

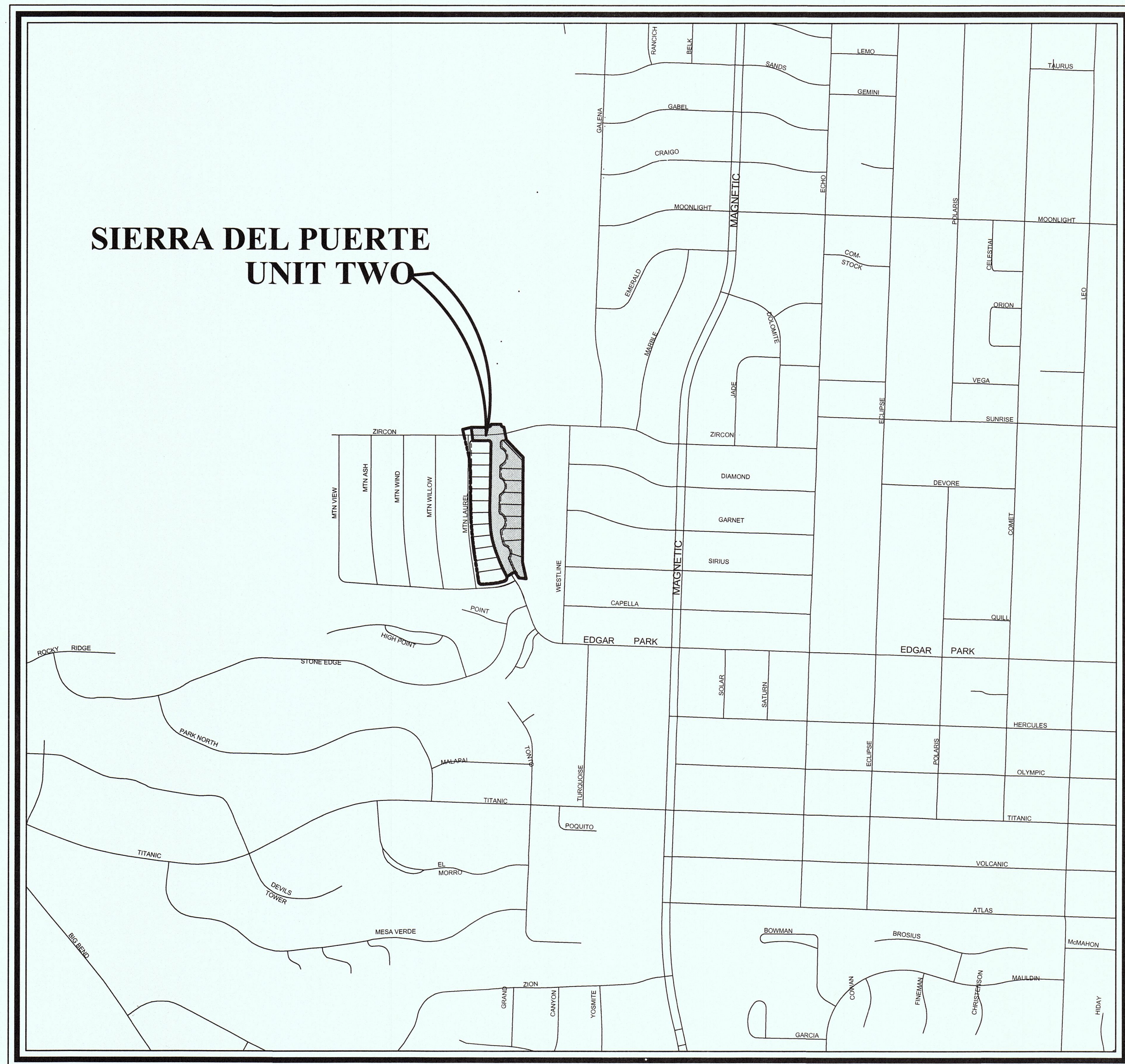
SIERRA DEL PUERTE UNIT TWO

SIERRA DEL PUERTE UNIT TWO



LOCATION MAP

SCALE 1" = 600'



STREET IMPROVEMENT ENGINEERING PACKAGE INDEX OF SHEETS

SHEET TITLE	SHEET NO.
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DRAINAGE PLAN	5
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EDGAR PARK / ZIRCON DRIVE PLAN AND PROFILE	10-12
RETAINING ROCK WALL DETAILS	13
TYPICAL DETAILS	14-15
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ILLUMINATION AND TRAFFIC SIGN DETAILS AND U.S.P.S. DETAILS	17-18
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WATER WASTE WATER NOTES	20
WATER DETAILS	21-22
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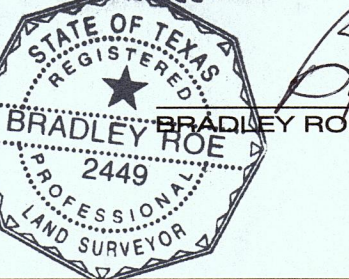
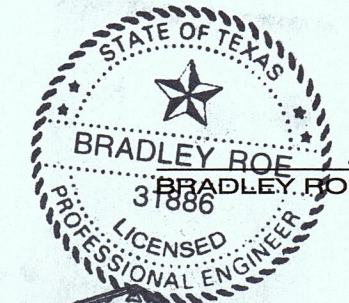
**CITY DEVELOPMENT
DEPARTMENT**

Reviewed For Conformance For Condition Related To:

- Sidewalk
- Grading & Drainage
- Wheelchair Ramps
- On Site Parking Layout
- Driveways
- Retaining Rock Walls
- On Site Paving of Storm Water

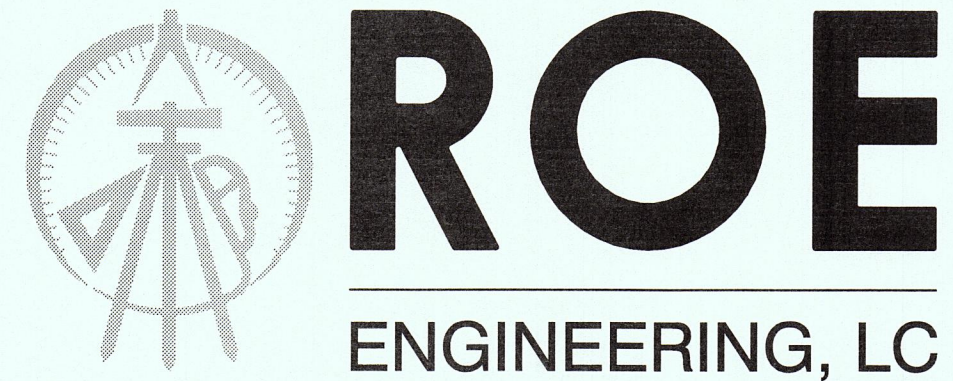
Contractor Must Call 24 Hours Prior To Construction for Inspections

Bradley Roe 8/6/2015
Date



Bradley Roe 5 Aug 2015
DATE:

Bradley Roe 5 Aug 2015
DATE:



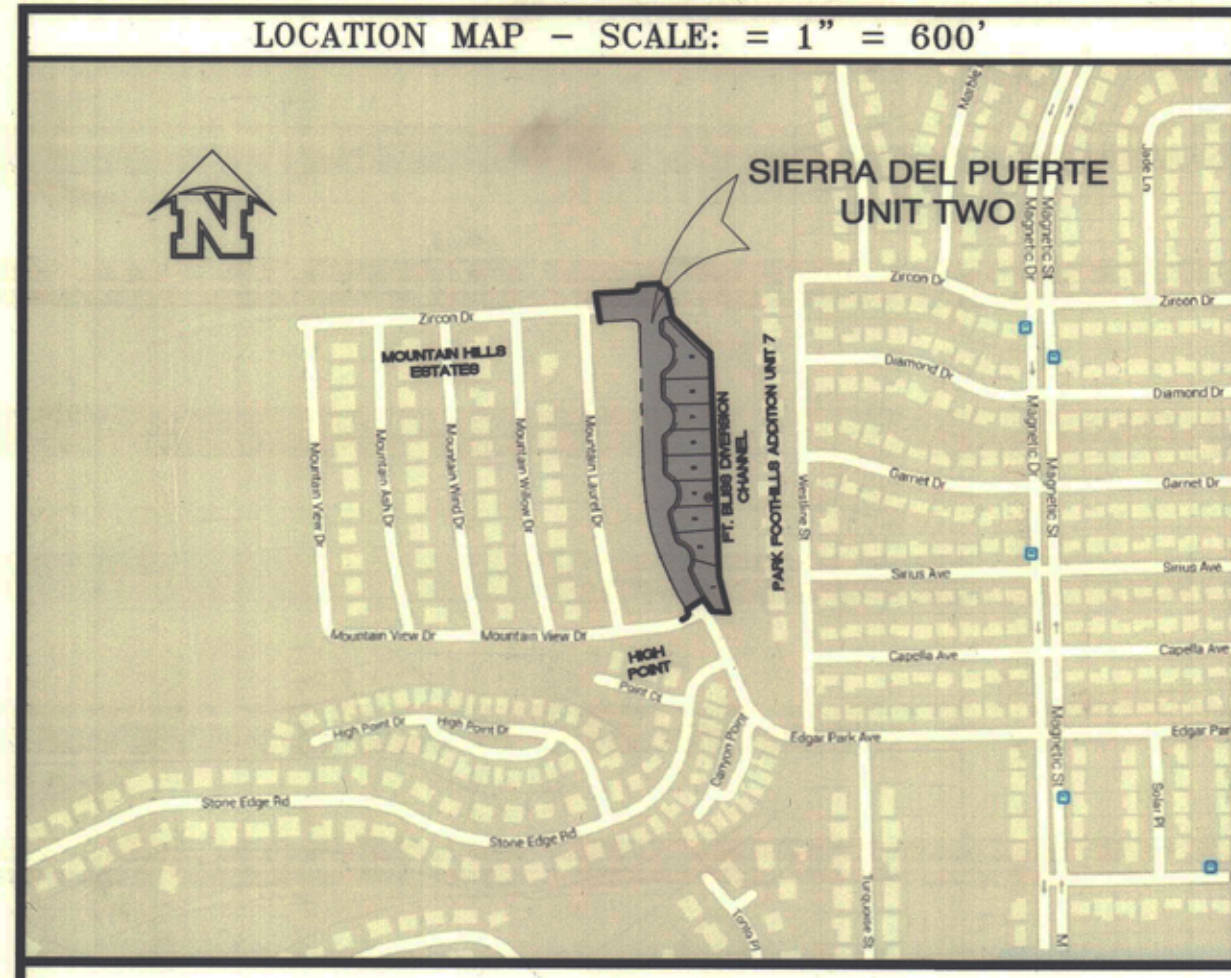
NAME	ADDRESS	CITY & ZIP	PHONE	FAX
OWNER/DEVELOPER	GGCOHL, LLC	1014 CEDAR STREET	EL PASO, TEXAS 79903	915-487-0383
ENGINEER	BRADLEY ROE, P.E. 31886	601 N. COTTON STREET, SUITE 6	EL PASO, TEXAS 79902	915-533-1418 915-533-4972
SURVEYOR	BRADLEY ROE, R.P.L.S. 2449	601 N. COTTON STREET, SUITE 6	EL PASO, TEXAS 79902	915-533-1418 915-533-4972

SIERRA DEL PUERTE UNIT TWO

REVISION NUMBER	SHEET NAME OR NUMBER	DESCRIPTION OF REVISION	DATE OF REVISION	REVISION APPROVED BY

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REVISED
07-10-2015



EL PASO INDEPENDENT SCHOOL DISTRICT

LEGEND

- ⊕ EXISTING CITY MONUMENT
- PROPOSED CITY MONUMENT
- DENOTES SET 5/8" REBAR WITH YELLOW PLASTIC CAP STAMPED TX 2449, ROE ENGR., L.C. UNLESS OTHERWISE NOTED.
- NEIGHBORHOOD DELIVERY AND COLLECTION BOX UNITS (NDCBUS)

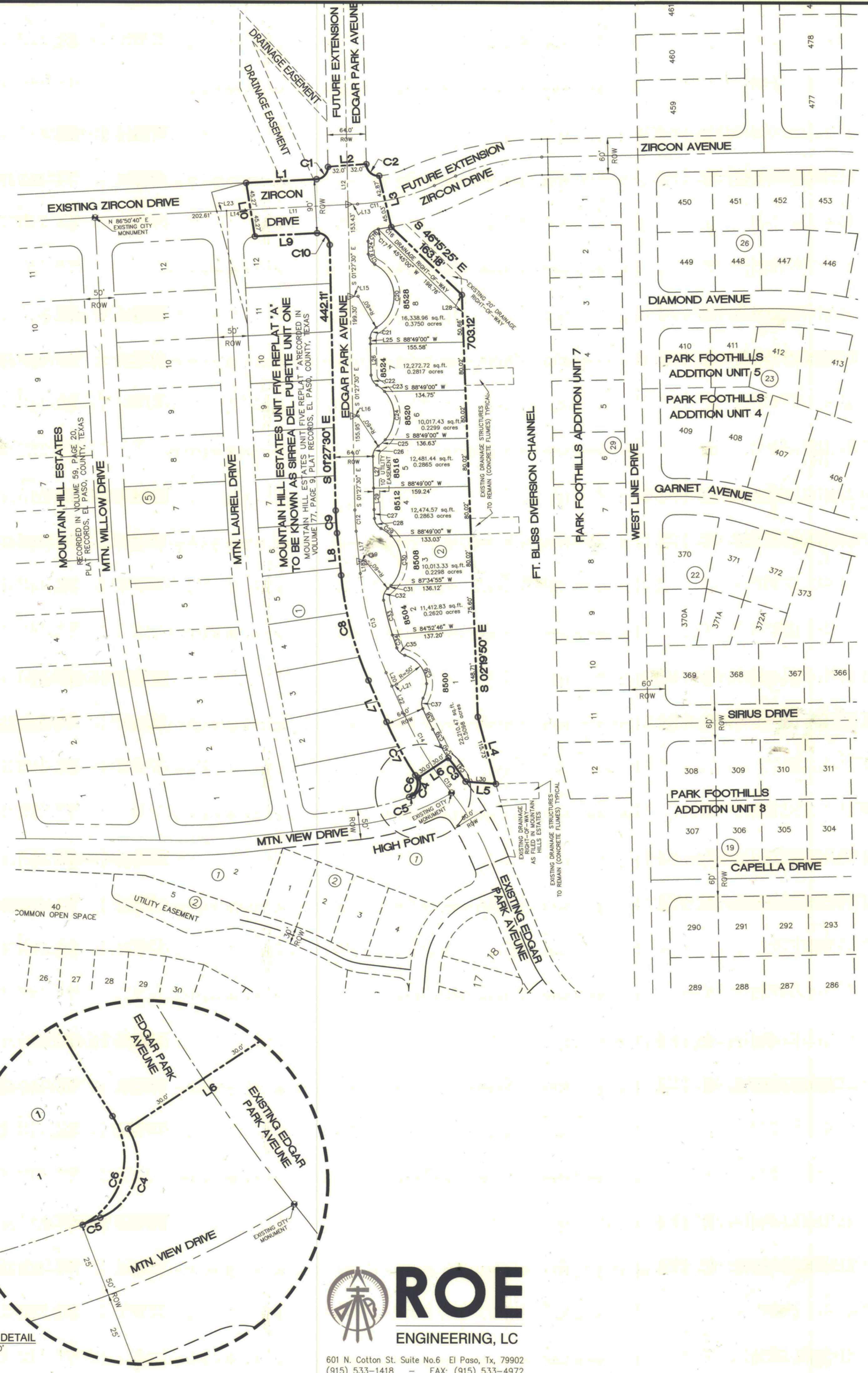
GENERAL NOTES:

1. THIS IS TO CERTIFY THAT WATER AND SEWER SERVICES WILL BE PROVIDED TO SIERRA DEL PUERTE UNIT TWO BY THE EL PASO WATER UTILITIES 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 IN ZIRCON DRIVE AND EDGAR PARK DRIVE RIGHT-OF-WAYS AND HAVE BEEN CONSTRUCTED TO SERVE THE SUBDIVISION.
2. "SIDEWALKS WITHIN THIS SUBDIVISION WILL BE PROVIDED BY BUILDER UNLESS OTHERWISE NOTED.
3. RESTRICTIVE COVENANTS FOR THIS SUBDIVISION ARE FILED IN THE OFFICE OF THE COUNTY CLERK, DEED AND RECORD SECTION, INSTRUMENT NO. 2016004278, DATE 6-21-16.
4. THE ABOVE REFERENCED PROPERTY IS WITHIN ZONE "C" (EXPLANATION: AREAS OF MINIMAL FLOODING) ACCORDING TO THE FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAPS, AS PER AREA COMMUNITY PANEL NO. 480214 0024B, DATED OCTOBER 15, 1982.
5. POSTAL DELIVERY SERVICE WITHIN THE SUBDIVISION WILL BE PROVIDED USING NEIGHBORHOOD DELIVERY SERVICE.
6. TEN FOOT UTILITY EASEMENT ALONG THE FRONT OF ALL PROPERTY LINES UNLESS OTHERWISE NOTED.
7. VEHICULAR ACCESS TO LOT 8, BLOCK 2, AS THEY ABUT ZIRCON DRIVE SHALL BE FROM OTHER DEDICATED STREETS ONLY. THE INSTRUMENT ASSURING RELEASE OF ACCESS IS FILED IN THE OFFICE OF THE COUNTY CLERK, DEEDS AND RECORDS SECTION, INSTRUMENT NO. _____, DATE _____.
8. TAX CERTIFICATE(S) FOR THIS SUBDIVISION ARE FILED IN THE OFFICE OF THE COUNTY CLERK, DEED AND RECORDS SECTION, INSTRUMENT NO. 2016004269-42707, DATE 6-21-16.
9. ALL STORM WATER RUNOFF SHALL BE ADDRESSED WITHIN THE SUBDIVISION LIMITS AND SHALL COMPLY WITH ALL PROVISIONS OF CITY OF EL PASO'S DESIGN STANDARDS FOR CONSTRUCTION (DSC), 19.19.010A AND CITY OF EL PASO ENGINEERING DEPARTMENT DRAINAGE DESIGN MANUAL (DDM), 11.1).
10. SET 5/8" REBAR WITH YELLOW PLASTIC CAP STAMPED TX 2449, ROE ENGR., L.C. AT ALL EXTERIOR BOUNDARY CORNERS UNLESS OTHERWISE NOTED.
11. ALL LOT CORNERS WILL BE SET UPON COMPLETION OF CONSTRUCTION OF ROADWAYS AND UTILITIES.
12. BEARINGS BASED ON MAP OF MOUNTAIN HILLS ESTATES UNIT FIVE REPLAT "A" RECORDED IN VOLUME 77, PAGE 90, FILE NUMBER 20020067195, PLAT RECORDS OF EL PASO COUNTY, TEXAS.

LINE NO.	BEARING	LENGTH
L1	N 86°50'41" E	117.34
L2	S 85°39'44" W	64.08
L3	N 13°28'12" W	87.89
L4	S 15°11'51" E	115.73
L5	N 85°48'52" W	50.49
L6	N 56°18'41" E	60.00
L7	S 23°39'52" E	75.65
L8	S 05°48'41" E	70.94
L9	N 86°50'41" E	103.68
L10	S 09°22'45" E	90.53
L11	N 86°50'41" E	162.54
L12	S 01°27'30" E	65.10
L13	N 86°50'41" E	16.00
L14	N 86°50'41" E	40.09
L15	N 88°32'30" E	13.36
L16	N 88°32'30" E	9.00
L17	S 05°48'41" E	50.56
L18	S 05°48'41" E	20.38
L19	N 84°11'19" E	10.00
L20	S 23°39'52" E	24.43
L21	N 66°20'08" E	8.39
L22	S 23°39'52" E	51.22
L23	N 86°50'41" E	16.13
L24	S 01°27'30" E	21.31
L25	S 01°27'30" E	9.50
L26	S 01°27'30" E	52.28
L27	S 01°27'30" E	52.81
L28	S 02°19'50" E	28.05
L29	S 01°27'30" E	35.69
L30	N 85°48'52" W	50.49

CURVE	RADIUS	LENGTH	TANGENT	CHORD	BEARING	DELTA
C1	20.00	30.82	19.42	27.86	N 42°41'35" E	88°18'11"
C2	20.00	32.53	21.14	29.06	S 48°02'58" E	93°10'56"
C3	552.30	48.99	24.51	48.97	N 36°13'48" W	5°04'54"
C4	19.99	35.43	24.49	30.97	N 17°04'45" E	101°33'59"
C5	350.00	6.63	3.31	6.63	N 68°29'11" E	1°05'07"
C6	25.00	42.53	28.50	37.59	N 15°38'42" E	97°28'36"
C7	614.30	101.09	50.66	100.98	S 28°22'44" E	9°25'44"
C8	582.00	181.35	91.41	180.62	S 14°44'16" E	175°11'11"
C9	497.00	37.76	18.89	37.76	S 03°38'05" E	4°21'11"
C10	20.00	32.01	20.60	28.70	N 47°18'24" W	91°41'49"
C11	359.60	46.27	23.17	46.24	N 83°09'32" E	7°22'19"
C12	465.00	35.33	17.67	35.32	S 03°38'05" E	4°21'11"
C13	550.00	171.38	86.39	170.68	S 14°44'17" E	175°11'11"
C14	582.30	51.49	25.75	51.47	S 36°13'19" E	5°03'58"
C15	582.30	101.88	51.07	101.75	S 28°40'36" E	10°01'28"
C16	402.22	21.78	10.89	21.78	N 80°45'06" E	3°06'08"
C17	20.00	0.42	0.21	0.42	S 81°42'17" W	1°11'48"
C18	20.00	28.82	17.56	26.39	S 39°49'26" W	82°33'53"
C19	20.00	21.33	11.81	20.34	S 32°01'05" E	61°07'09"
C20	60.00	128.01	108.78	105.07	N 01°27'30" W	122°41'17"
C21	20.00	21.33	11.81	20.34	S 29°06'04" W	61°07'09"
C22	20.00	20.07	10.97	19.24	S 30°12'06" E	57°29'11"
C23	60.00	16.91	8.51	16.85	N 50°52'15" W	16°08'52"
C24	60.00	87.57	53.67	80.00	N 00°59'01" W	83°37'35"
C25	60.00	15.92	8.00	15.87	N 48°25'43" E	15°11'54"
C26	20.00	20.07	10.97	19.24	S 27°17'05" W	57°29'11"
C27	433.00	14.75	7.37	14.75	S 02°26'03" E	1°57'05"
C28	20.00	21.09	11.65	20.13	S 33°17'25" E	60°25'40"
C29	60.00	20.87	10.54	20.76	N 53°52'29" W	19°55'32"
C30	60.00	91.59	57.40	82.95	N 00°10'59" W	87°27'28"
C31	60.00	7.48	3.74	7.47	N 47°06'55" E	7°08'20"
C32	20.00	21.58	11.98	20.55	S 19°46'04" W	61°50'02"
C33	518.00	59.53	29.80	59.50	S 14°26'29" E	6°35'04"
C34	518.00	22.80	11.40	22.80	S 18°59'40" E	2°31'18"
C35	20.00	18.83	10.18	18.14	S 47°13'46" E	53°56'55"
C36	50.00	89.01	61.74	77.71	N 23°12'24" W	101°59'40"
C37	20.00	18.09	9.72	17.48	S 01°52'20" W	51°50'13"
C38	550.30	38.39	19.20	38.38	S 26°02'41" E	3°59'48"
C39	500.00	29.79	14.90	29.79	S 26°20'10" W	3°24'51"
C40	100.00	24.60	12.36	24.54	S 31°40'37" E	14°05'45"
C41	552.30	48.99	24.51	48.97	N 36°13'48" W	5°04'54"

ENLARGED DETAIL
SCALE: 1" = 20'

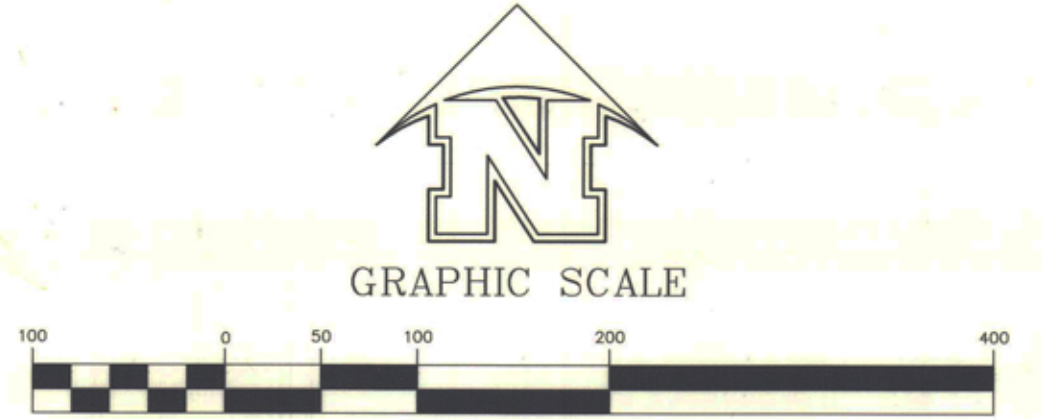


601 N. Cotton St. Suite No.6 El Paso, Tx, 79902
(915) 533-1418 - FAX: (915) 533-4972

SIERRA DEL PUERTE UNIT TWO

BEING A REPLAT OF LOTS 1 THRU 9, BLOCK 10 AND PORTIONS OF EDGAR PARK DRIVE AND ZIRCON DRIVE, MOUNTAIN HILLS ESTATES UNIT FIVE REPLAT "A" CITY OF EL PASO, EL PASO COUNTY, TEXAS

CONTAINING IN ALL 202,552.44 SQUARE FEET OR 4.6499 ACRES MORE OR LESS



OWNER'S DEDICATION, CERTIFICATION

STATE OF TEXAS
COUNTY OF EL PASO

I, DANIEL T. KNAPP, MANAGER OF GCGOHL, L.L.C. OWNERS OF THIS LAND HEREBY PRESENT THIS MAP AND DEDICATE TO THE USE OF THE PUBLIC, STREETS AND EASEMENTS, INCLUDING EASEMENTS FOR OVERHANG OF SERVICE WIRES FOR POLE TYPE UTILITIES, AND BURIED SERVICE WIRES CONDUITS AND PIPES FOR UNDERGROUND UTILITIES AND THE RIGHT TO INGRESS AND EGRESS FOR SERVICE UNLESS OTHERWISE NOTED AND CONSTRUCTION AND THE RIGHT TO TRIM INTERFERING TREES AND SHRUBS.

BY: *[Signature]*
DANIEL T. KNAPP, MANAGER
GCGOHL, L.L.C.

ACKNOWLEDGMENT

STATE OF TEXAS
COUNTY OF EL PASO

BEFORE ME, THE UNDERSIGNED AUTHORITY, ON THIS DAY PERSONALLY APPEARED DANIEL T. KNAPP, MANAGER OF GCGOHL, L.L.C., KNOWN BY ME TO BE THE PERSON WHOSE NAME IS SUBSCRIBED TO THE FOREGOING INSTRUMENT AND ACKNOWLEDGED TO ME THAT HE EXECUTED THE SAME FOR THE PURPOSES AND CONSIDERATIONS THEREIN STATED.

GIVEN UNDER MY HAND AND SEAL THIS 09 DAY OF JUNE, 2016 A.D.
[Signature]
Kaci A. Jackson
NOTARY PUBLIC IN AND FOR EL PASO COUNTY, TEXAS
MY COMMISSION EXPIRES 05-09-2020



CITY PLAN COMMISSION

THIS SUBDIVISION IS HEREBY APPROVED AS TO THE PLATTING AND AS TO THE CONDITIONS OF THE DEDICATION IN ACCORDANCE WITH CHAPTER 212 OF THE LOCAL GOVERNMENT CODE OF TEXAS THIS 4 DAY OF June, 2015 A.D.

[Signature] EXECUTIVE SECRETARY
[Signature] CHAIRPERSON

APPROVED FOR FILING THIS 16th DAY OF June, 2016 A.D.

PLANNING AND INSPECTIONS DIRECTOR

COUNTY CLERK'S RECORDING CERTIFICATE

[Signature], COUNTY CLERK OF EL PASO COUNTY, CERTIFY THAT THE PLAT BEARING THIS CERTIFICATE WAS FILED AND RECORDED UNDER THE INSTRUMENT NO. 2016004269 IN THE PLAT RECORDS OF THE EL PASO COUNTY.

BY: *[Signature]* COUNTY CLERK
DATE: 6-21-2016
BY: *[Signature]* DEPUTY COUNTY CLERK
DATE: 6-21-2016

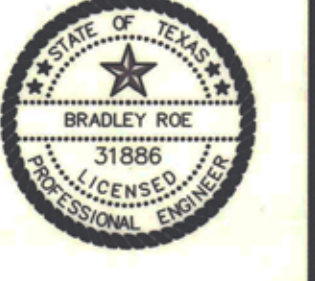
I HEREBY CERTIFY THAT THIS PLAT REPRESENTS A SURVEY MADE ON THE GROUND UNDER MY SUPERVISION AND IS IN COMPLIANCE WITH THE CURRENT TEXAS BOARD OF PROFESSIONAL LAND SURVEYING, PROFESSIONAL AND TECHNICAL STANDARDS, REGISTERED PUBLIC LAND SURVEYOR No. 2449

[Signature]
BRADLEY ROE, R.P.L.S. 2449
FIRM REGISTRATION / LICENSE No. 10068700



PREPARED BY AND UNDER THE SUPERVISION OF BRADLEY ROE, REGISTERED PROFESSIONAL ENGINEER No. 31886

[Signature]
BRADLEY ROE, P.E. 31886
ROE ENGINEERING, L.C.
TEXAS REGISTERED ENGINEERING FIRM F-2103



2:\Clients\100_Veritas_Properties\022015-118_Sierra_Del_Puerte_Unit_Two_CDC_Approved\Views\USD_Plat_Planning\06/20/16_1:30PM
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 NO. 022015-11A
 FILE NAME: SDP-U1 PLATTING
 PREPARATION DATE: APRIL 7, 2015
 REVISED DATE:

LOCATION MAP - SCALE: = 1" = 600'



SIERRA DEL PUERTE UNIT TWO



EL PASO INDEPENDENT SCHOOL DISTRICT

LEGEND

- ◆ EXISTING CITY MONUMENT
- △ PROPOSED CITY MONUMENT
- DENOTES SET 5/8"Ø REBAR WITH YELLOW PLASTIC CAP STAMPED TX 2449, ROE ENGR., L.C. UNLESS OTHERWISE NOTED.
- ▭ NEIGHBORHOOD DELIVERY AND COLLECTION BOX UNITS (NDCBUS)

GENERAL NOTES:

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L4	S 15°11'51" E	115.73
L5	N 85°48'52" W	50.49
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L9	N 86°50'41" E	103.68
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L11	N 86°50'41" E	162.54
L12	S 01°27'30" E	65.10
L13	N 86°50'41" E	16.00
L14	N 86°50'41" E	40.09
L15	N 88°32'30" E	13.36
L16	N 86°50'41" E	9.00
L17	S 05°48'41" E	50.56
L18	S 05°48'41" E	20.38
L19	N 84°11'19" E	10.00
L20	S 23°39'52" E	24.43
L21	N 66°20'08" E	8.39
L22	S 23°39'52" E	51.22
L23	N 86°50'41" E	16.13
L24	S 01°27'30" E	21.31
L25	S 01°27'30" E	9.50
L26	S 01°27'30" E	52.28
L27	S 01°27'30" E	52.81
L28	S 02°19'50" E	28.05
L29	S 01°27'30" E	35.69
L30	N 85°48'52" W	50.49

CURVE	RADIUS	LENGTH	TANGENT	CHORD	BEARING	DELTA
C1	20.00	30.82	19.42	27.86	N 42°41'35" E	88°18'11"
C2	20.00	32.53	21.14	29.06	S 48°02'58" E	93°10'56"
C3	552.30	48.99	24.51	48.97	N 36°13'48" W	50°45'54"
C4	19.99	35.43	24.49	30.97	N 17°04'45" E	101°33'59"
C5	350.00	6.63	3.31	6.63	N 68°29'11" E	1°05'07"
C6	25.00	42.53	28.50	37.59	N 15°38'42" E	97°28'36"
C7	614.30	101.09	50.66	100.98	S 28°22'44" E	9°25'44"
C8	582.00	181.35	91.41	180.62	S 14°44'16" E	17°51'11"
C9	497.00	37.76	18.89	37.75	S 03°38'05" E	4°21'11"
C10	20.00	32.01	20.60	28.70	N 47°18'24" W	91°41'49"
C11	359.60	46.27	23.17	46.24	N 83°09'32" E	7°22'19"
C12	465.00	35.33	17.67	35.32	S 03°38'05" E	4°21'11"
C13	550.00	171.36	86.39	170.68	S 14°44'17" E	17°51'11"
C14	582.30	101.88	51.07	101.75	S 28°40'36" E	10°01'28"
C15	582.30	51.49	25.76	51.47	S 36°13'19" E	5°03'58"
C16	402.72	21.78	10.89	21.78	N 80°45'06" E	3°06'08"
C17	20.00	0.42	0.21	0.42	S 81°42'17" W	1°11'48"
C18	20.00	28.82	17.56	26.39	S 39°49'26" W	82°33'53"
C19	20.00	21.33	11.81	20.34	S 32°01'05" E	61°07'09"
C20	60.00	128.01	108.78	105.07	N 01°27'30" W	122°14'17"
C21	20.00	21.33	11.81	20.34	S 29°06'04" W	61°07'09"
C22	20.00	20.07	10.97	19.24	S 30°12'06" E	57°29'11"
C23	60.00	16.91	8.45	16.85	N 50°52'15" W	16°08'52"
C24	60.00	87.57	53.67	80.00	N 00°56'01" W	87°22'28"
C25	60.00	15.92	8.00	15.87	N 48°25'43" E	15°11'54"
C26	20.00	20.07	10.97	19.24	S 27°17'05" W	57°29'11"
C27	433.00	14.75	7.37	14.75	S 02°26'03" E	1°57'05"
C28	20.00	21.09	11.65	20.13	S 33°37'25" E	6°20'24"
C29	60.00	20.87	10.54	20.76	N 53°52'29" W	19°55'32"
C30	60.00	81.69	57.40	82.95	N 00°10'59" W	87°22'28"
C31	60.00	7.48	3.74	7.47	S 47°06'55" E	7°08'20"
C32	20.00	21.58	11.98	20.55	S 19°46'04" E	61°50'02"
C33	518.00	59.53	29.80	59.50	S 14°26'29" E	6°35'04"
C34	518.00	22.80	11.40	22.80	S 18°59'40" E	2°31'18"
C35	20.00	18.83	10.18	18.14	S 47°13'46" E	5°35'55"
C36	50.00	89.01	61.74	77.71	N 23°12'24" W	101°59'40"
C37	20.00	18.09	9.72	17.48	S 01°52'20" W	81°50'13"
C38	550.30	38.39	19.20	38.38	S 26°10'24" E	3°59'48"
C39	500.00	29.79	14.90	29.79	N 26°20'10" W	3°24'51"
C40	100.00	24.60	12.36	24.54	S 31°40'37" E	14°05'45"
C41	552.30	48.99	24.51	48.97	N 36°13'48" W	50°45'54"

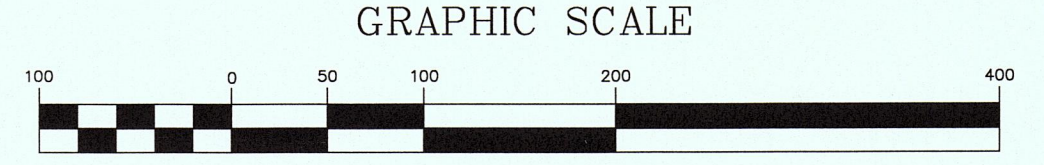
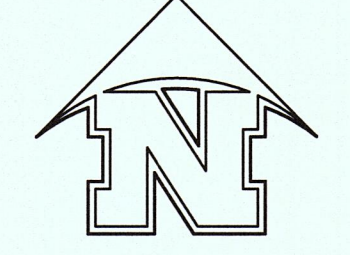
ENLARGED DETAIL
SCALE: 1" = 20'



SIERRA DEL PUERTE UNIT TWO

BEING A REPLAT OF LOTS 1 THRU 9, BLOCK 10 AND PORTIONS OF EDGAR PARK DRIVE AND ZIRCON DRIVE, MOUNTAIN HILLS ESTATES UNIT FIVE REPLAT "A" CITY OF EL PASO, EL PASO COUNTY, TEXAS

CONTAINING IN ALL 202,552.44 SQUARE FEET OR 4.6499 ACRES MORE OR LESS



OWNER'S DEDICATION, CERTIFICATION

STATE OF TEXAS
COUNTY OF EL PASO

I, DANIEL T. KNAPP, MANAGER OF GCGOHL, L.L.C. OWNERS OF THIS LAND HEREBY PRESENT THIS MAP AND DEDICATE TO THE USE OF THE PUBLIC, STREETS AND EASEMENTS, INCLUDING EASEMENTS FOR OVERHANG OF SERVICE WIRES FOR POLE TYPE UTILITIES, AND BURIED SERVICE WIRES CONDUITS AND PIPES FOR UNDERGROUND UTILITIES AND THE RIGHT TO INGRESS AND EGRESS FOR SERVICE UNLESS OTHERWISE NOTED AND CONSTRUCTION AND THE RIGHT TO TRIM INTERFERING TREES AND SHRUBS.

BY:
DANIEL T. KNAPP, MANAGER
GCGOHL, L.L.C.

ACKNOWLEDGMENT

STATE OF TEXAS
COUNTY OF EL PASO

BEFORE ME, THE UNDERSIGNED AUTHORITY, ON THIS DAY PERSONALLY APPEARED DANIEL T. KNAPP, MANAGER OF GCGOHL, L.L.C., KNOWN BY ME TO BE THE PERSON WHOSE NAME IS SUBSCRIBED TO THE FOREGOING INSTRUMENT AND ACKNOWLEDGED TO ME THAT HE EXECUTED THE SAME FOR THE PURPOSES AND CONSIDERATIONS THEREIN STATED.

GIVEN UNDER MY HAND AND SEAL THIS _____ DAY OF _____, 2015 A.D.

NOTARY PUBLIC IN AND FOR EL PASO COUNTY, TEXAS

MY COMMISSION EXPIRES _____

CITY PLAN COMMISSION

THIS SUBDIVISION IS HEREBY APPROVED AS TO THE PLATTING AND AS TO THE CONDITIONS OF THE DEDICATION IN ACCORDANCE WITH CHAPTER 212 OF THE LOCAL GOVERNMENT CODE OF TEXAS THIS _____ DAY OF _____, 2015 A.D.

EXECUTIVE SECRETARY

CHAIRPERSON

APPROVED FOR FILING THIS _____ DAY OF _____, 2015 A.D.

PLANNING AND INSPECTIONS DIRECTOR



COUNTY CLERK'S RECORDING CERTIFICATE

I, _____ COUNTY CLERK OF EL PASO COUNTY, CERTIFY THAT THE PLAT BEARING THIS CERTIFICATE WAS FILED AND RECORDED UNDER THE INSTRUMENT NO. _____ IN THE PLAT RECORDS OF THE EL PASO COUNTY.

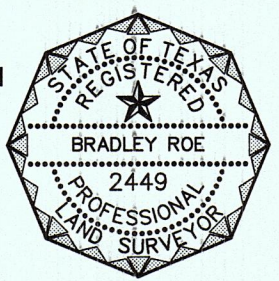
BY:

COUNTY CLERK

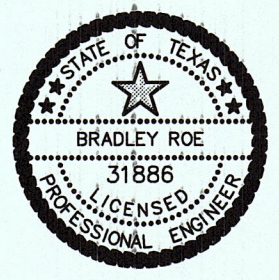
BY:

DEPUTY COUNTY CLERK

I HEREBY CERTIFY THAT THIS PLAT REPRESENTS A SURVEY MADE ON THE GROUND UNDER MY SUPERVISION AND IS IN COMPLIANCE WITH THE CURRENT TEXAS BOARD OF PROFESSIONAL LAND SURVEYING, PROFESSIONAL AND TECHNICAL STANDARDS, REGISTERED PUBLIC LAND SURVEYOR NO. 2449.



BRADLEY ROE, R.P.L.S. 2449
FIRM REGISTRATION / LICENSE NO. 10060700



BRADLEY ROE, P.E. 31886
ROE ENGINEERING, L.L.C.
TEXAS REGISTERED ENGINEERING FIRM F-2103

PREPARED BY AND UNDER THE SUPERVISION OF BRADLEY ROE, REGISTERED PROFESSIONAL ENGINEER NO. 31886



601 N. Cotton St. Suite No.6 El Paso, TX, 79902
(915) 533-1418 - FAX: (915) 533-4972

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W.D. 022215-11A
FILE NAME: SDP_11A_PLAT.DWG
PREPARATION DATE: APRIL 7, 2015
REVISED DATE:

GENERAL GRADING SPECS

- 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 MATERIAL: FILL MATERIAL SHALL BE GRANULAR, FREE OF CLAYEY AND ORGANIC MATERIAL AND SHALL NOT CONTAIN GRAVEL LARGER THAN ONE (1) INCH IN GREATEST DIMENSION AND SHALL BE DEFINED AS THOSE COMPLYING WITH ASTM D2487 SOIL CLASSIFICATION GROUPS GM, SM, AND SC.
- UNSATISFACTORY FILL MATERIAL ARE DEFINED AS THOSE COMPLYING WITH ASTM D2487 SOIL CLASSIFICATION GROUPS ML, MH, CL, CH, SP, OL, OH, AND PT, OR WHERE THE PLASTICITY INDEX EXCEEDS 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 10 INCHES, AND UNTIL THE SURFACE IS FREE FROM RUTS, HUMMOCKS, OR OTHER UNEVEN FEATURES WHICH WOULD PREVENT UNIFORM COMPACTION. PLOW STRIP, OR BREAK OR BREAK UP SLOPED SURFACES STEEPER THAN 1 VERTICAL TO 4 HORIZONTAL SO THAT THE FILL MATERIAL WILL BE 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 CLOUDS, BROUGHT TO OPTIMUM MOISTURE, AND COMPACTED 95% OF MAXIMUM DENSITY IN ACCORDANCE WITH ASTM D-1557.
- PLACEMENT OF FILL: PLACE BACKFILL AND FILL MATERIALS IN LAYERS OF 8 TO 10 INCHES IN LOOSE DEPTH FOR MATERIAL COMPACTED BY HEAVY COMPACTION EQUIPMENT, AND NOT MORE THAN 4 INCHES IN LOOSE DEPTH FOR MATERIAL COMPACTED BY HAND-OPERATED TAMPERS. BEFORE COMPACTION MOISTEN OR AERATE EACH LAYER AS NECESSARY TO PROVIDE OPTIMUM MOISTURE CONTENT. PLACE FILL MATERIALS EVENLY ADJACENT TO SITE APPURTENANCES, PIPING, OR CONDUIT TO 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 3 PERCENT POINTS OF OPTIMUM MOISTURE CONTENT. REMOVE AND REPLACE, OR SCARIFY AND AIR DRY SOIL MATERIAL THAT IS TO WET TO PERMIT COMPACTION TO SPECIFIED COMPACTION.
- QUALITY CONTROL: THE OWNER SHALL PROVIDE A GEOTECHNICAL ENGINEER TO PERFORM FIELD DENSITY TEST OF THE COMPACTION OF EACH LAYER TO FILL. DENSITY TEST SHALL BE TAKEN IN COMPACTED MATERIAL BELOW THE DISTURBED SURFACE. WHEN THESE TESTS INDICATE THAT THE DENSITY OF ANY LAYER OF FILL OR PORTION THERE OF 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 COSTS RESULTING FROM THE REQUIRED DENSITIES ARE NOT MET SUPERVISION BY THE GEOTECHNICAL ENGINEER DURING THE GRADING OPERATIONS TO ENSURE GRADING WORK IN ACCORDANCE WITH THIS PLAN AND SPECIFICATIONS.

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 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 AND BEFORE QUIETING 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 TO PERFORM HIS WORK SO AS TO ASSURE PROPER PASSAGE OF STORM RUNOFF DURING THE COURSE OF HIS OPERATIONS. ALL LABOR, TOOLS AND 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 CONTRACTOR.
- THE CONTRACTOR SHALL COORDINATE THE CONSTRUCTION SCHEDULE WITH THE USER, ALL UTILITIES AND ALL OTHER AGENCIES WITH THE JURISDICTION OVER THE PROJECT.
- ALL EXISTING PAVEMENT, ADJACENT UTILITIES, STRUCTURES, ECT., 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. ALL DISCREPANCIES FOND SHALL BE REPORTED IMMEDIATELY TO THE ENGINEER OTHERWISE THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR THEIR CORRECTNESS.
- VIBRATORY ROLLERS WILL NOT BE PERMITTED ON ANY PHASE OF THIS PROJECT, UNLESS APPROVED IN WRITING BY THE ENGINEER.
- ALL WORK REQUIRED BY THESE PLANS SHALL BE CONDUCTED IN CONFORMANCE WITH CURRENT SAFETY CODES AND STANDARDS WITH JURISDICTION OVER THE PROJECT.
- THE LOCATION OF THE FLUMES AND INLETS SHALL BE AT THE FIELD LOW POINT AND APPROVED BY THE ENGINEER.

TRENCH SAFETY NOTES:

- IN ACCORDANCE WITH THE LAWS OF THE STATE OF TEXAS AND THE U.S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION REGULATIONS, ALL TRENCHES OVER 5 FEET IN DEPTH IN EITHER HARD AND COMPACT OR SOFT AND UNSTABLE SOIL SHALL BE SLOPED, SHORED, SHEETED, BRACED OR OTHERWISE SUPPORTED. FURTHERMORE, ALL TRENCHES LESS THAN 5 FEET IN DEPTH SHALL ALSO BE EFFECTIVELY PROTECTED WHEN HAZARDOUS GROUND MOVEMENT MAY BE EXPECTED.
- IN ACCORDANCE WITH THE U.S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION REGULATIONS WHEN EMPLOYEES ARE REQUIRED TO BE IN TRENCHES 4 FEET DEEP OR MORE, ADEQUATE MEAN EXIT, SUCH AS A LADDER OR STEPS, MUST BE PROVIDED AND LOCATED SO AS TO REQUIRE NO MORE THAN 25 FEET OF LATERAL TRAVEL.
- CONTRACTOR SHALL PROVIDE TO THE ENGINEER THE TRENCH SAFETY PLAN SEALED BY A REGISTERED ENGINEER.

