CIVIL CONSTRUCTION PLANS
PAVING, GRADING & UTILITIES
FOR

ESPERANZA 3H

KENDALL COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT NO. 2B
KENDALL COUNTY, TEXAS

For Review
07/28/2025

REVIEWED
CITY OF BOERNE
UTILITIES DEPARTMENT
08/07/2025
APPROVED AS NOTED

- See Minor Comment to Sewer Notes, see Sheet 29. No Resubmittal required.

REVIEWED
City of Boerne
FIRE MARSHAL
Robert Lee
07/29/2025

No Additional Comments

PLAN SUBMITTAL/REVIEW LOG

1ST SUBMITTAL TO CITY	05-19-2025
2ND SUBMITTAL TO CITY	07-28-2025

ENGINEER
Kimley»Horn

10101 REUNION PLACE
SUITE 400
SAN ANTONIO, TX 78216
PHONE: (210) 541-9166
CONTACT: MICHAEL A. SCHOLZE, P.E.

STATE OF TEXAS
REGISTRATION NO. TBPE F-928

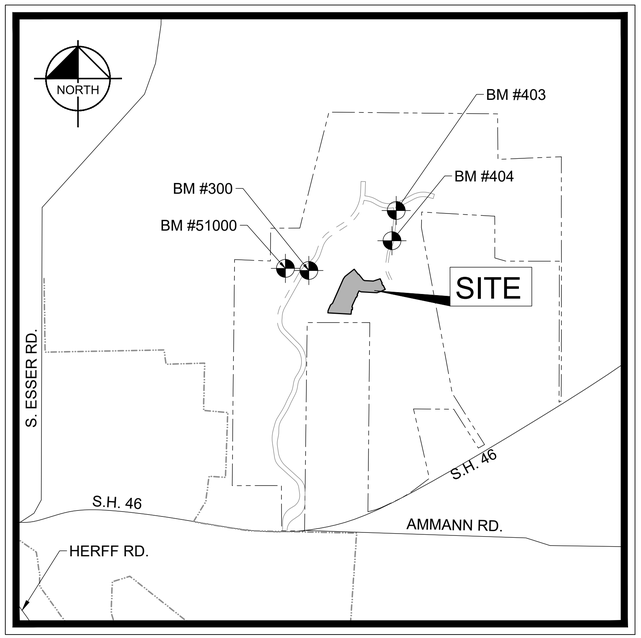
SURVEYOR
Kimley»Horn

10101 REUNION PLACE
SUITE 400
SAN ANTONIO, TX 78216
PHONE: (210) 541-9166
CONTACT: GREG MOSIER, RPLS

STATE OF TEXAS
REGISTRATION NO. TBPLS F-10193973

OWNER/DEVELOPER
LOOKOUT DEVELOPMENT GROUP, LP
1001 CRYSTAL FALLS PKWY.
LEANDER, TX 78641
PHONE: (512) 260-2066
CONTACT: MIKE SIEFERT

WATER CONTROL AND IMPROVEMENT DISTRICT
KENDALL COUNTY WCID #2B
1330 POST OAK BOULEVARD, STE. 2650
HOUSTON, TEXAS 77056
PHONE: (713) 850-9000 X218
CONTACT: JULIANNE KUGLE



VICINITY MAP
SCALE: 1" = 2,000'

CIVIL CONSTRUCTION PLANS BY KIMLEY-HORN		
SHEET NO.	SHEET TITLE	REVISION NO.
1	COVER SHEET	
2	ESPERANZA 3H PLAT SHEET 1	
3	ESPERANZA 3H PLAT SHEET 2	
4	ESPERANZA 3H PLAT SHEET 3	
5	GENERAL NOTES	
6	CITY OF BOERNE GENERAL CONSTRUCTION NOTES	
7	EROSION CONTROL PLAN	
8	EROSION CONTROL DETAILS	
9	PAVING PLAN & PROFILE BUENA VIDA	
10	PAVING PLAN & PROFILE BUENA VIDA & SERENO	
11	PAVING PLAN & PROFILE SERENO	
12	PAVING PLAN & PROFILE TAMARINDO	
13	PAVING PLAN & PROFILE SUAVECITO	
14	CUL-DE-SAC DETAIL	
15	SIGNAGE PLAN	
16	PAVING DETAILS	
17	DRAINAGE AREA MAP	
18	DRAINAGE AREA CALCULATIONS	
19	OVERALL GRADING PLAN	
20	GRADING PLAN (SHEET 1 OF 2)	
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22	STORM DRAIN PLAN & PROFILE SD LINE A	
23	STORM DRAIN PLAN & PROFILE SD LINE B	
24	STORM DRAIN CALCULATIONS	
25	STORM DRAIN DETAILS (SHEET 1 OF 2)	
26	STORM DRAIN DETAILS (SHEET 2 OF 2)	
27	OVERALL UTILITY PLAN	
28	SANITARY SEWER PLAN & PROFILE SS LINE A	
29	SANITARY SEWER PLAN & PROFILE SS LINE A & D	
30	SANITARY SEWER PLAN & PROFILE SS LINE B	
31	SANITARY SEWER PLAN & PROFILE SS LINE C & E	
32	SANITARY SEWER DETAILS	
33	WATER PLAN (SHEET 1 OF 2)	
34	WATER PLAN (SHEET 2 OF 2)	
35	RECLAIMED WATER PLAN (SHEET 1 OF 2)	
36	RECLAIMED WATER PLAN (SHEET 2 OF 2)	
37	WATER DETAILS (SHEET 1 OF 2)	
38	WATER DETAILS (SHEET 2 OF 2)	

RESIDENTIAL GAS PLANS BY KIMLEY-HORN		
SHEET NO.	SHEET TITLE	REVISION NO.
G1	NATURAL GAS LAYOUT	
G2	NATURAL GAS DETAILS	

ELECTRIC PLANS BY SCHNEIDER ENGINEERING		
SHEET NO.	SHEET TITLE	REVISION NO.
E0-E5	UNDERGROUND ELECTRICAL PLANS	

Reviewed by City of Boerne Engineering & Mobility:
Approved for Construction X
Approved as Noted _____
Disapproved _____
Incomplete - Not Reviewed _____
Not Reviewed - Accepted FIO _____
By: _____ Date: 8/12/25

City of Boerne Review Notes:

1) Approval of these documents does not relieve the Engineer or Contractor from full compliance with the City of Boerne Standard Specifications or applicable City Ordinances.

2) Any changes to documents approved by the City of Boerne are required to be re-submitted for review and approval prior to proceeding with construction.

REVIEWED
CITY OF BOERNE
DEVELOPMENT ENGINEERING
BY _____ DATE 08/12/2025
Reviewed Only
no objection

Know what's **below.**
Call before you dig.

No.	REVISIONS	DATE	BY

Kimley»Horn
© 2025 KIMLEY-HORN AND ASSOCIATES, INC.
10101 REUNION PLACE, SUITE 400, SAN ANTONIO, TX 78216
PHONE: 210-541-9166 FAX: 210-541-9889
WWW.KIMLEY-HORN.COM TBPE FIRM NO. F-928

MICHAEL A. SCHOLZE
131737
LICENSED PROFESSIONAL ENGINEER
7/28/2025

KHA PROJECT 068686339
DATE 7/28/2025
SCALE AS SHOWN
DESIGNED BY JPV
DRAWN BY JPV
CHECKED BY MAS

PHASE 3H
COVER SHEET

Esperanza
BOERNE ★ TEXAS

KENDALL COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT NO. 2B

SHEET NUMBER
1

Plotted By: Vinet, Josh July 28, 2025 11:10:41am K:\sna_civil\068686339-esperanza3h\CAD\sheets\C-COVR-3H.dwg
This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

Easement notes

All properties designated as easements shall or may be utilized for the following purposes:

Drainage Easement:
Drainage, water diversion and sanitary control, including without limitation, walls, bed, embankments, spillways, appurtenances and other engineered devices (the "drainage system").

Together with the right of ingress and egress over passable areas of the grantor's adjacent land, when the delineated entrance point that abuts public right of way is obstructed and/or inaccessible, either in whole or in part, in order to access or leave the easement for the purpose of constructing, reconstructing, inspecting, patrolling, operating, maintaining, repairing, and removing the drainage system; the right to change the size of the drainage system within the easement; the right to relocate along the same general direction of the drainage system; the right to create and/or dredge a stream courses, refill, or dig out such stream course, establish or change stream embankments within the easement, install storm sewer systems, culverts, water gaps, and protecting rails; the right to remove from the easement all trees and parts thereof, or other obstructions, which reasonably endanger or may reasonably interfere with the efficiency of the drainage system; and the right to place temporary structures for use in constructing or repairing the drainage system.

With respect to the drainage system, it is expressly agreed and understood by all parties hereto, that the intention is to improve conditions of sanitation and water drainage control on the property for the benefit of the property, adjacent property and the community, but the city does not guarantee or warrant that such control work will be effective, nor does the city assume any additional liability whatsoever for the effects of flood, standing water or drainage on or to the property or any other property or persons that might be affected by said stream, wash or gully in its natural state or as changed by the city.

1. The grantor specifically reserves the right to use all or any part of the easement for any purpose, which does not damage, destroy, injure, and/or unreasonably interfere with the grantee's use of the easement.
2. The grantee shall make commercially reasonable efforts to ensure the damage to the property is minimized and will at all times, after doing any work in connection with the drainage system, restore the property to the condition in which the property was found before such work was undertaken to the extent that such restoration is reasonable in accordance with the grantee's usual and customary practices.
3. The grantee shall make necessary modifications and improvements to conform with the city of boerne drainage policy and plan at such a time as the said plan and policy are enacted by city council of the city of boerne, texas.

Utility easement:
Utilities, including, without limitation, sewer, water, gas, electricity, telephone and cable television, with all necessary and/or desirable lines, laterals and/or appurtenances thereto (the "utilities").

Together with the right of ingress and egress over passable areas of the grantor's adjacent land, when the delineated entrance point that abuts public right of way is obstructed and/or inaccessible, either in whole or in part, in order to access or leave the easement for the purpose of constructing, reconstructing, inspecting, patrolling, operating, maintaining, repairing and removing the utilities; the right to place new or additional utilities in the easement and to change the size of the utilities within the easement; the right to relocate along the same general direction of the utilities; the right to remove from the easement all trees and parts thereof or other obstructions, which reasonably endanger or may reasonably interfere with the efficiency or operation of the utilities; and the right to place temporary structures for use in constructing or repairing the utilities.

1. The property owner retains the right to use all or any part of the easement for any purpose which does not damage, destroy, injure and/or unreasonably interfere with the use of the easement. However, the easement shall be kept clear of all structures or other improvements.
2. The city (and/or district) shall make commercially reasonable efforts to ensure that damage to the property is minimized and the city will at all times, after doing any work in connection with the utilities, restore the property to the condition in which the property was found before such work was undertaken to the extent that such restoration is reasonable in accordance with the city's usual and customary practices.

PEDERNALES ELECTRIC COOPERATIVE NOTES:
It is understood and agreed that perpetual easements are reserved for the installation and maintenance of utilities and all necessary appurtenances thereto, whether installed in the air, upon the surface or underground, along and within fifteen feet (15') front lines of all lots and/or tracts and in the streets, alleys, boulevards, lanes and roads of the subdivision, and fifteen feet (15') along the outer boundaries of all streets, alleys, boulevards, lanes and roads where subdivision lines or lots of individual tracts are deeded to the centerline of the roadway. Nothing shall be placed or permitted to remain within the easement areas which may damage or interfere with the installation or maintenance of utilities. The easement area of each lot and all improvements within it shall be maintained by the owner of the lot, except for those facilities for which an authority or utility company is responsible. Utility companies or their employees shall have all of the rights and benefits necessary or convenient for the full enjoyment of the rights herein granted, including but not limited to the free right of ingress to and egress from the right-of-way and easements, and the right from time to time to cut all trees, undergrowth and other obstructions that may injure, endanger or interfere with the operation of said utility facilities. The easement rights herein reserved include the privilege of anchoring any support cables or other devices outside said easement when deemed necessary by the utility to support equipment within said easement and the right to install wires and/or cables over portions of said lots and/or tracts not within said easement so long as such items do not prevent the construction of buildings on any of the lots and/or tracts of this subdivision.

Plat Notes

Fence Notes:
1. Gates across easement: double swing gates with a minimum clear opening of 12 feet wide shall be installed wherever fences cross utility and drainage easements.
2. Obstructions of drainage: adequate structures shall be provided to allow the unhindered passage of all storm and drainage flows wherever fences cross drainage easements.

Sidewalk Note:
Five-foot wide reinforced concrete sidewalks shall be installed adjacent to all street frontage property lines of each lot fronting a street at such time as that lot is developed.

Impact fee assessment note:
Assessment and collection of the City of Boerne water and wastewater utilities' capital recovery fees shall be the amount per lot as set forth in City Ordinance No. 2023-18, Section 1.10(5).

Tax Certificate Note:

Tax Certificate Affidavit filed this date in Document No. _____, Kendall County Official Records.

Building Setback Note:
Setbacks in the ETJ: lot setbacks are determined by the City of Boerne Zoning Ordinance enforced at the time of development. The use that is being constructed and the lot size shall determine which setbacks shall apply.

Open Space Notes:
1. Installation of potable water and wastewater services to open space lots may be performed by the developer, at his option, as part of the overall infrastructure design/construction process based upon the need for those services on individual lots. If potable water or wastewater services are not initially installed but are desired subsequent to the subdivision infrastructure development, the service applicant shall be financially responsible for the entirety of the design and installation costs for these services. In some instances, this work may also include the extension of utility mains to properly locate the desired utility services.
2. Open space Lot 100 - Block 110 and Lot 101 - Block 113 shall be a Drainage, Sidewalk, & Utility Easements.

Landscape Note:
Residential lots in excess of 12,500 square feet shall only irrigate the area that lies within 75 feet of the main residence. Turf grasses shall be limited to Zoysia, Buffalo or Bermuda grasses or other grasses approved by the City Manager or his or her designated representative. (Ord. No. 2004-20). Xeriscaping is permitted as described in the City of Boerne Zoning Ordinance, Article 3, Section 3.07.003D.

Drainage Basin Note:
The subject area is not upstream from a City water supply lake.

Private Street Note:
Lot 200 shall be dedicated as Private Streets and shall also be dedicated as Drainage and Utility Easements.

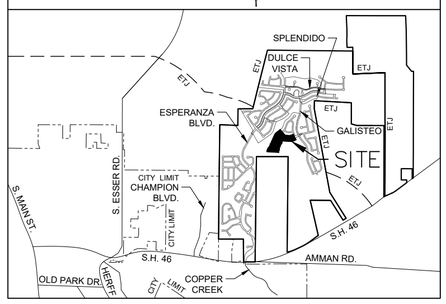
Acreage and Density:
1. This subdivision contains 19.740 total acres with 81 residential lots for a density of 4.103 residential lots per acre.
2. This subdivision contains 0.837 acres of open space.
3. The area of the smallest lot is 0.134 acres.
4. The perimeter of the largest block is 2,075 LF. The perimeter of the smallest block is 1,192 LF.

Flood Statement:
According to Map No. 48259C0415F & 48259C0420F, dated December 17, 2010 of the National Flood Insurance Program Map, Flood Insurance Rate Map of Kendall County, Texas and Incorporated Areas, Federal Emergency Management Agency, Federal Insurance Administration, the property is within Zone "X" (un-shaded) defined by FEMA as "areas determined to be outside the 0.2% annual chance floodplain." All zone delineations shown hereon are approximate. This statement does not imply that any portion of the subject tract is totally free of potential flood hazard. Localized flooding can occur due to natural and/or man-made influences. This flood statement shall create no liability on the part of Kimley-Horn or the undersigned.

Heritage Legacy Tree Note:
There are 14 Heritage Legacy Trees, as defined in Subsection 2.02.002, identified on this plat.

VICINITY MAP

NOT TO SCALE



SHEET INDEX MAP

1" = 400'

Surveyors Notes:

1. Property corners are monumented with 1/2" iron rod with a plastic cap stamped "KHA" prior to lot sales unless noted otherwise.
2. The bearings shown hereon are the Texas State Plane System, South Central Zone (FIPS 4204) (NAD'83). All distances shown hereon are on the Surface. The Grid to Surface Scale Factor is 1.000090 feet. The unit of linear measurement is U.S. Survey Feet.

State of Texas §
County of Kendall §

Now, therefore, know all men by these presents:

That Lookout Development Group, L.P., acting herein by and through its duly authorized officers, does hereby adopt this plat designating the herein above described property as Esperanza, Phase 3H, an addition to Kendall County, Texas, and does hereby dedicate to the public and the City of Boerne, the public utility easements shown hereon for the mutual use and accommodation of the City of Boerne and all public utility providers desiring to use or using the same. Lookout Development Group, L.P., does hereby dedicate to the public and Kendall County Water Control and Improvement District No. 2B (the district) the streets hereon together with the drainage easements, and public use areas shown hereon, and do hereby dedicate the easements shown on the plat for the purposes as indicated to the district's exclusive use forever, said dedications being free and clear of all liens and encumbrances except as shown herein. No buildings, fences, trees, shrubs or other improvements shall be constructed or placed upon, over or across the easements of said plat. At the sole and exclusive discretion of the district and subject to its written approval, utility easements may also be used for the mutual use and accommodation of all public utilities desiring to use the same unless the easement limits the use to a particular utility or utilities, sold use by public utilities being subordinate to the district's use thereof. Any public utility given the right by the district to use said easements shall have the right to remove and keep removed all or part of any buildings, fences, trees, shrubs, or other improvements or growths which in any way endanger or interfere with the construction, maintenance, or efficiency of its respective system on any of these easements. Any public utility shall at all times have the rights of ingress and egress to and from and upon any of said easements for the purpose of constructing, reconstructing, inspecting, patrolling, maintaining and adding to or removing all or part of its respective system without the necessity at any time procuring the permission of anyone. I do hereby bind myself, my successors and assigns forever, to warrant and defend all and singular the above described streets, alleys, easements and rights unto the district against every person whomsoever comes lawfully claiming or to claim the same or any part thereof. This property is located within the extraterritorial jurisdiction of the City of Boerne. This plat approved subject to all the platting ordinances, rules and regulations of the City of Boerne.

