

MAP

FILE NUMBER: 20230005430

**DESCRIPTION: HORIZONTE
RESIDENCIAL**

DATE: 01/23/2023

AMOUNT: \$96.00

DEPUTY: ERIK MORALES

SIGNATURE: 

Doc# 20230005430
#Pages 3 #NFPages 1
1/23/2023 3:23:04 PM
Filed & Recorded in
Official Records of
El Paso County
Delia Briones
County Clerk
Fees \$75.00

I hereby certify that this instrument was filed on the date and time stamped
hereon by me and was duly recorded by document number in the Recording
Division of Real Property in El Paso County.

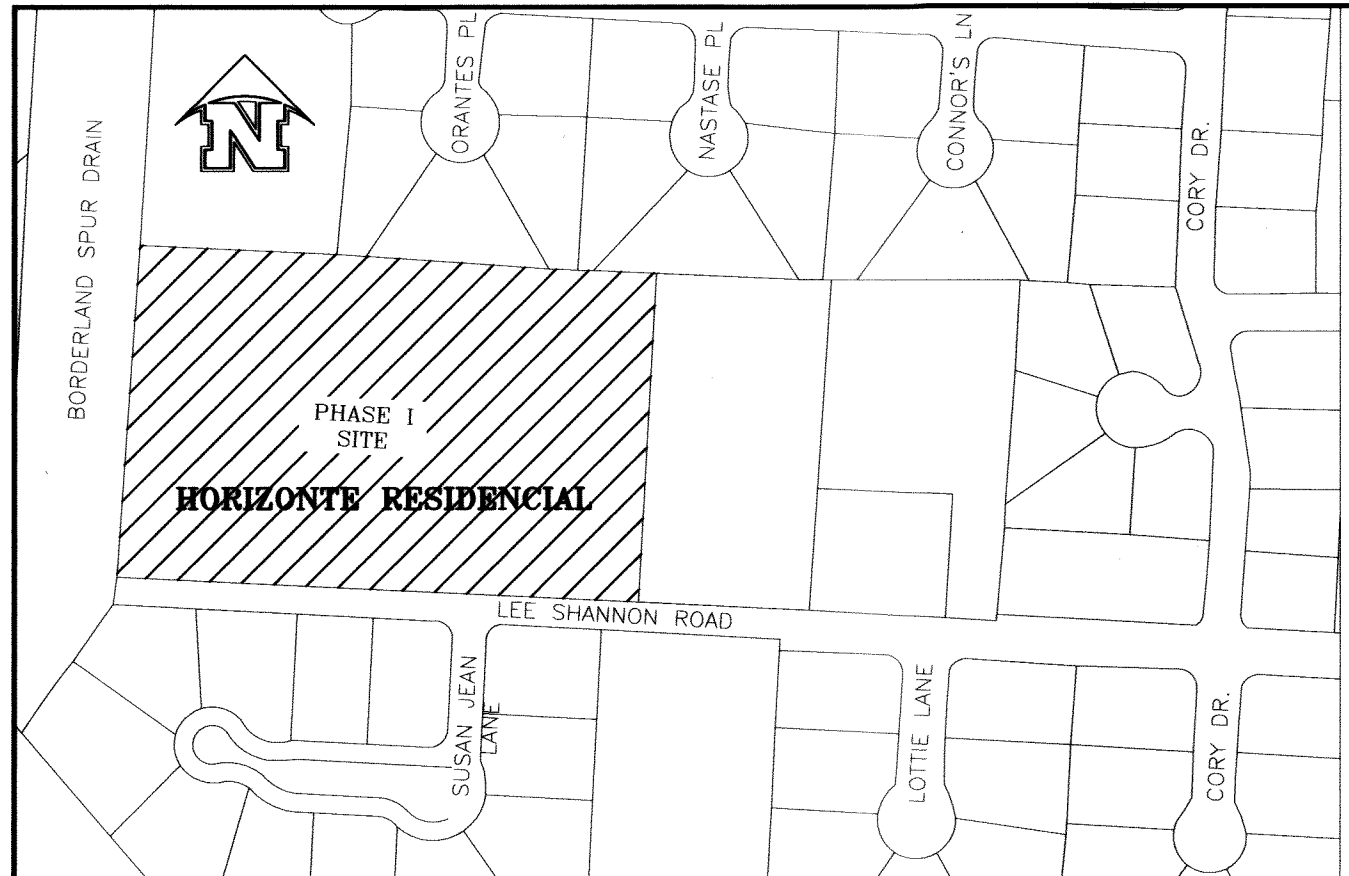


EL PASO COUNTY, TEXAS

Delia Briones

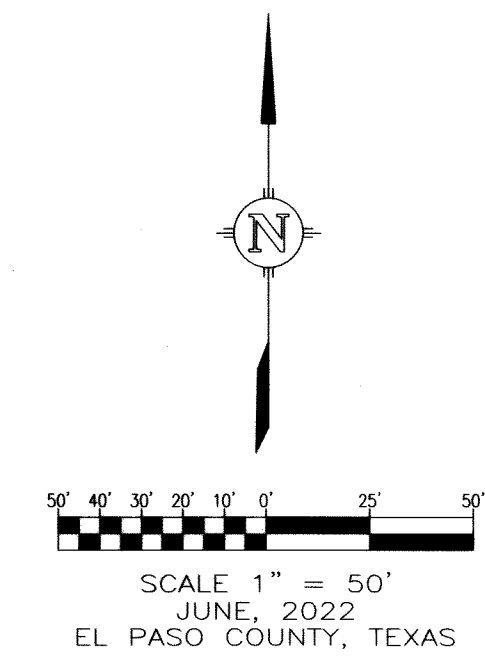
HORIZONTE RESIDENCIAL

A PORTION OF TRACT 5A, BLOCK 8, UPPER VALLEY SURVEYS
CITY OF EL PASO, EL PASO COUNTY, TEXAS.
CONTAINING 6.804 ACRES ±



LOCATION MAP
SCALE: 1" = 600'

- LEGEND**
- SUBDIVISION BOUNDARY LINE
 - STREET CENTERLINE
 - ① BLOCK NUMBER
 - ② LOT NUMBER
 - EXISTING RIGHT OF WAY
 - EXISTING CITY MONUMENT
 - PROPOSED STREET CITY MONUMENT
 - SET 5/8" INCH IRON ROD WITH A RED CAP STAMPED "ZWA"
 - SET 1/2" INCH IRON ROD WITH A RED CAP STAMPED "ZWA"
 - 5/8" INCH IRON ROD FOUND UNLESS NOTED
 - △ CALCULATED POINT
 - () RECORD INFORMATION
 - () EL PASO WATER UTILITY
 - () PSB PUBLIC SERVICE BOARD
 - () P.S. PRIVATE STREET
 - () U.E. UTILITY EASEMENT
 - () P.R.E.P.C.T. PLAT RECORDS
 - () EL PASO COUNTY, TEXAS
 - () O.P.R.E.P.C.T. OFFICIAL PUBLIC RECORDS
 - () EL PASO COUNTY, TEXAS
 - () CENTERLINE OF ROAD
 - BM#1 BENCH MARK
 - 3985.14'



ACREAGE TABLE

DESCRIPTION	ACRES	SQ. FT.
RESIDENTIAL	4.441	193,449
PRIVATE PARK	0.487	21,213
RIGHT-OF-WAY 5' ADDITIONAL	0.08	3,484
RIGHT-OF-WAY WEST GATE DRIVE	1.796	78,233

STREET NAME	LINEAR FEET
WEST GATE DRIVE	1,118 FEET

SCHOOL DISTRICT
EL PASO INDEPENDENT SCHOOL DISTRICT
6531 BOEING DRIVE
EL PASO, TEXAS 79925

PROPOSED LAND USE
RESIDENTIAL LOTS = 17
PRIVATE PARK = 1

OWNERS DEDICATION, CERTIFICATION AND ATTESTATION

I, HORIZONTE RESIDENCIAL DEVELOPERS, LLC, OWNER OF THE 6.804 ACRE TRACT OF LAND ENCOMPASSED WITHIN HORIZONTE RESIDENCIAL DO HEREBY SUBDIVIDE THE LAND AS DEPICTED IN THIS SUBDIVISION PLAT SPECIFIC IMPROVEMENTS TO BE DEDICATED TO THE EL PASO WATER UTILITIES PUBLIC SERVICE BOARD ARE UTILITY EASEMENTS SHOWN HEREIN.

- I CERTIFY THAT I HAVE COMPLIED WITH THE REQUIREMENTS OF TEXAS LOCAL GOVERNMENT CODE 232.032 AND THAT:
- (A) THE WATER QUALITY AND CONNECTIONS TO THE LOTS MEET, OR WILL MEET, THE MINIMUM STATE STANDARDS AND THE REGULATIONS OF THE EL PASO WATER UTILITIES PUBLIC SERVICE BOARD.
 - (B) SEWER CONNECTIONS TO THE LOTS MEET, OR WILL MEET, THE MINIMUM STATE STANDARDS AND THE REGULATIONS OF THE EL PASO WATER UTILITIES PUBLIC SERVICE BOARD.
 - (C) ELECTRICAL CONNECTIONS PROVIDED TO THE LOTS MEET, OR WILL MEET, THE MINIMUM STATE STANDARDS.
 - (D) GAS CONNECTIONS, IF AVAILABLE, PROVIDED TO THE LOTS MEET, OR WILL MEET, THE MINIMUM STATE STANDARDS.

I ATTEST THAT THE MATTERS ASSERTED IN THIS PLAT ARE TRUE AND COMPLETE.

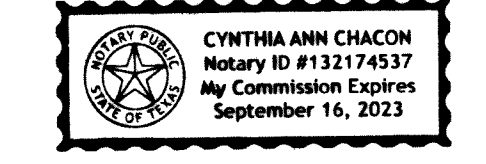
JORGE ADAN MIRAMONTES GARCIA
HORIZONTE RESIDENCIAL DEVELOPERS, LLC
DATE: 12/6/2022

**STATE OF TEXAS
COUNTY OF EL PASO**

BEFORE ME, THE UNDERSIGNED AUTHORITY, ON THIS DAY PERSONALLY APPEARED JORGE ADAN MIRAMONTES GARCIA, OF HORIZONTE RESIDENCIAL DEVELOPERS, LLC, 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 CONSIDERATION THEREIN EXPRESSED, IN THE CAPACITY THEREIN STATED.

GIVEN UNDER MY HAND AND SEAL OF OFFICE THIS 5th DAY OF December, 2022.

[Signature]
NOTARY PUBLIC IN AND FOR EL PASO COUNTY, TX.
9-16-23
MY COMMISSION EXPIRES



CITY PLAN COMMISSION

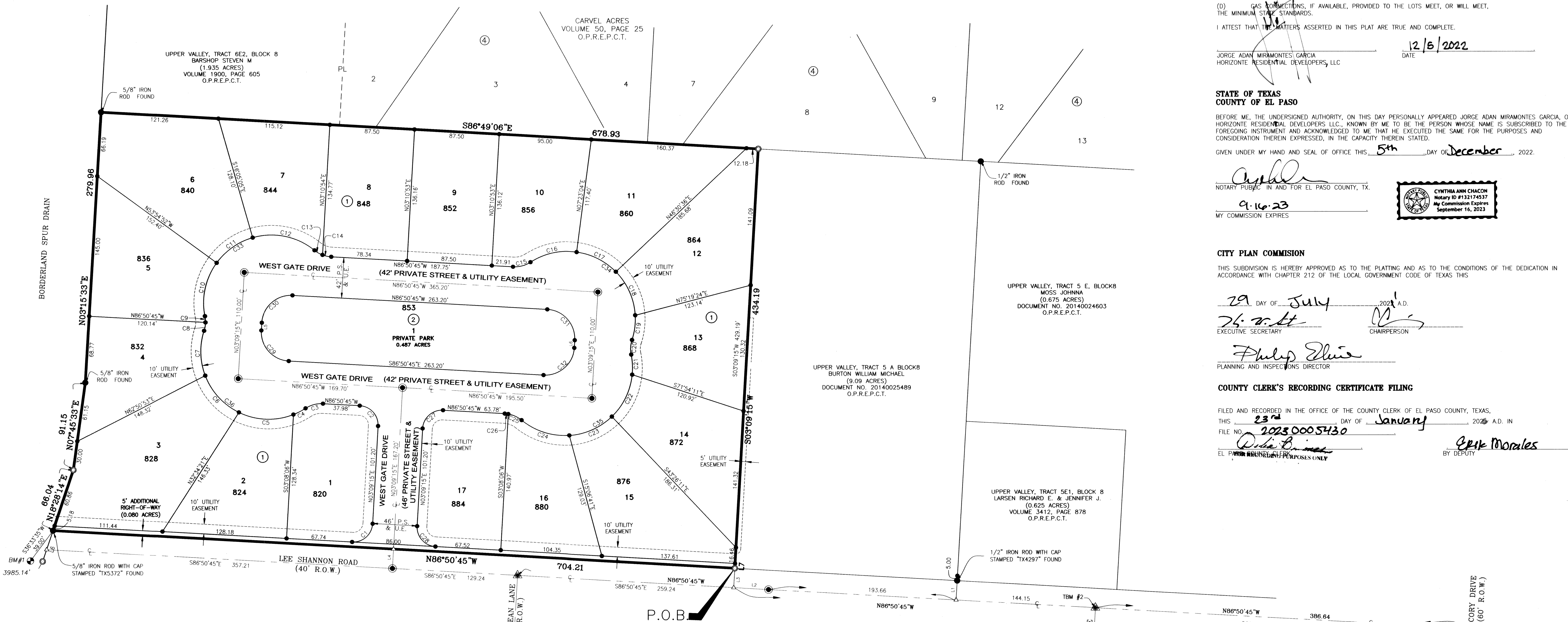
THIS SUBDIVISION IS HEREBY APPROVED AS TO THE PLATTING AND AS TO THE CONDITIONS OF THE DEDICATION IN ACCORDANCE WITH CHAPTER 212 OF THE LOCAL GOVERNMENT CODE OF TEXAS THIS

29 DAY OF July, 2023 A.D.
7:30 AM
EXECUTIVE SECRETARY
CHAIRPERSON

[Signature]
PLANNING AND INSPECTIONS DIRECTOR

COUNTY CLERK'S RECORDING CERTIFICATE FILING

FILED AND RECORDED IN THE OFFICE OF THE COUNTY CLERK OF EL PASO COUNTY, TEXAS.
THIS 23rd DAY OF January, 2023 A.D. IN
FILE NO. 2023 0005430
[Signature]
EL PASO COUNTY CLERK FOR RECORDING PURPOSES ONLY
BY DEPUTY: Erik Morales

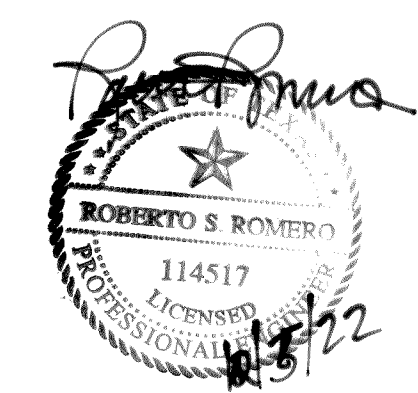


SURVEYOR
ZWA
Zamora, L.L.C.
Professional Land Surveyors
Job # 2119-01
1510 Zaragoza Road, Suite B-7
El Paso, TX 79936
Office: (512) 295-6201

SURVEYOR'S DEDICATION
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.
[Signature]
G. RENE ZAMORA, R.P.L.S., TX. NO. 5682

ENGINEER
TRE & ASSOCIATES
Engineering Solutions
TYPE FIRM #13887
110 Mesa Park Drive, Suite 200 El Paso, Texas 79912
Office: (915) 852-9093 Fax: (915) 629-8506
6101 W. Courtyard Dr., Bldg 1, Ste. 100 Austin, Texas 78730
Office: (512) 368-4049 Fax: (512) 366-5374

ENGINEER'S DEDICATION
SUBDIVISION IMPROVEMENT PLANS PREPARED BY AND UNDER THE SUPERVISION OF TRE & ASSOCIATES, LLC.
[Signature]
ROBERTO S. ROMERO, P.E. NO. 114517



OWNER
HORIZONTE RESIDENCIAL DEVELOPERS, LLC
6006 N. MESA STE #903
EL PASO, TEXAS 79912
PHONE: (915) 600-766

HORIZONTE RESIDENCIAL

A PORTION OF TRACT 5A, BLOCK 8, UPPER VALLEY SURVEYS
CITY OF EL PASO, EL PASO COUNTY, TEXAS.
CONTAINING 6.804 ACRES ±

Curve Table					
CURVE #	LENGTH	RADIUS	DELTA	CHORD DIRECTION	CHORD LENGTH
C1	31.42	20.00	90°00'00"	N48°09'15"E	28.28
C2	31.42	20.00	90°00'00"	N41°50'45"W	28.28
C3	18.91	30.00	36°06'43"	S75°05'53"W	18.60
C4	14.08	70.00	11°31'25"	N62°48'15"E	14.06
C5	57.91	70.00	47°23'46"	S87°44'10"E	56.27
C6	52.69	70.00	43°07'37"	S42°28'28"E	51.45
C7	47.24	70.00	38°40'07"	S01°34'36"E	46.35
C8	8.77	30.00	16°44'33"	N09°23'12"E	8.74
C9	6.53	30.00	12°27'54"	N05°13'02"W	6.51
C10	58.08	70.00	47°32'06"	S12°19'05"W	56.42
C11	46.22	70.00	37°49'46"	S55°00'02"W	45.38
C12	67.62	70.00	55°21'02"	N78°24'34"W	65.02
C13	9.60	30.00	18°20'22"	S59°54'14"E	9.56
C14	9.31	30.00	17°46'20"	S77°57'35"E	9.27
C15	18.91	30.00	36°06'43"	N75°05'53"E	18.60
C16	49.68	70.00	40°39'55"	S77°22'30"W	48.65

Curve Table					
CURVE #	LENGTH	RADIUS	DELTA	CHORD DIRECTION	CHORD LENGTH
C17	46.12	70.00	37°44'52"	N63°25'07"W	45.29
C18	50.28	70.00	41°09'12"	N23°58'05"W	49.20
C19	25.84	70.00	21°08'57"	N07°11'00"E	25.69
C20	15.29	30.00	29°12'27"	S03°09'15"W	15.13
C21	20.87	70.00	17°04'58"	N02°54'29"W	20.79
C22	49.17	70.00	40°14'56"	N25°45'28"E	48.17
C23	49.02	70.00	40°07'21"	N65°56'36"E	48.02
C24	52.85	70.00	43°15'41"	S72°21'53"E	51.61
C25	15.20	30.00	24°04'22"	N65°15'18"W	15.04
C26	3.70	30.00	7°04'11"	N83°18'40"W	3.70
C27	31.42	20.00	90°00'00"	S48°09'15"W	28.28
C28	31.42	20.00	90°00'00"	S41°50'45"E	28.28
C29	47.12	30.00	90°00'00"	S41°50'45"E	42.43
C30	47.12	30.00	90°00'00"	S48°09'15"W	42.43
C31	47.12	30.00	90°00'00"	N41°50'45"W	42.43
C32	47.12	30.00	90°00'00"	N48°09'15"E	42.43
C33	171.92	70.00	140°42'56"	S58°54'29"W	131.85
C34	171.92	70.00	140°42'56"	N52°36'00"W	131.85
C35	171.92	70.00	140°42'56"	N58°54'29"E	131.85
C36	171.92	70.00	140°42'56"	S52°36'00"E	131.85

Line Table		
Line #	Length	Direction
L1	20.00	S03°09'15"W
L2	36.00	S86°50'45"E
L3	20.00	N03°09'15"W
L4	20.00	N03°09'15"E
L5	8.00	S03°09'15"W
L6	8.00	N03°09'15"E
L7	5.00	N03°09'15"E

PLAT NOTES AND RESTRICTIONS

- BEARINGS ARE BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM N.A.D. 1983, CENTRAL ZONE.
- ⊙ = THIS SYMBOL REPRESENTS ALL PROPOSED STREET MONUMENT LOCATIONS.
- THE SUBDIVISION IS WITHIN FLOOD ZONE "X", AREAS DETERMINED TO BE OUTSIDE 500 YEAR FLOOD PLAIN - PANEL No. 480212 0125B, DATED SEPTEMBER 4, 1991.
- TAX CERTIFICATE(S) FOR THIS SUBDIVISION ARE FILED IN THE OFFICE OF THE COUNTY CLERK, DEED AND RECORDS SECTION. DOCUMENT No. 20230005431 DATE: 1/23/23
- RESTRICTIVE COVENANTS FOR THIS SUBDIVISION ARE FILED IN THE OFFICE OF THE COUNTY CLERK, DEED AND RECORDS SECTION. DOCUMENT No. 20230005432 DATE: 9/15/2022 DOCUMENT No. 20230005432 DATE: 1/23/23
- THIS IS TO CERTIFY THAT WATER AND SEWER SERVICES WILL BE PROVIDED TO HORIZONTE RESIDENCIAL BY EL PASO WATER UTILITIES (EPWU) IN ACCORDANCE WITH THEIR RULES AND REGULATIONS AND WITH SECTION 16.343 OF THE TEXAS WATER CODE. WATER AND SEWER SERVICES WILL BE FROM EXISTING FACILITIES LOCATED ON LEE SHANNON ROAD AND WILL BE CONSTRUCTED TO SERVE THE SUBDIVISION WITHIN TWO (2) YEARS OF THE DATE OF FILING THE FINAL SUBDIVISION PLAT.
- LOT CORNERS WILL BE SET UPON COMPLETION OF CONSTRUCTION OF ROADWAYS.
- LOTS SHALL PROVIDE ON SITE PONDING INCLUDING HALF OF ABUTTING ROADWAY.
- HORIZONTE RESIDENCIAL DEVELOPER, L.L.C., THE SUBDIVIDER OF HORIZONTE RESIDENCIAL HAS INSTALLED ALL UTILITY SERVICE LINES TO THE PROPERTY LINES, UNLESS OTHERWISE APPROVED IN WRITING, BY THE COUNTY ENGINEER.
- ALL "PRIVATE STREET AND UTILITY EASEMENTS" SHALL BE MAINTAINED BY HORIZONTE RESIDENCIAL DEVELOPER, L.L.C.
- IN ACCORDANCE WITH TEXAS LOCAL GOVERNMENT CODE SECTION 232.025(6), IT IS HEREBY EXPRESSED THAT ALL PURCHASE CONTRACTS MADE BETWEEN PUNTO LIVING, L.L.C. AND A PURCHASER OF LAND IN THIS SUBDIVISION WILL CONTAIN A STATEMENT DESCRIBING WHEN WATER, SEWER ELECTRICITY, AND GAS SERVICES WILL BE MADE AVAILABLE TO THIS SUBDIVISION.
- POSTAL SERVICE WITHIN THE SUBDIVISION WILL BE PROVIDED USING NEIGHBORHOOD DELIVERY AND COLLECTION BOX UNITS.
- LANDSCAPE AND PARKWAY FACILITIES SHALL BE MAINTAINED BY HORIZONTE RESIDENCIAL DEVELOPERS, L.L.C.
- NO DIRECT VEHICULAR ACCESS TO LEE SHANNON ROAD FOR LOTS 1-3 AND LOTS 15-17, BLOCK 1.
- LOT 1, BLOCK 2 SHALL BE MAINTAINED BY HORIZONTE RESIDENCIAL DEVELOPERS, L.L.C.
- ON-SITE PONDING OF ALL STORM-WATER RUNOFF DISCHARGE VOLUME IS REQUIRED WITHIN EACH SUBDIVIDED LOT AND SHALL COMPLY WITH ALL PROVISIONS OF THE MUNICIPAL CODE SECTION 19.19.010A2,DSC PANEL 1-4C-J, AND DDM#11.

LEGAL DESCRIPTION

DESCRIPTION OF A 6.804 ACRE TRACT OF LAND, SITUATED IN EL PASO COUNTY, TEXAS, BEING A PORTION OF TRACT 5A, BLOCK 8, UPPER VALLEY SURVEY, AS DESCRIBED IN A DEED TO NATHAN AND JEANNIE STRINGFIELD, OF RECORD IN DOCUMENT NO. 20140025489, OFFICIAL PUBLIC RECORDS OF EL PASO COUNTY, TEXAS, SAID 6.804 ACRE TRACT BEING DESCRIBED BY METES AND BOUNDS AS FOLLOWS:

BEGINNING at a 5/8 inch iron rod found at the northwest corner of said Tract 5A, Block 8, Upper Valley Survey, being also on the east line of Borderland Spur Drain, being also the southwest corner of that certain 1.935 acre tract known as Tract 6E2, Block 8, Upper Valley, as conveyed to Steven M. Barshop in a Deed of record in Volume 1900, Page 605, Official Public Records, El Paso County, Texas, and being the northwest corner of the herein described tract;

THENCE, S 86°49'06" E, departing the east line of said Borderland Spur Drain, along the north line of said Tract 5A, Block 8, being also the south line of said Tract 6E2, and the south line of Carvel Acres, a subdivision of record in Volume 50, Page 25, Official Public Records of El Paso County, Texas, for a distance of **678.93** feet to a 5/8 inch iron rod with cap stamped "ZWA" set for the northeast corner of the herein described tract;

THENCE, S 03°09'14" W, departing the south line of said Carvel Acres, over and across said Tract 5A, for a distance of **434.19** feet, to a 5/8 inch iron rod with cap stamped "ZWA" set, for the southeast corner of the herein described tract, and being on the north line of Lee Shannon Road, a forty (40) foot right of way;

THENCE, N 86°50'45" W, with the north line of said Lee Shannon Road, for a distance of **704.21** feet to a 5/8 inch iron rod with cap stamped "TX5372" found for the southwest corner of the herein described tract, being also the southwest corner of said Tract 5A, and being on the east line of said Borderland Spur Drain;

THENCE, N 18°28'14" E, leaving the north line of said Lee Shannon Road, along the west line of said Tract 5A, being also the east line of said Borderland Spur Drain, for a distance of **66.04** feet to a 5/8 inch iron rod with cap stamped "ZWA" set for an angle point on the west line of the herein described tract;

THENCE, N 07°45'33" E, along the east line of said Borderland Spur Drain, being also the west line of said Tract 5A, for a distance of **91.15** feet to a 5/8 inch iron rod found for an angle point on the west line of the herein described tract;

THENCE, N 03°15'33" E, continuing along the east line of said Borderland Spur Drain, being also the west line of said Tract 5A, for a distance of **279.96** feet to the **POINT OF BEGINNING**, containing **6.804** acres of land more or less.

LOT SQUARE FOOTAGE TABLES

BLOCK	LOT	SQ. FEET	ACRES
1	1	12,072	0.277
1	2	11,555	0.265
1	3	17,386	0.399
1	4	11,088	0.254
1	5	12,737	0.292
1	6	15,906	0.365
1	7	11,422	0.262
1	8	11,911	0.273
1	9	11,911	0.273
1	10	11,507	0.264
1	11	13,226	0.303
1	12	13,516	0.310
1	13	11,276	0.258
1	14	12,311	0.282
1	15	13,979	0.320
1	16	10,691	0.245
1	17	12,182	0.279
2	1	21,205	0.486
R.O.W.		60,511	1.389

BEARING BASIS:

THE BEARINGS SHOWN HEREON ARE BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM, TEXAS CENTRAL ZONE, (4203) NAD83 (93) HARN US SURVEY FEET. THE BEARINGS SHOWN ARE GRID BEARINGS, ESTABLISHED BY USING THE VRS-RTK NETWORK. ALL DISTANCE SHOWN ARE SURFACE DISTANCES, CONVERTED WITH A COMBINED SCALE FACTOR OF 1.00023100.

VERTICAL DATUM:

VERTICAL DATUM IS BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (N.A.V.D.88).

BENCH MARKS:

TBM#1: 5/8" IRON ROD WITH CAP STAMPED "ZWA-CONTROL" SET APPROXIMATELY 39 FEET SOUTHWEST OF SOUTHWEST CORNER, INSIDE THE BORDERLAND SPUR DRAIN R.O.W.

GRID COORDINATES:
N=10,692,979.94
E=345,327.85
ELEVATION=3749.77'

TBM#2: BRASS DISK IN CONCRETE FOUND FOR CITY MONUMENT AT THE CENTERLINE INTERSECTION OF LEE SHANNON ROAD AND LOTTIE LANE.

GRID COORDINATES:
N=10,692,932.00
E=346,426.01
ELEVATION=3750.57'

SURVEYOR



ZWA

Zamora, L.L.C.
Professional Land Surveyors

Job # 2119-01
1510 Zaragosa Road, Suite B-7
El Paso, TX 79936
Office: (512)295-6201

OWNER

HORIZONTE RESIDENCIAL DEVELOPERS, L.L.C.
6006 N. MESA STE #903
EL PASO, TEXAS 79912
PHONE: (915)600-766

ENGINEER



Engineering Solutions

TSPC FIRM #13897
110 Mesa Park Drive, Suite 200 El Paso, Texas 79912
Office: (915) 852-9093
Fax: (915) 829-8506
6101 W. Courtyard Dr., Bldg. 1, Ste. 100 Austin, Texas 78730
Office: (512) 358-4049
Fax: (512) 366-5374

HORIZONTE RESIDENCIAL

A PORTION OF TRACT 5A, BLOCK 8 UPPER VALLEY SURVEYS
CITY OF EL PASO, EL PASO COUNTY, TEXAS.
CONTAINING 6.804 ACRES ±

ENGINEERING REPORT FOR HORIZONTE RESIDENCIAL BY ROBERTO S. ROMERO, P.E.

WATER SUPPLY: DESCRIPTION, COST, AND OPERABILITY DATE

THE EL PASO WATER UTILITIES PUBLIC SERVICE BOARD (EPWU) WILL PROVIDE POTABLE WATER SERVICE TO HORIZONTE RESIDENCIAL SUBDIVISION. HORIZONTE RESIDENCIAL DEVELOPERS, LLC (THE OWNER) AND THE EPWU HAVE ENTERED INTO A CONTRACT IN WHICH THE EPWU HAS PROMISED TO PROVIDE SUFFICIENT WATER TO THE SITE FOR AT LEAST 30 YEARS AND THE EPWU HAS PROVIDED DOCUMENTATION TO SUFFICIENTLY ESTABLISH THE LONG TERM QUANTITY AND QUALITY OF THE AVAILABLE WATER SUPPLY TO SERVE THE FULL DEVELOPMENT OF THE SITE.

THE PROPOSED WATER SYSTEM WILL TIE-INTO AN EXISTING WATER LINE AT TWO LOCATIONS, AT THE INTERSECTION OF THE PROPOSED WEST GATE DR. AND LEE SHANNON RD. THE PROPOSED SYSTEM WILL TIE INTO AN EXISTING EIGHT (8") INCH MAIN LINE.

ONCE THE EIGHT (8") INCH DIAMETER WATER LINE IS INSTALLED, THE TOTAL ESTIMATED COST FOR THESE IMPROVEMENTS IS \$50,000.00 PRIOR TO OBTAINING WATER SERVICE. THE SITE OWNER MUST OBTAIN A WATER METER FROM THE EPWU AND PAY ALL APPLICABLE FEES TO THE EPWU. THE WATER FACILITIES WILL BE FULLY OPERABLE BY THE DATE OF MAY 2023.

SEWAGE FACILITIES: DESCRIPTION, COST, AND OPERABILITY DATE

THE EPWU WILL PROVIDE SEWAGE SERVICE TO HORIZONTE RESIDENCIAL. THE OWNER AND EPWU HAVE ENTERED INTO A CONTRACT IN WHICH THE EPWU HAS PROMISED TO PROVIDE SEWER SERVICE TO THE SITE FOR AT LEAST 30 YEARS. THE PROPOSED SEWAGE SYSTEM WILL TIE-INTO AN EXISTING EIGHT (8") INCH WASTEWATER LINE AT LEE SHANNON RD. AS SHOWN ON THE MAP BELOW.

THE PROPOSED SEWER SYSTEM WILL BE CONSTRUCTED BY THE DEVELOPER DURING THE SITE CONSTRUCTION PHASE OF HORIZONTE RESIDENCIAL. THE ESTIMATED COST OF THE SEWER FACILITIES IS \$45,000.00. BEFORE OBTAINING SEWER SERVICE, THE SITE OWNER MUST PAY ALL APPLICABLE FEES TO EPWU. THE WASTEWATER FACILITIES WILL BE FULLY OPERABLE ON THE DATE OF MAY 2023.

CERTIFICATION

I CERTIFY THAT THE WATER AND WASTEWATER SERVICE FACILITIES DESCRIBED ABOVE ARE IN COMPLIANCE WITH THE MODEL SUBDIVISION RULES ADOPTED UNDER SECTION 16.343, TEXAS WATER CODE. I CERTIFY THAT THE ESTIMATED COST TO INSTALL WATER AND WASTEWATER FACILITIES, DISCUSSED ABOVE, ARE AS FOLLOWS:

WATER FACILITIES: THESE FACILITIES WILL BE INSTALLED AND COMPLETELY CONSTRUCTED, EXCEPT WATER METER AND INSTALLATION, AND WILL COST \$50,000.00
SEWAGE FACILITIES: THESE FACILITIES WILL BE INSTALLED AND COMPLETELY CONSTRUCTED, EXCEPT FOR THE INSTALLATION AND HOOK-UP FEES OF INDIVIDUAL LOTS, AND WILL COST \$45,000.00.

THE WATER AND SEWAGE FACILITIES TO BE INSTALLED BY THE DEVELOPER WILL BE CONSTRUCTED WITHIN TWO (2) YEARS OF THE FILING OF THE FINAL PLAT FOR THIS SITE.

Roberto S. Romero
ROBERTO S. ROMERO
TEXAS LICENSE 114517



12/5/2022
DATE

DISTRIBUCION DE AGUA: DESCRIPCION, COSTOS Y FECHA DE INICIO DE OPERACIONES

EL PASO WATER UTILITIES PUBLIC SERVICE BOARD (EPWU) PROVEERA EL SERVICIO DE AGUA POTABLE A EL SITIO HORIZONTE RESIDENCIAL. HORIZONTE RESIDENCIAL DEVELOPERS, LLC (EL PROPIETARIO) Y PDEMUD 1 HAN ESTABLECIDO UN CONTRATO EN EL CUAL PDEMUD 1 SE COMPROMETE A PROVEER DE SUFICIENTE AGUA A EL SITIO POR UN PERIODO MINIMO DE TREINTA ANOS Y EPWU HA PROPORCIONADO LA DOCUMENTACION NECESARIA QUE GARANTIZA LA CALIDAD Y CANTIDAD DEL SUBMINISTRO DE AGUA DISPONIBLE A LARGO PLAZO, PARA ABASTACER EL DESARROLLO COMPLETO DE EL SITIO.

EL NUEVO SISTEMA DE AGUA POTABLE SERA CONECTADO A UN SISTEMA YA EXISTENTE EN LA INTERSECCION DE WEST GATE DR Y LEE SHANNON RD. EL SISTEMA SERA CONECTADO A UNA LINEA DE OCHO (8") PULGADAS

DESPUES DE LA INSTALACION DE LA LINEA DE OCHO (8") PULGADAS DE DIAMETRO, EL TOTAL ESTIMADO POR ESTAS MEJORAS ES \$50,000.00. ANTES DE OBTENER EL SERVICIO DE AGUA POTABLE, EL PROPIETARIO DE EL SITIO DEBERA OBTENER UN MEDIDOR DE AGUA DE EPWU Y NECESITARA PAGAR TODAS LAS CUOTAS PERTINENTES AL EPWU. EL SISTEMA DE AGUA ESTARA COMPLETAMENTE OPERATIVO PARA EL DIA PRIMERO DE MAYO DEL 2023.

SISTEMA DE SANEAMIENTO: DESCRIPCION, COSTOS Y FECHA DE INICIO DE OPERACIONES

EPWU PROVEERA DEL SERVICIO DE DRENAJE A EL SITIO HORIZONTE RESIDENCIAL. EL PROPIETARIO Y EPWU HAN ESTABLECIDO UN CONVENIO EN EL CUAL EPWU SE HA COMPROMETIDO A PROVEER EL SERVICIO DE SANEAMIENTO A EL SITIO POR LO MENOS TREINTA ANOS. EL SISTEMA DE DRENAJE PROPUESTO SE CONECTARA A UNA LINEA DE DRENAJE EXISTENTE DE OCHO (8") PULGADAS EN LA INTERSECCION DE WEST GATE DR Y LEE SHANNON RD COMO SE DEMUESTRA EN EL MAPA ACONTINUACION

EL SISTEMA PROPUESTO DE DRENAJE SERA CONSTRUIDO POR EL URBANIZADOR DURANTE LA FASE DE CONSTRUCCION DE EL SITIO HORIZONTE RESIDENCIAL. EL COSTO ESTIMADO DE ESTE SISTEMA DE DRENAJE ES DE \$45,000.00. ANTES DE OBTENER SERVICIO DE DRENAJE, EL PROPIETARIO DEBERA PAGAR LAS CUOTAS REQUERIDAS POR AL EPWU. EL SISTEMA DE DRENAJE SANITARIO ESTARA COMPLETAMENTE OPERATIVO PARA EL DIA PRIMERO DE MAYO DEL 2023.

CERTIFICACION

YO CERTIFICO QUE LOS SERVICIOS DE AGUA Y DRENAJE MENCIONADOS ANTERIORMENTE ESTAN DE ACUERDO CON EL MODELO DE REGLAS APROBADO BAJO LA SECCION 16.343 DEL CODIGO DE AGUA DE TEXAS. YO CERTIFICO QUE LOS COSTOS ESTIMADOS DE INSTALACION DEL SISTEMA DE AGUA Y DRENAJE MENCIONADOS ANTERIORMENTE, SON:

SISTEMA DE AGUA: ESTE SISTEMA SERA INSTALADO Y CONSTRUIDO EN SU TOTALIDAD, CON EXCEPCION DE LOS MEDIDORES DE AGUA, Y COSTARA \$50,000.00.

SISTEMA DE DRENAJE: ESTE SISTEMA SERA INSTALADO Y CONSTRUIDO EN SU TOTALIDAD, EXCEPCION DEL COSTO DE LAS CONECCIONES PARA CADA LOTE, Y COSTARA \$45,000.00

EL SISTEMA DE AGUA Y DRENAJE INSTALADO POR EL URBANIZADOR SERA CONSTRUIDO DENTRO DE DOS (2) ANOS DESPUES DE ARCHIVAR EL PLANO FINAL DE EL SITIO.

ENGINEERING DRAINAGE REPORT BY ROBERTO S. ROMERO, P.E.

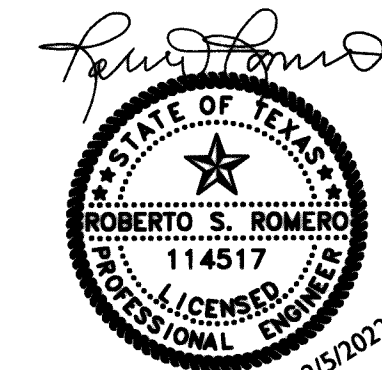
HORIZONTE RESIDENCIAL IS A 6.804 ACRE SITE LOCATED AT THE NORTHEAST CORNER OF THE WESTERN END OF LEE SHANNON ROAD. THE SITE LIES ON LAND THAT IS GENERALLY FLAT. THE SITE IS DESIGNED TO CAPTURE AND CONTAIN STORMWATER RUNOFF GENERATED WITHIN ITS BOUNDARIES AND CARRY IT AWAY FROM THE STREETS INTO ON-SITE POND OF THE LOTS AND PARK WHICH IS DESIGNED WITH SUFFICIENT POND CAPACITY TO RETAIN A 100-YEAR DESIGN RAINFALL.

THE ABOVE MEASURES PROVIDE POSITIVE DRAINAGE AWAY FROM ALL SIDEWALKS, AVOID CONCENTRATING RUNOFF, AND COORDINATE THE ROAD DRAINAGE WITH THE GENERAL STORM DRAINAGE PATTERN FOR THE AREA. THE MAP BELOW ILLUSTRATES THE FLOW PATTERNS FOR THE RUNOFF.

CERTIFICATION

UNDER LOCAL GOVT. CODE 232.021(4), "FLOODPLAIN" MEANS ANY AREA IN THE 100-YEAR FLOODPLAIN THAT IS SUSCEPTIBLE TO BEING INUNDTATED BY WATER FROM ANY SOURCE OR THAT IS IDENTIFIED BY FEMA UNDER THE NATIONAL FLOOD INSURANCE ACT. BY MY SIGNATURE BELOW, I CERTIFY THAT EL PASO STATION NO.1 LIES WITHIN A FLOOD ZONE DESIGNATION OF "X", AS DESIGNATED IN PANEL NO. 480212 0250B DATED SEPTEMBER 4, 1991, OF THE FLOOD INSURANCE RATE MAPS, EL PASO COUNTY, TEXAS. ZONE "X" INDICATES AREAS OF MINIMAL FLOODING.

Roberto S. Romero
ROBERTO S. ROMERO
TEXAS LICENSE 114517



12/5/2022
DATE

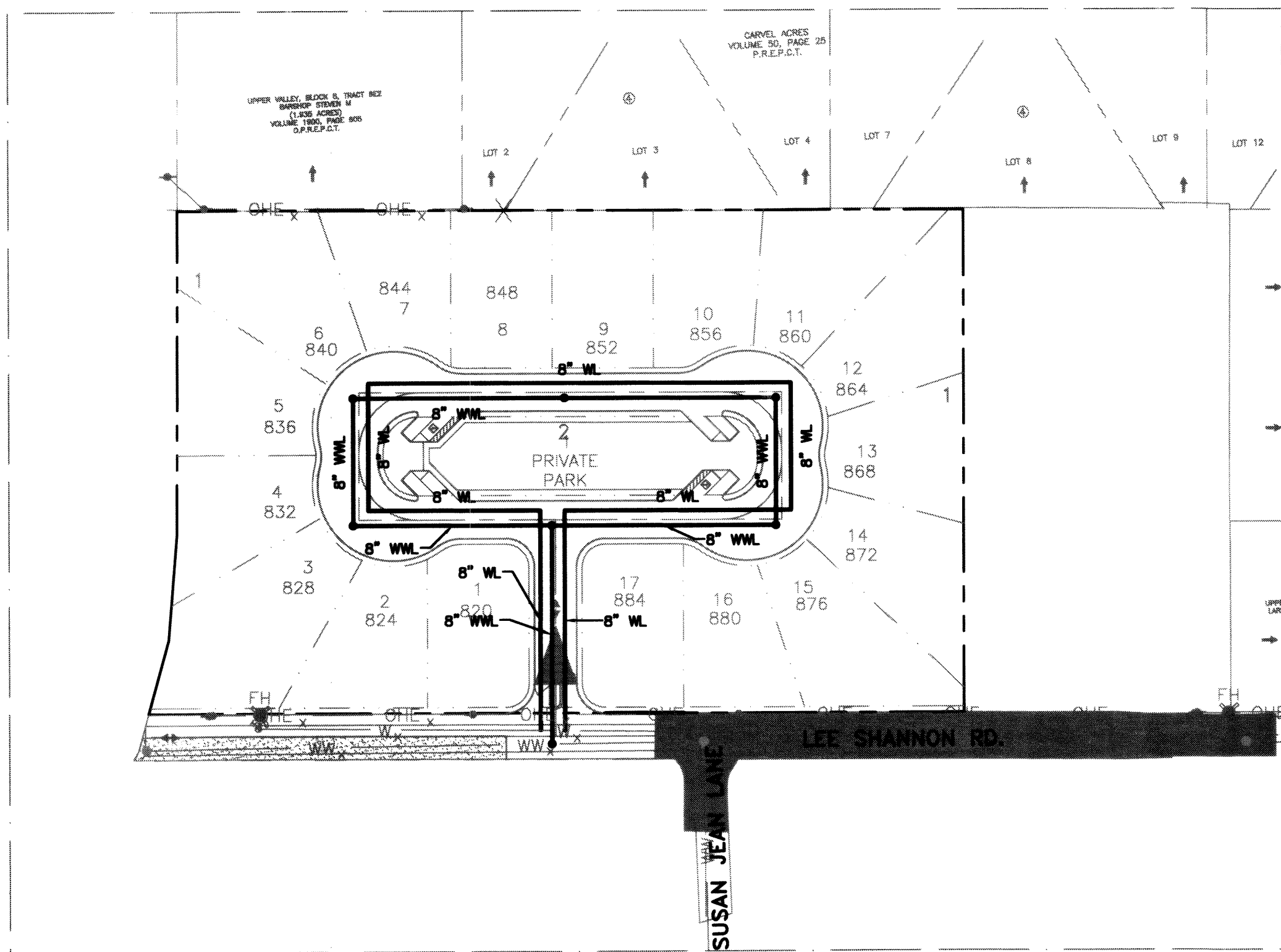
REPORTE DE DESAGÜE

HORIZONTE RESIDENCIAL ES UN SITIO DE 6.804 ACRES QUE SE ENCUENTRA AL NORESTE DE LA INTERSECCION DE LAS CALLES LEE SHANNON DRIVE Y SUSAN JEAN LANE. EL SITIO SE ENCUENTRA EN TERRENOS MAYORMENTE PLANOS. EL SITIO ESTA SIDENADO PARA CAPTURAR Y LLEVAR LA ESCORRENTIA PLUVIAL DENTRO SE SUS LOTES Y PARQUE CON ON-SITE PONDING. DISENADOS CON CAPACIDAD SUFICIENTE PARA CONTENER LAS TORMENTAS DE 100 ANOS.

LAS MEDIDAS MENCIONADAS ANTERIORMENTE PROPORCIONAN DESAGÜES EFECTIVOS LEJOS DE CUALQUIER EDIFICIO. EVITAN LA CONCENTRACION DE LA ESCORRENTIA EN LA HACERA, Y COORDINAN EL DESAGÜE CON EL SISTEMA DE DESAGÜE DEL AREA. EL MAPA DE DEBAJO MUESTRA EL CAMINO QUE SIGUE LA ESCORRENTIA.

CERTIFICACION

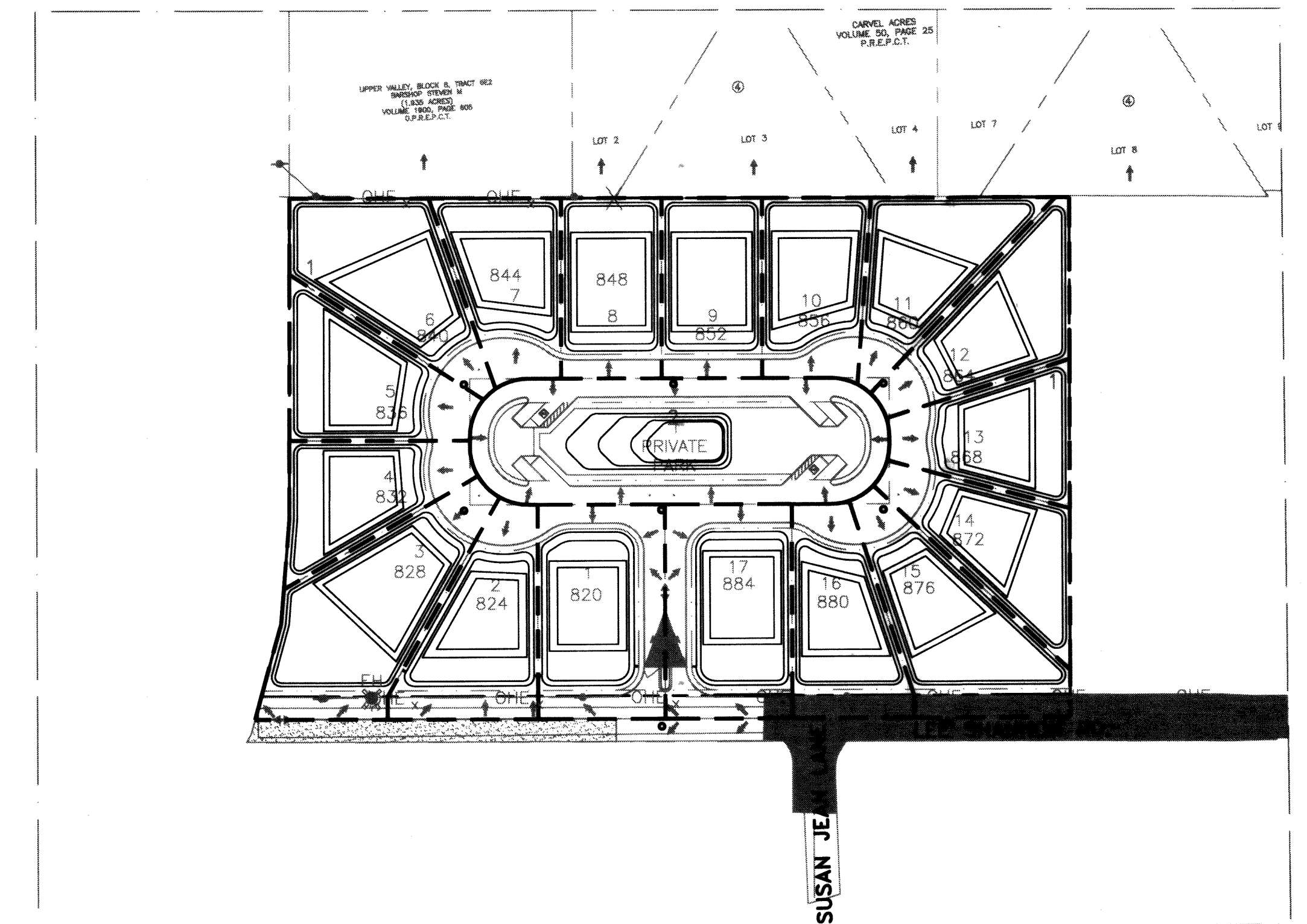
BAJO EL CODIGO LOCAL DE GOBIERNO 232.021(4), "PLANICIE DE INUNDACION" (FLOODPLAIN) SIGNIFICA CUALQUIER AREA LOCALIZADA EN LA PLANICIE DE INUNDACION DE LAS TORMENTAS DE 100-AÑOS QUE SON SUSCEPTIBLES A INUNDARSE CON AGUA PROCEDENTE DE CUALQUIER FUENTE IDENTIFICADA POR FEMA BAJO EL ACTO NACIONAL DE ASEGURANZA DE INUNDACION (NATIONAL FLOOD INSURANCE ACT). CON MI FIRMA, CERTIFICO QUE EL SEGMENTO DE CALLE PROPUESTO IDENTIFICADO COMO "EL PASO STATION NO.1" SE ENCUENTRA EN LA ZONA "X". DE ACUERDO AL PANEL NO. 480212 0250B, CON FECHA DEL 4 DE SEPTIEMBRE DE 1991, DE LOS MAPAS DE TARIFA DEL SEGURO DE INUNDACION (FLOOD INSURANCE RATE MAPS), DEL CONDADO DE EL PASO, TEXAS. ZONA "X" DENOTA AREAS CON MINIMA INUNDACION.



MAP OF WATER AND WASTEWATER SYSTEMS
MAPA DE AGUA POTABLE Y SANEAMIENTO



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MAP OF DRAINAGE SYSTEM
MAPA DEL SISTEMA DE DESAGUE

LEGEND

	HIGH WATER MARK
	SUBDIVISION BOUNDARY LINE
	ROW LINE
	CURB LINE
	PROPERTY LINE
	STREET CENTERLINE
	EASEMENT LINE
	MATCH LINE
	FINISHED GROUND CONTOUR ELEVATION (INDEX)
	FINISHED GROUND CONTOUR ELEVATION (INTERMEDIATE)
	EXISTING GROUND CONTOUR ELEVATION (INDEX)
	EXISTING GROUND CONTOUR ELEVATION (INTERMEDIATE)
	NEW RETAINING ROCKWALL (IF OTHERWISE NOTED)
	EXISTING RETAINING ROCKWALL
	STANDARD BOX MANHOLE
	CITY MONUMENT
	FINISHED SPOT ELEVATION
	LOT FINISHED GROUND ELEVATION
	TOP OF CURB ELEVATION
	TOP OF PAVEMENT ELEVATION
	SUBDIVISION LOT AND BLOCK NUMBER
	DRAINAGE FLOW
	HIGH POINT
	LOW POINT
	EXISTING HIGH POINT
	EXISTING LOW POINT
	DRAINAGE AREA
	HORIZONTAL:VERTICAL SLOPE RATIO

ABBREVIATIONS

L.P.	LOW POINT	EXP.	EXPECTED
H.P.	HIGH POINT	INV.	INVERT
ELEV.	ELEVATION	C.F.S.	CUBIC FEET PER SECOND
STA.	STATION	A.	AREA
V.C.S.	VERTICAL CURVE STATION	D.A.	DRAINAGE AREA
V.C.E.	VERTICAL CURVE ELEVATION	L.F.	LINEAR FEET
T.C.	TOP OF CURB	STD.	STANDARD
T.P.	TOP OF PAVEMENT	CONC.	CONCRETE
TYP.	TYPICAL	P.C.	POINT OF CURVATURE
P.V.C.	POINT OF VERTICAL CURVE	P.I.	POINT OF INTERSECTION
P.V.T.	POINT OF VERTICAL INTERSECTION	P.T.	POINT OF TANGENT
A.D.	ALGEBRAIC DIFFERENCE	L	LENGTH
C.R.	CURVE RETURN	S	SLOPE
R.O.W.	RIGHT OF WAY	C&G	CURB & GUTTER
C.L.	CENTER LINE	TEMP.	TEMPORARY
P.L.	PROPERTY LINE	V.	VELOCITY IN FEET PER SECOND
F.G.	FINISHED GROUND	H.G.L.	HYDRAULIC GRADE LINE
F.F.	FINISHED FLOOR	N.I.C.	NOT IN CONTRACT
E.G.	EXISTING GRADE	H.W.M	HIGH WATER MARK
MIN.	MINIMUM	PVMT.	PAVEMENT
R.C.P.	REINFORCED CONCRETE PIPE	PCR	POINT OF CURB RETURN
Q.	QUANTITY	OF	OUTFALL
CAP.	CAPACITY	U.P.	UNIFORM FLOW
		FL.	FLOWLINE

GRADING SPECIFICATIONS

- CLEARING AND GRUBBING: CLEAR SITE OF TREES, SHRUBS, AND OTHER VEGETATION; COMPLETELY REMOVE STUMPS, ROOTS, AND OTHER DEBRIS PROTRUDING THROUGH GROUND SURFACE; FILL DEPRESSIONS CAUSED BY CLEARING AND GRUBBING OPERATIONS WITH SATISFACTORY FILL MATERIAL, UNLESS FURTHER EXCAVATION OF EARTHWORK IS INDICATED; REMOVE EXISTING ABOVE-GRADE AND BELOW-GRADE IMPROVEMENTS AS INDICATED AND AS NECESSARY TO FACILITATE NEW CONSTRUCTION. BURNING IS NOT PERMITTED ON OWNER'S PROPERTY. REMOVE WASTE MATERIALS FROM OWNER'S PROPERTY
- SATISFACTORY FILL MATERIALS: FILL MATERIALS SHALL BE GRANULAR, FREE OF CLAYEY AND ORGANIC MATERIAL AND SHALL NOT CONTAIN GRAVEL LARGER THAN THREE (3) INCHES IN GREATEST DIMENSION AND SHALL BE DEFINED AS THOSE COMPLYING WITH ASTM D2487 SOIL CLASSIFICATION GROUPS SM, SM-SW, SM-SP, GM, GM-GW, GM-GP.
- 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 UP SLOPED SURFACES STEEPER THAN 1 VERTICAL TO 4 HORIZONTAL SO THAT FILL MATERIAL WILL BOND WITH EXISTING SURFACE. AFTER PLOWING AND SCARIFYING FILL AREA, IT SHALL THEN BE DISCED OR BLADED UNTIL IT IS UNIFORM AND FREE FROM LARGE CLODS, BROUGHT TO OPTIMUM MOISTURE, AND COMPACTED 95% OF MAXIMUM DENSITY IN ACCORDANCE WITH ASTM D-1557.
- PLACEMENT OF THE FILL: PLACE BACKFILL AND FILL MATERIALS IN LAYERS FROM 8 INCHES IN LOOSE DEPTH FOR MATERIAL COMPACTED BY HEAVY COMPACTION EQUIPMENT, AND NOT MORE THAN 4 INCHES IN LOOSE DEPTH FOR MATERIAL COMPACTED BY HAND-OPERATED TAMPERS. BEFORE COMPACTION MOISTEN OR AERATE EACH LAYER AS NECESSARY TO PROVIDE OPTIMUM MOISTURE CONTENT. PLACE FILL MATERIALS EVENLY ADJACENT TO SITE APPURTENANCES, PIPING, OR CONDUIT TO REQUIRED ELEVATIONS. PREVENT WEDGING ACTION OF BACKFILL AGAINST SITE APPURTENANCES OR DISPLACEMENT OF PIPING OR CONDUIT TO APPROXIMATELY SAME ELEVATION IN EACH LIFT. COMPACT SOIL TO NOT BE 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 TOO WET TO PERMIT COMPACTION TO SPECIFIED DENSITY.
- QUALITY CONTROL: THE OWNER SHALL PROVIDE A GEOTECHNICAL ENGINEER TO PERFORM FIELD DENSITY TEST OF THE COMPACTION OF EACH LAYER OF FILL. DENSITY 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 THEREOF IS BELOW THE REQUIRED DENSITY, THE PARTICULAR LAYER OR PORTION SHALL BE REWORKED UNTIL THE REQUIRED DENSITY, HAS BEEN OBTAINED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ADDITIONAL COSTS RESULTING FROM NOT MEETING THE REQUIRED DENSITIES. THE GEOTECHNICAL ENGINEER SHALL SUPERVISE DURING THE GRADING OPERATIONS TO ENSURE GRADING WORK WILL BE 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 IS NOT LIMITED TO DRIVEWAYS, STREETS, PARKING AND WALKWAYS. THIS REQUIREMENT SHALL BE FULFILLED AT NO EXTRA COST TO THE OWNER.
- CONTRACTOR SHALL WATER CONSTRUCTION AREA A MINIMUM OF TWICE A DAY TO KEEP DUST TO A MINIMUM — ONCE IN THE MORNING AND BEFORE QUITTING TIME. THIS SHALL ALSO BE DONE DURING WEEKENDS AND HOLIDAYS.
- IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE, PROTECT, AND REPLACE ALL UNDERGROUND UTILITY LINES AT NO EXTRA COST TO THE OWNER WHEN LINES ARE DISTURBED AS A RESULT OF THE WORK. SERVICE SHALL BE PROVIDED TO USER AT ALL TIMES.
- IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO SCHEDULE AND PERFORM HIS WORK SO AS TO ASSURE PROPER PASSAGE OF STORM RUNOFF DURING THE COURSE OF HIS OPERATIONS. ALL LABOR, TOOLS, EQUIPMENT, AND SUPERVISION REQUIRED TO ASSURE SUCH PROPER PASSAGE OF RUNOFF WATER AND ANY REMOVAL OR HANDLING OF WATER IN ORDER TO MAINTAIN DRY CONDITIONS SHALL BE CONSIDERED INCIDENTAL TO THE WORK, AND SHALL BE AT THE EXPENSE OF CONTRACTOR.
- THE CONTRACTOR SHALL COORDINATE THE CONSTRUCTION SCHEDULE WITH THE USER, ALL UTILITIES AND ALL OTHER AGENCIES WITH JURISDICTION OVER THE PROJECT.
- ALL EXISTING PAVEMENT, ADJACENT UTILITIES, STRUCTURES, ECT., DISTURBED AS A RESULT OF THE NEW CONSTRUCTION, SHALL BE REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
- THE OWNER SHALL FURNISH HORIZONTAL AND VERTICAL CONTROL REFERENCED POINTS ONLY. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND GRADES BEFORE PROCEEDING WITH THE WORK. ANY DISCREPANCIES FOUND SHALL BE REPORTED IMMEDIATELY TO THE ENGINEER. OTHERWISE THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR THEIR CORRECTNESS.
- 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 MEANS OF 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 A TRENCH SAFETY PLAN, SEALED BY A REGISTERED ENGINEER.

