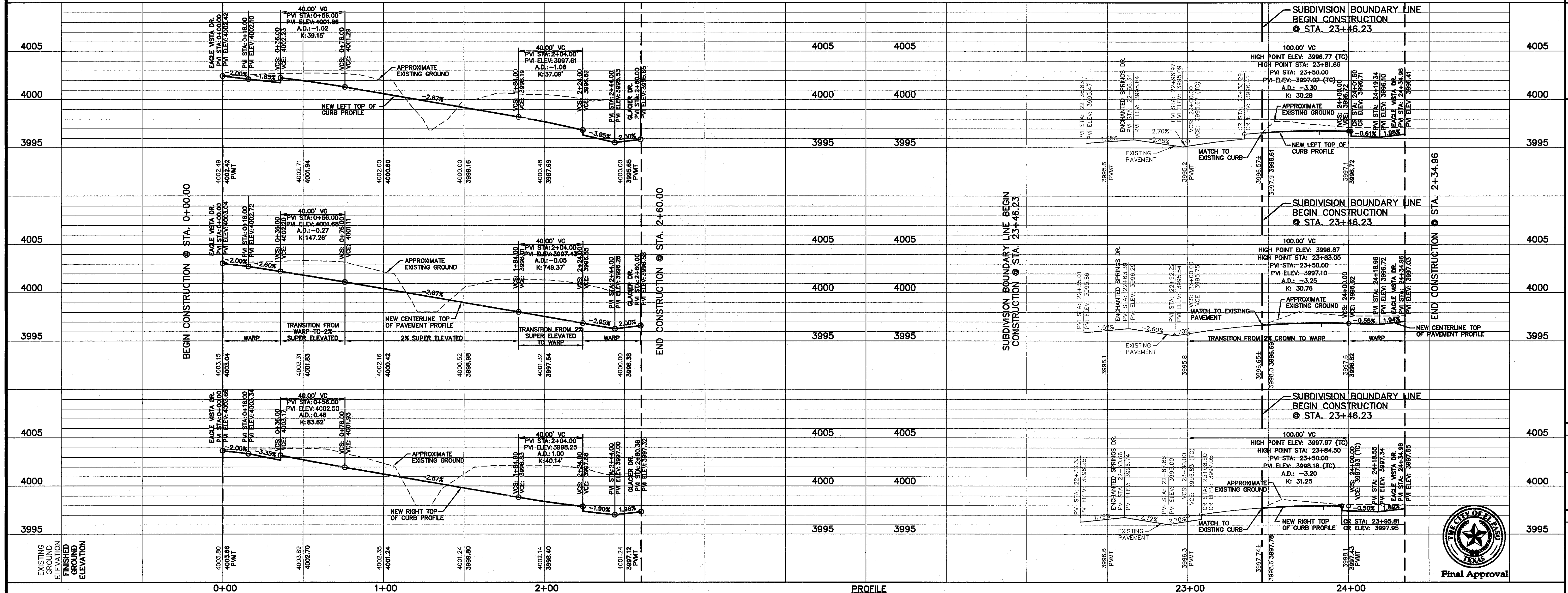
ceea
engineers • architects • planners
TEXAS REGISTERED ENGINEERING FIRM F-454
4712 Woodrow Beem, Ste. F El Paso, TX 79924
Office: 915.544.5522 Fax: 915.544.5525 www.ceea.com

DESIGN BY: A.H.
DRAWN BY: J.H.
CHKD. BY: J.L.A.
APPV. BY: J.L.A.
JOB No. 2060-028-ID



LEGEND:

WHEELCHAIR RAMP BY DEVELOPER



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

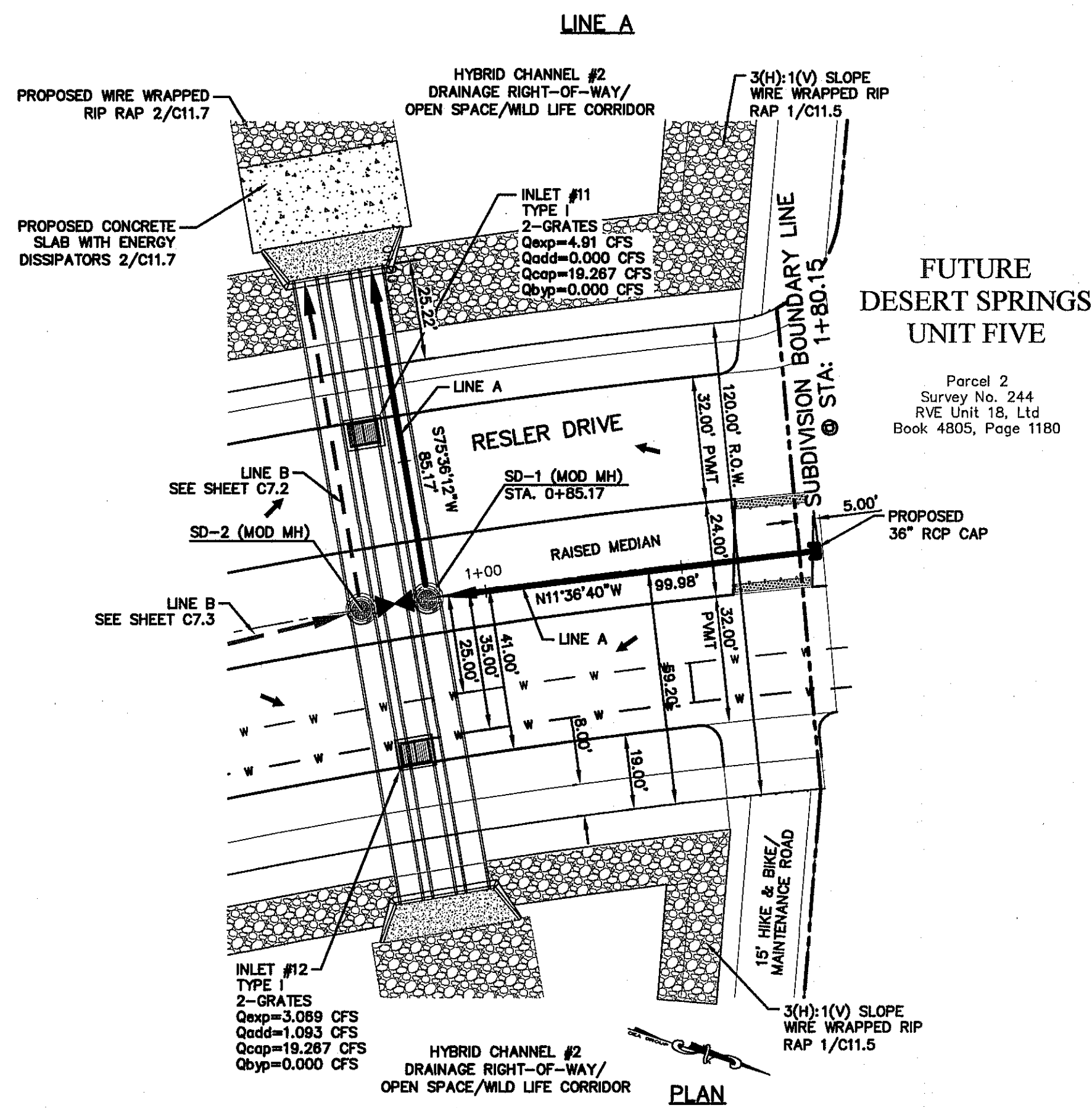
DATE: DECEMBER 2014
DESIGN BY: A.H.
DRAWN BY: J.H.
CHKD. BY: J.L.A.
APPV. BY: J.L.A.
JOB No. 2060-028-ID

PROJECT TITLE
DESERT SPRINGS UNIT FOUR
SUBDIVISION IMPROVEMENTS

SHEET TITLE
CLOSEPOINT PL. PLAN & PROFILE FROM STA. 0+00.00 TO STA. 2+60.00
NEARPOINT DR. PLAN & PROFILE FROM STA. 23+46.23 TO STA. 24+34.96

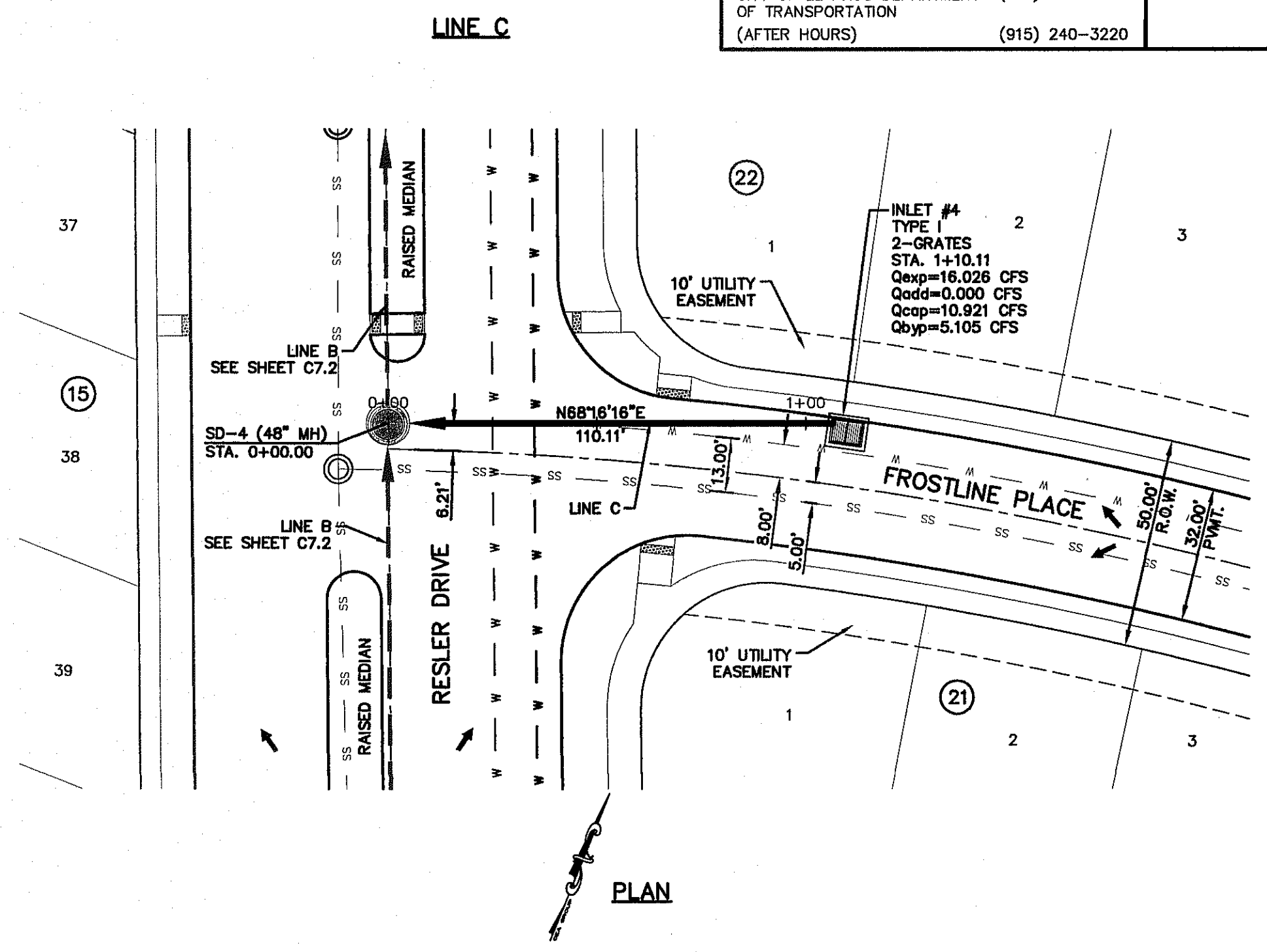
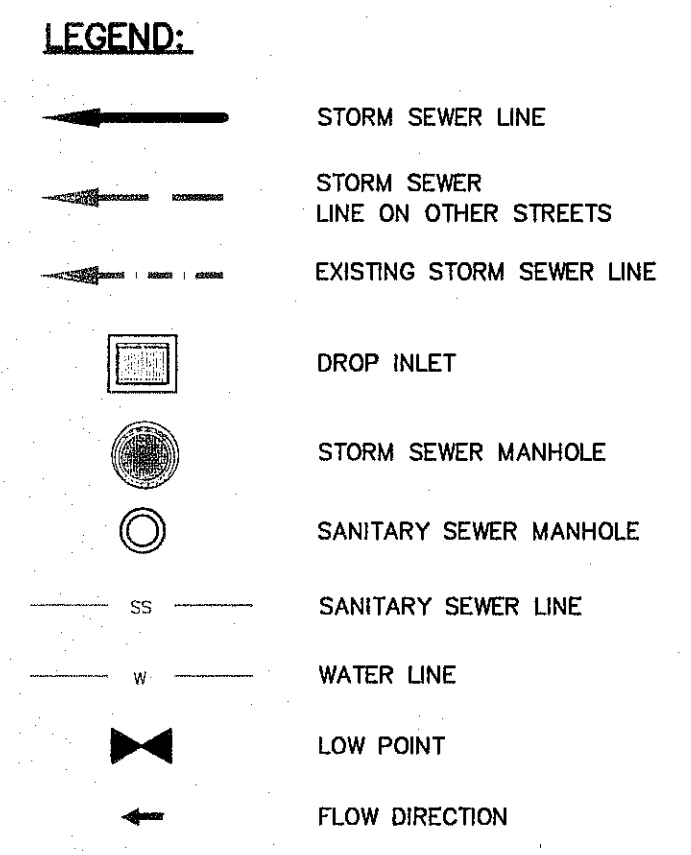
SHEET NO. **C6.13**

Final Approval



FUTURE DESERT SPRINGS UNIT FIVE

Parcel 2
Survey No. 244
RVE Unit 18, Ltd
Book 4805, Page 1180



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
ONEOK PARTNERS	(915) 595-6918
AT&T	(800) 852-3786
U.S. SPRINT TELECOMM	(800) 521-0579
CITY OF EL PASO DEPARTMENT OF TRANSPORTATION	(915) 621-6750
(AFTER HOURS)	(915) 240-3220

WARNING I BEFORE YOU DIG

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

FOR FIELD LOCATING EXISTING UTILITIES

REFERENCES - BENCHMARKS

FOUND N.G.S. SURVEY MARKER STAMPED "CHNO 1980"	ELEVATION: 3935.83 (CITY OF EL PASO VERTICAL DATUM)
3935.83 (CITY OF EL PASO VERTICAL DATUM)	3945.78 (NAD 83 DATUM)
3945.78 (NAD 83 DATUM)	3945.78 (NAD 83 DATUM)

TIE TO THE PROJECT BENCHMARK IS N53°09'09" W, 4.008.83 FEET FROM 1/2" INCH BENCHMARK FOUND AT THE NORTHWEST CORNER OF TRACT 11, WELLS B. JARDON SURVEY NO. 253

DATE	REVISIONS	BY

CS&A

engineers • architects • planners

TEXAS REGISTERED ENGINEERING FIRM F-4684

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

ENGINEER'S SEAL

ALAN D. HERRERA
10414

EXISTING GROUND ELEVATION	PROPOSED GROUND ELEVATION	PROFILE	LINE A	LINE C	PROJECT TITLE
4015		4015	4025	4025	DESERT SPRINGS UNIT FOUR SUBDIVISION IMPROVEMENTS
4010		4010	4020	4020	
4005		4005	4015	4015	
4000		4000	4010	4010	
3995		3995	4005	4005	
3990		3990	4000	4000	
3985		3985	3995	3995	
3980		3980	3990	3990	
3975		3975	3985	3985	
3970		3970	3980	3980	
3965		3965	3975	3975	
					SHEET TITLE LINE A PLAN & PROFILE FROM STA. 0+00.00 TO STA. 1+85.15 LINE C PLAN & PROFILE FROM STA. 0+00.00 TO STA. 1+10.11 SHEET NO. C7.1



Final Approval

C:\3980\3980-01-10\DESIGN\Construction\Plan\Unit 4\2080-028-ID-C7.1_Sheet_Cover_Plot.dwg, Made: 2/17/2015 2:41:52 PM

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) 660-7200
ONEOK PARTNERS	(915) 595-6918
AT&T	(800) 852-3786
U.S. SPRINT TELECOMM	(800) 521-0579
CITY OF EL PASO DEPARTMENT OF TRANSPORTATION	(915) 621-6750
(AFTER HOURS)	(915) 240-3220

WARNING I BEFORE YOU DIG

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

FOR FIELD LOCATING EXISTING UTILITIES

REFERENCES - BENCHMARKS

FOUND N.G.S. SURVEY MARKER STAMPED "CHNO 1980"
ELEVATION: 3935.83 (CITY OF EL PASO VERTICAL DATUM)
SHOW (NAVD 83 DATUM)
3945.78 (NAVD 20 DATUM)

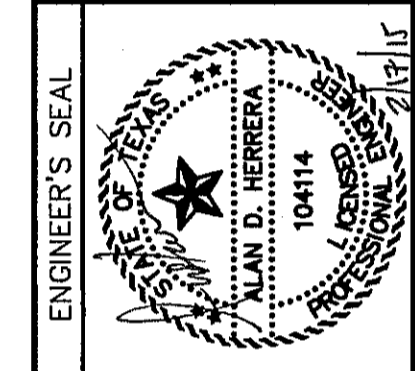
TIE TO THE PROJECT BENCHMARK IS N33°09'09" W, 4.008.83 FEET FROM A 1/2 INCH REBAR FOUND FOR THE NORTHWEST CORNER OF TRACT 11, BELLE D. MURPHY SURVEY NO. 239

DATE _____ BY _____

REVISIONS _____

LEGEND:

- STORM SEWER LINE
- STORM SEWER LINE ON OTHER STREETS
- EXISTING STORM SEWER LINE
- DROP INLET
- STORM SEWER MANHOLE
- SANITARY SEWER MANHOLE
- SANITARY SEWER LINE
- WATER LINE
- LOW POINT
- FLOW DIRECTION

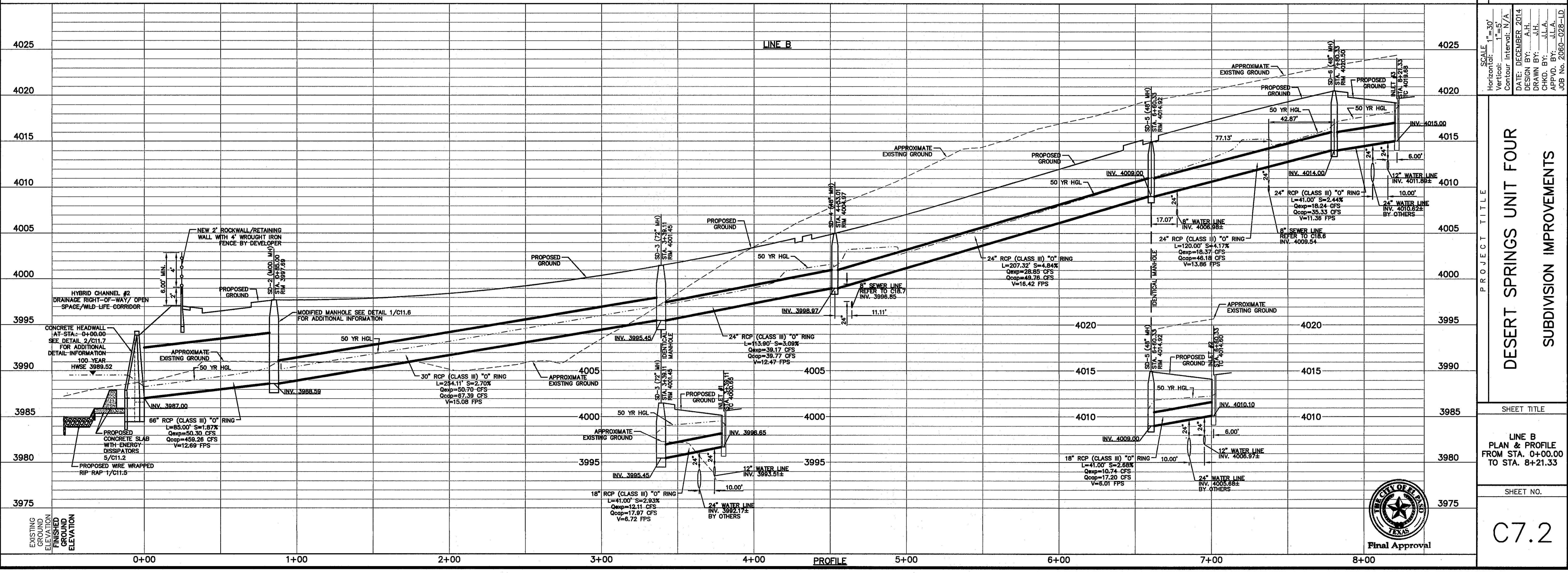
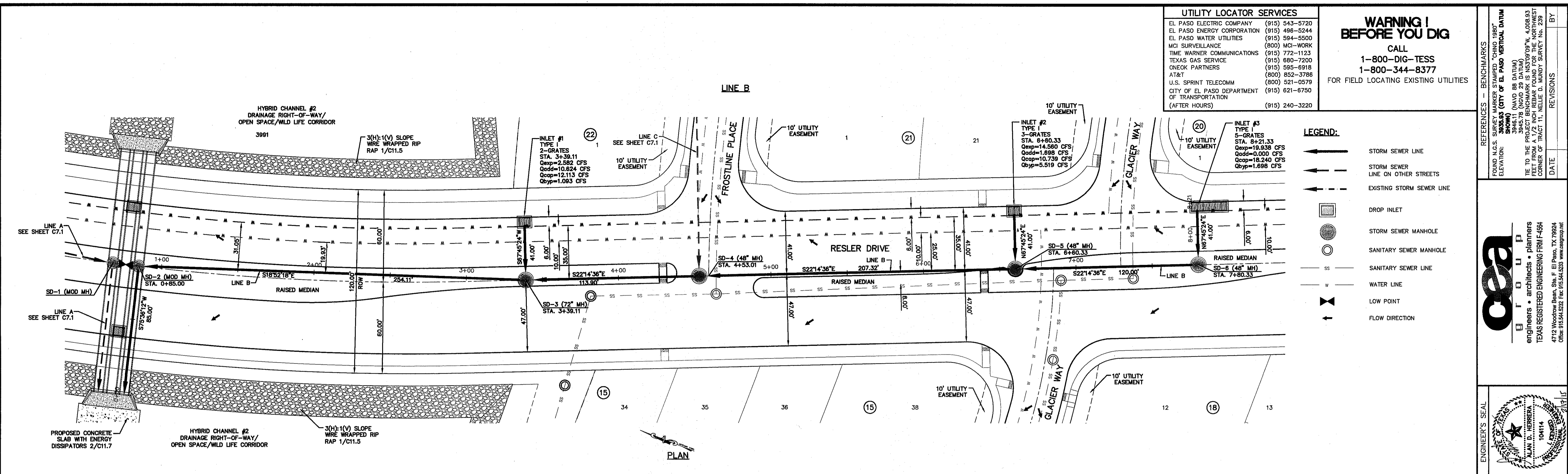


DESIGN BY: A.H.
DRAWN BY: J.H.
CHKD. BY: J.L.A.
APP'D. BY: J.L.A.

DATE: DECEMBER 2014

SCALE: Horizontal: 1"=30'
Vertical: 1"=5'
Contour Interval: 1' / 4'

PROJECT TITLE: DESERT SPRINGS UNIT FOUR SUBDIVISION IMPROVEMENTS



DESERT SPRINGS UNIT FOUR SUBDIVISION IMPROVEMENTS

SHEET TITLE: LINE B PLAN & PROFILE FROM STA. 0+00.00 TO STA. 8+21.33

SHEET NO. C7.2

Final Approval

2/20/15 10:55:35 AM C:\Users\jgarcia\OneDrive\Documents\Projects\Desert Springs Unit Four\Drawings\Sheet C7.2.dwg (2/17/2015 2:32:58 PM)

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) 880-7200
ONEOK PARTNERS	(915) 595-6918
AT&T	(800) 852-3786
U.S. SPRINT TELECOMM	(800) 521-0579
CITY OF EL PASO DEPARTMENT OF TRANSPORTATION	(915) 621-6750
(AFTER HOURS)	(915) 240-3220

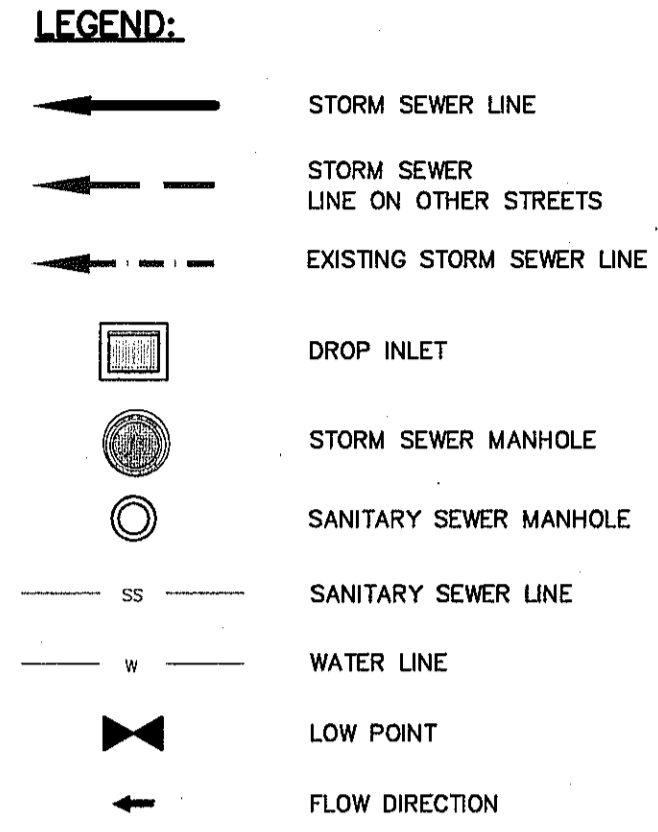
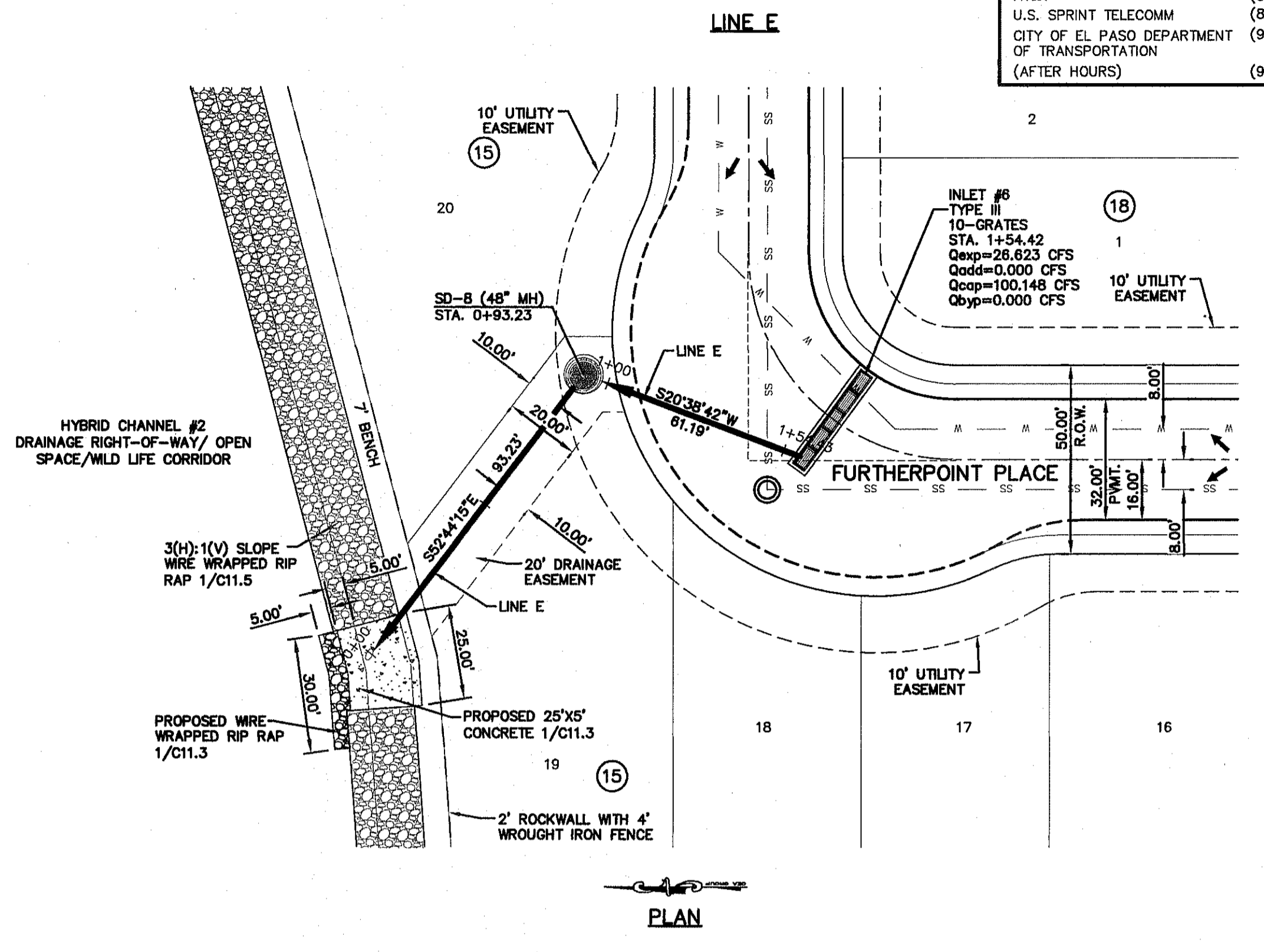
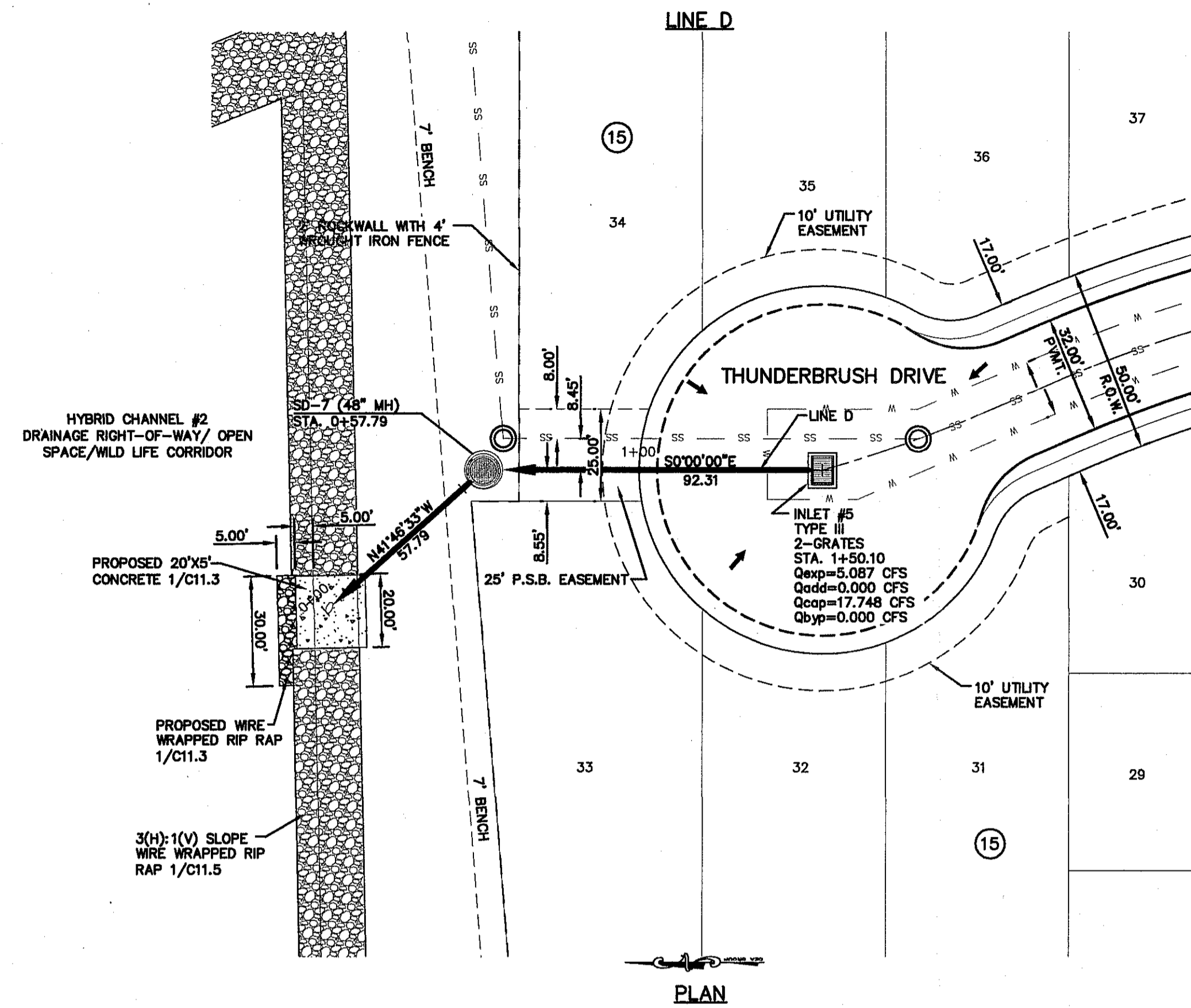
WARNING ! BEFORE YOU DIG

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

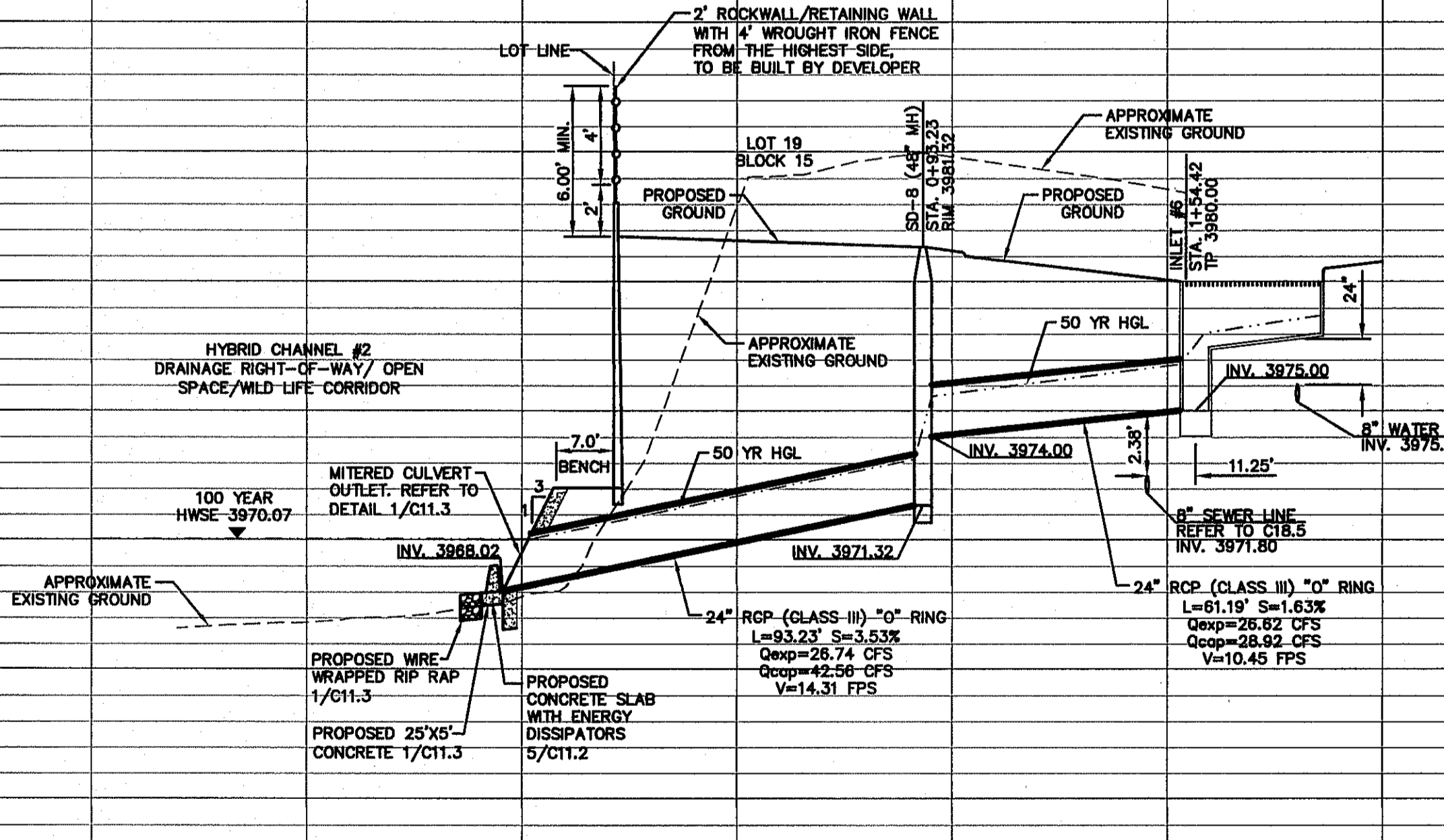
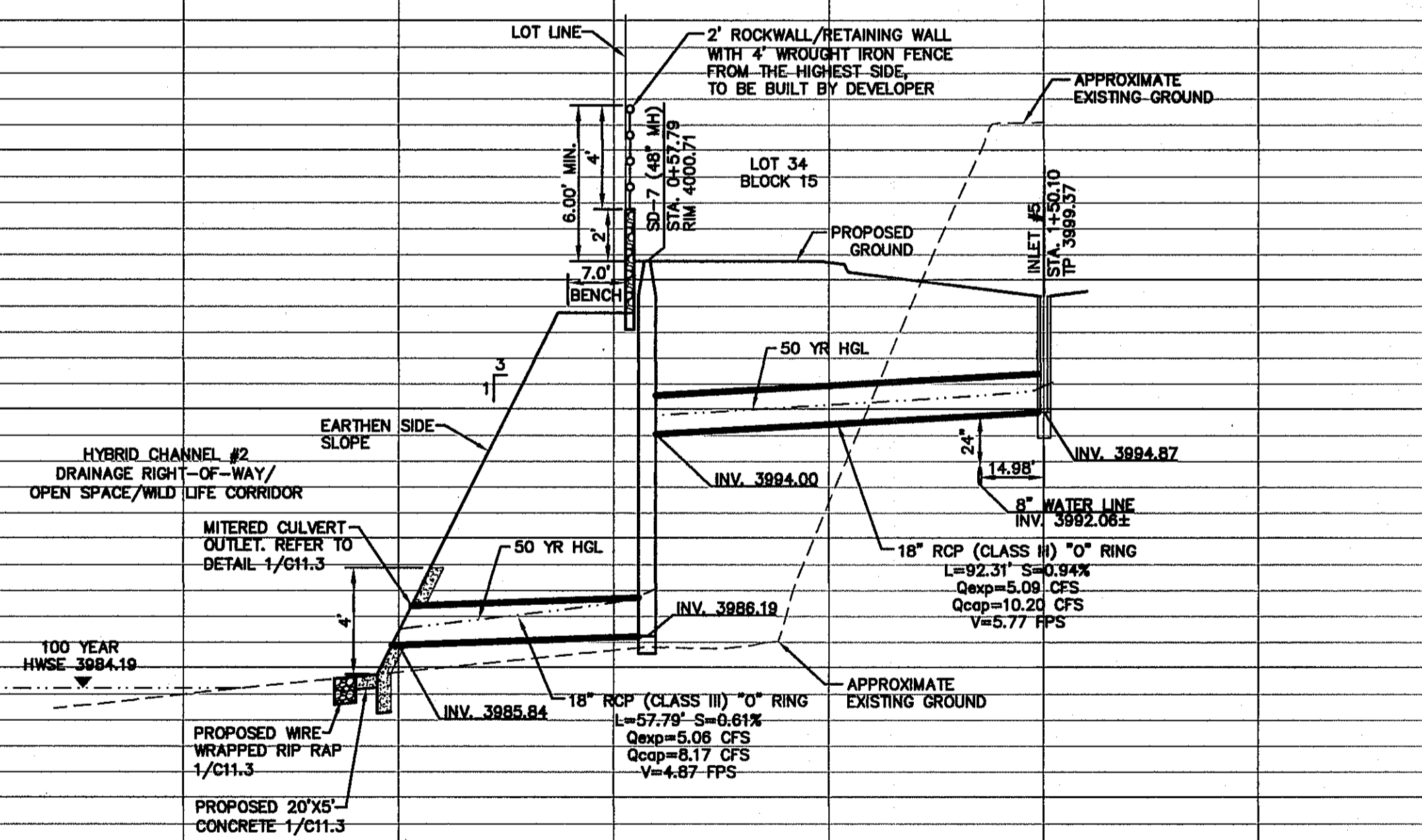
FOR FIELD LOCATING EXISTING UTILITIES

REFERENCES - BENCHMARKS

FOUND N.G.S. SURVEY MARKER STAMPED "CHNO 1980"
ELEVATION: 3935.83 (CITY OF EL PASO VERTICAL DATUM SHOWN)
(NAD 83 DATUM)
3945.78 (NAD 83 DATUM)
TIE TO THE PROJECT BENCHMARK IS N53°09'09"W, 4.008.93 FEET FROM A 1/2" INCH REBAR FOUND FOR THE NORTHWEST CORNER OF TRACT 11, NELLE D. MUNDY SURVEY NO. 239



EXISTING GROUND ELEVATION	FINISHED GROUND ELEVATION	LINE D	LINE E	EXISTING GROUND ELEVATION	FINISHED GROUND ELEVATION
4015				4015	3995
4010				4010	3990
4005				4005	3985
4000				4000	3980
3995				3995	3975
3990				3990	3970
3985				3985	3965
3980				3980	3960
3975				3975	3955
3970				3970	3950
3965				3965	3945



SCALE

Horizontal: 1"=30'

Vertical: 1"=5'

Contour Interval: N/A

DATE: DECEMBER 2014

DESIGN BY: A.H.

DRAWN BY: J.H.

CHKD. BY: J.L.A.

APPVD. BY: J.L.A.

JOB NO. 2050-028-1D

PROJECT TITLE

DESERT SPRINGS UNIT FOUR

SUBDIVISION IMPROVEMENTS

SHEET TITLE

LINE D & PROFILE FROM STA. 0+00.00 TO STA. 1+21.11

LINE E & PROFILE FROM STA. 0+00.00 TO STA. 1+54.42

SHEET NO.



Final Approval

C7.3

E:\2015\2015-2015-UT\005\Construction\Drawings\Improvements\Sheet\Unit_4\2015-2015-UT_005.dwg, Date: 2/17/2015, 2:30:55 PM

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
ONEOK PARTNERS	(915) 595-6918
AT&T	(800) 852-3796
U.S. SPRINT TELECOMM	(800) 521-0579
CITY OF EL PASO DEPARTMENT OF TRANSPORTATION (AFTER HOURS)	(915) 621-6750
	(915) 240-3220

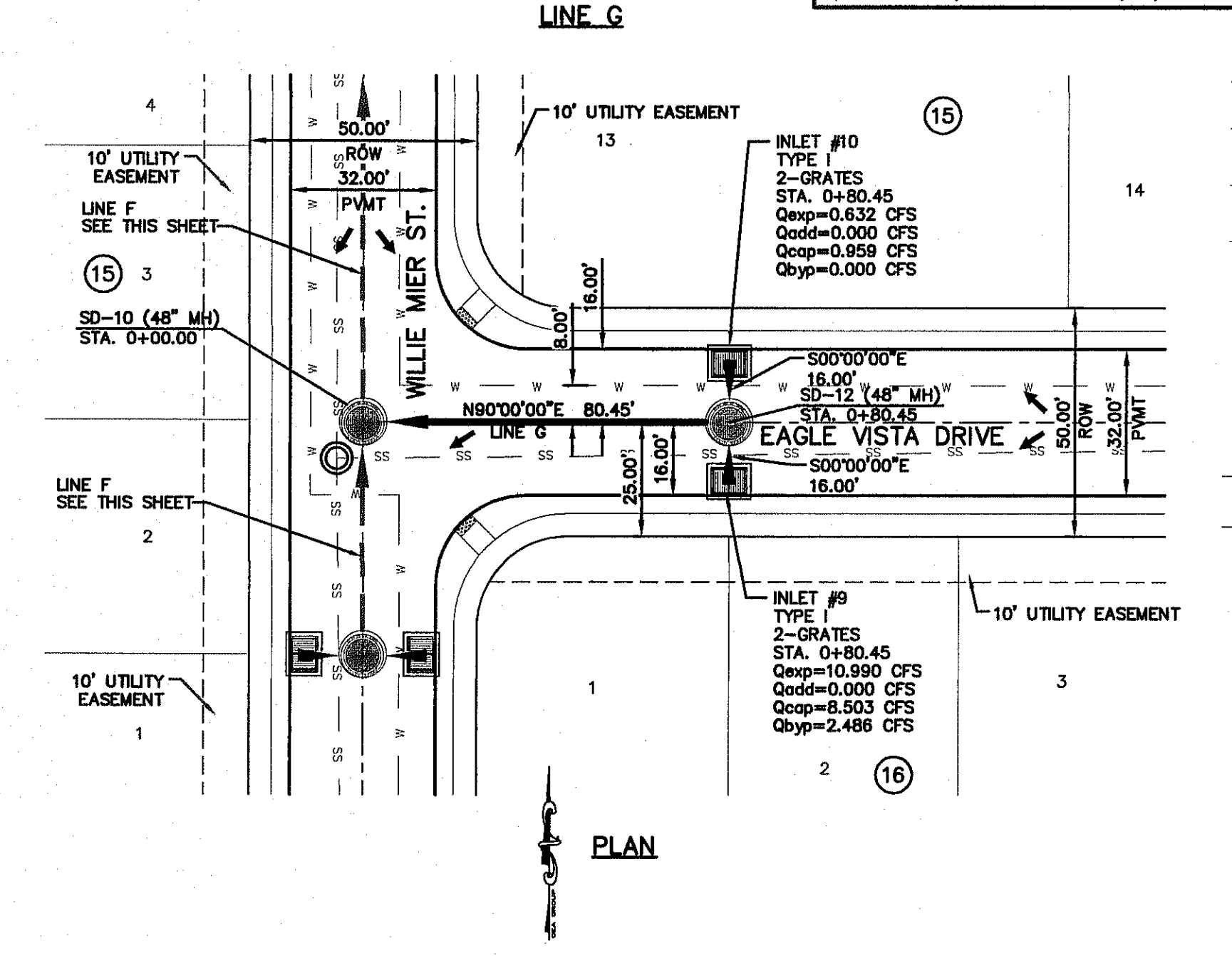
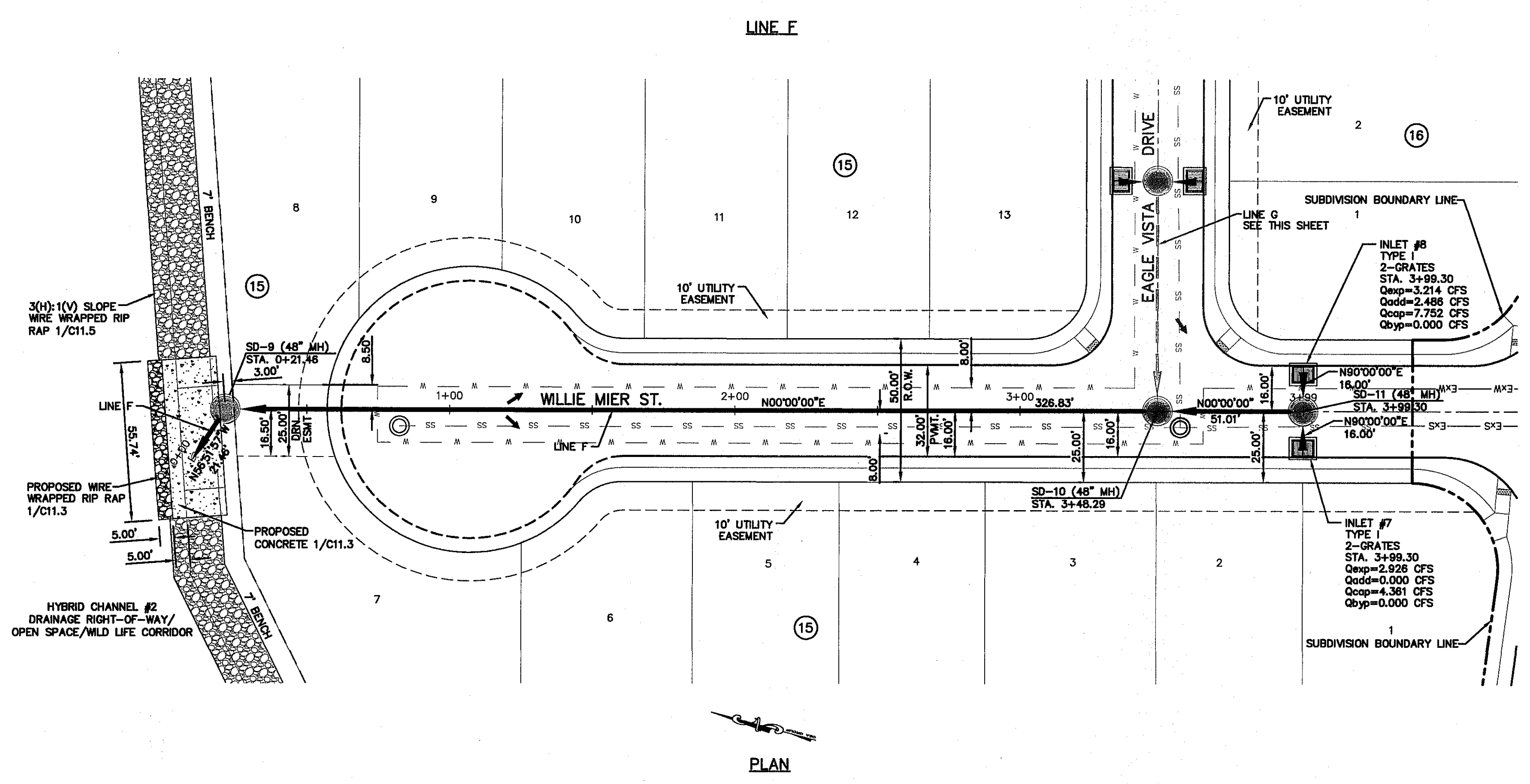
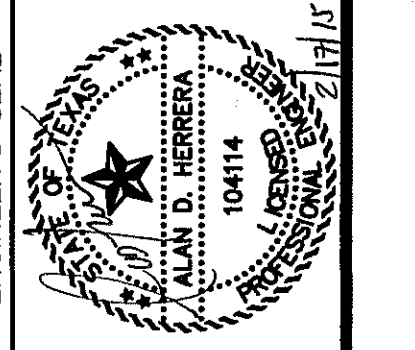
WARNING I BEFORE YOU DIG

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

FOR FIELD LOCATING EXISTING UTILITIES

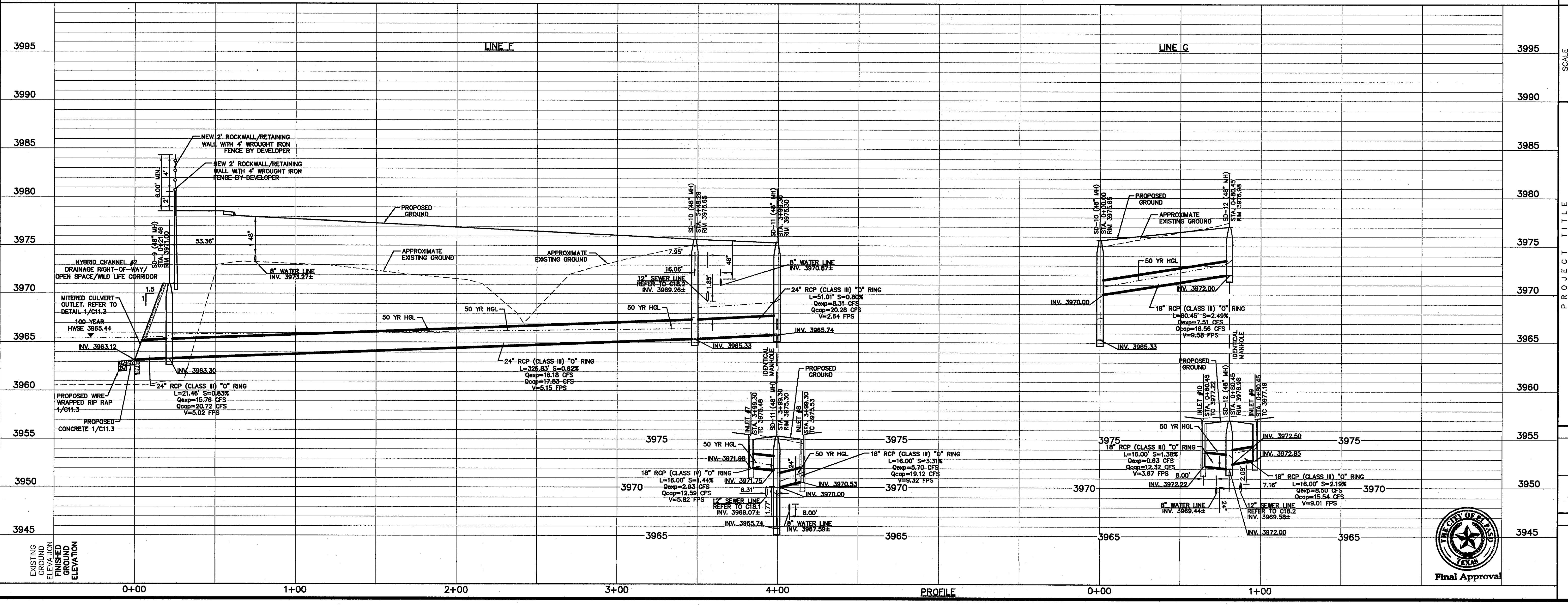
REFERENCES - BENCHMARKS	DATE	BY
FOUND N.G.S. SURVEY MARKER STAMPED "CHINO 1890" (CITY OF EL PASO VERTICAL DATUM SHOWING) (NAD 83 DATUM) 3945.78 (NAD 29 DATUM)		
TIE TO THE PROJECT BENCHMARK IS N53°09'09"W, 4.008.93 FEET FROM A 1/2" INCH BEARING FOUND FOR THE NORTHWEST CORNER OF TRACT 11, RELIEU D. WARD SURVEY NO. 239		

CS&P
 engineers • architects • planners
 TEXAS REGISTERED ENGINEERING FIRM #4864
 4772 Woodrow Beam, Ste. F El Paso, TX 79924
 Office: 915.544.5232 Fax: 915.544.5230 www.csandp.com



LEGEND:

- STORM SEWER LINE
- STORM SEWER LINE ON OTHER STREETS
- EXISTING STORM SEWER LINE
- DROP INLET
- STORM SEWER MANHOLE
- SANITARY SEWER MANHOLE
- SANITARY SEWER LINE
- WATER LINE
- LOW POINT
- FLOW DIRECTION



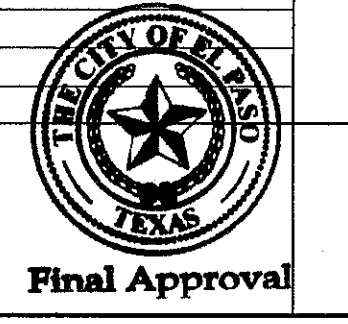
SCALE
 Horizontal: 1"=30'
 Vertical: 1"=5'
 Contour Interval: 1' / A

DATE: DECEMBER 2014
 DESIGN BY: A.H.
 DRAWN BY: J.H.
 CHECKED BY: J.L.A.
 APP'D BY: J.L.A.

JOB No. 2050-028-LD

DESERT SPRINGS UNIT FOUR
SUBDIVISION IMPROVEMENTS

SHEET TITLE	LINE F & PROFILE FROM STA. 0+00.00 TO STA. 3+99.30
SHEET NO.	LINE G & PROFILE FROM STA. 0+00.00 TO STA. 0+80.45



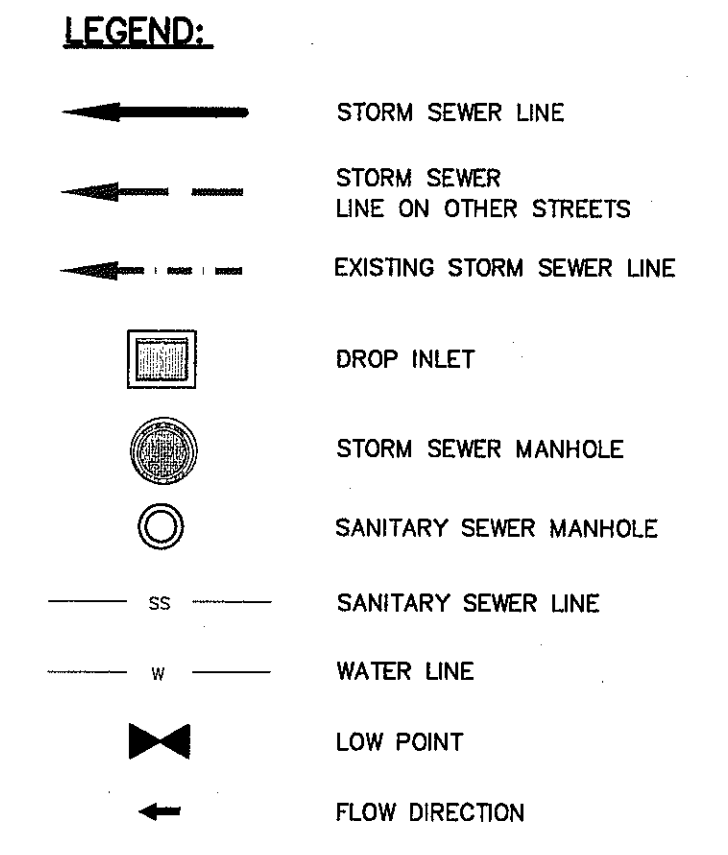
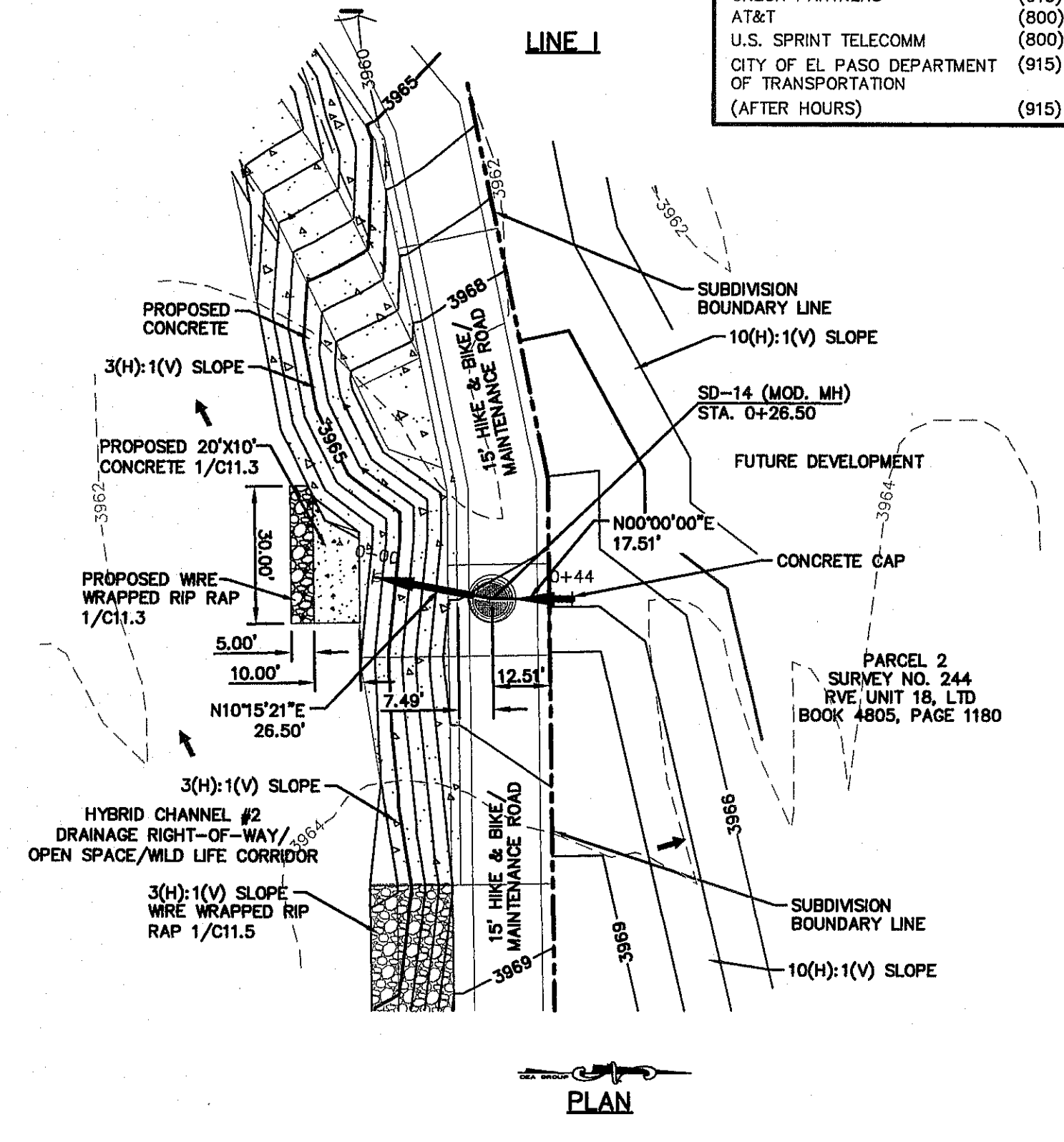
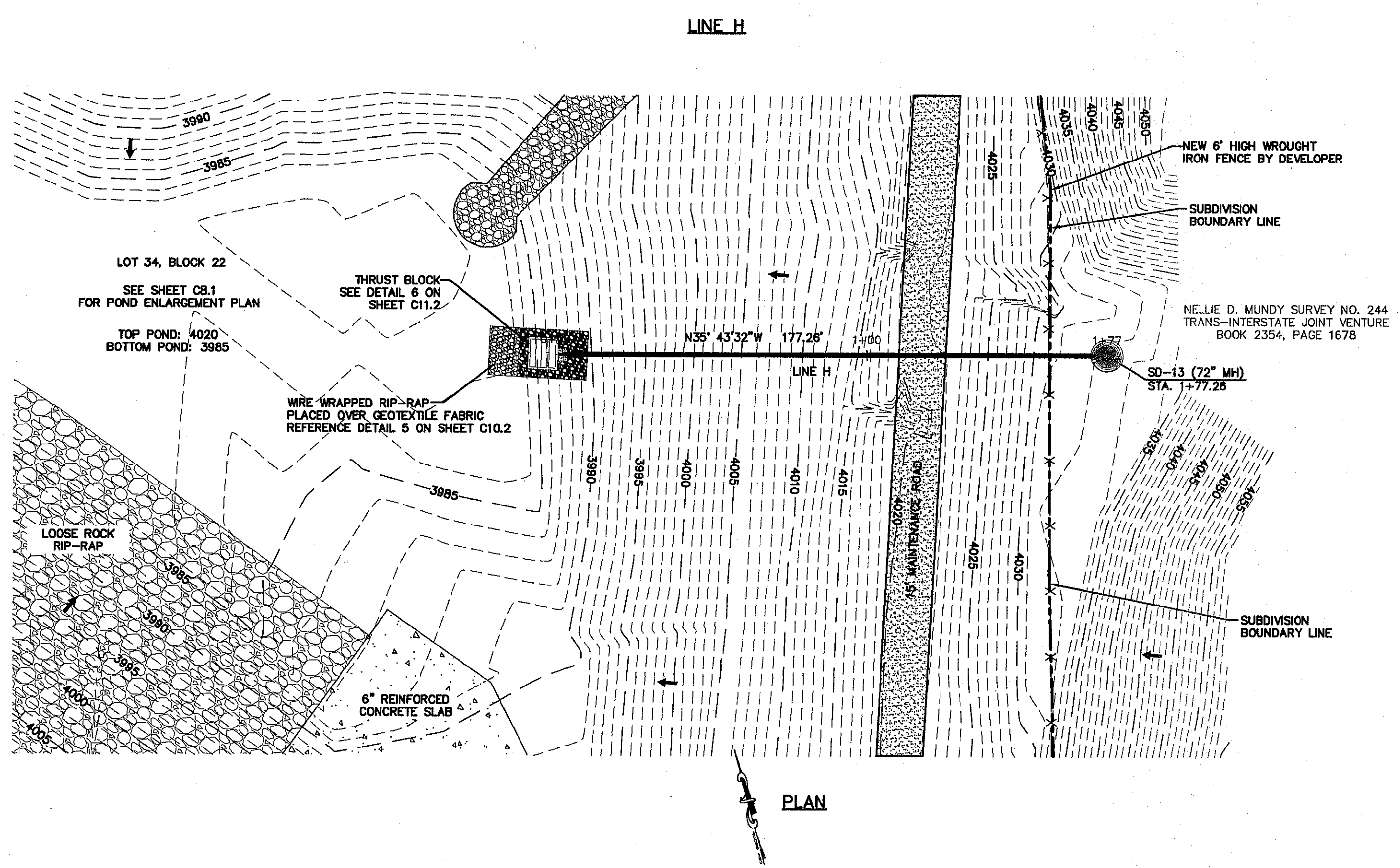
C7.4

S:\2014\2050-028-LD\2050-028-LD\2050-028-LD.dwg, Plot Date: 12/22/14, 2:58:52 PM

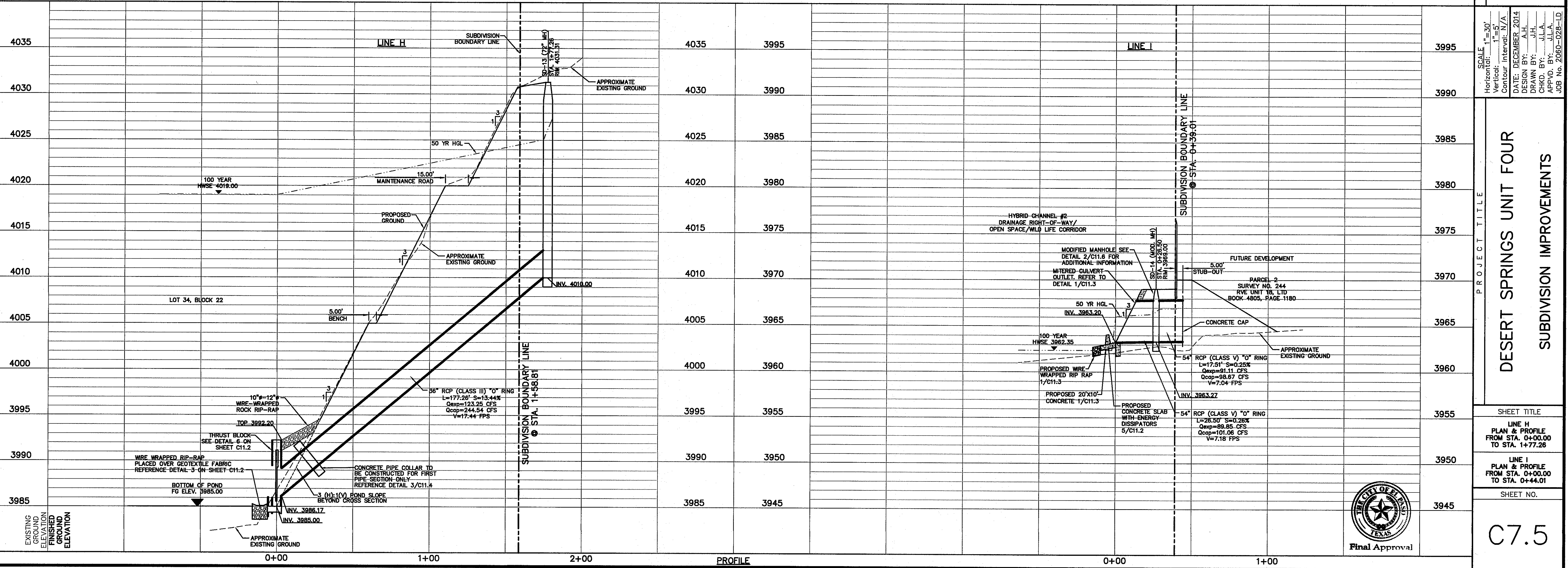
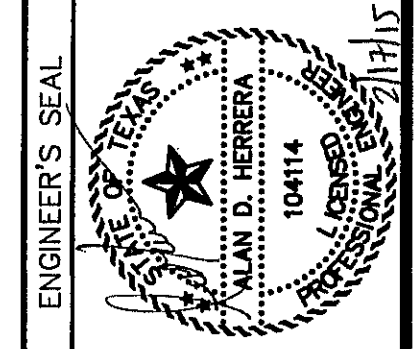
UTILITY LOCATOR SERVICES	
EL PASO ELECTRIC COMPANY	(915) 543-3720
EL PASO ENERGY CORPORATION	(915) 496-5244
EL PASO WATER UTILITIES	(915) 594-5500
MCI SURVEILLANCE	(800) MCI-WORK
TIME WARNER COMMUNICATIONS	(915) 772-1123
TEXAS GAS SERVICE	(915) 680-7200
ONEOK PARTNERS	(915) 595-6918
AT&T	(800) 852-3786
U.S. SPRINT TELECOM	(800) 521-0579
CITY OF EL PASO DEPARTMENT OF TRANSPORTATION (AFTER HOURS)	(915) 621-6750
	(915) 240-3220

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

REFERENCES - BENCHMARKS	REVISIONS
FOUND N.G.S. SURVEY MARKER STAMPED "CHINO 1980" ELEVATION: 3925.93 (CITY OF EL PASO VERTICAL DATUM 3945.78) (NAD 83 DATUM) 3945.78 (NAD 29 DATUM) 3945.78	DATE
TIE TO THE PROJECT BENCHMARK IS N50°09'09"W, 4.008.93 INCH NORTH FROM THE NORTHWEST CORNER OF TRACT 11, BELLE D. MUNDY SURVEY, 180, 235	BY



ceea
engineers • architects • planners
TEXAS REGISTERED ENGINEERING FIRM #464
4712 Woodrow Bean, Ste. F El Paso, TX 79904
Office: 915.544.3232 Fax: 915.544.5233 www.ceea.net



SCALE: Horizontal: 1"=50'
Vertical: 1"=5'
Contour Interval: N/A
DATE: DECEMBER 2014
DESIGN BY: A.H.
DRAWN BY: J.H.
CHKD. BY: J.L.A.
APPD. BY: J.L.A.
JOB No. Z060-028-LD

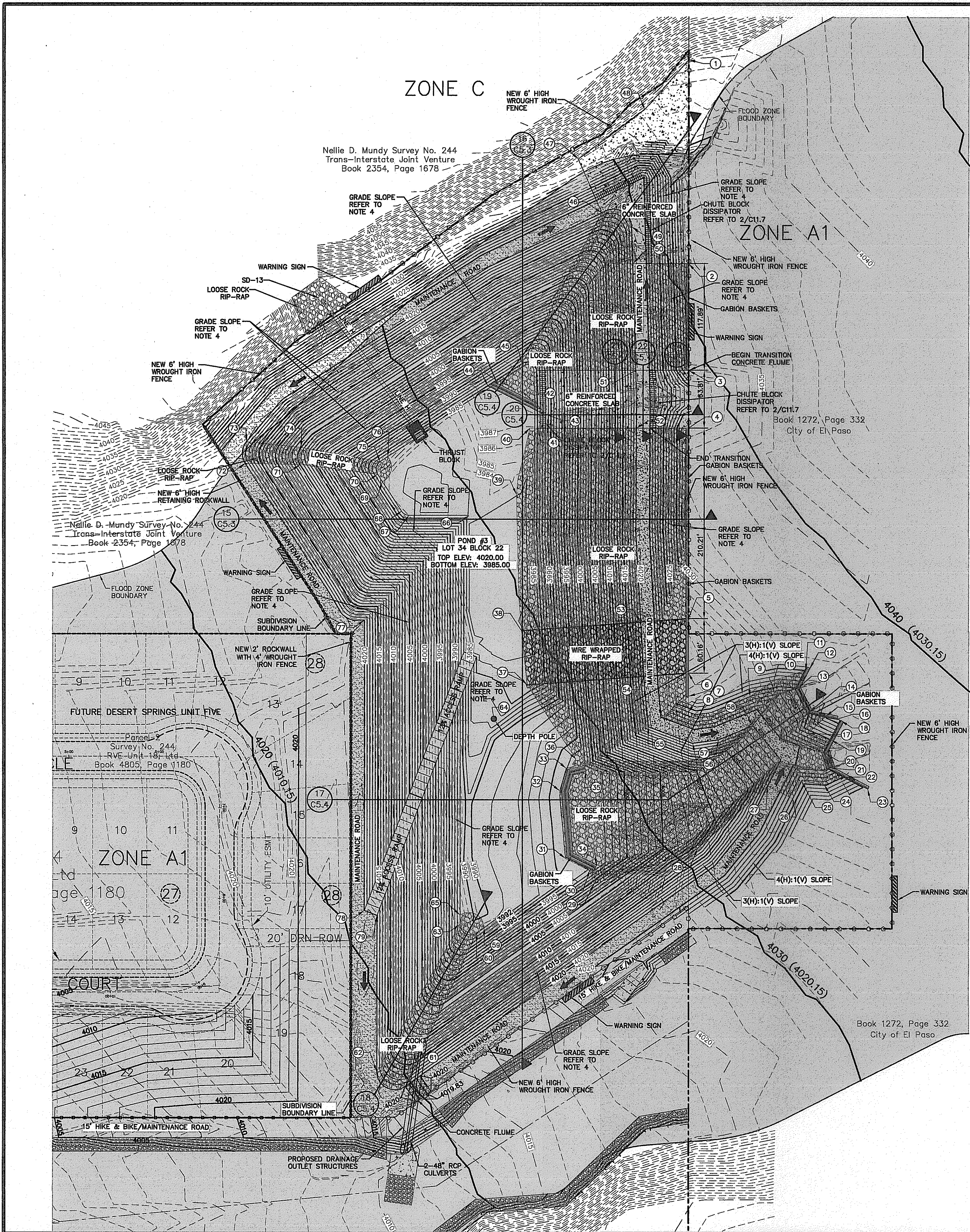
PROJECT TITLE
DESERT SPRINGS UNIT FOUR
SUBDIVISION IMPROVEMENTS

SHEET TITLE
LINE H
PLAN & PROFILE
FROM STA. 0+00.00
TO STA. 1+77.26

SHEET NO.
C7.5

Final Approval

S:\2014\2014-01-10\DESIGN\Construction\Drawings\Improvement Plans\Unit 4\300-013-LD-C7.5 Storm Sewer RFP.dwg, Model: 2/7/2015, 3:00:49 PM



Point #	Northing	Easting
1	13069.7822	11579.6528
2	12845.3503	11579.6515
3	12727.4583	11579.6510
4	12863.6528	11579.6507
5	12453.6568	11579.6499
6	12393.5013	11579.6497
7	12367.9221	11579.6496
8	12350.7130	11579.6496
9	12367.6874	11647.5734
10	12385.4593	11673.9546
11	12396.7935	11709.3085
12	12398.8499	11713.7794
13	12377.1350	11700.3989
14	12351.0069	11713.6552
15	12345.8863	11731.5415
16	12343.0705	11744.1248
17	12327.4450	11711.9994
18	12341.2351	11748.2020
19	12320.1418	11737.0265
20	12305.4550	11730.2396
21	12289.3224	11735.1979
22	12278.8211	11753.1419
23	12265.6712	11777.9617
24	12270.3755	11729.9092
25	12274.6538	11704.7265
26	12255.1352	11694.9414
27	12269.0281	11667.2288
28	12199.8175	11589.4717
29	12161.1391	11474.9421
30	12176.3822	11470.0791
31	12189.1240	11442.8956
32	12263.7778	11436.6722

Point #	Northing	Easting
33	12288.6624	11443.8531
34	12181.8608	11477.5577
35	12285.0046	11465.7738
36	12298.8466	11454.5498
37	12380.6141	11400.7601
38	12440.3245	11394.5821
39	12590.7227	11388.9632
40	12663.6528	11403.5478
41	12663.6528	11411.8402
42	12727.4590	11410.9111
43	12682.5801	11411.9346
44	12710.4020	11356.8922
45	12734.7889	11394.8475
46	12901.1370	11483.1511
47	12960.4844	11456.9416
48	13014.9604	11530.6206
49	12885.8506	11516.3530
50	12845.3506	11517.5304
51	12727.4585	11520.9578
52	12663.6528	11521.8415
53	12449.8416	11526.6901
54	12389.9302	11530.0787
55	12334.2509	11535.0737
56	12316.0937	11584.1864
57	12319.8425	11612.5954
58	12335.4280	11650.6134
59	12112.8157	11353.2667
60	12106.9940	11345.1360
61	11937.3555	11286.2454
62	11953.6168	11234.6020
63	12116.5185	11326.6020
64	12343.1107	11364.0032

POND 3 CALCULATIONS

100-YEAR STORM EVENT

A total = 951.84 acres
 Q inflow = 1777.49 cfs
 Q outflow = 308.91 cfs
 Q storage = 119.5 ac-ft
 Q elevation = 4019.00

TOTAL_{req} = 119.500 AC-FT
 TOTAL_{cap} = 125.796 AC-FT

DRAINAGE RUNOFF CALCULATIONS HAVE BEEN DESIGNED AND ANALYZED FOR THE OVERALL AREA AFFECTING FLOWPATHS 41, 41A AND DESERT SPRINGS DEVELOPMENT. CALCULATIONS ARE BASED FROM HYDROLOGY MODEL HEC-HMS (Version 3.5).
 LOSS METHOD: INITIAL AND CONSTANT
 TRANSFORM METHOD: SNYDER UNIT HYDROGRAPH

THE HYDRAULICS/HYDROLOGY OF THE BASIN WAS DESIGNED TO 3986 ELEVATION. THE BASIN HAS AN ADDITIONAL DEPTH FOR POSSIBLE SILT ACCUMULATION/STORAGE.
 0.006 ac-ft/acre (ALLUVIAL)
 SILT VOLUME = 5.711 ac-ft

POND 3 AREAS

CONTOUR	ACCUMULATED VOLUME (ac-ft)
4020	125.796
4019	119.650
4018	113.474
4017	107.565
4016	101.822
4015	96.243
4014	90.827
4013	85.570
* 4012	80.472
4011	75.530
4010	70.743
4009	66.109
4008	61.625
4007	57.291
4006	53.104
4005.1	49.488
4005	49.081
4004	45.418
4003	41.893
4002	38.505
4001	35.252
4000	32.131
3999	29.142
3998	26.281
3997	23.548
3996	20.941
3995	18.457
3994	16.095
3993	13.853
3992	11.728
3991	9.720
3990	7.826
3989	6.044
3988	4.372
3987	2.809
3986	1.352
**3985	0.000

POND 3 SILT AREAS

CONTOUR	ACCUMULATED VOLUME (ac-ft)
3985	5.257
3984	4.008
3983	2.860
3982	1.810
3981	0.858
3980	0.000

THE BASIN HAS EXTRA CAPACITY FOR POSSIBLE SILT/DEBRIS STORAGE ACCUMULATION WITHOUT AFFECTING THE EFFICIENCY OF THE HYDRAULICS/HYDROLOGY DESIGN OF THE BASIN.

* THE CENTER ELEVATION OF THE OUTLET CONDUITS IS LOCATED AT ELEVATION 4012.60. THE OUTLET CONSISTS OF TWO (2) - 48" RCP CULVERTS. INVERT ELEVATION = 4010.60

** EFFECTIVE HYDRAULICS/HYDROLOGY BOTTOM OF THE BASIN. THE BASIN HAS AN ACTUAL BOTTOM ELEVATION OF 3980. THE BASIN HAS EXTRA CAPACITY FOR POSSIBLE SILT/DEBRIS STORAGE ACCUMULATION WITHOUT AFFECTING THE EFFICIENCY OF THE HYDRAULICS/HYDROLOGY DESIGN OF THE BASIN.

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
 ONEOK PARTNERS (915) 595-6818
 AT&T (800) 852-3786
 U.S. SPRINT TELECOMM (800) 521-0579
 CITY OF EL PASO DEPARTMENT OF TRANSPORTATION (915) 621-6750
 (AFTER HOURS) (915) 240-3220

WARNING!
BEFORE YOU DIG

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

FOR FIELD LOCATING EXISTING UTILITIES

GENERAL NOTES

- FIFTEEN (15') FEET WIDE POND ACCESS RAMP SHALL HAVE A TWELVE (12%) PERCENT SLOPE AND A MINIMUM P.L. OF EIGHT (8) WITH NO LOOSE MATERIAL AND A MINIMUM NINETY-FIVE (95%) PERCENT COMPACTION PER ASTM-D1557.
- POND PERIMETER WALL/FENCE SHALL BE BUILT TO A SIX (6') FEET MINIMUM HEIGHT FROM THE HIGHEST GROUND.
- PROPOSED ROCKWALLS & RETAINING WALL LOCATIONS SHALL BE CONSTRUCTED ACCORDING TO GRADING SECTIONS.
- ALL DETENTION BASIN SIDE SLOPES SHALL BE FINE GRADED TO 3(H)-1(V) SLOPES, MAINTENANCE ROAD SHALL BE GRADED TO 4020 ELEVATION AND BENCH TO 4005 ELEVATION.
- REFERENCE SHEETS CS.3, CS.4 AND CS.5 FOR ADDITIONAL INFORMATION ON CROSS SECTIONS.
- MAINTENANCE ROAD SHALL BE SLOPED AT THE FLATTEST POSSIBLE SLOPE TO DRAIN RUNOFF TO POINTS WHERE EROSION PROTECTION IS LOCATED.
- GABIONS USED SHALL BE ZINC AND PVC COATED.
- LOOSE ROCK RIP RAP
 - B.1. ROCK SIZE: 4" - 18" #
 - B.2. D50: 12"
 - B.3. ROCK WEIGHT: 155 LB/FT³
 - B.4. VOIDS: 30% MAXIMUM

LEGEND:

- NEW 6' HIGH ROCKWALL (0'-2' RETAINING HEIGHT)
- NEW 6' HIGH RETAINING ROCKWALL (3'-9' RETAINING HEIGHT)
- NEW 6' HIGH WROUGHT IRON FENCE BY DEVELOPER
- 4" - 18" LOOSE ROCK RIP-RAP (TWO LAYERS)
- 3" THICK COMPACTED SCREENING
- 6" REINFORCED CONCRETE SLAB BY DEVELOPER
- WARNING SIGN
- GABION BASKETS

REFERENCES - BENCHMARKS

FOUND N.G.S. SURVEY MARKER STAMPED "CHINO 1980"
 ELEVATION: 3946.11 (CITY OF EL PASO VERTICAL DATUM)
 (SHOW)

SEE TO THE PROJECT FOR THE LOCATION OF THE SURVEY MARKER.
 THE TO BE PROPOSED DEVELOPMENT IS 4.0083 FEET FROM A 1/2" INCH BEARING FOUND FOR THE NORTHWEST CORNER OF TRACT 11, NELLE D. MUNDY SURVEY NO. 239

DATE: _____ BY: _____

ENGINEER'S SEAL

SCALE: 1" = 60'
 Horizontal: N/A
 Vertical: N/A
 Contour Interval: N/A

DATE: DECEMBER 2014
 DESIGN BY: ALH
 DRAWN BY: J.L.A.
 CHECK BY: J.L.A.
 APPROVED BY: J.L.A.
 JOB NO. 20060-02B-LD

DESERT SPRINGS UNIT FOUR
SUBDIVISION IMPROVEMENTS

PROJECT TITLE

DESERT SPRINGS UNIT FOUR
SUBDIVISION IMPROVEMENTS

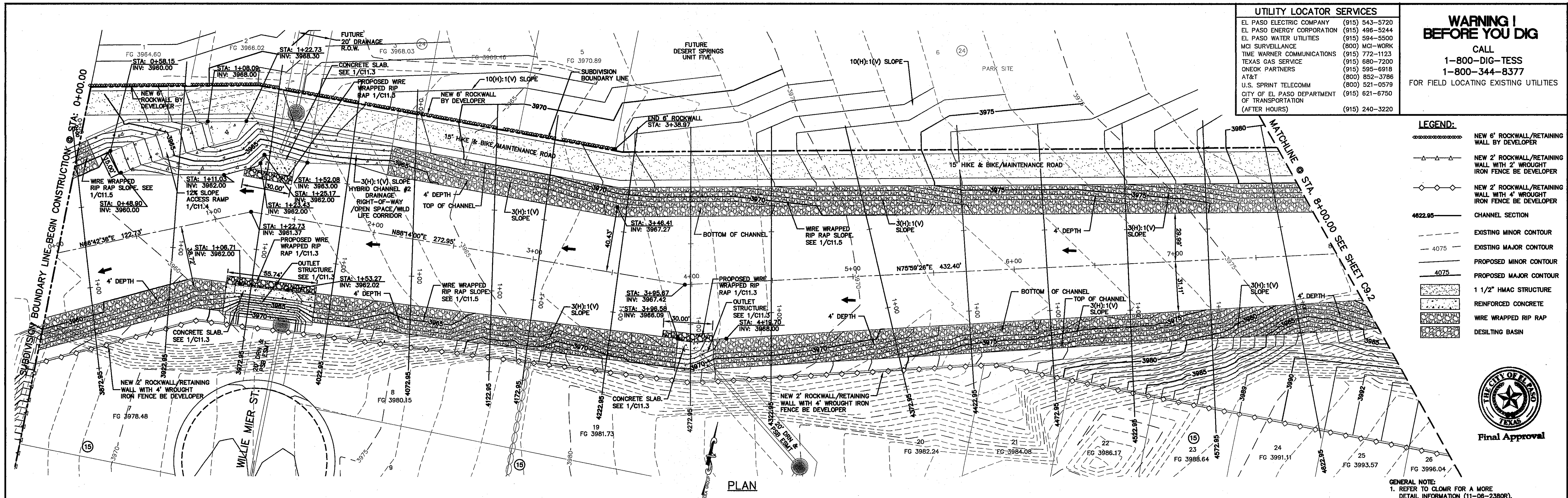
SHEET TITLE

POND #3
ENLARGEMENT
PLAN

SHEET NO.

C8.1

Final Approval



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
CHECK PARTNERS	(915) 595-6918
ATAF	(800) 853-3786
U.S. SPRINT TELECOM	(800) 521-0579
CITY OF EL PASO DEPARTMENT OF TRANSPORTATION	(915) 621-6750
(AFTER HOURS)	(915) 240-3220

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

LEGEND:

- NEW 6" ROCKWALL/RETAINING WALL BY DEVELOPER
- NEW 2" ROCKWALL/RETAINING WALL WITH 2" WROUGHT IRON FENCE BE DEVELOPER
- NEW 2" ROCKWALL/RETAINING WALL WITH 4" WROUGHT IRON FENCE BE DEVELOPER
- CHANNEL SECTION
- EXISTING MINOR CONTOUR
- EXISTING MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- 1 1/2" HMAC STRUCTURE
- REINFORCED CONCRETE
- WIRE WRAPPED RIP RAP
- DESILTING BASIN



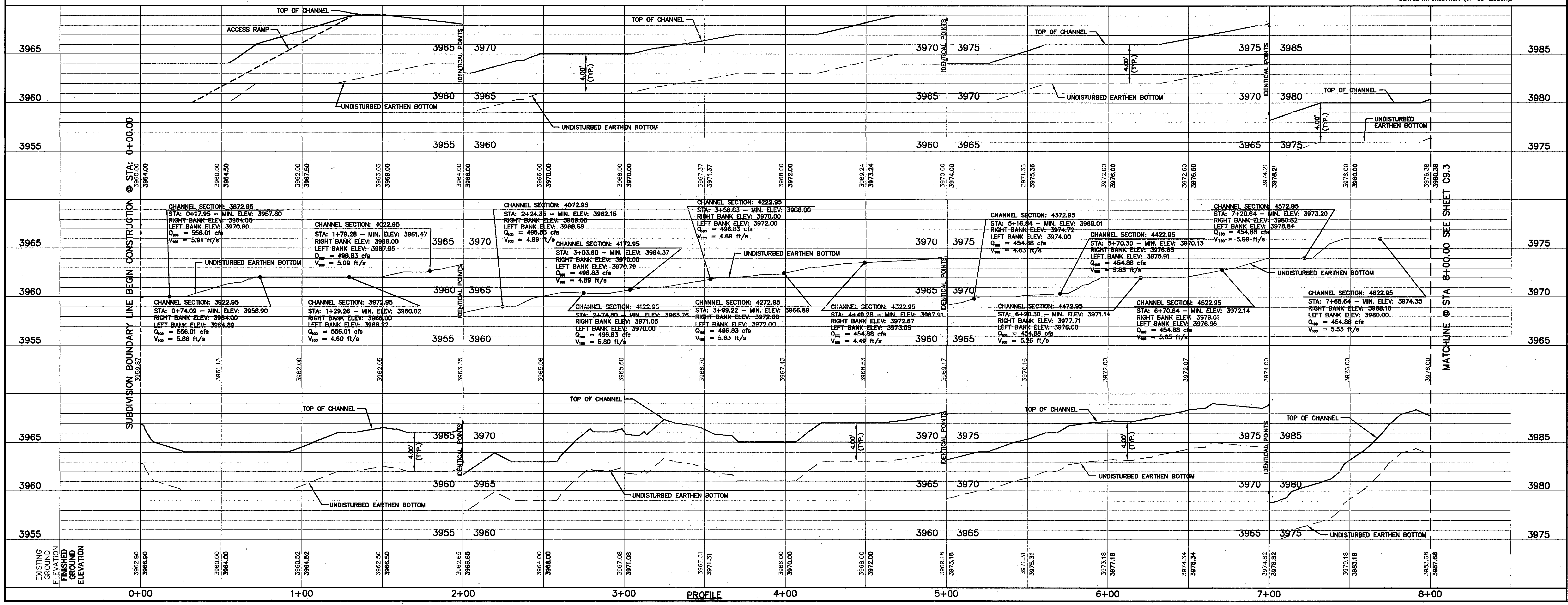
REFERENCES - BENCHMARKS

FOUND ALG.S. SURVEY MARKER STAMPED "CHNO 1980"
 ELEVATION: 3935.83 (CITY OF EL PASO VERTICAL DATUM SHOWN)
 THE TO THE PROJECT BENCHMARK IS N23799.09' W, 4008.83 FEET FROM A 1/2" INCH REBAR FOUND FOR THE NORTHWEST CORNER OF TRACT 11, HELLE D. MUNDY SURVEY NO. 239

ENGINEER'S SEAL

PLANNERS ENGINEERS ARCHITECTS
 TEXAS REGISTERED ENGINEERING FIRM #664
 4712 Woodrow Bann, Ste. F, El Paso, TX 79924
 Office: 915.541.5232 Fax: 915.541.5233 www.oegroup.net

DATE: _____ BY: _____
 REVISIONS: _____



SCALE:
 Horizontal: 1"=30'
 Vertical: 1"=5'

DATE: DECEMBER 2014
DESIGN BY: A.H.
DRAWN BY: J.H.
CHKD. BY: J.L.A.
APP'D. BY: J.L.A.

PROJECT TITLE
 DESERT SPRINGS UNIT FOUR
 SUBDIVISION IMPROVEMENTS

SHEET TITLE
 HYBRID CHANNEL #2
 PLAN & PROFILE
 FROM STA. 0+00.00
 TO STA. 8+00.00
 (SHEET 1 OF 6)

SHEET NO.
 C9.1

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
ONEOK PARTNERS	(915) 595-6918
AT&T	(800) 852-3786
U.S. SPRINT TELECOMM	(800) 521-0579
CITY OF EL PASO DEPARTMENT OF TRANSPORTATION (AFTER HOURS)	(915) 621-6750
	(915) 240-3220

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

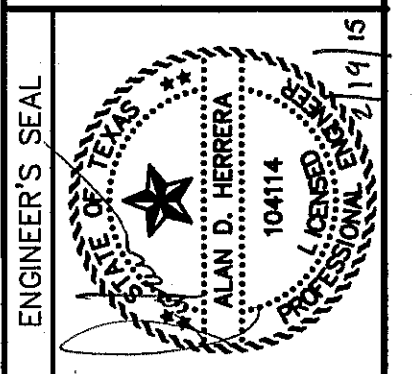
GENERAL NOTE:
1. REFER TO CLOMR FOR A MORE DETAILED INFORMATION (11-06-2380R).

LEGEND:

	NEW 6' RETAINING ROCKWALL (3'-9" RETAINING HEIGHT) BY DEVELOPER
	NEW 6' ROCKWALL/RETAINING WALL BY DEVELOPER
	NEW 2' ROCKWALL/RETAINING WALL WITH 4" WROUGHT IRON FENCE BY DEVELOPER
	CHANNEL SECTION
	EXISTING MINOR CONTOUR
	EXISTING MAJOR CONTOUR
	PROPOSED MINOR CONTOUR
	PROPOSED MAJOR CONTOUR
	1 1/2" HMAC STRUCTURE
	REINFORCED CONCRETE
	WIRE WRAPPED RIP RAP
	DESILTING BASIN

REFERENCES - BENCHMARKS
FOUND N.G.S. SURVEY MARKER STATION "CH10 1980" ELEVATION: 3933.93 (CITY OF EL PASO VERTICAL DATUM) (NAVD 88 DATUM) 3948.71
TIE TO THE PROJECT BENCHMARK IS N53°09'09"W, 4,008.93 FEET FROM A 1/2" INCH REBAR FOUND FOR THE NORTHWEST CORNER OF TRACT 11, HELLE D. MUNDY SURVEY NO. 239
DATE: _____ BY: _____

osa
engineers • architects • planners
TEXAS REGISTERED ENGINEERING FIRM F-1666
4712 Woodrow Bland, Ste. F, El Paso, TX 79924
Office: 915.544.5232 Fax: 915.544.5233 www.osaengr.com

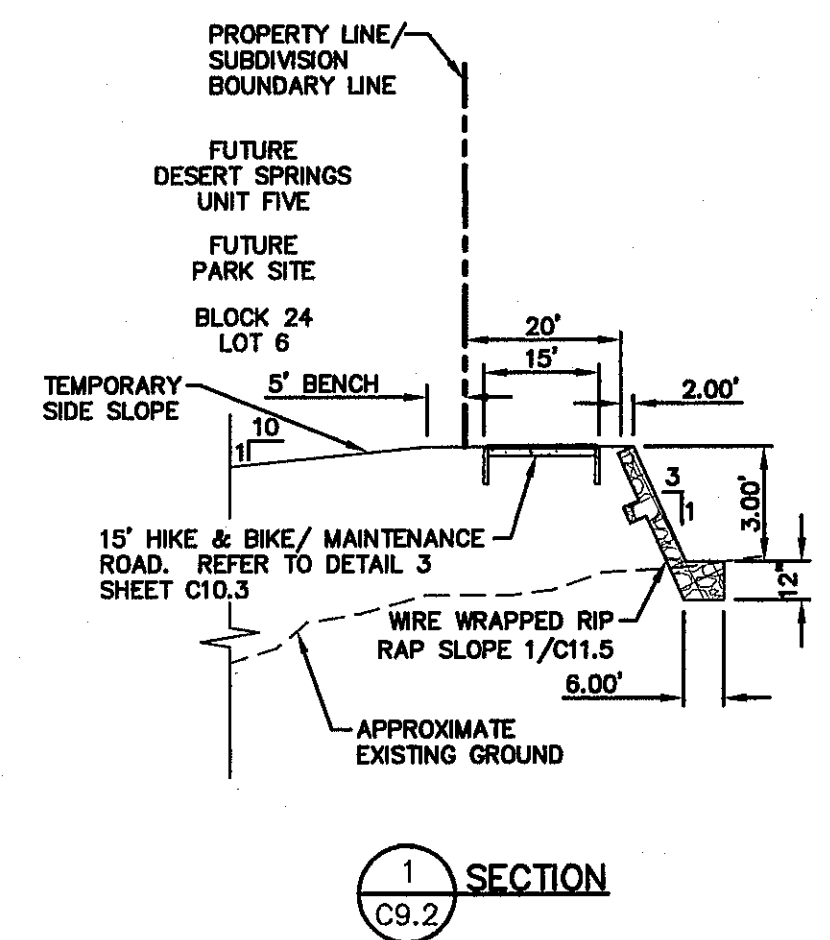
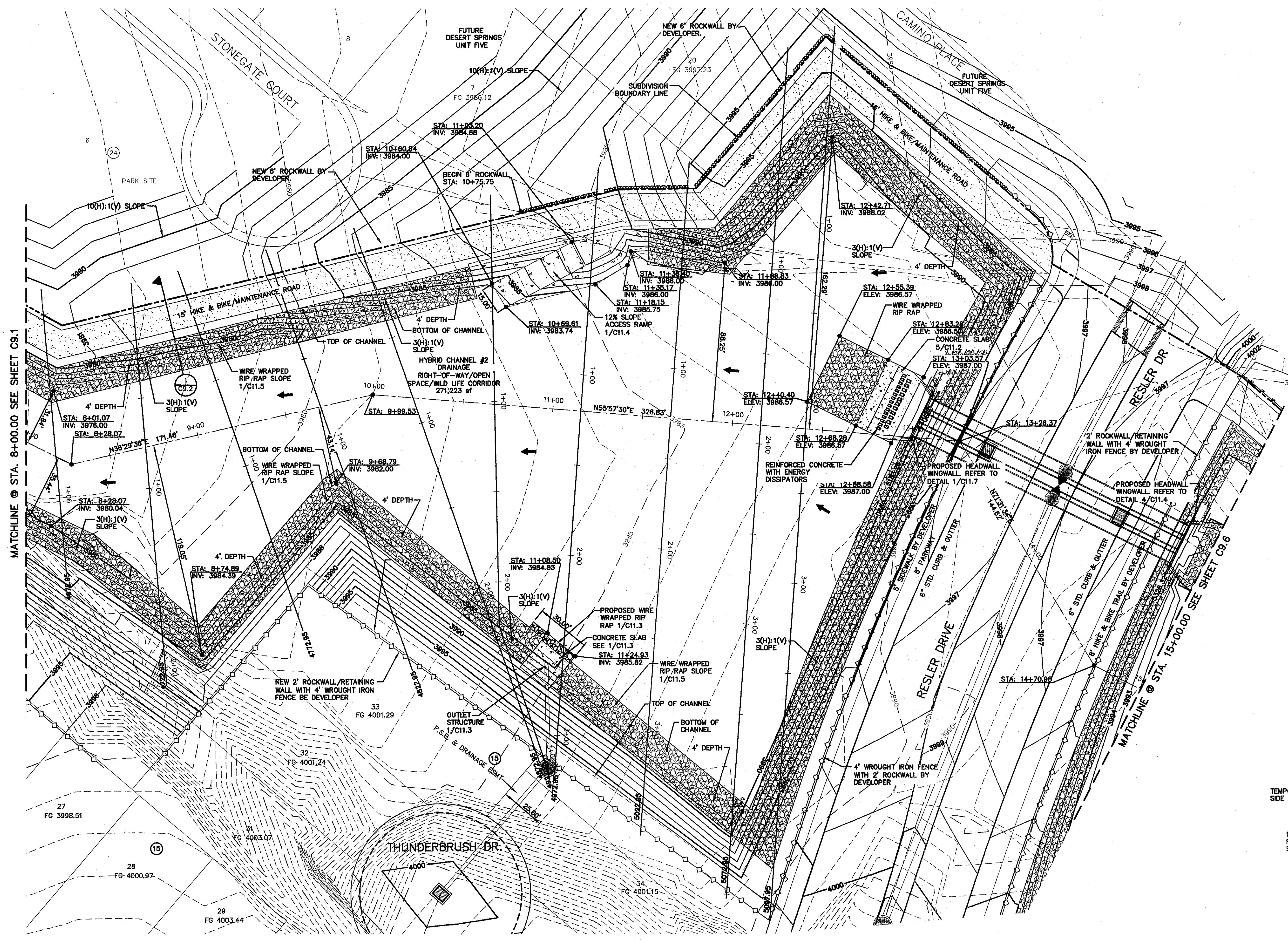


SCALE: 1"=60'
Horizontal: 1"=5'
Vertical: Contour Interval: N/A
DATE: DECEMBER 2014
DESIGN BY: A.H.L.
DRAWN BY: J.L.A.
CHKD. BY: J.L.A.
APPROV. BY: J.L.A.
JOB No. 2060-028-LD

PROJECT TITLE
DESERT SPRINGS UNIT FOUR
SUBDIVISION IMPROVEMENTS

SHEET TITLE
HYBRID CHANNEL #2
PLAN & PROFILE
FROM
STA. 8+00.00
TO STA. 15+00.00
(SHEET 2 OF 6)
SHEET NO.

C9.2



MATCHLINE @ STA. 8+00.00 SEE SHEET C9.1

MATCHLINE @ STA. 15+00.00 SEE SHEET C9.6

PLAN

Final Approval

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
ONEOK PARTNERS	(915) 595-6918
AT&T	(800) 852-3786
U.S. SPRINT TELECOM	(800) 521-0579
CITY OF EL PASO DEPARTMENT OF TRANSPORTATION	(915) 621-6750
(AFTER HOURS)	(915) 240-3220

WARNING I BEFORE YOU DIG

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

FOR FIELD LOCATING EXISTING UTILITIES

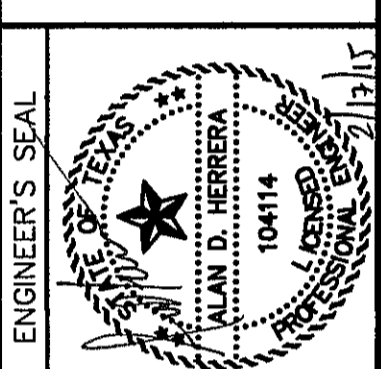
DATE	REVISIONS	BY

CS&A

engineers • architects • planners

TEXAS REGISTERED ENGINEERING FIRM F-464

4712 Woodrow Bean, Ste. F El Paso, TX 79924
Office: 915.544.5322 Fax: 915.544.5233 www.csandae.com



SCALE: 1" = 30'

Horizontal: 1" = 5'

Vertical: 1" = 5'

Contour Interval: 1/4'

DATE: DECEMBER 2014

DESIGN BY: A.H.

DRAWN BY: J.H.

CHKD. BY: J.L.A.

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

JOB No. 2050-028-1D

PROJECT TITLE

DESERT SPRINGS UNIT FOUR

SUBDIVISION IMPROVEMENTS

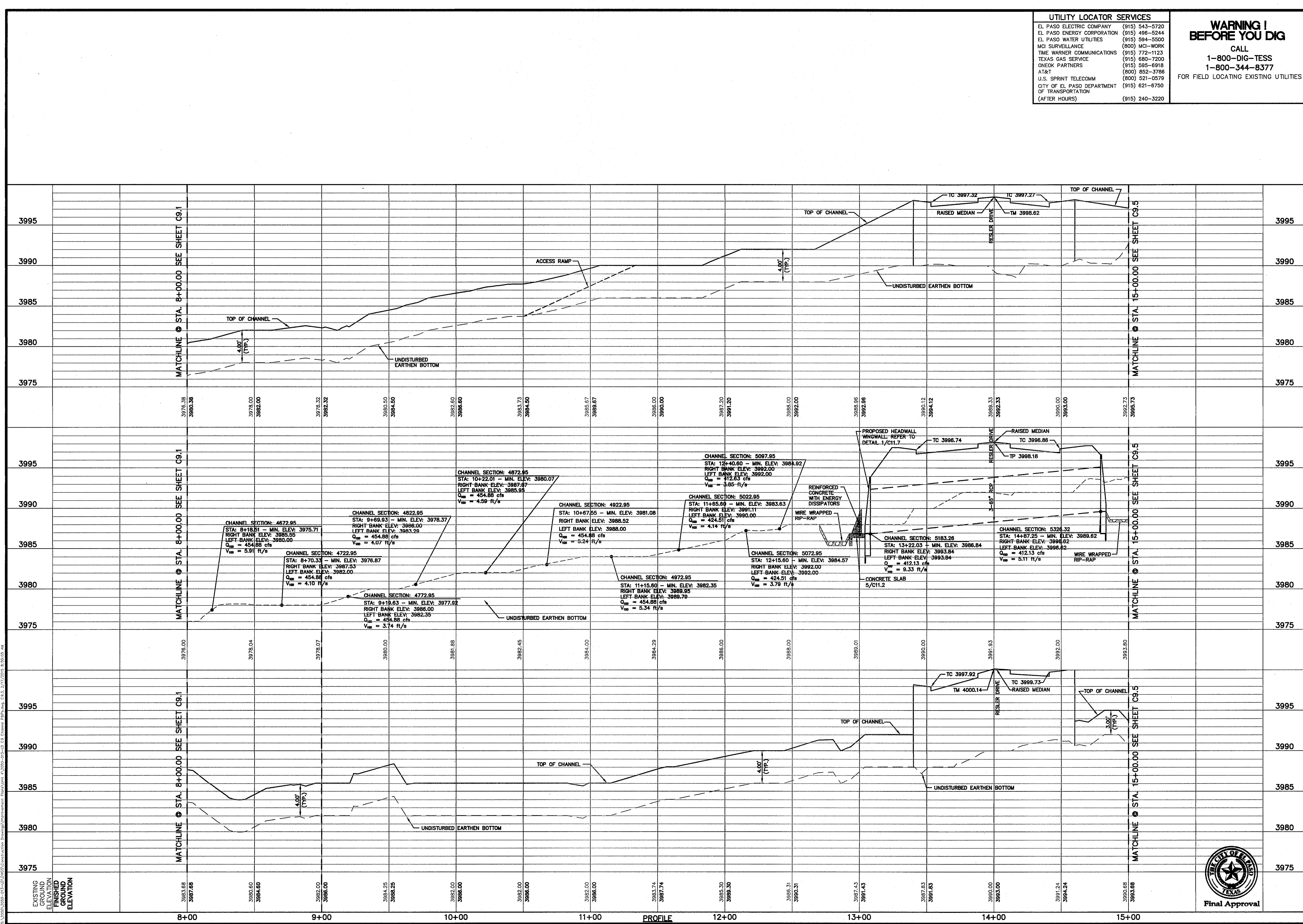
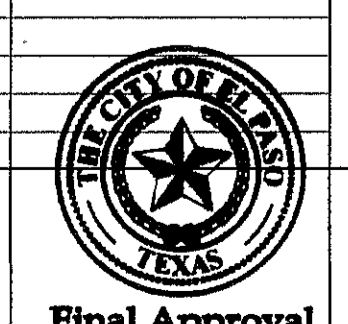
SHEET TITLE

HYBRID CHANNEL #2
PLAN & PROFILE
FROM STA. 8+00.00
TO STA. 15+00.00

(SHEET 3 OF 6)

SHEET NO.

C9.3



C:\Users\jsh59\OneDrive - City of El Paso\Documents\Projects\Desert Springs\Hybrid Channel\Hybrid Channel.dwg, 12/15/2014 8:30:05 AM

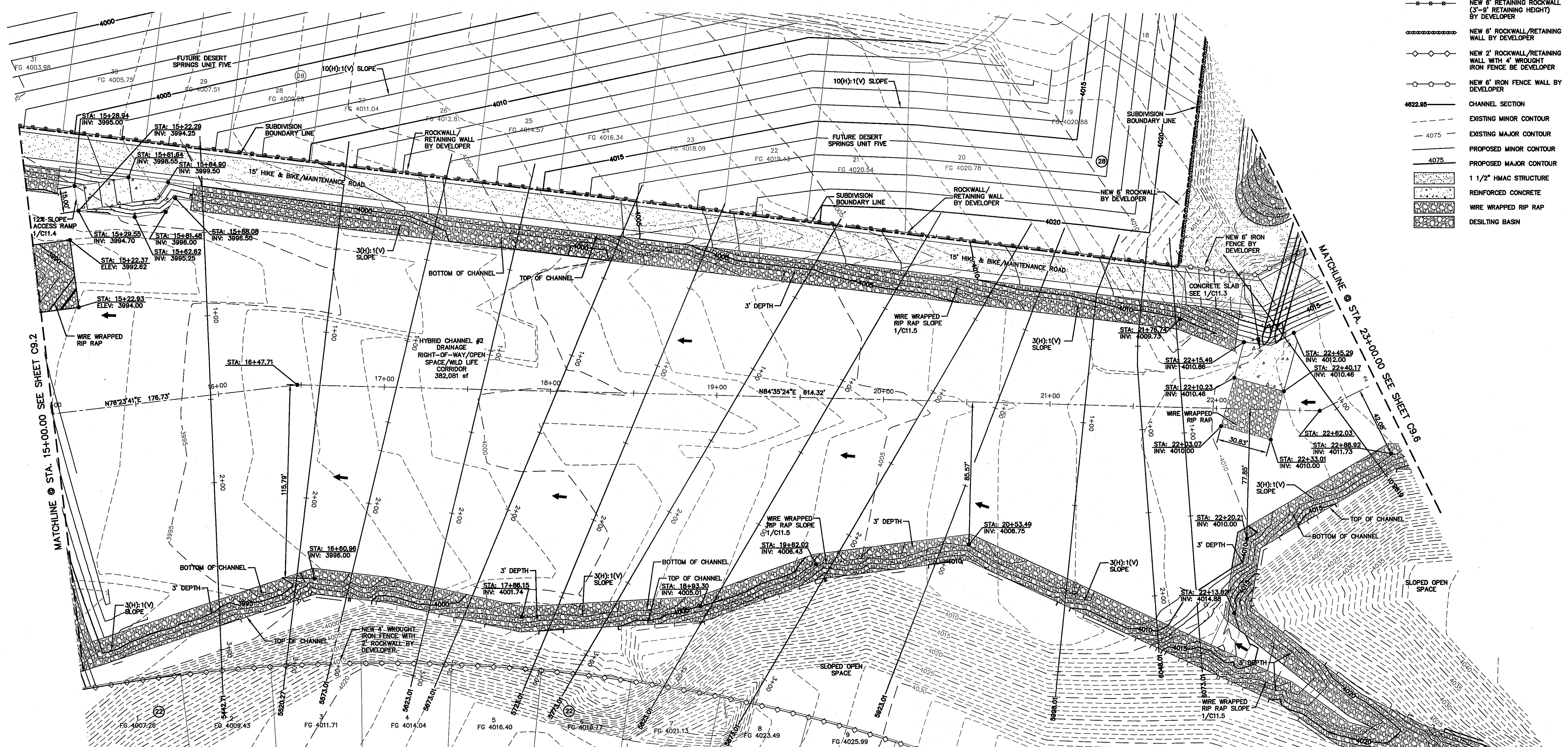
GENERAL NOTE:
1. REFER TO CLOMR FOR A MORE
DETAIL INFORMATION (11-06-2380R).

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
ONEOK PARTNERS	(915) 595-6918
AT&T	(800) 853-3766
U.S. SPRINT TELECOMM	(800) 521-0579
CITY OF EL PASO DEPARTMENT OF TRANSPORTATION	(915) 621-6750
(AFTER HOURS)	(915) 240-3220

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

LEGEND:

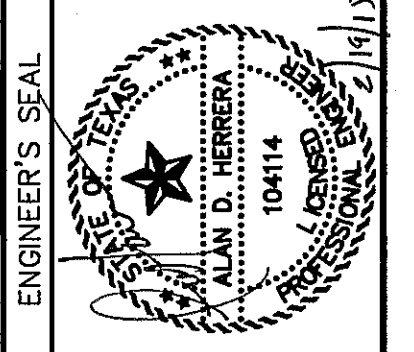
- NEW 6' RETAINING ROCKWALL (3'-9" RETAINING HEIGHT) BY DEVELOPER
- NEW 6' ROCKWALL/RETAINING WALL BY DEVELOPER
- NEW 2' ROCKWALL/RETAINING WALL WITH 4' WROUGHT IRON FENCE BY DEVELOPER
- NEW 6' IRON FENCE WALL BY DEVELOPER
- CHANNEL SECTION
- EXISTING MINOR CONTOUR
- EXISTING MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- 1 1/2" HMA STRUCTURE
- REINFORCED CONCRETE
- WIRE WRAPPED RIP RAP
- DESILTING BASIN



PLAN

REFERENCES - BENCHMARKS
FOUND N.T.S. SURVEY MARKER STATIONED "PLUS 1887"
ELEVATION: 3935.83 (CITY OF EL PASO VERTICAL DATUM)
3946.11 (NAVD 88 DATUM)
NOTE: TO THE PROJECT BENCHMARK IS N37°09'09"W, 4,008.83 FEET FROM A 1/2" INCH REBAR FOUND FOR THE NORTHWEST CORNER OF TRACT 11, NELLIE D. MUNDY SURVEY No. 239

osa
engineers • architects • planners
TEXAS REGISTERED ENGINEERING FIRM F-4664
4712 Woodrow Bham, Ste. F El Paso, TX 79904
Office: 915.544.5232 Fax: 915.544.5233 www.osainc.com



SCALE: 1"=30'
Horizontal: N/A
Vertical: N/A
Contour Interval: N/A
DATE: DECEMBER 2014
DESIGN BY: A.H.
DRAWN BY: J.L.A.
CHKD. BY: J.L.A.
APPVD. BY: J.L.A.
JOB No. 2060-028-LD

PROJECT TITLE
DESERT SPRINGS UNIT FOUR
SUBDIVISION IMPROVEMENTS

SHEET TITLE

HYBRID CHANNEL #2
PLAN & PROFILE
FROM STA. 15+00.00
TO STA. 23+00.00

(SHEET 4 OF 6)

SHEET NO.

C9.4



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
ONEOK PARTNERS	(915) 595-6919
AT&T	(800) 852-3786
U.S. SPRINT TELECOMM	(800) 521-0579
CITY OF EL PASO DEPARTMENT OF TRANSPORTATION	(915) 621-6750
(AFTER HOURS)	(915) 240-3220

WARNING I BEFORE YOU DIG

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

FOR FIELD LOCATING EXISTING UTILITIES

REFERENCES	BENCHMARKS
FOUND N.G.S. SURVEY MARKER STAMPED "CHNO 1980" (NOV. 88 DATUM)	3993.83 (CITY OF EL PASO VERTICAL DATUM)
TIE TO THE PROJECT BENCHMARK IS N37°09'09" W, 4.008.83 FEET FROM A 1/2 INCH REBAR FOUND FOR THE NORTHWEST CORNER OF TRACT 11, WELLS D. BONDY SURVEY NO. 239	3995.78 (NOV. 28 DATUM)
	3995.78 (NOV. 28 DATUM)

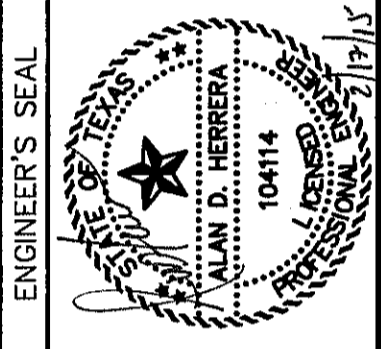
ENGINEER'S SEAL

SCALE

Horizontal: N/A
 Vertical: Contour Interval: 1' / 4'

DATE: DECEMBER 2014
 DESIGN BY: A.H.
 DRAWN BY: J.H.
 CHKD. BY: J.L.A.
 APPVD. BY: J.L.A.

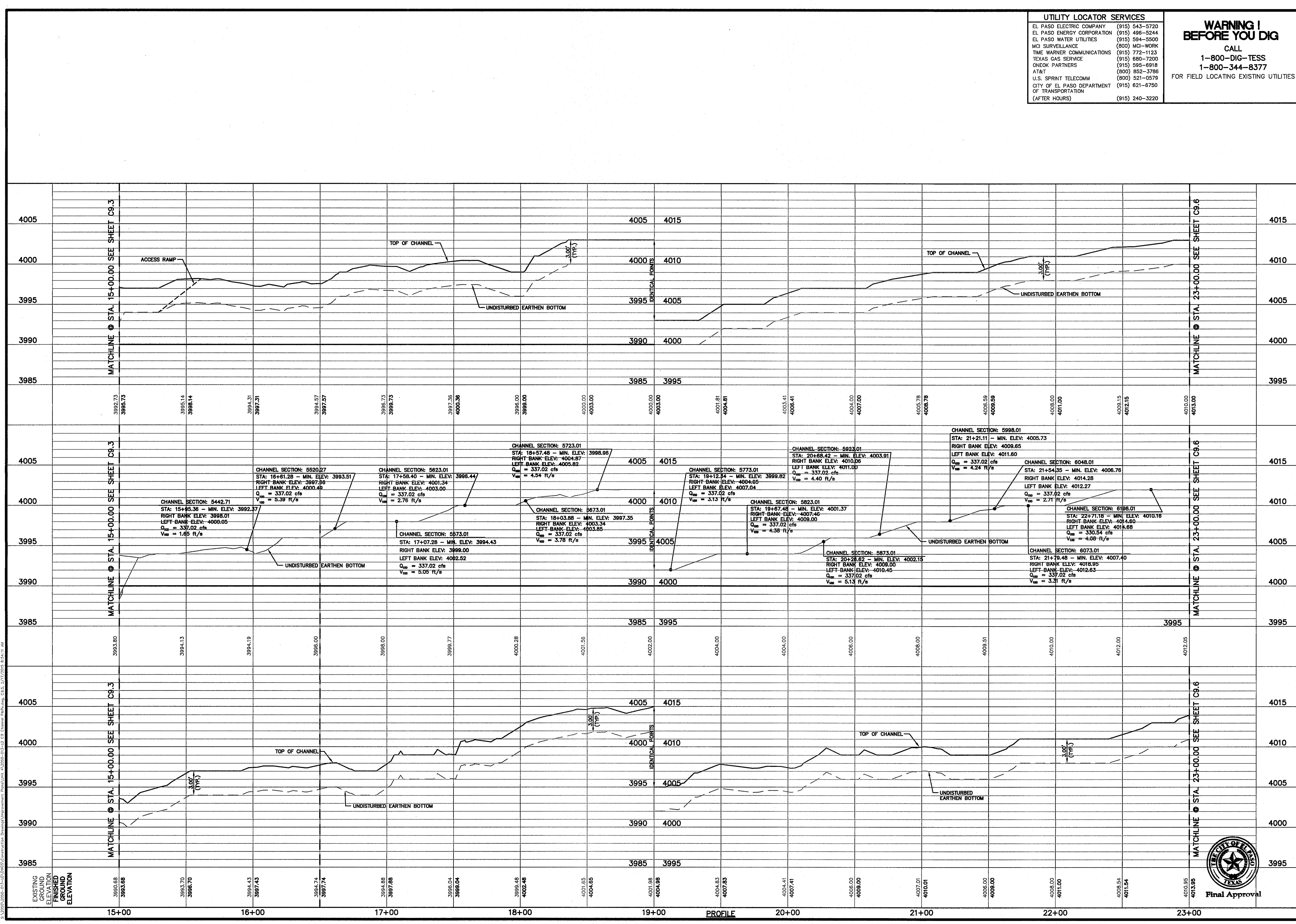
JOB NO. 2050-028-ID



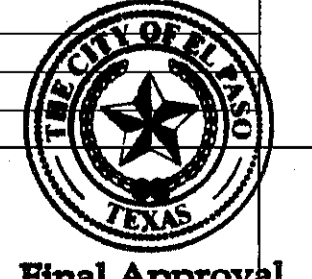
DESERT SPRINGS UNIT FOUR
 SUBDIVISION IMPROVEMENTS

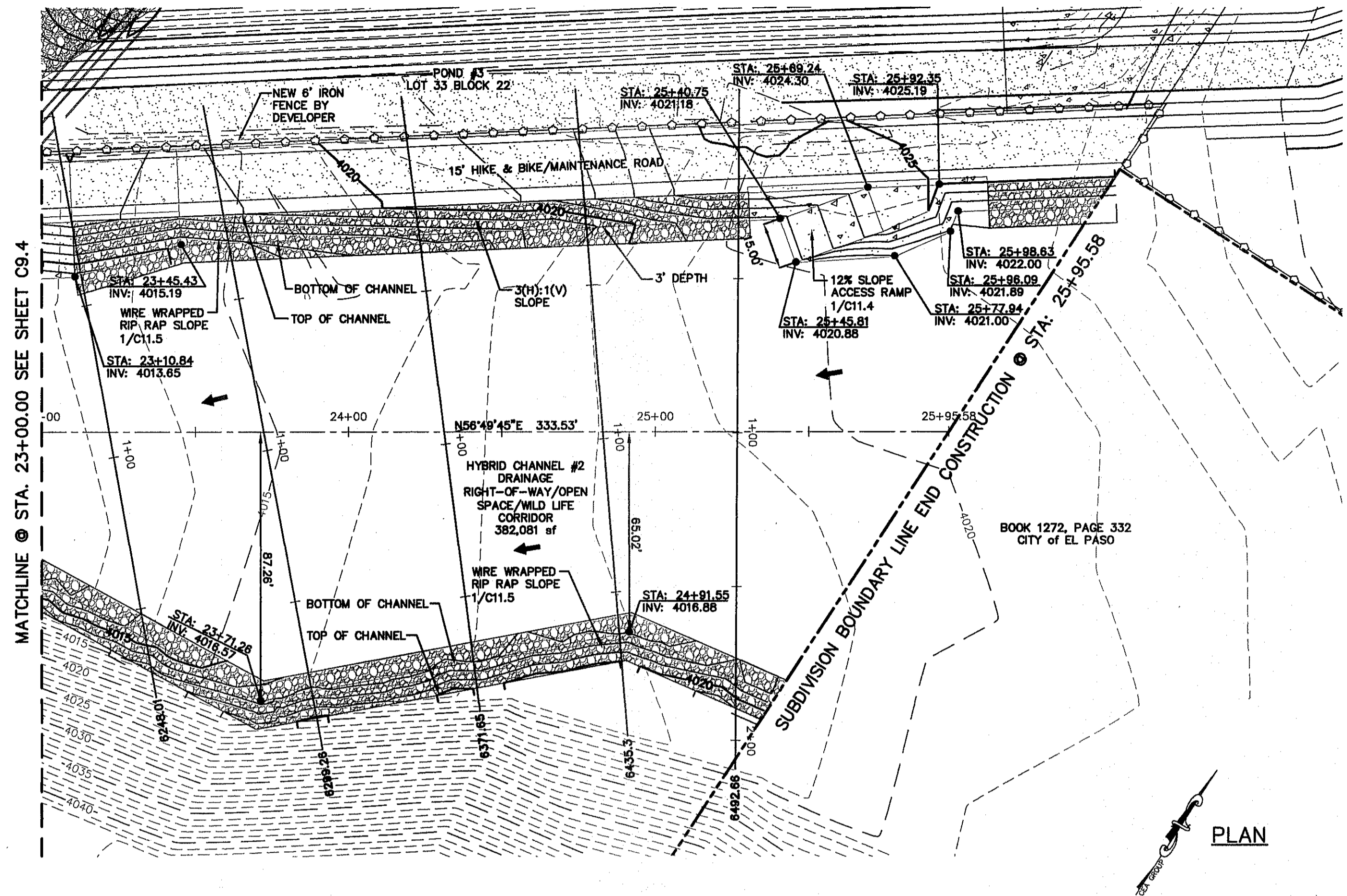
SHEET TITLE
 HYBRID CHANNEL #2
 PLAN & PROFILE
 FROM STA. 15+00.00
 TO STA. 23+00.00
 (SHEET 5 OF 6)
 SHEET NO.

C9.5



2013/09/25 09:55:01 - J:\Projects\Construction\DesertSprings\Subdivisions\HybridChannel\Drawings\C9.5 - 2/12/2014 8:56:11 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
ONEOK PARTNERS	(915) 595-8918
AT&T	(800) 852-3766
U.S. SPRINT TELECOMM	(800) 521-0579
CITY OF EL PASO DEPARTMENT OF TRANSPORTATION	(915) 621-6750
(AFTER HOURS)	(915) 240-3220

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

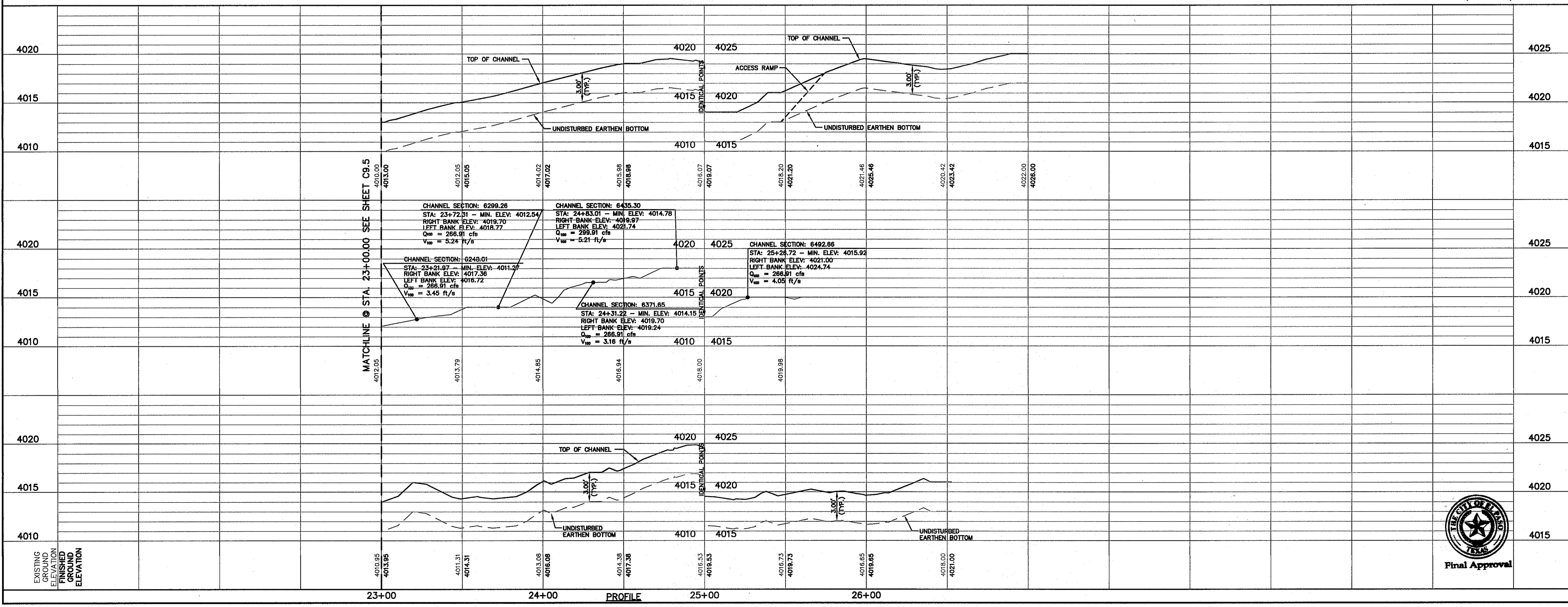
- LEGEND:**
- NEW 6" IRON FENCE WALL BY DEVELOPER
 - EXISTING MINOR CONTOUR
 - EXISTING MAJOR CONTOUR
 - PROPOSED MINOR CONTOUR
 - PROPOSED MAJOR CONTOUR
 - CHANNEL SECTION
 - 1 1/2" HMC STRUCTURE
 - REINFORCED CONCRETE
 - WIRE WRAPPED RIP RAP
 - DESILTING BASIN

REFERENCES - BENCHMARKS
 FOUND N.T.S. SURVEY MARKER STAMPED FOUND 1887
 ELEVATION: 3946.11
 3946.11 (NAD 83 DATUM)
 3946.11 (NAD 83 DATUM)
 TITLE TO THE PROJECT BENCHMARK IS N379°09'W, 4.008.93 FEET FROM A 1/2" INCH REBAR FOUND FOR THE NORTHWEST CORNER OF TRACT 11, NELLIE D. MUNDY SURVEY No. 239

ENGINEER'S SEAL

 J.L.A.
 10414
 ENGINEERS • ARCHITECTS • PLANNERS
 TEXAS REGISTERED ENGINEERING FIRM F-654
 4712 Woodrow Beane, Ste. F, El Paso, TX 79924
 Office: 915.544.5232 Fax: 915.544.5233 www.oesa.com

GENERAL NOTE:
 1. REFER TO CDMR FOR A MORE DETAILED INFORMATION (11-08-2380R).



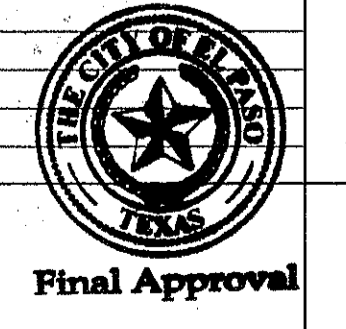
ENGINEER'S SEAL

 J.L.A.
 10414
 ENGINEERS • ARCHITECTS • PLANNERS
 TEXAS REGISTERED ENGINEERING FIRM F-654
 4712 Woodrow Beane, Ste. F, El Paso, TX 79924
 Office: 915.544.5232 Fax: 915.544.5233 www.oesa.com

SCALE:
 Horizontal: N/A
 Vertical: Contour Interval: N/A
 DATE: DECEMBER 2014
 DESIGN BY: A.H.
 DRAWN BY: J.H.
 CHKD. BY: J.L.A.
 APPVD. BY: J.L.A.
 JOB No. 2080-028-LD

PROJECT TITLE
 DESERT SPRINGS UNIT FOUR
 SUBDIVISION IMPROVEMENTS

SHEET TITLE
 HYBRID CHANNEL #2
 PLAN & PROFILE
 FROM STA. 23+00.00
 TO STA. 25+95.58
 (SHEET 6 OF 6)
 SHEET NO.



C9.6

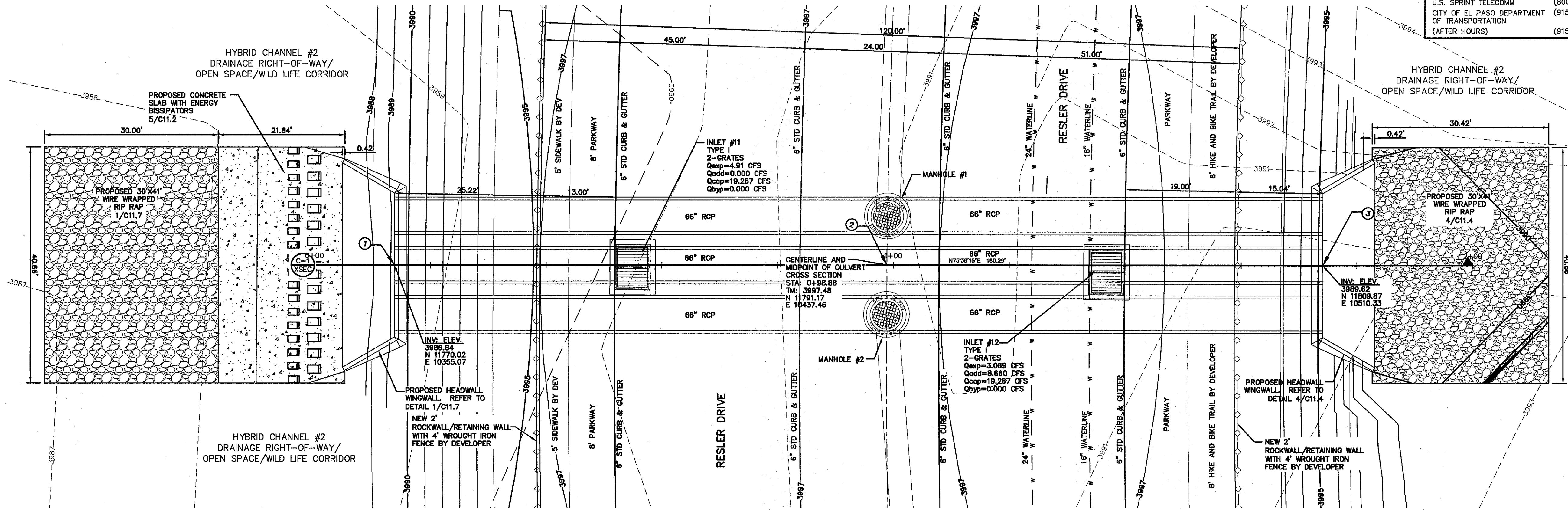
UTILITY LOCATOR SERVICES	
EL PASO ELECTRIC COMPANY	(915) 543-5720
EL PASO ENERGY CORPORATION	(915) 496-5244
EL PASO WATER UTILITIES	(915) 594-5500
MCI SURVEILLANCE	(800) MCI-WORK
TIME WARNER COMMUNICATIONS	(915) 772-1123
TEXAS GAS SERVICE	(915) 680-7200
ONEOK PARTNERS	(915) 595-6918
AT&T	(800) 852-3788
U.S. SPRINT TELECOMM	(800) 521-0579
CITY OF EL PASO DEPARTMENT OF TRANSPORTATION (AFTER HOURS)	(915) 621-6750
	(915) 240-3220

**WARNING !
BEFORE YOU DIG**

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

FOR FIELD LOCATING EXISTING UTILITIES

DATE	BY	REVISIONS

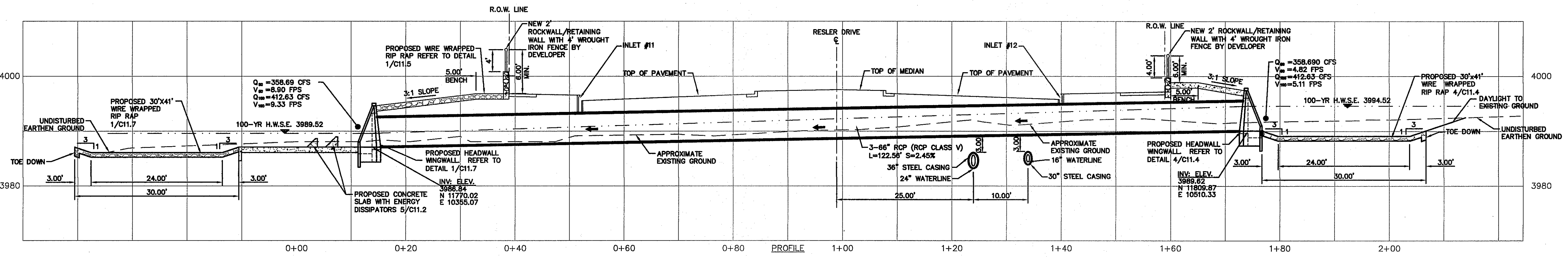


- LEGEND:**
- TP TOP OF POND ELEVATION
 - BP BOTTOM OF POND ELEVATION
 - - - - - EXISTING MINOR CONTOUR
 - - - - - EXISTING MAJOR CONTOUR
 - - - - - PROPOSED MINOR CONTOUR
 - - - - - PROPOSED MAJOR CONTOUR
 - 4350
 - 6" REINFORCED CONCRETE SLAB
 - NEW 2" ROCKWALL/RETAINING WALL WITH 4" WROUGHT IRON FENCE BY DEVELOPER
 - WIRE WRAPPED RIP RAP
 - LOOSE ROCK RIP RAP
 - DESILTING BASIN

Point Table

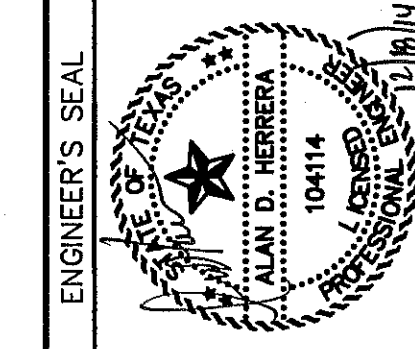
Point #	Elevation	Northing	Easting	Description
1	3987.00	11770.02	10355.07	Downstream
2	3988.59	11791.17	10437.46	Centerline
3	3990.00	11809.87	10510.33	Upstream

CULVERT 1 DESIGN
SCALE: 1" = 10'



REFERENCES - BENCHMARKS
FEMA N.C.S. SURVEY MARKER STAVES "STAVO 1880"
ELEVATION: 3955.83 (CITY OF EL PASO VERTICAL DATUM SHOWN)
3946.11 (NAVD 88 DATUM)
NOTE: THE PROJECT BENCHMARK IS NAD83/09 W. 4008.93 FEET FROM A 1/2 INCH REBAR FOUND FOR THE NORTHWEST CORNER OF TRACT 11, NELLIE D. MUNDY SURVEY No. 239

osa
engineers • architects • planners
TEXAS REGISTERED ENGINEERING FIRM #4684
4712 Woodrow Bean, Ste. F, El Paso, TX 79924
Office: 915.544.5232 Fax: 915.544.5233 www.osagroup.com



SCALE: 1" = 10'
Horizontal: 1" = 10'
Vertical: 1" = 10'
Contour Interval: N/A
DATE: DECEMBER 2014
DESIGN BY: A.H.
DRAWN BY: J.H.
CHKD. BY: J.L.A.
APP'D. BY: J.L.A.
JOB No. 2060-028-LD

PROJECT TITLE
**DESERT SPRINGS UNIT FOUR
SUBDIVISION IMPROVEMENTS**

SHEET TITLE
CULVERT CROSSING

SHEET NO.

C9.9



GENERAL NOTES

1. ALL DETENTION BASIN SIDE SLOPES SHALL BE FINE GRADED TO 3(H):1(V) SLOPES. MAINTENANCE ROAD SHALL BE GRADED TO 4020 ELEVATION AND BENCH TO 4005 ELEVATION.

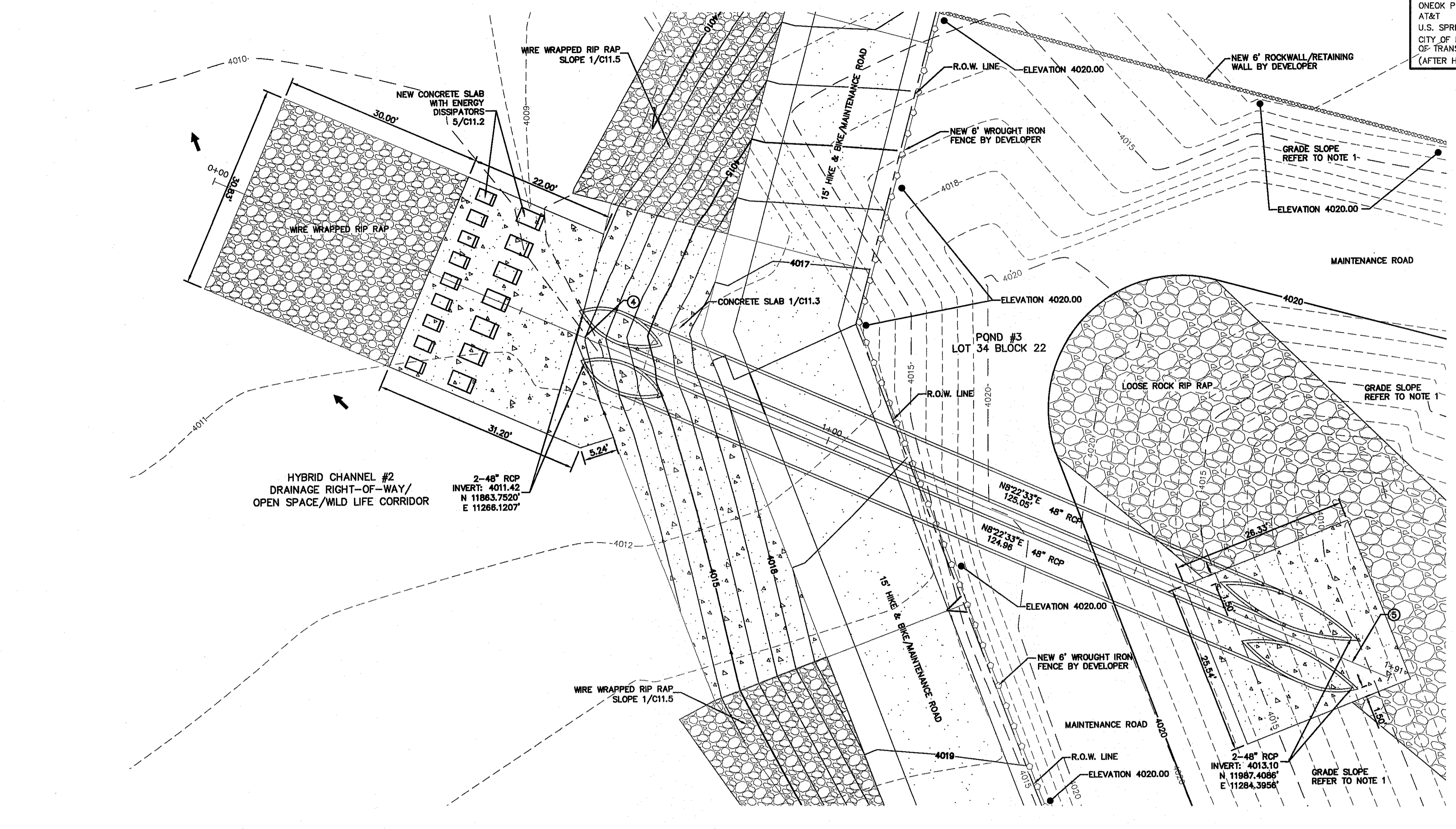
UTILITY LOCATOR SERVICES

EL PASO ELECTRIC COMPANY	(915) 543-5720
EL PASO ENERGY CORPORATION	(915) 496-5244
EL PASO WATER UTILITIES	(915) 594-5500
MCI SURVEILLANCE	(800) MCI-WORK
TIME WARNER COMMUNICATIONS	(915) 772-1123
TEXAS GAS SERVICE	(915) 680-7200
ONEOK PARTNERS	(915) 595-6918
AT&T	(800) 852-3786
U.S. SPRINT TELECOMM	(800) 921-0579
CITY OF EL PASO DEPARTMENT OF TRANSPORTATION (AFTER HOURS)	(915) 621-6750
	(915) 240-3220

WARNING!
BEFORE YOU DIG

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

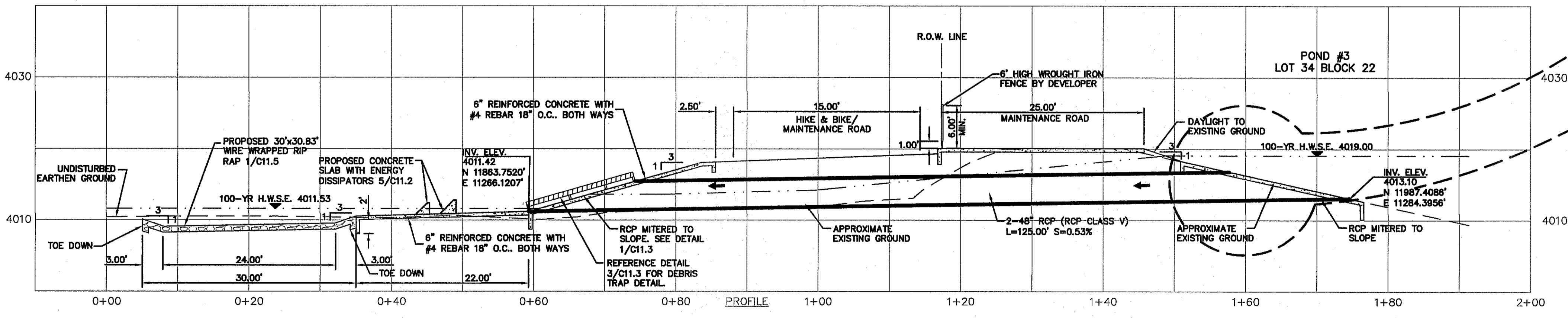
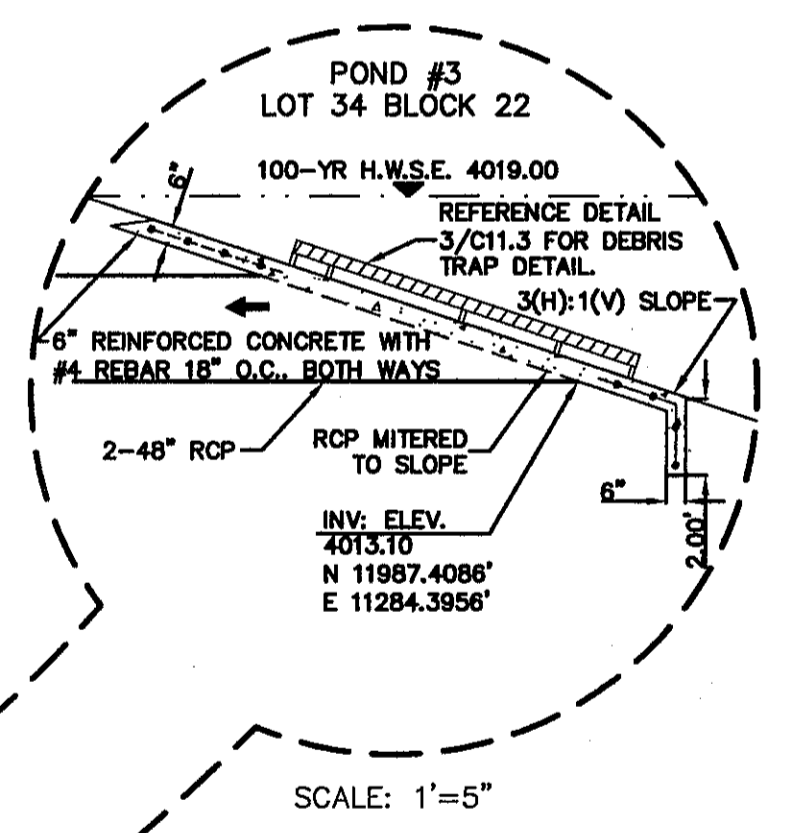
FOR FIELD LOCATING EXISTING UTILITIES



LEGEND:

TP	TOP OF POND ELEVATION
BP	BOTTOM OF POND ELEVATION
---	EXISTING MINOR CONTOUR
---	EXISTING MAJOR CONTOUR
---	PROPOSED MINOR CONTOUR
---	PROPOSED MAJOR CONTOUR
[Symbol]	6" REINFORCED CONCRETE SLAB
[Symbol]	NEW 6" WROUGHT IRON FENCE BY DEVELOPER
[Symbol]	NEW 6" ROCKWALL/RETAINING WALL BY DEVELOPER
[Symbol]	WIRE WRAPPED RIP RAP
[Symbol]	LOOSE ROCK RIP RAP
[Symbol]	DESILTING BASIN

CULVERT 2 DESIGN
SCALE: 1" = 10'



COORDINATE TABLE

Point #	Northing	Easting
4	11863.7520	11266.1207
5	11987.4086	11284.3956

REFERENCES - BENCHMARKS
FOUND N.C.S. SURVEY MARKER STAMPED "CHINO 1887" ELEVATION: 3925.83 (CITY OF EL PASO VERTICAL DATUM SHOWN)
3946.11 (NAD 83 DATUM)
TIE TO THE PROJECT BENCHMARK IS N5370/09"W, 4.008.93 FEET FROM A 1/2" INCH REBAR FOUND FOR THE NORTHWEST CORNER OF TRACT 11, NELLIE D. HUNDY SURVEY No. 239

CSA
engineers • architects • planners
TEXAS REGISTERED ENGINEERING FIRM #14884
4772 Woodrow Bean, Ste. F, El Paso, TX 79924
Office: 915.544.5232 Fax: 915.544.5233 www.csaengg.com

ENGINEER'S SEAL
[Seal]

SCALE: 1"=10'
Horizontal: 1"=10'
Vertical: 1"=10'
Contour Interval: N/A
DATE: DECEMBER, 2014
DESIGN BY: A.H.
DRAWN BY: J.H.
CHKD. BY: J.L.A.
APPVD. BY: J.L.A.
JOB No. 2060-028-LD

PROJECT TITLE
DESERT SPRINGS UNIT FOUR
SUBDIVISION IMPROVEMENTS

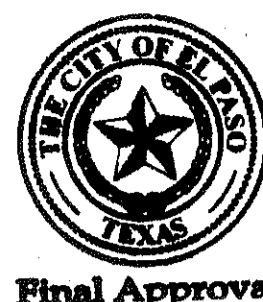
SHEET TITLE
CULVERT CROSSING

SHEET NO.
C9.8

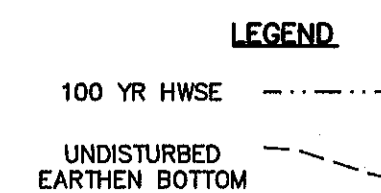
Final Approval

GENERAL NOTES:

1. THE SIDES OF THE CHANNEL SHALL BE WIRE TIED RIP RAP AS PER DETAIL 8/C11.3.
2. ACCESS RAMPS OF THE CHANNEL SHALL BE REINFORCED CONCRETE AS PER DETAIL 1/C11.4.
3. REINFORCED CONCRETE ACCOMMODATIONS SHALL BE AS PER DETAIL 5/C11.5.
4. HYBRID CHANNEL #2 CROSS SECTION LABELS ARE THE IDENTIFICATION OF THE CROSS SECTIONS AND ARE LOCATED ON HYBRID CHANNEL #2 PLAN AND PROFILE SHEETS C9.1-C9.6.



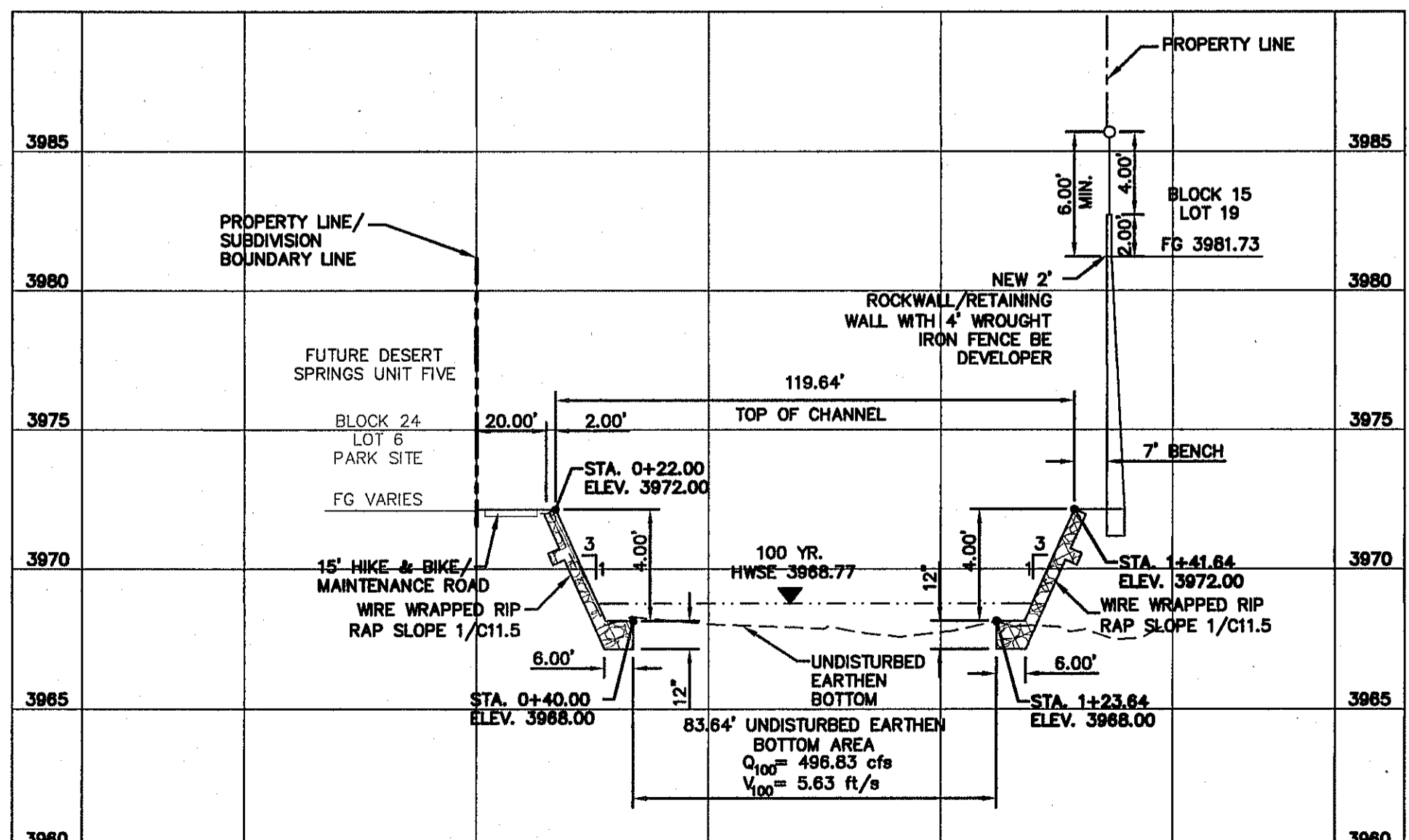
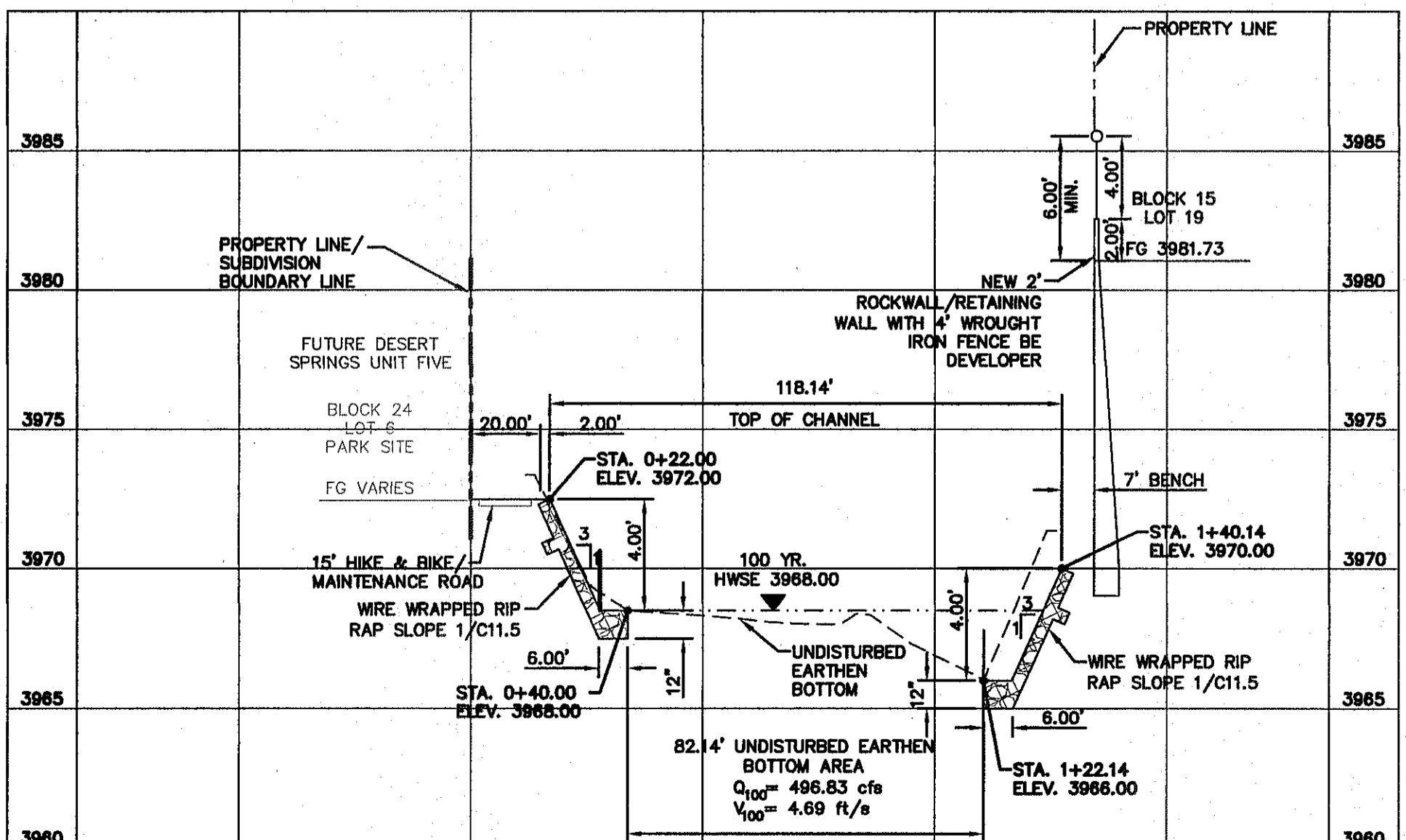
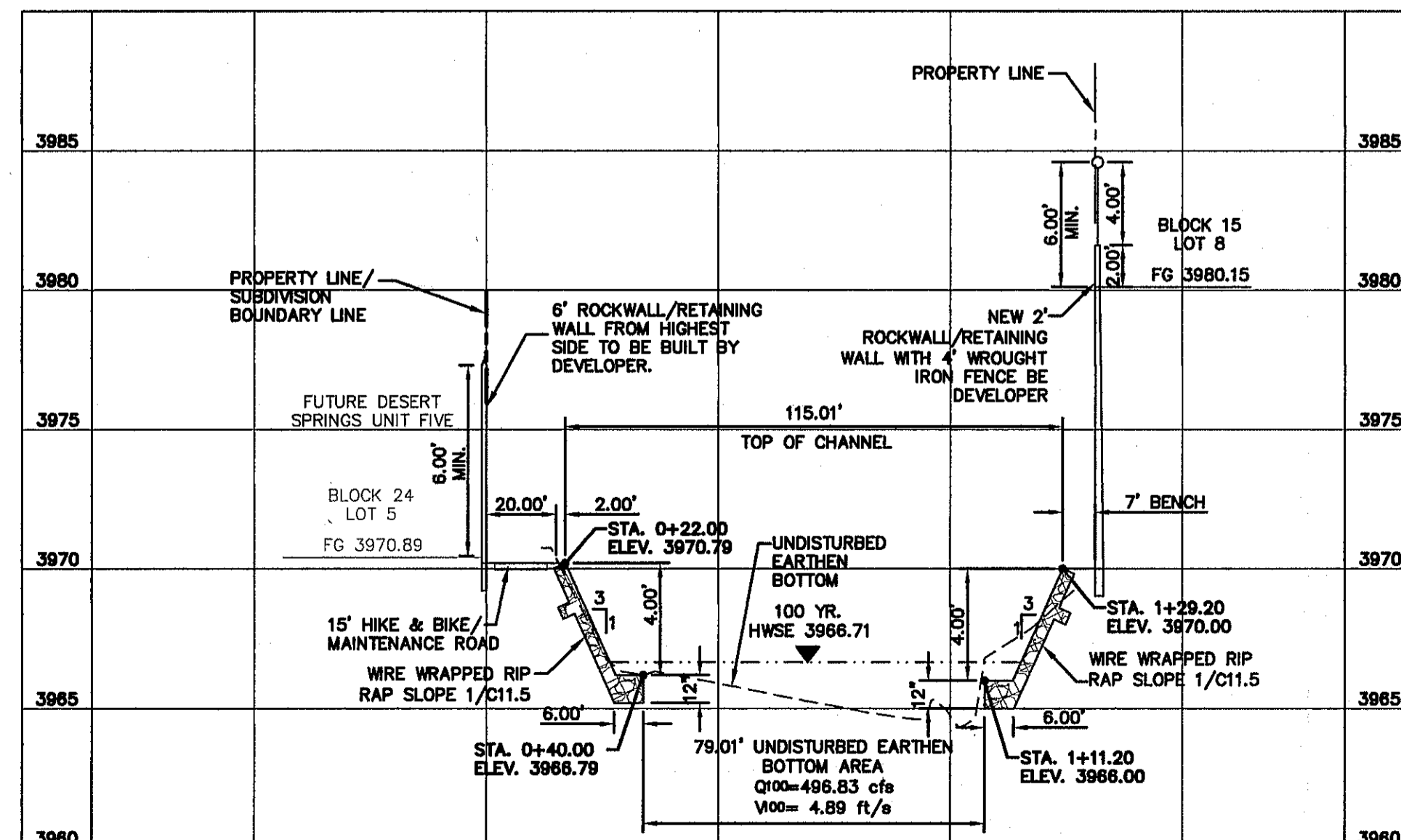
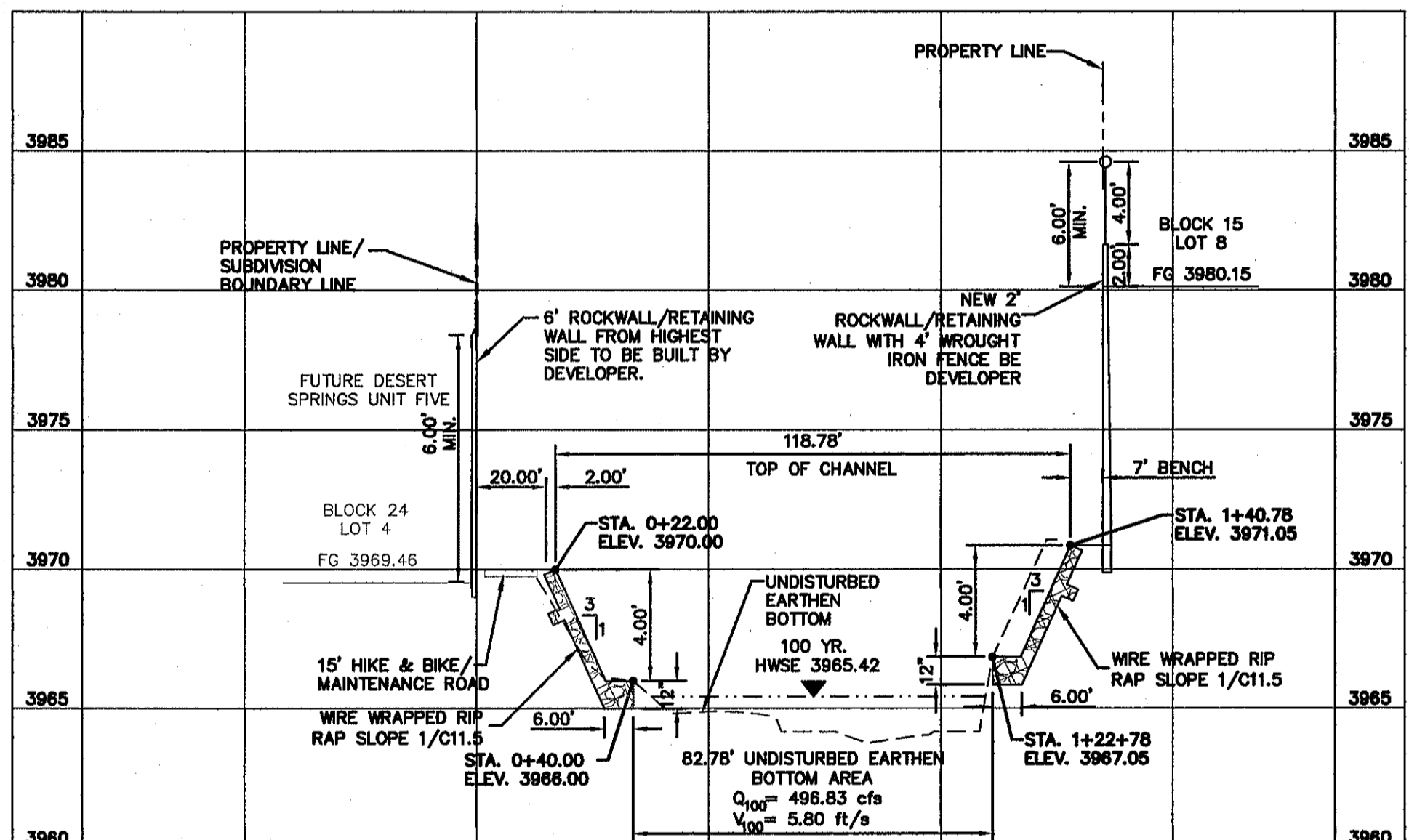
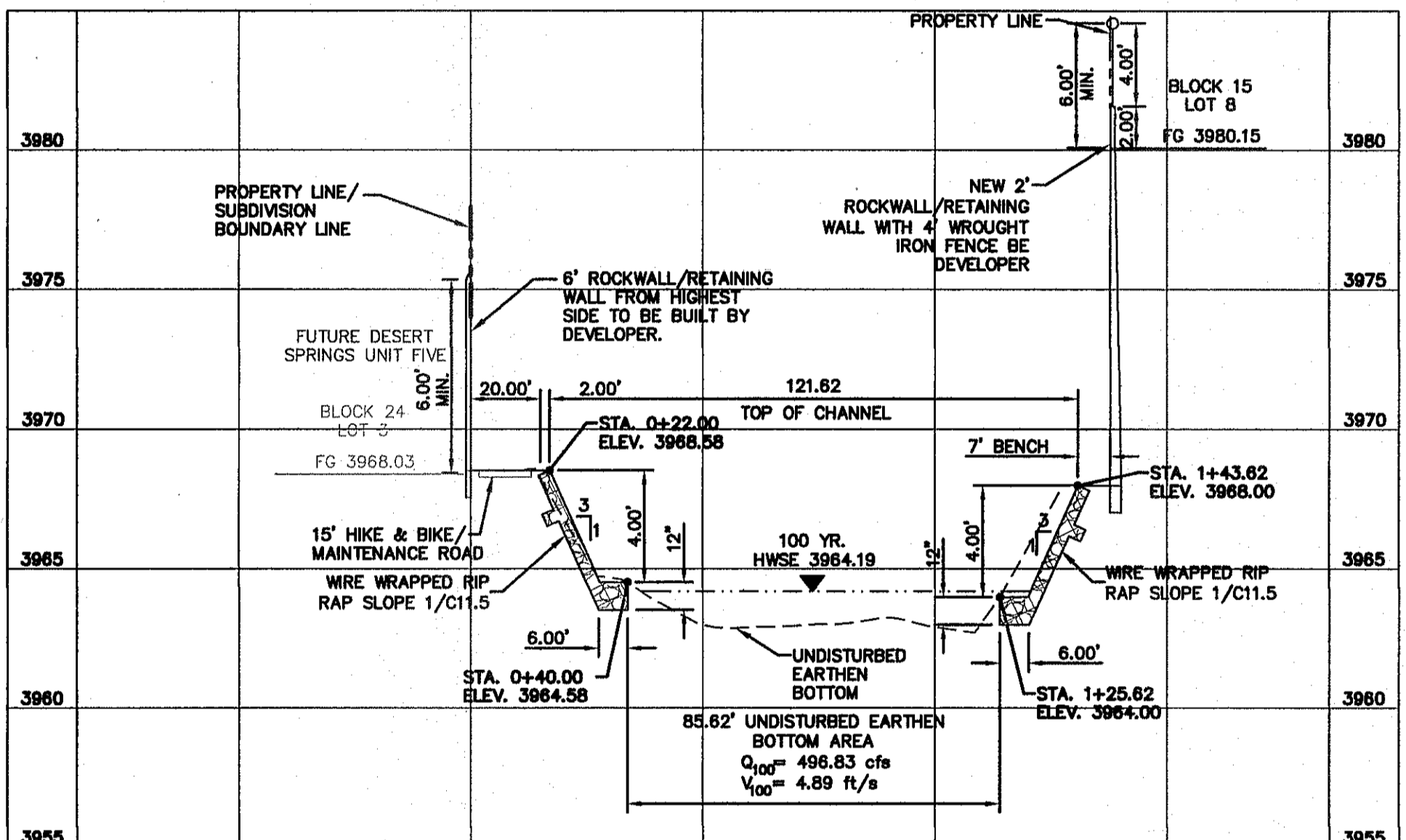
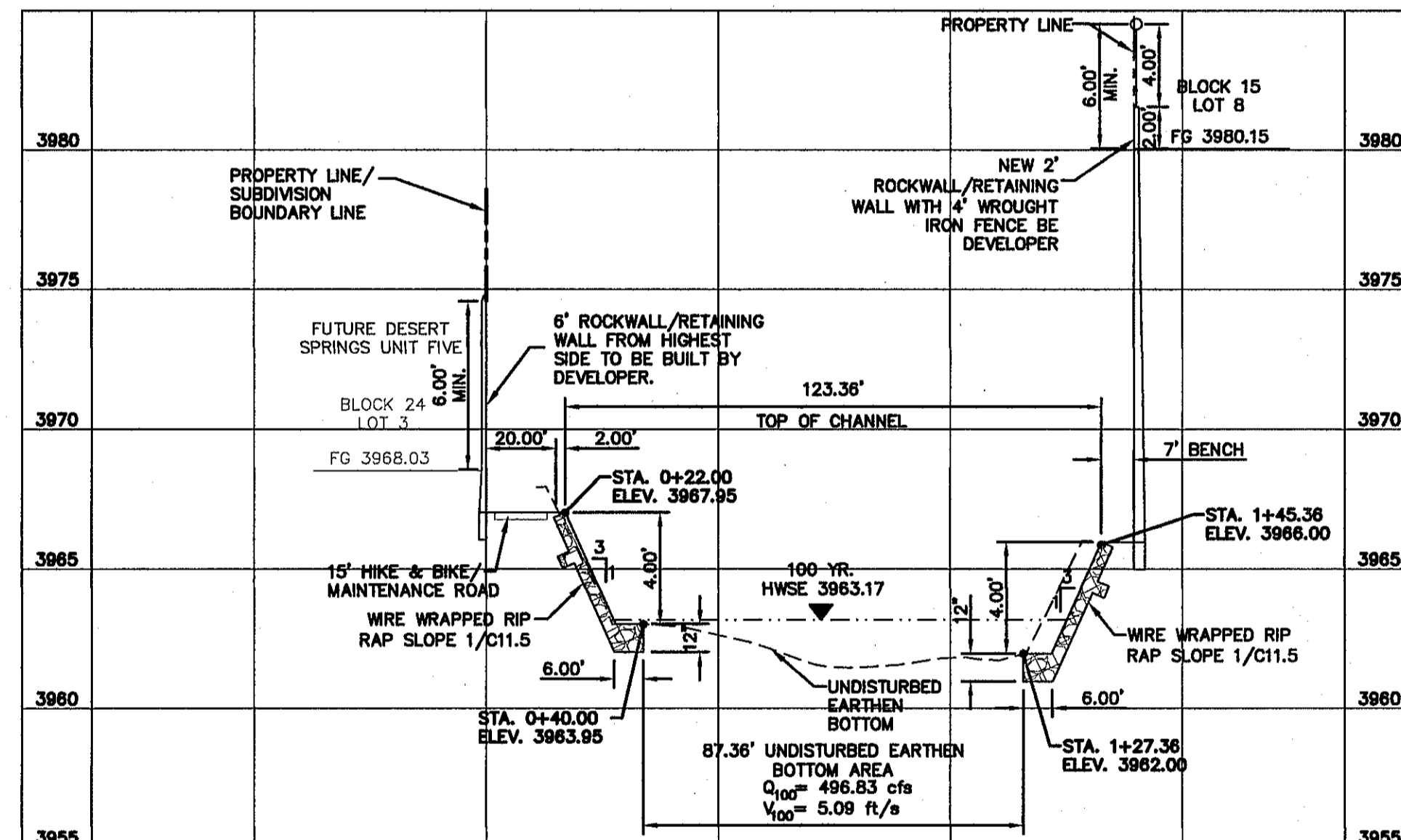
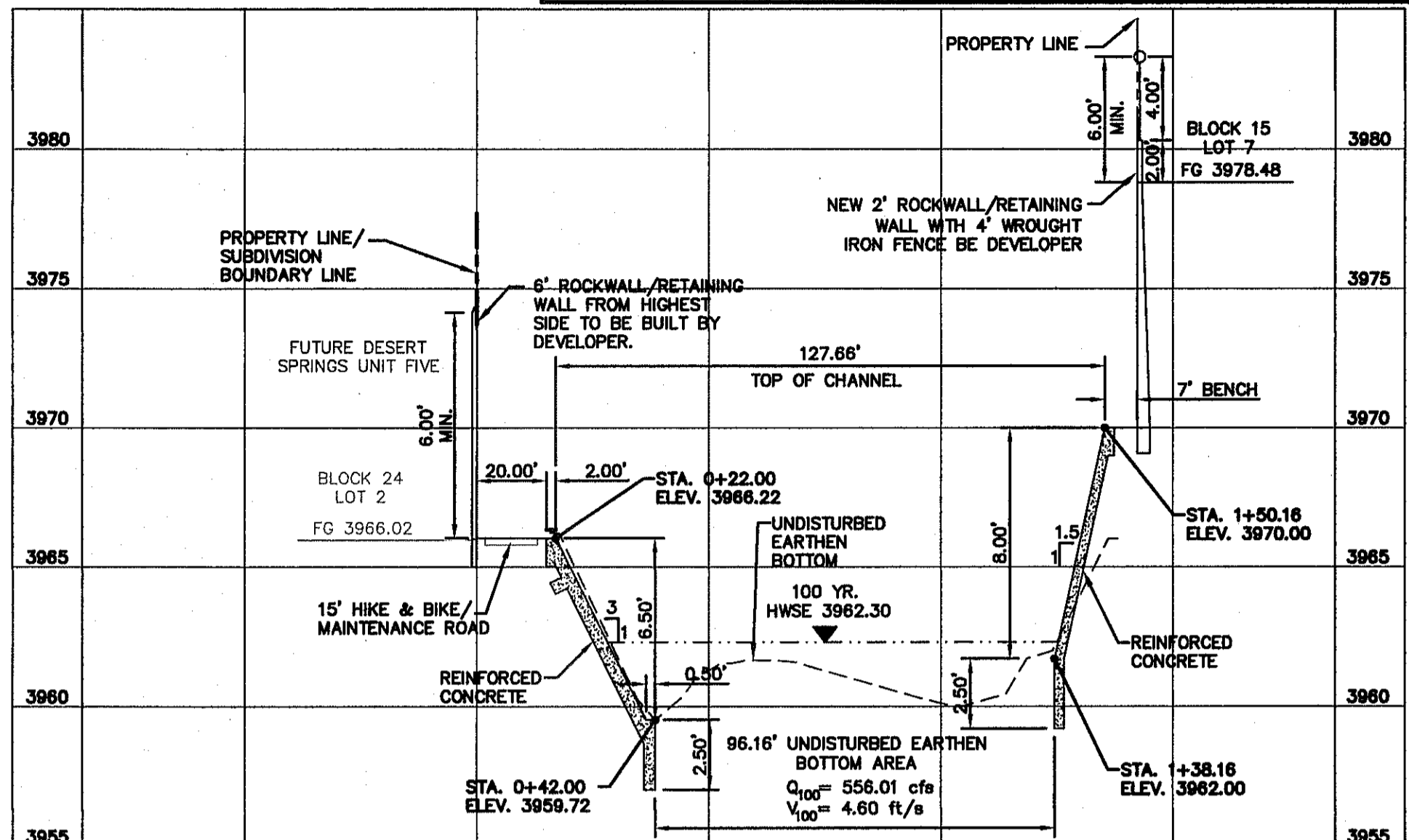
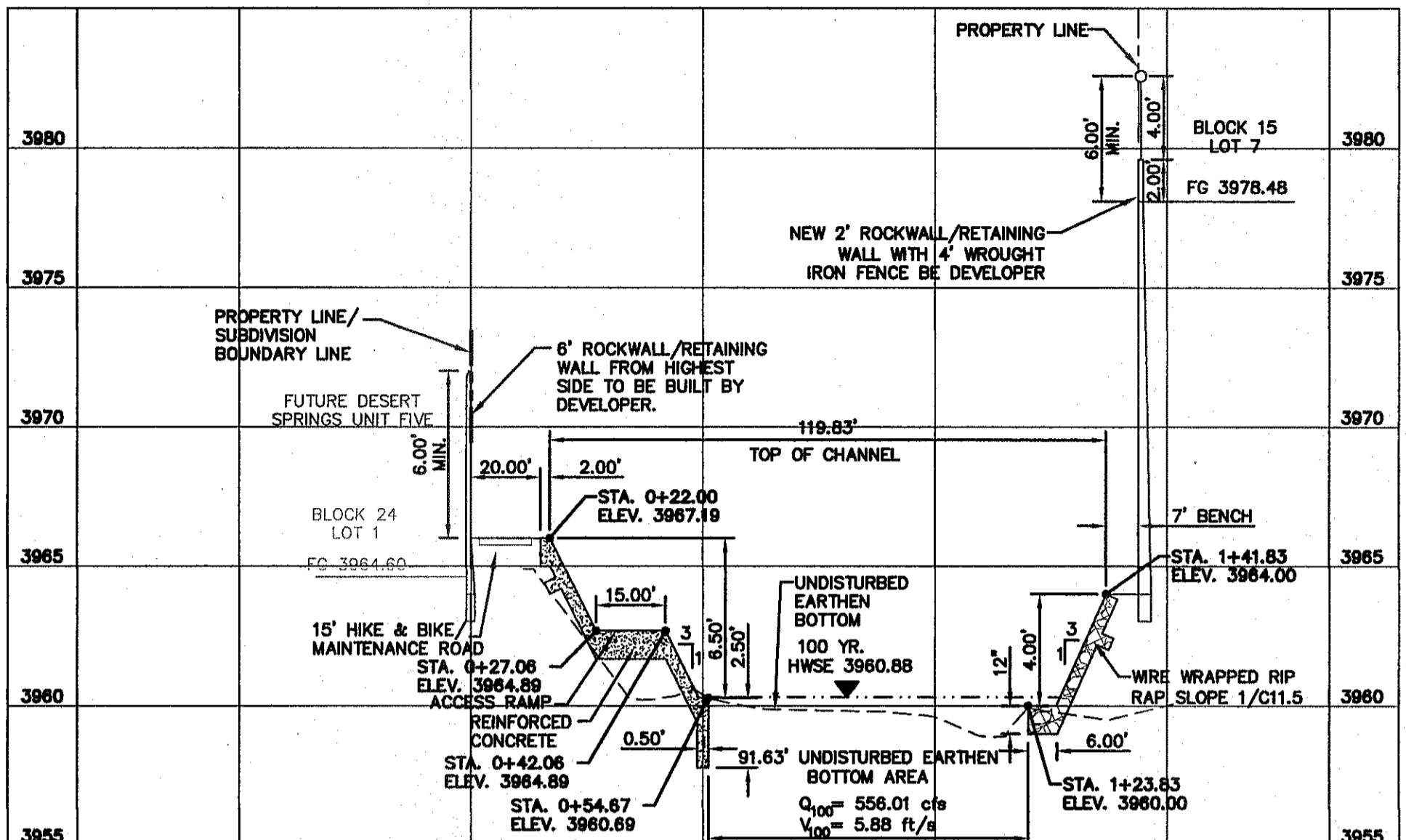
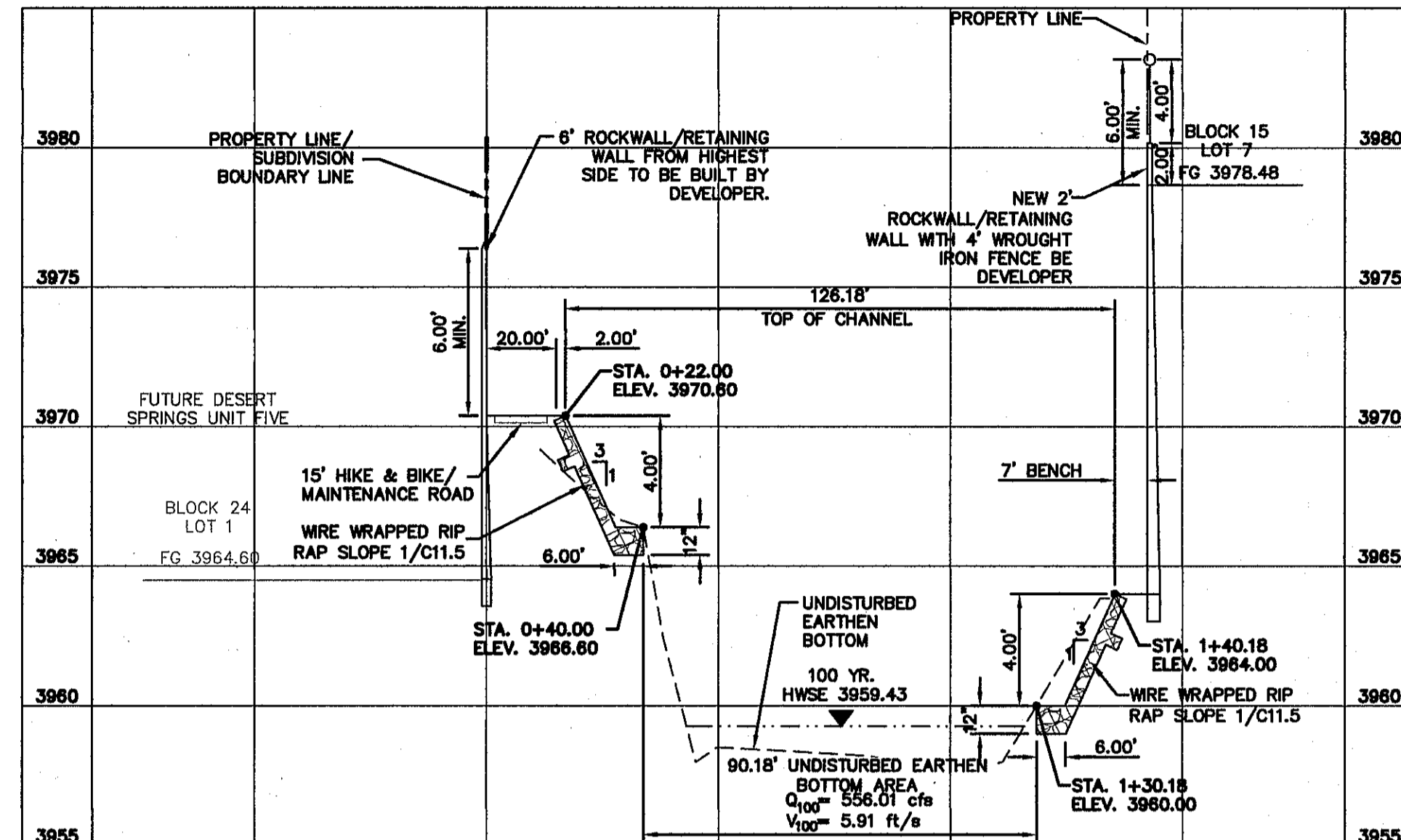
BENCHMARK:
 FOUND N.G.S. SURVEY MARKER STAMPED "CHINO 1980"
 ELEVATION: 3935.83 (CITY OF EL PASO VERTICAL DATUM SHOWN)
 3946.11 (NAVD 88 DATUM)
 3945.78 (NGVD 29 DATUM)
 TIE TO THE PROJECT BENCHMARK IS N35°09'09"W, 4,008.93 FEET FROM A 1/2" INCH REBAR FOUND FOR THE NORTHWEST CORNER OF TRACT 11, NELLE D. MUNDY SURVEY No. 239



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
ONEOK PARTNERS	(915) 595-6918
AT&T	(800) 852-3786
U.S. SPRINT TELECOMM	(800) 521-0579
CITY OF EL PASO DEPARTMENT OF TRANSPORTATION (AFTER HOURS)	(915) 621-6750
	(915) 240-3220

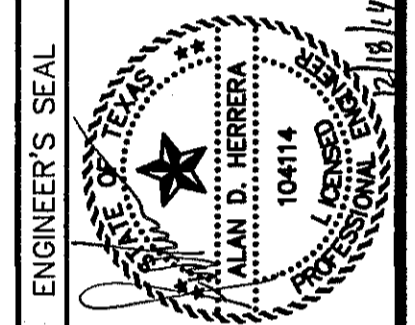
WARNING!
BEFORE YOU DIG
 CALL
 1-800-DIG-TESS
 1-800-344-8377
 FOR FIELD LOCATING EXISTING UTILITIES



REFERENCES - BENCHMARKS

FOUND N.G.S. SURVEY MARKER STAMPED "CHINO 1980"
 ELEVATION: 3935.83 (CITY OF EL PASO VERTICAL DATUM SHOWN)
 3946.11 (NAVD 88 DATUM)
 3945.78 (NGVD 29 DATUM)
 TIE TO THE PROJECT BENCHMARK IS N35°09'09"W, 4,008.93 FEET FROM A 1/2" INCH REBAR FOUND FOR THE NORTHWEST CORNER OF TRACT 11, NELLE D. MUNDY SURVEY No. 239

ceea
 engineers • architects • planners
 TEXAS REGISTERED ENGINEERING FIRM F-494
 4712 Woodloch Park, Suite F, El Paso, TX 79924
 (915) 544-4222 Fax: (915) 544-4223 www.ceea.com



ENGINEER'S SEAL
 SCALE: 1"=30'
 Horizontal: 1"=6'
 Vertical: 1"=6'
 Contour Interval: N/A
 DATE: DECEMBER 2014
 DESIGN BY: J.D. HERRERA
 CHECKED BY: J.L.A.
 APPR. BY: J.L.A.
 JOB NO. 20160-02B-1D

PROJECT TITLE
 DESERT SPRINGS UNIT FOUR
 SUBDIVISION IMPROVEMENTS

SHEET TITLE
 HYBRID CHANNEL #2
 CROSS SECTIONS
 (SHEET 1 OF 8)
 SHEET NO.