Owner's Acknowledgement:

State of Texas §
County of _____ §

The owner of land shown on this plat, in person or through a duly authorized agent, dedicates to the use of the public, forever all streets, alleys, parks, watercourses, drains, easements and public places thereon shown for the purpose and consideration therein expressed.

Lookout Development Group, L.P.
1001 Crystal Falls Parkway
Leander, Texas 78641

By: _____

Before me, the undersigned authority on this day personally appeared _____ known to 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 and in the capacity therein stated.

Given under my hand and seal of office this____day of_____, 20__.

_____
Notary Public, State of Texas

Approval of the Planning and Zoning Commission:

This plat of ESPERANZA PHASE 3H has been submitted to and considered by the Planning and Zoning Commission of the City of Boerne, Texas, and is hereby approved by such commission.

Dated this ___ day of _____ 20__.

By:_____
Chair

By:_____
Secretary

State of Texas §
County of Bexar §

I hereby certify that this plat is true and correct and was prepared from an actual survey of the property made on the ground under my supervision.

PRELIMINARY
THIS DOCUMENT SHALL NOT BE RECORDED FOR ANY PURPOSE AND SHALL NOT BE USED OR VIEWED OR RELIED UPON AS A FINAL SURVEY DOCUMENT

_____
John G. Mosier
Registered Professional Land Surveyor #6330

Before me, the undersigned authority on this day personally appeared _____ known to 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 and in the capacity therein stated.

Given under my hand and seal of office this____day of_____, 20__.

_____
Notary Public, State of Texas

State of Texas §
County of Bexar §

I hereby certify that proper engineering consideration has been given in this plat to the matters of streets, lots, and drainage layout. To the best of my knowledge, this plat conforms to all requirements of the Subdivision Ordinance, except for those variances granted by the Planning and Zoning Commission of the City of Boerne.

_____
Michael A. Scholze, P.E. #131737
Licensed Professional Engineer

PRELIMINARY
FOR REVIEW ONLY
Kimley»Horn
Engineer MICHAEL A. SCHOLZE
P.E. No. 131737 Date 7/28/2025

Before me, the undersigned authority on this day personally appeared _____ known to 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 and in the capacity therein stated.

Given under my hand and seal of office this____day of_____, 20__.

_____
Notary Public, State of Texas

State of Texas §
County of Kendall §

I, _____ County Clerk of said county, do hereby certify that the foregoing instrument of writing with this certificate of authentication was filed for record in my office, on the _____ day of _____,A.D. 202__ at ____. m.in the plat records of said county in Document No. _____.

Tax Certificate Affidavit filed this date in Document No. _____, Kendall County Official Records. In testimony whereof, witness my hand and seal of office, this ____ day of _____ A.D. 202__.

_____
County Clerk
Kendall County, Texas

By:_____
Deputy

DRAFT PLAT ESTABLISHING
ESPERANZA
PHASE 3H
19.740 ACRES
4.546 ACRES PRIVATE R.O.W.
81 RESIDENTIAL LOTS
2 OPEN SPACE LOTS
BEING A PORTION OF THAT CERTAIN 61.084 ACRE TRACT RECORDED IN DOCUMENT NO. 2021-355761, IN THE OFFICIAL PUBLIC RECORDS OF KENDALL COUNTY, TEXAS
JUAN ORTIZ SURVEY NO. 190, ABSTRACT NO. 363
KENDALL COUNTY, TEXAS

OWNER:
LOOKOUT DEVELOPMENT GROUP, L.P.
1001 CRYSTAL FALLS PARKWAY
LEANDER, TEXAS 78641
CONTACT: MIKE SIEFERT, P.E.

CIVIL ENGINEER:
KIMLEY-HORN AND ASSOCIATES, INC.
10101 REUNION PLACE, SUITE 400
SAN ANTONIO, TEXAS 78216
TBPE #928

SURVEYOR:
KIMLEY-HORN AND ASSOCIATES, INC.
10101 REUNION PLACE, SUITE 400
SAN ANTONIO, TEXAS 78216

Kimley»Horn
10101 Reunion Place, Suite 400
San Antonio, Texas 78216 FIRM # 10193973
Tel. No. (210) 541-9166
www.kimley-horn.com

Scale	Drawn by	Checked by	Date	Project No.	Sheet No.
AS SHOWN	DJG	JGM	7/28/2025	068686339	1 OF 3

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Kimley-Horn and Associates, Inc.
All rights reserved

DWG NAME: K:\SNA_SURVEY\ESPERANZA DEVELOPEMENT\068686339-ESPERANZA 3H\DWG\PLATS\068686339 ESPERANZA 3H DRAFT PLAT.DWG PLOTTED BY VINAL, JOSH 7/28/2025 11:10 AM LAST SAVED 7/17/2025 11:29 AM

NORTH

GRAPHIC SCALE IN FEET
100 0 50 100 200
1" = 100' @ 18X24

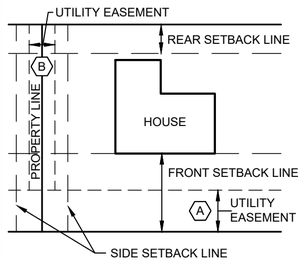
BUILDING SETBACKS							
PER DA AMENDED 2/16/2023 & PER CITY COUNCIL 2/14/2023 APPROVAL							
RESIDENTIAL TYPE	MINIMUM LOT WIDTH	MINIMUM LOT SQ. FEET	MINIMUM SIDE YARD SETBACK - PER SIDE(c)	MINIMUM SIDE YARD SETBACK ON STREET FACING CORNER LOT	MINIMUM FRONT FACING GARAGE FRONT SETBACK	MINIMUM FRONT YARD SETBACK	MINIMUM REAR YARD SETBACK
GARDEN	45' (a)	4,500	0'-10' (b)	10'	25'	15'	15'
SINGLE FAMILY	50'	5,500	5'	10'	25'	15'	15'
GARDEN	55'	6,000	0'-10' (b)	10'	25'	20'	15'
SINGLE FAMILY	60'	6,500	5'	10'	25'	20'	15'
GARDEN	65'	7,000	0'-10' (b)	10'	25'	20'	15'
SINGLE FAMILY	70'	8,000	5'	10'	25'	20'	15'

TYPICAL BUILDING SETBACK ON INTERIOR PROPERTY LINE

(*a*) Add 5 additional feet of frontage for a corner lot.
(*b*) The total combined side yard setbacks must be a minimum of 10 feet.
(*c*) Setbacks less than 5' are allowed, including 0-lot line development provided a minimum 10' separation between buildings and any necessary maintenance easements are indicated on a recorded final plat.

LEGEND

○	1/2" IRON ROD W/ "KHA" CAP SET
●	FOUND MONUMENT
B.S.L.	BUILDING SETBACK LINE
OPRKC	OFFICIAL PUBLIC RECORDS OF KENDALL COUNTY, TEXAS
BLOCK XX	BLOCK IDENTIFICATION
(A)	15' UTILITY EASEMENT
(B)	20' X 60' OFF-LOT UTILITY EASEMENT TO EXPIRE INTO PRIVATE PLATTED STREET (0.028 AC)
———	PROPOSED PLAT BOUNDARY
———	ADJACENT PROPERTY BOUNDARY
- - - -	CITY OF BOERNE ETJ BOUNDARY
	EXISTING SLOPES 15%-25%
	EXISTING SLOPES >25%



TYPICAL BUILDING SETBACK AND EASEMENT LOCATIONS
N.T.S.

Perimeter:
Block 101 - 1,908 LF
Block 109 - 1,649 LF
Block 110 - 1,192 LF
Block 111 - 2,075 LF
Block 112 - 1,880 LF
Block 113 - 1,728 LF

Surveyors Notes:

1. Property corners are monumented with 1/2" iron rod with a plastic cap stamped "KHA" prior to lot sales unless noted otherwise.
2. The bearings shown hereon are the Texas State Plane System, South Central Zone (FIPS 4204) (NAD'83). All distances shown hereon are on the Surface. The Grid to Surface Scale Factor is 1.000090 feet. The unit of linear measurement is U.S. Survey Feet.

20.941 ACRE
PERMANENT DRAINAGE
AND UTILITY EASEMENT
DOC# 2024-390980
OPRKC

20.941 ACRE
PERMANENT DRAINAGE
AND UTILITY EASEMENT
DOC# 2024-390980
OPRKC

MIRAVAL
(LOCAL NEIGHBORHOOD)
DOC# 2021-359818 OPRKC

ESPERANZA PHASE 2F
DOC# 2021-359818
OPRKC

LOT 116
BLOCK 17
0.308 AC.
DRAINAGE
EASEMENT

LOT 100
BLOCK 110
OPEN SPACE, DRAINAGE, SIDEWALK, & UTILITY EASEMENT
(0.207 AC)

ESPERANZA PHASE 3E
DOC# _____
OPRKC

ESPERANZA PHASE 3D
DOC# 2024-392426
OPRKC

SERENO
(LOCAL RESIDENTIAL)
DRAINAGE & UTILITY EASEMENT
(60' ROW)

PROSPERO
(LOCAL RESIDENTIAL)
(60' ROW)

TERRAZAS
(LOCAL RESIDENTIAL)
DRAINAGE & UTILITY EASEMENT
(60' ROW)

GALISTEO
(PRIMARY COLLECTOR)
(66' WIDTH PUBLIC R.O.W.)

BUENA VIDA
(LOCAL NEIGHBORHOOD)
DRAINAGE & UTILITY EASEMENT
(60' R.O.W.)

SERENO
(LOCAL NEIGHBORHOOD)
DRAINAGE & UTILITY EASEMENT
(60' R.O.W.)

SUAVECITO
(LOCAL NEIGHBORHOOD)
DRAINAGE & UTILITY EASEMENT
(60' R.O.W.)

TAMARINDO
(LOCAL NEIGHBORHOOD)
DRAINAGE & UTILITY EASEMENT
(60' R.O.W.)

LOT 200
(PRIVATE STREET)
4.546 AC.

BLOCK 101
BLOCK 105
BLOCK 109
BLOCK 110
BLOCK 111
BLOCK 112
BLOCK 113

N71°25'47"E 199.76'
S86°47'14"E 244.59'
S38°28'11"E 204.76'
S38°28'11"E 190.00'
N51°31'49"E 327.05'
N86°43'10"W 445.28'
N23°51'07"E 743.89'
S23°51'07"W 186.67'
N23°51'07"E 171.25'
N86°40'20"W 651.57'

CALLED 61.084 ACRES
LOOKOUT DEVELOPMENT
GROUP L.P.
DOC# 2021-355761 OPRKC
(REMAINDER)

LOT 101
BLOCK 113
OPEN SPACE, DRAINAGE, SIDEWALK, & UTILITY EASEMENT
(0.630 AC)

VARIABLE WIDTH
OFF-LOT UTILITY EASEMENT
DOC# _____
OPRKC

TRACT 3
CALLED 800.258 ACRES
LOOKOUT BOERNE
HOLDINGS, L.P.
VOL.1389, PG.572 OPRKC
(REMAINDER)

26.62 ACRE
100' ELECTRIC LINE
EASEMENT AND
RIGHT-OF-WAY
VOL. 206, PG. 316
OPRKC

VARIABLE WIDTH
DRAINAGE
EASEMENT
DOC# 2024-392426
OPRKC

CALLED 230.65 ACRES BEING THE EAST 1/2 OF 458 ACRES
LEROY & LULA BELL RITTIMANN ET AL
VOL.347, PG. 746
VOL.328, PG. 615
(ORIGINALLY CALLED EAST 1/2 OF 458 ACRES VOL.77, PG.309)
(CALLED 460 ACRES - REMAINDER - VOL.63, PG. 300)
DRKC

DRAFT PLAT ESTABLISHING
ESPERANZA PHASE 3H
19.740 ACRES
4.546 ACRES PRIVATE R.O.W.
81 RESIDENTIAL LOTS
2 OPEN SPACE LOTS
BEING A PORTION OF THAT CERTAIN 61.084 ACRE TRACT RECORDED IN DOCUMENT NO. 2021-355761, IN THE OFFICIAL PUBLIC RECORDS OF KENDALL COUNTY, TEXAS
JUAN ORTIZ SURVEY NO. 190, ABSTRACT NO. 363
KENDALL COUNTY, TEXAS

OWNER:
LOOKOUT DEVELOPMENT GROUP, L.P.
1001 CRYSTAL FALLS PARKWAY
LEANDER, TEXAS 78641
CONTACT: MIKE SIEFERT, P.E.

CIVIL ENGINEER:
KIMLEY-HORN AND ASSOCIATES, INC.
10101 REUNION PLACE, SUITE 400
SAN ANTONIO, TEXAS 78216
TBPE #928

SURVEYOR:
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Scale	Drawn by	Checked by	Date	Project No.	Sheet No.
AS SHOWN	DJG	JGM	7/28/2025	068686339	2 OF 3

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DWG NAME: K:\SNA_SURVEY\ESPERANZA DEVELOPEMENT\068686339-ESPERANZA 3H\DWG\PLATS\068686339 ESPERANZA 3H DRAFT PLAT.DWG PLOTTED BY VINAL, JOSH 7/28/2025 11:10 AM LAST SAVED 7/17/2025 11:29 AM

LOT TABLE		
LOT NO.	ACRES	SQ. FT.
BLK 101	2.709	117,997
BLK 109	2.105	91,704
BLK 110	1.417	61,733
BLK 111	2.964	129,105
BLK 112	4.128	179,802
BLK 113	1.871	81,503
BLOCK 101 - LOT 11	0.134	5,850
BLOCK 101 - LOT 12	0.144	6,290
BLOCK 101 - LOT 13	0.165	7,169
BLOCK 101 - LOT 14	0.240	10,446
BLOCK 101 - LOT 15	0.165	7,178
BLOCK 101 - LOT 16	0.180	7,853
BLOCK 101 - LOT 17	0.176	7,647
BLOCK 101 - LOT 18	0.134	5,849
BLOCK 101 - LOT 19	0.134	5,849
BLOCK 101 - LOT 20	0.134	5,850
BLOCK 101 - LOT 21	0.164	7,150
BLOCK 101 - LOT 22	0.167	7,271
BLOCK 101 - LOT 23	0.203	8,843
BLOCK 101 - LOT 24	0.195	8,515
BLOCK 101 - LOT 25	0.162	7,039
BLOCK 101 - LOT 26	0.211	9,198
BLOCK 109 - LOT 1	0.206	8,973
BLOCK 109 - LOT 2	0.172	7,496
BLOCK 109 - LOT 3	0.152	6,619
BLOCK 109 - LOT 4	0.157	6,833
BLOCK 109 - LOT 5	0.166	7,219
BLOCK 109 - LOT 6	0.137	5,951
BLOCK 109 - LOT 7	0.135	5,867
BLOCK 109 - LOT 8	0.135	5,864

LOT TABLE		
LOT NO.	ACRES	SQ. FT.
BLOCK 109 - LOT 9	0.135	5,862
BLOCK 109 - LOT 10	0.135	5,860
BLOCK 109 - LOT 11	0.134	5,858
BLOCK 109 - LOT 12	0.174	7,576
BLOCK 109 - LOT 13	0.269	11,726
BLOCK 110 - LOT 1	0.215	9,347
BLOCK 110 - LOT 2	0.194	8,450
BLOCK 110 - LOT 3	0.194	8,450
BLOCK 110 - LOT 4	0.207	9,027
BLOCK 110 - LOT 5	0.222	9,689
BLOCK 110 - LOT 6	0.178	7,734
BLOCK 110 - LOT 100	0.207	9,036
BLOCK 111 - LOT 1	0.226	9,831
BLOCK 111 - LOT 2	0.216	9,425
BLOCK 111 - LOT 3	0.183	7,975
BLOCK 111 - LOT 4	0.183	7,975
BLOCK 111 - LOT 5	0.183	7,975
BLOCK 111 - LOT 6	0.216	9,425
BLOCK 111 - LOT 7	0.216	9,425
BLOCK 111 - LOT 8	0.216	9,425
BLOCK 111 - LOT 9	0.183	7,975
BLOCK 111 - LOT 10	0.216	9,425
BLOCK 111 - LOT 11	0.217	9,473
BLOCK 111 - LOT 12	0.249	10,864
BLOCK 111 - LOT 13	0.235	10,256
BLOCK 111 - LOT 14	0.222	9,655
BLOCK 112 - LOT 1	0.230	10,021
BLOCK 112 - LOT 2	0.170	7,425
BLOCK 112 - LOT 3	0.139	6,075
BLOCK 112 - LOT 4	0.139	6,075

LOT TABLE		
LOT NO.	ACRES	SQ. FT.
BLOCK 112 - LOT 5	0.139	6,075
BLOCK 112 - LOT 6	0.139	6,075
BLOCK 112 - LOT 7	0.139	6,075
BLOCK 112 - LOT 8	0.139	6,075
BLOCK 112 - LOT 9	0.170	7,425
BLOCK 112 - LOT 10	0.170	7,425
BLOCK 112 - LOT 11	0.202	8,816
BLOCK 112 - LOT 12	0.252	10,967
BLOCK 112 - LOT 13	0.235	10,224
BLOCK 112 - LOT 14	0.170	7,425
BLOCK 112 - LOT 15	0.139	6,075
BLOCK 112 - LOT 16	0.139	6,075
BLOCK 112 - LOT 17	0.139	6,075
BLOCK 112 - LOT 18	0.139	6,075
BLOCK 112 - LOT 19	0.139	6,075
BLOCK 112 - LOT 20	0.170	7,425
BLOCK 112 - LOT 21	0.170	7,425
BLOCK 112 - LOT 22	0.139	6,075
BLOCK 112 - LOT 23	0.139	6,075
BLOCK 112 - LOT 24	0.139	6,075
BLOCK 112 - LOT 25	0.234	10,174
BLOCK 113 - LOT 1	0.167	7,291
BLOCK 113 - LOT 2	0.179	7,806
BLOCK 113 - LOT 3	0.227	9,899
BLOCK 113 - LOT 4	0.158	6,875
BLOCK 113 - LOT 5	0.160	6,986
BLOCK 113 - LOT 6	0.178	7,765
BLOCK 113 - LOT 7	0.171	7,448
BLOCK 113 - LOT 101	0.630	27,433