BEARING BASIS:

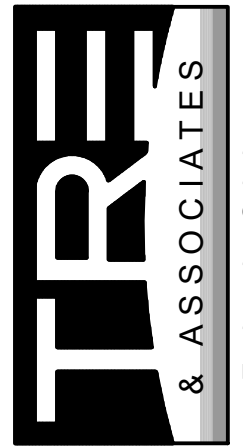
THE BEARINGS SHOWN HEREON ARE BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM, TEXAS CENTRAL ZONE, NAD83 (93) HARN. THE BEARINGS SHOWN ARE GRID BEARINGS. ESTABLISHED BY USING TYP-DOT VRS-RTX NETWORK. ALL DISTANCES SHOWN ARE SURFACE DISTANCES, CONVERTED WITH A COMBINED SCALE FACTOR OF 1.00023100.

VERTICAL DATUM:

VERTICAL DATUM IS BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (N.A.V.D.88).

BENCH MARKS:

- | | | |
|-------|-----------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|
| TBM#1 | 5/8" IRON ROD WITH CAP STAMPED "ZWA-CONTROL" SET APPROXIMATELY 39 FEET SOUTHWEST OF SOUTHWEST CORNER, INSIDE THE BORDERLAND SPUR DRAIN R.O.W. | GRID COORDINATES:
N=10,692,979.94
E=345,327.85
ELEVATION=3749.77' |
| TBM#2 | BRASS DISK IN CONCRETE FOUND FOR CITY MONUMENT AT THE CENTERLINE INTERSECTION OF LEE SHANNON ROAD AND LOTTIE LANE. | GRID COORDINATES:
N=10,692,932.00
E=346,426.01
ELEVATION=3750.57' |



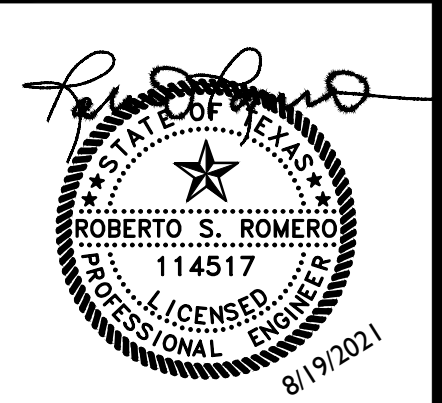
Engineering Solutions
 TREE ENGINEERS & ASSOCIATES
 110 Mesa Park Drive, Suite 200 El Paso, Texas 79912
 6101 W. Coahuila Dr., Bldg. 1, Suite 100 Austin, Texas 78730
 Office: (817) 398-4049
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PROJECT NO. 2002-12004-32	DESIGNED BY: KB		
DWG FILE: SDGNIS	DRAWN BY: KB		
DATE: AUGUST 2021	CHECKED BY: RR		
NO.	BY	DATE	REVISION DESCRIPTION

**HORIZONTE RESIDENCIAL
 STREET, DRAINAGE, WATER, &
 WASTEWATER
 IMPROVEMENTS**

**STREET & DRAINAGE
 GENERAL NOTES**

NOTICE:
 ALTERATION OF A SEALED DRAWING WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS A VIOLATION OF THE TEXAS ENGINEERING PRACTICE ACT.



GENERAL NOTES:

- 1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE TO THE CURRENT EL PASO WATER UTILITIES (EPWU) - PUBLIC SERVICE BOARD (PSB) STANDARD SPECIFICATIONS, INCLUDING MATERIALS AND TESTING, FOR THE INSTALLATION OF WATER MAINS, SEWER MAINS, AND RELATED APPURTENANCES.
2. PRIOR TO BEGINNING CONSTRUCTION, THE OWNER OR HIS/HER AUTHORIZED REPRESENTATIVE SHALL CONVENE A PRECONSTRUCTION CONFERENCE BETWEEN THE CONSULTING ENGINEER'S REPRESENTATIVE, CONTRACTOR(S), EL PASO COUNTY (IF APPROPRIATE), THE EPWU, TCEQ, CITY OF EL PASO (IF APPROPRIATE) AND ANY OTHER AFFECTED PARTIES.
3. THE CONTRACTOR SHALL GIVE THE ENGINEER, CITY (IF APPLICABLE), COUNTY (IF APPLICABLE) A MINIMUM OF 48 HOURS NOTICE BEFORE BEGINNING EACH PHASE OF CONSTRUCTION.
4. 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.
5. 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.
6. CONTRACTORS 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 UTILITY'S OPTION, AND SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
7. CONTACT THE ENGINEER AND ANY OTHER CONCERNED PARTIES 48 HOURS PRIOR TO CONNECTING TO EXISTING WATER AND/OR WASTEWATER LINES.
8. ALL FILL AREAS OVER ALL EPWU UTILITIES, SHALL BE COMPACTED TO 95% STANDARD PROCTOR DENSITY IN ACCORDANCE WITH TEX 113-E METHOD.
9. WATER AND WASTEWATER ALIGNMENTS SHOWN ON THE PLANS SHOULD BE ACHIEVED BY FLEXURE WITHIN THE MANUFACTURER'S SPECIFICATIONS, EXCEPT WHERE SPECIFIC FITTINGS ARE CALLED FOR IN THE PLANS.
10. 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 25FT. OF ANY UTILITIES SHOWN ON THE PLANS.
11. ALL CONSTRUCTION ACTIVITIES, INCLUDING ACCESS, EGRESS, TRAVEL, STOCKPILING, ETC. ARE TO BE CONFINED TO AREAS IDENTIFIED BY THE ENGINEER.
12. DISPOSAL OF ALL SPOILS OFFSITE WILL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
13. PIPE FITTINGS AND JOINTS: WATER-PVC DR 18, C-900, CL-235, WITH BOLTLESS GASKETED JOINTS AND D.I., M.J. OR FLANGED FITTINGS UNLESS OTHERWISE SHOWN ON THE PLANS; FLUSHING VALVE / FIRE HYDRANTS LEAD - DUCTILE IRON, CLASS 50, MECHANICAL JOINTS AND C.I. (D.I. ENDS) FITTINGS, UNLESS OTHERWISE SHOWN ON THE PLANS; GRAVITY SEWER - PVC SDR 35 AND SDR 26 UNLESS OTHERWISE NOTED.
14. AT ALL LOCATIONS WHERE A WATERLINE CROSSES A WASTEWATER LINE, THE CONSTRUCTION SHALL STRICTLY COMPLY WITH ALL APPLICABLE RULES AND REGULATIONS OF THE TCEQ.
15. 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.
16. THE CITY OF EL PASO AND THE ENGINEER SHALL BE GIVEN 48 HOURS NOTICE PRIOR TO ANY TESTING PHASE (DENSITY, PRESSURE, LEAKAGE, ETC.)
17. 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.
18. 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.
19. PLASTIC PIPE FOR USE IN PUBLIC WATER SYSTEMS MUST BEAR THE NATIONAL SANITATION FOUNDATION SEAL OF APPROVAL (NSF-PW) AND HAVE AN ASTM DESIGN PRESSURE RATING OF AT LEAST 150 PSI OR A STANDARD DIMENSION RATIO OF 26 OR LESS.
20. 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.
21. 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 24 INCHES BELOW GROUND SURFACE.
22. THE HYDROSTATIC LEAKAGE RATE SHALL NOT EXCEED THE AMOUNT ALLOWED OR RECOMMENDED BY AWWA FORMULA FOR PVC PIPE: L= (N)(D)/(P)/7,400. THE FORMULA FOR DUCTILE OR CAST IRON PIPE IS L= (S)(D)/(P)/133,200.
23. THE USE OF PIPES AND PIPE FITTINGS THAT CONTAIN MORE THAN 8.0% LEAD OR SILDERS AND FLUX THAT CONTAINS MORE THAN 0.2% LEAD IS PROHIBITED IN THE FOLLOWING CIRCUMSTANCES FOR INSTALLATION OR REPAIR OF ANY PUBLIC WATER SUPPLY AND FOR INSTALLATION OR REPAIR OF ANY PLUMBING IN A RESIDENTIAL OR NONRESIDENTIAL FACILITY PROVIDING WATER FOR HUMAN CONSUMPTION AND CONNECTED TO A PUBLIC DRINKING WATER SUPPLY SYSTEM.
24. THE CONTRACTOR SHALL MAINTAIN A MINIMUM SEPARATION DISTANCE IN ALL DIRECTIONS OF NINE 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 #290.44(E) OF THE CURRENT RULES.
25. THE CONTRACTOR SHALL NOT PLACE THE PIPE IN WATER OR WHERE IT CAN BE FLOODED WITH WATER OR SEWAGE DURING ITS STORAGE OR INSTALLATION.
26. THE CONTRACTOR SHALL DISINFECT THE NEW WATER MAINS IN ACCORDANCE WITH AWWA STANDARD C651 AND THEN FLUSH AND SAMPLE THE LINES BEFORE BEING 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 1,000 FEET OF COMPLETED WATER LINE WILL BE REQUIRED OR AT THE NEXT AVAILABLE SAMPLING POINT BEYOND 1,000 FEET AS DESIGNATED BY THE DESIGN ENGINEER.
27. WATER LINE/NEW SEWER LINE SEPARATION: WHEN NEW SANITARY SEWERS ARE INSTALLED, THEY SHALL BE INSTALLED NO CLOSER TO WATER LINES THAN NINE FEET IN ALL DIRECTIONS. SEWERS THAT PARALLEL WATER LINES MUST BE INSTALLED IN SEPARATE TRENCHES. WHERE THE NINE (9) FOOT SEPARATION DISTANCE CANNOT BE ACHIEVED, THE FOLLOWING GUIDELINES APPLY:
a. WHERE A SANITARY SEWER PARALLELS A WATER LINE, THE SEWER SHALL BE CONSTRUCTED OF CAST IRON, DUCTILE IRON OR PVC MEETING ASTM SPECIFICATION WITH A PRESSURE RATING FOR BOTH THE PIPE AND JOINTS OF 150 PSI. THE VERTICAL SEPARATION SHALL BE A MINIMUM OF TWO FEET BETWEEN OUTSIDE DIAMETERS AND THE HORIZONTAL SEPARATION SHALL BE A MINIMUM OF FOUR FEET BETWEEN OUTSIDE DIAMETERS. THE SEWER SHALL BE LOCATED BELOW THE WATER LINE.
b. WHERE A SANITARY SEWER CROSSES A WATER LINE AND THE SEWER IS CONSTRUCTED OF CAST IRON, DUCTILE IRON OR PVC WITH A MINIMUM PRESSURE RATING OF 150 PSI, AN ABSOLUTE MINIMUM DISTANCE OF 6 INCHES BETWEEN OUTSIDE DIAMETERS SHALL BE MAINTAINED. IN ADDITION THE SEWER SHALL BE LOCATED BELOW THE WATER LINE WHERE POSSIBLE AND ONE LENGTH OF THE SEWER PIPE MUST BE CENTERED ON THE WATER LINE.
c. WHERE A SEWER CROSSES UNDER A WATER LINE AND THE SEWER IS CONSTRUCTED OF ABS TRUSS PIPE, SIMILAR SEMI-RIGID PLASTIC COMPOSITE PIPE, CLAY PIPE OR CONCRETE PIPE WITH GASKETED JOINTS, A MINIMUM TWO FOOT SEPARATION DISTANCE SHALL BE MAINTAINED. THE INITIAL BACKFILL SHALL BE CEMENT STABILIZED SAND (TWO OR MORE BAGS OF CEMENT PER CUBIC YARD OF SAND) FOR ALL SECTIONS OF SEWER WITHIN NINE FEET OF THE WATER LINE. THIS INITIAL BACKFILL SHALL BE FROM ONE QUARTER DIAMETER BELOW THE CENTERLINE OF THE PIPE TO ONE PIPE DIAMETER (BUT NOT LESS THAN 12 INCHES) ABOVE THE TOP OF THE PIPE.
d. WHERE A SEWER CROSSES OVER A WATER LINE ALL PORTIONS OF THE SEWER WITHIN NINE FEET OF THE WATER LINE SHALL BE CONSTRUCTED OF CAST IRON, DUCTILE IRON, OR PVC PIPE WITH A PRESSURE RATING OF AT LEAST 150 PSI USING APPROPRIATE ADAPTERS. IN LIEU OF THIS PROCEDURE, THE NEW CONVEYANCE MAY BE ENCASED IN A JOINT OF 150 PSI PRESSURE CLASS PIPE AT LEAST 18- FEET LONG AND TWO NOMINAL SIZES LARGER THAN THE NEW CONVEYANCE. THE SPACE AROUND THE CARRIER PIPE SHALL BE SUPPORTED AT 5 FEET INTERVALS WITH SPACERS OR BE FILLED TO THE SPRINGLINE WITH WASHED SAND. THE ENCASEMENT PIPE SHOULD BE CENTERED ON THE CROSSING AND BOTH ENDS SEALED WITH CEMENT GROUT OR MANUFACTURED SEAL.
e. WATER LINE/MANHOLE SEPARATION. UNLESS MANHOLES CAN BE MADE WATERTIGHT AND TESTED FOR NO LEAKAGE THEY MUST BE INSTALLED SO AS TO PROVIDE A MINIMUM OF NINE FEET OF HORIZONTAL CLEARANCE FROM AN EXISTING OR PROPOSED WATER LINE. IF THE NINE FOOT SEPARATION DISTANCE CANNOT BE ACHIEVED, THE WATERLINE MUST BE ENCASED IN A JOINT OF 150 PSI PRESSURE CLASS PIPE AT LEAST 18 FEET LONG AND TWO NOMINAL SIZES LARGER THAN THE WATERLINE. THE SPACE AROUND THE CARRIER PIPE SHALL BE SUPPORTED AT 5 FOOT INTERVALS WITH SPACERS OR BE FILLED TO THE SPRINGLINE WITH WASHED SAND. THE ENCASEMENT PIPE SHOULD BE CENTERED ON THE CROSSING AND BOTH ENDS SEALED WITH CEMENT GROUT OR MANUFACTURED SEAL.

- 28. MANHOLE CONSTRUCTION AND REHABILITATION: ALL MANHOLES SHALL BE WATERTIGHT, WITH WATERTIGHT RINGS AND COVERS. IF MANHOLES ARE WITHIN THE 100-YEAR FLOODPLAIN THE MANHOLE COVERS SHALL HAVE GASKETS AND BE BOLTED. WHERE GASKETED MANHOLE COVERS ARE REQUIRED FOR MORE THAN THREE MANHOLES IN SEQUENCE, ALTERNATE MEANS OF VENTING SHALL BE PROVIDED. BRICKS ARE NOT AN ACCEPTABLE CONSTRUCTION MATERIAL FOR ANY PORTION OF THE MANHOLE PER 30 TAC 217.55 (F). ALL MANHOLES MUST BE TESTED TO MEET OR EXCEED THE FOLLOWING REQUIREMENTS: MANHOLES AND WET WELLS MUST BE TESTED SEPARATELY AND INDEPENDENTLY OF THE COLLECTION LINES. ALL MANHOLES MUST BE HYDROSTATICALLY TESTED WITH A MAXIMUM-LOSS ALLOWANCE OF 0.025-GALLON PER FOOT DIAMETER PER FOOT OF HEAD PER HOUR. OTHER TESTING METHODS, SUCH AS VACUUM TESTING, MAY BE APPROVED ON A CASE-BY-CASE BASIS BY THE EXECUTIVE DIRECTOR OF THE TCEQ.
29. ALL SEWER LINES SHALL BE TESTED USING THE FOLLOWING METHOD:
a. ALL LOW PRESSURE AIR TESTS SHALL CONFORM TO THE PROCEDURES DESCRIBED IN ASTM C-828, ASTM C-924, OR OTHER APPROPRIATE PROCEDURES. THE TIME FOR THE PRESSURE TO DROP SHALL BE AT LEAST AS STRINGENT AS THE REQUIREMENTS OF TCEQ RULES SECTION 217.57 (A)(I)(B) DESCRIBED BELOW.

FOR SECTIONS OF PIPE UP TO 36-INCHES AVERAGE INSIDE DIAMETER, THE MINIMUM TIME ALLOWABLE FOR THE PRESSURE TO DROP FROM 3.5 POUNDS PER SQUARE INCH GAUGE TO 2.5 POUNDS PER SQUARE INCH GAUGE SHALL BE COMPUTED FROM THE FOLLOWING EQUATION:

T = 0.0850(D)(K) / (O); WHERE
T = TIME FOR PRESSURE TO DROP 1.0 POUND PER SQUARE INCH GAUGE IN SECONDS.
K = 0.000419(D)(L); BUT NOT LESS THAN 1.0
D = AVERAGE INSIDE DIAMETER IN INCHES
L = LENGTH OF LINE IN FEET OF SAME SIZE BEING TESTED
Q = RATE OF LOSS, 0.0015 CUBIC FEET PER MINUTE PER SQUARE FOR INTERNAL SURFACE SHALL BE USED

SINCE A K VALUE OF LESS THAN 1.0 SHALL NOT BE USED, THERE ARE MINIMUM TIMES FOR EACH PIPE DIAMETER AS OUT LINED BELOW:

Table with 5 columns: PIPE DIA. (IN), MIN. TIME (SEC), LEN. FOR MIN. (FT), TIME FOR LONGER LENGTH (SEC), and a column for equivalent length in feet for various diameters.

LINES WITH A 36 INCH AVERAGE INSIDE DIAMETER AND LARGER MAY BE TESTED AT EACH JOINT. THE MINIMUM TIME ALLOWABLE FOR THE PRESSURE TO DROP FROM 3.5 PSIG TO 2.5 PSIG DURING A JOINT TEST, REGARDLESS OF PIPE SIZE, SHALL BE 20 SECONDS.

- b. ALL INFILTRATION/EXFILTRATION TESTS SHALL MEET THE FOLLOWING MINIMUM REQUIREMENTS. THE TOTAL INFILTRATION OR EXFILTRATION, AS DETERMINED BY WATER TEST, MUST BE AT A RATE NOT GREATER THAN 50 GALLONS PER INCH OF PIPE DIAMETER PER MILE OF PIPE PER 24 HOURS AT A MINIMUM TEST HEAD OF TWO FEET. IF THE QUANTITY OF INFILTRATION OR EXFILTRATION EXCEEDS THE MAXIMUM QUANTITY SPECIFIED, REMEDIAL ACTION MUST BE UNDERTAKEN IN ORDER TO REDUCE THE INFILTRATION OR EXFILTRATION TO AN AMOUNT WITHIN THE LIMITS SPECIFIED IN 30 TAC SEC 217.57(A) (2).
c. DEFLECTION TEST SHALL BE PERFORMED ON ALL FLEXIBLE AND SEMI-RIGID PIPES. THE TEST SHALL BE CONDUCTED AFTER THE FINAL BACKFILL HAS BEEN IN PLACE AT LEAST 30 DAYS. NO PIPE SHALL EXCEED A DEFLECTION OF FIVE PERCENT. IF THE DEFLECTION TEST IS TO BE RUN USING A RIGID BALL OR MANDREL, SUCH TEST DEVICE SHALL HAVE A DIAMETER EQUAL TO 95% OF THE INSIDE DIAMETER OF THE PIPE. THE TESTS SHALL BE PERFORMED WITHOUT MECHANICAL PULLING DEVICES. THE DESIGN ENGINEER SHOULD RECOGNIZE THAT THIS IS A MAXIMUM DEFLECTION CRITERION FOR ALL PIPES. A REDUCED PERCENT DEFLECTION MAY BE MORE APPROPRIATE FOR SPECIFIC TYPES AND SIZES OF PIPE. REFERENCE 30 TAC SEC 217.57 (B).

30. THE BEDDING AND BACKFILL FOR FLEXIBLE PIPE SHALL COMPLY WITH THE STANDARDS OF ASTM D-2321, CLASSES I OR II. FOR RIGID PIPE THE BEDDING SHALL COMPLY WITH THE REQUIREMENTS OF ASTM-C-12 CLASSES A OR B. REFERENCE 30 TAC SECTION 217.54(A).

31. SEWER LINES SHALL BE TESTED FROM MANHOLE TO MANHOLE OR WHEN A NEW SEWER LINE IS CONNECTED TO AN EXISTING STUB OR CLEAN-OUT, IT SHALL BE TESTED FROM AN EXISTING MANHOLE TO A NEW MANHOLE.

32. ALL FORCE AND GRAVITY SEWER LINE SHALL HAVE A MINIMUM 48 INCHES OF COVER FROM FINISHED GRADE OR 36 INCHES BELOW ACTUAL SUBGRADE UNLESS OTHERWISE DENOTED ON PLANS.

33. INCLUDE ADDITIONAL FLUSHING VALVES, GATE VALVES AND TEST CONNECTIONS NECESSARY TO PERFORM TEST AND STERILIZATION OPERATION.

34. ALL GATE VALVES SHALL HAVE RESILIENT VALVE SEATS.

35. ALL MANHOLES AND WET WELLS MUST BE TESTED SEPARATELY AND INDEPENDENTLY OF THE COLLECTION LINES.

36. AFTER THE FORCE MAIN HAS BEEN INSTALLED AND BACKFILLED AND ALL OTHER APPURTENANCES INSTALLED AND CONNECTED, A PRESSURE TEST, FOLLOWED BY A LEAKAGE TEST, WILL BE CONDUCTED BY THE CONTRACTOR UNDER THE OBSERVATION BY THE DISTRICT. THE CONTRACTOR SHALL BE PRESENT AND SHALL FURNISH ALL NECESSARY LABOR AND EQUIPMENT FOR CONDUCTING THE TESTS. THE SPECIFIED TEST PRESSURES WILL BE BASED ON THE ELEVATION OF THE LOWEST POINT OF THE LINE OR SECTION UNDER TEST. BEFORE APPLYING THE SPECIFIED TEST PRESSURE, ALL AIR SHALL BE EXPULSED FROM THE PIPE. IF PERMANENT AIR VENTS ARE NOT LOCATED AT ALL HIGH POINTS, THE CONTRACTOR SHALL INSTALL CORPORATION COCKS AT SUCH POINTS.

a. PRESSURE TEST: THE ENTIRE PROJECT OR EACH VALVED SECTION SHALL BE TESTED, AT A PRESSURE OF 200 PSI FOR A SUFFICIENT PERIOD (APPROXIMATELY 10 MINUTES) TO DISCOVER ALL LEAKING OR DEFECTIVE MATERIALS. REPAIRS SHALL BE MADE BY THE CONTRACTOR TO CORRECT ANY LEAKING OR DEFECTIVE MATERIALS.
b. PRESSURE PIPE LEAKAGE TEST: A LEAKAGE TEST WILL FOLLOW THE PRESSURE TEST AND BE CONDUCTED ON THE ENTIRE PROJECT OR EACH VALVED SECTION. THE LEAKAGE TEST SHALL BE AT 150 PSI FOR AT LEAST 1 HOUR.
ALLOWABLE LEAKAGE: LEAKAGE SHALL BE DEFINED AS THE QUANTITY OF WATER THAT MUST BE SUPPLIED INTO ANY TEST SECTION OF PIPE TO MAINTAIN THE SPECIFIED LEAKAGE TEST PRESSURE AFTER THE AIR IN THE PIPELINE HAS BEEN EXCEEDED 25 GALLONS/24 HOURS/MILE OF PIPE/INCH NOMINAL PIPE DIAMETER.
(25 GDD) / (N-M)
N = MINIMUM DIAMETER OF LEAKAGE.
M = LOCATION AND CORRECTION OF LEAKAGE.
IN SUCH TESTING DISCLOSES LEAKAGE IN EXCESS OF THIS SPECIFIED ALLOWABLE, THE CONTRACTOR, AT HIS EXPENSE, SHALL LOCATE AND CORRECT ALL DEFECTS IN THE PIPE LINE UNTIL THE LEAKAGE IS WITHIN THE INDICATED ALLOWANCE. ALL VISIBLE LEAKAGE IN PIPE SHALL ALSO BE CORRECTED BY THE CONTRACTOR AT HIS OWN EXPENSE.

37. SEWERS SHALL BE LAID IN STRAIGHT ALIGNMENT WITH UNIFORM GRADE BETWEEN MANHOLES. DEVIATION FROM STRAIGHT ALIGNMENT AND UNIFORM GRADE SHALL BE APPROVED ONLY ON A CASE BY CASE BASIS BY THE TCEQ. IF APPROVAL IS GIVEN FOR DEVIATION FROM STRAIGHT ALIGNMENT AND UNIFORM GRADE, CURRENT COMMISSION POLICY REGARDING HORIZONTAL CURVATURE SHALL BE COMPLIED WITH FULLY. GENERAL NOTES FOR CURVED SEWER LINES:

- A. ALL CURVATURE OF SEWER PIPE WILL BE ACHIEVED BY PIPE FLEXURE PER RECOMMENDED PROCEDURE.
IN-PLACE DEFLECTION TESTS (MANDREL TEST) MUST BE PERFORMED ON ALL FLEXIBLE AND SEMI-RIGID PIPE IN ACCORDANCE WITH 30 TAC SECTION 217.57 (B) (I)
B. INFILTRATION TEST SHALL BE CONDUCTED IN ACCORDANCE WITH 30 TAC SECTION 217.57 (A) (2) (C) - 50 GALLONS PER INCH OF DIAMETER PER MILE OF PIPE.
SPECIFIC CARE SHALL BE TAKEN TO ENSURE THAT THE JOINT IS PLACED IN THE CENTER OF THE TRENCH AND PROPERLY BEDDED IN ACCORDANCE WITH 30 TAC SECTION 217.54 (A)
38. THE ASTM, ANSI, OR AWWA SPECIFICATION NUMBERS FOR THE PIPE AND JOINTS ARE ASTM D3034 & ASTM 2241. THE PIPE MATERIAL, THE PRESSURE CLASSES, AND THE SDR AND/OR DR DESIGNATIONS ARE SDR 35 AND SDR 26.
39. THE DIAMETER OF THE MANHOLES SHALL BE A MINIMUM OF FOUR FEET AND THE MANHOLE OPENING SHALL HAVE A MINIMUM NOMINAL DIAMETER OF 30 INCHES. THESE DIMENSIONS ARE LABELED ON THE MANHOLE DRAWING ON THE DETAIL SHEET.
40. THE MANHOLE DETAILS SHALL INSURE THAT THE TCEQ RULES CONCERNING SEWER INVERTS HAVE BEEN COMPLIED WITH AS DESCRIBED IN 217.55 (L) (2)
41. A CROSS SECTION OF THE TRENCH DETAILS IS INCLUDED IN THE PLANS WHICH SHOW THE DIMENSIONS OF THE TRENCH AND PIPE AND THE CLASS OF BEDDING MATERIAL REQUIRED.
42. ALL PRESSURIZED PVC PIPE SHALL BE MARKED WITH DUAL INDICATOR LINES AT THE SPIGOT END INDICATING PROPER PENETRATION WHEN THE JOINT IS ASSEMBLED OR BELL PROTECTION SYSTEM.
43. PUBLIC WATER AND SEWER UTILITY WORK SHALL NOT BE PERFORMED BY THE CONTRACTOR UNTIL A DEVELOPMENT AGREEMENT HAS BEEN EXECUTED BETWEEN THE OWNER AND THE EPWU-PSB.

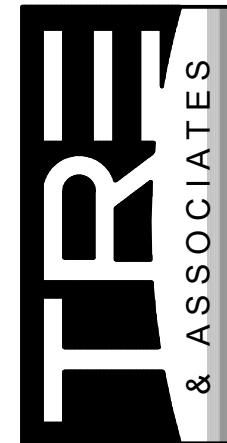
TRENCH SAFETY NOTES:

- 1. 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, SHETTED, 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.
2. 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 OF EXIT, SUCH AS A LADDER OR STEPS, MUST BE PROVIDED AND LOCATED SO AS TO REQUIRE NO MORE THAN 25 FEET OF LATERAL TRAVEL.
3. IF TRENCH SAFETY SYSTEM 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 SYSTEM DETAILS, AS DESIGNED BY A PROFESSIONAL ENGINEER, ARE SUBMITTED TO AND ACCEPTED BY ENGINEER.
4. 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

- 1. 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.
2. 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.
3. 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.
4. PLASTIC PIPE FOR USE IN PUBLIC WATER SYSTEMS MUST BEAR THE NATIONAL SANITATION FOUNDATION SEAL OF APPROVAL (NSF-PW) AND HAVE AN ASTM DESIGN PRESSURE RATING OF AT LEAST 150 PSI OR A STANDARD DIMENSION RATIO OF 26 OR LESS.
5. 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.
6. 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 24 INCHES BELOW GROUND SURFACE.
7. 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.
8. 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.
9. THE CONTRACTOR SHALL MAINTAIN A MINIMUM SEPARATION DISTANCE IN ALL DIRECTIONS OF NINE 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 #290.44(E) OF THE CURRENT RULES.
10. THE CONTRACTOR SHALL DISINFECT THE NEW WATER MAINS IN ACCORDANCE WITH AWWA STANDARD C651 AND THEN FLUSH AND SAMPLE THE LINES BEFORE BEING 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 1,000 FEET OF COMPLETED WATER LINE WILL BE REQUIRED OR AT THE NEXT AVAILABLE SAMPLING POINT BEYOND 1,000 FEET AS DESIGNATED BY THE DESIGN ENGINEER.
11. THE CONTRACTOR SHALL NOT PLACE THE PIPE IN WATER OR WHERE IT CAN BE FLOODED WITH WATER OR SEWAGE DURING ITS STORAGE OR INSTALLATION.

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Table with columns for PROJECT NO., DWG FILE, DATE, NO., BY, DATE, REVISION, DESCRIPTION, DESIGNED BY, DRAWN BY, CHECKED BY, RR.

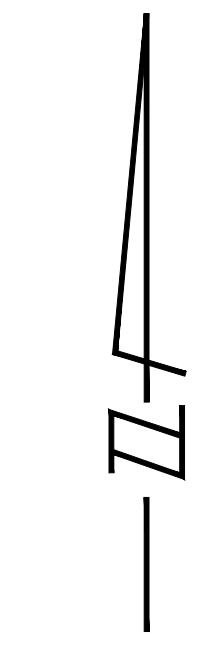
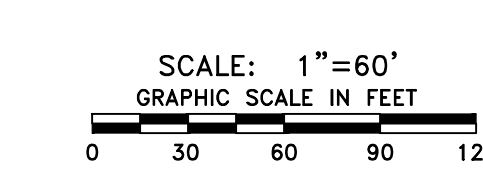
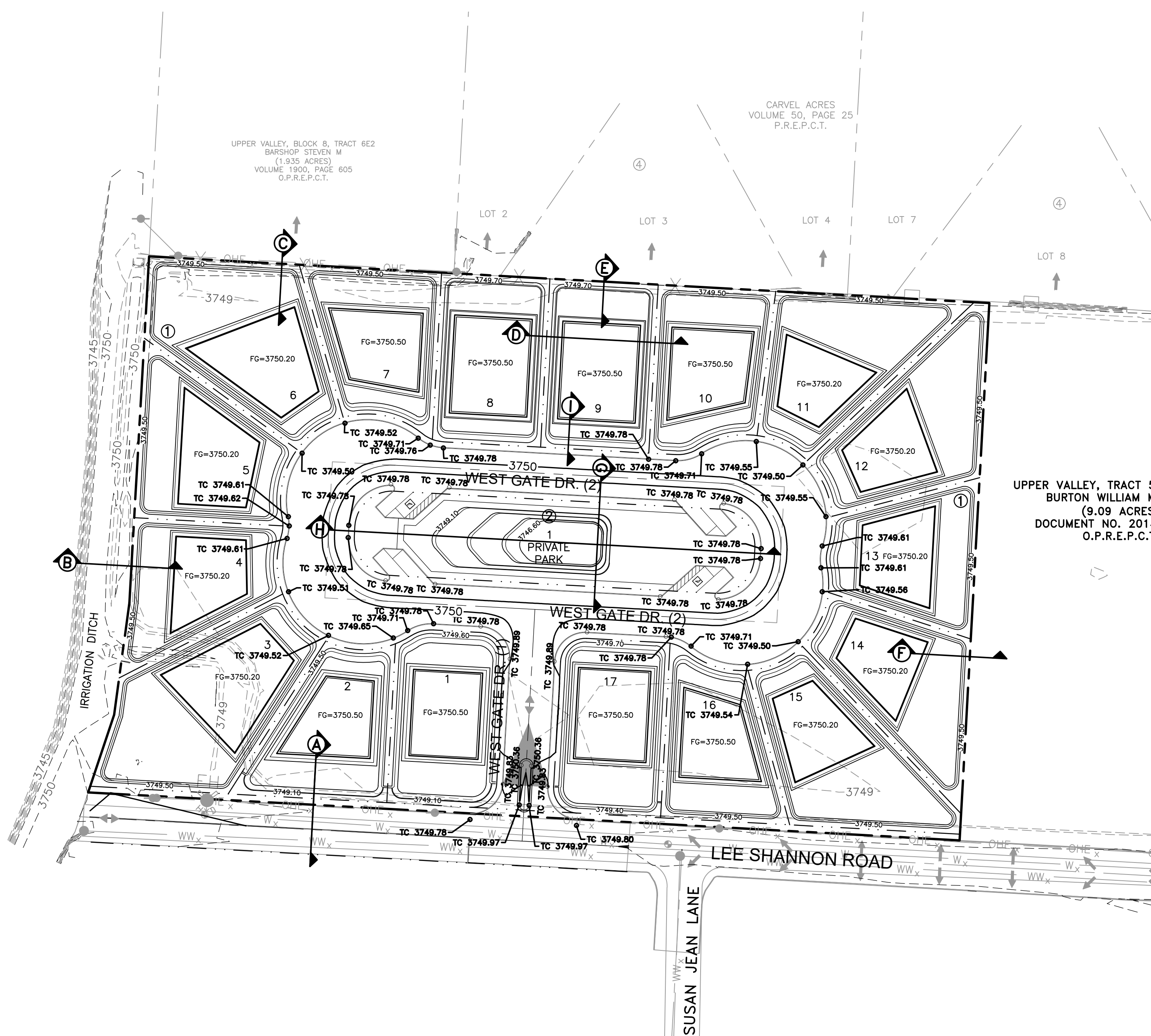
HORIZONTE RESIDENTIAL STREET, DRAINAGE, WATER, & WASTEWATER IMPROVEMENTS

WARNING! BEFORE YOU DIG
COORDINATION WITH UTILITIES:
CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES PRIOR TO ANY EXCAVATION AND/OR RELOCATION OF EXISTING UTILITIES ENCOUNTERED DURING CONSTRUCTION WORK.

Contact information for utility companies: EL PASO ELECTRIC CO., TIME WARNER COMMUNICATIONS, EL PASO WATER UTILITIES PUBLIC SERVICE BOARD, TEXAS GAS SERVICE, AT&T, TEXAS EXCAVATION SAFETY SYSTEM.

NOTICE: ALTERATION OF A SEALED DRAWING WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS A VIOLATION OF THE TEXAS ENGINEERING PRACTICE ACT.



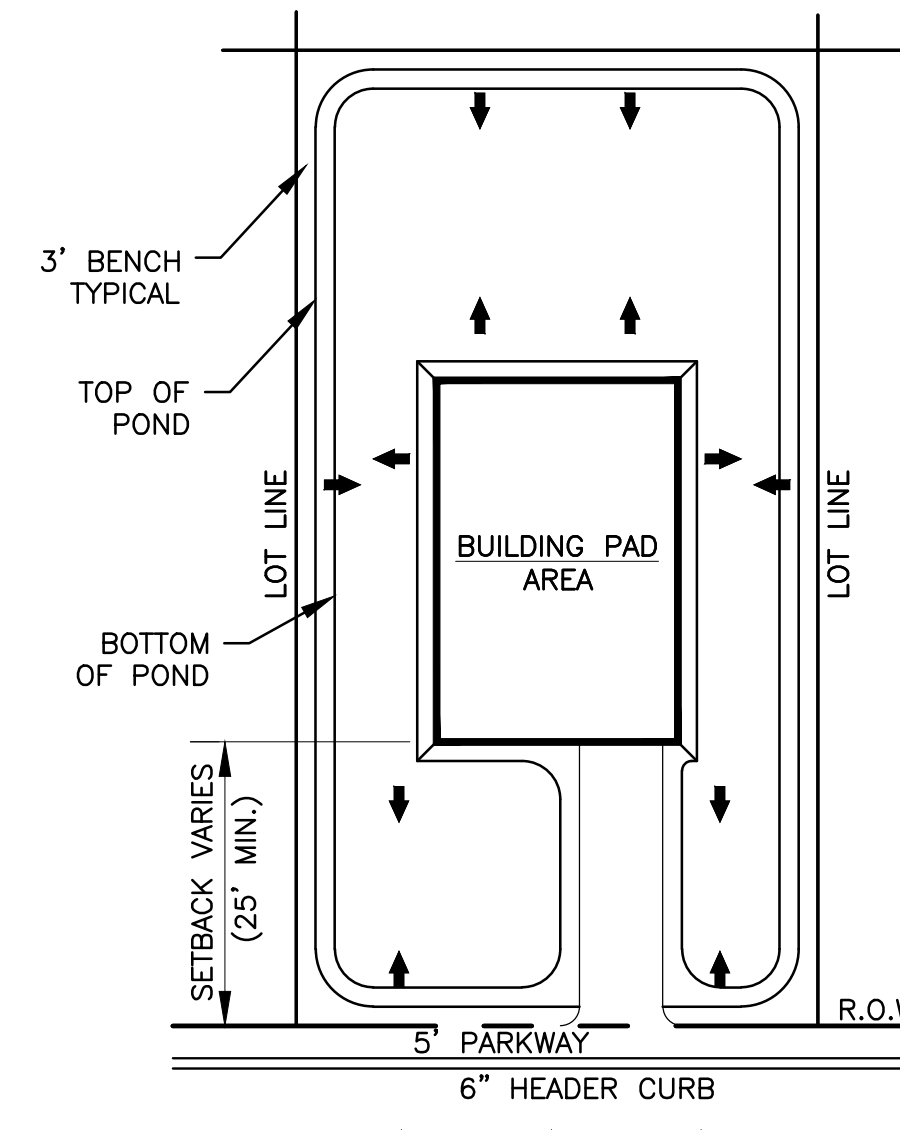


LEGEND	
	SUBDIVISION BOUNDARY
	PROPERTY LINE
	MAJOR CONTOURS
	MINOR CONTOURS
	HIGH POINT
	LOW POINT
	EXISTING WATER LINE
	EXISTING WASTEWATER LINE
	EXISTING OVERHEAD ELECTRIC
	EXISTING CHAINLINK FENCE
	EXISTING ROCKWALL
	EXISTING FIRE HYDRANT
	EXISTING PAVEMENT
	EXISTING DIRT ROAD
	EXISTING DIRECTION OF FLOW

UPPER VALLEY, TRACT 5 A BLOCK 8
BURTON WILLIAM MICHAEL
(9.09 ACRES)
DOCUMENT NO. 20140025489
O.P.R.E.P.C.T.

SETBACK NOTE:
SETBACK FOR SIDE YARD ABUTTING STREET = 10 FEET

DRIVEWAY NOTE:
DRIVEWAY SLOPES MUST BE 10% MAX. FROM CURB FOR FIRST 12 FEET AND 14% MAX. THEREAFTER (BLDG CD 18.08.060 C)



TYPICAL LOT GRADING
SCALE: N.T.S.

NOTES:

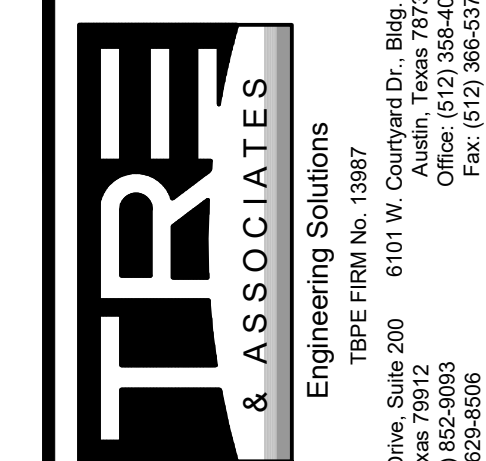
- FINISHED FLOOR ELEVATIONS FOR EACH LOT SHALL BE DETERMINED BY ADDING 6" MINIMUM TO THE FINISHED GRADE ELEVATION.
- THE CONTRACTOR SHALL VISIT AND FAMILIARIZE HIMSELF WITH THE PROJECT SITE PRIOR TO SUBMITTING HIS BID.
- THE CONTRACTOR SHALL SCHEDULE AND PERFORM HIS WORK SO AS TO INSURE THE SAFE AND SUFFICIENT PASSAGE OF STORM WATER RUNOFF DURING THE COURSE OF HIS OPERATIONS. ALL REQUIRED LABOR, TOOLS, EQUIPMENT, AND SUPERVISION SHALL BE CONSIDERED INCIDENTAL TO THE WORK AND SHALL BE PROVIDED AT NO ADDITIONAL COST TO OWNER.
- THE CONTRACTOR SHALL COORDINATE THE CONSTRUCTION SCHEDULE WITH THE OWNER, ALL AFFECTED UTILITY COMPANIES, AND ALL OTHER ENTITIES HAVING JURISDICTION OVER THE PROJECT.
- THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND GRADES PRIOR TO COMMENCING WITH THE WORK. ANY DISCREPANCIES NOTED SHALL BE REPORTED IMMEDIATELY TO THE PROJECT CIVIL ENGINEER. OTHERWISE, THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR THEIR CORRECTNESS.
- VIOLATORY ROLLERS SHALL NOT BE PERMITTED ON ANY PHASE OF THIS PROJECT.
- ALL WORK ON THIS PROJECT SHALL BE PERFORMED IN STRICT CONFORMANCE WITH ALL CURRENT SAFETY CODES AND STANDARDS, INCLUDING BUT NOT LIMITED TO OSHA REQUIREMENTS.
- THE EXISTING TOPOGRAPHIC/BOUNDARY INFORMATION ON THIS DRAWING WAS OBTAINED FROM ZWA, LLC., 1510 ZARAGOSA ROAD, SUITE B-8 EL PASO, TEXAS 79936. THE PROJECT CIVIL ENGINEER DOES NOT WARRANT THE ACCURACY OF THIS INFORMATION.
- WARNING! BEFORE EXCAVATING, CONTRACTOR SHALL LOCATE AND PROTECT ALL UNDERGROUND UTILITY LINES. CONTRACTOR SHALL REPLACE ANY UTILITIES DAMAGED DURING CONSTRUCTION, AT NO ADDITIONAL COST TO OWNER.
- CONTRACTOR SHALL WATER CONSTRUCTION SITE AREA A MINIMUM OF TWICE A DAY TO KEEP DUST TO A MINIMUM - ONCE IN THE MORNING AND ONCE IN THE AFTERNOON. THIS SHALL ALSO BE DONE ON WEEKENDS AND HOLIDAYS.
- CONTRACTOR SHALL PREVENT THE EROSION OF SILT, SEDIMENT, AND DEBRIS FROM THE CONSTRUCTION SITE ONTO ADJACENT PROPERTIES AND STREETS. THIS MAY BE ACCOMPLISHED THROUGH THE USE OF A GEOTEXTILE FABRIC SILT FENCE OR OTHER APPROVED MEANS.
- FILL MATERIALS FOR SITE GRADING AND BACKFILL MAY CONSIST OF ONSITE AND/OR IMPORTED MATERIALS IN COMPLIANCE WITH THE FOLLOWING:
 - PRIOR TO THE PLACEMENT OF ANY FILL MATERIAL AT THE SITE THE SURFACE SOIL SHOULD BE FLOODED WITH 1 FOOT OF STANDING WATER OVERNIGHT.
 - FILL MATERIALS SHALL BE GRANULAR, FREE OF CLAYEY AND ORGANIC MATERIAL AND SHALL NOT CONTAIN ROCKS OR LUMPS OVER 3 INCH IN GREATEST DIMENSION.
 - FILL MATERIALS SHALL BE CLASSIFIED IN ACCORDANCE WITH ASTM D2447. SOILS CLASSIFIED AS SM-SW, GM-SP, GM-GW, GM-GP ARE CONSIDERED SATISFACTORY. SOILS WITH A PLASTICITY INDEX OF GREATER THAN 12 OR IF CLASSIFIED AS ML, MH, CL, CH, OL, OH, OR PT SHALL BE CONSIDERED UNSATISFACTORY.
 - THE SURFACE ON WHICH FILL MATERIAL IS TO BE PLACED SHALL BE SCARIFIED TO A MINIMUM DEPTH OF 10 INCHES, WATERED TO ADD THE AMOUNT OF MOISTURE REQUIRED FOR OPTIMUM COMPACTION, AND THEN COMPACTED TO 95 PERCENT OF MAXIMUM DENSITY IN ACCORDANCE WITH ASTM D1557.
 - FILL MATERIAL SHALL BE PLACED IN LIFTS FROM 8 TO 10 INCHES UNCOMPACTED DEPTH, WITH MOISTURE CONTENT AT PLUS OR MINUS 3 PERCENT OF OPTIMUM. EACH LIFT SHALL BE COMPACTED TO 95 PERCENT OF MAXIMUM DENSITY IN ACCORDANCE WITH ASTM D1557.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF EXISTING IMPROVEMENTS IN THE PROJECT AREA AND ITS VICINITY. ANY DAMAGES RESULTING FROM CONTRACTOR'S WORK SHALL BE REPAIRED TO ITS ORIGINAL CONDITION BY CONTRACTOR, AT NO COST TO OWNER.
- ALL RETAINING WALLS TO BE CONSTRUCTED BY DEVELOPER AS NOTED ON LEGEND. GARDEN WALLS TO BE CONSTRUCTED BY HOME BUILDERS. GARDEN WALL ALONG PROPERTY LINE SHALL BE 4 FEET HIGH. ALL GARDEN WALLS ABUTTING LEE SHANNON ROAD AND IRRIGATION DITCH SHALL BE 6 FEET HIGH BY DEVELOPER.
- CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS WHERE PROPOSED RETAINING WALL IS ADJACENT TO EXISTING SUBDIVISION.

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. ESTABLISHED BY USING TX-DOT VRS-RTK NETWORK. ALL DISTANCES SHOWN ARE SURFACE DISTANCES, CONVERTED WITH A COMBINED SCALE FACTOR OF 1.00023100.

VERTICAL DATUM:
VERTICAL DATUM IS BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (N.A.V.D.88).

- BENCH MARKS:**
- TBM#1 5/8" IRON ROD WITH CAP STAMPED "ZWA-CONTROL" SET APPROXIMATELY 59 FEET SOUTHWEST OF SOUTHWEST CORNER, INSIDE THE BORDERLAND SPUR DRAIN R.O.W.
GRID COORDINATES:
N=10,692,979.94
E=345,327.85
ELEVATION=3749.77'
 - TBM#2 BRASS DISK IN CONCRETE FOUND FOR CITY MONUMENT AT THE CENTERLINE INTERSECTION OF LEE SHANNON ROAD AND LOTTIE LANE.
GRID COORDINATES:
N=10,692,979.00
E=345,426.01
ELEVATION=3750.57'

FLOOD_ZONE:
THE SUBDIVISION IS WITHIN FLOOD_ZONE "X", AREAS DETERMINED TO BE OUTSIDE 500 YEAR FLOOD PLAIN - PANEL No. 480212 0125B, DATED SEPTEMBER 4, 1991.



Engineering Solutions
TREA FIRM No. 1939
110 Moss Park Drive, Suite 200 6101 W. Coupland Dr., Bldg. 1, Suite 100
El Paso, Texas 79912 Austin, Texas 78730
Office: (915) 852-9093 Office: (512) 388-1049
Fax: (915) 626-8586 Fax: (512) 385-5374

PROJECT NO.	DESIGNED BY:		
2002-12004-32	KB		
DWG FILE:	DRAWN BY:		
GRAD	KB		
DATE:	CHECKED BY:		
AUGUST 2021	RR		
NO.	BY	DATE	REVISION DESCRIPTION

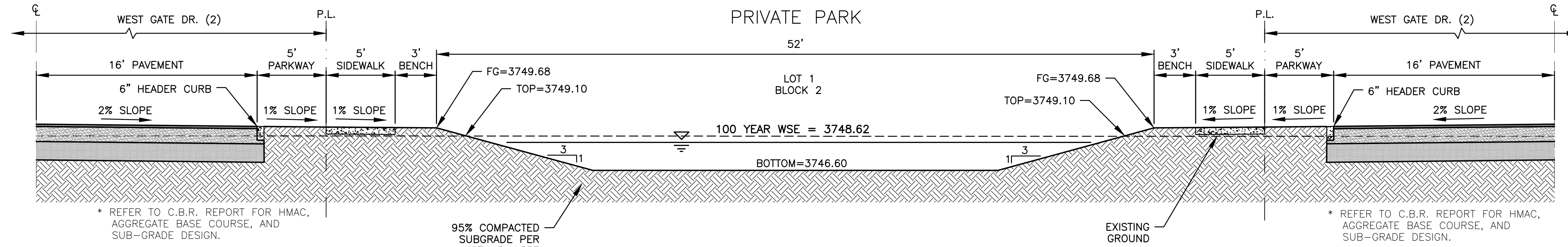
**HORIZONTE RESIDENTIAL
STREET, DRAINAGE, WATER, &
WASTEWATER
IMPROVEMENTS**

GRADING PLAN

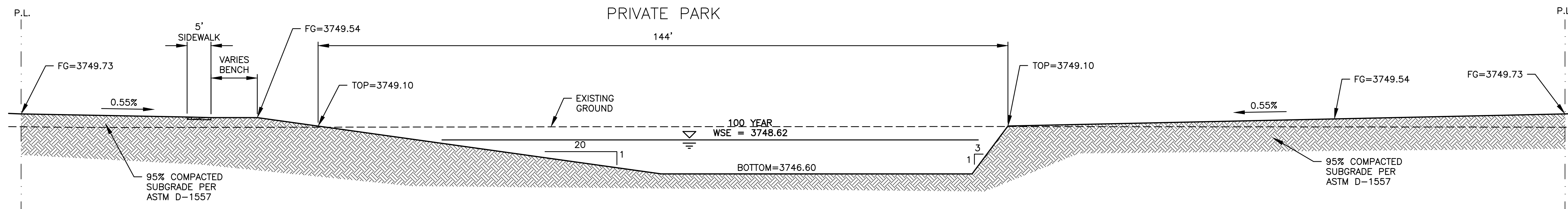
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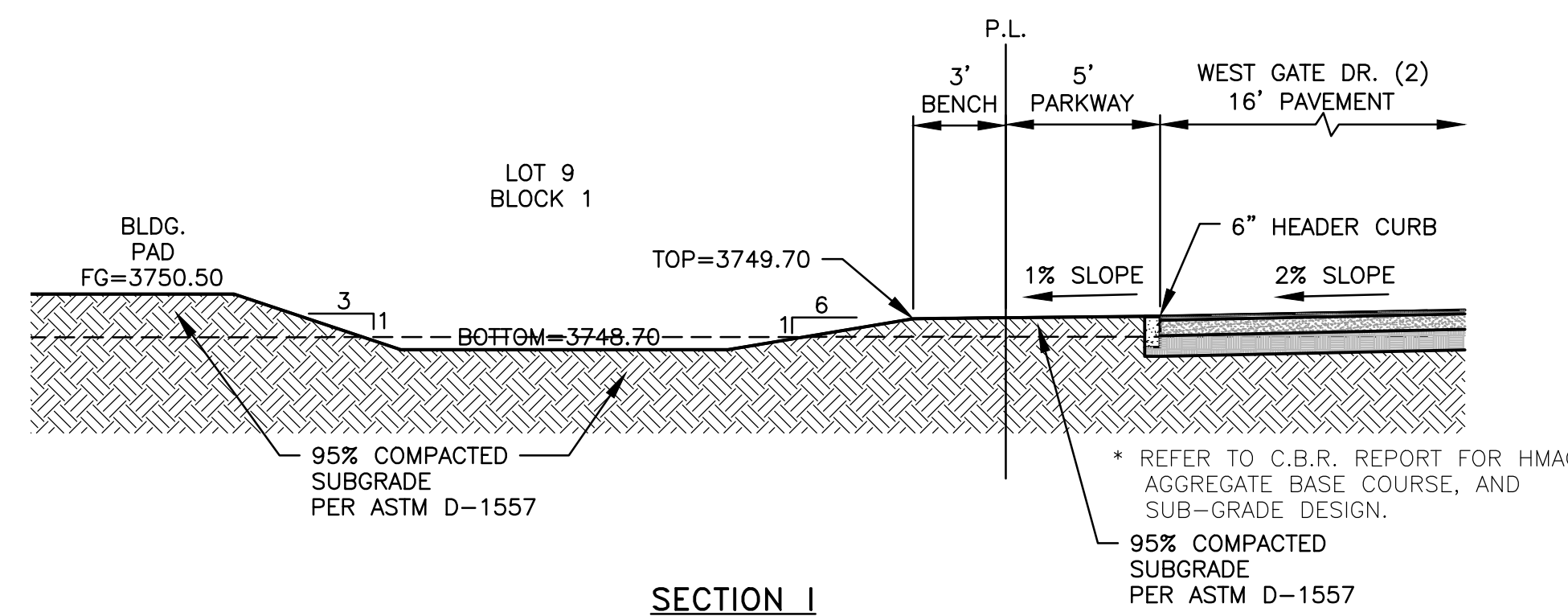
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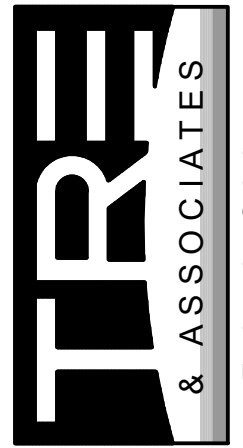
SECTION G
N.T.S.