C9.9



Final Approval

BENCHMARK:
 FOUND N.G.S. SURVEY MARKER STAMPED "CHINO 1980"
 ELEVATION: 3935.93 (CITY OF EL PASO VERTICAL DATUM SHOWN)
 3946.11 (NAVD 88 DATUM)
 3945.78 (NGVD 29 DATUM)
 TIE TO THE PROJECT BENCHMARK IS N53°09'09"W, 4,008.93 FEET FROM A 1/2 INCH REBAR FOUND FOR THE NORTHWEST CORNER OF TRACT 11, NELLIE D. MUNDY SURVEY No. 239

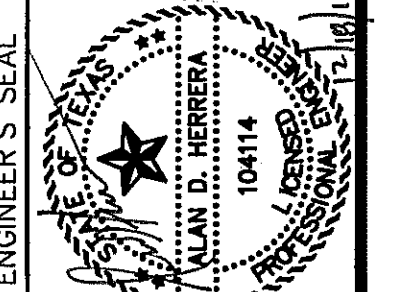
LEGEND:
 100 YR HWSE
 UNDISTURBED EARTHEN BOTTOM

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
ONEOK PARTNERS	(915) 595-6918
AT&T	(800) 852-3786
U.S. SPRINT TELECOMM	(800) 521-0579
CITY OF EL PASO DEPARTMENT OF TRANSPORTATION (AFTER HOURS)	(915) 621-6750
	(915) 240-3220

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

DATE	REVISIONS	BY

CS&A
 engineers • architects • planners
 TEXAS REGISTERED ENGINEERING FIRM #484
 4712 Woodrow Bann, Ste. F El Paso, TX 79904
 Office: 915.544.5232 Fax: 915.544.5233 www.csandp.com

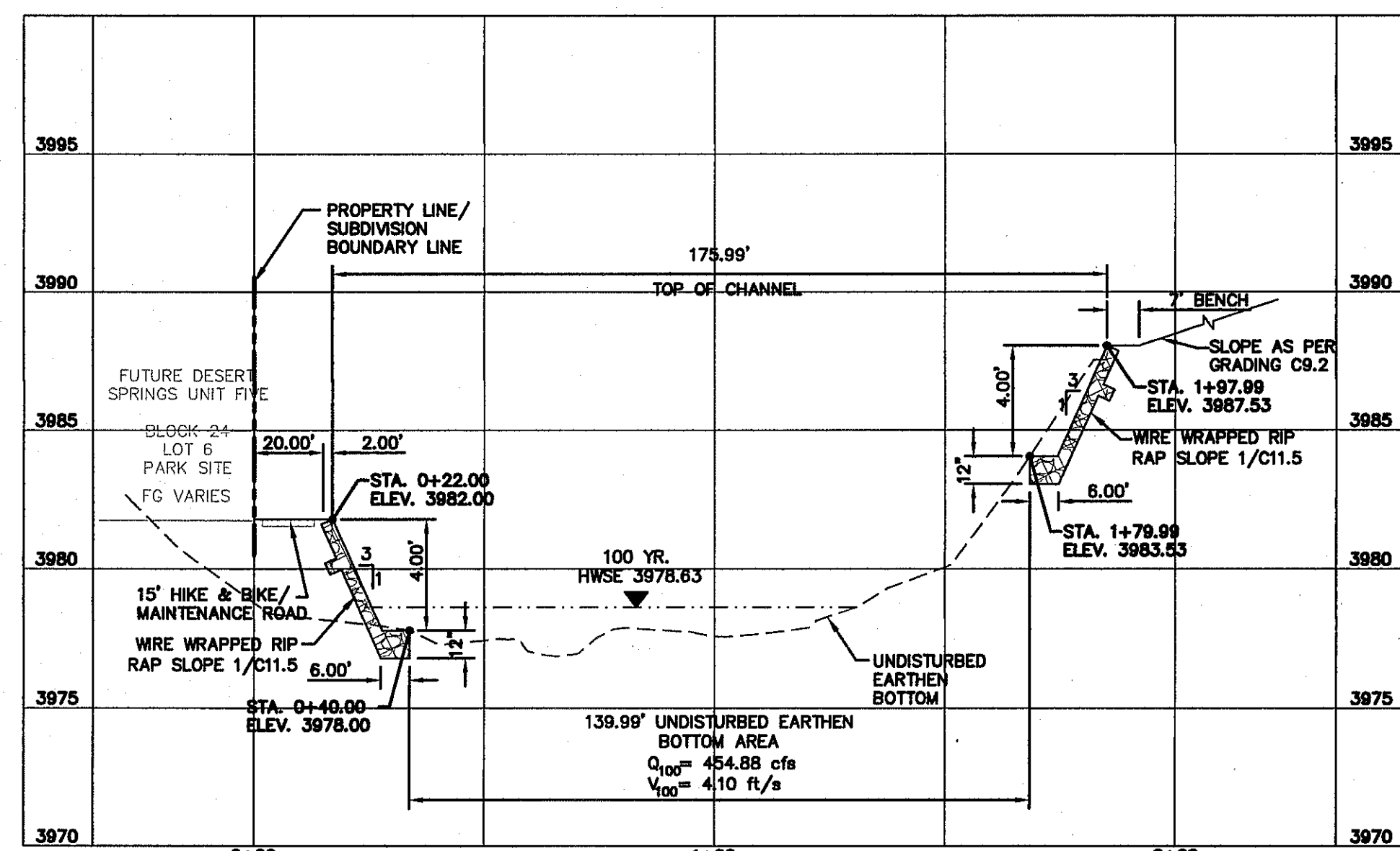
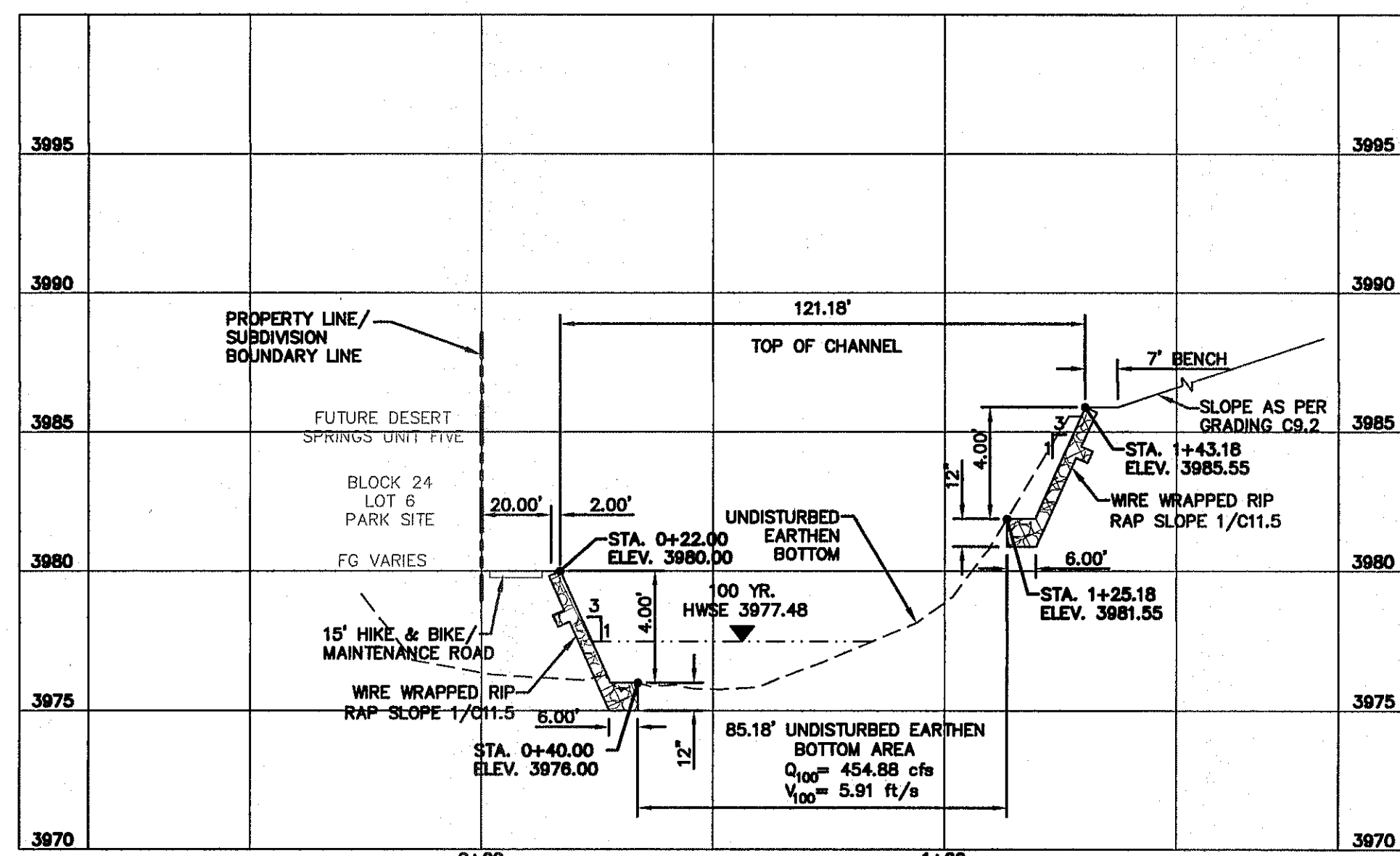
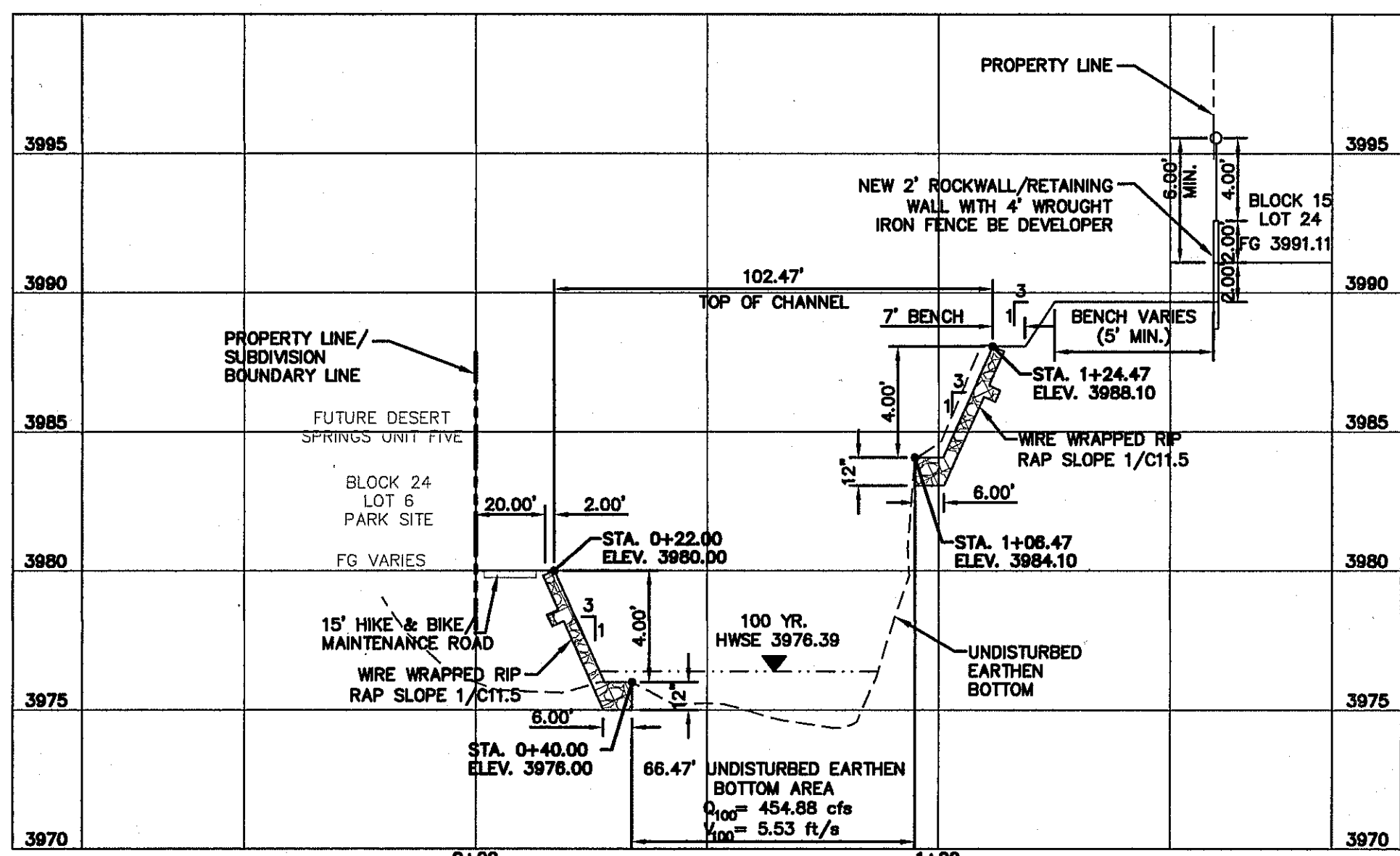
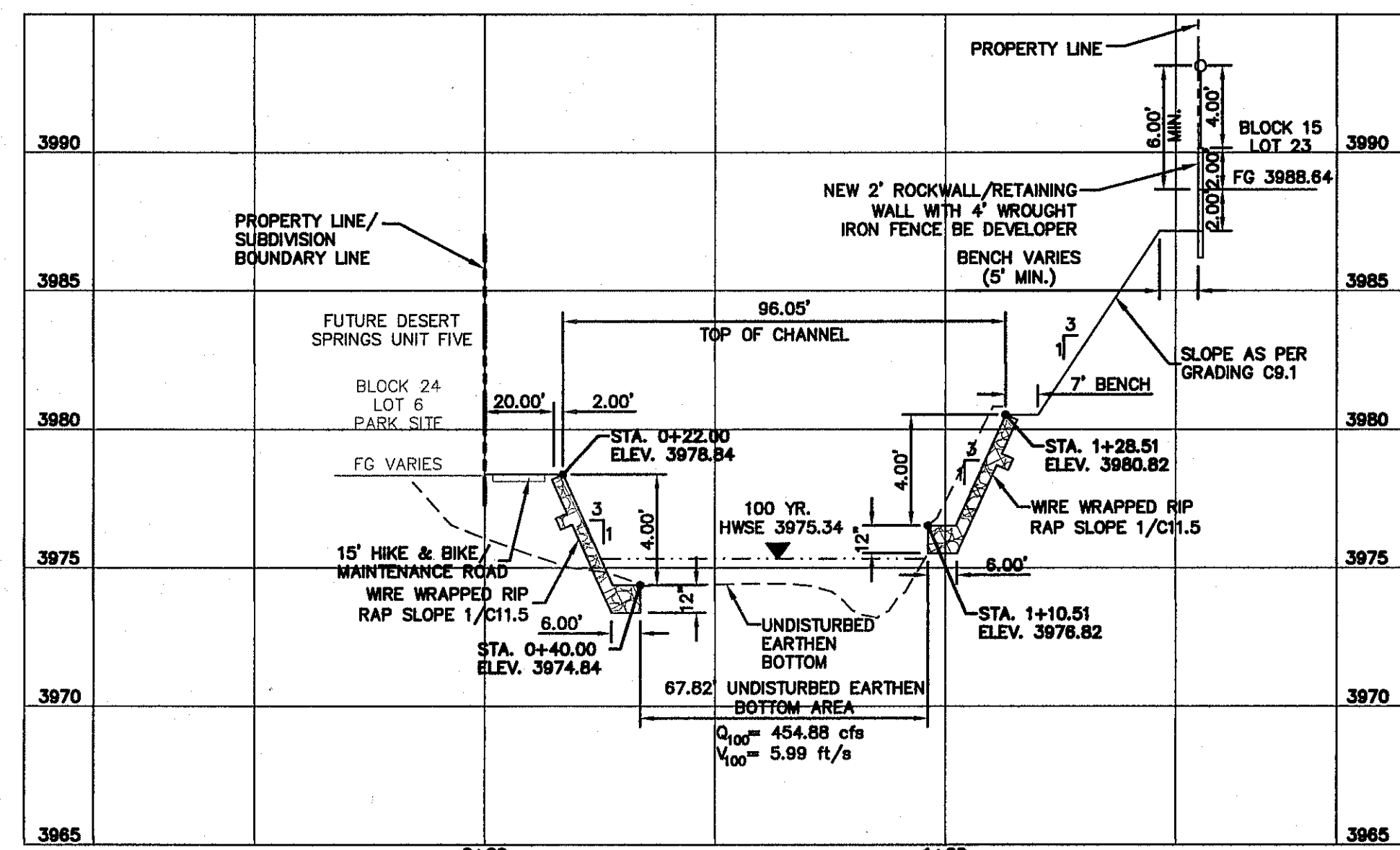
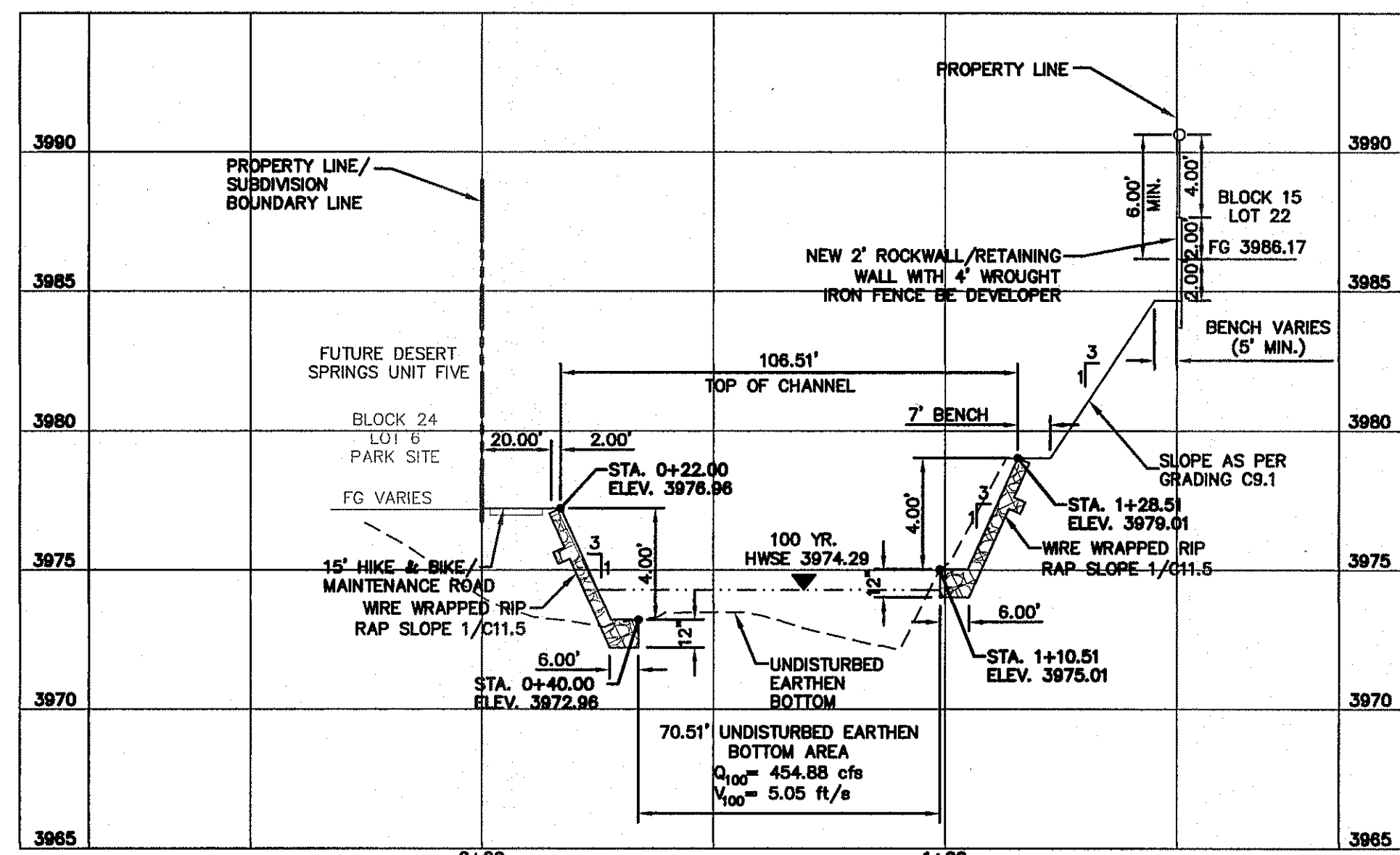
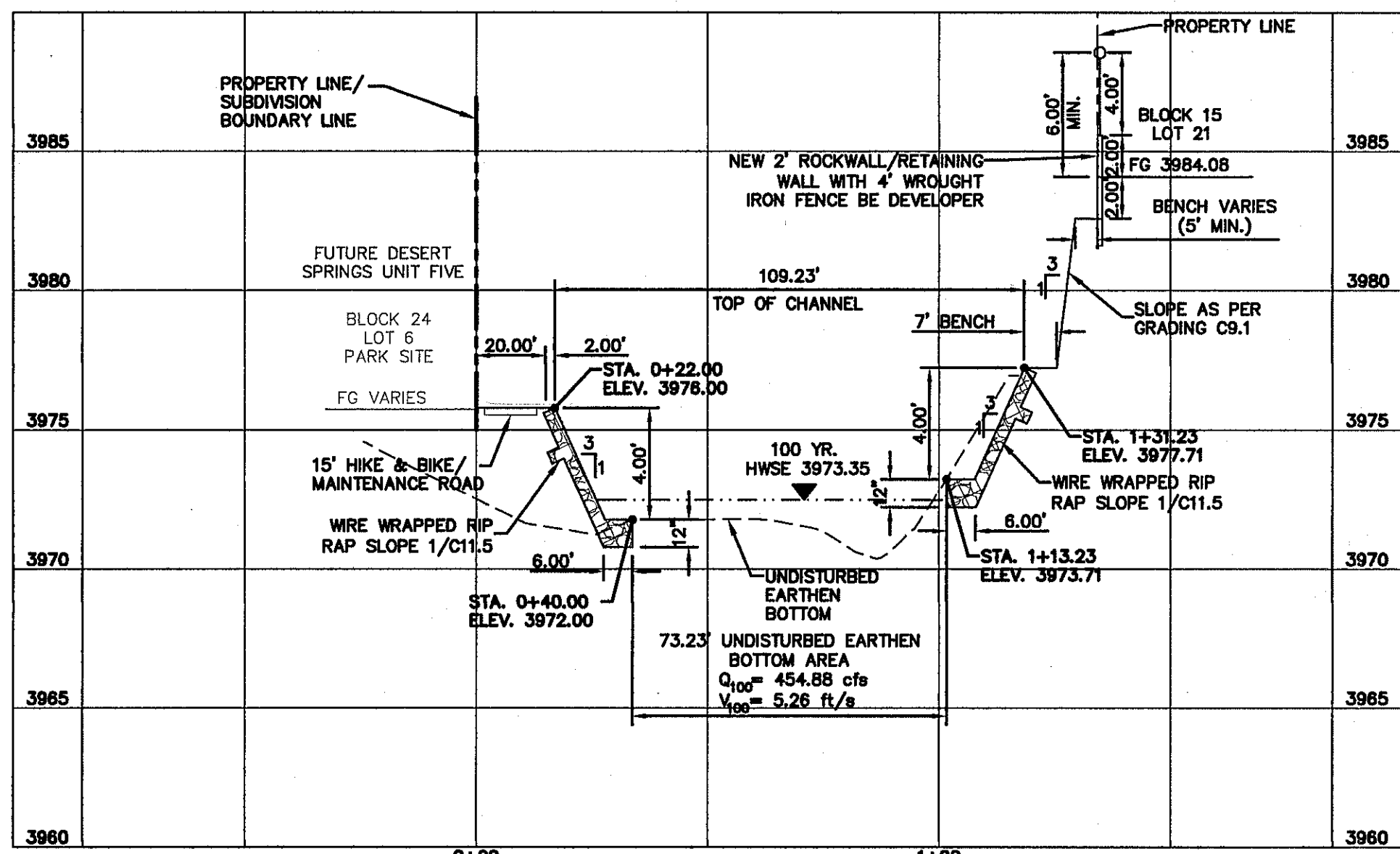
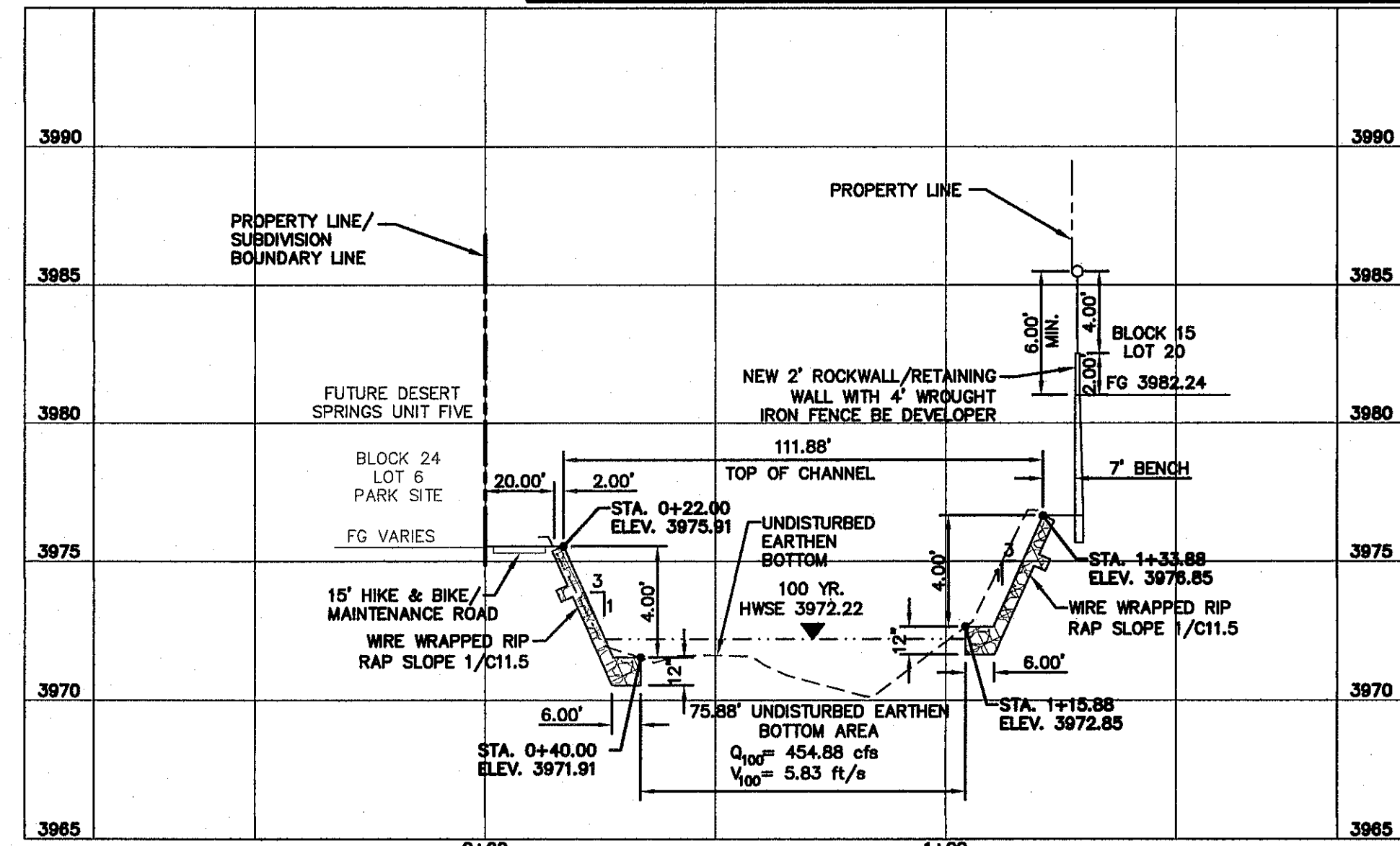
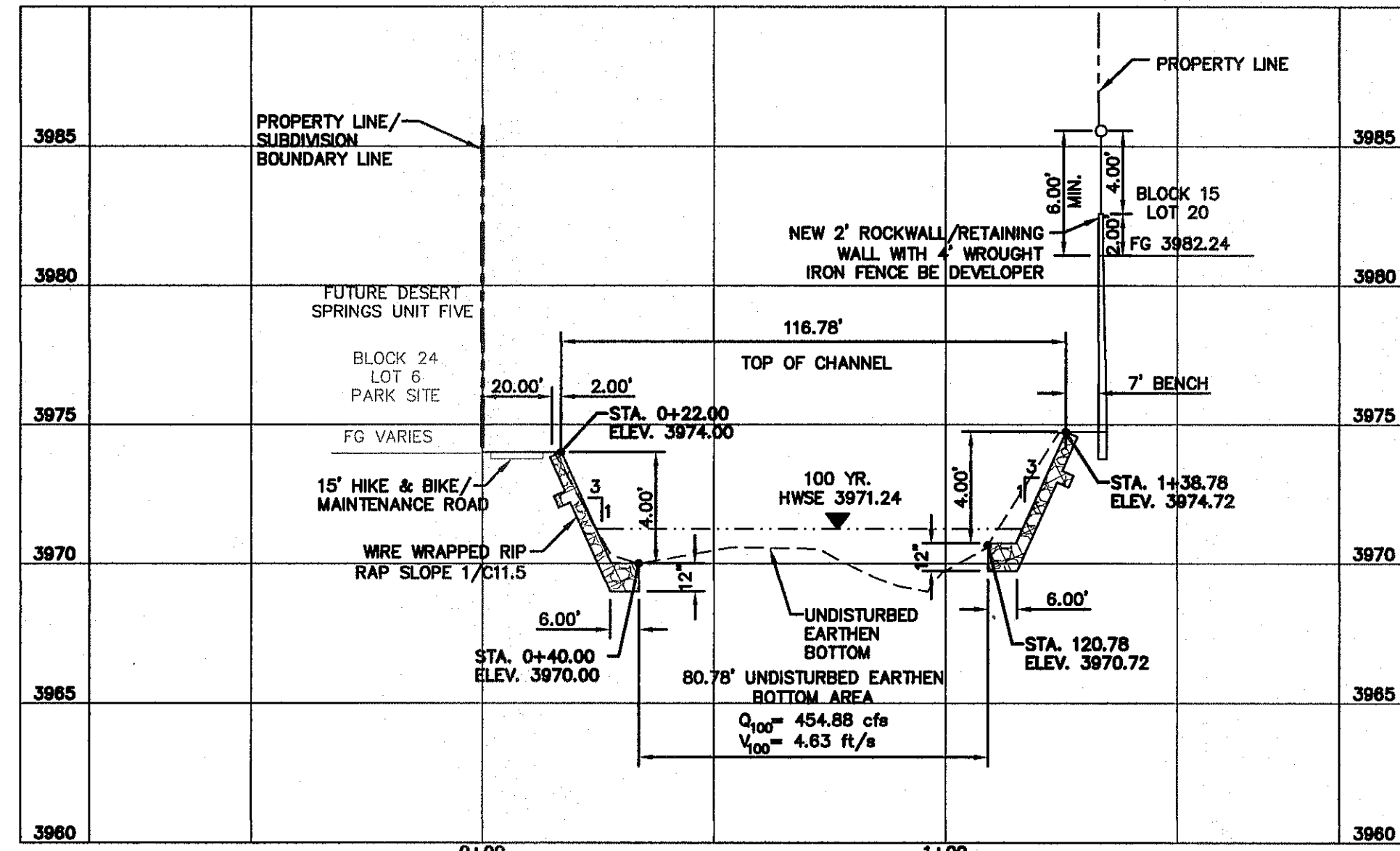
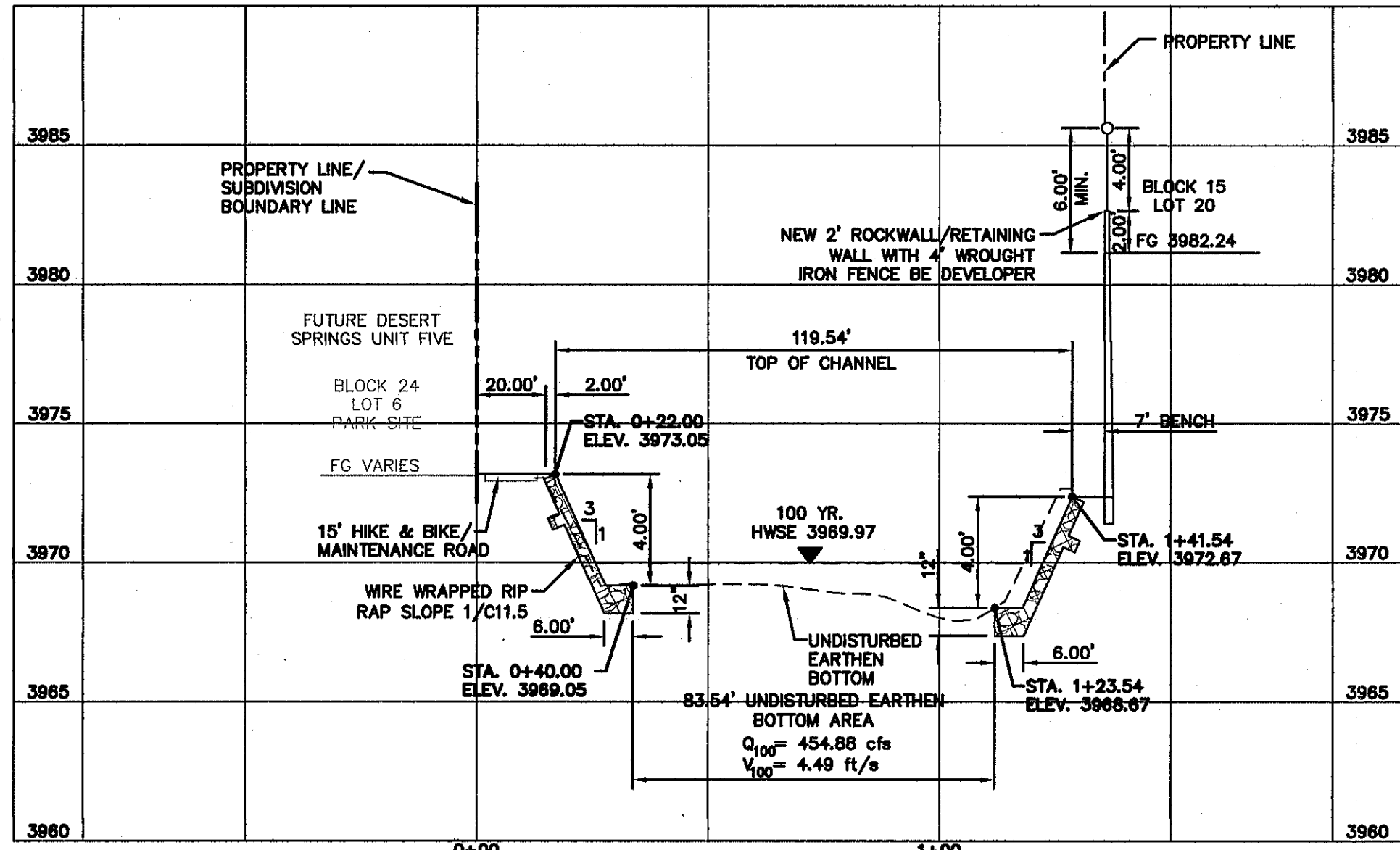


SCALE:
 Horizontal: 1" = 30'
 Vertical: 1" = 6'
 Contour Interval: 1/4'
 DATE: DECEMBER 2014
 DESIGN BY: A.H.
 DRAWN BY: J.H.
 CHKD. BY: J.L.A.
 APPVD. BY: J.L.A.
 JOB No. 2060-028-LD

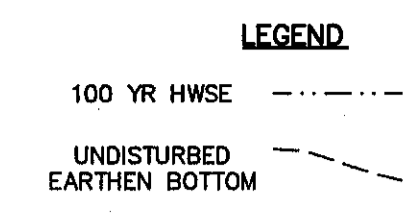
PROJECT TITLE
 DESERT SPRINGS UNIT FOUR
 SUBDIVISION IMPROVEMENTS

SHEET TITLE
 HYBRID CHANNEL #2 CROSS SECTIONS
 (SHEET 2 OF 8)
SHEET NO.

C9.10



BENCHMARK:
 FOUND N.G.S. SURVEY MARKER STAMPED "CHINO 1980"
 ELEVATION: 3935.93 (CITY OF EL PASO VERTICAL DATUM SHOWN)
 3946.11 (NAVD 88 DATUM)
 3945.78 (NGVD 29 DATUM)
 TIE TO THE PROJECT BENCHMARK IS N53°09'09"W, 4,008.93 FEET FROM A 1/2 INCH REBAR FOUND FOR THE NORTHWEST CORNER OF TRACT 11, NELLIE D. MUNDY SURVEY No. 239



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
ONEOK PARTNERS	(915) 595-6918
AT&T	(800) 852-3786
U.S. SPRINT TELECOMM	(800) 521-0579
CITY OF EL PASO DEPARTMENT OF TRANSPORTATION	(915) 621-6750
(AFTER HOURS)	(915) 240-3220

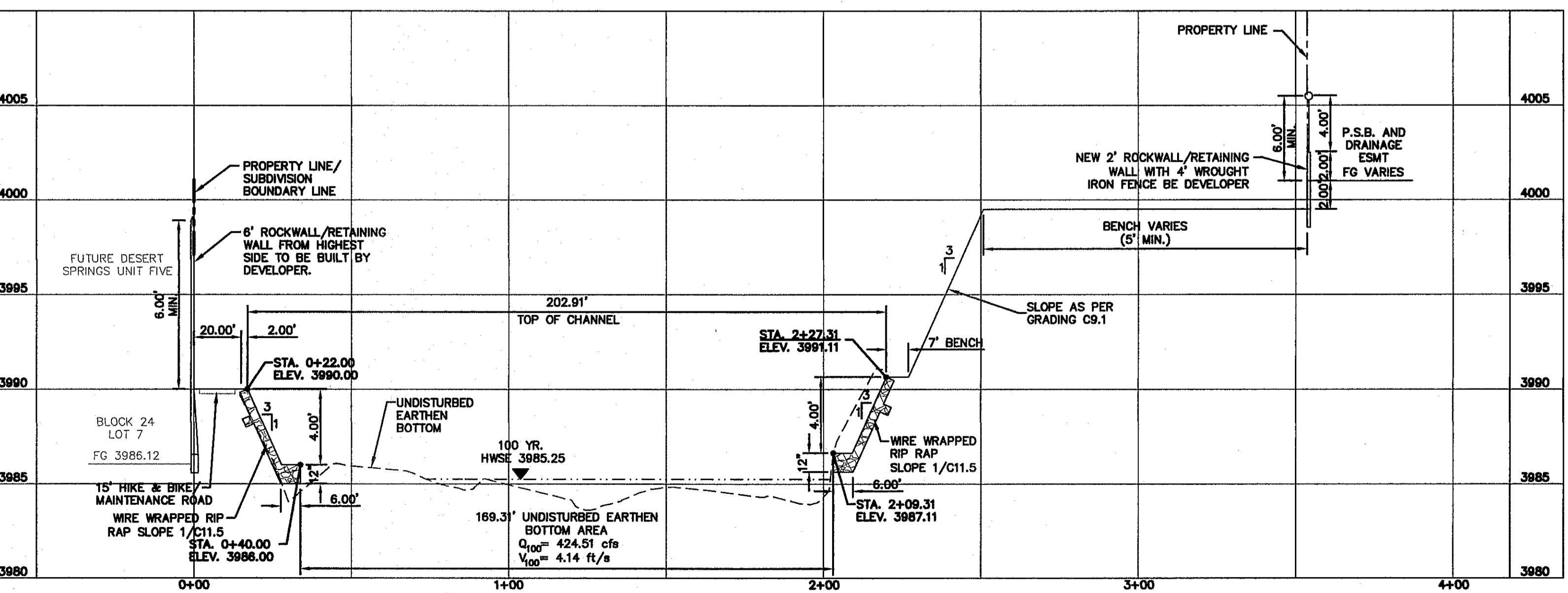
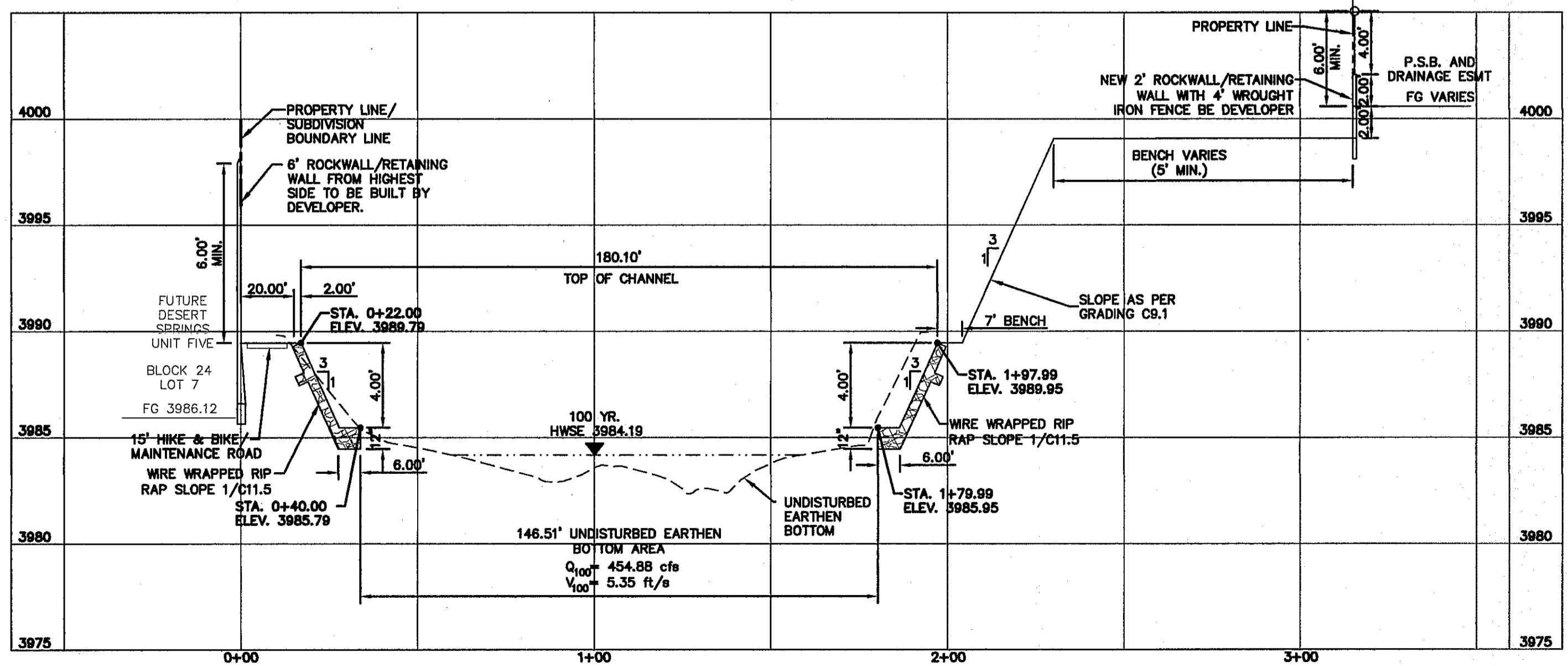
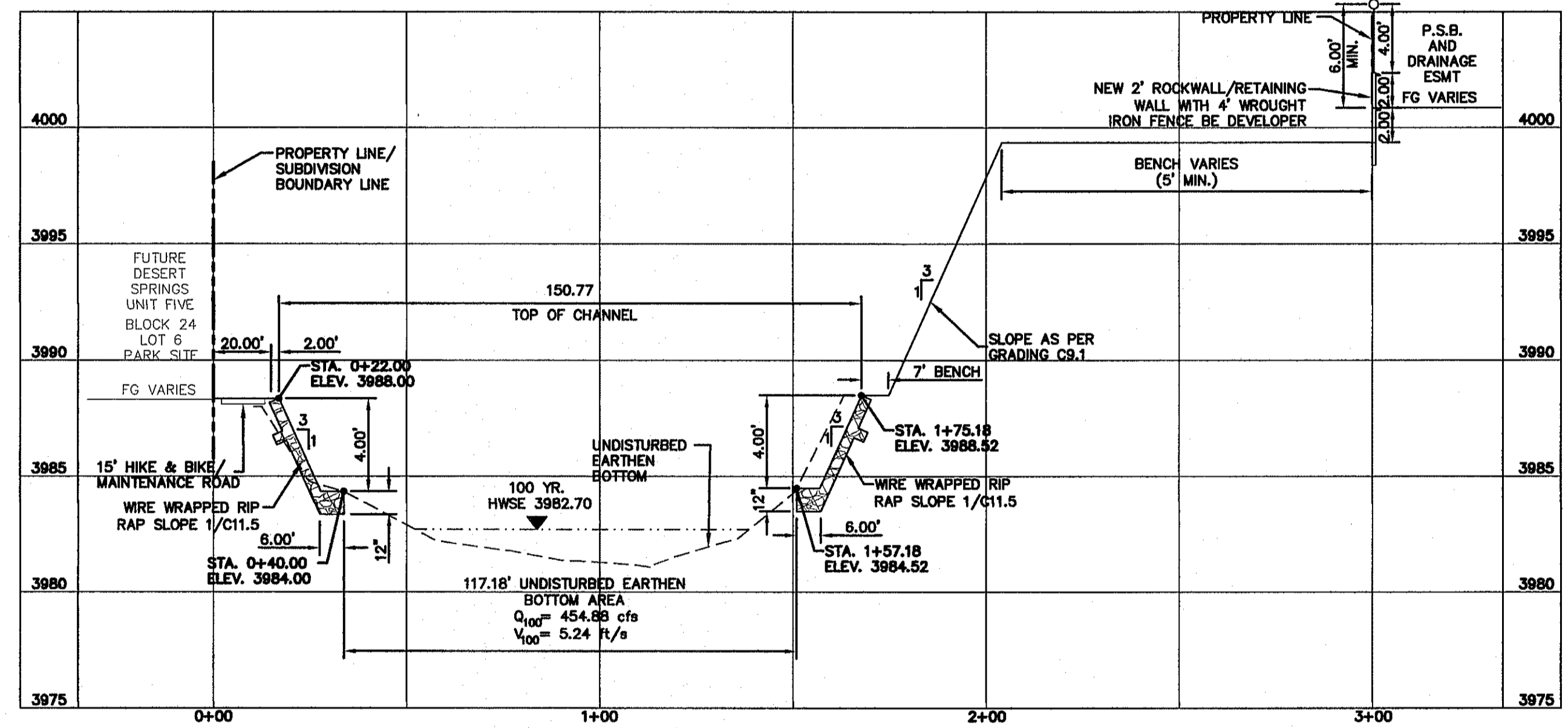
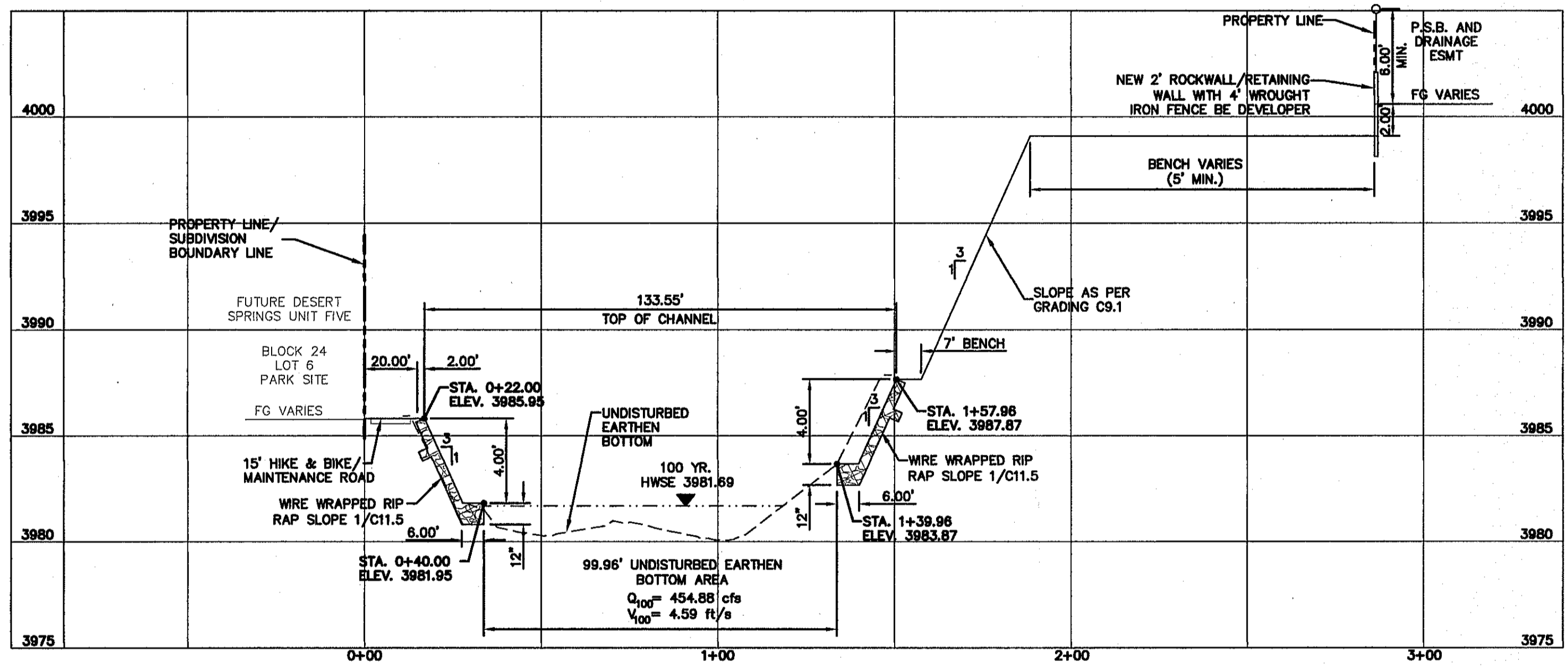
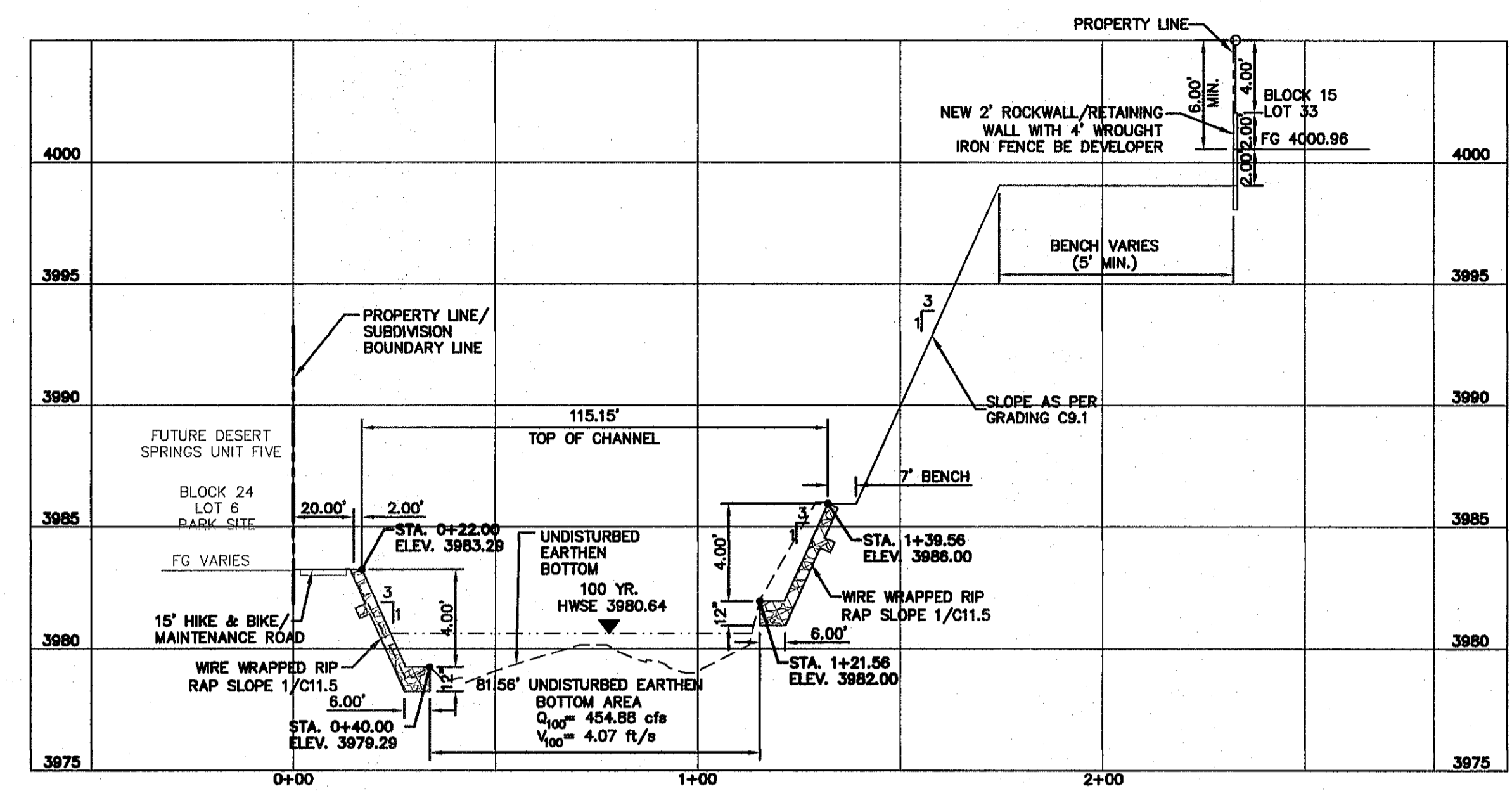
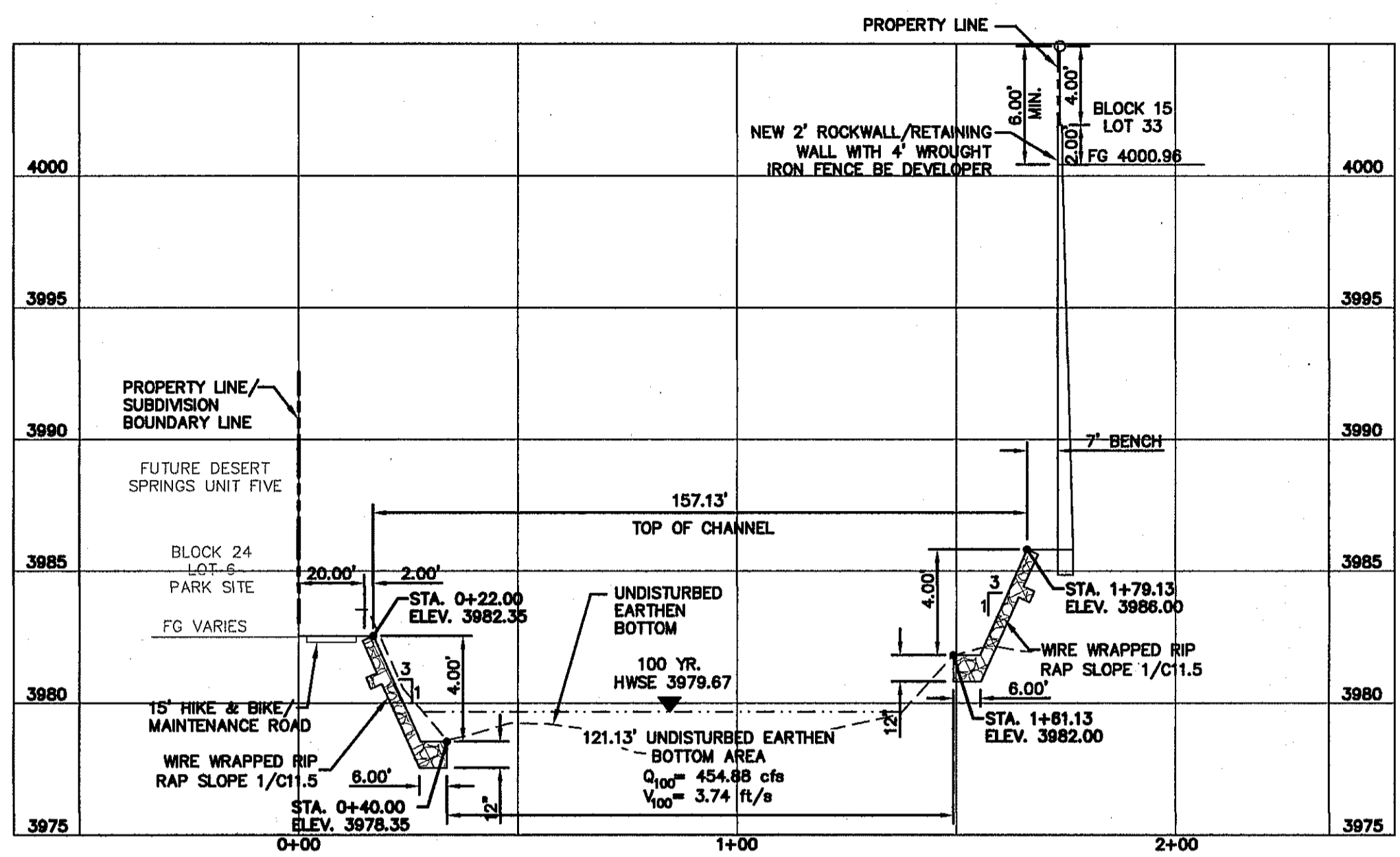
WARNING!
BEFORE YOU DIG
 CALL
 1-800-DIG-TESS
 1-800-344-8377
 FOR FIELD LOCATING EXISTING UTILITIES

DATE	REVISIONS	BY

o&a
 engineers • architects • planners
 TEXAS REGISTERED ENGINEERING FIRM #4584
 4712 Woodrow Bean, Ste. F El Paso, TX 79924
 Office: 915.544.5202 Fax: 915.544.5233 www.oandapl.com



SCALE:
 Horizontal: 1" = 30'
 Vertical: 1" = 6'
 Contour Interval: 1/4'
 DATE: DECEMBER 2014
 DESIGN BY: A.H.
 DRAWN BY: J.H.
 CHKD. BY: J.L.A.
 APP'D. BY: J.L.A.
 JOB No. 2060-078-LD



PROJECT TITLE
DESERT SPRINGS UNIT FOUR
SUBDIVISION IMPROVEMENTS

SHEET TITLE
HYBRID CHANNEL #2 CROSS SECTIONS
 (SHEET 3 OF 8)
 SHEET NO.

C9.11

BENCHMARK:
 FOUND N.G.S. SURVEY MARKER STAMPED "CHINO 1980"
 ELEVATION: **3935.93** (CITY OF EL PASO VERTICAL DATUM SHOWN)
 3946.11 (NAVD 88 DATUM)
 3945.78 (NGVD 29 DATUM)
 TIE TO THE PROJECT BENCHMARK IS N53°09'09"W, 4,008.93 FEET FROM A 1/2 INCH REBAR FOUND FOR THE NORTHWEST CORNER OF TRACT 11, NELLIE D. MUNDY SURVEY No. 239

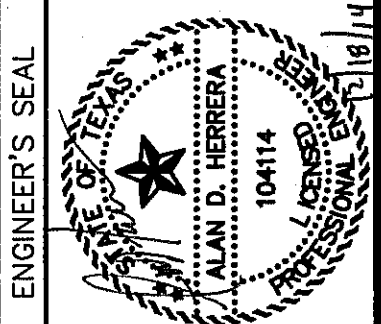
LEGEND
 100 YR HWSE
 UNDISTURBED EARTHEN BOTTOM

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
ONEOK PARTNERS	(915) 595-8918
AT&T	(800) 852-3786
U.S. SPRINT TELECOMM	(800) 521-0579
CITY OF EL PASO DEPARTMENT OF TRANSPORTATION	(915) 621-6750
(AFTER HOURS)	(915) 240-3220

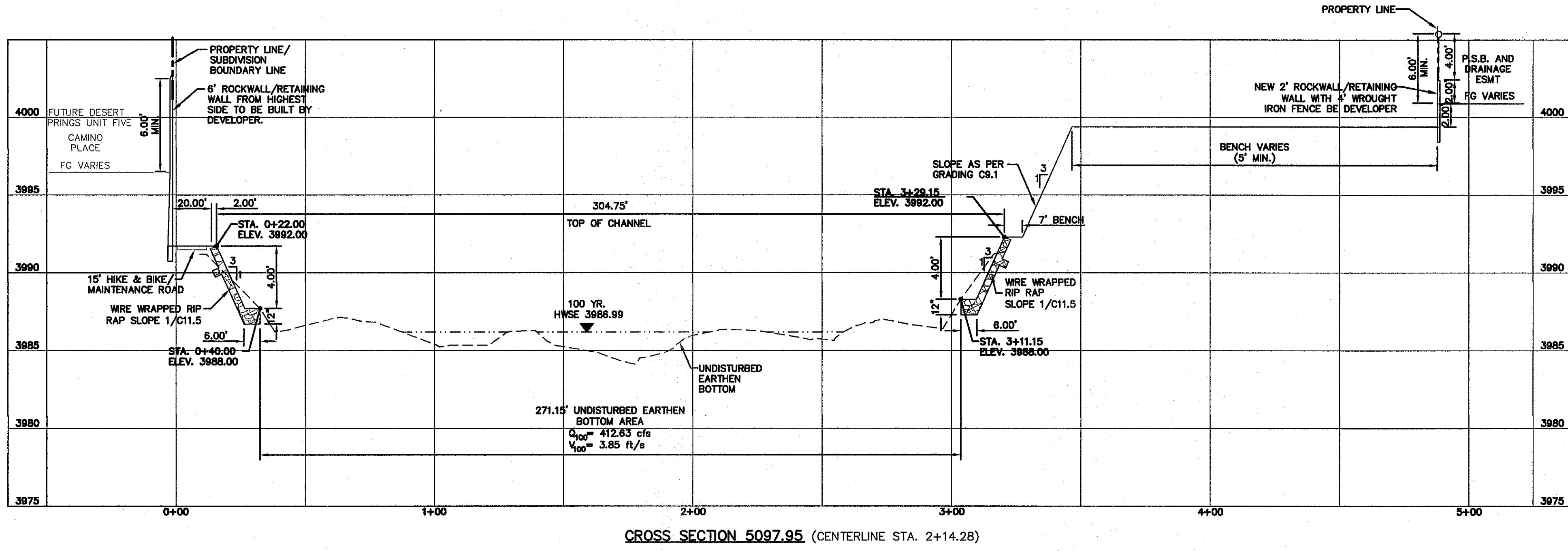
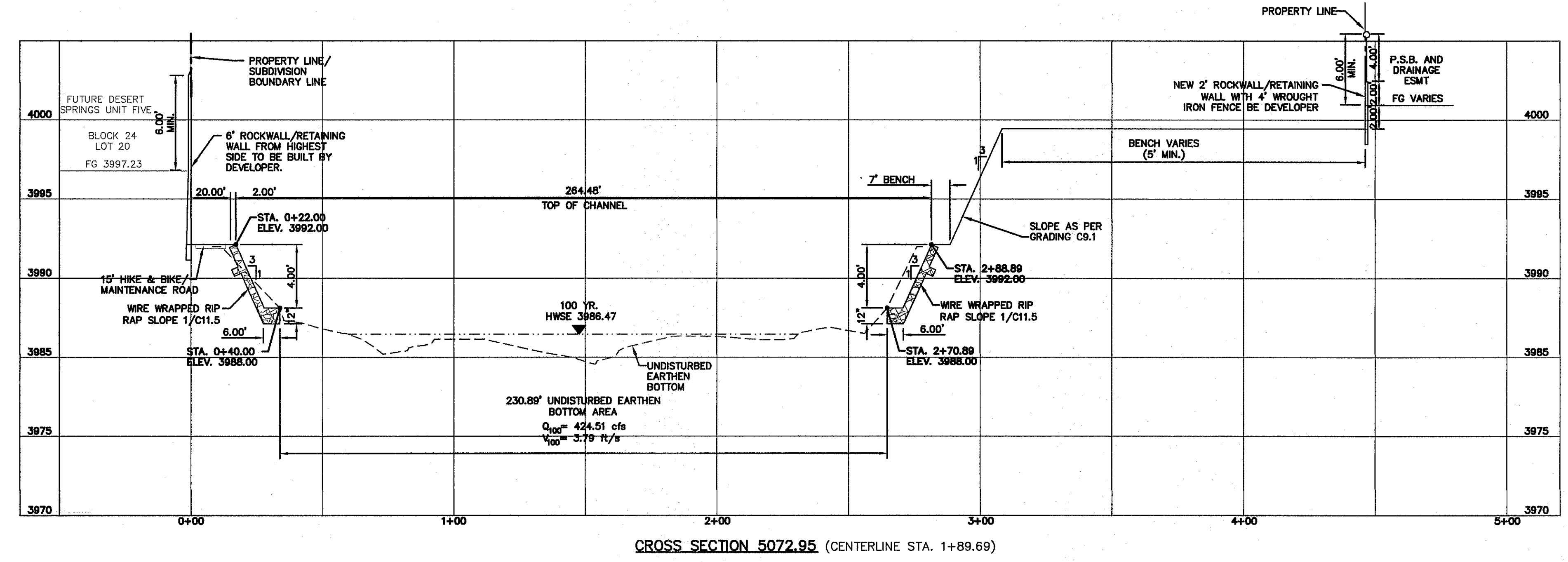
WARNING!
BEFORE YOU DIG
 CALL
1-800-DIG-TESS
1-800-344-8377
 FOR FIELD LOCATING EXISTING UTILITIES

DATE	REVISIONS	BY

CS&A
 ENGINEERS • ARCHITECTS • PLANNERS
 TEXAS REGISTERED ENGINEERING FIRM #454
 4712 Woodrow Bean, Ste. F, El Paso, TX 79924
 Office: 915.544.5232 Fax: 915.544.5233 www.csandap.net



SCALE
 Horizontal: 1" = 30'
 Vertical: 1" = 6'
 Contour Interval: 1/4'
 DATE: DECEMBER 2014
 DESIGN BY: A.H.
 DRAWN BY: J.H.
 CHKD. BY: J.L.A.
 APPVD. BY: J.L.A.
 JOB No. 2060-028-LD



PROJECT TITLE
 DESERT SPRINGS UNIT FOUR
 SUBDIVISION IMPROVEMENTS

SHEET TITLE
 HYBRID CHANNEL #2 CROSS SECTIONS
 (SHEET 4 OF 8)
 SHEET NO.



C9.12

UTILITY LOCATOR SERVICES	
EL PASO ELECTRIC COMPANY	(915) 543-5720
EL PASO ENERGY CORPORATION	(915) 496-5244
EL PASO WATER UTILITIES	(915) 594-3500
MCI SURVEILLANCE	(800) MCI-WORK
TIME WARNER COMMUNICATIONS	(915) 772-1123
TEXAS GAS SERVICE	(915) 680-7200
ONEOK PARTNERS	(915) 595-6918
AT&T	(800) 852-3786
U.S. SPRINT TELECOMM	(800) 521-0579
CITY OF EL PASO DEPARTMENT OF TRANSPORTATION	(915) 621-6750
(AFTER HOURS)	(915) 240-3220

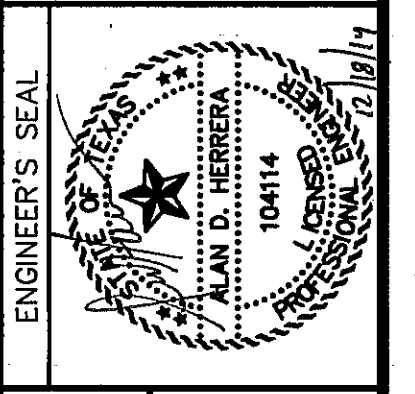
WARNING!
BEFORE YOU DIG

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

FOR FIELD LOCATING EXISTING UTILITIES

REVISIONS	DATE	BY

DESIGNER
CS&A
engineers • architects • planners
TEXAS REGISTERED ENGINEERING FIRM F-454
4712 Woodrow Bean, Ste. F, El Paso, TX 79924
Office: 915.544.5232 Fax: 915.544.5233 www.csandagroup.net



SCALE
Horizontal: 1"=30'
Vertical: 1"=6'
Contour Interval: 1/4'

DATE: DECEMBER 2014
DESIGN BY: A.H.
DRAWN BY: J.H.
CHKD. BY: J.L.A.
APPVD. BY: J.L.A.
JOB No. 2060-028-LD

PROJECT TITLE
DESERT SPRINGS UNIT FOUR
SUBDIVISION IMPROVEMENTS

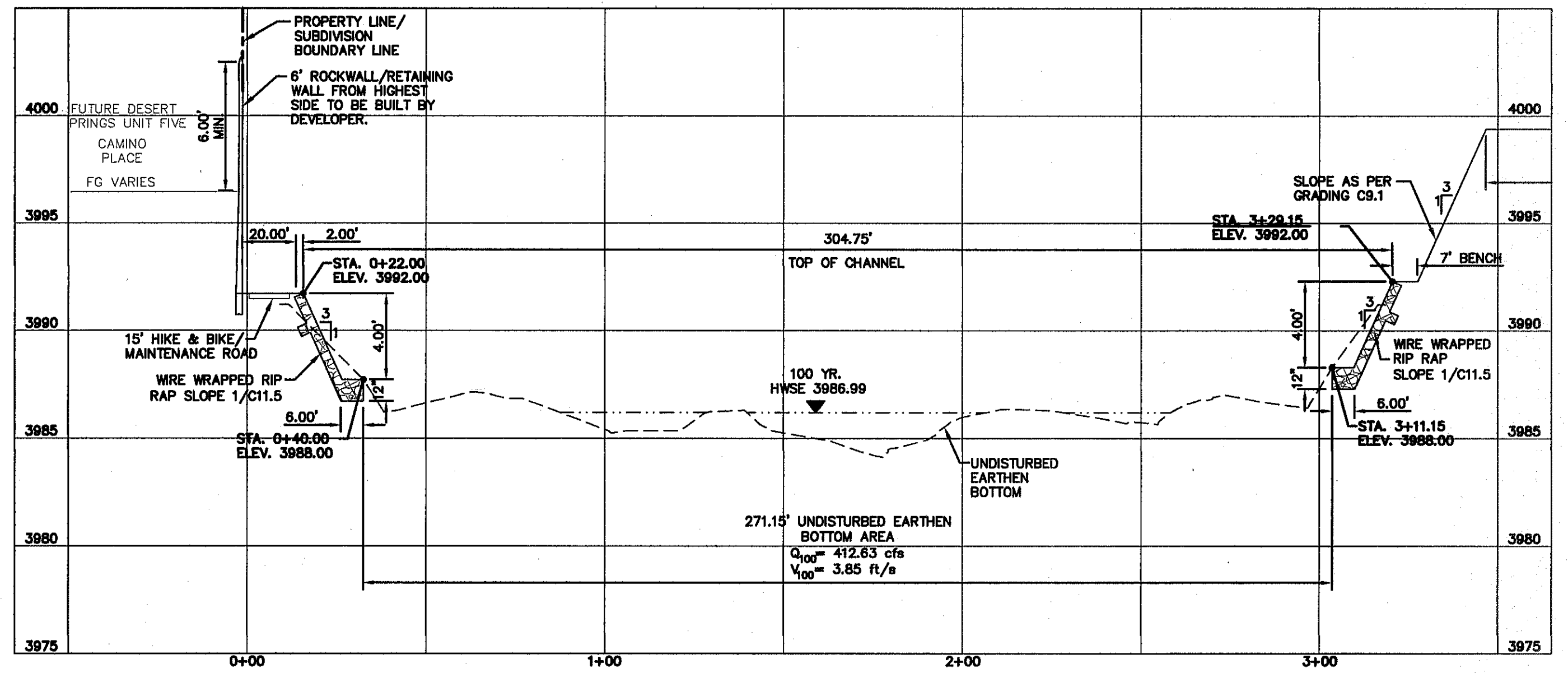
SHEET TITLE
HYBRID CHANNEL #2 CROSS SECTIONS
(SHEET 5 OF 8)
SHEET NO.

C9.13

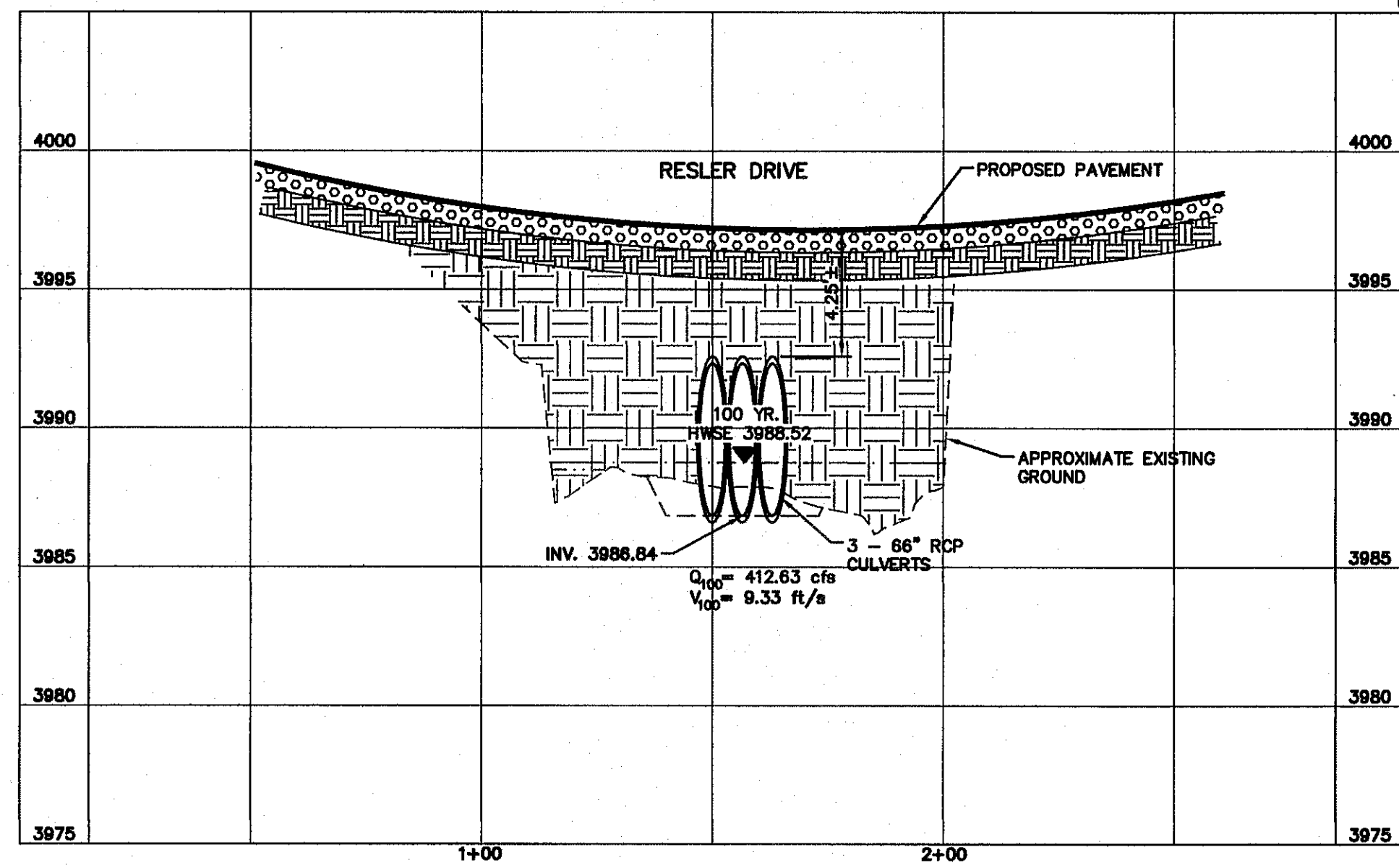


BENCHMARK:
FOUND N.G.S. SURVEY MARKER STAMPED "CHINO 1980"
ELEVATION: 3935.93 (CITY OF EL PASO VERTICAL DATUM SHOWN)
3946.11 (NAVD 88 DATUM)
3943.78 (NGVD 29 DATUM)
TIE TO THE PROJECT BENCHMARK IS N53°09'09"W, 4,008.93 FEET FROM A 1/2 INCH REBAR FOUND FOR THE NORTHWEST CORNER OF TRACT 11, NELLIE D. MUNDY SURVEY No. 239

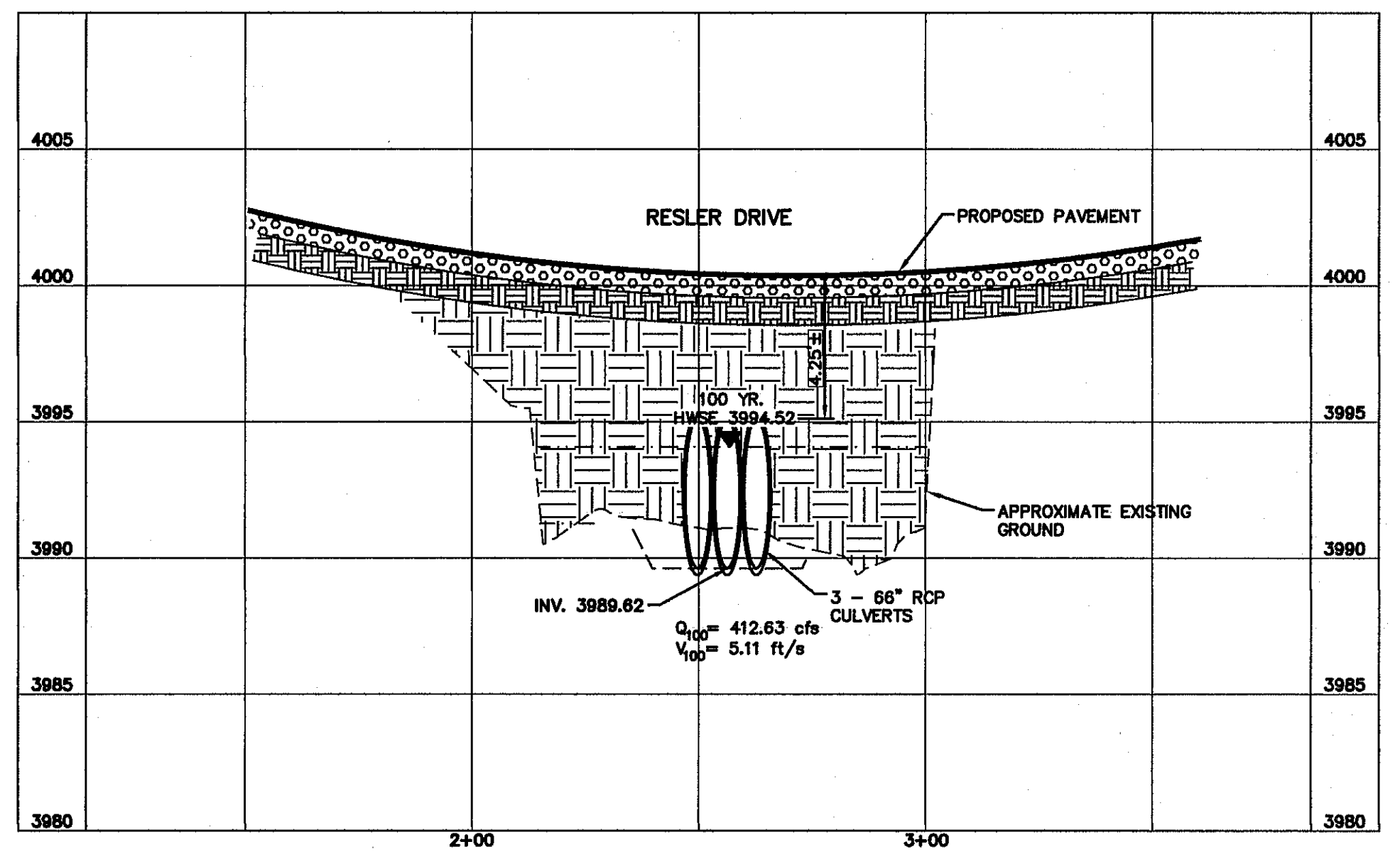
LEGEND:
100 YR HWSE
UNDISTURBED EARTHEN BOTTOM



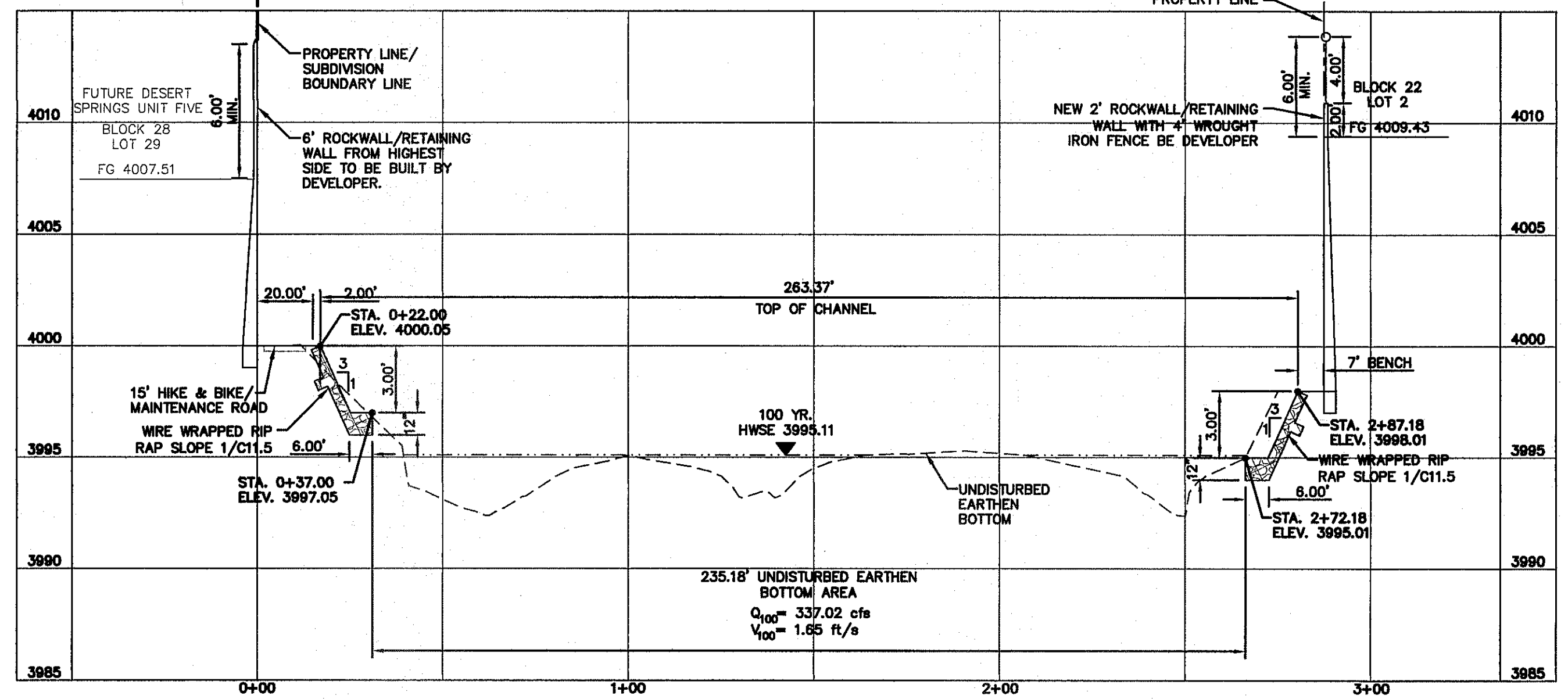
CROSS SECTION 5097.95 (CENTERLINE STA. 2+14.28)



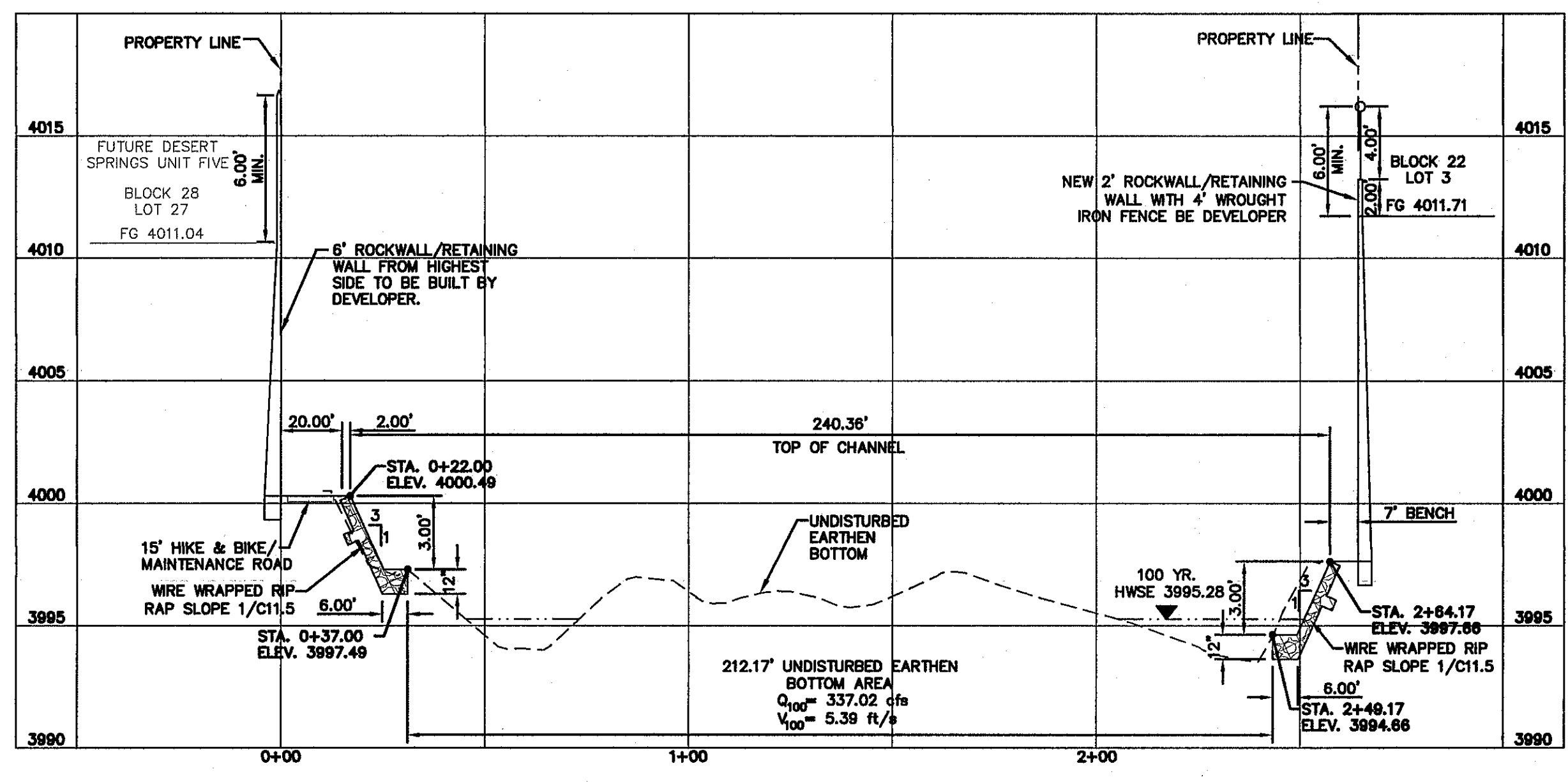
CROSS SECTION 5183.26 (CENTERLINE STA. 1+42.32)



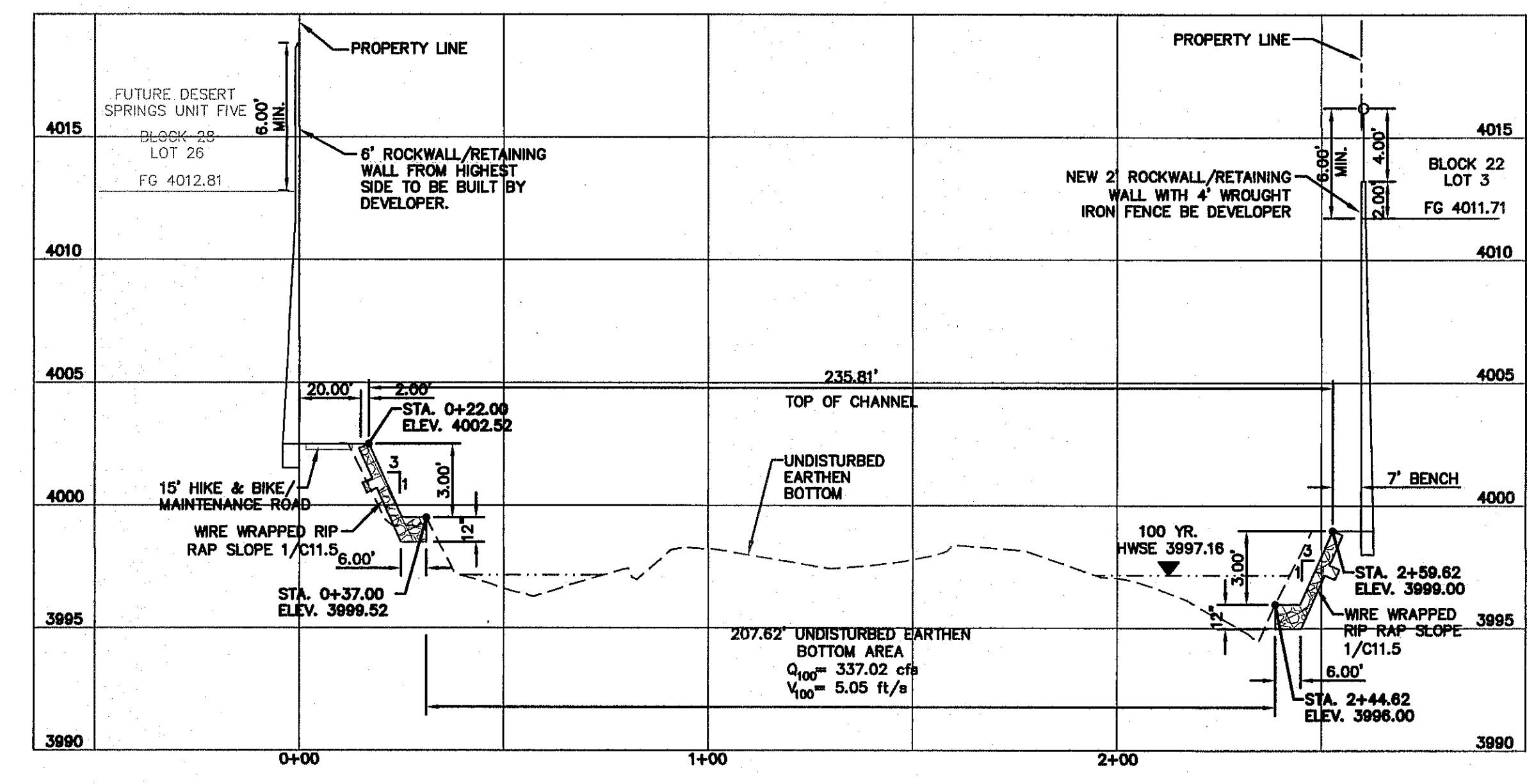
CROSS SECTION 5326.32 (CENTERLINE STA. 0+38.75)



CROSS SECTION 5442.71 (CENTERLINE STA. 1+47.46)



CROSS SECTION 5520.27 (CENTERLINE STA. 1+31.96)



CROSS SECTION 5573.01 (CENTERLINE STA. 1+28.47)

BENCHMARK:
 FOUND N.G.S. SURVEY MARKER STAMPED "CHINO 1980"
 ELEVATION: 3935.83 (CITY OF EL PASO VERTICAL DATUM)
 3946.11 (NAVD 88 DATUM)
 3945.78 (NGVD 29 DATUM)
 TIE TO THE PROJECT BENCHMARK IS N53°09'09"W, 4,008.93 FEET FROM A 1/2 INCH REBAR FOUND FOR THE NORTHWEST CORNER OF TRACT 11, NELLIE D. MUNDY SURVEY No. 239

LEGEND:
 100 YR HWSE
 UNDISTURBED EARTHEN BOTTOM

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
ONEOK PARTNERS	(915) 595-6918
AT&T	(800) 852-3786
U.S. SPRINT TELECOMM	(800) 521-0579
CITY OF EL PASO DEPARTMENT OF TRANSPORTATION	(915) 621-6750
(AFTER HOURS)	(915) 240-3220

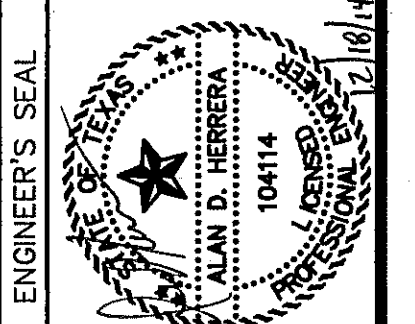
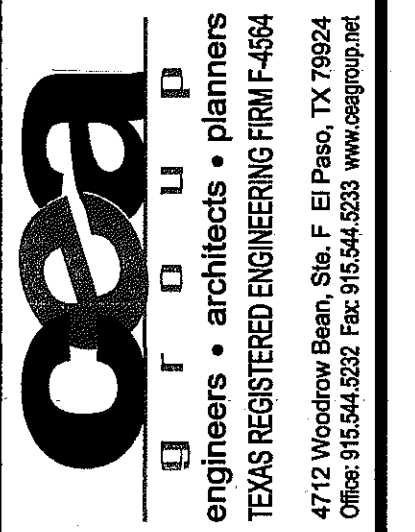
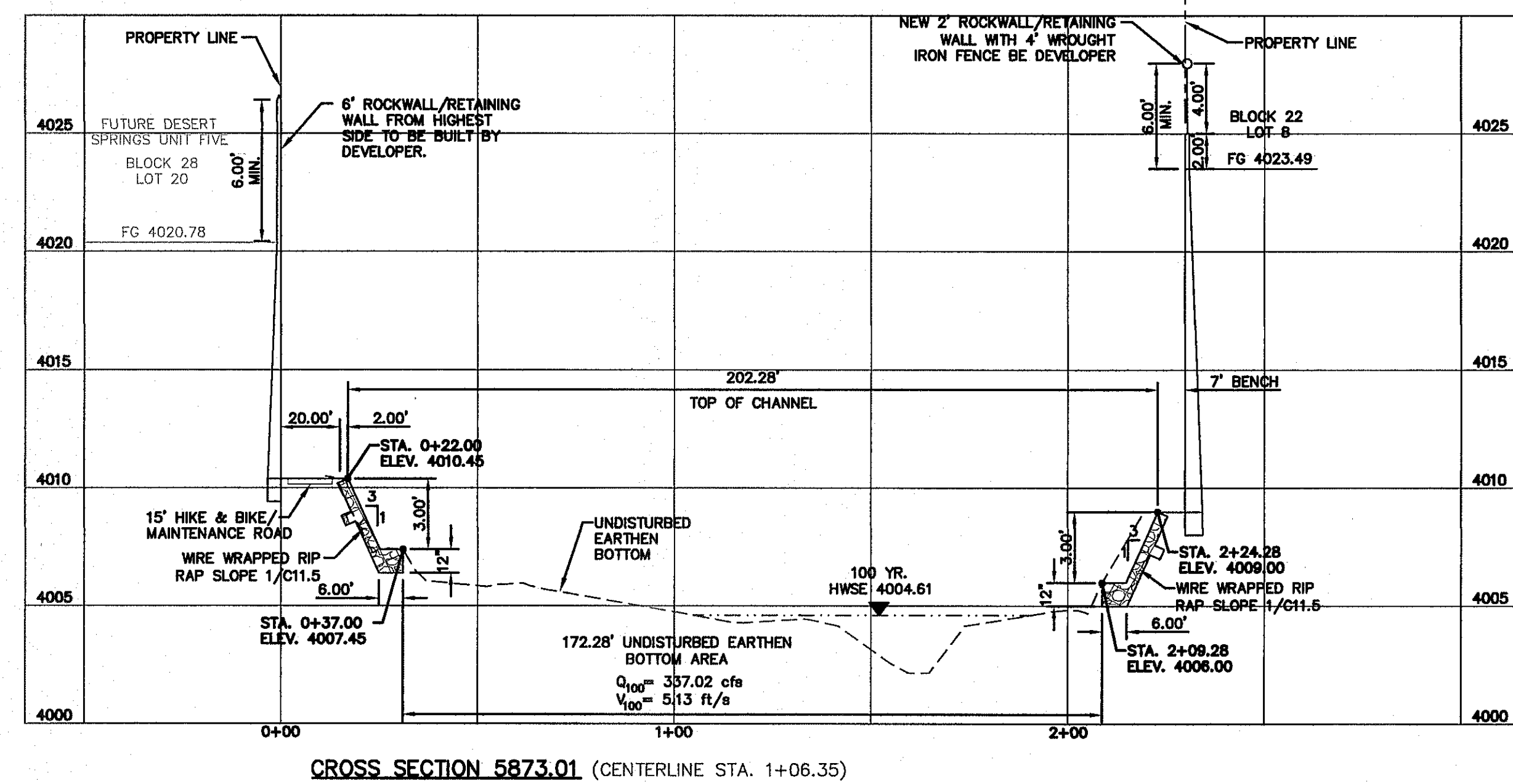
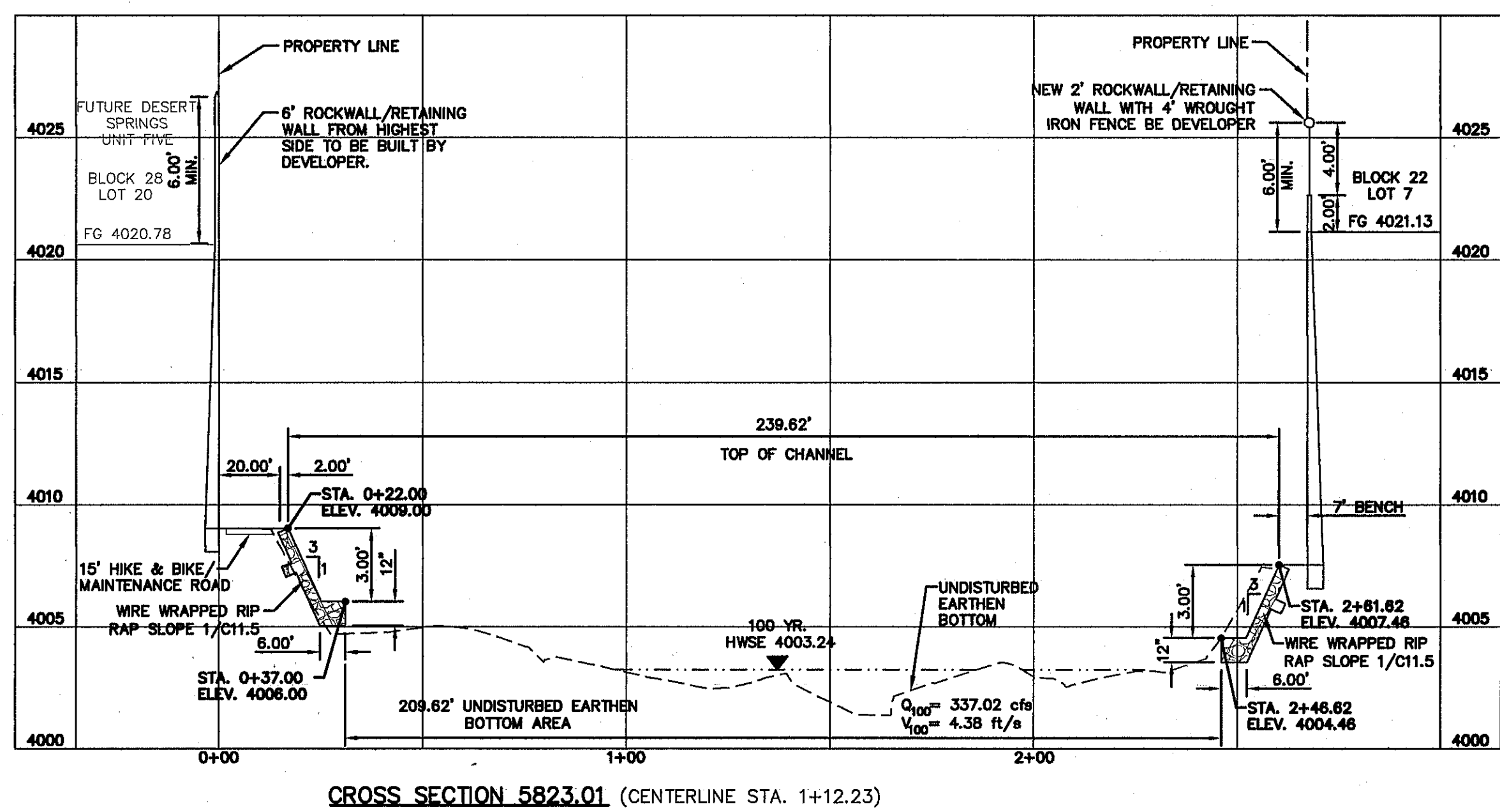
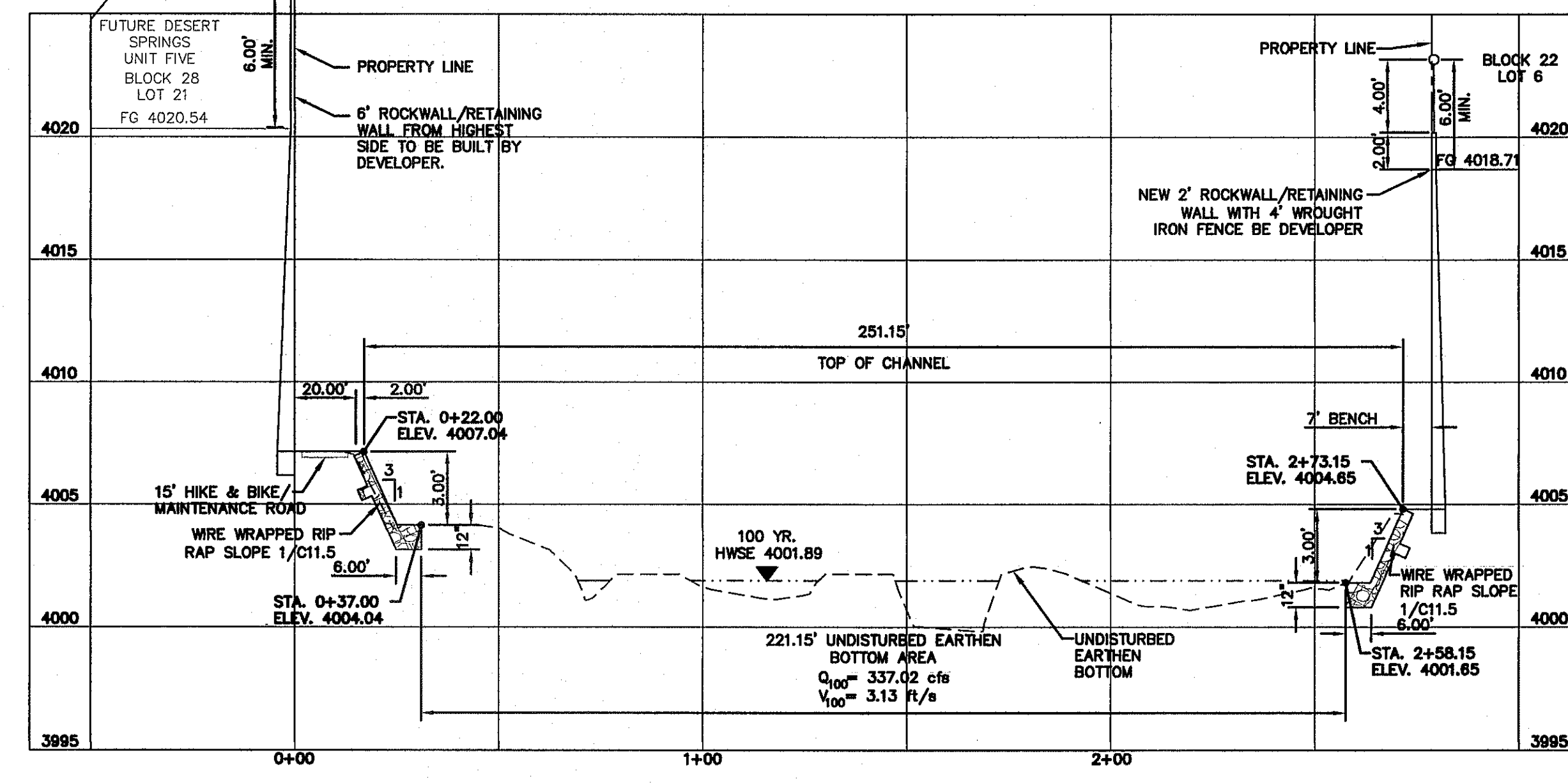
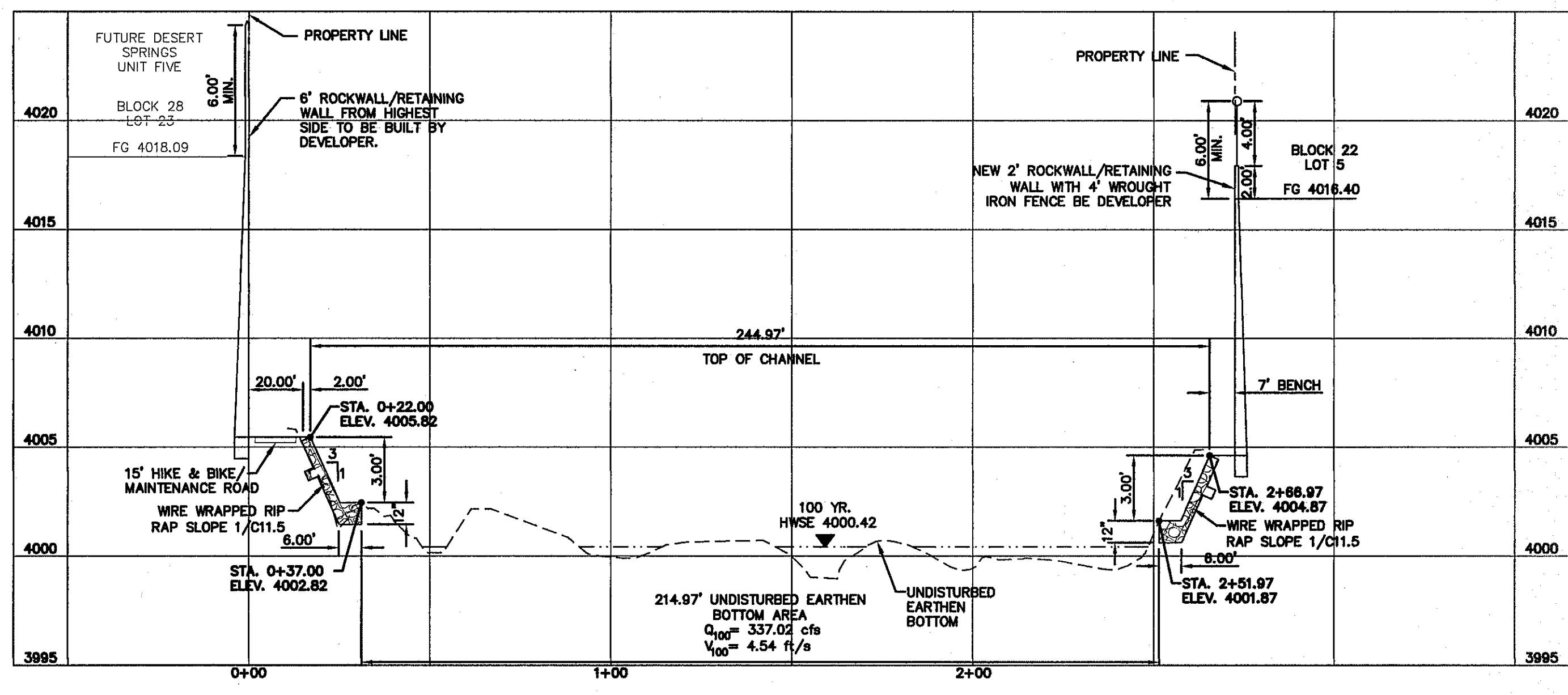
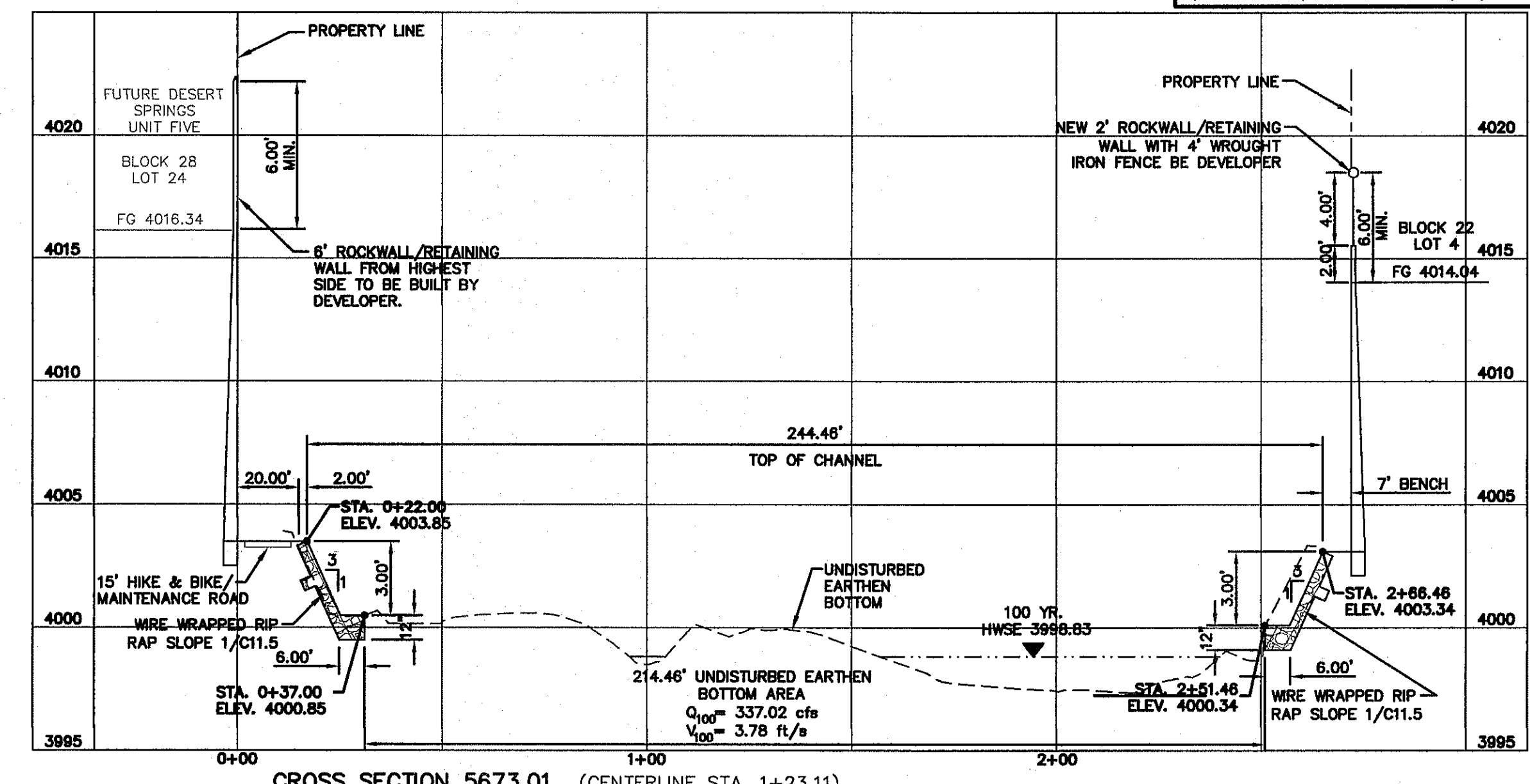
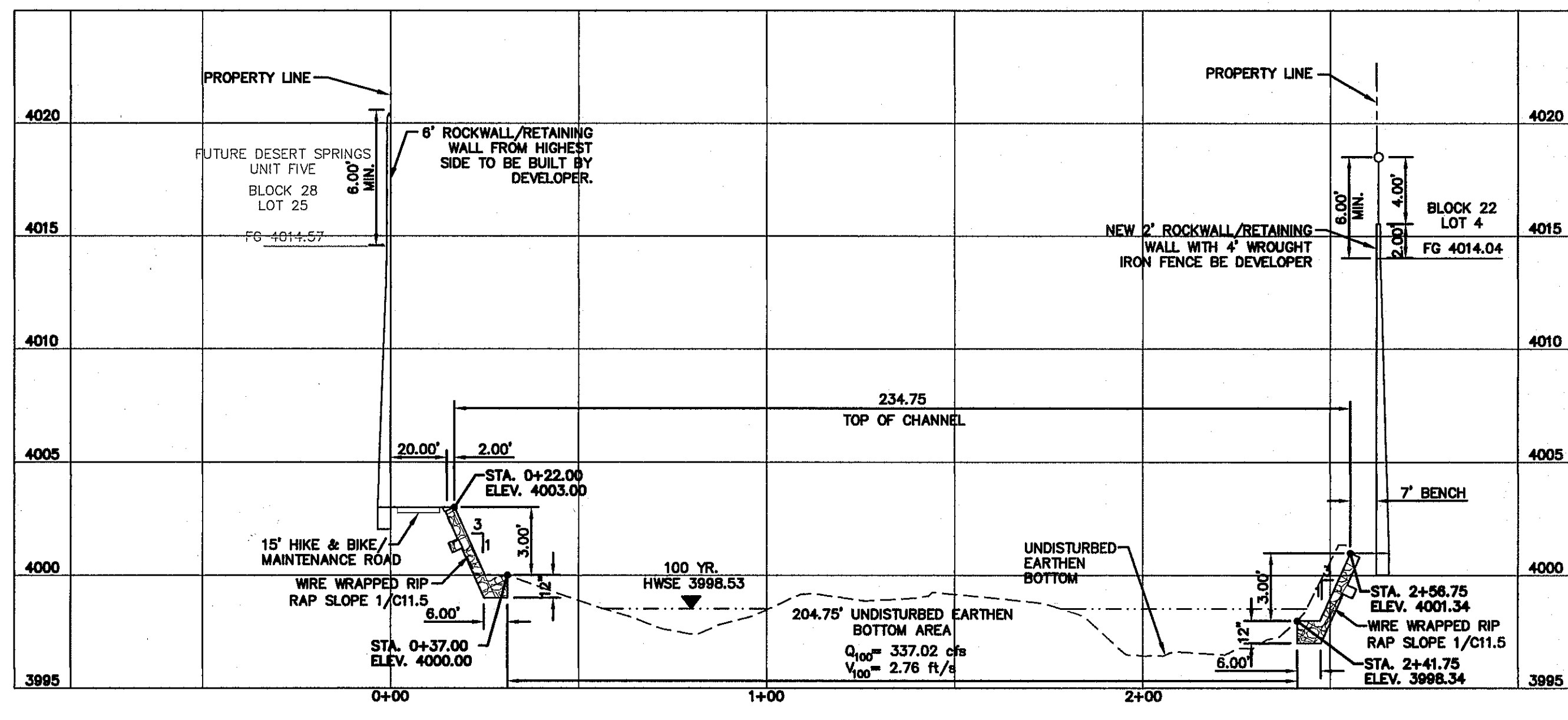
WARNING!
BEFORE YOU DIG
 CALL
 1-800-DIG-TESS
 1-800-344-8377
 FOR FIELD LOCATING EXISTING UTILITIES

REFERENCES - BENCHMARKS

FOUND N.G.S. SURVEY MARKER STAMPED "CHINO 1980"
 ELEVATION: 3935.83 (CITY OF EL PASO VERTICAL DATUM)
 3946.11 (NAVD 88 DATUM)
 3945.78 (NGVD 29 DATUM)
 TIE TO THE PROJECT BENCHMARK IS N53°09'09"W, 4,008.93 FEET FROM A 1/2 INCH REBAR FOUND FOR THE NORTHWEST CORNER OF TRACT 11, NELLIE D. MUNDY SURVEY No. 239

DATE: _____ BY: _____

REVISIONS



SCALE: 1"=30'
 Horizontal: 1"=60'
 Vertical: 1"=6'
 Contour Interval: 3'/4'
 DATE: DECEMBER 2014
 DESIGN BY: A.H.
 DRAWN BY: J.H.
 CHKD. BY: J.L.A.
 APPVD. BY: J.L.A.
 JOB No. 2050-028-LD

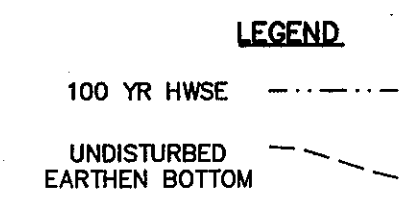
PROJECT TITLE
DESERT SPRINGS UNIT FOUR
SUBDIVISION IMPROVEMENTS

SHEET TITLE
HYBRID CHANNEL #2 CROSS SECTIONS
 (SHEET 6 OF 8)
 SHEET NO.



C9.14

BENCHMARK:
 FOUND N.G.S. SURVEY MARKER STAMPED "CHINO 1980"
 ELEVATION: 3935.93 (CITY OF EL PASO VERTICAL DATUM SHOWN)
 3946.11 (NAVD 88 DATUM)
 3945.78 (NGVD 29 DATUM)
 TIE TO THE PROJECT BENCHMARK IS N53°09'09"W, 4,008.93 FEET FROM A 1/2 INCH REBAR FOUND FOR THE NORTHWEST CORNER OF TRACT 11, NELLIE D. MUNDY SURVEY No. 239

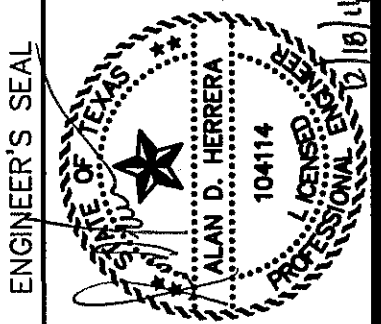


UTILITY LOCATOR SERVICES	
EL PASO ELECTRIC COMPANY	(915) 543-5720
EL PASO ENERGY CORPORATION	(915) 496-5244
EL PASO WATER UTILITIES	(915) 594-5500
MCI SURVEILLANCE	(800) MCI-WORK
TIME WARNER COMMUNICATIONS	(915) 772-1123
TEXAS GAS SERVICE	(915) 680-7200
ONEOK PARTNERS	(915) 595-6918
AT&T	(800) 852-3786
U.S. SPRINT TELECOMM	(800) 521-0579
CITY OF EL PASO DEPARTMENT OF TRANSPORTATION (AFTER HOURS)	(915) 621-6750
	(915) 240-3220

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

DATE	REVISIONS	BY

ceba
 ENGINEERS • ARCHITECTS • PLANNERS
 TEXAS REGISTERED ENGINEERING FIRM F-464
 4712 Woodrow Bean, Ste. F, El Paso, TX 79924
 Office: 915.544.5232 Fax: 915.544.5235 www.cebaonline.com



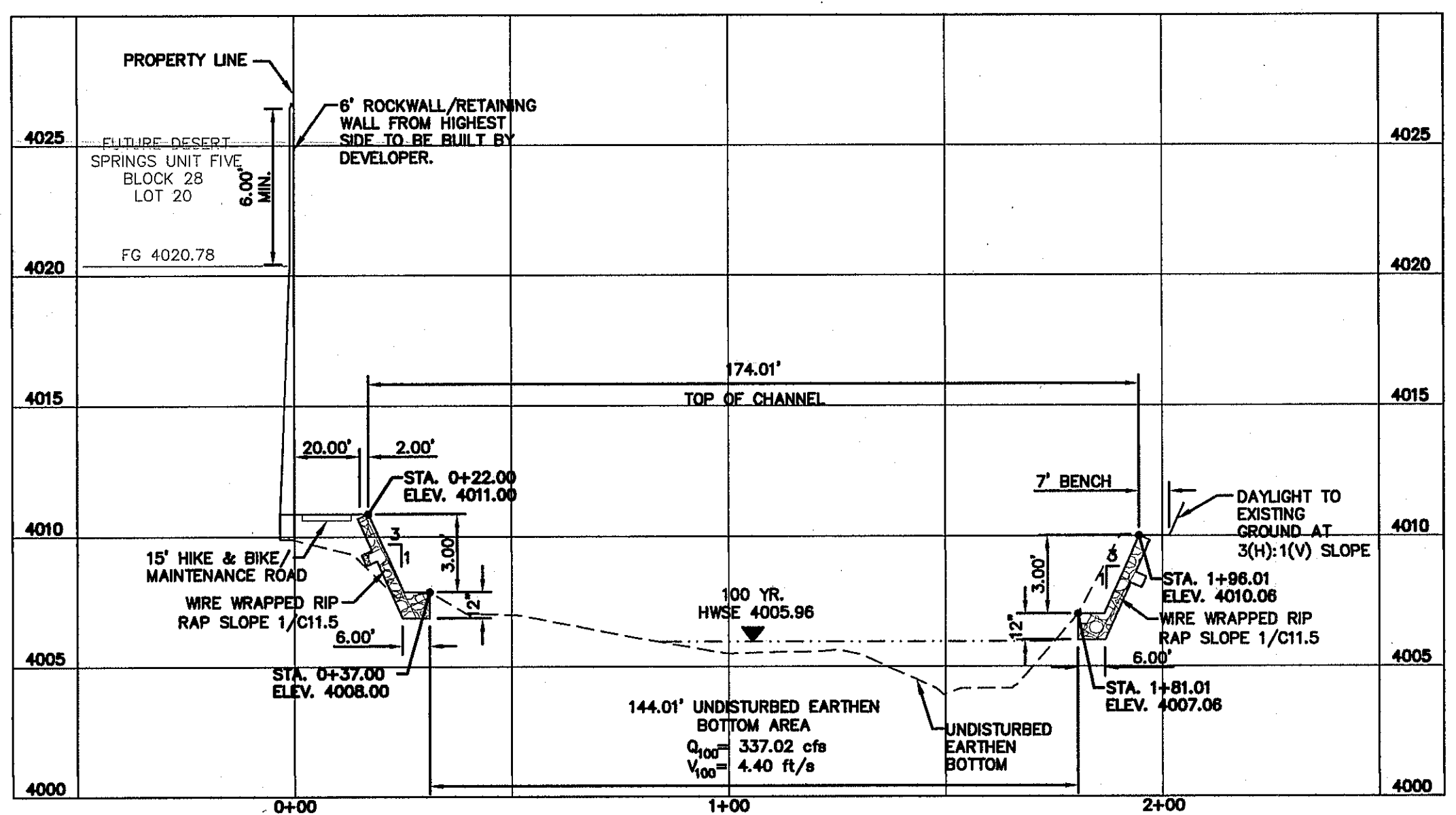
SCALE: 1"=30'
 Horizontal: 1"=60'
 Vertical: 1"=6'
 Contour Interval: 1/4'
 DATE: DECEMBER 2014
 DESIGN BY: A.H.
 DRAWN BY: J.H.
 CHKD. BY: J.L.A.
 APPVD. BY: J.L.A.
 JOB No. 2060-028-LD

PROJECT TITLE
DESERT SPRINGS UNIT FOUR
SUBDIVISION IMPROVEMENTS

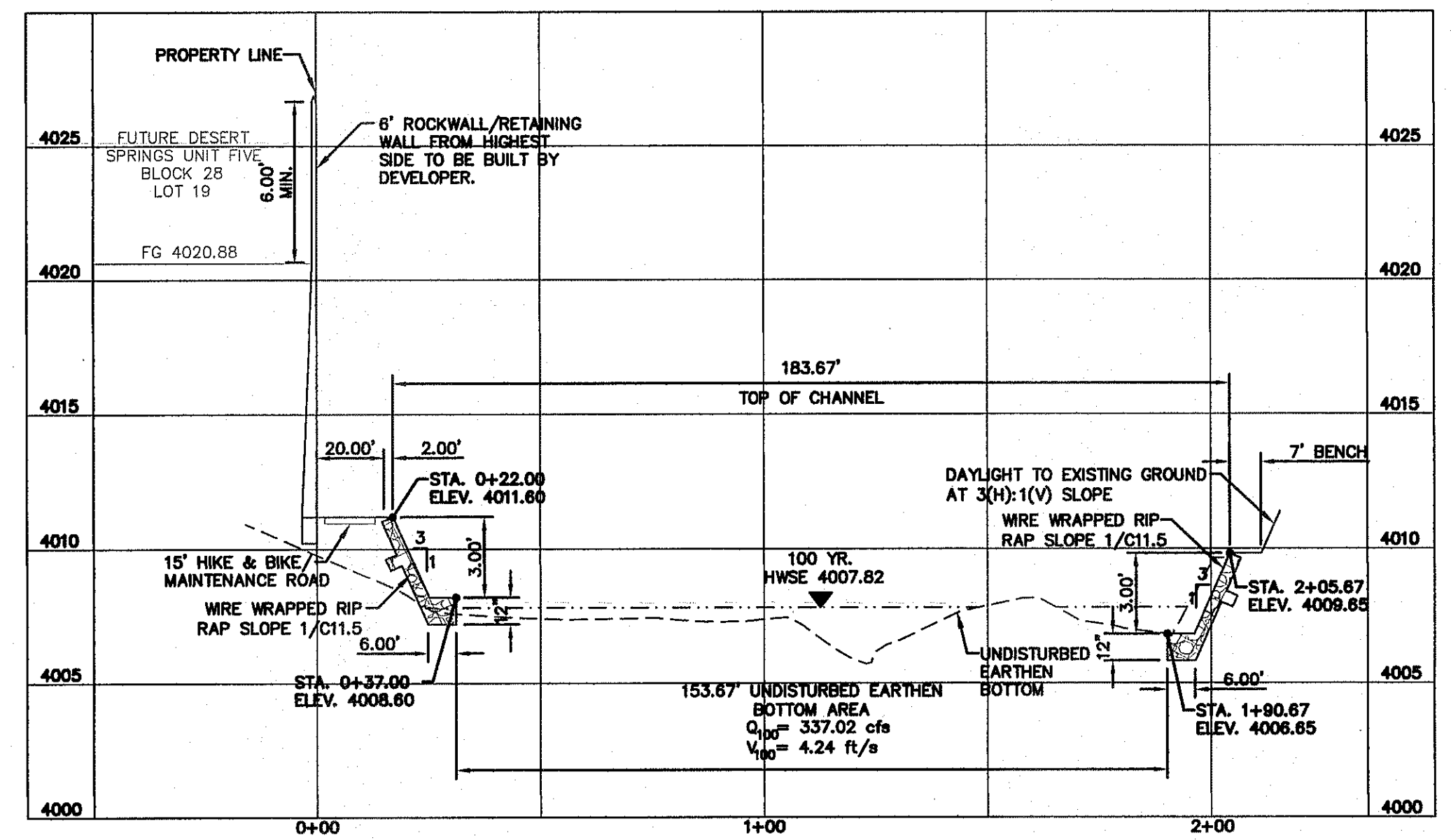
SHEET TITLE
HYBRID CHANNEL #2 CROSS SECTIONS
 (SHEET 7 OF 8)
 SHEET NO.



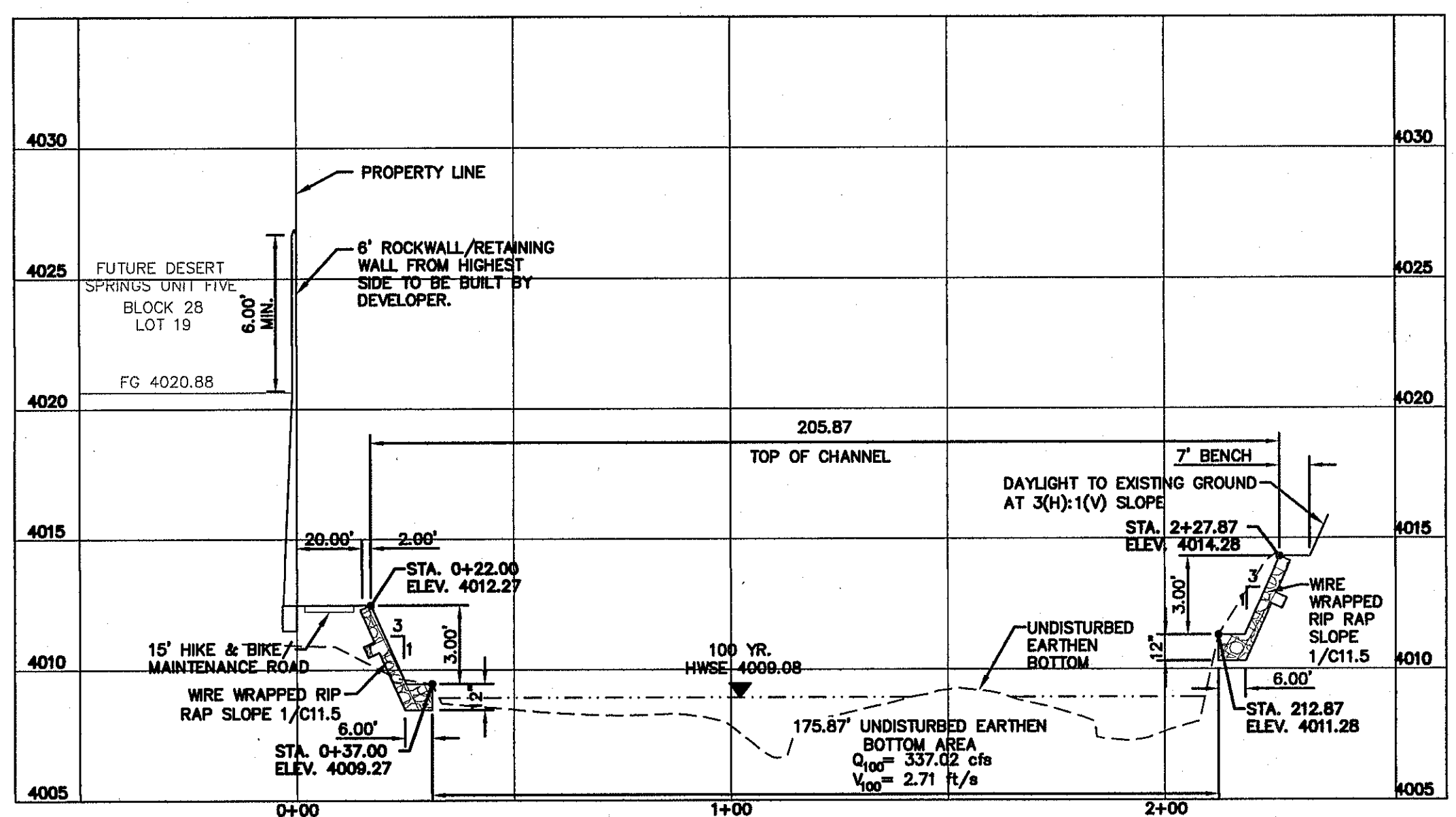
C9.15



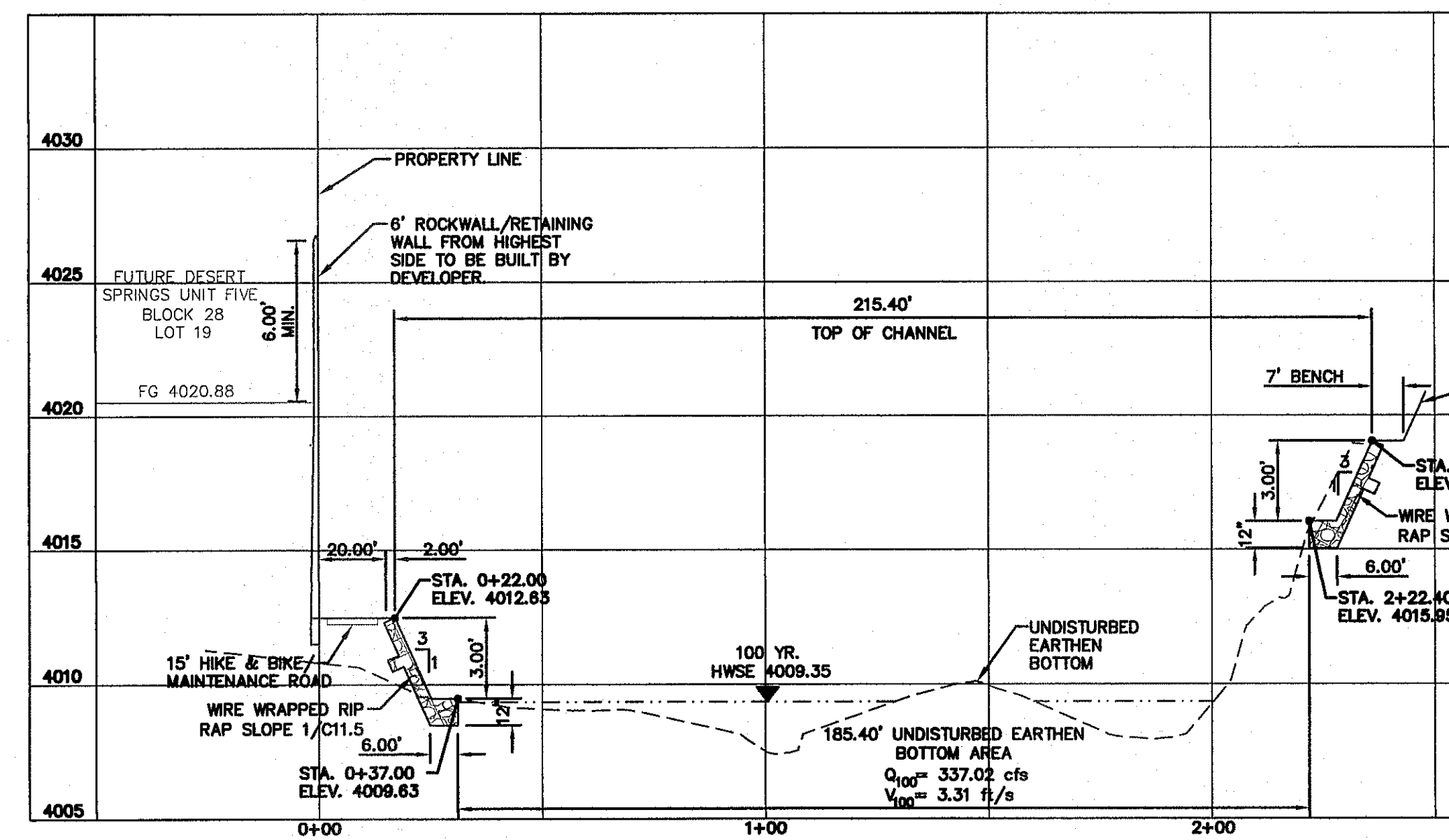
CROSS SECTION 5923.01 (CENTERLINE STA. 0+96.51)



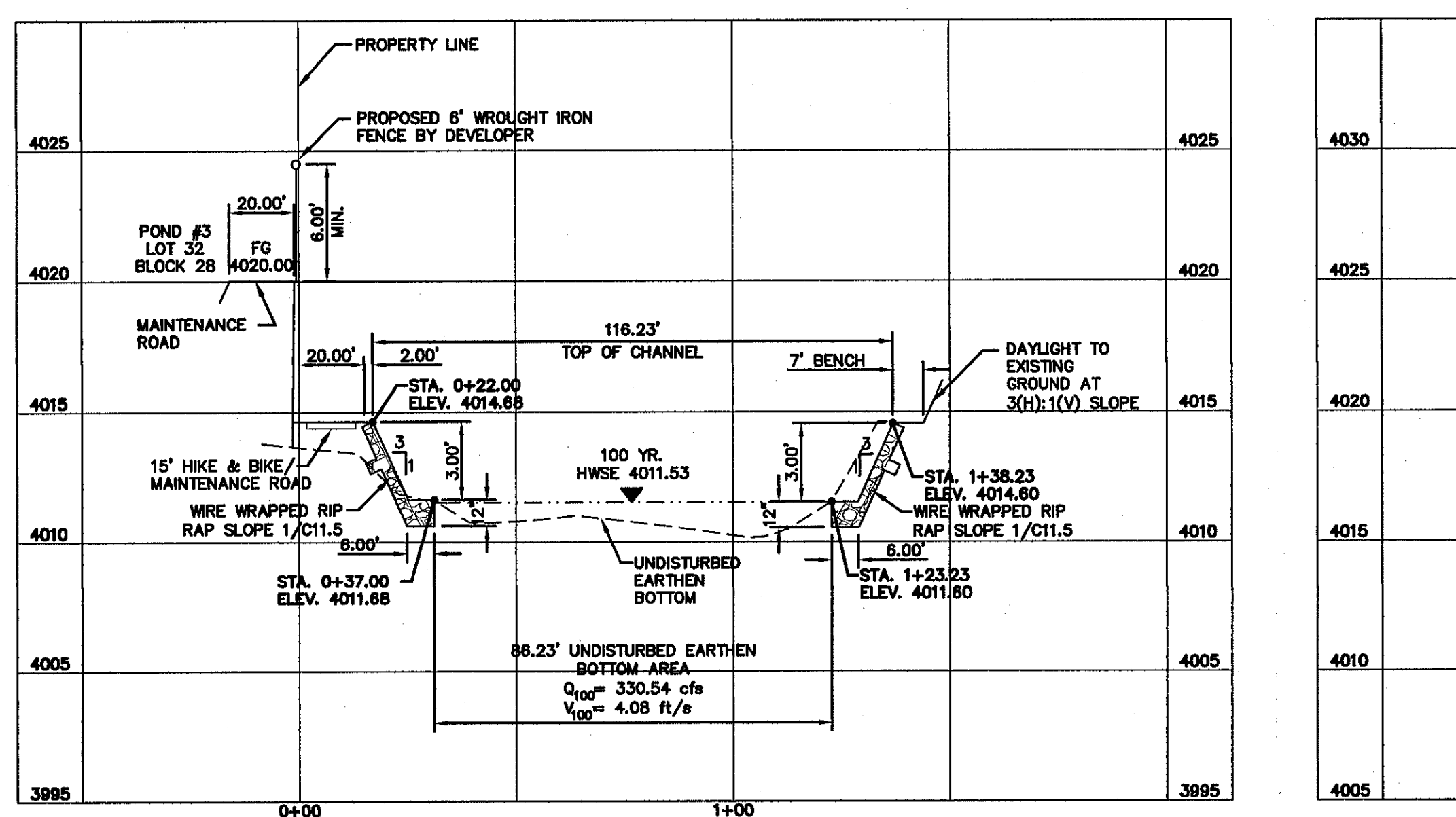
CROSS SECTION 5998.01 (CENTERLINE STA. 0+89.29)



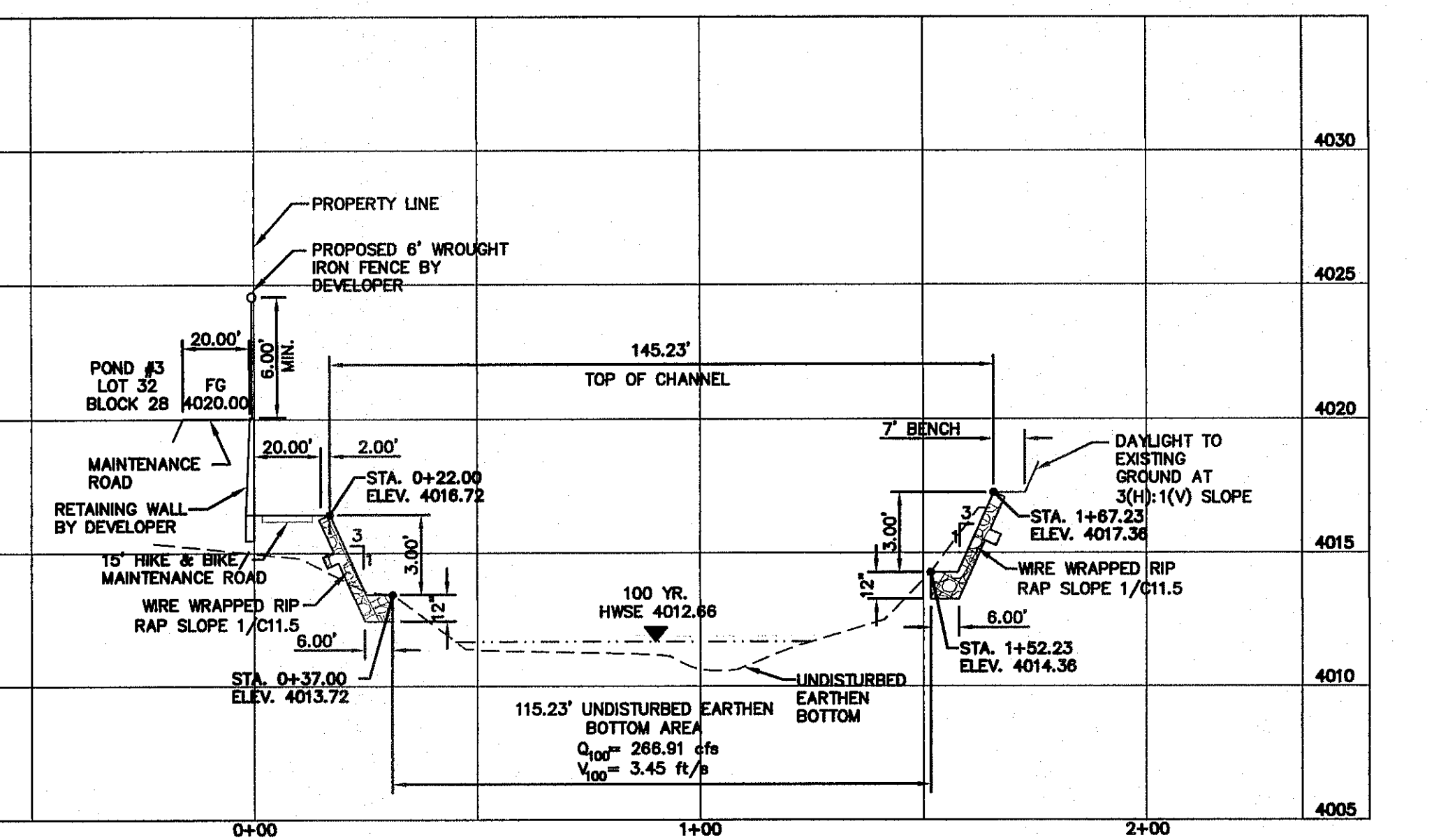
CROSS SECTION 6048.01 (CENTERLINE STA. 0+86.02)



CROSS SECTION 6073.01 (CENTERLINE STA. 0+84.70)



CROSS SECTION 6198.01 (CENTERLINE STA. 0+96.57)



CROSS SECTION 6248.01 (CENTERLINE STA. 0+91.65)

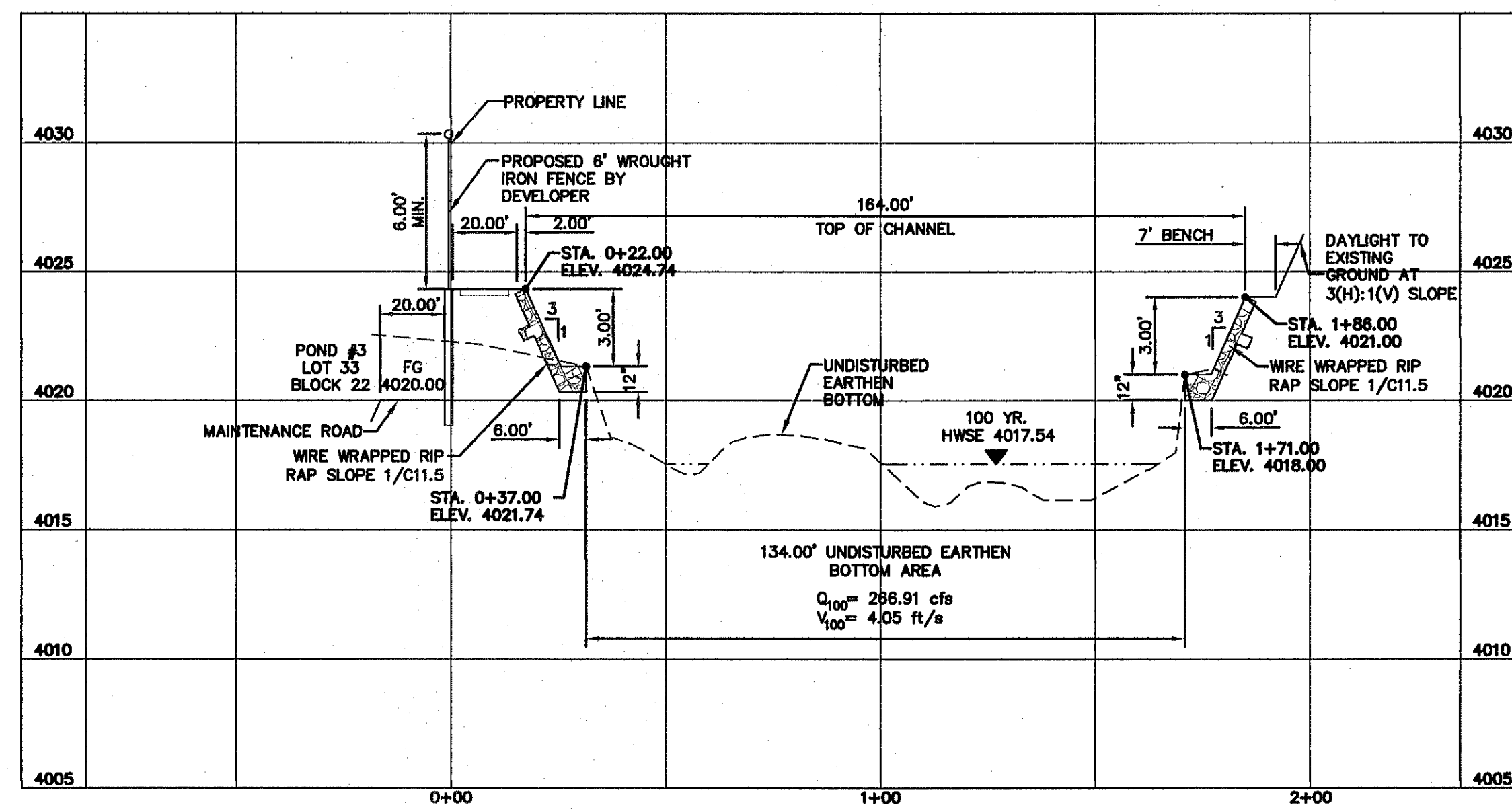
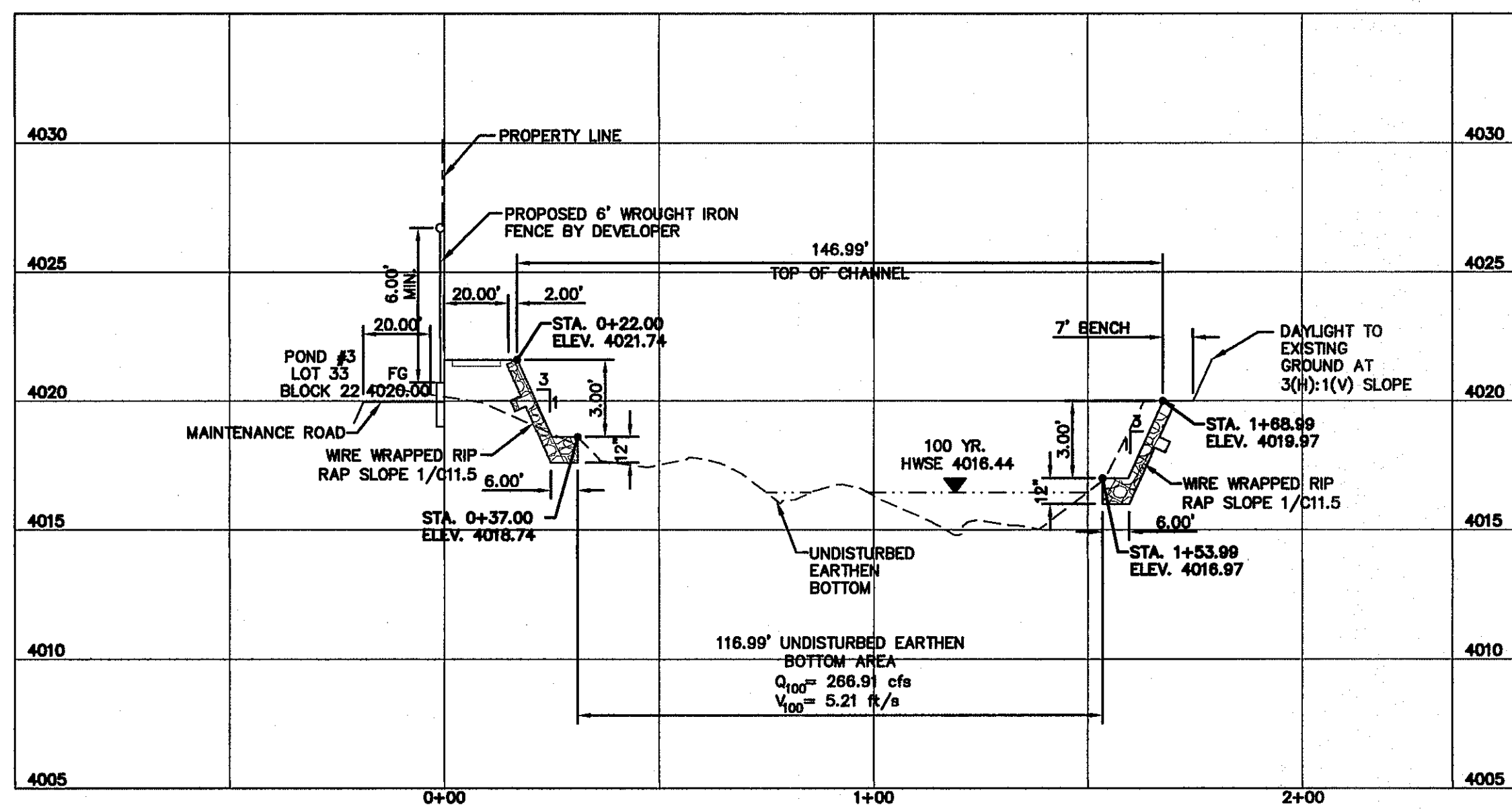
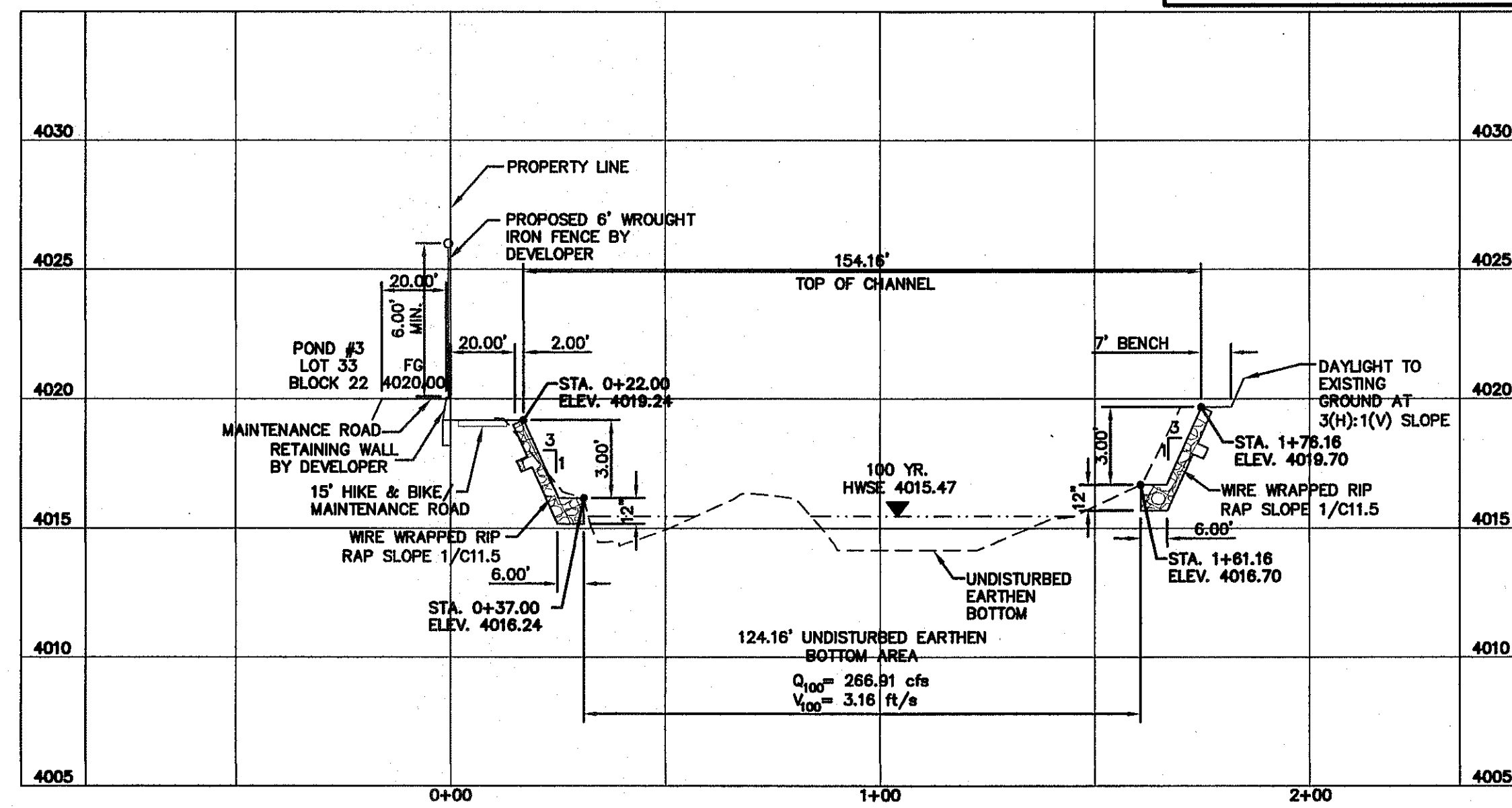
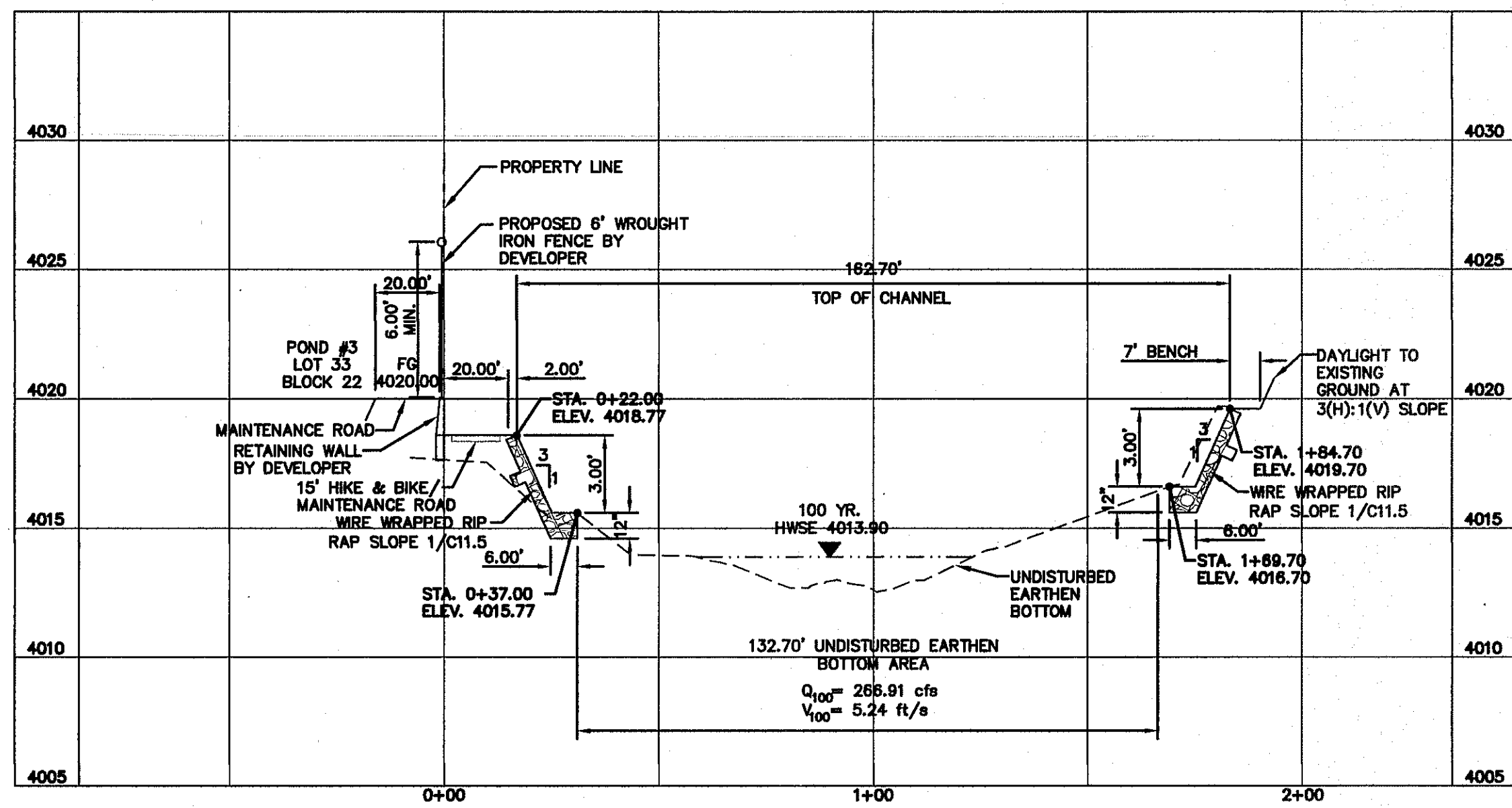
BENCHMARK:
 FOUND N.G.S. SURVEY MARKER STAMPED "CHINO 1980"
 ELEVATION: **3935.93** (CITY OF EL PASO VERTICAL DATUM SHOWN)
 3948.11 (NAVD 88 DATUM)
 3945.78 (NOVD 29 DATUM)
 TIE TO THE PROJECT BENCHMARK IS N53°09'09"W, 4,008.93 FEET FROM A 1/2 INCH REBAR FOUND FOR THE NORTHWEST CORNER OF TRACT 11, NELLIE D. MUNDY SURVEY No. 239

LEGEND:
 100 YR HWSE
 UNDISTURBED EARTHEN BOTTOM

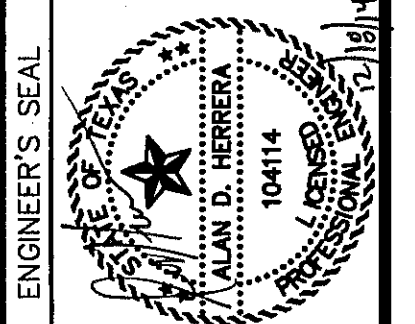
UTILITY LOCATOR SERVICES	
EL PASO ELECTRIC COMPANY	(915) 543-5720
EL PASO ENERGY CORPORATION	(915) 496-5244
EL PASO WATER UTILITIES	(915) 594-3500
MCI SURVEILLANCE	(800) MCI-WORK
TIME WARNER COMMUNICATIONS	(915) 772-1123
TEXAS GAS SERVICE	(915) 680-7200
ONEOK PARTNERS	(915) 595-6918
AT&T	(800) 852-3786
U.S. SPRINT TELECOMM	(800) 521-0579
CITY OF EL PASO DEPARTMENT OF TRANSPORTATION (AFTER HOURS)	(915) 621-6750
	(915) 240-3220

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

DATE	REVISIONS	BY



cepa
 engineers • architects • planners
 TEXAS REGISTERED ENGINEERING FIRM F-484
 4712 Woodrow Bean, Ste. F, El Paso, TX 79924
 Office: 915.544.5232 Fax: 915.544.5233 www.cepa.com



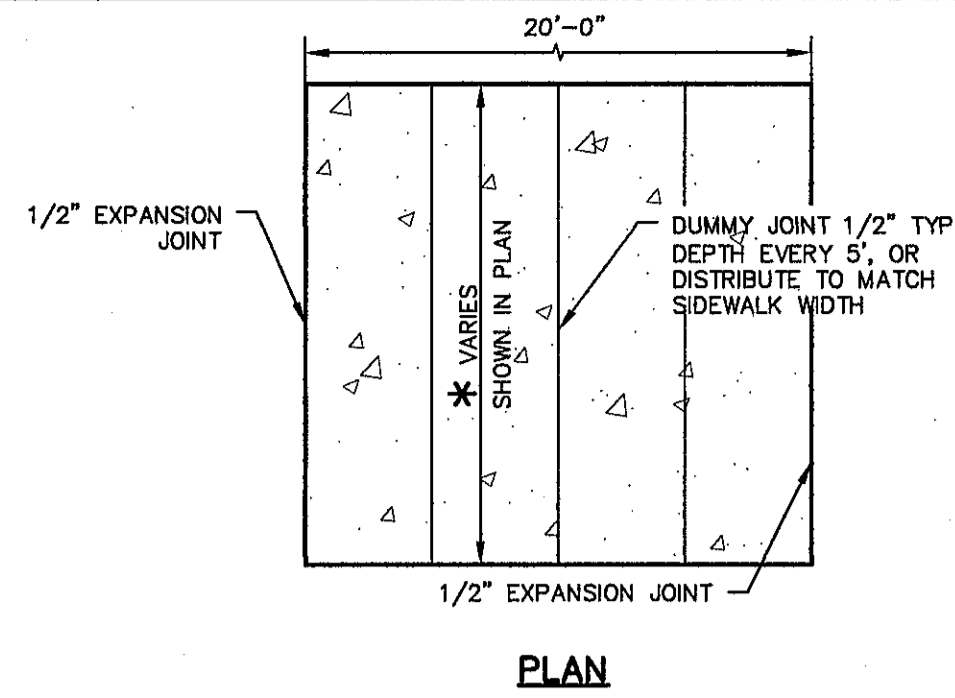
SCALE:
 Horizontal: 1" = 30'
 Vertical: 1" = 6'
 Contour Interval: 1/4'
 DATE: DECEMBER, 2014
 DESIGN BY: A.H.
 DRAWN BY: J.H.
 CHKD. BY: J.L.A.
 APPVD. BY: J.L.A.
 JOB No. 2060-028-LD

PROJECT TITLE
DESERT SPRINGS UNIT FOUR
SUBDIVISION IMPROVEMENTS

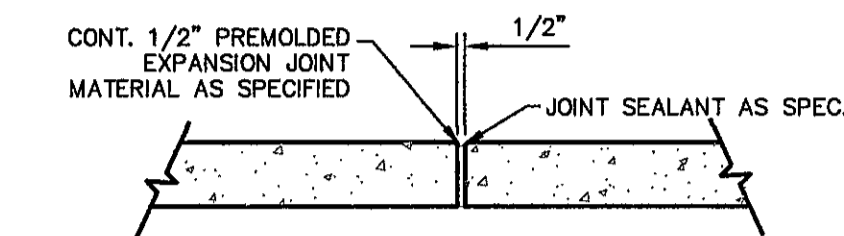
SHEET TITLE
 HYBRID CHANNEL #2 CROSS SECTIONS
 (SHEET 8 OF 8)
 SHEET NO.



C9.16



PLAN



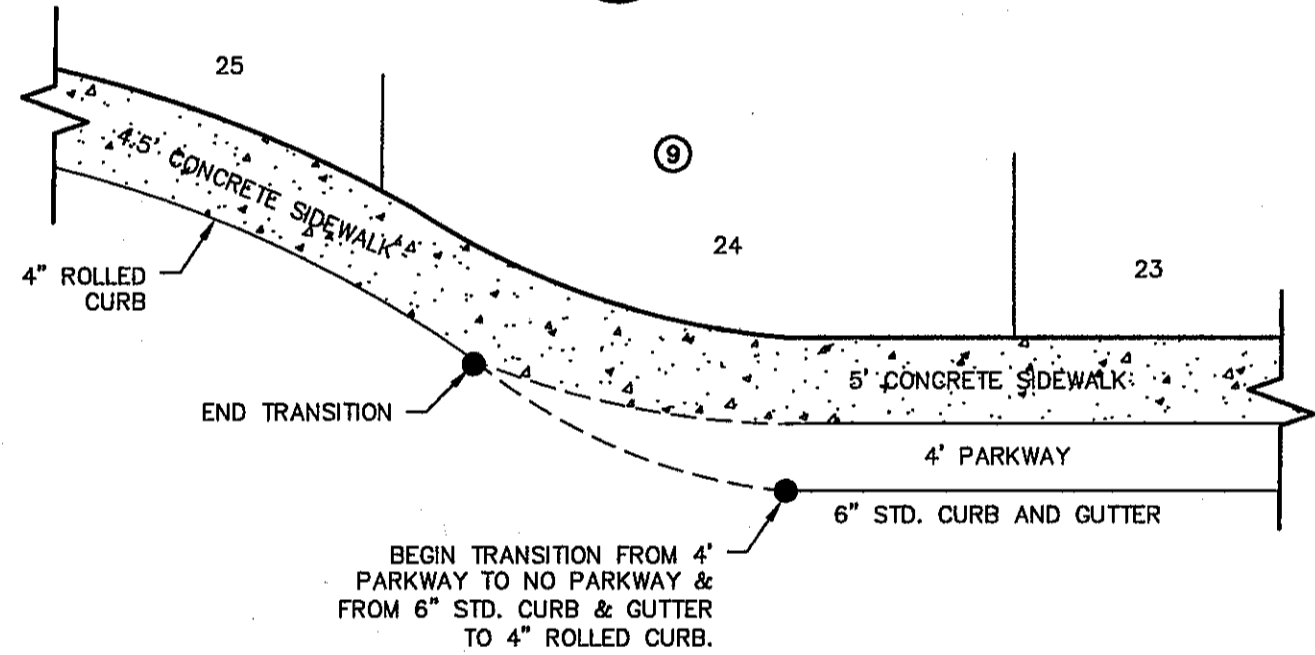
- NOTES:**
1. EXPANSION JOINT FILLER SHALL BE 1/2" BITUMINOUS TYPE PREFORMED JOINT FILLER (AASHTO M-33)
 2. EXPANSION JOINTS SHALL BE SPACED AT 20'-0" MAX.
 3. WHEREVER SIDEWALK ABUTS ROCK OR MASONRY STRUCTURES SUCH AS CURBS OR BUILDINGS, EXPANSION JOINTS FILLER SHALL BE PLACED IN ACCORDANCE WITH STANDARD SPECIFICATIONS.

EXPANSION JOINT SECTION
SCALE: 1" = 1'-0"

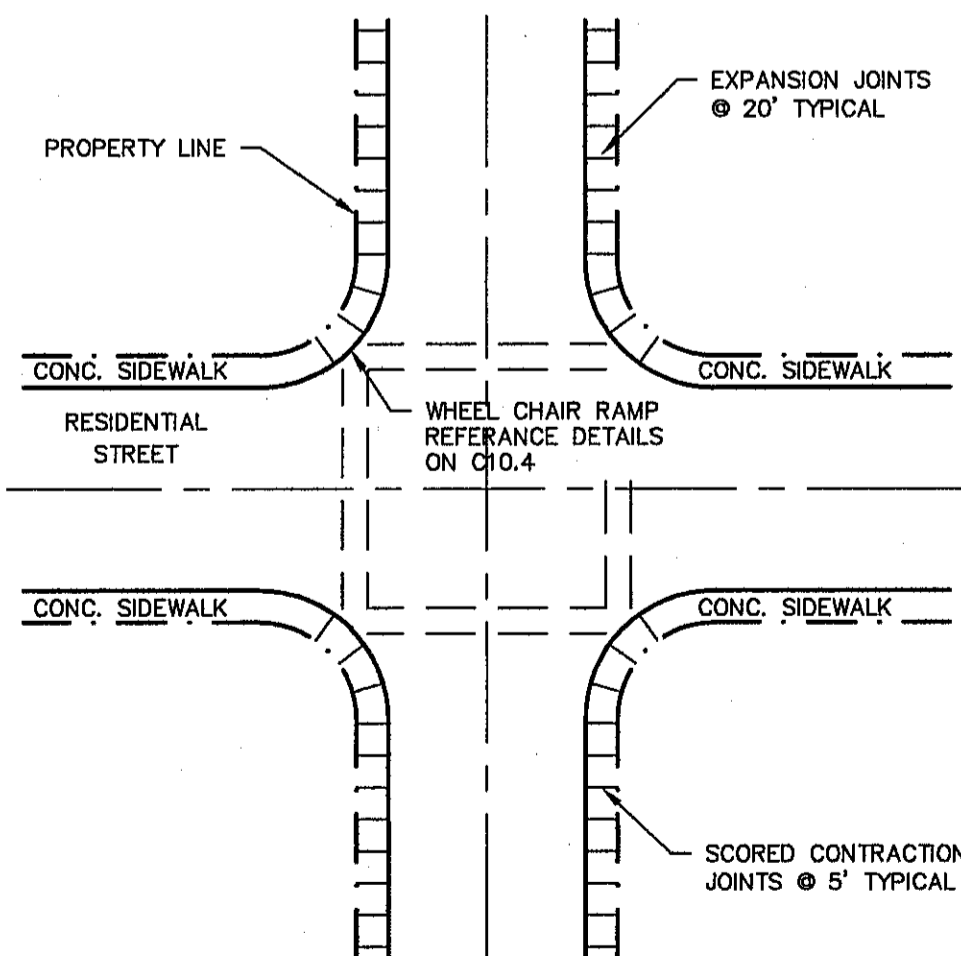
SIDEWALK NOTES:

1. CONCRETE SIDEWALK SHALL BE 3,000 P.S.I. @ TWENTY-EIGHT (28) DAYS.
 2. DUMMY JOINTS REQUIRED AT 5' O.C.
 3. EXPANSION JOINTS SHALL BE AT 20' O.C. MAXIMUM, USE 1/2" PREFORMED BITUMINOUS EXPANSION JOINTS (AASHTO M-33)
 4. EXPANSION JOINT FILLER SHALL BE PLACED WHEREVER SIDEWALK ABUTS ROCK OR MASONRY STRUCTURES SUCH AS CURBS OR BUILDINGS.
 5. SUBGRADE TO BE COMPACTED TO 95% AS PER ASTM D1557.
 6. REINFORCEMENT (6X6-10/10 W.W.F.) SHALL BE PLACED WHEREVER SIDEWALK ABUTS A PEDESTRIAN WALKWAY AND/OR PARK.
- * SIDEWALK SHALL BE SEVEN (7) FEET FROM BACK OF CURB AND PARKWAY SHALL BE A FOOT AND A HALF (1.5) FEET FROM BACK OF SIDEWALK WHEN ABUTTING PARKS. SIDEWALK AND PARKWAY SHALL ALSO BE 4" CONCRETE REINFORCED WITH 6X6-10/10 W.W.F.

1 SECTION-SIDEWALK/SLAB
C10.1 SCALE: 1" = 2'-0"

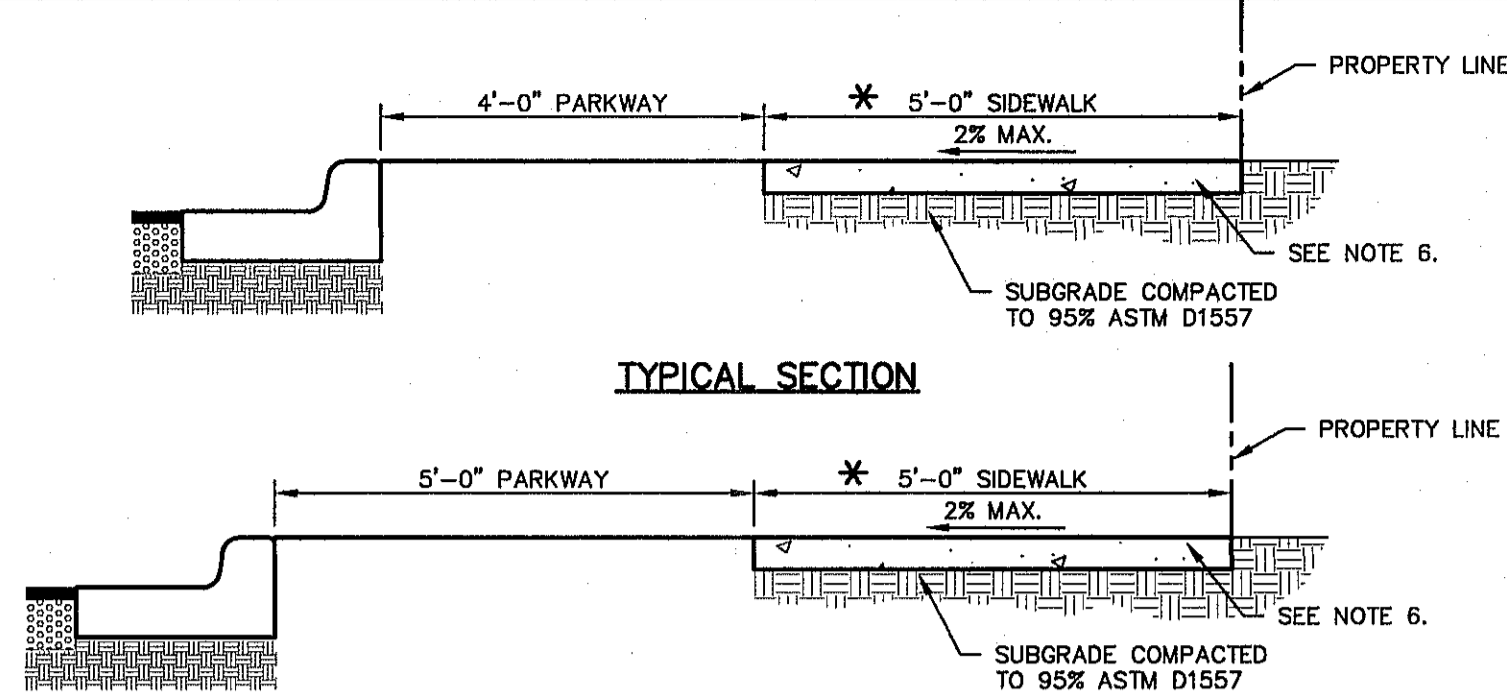


4 TYPICAL HEEL/CUL-DE-SAC SIDEWALK TRANSITION
C10.1 SCALE: N.T.S.

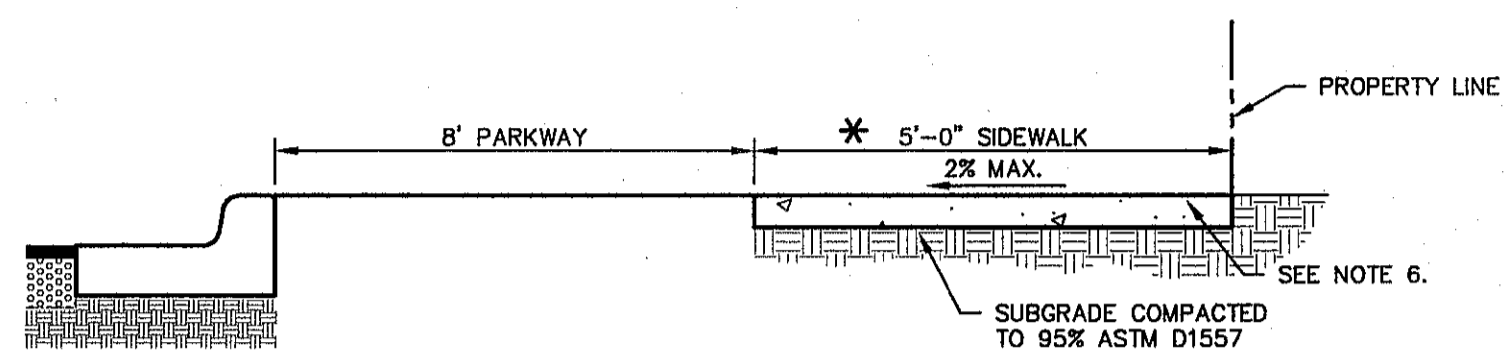


- NOTES:**
1. RAMPS MAY BE PLACED AS SUGGESTED, HOWEVER EXISTING LIGHT POLES, FIRE HYDRANTS, DROP INLETS, ETC., MAY AFFECT PLACEMENT.
 2. THE CONCRETE SURFACE SHALL HAVE A ROUGH, NONSKID TYPE FINISH.
 3. CONSTRUCTION METHODS SHALL CONFORM WITH THE CITY OF EL PASO SPECIFICATIONS.
 4. ALL PARKING AND PAVEMENT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

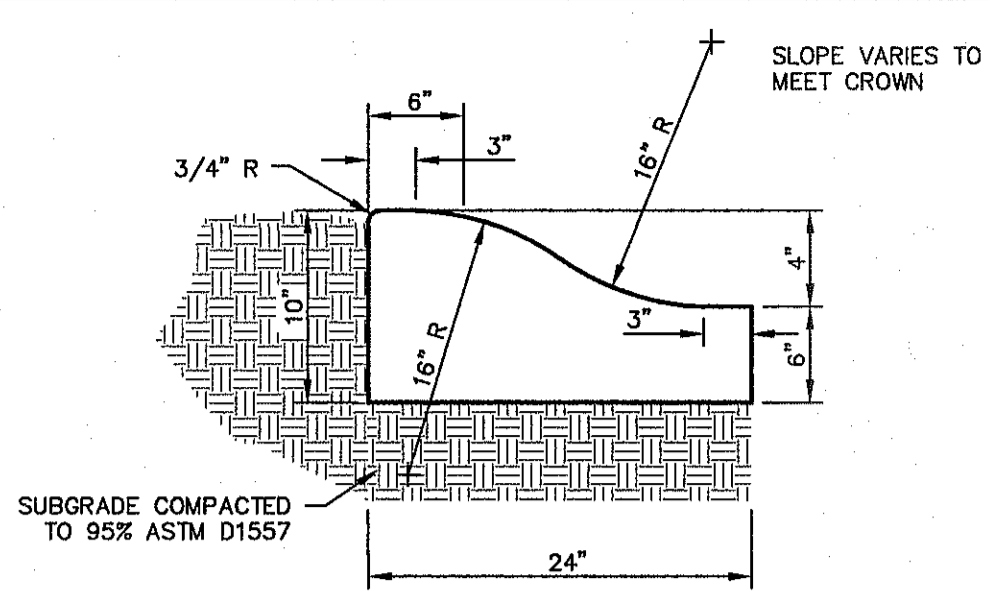
7 WHEELCHAIR RAMP STREET PLAN
C10.1 SCALE: 1" = 30'-0"



TYPICAL SECTION AT ENCHANTED SPRINGS DR.