CURVE TABLE					
NO.	DELTA	RADIUS	LENGTH	CHORD BEARING	CHORD
C1	1°22'44"	753.00'	18.12'	S26°07'57"E	18.12'
C2	90°00'00"	13.00'	20.42'	S21°08'53"E	18.38'
C3	90°00'00"	13.00'	20.42'	S68°51'07"W	18.38'
C4	16°15'44"	270.00'	76.63'	S15°43'15"W	76.38'
C5	94°15'44"	13.00'	21.39'	S39°32'28"E	19.06'
C7	1°24'53"	330.00'	8.15'	N85°57'54"W	8.15'
C8	0°52'36"	786.00'	12.03'	S25°00'17"E	12.03'
C9	90°00'00"	13.00'	20.42'	S19°33'25"W	18.38'
C10	90°00'00"	13.00'	20.42'	S70°26'35"E	18.38'
C11	28°39'37"	330.00'	165.07'	S78°53'14"W	163.36'
C12	14°27'58"	330.00'	83.32'	N79°32'59"W	83.10'
C13	83°49'53"	13.00'	19.02'	S65°46'04"W	17.37'
C14	19°06'34"	330.00'	110.06'	N75°42'10"W	109.55'
C15	90°00'00"	13.00'	20.42'	S68°51'07"W	18.38'
C16	47°04'00"	13.00'	10.68'	S00°19'07"W	10.38'
C17	287°16'09"	60.00'	300.83'	N59°34'48"W	71.15'
C18	60°12'09"	13.00'	13.66'	N53°57'12"E	13.04'
C19	27°40'42"	230.00'	111.11'	N37°41'28"E	110.03'
C20	90°00'00"	13.00'	20.42'	S06°31'49"W	18.38'
C21	23°28'40"	270.00'	110.64'	S50°12'31"E	109.86'

CURVE TABLE					
NO.	DELTA	RADIUS	LENGTH	CHORD BEARING	CHORD
C22	24°50'06"	270.00'	117.03'	S74°21'55"E	116.12'
C23	28°39'37"	270.00'	135.06'	N78°53'14"E	133.65'
C24	85°47'58"	13.00'	19.47'	N19°02'52"W	17.70'
C25	16°15'44"	330.00'	93.66'	N15°43'15"E	93.35'
C26	99°37'54"	13.00'	22.61'	N57°24'21"E	19.86'
C27	6°37'49"	270.00'	31.24'	S69°27'48"E	31.23'
C28	90°00'00"	13.00'	20.42'	S21°08'53"E	18.38'
C29	17°59'49"	170.00'	53.40'	S32°51'01"W	53.18'
C30	99°40'53"	13.00'	22.62'	N88°18'38"W	19.87'
C31	23°28'40"	330.00'	135.22'	N50°12'31"W	134.28'
C32	28°39'37"	300.00'	150.07'	S78°53'14"W	148.51'
C33	24°50'06"	300.00'	130.04'	S74°21'55"E	129.02'
C34	23°28'40"	300.00'	122.93'	S50°12'31"E	122.07'
C35	27°40'42"	200.00'	96.62'	S37°41'28"W	95.68'
C36	20°31'27"	300.00'	107.46'	S76°24'36"E	106.89'
C37	16°15'44"	300.00'	85.15'	N15°43'15"E	84.86'

LINE TABLE		
NO.	BEARING	LENGTH
L1	S25°26'35"E	99.65'
L2	S64°33'25"W	130.09'
L3	S71°39'13"W	118.98'
L4	N66°08'53"W	63.21'
L5	S23°51'07"W	122.88'
L6	S23°51'07"W	60.00'
L7	S07°35'24"W	9.97'
L8	S03°19'40"W	60.00'
L9	S04°44'33"W	135.14'
L10	N03°23'54"E	64.64'
L11	N50°03'48"E	72.45'
L12	N34°28'15"E	85.25'
L13	N51°31'49"E	12.49'
L14	S65°14'29"E	39.31'
L15	S25°26'35"E	113.10'
L16	S25°26'35"E	60.00'
L17	S64°33'25"W	90.87'
L18	S38°28'11"E	17.04'
L19	S61°56'51"E	113.33'
L20	N64°33'25"E	90.87'

LINE TABLE		
NO.	BEARING	LENGTH
L21	N07°35'24"E	8.84'
L22	N38°28'11"W	14.81'
L23	N61°56'51"W	89.25'
L24	N64°33'25"E	90.87'
L25	S61°56'51"E	113.33'
L26	S38°28'11"E	60.04'
L27	N07°35'24"E	55.46'
L28	S66°08'53"E	43.00'
L29	N51°31'49"E	45.00'
L30	S62°15'06"W	15.00'
L33	S86°40'20"E	23.97'
L34	N66°08'53"W	6.72'
L35	N86°40'20"W	23.97'

TREE TABLE	
TREE TAG	DESCRIPTION (CIRCUMFERENCE)
5971	36" LIVE OAK (TC 113")
5981	29" LIVE OAK (TC 91")
6706	36.5" LIVE OAK (TC 115")
6727	31" LIVE OAK (TC 97")
6728	28" LIVE OAK (TC 88")
6730	29.7" LIVE OAK (TC 93")
6739	25" LIVE OAK (TC 79")
6745	29.5" LIVE OAK (TC 93")
6751	28" LIVE OAK (TC 88")
6752	27" LIVE OAK (TC 85")
6753	25.5" LIVE OAK (TC 80")
6755	26" LIVE OAK (TC 82")
6779	26" LIVE OAK (TC 82")
6785	30.5" LIVE OAK (TC 96")

DRAFT PLAT ESTABLISHING

ESPERANZA
PHASE 3H

19.740 ACRES
4.546 ACRES PRIVATE R.O.W.
81 RESIDENTIAL LOTS
2 OPEN SPACE LOTS

BEING A PORTION OF THAT CERTAIN 61.084 ACRE TRACT RECORDED IN DOCUMENT NO. 2021-355761, IN THE OFFICIAL PUBLIC RECORDS OF KENDALL COUNTY, TEXAS
JUAN ORTIZ SURVEY NO. 190, ABSTRACT NO. 363
KENDALL COUNTY, TEXAS

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DWG NAME: K:\SNA_SURVEY\ESPERANZA DEVELOPEMENT\068686339-ESPERANZA 3H\DWG\PLAT\S068686339 ESPERANZA 3H DRAFT PLAT.DWG PLOTTED BY VINAL, JOSH 7/28/2025 11:10 AM LAST SAVED 7/17/2025 11:29 AM

Plotted By: Vinal, Josh July 28, 2025 11:11:01am K:\sna_civil\068686339-esperanza3h\CAD\plansheets\C-GENN-3H.dwg
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GENERAL CONSTRUCTION NOTES

1. ALL MATERIAL AND CONSTRUCTION SHALL CONFORM TO THE CITY'S DESIGN STANDARDS. CONSTRUCTION OF ALL FACILITIES TO BE DEDICATED TO THE PUBLIC SHALL BE PERFORMED PER THE REQUIREMENTS OF THE CITY OF BOERNE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, LATEST EDITION AND THE CITY OF BOERNE SUBDIVISION CODE, LATEST EDITION.
2. THE CONTRACTOR SHALL BE RESPONSIBLE TO FURNISH ALL MATERIAL AND LABOR TO CONSTRUCT THE FACILITY AS SHOWN AND DESCRIBED IN THE CONSTRUCTION DOCUMENTS IN ACCORDANCE WITH THE APPROPRIATE APPROVING AUTHORITIES, SPECIFICATIONS AND REQUIREMENTS.
3. THE CONTRACTOR SHALL CONTACT ALL FRANCHISED UTILITY COMPANIES TO HAVE THEM LOCATE EXISTING UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL COORDINATE THE EXACT LOCATION AND DEPTH OF ALL FRANCHISED UTILITY SERVICES AND ANY REQUIRED RELOCATION AND/OR EXTENSIONS. SERVICES SHOWN ON THE PLANS ARE CONCEPTUAL.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL PUBLIC UTILITIES IN THE CONSTRUCTION OF THIS PROJECT. ALL MANHOLES, CLEANOUTS, VALVE BOXES, FIRE HYDRANTS, ETC., MUST BE ADJUSTED TO PROPER GRADE BY THE CONTRACTOR PRIOR TO AND AFTER PLACING OF PERMANENT PAVING. UTILITIES MUST BE MAINTAINED TO PROPER LINE AND GRADE DURING CONSTRUCTION OF THE PAVING FOR THIS PROJECT.
5. BRACING OF UTILITY POLES MAY BE REQUIRED BY UTILITY COMPANIES WHEN TRENCHING OR EXCAVATION IS IN CLOSE PROXIMITY TO THE POLES. THE COST OF BRACING POLES WILL BE BORNE BY THE CONTRACTOR. THERE IS NO SEPARATE PAY ITEM FOR THIS WORK. THE COST IS INCIDENTAL TO THE VARIOUS PAY ITEMS FOR INSTALLATION OF PIPE.
6. THE LOCATIONS, ELEVATIONS, AND DIMENSIONS OF EXISTING UTILITIES SHOWN ON THE PLANS WERE OBTAINED FROM AVAILABLE UTILITY COMPANY RECORDS AND PLANS AND ARE CONSIDERED APPROXIMATE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY LOCATIONS, ELEVATIONS, AND DIMENSIONS OF ADJACENT AND/OR CONFLICTING UTILITIES SUFFICIENTLY IN ADVANCE OF CONSTRUCTION IN ORDER THAT ADJUSTMENTS CAN BE MADE TO PROVIDE ADEQUATE CLEARANCES. THE CONTRACTOR SHALL PRESERVE AND PROTECT PUBLIC UTILITIES AT ALL TIMES DURING CONSTRUCTION. ANY DAMAGE TO UTILITIES RESULTING FROM CONTRACTOR'S OPERATIONS SHALL BE RESTORED AT THEIR EXPENSE. THE ENGINEER SHALL BE NOTIFIED WHEN PROPOSED FACILITY GRADES CONFLICT WITH EXISTING UTILITY GRADES.
7. THE CONTRACTOR SHALL IMMEDIATELY REPAIR OR REPLACE ANY PHYSICAL DAMAGE TO PRIVATE PROPERTY, INCLUDING, BUT NOT LIMITED TO FENCES, WALLS, PAVEMENT, GRASS, TREES, AND LAWN SPRINKLER AND IRRIGATION SYSTEMS AT NO COST TO THE OWNER. THIS WORK SHALL BE SUBSIDIARY TO THE CONTRACT (UNLESS OTHERWISE NOTED) AND IS NOT A SEPARATE PAY ITEM.
8. THE CONTRACTOR SHALL REMOVE SURPLUS MATERIAL FROM THE PROJECT AREA. THIS WORK SHALL BE SUBSIDIARY TO THE CONTRACT AND IS NOT A SEPARATE PAY ITEM.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS PRIOR TO CONSTRUCTION.
10. THE CONTRACTOR SHALL HAVE AVAILABLE AT THE JOB SITE AT ALL TIMES ONE COPY OF THE CONTRACT DOCUMENTS INCLUDING PLANS, SPECIFICATIONS, AND SPECIAL CONDITIONS, COPIES OF ANY REQUIRED CONSTRUCTION PERMITS, EROSION CONTROL PLANS, SWPPP AND INSPECTION REPORTS.
11. ANY DISCREPANCIES ON THE DRAWINGS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ARCHITECT AND ENGINEER BEFORE COMMENCING WORK. NO FIELD CHANGES OR DEVIATIONS FROM DESIGN ARE TO BE MADE WITHOUT PRIOR APPROVAL OF THE OWNER AND NOTIFICATION TO THE ENGINEER. NO CONSIDERATION WILL BE GIVEN TO CHANGE ORDERS FOR WHICH THE OWNER AND ENGINEER WERE NOT CONTACTED PRIOR TO CONSTRUCTION OF THE AFFECTED ITEM.
12. ALL COPIES OF COMPACTION, CONCRETE AND OTHER REQUIRED TEST RESULTS ARE TO BE SENT TO THE ARCHITECT, CITY ENGINEER AND CIVIL ENGINEER OF RECORD DIRECTLY FROM THE TESTING AGENCY.
13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUBMITTING TO THE ENGINEER A CERTIFIED RECORD SURVEY SIGNED AND SEALED BY A PROFESSIONAL LAND SURVEYOR REGISTERED IN THE STATE OF TEXAS DEPICTING THE ACTUAL FIELD LOCATION OF ALL CONSTRUCTED IMPROVEMENTS THAT ARE REQUIRED BY THE JURISDICTIONAL AGENCIES FOR THE CERTIFICATION PROCESS. ALL SURVEY COSTS WILL BE THE CONTRACTOR'S RESPONSIBILITY.
14. ALL NECESSARY INSPECTIONS AND/OR CERTIFICATIONS REQUIRED BY CODES, JURISDICTIONAL AGENCIES AND/OR UTILITY SERVICE COMPANIES SHALL BE PERFORMED PRIOR TO ANNOUNCED BUILDING POSSESSION AND THE FINAL CONNECTION OF SERVICES.
15. CONTRACTOR SHALL VERIFY BENCHMARKS AND DATUM PRIOR TO COMMENCING CONSTRUCTION OR STAKING OF IMPROVEMENTS.
16. CONTRACTOR SHALL THOROUGHLY CHECK COORDINATION OF CIVIL, LANDSCAPE, MEP, ARCHITECTURAL, STRUCTURAL, AND OTHER PLANS PRIOR TO COMMENCING CONSTRUCTION. OWNER AND ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCY PRIOR TO COMMENCING WITH CONSTRUCTION.
17. ALL HORIZONTAL DIMENSIONS GIVEN ARE TO FACE OF CURB AND TO PIPE CENTERLINES UNLESS OTHERWISE NOTED ON PLANS.
18. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING RELOCATION AND INSTALLATION OF FRANCHISED UTILITIES NECESSARY FOR ON AND OFF SITE CONSTRUCTION.
19. ALL SLOPES AND AREAS DISTURBED BY CONSTRUCTION SHALL BE GRADED SMOOTH. THE AREAS SHALL THEN BE SEEDED, IRRIGATED, AND STABILIZED AS SPECIFIED IN THE PLANS, AND MAINTAINED UNTIL SOIL IS STABILIZED IN ALL AREAS. ANY AREAS DISTURBED FOR ANY REASON PRIOR TO FINAL ACCEPTANCE OF THE JOB SHALL BE CORRECTED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER. ALL EARTHEN AREAS WILL BE STABILIZED AND MULCHED AS SHOWN ON THE LANDSCAPE, GRADING, AND EROSION CONTROL PLANS.
20. ALL CUT OR FILL SLOPES SHALL BE 4:1 OR FLATTER UNLESS OTHERWISE SHOWN.
21. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONTROL OF DUST AND DIRT RISING AND SCATTERING IN THE AIR DURING CONSTRUCTION AND SHALL PROVIDE WATER SPRINKLING OR OTHER SUITABLE METHODS OF CONTROL. THE CONTRACTOR SHALL COMPLY WITH ALL GOVERNING REGULATIONS PERTAINING TO ENVIRONMENTAL PROTECTION.
22. SOD OR SEED MUST BE INSTALLED AND MAINTAINED ON EXPOSED SLOPES WITHIN 48 HOURS OF COMPLETING FINAL GRADING AND AT ANY OTHER TIME AS NECESSARY TO PREVENT EROSION, SEDIMENTATION OR TURBID DISCHARGES.
23. THE CONTRACTOR MUST REVIEW AND MAINTAIN A COPY OF THE STORM WATER POLLUTION PREVENTION PLAN WITH ALL CONDITIONS, ATTACHMENTS, EXHIBITS, AND PERMIT MODIFICATIONS IN GOOD CONDITION AT THE CONSTRUCTION SITE. THE COMPLETE PERMIT MUST BE AVAILABLE FOR REVIEW UPON REQUEST BY WATER MANAGEMENT DISTRICT REPRESENTATIVES.
24. THE CONTRACTOR MUST CONSTRUCT AND MAINTAIN A PERMANENT STABLE PROTECTIVE COVER (GRASS) FOR EROSION AND SEDIMENT CONTROL ON ALL LAND SURFACES EXPOSED OR DISTURBED BY CONSTRUCTION OF THE PERMITTED PROJECT. THE PROTECTIVE COVER MUST BE INSTALLED WITHIN FOURTEEN DAYS AFTER FINAL GRADING OF THE AFFECTED LAND SURFACE. A PERMANENT STABLE COVER MUST BE ESTABLISHED WITHIN 60 DAYS OF ITS INSTALLATION.
25. UPON COMPLETION OF CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE THE CIVIL ENGINEER A COPY OF AS-BUILT PLANS IDENTIFYING ALL DEVIATIONS OR VARIATIONS FROM THE ORIGINAL PLANS.
26. ALL EXISTING PAVEMENT, ADJACENT UTILITIES, STRUCTURES, ETC., DISTURBED AS A RESULT OF THE NEW CONSTRUCTION, SHALL BE REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
27. ALL WORK REQUIRED BY THESE PLANS SHALL BE CONDUCTED IN CONFORMANCE WITH CURRENT SAFETY CODES AND STANDARDS WITH JURISDICTION OVER THIS PROJECT.
28. CONTRACTOR MUST OBTAIN A RIGHT-OF-WAY (ROW) PERMIT FOR ANY FENCE OR WALL CROSSING PUBLIC ROW/EASEMENT.