SECTION H
N.T.S.



SECTION I
N.T.S.



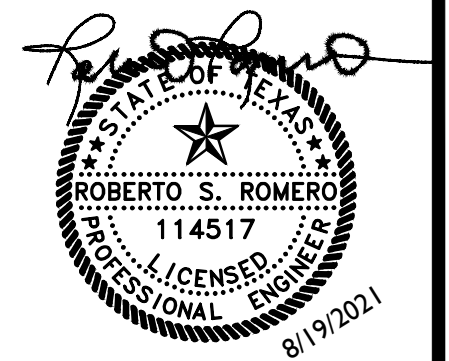
Engineering Solutions
 110 Mesa Park Drive, Suite 200
 El Paso, Texas 79912
 Office: (915) 852-9093
 Fax: (915) 852-5374

NO.	BY	DATE	REVISION DESCRIPTION

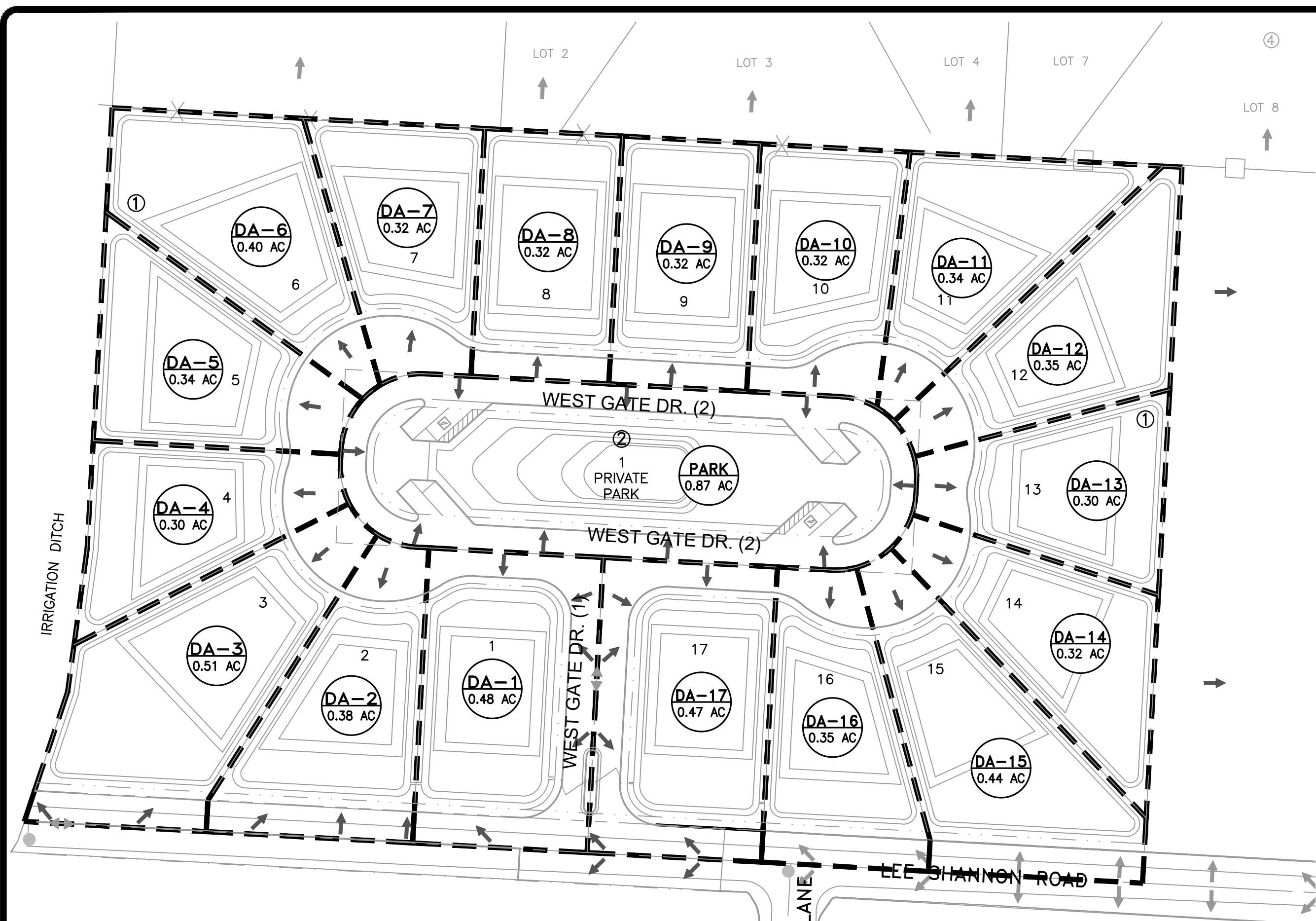
HORIZONTE RESIDENTIAL
 STREET, DRAINAGE, WATER, &
 WASTEWATER
 IMPROVEMENTS

GRADING CROSS
 SECTIONS 2 OF 2

NOTICE:
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 ENGINEERING PRACTICE ACT.



FILE: P:\2002 Punto Living, LLC\12004 - Horizonte Residential\CADD\Sheets\DRAN.dwg LAYOUT: DRAINAGE PLAN & DRAINAGE CALCULATIONS DATE: 8/19/2021 9:16:08 AM BY: KBARRAZA



LOT 1 RETENTION POND AVAILABLE CAPACITY CALCULATIONS

	Elevation (ft)	Area (sf)	Incr. Volume (cf)	Accum. Volume (cf)	Accum. Volume (Ac-Ft)
Bottom	3,748.60	3247.99	0.00	0.00	0.00
Top	3,749.60	6506.96	4,877.47	4,877.47	0.11

100 Year Capacity= 0.10 Ac-ft
100 Year Water Surface Elevation = 3749.45 ft

LOT 2 RETENTION POND AVAILABLE CAPACITY CALCULATIONS

	Elevation (ft)	Area (sf)	Incr. Volume (cf)	Accum. Volume (cf)	Accum. Volume (Ac-Ft)
Bottom	3,748.47	2887.89	0.00	0.00	0.00
Top	3,749.47	6239.30	4,563.60	4,563.60	0.10

100 Year Capacity= 0.08 Ac-ft
100 Year Water Surface Elevation = 3749.20 ft

LOT 3 RETENTION POND AVAILABLE CAPACITY CALCULATIONS

	Elevation (ft)	Area (sf)	Incr. Volume (cf)	Accum. Volume (cf)	Accum. Volume (Ac-Ft)
Bottom	3,748.46	6760.77	0.00	0.00	0.00
Top	3,749.46	10028.21	8,394.49	8,394.49	0.19

100 Year Capacity= 0.10 Ac-ft
100 Year Water Surface Elevation = 3748.99 ft

LOT 4 RETENTION POND AVAILABLE CAPACITY CALCULATIONS

	Elevation (ft)	Area (sf)	Incr. Volume (cf)	Accum. Volume (cf)	Accum. Volume (Ac-Ft)
Bottom	3,748.46	3303.57	0.00	0.00	0.00
Top	3,749.46	5964.02	4,633.80	4,633.80	0.11

100 Year Capacity= 0.06 Ac-ft
100 Year Water Surface Elevation = 3749.02 ft

LOT 5 RETENTION POND AVAILABLE CAPACITY CALCULATIONS

	Elevation (ft)	Area (sf)	Incr. Volume (cf)	Accum. Volume (cf)	Accum. Volume (Ac-Ft)
Bottom	3,748.45	3755.83	0.00	0.00	0.00
Top	3,749.45	6679.65	5,217.74	5,217.74	0.12

100 Year Capacity= 0.07 Ac-ft
100 Year Water Surface Elevation = 3749.02 ft

LOT 6 RETENTION POND AVAILABLE CAPACITY CALCULATIONS

	Elevation (ft)	Area (sf)	Incr. Volume (cf)	Accum. Volume (cf)	Accum. Volume (Ac-Ft)
Bottom	3,748.45	5962.24	0.00	0.00	0.00
Top	3,749.45	9214.76	7,588.50	7,588.50	0.17

100 Year Capacity= 0.08 Ac-ft
100 Year Water Surface Elevation = 3748.91 ft

LOT 7 RETENTION POND AVAILABLE CAPACITY CALCULATIONS

	Elevation (ft)	Area (sf)	Incr. Volume (cf)	Accum. Volume (cf)	Accum. Volume (Ac-Ft)
Bottom	3,748.47	3171.37	0.00	0.00	0.00
Top	3,749.47	6154.56	4,662.97	4,662.97	0.11

100 Year Capacity= 0.06 Ac-ft
100 Year Water Surface Elevation = 3749.07 ft

LOT 8 RETENTION POND AVAILABLE CAPACITY CALCULATIONS

	Elevation (ft)	Area (sf)	Incr. Volume (cf)	Accum. Volume (cf)	Accum. Volume (Ac-Ft)
Bottom	3,748.71	2799.85	0.00	0.00	0.00
Top	3,749.71	5796.07	4,297.96	4,297.96	0.10

100 Year Capacity= 0.06 Ac-ft
100 Year Water Surface Elevation = 3749.35 ft

LOT 9 RETENTION POND AVAILABLE CAPACITY CALCULATIONS

	Elevation (ft)	Area (sf)	Incr. Volume (cf)	Accum. Volume (cf)	Accum. Volume (Ac-Ft)
Bottom	3,748.73	2779.68	0.00	0.00	0.00
Top	3,749.73	5795.19	4,287.44	4,287.44	0.10

100 Year Capacity= 0.06 Ac-ft
100 Year Water Surface Elevation = 3749.37 ft

RETENTION POND REQUIRED CAPACITY CALCULATIONS

Basin No.	Area (sf)	Area (Ac)	Composite C	R (inches)	Required Capacity (Ac-Ft)	Available Capacity (Ac-Ft)	Required Depth (Ft)	Available Depth (Ft)
DA-1	20,735.79	0.48	0.60	4.00	0.10	0.11	0.85	1.00
DA-2	16,702.18	0.38	0.60	4.00	0.08	0.10	0.73	1.00
DA-3	22,122.90	0.51	0.60	4.00	0.10	0.19	0.53	1.00
DA-4	12,931.81	0.30	0.60	4.00	0.06	0.11	0.56	1.00
DA-5	14,965.24	0.34	0.60	4.00	0.07	0.12	0.57	1.00
DA-6	17,374.26	0.40	0.60	4.00	0.08	0.17	0.46	1.00
DA-7	13,872.38	0.32	0.60	4.00	0.06	0.11	0.60	1.00
DA-8	13,753.08	0.32	0.60	4.00	0.06	0.10	0.64	1.00
DA-9	13,749.40	0.32	0.60	4.00	0.06	0.10	0.64	1.00
DA-10	14,061.66	0.32	0.60	4.00	0.06	0.10	0.62	1.00
DA-11	14,650.70	0.34	0.60	4.00	0.07	0.16	0.43	1.00
DA-12	15,324.66	0.35	0.60	4.00	0.07	0.16	0.45	1.00
DA-13	13,252.55	0.30	0.60	4.00	0.06	0.11	0.56	1.00
DA-14	14,059.61	0.32	0.60	4.00	0.06	0.14	0.47	1.00
DA-15	19,167.30	0.44	0.60	4.00	0.09	0.16	0.54	1.00
DA-16	15,249.12	0.35	0.60	4.00	0.07	0.10	0.71	1.00
DA-17	20,684.39	0.47	0.60	4.00	0.09	0.11	0.86	1.00
PARK	37,939.28	0.87	0.60	4.00	0.17	0.23	2.02	2.50

Q=CIA
QT=ARC/12
Silt Volume= Area*0.012

LOT 10 RETENTION POND AVAILABLE CAPACITY CALCULATIONS

	Elevation (ft)	Area (sf)	Incr. Volume (cf)	Accum. Volume (cf)	Accum. Volume (Ac-Ft)
Bottom	3,748.52	3025.09	0.00	0.00	0.00
Top	3,749.52	6083.09	4,554.09	4,554.09	0.10

100 Year Capacity= 0.06 Ac-ft
100 Year Water Surface Elevation = 3749.14 ft

LOT 11 RETENTION POND AVAILABLE CAPACITY CALCULATIONS

	Elevation (ft)	Area (sf)	Incr. Volume (cf)	Accum. Volume (cf)	Accum. Volume (Ac-Ft)
Bottom	3,748.46	5501.78	0.00	0.00	0.00
Top	3,749.46	8250.55	6,876.17	6,876.17	0.16

100 Year Capacity= 0.07 Ac-ft
100 Year Water Surface Elevation = 3748.89 ft

LOT 12 RETENTION POND AVAILABLE CAPACITY CALCULATIONS

	Elevation (ft)	Area (sf)	Incr. Volume (cf)	Accum. Volume (cf)	Accum. Volume (Ac-Ft)
Bottom	3,748.46	5449.81	0.00	0.00	0.00
Top	3,749.46	8279.85	6,864.83	6,864.83	0.16

100 Year Capacity= 0.07 Ac-ft
100 Year Water Surface Elevation = 3748.91 ft

LOT 13 RETENTION POND AVAILABLE CAPACITY CALCULATIONS

	Elevation (ft)	Area (sf)	Incr. Volume (cf)	Accum. Volume (cf)	Accum. Volume (Ac-Ft)
Bottom	3,748.49	3425.38	0.00	0.00	0.00
Top	3,749.49	6100.49	4,762.94	4,762.94	0.11

100 Year Capacity= 0.06 Ac-ft
100 Year Water Surface Elevation = 3749.05 ft

LOT 14 RETENTION POND AVAILABLE CAPACITY CALCULATIONS

	Elevation (ft)	Area (sf)	Incr. Volume (cf)	Accum. Volume (cf)	Accum. Volume (Ac-Ft)
Bottom	3,748.45	4683.99	0.00	0.00	0.00
Top	3,749.45	7376.75	6,030.37	6,030.37	0.14

100 Year Capacity= 0.06 Ac-ft
100 Year Water Surface Elevation = 3748.92 ft

LOT 15 RETENTION POND AVAILABLE CAPACITY CALCULATIONS

	Elevation (ft)	Area (sf)	Incr. Volume (cf)	Accum. Volume (cf)	Accum. Volume (Ac-Ft)
Bottom	3,748.45	5692.73	0.00	0.00	0.00
Top	3,749.45	8573.02	7,132.88	7,132.88	0.16

100 Year Capacity= 0.09 Ac-ft
100 Year Water Surface Elevation = 3748.99 ft

LOT 16 RETENTION POND AVAILABLE CAPACITY CALCULATIONS

	Elevation (ft)	Area (sf)	Incr. Volume (cf)	Accum. Volume (cf)	Accum. Volume (Ac-Ft)
Bottom	3,748.49	2831.90	0.00	0.00	0.00
Top	3,749.49	5728.23	4,280.06	4,280.06	0.10

100 Year Capacity= 0.07 Ac-ft
100 Year Water Surface Elevation = 3749.20 ft

LOT 17 RETENTION POND AVAILABLE CAPACITY CALCULATIONS

	Elevation (ft)	Area (sf)	Incr. Volume (cf)	Accum. Volume (cf)	Accum. Volume (Ac-Ft)
Bottom	3,748.73	3257.16	0.00	0.00	0.00
Top	3,749.73	6359.12	4,808.14	4,808.14	0.11

100 Year Capacity= 0.09 Ac-ft
100 Year Water Surface Elevation = 3749.59 ft

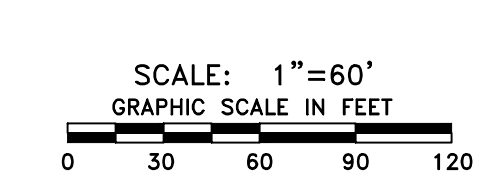
PARK RETENTION POND AVAILABLE CAPACITY CALCULATIONS

	Elevation (ft)	Area (sf)	Incr. Volume (cf)	Accum. Volume (cf)	Accum. Volume (Ac-Ft)
Bottom	3,746.60	1,989.79	0.00	0.00	0.00
Top	3,747.10	2,705.77	1,173.89	1,173.89	0.03

100 YR WSE 3,748.10 4,429.61 3,567.69 4,741.58 0.11
100 Year Capacity= 0.17 Ac-ft
100 Year Water Surface Elevation = 3748.62 ft

ON-SITE PONDING NOTES:

- ALL LOTS IN THE SUBDIVISION ARE SUBJECT TO ON-SITE PONDING. LOT OWNERS ARE RESPONSIBLE FOR MAINTAINING ADEQUATE PROVISIONS TO ACCOMMODATE ALL STORMWATER RUNOFF GENERATED FROM THEIR RESPECTIVE LOT PLUS ONE-HALF THE RUNOFF GENERATED FROM ALL ADJUTING STREET RIGHT-OF-WAYS DIRECTLY FRONTING THE LOT. THE POND DEPTH AND LOT GRADING REQUIREMENTS ARE AS PER APPROVED GRADING AND DRAINAGE PLAN FOR THE SUBDIVISION.
- WALLS CONSTRUCTED ABUTTING STREET RIGHT-OF-WAYS SHALL BE CONSTRUCTED WITH A SERIES OF DRAIN PIPES ALLOWING THE STREET RUNOFF TO BE CONVEYED TO THE SUBJECT PROPERTY.
- ON-SITE PONDING AREAS SHALL HAVE MAXIMUM ONE (VERTICAL) TO THREE (HORIZONTAL) SIDE SLOPES AND A MAXIMUM DEPTH OF TWELVE (12) INCHES BASED ON A ONE HUNDRED YEAR STORM.
- PERMANENT ELEVATION MARKER SHALL BE INSTALLED TO DEFINE THE LEVELS TO BE MAINTAINED TO ENSURE THE EFFECTIVENESS OF ON-SITE PONDING. PERMANENT ELEVATION MARKERS SHALL NOT BE MOVED, COVERED, OR ALTERED WITHOUT WRITTEN PERMISSION FROM THE CITY ENGINEER.
- THE CITY AND/OR ITS REPRESENTATIVE IS GRANTED PERMANENT RIGHT OF ACCESS TO INSPECT THE PONDING AREAS AND PERMANENT ELEVATION MARKERS.
- FILLING OR CHANGING THE POND, OR ALLOWING THE POND TO BE FILLED OR CHANGED TO AN ELEVATION GREATER THAN ESTABLISHED BY THE PERMANENT ELEVATION MARKERS, IS PROHIBITED.
- ON-SITE PONDING AREAS AND PERMANENT ELEVATION MARKERS SHALL BE CONSTRUCTED AND INSPECTED PRIOR TO BUILDING OCCUPANCY. PERMANENT CERTIFICATE OF OCCUPANCY, REQUIRED TO OBTAIN UTILITY SERVICES, WILL BE ISSUED ONLY AFTER THE CITY OF EL PASO HAS PERFORMED THE INSPECTION.
- NO PERSON SHALL BE PERMITTED TO IMPAIR THE FUNCTIONALITY OF AN ON-SITE POND. NO MORE THAN FIFTY-PERCENT (50%) OF THE AREA OF ANY RESIDENTIAL LOT CONVEYED BY DEED SHALL BE COVERED BY IMPROVEMENTS, EITHER TEMPORARY OR PERMANENT, WHICH SHED STORMWATER, INCLUDING BUT NOT LIMITED TO, BUILDINGS, DRIVEWAY PATIOS, DECKS OR LANDSCAPING UNDERLAID WITH PLASTIC SHEETING OR OTHER IMPERMEABLE MATERIAL.
- IN THE EVENT THAT THE FUNCTIONALITY OF AN ON-SITE POND BECOMES IMPAIRED WHETHER BY ACT OF MAN OR NATURE, THE OWNER OF THE LOT ON WHICH THE IMPAIRED POND IS LOCATED SHALL PERFORM ALL CORRECTIVE ACTIONS REQUIRED TO RESTORE THAT FUNCTIONALITY.
- ANY OWNER NOTIFIED IN WRITING BY THE CITY ENGINEER OF CORRECTIVE ACTIONS REQUIRED TO RESTORE THE FUNCTIONALITY OF AN ON-SITE POND OR DRAINAGE PROBLEM ON THE LOT SHALL COMPLY WITHIN FORTY-FIVE CALENDAR DAYS OF RECEIPT OF SUCH NOTICE; PROVIDED, HOWEVER, THAT NOTHING HEREIN SHALL PREVENT THE CITY FROM MANDATING AN EARLIER TIME FOR COMMENCEMENT OF COMPLETION DURING TIMES OF EMERGENCY, WHERE THERE IS IMMINENT DANGER OF LOSS OF LIFE, LIMB OR PROPERTY.
- OWNER OF PROPERTY UTILIZING ON-SITE PONDING WAIVES ANY CLAIM OR CAUSE OF ACTION AGAINST THE CITY, EPWU-PSB, OFFICIALS OR EMPLOYEES, FOR ANY DEATH, INJURY OR PROPERTY DAMAGE RESULTING FROM ALTERATION OF THE PONDING CAPACITY FOR THAT LOT, INCLUDING LACK OF MAINTENANCE.
- THESE ON-SITE PONDING REQUIREMENTS SHALL BE ENFORCED BY INJUNCTIVE RELIEF WITHOUT THE REQUIREMENT FOR BOND OR OTHER SECURITY.
- THE CONVEYANCE OF PROPERTY PERMITTING ON-SITE PONDING SHALL DECLARE IN CONSPICUOUS LANGUAGE IN THE DEED THAT THE PROPERTY IS SUBJECT TO ON-SITE PONDING REQUIREMENTS, MAINTENANCE OF ELEVATION MARKERS, STANDING WATER ON LOT, AND INGRESS AND EGRESS FOR INSPECTION AS STATED ON THE PLAT.



TRE & ASSOCIATES
Engineering Solutions
110 Meza Park Drive, Suite 200
El Paso, Texas 79912
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Fax: (915) 852-5374

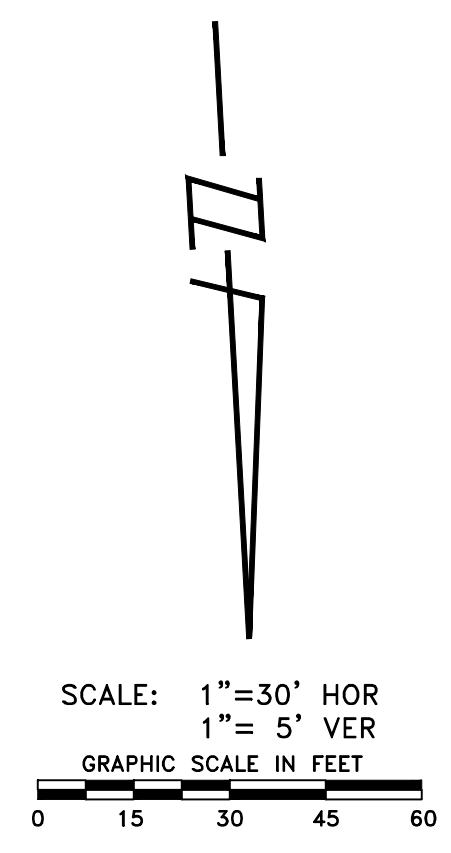
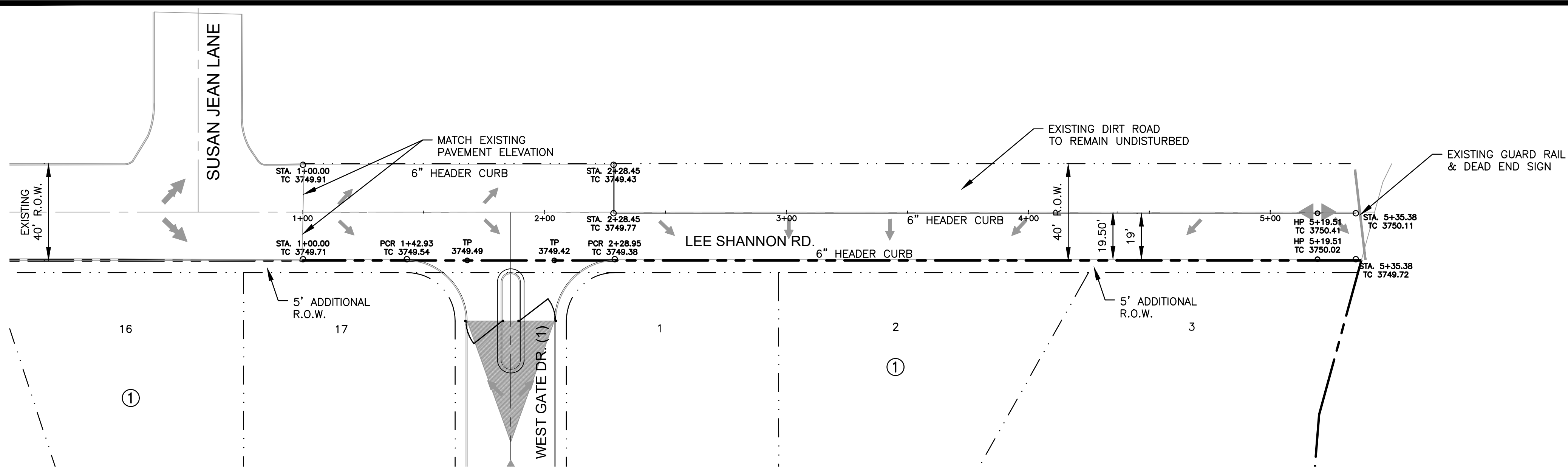
PROJECT NO. 2002-12004-32	DESIGNED BY: KB
DWG FILE: DRAN	DRAWN BY: KB
DATE: AUGUST 2021	CHECKED BY: RR
NO. BY DATE	REVISION DESCRIPTION

HORIZONTE RESIDENTIAL STREET, DRAINAGE, WATER, & WASTEWATER IMPROVEMENTS

DRAINAGE PLAN & DRAINAGE CALCULATIONS

NOTICE: ALTERATION OF A SEALED DRAWING WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS A VIOLATION OF THE TEXAS ENGINEERING PRACTICE ACT.

FILE: P:\2002 Punto Living, LLC\12004 - Horizonte Residential\CAD\Sheets\LEE SHANNON RD.dwg LAYOUT: LEE SHANNON RD. PLAN & PROFILE STA. 1+00.00 TO END DATE: 8/19/2021 9:16:24 AM BY: KBARRAZA

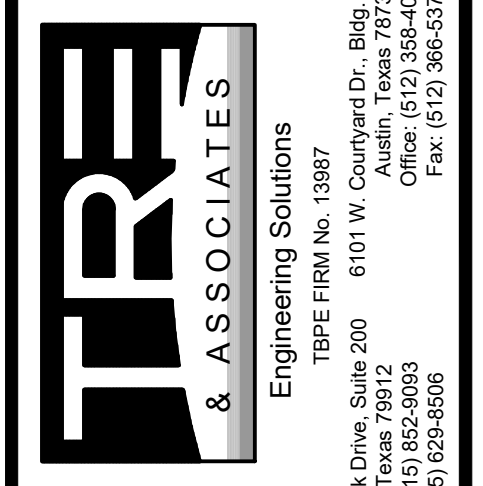
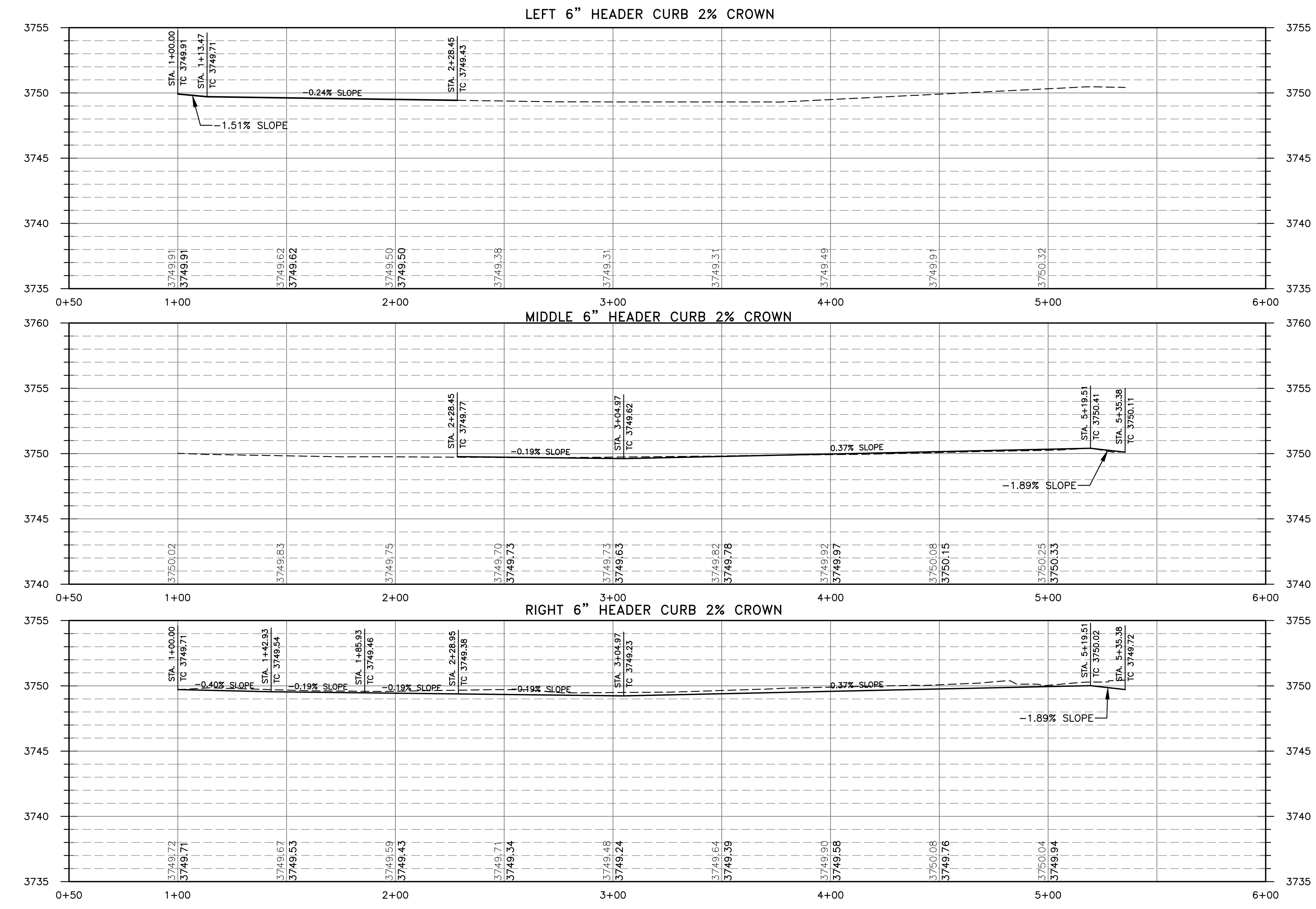


LEGEND

- SUBDIVISION BOUNDARY
- PROPERTY LINE
- EXISTING GROUND
- HIGH POINT
- EXISTING PAVEMENT
- EXISTING DIRT ROAD

NOTE: 1. REFER TO PLAT FOR ALL ROADWAY CENTERLINE INFORMATION.

BENCH MARKS:
 TBM#1 5/8" IRON ROD WITH CAP STAMPED "ZWA-CONTROL" SET APPROXIMATELY 39 FEET SOUTHWEST OF SOUTHWEST CORNER, INSIDE THE BORDERLAND SPUR DRAIN R.O.W.
 GRID COORDINATES:
 N=10,692,979.94
 E=345,327.85
 ELEVATION=3749.77'
 TBM#2 BRASS DISK IN CONCRETE FOUND FOR CITY MONUMENT AT THE CENTERLINE INTERSECTION OF LEE SHANNON ROAD AND LOTTIE LANE.
 GRID COORDINATES:
 N=10,692,932.00
 E=346,426.01
 ELEVATION=3750.57'

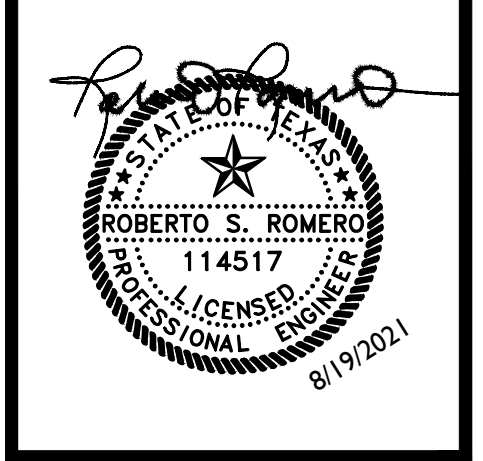


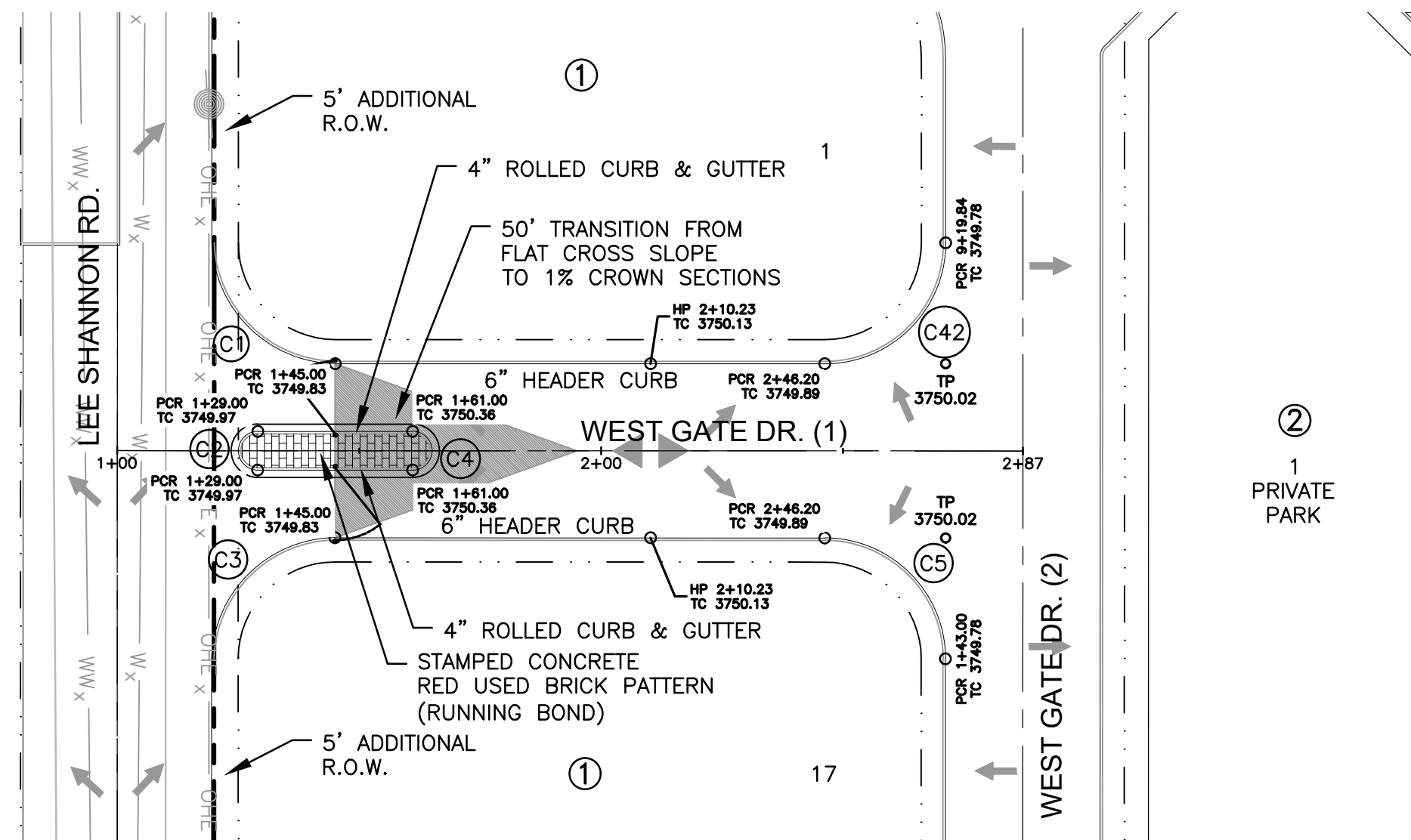
PROJECT NO. 2002-12004-32	DESIGNED BY: KB		
DWG FILE: LEE SHANNON RD	DRAWN BY: KB		
DATE: AUGUST 2021	CHECKED BY: RR		
NO.	BY	DATE	REVISION DESCRIPTION

HORIZONTE RESIDENCIAL STREET, DRAINAGE, WATER, & WASTEWATER IMPROVEMENTS

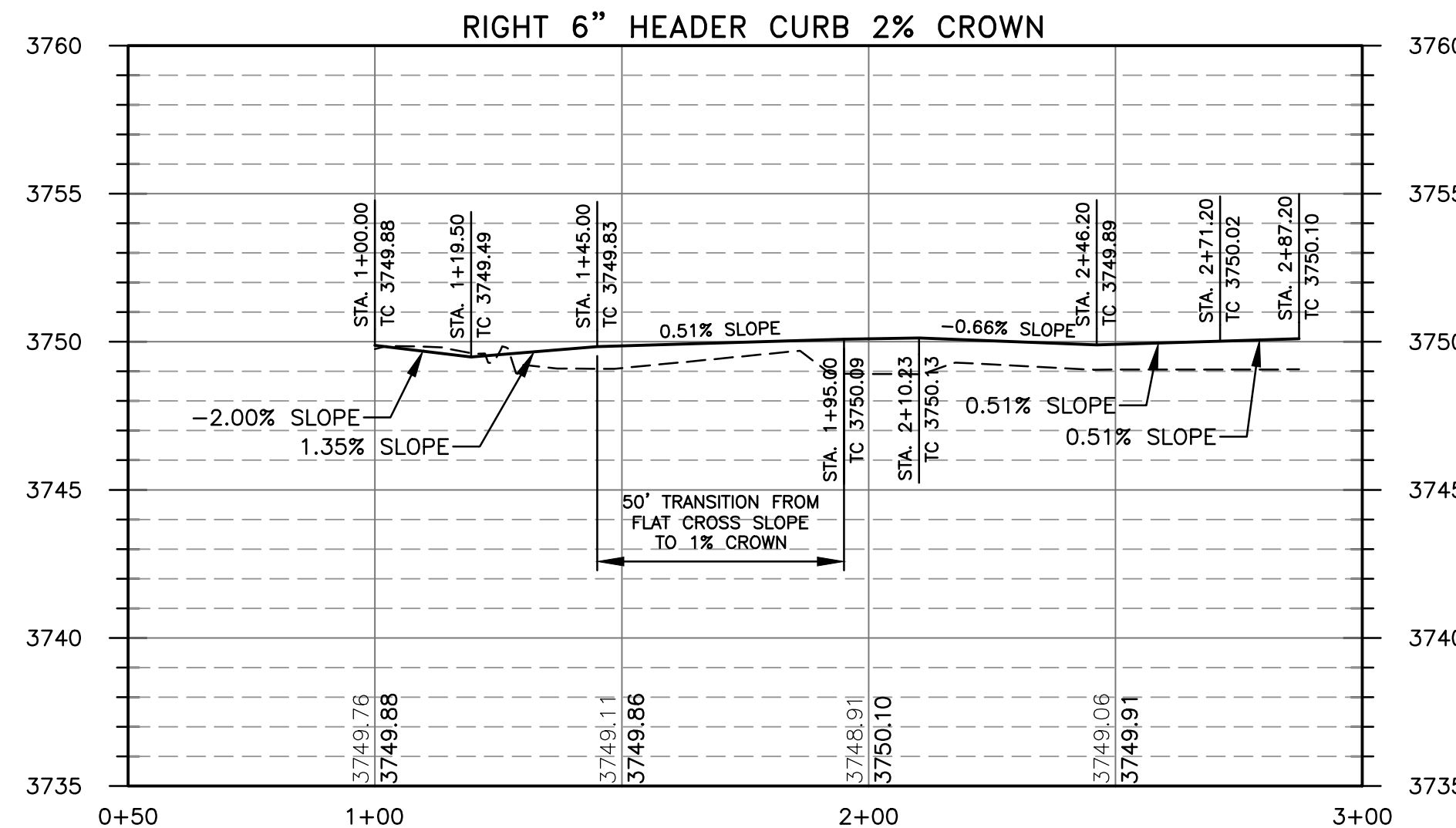
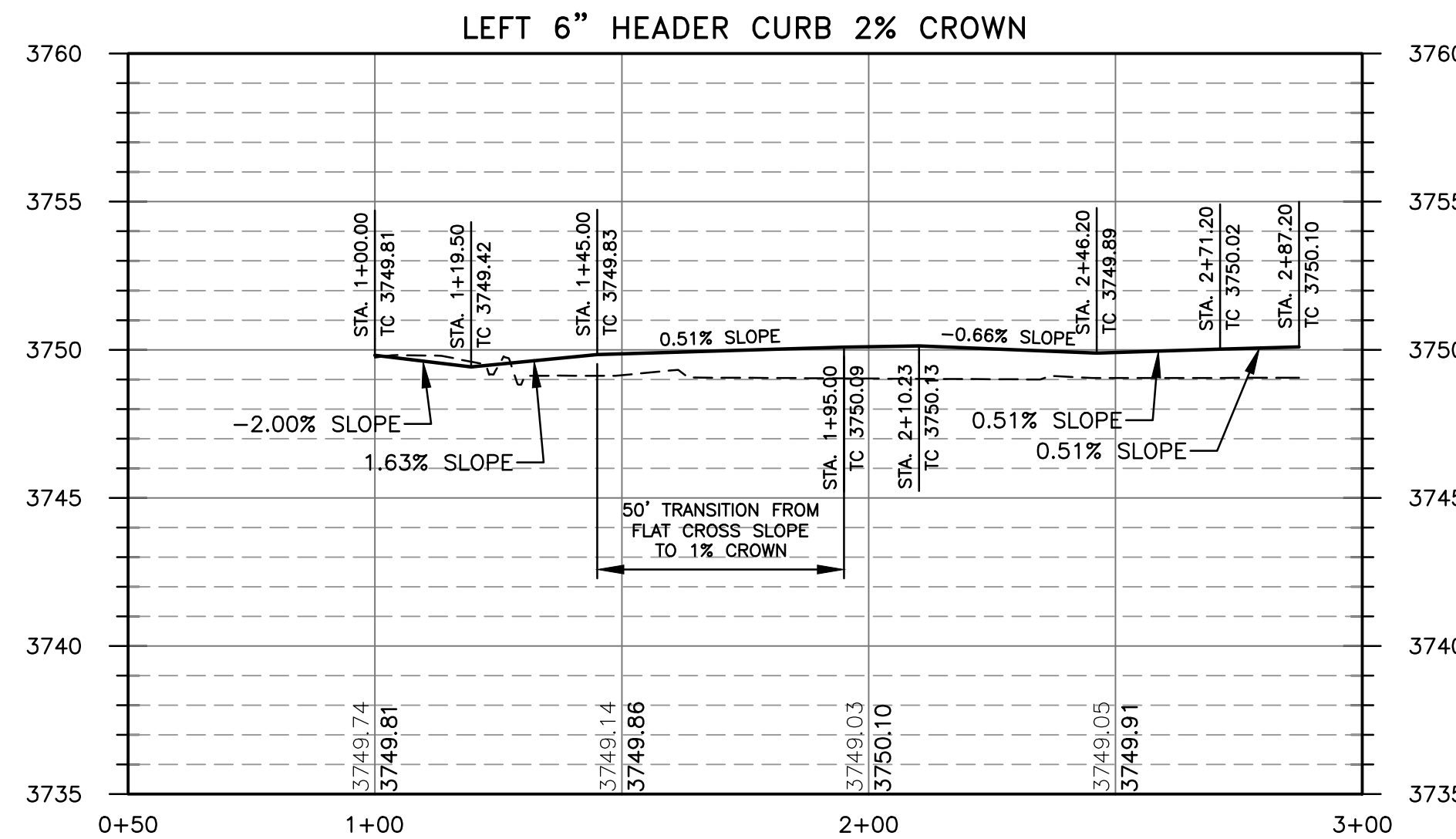
LEE SHANNON RD. PLAN & PROFILE STA. 1+00.00 TO END

NOTICE: ALTERATION OF A SEALED DRAWING WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS A VIOLATION OF THE TEXAS ENGINEERING PRACTICE ACT.





CURVE DATA						
NUMBER	DELTA	TANGENT	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING
C1	87° 15' 41"	24.67	25.88	39.41	35.71	N47° 35' 12.54"E
C2	180° 00' 00"	INFINITY	4.00	12.57	8.00	S86° 50' 45.30"E
C3	87° 15' 41"	24.67	25.88	39.41	35.71	N41° 16' 43.14"W
C4	180° 00' 00"	INFINITY	4.00	12.57	8.00	S86° 50' 45.30"E
C5	90° 00' 00"	25.00	25.00	39.27	35.36	N48° 09' 14.70"E
C42	90° 00' 00"	25.00	25.00	39.27	35.36	S41° 50' 45.30"E



SCALE: 1"=30' HOR
1"= 5' VER
GRAPHIC SCALE IN FEET

LEGEND

- SUBDIVISION BOUNDARY
- PROPERTY LINE
- EXISTING GROUND
- HIGH POINT
- EXISTING DIRT ROAD

NOTE: 1. REFER TO PLAT FOR ALL ROADWAY CENTERLINE INFORMATION.

BENCH MARKS:

TBM#1 5/8" IRON ROD WITH CAP STAMPED "ZWA-CONTROL" SET APPROXIMATELY 39 FEET SOUTHWEST OF SOUTHWEST CORNER, INSIDE THE BORDERLAND SPUR DRAIN R.O.W.

GRID COORDINATES:
N=10,692,979.94
E=345,327.85
ELEVATION=3749.77'

TBM#2 BRASS DISK IN CONCRETE FOUND FOR CITY MONUMENT AT THE CENTERLINE INTERSECTION OF LEE SHANNON ROAD AND LOTTIE LANE.

GRID COORDINATES:
N=10,692,932.00
E=346,426.01
ELEVATION=3750.57'



Engineering Solutions
TREC & ASSOCIATES
110 Moss Park Drive, Suite 200 6101 W. Courtyard Dr., Bldg. 1, Suite 100
El Paso, Texas 79912 Austin, Texas 78730
Office: (915) 852-9093 Office: (512) 398-4049
Fax: (915) 626-8586 Fax: (512) 365-5374

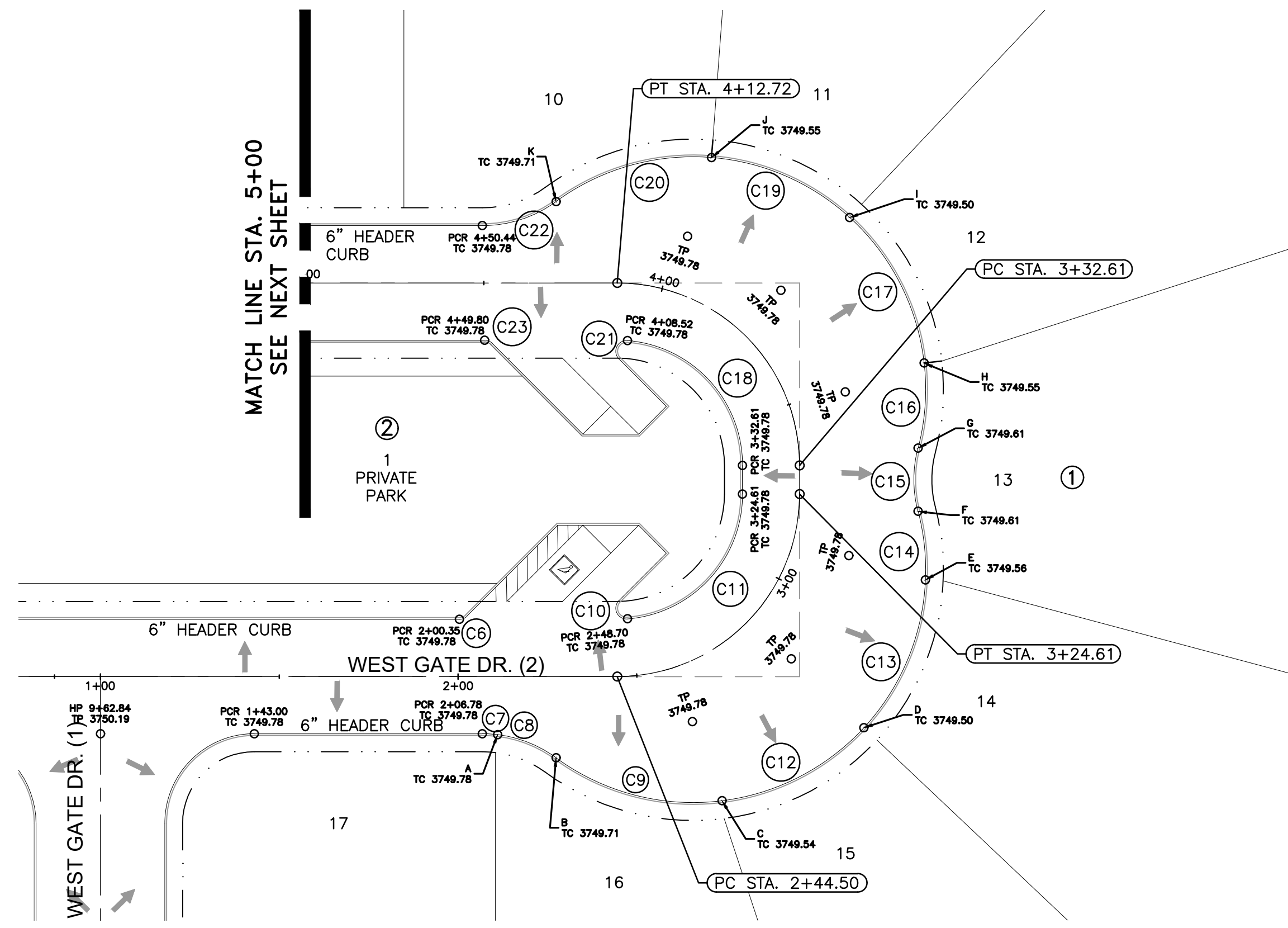
PROJECT NO. 2002-12004-13	DESIGNED BY: KB		
DWG FILE: STREET A	DRAWN BY: KB		
DATE: AUGUST 2021	CHECKED BY: RR		
NO.	BY	DATE	REVISION DESCRIPTION

HORIZONTE RESIDENCIAL
STREET, DRAINAGE, WATER, &
WASTEWATER
IMPROVEMENTS

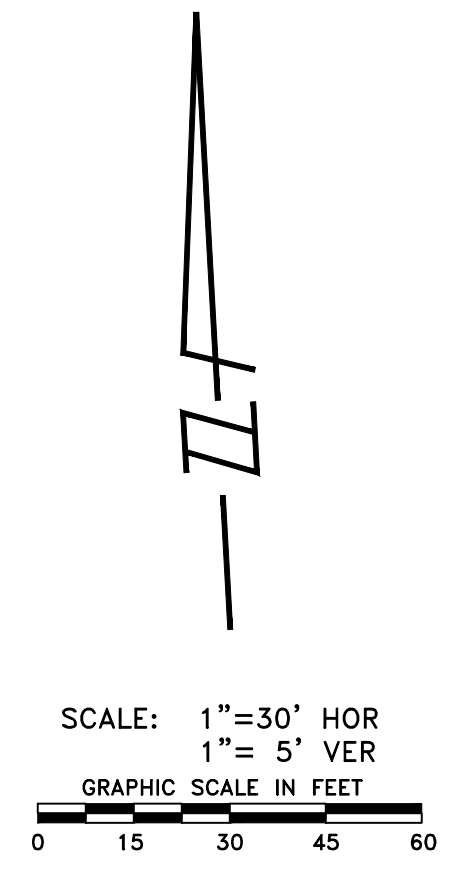
WEST GATE DR. (1) PLAN &
PROFILE STA. 1+00.00 TO
END

NOTICE:
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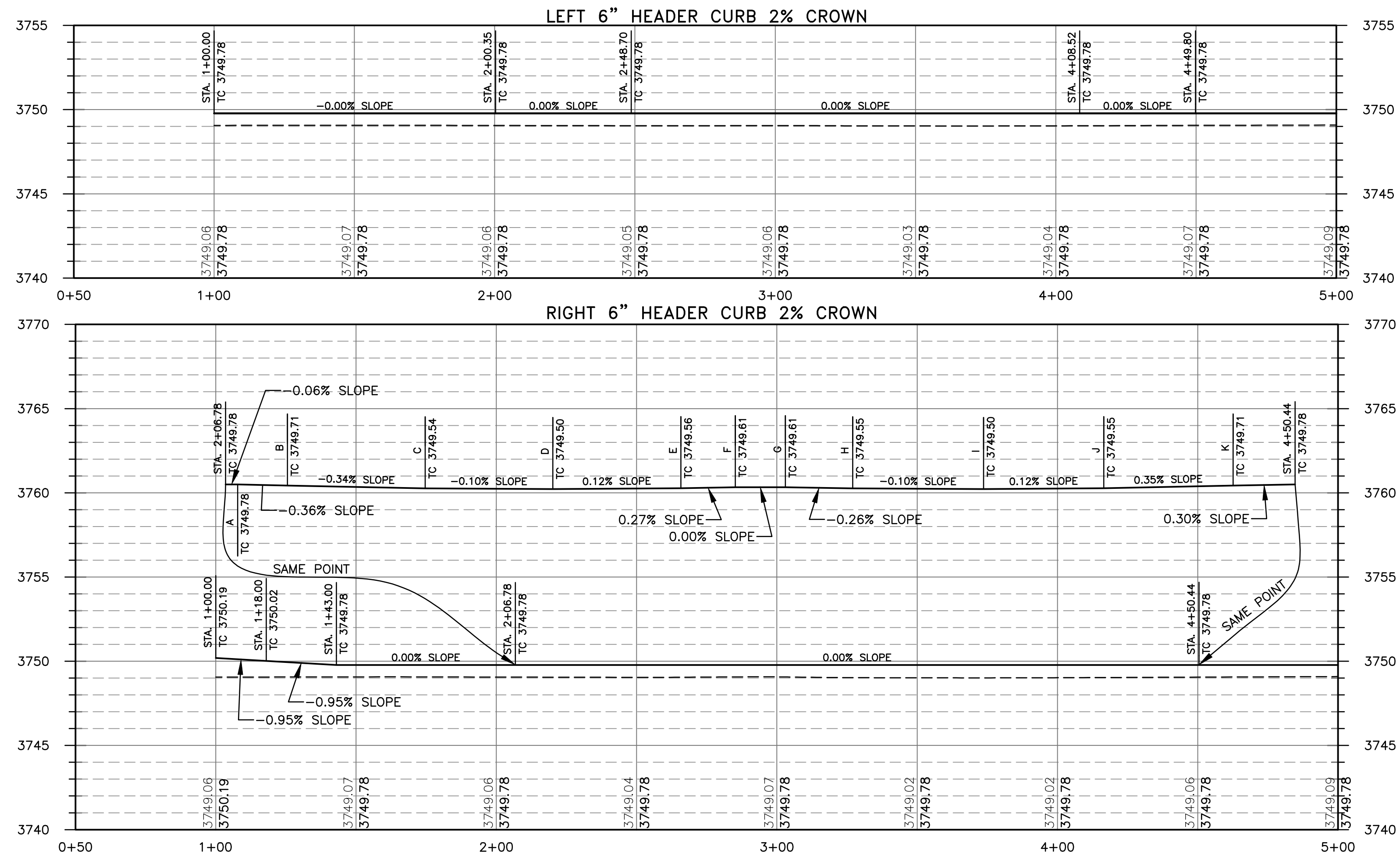


CURVE DATA						
NUMBER	DELTA	TANGENT	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING
C6	45° 00' 00"	1.24	3.00	2.36	2.30	N70° 39' 14.70"E
C7	7° 04' 11"	2.16	35.00	4.32	4.32	S83° 18' 39.94"E
C8	29° 02' 32"	9.07	35.00	17.74	17.55	S65° 15' 18.60"E
C9	43° 15' 41"	25.78	65.00	49.08	47.92	S72° 21' 53.07"E
C10	139° 42' 55"	8.18	3.00	7.32	5.63	S21° 42' 12.90"E
C11	85° 17' 05"	32.23	35.00	52.10	47.42	N45° 47' 47.10"E
C12	40° 07' 21"	23.74	65.00	45.52	44.59	N65° 56' 36.15"E
C13	40° 14' 56"	23.82	65.00	45.66	44.73	N25° 45' 27.81"E
C14	17° 04' 58"	9.76	65.00	19.38	19.31	N2° 54' 29.43"W
C15	29° 12' 27"	9.12	35.00	17.84	17.65	N3° 09' 14.70"E
C16	21° 08' 57"	12.13	65.00	23.99	23.86	N7° 10' 59.60"E
C17	41° 09' 12"	24.40	65.00	46.69	45.69	N23° 58' 04.68"W
C18	85° 17' 05"	32.23	35.00	52.10	47.42	N39° 29' 17.70"W
C19	37° 44' 52"	22.22	65.00	42.82	42.05	N63° 25' 06.60"W
C20	40° 39' 55"	24.09	65.00	46.13	45.17	S77° 22' 29.67"W
C21	139° 42' 55"	8.18	3.00	7.32	5.63	S28° 00' 42.30"W
C22	36° 06' 43"	11.41	35.00	22.06	21.70	S75° 05' 53.36"W
C23	45° 00' 00"	1.24	3.00	2.36	2.30	N64° 20' 45.30"W



LEGEND

- SUBDIVISION BOUNDARY
- PROPERTY LINE
- EXISTING GROUND



NOTE: 1. REFER TO PLAT FOR ALL ROADWAY CENTERLINE INFORMATION.