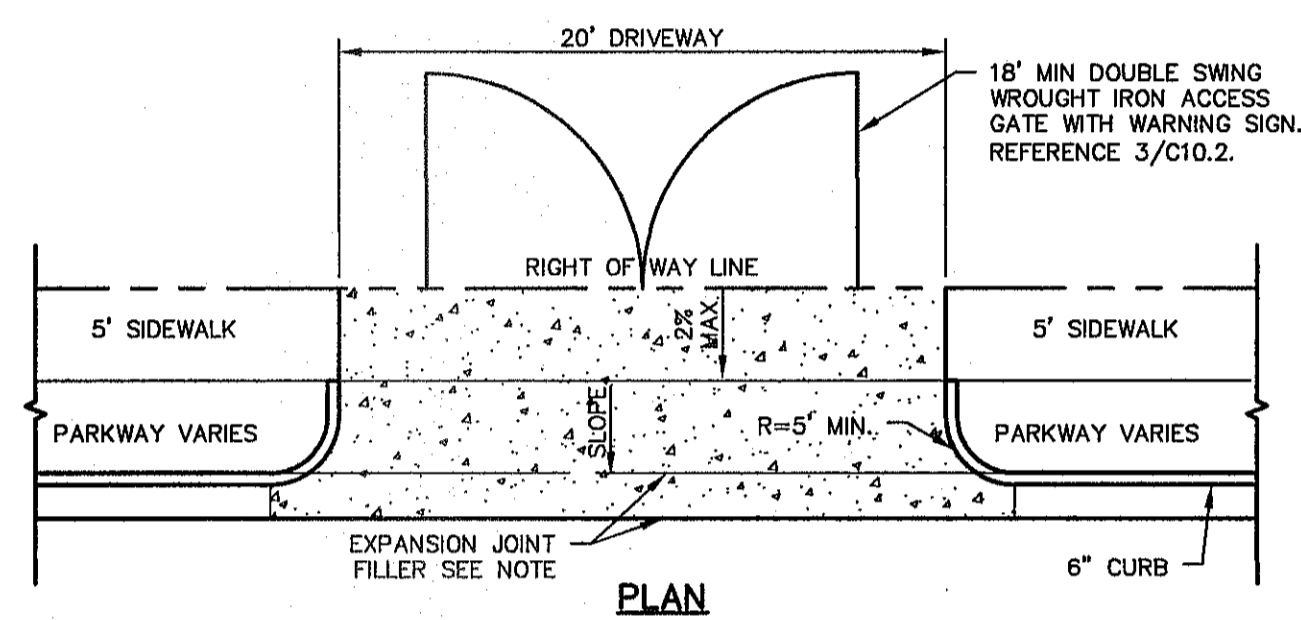


TYPICAL SECTION AT RESLER DR. WITH 8' PARKWAY

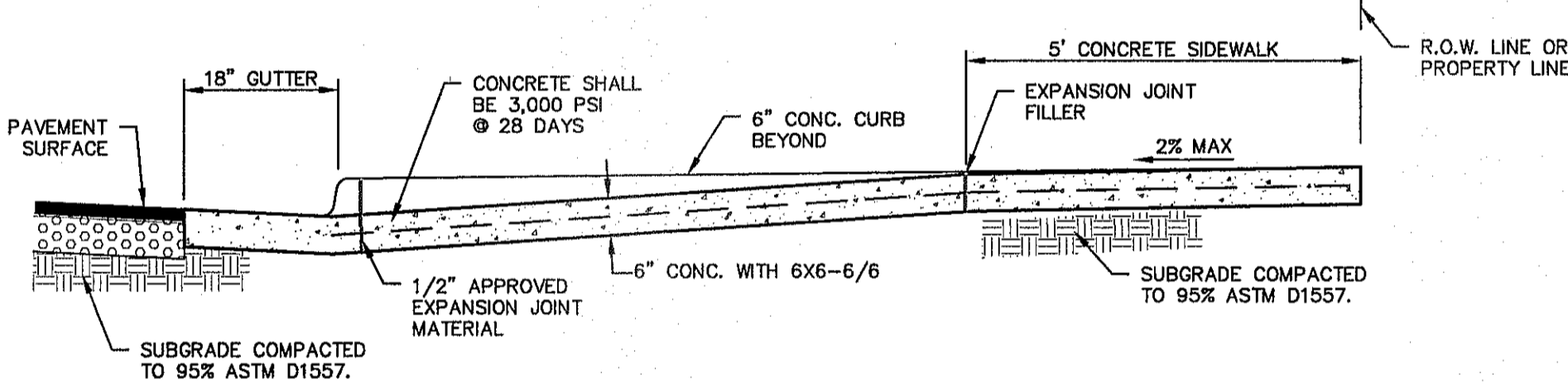


- NOTES:**
1. CONCRETE TO BE 3,000 PSI MIN. @ TWENTY-EIGHT (28) DAYS.
 2. DUMMY JOINTS REQUIRED AT 10' O.C. FOR HEADERS AND 5' O.C. FOR SIDEWALK
 3. EXPANSION MATERIAL REQUIRED AT CURB RETURNS WITH 1/2" PREFORMED ASPHALT IMPREGNATED EXPANSION MATERIAL OR EQUAL.
 4. EXPANSION JOINTS REQUIRED AT FIFTY (50) FEET O.C. WHEN FORMING FOR HEADERS.
 5. EXPANSION JOINTS REQUIRED FOR SIDEWALK AT TWENTY (20) FEET O.C.

2 4" CONCRETE ROLLED CURB DETAIL
C10.1 SCALE: 1" = 1'-0"



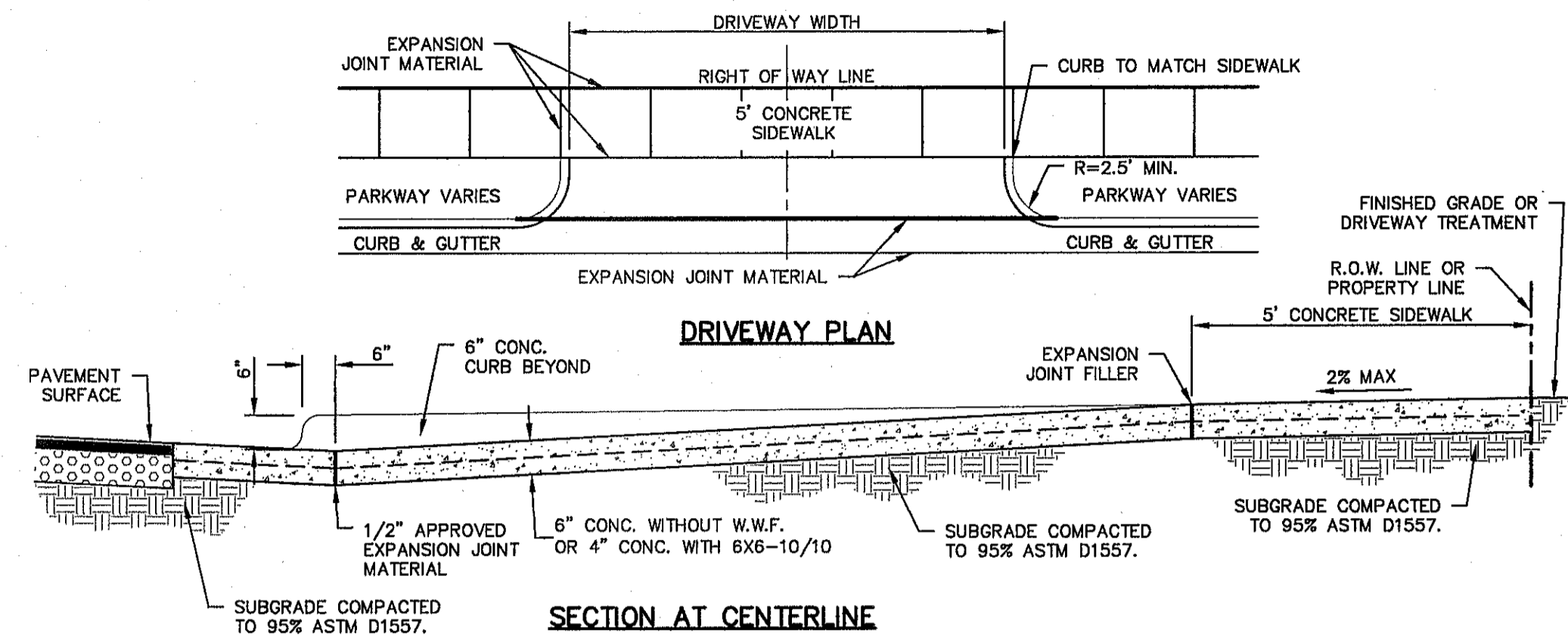
PLAN



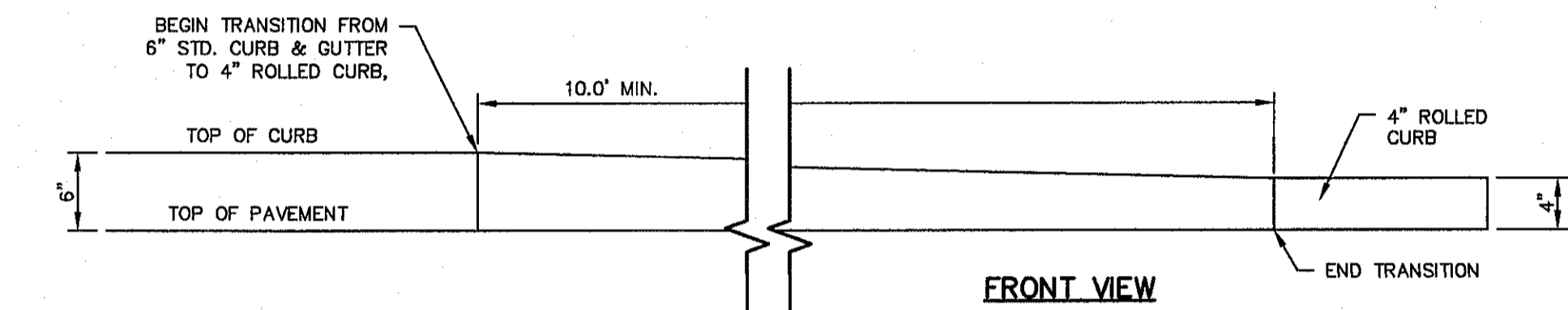
SECTION AT CENTERLINE

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

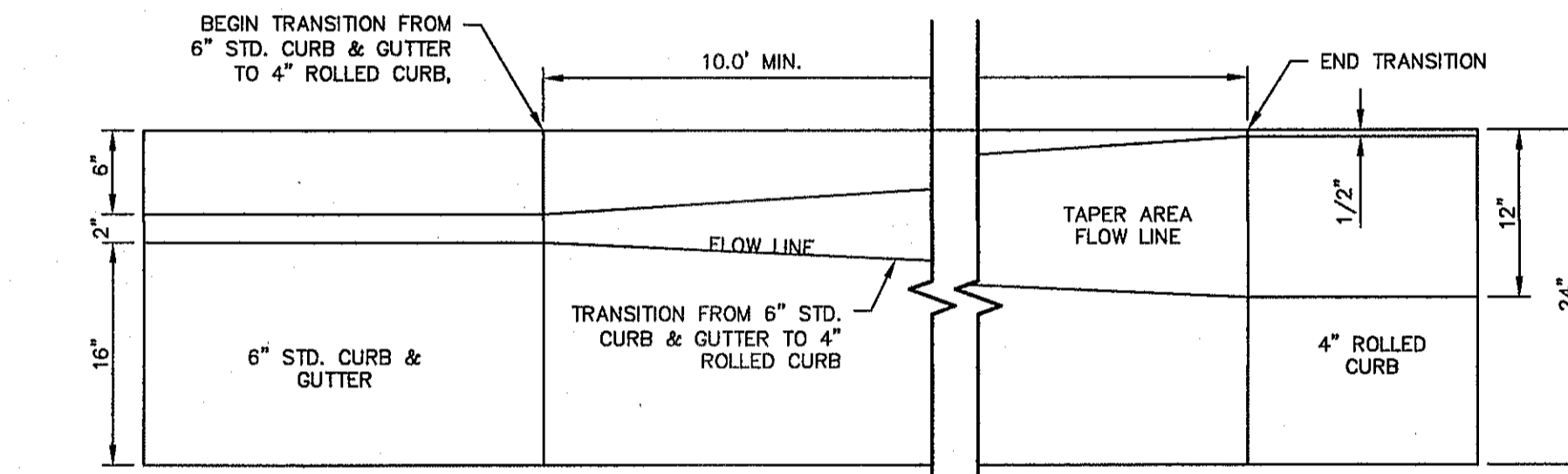
5 COMMERCIAL DRIVEWAY DETAIL
C10.1 SCALE: N.T.S.



3 TYPICAL DRIVEWAY DETAIL
C10.1 SCALE: N.T.S.



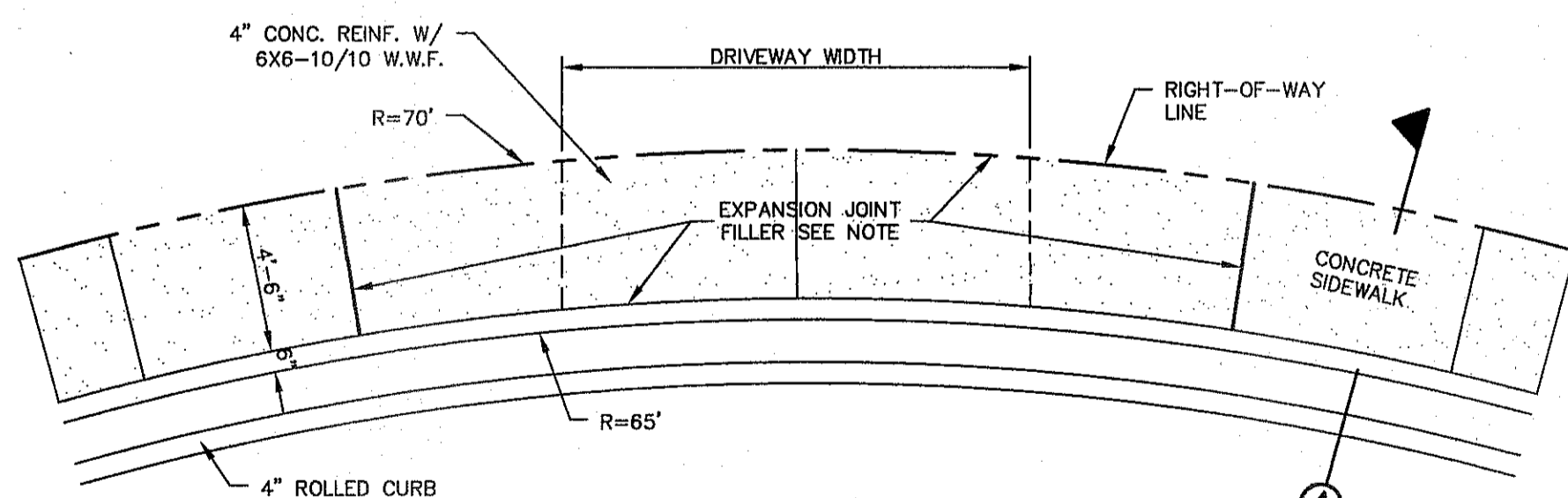
FRONT VIEW



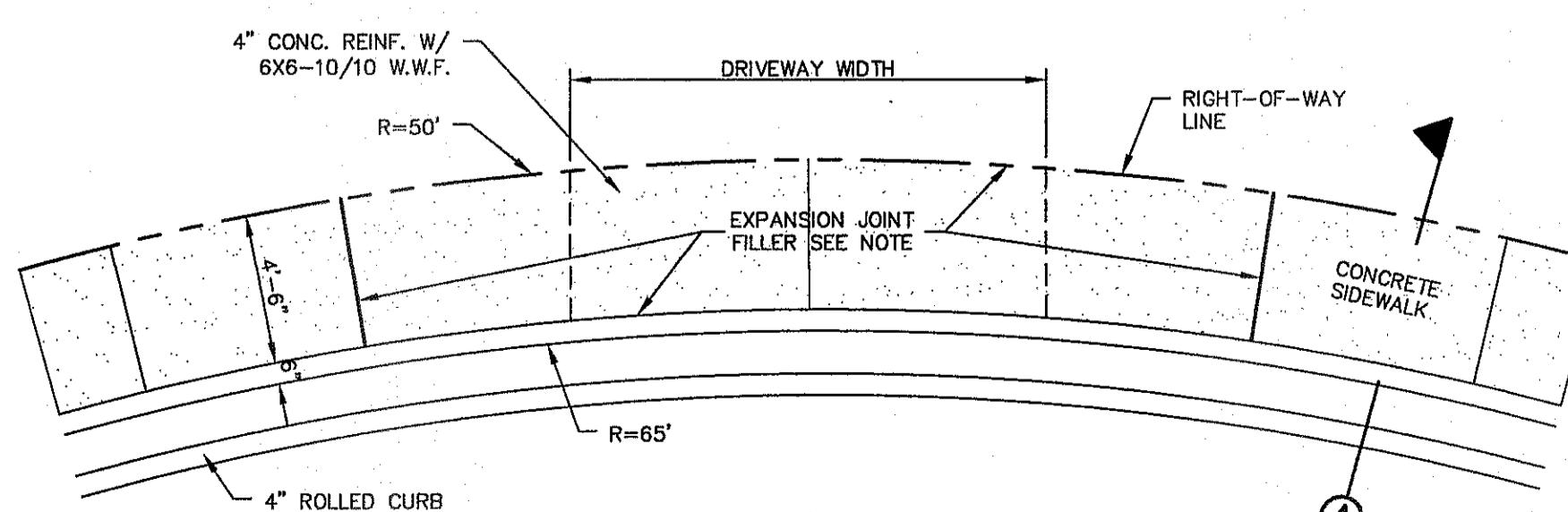
TOP VIEW

- NOTE:**
- SIDEWALK SHALL MAINTAIN TOP OF CURB ELEVATIONS.

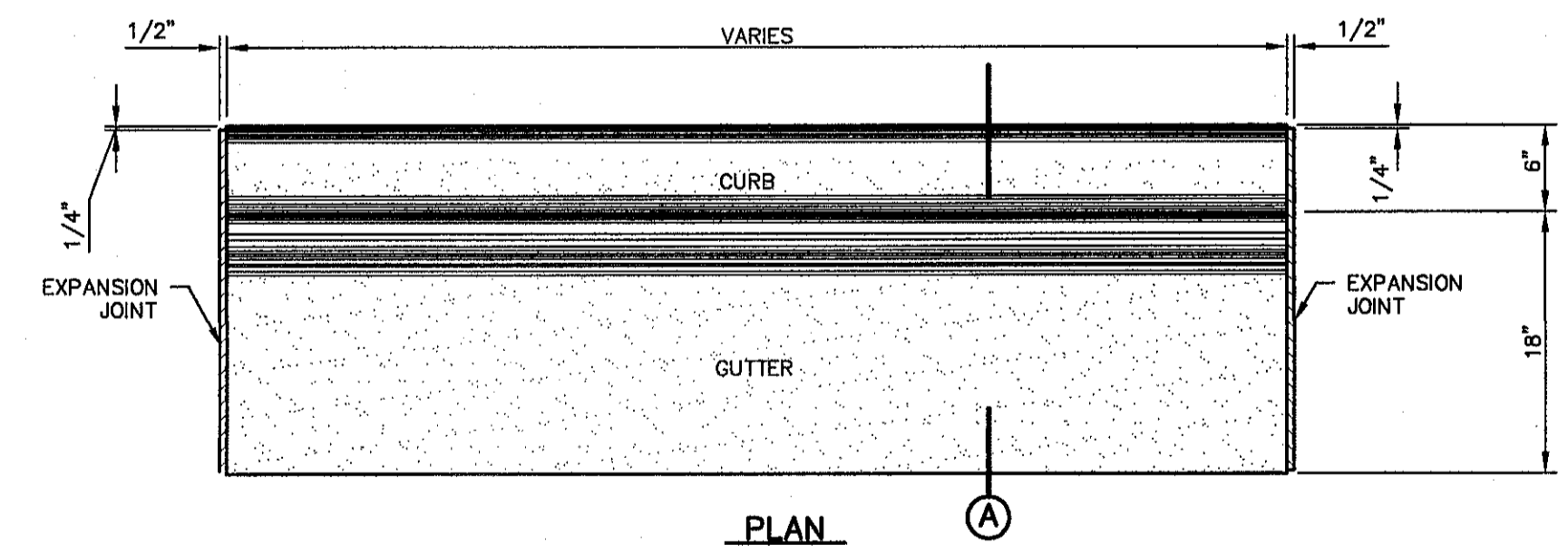
6 CURB TRANSITION DETAIL
C10.1 SCALE: 1" = 1'-0"



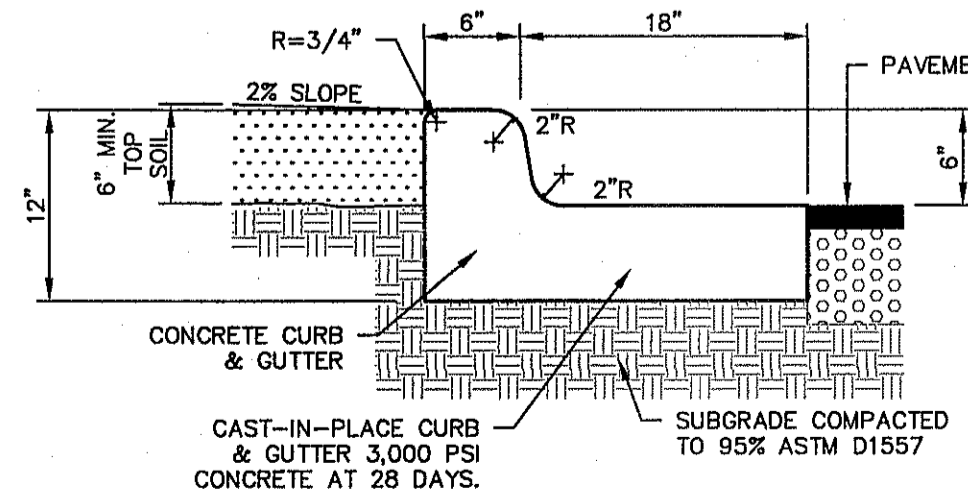
HEEL PLAN



CUL-DE-SAC PLAN



PLAN



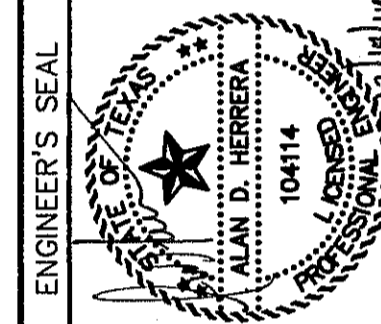
A SECTION

- NOTES:**
1. CONCRETE CURB, GUTTER, AND RETURNS SHALL BE 3,000 P.S.I. MIN. @ TWENTY-EIGHT (28) DAYS.
 2. DUMMY JOINTS REQUIRED AT 10' O.C.
 3. 1/2" PREFORMED BITUMINOUS EXPANSION JOINT (AASHTO M-33) IS REQUIRED FOR ALL CURBS RETURNS. TRIM BITUMINOUS MATERIAL 1/4" LESS THAN NEAT CURB & GUTTER DIMENSION.
 4. SUBGRADE UNDER CURBS MUST BE FORMED AND COMPACTED TO 95% ASTM D1557.
 5. EXPANSION JOINTS REQUIRED AT 50' O.C. WHEN FORMING FOR CURBS.

9 CURB & GUTTER DETAIL
C10.1 SCALE: 1" = 1'-0"

REFERENCES - BENCHMARKS
FOUND N.G.S. SURVEY MARKER STAMPED "CHIND 1980"
ELEVATION: 3946.11
CITY OF EL PASO VERTICAL DATUM
SHOWA (NAVD 88 DATUM)
3946.11 (NAVD 88 DATUM)
3946.11 (NAVD 88 DATUM)
TE TO BE PRECISELY LOCATED BY THE CITY OF EL PASO
FEET FROM 1/4" CHIND BEAR FOUND FOR THE NORTHWEST
CORNER OF TRACT 11, NELLE D. MUNDY SURVEY NO. 239
DATE: _____ BY: _____
REVISIONS: _____

CSA
engineers • architects • planners
ALAN D. HERRERA
TEXAS REGISTERED ENGINEERING FIRM F-4684
4712 Woodrow Bean, Ste. 1, El Paso, TX 79924
Circ: 915-441-8222 Fax: 915-441-8225 www.csaonline.com

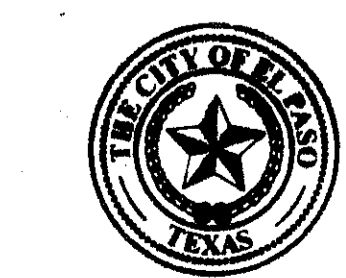


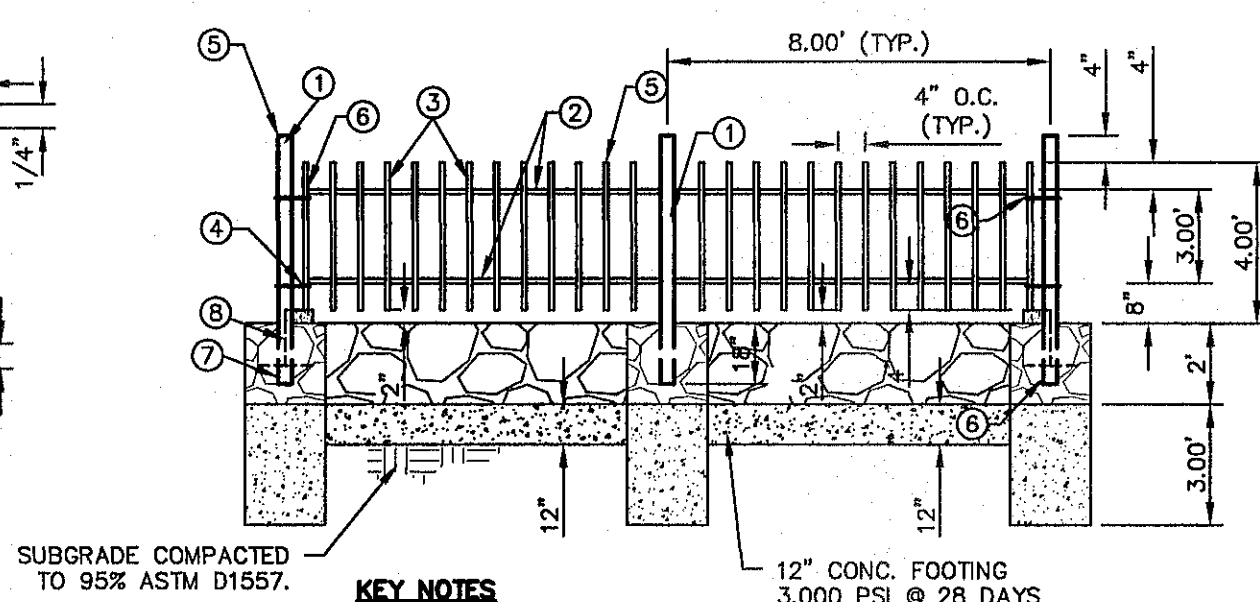
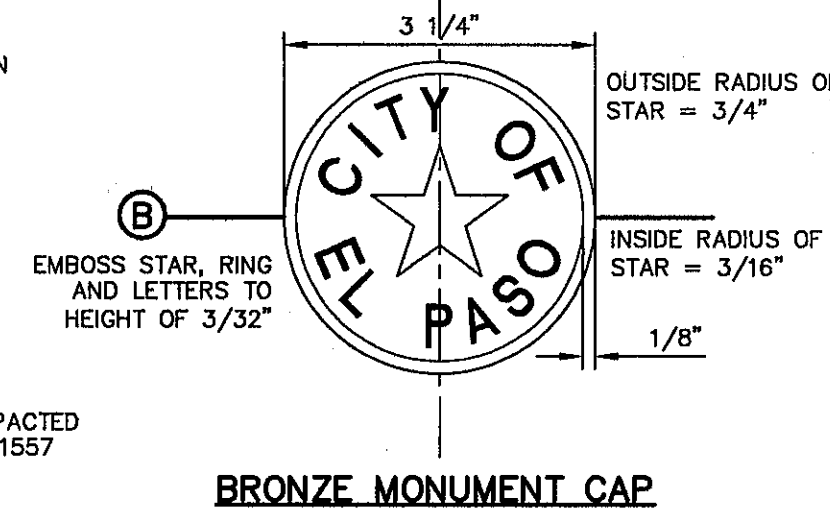
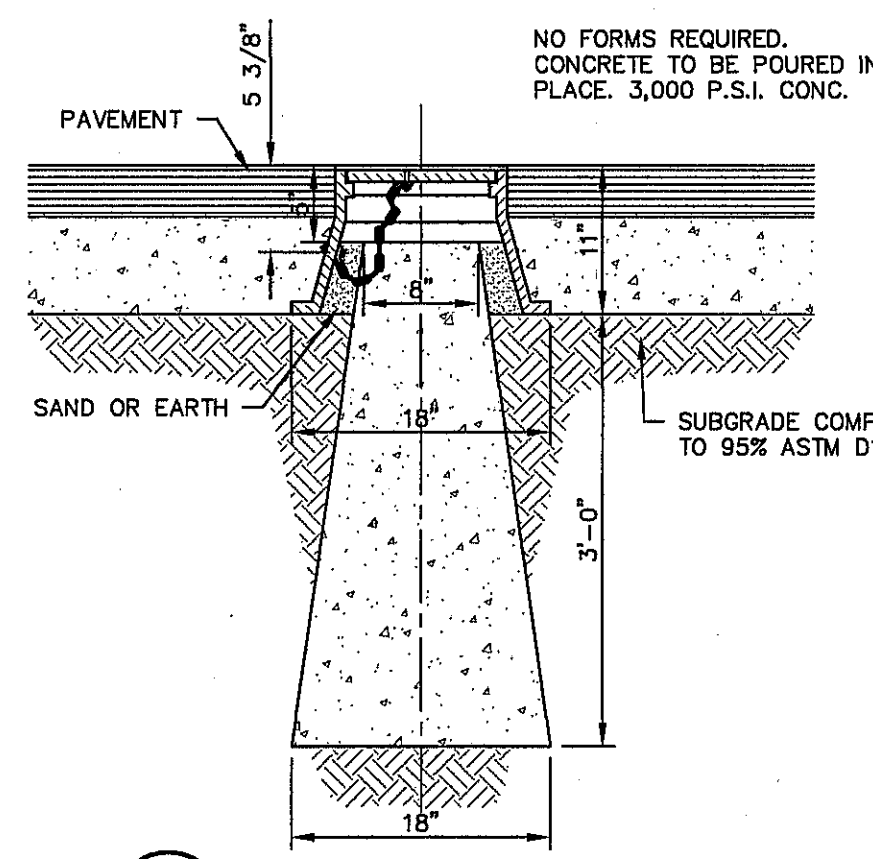
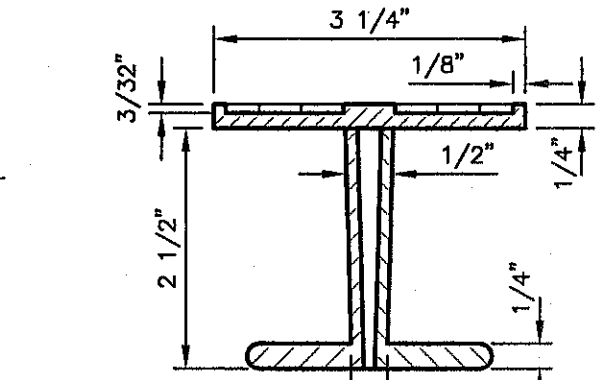
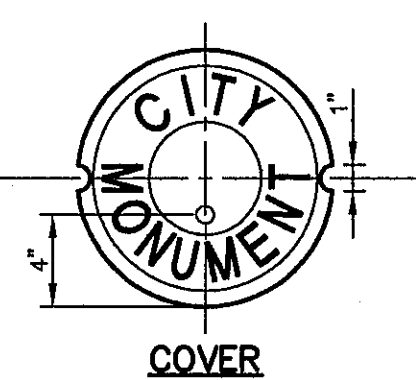
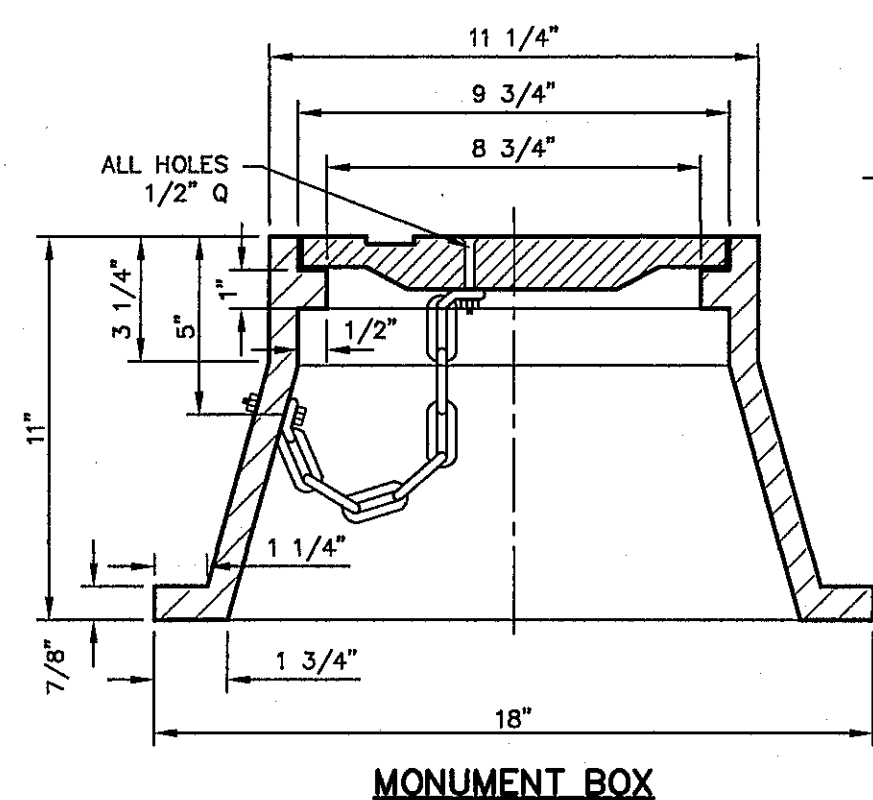
SCALE SHOWN
Vertical: N/A
Horizontal: N/A
Contour Interval: N/A
DATE: DECEMBER 2014
DESIGN BY: A.H.
DRAWN BY: J.H.
CHKD. BY: J.L.A.
APP'D. BY: J.L.A.
JOB No. 2060-028-1D

PROJECT TITLE
DESERT SPRINGS UNIT FOUR
SUBDIVISION IMPROVEMENTS

SHEET TITLE
STANDARD
DETAILS
(SHEET 1 OF 5)
SHEET NO.

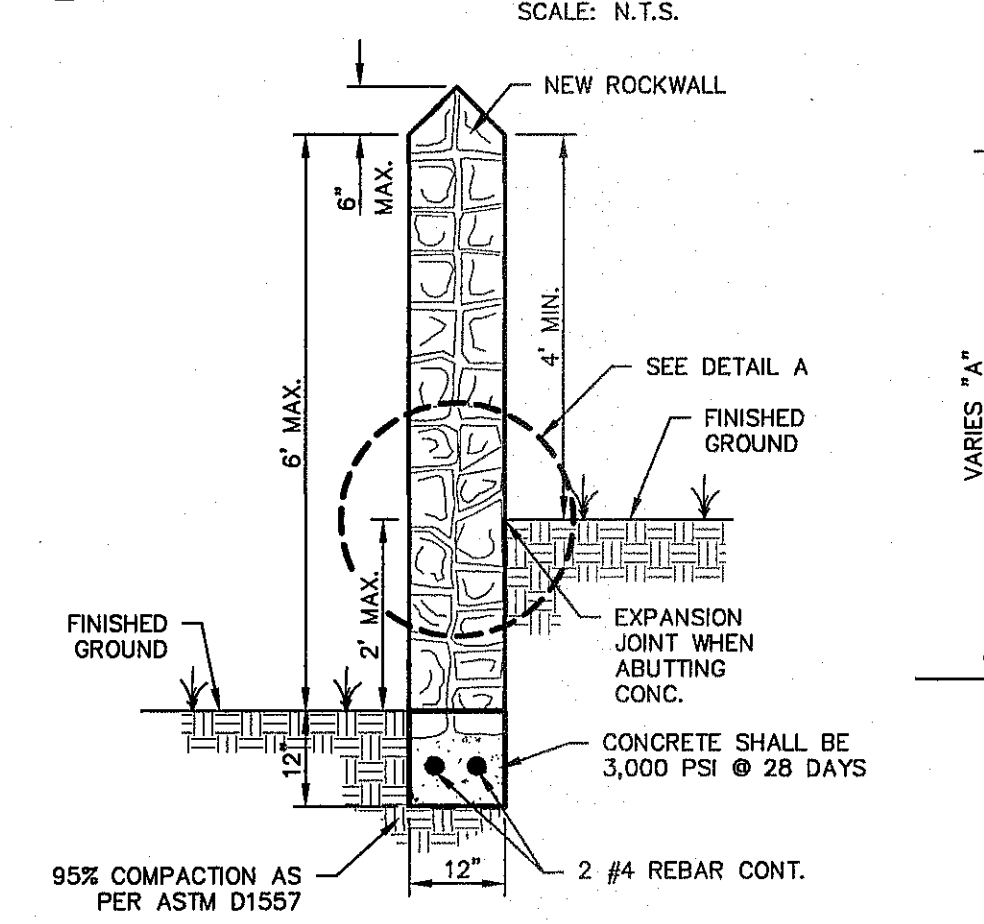
C10.1



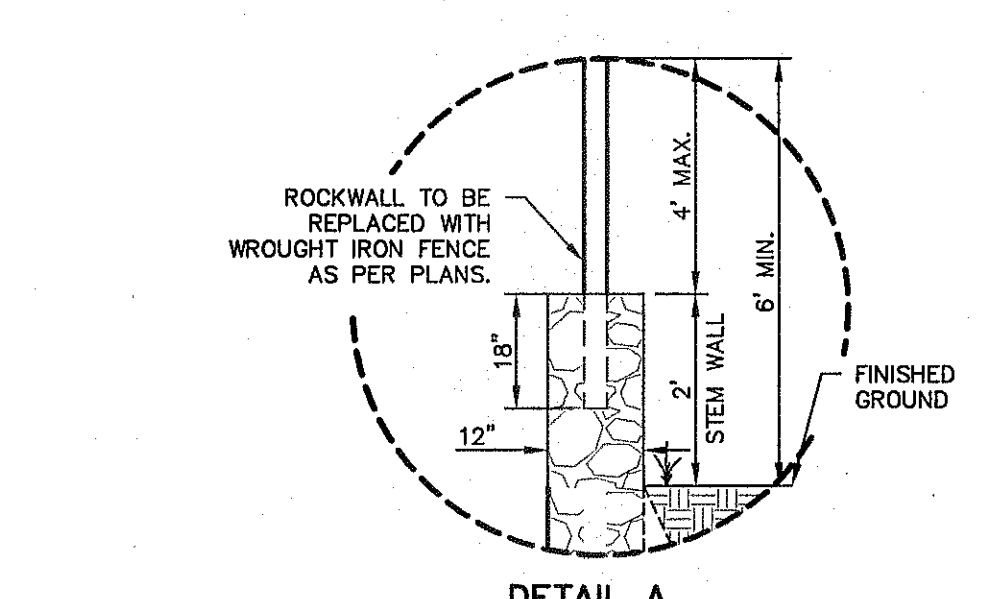


- KEY NOTES**
- 3" x 3" x 3/16" SQUARE STEEL TUBING
 - 2" x 1" x 14 GA. RECTANGULAR STEEL TUBING
 - 1 1/2" x 1 1/2" x 16 GA. RECTANGULAR STEEL TUBING
 - BOLT HOOK AND STRAP HINGE
 - FLAT TOP POLYVINYL CAP (TYP.) SECURED WITH EPOXY
 - 2" x 1" x 10 GA. RECTANGULAR STEEL TUBING
 - 1' x 3' DEEP 3,000 PSI CONCRETE POST FOOTING
 - 5" x 5" x 3/8" SQUARE STEEL SLEEVE W/7" x 7" x 3/8" BASE PLATE
- NOTE: REFER TO PLANS IF ROCKWALL IS DESIRED FOR A 2' ROCKWALL/4' FENCE OR ONLY A 6' WROUGHT IRON FENCE.

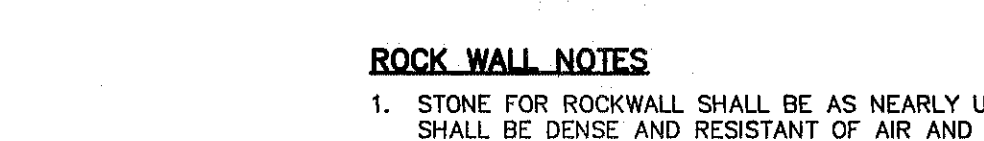
2 C10.2 TYPICAL ROCKWALL W/ WROUGHT IRON FENCE DETAILS
SCALE: N.T.S.



GARDEN WALL SECTION (2' MAX.)

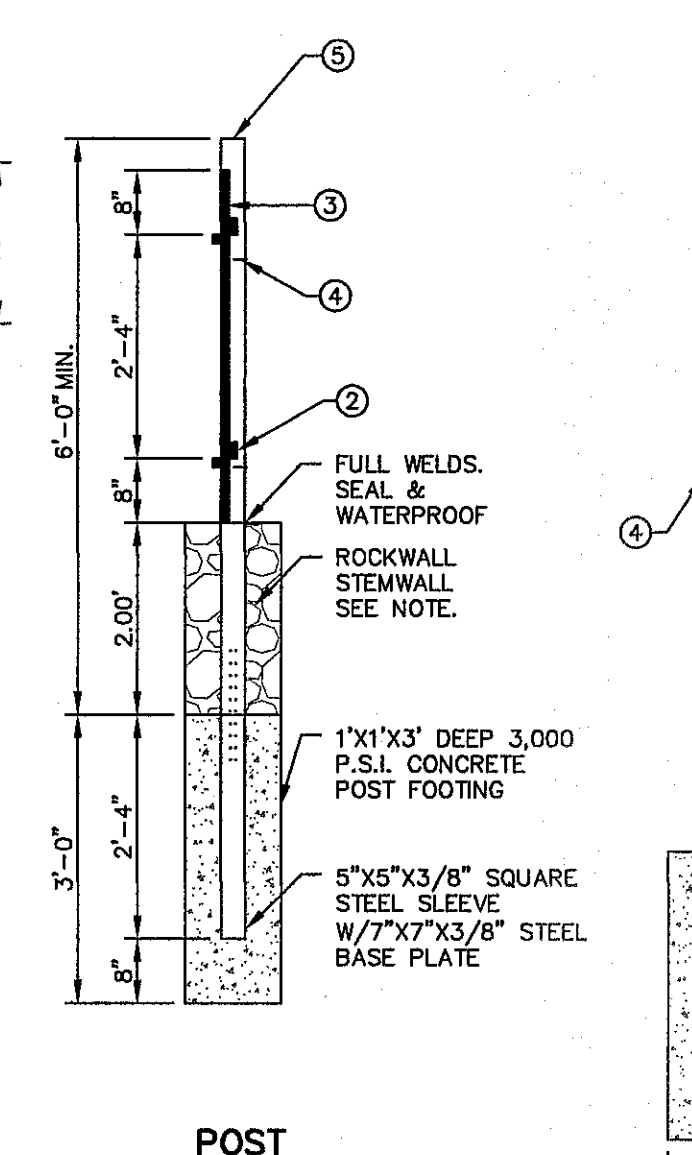


RETAINING WALL SECTION (3' MIN. TO 14' MAX.)

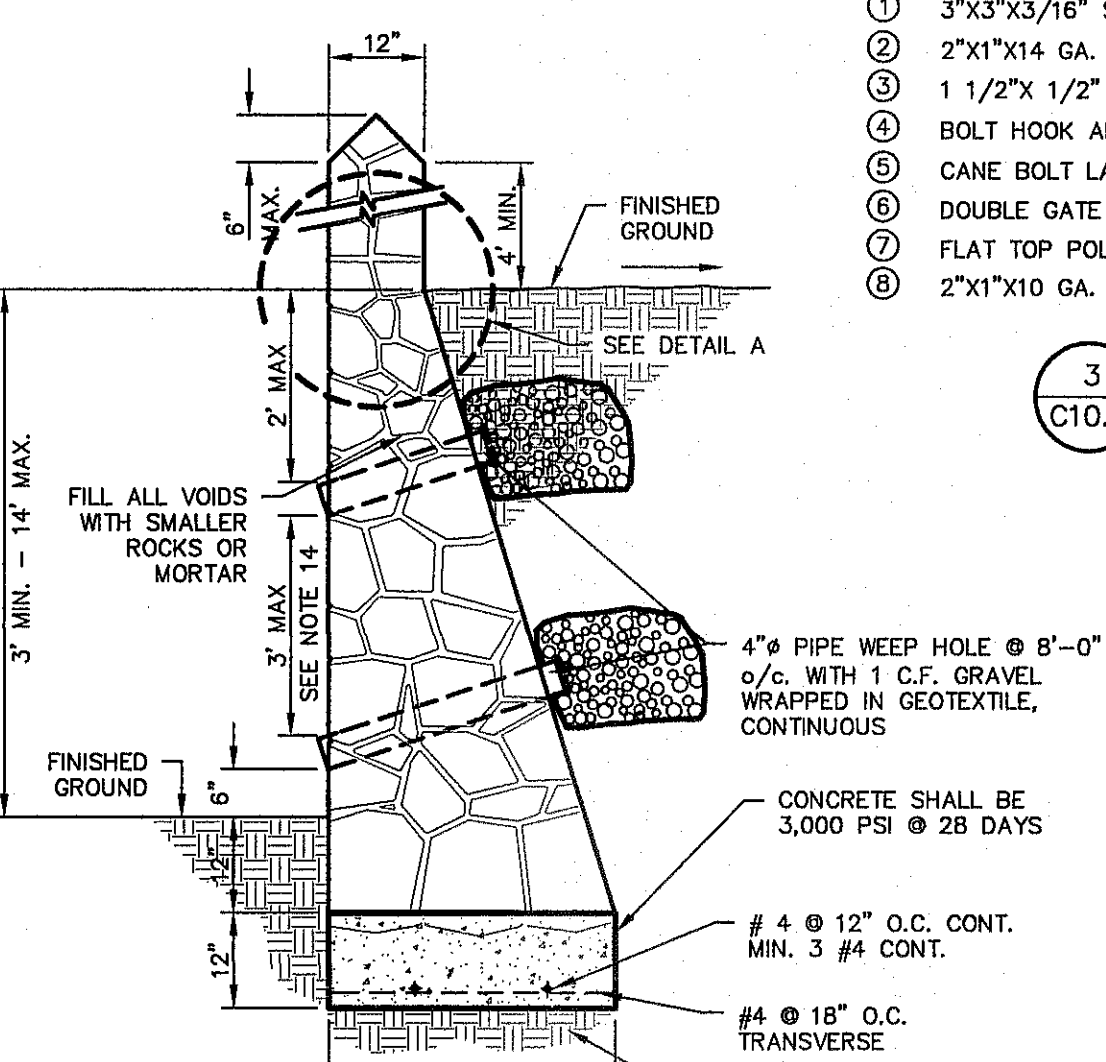


DETAIL A

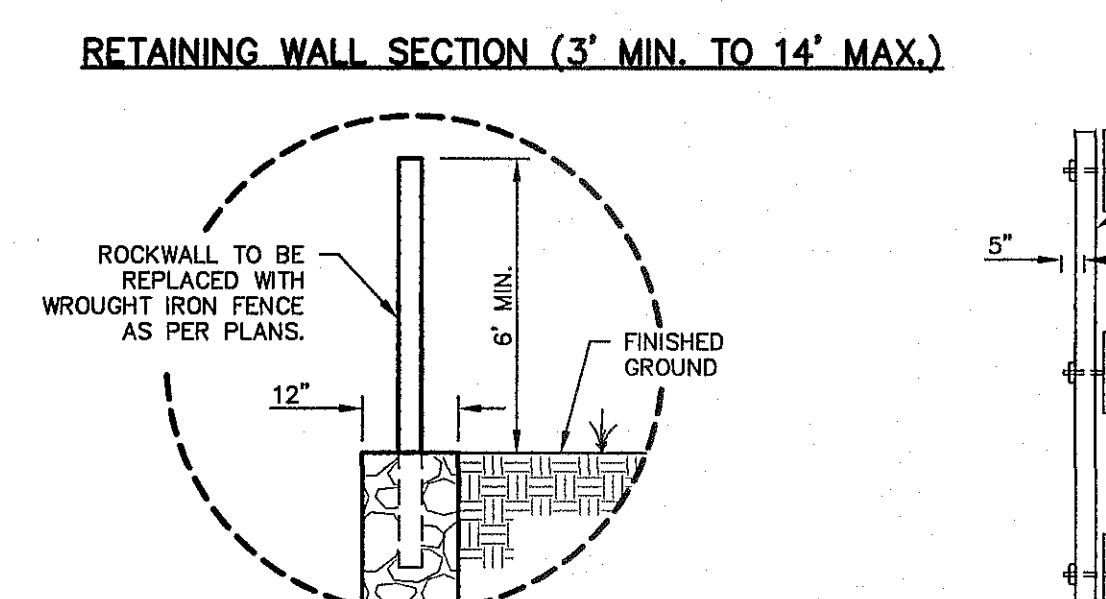
- ROCK WALL NOTES**
- STONE FOR ROCKWALL SHALL BE AS NEARLY UNIFORM IN SECTIONS AS IN PRACTICABLE THE STONE SHALL BE DENSE AND RESISTANT OF AIR AND WATER.
 - MORTAR MUST BE TYPE "S" 1,800 P.S.I. AS PER ASTM C270.
 - MASONRY WALL OVER SIX (6) FEET IN HEIGHT AND THOSE USED FOR EARTH RETENTION OVER TWO (2) FEET MUST BE DESIGNED AS STRUCTURAL WALLS.
 - WALLS ADJACENT TO PONDING AREAS OR DRAINAGE DITCHES MAY BE CONSTRUCTED OF BRICK, ROCK, STONE, OR CINDER BLOCK AND SHALL NOT BE LESS THAN SIX (6) FEET HIGH.
 - ROCKWALL MORTAR JOINTS MUST NOT EXCEED TWO (2) INCHES.
 - PROVIDE ONE (1) INCH EXPANSION JOINTS AT EVERY 100 FEET.
 - ALL STONE SHALL BE THOROUGHLY SOAKED BEFORE BEING PLACED.
 - ALL STONE FOR ROCKWALLS SHALL BE FRACTURED QUARRIED ROCK OR ROUND ROCK, NO RIVER ROCK SHALL BE ALLOWED.
 - REINFORCING STEEL SHALL BE ASTM A615 GRADE 40.
 - ALLOWABLE SOIL BEARING PRESSURE = 2,500 PSI (MINIMUM).
 - BACKFILL MATERIALS SHALL CONSIST OF COARSE GRAINED, WELL-DRAINED SOILS (WITH NO CLAY CONTENT).
 - 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 CONSTRUCTING THE REMAINING OF THE STEM WALL.
 - WHENEVER PLANS SPECIFY A WROUGHT IRON FENCE, REFER TO DETAIL A.
 - WHENEVER THE RETAINING WALL EXCEEDS NINE (9) FEET, THE MAXIMUM VERTICAL SPACING BETWEEN WEEP HOLES SHALL BE TWO (2) FEET.



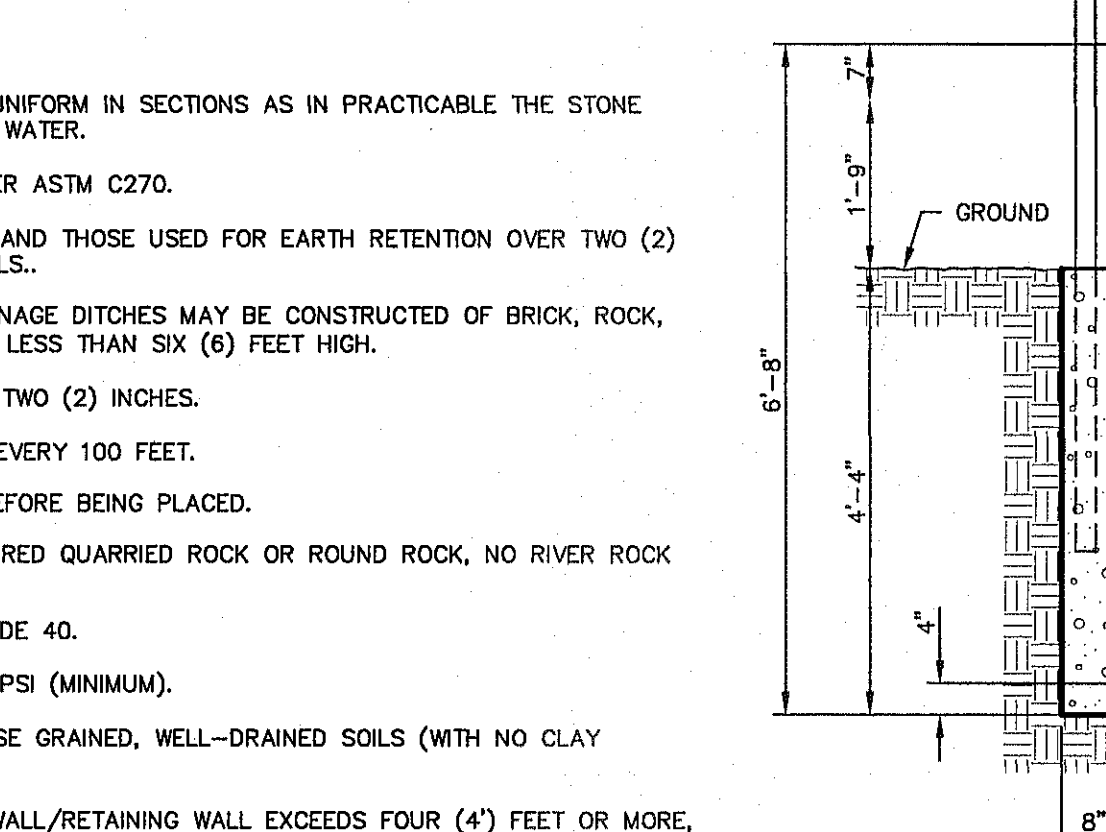
POST



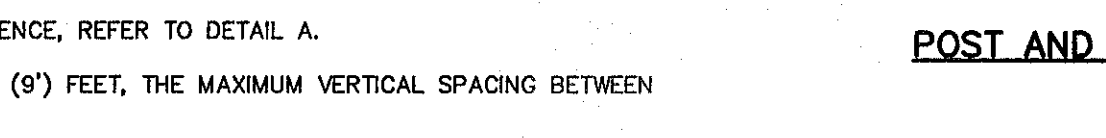
3 C10.2 TYPICAL WROUGHT IRON GATE DETAILS
SCALE: N.T.S.



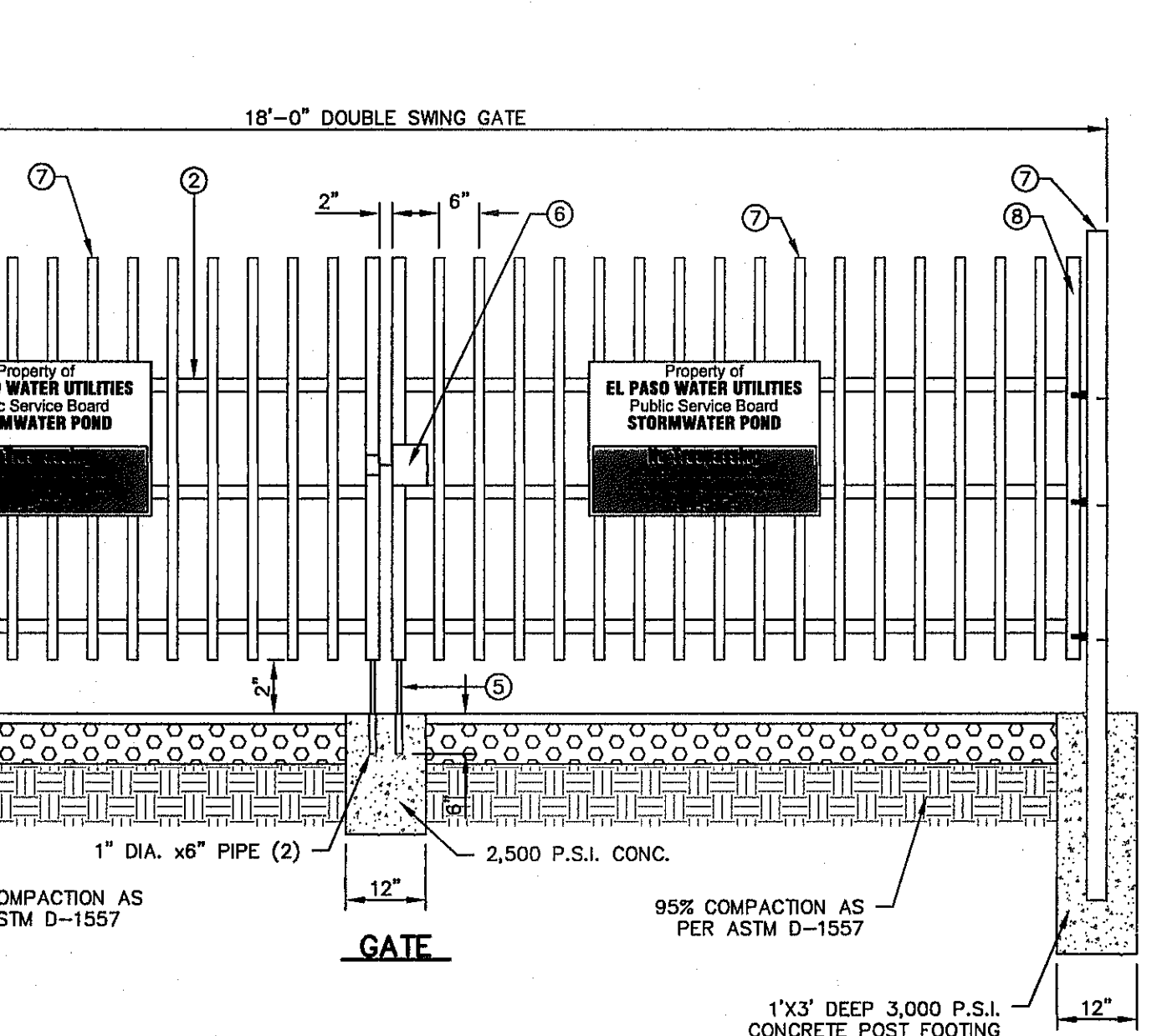
ELEVATION
SCALE: 1" = 5'-0"



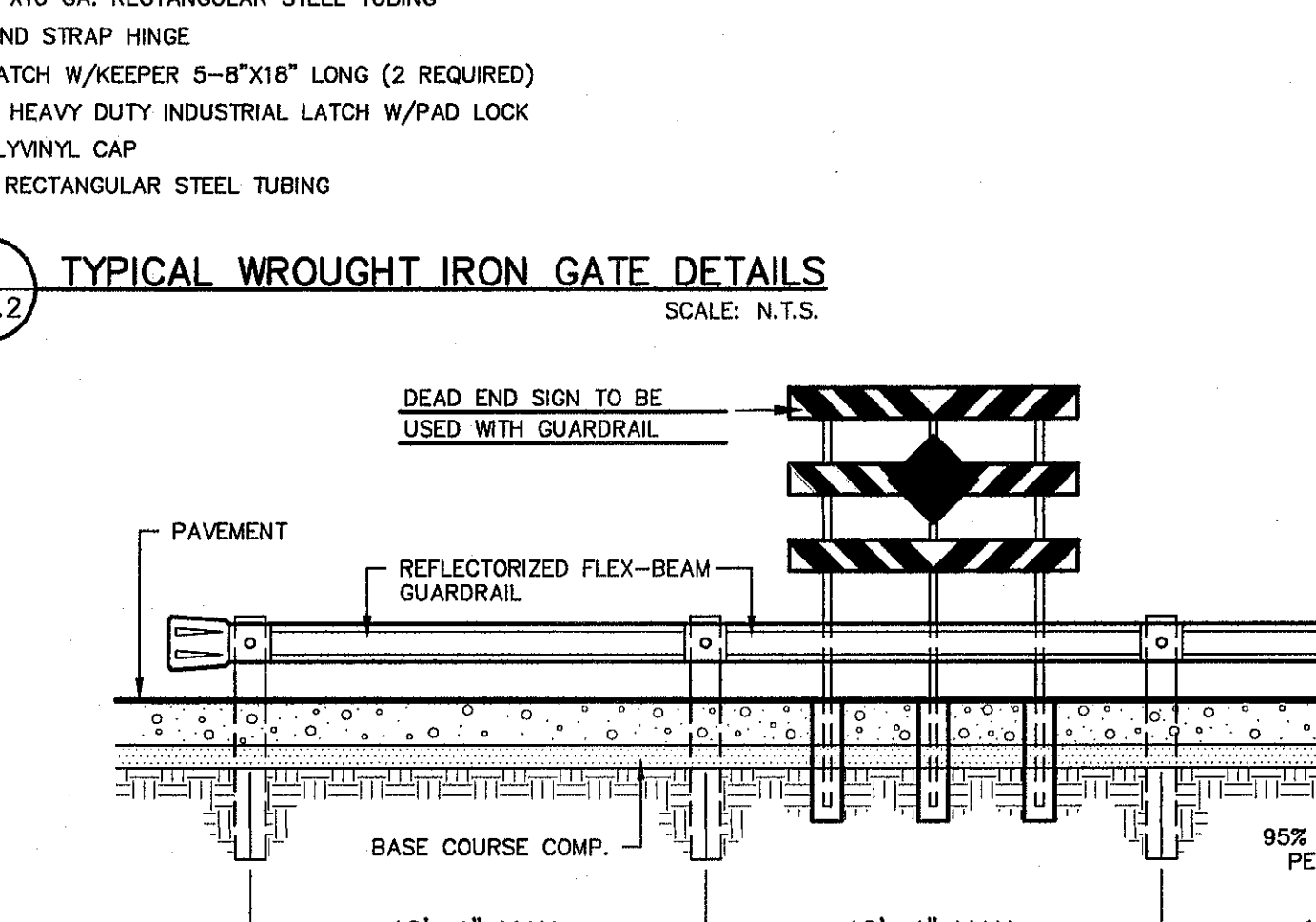
POST AND SIGN DETAIL
SCALE: N.T.S.



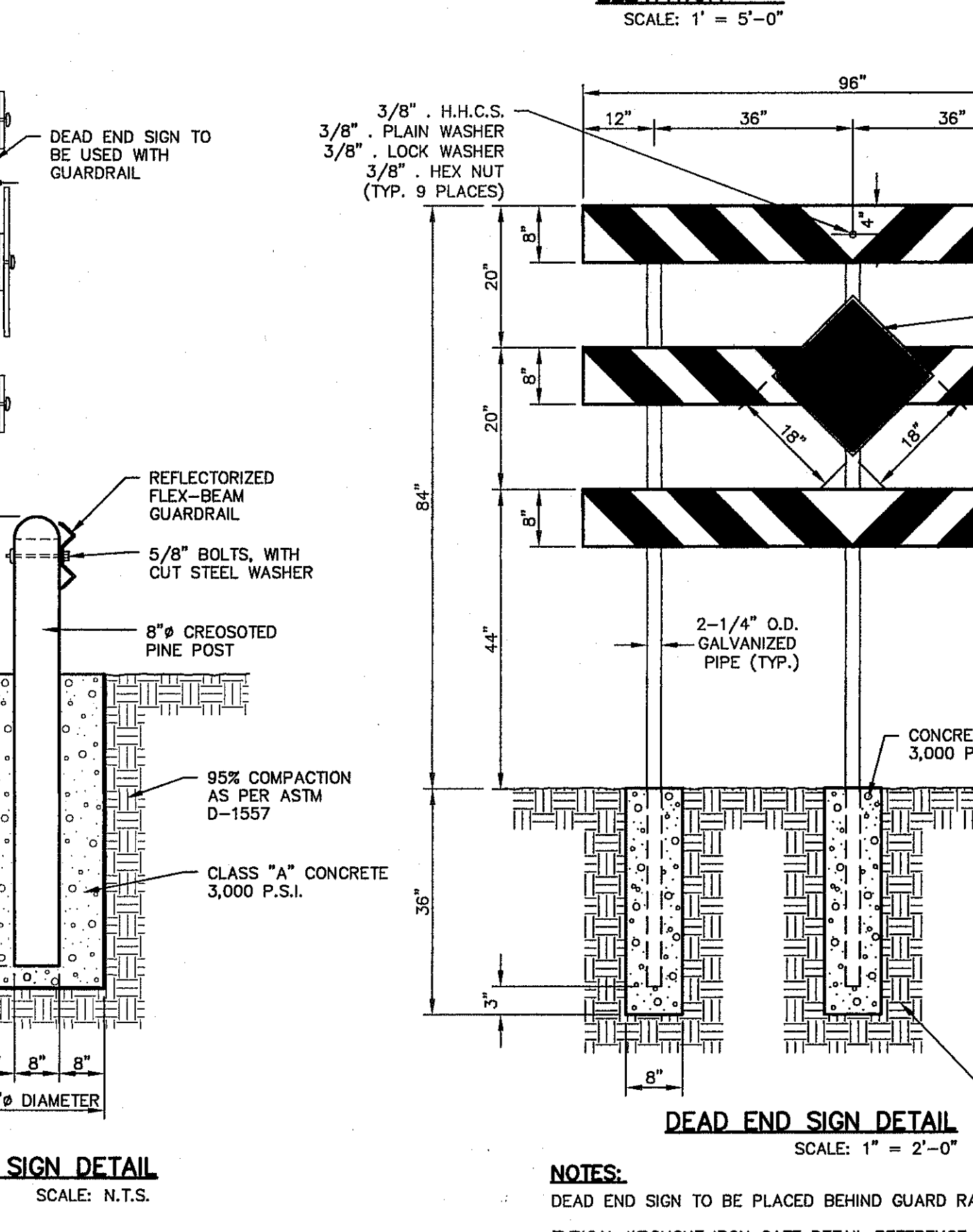
5 C10.2 GUARD RAIL/SIGN ASSEMBLY AT DEAD END STREET DETAIL
SCALE: AS SHOWN



18'-0" DOUBLE SWING GATE



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



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

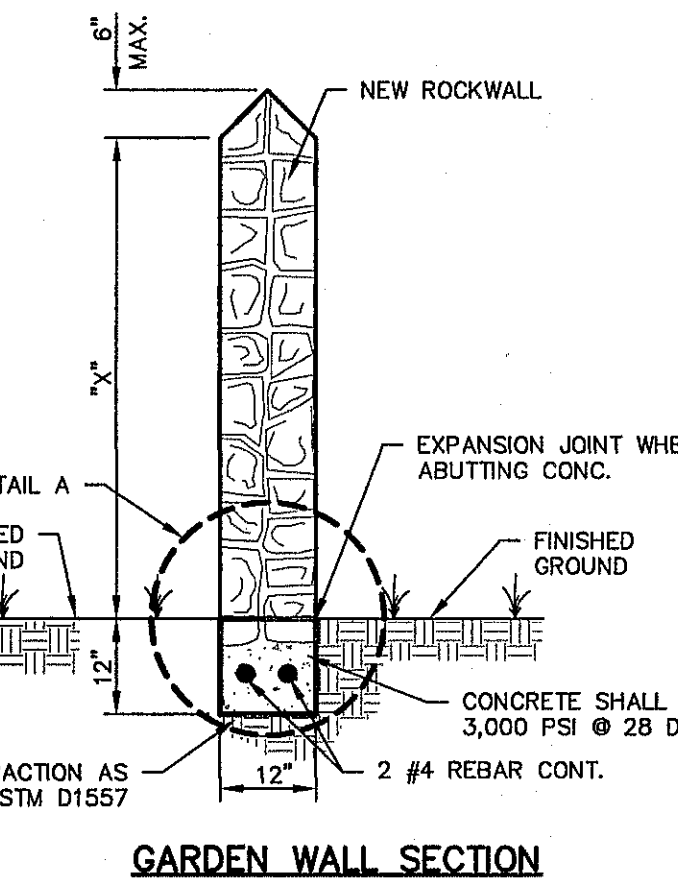
1 C10.2 CITY SURVEY MONUMENT DETAILS
SCALE: N.T.S.

2 C10.2 TYPICAL ROCKWALL W/ WROUGHT IRON FENCE DETAILS
SCALE: N.T.S.

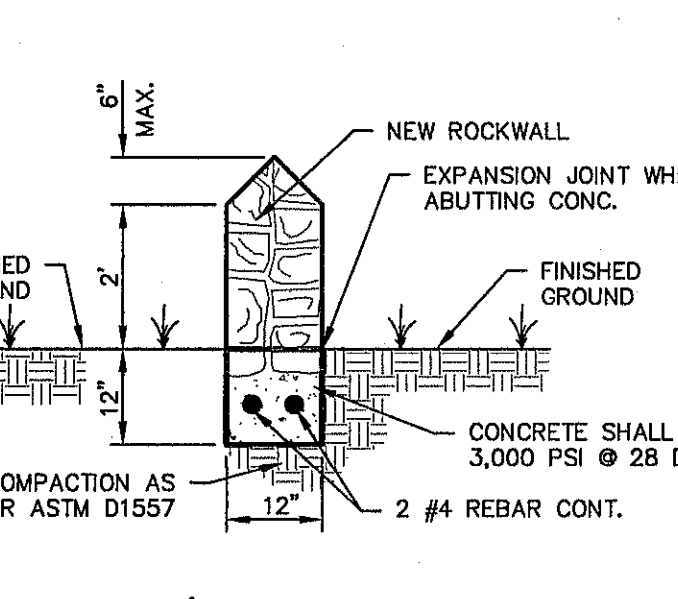
3 C10.2 TYPICAL WROUGHT IRON GATE DETAILS
SCALE: N.T.S.

4 C10.2 TYPICAL ROCKWALL DETAILS
SCALE: 1" = 2'-0"

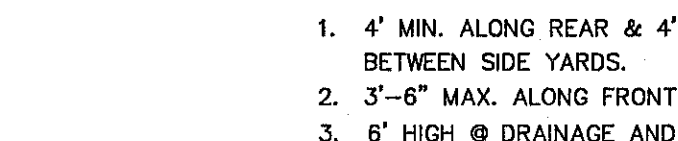
5 C10.2 GUARD RAIL/SIGN ASSEMBLY AT DEAD END STREET DETAIL
SCALE: AS SHOWN



GARDEN WALL SECTION (2' MAX.)



RETAINING WALL SECTION (3' MIN. TO 14' MAX.)



DETAIL A

- ROCK WALL NOTES**
- STONE FOR ROCKWALL SHALL BE AS NEARLY UNIFORM IN SECTIONS AS IN PRACTICABLE THE STONE SHALL BE DENSE AND RESISTANT OF AIR AND WATER.
 - MORTAR MUST BE TYPE "S" 1,800 P.S.I. AS PER ASTM C270.
 - MASONRY WALL OVER SIX (6) FEET IN HEIGHT AND THOSE USED FOR EARTH RETENTION OVER TWO (2) FEET MUST BE DESIGNED AS STRUCTURAL WALLS.
 - WALLS ADJACENT TO PONDING AREAS OR DRAINAGE DITCHES MAY BE CONSTRUCTED OF BRICK, ROCK, STONE, OR CINDER BLOCK AND SHALL NOT BE LESS THAN SIX (6) FEET HIGH.
 - ROCKWALL MORTAR JOINTS MUST NOT EXCEED TWO (2) INCHES.
 - PROVIDE ONE (1) INCH EXPANSION JOINTS AT EVERY 100 FEET.
 - ALL STONE SHALL BE THOROUGHLY SOAKED BEFORE BEING PLACED.
 - ALL STONE FOR ROCKWALLS SHALL BE FRACTURED QUARRIED ROCK OR ROUND ROCK, NO RIVER ROCK SHALL BE ALLOWED.
 - REINFORCING STEEL SHALL BE ASTM A615 GRADE 40.
 - ALLOWABLE SOIL BEARING PRESSURE = 2,500 PSI (MINIMUM).
 - BACKFILL MATERIALS SHALL CONSIST OF COARSE GRAINED, WELL-DRAINED SOILS (WITH NO CLAY CONTENT).
 - 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 CONSTRUCTING THE REMAINING OF THE STEM WALL.
 - WHENEVER PLANS SPECIFY A WROUGHT IRON FENCE, REFER TO DETAIL A.
 - WHENEVER THE RETAINING WALL EXCEEDS NINE (9) FEET, THE MAXIMUM VERTICAL SPACING BETWEEN WEEP HOLES SHALL BE TWO (2) FEET.

5 C10.2 GUARD RAIL/SIGN ASSEMBLY AT DEAD END STREET DETAIL
SCALE: AS SHOWN

RETAINING ROCK WALL	
"A"	"B"
3.01'	2'-6"
4'	2'-10"
5'	3'-3"
6'	3'-8"
7'	4'-0"
8'	4'-5"
9'	4'-10"
10'	5'-7"
11'	6'-1"
12'	6'-6"
13'	7'-0"
14'	7'-6"

DESERT SPRINGS UNIT FOUR
SUBDIVISION IMPROVEMENTS

PROJECT TITLE
SHEET TITLE
STANDARD DETAILS
(SHEET 2 OF 5)
SHEET NO.

SCALE: AS SHOWN
Horizontal: N/A
Vertical: N/A
Contour Interval: N/A
DATE: DECEMBER 2014
DESIGN BY: J.H.
DRAWN BY: J.H.
CHECKED BY: J.L.A.
APPROVED BY: J.L.A.
JOB NO. 2010-02B-ID

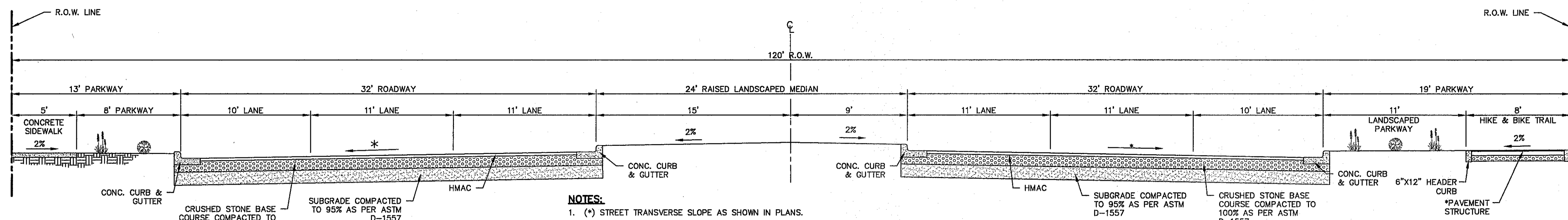
REFERENCES - BENCHMARKS
FOUND N.T.S. SURVEY MARKER STAMPED "CHINA 1880"
ELEVATION: 3946.11 (N.A.D. 88 DATUM)
3945.78 (N.G.D. 29 DATUM)
TIE TO THE PREVIOUS SURVEY: 4.0983
FEET FROM A 1/2" HIGH REBAR FOUND FOR THE NORTHWEST CORNER OF TRACT 11, NELLE D. MUNDY SURVEY No. 239

BY: [Signature]
DATE: [Blank]
REVISIONS: [Blank]

osa
engineers • architects • planners
TEXAS REGISTERED ENGINEERING FIRM F-4564
4713 Westchase Plaza, Ste. E El Paso, TX 79904
Office: 915.544.5223 Fax: 915.544.5233 www.osa.net

ENGINEER'S SEAL
[Seal]

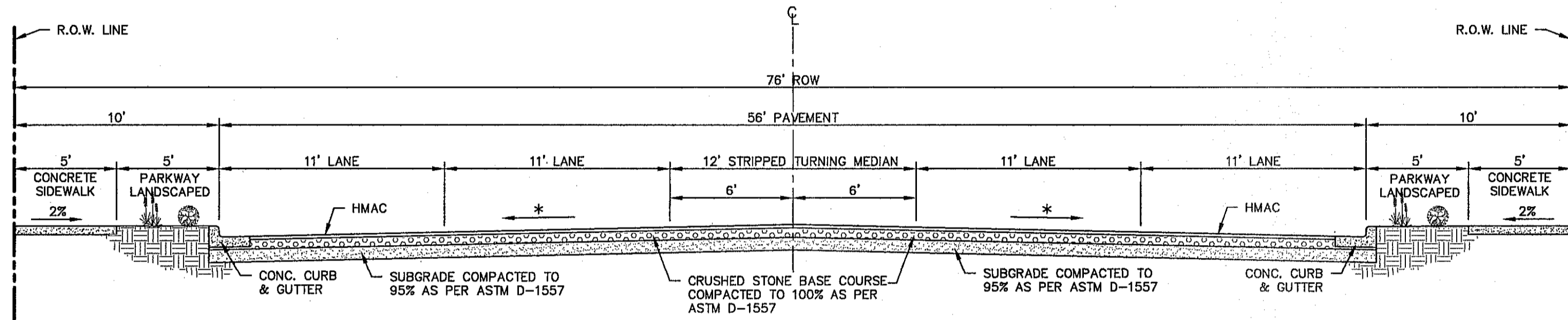
Final Approval
[Signature]



- NOTES:**
- (*) STREET TRANSVERSE SLOPE AS SHOWN IN PLANS.
 - SIDEWALK WIDTH IS REQUIRED TO COMPLY WITH ADA/TAS REGULATIONS.
 - STREET IMPROVEMENTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH CURRENT CITY OF EL PASO PAVING CONSTRUCTION DETAILS AND STANDARD SPECIFICATIONS: CBR @ EVERY 500' RESULTS TO BE SUBMITTED TO THE CITY OF EL PASO FOR REVIEW AND APPROVAL PRIOR TO PLACEMENT OF PAVEMENT.
 - SHALL COMPLY WITH THE CURRENT MUTCD MANUAL AND CITY OF EL PASO DEPARTMENT OF TRANSPORTATION SPECIFICATIONS AND REGULATIONS.
 - PROPOSED MEANDERING HIKE/BIKE TRAIL ON RESLER DRIVE SHALL MATCH EXISTING HIKE/BIKE TRAIL LOCATED SOUTH OF TRANSMOUNTAIN DRIVE ON EXISTING RESLER DRIVE.
 - ON LANDSCAPED PARKWAYS AND LANDSCAPED MEDIANS, REFER TO LANDSCAPED PLANS FOR ADDITIONAL INFORMATION ON LANDSCAPING DESIGN & IRRIGATION DESIGN.

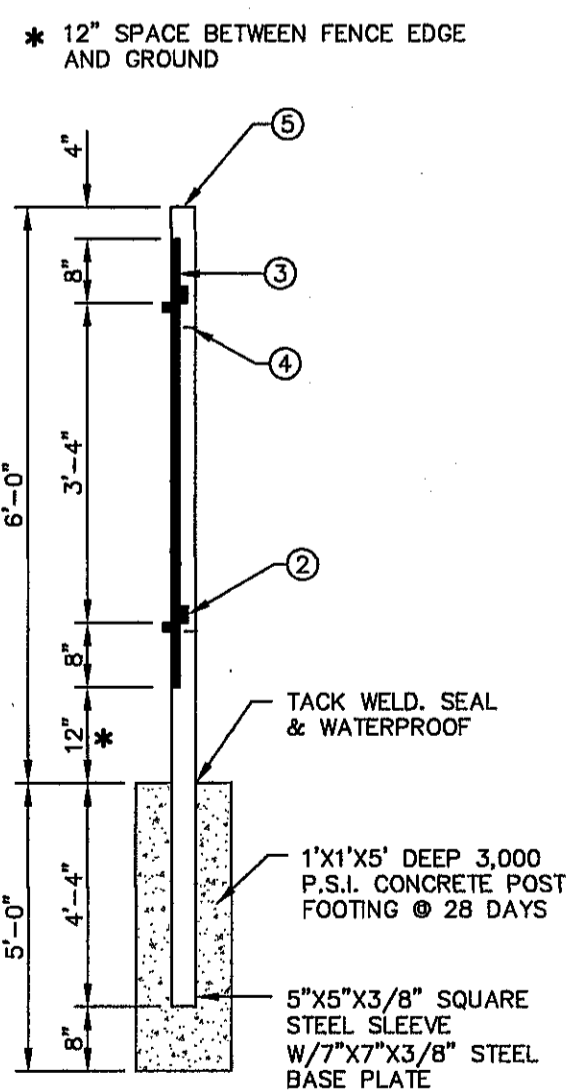
- PAVEMENT STRUCTURE:**
- 1 1/2" HMA TYPE D SEAL COATED (2 COATS)
 - 6" CSBC 100% COMPACTED AS PER ASTM D-1557
 - 8" SCARIFIED SUBGRADE 95% COMPACTED AS PER ASTM D-1557

1 TYPICAL 120' ROW STREET SECTION DETAIL (RESLER DRIVE)
SCALE: 1" = 5'-0"



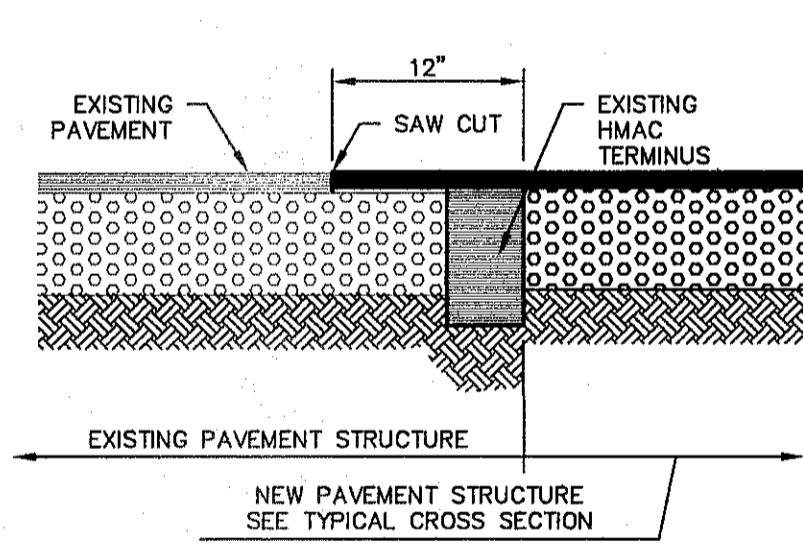
- NOTES:**
- (*) STREET TRANSVERSE SLOPE AS SHOWN IN PLANS.
 - SIDEWALK WIDTH IS REQUIRED TO COMPLY WITH ADA/TAS REGULATIONS.
 - STREET IMPROVEMENTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH CURRENT CITY OF EL PASO PAVING CONSTRUCTION DETAILS AND STANDARD SPECIFICATIONS: CBR @ EVERY 500' RESULTS TO BE SUBMITTED TO THE CITY OF EL PASO FOR REVIEW AND APPROVAL PRIOR TO PLACEMENT OF PAVEMENT.
 - SHALL COMPLY WITH THE CURRENT MUTCD MANUAL AND CITY OF EL PASO DEPARTMENT OF TRANSPORTATION SPECIFICATIONS AND REGULATIONS.
 - ON LANDSCAPED PARKWAYS AND LANDSCAPED MEDIANS, REFER TO LANDSCAPED PLANS FOR ADDITIONAL INFORMATION ON LANDSCAPING DESIGN & IRRIGATION DESIGN.

2 TYPICAL 76' ROW STREET SECTION DETAIL (ENCHANTED SPRINGS DRIVE)
SCALE: 1" = 5'-0"

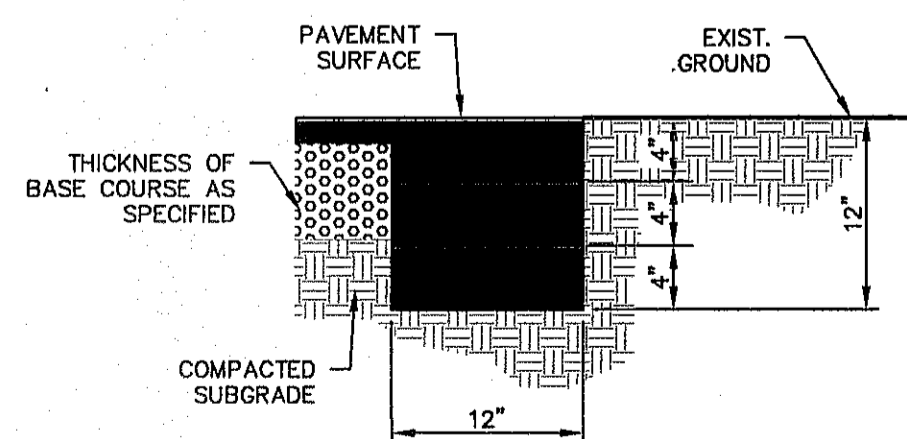


- KEY NOTES**
- 3" x 3" x 3/16" SQUARE STEEL TUBING
 - 2" x 1" x 14 GA. RECTANGULAR STEEL TUBING
 - 1 1/2" x 1/2" x 16 GA. RECTANGULAR STEEL TUBING
 - BOLT HOOK AND STRAP HINGE
 - FLAT TOP POLYVINYL CAP (TYP.)
 - 2" x 1" x 10 GA. RECTANGULAR STEEL TUBING
 - 1" x 1" x 5" DEEP 3,000 PSI CONCRETE POST FOOTING
 - 5" x 5" x 3/8" SQUARE STEEL SLEEVE W/7" x 7" x 3/8" BASE PLATE

6 SIX (6') FOOT HIGH WROUGHT IRON FENCE
SCALE: N.T.S.

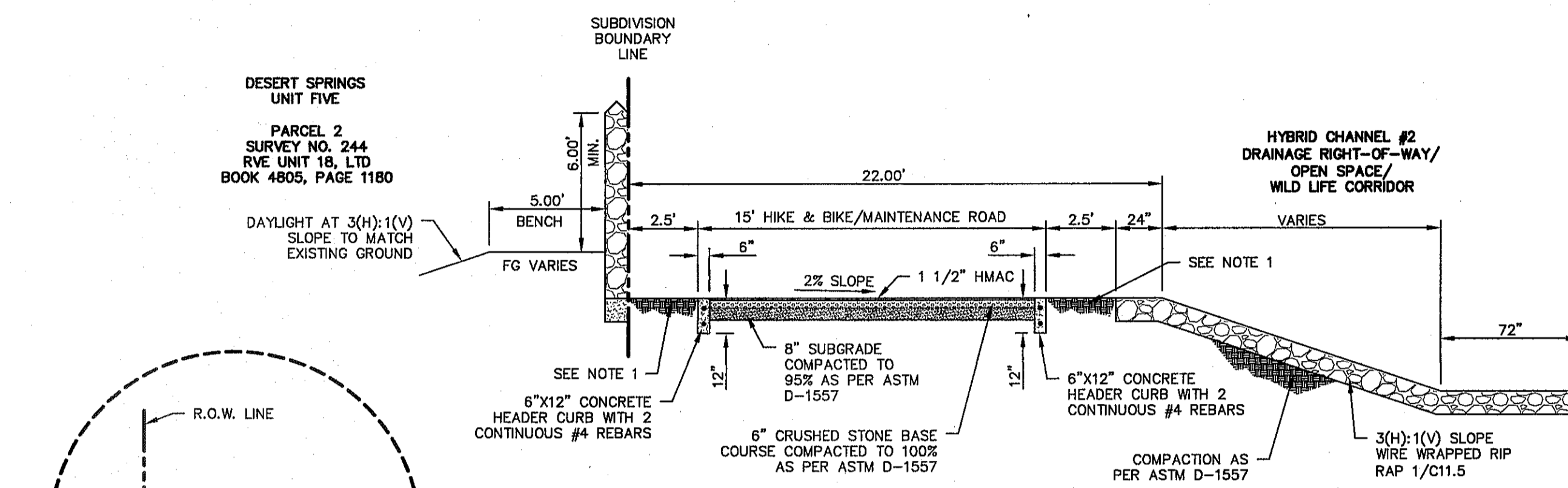


4 TYPICAL PAVEMENT JOINT SECTION
SCALE: 1" = 1'-0"



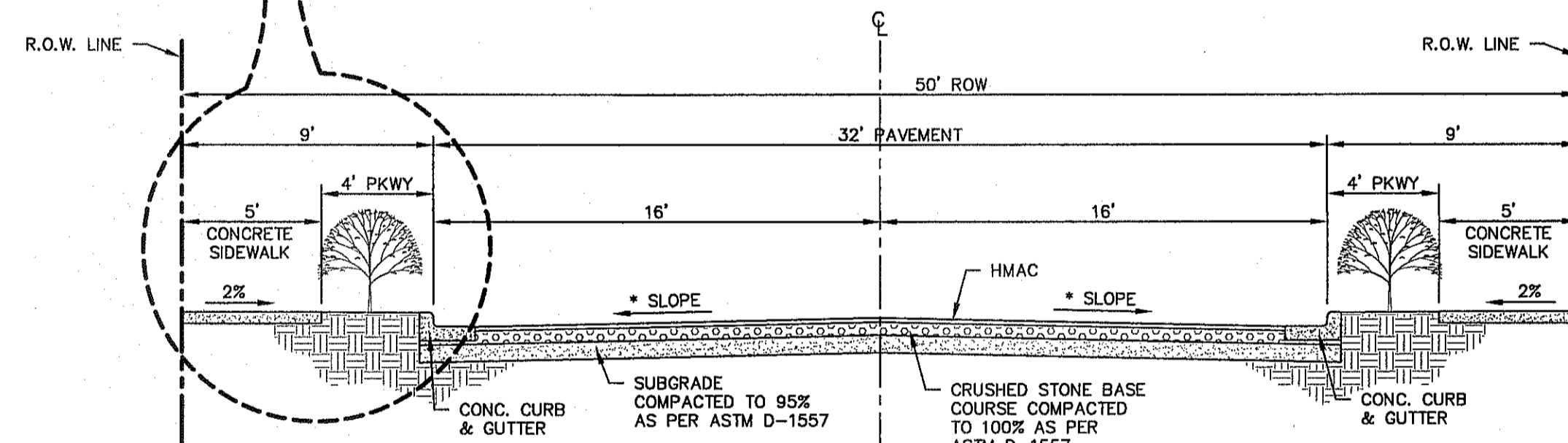
- NOTES:**
- TERMINUS MUST BE CONSTRUCTED IN FOUR (4) INCH LIFTS. FINAL LIFT MUST BE PLACED WITH FINAL PAVEMENT COURSE.

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



3 HIKE & BIKE / MAINTENANCE ROAD
SCALE: 1" = 5'-0"

ABUTTING A PARK

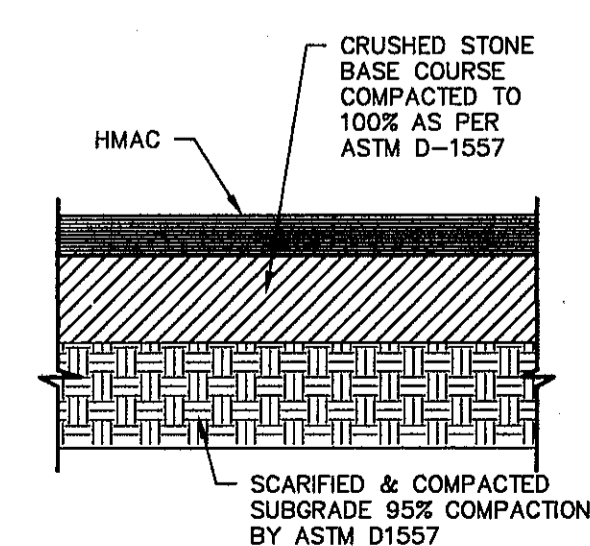


- NOTES:**
- (*) STREET TRANSVERSE SLOPE AS SHOWN IN PLANS.
 - SIDEWALK WIDTH IS REQUIRED TO COMPLY WITH ADA/TAS REGULATIONS.
 - STREET IMPROVEMENTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH CURRENT CITY OF EL PASO PAVING CONSTRUCTION DETAILS AND STANDARD SPECIFICATIONS: CBR @ EVERY 500' RESULTS TO BE SUBMITTED TO THE CITY OF EL PASO FOR REVIEW AND APPROVAL PRIOR TO PLACEMENT OF PAVEMENT.
 - DEVELOPER/BUILDER HAS AGREED TO INSTALL ONE (1) TREE IN THE PARKWAY PER RESIDENTIAL LOT TO BE INSTALLED AT TIME OF CERTIFICATE OF OCCUPANCY.

5 TYPICAL 50' ROW STREET SECTION DETAIL
SCALE: 1" = 5'-0"

PAVEMENT SECTION NOTES:

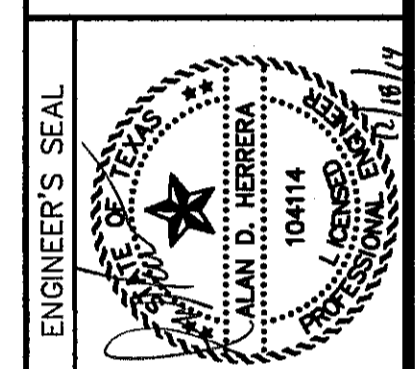
- SUBGRADE TO BE COMPACTED TO 95% OF MAXIMUM DENSITY AS PER ASTM D-1557.
- MINIMUM PAVEMENT DESIGN DETAILS ARE SHOWN, ACTUAL PAVEMENT DESIGN WILL BE DETERMINED BY CBR.
- STREET IMPROVEMENTS (FLEXIBLE PAVEMENT DESIGN STRUCTURE) SHALL BE CONSTRUCTED IN ACCORDANCE WITH CURRENT CITY OF EL PASO PAVING CONSTRUCTION DETAILS AND STANDARD SPECIFICATIONS: CBR @ EVERY 500' RESULTS TO BE SUBMITTED TO THE CITY OF EL PASO FOR REVIEW AND APPROVAL PRIOR TO PLACEMENT OF PAVEMENT. THE CBR RESULTS WILL DICTATE THE REQUIRED THICKNESS OF THE PAVEMENT STRUCTURE BASED ON CITY OF EL PASO DESIGN STANDARDS. THE DEVELOPER SHALL PLACE THE HIGHER VALUE OF PAVEMENT STRUCTURE BASED ON THE CBR RESULTS OR THE MINIMUM PAVEMENT THICKNESS AS SHOWN ON THE CITY OF EL PASO DESIGN STANDARDS.



8 TYPICAL PAVEMENT SECTION
SCALE: N.T.S.

REFERENCES - BENCHMARKS
FOUND N.G.S. SURVEY MARKER STAMPED "CHINO 1980"
ELEVATION: 3938.93 (CITY OF EL PASO VERTICAL DATUM)
3946.11 (NAVD 88 DATUM)
3945.78 (NGVD 29 DATUM)
TIE TO THE PROJECT BENCHMARK IS N53°09'09"W, 4,008.93'
TO THE CORNER OF TRACT 11, BELLE D. MUNDY SURVEY, NO. 239
DATE: _____ REVISIONS: _____ BY: _____

CS&A
engineers • architects • planners
TEXAS REGISTERED ENGINEERING FIRM F-4594
4712 Woodrow Branch, Ste. F El Paso, TX 79924
Office: 915.544.5222 Fax: 915.544.5223 www.csandap.com

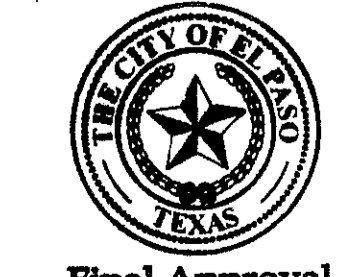


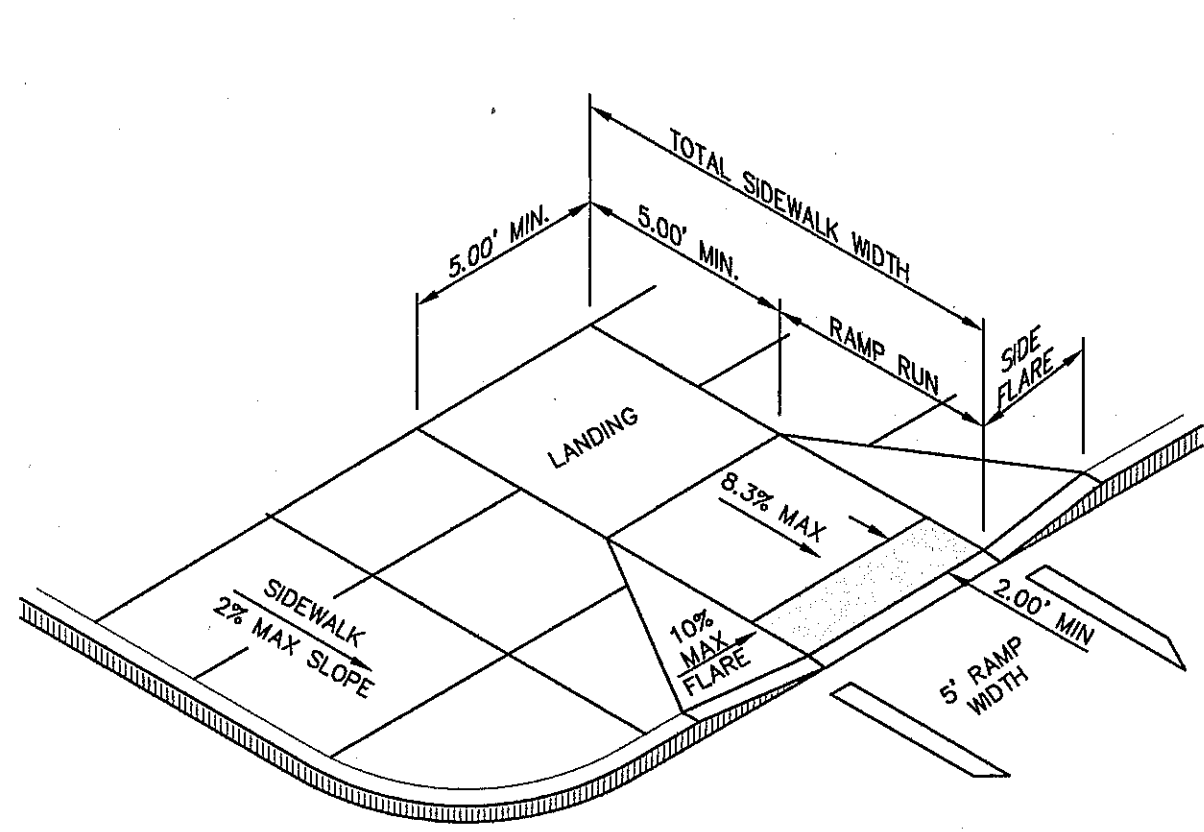
SCALE SHOWN:
Vertical: N/A
Horizontal: N/A
Contour Interval: N/A
DATE: DECEMBER 2014
DESIGN BY: A.H.
DRAWN BY: J.H.
CHKD. BY: J.L.A.
APPRD. BY: J.L.A.
JOB NO. 2060-028-1D

PROJECT TITLE
DESERT SPRINGS UNIT FOUR
SUBDIVISION IMPROVEMENTS

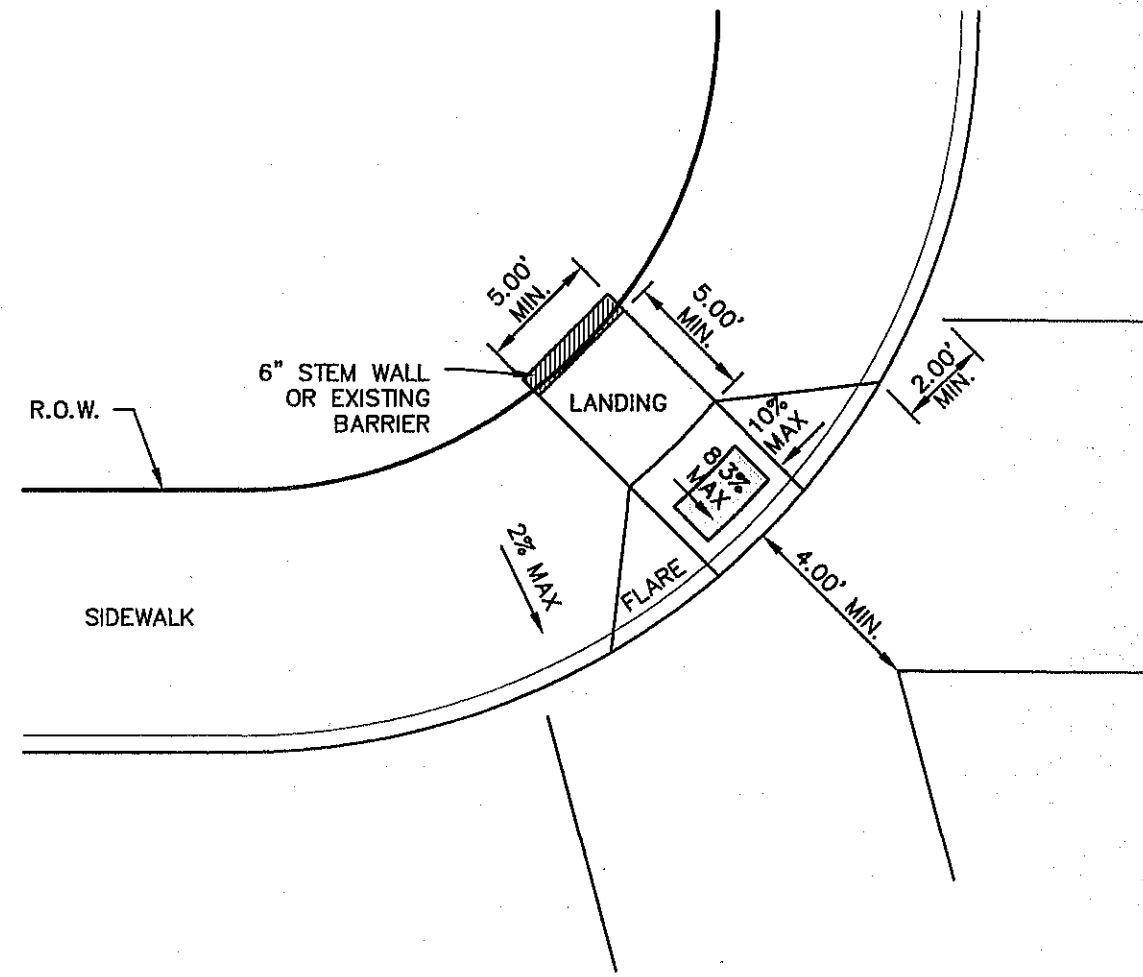
SHEET TITLE
STANDARD
DETAILS
(SHEET 3 OF 5)
SHEET NO.

C10.3

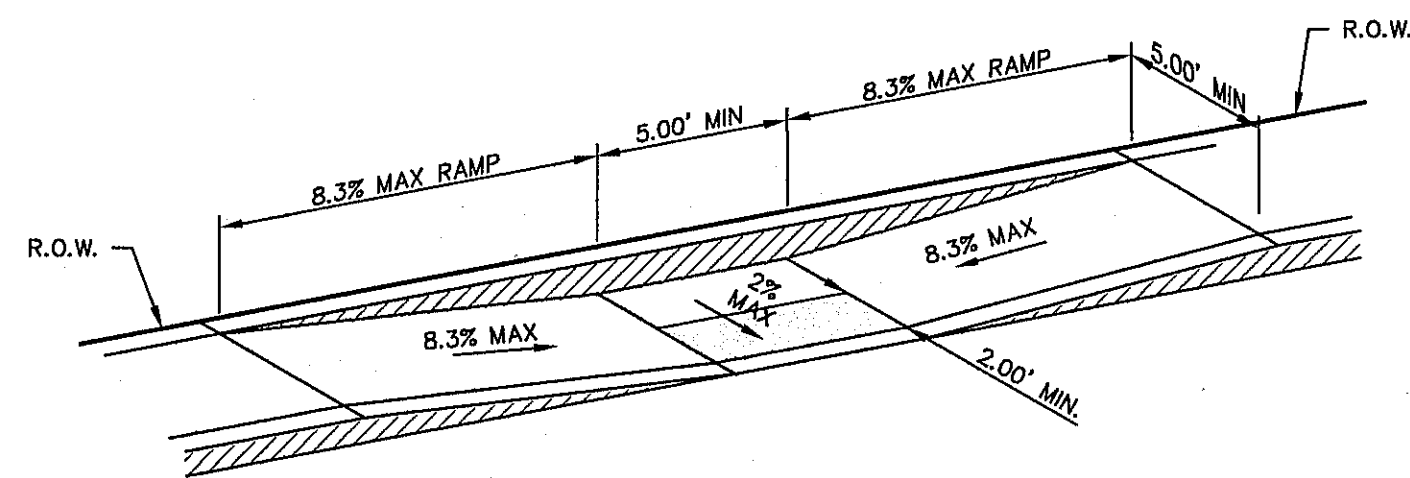




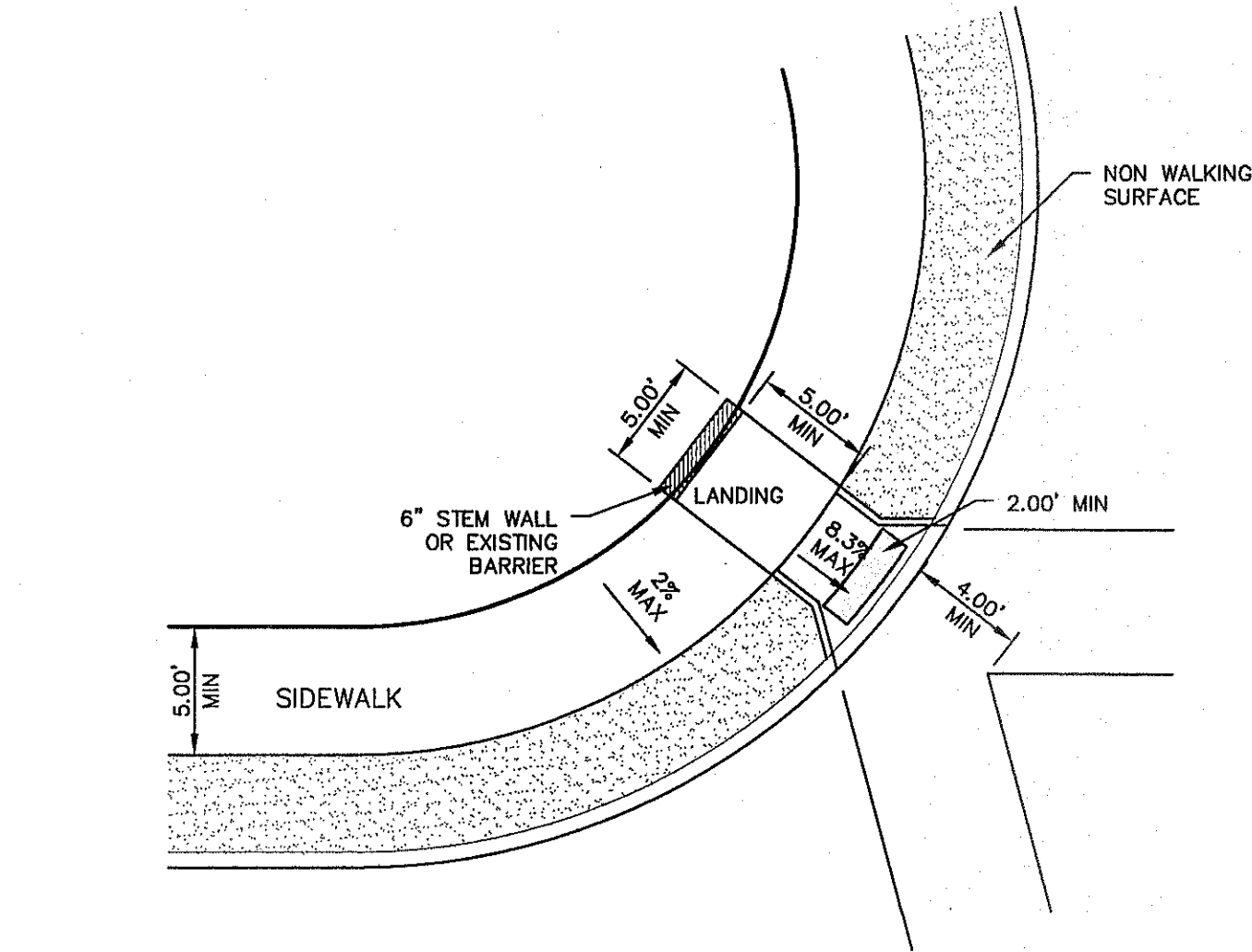
1 PERPENDICULAR CURB RAMP (TYPE I)
SCALE: N.T.S.



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

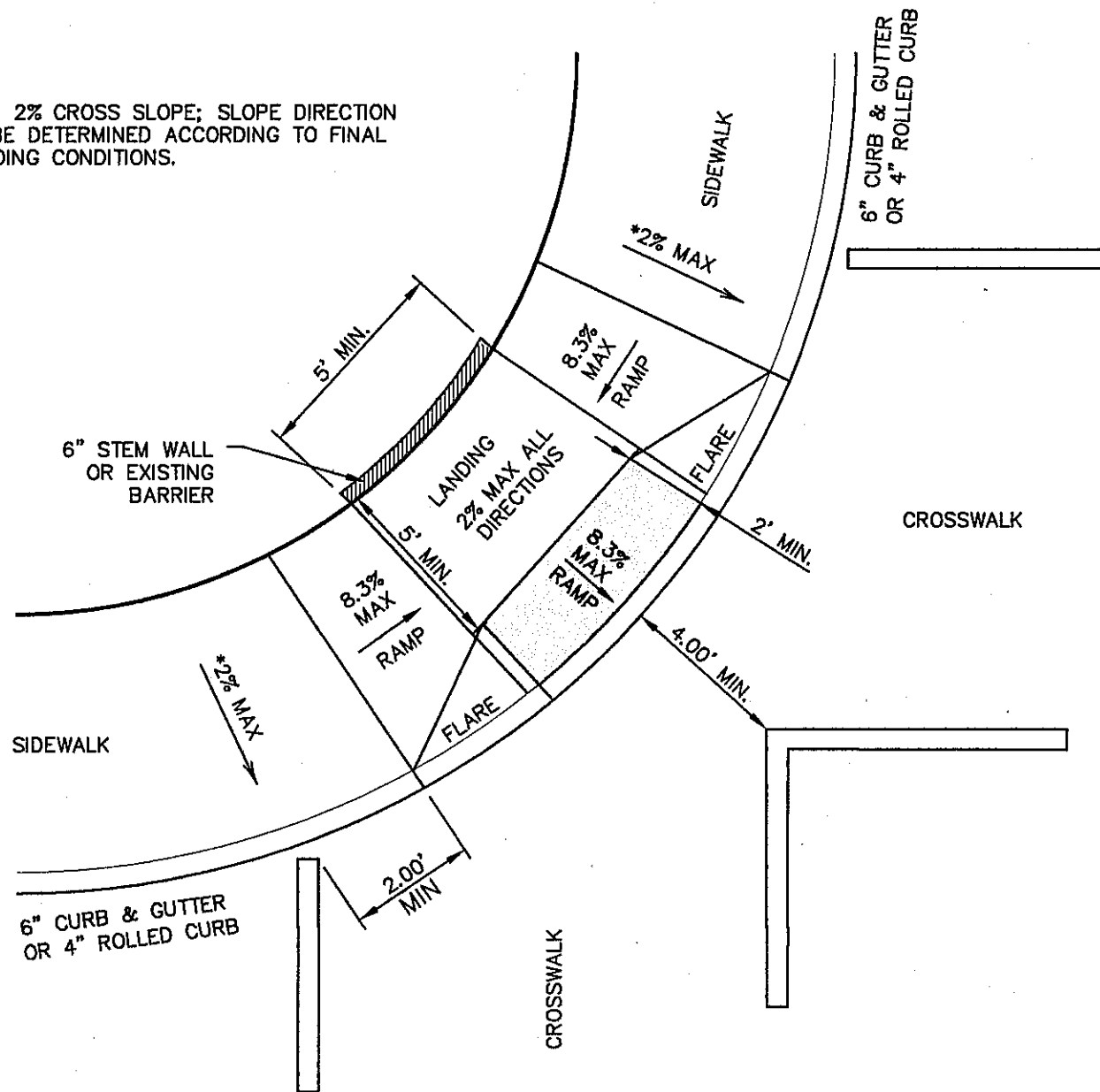


2 PARALLEL CURB RAMP (TYPE II)
SCALE: N.T.S.

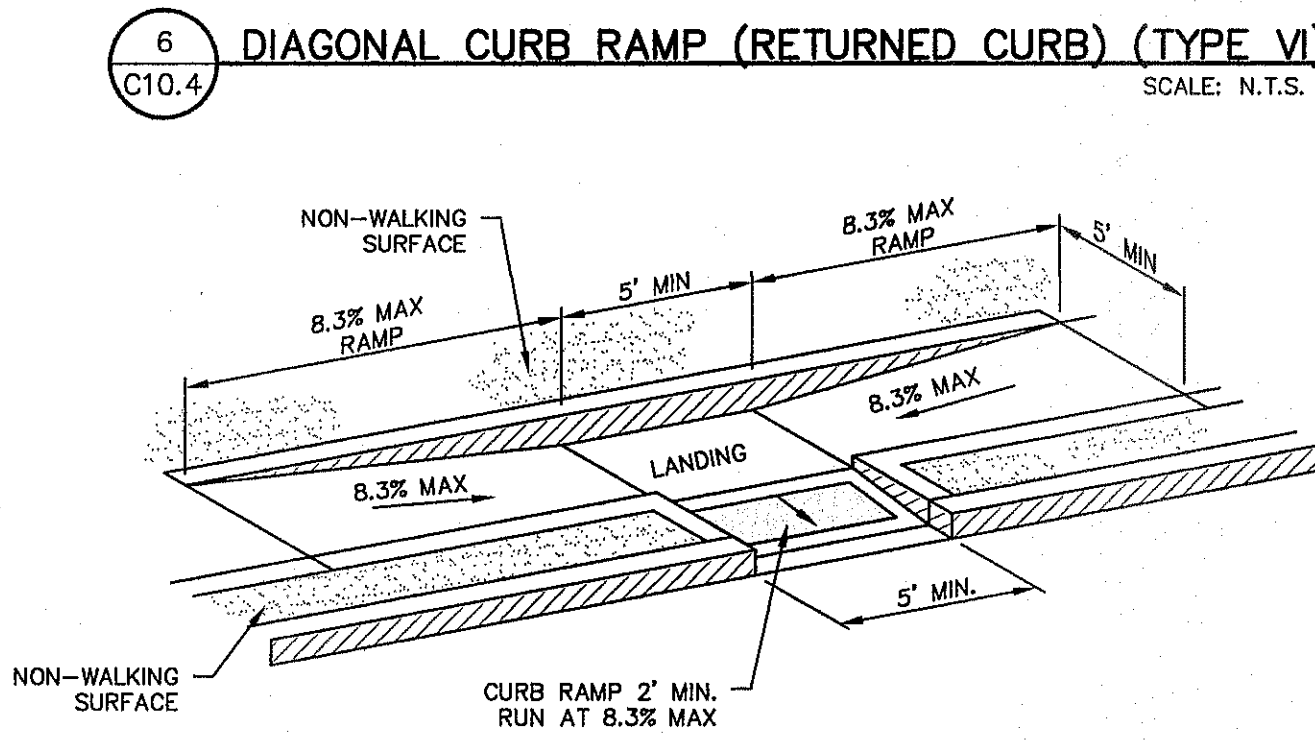


6 DIAGONAL CURB RAMP (RETURNED CURB) (TYPE VI)
SCALE: N.T.S.

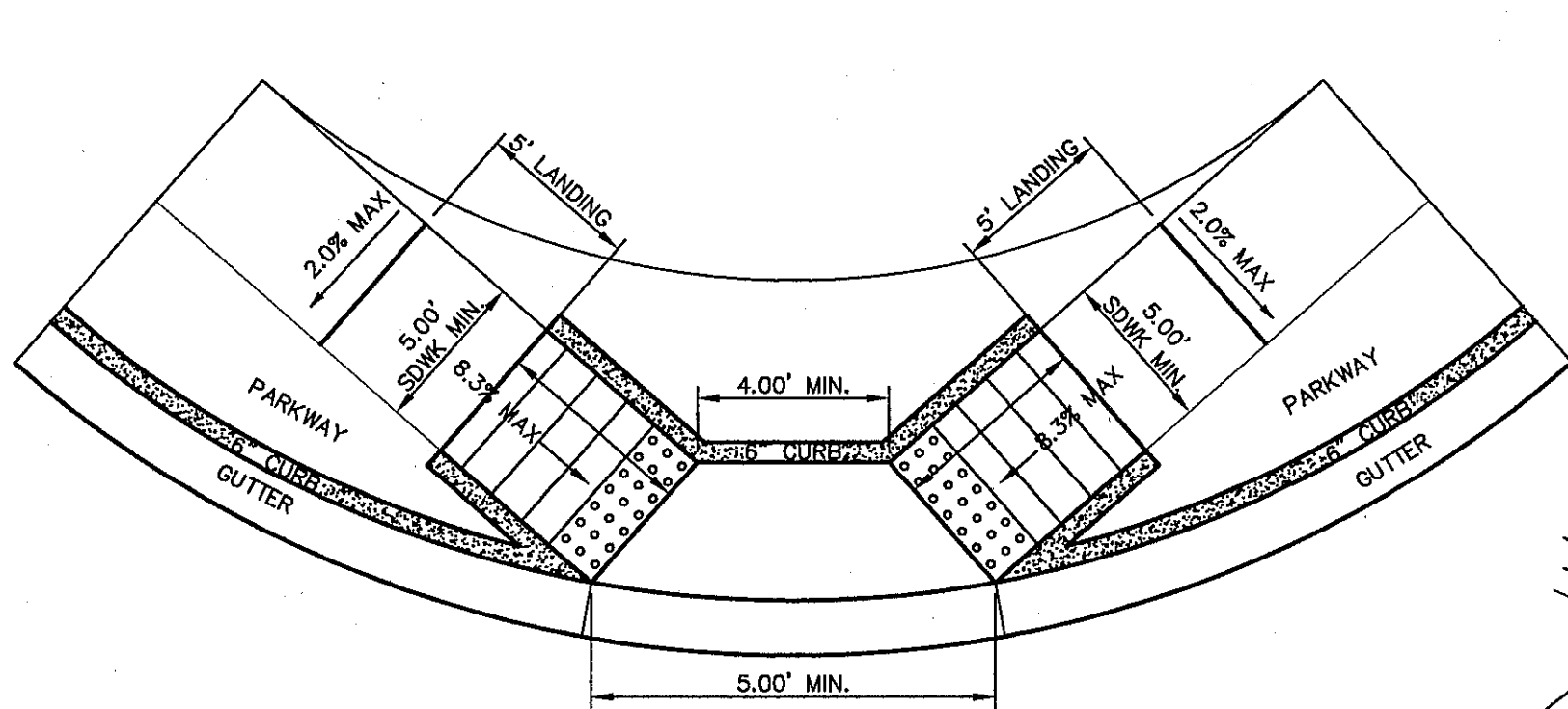
* NOTE: MAX. 2% CROSS SLOPE; SLOPE DIRECTION TO BE DETERMINED ACCORDING TO FINAL GRADING CONDITIONS.



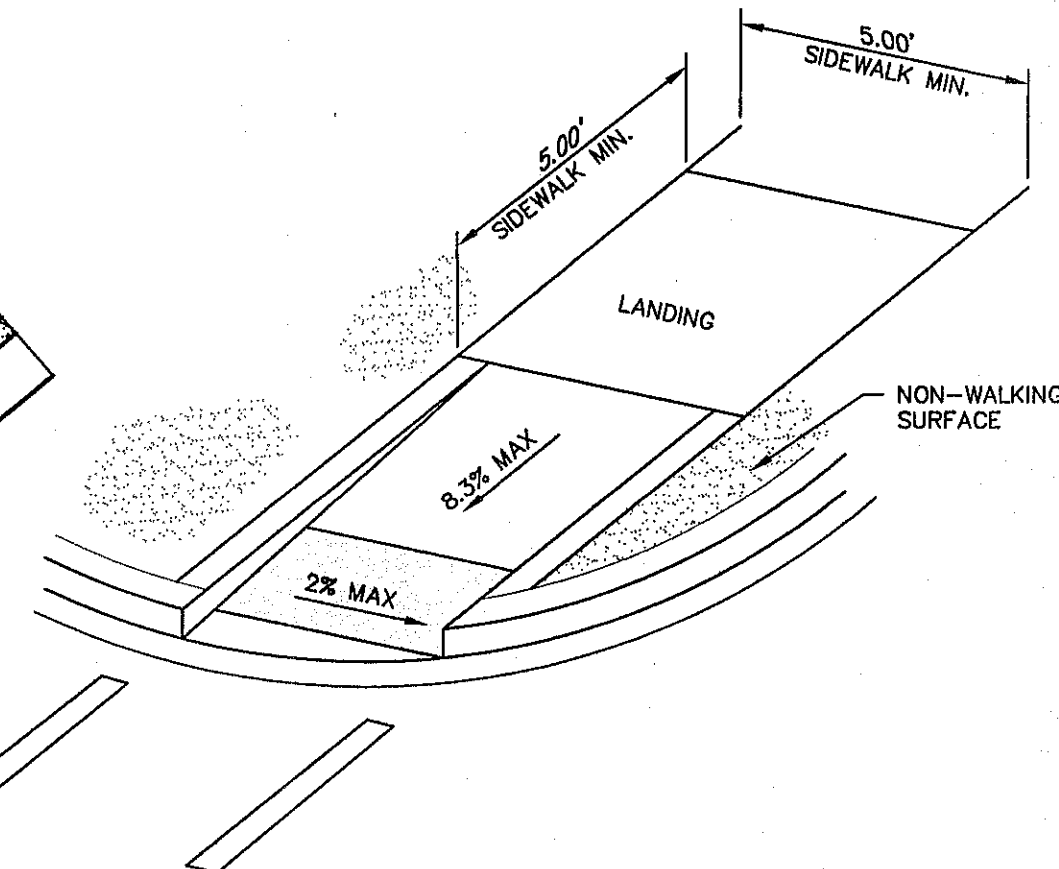
3 DIAGONAL COMBINATION CURB RAMP (TYPE III)
SCALE: N.T.S.



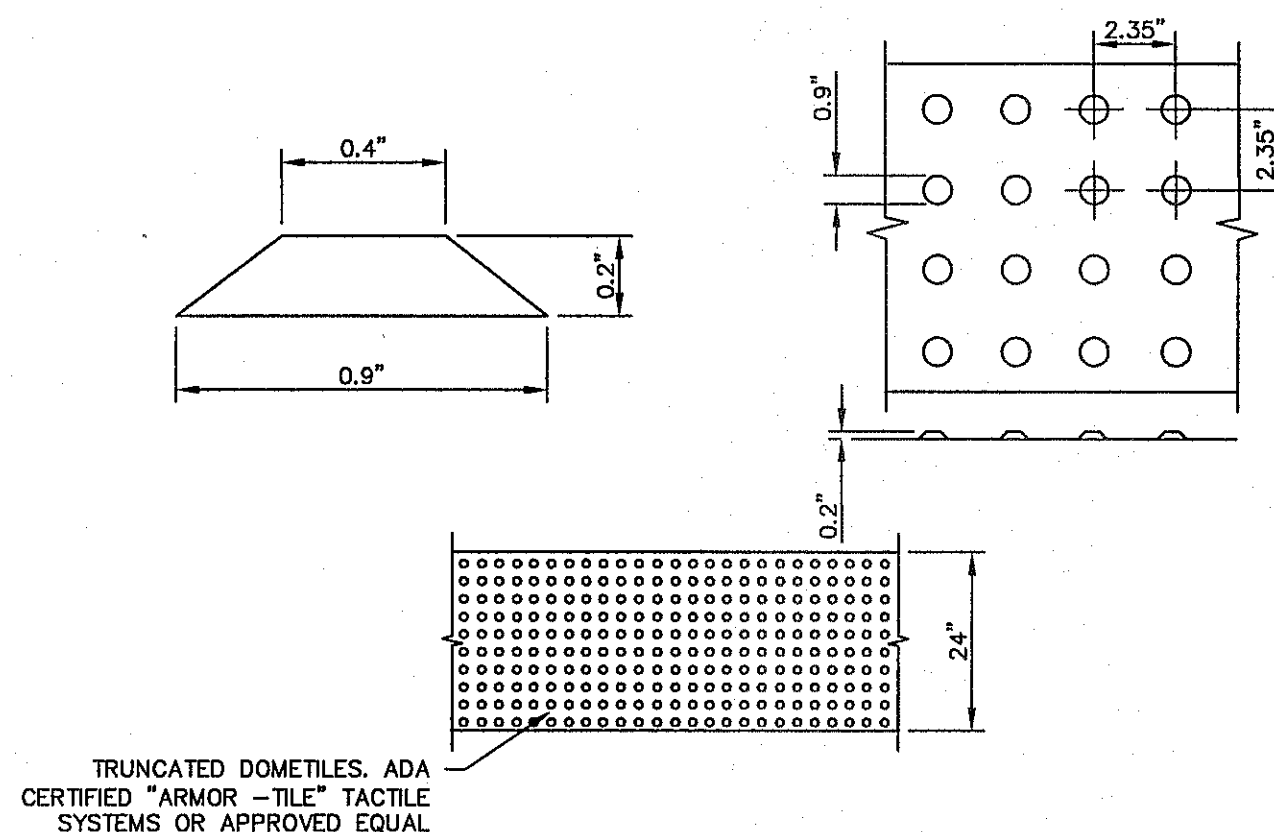
7 COMBINATION CURB RAMPS (TYPE VII)
SCALE: N.T.S.



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



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



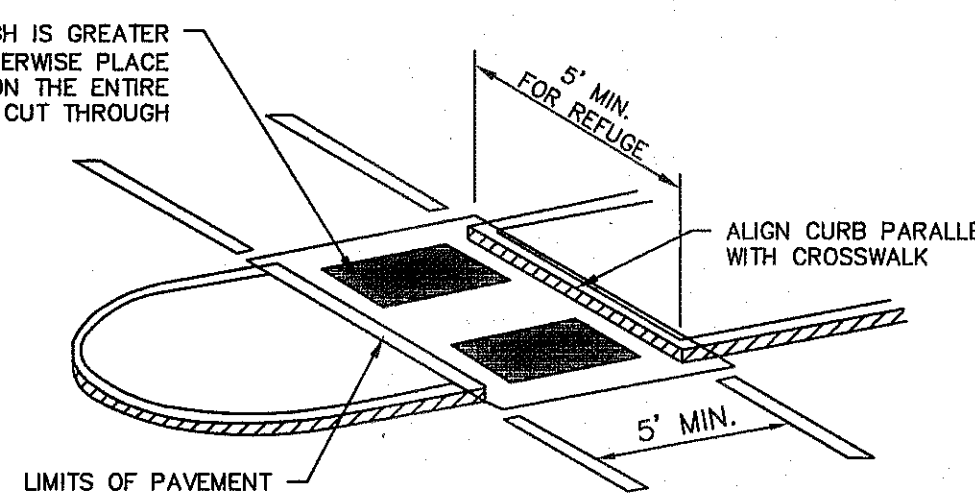
9 TRUNCATED DOME
SCALE: N.T.S.

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.

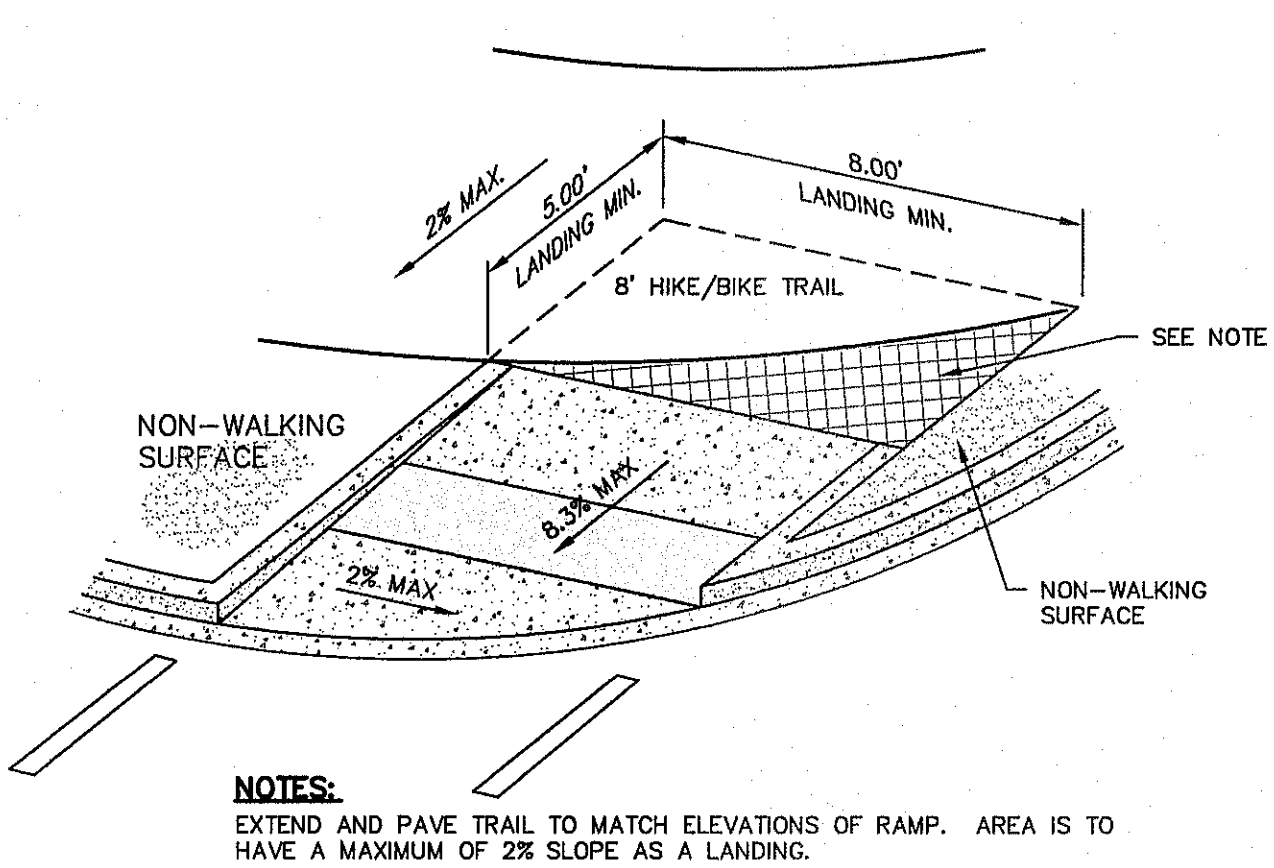
DOME ALIGNMENT. DOMES SHALL BE ALIGNED ON A SQUARE GRID IN THE PREDOMINANT DIRECTION OF TRAVEL TO PERMIT WHEELS TO ROLL BETWEEN DOMES. DETECTABLE WARNING SURFACES SHALL EXTEND 24 INCHES (610 mm) MINIMUM IN THE DIRECTION OF TRAVEL AND THE FULL WIDTH OF THE CURB RAMP, LANDING, OR BLENDED TRANSITION.

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.

2' STRIP IF CUT THROUGH IS GREATER THAN 4' IN LENGTH, OTHERWISE PLACE DETECTABLE WARNING ON THE ENTIRE SURFACE OF CUT THROUGH



10 CURB RAMPS AT MEDIAN ISLANDS
SCALE: N.T.S.



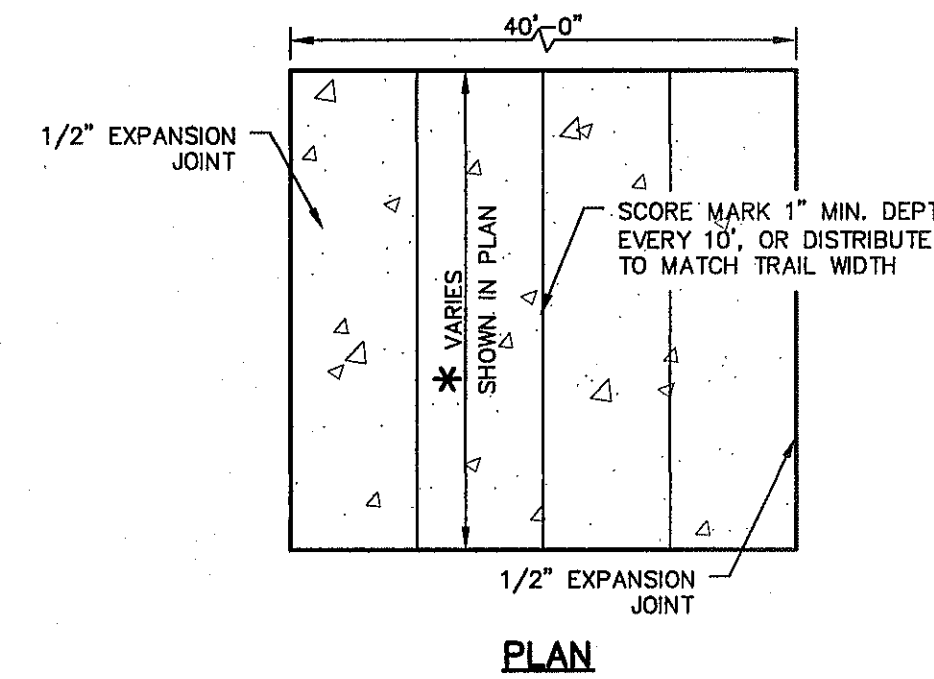
11 DIRECTIONAL RAMP WITHIN RADIUS FOR HIKE/BIKE TRAIL
SCALE: N.T.S.

NOTES:
EXTEND AND PAVE TRAIL TO MATCH ELEVATIONS OF RAMP. AREA IS TO HAVE A MAXIMUM OF 2% SLOPE AS A LANDING.

LEGEND
[Symbol] DETECTABLE WARNING SURFACE

GENERAL NOTES:

- IMPROVEMENTS SHALL COMPLY WITH AMERICANS WITH DISSABILITY ACT (ADA) AND TEXAS DEPARTMENT OF LICENSING AND REGULATION (TDLR) STANDARDS.
- 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.
- THE MINIMUM SIDEWALK WIDTH IS FOUR (4') FEET. WHERE A FIVE (5') FEET SIDEWALK CAN NOT BE PROVIDED DUE TO SITE CONSTRAINTS, A MINIMUM THREE (3') FEET SIDEWALK WITH 5'x5' PASSING SPACE AREAS ARE REQUIRED TO BE LOCATED AT REASONABLE INTERVALS NOT TO EXCEED TWO-HUNDRED (200') FEET.
- LANDINGS SHALL BE 5'x5' MINIMUM WITH A MAXIMUM TWO (2%) PERCENT SLOPE IN ANY DIRECTION.
- MANEUVERING SPACE AT THE BOTTOM OF CURB RAMPS SHALL BE A MINIMUM OF 4'x4' WHOLLY CONTAINED WITHIN THE CROSSWALK AND WHOLLY OUTSIDE THE PARALLEL VEHICULAR TRAVEL PATH.
- CURB RAMPS WITH RETURNED CURBS MAY BE USED ONLY WHERE PEDESTRIANS WOULD NOT NORMALLY WALK ACROSS THE RAMP. OTHERWISE, FLARED SIDES SHALL BE PROVIDED WITH A MAXIMUM 10(H):1(V) SLOPE. IF THE LANDING DEPTH IS LESS THAN FOUR (4') FEET, THEN THE SLOPE OF THE FLARED SIDE SHALL NOT EXCEED 12(H):1(V) SLOPE.
- ALL CONCRETE SIDEWALK SURFACES SHALL RECEIVE A LIGHT BROOM FINISH UNLESS NOTED OTHERWISE IN THE PLANS.
- RAMP TEXTURES MUST CONSIST OF TRUNCATED DOME SURFACES. TEXTURES ARE REQUIRED TO BE DETECTABLE UNDERFOOT. SURFACES THAT WOULD ALLOW WATER TO ACCUMULATE ARE PROHIBITED. REFER TO TRUNCATED DOME DETAIL.
- CROSSWALK DIMENSIONS, CROSSWALK MARKINGS AND STOP BAR LOCATIONS SHALL BE AS SHOWN ELSEWHERE IN THE PLANS. AT INTERSECTIONS WHERE CROSSWALK MARKINGS ARE NOT REQUIRED, RAMPS SHALL BE ALIGNED WITH THEORETICAL CROSSWALKS, OR AS DIRECTED BY THE ENGINEER.
- ACCESSIBLE ROUTES WITH A RUNNING SLOPE GREATER THAN FIVE (5%) PERCENT IS A RAMP AND SHALL COMPLY WITH TDLR 4.8 - RAMPS. MAXIMUM ALLOWABLE CROSS SLOPE ON SIDEWALK AND RAMP SURFACES IS TWO (2%) PERCENT.
- 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 TDLR.
- ALL ADA RAMPS TO BE BUILT BY DEVELOPER.

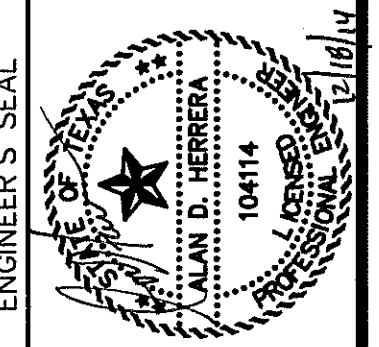


12 TYPICAL GRADING SECTION-HIKE & BIKE TRAIL
SCALE: N.T.S.

- HIKE & BIKE NOTES:
- CONCRETE SHALL BE 3,000 P.S.I. AT TWENTY-EIGHT (28) DAYS.
 - DUMMY JOINTS REQUIRED AT EIGHT (8') FEET ON CENTER.
 - EXPANSION JOINTS SHALL BE AT FORTY (40') FEET ON CENTER 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 NINETY-FIVE (95%) PERCENT AS PER ASTM D1557.
 - THE HIKE/BIKE TRAIL MUST HAVE A MAXIMUM RUNNING SLOPE OF FIVE (5%) PERCENT AND A MAXIMUM CROSS SLOPE OF TWO (2%) PERCENT.

REFERENCES - BENCHMARKS
WORKER STAMPED "CHINO 1980"
ELEVATION: 3945.11 (CITY OF EL PASO VERTICAL DATUM)
3945.11 (NAVD 88 DATUM)
3945.11 (NAVD 83 DATUM)
3945.11 (NAVD 29 DATUM)
TIE TO THE PROJECT DATUM (NGVD 29 DATUM) IS 4.00893 FEET FROM A 1/2" INCH REBAR FOUND FOR THE NORTHWEST CORNER OF TRACT 11, NELLE D. MUNDY SURVEY NO. 239

DESIGNER'S SEAL
CASA ENGINEERS ARCHITECTS PLANNERS
TEXAS REGISTERED ENGINEERING FIRM #4684
4712 Woodchuck Bend, Ste. F, El Paso, TX 79924
Office: 915.544.5232 Fax: 915.544.5233 www.casaplan.com

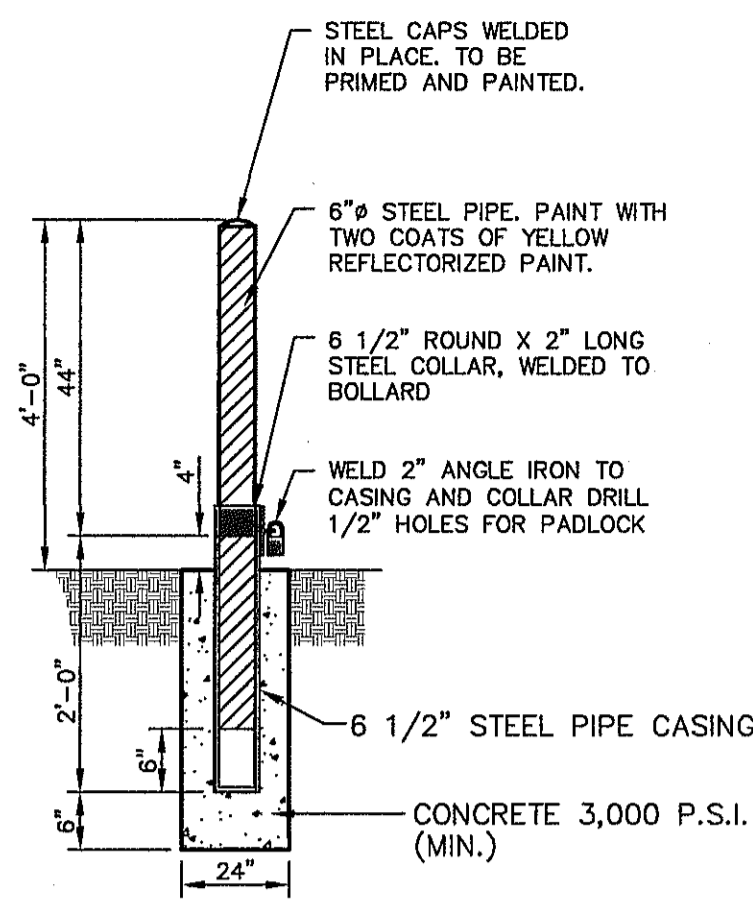


SCALE: AS SHOWN
Horizontal: N/A
Vertical: N/A
Date: DECEMBER 2014
DESIGN BY: J.L.A.
CHECKED BY: J.L.A.
APPROVED BY: J.L.A.
JOB No. 2010-028-1D

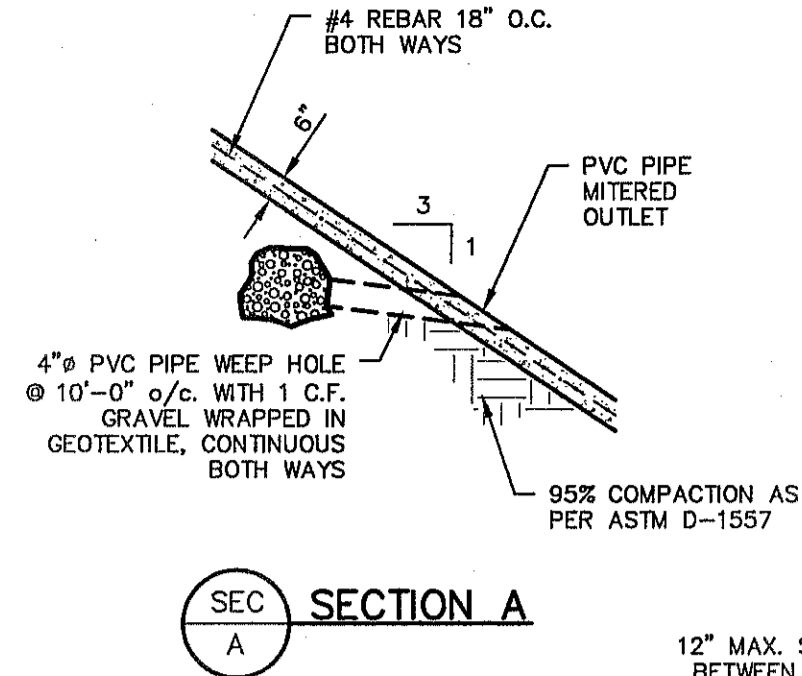
PROJECT TITLE
DESERT SPRINGS UNIT FOUR
SUBDIVISION IMPROVEMENTS

SHEET TITLE
STANDARD DETAILS
(SHEET 4 OF 5)
SHEET NO.

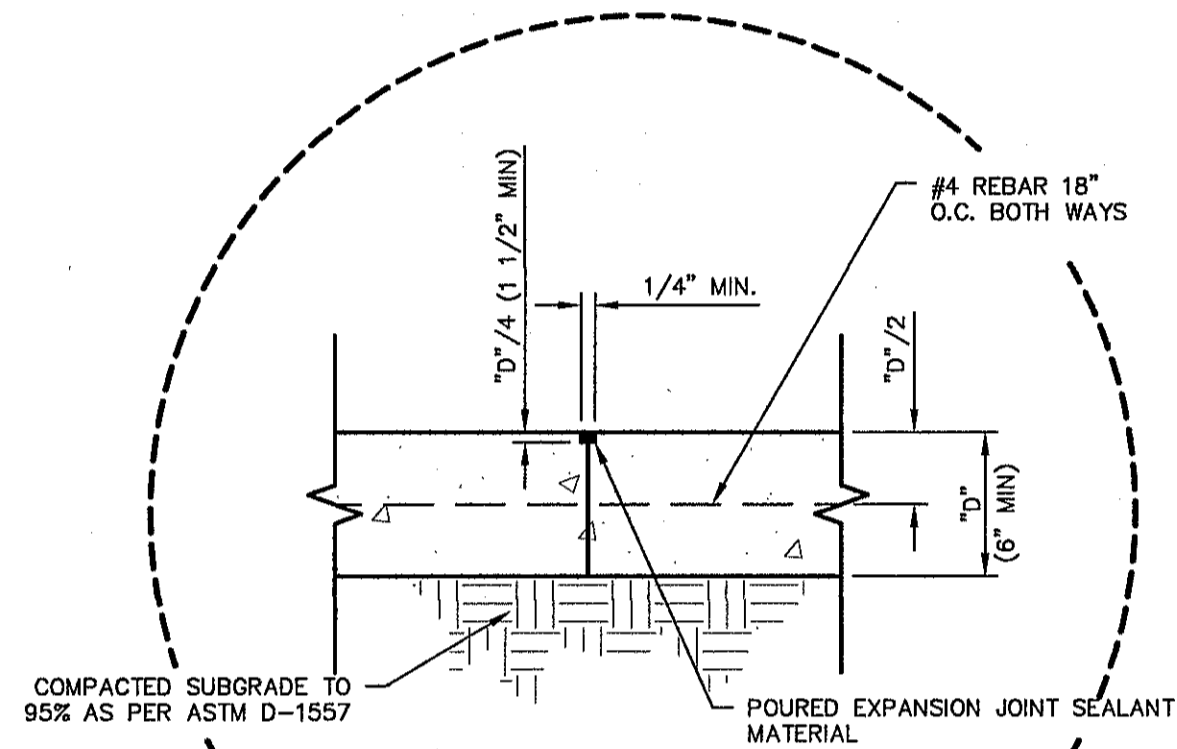
C10.4
Final Approval



2 TYPICAL REMOVABLE BOLLARD POST EMBEDMENT DETAIL
SCALE: N.T.S.



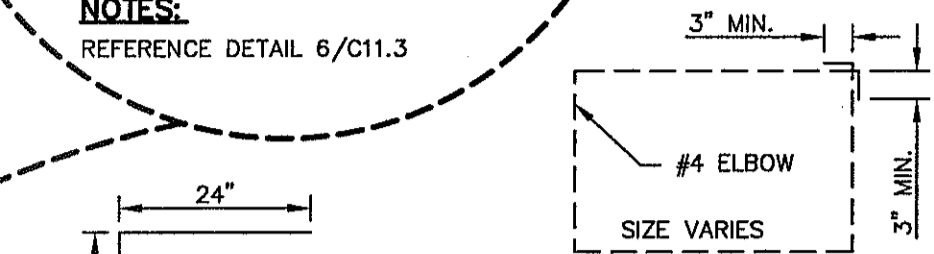
SECTION A



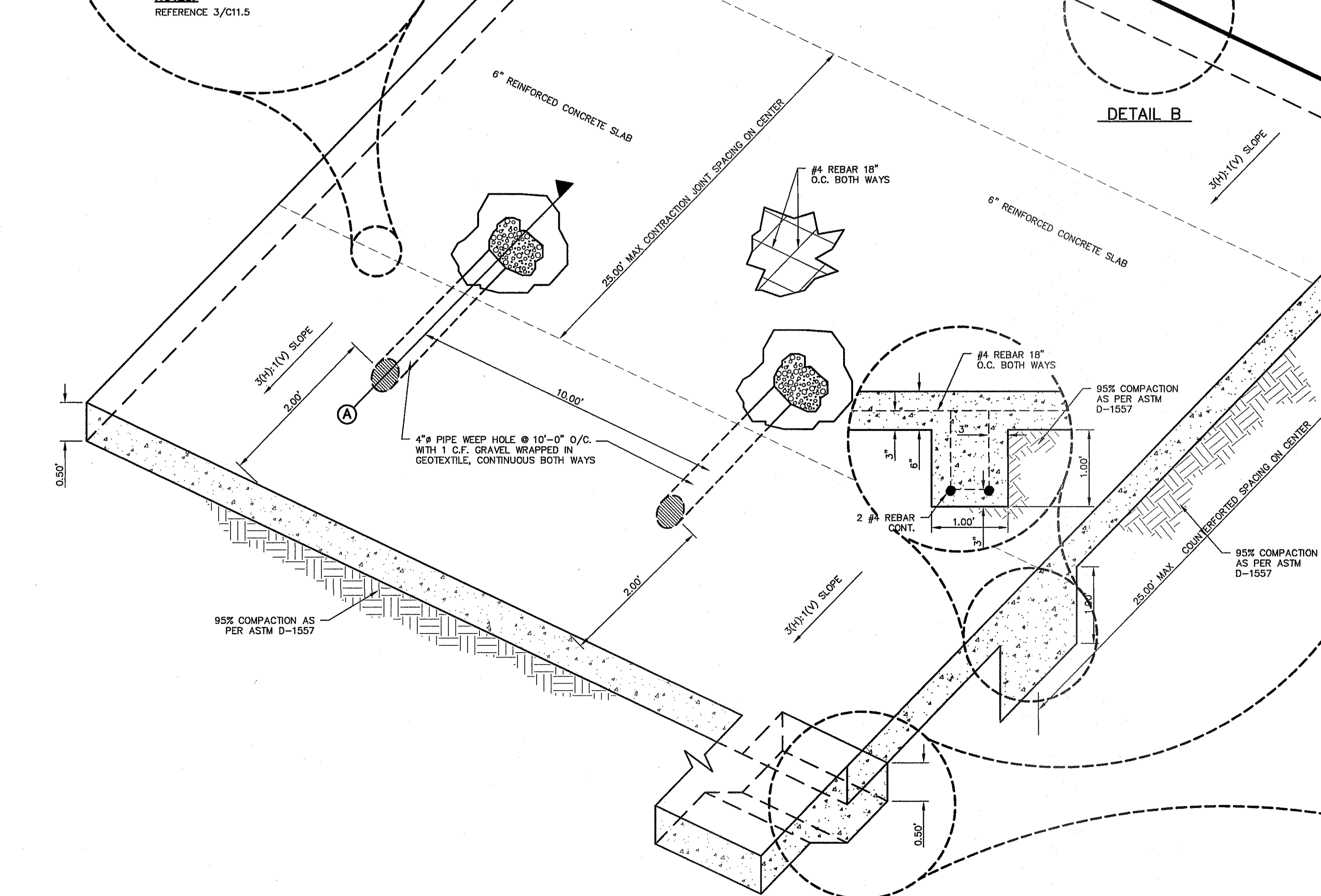
NOTES:
REFERENCE 3/C11.5

Property of
EL PASO WATER UTILITIES
Public Service Board
STORMWATER POND

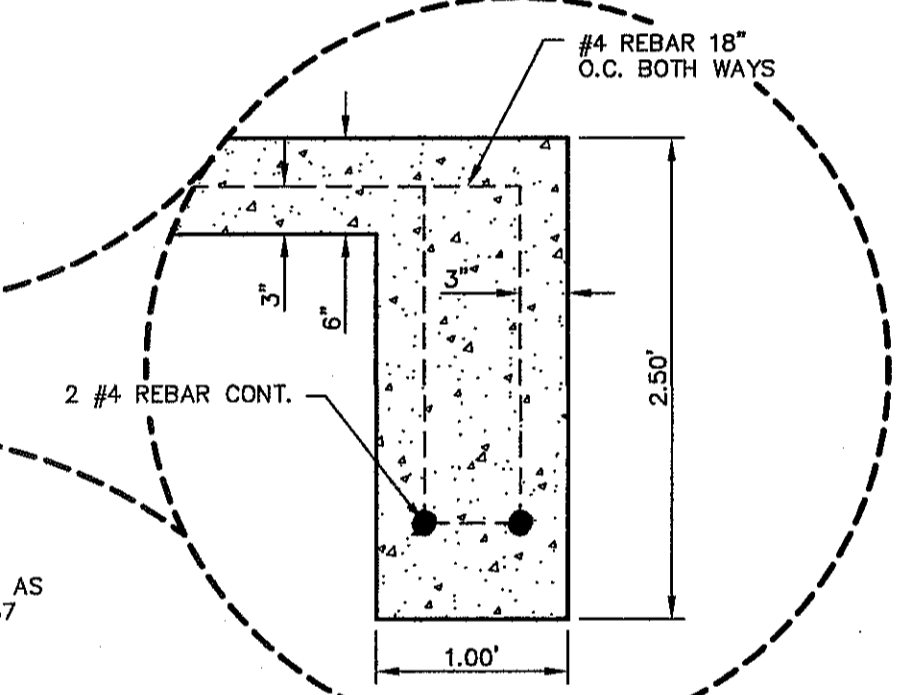
NOTES:
REFERENCE DETAIL 6/C11.3



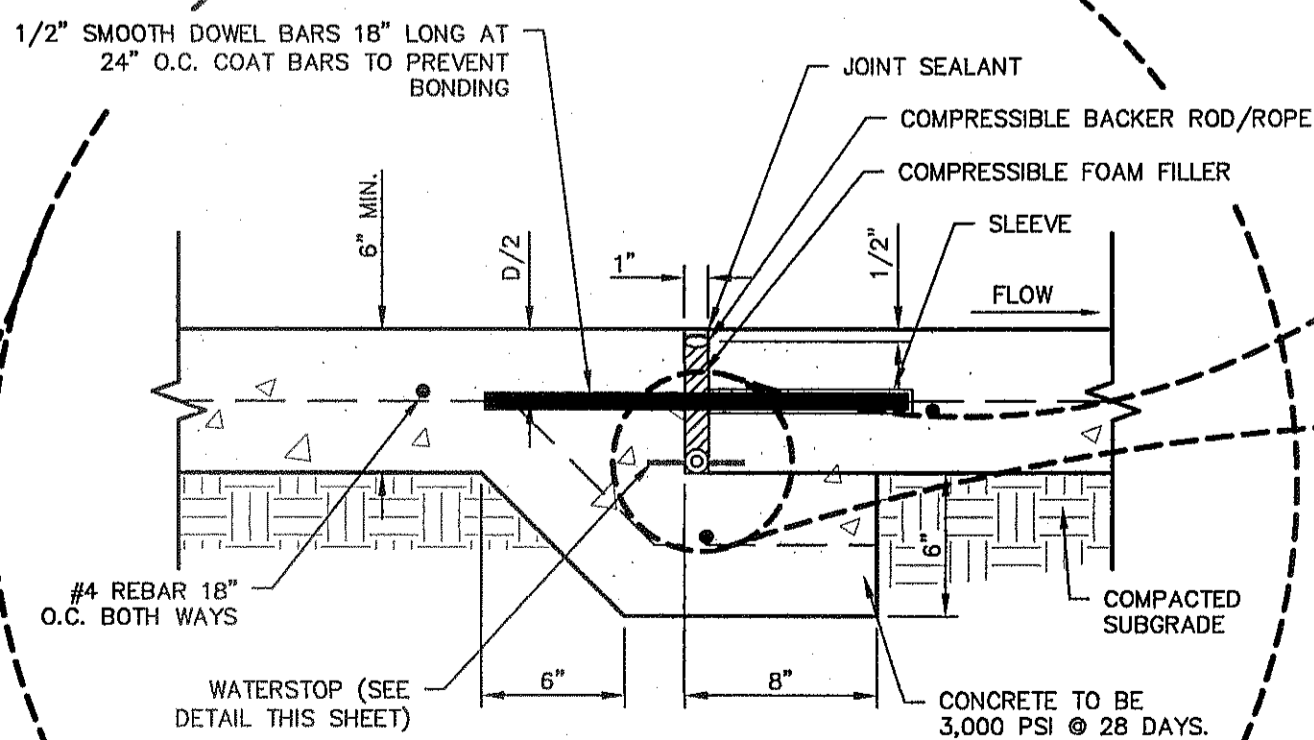
DETAIL B



DETAIL B



WATERSTOP DETAIL
SCALE: 3" = 2' - 0"



NOTES:
REFERENCE 2/C11.3
MAXIMUM EXPANSION JOINT SPACING AT 100 FEET O.C. ALONG CENTERLINE OF CHANNEL

- SIDEWALK NOTES:**
1. CONCRETE SHALL BE 3,000 P.S.I. @ TWENTY-EIGHT (28) DAYS.
 2. SUBGRADE TO BE COMPACTED TO NINETY-FIVE (95%) PERCENT AS PER ASTM D1557.
 3. CONTRACTION JOINTS ARE REQUIRED AT TWENTY-FIVE (25) FEET ON CENTER MAXIMUM.
 4. REINFORCING STEEL SHALL BE ASTM A615 GRADE 40 AND DEFORMED.
 5. EXPANSION JOINTS ARE REQUIRED AT ONE HUNDRED (100) FEET ON CENTER MAXIMUM.

1 WROUGHT IRON FENCE TOE DOWN DETAIL
SCALE: N.T.S.

REFERENCES - BENCHMARKS
FOUND N.G.S. SURVEY MARKER STAMPED "CHINO 1980"
ELEVATION: 3946.11 (NAVD 88 DATUM)
SHOWING (CITY OF EL PASO VERTICAL DATUM)
3946.78 (NAVD 88 DATUM)
TO THE POINT OF INTERSECTION
FEET FROM A 1/2" INCH REBAR FOUND FOR THE NORTHWEST
CORNER OF TRACT 11, NELLE D. MANDY SURVEY NO. 239

DATE: _____ BY: _____
REVISIONS: _____

o&a
engineers • architects • planners
TEXAS REGISTERED ENGINEERING FIRM F-464
4712 Woodrow Behm, Ste. F, El Paso, TX 79924
Office: 915-54-1522 Fax: 915-54-1528 www.oandae.com

ENGINEER'S SEAL
ALAN D. HERRERA
10414
REGISTERED PROFESSIONAL ENGINEER
EXPIRES 12/31/14

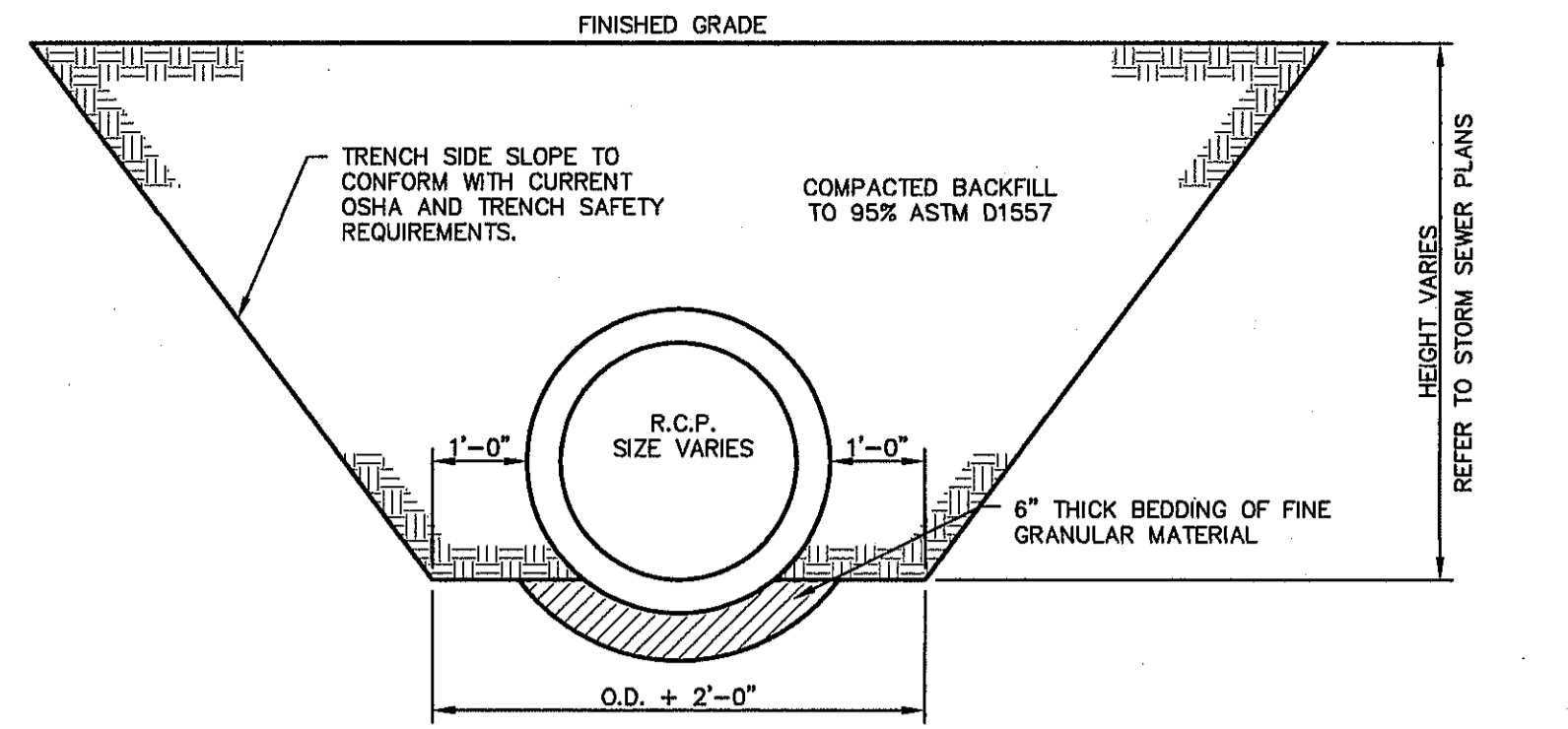
SCALE: AS SHOWN
Horizontal: N/A
Vertical: N/A
Contour Interval: N/A

DATE: DECEMBER 2014
DESIGN BY: A.H.
DRAWN BY: J.H.
CHKD. BY: J.L.A.
APP'D. BY: _____
JOB No. 2060-028-1D

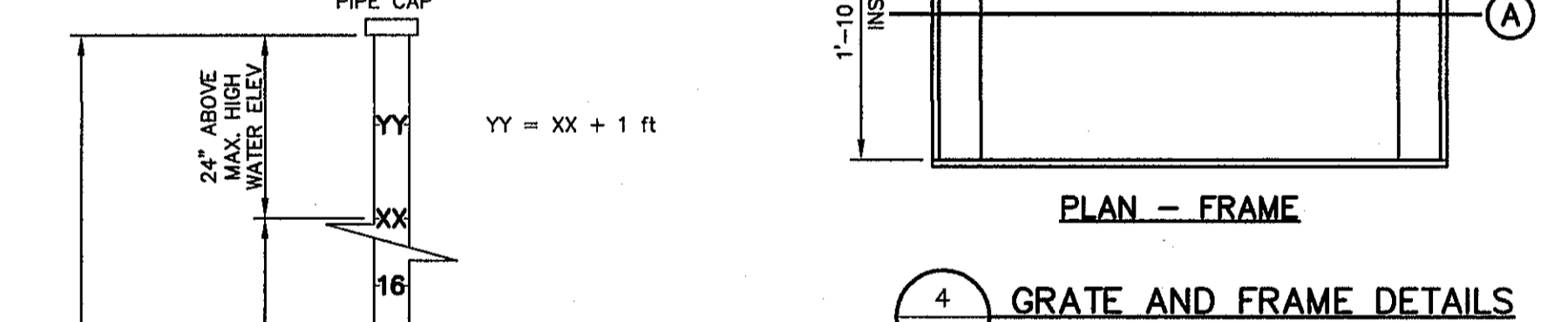
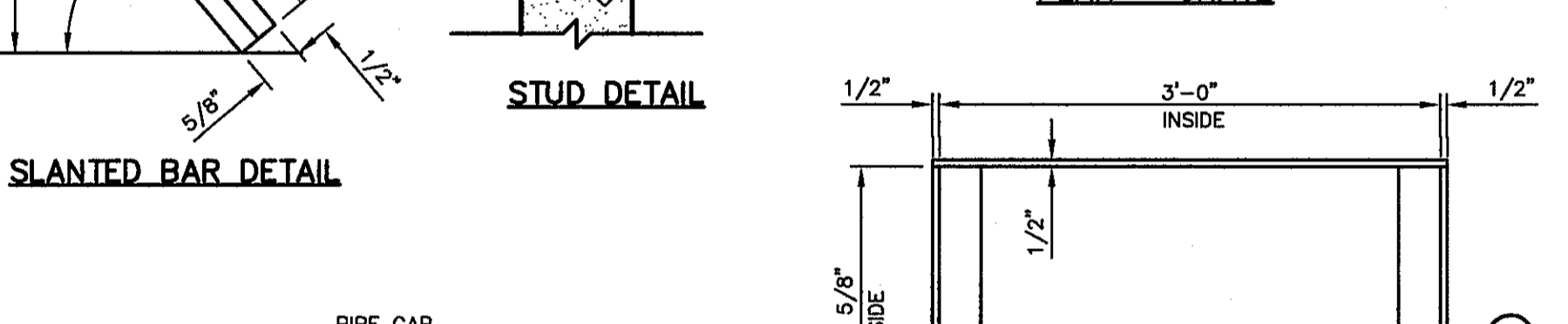
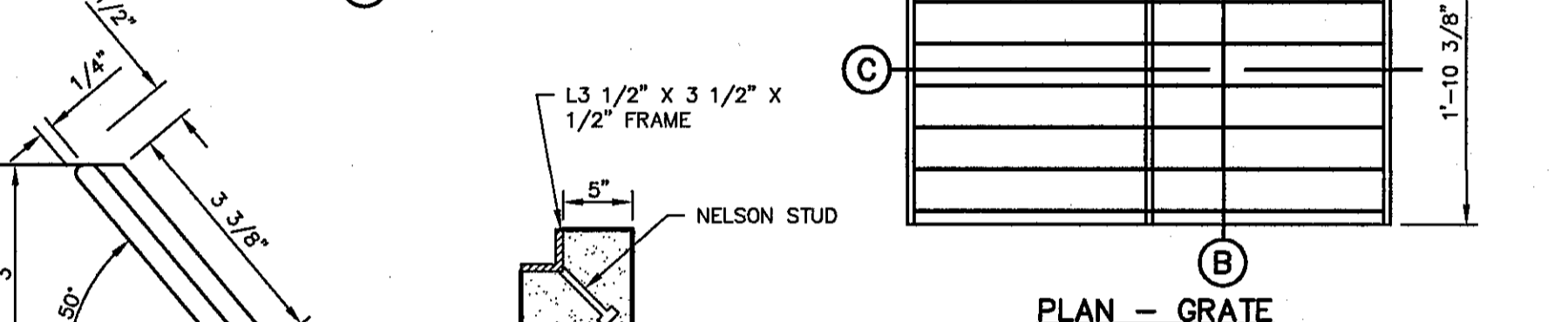
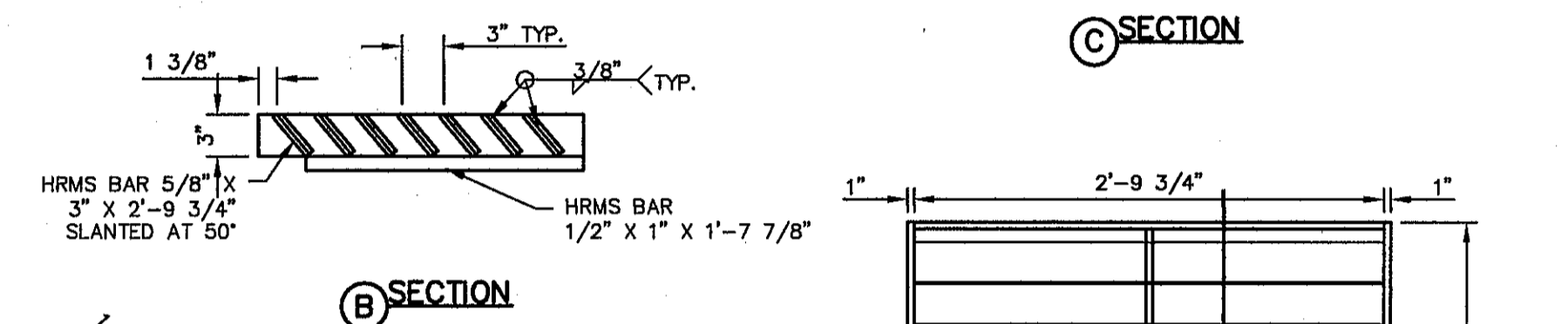
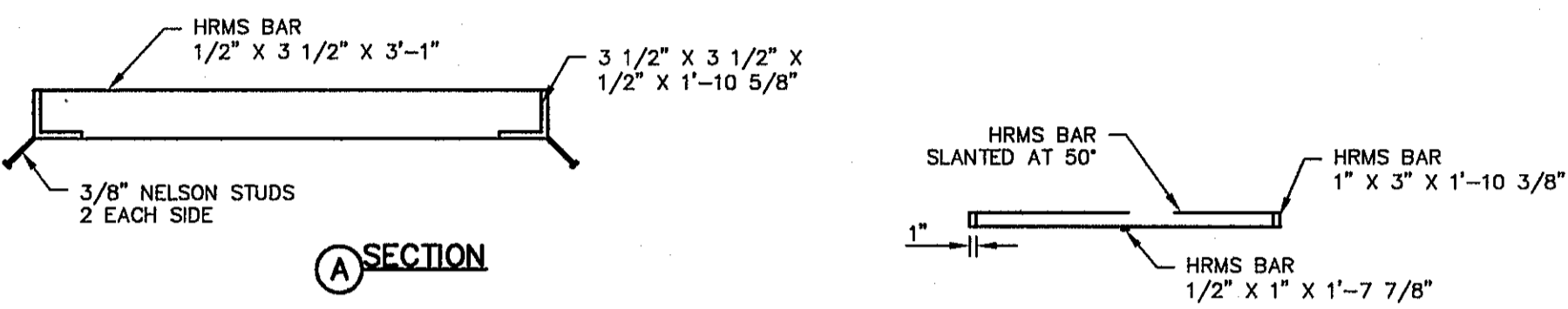
PROJECT TITLE
DESERT SPRINGS UNIT FOUR
SUBDIVISION IMPROVEMENTS

SHEET TITLE
STANDARD DETAILS
(SHEET 5 OF 5)
SHEET NO.
C10.5

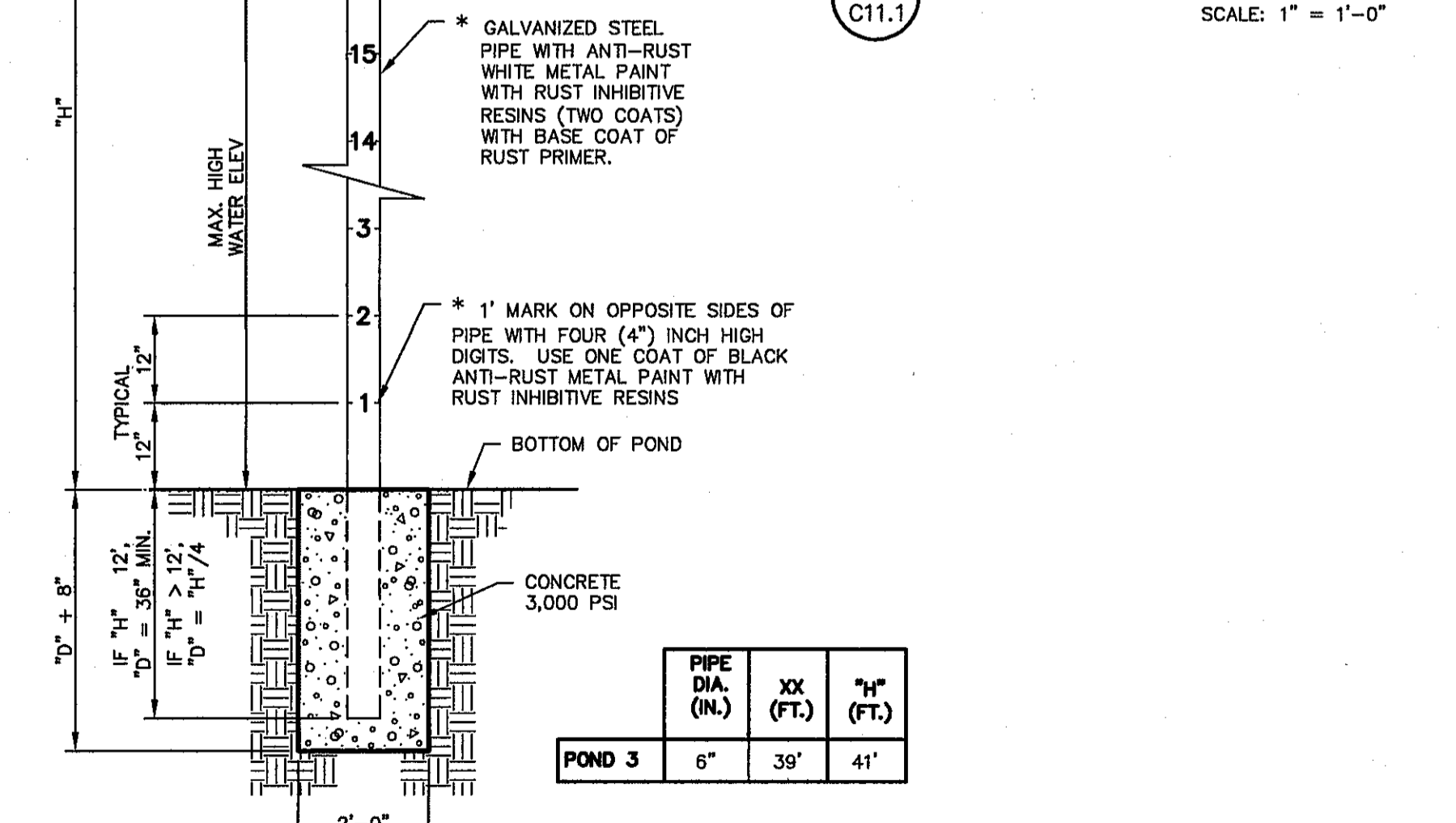
Final Approval



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

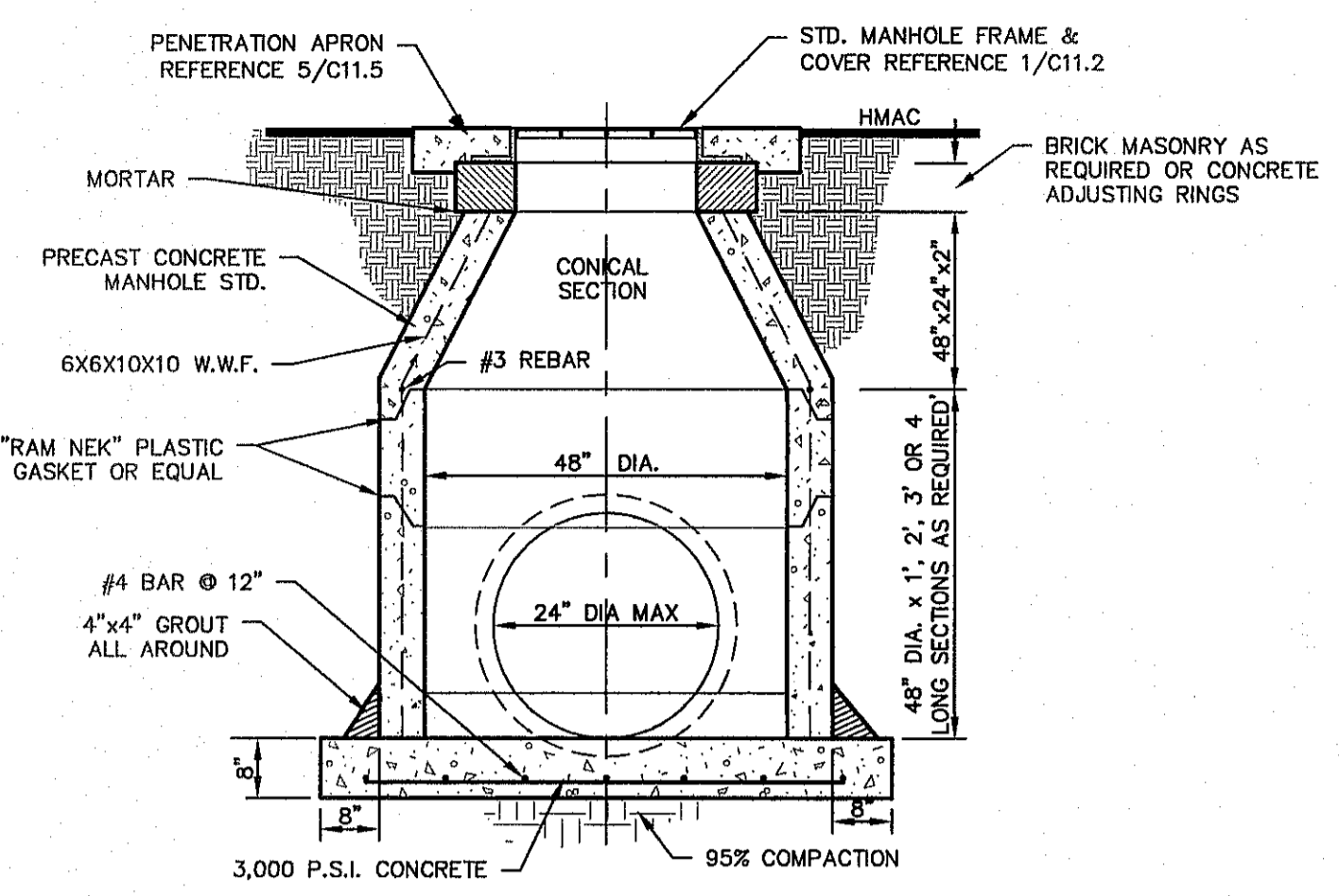


4 GRATE AND FRAME DETAILS
SCALE: 1" = 1'-0"



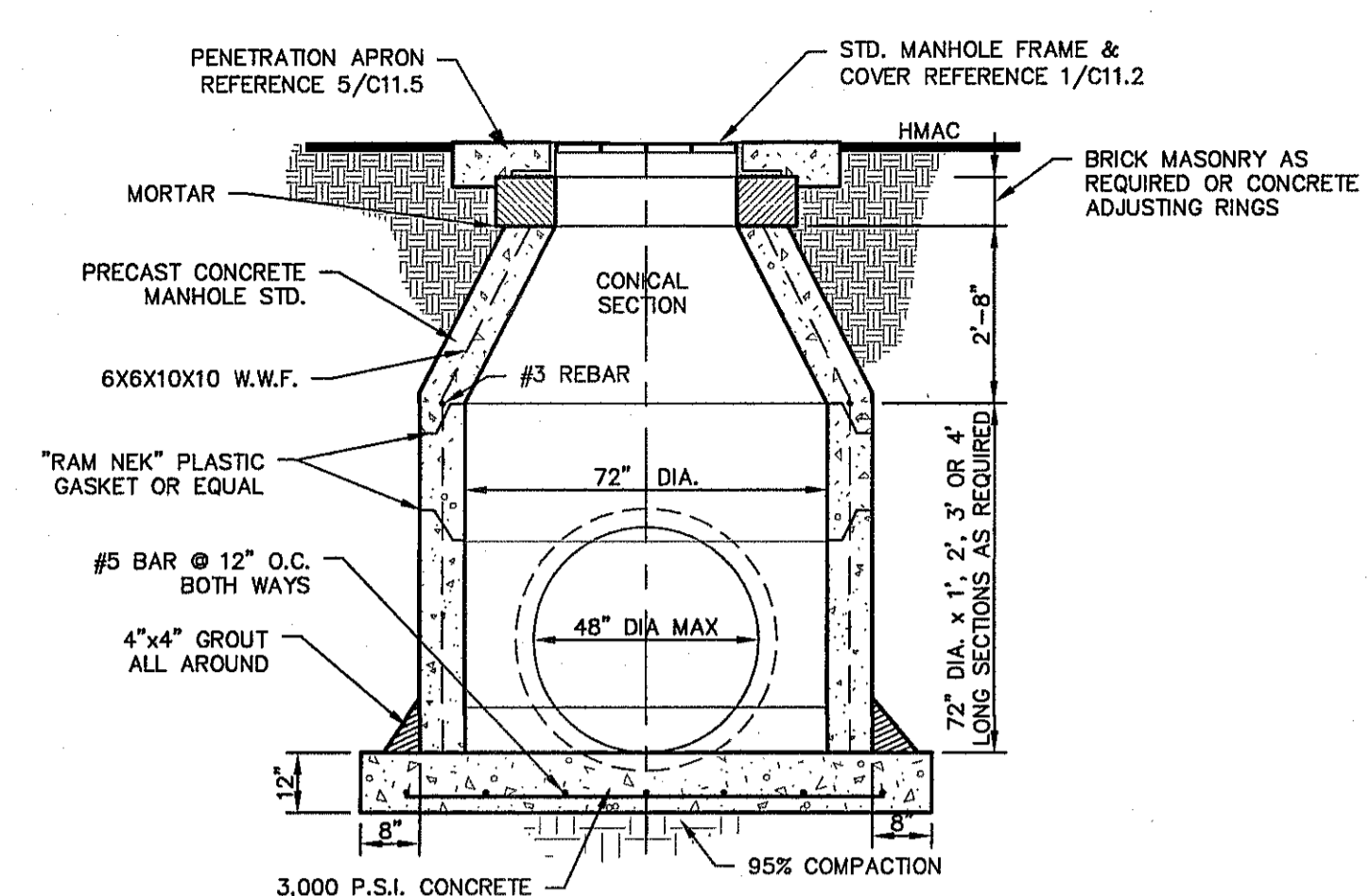
- NOTES:**
- CONSULT WITH PAINT MANUFACTURER FOR PRODUCTS THAT CAN SUSTAIN LONG PERIODS OF MOISTURE.
 - GUAGE REQUIRED IN PONDS OF GREATER THAN FIVE (5') FOOT DEPTH ONLY.
 - "h"=Height
 - xx = MAXIMUM HIGH WATER ELEVATION BASED ON A 100-YR STORM EVENT ROUNDED TO NEAREST WHOLE NUMBER.
 - ALTERNATES WILL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

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



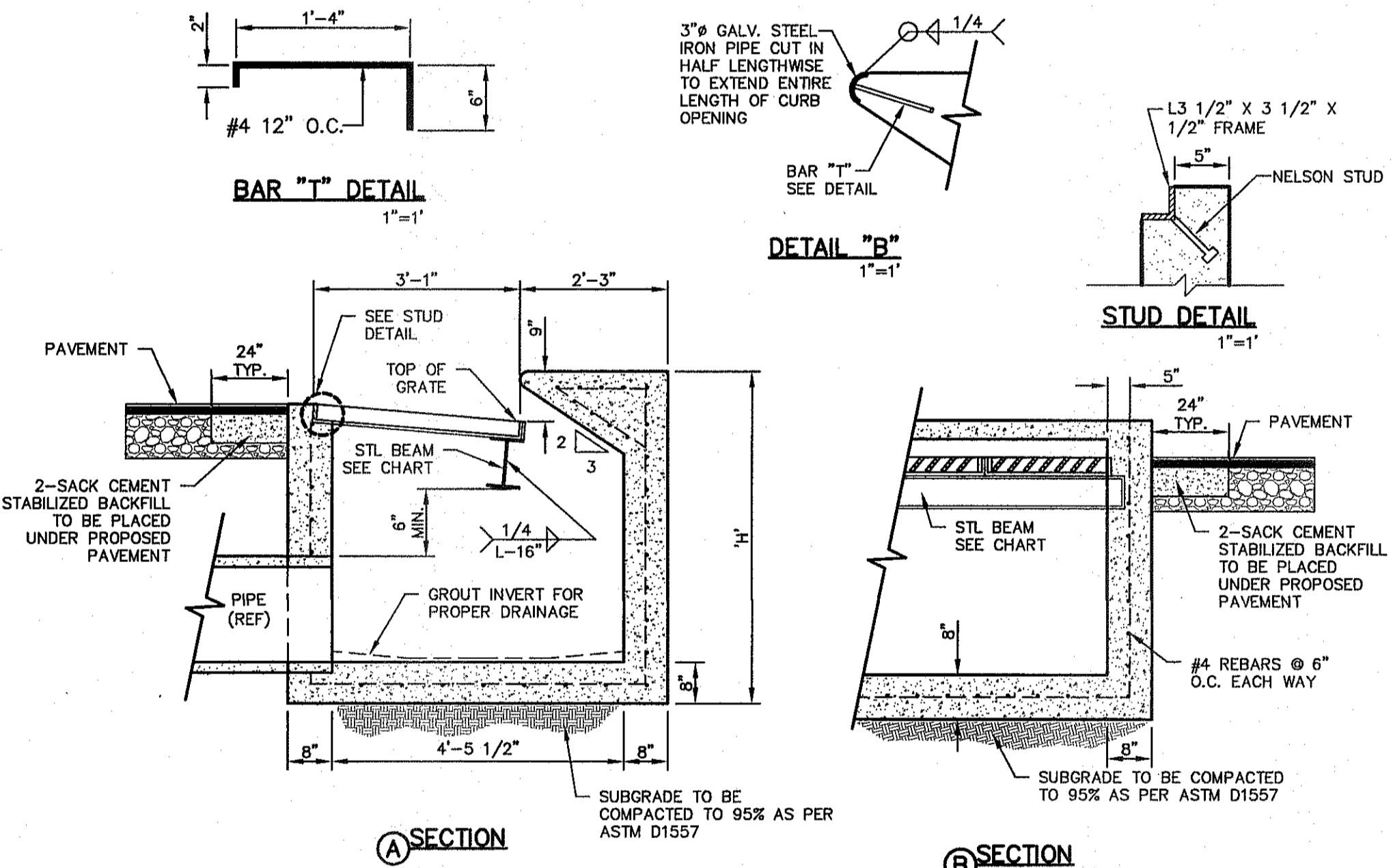
- NOTES:**
- ALL CONCRETE SHALL HAVE 3,000 PSI MIN. @ 28 DAYS.
 - NINETY-FIVE (95%) PERCENT COMPACTION AS PER ASTM D-1557 UNDER ALL CONCRETE STRUCTURES.
 - REINFORCED STEEL SHALL BE DEFORMED AND A MINIMUM OF GRADE 40.