STORM SEWER DISCHARGE AUTHORIZATION:

1. A CONSTRUCTION SITE NOTICE SHALL POSTED BY THE CONTRACTOR PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITIES.
2. ALL CONTRACTORS AND SUBCONTRACTORS PROVIDING SERVICES RELATED TO THE SWPPP SHALL SIGN A CONTRACTOR CERTIFICATION STATEMENT ACKNOWLEDGING THEIR RESPONSIBILITIES AS SPECIFIED IN THE SWPPP.
3. A COPY OF THE SWPPP, INCLUDING CONTRACTOR CERTIFICATIONS AND ANY REVISIONS, SHALL BE SUBMITTED TO THE CITY AND FILED WITH THE CONSTRUCTION PLANS, AND SHALL BE RETAINED ON-SITE DURING CONSTRUCTION.
4. A NOTICE OF TERMINATION (N.O.T.) SHALL BE SUBMITTED TO THE TCEQ BY THE CONTRACTOR WHEN THE SITE HAS 100% OF THE DISTURBED AREAS STABILIZED AND THE SITE NO LONGER HAS STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES, OR THE N.O.T. PERMITTEE OR CO-PERMITTEE NO LONGER HOLDS OPERATIONAL CONTROL OF THE CONSTRUCTION.

PAVING AND STRIPING NOTES

1. CONSTRUCTION OF ALL FACILITIES TO BE DEDICATED TO THE PUBLIC SHALL BE PERFORMED PER THE REQUIREMENTS OF THE CITY OF BOERNE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, LATEST EDITION.
2. THE CONTRACTOR SHALL REFER TO THE PAVING PLAN AND GEOTECHNICAL REPORT FOR PAVEMENT THICKNESS AND TYPE.
3. TESTING OF MATERIALS REQUIRED FOR THE CONSTRUCTION OF THE PAVING IMPROVEMENTS SHALL BE PERFORMED BY AN AGENCY, APPROVED BY THE OWNER, FOR TESTING MATERIALS. PROCUREMENT OF THE TESTING LABORATORY AND THE PAYMENT OF SUCH TESTING SERVICES SHALL BE MADE BY THE OWNER. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ENSURE, BY THE STANDARD TESTING PROCEDURES, THAT THE WORK CONSTRUCTED MEETS THE REQUIREMENTS OF THE CITY AND PROJECT SPECIFICATIONS.
4. ALL SIGNS, PAVEMENT MARKINGS, AND OTHER TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE "TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES".
5. RAISED PAVEMENT MARKERS SHALL BE BONDED TO THE ROADWAY SURFACE WITH ADHESIVE CONFORMING WITH THE MANUFACTURER'S RECOMMENDATIONS.
6. THE PAVEMENT UPON WHICH THE LANE AND PAVEMENT MARKERS ARE TO BE PLACED SHALL BE PREPARED TO THE APPROVAL OF THE INSPECTOR TO ENSURE PROPER CLEANING OF THE PAVEMENT SURFACE.
7. ALL ON-SITE STRIPING SHALL BE ACRYLIC MARKING MATERIAL.
8. SIGN LOCATIONS AND INSTALLATIONS SHALL BE IN ACCORDANCE WITH THE CITY. CONTRACTOR SHALL REVIEW ALL TRAFFIC CONTROL DEVICES WITH THE CITY PRIOR TO INSTALLATION.
9. CONTRACTOR SHALL FURNISH AND INSTALL ALL PAVEMENT MARKINGS FOR FIRE LANES, PARKING STALLS, HANDICAPPED PARKING SYMBOLS, AND MISCELLANEOUS STRIPING WITHIN PARKING LOT AND AROUND BUILDING AS SHOWN ON THE PLANS.
10. SEE IRRIGATION PLAN PLANS FOR LOCATION OF PROPOSED SLEEVING AND CONDUITS.
11. ALL HANDICAP RAMPS, STRIPING, AND PAVEMENT MARKINGS SHALL CONFORM TO THE AMERICANS WITH DISABILITIES ACT OF 2010 AND THE TEXAS ARCHITECTURAL BARRIERS ACT OF 1994.
12. CONTRACTOR TO SUBMIT A PAVEMENT JOINTING PLAN TO THE ENGINEER AND OWNER PRIOR TO THE BEGINNING OF ANY CONCRETE PAVING WORK.
13. ALL EXISTING CONCRETE OR ASPHALT SHOWN TO BE REMOVED SHALL BE PROPERLY DISPOSED OF BY THE CONTRACTOR OFF SITE.

TRAFFIC CONTROL NOTES

1. CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL PLANS, AT LEAST 48 HOURS PRIOR TO ANY WORK IN A CITY STREET.
2. ALL TRAFFIC CONTROL MEASURES SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (TMUTCD), LATEST VERSION.
3. THE CONTRACTOR SHALL COVER EXISTING SIGNS AND OBLITERATE EXISTING PAVEMENT MARKINGS THAT CONFLICT WITH THE INTENT OF THESE TRAFFIC CONTROL PLANS TO AVOID CONFUSION TO THE TRAVELING PUBLIC.
4. THE CONTRACTOR SHALL UNCOVER EXISTING SIGNS AND REPLACE PAVEMENT MARKINGS IN-KIND AS ORIGINALLY CONFIGURED OR AS MODIFIED BY THESE PLANS AT THE END OF CONSTRUCTION OPERATIONS AND PRIOR TO FINAL ACCEPTANCE BY THE OWNER.
5. ALL TEMPORARY SIGNS, BARRICADES, WARNING LIGHTS AND OTHER MISCELLANEOUS TRAFFIC CONTROL MEASURES SHALL BE REMOVED AND ORIGINAL TRAFFIC CONTROL MEASURES REPLACED AT THE END OF THE CONTRACTOR'S CONSTRUCTION OPERATIONS.
6. THE TEMPORARY TRAFFIC CONTROL MEASURES SHOWN ON THESE PLANS ARE TO BE CONSIDERED AN ESTABLISHED MINIMUM. ADDITIONAL SIGNS, BARRICADES OR OTHER WARNING DEVICES SHALL BE FURNISHED WHEN NECESSARY TO SAFELY GUIDE TRAFFIC THROUGH THE CONSTRUCTION AREA.
7. TRAFFIC BARRICADES WILL BE REQUIRED AT ALL PROPOSED DRIVEWAY CONNECTIONS TO STREETS AND STORM SEWER CONSTRUCTION IN STREET RIGHT-OF-WAY. BARRICADES SHALL CONFORM TO THE INSTALLATION SHOWN IN THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (TMUTCD), LATEST VERSION.

GRADING NOTES

1. IF A GRADING PERMIT IS REQUIRED FROM THE CITY PRIOR TO STARTING CONSTRUCTION, CONTRACTOR IS RESPONSIBLE FOR OBTAINING PERMIT AND PAYING ALL ASSOCIATED FEES.
2. CONTRACTOR SHALL FIELD VERIFY HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR PROTECTING EXISTING UTILITIES (SHOWN OR NOT SHOWN) WITHIN SCOPE OF CONSTRUCTION. IF ANY EXISTING UTILITIES ARE DAMAGED, THE CONTRACTOR SHALL REPLACE THEM AT HIS OWN EXPENSE.
3. ALL SPOT ELEVATIONS SHOWN ARE TO TOP OF PAVING SURFACE OR FINISHED EARTH GRADE UNLESS NOTED OTHERWISE. ADD 0.625' TO SPOT GRADES SHOWN FOR TOP OF CURB ELEVATIONS.
4. CONTRACTOR TO ENSURE POSITIVE DRAINAGE FROM THE PROPOSED BUILDINGS AND NO PONDING IN PAVED AREAS. CONTRACTOR ADJUSTMENTS TO SPOT GRADES TO MAINTAIN POSITIVE DRAINAGE IS ALLOWED WITH THE PRIOR APPROVAL OF THE ENGINEER. CONTRACTOR SHALL CONTACT THE ENGINEER PRIOR TO PAVING IF ANY AREAS OF POOR DRAINAGE ARE ENCOUNTERED.
5. THE CONTRACTOR SHALL PROTECT ALL MANHOLE COVERS, VALVE COVERS, VAULT LIDS, FIRE HYDRANTS, POWER POLES, GUY WIRES, AND TELEPHONE BOXES WHICH ARE TO REMAIN IN PLACE AND UNDISTURBED DURING CONSTRUCTION.
6. ALL EXISTING CONCRETE PAVING, CHANNEL IMPROVEMENTS, SIDEWALK, STRUCTURES AND CURB DEMOLITION SHALL BE REMOVED IN THEIR ENTIRETY AND DISPOSED OF BY THE CONTRACTOR OFF SITE, UNLESS OTHERWISE DIRECTED BY THE OWNER OR ENGINEER.
7. ALL AREAS DISTURBED BY GRADING OPERATIONS SHALL BE SEEDED, TEMPORARILY IRRIGATED AND MAINTAINED UNTIL A UNIFORM COVERAGE IN ACCORDANCE WITH CITY REQUIREMENTS, IS ACHIEVED.
8. BUILDING PAD PREPARATION SHALL BE CONSISTENT WITH THE GEOTECHNICAL REPORT.
9. ALL CLEARING, GRADING, COMPACTION AND SUBGRADE PREPARATION SHALL BE IN ACCORDANCE WITH THE RECOMMENDATIONS MADE IN THE GEOTECHNICAL REPORT.
10. GRADING CONTRACTOR TO COORDINATE WITH THE FRANCHISED UTILITY COMPANIES FOR ANY REQUIRED UTILITY ADJUSTMENTS AND/OR RELOCATIONS.
11. THE CONTRACTOR SHALL CALCULATE HIS OWN EARTHWORK QUANTITIES AND USE TO DETERMINE HIS BID ACCORDINGLY. ANY DEVIATION FROM A BALANCED CUT AND FILL SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ARCHITECT AND CIVIL ENGINEER AND ANY VARIANCE QUANTIFIED ON THE BID.
12. REFERENCE STRUCTURAL PLANS AND SPECIFICATIONS AND GEOTECHNICAL REPORT FOR ALL BUILDING PAD LAYOUT AND SOIL PREPARATION/COMPACTION.

GAS, ELECTRIC AND TELEPHONE NOTES:

1. THE CONTRACTOR SHALL PROVIDE 4 WEEKS LEAD TIME FOR (TEMPORARY AND PERMANENT) TELEPHONE SERVICE INSTALLATION, AND 14-16 WEEK LEAD TIME FOR THREE-PHASE TRANSFORMERS. COORDINATE SERVICE WITH THE LOCAL ELECTRIC PROVIDER.
2. THE CONTRACTOR SHALL COORDINATE ALL ELECTRIC AND GAS SERVICE (TEMPORARY AND PERMANENT) LOCATION, ALIGNMENT, INSTALLATION REQUIREMENTS AND COST SHARING ARRANGEMENTS WITH FRANCHISED UTILITY PROVIDER.
3. ALL FRANCHISED UTILITY LOCATIONS SHOWN ON THESE DRAWINGS ARE CONCEPTUAL IN NATURE. THE CONTRACTOR SHALL COORDINATE THE EXACT DESIGN, ALIGNMENT, INSTALLATION REQUIREMENTS AND COST SHARING ARRANGEMENTS WITH THE INDIVIDUAL UTILITY PROVIDERS. THE CONTRACTOR SHALL INCLUDE ALL ASSOCIATED COSTS TO INSTALL FRANCHISED UTILITY (GAS, ELECTRIC, PHONE, CABLE) SERVICE TO THE PROPOSED BUILDING, IN THE BASE BID ALIGNMENT WITH UTILITY PROVIDER.

EROSION CONTROL NOTES

1. ALL EROSION CONTROL DEVICES SHALL BE INSTALLED PRIOR TO SITE DISTURBANCE AND SHALL REMAIN IN PLACE UNTIL FINAL GRADING AND PAVING IS COMPLETE AND A STAND OF GRASS IS ESTABLISHED IN ACCORDANCE WITH CITY REQUIREMENTS.
2. CONSTRUCTION OPERATIONS SHALL BE MANAGED SO THAT AS MUCH OF THE SITE AS POSSIBLE IS LEFT COVERED WITH TOPSOIL AND VEGETATION.
3. THE CONTRACTOR SHALL COMPLY WITH ALL FEDERAL, STATE, AND LOCAL EROSION, CONSERVATION, AND SILTATION ORDINANCES. THE CONTRACTOR SHALL REMOVE ALL TEMPORARY EROSION CONTROL DEVICES UPON COMPLETION OF PERMANENT DRAINAGE AND THE ESTABLISHMENT OF A STAND OF GRASS SUFFICIENT TO PREVENT EROSION. THE CONTRACTOR MUST USE SEDIMENT FILTERS OR OTHER MEASURES APPROVED BY THE ENGINEER AND CONSTRUCTION MANAGER TO PREVENT SILT AND CONSTRUCTION DEBRIS FROM CLOGGING STORM SEWER PIPES OR PROPOSED OR EXISTING INLETS, OR FROM BEING TRANSPORTED TO ADJACENT PROPERTIES AND STREET RIGHT OF WAYS.
4. CONTRACTOR SHALL CONSTRUCT A STABILIZED CONSTRUCTION ENTRANCE AT ALL PRIMARY POINTS OF ACCESS. CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ALL CONSTRUCTION TRAFFIC UTILIZES THE STABILIZED ENTRANCE AT ALL TIMES FOR INGRESS/EGRESS TO THE SITE.
5. SITE ENTRY AND EXIT LOCATIONS SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC ROADWAYS. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ON A PUBLIC ROADWAY MUST BE REMOVED IMMEDIATELY. WHEN WASHING IS REQUIRED TO REMOVE SEDIMENT PRIOR TO ENTRANCE TO A PUBLIC ROADWAY, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE. ALL FINES IMPOSED FOR TRACKING ONTO PUBLIC ROADS SHALL BE PAID BY THE CONTRACTOR.
6. CONTRACTOR IS RESPONSIBLE FOR PROPER MAINTENANCE OF THE REQUIRED EROSION CONTROL DEVICES THROUGHOUT THE ENTIRE CONSTRUCTION PROCESS. EROSION CONTROLS SHALL BE REPAIRED OR REPLACED AS INSPECTION DEEMS NECESSARY, OR AS DIRECTED BY THE OWNER'S REPRESENTATIVE. ACCUMULATED SILT IN ANY EROSION CONTROL DEVICE SHALL BE REMOVED AND SHALL BE DISTRIBUTED ON SITE IN A MANNER NOT CONTRIBUTING TO ADDITIONAL SILTATION.
7. THE CONTRACTOR IS RESPONSIBLE FOR REESTABLISHING ANY EROSION CONTROL DEVICE WHICH THEY DISTURB. EACH CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE OF ANY DEFICIENCIES IN THE ESTABLISHED EROSION CONTROL MEASURES WHICH MAY LEAD TO UNAUTHORIZED DISCHARGE OR STORM WATER POLLUTION, SEDIMENTATION OR OTHER POLLUTANTS. UNAUTHORIZED POLLUTANTS INCLUDE, BUT ARE NOT LIMITED TO, EXCESS CONCRETE DUMPING OR CONCRETE RESIDUE, PAINTS, SOLVENTS, GREASES, FUEL AND LUBE OIL, PESTICIDES, AND SOLID WASTE MATERIALS.
8. THE CONTRACTOR SHALL MAINTAIN ADEQUATE SITE DRAINAGE DURING ALL PHASES OF CONSTRUCTION. THE CONTRACTOR SHALL USE FILTER BARRIER (OR OTHER METHOD APPROVED BY THE ENGINEER AND CITY) AS REQUIRED TO PREVENT ADVERSE OFF SITE IMPACT OR STORM WATER QUALITY FROM SILT AND CONSTRUCTION DEBRIS FLOWING ONTO ADJACENT PROPERTIES AS REQUIRED BY THE CITY. CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE FEDERAL, STATE, OR LOCAL EROSION, CONSERVATION, AND SILTATION ORDINANCES. CONTRACTOR SHALL REMOVE ALL TEMPORARY EROSION CONTROL DEVICES UPON COMPLETION OF PERMANENT DRAINAGE FACILITIES AND THE ESTABLISHMENT OF A STAND OF GRASS OR OTHER GROWTH TO PREVENT EROSION.
9. CONTRACTOR SHALL PROVIDE ADEQUATE EROSION CONTROL DEVICES DURING THE PHASED CONSTRUCTION OF THIS PROJECT.
10. CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL SILT AND DEBRIS OFF SITE FROM THE EXISTING ROADWAYS AND PROJECT SITE THAT ARE A RESULT OF THE PROPOSED CONSTRUCTION.
11. BEFORE ANY EARTHWORK IS DONE, THE CONTRACTOR SHALL STAKE OUT AND MARK THE LIMITS OF CONSTRUCTION AND OTHER ITEMS ESTABLISHED BY THE PLANS. THE CONTRACTOR SHALL PROTECT AND PRESERVE CONTROL POINTS AT ALL TIMES DURING THE COURSE OF THE PROJECT. THE GRADING CONTRACTOR SHALL PROVIDE ALL NECESSARY ENGINEERING AND SURVEYING FOR LINE AND GRADE CONTROL POINTS RELATED TO EARTHWORK.
12. THE CONTRACTOR SHALL SALVAGE AND PROTECT ALL EXISTING POWER POLES, SIGNS, MANHOLES, TELEPHONE RISERS, WATER VALVES, ETC. DURING ALL CONSTRUCTION PHASES UNLESS NOTED OTHERWISE.
13. CONTRACTOR STAGING AREA TO BE AGREED UPON BY OWNER PRIOR TO BEGINNING CONSTRUCTION.
14. AS INLETS ARE COMPLETED TEMPORARY SEDIMENT BARRIERS SHALL BE INSTALLED.
15. SILT FENCE AND INLET SEDIMENT BARRIERS SHALL REMAIN IN PLACE UNTIL REVEGETATION HAS BEEN COMPLETED.
16. DISTURBED AREAS THAT ARE SEEDED OR SODDED SHALL BE CHECKED PERIODICALLY TO SEE THAT GRASS COVERAGE IS PROPERLY MAINTAINED. DISTURBED AREAS SHALL BE WATERED, FERTILIZED, AND RESEEDED OR RESODDED, IF NECESSARY.
17. CONTRACTOR SHALL PROMOTE AND PROVIDE FOR A HEALTHY ESTABLISHMENT OF TURF GRASSES WHILE KEEPING IRRIGATION TO A MINIMUM IN ORDER TO REDUCE EROSION FROM SURFACE RUNOFF.
18. EROSION CONTROL DEVICES SHALL BE PLACED TO TRAP ANY LOSSES FROM STOCKPILED TOPSOIL.