BENCH MARKS:

TBM#1 5/8" IRON ROD WITH CAP STAMPED "ZWA-CONTROL" SET APPROXIMATELY 39 FEET SOUTHWEST OF SOUTHWEST CORNER, INSIDE THE BORDERLAND SPUR DRAIN R.O.W.

GRID COORDINATES:
N=10,692,979.94
E=345,327.85
ELEVATION=3749.77'

TBM#2 BRASS DISK IN CONCRETE FOUND FOR CITY MONUMENT AT THE CENTERLINE INTERSECTION OF LEE SHANNON ROAD AND LOTTIE LANE.

GRID COORDINATES:
N=10,692,932.00
E=346,426.01
ELEVATION=3750.57'



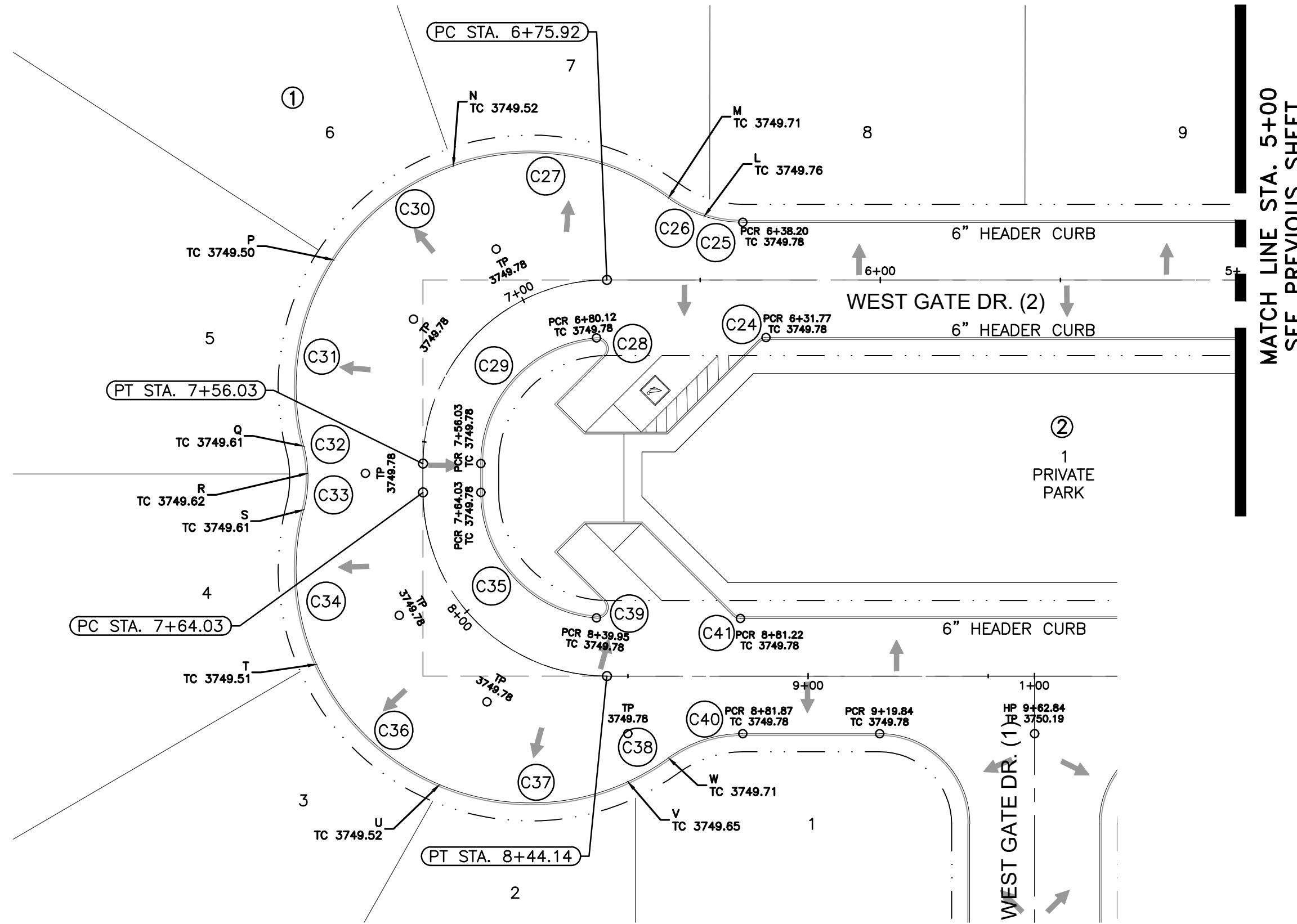
PROJECT NO. 2002-12004-32	DESIGNED BY: KB		
DWG FILE: STREET B	DRAWN BY: KB		
DATE: AUGUST 2021	CHECKED BY: RR		
NO.	BY	DATE	REVISION DESCRIPTION

HORIZONTE RESIDENCIAL STREET, DRAINAGE, WATER, & WASTEWATER IMPROVEMENTS

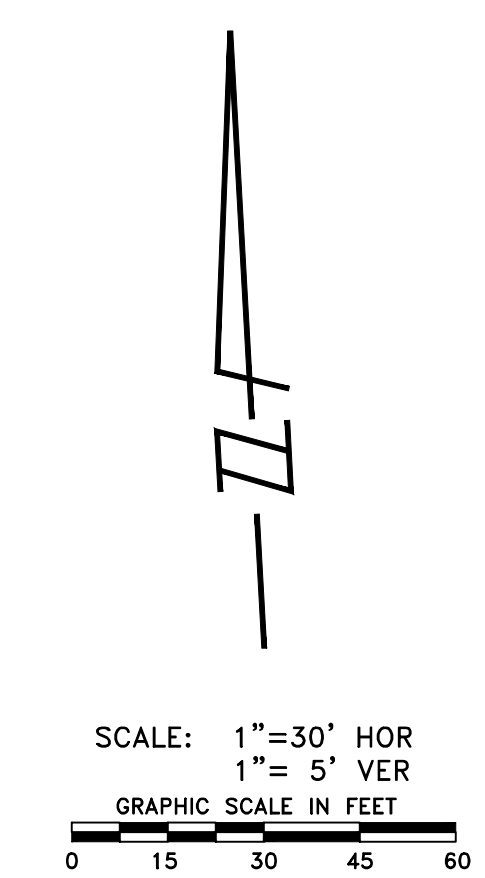
WEST GATE DR. (2) PLAN & PROFILE STA. 1+00 TO 5+00

NOTICE:
ALTERATION OF A SEALED DRAWING WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS A VIOLATION OF THE TEXAS ENGINEERING PRACTICE ACT.





CURVE DATA						
NUMBER	DELTA	TANGENT	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING
C24	45° 00' 00"	1.24	3.00	2.36	2.30	S70° 39' 14.70"W
C25	17° 46' 20"	5.47	35.00	10.86	10.81	N77° 57' 35.06"W
C26	18° 20' 22"	5.65	35.00	11.20	11.16	N59° 54' 13.72"W
C27	55° 21' 02"	34.09	65.00	62.79	60.38	N78° 24' 33.64"W
C28	139° 42' 55"	8.18	3.00	7.32	5.63	N21° 42' 12.90"W
C29	85° 17' 05"	32.23	35.00	52.10	47.42	S45° 47' 47.10"W
C30	37° 49' 48"	22.27	65.00	42.92	42.14	S55° 00' 01.53"W
C31	47° 32' 06"	28.62	65.00	53.93	52.39	S12° 19' 04.52"W
C32	12° 27' 54"	3.82	35.00	7.61	7.60	S5° 13' 01.86"E
C33	16° 44' 33"	5.15	35.00	10.23	10.19	S9° 23' 11.50"W
C34	38° 40' 07"	22.81	65.00	43.87	43.04	S1° 34' 35.69"E
C35	85° 17' 05"	32.23	35.00	52.10	47.42	S39° 29' 17.70"E
C36	43° 07' 37"	25.69	65.00	48.93	47.78	S42° 28' 27.98"E
C37	47° 23' 46"	28.53	65.00	53.77	52.25	S87° 44' 09.59"E
C38	11° 31' 25"	6.56	65.00	13.07	13.05	N62° 48' 14.68"E
C39	139° 42' 55"	8.18	3.00	7.32	5.63	N28° 00' 42.30"E
C40	36° 06' 43"	11.41	35.00	22.06	21.70	N75° 05' 53.36"E
C41	45° 00' 00"	1.24	3.00	2.36	2.30	S64° 20' 45.30"E



LEGEND

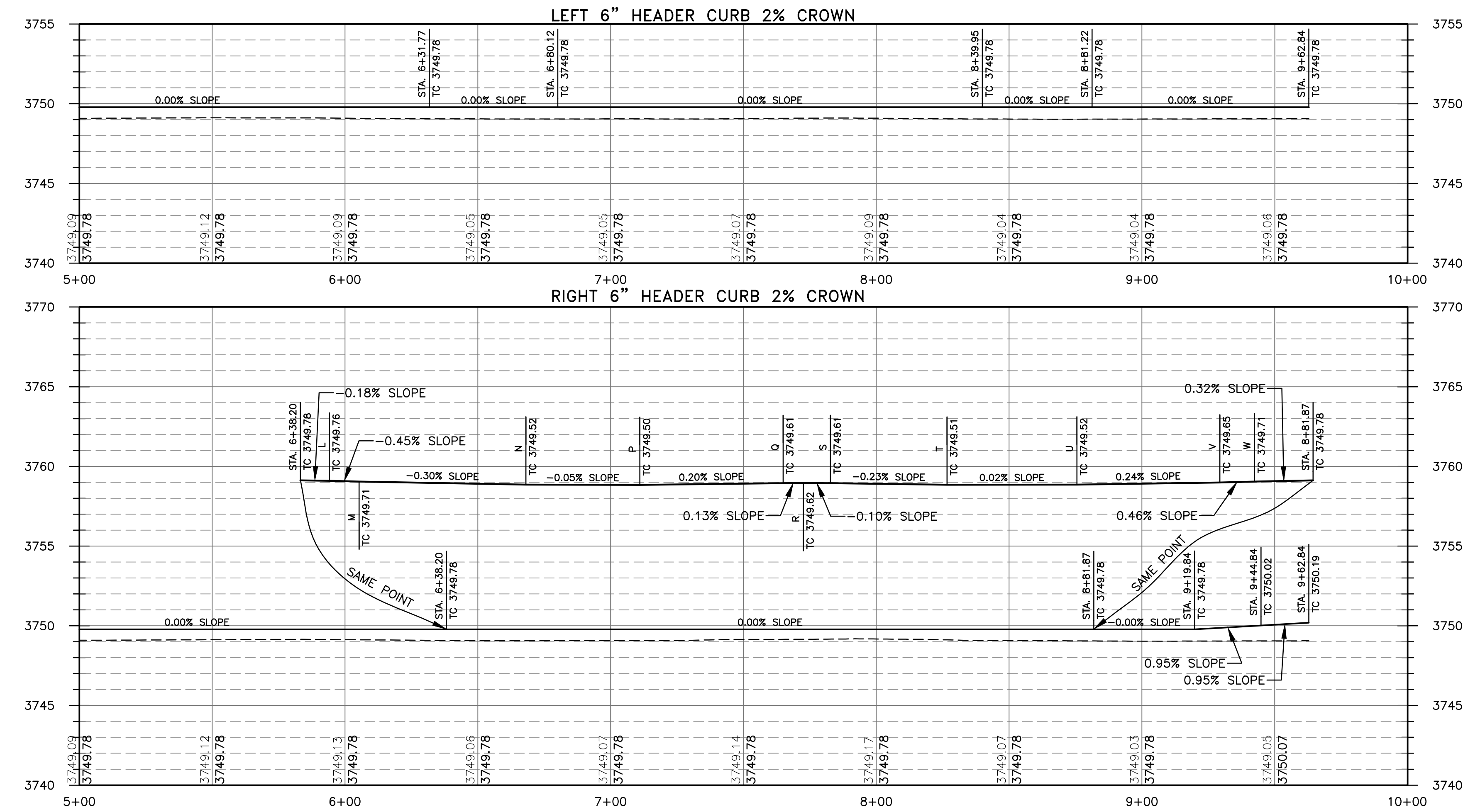
- SUBDIVISION BOUNDARY
- - - PROPERTY LINE
- - - EXISTING GROUND

NOTE: 1. REFER TO PLAT FOR ALL ROADWAY CENTERLINE INFORMATION.

BENCH MARKS:

TBM#1 5/8" IRON ROD WITH CAP STAMPED "ZWA-CONTROL" SET APPROXIMATELY 39 FEET SOUTHWEST OF SOUTHWEST CORNER, INSIDE THE BORDERLAND SPUR DRAIN R.O.W.
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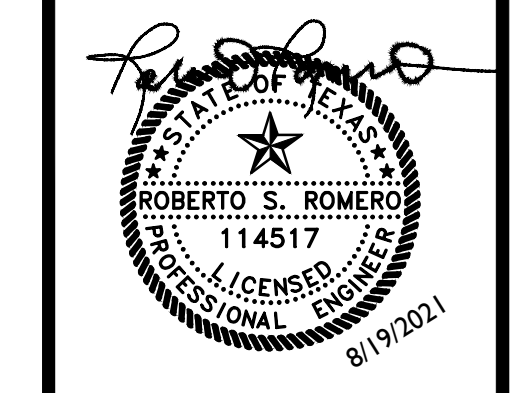
TRE & ASSOCIATES
 Engineering Solutions
 110 Mesa Park Drive, Suite 200 El Paso, Texas 79912
 Office: (915) 852-9093 Fax: (915) 852-5374

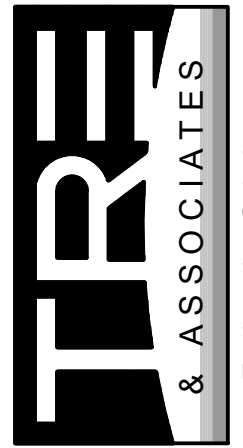
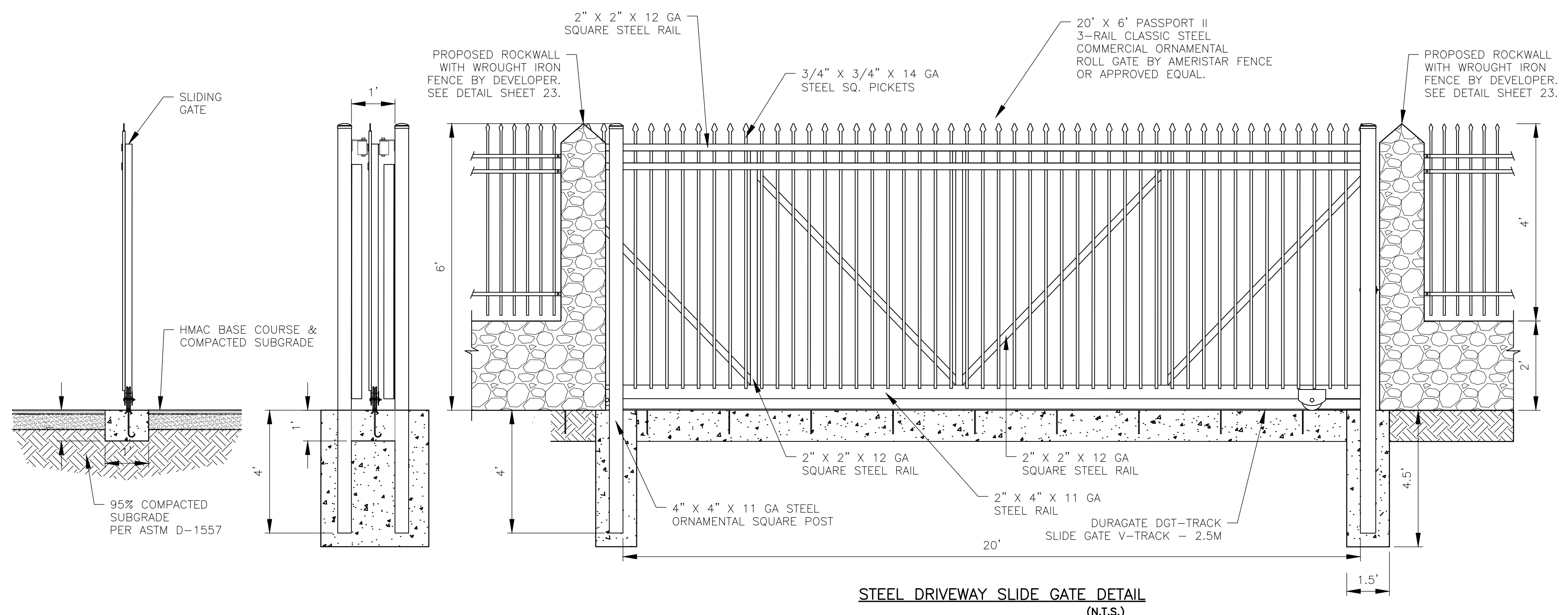
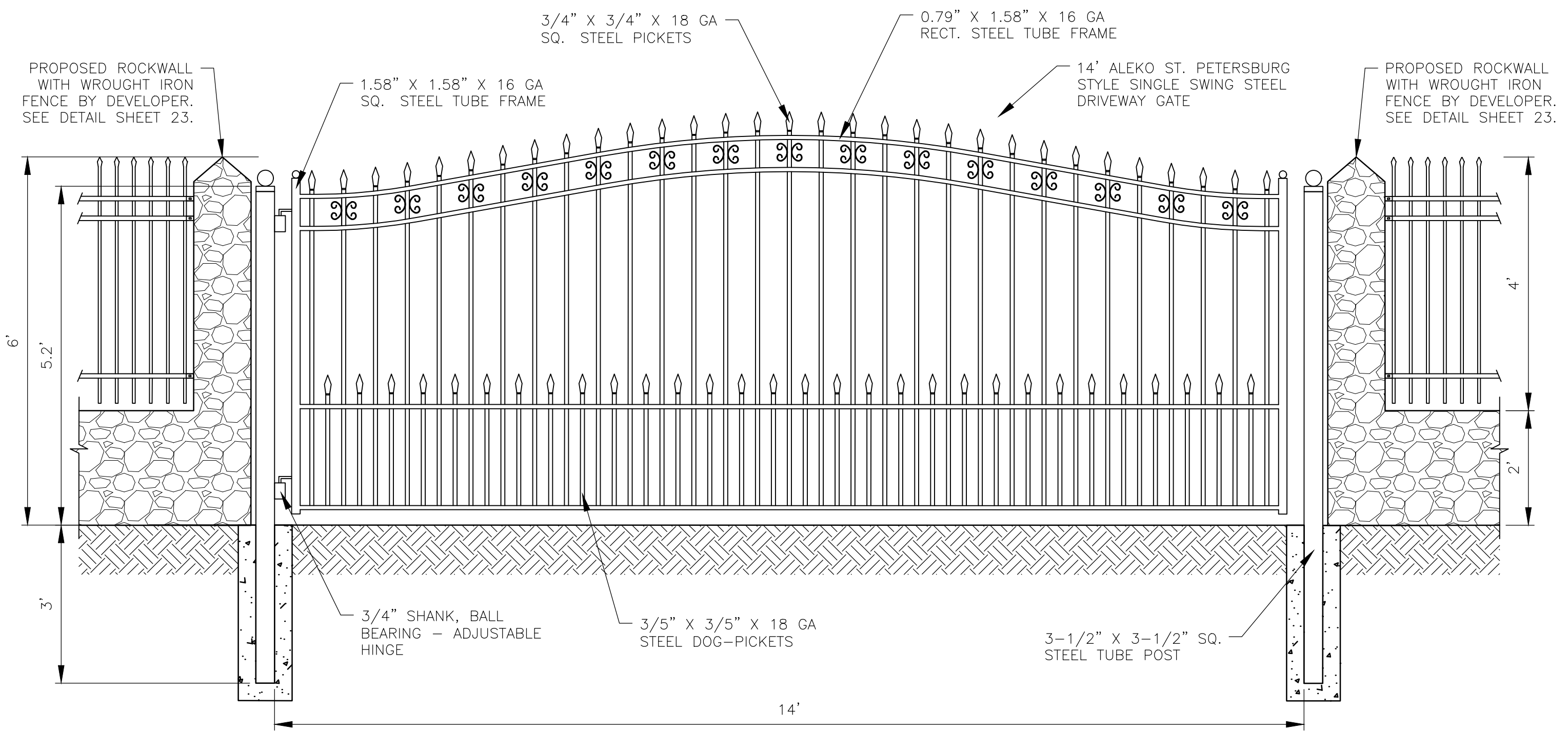
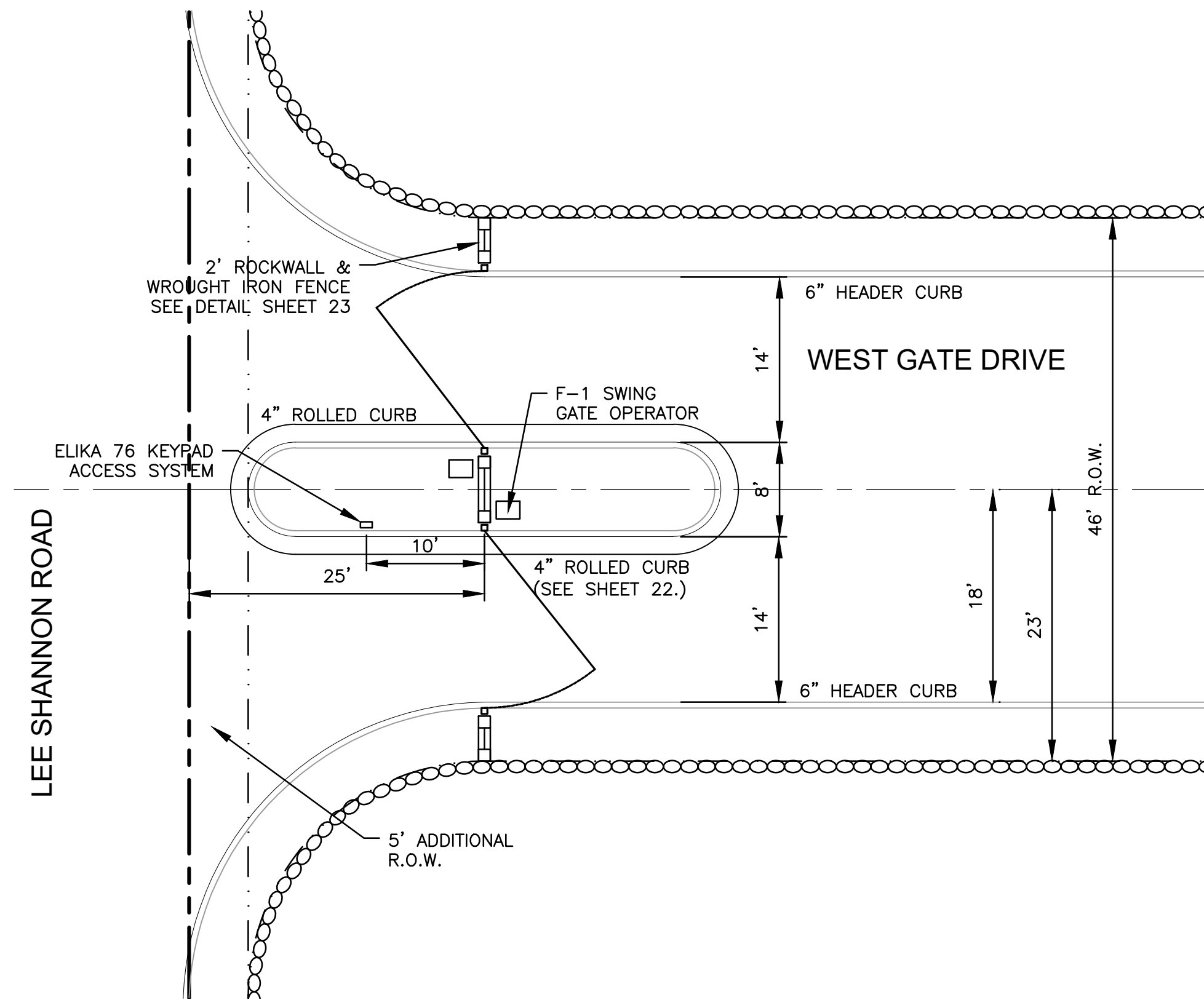
PROJECT NO. 2002-12004-32	DESIGNED BY: KB		
DWG FILE: STREET B	DRAWN BY: KB		
DATE: AUGUST 2021	CHECKED BY: RR		
NO.	BY	DATE	REVISION DESCRIPTION

HORIZONTE RESIDENCIAL STREET, DRAINAGE, WATER, & WASTEWATER IMPROVEMENTS

WEST GATE DR. (2) PLAN & PROFILE STA. 5+00 TO END

NOTICE: ALTERATION OF A SEALED DRAWING WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS A VIOLATION OF THE TEXAS ENGINEERING PRACTICE ACT.





Engineering Solutions
 TIRE FIRM, INC.
 110 Mesa Park Drive, Suite 200
 El Paso, Texas 79912
 Office: (915) 852-9093
 Fax: (915) 852-5374

PROJECT NO. 2002-12004-32	DESIGNED BY: KB		
DWG FILE: EWGP	DRAWN BY: KB		
DATE: AUGUST 2021	CHECKED BY: RR		
NO.	BY	DATE	REVISION DESCRIPTION

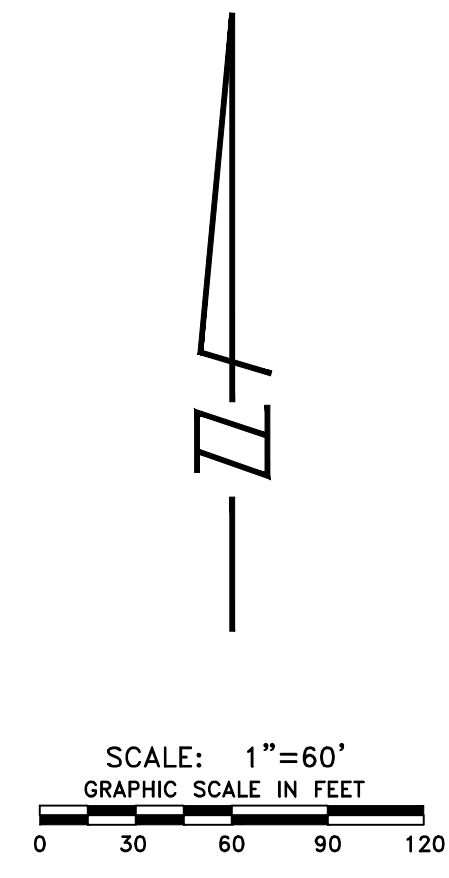
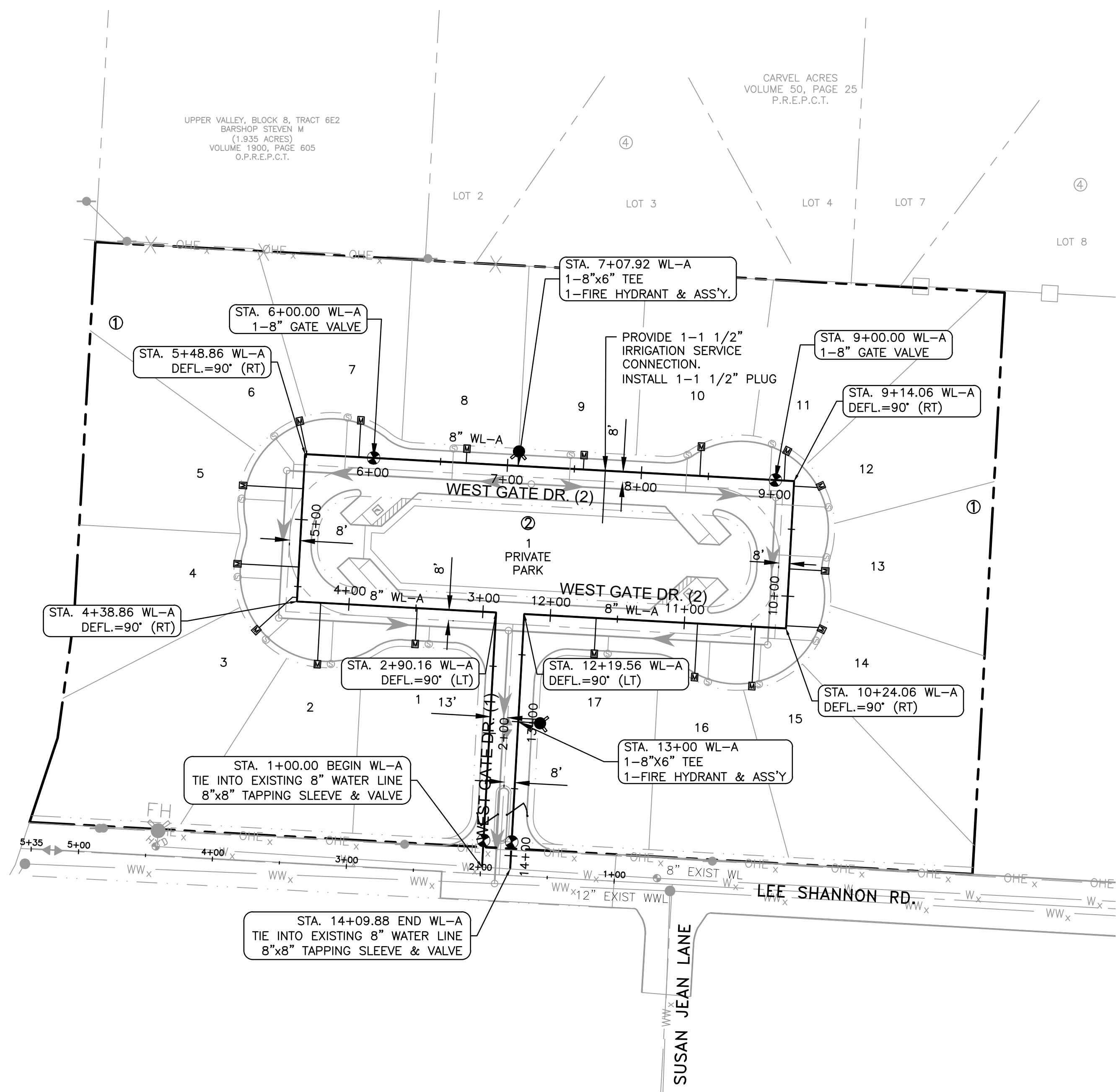
HORIZONTE RESIDENTIAL
 STREET, DRAINAGE, WATER, &
 WASTEWATER
 IMPROVEMENTS

ENTRY WAY GATE PLAN

NOTICE:
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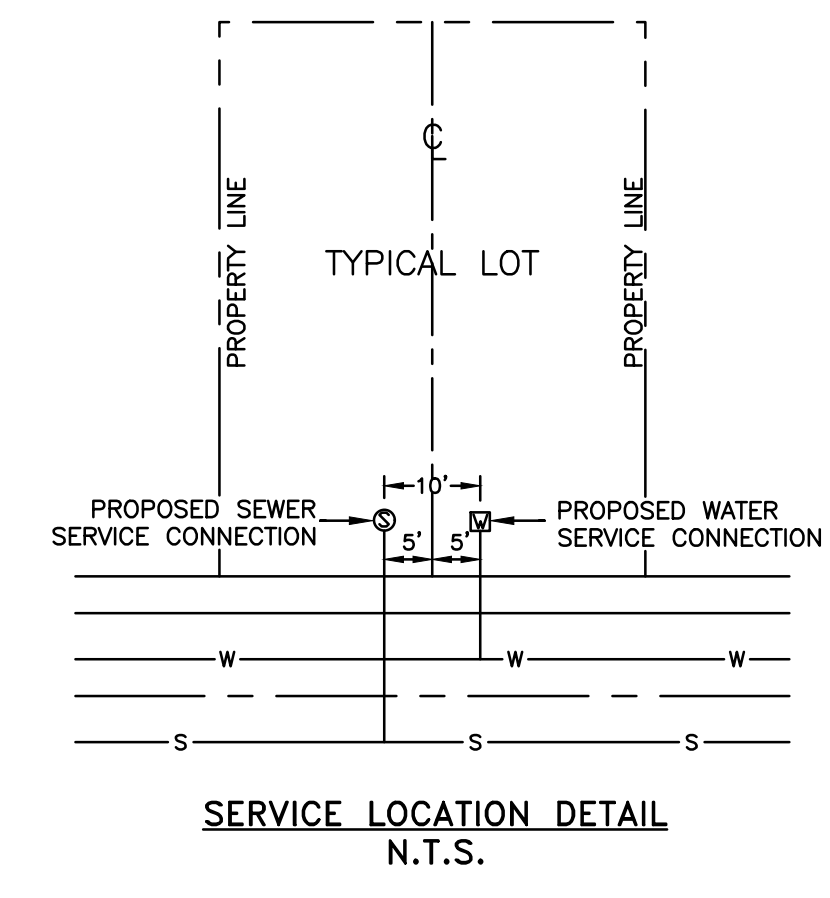
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LEGEND

	SUBDIVISION BOUNDARY LINE
	STREET CENTER LINE
	RIGHT-OF-WAY LINE
	PROPOSED WATER LINE
	PROPOSED GATE VALVE
	PROPOSED FIRE HYDRANT
	WATER SERVICE WITH METER
	WASTEWATER SERVICE WITH METER
	PROPOSED WASTEWATER LINE
	EXISTING WATER LINE
	EXISTING WASTEWATER LINE
	EXISTING OVERHEAD ELECTRIC
	EXISTING FIRE HYDRANT

- NOTES:**
- CONTACT UTILITY COMPANIES FOR EXACT LOCATION OF ANY UNDERGROUND UTILITIES IN THIS AREA BEFORE EXCAVATION.
 - INSTALL A TRENCH SAFETY SYSTEM TO PROVIDE FOR THE SAFE EXCAVATION OF ALL TRENCHES EXCEEDING A DEPTH OF FIVE (5) FEET AS PER O.S.H.A. REQUIREMENTS.
 - ALL 12" WATER LINES AND SMALLER PVC PIPE SHALL MEET THE REQUIREMENTS OF AWWA C900, CLASS 235 (DR 18).
 - ALL WATER LINE FITTINGS SHALL MEET THE REQUIREMENTS OF AWWA C153, CLASS 350, DUCTILE IRON, WITH MECHANICAL JOINTS, AND SHALL BE SIZED TO MATCH THE PVC WATER LINE SIZE.
 - ALL PVC WATER LINE JOINTS SHALL MEET THE REQUIREMENTS OF ASTM 477 AND ASTM D3139, COMPRESSION GASKET RING, INTEGRAL BELL AND SPIGOT TYPE.
 - PROVIDE FOUR (4) FEET MINIMUM COVER OVER ALL PROPOSED WATER LINES.
 - ALL CAST IRON WATER LINE FITTINGS SHALL BE CEMENT-LINED AND SEAL COATED IN ACCORDANCE WITH AWWA C-104 AND SHALL BE OUTSIDE ASPHALTIC COATED AS PER AWWA C-110.
 - CONTRACTOR SHALL VERIFY LOCATION AND DEPTH OF ALL EXISTING UTILITIES PRIOR TO INITIATING CONSTRUCTION.
 - PUBLIC WATER AND SEWER UTILITY WORK SHALL NOT BE PERFORMED BY THE CONTRACTOR UNTIL A DEVELOPMENT AGREEMENT HAS BEEN EXECUTED BETWEEN THE OWNER AND THE EPWU-PSB.
 - CONSTRUCTION OF PUBLIC WATER AND SEWER SYSTEMS, INCLUDING MATERIALS AND TESTING, SHALL CONFORM TO EPWU STANDARD SPECIFICATIONS.
 - ALL PRESSURIZED PVC PIPE SHALL BE MARKED WITH DUAL INDICATOR LINES AT THE SPIGOT END INDICATING PROPER PENETRATION WHEN THE JOINT IS ASSEMBLED OR BELL PROTECTION SYSTEM.
 - CONTRACTOR SHALL COORDINATE WITH THE CITY OF EL PASO FOR OPEN CUT PERMIT.



BENCH MARK:
VERTICAL DATUM IS BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (N.A.V.D. 88)

WARNING! BEFORE YOU DIG

COORDINATION WITH UTILITIES:

CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES PRIOR TO ANY EXCAVATION AND/OR RELOCATION OF EXISTING UTILITIES ENCOUNTERED DURING CONSTRUCTION WORK.

EL PASO ELECTRIC CO. 100 N. STANTON STREET EL PASO, TEXAS 79901 MR. RAUL GUEL, (915) 543-4108	TIME WARNER COMMUNICATIONS #20 CONCORD STREET EL PASO, TEXAS 79906 CONSTRUCTION, (915) 775-7414	TEXAS EXCAVATION SAFETY SYSTEM ANYWHERE IN TEXAS 1-800-334-8377
TEXAS GAS SERVICE 4700 POLLARD STREET EL PASO, TEXAS 79930 DISPATCH, (915) 680-8250	AT&T 11200 PELLICANO DRIVE EL PASO, TEXAS 79935 MANNY MORENO (915) 595-5107	EL PASO WATER UTILITIES 1154 HAWKINS BLVD. EL PASO, TEXAS 79925 FELIPE LOPEZ, P.E. (915) 594-5530

TRE & ASSOCIATES
Engineering Solutions
110 Mesa Park Drive, Suite 200
El Paso, Texas 79912
Office: (915) 852-9093
Fax: (915) 852-9096

DESIGNED BY: KB	PROJECT NO. 2002-12004-32		
DRAWN BY: KB	DWG FILE: WDP		
CHECKED BY: RR	DATE: AUGUST 2021		
NO.	BY	DATE	REVISION DESCRIPTION

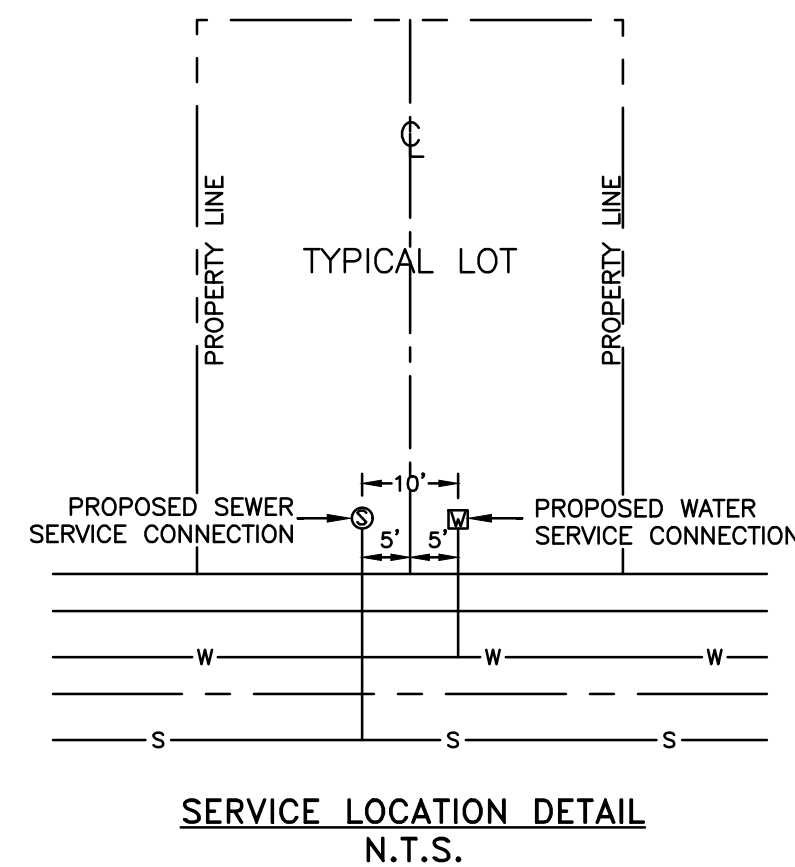
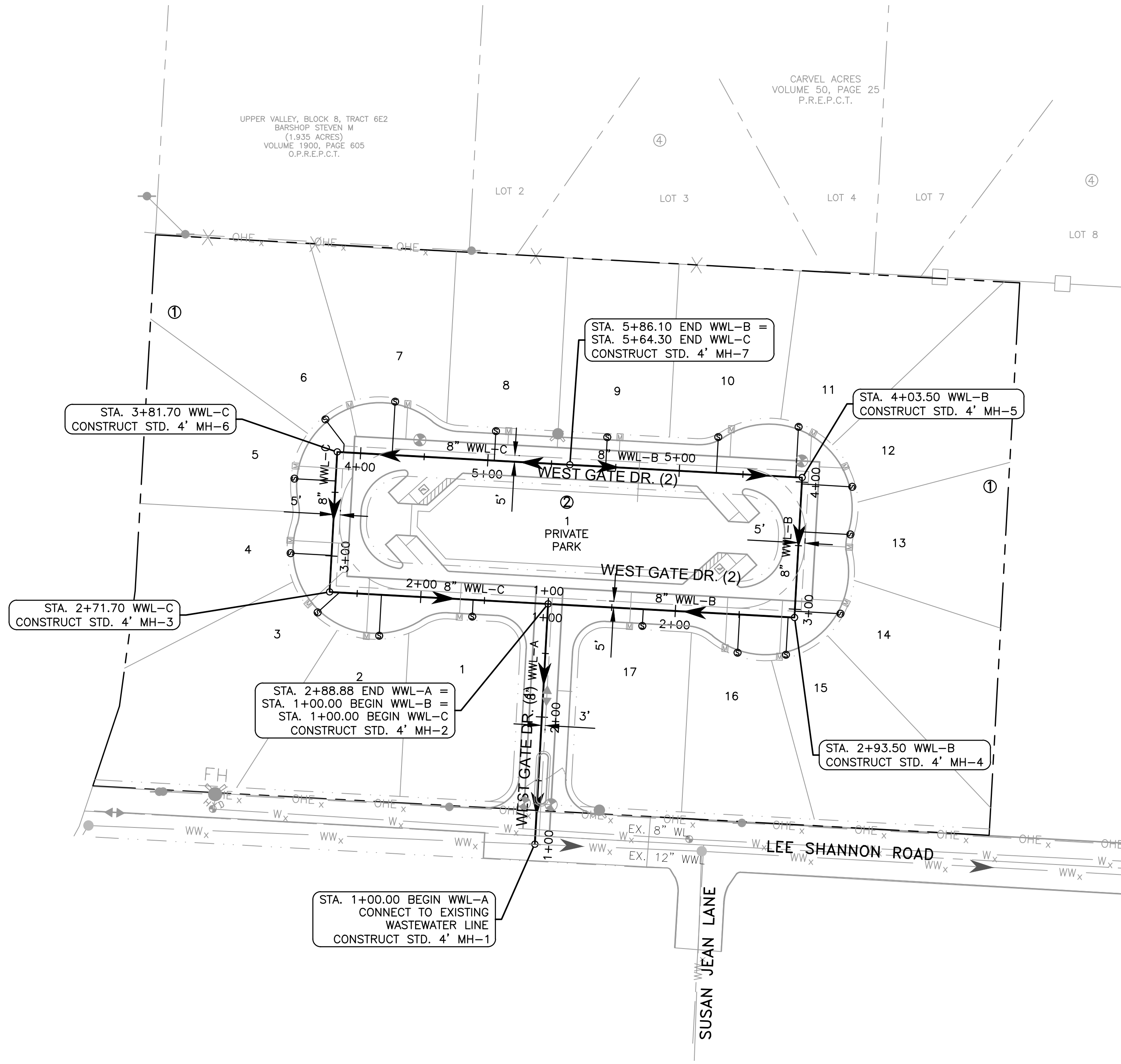
**HORIZONTE RESIDENCIAL
STREET, DRAINAGE, WATER, &
WASTEWATER
IMPROVEMENTS**

**WATER DISTRIBUTION
PLAN**

NOTICE:
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FILE: P:\2002 Punto Living, LLC\12004 - Horizonte Residential\CAD\Sheets\WWCP.dwg LAYOUT: WASTEWATER COLLECTION PLAN DATE: 8/19/2021 9:17:47 AM BY: KBARRAZA



BENCH MARK:
VERTICAL DATUM IS BASED ON THE NORTH
AMERICAN VERTICAL DATUM OF 1988
(N.A.V.D. 88)

LEGEND

- SUBDIVISION BOUNDARY LINE
- STREET CENTER LINE
- RIGHT-OF-WAY LINE
- PROPOSED WASTEWATER LINE
- PROPOSED WASTEWATER MANHOLE
- DIRECTION OF FLOW
- WASTEWATER SERVICE WITH METER
- WATER SERVICE WITH METER
- PROPOSED WATER LINE
- PROPOSED FIRE HYDRANT
- W_x EXISTING WATER LINE
- WW_x EXISTING WASTEWATER LINE
- OHE_x EXISTING OVERHEAD ELECTRIC
- FH EXISTING FIRE HYDRANT

NOTES:

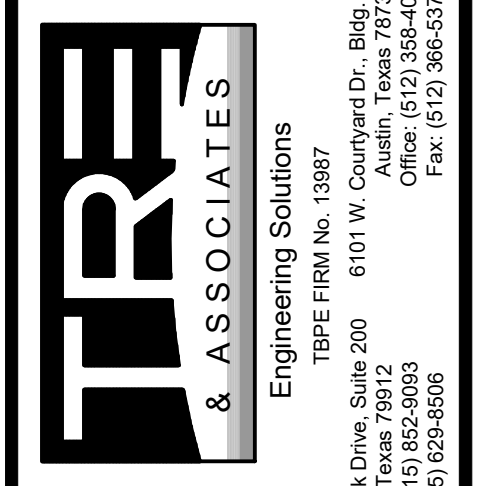
1. CONTACT UTILITY COMPANIES FOR EXACT LOCATION OF UNDERGROUND UTILITIES IN THIS AREA BEFORE EXCAVATION.
2. INSTALL A TRENCH SAFETY SYSTEM TO PROVIDE FOR THE SAFE EXCAVATION OF ALL TRENCHES EXCEEDING A DEPTH OF FIVE (5) FEET AS PER O.S.H.A. REQUIREMENTS.
3. ALL SANITARY SEWER PVC PIPE SHALL MEET REQUIREMENTS OF ASTM D3034, SDR 35, UNLESS OTHERWISE NOTED.
4. PROVIDE MANHOLE ADAPTER WHERE PVC SEWER LINE CONNECTS TO MANHOLE. REFER TO DETAIL 376.
5. INSTALL 4" DIAMETER SEWER SERVICE LATERALS TO EACH LOT AS INDICATED. SERVICE LATERALS SHALL HAVE A MINIMUM SLOPE OF 2.0%, UNLESS OTHERWISE SHOWN AND SHALL TERMINATE 6" BEYOND BACK OF CURB AS SHOWN ON DETAIL 391.
6. MAINTAIN A MINIMUM HORIZONTAL SEPARATION DISTANCE OF 10" BETWEEN ALL WATER & SEWER LINES. VARIATIONS TO THIS MINIMUM MUST BE IN STRICT ACCORDANCE WITH TOEQ REQUIREMENTS.
7. CONCENTRIC CONE TO BE USED FOR ALL MANHOLES.
8. CONTRACTOR SHALL COORDINATE WITH THE CITY OF EL PASO FOR OPEN CUT PERMIT.

WARNING! BEFORE YOU DIG

COORDINATION WITH UTILITIES:

CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES PRIOR TO ANY EXCAVATION AND/OR RELOCATION OF EXISTING UTILITIES ENCOUNTERED DURING CONSTRUCTION WORK.