2 48\"/>



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

3 72\"/>



DROP INLET GENERAL NOTES:

- WELDED STEEL OR CAST GRATES AS DETAILED ARE ALL ACCEPTABLE GRATES. MIXING OF ALTERNATE TYPES OF GRATES ON THE SAME PROJECT WILL BE PERMITTED WITH THE APPROVAL OF DEVELOPMENT SERVICES.
- ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE CURRENT STANDARD SPECIFICATIONS.
- SHARP EDGES RESULTING FROM FABRICATION SHALL BE DULLED BY ANY ACCEPTABLE METHOD FOR SAFETY IN HANDLING.
- GRATES SHALL BE INSTALLED IN FRAME WITH FLOW ARROW POINTING DOWNSTREAM OR TOWARD THE LOW POINT IN A SUMP.
- WELDED GRATES SHALL BE STRUCTURAL STEEL CONFORMING TO THE REQUIREMENTS OF AASHTO M-183 OR OF CORROSION RESISTANT STRUCTURAL STEEL CONFORMING TO THE REQUIREMENTS OF AASHTO M-181 OR M-222 OR BE MADE OF OTHER APPROVED STEELS OF EQUAL QUALITY. MIXING GRADES OF STEEL ON THE SAME GRATE WILL NOT BE PERMITTED.
- GRATES MADE OF M-183 STEEL SHALL BE GALVANIZED IN ACCORDANCE WITH AASHTO M-111 SPECIFICATIONS OR SHALL BE PAINTED WITH INORGANIC ZINC PAINTS, MEETING THE REQUIREMENTS OF CURRENT STANDARD SPECIFICATIONS.
- ALL WELDS SHALL HAVE A MINIMUM OF 1/4" FILLET AND SHALL CONFORM TO THE SPECIFICATIONS FOR HIGHWAY CONSTRUCTION AND TO THE AWS STRUCTURAL WELDING CODE. ELECTRODES SHALL BE COMPATIBLE TO THE DIFFERENT GRADES OF STEEL THAT COMPOSE THE GRATE MEMBERS.
- CAST GRATES SHALL BE CAST STEEL CONFORMING TO THE REQUIREMENTS OF AASHTO M-103, GRADE 65-35 OR OF DUCTILE IRON CONFORMING TO THE REQUIREMENTS OF ASTM A-536, SPECIAL GRADE 60-45, OR OF GRAY IRON CONFORMING TO THE REQUIREMENTS OF AASHTO M-105, CLASS 35B OR ASTM A-48 CLASS 35B. THE SPECIFICATIONS OF GENERAL APPLICATION FOR CAST STEEL GRATES SHALL BE AASHTO M-103 SCOPE 1.2.1, GRADE N-1.
- FERROUS CASTINGS SHALL BE OF UNIFORM QUALITY, FREE OF BLOWHOLES, POROSITY, HARD SPOTS, SHRINKAGE DISTORTION OR OTHER DEFECTS. THEY SHALL BE SMOOTH AND WELL CLEANED BY SHOT BLASTING OR OTHER APPROVED CLEANING METHOD. AFTER CLEANING THEY SHALL BE COATED WITH ASPHALT BASE PAINT RESULTING IN A SMOOTH COATING, TOUGH AND TENACIOUS WHEN COLD, NOT TACKY OR BRITTLE.
- ALL CASTING SHALL BE MANUFACTURED TRUE TO PATTERN. COMPONENT PARTS SHALL FIT TOGETHER IN A SATISFACTORY MANNER.
- ALL CONCRETE TO BE 3,000 PSI. CHAMFER ALL EXPOSED EDGES 3/4". ALL DIMENSIONS RELATING TO REINFORCING STEEL ARE TO CENTER OF BARS.
- MINIMUM CONCRETE COVER SHALL BE 1 1/2" FOR STEEL REINFORCING.
- EXPANSION MATERIAL TO BE 1/2" BITUMINOUS FIBER AND PLACED WHERE PROPOSED CONCRETE COMES IN CONTACT WITH ANY EXISTING OR PROPOSED CONCRETE OR MASONRY STRUCTURE.
- STRUCTURAL STEEL SHALL BE SHOP PAINTED IN ACCORDANCE WITH TxDOT ITEM 446 "PAINT AND PAINTING."
- SURFACE OF ALL EXPOSED CONCRETE SHALL CONFORM IN SLOPE AND GRADE TO EXISTING OR PROPOSED CURB AND WALK ADJACENT TO INLETS.
- GRATES WILL BE DEPRESSED 1" BELOW PROPOSED OR EXISTING GRADE.
- ALL REINFORCING BARS TO BE #4 BARS AT 6" O.C. GRADE 60. BEND BARS AROUND PIPE OPENINGS.
- LOCATION OF SEWER PIPES SHOWN ELSEWHERE IN PLANS.
- TWO 3/8"x4" LONG CONCRETE ANCHOR STUDS REQUIRED FOR EACH SIDE OF FRAME, WHERE RESTING ON CONCRETE, USE NELSON STUDS OR EQUAL.
- THE GRATES OF ALL INLETS WITHIN THE STREET PAVEMENT MUST BE CONSTRUCTED WITH THE GRATE BARS PERPENDICULAR TO THE CURB.
- INLETS TO BE DESIGNATED IN PLANS BY II OF GRATES REQUIREMENTS

* THESE CAPACITIES CORRESPOND TO A CLOGGING FACTOR OF 0.5

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

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

REFERENCES - BENCHMARKS

FOUND A.G.S. SURVEY MARKER STAMPED "CHNO 1880" 3933.83 (CITY OF EL PASO VERTICAL DATUM SHOW) (NOV. 88 DATUM) 3945.78 (NOV. 28 DATUM) 3945.78 (NOV. 28 DATUM)

TIE TO THE PROJECT BENCHMARK IS NESTED 89' W, 4.00R.83 FEET FROM A 1/2" INCH REBAR FOUND FOR THE NORTHWEST CORNER OF TRACT 11, WELLS D. HUNDT SURVEY NO. 259

DATE _____ REVISIONS _____ BY _____

ENGINEER'S SEAL

ALAN D. HERRERA
10414
4712 Woodrow Blain, Ste. F, El Paso, TX 79924
Office: 915.544.5322 Fax: 915.544.6233 www.oaseng.com

SCALE: AS SHOWN

Horizontal: N/A
Vertical: N/A
Contour Interval: N/A
DATE: DECEMBER 2014
DESIGN BY: A.H.
DRAWN BY: J.H.
CHKD. BY: J.L.A.
APPVD. BY: J.L.A.
JOB No. 2050-028-1D

PROJECT TITLE

DESERT SPRINGS UNIT FOUR

SUBDIVISION IMPROVEMENTS

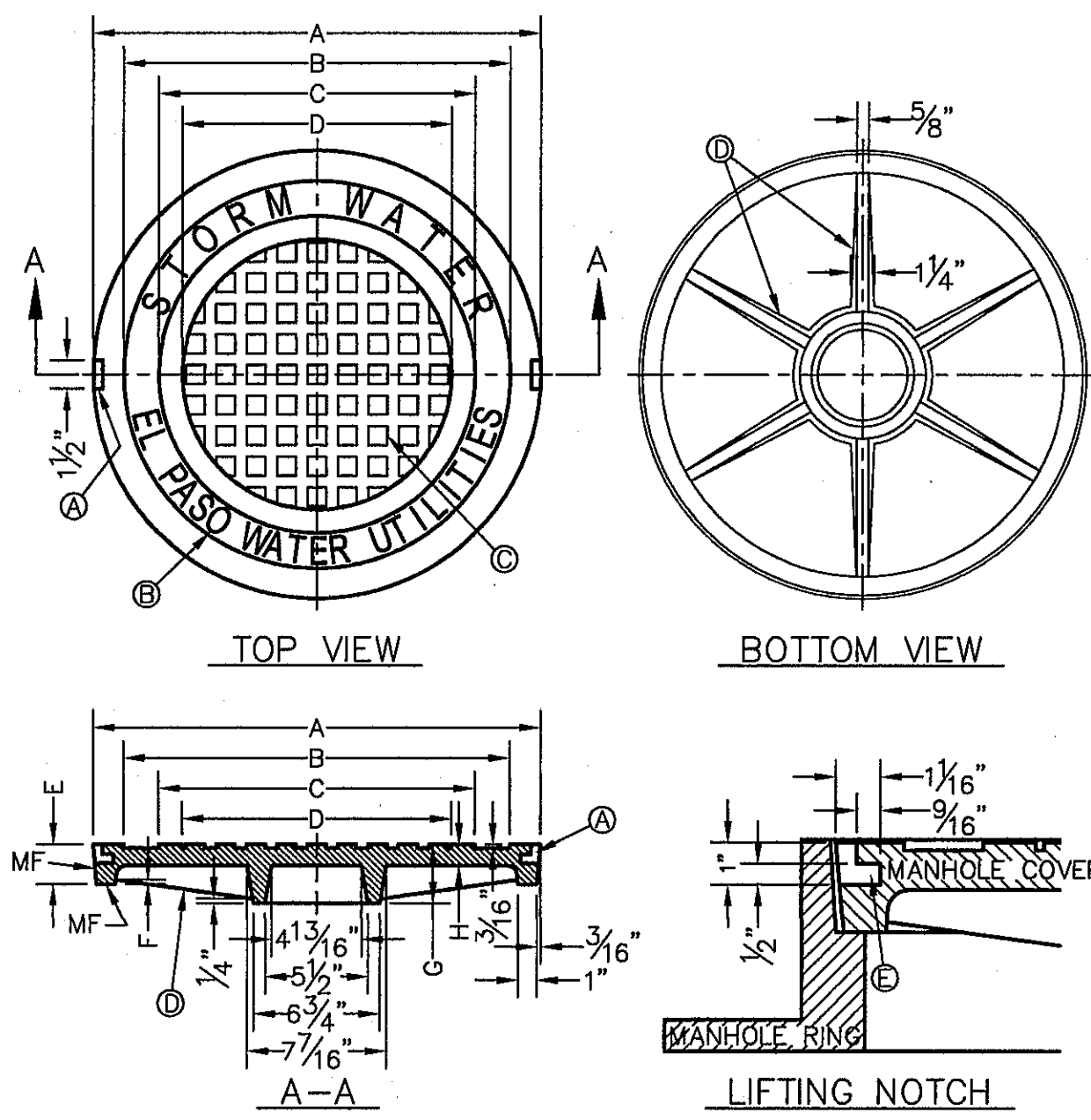
SHEET TITLE

DRAINAGE DETAILS

(SHEET 1 OF 7)
SHEET NO.

C11.1





STORMWATER MANHOLE COVER

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

- CONSTRUCTION KEY NOTES:**
- LIFTING NOTCH.
 - $\frac{3}{16}$ " RAISED LETTERING.
 - 1" SQUARES ($\frac{3}{16}$ " TALL) WITH $\frac{5}{8}$ " SPACE BETWEEN.
 - REINFORCING RIBS.
 - SLOT.

SEE NOTE 6

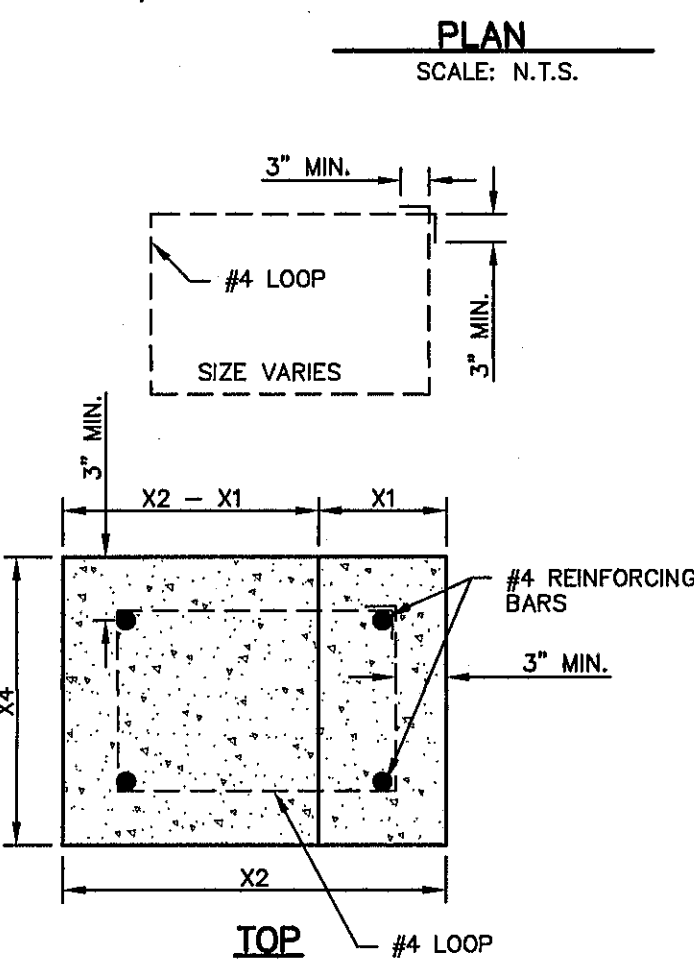
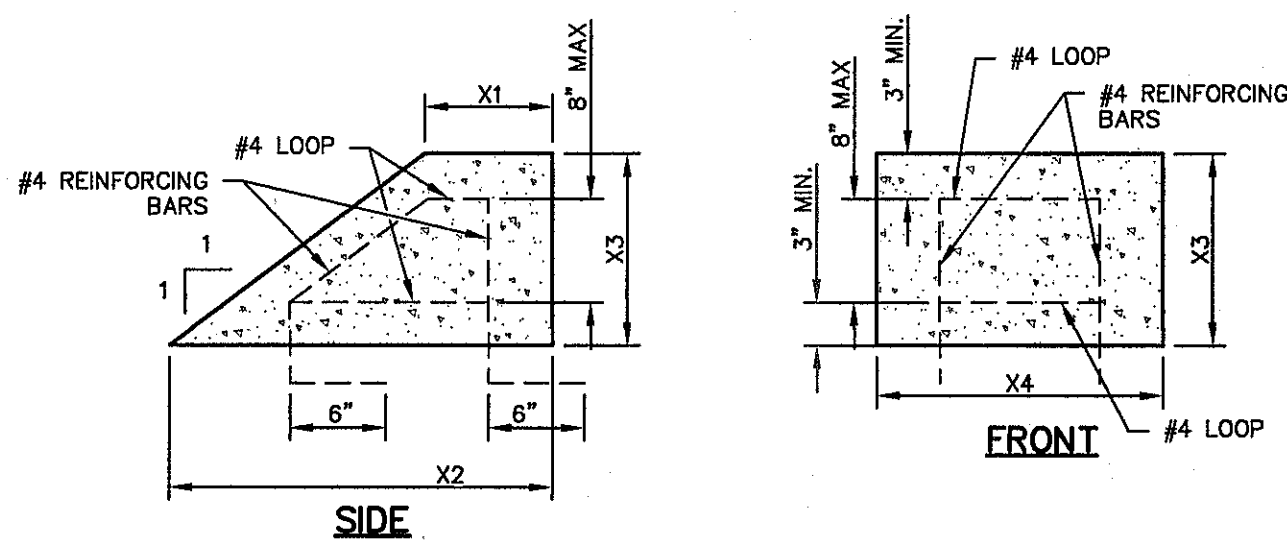
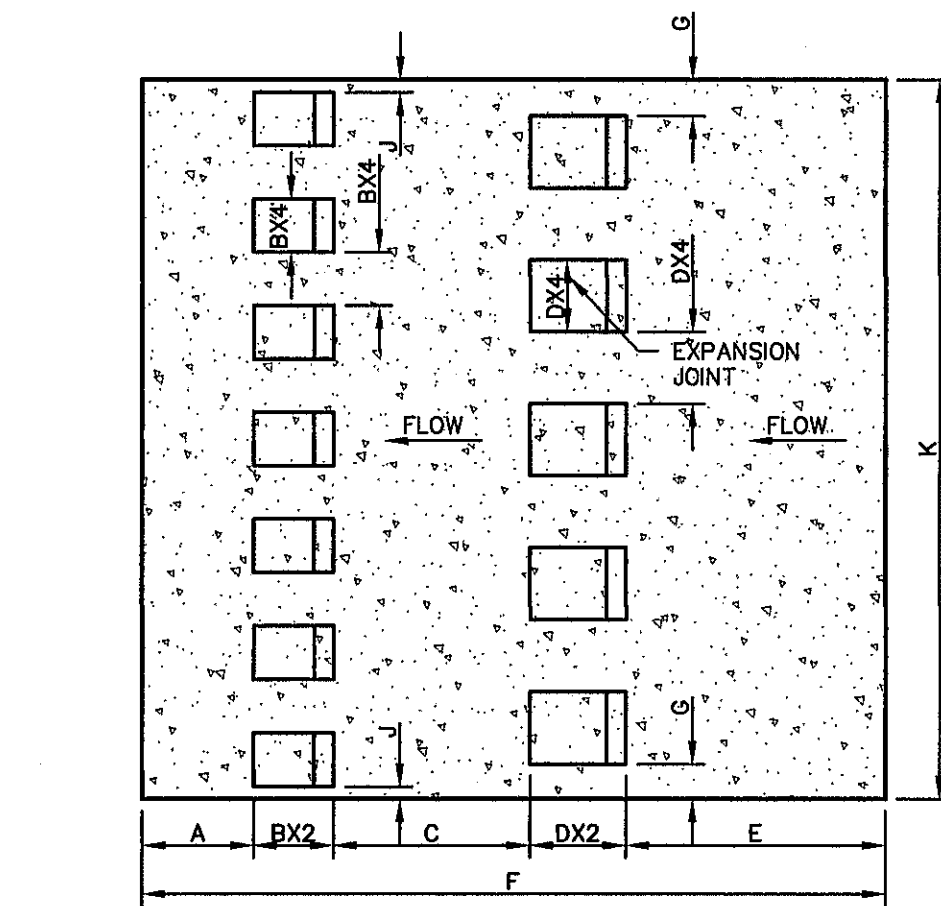
MANHOLE COVER	MANHOLE - ALL TYPES	MANHOLE TYPE 48"	MANHOLE TYPE 72"
A	31 3/8"	25 3/4"	31 1/4"
B	28 1/2"	20 5/8"	28 1/4"
C	24 3/8"	16 7/8"	24 3/8"
D	21 7/8"	14 3/8"	21 7/8"
E	2 1/8"	3"	3"
F	1/4"	1 1/4"	1 1/4"
G	3/8"	3"	3"
H	1 1/8"	1"	1"
WEIGHT	265 lbs.	175 lbs.	310 lbs.

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

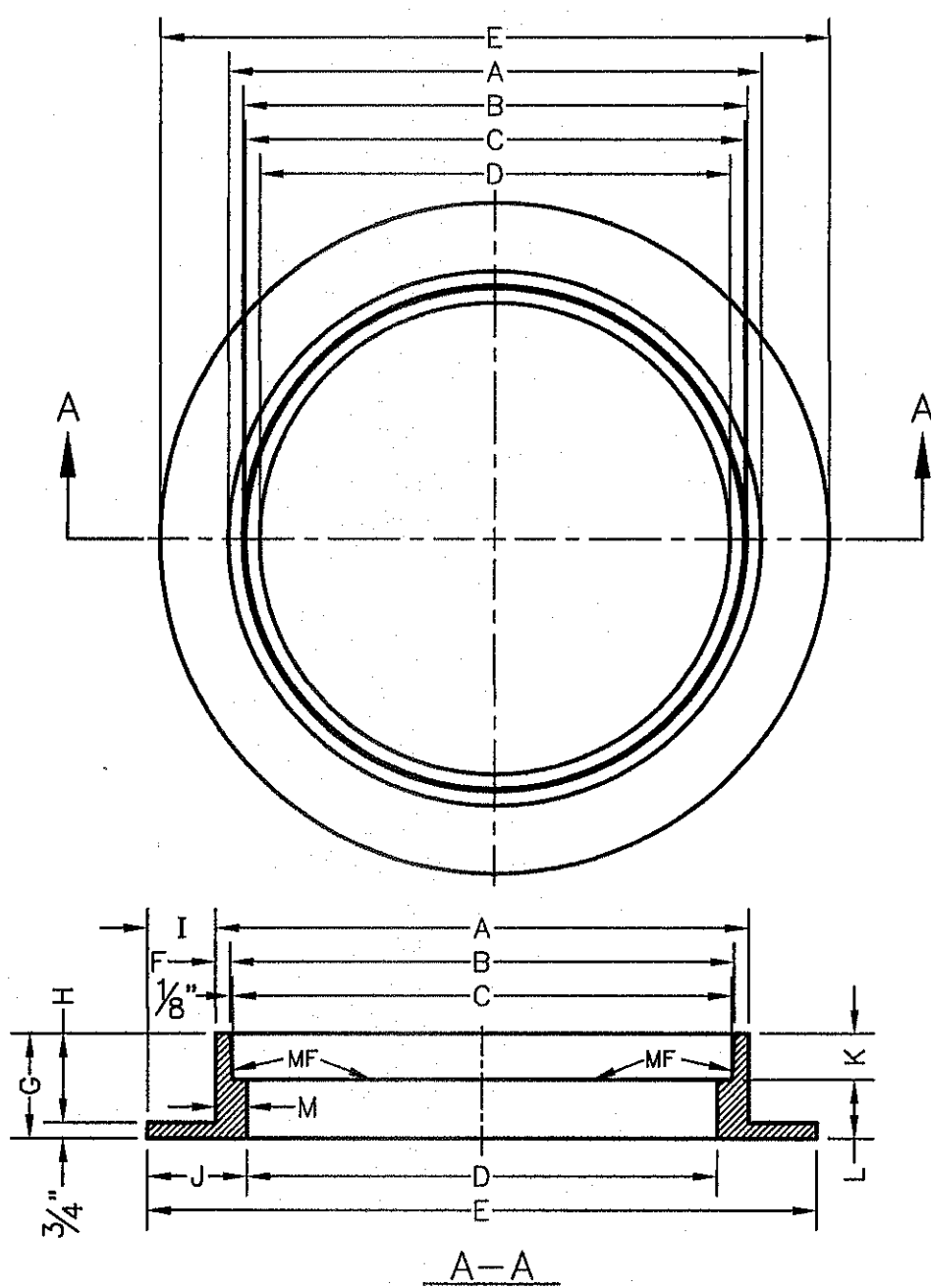
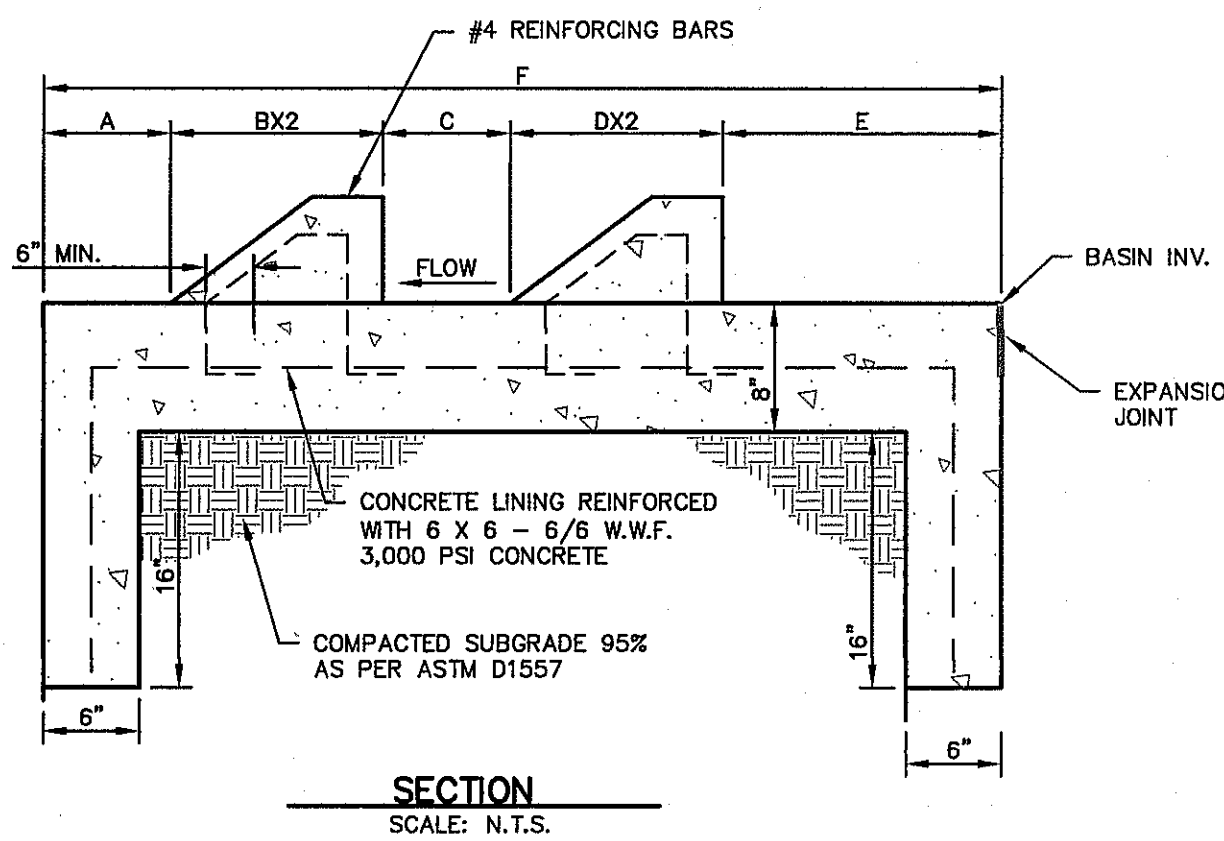
LOCATION	A	BX1	BX2	BX3	BX4	C	DX1	DX2	DX3	DX4	E	F	G	J	K
CULVERT 1 OUTLET - DOWNSTREAM	116.44"	4.75"	28.75"	24"	17.5"	22.75"	6"	34.5"	28.5"	22.25"	54.6"	257.04"	10.33"	7.71"	487.92"
CULVERT 2 OUTLET - DOWNSTREAM	26.5"	5.5"	33.0"	27.5"	20.5"	50"	7.5"	44.5"	37"	26.5"	110"	264"	12.75"	10.75"	370"

- NOTES:**
- ALL CONCRETE SHALL HAVE 3,000 PSI MIN. @ 28 DAYS.
 - REINFORCED STEEL SHALL BE DEFORMED AND A MINIMUM OF GRADE 40.

* REFERENCE 1/C10.5 DETAIL FOR MORE INFORMATION ON DIMENSIONS
** REFER TO C9 (CULVERT CROSSINGS) FOR ADDITIONAL INFORMATION ON DIMENSIONS.



5 ENERGY DISSIPATERS DETAIL
SCALE: 1" = 1'-0"

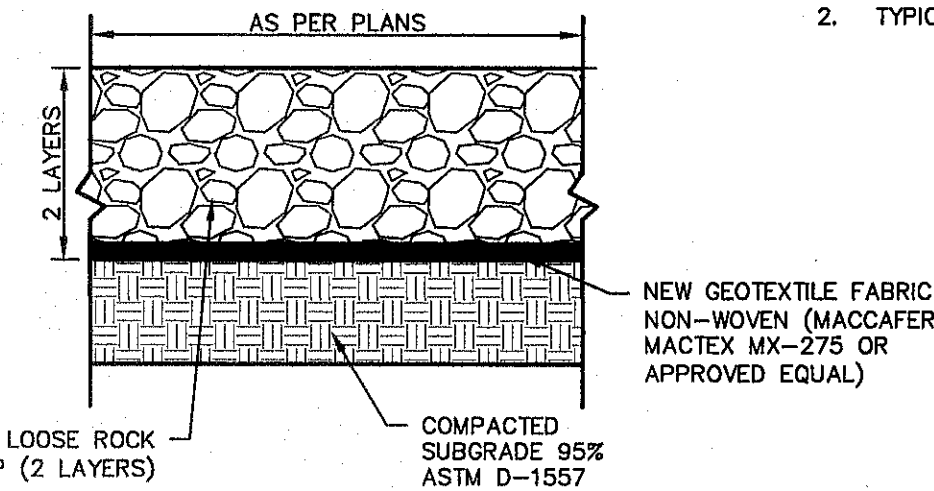


STORMWATER MANHOLE RING

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

SEE NOTE 6

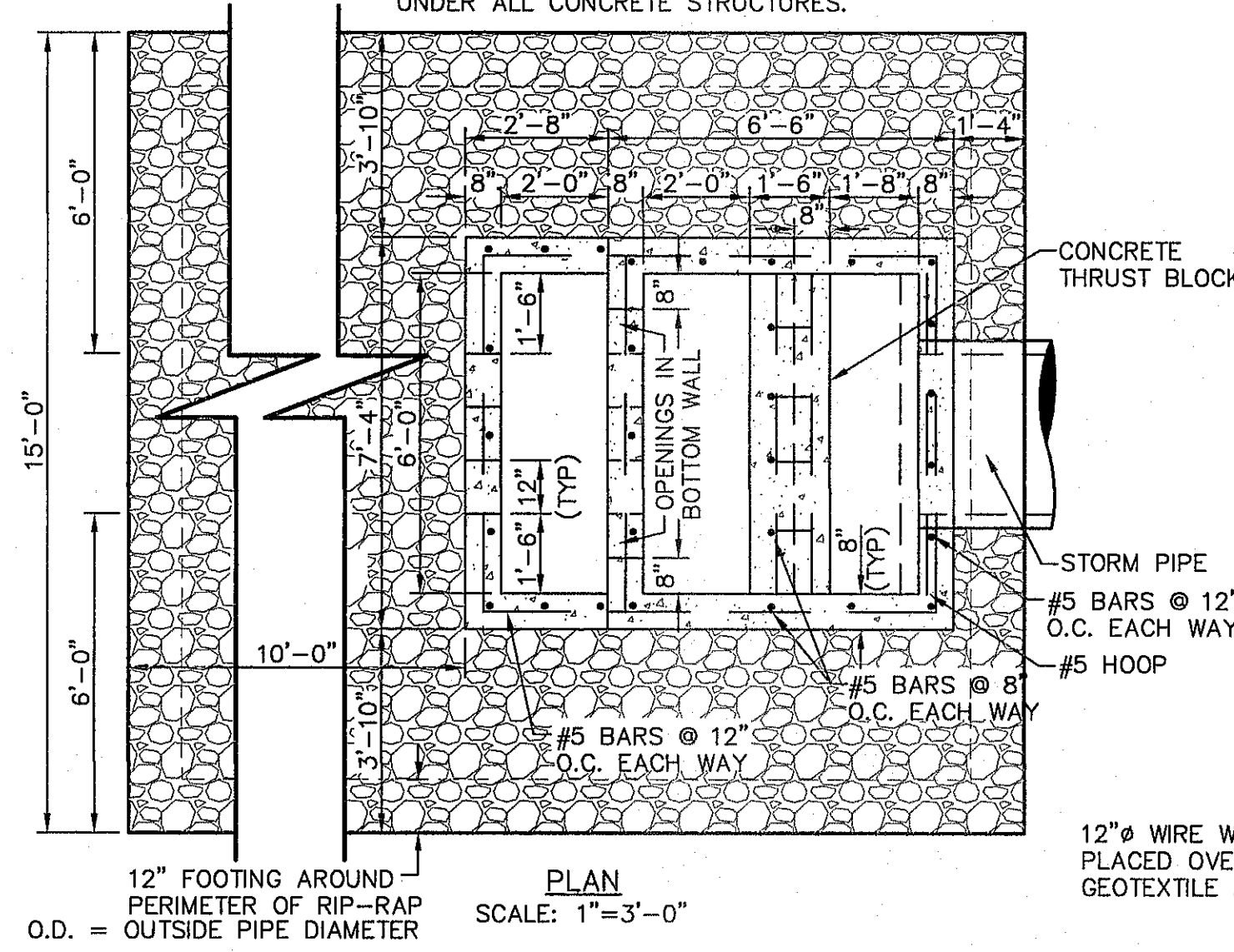
MANHOLE RING	MANHOLE - ALL TYPES	MANHOLE TYPE 48"	MANHOLE TYPE 72"
A	33"	25 3/4"	32 3/4"
B	31 3/4"	23 3/8"	31 3/8"
C	31 1/2"	23 3/8"	31 3/8"
D	30"	22 1/2"	30"
E	39 1/2"	34 1/2"	42"
F	5/8"	1 1/8"	1 1/8"
G	5"	6"	6"
H	4 1/4"	6 1/4"	5 1/4"
I	3 1/4"	4 1/8"	4 1/8"
J	4 3/4"	6"	6"
K	2 3/8"	3 3/8"	3 3/8"
L	2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



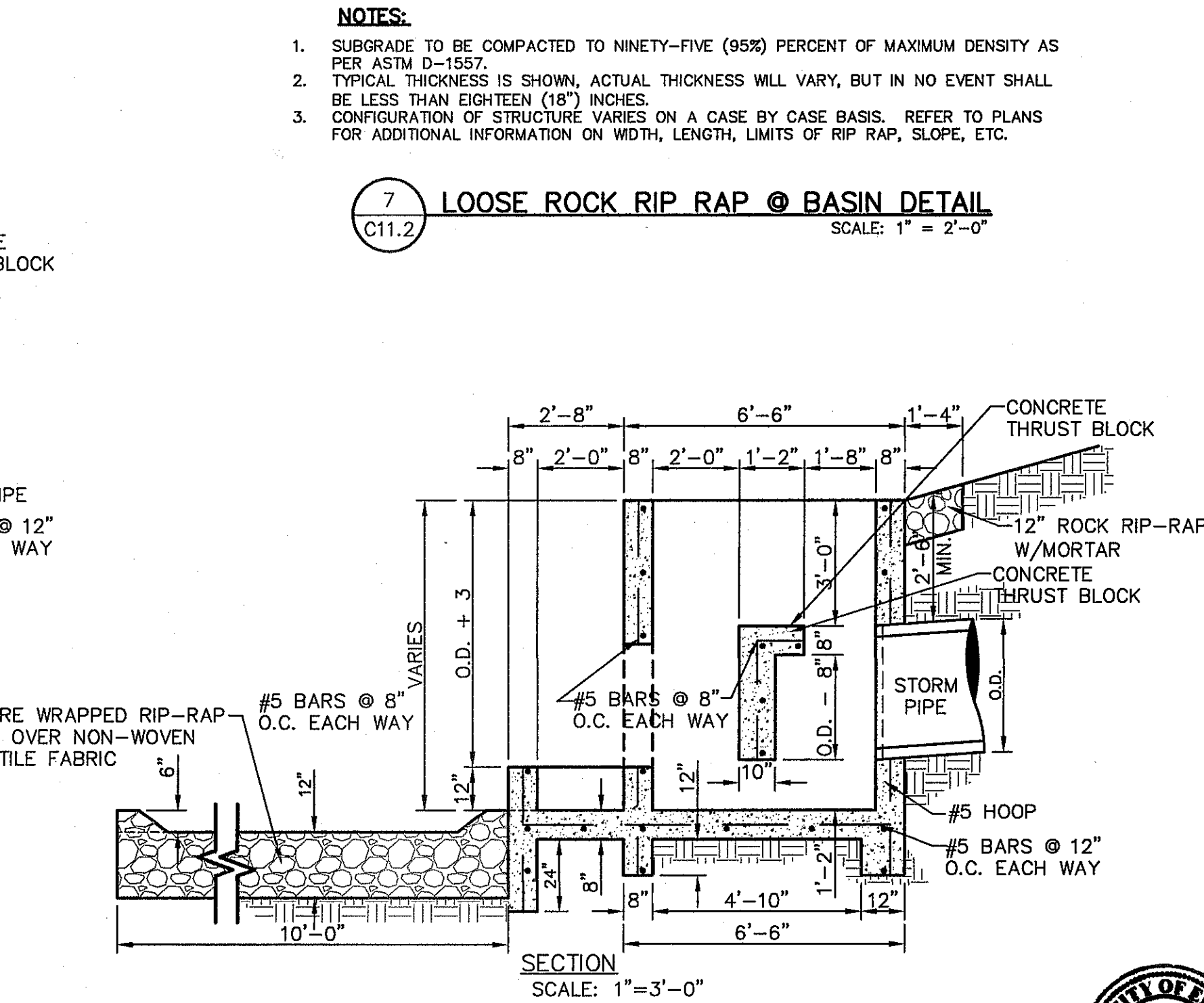
- NOTES:**
- SUBGRADE TO BE COMPACTED TO NINETY-FIVE (95%) PERCENT OF MAXIMUM DENSITY AS PER ASTM D-1557.
 - TYPICAL THICKNESS IS SHOWN, ACTUAL THICKNESS WILL VARY, BUT IN NO EVENT SHALL BE LESS THAN TWELVE (12") INCHES.
 - CONFIGURATION OF STRUCTURE VARIES ON A CASE BY CASE BASIS. REFER TO PLANS FOR ADDITIONAL INFORMATION ON WIDTH, LENGTH, LIMITS OF RIP RAP, SLOPE, ETC.

4 LOOSE ROCK RIP RAP DETAIL
SCALE: 1" = 2'-0"

12" WIRE WRAPPED RIP-RAP PLACED OVER NON-WOVEN GEOTEXTILE FABRIC



PLAN SCALE: 1" = 3'-0"



6 CONCRETE THRUST BLOCK STRUCTURE DETAIL
SCALE AS SHOWN

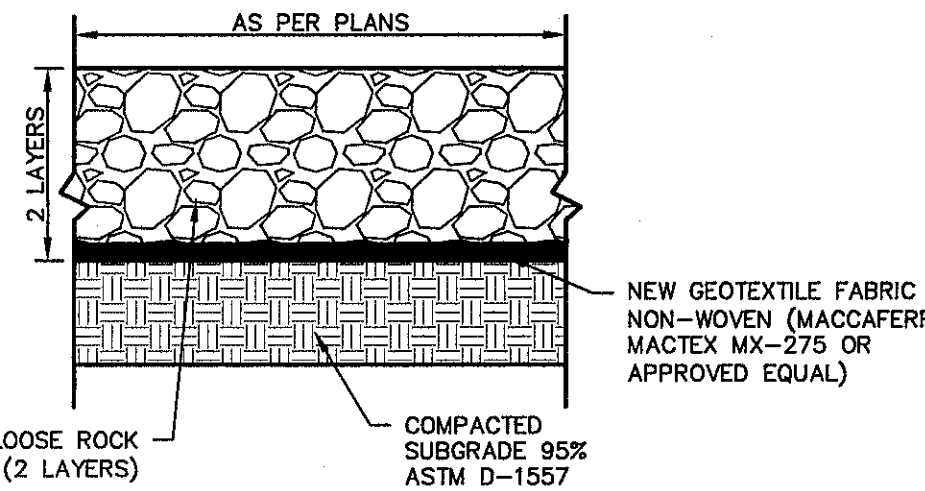
7 LOOSE ROCK RIP RAP @ BASIN DETAIL
SCALE: 1" = 2'-0"

- NOTES:**
- SUBGRADE TO BE COMPACTED TO NINETY-FIVE (95%) PERCENT OF MAXIMUM DENSITY AS PER ASTM D-1557.
 - TYPICAL THICKNESS IS SHOWN, ACTUAL THICKNESS WILL VARY, BUT IN NO EVENT SHALL BE LESS THAN EIGHTEEN (18") INCHES.
 - CONFIGURATION OF STRUCTURE VARIES ON A CASE BY CASE BASIS. REFER TO PLANS FOR ADDITIONAL INFORMATION ON WIDTH, LENGTH, LIMITS OF RIP RAP, SLOPE, ETC.

* MINIMUM DIMENSION UNLESS OTHERWISE PROVIDED IN THE PLANS.

- NOTES:**
- SUBGRADE TO BE COMPACTED TO NINETY-FIVE (95%) PERCENT OF MAXIMUM DENSITY AS PER ASTM D-1557.
 - TYPICAL THICKNESS IS SHOWN, ACTUAL THICKNESS WILL VARY, BUT IN NO EVENT SHALL BE LESS THAN TWELVE (12") INCHES.

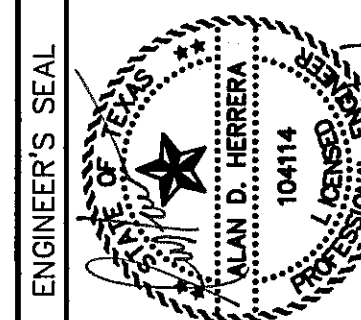
3 DESILTING BASIN DETAIL
SCALE: 1" = 2'-0"



REFERENCES - BENCHMARKS

FOUND N.G.S. SURVEY MARKER STAMPED "CHNO 1980"
ELEVATION: 3933.83 (CITY OF EL PASO VERTICAL DATUM)
SHOW (NAD 83 DATUM)
48 78 39 29
TO THE PROJECT BENCHMARK IS N3739 09' W, 4008.83 FEET FROM A 1/2" INCH REBAR FOUND FOR THE NORTHWEST CORNER OF TRACT 11, BELLE D. MUNDY SURVEY NO. 239 DATE

DESIGNER
CSA
engineers • architects • planners
TEXAS REGISTERED ENGINEERING FIRM F-4664
4712 Woodrow Bann, Ste. F, El Paso, TX 79924
Office: 915.544.5322 Fax: 915.544.5323 www.csaengineers.com



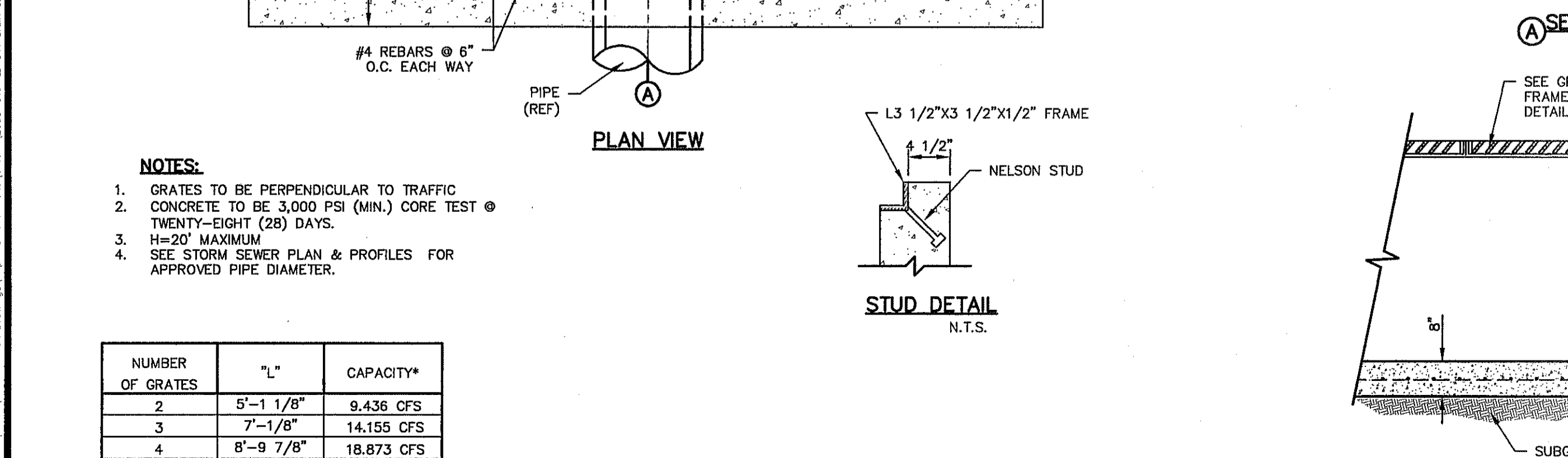
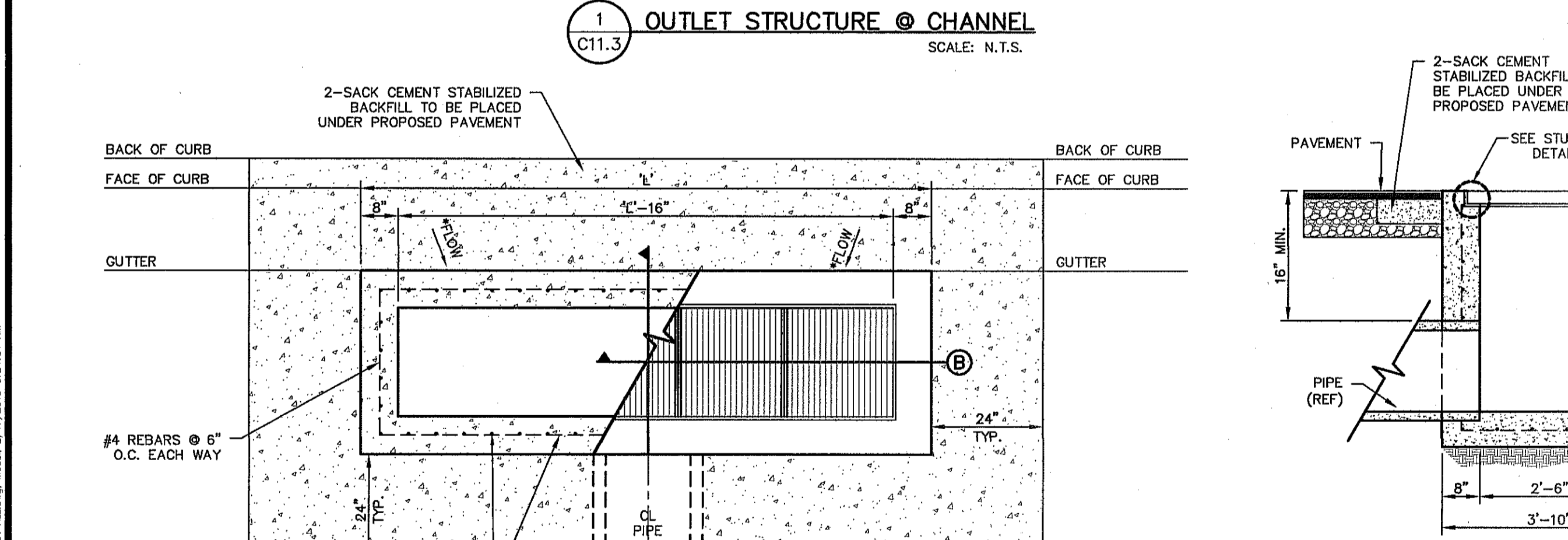
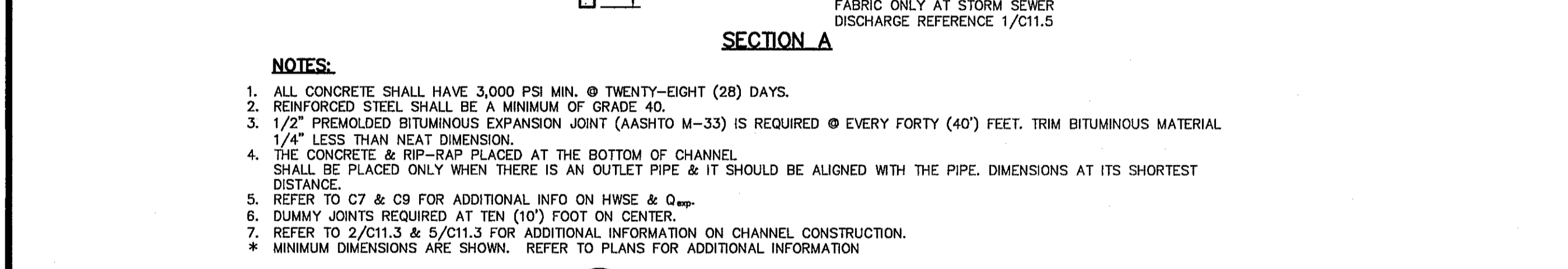
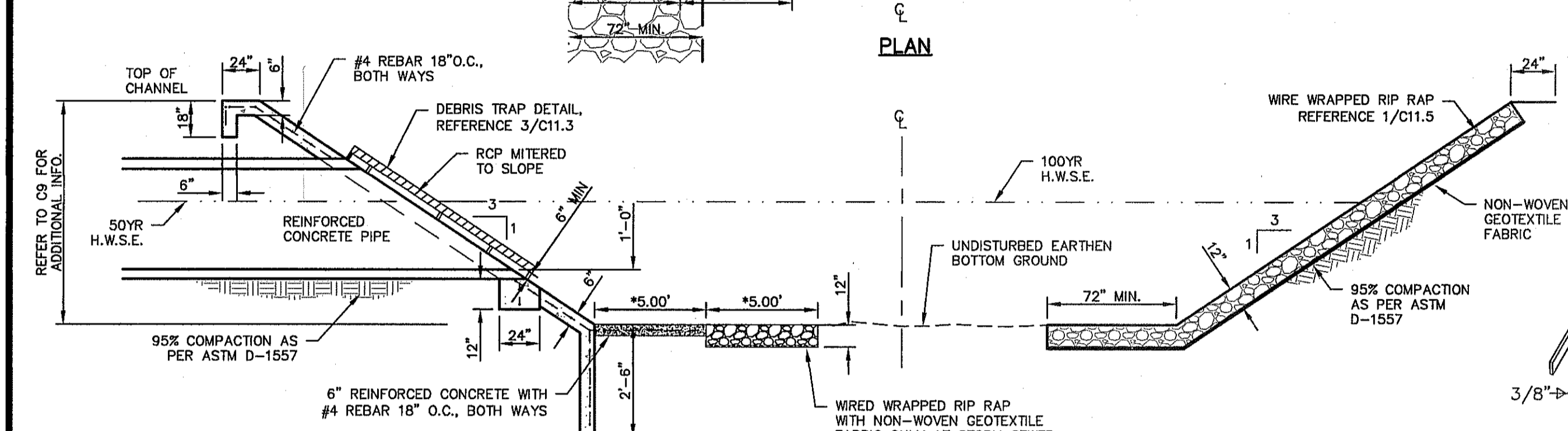
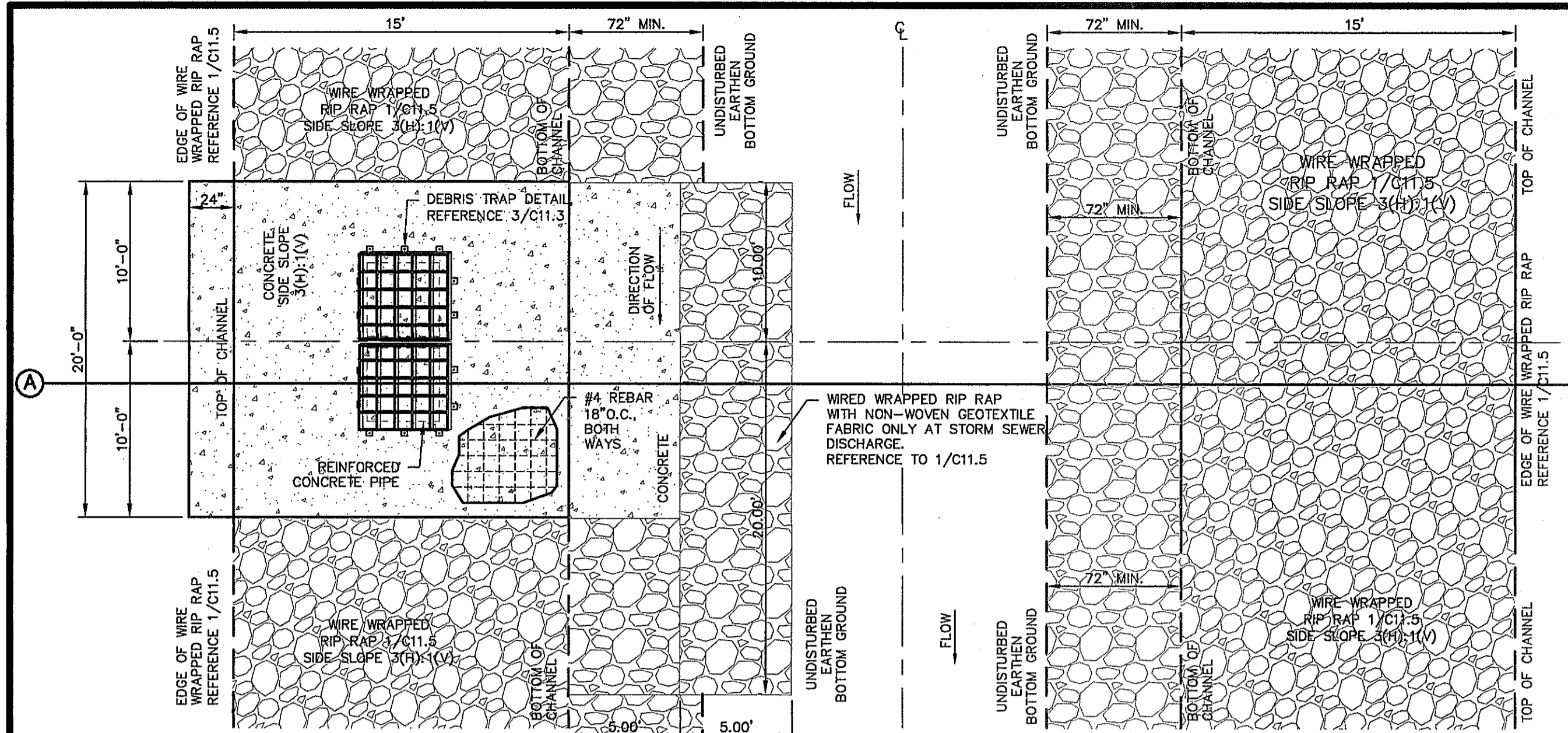
SCALE
Horizontal: AS SHOWN
Vertical: N/A
Contour Interval: N/A
DATE: DECEMBER 2014
DESIGN BY: A.H.
DRAWN BY: J.H.
CHKD. BY: J.L.A.
APP'D. BY: J.L.A.
JOB No. 2060-028-ID

PROJECT TITLE
DESERT SPRINGS UNIT FOUR
SUBDIVISION IMPROVEMENTS

SHEET TITLE
DRAINAGE DETAILS
(SHEET 2 OF 7)
SHEET NO.

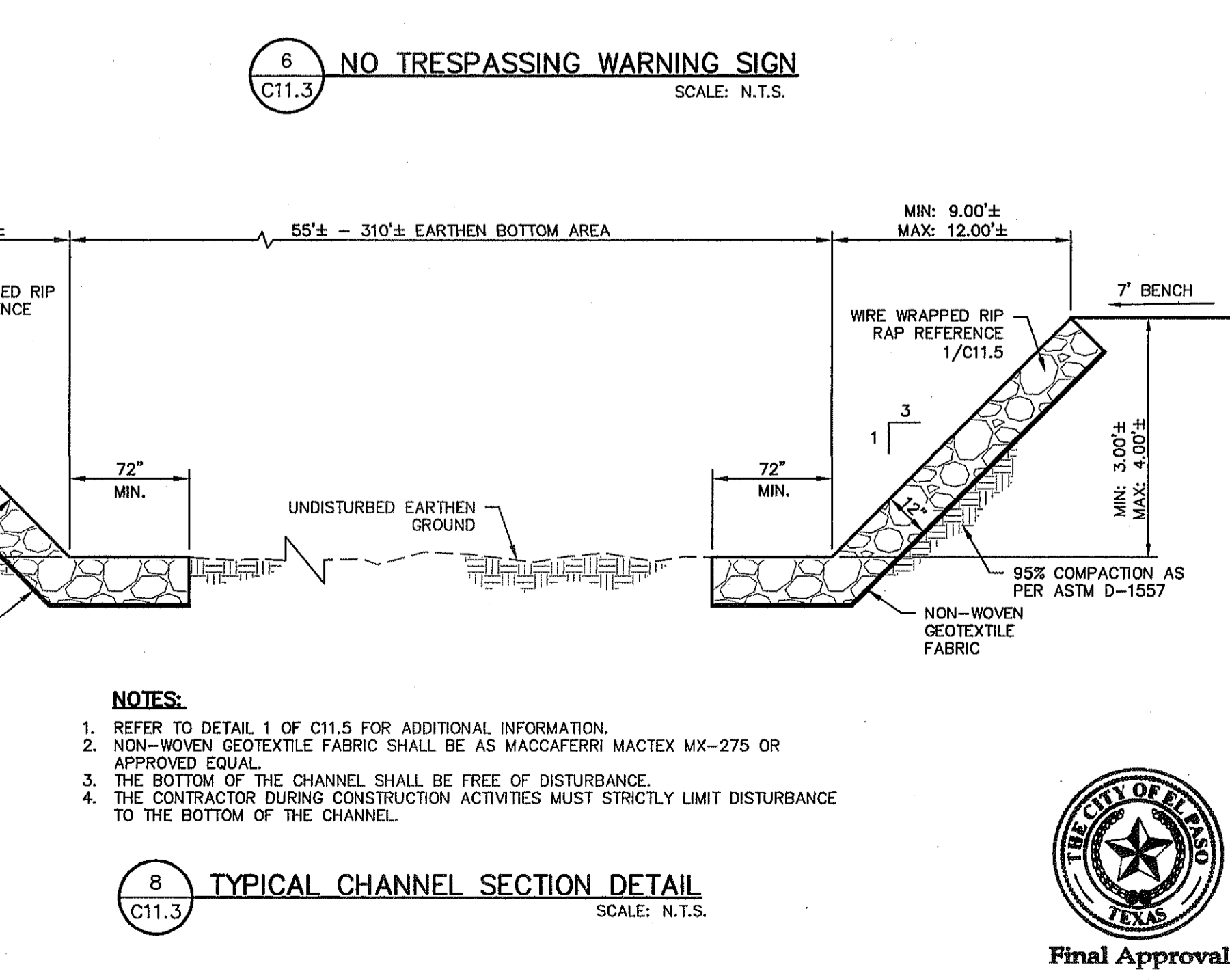
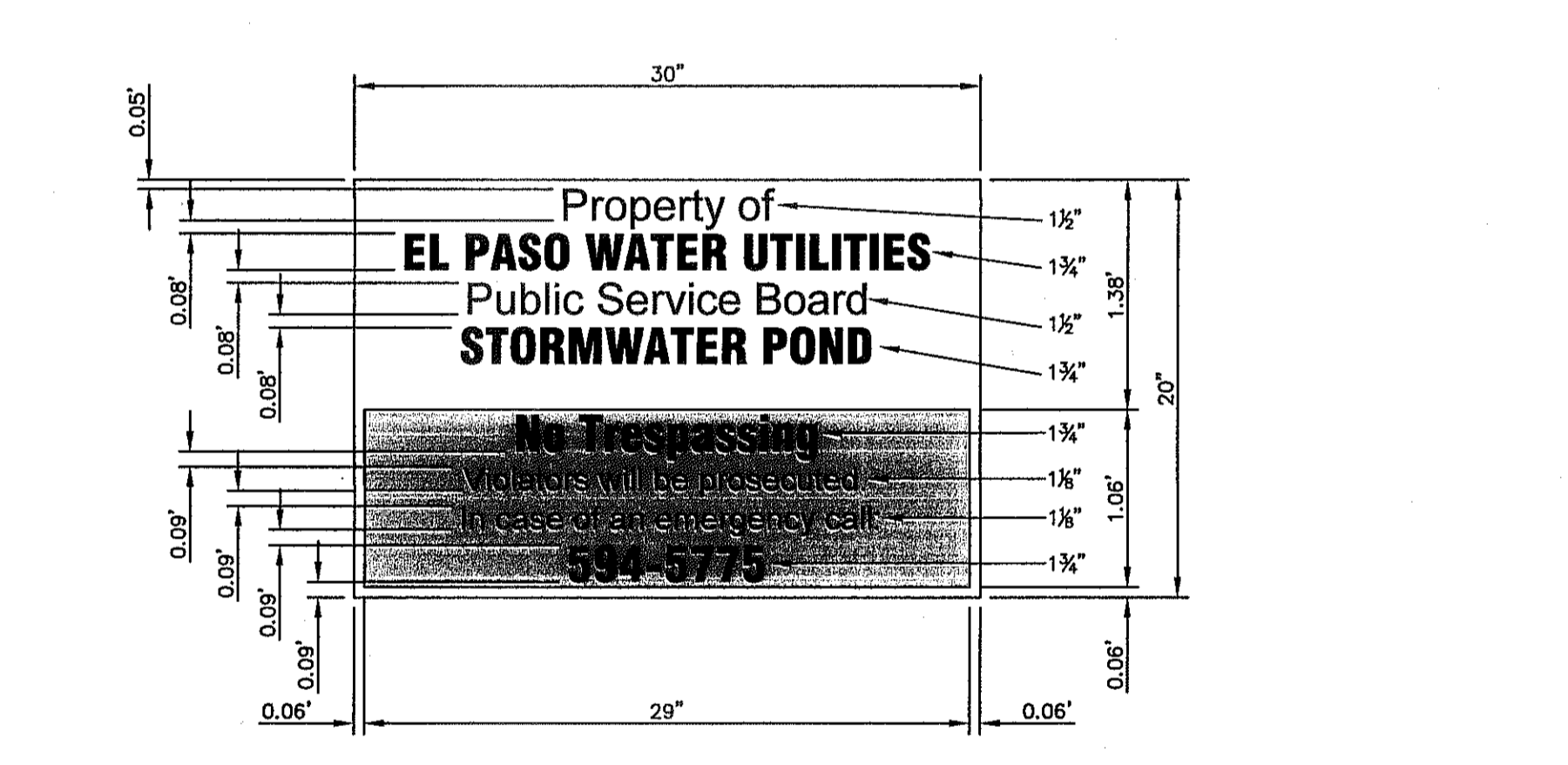
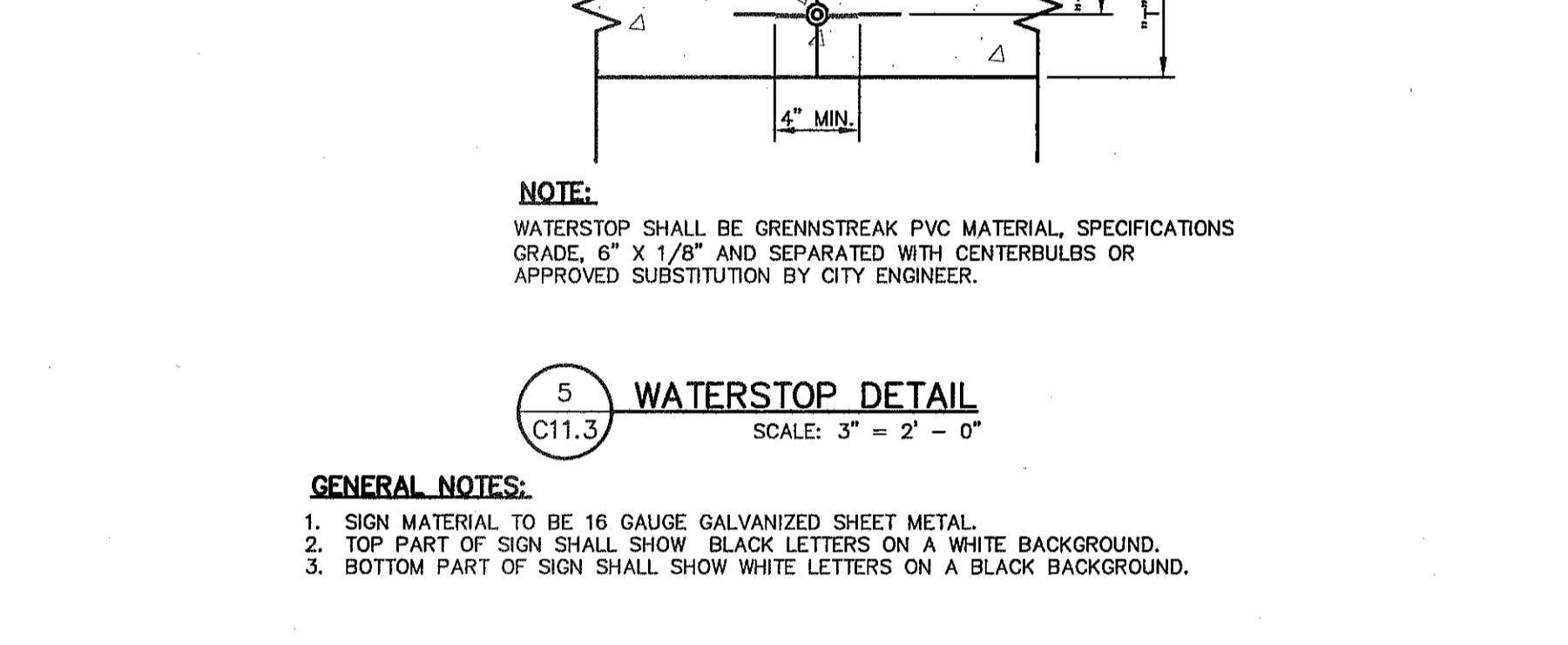
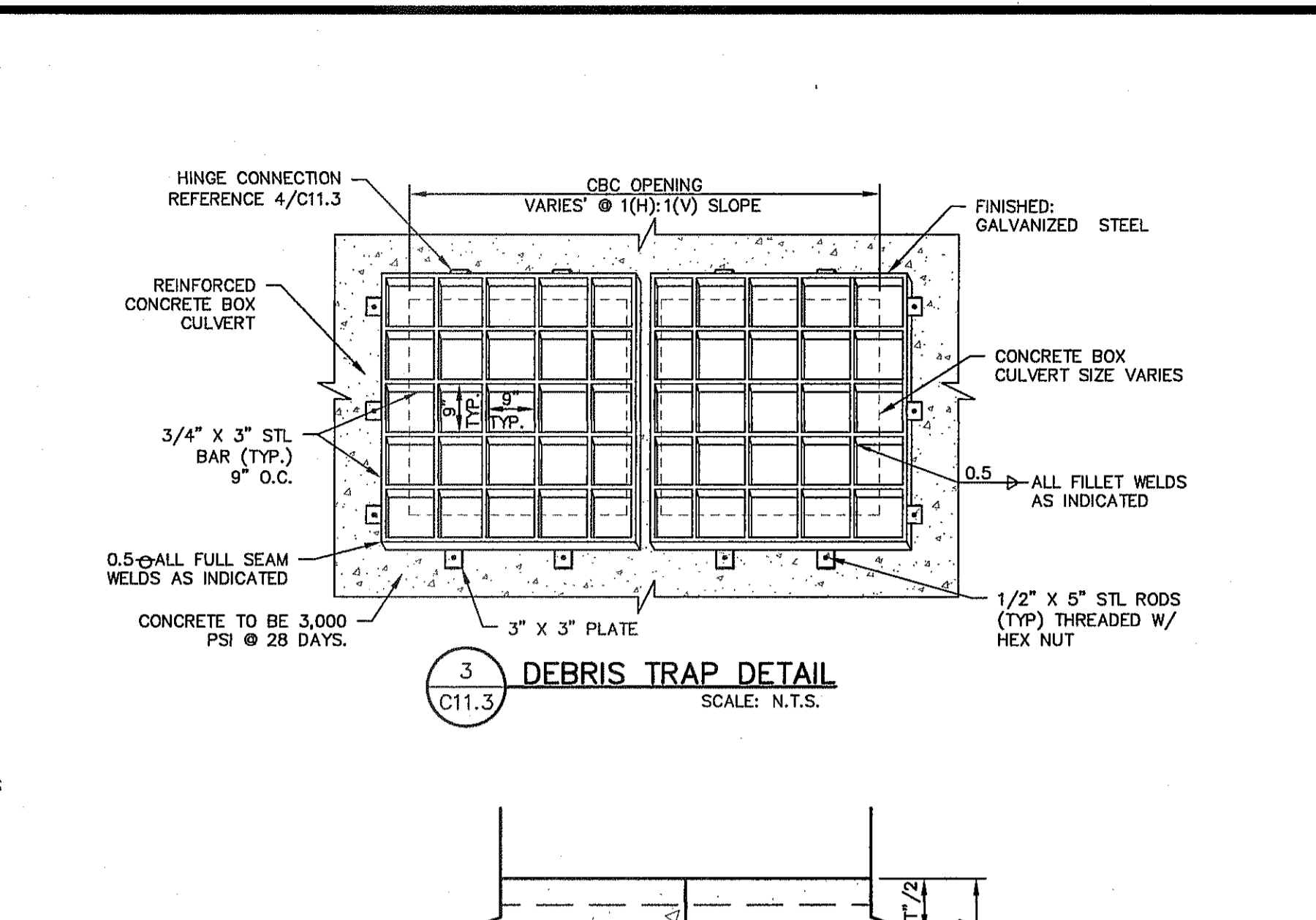
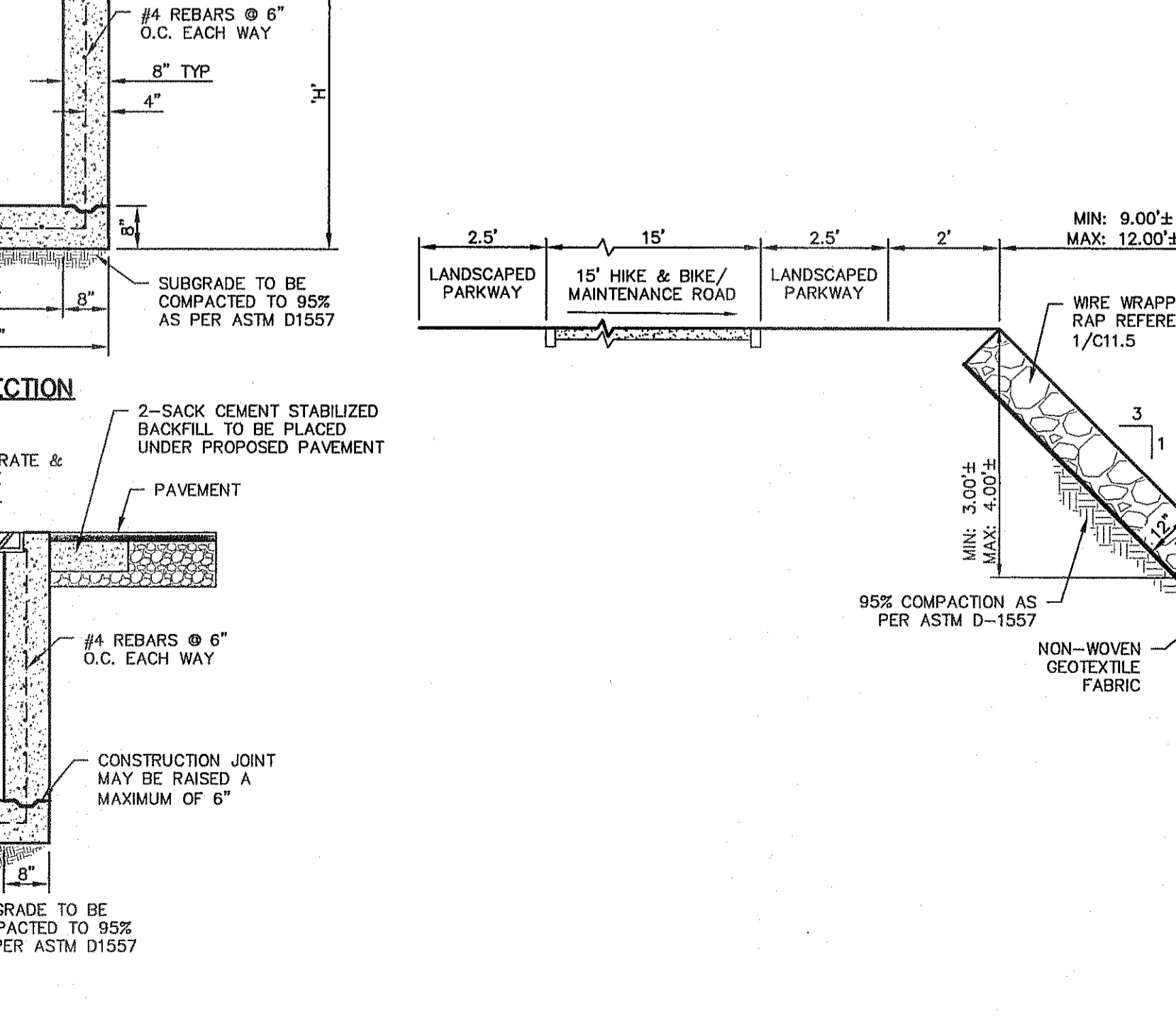
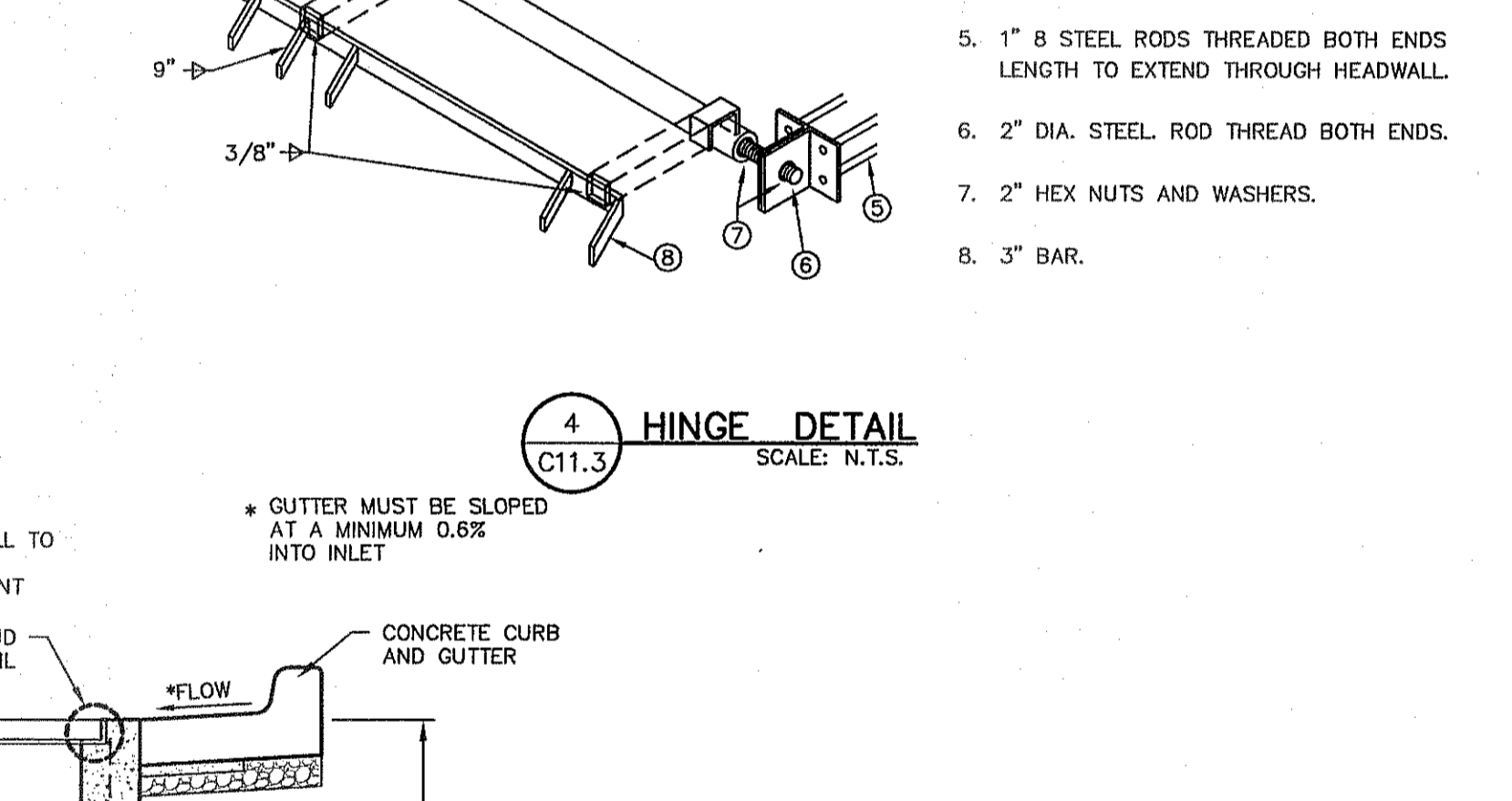
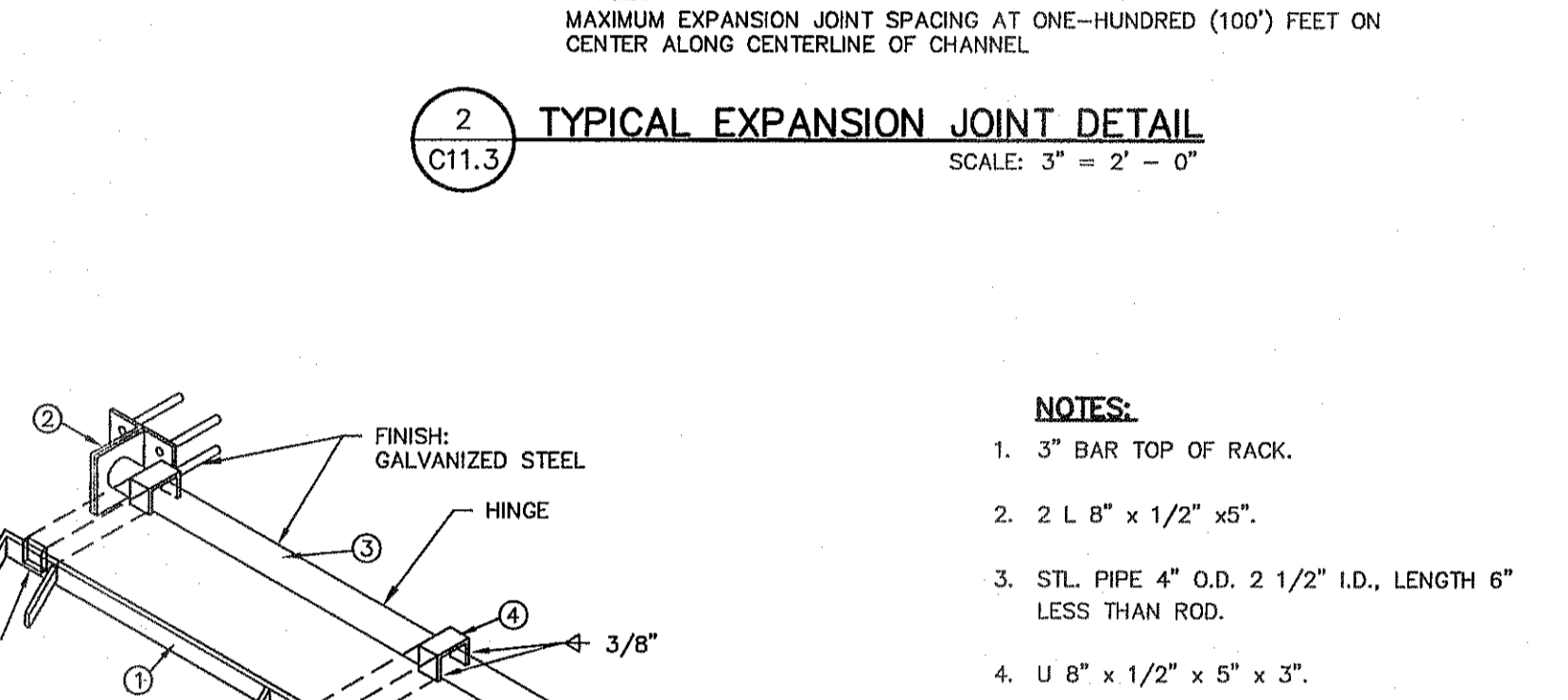
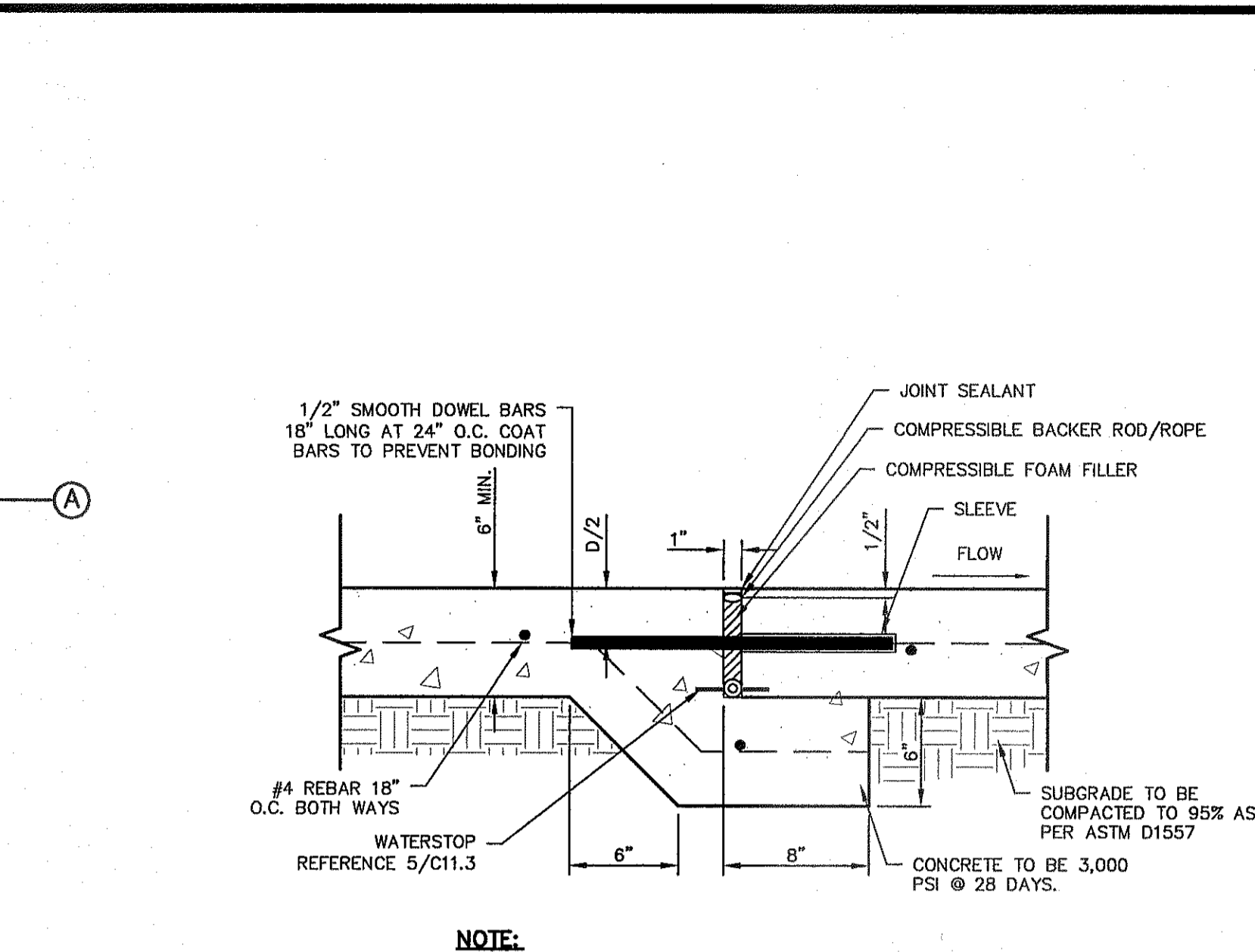
C11.2





NUMBER OF GRATES	"L"	CAPACITY*
2	5'-1 1/8"	9,436 CFS
3	7'-1 1/8"	14,155 CFS
4	8'-9 7/8"	18,873 CFS
5	10'-8"	23,592 CFS

* THESE CAPACITIES CORRESPOND TO A CLOGGING FACTOR OF 0.5



REFERENCES - BENCHMARKS

FOUND N.G.S. SURVEY MARKER STAMPED "CHINO 1980"

ELEVATION: 3955.93 (CITY OF EL PASO VERTICAL DATUM)

3946.11 (NAVD 88 DATUM)

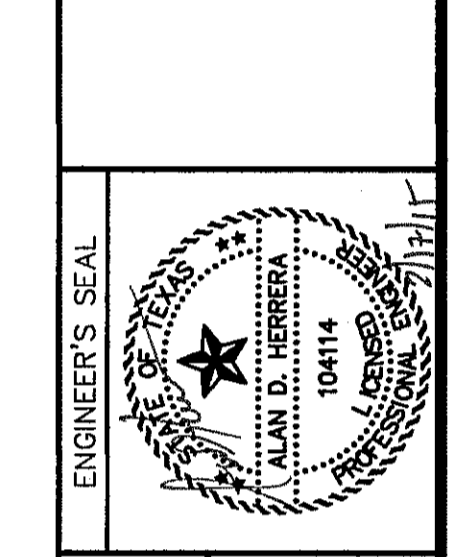
3945.78 (NAVD 28 DATUM)

TIE TO THE PROJECT BENCHMARK IS N5339.09' W, 4.008.93' N FROM THE PROJECT BENCHMARK TO THE CORNER OF TRACT 11, BELLE D. MANDY SURVEY, NO. 239

DATE: _____

REVISIONS: _____

BY: _____



SCALE: AS SHOWN

Horizontal: N/A

Vertical: N/A

Contour Interval: N/A

DATE: DECEMBER 2014

DESIGN BY: A.H.

DRAWN BY: J.H.

CHKD. BY: J.L.A.

APPVD. BY: J.L.A.

JOB NO. 2060-028-LD

PROJECT TITLE

DESERT SPRINGS UNIT FOUR

SUBDIVISION IMPROVEMENTS

SHEET TITLE

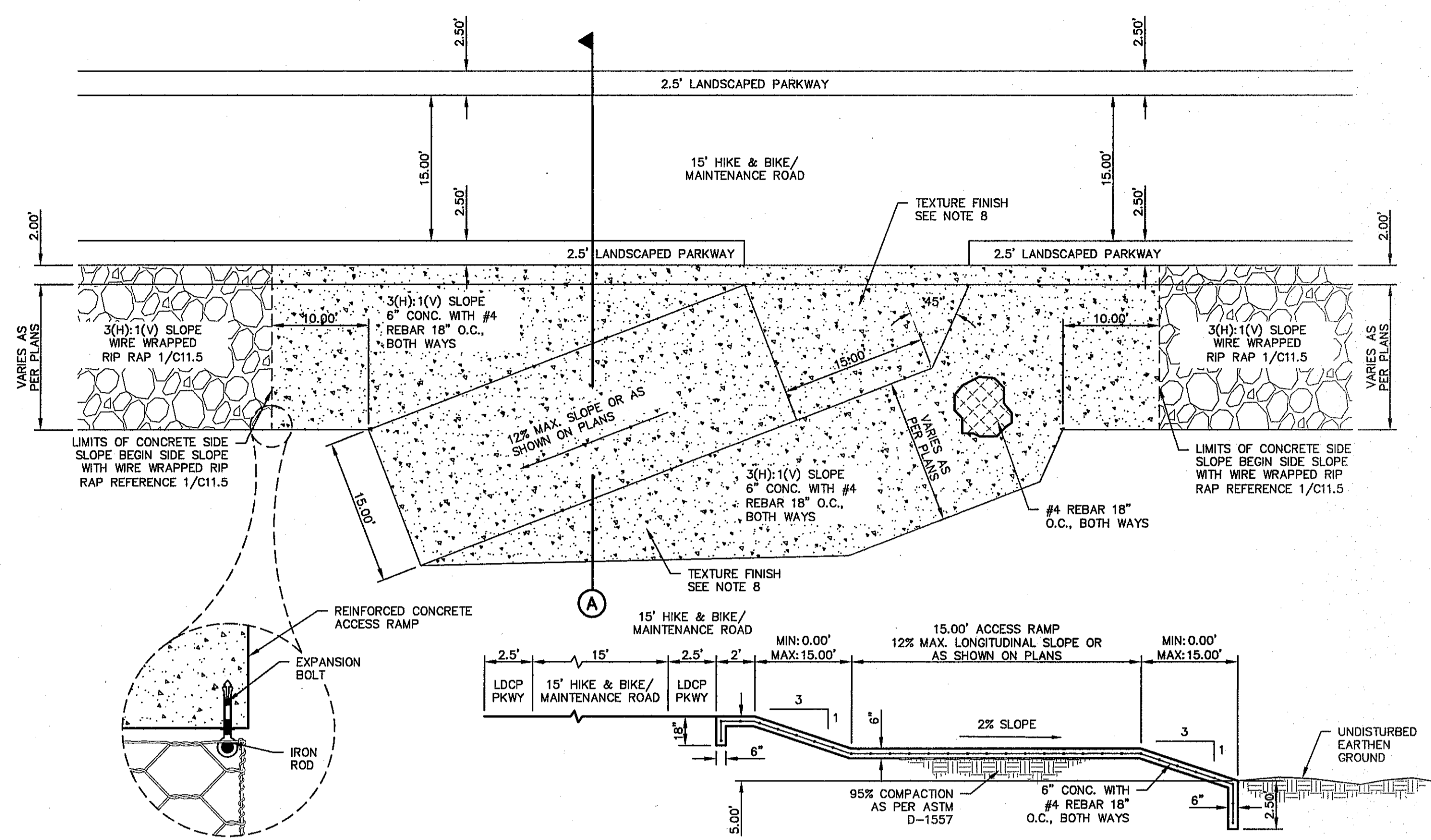
DRAINAGE DETAILS

(SHEET 3 OF 7)

SHEET NO.

C11.3



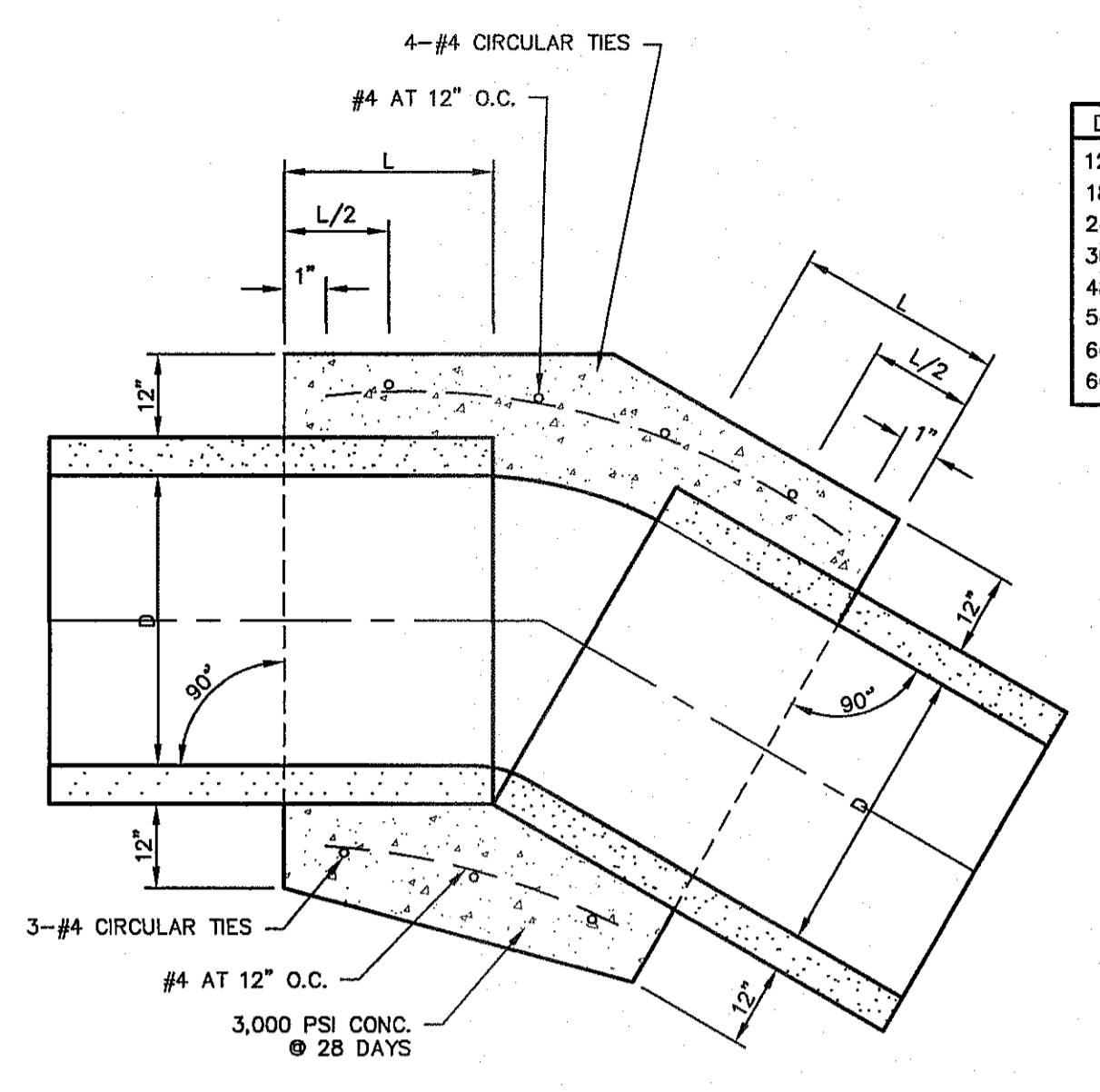


1. TO BE PLACED AS NEEDED, MINIMUM OF THREE EXPANSION BOLTS REQUIRED PER SIDE OF REINFORCED CONCRETE ACCESS RAMP.
2. REFERENCE 2/C11.6 FOR ADDITIONAL INFORMATION.

ACCESS RAMP NOTES:

1. ALL CONCRETE SHALL HAVE 3,000 PSI MIN. @ TWENTY-EIGHT (28) DAYS.
2. REINFORCED STEEL SHALL BE A MINIMUM OF GRADE 40.
3. 1/2" PREMOLDED BITUMINOUS EXPANSION JOINT (AASHTO M-33) IS REQUIRED AS SHOWN. TRIM BITUMINOUS MATERIAL 1/4" LESS THAN NEAT DIMENSION.
4. DUMMY JOINTS REQUIRED AT FIFTEEN (15') FEET O.C.
5. REFER TO 2/C11.3 & 5/C11.3. FOR ADDITIONAL INFORMATION ON CHANNEL CONSTRUCTION.
6. REINFORCEMENT (#4 REBAR 18" O.C., BOTH WAYS) SHALL BE PLACED IN ACCESS RAMP.
7. SUBGRADE TO BE COMPACTED TO NINETY-FIVE (95%) PERCENT AS PER ASTM D1557.
8. A METAL-TINE TEXTURE FINISH IS REQUIRED TO APPROXIMATELY 3/16 INCHES IN DEPTH TO BE PERPENDICULAR TO TRAFFIC PATH AT THE ACCESS RAMP.

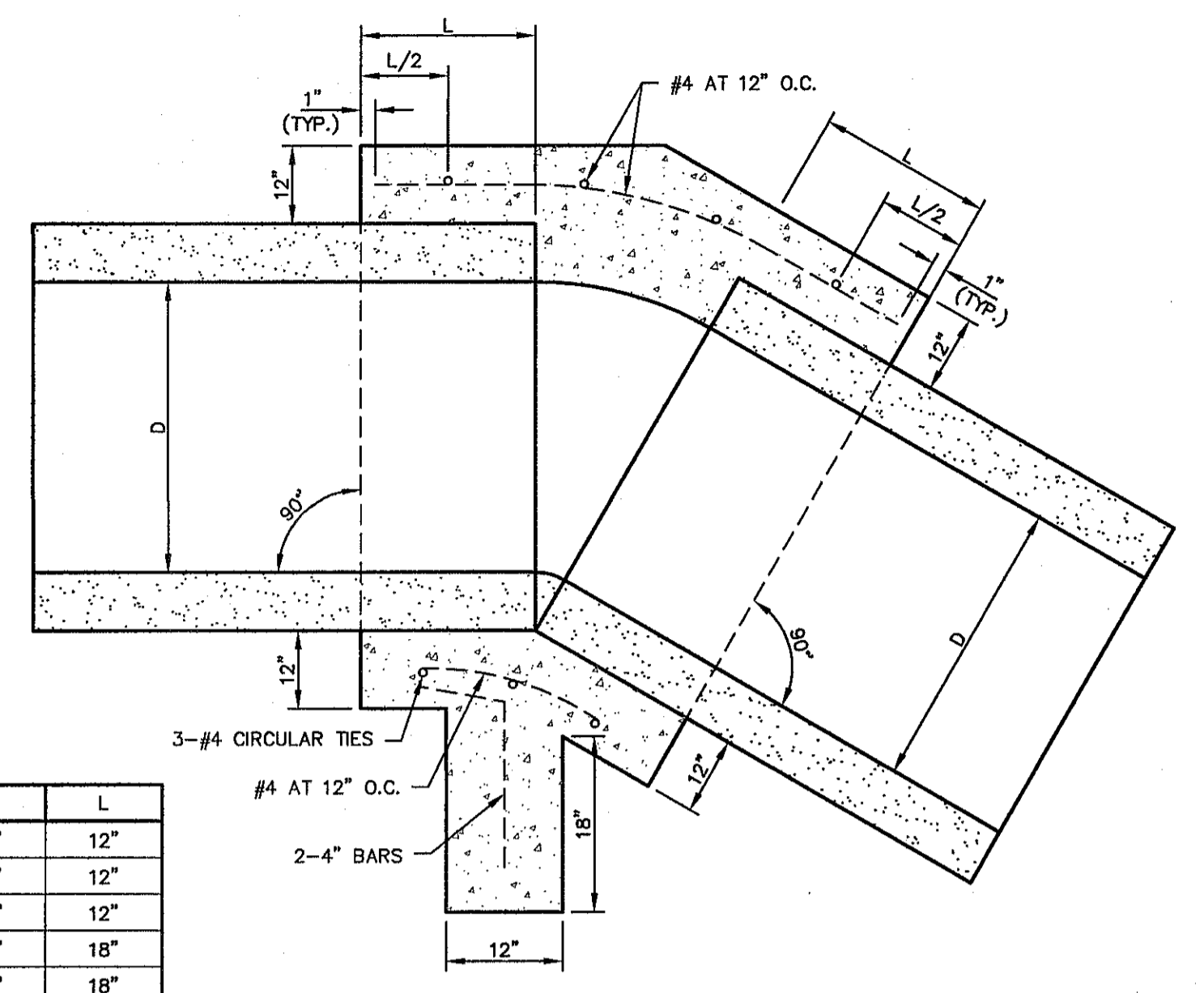
1 ACCESS RAMP DETAIL
SCALE: 1" = 10'



1. A CONCRETE PIPE COLLAR IS REQUIRED WHERE PIPES CHANGE IN HORIZONTAL OR VERTICAL ALIGNMENT.
2. FOR PIPES 24" OR LESS IN DIAMETER REINFORCE WITH W.W.M.

2 CONCRETE PIPE COLLAR
SCALE: N.T.S.

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

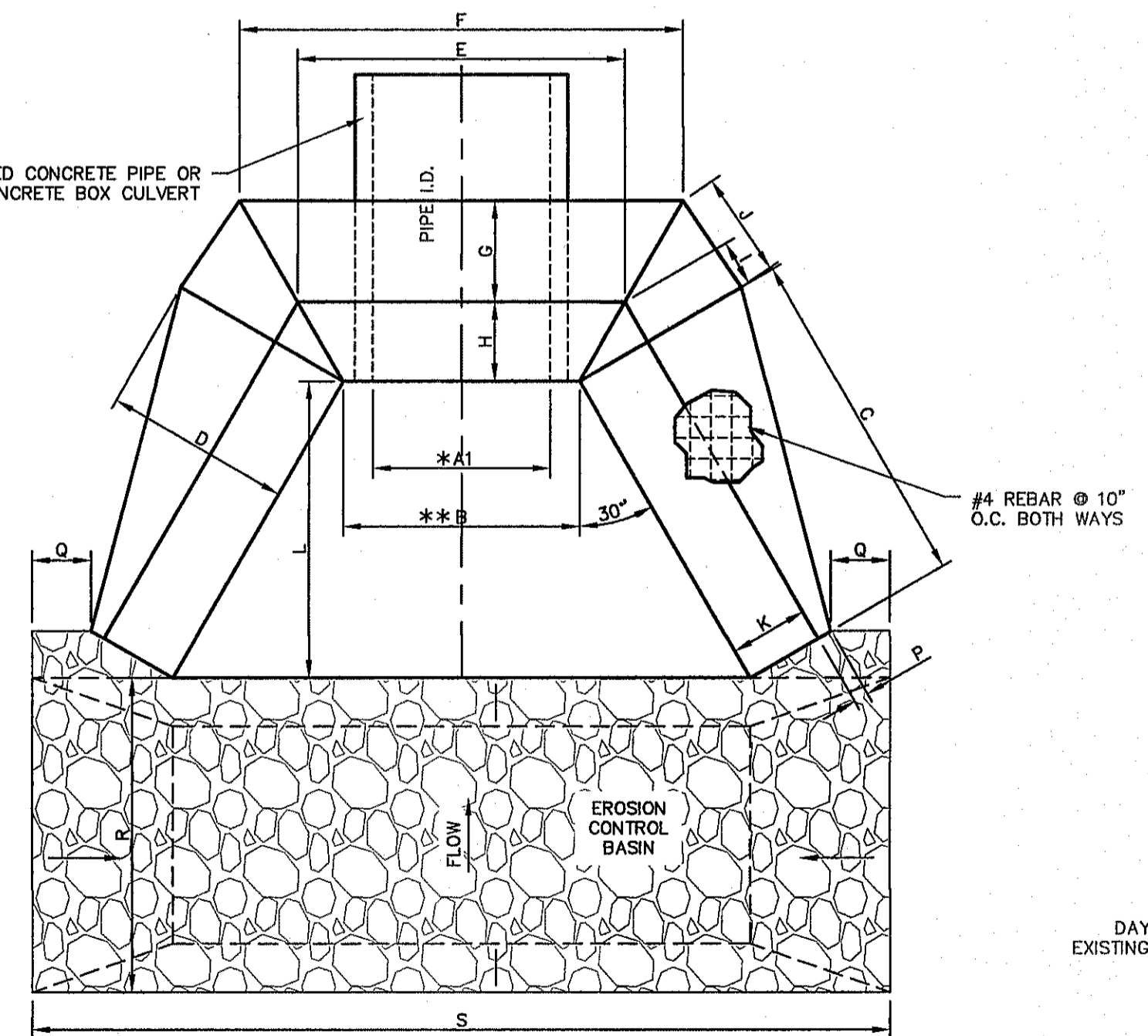


1. A CONCRETE ANCHOR COLLAR IS REQUIRED AT THE FIRST JOINT UPSTREAM FROM THE THRUST BLOCK OUTLET STRUCTURE.
2. FOR PIPES 24" OR LESS IN DIAMETER, REINFORCE WITH W.W.M.

3 CONCRETE ANCHOR COLLAR
SCALE: 3/4" = 1'-0"

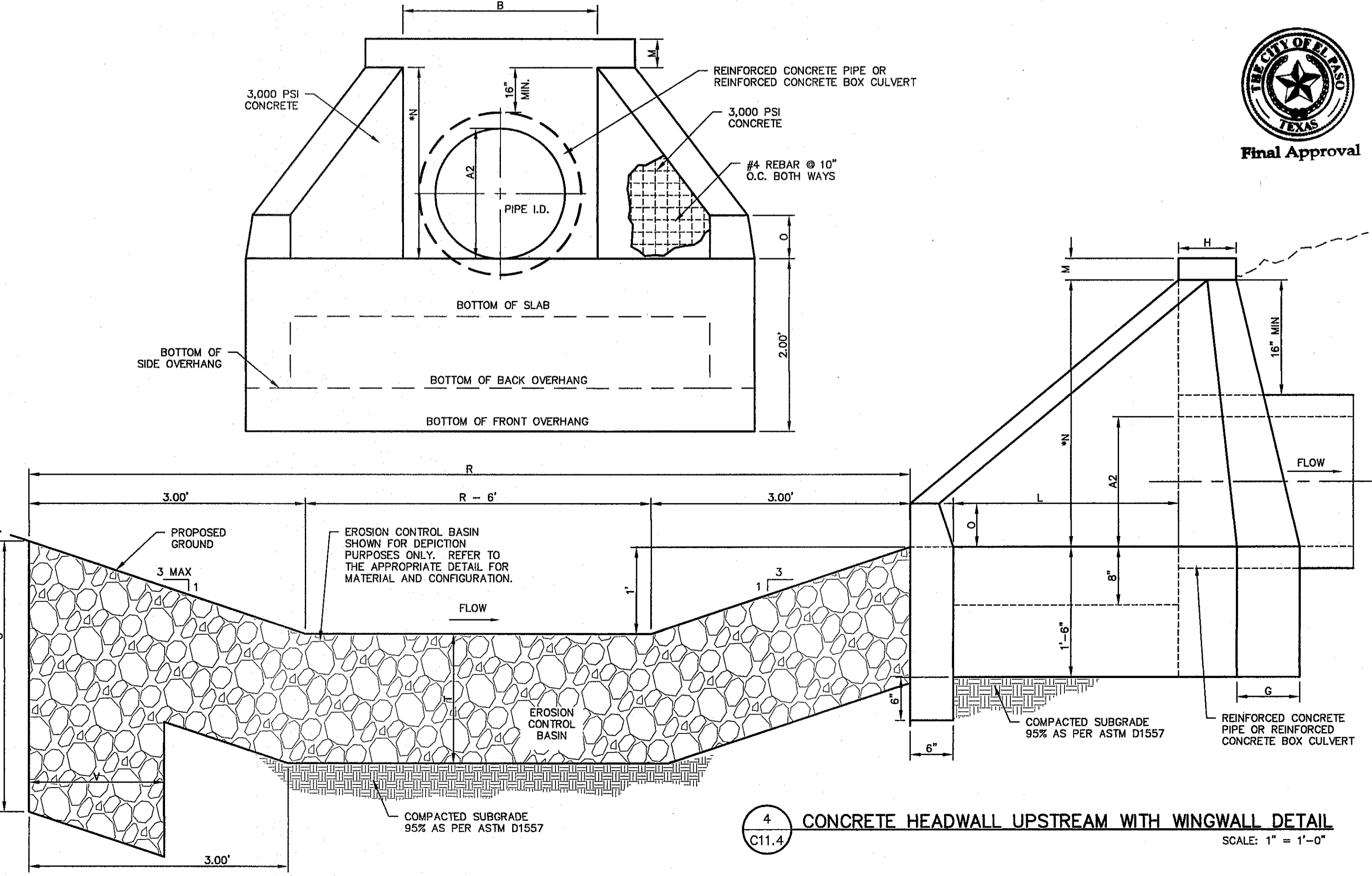
CONCRETE HEADWALL UPSTREAM NOTES:

1. CASTING TO BE SMOOTH & VOID OF AIR HOLES.
2. CONCRETE TO BE 3,000 PSI MIN. @ TWENTY-EIGHT (28) DAYS.
3. EXPANSION MATERIAL REQUIRED AT CURB RETURNS WITH 1/2" PREMOLDED ASPHALT IMPREGNATED EXPANSION MATERIAL OR EQUAL.
4. ALL REINFORCING BARS SHALL HAVE A MINIMUM OF THREE (3") INCHES OF COVER WHEN ABUTTING EARTHEN MATERIAL.
5. NINETY-FIVE (95%) PERCENT COMPACTION AS PER ASTM D-1557 UNDER ALL CONCRETE STRUCTURES.
6. REINFORCED STEEL SHALL BE DEFORMED AND HAVE A MINIMUM OF GRADE 40.



CONCRETE HEADWALL I.D.	REINFORCED CONCRETE PIPE	EROSION CONTROL BASIN	REFERENCE DETAIL	*A1	A2	**B	C	D	E	F	G	H	I	J	K	L	M	**N	O	P	Q	R	S	T	U	V	
1	3 - 66" RCP	WIRE WRAPPED RIP RAP	1/C11.5	198"	66"	288"	120"	24"	300"	324"	12"	6"	8"	4"	12"	8"	108"	3"	88"	6"	2"	24"	360"	487"	12"	24"	12"

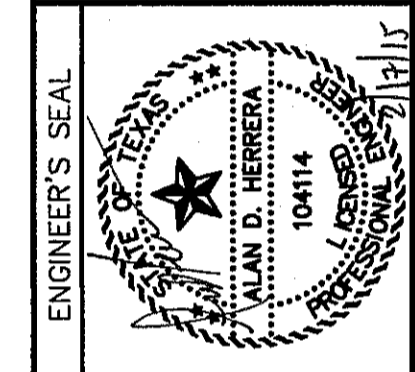
- NOTES:**
- * APPROXIMATE DISTANCE INCLUDING THE NUMBER OF BARRELS.
 - ** APPROXIMATE DISTANCE SHOWN. ACTUAL DISTANCE WILL VARY ACCORDING TO PIPE WALL THICKNESS.
 - *** REFER TO C9 (CULVERT CROSSINGS) FOR ADDITIONAL INFORMATION ON DIMENSIONS.



4 CONCRETE HEADWALL UPSTREAM WITH WINGWALL DETAIL
SCALE: 1" = 1'-0"

REFERENCES - BENCHMARKS
FOUND N.G.S. SURVEY MARKER STAMPED "CHNO 1980"
ELEVATION: 3933.83 (CITY OF EL PASO VERTICAL DATUM)
SHOWN (NAVD 88 DATUM)
3945.78 (NAVD 28 DATUM)
TIE TO THE PROJECT BENCHMARK IS N3709 09' W, 4,008.83 FEET FROM A 1/2" INCH REBAR FOUND FOR THE NORTHWEST CORNER OF TRACT 11, BELLE D. MURPHY SURVEY NO. 259

DESIGNERS: **CSA**
engineers • architects • planners
TEXAS REGISTERED ENGINEERING FIRM F-4684
4712 Woodrow Bain, Ste. F, El Paso, TX 79924
Office: 915.544.5232 Fax: 915.544.5233 www.csaonline.com



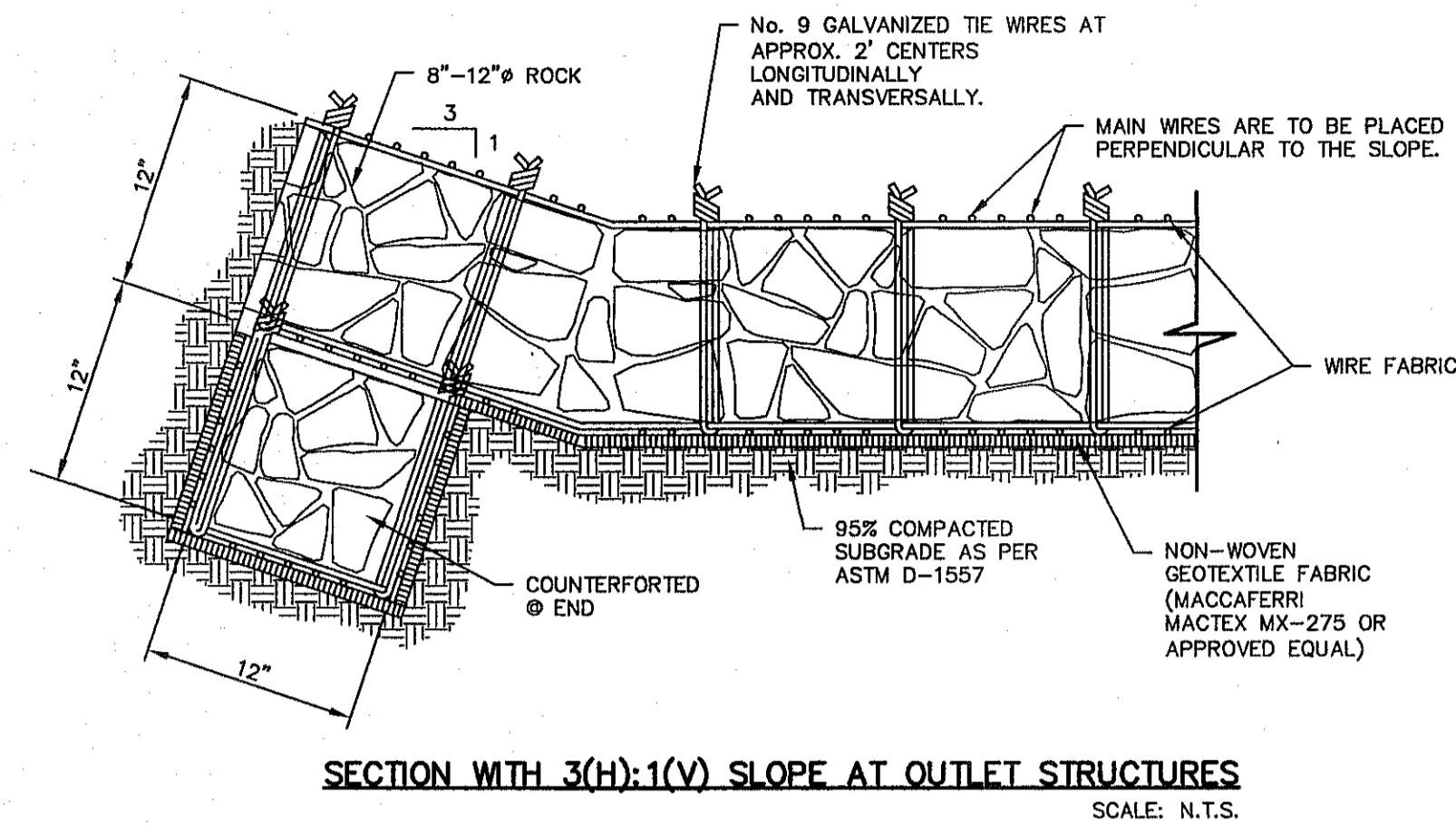
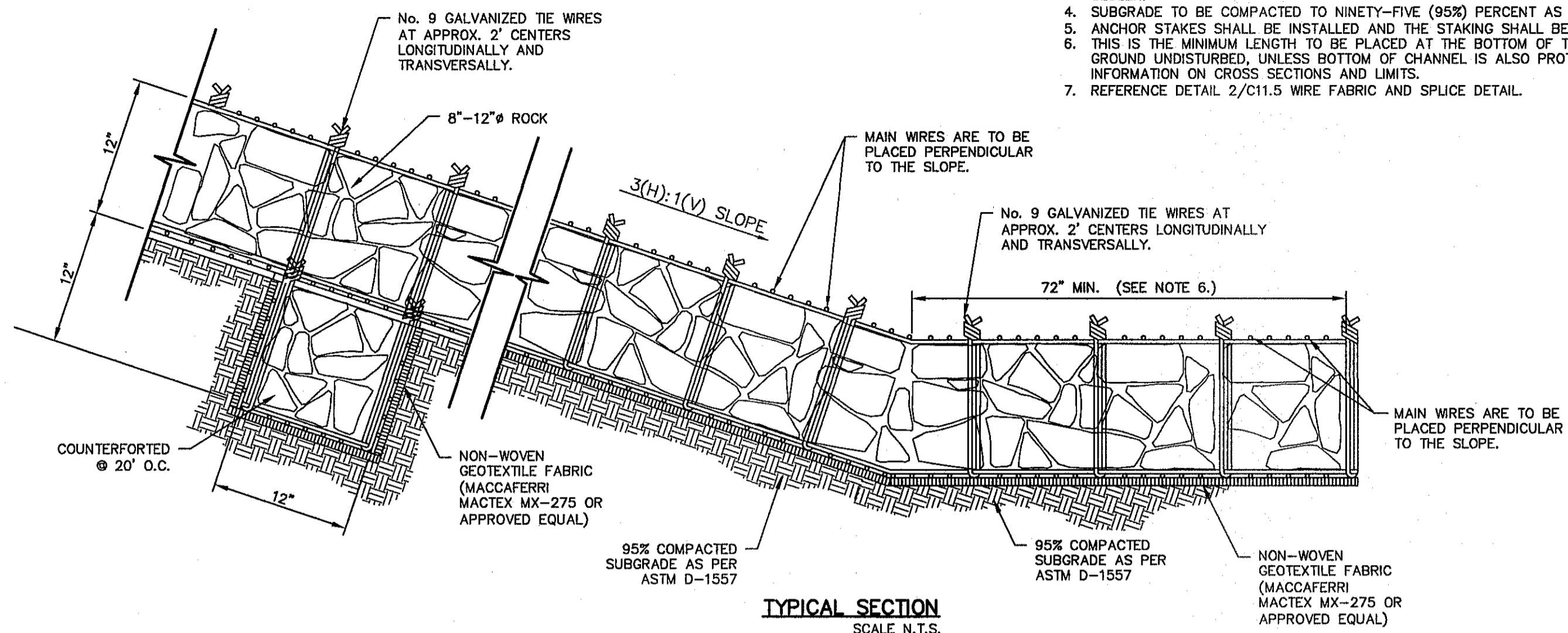
SCALE: AS SHOWN
Horizontal: N/A
Vertical: N/A
Contour Interval: N/A
DATE: DECEMBER 2014
DESIGN BY: A.H.
DRAWN BY: J.H.
CHKD. BY: J.L.A.
APPD. BY: J.L.A.
JOB No. 2060-028-1D

PROJECT TITLE
DESERT SPRINGS UNIT FOUR
SUBDIVISION IMPROVEMENTS

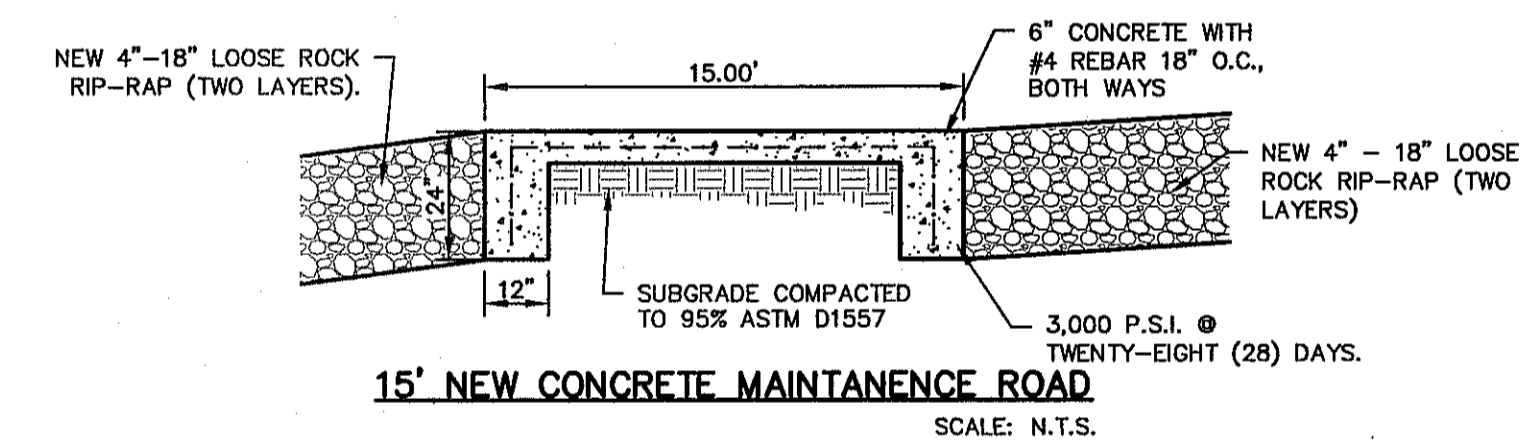
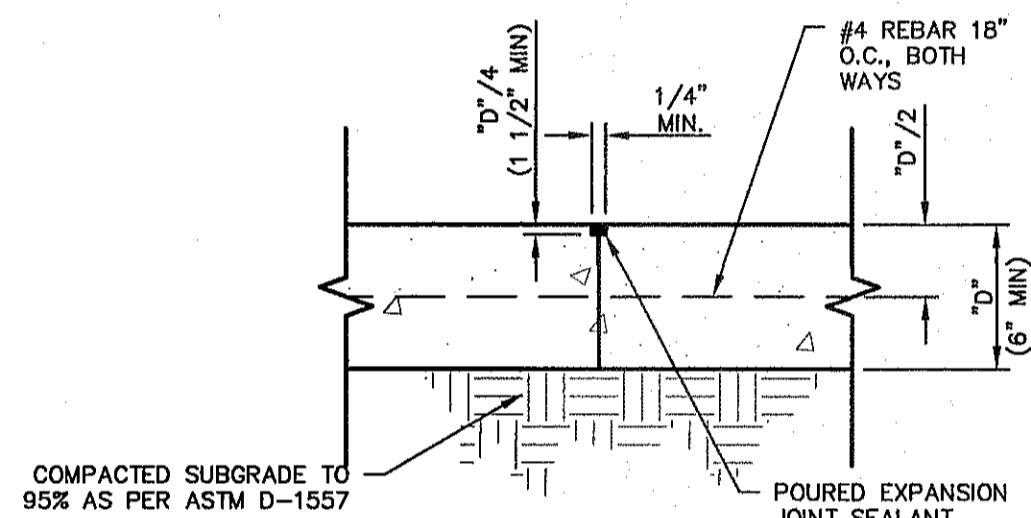
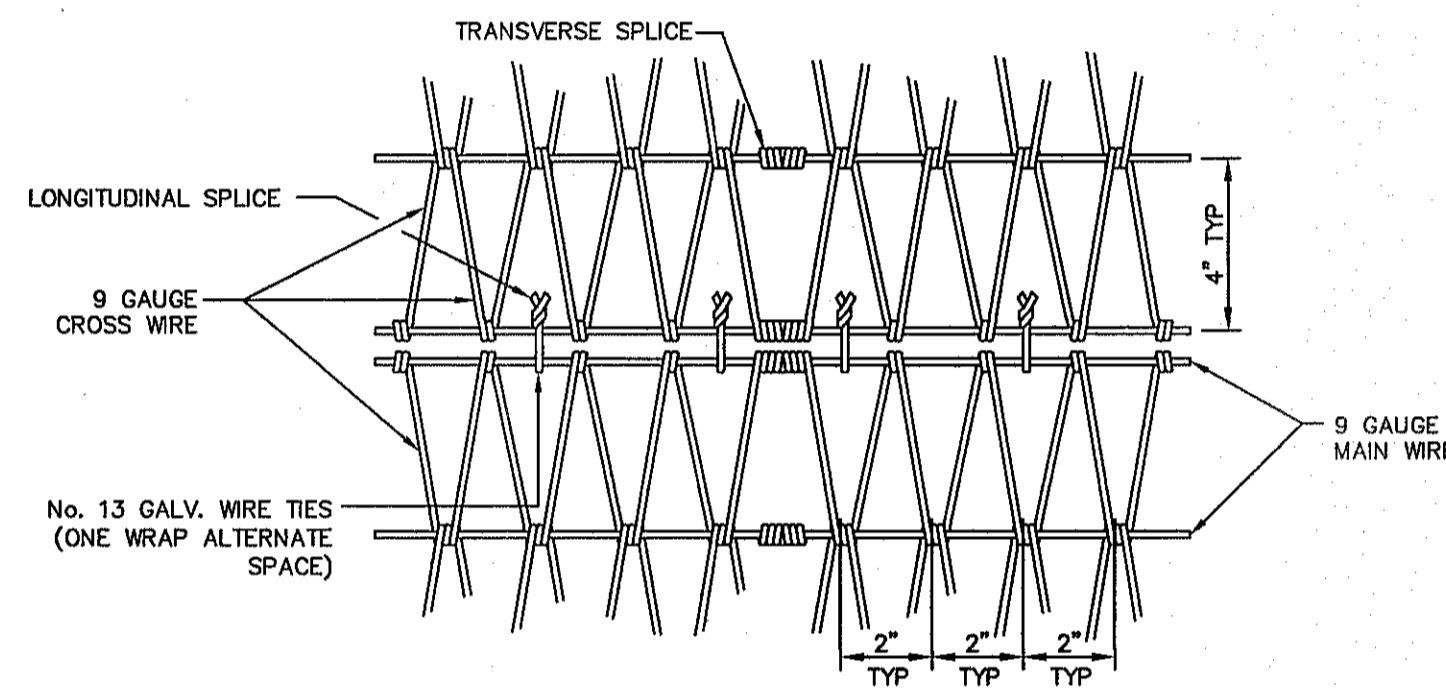
SHEET TITLE
DRAINAGE DETAILS

(SHEET 4 OF 7)
SHEET NO.
C11.4

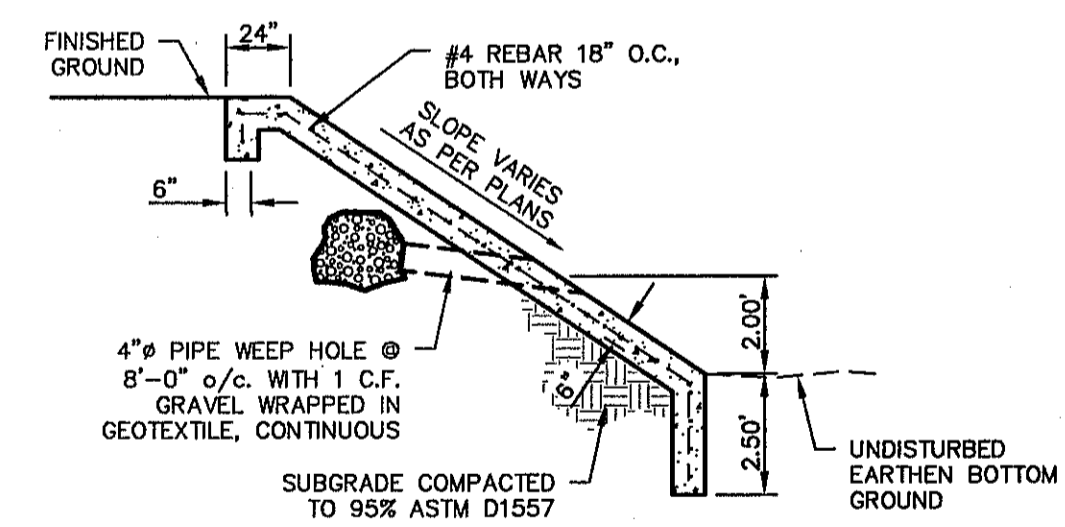
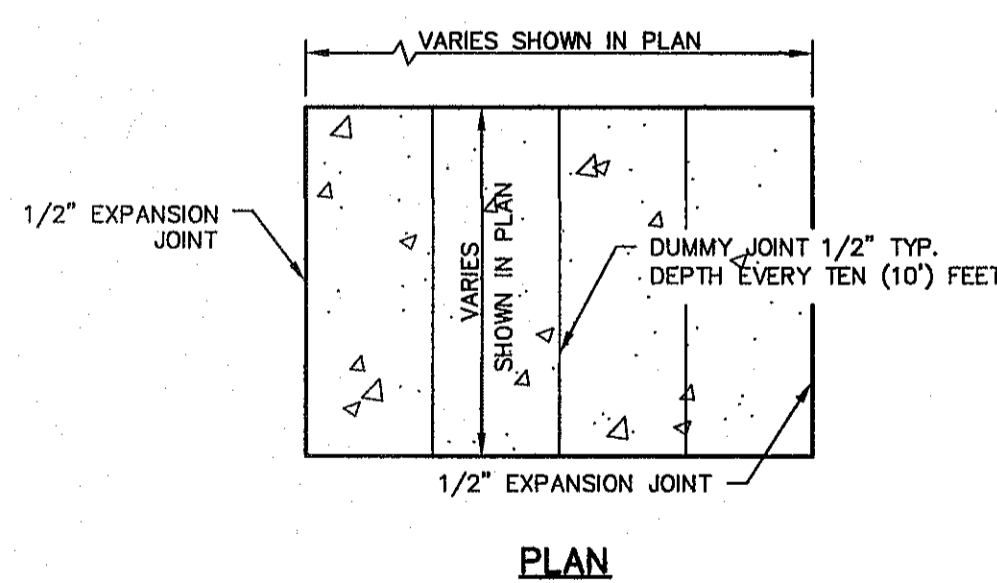
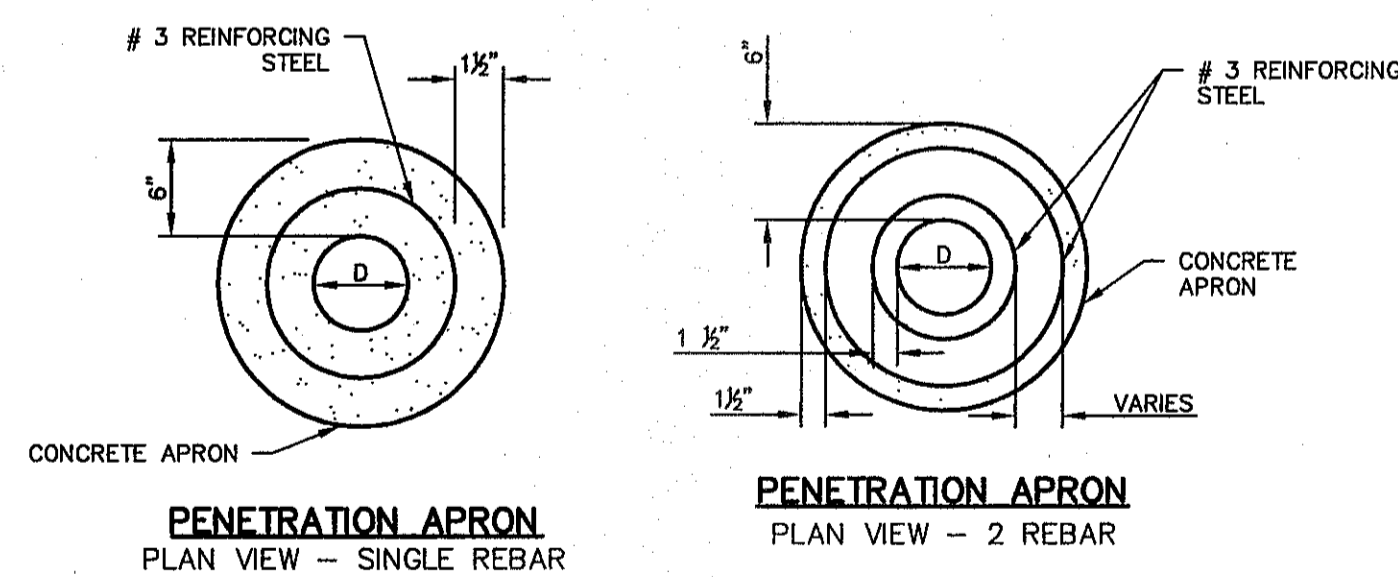
- NOTES:**
1. WIRE WRAPPED RIP RAP SHALL BE UTILIZED OR OTHER APPLICATION AS APPROVED EQUAL.
 2. COUNTERFORT TO BE PLACED @ THE BEGINNING AND END OF RIP RAP.
 3. COUNTERFORT SPACING SHALL BE AS SPECIFIED OR AS PER MANUFACTURER'S RECOMMENDATION, WHICHEVER IS CLOSER.
 4. SUBGRADE TO BE COMPACTED TO NINETY-FIVE (95%) PERCENT AS PER ASTM D1557.
 5. ANCHOR STAKES SHALL BE INSTALLED AND THE STAKING SHALL BE AS PER MANUFACTURER'S RECOMMENDATION.
 6. THIS IS THE MINIMUM LENGTH TO BE PLACED AT THE BOTTOM OF THE CHANNEL WHEN LEAVING NATURAL GROUND UNDISTURBED, UNLESS BOTTOM OF CHANNEL IS ALSO PROTECTED. REFER TO PLANS FOR MORE INFORMATION ON CROSS SECTIONS AND LIMITS.
 7. REFERENCE DETAIL 2/C11.5 WIRE FABRIC AND SPLICE DETAIL.



1 WIRE WRAPPED RIP-RAP DETAIL
SCALE: N.T.S.



CONCRETE APRON FOR CIRCULAR PENETRATIONS IN ASPHALT PAVEMENTS				
"D" DIAMETER OF PENETRATION (INCHES)	"A" CONCRETE HORIZONTAL DIMENSION FROM PENETRATION (INCHES)	NUMBER OF NO. 3 REINFORCING STEEL BARS (INCHES)	"B" MINIMUM CLEARANCE FROM EDGE OF CONCRETE APRON TO CENTER OF NEAREST REBAR (INCHES)	"C" MINIMUM CLEARANCE FROM PENETRATION EDGE TO CENTER OF NEAREST REBAR (INCHES)
0 TO 6.01	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

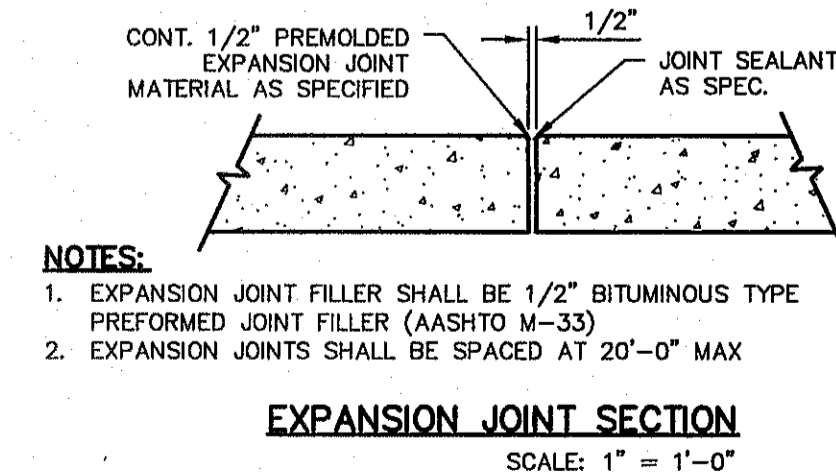
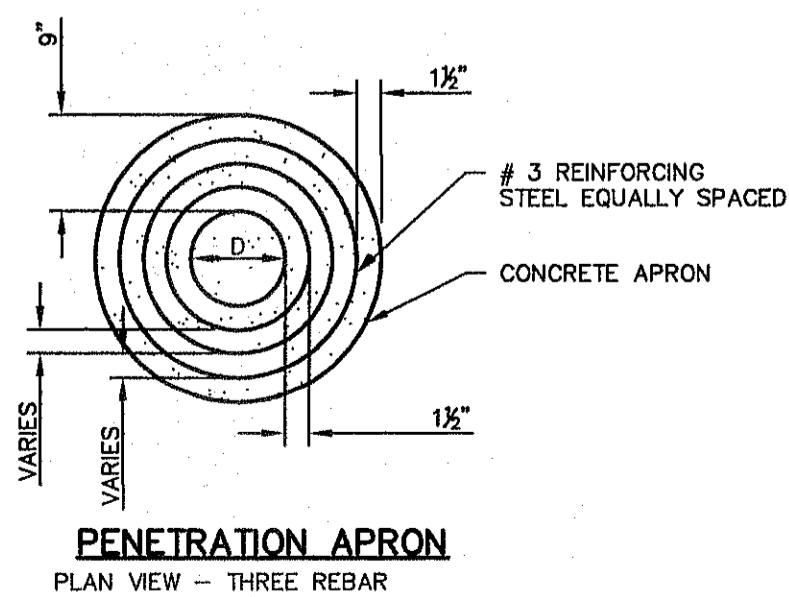
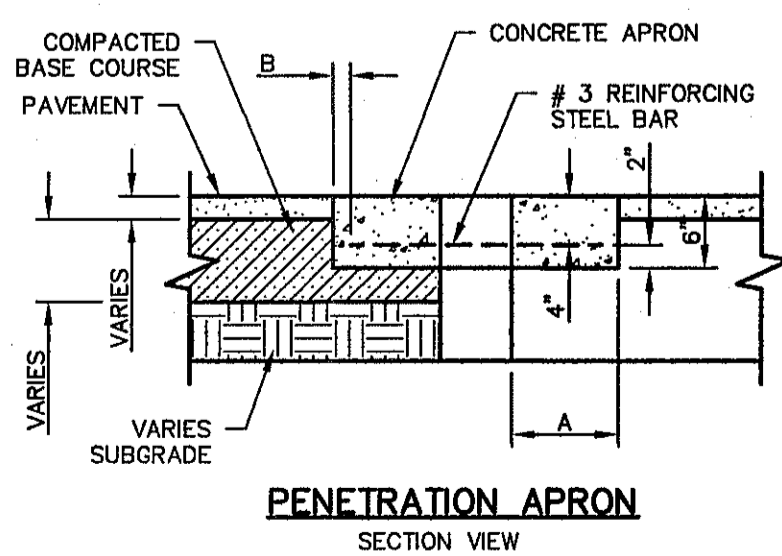


CONSTRUCTION NOTES:

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.



5 6" CONCRETE SLAB
SCALE: 1" = 2'-0"
C11.5

REFERENCES - BENCHMARKS

FOUND N.G.S. SURVEY MARKER STAMPED "CHNO 1980"
ELEVATION: 3935.93 (CITY OF EL PASO VERTICAL DATUM SHOWN)
(NAVD 88 DATUM)
3945.78 (NGVD 29 DATUM)

TIE TO THE PROJECT BENCHMARK IS N33°09'09" W, 4.008.63 FEET FROM A 1/2" INCH REBAR FOUND FOR THE NORTHWEST CORNER OF TRACT 11, BELLE D. MURPHY SURVEY NO. 239

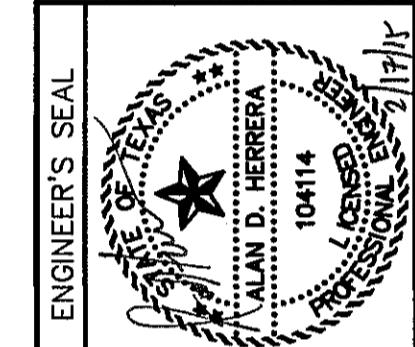
DATE: _____ BY: _____

REVISIONS

CSA

engineers • architects • planners

TEXAS REGISTERED ENGINEERING FIRM F-464
4712 Woodrow Beam, Ste. F, El Paso, TX 79924
Office: 915.544.5232 Fax: 915.544.5233 www.csaengineers.com



SCALE

Horizontal: AS SHOWN
Vertical: N/A

Contour Interval: N/A

DATE: DECEMBER 2014

DESIGN BY: A.H.

DRAWN BY: J.H.

CHKD. BY: J.L.A.

APPVD. BY: J.L.A.

JOB No. 2060-028-LD

PROJECT TITLE

DESERT SPRINGS UNIT FOUR

SUBDIVISION IMPROVEMENTS

SHEET TITLE

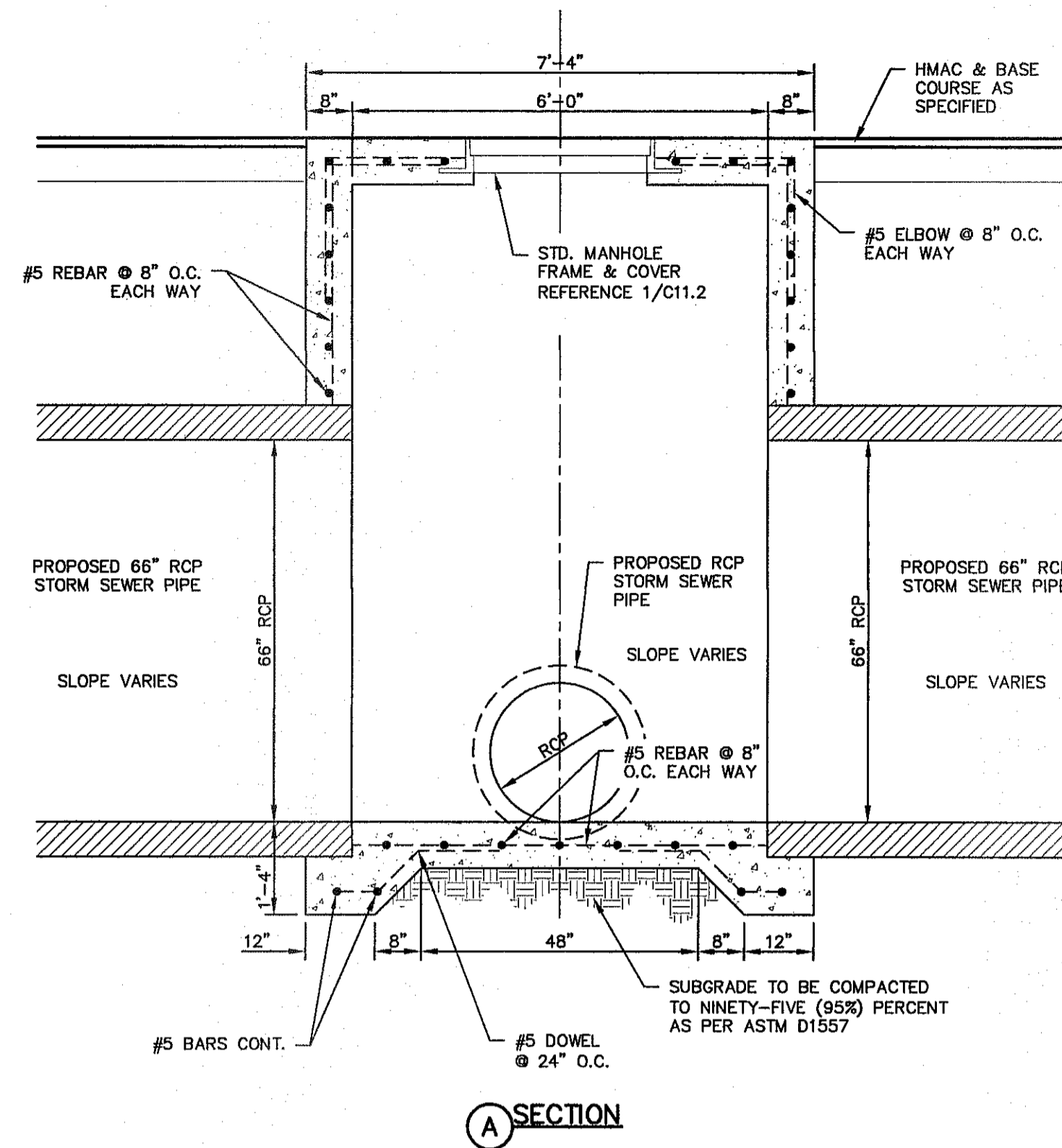
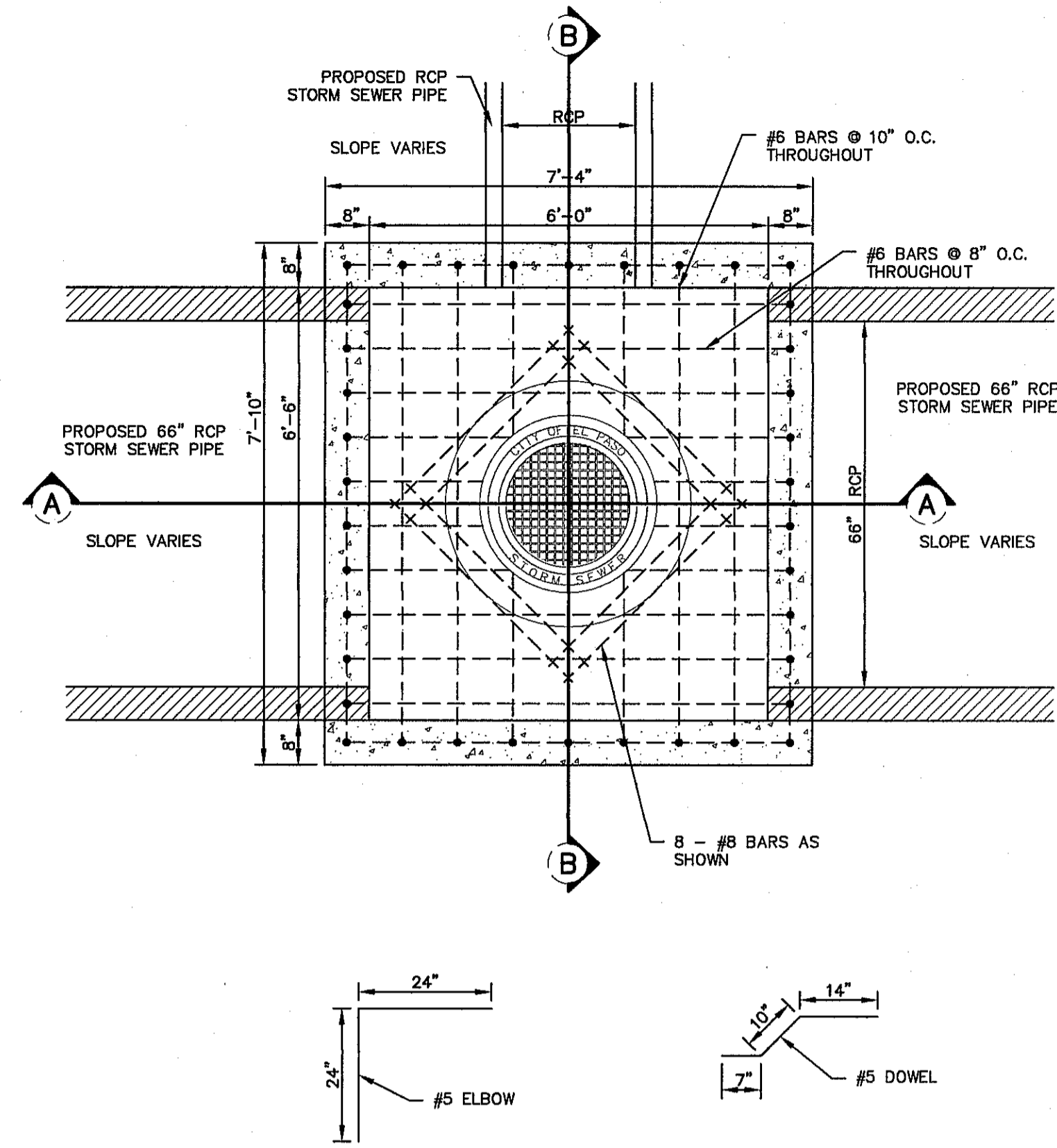
DRAINAGE DETAILS

(SHEET 5 OF 7)

SHEET NO.

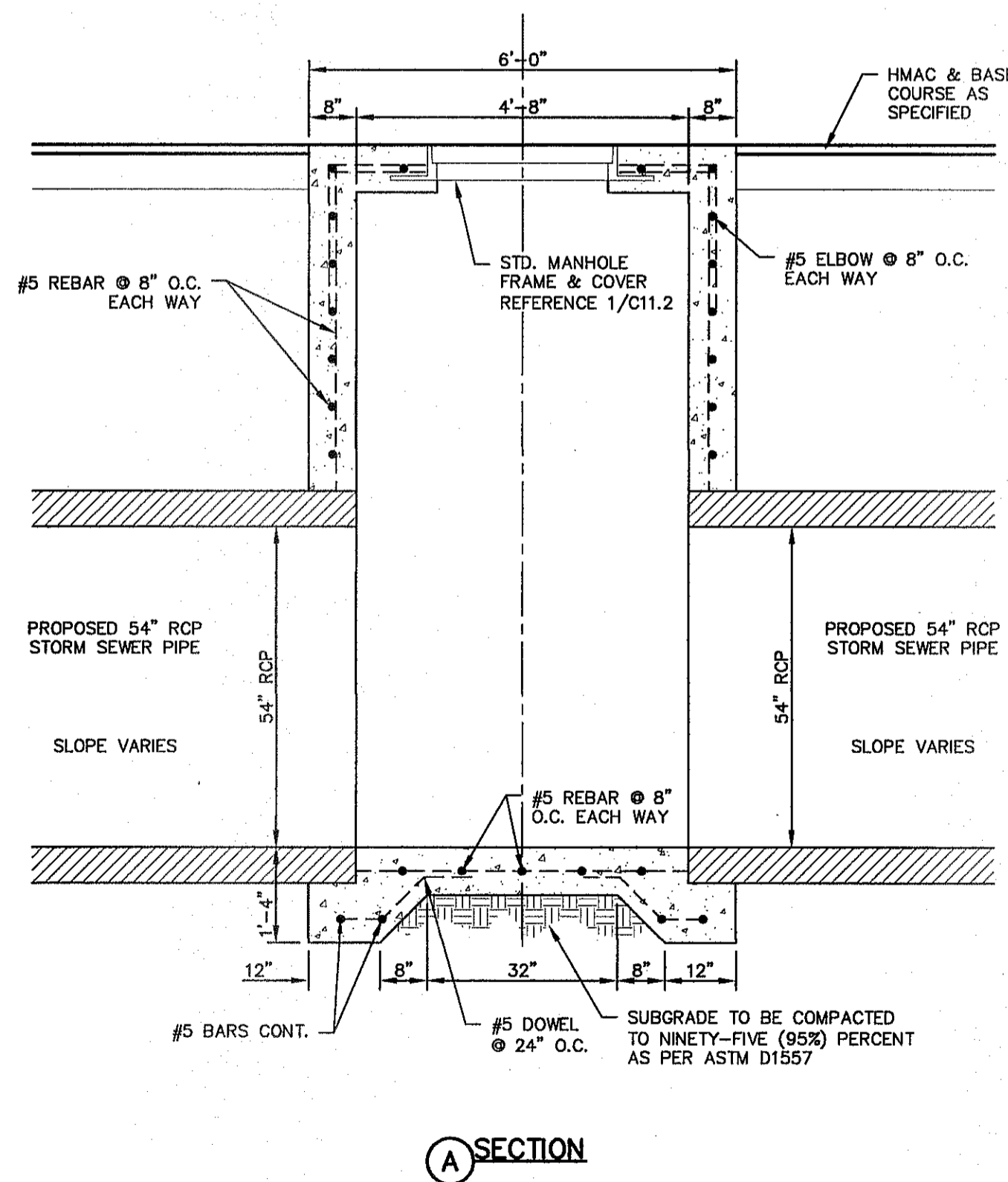
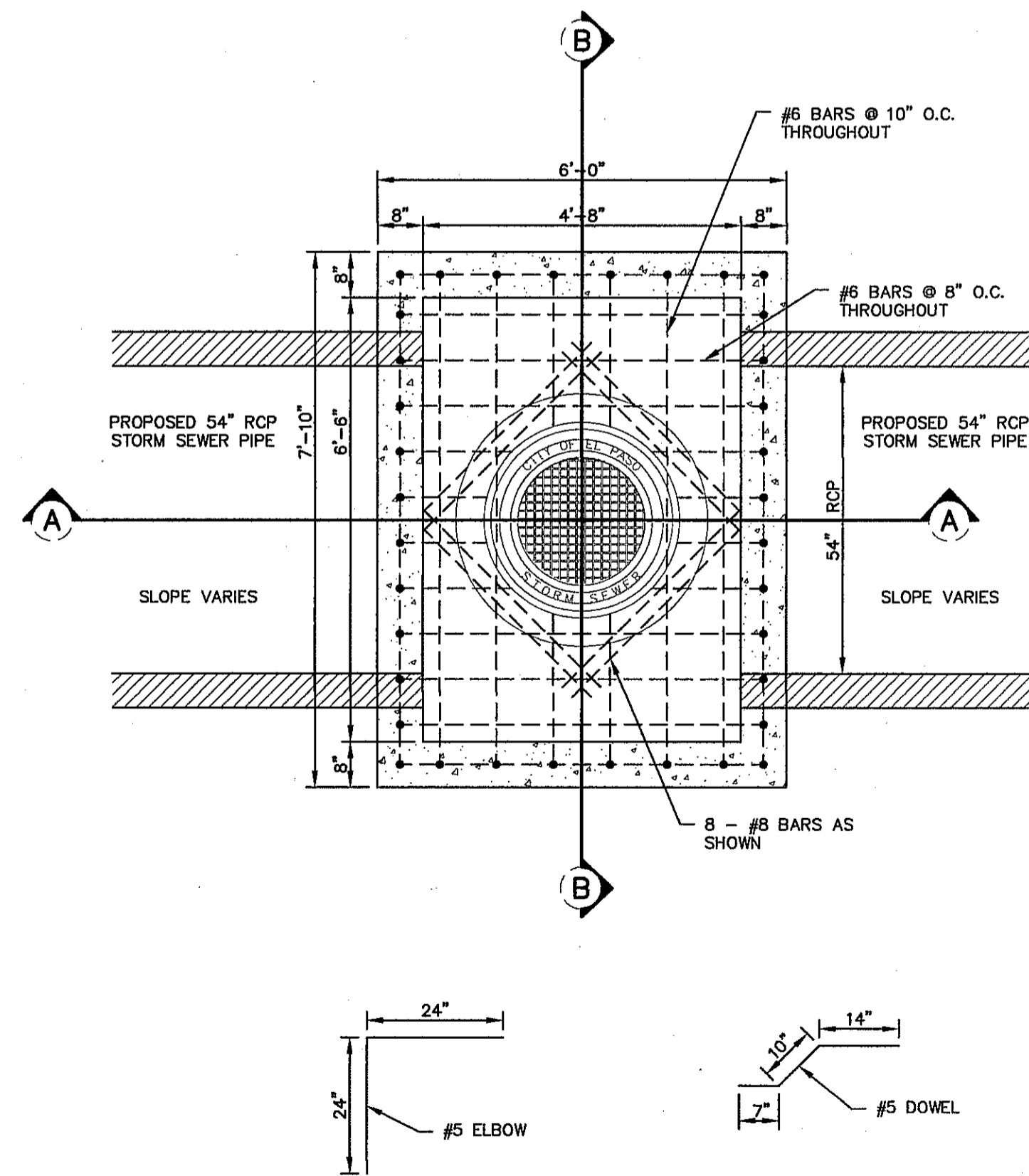
C11.5





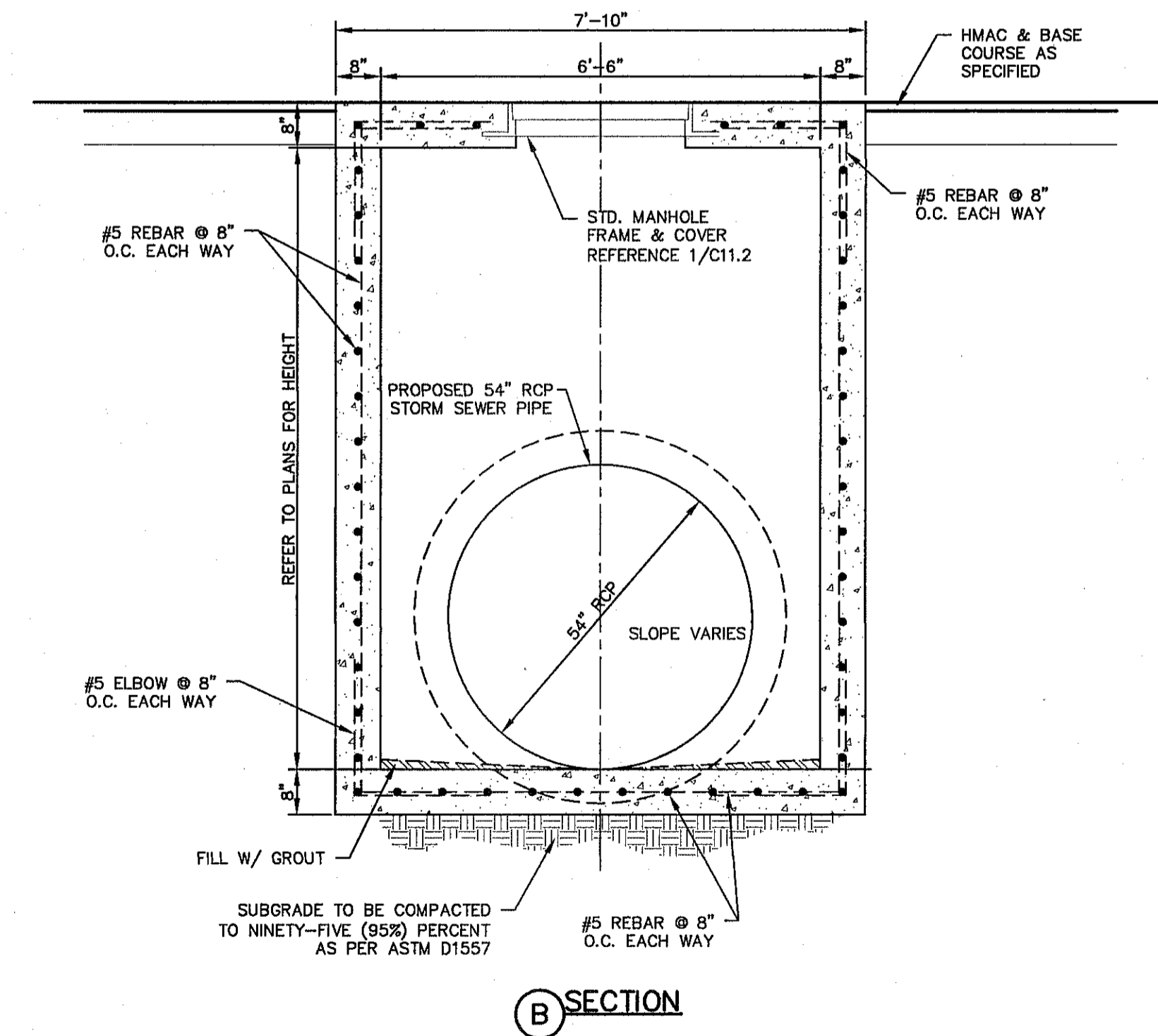
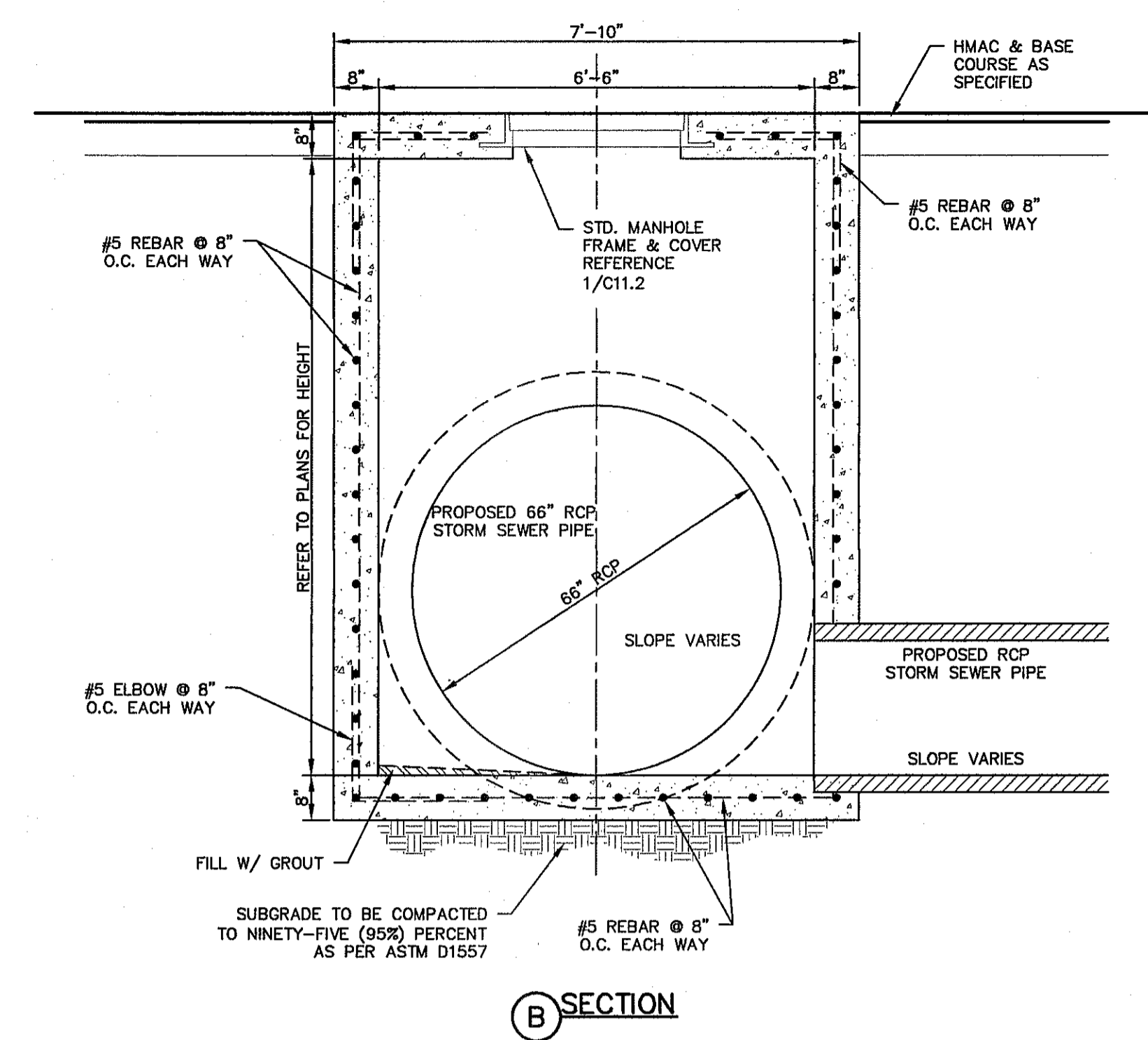
- NOTES:**
1. ALL REINFORCING BARS SHALL HAVE A MINIMUM OF 3-INCHES OF COVER WHEN ABUTTING EARTHEN MATERIAL.
 2. ALL CONCRETE SHALL HAVE 3,000 P.S.I. (MIN.) AT TWENTY-EIGHT (28) DAYS
 3. NINETY-FIVE (95%) PERCENT COMPACTION AS PER ASTM D-1557 UNDER ALL CONCRETE STRUCTURES.
 4. REINFORCED STEEL SHALL BE DEFORMED AND HAVE A MINIMUM OF GRADE 40.
 5. STRUCTURE SHALL BE DESIGNED FOR HS-20 LOADING.
 6. IN NO MEANS IS THIS ATTEMPTING OR IMPLYING ON HOW TO CONSTRUCT ITEMS, BUT WHENEVER NEEDED A MONOLITHIC POUR MAY BE REQUIRED.

1 REINFORCED MODIFIED CAST-IN-PLACE CONCRETE MANHOLE 1
SCALE: 1" = 2'-0"



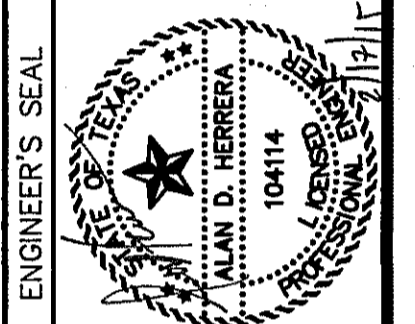
- NOTES:**
1. ALL REINFORCING BARS SHALL HAVE A MINIMUM OF 3-INCHES OF COVER WHEN ABUTTING EARTHEN MATERIAL.
 2. ALL CONCRETE SHALL HAVE 3,000 P.S.I. (MIN.) AT TWENTY-EIGHT (28) DAYS
 3. NINETY-FIVE (95%) PERCENT COMPACTION AS PER ASTM D-1557 UNDER ALL CONCRETE STRUCTURES.
 4. REINFORCED STEEL SHALL BE DEFORMED AND HAVE A MINIMUM OF GRADE 40.
 5. STRUCTURE SHALL BE DESIGNED FOR HS-20 LOADING.
 6. IN NO MEANS IS THIS ATTEMPTING OR IMPLYING ON HOW TO CONSTRUCT ITEMS, BUT WHENEVER NEEDED A MONOLITHIC POUR MAY BE REQUIRED.

2 REINFORCED MODIFIED CAST-IN-PLACE CONCRETE MANHOLE 2
SCALE: 1" = 2'-0"



REFERENCES - BENCHMARKS
 FOUND N.G.S. SURVEY MARKER STATIONED "CHANG 1880"
 ELEVATION: 3933.93 (CITY OF EL PASO VERTICAL DATUM
 (NAVD 88 DATUM)
 3946.11
 TIE TO THE PROJECT BENCHMARK IS N53°09'09"W, 4,008.83
 FEET FROM A 1/2 INCH REBAR FOUND FOR THE NORTHWEST
 CORNER OF TRACT 11, NELLIE D. MUNDY SURVEY No. 239
 DATE _____ BY _____

osa
 engineers • architects • planners
 TEXAS REGISTERED ENGINEERING FIRM F-4664
 4712 Woodrow Bann, Ste. F El Paso, TX 79924
 Office: 915.544.5232 Fax: 915.544.5233 www.osainc.com

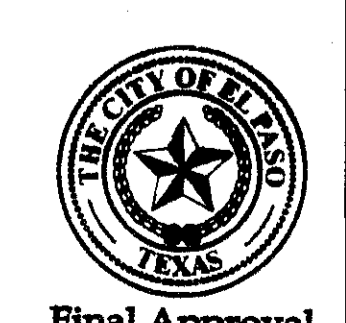


SCALE
 Horizontal: AS SHOWN
 Vertical: N/A
 Contour Interval: N/A
 DATE: DECEMBER 2014
 DESIGN BY: A.H.
 DRAWN BY: J.H.
 CHKD. BY: J.L.A.
 APPVD. BY: J.L.A.
 JOB No. 2060-028-ID

PROJECT TITLE
**DESERT SPRINGS UNIT FOUR
 SUBDIVISION IMPROVEMENTS**

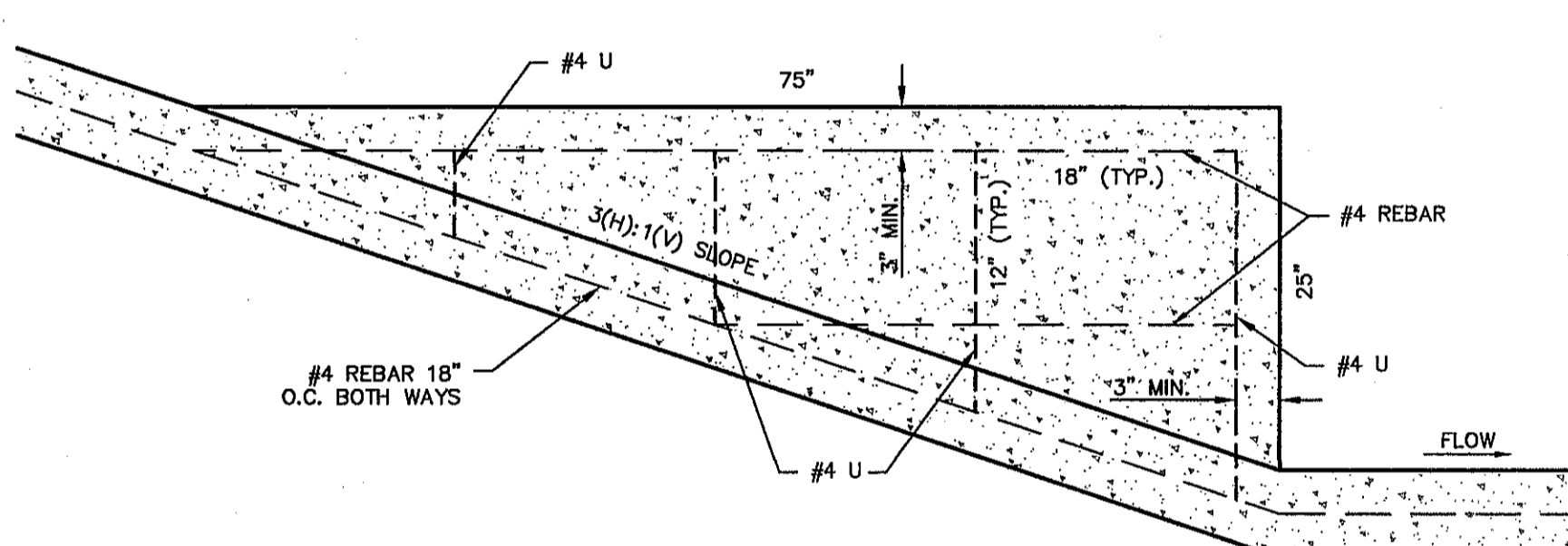
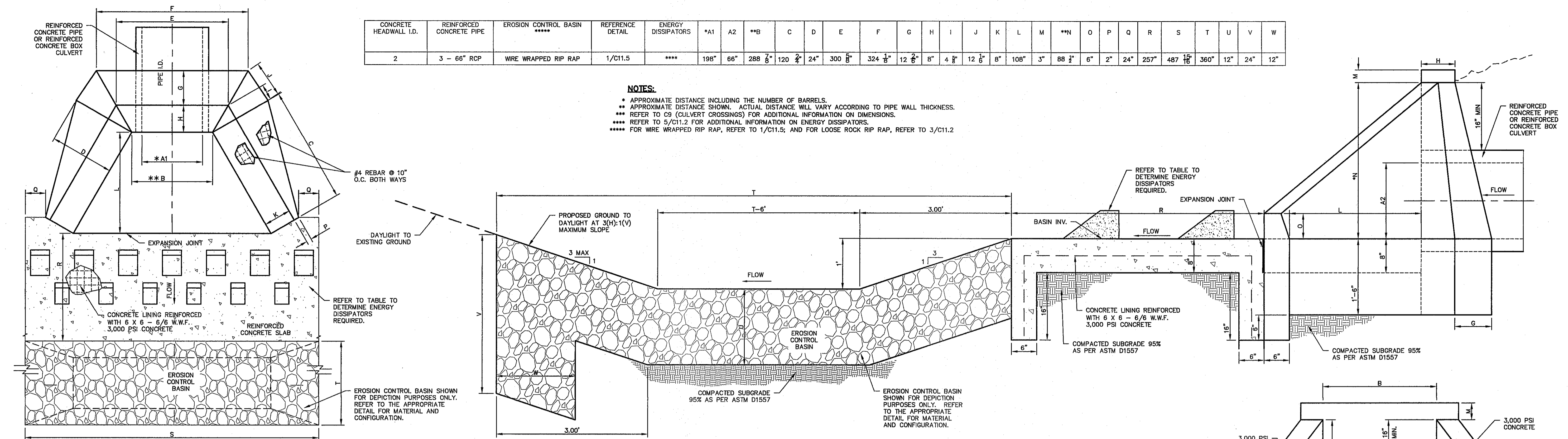
SHEET TITLE
**DRAINAGE
 DETAILS**
 (SHEET 6 OF 7)
 SHEET NO.

C11.6

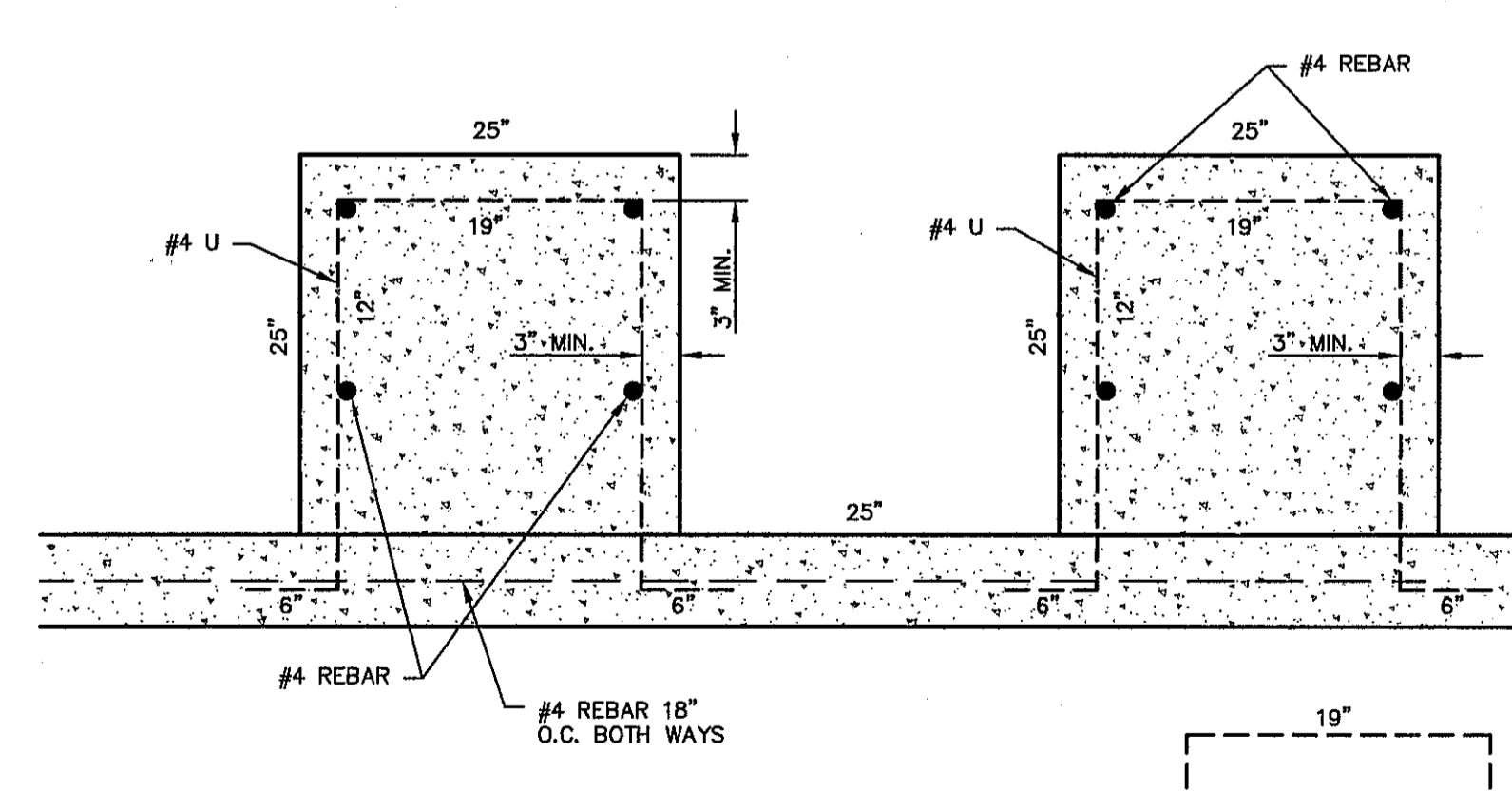


CONCRETE HEADWALL I.D.	REINFORCED CONCRETE PIPE	EROSION CONTROL BASIN *****	REFERENCE DETAIL	ENERGY DISSIPATORS	*A1	A2	**B	C	D	E	F	G	H	I	J	K	L	M	**N	O	P	Q	R	S	T	U	V	W
2	3 - 66" RCP	WIRE WRAPPED RIP RAP	1/C11.5	****	198"	66"	288 7/8"	120 2/4"	24"	300 5/8"	324 1/8"	12 2/4"	8"	4 7/8"	12 1/8"	8"	108"	3"	88 2/4"	6"	2"	24"	257"	487 1/8"	360"	12"	24"	12"

NOTES:
 * APPROXIMATE DISTANCE INCLUDING THE NUMBER OF BARRELS.
 ** APPROXIMATE DISTANCE SHOWN. ACTUAL DISTANCE WILL VARY ACCORDING TO PIPE WALL THICKNESS.
 *** REFER TO C9 (CULVERT CROSSINGS) FOR ADDITIONAL INFORMATION ON DIMENSIONS.
 **** REFER TO 5/C11.2 FOR ADDITIONAL INFORMATION ON ENERGY DISSIPATORS.
 ***** FOR WIRE WRAPPED RIP RAP, REFER TO 1/C11.5; AND FOR LOOSE ROCK RIP RAP, REFER TO 3/C11.2

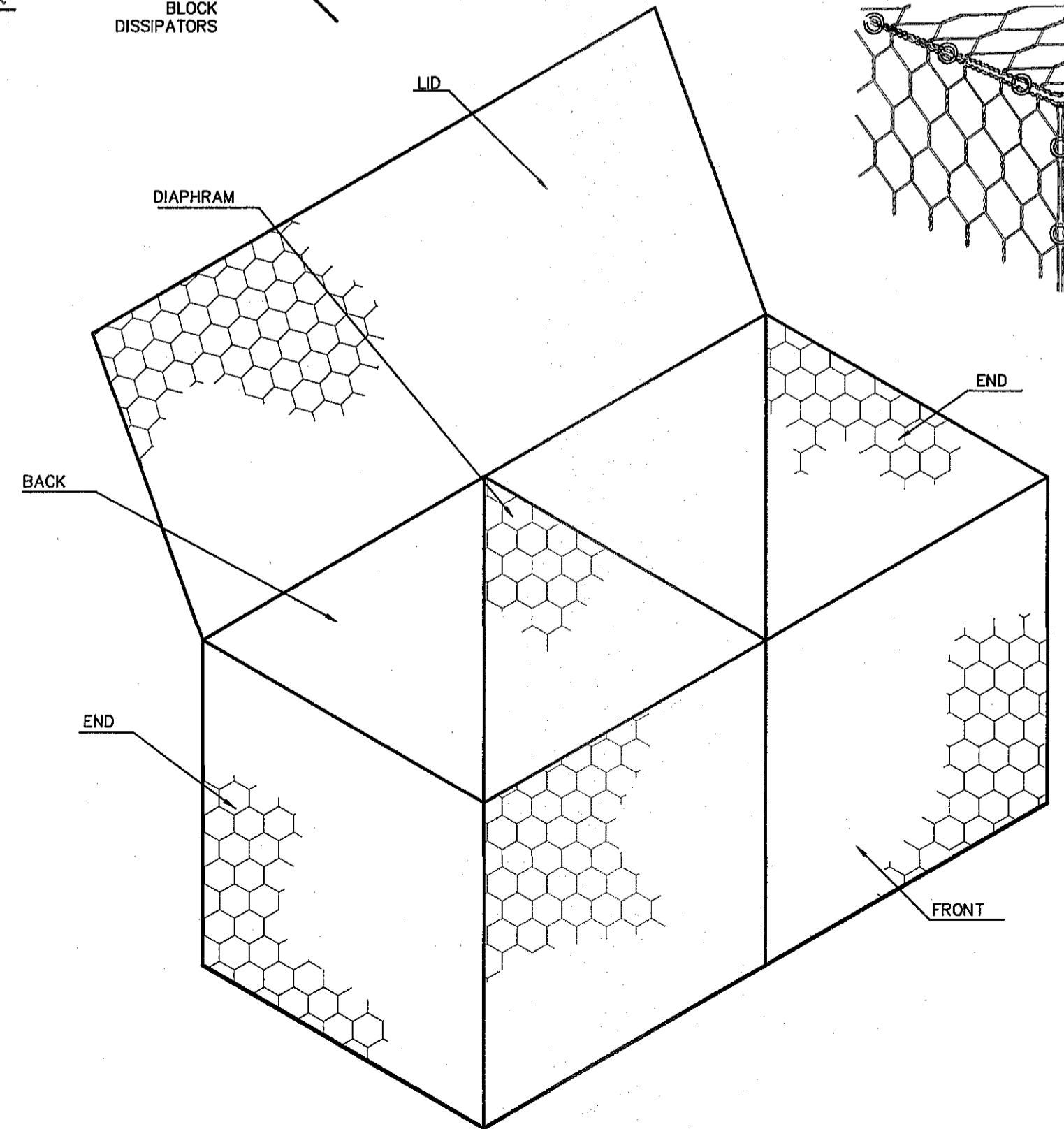
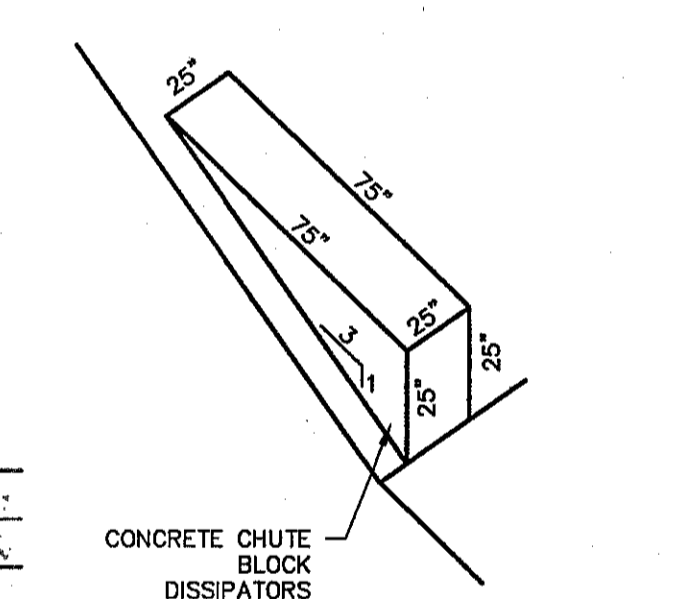


1 CONCRETE HEADWALL DOWNSTREAM WITH WINGWALL DETAIL
 SCALE: 1" = 1'-0"



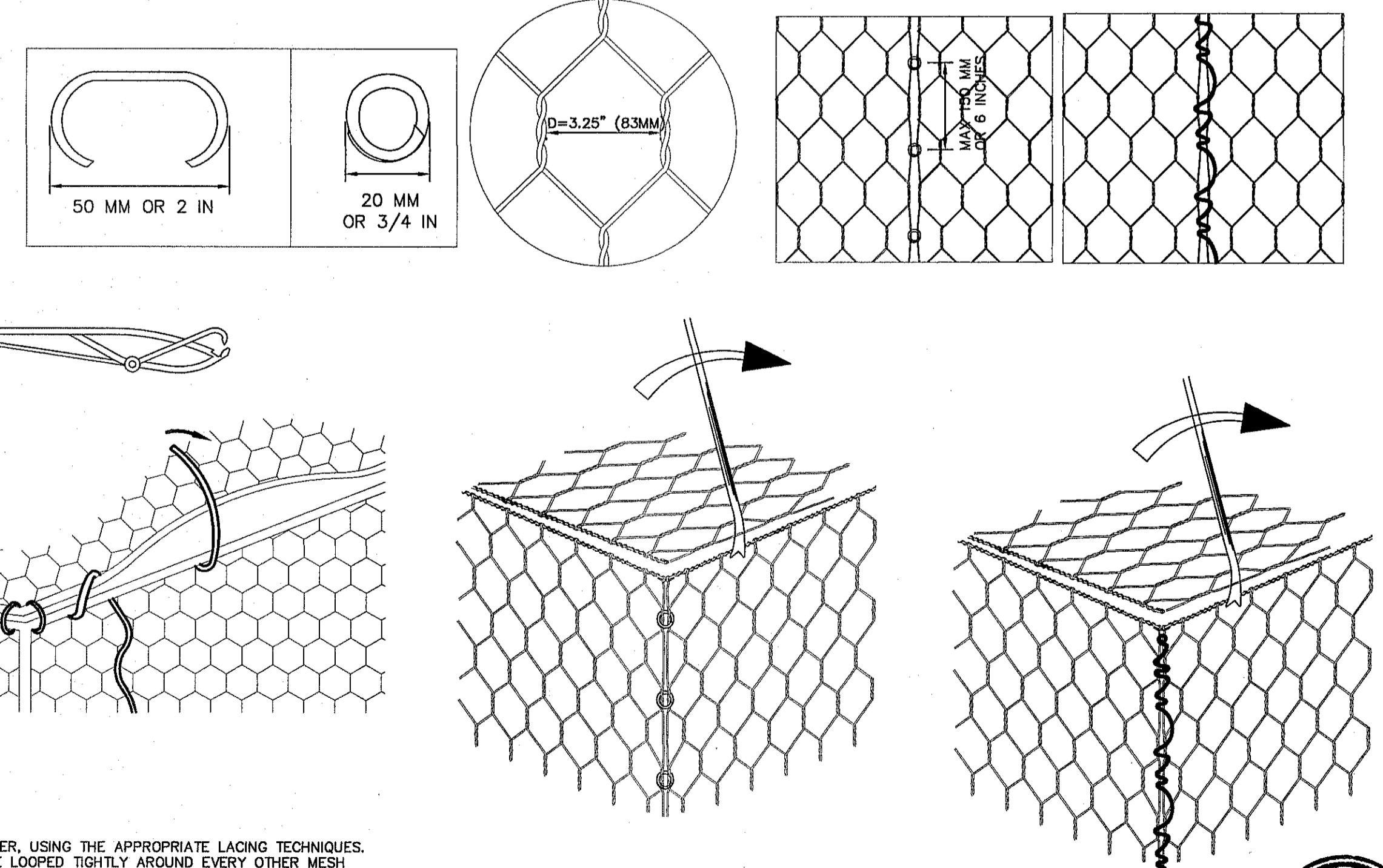
2 CHUTE BLOCK DISSIPATOR DETAIL
 SCALE: 1" = 1'-0"

NOTES:
 1. ALL CONCRETE SHALL HAVE 3,000 PSI MIN. @ 28 DAYS.
 2. REINFORCED STEEL SHALL BE DEFORMED AND A MINIMUM OF GRADE 40.