STORM SEWER NOTES

1. CONTRACTOR SHALL FIELD VERIFY THE VERTICAL AND HORIZONTAL LOCATIONS OF ALL EXISTING UTILITIES PRIOR TO START OF CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND CONSTRUCTION MANAGER IMMEDIATELY IF A CONFLICT IS DISCOVERED.
2. CONTRACTOR SHALL VERIFY AND COORDINATE ALL DIMENSIONS SHOWN, INCLUDING THE HORIZONTAL AND VERTICAL LOCATION OF CURB INLETS, GRATE INLETS, AND ALL UTILITIES CROSSING THE STORM SEWER. FLOW LINES AND RIMS OF PROPOSED INLETS SHALL BE VERIFIED WITH THE PROPOSED GRADE PRIOR TO CONSTRUCTION. CONTRACTOR SHALL BE PROVIDED AN ELECTRONIC ACAD FILE FOR USE IN CONSTRUCTION STAKING AND LAYOUT.
3. THE SITE UTILITY CONTRACTOR SHALL PROVIDE ALL MATERIALS AND APPURTENANCES NECESSARY FOR COMPLETE INSTALLATION OF THE STORM SEWER.
4. STORM MANHOLE ACCESS POINTS ARE NOT INTENDED FOR PERSONAL ACCESS. LIDS SHALL BE LOCATED ABOVE THE OUTLET DISCHARGE PIPE SUCH THAT DEBRIS REMOVAL CAN OCCUR WITHOUT REQUIREING ENTRANCE IN TO THE INLET/, JUNCTION BOX, ETC.
5. THE GENERAL CONTRACTOR AND ALL SUBCONTRACTORS SHALL VERIFY THE SUITABILITY OF ALL EXISTING AND PROPOSED SITE CONDITIONS INCLUDING GRADES AND DIMENSIONS BEFORE COMMENCEMENT OF CONSTRUCTION. THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCIES.
6. REFERENCE CITY'S DESIGN STANDARDS FOR NEW STORM SEWER SYSTEMS.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PREPARING AND IMPLEMENTING A TRENCH PROTECTION PLAN FOR ALL OPEN TRENCH EXCAVATION.
8. EXISTING MANHOLE TOPS AND ALL OTHER DRAINAGE FACILITIES SHALL BE ADJUSTED AS REQUIRED TO MATCH FINAL GRADES AS SHOWN ON GRADING PLAN. NO SEPARATE PAY ITEM.
9. ALL STORM SEWER PIPE WITHIN PUBLIC EASEMENTS/R.O.W. SHALL BE SPIRAL RIBBED CORRUGATED METAL PIPE (SRCMP) POLYMER COATED, ASTM A742.

WATER NOTES

1. ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THIS PROJECT SHALL BE APPROVED BY THE CITY OF BOERNE (COB) AND COMPLY WITH THE FOLLOWING AS APPLICABLE:
   A. CURRENT CITY OF BOERNE "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION"
   B. CURRENT TXDOT " STANDARD SPECIFICATION FOR CONSTRUCTION OF HIGHWAYS, STREETS AND DRAINAGE"
2. THE LOCATIONS AND DEPTHS OF EXISTING UTILITIES, INCLUDING SERVICE LATERALS, AND DRAINAGE STRUCTURES SHOWN ON THE PLANS ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION AND DEPTHS OF UNDERGROUND UTILITIES AT LEAST 48 HOURS PRIOR TO CONSTRUCTION WHETHER SHOWN ON PLANS OR NOT, AND TO PROTECT THE SAME DURING CONSTRUCTION.

   TEXAS STATE WIDE ONE CALL LOCATOR 1-800-545-6005
3. NO METER BOXES TO BE SET IN DRIVEWAYS. ANY METER BOXES SET IN DRIVEWAYS WILL BE RELOCATED AT CONTRACTOR'S AND/OR DEVELOPER'S EXPENSE.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING TO ITS ORIGINAL OR BETTER CONDITION FROM DAMAGE DONE TO EXISTING FENCES, CURBS, STREETS, DRIVEWAYS, LANDSCAPING AND STRUCTURES.
5. THE CONTRACTOR SHALL AVOID CUTTING ROOTS LARGER THAN ONE INCH IN DIAMETER WHEN EXCAVATING NEAR EXISTING TREES. EXCAVATION IN VICINITY OF TREES SHALL PROCEED WITH CAUTION.
6. NO EXTRA-PAYMENT SHALL BE ALLOWED FOR WORK CALLED FOR ON THE PLANS BUT NOT INCLUDED ON THE BID SCHEDULE. THIS INCIDENTAL WORK WILL BE REQUIRED AND SHALL BE INCLUDED UNDER THE PAY ITEM TO WHICH IT RELATES.
7. THE DEVELOPER DEDICATES THE WATER MAINS UPON COMPLETION BY THE DEVELOPER AND ACCEPTANCE BY THE CITY OF BOERNE AND/OR KCWCID#2. CITY OF BOERNE AND/OR KCWCID#2 WILL OWN AND MAINTAIN SAID WATER MAINS WHICH ARE LOCATED WITHIN THIS PARTICULAR SUBDIVISION. (AS APPLICABLE)
8. CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES. THE CONTRACTOR'S IMPLEMENTATION OF THE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLIES WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.
9. THE CONTRACTOR WILL KEEP THE AREA ON TOP OF AND AROUND THE WATER METER BOX FREE OF ALL OBJECTS AND DEBRIS.
10. ALL TESTING, CLEANING & DISINFECTION SHALL BE PERFORMED IN ACCORDANCE WITH BOERNE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, ITEM NO. 02660.
11. ALL WATER LINES SHALL MAINTAIN A MINIMUM COVER OF 48 INCHES FROM TOP OF PIPE TO TOP OF GROUND OR PAVEMENT, UNLESS OTHERWISE NOTED.

SANITARY SEWER NOTES

1. ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THIS PROJECT SHALL BE APPROVED BY THE CITY OF BOERNE PUBLIC WORKS (COB) AND COMPLY WITH THE FOLLOWING AS APPLICABLE:
   A. CURRENT TEXAS COMMISSION ON ENVIRONMENTAL QUALITY'S DESIGN CRITERIA FOR SEWERAGE SYSTEMS [30 TAC 217.1, 30 TAC 217.2, 30 TAC 217.3 AND 30 TAC 217.13].
   B. CITY OF BOERNE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, LATEST EDITION.
   C. CURRENT TXDOT " STANDARD SPECIFICATION FOR CONSTRUCTION OF HIGHWAYS, STREETS AND DRAINAGE".
2. THE LOCATIONS AND DEPTHS OF EXISTING UTILITIES, INCLUDING SERVICE LATERALS, AND DRAINAGE STRUCTURES SHOWN ON THE PLANS ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION AND DEPTHS OF UNDERGROUND UTILITIES AT LEAST 48 HOURS PRIOR TO CONSTRUCTION WHETHER SHOWN ON PLANS OR NOT, AND TO PROTECT THE SAME DURING CONSTRUCTION.

   TEXAS STATE WIDE ONE CALL LOCATOR 1-800-545-6005
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING TO ITS ORIGINAL OR BETTER CONDITION FROM DAMAGE DONE TO EXISTING FENCES, CURBS, STREETS, DRIVEWAYS, LANDSCAPING AND STRUCTURES.
4. THE CONTRACTOR SHALL AVOID CUTTING ROOTS LARGER THAN ONE INCH IN DIAMETER WHEN EXCAVATING NEAR EXISTING TREES. EXCAVATION IN VICINITY OF TREES SHALL PROCEED WITH CAUTION.
5. THE CONTRACTOR SHALL MAINTAIN SERVICE TO EXISTING SANITARY SEWERS AT ALL TIMES DURING CONSTRUCTION.
6. DUE TO FEDERAL REGULATIONS TITLE 49, PART 192.181, CITY OF BOERNE MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT AND WORK AROUND GAS VALVES THAT ARE IN THE PROJECT AREAS.
7. ALL RESIDENTIAL SEWER SERVICE LATERALS SHALL BE EXTENDED TO THE UTILITY EASEMENT LINE AND CAPPED AND SEALED.
8. AFTER CONSTRUCTION, TESTING WILL BE DONE BY TV CAMERA BY THE CONTRACTOR AND OBSERVED BY INSPECTOR, AND WASTEWATER ENGINEERING PERSONNEL, AS THE CAMERA IS RUN THROUGH THE LINES. ANY ABNORMALITIES, SUCH AS BROKEN PIPE OR MISALIGNED JOINTS, MUST BE REPLACED BY THE CONTRACTOR AT HIS EXPENSE. CONTRACTOR TO PROVIDE TV TAPES TO CONSTRUCTION INSPECTION FOR REVIEW PRIOR TO FINAL INSPECTION OF THE PROJECT.

EXCAVATION

9. CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES. THE CONTRACTOR'S IMPLEMENTATION OF THE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLIES WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.
10. CONTRACTOR IS RESPONSIBLE FOR REMOVAL OF ALL WASTE MATERIALS UPON PROJECT COMPLETION. THE CONTRACTOR SHALL NOT PERMANENTLY PLACE ANY WASTE MATERIALS IN THE 100-YEAR FLOOD PLAIN WITHOUT FIRST OBTAINING AN APPROVED FLOOD PLAIN DEVELOPMENT PERMIT.
11. WATER JETTING THE BACKFILL WITHIN A STREET WILL NOT BE PERMITTED. SANITARY SEWER TRENCHES SHALL CONFORM TO THE BOERNE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, ITEM NO. 02221.

EROSION AND SEDIMENTATION CONTROL

12. THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY AND ENVIRONMENTAL PROTECTION AGENCY (EPA) REQUIRE EROSION AND SEDIMENTATION CONTROL FOR CONSTRUCTION OF SEWER COLLECTION SYSTEMS. DEVELOPER OR AUTHORIZED REPRESENTATIVE SHALL PROVIDE EROSION AND SEDIMENTATION CONTROL AS NOTES ON THE PROJECT'S PLAN AND PROFILE SHEETS.
13. ALL TEMPORARY EROSION AND SEDIMENTATION CONTROLS SHALL BE REMOVED BY THE CONTRACTOR AT FINAL ACCEPTANCE OF THE PROJECT BY THE CITY OF BOERNE.

SUPPLEMENTARY

14. NO EXTRA-PAYMENT SHALL BE ALLOWED FOR WORK CALLED FOR ON THE PLANS BUT NOT INCLUDED ON THE BID SCHEDULE. THIS INCIDENTAL WORK WILL BE REQUIRED AND SHALL BE INCLUDED UNDER THE PAY ITEM TO WHICH IT RELATES.
15. THE DEVELOPER DEDICATES THE SANITARY SEWER MAINS UPON COMPLETION BY THE DEVELOPER AND ACCEPTANCE BY THE CITY OF BOERNE/KCWCID#2. THE CITY OF BOERNE (AND/OR KCWCID#2) WILL OWN AND MAINTAIN SAID SANITARY SEWER MAINS WHICH ARE LOCATED WITHIN THIS PARTICULAR SUBDIVISION. (AS APPLICABLE)
16. ALL PVC SEWER PIPE WITH OVER 14 FEET OF COVER SHALL BE EXTRA STRENGTH PIPE, MINIMUM STIFFNESS OF 115 PSI.
17. ALL TESTING, VIDEO INSPECTION & CLEANING SHALL BE PERFORMED IN ACCORDANCE WITH BOERNE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, ITEM NO. 02530.
18. THE SEWER PIPE SHALL BE INSTALLED STARTING FROM DOWNSTREAM OF THE POINT OF CONNECTION ON THE EXISTING SEWER OR FROM A DESIGNATED STARTING POINT. THE SEWER PIPE SHALL BE INSTALLED WITH THE BELL END UPSTREAM.
19. AT PROPOSED POINTS OF CONNECTION TO AN EXISTING MANHOLE, PRIOR TO CONSTRUCTING ANY NEW SEWER LINES UPSTREAM OF MANHOLE, CONTRACTOR SHALL VERIFY THAT THE PROPOSED SEWER LINE HAS A MINIMUM 6 INCH SEPARATION (OR PER MANUFACTURER RECOMMENDATION) FROM THE O.D. OF THE PROPOSED SEWER LINE TO ANY EXISTING JOINTS BETWEEN MANHOLE BASE AND RINGS. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY IF A CONFLICT IS DISCOVERED.

MISC WATER AND SANITARY SEWER NOTES

1. THE CONTRACTOR SHALL FIELD VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UTILITIES WHERE PROPOSED UTILITIES ARE BEING CONNECTED, PRIOR TO START OF CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY IF A CONFLICT IS DISCOVERED.
2. ALL PVC 4" - 12" WATER LINES SHALL BE AWWA C900 DR-14 OR APPROVED EQUAL. ALL PVC 14"-48" WATER LINES SHALL BE AWWA C905 DR-18.
3. ALL 4"-12" VALVES SHALL BE RESILIENT SEAT GATE VALVES PER AWWA C509. ALL VALVES GREATER THAN 14" SHALL BE BUTTERFLY VALVES PER AWWA C504. DOMESTIC VALVES SHALL BE OPEN "COUNTER CLOCKWISE" AND ALL RECLAIM VALVES SHALL BE OPEN "CLOCKWISE."
4. TRACER WIRE LOCATE BOX (SNAKE PIT OR APPROVED EQUAL) SHALL BE INSTALLED PER CITY SPECIFICATIONS AT ALL WATER VALVES (INCLUDING FIRE HYDRANT VALVES) AND BLOWOFFS. FOR GROUPING OF VALVES AT ONE GENERAL LOCATION, ONE LOCATE BOX MAY BE USED.
5. TRACER WIRE INSTALLATION SHALL COMPLY WITH CITY OF BOERNE SPECS 02660 AND 02670.
6. RECLAIMED WATER LINES SHALL COMPLY WITH TCEQ CHAPTER 210 AND 217. ALL PIPE AND METER LIDS SHALL BE PURPLE IN COLOR. ALL VALVE BOXES, BRASS/BRONZE FITTINGS, ETC. SHALL BE PAINTED PURPLE COLOR. ALL COPPER TUBING SHALL BE TAPED WITH PURPLE TAPE.
7. ALL SANITARY SEWER LINES SHALL BE A MINIMUM OF PVC SDR-35, ASTM F789/D3212. ALL SANITARY SEWER LINES DEEPER THAN 14 FEET SHALL BE A MINIMUM OF PVC SDR-26.
8. ALL UTILITY CONSTRUCTION, WATER TAPS, VALVES, AND SERVICES SHALL BE INSTALLED BY THE CONTRACTOR AFTER APPROVAL FROM THE CITY AND SHALL CONFORM TO ALL GUIDELINES AND REGULATIONS SET FORTH BY THE CITY FOR WATER AND SANITARY SEWER CONSTRUCTION.
9. CONTRACTOR TO SEQUENCE CONSTRUCTION AS TO AVOID INTERRUPTION OF WATER AND SANITARY SEWER SERVICE TO SURROUNDING AREAS.
10. CONTRACTOR TO REPLACE GRASS AND RESTORE PROPERTY TO ORIGINAL CONDITION IN ALL DISTURBED AREAS.
11. EXISTING AND/OR PROPOSED WATER MAINS SHALL BE LOWERED BELOW OR ABOVE PROPOSED SANITARY AND STORM SEWER LINES TO MAINTAIN A MINIMUM OF 2.0 FEET OF VERTICAL SEPARATION. CONTRACTOR TO REFER TO TCEQ CHAPTERS 217 AND 290 FOR REQUIREMENTS AT ALL WATER AND SANITARY SEWER CROSSINGS.
12. THE FOLLOWING REQUIREMENTS SHALL APPLY TO WATER AND SANITARY SEWER CROSSINGS IN THEIR RESPECTIVE SITUATIONS:
    A. WHERE A NEW POTABLE WATERLINE CROSSES A NEW, NON-PRESSURE RATED WASTEWATER MAIN OR LATERAL AND THE STANDARD PIPE SEGMENT LENGTH OF THE WASTEWATER MAIN OR LATERAL AND THE STANDARD PIPE SEGMENT IS AT LEAST 18 FEET, ONE SEGMENT OF THE WATERLINE PIPE SHALL BE CENTERED OVER THE WASTEWATER MAIN OR LATERAL SUCH THAT THE JOINTS OF THE WATERLINE PIPE ARE EQUIDISTANT AND AT LEAST NINE FEET HORIZONTALLY FROM THE CENTERLINE OF THE WASTEWATER MAIN OR LATERAL. THE POTABLE WATERLINE SHALL BE AT LEAST TWO FEET ABOVE THE WASTEWATER MAIN OR LATERAL. WHENEVER POSSIBLE, THE CROSSING SHALL BE CENTERED BETWEEN THE JOINTS OF THE WASTEWATER MAIN OR LATERAL. THE WASTEWATER MAIN OR LATERAL SHALL BE EMBEDDED IN CEMENT STABILIZED SAND PER THE STANDARDS LISTED BELOW IN 13(D) FOR THE TOTAL LENGTH OF ONE PIPE SEGMENT PLUS 12 INCHES BEYOND THE JOINT ON EACH END.
    B. WHERE A NEW, POTABLE WATERLINE CROSSES A NEW, NON-PRESSURE RATED WASTEWATER MAIN OR LATERAL AND A STANDARD LENGTH OF THE WASTEWATER PIPE IS LESS THAN 18 FEET IN LENGTH, THE POTABLE WATER PIPE SEGMENT SHALL BE CENTERED OVER THE WASTEWATER LINE. THE MATERIALS AND METHOD OF INSTALLATION SHALL CONFORM WITH ONE OF THE FOLLOWING:
       i. WITHIN NINE FEET HORIZONTALLY OF EITHER SIDE OF THE WATERLINE, THE WASTEWATER PIPE AND JOINTS SHALL BE CONSTRUCTED WITH PIPE MATERIAL HAVING A MINIMUM PRESSURE RATING OF AT LEAST 150 PSI. AN ABSOLUTE MINIMUM VERTICAL SEPARATION DISTANCE OF TWO FEET SHALL BE PROVIDED WITH THE WATERLINE LOCATED OVER THE WASTEWATER MAIN OR LATERAL.
       ii. ALL SECTIONS OF WASTEWATER MAIN OR LATERAL WITHIN NINE FEET HORIZONTALLY OF THE WATERLINE SHALL BE ENCASED IN AN 18-FOOT (OR LONGER) SECTION OF PIPE. THE ENCASING PIPE SHALL BE CENTERED ON THE WATERLINE AND SHALL BE AT LEAST TWO NOMINAL DIAMETERS LARGER THAN THE WASTEWATER MAIN OR LATERAL. THE SPACE AROUND THE CARRIER PIPE SHALL BE SUPPORTED AT FIVE-FOOT (OR LESS) INTERVALS WITH SPACERS OR BE FILLED TO THE SPRINGLINE WITH WASHED SAND. EACH END OF THE CASING SHALL BE SEALED WITH WATERTIGHT NON-SHRINK CEMENT GROUT OR A MANUFACTURED WATERTIGHT SEAL. AN ABSOLUTE MINIMUM SEPARATION DISTANCE OF SIX INCHES BETWEEN THE ENCASEMENT PIPE AND THE WATERLINE SHALL BE PROVIDED WITH THE WATERLINE LOCATED BELOW THE WATERLINE.
       iii. WHEN A NEW WATERLINE CROSSES UNDER A WASTEWATER MAIN OR LATERAL, THE WATERLINE SHALL BE ENCASED AS DESCRIBED ABOVE IN 13(b) OR CONSTRUCTED OF DUCTILE IRON STEEL PIPE WITH MECHANICAL OR WELDED JOINTS AS APPROPRIATE. AN ABSOLUTE MINIMUM SEPARATION OF ONE FOOT BETWEEN THE WATERLINE AND WASTEWATER MAIN OR LATERAL SHALL BE PROVIDED. BOTH WATER AND WASTEWATER MUST PASS A PRESSURE AND LEAKAGE TEST AS SPECIFIED IN AWWA C600 STANDARDS.
    C. WHERE A NEW POTABLE WATERLINE CROSSES A NEW, PRESSURE RATED WASTEWATER MAIN OR LATERAL, ONE SEGMENT OF THE WATERLINE PIPE SHALL BE CENTERED OVER THE WASTEWATER LINE SUCH THAT THE JOINTS OF THE WATERLINE PIPE ARE EQUIDISTANT AND AT LEAST NINE FEET HORIZONTALLY FROM THE CENTER LINE OF THE WASTEWATER MAIN OR LATERAL. THE POTABLE WATERLINE SHALL BE AT LEAST SIX INCHES ABOVE THE WASTEWATER MAIN OR LATERAL. WHENEVER POSSIBLE, THE CROSSING SHALL BE CENTERED BETWEEN THE JOINTS OF THE WASTEWATER MAIN OR LATERAL. THE WASTEWATER PIPE SHALL HAVE A MINIMUM PRESSURE RATING OF AT LEAST 150 PSI. THE WASTEWATER MAIN OR LATERAL SHALL BE EMBEDDED IN CEMENT STABILIZED SAND PER THE STANDARDS LISTED BELOW IN 13(D) FOR THE TOTAL LENGTH OF ONE PIPE SEGMENT PLUS 12 INCHES BEYOND THE JOINT ON EACH END.
    D. WHERE CEMENT STABILIZED SAND BEDDING IS REQUIRED, THE CEMENT STABILIZED SAND SHALL HAVE A MINIMUM OF 10% CEMENT PER CUBIC YARD OF CEMENT STABILIZED SAND MIXTURE, BASED ON LOOSE DRY WEIGHT VOLUME (AT LEAST 2.5 BAGS OF CEMENT PER CUBIC YARD OF MIXTURE). THE CEMENT STABILIZED SAND BEDDING SHALL BE A MINIMUM OF SIX INCHES ABOVE AND FOUR INCHES BELOW THE WASTEWATER MAIN OR LATERAL.
13. EXISTING MANHOLE TOPS, VALVE BOXES, FIRE HYDRANTS AND ALL OTHER UTILITY APPURTENANCES SHALL BE ADJUSTED AS REQUIRED TO MATCH PROPOSED GRADES AS SHOWN ON GRADING PLAN.
14. CLEANOUTS LOCATED IN PAVEMENT OR SIDEWALKS SHALL HAVE BRASS OR CAST IRON COVERS THAT EXTEND TO GRADE.
15. CONTRACTOR SHALL CONTACT ALL NECESSARY UTILITY COMPANIES PRIOR TO CONSTRUCTION, IN ORDER TO LOCATE AND/OR DISCONNECT SERVICES.
16. FOR EACH SEWER AND WATER CROSSING, CENTER ONE LENGTH OF SEWER PIPE ON THE EXISTING OR PROPOSED WATER MAIN.
17. CONTRACTOR TO BRACE AND/OR BENCH ALL UTILITY TRENCHES AS REQUIRED FOR CONSTRUCTION ADJACENT TO EXISTING AND/OR PROPOSED PAVEMENT AND FOUNDATIONS.