- | | | |
|--------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|
| EL PASO ELECTRIC CO.
100 N. STANTON STREET
EL PASO, TEXAS 79901
MR. RAUL GUEL, (915) 543-4108 | TIME WARNER COMMUNICATIONS
#20 CONCORD STREET
EL PASO, TEXAS 79906
CONSTRUCTION, (915) 775-7414 | TEXAS EXCAVATION SAFETY SYSTEM
ANYWHERE IN TEXAS
1-800-334-8377 |
| TEXAS GAS SERVICE
4700 POLLARD STREET
EL PASO, TEXAS 79930
DISPATCH, (915) 680-8250 | AT&T
11200 PELLICANO DRIVE
EL PASO, TEXAS 79935
MANNY MORENO
(915) 595-5107 | EL PASO WATER UTILITIES
1154 HAWKINS BLVD.
EL PASO, TEXAS 79925
FELIPE LOPEZ, P.E.
(915) 594-5530 |

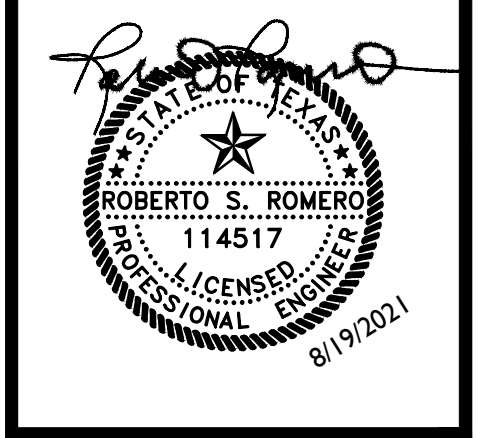


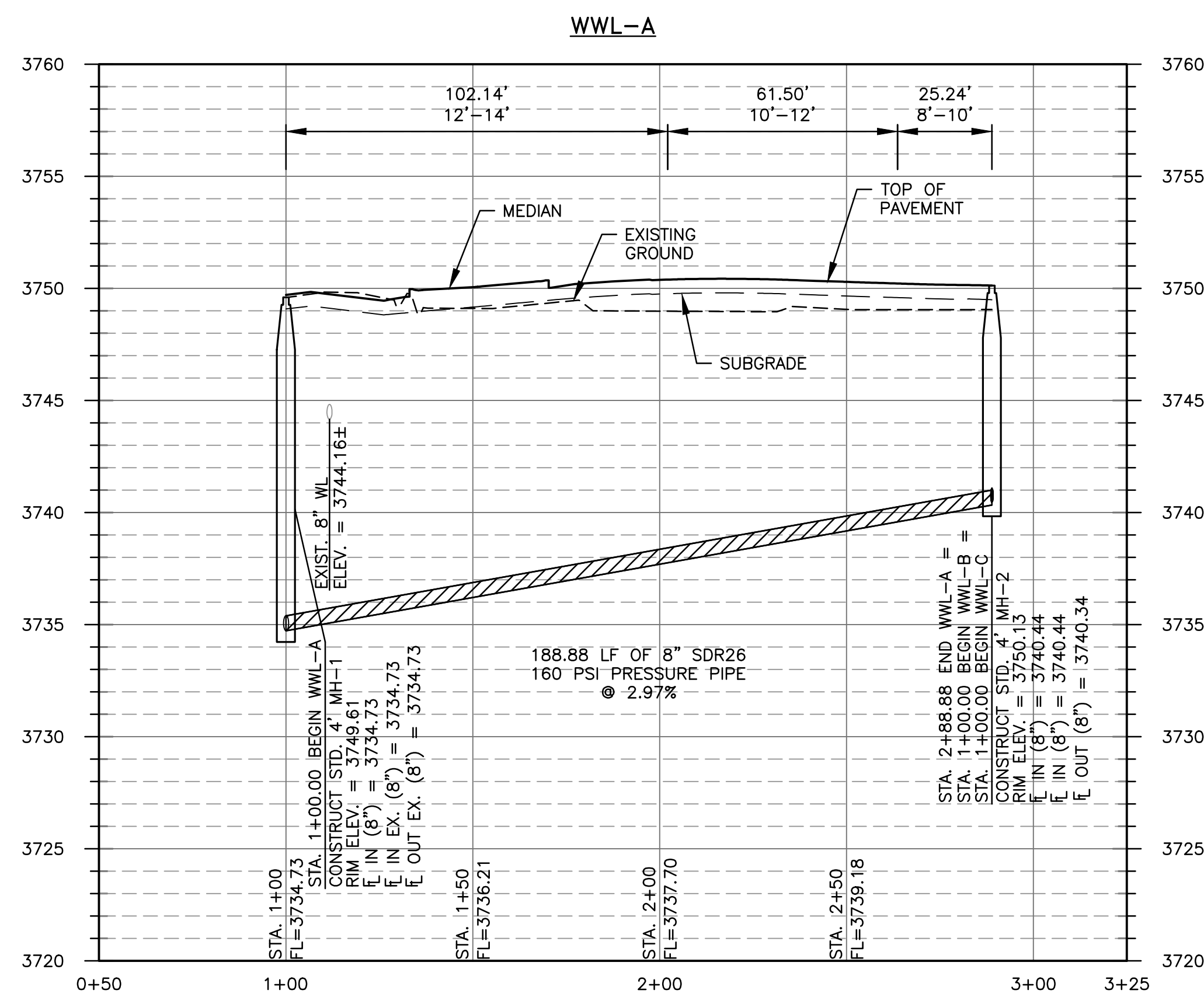
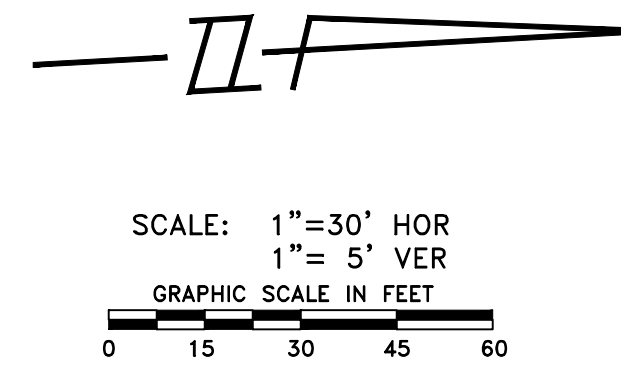
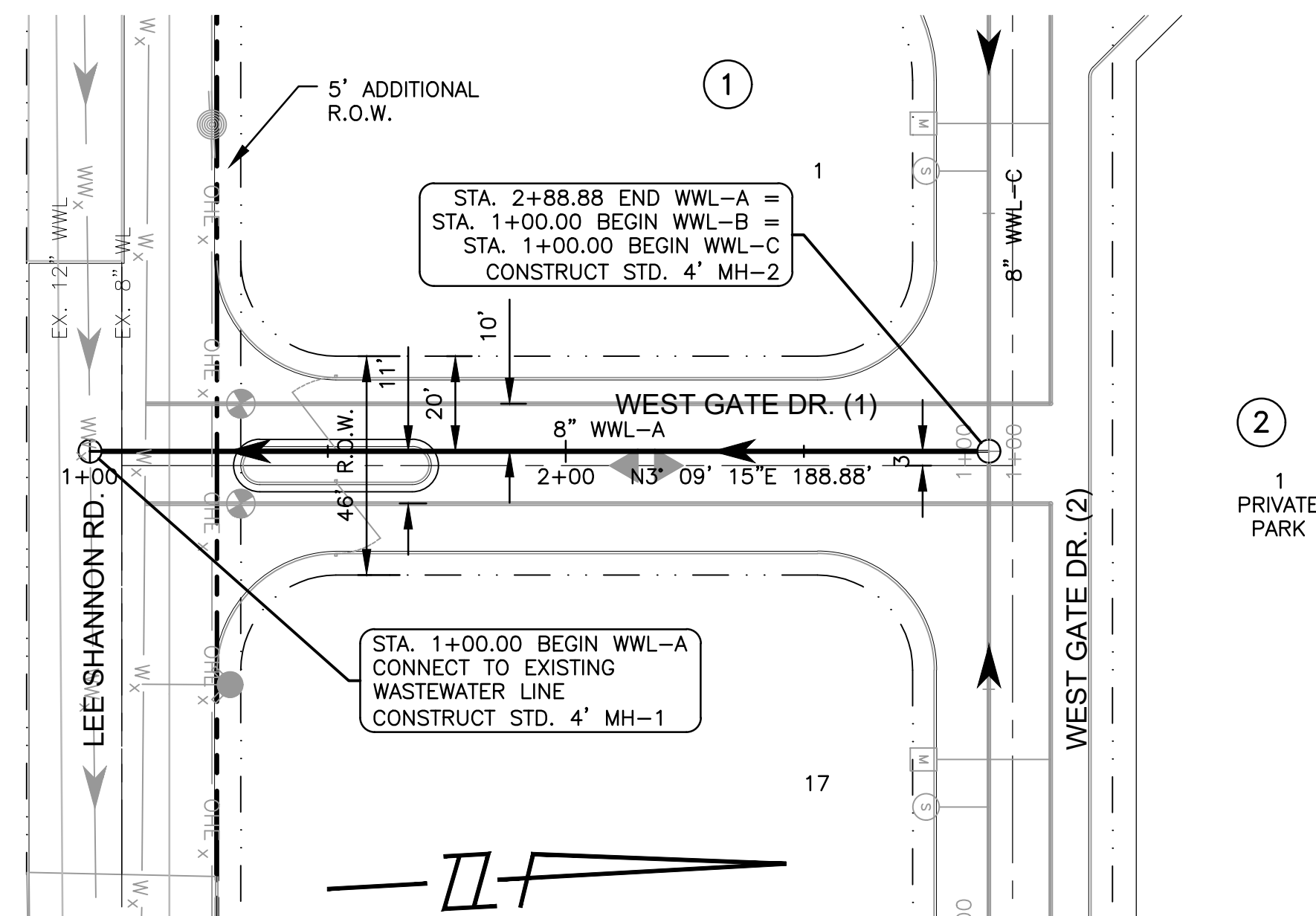
PROJECT NO. 2002-12004-32	DESIGNED BY: KB		
DWG FILE: WWCP	DRAWN BY: KB		
DATE: AUGUST 2021	CHECKED BY: RR		
NO.	BY	DATE	REVISION DESCRIPTION

**HORIZONTE RESIDENTIAL
STREET, DRAINAGE, WATER, &
WASTEWATER
IMPROVEMENTS**

**WASTEWATER
COLLECTION PLAN**

NOTICE:
ALTERATION OF A SEALED
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ENGINEERING PRACTICE ACT.





LEGEND

- SUBDIVISION BOUNDARY LINE
- STREET CENTER LINE
- RIGHT-OF-WAY LINE
- PROPOSED WASTEWATER LINE
- PROPOSED WASTEWATER MANHOLE
- DIRECTION OF FLOW
- ⊙ WASTEWATER SERVICE WITH METER
- ⊙ WATER SERVICE WITH METER
- PROPOSED WATER LINE
- PROPOSED FIRE HYDRANT
- W_x EXISTING WATER LINE
- WW_x EXISTING WASTEWATER LINE
- OHE_x EXISTING OVERHEAD ELECTRIC
- ⊙ EXISTING FIRE HYDRANT

NOTES:

1. CONTACT UTILITY COMPANIES FOR EXACT LOCATION OF UNDERGROUND UTILITIES IN THIS AREA BEFORE EXCAVATION.
2. INSTALL A TRENCH SAFETY SYSTEM TO PROVIDE FOR THE SAFE EXCAVATION OF ALL TRENCHES EXCEEDING A DEPTH OF FIVE (5) FEET AS PER O.S.H.A. REQUIREMENTS.
3. ALL SANITARY SEWER PVC PIPE SHALL MEET REQUIREMENTS OF ASTM D3034, SDR 35, UNLESS OTHERWISE NOTED.
4. PROVIDE MANHOLE ADAPTER WHERE PVC SEWER LINE CONNECTS TO MANHOLE. REFER TO DETAIL 376.
5. INSTALL 4" DIAMETER SEWER SERVICE LATERALS TO EACH LOT AS INDICATED. SERVICE LATERALS SHALL HAVE A MINIMUM SLOPE OF 2.0%, UNLESS OTHERWISE SHOWN AND SHALL TERMINATE 6" BEYOND BACK OF CURB AS SHOWN ON DETAIL 391.
6. MAINTAIN A MINIMUM HORIZONTAL SEPARATION DISTANCE OF 10' BETWEEN ALL WATER & SEWER LINES. VARIATIONS TO THIS MINIMUM MUST BE IN STRICT ACCORDANCE WITH TCEQ REQUIREMENTS.
7. CONCENTRIC CONE TO BE USED FOR ALL MANHOLES.
8. CONTRACTOR SHALL COORDINATE WITH THE CITY OF EL PASO FOR OPEN CUT PERMIT.

WARNING! BEFORE YOU DIG

COORDINATION WITH UTILITIES:

CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES PRIOR TO ANY EXCAVATION AND/OR RELOCATION OF EXISTING UTILITIES ENCOUNTERED DURING CONSTRUCTION WORK.

EL PASO ELECTRIC CO. 100 N. STANTON STREET EL PASO, TEXAS 79901 MR. RAUL GUEL, (915) 543-4108	TIME WARNER COMMUNICATIONS #20 CONCORD STREET EL PASO, TEXAS 79906 CONSTRUCTION, (915) 775-7414	TEXAS EXCAVATION SAFETY SYSTEM ANYWHERE IN TEXAS 1-800-334-8377
TEXAS GAS SERVICE 4700 POLLARD STREET EL PASO, TEXAS 79930 DISPATCH, (915) 680-8250	AT&T 11200 PELLICANO DRIVE EL PASO, TEXAS 79935 MANNY MORENO (915) 595-5107	EL PASO WATER UTILITIES 1154 HAWKINS BLVD. EL PASO, TEXAS 79925 FELIPE LOPEZ, P.E. (915) 594-5530



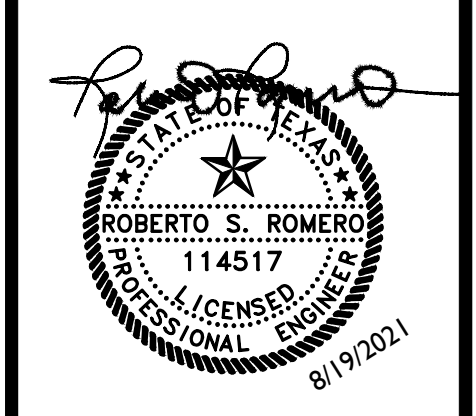
Engineering Solutions
 TREC FIRM NO. 19397
 110 Mesa Park Drive, Suite 200 6101 W. Courtyard Dr., Bldg. 1, Suite 100
 El Paso, Texas 79912 Austin, Texas 78730
 Office: (915) 852-9093
 Fax: (915) 852-9093

PROJECT NO. 2002-12004-32	DESIGNED BY: KB		
DWG FILE: WWL-A-D	DRAWN BY: KB		
DATE: AUGUST 2021	CHECKED BY: RR		
NO.	BY	DATE	REVISION DESCRIPTION

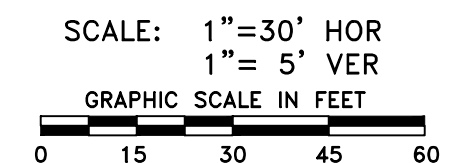
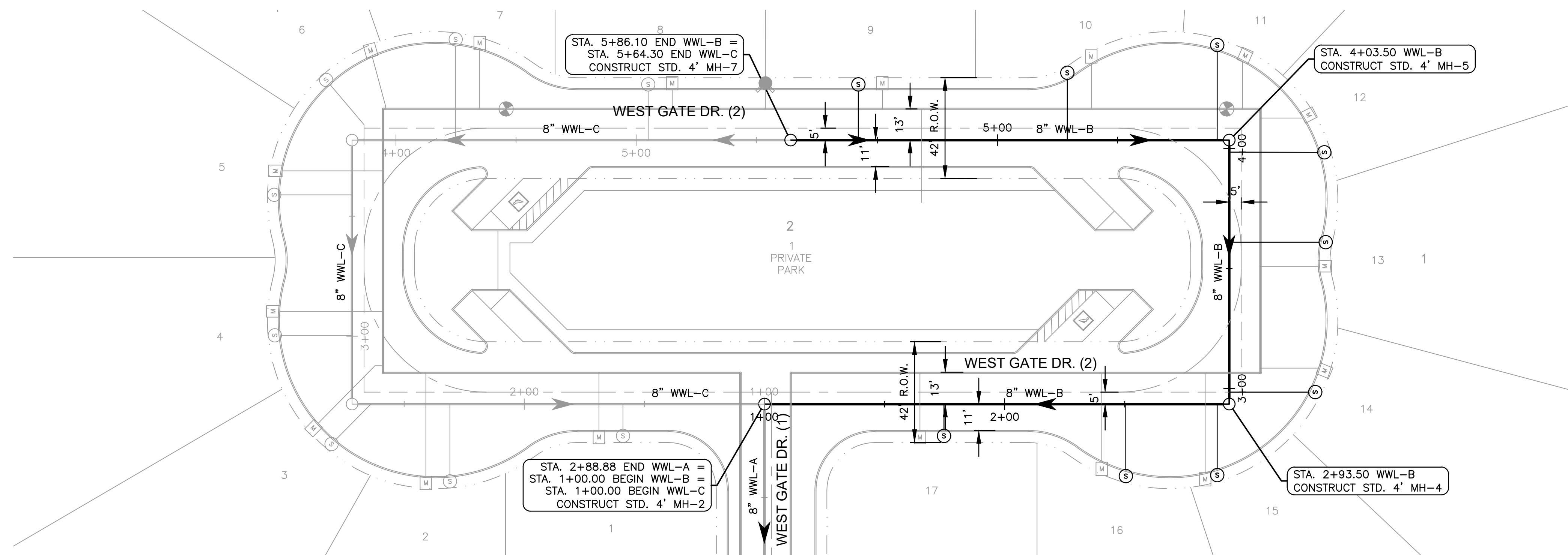
**HORIZONTE RESIDENCIAL
 STREET, DRAINAGE, WATER, &
 WASTEWATER
 IMPROVEMENTS**

**WWL-A PLAN &
 PROFILE STA.
 1+00.00 TO END**

NOTICE:
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LEGEND

- SUBDIVISION BOUNDARY LINE
- STREET CENTER LINE
- RIGHT-OF-WAY LINE
- PROPOSED WASTEWATER LINE
- PROPOSED WASTEWATER MANHOLE
- DIRECTION OF FLOW
- WASTEWATER SERVICE WITH METER
- WATER SERVICE WITH METER
- PROPOSED FIRE HYDRANT
- PROPOSED WATER LINE
- EXISTING WATER LINE
- EXISTING WASTEWATER LINE

NOTES:

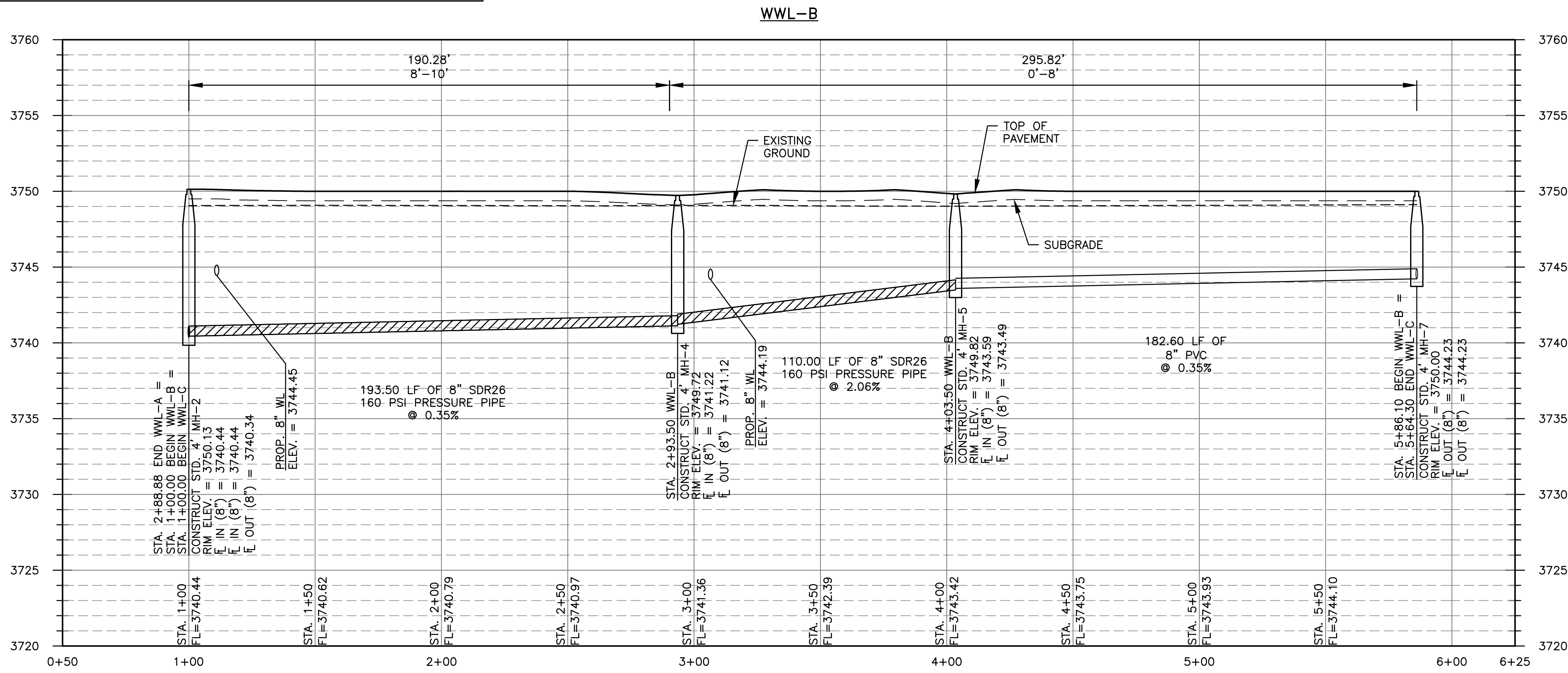
1. CONTACT UTILITY COMPANIES FOR EXACT LOCATION OF UNDERGROUND UTILITIES IN THIS AREA BEFORE EXCAVATION.
2. INSTALL A TRENCH SAFETY SYSTEM TO PROVIDE FOR THE SAFE EXCAVATION OF ALL TRENCHES EXCEEDING A DEPTH OF FIVE (5) FEET AS PER O.S.H.A. REQUIREMENTS.
3. ALL SANITARY SEWER PVC PIPE SHALL MEET REQUIREMENTS OF ASTM D3034, SDR 35, UNLESS OTHERWISE NOTED.
4. PROVIDE MANHOLE ADAPTER WHERE PVC SEWER LINE CONNECTS TO MANHOLE. REFER TO DETAIL 376.
5. INSTALL 4" DIAMETER SEWER SERVICE LATERALS TO EACH LOT AS INDICATED. SERVICE LATERALS SHALL HAVE A MINIMUM SLOPE OF 2.0%, UNLESS OTHERWISE SHOWN AND SHALL TERMINATE 6" BEYOND BACK OF CURB AS SHOWN ON DETAIL 391.
6. MAINTAIN A MINIMUM HORIZONTAL SEPARATION DISTANCE OF 10' BETWEEN ALL WATER & SEWER LINES. VARIATIONS TO THIS MINIMUM MUST BE IN STRICT ACCORDANCE WITH TCEQ REQUIREMENTS.
7. CONCENTRIC CONE TO BE USED FOR ALL MANHOLES.

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<p>EL PASO ELECTRIC CO. 100 N. STANTON STREET EL PASO, TEXAS 79901 MR. RAUL GUEL, (915) 543-4108</p>	<p>TIME WARNER COMMUNICATIONS #20 CONCORD STREET EL PASO, TEXAS 79906 MANNY MORENO CONSTRUCTION, (915) 775-7414</p>	<p>TEXAS EXCAVATION SAFETY SYSTEM ANYWHERE IN TEXAS 1-800-334-8377</p>
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TRE & ASSOCIATES
Engineering Solutions
110 Mesa Park Drive, Suite 200
El Paso, Texas 79912
Office: (915) 852-9093
Fax: (915) 852-5374

PROJECT NO. 2002-12004-32	DESIGNED BY: KB	DRAWN BY: KB	CHECKED BY: RR
DWG FILE: WWL-B	DATE: AUGUST 2021	NO.	BY
REVISION DESCRIPTION			

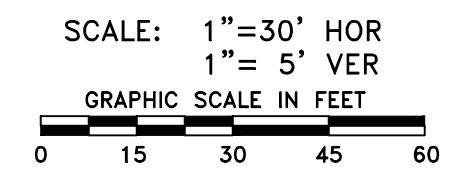
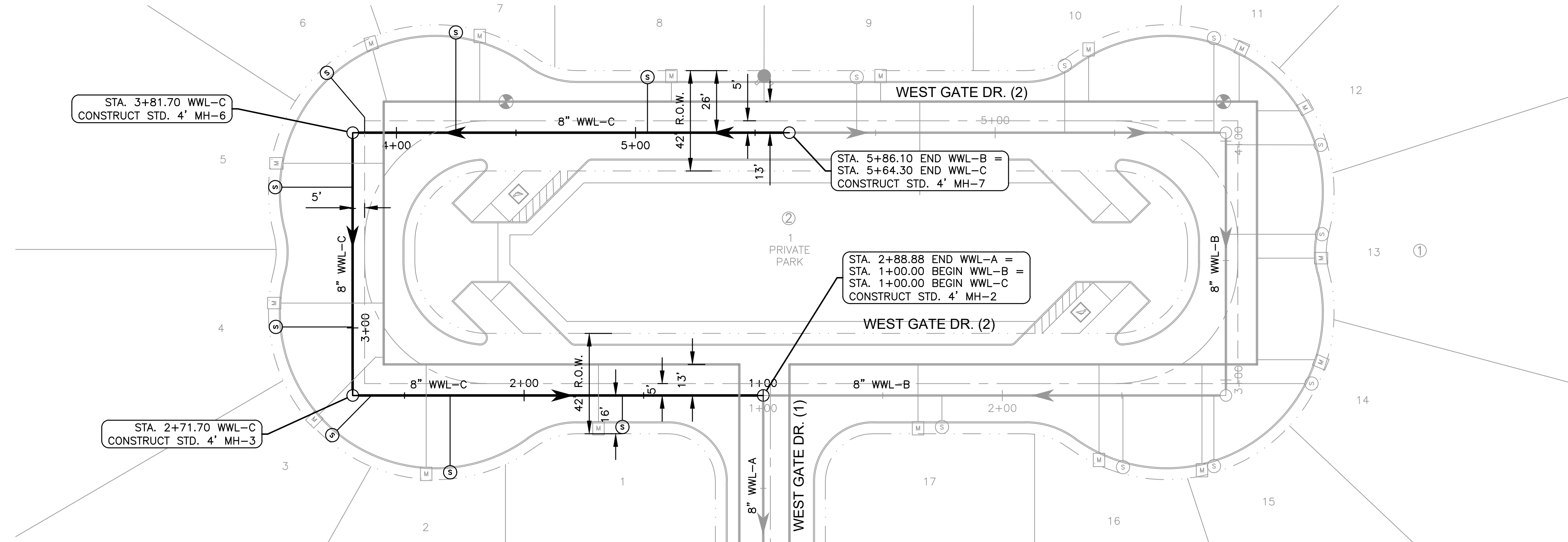
**HORIZONTE RESIDENTIAL
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IMPROVEMENTS**

**WWL-B PLAN & PROFILE
STA. 1+00.00 TO END**

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WARNING! BEFORE YOU DIG

COORDINATION WITH UTILITIES:

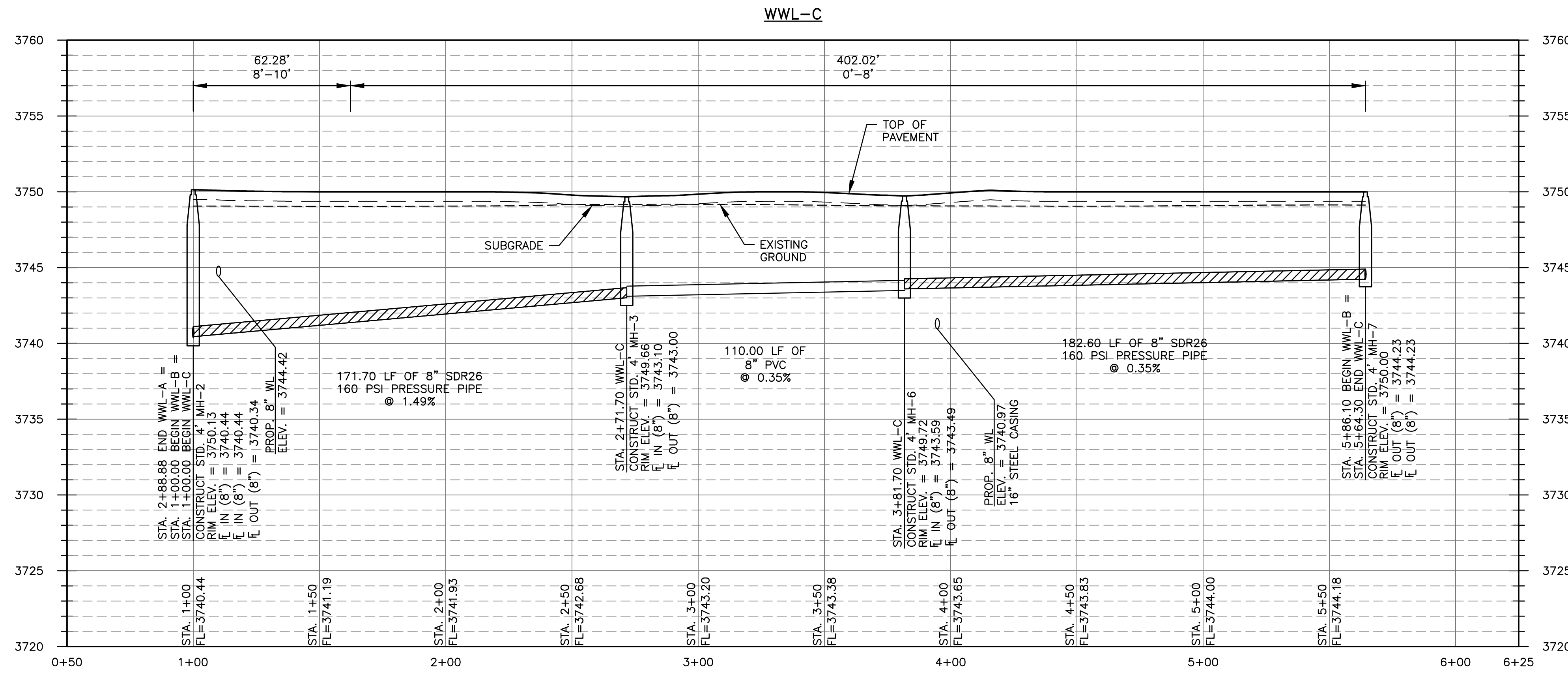
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LEGEND

	SUBDIVISION BOUNDARY LINE
	STREET CENTER LINE
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	PROPOSED WASTEWATER LINE
	PROPOSED WASTEWATER MANHOLE
	DIRECTION OF FLOW
	WASTEWATER SERVICE WITH METER
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	PROPOSED FIRE HYDRANT
	PROPOSED WATER LINE
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- NOTES:**
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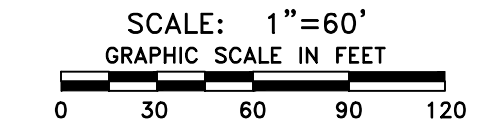
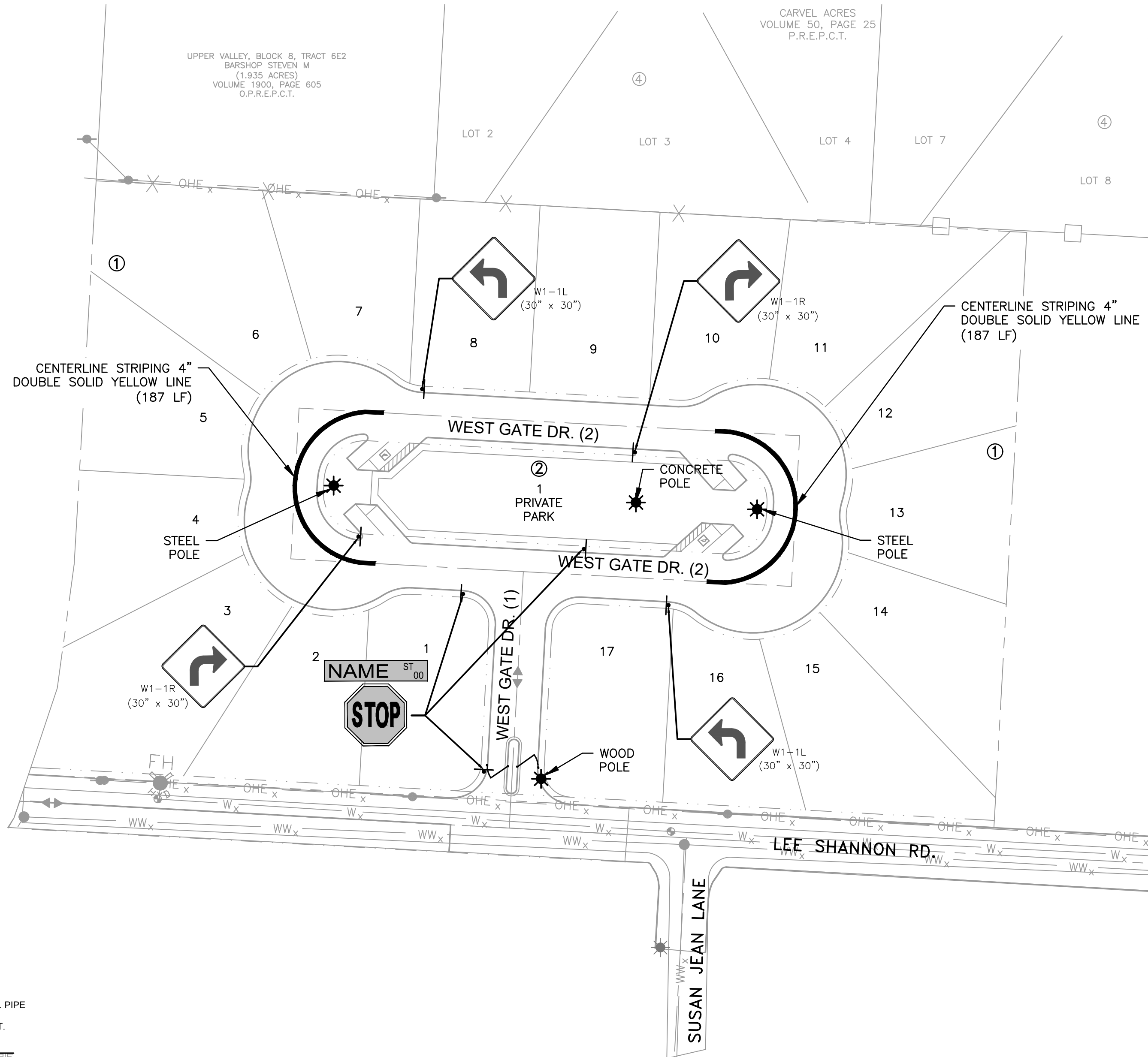
PROJECT NO. 2002-12004-32	DESIGNED BY: KB		
DWG FILE: WWL-C	DRAWN BY: KB		
DATE: AUGUST 2021	CHECKED BY: RR		
NO.	BY	DATE	REVISION DESCRIPTION

**HORIZONTE RESIDENCIAL
STREET, DRAINAGE, WATER, &
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**WWL-C PLAN & PROFILE
STA. 1+00.00 TO END**

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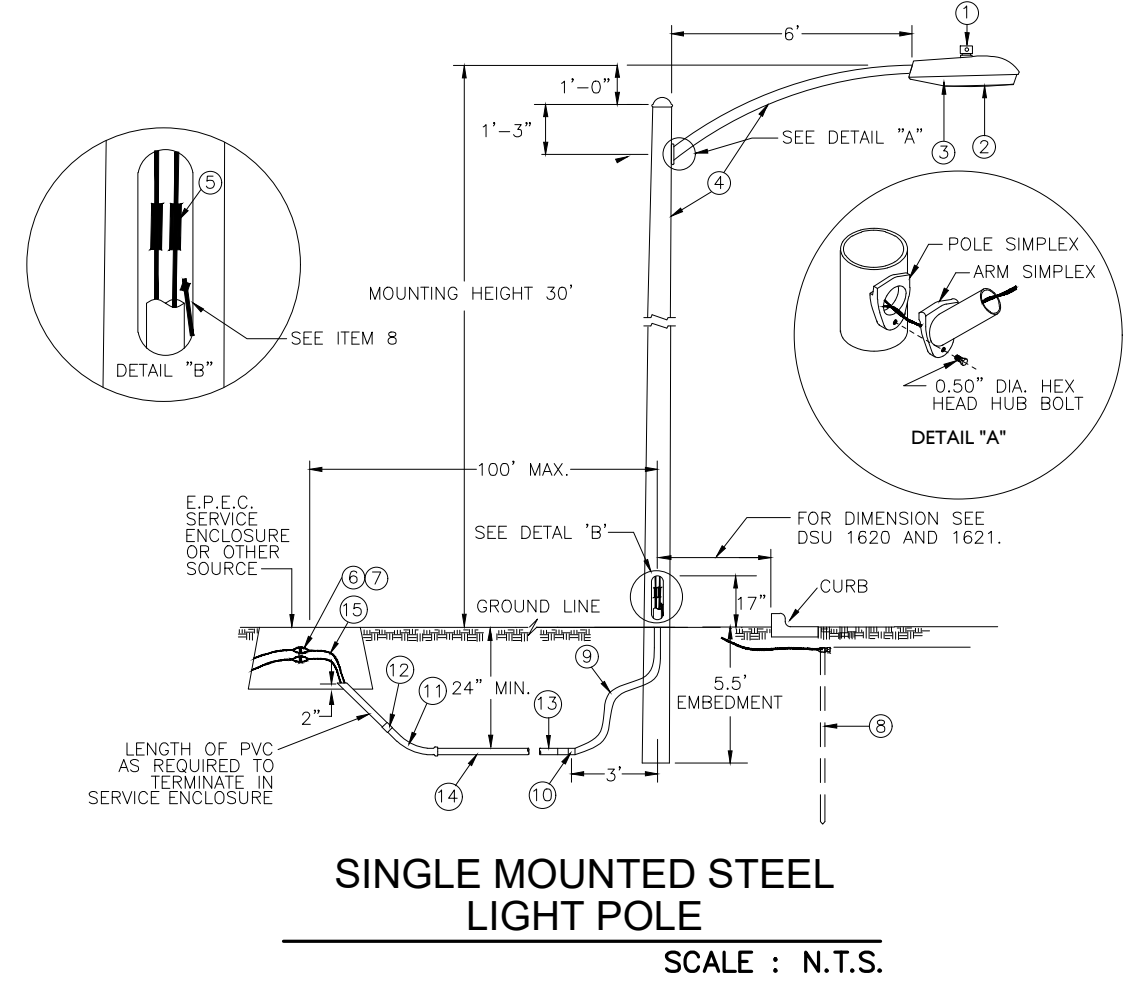


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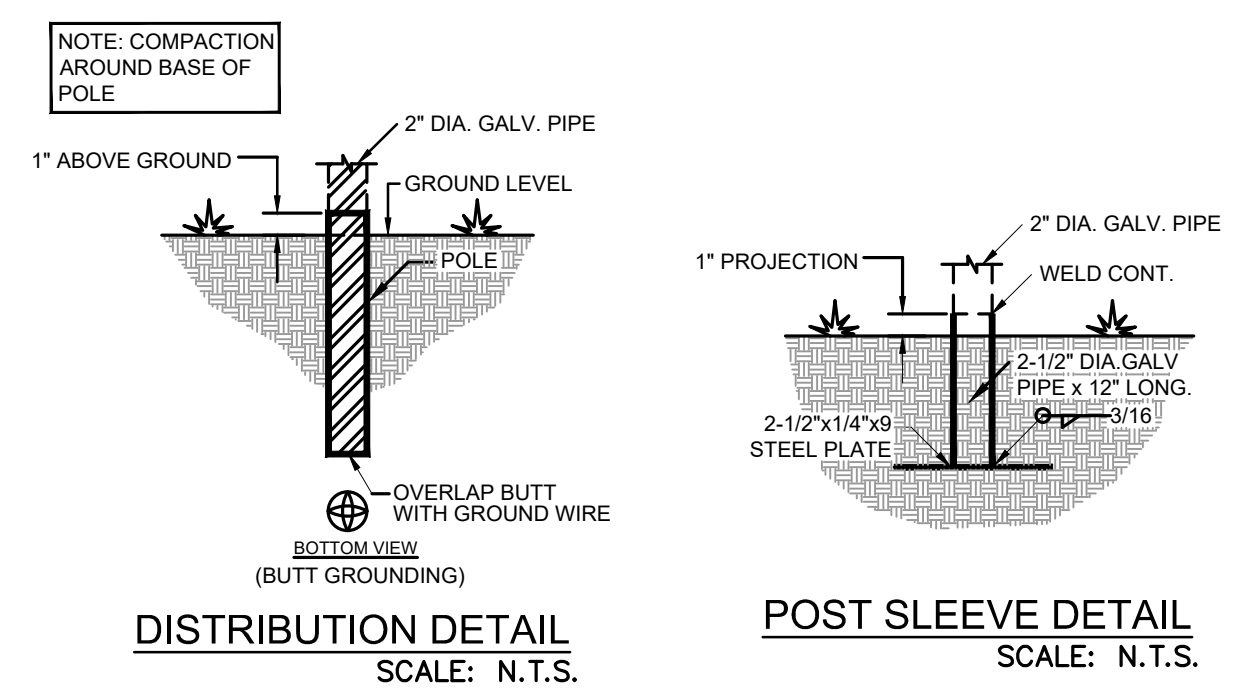
- EXISTING RESIDENTIAL STREET LIGHT LOCATION
- PROPOSED RESIDENTIAL STREET LIGHT LOCATION
- PROPOSED TRAFFIC SIGN LOCATION 30"
- EXISTING WATER LINE
- EXISTING WASTEWATER LINE
- EXISTING OVERHEAD ELECTRIC
- EXISTING FIRE HYDRANT

ITEM No.	DESCRIPTION	STOCK/DSU No.	Qty.	C/U Code	FEATURE
1	PHOTOCELL, 240V - SEE NOTE 1	21-225	1		ST. LT. 100W HPS FOR STEEL POLE
2	LED LAMP, 65W	21-085	1	LCOBRAHD	
3	LUMINAIRE, 65W LED	21-335	1		
4	34'-6" DIRECT EMB. ST POLE WITH 6' MAST ARM	08-310	1	L345TLUG	
5	BUTT SPURCE, # 12-# 10	05-140	2	ESLV1210	
6	FUSE IGA	21-240	2	LFUS10A	STEEL DIRECT BURIED ST. LT. POLE
7	FUSEHOLDER - 30A-SUBMERSIBLE	21-246	2	LFUSEHOLDERSUB	
8	5/8" x 10" CU BONDED GROUND ROD	08-626	1		
	TRANSFORMER GROUND CLAMP	04-100	1	PORNSTL	
	# 4 BARE COPPER WELD	12-106	6'		
9	1" PVC FLEX CONDUIT	21-527	6'	LPVCFX1	
10	1" PVC FLEX CONDUIT FITTING	21-214	1	LPVCFIT1	
11	1" PVC 45 DEGREE ELBOW	17-298	1	DEL451	
12	1" PVC COUPLING	17-296	1	DPLG1	
13	1" PVC FEMALE ADAPTER	17-295	1	DFADAPT1	
14	1" PVC CONDUIT	17-299	1	DPVCT	
15	CABLE COPPER, #12, SOLID, 600V, BLUE	13-702	1	LC#12CU	LTOROUT#12 CU

NOTES:
 1 MOUNT SO THAT PHOTO CELL IS FACING NORTH.
 2 INSTALLATION MUST COMPLY WITH LOCAL CODE REQUIREMENTS.
 3 FOR ANY CLARIFICATION, EXCEPTIONS OR QUESTIONS REGARDING THIS STANDARD, CALL THE EL PASO ELECTRIC COMPANY DISTRIBUTION DESIGN DEPARTMENT.
 4 ON STREETS WHERE SIDEWALK IS ADJACENT TO CURB, STREET LIGHT POLE SHALL BE INSTALLED IN THE SIDEWALK NEXT TO PROPERTY LINE. 36 INCHES REQUIRED FROM BACK OF CURB TO COMPLY WITH AMERICAN DISABILITY'S ACT AND LOCAL CODES.



SINGLE MOUNTED STEEL LIGHT POLE
SCALE : N.T.S.

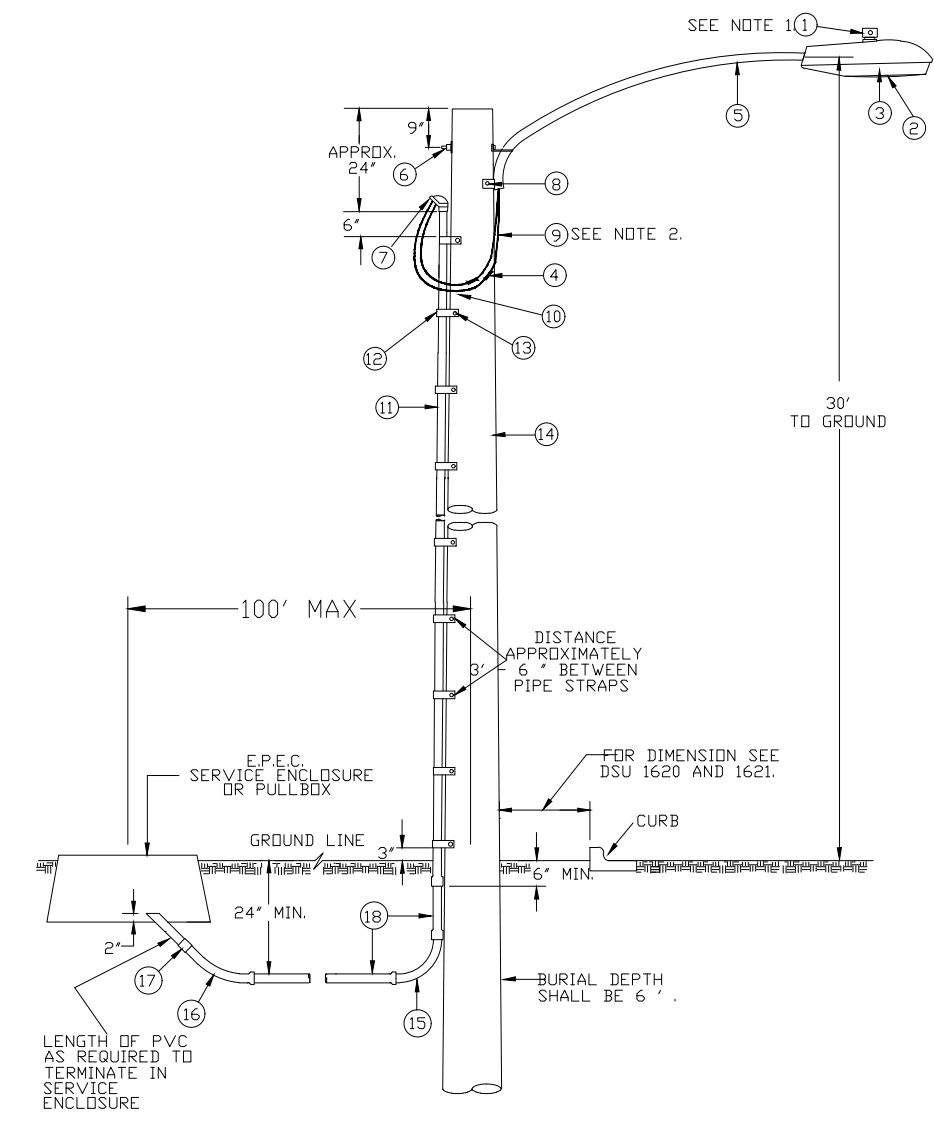


DISTRIBUTION DETAIL
SCALE: N.T.S.

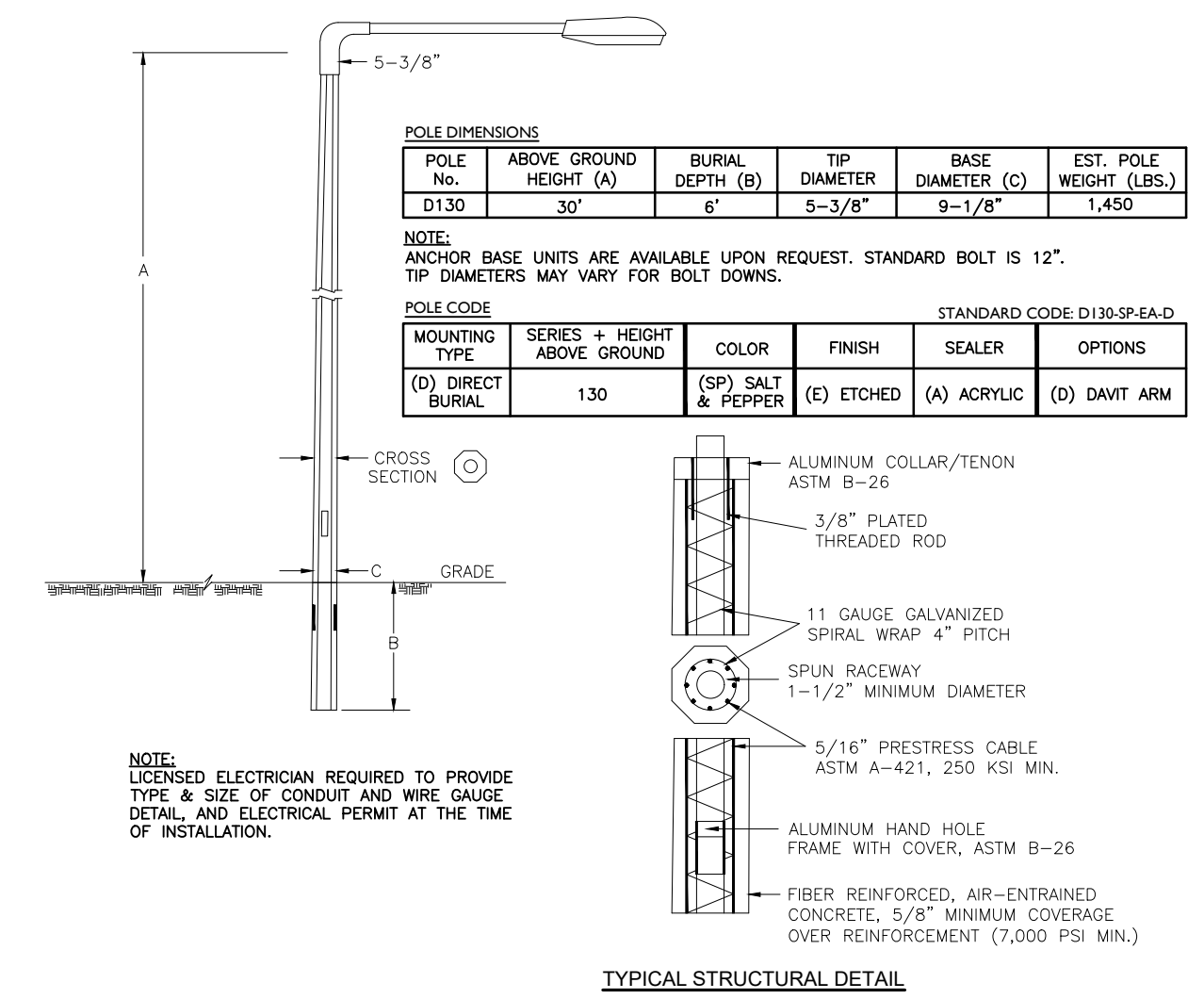
POST SLEEVE DETAIL
SCALE: N.T.S.

ITEM No.	DESCRIPTION	STOCK/DSU No.	Qty.	C/U Code	MACRO Code
1	PHOTO CELL, 240V - SEE NOTE 1	21-225	1		
2	LED LAMP, 65W	21-085	1	LCOBRAHD	
3	LUMINAIRE, 65W L.E.D.	21-335	1		
4	SLEEVES, #12-10	05-140	2		
5	MAST ARM, 6' x 1 1/4"	21-200	1	LBRKT1*6	
6	MACHINE BOLT, 5/8" x 12"	02-470	1		
7	SQUARE GALV WASHER, 3/4" x 2 1/4"	02-760	1	LMB5/812	
8	COIL SPRING WASHER, 5/8"	02-786	1		
9	LOCK NUT, 5/8"	02-705	1		
10	SERVICE ENTRANCE CAP FOR 1" PVC CONDUIT	17-281	1	LSVCCAP1	
11	LAG BOLT, 3/8" x 3"	02-343	2	LLAG38*3	LCOBRAUG
12	CABLE, #10, 2 CONDUCTOR, 600V, BLUE	13-600	8'	L2C#10S	
13	COPPER CABLE, #12, 19 SOLID, 600V, BLUE	13-702	60'	LC#12CU	
14	SCHEDULE 80 1" PVC CONDUIT	17-280	30'	LSC#H801	
15	PIPE STRAP FOR 1" PVC CONDUIT, 2-HOLE	17-283	9	LPVCSTRP	
16	NAIL, STAINLESS STEEL SCREW 2.5 IN.	14-427	25#	LNAL14*2	
17	POLE, 35 FT. - CLASS 4	09-035	1	L384UG	
18	1" PVC 90 DEGREE ELBOW	17-297	1	LEL901	
19	1" PVC 45 DEGREE ELBOW	17-298	1	LEL451	
20	1" PVC COUPLING	17-296	1	LCPLG1	
21	1" PVC CONDUIT	17-299	AS REQ	LPVC1	

NOTES:
 1 MOUNT SO THAT PHOTO CELL IS FACING NORTH
 2 ITEM #9 SHALL NOT BE SPLICED INSIDE ITEM #5
 3 INSTALLATION MUST COMPLY WITH LOCAL CODE REQUIREMENTS.
 4 FOR ANY CLARIFICATION, EXCEPTIONS OR QUESTIONS REGARDING THIS STANDARD, CALL THE EL PASO ELECTRIC COMPANY DISTRIBUTION DESIGN DEPARTMENT.
 5 ON STREETS WHERE SIDEWALK IS ADJACENT TO CURB, STREET LIGHT POLE SHALL BE INSTALLED IN THE SIDEWALK NEXT TO PROPERTY LINE. 36 INCHES REQUIRED FROM BACK OF CURVE TO COMPLY WITH AMERICANS WITH DISABILITIES ACT AND LOCAL CODES.



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



CONCRETE LIGHT POLE
SCALE : N.T.S.