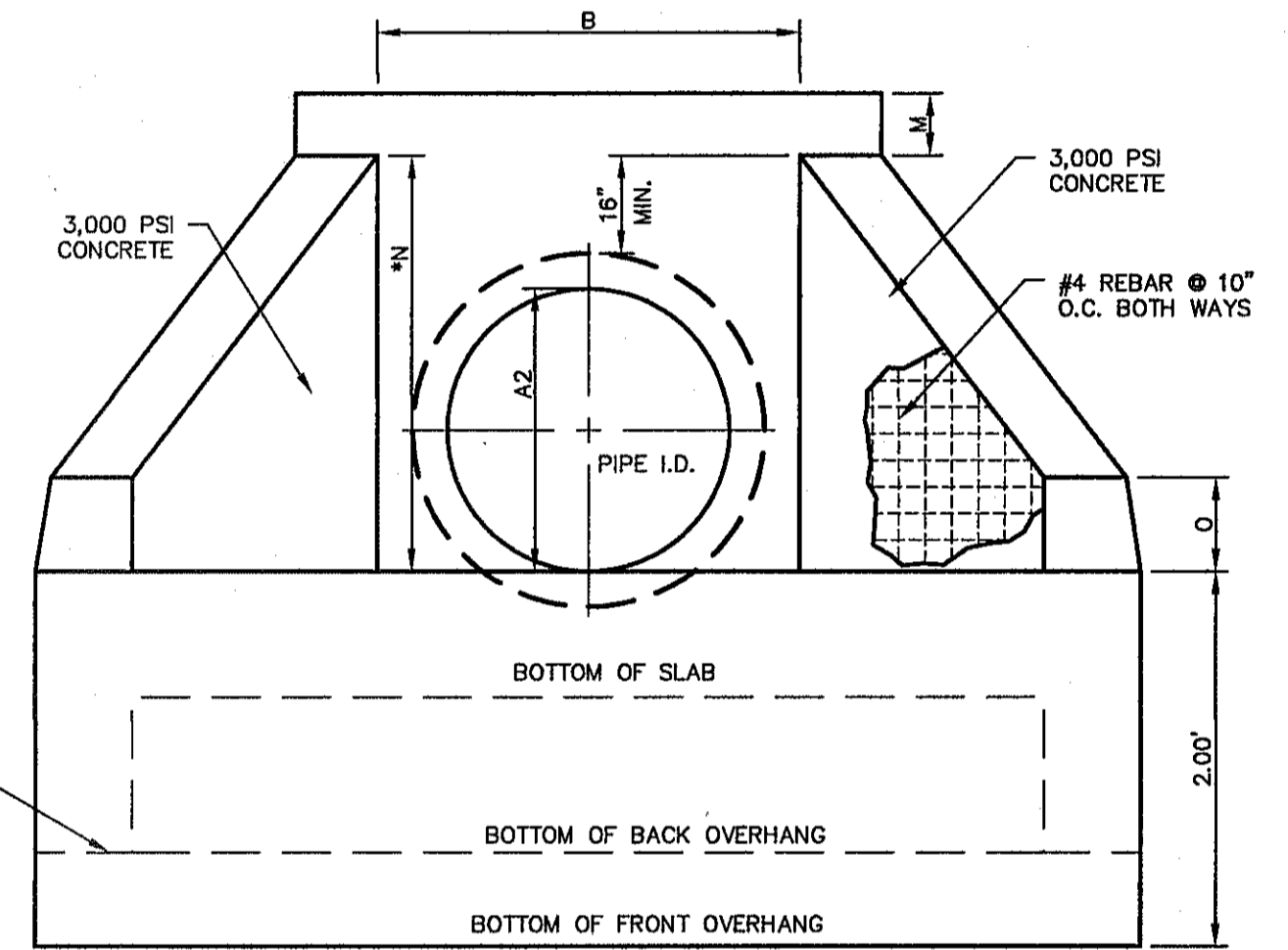


NOTES:
 1. EDGES ARE JOINED TOGETHER, USING THE APPROPRIATE LACING TECHNIQUES.
 2. MANUAL: CONTINUOUS WIRE LOOPED TIGHTLY AROUND EVERY OTHER MESH OPENING, ALTERNATING SINGLE AND DOUBLE LOOPS (FIG. 5).
 3. MECHANICAL: USING A PNEUMATIC OR HAND POWER TOOL, EMPLOYING STAINLESS STEEL "C" SHAPED FASTENERS.
 4. FOR CONTINUITY AND STRENGTH, THE RECOMMENDED SPACING IS 8 TO 12 CM, MAX 150MM.
 5. THE STAINLESS STEEL FASTENER HAS A DIAMETER OF 50 MM OPEN AND 20 MM CLOSED.

3 GABION CLOSING PROCESS
 SCALE: N.T.S.



CONCRETE HEADWALL DOWNSTREAM NOTES:
 1. CASTING TO BE SMOOTH & VOID OF AIR HOLES.
 2. CONCRETE TO BE 3,000 PSI MIN. @ TWENTY-EIGHT (28) DAYS.
 3. EXPANSION MATERIAL REQUIRED AT CURB RETURNS WITH 1/2" PREMOULDED ASPHALT IMPREGNATED EXPANSION MATERIAL OR EQUAL.
 4. ALL REINFORCING BARS SHALL HAVE A MINIMUM OF THREE (3") INCHES OF COVER WHEN ABUTTING EARTHEN MATERIAL.
 5. NINETY-FIVE (95%) PERCENT COMPACTION AS PER ASTM D-1557 UNDER ALL CONCRETE STRUCTURES.
 6. REINFORCED STEEL SHALL BE DEFORMED AND HAVE A MINIMUM OF GRADE 40.



REFERENCES - BENCHMARKS
 FOUND N.G.S. SURVEY MARKER STABED "CHNO 1980"
 ELEVATION: 3935.83 (CITY OF EL PASO VERTICAL DATUM)
 (NAD 83 DATUM)
 468.78
 390.78
 TIE TO THE PROJECT BENCHMARK IS N3739.09' W, 4,008.93 FEET FROM A 1/2" INCH REBAR FOUND FOR THE NORTHWEST CORNER OF TRACT 11, HELLE D. MUNDY SURVEY NO. 239

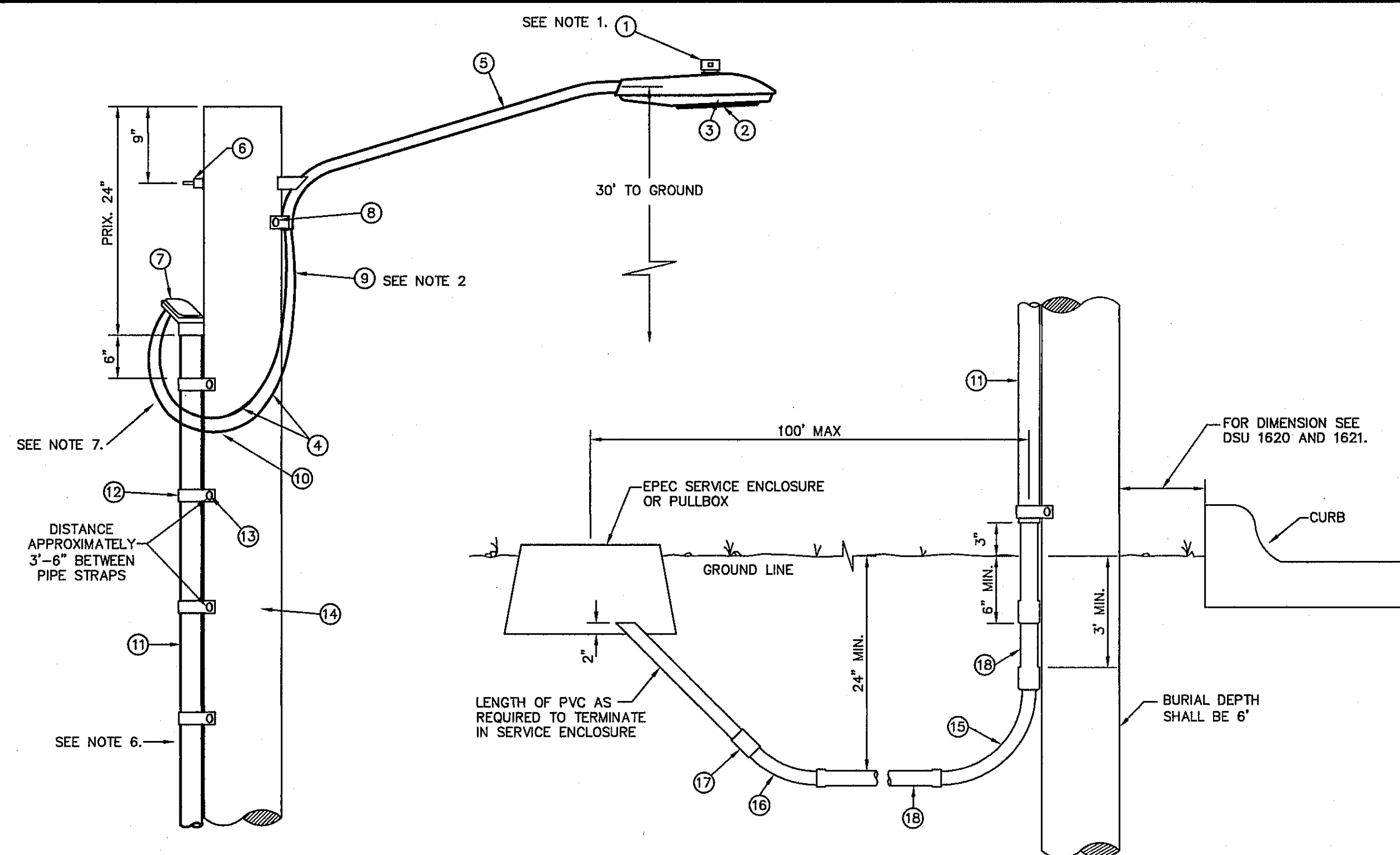
ENGINEER'S SEAL
 STATE OF TEXAS
 PROFESSIONAL ENGINEER
 ALAN D. HERRERT
 104114
 ENGINEERS • ARCHITECTS • PLANNERS
 TEXAS REGISTERED ENGINEERING FIRM F-1664
 4712 Woodrow Bann, Ste. F, El Paso, TX 79924
 Office: 915.544.5232 Fax: 915.544.5233 www.osaengineers.com

SCALE AS SHOWN
 Horizontal: N/A
 Vertical: N/A
 Contour Interval: N/A
 DATE: DECEMBER 2014
 DESIGN BY: A.J.H.
 DRAWN BY: J.H.
 CHKD. BY: J.L.A.
 APP'D. BY: J.L.A.
 JOB No. 2060-028-ID

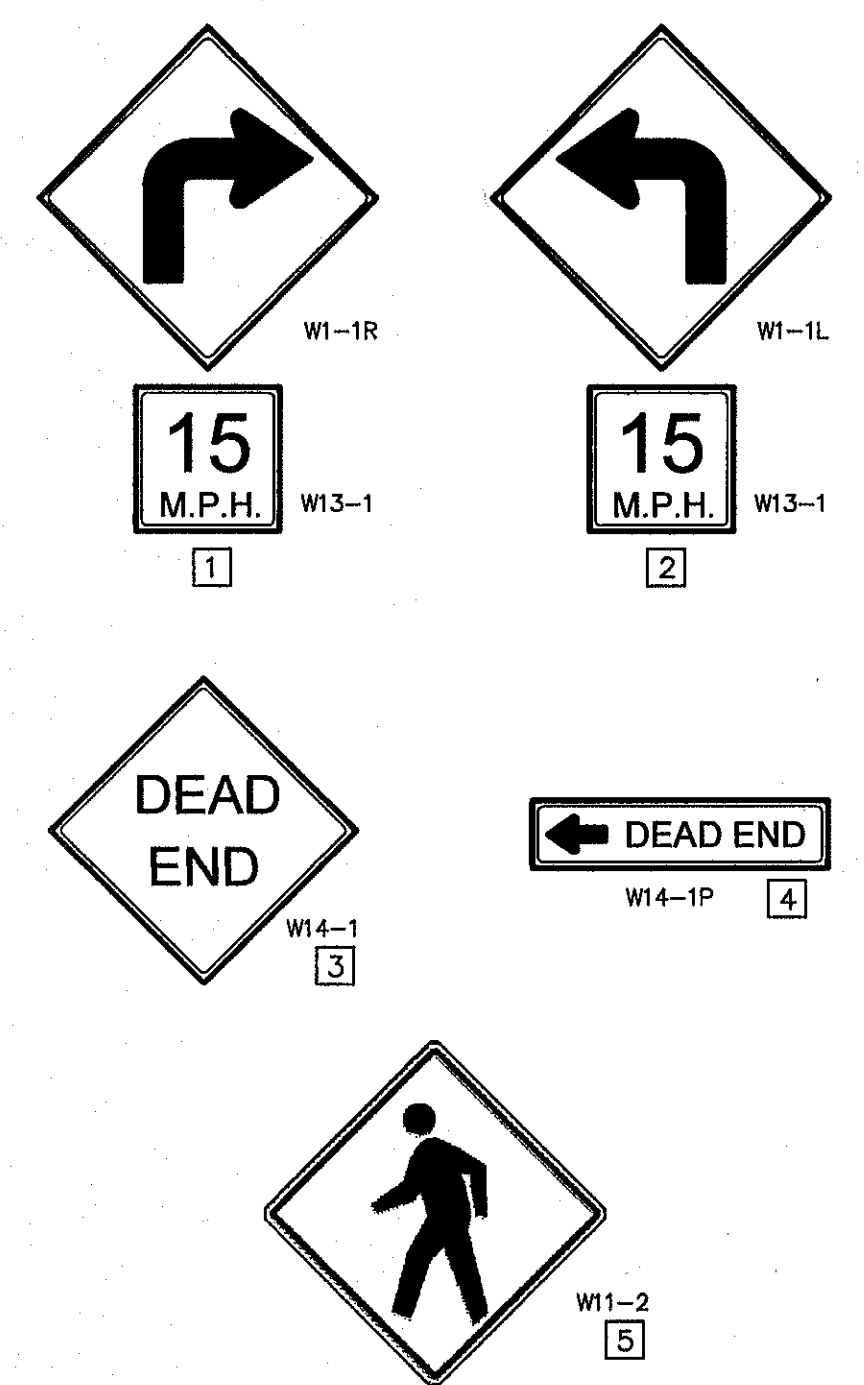
PROJECT TITLE
 DESERT SPRINGS UNIT FOUR
 SUBDIVISION IMPROVEMENTS

SHEET TITLE
 DRAINAGE DETAILS
 (SHEET 7 OF 7)
 SHEET NO.

C11.7
 Final Approval



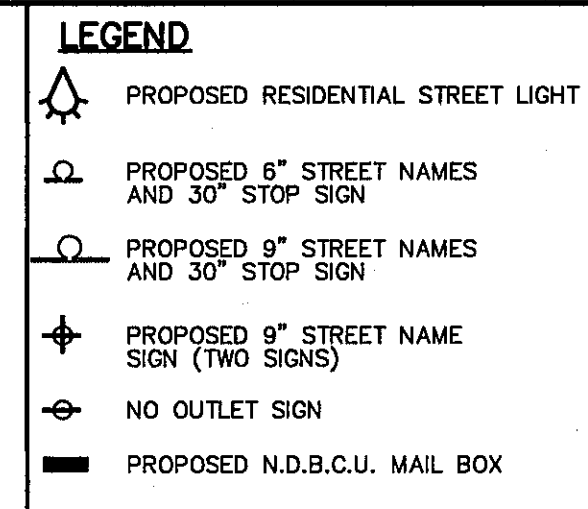
ITEM No.	DESCRIPTION	STOCK No.	QTY.	C/U CODE	MACRO CODE
1	PHOTOCELL, 240V-SEE NOTE 1	21-225	1		
2	HPS LAMP, 100W	21-085	1	LCOBRAHD	
3	LUMINAIRE, 100W H. P. S.	21-335	1		
4	SLEEVES, #12-10	05-140	2	LSLVI210	
5	MAST ARM, 6" x 1-1/4"	21-200	1	LBRKT1*6	
6	MACHINE BOLT, 5/8" x 12"	02-470	1		
	SQUARE GALV. WASHER, 2-1/4" x 2-1/4"	02-760	1	LMB5/812	
	COIL-SPRING WASHER, 5/8"	02-786	1		
	LOCKNUT, 5/8"	02-705	1		
7	SERVICE ENTRANCE CAP FOR 1" PVC CONDUIT	17-281	1	LSVCCAP1	LCOBRAUG
8	LAG BOLT, 3/8" x 3"	02-343	2	LLAG38*3	
9	CABLE #10, 2 CONDUCTOR, 600 V, UF	13-600	8'	L2C#10S	
10	COPPER CABLE, #12, SOLID, 600 V, BLUE	13-702	60'	LC#12CU	
11	SCHEDULE 80 1" PVC CONDUIT	17-280	30'	LSCH801	
12	PIPE STRAP FOR 1" PVC CONDUIT, 2-HOLE	17-283	9	LPVCSRP	
13	NAIL, STAINLESS STEEL SCREW 2.5 IN.	14-427	.25#	LNAL14*2	
14	POLE, 35 FT.-CLASS IV	09-035	1	L354UG	
15	1" PVC 90 DEGREE ELBOW	17-297	1	LEL901	
16	1" PVC 45 DEGREE ELBOW	17-298	1	LEL451	
17	1" PVC COUPLING	17-296	1	LCPL61	
18	1" PVC CONDUIT	17-299	AS REQ	LPVCI	



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) 880-7200
 ONEOK PARTNERS (915) 595-8918
 AT&T (800) 852-3786
 U.S. SPRINT TELECOMM (800) 521-0579
 CITY OF EL PASO DEPARTMENT OF TRANSPORTATION (915) 621-6750
 (AFTER HOURS) (915) 240-3220

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

- NOTES**
- TRAFFIC STREET SIGNS MUST BE OF HIGH INTENSITY REFLECTIVE SHEETING.
 - TEXT SIZES, FONTS, COLORS, ETC. MUST BE AS PER MUTCD STANDARDS & REQUIREMENTS
 - SIGNS & STRIPING SHOULD COMPLY WITH THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
 - ANY STRIPING, SIGNS, ETC WITHIN TxDOT ROW SHALL COMPLY W/TxDOT STANDARDS & REQUIREMENTS.
 - POSTS MUST BE BREAK-AWAY TYPE AS SHOWN ON THIS SHEET.
 - TEMPORARY DEAD END SIGN TO BE REMOVED UPON FUTURE COMPLETION OF RESLER DR.



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

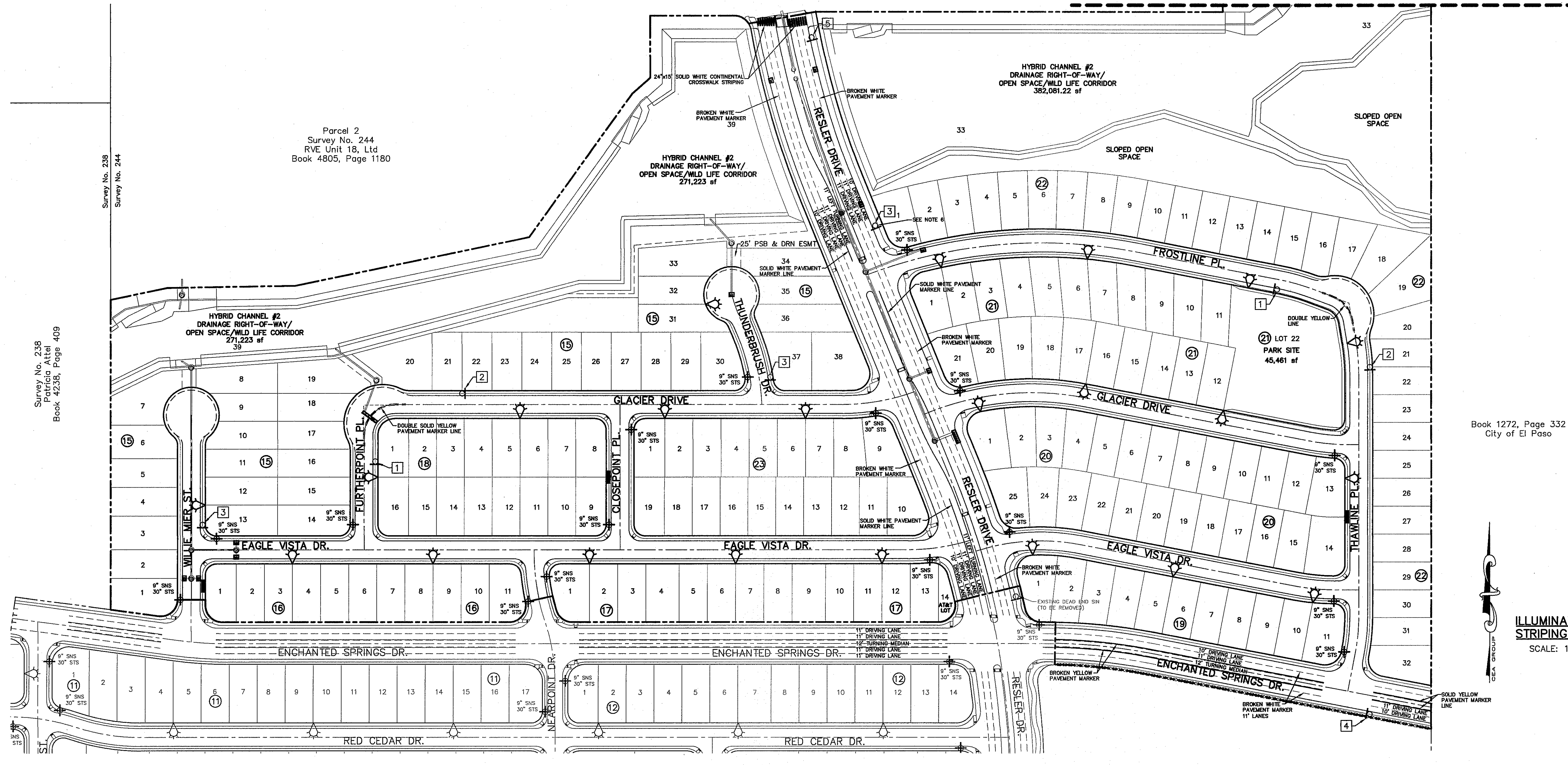
RESIDENTIAL STREET LIGHT WOOD POLE
 SCALE: N.T.S.

RESIDENTIAL STREET LIGHT WOOD POLE
 SCALE: N.T.S.

SIGNS DETAIL
 SCALE: N.T.S.

22 RESIDENTIAL STREET LIGHTS

MATCHLINE SEE SHEET C12.2



Book 1272, Page 332
 City of El Paso

ILLUMINATION, SIGNAGE & STRIPING PLAN
 SCALE: 1" = 100'

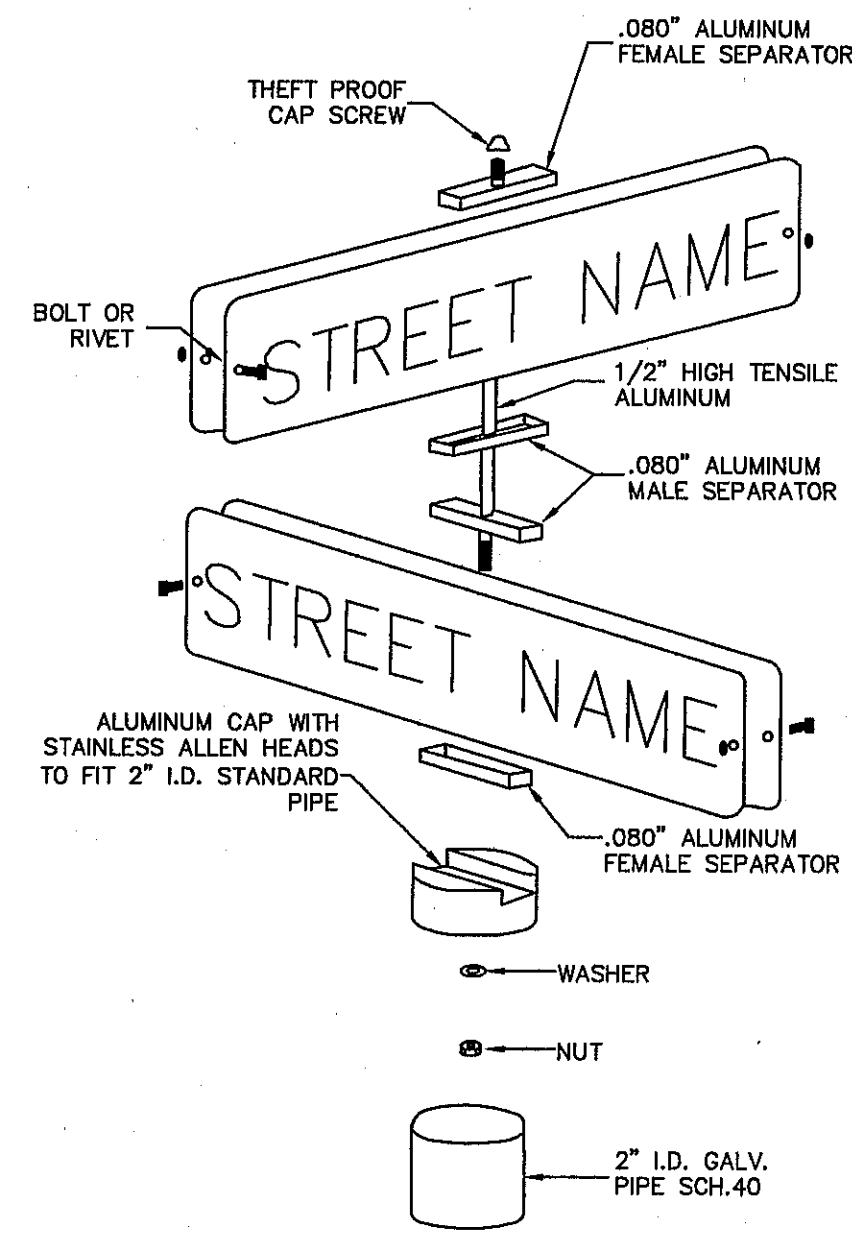


REFERENCES - BENCHMARKS
 FOUND N.G.S. SURVEY MARKER STAMPED "CHNO 1980"
 ELEVATION: 3933.93 (CITY OF EL PASO VERTICAL DATUM)
 3946.11 (NAVD 88 DATUM)
 3945.78 (NAD 83 DATUM)
 TIE TO THE PROJECT BENCHMARK IS N350°09'W, 4.008.83
 CORNER OF TRACT 11, NELLE D. MUNDY SURVEY NO. 238
 DATE: _____ BY: _____
 REVISIONS: _____

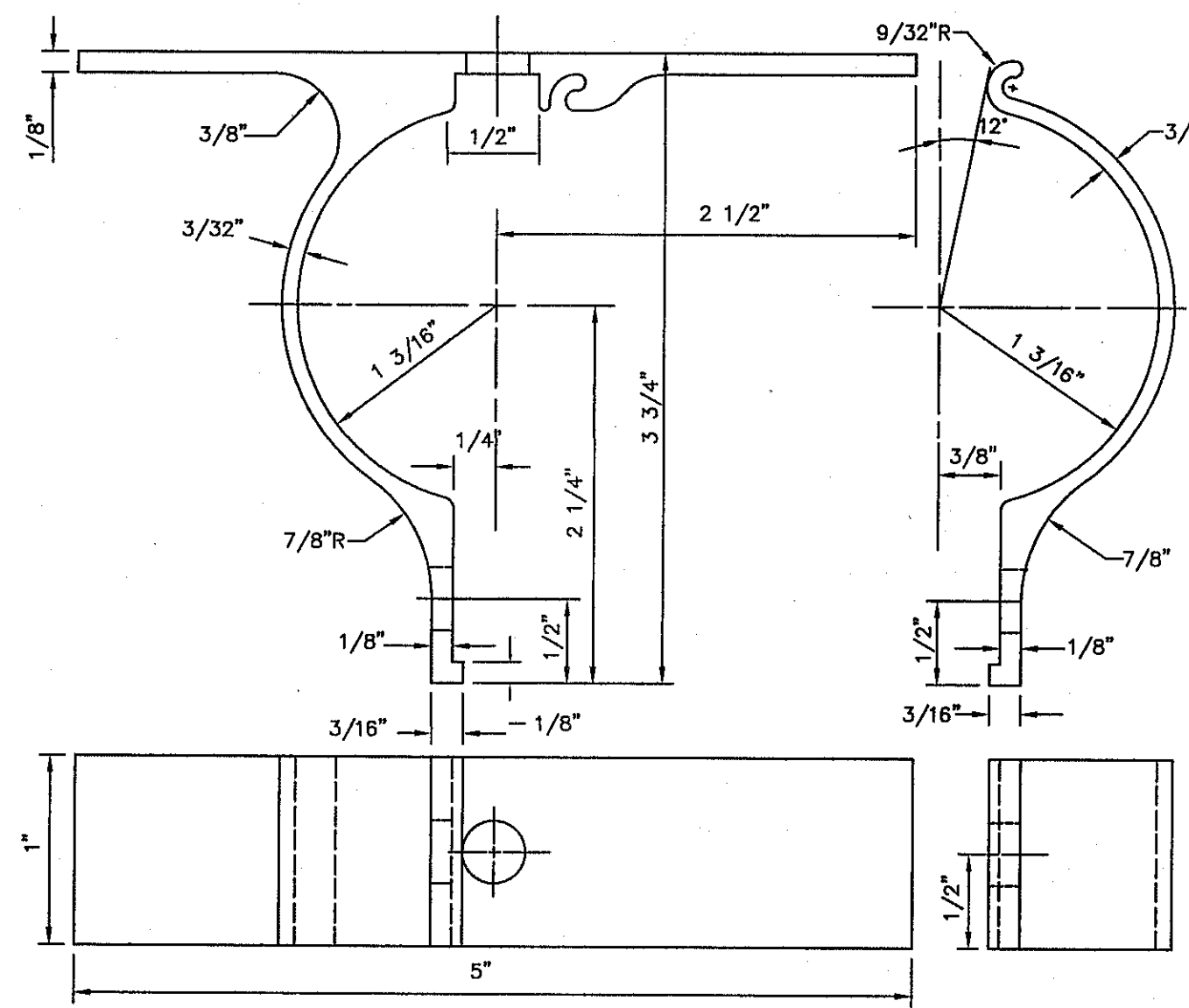
ENGINEER'S SEAL
 SCALE: 1"=100'
 Horizontal: N/A
 Vertical: N/A
 Contour Interval: N/A
 DATE: DECEMBER 2014
 DESIGN BY: A.H.
 DRAWN BY: J.H.
 CHECKED BY: J.L.A.
 APPROVED BY: J.L.A.
 JOB No. 2060-028-1D

PROJECT TITLE
DESERT SPRINGS UNIT FOUR
SUBDIVISION IMPROVEMENTS

SHEET TITLE
ILLUMINATION, SIGNAGE & STRIPING PLAN
 (SHEET 1 OF 3)
 SHEET NO.
C12.1

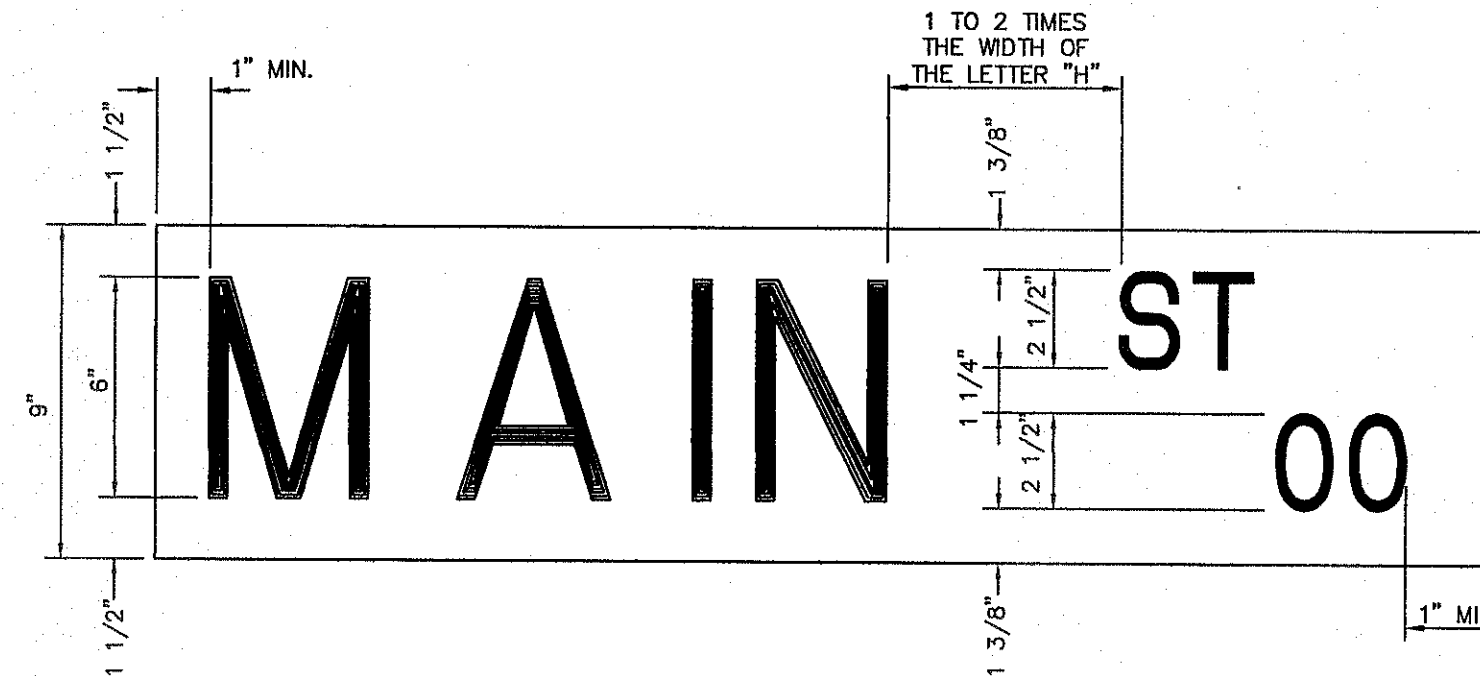


9" STREET NAME ASSEMBLY
SCALE: N.T.S.



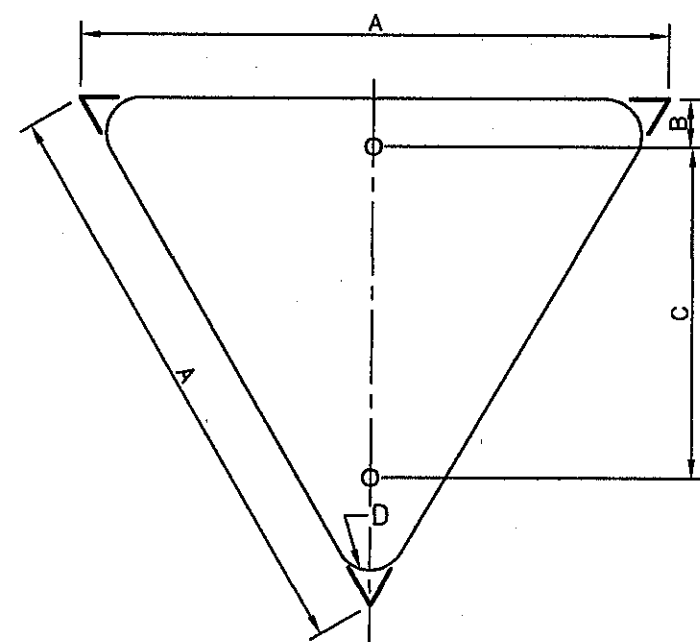
ALUMINUM SIGN CLAMP BRACKET FOR TRAFFIC CONTROL SIGNS
SCALE: N.T.S.

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



SIGN CLASS	SIGN LENGTH	PRIMARY LETTERS SIZE & SERIES	SUFFIX & BLOCK NUMBER SIZE & SERIES
9" ARTERIAL STREETS	36"	6" C,D SERIES	3" C SERIES
	42"	6" C,D SERIES	3" C SERIES
	48"	6" A,B,C,D SERIES	3" C SERIES

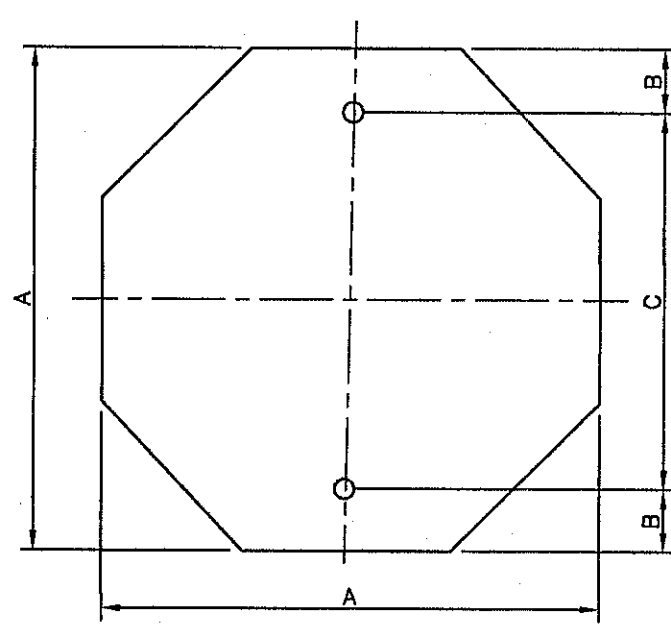
LAYOUT FOR 9" STREET NAME SIGNS
SCALE: N.T.S.



EQUILATERAL TRIANGLE
N.T.S.

3/8" HOLE DIA.

A	B	C	D
36	3	21	2
42	3	24	2 1/2
48	3	35	3

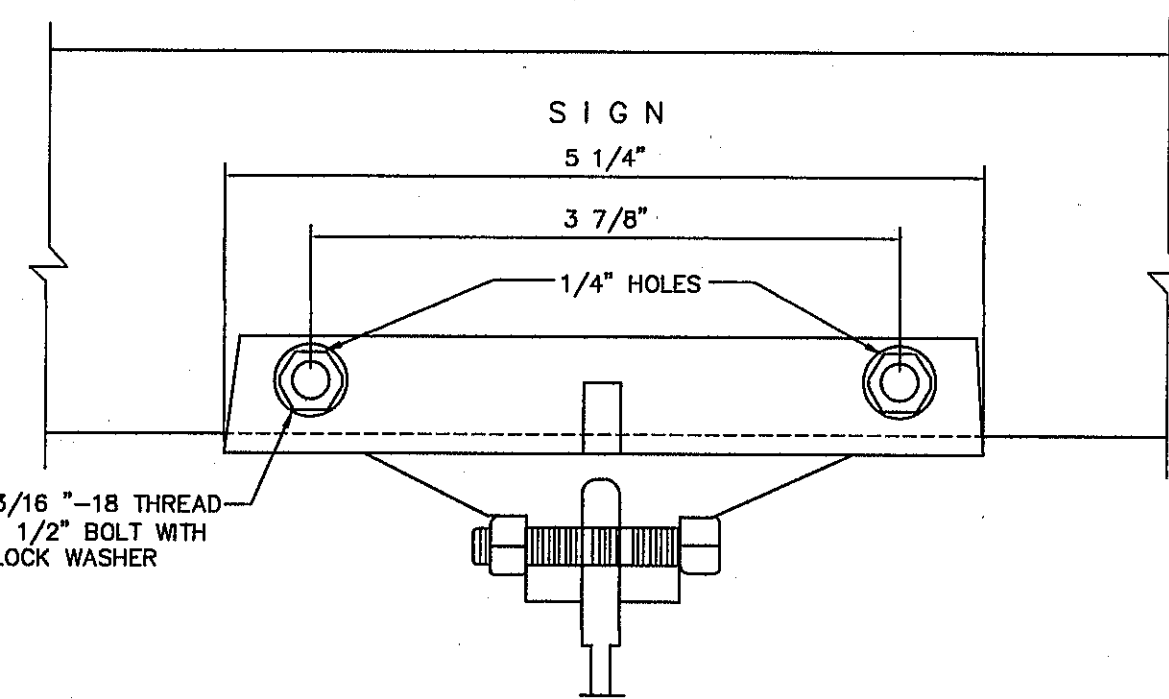


OCTAGON
N.T.S.

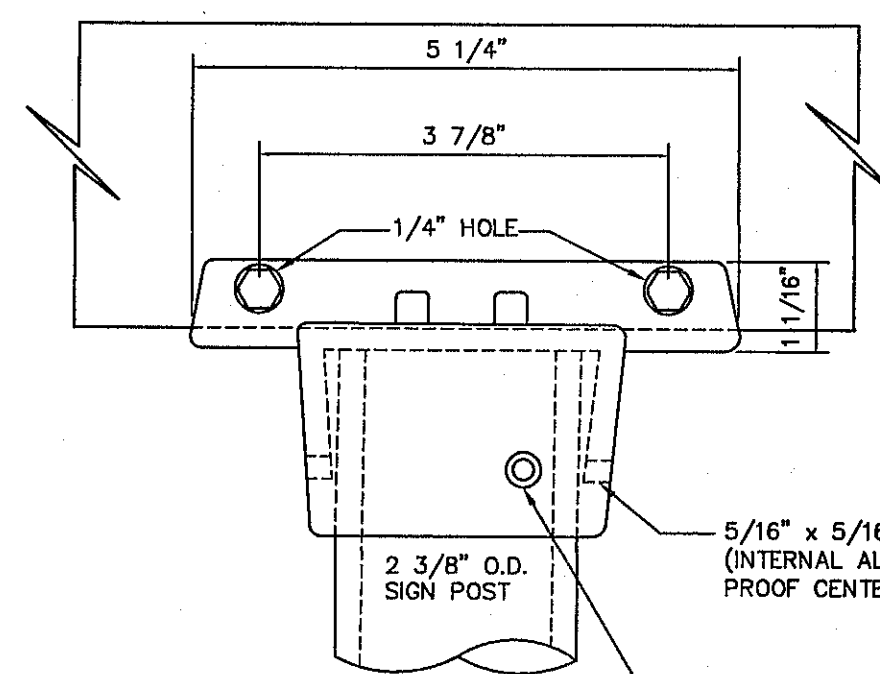
3/8" HOLE DIA.

A	B	C
24	3	18
30	3	24
36	3	30

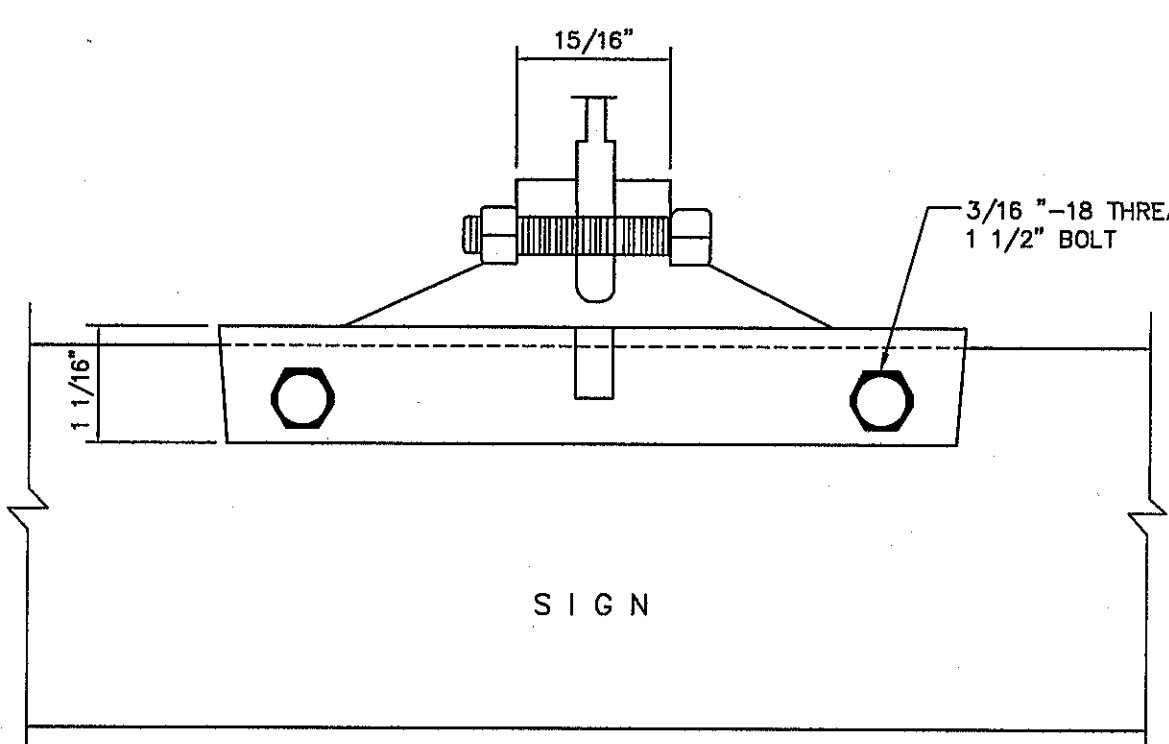
D.H.T. BLANK STANDARDS
SCALE: N.T.S.



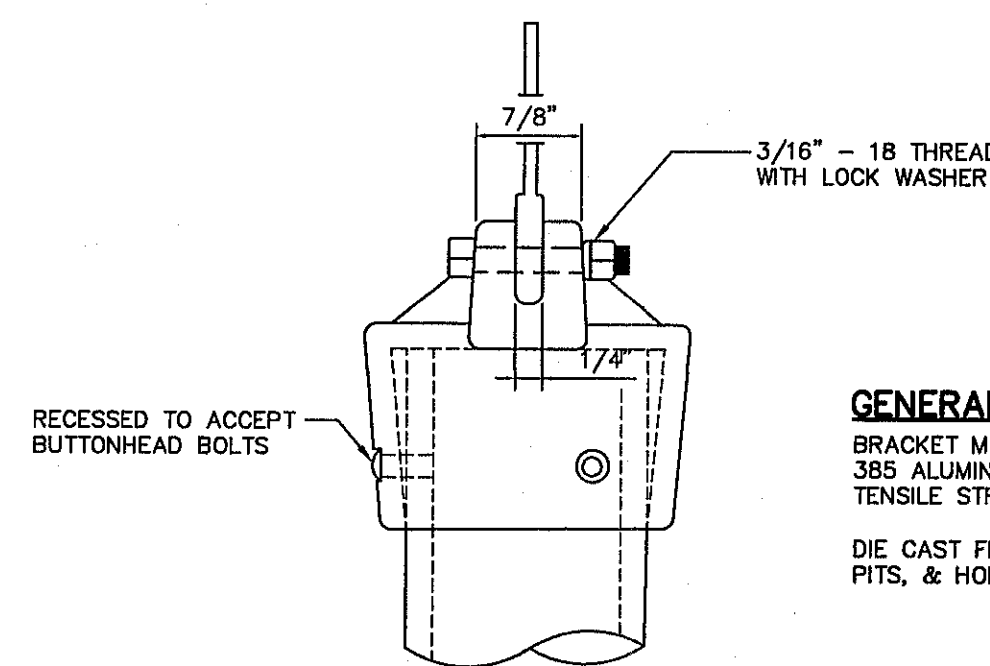
90" SIGN TO SIGN BACK (FOR EXTRUDED BLADES)



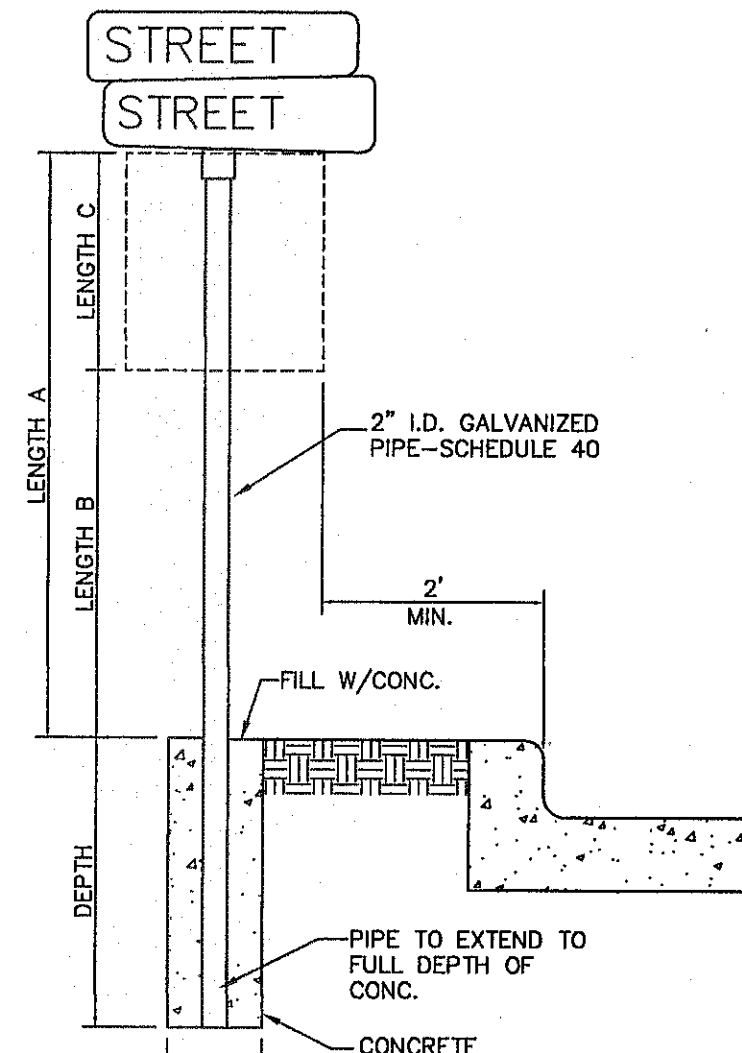
POST CAP BRACKET (FOR EXTRUDED BLADES)



9" STREET NAME SIGN ASSEMBLY
SCALE: N.T.S.



GENERAL NOTES
BRACKET MATERIALS TO BE 305 ALUMINUM ALLOY TENSILE STRENGTH 4900 P.S.I.
DIE CAST FREE OF BURRS, PITS, & HOLES



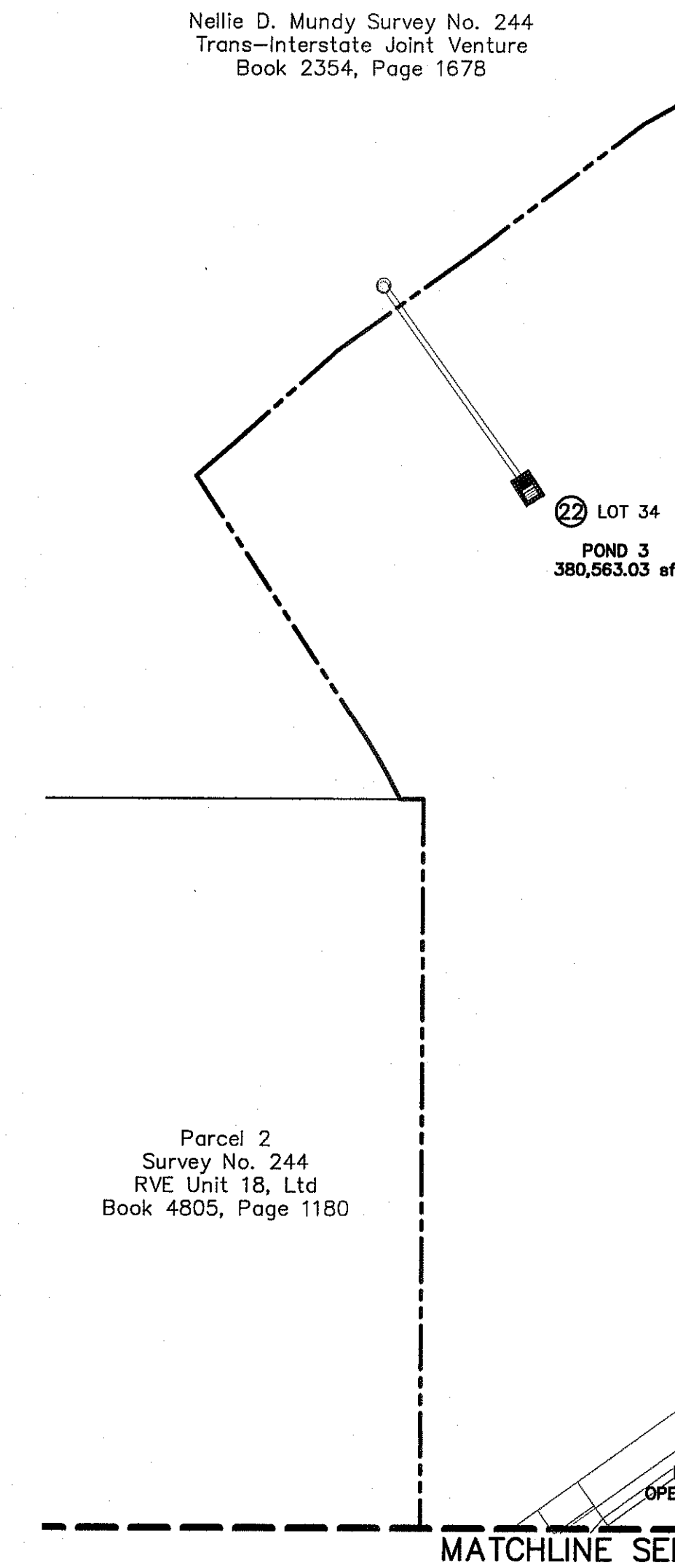
SIGN POST INSTALLATION
SCALE: N.T.S.

LENGTH A	LENGTH B	LENGTH C	DEPTH
10 FT	7 FT	LARGER THAN 24"	2 FT
9 FT	7 FT	SMALLER THAN 24"	1 1/2 FT

SIGN POST INSTALLATION
SCALE: N.T.S.

CITY OF EL PASO SPECIFICATIONS FOR REFLECTORIZED STREET NAME SIGNS

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



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
ONEOK PARTNERS	(915) 595-6918
AT&T	(800) 852-3786
U.S. SPRINT TELECOMM	(800) 521-0579
CITY OF EL PASO DEPARTMENT OF TRANSPORTATION (AFTER HOURS)	(915) 821-6750 (915) 240-3220

WARNING! BEFORE YOU DIG

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

FOR FIELD LOCATING EXISTING UTILITIES

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

LEGEND

- PROPOSED RESIDENTIAL STREET LIGHT
- PROPOSED 6" STREET NAMES AND 30" STOP SIGN
- PROPOSED 9" STREET NAMES AND 30" STOP SIGN
- PROPOSED 9" STREET NAME SIGN (TWO SIGNS)
- NO OUTLET SIGN
- PROPOSED N.D.B.C.U. MAIL BOX

REFERENCES - BENCHMARKS

FOUND N.A.S. SURVEY MARKER STAMPED "OHIO 1880" ELEVATION: 3946.11 CITY OF EL PASO VERTICAL DATUM 3946.11 (NAVD 88 DATUM) 3945.78 (NGVD 29 DATUM) BE TO THE PROJECT BENCHMARK IS W550909"W, 4.006.93"E FROM THE BENCHMARK IS W550909"W, 4.006.93"E CORNER OF TRACT 11, NELLIE D. MUNDY SURVEY NO. 239

ENGINEER'S SEAL

SCALE: 1"=100'
Horizontal: N/A
Vertical: N/A
Contour Interval: N/A
DATE: DECEMBER, 2014
DESIGN BY: J.H.
CHECK BY: J.H.
APP'D BY: J.H.
JOB No. 2060-028-LD

PROJECT TITLE

DESERT SPRINGS UNIT FOUR SUBDIVISION IMPROVEMENTS

SHEET TITLE

ILLUMINATION, SIGNAGE & STRIPING PLAN
SCALE: 1" = 100'

ILLUMINATION, SIGNAGE & STRIPING PLAN
(SHEET 2 OF 3)
SHEET NO.

C12.2

Final Approval

LEGEND:

	PROPOSED RESIDENTIAL STREET LIGHT
	PROPOSED 6" STREET NAMES AND 30" STOP SIGN
	PROPOSED 9" STREET NAME SIGN (TWO SIGNS)
	EXISTING 9" STREET NAME SIGN (TWO SIGNS)
	EXISTING RESIDENTIAL STREET LIGHT
	5-FT ACCESSIBLE PEDESTRIAN ROUTE
	24" SOLID WHITE STOP BAR PAVEMENT MARKER
	8" WHITE SOLID PAVEMENT MARKER
	4" BROKEN WHITE PAVEMENT MARKER

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
ONEOK PARTNERS	(915) 595-6918
AT&T	(800) 852-3786
U.S. SPRINT TELECOMM	(800) 521-0579
CITY OF EL PASO DEPARTMENT OF TRANSPORTATION	(915) 621-6750
(AFTER HOURS)	(915) 240-3220

WARNING!
BEFORE YOU DIG

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

FOR FIELD LOCATING EXISTING UTILITIES

REFERENCES - BENCHMARKS

FOUND N.G.S. SURVEY MARKER SPANED "ROUND 1860" ELEVATION: 3946.11 (NAD 83 DATUM)

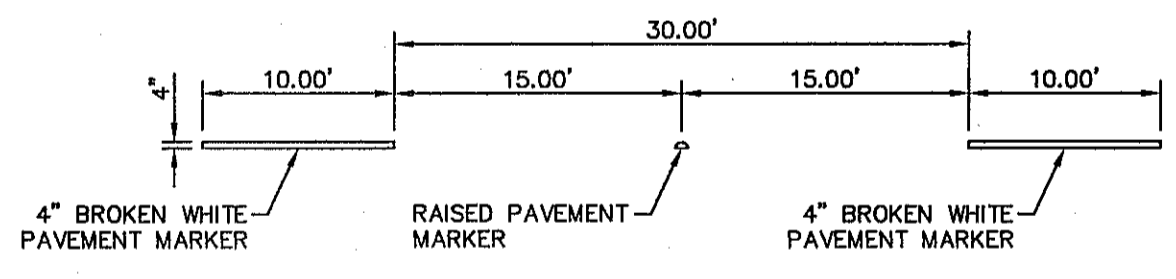
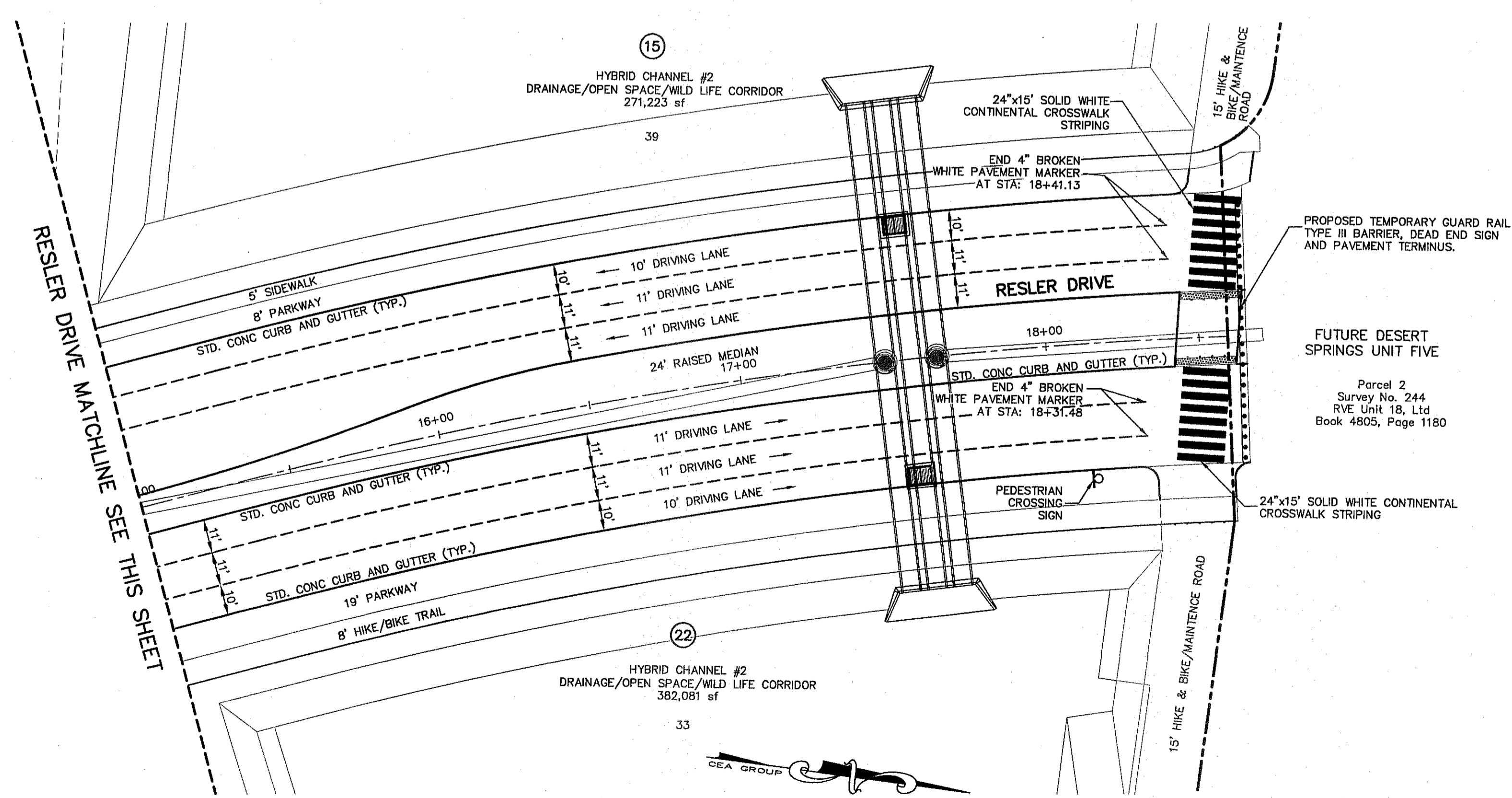
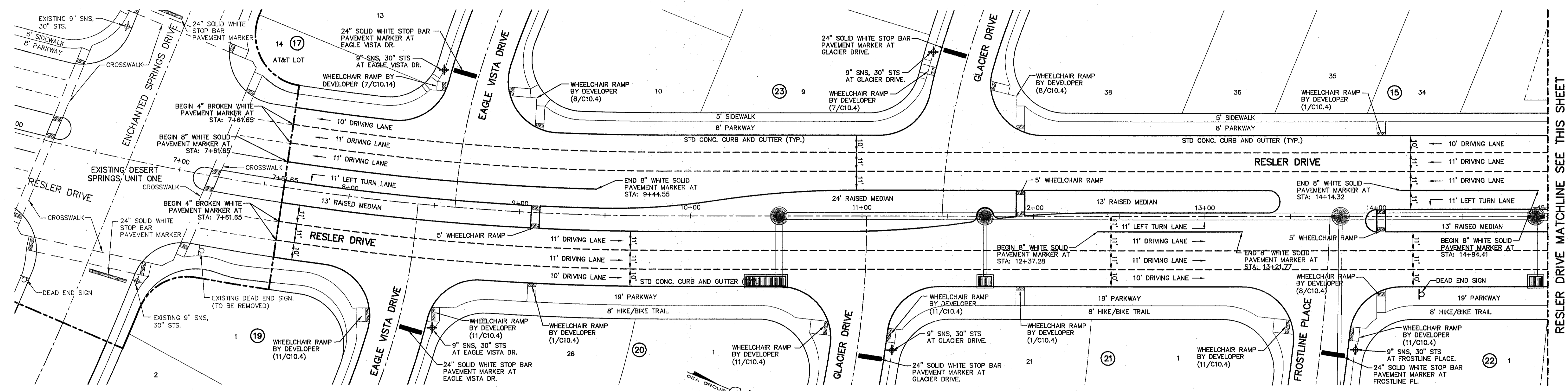
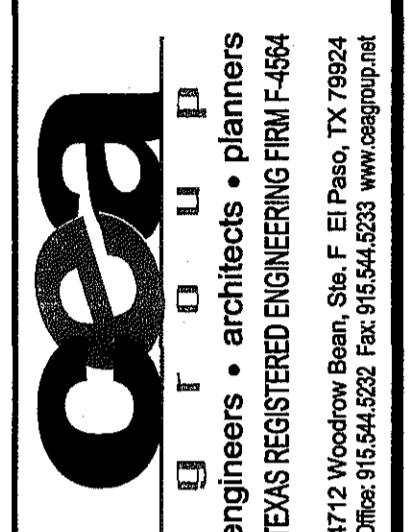
3946.78 (NAD 83 DATUM)

3946.78 (NAD 83 DATUM)

FEET FROM A 1/2" INCH REBAR FOUND FOR THE NORTHWEST CORNER OF TRACT 11, NELLE D. MURPHY SURVEY No. 239

DATE: _____ BY: _____

REVISIONS: _____



NOTE:
SIGNS & STRIPING SHOULD COMPLY WITH THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).

4" BROKEN WHITE PVMT MARKER TYP.
SCALE: 1" = 1'

ILLUMINATION, SIGNAGE & STRIPING PLAN
SCALE: 1" = 30'



PROJECT TITLE

DESERT SPRINGS UNIT FOUR
SUBDIVISION IMPROVEMENTS

SCALE: 1" = 30'

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

DATE: DECEMBER 2014
DESIGN BY: J.H.
DRAWN BY: J.H.
CHKD. BY: J.L.A.
APP'D. BY: J.L.A.

JOB No. 2080-028-1D

SHEET TITLE

ILLUMINATION, SIGNAGE & STRIPING PLAN

(SHEET 3 OF 3)

SHEET NO.

C12.3

SITE DESCRIPTION

PROJECT NAME AND LIMITS: DESERT SPRINGS UNIT FOUR
THE PROJECT IS BOUNDED IN THE FOLLOWING MANNER:
DESERT SPRINGS UNIT ONE TO THE SOUTH.
NELLIE D. MUNDY SURVEY No. 244 BOOK 1272, PAGE 332 TO THE EAST
NELLIE D. MUNDY SURVEY No. 244 TRANS-INTERSTATE JOINT VENTURE BOOK 2354, PAGE 1678 TO THE NORTH.
AND THE FOLLOWING PROPERTIES TO THE WEST: TRACT 9C, SURVEY No. 238, TRANS-INTERSTATE JOINT VENTURE; AND TRACT 8, SURVEY No. 238, PATRICIA ATTEL TO THE WEST.

PROJECT DESCRIPTION: THE SITE FOR THE NEW SUBDIVISION WILL ENCOMPASS APPROXIMATELY 61.397± ACRES, AND WILL CONTAIN 190 RESIDENTIAL LOTS.

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

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

TOTAL PROJECT AREA: 63.076± A.C.

TOTAL AREA TO BE DISTURBED: 63.076± A.C.

WEIGHTED RUNOFF COEFFICIENT (AFTER CONSTRUCTION): 0.67

EXISTING CONDITION OF SOIL AND VEGETATIVE COVER AND % OF EXISTING VEGETATIVE COVER: THE SOIL CLASSIFICATION FOR THE PROJECT AREA IS IN THE VICINITY OF THE DEL NORTE-CANUTILLO ASSOCIATION: NEARLY LEVEL TO STEEP SOILS THAT ARE DEEP AND GRAVELLY THROUGHOUT; MAINLY ON AND NEAR FOOT SLOPES OF THE FRANKLIN MOUNTAINS. THERE IS AN EXISTING APPROXIMATE 30% VEGETATIVE COVER IN THIS AREA.

NAME OF RECEIVING WATERS: THERE WILL BE PROPOSED DETENTION BASIN AREAS DESIGNED TO HOLD A PORTION OF THE UPSTREAM STORM WATER RUNOFF FROM THE EXISTING LAND DISCHARGING TO PROPOSED HYBRID CHANNELS INSIDE THE LIMITS OF THE DEVELOPMENT THE STORM RUNOFF IS CONVEYED VIA SURFACE FLOW TO PROPOSED INLETS STRUCTURES ON THE STORM SEWER INFRASTRUCTURE THAT WILL ULTIMATELY DISCHARGE INTO HYBRID CHANNELS AND/OR DETENTION BASIN. STORM RUNOFF WILL CONTINUE ITS ORIGINAL PATH AT A DECREASED WATER CONCENTRATION.

CONTRACTOR'S CERTIFICATION

GENERAL CONTRACTOR
I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHERED AND EVALUATED THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGES THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.

OPERATOR: _____
SIGNATURE: _____
NAME (PRINT): _____
TITLE: _____
DATE: _____

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 SHEETS FOR ADDITIONAL INFORMATION ON WATERSHED AREAS AND RUNOFF QUANTITIES (Q).
6. THE FOLLOWING HAVE BEEN IDENTIFIED AS POTENTIAL CONTAMINATION SOURCES: CLEARED AND GRADED AREAS; CONSTRUCTION SITE ENTRANCE AND ASPHALT PARKING AREA CONSTRUCTION; ASPHALT LOADING/UNLOADING AREAS; CONCRETE LOADING/UNLOADING AREAS; AND, ALL UNDISTURBED AREAS.
7. THE FOLLOWING IS A LIST OF POTENTIAL CONSTRUCTION SITE STORM WATER POLLUTANTS: ASPHALT; CONCRETE; GLUE/ADHESIVE; PAINTS; CURING COMPOUNDS; WASTEWATER FROM CONSTRUCTION EQUIPMENT WASHING; HYDRAULIC OIL/FLUIDS; GASOLINE; DIESEL FUEL; KEROSENE; ANTIFREEZE/COOLANT; AND EROSION.

BEST MANAGEMENT PRACTICES CONTROLS

I. WASTE MATERIALS:

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

II. HAZARDOUS WASTE:

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

III. SANITARY WASTE:

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

IV. SPILL PREVENTION:

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

GOOD HOUSEKEEPING:

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

HAZARDOUS PRODUCTS:

PRACTICES USED TO REDUCE RISKS:

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

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.

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

V. 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.

VI. 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.

VII. OFFSITE VEHICLE TRACKING:

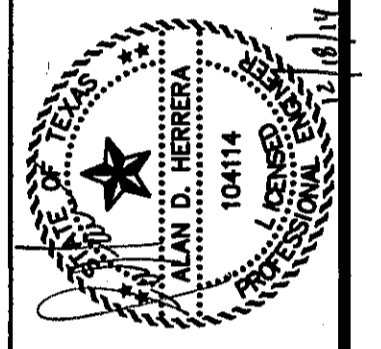
IN ADDITION TO THE STABILIZED CONSTRUCTION ENTRANCES, THE FOLLOWING MEASURES SHALL BE OBSERVED DURING CONSTRUCTION:

- 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: _____

VIII. REFER TO SWPPP REPORT FOR ADDITIONAL INFORMATION

REFERENCES - BENCHMARKS
FOUND N.G.S. SURVEY MARKER STAMPED "CHINO 1987"
ELEVATION: 3935.03 (CITY OF EL PASO VERTICAL DATUM)
3935.03 (NAVD 88 DATUM)
3945.78 (NOVD 29 DATUM)
TIE TO THE PROJECT BENCHMARK IS N35709.09' W, 4.008.83' S FROM THE PROJECT BENCHMARK TO THE NORTHWEST CORNER OF TRACT 11, NELLIE D. MUNDY SURVEY No. 238

osa
engineers • architects • planners
TEXAS REGISTERED ENGINEERING FIRM F-4664
4712 Woodrow Bean, Ste. F El Paso, TX 79924
Office: 915.544.5222 Fax: 915.544.5225 www.osaengineers.com



SCALE: N/A
Horizontal: N/A
Vertical: N/A
Contour Interval: N/A
DATE: DECEMBER 2014
DESIGN BY: A.H.
DRAWN BY: J.H.
CHKD. BY: J.L.A.
APP'D. BY: J.L.A.
JOB No. 2080-028-ID

PROJECT TITLE
DESERT SPRINGS UNIT FOUR
SUBDIVISION IMPROVEMENTS

SHEET TITLE

STORM WATER POLLUTION PREVENTION PLAN: GENERAL NOTES

SHEET NO.

C13.1



NOTES:

- BEGIN CONSTRUCTION ACTIVITIES AT PONDING AREAS. PONDING AREAS ARE TO BE EIGHTY-FIVE (85%) PERCENT COMPLETE PRIOR TO COMMENCING CONSTRUCTION ACTIVITIES FOR THE REMAINING OF SUBDIVISION.
- ALL CONSTRUCTION PRACTICES AND PROCEDURES WILL COMPLY WITH THE PERTINENT PROVISIONS OF THE OCCUPATIONAL SAFETY AND HEALTH STANDARD (TITLE 29, CODE OF FEDERAL REGULATIONS) PUBLISHED BY THE OSHA, DEPARTMENT OF LABOR.
- THE CONTRACTOR SHALL FIELD VERIFY ELEVATIONS, MEASUREMENTS AND EXISTING CONDITIONS PRIOR TO COMMENCING CONSTRUCTION ACTIVITIES. NOTIFY THE ENGINEER PROMPTLY OF ANY OMISSIONS, ERRORS, OR DISCREPANCIES FOUND SO THAT NECESSARY CORRECTIONS AND INTERPRETATIONS BE MADE PRIOR TO CONSTRUCTION.

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
ONEOK PARTNERS	(915) 595-6918
AT&T	(800) 852-3786
U.S. SPRINT TELECOMM	(800) 521-0579
CITY OF EL PASO DEPARTMENT OF TRANSPORTATION	(915) 621-6750
(AFTER HOURS)	(915) 240-3220

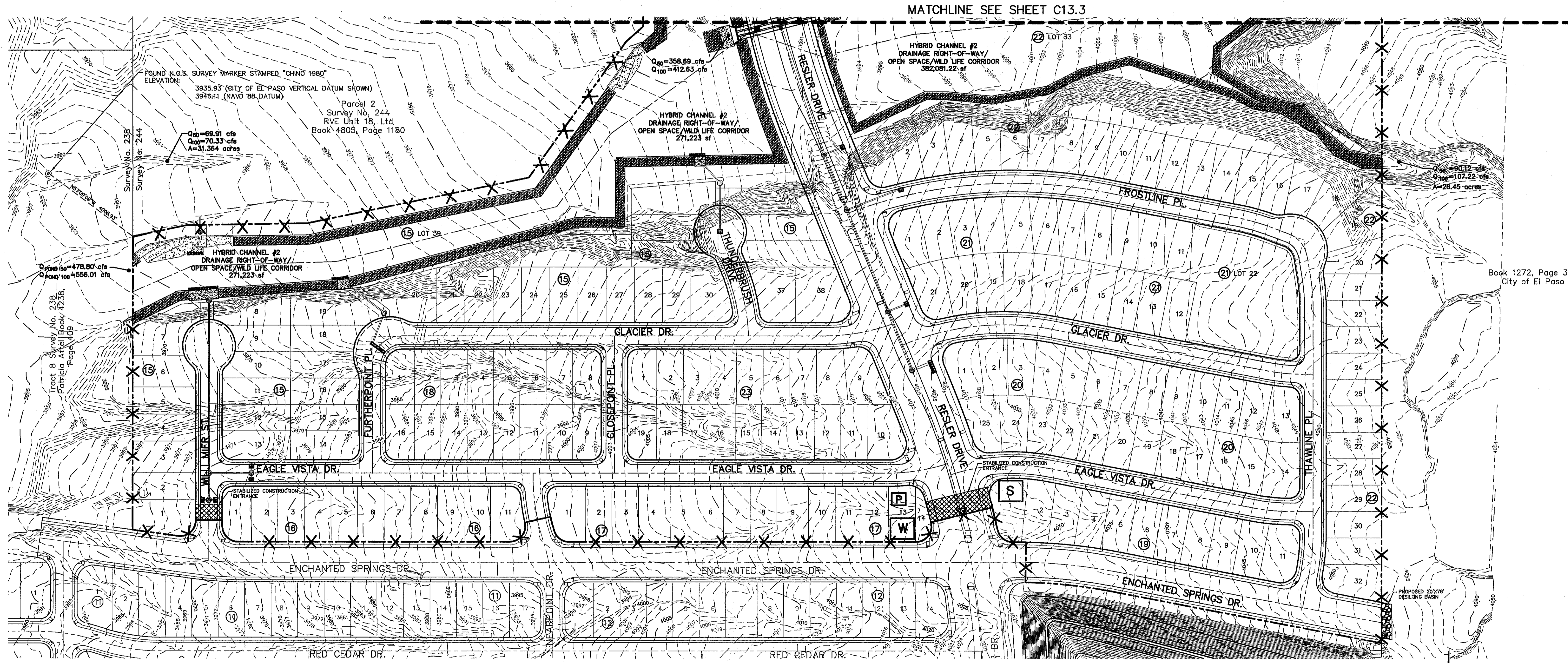
**WARNING !
BEFORE YOU DIG**

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

A PORTION OF NELLIE D. MUNDY SURVEY No. 243, PARCEL 2,
CITY OF EL PASO, EL PASO COUNTY, TEXAS
63.076 ACRES±

LEGEND:

- X—X SILT FENCE OR EARTHEN BERM
- [Hatched Box] STABILIZED CONSTRUCTION ENTRANCE
- [S Box] STAGING AREA
- [P Box] PORTABLE TOILETS
- [W Box] WASHOUT SITE



REFERENCES - BENCHMARKS

FOUND N.G.S. SURVEY MARKER STAMPED "CHINO 1980"	ELEVATION: 3935.93 (CITY OF EL PASO VERTICAL DATUM)
3946.11 (NAVD 88 DATUM)	
3946.11 (NAVD 88 DATUM)	
TIE TO THE PROJECT BENCHMARK IS N233°09'09"W, 4.00883	
CORNER OF TRACT 11, NELLIE D. MUNDY SURVEY No. 239	
DATE	REVISIONS
	BY

cea
engineers • architects • planners
TEXAS REGISTERED ENGINEERING FIRM F-464
4712 Woodrow Bean, Ste. F, El Paso, TX 79924
Office: 915.544.6222 Fax: 915.544.6228 www.cea.com

ENGINEER'S SEAL
ALAN D. HERRERA
10414
Professional Engineer
No. 11114

SCALE: 1"=100'

Horizontal:	N/A
Vertical:	N/A
Contour Interval:	N/A
DATE:	DECEMBER 2014
DESIGN BY:	A.H.
DRAWN BY:	J.H.
CHKD. BY:	J.L.A.
APP'D. BY:	J.L.A.
JOB NO.	2080-028-1D

PROJECT TITLE
**DESERT SPRINGS UNIT FOUR
SUBDIVISION IMPROVEMENTS**



SWPPP SITE PLAN
SCALE: 1" = 100'

SHEET TITLE
STORM WATER POLLUTION PREVENTION PLAN: SITE PLAN
(SHEET 1 OF 2)
SHEET NO.

C13.2

S:\2080\2080-01-10\DWG\Construction\Drawings\Improvement Plans\Unit 4\2080-01-10 C13.2.dwg 12/19/2014 8:59:05 AM

NOTES:

- BEGIN CONSTRUCTION ACTIVITIES AT PONDING AREAS. PONDING AREAS ARE TO BE EIGHTY-FIVE (85%) PERCENT COMPLETE PRIOR TO COMMENCING CONSTRUCTION ACTIVITIES FOR THE REMAINING OF SUBDIVISION.
- ALL CONSTRUCTION PRACTICES AND PROCEDURES WILL COMPLY WITH THE PERTINENT PROVISIONS OF THE OCCUPATIONAL SAFETY AND HEALTH STANDARD (TITLE 29, CODE OF FEDERAL REGULATIONS) PUBLISHED BY THE OSHA, DEPARTMENT OF LABOR.
- THE CONTRACTOR SHALL FIELD VERIFY ELEVATIONS, MEASUREMENTS AND EXISTING CONDITIONS PRIOR TO COMMENCING CONSTRUCTION ACTIVITIES. NOTIFY THE ENGINEER PROMPTLY OF ANY OMISSIONS, ERRORS, OR DISCREPANCIES FOUND SO THAT NECESSARY CORRECTIONS AND INTERPRETATIONS BE MADE PRIOR TO CONSTRUCTION.

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
ONEOK PARTNERS	(915) 595-6918
AT&T	(800) 852-3786
U.S. SPRINT TELECOMM	(800) 521-0579
CITY OF EL PASO DEPARTMENT OF TRANSPORTATION (AFTER HOURS)	(915) 621-6750 (915) 240-3220

**WARNING I
BEFORE YOU DIG**

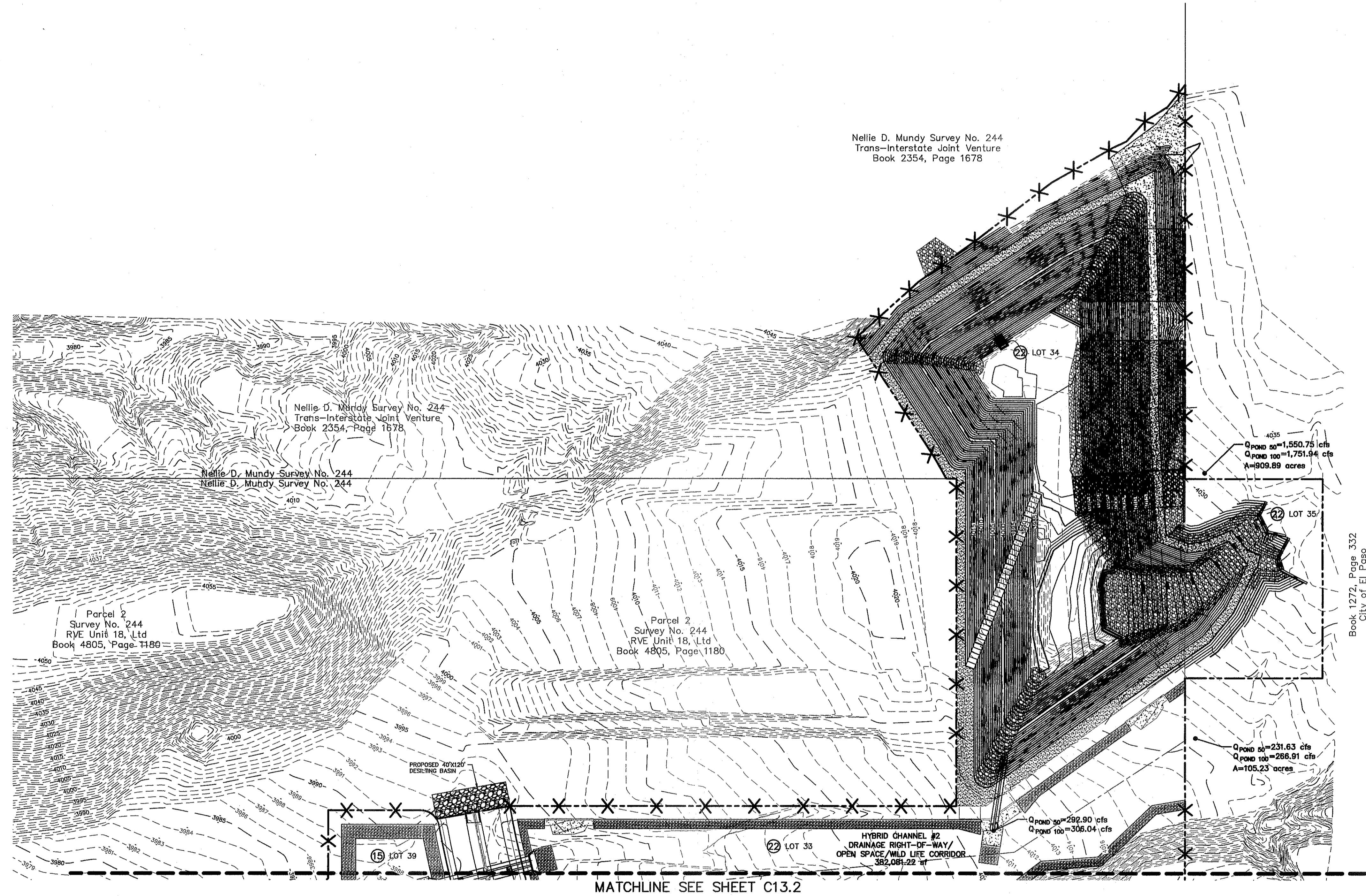
CALL
1-800-DIG-TESS
1-800-344-8377

FOR FIELD LOCATING EXISTING UTILITIES

A PORTION OF NELLIE D. MUNDY SURVEY No. 243, PARCEL 2,
CITY OF EL PASO, EL PASO COUNTY, TEXAS
63.076 ACRES±

LEGEND:

- X—X SILT FENCE OR EARTHEN BERM
- [Hatched Box] STABILIZED CONSTRUCTION ENTRANCE
- [S] STAGING AREA
- [P] PORTABLE TOILETS
- [W] WASHOUT SITE



Nellie D. Mundy Survey No. 244
Trans-Interstate Joint Venture
Book 2354, Page 1678

Book 1272, Page 332
City of El Paso

DATE	REVISIONS	BY

REFERENCES - BENCHMARKS
FOUND N.C.S. SURVEY MARKER STAMPED "CHNO 1980"
ELEVATION: 3955.93 (CITY OF EL PASO VERTICAL DATUM)
3948.11 (NAVD 88 DATUM)
3945.78 (NAVD 29 DATUM)
TIE TO THE PROJECT BENCHMARK IS N35309.09°W, 4.008.83
METERS TO THE PROJECT BENCHMARK IS N35309.09°W, 4.008.83
CORNER OF TRACT 11, NELLIE D. MUNDY SURVEY NO. 243

CSA
engineers • architects • planners
TEXAS REGISTERED ENGINEERING FIRM F-464
4712 Woodrow Beam, Ste. F, El Paso, TX 79924
Office: 915.544.6222 Fax: 915.544.6223 www.csaengineers.com

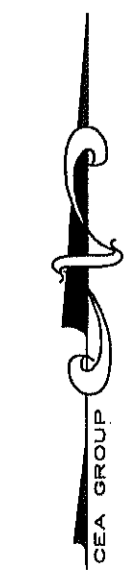
ENGINEER'S SEAL

SCALE: 1"=100'	Horizontal: N/A
Vertical: N/A	Contour Interval: N/A
DATE: DECEMBER 2014	DESIGN BY: A.H.
DRAWN BY: J.H.	CHKD. BY: J.L.A.
APPVD. BY: J.L.A.	JOB No. 2060-028-1D

PROJECT TITLE
**DESERT SPRINGS UNIT FOUR
SUBDIVISION IMPROVEMENTS**

SHEET TITLE
**STORM WATER
POLLUTION
PREVENTION PLAN:
SITE PLAN**
(SHEET 2 OF 2)
SHEET NO.

C13.3



SWPPP SITE PLAN
SCALE: 1" = 100'



Final Approval

ROCK FILTER DAM USAGE GUIDELINES

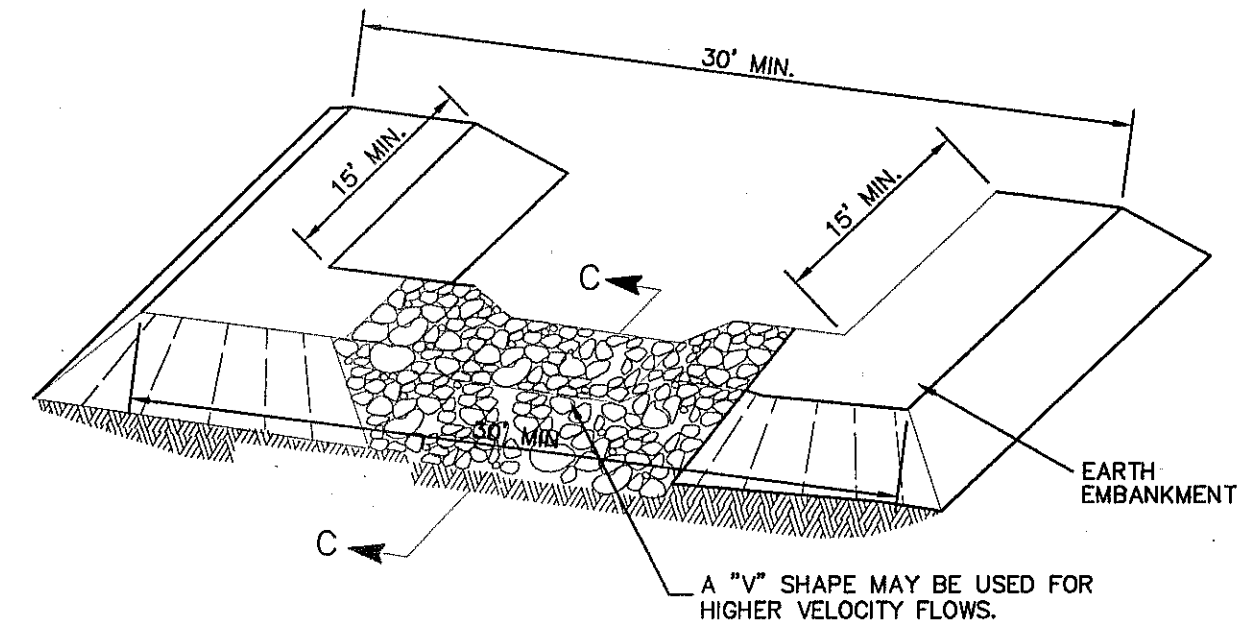
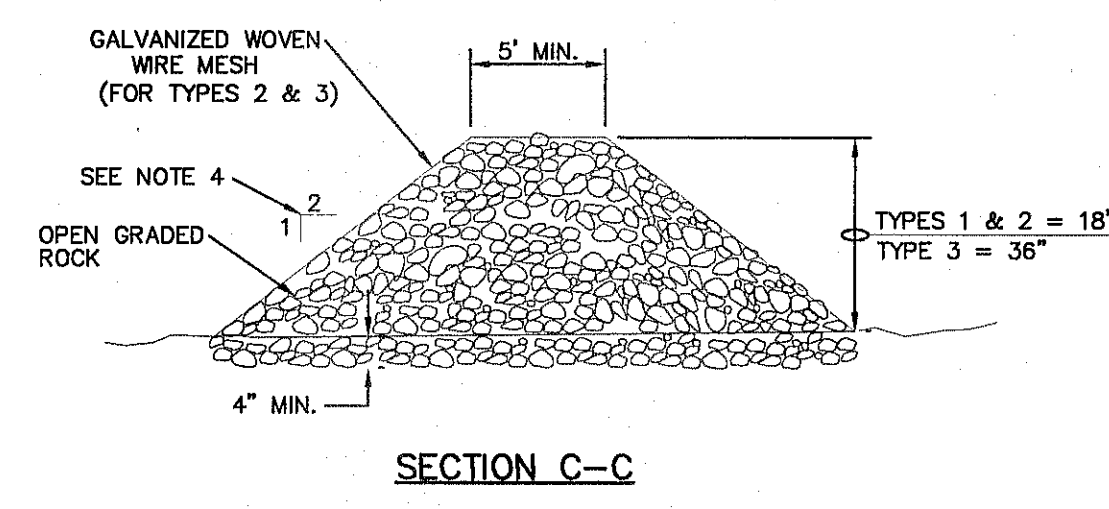
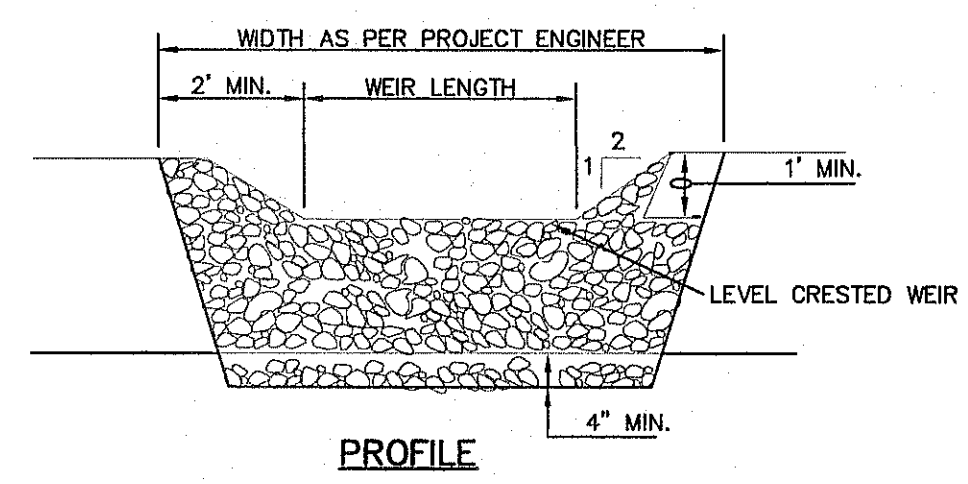
ROCK FILTER DAMS SHOULD BE CONSTRUCTED DOWNSTREAM FROM DISTURBED AREAS TO INTERCEPT SEDIMENT FROM OVERLAND RUNOFF AND/OR CONCENTRATED FLOW. THE DAMS SHOULD BE SIZED TO FILTER A MAXIMUM FLOW THROUGH RATE OF 60 GPM/FT² OF CROSS SECTIONAL AREA. A 2 YEAR STORM FREQUENCY MAY BE USED TO CALCULATE THE FLOW RATE.

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

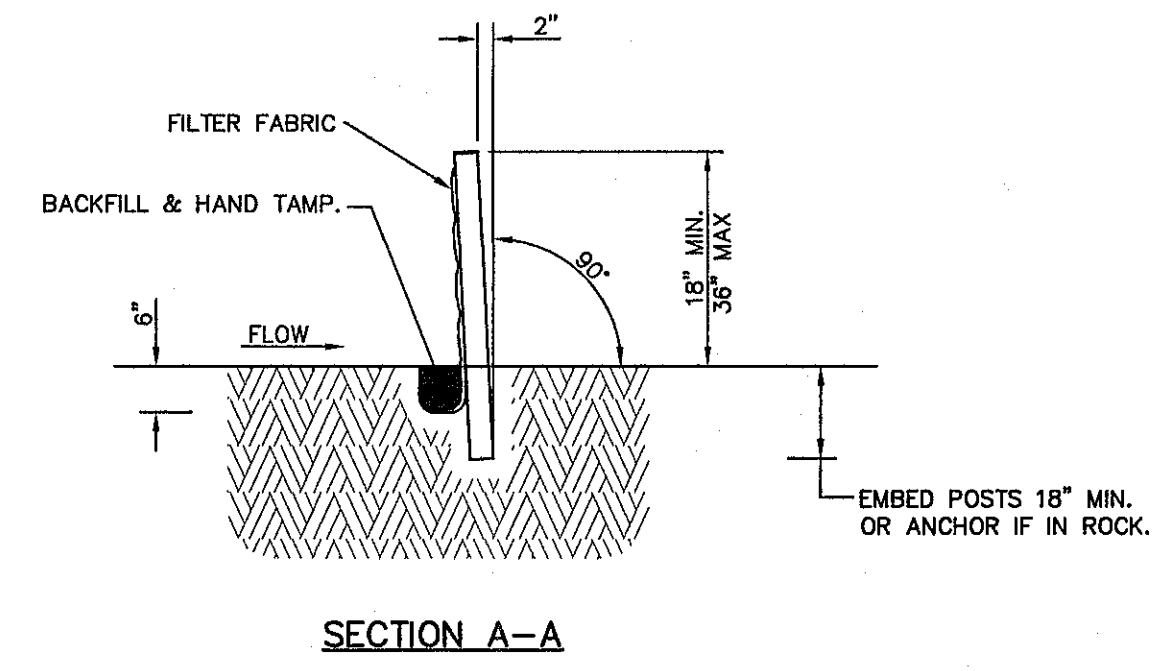
TYPE 2 (18" HIGH WITH WIRE MESH): TYPE 2 MAY BE USED IN DITCHES AND AT DIKE OR SWALE OUTLETS.

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

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



FILTER DAM AT SEDIMENT TRAP



SECTION A-A

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.

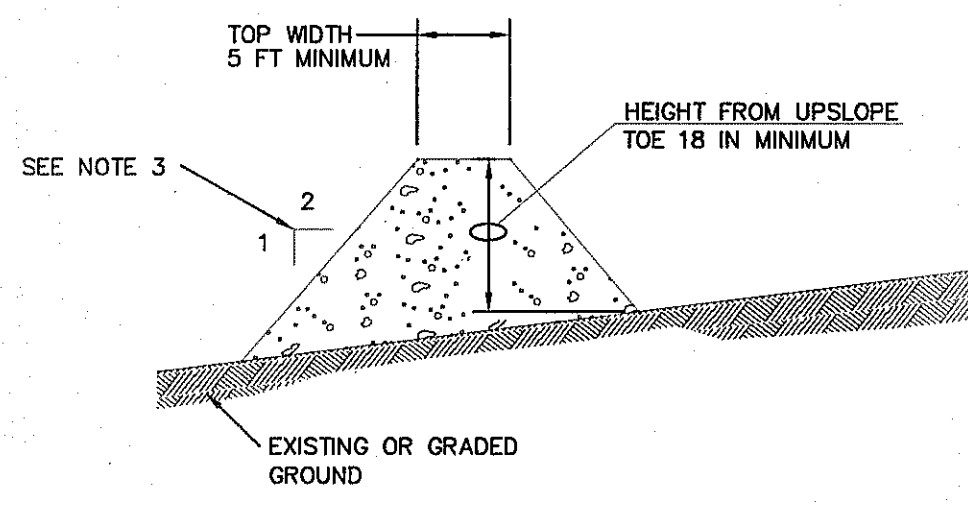
GALV. W.W.M. (12.5 GA. MIN.) MAX. OPENING SIZE SHALL BE 2" X 4".

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).

FASTEN FABRIC TO TOP STRAND OF WELDED WIRE MESH (W.W.M.) BY HOG RINGS OR CORD AT A MAX. SPACING OF 15".

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.

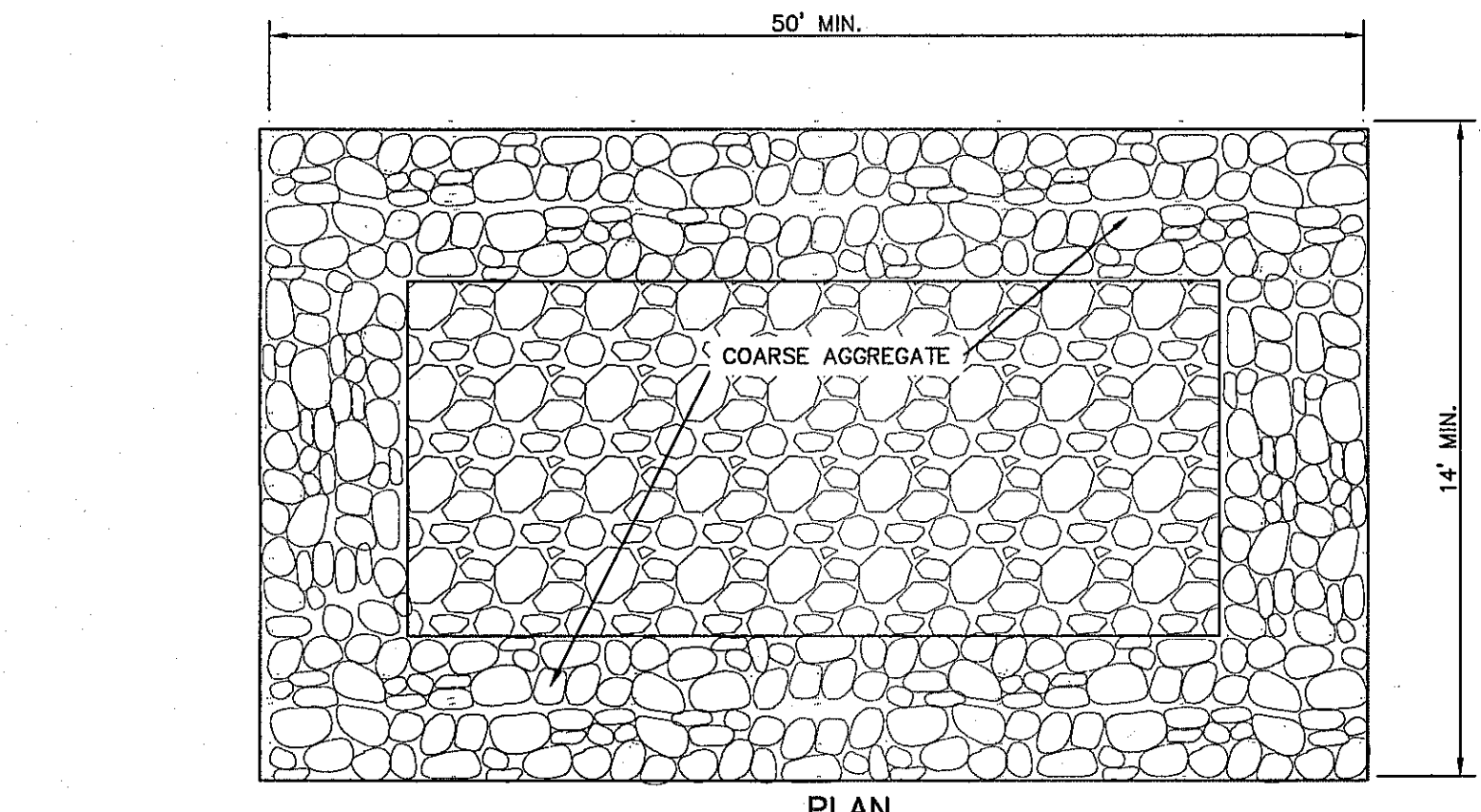
TEMPORARY SEDIMENT CONTROL FENCE



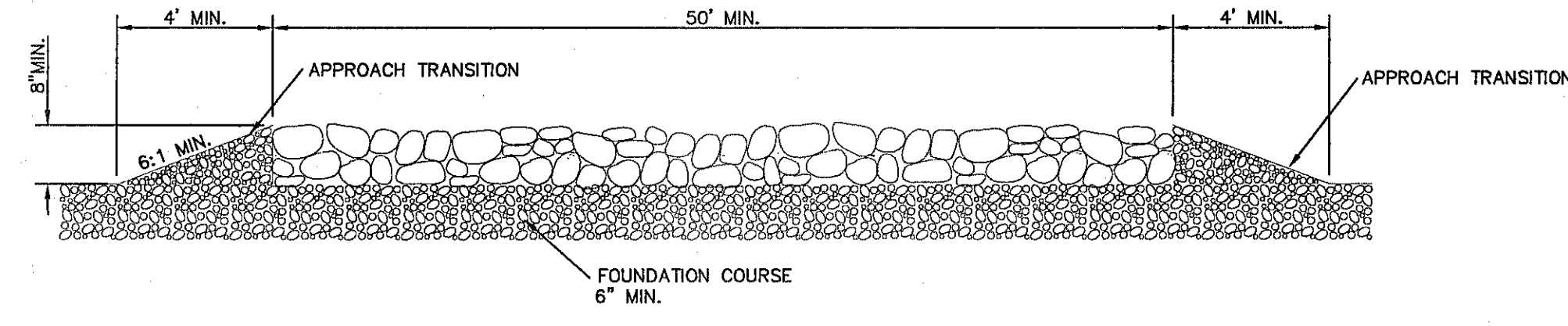
GENERAL NOTES:

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(H):1(V) 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 FORTY (40) 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 FIFTY (50) FEET.
2. THE COARSE AGGREGATE SHOULD BE OPEN GRADED WITH A SIZE OF FOUR (4") TO EIGHT (8") INCHES.
3. THE APPROACH TRANSITIONS SHOULD BE NO STEEPER THAN SIX TO ONE (6[H]:1[V]) SLOPES AND CONSTRUCTED AS DIRECTED BY THE ENGINEER.
4. THE CONSTRUCTION EXIT FOUNDATION COURSE SHALL BE FLEXIBLE BASE, BITUMINOUS CONCRETE, PORTLAND CEMENT CONCRETE OR OTHER MATERIAL AS APPROVED BY THE ENGINEER.
5. THE CONSTRUCTION EXIT SHALL BE GRADED TO ALLOW DRAINAGE TO A SEDIMENT TRAPPING DEVICE.
6. THE GUIDELINES SHOWN HEREON ARE SUGGESTIONS ONLY AND MAY BE MODIFIED BY THE ENGINEER.

CONSTRUCTION EXIT (TYPE 1)

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
ONEOK PARTNERS	(915) 595-6918
AT&T	(800) 852-3786
U.S. SPRINT TELECOMM	(800) 521-0579
CITY OF EL PASO DEPARTMENT OF TRANSPORTATION	(915) 621-6750
(AFTER HOURS)	(915) 240-3220

WARNING I BEFORE YOU DIG

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

FOR FIELD LOCATING EXISTING UTILITIES

DATE	REVISIONS	BY

es&a

engineers • architects • planners

TEXAS REGISTERED ENGINEERING FIRM F-464

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

ENGINEER'S SEAL

ALAN D. HERRERA
10414

SCALE	N/A
Horizontal:	N/A
Vertical:	N/A
Contour Interval:	N/A
DATE:	DECEMBER 2014
DESIGN BY:	A.H.
DRAWN BY:	J.H.
CHKD. BY:	J.L.A.
APPVD. BY:	J.L.A.
JOB No.	2080-028-I-D

PROJECT TITLE

DESERT SPRINGS UNIT FOUR

SUBDIVISION IMPROVEMENTS

SHEET TITLE

STORM WATER POLLUTION PREVENTION PLAN: DETAILS

SHEET NO.

C13.4



Final Approval

FUTURE DESERT SPRINGS UNIT FIVE
 Parcel 2
 Survey No. 244
 RVE Unit 18, Ltd
 Book 4805, Page 1180

Parcel 2
 Survey No. 244
 RVE Unit 18, Ltd
 Book 4805, Page 1180

INDEX

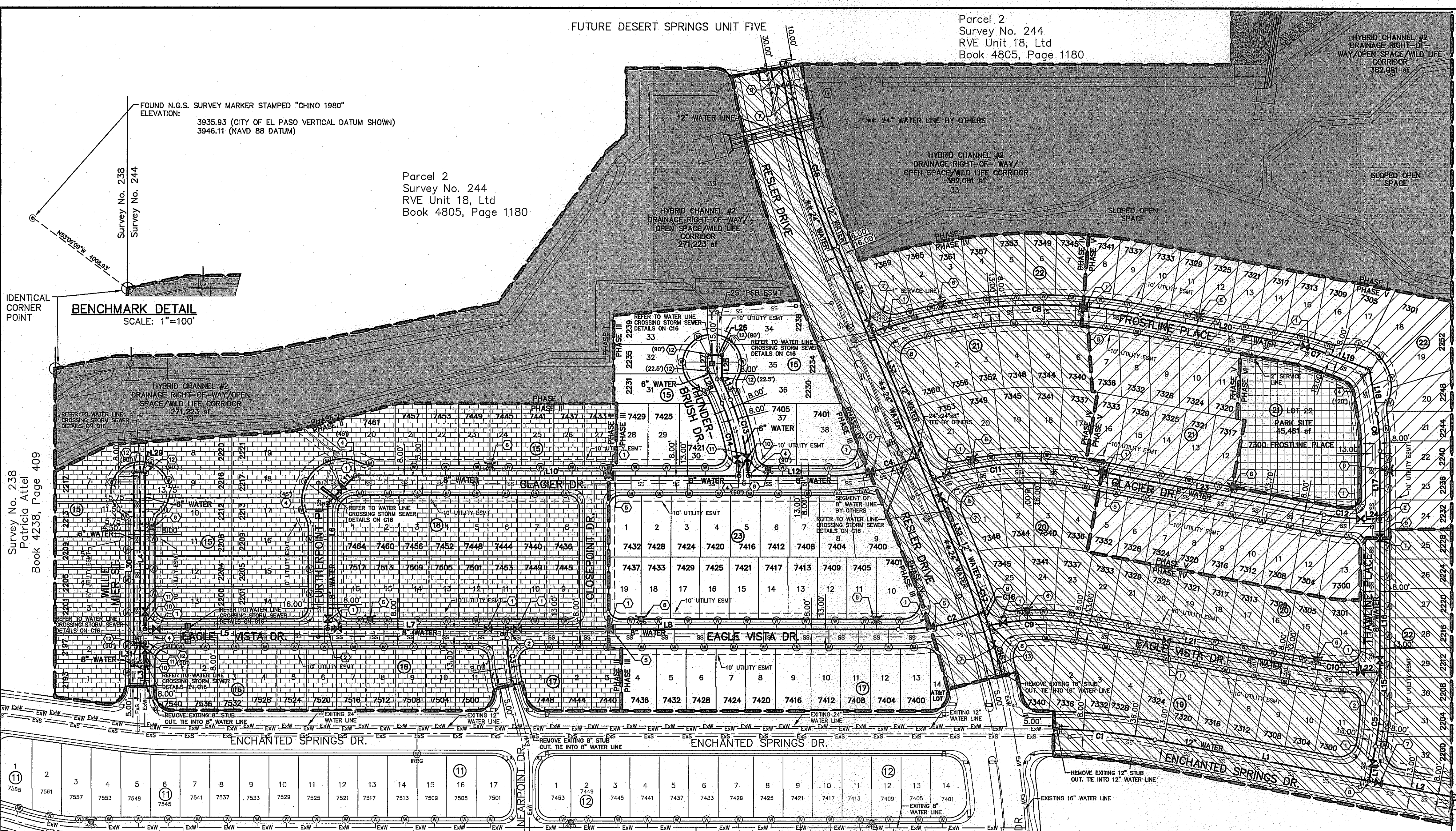
SHEET NO.	DESCRIPTION
C14.1&2	DESERT SPRINGS UNIT FOUR WATER MAIN PIPE LAYOUT
C15.1	WATER PLAN VIEWS
C15.2	WATER PLAN VIEWS
C15.3	WATER PLAN VIEWS
C16.1	WATER DETAILS
C16.2	WATER DETAILS
C16.3	WATER DETAILS
C16.4	WATER DETAILS

NOTES:

- ALL LOTS SHALL BE PROVIDED WITH ONE SERVICE CONNECTION TO BE INSTALLED AT THE LOCATION AS SHOWN ON THE SERVICE LOCATION DETAIL.
- ALL WATER LINES SHALL BE PVC C-900, CLASS 305.
- REFERENCE WATER DETAILS FOR TYPICAL VALVE AND WATER LOCATION AT STREET INTERSECTIONS.
- THE SUBJECT PROPERTY IS LOCATED WITHIN AN INTERMEDIATE PRESSURE ZONE. THE LOT/HOME BUYER SHALL ACQUIRE OWNERSHIP OF THE WATER PRESSURE REGULATING DEVICE TO BE LOCATED AT THE DISCHARGE SIDE OF THE WATER METER ON THEIR PROPERTY AND SHALL BE RESPONSIBLE FOR THE OPERATION AND MAINTENANCE OF THE WATER PRESSURE REGULATING DEVICE.

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
SS	PROPOSED SEWER LINE (PLAN VIEW)
ExS	EXISTING SEWER LINE
ExW	EXISTING WATER LINE
---	PHASING LINE
---	PROPOSED STORM SEWER
---	NEW SERVICE CONNECTION (PLAN VIEW)
---	NEW FIRE HYDRANT, KENNEDY OR MUELLER MODEL
---	EXISTING FIRE HYDRANT
---	NEW GATE VALVE
---	EXISTING GATE VALVE
---	NEW WATER LINE PLUG
---	EXISTING PLUG
---	NEW POINT OF TANGENCY
---	REDUCER



WATER QUANTITIES		
DESCRIPTION	QUANTITY	UNIT
6" PVC WATER LINE	1,043.55	LF
6" DIP WATER LINE	20	LF
8" PVC WATER LINE	5,821.79	LF
8" DIP WATER LINE	80	LF
12" PVC WATER LINE	1,785.54	LF
12" DIP WATER LINE	80	LF
6" GATE VALVE	4	EA
8" GATE VALVE	22	EA
12" GATE VALVE	1	EA
8" PLUG	4	EA
12" PLUG	1	EA
FIRE HYDRANT	13	EA

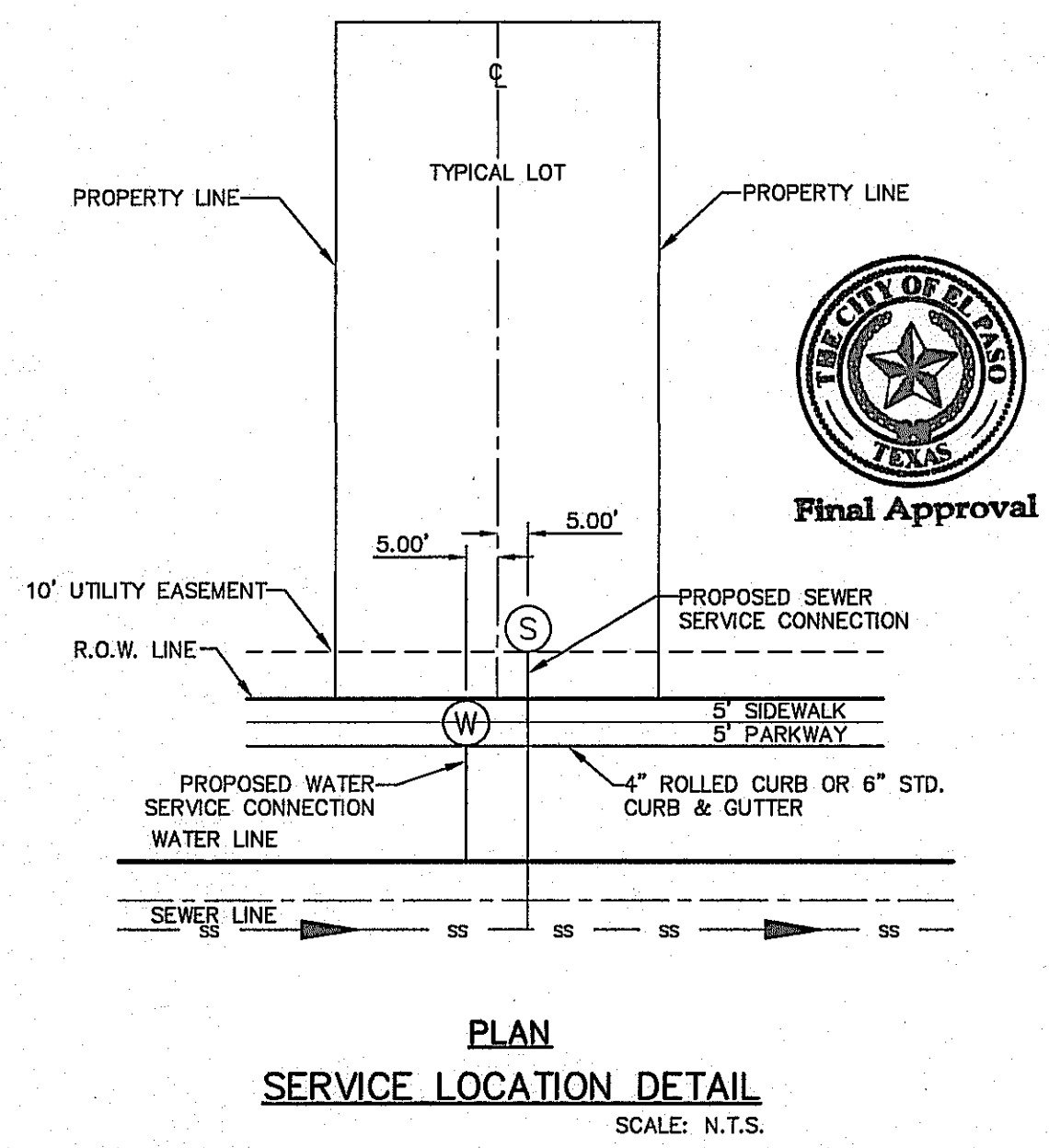
WATER KEYED NOTES			
KEY	DESCRIPTION	KEY	DESCRIPTION
(1)	8" # GATE VALVE	(4)	12" X 12" X 12" TEE
(2)	8" X 8" X 8" TEE	(5)	8" CROSS
(3)	8" BEND	(6)	8" BEND
(4)	8" CROSS	(7)	8" PLUG
(5)	8" BEND	(8)	FIRE HYDRANT
(6)	8" PLUG	(9)	12" BUTTERFLY VALVE
(7)	FIRE HYDRANT	(10)	12" X 12" X 8" TEE
(8)	12" BUTTERFLY VALVE	(11)	12" PLUG
(9)	12" X 12" X 8" TEE	(12)	6" X 8" REDUCER
(10)	12" PLUG	(13)	6" GATE VALVE
(11)	6" X 8" REDUCER	(14)	6" BEND
(12)	6" GATE VALVE	(15)	12" X 16" REDUCER
(13)	6" BEND		
(14)	12" X 16" REDUCER		

GENERAL NOTES

- 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).
- 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 INVERT OF PIPELINE TO PROPOSED 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.
- 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 PRIOR TO CONSTRUCTION. ALL EXISTING UTILITY DEPTHS ARE UNKNOWN. THE CONTRACTOR SHALL BE ULTIMATELY RESPONSIBLE FOR ACQUIRING FIELD DEPTHS OF ALL UTILITIES WITHIN THE PROJECT AREAS.
- TRENCH SAFETY REQUIREMENTS SHALL BE AS REQUIRED BY OSHA.
- AS-BUILT STATIONING, OFFSET FROM R.O.W. AND INVERT ELEVATIONS SHALL BE ACCURATELY RECORDED BY THE CONTRACTOR ON A CLEAN SET OF PLANS FOR EACH VALVE, FIRE HYDRANT, ELBOW, SERVICE CONNECTION AND/OR STUB-OUT, WITH RESPECT TO THE APPROPRIATE PROJECT CONTROL POINT.
- THE 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.
- 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.
- TRAFFIC CONTROL SHALL BE IN PLACE PRIOR TO INITIATING WORK.
- ALL TIE-INS SHALL BE CLOSELY COORDINATED WITH THE EL PASO WATER UTILITIES AT LEAST FORTY-EIGHT (48) HOURS PRIOR TO ACTUAL CONSTRUCTION.
- CONTRACTOR SHALL PROVIDE THE REQUIRED COUPLINGS, ELBOWS AND NECESSARY PIPING APPURTENANCES FOR A COMPLETE AND OPERATIONAL WATER SYSTEM.
- ALL NEW VALVES SHALL BE ALIGNED PERPENDICULAR TO PROPERTY LINES.
- 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.
- FIRE HYDRANTS SHALL BE INSTALLED IN THE PARKWAY AREA.
- THE WATER METERS FOR THE PROPOSED WATER SERVICE CONNECTIONS SHALL BE INSTALLED ON THE PARKWAYS. SYMBOLS ARE ONLY SHOWN FOR DEPICTION PURPOSES ONLY.

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

WATER INDEX MAP
 SCALE: 1" = 100'



GENERAL UTILITIES:
 TEXAS EXCAVATION SAFETY SERVICE
 1184 GREENVILLE AVENUE
 DALLAS, TX. 75243
 (800) 344-8377

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

FIBER OPTICS:
 U.S. SPRINT
 151 N. BOONE ST.
 EL PASO, TX. 79905
 (915) 534-7910
 MR. RICK DERAGISCH

WATER & SEWER:
 EL PASO WATER UTILITIES
 1154 HAWKINS BOULEVARD
 EL PASO, TX. 79961
 (915) 584-5530
 MR. FELIPE LOPEZ, JR., P.E.

ELECTRIC:
 EL PASO ELECTRIC CO.
 501 W. SAN ANTONIO ST.
 EL PASO, TX. 79902
 (915) 543-2076
 MR. FRANK WIGEL (DISTRIBUTION)

EL PASO STREETS
 CITY OF EL PASO
 DEPARTMENT OF TRANSPORTATION
 7969 SAN PAULLO DRIVE
 EL PASO, TX. 79907
 (915) 621-6750
 MR. TED MARQUEZ, PE.

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

FIBER OPTICS:
 AT&T
 P.O. BOX 1650
 EL PASO, TX. 79949
 (915) 852-3786
 MS. DARLENE NORIS

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

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

REFERENCES - BENCHMARKS
 FOUND N.G.S. SURVEY MARKER STAMPED "CHINO 1980"
 ELEVATION: 3935.93 (CITY OF EL PASO VERTICAL DATUM)
 3946.11 (NAVD 88 DATUM)
 TO THE PROJECT BENCHMARK IS NE3709'09" W, 4008.83 FEET FROM A 1/2" INCH BEARER FOUND FOR THE NORTHWEST CORNER OF TRACT 11, WELLS D. MADDY SURVEY NO. 259

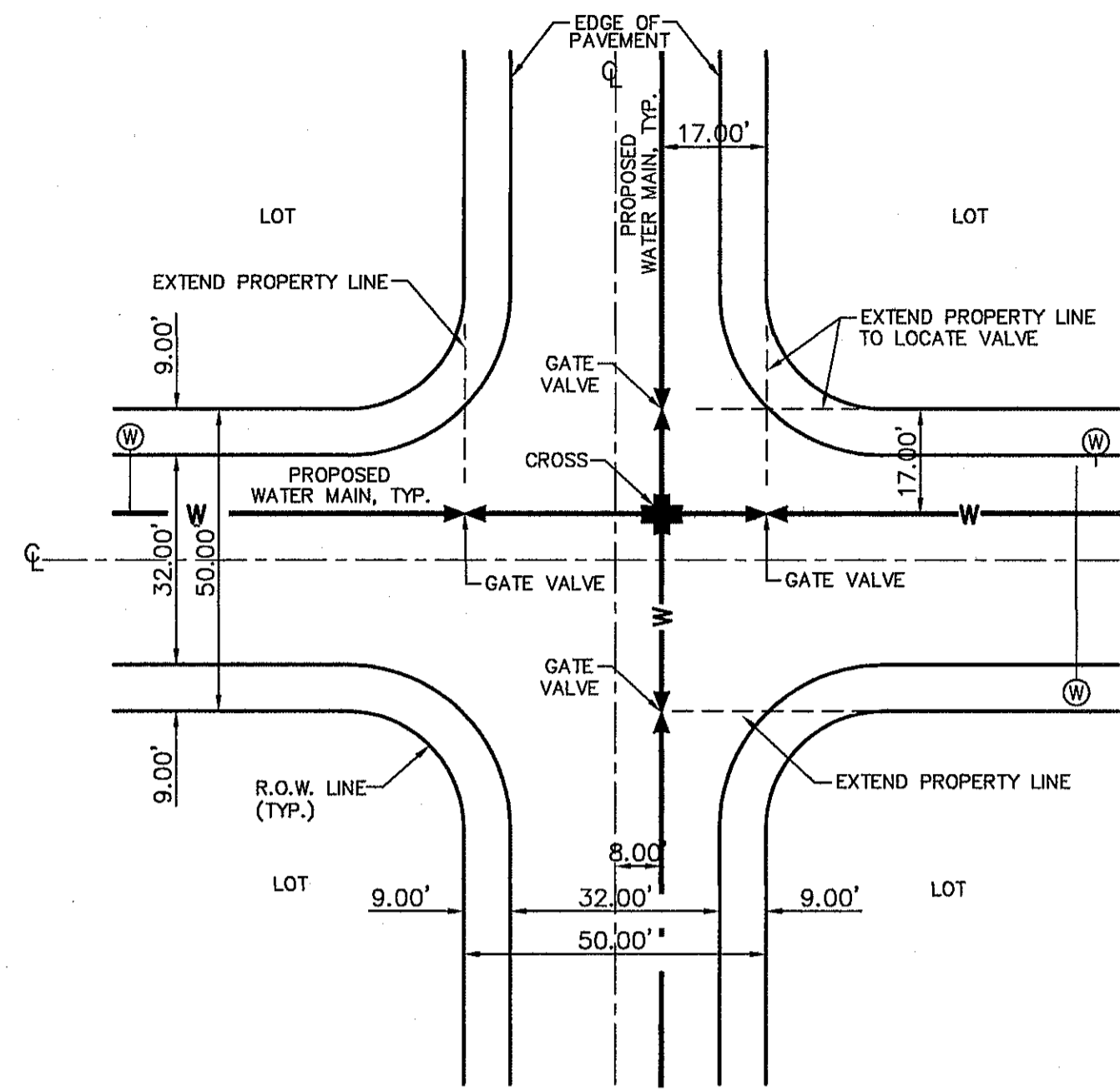
DATE: _____ REVISIONS: _____ BY: _____

ENGINEER'S SEAL
 SCALE: 1" = 100'
 Horizontal: N/A
 Vertical: N/A
 Contour Interval: N/A
 DATE: DECEMBER 2014
 DESIGN BY: A.H.
 DRAWN BY: J.H.
 CHKD. BY: J.L.A.
 APP'D. BY: J.L.A.
 JOB No. 2060-028-ID

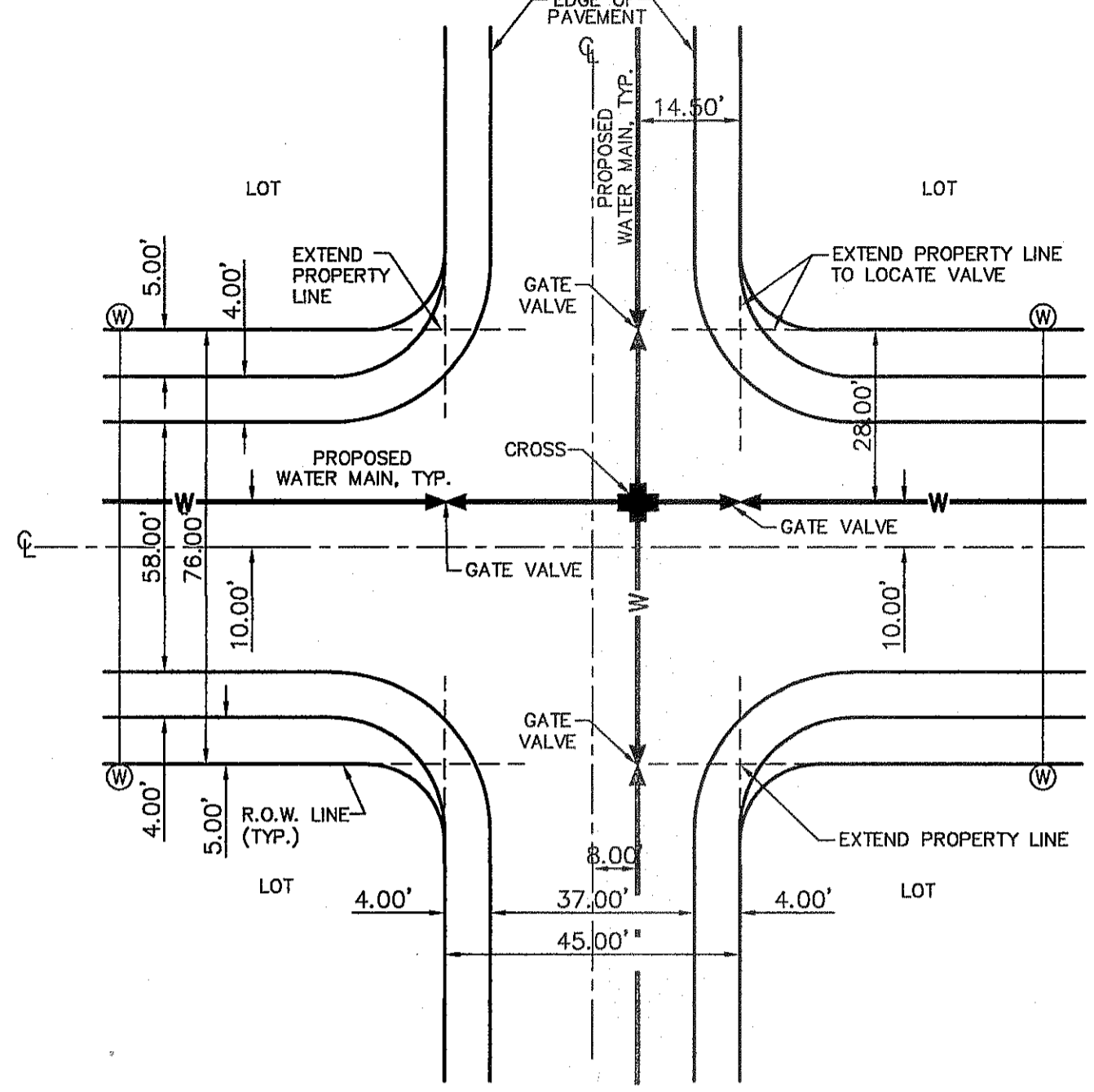
PROJECT TITLE
DESERT SPRINGS UNIT FOUR
 SUBDIVISION IMPROVEMENTS

SHEET TITLE
WATER INDEX/GENERAL INFORMATION
 (SHEET 1 OF 2)
 SHEET NO.
C14.1

C:\Users\jlopez\Documents\Projects\DesertSprings\Drawings\WaterIndexMap.dwg, 12/11/2014 10:52:17 AM, 12/11/2014 10:52:17 AM



TYPICAL VALVE AND WATER LOCATION AT STREET INTERSECTIONS ON A 50' R.O.W.
SCALE: N.T.S.



TYPICAL VALVE AND WATER LOCATION AT STREET INTERSECTIONS ON A 76' R.O.W.
SCALE: N.T.S.

INDEX

SHEET NO.	DESCRIPTION
C14.1&2	DESERT SPRINGS UNIT FOUR WATER MAIN PIPE LAYOUT
C15.1	WATER PLAN VIEWS
C15.1	WATER PLAN VIEWS
C15.1	WATER PLAN VIEWS
C16.1	WATER DETAILS
C16.2	WATER DETAILS
C16.3	WATER DETAILS
C16.4	WATER DETAILS

- NOTES:**
- ALL LOTS SHALL BE PROVIDED WITH ONE SERVICE CONNECTION TO BE INSTALLED AT THE LOCATION AS SHOWN ON THE SERVICE LOCATION DETAIL.
 - ALL WATER LINES SHALL BE PVC C-900, CLASS 305.
 - REFERENCE WATER DETAILS FOR TYPICAL VALVE AND WATER LOCATION AT STREET INTERSECTIONS.
 - THE SUBJECT PROPERTY IS LOCATED WITHIN AN INTERMEDIATE PRESSURE ZONE. THE LOT/HOME BUYER SHALL ACQUIRE OWNERSHIP OF THE WATER PRESSURE REGULATING DEVICE TO BE LOCATED AT THE DISCHARGE SIDE OF THE WATER METER ON THEIR PROPERTY AND SHALL BE RESPONSIBLE FOR THE OPERATION AND MAINTENANCE OF THE WATER PRESSURE REGULATING DEVICE.

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
SS	PROPOSED SEWER LINE (PLAN VIEW)
ExS	EXISTING SEWER LINE
ExW	EXISTING WATER LINE
---	PHASING LINE
⊙	PROPOSED STORM SEWER
⊙	NEW SERVICE CONNECTION (PLAN VIEW)
⊙	NEW FIRE HYDRANT, KENNEDY OR MUELLER MODEL
⊙	EXISTING FIRE HYDRANT
⊙	NEW GATE VALVE
⊙	EXISTING GATE VALVE
	NEW WATER LINE PLUG
	EXISTING PLUG
○	NEW POINT OF TANGENCY

LINE TABLE		
LINE	BEARING	LENGTH
L1	S79°09'50"E	369.42'
L2	S79°09'50"E	147.74'
L3	N00°00'00"E	68.44'
L4	N00°00'00"E	265.47'
L5	N90°00'00"E	310.00'
L6	N00°00'00"W	213.00'
L7	N90°00'00"E	305.00'
L8	N90°00'00"E	664.14'
L9	N00°00'00"E	14.77'
L10	N90°00'00"E	651.50'
L11	N45°00'00"E	66.47'
L12	N90°00'00"E	136.75'
L13	S23°17'10"E	37.69'
L14	S10°50'10"W	60.21'
L15	S00°00'00"E	52.26'
L16	S00°00'00"E	260.00'
L17	S00°00'00"E	114.80'
L18	S09°30'19"E	75.70'
L19	S69°39'31"E	75.70'
L20	S79°09'50"E	261.16'
L21	S79°09'50"E	394.32'
L22	N90°00'00"E	50.36'
L23	S79°09'50"E	411.71'
L24	N90°00'00"E	25.70'
L25	S00°00'00"E	40.89'
L26	N90°00'00"E	24.45'
L27	N00°00'00"E	24.55'
L28	S23°17'10"E	62.37'
L29	N90°00'00"E	19.50'
L30	N00°00'00"E	289.53'
L31	N89°26'24"E	19.50'
L32	S22°14'36"E	125.28'
L33	S22°14'36"E	269.56'
L34	S22°14'36"E	156.15'

CURVE TABLE						
CURVE	RADIUS	LENGTH	TANGENT	CHORD	BEARING	DELTA
C1	1008.00'	168.05'	84.22'	167.86'	N83°56'24"W	009°33'08"
C2	367.00'	149.63'	75.87'	148.59'	N78°19'13"E	023°21'35"
C3	367.00'	75.21'	37.74'	75.08'	S05°52'18"E	011°44'31"
C4	367.00'	164.62'	88.32'	163.88'	N77°08'50"E	028°08'09"
C5	385.50'	72.91'	36.56'	72.80'	N05°25'05"E	010°50'10"
C6	383.00'	63.54'	31.84'	63.47'	N04°45'09"W	009°30'19"
C7	383.00'	63.54'	31.84'	63.47'	N74°24'41"W	009°30'19"
C8	903.00'	460.08'	235.15'	455.12'	S86°14'24"W	029°11'32"
C9	383.00'	158.49'	80.40'	157.36'	S88°58'53"W	023°42'35"
C10	367.00'	69.41'	34.81'	69.31'	S84°34'55"E	010°50'10"
C11	508.00'	262.97'	134.50'	260.05'	S86°00'22"W	029°39'35"
C12	367.00'	69.41'	34.81'	69.31'	S84°34'55"E	010°50'10"
C13	383.00'	133.05'	67.20'	132.39'	N13°20'02"W	019°54'16"
C14	367.00'	126.55'	63.91'	125.92'	S13°24'28"E	019°45'25"
C15	1535.00'	82.80'	41.41'	82.79'	N15°27'55"W	003°05'26"
C16	1535.00'	24.91'	12.46'	24.91'	N17°28'32"W	000°55'47"
C17	1535.00'	115.28'	57.67'	115.25'	S20°05'31"E	004°18'10"
C18	1465.00'	326.36'	163.86'	325.69'	S15°51'41"E	012°45'50"

GENERAL NOTES

- 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).
- 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 INVERT OF PIPELINE TO PROPOSED 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.
- 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 PRIOR TO CONSTRUCTION. ALL EXISTING UTILITY DEPTHS ARE UNKNOWN. THE CONTRACTOR SHALL BE ULTIMATELY RESPONSIBLE FOR ACQUIRING FIELD DEPTHS OF ALL UTILITIES WITHIN THE PROJECT AREAS.
- TRENCH SAFETY REQUIREMENTS SHALL BE AS REQUIRED BY OSHA.
- AS-BUILT STATIONING, OFFSET FROM R.O.W. AND INVERT ELEVATIONS SHALL BE ACCURATELY RECORDED BY THE CONTRACTOR ON A CLEAN SET OF PLANS FOR EACH VALVE, FIRE HYDRANT, ELBOW, SERVICE CONNECTION AND/OR STUB-OUT, WITH RESPECT TO THE APPROPRIATE PROJECT CONTROL POINT.
- THE 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.
- 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.
- TRAFFIC CONTROL SHALL BE IN PLACE PRIOR TO INITIATING WORK.
- ALL TIE-INS SHALL BE CLOSELY COORDINATED WITH THE EL PASO WATER UTILITIES AT LEAST FORTY-EIGHT (48) HOURS PRIOR TO ACTUAL CONSTRUCTION.
- CONTRACTOR SHALL PROVIDE THE REQUIRED COUPLINGS, ELBOWS AND NECESSARY PIPING APPURTENANCES FOR A COMPLETE AND OPERATIONAL WATER SYSTEM.
- ALL NEW VALVES SHALL BE ALIGNED PERPENDICULAR TO PROPERTY LINES.
- CONSTRUCTION OF THE PUBLIC WATER AND SEWER SYSTEM INCLUDING MATERIALS AND TESTING SHALL CONFORM EPWJ-PSB SPECIFICATIONS FOR THE INSTALLATION OF WATER MAINS, SEWER MAINS AND RELATED APPURTENANCES.
- FIRE HYDRANTS SHALL BE INSTALLED IN THE PARKWAY AREA.
- THE WATER METERS FOR THE PROPOSED WATER SERVICE CONNECTIONS SHALL BE INSTALLED ON THE PARKWAYS. SYMBOLS ARE ONLY SHOWN FOR DEPICTION PURPOSES ONLY.

GENERAL UTILITIES:

TEXAS EXCAVATION SAFETY SERVICE
11864 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) 544-5232
MR. RICK DERAGISCH

FIBER OPTICS:

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

WATER & SEWER:

EL PASO WATER UTILITIES
1154 HAWKINS BOULEVARD
EL PASO, TX. 79961
(915) 594-5530
MR. FELIPE LOPEZ, JR., P.E.

ELECTRIC:

EL PASO ELECTRIC CO.
501 W. SAN ANTONIO ST.
EL PASO, TX. 79902
(915) 543-2076
MR. FRANK VOGEL (DISTRIBUTION)

EL PASO STREETS

CITY OF EL PASO
DEPARTMENT OF TRANSPORTATION
7969 SAN PAULLO DRIVE
EL PASO, TX. 79907
(915) 621-6750
MR. TED MARGUEZ, PE.

CABLE TELEVISION:

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

TELEPHONE:

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

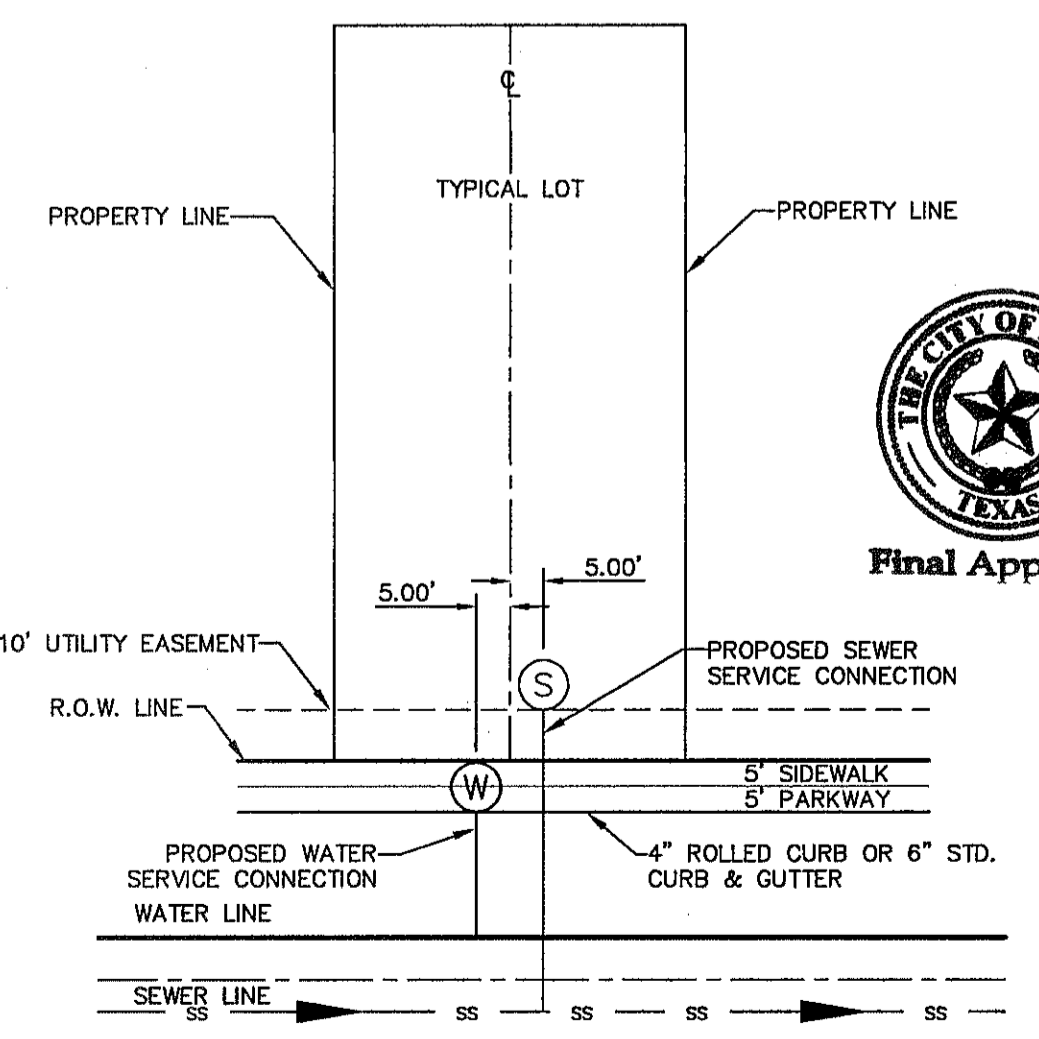
FIBER OPTICS:

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

RESIDENTIAL GAS LINES:

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

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



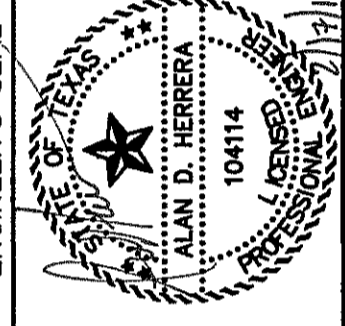
PLAN SERVICE LOCATION DETAIL
SCALE: N.T.S.

REFERENCES - BENCHMARKS

FOUND N.G.S. SURVEY MARKER "CHNO 1980"
ELEVATION: 3935.83 (CITY OF EL PASO VERTICAL DATUM SHOWN)
(NAD 83 DATUM)
(NAD 28 DATUM)
3945.78 (NAD 28 DATUM)
TIE TO THE PROJECT BENCHMARK IS N33°09'09"W, 4.008.83 FEET FROM A 1/2" INCH REBAR FOUND FOR THE NORTHWEST CORNER OF TRACT 11, NELLE D. MUNDY SURVEY NO. 239

DATE	REVISIONS	BY

CSA
engineers • architects • planners
TEXAS REGISTERED ENGINEERING FIRM F-1664
4712 Woodrow Bean, Ste. F, El Paso, TX 79924
Office: 915.544.5232 Fax: 915.544.5233 www.csaengineers.com



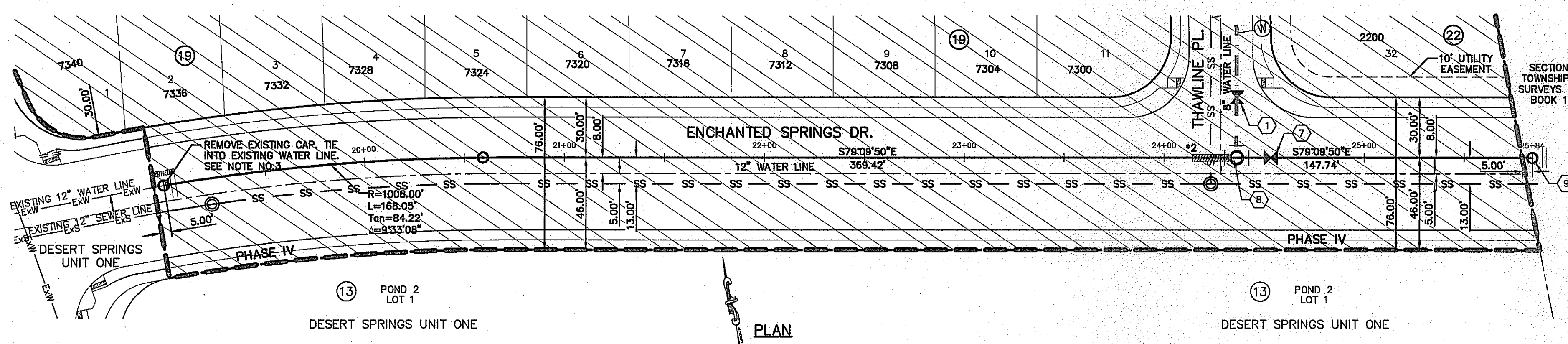
SCALE: 1"=100'
Horizontal: N/A
Vertical: N/A
Contour Interval: N/A
DATE: DECEMBER 2014
DESIGN BY: A.H.
DRAWN BY: J.H.
CHKD. BY: J.L.A.
APP'D. BY: J.L.A.
JOB No. 2060-028-1D

PROJECT TITLE
DESERT SPRINGS UNIT FOUR
SUBDIVISION IMPROVEMENTS

SHEET TITLE
WATER INDEX/GENERAL INFORMATION

(SHEET 2 OF 2)
SHEET NO.

C14.2



SECTION 10, BLOCK 82, TOWNSHIP 1, T&P R.R. Co. SURVEYS CITY OF EL PASO, BOOK 1272, PAGE 332

NOTE:
 #1 24" STEEL CASING TO BE CENTERED ON SEWER CROSSING.
 #2 DUCTILE IRON PIPE. SEE DETAILS ON SHEET C16

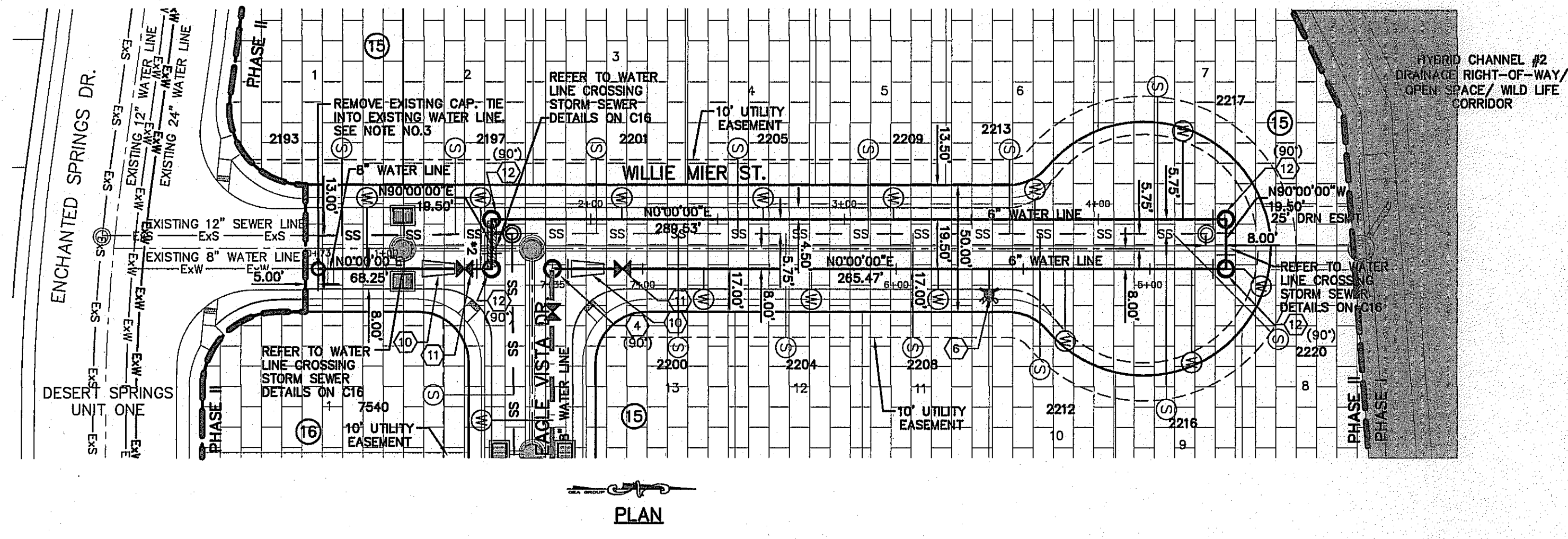
UTILITY LOCATOR SERVICES	
EL PASO ELECTRIC COMPANY	(915) 543-5720
EL PASO ENERGY CORPORATION	(915) 496-5244
EL PASO WATER UTILITIES	(915) 594-5500
MCI SURVEILLANCE	(800) MCI-WORK
TIME WARNER COMMUNICATIONS	(915) 772-1123
TEXAS GAS SERVICE	(915) 680-7200
ONEOK PARTNERS	(915) 595-6918
AT&T	(800) 852-3786
U.S. SPRINT TELECOMM	(800) 521-0579
CITY OF EL PASO DEPARTMENT OF TRANSPORTATION (AFTER HOURS)	(915) 621-6750
	(915) 240-3220

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

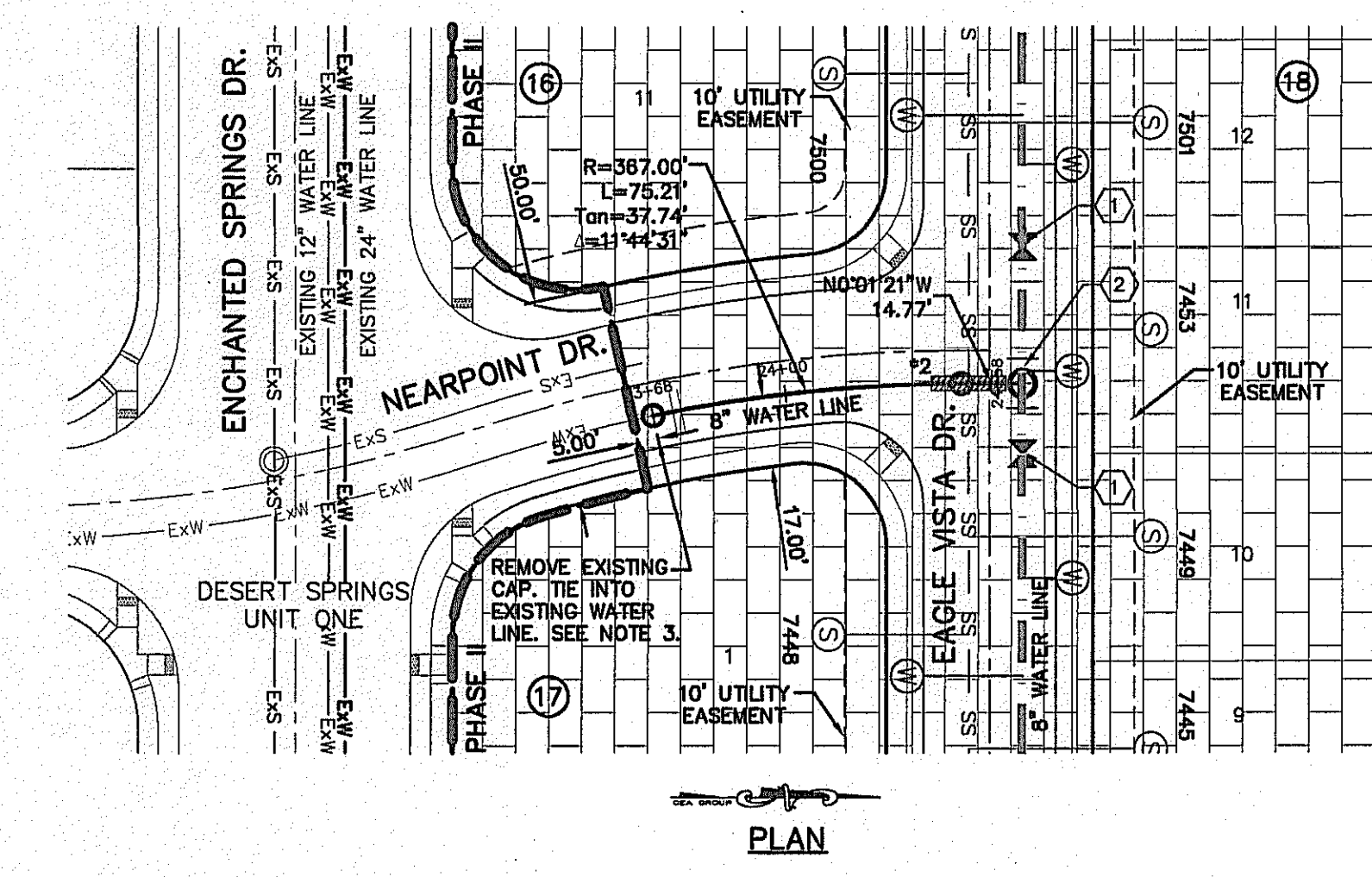
REFERENCES - BENCHMARKS
 FOUND N.G.S. SURVEY MARKER STATION "CHNO 188"
 ELEVATION: 3925.83 (CITY OF EL PASO VERTICAL DATUM)
 3946.11 (NAD 83 DATUM)
 3946.11 (NAD 83 DATUM)
 THE TO THE PROJECT BENCHMARK IS N33709'09"W, 4.008.93 FEET FROM A 1/2" INCH REBAR FOUND FOR THE NORTHWEST CORNER OF TRACT 11, HELLE D. MUNDY SURVEY NO. 239

LEGEND			
	STREET R.O.W. LINE		NEW FIRE HYDRANT, KENNEDY OR MUELLER MODEL
	PROPERTY LINE		EXISTING GATE VALVE
	SUBDIVISION BOUNDARY		NEW GATE VALVE
	24" WATER TRANSMISSION LINE BY OTHERS		TEE
	EXISTING WATER LINE		CROSS
	NEW 8" AND 12", C-900 P.V.C. PIPE		BEND(S)
	NEW 8" AND 12", C-900 P.V.C. PIPE (SEE OTHER LINE)		REDUCER
	NEW SANITARY SEWER		PLUG
	NEW STORM SEWER		POINT OF TANGENCY
	NEW SEWER SERVICE CONNECTION		PVC SLEEVE
	NEW WATER SERVICE CONNECTION		

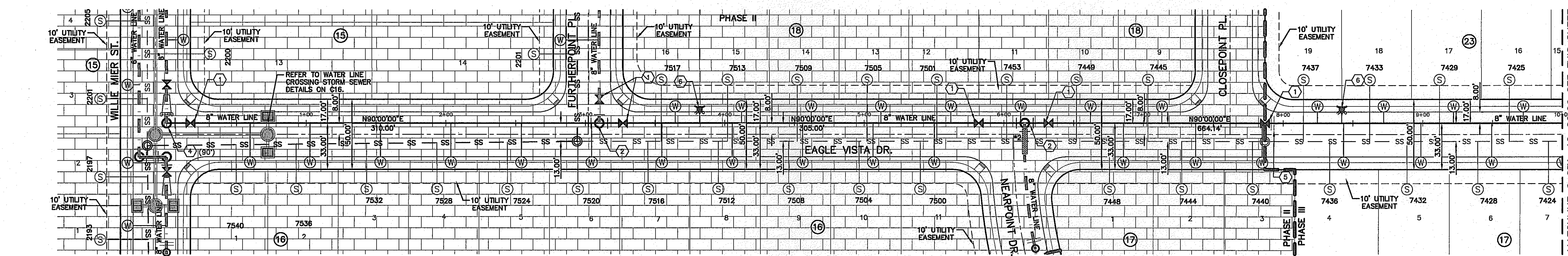
WATER KEYED NOTES	
(1)	8" GATE VALVE
(2)	8" X 8" X 8" TEE
(3)	8" CROSS
(4)	8" BEND
(5)	8" PLUG
(6)	FIRE HYDRANT
(7)	12" BUTTERFLY VALVE
(8)	12" X 12" X 8" TEE
(9)	12" PLUG
(10)	6" X 8" REDUCER
(11)	6" GATE VALVE
(12)	6" BEND
(13)	12" X 16" REDUCER
(14)	12" X 12" X 12" TEE



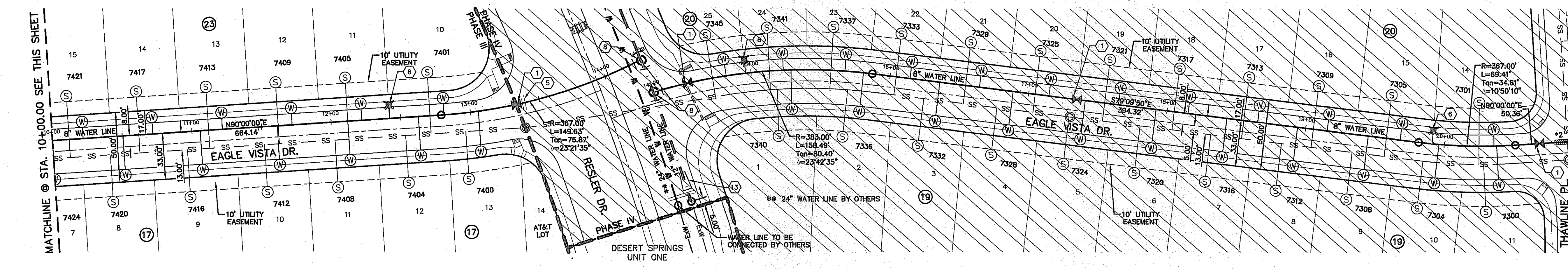
NOTES:
 1. ALL LOTS SHALL BE PROVIDED WITH ONE SERVICE CONNECTION TO BE INSTALLED AT THE LOCATION AS SHOWN ON THE SERVICE LOCATION DETAIL.
 2. ALL WATER LINES SHALL COMPLY WITH AWWA C-900 DR 14 PRESSURE CLASS 305, OR UNLESS OTHERWISE REQUIRED BY THE EL PASO WATER UTILITIES RULES AND REGULATIONS AND DESIGN STANDARDS.
 3. CONTRACTOR SHALL COORDINATE WITH THE EL PASO WATER UTILITIES FOR TURNING & SHUTTING WATER VALVES PRIOR TO REMOVAL OF EXISTING CAPS & CONSTRUCTION OF NEW LINES.
 4. CONTRACTOR IS TO POT HOLE LINES TO DETERMINE EXACT LOCATION AND DEPTH OF EXISTING WATER LINES. THIS ALSO AFFECTS THE DIMENSION PROVIDED IN THE PLANS WHEN REFERENCING TO EXISTING CONDITIONS. THESE DIMENSIONS ARE APPROXIMATE AND TO BE FIELD VERIFIED.



WATER INDEX	
	PHASE I
	PHASE II
	PHASE III
	PHASE IV
	PHASE V
	PHASE VI

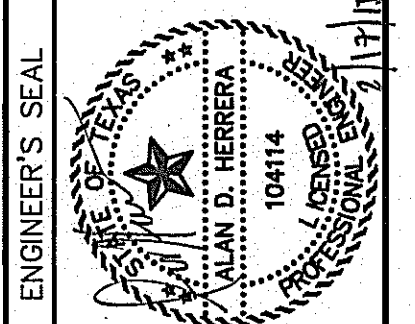


MATCHLINE @ STA. 10+00'00" SEE THIS SHEET



MATCHLINE @ STA. 10+00'00" SEE THIS SHEET

CSA
 engineers • architects • planners
 TEXAS REGISTERED ENGINEERING FIRM F-1664
 4712 Woodrow Bann, Ste. F, El Paso, TX 79904
 Office: 915.544.5322 Fax: 915.544.6233 www.csaeng.com

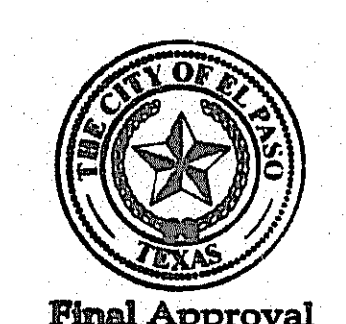


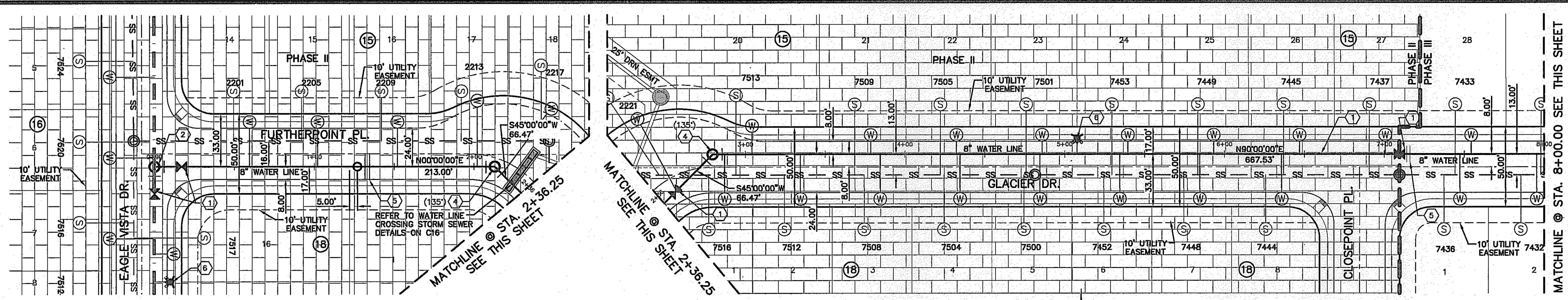
SCALE: 1"=40'
 Horizontal: 1"=50'
 Vertical: 1"=5'
 Contour Interval: N/A
 DATE: DECEMBER 2014
 DESIGN BY: A.H.
 DRAWN BY: J.H.
 CHKD. BY: J.L.A.
 APP'D. BY: J.L.A.
 JOB NO. 2060-028-ID

PROJECT TITLE
DESERT SPRINGS UNIT FOUR
 SUBDIVISION IMPROVEMENTS

SHEET TITLE
 WATER PLAN VIEWS
 ENCHANTED SPRINGS DRIVE, WILLIE MIER ST, NEARPOINT PLACE & EAGLE VISTA DRIVE
 (SHEET 1 OF 3)
 SHEET NO.

C15.1





UTILITY LOCATOR SERVICES

EL PASO ELECTRIC COMPANY	(915) 543-5720
EL PASO ENERGY CORPORATION	(915) 496-5244
EL PASO WATER UTILITIES	(915) 594-5500
MCI SURVEILLANCE	(800) MCI-WORK
TIME WARNER COMMUNICATIONS	(915) 772-1123
TEXAS GAS SERVICE	(915) 680-7200
ONEOK PARTNERS	(915) 595-6918
AT&T	(800) 852-3786
U.S. SPRINT TELECOM	(800) 521-0579
CITY OF EL PASO DEPARTMENT OF TRANSPORTATION	(915) 621-6750
(AFTER HOURS)	(915) 240-3220

WARNING I BEFORE YOU DIG

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

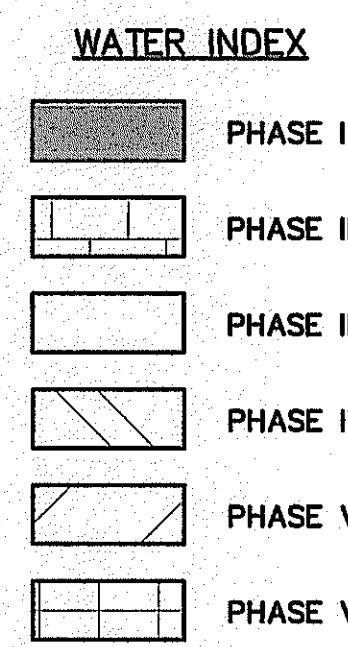
FOR FIELD LOCATING EXISTING UTILITIES

LEGEND

SYMBOL	DESCRIPTION
---	STREET R.O.W. LINE
---	PROPERTY LINE
---	SUBDIVISION BOUNDARY
---	24" WATER TRANSMISSION LINE BY OTHERS
---	16" WATER LINE BY OTHERS
---	EXISTING WATER LINE
---	NEW 8" AND 12", C-900 P.V.C. PIPE
---	NEW 8" AND 12", C-900 P.V.C. PIPE (SEE OTHER LINE)
---	NEW SANITARY SEWER
---	NEW STORM SEWER
---	NEW SEWER SERVICE CONNECTION
---	NEW WATER SERVICE CONNECTION
---	NEW FIRE HYDRANT, KENNEDY OR MUELLER MODEL
---	EXISTING GATE VALVE
---	NEW GATE VALVE
---	TEE
---	CROSS
---	BEND(S)
---	REDUCER
---	PLUG
---	POINT OF TANGENCY
---	PVC SLEEVE

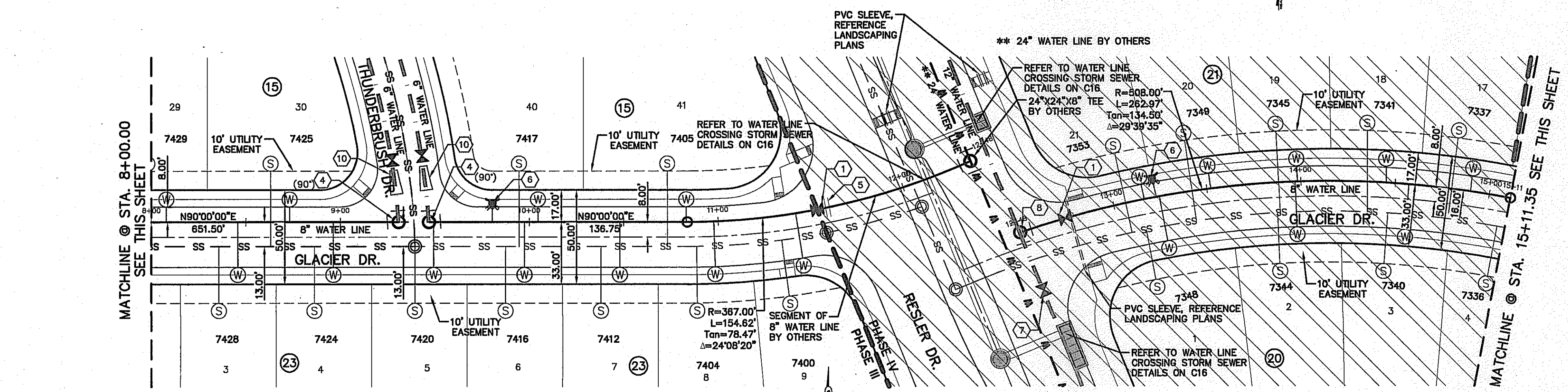
WATER KEYED NOTES

Symbol	Description
(1)	8" GATE VALVE
(2)	8" X 8" X 8" TEE
(3)	8" CROSS
(4)	8" BEND
(5)	8" PLUG
(6)	FIRE HYDRANT
(7)	12" BUTTERFLY VALVE
(8)	12" X 12" X 8" TEE
(9)	12" PLUG
(10)	6" X 8" REDUCER
(11)	6" GATE VALVE
(12)	6" BEND
(13)	12" X 16" REDUCER
(14)	12" X 12" X 12" TEE

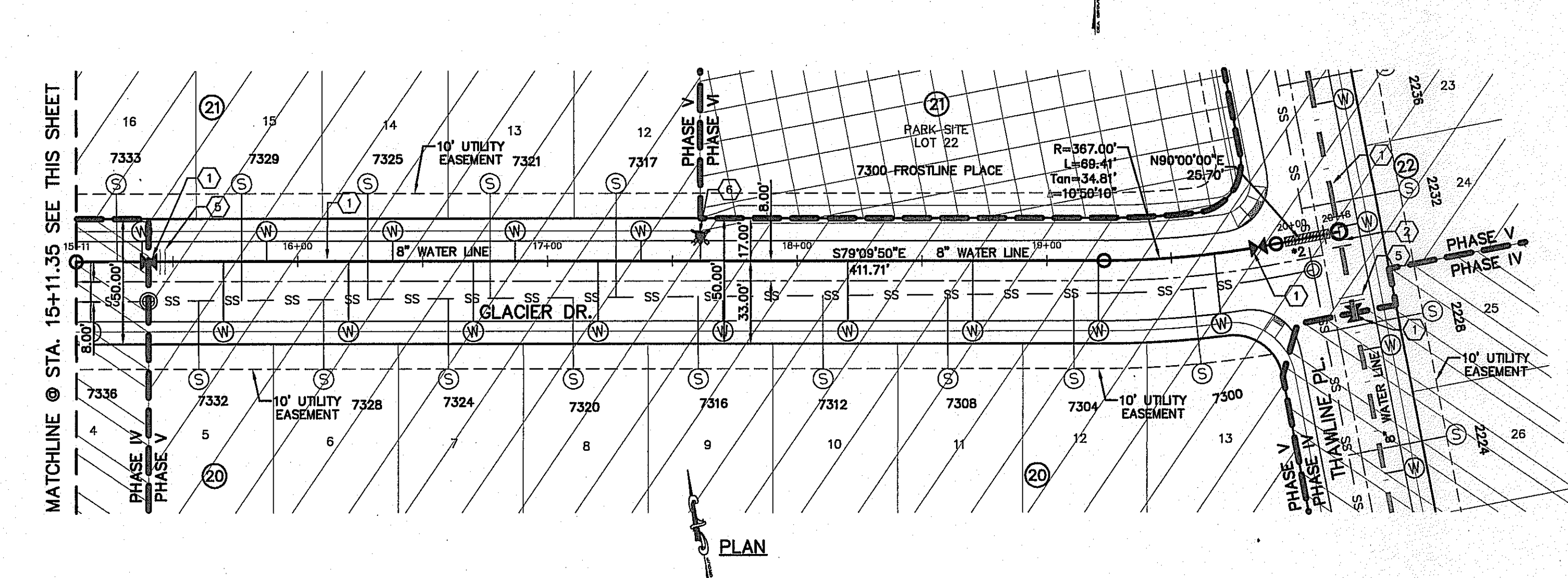


PLAN

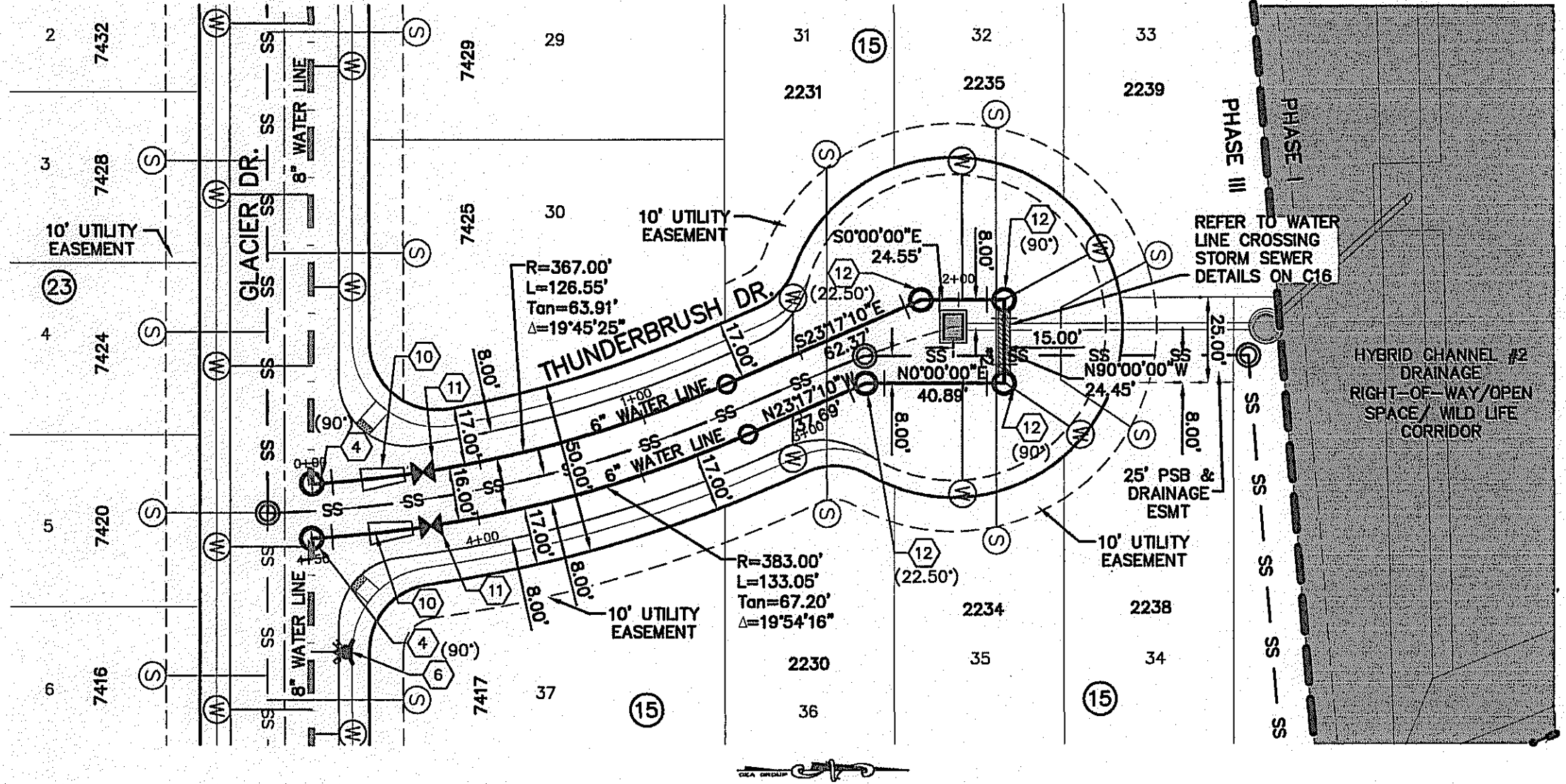
PLAN



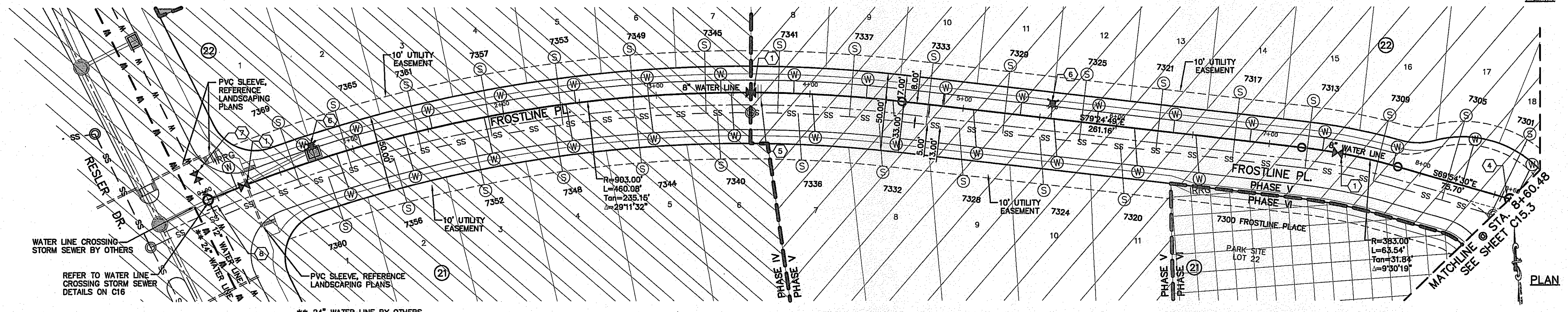
PLAN



PLAN



PLAN



PLAN

- NOTE:**
- #1 24" STEEL CASING TO BE CENTERED ON SEWER CROSSING.
 - #2 DUCTILE IRON PIPE. SEE DETAILS ON SHEET C16

- NOTES:**
- ALL LOTS SHALL BE PROVIDED WITH ONE SERVICE CONNECTION TO BE INSTALLED AT THE LOCATION AS SHOWN ON THE SERVICE LOCATION DETAIL.
 - ALL WATER LINES SHALL COMPLY WITH AWWA C-900 DR 14 PRESSURE CLASS 305, OR UNLESS OTHERWISE REQUIRED BY THE EL PASO WATER UTILITIES RULES AND REGULATIONS AND DESIGN STANDARDS.
 - CONTRACTOR SHALL COORDINATE WITH THE EL PASO WATER UTILITIES FOR TURNING & SHUTTING WATER VALVES PRIOR TO REMOVAL OF EXISTING CAPS & CONSTRUCTION OF NEW LINES.
 - CONTRACTOR IS TO POT HOLE LINES TO DETERMINE EXACT LOCATION AND DEPTH OF EXISTING WATER LINES. THIS ALSO AFFECTS THE DIMENSION PROVIDED IN THE PLANS WHEN REFERENCING TO EXISTING CONDITIONS. THESE DIMENSIONS ARE APPROXIMATE AND TO BE FIELD VERIFIED.



REFERENCES - BENCHMARKS

FOUND N.G.S. SURVEY MARKER STAMPED "CHNO 1980"
3935.83 (CITY OF EL PASO VERTICAL DATUM)
ELEVATION:
3945.78 (NAVD 88 DATUM)
3945.78 (NOVD 23 DATUM)

TIE TO THE PROJECT BENCHMARK IS N53°09'00"W, 4.008.93
FEET FROM 1/2" INCH SCALE FOUND FOR THE NORTHWEST
CORNER OF TRACT 11, WELLS 11, AND/OR SURVEY NO. 230

DATE _____ BY _____

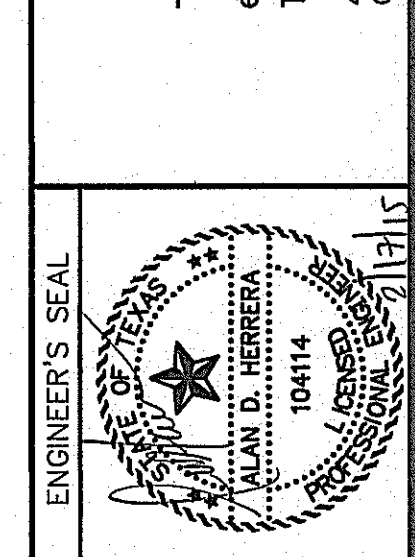
REVISIONS _____

CS&A

engineers • architects • planners

TEXAS REGISTERED ENGINEERING FIRM F-4684

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



SCALE: 1"=40'

Horizontal: 1"=50'

Vertical: 1"=5'

Contour Interval: 10'

DATE: DECEMBER 2014

DESIGN BY: A.H.

DRAWN BY: J.H.

CHKD. BY: J.L.A.

APPVD. BY: J.L.A.

JOB No. 2060-028-1D

PROJECT TITLE

DESERT SPRINGS UNIT FOUR

SUBDIVISION IMPROVEMENTS

SHEET TITLE

WATER PLAN VIEWS

FURTHERPOINT PLACE, GLACIER DRIVE, THUNDERBUSH DRIVE & FROSTLINE PLACE

(SHEET 2 OF 3)

SHEET NO.

C15.2

NOTE:

- 1 24" STEEL CASING TO BE CENTERED ON SEWER CROSSING.
- 2 DUCTILE IRON PIPE. SEE DETAILS ON SHEET C16

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 COMPLY WITH AWWA C-900 OR 14" PRESSURE CLASS 305, OR UNLESS OTHERWISE REQUIRED BY THE EL PASO WATER UTILITIES RULES AND REGULATIONS AND DESIGN STANDARDS.
3. CONTRACTOR SHALL COORDINATE WITH THE EL PASO WATER UTILITIES FOR TURNING & SHUTTING WATER VALVES PRIOR TO REMOVAL OF EXISTING CAPS & CONSTRUCTION OF NEW LINES.
4. CONTRACTOR IS TO POT HOLE LINES TO DETERMINE EXACT LOCATION AND DEPTH OF EXISTING WATER LINES. THIS ALSO AFFECTS THE DIMENSION PROVIDED IN THE PLANS WHEN REFERENCING TO EXISTING CONDITIONS. THESE DIMENSIONS ARE APPROXIMATE AND TO BE FIELD VERIFIED.