GENERAL GRADING NOTES

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- CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING IMPROVEMENTS IN THE PROJECT AREA AND ITS VICINITY. CONTRACTOR SHALL CONTACT UTILITY LOCATOR SERVICE FOR FILED LOCATION OF ALL UTILITIES PRIOR TO COMMENCING WORK. ANY DAMAGES RESULTING FROM CONTRACTOR'S CONSTRUCTION WORK SHALL BE RESTRICTED TO ITS ORIGINAL CONDITION BY CONTRACTOR.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF EXISTING UTILITIES IN THE PROJECT AREA. CONTRACTOR SHALL CONTACT UTILITY LOCATOR SERVICE FOR FILED LOCATION OF ALL UTILITIES PRIOR TO COMMENCING WORK. ANY DAMAGES SHALL BE REPAIRED IN ACCORDANCE WITH THE REQUIREMENTS OF THE UTILITY OWNER BY CONTRACTOR.
- FILL MATERIALS FOR SITE GRADING AND BACKFILL MATERIALS MAY CONSIST OF ON-SITE AND/OR IMPORTED MATERIALS IN COMPLIANCE WITH THE FOLLOWING SPECIFICATIONS.
- FILL MATERIALS FOR SITE GRADING AND BACKFILL MATERIALS SHALL BE FREE OF ANY ORGANIC OR DELETERIOUS SUBSTANCE AND SHALL NOT CONTAIN ROCKS OR LUMPS OVER 4 INCHES IN GREATEST DIMENSION.
- FILL MATERIALS SHALL BE CLASSIFIED IN ACCORDANCE WITH ASTM D-2487. SOILS WILL BE CONSIDERED SATISFACTORY FOR FILL MATERIAL WHEN CLASSIFIED AS FOLLOWS: GW, GP, GC, GM, GC-GM, GP-GC, SW, SP, SC, SM, SC-SM, SP-SM, SP-SC. SOILS WILL BE CONSIDERED UNSATISFACTORY FOR FILL MATERIAL WHEN CLASSIFIED AS FOLLOWS: FT, OL, OH, ML, CL, AND CH OR WHERE THE PLASTICITY INDEX EXCEEDS 12. (SEE SOILS REPORT FOR CLASSIFICATION)
- THE SURFACE ON WHICH FILL MATERIAL IS TO BE PLACED SHALL BE SCARIFIED TO A DEPTH OF 6 INCHES, WATERED TO ADD THE AMOUNT OF MOISTURE REQUIRED FOR OPTIMUM COMPACTION, AND THEN COMPACTED TO THE REQUIRED DENSITY. FILL MATERIAL SHALL BE PLACED IN LIFTS NOT EXCEEDING 6 INCHES IN DEPTH AND THEN COMPACTED. MOISTURE CONTENT OF FILL MATERIALS SHALL BE UNIFORM AND WITHIN PLUS OR MINUS TWO PERCENT OF OPTIMUM VALUE AS DETERMINED BY ASTM D-1557.
- EACH LIFT OF FILL SHALL BE COMPACTED TO 95 PERCENT (85 PERCENT ON SLOPE ONLY) OF MAXIMUM DENSITY. MAXIMUM DENSITY SHALL BE DETERMINED IN ACCORDANCE WITH ASTM D-1557 FIELD DENSITY SHALL BE DETERMINED IN ACCORDANCE WITH ASTM D-1556 OR D-2922.
- CONTRACTOR SHALL CO-ORDINATE WITH ALL UTILITY COMPANIES PRIOR TO ANY EXCAVATION AND/OR POSSIBLE RELOCATION OF UTILITIES ENCOUNTERED.
- CONTRACTOR SHALL EXCAVATION AND WATER DOWN GRADING AREA DAILY (MINIMUM), SO AS TO LIMIT THE DISTRIBUTION OF DUST FROM THE WORK SITE IN COMPLIANCE WITH THE CITY APPROVED GRADING ORDINANCE.
- DEVELOPER SHALL COMPLY WITH SECTION 13.08.090 EXCESSIVE PAVING CUTS.
- RETAINING ROCK WALLS 4' AND HIGHER SHALL BE CONSTRUCTED BY DEVELOPER AS PART OF SUBDIVISION IMPROVEMENT.
- DEVELOPER IS RESPONSIBLE TO MAINTAIN ALL SLOPE OUTSIDE SUBDIVISION LIMITS. PERMIT CLOSEOUT PROCEDURE.
- AFTER THE PERMITTEE COMPLETES THE GRADING UNDER THE PERMIT, THE PERMIT SHALL BE CLOSED AS PART OF THE CLOSEOUT PROCEDURE, THE APPLICANT MUST SUBMIT THE FOLLOW TO THE CITY.
 - A-A STATEMENT FROM THE ENGINEER OF RECORDS THAT STATES, " THE GRADING OPERATION HAS BEEN SUBSTANTIALLY AND GENERALLY CONFORMS TO THE APPROVED SET OF PLANS", THE PERMITTEE SHALL CALL THE PERMIT OFFICIAL TO ESTABLISH THE BEGINNING OF THE WARRANTY PERIOD AND TO NOTIFY THE PERMIT OFFICIAL THAT THE GSP HAS BEEN IMPLEMENTED.
 - B-A COPY OF THE NOTICE OF TERMINATION FILED WITH THE STATE OR DATED CONSTRUCTION SITE NOTICE, IF APPLICABLE, IN ACCORDANCE WITH CHAPTER 15, THE CITY WILL ISSUE A LETTER STATING GENERAL CONFORMANCE TO THE PERMIT HAS BEEN MET AND THE WARRANTY PERIOD REQUIREMENT WILL CONTINUE TO BE IN EFFECT.

WARRANTY: ANY PERSON ISSUED A PERMIT SHALL AGREE WARRANT AND MAINTAIN THE AREA DESCRIBED IN THE PERMIT FOR A PERIOD OF TWO YEARS AFTER THE PERMIT IS CLOSED BY THE CITY PURSUANT TO SECTION 18.44.220, OR UNTIL A BUILDING PERMIT IS ISSUED FOR THE PURPOSE OF MAINTAINING A STABILIZED SITE IN ACCORDANCE WITH THE APPROVED GSP, WHICH FIRST OCCURS (THE "WARRANTY" OR "WARRANTY PERIOD"). THE CITY MAY CONDUCT INSPECTIONS OF THE PERMITTED AREA THROUGHOUT THE WARRANTY PERIOD AND REQUIRE MAINTENANCE AND CORRECTION OF THE WORK BY THE PERMIT HOLDER. FAILURE OF THE PERMIT HOLDER TO CORRECT THE WORK SHALL CONSTITUTE A FAILURE TO COMPLY WITH THE PROVISIONS OF THIS CHAPTER.

LEGEND

	PROPOSED DRAINAGE HIGH-POINT		EXISTING DRAINAGE HIGH-POINT
	PROPOSED DRAINAGE LOW-POINT		PROPOSED CITY MONUMENT
	DENOTES EXISTING MANHOLE		EXISTING DRAINAGE FLOWS
	PROPOSED RETAINING WALL		PROPOSED TOP OF CURB ELEVATION
	FG=3930.00 PROPOSED FINISHED GRADE ELEVATION		EXISTING CONTOURS
	FF=3930.50 PROPOSED FINISHED FLOOR ELEVATION		PROPOSED CONTOURS
	DENOTES EXISTING WATER VALVE		DENOTES EXISTING POWER POLE
	DENOTES EXISTING FIRE HYDRANT		DENOTES EXISTING LIGHT STANDARD
			DENOTES EXISTING STOP SIGN

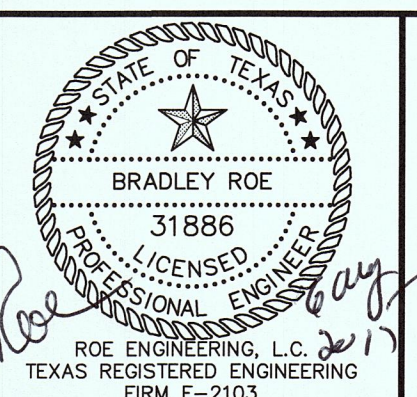
Z:\Client\Info_Vede Progettazione\22515-118 Sierra Del Puerte Phase 2\04-CAD\19-04m\19-04m.dwg 07/29/15 11:53AM

FLOOD NOTE:

NOTE: THE ABOVE REFERENCED PROPERTY IS WITHIN ZONE "C". (EXPLANATION: AREAS OF MINIMAL FLOODING) ACCORDING TO THE FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAPS, AS PER AREA COMMUNITY PANEL NO. 48021400248. DATED OCTOBER 15, 1982.

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DATE	REVISIONS	BY	PRIMARY BENCHMARK	SCALE
06/11/15	CITY COMMENTS	IR	EXISTING CITY MONUMENT LOCATED AT THE CENTERLINE INTERSECTION OF EDGAR PARK DRIVE AND MOUNTAIN VIEW DRIVE ELEVATION: 4229.73 (NAVD 88) ELEVATION : 4217.92 (CITY DATUM) ELEVATIONS BASED ON NAVD 88 DATUM	HOR: _____ VER: _____ W.O. 022515-11A DATE: APRIL 2015 DESIGN BY: IR DRAWN BY: IR/LAJ CHKD. BY: H.P. APPD. BY: B.R.



SIERRA DEL PUERTE UNIT TWO

GENERAL NOTES

601 N. Cotton St. Suite No.6 El Paso, Tx, 79902
(915) 533-1418 - FAX: (915) 533-4972

SHEET NO.

3

3 OF 23



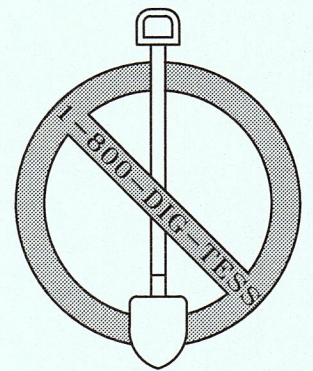
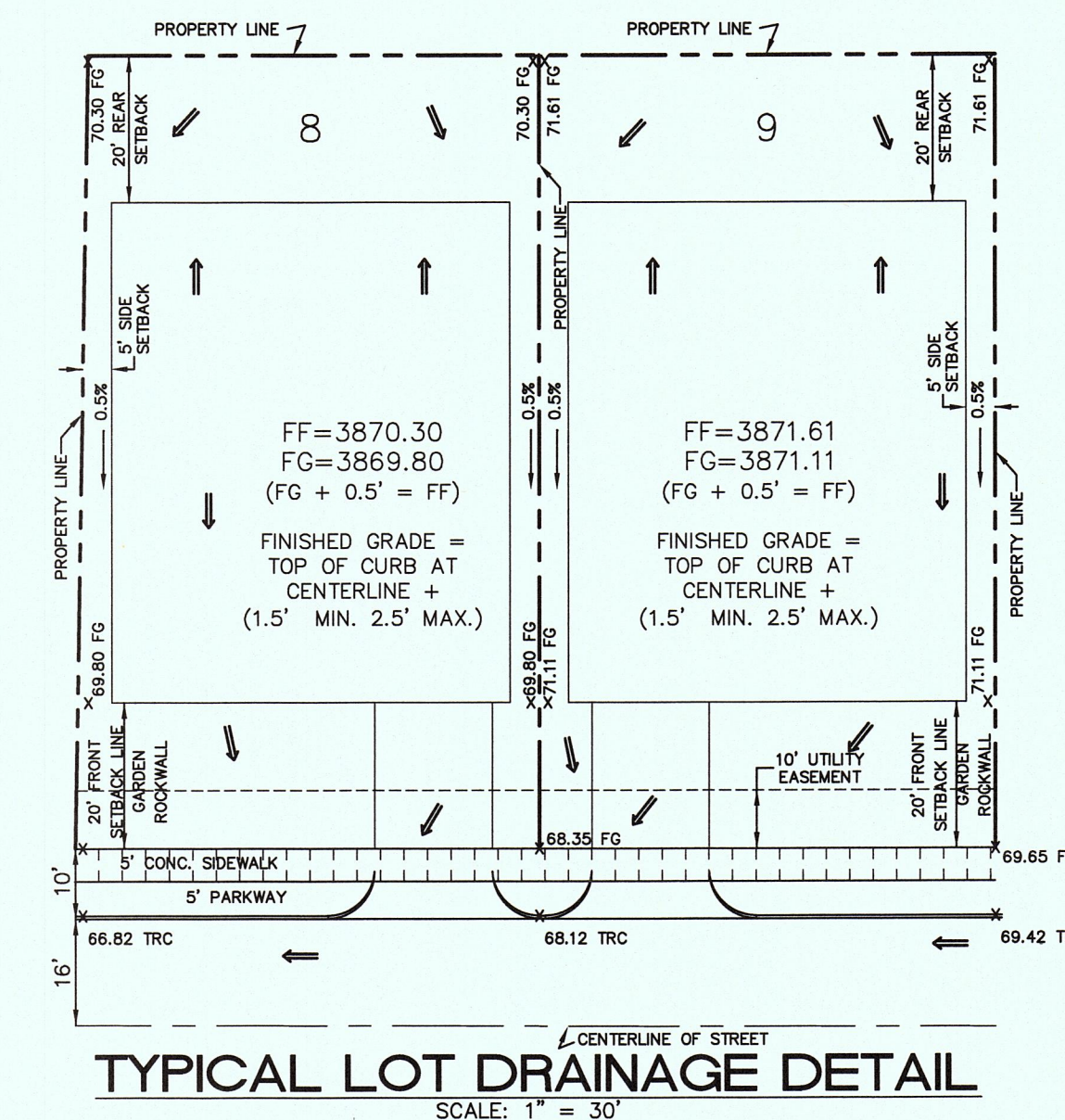
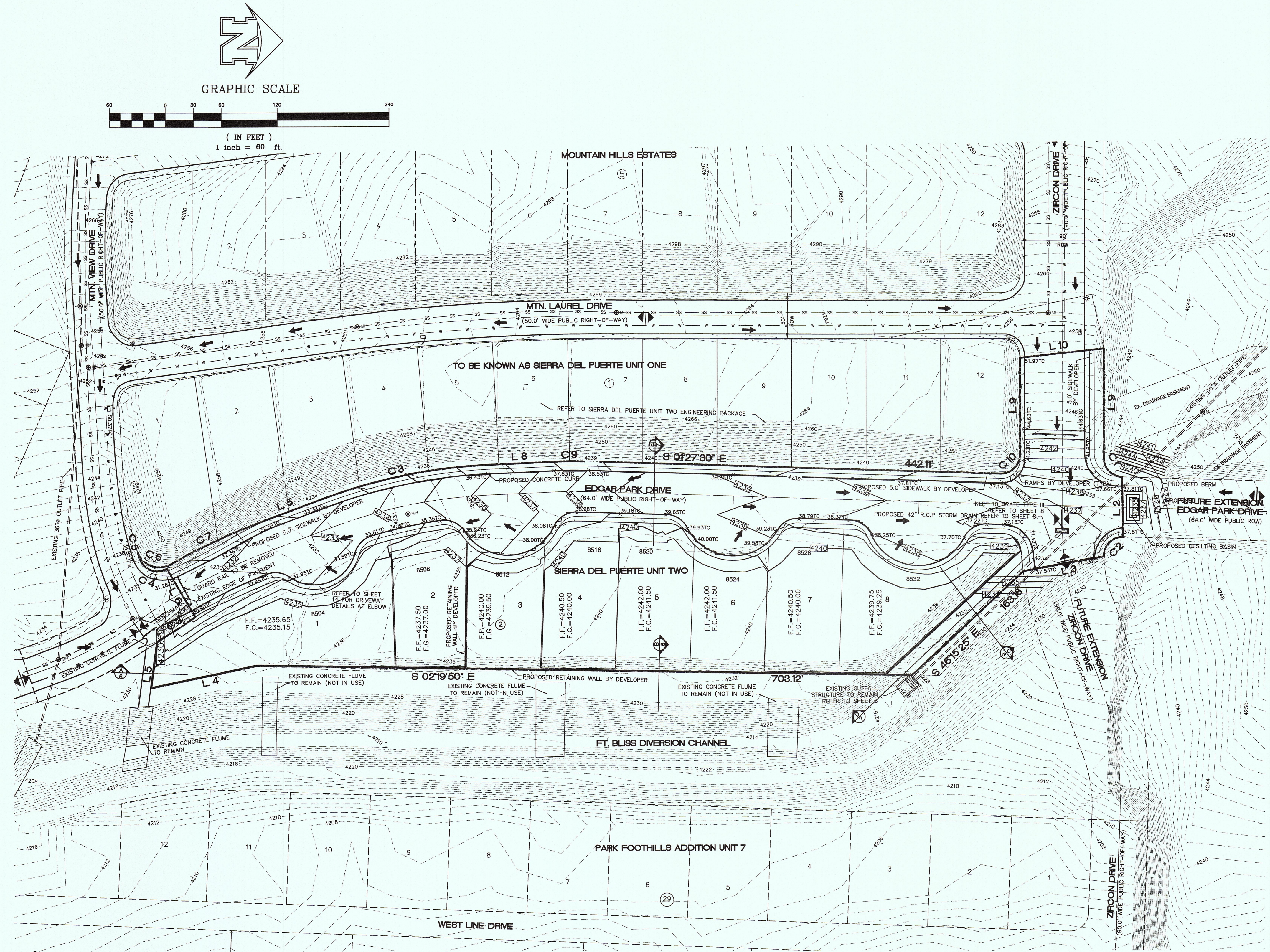
THIS SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY BRADLEY ROE, P.E. 31886 ON 05-01-2015. ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT.

SIERRA DEL PUERTE UNIT TWO

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WARNING! BEFORE YOU DIG
 TEXAS LAW REQUIRES TWO (2) WORKING DAYS NOTICE PRIOR TO ANY EXCAVATION
 CALL TEXAS EXCAVATION SAFETY SYSTEM ANYWHERE IN TEXAS 1-800-344-8377
 TEXAS EXCAVATION SAFETY SYSTEM DIG CONFIRMATION NUMBER (# _____) TO BE UPDATED EVERY 10 DAYS

UTILITY COMPANIES

- TEXAS GAS SERVICE (NATURAL GAS)**
4700 POLLARD STREET
EL PASO, TEXAS 79930
EMERGENCY 562-2003
- SOUTHWESTERN BELL TELEPHONE (TELEPHONE)**
11200 PELLICANO DRIVE
EL PASO, TEXAS 79935
828-5127
- EL PASO PUBLIC SERVICE BOARD (WATER, SEWER)**
1154 HAWKINS BOULEVARD
EL PASO, TEXAS 79925
MR. ALFONSO ORTIZ 594-5527
- TIME WARNER COMMUNICATIONS (CABLE)**
7010 AIRPORT ROAD
EL PASO, TEXAS 79906
775-7414
- EL PASO ELECTRIC COMPANY (ELECTRIC)**
501 WEST SAN ANTONIO STREET
EL PASO, TEXAS 79901
MR. PAT KEITH, 543-2917

LEGEND	
	PROPOSED DRAINAGE HIGH-POINT
	PROPOSED DRAINAGE LOW-POINT
	EXISTING DRAINAGE HIGH-POINT
	PROPOSED CITY MONUMENT
	EXISTING DRAINAGE FLOWS
	DENOTES EXISTING MANHOLE
	PROPOSED RETAINING WALL
	PROPOSED TOP OF CURB ELEVATION
	EXISTING CONTOURS
	PROPOSED FINISHED FLOOR ELEVATION
	DENOTES EXISTING POWER POLE
	DENOTES EXISTING WATER VALVE
	DENOTES EXISTING FIRE HYDRANT
	DENOTES EXISTING LIGHT STANDARD
	DENOTES EXISTING STOP SIGN

NOTES
Bearing Basis
 The Bearings shown hereon are based on the Texas State Plane Coordinate System, Texas Central Zone, NAD83 (93) HARN. The bearings shown are grid bearings. All distances shown are surface distances.
Vertical Datum
 Elevations and contours shown are based on the North American Vertical Datum of 1988 (N.A.V.D. 88)

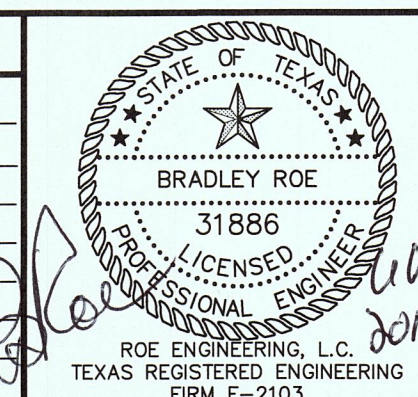
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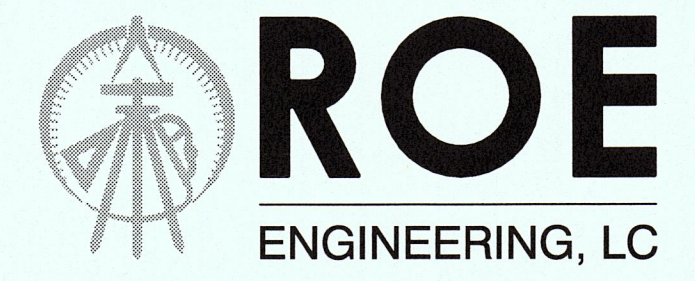
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DATE	REVISIONS	BY	PRIMARY BENCHMARK	SCALE
06/11/15	CITY COMMENTS	IR	EXISTING CITY MONUMENT LOCATED AT THE CENTERLINE INTERSECTION OF EDGAR PARK DRIVE AND MOUNTAIN VIEW DRIVE ELEVATION: 4229.73 (NAVD 88) ELEVATION: 4217.92 (CITY DATUM) ELEVATIONS BASED ON NAVD 88 DATUM	HOR: 1" = 60' VER: W.O. 022515-11A DATE: APRIL 2015 DESIGN BY: IR DRAWN BY: IR/LAJ CHKD. BY: H.P. APPD. BY: B.R.



SIERRA DEL PUERTE UNIT TWO

GRADING PLAN



601 N. Cotton St. Suite No.6 El Paso, Tx, 79902
 (915) 533-1418 - FAX: (915) 533-4972

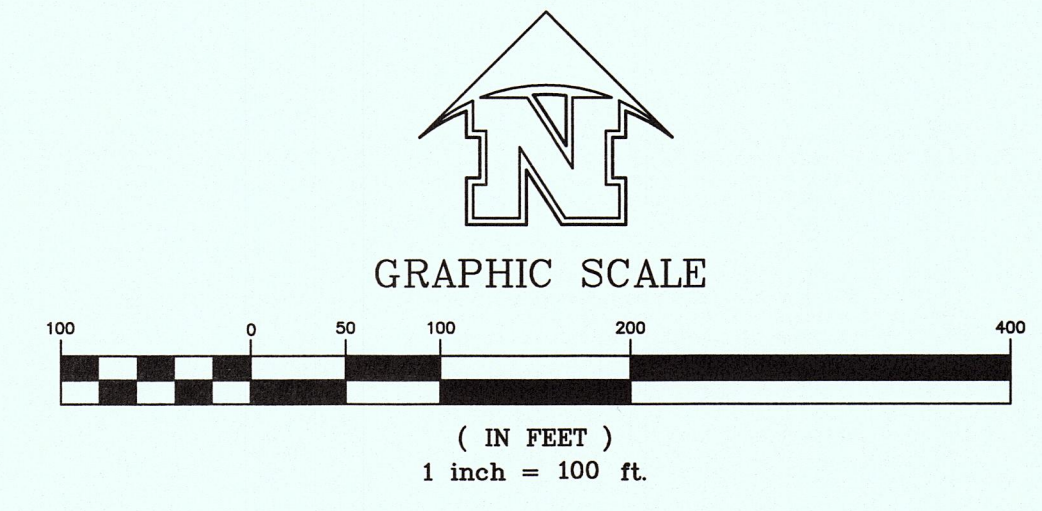
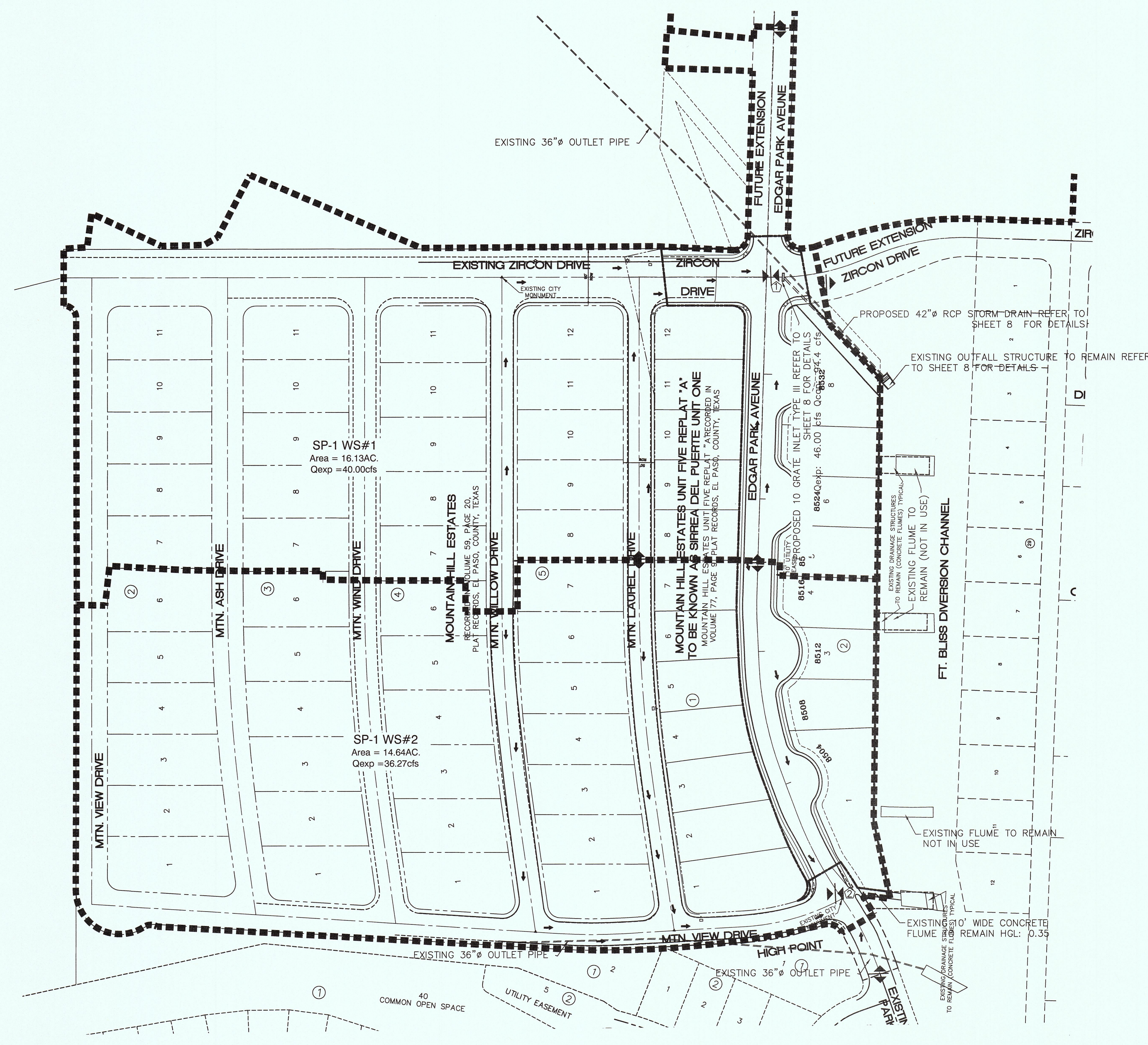
SHEET NO.

4

4 OF 23

Z:\Client\Yates_Veda_Properties\022515-11B_Siemn Del Puerte_Plan\022515-11B_Siemn Del Puerte_Plan.dwg 07/20/15 1:09PM

SIERRA DEL PUERTE UNIT TWO



DRAINAGE COMPUTATIONS
COMPUTATIONS BASED ON RATIONAL FORMULA $Q = C \cdot I \cdot A$ - 100 YEAR STORM FREQUENCY

WATERSHED AREA No.	TYPE	Tc MIN.	C COEFFICIENT	A AREA	I 100 INCHES/HOUR	Q 100 c.f.s. CU. FT. PER SECOND	15% ADDITIONAL SILT	Q 100 c.f.s. TOTAL	CONCENTRATION POINT
1	FT BLISS CHANNEL	3	0.60	16.13	4.13	40.00	6.00	46.00	①
2	FT BLISS CHANNEL	10.00	0.60	14.64	4.13	36.27	5.44	41.71	②

- LEGEND**
- EXISTING DRAINAGE FLOW
 - EXISTING WATERSHED BOUNDARY
 - ◆ EXISTING DRAINAGE HIGH-POINT
 - ▽ EXISTING DRAINAGE LOW-POINT



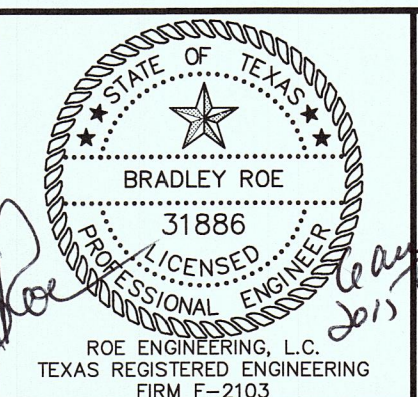
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SCALE
HOR: 1" = 100' VER:
W.O. 022515-11A
DATE: APRIL 2015
DESIGN BY: IR
DRAWN BY: IR/LAJ
CHKD. BY: H.P.
APPD. BY: B.R.



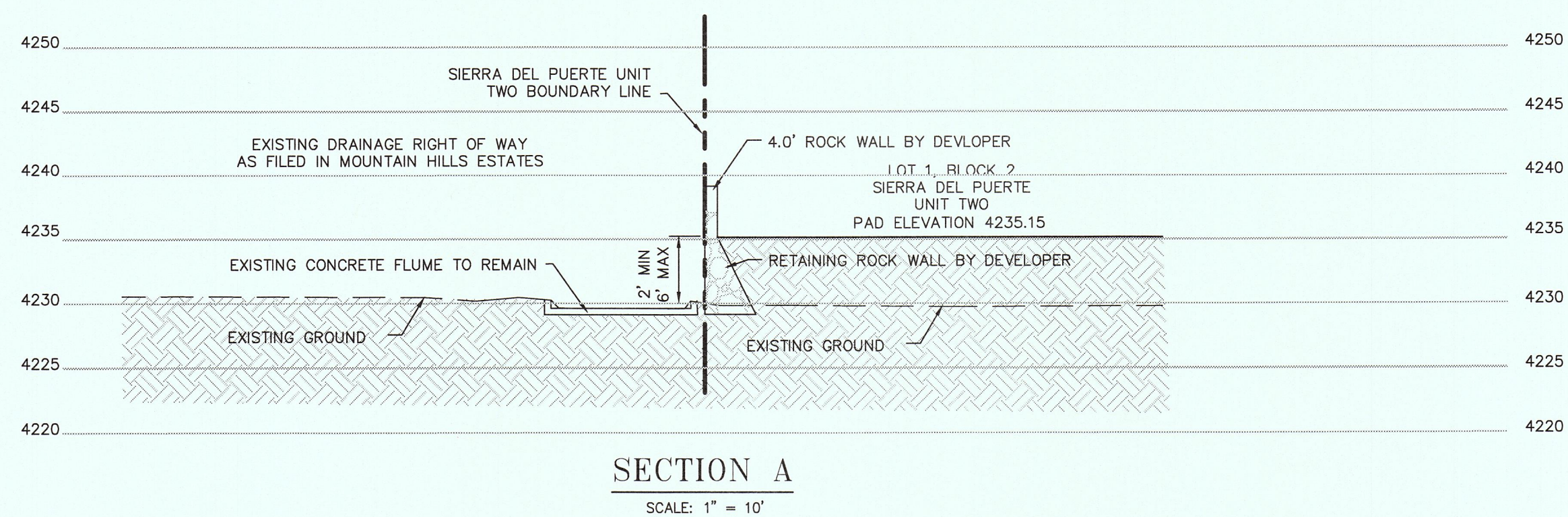
SIERRA DEL PUERTE UNIT TWO

DRAINAGE PLAN

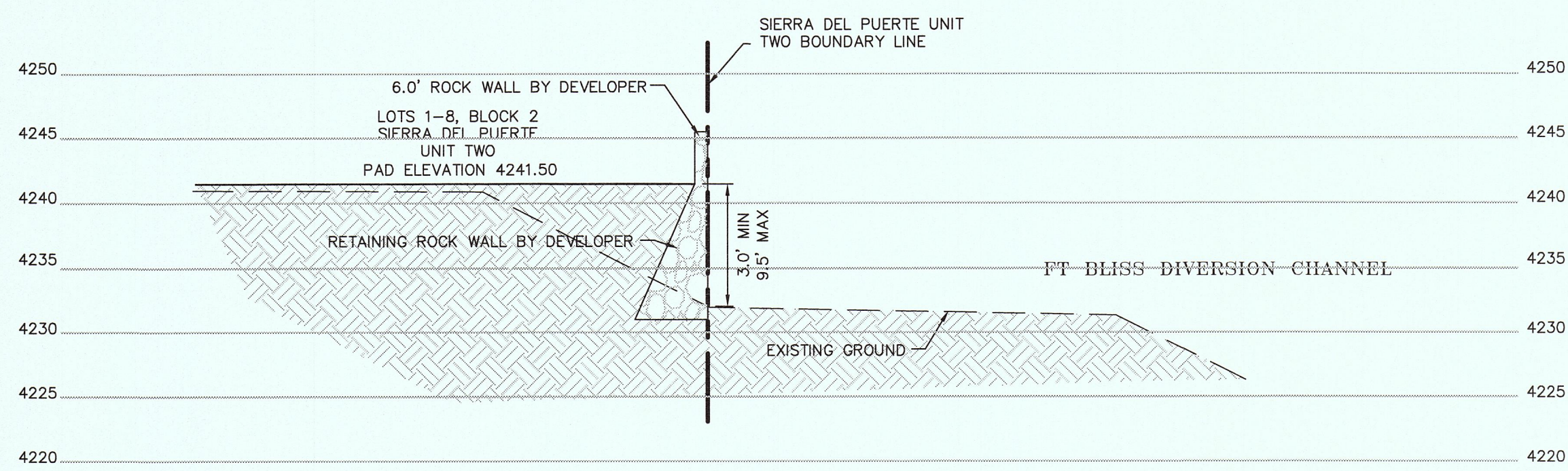
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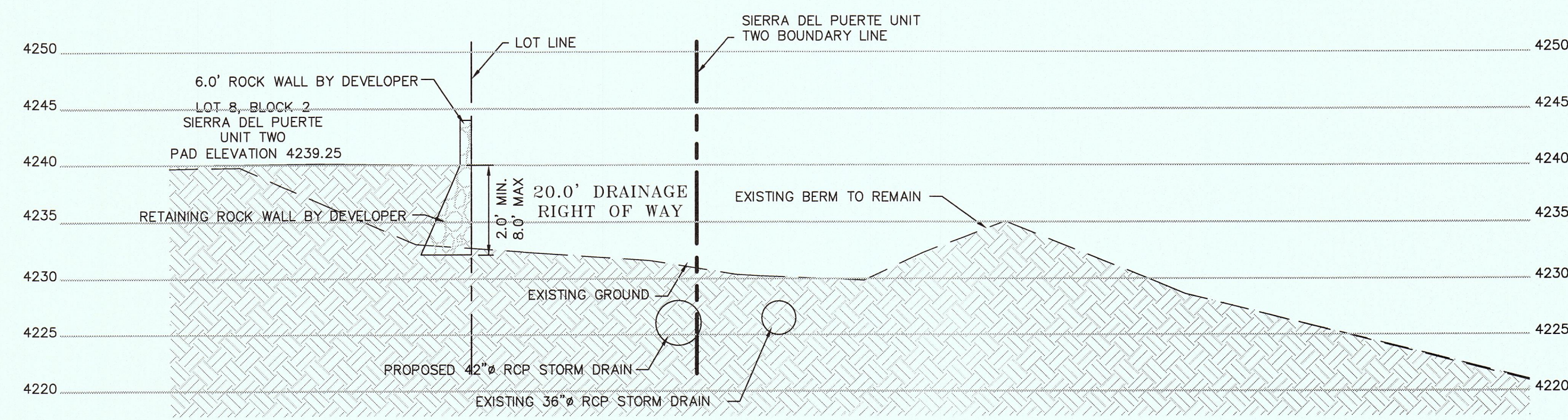
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SECTION A
SCALE: 1" = 10'



SECTION B
SCALE: 1" = 10'



SECTION C
SCALE: 1" = 10'

NOTE: REFER TO SHEET 13 FOR ROCK WALL DETAILS



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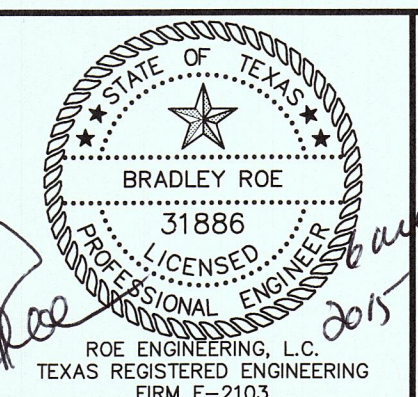
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SCALE
HOR: 1" = 10' VER:
W.O. 022515-11A
DATE: APRIL 2015
DESIGN BY: IR
DRAWN BY: IR/LAJ
CHKD. BY: H.P.
APPD. BY: B.R.



SIERRA DEL PUERTE UNIT TWO

SECTIONS

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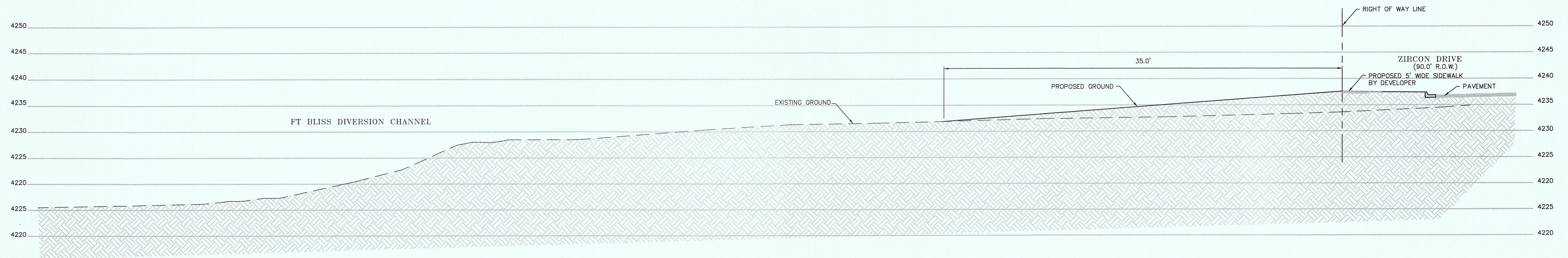
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SHEET NO.

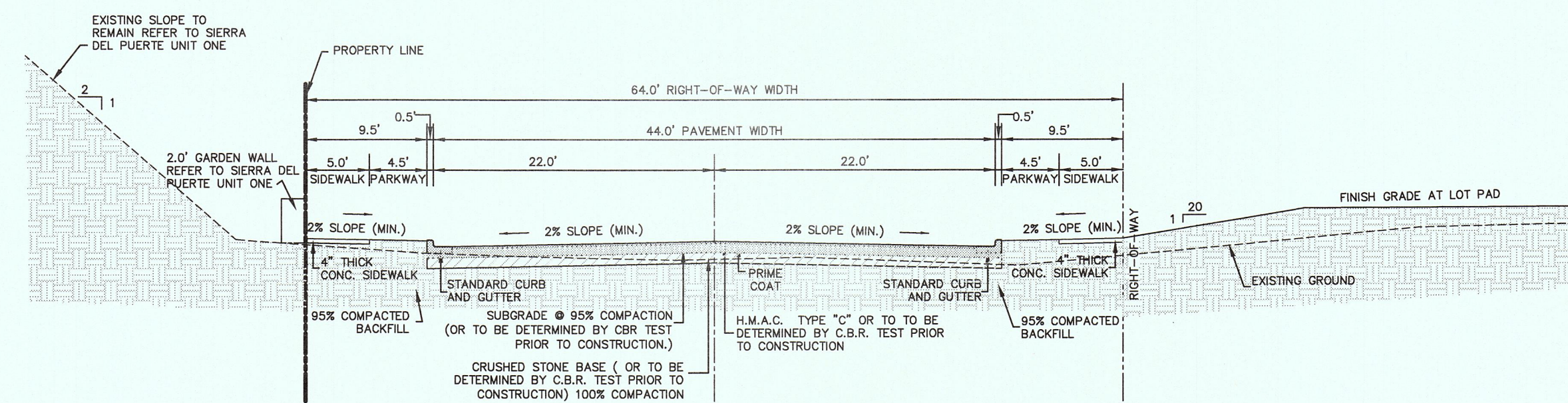
6

6 OF 23

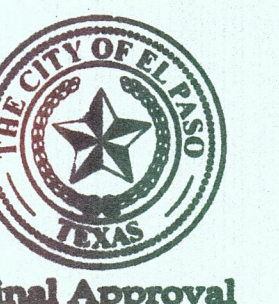
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SECTION D
SCALE: 1" = 10'



SECTION E
SCALE 1" = 10'



Final Approval

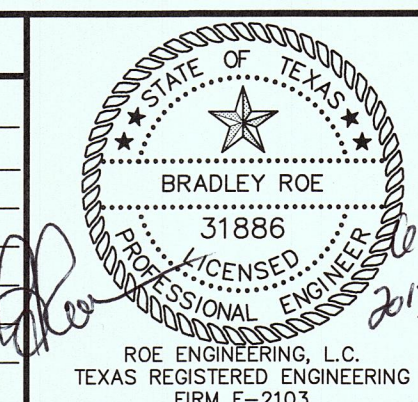
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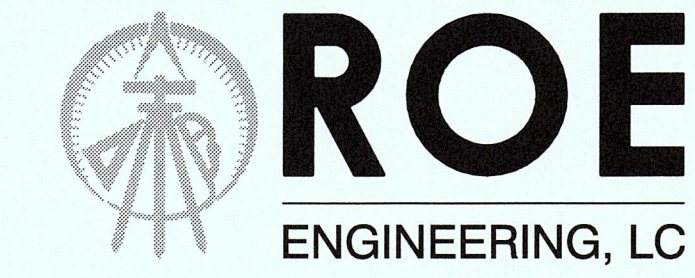
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SIERRA DEL PUERTE UNIT TWO

SECTIONS

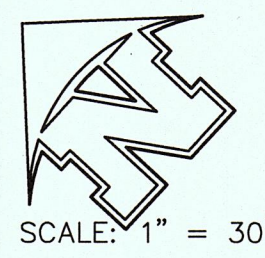


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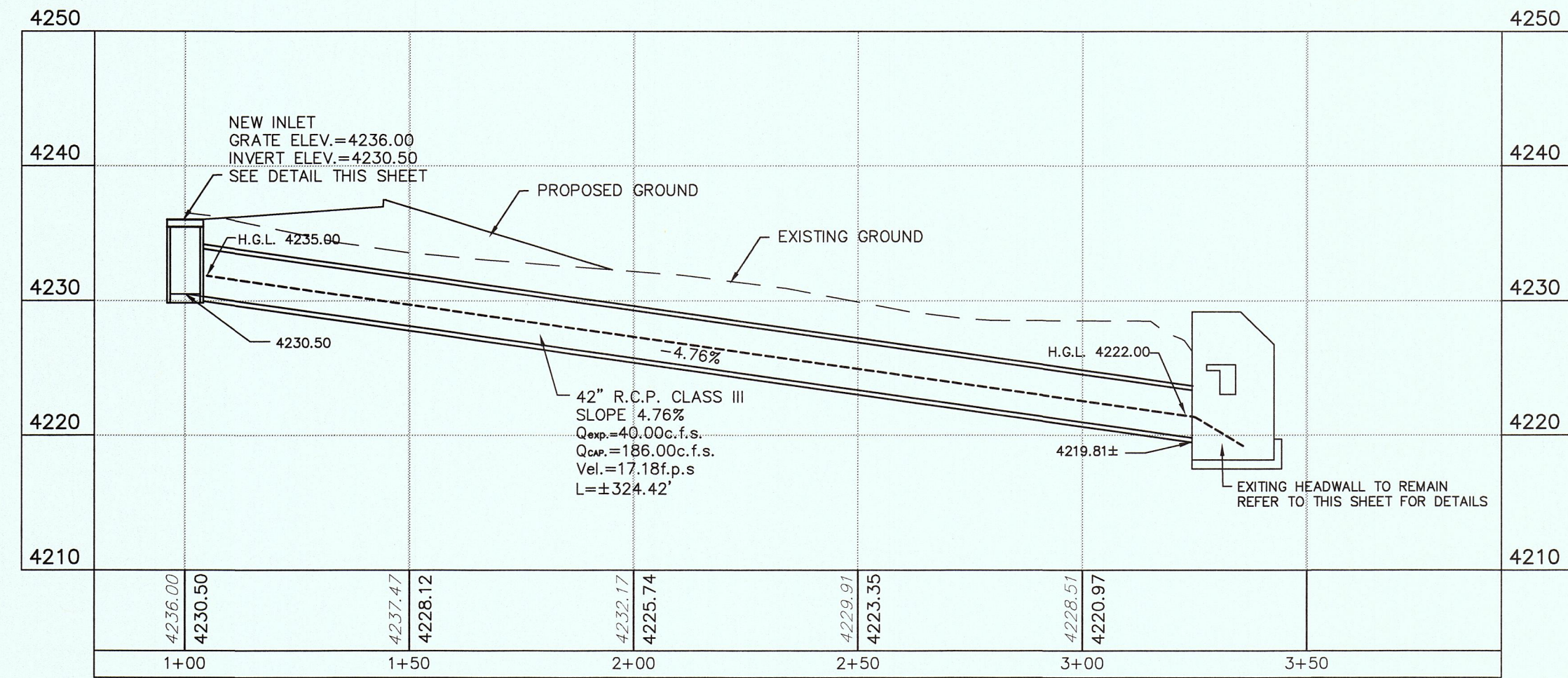
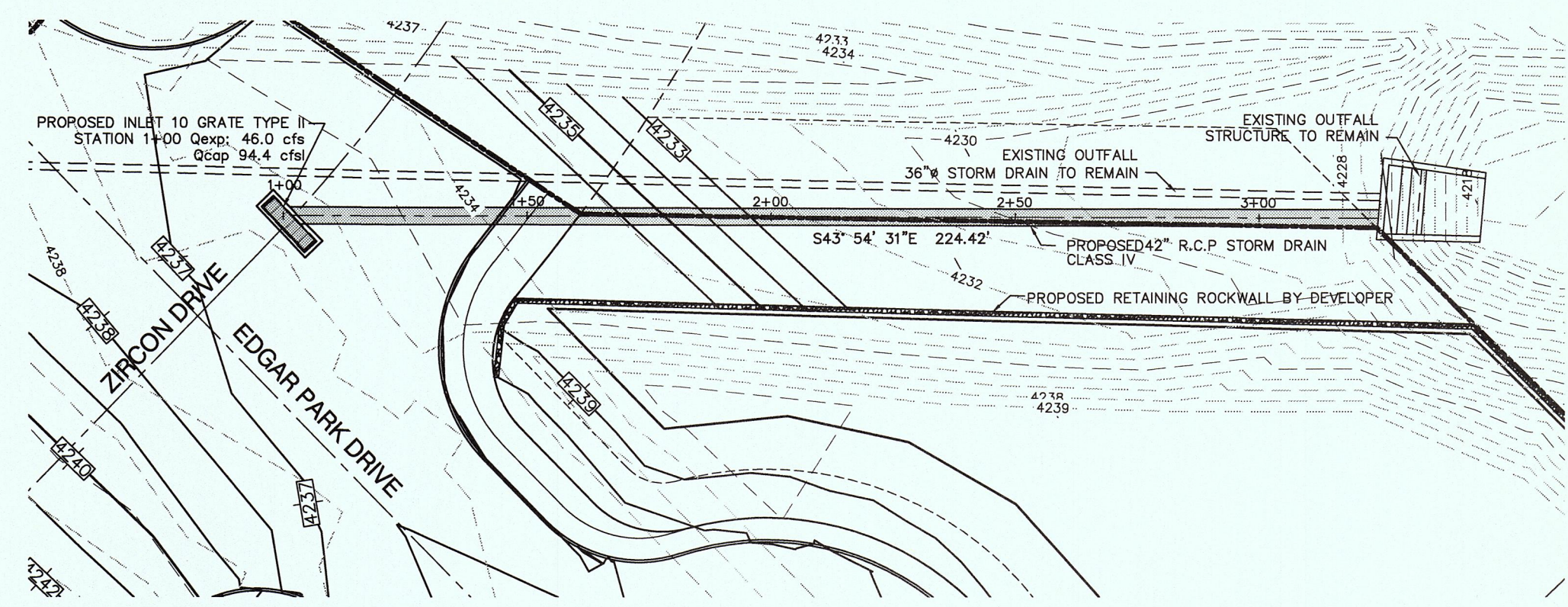
SHEET NO.