TRE & ASSOCIATES
 Engineering Solutions
 110 Mesa Park Drive, Suite 200
 El Paso, Texas 79912
 Office: (915) 852-9093
 Fax: (915) 852-5374

PROJECT NO.	DESIGNED BY:		
2002-12004-32	KB		
DWG FILE ILLUM	DRAWN BY:		
	KB		
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AUGUST 2021	RR		
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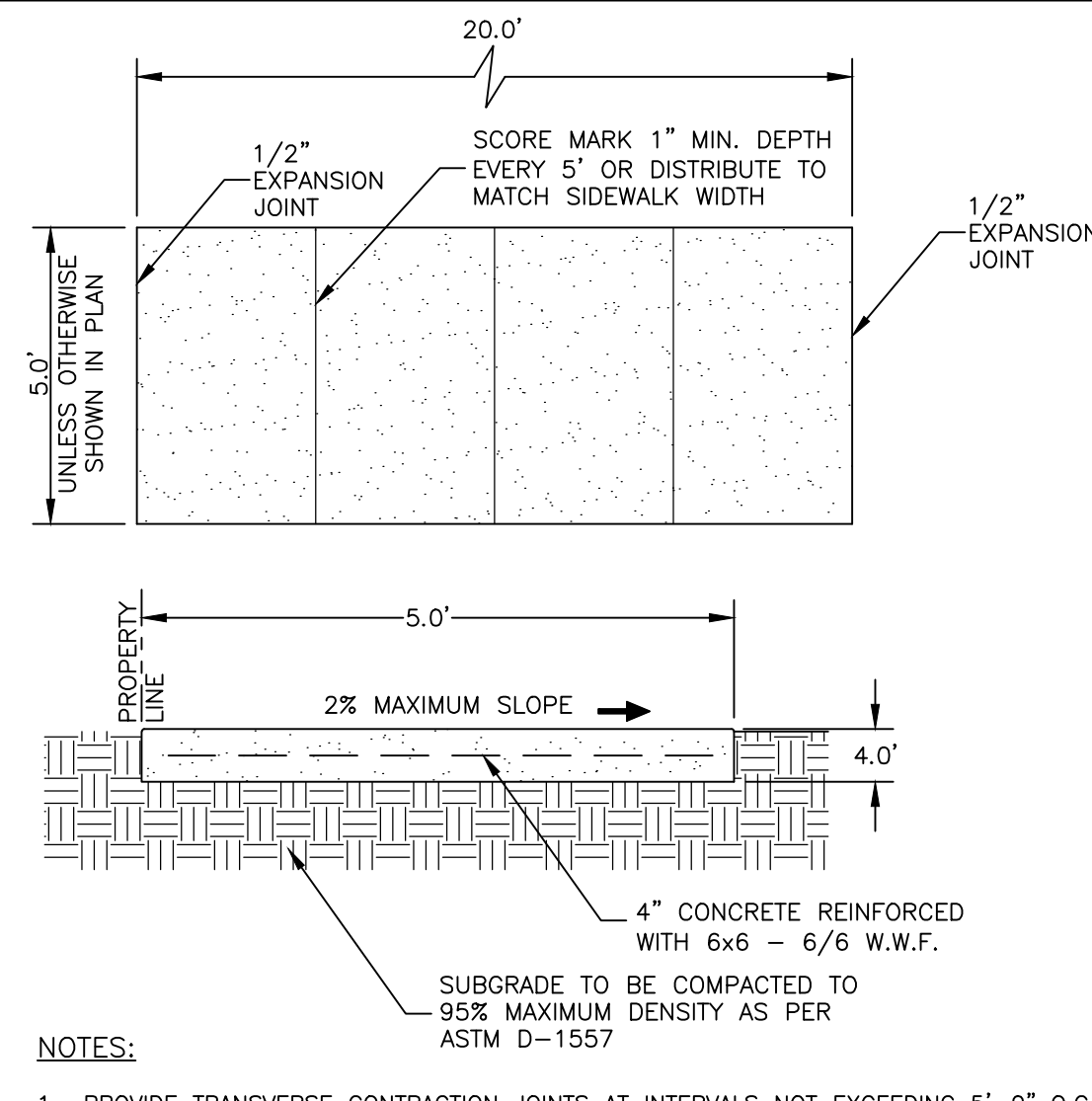
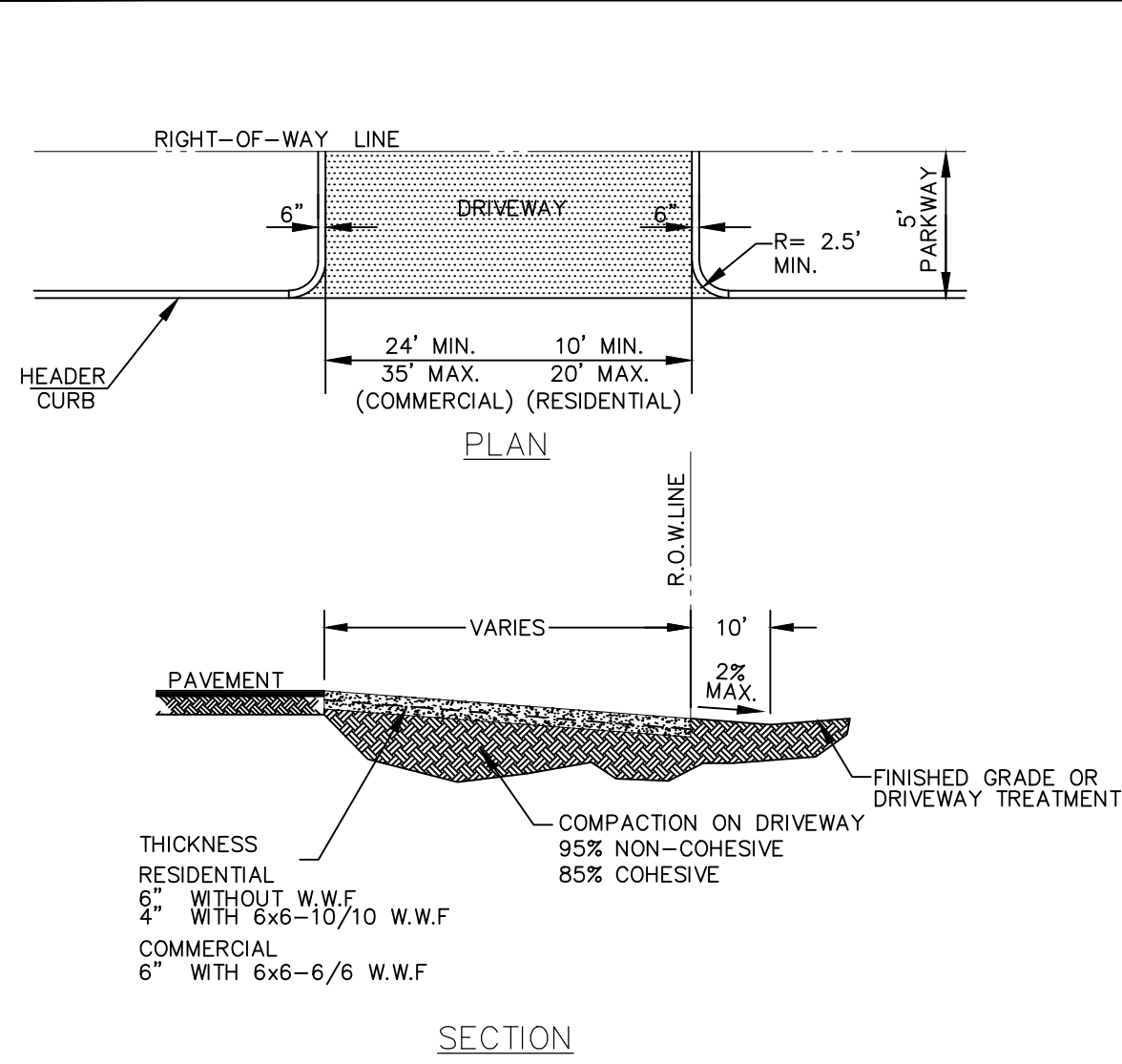
HORIZONTE RESIDENTIAL STREET, DRAINAGE, WATER, & WASTEWATER IMPROVEMENTS

ILLUMINATION, SIGNAGE, & STRIPING PLAN

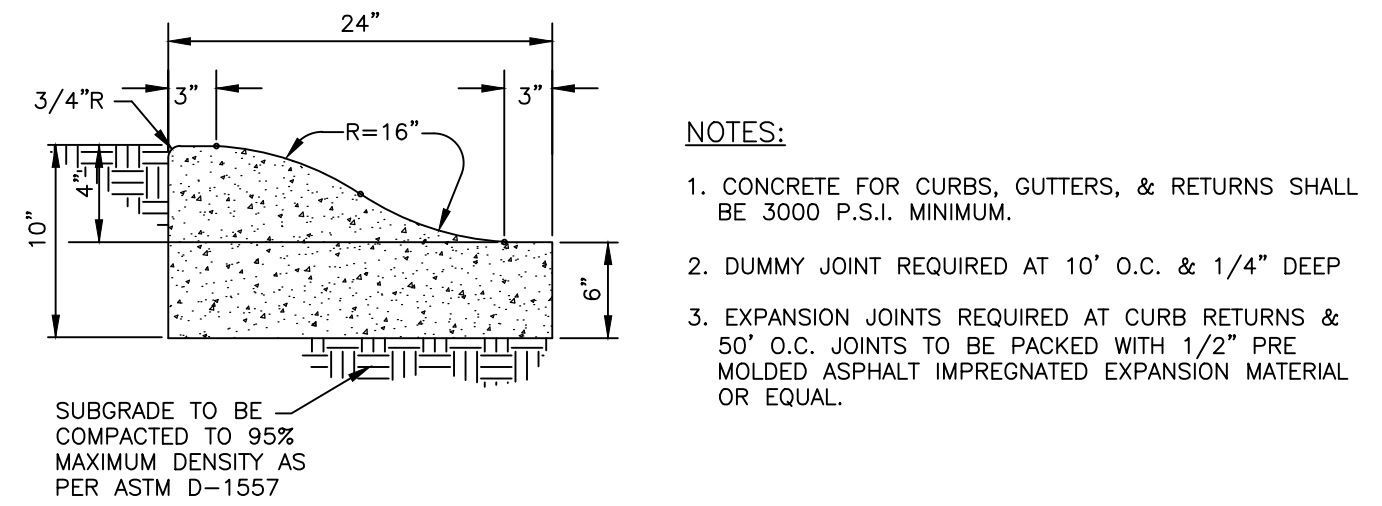
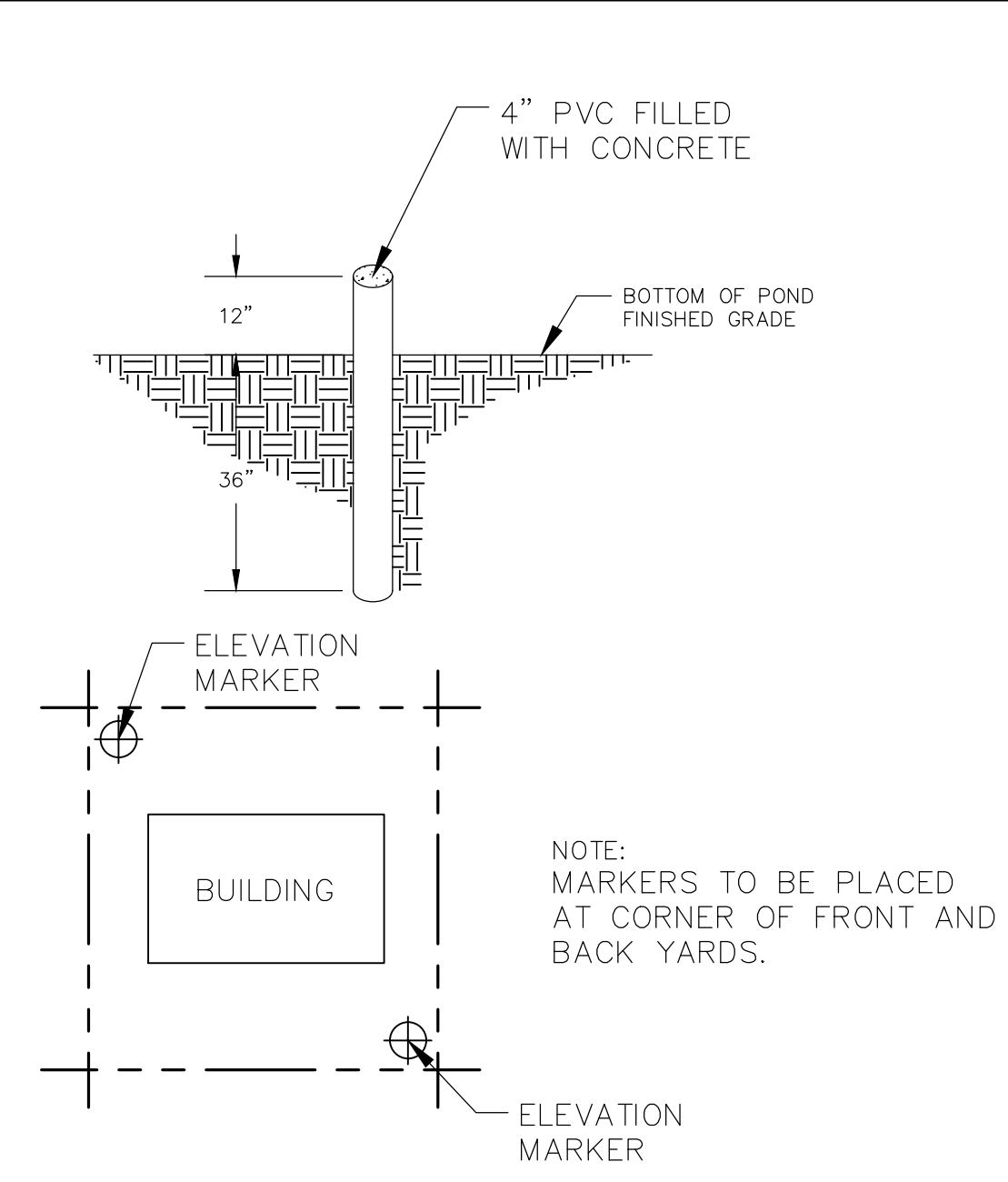
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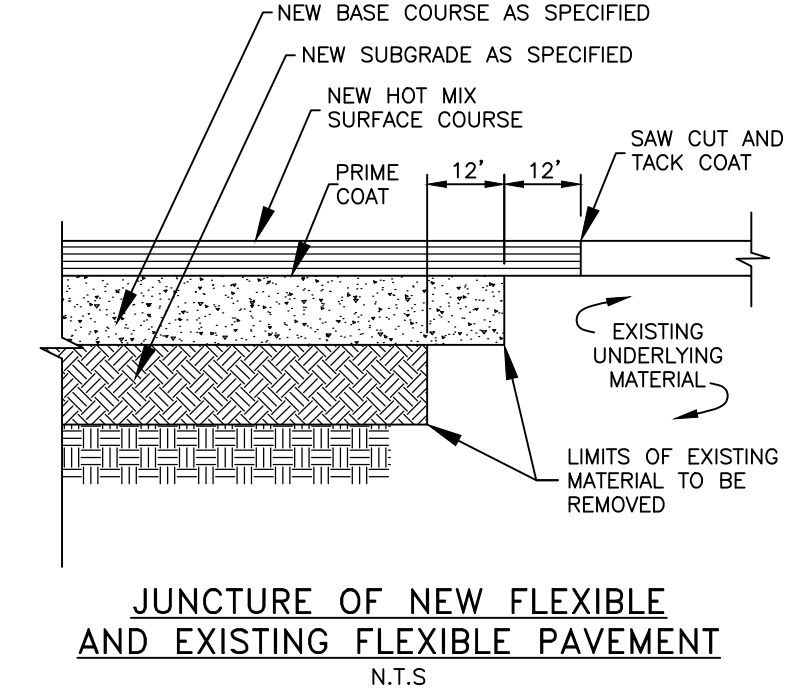
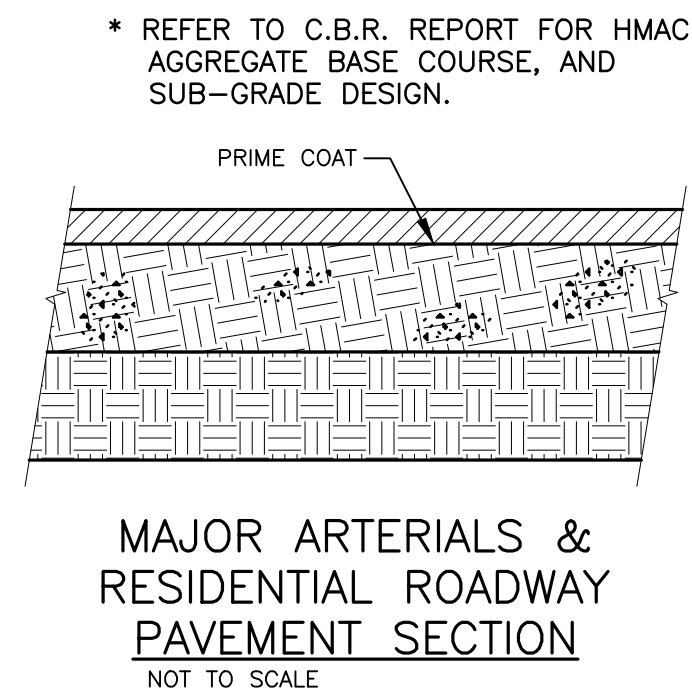
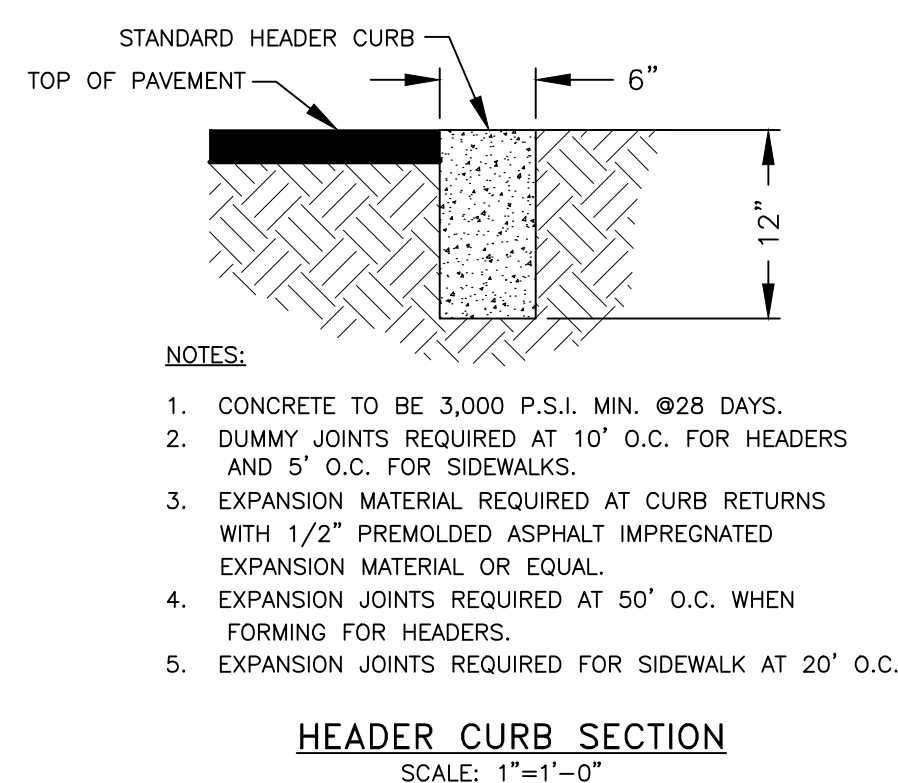
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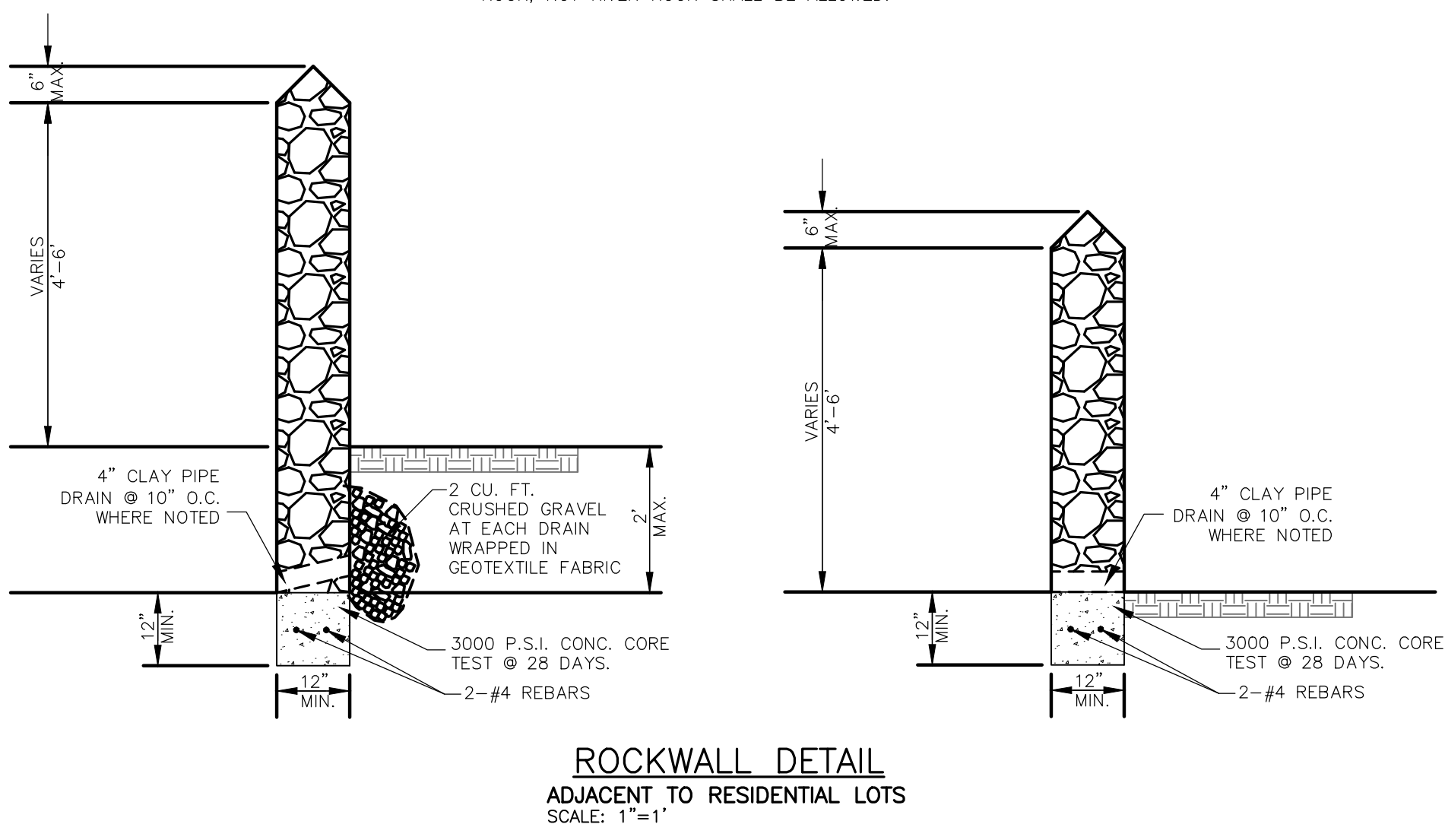
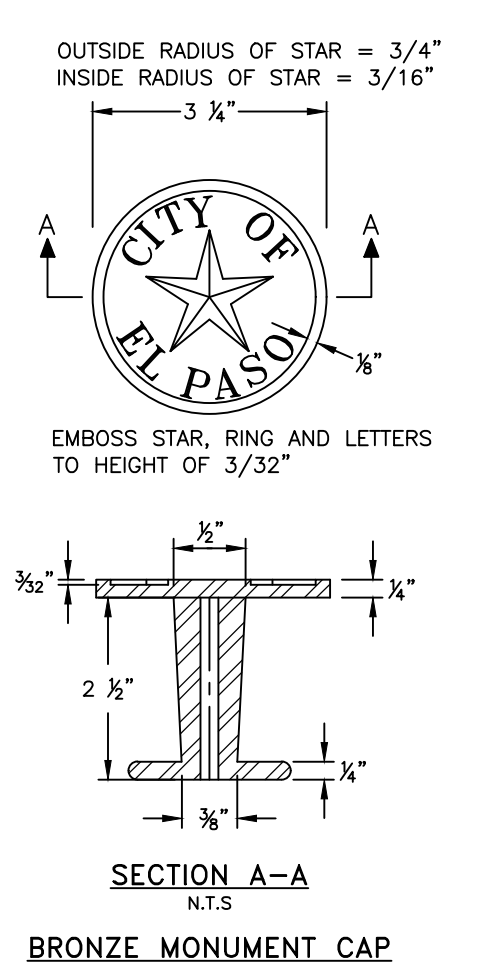
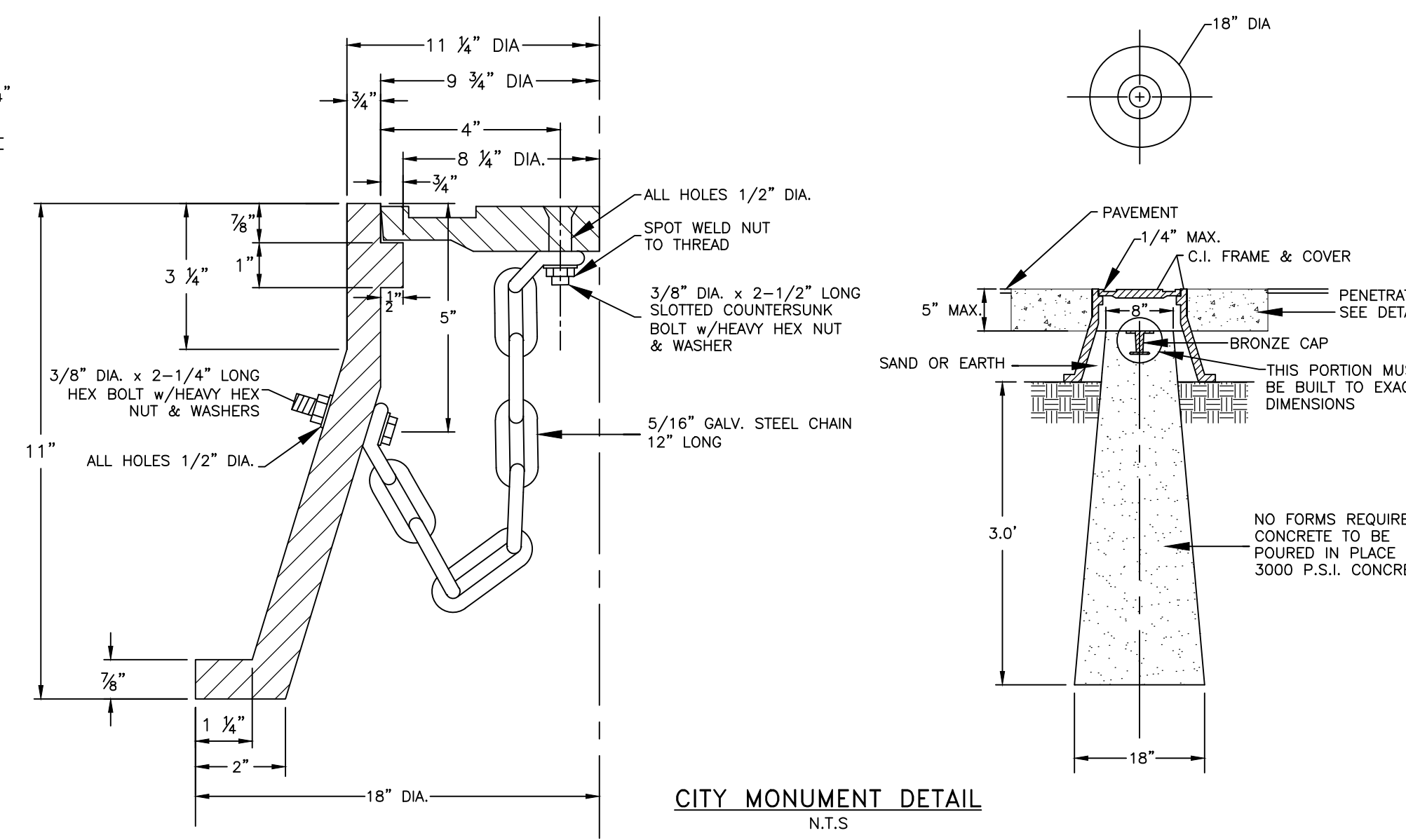
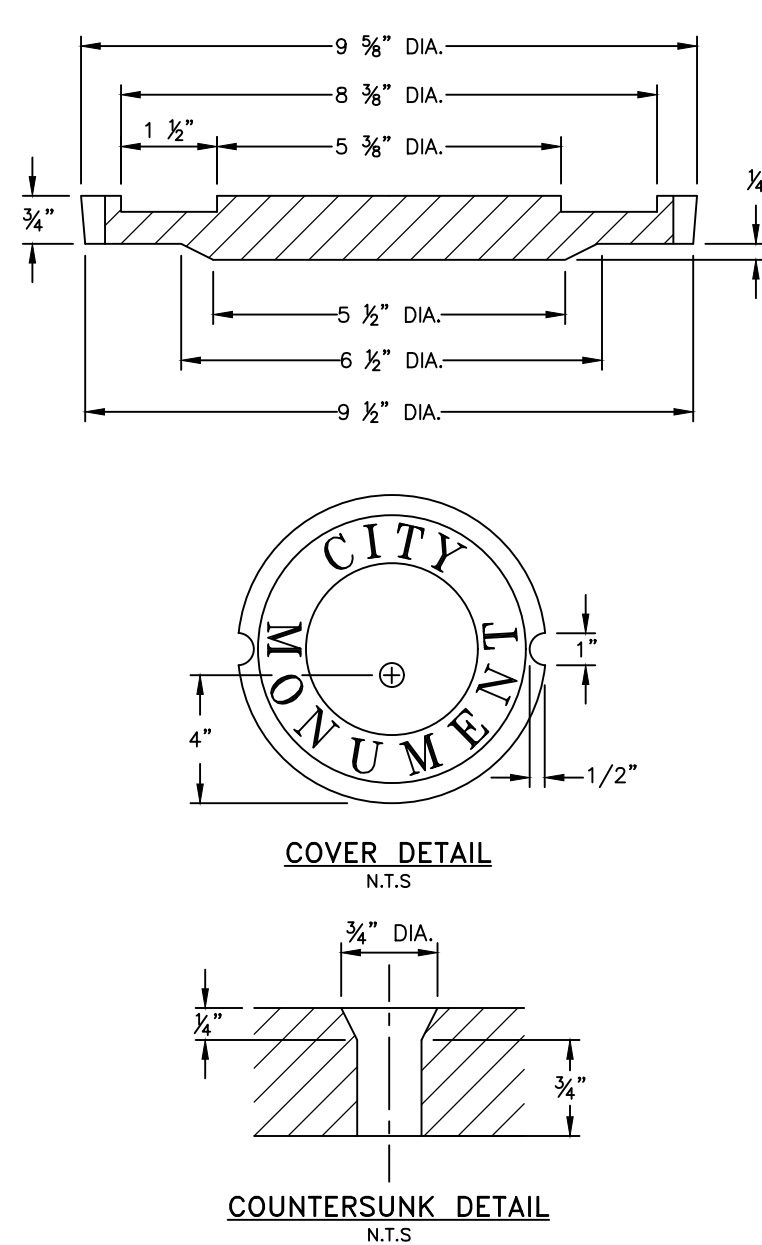
- NOTES:**
1. PROVIDE TRANSVERSE CONTRACTION JOINTS AT INTERVALS NOT EXCEEDING 5'-0" O.C.
 2. PROVIDE EXPANSION JOINTS AT INTERVALS NOT EXCEEDING 20'-0" O.C. AND ALONG FEATURES THAT PROJECT THROUGH OR ADJACENT TO SIDEWALK
 3. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS.
 4. EXPANSION JOINT FILLER SHALL BE 1/2" BITUMINOUS TYPE PREFORMED JOINT FILLER, AASHTO M-33.
 5. WHEREVER SIDEWALK ABUTS ROCK OR MASONRY STRUCTURES SUCH AS CURBS OR BUILDINGS, EXPANSION JOINT FILLER AND JOINT SEALANT SHALL BE PLACED IN ACCORDANCE WITH STANDARD SPECIFICATIONS.



- NOTES:**
1. CONCRETE FOR CURBS, GUTTERS, & RETURNS SHALL BE 3000 P.S.I. MINIMUM.
 2. DUMMY JOINT REQUIRED AT 10' O.C. & 1/4" DEEP
 3. EXPANSION JOINTS REQUIRED AT CURB RETURNS & 50' O.C. JOINTS TO BE PACKED WITH 1/2" PRE MOLDED ASPHALT IMPREGNATED EXPANSION MATERIAL OR EQUAL.



- ROCKWALL NOTES:**
1. STONE FOR ROCKWALLS SHALL BE AS NEARLY UNIFORM IN SECTIONS AS IN PRACTICABLE. THE STONE SHALL BE DENSE AND RESISTANT OF AIR AND WATER.
 2. MORTAR MUST BE TYPE "S" 1800 P.S.I. AS PER ASTM C270.
 3. MASONRY WALLS OVER SIX (6) FEET IN HEIGHT AND THOSE USED FOR EARTH RETENTION OVER TWO (2) FEET MUST BE DESIGNED AS STRUCTURAL WALLS.
 4. WALLS ADJACENT TO PONDING AREAS OR DRAINAGE DITCHES MAY BE CONSTRUCTED OF BRICK OR CINDER BLOCK AND SHALL NOT BE LESS THAN SIX (6) FEET HIGH.
 5. ROCKWALL MORTAR JOINTS MUST NOT EXCEED TWO (2) INCHES.
A - 6" MAX. ALONG REAR & SIDE YARDS.
B - 3" - 6" MAX. ALONG FRONT YARDS.
C - 6" HIGH @ DRAINAGE AND BASINS.
 6. PROVIDE ONE (1) INCH EXPANSION JOINTS AT EVERY 100 FEET.
 7. ALL STONE SHALL BE THOROUGHLY SOAKED BEFORE BEING PLACED.
 8. ALL STONE FOR ROCKWALLS SHALL BE FRACTURED QUARRIED ROCK, NOT RIVER ROCK SHALL BE ALLOWED.



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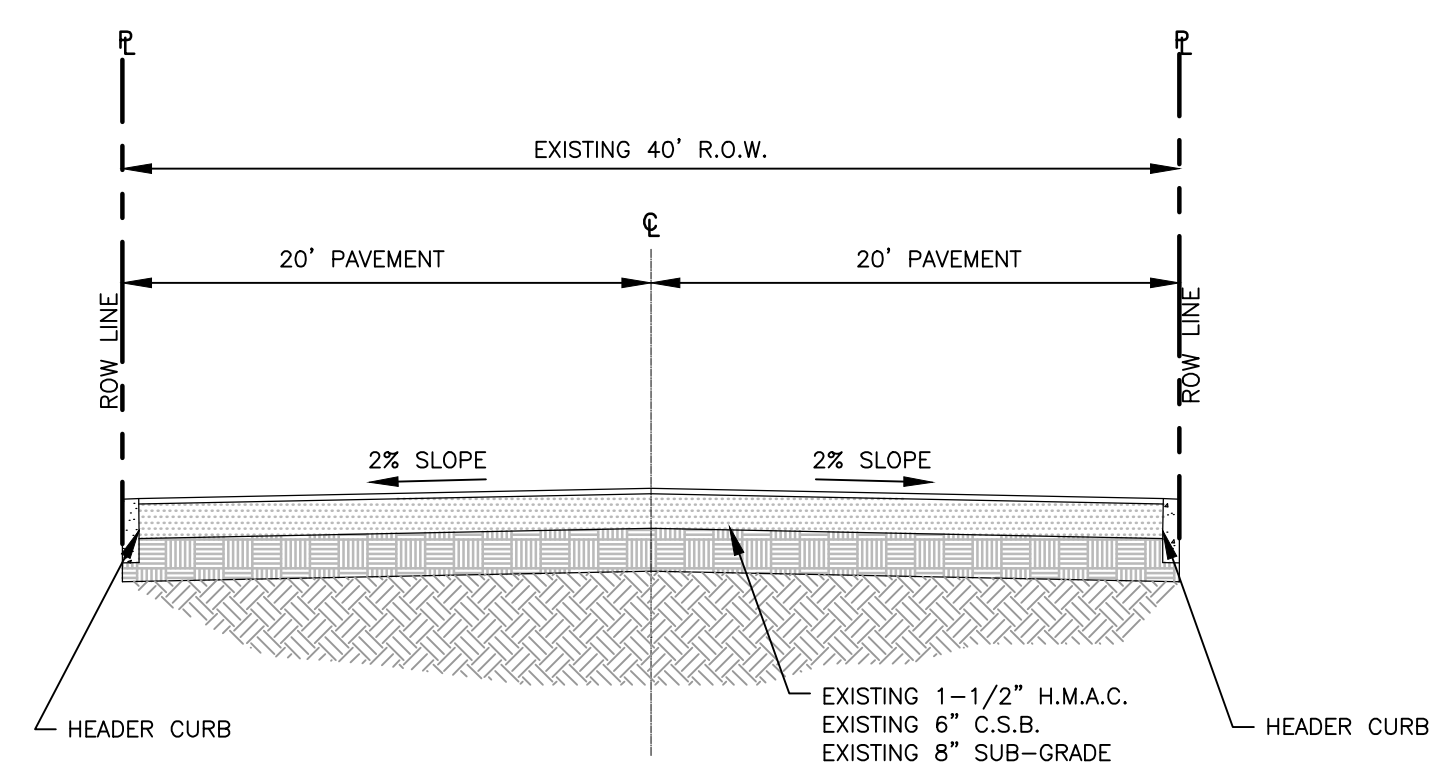
HORIZONTE RESIDENTIAL STREET, DRAINAGE, WATER, & WASTEWATER IMPROVEMENTS

STANDARD DETAILS 1

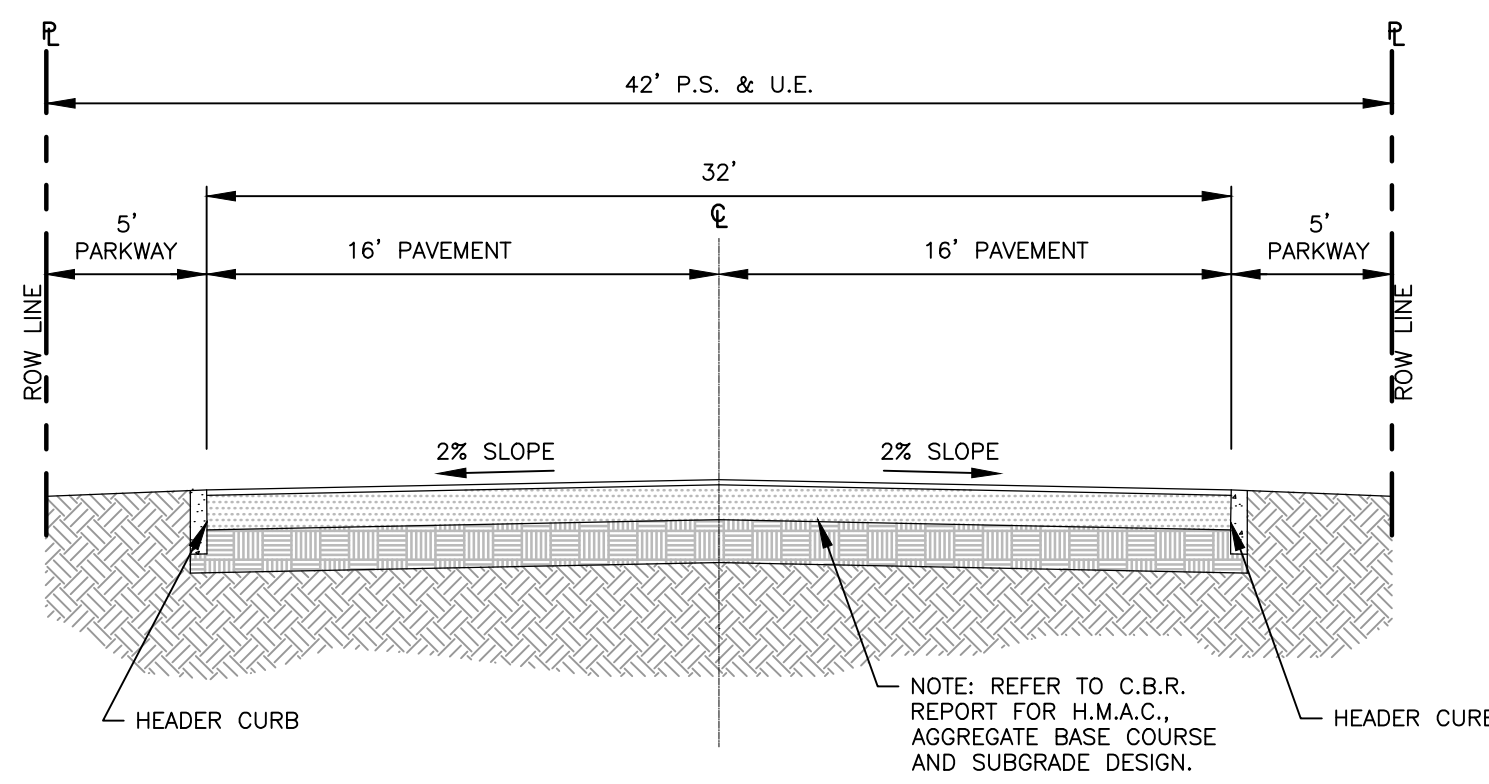
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ROBERTO S. ROMERO
114517
LICENSED PROFESSIONAL ENGINEER
8/19/2021

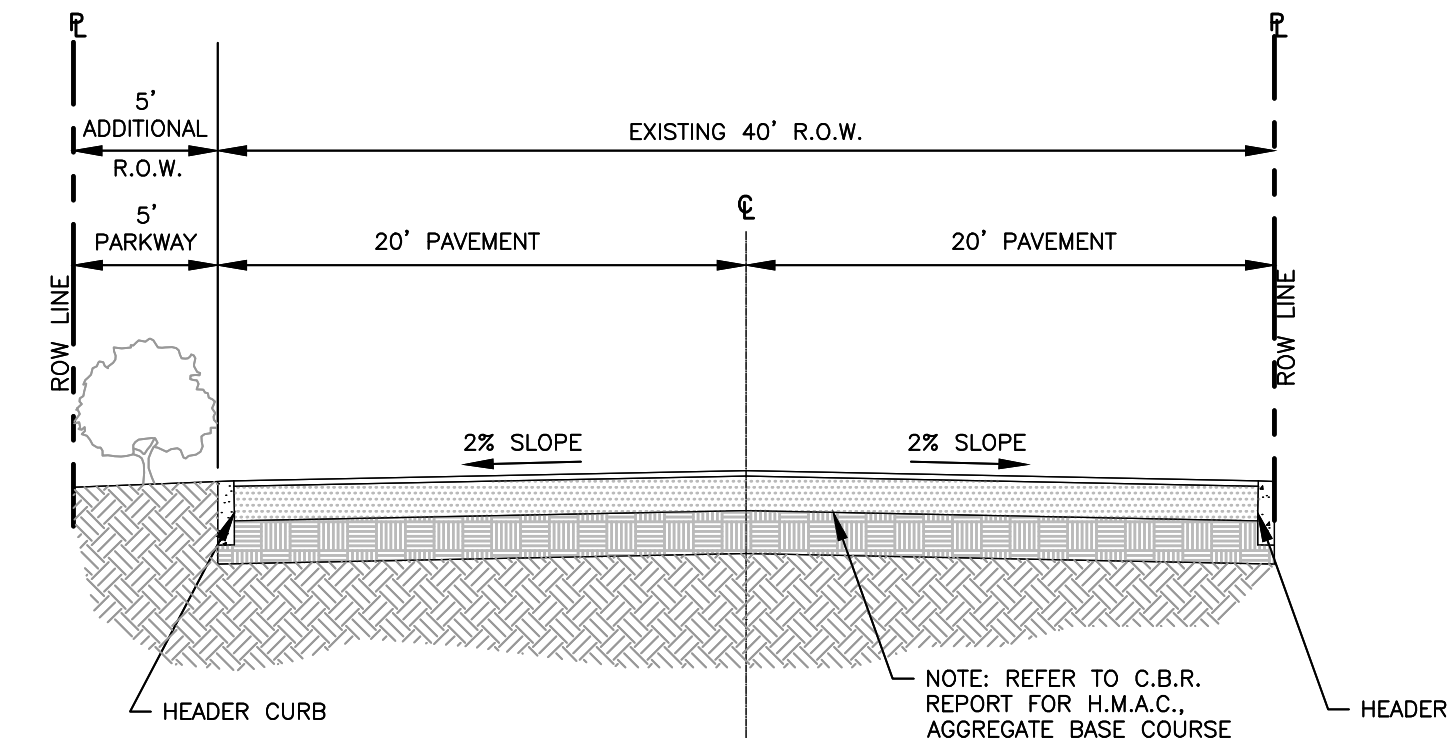
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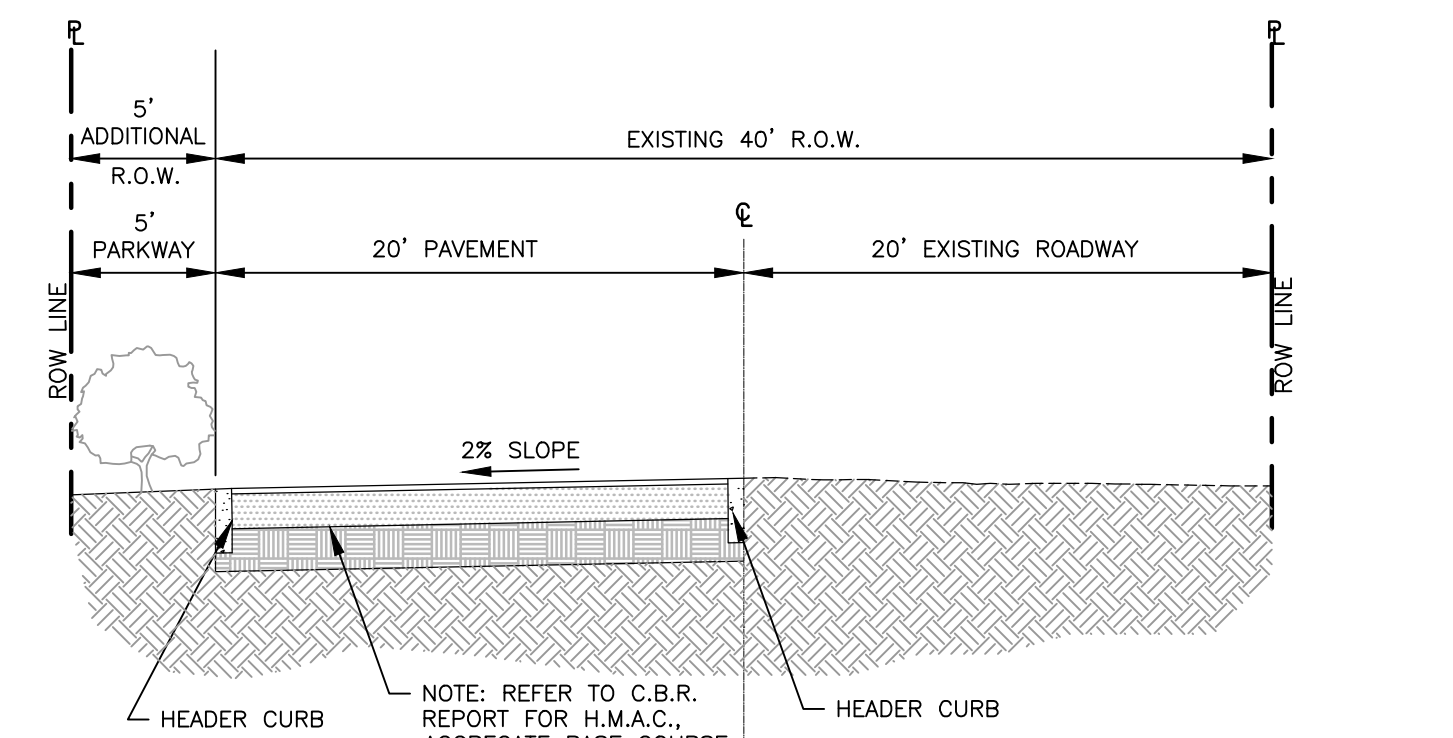
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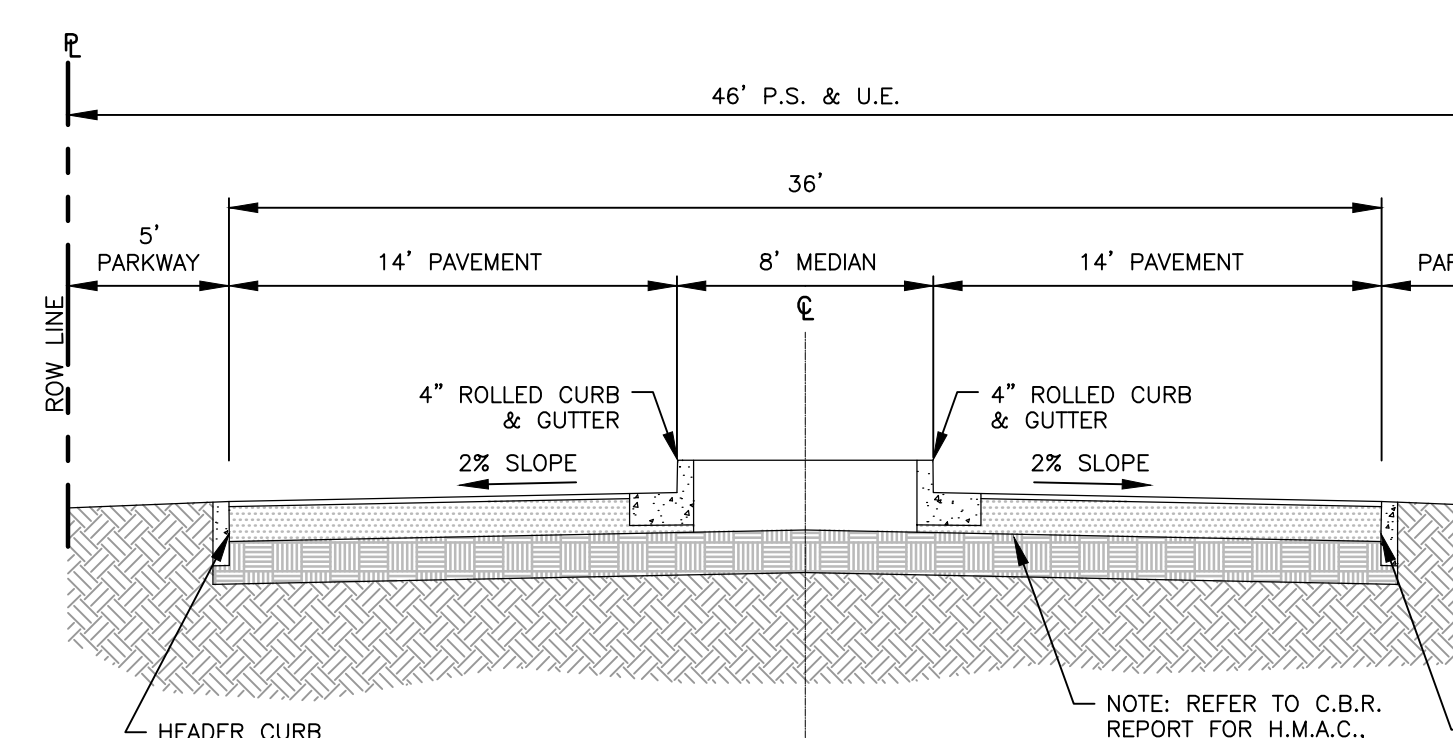
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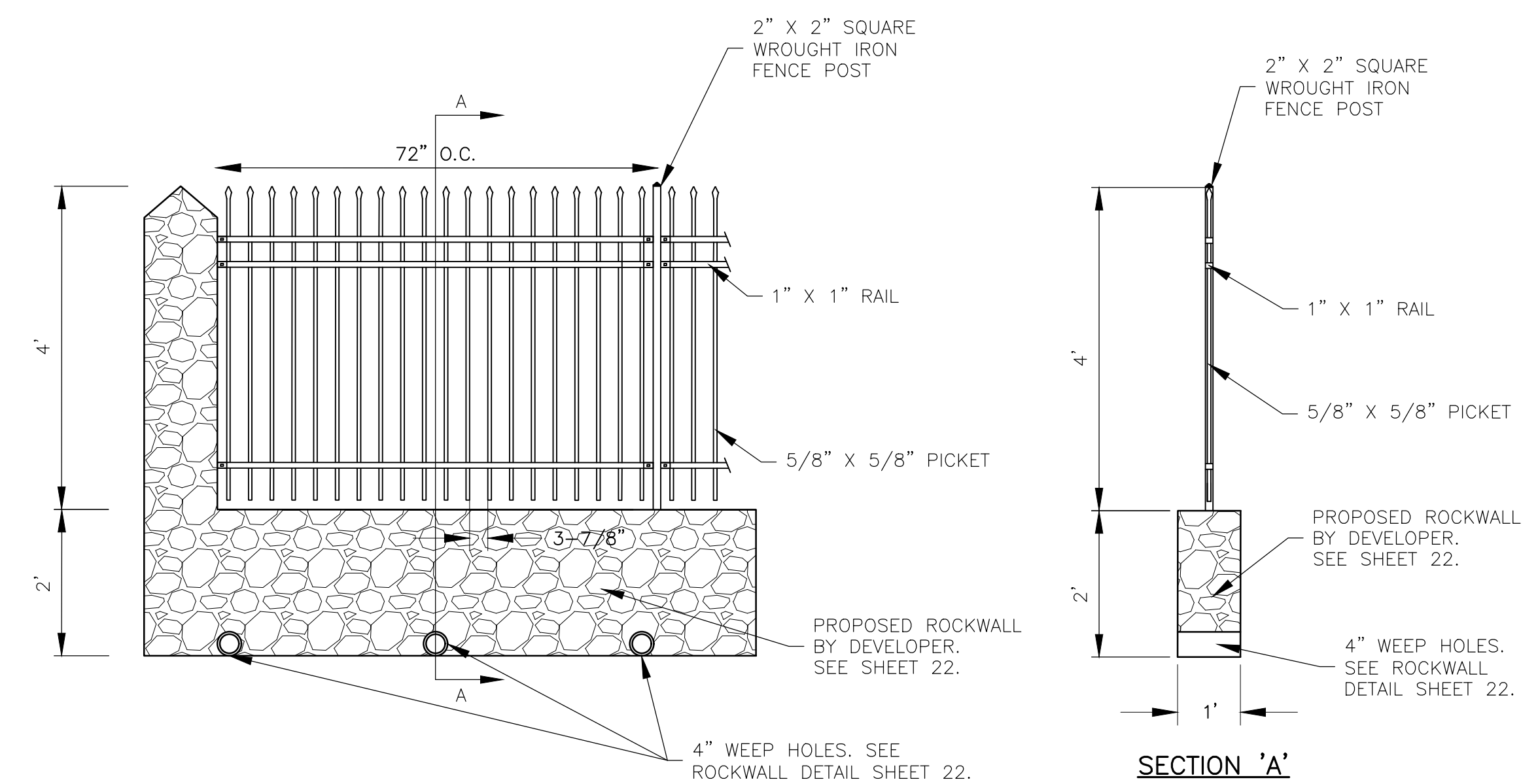
PROPOSED LEE SHANNON ROAD
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PROPOSED LEE SHANNON ROAD
(LOCAL RESIDENTIAL) (N.T.S.)



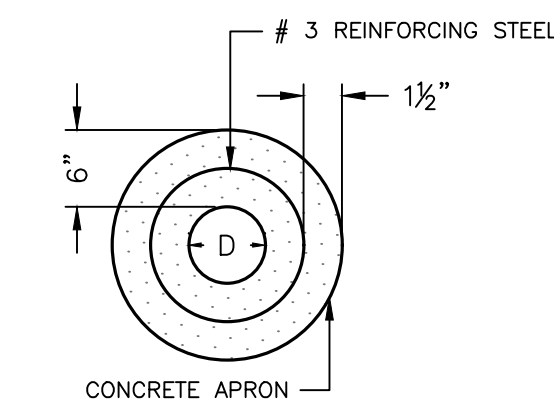
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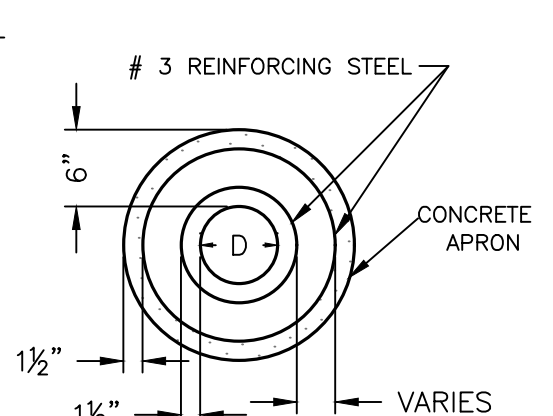
ROCKWALL WITH
ALUMINUM FENCE DETAIL
(N.T.S.)

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

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

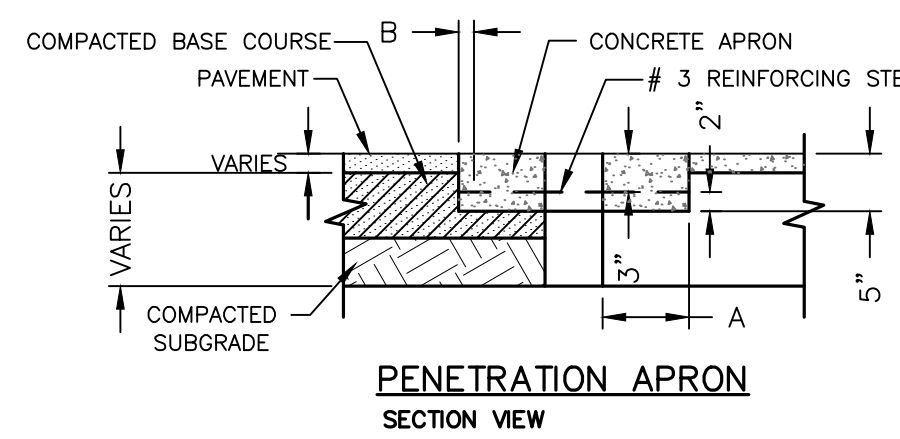


PENETRATION APRON
PLAN VIEW - SINGLE REBAR

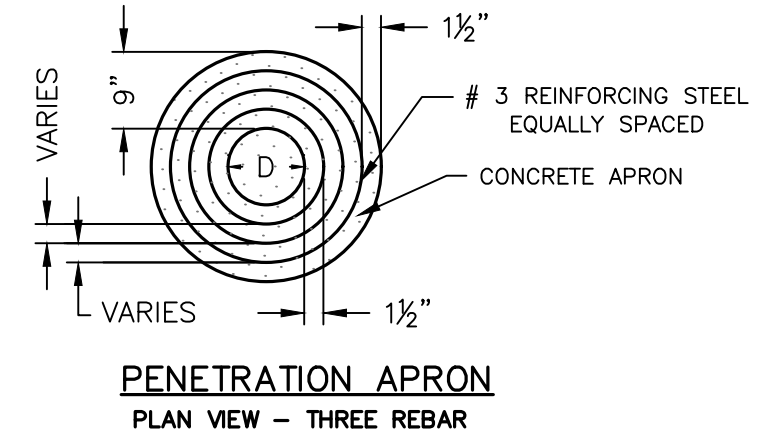


PENETRATION APRON
PLAN VIEW - 2 REBAR

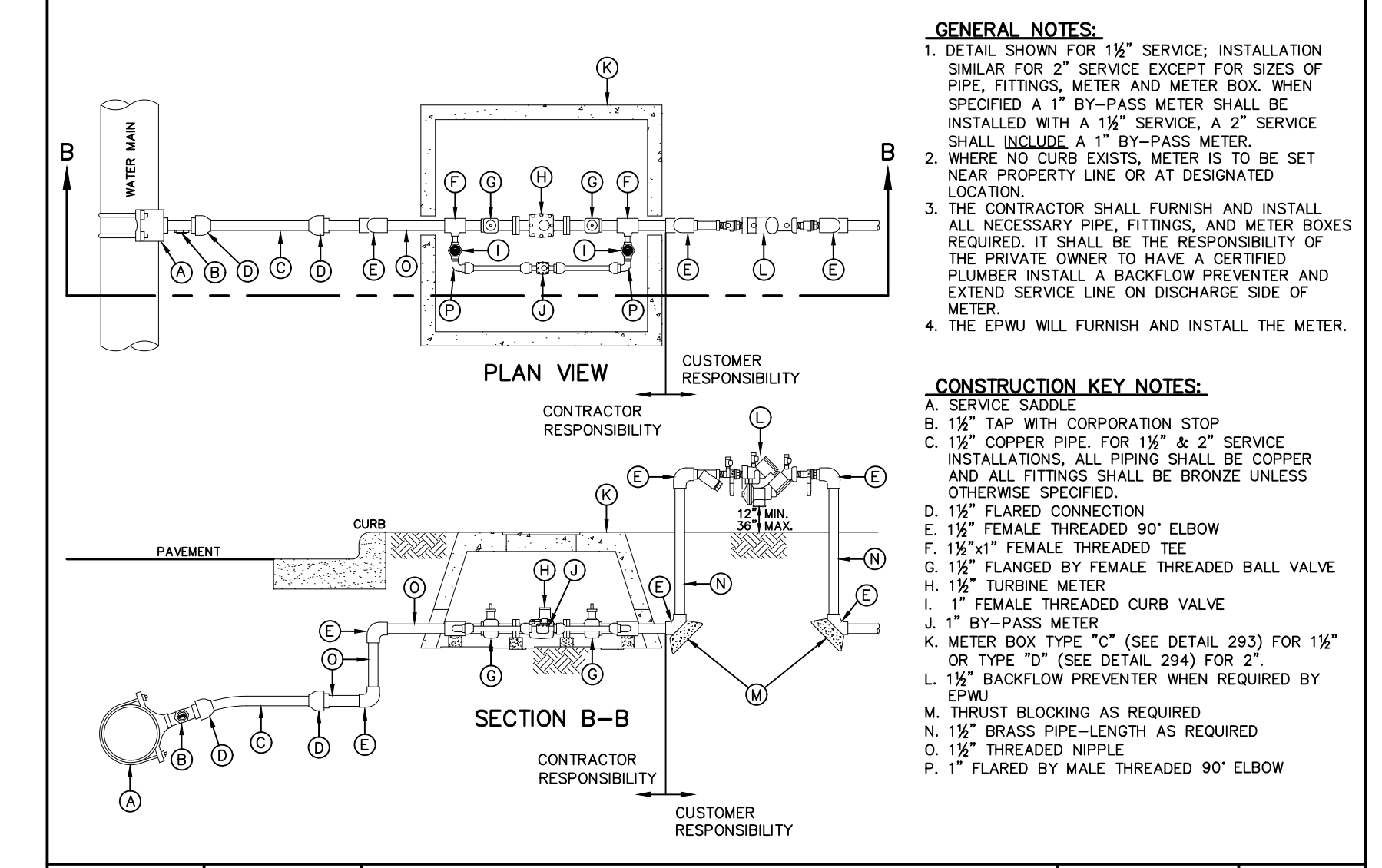
- GENERAL NOTES:**
- THE PENETRATION APRON SHOULD BE CAST IN-PLACE CONCRETE (MINIMUM 28 DAY COMPRESSIVE STRENGTH 4000 PSI. HIGH EARLY CONCRETE IS REQUIRED).
 - TOPS OF PENETRATION APRON SHALL BE FLUSH WITH ROADWAY SURFACE OR FINISHED GRADE UNLESS OTHERWISE SPECIFIED BY THE CITY ENGINEER.