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
ONEOK PARTNERS	(915) 585-6918
AT&T	(800) 852-3786
U.S. SPRINT TELECOM	(800) 521-0579
CITY OF EL PASO DEPARTMENT OF TRANSPORTATION	(915) 621-6750
(AFTER HOURS)	(915) 240-3220

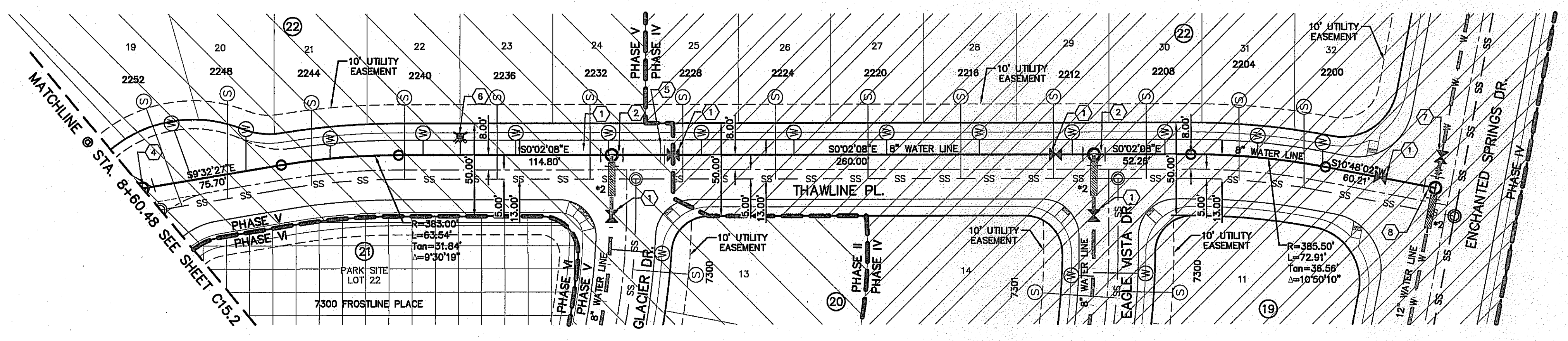
WARNING I BEFORE YOU DIG
 CALL
 1-800-DIG-TESS
 1-800-344-8377
 FOR FIELD LOCATING EXISTING UTILITIES

LEGEND

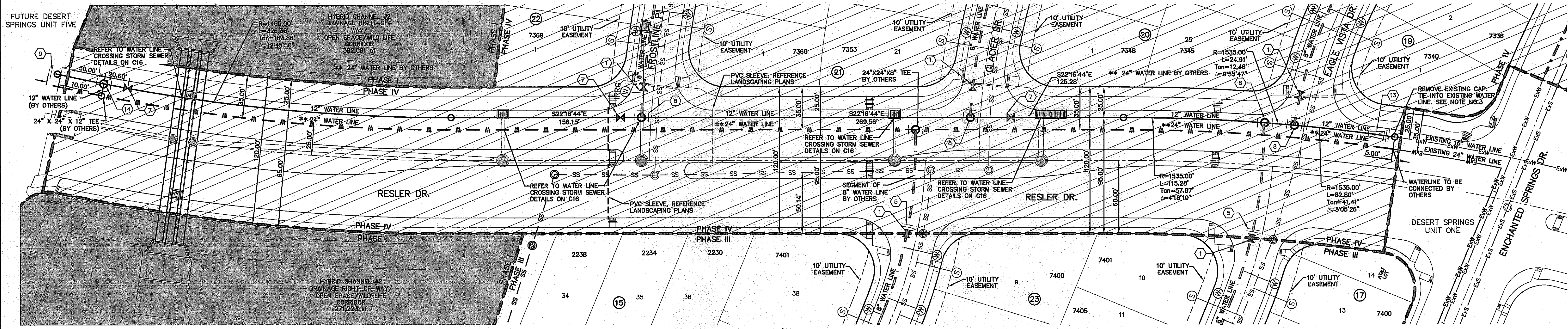
SYMBOL	DESCRIPTION
---	STREET R.O.W. LINE
---	PROPERTY LINE
---	SUBDIVISION BOUNDARY
---W---W---W---	24" WATER TRANSMISSION LINE BY OTHERS
---W---W---W---	16" WATER LINE BY OTHERS
---	EXISTING WATER LINE
---	NEW 8" AND 12", C-900 P.V.C. PIPE
---	NEW 8" AND 12", C-900 P.V.C. PIPE (SEE OTHER LINE)
SS	NEW SANITARY SEWER
SS	NEW STORM SEWER
SS	NEW SEWER SERVICE CONNECTION
SS	NEW WATER SERVICE CONNECTION
SS	NEW FIRE HYDRANT, KENNEDY OR MUELLER MODEL
SS	EXISTING GATE VALVE
SS	NEW GATE VALVE
SS	TEE
SS	CROSS
SS	BEND(S)
SS	REDUCER
SS	PLUG
SS	POINT OF TANGENCY
---	PVC SLEEVE

WATER KEYED NOTES	
(1)	8" GATE VALVE
(2)	8" X 8" X 8" TEE
(3)	8" CROSS
(4)	8" BEND
(5)	8" PLUG
(6)	FIRE HYDRANT
(7)	12" BUTTERFLY VALVE
(8)	12" X 12" X 8" TEE
(9)	12" PLUG
(10)	6" X 8" REDUCER
(11)	6" GATE VALVE
(12)	6" BEND
(13)	12" X 16" REDUCER
(14)	12" X 12" X 12" TEE

WATER INDEX	
[Pattern]	PHASE I
[Pattern]	PHASE II
[Pattern]	PHASE III
[Pattern]	PHASE IV
[Pattern]	PHASE V
[Pattern]	PHASE VI



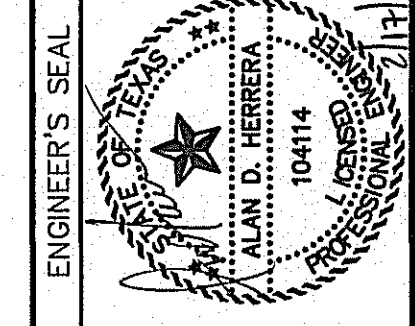
PLAN



PLAN

REFERENCES - BENCHMARKS
 FOUND N.G.S. SURVEY MARKER "CHINO 1980"
 3935.83 (CITY OF EL PASO VERTICAL DATUM)
 ELEVATION:
 3945.78 (NAD 83 DATUM)
 3945.78 (NAD 28 DATUM)
 TIE TO THE PROJECT BENCHMARK IS N37°09'09" W, 4.008.83 FEET FROM A 1/2" INCH REBAR FOUND FOR THE NORTHWEST CORNER OF TRACT 11, WELLS D. JORDY SURVEY NO. 239

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



SCALE: 1"=40'
 Horizontal: 1"=50'
 Vertical: 1"=5'
 Contour Interval: 10'
 DATE: DECEMBER 2014
 DESIGN BY: A.H.
 DRAWN BY: J.H.
 CHKD. BY: J.L.A.
 APPVD. BY: J.L.A.
 JOB No. 2060-028-LD

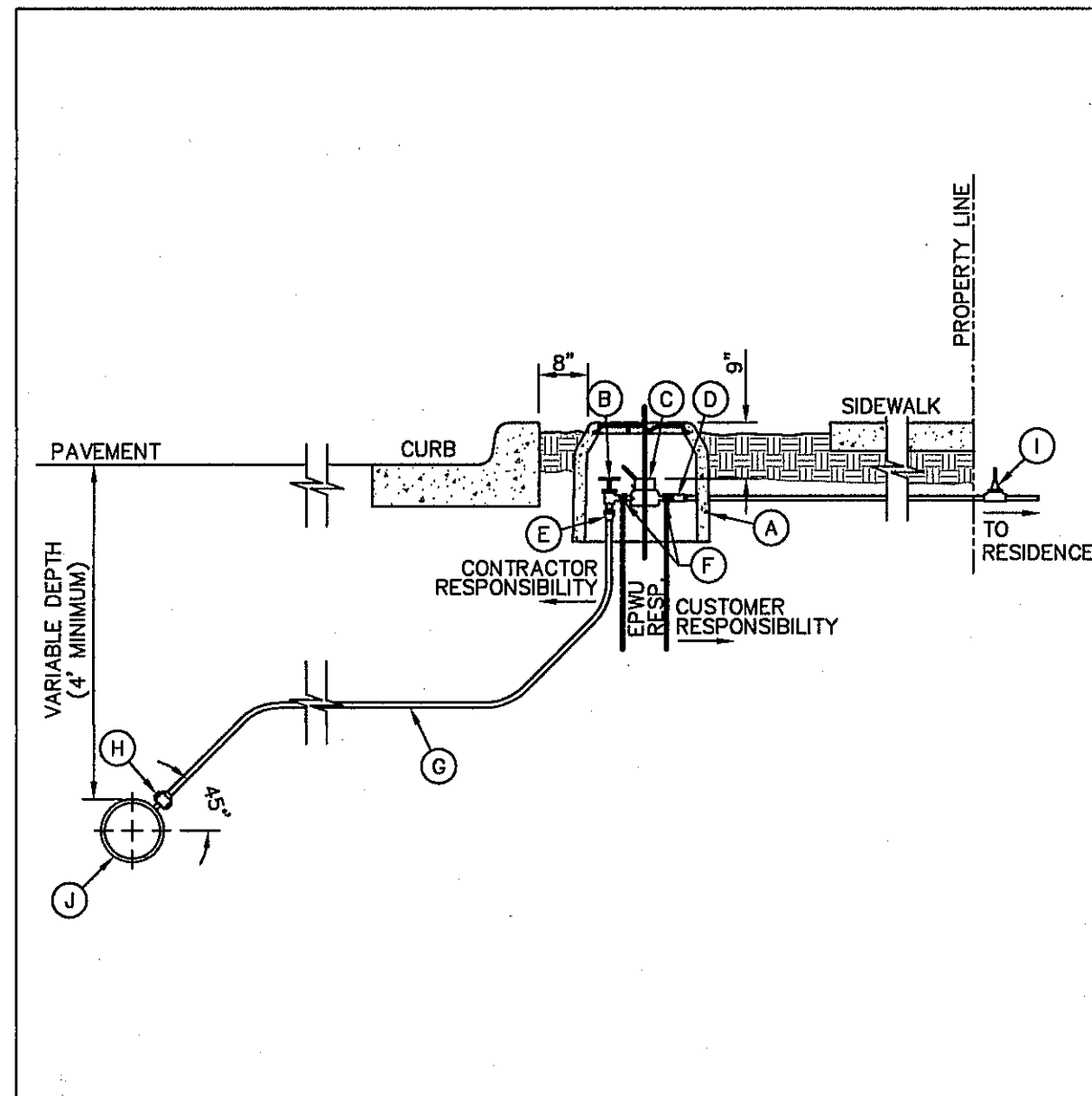
PROJECT TITLE
DESERT SPRINGS UNIT FOUR
SUBDIVISION IMPROVEMENTS

SHEET TITLE
WATER PLAN VIEW THAWLINE PLACE & RESLER DRIVE
 (SHEET 3 OF 3)
 SHEET NO.

C15.3



S:\2014\2060-015-03\2014\2060-015-03-C15.3.dwg Plot Date: 12/17/2015 9:51:16 AM
 User: jlh
 Plot Device: HPGL2
 Plot Style: C15.3.ctb
 Plot Scale: 1"=40'
 Plot Orientation: Horizontal
 Plot Range: All
 Plot Color: Black
 Plot Lineweight: 0.25
 Plot Linetype: Solid
 Plot Font: Arial, 10
 Plot Title: DESERT SPRINGS UNIT FOUR SUBDIVISION IMPROVEMENTS
 Plot Sheet: 3 of 3
 Plot Sheet No.: C15.3

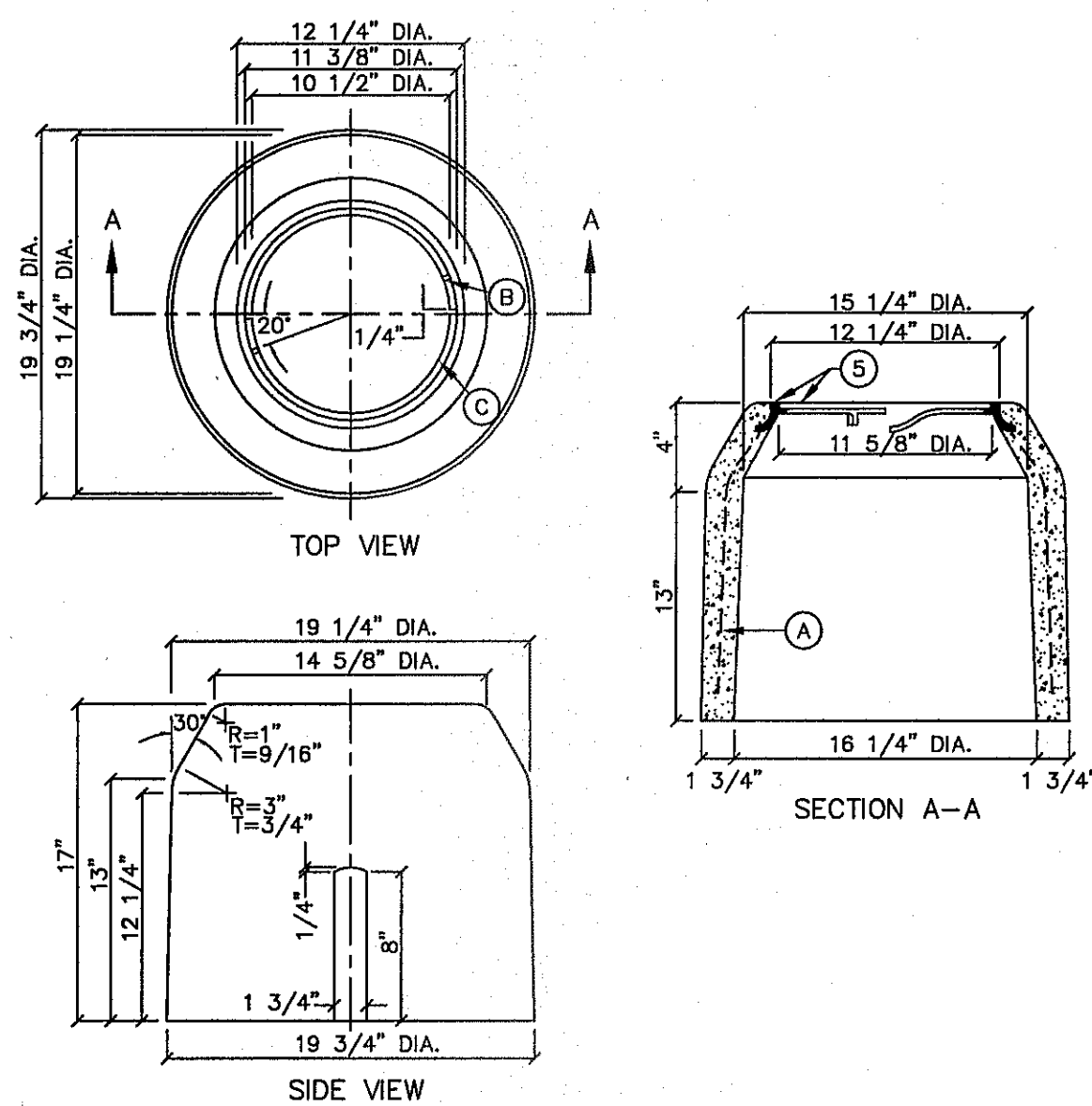


- GENERAL NOTES:**
- DETAIL SHOWN FOR A 3/4" SERVICE, 1" SERVICE INSTALLATION IS SIMILAR EXCEPT FOR SIZES OF PIPE, FITTING, METER AND BOX (TYPE "B").
 - WHERE NO CURB EXISTS, METER IS TO BE SET NEAR PROPERTY LINE OR AT DESIGNATED LOCATION.
 - THE CONTRACTOR SHALL FURNISH AND INSTALL ALL NECESSARY PIPE, FITTINGS, AND METER BOXES REQUIRED. IT SHALL BE THE RESPONSIBILITY OF THE PRIVATE OWNER TO HAVE A CERTIFIED PLUMBER INSTALL A BACKFLOW PREVENTER AND EXTEND SERVICE LINE ON DISCHARGE SIDE OF METER.
 - NO SPLICING SHALL BE ALLOWED. FULL LENGTH OF PIPING SERVICE SHALL BE INSTALLED.
 - THE EPWU WILL FURNISH AND INSTALL THE METER.

- CONSTRUCTION KEY NOTES:**
- METER BOX TYPE "A" (SEE DETAILS 300 & 301) SHALL BE SET SLIGHTLY HIGHER THAN SURROUNDING GROUND OR AT CURB LEVEL.
 - 3/4" ANGLE SERVICE VALVE.
 - WATER METER (CENTER INSIDE METER BOX).
 - WHEN REQUIRED BY EPWU, A DUAL CHECK BACKFLOW PREVENTER SHALL BE INSTALLED ON THE OUTLET SIDE OF THE METER.
 - END FLARE OF SERVICE LINE.
 - INLET AND OUTLET COUPLING.
 - 3/4" COPPER SERVICE LINE (SEE NOTE 4).
 - 5/8" X 3/4" CORPORATION STOP.
 - PRESSURE REGULATOR SOMETIMES LOCATED NEAR THE RESIDENCE.
 - WATER MAIN

STANDARD DETAIL	DATE: 10/20/2000 REV: 5/24/2007	SERVICE LINE 3/4" AND 1" INSTALLATION BY CONTRACTOR	EL PASO UTILITY BOARD	DETAIL No. 290-4
-----------------	------------------------------------	---	-----------------------	------------------

1 TYPICAL SERVICE LINE INSTALLATION
SCALE: N.T.S.

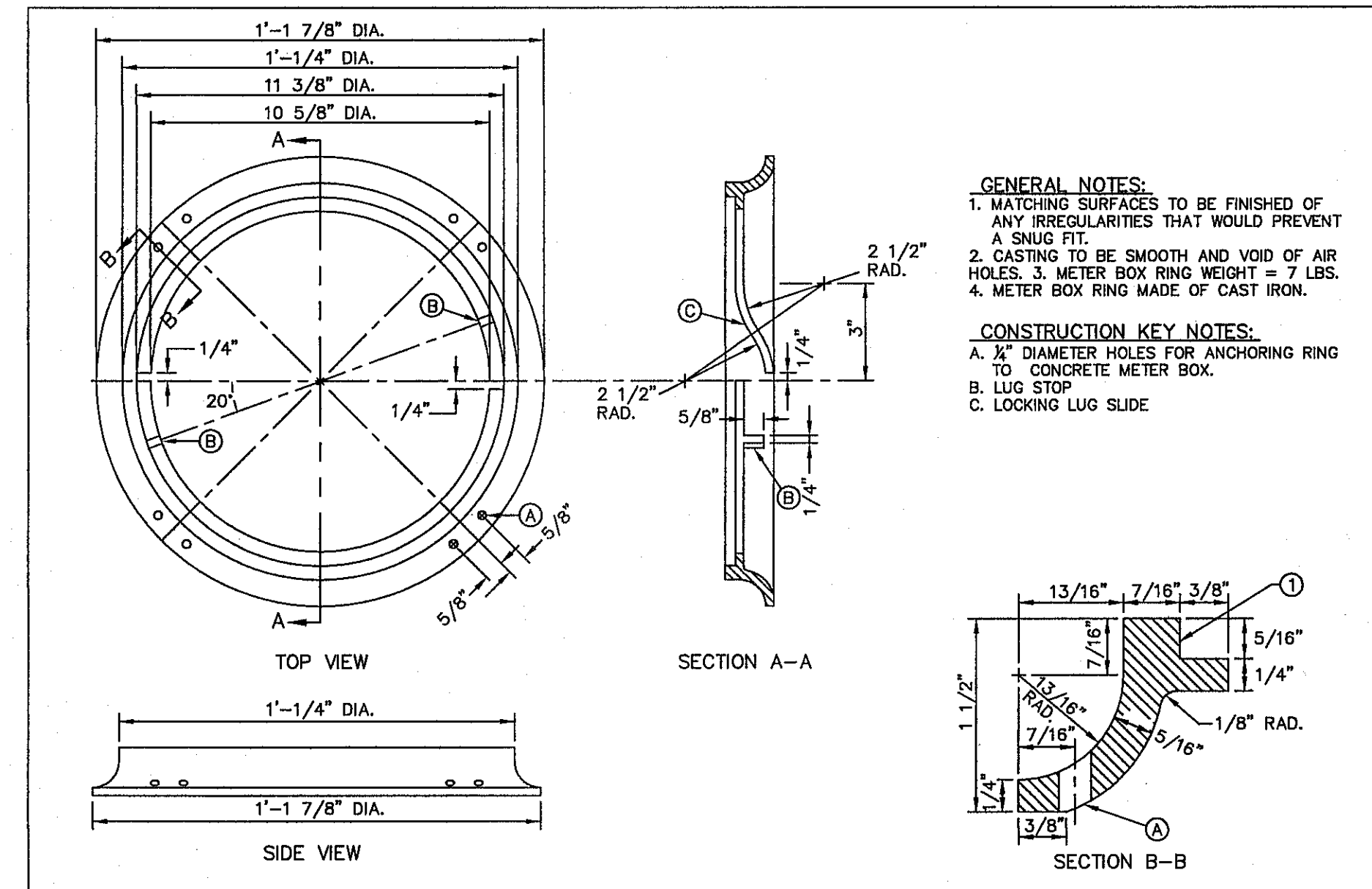


- GENERAL NOTES:**
- INSTALL TO GRADE MATCHING TOP OF CURB.
 - ANGLE VALVE SHALL BE IN LINE WITH THE INLET/OUTLET PORTS OF THE METER BOX.
 - METER BOXES SHALL NOT BE INSTALLED UNDER SIDEWALKS, DRIVEWAYS, OR PROPOSED ABOVE GROUND STRUCTURES.
 - WHERE NO CURBING EXISTS, INSTALL BOXES IN ACCESSIBLE LOCATIONS BEYOND LIMITS OF STREET SURFACING, WALKS AND DRIVEWAYS.
 - METER BOX RING AND COVER PER EPWU DETAILS 300 AND 301.
 - WHERE IT IS NECESSARY TO INSTALL A TYPE "A" BOX FOR 3/4" METER UNDER ROADWAYS OF TRAFFIC BEARING SURFACES, BOX SHALL BE ENCASED IN 12" CONCRETE, 3000 PSI, MINIMUM.
 - METER BOX SHALL BE SINGLE UNIT CONSTRUCTION; CONCRETE TO HAVE A MINIMUM 28 DAYS COMPRESSIVE STRENGTH OF 4000 PSI.

- CONSTRUCTION KEY NOTES:**
- 3/16", 9 GAUGE BLACK ANNEALED WIRE
 - LUG-STOP C. CAST IRON RING

STANDARD DETAIL	DATE: 4/1994 REV: 8/24/2006	METER BOX TYPE "A" FOR 3/4" SERVICE INSTALLATION	EL PASO UTILITY BOARD	DETAIL No. 281
-----------------	--------------------------------	--	-----------------------	----------------

2 METER BOX DETAIL
SCALE: N.T.S.

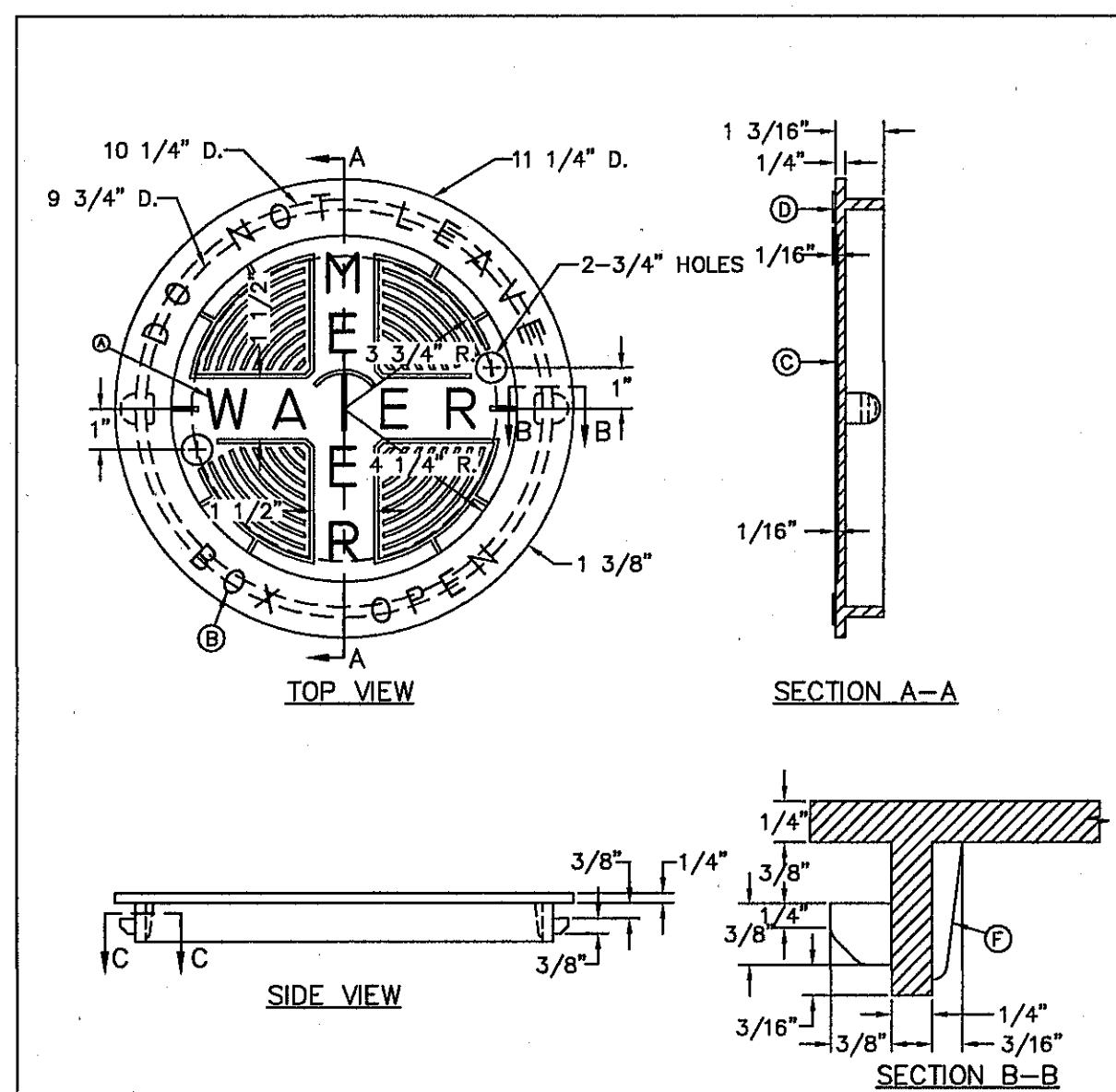


- GENERAL NOTES:**
- MATCHING SURFACES TO BE FINISHED OF ANY IRREGULARITIES THAT WOULD PREVENT A SNUG FIT.
 - CASTING TO BE SMOOTH AND VOID OF AIR HOLES. 3. METER BOX RING WEIGHT = 7 LBS.
 - METER BOX RING MADE OF CAST IRON.

- CONSTRUCTION KEY NOTES:**
- 1/2" DIAMETER HOLES FOR ANCHORING RING TO CONCRETE METER BOX.
 - LUG STOP
 - LOCKING LUG SLIDE

STANDARD DETAIL	DATE: 1/1995 REV: 8/10/2006	METER BOX RING FOR TYPE "A" & "B" METER BOXES	EL PASO UTILITY BOARD	DETAIL No. 300
-----------------	--------------------------------	---	-----------------------	----------------

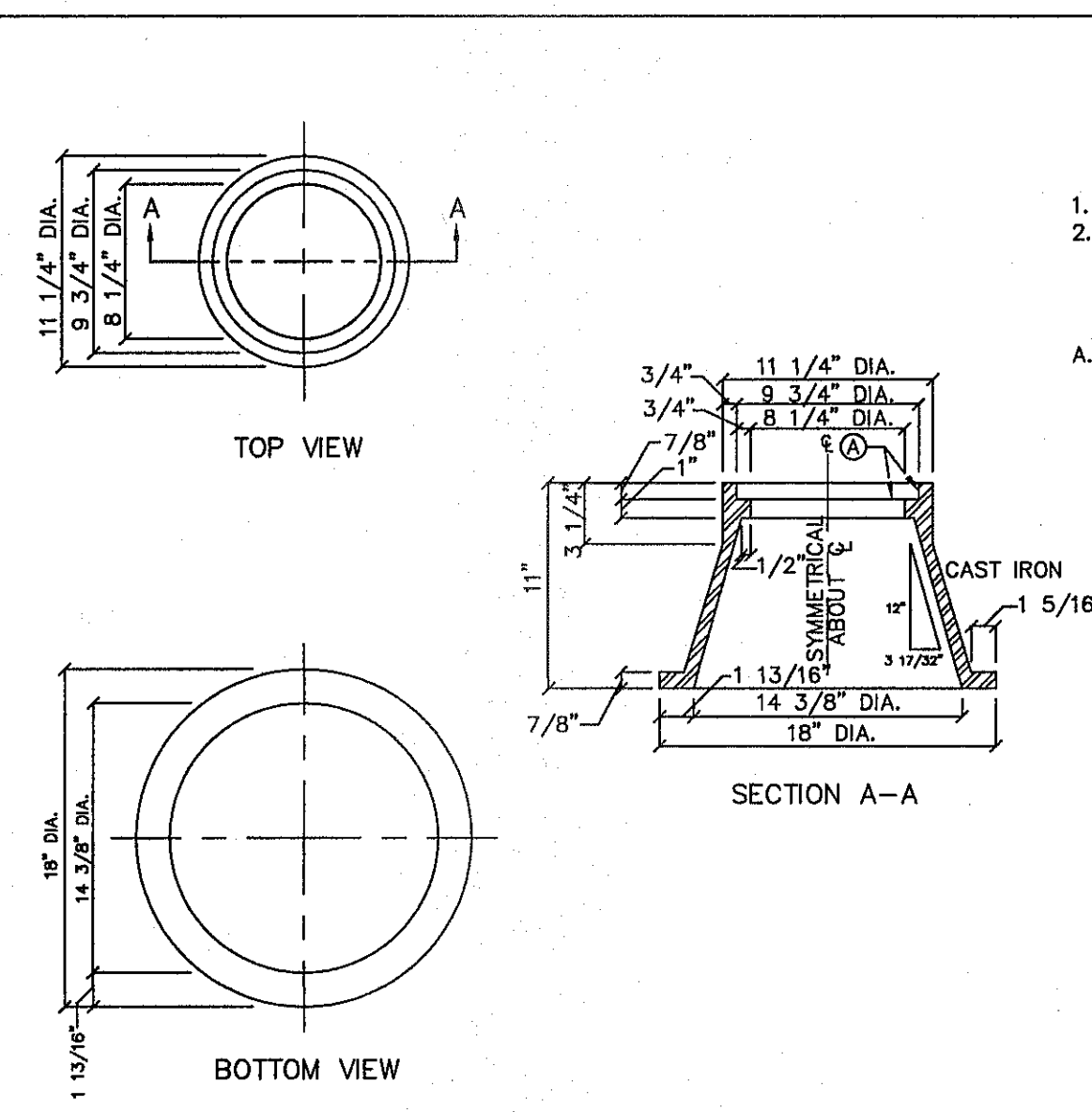
3 METER BOX RING DETAIL
SCALE: N.T.S.



- GENERAL NOTES:**
- MATCHING SURFACES TO BE ROUGH GROUND OF ANY IRREGULARITIES THAT WOULD PREVENT A SNUG FIT.
 - CASTING TO BE SMOOTH AND VOID OF AIR HOLES.
 - METER BOX COVER WEIGHT = 1 1/4 LBS.
- CONSTRUCTION KEY NOTES:**
- LETTERS TO BE 1" HIGH, 3/4" WIDE, 1/8" THICK
 - LETTERS TO BE 3/8" HIGH, 3/8" WIDE, 1/8" THICK
 - INSIDE LETTERS & RIBS 3/16" TALL
 - OUTSIDE LETTERS 1/4" TALL
 - REINFORCE BACK OF LUG
 - REINFORCEMENT

STANDARD DETAIL	DATE: 4/1994 REV: 8/10/2006	METER BOX COVER FOR TYPE "A" & "B" METER BOXES	EL PASO UTILITY BOARD	DETAIL No. 301
-----------------	--------------------------------	--	-----------------------	----------------

4 METER BOX COVER DETAIL
SCALE: N.T.S.

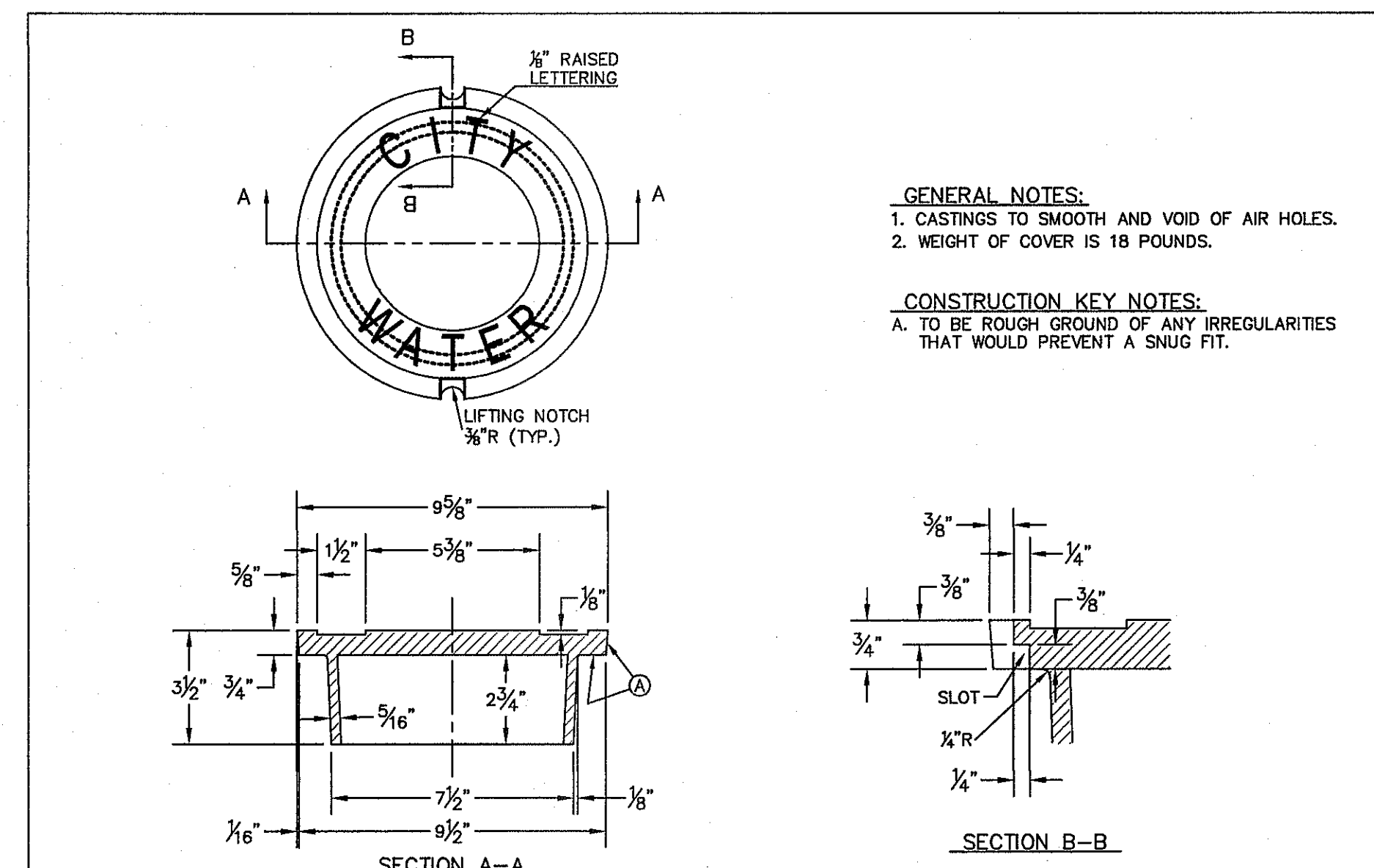


- GENERAL NOTES:**
- CASTING TO BE SMOOTH AND VOID OF AIR HOLES.
 - WEIGHT OF BONNET BOX IS 95 POUNDS.

- CONSTRUCTION KEY NOTES:**
- TO BE ROUGH GROUND OF ANY IRREGULARITIES THAT WOULD PREVENT A SNUG FIT.

STANDARD DETAIL	FEB. 1994 REV:	BONNET BOX	EL PASO UTILITY BOARD	DETAIL No. 268
-----------------	-------------------	------------	-----------------------	----------------

5 BONNET BOX
SCALE: N.T.S.



- GENERAL NOTES:**
- CASTINGS TO SMOOTH AND VOID OF AIR HOLES.
 - WEIGHT OF COVER IS 18 POUNDS.

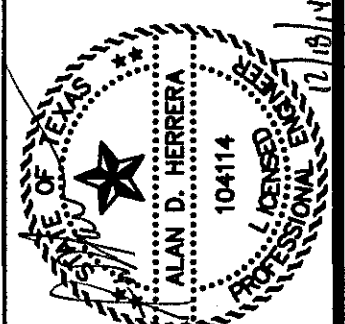
- CONSTRUCTION KEY NOTES:**
- TO BE ROUGH GROUND OF ANY IRREGULARITIES THAT WOULD PREVENT A SNUG FIT.

STANDARD DETAIL	DATE: 2/16/2006 REV: 12/14/2007	BONNET BOX COVER (FLIP RESISTANT)	EL PASO UTILITY BOARD	DETAIL No. 269-2
-----------------	------------------------------------	-----------------------------------	-----------------------	------------------

6 BONNET BOX COVER (FLIP RESISTANT)
SCALE: N.T.S.

REFERENCES - BENCHMARKS
FOUND N.G.S. SURVEY MARKER STAMPED "CHINO 1880"
ELEVATION: 3955.03 (CITY OF EL PASO VERTICAL DATUM)
3946.11 (NAVD 88 DATUM)
3945.78 (NAVD 29 DATUM)
TIE TO THE PROJECT BENCHMARK IS NS309.00'W, 4.006.33
'S, 11.111.00'N, 11.111.00'E, 11.111.00'S, 11.111.00'E
CORNER OF TRACT 11, RELIEU D. MUNDY, SURVEY NO. 239

DATE: _____ REVISIONS: _____ BY: _____



SCALE: N/A
Vertical: N/A
Horizontal: N/A
DATE: DECEMBER 2014
DESIGN BY: A.H.
DRAWN BY: J.H.
APPROV. BY: J.L.A.
CHKD. BY: J.L.A.
JOB No. 2080-028-LD

PROJECT TITLE
DESERT SPRINGS UNIT FOUR
SUBDIVISION IMPROVEMENTS

SHEET TITLE

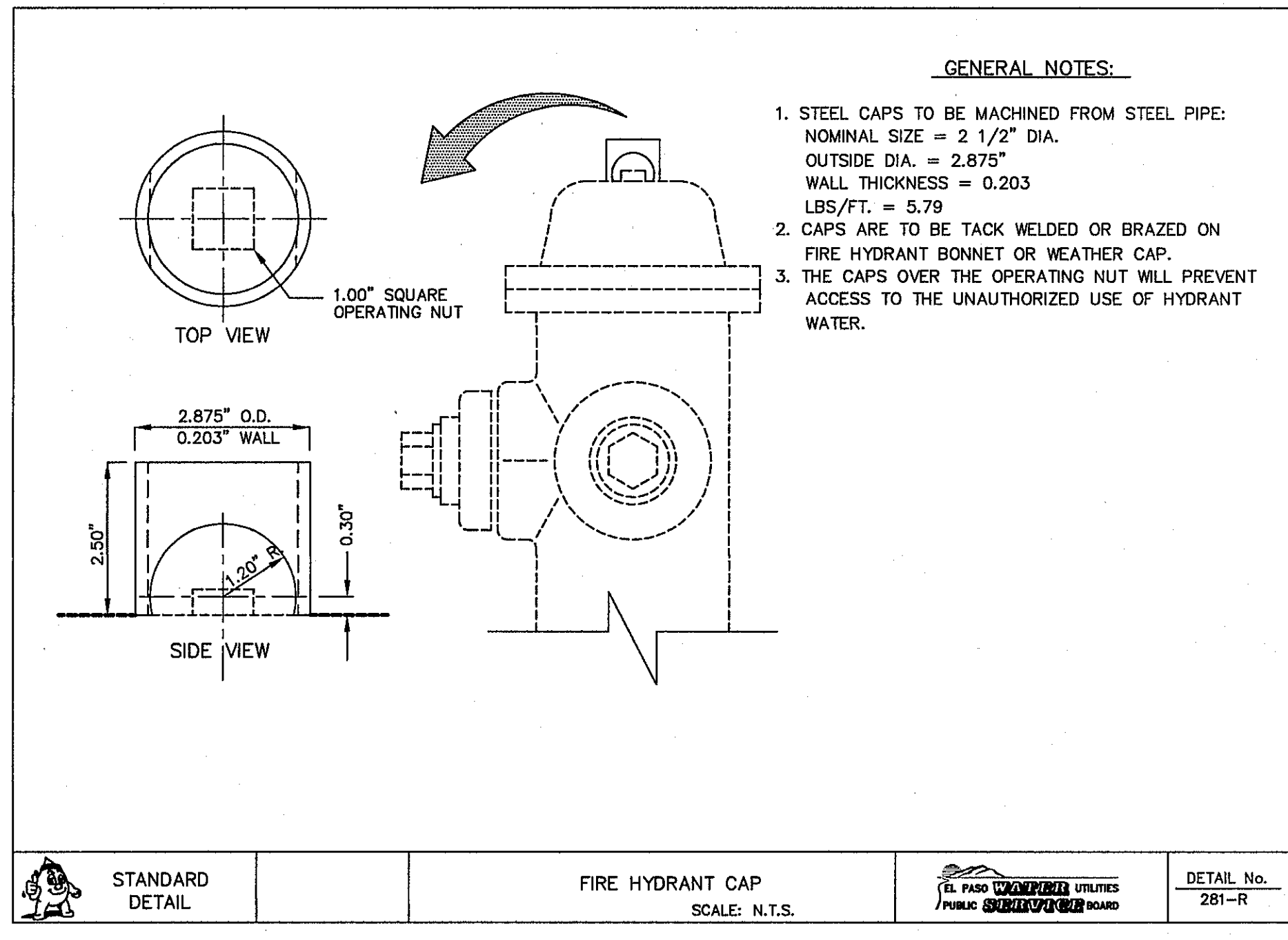
WATER DETAILS

(SHEET 1 OF 4)
SHEET NO.

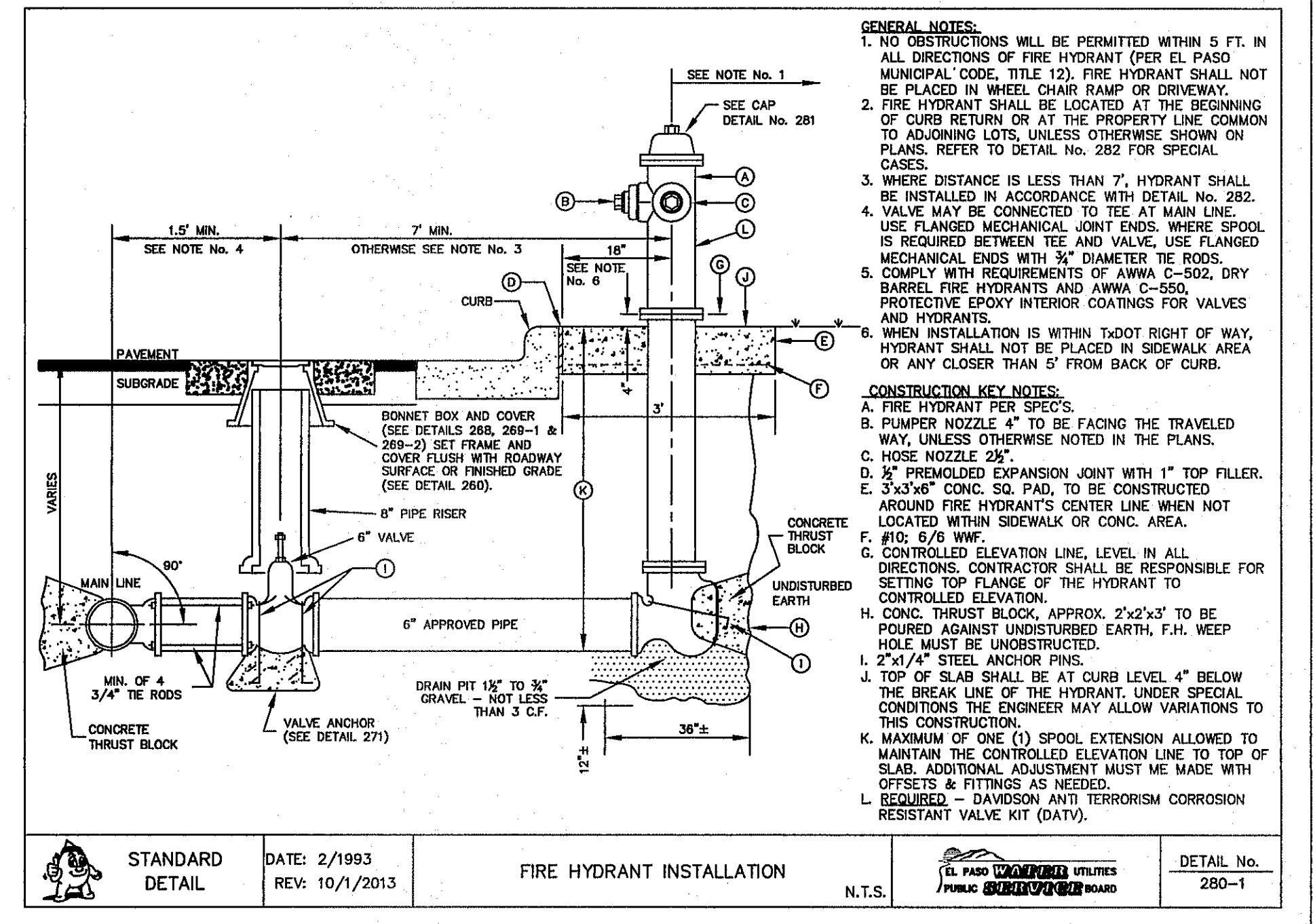
C16.1



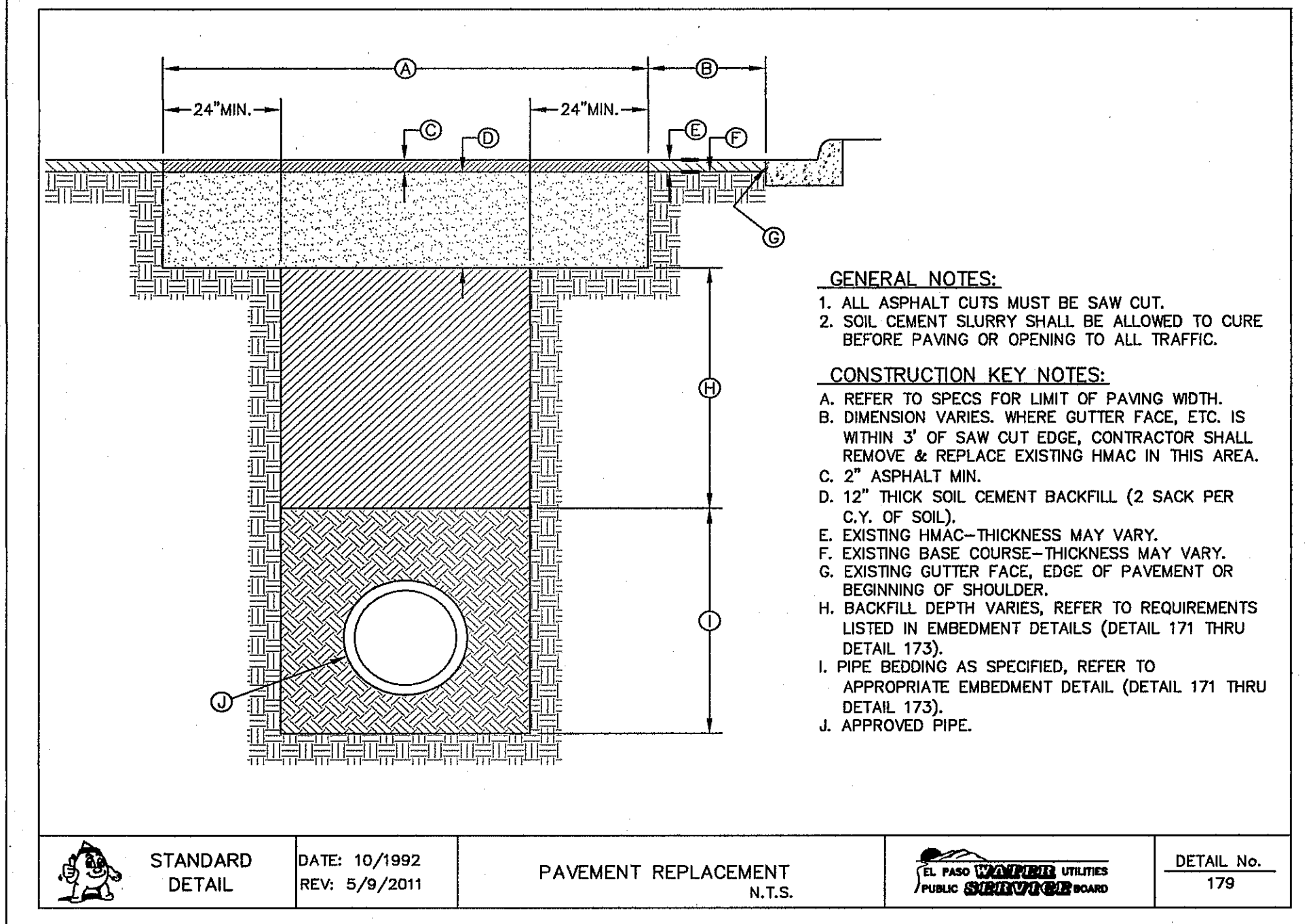
S:\2080\2080-013-LD\DWG\Construction Drawings\Improvement Plans\Unit A\2080-013-LD C16 water det ALL.dwg, Model: 12/17/2014 2:33:35 PM



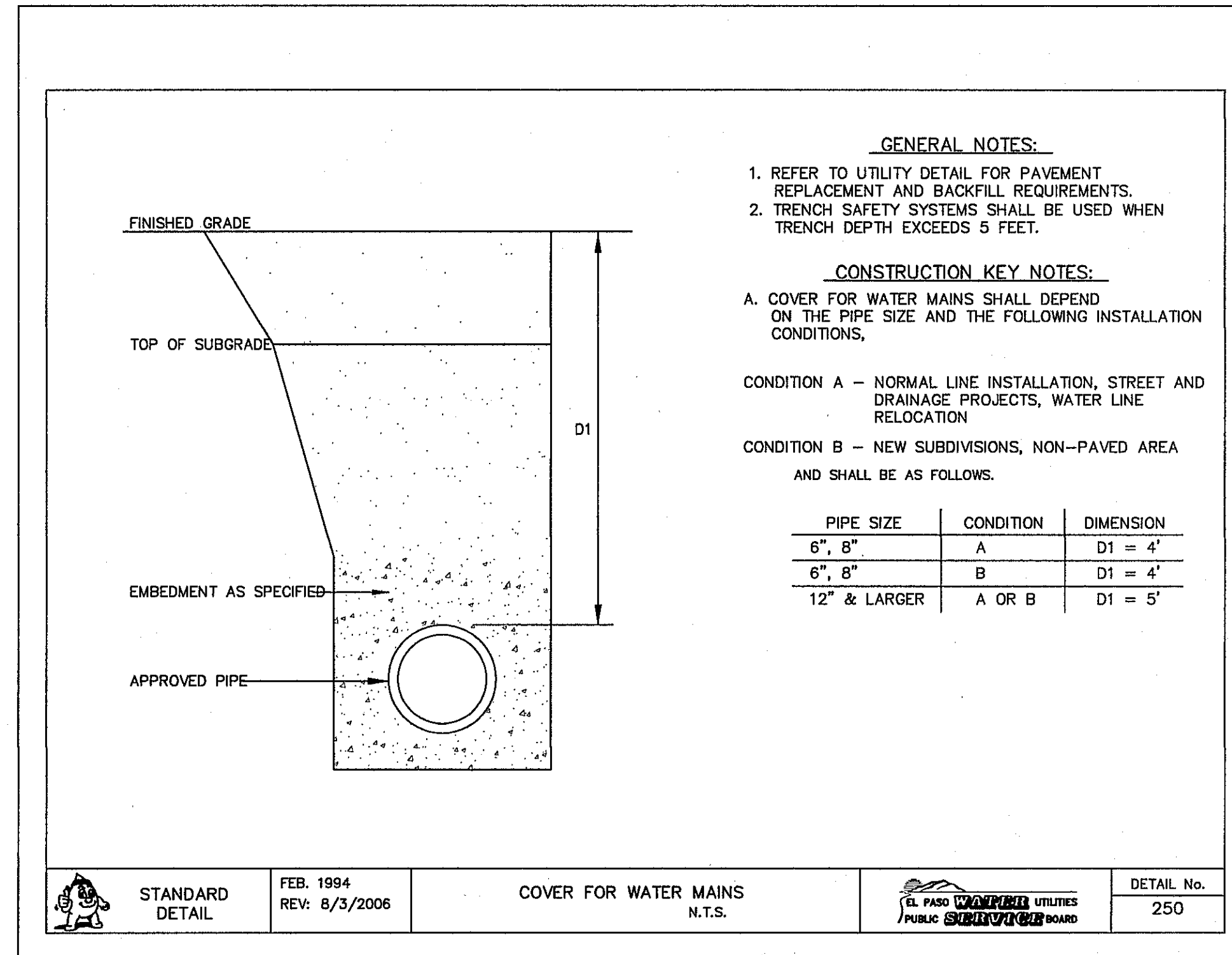
1 FIRE HYDRANT CAP
SCALE: N.T.S.



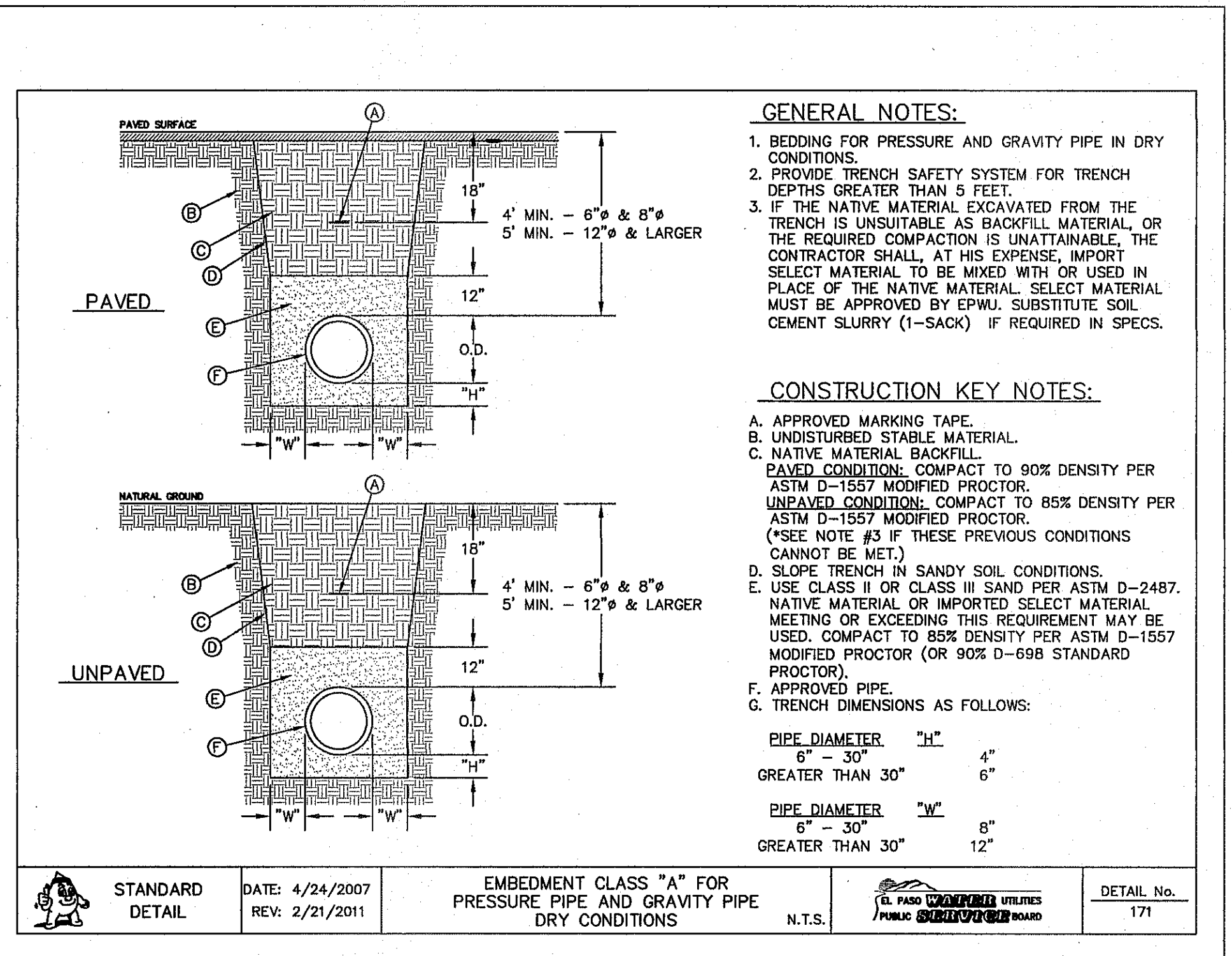
2 STANDARD FIRE HYDRANT INSTALLATION
SCALE: N.T.S.



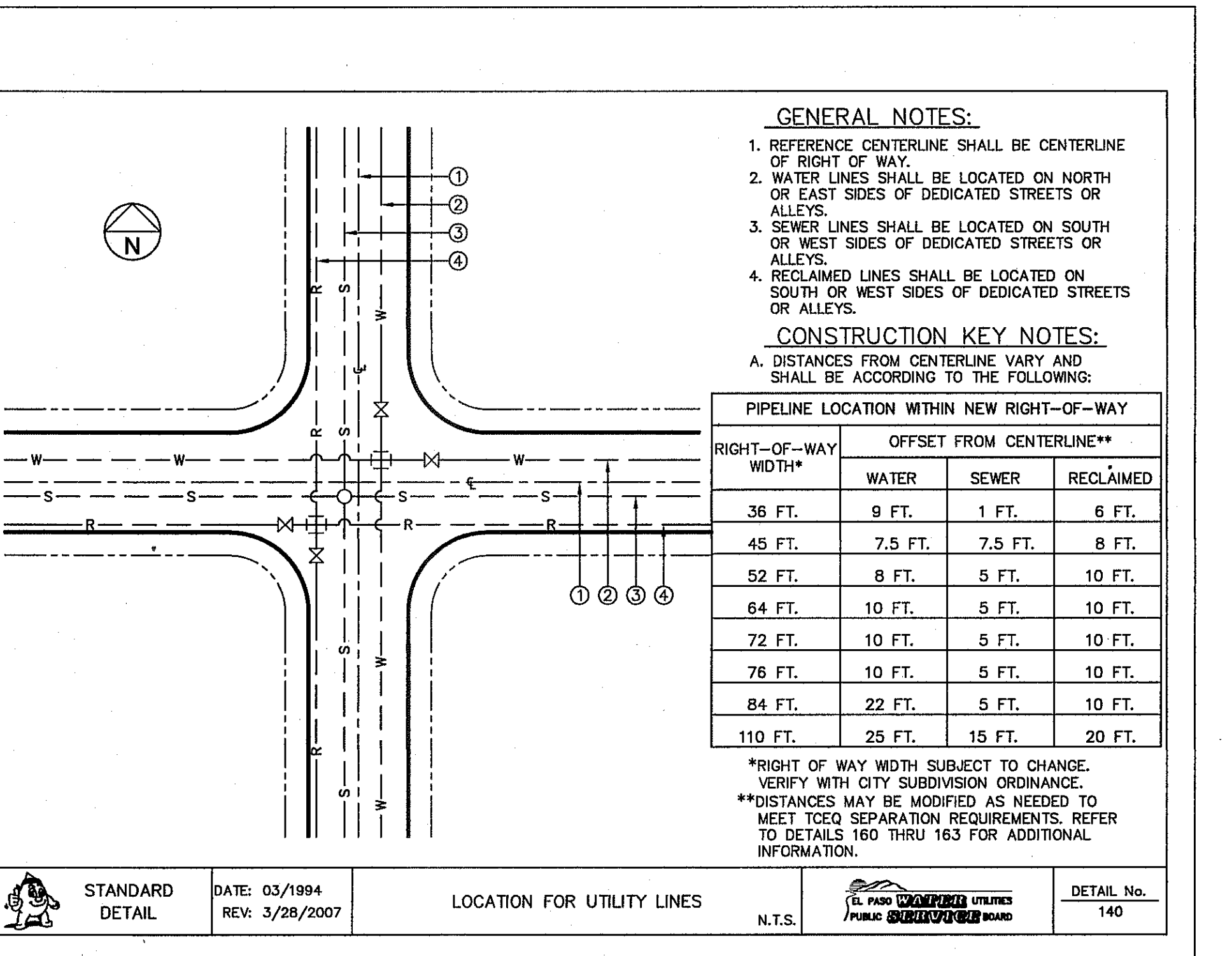
3 PAVEMENT REPAIR DETAIL
SCALE: N.T.S.



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



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



6 STANDARD LOCATION FOR EXTENSIONS DETAIL
SCALE: N.T.S.

REFERENCES - BENCHMARKS
FOUND N.C.S. SURVEY MARKER STAMPED "CHINO 1890"
ELEVATION: 3925.93 (CITY OF EL PASO VERTICAL DATUM SHOWN)
3946.11 (NAVD 88 DATUM)
3946.11 (NAVD 88 DATUM)
TO THE PROJECT BENCHMARK IS NS3709.09", 4.008.93 FEET FROM A 1/2" INCH REBAR FOUND FOR THE NORTHWEST CORNER OF TRACT 11, NELLE D. MUNDY SURVEY No. 239

DESERT SPRINGS UNIT FOUR
SUBDIVISION IMPROVEMENTS

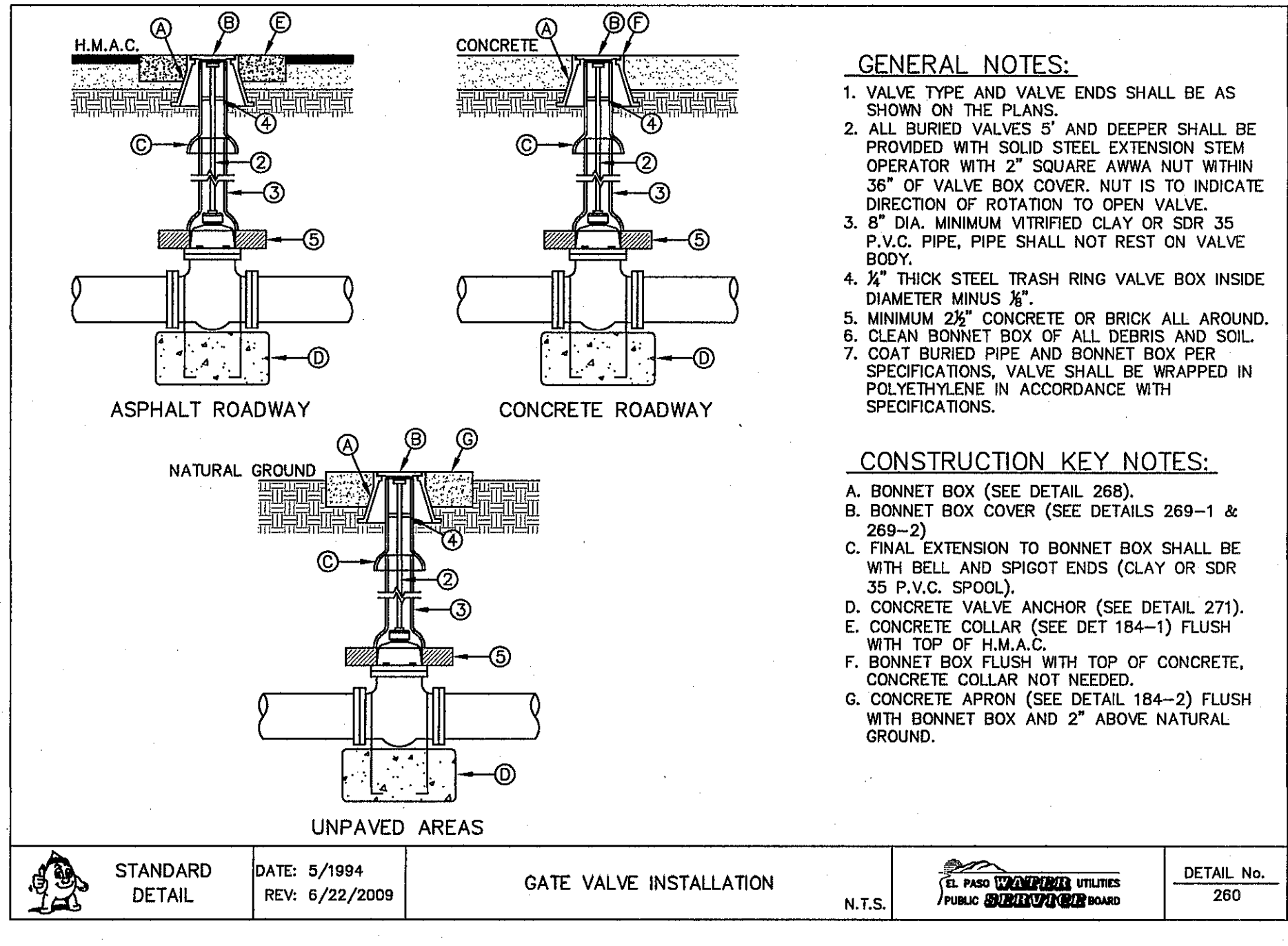
ENGINEER'S SEAL
101114
4712 Woodrow Bann, Ste. F, El Paso, TX 79924
Office: 915.544.5232 Fax: 915.544.5239 www.osaeng.com

SCALE: N/A
Horizontal: N/A
Vertical: N/A
Contour Interval: N/A
DATE: DECEMBER 2014
DESIGN BY: A.H.
DRAWN BY: J.H.
CHKD. BY: J.L.A.
APPVD. BY: J.L.A.
JOB No. 2060-028-LD

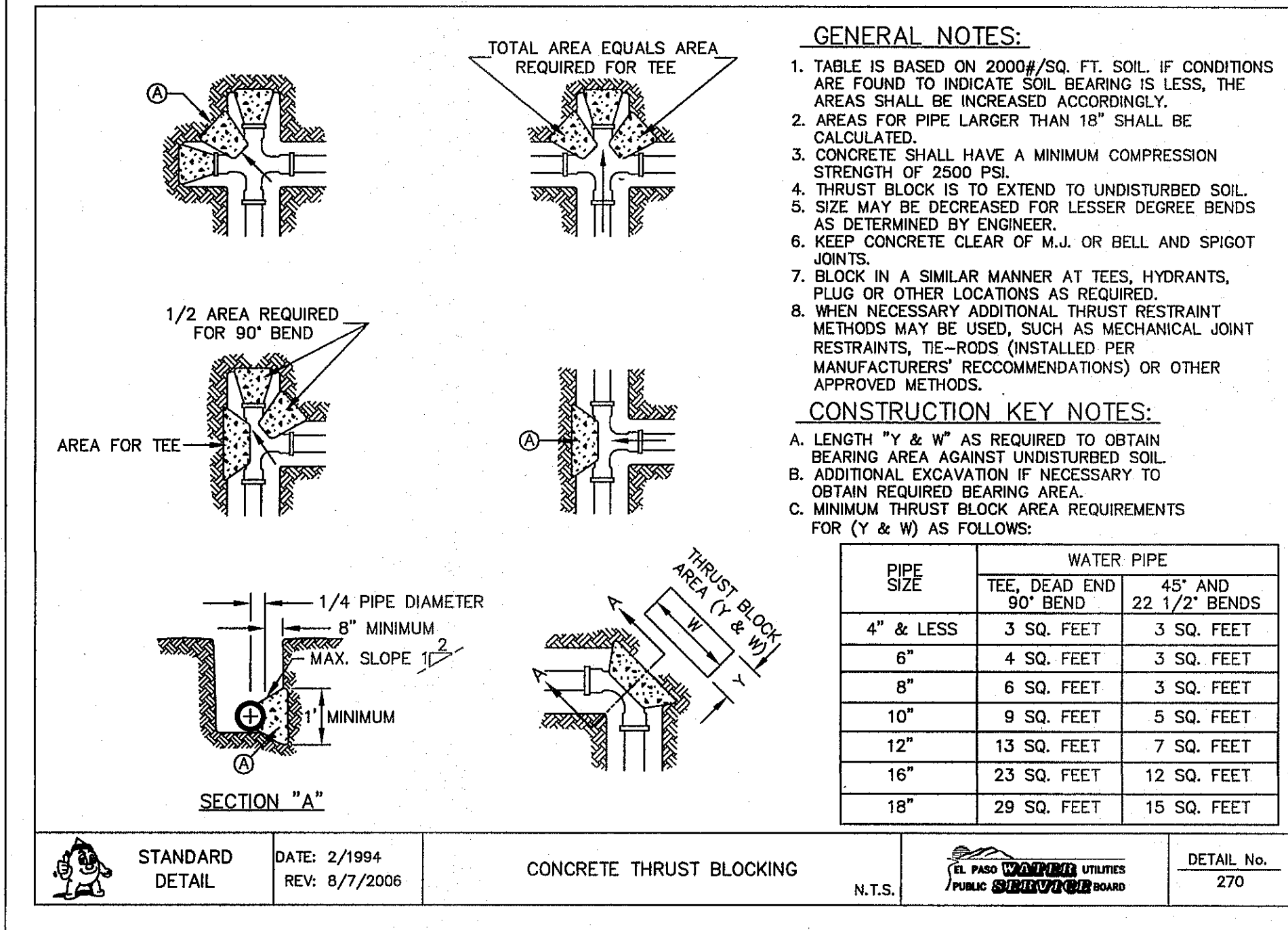
SHEET TITLE
WATER DETAILS
(SHEET 2 OF 4)
SHEET NO.
C16.2

Final Approval

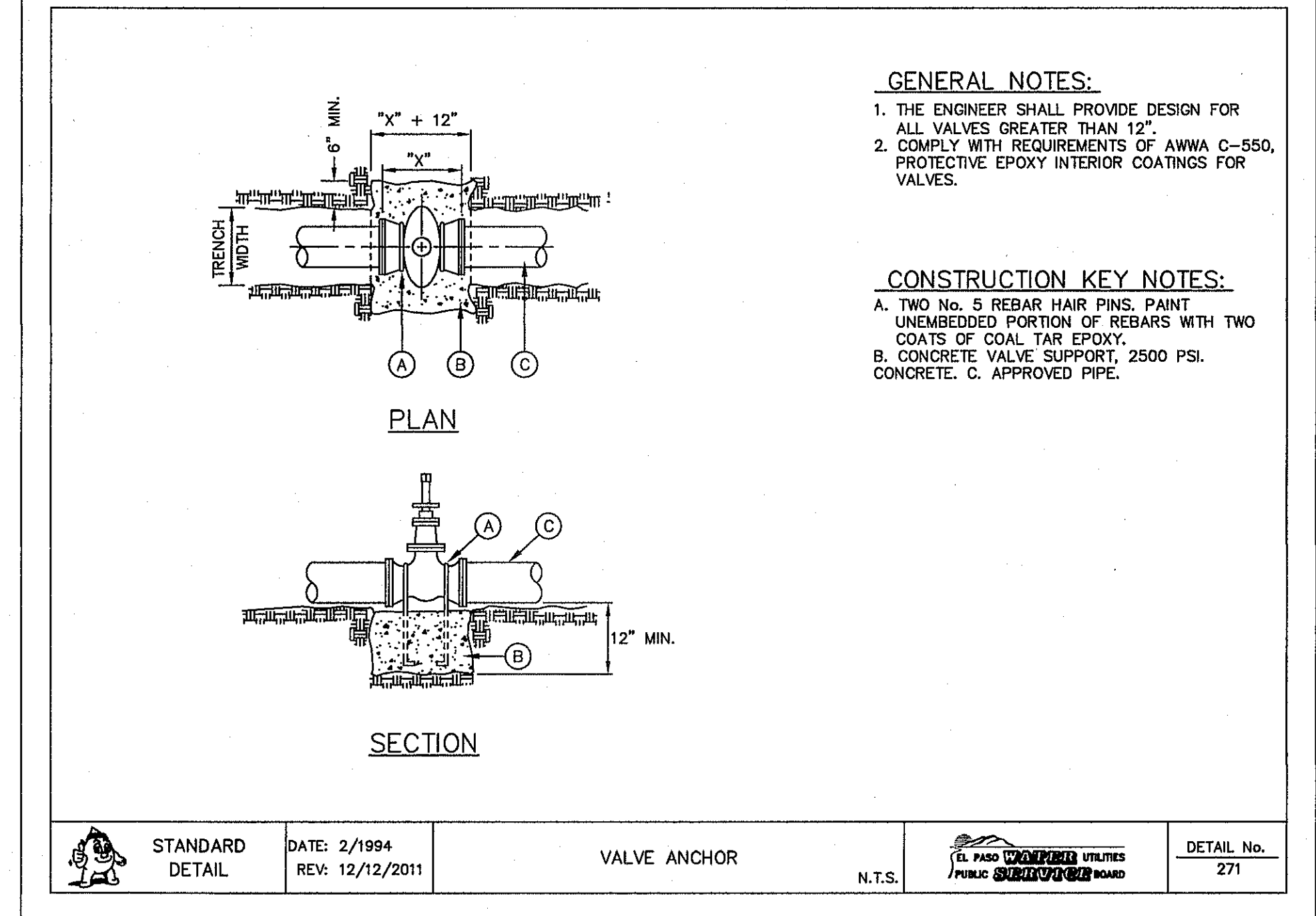
S:\2060\2060-013-LD\DWG\Construction Drawings\Improvement Plans\Unit A_2060-013-LD_C16_water set_ALL.dwg, Model, 12/17/2014 2:33:53 PM



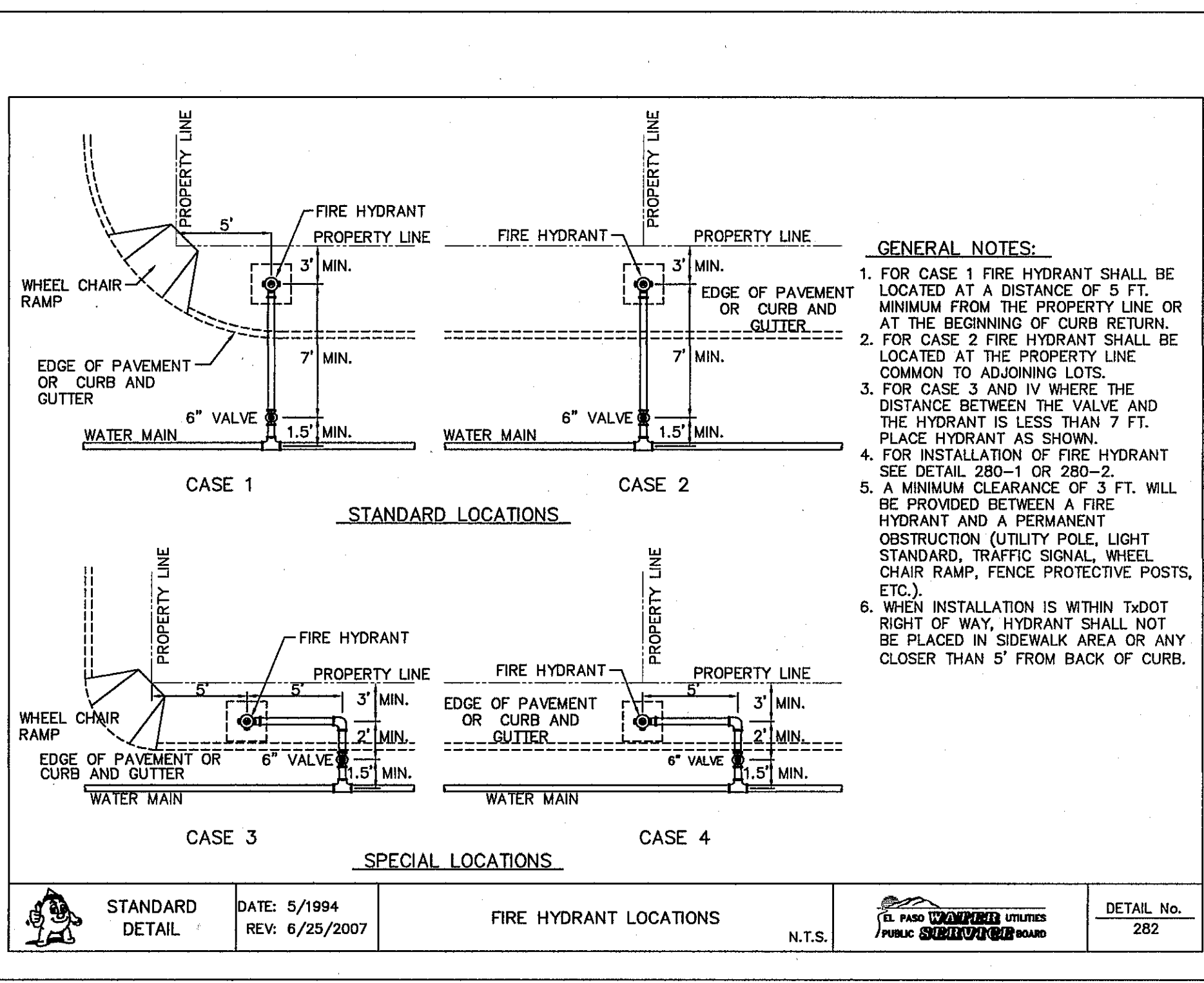
1 GATE VALVE INSTALLATION SCALE: N.T.S.



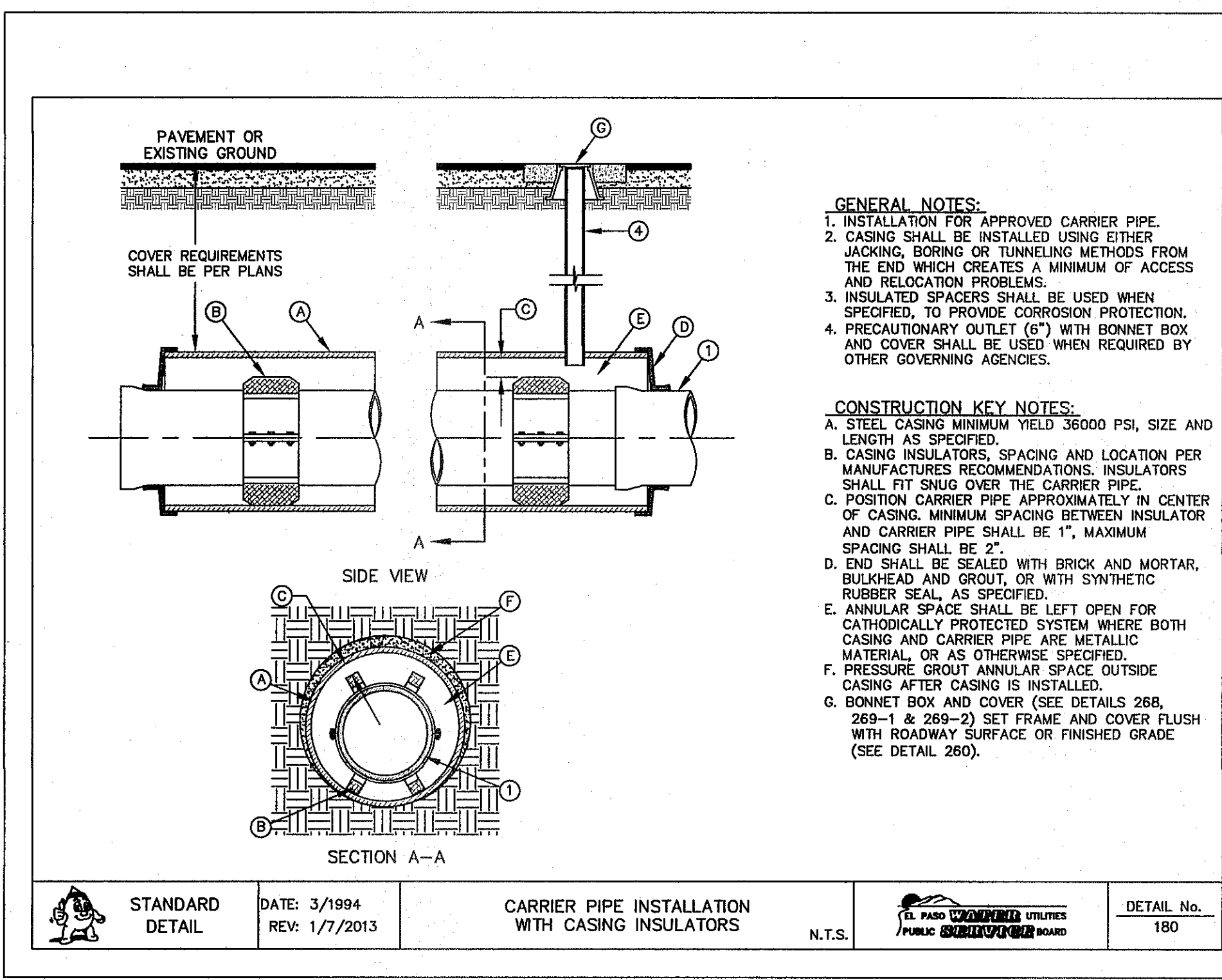
2 THRUST BLOCKING SCALE: N.T.S.



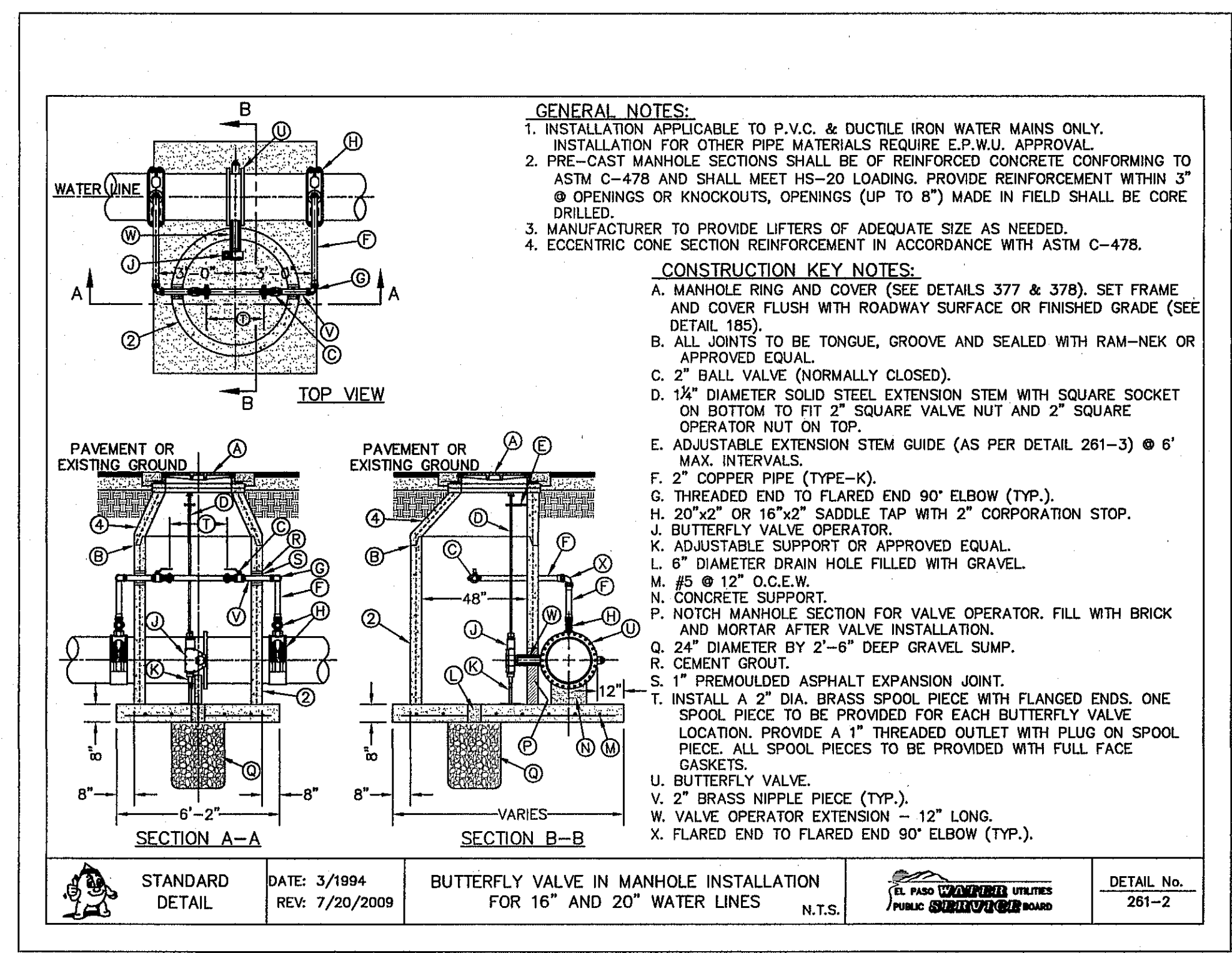
3 VALVE ANCHOR SCALE: N.T.S.



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



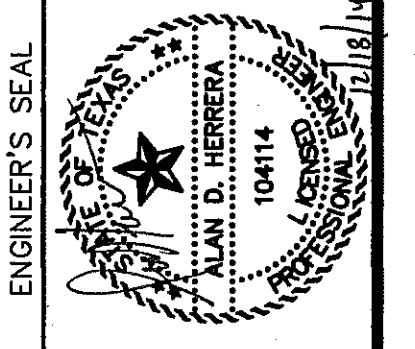
5 CARRIER PIPE INSTALLATION WITH CASING INSULATORS SCALE: N.T.S.



6 BUTTERFLY VALVE IN MANHOLE INSTALLATION FOR 16" AND 20" WATER LINES SCALE: N.T.S.

REFERENCES - BENCHMARKS
 FOUND N.G.S. SURVEY MARKER STAMPED "CHAND 1980"
 ELEVATION: 3635.63 (CITY OF EL PASO VERTICAL DATUM)
 3635.63 (CITY OF EL PASO VERTICAL DATUM)
 3635.63 (CITY OF EL PASO VERTICAL DATUM)
 TIE TO THE PROJECT BENCHMARK IS N57°09'09"W, 4,008.83
 3845.78 (NAD 83 DATUM)
 3845.78 (NAD 83 DATUM)
 TO THE CORNER OF THE NORTHWEST CORNER OF TRACT 11, BELLE D. ANDREY SURVEY, AC. 2331
 DATE: _____ REVISIONS: _____ BY: _____

CS&A
 engineers • architects • planners
 TEXAS REGISTERED ENGINEERING FIRM F-454
 4712 Woodrow Wilson, Ste. F, El Paso, TX 79924
 Office: 915.544.6222 Fax: 915.544.5233 www.csandamp.com



SCALE: N/A
 Horizontal: N/A
 Vertical: N/A
 Contour Interval: N/A
 DATE: DECEMBER 2014
 DESIGN BY: A.H.
 DRAWN BY: J.H.
 CHKD. BY: J.L.A.
 APPD. BY: J.L.A.
 JOB No. 2060-028-1D

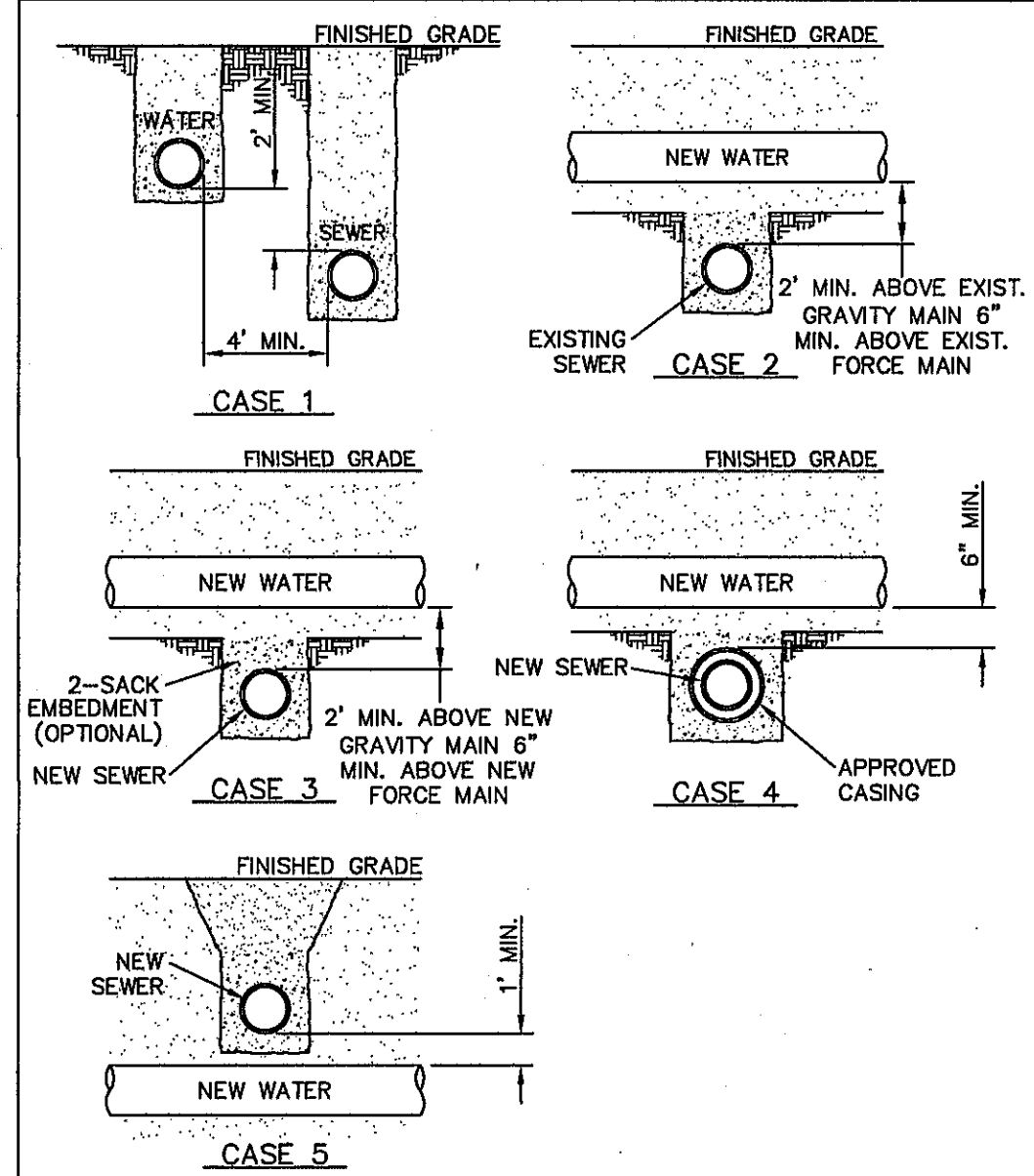
PROJECT TITLE
DESERT SPRINGS UNIT FOUR
SUBDIVISION IMPROVEMENTS

SHEET TITLE
WATER DETAILS
 (SHEET 3 OF 4)
 SHEET NO.

C16.3



S:\2050\2050-013-LD\DWGS\Construction Drawings\Improvement Plans\Unit A\2050-013-LD C16 water det. ALL.dwg, Model, 12/17/2014 2:34:13 PM



GENERAL NOTES:

- NEW OR EXISTING POTABLE WATER AND SANITARY SEWER MAINS.
- SEPARATION DISTANCES SHALL FOLLOW TEXAS SEWER OR ENVIRONMENTAL QUALITY STANDARD REQUIREMENTS.

CONSTRUCTION KEY NOTES:

WHEN STANDARD NINE (9) FOOT SEPARATION DISTANCE CANNOT BE ACHIEVED, SEPARATION SHALL BE DETERMINED ACCORDING TO THE FOLLOWING CONDITIONS:

CASE 1. GRAVITY SANITARY SEWER MAIN OR FORCE MAIN PARALLEL TO POTABLE WATER MAIN (PER TCEQ §290.44(c)(4)(B)(i) AND §290.44(c)(4)(B)(ii)).

- LOCATION: WATER ABOVE SEWER OR FORCE MAIN.
- SEWER MATERIALS: EXISTING GRAVITY MAIN (PVC 50/35 OR CLAY) OR FORCE MAIN TO REMAIN IF NOT LEAKING-IF LEAKING, MUST BE REPLACED WITH PVC (150 PSI) OR DI. NEW GRAVITY MAIN OR FORCE MAIN REQUIRES PVC (150 PSI) OR DI.
- SEPARATE TRENCHES SHALL BE USED.

CASE 2. NEW POTABLE WATER MAIN CROSSING EXISTING GRAVITY SANITARY SEWER MAIN OR EXISTING FORCE MAIN (PER TCEQ §290.44(c)(4)(B)(i) AND §290.44(c)(4)(B)(ii)).

- LOCATION: WATER ABOVE SEWER OR FORCE MAIN.
- SEWER MATERIALS: EXISTING GRAVITY MAIN (PVC 50/35 OR CLAY) OR FORCE MAIN TO REMAIN IF NOT LEAKING-IF LEAKING, REPLACE ONE PIPE SEGMENT PER CASE 3 REQUIREMENTS.
- CENTER ONE SEGMENT OF WATER PIPE OVER SEWER MAIN OR FORCE MAIN.
- MINIMUM PIPE SEGMENT LENGTH FOR WATER PIPE SHALL BE 18 FEET LONG.

CASE 3. NEW POTABLE WATER MAIN CROSSING NEW GRAVITY SANITARY SEWER MAIN OR NEW FORCE MAIN (PER TCEQ §290.44(c)(4)(B)(i), §290.44(c)(4)(B)(ii) AND §290.44(c)(4)(B)(iii)).

- LOCATION: WATER ABOVE SEWER OR FORCE MAIN.
- SEWER MATERIALS: NEW GRAVITY MAIN - PVC (150 PSI) OR DI REQUIRED. CENTER UNDER WATER MAIN. NEW FORCE MAIN - PVC (150PSI) OR DI REQUIRED. FORCE MAIN TO BE EMBEDDED IN CEMENT STABILIZED BACKFILL THE TOTAL LENGTH OF ONE PIPE PLUS 12" BEYOND THE JOINT AT EACH END.
- CENTER ONE SEGMENT OF WATER PIPE OVER SEWER PIPE OR FORCE MAIN.
- MINIMUM PIPE SEGMENT LENGTH FOR WATER AND SEWER SHALL BE 18 FEET LONG.
- FOR NEW GRAVITY SEWER ONLY, IN LIEU OF PVC (150PSI) OR DI, INSTALL ONE PIPE SEGMENT OF SDR35 SEWER MAIN MUST BE EMBEDDED IN CEMENT STABILIZED BACKFILL THE TOTAL LENGTH OF ONE PIPE PLUS 12" BEYOND THE JOINT AT EACH END.

CASE 4. NEW POTABLE WATER MAIN CROSSING NEW GRAVITY SANITARY SEWER MAIN OR NEW FORCE MAIN (PER TCEQ §290.44(c)(4)(B)(i), §290.44(c)(4)(B)(ii) AND §290.44(c)(4)(B)(iii)).

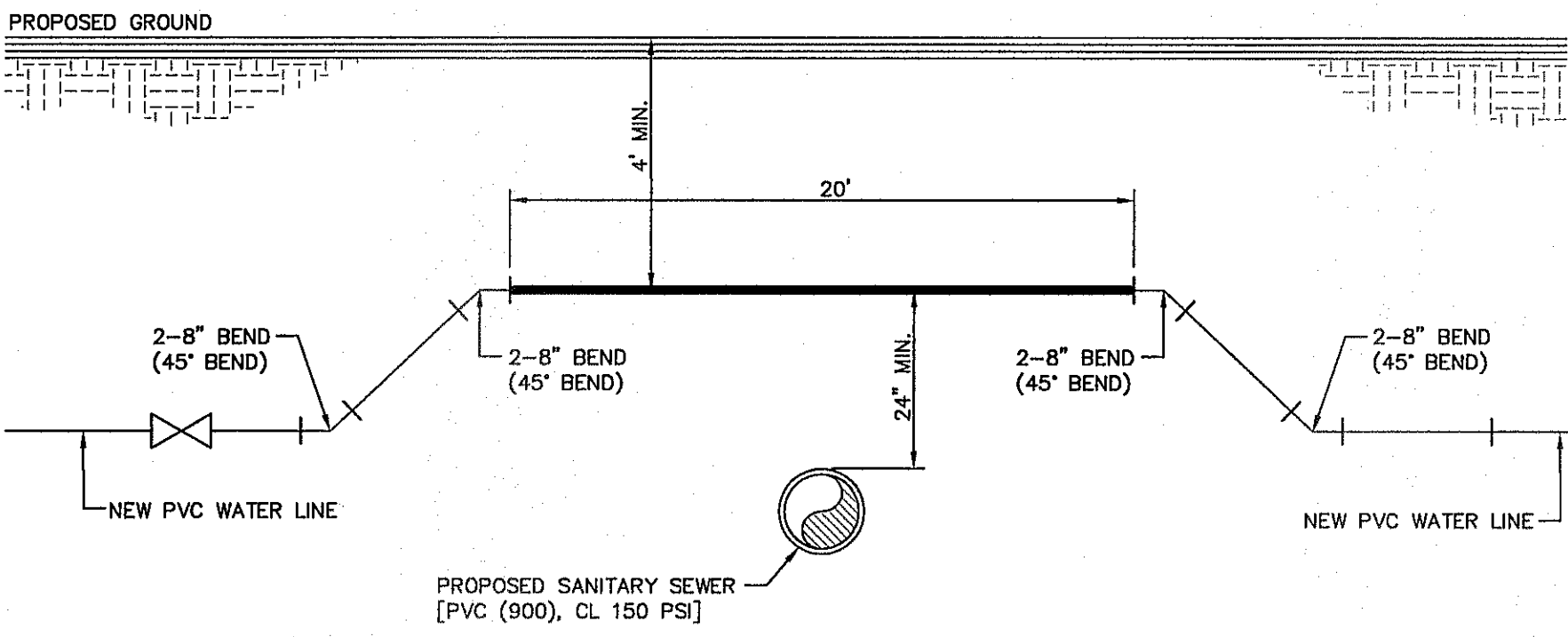
- LOCATION: WATER ABOVE SEWER OR FORCE MAIN.
- SEWER MATERIALS: NEW GRAVITY MAIN - SDR35 ACCEPTABLE. NEW FORCE MAIN - PVC (150PSI) OR DI REQUIRED. IN ADDITION, SEWER MAIN OR FORCE MAIN MUST BE ENCASED IN DI OR STEEL, TWO NOMINAL SIZES LARGER THAN MAIN AND AT LEAST 18 FEET LONG.
- CENTER ONE SEGMENT OF WATER MAIN.

CASE 5. NEW GRAVITY SANITARY SEWER MAIN OR NEW FORCE MAIN CROSSING NEW POTABLE WATER MAIN (PER TCEQ §290.44(c)(4)(B)(i), §290.44(c)(4)(B)(ii) AND §290.44(c)(4)(B)(iii)).

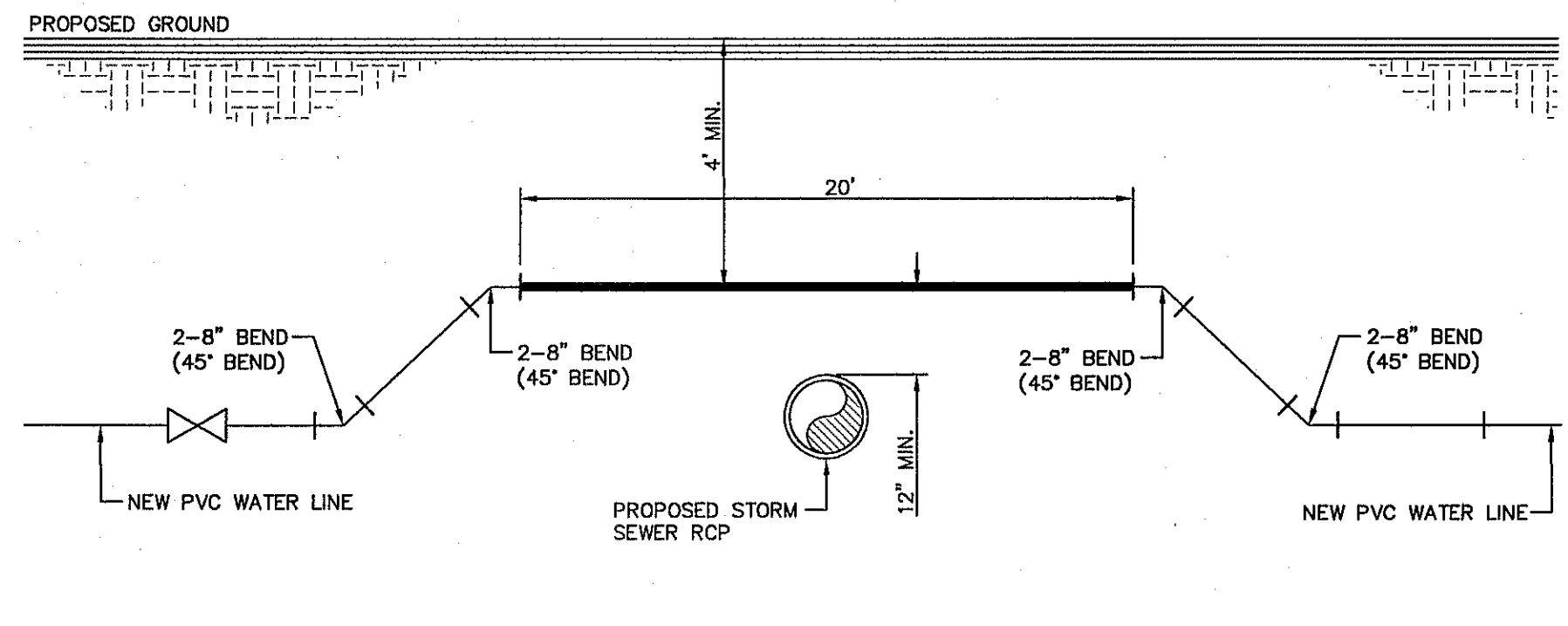
- LOCATION: SEWER OR FORCE MAIN ABOVE WATER.
- NEW GRAVITY MAIN OR FORCE MAIN REQUIRES ONE PIPE SEGMENT OF PVC (150 PSI) OR DI. IN ADDITION, WATER MUST BE DI OR STEEL OR ENCASED IN DI OR STEEL, TWO NOMINAL SIZES LARGER THAN MAIN AND AT LEAST 18 FEET LONG.
- CENTER ONE SEGMENT OF SEWER PIPE ON WATER MAIN.

STANDARD DETAIL	DATE: 8/3/2006 REV: 8/21/2007	SEPARATION DISTANCE SANITARY SEWER AND POTABLE WATER (SPECIAL CONDITIONS) N.T.S.	EL PASO UTILITIES PUBLIC UTILITIES BOARD	DETAIL NO. 161
-----------------	----------------------------------	---	---	-------------------

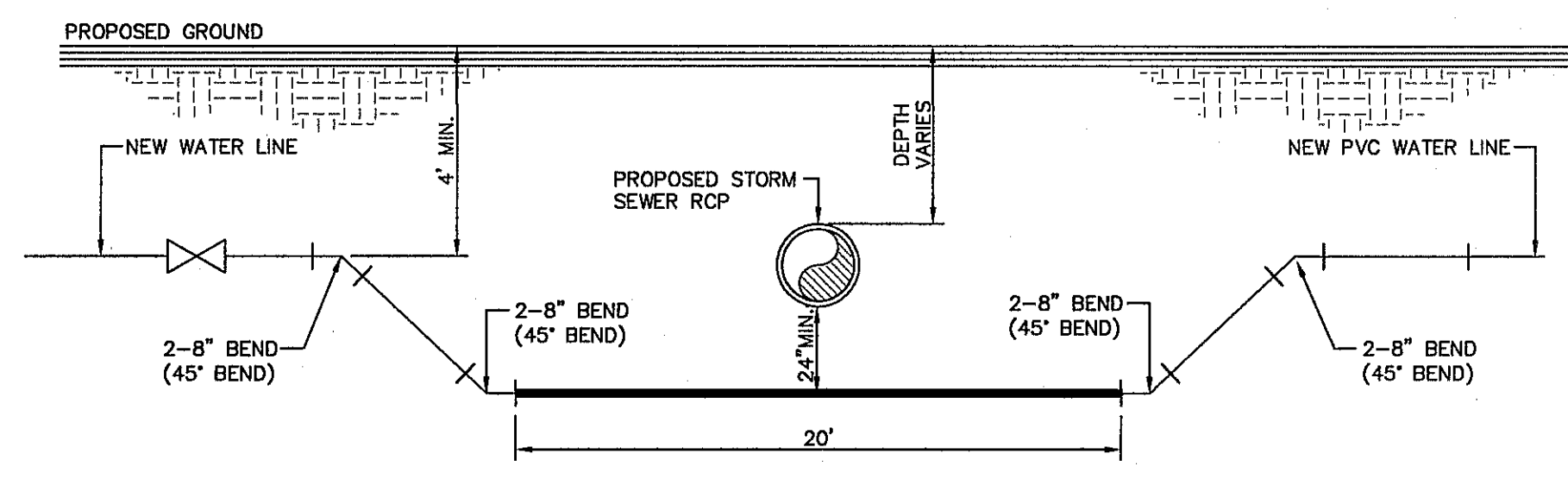
1 SEPARATION DISTANCE
POTABLE WATER AND SANITARY SEWER
(SPECIAL CONDITIONS) SCALE: N.T.S.



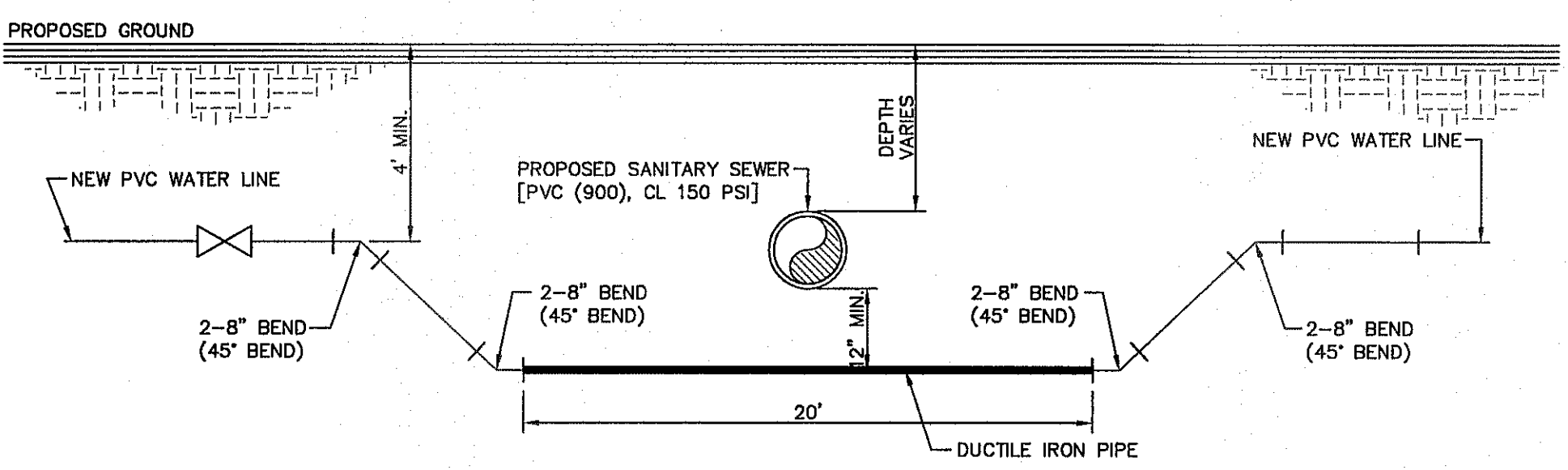
2 WATER LINE OVER SANITARY SEWER CROSSING DETAIL
SCALE: N.T.S.



3 WATER LINE OVER STORM SEWER CROSSING DETAIL
SCALE: N.T.S.



4 WATER LINE UNDER STORM SEWER CROSSING DETAIL
SCALE: N.T.S.

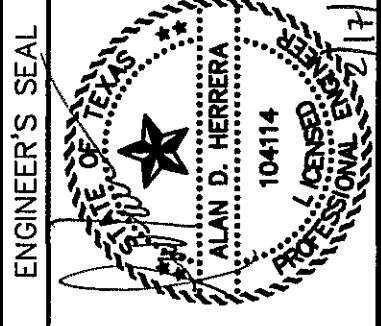


5 WATER LINE UNDER SANITARY SEWER CROSSING DETAIL
SCALE: N.T.S.

REFERENCES - BENCHMARKS
FOUND N.G.S. SURVEY MARKER STAMPED "CHNO 1987"
ELEVATION: 3935.83 (CITY OF EL PASO VERTICAL DATUM
SHOW) (NOV. 88 DATUM)
3945.78 (NOV. 28 DATUM)
TIE TO THE PROJECT BENCHMARK IS N37°09'08" W, 4.008.83
FEET FROM A 1/2" INCH REBAR FOUND FOR THE NORTHWEST
CORNER OF TRACT 11, WELLS D. JORDY SURVEY NO. 239

DATE _____ BY _____
REVISIONS _____

CSA
engineers • architects • planners
TEXAS REGISTERED ENGINEERING FIRM F-4664
4712 Woodrow Babin, Ste. F, El Paso, TX 79924
Office: 915.544.5232 Fax: 915.544.5233 www.csaonline.com



SCALE: N/A
Horizontal: N/A
Vertical: N/A
Contour Interval: N/A
DATE: DECEMBER 2014
DESIGN BY: A.H.
DRAWN BY: J.H.
CHKD. BY: J.L.A.
APPVD. BY: J.L.A.
JOB No. 2060-028-ID

PROJECT TITLE
**DESERT SPRINGS UNIT FOUR
SUBDIVISION IMPROVEMENTS**

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

C16.4



C:\Users\jordan\OneDrive\Documents\Projects\Desert Springs\Subdivision\Water\4-2014-01-01\DWG\Water Details\161.dwg, 2/17/2016, 8:12:05 AM

INDEX

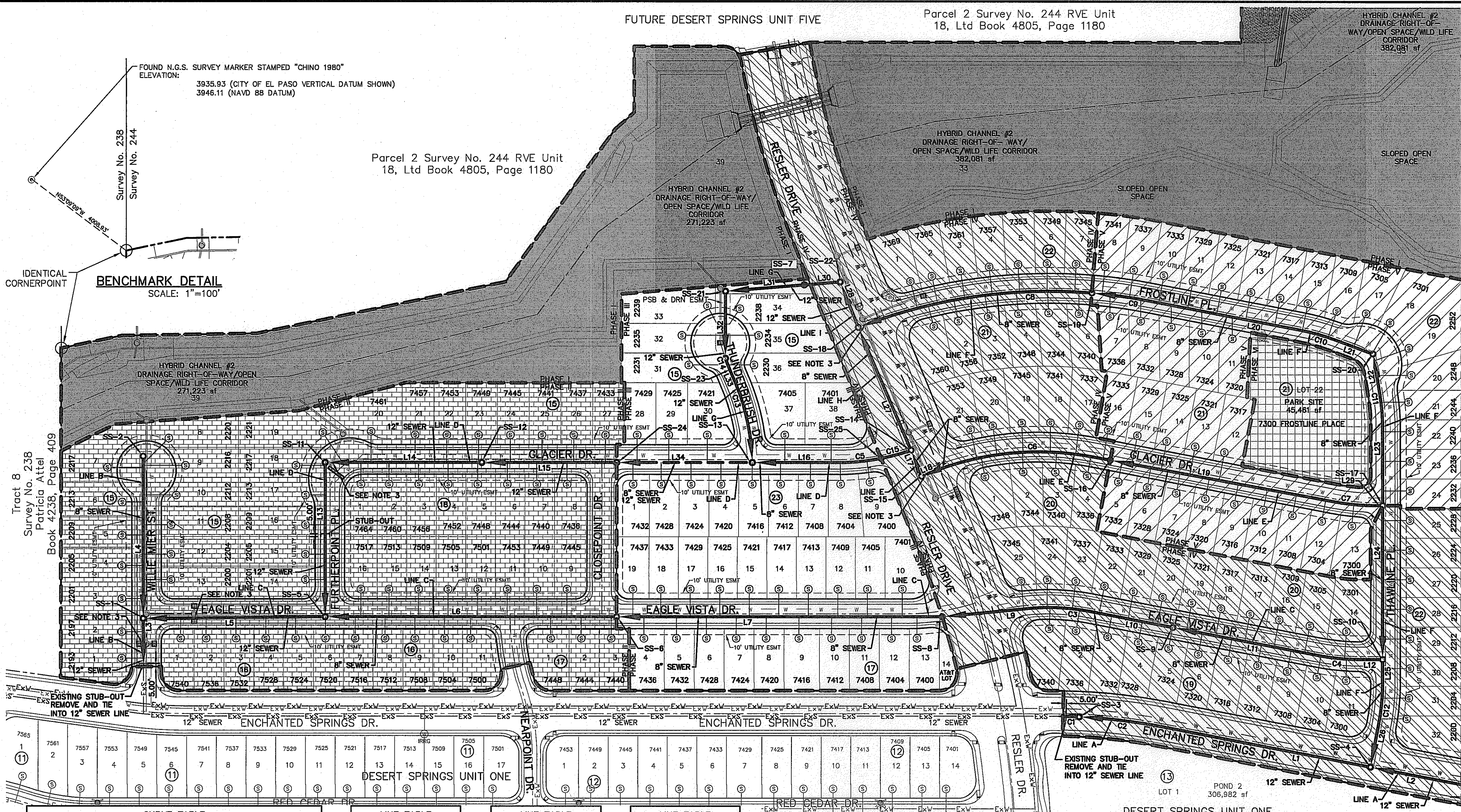
Table with 2 columns: SHEET NO. and DESCRIPTION. Lists sheets C17.1 through C19.3 and their corresponding descriptions.

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 SANITARY SEWER PIPES SHALL BE PVC, SDR 35, (D 3034), UNLESS OTHERWISE SHOWN, AS REQUIRED BY THE EPWJ/PSB RULES AND REGULATIONS AND DESIGN STANDARDS.
3. REFERENCE SANITARY SEWER DETAILS FOR SEWER CROSSINGS AT STORM SEWER.

LEGEND

Table with 2 columns: SYMBOL and DESCRIPTION. Lists various symbols for sewer lines, manholes, and service connections.



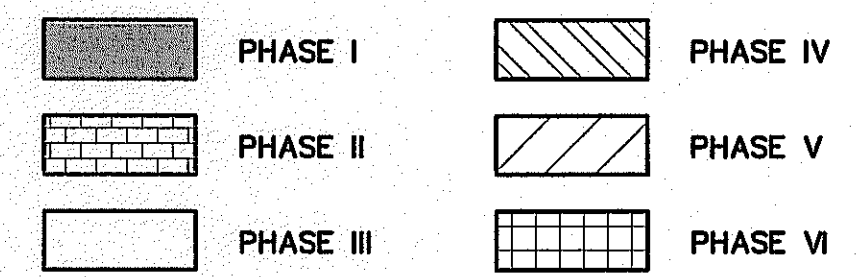
CURVE TABLE with columns: CURVE, RADIUS, LENGTH, TANGENT, CHORD, BEARING, DELTA. Lists curve data for 15 different curves.

LINE TABLE with columns: LINE, BEARING, LENGTH. Lists line data for 12 different lines.

LINE TABLE with columns: LINE, BEARING, LENGTH. Lists line data for 12 different lines.

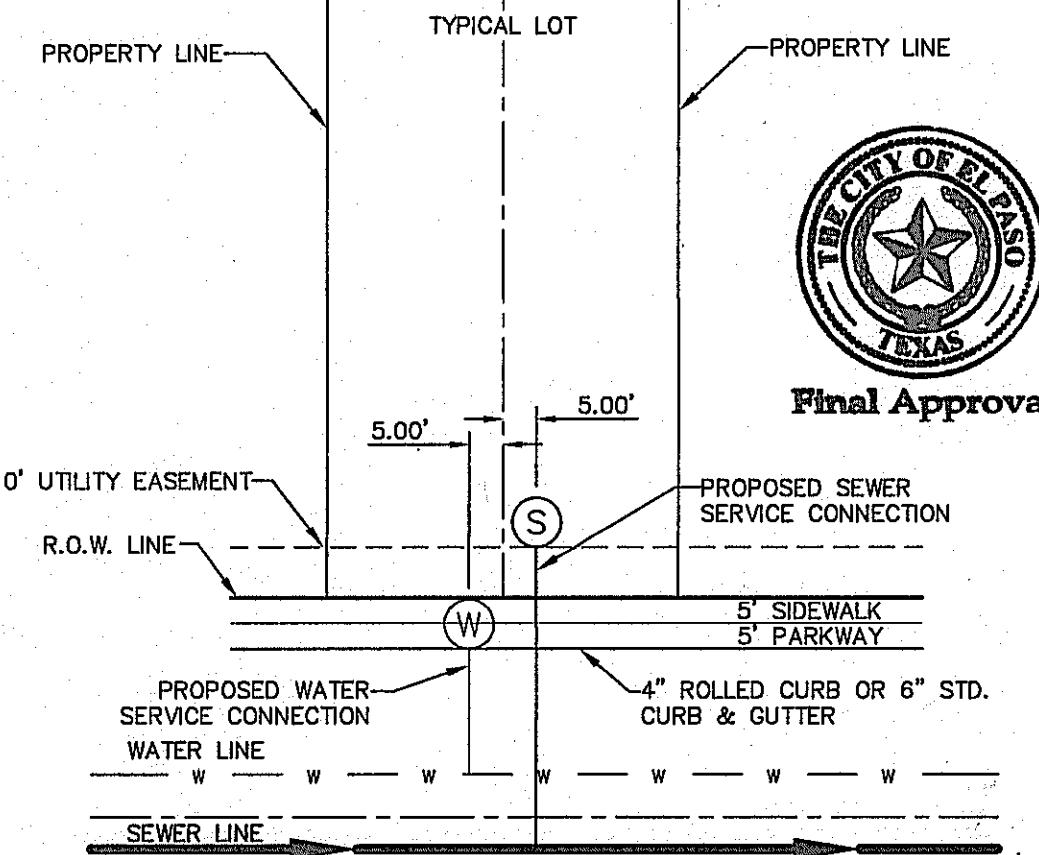
LINE TABLE with columns: LINE, BEARING, LENGTH. Lists line data for 12 different lines.

WASTEWATER QUANTITIES table with columns: ITEM NO., DESCRIPTION, QUANTITY, UNIT. Lists 10 items of wastewater service connections.



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

SANITARY SEWER INDEX MAP



GENERAL NOTES

- 1. 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.
2. 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.
3. 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 THE CITY OF EL PASO - DEVELOPMENT SERVICES PRIOR TO CONSTRUCTION.
4. TRENCH SAFETY REQUIREMENTS SHALL COMPLY WITH CURRENT OSHA REGULATIONS.
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 MANHOLE, SERVICE CONNECTION AND/OR STUB-OUT, WITH RESPECT TO THE APPROPRIATE PROJECT CONTROL POINT.
6. THE EL PASO WATER UTILITIES AND THE 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 AND ALL OTHER MISCELLANEOUS STRUCTURES DAMAGE OR REMOVED BY CONSTRUCTION ACTIVITIES SHALL BE RESTORED TO ORIGINAL OR BETTER THAN ORIGINAL CONDITION.
8. CONSTRUCTION OF THE PUBLIC WATER AND SEWER SYSTEM INCLUDING MATERIALS AND TESTING SHALL CONFIRM TO EPWJ-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
ENGINEER: CEA GROUP CASTNER CENTER @ TRANSMOUNTAIN 4712 WOODROW BEAN, STE. F EL PASO, TX 79924 (915) 544-5232 MR. JORGE L. AZCARATE, P.E.
FIBER OPTICS: U.S. SPRINT 151 N. BOONE ST. EL PASO, TX 79905 (915) 534-7910 MR. RICK DERAGISCH
FIBER OPTICS: MCI TELECOMMUNICATIONS CORPS. 4045 DONIPHAN PARK CIRCLE EL PASO, TX 79922 (915) 542-2770 EXT. 201 MR. DANIEL HERNANDEZ

WATER & SEWER: EL PASO WATER UTILITIES 1184 HAWKINS BOULEVARD EL PASO, TX 79961 (915) 594-5530 MR. FELIPE LOPEZ, JR., P.E.
ELECTRIC: EL PASO ELECTRIC CO. 501 W. SAN ANTONIO ST. EL PASO, TX 79902 (915) 543-2076 MR. FRANK VIGEL (DISTRIBUTION)
EL PASO STREETS: CITY OF EL PASO DEPARTMENT OF TRANSPORTATION 7969 SAN PAULLO DRIVE EL PASO, TX 79907 (915) 621-6750 MR. DARLYN W. COLE
CABLE TELEVISION: TALE WARNER COMMUNICATIONS 7010 AIRPORT ROAD EL PASO, TX 79906 (915) 772-1123 MR. JOHN MARES

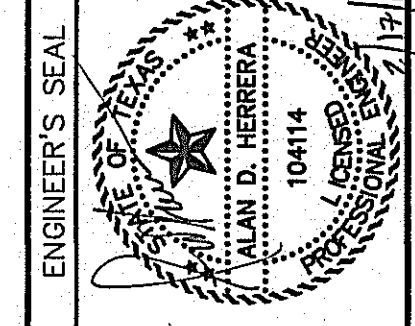
TELEPHONE: SBC 11200 PELICANO EL PASO, TX 79935 (915) 595-5151 MR. TIM BROWN
FIBER OPTICS: AT&T P.O. BOX 1650 EL PASO, TX 79949 (800) 852-3786 MS. DARLENE NORIS
RESIDENTIAL GAS LINES: TEXAS GAS SERVICE 4700 POLLARD ST. EL PASO, TX 79930 (915) 680-7218

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

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

REFERENCES - BENCHMARKS: FOUND N.G.S. SURVEY MARKER STAMPED 'CHINO 1980' ELEVATION: 3935.93 (CITY OF EL PASO VERTICAL DATUM) 3946.11 (NAVD 88 DATUM)
DATE: REVISIONS: BY

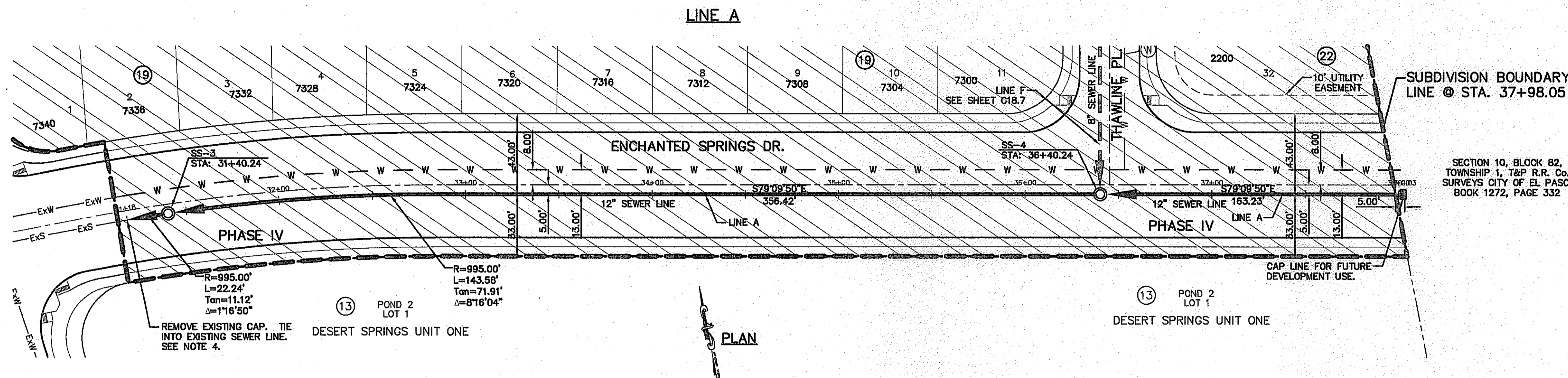
CEA GROUP engineers • architects • planners TEXAS REGISTERED ENGINEERING FIRM #464 4712 Woodrow Bean, Ste. F El Paso, TX 79924 Office: 915.544.5232 Fax: 915.544.5233 www.ceagroup.com



SCALE: 1"=100' Horizontal: 1"=100' Vertical: 1"=10' Contour Interval: N/A
DATE: DECEMBER 2014
DESIGN BY: A.H.
DRAWN BY: J.H.
CHKD. BY: J.L.A.
APP'D. BY: J.L.A.
JOB NO. 2080-028-1D

PROJECT TITLE: DESERT SPRINGS UNIT FOUR SUBDIVISION IMPROVEMENTS

SHEET TITLE: SANITARY SEWER INDEX SHEET NO. C17.1



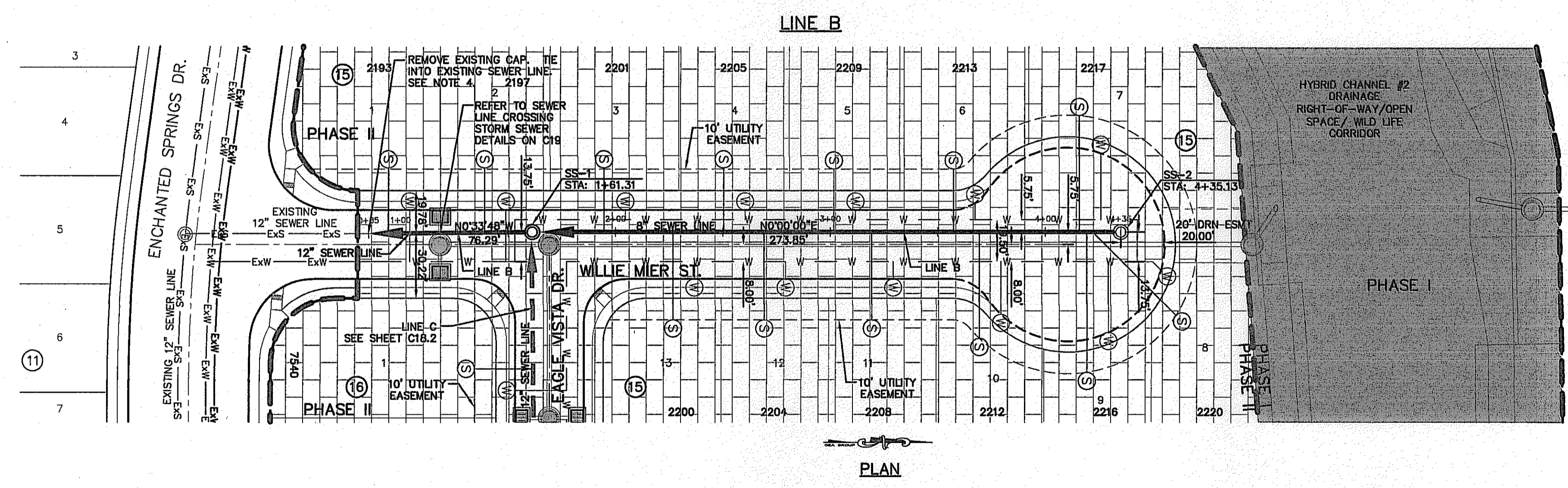
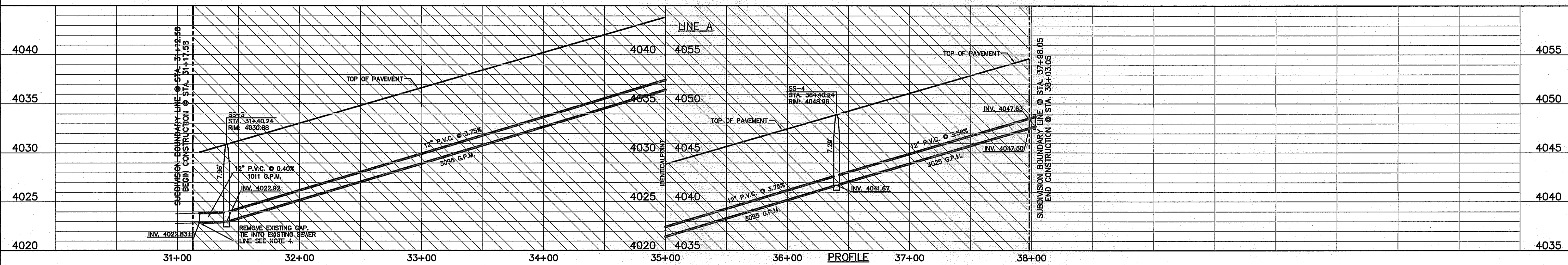
PHASE	UTILITY LOCATOR SERVICES
PHASE I	EL PASO ELECTRIC COMPANY (915) 543-5720
PHASE II	EL PASO ENERGY CORPORATION (915) 496-5244
PHASE III	EL PASO WATER UTILITIES (915) 594-5500
PHASE IV	MCI SURVEILLANCE (800) MCI-WORK
PHASE V	TIME WARNER COMMUNICATIONS (915) 772-1123
PHASE VI	TEXAS GAS SERVICE (915) 680-7200
	ONEOK PARTNERS (915) 595-6919
	AT&T (800) 852-3788
	U.S. SPRINT TELECOMM (800) 521-0579
	CITY OF EL PASO DEPARTMENT OF TRANSPORTATION (915) 621-6750
	(AFTER HOURS) (915) 240-3220

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

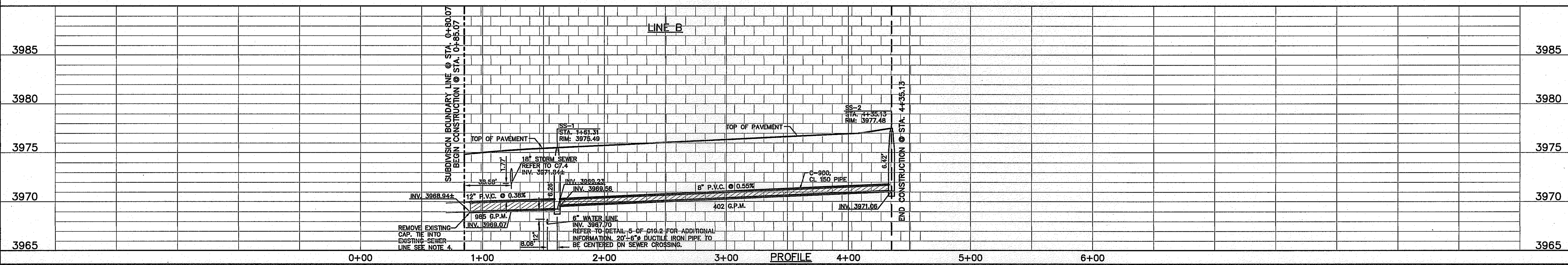
- LEGEND:**
- NEW DOUBLE PIGGY SANITARY SEWER LINES
 - NEW SANITARY SEWER LINE
 - NEW SANITARY SEWER LINE ON OTHER SHEETS
 - NEW WATER LINE
 - NEW STORM SEWER
 - C-900, CLASS 150 PIPE SEGMENT
 - NEW SEWER SERVICE
 - NEW WATER SERVICE

- NOTES:**
- ALL LOTS SHALL BE PROVIDED WITH ONE SERVICE CONNECTION TO BE INSTALLED AT THE LOCATION AS SHOWN ON THE SERVICE LOCATION DETAIL.
 - DEVELOPER SHALL ENSURE RESIDENTIAL SEWER SERVICE LINES HAVE BEEN EXTENDED TO THE PROPERTY LINE.
 - BUILDER SHALL ENSURE SIDEWALKS ARE NOT CONSTRUCTED UNTIL THE RESIDENTIAL SEWER SERVICE LINES HAVE BEEN EXTENDED TEN (10') PLUS FEET INTO PRIVATE PROPERTY FROM PROPERTY LINE.
 - CONTRACTOR IS TO POT HOLE LINES TO DETERMINE EXACT LOCATION AND DEPTH OF EXISTING SEWER LINES. THIS ALSO AFFECTS THE DIMENSION PROVIDED IN THE PLANS WHEN REFERENCING TO EXISTING CONDITIONS. THESE DIMENSIONS ARE APPROXIMATE AND TO BE FIELD VERIFIED.

SECTION 10, BLOCK 82, TOWNSHIP 1, T&P R.R. CO. SURVEYS CITY OF EL PASO, BOOK 1272, PAGE 332



PARCEL 2, SURVEY No. 244, RVE UNIT 18, LTD BOOK 4805, PAGE 1180



REFERENCES - BENCHMARKS
 FOUND N.G.S. SURVEY MARKER "CHINO 1980"
 ELEVATION: 3935.83 (CITY OF EL PASO VERTICAL DATUM SHOWN)
 (NOV. 88 DATUM)
 3945.78 (NOV. 28 DATUM)
 TIE TO THE PROJECT BENCHMARK IS N37°09'08"W, 4.008.83 FEET FROM A 1/2" INCH REBAR FOUND FOR THE NORTHWEST CORNER OF TRACT 11, WELLS D. BUDDY SURVEY NO. 259

ENGINEER'S SEAL
 ALAN D. HERRERA
 10414
 TEXAS REGISTERED ENGINEERING FIRM F-464
 4712 Woodrow Bann, Ste. F, El Paso, TX 79924
 Office: 915.544.5232 Fax: 915.544.6233 www.aepgroup.com

SCALE:
 Horizontal: 1"=40'
 Vertical: 1"=5'
 Contour Interval: 1V/4'

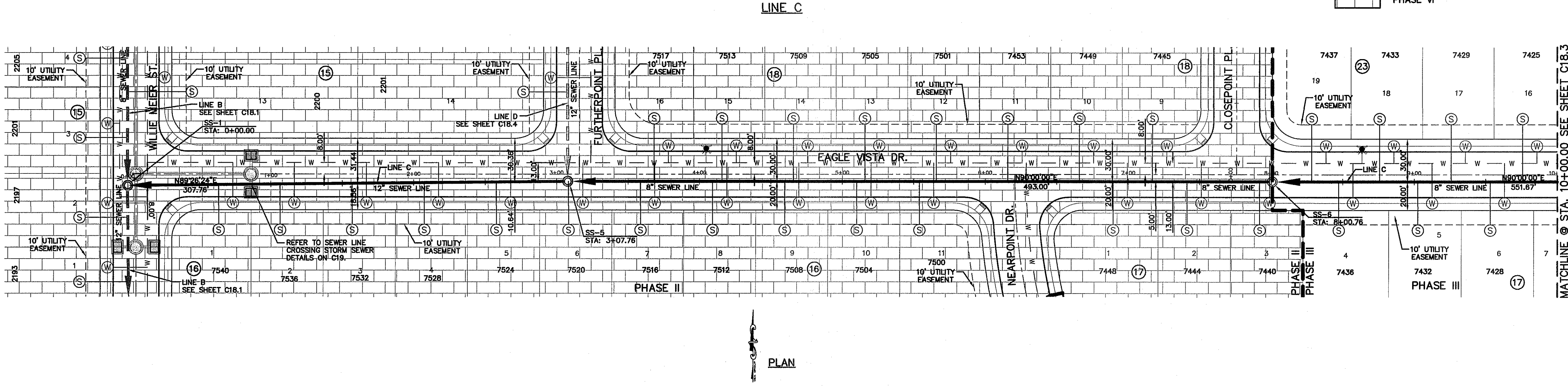
DATE: DECEMBER 2014
DESIGN BY: A.H.
DRAWN BY: J.H.
CHKD. BY: J.L.A.
APPVD. BY: J.L.A.
 JOB No. 2060-028-LD

PROJECT TITLE
 DESERT SPRINGS UNIT FOUR
 SUBDIVISION IMPROVEMENTS

SHEET TITLE
 SANITARY SEWER PLAN & PROFILE
 LINE "A" AND
 LINE "B"
 (SHEET 1 OF 8)
 SHEET NO.

C18.1

C:\Users\j2058-013-1\OneDrive\Construction Drawings\Improvements\Desert Springs\Subdivision\Sheet C18.1.dwg, 12/17/2015 8:55:05 AM
 A. B. 1982.dwg, C18.1 - 2/17/2015 8:55:05 AM
 A. B. 1982.dwg, C18.1 - 2/17/2015 8:55:05 AM



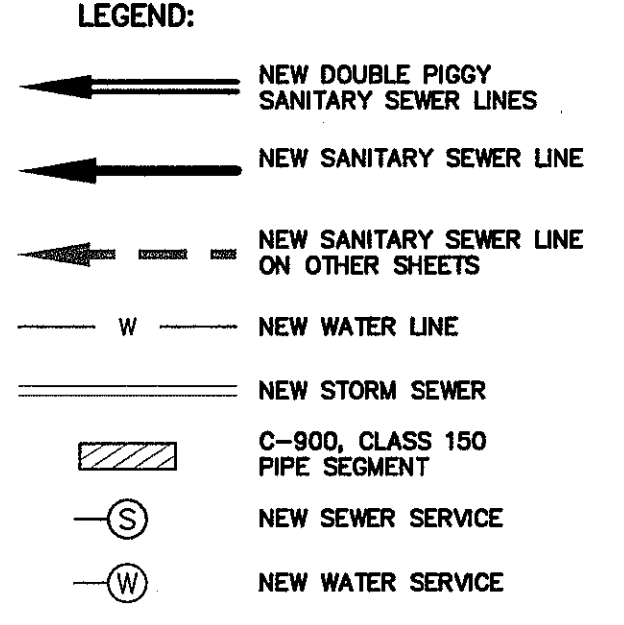
PLAN

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) 880-7200
ONECK PARTNERS	(915) 595-6918
AT&T	(800) 852-3786
U.S. SPRINT TELECOMM	(800) 521-0579
CITY OF EL PASO DEPARTMENT OF TRANSPORTATION	(915) 621-8750
(AFTER HOURS)	(915) 240-3220

WARNING I BEFORE YOU DIG

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

FOR FIELD LOCATING EXISTING UTILITIES



- NOTES:**
- ALL LOTS SHALL BE PROVIDED WITH ONE SERVICE CONNECTION TO BE INSTALLED AT THE LOCATION AS SHOWN ON THE SERVICE LOCATION DETAIL.
 - DEVELOPER SHALL ENSURE RESIDENTIAL SEWER SERVICE LINES HAVE BEEN EXTENDED TO THE PROPERTY LINE.
 - BUILDER SHALL ENSURE SIDEWALKS ARE NOT CONSTRUCTED UNTIL THE RESIDENTIAL SEWER SERVICE LINES HAVE BEEN EXTENDED TEN (10') PLUS FEET INTO PRIVATE PROPERTY FROM PROPERTY LINE.
 - CONTRACTOR IS TO POT HOLE LINES TO DETERMINE EXACT LOCATION AND DEPTH OF EXISTING SEWER LINES. THIS ALSO AFFECTS THE DIMENSION PROVIDED IN THE PLANS WHEN REFERENCING TO EXISTING CONDITIONS. THESE DIMENSIONS ARE APPROXIMATE AND TO BE FIELD VERIFIED.

REFERENCES - BENCHMARKS

FOUND N.G.S. SURVEY MARKER STAMPED "CHNO 1980"

ELEVATION: 3935.83 (CITY OF EL PASO VERTICAL DATUM)

3945.71 (NAVD 88 DATUM)

3945.78 (NAVD 29 DATUM)

TIE TO THE PROJECT BENCHMARK IS N53°09'09" W, 4.008.93

CORNER OF TRACT 11, BELLE D. JANDRY SURVEY, TR. 23B

DATE _____ BY _____

ENGINEER'S SEAL

engineers • architects • planners
 TEXAS REGISTERED ENGINEERING FIRM F-4664
 4712 Woodrow Bean, Ste. F, El Paso, TX 79924
 Office: 915.544.5222 Fax: 915.544.5233 www.aepgroup.net

SCALE: 1"=40'

Horizontal: 1"=40'

Vertical: 1"=5'

Contour Interval: N/A

DATE: DECEMBER 2014

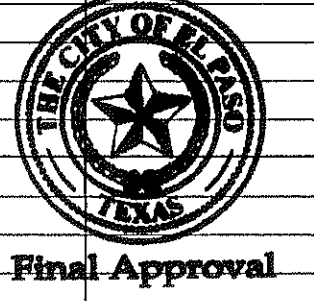
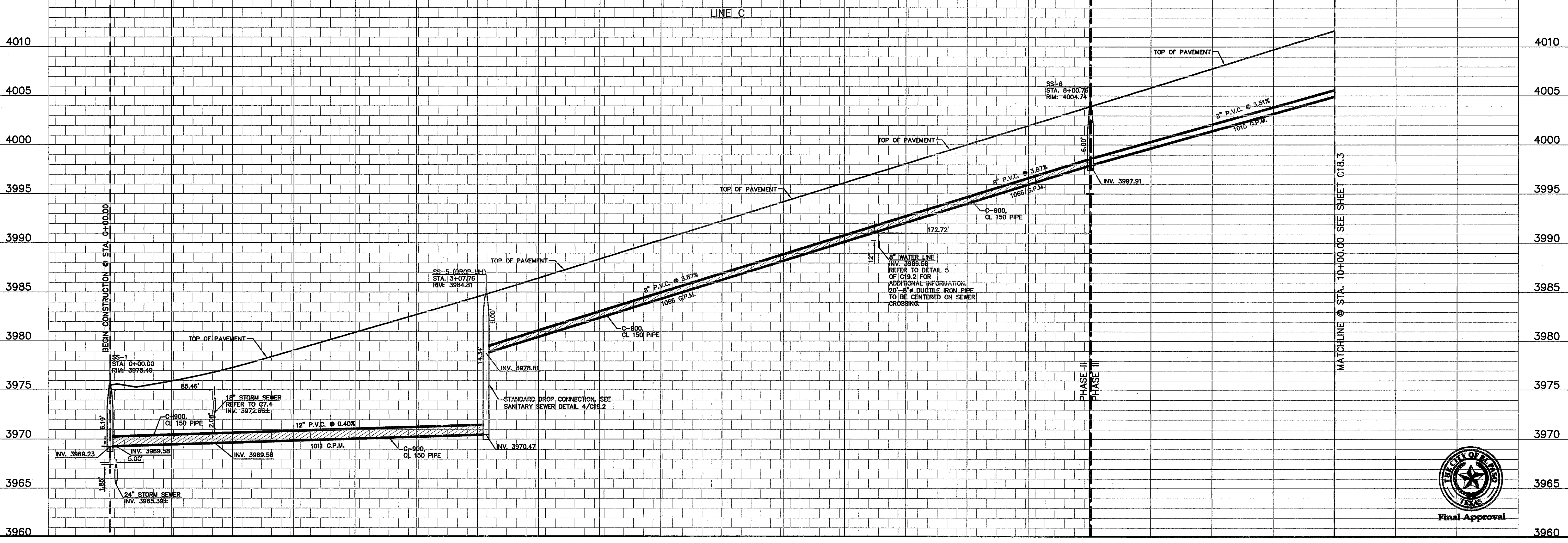
DESIGN BY: A.H.

DRAWN BY: J.H.

CHKD. BY: J.L.A.

APPVD. BY: J.L.A.

JOB No. 2080-028-ID



PROJECT TITLE

DESERT SPRINGS UNIT FOUR

SUBDIVISION IMPROVEMENTS

SHEET TITLE

SANITARY SEWER PLAN & PROFILE LINE "C"

(SHEET 2 OF 8)

SHEET NO.

C18.2

S:\2000\2080-028-ID\DWG\Construction\Profile\Plan\Line C\18.2.dwg, 3/17/2015, 9:11:58 AM

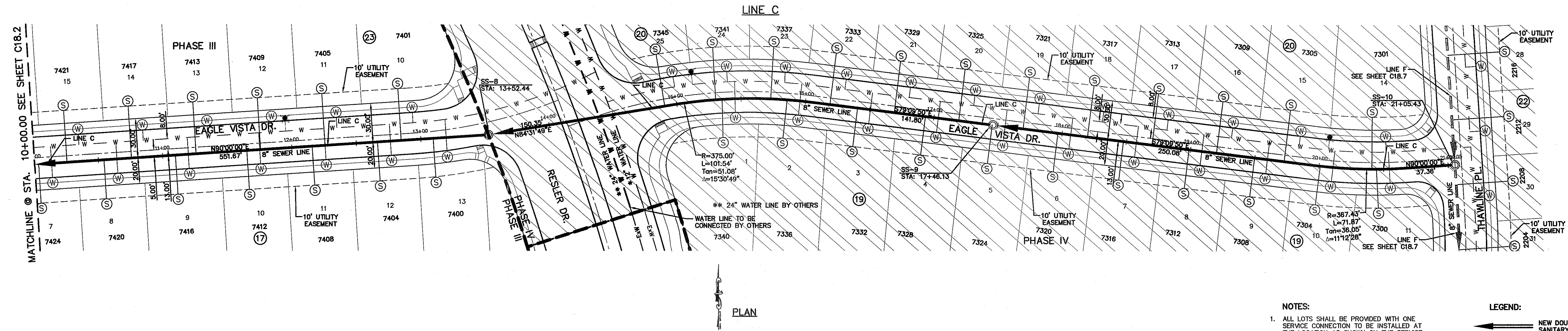
UTILITY LOCATOR SERVICES	
EL PASO ELECTRIC COMPANY	(915) 543-5720
EL PASO ENERGY CORPORATION	(915) 496-5244
EL PASO WATER UTILITIES	(915) 594-5500
MCI SURVEILLANCE	(800) MCI-WORK
TIME WARNER COMMUNICATIONS	(915) 772-1123
TEXAS GAS SERVICE	(915) 680-7200
ONEOK PARTNERS	(915) 595-6918
AT&T	(800) 852-3786
U.S. SPRINT TELECOMM	(800) 521-0579
CITY OF EL PASO DEPARTMENT OF TRANSPORTATION	(915) 621-6750
(AFTER HOURS)	(915) 240-3220

WARNING I BEFORE YOU DIG

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

FOR FIELD LOCATING EXISTING UTILITIES

DATE	REVISIONS	BY

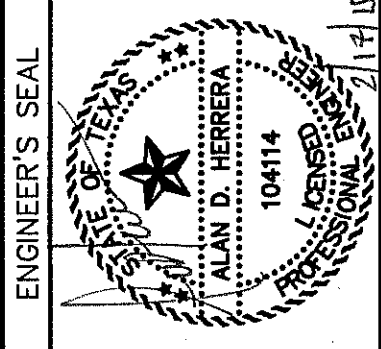


NOTES:

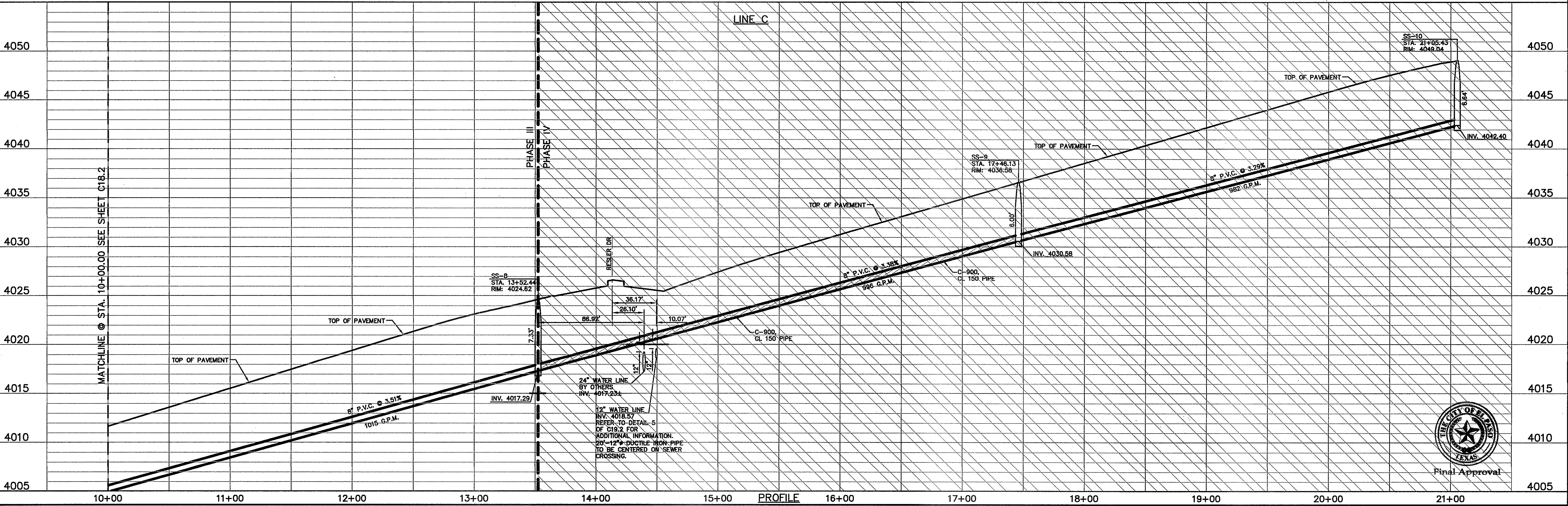
- ALL LOTS SHALL BE PROVIDED WITH ONE SERVICE CONNECTION TO BE INSTALLED AT THE LOCATION AS SHOWN ON THE SERVICE LOCATION DETAIL.
- DEVELOPER SHALL ENSURE RESIDENTIAL SEWER SERVICE LINES HAVE BEEN EXTENDED TO THE PROPERTY LINE.
- BUILDER SHALL ENSURE SIDEWALKS ARE NOT CONSTRUCTED UNTIL THE RESIDENTIAL SEWER SERVICE LINES HAVE BEEN EXTENDED TEN (10') PLUS FEET INTO PRIVATE PROPERTY FROM PROPERTY LINE.
- CONTRACTOR IS TO POT HOLE LINES TO DETERMINE EXACT LOCATION AND DEPTH OF EXISTING SEWER LINES. THIS ALSO APPLIES TO THE DIMENSION PROVIDED IN THE PLANS WHEN REFERENCING TO EXISTING CONDITIONS. THESE DIMENSIONS ARE APPROXIMATE AND TO BE FIELD VERIFIED.

LEGEND:

- NEW DOUBLE PIGGY SANITARY SEWER LINES
- NEW SANITARY SEWER LINE
- NEW SANITARY SEWER LINE ON OTHER SHEETS
- NEW WATER LINE
- NEW STORM SEWER
- C-900, CLASS 150 PIPE SEGMENT
- NEW SEWER SERVICE
- NEW WATER SERVICE



SCALE	Horizontal: 1"=40'
Vertical:	1"=5'
Contour Interval:	N/A
DATE:	DECEMBER 2014
DESIGN BY:	A.H.
DRAWN BY:	J.H.
CHKD. BY:	J.L.A.
APP'D. BY:	J.L.A.
JOB No.	2060-028-LD



PROJECT TITLE

DESERT SPRINGS UNIT FOUR

SANITARY SEWER PLAN & PROFILE LINE "C"

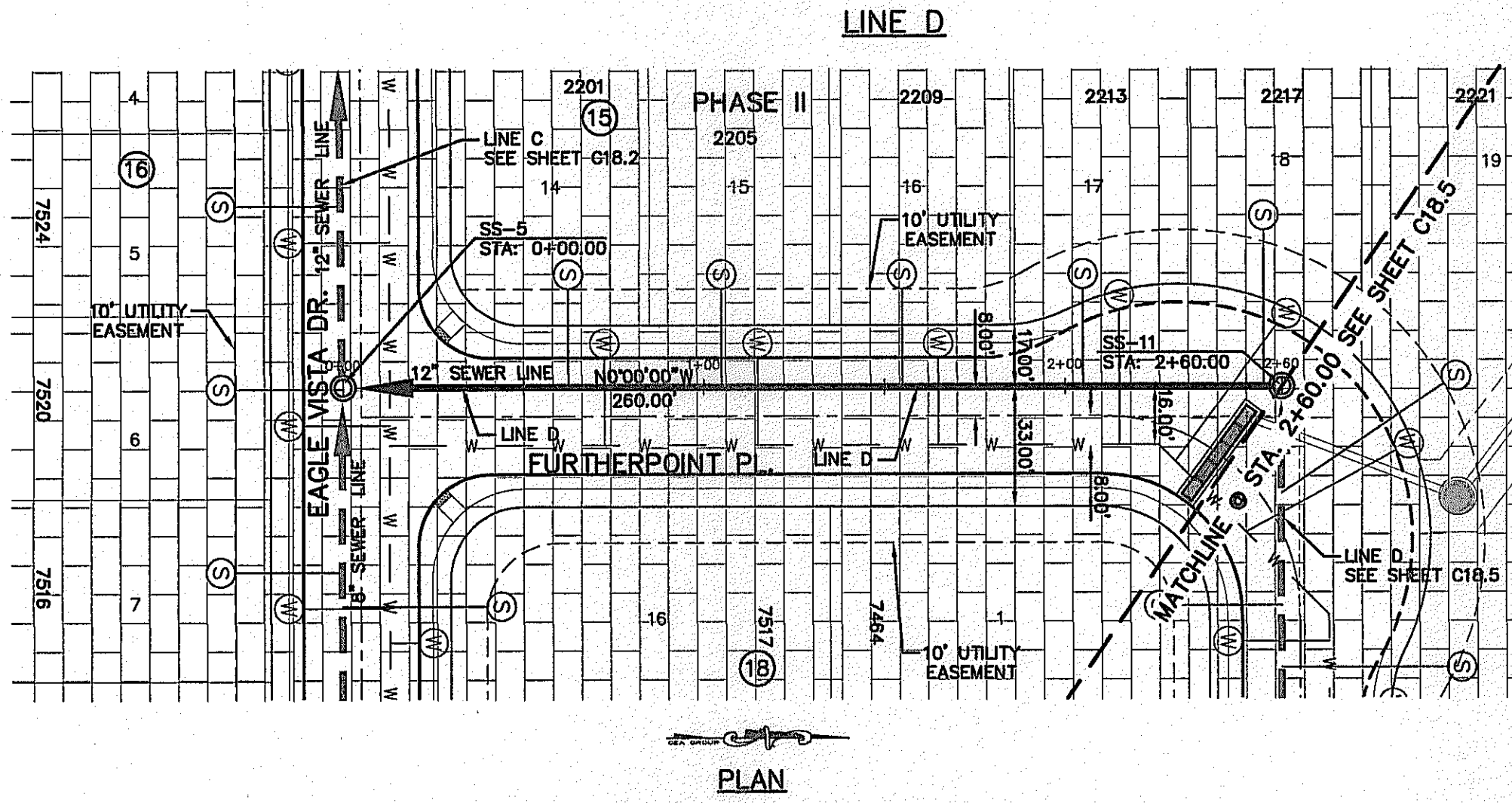
(SHEET 3 OF 9)

SHEET NO.

C18.3

Final Approval

C:\Users\j20020\OneDrive\Documents\Engineering\Subdivision\DesertSprings\SubdivisionImprovements\ProfileView.dwg - 12/17/2014 9:32:28 AM

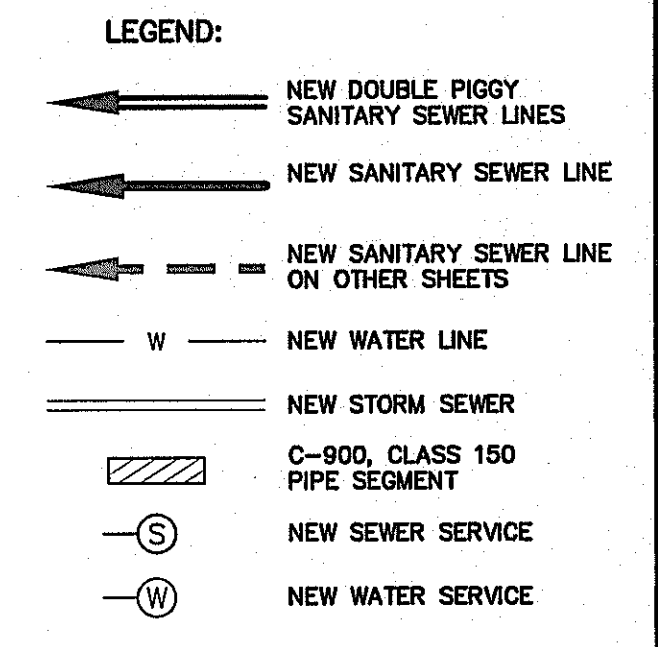


UTILITY LOCATOR SERVICES	
EL PASO ELECTRIC COMPANY	(915) 543-5720
EL PASO ENERGY CORPORATION	(915) 496-5244
EL PASO WATER UTILITIES	(915) 594-5500
MCI SURVEILLANCE	(800) MCI-WORK
TIME WARNER COMMUNICATIONS	(915) 772-1123
TEXAS GAS SERVICE	(915) 680-7200
ONEOK PARTNERS	(915) 595-6918
AT&T	(800) 852-3786
U.S. SPRINT TELECOM	(800) 521-0579
CITY OF EL PASO DEPARTMENT OF TRANSPORTATION (AFTER HOURS)	(915) 240-3220

WARNING I BEFORE YOU DIG

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

FOR FIELD LOCATING EXISTING UTILITIES



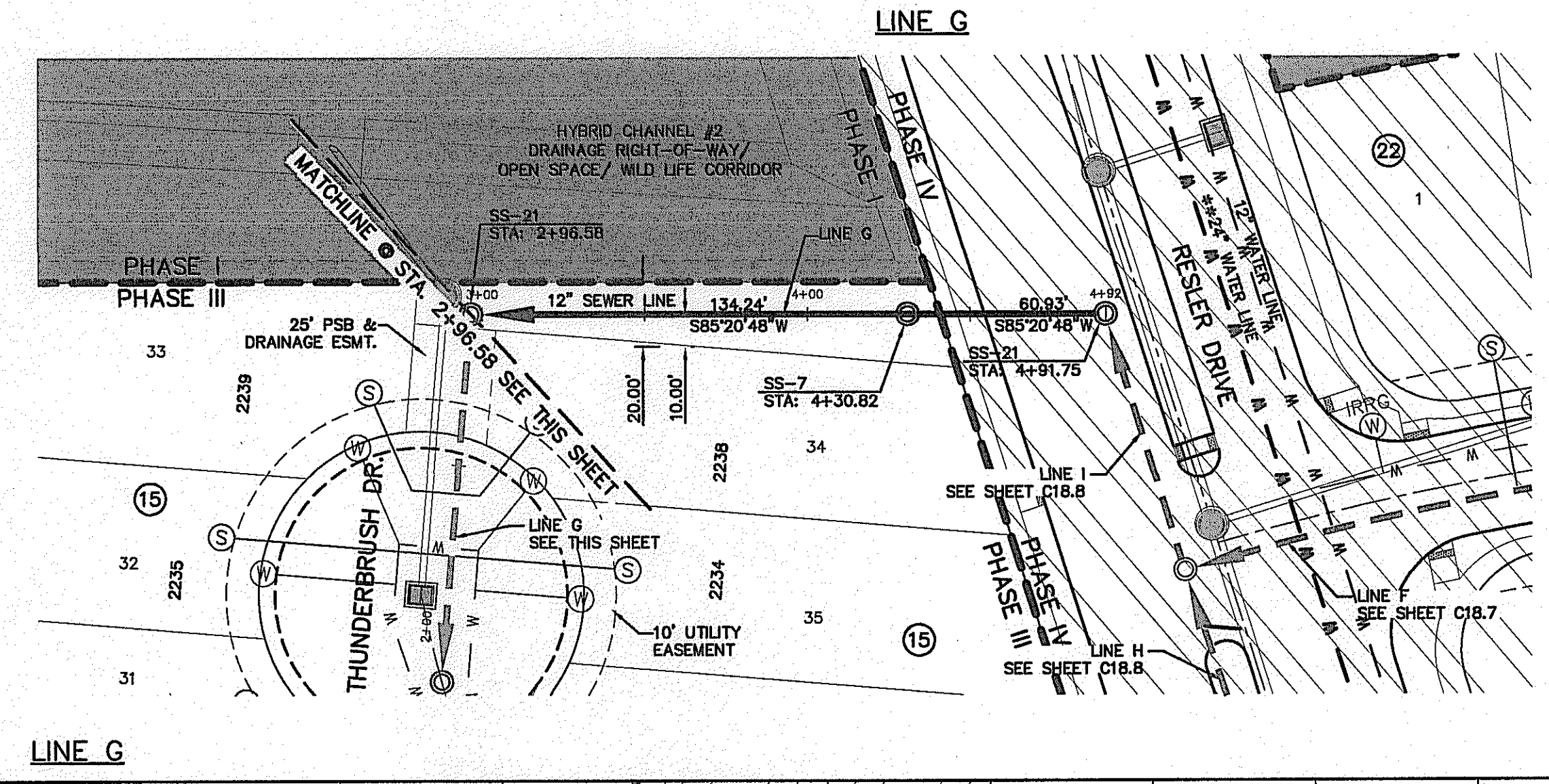
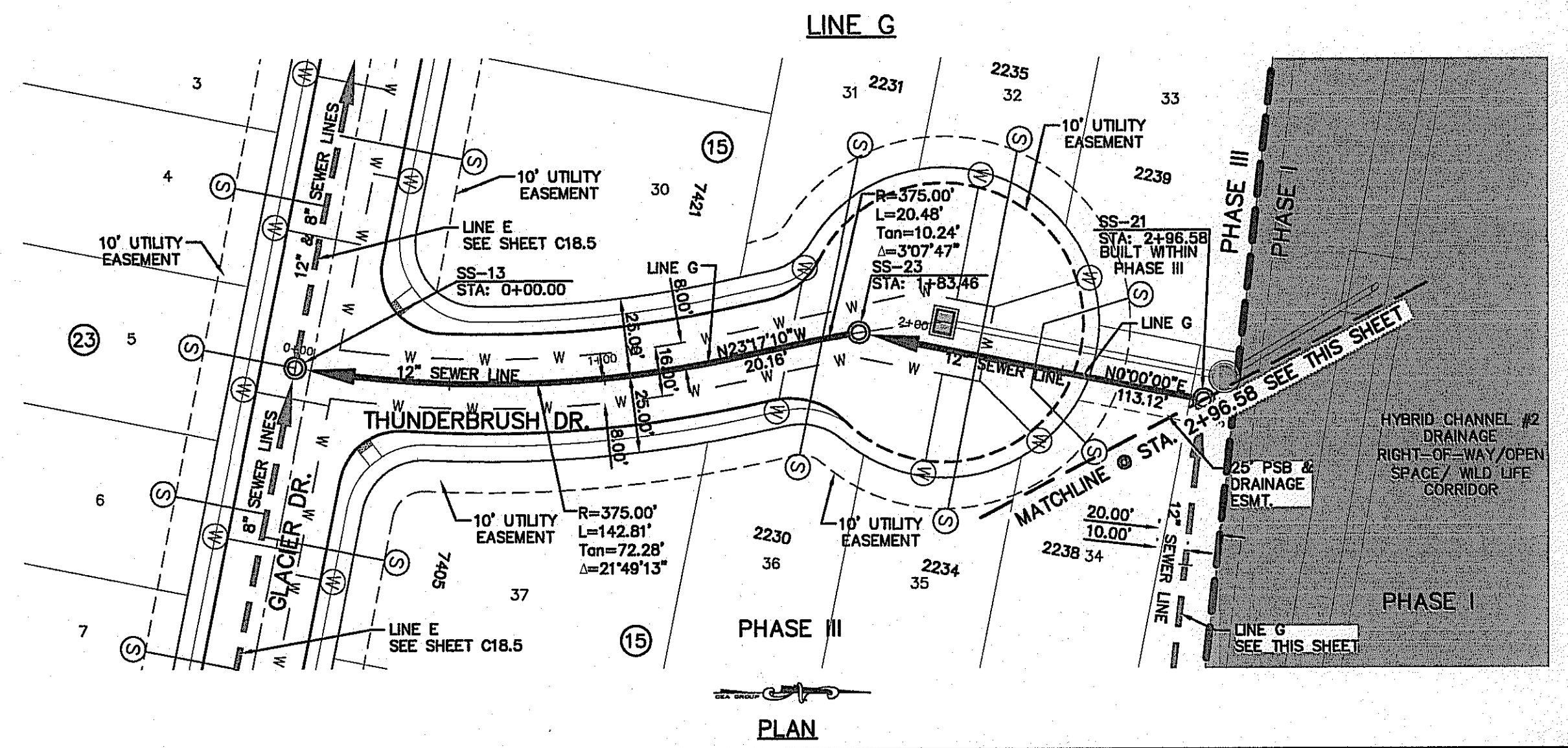
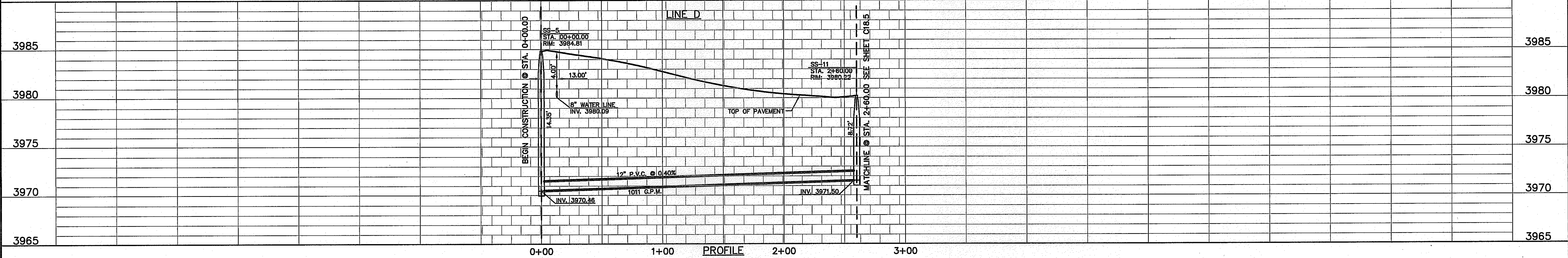
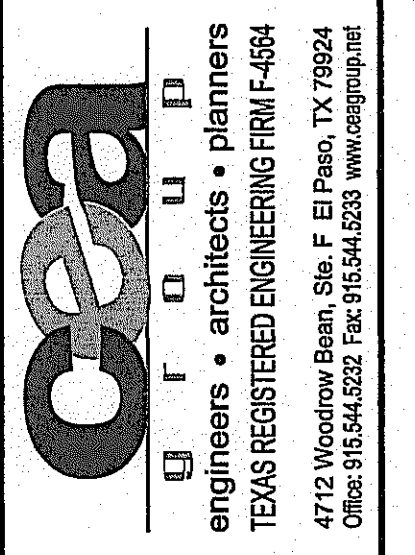
REFERENCES - BENCHMARKS

FOUND N.G.S. SURVEY MARKER STAMPED "CHINO 1980"
3935.63 (CITY OF EL PASO VERTICAL DATUM)
ELEVATION: 3935.63 (NAD 83 DATUM)
3945.78 (NGVD 29 DATUM)

TIE TO THE PROJECT BENCHMARK IS N63°09'09"W, 4,008.93 FEET FROM A 1/2" INCH REBAR FOUND FOR THE NORTHWEST CORNER OF TRACT 11, WELLS D. ANDREY SURVEY, No. 239

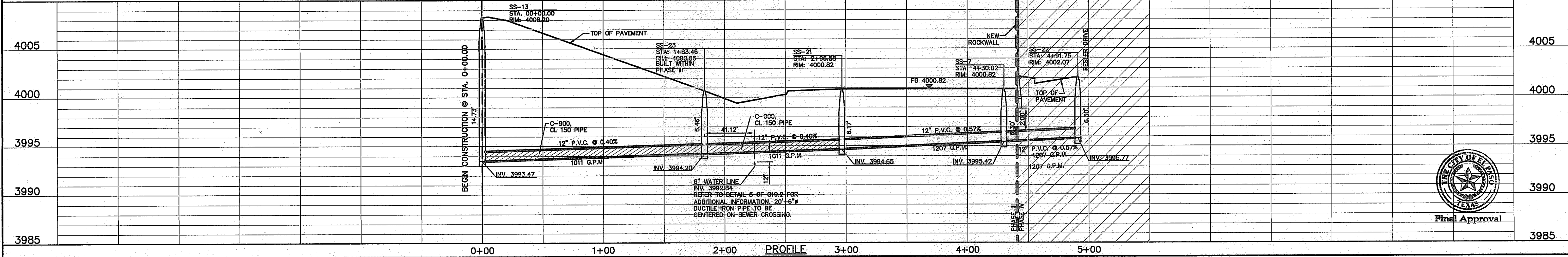
DATE: _____ BY: _____

REVISIONS: _____



NOTES:

- ALL LOTS SHALL BE PROVIDED WITH ONE SERVICE CONNECTION TO BE INSTALLED AT THE LOCATION AS SHOWN ON THE SERVICE LOCATION DETAIL.
- DEVELOPER SHALL ENSURE RESIDENTIAL SEWER SERVICE LINES HAVE BEEN EXTENDED TO THE PROPERTY LINE.
- BUILDER SHALL ENSURE SIDEWALKS ARE NOT CONSTRUCTED UNTIL THE RESIDENTIAL SEWER SERVICE LINES HAVE BEEN EXTENDED TEN (10') PLUS FEET INTO PRIVATE PROPERTY FROM PROPERTY LINE.
- CONTRACTOR IS TO POT HOLE LINES TO DETERMINE EXACT LOCATION AND DEPTH OF EXISTING SEWER LINES. THIS ALSO AFFECTS THE DIMENSION PROVIDED IN THE PLANS WHEN REFERENCING TO EXISTING CONDITIONS. THESE DIMENSIONS ARE APPROXIMATE AND TO BE FIELD VERIFIED.



PROJECT TITLE

DESERT SPRINGS UNIT FOUR

SUBDIVISION IMPROVEMENTS

SHEET TITLE

SANITARY SEWER PLAN & PROFILE LINE "D" AND LINE "G"

(SHEET 4 OF 8)

SHEET NO.

C18.4

Final Approval

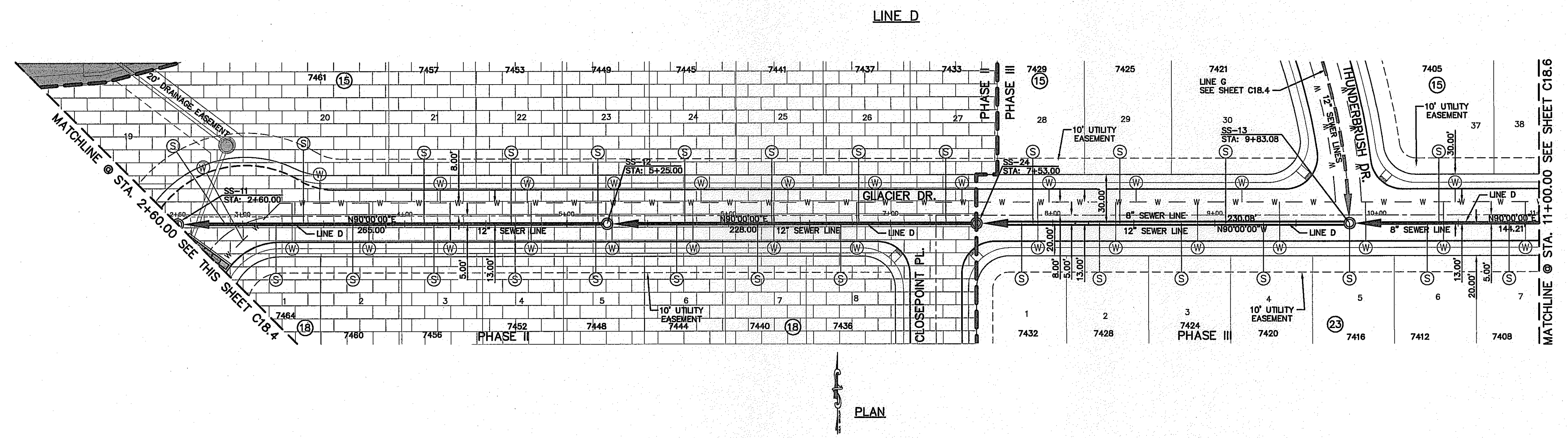
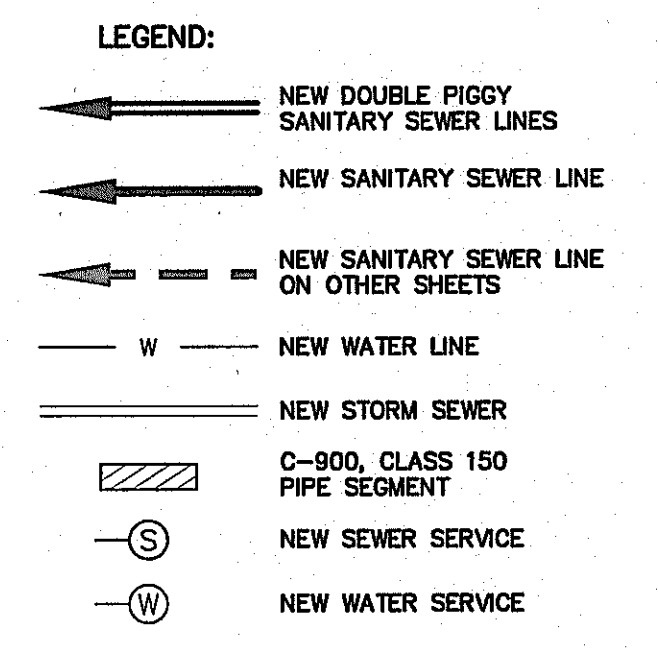
S:\2009\2009-013 - D:\DWG\Construction\Drawings\Improvement Plans\Unit 4\2009-013-LD-C18.4 San Sewer-IRE Dwg.dwg, C18.4, 2/17/2010, 9:16:15 AM

PHASE	UTILITY LOCATOR SERVICES
PHASE I	EL PASO ELECTRIC COMPANY (915) 543-5720
PHASE II	EL PASO ENERGY CORPORATION (915) 496-5244
PHASE III	EL PASO WATER UTILITIES (915) 594-5500
PHASE IV	MCI SURVEILLANCE (800) MCI-WORK
PHASE V	TIME WARNER COMMUNICATIONS (915) 772-1123
PHASE VI	TEXAS GAS SERVICE (915) 880-7200
	ONEOK PARTNERS (915) 595-6918
	AT&T (800) 852-3786
	U.S. SPRINT TELECOM (800) 521-0579
	CITY OF EL PASO DEPARTMENT OF TRANSPORTATION (915) 621-6750
	(AFTER HOURS) (915) 240-3220

WARNING I BEFORE YOU DIG

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

FOR FIELD LOCATING EXISTING UTILITIES



- NOTES:**
- ALL LOTS SHALL BE PROVIDED WITH ONE SERVICE CONNECTION TO BE INSTALLED AT THE LOCATION AS SHOWN ON THE SERVICE LOCATION DETAIL.
 - DEVELOPER SHALL ENSURE RESIDENTIAL SEWER SERVICE LINES HAVE BEEN EXTENDED TO THE PROPERTY LINE.
 - BUILDER SHALL ENSURE SIDEWALKS ARE NOT CONSTRUCTED UNTIL THE RESIDENTIAL SEWER SERVICE LINES HAVE BEEN EXTENDED TEN (10') PLUS FEET INTO PRIVATE PROPERTY FROM PROPERTY LINE.
 - CONTRACTOR IS TO POT HOLE LINES TO DETERMINE EXACT LOCATION AND DEPTH OF EXISTING SEWER LINES. THIS ALSO AFFECTS THE DIMENSION PROVIDED IN THE PLANS WHEN REFERENCING TO EXISTING CONDITIONS. THESE DIMENSIONS ARE APPROXIMATE AND TO BE FIELD VERIFIED.

REFERENCES - BENCHMARKS

FOUND N.G.S. SURVEY MARKER STAMPED "CHINO 1980"
ELEVATION: 3935.83 (CITY OF EL PASO VERTICAL DATUM)
SHOW (NAVD 88 DATUM)
3945.78 (NAVD 28 DATUM)

TIE TO THE PROJECT BENCHMARK IS N53°09'09"W, 4.008.83 FEET FROM A 1/2 INCH REBAR FOUND FOR THE NORTHWEST CORNER OF TRACT 11, BELLE D. JARDY SURVEY, NO. 239

DATE _____ BY _____

REVISIONS _____

ENGINEER'S SEAL

SCALE: Horizontal: 1"=40'
Vertical: 1"=5'
Contour Interval: N/A

DATE: DECEMBER 2014
DESIGN BY: A.H.
DRAWN BY: J.H.
CHKD. BY: J.L.A.
APPROV. BY: J.L.A.

JOB No. 2060-028-LD

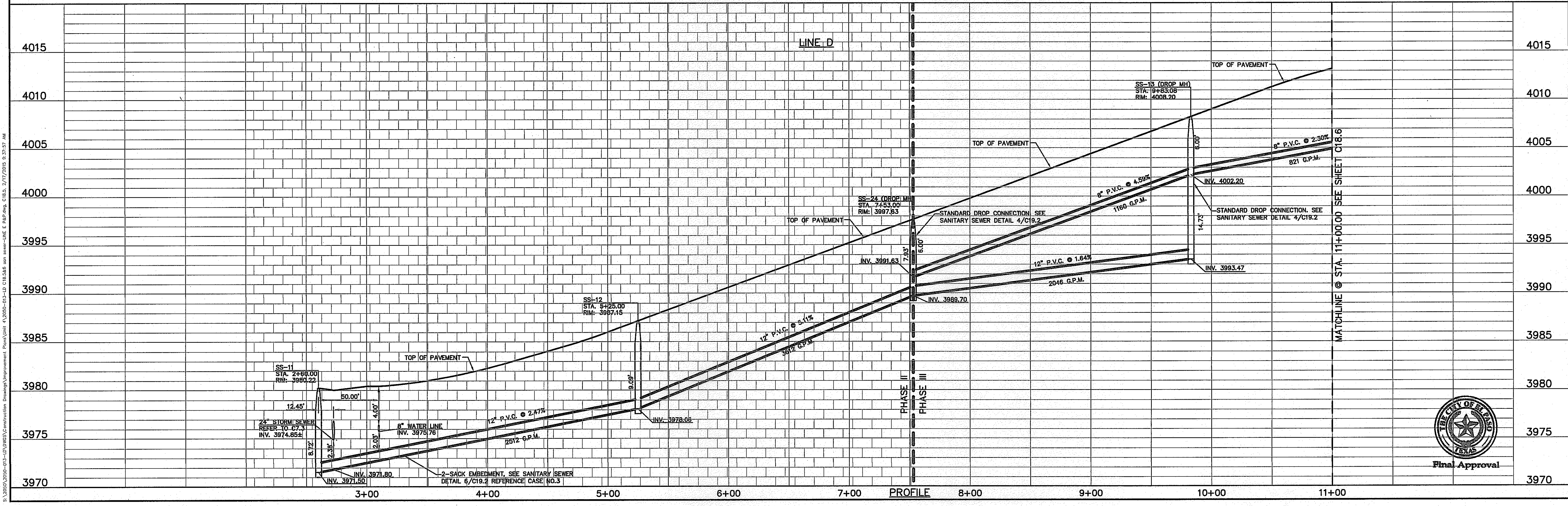
DESERT SPRINGS UNIT FOUR
SUBDIVISION IMPROVEMENTS

SHEET TITLE

SANITARY SEWER PLAN & PROFILE
LINE "D"

(SHEET 5 OF 8)
SHEET NO.