7
7 OF 23

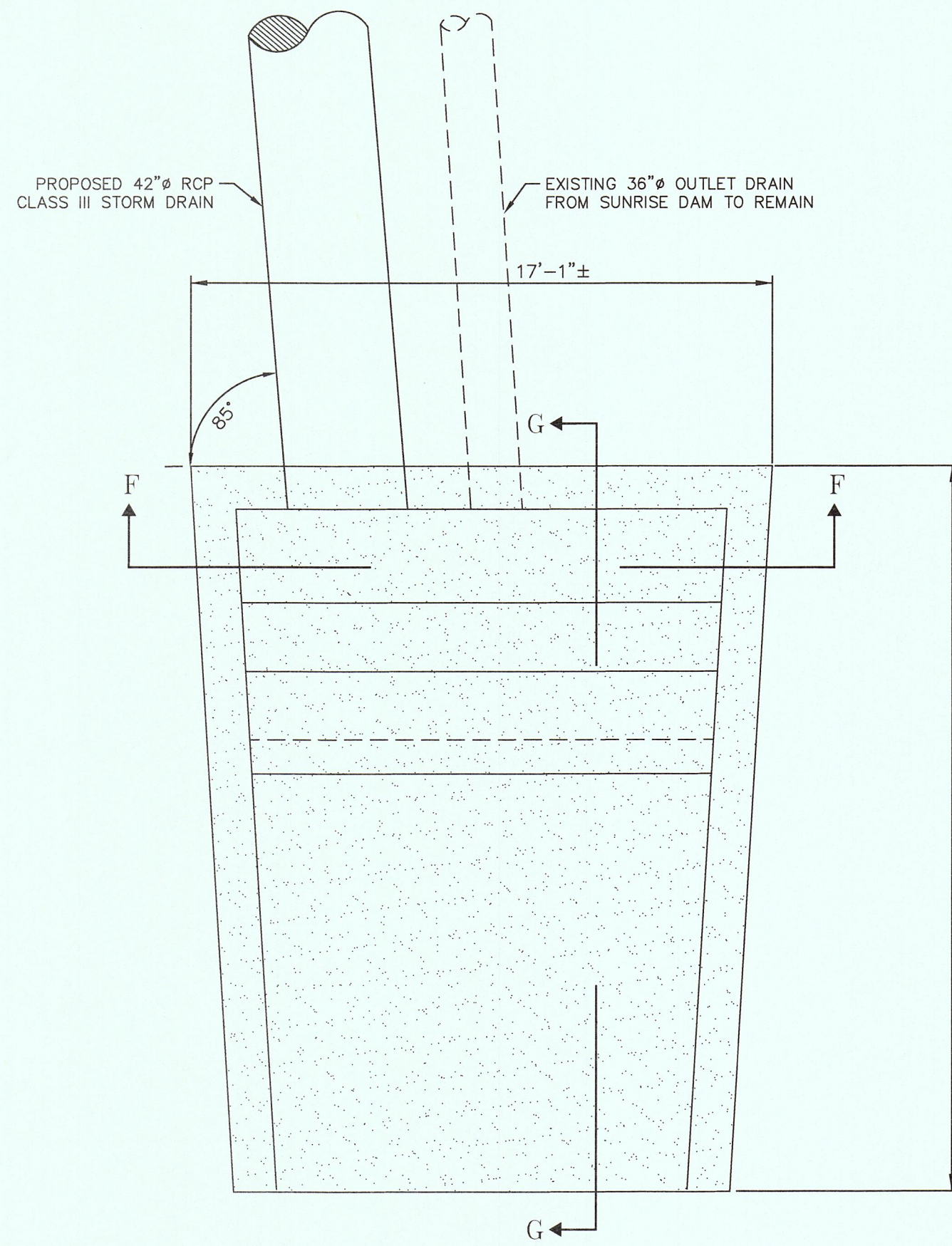
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SCALE: 1" = 30'

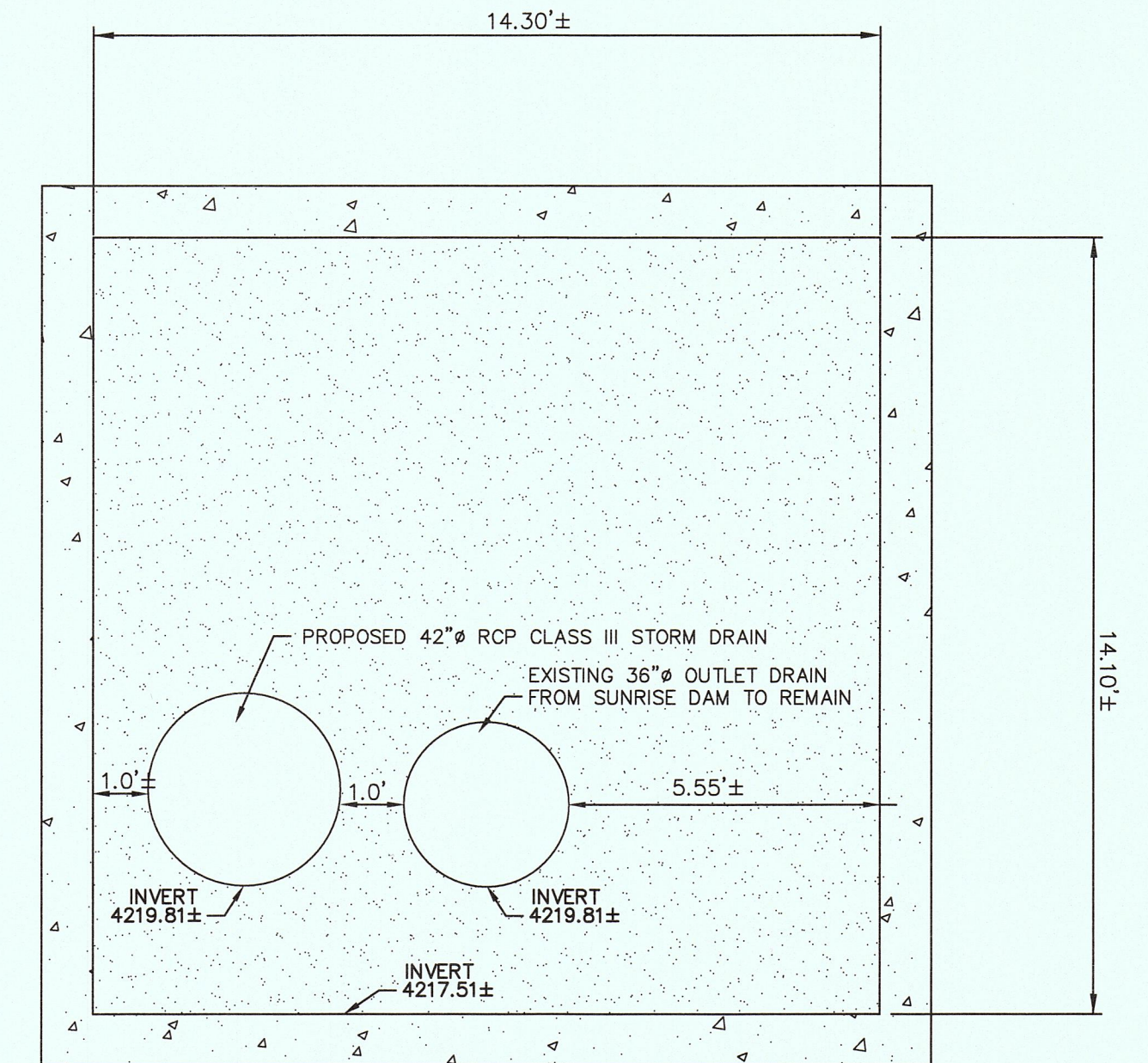


SYSTEM PLAN AND PROFILE



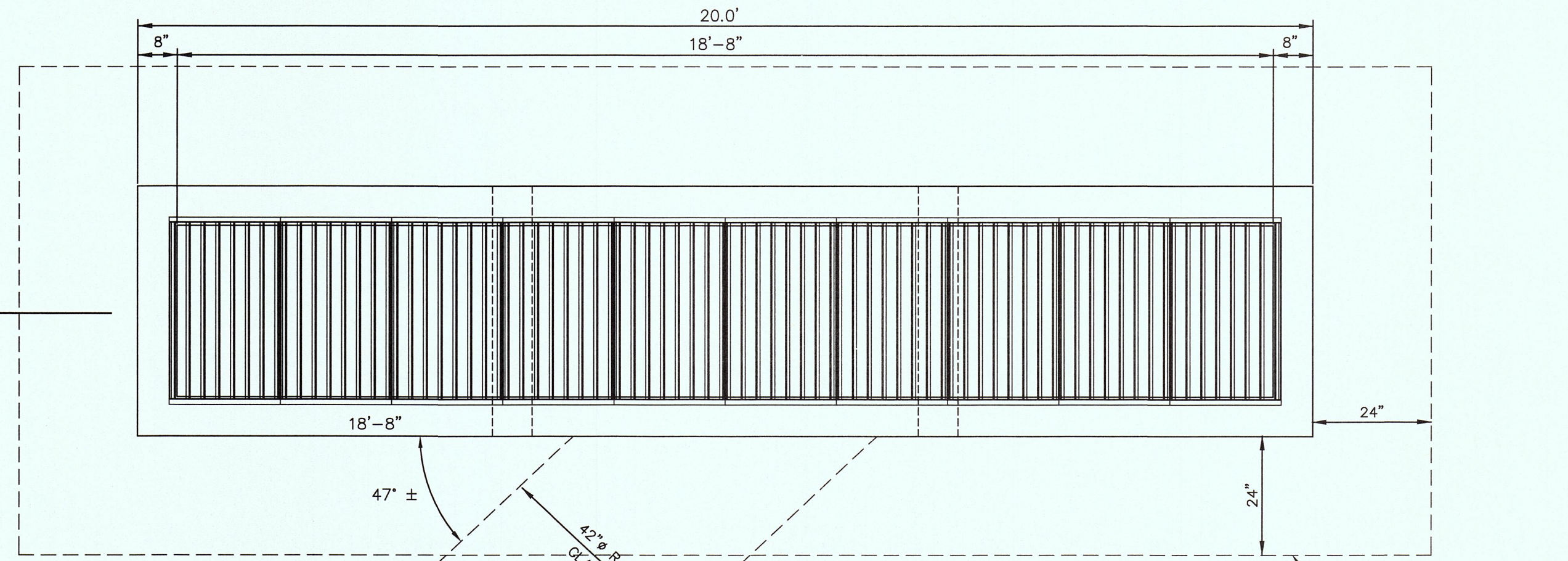
EXISTING CONCRETE HEADWALL

SCALE: 1" = 4'



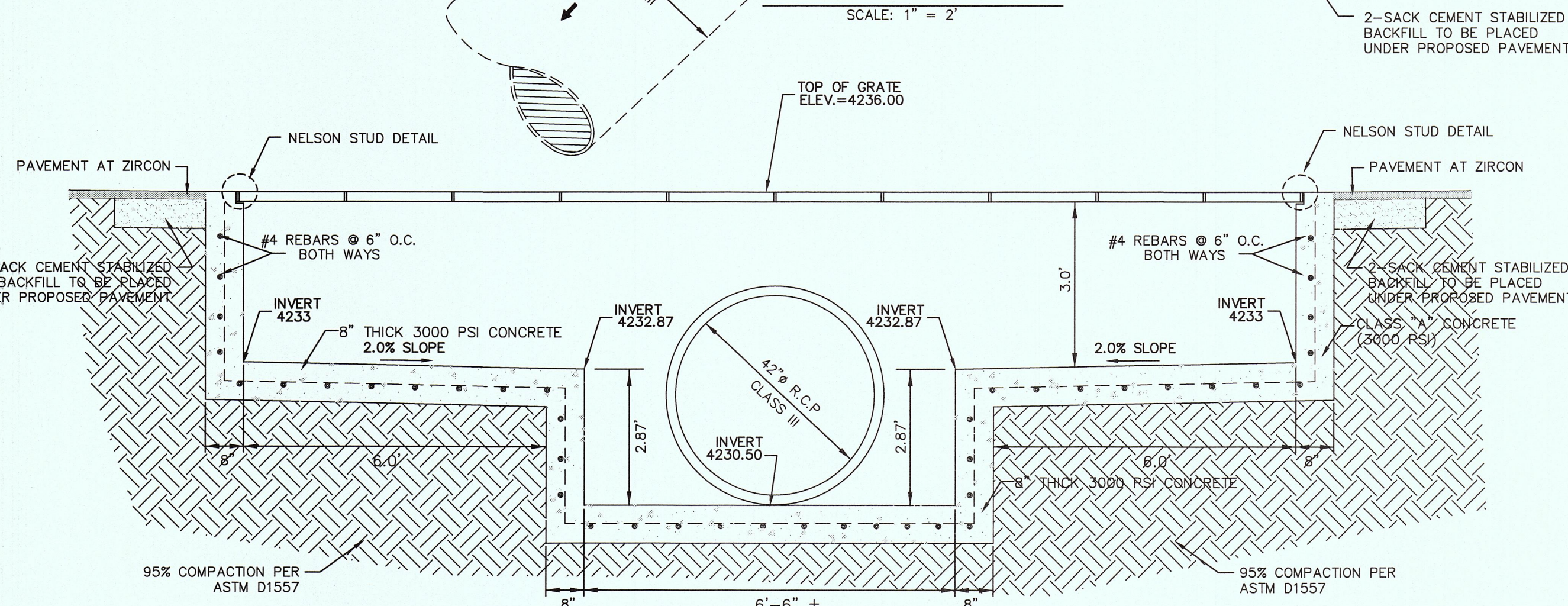
EXISTING CONCRETE HEADWALL SECTION F-F

SCALE: 1" = 3'



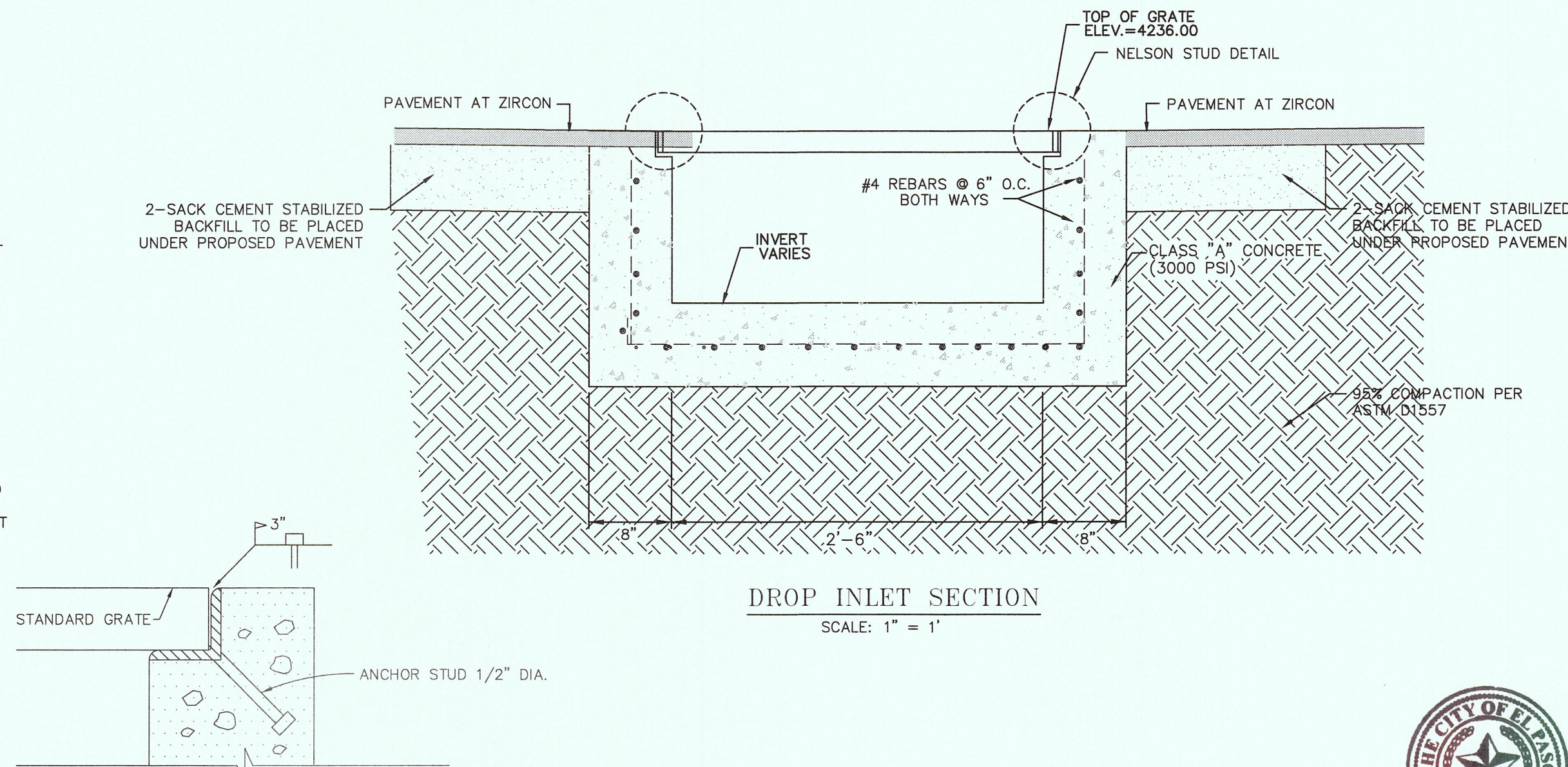
DROP INLET PLAN VIEW

SCALE: 1" = 2'



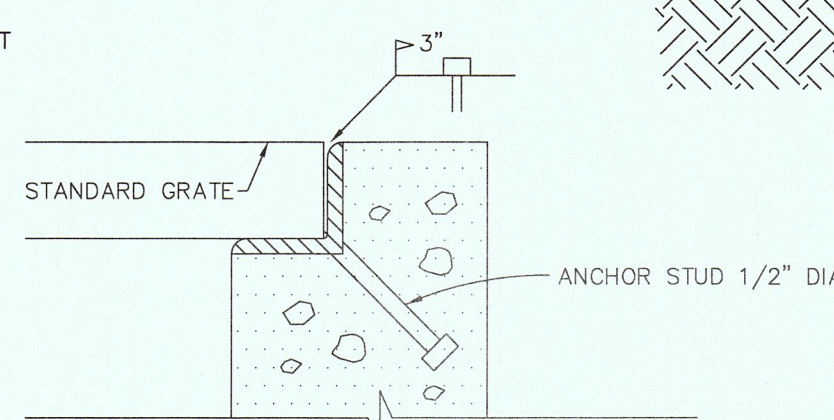
DROP INLET SECTION

SCALE: 1" = 2'



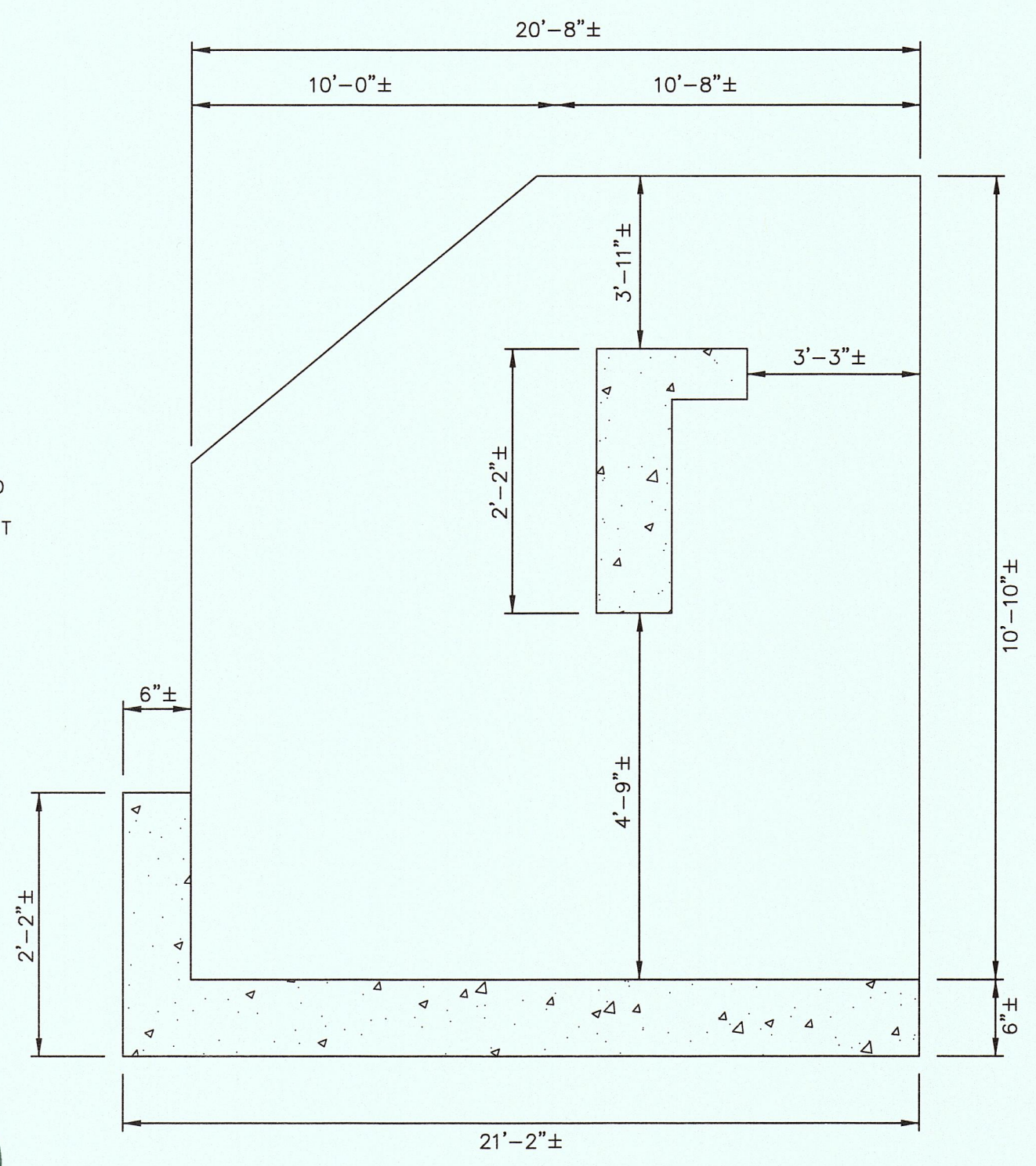
DROP INLET SECTION

SCALE: 1" = 1'



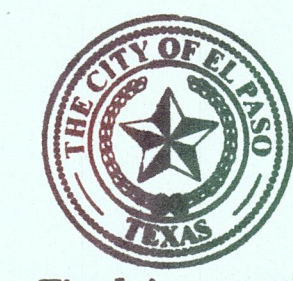
NELSON STUD DETAIL

SCALE: 1" = 6"



EXISTING CONCRETE HEADWALL SECTION G-G

SCALE: 1" = 3'

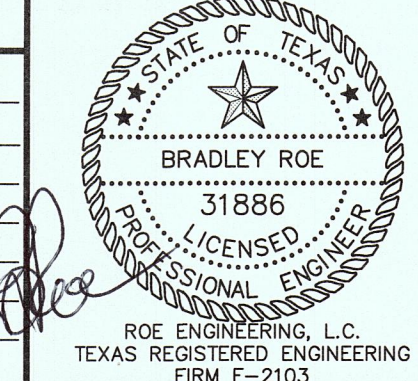


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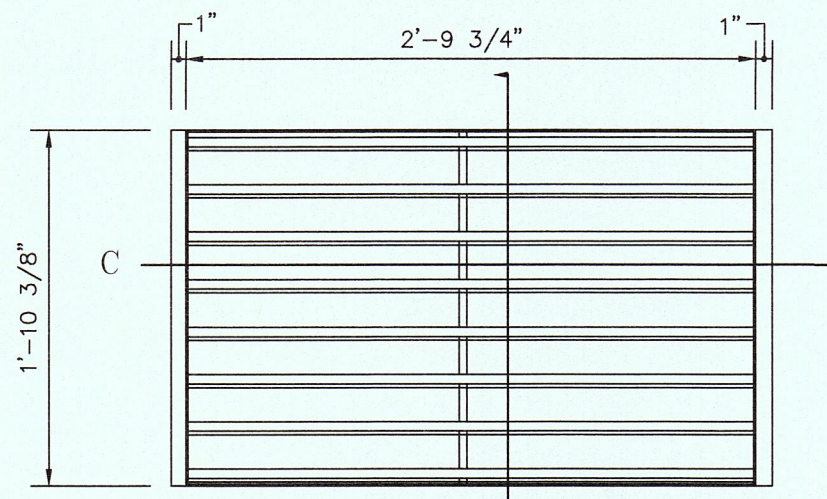
DATE	REVISIONS	BY	PRIMARY BENCHMARK	SCALE
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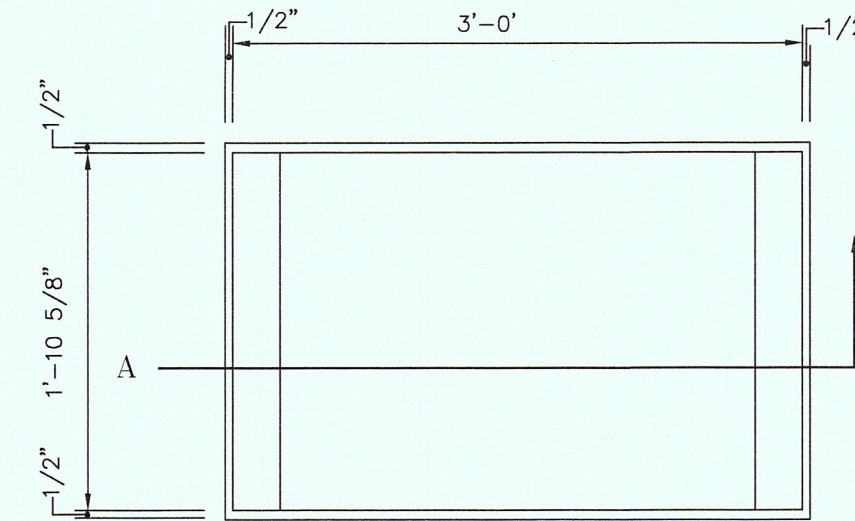
SIERRA DEL PUERTE UNIT TWO
DRAINAGE DETAILS

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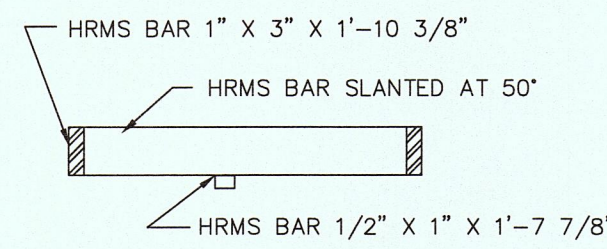
SHEET NO.
8
8 OF 23



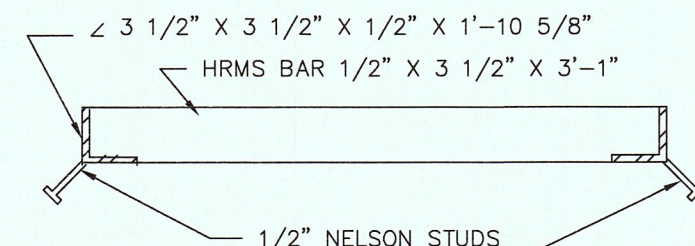
GRATE PLAN VIEW
SCALE: 1" = 1'-0"



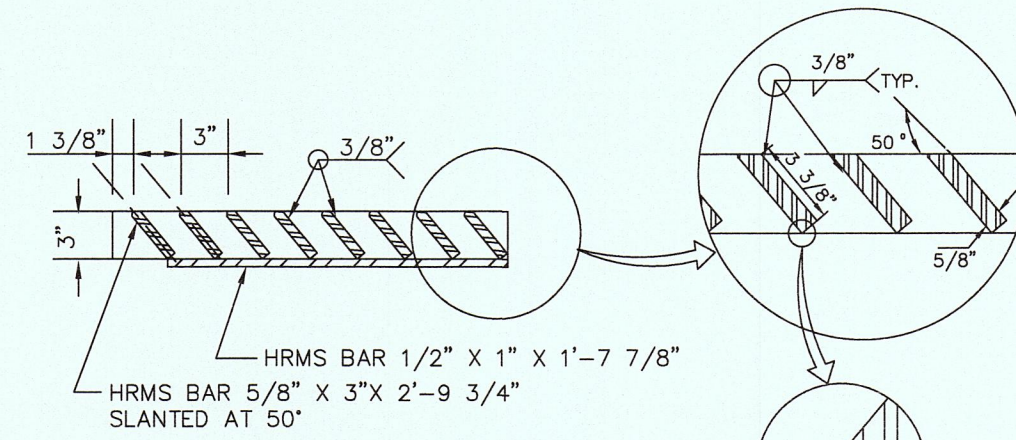
FRAME PLAN VIEW
SCALE: 1" = 1'-0"



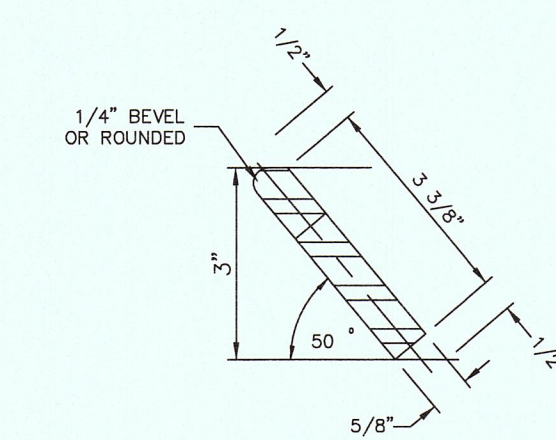
SECTION C
SCALE: 1" = 1'-0"



SECTION A
SCALE: 1" = 1'-0"

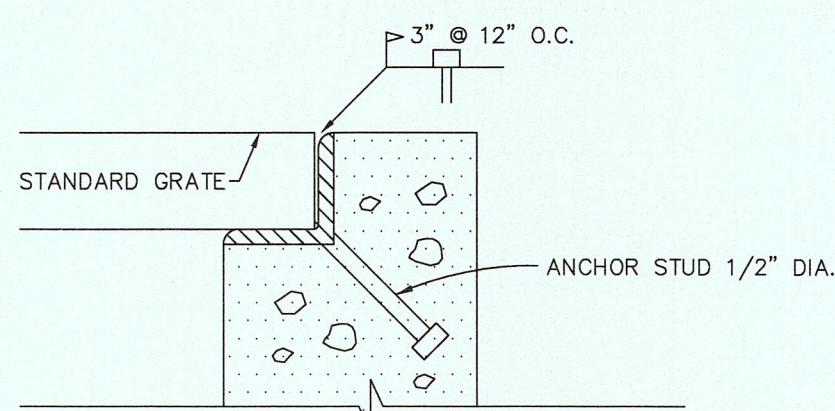


SECTION B
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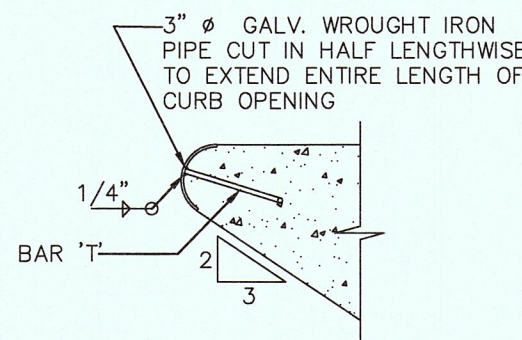


SLANTED BAR DETAIL
SCALE: 1" = 3"

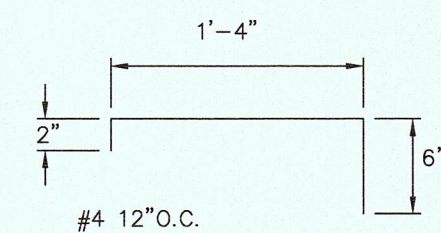
NOTE:
ROUND-OFF CORNERS OF
EACH SLANTED BAR AS SHOWN



NELSON STUD DETAIL
SCALE: 1" = 6"



METAL NOSE DETAIL
SCALE 1" = 1'-0"



BAR "T"
SCALE 1" = 1'-0"

DROP INLET DRAINAGE CALCULATIONS GRATE	
$Q_{cap} = 0.7 \times \text{AREA} \times (2 \times 32.2 \times H)^{1/2}$	
$Q_{cap} = 0.7 \times 3.86 \times (2 \times 32.2 \times 0.42)^{1/2}$	
$Q_{cap} = 14.00 \text{ cfs} \times 0.67 \text{ (CLOGGING FACTOR)}$	
$Q_{cap} = 9.33 \text{ c.f.s.}$	

DROP INLET NOTES

1. WELDED STEEL OR CAST GRATES AS DETAILED ARE ALL ACCEPTABLE GRATES. MIXING OF ALTERNATE TYPES OF GRATES ON THE SAME PROJECT WILL BE PERMITTED WITH THE APPROVAL OF THE CITY ENGINEER.
2. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE CURRENT STANDARD SPECIFICATIONS.
3. SHARP EDGES RESULTING FROM FABRICATION SHALL BE DULLED BY ANY ACCEPTABLE METHOD FOR SAFETY AND HANDLING.
4. GRATES SHALL BE INSTALLED IN FRAME WITH FLOW ARROW POINTING DOWNSTREAM OR TOWARD THE LOW POINT IN A JUMP.
5. WELDED GRATES SHALL BE STRUCTURAL STEEL CONFORMING TO THE REQUIREMENTS OF AASHTO M-183 OR OF CORROSION RESISTANT STRUCTURAL STEEL CONFORMING TO THE REQUIREMENTS OF AASHTO M-161 OR M-222 OR BE MADE OF OTHER APPROVED STEELS OF EQUAL QUALITY. MIXING GRATES OF STEEL ON THE SAME GRATE WILL NOT BE PERMITTED.
6. GRATES MADE OF M-183 STEEL SHALL BE GALVANIZED IN ACCORDANCE WITH AASHTO M-111 SPECIFICATIONS OR SHALL BE PAINTED WITH INORGANIC ZINC PAINTS, MEETING THE REQUIREMENTS OF CURRENT STANDARD SPECIFICATIONS.
7. ALL WELDS SHALL BE A MINIMUM OF 1/4" FILLET AND SHALL CONFORM TO THE SPECIFICATIONS FOR HIGHWAY CONSTRUCTION AND TO THE A.W.S. STRUCTURAL WELDING CODE. ELECTRODES SHALL BE COMPATIBLE TO THE DIFFERENT GRADES OF STEEL THAT COMPRISE THE GRATE MEMBERS.
8. CAST GRATES SHALL BE CAST STEEL CONFORMING TO THE REQUIREMENTS OF AASHTO M-103, GRADE 65-35 OR OF DUCTILE IRON CONFORMING TO THE REQUIREMENTS OF ASTM A-536, SPECIAL GRADE 60-45, OR OF GRAY IRON CONFORMING TO THE REQUIREMENTS OF AASHTO M-105, CLASS 35B OR ASTM A-48 CLASS 35B. THE SPECIFICATIONS OF GENERAL APPLICATION FOR CAST STEEL GRATES SHALL BE AASHTO M-103 SCOPE 1.2.1, GRADE N-1.
9. FERROUS CASTINGS SHALL BE OF UNIFORM QUALITY, FREE OF BLOWHOLES, POROSITY, HARD SPOTS, SHRINKAGE DISTORTION OR OTHER DEFECTS. THEY SHALL BE SMOOTH AND WELL CLEANED BY SHOT BLASTING OR OTHER APPROVED CLEANING METHOD. AFTER CLEANING THEY SHALL BE COATED WITH ASPHALT BASE PAINT RESULTING IN A SMOOTH COATING, TOUGH AND TENACIOUS WHEN COLD, NOT TACKY NOR BRITTLE.
10. ALL CASTINGS SHALL BE MANUFACTURED TRUE TO PATTERN. COMPONENT PARTS SHALL FIT TOGETHER IN A SATISFACTORY MANNER.
- *11. ALL CONCRETE TO BE 3000 P.S.I. CHAMFER ALL EXPOSED EDGES 3/4". ALL DIMENSIONS RELATING TO REINFORCING STEEL ARE TO CENTER OF BARS.
12. MINIMUM CONCRETE COVER SHALL BE 1 1/2" FOR STEEL REINFORCING.
13. EXPANSION MATERIAL TO BE 1/2" BITUMINOUS FIBER AND TO BE PLACED WHERE PROPOSED CONCRETE COMES IN CONTACT WITH ANY EXISTING OR PROPOSED CONCRETE OR MASONRY STRUCTURE.
14. STRUCTURAL STEEL SHALL BE SHOP PAINTED IN ACCORDANCE WITH T.H.D. ITEM 446 "PAINT AND PAINTING".
15. SURFACE OF ALL EXPOSED CONCRETE SHALL CONFORM IN SLOPE AND GRADE TO EXISTING OR PROPOSED CURB AND WALK ADJACENT TO INLETS.
16. GRATE WILL BE DEPRESSED 1" BELOW PROPOSED OR EXISTING GRADE.
17. ALL REINFORCING BARS TO BE # 4 BARS AT 6" O.C. GRADE 60. BEND BARS AROUND PIPE OPENINGS.
18. INLETS TO BE DESIGNATED IN PLANS BY NUMBER OF GRATES REQUIRED.
19. LOCATION OF SEWER PIPES SHOWN ELSEWHERE IN PLANS.
- 2 - 1/2" DIA. X 4" LONG CONG. ANCHOR STUDS REQUIRED FOR EACH SIDE OF FRAME, WHERE RESTING ON CONCRETE, USE NELSON STUDS OR EQUAL.
- *21. THE GRATES OF ALL INLETS WITHIN THE STREET PAVEMENT MUST BE CONSTRUCTED WITH THE GRATE BARS PERPENDICULAR TO THE CURB.
22. EXCAVATION WHICH WILL EXCEED FIVE (5) FEET IN DEPTH SHALL PROVIDE FOR TRENCH SAFETY AS PER OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) GUIDELINES.

DRAINAGE STRUCTURE NOTES

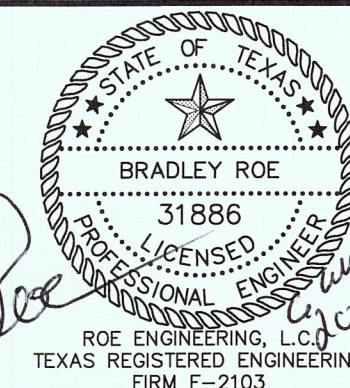
1. CONCRETE FOR ALL DRAINAGE STRUCTURES SHALL BE CLASS-A CONCRETE, AND SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 3000 POUNDS PER SQUARE INCH.
2. SUBGRADE UNDER ALL DRAINAGE STRUCTURES SHALL BE COMPACTED TO 95% OF MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D-1557.
3. ALL CONSTRUCTION AND MATERIAL SHALL BE IN ACCORDANCE WITH THE CURRENT CITY OF EL PASO STANDARD SPECIFICATIONS.
4. SHARP EDGES RESULTING FROM FABRICATION SHALL BE DULLED BY ANY ACCEPTABLE METHOD FOR SAFETY IN HANDLING.
5. ALL WELDS SHALL CONFORM TO THE SPECIFICATIONS FOR HIGHWAY CONSTRUCTION AND TO THE A.W.S. STRUCTURAL WELDING CODE. ELECTRODES SHALL BE COMPATIBLE TO THE DIFFERENT GRADES OF STEEL THAT COMPRISE THE GRATE MEMBERS.
6. ALL STEEL USED SHALL BE AS PER ASTM A153 CLASS A.

TRENCH SHORING - MINIMUM REQUIREMENTS

TRENCH JACKS MAY BE USED IN LIEU OF OR IN COMBINATION WITH CROSS BRACES. SHORING IS NOT REQUIRED IN SOLID ROCK, HARD SHALE, OR HARD SLAG WHERE DESIRABLE, STEEL SHEET PILING AND BRACING OF EQUAL STRENGTH MAY BE SUBSTITUTED FOR WOOD.

DEPTH OF TRENCH	KIND OR CONDITION OF EARTH	SIZE AND SPACING OF MEMBERS										
		UPRIGHTS		STRINGERS		CROSS BRACES		MAXIMUM SPACING		VERTICAL	HORIZONTAL	
		MINIMUM DIMENSION	MAXIMUM SPACING	MINIMUM DIMENSION	MAXIMUM SPACING	MINIMUM WIDTH OF TRENCH	MAXIMUM SPACING	FEET	FEET			
5 TO 10 FEET	HARD, COMPACT	3 x 4 or 2 x 6	6	4 x 6	4	2 x 6	4 x 4	4 x 6	6 x 6	6 x 8	4	6
	LIKELY TO CRACK	3 x 4 or 2 x 6	3	4 x 6	4	2 x 6	4 x 4	4 x 6	6 x 6	6 x 8	4	6
	SOFT, SANDY, OR FILLED	3 x 4 or 2 x 6	CLOSE SHEETING	4 x 6	4	4 x 4	4 x 6	6 x 6	6 x 8	8 x 8	4	6
	HYDROSTATIC PRESSURE	3 x 4 or 2 x 6	CLOSE SHEETING	6 x 8	4	4 x 4	4 x 6	6 x 6	6 x 8	8 x 8	4	6
10 TO 15 FEET	HARD	3 x 4 or 2 x 6	4	4 x 6	4	4 x 4	4 x 6	6 x 6	6 x 8	8 x 8	4	6
	LIKELY TO CRACK	3 x 4 or 2 x 6	2	4 x 6	4	4 x 4	4 x 6	6 x 6	6 x 8	8 x 8	4	6
	SOFT, SANDY, OR FILLED	3 x 4 or 2 x 6	CLOSE SHEETING	4 x 6	4	4 x 6	6 x 6	6 x 8	8 x 10	4	6	6
	HYDROSTATIC PRESSURE	3 x 6	CLOSE SHEETING	8 x 10	4	4 x 6	6 x 6	6 x 8	8 x 10	4	6	6

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HOR: _____ VER: _____
W.O. 022515-11A
DATE: APRIL 2015
DESIGN BY: IR
DRAWN BY: IR/LAJ
CHKD. BY: H.P.
APPD. BY: B.R.

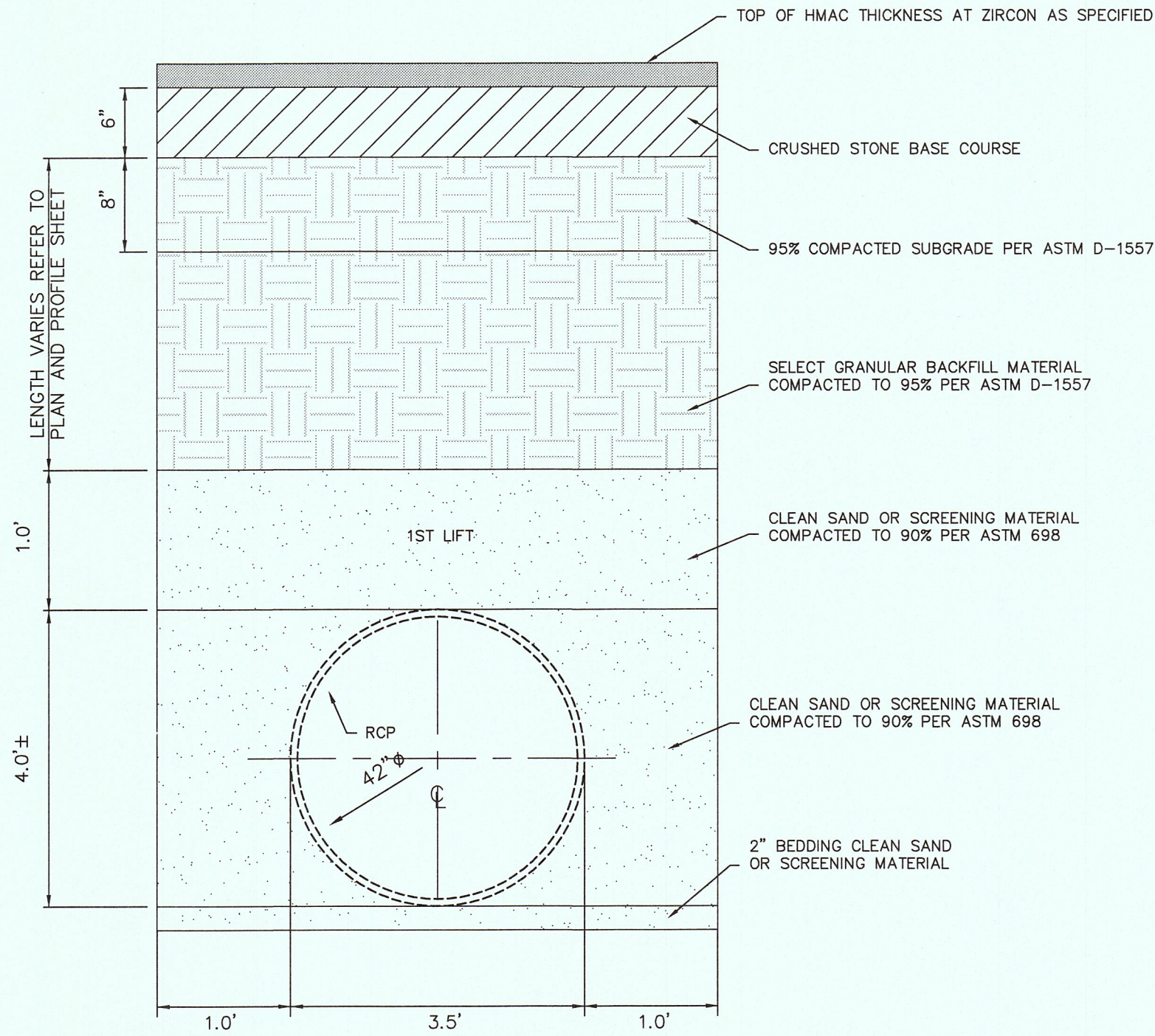
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SHEET NO. **9**
9 OF 23

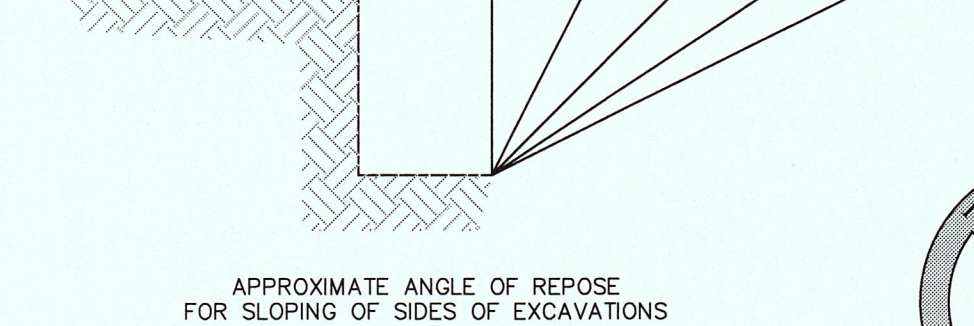
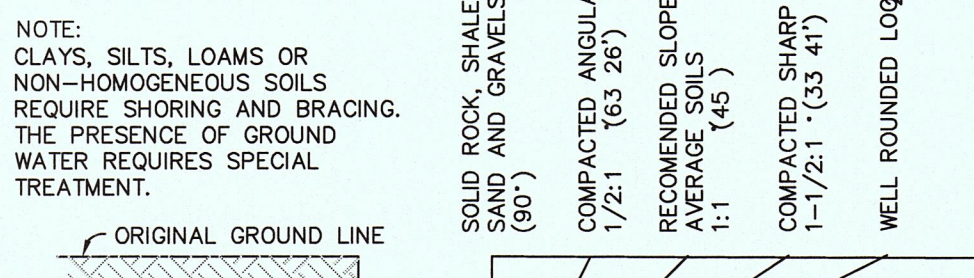
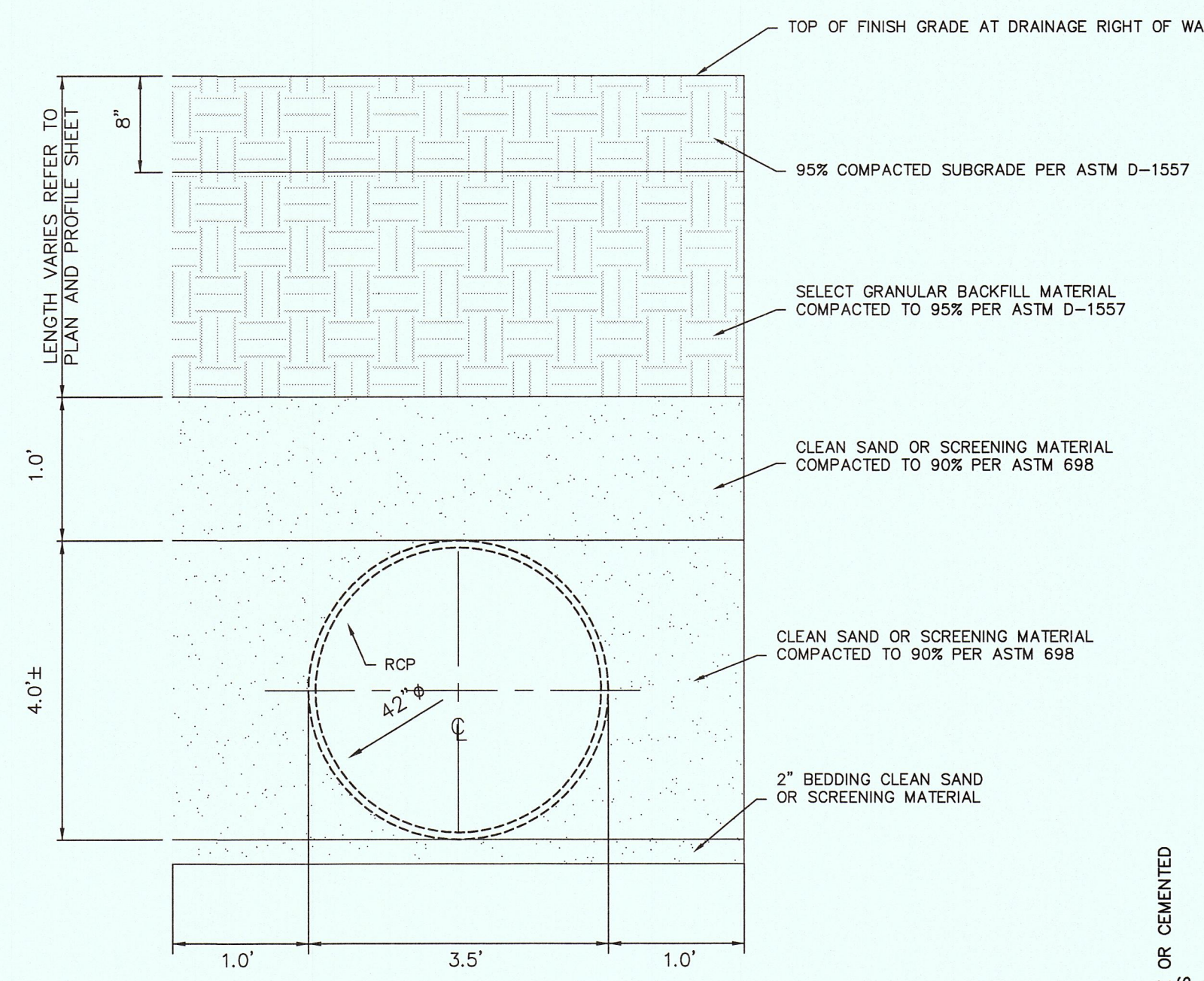
FLOOD NOTE:
NOTE: THE ABOVE REFERENCED PROPERTY IS WITHIN ZONE "C". (EXPLANATION: AREAS OF MINIMAL FLOODING) ACCORDING TO THE FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAPS, AS PER AREA COMMUNITY PANEL NO. 4802140024B, DATED OCTOBER 15, 1982.
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DATE	REVISIONS	BY	PRIMARY BENCHMARK	SCALE
06/11/15	CITY COMMENTS	IR	EXISTING CITY MONUMENT LOCATED AT THE CENTERLINE INTERSECTION OF EDGAR PARK DRIVE AND MOUNTAIN VIEW DRIVE ELEVATION: 4229.73 (NAVD 88) ELEVATION: 4217.92 (CITY DATUM) ELEVATIONS BASED ON NAVD 88 DATUM	