POND NOTES

1. ANY PONDS THAT ARE INTENDED TO HOLD WATER INDEFINITELY SHALL BE CONSTRUCTED WATERTIGHT.
2. FOR ANY PONDS INTENDED TO HOLD WATER INDEFINITELY: THE CONTRACTOR SHALL REFER TO THE GEOTECHNICAL REPORT FOR POND LINER SPECIFICATIONS.
3. A GEOTECHNICAL ENGINEER SHALL REVIEW AND APPROVE ALL POND LINER MATERIAL, PLACEMENT PROCEDURES, AND PROVIDE TESTING TO ENSURE THE POND LINER MATERIAL PLACED IS WATERTIGHT.
4. STORM SEWER PIPES AND HEADWALLS THAT CONNECT TO A POND INTENDED TO HOLD WATER INDEFINITELY SHALL BE INSTALLED WITH WATERTIGHT JOINTS TO AT LEAST 1-FOOT ABOVE THE NORMAL POOL WATER SURFACE ELEVATION.
5. ANY GRAVEL OR OTHER PERVIOUS EMBEDMENT AROUND PIPES OR OUTFALL STRUCTURES NEAR THE POND SHALL BE ELIMINATED FOR AT LEAST 20-FEET FROM THE POND SO NO ROUTE FOR WATER TO LEAK THROUGH THE EMBEDMENT MATERIAL IS PROVIDED. BACKFILL IN THESE AREAS SHALL BE OF IMPERVIOUS MATERIAL.
6. FOR ANY PONDS INTENDED TO HOLD WATER INDEFINITELY: THE WATER LEVEL FOLLOWING COMPLETION AND FILLING OF THE POND SHALL BE MONITORED BY THE CONTRACTOR FOR AT LEAST 60 DAYS TO OBSERVE WATER INFLOW, OUTFLOW, AND CALCULATE EVAPORATION TO VERIFY THAT THE POND IS WATERTIGHT.
7. FOR ANY PONDS INTENDED TO HOLD WATER INDEFINITELY: THE POND WATER LEVEL SHALL ALSO BE MAINTAINED BY THE CONTRACTOR FOR THE DURATION OF CONSTRUCTION SO THAT IT REMAINS FULL TO ITS DESIGN WATER LEVEL, AND IS NOT LOWERED, AS THIS MAY DRY-OUT THE POND LINER AND RISK ITS WATERTIGHT PROPERTIES.

WARNING: CONTRACTOR TO VERIFY PRESENCE AND EXACT LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.

REFERENCE BENCHMARKS

CONTRACTOR TO PROVIDE 16 PERMANENT BENCHMARKS UPON COMPLETION OF PROJECT. BENCHMARKS SHALL BE FIVE FEET LONG, STEEL REINFORCED CONCRETE POST, FOUR (4) INCHES IN DIAMETER, WITH TOP NO MORE THAN SIX (6) INCHES ABOVE AND NO LESS THAN TWO (2) INCHES BELOW FINISHED GRADE, OR OTHER PERMANENT STYLE AS APPROVED BY CITY OF BOERNE. CONTRACTOR TO PROVIDE FIELD NOTES WITH NORTHING, EASTING AND ELEVATIONS OF PROVIDED BENCH MARKS, AS VERIFIED BY A REGISTERED PROFESSIONAL LAND SURVEYOR, WITH THE AS-BUILT CONSTRUCTION DOCUMENTS.

= BENCHMARK

REFERENCE BENCHMARKS

DATUM IS NAVD '88, USING GEOID 18, BASED ON GPS OBSERVATIONS.

BM #300: MAG NAIL WITH WASHER SET STAMPED "300"

• ELEV.=1516.73'

BM #403: MAG NAIL WITH WASHER SET IN CURB

• ELEV.=1546.85'

BM #404: MAG NAIL WITH WASHER SET IN CURB

• ELEV.=1538.40'

BM #51000:

• ELEV.=1492.78'

= BENCHMARK

REFER TO TCEQ DESIGN GUIDELINES (CHAPTER 290) FOR ALL UTILITY CROSSINGS.

WHERE A CONFLICT EXISTS BETWEEN CITY OF BOERNE NOTES (SHEET 6) AND OTHER NOTES ON THIS SHEET, CITY OF BOERNE NOTES SHALL PREVAIL

No.	REVISIONS	DATE	BY

Kimley-Horn
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STATE OF TEXAS
MICHAEL A. SCHOLZE
131737
LICENSED PROFESSIONAL ENGINEER
7/28/2025

KHA PROJECT 068686339
DATE 7/28/2025
SCALE AS SHOWN
DESIGNED BY JPV
DRAWN BY JPV
CHECKED BY MAS

PHASE 3H
GENERAL NOTES

Esperanza
BOERNE ★ TEXAS

KENDALL COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT NO. 2B

SHEET NUMBER
5

CITY OF BOERNE - GENERAL CONSTRUCTION NOTES (6/21/2024)

GENERAL NOTES

1. CONSTRUCTION OF ALL FACILITIES TO BE DEDICATED TO THE PUBLIC SHALL BE PERFORMED PER THE REQUIREMENTS OF THE CITY OF BOERNE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, LATEST EDITION, AND ANY OTHER GOVERNING AGENCY SUCH AS THE TCEQ, TXDOT, ETC., AS APPLICABLE.
2. IF ANY CONFLICT ARISES BETWEEN THESE GENERAL NOTES AND ANY OTHER NOTES FOUND IN THE PLANS, THE CITY OF BOERNE'S GENERAL NOTES SHALL TAKE PRECEDENCE. HOWEVER, THE CITY ENGINEER HAS THE AUTHORITY TO REVIEW AND APPROVE LEGITIMATE CONFLICTING PROJECT SPECIFIC NOTES, IF NEEDED.
3. ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE INFRASTRUCTURE DRAWINGS REMAINS WITH THE ENGINEER OF RECORDS. IN APPROVING THESE INFRASTRUCTURE DRAWINGS, THE CITY OF BOERNE MUST RELY UPON THE ADEQUACY OF THE WORK OF THE ENGINEER OF RECORD.
4. PRIOR TO A CONSTRUCTION RELEASE PERMIT AND BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL CONTACT THE CITY OF BOERNE ENGINEERING & MOBILITY DEPARTMENT TO SCHEDULE A PRE-CONSTRUCTION MEETING. A SEPARATE ONSITE PRE-CONSTRUCTION MEETING MAY BE REQUIRED WITH THE CONTRACTOR AND ANY SUBCONTRACTORS PRIOR TO STARTING WORK.
5. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS PRIOR TO CONSTRUCTION.
6. THE CONTRACTOR SHALL NOTIFY CITY OF BOERNE ENGINEERING & MOBILITY DEPARTMENT AT LEAST 48 HOURS PRIOR TO BEGINNING CONSTRUCTION AT (830) 248-1538.
7. THE CONTRACTOR IS REQUIRED TO SCHEDULE ALL NECESSARY INSPECTIONS AT LEAST 24 HOURS IN ADVANCE. FEES MAY BE ASSESSED FOR WORK THAT IS NOT READY AT THE TIME OF INSPECTION OR NO-SHOWS FOR SCHEDULED INSPECTIONS.
8. THE CONTRACTOR SHALL HAVE THE FOLLOWING AVAILABLE AT THE JOB SITE AT ALL TIMES; THE APPROVED INFRASTRUCTURE DRAWINGS, INCLUDING ALL APPROVED REVISIONS; THE CITY OF BOERNE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION; ALL NECESSARY APPROVED PERMITS; NOTICE OF INTENT; EROSION CONTROL PLANS; AND SWPPP. IT IS ENCOURAGED TO KEEP AN EXTRA COPY OF APPROVED SUBMITTALS ON-SITE.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL PUBLIC UTILITIES DURING CONSTRUCTION OF THE PROJECT.
10. THE CONTRACTOR SHALL DETERMINE THE DEPTH AND LOCATION OF EXISTING UNDERGROUND UTILITIES PRIOR TO EXCAVATING, TRENCHING, OR DRILLING AND SHALL BE REQUIRED TO TAKE ANY PRECAUTIONARY MEASURES TO PROTECT ALL LINES SHOWN AND/OR ANY OTHER UNDERGROUND UTILITIES NOT OF RECORD OR NOT SHOWN ON THE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING ALL PUBLIC AGENCIES AND FRANCHISE UTILITIES 48 HOURS PRIOR TO CONSTRUCTION (TEXAS811 1-800-344-8377). THE CONTRACTOR MAY BE REQUIRED TO EXPOSE THESE FACILITIES AT THEIR OWN COST.
11. THE CONTRACTOR MUST CONTACT CITY OF BOERNE ENGINEERING & MOBILITY DEPARTMENT IMMEDIATELY IF ANY DAMAGE TO EXISTING UTILITIES OCCURS. ANY DAMAGE TO UTILITIES RESULTING FROM CONTRACTOR'S OPERATIONS SHALL BE RESTORED AT THEIR EXPENSE. IF DAMAGE TO A LIVE GAS MAIN OCCURS, CALL 911 IMMEDIATELY PRIOR TO CALLING CITY OF BOERNE UTILITIES DEPARTMENT.
12. THE CONTRACTOR SHALL IMMEDIATELY REPAIR OR REPLACE ANY PHYSICAL DAMAGE TO PUBLIC AND PRIVATE PROPERTY, INCLUDING, BUT NOT LIMITED TO FENCES, WALLS, PAVEMENT, GRASS, LANDSCAPE, TREES, AND LAWN SPRINKLER AND IRRIGATION SYSTEM AT THEIR OWN COST. ANY PERMITTED WORK LOCATED WITHIN EASEMENTS ON PRIVATE PROPERTY WILL REQUIRE A LETTER OF APPROVAL FROM EACH AFFECTED LANDOWNER PRIOR TO FINAL ACCEPTANCE OF CONSTRUCTION.
13. ANY DISCREPANCIES ON THE INFRASTRUCTURE DRAWINGS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE DESIGN ENGINEER AND CITY OF BOERNE ENGINEERING & MOBILITY DEPARTMENT BEFORE COMMENCING WORK. NO FIELD CHANGES OR DEVIATIONS FROM THE INFRASTRUCTURE DRAWINGS ARE PERMITTED WITHOUT WRITTEN APPROVAL FROM THE CITY.
14. STORMWATER MANAGEMENT FACILITIES SHALL BE PROVIDED PRIOR TO SITE CONSTRUCTION OR CLEARING AND BE MAINTAINED DURING THE PROGRESS OF CONSTRUCTION.
15. THE CONTRACTOR IS RESPONSIBLE FOR SITE SAFETY. ALL WORK REQUIRED SHALL BE CONDUCTED IN CONFORMANCE WITH CURRENT SAFETY CODES AND STANDARDS WITH JURISDICTION OVER THIS PROJECT.
16. THE CONTRACTOR SHALL PROVIDE THE CITY ACCESS TO CITY PROPERTY, EASEMENTS, UTILITIES, AND FACILITIES AT ALL TIMES DURING CONSTRUCTION.
17. THE CONTRACTOR SHALL FOLLOW THE CITY'S CURRENT NOISE ORDINANCE, ANY EXCEPTIONS OF WHICH MAY BE REQUESTED IN WRITING TO THE CITY OF BOERNE PERMITTING AND CODE COMPLIANCE DEPARTMENT.
18. THE CONTRACTOR IS RESPONSIBLE FOR REQUIRED CONSTRUCTION SURVEYING AND STAKING AND SHALL NOTIFY THE CITY OF ANY DISCREPANCIES PRIOR TO PROCEEDING WITH ANY WORK.
19. THE CONTRACTOR SHALL VERIFY BENCHMARKS AND DATUMS PRIOR TO COMMENCING CONSTRUCTION OR STAKING OF IMPROVEMENTS.
20. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL SURVEY MARKERS INCLUDING IRON RODS, PROPERTY CORNERS, OR SURVEY MONUMENTS WITHIN THE LIMITS OF THE CONSTRUCTION SITE AND OUTSIDE THE RIGHT-OF-WAY DURING CONSTRUCTION. ANY SURVEY MARKERS DISTURBED DURING CONSTRUCTION SHALL BE REPLACED BY THE CONTRACTOR AT THEIR OWN COST.
21. ALL GENERAL USE CONCRETE SHALL BE PLANT MIXED MEETING CITY SPECIFICATIONS WITH A MINIMUM OF 4,000 PSI AT 28 DAYS COMPRESSIVE STRENGTH UNLESS OTHERWISE SPECIFIED. ANY CONCRETE INSTALLED WITHOUT AN APPROVED MIX DESIGN SUBMITTAL WILL BE REMOVED AT CONTRACTOR'S EXPENSE.
22. CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS, AND/OR PROCEDURES FOR THE PROJECT DESCRIBED IN THESE CONTRACT DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS, AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLY WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS, SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.
23. CONTRACTOR SHALL FURNISH A SET OF "AS-BUILT" DRAWINGS TO THE CITY OF BOERNE ENGINEERING & MOBILITY DEPARTMENT AT THE TIME OF FINAL INSPECTION. CONTRACTOR SHALL GIVE CITY AT LEAST TWO WORKING DAYS NOTICE PRIOR TO FINAL INSPECTION.