C18.5



S:\2004\2004-013-UD\MS2\Construction\Drawings\Improvement\Drawings\11-0000-013-D C18.5.dwg User: JHE Date: 2/17/2015 9:27:57 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
ONEOK PARTNERS	(915) 595-6918
AT&T	(800) 852-3786
U.S. SPRINT TELECOMM	(800) 521-0579
CITY OF EL PASO DEPARTMENT OF TRANSPORTATION (AFTER HOURS)	(915) 621-6750
	(915) 240-3220

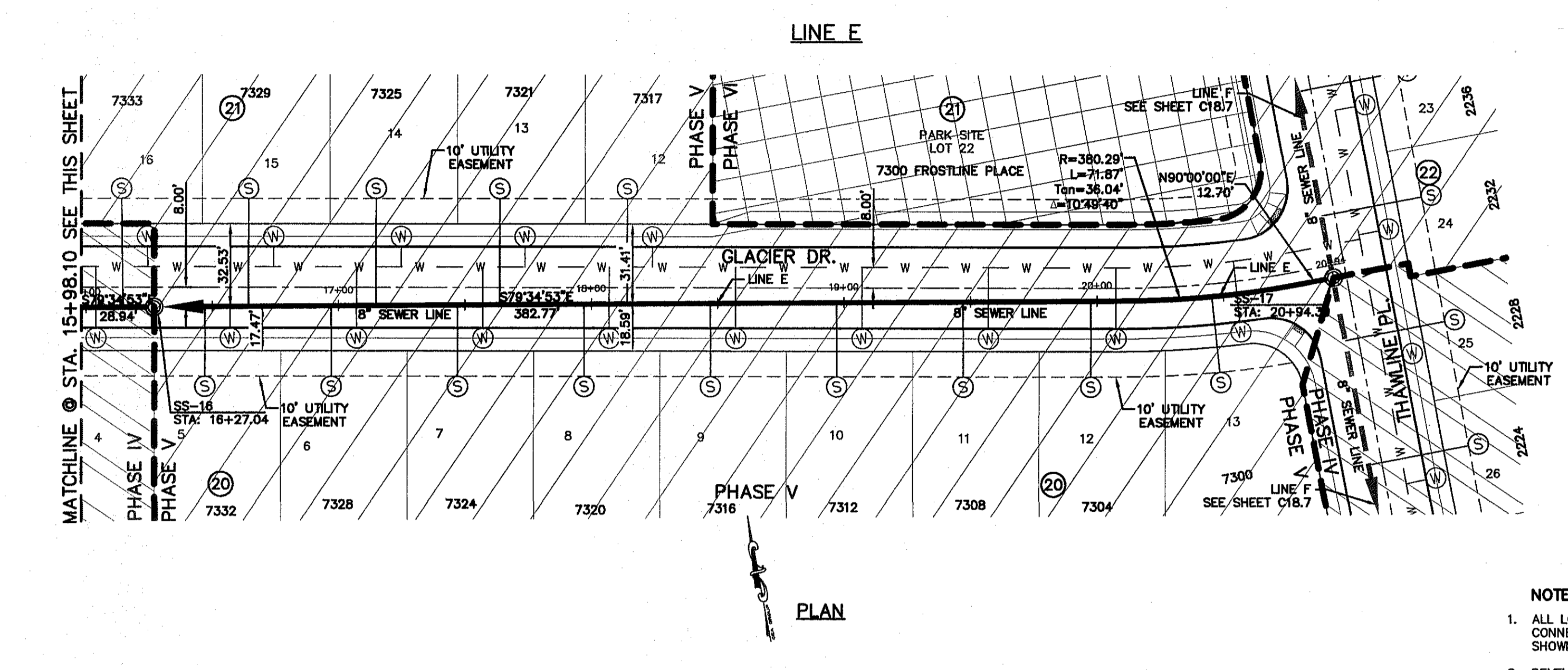
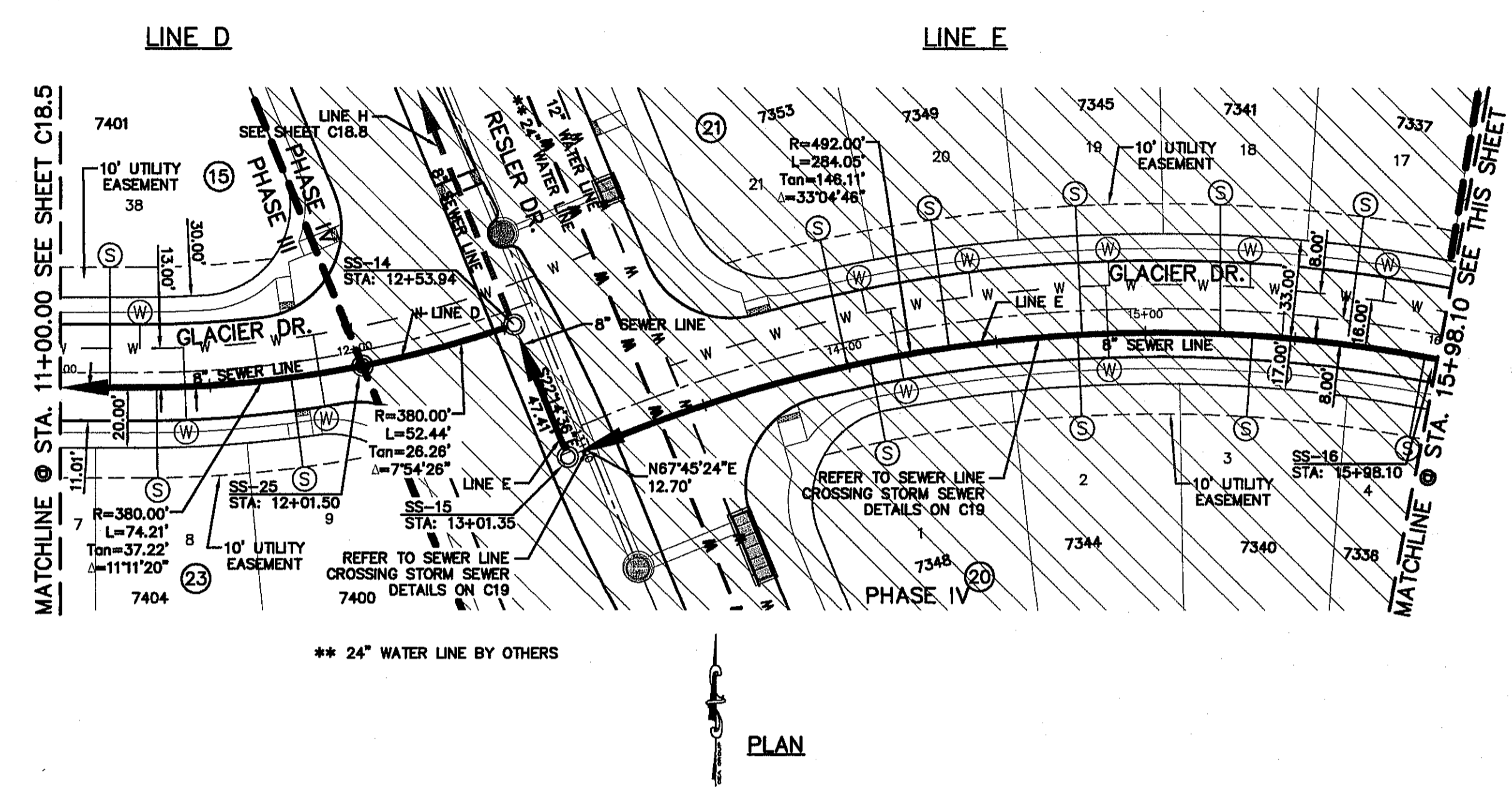
WARNING I BEFORE YOU DIG

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

FOR FIELD LOCATING EXISTING UTILITIES

- PHASE I
- PHASE II
- PHASE III
- PHASE IV
- PHASE V
- PHASE VI

- LEGEND:**
- NEW DOUBLE PIGGY SANITARY SEWER LINES
 - NEW SANITARY SEWER LINE
 - NEW SANITARY SEWER LINE ON OTHER SHEETS
 - NEW WATER LINE
 - NEW STORM SEWER
 - C-900, CLASS 150 PIPE SEGMENT
 - NEW SEWER SERVICE
 - NEW WATER SERVICE



- NOTES:**
- ALL LOTS SHALL BE PROVIDED WITH ONE SERVICE CONNECTION TO BE INSTALLED AT THE LOCATION AS SHOWN ON THE SERVICE LOCATION DETAIL.
 - DEVELOPER SHALL ENSURE RESIDENTIAL SEWER SERVICE LINES HAVE BEEN EXTENDED TO THE PROPERTY LINE.
 - BUILDER SHALL ENSURE SIDEWALKS ARE NOT CONSTRUCTED UNTIL THE RESIDENTIAL SEWER SERVICE LINES HAVE BEEN EXTENDED TEN (10') PLUS FEET INTO PRIVATE PROPERTY FROM PROPERTY LINE.
 - CONTRACTOR IS TO POT HOLE LINES TO DETERMINE EXACT LOCATION AND DEPTH OF EXISTING SEWER LINES. THIS ALSO AFFECTS THE DIMENSION PROVIDED IN THE PLANS WHEN REFERENCING TO EXISTING CONDITIONS. THESE DIMENSIONS ARE APPROXIMATE AND TO BE FIELD VERIFIED.

REFERENCES - BENCHMARKS

FOUND N.G.S. SURVEY MARKER STAMPED "CHNO 1880" ELEVATION: 3935.83 (CITY OF EL PASO VERTICAL DATUM 560M) (NOV. 88 DATUM) 3945.78 (NOV. 28 DATUM)

TIE TO THE PROJECT BENCHMARK IS N33°09'00"W, 4.008.63 FEET FROM A 1/2" INCH REBAR FOUND FOR THE NORTHWEST CORNER OF TRACT 11, BELLE D. MUNDY SURVEY No. 239

DATE: _____ BY: _____

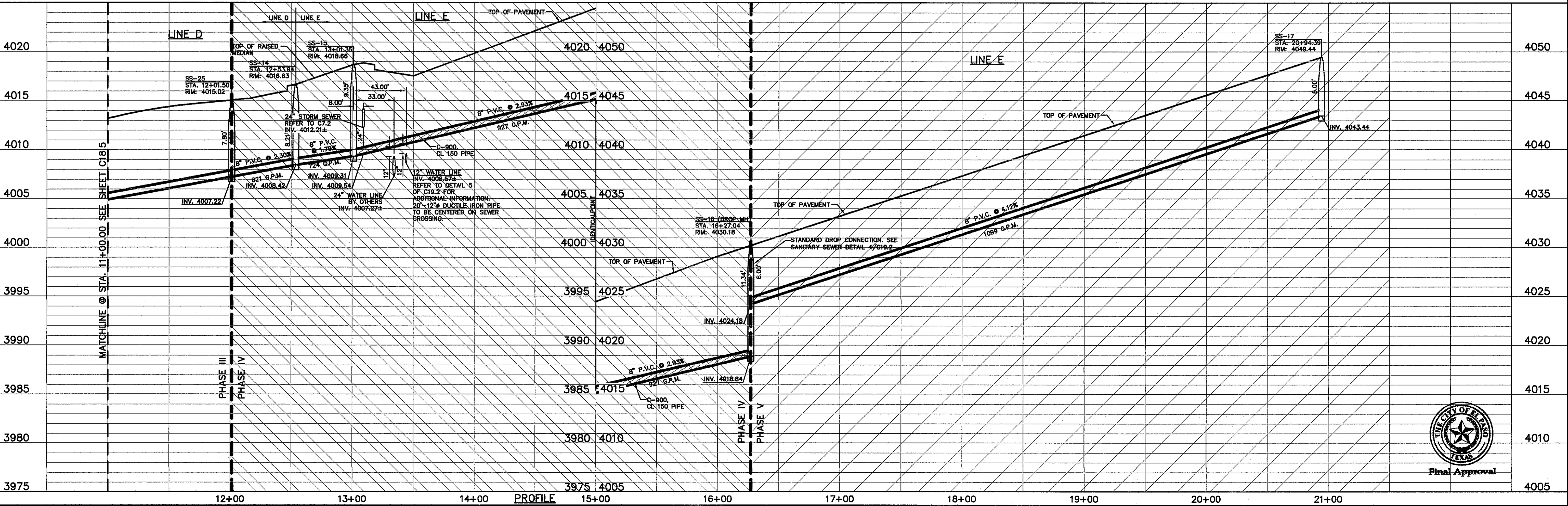
REVISIONS

CSA engineers • architects • planners TEXAS REGISTERED ENGINEERS FRM F-664 4712 Woodrow Babin, Ste. F, El Paso, TX 79924 Office: 915.544.5232 Fax: 915.544.5233 www.csaonline.com

ENGINEER'S SEAL

SCALE: Horizontal: 1"=40' Vertical: 1"=5' Contour Interval: 1' V.A.

DATE: DECEMBER 2014 DESIGN BY: A.H. DRAWN BY: J.H. CHKD. BY: J.L.A. APP'D. BY: J.L.A. JOB No. 2050-028-LD



PROJECT TITLE

DESERT SPRINGS UNIT FOUR

SUBDIVISION IMPROVEMENTS

SHEET TITLE

SANITARY SEWER PLAN & PROFILE LINE "D" AND LINE "E"

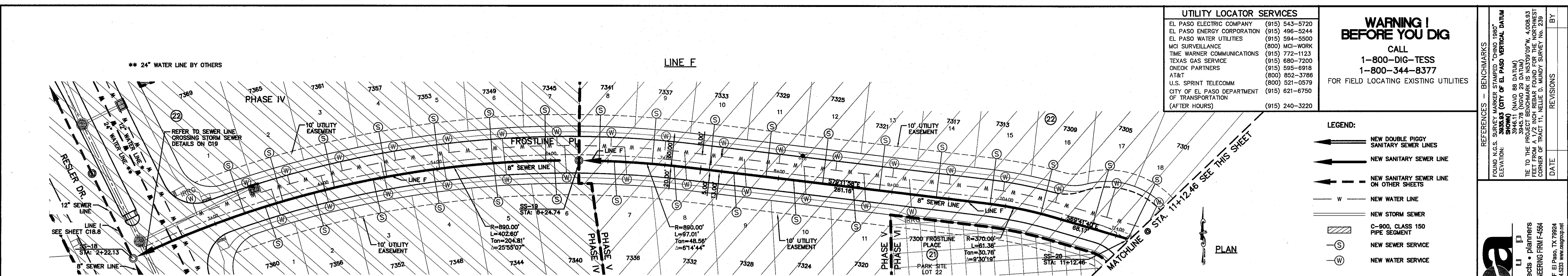
(SHEET 6 OF 9)

SHEET NO.

C18.6

Final Approval

E:\2015\2050-028-015-UT\DWG\Construction\Drawings\Improvement Plans\Unit 4\2050-028-015-UT-SS-SEWER-LINE E.dwg, 2/17/2015, 9:38:33 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
CHECK PARTNERS	(915) 595-6918
AT&T	(800) 852-3786
U.S. SPRINT TELECOMM	(800) 521-0579
CITY OF EL PASO DEPARTMENT OF TRANSPORTATION	(915) 621-6750
(AFTER HOURS)	(915) 240-3220

WARNING I BEFORE YOU DIG

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

FOR FIELD LOCATING EXISTING UTILITIES

LEGEND:

- ← NEW DOUBLE PIGGY SANITARY SEWER LINES
- ← NEW SANITARY SEWER LINE
- ← NEW SANITARY SEWER LINE ON OTHER SHEETS
- W NEW WATER LINE
- NEW STORM SEWER
- C-900, CLASS 150 PIPE SEGMENT
- NEW SEWER SERVICE
- NEW WATER SERVICE

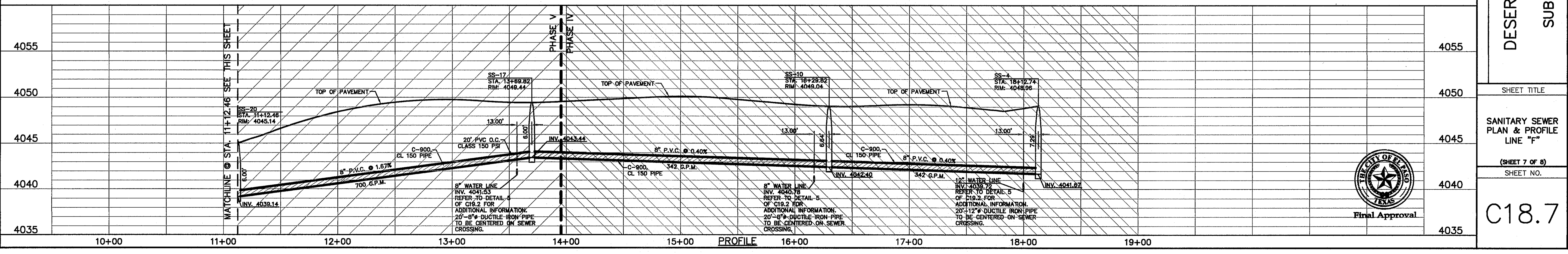
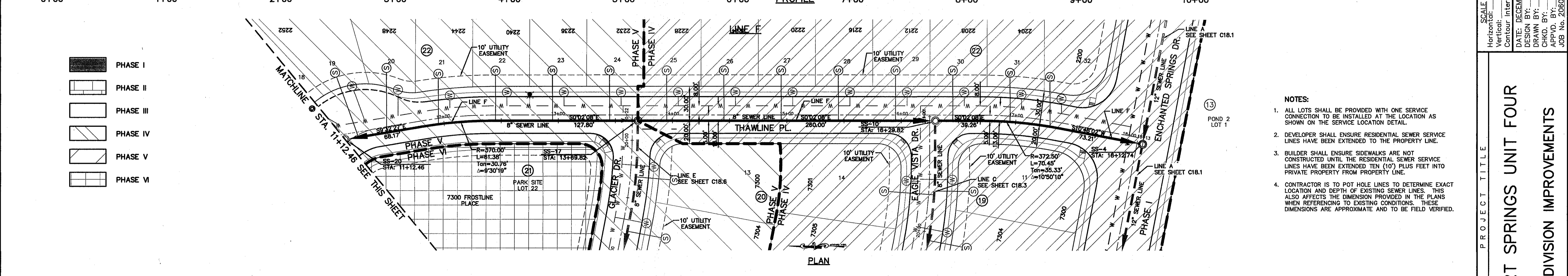
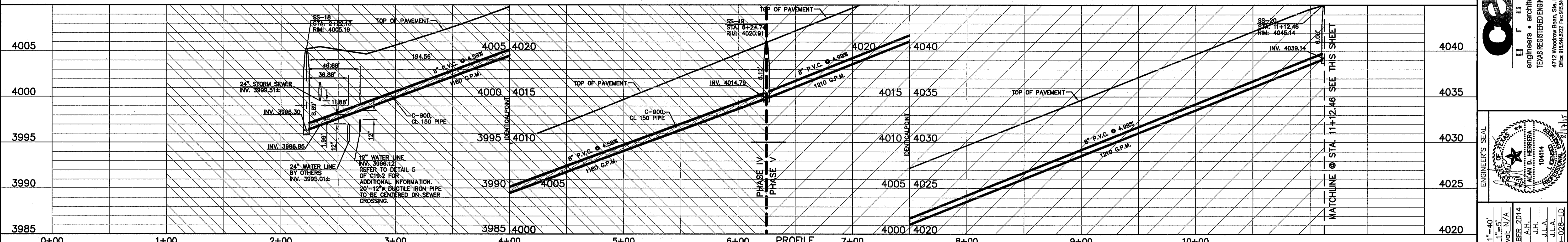
REFERENCES - BENCHMARKS

FOUND N.G.S. SURVEY MARKER STAMPED "CHNO 1980"
3955.83 (CITY OF EL PASO VERTICAL DATUM)
ELEVATION:
3945.78 (NAVD 88 DATUM)
3945.78 (NAVD 83 DATUM)

TIE TO THE PROJECT BENCHMARK IS N33°09'09" W, 4.008.83 FEET FROM A 1/2" INCH BENCHMARK FOUND FOR THE NORTHWEST CORNER OF TRACT 11, BELLE D. MURPHY SURVEY NO. 239

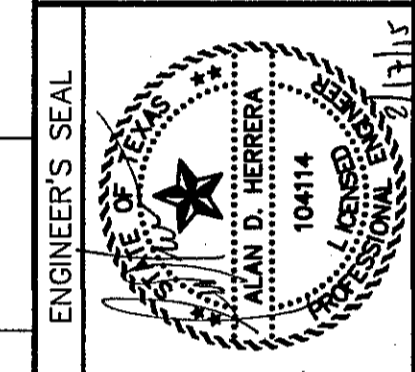
DATE _____ BY _____

REVISIONS _____



DESIGNER'S SEAL

ALAN D. HERRERA
10414
1115



SCALE: 1"=40'
Horizontal: 1"=50'
Vertical: 1"=5'
Contour Interval: 1V/4A

DATE: DECEMBER 2014
DESIGN BY: A.H.
DRAWN BY: J.H.
CHKD. BY: J.L.A.
APPVD. BY: J.L.A.
JOB No. 2060-028-LD

PROJECT TITLE

DESERT SPRINGS UNIT FOUR

SUBDIVISION IMPROVEMENTS

SHEET TITLE

SANITARY SEWER PLAN & PROFILE LINE "F"

(SHEET 7 OF 8)

SHEET NO.

C18.7



Final Approval

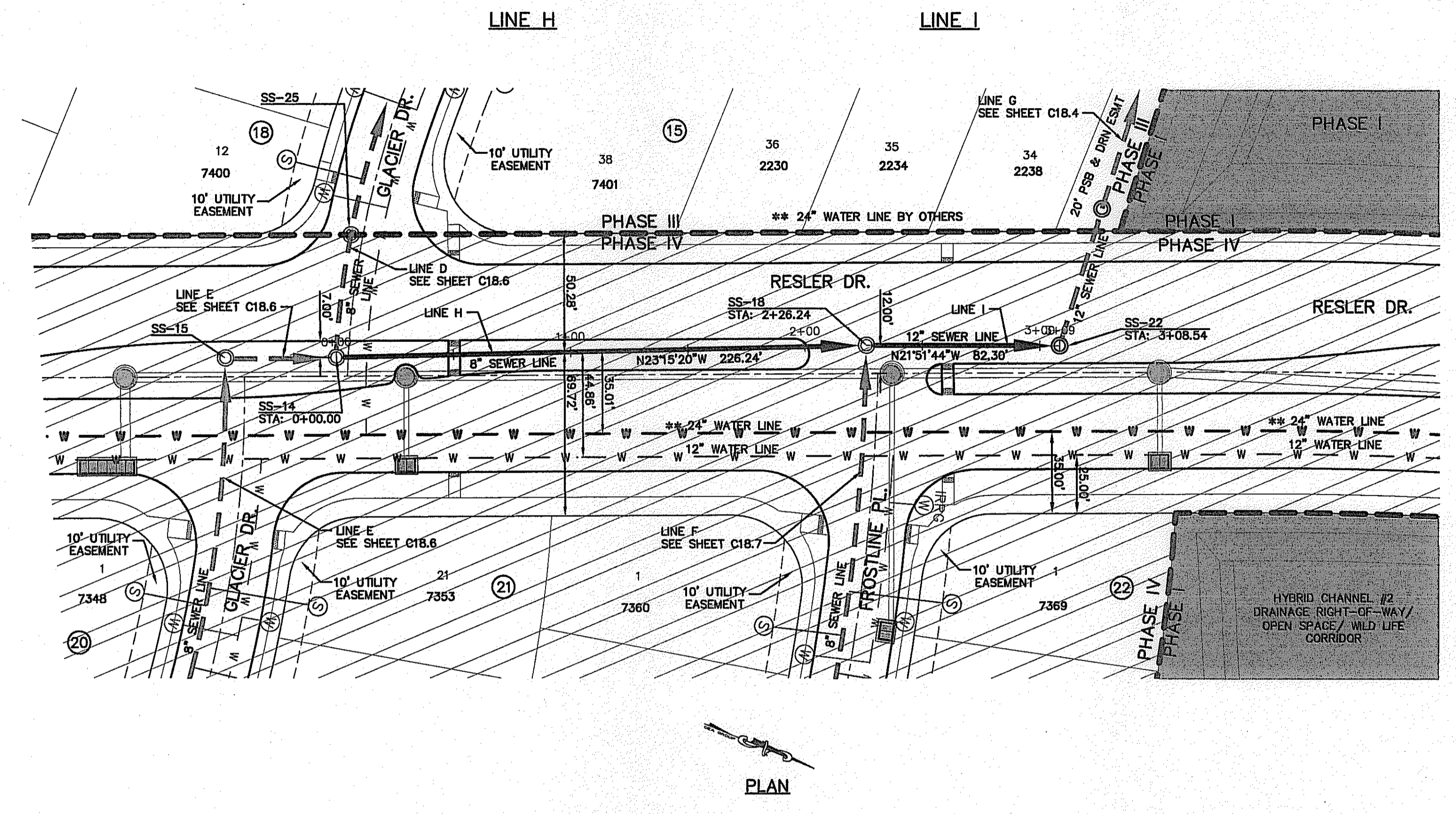
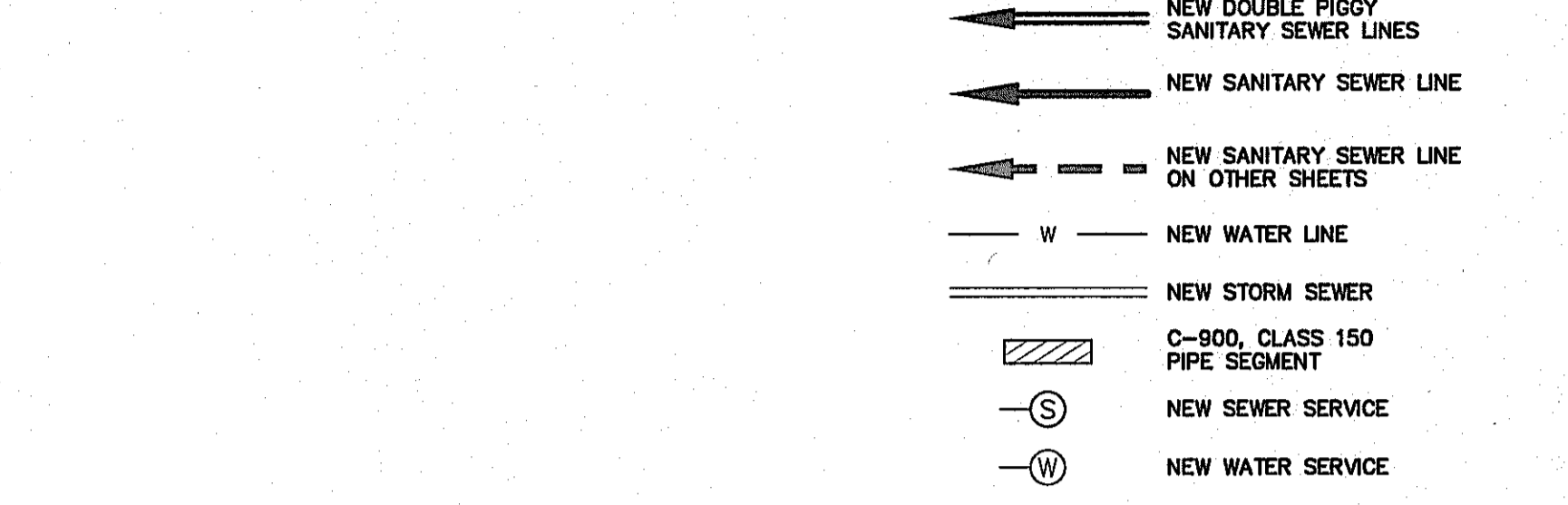
A:\2014\2060-028-LD\Subdivision\Improvements\Sanitary Sewer\Sheet F.dwg
 Date: 12/17/2014 10:17:45 AM
 User: jlh
 Plot: 12/17/2014 10:17:45 AM

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
ONEOK PARTNERS	(915) 595-6918
AT&T	(800) 852-3786
U.S. SPRINT TELECOMM	(800) 521-0579
CITY OF EL PASO DEPARTMENT OF TRANSPORTATION (AFTER HOURS)	(915) 621-6750
	(915) 240-3220

WARNING I BEFORE YOU DIG

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

FOR FIELD LOCATING EXISTING UTILITIES



- NOTES:**
- ALL LOTS SHALL BE PROVIDED WITH ONE SERVICE CONNECTION TO BE INSTALLED AT THE LOCATION AS SHOWN ON THE SERVICE LOCATION DETAIL.
 - DEVELOPER SHALL ENSURE RESIDENTIAL SEWER SERVICE LINES HAVE BEEN EXTENDED TO THE PROPERTY LINE.
 - BUILDER SHALL ENSURE SIDEWALKS ARE NOT CONSTRUCTED UNTIL THE RESIDENTIAL SEWER SERVICE LINES HAVE BEEN EXTENDED TEN (10') PLUS FEET INTO PRIVATE PROPERTY FROM PROPERTY LINE.
 - CONTRACTOR IS TO POT HOLE LINES TO DETERMINE EXACT LOCATION AND DEPTH OF EXISTING SEWER LINES. THIS ALSO AFFECTS THE DIMENSION PROVIDED IN THE PLANS WHEN REFERENCING TO EXISTING CONDITIONS. THESE DIMENSIONS ARE APPROXIMATE AND TO BE FIELD VERIFIED.

REFERENCES - BENCHMARKS

FOUND ALG.S. SURVEY MARKER STAMPED "CHNO 1980" ELEVATION: 3935.83 (CITY OF EL PASO VERTICAL DATUM SHOWN)

(NAD 83 DATUM) (NAD 83 DATUM) (NAD 83 DATUM)

TIE TO THE PROJECT BENCHMARK IS N33°09'09"W, 4.008.83 FEET FROM A 1/2" INCH REBAR FOUND FOR THE NORTHWEST CORNER OF TRACT 11, NELLE D. MUNDY SURVEY No. 239

DATE _____ BY _____

REVISIONS _____

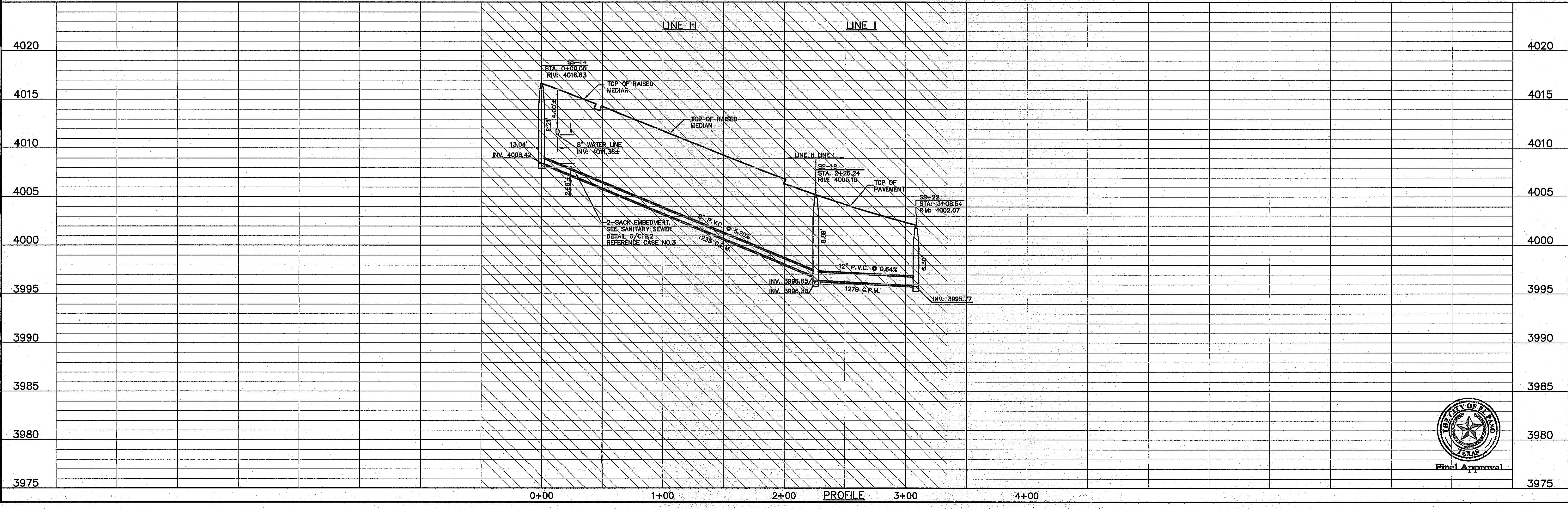
CS&A
engineers • architects • planners
TEXAS REGISTERED ENGINEERING FIRM F-4664
4712 Woodrow Blinn, Ste. F, El Paso, TX 79924
Office: 915.544.5322 Fax: 915.544.8283 www.csandap.com

ENGINEER'S SEAL

ALAN D. HERRICK
10414
REGISTERED PROFESSIONAL ENGINEER
EXPIRES 12/31/17

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

DATE: DECEMBER 2014
DESIGN BY: A.H.
DRAWN BY: J.H.
CHKD. BY: J.L.A.
APP'D. BY: J.L.A.
JOB No. 2060-028-1D



PROJECT TITLE

DESERT SPRINGS UNIT FOUR

SUBDIVISION IMPROVEMENTS

SHEET TITLE

SANITARY SEWER PLAN & PROFILE LINE "H" & "I"

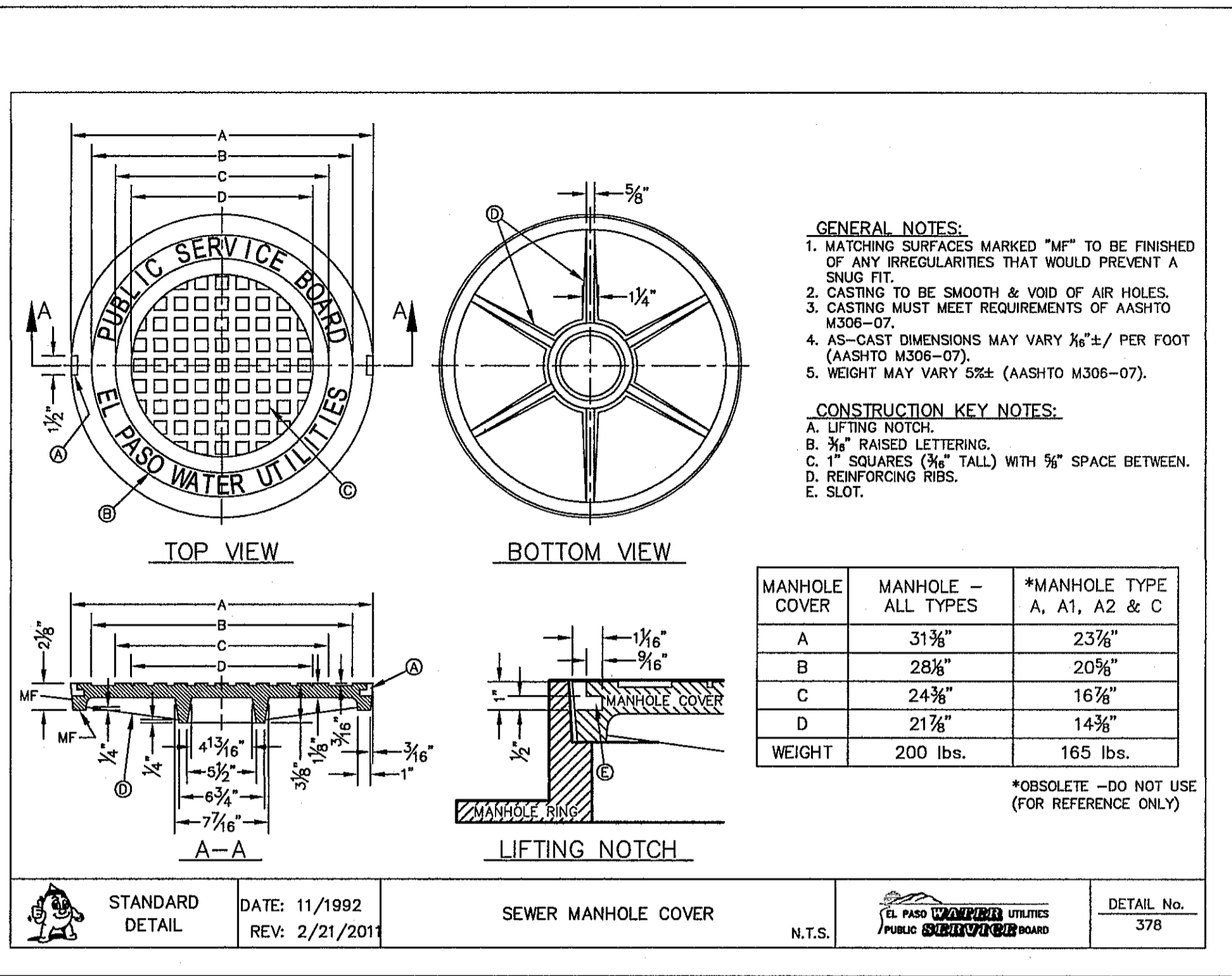
(SHEET 8 OF 8)

SHEET NO.

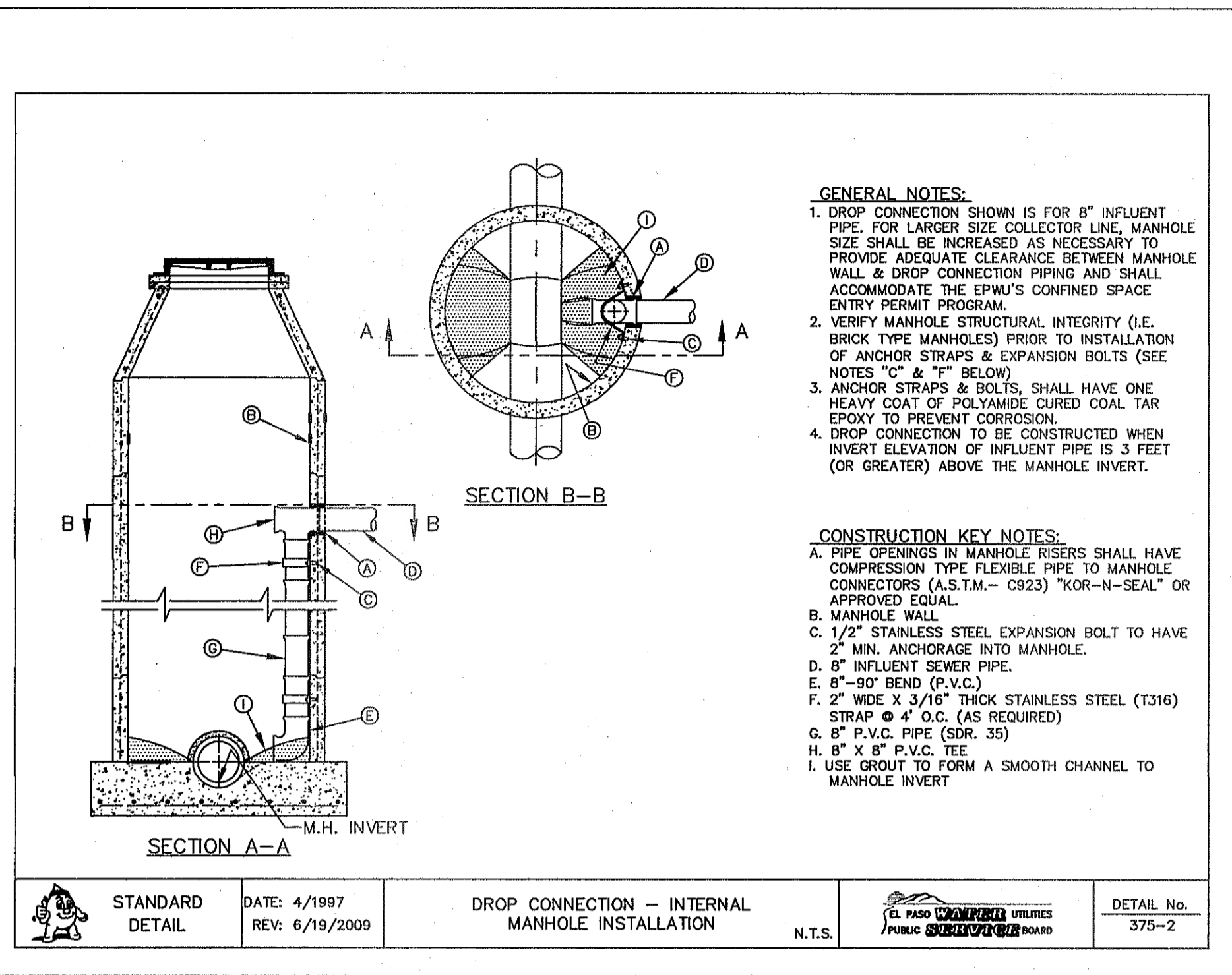
C18.8

Final Approval

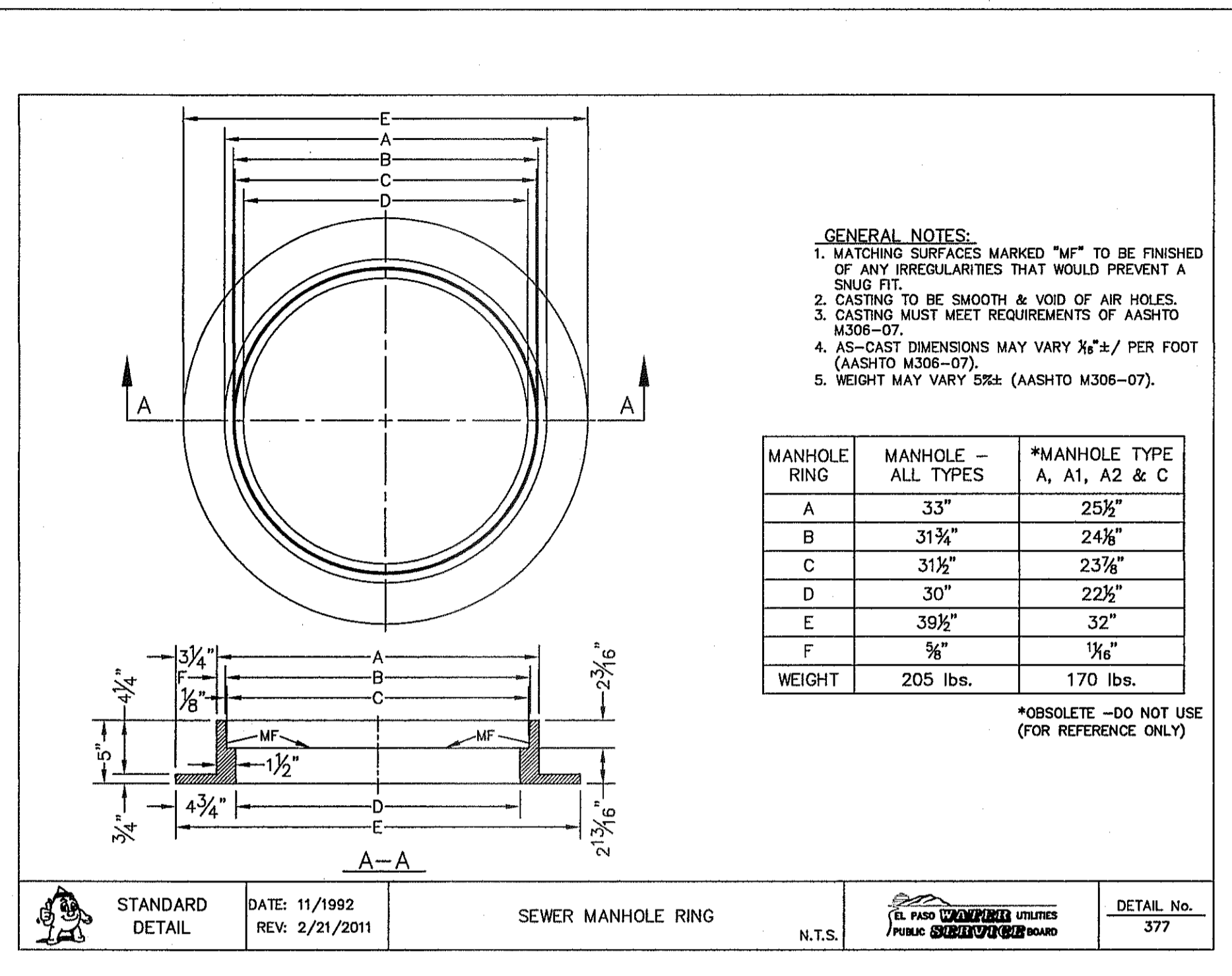
E:\2008\2060-028-1D\Drawings\Construction Drawings\Improvements Plan\Unit Four\Sanitary Sewer\LINE H & I.dwg, 2/7/2015 9:18:13 AM



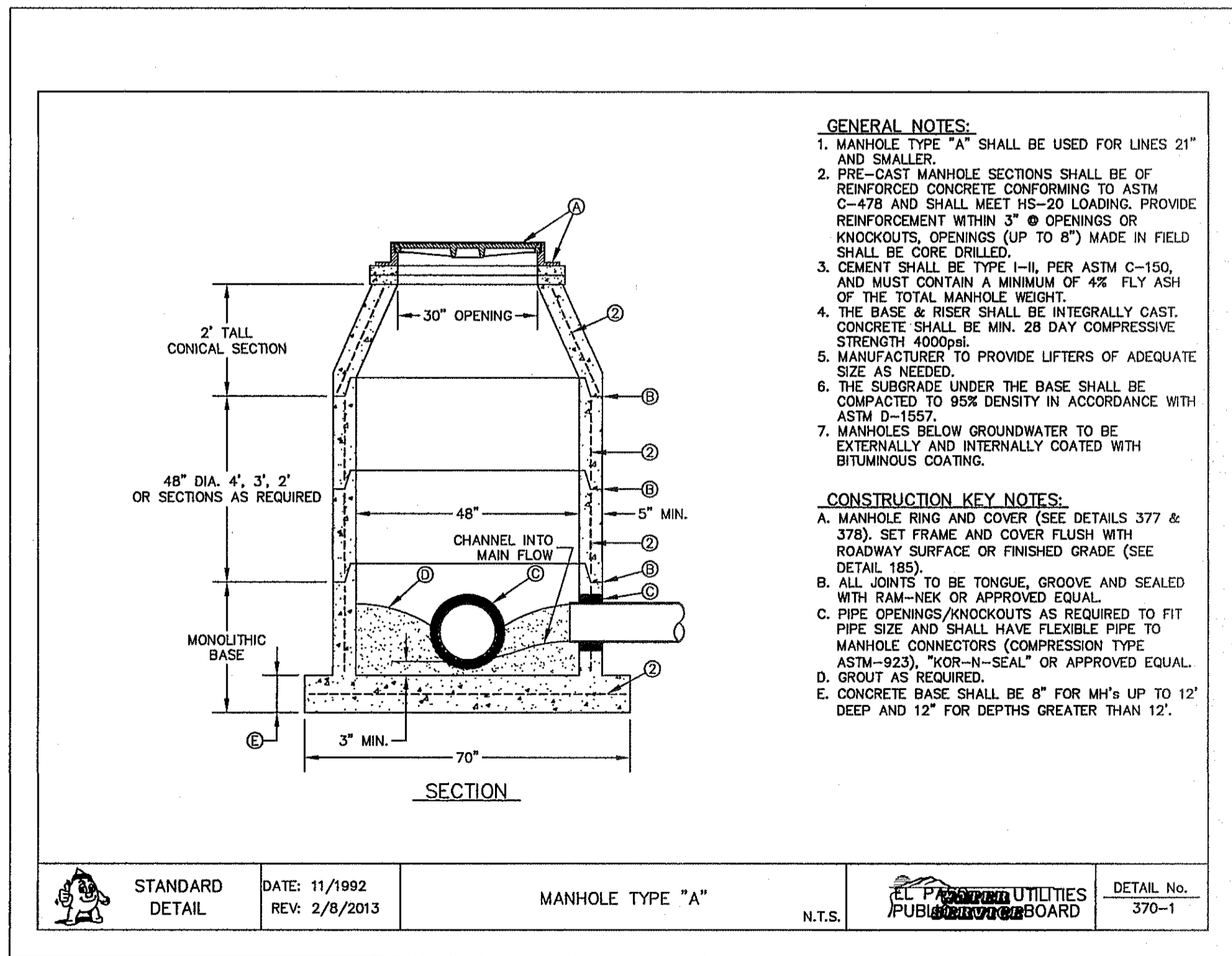
1 SEWER MANHOLE COVER
SCALE: N.T.S.



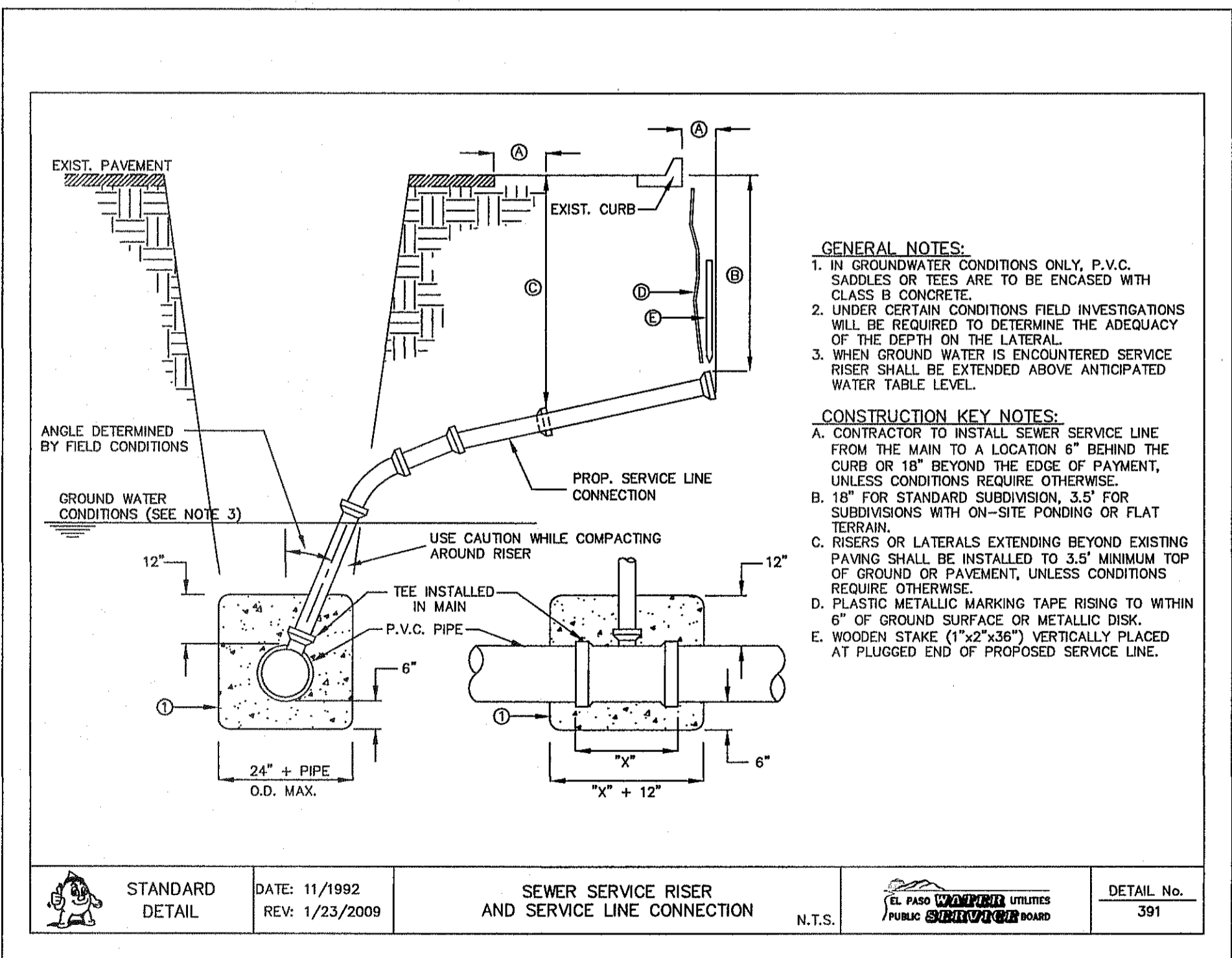
2 DROP CONNECTION - INTERNAL MANHOLE INSTALLATION
SCALE: N.T.S.



3 SEWER MANHOLE RING
SCALE: N.T.S.



4 MANHOLE TYPE "A"
SCALE: N.T.S.



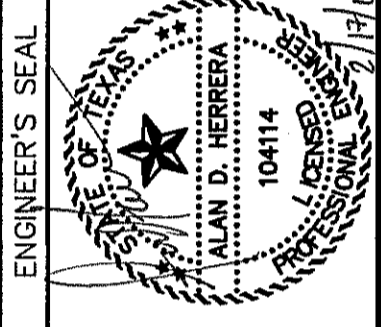
5 SEWER SERVICE RISER AND SERVICE LINE CONNECTION
SCALE: N.T.S.

GENERAL NOTES:

1. DEVELOPER SHALL ENSURE RESIDENTIAL SEWER SERVICE LINES HAVE BEEN EXTENDED TO THE PROPERTY LINE.
2. BUILDER SHALL ENSURE SIDEWALKS ARE NOT CONSTRUCTED UNTIL THE RESIDENTIAL SEWER SERVICE LINES HAVE BEEN EXTENDED TEN (10') PLUS FEET INTO PRIVATE PROPERTY FROM PROPERTY LINE.

REFERENCES - BENCHMARKS
FOUND N.G.S. SURVEY MARKER STAMPED "CHINO 1980"
ELEVATION: 3935.83 (CITY OF EL PASO VERTICAL DATUM SHOWN)
(NOV. 88 DATUM)
3945.78 (NOV. 28 DATUM)
TIE TO THE PROJECT BENCHMARK IS N35°09'09" W, 4,008.83 FEET FROM A 1/2" INCH REBAR FOUND FOR THE NORTHWEST CORNER OF TRACT 11, WELLS D. BUDNY SURVEY NO. 259

engineers • architects • planners
TEXAS REGISTERED ENGINEERING FIRM F-464
4712 Woodrow Bann, Ste. F, El Paso, TX 79924
Office 915.544.5232 Fax 915.544.5233 www.epaep.com



SCALE
Horizontal: N/A
Vertical: N/A
Contour Interval: N/A
DATE: DECEMBER 2014
DESIGN BY: A.H.
DRAWN BY: J.H.
CHKD. BY: J.L.A.
APPVD. BY: J.L.A.
JOB No. 2060-028-1D

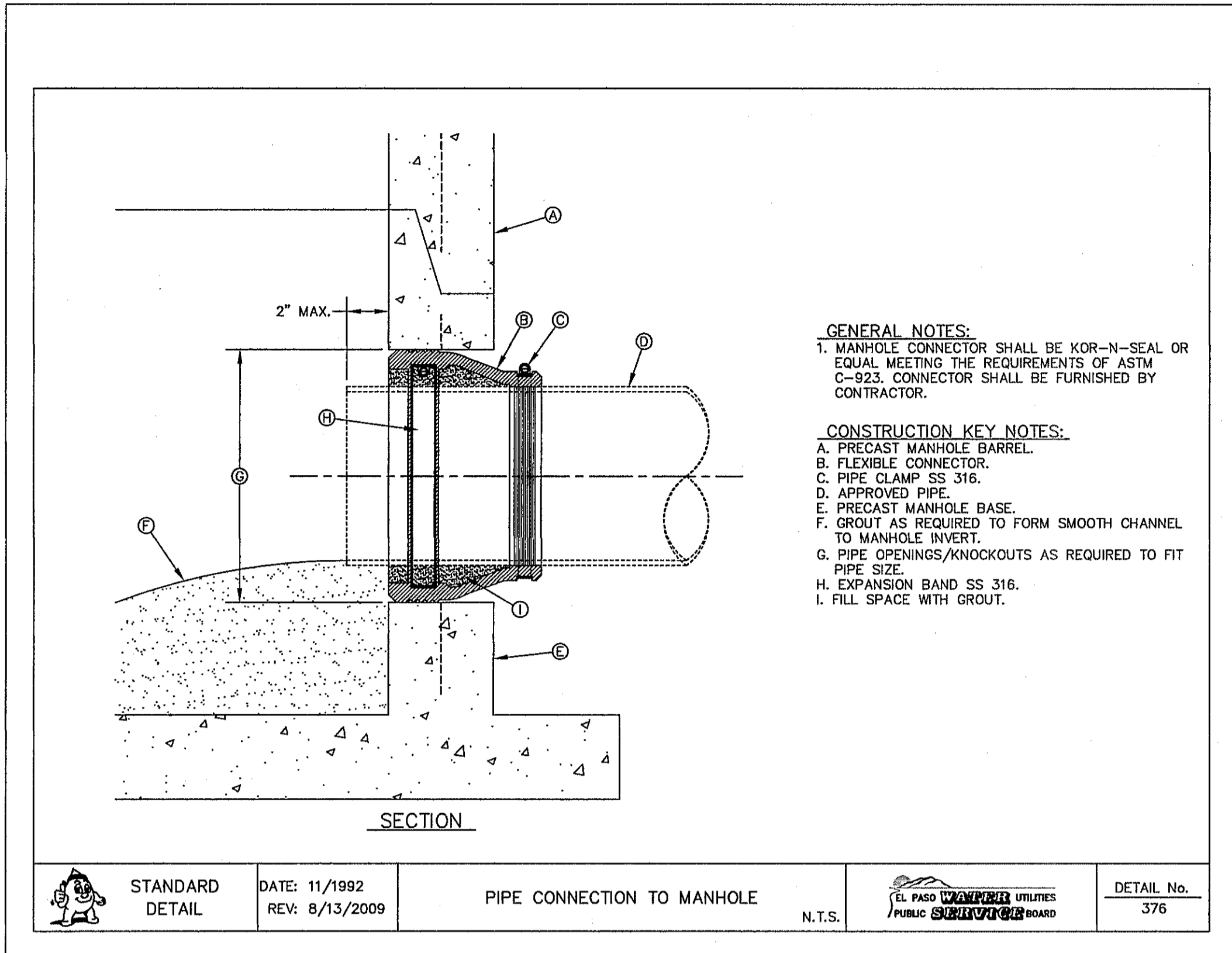
PROJECT TITLE
DESERT SPRINGS UNIT FOUR
SUBDIVISION IMPROVEMENTS

SHEET TITLE
SANITARY SEWER DETAILS
(SHEET 1 OF 3)
SHEET NO.

C19.1



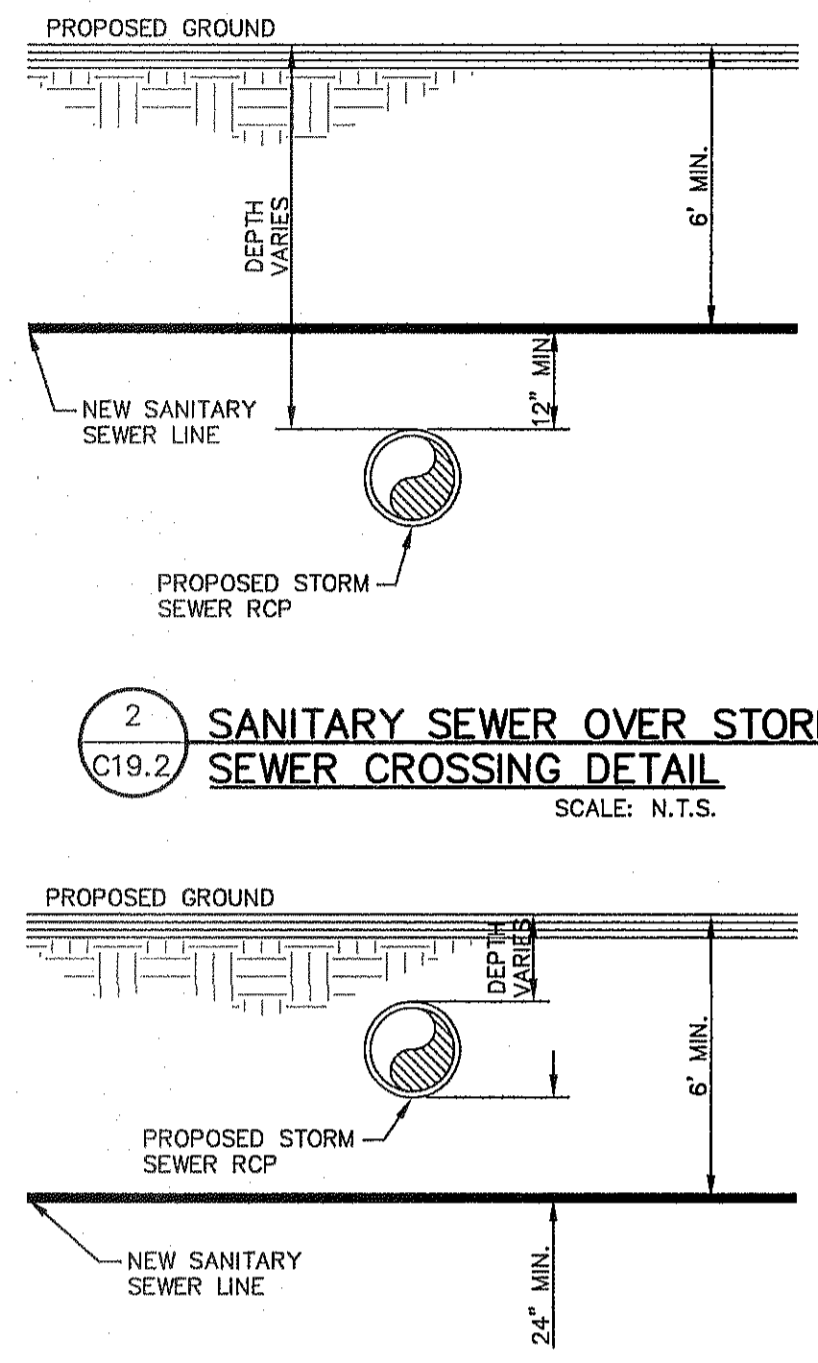
C:\Users\james\Desktop\Projects\Desert Springs Unit Four\DWG\Sanitary Sewer Details\1-C19.1.dwg
 Date: 11/19/2014 10:52:15 AM
 User: james



- GENERAL NOTES:**
 1. MANHOLE CONNECTOR SHALL BE KOR-N-SEAL OR EQUAL MEETING THE REQUIREMENTS OF ASTM C-923. CONNECTOR SHALL BE FURNISHED BY CONTRACTOR.
- CONSTRUCTION KEY NOTES:**
 A. PRECAST MANHOLE BARREL.
 B. FLEXIBLE CONNECTOR.
 C. PIPE CLAMP SS 316.
 D. APPROVED PIPE.
 E. PRECAST MANHOLE BASE.
 F. GROUT AS REQUIRED TO FORM SMOOTH CHANNEL TO MANHOLE INVERT.
 G. PIPE OPENINGS/KNOCKOUTS AS REQUIRED TO FIT PIPE SIZE.
 H. EXPANSION BAND SS 316.
 I. FILL SPACE WITH GROUT.

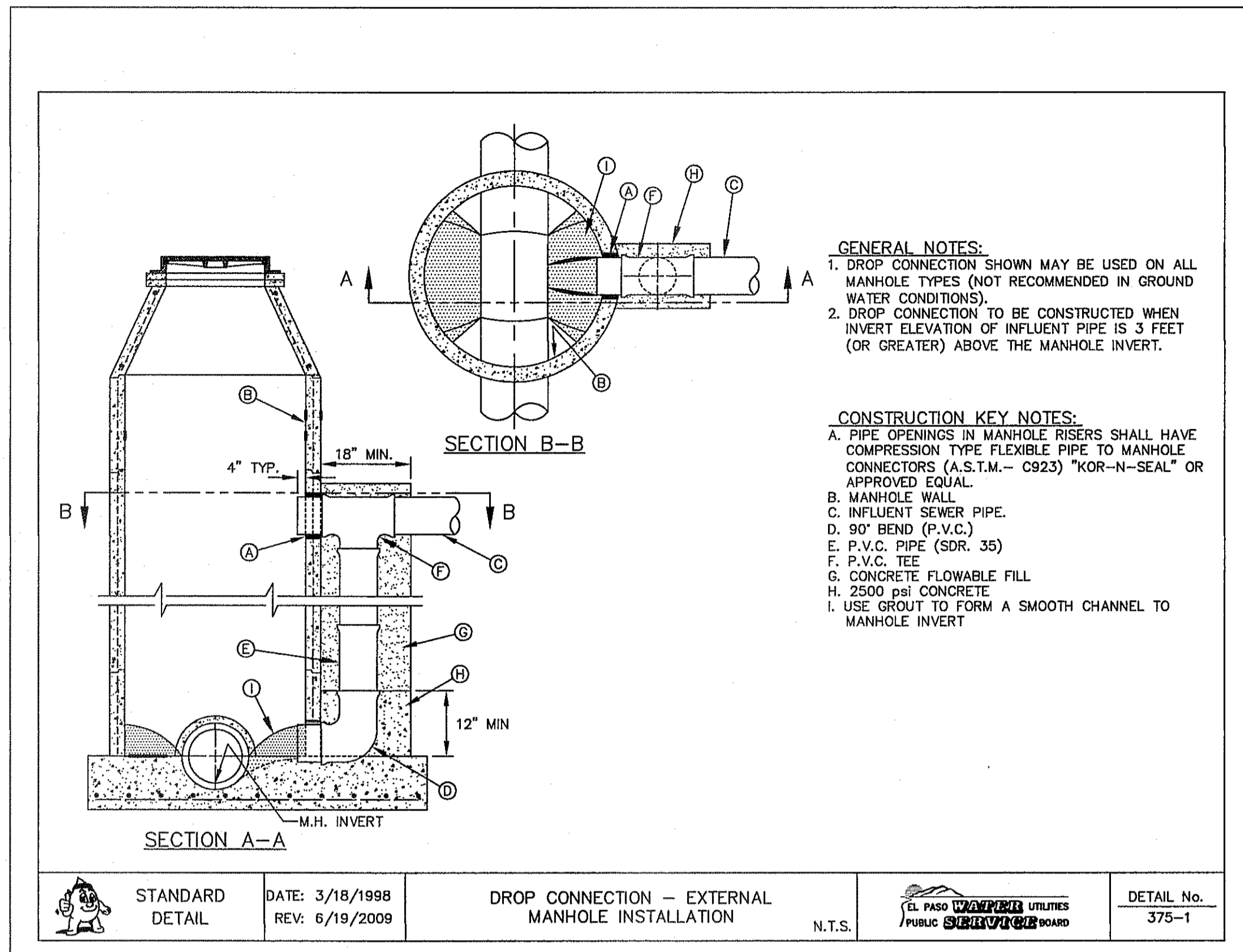
STANDARD DETAIL	DATE: 11/1992 REV: 8/13/2009	PIPE CONNECTION TO MANHOLE	N.T.S.	EL PASO WATER UTILITIES PUBLIC UTILITIES BOARD	DETAIL No. 376
-----------------	---------------------------------	----------------------------	--------	--	----------------

1 PIPE CONNECTION TO MANHOLE
 C19.2 SCALE: N.T.S.



2 SANITARY SEWER OVER STORM SEWER CROSSING DETAIL
 C19.2 SCALE: N.T.S.

3 SANITARY SEWER UNDER STORM SEWER CROSSING DETAIL
 C19.2 SCALE: N.T.S.

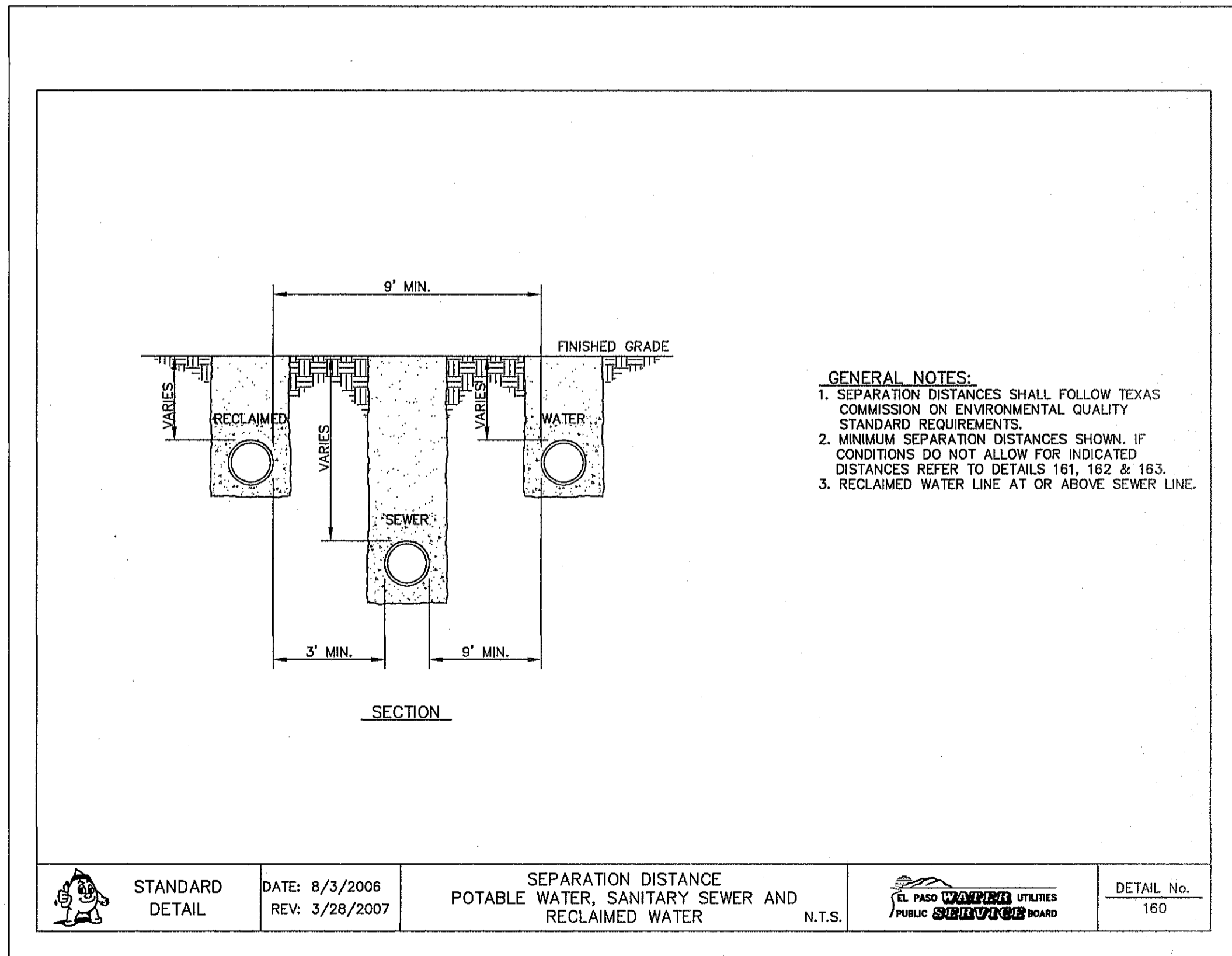


- GENERAL NOTES:**
 1. DROP CONNECTION SHOWN MAY BE USED ON ALL MANHOLE TYPES (NOT RECOMMENDED IN GROUND WATER CONDITIONS).
 2. DROP CONNECTION TO BE CONSTRUCTED WHEN INVERT ELEVATION OF INFLUENT PIPE IS 3 FEET (OR GREATER) ABOVE THE MANHOLE INVERT.

- CONSTRUCTION KEY NOTES:**
 A. PIPE OPENINGS IN MANHOLE RISERS SHALL HAVE COMPRESSION TYPE FLEXIBLE PIPE TO MANHOLE CONNECTORS (A.S.T.M.- C923) "KOR-N-SEAL" OR APPROVED EQUAL.
 B. MANHOLE WALL.
 C. INFLUENT SEWER PIPE.
 D. 90° BEND (P.V.C.).
 E. P.V.C. PIPE (SDR 35).
 F. P.V.C. TEE.
 G. CONCRETE FLOWABLE FILL, 2500 PSI CONCRETE.
 H. USE GROUT TO FORM A SMOOTH CHANNEL TO MANHOLE INVERT.

STANDARD DETAIL	DATE: 3/18/1998 REV: 6/19/2009	DROP CONNECTION - EXTERNAL MANHOLE INSTALLATION	N.T.S.	EL PASO WATER UTILITIES PUBLIC UTILITIES BOARD	DETAIL No. 375-1
-----------------	-----------------------------------	---	--------	--	------------------

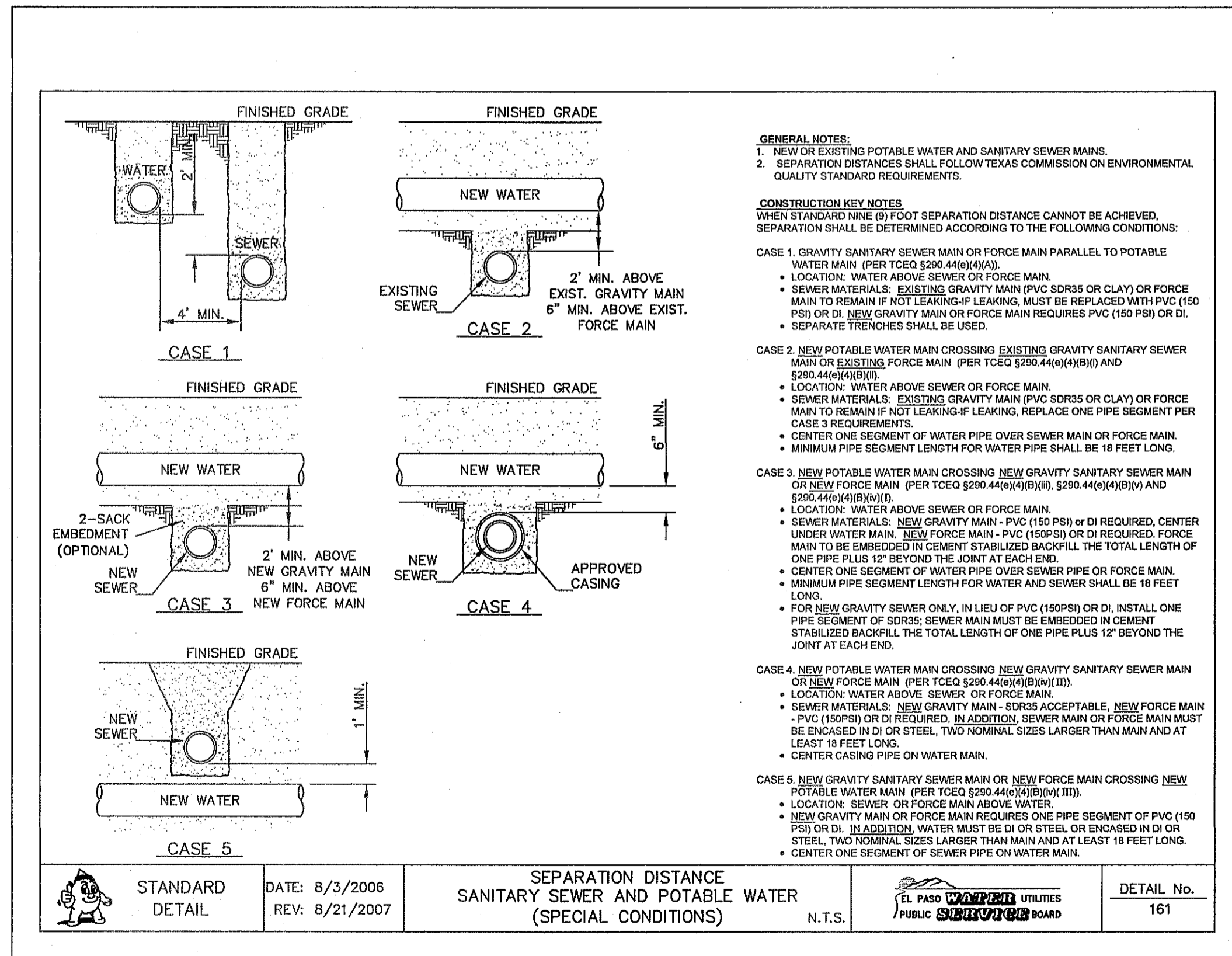
4 DROP CONNECTION - EXTERNAL MANHOLE INSTALLATION
 C19.2 SCALE: N.T.S.



- GENERAL NOTES:**
 1. SEPARATION DISTANCES SHALL FOLLOW TEXAS COMMISSION ON ENVIRONMENTAL QUALITY STANDARD REQUIREMENTS.
 2. MINIMUM SEPARATION DISTANCES SHOWN. IF CONDITIONS DO NOT ALLOW FOR INDICATED DISTANCES REFER TO DETAILS 161, 162 & 163.
 3. RECLAIMED WATER LINE AT OR ABOVE SEWER LINE.

STANDARD DETAIL	DATE: 8/3/2006 REV: 3/28/2007	SEPARATION DISTANCE POTABLE WATER, SANITARY SEWER AND RECLAIMED WATER	N.T.S.	EL PASO WATER UTILITIES PUBLIC UTILITIES BOARD	DETAIL No. 160
-----------------	----------------------------------	---	--------	--	----------------

5 SEPARATION DISTANCE POTABLE WATER, SANITARY AND RECLAIMED WATER
 C19.2 SCALE: N.T.S.



- GENERAL NOTES:**
 1. NEW OR EXISTING POTABLE WATER AND SANITARY SEWER MAINS.
 2. SEPARATION DISTANCES SHALL FOLLOW TEXAS COMMISSION ON ENVIRONMENTAL QUALITY STANDARD REQUIREMENTS.
- CONSTRUCTION KEY NOTES:**
 WHEN STANDARD NINE (9) FOOT SEPARATION DISTANCE CANNOT BE ACHIEVED, SEPARATION SHALL BE DETERMINED ACCORDING TO THE FOLLOWING CONDITIONS:
- CASE 1. GRAVITY SANITARY SEWER MAIN OR FORCE MAIN PARALLEL TO POTABLE WATER MAIN (PER TCEQ §200.44(b)(4)(B)).
- LOCATION: WATER ABOVE SEWER OR FORCE MAIN.
 - SEWER MATERIALS: EXISTING GRAVITY MAIN (PVC SDR35 OR CLAY) OR FORCE MAIN TO REMAIN IF NOT LEAKING IF LEAKING, MUST BE REPLACED WITH PVC (150 PSI) OR DI. NEW GRAVITY MAIN OR FORCE MAIN REQUIRES PVC (150 PSI) OR DI.
 - SEPARATE TRENCHES SHALL BE USED.
- CASE 2. NEW POTABLE WATER MAIN CROSSING EXISTING GRAVITY SANITARY SEWER MAIN OR EXISTING FORCE MAIN (PER TCEQ §200.44(b)(4)(B)) AND §200.44(b)(4)(B)(ii).
- LOCATION: WATER ABOVE SEWER OR FORCE MAIN.
 - SEWER MATERIALS: EXISTING GRAVITY MAIN (PVC SDR35 OR CLAY) OR FORCE MAIN TO REMAIN IF NOT LEAKING IF LEAKING, REPLACE ONE PIPE SEGMENT PER CASE 3 REQUIREMENTS.
 - CENTER ONE SEGMENT OF WATER PIPE OVER SEWER MAIN OR FORCE MAIN.
 - MINIMUM PIPE SEGMENT LENGTH FOR WATER PIPE SHALL BE 18 FEET LONG.
- CASE 3. NEW POTABLE WATER MAIN CROSSING NEW GRAVITY SANITARY SEWER MAIN OR NEW FORCE MAIN (PER TCEQ §200.44(b)(4)(B)) AND §200.44(b)(4)(B)(ii).
- LOCATION: WATER ABOVE SEWER OR FORCE MAIN.
 - SEWER MATERIALS: NEW GRAVITY MAIN - PVC (150 PSI) OR DI REQUIRED, CENTER LOWER WATER MAIN. NEW FORCE MAIN - PVC (150 PSI) OR DI REQUIRED, FORCE MAIN TO BE EMBEDDED IN CEMENT STABILIZED BACKFILL THE TOTAL LENGTH OF ONE PIPE PLUS 12" BEYOND THE JOINT AT EACH END.
 - CENTER ONE SEGMENT OF WATER PIPE OVER SEWER PIPE OR FORCE MAIN.
 - MINIMUM PIPE SEGMENT LENGTH FOR WATER AND SEWER SHALL BE 18 FEET LONG.
 - FOR NEW GRAVITY SEWER ONLY, IN LIEU OF PVC (150 PSI) OR DI, INSTALL ONE PIPE SEGMENT OF SDR35 SEWER MAIN MUST BE EMBEDDED IN CEMENT STABILIZED BACKFILL THE TOTAL LENGTH OF ONE PIPE PLUS 12" BEYOND THE JOINT AT EACH END.
- CASE 4. NEW POTABLE WATER MAIN CROSSING NEW GRAVITY SANITARY SEWER MAIN OR NEW FORCE MAIN (PER TCEQ §200.44(b)(4)(B)) AND §200.44(b)(4)(B)(ii).
- LOCATION: WATER ABOVE SEWER OR FORCE MAIN.
 - SEWER MATERIALS: NEW GRAVITY MAIN - SDR35 ACCEPTABLE. NEW FORCE MAIN - PVC (150 PSI) OR DI REQUIRED. IN ADDITION, SEWER MAIN OR FORCE MAIN MUST BE ENCASED IN DI OR STEEL, TWO NOMINAL SIZES LARGER THAN MAIN AND AT LEAST 18 FEET LONG.
 - CENTER CASING PIPE ON WATER MAIN.
- CASE 5. NEW GRAVITY SANITARY SEWER MAIN OR NEW FORCE MAIN CROSSING NEW POTABLE WATER MAIN (PER TCEQ §200.44(b)(4)(B)) AND §200.44(b)(4)(B)(ii).
- LOCATION: SEWER OR FORCE MAIN ABOVE WATER.
 - NEW GRAVITY MAIN OR FORCE MAIN REQUIRES ONE PIPE SEGMENT OF PVC (150 PSI) OR DI. IN ADDITION, WATER MUST BE DI OR STEEL, OR ENCASED IN DI OR STEEL, TWO NOMINAL SIZES LARGER THAN MAIN AND AT LEAST 18 FEET LONG.
 - CENTER ONE SEGMENT OF SEWER PIPE ON WATER MAIN.

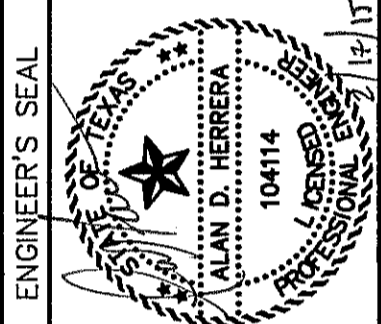
STANDARD DETAIL	DATE: 8/3/2006 REV: 8/21/2007	SEPARATION DISTANCE SANITARY SEWER AND POTABLE WATER (SPECIAL CONDITIONS)	N.T.S.	EL PASO WATER UTILITIES PUBLIC UTILITIES BOARD	DETAIL No. 161
-----------------	----------------------------------	---	--------	--	----------------

6 SEPARATION DISTANCE SANITARY SEWER AND POTABLE WATER (SPECIAL CONDITIONS)
 C19.2 SCALE: N.T.S.

REFERENCES - BENCHMARKS

FOUND N.G.S. SURVEY MARKER STAMPED "CHNO 1890"	ELEVATION: 3935.83 (CITY OF EL PASO VERTICAL DATUM)
(SHOW) (NOV. 88 DATUM)	3945.78 (NGVD 29 DATUM)
SEE TO THE PROJECT BENCHMARK IS N33°09'09" W, 4,008.83 FEET FROM A 1/2 INCH REBAR FOUND FOR THE NORTHWEST CORNER OF TRACT 11, BELLE D. BUDNEY SURVEY NO. 239	

engineers • architects • planners
 TEXAS REGISTERED ENGINEERING FIRM F-464
 4712 Woodrow Bann, Ste. F, El Paso, TX 79924
 Office 915.544.5232 Fax 915.544.5233 www.oegroup.net



SCALE

Horizontal:	N/A
Vertical:	N/A
Contour Interval:	N/A
DATE:	DECEMBER 2014
DESIGN BY:	A.H.
DRAWN BY:	J.H.
CHKD. BY:	J.L.A.
APPVD. BY:	J.L.A.

JOB No. 2060-028-LD

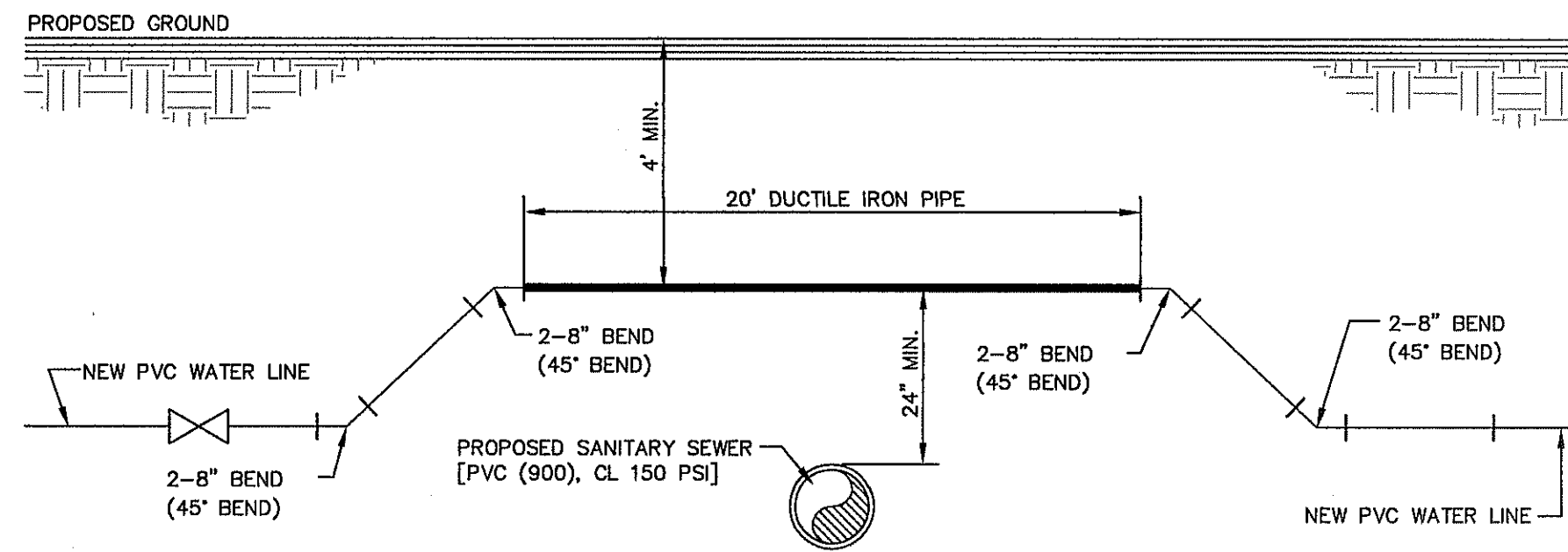
PROJECT TITLE
DESERT SPRINGS UNIT FOUR
 SUBDIVISION IMPROVEMENTS

SHEET TITLE
 SANITARY SEWER DETAILS
 (SHEET 2 OF 3)
 SHEET NO.

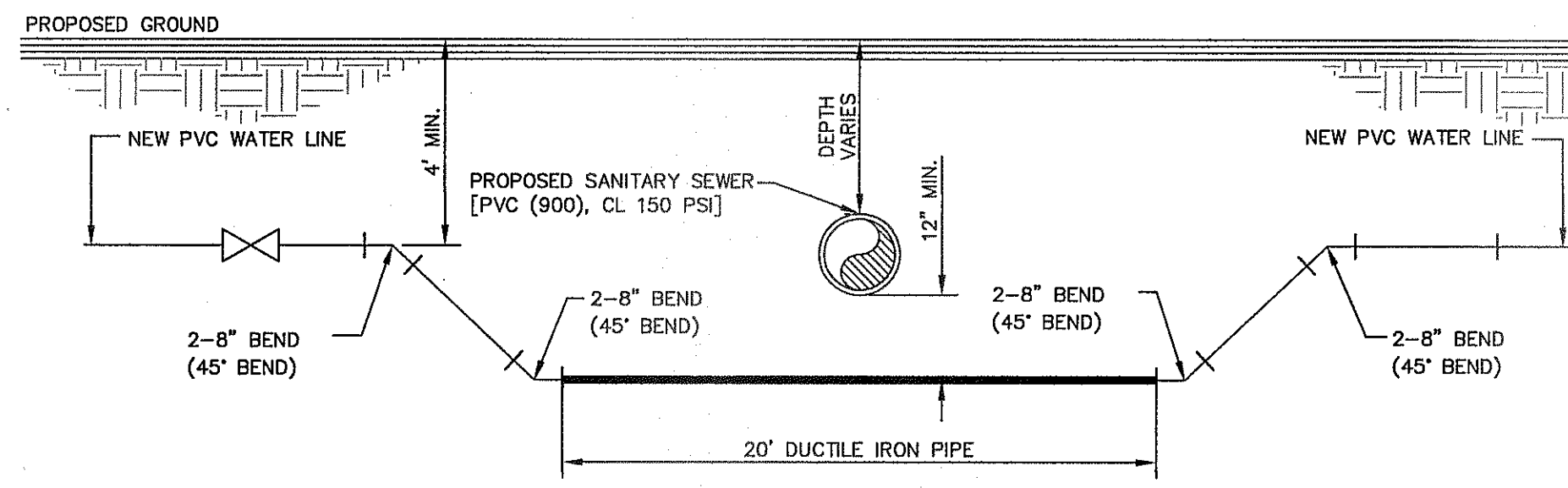
C19.2



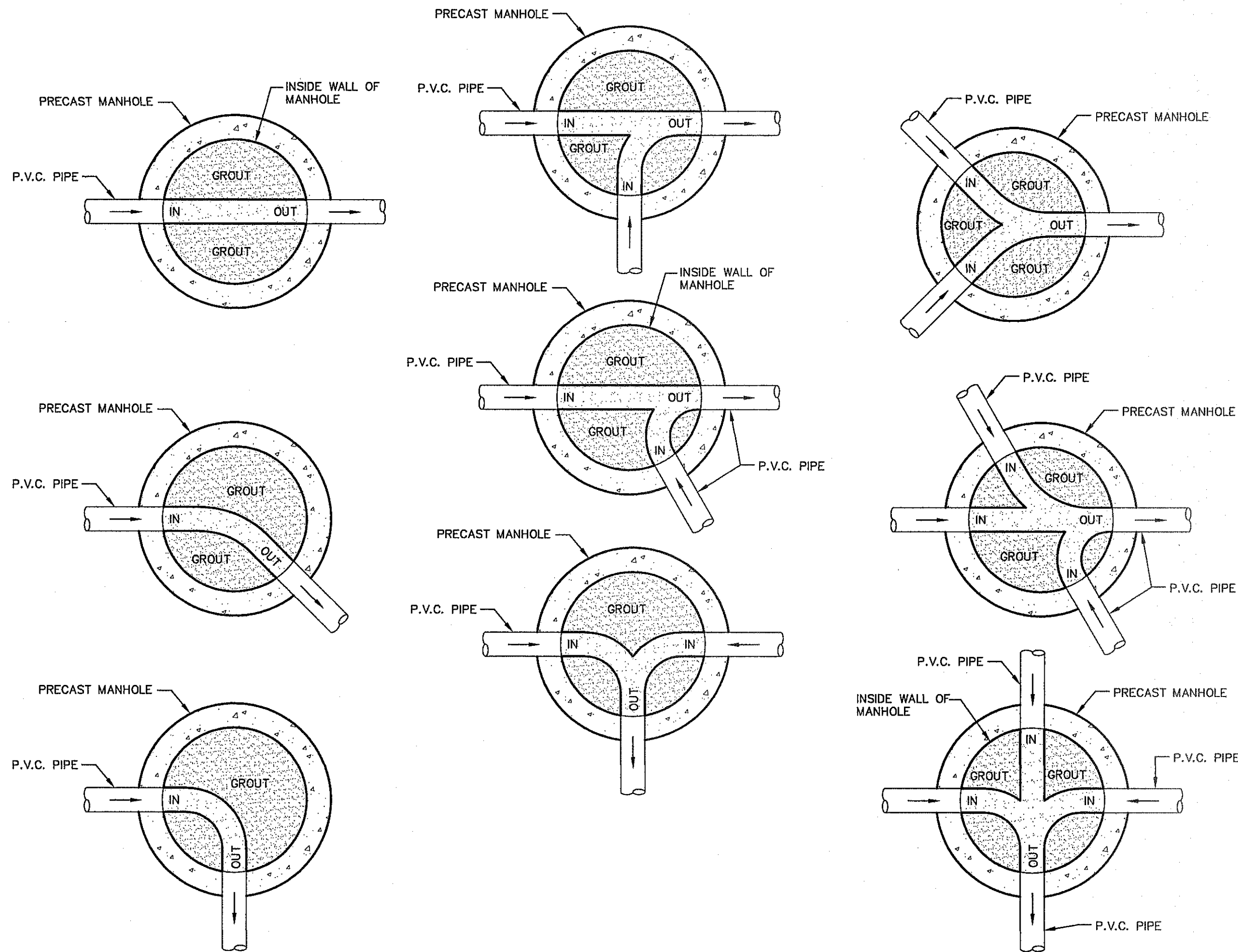
C:\Users\j2020\OneDrive - City of El Paso\Documents\El Paso\Projects\Desert Springs\Subdivision Improvements\DWG\C19.2\SDS-028-LD.dwg, 2/17/2015, 8:25:48 AM



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



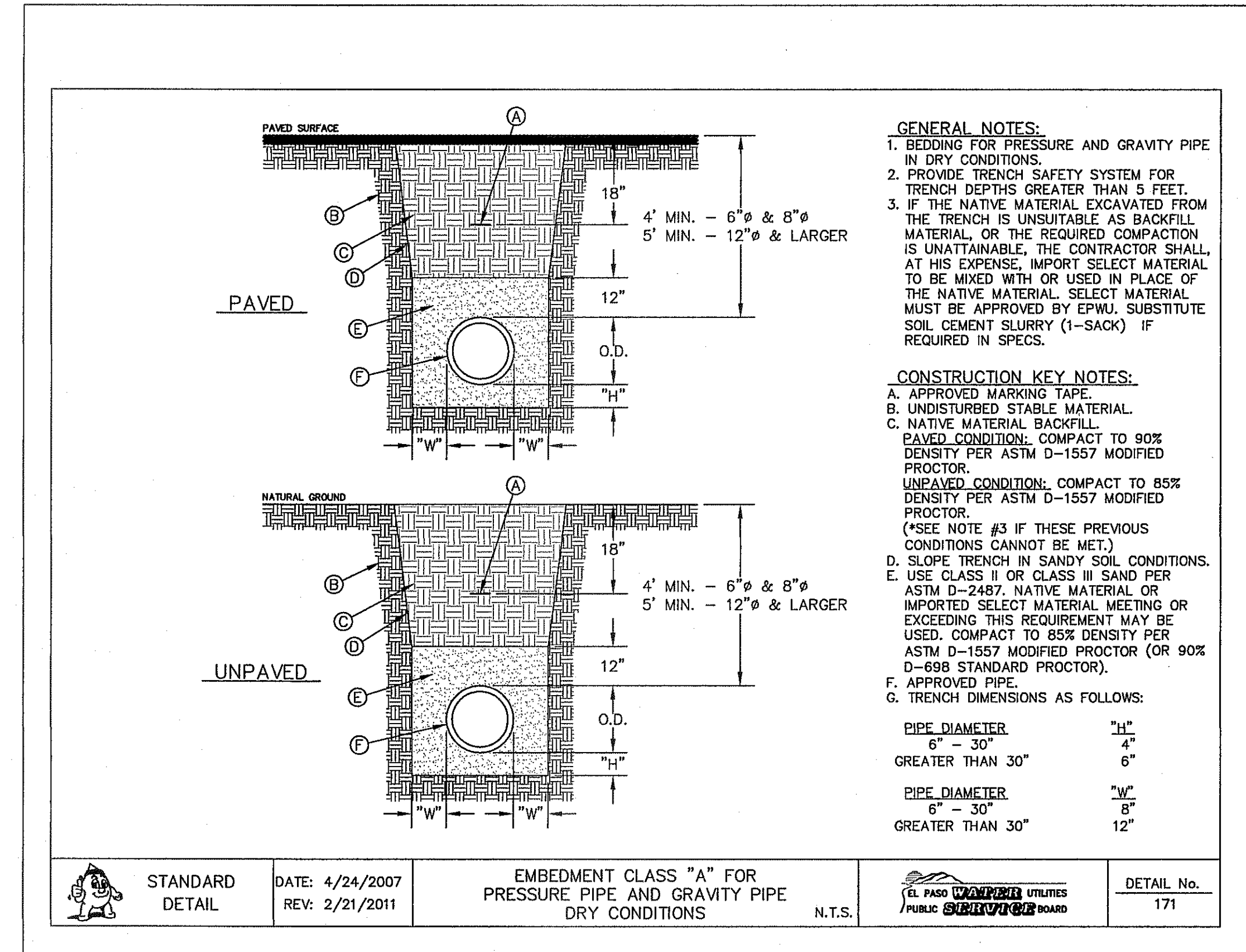
2 SANITARY SEWER OVER WATER LINE CROSSING DETAIL
SCALE: N.T.S.



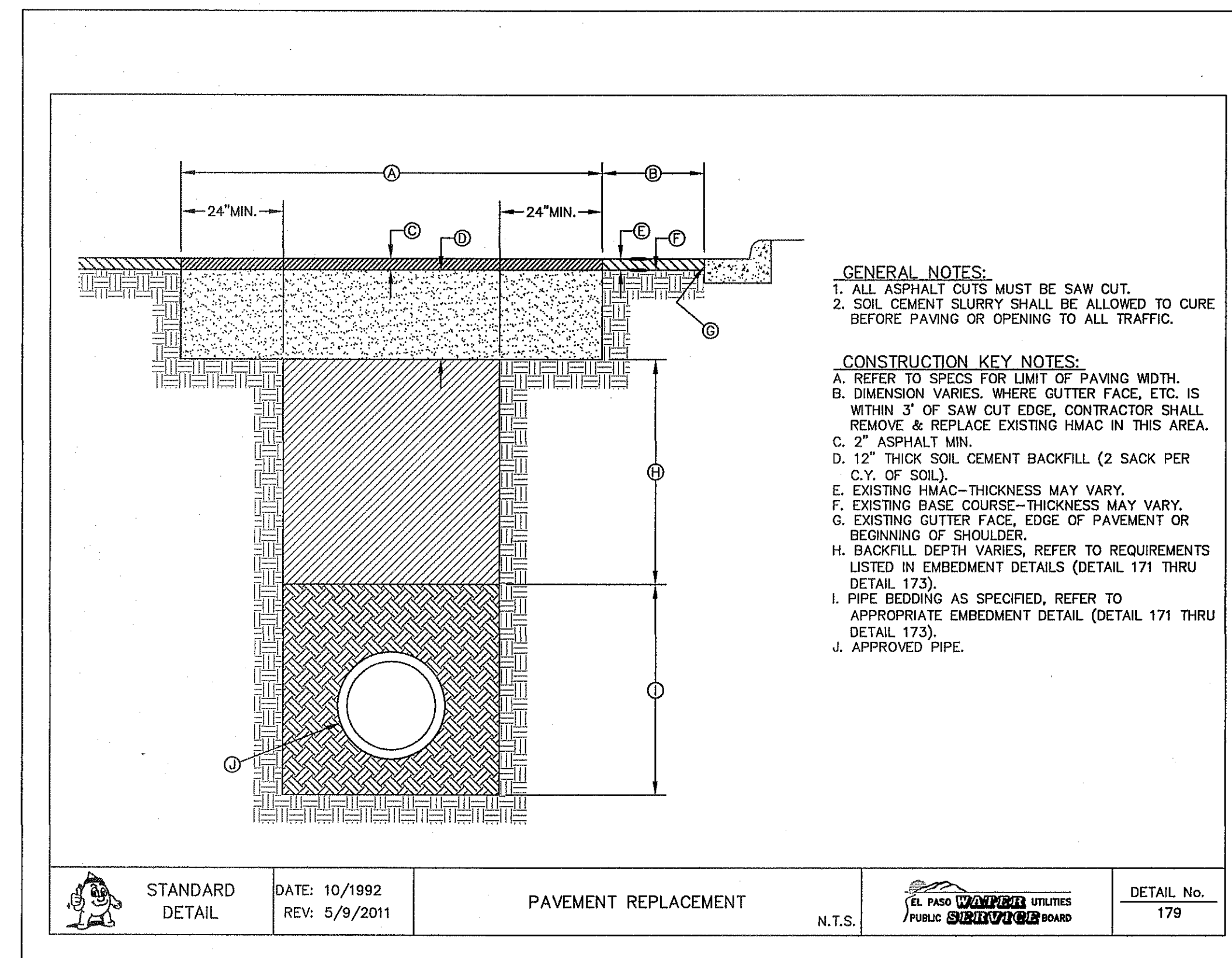
NOTES:

- CONTRACTOR TO FORM SMOOTH CHANNEL WITH GROUT TO CONTINUE PIPE SLOPE IN THE DIRECTION OF FLOW.
- WIDTH OF CHANNEL TO MATCH INSIDE DIAMETER OF PIPE.
- WHEN DIFFERENT SIZES OF PIPE ARE CONNECTING TO MANHOLE, TAPER WIDTH OF CHANNEL TO TOTAL LENGTH OF INSIDE DIAMETER OF MANHOLE.
- GROUT TO BE USED FOR BOTH MANHOLES AND DROP MANHOLES. NO P.V.C. PIPE SHALL BE INSTALLED IN MANHOLE. REFER TO DETAILS 2 & 4 ON SHEET C19.1.
- REFER TO PLAN & PROFILE SHEETS FOR SIZE OF PIPES AND MANHOLES.

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



3 EMBEDMENT CLASS "A" FOR PRESSURE PIPE AND GRAVITY PIPE DRY CONDITIONS
SCALE: N.T.S.



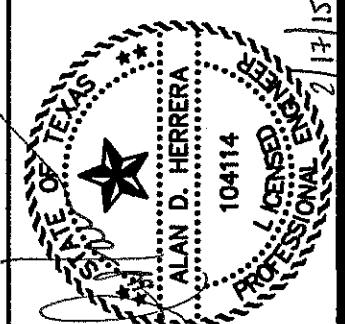
- GENERAL NOTES:**
- ALL ASPHALT CUTS MUST BE SAW CUT.
 - SOIL CEMENT SLURRY SHALL BE ALLOWED TO CURE BEFORE PAVING OR OPENING TO ALL TRAFFIC.

- CONSTRUCTION KEY NOTES:**
- REFER TO SPECS FOR LIMIT OF PAVING WIDTH.
 - DIMENSION VARIES. WHERE GUTTER FACE, ETC. IS WITHIN 3' OF SAW CUT EDGE, CONTRACTOR SHALL REMOVE & REPLACE EXISTING HMA/C IN THIS AREA.
 - 2" ASPHALT MIN.
 - 12" THICK SOIL CEMENT BACKFILL (2 SACK PER C.Y. OF SOIL).
 - EXISTING HMA/C—THICKNESS MAY VARY.
 - EXISTING BASE COURSE—THICKNESS MAY VARY.
 - EXISTING GUTTER 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.

5 PAVEMENT REPLACEMENT
SCALE: N.T.S.

REFERENCES — BENCHMARKS
FOUND N.G.S. SURVEY MARKER STAMPED "CHNO 1980"
ELEVATION: 3935.83 (CITY OF EL PASO VERTICAL DATUM SHOW) (NOV 88 DATUM)
3945.78 (NOV 28 DATUM)
TIE TO THE PROJECT BENCHMARK IS N33°09'09" W, 4.008.83 FEET FROM A 1/2" INCH REBAR FOUND FOR THE NORTHWEST CORNER OF TRACT 11, WELLS D. JORDY SURVEY NO. 259

engineers • architects • planners
TEXAS REGISTERED ENGINEERING FIRM F-464
4712 Woodrow Bean, Ste. F El Paso, TX 79924
Office: 915.544.8322 Fax: 915.544.8323 www.oasgroup.net



SCALE: N/A
Horizontal: N/A
Vertical: N/A
Contour Interval: N/A
DATE: DECEMBER 2014
DESIGN BY: A.H.
DRAWN BY: J.H.
CHKD. BY: J.L.A.
APPVD. BY: J.L.A.
JOB No. 2080-028-LD

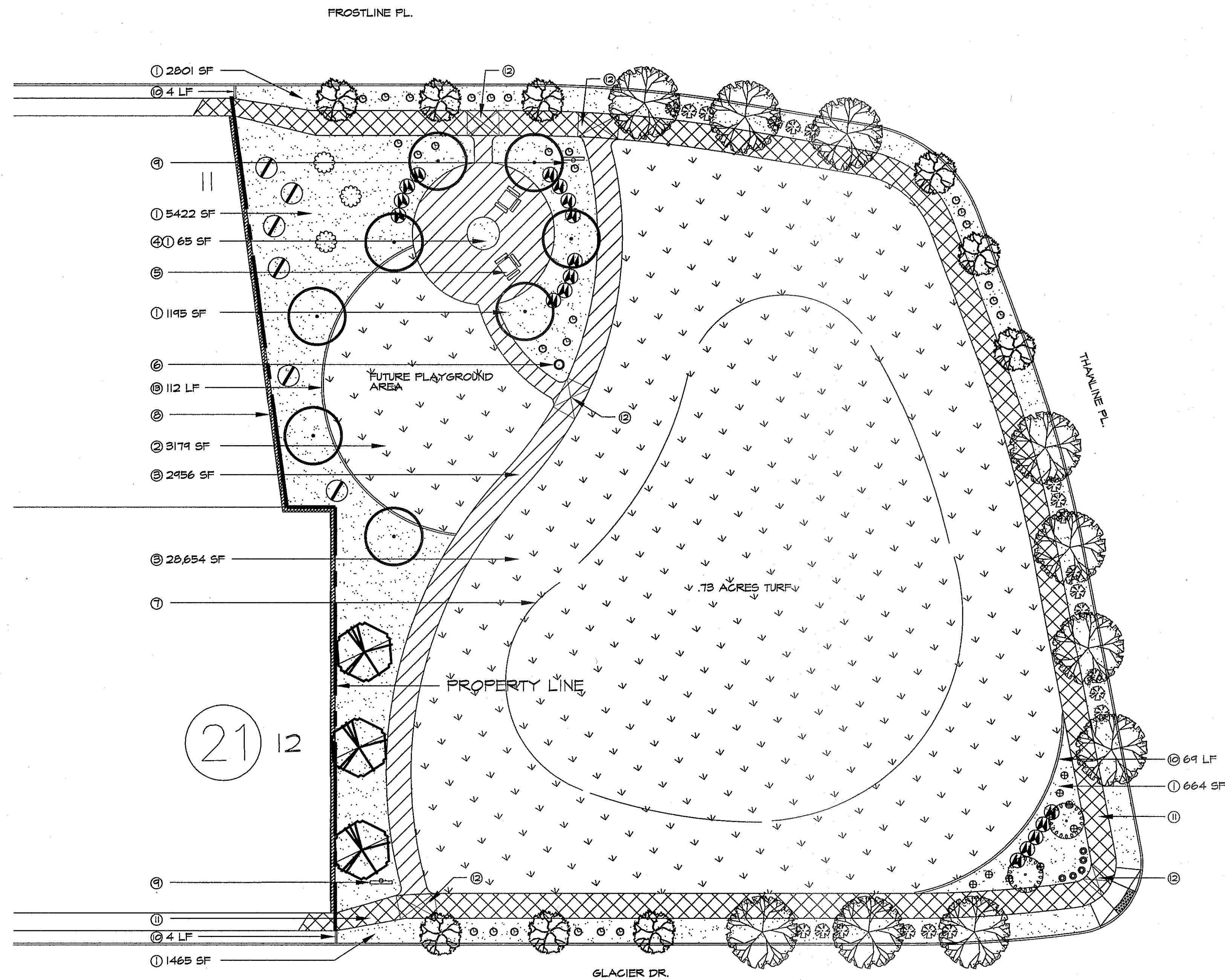
PROJECT TITLE
DESERT SPRINGS UNIT FOUR
SUBDIVISION IMPROVEMENTS

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

C19.3



A:\3200\3200-01-10\000000\Construction\Plan\Sheet\C19.3.dwg, 2/17/2011, 8:22:19 AM

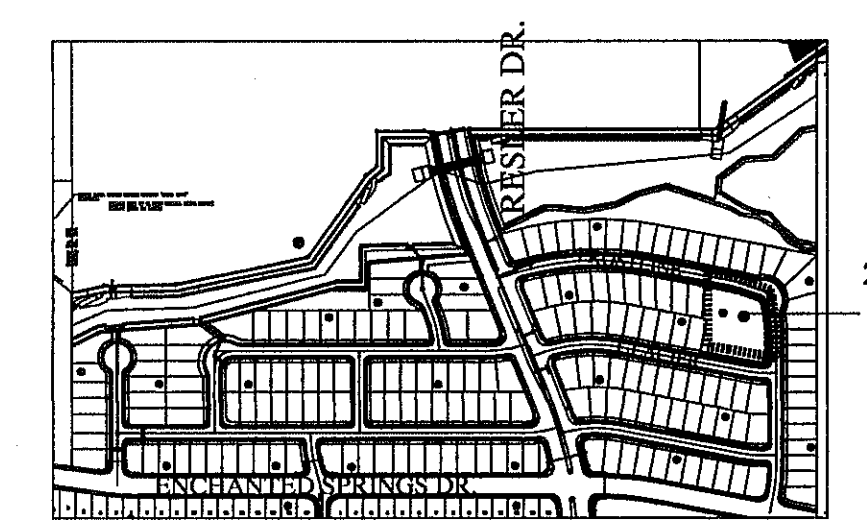


PLAN VIEW - PLANTING AND MATERIALS

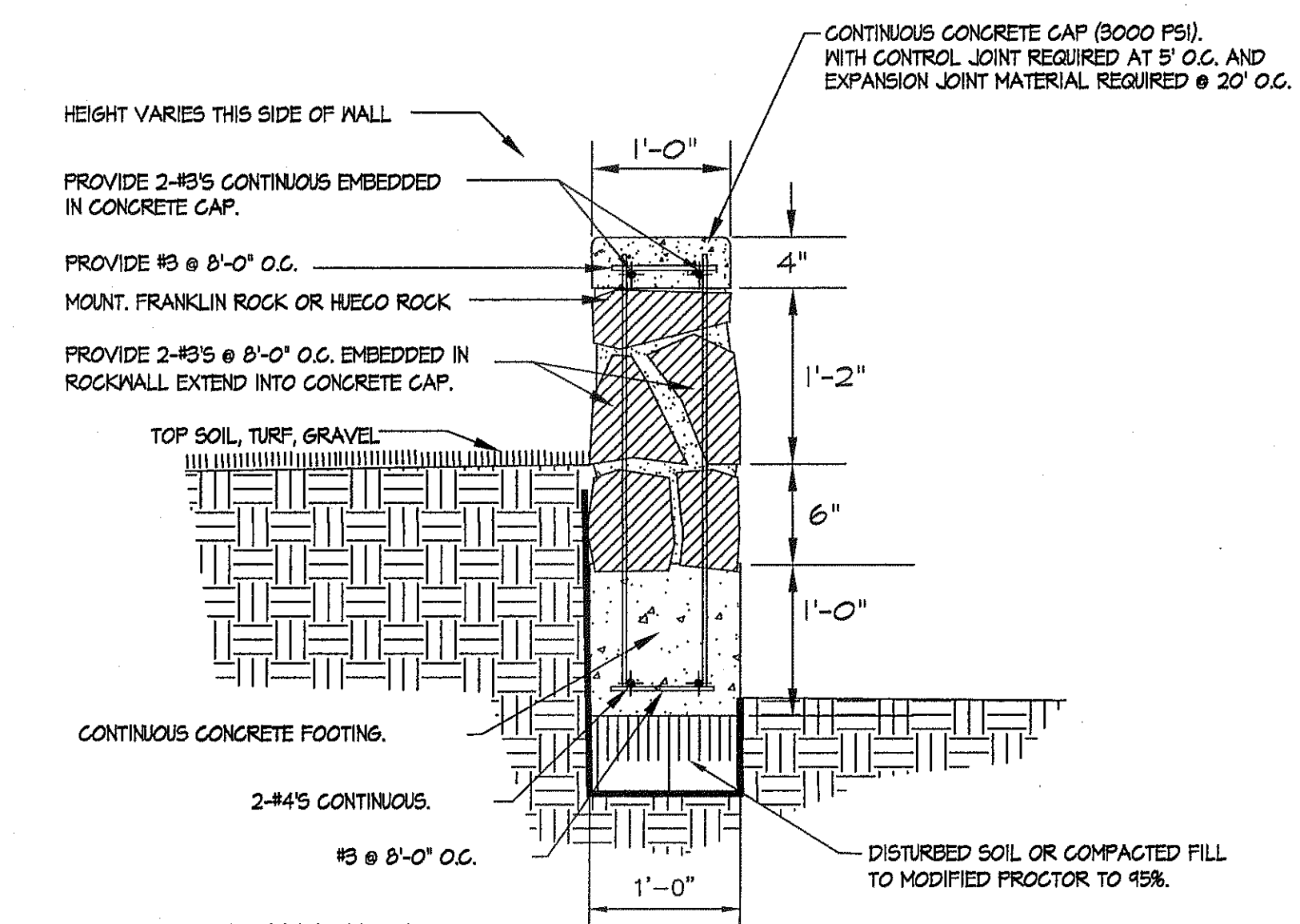
SCALE: 1" = 20' - 0"

DESERT SPRINGS U4 PARK MATERIAL LEGEND AND DETAIL KEY:

- FRANKLIN RED GRAVEL CRUSHER FINES 3" DEPTH 2" BELOW ALL CONCRETE SURFACES. USE NEED BARRIER. PROJECT TOTAL [1165 SF] SEE DETAIL (C) ON SHEET L15.
- SANTA ANA BERBERIA GRASS PROJECT TOTAL [31833 SF] TOP OF SOD 2" BELOW TOP OF SIDEWALK. SEE DETAIL (D) ON SHEET L15.
- PARK T WIDE CONCRETE WALKWAY. MAX 2% CROSS SLOPE PROJECT TOTAL [2355 SF] SEE DETAIL (C) ON SHEET L15.
- 4" DIAMETER PLANTING SPACE IN CONCRETE. REFER TO LAYOUT PLAN FOR LOCATION. MUST NOT BLOCK ADA ACCESSIBILITY TO PLOTTING TABLES.
- ACCESSIBLE PLOTTING TABLE - PROJECT TOTAL [2] BROWN-MATCH COLORS TO TRASH RECEPTACLE SEE DETAIL (E) ON SHEET L15.
- TRASH RECEPTACLE - PROJECT TOTAL [1] BROWN-MATCH COLORS TO BENCH AND TRASH RECEPTACLE SEE DETAIL (E) ON SHEET L15.
- 6"-8" RECESSED AREA FOR WATER HARVESTING PARKS AND RECREATION REPRESENTATIVE MUST APPROVE GRADING PRIOR TO INSTALLING SOD OR GRAVEL.
- ROCK WALL BY DEVELOPER. PROJECT TOTAL [149 LF] BUILT BY DEVELOPER ON RESIDENTIAL PROPERTY.
- PARK INFORMATION SIGN - LOCATION SHALL BE APPROVED BY PARKS DEPT REPRESENTATIVE. PROJECT TOTAL [2] SEE DETAIL (I) ON SHEET L15.
- 6"x12" CONCRETE HEADER CURB [69 LF] SEE DETAIL (C) ON SHEET L15.
- 7' WIDE PERIMETER SIDEWALK BY DEVELOPER SEE DETAIL (C) ON SHEET L15.
- SIDEWALK LANDINGS - 2% MAXIMUM SLOPE ALL DIRECTIONS
- PROPOSED ROCK WALL SEE DETAIL (C) ON THIS SHEET.



DRAWING KEY
SCALE: 1" = 600' - 0"



ROCKWALL NOTES:

- STONE FOR ROCKWALL SHALL BE AS NEARLY UNIFORM IN SECTION AS IS PRACTICABLE. THE STONE SHALL BE DENSE AND RESISTANT TO AIR AND WATER.
- MORTAR SHALL BE TYPE 'S' 1800 P.S.I. AS PER ASTM C270-13. MORTAR SHALL CONSIST BY VOLUME OF 1 PART PORTLAND CEMENT, 3 1/2 PARTS OF CLEAN, HARD, DURABLE SAND AND 1/4 PART (MORTAR) LIME THOROUGHLY MIXED WITH WATER.
- ROCKWALL MORTAR JOINTS SHALL NOT EXCEED 3/4" TO 1 1/4".
- STONE SHALL BE CLEANED, FREE OF DIRT PRIOR TO INSTALLATION.
- NO RIVER ROCK SHALL BE ALLOWED FOR ROCKWALLS.

PARK SITE NOTES

- NO SIGNS, FIRE HYDRANTS, LIGHTS, NODES, ELECTRICAL WATER BOXES, TELEPHONE PEDESTALS, NO OBSTRUCTIONS IN GENERAL SHALL BE PLACED INTO PROPOSED PERIMETER SIDEWALK, NOR SHALL ANY UTILITY CONDUITS BE PLACED ALONG THE PARK SITE. - ANY UTILITIES WITHIN THE PARKWAY MUST BE BURIED WITH 5'-0" MINIMUM COVER. IF PLACED BENEATH THE PROPOSED SIDEWALK STANDARD BURIAL DEPTHS APPLY.
- DEVELOPER SHALL OBTAIN SOIL SAMPLES (TAKEN FROM PROPOSED PARK SITE LOCATION FINISHED GRADE) AND PROVIDE COMPLETE ANALYSIS REPORT (TEXTURAL, MINERAL AVAILABILITY, WATER INFILTRATION, AND DETAILED SALINITY AND PH CONDUCTIVITY TEST) WITH RECOMMENDATIONS FOR SOIL AMENDMENTS AND PREPARATION TO INSURE EXISTING SOIL CONDITIONS ARE SUITABLE FOR TURF, SHRUBS AND TREE GROWTH. COORDINATE SITE VISIT WITH PARKS STAFF FOR COLLECTION OF SOIL SAMPLES.
- ANY UNSUITABLE SOIL CONDITIONS SHALL BE REMEDIATED TO ELIMINATE HARD SOILS, STONY SOILS, HIGH CALICHE SOILS, CLAY SOILS AND CONTAMINATED SOILS TO A MINIMUM DEPTH OF 12 INCHES. HARD PAN CALICHE, CLAY SOILS AND ROCKY SOILS MUST BE SHATTERED IN TWO DIRECTIONS TO A DEPTH OF 36" BELOW FINISHED GRADE AS REQUIRED FOR PROPER PLANTING, AS PER PARKS DESIGN AND CONSTRUCTION STANDARDS.
- ALL PARK IMPROVEMENTS (SIDEWALKS, RAMPS, ETC.) AND PAVED BIKE/BIKE TRAILS (IF APPLICABLE) ARE TO BE COMPLIANT WITH REQUIRED ACCESSIBILITY CRITERIA AS SET FORTH IN ADAAG & TAS STANDARDS AS MANDATED BY FEDERAL AND STATE GOVERNMENTS.

QUANTITIES ARE PROJECT TOTALS - VERIFY! PLANS TAKE PRECEDENCE

PLANT LEGEND/SCHEDULE

SYM	KEY	COMMON NAME	BOTANICAL NAME	CONT.	SPACING	QUANT.	SIZE	REMARKS
HC	HEAVENLY CLOUD TEXAS SAGE	LEICOPHYLLUM FRUTESCENS 'HEAVENLY CLOUD'	5 GAL	5' OC	17	18" HT	00	
AR	ARIZONA ROSEWOOD	VAUELINIA CALIFORNICA	5 GAL	10' OC	6	18" HT	00	
YL	NEW GOLD LANTANA	LANTANA CAMERA 'NEW GOLD'	5 GAL	4' OC	27	6" HT	CUT BACK MID FEB	
IH	LITTLE PINKIE INDIAN HANTHORN	RHAPHOLEPIS INDICA 'LITTLE PINKIE'	5 GAL	5' OC	21	18" HT	DO NOT TRIM	
YB	YELLOW BELLS	TECOMA STANS	5 GAL	10' OC	3	18" HT	CUT BACK MID FEB	
BF	BLACKFOOT DAISY	MELAMPIDIUM LEUCANTHUM	1 GAL	2' OC	5	6" HT	CUT BACK END OF FEB	
RY	RED YUCCA	HESPERALOE PARVIFLORA	5 GAL	5' OC	8	18" HT	CUT BACK END OF FEB	
PL	PURPLE LANTANA	LANTANA MONTEVIDENSIS	1 GAL	2' OC	4	6" HT	CUT BACK END OF FEB	
S	SANTA ANA BERBERIA GRASS	C.DACTYLOX X TRANSVAALENSIS SOD			31833 SF	00	00	

TREE LEGEND/SCHEDULE PROJECT TOTAL

SYM	KEY	COMMON NAME	BOTANICAL NAME	CONT.	SIZE	QUANT.	REMARKS
LET	LACEBARK ELM	ULMUS PARVIFOLIA	24" BOX	2" GAL-10HT-6' SPREAD	3	SINGLE-FULL	
RAT	RAYWOOD ASH	FRAXINUS OXYCARPA	24" BOX	2" GAL-10HT-6' SPREAD	8	SINGLE TRUNK-FULL	
DMT	DALLAS RED CREPE MYRTLE	LAGERSTROEMIA INDICA 'DALLAS RED'	24" BOX	2" GAL-10HT-6' SPREAD	2	TREE FORM - MULTI TRUNK	
CPT	CHINESE PISTACHE	PISTAGIA CHINENSIS	15 GAL	1" GAL-8' HEIGHT-4' SPREAD	10	MUST BE STAKED - SEE A ON L15	
RBT	TEXAS REDBUD	CERGIS MEXICANA OR TEXENSIS	15 GAL	1" GAL-7' HEIGHT-3' SPREAD	9	MUST BE STAKED - SEE A ON L15	

FUTURE PLAYGROUND ROCK WALL ADJACENT TO SOD - SECTION



REVIEWED BY: [Signature] 02.16.2015

REVISIONS

DATE

ARCHITECT'S SEAL

SCALE

Horizontal: Vertical: Contour Interval: N/A

DATE: 2/10/15

DESIGN BY: LM

DRAWN BY: LM

CHKD. BY: LM

APPROV. BY: LM

JOB NO.

PROJECT TITLE

EAGLE VISTA PARK

DESERT SPRINGS UNIT 4 SUBDIVISION

EL PASO, TEXAS

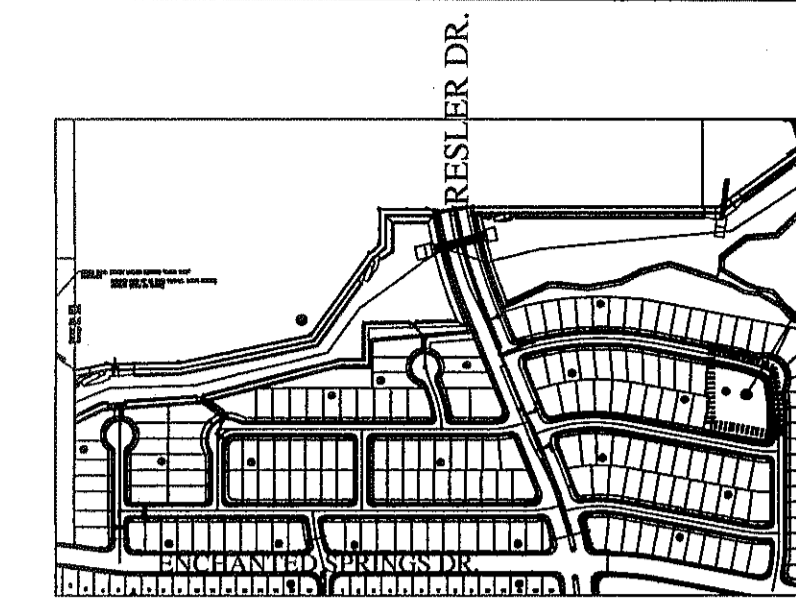
AREA: 45,461 SQ.FT. - 1.04 ACRES

SHEET TITLE

L2

PARK PLANTING AND MATERIALS

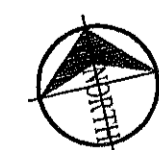
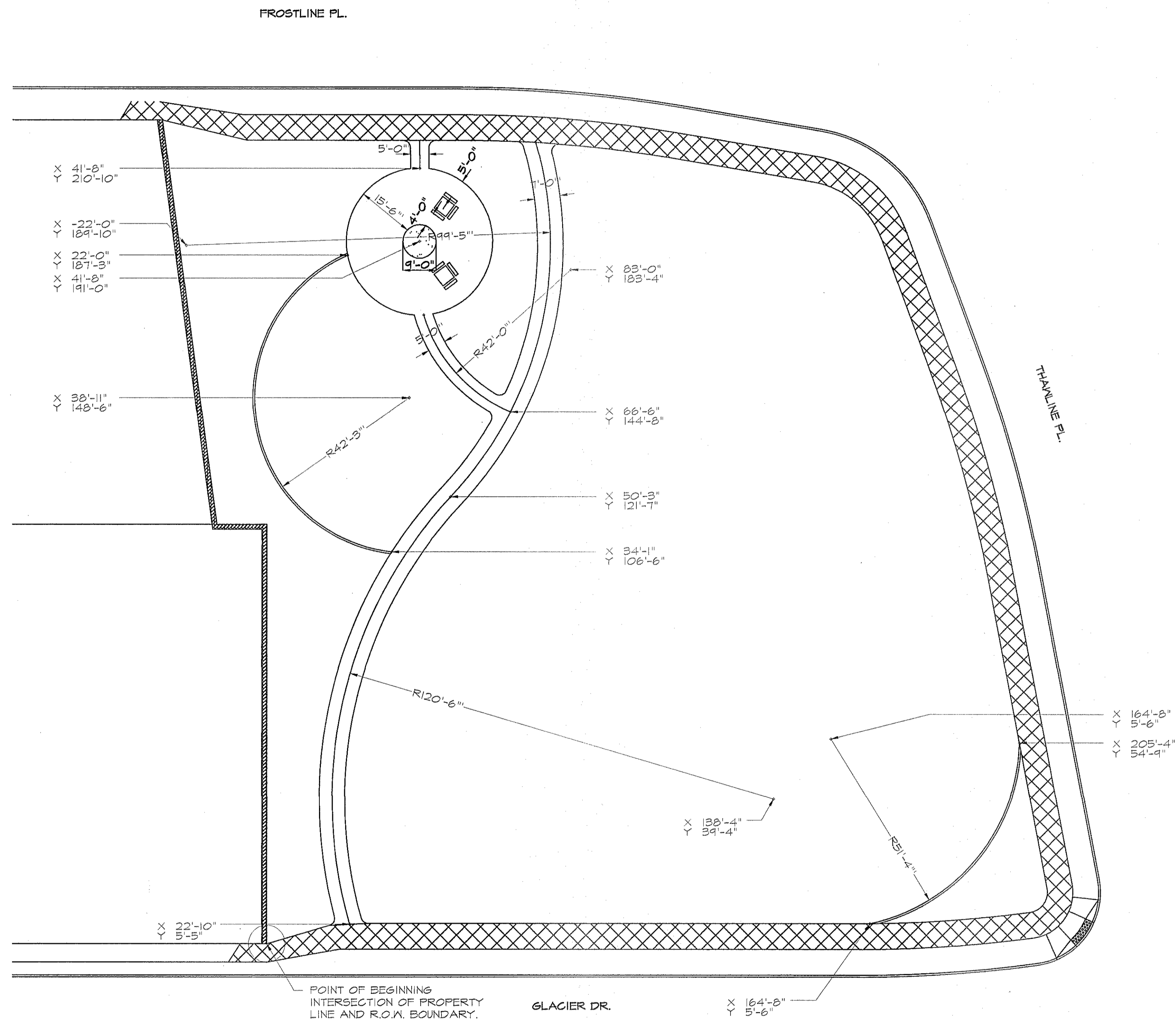
SHEET 2 OF 18



PARK AREA

2/10/15

DRAWING KEY
SCALE: 1" = 600'-0"

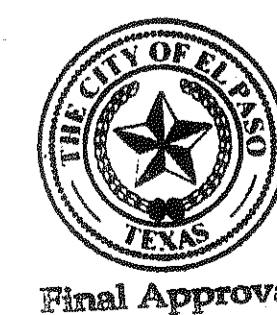


PLAN VIEW - LAYOUT

SCALE: 1" = 20' - 0"

PARK SITE NOTES

1. NO SIGNS, FIRE HYDRANTS, LIGHTS, NDCUBS, ELECTRICAL/WATER BOXES, TELEPHONE PEDESTALS, NO OBSTRUCTIONS IN GENERAL, SHALL BE PLACED INTO PROPOSED PERIMETER SIDEWALK, NOR SHALL ANY UTILITY CONDUITS BE PLACED ALONG THE PARK SITE. - ANY UTILITIES WITHIN THE PARKWAY MUST BE BURIED WITH 5'-0" MINIMUM COVER, IF PLACED BENEATH THE PROPOSED SIDEWALK STANDARD BURIAL DEPTHS APPLY.
2. DEVELOPER SHALL OBTAIN SOIL SAMPLES (TAKEN FROM PROPOSED PARK SITE LOCATION FINISHED GRADE) AND PROVIDE COMPLETE ANALYSIS REPORT (TEXTURAL, MINERAL AVAILABILITY, WATER INFILTRATION AND DETAILED SALINITY AND PH CONDUCTIVITY TEST) WITH RECOMMENDATIONS FOR SOIL AMENDMENTS AND PREPARATION TO INSURE EXISTING SOIL CONDITIONS ARE SUITABLE FOR TURF, SHRUBS AND TREE GROWTH. COORDINATE SITE VISIT WITH PARKS STAFF FOR COLLECTION OF SOIL SAMPLES.
3. ANY UNSUITABLE SOIL CONDITIONS SHALL BE REMEDIED TO ELIMINATE HARD SOILS, STONY SOILS, HIGH CALICHE SOILS, CLAY SOILS AND CONTAMINATED SOILS TO A MINIMUM DEPTH OF 12 INCHES. HARD PAN CALICHE, CLAY SOILS AND ROCKY SOILS MUST BE SHATTERED IN TWO DIRECTIONS TO A DEPTH OF 36" BELOW FINISHED GRADE AS REQUIRED FOR PROPER PLANTING, AS PER PARKS DESIGN AND CONSTRUCTION STANDARDS.
4. ALL PARK IMPROVEMENTS (SIDEWALKS, RAMPS, ETC.) AND PAVED HIKE/BIKE TRAILS (IF APPLICABLE) ARE TO BE COMPLIANT WITH REQUIRED ACCESSIBILITY CRITERIA AS SET FORTH IN ADAAG & TAS STANDARDS AS MANDATED BY FEDERAL AND STATE GOVERNMENTS.



PARKS DEPARTMENT
REVIEWED BY: *Antonio...* 02/10/2015

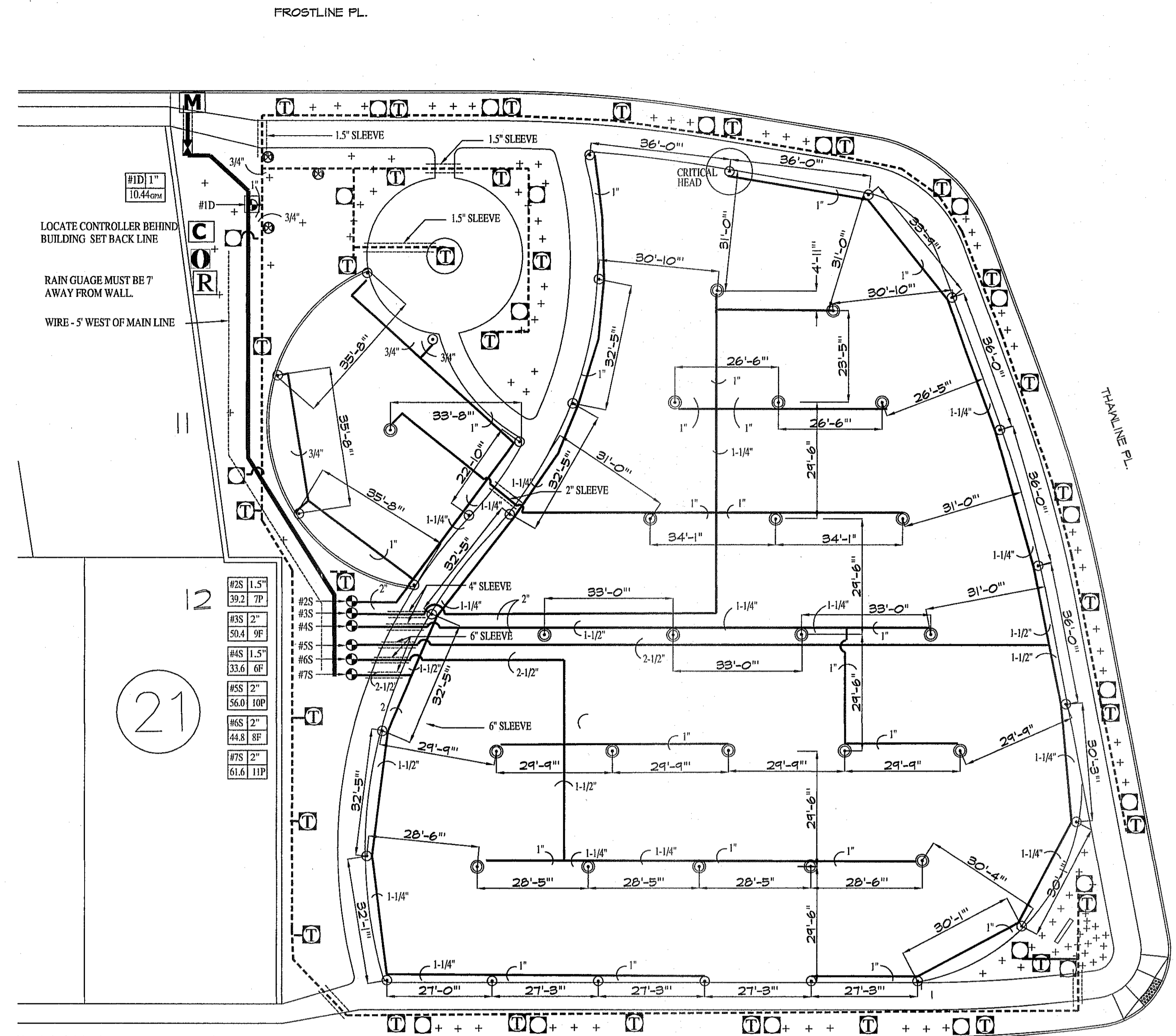
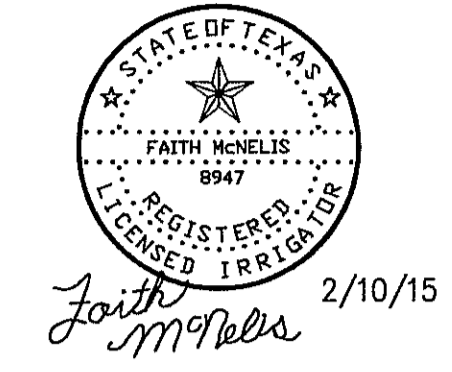
REVISIONS	DATE	<p>LISA MCNELIS LANDSCAPE ARCHITECT 1800 FOYBORO LAS CRUCES, NEW MEXICO 88007 (575) 621-8232</p>
ARCHITECT'S SEAL		<p>2/10/15</p>
SCALE	<p>Horizontal: N/A Vertical: N/A Contour Interval: N/A</p>	<p>DATE: 2/10/15 DESIGN BY: LM DRAWN BY: LM CHECK BY: LM APPROV. BY: LM JOB No.</p>
PROJECT TITLE	<p>EAGLE VISTA PARK LOT 22, BLOCK 21 DESERT SPRINGS UNIT 4 SUBDIVISION EL PASO, TEXAS AREA: 45,461 SQ.FT. - 1.04 ACRES</p>	
SHEET TITLE	<p>L3 PARK LAYOUT PLAN</p>	
<p>SHEET 3 OF 18</p>		

IRRIGATION IS REGULATED BY:
 PO BOX 13087
 AUSTIN, TEXAS 78711-3087
 TCEQ 512 239-6719
 CHAPTER 34, TEXAS WATER CODE
 IRRIGATOR'S LIC. #8947

VALVE NUMBER AND DRIP(D) OR SPRAY(S) NOTATION
 #1D 1" VALVE SIZE
 14.55 9F GALLONS PER MINUTE ON THIS VALVE
 NUMBER OF HEADS ON VALVE AND (F) FULL OR (P) PART RADIUS

MATERIAL LEGEND FOR PARK:

- 3" PRESSURE MAIN PVC SCHEDULE 40 SEE DETAIL 1 ON LIT.
- LATERAL FOR SPRAY PVC CLASS 200 SEE DETAIL 1 ON LIT.
- LATERAL FOR DRIP PVC CLASS 200 SEE DETAIL 1 ON LIT.
- SCH 40 SLEEVING UNDER ALL HARD SURFACES WHERE LINES ARE RUN. SLEEVES SHALL EXTEND 24" PAST PAVING. CHISEL 1" MARK IN CONCRETE CURB OR WALK TO LOCATE SLEEVE AT EACH SIDE. SIZE 2X DIA. OF PIPE TO BE SLEEVED. SEE #0 UNDER GENERAL IRRIGATION NOTES.
- FIELD WIRING SHALL BE IN A SEPARATE TRENCH 5' OFFSET FROM MAIN LINE ON NORTH AND WEST SIDE. SEE DETAIL 1 ON LIT.
- DRIP EMITTER FOR TREES: RAINBIRD XERI-BIRD XBD-80 WITH FILTER AND IN STEM PRESSURE REGULATOR. USE 8 XBD-20PC EMITTERS PER TREE. 21 GPM SET IN EMITTER VALVE BOX. SEE DETAILS 2, AND 3 ON LIT.
- DRIP EMITTER FOR PLANTS: RAINBIRD XERI-BIRD XBD-80 WITH FILTER AND IN STEM PRESSURE REGULATOR. USE 1 XBD-20PC EMITTER PER PLANT. SET IN EMITTER VALVE BOX. SEE DETAIL 2 ON LIT.
- DRIP EMITTER FOR 5 GAL PLANTS - DO NOT EXCEED 20' OF MICRO TUBE RAINBIRD PRESSURE COMPENSATING EMITTER XB-20. USE 1 EMITTER PER PLANT UNLESS OTHERWISE NOTED. PLACE ON UPHILL SIDE OF PLANT. .03 GPM.
- ELECTRIC REMOTE VALVE FOR SPRAY: WEATHERMATIC 8200CR-10 SIZE ON PLAN. IN LOCKING VALVE BOX. SEE DETAILS 5 AND 6 ON SHEET LIT.
- ELECTRIC REMOTE VALVE FOR DRIP: WEATHERMATIC 8200CR-10 SIZE ON PLAN. IN LOCKING VALVE BOX. SEE DETAILS 5 ON LIT AND 10 ON SHEET LIT.
- HUNTER I-20-06-55 WITH 6.0 BLUE NOZZLE. FULL CIRCLE. 6" STAINLESS STEEL RISER. 35 PSI 40' RADIUS - 5.6 GPM. MANUFACTURER'S PRECIPITATION RATE .34 SEE DETAIL 7 ON LIT.
- HUNTER I-20-06-55 WITH 6.0 BLUE NOZZLE. PART CIRCLE. 6" STAINLESS STEEL RISER. 35 PSI 40' RADIUS - 5.6 GPM. MANUFACTURER'S PRECIPITATION RATE .10 SEE DETAIL 7 ON LIT.
- QUICK COUPLER - BUCKNER 1" DOUBLE LUG GC WITH FACTORY ASSEMBLED LASCO SWING JT THAT HAS SNAP-LOK BRASS STABILIZER FITTING. TO BE SET IN CARSON MODEL 14H VALVE BOX WITH PURPLE FLAT LID AND VANDAL PROOF BOLT. SHALL HAVE WEATHER PROOF TAG THAT READS "NON-POTABLE WATER. NOT SAFE FOR DRINKING." SEE DETAIL 11 ON LIT.
- RAINBIRD RAIN SENSOR RSD-BEX. LOCATION TO BE APPROVED BY PARKS. SEE DETAIL 13 ON LIT. LOCATE 7' AWAY FROM WALL.
- ISOLATION GATE VALVE IN LOCKING VALVE BOX. USE STANDARD VALVE BOX DETAILS. SEE DETAIL 8 ON LIT.
- 2" METER. 25" SERVICE LINE. LOCATION ON THIS PLAN IS APPROXIMATE. FLOW: 120 GPM - STATIC PRESSURE: 65 PSI
- BACKFLOW: FIBCO REDUCED PRESSURE 825Y 2" MUST MEET LOCAL CODES CITY OF EL PASO PARKS DEPT. REQUIREMENTS. PLACE IN STAINLESS STEEL INSULATED HOT BOX ENCLOSURE. R-25 ASSE 1060 - CLASS 1. SEE DETAIL 14 ON LIT.
- RAINBIRD ESP SAT CONTROLLER ESP-12SAT-25 IN STRONG BOX PEDESTAL. SEE DETAIL 12 ON LIT.



PLAN VIEW - PIPE SIZING AND LAYOUT
 SCALE: 1" = 20' - 0"

WATERING SCHEDULE

STATION #	VALVE COMBINATION	RUN TIME PER WEEK	WATERING DAYS							DURATION	CLOCK SETTING
			S	M	T	W	T	F	S		
1D	X	240 MIN		X	X	X				80 MIN	12:00 AM
25	X	145 MIN		X	X	X				65 MIN	12:00 AM
35	X	402 MIN		X	X	X				134 MIN	1:06 AM
45	X	390 MIN		X	X	X				130 MIN	3:21 AM
55	X	474 MIN		X	X	X				150 MIN	5:32 AM
65	X	391 MIN		X	X	X				117 MIN	3:21 AM
75	X	201 MIN		X	X	X				67 MIN	8:11 AM
TOTAL RUN TIME PER DAY OF OPERATION - DRIP		80 MIN / 133 HOURS									
TOTAL RUN TIME PER DAY OF OPERATION - ROTORS		554 MIN / 9.23 HOURS									
TOTAL RUN TIME PER WEEK - ROTORS		1662 MIN / 27.7 HOURS									

PRECIPITATION SCHEDULE

VALVE #	VALVE SIZE	TOTAL GPM	WATER PRECIP. RATE	CALCULATED PRECIP. RATE	WATER REQUIREMENT	NOZZLE SIZE	# & TYPE OF HEADS	GPM PER HEAD	RUN TIME PER DAY
1D	1"	10.44	DRIP	N/A	N/A	N/A	N/A	N/A	80 MIN
25	1.5"	34.2	.70 IN/HR	11090 IN/HR	1.2"/WEEK	#6	7 PART	5.6	65 MIN
35	2"	50.4	.34 IN/HR	5379 IN/HR	1.2"/WEEK	#6	9 FULL	5.6	134 MIN
45	1.5"	33.6	.34 IN/HR	5536 IN/HR	1.2"/WEEK	#6	6 FULL	5.6	130 MIN
55	2"	56	.70 IN/HR	4648 IN/HR	1.2"/WEEK	#6	10 PART	5.6	150 MIN
65	2"	44.8	.34 IN/HR	6141 IN/HR	1.2"/WEEK	#6	8 FULL	5.6	117 MIN
75	2"	61.6	.70 IN/HR	10724 IN/HR	1.2"/WEEK	#6	11 PART	5.6	67 MIN

WATER AUDIT

- CONTRACTOR IS RESPONSIBLE FOR OBTAINING AN IRRIGATION SYSTEM WATER AUDIT AFTER INSTALLATION IS COMPLETE.
- AUDIT MUST BE PERFORMED BY A TEXAS CERTIFIED IRRIGATION WATER AUDITOR.
- WATER AUDIT MUST BE PERFORMED IN ACCORDANCE TO THE EL PASO PARKS AND RECREATION DESIGN AND CONSTRUCTION STANDARDS FOR PARK FACILITIES.

PRESSURE LOSS CALCULATIONS

SECTION # 45 56 GPM

TYPE OF PIPE	LENGTH OF PIPE (FEET)	FLOW (GAL)	PIPE SIZE (IN)	PIPE SIZE (IN)	PRESSURE LOSS PER 100 FEET (FEET)	PRESSURE LOSS THIS ITEM	ACCUMULATED PRESSURE LOSS
PVC CLASS 200	36	5.6	1		.5	.1800	.1800
PVC CLASS 200	34	11.2	1		1.82	.6188	.7988
PVC CLASS 200	36	16.8	1-1/4		1.24	.4464	1.2452
PVC CLASS 200	36	22.4	1-1/4		2.11	.7596	2.0048
PVC CLASS 200	21	28	1-1/2		1.45	.3045	2.3093
PVC CLASS 200	103	56	2-1/2		.79	1.4457	3.7550
PVC CLASS 200							
SECTION PRESSURE LOSSES (SUB TOTAL)							4.1383
ITEM	LENGTH OF PIPE (FEET)	FLOW (GAL)	PIPE SIZE (IN)	PIPE SIZE (IN)	PRESSURE LOSS PER 100 FEET (FEET)	PRESSURE LOSS THIS ITEM	ACCUMULATED PRESSURE LOSS
SECTION VALVE		56	2			2.0000	5.7550
MAINLINE PVC SCH 40	149	78.4	3		.6	.8940	6.6490
#4 AND #6 VALVES							
BACKFLOW			2			13.0000	19.6490
WATER METER			2			1.9000	21.5490
TYPE K COPPER SLP.	30	78.4	2.5		2.11	.6330	22.1820
TOTAL PRESSURE LOSS TO THE CITY MAIN							22.1820
PRESSURE LOSS 1' ELEVATION CHANGE							3.031
DESIGN PRESSURE-STATIC PRESSURE CITY MAIN							65.000
PRESSURE LOSS TO THE CITY MAIN							25.2130
ACTUAL HEAD PRESSURE							39.7870
MINIMUM REQUIRED HEAD PRESSURE							35.0000



PARKS DEPARTMENT
 REVIEWED BY: [Signature] 02/14/2015
 Final Approval

REVISIONS

DATE	REVISIONS

ARCHITECT'S SEAL

LISA MCNEELIS
 LANDSCAPE ARCHITECT
 1800 FORTWORTH
 LAS CRUCES, NEW MEXICO 88007
 (505) 621-5023

ARCHITECT'S SEAL

SCALE: Horizontal: 1" = 20' - 0" Vertical: 1" = 10' - 0"

DATE: 2/10/15
 DRAWN BY: LM
 CHECKED BY: LM
 APP. NO. BY: LM
 JOB NO.:

EAGLE VISTA PARK
 LOT 22, BLOCK 21
 DESERT SPRINGS UNIT 4 SUBDIVISION
 EL PASO, TEXAS
 AREA: 45,461 SQ. FT. - 1.04 ACRES

L5
 PARK PIPE SIZING
 DRIP IRRIGATION
 SHEET 5 OF 18

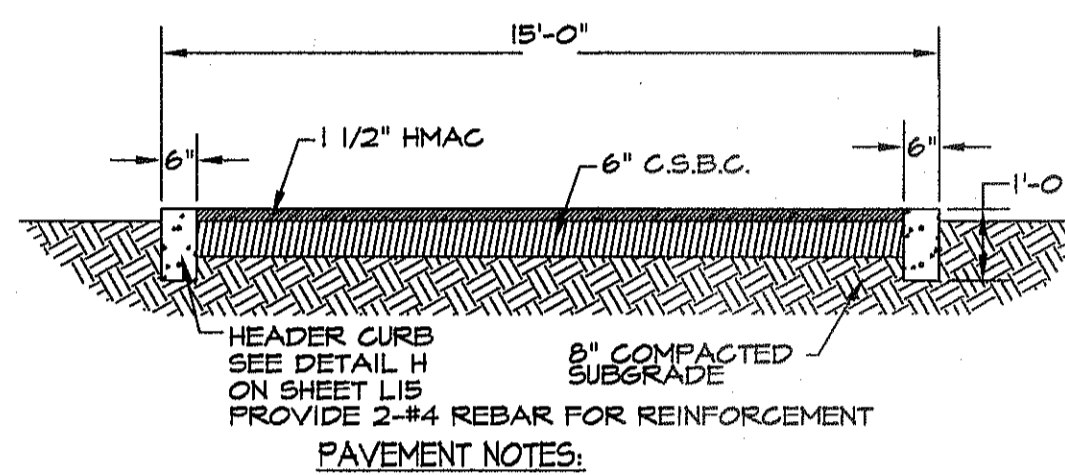
QUANTITIES ARE PROJECT TOTALS - VERIFY! PLANS TAKE PRECEDENCE

PLANT LEGEND/SCHEDULE FOR WILDLIFE CORRIDOR						
SYM KEY	COMMON NAME	BOTANICAL NAME	CONT.	SPACINGS	QUANT.	REMARKS
CS	CIMARRON SAGE	LEUCOPHYLLUM ZYGOPHYLLUM	5 GAL	5' OC	136	18" HT
PP	SAND PENSTEMON	PENSTEMON AMBIGUUS	1 GAL	6' OC	38	12" HT
YL	NEW GOLD LANTANA	LANTANA CAMERA 'NEW GOLD'	1 GAL	5' OC	36	6' HT CUT BACK MID FEB
TB	TURPENTINE BUSH	ERIGONIA LARGIFOLIA	5 GAL	5' OC	53	18" HT DO NOT TRIM
GM	GLOBE MALLOW	SPHERALCEA AMBIGUA	1 GAL	5' OC	34	12" HT CUT BACK MID FEB
BF	BLACKFOOT DAISY	MELAMPODIUM LEUCANTHUM	1 GAL	2' OC	54	6' HT CUT BACK END OF FEB
RY	RED YUCCA	HESPERALOE PARVIFLORA	5 GAL	5' OC	60	18" HT CUT BACK END OF FEB
PL	PURPLE LANTANA	LANTANA MONTEVIDENSIS	1 GAL	5' OC	43	6' HT CUT BACK END OF FEB
MF	MEXICAN FEATHER GRASS	NASSELLA TENUISSIMA	1 GAL	3' OC	185	15" HT CUT BACK MID MARCH

WILDLIFE CORRIDOR MATERIAL LEGEND AND DETAIL KEY:

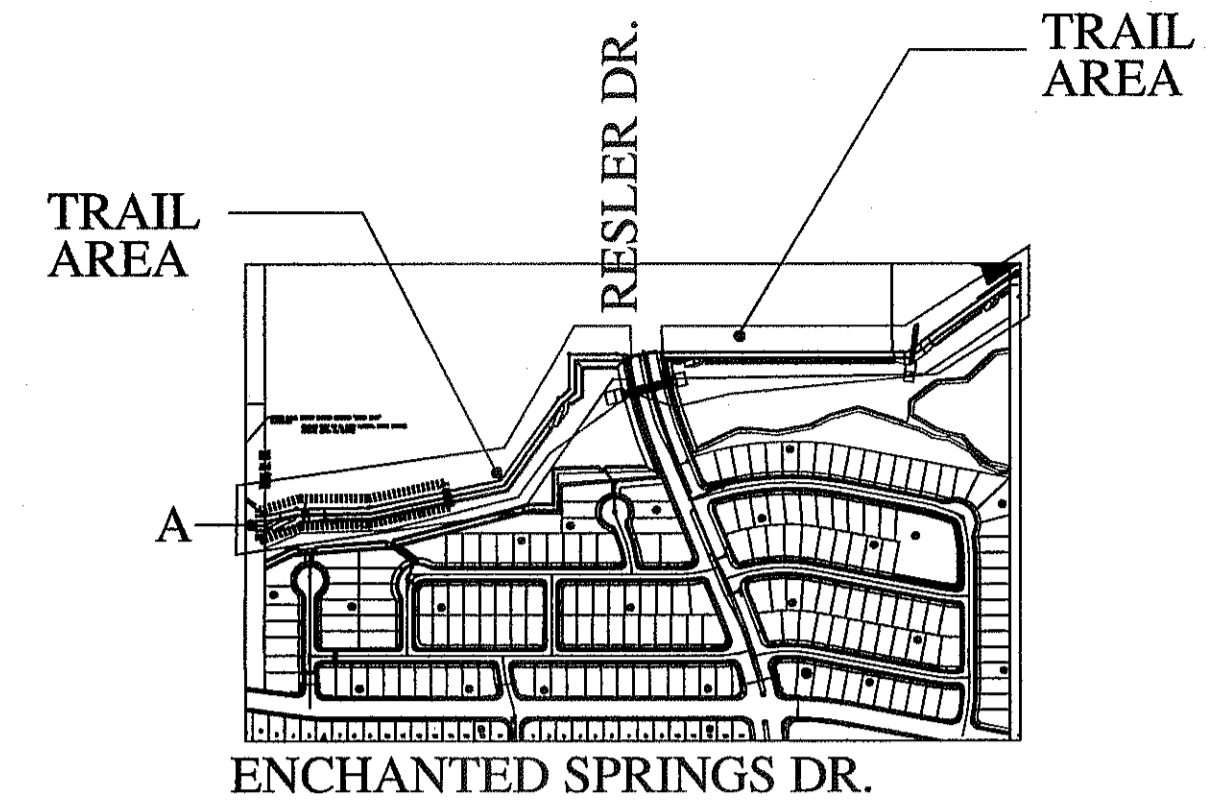
	1. 3/4" FRANKLIN RED ROCK MULCH 4" DEPTH 2" BELOW ALL CONCRETE SURFACES. USE NON WOVEN POLY FABRIC. - CITY 12286 SF SEE DETAIL THIS SHEET.
	2. 18" HMAC WALKWAY WITH HEADER CURBS CITY 2881 LF SEE DETAIL THIS SHEET.
	3. BOLLARDS SEE ENGINEER'S DRAWING
	4. DRAINAGE STRUCTURES

VERIFY QUANTITIES. PLAN TAKES PRECEDENCE.



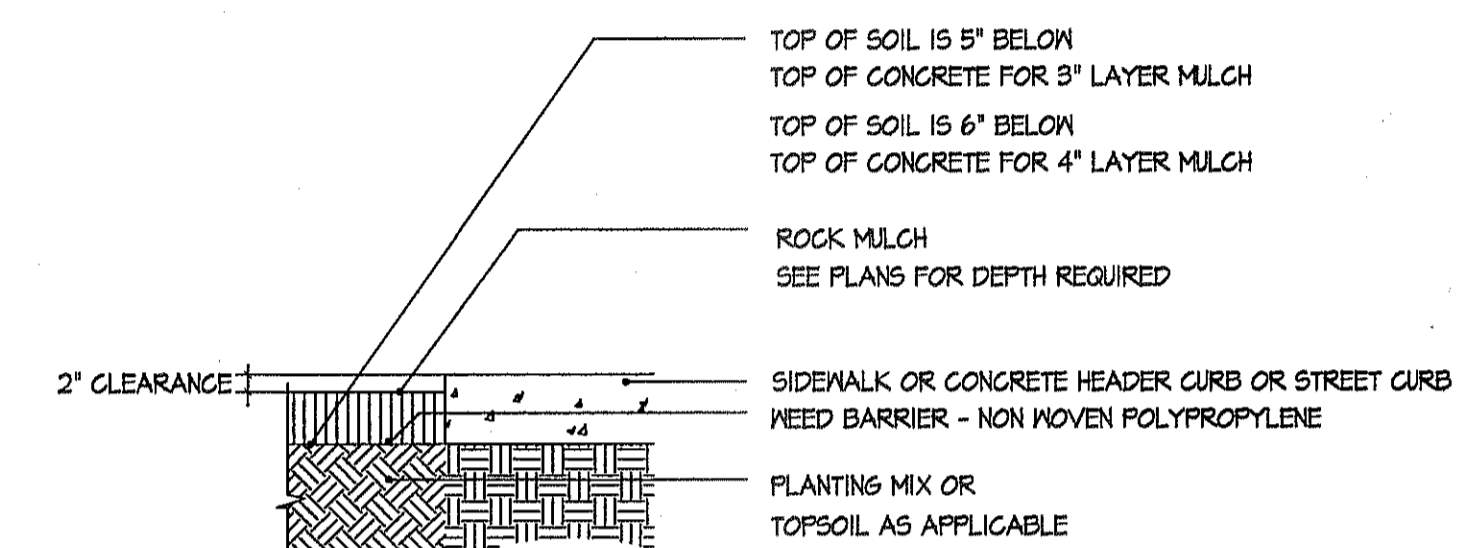
- PAVEMENT NOTES:
- SUBGRADE TO BE COMPACTED TO 95% OF MAXIMUM DENSITY AS PER ASTM D1557, (B)
 - BASE TO BE COMPACTED TO NOT LESS THAN 100% DENSITY IN ACCORDANCE WITH ASTM D1557, AS PER ITEM 241, TYPE A GRADE 3, (B)
 - PRIME COAT TO BE 0.25 GAL. PER SQUARE YARD (MINIMUM COVERAGE) MC-10.
 - BITUMINOUS MATERIAL SHALL CONFORM TO AC-10 OR AC-20 IN ACCORDANCE WITH ASTM D3301, TYPE 171 MIX.
 - HMAC BASE COURSE AND SUBGRADE WILL BE IN ACCORDANCE WITH LATEST CITY OF EL PASO SPECIFICATION (MIN 1-1/2")
 - ALL STRIPPING & LETTERS ON PAVEMENT SHALL BE YELLOW (REFLECTORIZED PAINT).

WILDLIFE CORRIDOR TRAIL
NOT TO SCALE



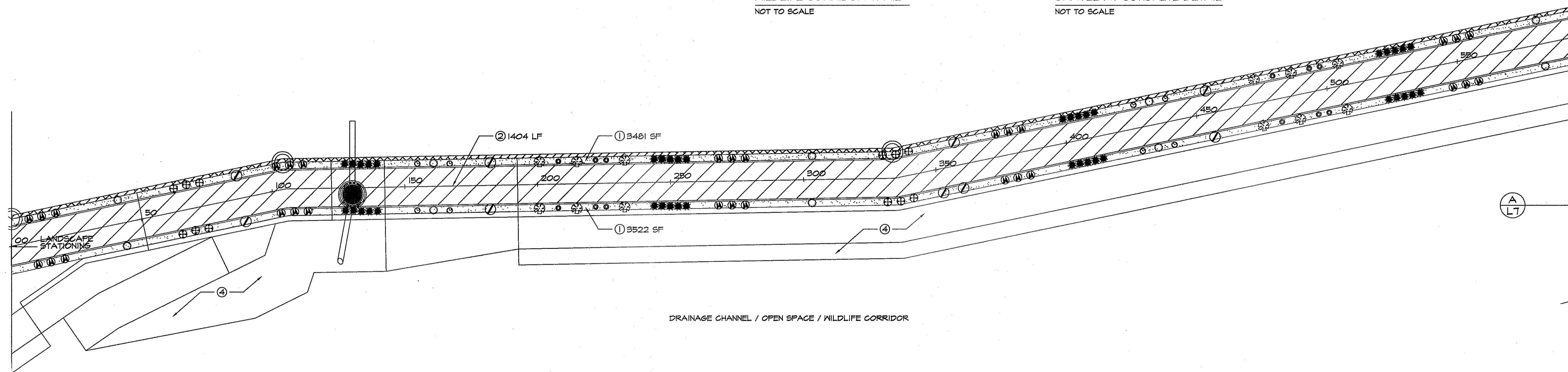
PLAN KEY

SCALE: 1" = 60'

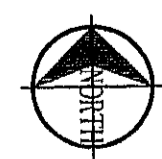


- NOTE:
- TOP OF ROCK MULCH IS 2" BELOW CONCRETE SURFACES.
 - NEED BARRIER MUST BE APPROVED BY CITY OF EL PASO PARKS DEPT.
 - NEED BARRIER MUST PINNED 12" OC ON SEAMS AND OVERLAPS AND 2'-0" OC THROUGHOUT.

GRAVEL AT CONCRETE DETAIL
NOT TO SCALE

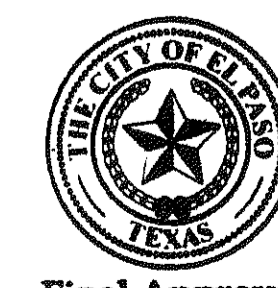


DRAINAGE CHANNEL / OPEN SPACE / WILDLIFE CORRIDOR



PLAN VIEW A - PLANTING AND MATERIALS

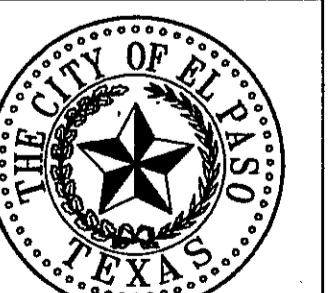
SCALE: 1" = 20' - 0"



Final Approval

PARKS DEPARTMENT

REVIEWED BY: *Antonio...* 02/14/2015

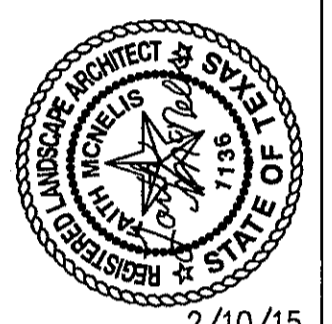


SHEET TITLE

L6

WILDLIFE CORRIDOR PLANTING PLAN

SHEET 6 OF 18



ARCHITECT'S SEAL

SCALE: Horizontal: Vertical: Interval: N/A

DATE: 2/10/15

DESIGN BY: LM

DRAWN BY: LM

CHKD. BY: LM

APPRD. BY: LM

JOB No.

PROJECT TITLE

HIKE & BIKE WILDLIFE CORRIDOR

DRAINAGE / OPEN SPACE / WILDLIFE CORRIDOR

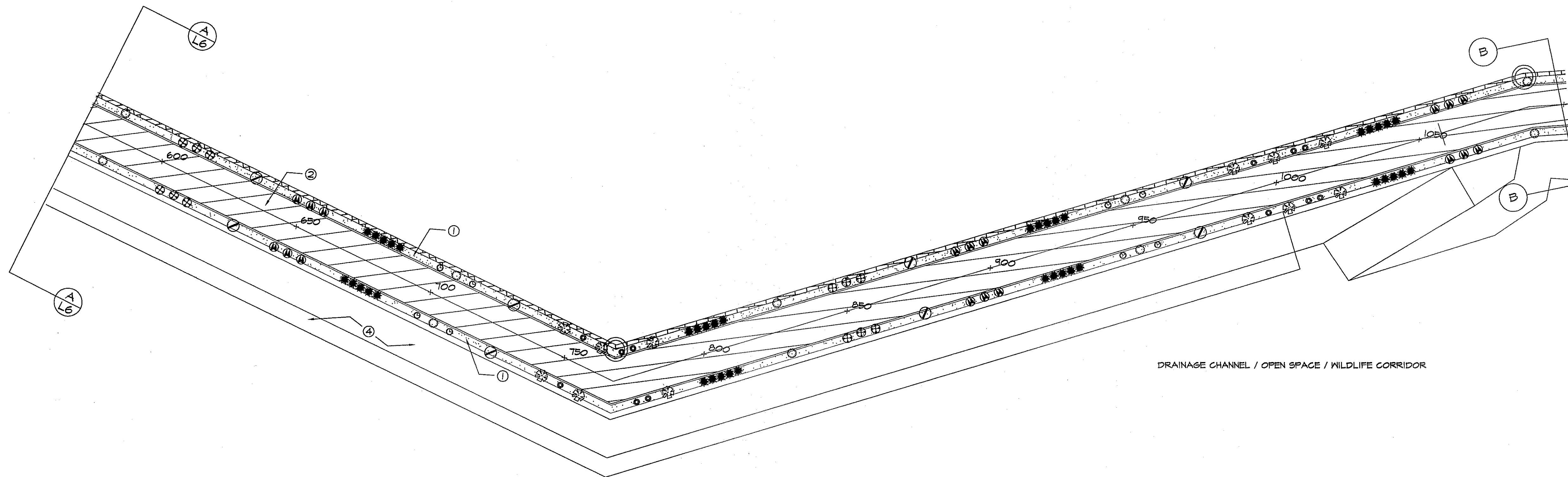
LOT 15, BLOCK 39 AND LOT 39 BLOCK 22
DESERT SPRINGS UNIT 4 SUBDIVISION
EL PASO, TEXAS

AREA: 650,484 SQ.FT. - 14.93 ACRES

REVISIONS

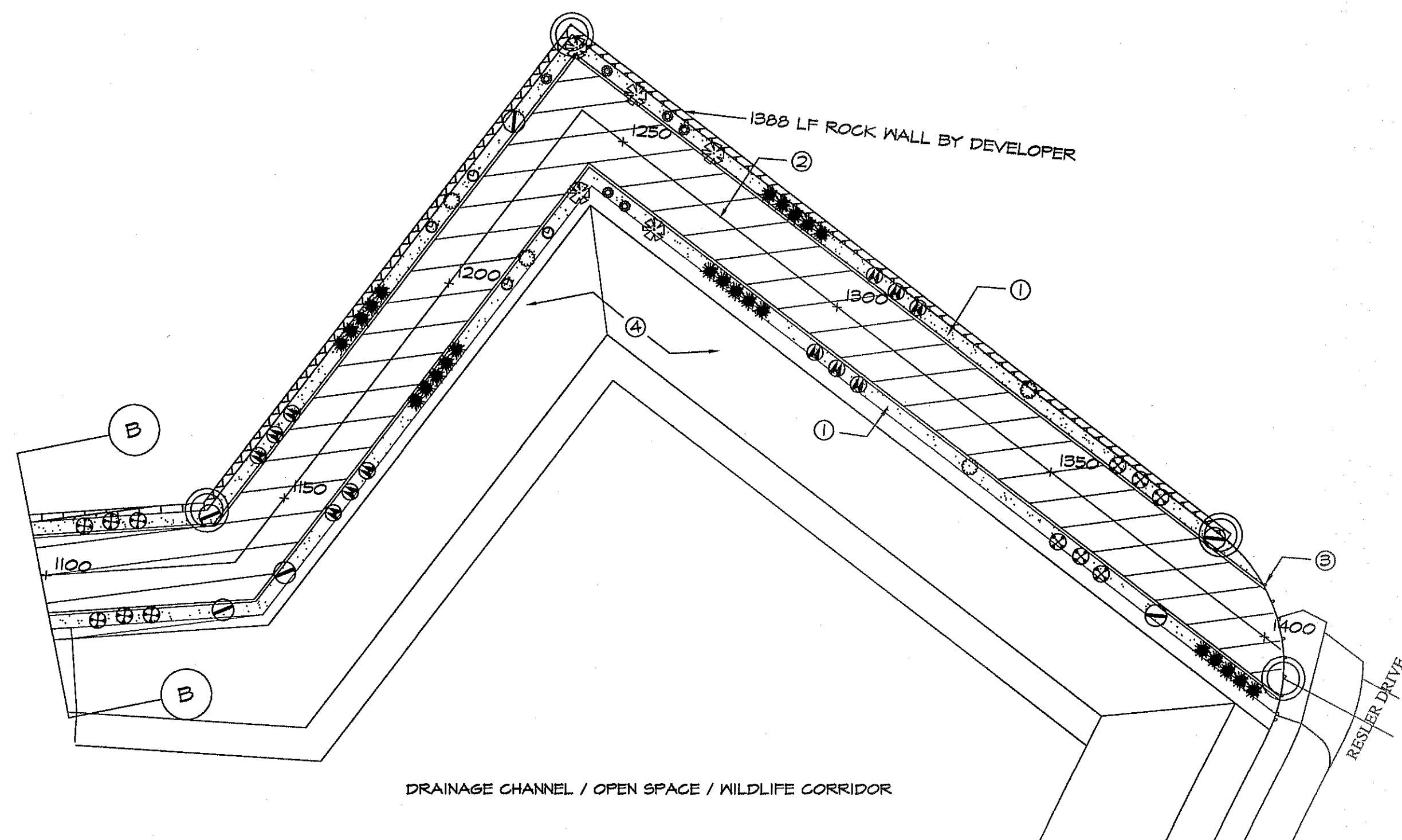
DATE

LISA MCNELIS
LANDSCAPE ARCHITECT
1800 FOXBORO
LAS CRUCES, NEW MEXICO 88007
(505) 621-8092



PLAN VIEW B - PLANTING AND MATERIALS

SCALE: 1" = 20' - 0"



PLAN VIEW C - PLANTING AND MATERIALS

SCALE: 1" = 20' - 0"

DRAINAGE CHANNEL / OPEN SPACE / WILDLIFE CORRIDOR

DRAINAGE CHANNEL / OPEN SPACE / WILDLIFE CORRIDOR

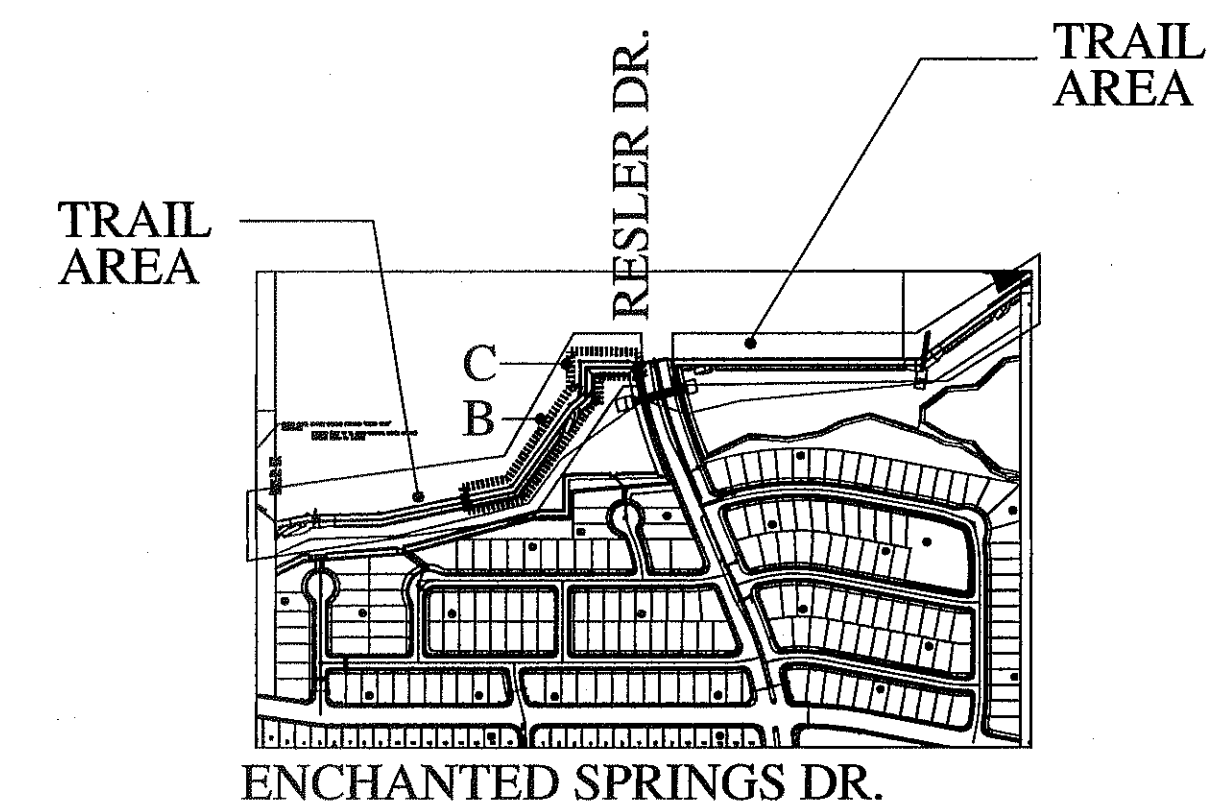
QUANTITIES ARE PROJECT TOTALS - VERIFY! PLANS TAKE PRECEDENCE

PLANT LEGEND/SCHEDULE FOR WILDLIFE CORRIDOR							
SYM	KEY	COMMON NAME	BOTANICAL NAME	CONT.	SPACING	QUANT. SIZE	REMARKS
CS		GIMARRON SAGE	LEUCOPHYLLUM ZYGOPHYLLUM	5 GAL	5' OC	138 18" HT	OO
FP		SAND PENSTEMON	PENSTEMON ANGISUS	1 GAL	6' OC	38 12" HT	OO
YL		NEW GOLD [®] LANTANA	LANTANA CAMERA 'NEW GOLD'	1 GAL	5' OC	36 6" HT	CUT BACK MID FEB
TB		TURPENTINE BUSH	ERICAMERIA LARICIFOLIA	5 GAL	5' OC	58 18" HT	DO NOT TRIM
GM		GLOBE MALLOW	SPHAERALCEA AMBIGUA	1 GAL	5' OC	34 12" HT	CUT BACK MID FEB
BF		BLACKFOOT DAISY	MELAMPODIUM LEUCANTHUM	1 GAL	2' OC	54 6" HT	CUT BACK END OF FEB
RY		RED YUCCA	HESPERALOE PARVIFLORA	5 GAL	5' OC	60 18" HT	CUT BACK END OF FEB
PL		PURPLE LANTANA	LANTANA MONTEVIDENSIS	1 GAL	5' OC	48 6" HT	CUT BACK END OF FEB
MF		MEXICAN FEATHER GRASS	NASSELLA TENUSSIMA	1 GAL	5' OC	105 15" HT	CUT BACK MID MARCH

WILDLIFE CORRIDOR MATERIAL LEGEND AND DETAIL KEY:

	1. 3/4" FRANKLIN RED ROCK M/LCH - 4" DEPTH 2" BELOW ALL CONCRETE SURFACES. USE NON WOVEN POLY FABRIC. - QTY: 12,886 SF SEE DETAIL THIS SHEET.
	2. 15" IMAC WALKWAY WITH HEADER CURBS QTY: 286 LF SEE DETAIL THIS SHEET.
	3. BOLLARDS SEE ENGINEER'S DRAWING
	4. DRAINAGE STRUCTURES

VERIFY QUANTITIES. PLAN TAKES PRECEDENCE.



PLAN KEY

SCALE: 1" = 600'

PARKS DEPARTMENT
REVIEWED BY *Anthony del...* 02/14/2015



REVISIONS

DATE	REVISIONS

ARCHITECT'S SEAL

LISA MCNELIS
LANDSCAPE ARCHITECT
1800 FOWLER
LAS CRUCES, NEW MEXICO 88007
(505) 621-8032

ARCHITECT'S SEAL

LISA MCNELIS
LANDSCAPE ARCHITECT & SPECIALIST
1800 FOWLER
LAS CRUCES, NEW MEXICO 88007
(505) 621-8032

2/10/15

SCALE

Horizontal: N/A
Vertical: 2/10/15

DATE: 2/10/15
DESIGN BY: LM
DRAWN BY: LM
CHKD BY: LM
APPVD BY: LM
JOB No.:

PROJECT TITLE

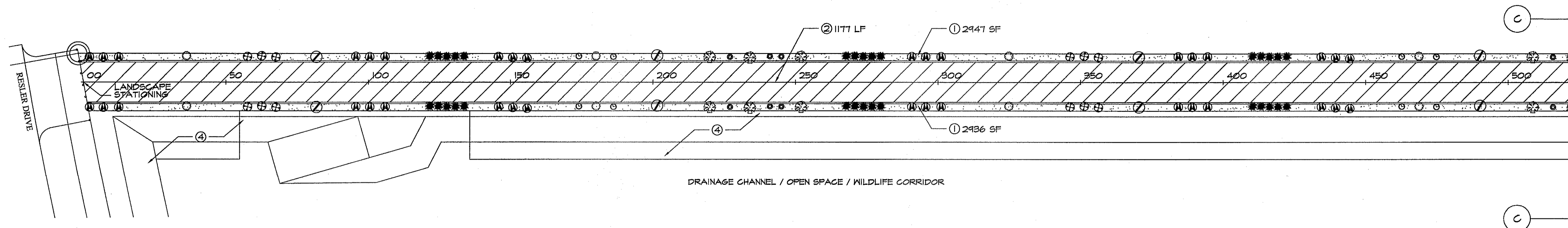
HIKE & BIKE WILDLIFE CORRIDOR
DRAINAGE / OPEN SPACE / WILDLIFE CORRIDOR
LOT 15, BLOCK 39 AND LOT 4 SUBDIVISION
DESERT SPRINGS UNIT 4 SUBDIVISION
EL PASO, TEXAS
AREA: 650,484 SQ.FT. - 14.93 ACRES

SHEET TITLE

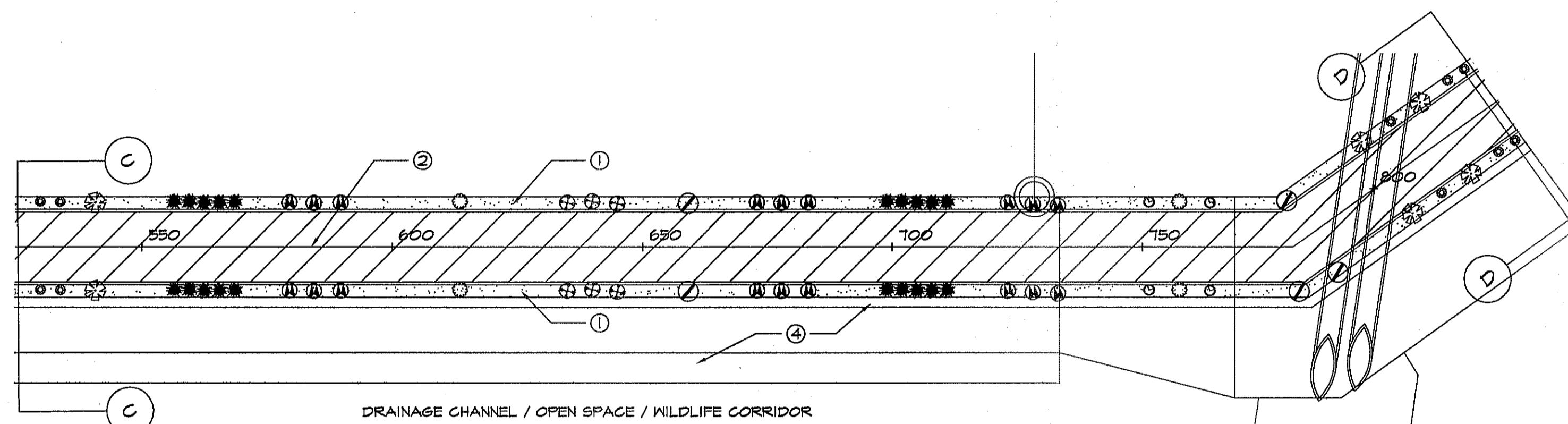
L7

WILDLIFE CORRIDOR
PLANTING PLAN

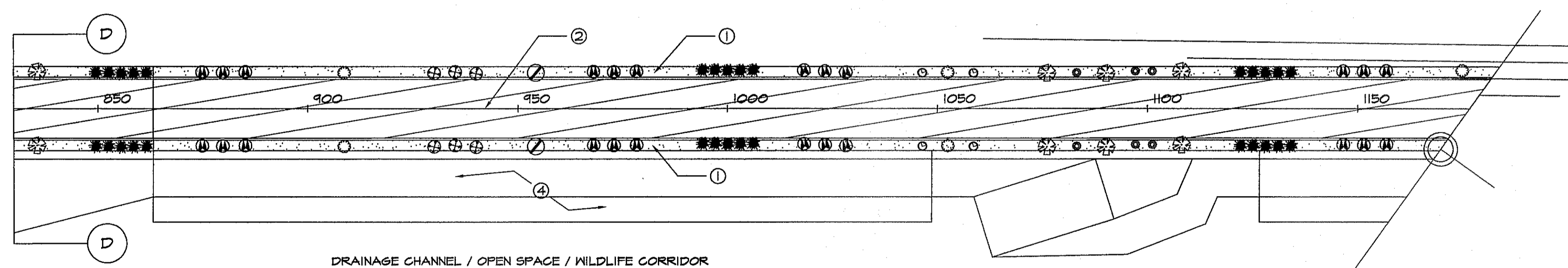
SHEET 7 OF 18



PLAN VIEW D - PLANTING AND MATERIALS
SCALE: 1" = 20' - 0"



PLAN VIEW E - PLANTING AND MATERIALS
SCALE: 1" = 20' - 0"



PLAN VIEW F - PLANTING AND MATERIALS
SCALE: 1" = 20' - 0"

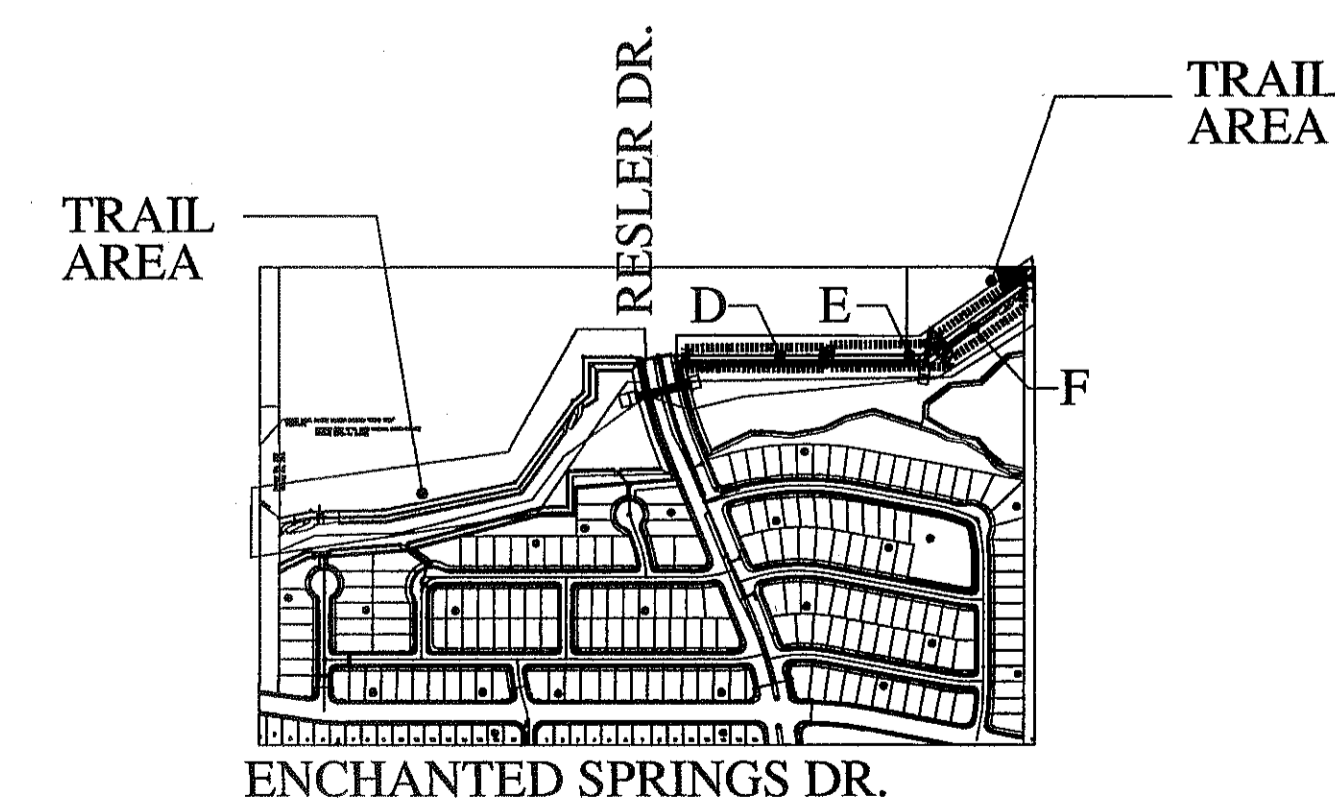
QUANTITIES ARE PROJECT TOTALS - VERIFY! PLANS TAKE PRECEDENCE

PLANT LEGEND/SCHEDULE FOR WILDLIFE CORRIDOR								
SYM	KEY	COMMON NAME	BOTANICAL NAME	CONT.	SPACING	QUANT.	SIZE	REMARKS
W	CS	GIMARRON SAGE	LEUCOPHYLLUM ZYGOPHYLLUM	5 GAL	5' OC	138	18" HT	OO
W	PP	SAND PENSTEMON	PENSTEMON AMBIGUUS	1 GAL	6' OC	38	12" HT	OO
W	YL	'NEW GOLD' LANTANA	LANTANA CAMERA 'NEW GOLD'	1 GAL	5' OC	36	6" HT	CUT BACK MID FEB
W	TB	TURPENTINE BUSH	ERIGONIA LARGIFOLIA	5 GAL	5' OC	58	18" HT	DO NOT TRIM
W	GM	GLOBE MALLOW	SPHADRALCEA AMBIGUA	1 GAL	5' OC	34	12" HT	CUT BACK MID FEB
W	BF	BLACKFOOT DAISY	MELAMPODIUM LEUCANTHUM	1 GAL	2' OC	54	6" HT	CUT BACK END OF FEB
W	RY	RED YUCCA	HESPERALOE PARVIFLORA	5 GAL	5' OC	60	18" HT	CUT BACK END OF FEB
W	PL	PURPLE LANTANA	LANTANA MONTEVIDENSIS	1 GAL	5' OC	43	6" HT	CUT BACK END OF FEB
W	MF	MEXICAN FEATHER GRASS	NASSELLA TENUISSIMA	1 GAL	3' OC	105	15" HT	CUT BACK MID MARCH

WILDLIFE CORRIDOR MATERIAL LEGEND AND DETAIL KEY:

	1. 3/4" FRANKLIN RED ROCK MILG 4" DEPTH 2" BELOW ALL CONCRETE SURFACES USE NON WOVEN POLY FABRIC - QTY: 12806 SF SEE DETAIL THIS SHEET.
	2. 15" IMAG WALKWAY WITH HEADER CURBS QTY: 280 LF SEE DETAIL THIS SHEET.
	3. BOLLARDS SEE ENGINEER'S DRAWING
	4. DRAINAGE STRUCTURES

VERIFY QUANTITIES. PLAN TAKES PRECEDENCE.