ALL TRENCHING SHALL BE IN ACCORDANCE WITH O.S.H.A. REGULATIONS

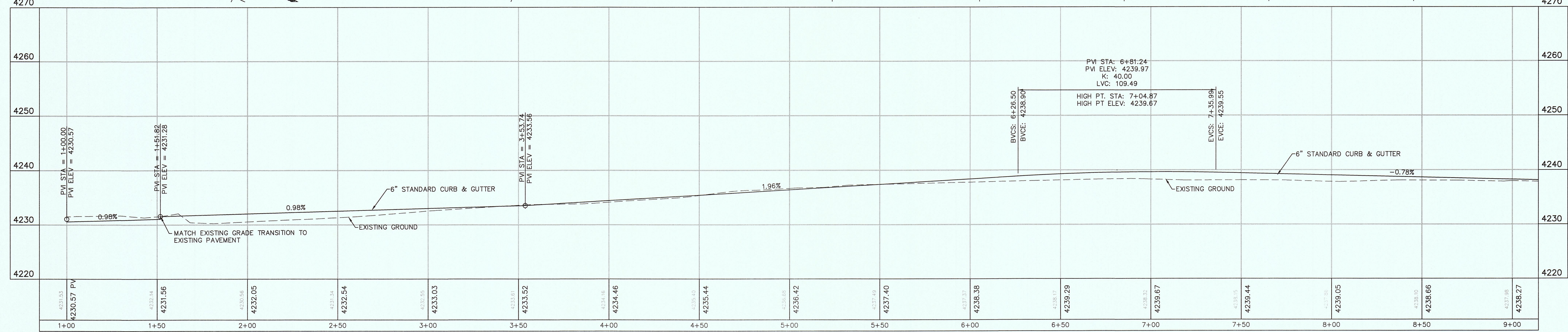
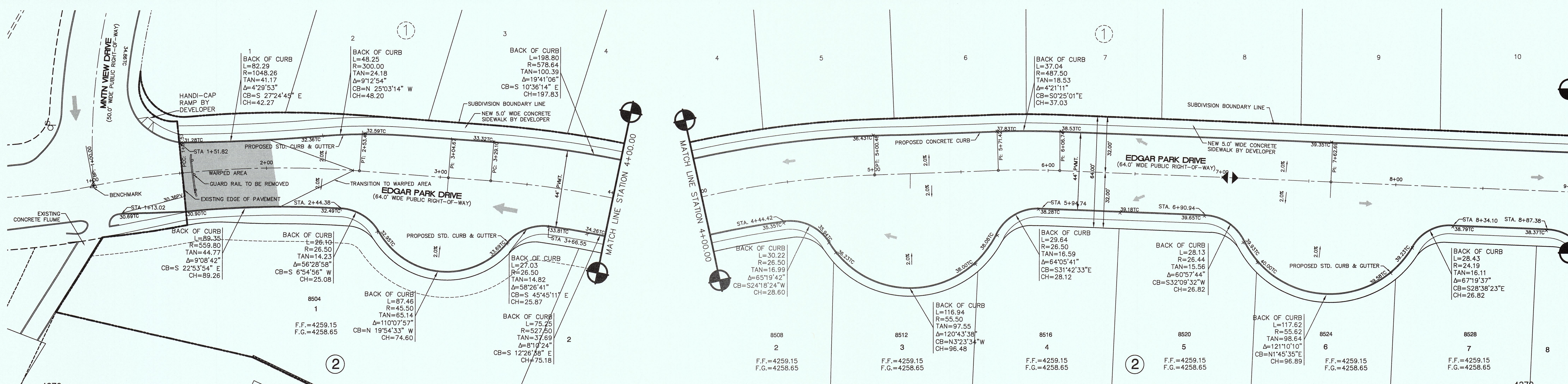
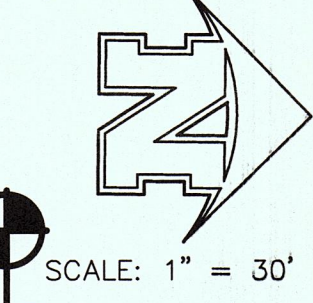
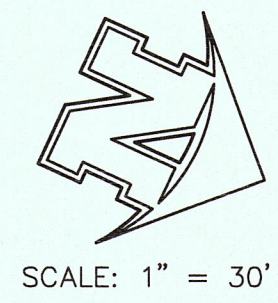
- NOTES:
1. ALL SELECT GRANULAR BACKFILL TO BE PLACED IN A BALANCED FASHION IN THIN LIFTS (6"-8" LOOSE TYPICALLY) AND COMPACTED TO 90 PERCENT DENSITY PER AASHTO T-180.
 2. COMPLETE AND REGULAR MONITORING OF THE CSP SHAPE IS NECESSARY DURING ALL BACKFILLING OF THE STRUCTURE.
 3. PREVENT EXCESSIVE DISTORTION OF SHAPE AS NECESSARY BY VARYING COMPACTION METHODS AND EQUIPMENT.
 4. THIS WIDTH SHOULD BE EQUAL TO 1/2 DIA. TO ONE DIA. WIDTH TYPICALLY. GREATER OR LESSER DISTANCE MAY BE REQUIRED. DISTANCE DEPENDS ON BEARING LOAD FOR ANY GIVEN LOADING, STRUCTURE SHAPE AND BACKFILL MATERIAL. THIS MUST BE EVALUATED BY THE PROJECT ENGINEER FOR EACH SPECIFIC SITUATION.
 5. BEDDING ZONE SHOULD BE FREE OF DEBRIS. PLACE BEDDING MATERIAL AT MIN. THICKNESS EQUAL TO TWICE THE CORRUGATION DEPTH.
 6. EMBANKMENT WIDTH H TO BE SUCH THAT A STABLE EMBANKMENT CAPABLE OF RESISTING SIDE PRESSURES FROM CSP PIPE-ARCH SHAPE WILL BE MAINTAINED THROUGHOUT THE LIFE OF INSTALLATION. THIS WIDTH TO BE DETERMINED BY THE PROJECT ENGINEER.



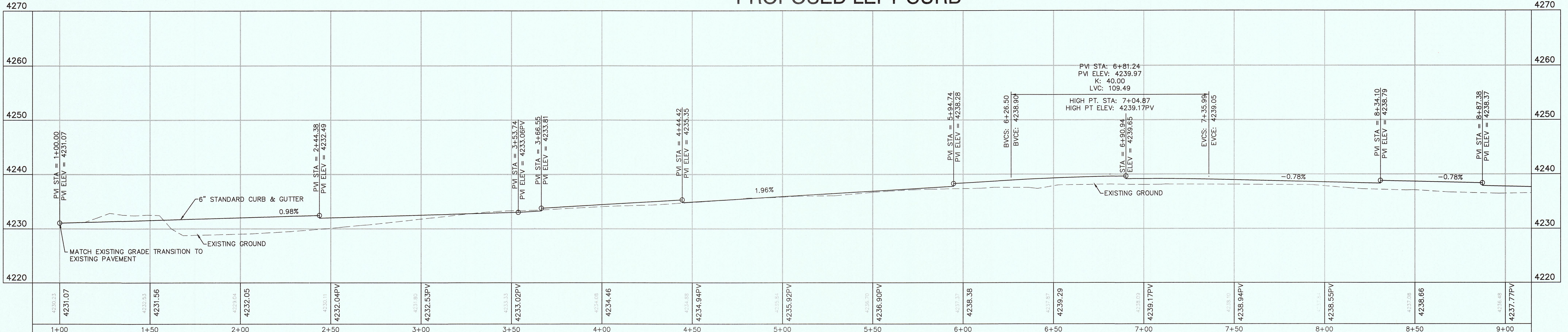
NOTE:
ALL TRENCHING AND SHORING TO ADHERE STRICTLY TO O.S.H.A. 4576-2 AND O.S.H.A. 2226
* EXCAVATING AND TRENCHING OPERATION * 1975

WARNING! BEFORE YOU DIG
TEXAS LAW REQUIRES TWO (2) WORKING DAYS NOTICE PRIOR TO ANY EXCAVATION
CALL TEXAS EXCAVATION SAFETY SYSTEM ANYWHERE IN TEXAS 1-800-344-8377
TEXAS EXCAVATION SAFETY SYSTEM DIG CONFIRMATION NUMBER (# _____) TO BE UPDATED EVERY 10 DAYS





PROPOSED LEFT CURB



PROPOSED RIGHT CURB

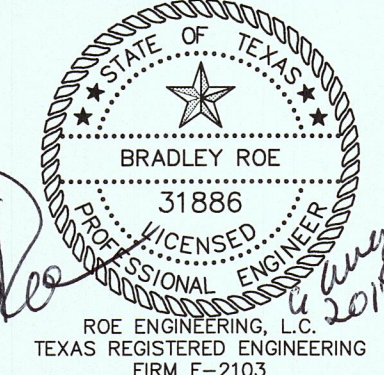
FLOOD NOTE:
 NOTE: THE ABOVE REFERENCED PROPERTY IS WITHIN ZONE "C" (EXPLANATION: AREAS OF MINIMAL FLOODING) ACCORDING TO THE FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAPS, AS PER AREA COMMUNITY PANEL NO. 4802140024B, DATED OCTOBER 15, 1982.

LEGEND

- × 44.51 TRC PROPOSED TOP OF 4" ROLL-OVER CURB
- × 44.27 FG PROPOSED FINISHED GRADE ELEVATION
- × 45.00 PV PROPOSED TOP OF PAVEMENT
- × 44.51 TC PROPOSED TOP OF 6" CURB
- ← PROPOSED DRAINAGE FLOW
- - - PROPOSED STREET CENTERLINE
- - - SUBDIVISION BOUNDARY LINE
- △ PROPOSED CITY MONUMENT

DATE	REVISIONS	BY	PRIMARY BENCHMARK	SCALE
06/11/15	CITY COMMENTS	IR	EXISTING CITY MONUMENT LOCATED AT THE CENTERLINE INTERSECTION OF EDGAR PARK DRIVE AND MOUNTAIN VIEW DRIVE ELEVATION: 4229.75 (NAVD 88) ELEVATION: 4217.82 (CITY DATUM) ELEVATIONS BASED ON NAVD 88 DATUM	HOR: 1" = 30' VER: 1" = 10' W.O. 022515-11A DATE: APRIL 2015 DESIGN BY: IR DRAWN BY: IR/LAJ CHKD. BY: H.P. APPD. BY: B.R.

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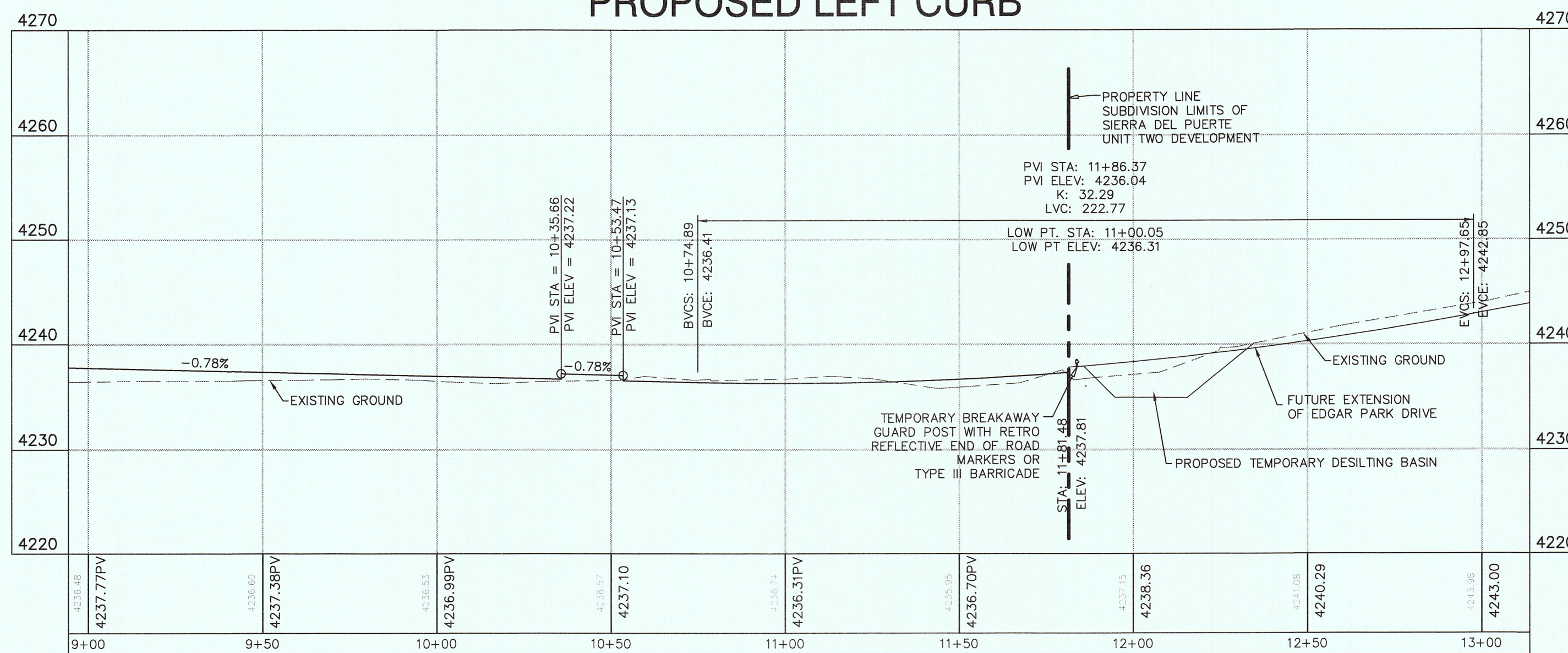
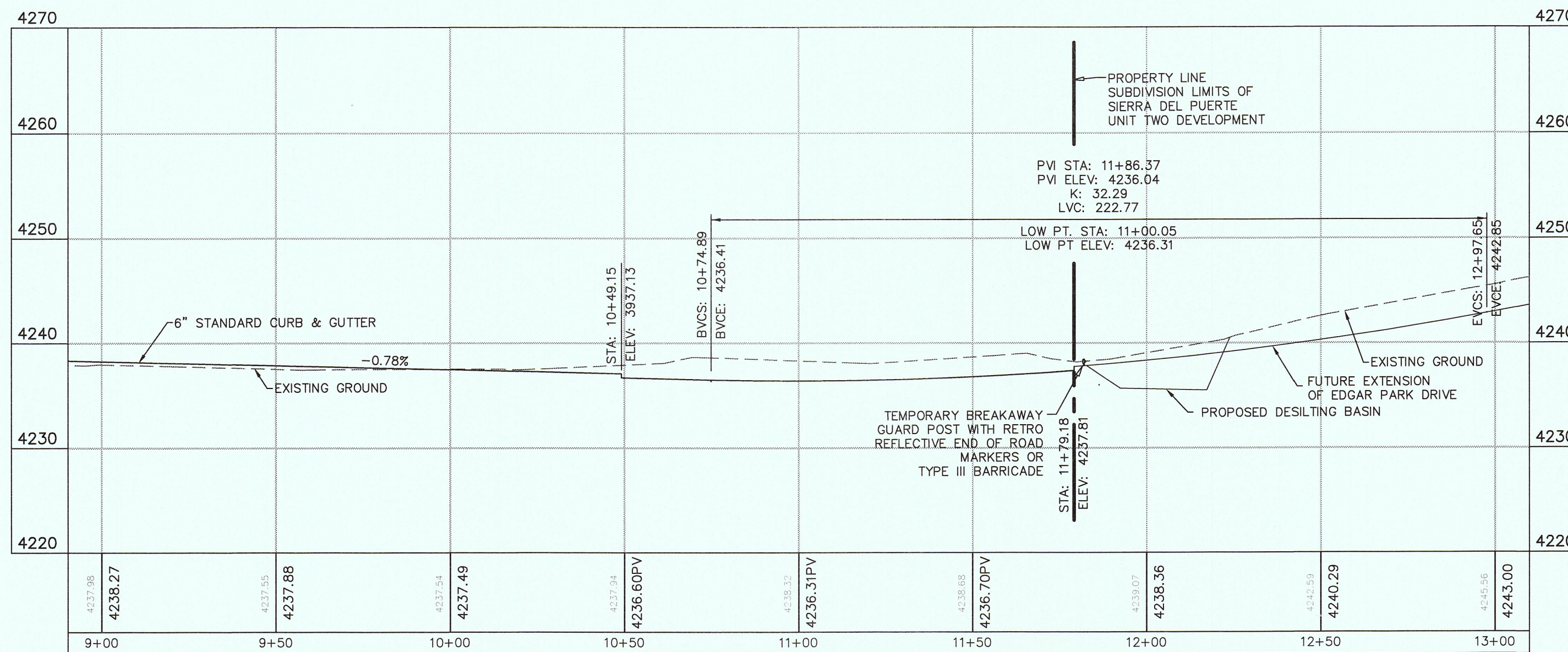
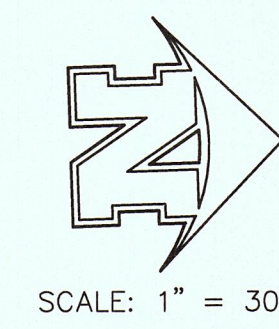
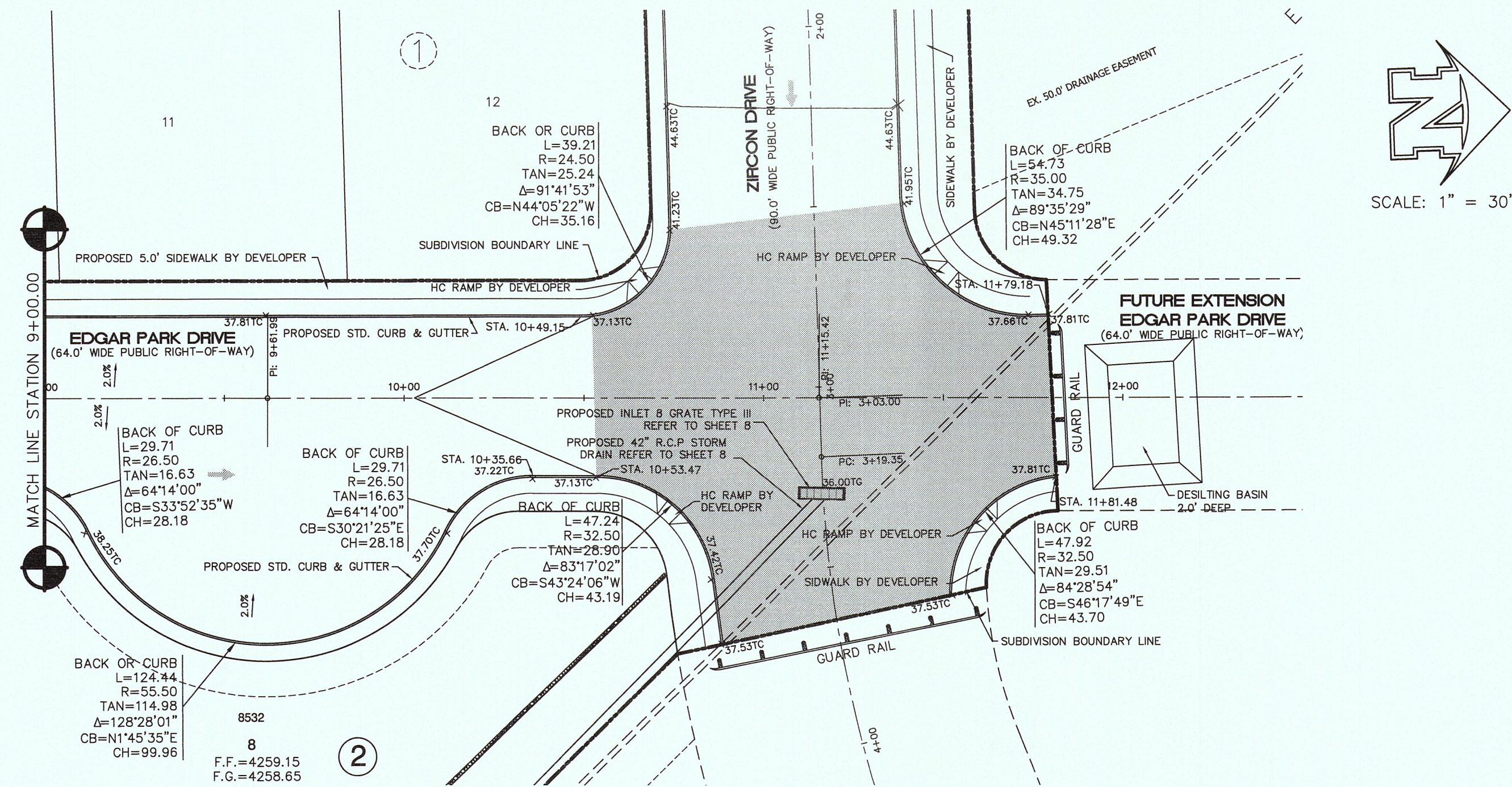
SIERRA DEL PUERTE UNIT TWO

**EDGAR PARK DRIVE
 PLAN AND PROFILE
 STA 1+00 TO 9+00**

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2: Urban/High Way Properties 022515-11B Sheet 10 of 23 Plan and Profile Edgar Park Drive 07/20/15 1:45PM



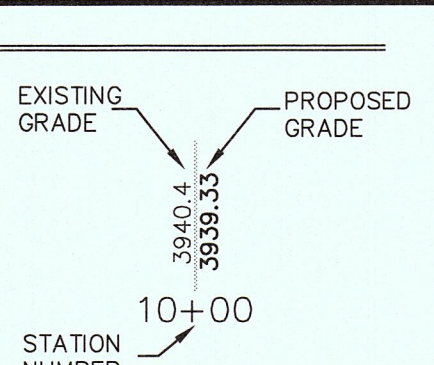
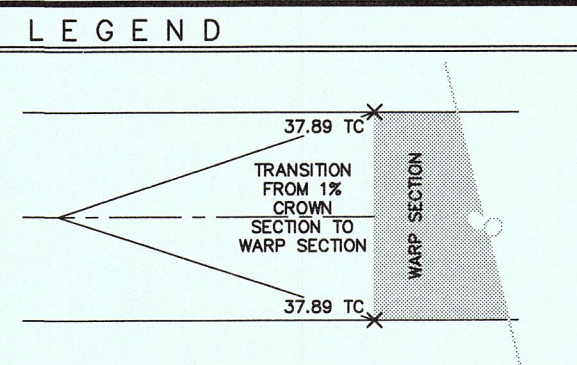
PROPOSED LEFT CURB

PROPOSED RIGHT CURB

FLOOD NOTE:
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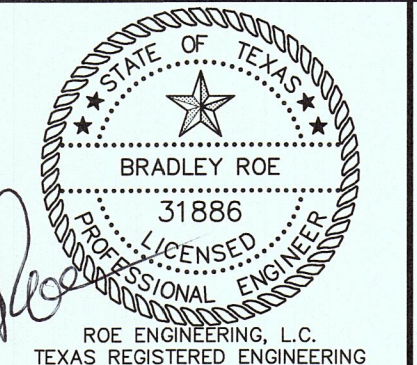
- LEGEND**
- × 44.51 TRC PROPOSED TOP OF 4" ROLL-OVER CURB
 - × 44.27 FG PROPOSED FINISHED GRADE ELEVATION
 - × 45.00 PV PROPOSED TOP OF PAVEMENT
 - × 44.51 TC PROPOSED TOP OF 6" CURB
 - PROPOSED DRAINAGE FLOW
 - PROPOSED STREET CENTERLINE
 - - - SUBDIVISION BOUNDARY LINE
 - △ PROPOSED CITY MONUMENT



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EDGAR PARK DRIVE
 PLAN AND PROFILE
 STA 9+00 TO 11+82



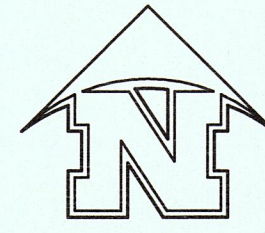
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THE CITY OF EL PASO TEXAS

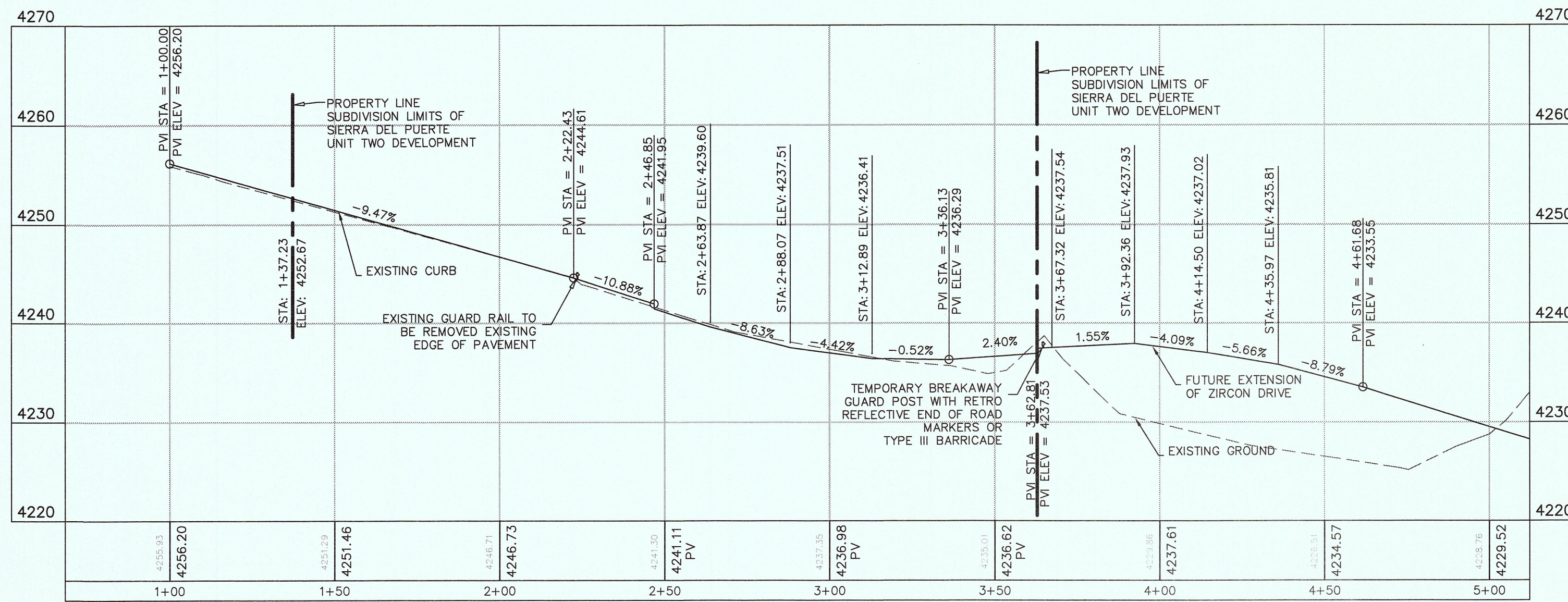
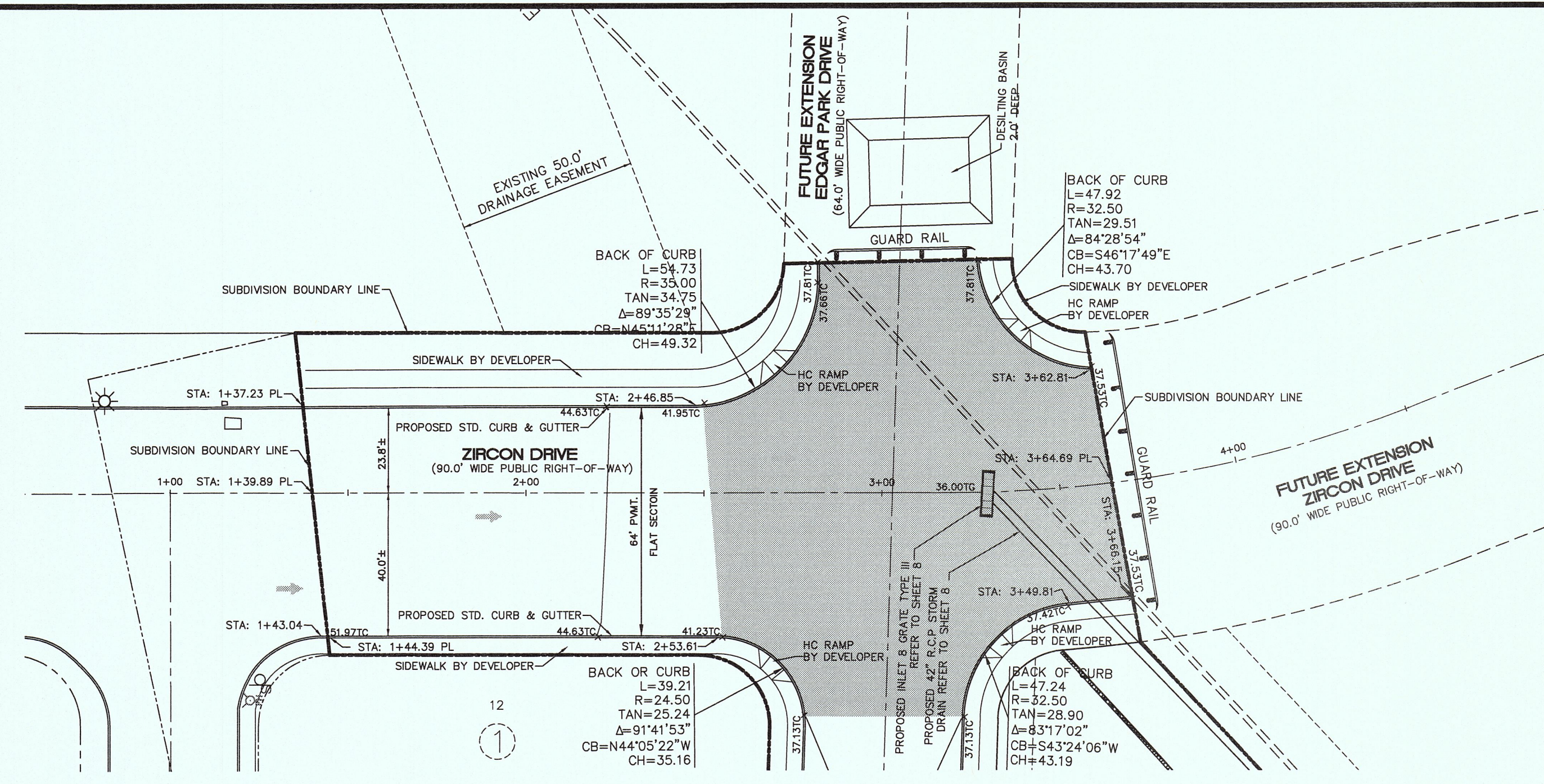
Final Approval

SHEET NO.
 11
 11 OF 23

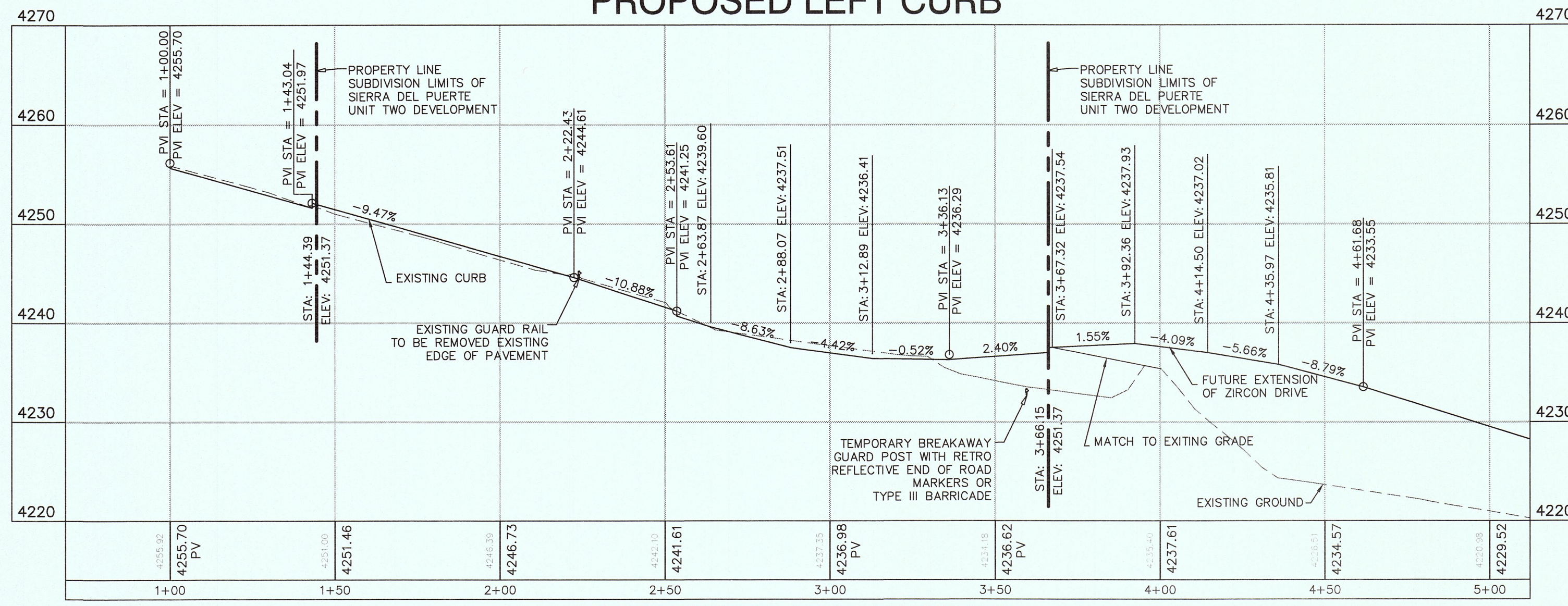
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SCALE: 1" = 30'

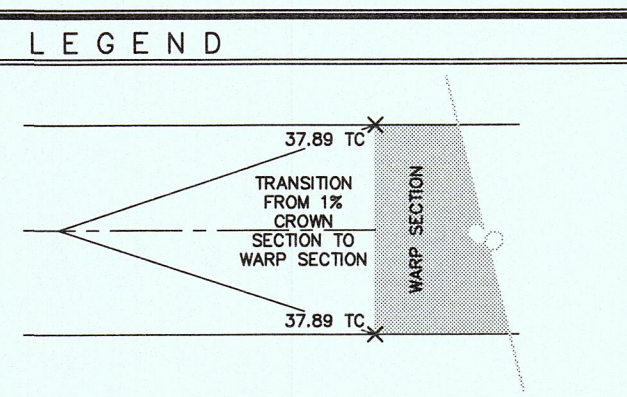


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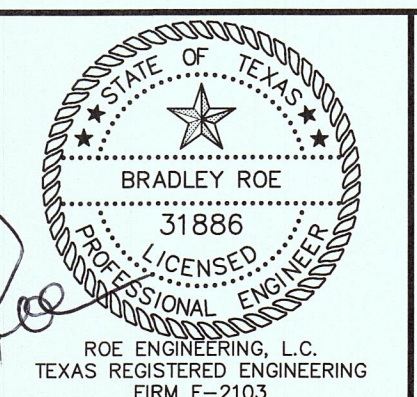


PROPOSED RIGHT CURB

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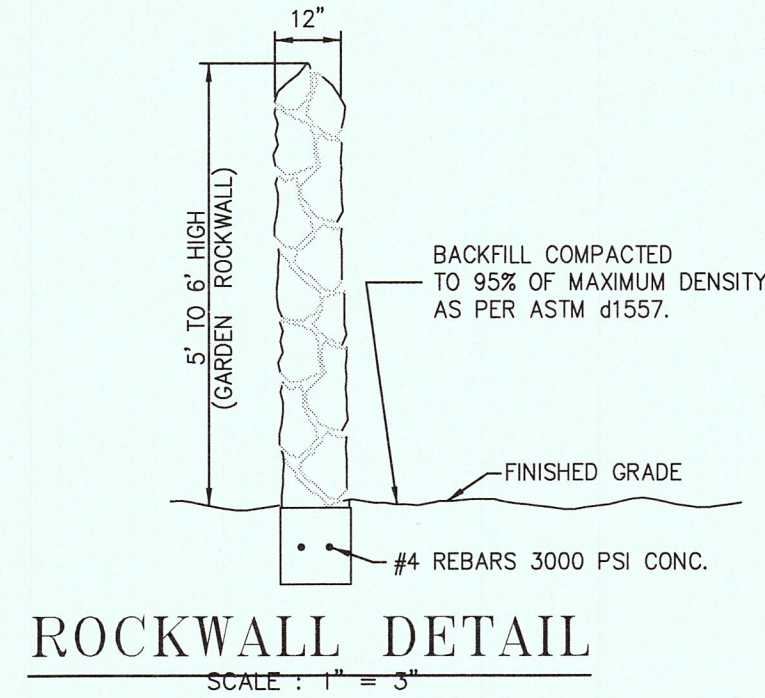
SIERRA DEL PUERTE UNIT TWO
ZIRCON DRIVE
PLAN AND PROFILE
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12
12 OF 23

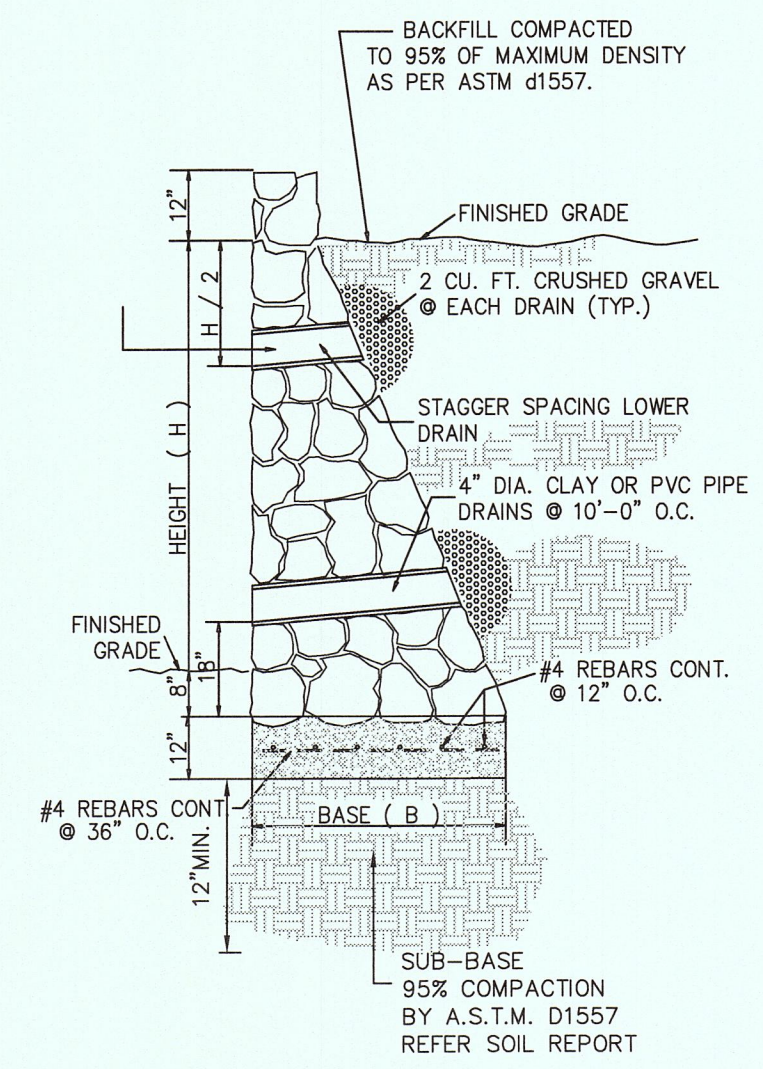
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Z:\Columbia\Rock Wall Details\Phase 2\06-0000\11-Typical Detail_Rockwall_Sheet13.dwg 07/20/15 11:47PM



GENERAL ROCKWALL NOTES

- 1 NATURAL STONE SHALL BE SOUND AND FREE FROM LOOSE OR FRIABLE INCLUSIONS AND SHALL MEET REQUIRED STRENGTH AND DURABILITY FOR PROPOSED USE.
- 2 MORTAR SHALL BE ASTM-270 TYPE S PROPORTION BY VOLUME:
PORTLAND CEMENT 1 PART
LIME 1/4 PART
SAND 3-1/2 PARTS
- 3 CONCRETE F'C=3000 PSI @ 28 DAYS.
- 4 REINFORCING STEEL ASTM A615 GRADE 40, Fy+40,000 PSI.
- 5 ALLOWABLE SOIL BEARING PRESSURE _____ MINIMUM.
- 6 WALL FOOTING SHALL BEAR ON COMPACTED OR FIRM UNDISTURBED GROUND.
- 7 CHANGES IN WALL DIRECTION, WALL HEIGHT OR FOOTING ELEVATION WILL REQUIRE ADDITIONAL DESIGN.
- 8 BACKFILL MATERIAL SHALL CONSIST OF WELL-DRAINED, COARSE DRAINED SOILS OR FINE SILTY SANDS WITH NO CLAY CONTENT. BACKFILL MATERIAL SHALL EXERT A HORIZONTAL FORCE OF AN EQUIVALENT FLUID PRESSURE NOT TO EXCEED 50#/F+3.
- 9 SURCHARGE WILL REQUIRE ADDITIONAL DESIGN. YES _____ NO. IF SURCHARGED, DETAILS MUST BE SUBMITTED FOR REVIEW AND APPROVAL TO BUILDING INSPECTION DEPARTMENT AT THE TIME BUILDING CONSTRUCTION PLANS ARE SUBMITTED.
- 10 RETAINING WALL (S) WILL BE REQUIRED WHERE THE GRADE DIFFERENCE BETWEEN THE FINISHED GRADE OF ANY LOT WITHIN THIS SUBDIVISION AND/OR ADJOINING PROPERTY IS TWO (2) FEET OR GREATER.
- 11 SUBGRADE UNDER ALL RETAINING STRUCTURE SHALL BE COMPACTED TO 95% OF MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D-1557
- 12 24" SUBGRADE MATERIAL SHALL BE COMPACTED UNDER RETAINING STRUCTURE



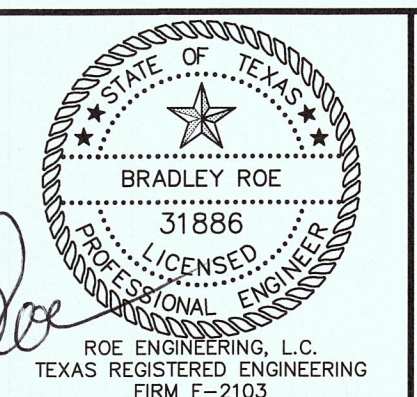
HEIGHT (H)	BASE (B)	REINFORCING
3' - 0"	2' - 2"	3 #4 REBARS @ 12" O.C.
3' - 6"	2' - 5"	3 #4 REBARS @ 12" O.C.
4' - 0"	2' - 9"	4 #4 REBARS @ 12" O.C.
4' - 6"	3' - 0"	4 #4 REBARS @ 12" O.C.
5' - 0"	3' - 3"	4 #4 REBARS @ 12" O.C.
5' - 6"	3' - 9"	5 #4 REBARS @ 12" O.C.
6' - 0"	4' - 3"	5 #4 REBARS @ 12" O.C.
6' - 6"	4' - 9"	6 #4 REBARS @ 12" O.C.
7' - 0"	4' - 8"	7 #4 REBARS @ 12" O.C.
7' - 6"	5' - 1"	7 #4 REBARS @ 12" O.C.
8' - 0"	5' - 6"	7 #4 REBARS @ 12" O.C.
8' - 6"	6' - 0"	8 #4 REBARS @ 12" O.C.
9' - 0"	6' - 5"	9 #4 REBARS @ 12" O.C.
9' - 6"	6' - 9"	9 #4 REBARS @ 12" O.C.
10' - 0"	7' - 0"	9 #4 REBARS @ 12" O.C.

FLOOD NOTE:
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DATE	REVISIONS	BY	PRIMARY BENCHMARK
06/11/15	CITY COMMENTS	IR	

SCALE	
HOR:	VER:
W.O. 022515-11A	
DATE: APRIL 2015	
DESIGN BY: IR	
DRAWN BY: IR/LAJ	
CHKD. BY: H.P.	
APPD. BY: B.R.	