GEOTECHNICAL TESTING

1. ALL COMPACTION, CONCRETE, AND OTHER REQUIRED TEST RESULTS SHALL BE SENT TO THE DESIGN ENGINEER AND CITY DIRECTLY FROM THE TESTING AGENCY. CITY OF BOERNE INSPECTORS SHALL BE PROVIDED A MINIMUM OF 24-HOUR NOTICE AND PROVIDED THE OPPORTUNITY TO OBSERVE ALL REQUIRED TESTING.
2. ALL PROCTOR TESTING SHALL BE COMPLETED PER ASTM D1557 (MODIFIED PROCTOR) AND PROCTOR SHALL BE SUBMITTED TO THE CITY OF BOERNE ENGINEERING & MOBILITY DEPARTMENT PRIOR TO COMPACTION.
3. UPON COMPLETION OF CONSTRUCTION, A COPY OF ALL TESTING REPORTS SHALL BE COMPILED AND FORWARDED TO THE CITY OF BOERNE ENGINEERING & MOBILITY DEPARTMENT PRIOR TO FINAL ACCEPTANCE.
4. IT IS THE RESPONSIBILITY OF THE DEVELOPER, CONTRACTOR, SUBCONTRACTORS, BUILDERS, GEOTECHNICAL ENGINEER, AND DESIGN ENGINEER TO IMMEDIATELY NOTIFY THE CITY AND DESIGN ENGINEER IF THE PRESENCE OF GROUNDWATER WITHIN THE SITE IS EVIDENT. UPON NOTIFICATION, THE DESIGN ENGINEER SHALL RESPOND WITH PLAN REVISIONS FOR THE MITIGATION OF THE GROUNDWATER ISSUE. ALL CONSTRUCTION ACTIVITY IMPACTED BY THE DISCOVERY OF GROUNDWATER SHALL BE SUSPENDED UNTIL THE CITY APPROVES THE GROUNDWATER MITIGATION PLAN IN WRITING.

TRAFFIC CONTROL

1. CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING AND INSTALLING ALL TEMPORARY AND PERMANENT TRAFFIC CONTROL IN ACCORDANCE WITH THE MINIMUM REQUIREMENTS OF THE LATEST REVISION OF THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (TMUTCD) AND TXDOT BARRICADE AND CONSTRUCTION STANDARDS.
2. CONTRACTOR SHALL NOT IMPEDE TRAFFIC ON EXISTING STREETS, DRIVEWAYS, OR FIRE LANES OPEN TO THE PUBLIC.
3. CONTRACTOR TO PROVIDE TRAFFIC CONTROL PLAN FOR REVIEW AND APPROVAL TO THE CITY AT LEAST 3 BUSINESS DAYS IN ADVANCE OF COMMENCING WORK IN A CITY RIGHT-OF-WAY.
4. TEMPORARY LANE CLOSURES DURING THE HOURS OF 9AM TO 3PM MAY BE PERMITTED WHERE SHOWN AS NECESSARY WITHIN THE TRAFFIC CONTROL PLAN WITH PRIOR APPROVAL BY THE CITY OF BOERNE ENGINEERING & MOBILITY. NO LANE CLOSURES ARE PERMITTED ON WEEKENDS OR HOLIDAYS WITHOUT PRIOR WRITTEN APPROVAL.
5. TEMPORARY STEEL PLATES MAY BE UTILIZED AS PERMITTED BY THE CITY OF BOERNE ENGINEERING & MOBILITY DEPARTMENT FOR A MAXIMUM OF TWO (2) WEEKS UNLESS PRIOR APPROVAL OF AN EXTENDED TIME IS PROVIDED.
6. ALL TEMPORARY SIGNS, BARRICADES, WARNING LIGHTS, AND OTHER MISCELLANEOUS TRAFFIC CONTROL MEASURES SHALL NOT BE INSTALLED EARLIER THAN 24 HOURS BEFORE THE CONTRACTOR IS READY TO PROCEED WITH CONSTRUCTION FOR THAT SITE.
7. ALL TEMPORARY SIGNS, BARRICADES, WARNING LIGHTS AND OTHER MISCELLANEOUS TRAFFIC CONTROL MEASURES SHALL BE REMOVED AND ORIGINAL TRAFFIC CONTROL MEASURES REPLACED AT THE END OF THE CONTRACTOR'S CONSTRUCTION OPERATION.

EROSION CONTROL NOTES

1. ALL EROSION CONTROL DEVICES SHALL BE INSTALLED PRIOR TO SITE DISTURBANCE AND SHALL REMAIN IN PLACE UNTIL FINAL GRADING AND PAVING IS COMPLETE AND VEGETATION IS ESTABLISHED WITH 85% COVERAGE ACHIEVED.
2. CONTRACTOR IS RESPONSIBLE FOR PROPER MAINTENANCE OF THE REQUIRED EROSION CONTROL DEVICES THROUGHOUT THE ENTIRE CONSTRUCTION PROCESS. EROSION CONTROLS SHALL BE REPAIRED OR REPLACED AS INSPECTION DEEMS NECESSARY, OR AS DIRECTED BY THE OWNER'S REPRESENTATIVE. ACCUMULATED SILT IN ANY EROSION CONTROL DEVICE SHALL BE REMOVED AND SHALL BE DISTRIBUTED ON-SITE IN A MANNER NOT CONTRIBUTING TO ADDITIONAL SILTATION.
3. THE CONTRACTOR IS RESPONSIBLE TO ENSURE THAT EROSION CONTROL MEASURES AND STORMWATER CONTROL IS SUFFICIENT TO MITIGATE OFF-SITE IMPACTS AND ARE IN PLACE AT ALL STAGES OF CONSTRUCTION.
4. THE CITY INSPECTOR HAS THE AUTHORITY TO HAVE THE CONTRACTOR MODIFY THE EROSION CONTROLS AT THE DEVELOPER'S EXPENSE. THE DEVELOPER SHALL BE NOTIFIED OF THESE MODIFICATIONS PRIOR TO COMMENCEMENT OF THE MODIFICATIONS.
5. CONSTRUCTION OPERATIONS SHALL BE MANAGED SO THAT AS MUCH OF THE SITE AS POSSIBLE IS LEFT COVERED WITH TOPSOIL AND VEGETATION.
6. CONTRACTOR TO REMOVE GRASS AND STRIP TOPSOIL TO DEPTHS ENCOUNTERED AND STOCKPILE TOPSOIL TO BE DISTRIBUTED DURING FINAL GRADING OF THE DISTURBED AREAS.
7. CONTRACTOR SHALL CONSTRUCT A STABILIZED CONSTRUCTION ENTRANCE AT ALL PRIMARY POINTS OF ACCESS. CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ALL CONSTRUCTION TRAFFIC UTILIZES THE STABILIZED CONSTRUCTION ENTRANCES AT ALL TIMES FOR INGRESS/EGRESS TO THE SITE.
8. CONTRACTOR IS RESPONSIBLE FOR KEEPING STREETS AND DRIVEWAYS ADJACENT TO THE PROJECT FREE FROM ROCK, MUD, TRASH AND DEBRIS AT ALL TIMES. CONTRACTOR SHALL CLEAN AND REMOVE ALL MATERIAL RESULTING FROM CONSTRUCTION OPERATIONS.
9. THE CONTRACTOR SHALL TAKE ALL AVAILABLE PRECAUTIONS TO CONTROL DUST.
10. AS INLETS ARE COMPLETED, TEMPORARY SEDIMENT BARRIERS SHALL BE INSTALLED. PRIOR TO FINAL ACCEPTANCE BY THE CITY OF BOERNE, ALL TEMPORARY INLET BARRIERS SHALL BE REMOVED. REPLACE WITH CONTROLS TO PREVENT SEDIMENT FROM ENTERING THE STREET ROW. CITY STREETS SHALL NOT TO BE USED AS SEDIMENT TRAPS WITHOUT WRITTEN APPROVAL FROM THE CITY OF BOERNE ENGINEERING AND MOBILITY DEPARTMENT.
11. THE CONTRACTOR IS REQUIRED TO INSPECT THE CONTROLS AND FENCES AT WEEKLY INTERVALS AND AFTER SIGNIFICANT RAINFALL EVENTS TO ENSURE THAT THEY ARE FUNCTIONING PROPERLY. THE PERSON(S) RESPONSIBLE FOR MAINTENANCE OF CONTROLS AND FENCES SHALL IMMEDIATELY MAKE ANY NECESSARY REPAIRS TO DAMAGED AREAS. SILT ACCUMULATION AT CONTROLS MUST BE REMOVED WHEN THE DEPTH REACHES SIX (6) INCHES.
12. DISTURBED PORTIONS OF THE SITE MUST BE STABILIZED. STABILIZATION PRACTICES MUST BE INITIATED WITHIN 14 DAYS IN PORTIONS OF THE SITE WHERE CONSTRUCTION HAS BEEN EITHER TEMPORARILY OR PERMANENTLY CEASED, UNLESS EXCEPTED WITHIN THE TPDES PERMIT.
13. CONTRACTOR SHALL INSPECT DISTURBED AREAS, MATERIAL STORAGE AREAS EXPOSED TO PRECIPITATION, STRUCTURAL CONTROL MEASURES, AND VEHICLE ENTRY AND EXIT AREAS AT LEAST ONCE EVERY 14 CALENDAR DAYS AND WITHIN 24 HOURS OF A STORM EVENT OF 0.5 INCHES OR GREATER.
14. ALL TEMPORARY EROSION AND SEDIMENTATION CONTROLS SHALL BE REMOVED BY THE CONTRACTOR AT FINAL ACCEPTANCE OF THE PROJECT BY THE CITY OF BOERNE.

GRADING NOTES

1. CONTRACTOR IS REQUIRED TO OBTAIN AN APPROVED GRADING PERMIT FROM THE CITY, IF APPLICABLE.
2. CONTRACTOR TO ENSURE POSITIVE DRAINAGE AT ALL TIMES DURING CONSTRUCTION.
3. CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES WHICH ARE TO REMAIN IN PLACE AND UNDISTURBED DURING CONSTRUCTION.
4. GRADING WORK SHALL BE COMPLETED TO WITHIN 0.10 FEET OF THE FINAL GRADE PRIOR TO INSTALLATION OF UTILITIES INCLUDING ANY UTILITY TYPE INSTALLATION OUTSIDE OF THE ROW TO ENSURE DEPTHS ARE APPROPRIATE FROM FINAL GRADE.
5. CONTRACTOR SHALL NOT PLACE ANY FILL OR WASTE MATERIAL IN THE LOCAL OR 100-YEAR FLOODPLAIN WITHOUT FIRST OBTAINING AN APPROVED FLOODPLAIN DEVELOPMENT PERMIT.

WARNING: CONTRACTOR TO VERIFY PRESENCE AND EXACT LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.

PAVING NOTES

1. ALL CONSTRUCTION AND TESTING SHALL BE PERFORMED IN ACCORDANCE WITH THE CITY OF BOERNE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, LATEST EDITION.
2. SUBMITTALS FOR LIME, BASE, PRIME COAT, TACK COAT, AND ASPHALT, AS APPLICABLE, SHALL BE APPROVED PRIOR TO INSTALLATION. INSTALLATION PRIOR TO SUBMITTAL APPROVAL MAY REQUIRE REMOVAL/REPLACEMENT AT THE CONTRACTOR'S EXPENSE.
3. NO EARTHWORK, LIME APPLICATION, OR OTHER PREPARATION OF THE SUBGRADE FOR PAVING OF STREETS SHALL BE INITIATED WITHOUT AUTHORIZATION FROM THE CITY OF BOERNE ENGINEERING & MOBILITY DEPARTMENT. THE CITY WILL AUTHORIZE THE SUBGRADE WORK IN PREPARATION FOR THE PAVING AFTER UTILITY TRENCH BACKFILL TESTING IS COMPLETE AND VERIFIED TO MEET CITY REQUIREMENTS.
4. EMBANKMENT/FILL MATERIAL UNDER PROPOSED STREETS MUST BE FREE OF LARGE STONES (4" WHEN BACKFILL IS 12" OR GREAT IN DEPTH OR 2.5" WHEN FILL IS LESS THAN 12" IN DEPTH), HAVE A PLASTICITY INDEX (PI) LESS THAN 20 PER ASTM D4318, AND BE COMPACTED TO 95% PER ASTM D1557 (MODIFIED PROCTOR).
5. UTILITIES MUST BE MAINTAINED TO PROPER LINE AND GRADE DURING CONSTRUCTION OF THE PAVING FOR THIS PROJECT.
6. FLEXIBLE BASE UNDER ROADWAYS REQUIRES 100% COMPACTION MEETING ASTM D1557 (MODIFIED PROCTOR) AND MUST EXTEND AT LEAST 18 INCHES BEHIND THE BACK OF CURB.
7. TESTING OF MATERIALS REQUIRED FOR THE CONSTRUCTION OF PAVING IMPROVEMENTS SHALL BE PERFORMED BY A GEOTECHNICAL TESTING COMPANY AND PROVIDE OPPORTUNITY TO BE WITNESSED BY A CITY INSPECTOR. ALL TESTING MUST BE SCHEDULED WITH THE CITY OF BOERNE ENGINEERING &MOBILITY DEPARTMENT.

PEDESTRIAN NOTES

1. THE CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTING ALL STREETS, CROSSWALKS, SIDEWALKS AND CURB RAMPS, DRIVEWAYS, AND ANY OTHER SURFACE RELATED TO AN "ACCESSIBLE ROUTE" PER THE TEXAS ACCESSIBILITY STANDARDS (TAS), LATEST EDITION AND PUBLIC RIGHT-OF-WAY ACCESSIBILITY GUIDELINES (PROWAG), LATEST EDITION. THE CONTRACTOR SHALL REMOVE AND REPLACE ANY CONSTRUCTED OR INSTALLED ITEMS NOT MEETING THE CURRENT TAS REQUIREMENTS AT THEIR OWN COST. CONTRACTOR SHALL MAINTAIN ALL EXISTING PEDESTRIAN ROUTES AND ACCESS WITHIN AND ADJACENT TO THE SITE THROUGHOUT THE DURATION OF CONSTRUCTION. A TEMPORARY PEDESTRIAN ROUTE SHALL BE PROVIDED WHEN ANY EXISTING SIDEWALK IS CLOSED DUE TO ANY CONSTRUCTION ACTIVITY. ANY SIGNAGE REQUIRED FOR THE DESIGNATION OF A TEMPORARY PEDESTRIAN ROUTE SHALL BE INCLUDED ON THE APPROVED TRAFFIC CONTROL PLAN. ANY TEMPORARY CLOSURES TO EXISTING SIDEWALKS MUST BE APPROVED BY THE ENGINEERING & MOBILITY DEPARTMENT IN ADVANCE OF CONSTRUCTION AND AN ALTERNATE ADA COMPLIANT PATH MUST BE PROVIDED IN THE INTERIM IN ACCORDANCE OF PROWAG.

UTILITIES

GENERAL

1. ALL CONSTRUCTION, TESTING, CLEANING, AND DISINFECTION SHALL BE PERFORMED IN ACCORDANCE WITH THE CITY OF BOERNE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, LATEST EDITION.
2. CONTRACTOR SHALL NOT OPERATE ANY EXISTING VALVES. THE CITY MUST BE PRESENT DURING ANY WORK COMPLETED ON EXISTING CITY UTILITIES. THE CONTRACTOR IS NOT PERMITTED TO COMPLETE GAS WORK ON EXISTING CITY GAS MAINS AT ANY TIME.
3. THE CONTRACTOR MUST COORDINATE AND SCHEDULE ALL UTILITY TIE-INS WITH THE CITY. NO TIE-INS SHALL BE MADE TO THE EXISTING UTILITY SYSTEM UNTIL ALL TEST RESULTS HAVE BEEN PROVIDED TO THE CITY AND ARE VERIFIED.
4. UNLESS THE DEVELOPER HAS RECEIVED PRIOR WRITTEN PERMISSION BY THE CITY OF BOERNE, ALL UTILITIES, INCLUDING BUT NOT LIMITED TO WATER, RECLAIMED WATER, SEWER, GAS, AND ELECTRIC UTILITIES MUST BE INSTALLED AND TESTED PRIOR TO THE PAVING OF A STREET OR ALLEY OR PORTION THEREOF.
5. PRIOR TO RECEIVING BULK WATER, THE CONTRACTOR MUST SUBMIT APPLICATION TO THE UTILITIES DEPARTMENT FOR A BULK WATER METER. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLING A CITY APPROVED BACKFLOW DEVICE OR AIR GAP ON ALL JUMPERS PRIOR TO LOADING WATER IN UNAPPROVED MAINS.
6. ALL MANHOLES, END OF MAIN CLEANOUTS, VALVES, AND BLOW-OFFS SHALL HAVE CONCRETE ENCASEMENTS INSTALLED. ANY ENCASEMENTS IN PAVEMENT WILL BE DIAGONAL FROM THE DIRECTION OF TRAFFIC.
7. ONE DENSITY TEST PER 8-INCH LIFT IS REQUIRED EVERY 500 FEET FOR TRENCHES UP TO 12 FEET IN DEPTH AND EVERY 300 FEET FOR TRENCHES 12 FEET AND DEEPER. DENSITY TESTING MUST BE COMPLETED FOR EACH LIFT PRIOR TO COMMENCING INSTALLATION OF THE NEXT LIFT. POTHOLING AND STAIR STEPPING IS NOT PERMITTED.
8. ALL VALVE BOXES, METER BOXES, FIRE HYDRANTS, MANHOLES, ETC. ARE REQUIRED TO BE ADJUSTED AS REQUIRED TO MATCH FINAL GRADES.
9. THE CONTRACTOR IS RESPONSIBLE FOR STAKING UTILITIES AND INSTALLING PERMANENT PROPERTY PINS PRIOR TO THE FINAL INSPECTION TO VERIFY LOCATION, FINISH GRADE, AND DEPTH.
10. TRACER WIRE LOCATE BOX SHALL BE INSTALLED PER CITY REQUIREMENTS AT ALL VALVES INCLUDING, GAS, RECLAIMED WATER, FIRE HYDRANT VALVES AND BLOWOFFS. FOR GROUPING OF VALVES AT ONE GENERAL LOCATION, ONE LOCATE BOX MAY BE USED.