PENETRATION APRON
SECTION VIEW



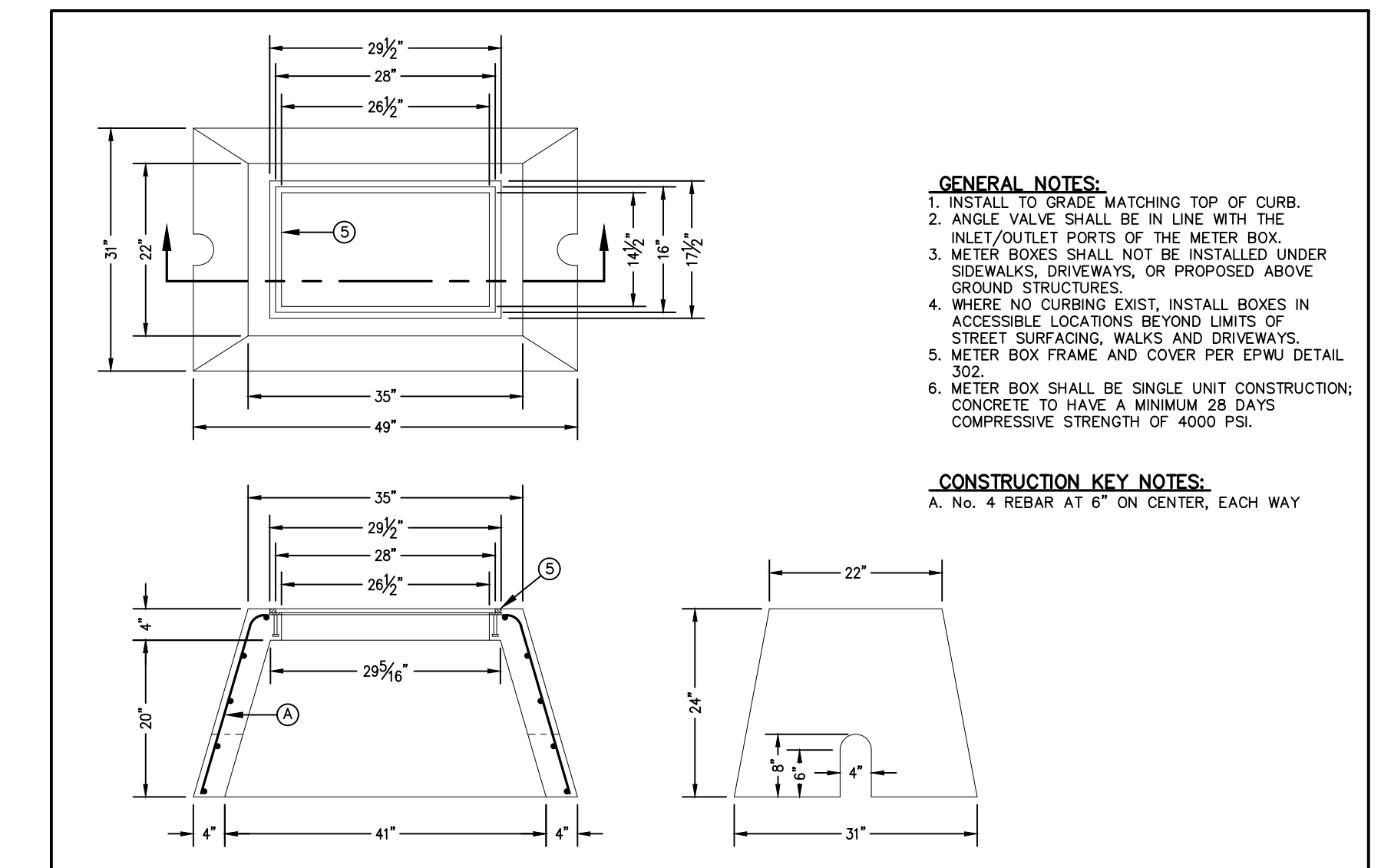
PENETRATION APRON
PLAN VIEW - THREE REBAR



STANDARD DETAIL DATE: 4/21/1998 REV: 3/9/2011 SERVICE LINE 1 1/2" AND 2" INSTALLATION BY CONTRACTOR N.T.S. el paso WATER DETAIL No. 290-5

- GENERAL NOTES:**
- DETAIL SHOWN FOR 1 1/2" SERVICE. INSTALLATION SIMILAR FOR 2" SERVICE EXCEPT FOR SIZES OF PIPE, FITTINGS, METER AND METER BOX. WHEN SPECIFIED A 1" BY-PASS METER SHALL BE INSTALLED WITH A 1 1/2" SERVICE. A 2" SERVICE SHALL INCLUDE A 1" BY-PASS METER.
 - 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.
 - THE EPWU WILL FURNISH AND INSTALL THE METER.

- CONSTRUCTION KEY NOTES:**
- SERVICE SADDLE
 - 1 1/2" TAP WITH CORPORATION STOP
 - 1 1/2" COPPER PIPE FOR 1 1/2" & 2" SERVICE INSTALLATIONS. ALL PIPING SHALL BE COPPER AND ALL FITTINGS SHALL BE BRONZE UNLESS OTHERWISE SPECIFIED.
 - 1 1/2" FLARED CONNECTION
 - 1 1/2" FEMALE THREADED 90° ELBOW
 - 1 1/2" FEMALE THREADED TEE
 - 1 1/2" FLANGED BY FEMALE THREADED BALL VALVE
 - 1 1/2" TURBINE METER
 - 1" FEMALE THREADED CURB VALVE
 - 1" BY-PASS METER
 - METER BOX TYPE "C" (SEE DETAIL 293) FOR 1 1/2" OR TYPE "D" (SEE DETAIL 294) FOR 2"
 - 1 1/2" BACKFLOW PREVENTER WHEN REQUIRED BY EPWU
 - THURST BLOCKING AS REQUIRED
 - 1 1/2" BRASS PIPE-LENGTH AS REQUIRED
 - 1 1/2" THREADED NIPPLE
 - 1" FLARED BY MALE THREADED 90° ELBOW



STANDARD DETAIL DATE: 4/8/2004 REV: 3/26/2007 METER BOX TYPE "C" FOR 1 1/2" SERVICE INSTALLATION N.T.S. el paso WATER DETAIL No. 293

- 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 FRAME AND COVER PER EPWU DETAIL 302.
 - METER BOX SHALL BE SINGLE UNIT CONSTRUCTION. CONCRETE TO HAVE A MINIMUM 28 DAYS COMPRESSIVE STRENGTH OF 4000 PSI.

- CONSTRUCTION KEY NOTES:**
- No. 4 REBAR AT 6" ON CENTER, EACH WAY

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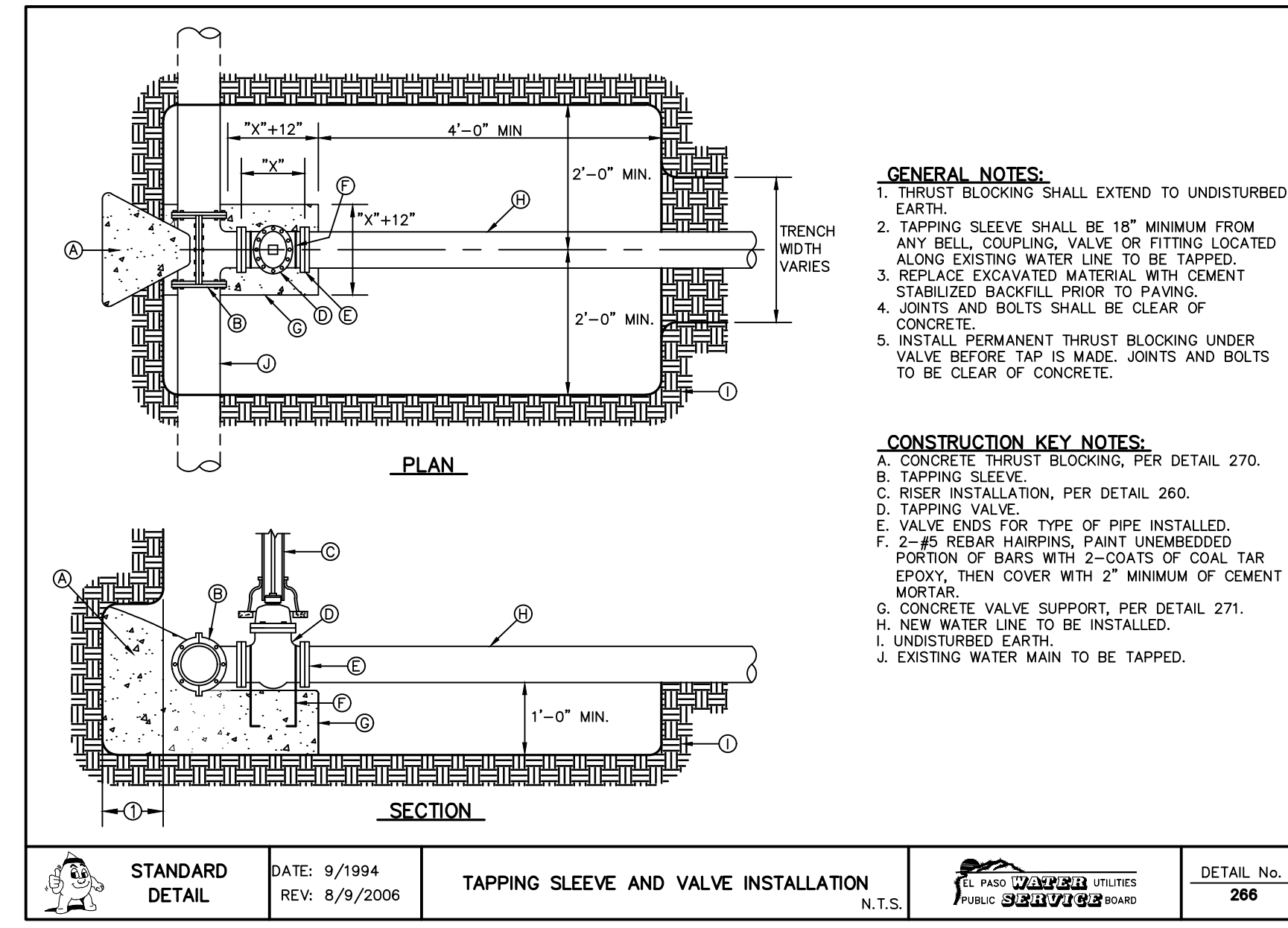
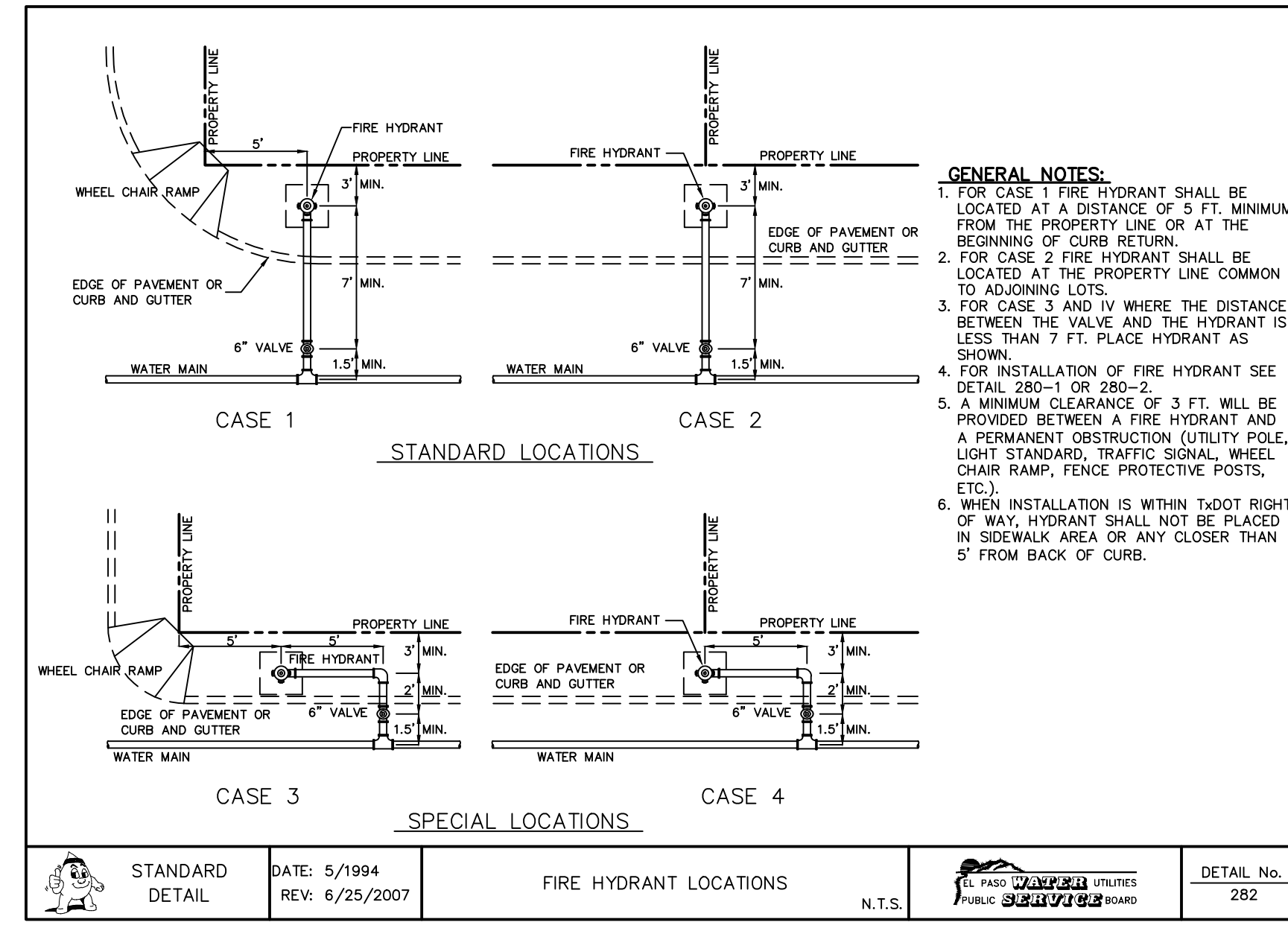
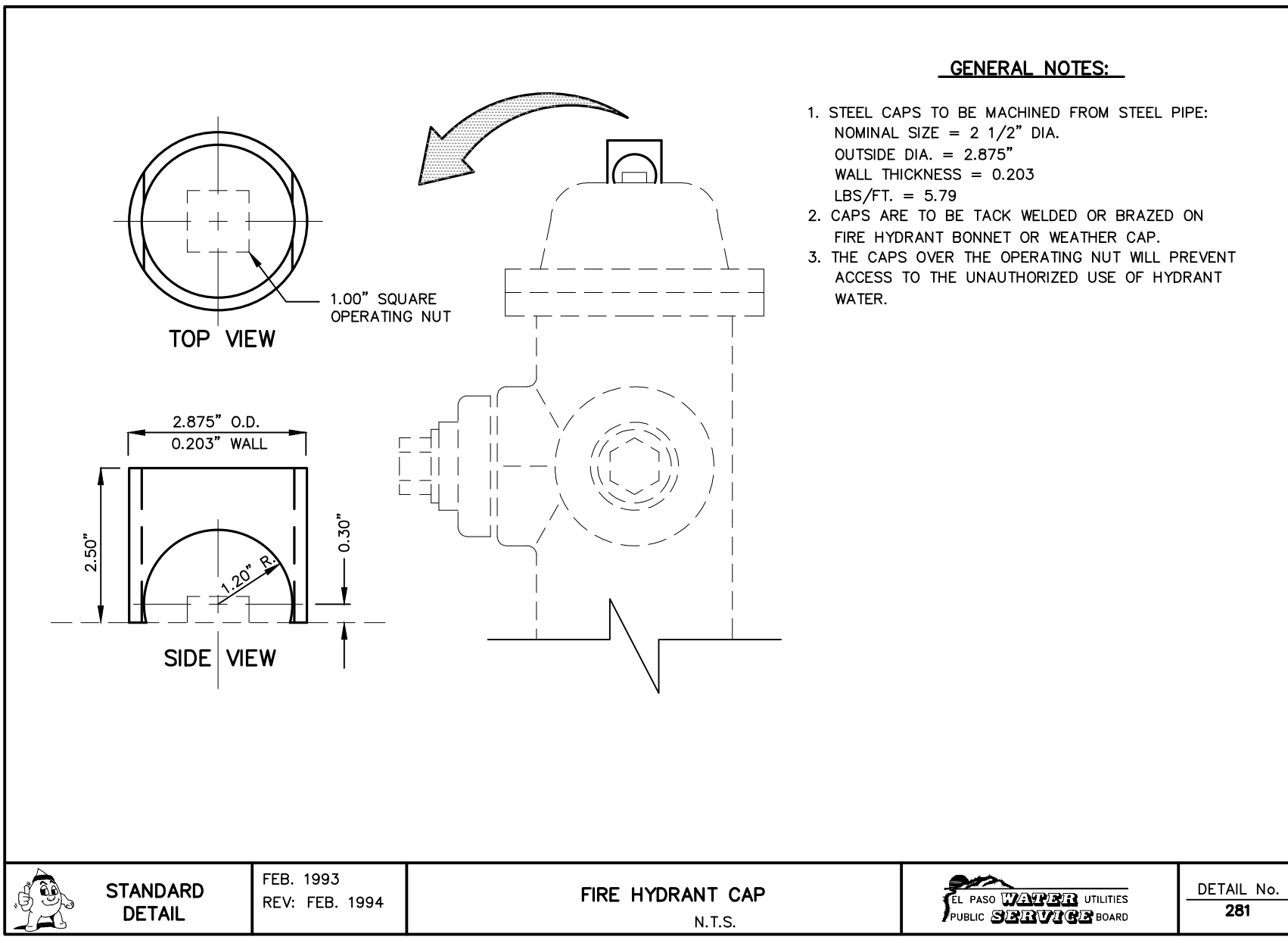
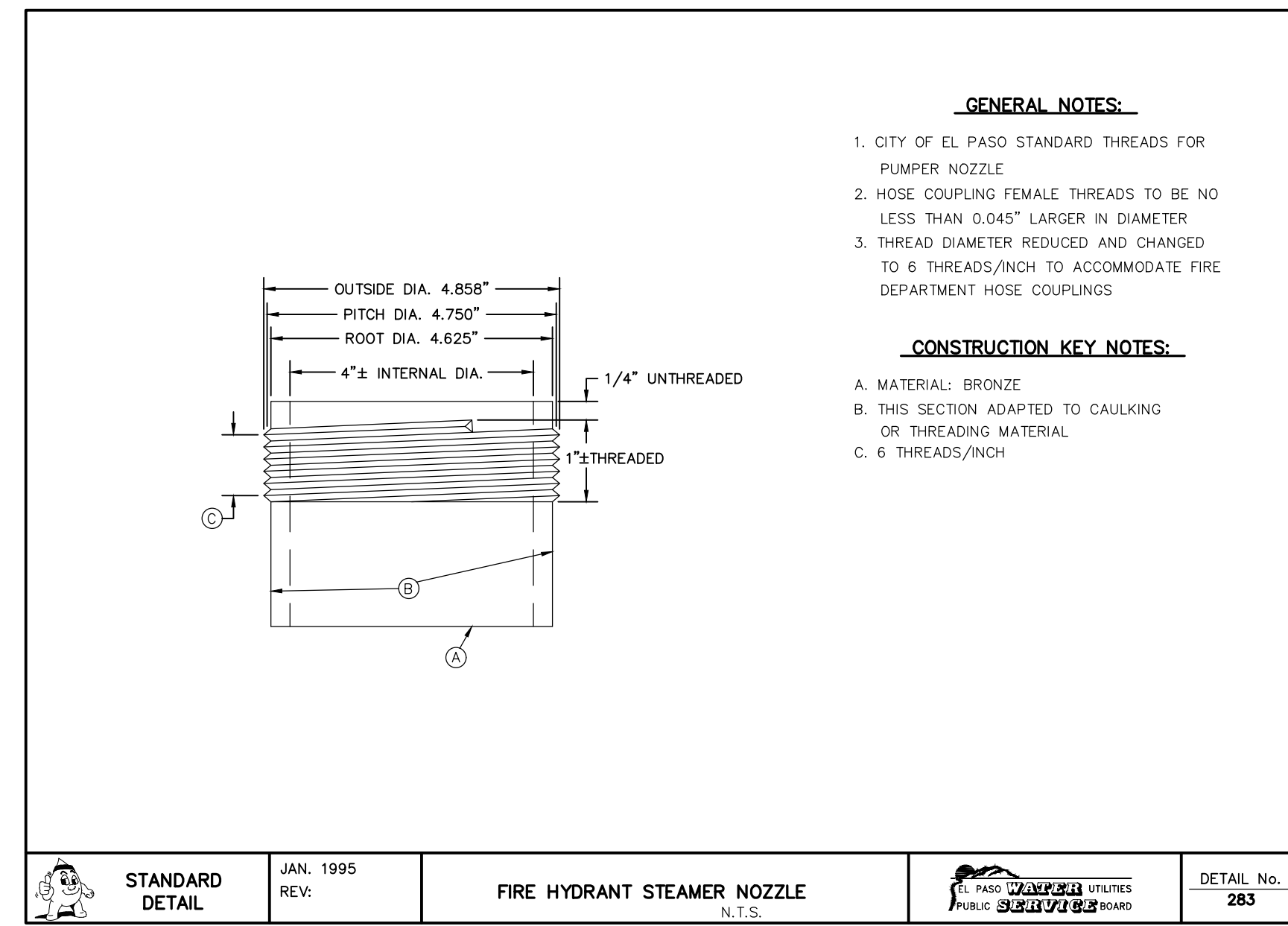
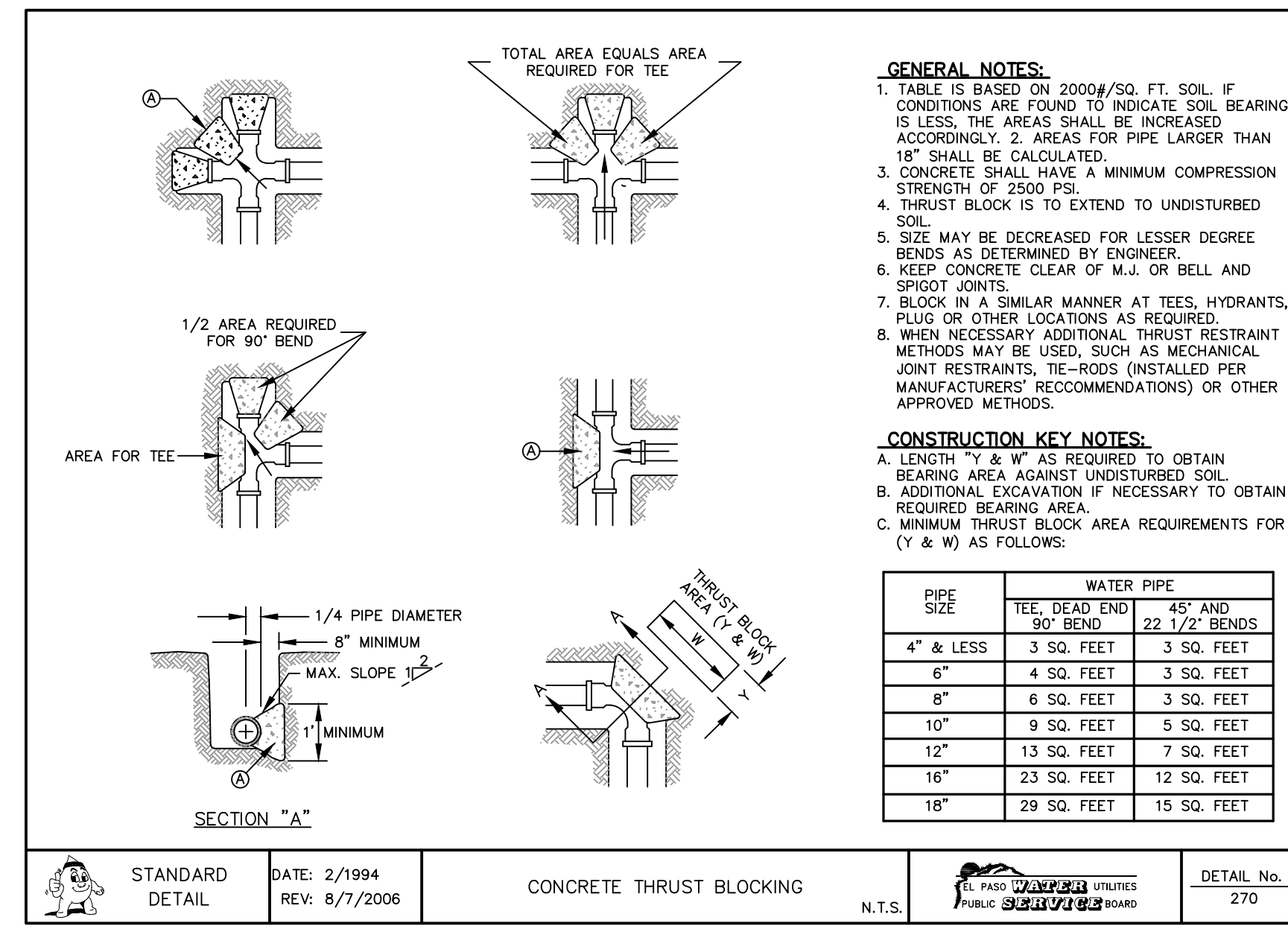
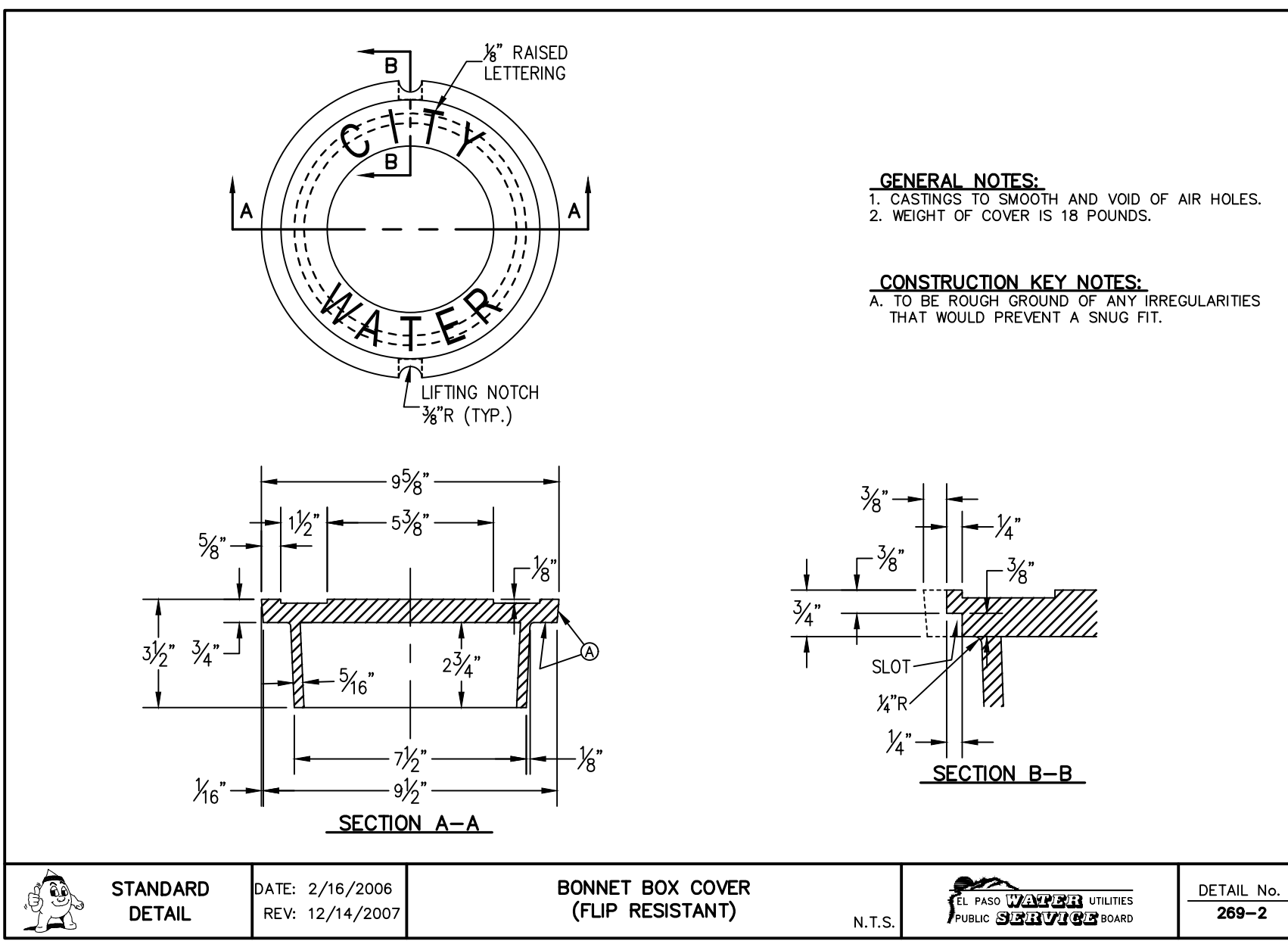
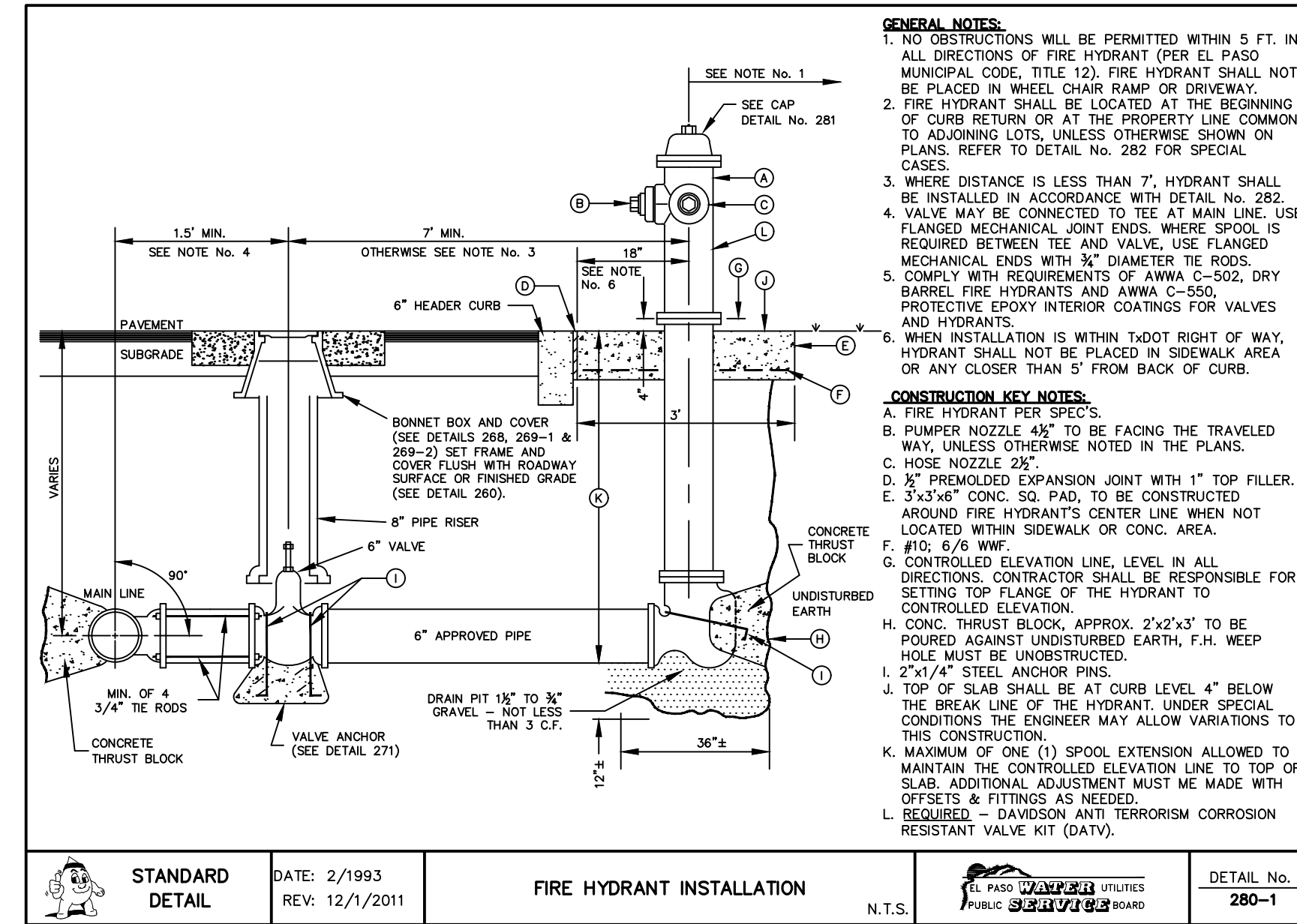
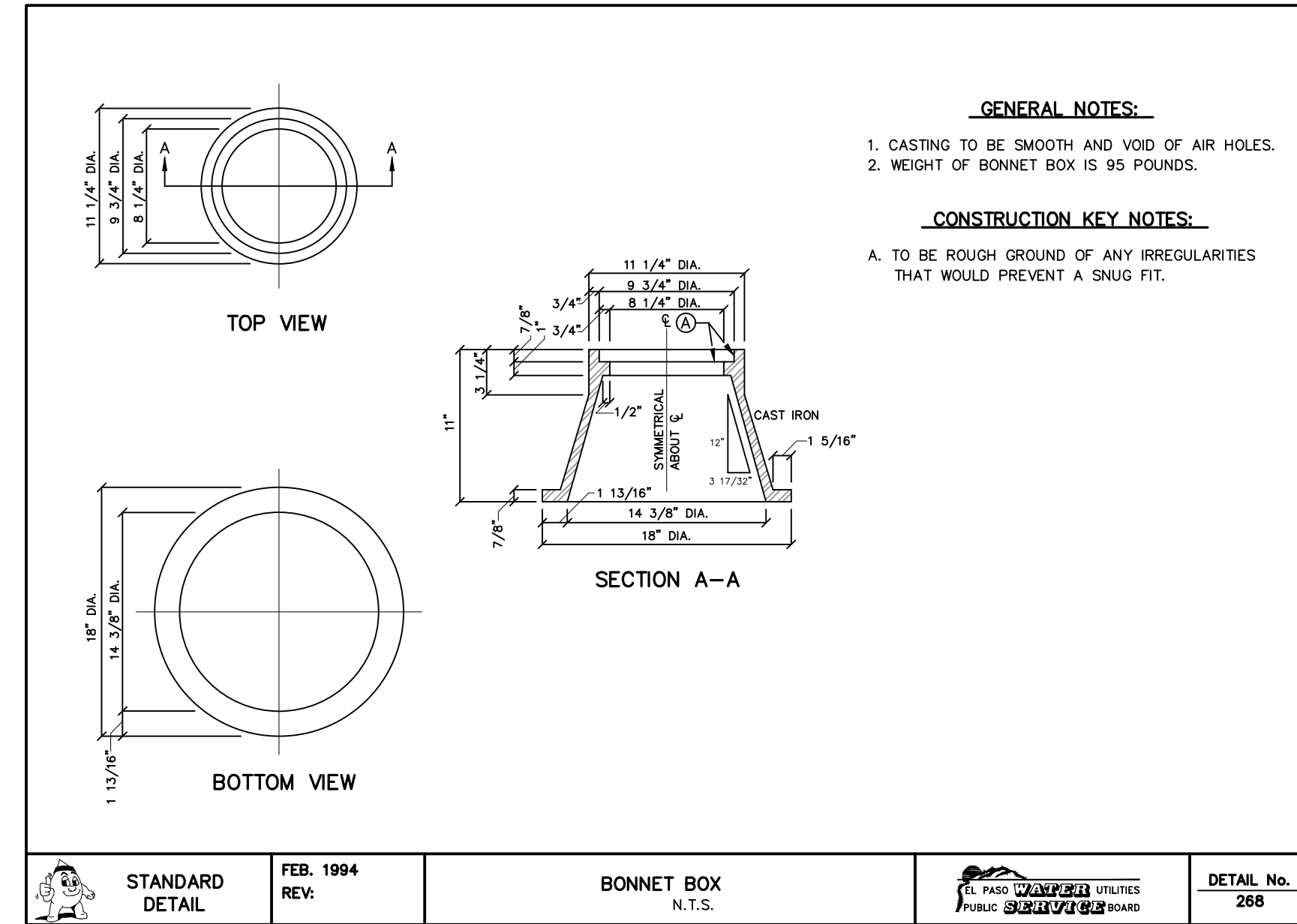
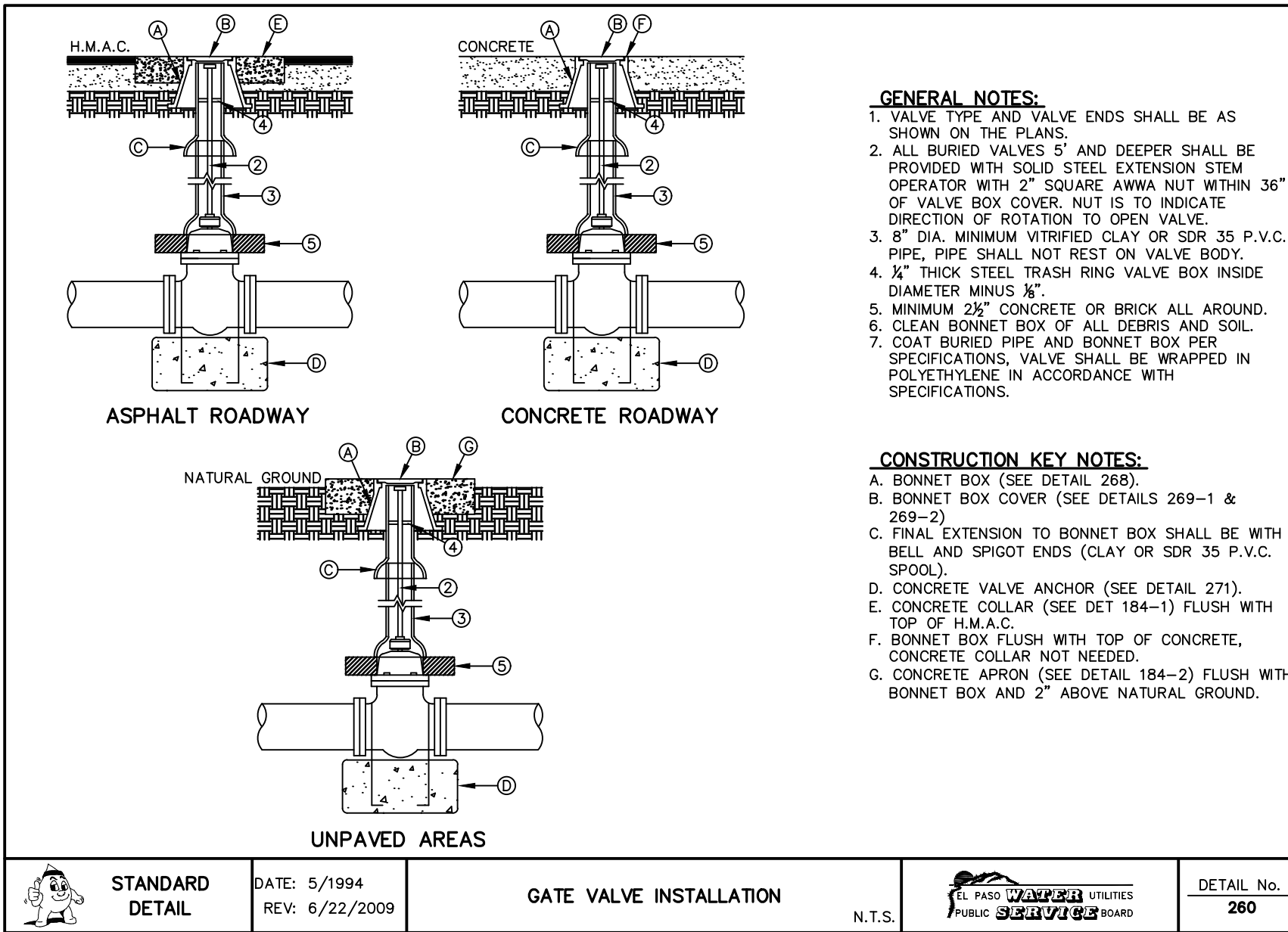
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DWG FILE: STDDTL	DRAWN BY: KB
DATE: AUGUST 2021	CHECKED BY: RR
NO.	BY DATE REVISION DESCRIPTION

HORIZONTE RESIDENTIAL STREET, DRAINAGE, WATER, & WASTEWATER IMPROVEMENTS

STANDARD DETAILS 2 & WATER DETAILS

NOTICE: ALTERATION OF A SEALED DRAWING WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS A VIOLATION OF THE TEXAS ENGINEERING PRACTICE ACT.

ROBERTO S. ROMERO
114517
LICENSED PROFESSIONAL ENGINEER
8/19/2021



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PROJECT NO. 2002-12004-32
DESIGNED BY: KB
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NO. BY DATE REVISION DESCRIPTION

HORIZONTE RESIDENCIAL WATER, & WASTEWATER IMPROVEMENTS
STREET, DRAINAGE, WATER, & WASTEWATER IMPROVEMENTS

WATER DETAILS 1

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ROBERTO S. ROMERO
114517
LICENSED PROFESSIONAL ENGINEER
8/19/2021

SHEET 24 OF 28

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

CONSTRUCTION KEY NOTES:
 A. APPROVED MARKING TAPE.
 B. UNDISTURBED STABLE MATERIAL.
 C. NATIVE MATERIAL BACKFILL.
 PAVED CONDITION: COMPACT TO 90% DENSITY PER ASTM D-1557 MODIFIED PROCTOR.
 UNPAVED CONDITION: COMPACT TO 85% DENSITY PER ASTM D-1557 MODIFIED PROCTOR.
 (*SEE NOTE #3 IF THESE PREVIOUS CONDITIONS CANNOT BE MET.)
 D. SLOPE TRENCH IN SANDY SOIL CONDITIONS.
 E. USE CLASS II OR CLASS III SAND PER ASTM D-2487. NATIVE MATERIAL OR IMPORTED SELECT MATERIAL MEETING OR EXCEEDING THIS REQUIREMENT MAY BE USED. COMPACT TO 85% DENSITY PER ASTM D-1557 MODIFIED PROCTOR (OR 90% D-698 STANDARD PROCTOR).
 F. APPROVED PIPE.
 G. TRENCH DIMENSIONS AS FOLLOWS:
 PIPE DIAMETER 6" - 30" 4"
 GREATER THAN 30" 6"
 PIPE DIAMETER 6" - 30" 8"
 GREATER THAN 30" 12"

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

GENERAL NOTES:
 1. DETAIL SHOWN FOR A 3/4" SERVICE, 1" SERVICE INSTALLATION IS SIMILAR EXCEPT FOR SIZES OF PIPE, FITTING, METER AND BOX (TYPE "B").
 2. WHERE NO CURB EXISTS, METER IS TO BE SET NEAR PROPERTY LINE OR AT DESIGNATED LOCATION.
 3. 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.
 4. NO SPLICING SHALL BE ALLOWED. FULL LENGTH OF PIPING SERVICE SHALL BE INSTALLED.
 5. THE EPWU WILL FURNISH AND INSTALL THE METER.

CONSTRUCTION KEY NOTES:
 A. METER BOX TYPE "A" (SEE DETAILS 291 & 292) SHALL BE SET SLIGHTLY HIGHER THAN SURROUNDING GROUND OR AT CURB LEVEL.
 B. 3/4" ANGLE SERVICE VALVE.
 C. WATER METER (CENTER INSIDE METER BOX).
 D. WHEN REQUIRED BY EPWU, A DUAL CHECK BACKFLOW PREVENTER SHALL BE INSTALLED ON THE OUTLET SIDE OF THE METER.
 E. END FLARE OF SERVICE LINE.
 F. INLET AND OUTLET COUPLING.
 G. 3/8" COPPER SERVICE LINE (SEE NOTE 4).
 H. 5/8" X 3/4" COPPERATION STOP.
 I. PRESSURE REGULATOR (SOMETIMES LOCATED NEAR THE RESIDENCE).
 J. WATER MAIN.

STANDARD DETAIL DATE: 10/20/2000 REV: 5/24/2007 **SERVICE LINE 3/4" AND 1" INSTALLATION BY CONTRACTOR** N.T.S. **EL PASO WATER UTILITIES PUBLIC SERVICE BOARD** DETAIL No. 290-4

GENERAL NOTES:
 1. THE ENGINEER SHALL PROVIDE DESIGN FOR ALL VALVES GREATER THAN 12".
 2. COMPLY WITH REQUIREMENTS OF ANMA C-550, PROTECTIVE EPOXY INTERIOR COATINGS FOR VALVES.

CONSTRUCTION KEY NOTES:
 A. TWO NO. 5 REBAR HAIR PINS. PAINT UNEMBEDDED PORTION OF REBARS WITH TWO COATS OF COAL TAR EPOXY.
 B. CONCRETE VALVE SUPPORT, 2500 PSI. CONCRETE.
 C. APPROVED PIPE.

STANDARD DETAIL DATE: 2/1994 REV: 12/12/2011 **VALVE ANCHOR** N.T.S. **EL PASO WATER UTILITIES PUBLIC SERVICE BOARD** DETAIL No. 271

GENERAL NOTES:
 1. DETAIL DRAWING TERMINOLOGY IS IN ACCORDANCE WITH ASTM D-2321.
 2. UNLESS OTHERWISE PERMITTED BY THE ENGINEER, ALL MATERIAL IN THE EMBEDMENT ZONE SHALL BE HOMOGENEOUS.

STANDARD DETAIL DATE: 11/1992 REV: 3/28/2007 **TRENCH CROSS SECTION TERMINOLOGY** N.T.S. **EL PASO WATER UTILITIES PUBLIC SERVICE BOARD** DETAIL No. 170

GENERAL NOTES:
 1. ALL ASPHALT CUTS MUST BE SAW CUT.
 2. SOIL CEMENT SLURRY SHALL BE ALLOWED TO CURE BEFORE PAVING OR OPENING TO ALL TRAFFIC.

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

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

GENERAL NOTES:
 1. MATCHING SURFACES TO BE FINISHED OF ANY IRREGULARITIES THAT WOULD PREVENT A SNUG FIT.
 2. CASTING TO BE SMOOTH AND VOID OF AIR HOLES.
 3. METER BOX RING WEIGHT = 7 LBS.
 4. METER BOX RING MADE OF CAST IRON.

CONSTRUCTION KEY NOTES:
 A. 1/2" DIAMETER HOLES FOR ANCHORING RING TO CONCRETE METER BOX.
 B. LUG STOP.
 C. LOCKING LUG SLIDE.

STANDARD DETAIL DATE: 1/1995 REV: 8/10/2006 **METER BOX RING FOR TYPE "A" & "B" METER BOXES** N.T.S. **EL PASO WATER UTILITIES PUBLIC SERVICE BOARD** DETAIL No. 300

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

CONSTRUCTION KEY NOTES:
 A. COVER FOR WATER MAINS SHALL DEPEND ON THE PIPE SIZE AND THE FOLLOWING INSTALLATION CONDITIONS.
 CONDITION A - NORMAL LINE INSTALLATION, STREET AND DRAINAGE PROJECTS, WATERLINE RELOCATION
 CONDITION B - NEW SUBDIVISIONS, NON-PAVED AREA
 AND SHALL BE AS FOLLOWS:

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

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

GENERAL NOTES:
 1. INSTALL TO GRADE MATCHING TOP OF CURB.
 2. ANGLE VALVE SHALL BE IN LINE WITH THE INLET/OUTLET PORTS OF THE METER BOX.
 3. METER BOXES SHALL NOT BE INSTALLED UNDER SIDEWALKS, DRIVEWAYS, OR PROPOSED ABOVE GROUND STRUCTURES.
 4. WHERE NO CURBING EXIST, INSTALL BOXES IN ACCESSIBLE LOCATIONS BEYOND LIMITS OF STREET SURFACING, WALKS AND DRIVEWAYS.
 5. METER BOX RING AND COVER PER EPWU DETAILS 300 AND 301.
 6. 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.
 7. METER BOX SHALL BE SINGLE UNIT CONSTRUCTION; CONCRETE TO HAVE A MINIMUM 28 DAYS COMPRESSIVE STRENGTH OF 4000 PSI.

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

STANDARD DETAIL DATE: 4/1994 REV: 8/24/2006 **METER BOX TYPE "A" FOR 3/4" SERVICE INSTALLATION** N.T.S. **EL PASO WATER UTILITIES PUBLIC SERVICE BOARD** DETAIL No. 291

GENERAL NOTES:
 1. MATCHING SURFACES TO BE ROUGH GROUND OF ANY IRREGULARITIES THAT WOULD PREVENT A SNUG FIT.
 2. CASTING TO BE SMOOTH AND VOID OF AIR
 3. METER BOX COVER WEIGHT = 1 1/4 LBS.

CONSTRUCTION KEY NOTES:
 A. LETTERS TO BE 1" HIGH, 3/4" WIDE, 1/8" THICK
 B. LETTERS TO BE 3/4" HIGH, 3/8" WIDE, 1/8" THICK
 C. INSIDE LETTERS & RIBS 1/2" TALL
 D. OUTSIDE LETTERS 3/4" TALL
 E. REINFORCE BACK OF LUG
 F. REINFORCEMENT

STANDARD DETAIL DATE: 4/1994 REV: 8/10/2006 **METER BOX COVER FOR TYPE "A" & "B" METER BOXES** N.T.S. **EL PASO WATER UTILITIES PUBLIC SERVICE BOARD** DETAIL No. 301

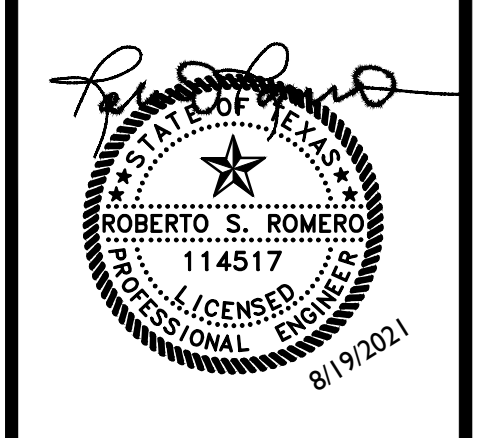
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PROJECT NO. 2002-12004-32	DESIGNED BY: KB		
DWG FILE: WDTLS	DRAWN BY: KB		
DATE: AUGUST 2021	CHECKED BY: RR		
NO.	BY	DATE	REVISION DESCRIPTION

HORIZONTE RESIDENTIAL WATER, & WASTEWATER IMPROVEMENTS

WATER DETAILS 2

NOTICE:
 ALTERATION OF A SEALED DRAWING WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS A VIOLATION OF THE TEXAS ENGINEERING PRACTICE ACT.



GENERAL NOTES:

- IN GROUND WATER CONDITIONS ONLY, P.V.C. SADDLES OR TEES ARE TO BE ENCASED WITH CLASS B CONCRETE.
- UNDER CERTAIN CONDITIONS FIELD INVESTIGATIONS WILL BE REQUIRED TO DETERMINE THE ADEQUACY OF THE DEPTH ON THE LATERAL.
- WHEN GROUND WATER IS ENCOUNTERED SERVICE RISER SHALL BE EXTENDED ABOVE ANTICIPATED WATER TABLE LEVEL.

CONSTRUCTION KEY NOTES:

- CONTRACTOR TO INSTALL SERVICE LINE FROM THE MAIN TO A LOCATION 6" BEHIND THE CURB OR 18" BEYOND THE EDGE OF PAYMENT, UNLESS CONDITIONS REQUIRE OTHERWISE.
- 16" FOR STANDARD SUBDIVISION, 3.5' FOR SUBDIVISIONS WITH ON-SITE PONDING OR FLAT TERRAIN.
- RISERS OR LATERALS EXTENDING BEYOND EXISTING PAVING SHALL BE INSTALLED TO 3.5' MINIMUM TOP OF GROUND OR PAVEMENT, UNLESS CONDITIONS REQUIRE OTHERWISE.
- PLASTIC METALLIC MARKING TAPE RISING TO WITHIN 6" OF GROUND SURFACE OR METALLIC DISK.
- WOODEN STAKE (1"x2"x36") VERTICALLY PLACED AT PLUGGED END OF PROPOSED SERVICE LINE.

STANDARD DETAIL DATE: 11/1992 REV: 1/23/2009 **SEWER SERVICE RISER AND SERVICE LINE CONNECTION** N.T.S. **el PASO WATER UTILITIES PUBLIC SERVICE BOARD** DETAIL No. 391

GENERAL NOTES:

- MATCHING SURFACES MARKED "MF" TO BE FINISHED TO ANY IRREGULARITIES THAT WOULD PREVENT A SMOOTH FIT.
- CASTING TO BE SMOOTH & VOID OF AIR HOLES.
- CASTING MUST MEET REQUIREMENTS OF AASHTO M306-07.
- AS-CAST DIMENSIONS MAY VARY $\pm 1/8"$ PER FOOT (AASHTO M306-07).
- WEIGHT MAY VARY 5% (AASHTO M306-07).

MANHOLE RING	MANHOLE - ALL TYPES	*MANHOLE TYPE A, A1, A2 & C
A	33"	25 1/2"
B	31 3/4"	24 1/4"
C	31 1/2"	23 3/4"
D	30"	22 3/4"
E	29 3/4"	22"
F	28"	21 1/4"
WEIGHT	205 lbs.	170 lbs.