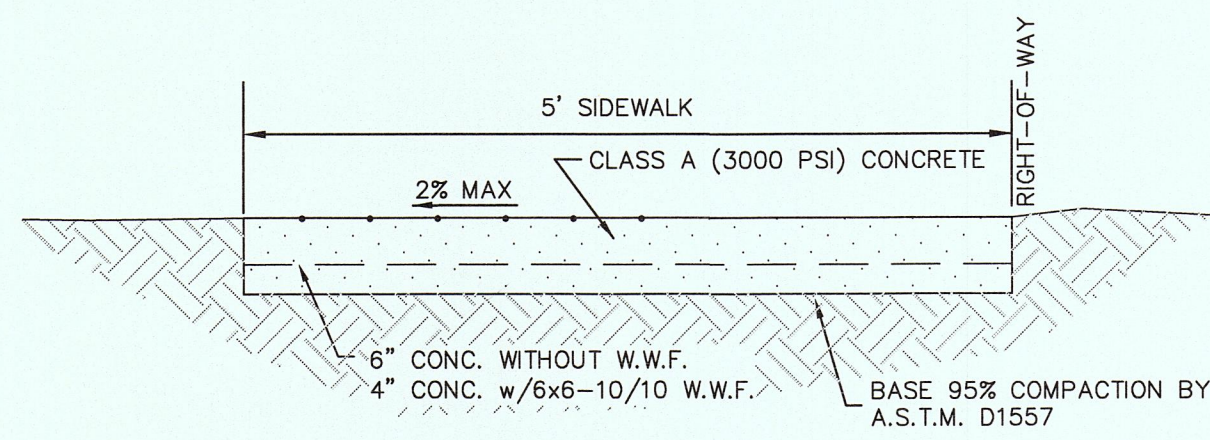
SIERRA DEL PUERTE UNIT TWO
ROCK WALL DETAILS

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13 OF 23



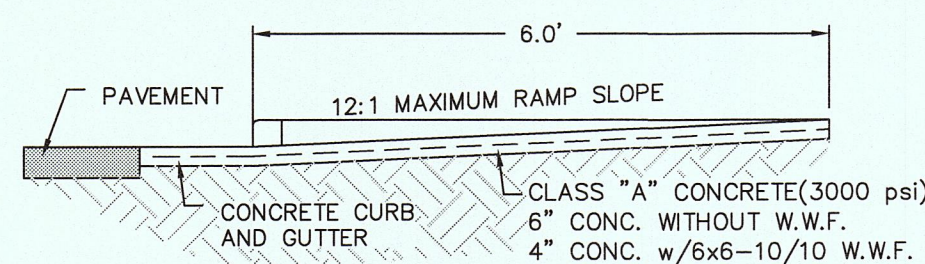
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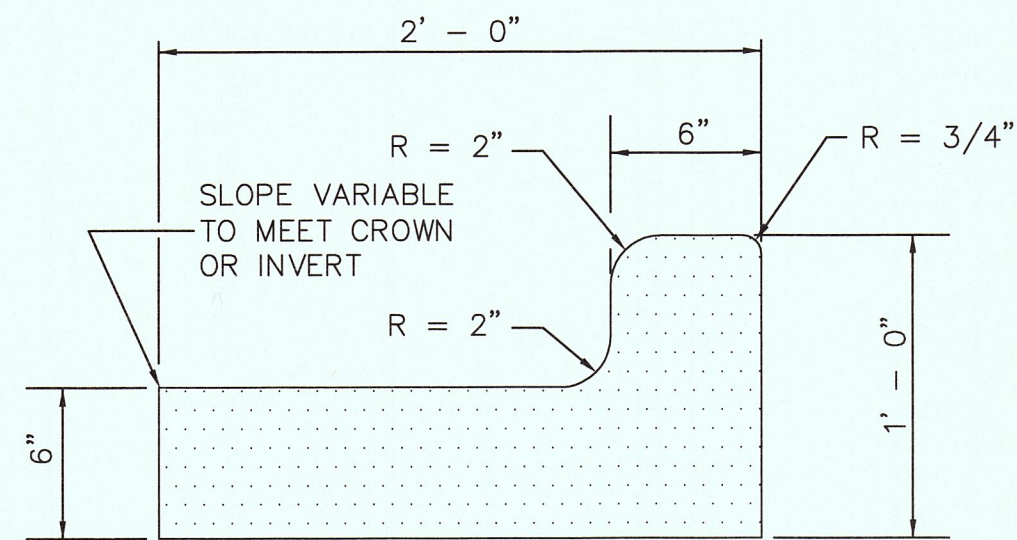
5' SIDEWALK DETAIL
SCALE: 1" = 1'

NOTES FOR CURB AND GUTTER:

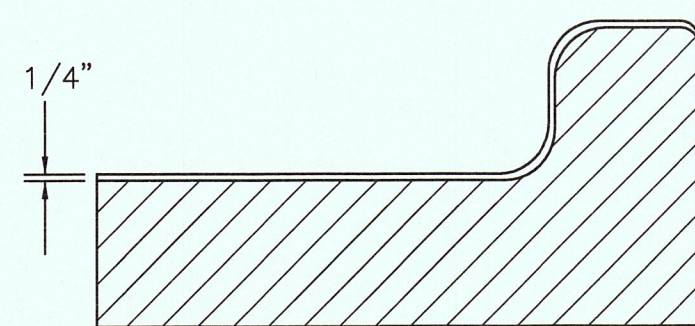
1. EXPANSION JOINTS WILL BE REQUIRED AT THE END OF CURB RETURNS, AT 50' O.C. & POINT OF TANGENCY WITH STRAIGHT RUNS OF CURB AT EVERY INTERSECTION
2. CONTRACTION JOINTS (1/2 INCH MIN. SCORED JOINTS) MUST BE INSTALLED EVERY 10 FEET IN CURB OR CURB AND GUTTER.
3. ALL EXPANSION JOINTS WILL BE PREFORMED BITUMINOUS FIBER 1/2 INCH THICK.
4. CONCRETE TO BE CLASS "A", 3000 P.S.I.



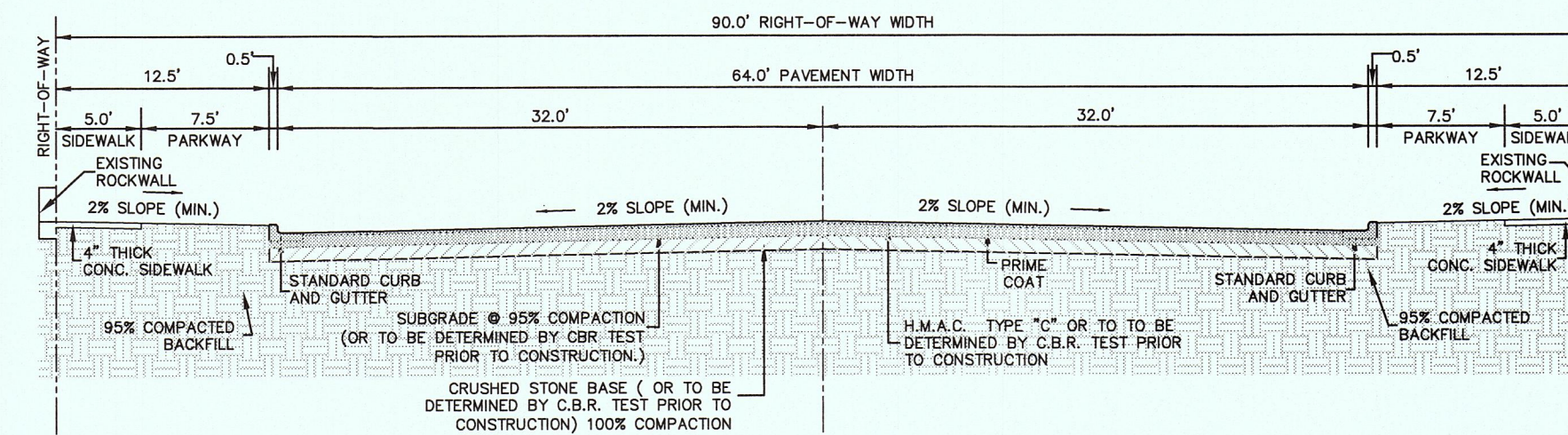
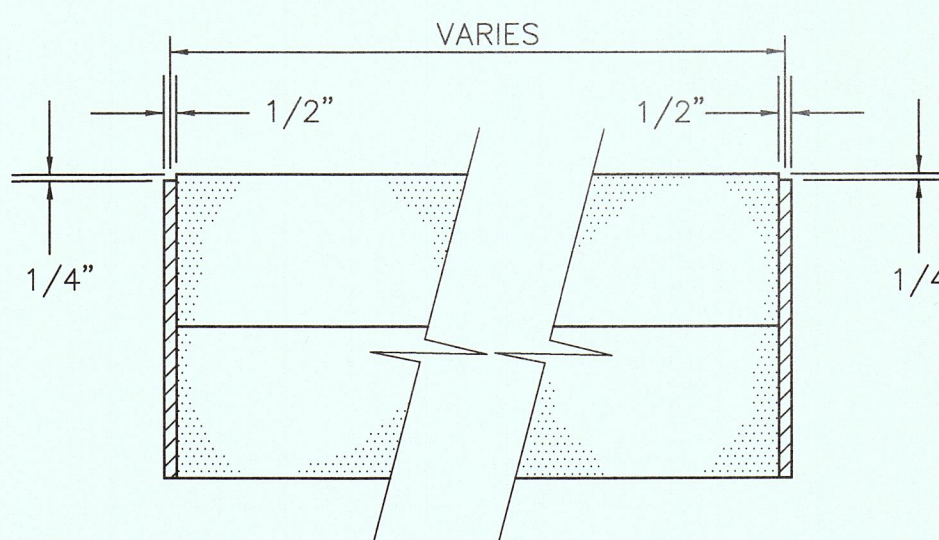
TYPICAL HANDICAP RAMP
SCALE: 1" = 2'



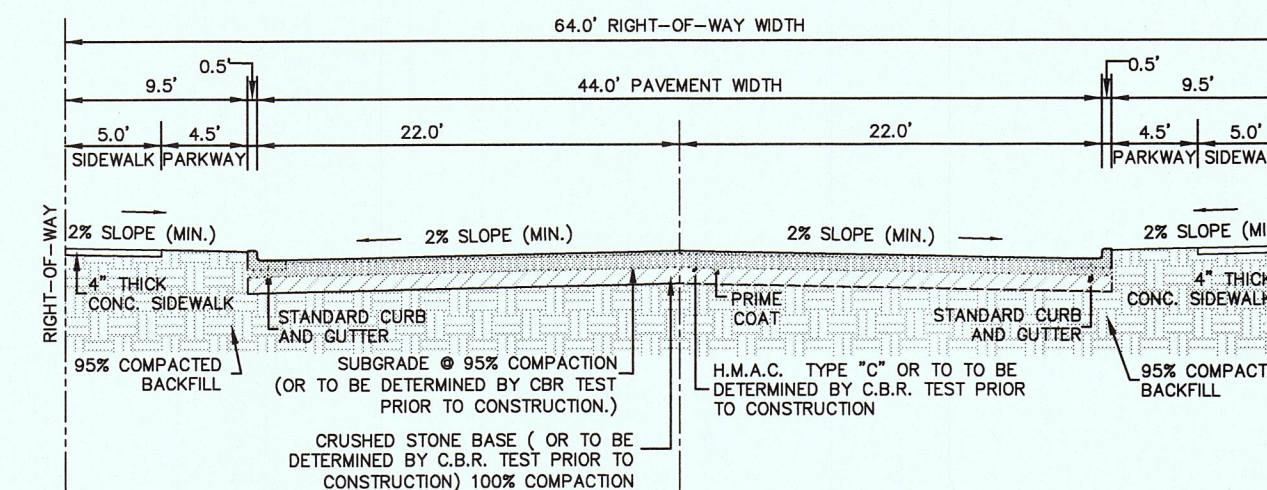
STANDARD CURB AND GUTTER DETAIL
SCALE 1 1/2" = 1'



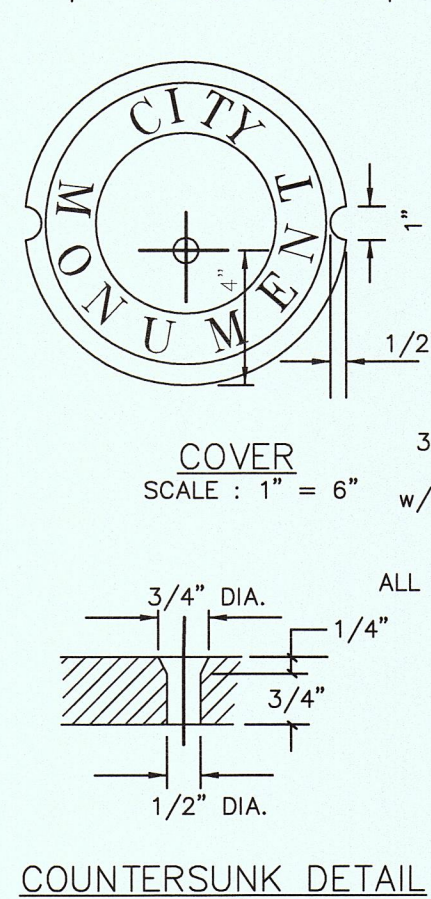
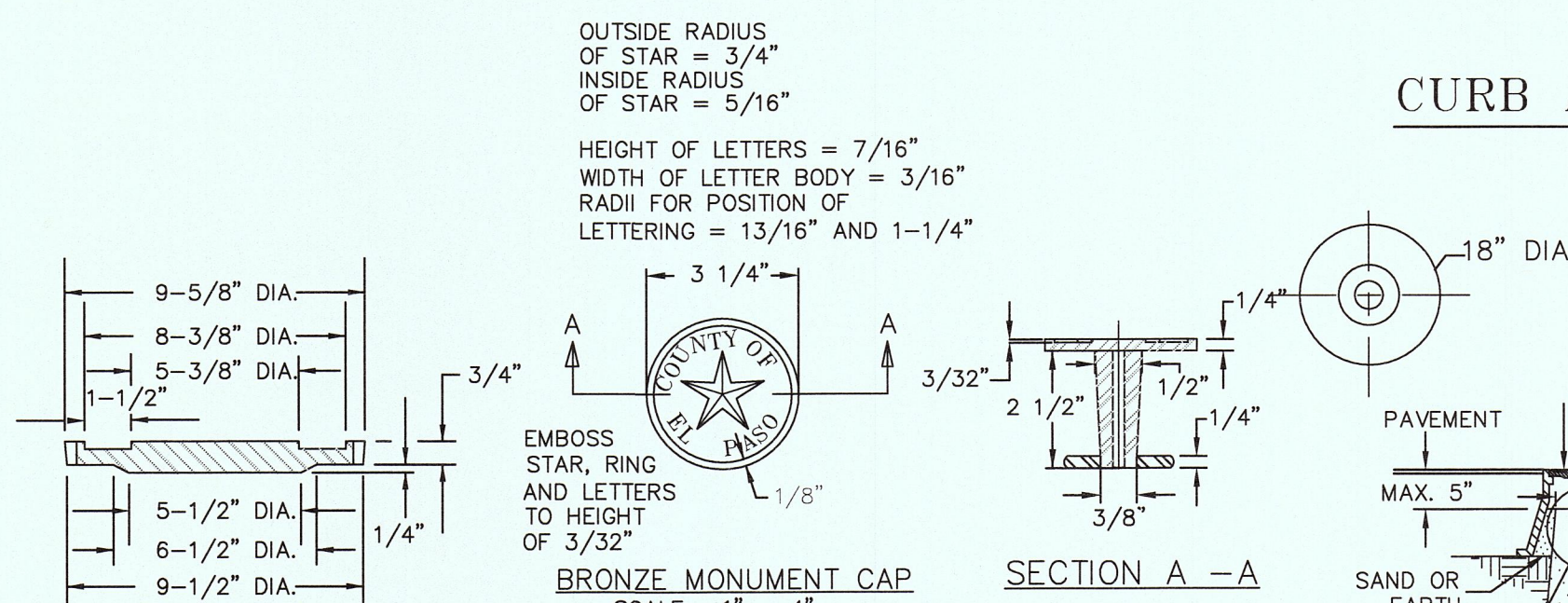
CURB AND GUTTER EXPANSION JOINT DETAIL



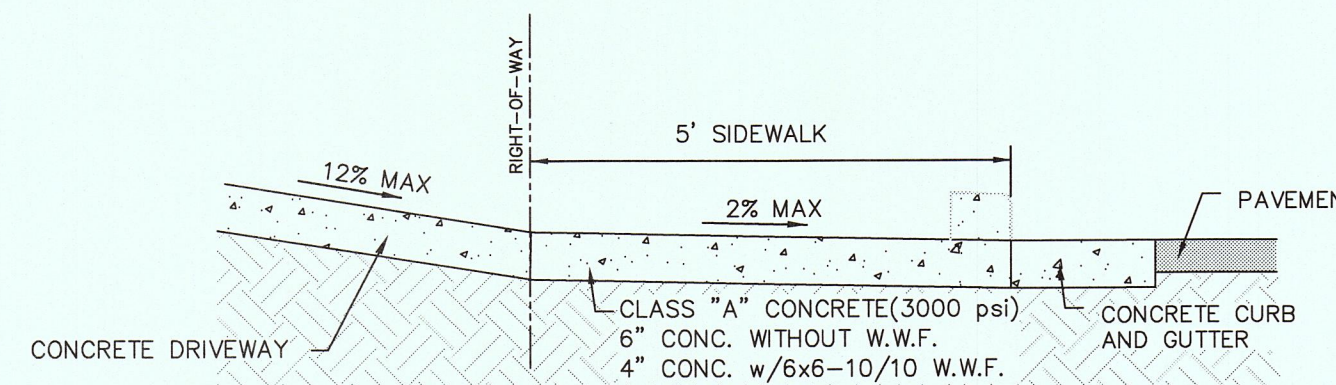
**EXISTING / FUTURE STREET SECTION
90' PUBLIC RIGHT-OF-WAY
(ZIRCON DRIVE)
MINOR ARTERIAL**
SCALE 1" = 10'



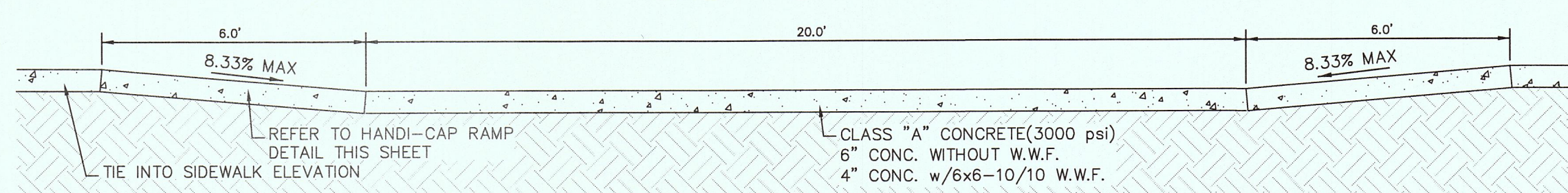
**EXISTING / FUTURE STREET SECTION
64' PUBLIC RIGHT-OF-WAY
(EDGAR PARK DRIVE)
RESIDENTIAL COLLECTOR**
SCALE 1" = 10'



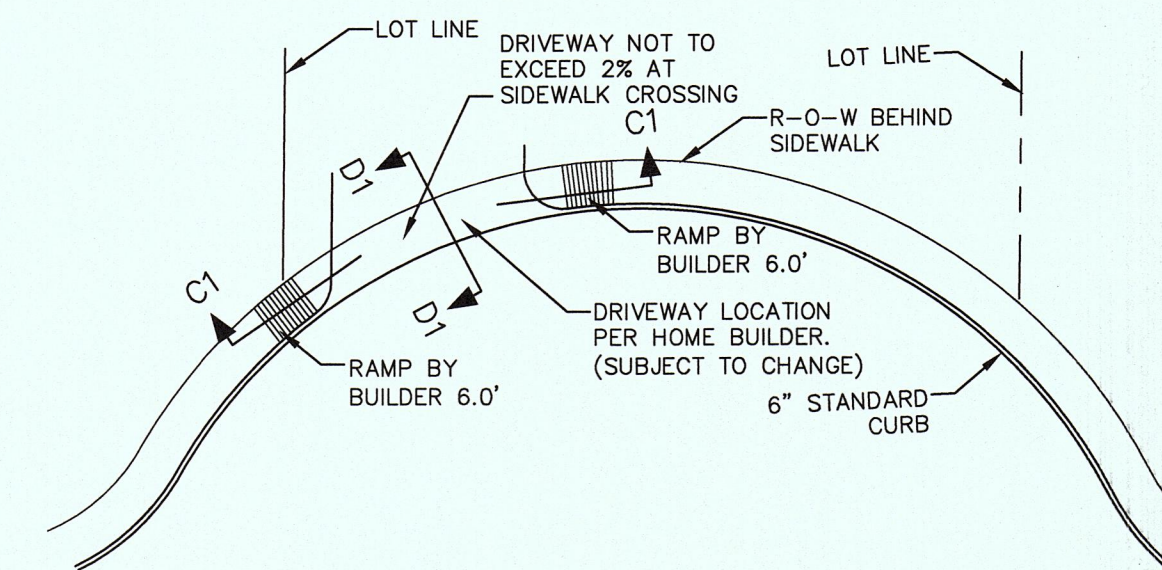
COUNTY MONUMENT DETAIL



DRIVEWAY SECTION D1
SCALE 1" = 2'



DRIVEWAY SECTION C1
SCALE 1" = 3'



PROPOSED DRIVEWAY AT ELBOWS
SCALE 1" = 5'

SIZE AND CONSTRUCTION:

THE STANDARD CITY MONUMENT SHALL BE POURED-IN-PLACE CONCRETE CONE, EIGHT (8) INCHES MINIMUM DIAMETER AT THE TOP, EIGHTEEN (18) INCHES MINIMUM DIAMETER AT THE BOTTOM, THIRTY-SIX (36) INCHES MINIMUM IN DEPTH WITH THE MONUMENT CAP IN PLACE ON TOP.

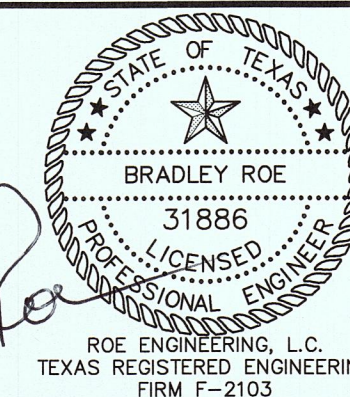
NUMBER AND LOCATIONS:

THE MONUMENTS SHALL BE INSTALLED WHERE SHOWN ON THE SUBDIVISION PLAT AS APPROVED BY THE CITY ENGINEER.

NO FEWER THAN TWO MONUMENTS SHALL BE PLACED IN A ONE STREET SUB-DIVISION.

AT LEAST ONE (1) MONUMENT SHALL BE PLACED ON EACH HORIZONTAL CURVE. TWO SHALL BE PLACED IF THE POINT OF INTERSECTION (P.I.) OF THE TANGENTS LEADING INTO THE CURVE FALLS OUTSIDE OF CITY RIGHT-OF-WAY. MONUMENTS SHALL BE INSTALLED SO THAT ALL FRONT PROPERTY CORNERS OF ALL LOTS IN THE SUBDIVISION ARE WITHIN LINE OF SIGHT OF A MONUMENT, OR WITHIN LINE OF SIGHT BETWEEN TWO ADJACENT MONUMENTS.

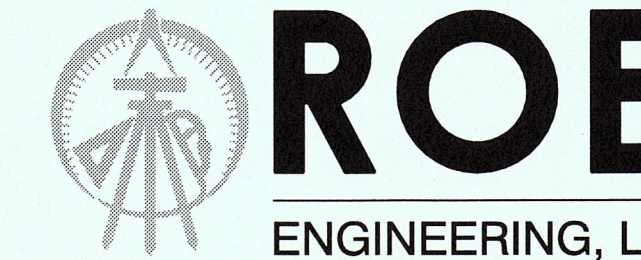
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SIERRA DEL PUERTE UNIT TWO

TYPICAL DETAILS

HOR: _____ VER: _____
W.O. 022515-11A
DATE: APRIL 2015
DESIGN BY: IR
DRAWN BY: IR/LAJ
CHKD. BY: H.P.
APPD. BY: B.R.



601 N. Cotton St. Suite No.6 El Paso, Tx, 79902
(915) 533-1418 - FAX: (915) 533-4972



Final Approval

SHEET NO.

14

14 OF 23

FLOOD NOTE:

NOTE: THE ABOVE REFERENCED PROPERTY IS WITHIN ZONE "C". (EXPLANATION: AREAS OF MINIMAL FLOODING) ACCORDING TO THE FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAPS, AS PER AREA COMMUNITY PANEL NO. 4802140024B, DATED OCTOBER 15, 1982.

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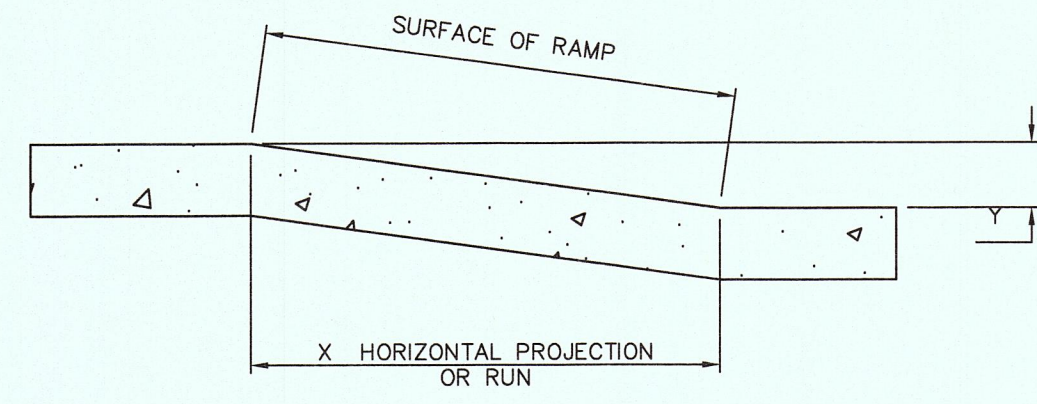
City of El Paso Dome Size and Spacing

CITY OF EL PASO
DOME SIZE AND SPACING

1. 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 (5MM), AND CENTER TO CENTER SPACING OF NOMINAL 2.35 INCHES (60 MM) MEASURED ALONG ONE SIDE OF A SQUARE ARRANGEMENT.
2. 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.
3. 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 THE SURFACE SHALL BE PERMITTED.

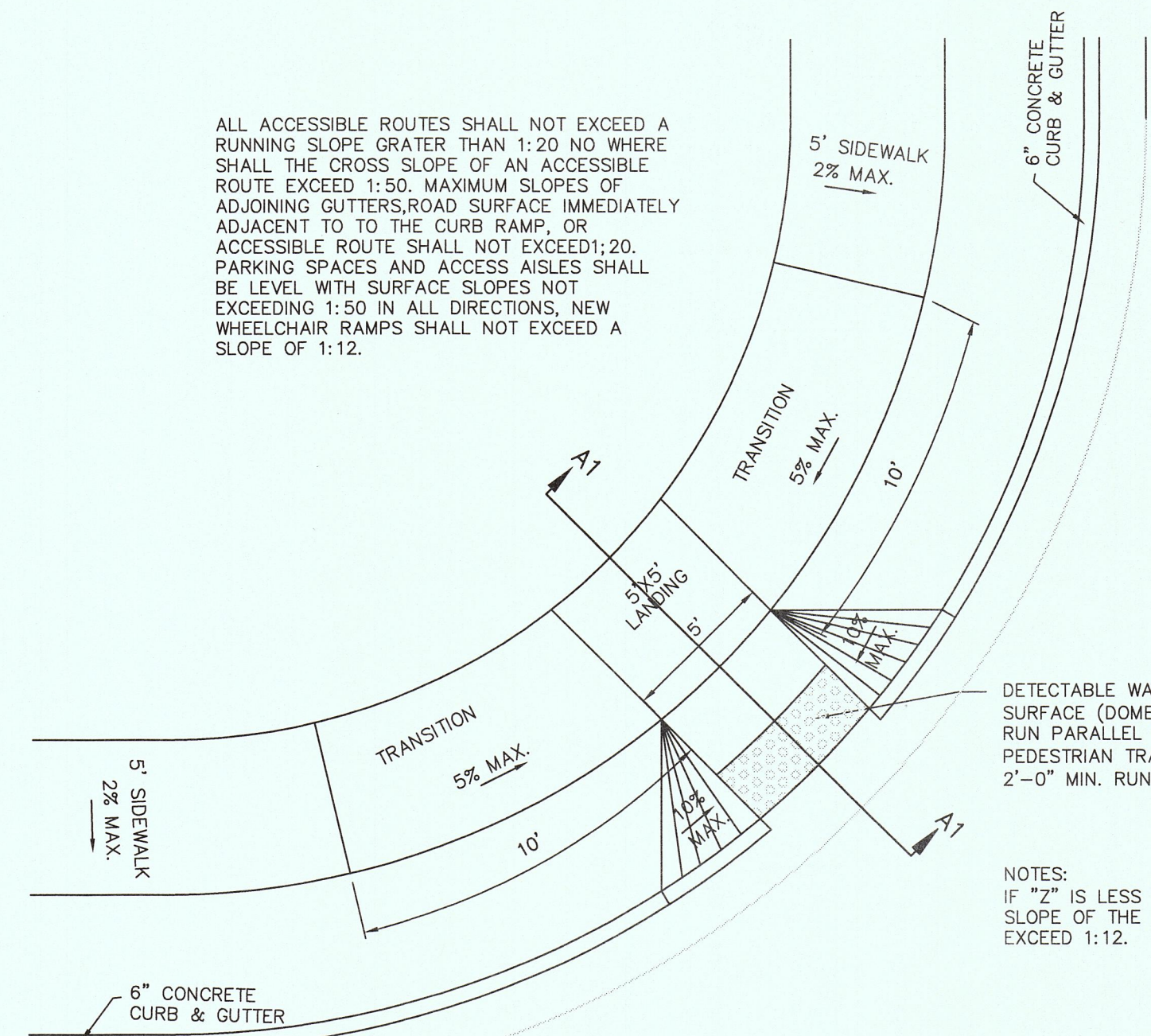
Pedestrian Facilities General Notes

1. All slopes are maximum allowable. The least possible slope that will still drain properly should be used. Adjust curb ramp length or grade of approach sidewalks as directed.
2. Landings shall be 5' x 5' minimum with a maximum 2% slope in any direction.
3. Maneuvering space at the bottom of curb ramps shall be a minimum of 4' x 4' wholly contained within the crosswalk and wholly outside the parallel vehicular travel path.
4. Maximum allowable cross slope on sidewalk and curb ramp surfaces is 2%.
5. Curb ramps with returned curbs may be used only where pedestrians would not normally walk across the ramp, either because the adjacent surface is planting or other non-walking surface or because the side approach is substantially obstructed. Otherwise, provide flared sides.
6. 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) and 16 TAC 68.102.
7. Separate curb ramp and landings from adjacent sidewalk and any other elements with precast with illuminated exp. joint or board joint of 3/4" unless otherwise directed by the Engineer.
8. Provide a smooth transition where the curb ramps connect to the street.
9. Flare slope shall not exceed 10% measured along curb line.



SECTION A1-A1

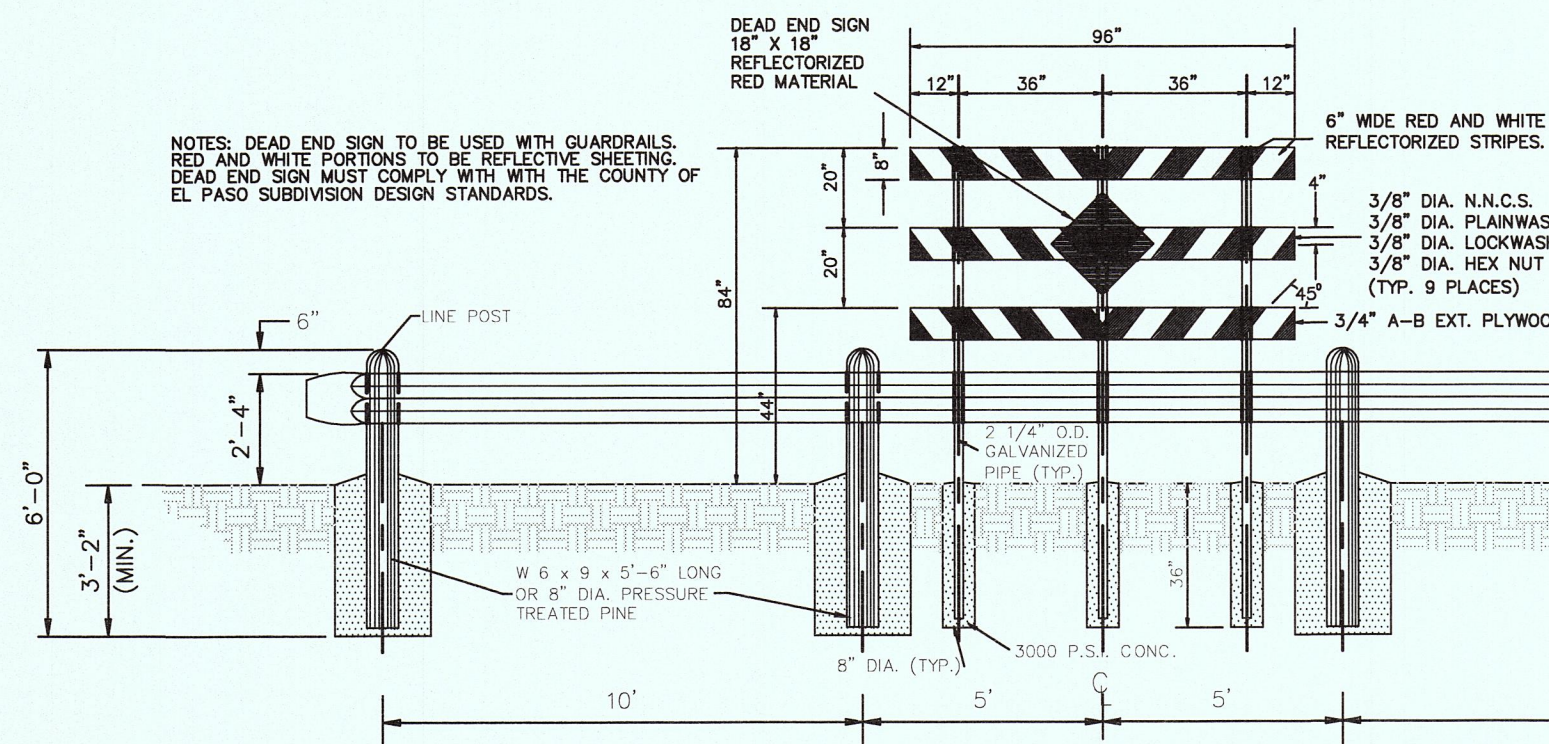
NOTES:
SLOPE = Y:X, WHERE X IS LEVEL PLANE
CROSS-SLOPE SHALL NOT EXCEED 1:50



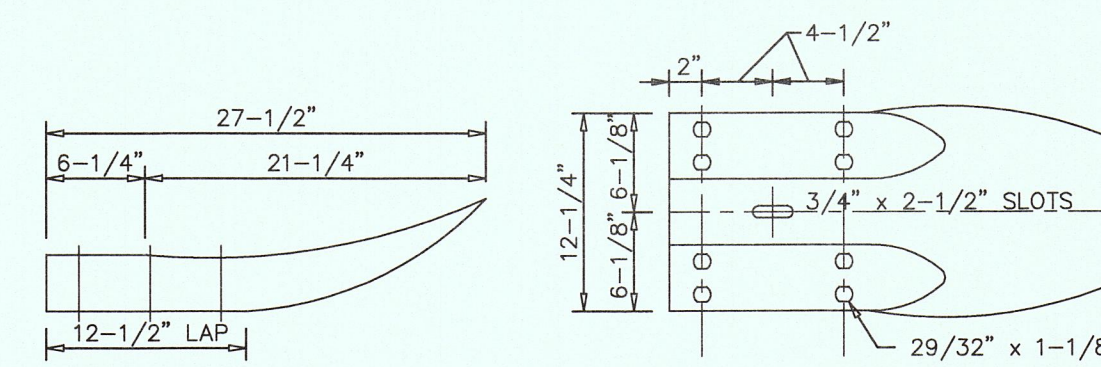
DIAGONAL CURB RAMP WITH FLARED SIDES

GENERAL NOTES :

1. CONTRACTOR TO VERIFY ALL DIMENSIONS AND ELEVATIONS IN THE DRAWINGS AND SITE CONDITIONS BEFORE COMMENCING WORK.
2. ANY DISCREPANCIES FOUND AMONG THE DIFFERENT DISCIPLINE DRAWINGS SHALL BE REPORTED TO ENGINEER FOR PROPER ADJUSTMENT PRIOR TO PROCEEDING WITH WORK.
3. DETAILS ON THIS DRAWINGS ARE TYPICAL AND APPLY TO SIMILAR PROJECT CONDITIONS REGARDLESS OF WHETHER OR NOT THEY ARE SPECIFICALLY REFERENCED.

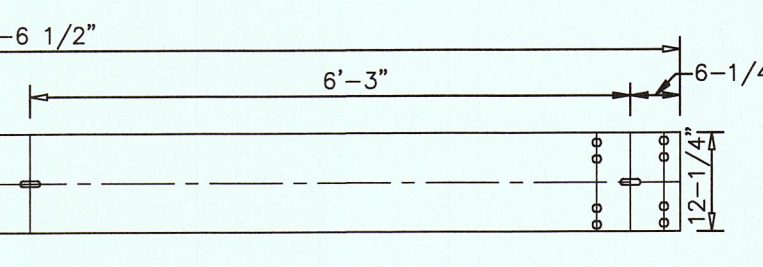
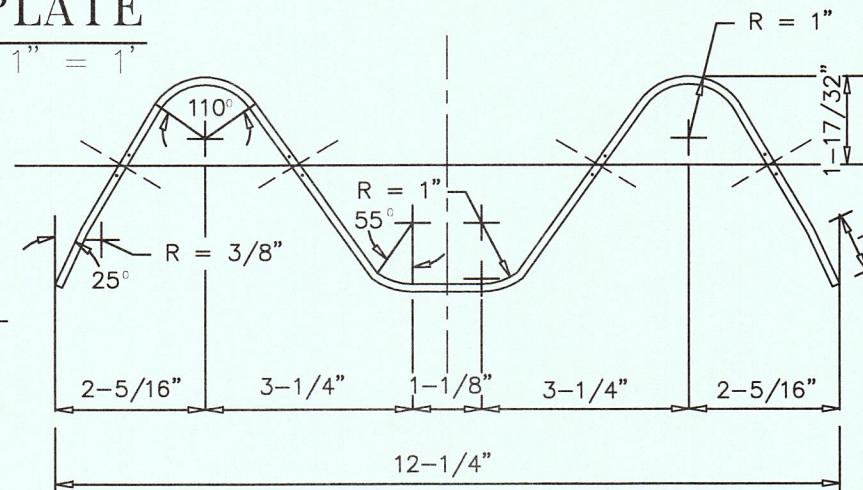


GUARD RAIL DETAIL



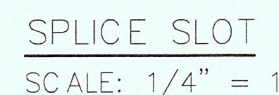
TERMINAL PLATE

SCALE: 1" = 1'



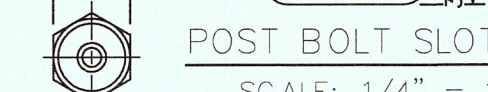
WASHER

SCALE: 1/4" = 1'



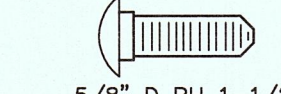
SPLICE SLOT

SCALE: 1/4" = 1'



POST BOLT SLOT

SCALE: 1/4" = 1'



HEX NUT

SCALE: 1/4" = 1'



5/8" D RH 1-1/2"

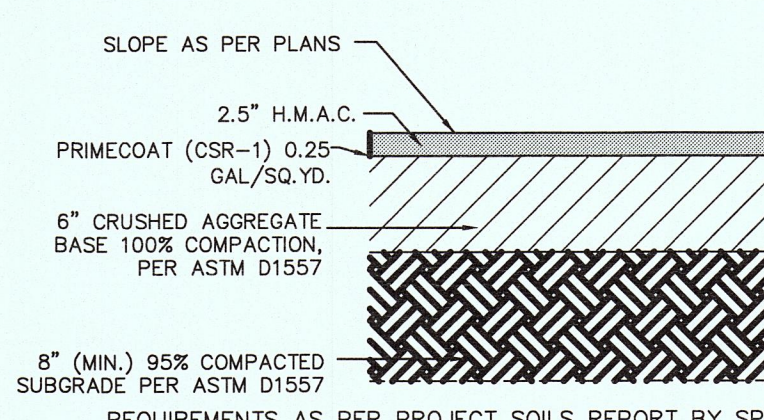
SCALE: 1/2" = 1'



RAIL BOLT

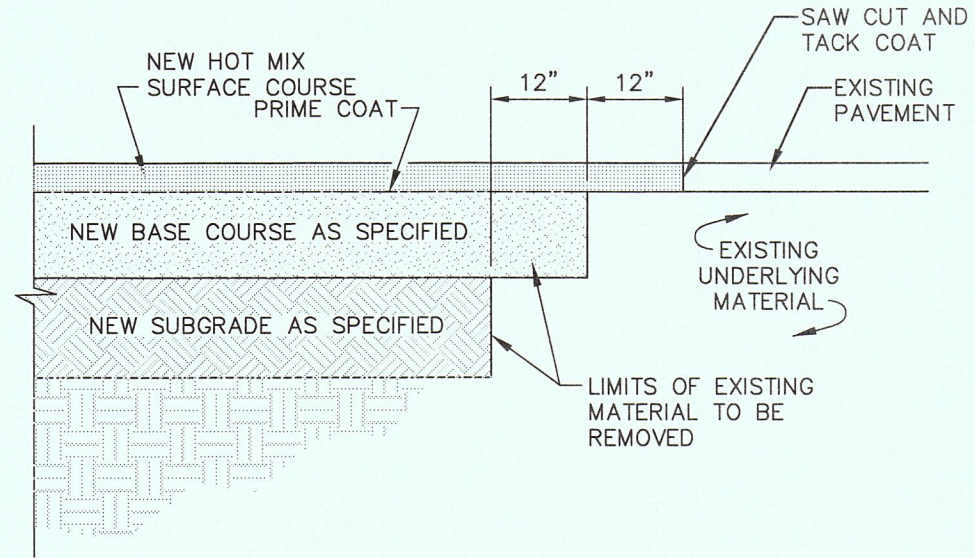
SCALE: 1/2" = 1'

FINAL BASE AND PAVEMENT SECTION TO BE DETERMINED AND VERIFIED BY C.B.R. TESTING OF SUBBASE



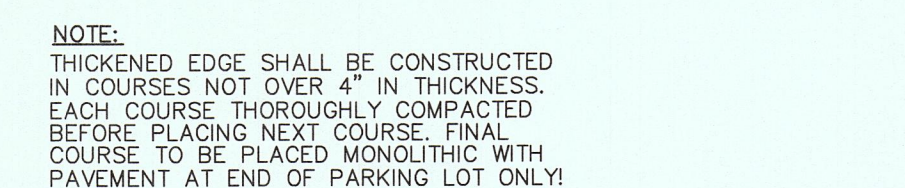
TYPICAL PAVEMENT SECTION

SCALE: 1" = 1'



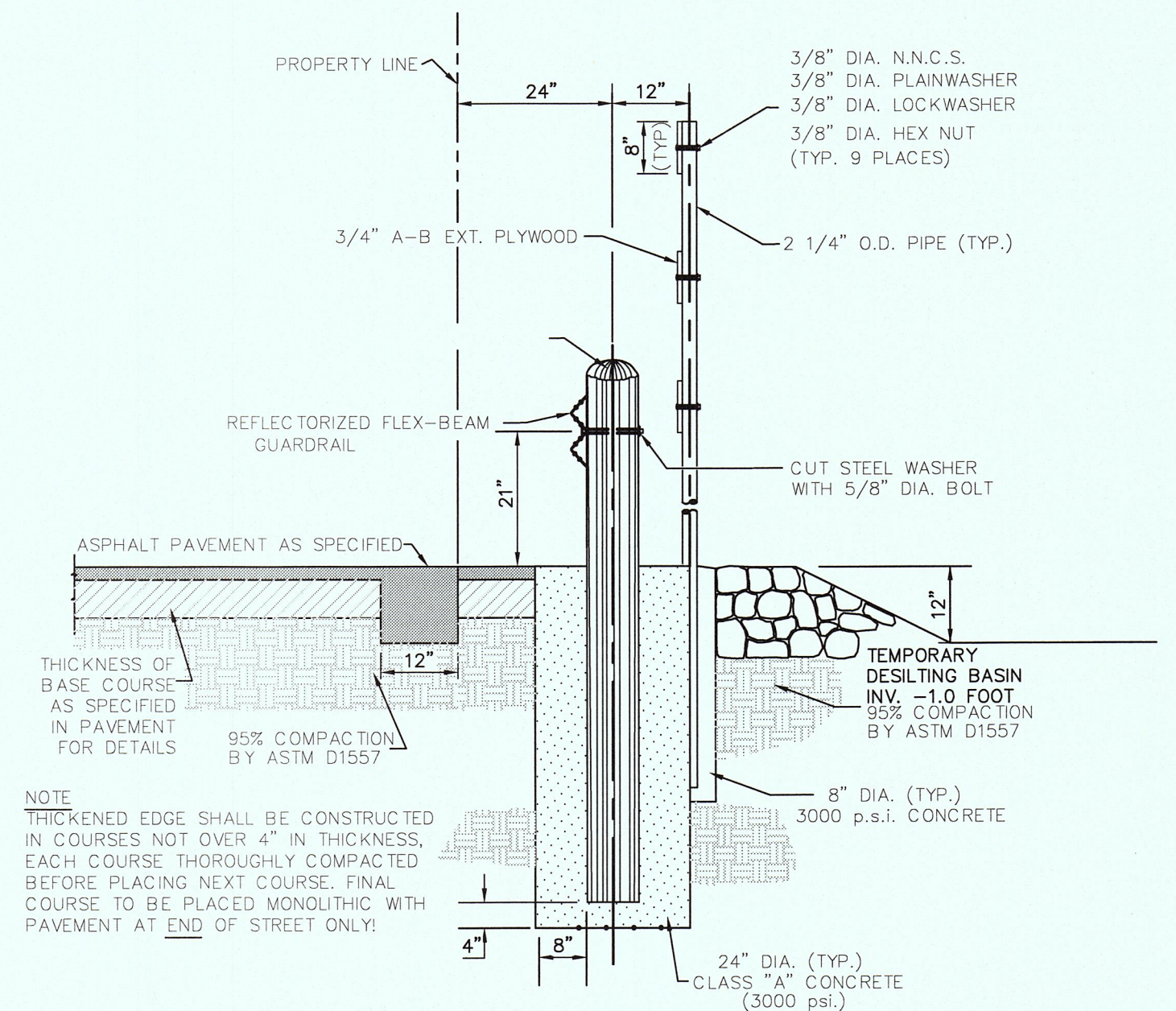
JUNCTURE OF NEW FLEXIBLE AND EXISTING FLEXIBLE PAVEMENT

SCALE: 1/2" = 1'



PAVEMENT TERMINUS

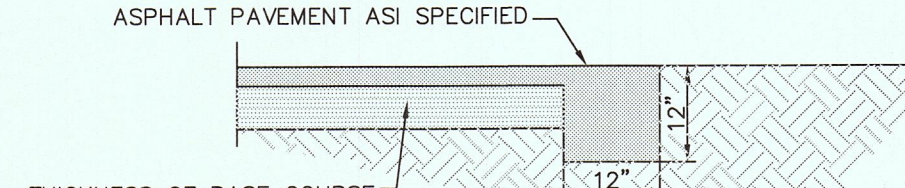
SCALE: 1" = 2'



TERMINUS OF STREET

SCALE: 1" = 2'

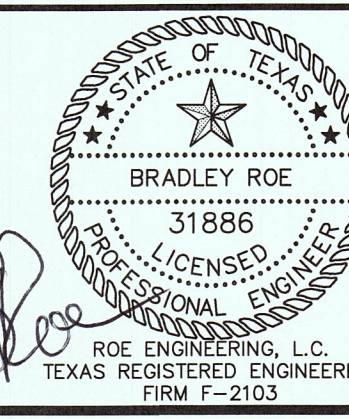
NOTE: THICKENED EDGE SHALL BE CONSTRUCTED IN COURSES NOT OVER 4" IN THICKNESS. EACH COURSE THOROUGHLY COMPACTED BEFORE PLACING NEXT COURSE. FINAL COURSE TO BE PLACED MONOLITHIC WITH PAVEMENT AT END OF PARKING LOT ONLY!