PLAN KEY
SCALE: 1" = 60'

PARKS DEPARTMENT
REVIEWED BY: *Antonio...* 02/14/2015



REVISIONS	
DATE	
LISA MCNELLIS LANDSCAPE ARCHITECT 1800 FORTYFORTH LAS CRUCES, NEW MEXICO 88007 (575) 621-5032	
ARCHITECT'S SEAL	
SCALE	Vertical: N/A Horizontal: 2/10/15 DATE: 2/10/15 DESIGN BY: LM DRAWN BY: LM CHECKED BY: LM APPROVED BY: LM JOB NO.
PROJECT TITLE	HIKE & BIKE WILDLIFE CORRIDOR DRAINAGE / OPEN SPACE / WILDLIFE CORRIDOR LOT 15, BLOCK 39 AND LOT 39 BLOCK 22 DESERT SPRINGS UNIT 4 SUBDIVISION EL PASO, TEXAS AREA: 650,484 SQ.FT. - 14.93 ACRES
SHEET TITLE	L8 WILDLIFE CORRIDOR PLANTING PLAN
 Final Approval	
SHEET 8 OF 18	

VALVE NUMBER AND DRIP(D) OR SPRAY(S) NOTATION
 #1D 1" VALVE SIZE
 14.55 GPM GALLONS PER MINUTE ON THIS VALVE.

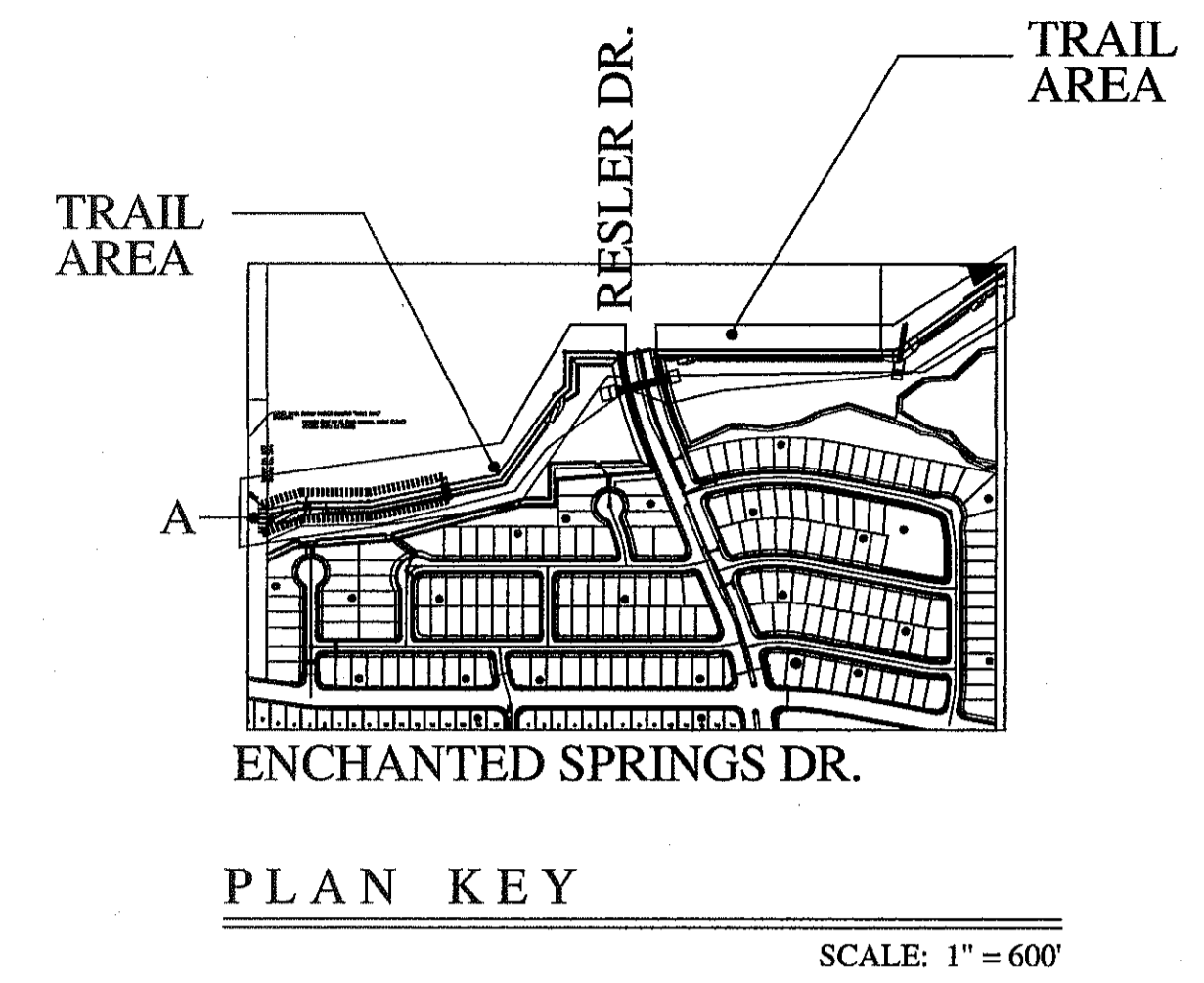
MATERIAL LEGEND:

- SEE RESLER DRIVE IRRIGATION SHEET L13
- LATERAL FOR DRIP PVC CLASS 200, DEPTH 16", TO TOP OF PIPE. SEE DETAIL G ON L12.
- SCH 40 SLEEVING UNDER ALL PAVED AREAS WHERE LINES ARE RUN. SLEEVES SHALL EXTEND 12" PAST PAVING. CHISEL 1" MARK IN CONCRETE CURB OR WALK TO LOCATE SLEEVE AT EACH SIDE. SIZE 2X DIA. OF PIPE TO BE SLEEVED. SEE #5 UNDER GENERAL IRRIGATION NOTES.
- TORO DRIP TUBING 1/2" WITH FLUSH CAPS IN VALVE BOX AT ENDS. DO NOT EXCEED 300 LF OR 4 GPM ON 1/2" POLY PIPE. SEE DETAIL H ON L13.
- DRIP EMITTER FOR TREES: RAINBIRD XERI-BIRD XBD-80 WITH FILTER AND IN STEM PRESSURE REGULATOR. USE 8 XB-20PC EMITTERS PER TREE. 27 GPM SET IN EMITTER VALVE BOX. SEE DETAILS E, AND F ON L12.
- +
- ▲ DRIP EMITTER FOR 1 GAL PLANTS OR AS SPECIFIED RAINBIRD PRESSURE COMPENSATING EMITTER XB-05PC, USE 1 EMITTER PER PLANT. .008 GPM
- ⊗ ISOLATION GATE VALVE IN LOCKING VALVE BOX. USE STANDARD VALVE BOX DETAILS. SEE DETAIL G ON L13
- ⊙ POLY PIPE TO PVC CONNECTION. PLACE IN VALVE BOX. SEE DETAIL I ON L13.
- M SEE RESLER DRIVE IRRIGATION SHEET L13
- ⊠ SEE RESLER DRIVE IRRIGATION SHEET L13
- C SEE RESLER DRIVE IRRIGATION SHEET L13

STATIC PRESSURE-CITY MAIN 65 PSI

PRESSURE LOSS CALCULATIONS

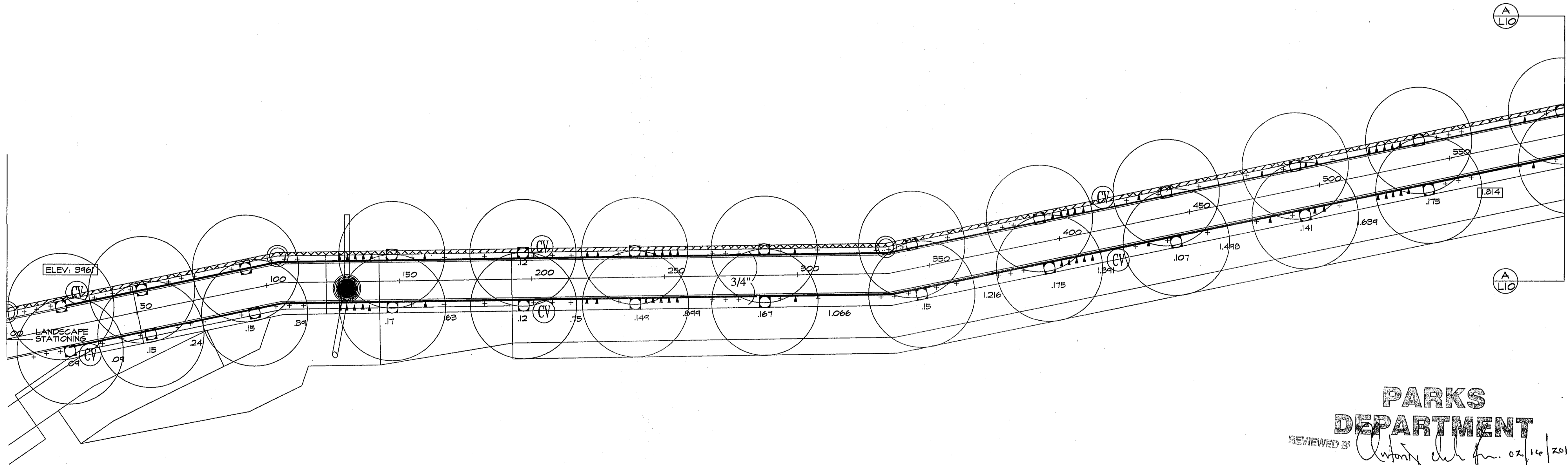
SECTION # 2D 8,596 GPM						
TYPE OF PIPE	LENGTH OF PIPE (FEET)	FLOW (GAL)	PIPE SIZE (IN)	PRESSURE LOSS PER 100 FEET (FEET)	PRESSURE LOSS THIS ITEM	ACCUMULATED PRESSURE LOSS
PVC CLASS 200	261	899	3/4	.06	.1566	.1566
PVC CLASS 200	356	1,981	3/4	.22	.7832	.9398
PVC CLASS 200	347	2,978	3/4	.46	1.5962	2.5360
PVC CLASS 200	300	3,914	3/4	.79	2.3700	4.9060
PVC CLASS 200	97	4,226	3/4	1.19	1.1543	6.0603
PVC CLASS 200	582	8,596	1	1.07	6.2274	12.2877
SECTION PRESSURE LOSSES (SUB TOTAL)						12.2877
ITEM	LENGTH OF PIPE (FEET)	SIZE (IN)	PRESSURE LOSS PER 100 FEET (FEET)	PRESSURE LOSS THIS ITEM	ACCUMULATED PRESSURE LOSS	
SECTION VALVE	8,596	1		2.9	15.1877	
MAINLINE PVC SCH 40	8	1-1/4	.52	.0416	15.2293	
TOTAL PRESSURE LOSS TO THE CITY MAIN						30.2032
PRESSURE GAIN 44' ELEVATION CHANGE						19.0520
DESIGN PRESSURE-STATIC PRESSURE CITY MAIN						65.0000
STATIC PRESSURE + PRESSURE GAIN						84.0520
PRESSURE LOSS TO THE CITY MAIN						30.2032
ACTUAL HEAD PRESSURE						53.8488
MINIMUM REQUIRED HEAD PRESSURE						15.0000



EMITTER SCHEDULE

SYM	EMTR	COMMON NAME
▲		FEATHER GRASS
▲		BLACKFOOT DAISY
+		ALL OTHER PLANTS

▲ 017 158 WEST SIDE OF TRAIL
 + 023 197 WEST SIDE OF TRAIL
 ▲ 017 61 EAST SIDE OF TRAIL
 + 023 176 EAST SIDE OF TRAIL



PLAN VIEW A - IRRIGATION SCALE: 1" = 20' - 0"

REVISIONS

DATE

ARCHITECT'S SEAL

SCALE

Horizontal: 1" = 20'

Vertical: 1" = 10'

Contour Interval: N/A

DATE: 2/10/15

DESIGN BY: LM

CHECK BY: LM

APPROV. BY: LM

JOB NO.

PROJECT TITLE

HIKE & BIKE WILDLIFE CORRIDOR
 DRAINAGE / OPEN SPACE / WILDLIFE CORRIDOR

LOT 15, BLOCK 38 AND LOT 39 BLOCK 22
 DESERT SPRINGS UNIT 4 SUBDIVISION
 EL PASO, TEXAS
 AREA: 660,484 SQ.FT. - 14.93 ACRES

SHEET TITLE

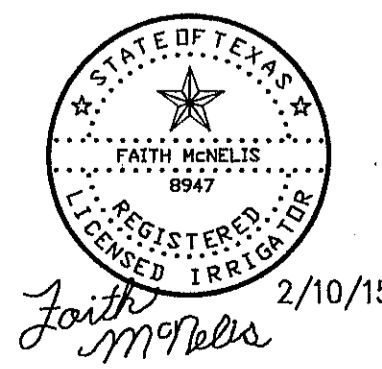
L9

WILDLIFE CORRIDOR IRRIGATION PLAN

SHEET 9 OF 18

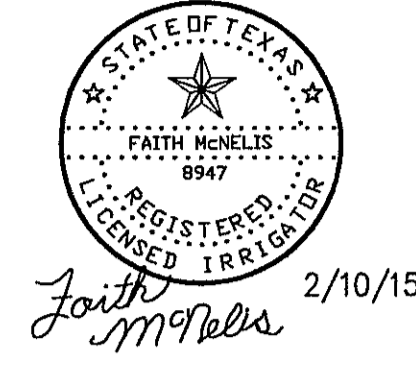


IRRIGATION IS REGULATED BY:
 PO BOX 13087
 AUSTIN, TEXAS 78711-3087
 TCEQ 512 239-6719
 CHAPTER 34, TEXAS WATER CODE
 IRRIGATOR'S LIC. #8947

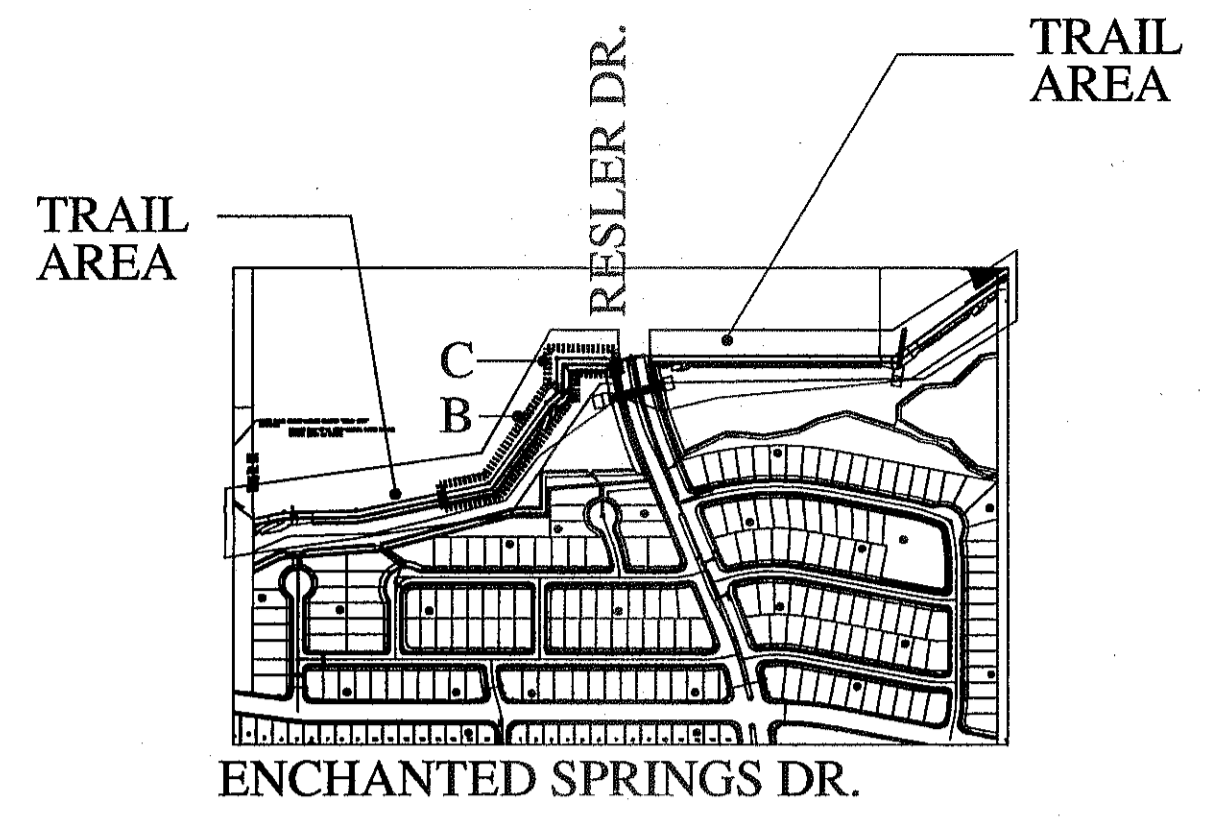


PARKS DEPARTMENT
 REVIEWED BY: *Faith McNeelis* on 02/10/2015

IRRIGATION IS REGULATED BY:
 PO BOX 13087
 AUSTIN, TEXAS 78711-3087
 TCEQ 512-239-6719
 CHAPTER 34, TEXAS WATER CODE
 IRRIGATOR'S LIC. #8947

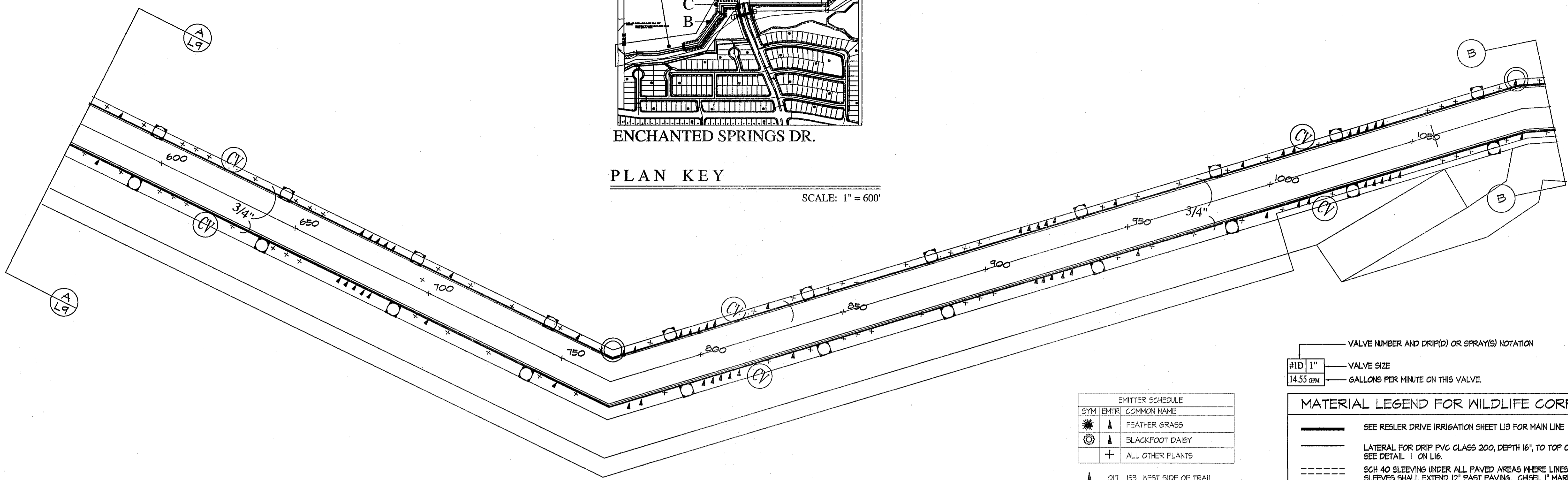


Faith Novellis 2/10/15



PLAN KEY

SCALE: 1" = 60'



PLAN VIEW B - IRRIGATION

SCALE: 1" = 20' - 0"

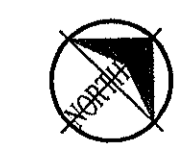
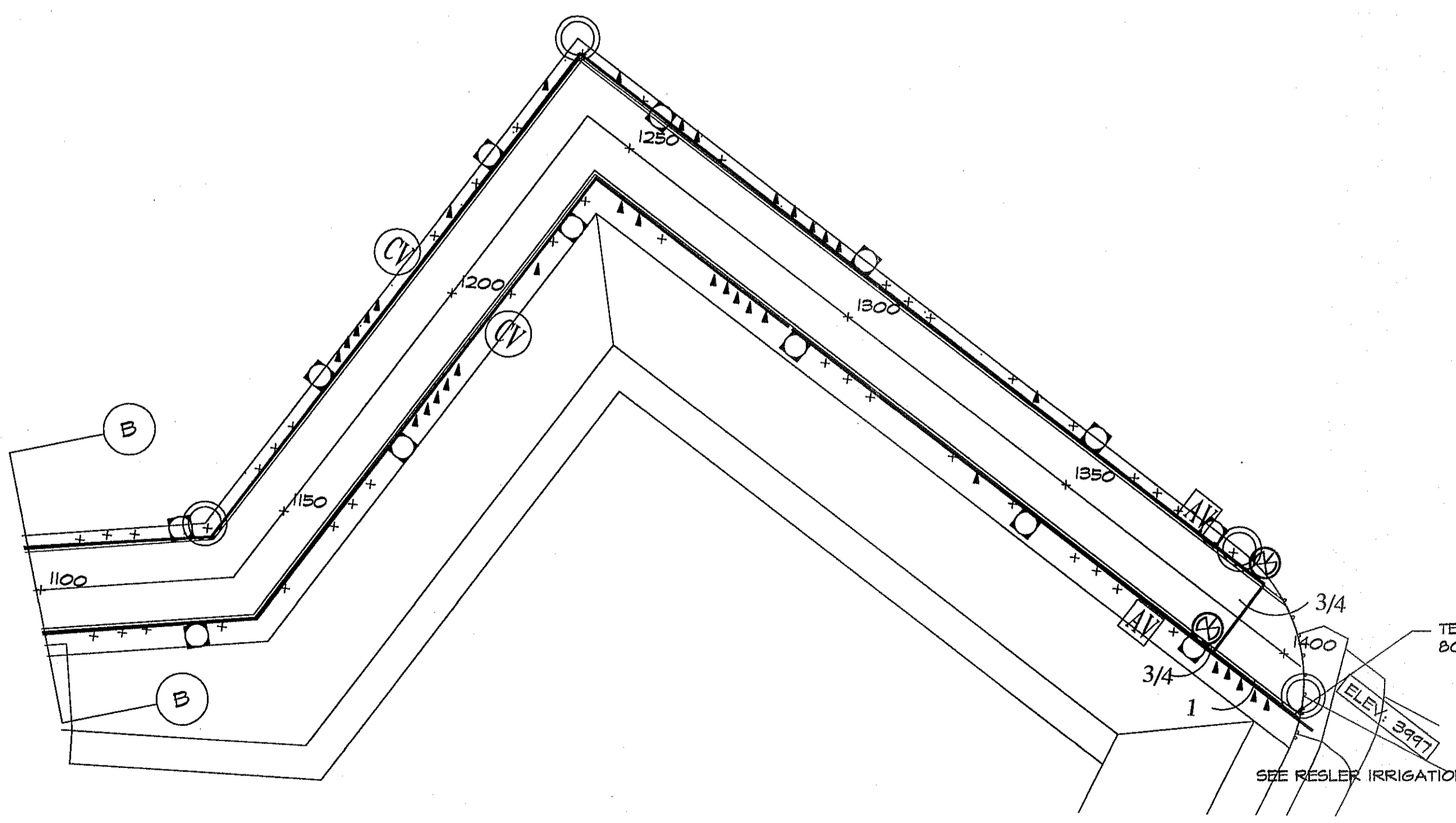
EMITTER SCHEDULE	
SYM	EMITTER COMMON NAME
▲	FEATHER GRASS
▲	BLACKFOOT DAISY
+	ALL OTHER PLANTS

- ▲ .017 153 WEST SIDE OF TRAIL
- + .03 197 WEST SIDE OF TRAIL
- ▲ .017 61 EAST SIDE OF TRAIL
- + .03 176 EAST SIDE OF TRAIL

- VALVE NUMBER AND DRIP(D) OR SPRAY(S) NOTATION
- #1D 1" VALVE SIZE
- 14.55 gpm GALLONS PER MINUTE ON THIS VALVE.

MATERIAL LEGEND FOR WILDLIFE CORRIDOR:

- SEE RESLER DRIVE IRRIGATION SHEET LIB FOR MAIN LINE INFORMATION
- LATERAL FOR DRIP PVC CLASS 200, DEPTH 16", TO TOP OF PIPE. SEE DETAIL 1 ON LIB.
- SCH 40 SLEEVING UNDER ALL PAVED AREAS WHERE LINES ARE RUN. SLEEVES SHALL EXTEND 12" PAST PAVING. CHISEL 1" MARK IN CONCRETE CURB OR WALK TO LOCATE SLEEVE AT EACH SIDE. SIZE 2X DIA. OF PIPE TO BE SLEEVED. SEE #5 UNDER GENERAL IRRIGATION NOTES ON LI.
- DRIP EMITTER FOR PLANTS: RAINBIRD XERI-BIRD XBD-80 WITH FILTER AND PRESSURE REGULATOR. SET IN EMITTER VALVE BOX. SEE DETAIL 2 ON LIB.
- + DRIP EMITTER FOR 5 GAL PLANTS OR AS SPECIFIED - DO NOT EXCEED 20' OF MICRO TUBE RAINBIRD PRESSURE COMPENSATING EMITTER XB-20. USE 1 EMITTER PER PLANT UNLESS OTHERWISE NOTED. PLACE ON UP HILL SIDE OF PLANT. .03 GPM.
- ▲ DRIP EMITTER FOR 1 GAL PLANTS OR AS SPECIFIED RAINBIRD PRESSURE COMPENSATING EMITTER XB-05PC. USE 1 EMITTER PER PLANT. DO NOT EXCEED 20' OF MICRO TUBE. .017 GPM.
- ⊗ ISOLATION GATE VALVE IN LOCKING VALVE BOX. USE STANDARD VALVE BOX DETAILS. SEE DETAIL 8 ON LIB.
- AV AIR VACUUM RELEASE VALVE - LOCATE AT HIGH POINTS OF LATERALS HIGH POINTS TO BE DETERMINED IN THE FIELD. SEE DETAIL 19 ON LIB.
- CV SCH 40 PVC SPRING LOADED CHECK VALVE. LOCATE EVERY 200' ON DOWN HILL SLOPES. SEE DETAIL 20 ON LIB.
- M SEE RESLER DRIVE IRRIGATION SHEET LIB
- ⊠ SEE RESLER DRIVE IRRIGATION SHEET LIB
- C SEE RESLER DRIVE IRRIGATION SHEET LIB



PLAN VIEW C - IRRIGATION

SCALE: 1" = 20' - 0"

TEST WATER PRESSURE AT THIS POINT IF EXCEEDS 80 PSI INSTALL PRESSURE REGULATOR.

SEE RESLER IRRIGATION SHEET LIB FOR CONTINUATION OF IRRIGATION



Final Approval

PARKS DEPARTMENT

REVIEWED BY *Anthony Clark* 02/10/2015

STATIC PRESSURE-CITY MAIN 65 PSI

PRESSURE LOSS CALCULATIONS					
SECTION # 2D 0.596 GPM					
TYPE OF PIPE	LENGTH OF PIPE (FEET)	FLOOR/ALL	PIPE SIZE/IN	PRESSURE LOSS PER 100 FEET THIS ITEM	ACCUMULATED PRESSURE LOSS
PVC CLASS 200	261	0.91	3/4	.06	.1566
PVC CLASS 200	356	1.98	3/4	.22	.7832
PVC CLASS 200	347	2.978	3/4	.46	1.5962
PVC CLASS 200	300	3.914	3/4	.71	2.3700
PVC CLASS 200	97	4.226	3/4	1.19	1.1543
PVC CLASS 200	582	8.596	1	1.07	6.2274
					12.2877
SECTION PRESSURE LOSSES (SUB TOTAL)					
ITEM	LENGTH OF PIPE (FEET)	SIZE/IN	PRESSURE LOSS PER 100 FEET THIS ITEM	PRESSURE LOSS THIS ITEM	ACCUMULATED PRESSURE LOSS
SECTION VALVE		0.596	1	2.1	15.1877
MAINLINE PVC SCH 40	8	0.596	1-1/4	52	0.416
					15.2243
BACKFLOW				13.0000	28.2243
WATER METER				5.0000	28.1243
TYPE K COPPER SUP.	51	0.596	1	2.81	30.2032
					30.2032
TOTAL PRESSURE LOSS TO THE CITY MAIN					30.2032
4005-9461 = 44X483 = 14.052					14.0520
DESIGN PRESSURE-STATIC PRESSURE CITY MAIN					65.0000
PRESSURE GAIN AT ELEVATION CHANGE					84.0520
IRRIGATION IS REGULATED BY:					84.0520
PO BOX 13087 PRESSURE + PRESSURE GAIN					84.0520
AUSTIN, TEXAS 78711-3087					84.0520
TCEQ 512-239-6719					84.0520
CHAPTER 34, TEXAS WATER CODE					84.0520
ACTUAL HEAD PRESSURE					59.8488
MINIMUM REQUIRED HEAD PRESSURE					15.0000
IRRIGATOR'S LIC. #8947					

REVISIONS

DATE

ARCHITECT'S SEAL

SCALE

PROJECT TITLE

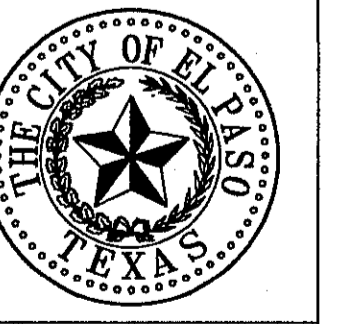
SHEET TITLE

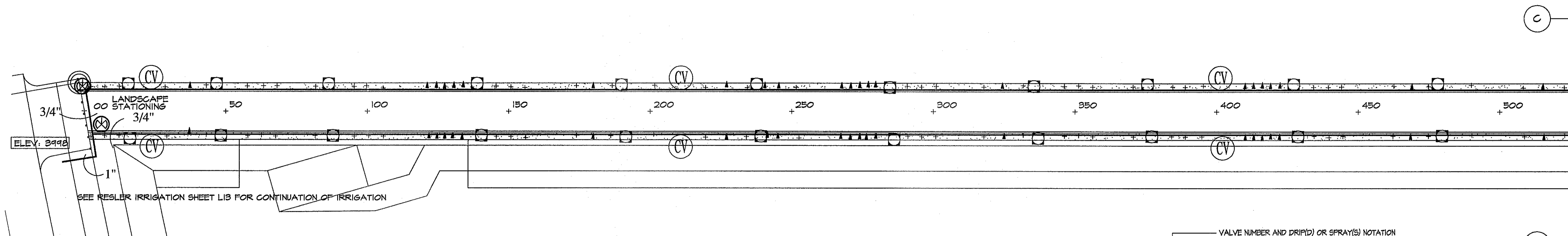
L10

WILDLIFE CORRIDOR IRRIGATION PLAN

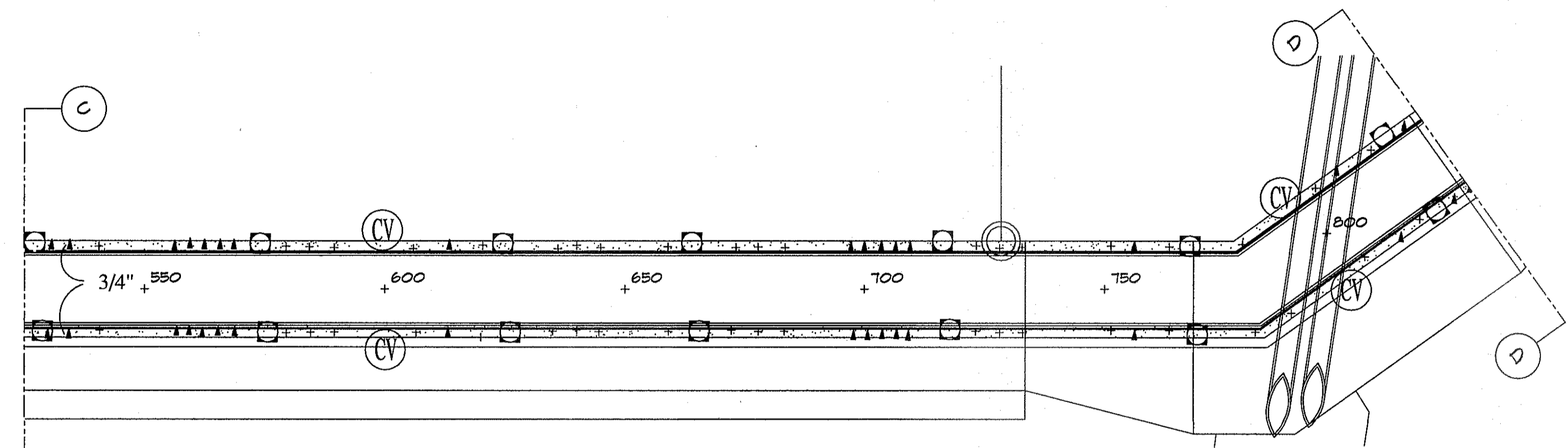
SHEET 10 OF 18

HIKE & BIKE WILDLIFE CORRIDOR
 DRAINAGE / OPEN SPACE / WILDLIFE CORRIDOR
 LOT 15, BLOCK 39 AND LOT 39 BLOCK 22
 DESERT SPRINGS UNIT 4 SUBDIVISION
 EL PASO, TEXAS
 AREA: 650,484 SQ.FT. - 14.93 ACRES

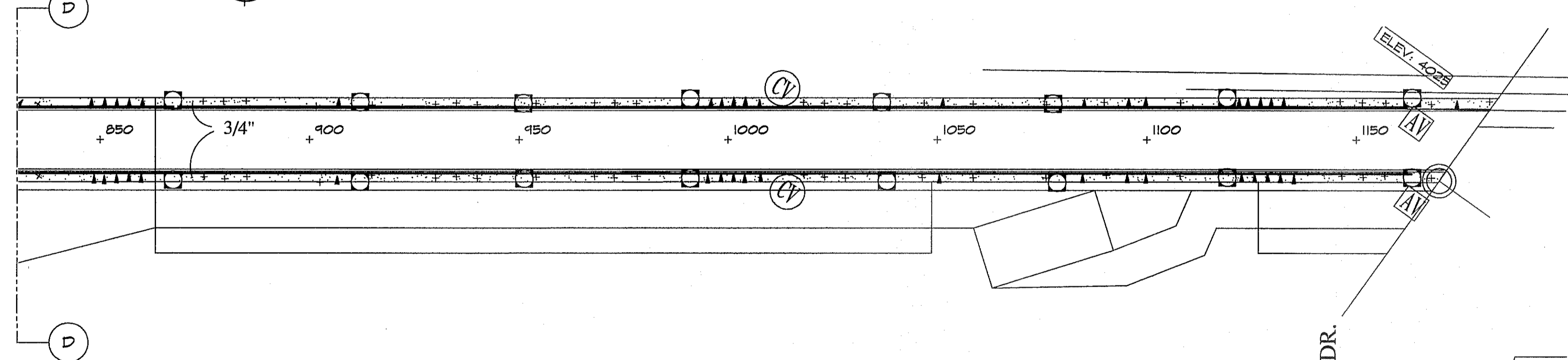




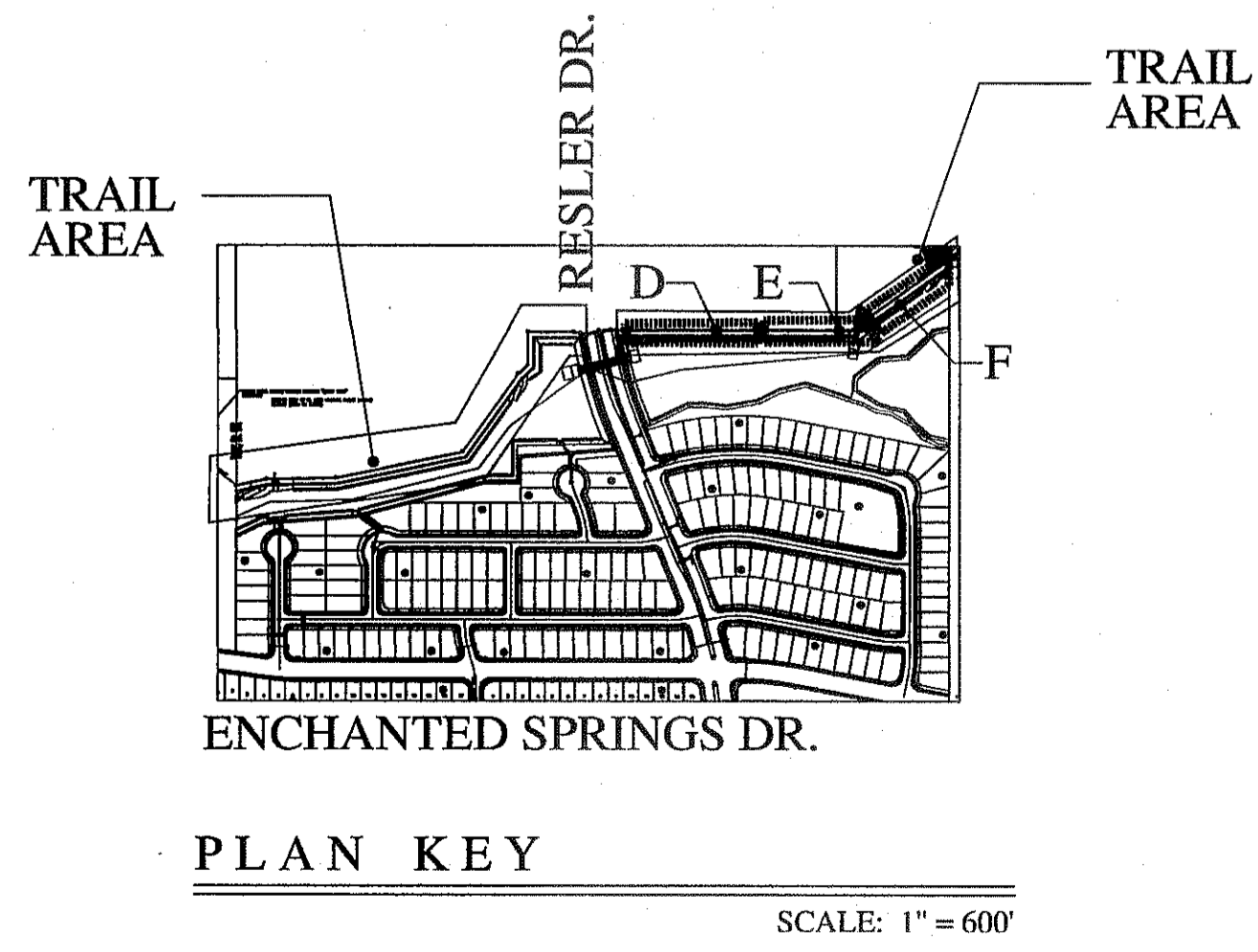
PLAN VIEW D - PLANTING AND MATERIALS
SCALE: 1" = 20' - 0"



PLAN VIEW E - PLANTING AND MATERIALS
SCALE: 1" = 20' - 0"



PLAN VIEW F - PLANTING AND MATERIALS
SCALE: 1" = 20' - 0"



VALVE NUMBER AND DRIP(D) OR SPRAY(S) NOTATION
 #1D 1" VALVE SIZE
 14.55 GPM GALLONS PER MINUTE ON THIS VALVE

- MATERIAL LEGEND FOR WILDLIFE CORRIDOR:**
- SEE RESLER DRIVE IRRIGATION SHEET LIB FOR MAIN LINE INFORMATION
 - LATERAL FOR DRIP PVC CLASS 200, DEPTH 16", TO TOP OF PIPE. SEE DETAIL 1 ON L16.
 - SCH 40 SLEEVING UNDER ALL PAVED AREAS WHERE LINES ARE RUN. SLEEVES SHALL EXTEND 12" PAST PAVING. CHEST 1" MARK IN CONCRETE CURB OR WALK TO LOCATE SLEEVE AT EACH SIDE. SIZE 2X DIA. OF PIPE TO BE SLEAVED. SEE #5 UNDER GENERAL IRRIGATION NOTES ON L1.
 - DRIP EMITTER FOR PLANTS: RAINBIRD XERI-BIRD XBD-80 WITH FILTER AND PRESSURE REGULATOR SET IN EMITTER VALVE BOX. SEE DETAIL 2 ON L16.
 - ⊕ DRIP EMITTER FOR 5 GAL PLANTS OR AS SPECIFIED - DO NOT EXCEED 20' OF MICRO TUBE RAINBIRD PRESSURE COMPENSATING EMITTER XB-20, USE 1 EMITTER PER PLANT UNLESS OTHERWISE NOTED. PLACE ON UPHILL SIDE OF PLANT. 03 GPM.
 - ▲ DRIP EMITTER FOR 1 GAL PLANTS OR AS SPECIFIED RAINBIRD PRESSURE COMPENSATING EMITTER XB-20, USE 1 EMITTER PER PLANT. DO NOT EXCEED 20' OF MICRO TUBE. 017 GPM.
 - ⊗ ISOLATION GATE VALVE IN LOCKING VALVE BOX. USE STANDARD VALVE BOX DETAILS. SEE DETAIL 8 ON L16.
 - AV AIR VACUUM RELEASE VALVE - LOCATE AT HIGH POINTS OF LATERALS. HIGH POINTS TO BE DETERMINED IN THE FIELD. SEE DETAIL 19 ON L16.
 - CV SCH 40 PVC SPRING LOADED CHECK VALVE. LOCATE EVERY 200' ON DOWN HILL SLOPES. SEE DETAIL 20 ON L16.
 - M SEE RESLER DRIVE IRRIGATION SHEET LIB
 - ⊠ SEE RESLER DRIVE IRRIGATION SHEET LIB
 - C SEE RESLER DRIVE IRRIGATION SHEET LIB

STATIC PRESSURE-CITY MAIN 65 PSI

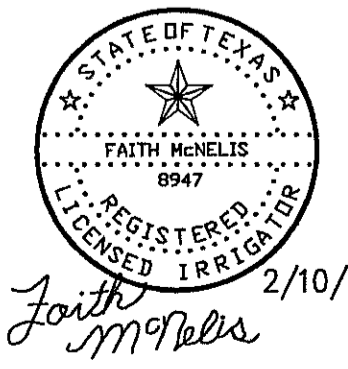
SECTION # 4D 7.937 GPM					
TYPE OF PIPE	LENGTH OF PIPE (FEET)	FLOW (GAL)	PIPE SIZE (I)	PRESSURE LOSS PER 100 FEET (FEET)	ACCUMULATED PRESSURE LOSS
PVC CLASS 200	294	.932	3/4	.06	.1764
PVC CLASS 200	335	1.966	3/4	.22	.7970
PVC CLASS 200	337	2.942	3/4	.46	1.5502
PVC CLASS 200	205	3.681	3/4	.71	1.6195
PVC CLASS 200	416	7.937	1	.86	3.5776
SECTION PRESSURE LOSSES (SUB TOTAL)					7.6607
ITEM	LENGTH OF PIPE (FEET)	SIZE (I)	PRESSURE LOSS PER 100 FEET (FEET)	PRESSURE LOSS THIS ITEM	ACCUMULATED PRESSURE LOSS
SECTION VALVE	7.937	1		2.9	10.5607
MAINLINE PVC SCH 40	8	1-1/4	.42	.3366	10.9443
BACKFLOW				13.0000	23.9443
WATER METER				.5000	24.0443
TYPE K COPPER SIF.	51	1.937	1	1.1892	25.2775
TOTAL PRESSURE LOSS TO THE CITY MAIN					25.2775
4025-4025 = 20X.435 = 8.66					33.9375
PRESSURE LOSS 20' ELEVATION CHANGE					8.66
DESIGN PRESSURE-STATIC PRESSURE CITY MAIN					65.0000
PRESSURE LOSS TO THE CITY MAIN					33.9375
ACTUAL HEAD PRESSURE					31.0625
MINIMUM REQUIRED HEAD PRESSURE					15.0000

PARKS DEPARTMENT

REVIEWED BY *[Signature]* 02/14/2015

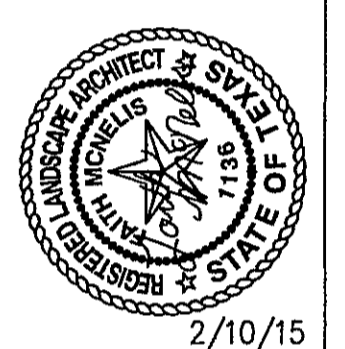


IRRIGATION IS REGULATED BY:
 PO BOX 13087
 AUSTIN, TEXAS 78711-3087
 TCEQ 512 239-6719
 CHAPTER 34, TEXAS WATER CODE
 IRRIGATOR'S LIC. #8947



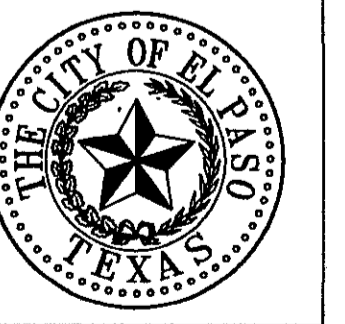
REVISIONS	DATE

LISA MCNEILIS
 LANDSCAPE ARCHITECT
 1500 FOWLER
 LAS CRUCES, NEW MEXICO 88007
 (505) 621-9232



SCALE
 Horizontal: N/A
 Vertical: Contour Interval: N/A
 DATE: 2/10/15
 DESIGNED BY: LM
 DRAWN BY: LM
 CHECKED BY: LM
 APPROVED BY: LM
 JOB No.

HIKE & BIKE WILDLIFE CORRIDOR
 DRAINAGE / OPEN SPACE / WILDLIFE CORRIDOR
 LOT 15, BLOCK 39 AND LOT 39 BLOCK 22
 DESERT SPRINGS UNIT 4 SUBDIVISION
 EL PASO, TEXAS
 AREA: 650,484 SQ. FT. - 14.93 ACRES

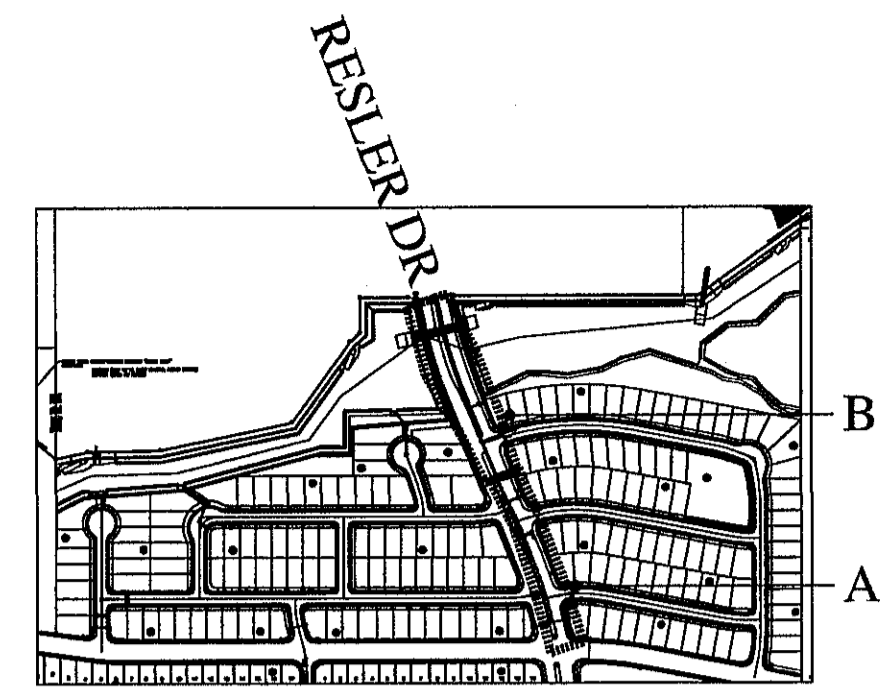


SHEET TITLE

L11

WILDLIFE CORRIDOR IRRIGATION PLAN

SHEET 11 OF 18



ENCHANTED SPRINGS DR.

PLAN KEY

SCALE: 1" = 600'

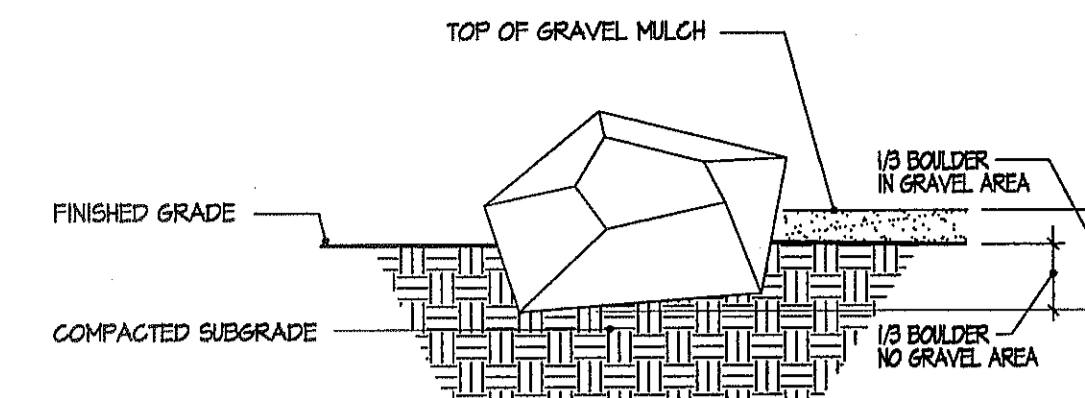
RESLER MATERIAL LEGEND AND DETAIL KEY:

1. 3/4" FRANKLIN RED GRAVEL 3" DEPTH
2" BELOW ALL CONCRETE SURFACES. USE NEED BARRIER. PROJECT TOTAL 12510 SF
SEE DETAIL 6 ON LIS
2. GREY 2"-3" KICKER STONE 4" DEPTH
2" BELOW ALL CONCRETE SURFACES. USE NEED BARRIER. PROJECT TOTAL 12151 SF
SEE DETAIL 6 ON LIS
3. GREY BOULDERS 36"X36"
2" BELOW ALL CONCRETE SURFACES. USE NEED BARRIER. PROJECT TOTAL 14
SEE DETAIL ON THIS SHEET
4. GREY BOULDERS, MIX SIZES 18"X18" TO 24"X24"
PROJECT TOTAL 81
SEE DETAIL ON THIS SHEET
5. 8" CONCRETE SIDEWALK
SEE DETAIL D ON LIS

VERIFY QUANTITIES. PLANS TAKE PRECEDENCE

PLANT LEGEND/SCHEDULE FOR RESLER DRIVE								
SYM	KEY	COMMON NAME	BOTANICAL NAME	CONT.	SPACING	QUANT.	SIZE	REMARKS
LG	LYNN'S LEGACY TEXAS SAGE	LEUCOPHYLLUM LANGMANIAE	LYNN'S LEGACY	5 GAL	5' OC	24	18" HT	OO
RM	REGAL MIST MAJLY	MULLENBERGIA CAPILLARIS	REGAL MIST	5 GAL	5' OC	11	14" HT	CUT BACK ALTERNATE YEARS, END OF FEB
PC	POKIS CASTLE ARTEMESIA	ARTEMESIA FILIFOLIA 'POKIS CASTLE'		5 GAL	4' OC	21	4" HT	CUT BACK TO 12" END OF FEB.
CS	CLEVELAND SAGE	SALVIA CLEVELANDII		5 GAL	4' OC	23	12" HT	OO
TB	TURPENTINE BUSH	ERICAMERIA LARICIFOLIA		5 GAL	5' OC	36	18" HT	DO NOT TRIM
BF	BLACKFOOT DAISY	MELAMPODIUM LEIGANTHUM		1 GAL	2' OC	64	6" HT	CUT BACK END OF FEB
RY	RED YUCCA	HESPERALOE PARVIFLORA		5 GAL	5' OC	16	18" HT	
PL	PURPLE LANTANA	LANTANA MONTEVIDENSIS		5 GAL	5' OC	32	6" HT	CUT BACK END OF FEB
MF	MEXICAN FEATHER GRASS	NASSELLA TENISSIMA		1 GAL	3' OC	60	15" HT	CUT BACK MID MARCH
YL	'NEW GOLD' LANTANA	LANTANA CAMERA 'NEW GOLD'		5 GAL	4' OC	24	6" HT	CUT BACK MID FEB

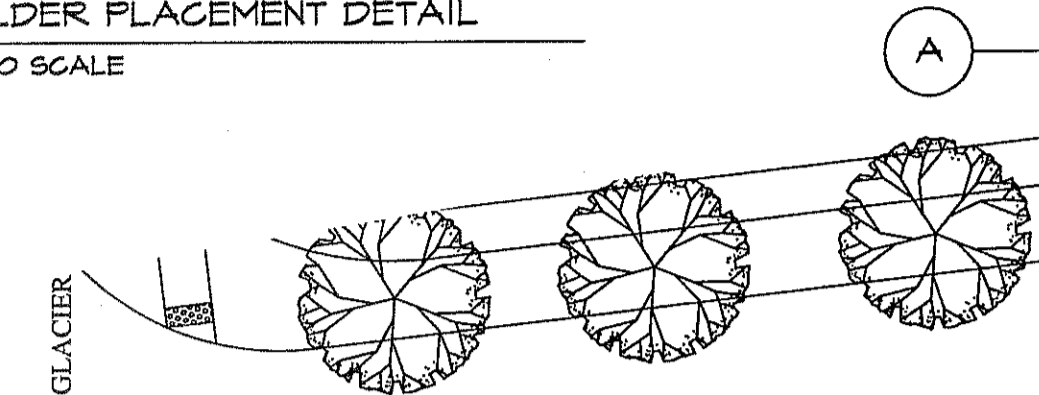
TREE LEGEND/SCHEDULE PROJECT TOTAL FOR RESLER DRIVE							
SYM	KEY	COMMON NAME	BOTANICAL NAME	CONT.	SIZE	QUANT.	REMARKS
DWT	BUBBA DESERT WILLOW	CHILOPSIS LINEARIS 'BUBBA'		24' BOX	2' CAL-10HT-6' SPREAD	14	SINGLE-FULL
PVT	DESERT MUSEUM PALOVERDE	CERCOPHILUM X DESERT MUSEUM		24' BOX	2' CAL-10HT-6' SPREAD	13	SINGLE TRUNK-FULL
MT	MAVERICK MESQUITE	PROSOPIUM GLANDULOSA MAVERICK		24' BOX	2' CAL-10HT-6' SPREAD	10	SINGLE-FULL



FOR NATURAL APPEARANCE PLACE 2 OR 3 BOULDERS TOUCHING AND AT DIFFERENT HEIGHTS.

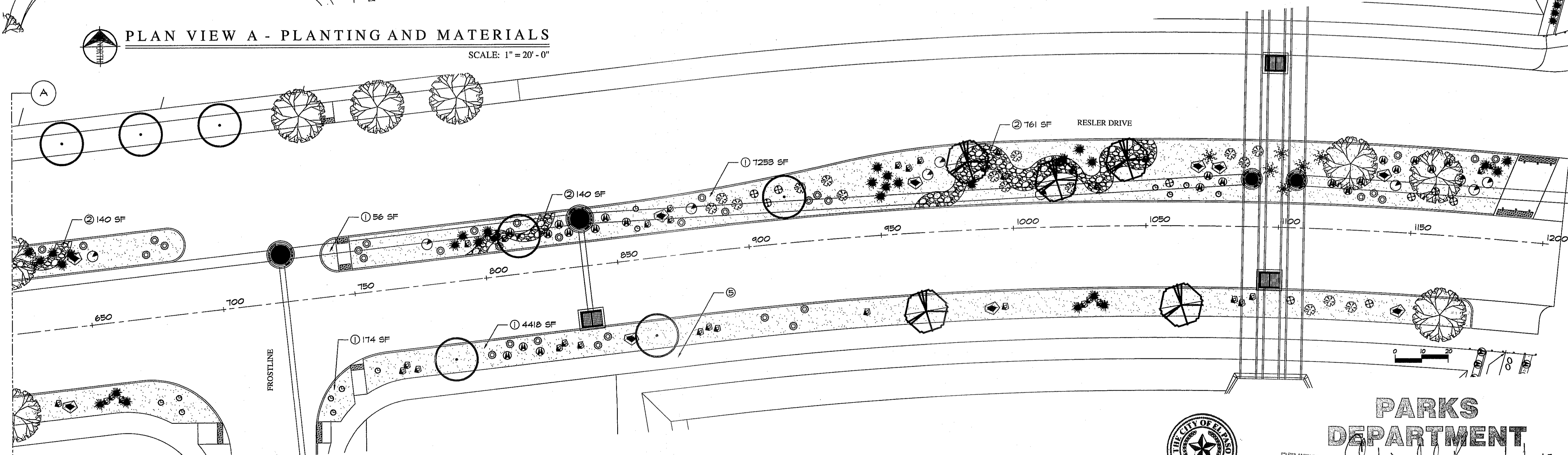
BOULDER PLACEMENT DETAIL

NOT TO SCALE



PLAN VIEW A - PLANTING AND MATERIALS

SCALE: 1" = 20' - 0"



PLAN VIEW B - PLANTING AND MATERIALS

SCALE: 1" = 20' - 0"

REVISIONS

DATE

PROJECT TITLE

**RESLER DRIVE
MEDIANS AND PARKWAY TRAIL**

DESERT SPRINGS UNIT 4 SUBDIVISION
EL PASO, TEXAS
TRAIL AREA: 19,597 SQ.FT. - .45 ACRES
MEDIAN AREA: 17,114 SQ.FT. - .39 ACRES

ARCHITECT'S SEAL

LISA MCNELLIS
LANDSCAPE ARCHITECT
1900 FOWERS
LAS CRUCES, NEW MEXICO 88007
(575) 621-8052

SCALE

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

DATE: 2/10/15
DESIGN BY: LM
DRAWN BY: LM
CHECKED BY: LM
APP. NO. BY: LM
JOB NO.:

SHEET TITLE

L12

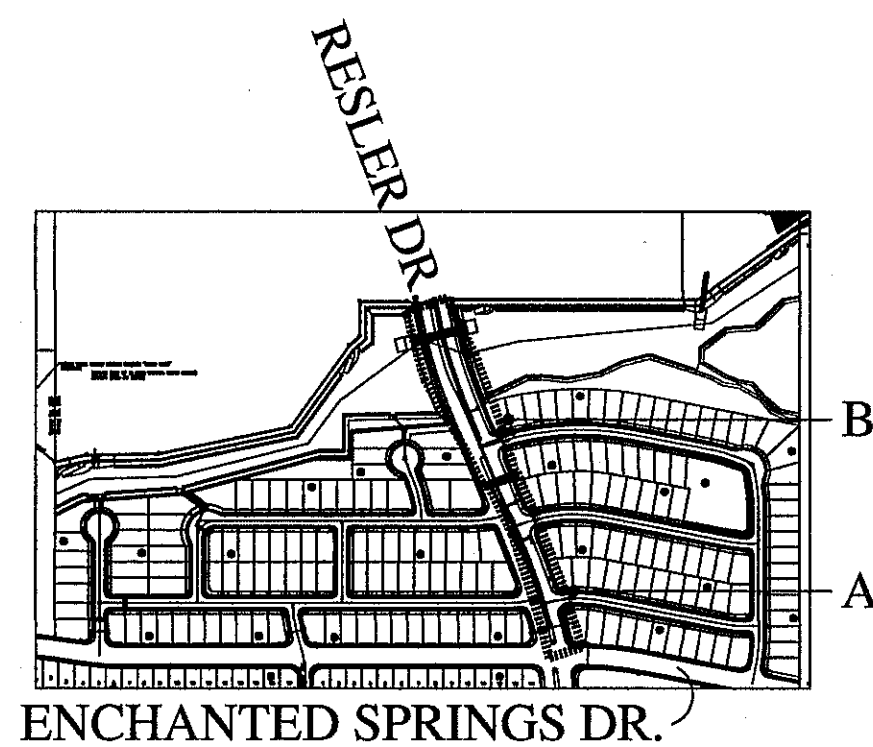
RESLER TRAIL AND MEDIANS

SHEET 12 OF 18



PARKS DEPARTMENT

REVIEWED BY: *[Signature]* 02/14/2015



PLAN KEY

SCALE: 1" = 600'

MATERIAL LEGEND FOR RESLER:

- PRESSURE MAIN PVC SCHEDULE 40, DEPTH 24" TO TOP OF PIPE. SEE DETAIL 1 ON L16.
 - LATERAL FOR DRIP PVC CLASS 200, DEPTH 16", TO TOP OF PIPE. SEE DETAIL 1 ON L16.
 - SCH 40 SLEEVING UNDER ALL PAVED AREAS WHERE LINES ARE RUN. SLEEVES SHALL EXTEND 12" PAST PAVING. CHISEL 1" MARK IN CONCRETE CURB OR WALK TO LOCATE SLEEVE AT EACH SIDE. SIZE 2X DIA. OF PIPE TO BE SLEEVED. SEE #5 UNDER GENERAL IRRIGATION NOTES AND DETAIL 1 ON L16.
 - TORO DRIP TUBING 1/2" WITH FLUSH CAPS IN VALVE BOX AT ENDS. DO NOT EXCEED 500 LF OR 4 GPM ON 1/2" POLY PIPE. SEE DETAIL 19 ON L16.
 - Ⓜ DRIP EMITTER FOR TREES, RAINBIRD XERI-BIRD XBD-80 WITH FILTER. USE 8 XB-20PC EMITTERS PER TREE. 27 GPM. SET IN EMITTER VALVE BOX. SEE DETAILS 2 AND 3 ON L16.
 - + DRIP EMITTER FOR 5 GAL PLANTS OR AS SPECIFIED. RAINBIRD PRESSURE COMPENSATING EMITTER XB-20PC, USE 1 EMITTER PER PLANT UNLESS OTHERWISE SHOWN. 29 GPM. PLACE ON UPHILL SIDE OF SLOPE.
 - ▲ DRIP EMITTER FOR 1 GAL PLANTS OR AS SPECIFIED. RAINBIRD PRESSURE COMPENSATING EMITTER XB-08PC, USE 1 EMITTER PER PLANT. 17 GPM.
 - ⊙ POLY PIPE TO PVC CONNECTION. PLACE IN VALVE BOX. SEE DETAIL 17 ON L16.
 - ⊙ ISOLATION GATE VALVE IN LOCKING VALVE BOX. USE STANDARD VALVE BOX DETAILS. SEE DETAIL 8 ON L16.
 - Ⓜ ELECTRIC REMOTE VALVE: RAINBIRD FE5B. SIZE ON PLAN. WITH CUT OFF BALL VALVE, AND T805 CONTROL MODULE/SOLENOID IN LOCKING VALVE BOX. SEE DETAIL 10 ON SHEET L17 AND DETAIL 16 ON SHEET L18.
 - Ⓜ ELECTRIC REMOTE VALVE FOR DRIP: HEATHERMATIC 8200CR-10. SIZE ON PLAN. IN LOCKING VALVE BOX. SEE DETAILS 5 ON L16 AND 10 ON SHEET L17.
 - Ⓜ 1" METER. LOCATION ON THIS PLAN IS APPROXIMATE. FLOW: 15 GPM - STATIC PRESSURE: 65 PSI.
 - Ⓜ BACKFLOW: FEBCO REDUCED PRESSURE 825Y 1" IN INSULATED STAINLESS STEEL ENCLOSURE. MAY USE BLANKET BUT MUST BE INSULATED TO R25. SEE DETAIL 14 ON L17.
 - Ⓜ T805 BATTERY OPERATED CONTROLLER - TRANSMITTER MAY BE USED FOR ALL VALVES. T805 II - 404MS. ALL DRIP STATIONS SHALL BE SET FOR 240 MIN PER WEEK OR 80 MIN 3 DAYS PER WEEK. SEE DETAIL 16 ON L16.
- IF RUNOFF OCCURS THEN DURATION SHALL BE REDUCED BUT MULTIPLE RUN TIMES WITH 2 HOUR SOAK PERIODS BETWEEN RUN TIMES SHALL BE USED IN ORDER TO DELIVER REQUIRED AMOUNT OF WATER.
- NOTE: IF PRESSURE EXCEEDS 100 PSI CONTRACTOR MUST INSTALL PRESSURE REGULATOR DOWNSTREAM OF BACKFLOW.

— VALVE NUMBER AND DRIP(D) OR SPRAY(S) NOTATION

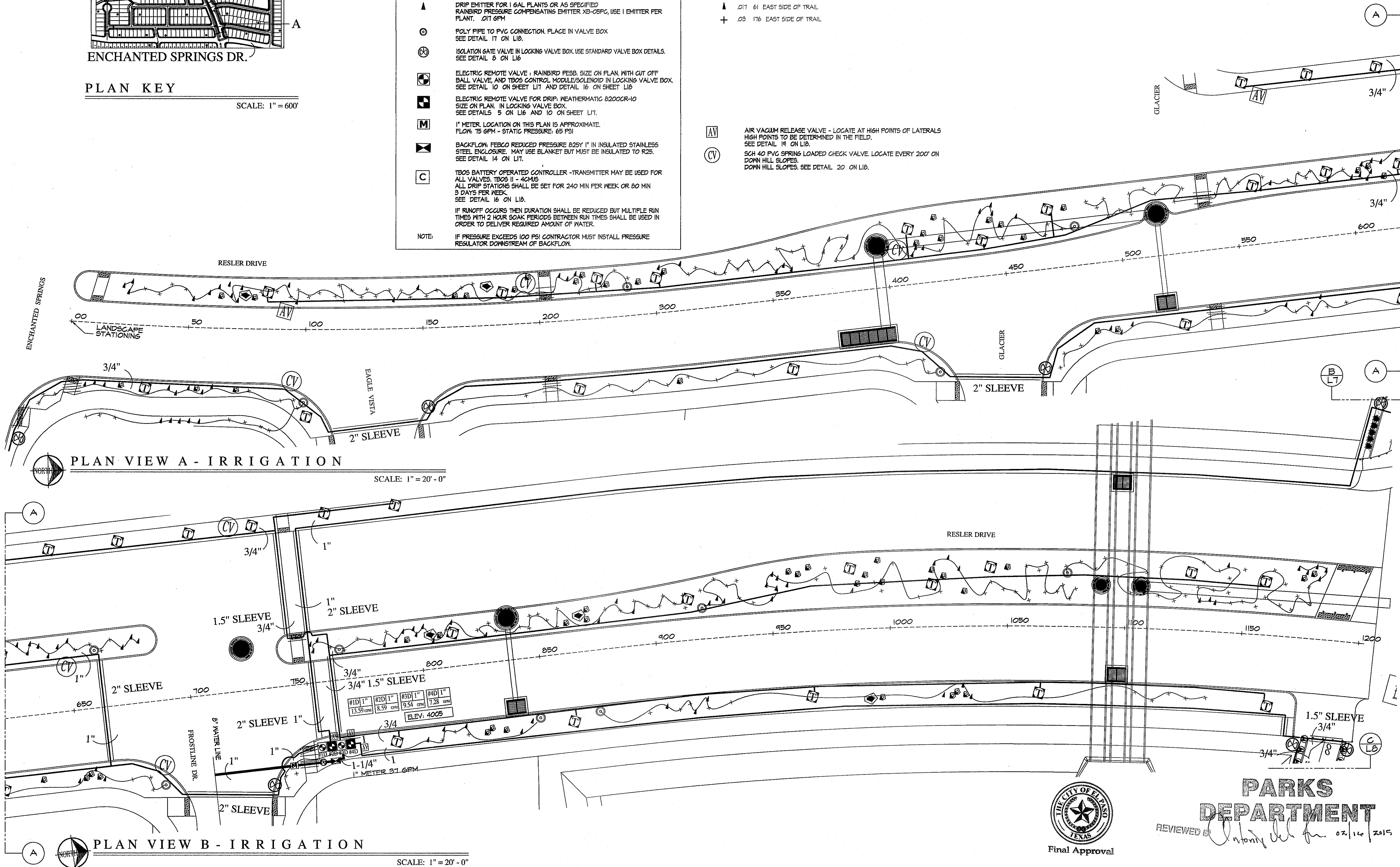
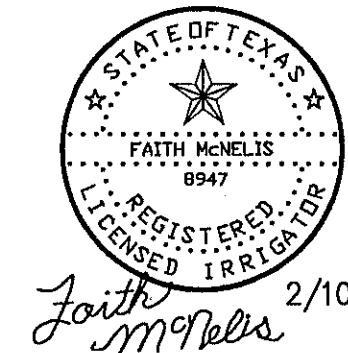
#1D 1" — VALVE SIZE
14.55 GPM — GALLONS PER MINUTE ON THIS VALVE

SYM	EMTR	COMMON NAME
▲		FEATHER GRASS
▲		BLACKFOOT DAISY
+		ALL OTHER PLANTS

- ▲ 017 153 WEST SIDE OF TRAIL
- + 028 147 WEST SIDE OF TRAIL
- ▲ 017 61 EAST SIDE OF TRAIL
- + 028 176 EAST SIDE OF TRAIL

- AV AIR VACUUM RELEASE VALVE - LOCATE AT HIGH POINTS OF LATERALS. HIGH POINTS TO BE DETERMINED IN THE FIELD. SEE DETAIL 19 ON L16.
- CV SCH 40 PVC SPRING LOADED CHECK VALVE. LOCATE EVERY 200' ON DOWN HILL SLOPES. SEE DETAIL 20 ON L16.

IRRIGATION IS REGULATED BY:
PO BOX 13087
AUSTIN, TEXAS 78711-3087
TCEQ 512-239-6719
CHAPTER 34, TEXAS WATER CODE
IRRIGATOR'S LIC. #8947



PLAN VIEW A - IRRIGATION

SCALE: 1" = 20' - 0"

PLAN VIEW B - IRRIGATION

SCALE: 1" = 20' - 0"

REVISIONS	DATE	DESCRIPTION

PROJECT TITLE
RESLER DRIVE
MEDIAN AND PARKWAY TRAIL
DESERT SPRINGS UNIT & SUBDIVISION
EL PASO, TEXAS
TRAIL AREA: 19,897 SQ.FT. - .45 ACRES
MEDIAN AREA: 17,114 SQ.FT. - .39 ACRES

ARCHITECT'S SEAL
LISA MCNELIS
LANDSCAPE ARCHITECT
1800 FOWLER
LAS CRUCES, NEW MEXICO 88007
(505) 621-9232

SCALE
Vertical: N/A
Horizontal: N/A
Contour Interval: N/A
DATE: 2/10/15
DESIGN BY: LM
DRAWN BY: LM
APP'D. BY: LM
JOB NO.:

SHEET TITLE
L13
RESLER
IRRIGATION
SHEET 13 OF 18



PARKS DEPARTMENT
REVIEWED BY: Anthony [Signature] 02/10/2015

TREE LEGEND/SCHEDULE PROJECT TOTAL FOR ENCHANTED SPRINGS DRIVE					
SYM	KEY	COMMON NAME	BOTANICAL NAME	CONT.	REMARKS
⊗	DWT	BUBBA DESERT WILLOW	CHILOPSIS LINEARIS 'BUBBA	24' BOX	2' GAL-10HT-6' SPREAD 6 SINGLE-FULL
⊙	LET	LACEBARK ELM	ULMUS PARVIFOLIA	24' BOX	2' GAL-10HT-6' SPREAD 12 SINGLE TRUNK-FULL

MATERIAL LEGEND AND DETAIL KEY FOR ENCHANTED SPRINGS:

1. 3/4" FRANKLIN RED ROCK MULCH 3" DEPTH
2" BELOW ALL CONCRETE SURFACES. USE NON WOVEN
POLY FABRIC. - QTY: 2602 SF
SEE DETAIL Ⓞ ON SHEET L13

VERIFY QUANTITIES. PLAN TAKES PRECEDENCE.

VALVE NUMBER AND DRIP(D) OR SPRAY(S) NOTATION

#11 | 1" VALVE SIZE
14.55 GPM GALLONS PER MINUTE ON THIS VALVE.

MATERIAL LEGEND FOR ENCHANTED SPRINGS DR.

— SEE RESLER DRIVE IRRIGATION SHEET L13

--- LATERAL FOR DRIP PVC CLASS 200, DEPTH 16", TO TOP OF PIPE. SEE DETAIL 1 ON L16.

----- SCH 40 SLEEVING UNDER ALL PAVED AREAS WHERE LINES ARE RUN. SLEEVES SHALL EXTEND 12" PAST PAVING. CHISEL 1" MARK IN CONCRETE CURB OR WALK TO LOCATE SLEEVE AT EACH SIDE. SIZE 2X DIA. OF PIPE TO BE SLEAVED. SEE #5 UNDER GENERAL IRRIGATION NOTES.

⊗ DRIP EMITTER FOR TREES: RAINBIRD XERI-BIRD XBD-80 WITH FILTER AND IN STEM PRESSURE REGULATOR. USE 8 XBD-20PG EMITTERS PER TREE. 21 GPM SET IN EMITTER VALVE BOX. SEE DETAILS 2, AND 3 ON L16.

⊗ ISOLATION GATE VALVE IN LOCKING VALVE BOX. USE STANDARD VALVE BOX DETAILS. SEE DETAIL 8 ON L16.

M SEE RESLER DRIVE IRRIGATION SHEET L13

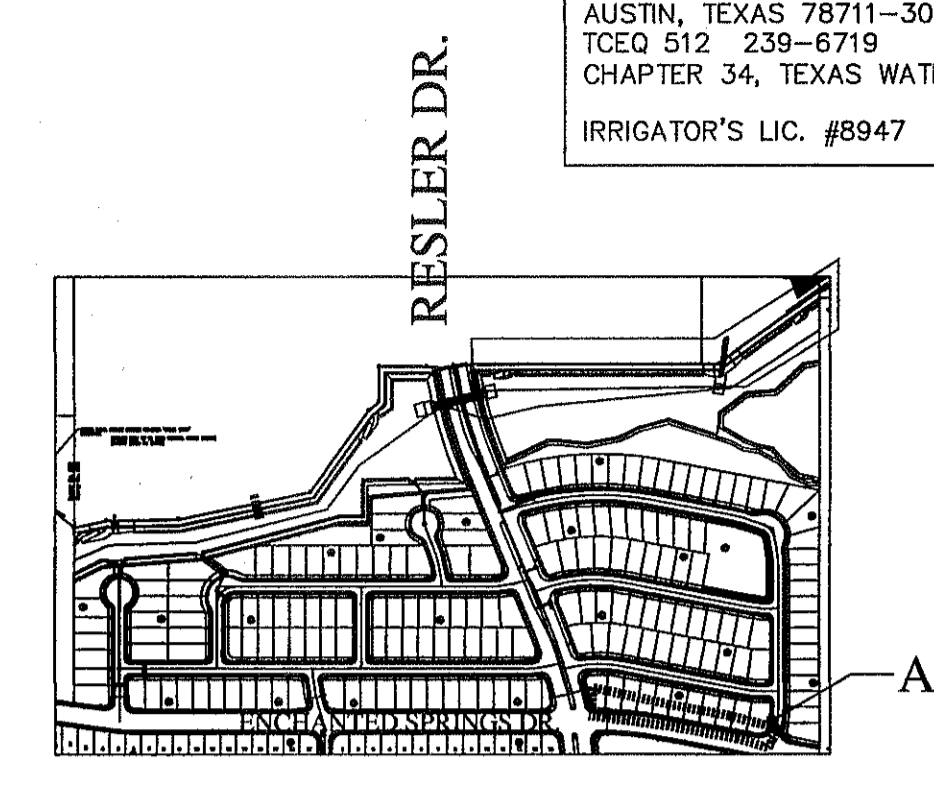
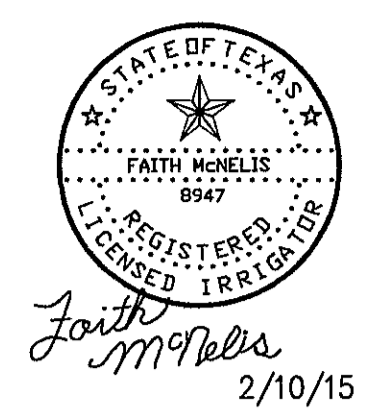
⊗ SEE RESLER DRIVE IRRIGATION SHEET L13

C SEE RESLER DRIVE IRRIGATION SHEET L13

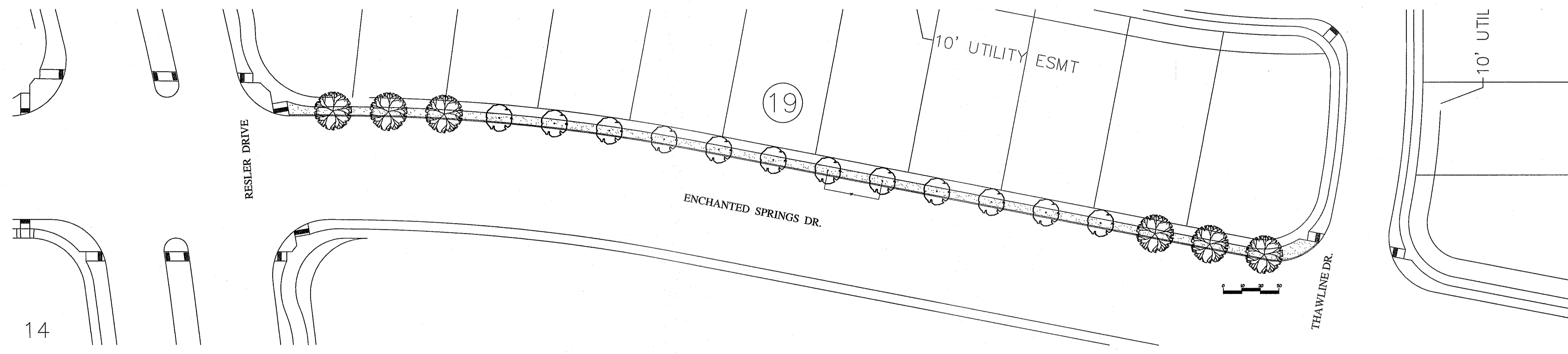
AV AIR VACUUM RELEASE VALVE - LOCATE AT HIGH POINTS OF LATERALS. HIGH POINTS TO BE DETERMINED IN THE FIELD. SEE DETAIL 19 ON L16.

CV SCH 40 PVC SPRING LOADED CHECK VALVE. LOCATE EVERY 200' ON DOWN HILL SLOPES. SEE DETAIL 20 ON L16.

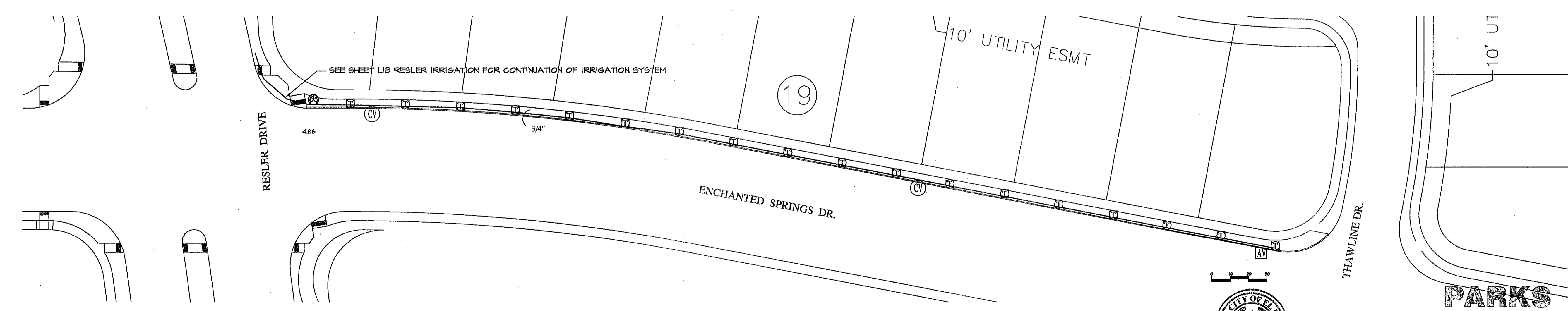
IRRIGATION IS REGULATED BY:
PO BOX 13087
AUSTIN, TEXAS 78711-3087
TCEQ 512 239-6719
CHAPTER 34, TEXAS WATER CODE
IRRIGATOR'S LIC. #8947



PLAN KEY
SCALE: 1" = 600'



PLAN VIEW A - PLANTING
SCALE: 1" = 30' - 0"



PLAN VIEW A - IRRIGATION
SCALE: 1" = 30' - 0"



PARKS DEPARTMENT
REVIEWED BY [Signature] 02/16/2015

REVISIONS

DATE

PROJECT TITLE
**ENCHANTED SPRINGS DRIVE
DOUBLE FRONTING LOTS
DESERT SPRINGS UNIT 4 SUBDIVISION
EL PASO, TEXAS**

ARCHITECT'S SEAL
LISA MCNEILIS
LANDSCAPE ARCHITECT
1800 FORTWORTH
LAS CRUCES, NEW MEXICO 88007
(505) 621-8032

SCALE
Horizontal: N/A
Vertical: N/A
Contour Interval: N/A
DATE: 2/10/15
DESIGN BY: LM
DRAWN BY: LM
CHKD. BY: LM
APPROV. BY: LM
JOB No.

SHEET TITLE
L14
ENCHANTED SPRINGS PLANTING & IRRIG.
SHEET 14 OF 18

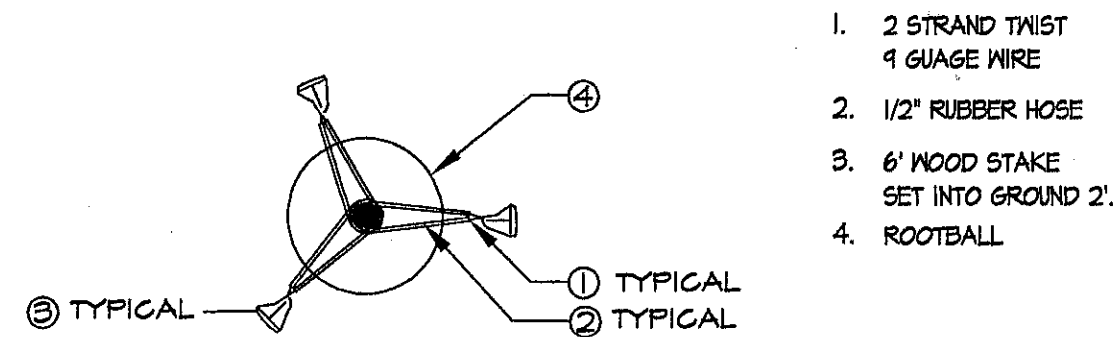
STAKING IS NOT REQUIRED BUT IF DEEMED NECESSARY THE STAKING DETAIL SHALL BE FOLLOWED. STAKING IS AT THE DISCRETION OF THE CONTRACTOR, LANDSCAPE ARCHITECT AND PARKS DEPT. BUT SHOULD TREES REQUIRE STAKING THE CONTRACTOR SHALL INCLUDE THE COST OF THE STAKING IN THE COST OF THE TREE.

IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REMOVE STAKES AT END OF THE GUARANTEE PERIOD AT NO COST TO THE OWNER.

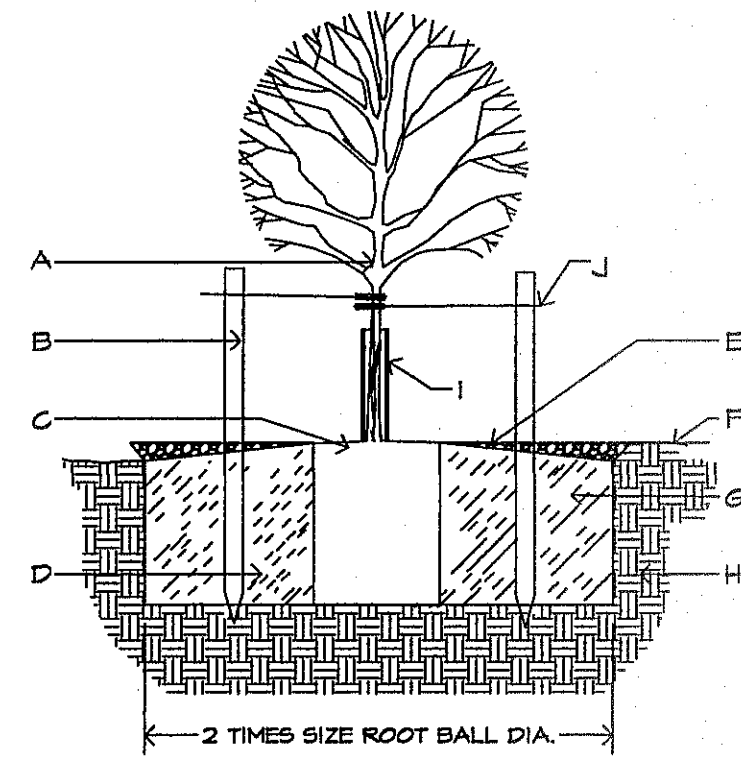
TREES THAT ARE DAMAGED DUE TO IMPROPER OR LACK OF STAKING MUST BE REPLACED BY THE CONTRACTOR AT NO COST TO THE OWNER.

WIRES SHALL NOT BE TAUT BUT SHOULD ALLOW MOVEMENT OF 5 - 10 DEGREES FROM VERTICAL.

STAKES SHALL NOT BE DRIVEN INTO ROOTBALL OF TREES.



A TYPICAL TREE GUYING DETAIL - PLAN VIEW
NOT TO SCALE



- A. TREE
- B. STAKING NEEDED
- C. 4" SPACE BETWEEN MULCH AND TREE
- D. SLOPE ON SIDES OF PLANTING HOLE
- E. DEPTH OF BARK MULCH-SEE PLAN
- F. FINISH SOIL GRADE
- G. BACKFILL WITH EXISTING NATIVE SOIL
- H. UNDISTURBED SOIL
- I. TREESGUARD
- J. TIES TO STAKES TO HAVE RUBBER HOSE TO PROTECT TREE TRUNK FROM DAMAGE BY WIRE. WIRE TIES TO BE LOOSE TO PROTECT TREE TRUNK FROM DAMAGE. WIRE TIES TO BE SET ON SAME TRUNK OR MAIN TRUNK.

STAKE 1" CALIPER TREES IN PARK PARKWAY.

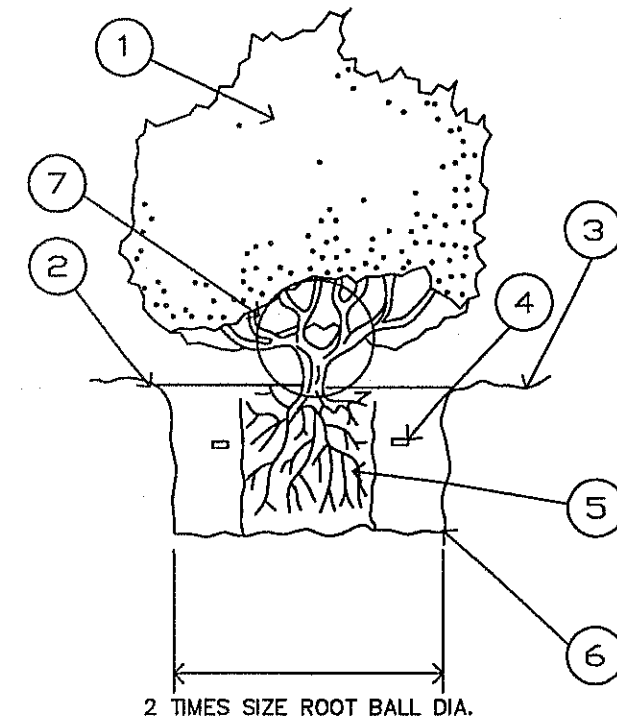
B TREE PLANTING DETAIL - SECTION
NOT TO SCALE

1. KEEP SOIL BELOW ROOT BALL UNDISTURBED TO PREVENT TREE FROM SETTLING.
2. REMOVE ANY EXCESS SOIL FROM TOP OF ROOTBALL TO EXPOSE ROOT FLARE (WHERE TOP MOST ROOT EMERGES FROM THE TRUNK). PLANT WITH ROOT FLARE THAN FINISH GRADE 1"-2" HIGHER.
3. REMOVE CONTAINER AND CUT ANY ROOTS THAT ARE CIRCLING THE CONTAINER. PRIOR TO SETTING TREE IN PLANTING HOLE (PIT).
4. TAMP SOIL FIRMLY AROUND BASE OF ROOTBALL WITH FOOT PRESSURE.
5. AT TIME OF PLANTING, ONLY PRUNE CO-DOMINANT LEADERS (DOES NOT APPLY TO MULTI-TRUNK SPECIMENS), CROSSOVER LIMBS, AND DEAD OR BROKEN BRANCHES.
6. DO NOT ALLOW MULCH IN CONTACT WITH TREE TRUNK, KEEP AT LEAST 4" AWAY FROM TRUNK.

1. INSTALL TREE GUARD. FOR TREES IN TURF AREAS. WWW.BENMEADOWS.COM
2. WHEN DONE, THOROUGHLY WATER TO ELIMINATE AIR POCKETS.
3. STAKING IS NOT REQUIRED - STAKE TREES ONLY IF TREE CANNOT STAND ALONE AND WITH APPROVAL OF THE LANDSCAPE ARCHITECT. CONTRACTOR SHALL NOT STAKE ALL TREES INDISCRIMINATELY, APPROVAL MUST BE OBTAINED TO STAKE TREES.
10. WITH APPROVAL, PROVIDE MIN. 9 STAKES/TREE (TYP) IN A TRIANGULAR PATTERN, STAKED INTO UNDISTURBED SOIL WITH CLARK'S TREE STAKE KIT OR APPROVED EQUAL, REMOVE AFTER ONE GROWING SEASON.
11. TOP OF ROOT BALL SHALL BE LEVEL WITH TOP OF MULCH OR BARK. MULCH SHALL BE FEATHERED TO FULL DEPTH.

GENERAL NOTES:

1. TREES PLANTED IN ROCKY, CALICHE AND CLAY SOILS TO HAVE PIT EXCAVATED 5 TIMES THE SIZE OF THE ROOTBALL.
2. TREES PLANTED IN ROCKY, CALICHE AND CLAY SOILS TO HAVE 1/3 TO 1/2 TOP SOIL BLENDED WITH CLAY SOIL AND USED AS BACKFILL.
3. TREES PLANTED IN ROCKY SOIL ARE TO HAVE ALL ROCKY MATERIAL LARGER THAN 1" IN SIZE REMOVED.

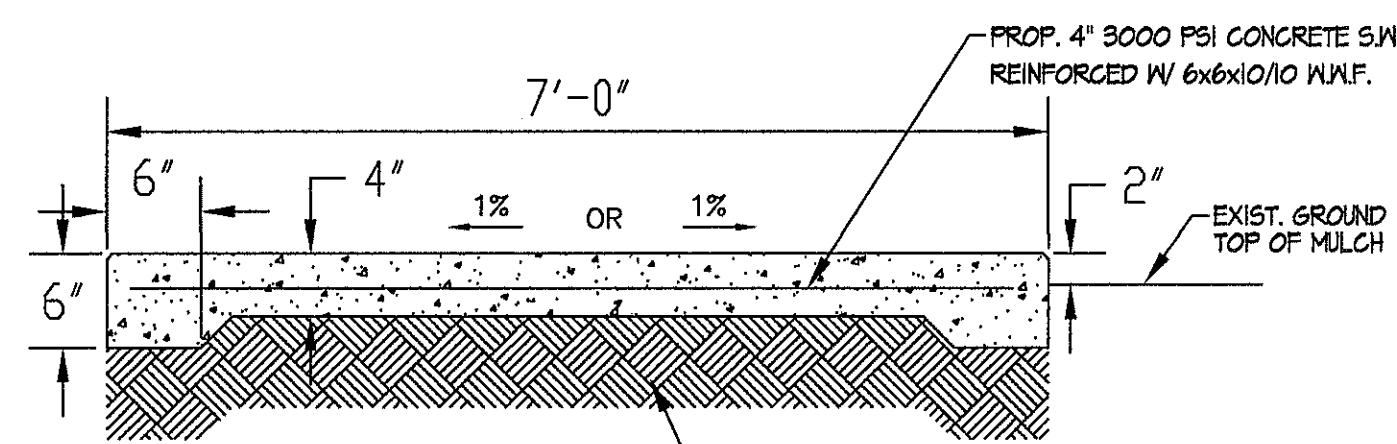


LEGEND

1. SHRUB OR VINE PER PLAN
2. EARTH WATERING BASIN (COVER WITH SPECIFIED MULCH ON PLAN).
3. FINISH GRADE
4. 1 GRAM PLANT TABLETS
1 GAL = 3, 5 GAL = 6, 10-15 GAL = 9
5. ROOTBALL (SET CROWN FLUSH WITH FINISH GRADE) COVER 2" SPECIFIED MULCH.
6. UNDISTURBED NATIVE SOIL

EXCAVATE AND REPLACE WITH SAME SOIL. REMOVE STONES 2" OR LARGER.

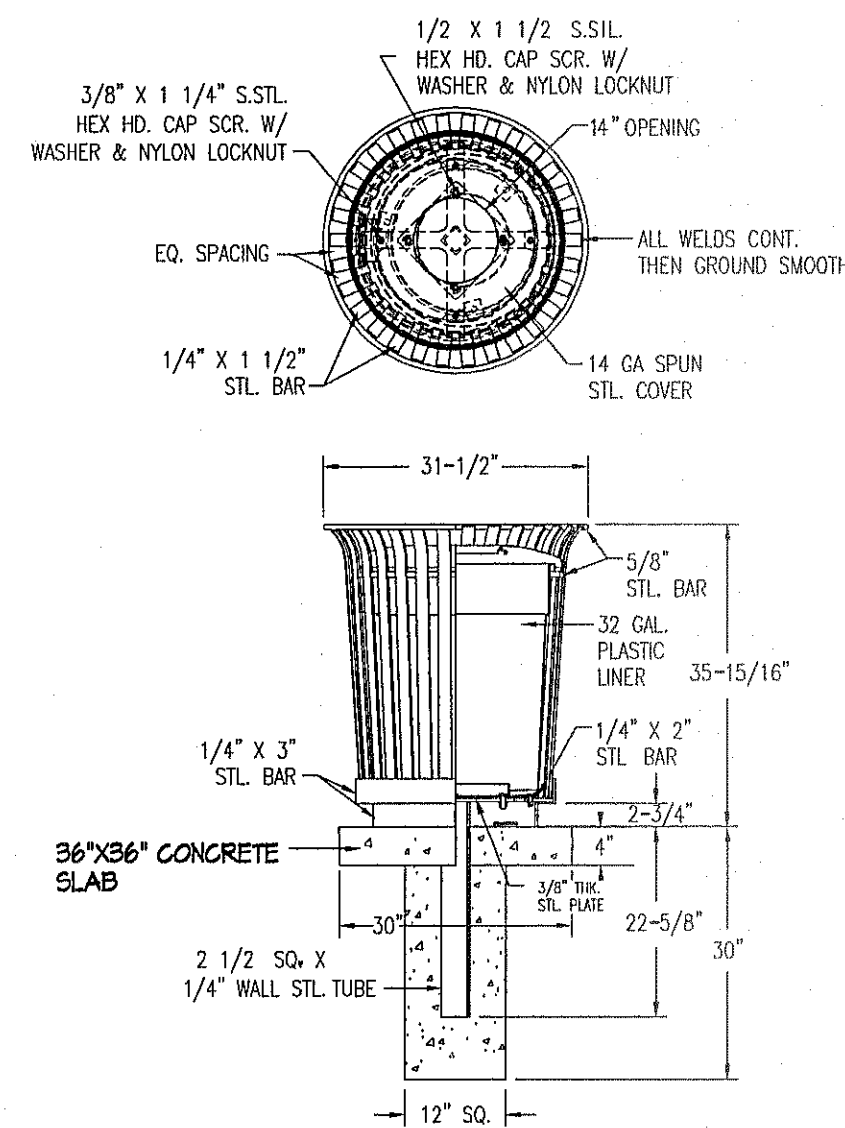
C SHRUB PLANTING DETAIL - SECTION
NOT TO SCALE



NOTES:

1. CONCRETE SHALL BE 3000 PSI MINIMUM.
2. CONTROL JOINT REQUIRED AT 5' O.C. FOR SIDEWALKS, CONTROL JOINTS SHALL BE 1/8" THICK AND 1" DEEP.
3. EXPANSION JOINT MATERIAL REQUIRED @ 20' O.C. FOR SIDEWALKS.
4. DO NOT CROSS REINFORCEMENT THRU EXPANSION MATERIAL.
5. PROVIDE EXPANSION JOINT MATERIAL WHERE SIDEWALKS MEET, EXISTING SIDEWALKS AND CURBS.

D TYPICAL CONCRETE SIDEWALK - SECTION
NOT TO SCALE



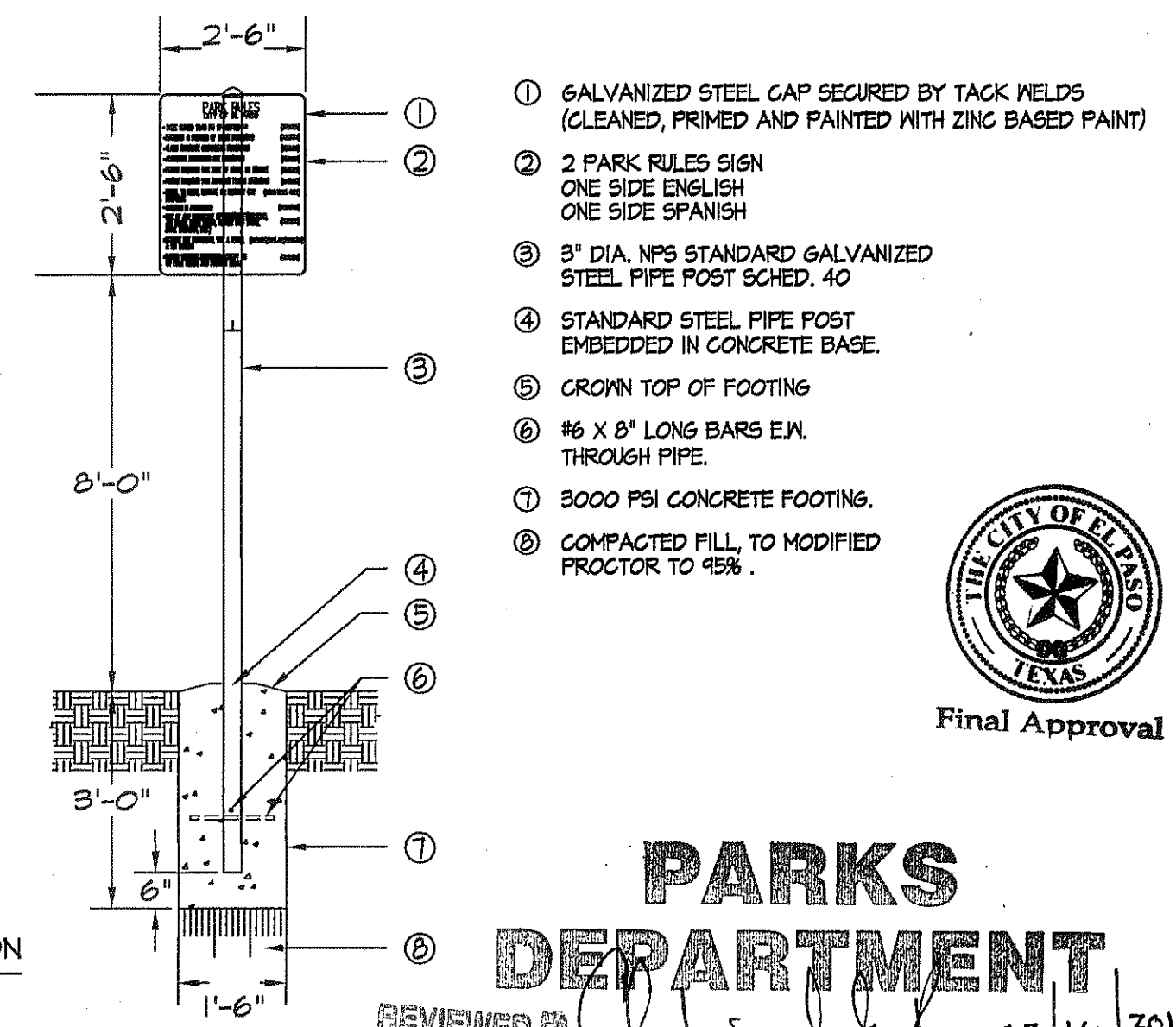
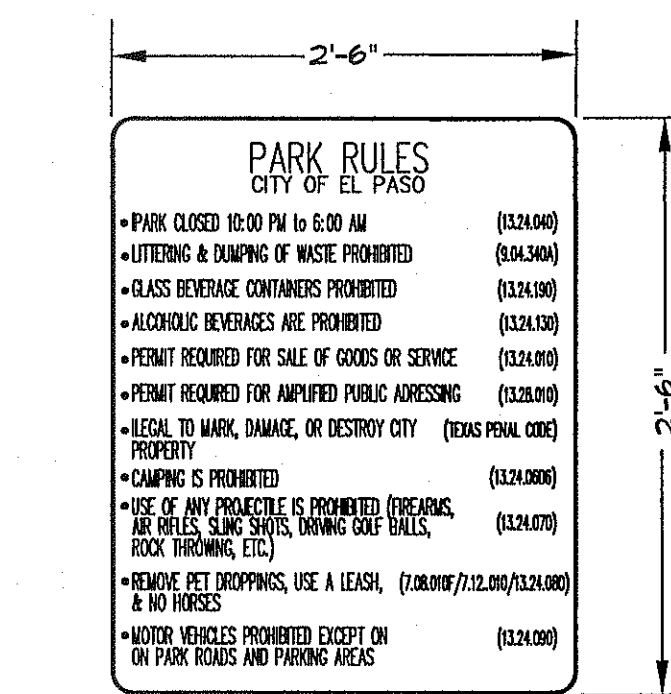
MODEL NUMBER 84-32-FIT05-I

NOTES:

1. ALL STL. MEMBERS COATED W/ ZINC RICH EPOXY THEN FINISHED W/ POLYESTER POWDER COATING.
2. ALL WELDS CONT. THEN GROUND SMOOTH.
3. COLOR IS BROWN. MATCH WITH TABLE AND BENCH. TO BE APPROVED.
4. 32 GAL CAPACITY WITH LINER AND FLAT LID W/ 1/4" OPENING. LID SHALL BE ABLE TO SECURE TO MAIN BODY OF RECEPTICAL.

E TYPICAL TRASH RECEPTACLE - SECTION
NOT TO SCALE

F ADA ACCESSIBLE PICNIC TABLE
NOT TO SCALE



G ROCK MULCH DEPTH AT CONCRETE - SECTION
NOT TO SCALE

H CONCRETE HEADER CURB DETAIL - SECTION
NOT TO SCALE

I TYPICAL TURF AT CONCRETE DETAIL - SECTION
NOT TO SCALE

J PARK RULES SIGN - SECTION
NOT TO SCALE

REVISIONS

DATE

LISA MCNELLIS
LANDSCAPE ARCHITECT
1900 FOXBORO
LAS CRUCES, NEM MEXICO 88007
(575) 621-8092

ARCHITECT'S SEAL

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

DATE: 2/10/15

DESIGN BY: LM

DRAWN BY: LM

CHKD. BY: LM

APPROV. BY: LM

JOB No.

PROJECT TITLE

EAGLE VISTA PARK AND AND BIKE WILDLIFE CORRIDOR LANDSCAPE IMPROVEMENTS

CITY OF EL PASO TEXAS

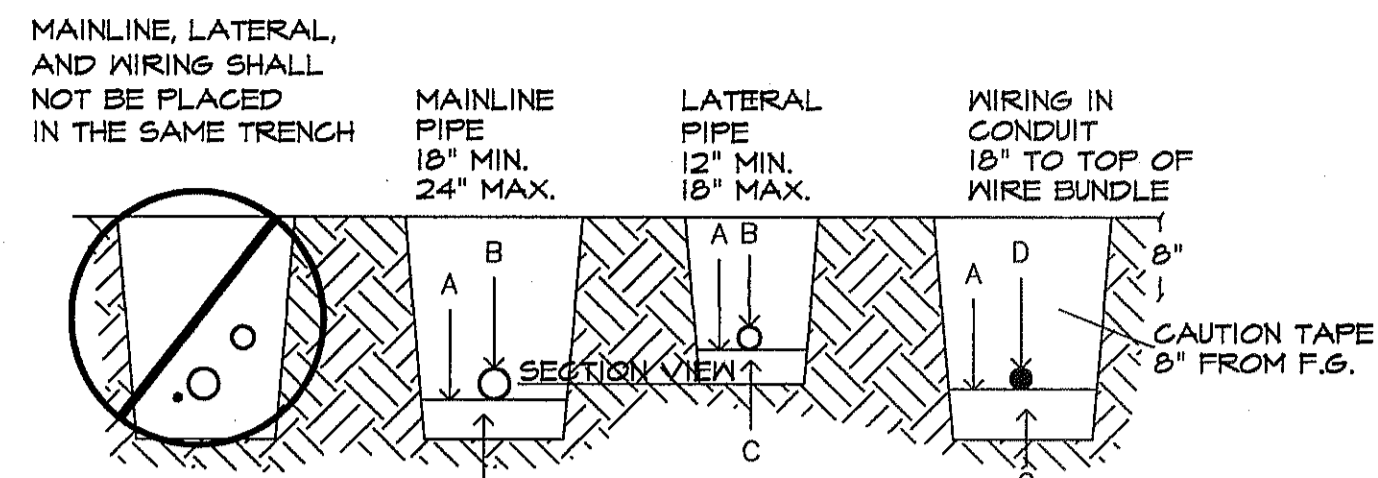
CITY OF EL PASO TEXAS

SHEET TITLE

L15

CONSTRUCTION DETAILS

SHEET 15 OF 18



SET WIRE BUNDLE AT 5' FROM MAINLINE ALONG THE NORTH AND WEST SIDE OF MAIN OR AS AGREED TOO WITH PARKS STAFF.

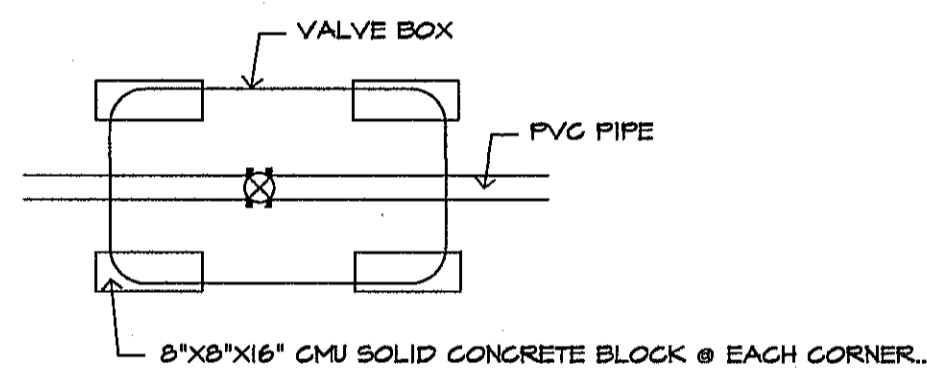
ALL SOLVENT WELD PLASTIC PIPING TO BE SNAKED IN TRENCH AS SHOWN FOR LATERAL LINES.

TIE A 24-INCH LOOP IN ALL WIRING AT CHANGES OF DIRECTION OF 90° OR GREATER AND EVERY 200 FEET.

NOTES: A. BOTTOM OF EXCAVATED TRENCH WHERE NONE ROCKY SOILS ARE EXPOSED (ENCOUNTERED).
 B. IRRIGATION SYSTEM PIPING.
 C. MINIMUM 4" DEEP BEDDING SANDY SOILS MATERIAL WHERE ROCKY SOILS ARE EXPOSED.
 D. IRRIGATION SYSTEM VALVE WIRING.
 E. BACKFILL SOILS MATERIAL MAY BE NATIVE SOILS IF IT IS FREE OF CALICHE OR STONES LARGER THAN 1" IN SIZE AND ORGANIC MATTER OR WASTE DEBRIS. SOILS COMPACTION IN TURF AREAS TO BE 80% TO 85% DENSITY BY ASTM D-1587 STANDARD AND AT 95% DENSITY UNDER PAVED OR HARDSCAPE SURFACES.

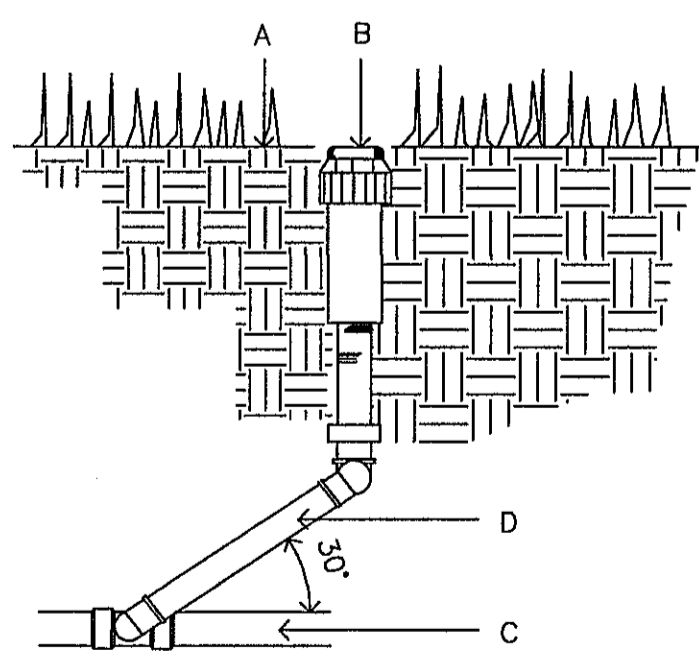
1 TYPICAL PIPE AND WIRE TRENCHING DETAIL NOT TO SCALE

THIS DETAIL SHALL TAKE PRECEDENCE TO ANY OTHER DETAIL SHOWING VALVE BOX INSTALLATION.



NOTE: BLOCKS TO SIT ON NEED CLOTH ON UNDISTURBED SOIL. DISTURBED SOILS SHALL BE COMPACTED WITH TAMPER PRIOR TO SETTING NEED CLOTH & BLOCKS. VALVE BOX AND EXTENSIONS TO SIT ON BLOCKS. VALVE BOX AND EXTENSIONS TO HAVE A MINIMUM 2" CLEARANCE TO THE TOP OF PVC PIPE.

4 BLOCK PLACEMENT FOR VALVE BOXES NOT TO SCALE



A. FINISH GRADE.
 B. SPRINKLER HEAD (SEE PLAN).
 C. LATERAL LINE (SEE PLAN).
 D. LASCO PRE-ASSEMBLED SWING JOINT.

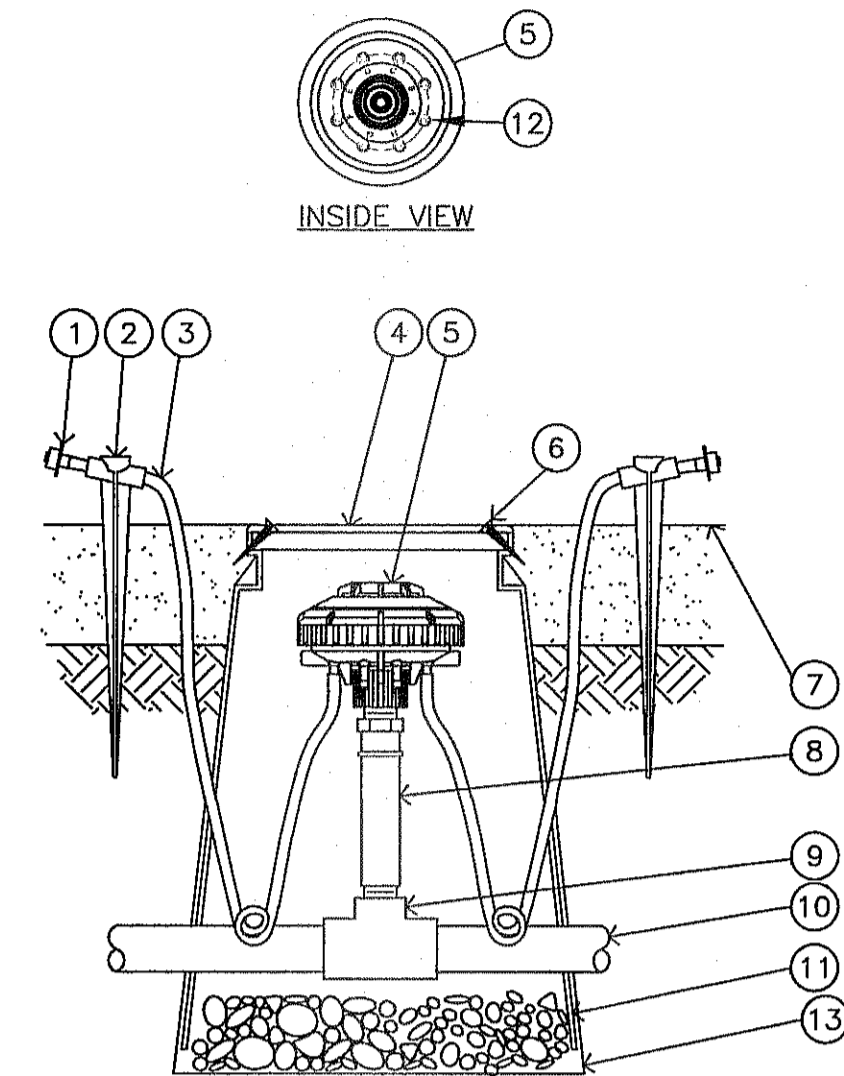
THIS DETAIL SHALL BE USED FOR POP-UP SHRUB SPRAY, POP-UP LAWN SPRAY, GEAR DRIVEN AND ROTARY SPRINKLER HEADS. TOP OF SPRINKLER HEAD SHALL BE SET FLUSH WITH FINISH GRADE. SWING JOINT INSTALLATION TO COMPLY WITH MANUFACTURER'S RECOMMENDATION.

7 HUNTER 1-20-06-55 ROTOR HEAD NOT TO SCALE

LOCATE INNER RING EMITTER OUTLETS WITHIN 3' OF TREE TRUNK.
 LOCATE OUTER RING EMITTER OUTLETS 8' FROM ROOTBALL.

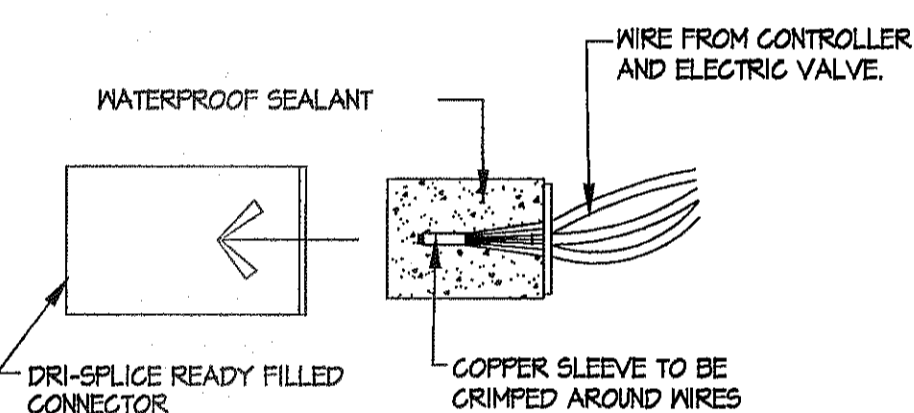
DO NOT EXCEED 20' OF MICROTUBING.

FOR SHRUBS AND GROUNDCOVER PLANTS PLACE EMITTER ON UPHILL SIDE SIDE OF PLANT 12" FROM STEM.



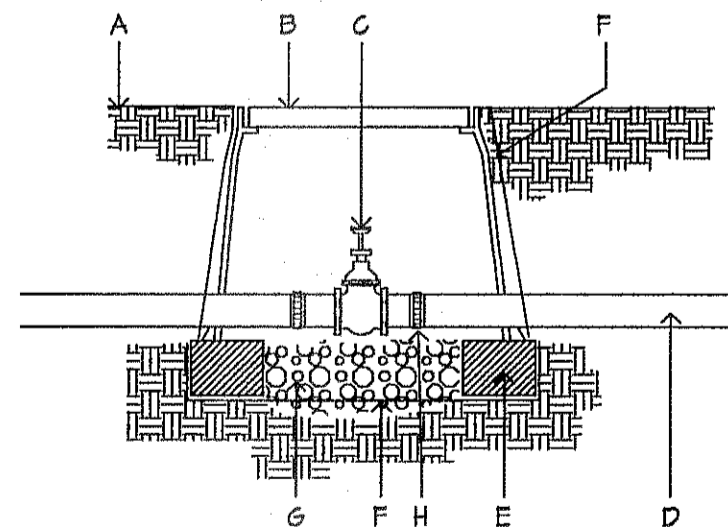
NOTES:
 1. COIL ADDITIONAL 4" OF TUBING IN EMITTER BOX TO FACILITATE MAINTENANCE.
 2. RAIN BIRD XERI-BIRD BARB X BARB EMITTERS ARE AVAILABLE IN THE FOLLOWING MODELS:
 XB-0BFC 0.5 GPH XB-10FC 1.0 GPH XB-20FC 2.0 GPH

2 DRIP EMITTER FOR TREES AND PLANTS RAIN BIRD XERI-BIRD & MULTI OUTLET EMISSION DEVICE NOT TO SCALE



THREE STEP OPERATION DRI-SPLICE READY FILL CONNECTORS. ADD ADDITIONAL SILICONE TO SUFFICIENTLY SEAL WHEN ASSEMBLED - (AS REQUIRED).

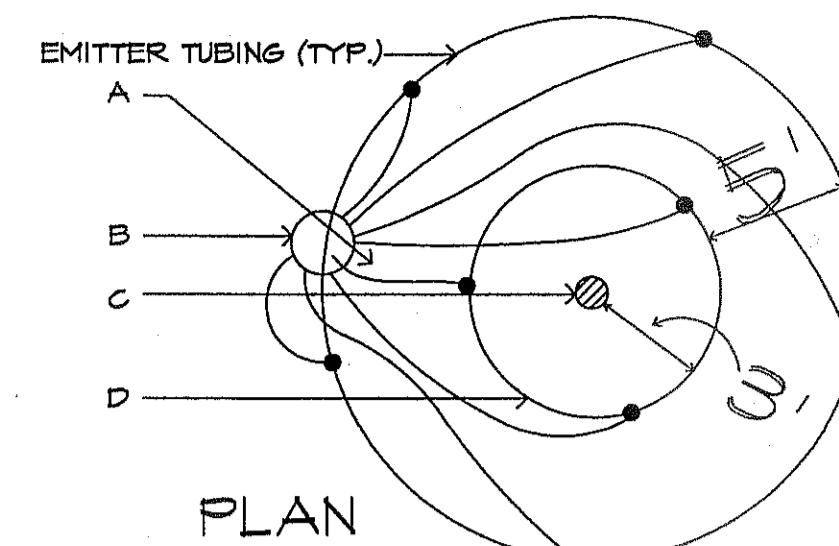
5 WIRE CONNECTORS NOT TO SCALE



A. FINISH GRADE.
 B. CARSON PRODUCTS INC, 1419-18(ABS) VALVE BOX WITH BOLT DOWN FLAT LID COVER TO MATCH COLOR OF FINISH MATERIAL AND 8" EXTENSIONS AS NECESSARY.
 C. BRASS ISOLATION VALVE- SEE IRRIGATION LEGEND.
 D. IRRIGATION MAINLINE.
 E. 8" X 8" X 16" SOLID CMU BLOCK @ EACH CORNER.
 F. PROVIDE DENITT PRO 5 NEED CLOTH ALONG SIDES AND BASE OF VALVE BOX INSTALLATION TAPE TO ALL INLET AND OUTLET PIPE AND VALVE BOX WITH HEAVY DUTY PLASTIC 3M TAPE.
 G. 4" DEPTH 3/8" WASHED PEA GRAVEL.
 H. FLANGE (8" AND ABOVE) AND UNION (BELOW 3" PIPE SIZE)

NOTE: PVC PIPE TO BE CLEAR OF VALVE BOX AND SOLID CMU BLOCK MUST BE LOCATED 10' FROM CONCENTRIC REDUCER ON 4" PIPE.

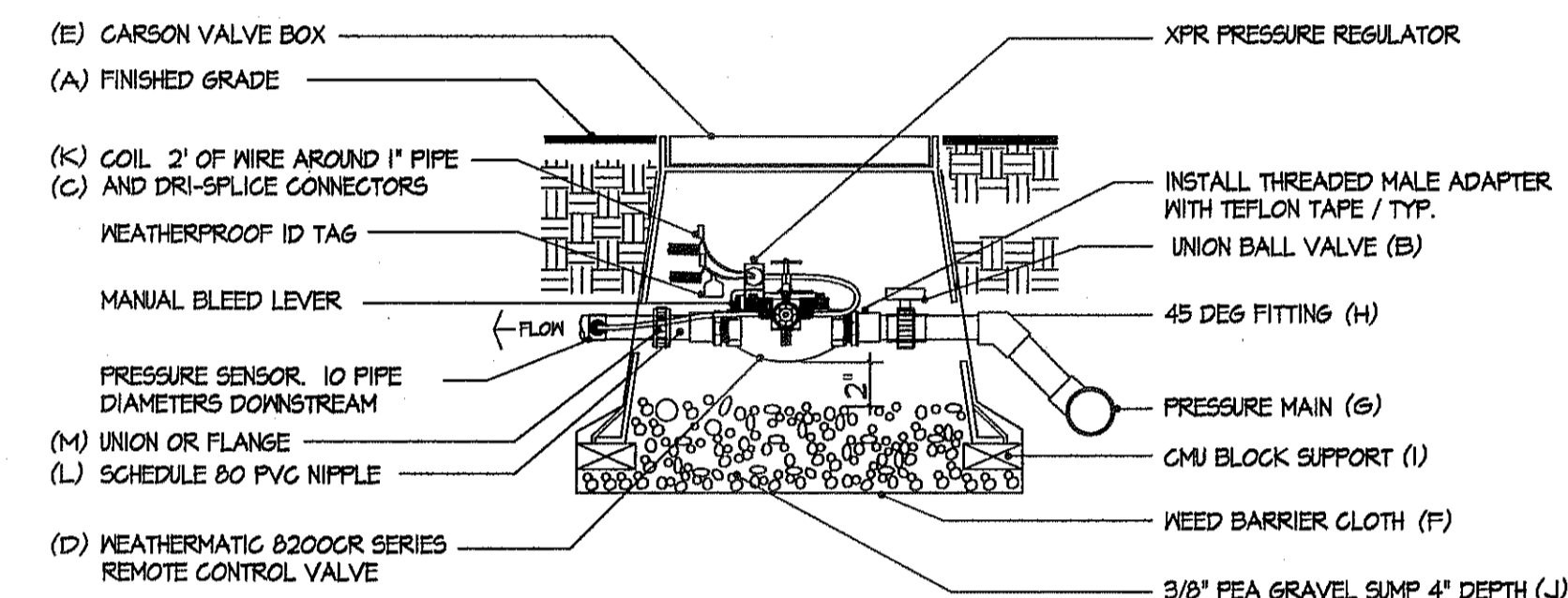
8 ISOLATION VALVE NOT TO SCALE



INSTALL (8) EMITTERS PER TREE. SPACE EVENLY AROUND ROOTBALL. IN OFFSET TRIANGULAR PATTERN FOR TREES. SEE IRRIGATION LEGEND FOR OUTLET EMITTER SIZE.

A. EMITTER TUBING.
 B. MULTI OUTLET EMITTER DEVICE. INSTALL 8' FROM TREE TRUNK ON WEST SIDE.
 C. TREE TRUNK.
 D. TREE ROOTBALL.

3 EMITTER PLACEMENT FOR TREES NOT TO SCALE



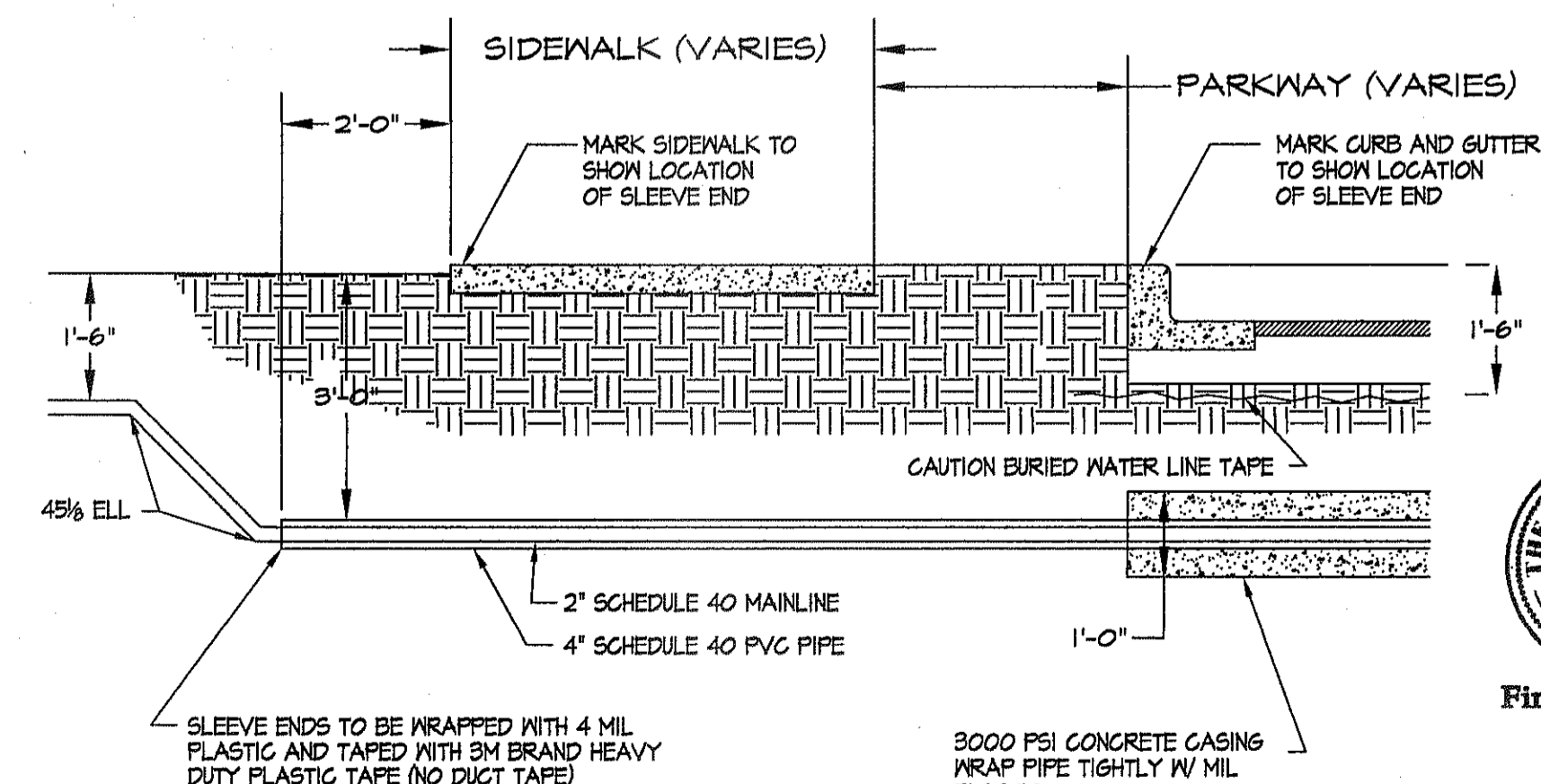
VALVE WIRING SHALL BE STANDARD COLORS: RED (HOT) AND WHITE (COMMON)

REFER TO WIRE CONNECTOR DETAIL THIS SHEET

NOTE: PVC PIPE TO BE CLEAR OF VALVE BOX AND SOLID CMU BLOCK.

A. FINISH GRADE.
 B. BALL VALVE.
 C. DRY SPLICE CONNECTOR OR EQUAL.
 D. ELECTRIC VALVE -SEE IRRIGATION LEGEND.
 E. CARSON PRODUCTS INC, 1419-18(ABS) VALVE BOX WITH BOLT DOWN FLAT LID COVER TO MATCH COLOR OF FINISHED MATERIAL AND 8" EXTENSIONS AS NECESSARY.
 F. PROVIDE DENITT PRO 5 NEED CLOTH ALONG SIDES AND BASE OF VALVE BOX INSTALLATION TAPE TO ALL INLET AND OUTLET PIPE AND VALVE BOX WITH HEAVY DUTY PLASTIC 3M TAPE.
 G. PVC MAINLINE-SEE IRRIGATION LEGEND.
 H. SCH 80 - 45 DEGREE FITTING.
 I. 8" X 8" X 16" SOLID CMU BLOCK @ EACH CORNER.
 J. 4" DEPTH 3/8" DIAMETER WASHED PEA GRAVEL.
 K. 24" WIRE EXPANSION COIL, EXTEND WIRE 12" ABOVE VALVE BOX FOR SERVICE.
 L. SCHEDULE 80 PVC CLOSE NIPPLE.
 M. FLANGE (8" AND ABOVE) AND UNION (BELOW 3" PIPE SIZE)
 N. LATERAL LINE.

6 IRRIGATION CONTROL VALVE NOT TO SCALE



NOTE: SLEEVE TO BE KEPT CLEAN AND FREE OF SOIL AND DEBRIS

9 SLEEVING UNDER STREETS NOT TO SCALE

IRRIGATION IS REGULATED BY:
 PO BOX 13087
 AUSTIN, TEXAS 78711-3087
 TCEQ 512 239-6719
 CHAPTER 34, TEXAS WATER CODE
 IRRIGATOR'S LIC. #8947



2/10/15

LOCATE INNER RING EMITTER OUTLETS WITHIN 3' OF TREE TRUNK.
 LOCATE OUTER RING EMITTER OUTLETS 8' FROM ROOTBALL.
 DO NOT EXCEED 20' OF MICROTUBING.

FOR SHRUBS AND GROUNDCOVER PLANTS PLACE EMITTER ON UPHILL SIDE SIDE OF PLANT 12" FROM STEM.

REVISIONS	DATE

LISA MCNEILIS
 LANDSCAPE ARCHITECT
 1900 FOXBORO
 LAS CRUCES, NEW MEXICO 88007
 (505) 621-9032



2/10/15

SCALE	Horizontal	Vertical

PROJECT TITLE
 EAGLE VISTA PARK
 AND
 HIKE AND BIKE WILDLIFE CORRIDOR
 LANDSCAPE IMPROVEMENTS



SHEET TITLE

L16

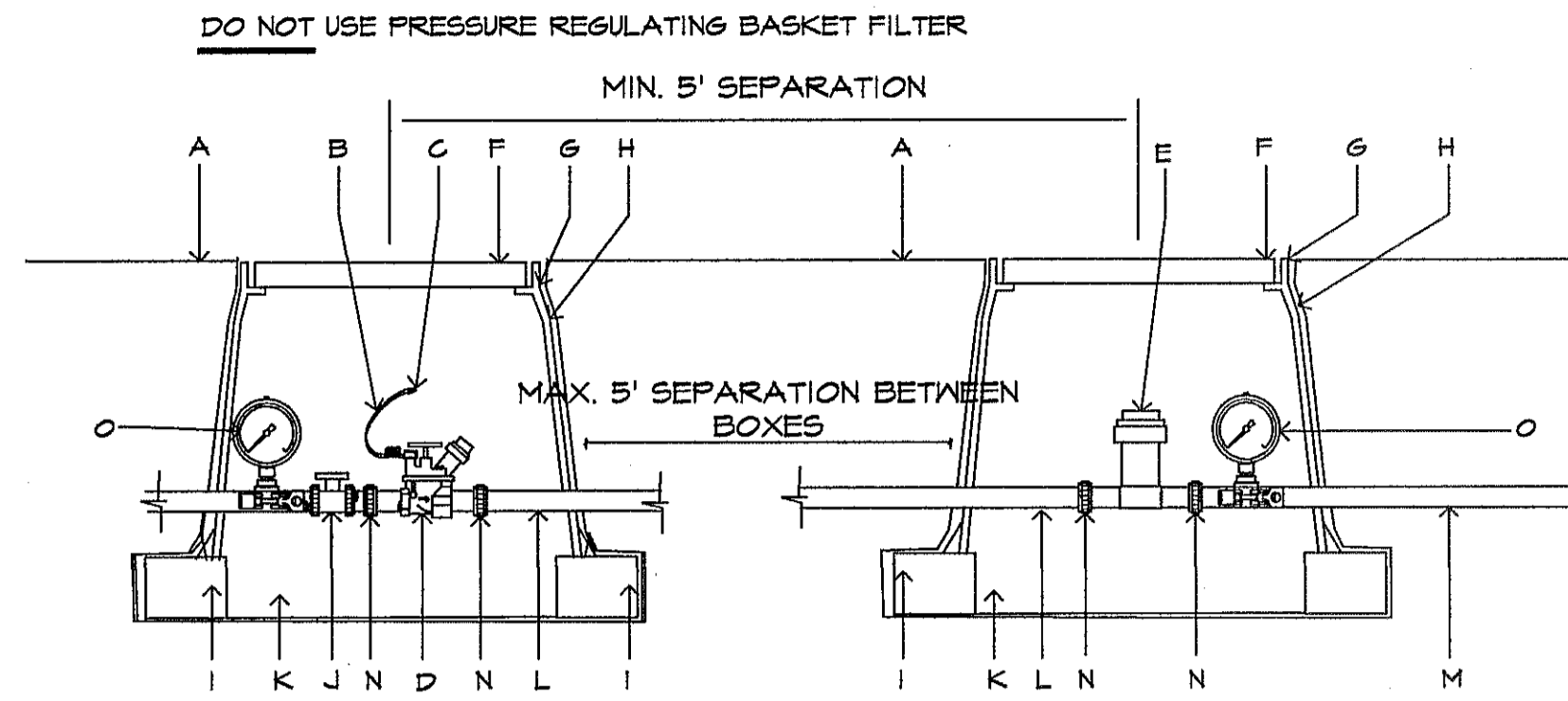
IRRIGATION
 DETAILS

SHEET 16 OF 18

REVIEWED BY [Signature] 02/10/15

PARKS
 DEPARTMENT

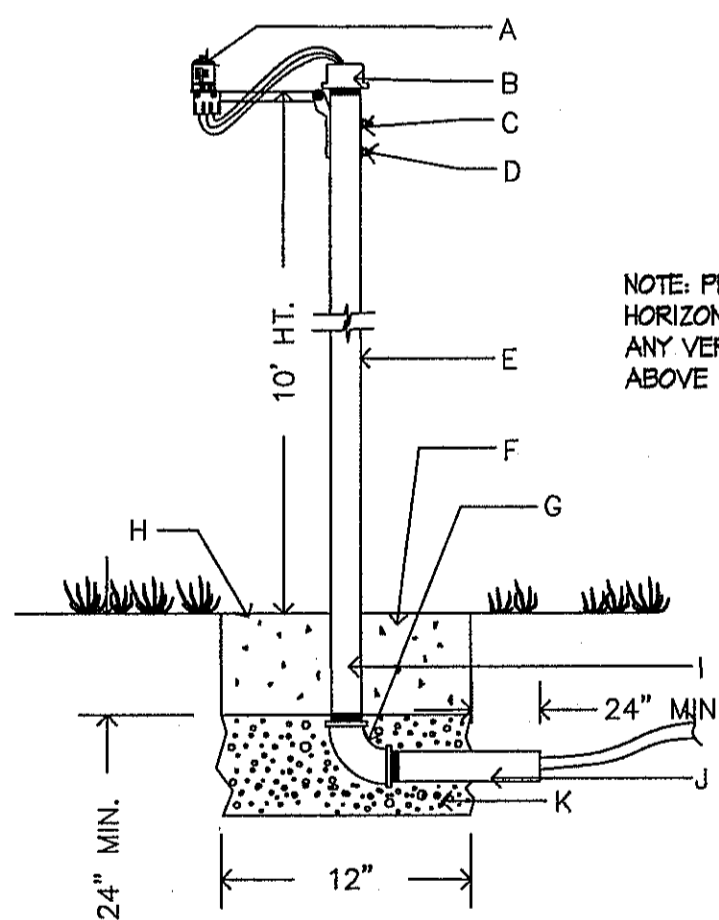
Final Approval



NOTE: PROVIDE 1 PRESSURE GAUGE ON MAIN LINE UPSTREAM OF BALL VALVE AND ANOTHER DOWNSTREAM OF BASKET FILTER. PROVIDE 5' SEPARATION BETWEEN BOXES. IF SPACE IS NOT AVAILABLE, PROVIDE A MIN. 5' SEPARATION AT CENTER LINES OF BOXES. SET GAUGES HORIZONTAL TO BE READABLE FROM ABOVE.

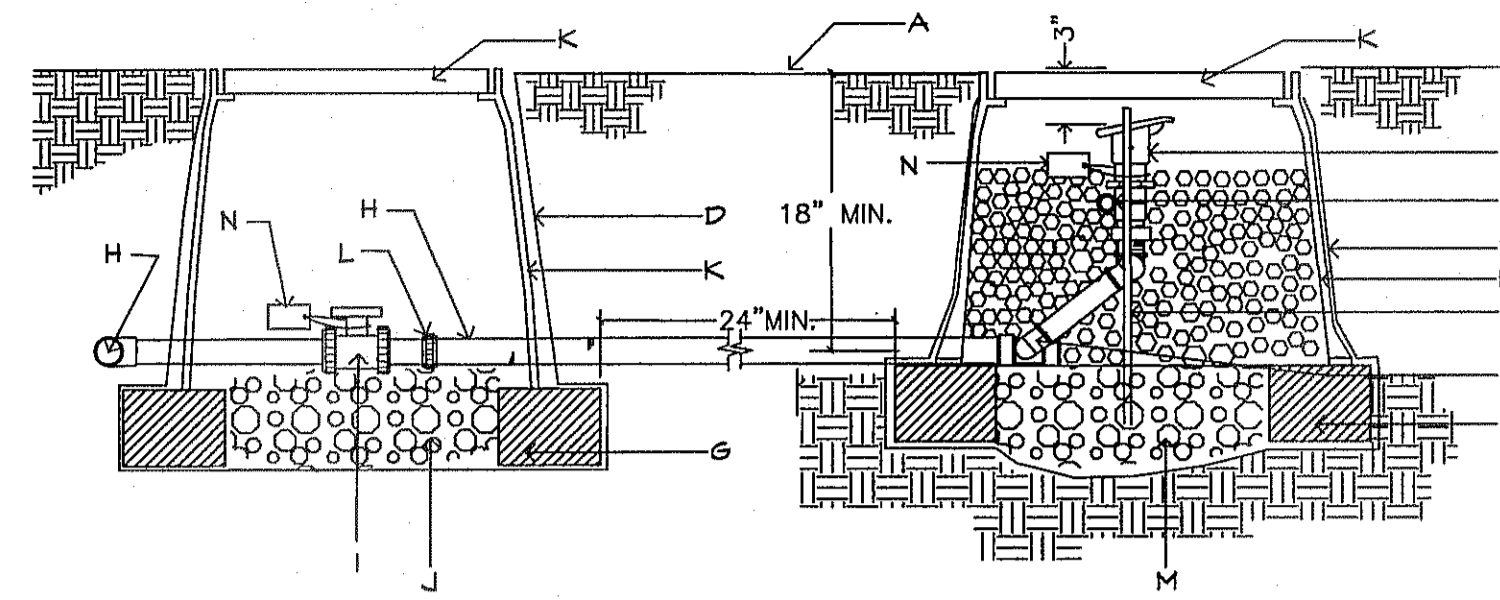
- A. FINISH GRADE.
- B. 24" WIRE LOOP.
- C. DRY SPLICE CONNECTOR OR EQUAL.
- D. AUTOMATIC VALVE. SEE IRRIGATION LEGEND.
- E. RAINBIRD PRESSURE BASKET FILTER STRAINER SHALL BE INSTALLED TO PROVIDE ACCESS FOR MAINTENANCE AND REPLACEMENT.
- F. LOCKING VALVE BOX COVER FLAT LID WITH BOLT.
- G. CARSON PRODUCTS INC. 1419-18 BODY (ABS) VALVE BOX W/BOLT DOWN COVER (COVER COLOR TO MATCH FINISH MATERIAL AND EXTENSION AS NECESSARY).
- H. PROVIDE DEWITT PRO 5 WEED CLOTH ALONG SIDES AND BASE OF VALVE BOX AND BLOCKS TAPE TO ALL INLET & OUTLET PIPE WITH 3M HEAVY DUTY PLASTIC TAPE.
- I. 8"X8"X16" CMU SOLID CONCRETE BLOCK @ EACH CORNER.
- J. BALL VALVE, INCLUDED IN CONTROL ZONE KIT, SEE IRRIGATION LEGEND.
- K. 4" LAYER OF 3/8" WASHED PEA GRAVEL.
- L. PVC PIPE SIZED PER PLAN WITH WELD ON THREADED FITTINGS ON EACH END.
- M. LATERAL LINE.
- N. PROVIDE PVC UNION FOR PIPE SIZES LESS THAN THREE INCHES IN DIAMETER OR PROVIDE. FLANGES FOR PIPE SIZES THREE INCHES IN DIAMETER OR LARGER.
- O. HORIZONTAL HYGIENIC PRESSURE GAUGE.

10 DRIP VALVE W/ BASKET FILTER
NOT TO SCALE



- A. RAIN BIRD RSD-BEX RAIN SENSOR. SET TO 1/8"
- B. 2 1/2" PIPE CAP WITH HOLE FOR WIRES AND SEAL WITH EXTERIOR GRADE SILICONE SEALANT.
- C. DRILL TWO 3/16" HOLES IN PIPE FOR SENSOR BRACKET.
- D. (2) NO. 8-32 MACHINE SCREENS WITH WASHER, LOCK WASHER AND NUT.
- E. 2 1/2" SCH 40 GALVANIZED PIPE-10 FT. HT. A.S.
- F. 12"X12" CONCRETE BASE, MIN. 24" DEEP.
- G. PIPE ELBOW.
- H. FINISH GRADE.
- I. PIPE TO BE SEALED AFTER CABLE IS RUN, USE 4 MIL. PLASTIC AND TAPED NIPPLE AND THE CABLE WITH HIGH GRADE 3M WEATHER PROOF PLASTIC TAPE.
- J. NIPPLE GALVANIZED PIPE IN CONCRETE FOOTING TO BE WRAPPED WITH WEATHER PROOF TAPE TO PROTECT FROM CORROSION.
- K. 6" THICK, 3/8" DIAMETER WASHED PEA GRAVEL.

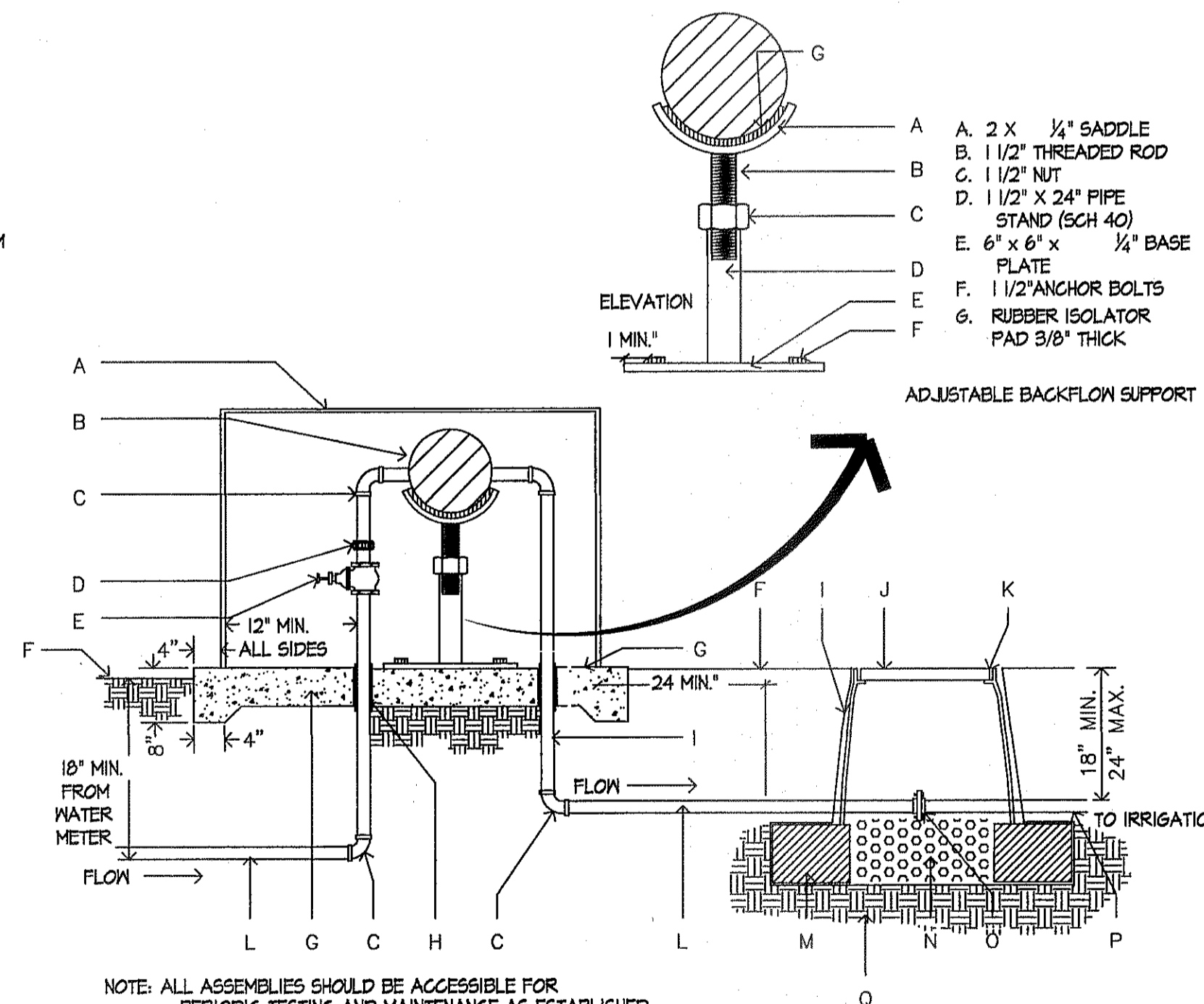
13 RAIN SENSOR
NOT TO SCALE



- A. FINISH GRADE.
- B. 1" BUCKNER QUICK COUPLER VALVE, DOUBLE SLOT, PURPLE TOP-MODEL QBSNPIO WITH LASCO SNAP-LOK W/MALE BRASS STABILIZER ELBOW.
- C. MIN. 12" SECTION 1" DIA. PVC, SECTION SHOULD EXTEND BEYOND BOTH REBAR SECTION, STABILIZE IN GRAVEL.
- D. PROVIDE DEWITT PRO 5 WEED CLOTH ALONG SIDES AND BASE OF VALVE BOX. TAPE TO ALL INLET AND OUTLET PIPE AND VALVE BOX WITH HEAVY DUTY 3M PLASTIC TAPE.
- E. 1/2" OR 3/8" REBAR, MIN. 30" LENGTH, ONE ON EITHER SIDE OF QUICK COUPLER FOR STABILITY.
- F. LASCO SWING JOINT (PRE-ASSEMBLED).
- G. 8" X 8" X 16" SOLID CMU BLOCK.
- H. IRRIGATION MAINLINE.
- I. ISOLATION BALL VALVE, SEE IRRIGATION LEGEND.
- J. 6" DEPTH OF 3/8" WASHED PEA GRAVEL.
- K. CARSON PRODUCTS INC. 1419-18 BODY (ABS) VALVE BOX AND EXTENSION(S) W/BOLT DOWN COVER (COVER COLOR TO BE PURPLE).
- L. PROVIDE PVC UNION FOR PIPE SIZES LESS THAN THREE INCHES IN DIAMETER OR PROVIDE. FLANGES FOR PIPE SIZES THREE INCHES IN DIAMETER OR LARGER.
- M. 3/8" WASHED PEA GRAVEL FILLED TO QUICK COUPLER FOR STABILITY.
- N. WEATHER PROOF TAG THAT READS "NON-PORTABLE WATER, NOT SAFE FOR DRINKING." FLANGES FOR PIPE SIZES THREE INCHES IN DIAMETER OR LARGER.

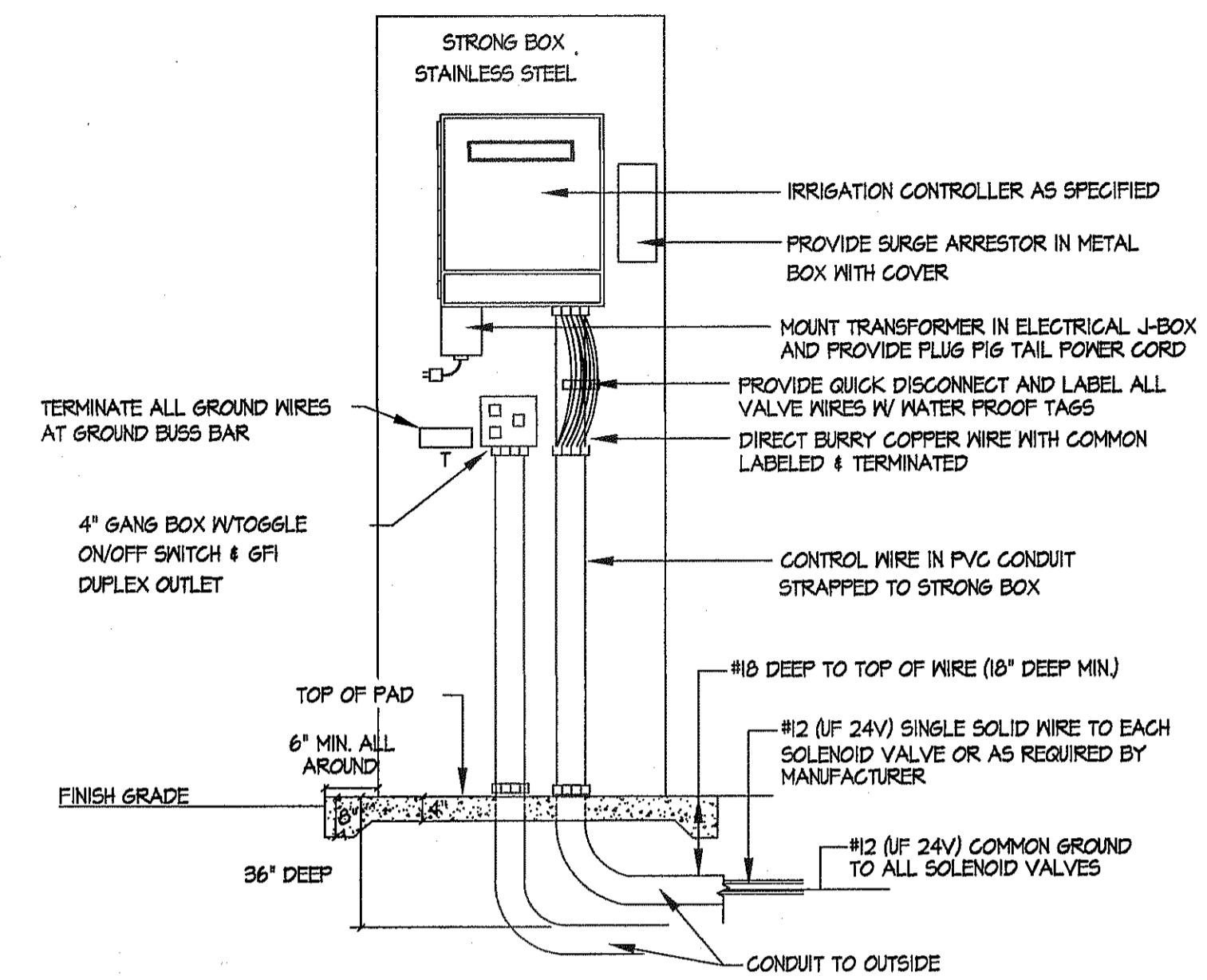
NOTE: INSTALL AN 8" X 8" X 16" SOLID CMU BLOCK AT EACH CORNER OF THE VALVE BOX. INSTALL 3/8" PEA GRAVEL BELOW THE 1419-18 VALVE BOX WITH BOLT DOWN COVER. EXTEND PEA GRAVEL UP TO COLLAR OF QUICK COUPLER VALVE. INSTALL A TEE, FLANGE & BALL VALVE OFF OF THE MAIN LINE IMMEDIATELY UPSTREAM OF THE QUICK COUPLER VALVE.

11 QUICK COUPLER
NOT TO SCALE



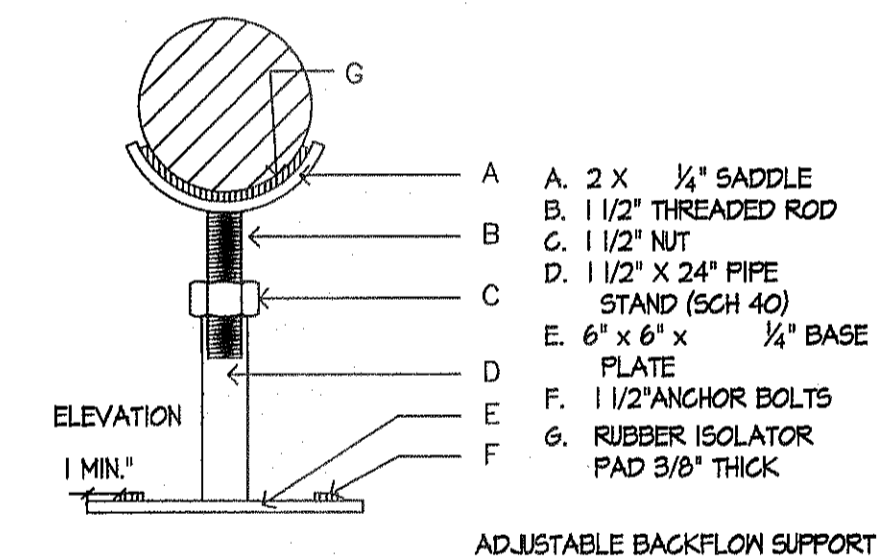
NOTE: ALL ASSEMBLIES SHOULD BE ACCESSIBLE FOR PERIODIC TESTING AND MAINTENANCE AS ESTABLISHED BY LOCAL CODES. SUGGESTED 16" MINIMUM CLEARANCE FROM TESTCOCK SIDE OF ASSEMBLY AND 12" MINIMUM CLEARANCE FROM VALVE BODY.

14 REDUCED PRESSURE ASSEMBLY BACKFLOW
NOT TO SCALE



NOTES: 1. GROUND CABINET WITH #10 GAUGE OR HEAVIER STRANDED COPPER WIRE TO GROUNDING ROD AS PER MANUFACTURER'S SPECIFICATIONS. 2. PEDESTAL ENCLOSURE TO BE SIZED TO HOUSE EQUIPMENT PROPERLY.

12 CONTROLLER IN PEDESTAL ENCLOSURE DETAIL
NOT TO SCALE



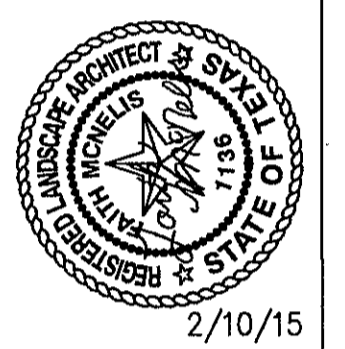
- A. 2 X 1/4" SADDLE
- B. 1 1/2" THREADED ROD
- C. 1 1/2" NUT
- D. 1 1/2" X 24" PIPE STAND (SCH 40)
- E. 6" X 6" X 1/4" BASE
- F. 1 1/2" ANCHOR BOLTS
- G. RUBBER ISOLATOR PAD 3/8" THICK

- A. STAINLESS STEEL INSULATED HOT BOX ENCLOSURE R-VALVE R-25 (SEE IRRIGATION LEGEND) ASSE 1060-CLASS 1
- B. REDUCED PRESSURE ASSEMBLY BACKFLOW PREVENTER (SEE PARTS LIST)
- C. COPPER FITTINGS.
- D. COPPER UNION, 4" ABOVE GRADE, MIN.
- E. BRASS BALL VALVE.
- F. FINISH GRADE.
- G. 4000 PSI CONCRETE PAD, 4" DEPTH, SLOPED 1% TO DRAIN.
- H. PIPE SHALL BE SLEEVED THROUGH CONC. PAD WITH SCH 40 PVC SEAL PIPE.
- I. PROVIDE PRO 5 WEED CLOTH ALONG SIDES AND BASE OF VALVE BOX. TAPE TO ALL INLET & OUTLET PIPE WITH HEAVY DUTY PLASTIC TAPE MANUFACTURED BY 3M.
- J. 1419 BOLT DOWN FLAT LID COVER (ABS).
- K. CARSON PRODUCTS INC. 1419-18 BODY (ABS) VALVE BOX (OR APPROVED EQUAL), EXTENSION AS NEEDED.
- L. TYPE K COPPER PIPING.
- M. 8" X 8" X 16" SOLID CMU SOLID BLOCK.
- N. 3/8" WASHED PEA GRAVEL, 4" DEPTH.
- O. FLANGE.
- P. PVC MAIN LINE.
- Q. UNDISTURBED OR COMPACTED SOILS.

INSTALL AN 8" X 8" X 16" SOLID CMU BLOCK AT EACH CORNER OF THE VALVE BOX. INSULATE (R-25 MIN) FROM FREEZING MUST COMPLY WITH ASSE 1060-CLASS 1. PROVIDE 2" CLEARANCE BETWEEN VALVE BOXES AND PVC OR COPPER PIPING.

REVISIONS	DATE

LISA MCNELLIS
LANDSCAPE ARCHITECT
1900 FOREBROOK
LAS CRUCES, NEW MEXICO 88001
(505) 621-8032



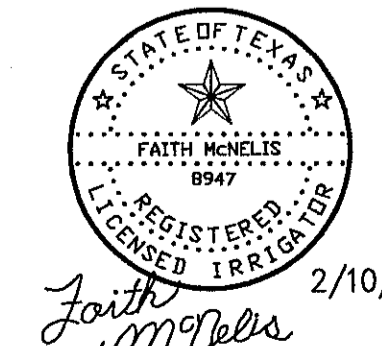
SCALE	PROJECT TITLE
Horizontal: Contour Interval: N/A	EAGLE VISTA PARK AND AND BIKE WILDLIFE CORRIDOR LANDSCAPE IMPROVEMENTS
DATE: 2/10/15	
DESIGN BY: LM	
DRAWN BY: LM	
CHKD. BY: LM	
APPRD. BY: LM	JOB No.

PARKS DEPARTMENT
REVIEWED BY: *[Signature]* 02/16/2015



Final Approval

IRRIGATION IS REGULATED BY:
PO BOX 13087
AUSTIN, TEXAS 78711-3087
TCOQ 512 239-6719
CHAPTER 34, TEXAS WATER CODE
IRRIGATOR'S LIC. #8947



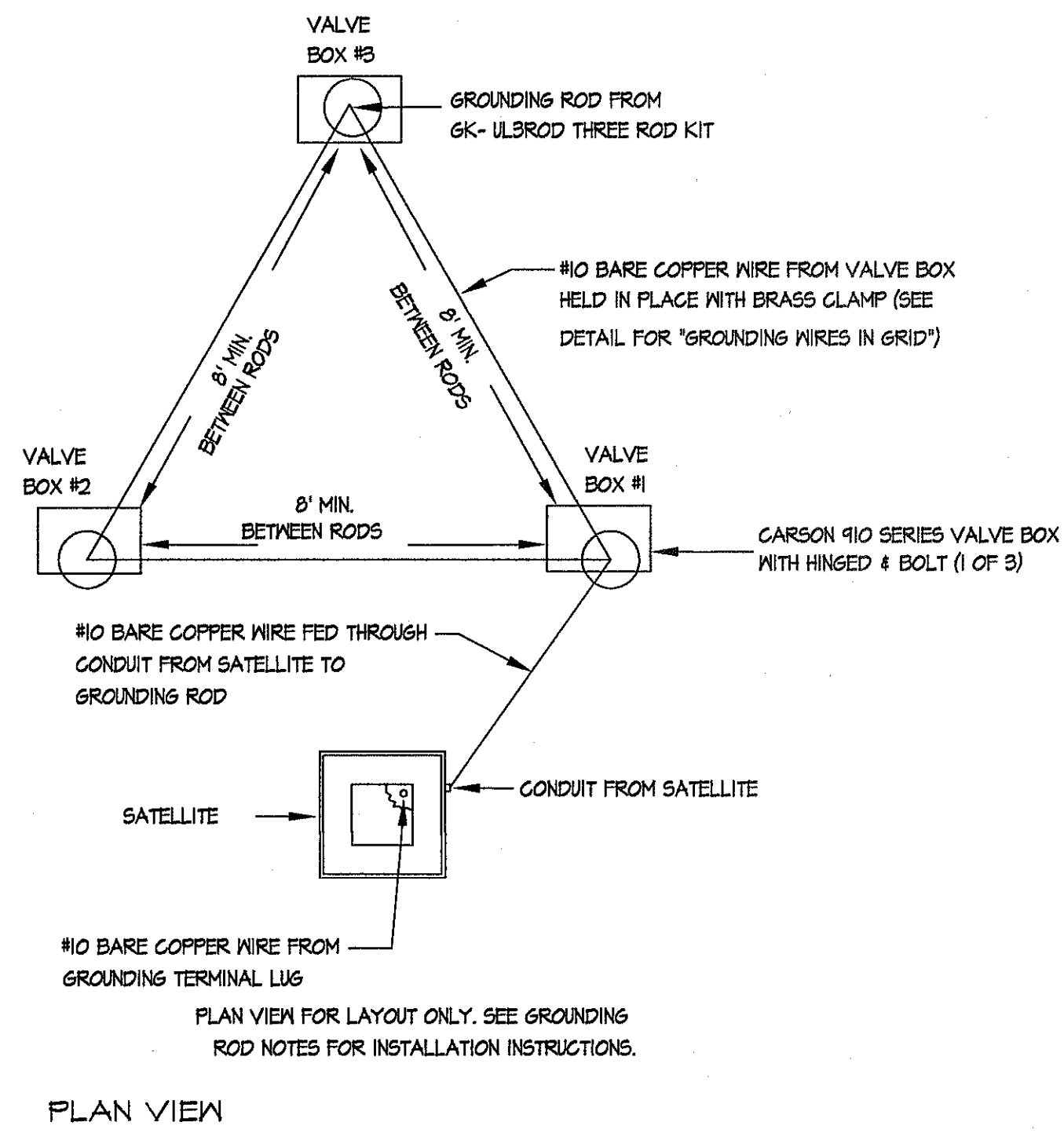
2/10/15
[Signature]

SHEET TITLE

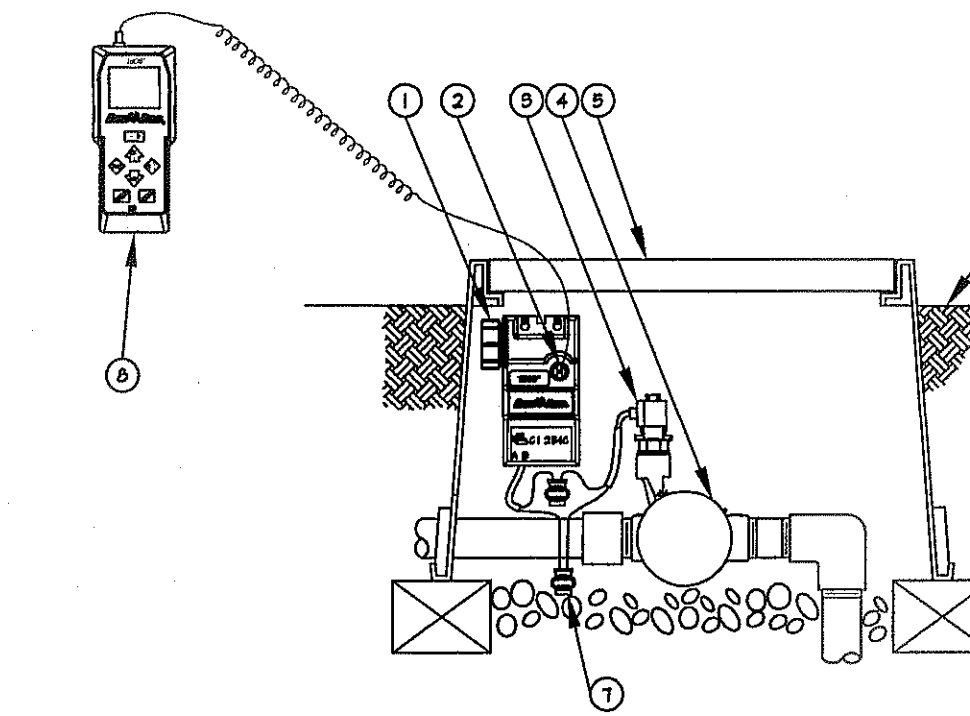
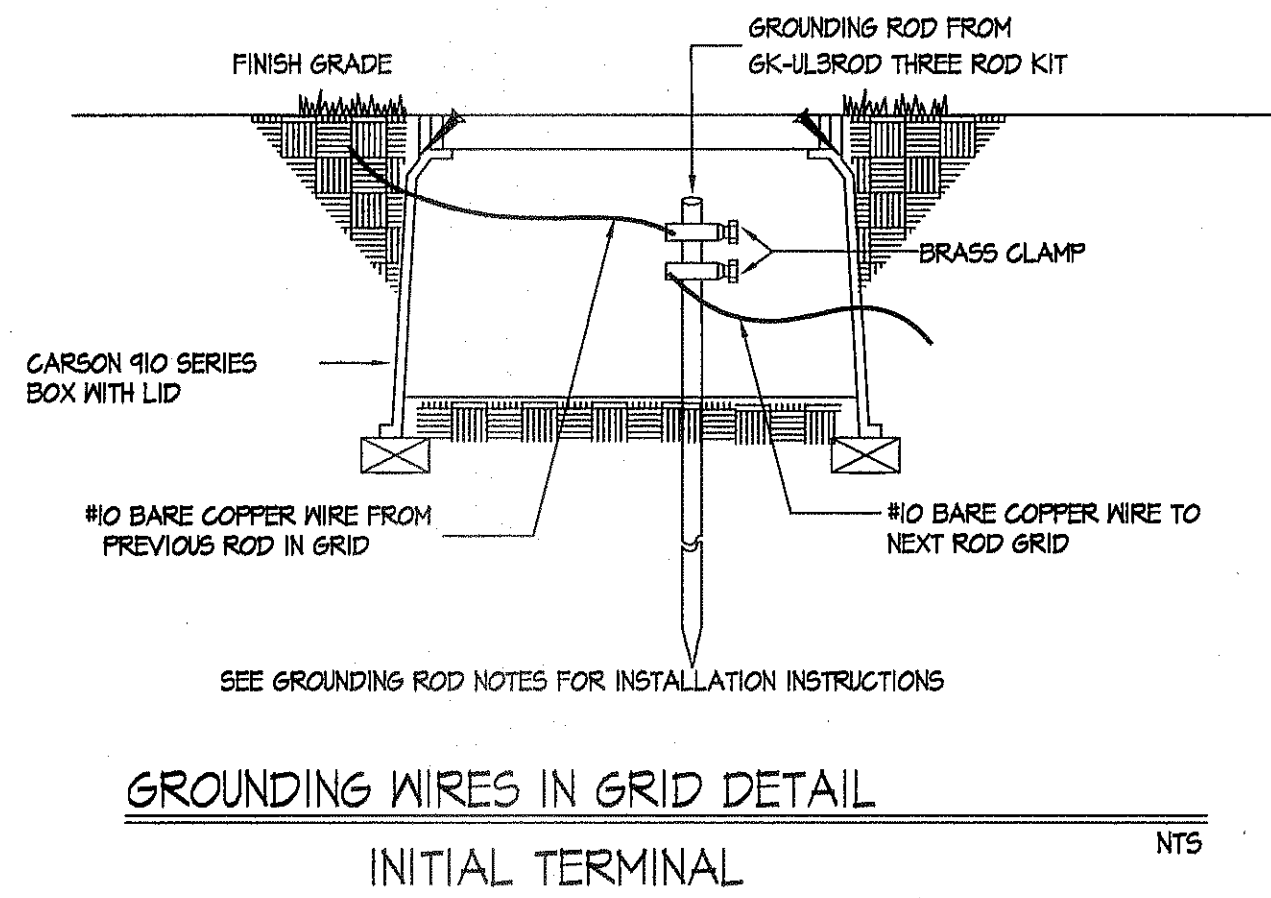
L17

IRRIGATION DETAILS

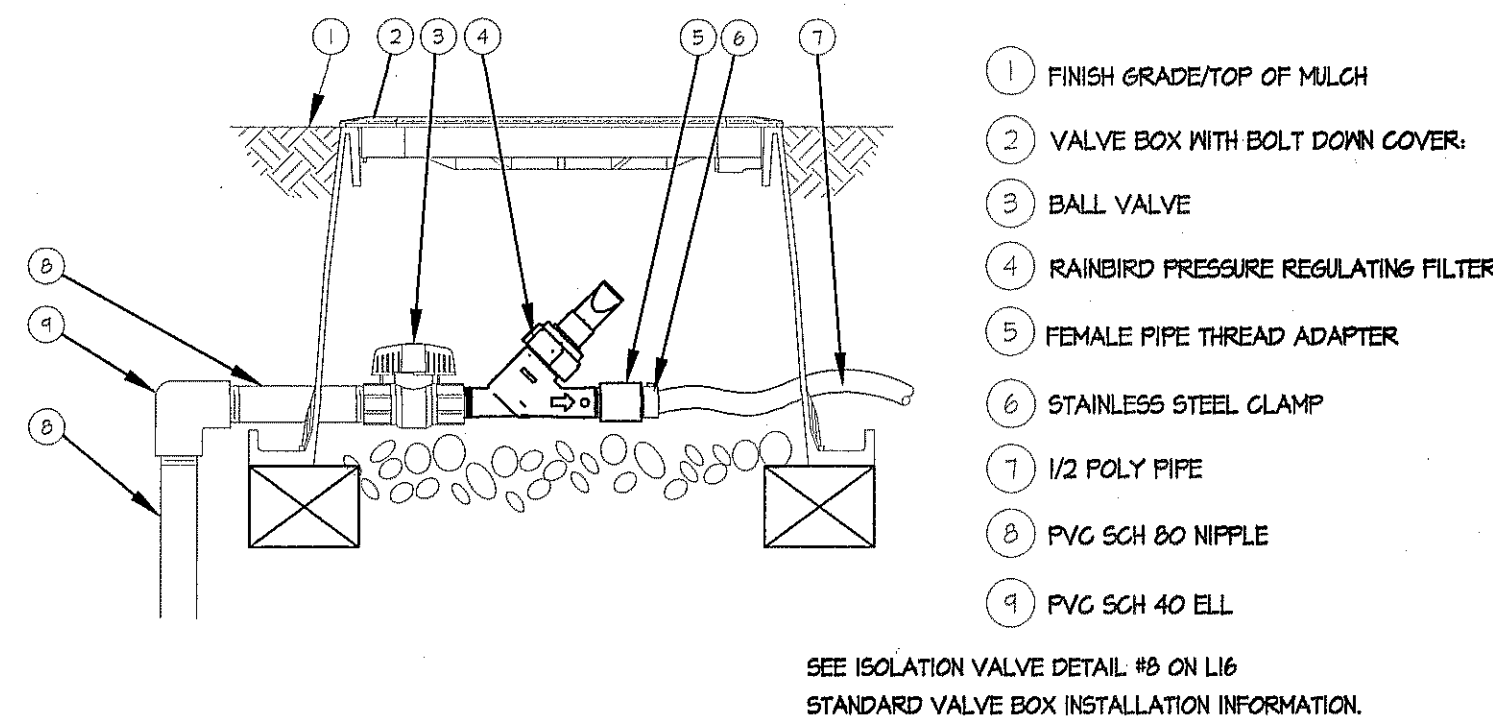
SHEET 17 OF 18



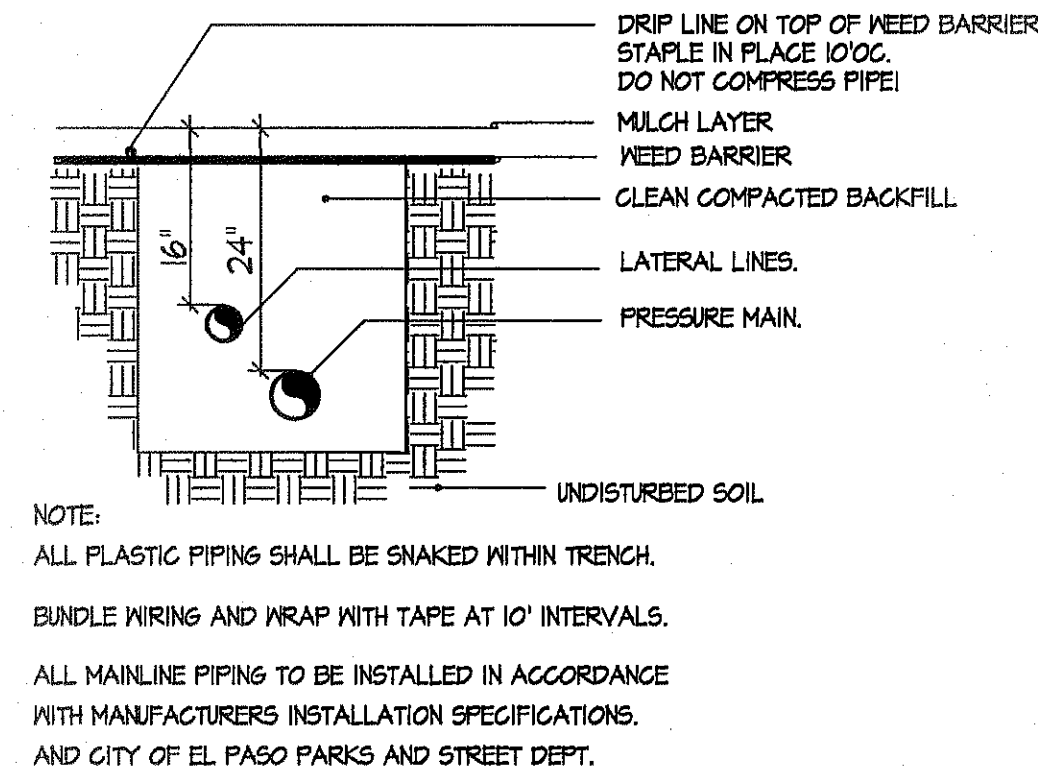
15 TRIANGULAR GROUNDING GRID DETAIL
NOT TO SCALE



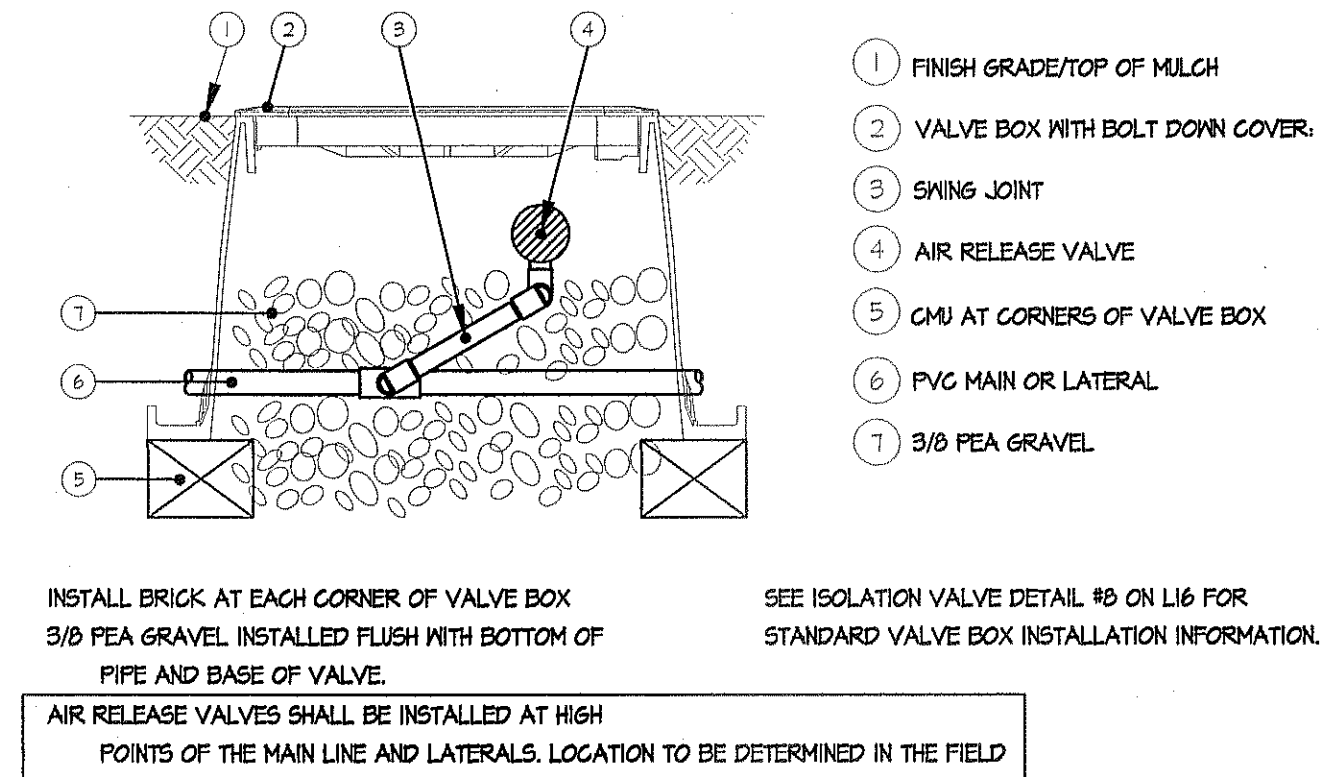
16 TBOS MODULE AND TRANSMITTER DETAIL FOR RESLER AND WILDLIFE CORRIDOR
NOT TO SCALE



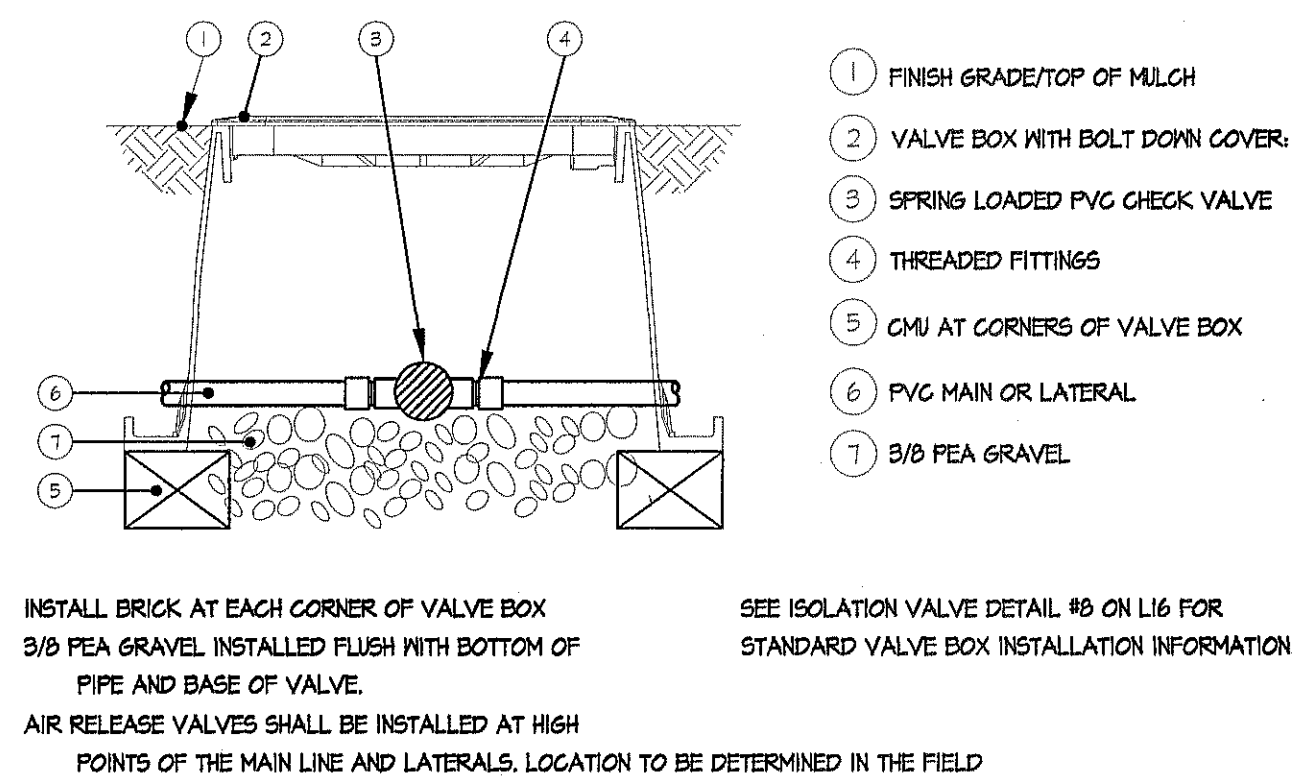
17 POLY PIPE TO PVC PIPE CONNECTION
NOT TO SCALE



18 PIPE PLACEMENT
NOT TO SCALE



19 AIR RELEASE VALVE
NOT TO SCALE



20 IN-LINE CHECK VALVE
NOT TO SCALE

IRRIGATION IS REGULATED BY:
PO BOX 13087
AUSTIN, TEXAS 78711-3087
TOEQ 512 239-6719
CHAPTER 34, TEXAS WATER CODE
IRRIGATOR'S LIC. #8947

STATE OF TEXAS
REGISTERED
LANDSCAPE ARCHITECT
FAITH MCNEELIS
8947
Faith McNeelis 2/10/15

REVISIONS	
DATE	
ARCHITECT'S SEAL	
PROJECT TITLE	<p>EAGLE VISTA PARK AND BIKE WILDLIFE CORRIDOR LANDSCAPE IMPROVEMENTS</p>
SHEET TITLE	IRRIGATION DETAILS
	L18
	IRRIGATION DETAILS
	SHEET 18 OF 18

PARKS DEPARTMENT
REVIEWED BY Anthony [Signature] 02/16/2015

THE CITY OF EL PASO, TEXAS
Final Approval