*OBSOLETE - DO NOT USE (FOR REFERENCE ONLY)

STANDARD DETAIL DATE: 11/1992 REV: 2/21/2011 **SEWER MANHOLE RING** N.T.S. **el PASO WATER UTILITIES PUBLIC SERVICE BOARD** DETAIL No. 377

GENERAL NOTES:

- MATCHING SURFACES MARKED "MF" TO BE FINISHED TO ANY IRREGULARITIES THAT WOULD PREVENT A SMOOTH FIT.
- CASTING TO BE SMOOTH & VOID OF AIR HOLES.
- CASTING MUST MEET REQUIREMENTS OF AASHTO M306-07.
- AS-CAST DIMENSIONS MAY VARY $\pm 1/8"$ PER FOOT (AASHTO M306-07).
- WEIGHT MAY VARY 5% (AASHTO M306-07).

CONSTRUCTION KEY NOTES:

- LIFTING NOTCH.
- RAISED LETTERING.
- SQUARED $3/4"$ TALL) WITH $1/2"$ SPACE BETWEEN.
- REINFORCING RIBS.
- SLOT.

MANHOLE COVER	MANHOLE - ALL TYPES	*MANHOLE TYPE A, A1, A2 & C
A	31 3/4"	23 3/4"
B	28 3/4"	20 5/8"
C	24 3/4"	16 7/8"
D	21 3/4"	14 3/8"
WEIGHT	200 lbs.	165 lbs.

*OBSOLETE - DO NOT USE (FOR REFERENCE ONLY)

STANDARD DETAIL DATE: 11/1992 REV: 2/21/2011 **SEWER MANHOLE COVER** N.T.S. **el PASO WATER UTILITIES PUBLIC SERVICE BOARD** DETAIL No. 378

GENERAL NOTES:

- MANHOLE CONNECTOR SHALL BE KOR-N-SEAL OR EQUAL MEETING THE REQUIREMENTS OF ASTM C-923. CONNECTOR SHALL BE FURNISHED BY CONTRACTOR.

CONSTRUCTION KEY NOTES:

- MANHOLE CONNECTOR SHALL BE KOR-N-SEAL OR EQUAL MEETING THE REQUIREMENTS OF ASTM C-923. CONNECTOR SHALL BE FURNISHED BY CONTRACTOR.
- FLEXIBLE CONNECTOR.
- PIPE CLAMP SS 316.
- APPROVED PIPE.
- PRECAST MANHOLE BASE.
- GROUT AS REQUIRED TO FORM SMOOTH CHANNEL TO MANHOLE INVERT.
- PIPE OPENINGS/KNOCKOUTS AS REQUIRED TO FIT PIPE SIZE.
- EXPANSION BAND SS 316.
- FILL SPACE WITH GROUT.

STANDARD DETAIL DATE: 11/1992 REV: 8/13/2009 **PIPE CONNECTION TO MANHOLE** N.T.S. **el PASO WATER UTILITIES PUBLIC SERVICE BOARD** DETAIL No. 376

GENERAL NOTES:

- THE CONCRETE COLLAR SHOULD BE CAST IN-PLACE CONCRETE (MINIMUM 28 DAY COMPRESSIVE STRENGTH 4000 PSI. HIGH EARLY CONCRETE IS REQUIRED).
- TOPS OF CONCRETE COLLAR SHALL BE FLUSH WITH ROADWAY SURFACE OR FINISHED GRADE UNLESS OTHERWISE SPECIFIED BY THE ENGINEER.
- ANY DISTURBED SURFACE UNDER THE CONCRETE COLLAR SHALL BE COMPACTED TO 95% DENSITY $\pm 3\%$ OPTIMUM MOISTURE CONTENT IN ACCORDANCE WITH ASTM D-1557.
- ANY DISTURBED BASE COARSE UNDER THE CONCRETE COLLAR SHALL BE COMPACTED TO 100% DENSITY $\pm 2\%$ OPTIMUM MOISTURE CONTENT IN ACCORDANCE WITH ASTM D-1557.
- PROVIDE A MINIMUM OF 1" OF CONCRETE COVER FOR ALL REINFORCING STEEL.
- REINFORCING SHALL MEET ASTM C-478 AND TRAFFIC LOADING (HS-20).
- NO. 3 REINFORCING STEEL HOOPS SHALL BE SPACED EQUALLY.

CONSTRUCTION KEY NOTES:

- #3 REINFORCING STEEL TYP.
- CONCRETE COLLAR.
- #3 REINFORCING STEEL EQUALLY SPACED.
- PAVEMENT.
- COMPACTED SUBGRADE.

"D" DIAMETER OF PENETRATION	NUMBER OF #3 REINFORCING STEEL BARS	*"A" MINIMUM CONCRETE HORIZONTAL DIMENSION FROM PENETRATION	"B" MINIMUM CLEARANCE FROM EDGE OF CONCRETE COLLAR TO CENTER OF NEAREST REBAR	"C" MINIMUM CLEARANCE FROM PENETRATION EDGE TO CENTER OF NEAREST REBAR
0" TO 4"	1	6"	1 1/2"	4 1/2"
4.1" TO 8"	2	6"	1 1/2"	1 1/2"
8.1" AND OVER	3	9"	1 1/2"	1 1/2"

STANDARD DETAIL DATE: 8/9/2006 REV: 11/6/2008 **CONCRETE COLLAR INSTALLATION IN PAVED AREAS** N.T.S. **el PASO WATER UTILITIES PUBLIC SERVICE BOARD** DETAIL No. 184-1

GENERAL NOTES:

- MANHOLE TYPE "A" SHALL BE USED FOR LINES 21" AND SMALLER.
- PRE-CAST MANHOLE SECTIONS SHALL BE OF REINFORCED CONCRETE CONFORMING TO ASTM C-478 AND SHALL MEET HS-20 LOADING. PROVIDE REINFORCEMENT WITHIN 3" OF OPENINGS OR KNOCKOUTS. OPENINGS (UP TO 6") MADE IN FIELD SHALL BE CORE DRILLED.
- CEMENT SHALL BE TYPE I-II, PER ASTM C-150, AND MUST CONTAIN A MINIMUM OF 4% FLY ASH OF THE TOTAL MANHOLE WEIGHT.
- THE BASE & RISER SHALL BE INTERNALLY CAST. CONCRETE SHALL BE MIN. 28 DAY COMPRESSIVE STRENGTH 4000PSI.
- MANUFACTURER TO PROVIDE LIFTERS OF ADEQUATE SIZE AS NEEDED.
- THE SUBGRADE UNDER THE BASE SHALL BE COMPACTED TO 95% DENSITY IN ACCORDANCE WITH ASTM D-1557.
- MANHOLES BELOW GROUNDWATER TO BE EXTERNALLY AND INTERNALLY COATED WITH BITUMINOUS COATING.

CONSTRUCTION KEY NOTES:

- MANHOLE RING AND COVER (SEE DETAILS 377 & 378). SET FRAME AND COVER FLUSH WITH ROADWAY SURFACE OR FINISHED GRADE (SEE DETAIL 185).
- ALL JOINTS TO BE TONGUE, GROOVE AND SEALED WITH RAM-NEK OR APPROVED EQUAL.
- PIPE OPENINGS/KNOCKOUTS AS REQUIRED TO FIT PIPE SIZE AND SHALL HAVE FLEXIBLE PIPE TO MANHOLE CONNECTORS (COMPRESSION TYPE ASTM-923), "KOR-N-SEAL" OR APPROVED EQUAL. GROUT AS REQUIRED.
- CONCRETE BASE SHALL BE 8" FOR MH'S UP TO 12" DEEP AND 12" FOR DEPTHS GREATER THAN 12".

STANDARD DETAIL DATE: 11/1992 REV: 2/8/2013 **MANHOLE TYPE "A"** N.T.S. **el PASO WATER UTILITIES PUBLIC SERVICE BOARD** DETAIL No. 370-1

GENERAL NOTES:

- DROP CONNECTION SHOWN MAY BE USED ON ALL MANHOLE TYPES (NOT RECOMMENDED IN GROUND WATER CONDITIONS).
- DROP CONNECTION TO BE CONSTRUCTED WHEN INVERT ELEVATION OF INFLUENT PIPE IS 3 FEET (OR GREATER) ABOVE THE MANHOLE INVERT.

CONSTRUCTION KEY NOTES:

- PIPE OPENINGS IN MANHOLE RISERS SHALL HAVE COMPRESSION TYPE FLEXIBLE PIPE TO MANHOLE CONNECTORS (A.S.T.M. - C923) "KOR-N-SEAL" OR APPROVED EQUAL.
- MANHOLE WALL.
- INFLUENT SEWER PIPE.
- 90° BEND (P.V.C.)
- P.V.C. PIPE (SDR 35)
- P.V.C. TEE
- CONCRETE FLOWABLE FILL
- 2500 PSI CONCRETE
- USE GROUT TO FORM A SMOOTH CHANNEL TO MANHOLE INVERT

STANDARD DETAIL DATE: 3/18/1998 REV: 6/19/2009 **DROP CONNECTION - EXTERNAL MANHOLE INSTALLATION** N.T.S. **el PASO WATER UTILITIES PUBLIC SERVICE BOARD** DETAIL No. 375-1

GENERAL NOTES:

- INSTALLATION FOR APPROVED CARRIER PIPE.
- CASING SHALL BE INSTALLED USING EITHER JACKING, BORING OR TUNNELING METHODS FROM THE END WHICH CREATES A MINIMUM OF ACCESS AND RELOCATION PROBLEMS.
- INSULATED SPACERS SHALL BE USED WHEN SPECIFIED, TO PROVIDE CORROSION PROTECTION.
- PRECAUTIONARY OUTLET (6") WITH BONNET BOX AND COVER SHALL BE USED WHEN REQUIRED BY OTHER GOVERNING AGENCIES.

CONSTRUCTION KEY NOTES:

- STEEL CASING MINIMUM YIELD 36000 PSI, SIZE AND LENGTH AS SPECIFIED.
- CASING INSULATORS, SPACING AND LOCATION PER MANUFACTURER'S RECOMMENDATIONS. INSULATORS SHALL FIT SNUG OVER THE CARRIER PIPE.
- POSITION CARRIER PIPE APPROXIMATELY IN CENTER OF CASING. MINIMUM SPACING BETWEEN INSULATOR AND CARRIER PIPE SHALL BE 1". MAXIMUM SPACING SHALL BE 2".
- END SHALL BE SEALED WITH BRICK AND MORTAR, BULKHEAD OR GROUT, OR WITH SYNTHETIC RUBBER SEAL, AS SPECIFIED.
- ANNULAR SPACE SHALL BE LEFT OPEN FOR CATHODICALLY PROTECTED SYSTEM WHERE BOTH CASING AND CARRIER PIPE ARE METALLIC MATERIAL, OR AS OTHERWISE SPECIFIED.
- PRESSURE GROUT ANNULAR SPACE OUTSIDE CASING AFTER CASING IS INSTALLED.
- BONNET BOX AND COVER (SEE DETAILS 268, 269-1 & 269-2) SET FRAME AND COVER FLUSH WITH ROADWAY SURFACE OR FINISHED GRADE (SEE DETAIL 260).

STANDARD DETAIL DATE: 3/1994 REV: 1/7/2013 **CARRIER PIPE INSTALLATION WITH CASING INSULATORS** N.T.S. **el PASO WATER UTILITIES PUBLIC SERVICE BOARD** DETAIL No. 180

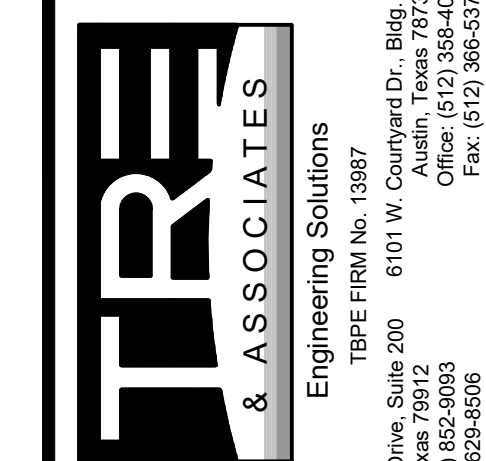
GENERAL NOTES:

- NEW OR EXISTING POTABLE WATER AND SANITARY SEWER MAINS.
- SEPARATION DISTANCES SHALL FOLLOW TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ) REQUIREMENTS.

CONSTRUCTION KEY NOTES:

- WHEN STAGGERED (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 §300.44(a)(4)).
 - CASE 2: NEW POTABLE WATER MAIN CROSSING EXISTING GRAVITY SANITARY SEWER MAIN OR EXISTING FORCE MAIN (PER TCEQ §300.44(b)(6)) AND §300.44(b)(7).
 - CASE 3: NEW POTABLE WATER MAIN CROSSING NEW GRAVITY SANITARY SEWER MAIN OR NEW FORCE MAIN (PER TCEQ §300.44(b)(8)).
 - CASE 4: NEW POTABLE WATER MAIN CROSSING NEW GRAVITY SANITARY SEWER MAIN OR NEW FORCE MAIN (PER TCEQ §300.44(b)(9)).
 - CASE 5: NEW GRAVITY SANITARY SEWER MAIN OR NEW FORCE MAIN CROSSING NEW POTABLE WATER MAIN (PER TCEQ §300.44(b)(10)).

STANDARD DETAIL DATE: 8/3/2006 REV: 8/21/2007 **SEPARATION DISTANCE SANITARY SEWER AND POTABLE WATER (SPECIAL CONDITIONS)** N.T.S. **el PASO WATER UTILITIES PUBLIC SERVICE BOARD** DETAIL No. 161

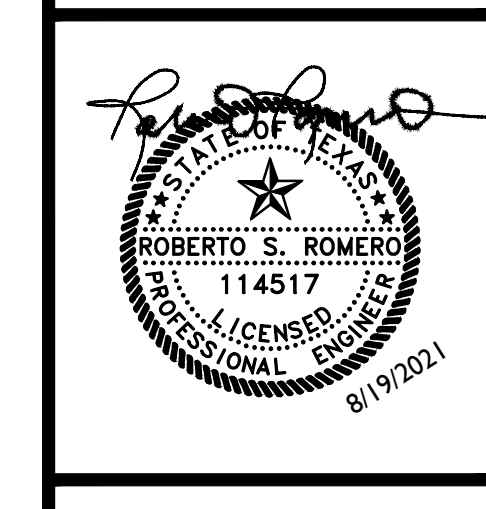


DESIGNED BY: KB
DRAWN BY: KB
CHECKED BY: RR
NO. BY DATE REVISION DESCRIPTION

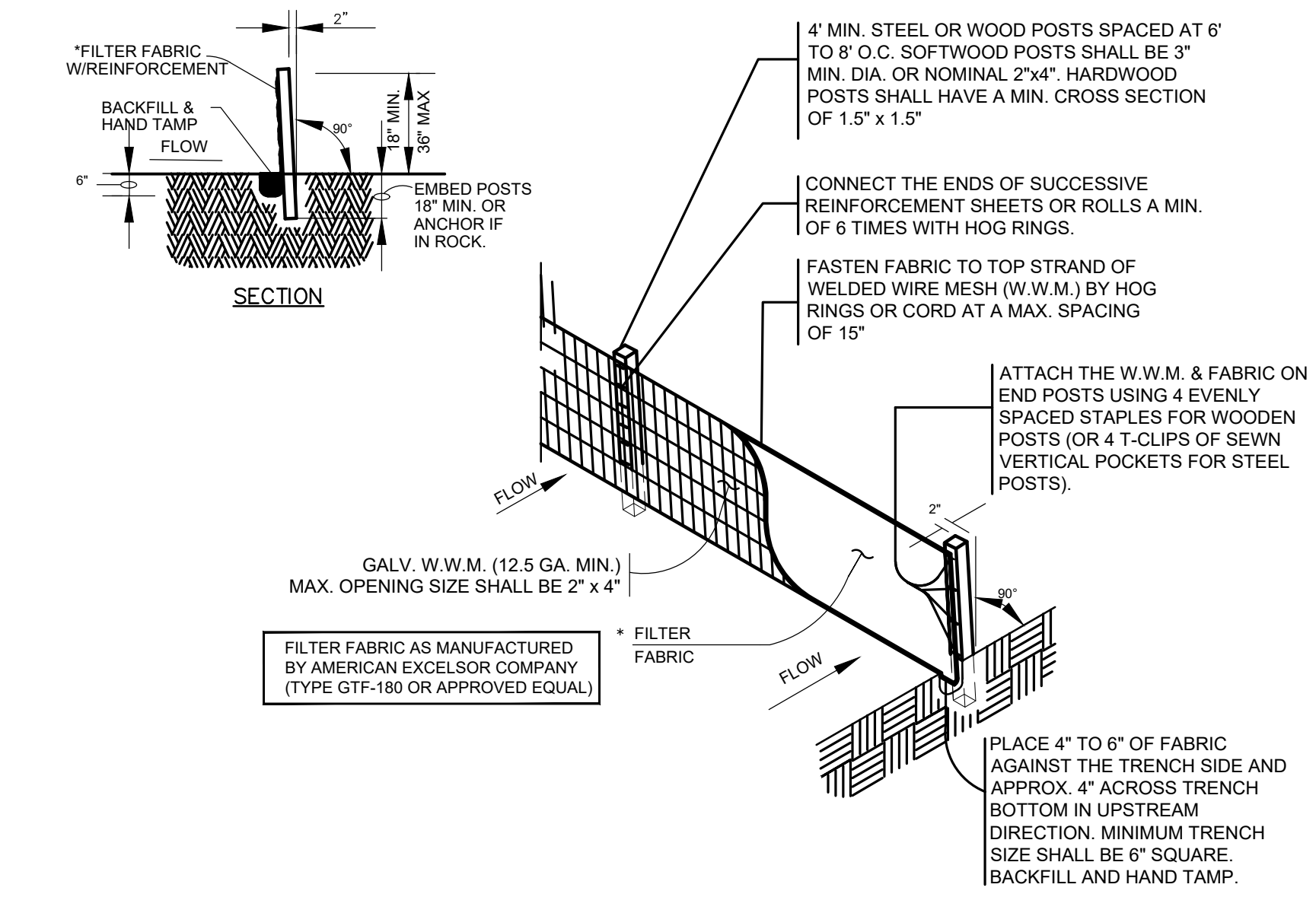
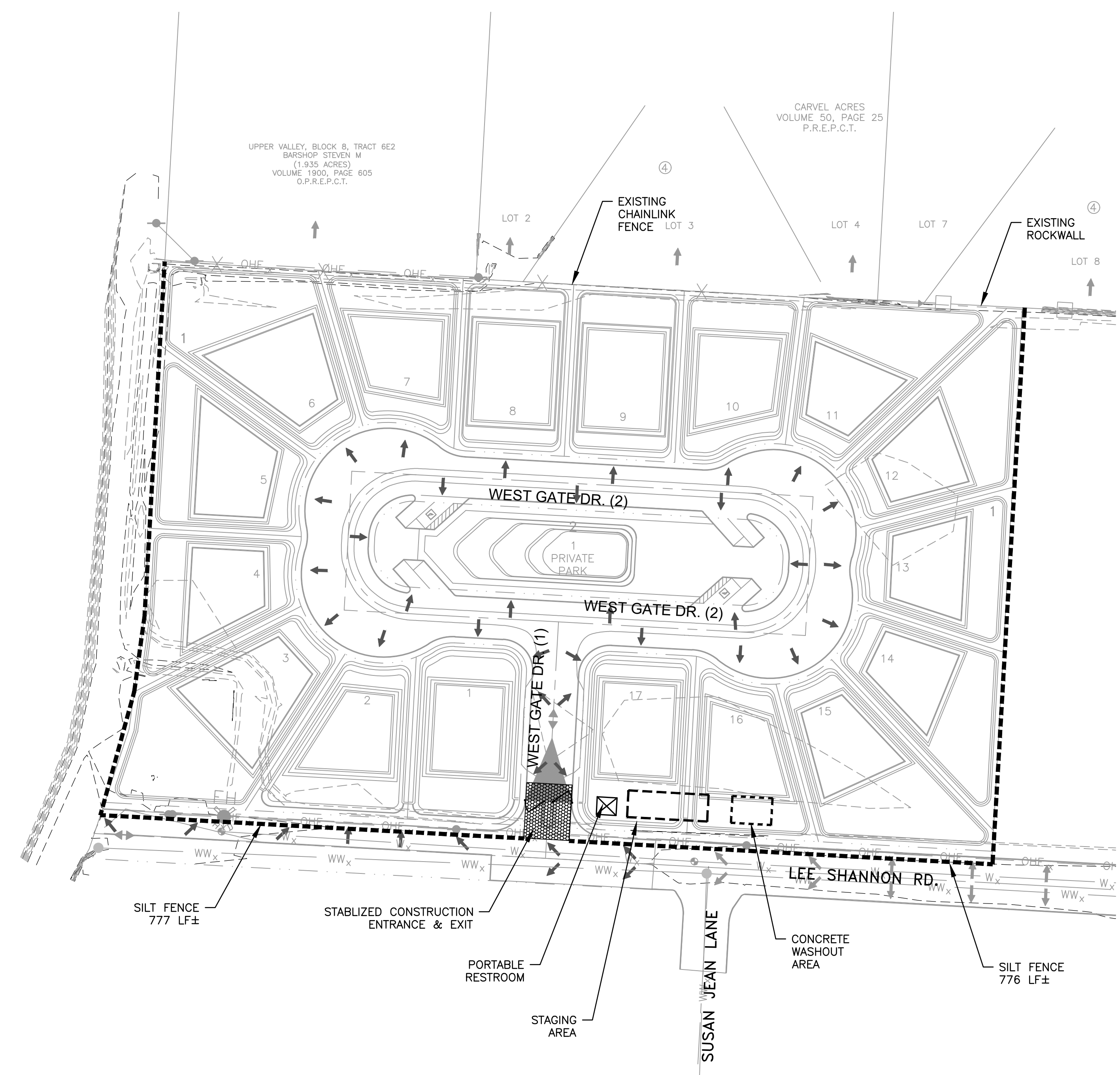
HORIZONTE RESIDENTIAL STREET, DRAINAGE, WATER, & WASTEWATER IMPROVEMENTS

WATER & WASTEWATER DETAILS

NOTICE: ALTERATION OF A SEALED DRAWING WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS A VIOLATION OF THE TEXAS ENGINEERING PRACTICE ACT.



FILE: P:\2002 Punto Living, LLC\12004 - Horizonte Residential\CAD\Sheets\SWPPP.dwg LAYOUT: STORMWATER POLLUTION PREVENTION PLAN & DETAILS DATE: 8/19/2021 9:20:14 AM BY: KBARRAZA



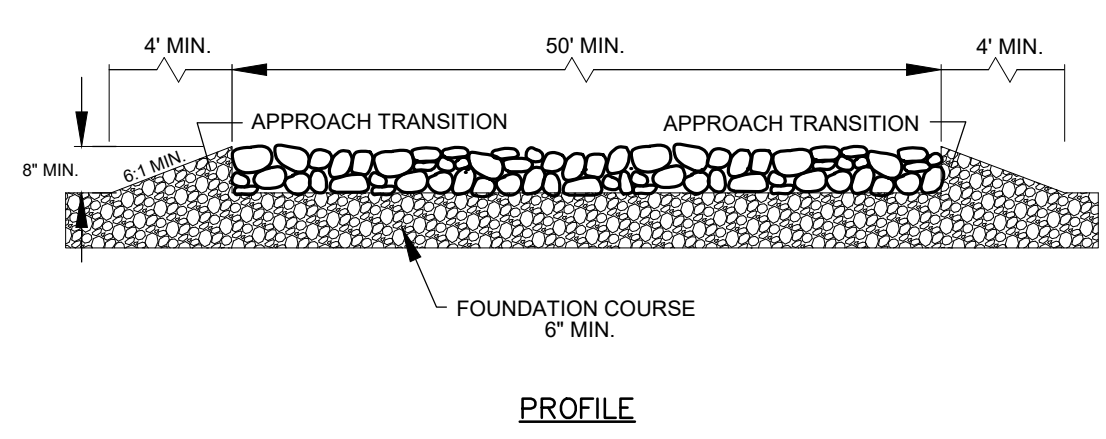
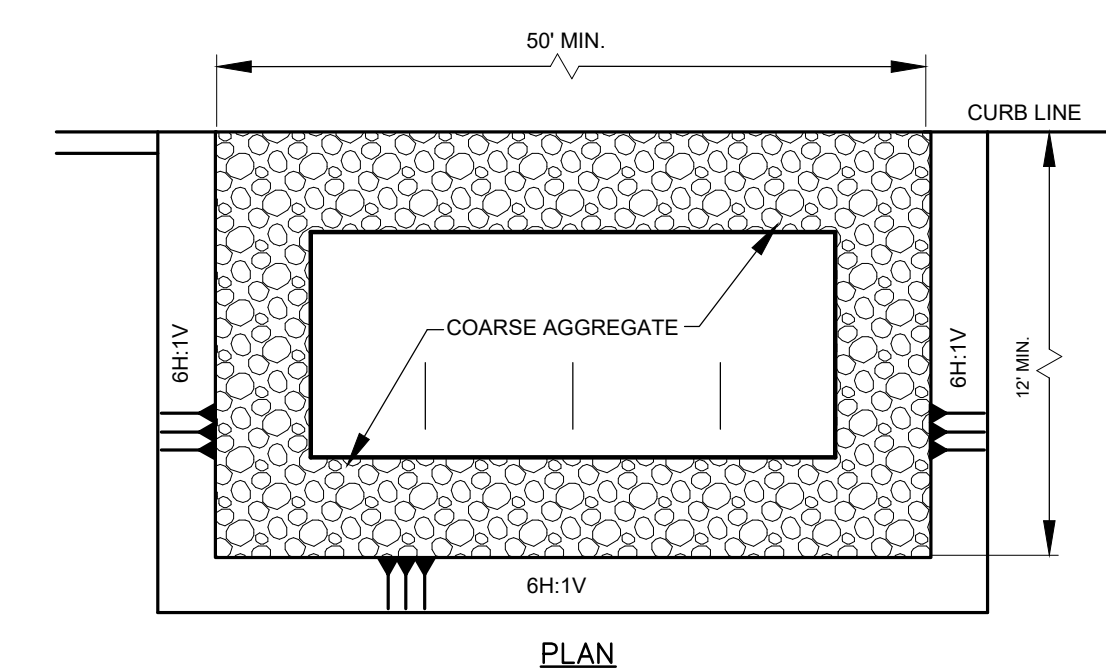
- NOTES:**
1. THE LENGTH OF THE TYPE 1 CONSTRUCTION EXIT SHALL BE AS INDICATED ON THE PLANS, BUT NOT LESS THAN 50'.
 2. THE COARSE AGGREGATE SHOULD BE OPEN GRADED WITH A SIZE OF 4" TO 8".
 3. THE APPROACH TRANSITIONS SHOULD BE NO STEEPER THAN 6:1 AND CONSTRUCTED AS DIRECTED BY THE ENGINEER.
 4. THE CONSTRUCTION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

SEDIMENT CONTROL FENCE USAGE GUIDELINES

A SEDIMENT CONTROL FENCE MAY BE CONSTRUCTED NEAR THE DOWNSTREAM PERIMETER OF A DISTURBED AREA ALONG A CONTOUR TO INTERCEPT SEDIMENT FROM OVERLAND RUNOFF. A 2 YEAR STORM FREQUENCY MAY BE USED TO CALCULATE THE FLOW RATE TO BE FILTERED.

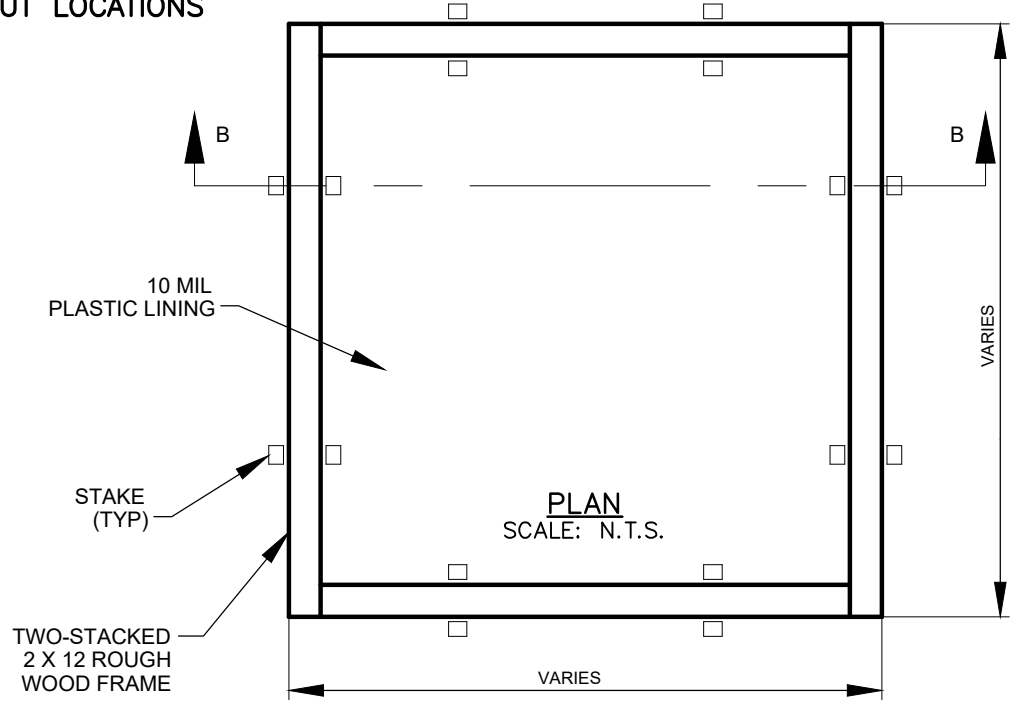
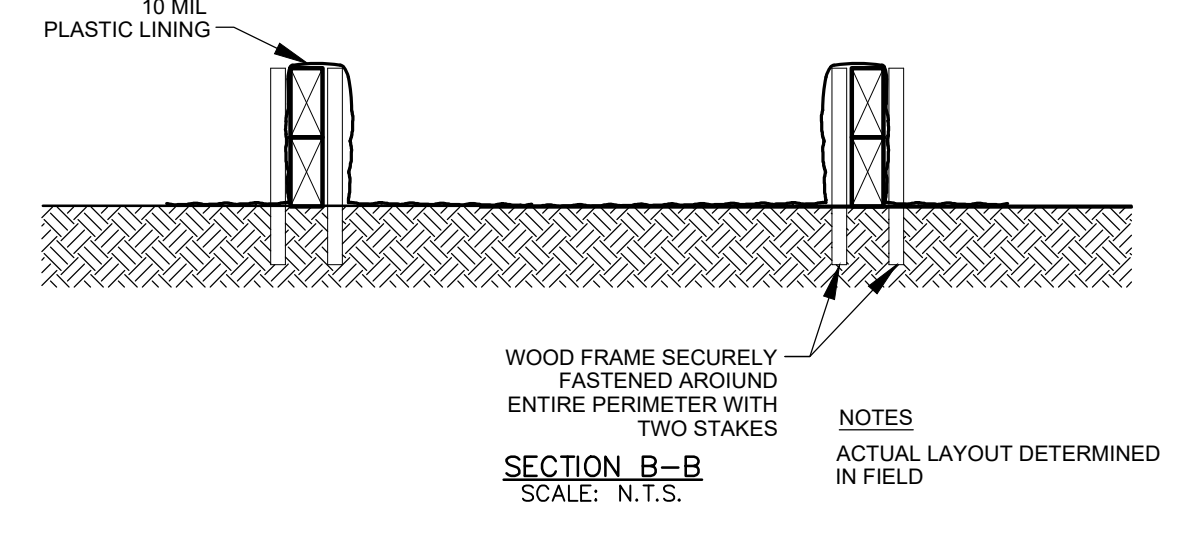
SEDIMENT CONTROL FENCE SHOULD BE SIZED TO FILTER A MAX. FLOW THROUGH RATE OF 0.22 CFS/FT. SEDIMENT CONTROL FENCE IS NOT RECOMMENDED TO CONTROL EROSION FROM A DRAINAGE AREA LARGER THAN 2 ACRES.

TEMPORARY SEDIMENT CONTROL FENCE
SCALE: N.T.S.

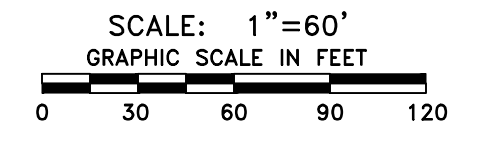


CONSTRUCTION EXIT (TYPE 1)
SCALE: N.T.S.

CONCRETE WASHOUT AREAS SHALL BE REQUIRED AND SHALL CONSIST OF A PIT, LINED WITH AN IMPERVIOUS MATERIAL, OF SUFFICIENT SIZE TO CONTAIN, UNTIL EVAPORATION, ALL WATER USED AND WASHOUT MATERIAL PRODUCED DURING CONCRETE WASHOUT OPERATIONS. THE CONCRETE WASHOUT LOCATIONS SHALL BE DIRECTED BY THE ENGINEER.

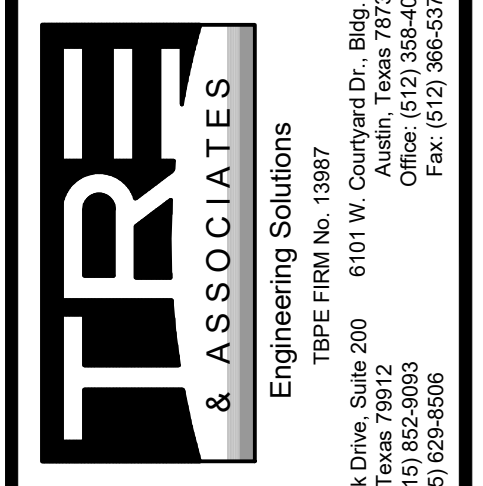


CONCRETE WASHOUT DETAIL
SCALE: N.T.S.



LEGEND

- SILT FENCE
- ▨ STABILIZED CONSTRUCTION ENTRANCE/EXIT
- ↑ DIRECTION OF FLOW
- STAGING AREA
- ▭ CONCRETE WASHOUT AREA
- ⊠ PORTABLE RESTROOM



PROJECT NO. 2002-12004-32	DESIGNED BY: KB		
DWG FILE: SWPPP	DRAWN BY: KB		
DATE: AUGUST 2021	CHECKED BY: RR		
NO.	BY	DATE	REVISION DESCRIPTION

HORIZONTE RESIDENTIAL STREET, DRAINAGE, WATER, & WASTEWATER IMPROVEMENTS

STORMWATER POLLUTION PREVENTION PLAN & DETAILS

NOTICE:
ALTERATION OF A SEALED DRAWING WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS A VIOLATION OF THE TEXAS ENGINEERING PRACTICE ACT.



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I. SITE DESCRIPTION

PROJECT LOCATION NAME AND LIMITS: LEE SHANNON SUBDIVISION IMPROVEMENTS. THIS PROJECT SITE IS LOCATED WITHIN THE CITY LIMITS OF EL PASO, TEXAS APPROX. 0.1 MILES EAST OF SUNLAND PARK, NEW MEXICO. PROJECT DESCRIPTION: SITE IMPROVEMENTS WILL INCLUDE GRADING IMPROVEMENTS. EXISTING CONDITIONS: THE PROJECT SITE IS CURRENTLY VACANT. THE SITE TERRAIN CONSISTS OF DESERT SAND AND WEED VEGETATION. MAJOR SOIL DISTURBING ACTIVITIES: SOIL DISTURBING ACTIVITIES WILL CONSIST OF EXCAVATING, TRENCHING, AND BACKFILLING FOR CONSTRUCTION OF STREET, DRAINAGE AND UTILITY IMPROVEMENTS. TOTAL PROJECT AREA: 6.724 ± TOTAL AREA TO BE DISTURBED: WEIGHTED RUNOFF COEFFICIENT (AFTER CONSTRUCTION) 0.60 EXISTING CONDITION OF SOIL AND VEGETATIVE COVER AND % OF EXISTING VEGETATIVE COVER: THE SITE IS IRREGULAR WITH SPARSE VEGETATION. THE SOILS ENCOUNTERED AT THE SITE CONSIST MAINLY OF SILTY SOILS.

II. SOURCES OF POLLUTION

A. CONTRACTOR MUST IDENTIFY ALL POTENTIAL SOURCES OF POLLUTION THAT MAY AFFECT STORM WATER RUNOFF. X PORTABLE RESTROOMS X FUEL TANKS X STAGING AREA WASTE CONTAINERS CONCRETE CURE PAINT NONE OTHER: SEQUENCE OF CONSTRUCTION ACTIVITIES AND SCHEDULE OF IMPLEMENTATION: MAJOR ACTIVITY (REF: COP 3.4A) ESTIMATED DATE BMP IMPLEMENTATION FORECAST WEATHER SET UP SWPPP COMPLETE GRADING COMPLETE DRAINAGE REMOVE SWPPP OPERATOR RESPONSIBLE FOR CONTROL MEASURE IMPLEMENTATION: OPERATOR TO RECORD IF AND WHEN CONSTRUCTION TEMPORARILY OR PERMANENTLY CEASES.

B. POLLUTANT SOURCES OTHER THAN CONSTRUCTION ACTIVITIES: CONCRETE PLANT ASPHALT PLANT INDUSTRIAL ACTIVITY X NONE OTHER:

C. ALLOWABLE SOURCE OF NON-STORM WATER DISCHARGE MANAGEMENT: NON-STORM WATER DISCHARGES TO BE ELIMINATED OR REDUCED TO THE EXTENT FEASIBLE: DISCHARGES FROM FIRE-FIGHTING ACTIVITIES. FIRE HYDRANT FLUSHINGS. WATERS USED TO WASH VEHICLES WHERE DETERGENTS ARE NOT USED. WATER USED TO CONTROL DUST IN ACCORDANCE WITH SUBPART 3.4.G. POTABLE WATER INCLUDING UNCONTAMINATED WATER LINE FLUSHINGS. ROUTINE EXTERNAL BUILDING WASH DOWN THAT DOES NOT USE DETERGENTS. PAVEMENT WASH WATERS WHERE SPILLS OR LEAKS OF TOXIC OR HAZARDOUS MATERIALS HAVE NOT OCCURRED (UNLESS ALL SPILLED MATERIAL HAS BEEN REMOVED) AND WHERE DETERGENTS ARE NOT USED. UNCONTAMINATED AIR CONDITIONING OR COMPRESSOR CONDENSATE. UNCONTAMINATED GROUND WATER OR SPRING WATER. FOUNDATION OR FOOTING DRAINS WHERE FLOWS ARE NOT CONTAMINATED WITH PROCESS MATERIALS SUCH AS SOLVENTS. UNCONTAMINATED EXCAVATION DEWATERING. LANDSCAPE IRRIGATION.

POLLUTION PREVENTION MEASURES FOR NON-STORM WATER DISCHARGES SHALL INCLUDE: TEMPORARY DESILTING BERMS TEMPORARY SILT FENCES TEMPORARY STILLING BASIN OTHER:

III. BEST MANAGEMENT PRACTICE (BMPs)

Table with 4 columns: Activity, Interim, Permanent, Other. Rows include: A. EROSION & SEDIMENT CONTROL STABILIZATION PRACTICES (Temporary Seeding, Permanent Planting, etc.), B. STRUCTURAL CONTROL PRACTICES (Silt Fences, Hay Bales, etc.), C. WASTE MATERIALS, D. HAZARDOUS WASTE, E. SANITARY WASTE, F. SPILL PREVENTION.

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

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

E. 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 DISPOSAL SHALL BE THE RESPONSIBILITY OF THE SANITARY CONTRACTOR.

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

1. 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 OF THE CONTAINER, F. FOLLOW MANUFACTURERS RECOMMENDATIONS FOR PROPER USE AND DISPOSAL

2. 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.

3. PETROLEUM PRODUCTS: ALL ON-SITE VEHICLES SHALL BE MONITORED FOR LEAKS AND RECEIVE REGULAR PREVENTIVE MAINTENANCE TO REDUCE THE CHANCE OF LEAKAGE. WHEN FLUIDS ARE CHANGED, THE REMOVED FLUIDS AND FILTERS MUST BE DISPOSED OF PROPERLY. TIGHTLY SEALED CONTAINERS WHICH ARE CLEARLY LABELED. ANY ASPHALT SUBSTANCES USED ON-SITE SHALL BE APPLIED ACCORDING TO THE MANUFACTURER'S RECOMMENDATION.

G. SPILL CONTROL PRACTICES: A. MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEANUP SHALL BE CLEARLY POSTED AND SITE PERSONNEL SHALL BE MADE AWARE OF THE PROCEDURES; B. MATERIALS AND EQUIPMENT NECESSARY FOR 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 SHALL BE WORN; E. ANY SPILL SHALL BE REPORTED TO THE APPROPRIATE GOVERNMENTAL AGENCY; F. MEASURES SHALL BE TAKEN TO PREVENT A SPILL FROM REOCCURRING.

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

I. OFF-SITE VEHICLE TRACKING: IN ADDITION TO THE STABILIZED CONSTRUCTION ENTRANCES, THE FOLLOWING MEASURES SHALL BE OBSERVED DURING CONSTRUCTION: HAIL ROADS SHALL BE DAMPENED FOR DUST CONTROL LOADED HAUL TRUCKS SHALL BE COVERED WITH TARPULVIN EXCESS DIRT ON ROAD SHALL BE REMOVED DAILY STABILIZED CONSTRUCTION ENTRANCE OTHER:

J. VELOCITY DISSIPATION DEVICES MUST BE PLACED AT DISCHARGE LOCATIONS AND ALONG THE LENGTH OF ANY OUTFALL CHANNEL TO PROVIDE A NON-EROSIVE FLOW VELOCITY FROM THE STRUCTURE TO A WATER COURSE SO THAT THE NATURAL PHYSICAL AND BIOLOGICAL CHARACTERISTICS AND FUNCTIONS ARE MAINTAINED AND PROTECTED (E.G., NO SIGNIFICANT CHANGES IN THE HYDROLOGICAL REGIME OF THE RECEIVING WATER).

K. ALL CONTROL MEASURES MUST BE PROPERLY SELECTED, INSTALLED, AND MAINTAINED IN ACCORDANCE WITH ANY RELEVANT MANUFACTURER SPECIFICATIONS AND GOOD ENGINEERING PRACTICES. IF PERIODIC INSPECTIONS OR OTHER INFORMATION INDICATES A CONTROL HAS BEEN USED INAPPROPRIATELY, OR INCORRECTLY, THE OPERATOR MUST REPLACE OR MODIFY THE CONTROL FOR SITE SITUATIONS AS SOON AS PRACTICABLE.

L. IF SEDIMENT ESCAPES THE CONSTRUCTION SITE, OFF-SITE ACCUMULATIONS OF SEDIMENT MUST BE REMOVED AT A FREQUENCY SUFFICIENT TO MINIMIZE OFF-SITE IMPACTS. M. LITTER, CONSTRUCTION DEBRIS, AND CONSTRUCTION CHEMICALS THAT COULD BE EXPOSED TO STORM WATER MUST BE PREVENTED FROM BECOMING A POLLUTANT SOURCE IN STORM WATER DISCHARGES (E.G. SCREENING OUTFALLS, PICKUP DAILY, ETC.)

N. EXCEPT AS PROVIDED BELOW, STABILIZATION MEASURES MUST BE INITIATED AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED.

- 1. WHERE STABILIZATION BY THE 14TH DAY IS PRECLUDED BY SNOW COVER OR FROZEN GROUND CONDITIONS, STABILIZATION MEASURES MUST BE INITIATED AS SOON AS PRACTICABLE. 2. WHERE CONSTRUCTION ACTIVITY ON A PORTION OF THE SITE IS TEMPORARILY CEASED, AND EARTH DISTURBING ACTIVITIES WILL BE RESUMED WITHIN 14 DAYS, TEMPORARY STABILIZATION MEASURES DO NOT HAVE TO BE INITIATED ON THAT PORTION OF THE SITE. 3. IN ARID, SEMIARID, AND DROUGHT-STRIKEN AREAS WHERE INITIATING PERENNIAL VEGETATIVE STABILIZATION MEASURES IS NOT POSSIBLE WITHIN 14 DAYS AFTER CONSTRUCTION ACTIVITY HAS TEMPORARILY OR PERMANENTLY CEASED, FINAL VEGETATIVE STABILIZATION MEASURES MUST BE INITIATED AS SOON AS PRACTICABLE.

IV. INSPECTIONS

A. INSPECTIONS MUST BE CONDUCTED IN ACCORDANCE WITH ONE OF THE TWO SCHEDULES LISTED BELOW. CONTRACTOR TO SPECIFY WHICH SCHEDULE WILL BE FOLLOWED. AT LEAST ONCE EVERY 7 CALENDAR DAYS, OR AT LEAST ONCE EVERY 14 CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A STORM EVENT OF 0.5 INCHES OR GREATER. OTHER: IF WAIVER, STATE PERIOD (BEGINNING AND ENDING DATES):

B. INSPECTIONS MUST BE CONDUCTED BY QUALIFIED PERSONNEL (PROVIDED BY THE OPERATOR OR COOPERATIVELY BY MULTIPLE OPERATORS). "QUALIFIED PERSONNEL" MEANS A PERSON KNOWLEDGEABLE IN THE PRINCIPLES AND PRACTICE OF EROSION AND SEDIMENT CONTROLS WHO POSSESSES THE SKILLS TO ASSESS CONDITIONS AT THE CONSTRUCTION SITE THAT COULD IMPACT STORM WATER QUALITY AND TO ACCESS THE EFFECTIVENESS OF ANY SEDIMENT AND EROSION CONTROL MEASURES SELECTED TO CONTROL THE QUALITY OF STORM WATER DISCHARGES FROM THE CONSTRUCTION ACTIVITY.

C. OPERATOR MUST HAVE A COPY OF THE SWPPP AVAILABLE AT A CENTRAL LOCATIONS ON-SITE FOR THE USE OF ALL THOSE IDENTIFIED AS HAVING RESPONSIBILITIES UNDER THE SWPPP WHENEVER THEY ARE ON THE CONSTRUCTION SITE. IF AN ON-SITE LOCATION IS UNAVAILABLE TO STORE THE SWPPP WHEN NO PERSONNEL ARE PRESENT, NOTICE OF THE PLAN'S LOCATION MUST BE POSTED NEAR THE MAIN ENTRANCE AT THE CONSTRUCTION SITE.

D. INSPECTIONS MUST INCLUDE ALL AREAS OF THE SITE DISTURBED BY CONSTRUCTION ACTIVITY AND AREAS USED FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION. INSPECTORS MUST LOOK FOR EVIDENCE OF, OR THE POTENTIAL FOR, POLLUTANTS ENTERING THE STORM WATER CONVEYANCE SYSTEM.

E. SEDIMENTATION AND EROSION CONTROL MEASURES IDENTIFIED IN THE SWPPP MUST BE OBSERVED TO ENSURE PROPER OPERATION. F. DISCHARGE LOCATIONS MUST BE INSPECTED TO ASCERTAIN WHETHER EROSION CONTROL MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT IMPACTS TO WATERS OF THE UNITED STATES.

G. WHERE DISCHARGE LOCATIONS ARE INACCESSIBLE, NEARBY DOWNSTREAM LOCATIONS MUST BE INSPECTED TO THE EXTENT THAT SUCH INSPECTIONS ARE PRACTICABLE. H. LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE MUST BE INSPECTED FOR EVIDENCE OF OFF-SITE SEDIMENT TRACKING.

I. FOR EACH INSPECTION REQUIRED ABOVE, THE OPERATOR MUST COMPLETE AN INSPECTION REPORT. AT A MINIMUM, THE INSPECTION REPORT MUST INCLUDE:

- 1. THE INSPECTION DATE; 2. NAMES, TITLES AND QUALIFICATIONS OF PERSONNEL MAKING THE INSPECTION; 3. WEATHER INFORMATION FOR THE PERIOD SINCE THE LAST INSPECTION (OR SINCE COMMENCEMENT OF CONSTRUCTION ACTIVITY IF THE FIRST INSPECTION) INCLUDING A BEST ESTIMATE OF THE BEGINNING OF EACH STORM EVENT, DURATION OF EACH STORM EVENT, APPROXIMATE AMOUNT OF RAINFALL FOR EACH STORM EVENT (IN INCHES), AND WHETHER ANY DISCHARGES OCCURRED; 4. WEATHER INFORMATION AND A DESCRIPTION OF ANY DISCHARGES OCCURRING AT THE TIME OF THE INSPECTION; 5. LOCATION(S) OF DISCHARGES OF SEDIMENT OR OTHER POLLUTANTS FROM THE SITE; 6. LOCATION(S) OF BMPs THAT NEED TO BE MAINTAINED; 7. LOCATION(S) OF BMPs THAT FAILED TO OPERATE AS DESIGNED OR PROVIDED INADEQUATE FOR A PARTICULAR LOCATION; 8. LOCATION(S) WHERE ADDITIONAL BMPs ARE NEEDED THAT DID NOT EXIST AT THE TIME OF INSPECTION; AND 9. CORRECTIVE ACTION REQUIRED INCLUDING ANY CHANGES TO THE SWPPP NECESSARY AND IMPLEMENTATION DATES. J. A RECORD OF EACH INSPECTION AND OF ANY ACTIONS TAKEN IN ACCORDANCE WITH THIS PART MUST BE RETAINED AS PART OF THE SWPPP FOR AT LEAST THREE YEARS FROM THAT DATE THAT PERMIT COVERAGE EXPIRES OR IS TERMINATED. K. THE INSPECTION REPORTS MUST IDENTIFY ANY INCIDENTS OF NON-COMPLIANCE WITH THE PERMIT CONDITIONS. WHERE A REPORT DOES NOT IDENTIFY ANY INCIDENTS OF NON-COMPLIANCE, THE REPORT MUST CONTAIN A CERTIFICATION THAT THE CONSTRUCTION PROJECT OR SITE IS IN COMPLIANCE WITH THE SWPPP AND THIS PERMIT. THE REPORT MUST BE SIGNED IN ACCORDANCE WITH NPDES REGULATIONS.

V. POSTING REQUIREMENTS

A. OPERATOR SHALL POST COPY OF PERMIT, SIGNED AND CERTIFIED NOTICE OF INTENT (NOI) THAT WAS SUBMITTED TO EPA IN CONJUNCTION WITH APPROVED SWPPP. B. UPON RECEIPT, A COPY OF THE LETTER FROM THE EPA STORM WATER NOTICE PROCESSING CENTER NOTIFYING OF THEIR RECEIPT OF THE ADMINISTRATIVELY COMPLETE NOI MUST ALSO BE INCLUDED AS A COMPONENT OF THIS SWPPP. C. THE OPERATOR IS RESPONSIBLE FOR UNDERSTANDING, COMPLYING AND IMPLEMENTING THE LOCAL, STATE AND FEDERAL PERMIT REQUIREMENTS OF THE STORM WATER DISCHARGE ELIMINATION SYSTEM. STATE PERMIT LANGUAGE SHALL BE AVAILABLE WITH THIS SWPPP. D. IT IS THE RESPONSIBILITY OF THE OPERATOR TO SUBMIT A COMPLETE AND ACCURATE NOTICE OF TERMINATION (N.O.T.). SUBMIT A N.O.T. AFTER ONE OR MORE OF THE FOLLOWING CONDITIONS HAVE BEEN MET:

- 1. FINAL STABILIZATION HAS BEEN ACHIEVED ON ALL PORTIONS OF THE SITE FOR WHICH YOU ARE RESPONSIBLE; 2. ANOTHER OPERATOR HAS ASSUMED CONTROL ACCORDING TO APPENDIX G, SECTION 11.C OF THE NPDES GENERAL PERMIT OVER ALL AREAS OF THE SITE THAT HAVE NOT BEEN FINALLY STABILIZED; 3. COVERAGE UNDER AN INDIVIDUAL OR ALTERNATIVE GENERAL NPDES PERMIT HAS BEEN OBTAINED; OR 4. FOR RESIDENTIAL CONSTRUCTION ONLY, TEMPORARY STABILIZATION HAS BEEN COMPLETED AND THE RESIDENCE HAS BEEN TRANSFERRED TO THE HOMEOWNER.

THE N.O.T. MUST BE SUBMITTED WITHIN 30 DAYS OF ONE OF THE ABOVE CONDITIONS BEING MET. AUTHORIZATION TO DISCHARGE TERMINATES AT MIDNIGHT OF THE DAY THE N.O.T. IS SIGNED.

VI. CERTIFICATIONS

OWNER CERTIFICATION

I CERTIFY UNDER PENALTY OF LAW THAT I UNDERSTAND THE TERMS AND CONDITIONS OF THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) GENERAL PERMIT FOR STORM WATER DISCHARGES FROM CONSTRUCTION ACTIVITIES OF THE AREA(S) OF THE PROJECT SITE IDENTIFIED IN THIS CERTIFICATION AS HAVING CONTROL OVER.

OWNER : SIGNED _____ OWNER: NAME _____ TITLE _____ DATE _____

OPERATOR(S) CERTIFICATION

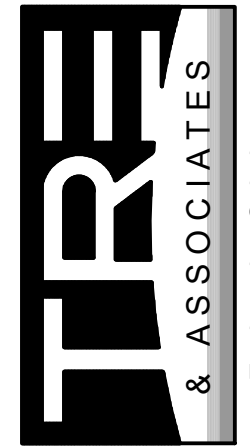
I CERTIFY UNDER PENALTY OF LAW THAT I UNDERSTAND THE TERMS AND CONDITIONS OF THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) GENERAL PERMIT FOR STORM WATER DISCHARGES FROM CONSTRUCTION ACTIVITIES OF THE AREA(S) OF THE PROJECT SITE IDENTIFIED IN THIS CERTIFICATION AS HAVING CONTROL OVER.

SIGNED: _____ COMPANY: _____ NAME: _____ ADDRESS: _____ TITLE: _____ TELEPHONE: _____ DATE: _____ AREA(S) OF SITE WITH CONTROL _____

SUBCONTRACTOR-OPERATOR CERTIFICATION

I CERTIFY UNDER PENALTY OF LAW THAT IT IS MY RESPONSIBILITY TO COMPLY WITH ALL APPLICABLE TERMS AND CONDITIONS OF THIS PERMIT AS IT RELATES TO THE CONSTRUCTION ACTIVITIES ON THE AREA(S) OF THE PROJECT SITE IDENTIFIED AS HAVING CONTROL, INCLUDING PROTECTION OF ENDANGERED SPECIES, CRITICAL HABITAT, HISTORIC PROPERTIES, IMPLEMENTATION OF BEST MANAGEMENT PRACTICES (BMPs) AND OTHER CONTROLS REQUIRED BY THE SWPPP. I WILL ENSURE EITHER DIRECTLY OR THROUGH COORDINATION WITH OTHER PERMITEES, THAT MY ACTIVITIES DO NOT RENDER ANOTHER PARTY'S POLLUTION CONTROL INEFFECTIVE. I WILL EITHER IMPLEMENT MY PORTION OF THIS SWPPP OR DEVELOP AND IMPLEMENT MY OWN SWPPP.

SIGNED: _____ SIGNED: _____ NAME: _____ NAME: _____ TITLE: _____ TITLE: _____ COMPANY: _____ COMPANY: _____ ADDRESS: _____ ADDRESS: _____ TELEPHONE: _____ TELEPHONE: _____ DATE: _____ DATE: _____ AREA(S) OF SITE WITH CONTROL: _____ AREA(S) OF SITE WITH CONTROL _____



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Table with columns: PROJECT NO., DWG FILE, DATE, NO., BY, DATE, REVISION, DESCRIPTION, DESIGNED BY, DRAWN BY, CHECKED BY.

HORIZONTE RESIDENCIAL STREET, DRAINAGE, WATER, & WASTEWATER IMPROVEMENTS

STORMWATER POLLUTION PREVENTION & SPECIFICATIONS

NOTICE: ALTERATION OF A SEALED DRAWING WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS A VIOLATION OF THE TEXAS ENGINEERING PRACTICE ACT.