PAVEMENT TERMINUS

SCALE: 1" = 2'

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SIERRA DEL PUERTE UNIT TWO

TYPICAL DETAILS

DATE	REVISIONS	BY	PRIMARY BENCHMARK	SCALE
06/11/15	CITY COMMENTS	IR		
			EXISTING CITY MONUMENT LOCATED AT THE CENTERLINE INTERSECTION OF EDGAR PARK DRIVE AND MOUNTAIN VIEW DRIVE ELEVATION: 4229.73 (NAVD 88) ELEVATION : 4217.92 (CITY DATUM) ELEVATIONS BASED ON NAVD 88 DATUM	



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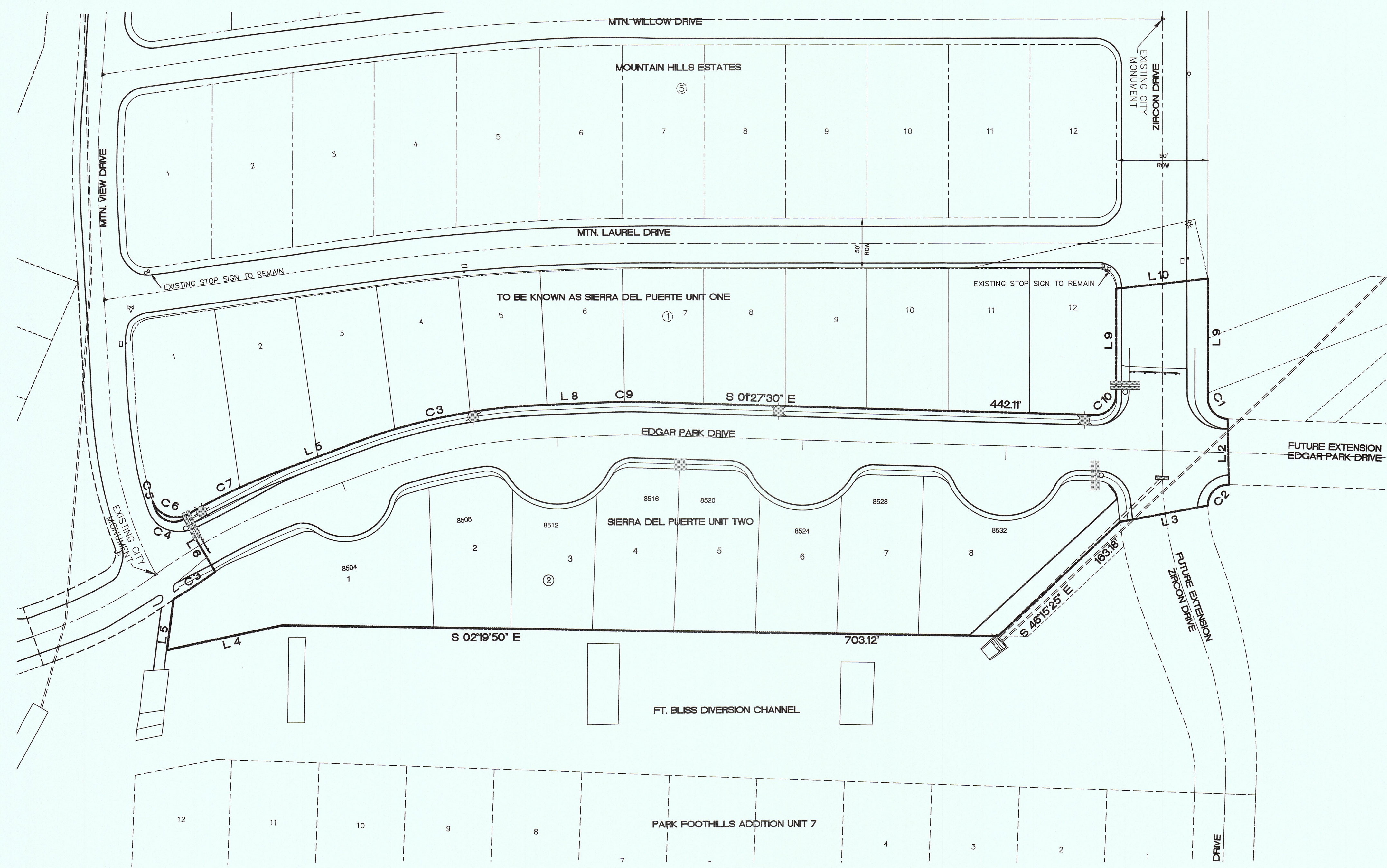
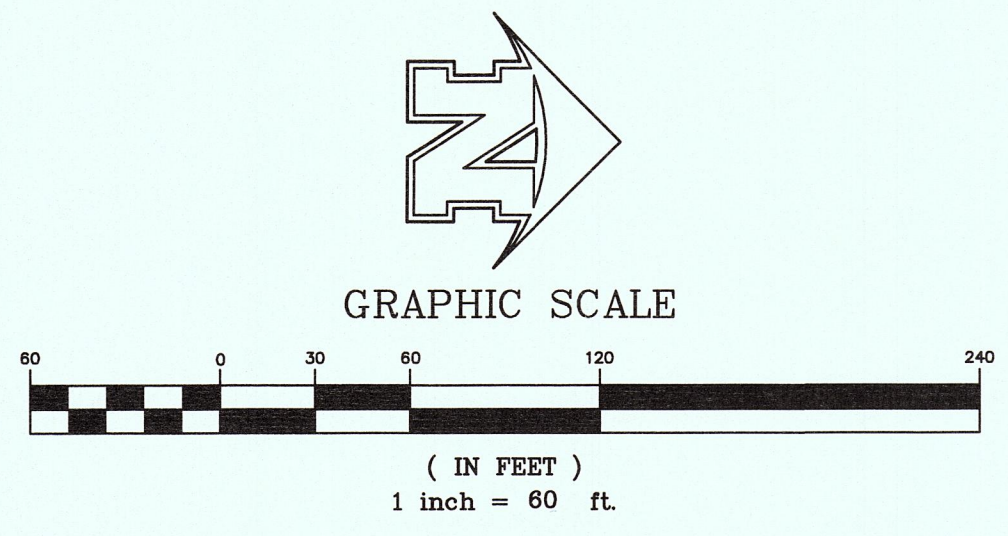
Final Approval

SHEET NO.

15

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Z:\Urban\Yolo_Vista_Planet\Planets\2108-0400\11-Typical\Detail\Detail_Sheet\14-15_SDP_U2_TYPICAL_DETAILS.DWG 08/05/15 B.GRAM



- DENOTES LOCATION OF PROPOSED LIGHT POLE
3 TOTAL
- DENOTES LOCATION OF NDCBU (4' x 6')
- DENOTES LOCATION OF PROPOSED 9" SNS
WITH 30" STS

Z:\Client\Map_Video_Properties\022515-11A_Siem Del Puerte Phase 2\02-0403\12-Illumination_Street_Intersection_Datam\02-16-18-2015 US ILLUMINATION PLAN.DWG 07/20/15 11:49AM



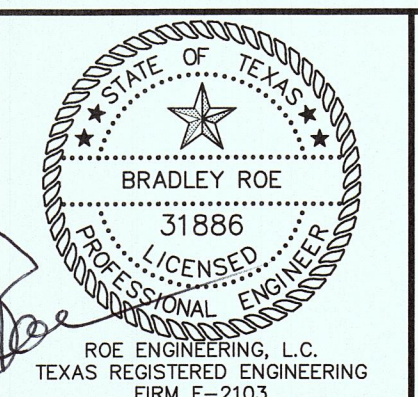
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FLOOD NOTE:
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DATE	REVISIONS	BY	PRIMARY BENCHMARK
06/11/15	CITY COMMENTS	IR	EXISTING CITY MONUMENT LOCATED AT THE CENTERLINE INTERSECTION OF EDGAR PARK DRIVE AND MOUNTAIN VIEW DRIVE ELEVATION: 4229.73 (NAVD 88) ELEVATION: 4217.92 (CITY DATUM) ELEVATIONS BASED ON NAVD 88 DATUM

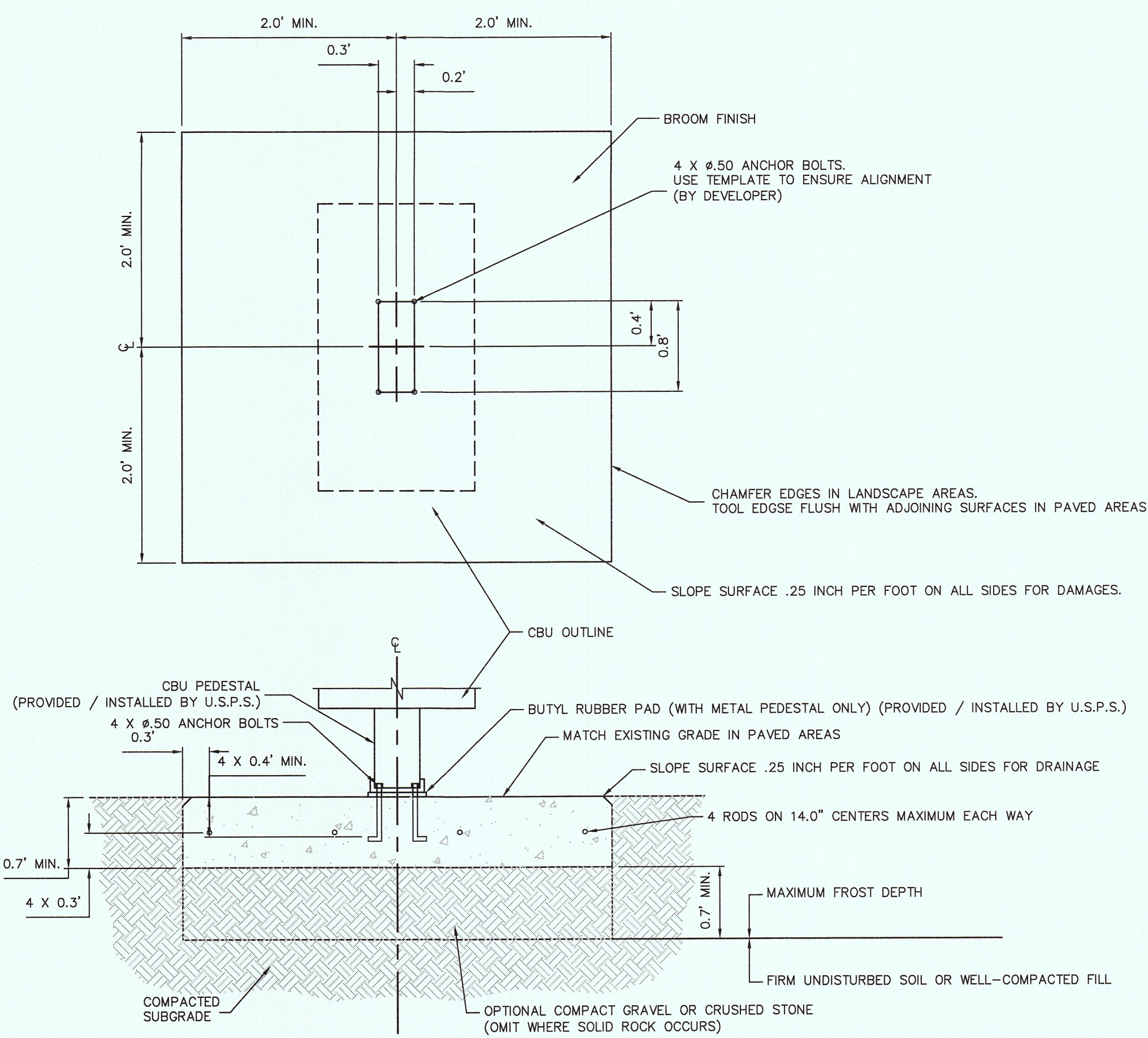
SCALE
HOR: 1" = 60' VER:
W.O. 022515-11A
DATE: APRIL 2015
DESIGN BY: IR
DRAWN BY: IR/LAJ
CHKD BY: H.P.
APPD BY: B.R.



SIERRA DEL PUERTE UNIT TWO
ILLUMINATION PLAN

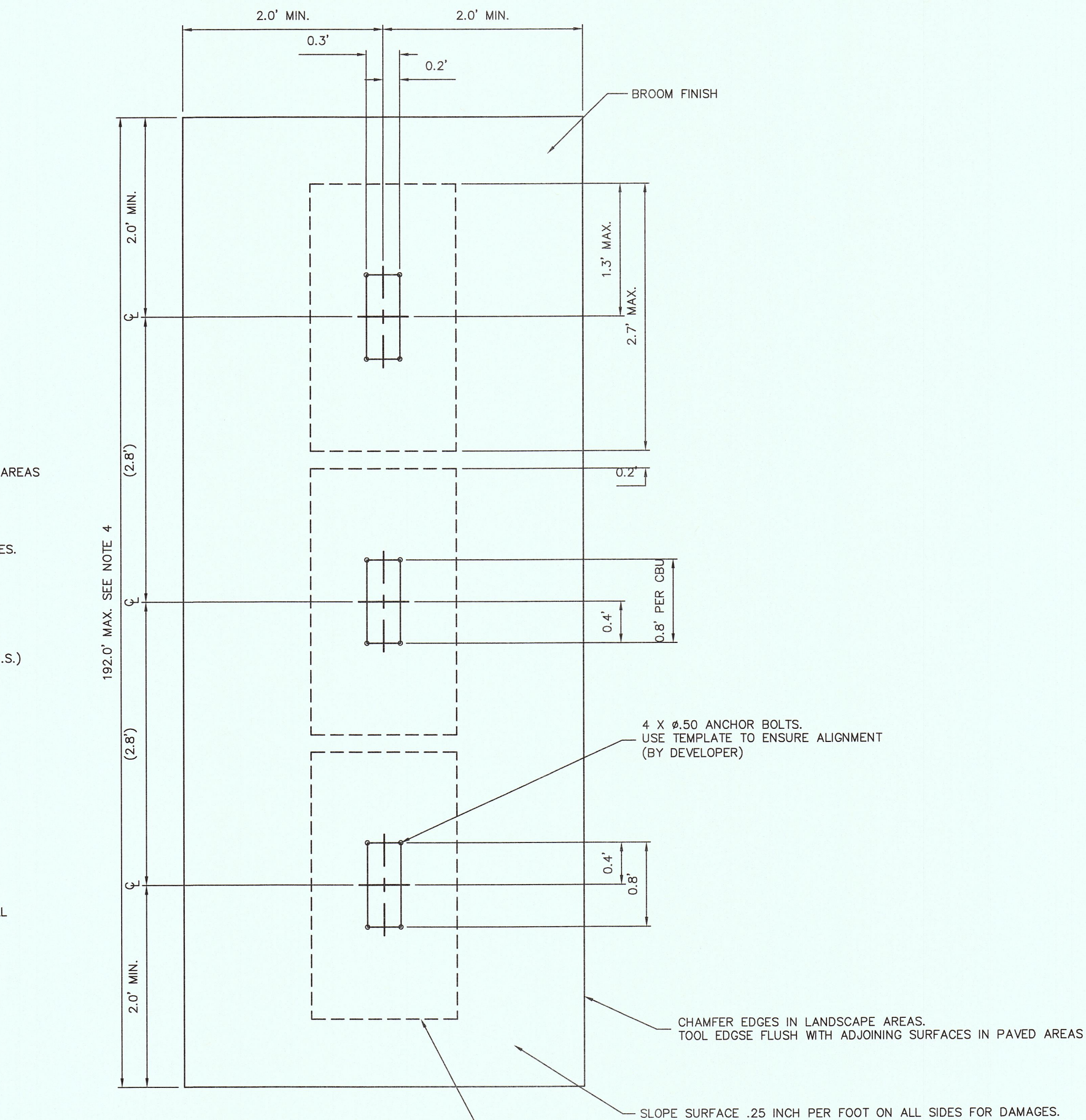
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ENGINEERING, L.C.
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(915) 533-1418 - FAX: (915) 533-4972

SHEET NO.
16
16 OF 23



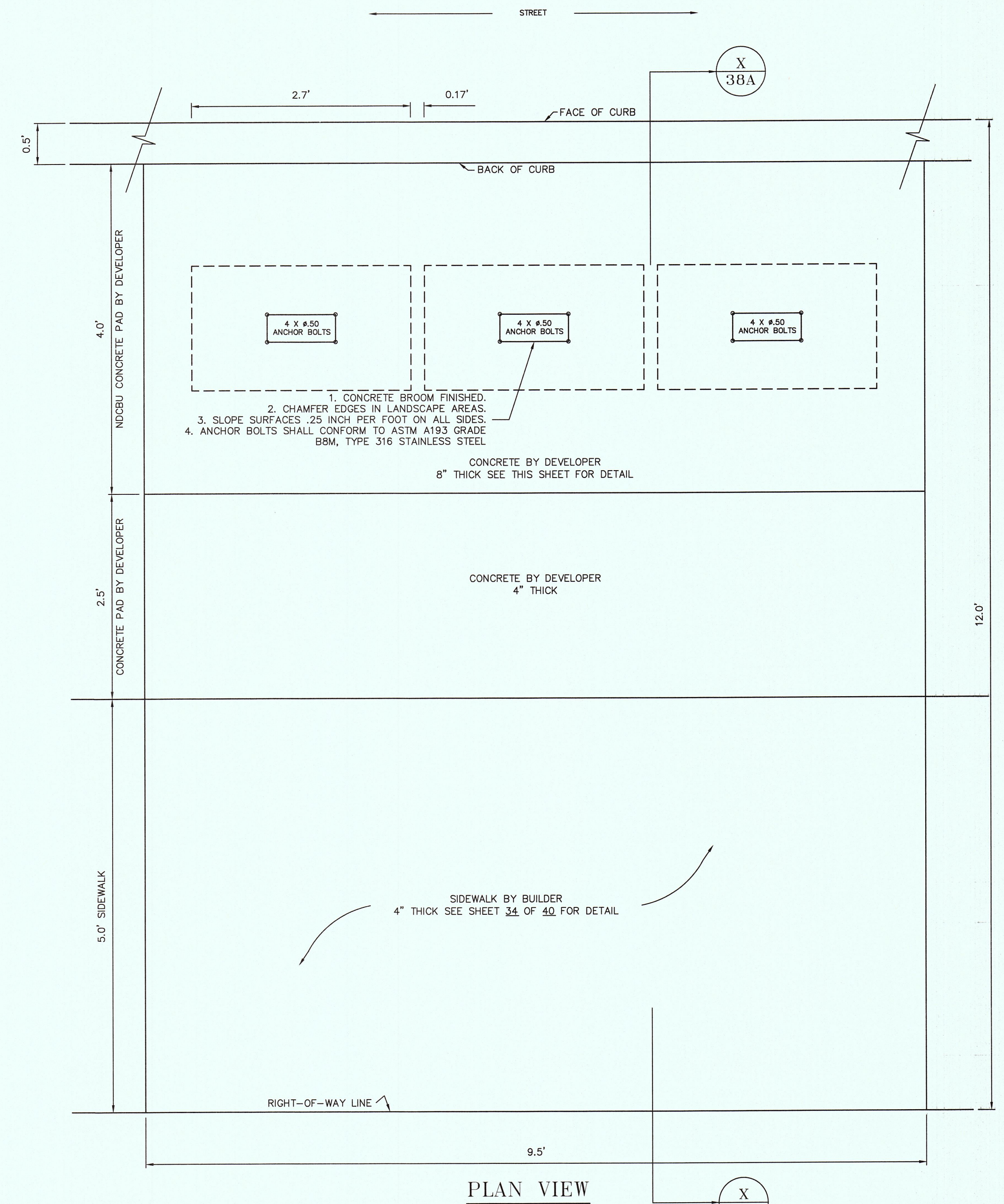
- NOTES:
1. CONCRETE SHALL HAVE A COMPRESSIVE STRENGTH OF 3000 SI @ 28 DAYS, CONTAIN 4% MIN - 6% MAX AIR ENTRAINMENT AND BE PLACED WITH A 3.50 - 4.50 SLUMP IN ACCORDANCE WITH ACI 301. (BY DEVELOPER)
 2. REINFORCING STEEL RODS SHALL CONFORM TO ASTM A615 GRADE 60. (BY DEVELOPER)
 3. ANCHOR BOLTS SHALL CONFORM TO ASTM A 193, GRADE B8M TYPE 316 STAINLESS STEEL. (BY DEVELOPER)

U.S.P.S. APPROVED SPECIFICATIONS - CONCRETE PAD (SINGLE UNIT)

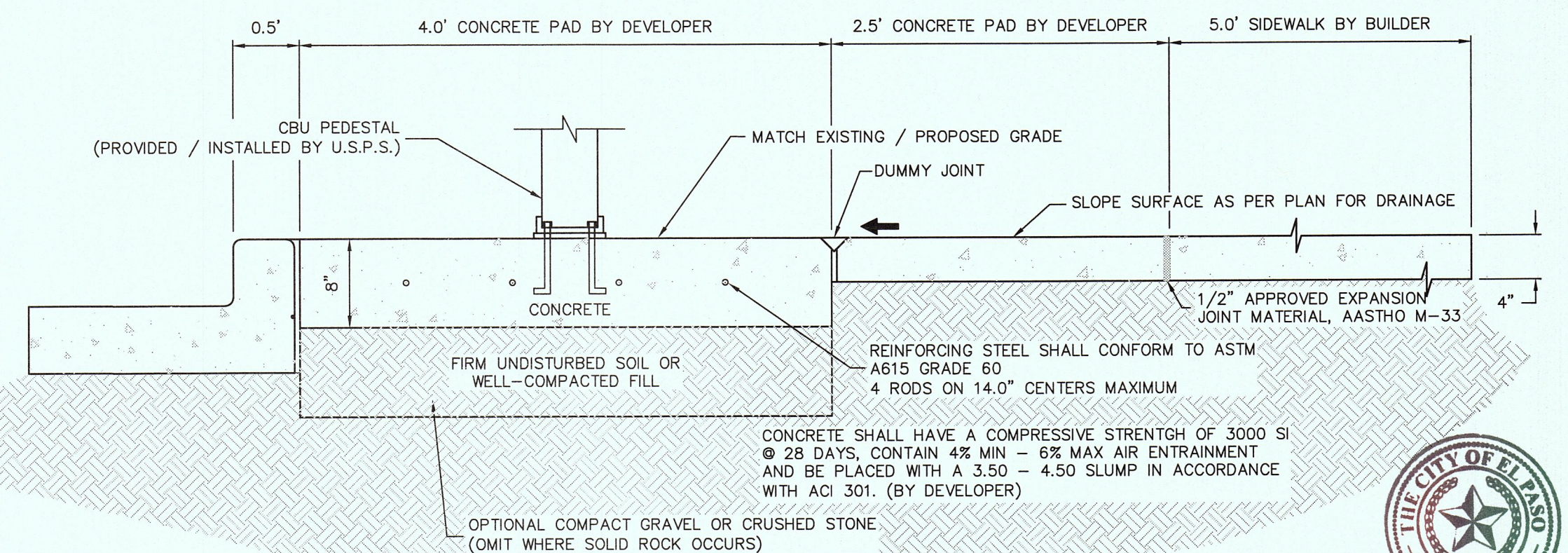


- NOTES:
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 3. ANCHOR BOLTS SHALL CONFORM TO ASTM A 193, GRADE B8M TYPE 316 STAINLESS STEEL. (BY DEVELOPER)
 4. A 3 CBU CONFIGURATION IS DEPICTED. A 2 OR 4 CBU CONFIGURATION MAY BE USED AS LONG AS THEY ARE ARRANGED IN GROUPS SUCH THAT THE OVERALL DIMENSION OF THE CONCRETE DOES NOT EXCEED 192 INCHES.

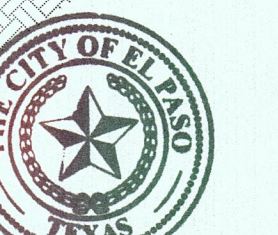
U.S.P.S. APPROVED SPECIFICATIONS - CONCRETE PAD (MULTIPLE UNIT)



PLAN VIEW

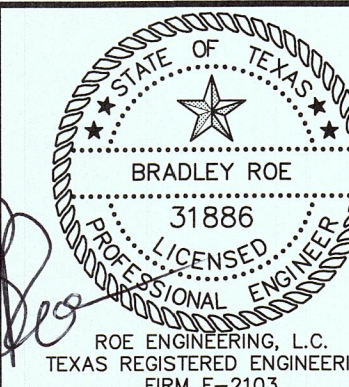


CROSS SECTION X-X



Final Approval

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HOR: _____ VER: _____
 W.O. 022515-11A
 DATE: APRIL 2015
 DESIGN BY: IR
 DRAWN BY: IR/LAJ
 CHKD. BY: H.P.
 APPD. BY: B.R.

SIERRA DEL PUERTE UNIT TWO
 U.S.P.S. DETAILS

ROE
 ENGINEERING, LC

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 (915) 533-1418 - FAX: (915) 533-4972

SHEET NO.

18

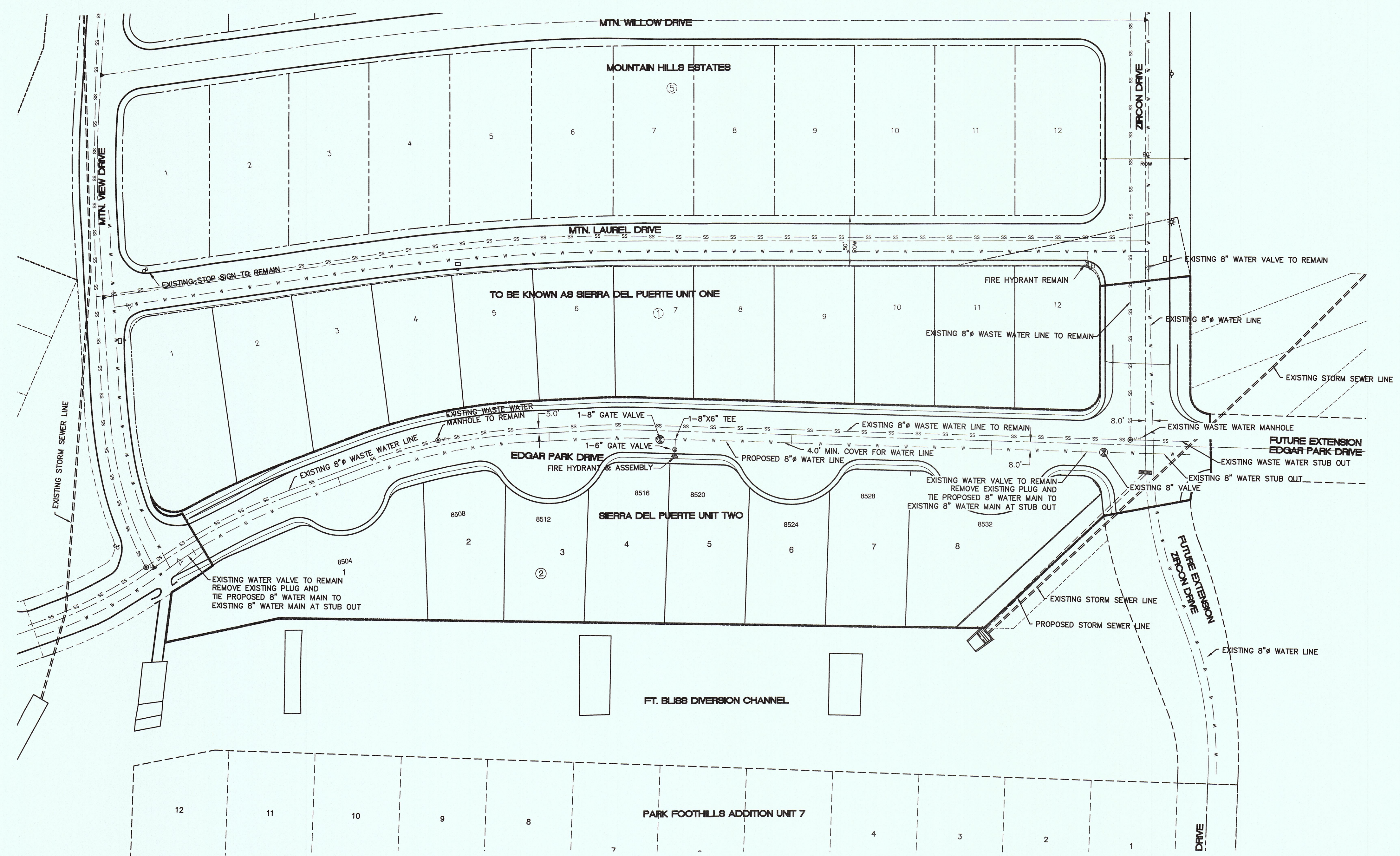
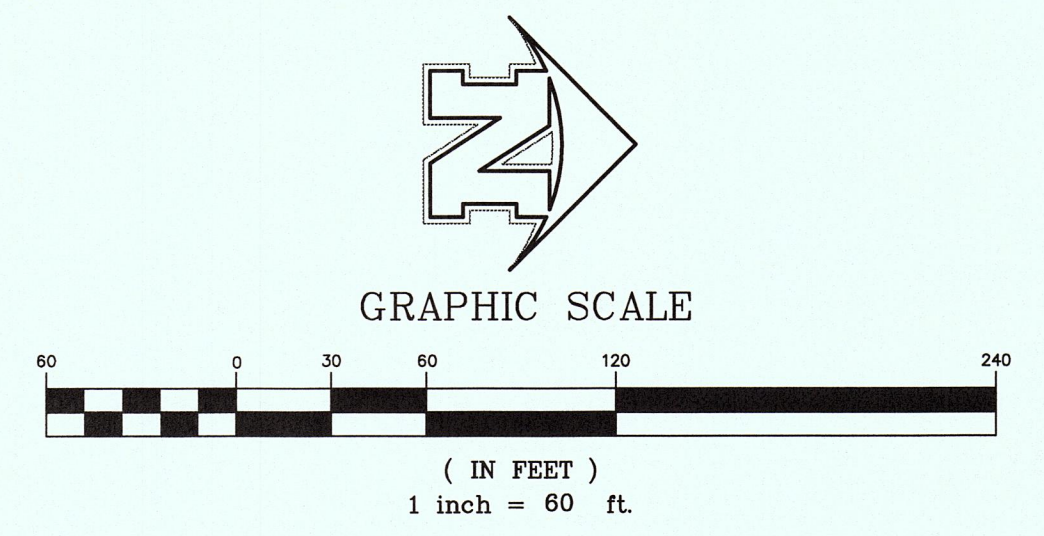
18 OF 23

FLOOD NOTE:

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DATE	REVISIONS	BY	PRIMARY BENCHMARK	SCALE
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- LEGEND**
- SUBDIVISION BOUNDARY LINE
 - STREET CENTER LINE
 - RIGHT-OF-WAY LINE
 - - - - - PROPOSED WATER LINE
 - ⊕ PROPOSED GATE VALE
 - ⊕ PROPOSED FIRE HYDRANT
 - - - - - PROPOSED WASTEWATER LINE
 - - - - - PROPOSED STORM SEWER LINE
 - - - - - EXISTING WATER LINE
 - - - - - EXISTING WASTEWATER LINE



NOTES

1. CONTACT UTILITY COMPANIES FOR EXACT LOCATION OF ANY UNDERGROUND UTILITIES IN THIS AREA.
2. INSTALL A TRENCH SAFETY SYSTEM TO PROVIDE FOR THE SAFE EXCAVATION OF ALL TRENCHES EXCEEDING THE DEPTH OF (5) FEET AS PER O.S.H.A. REQUIREMENTS.
3. 12" WATERLINES AND SMALLER PVC PIPE SHALL MEET THE REQUIREMENTS OF AWWA C900, PVC DR25 OR D.I. CL 350, UNLESS OTHERWISE SHOWN.
4. ALL WATERLINE FITTINGS SHALL MEET THE REQUIREMENTS OF AWWA C110, CLASS 350, DUCTILE IRON , WITH MECHANICAL JOINTS, AND SHALL BE SIZED TO MATCH THE PVC WATER LINE SIZE.
5. ALL PVC WATERLINE JOINTS SHALL MEET THE REQUIREMENTS OF ASTM 477 AND ASTM D3139, COMPRESSION GASKET RING, INTERGRAL BELL AND SPIGOT TYPE.
6. PROVIDE (4) FEET MINIMUM COVER OVER ALL PROPOSED WATERLINES 12" AND SMALLER.
7. CONTRACTOR SHALL VERIFY LOCATION AND DEPTH OF ALL EXISTING UTILITIES PRIOR TO INITIATING CONSTRUCTION.
8. MAINTAIN A MINIMUM HORIZONTAL SEPARATION DISTANCE OF 10' FEET BETWEEN ALL WATER & SEWER LINES. VARIATIONS TO THIS MINIMUM MUST BE IN STRICT ACCORDANCE WITH TCEQ REQUIREMENTS AND EPWJ.
9. FOR 12" DIAMETER WATER MAINS AND SMALLER, CONCRETE THRUST BLOCKS OR OTHER APPROVED THRUST RESTRAINT METHOD SHALL BE INSTALLED AT ALL FITTINGS AND VALVES PER DESIGN PLANS AND IN ACCORDANCE WITH EPWJ SPECIFICATIONS. IF APPROVED, THRUST RESTRAINT DEVICES MAY BE INSTALLED IN LIEU OF THRUST BLOCKS AS PER MANUFACTURER'S SPECIFICATIONS.
10. REFER TO SHEET 20 FOR ADDITIONAL NOTES

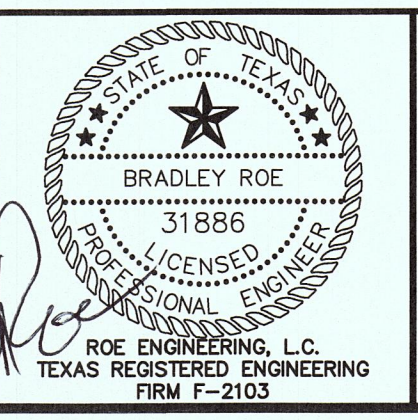
FLOOD NOTE:

NOTE: THE ABOVE REFERENCED PROPERTY IS WITHIN ZONE "C". (EXPLANATION: AREAS OF MINIMAL FLOODING) ACCORDING TO THE FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAPS, AS PER AREA COMMUNITY PANEL NO. 4802140024B. DATED OCTOBER 15, 1982.

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DATE	REVISIONS	BY	PRIMARY BENCHMARK
06/11/15	CITY COMMENTS	IR	EXISTING CITY MONUMENT LOCATED AT THE CENTERLINE INTERSECTION OF EDGAR PARK DRIVE AND MOUNTAIN VIEW DRIVE ELEVATION: 4229.73 (NAVD 88) ELEVATION: 4217.92 (CITY DATUM) ELEVATIONS BASED ON NAVD 88 DATUM

SCALE
HOR: 1" = 60' VER:
W.O. 022515-11A
DATE: APRIL 2015
DESIGN BY: IR
DRAWN BY: IR/LAJ
CHKD. BY: H.P.
APPD. BY: B.R.



SIERRA DEL PUERTE UNIT TWO

WATER PLAN

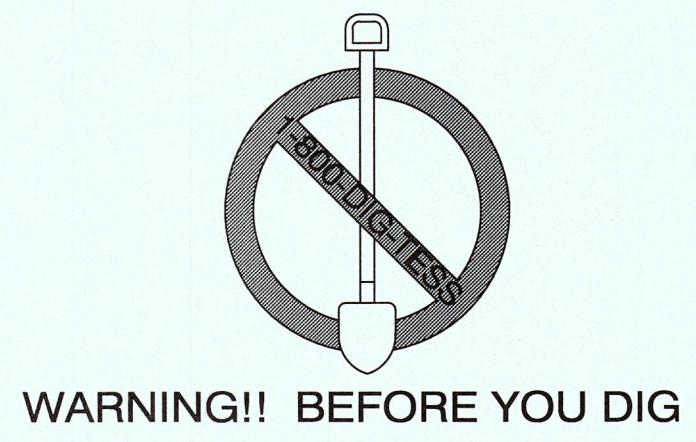
ROE ENGINEERING, L.C.

601 N. Cotton St. Suite No.6 El Paso, Tx, 79902
(915) 533-1418 - FAX: (915) 533-4972

SHEET NO.

19

19 OF 23



UTILITY COMPANIES

- | | |
|--|---|
| <p>TEXAS GAS SERVICE (NATURAL GAS)
4700 POLLARD STREET
EL PASO, TEXAS 79930
DISPATCH (915) 680-8250</p> <p>EL PASO COUNTY ROAD AND BRIDGE
800 E. OVERLAND SUITE 407
EL PASO, TEXAS 79901
ERNE CARROLL, PE
(915) 546-2015</p> <p>EL PASO ELECTRIC COMPANY (ELECTRIC)
501 WEST SAN ANTONIO STREET
EL PASO, TEXAS 79901
RUAL GUEL, (915) 543-4108</p> | <p>ATAK
11206 PELLICANO DRIVE
EL PASO, TEXAS 79935
MANY MORENO
(915) 595-8107</p> <p>TIME WARNER COMMUNICATIONS
400 CONCORD STREET
EL PASO, TEXAS 79906
CONSTRUCTION (915) 775-7414</p> <p>PASCO DEL ESTE MUD NO. 1 (WATER, SEWER)
12300 MONTWOOD, SUITE 100
EL PASO, TEXAS 79928
JOHN DIXON
(915) 858-1068</p> |
|--|---|

Z:\Client\Yolo\Yolo Proprietor\022515-11B Sierra Del Puerte Phases 2,3,4,5,6,7,8,9,10,11,12 Water, Wastewater Plan\DWG_06/05/15_2-3D94

GENERAL NOTES

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE TO THE REQUIREMENTS OF EL PASO WATER UTILITIES (EPWU) AND TCEQ.
- ALL EXISTING UTILITIES CURRENTLY IN SERVICE MUST REMAIN IN SERVICE THROUGHOUT CONSTRUCTION OF THE NEW LINE. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING ALL EXISTING UTILITIES (INCLUDING SERVICE CONNECTIONS) FROM DAMAGE AS A RESULT OF CONSTRUCTION ACTIVITIES.
- ALTHOUGH ALL EFFORTS HAVE BEEN MADE TO INDICATE ALL MAJOR EXISTING UTILITIES ON PLANS, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LOCATE AND PROTECT ALL SAID UTILITIES AS WELL AS SERVICE CONNECTIONS (WHETHER OR NOT INDICATED ON PLANS) PRIOR TO AND DURING CONSTRUCTION.
- ANY EXISTING PAVEMENT, CURBS AND/OR SIDEWALKS DAMAGED OR REMOVED DURING CONSTRUCTION WILL BE REPAIRED BY THE CONTRACTOR AT HIS OWN EXPENSE BEFORE ACCEPTANCE OF THE WORK.
- THE LOCATION AND DEPTHS OF ANY EXISTING WATER AND/OR WASTEWATER LINES TO BE CROSSED OR CONNECTED TO SHALL BE VERIFIED BY THE CONTRACTOR AT THE TIME OF COMMENCEMENT OF CONSTRUCTION.
- CONTRACTOR SHALL VERIFY EXACT DEPTH AND LOCATION OF ALL UTILITIES PRIOR TO BEGINNING CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES, DRIVEWAYS, PAVEMENT, CURB & GUTTER, SIDEWALKS, ETC. SHALL BE REPAIRED BY THE CONTRACTOR, OR THE UTILITY, AT THE UTILITIES OPTION, AND SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
- CONTACT EPWU, THE ENGINEER AND ANY OTHER CONCERNED PARTIES 48 HOURS PRIOR TO CONNECTING TO EXISTING WATER AND/OR WASTEWATER LINES.
- ALL FILL AREAS OVER ALL UTILITIES, SHALL BE COMPACTED TO 95% STANDARD PROCTOR DENSITY IN ACCORDANCE WITH TEX 113-E METHOD.
- WATER AND WASTEWATER ALIGNMENTS SHOWN ON PLANS SHOULD BE ACHIEVED BY FLEXURE WITHIN THE MANUFACTURER'S SPECIFICATIONS, EXCEPT WHERE SPECIFIC FITTINGS ARE CALLED FOR IN THE PLANS.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE AND PROTECT ALL EXISTING UTILITIES SUCH AS GAS LINES, ELECTRIC LINES, WATERLINES, VALVE BOXES, FIRE HYDRANTS, STRUCTURES, AND OTHER APPURTENANCES THAT LIE WITHIN THE RIGHT OF WAY OR EASEMENTS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REPAIR ALL UTILITIES, DRIVEWAYS, PAVEMENT, CURB, GUTTER, SIDEWALKS, FENCES AND OTHER ITEMS DAMAGED DURING CONSTRUCTION REGARDLESS OF WHETHER ALL ITEMS ARE SHOWN ON THE PLANS AT HIS SOLE EXPENSE. IN ADDITION TO NORMAL PRECAUTIONS WHEN EXCAVATING, TAKE EXTRA CAUTION WHEN EXCAVATING WITHIN 25 FT. OF ANY UTILITIES SHOWN ON THE PLANS.
- ALL CONSTRUCTION ACTIVITIES, INCLUDING ACCESS, EGRESS, TRAVEL, STOCKPILING, ETC. ARE TO BE CONFINED TO AREAS IDENTIFIED BY THE ENGINEER.
- DISPOSAL OF ALL SPOILS OFFSITE WILL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
- PIPE FITTINGS AND JOINTS: WATER-PVC DR 25, C-900, CL-165, WITH BOLT LESS GASKET JOINTS AND C.I., M.J. OR FLANGED FITTINGS UNLESS OTHERWISE SHOWN ON THE PLANS; FUSING VALVE / FIRE HYDRANTS LEAD - DUCTILE IRON, CLASS 50; MECHANICAL JOINTS (D.I. ENDS) FITTINGS, UNLESS OTHERWISE SHOWN ON THE PLANS. ALL PIPE FITTINGS AND JOINTS SHALL CONFORM TO EL PASO WATER UTILITIES STANDARDS AND SPECIFICATIONS.
- AT ALL LOCATIONS WHERE A WATERLINE CROSSES A WASTEWATER LINE, THE CONSTRUCTION SHALL STRICTLY COMPLY WITH ALL APPLICABLE RULES AND REGULATIONS OF EPWU / TCEQ.
- THE CONTRACTOR SHALL FURNISH THE ENGINEER ONE SET OF AS-BUILT PLANS REFLECTING ALL CHANGES MADE IN THE FIELD, AND TWO MEASUREMENTS TO ALL VALVES AND MANHOLES INSTALLED FROM PERMANENT OBJECTS.
- EPWU AND THE ENGINEER SHALL BE GIVEN 48 HOURS NOTICE PRIOR TO ANY TESTING (DENSITY, PRESSURE, LEAKAGE, ETC.)
- THIS WATER DISTRIBUTION SYSTEM MUST BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ) RULES AND REGULATIONS FOR PUBLIC WATER SYSTEMS, AND CONFORM TO EL PASO WATER UTILITIES STANDARDS AND SPECIFICATIONS.
- ALL NEWLY INSTALLED PIPES AND RELATED PRODUCTS MUST CONFORM TO AMERICAN NATIONAL STANDARDS INSTITUTE/NATIONAL SANITATION FOUNDATION (ANSI/NSF) STANDARD 61 AND MUST BE CERTIFIED BY AN ORGANIZATION ACCREDITED BY ANSI. REFER TO EL PASO WATER UTILITY STANDARDS AND SPECIFICATIONS.
- PVC PIPE MATERIAL SHALL BE IN ACCORDANCE WITH EPWU SPECIFICATION 1.1.
- NO PIPE WHICH HAS BEEN USED FOR ANY PURPOSE OTHER THAN THE CONVEYANCE OF DRINKING WATER SHALL BE ACCEPTED OR RELOCATED FOR USE IN ANY PUBLIC DRINKING WATER SYSTEM.
- WATER TRANSMISSION AND DISTRIBUTION LINES MUST BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. HOWEVER, THE TOP OF THE WATER LINE MUST BE LOCATED BELOW THE FROST LINE AND IN NO CASE SHALL THE TOP OF THE WATER LINE BE LESS THAN 48 INCHES BELOW GROUND SURFACE.
- THE HYDROSTATIC LEAKAGE RATE SHALL CONFORM TO EL PASO WATER UTILITIES STANDARDS AND SPECIFICATIONS.
- THE CONTRACTOR SHALL MAINTAIN A MINIMUM SEPARATION DISTANCE IN ALL DIRECTIONS OF TEN FEET BETWEEN THE PROPOSED WATERLINE AND WASTEWATER COLLECTION FACILITIES INCLUDING MANHOLES AND SEPTIC TANK DRAINFIELDS. IF THIS DISTANCE CANNOT BE MAINTAINED, THE CONTRACTOR MUST IMMEDIATELY NOTIFY THE PROJECT ENGINEER FOR FURTHER DIRECTION, SEPARATION DISTANCES, INSTALLATION METHODS, AND MATERIALS UTILIZED MUST MEET 290.14(E) OF THE CURRENT RULES.
- THE CONTRACTOR SHALL NOT PLACE THE PIPE IN WATER OR WHERE IT CAN BE FLOODED WITH WATER OR SEWAGE DURING ITS STORAGE OR INSTALLATION.
- DISINFECTION AND TESTING WILL BE IN ACCORDANCE WITH EPWU STANDARD SPECIFICATIONS FOR THE INSTALLATION OF WATER MAINS, SANITARY SEWER MAINS AND RELATED APPURTENANCES.

LIST OF UTILITIES AND AGENCIES

TEXAS 811
1-800-344-8377

QWEST
(915) 587-9899
Fred Para

SPRINT
1-800-521-0579
LOCAL (915) 534-7910

E.P.C.W.I.D #1
(915) 859-4186

WORLD COM
(915) 587-4015
cell (915) 449-9435
Manny Arredariz

EL PASO ELECTRIC CO.
DISTRIBUTION LINES
(915) 543-5274
cell (915) 526-3189

COUNTY OF EL PASO, TEXAS
(915) 546-2015
Ernie Carrizal, P.E.

TEXAS GAS SERVICE
(915) 680-7728
Tomas Lucero

TIME WARNER CABLE
(915) 772-1123
Raymond Mendoza

MCi
(915) 449-9435
Ken Bailey

EL PASO WATER UTILITIES (EPWU)
(915) 594-5643
Federico Hernandez II

AT & T
(915) 595-5118
Frank Gonzalez
fm4424@att.com

EL PASO ELECTRIC CO. (EPEC)
(915) 543-5866
Francisco Melendez

CITY DEPARTMENT OF TRANSPORTATION
(915) 599-6448
Sergio Reyes

TRENCH SAFETY NOTES

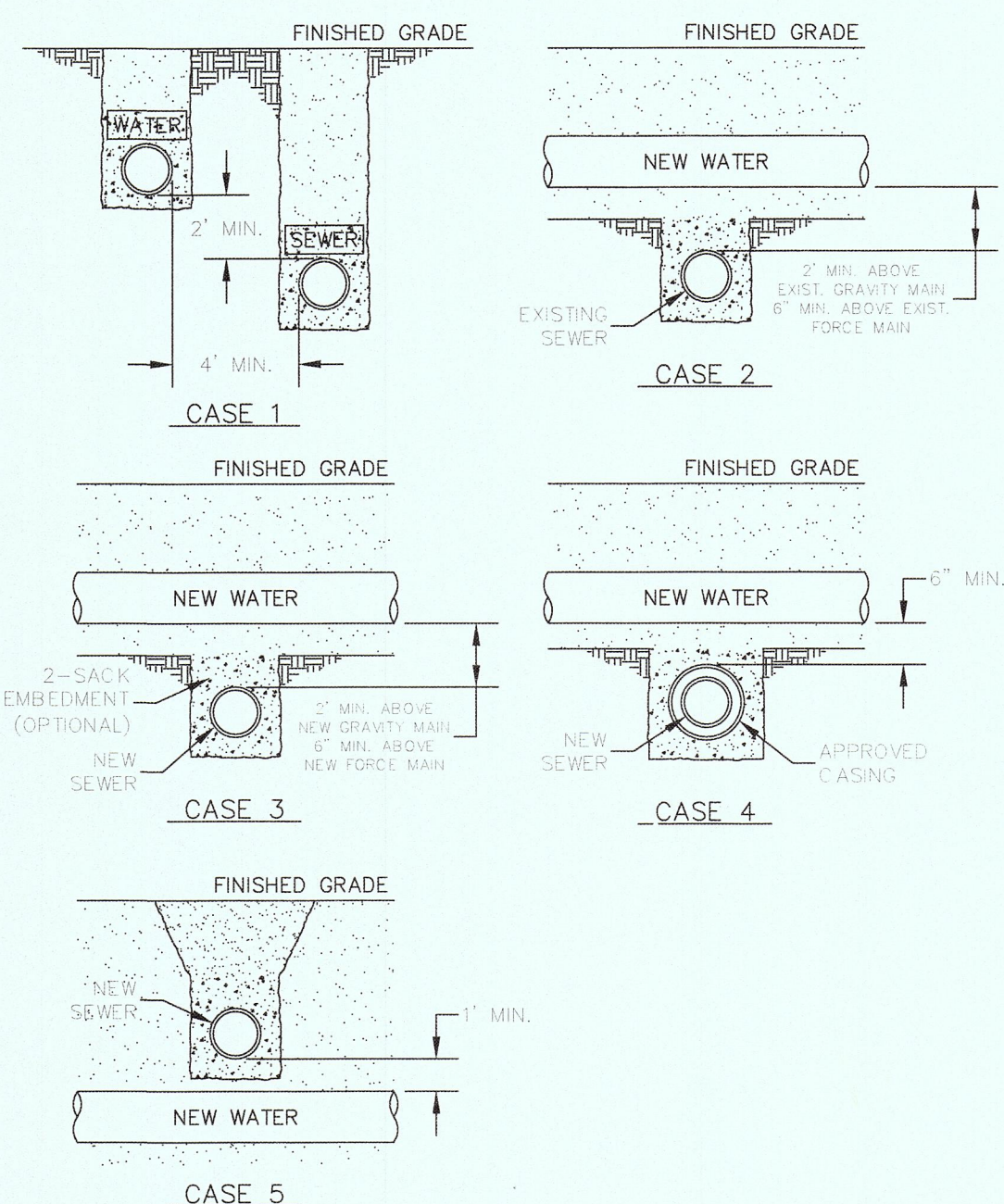
- IN ACCORDANCE WITH THE LAW OF THE STATE OF TEXAS AND THE U.S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION REGULATIONS. ALL TRENCHES OVER 5 FEET IN DEPTH IN EITHER HARD AND COMPACT OF SOFT AND UNSTABLE SOIL SHALL BE SLOPED, SHORED, SHEETED, BRACED OR OTHERWISE SUPPORTED. FURTHERMORE, ALL TRENCHES LESS THAN 5 FEET IN DEPTH SHALL ALSO BE EFFECTIVELY PROTECTED WHEN HAZARDOUS GROUND MOVEMENT MAY BE EXPECTED.
- IN ACCORDANCE WITH THE U.S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION REGULATIONS, WHEN EMPLOYEES ARE REQUIRED TO BE IN TRENCHES 4 FEET DEEP OR MORE, ADEQUATE MEANS EXIT, SUCH AS A LADDER OR STEPS, MUST BE PROVIDED AND LOCATED SO AS TO REQUIRE NO MORE THAN 25 FEET OF LATERAL TRAVEL.
- IF TRENCH SAFETY SYSTEMS DETAILS WERE NOT PROVIDED IN THE PLANS BECAUSE TRENCHES WERE ANTICIPATED TO BE LESS THAN FIVE FEET IN DEPTH AND DURING CONSTRUCTION IT IS FOUND THAT TRENCHES ARE IN FACT 5 FEET OR MORE IN DEPTH OR TRENCHES LESS THAN 5 FEET IN DEPTH ARE IN AN AREA WHERE HAZARDOUS GROUND MOVEMENT IS EXPECTED, ALL CONSTRUCTION SHALL CEASE, THE TRENCHED AREA SHALL BE BARRICADED AND THE ENGINEER NOTIFIED IMMEDIATELY. CONSTRUCTION SHALL NOT RESUME UNTIL APPROPRIATE TRENCH SAFETY SYSTEMS DETAILS, AS DESIGNED BY A PROFESSIONAL ENGINEER, ARE SUBMITTED TO AND ACCEPTED BY PDEMUD1 MUD 1.
- CONTRACTOR SHALL PROVIDE TO THE AUTHORITY A TRENCH SAFETY PLAN, SEALED BY A REGISTERED ENGINEER.

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

WATER DISTRIBUTION SYSTEM GENERAL CONSTRUCTION NOTES

- THIS WATER DISTRIBUTION SYSTEM MUST BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ) RULES AND REGULATIONS FOR PUBLIC WATER SYSTEMS 30 TEXAS ADMINISTRATIVE CODE (TAC) CHAPTER 290 SUBCHAPTER D.
- PRIOR TO COMMENCEMENT OF CONSTRUCTION, THE OWNER OF THE SYSTEM OR HIS REPRESENTATIVE MUST NOTIFY THE APPROPRIATE TCEQ REGIONAL OFFICE IN WRITING OF THE DATE ON WHICH CONSTRUCTION WILL BEGIN.
- ALL NEWLY INSTALLED PIPES AND RELATED PRODUCTS MUST CONFORM TO AMERICAN NATIONAL STANDARDS INSTITUTE/NATIONAL SANITATION FOUNDATION (ANSI/NSF) AND HAVE AN ASTM DESIGN PRESSURE RATING OF AT LEAST 350 PSI OR A STANDARD DIMENSION RATION OF 26 OR LESS.
- NO PIPE WHICH HAS BEEN USED FOR ANY PURPOSE OTHER THAN THE CONVEYANCE OF DRINKING WATER SHALL BE ACCEPTED OR RELOCATED FOR USE IN ANY PUBLIC DRINKING WATER SUPPLY.
- WATER TRANSMISSION AND DISTRIBUTION LINES MUST BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTION HOWEVER, THE TOP OF THE WATER LINE MUST BE LOCATED BELOW THE FROST LINE AND IN NO CASE SHALL THE TOP OF THE WATER LINE BE LESS THAN 24 INCHES BELOW THE GROUND.
- THE HYDROSTATIC LEAKAGE RATE SHALL NOT EXCEED THE AMOUNT ALLOWED OR RECOMMENDED BY THE MOST CURRENT AWWA FORMULAS FOR PVC PIPE, CAST IRON AND DUCTILE IRON PIPE.
- THE CONTRACTOR SHALL INSTALL APPROPRIATE AIR RELEASE DEVICES IN THE DISTRIBUTION SYSTEM AT ALL POINTS WHERE TOPOGRAPHY OR OTHER FACTORS MAY CREATE AIR LOCKS IN THE LINES. ALL VENT OPENINGS TO THE ATMOSPHERE SHALL BE COVERED WITH 16-MESH OR FINER, CORROSION RESISTANT SCREENING MATERIAL OR AN ACCEPTABLE EQUIVALENT.
- THE CONTRACTOR SHALL MAINTAIN A MINIMUM SEPARATION DISTANCE IN ALL DIRECTIONS OF NINE FEET BETWEEN THE PROPOSED WATER LINE AND WASTEWATER COLLECTION FACILITIES INCLUDING MANHOLES AND SEPTIC TANK DRAINFIELDS. IF THIS DISTANCE CANNOT BE MAINTAINED, THE CONTRACTOR MUST IMMEDIATELY NOTIFY THE PROJECT ENGINEER FOR FURTHER DIRECTION. SEPARATION DISTANCES, INSTALLATION METHODS, AND MATERIALS UTILIZED MUST MEET #290.44(E) OF THE CURRENT RULES.
- THE CONTRACTOR SHALL DISINFECT THE NEW WATER MAINS IN ACCORDANCE WITH AWWA STANDARD C651 AND THEN FLUSH AND SAMPLE THE LINES BEFORE USING PLACED INTO SERVICE. SAMPLES SHALL BE COLLECTED FOR MICROBIOLOGICAL ANALYSIS TO CHECK THE EFFECTIVENESS OF THE DISINFECTION PROCEDURE WHICH SHALL BE REPEATED IF CONTAMINATION PERSISTS. A MINIMUM OF ONE SAMPLE FOR EACH 1000 FEET OF COMPLETED WATER LINE WILL BE REQUIRED OR AT THE NEXT AVAILABLE SAMPLING POINT BEYOND 1000 FEET AS DESIGNATED BY THE DESIGN ENGINEER.
- THE CONTRACTOR SHALL NOT PLACE THE PIPE IN THE WATER OR WHERE IT CAN BE FLOODED WITH WATER OR SEWAGE DURING ITS STORAGE OR INSTALLATION.

SEPARATION DISTANCE



CONSTRUCTION KEY NOTES
WHEN STANDARD NINE (9) FOOT SEPARATION DISTANCE CANNOT BE ACHIEVED, SEPARATION SHALL BE DETERMINED ACCORDING TO THE FOLLOWING CONDITIONS:

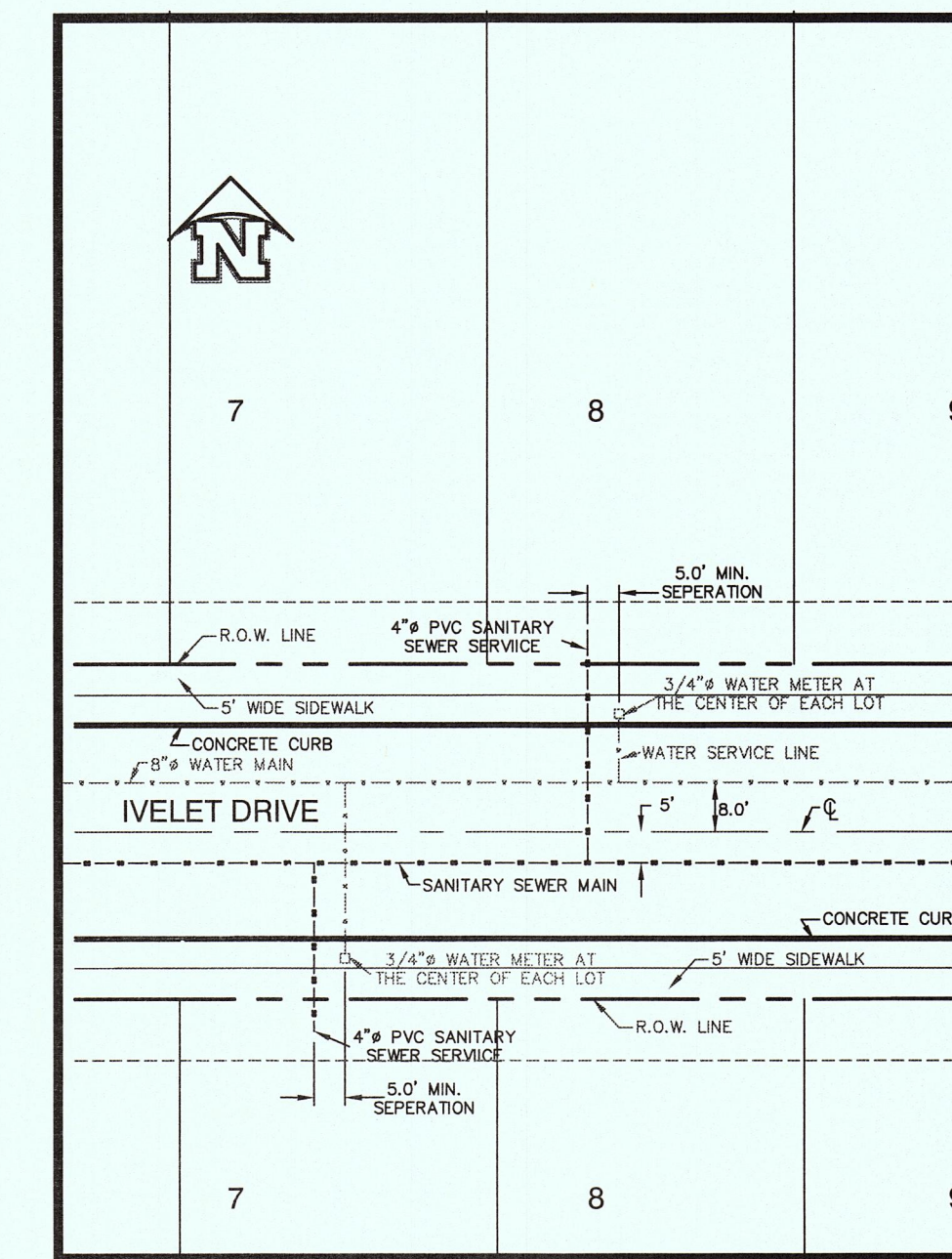
CASE 1: GRAVITY SANITARY SEWER MAIN OR FORCE MAIN PARALLEL TO POTABLE WATER MAIN (PER TCEQ §290.44(a)(4)(A)).
 • LOCATION: WATER ABOVE SEWER OR FORCE MAIN.
 • SEWER MATERIALS: EXISTING GRAVITY MAIN (PVC SDR35 OR CLAY) OR FORCE MAIN TO REMAIN IF NOT LEAKING-IF LEAKING, MUST BE REPLACED WITH PVC (150 PSI) 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 §290.44(a)(4)(B)) AND §290.44(a)(4)(C)).
 • 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 §290.44(a)(4)(B)(i)), §290.44(a)(4)(B)(ii) AND §290.44(a)(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 GRAVITY 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 (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(a)(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 CASING PIPE ON WATER MAIN.

CASE 5: NEW GRAVITY SANITARY SEWER MAIN OR NEW FORCE MAIN CROSSING NEW POTABLE WATER MAIN (PER TCEQ §290.44(a)(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.



TYPICAL WATER AND SANITARY SEWER SERVICE DETAIL
SCALE: 1" = 30'

NOTE: EXISTING SANITARY SEWER MANHOLE RINGS TO BE ADJUSTED TO GRADE BY EPWU CREWS AT OWNER'S EXPENSE

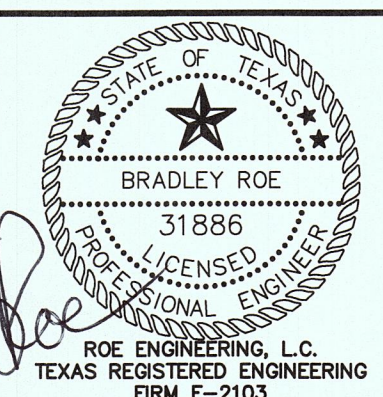


Final Approval

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FLOOD NOTE:
NOTE: THE ABOVE REFERENCED PROPERTY IS WITHIN ZONE "C". (EXPLANATION: AREAS OF MINIMAL FLOODING) ACCORDING TO THE FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAPS, AS PER AREA COMMUNITY PLAN NO. 4802140248. DATED OCTOBER 15, 1982.
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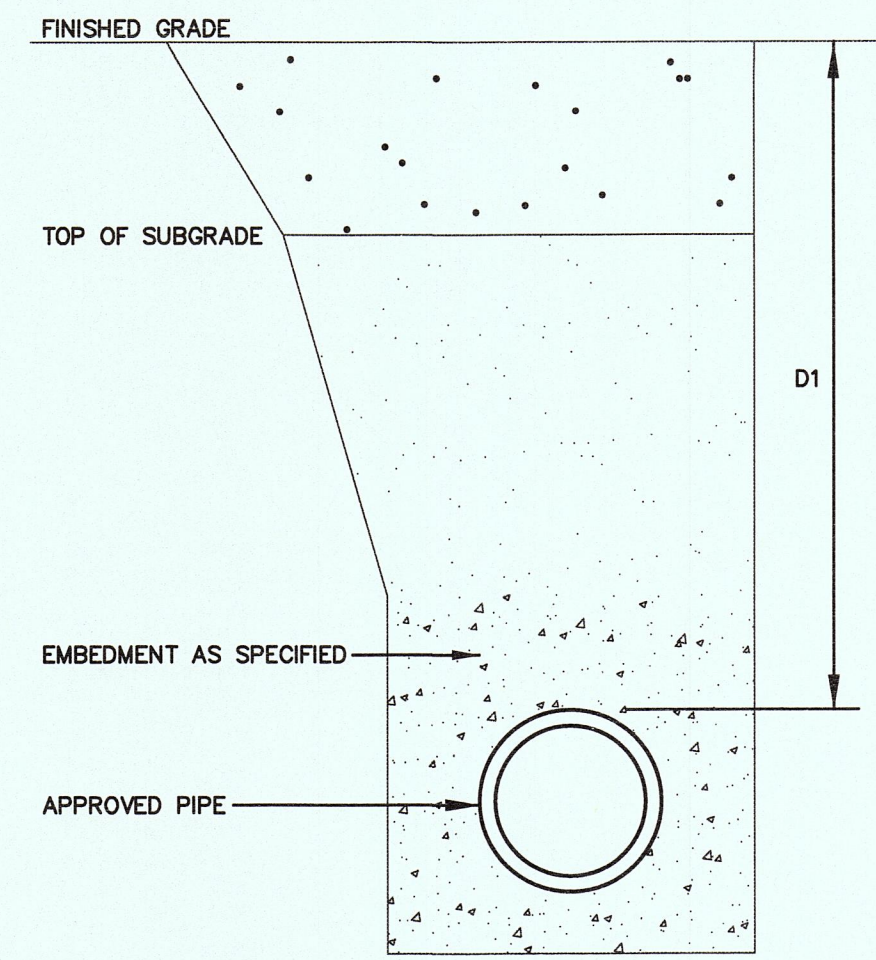
DATE	REVISIONS	BY	PRIMARY BENCHMARK	SCALE
06/11/15	CITY COMMENTS	IR	EXISTING CITY MONUMENT LOCATED AT THE CENTERLINE INTERSECTION OF EDGAR PARK DRIVE AND MOUNTAIN VIEW DRIVE ELEVATION: 4229.73 (NAVD 88) ELEVATION: 4217.92 (CITY DATUM) ELEVATIONS BASED ON NAVD 88 DATUM	HOR: _____ VER: _____ W.O. 022515-11A DATE: APRIL 2015 DESIGN BY: IR DRAWN BY: IR/LAJ CHKD. BY: H.P. APPD. BY: B.R.



SIERRA DEL PUERTE UNIT TWO
WATER GENERAL NOTES

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601 N. Cotton St. Suite No.6 El Paso, Tx, 79902
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SHEET NO.
20
20 OF 23



COVER FOR WATER MAINS

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

CONSTRUCTION KEY NOTES:

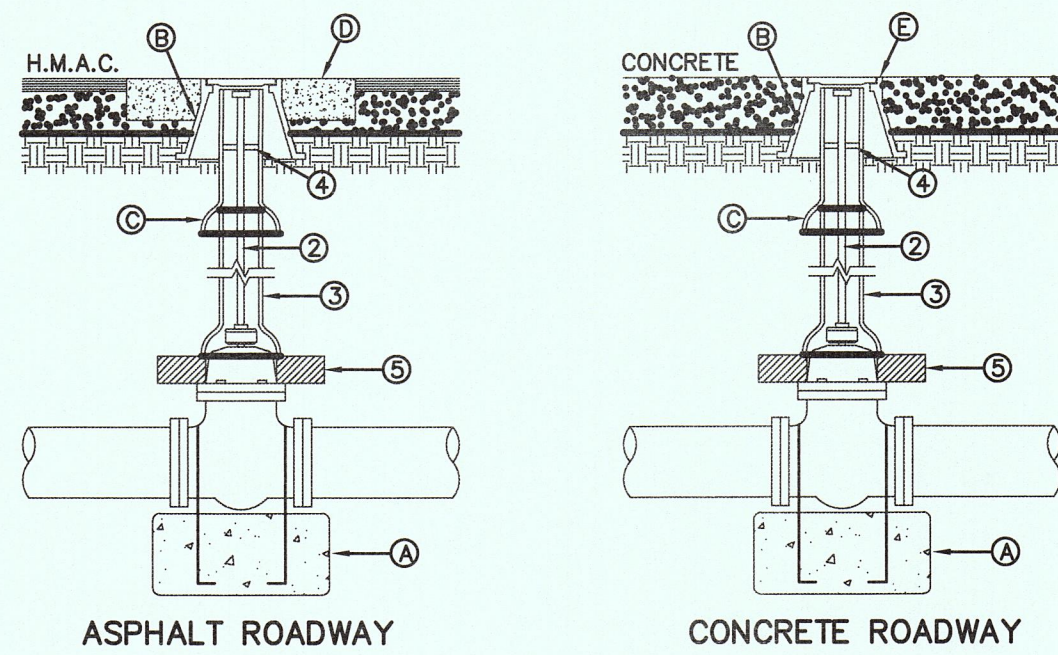
A. COVER FOR WATER MAINS SHALL DEPEND ON THE PIPE SIZE AND THE FOLLOWING INSTALLATION CONDITIONS.

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

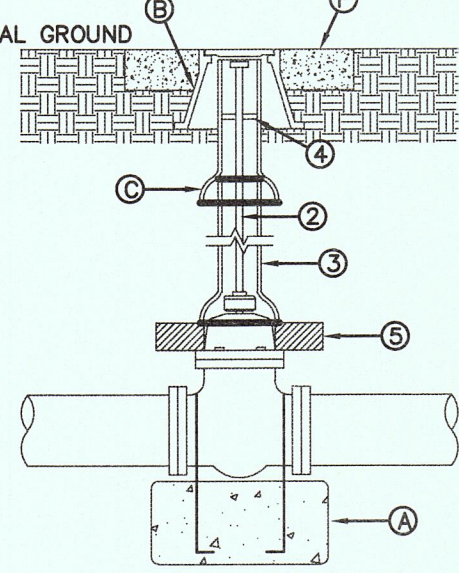
CONDITION B - NEW SUBDIVISIONS, NON-PAVED AREA

AND SHALL BE AS FOLLOWS.

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



ASPHALT ROADWAY CONCRETE ROADWAY



UNPAVED AREAS

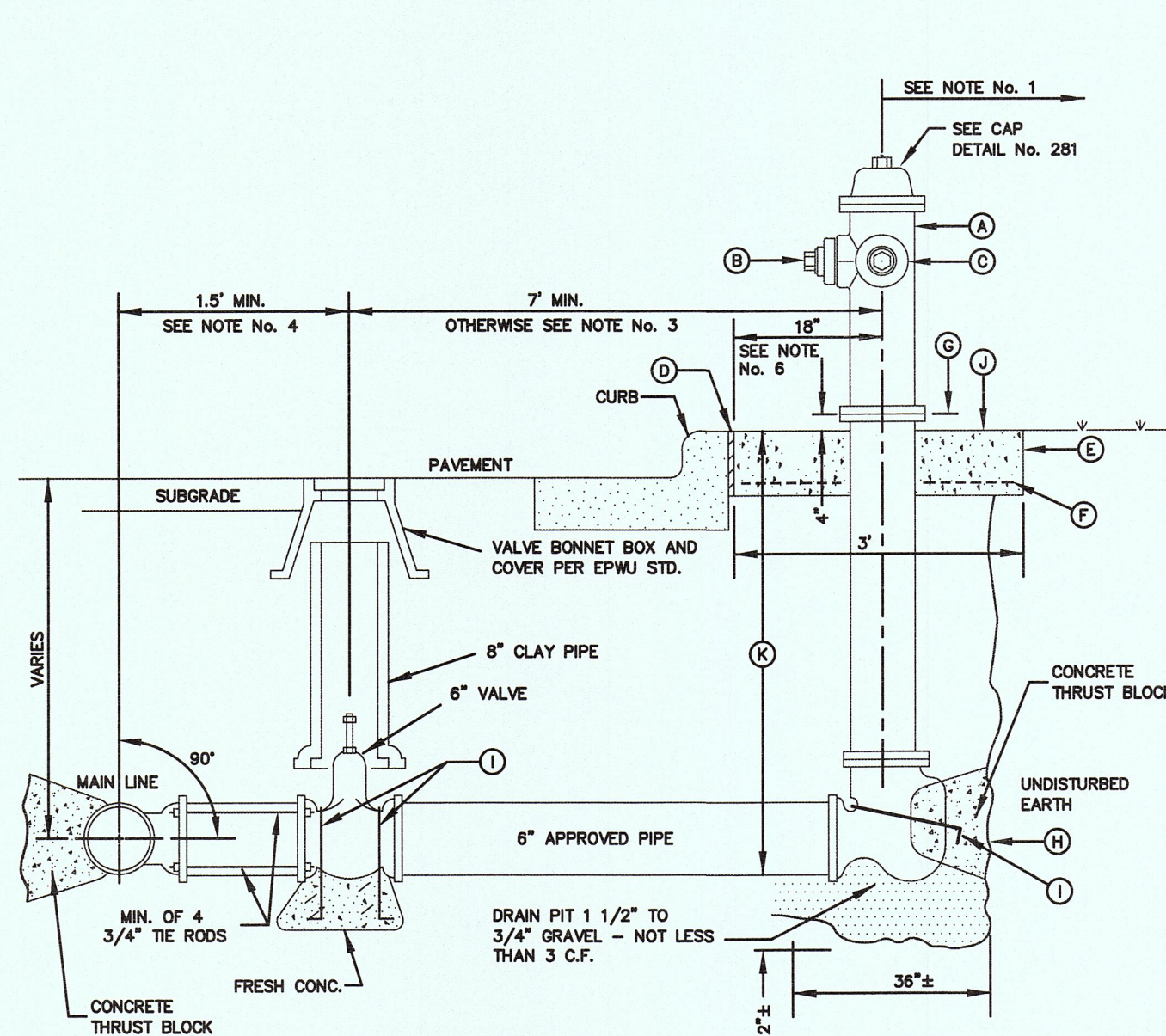
GATE VALVE INSTALLATION

GENERAL NOTES:

- VALVE TYPE AND VALVE ENDS SHALL BE AS SHOWN ON THE PLANS.
- ALL BURIED VALVES 5' AND DEEPER SHALL BE PROVIDED WITH SOLID STEEL EXTENSION STEM OPERATOR WITH 2" SQUARE AWWA NUT WITHIN 36" OF VALVE BOX COVER. NUT IS TO INDICATE DIRECTION OF ROTATION TO OPEN VALVE.
- 8" DIA. MINIMUM VITRIFIED CLAY OR SDR 35 P.V.C. PIPE. PIPE SHALL NOT REST ON VALVE BODY.
- 1/2" THICK STEEL TRASH RING VALVE BOX INSIDE DIAMETER MINUS 1/4".
- MINIMUM 2 1/2" CONCRETE OR BRICK ALL AROUND.
- CLEAN BONNET BOX OF ALL DEBRIS AND SOIL.
- COAT BURIED PIPE AND BONNET BOX PER SPECIFICATIONS. VALVE SHALL BE WRAPPED IN POLYETHYLENE IN ACCORDANCE WITH SPECIFICATIONS.

CONSTRUCTION KEY NOTES:

- CONCRETE VALVE SUPPORT, SEE DET 271.
- BONNET BOX, SEE DET 268.
- FINAL EXTENSION TO BONNET BOX SHALL BE WITH BELL AND SPIGOT ENDS (CLAY OR SDR 35 P.V.C. SPOOL).
- CIRCULAR CONCRETE COLLAR (SEE DET 184) FLUSH WITH TOP OF H.M.A.C.
- BONNET BOX (SEE DET 268) FLUSH WITH TOP OF CONCRETE, CIRCULAR CONCRETE COLLAR NOT NEEDED.
- CIRCULAR CONCRETE COLLAR (SEE DET 184) FLUSH WITH BONNET BOX.



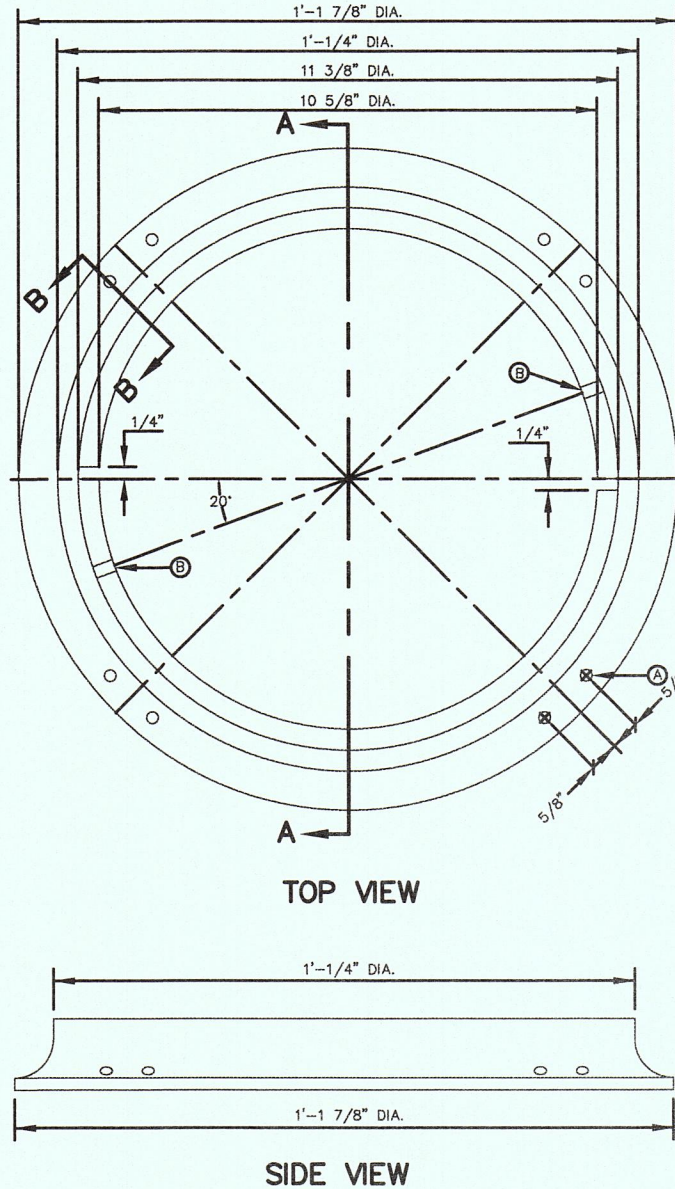
FIRE HYDRANT INSTALLATION

GENERAL NOTES:

- NO OBSTRUCTIONS WILL BE PERMITTED WITHIN 3 FT. IN ALL DIRECTIONS OF FIRE HYDRANT. FIRE HYDRANT SHALL NOT BE PLACED IN WHEEL CHAIR RAMP OR DRIVEWAY.
- FIRE HYDRANT SHALL BE LOCATED AT THE BEGINNING OF CURB RETURN OR AT THE PROPERTY LINE COMMON TO ADJOINING LOTS, UNLESS OTHERWISE SHOWN ON PLANS. REFER TO DETAIL No. 282 FOR SPECIAL CASES.
- WHERE DISTANCE IS LESS THAN 7', HYDRANT SHALL BE INSTALLED IN ACCORDANCE WITH DETAIL No. 282.
- VALVE MAY BE CONNECTED TO TEE AT MAIN LINE. USE FLANGED MECHANICAL JOINT ENDS. WHERE SPOOL IS REQUIRED BETWEEN TEE AND VALVE, USE FLANGED MECHANICAL ENDS WITH 3/4" DIAMETER TIE RODS.
- COMPLY WITH REQUIREMENTS OF AWWA C-502, DRY BARREL FIRE HYDRANTS AND AWWA C-550, PROTECTIVE EPOXY INTERIOR COATINGS FOR VALVES AND HYDRANTS.
- WHEN INSTALLATION IS WITHIN 1'00" RIGHT OF WAY, HYDRANT SHALL NOT BE PLACED IN SIDEWALK AREA OR ANY CLOSER THAN 5' FROM BACK OF CURB.

CONSTRUCTION KEY NOTES:

- FIRE HYDRANT PER SPEC'S.
- PUMPER NOZZLE 4 1/2" TO BE FACING THE TRAVELED WAY, UNLESS OTHERWISE NOTED IN THE PLANS.
- HOSE NOZZLE 2 1/2"
- 1/2" REMOLDED EXPANSION JOINT WITH 1" TOP FILLER.
- 3'x3'x6" CONC. SQ. PAD, TO BE CONSTRUCTED AROUND FIRE HYDRANT'S CENTER LINE WHEN NOT LOCATED WITHIN SIDEWALK OR CONC. AREA.
- #10, 6/8 W/F.
- CONTROLLED ELEVATION LINE, LEVEL IN ALL DIRECTIONS. CONTRACTOR SHALL BE RESPONSIBLE FOR SETTING TOP FLANGE OF THE HYDRANT TO CONTROLLED ELEVATION.
- CONC. THRUST BLOCK, APPROX. 2'x2'x3' TO BE POURED AGAINST UNDISTURBED EARTH, F.H. WEEP HOLE MUST BE UNOBSTRUCTED.
- 2'x1/4" STEEL ANCHOR PINS.
- TOP OF SLAB SHALL BE AT CURB LEVEL 4" BELOW THE BREAK LINE OF THE HYDRANT UNDER SPECIAL CONDITIONS THE ENGINEER MAY ALLOW VARIATIONS TO THIS CONSTRUCTION.
- CONTRACTOR IS TO PROVIDE ADDITIONAL SPOOLS IF NEEDED TO MAINTAIN THE 4" MIN. CLEARANCE FROM THE CONTROLLED ELEV. LINE TO TOP OF SLAB.



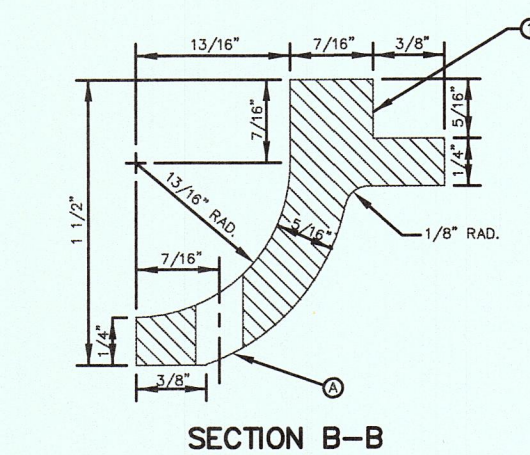
METER BOX RING FOR TYPE "A" & "B" METER BOXES

GENERAL NOTES:

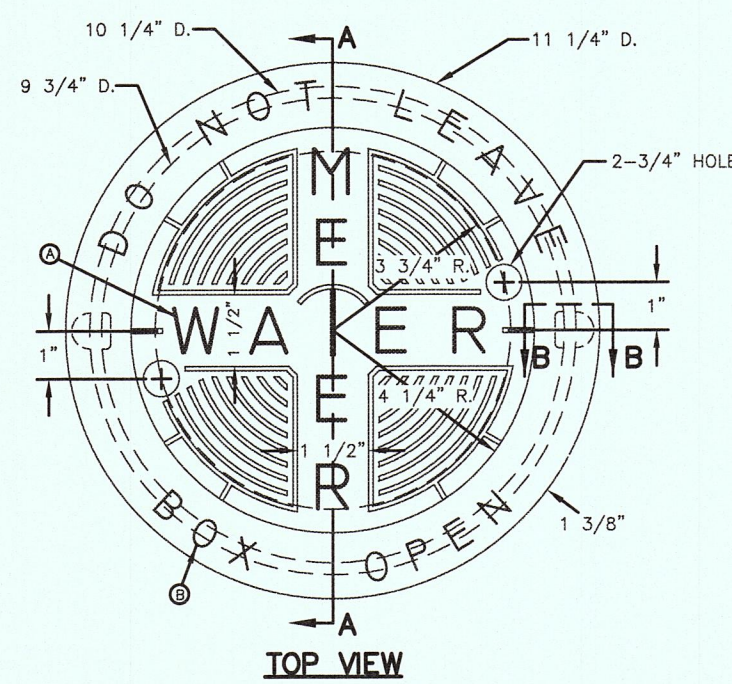
- MATCHING SURFACES TO BE FINISHED OF ANY IRREGULARITIES THAT WOULD PREVENT A SNUG FIT.
- CASTING TO BE SMOOTH AND VOID OF AIR HOLES.
- METER BOX RING WEIGHT = 7 LBS.
- METER BOX RING MADE OF CAST IRON.

CONSTRUCTION KEY NOTES:

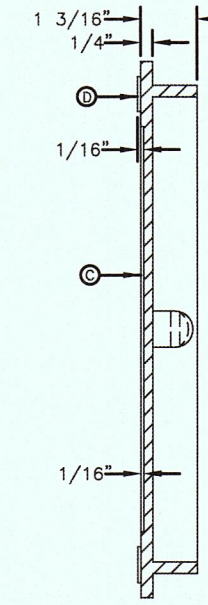
- 1/2" DIAMETER HOLES FOR ANCHORING RING TO CONCRETE METER BOX.
- LUG STOP
- LOCKING LUG SLIDE



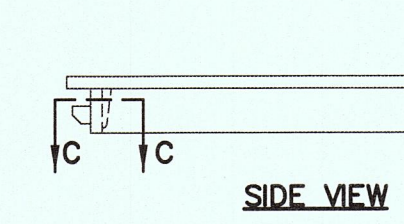
SECTION B-B



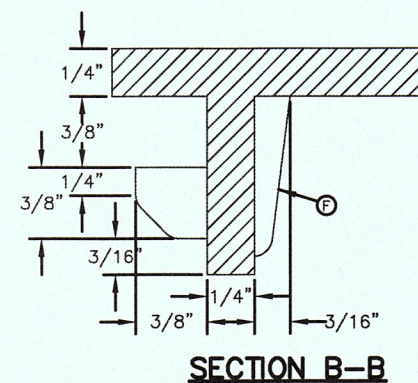
TOP VIEW



SECTION A-A



SIDE VIEW



SECTION B-B

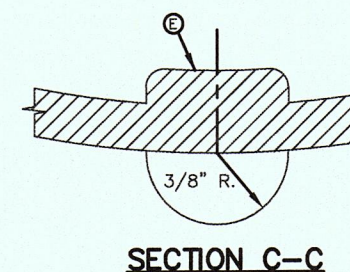
METER BOX COVER FOR TYPE "A" & "B" METER BOXES

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 1/8" TALL
- OUTSIDE LETTERS 1/2" TALL
- REINFORCE BACK OF LUG
- REINFORCEMENT



SECTION C-C

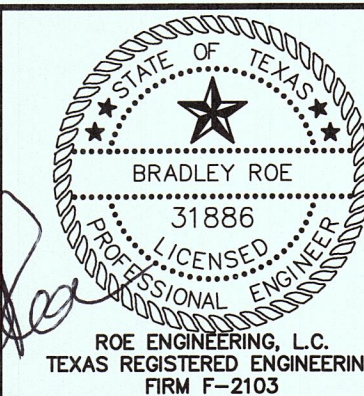
FLOOD NOTE:

NOTE: THE ABOVE REFERENCED PROPERTY IS WITHIN ZONE "C". (EXPLANATION: AREAS OF MINIMAL FLOODING) ACCORDING TO THE FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAPS, AS PER AREA COMMUNITY PANEL NO. 4802140024B, DATED OCTOBER 15, 1982.

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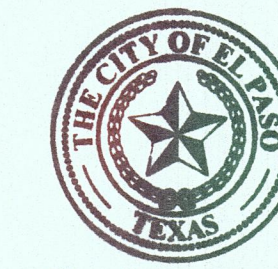
DATE	REVISIONS	BY	PRIMARY BENCHMARK	SCALE
06/11/15	CITY COMMENTS	IR	EXISTING CITY MONUMENT LOCATED AT THE CENTERLINE INTERSECTION OF EDGAR PARK DRIVE AND MOUNTAIN VIEW DRIVE ELEVATION: 4229.73 (NAVD 88) ELEVATION: 4217.92 (CITY DATUM) ELEVATIONS BASED ON NAVD 88 DATUM	HOR: NA VER: W.O. 022515-11A DATE: APRIL 2015 DESIGN BY: IR DRAWN BY: IR/LAJ CHKD. BY: H.P. APPD. BY: B.R.

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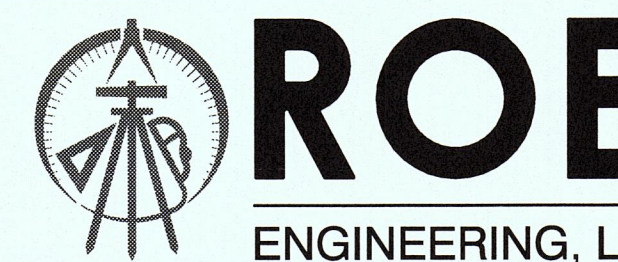


SIERRA DEL PUERTE UNIT TWO

WATER DETAILS



Final Approval

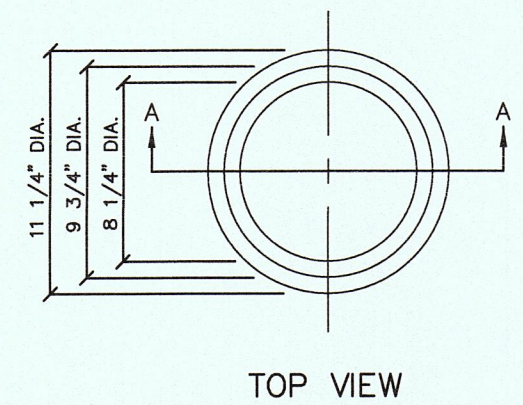


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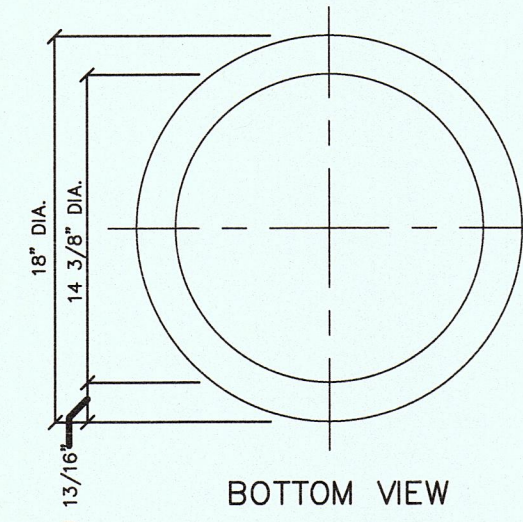
SHEET NO.

21

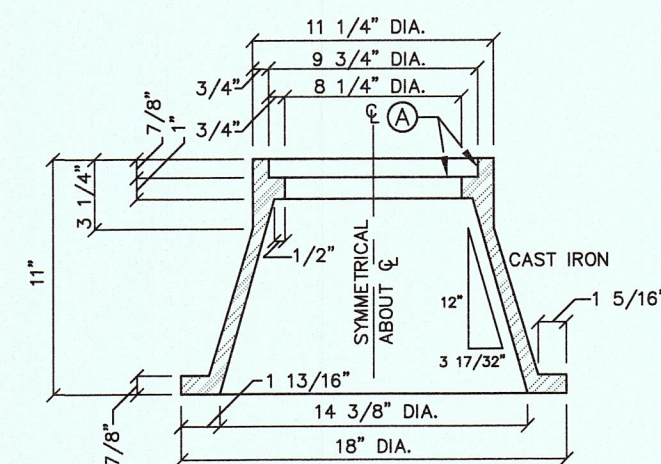
21 OF 23



TOP VIEW



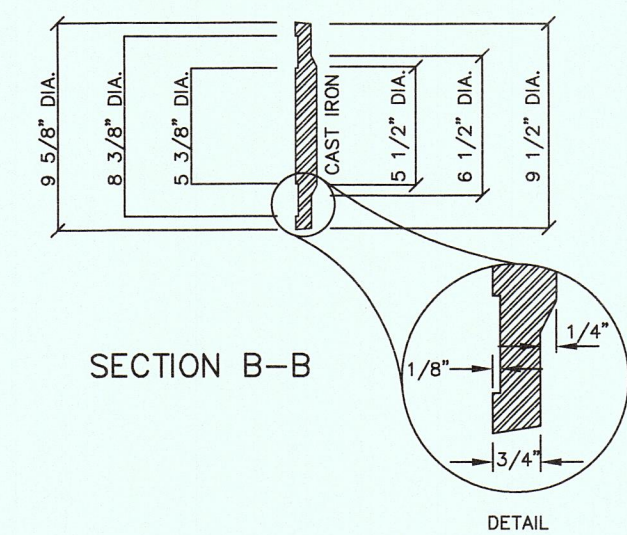
BOTTOM VIEW



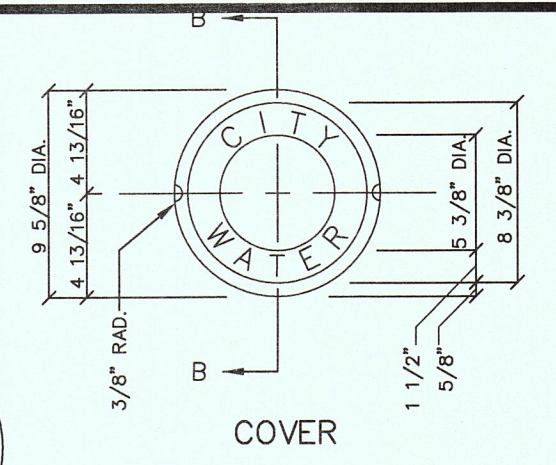
SECTION A-A

BONNET BOX

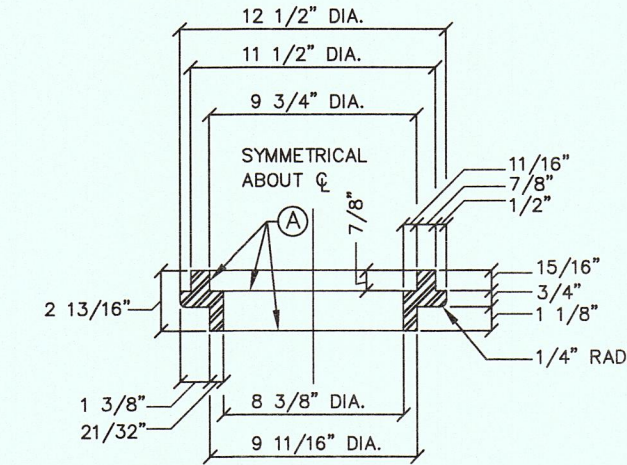
- GENERAL NOTES:**
- CASTING TO BE SMOOTH AND VOID OF AIR HOLES.
 - WEIGHT OF BONNET BOX IS 95 POUNDS.
- CONSTRUCTION KEY NOTES:**
- TO BE ROUGH GROUND OF ANY IRREGULARITIES THAT WOULD PREVENT A SNUG FIT.



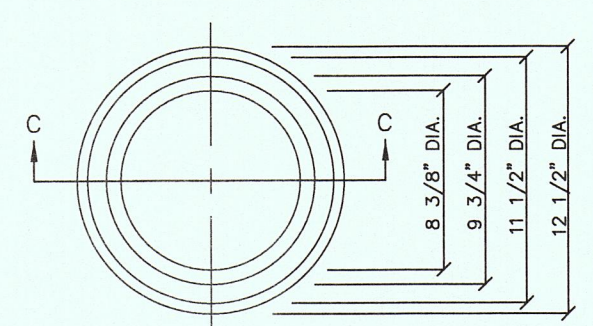
SECTION B-B



COVER



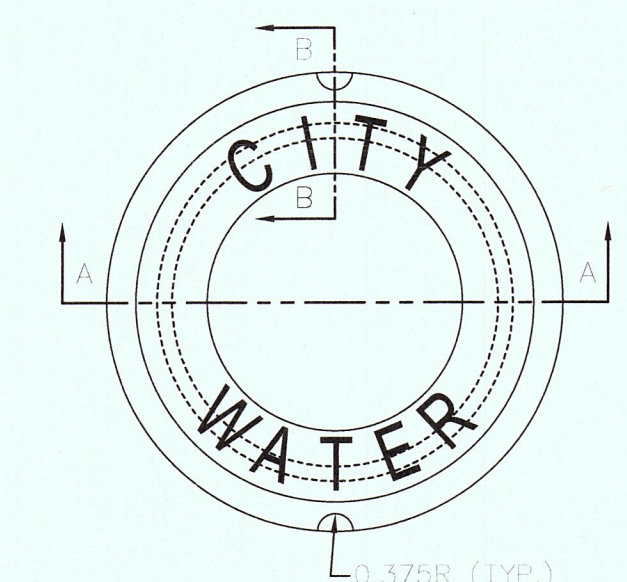
SECTION C-C



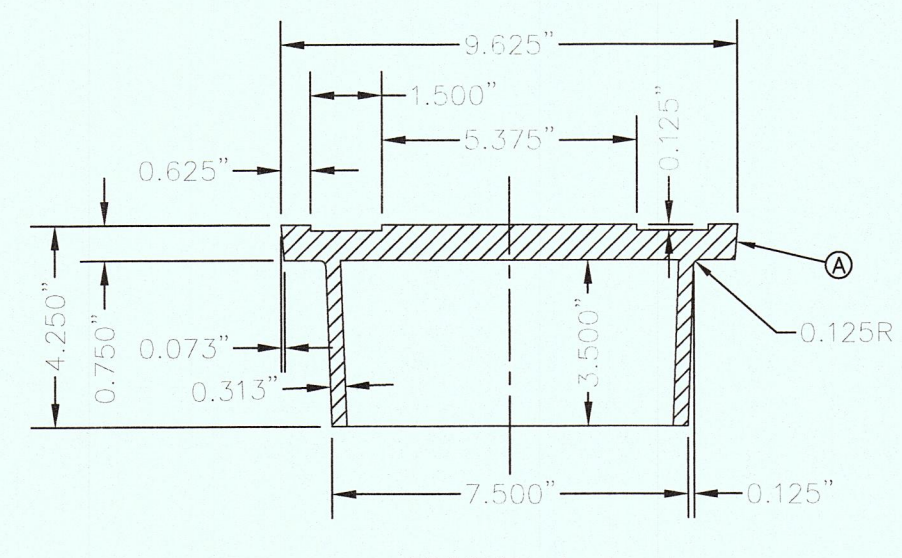
EXTENSION

BONNET BOX COVER AND EXTENSION

- GENERAL NOTES:**
- CASTINGS TO BE SMOOTH AND VOID OF AIR HOLES.
 - WEIGHT OF BONNET BOX EXTENSION IS 25 POUNDS.
 - WEIGHT OF COVER IS 10 POUNDS.
- CONSTRUCTION KEY NOTES:**
- TO BE ROUGH GROUND OF ANY IRREGULARITIES THAT WOULD PREVENT A SNUG FIT.

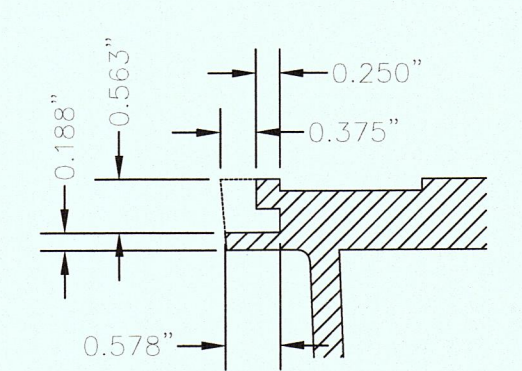


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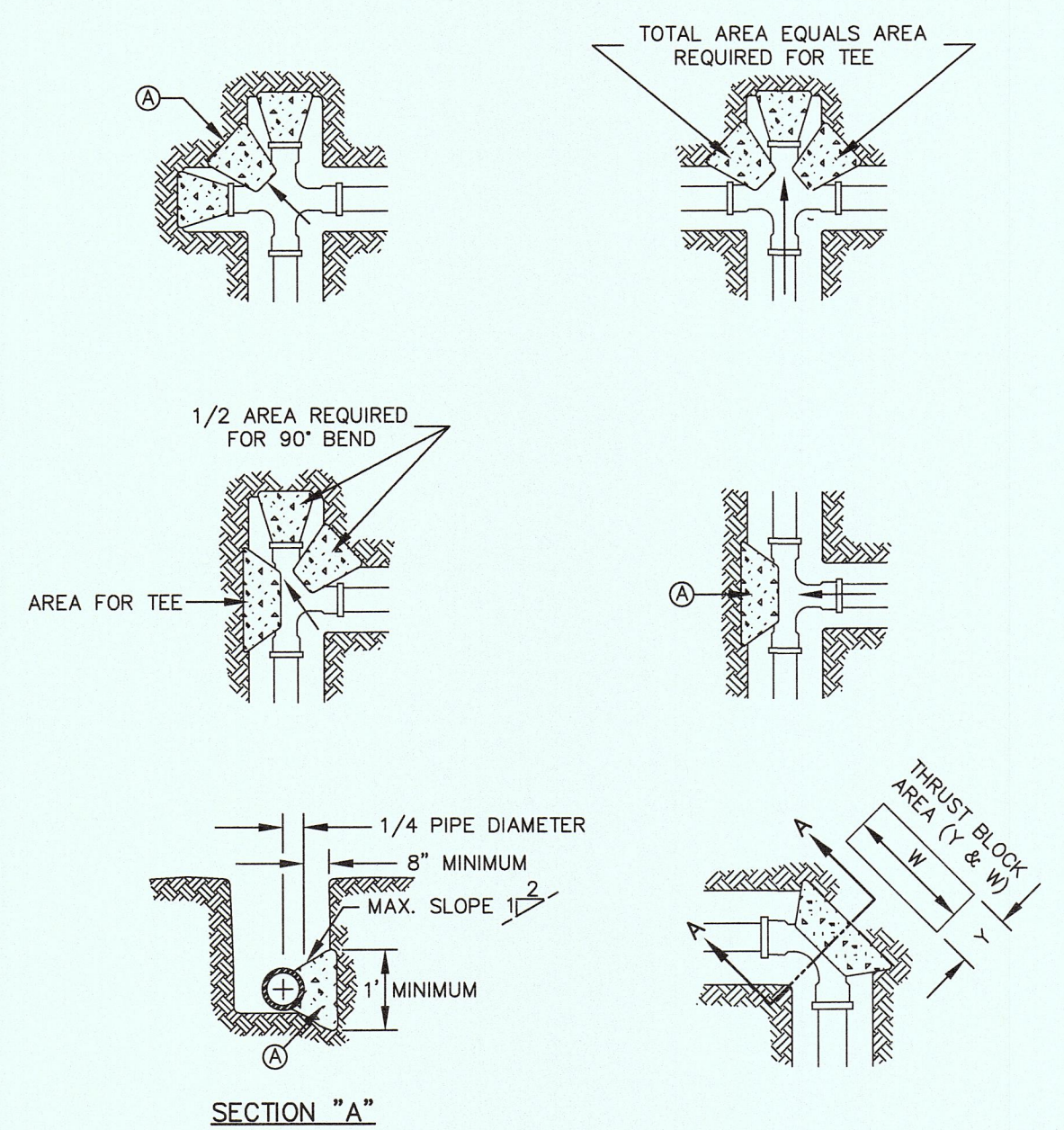
SECTION A-A

BONNET BOX COVER (FLIP RESISTANT)



SECTION B-B

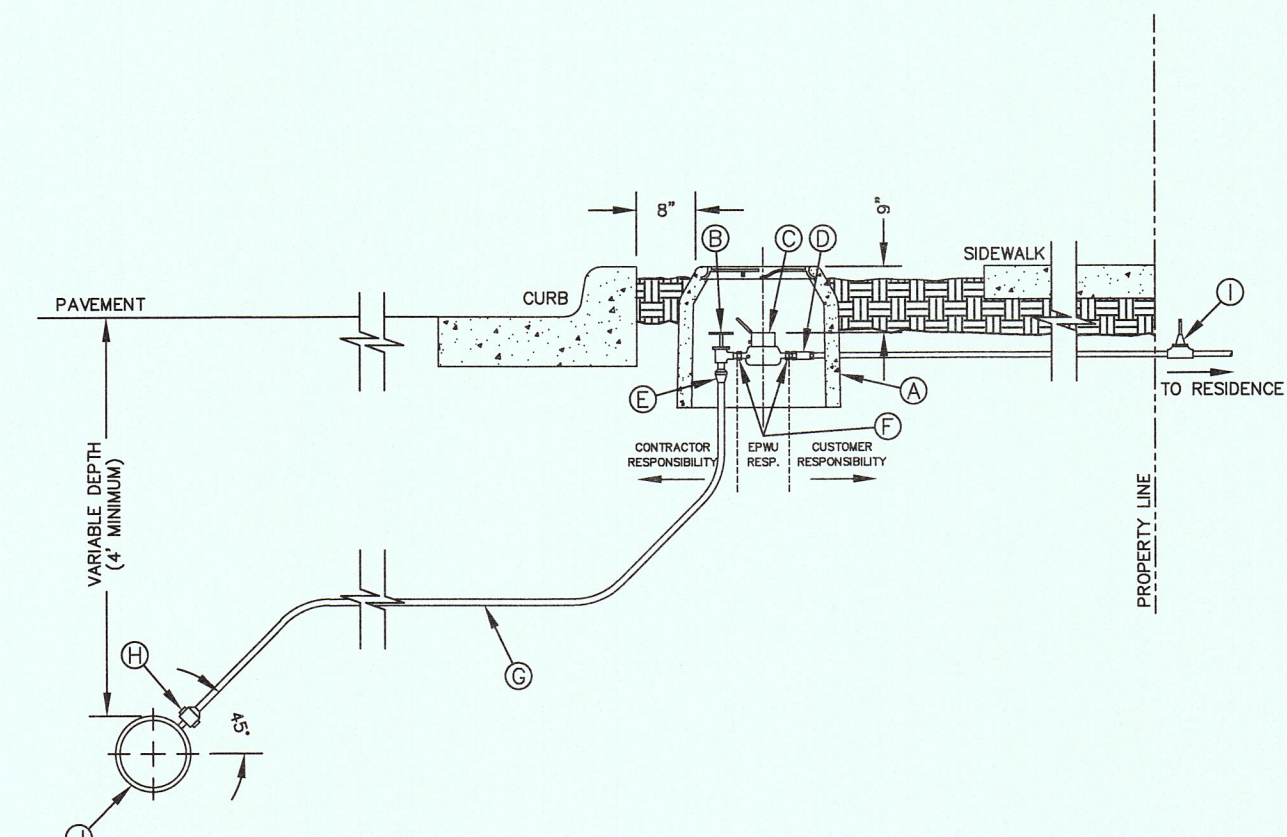
- GENERAL NOTES:**
- CASTINGS TO SMOOTH AND VOID OF AIR HOLES.
 - WEIGHT OF COVER IS 22 POUNDS.
- CONSTRUCTION KEY NOTES:**
- TO BE ROUGH GROUND OF ANY IRREGULARITIES THAT WOULD PREVENT A SNUG FIT.



CONCRETE THRUST BLOCKING

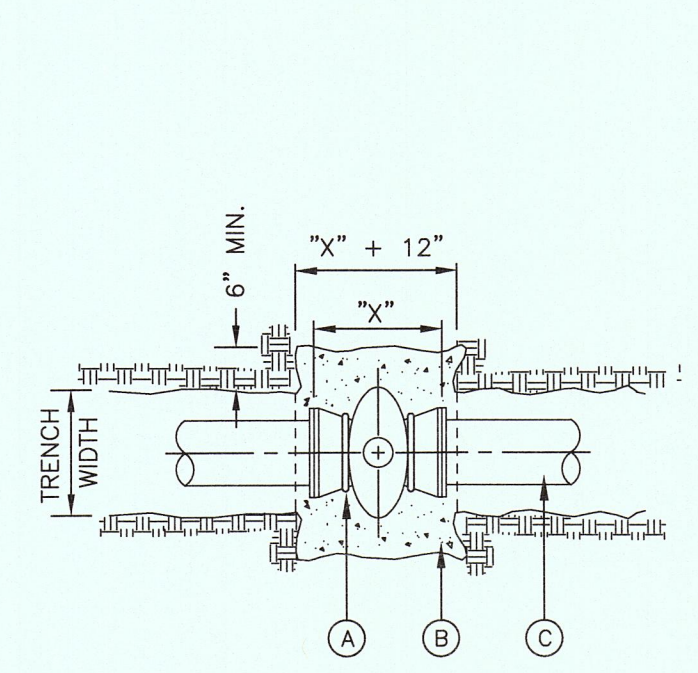
- GENERAL NOTES:**
- TABLE IS BASED ON 2000#/SQ. FT. SOIL. IF CONDITIONS ARE FOUND TO INDICATE SOIL BEARING IS LESS, THE AREAS SHALL BE INCREASED ACCORDINGLY.
 - AREAS FOR PIPE LARGER THAN 18" SHALL BE CALCULATED.
 - CONCRETE SHALL HAVE A MINIMUM COMPRESSION STRENGTH OF 2500 PSI.
 - THRUST BLOCK IS TO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

PIPE SIZE	WATER PIPE	
	TEE, DEAD END 90° BEND	45° AND 22 1/2° BENDS
4" & LESS	3 SQ. FEET	3 SQ. FEET
6"	4 SQ. FEET	3 SQ. FEET
8"	6 SQ. FEET	3 SQ. FEET
10"	9 SQ. FEET	5 SQ. FEET
12"	13 SQ. FEET	7 SQ. FEET
16"	23 SQ. FEET	12 SQ. FEET
18"	29 SQ. FEET	15 SQ. FEET

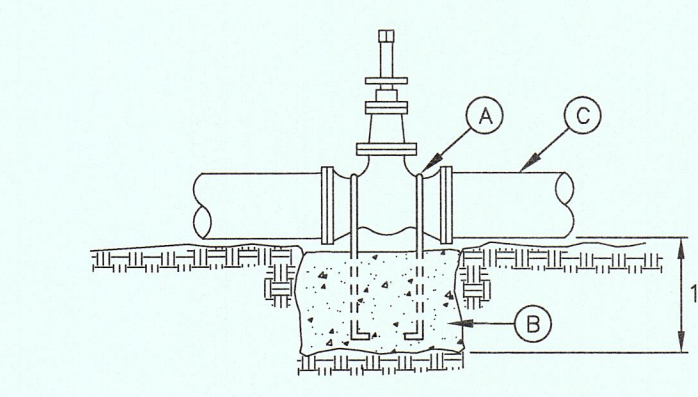


SERVICE LINE 3/4" AND 1" INSTALLATION BY CONTRACTOR

- GENERAL NOTES:**
- DETAIL SHOWN FOR A 3/4" SERVICE. 1" SERVICE INSTALLATION IS SIMILAR EXCEPT FOR SIZES OF PIPE, FITTINGS, 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 EPWJ 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 EPWJ, 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).
 - H. 5/8" X 3/4" CORPORATION STOP.
 - PRESSURE REGULATOR SOMETIMES LOCATED NEAR THE RESIDENCE.
 - WATER MAIN.



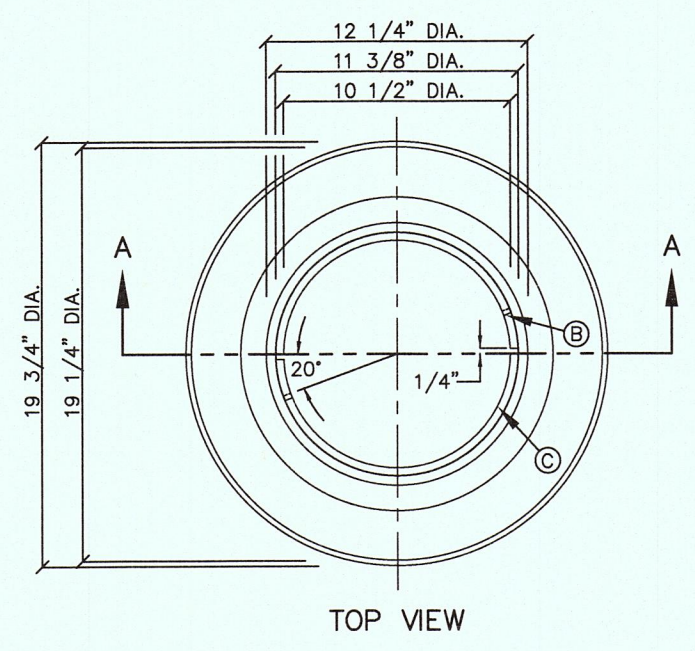
PLAN



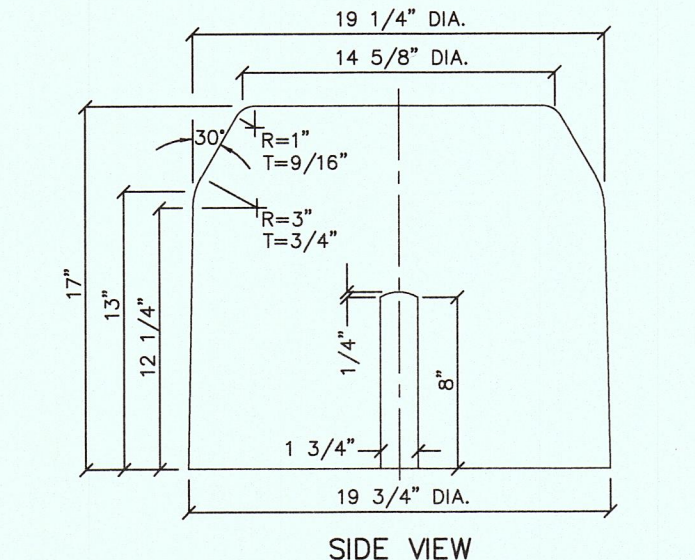
SECTION

VALVE ANCHOR

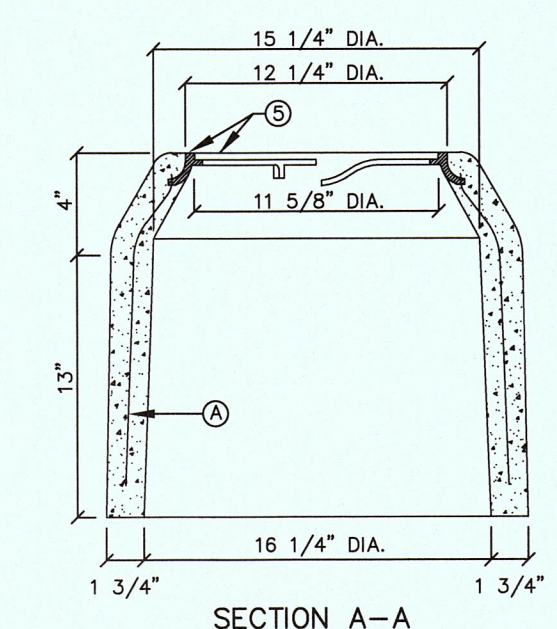
- GENERAL NOTES:**
- THE ENGINEER SHALL PROVIDE DESIGN FOR ALL VALVES GREATER THAN 12" CENTERLINE INTERSECTION OF EDGAR PARK DRIVE AND MOUNTAIN VIEW DRIVE.
 - COMPLY WITH REQUIREMENTS OF AWWA C-550, PROTECTIVE EPOXY INTERIOR COATINGS FOR VALVES.
- CONSTRUCTION KEY NOTES:**
- TWO No. 5 REBAR HAIR PINS, PAINT UNEMBEDDED PORTION OF REBARS WITH TWO COATS OF COAL TAR EPOXY.
 - CONCRETE VALVE SUPPORT, 2500 PSI. CONCRETE.
 - APPROVED PIPE.



TOP VIEW



SIDE VIEW

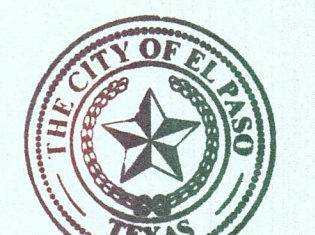


SECTION A-A

METER BOX TYPE "A" FOR 3/4" SERVICE INSTALLATION

- 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 EPWJ 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

- CONSTRUCTION KEY NOTES:**
- 3/16" 9 GAUGE BLACK ANNEALED WIRE
 - LUG-STOP C. CAST IRON RING



Final Approval

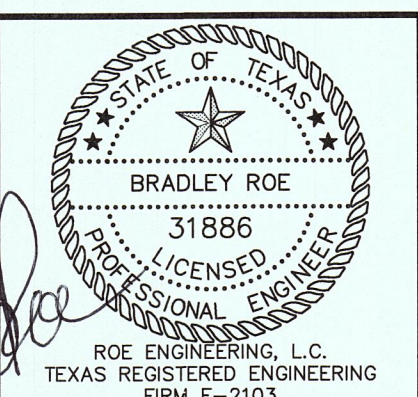
FLOOD NOTE:

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DATE	REVISIONS	BY	PRIMARY BENCHMARK
06/11/15	CITY COMMENTS	IR	EXISTING CITY MONUMENT LOCATED AT THE CENTERLINE INTERSECTION OF EDGAR PARK DRIVE AND MOUNTAIN VIEW DRIVE ELEVATION: 4229.73 (NAVD 88) ELEVATION: 4217.92 (CITY DATUM) ELEVATIONS BASED ON NAVD 88 DATUM

SCALE
HOR: NA VER: 022515-11A DATE: APRIL 2015 DESIGN BY: IR/LAJ DRAWN BY: H.P. CHKD. BY: B.R. APPD. BY: B.R.



SIERRA DEL PUERTE UNIT TWO

WATER DETAILS

ROE ENGINEERING, LC

801 N. Cotton St. Suite No.6 El Paso, Tx, 79902 (915) 533-1418 - FAX: (915) 533-4972

SHEET NO. 22

22 OF 23

Z:\Clients\Photo_Verba Properties\022015-1118 Sierra Del Puerte Phase 2\06-CADD\16-Water_Waste\Water_Details.dwg 07/20/15 4:03PM

STORM WATER POLLUTION PREVENTION PLAN NARRATIVE

Project Title: SIERRA DEL PUERTE UNIT TWO
 Operator with Control Over Construction Plans and Specifications (Company Name and Address): GGGHLL, LLC DANIEL T. KNAPP, 1014 CEDAR STREET EL PASO, TX 79903
 Operator's Representative: BRADLEY ROE, Phone No. 915-533-1418
 Prepared by: Roe Engineering, L.C., Date: 05-01-2015

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 gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature: [Signature] / BRADLEY ROE
 Signature: [Signature] / BRADLEY ROE

Company Name and Address: GGGHLL, LLC DANIEL T. KNAPP, 1014 CEDAR STREET EL PASO, TX 79903
 Operator's Representative: BRADLEY ROE, Phone No. 915-533-1418

Revisions to SWPPP

Revision No.	Date	Description of Changes	Signature

Copy of NOI(s) or Site Notice(s) and TPDES General Permit TXR150000 attached?

Name of Receiving Water(s): _____

Name of Municipal Separate Storm Sewer System (MS4) Receiving Discharge (if applicable): _____

Total Area of Property _____ Acres
 Total Area of Site to be Disturbed _____ Acres
 Total Area of Off-site Material Storage & Borrow/Fill Sites _____ Acres

Description of Project/Construction Activity: _____

Sequence of Major Construction Activities. Provide a description of the intended sequence of major activities that will disturb soils. Describe the general timing or sequence for implementation (and removal) of BMPs that will be used to minimize pollution in runoff.

Activity/BMP	Estimated Start	Estimated Completion

Existing Topography and Drainage Features. Describe the existing topography, drainage patterns, and natural drainage features including channels, creeks, watercourses, etc. Provide name (if available) of creeks, streams, etc. and protection measures such as buffers.

- Previously graded land with fill material and no vegetation.
- Topography is generally level across the site.
- Substratum consisting of poorly graded sand with various amounts of silt.

Revision	Date	Page	of

Soil Types	Erosion Factor (K)	Unified Classification	Site Coverage (%)

Existing (Pre-construction) Ground Cover. Describe existing vegetation on the drawings. Such features as tree clusters, grossy areas, and unique or sensitive vegetation should be shown.

Revision	Date	Page	of

Type of Grass/Vegetation/Trees	Approximate Density (%)	Site Coverage (%)

Critical Areas. Describe the location, size, and characteristics of any wetlands, streams, or lakes that are adjacent or in close proximity to the site, and/or will receive discharges from disturbed areas of the project. Also delineate areas with high erosion potential including steep slopes. Critical areas are shown in drawing.

Description of Potential Pollutants. Describe potential pollutants, including construction and waste materials, chemicals, paints, solvents, etc. expected to be stored on-site. At a Minimum, Any Products in The Following Categories Shall Be Considered Hazardous: Paints, Acids for Cleaning Masonry Surfaces, Cleaning Solvents, Asphalt Products, Chemical Additives For Soil Stabilization, Drying Compounds And Additives. In The Event Of A Spill Which May Be Hazardous, The Contractor Shall Take Immediate Action And Contact The Fire Department And TNRCC.

Existing Storm Sewer System. Describe any existing onsite storm sewer systems including location of inlets and outfalls, pipe sizes, etc.

Permanent (Post-Construction) Storm Water Management Controls. Provide a description of measures that will be installed to control pollutants (sediment, oil, grease, fertilizer, pesticides, etc.) in storm water discharges that will occur after construction is complete and the developed property is placed in service.

Installation of Concrete Curbs And Gutters Storm Drains, Retention Ponds

GENERAL CONTRACTOR CERTIFICATION

I Certify Under Penalty of Law That I Understand The Terms And Conditions Of The National Pollutant Discharge Elimination System (NPDES) General Permit That Authorizes Storm Water Discharges Associated With Construction Activity From The Construction Site Identified As Part Of This Certification.

Signed: _____ Company: _____
 Name: _____ Address: _____
 Title: _____ Telephone: _____
 Date: _____

TEN ELEMENTS OF A CONSTRUCTION SWPPP

For each of the following Ten Elements, describe the measures used to address the element. Include the type and location of BMPs used to satisfy the required element and the general timing or sequence for implementation. If an element is not applicable to a project, provide a written justification for why it is not necessary.

1. LIMIT SOIL DISTURBANCE

Provide a description of the areas including natural drainage features, trees and other vegetation, and appropriate buffers that are to be preserved within the construction area and the measures to be implemented to ensure protection.

2. PREVENT SOIL EROSION

Describe the temporary and permanent stabilization practices for disturbed areas of the site, including a schedule of when the practices will be implemented.

3. PROTECT SLOPES

Describe practices used to protect slopes and divert flows away from exposed soils or disturbed areas.

4. MINIMIZE SEDIMENT LOSS FROM SITE

Describe the practices to lessen the off-site transport of sediment and to reduce generation of dust. Sediment basins are required, where feasible, for common drainage locations that serve an area with ten or more acres disturbed at one time. In addition to the stabilized construction entrance, the following measures shall be observed during construction:

5. CONTROL FLOW RATES AND STABILIZE CHANNELS/OUTFALLS

Provide a description of velocity dissipation devices used at discharge locations and channel stabilization measures to provide non-erosive flows.

6. ESTABLISH CONSTRUCTION ACCESS

Provide a description of measures to minimize the off-site tracking of sediment by vehicles.

7. PROTECT DRAIN INLETS

Provide a description of inlet protection measures to prevent sediment from entering the storm drain system.

8. CONTROL DEWATERING

Provide a description of controls to prevent the off-site transport of suspended sediments and other pollutants in discharges from dewatering operations.

9. CONTROL WASTE AND POLLUTANTS

Provide a description of controls to reduce pollutants and spill prevention and response procedures associated with construction and waste materials. Also provide a description of controls and measures that will be implemented to minimize pollutants in any discharges associated with industrial activity other than construction (i.e., dedicated asphalt or concrete plants) covered by the Construction General Permit.

10. CONSTRUCTION PHASING AND PROJECT MANAGEMENT

Provide a description of considerations given to project phasing in order to reduce the amount of soil exposed at one time.

Revision _____ Date _____ Page _____ of _____

SUB-CONTRACTOR CERTIFICATION

I Certify Under Penalty of Law That I Will Coordinate, Either Through The General Contractor, Owner, Or Directly With The Contractor(s) And/Or Subcontractor(s) Identified In The Pollution Prevention Plan Having Responsibility For Implementing Storm Water Control Measures To Minimize Any Impact My Actions May Have On The Effectiveness Of These Storm Water Control Measures.

Signed: _____ Company: _____
 Name: _____ Address: _____
 Title: _____ Telephone: _____
 Date: _____

OWNER CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Owner: (Signed) _____ Date _____
 Owner: (Name) _____
 Phone Number _____

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). From _____ to _____
2. Perform Roadway Clearing And Grubbing: From _____ to _____
3. Excavation For Utilities: From _____ To _____
4. Complete Lot Grading: From _____ To _____
5. Construction Of Site Improvements: _____ To _____
6. After Stabilization Of 70% Of Site Is Complete, Remove Temporary Controls In # 1 Above And Submit Notice Of Termination Form To City Engineering And E.P.A.

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 (Temporary)
- _____ Hay Bales
- _____ Rock Berms
- _____ Diversion, Interceptor, Or Perimeter Dikes
- _____ Diversion, Interceptor, Or Perimeter Swales
- _____ Diversion Dike And Swale Combinations
- _____ Pipe Slope Drains
- _____ Concrete Flumes
- _____ Rock Bedding At Construction Exit (Temporary)
- _____ Timber Matting At Construction Exit
- _____ Channel Liners
- _____ Sediment Traps
- _____ Sediment Basins
- _____ Storm Inlet Sediment Trap
- _____ Stone Outlet Structures
- _____ Curbs And Gutters (Permanent)
- _____ Storm Drains (Permanent)
- _____ Velocity Control Devices
- _____ Vegetated Swales & Natural Depressions

Other: _____

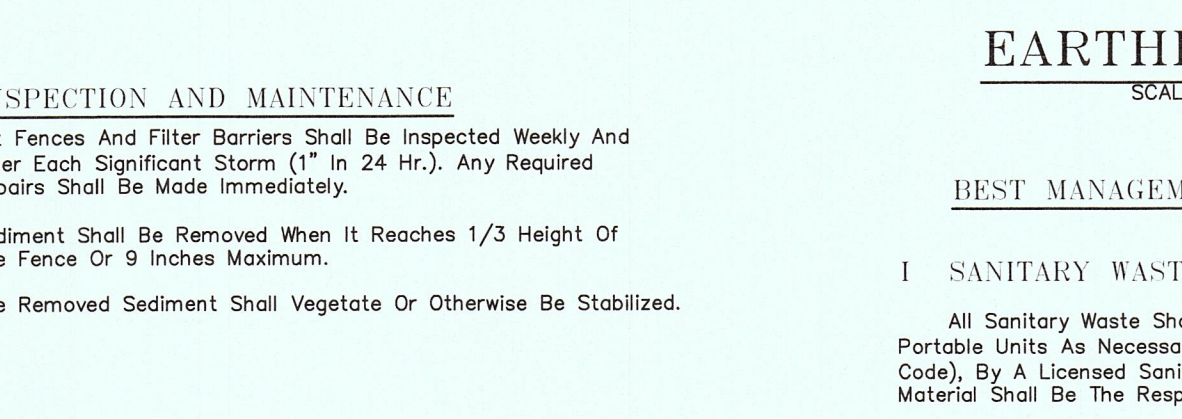
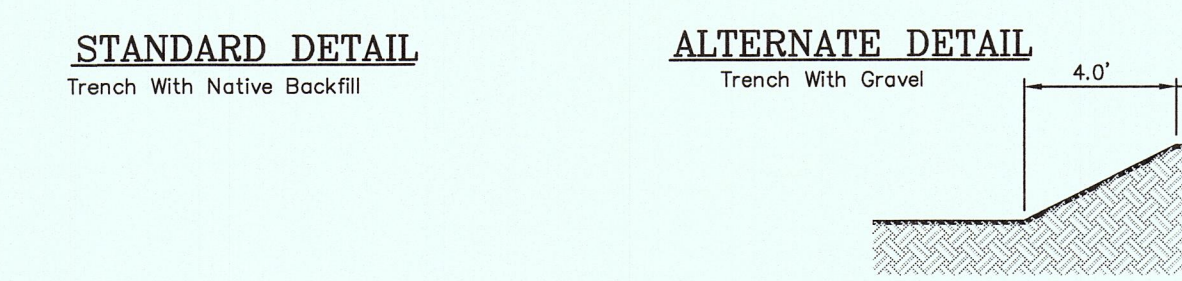
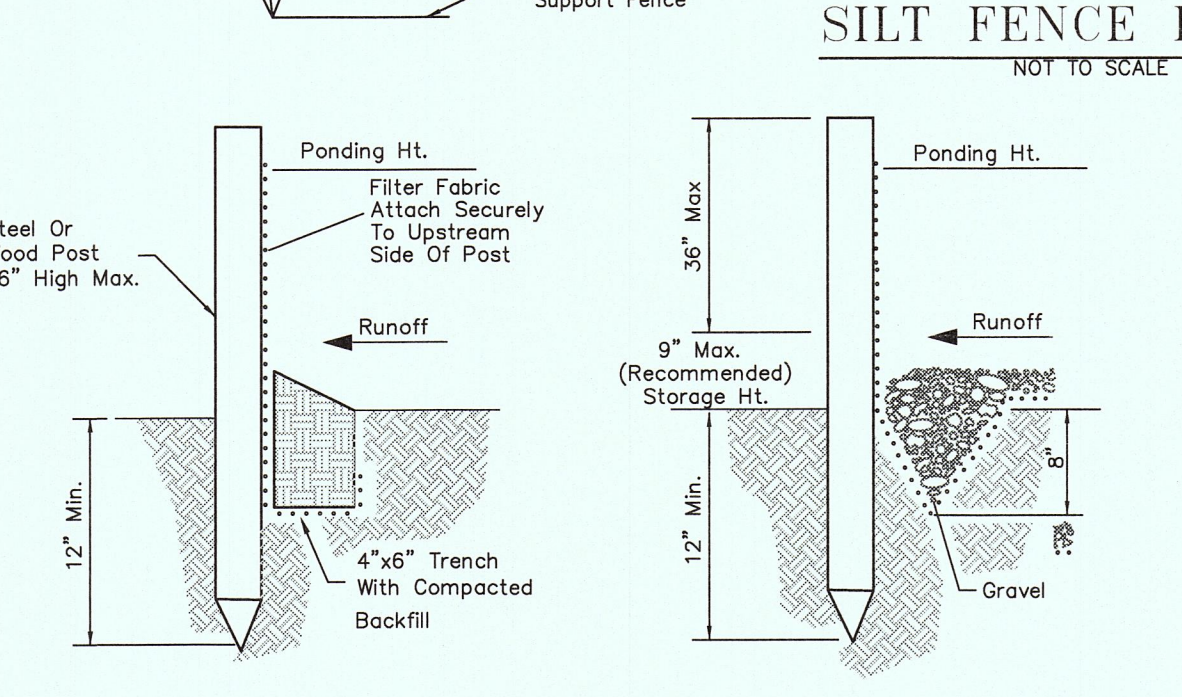
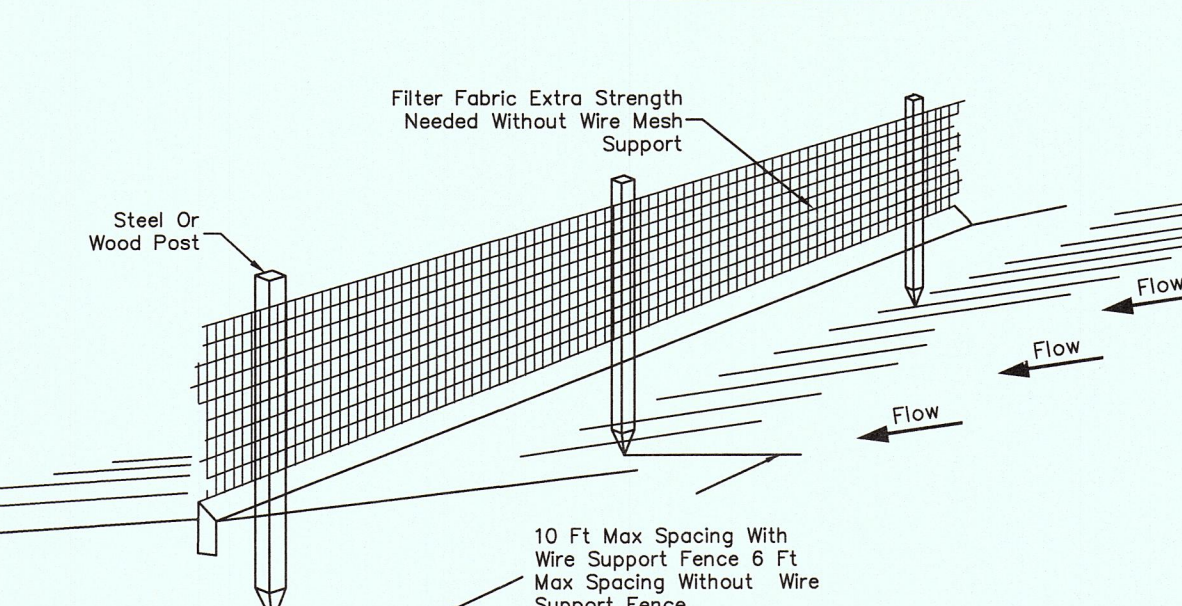
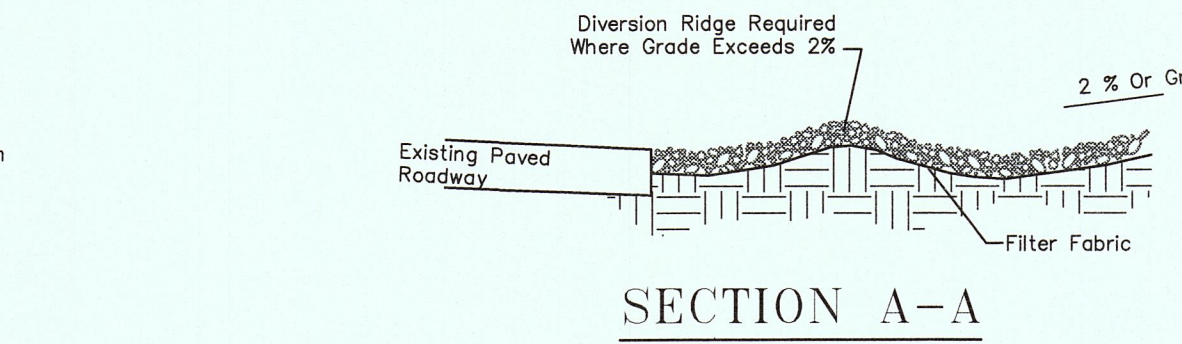
NON-STORMWATER DISCHARGES ALLOWED

A. No person shall introduce or cause to be introduced into the municipal separate storm sewer system (MS4) or waters within the jurisdiction of the city any discharge that is not composed entirely of stormwater.

B. It is an affirmative defense to any enforcement action for violation of subsection A of this section that the discharge was composed entirely of one or more of the following categories of discharges:

1. A discharge authorized by, and in full compliance with, an NPDES permit (other than the NPDES permit for discharges from the MS4);
2. A discharge resulting from firefighting;
3. Agricultural stormwater runoff;
4. A discharge from water line flushing, but not including a discharge from water line disinfection by superchlorination or other means unless it contains no harmful quantity of chlorine or any other chemical used in line disinfection;
5. A discharge from lawn watering, landscape irrigation, or other irrigation water;
6. A discharge from a diverted stream flow or natural spring;
7. A discharge from uncontaminated pumped groundwater or rising groundwater;
8. Uncontaminated groundwater infiltration (as defined as 40 CFR Section 35.2005 (20)) to the MS4;
9. Uncontaminated discharge from a foundation drain, crawl space pump, footing drain or sump pump;
10. A discharge from a potable water source not containing any harmful substance or material from the cleaning or draining of a storage tank or other container;
11. A discharge from air conditioning condensation that is unmixed with water from a cooling tower, emissions scrubber, emissions filter, or any other source of pollutant;
12. A discharge from individual residential or charity car washing;
13. An uncontaminated discharge from riparian habitat or wetland;
14. A discharge from water used in street washing; provided, that the water is not contaminated with any harmful cleaning substance;

C. No affirmative defense shall be available under subsection B of this section if the discharge or flow in question has been determined by the city to be a source of a pollutant or pollutants to the waters of the United States or to the MS4, and written notice of such determination has been provided to the discharger. (Ord. 13477 § 1 (part), 1998)



INSPECTION AND MAINTENANCE

1. Silt Fences And Filter Barriers Shall Be Inspected Weekly And After Each Significant Storm (1\"/>

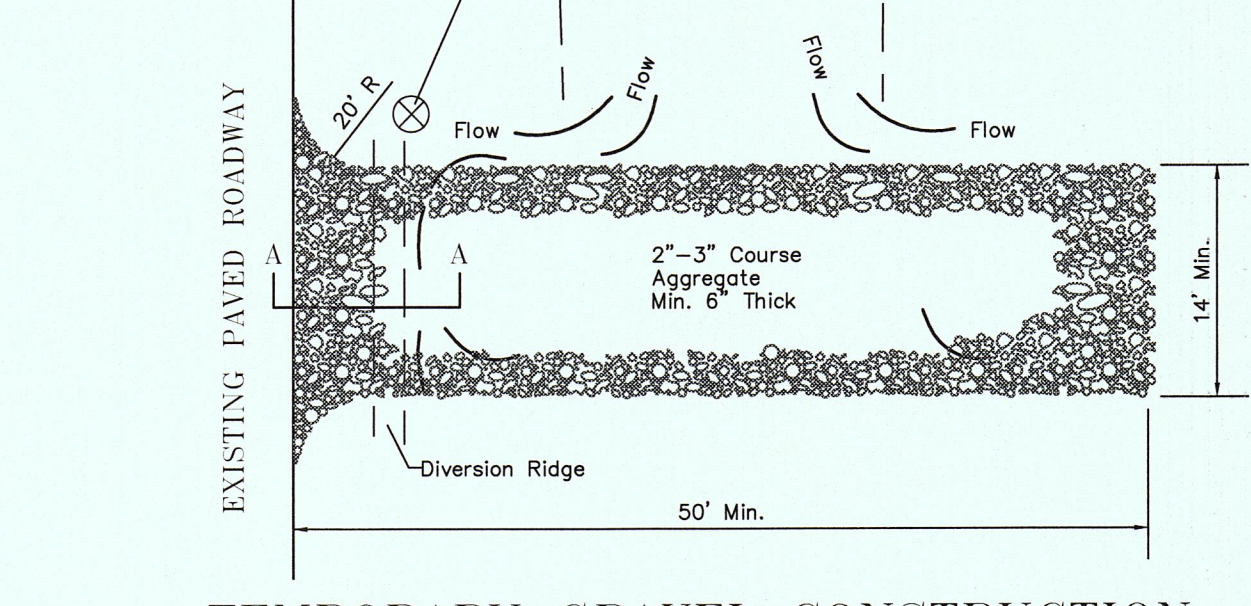
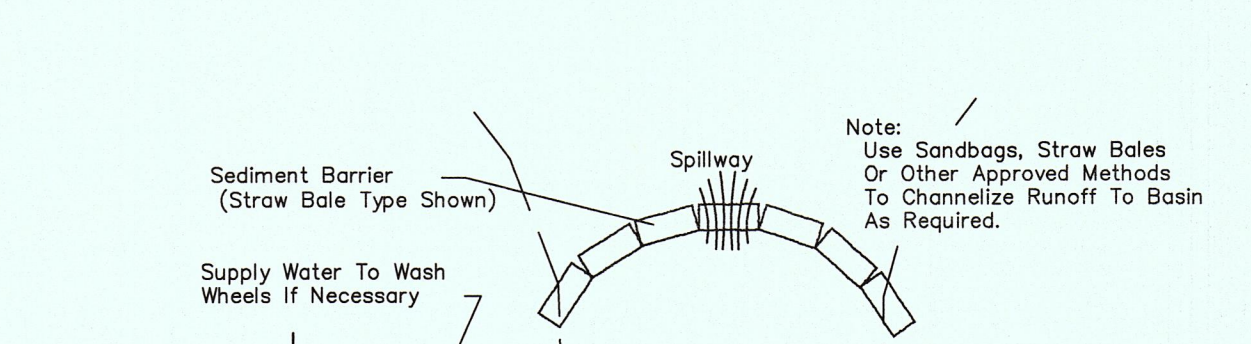
NOTES:

There is No Listed Endangered Or Threatened Species Or Designated Critical Habitat In The Project Area.

There is No Historical Impact Within The Project Limits.

A Copy Of The TPDES General Permit TXR150000 (Permit Language) Shall Be Read, Understood, And Maintained On Site By The Operator.

No Asphalt/Batch plant



CONSTRUCTION SPECIFICATIONS

1. The Height Of A Silt Fence Shall Not Exceed 36 Inches. Storage Height Shall Never Exceed 18\"/>

BEST MANAGEMENT PRACTICES CONTROLS

I. 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.

II. SPILL PREVENTION:

The Following Practices Shall Be Used To Reduce The Risk Of Spills Of Other Accidental Exposures Of Materials To Storm Water Runoff.

III. 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

IV. 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

V. 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.

VI. SPILL CONTROL PRACTICES:

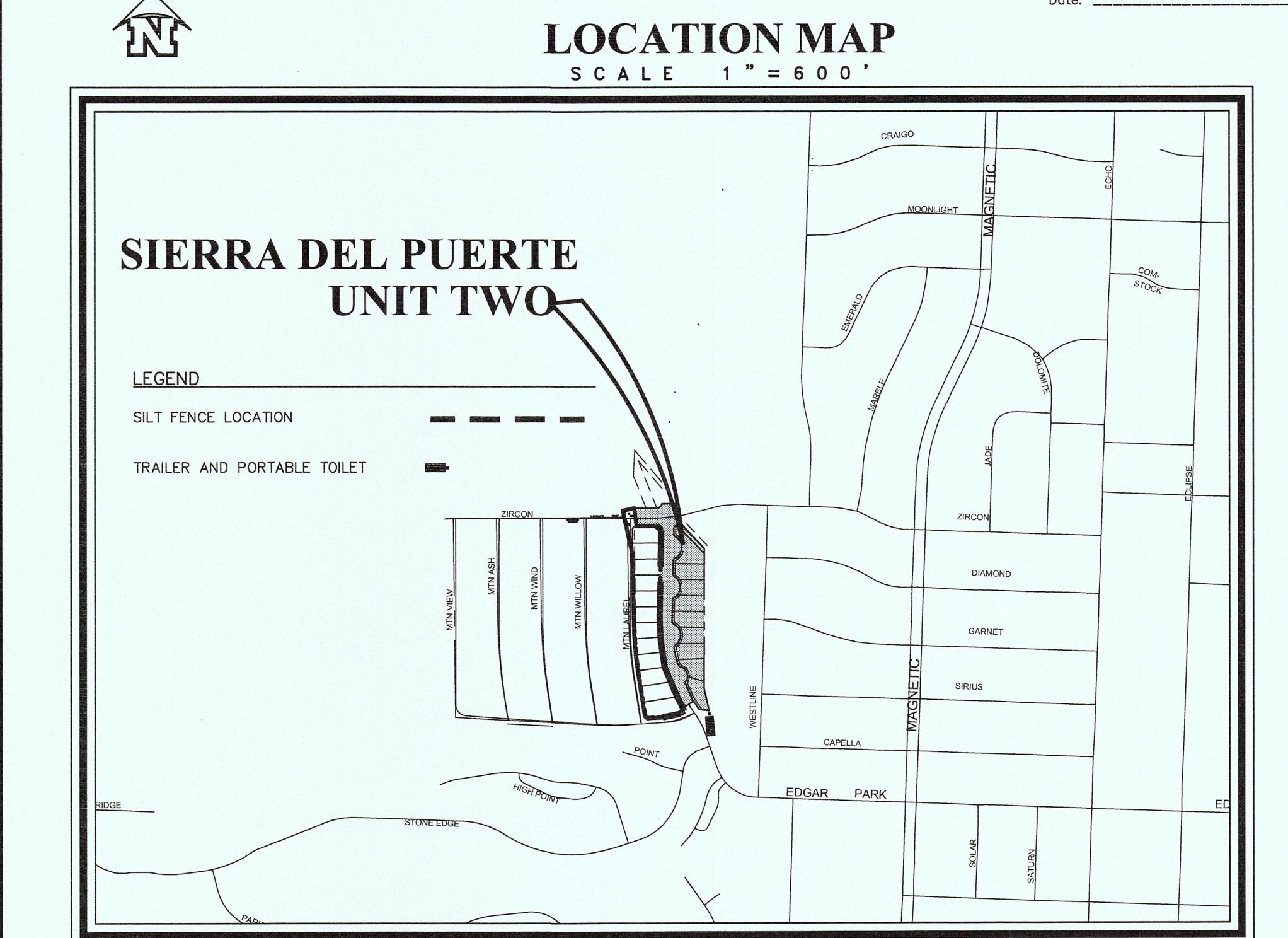
- a. Manufacturer's Recommended Methods For Spill Cleanup Shall Be Clearly Posted And Personnel Shall Be Made Aware Of The Procedures:
- b. Materials And Equipment Necessary For Spill Cleanup Shall Be Kept In The Material Storage Area On-Site:
- c. All Spills Shall Be Cleaned Up Immediately After Discovery
- d. Spill Area Shall Be Well Ventilated And Appropriate Clothing Will Be Worn:
- e. Any Spill Shall Be Reported To The Appropriate Governmental Agency

VII. 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 And Periods Will Be Conducted Monthly. Best Management Practices And Pollution Control Procedures Shall Be Inspected For Adequacy. A Report Summarizing The Scope Of Inspection Shall Be Done & Retained Along With The SDPP.

VIII. 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 Embankments, Temporary Bridges, Matting, Framework, Filing Debris Or Other Obstructions Placed During Construction Operations That Are Not A Part Of The Finished Work.



FLOOD NOTE:

NOTE: THE ABOVE REFERENCED PROPERTY IS WITHIN ZONE "C". (EXPLANATION: AREAS OF MINIMAL FLOODING) ACCORDING TO THE FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAPS, AS PER AREA COMMUNITY PANEL NO. 48021400248. DATED OCTOBER 15, 1982.

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DATE	REVISIONS	BY	PRIMARY BENCHMARK	SCALE
06/11/15	CITY COMMENTS	IR	EXISTING CITY MONUMENT LOCATED AT THE CENTERLINE INTERSECTION OF EDGAR PARK DRIVE AND MOUNTAIN VIEW DRIVE ELEVATION: 4229.73 (NAVD 88) ELEVATION: 4217.92 (CITY DATUM) ELEVATIONS BASED ON NAVD 88 DATUM	HOR: NA VER: _____ W.O. 022515-11A DATE: APRIL 2015 DESIGN BY: IR DRAWN BY: IR/LAJ CHKD. BY: H.P. APPD. BY: B.R.

SIERRA DEL PUERTE UNIT TWO

STORM WATER POLLUTION PREVENTION PLAN

ROE ENGINEERING, L.C.
 TEXAS REGISTERED ENGINEERING FIRM F-2103

SIERRA DEL PUERTE UNIT TWO

STORM WATER POLLUTION PREVENTION PLAN

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 TEXAS REGISTERED ENGINEERING FIRM F-2103

ROE ENGINEERING, L.C.

601 N. Cotton St. Suite No.6 El Paso, Tx, 79902
 (915) 533-1418 - FAX: (915) 533-4972

SHEET NO. 23 OF 23