WATER

11. WHERE THE MINIMUM NINE (9) FEET SEPARATION BETWEEN WATER AND SANITARY SEWER LINES CANNOT BE MAINTAINED, THE CONTRACTOR MUST MEET THE REQUIREMENTS OF 30 TAC 217.53(D) AND 30 TAC 290.44(E).
12. ALL WATER LINES SHALL BE INSTALLED AT A DEPTH BETWEEN FOUR (4) AND SIX (6) FEET OR AS SHOWN ON THE APPROVED INFRASTRUCTURE DRAWINGS. DEVIATIONS FROM THESE DEPTHS REQUIRES= PRIOR APPROVAL.
13. ALL WATER MAINS SHALL BE HYDROSTATICALLY TESTED BY THE CONTRACTOR PER CITY REQUIREMENTS.
14. THE USE OF TEMPORARY JUMPERS IS REQUIRED FOR NEW WATER MAIN INSTALLATION.
15. SAMPLE TEST PORTS FOR BACTERIOLOGICAL TESTING SHALL BE PROVIDED ALONG THE WATER MAIN AT THE FREQUENCY AND LOCATION REQUIRED BY THE CITY OF BOERNE OR AT A MINIMUM PER THE TCEQ REQUIREMENTS.
16. FINAL CONNECTION TO THE EXISTING WATER MAIN SHALL NOT BE MADE UNTIL THE WATER MAIN HAS BEEN PRESSURE TESTED, CHLORINATED, PASSED BACTERIOLOGICAL TESTING AND THE CITY OF BOERNE RELEASED THE MAIN FOR TIE-IN AND USE.
17. BACKFLOW PREVENTION DEVICES SHALL BE INSTALLED WITHIN 40 FEET OF THE WATER MAIN.
18. NO VALVES , OR APPURTENANCES SHALL BE CONSTRUCTED WITHIN CURBS, CURB RAMPS OR LANDINGS. ADDITIONALLY, HYDRANTS AND BLOWOFFS SHALL NOT BE INSTALLED WITHIN SIDEWALKS OR DRIVEWAYS WITHOUT PRIOR AUTHORIZATION.
19. ALL FIRE HYDRANTS SHALL BE INSTALLED WITH THE MAIN PUMPER NOZZLE A MINIMUM OF 18", AND A MAXIMUM OF 24" FROM FINISH GRADE, HYDRANTS IN THE RIGHT OF WAY SHALL BE INSTALLED FROM 1' MINIMUM TO 7' MAXIMUM FROM THE FACE OF THE CURB.

SEWER

20. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING NO SANITARY SEWER OVERFLOWS (SSOS) OCCUR AS A RESULT OF WORK. CONTRACTOR SHALL CONTACT THE CITY IMMEDIATELY UPON FINDING A SSO.
21. ALL PVC SEWER PIPE WITH OVER 14 FEET OF COVER SHALL BE EXTRA STRENGTH, SDR 26 MINIMUM PIPE STIFFNESS OF 115 PSI FROM MANHOLE TO MANHOLE.
22. ALL SANITARY SEWER MANHOLES REQUIRE CHIMNEY SEALS AND INTERIOR/EXTERIOR COATINGS PER CITY REQUIREMENTS.
23. ALL SANITARY SEWER MANHOLES MUST INCLUDE AT LEAST TWO (2) GRADE ADJUSTMENT RINGS FOR A MINIMUM OF FOUR (4) INCHES BUT NO MORE THAN FOUR (4) ADJUSTMENT RINGS FOR A MAXIMUM OF TWELVE (12) INCHES. IF MORE THAN 12 INCHES IS REQUIRED FOR ADJUSTMENT, A SECTION OF THE EXISTING MANHOLE MUST BE REPLACED TO ADJUST THE MANHOLE TO GRADE WITH THE MINIMUM OF 2 ADJUSTMENT RINGS FOR A MINIMUM OF 4 INCHES BEING PROVIDED.
24. AFTER COMPLETION OF CONSTRUCTION, CONTRACTOR SHALL THOROUGHLY CLEAN THE SEWER MAINS AND SERVICE LINES AND TESTING WILL BE DONE BY TV CAMERA AND OBSERVED BY THE , WASTEWATER ENGINEERING PERSONNEL, AND CONTRACTOR AS THE CAMERA IS RUN. ANY ABNORMALITIES, SUCH AS BROKEN PIPE OR MISALIGNED JOINTS, MUST BE REPLACED BY THE CONTRACTOR AT THEIR OWN EXPENSE. THE CITY WILL REVIEW THE VIDEOS AND PROVIDE REVIEW COMMENTS FOR ACCEPTANCE.
25. WHEN SEWER LATERALS ARE TO BE CONNECTED TO EXISTING SEWER MAINS AND NO STUB-OUT HAS BEEN EARLIER PROVIDED, THE CONNECTION MUST BE MADE WITH AN APPROVED SERVICE SADDLE PER CITY REQUIREMENTS.
26. NO TESTING WILL BE PERFORMED PRIOR TO 30 DAYS FROM COMPLETE INSTALLATION OF THE SANITARY SEWER LINES. THE FOLLOWING SEQUENCE WILL BE STRICTLY ADHERED TO: (1) MANDREL TEST; (2) AIR TEST; (3) TELEVISING.

GAS

27. ONLY THE CITY OF BOERNE SHALL OPERATE VALVES ON ANY ACTIVE GAS MAIN. IF A VALVE MUST BE OPERATED DURING THE CONSTRUCTION OPERATIONS, THE CONTRACTOR SHALL SCHEDULE THE OPERATION IN ADVANCE THROUGH ENGINEERING & MOBILITY DEPARTMENT.
28. ONLY THE CITY OF BOERNE MAY PERFORM WORK ON ANY ACTIVE GAS MAIN.
29. GAS VALVE BOXES ON ACTIVE GAS MAINS MUST BE PROTECTED AND REMAIN ACCESSIBLE AT ALL TIMES DURING AND AFTER CONSTRUCTION.
30. BEFORE SCHEDULING THE CITY TO PERFORM ANY GAS SYSTEM TIE-IN, THE DESIGN ENGINEER MUST TURN IN PRELIMINARY GAS AS-BUILT RECORD DRAWINGS WITH ALL REQUIRED POLYETHYLENE PRINTLINE DATA INCLUDED FOR ENGINEERING AND MOBILITY DEPARTMENT TO REVIEW. APPROVAL OF AS-BUILT RECORD DOCUMENTS IS REQUIRED PRIOR TO ANY TIE-IN BEING PERFORMED.
31. PRINTLINE DATA MUST INCLUDE SERIAL NUMBERS, LOCATION AND FOOTAGE OF ALL MAIN LINE PIPE INSTALLED, SERIAL NUMBER, LOCATION AND FOOTAGE FOR EACH LOT ON ALL SERVICE PIPE, SERIAL NUMBER AND LOCATION OF ALL VALVES, AND LOCATION OF ALL TRACER WIRE LOCATE BOXES.

RECLAIMED WATER

32. ALL PORTIONS OF THE RECLAIMED SYSTEM WILL BE MANUFACTURED, PAINTED OR COVERED IN PURPLE MATERIAL TO BE EASILY IDENTIFIABLE.
33. ALL FITTINGS, VALVES AND OTHER UNDERGROUND APPURTENANCES NOT EASILY PAINTED MUST BE THOROUGHLY AND SECURELY COVERED IN AN APPROVED PURPLE POLYWRAP MATERIAL. ALL SERVICE FITTINGS, AIR RELEASE VALVES, ETC. MUST BE PAINTED WITH AN APPROVED PAINT, COLOR TO BE PANTONE 522C.
34. ALL PLASTIC METER BOX LIDS TO BE MANUFACTURED OF AN APPROVED PURPLE MATERIAL, NO PAINTING OF PLASTIC LIDS ALLOWED.
35. ALL DESIGN AND CONSTRUCTION SHALL COMPLY WITH THE PROVISIONS OF 30 TAC 217.69
36. A MINIMUM OF 4 FT HORIZONTAL SEPARATION IS TO BE MAINTAINED BETWEEN POTABLE AND RECLAIMED WATER LINES AND SERVICES. WHERE THE MINIMUM 4 FT HORIZONTAL DISTANCE CANNOT BE MAINTAINED, EMBED THE RECLAIMED MAIN IN AN APPROVED CEMENT STABILIZED SAND WITHIN 4 FT OF THE POTABLE WATER LINE OR SERVICE.
37. WHERE RECLAIMED WATER MAINS CROSS POTABLE WATER MAINS AND SERVICES AND THE 4 FT MINIMUM DISTANCE CANNOT BE MAINTAINED, CENTER A JOINT OF THE RECLAIMED WATER ON THE POTABLE WATER PIPE, INSTALL THE RECLAIMED WATER MAIN BELOW THE POTABLE WATER WITH A MINIMUM OF 6 IN CLEARANCE, EMBED THE RECLAIMED MAIN IN AN APPROVED CEMENT STABILIZED SAND WITHIN 4 FT OF THE POTABLE WATER LINE OR SERVICE.
38. FINAL CONNECTION TO THE EXISTING RECLAIMED SYSTEM MAY NOT OCCUR UNTIL THE RECLAIMED MAINS AND SERVICES HAVE PASSED PRESSURE TESTING, CROSS CONNECTION TESTING AND ARE APPROVED FOR FINAL CONNECTION AND OPERATION BY THE CITY OF BOERNE.

ELECTRIC

39. ALL RIGID NON-METALLIC PIPE, FITTING AND SOLVENT CEMENT FOR UNDERGROUND PRIMARY INSTALLATION SHALL BE SUPPLIED BY THE SAME MANUFACTURER.
40. LONG SWEEP ELBOWS SHALL HAVE A MINIMUM 24 IN RADIUS.
41. THE CITY OF BOERNE MUST BE PRESENT TO INSPECT AT EACH STAGE OF CONDUIT INSTALLATION, BACKFILL, AND COMPACTION.
42. TORCH OR LOW FIRE BENDING OF CONDUITS WILL NOT BE ACCEPTED.
43. ALL MANDREL TESTING MUST BE COMPLETED PRIOR TO PROJECT ACCEPTANCE.
44. STREETLIGHTS, IF REQUIRED, MUST BE INSTALLED BEFORE ACCEPTANCE ON ALL ELECTRIC SYSTEMS NOT UNDER THE JURISDICTION OF THE CITY OF BOERNE.
45. EXCAVATION ADJACENT TO EXISTING POWER POLES WILL REQUIRE TEMPORARY BRACING AT THE CONTRACTOR'S EXPENSE. CONTRACTOR TO PROVIDE BRACING PLAN FOR UTILITY DEPARTMENT APPROVAL PRIOR TO EXCAVATION.

TREES

1. A TREE REMOVAL PERMIT IS REQUIRED PRIOR TO REMOVAL OF ANY TREE WITHIN THE CITY LIMITS.
2. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL CONSTRUCT AND MAINTAIN PROTECTIVE FENCING AT THE DRIP LINE OF ALL PROTECTED EXISTING TREES, UNLESS NOTED OTHERWISE ON THE CONSTRUCTION DRAWINGS. ANY DAMAGE TO ONSITE OR OFFSITE PRESERVED TREES DURING CONSTRUCTION RESULTING IN >25% CANOPY LOSS OR ROOT/TRUNK DAMAGE THAT WILL RESULT IN TREE MORTALITY SHALL BE MITIGATED ACCORDING TO SECTION 8.3.E OF THE CITY OF BOERNE UNIFIED DEVELOPMENT CODE AT THE CONTRACTOR'S EXPENSE.
3. ALL PROTECTIVE MEASURES SHALL BE IN PLACE PRIOR TO COMMENCEMENT OF ANY SITE OR GRADING WORK AND REMAIN IN PLACE UNTIL ALL EXTERIOR WORK HAS BEEN COMPLETED.
4. THE CITY URBAN FORESTER SHALL BE CONTACTED TO APPROVE THE PLACEMENT OF THE TREE PRESERVATION FENCING PRIOR TO BEGINNING OF SITE WORK ON PROPERTY.
5. THE FOLLOWING ACTIVITIES SHALL BE PROHIBITED WITHIN THE LIMITS OF THE PRIMARY ROOT ZONE: MATERIAL STORAGE, EQUIPMENT CLEANING/LIQUID DISPOSAL, AND CONSTRUCTION EQUIPMENT/VEHICULAR TRAFFIC. NO SIGNS OR WIRES SHALL BE ATTACHED TO TREES.
6. UNLESS SPECIFICALLY ALLOWED, NO GRADE CHANGES SHALL BE ALLOWED WITHIN THE LIMITS OF THE ROOT PROTECTION ZONE OF ANY PROTECTED TREE UNLESS THE CITY URBAN FORESTER APPROVES ADEQUATE CONSTRUCTION METHODS.
7. NO TRIMMING OF TREES MAY OCCUR WITHIN THE TREE PRESERVATION FENCING LIMITS WITHOUT PRIOR CONSENT OF THE CITY URBAN FORESTER.

REVEGETATION

1. All slopes and areas disturbed by construction shall be graded smooth. The contractor must loosen the surface of the soil to a depth of 2 inches and remove all stones and debris over 2 inches in any dimension. All areas for revegetation require a minimum of 4 inches of soil, overcutting of rock subgrade may be required. Additional topsoil from the stockpiled topsoil may be necessary to bring to required grades and for re-establishing vegetation. The area shall then be revegetated and maintained until soil is stabilized in all areas. Any area disturbed for any reason prior to final acceptance of the project shall be corrected by the contractor.
2. The contractor must construct and maintain a permanent stable protective cover (grass) for erosion and sediment control on all land surfaces exposed or disturbed by construction of the permitted project. The protective cover must be installed within 14 days after final grading of the affected land surface. A permanent stable cover must be established within 60 days of its installation.
3. At least 85% of all disturbed areas must have vegetation established prior to acceptance by the City of Boerne.
4. Disturbed areas that are seeded or sodded shall be checked periodically to see that grass coverage is properly maintained. Disturbed areas shall be watered, fertilized, and re-seeded or re-sodded if necessary.

RECORD DRAWINGS

1. Upon completion of construction, the contractor shall provide the design engineer a copy of as-built plans identifying all deviations or variations from the original plans.
2. The design engineer shall provide to the City of Boerne the "Plan of Record", signed and sealed by the design engineer.
3. The "Plan of Record" must include print line data and pipe testing information for all gas mains and service lines.

REFERENCE BENCHMARKS

CONTRACTOR TO PROVIDE 16 PERMANENT BENCHMARKS UPON COMPLETION OF PROJECT. BENCHMARKS SHALL BE FIVE FEET LONG, STEEL REINFORCED CONCRETE POST, FOUR (4) INCHES IN DIAMETER, WITH TOP NO MORE THAN SIX (6) INCHES ABOVE AND NO LESS THAN TWO (2) INCHES BELOW FINISHED GRADE, OR OTHER PERMANENT STYLE AS APPROVED BY CITY OF BOERNE. CONTRACTOR TO PROVIDE FIELD NOTES WITH NORTHING, EASTING AND ELEVATIONS OF PROVIDED BENCH MARKS, AS VERIFIED BY A REGISTERED PROFESSIONAL LAND SURVEYOR, WITH THE AS-BUILT CONSTRUCTION DOCUMENTS.

⊕ = BENCHMARK

REFERENCE BENCHMARKS

DATUM IS NAVD '88, USING GEOID 18, BASED ON GPS OBSERVATIONS.

BM #300: MAG NAIL WITH WASHER SET STAMPED "300"

- ELEV.=1516.73'

BM #403: MAG NAIL WITH WASHER SET IN CURB

- ELEV.=1546.85'

BM #404: MAG NAIL WITH WASHER SET IN CURB

- ELEV.=1538.40'

BM #51000:

- ELEV.=1492.78'

⊕ = BENCHMARK

REFER TO TCEQ DESIGN GUIDELINES (CHAPTER 290) FOR ALL UTILITY CROSSINGS.

WHERE A CONFLICT EXISTS BETWEEN CITY OF BOERNE NOTES (SHEET 6) AND OTHER NOTES ON THIS SHEET, CITY OF BOERNE NOTES SHALL PREVAIL

No.	REVISIONS	DATE	BY

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STATE OF TEXAS
MICHAEL A. SCHOLZE
131737
LICENSED PROFESSIONAL ENGINEER
7/28/2025

KHA PROJECT	068686339
DATE	7/28/2025
SCALE	AS SHOWN
DESIGNED BY	JPV
DRAWN BY	JPV
CHECKED BY	MAS

PHASE 3H
CITY OF BOERNE GENERAL CONSTRUCTION NOTES

Esperanza BOERNE ★ TEXAS

KENDALL COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT NO. 2B

SHEET NUMBER
6

Plotted By: Vinal, Josh July 28, 2025 11:11:03am K:\sna_civil\068686339-esperanza3h\CAD\plansheets\C-GENN-3H.dwg
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NORTH

GRAPHIC SCALE IN FEET
0 50 100 200

LEGEND

CE	CONSTRUCTION ENTRANCE (SEE DETAIL, SHEET 8)
EB	EROSION CONTROL BLANKET (SEE DETAIL, SHEET 8)
SF	SILT FENCE (SEE DETAIL, SHEET 8)
GB	GRAVEL FILTER BAGS (SEE DETAIL, SHEET 8)
RB	ROCK BERM (SEE DETAIL, SHEET 8)
RR	ROCK RIP RAP (SEE DETAIL, SHEET 8)
CW	CONCRETE WASHOUT (SEE DETAIL, SHEET 8)
1530	PROPOSED CONTOURS
1530	EXISTING CONTOURS
	LIMITS OF DISTURBED AREA
	FLOW DIRECTION

NOTES

1. AREAS CONTAINED WITHIN THE PROPERTY BOUNDARIES WILL BE AREAS OF DISTURBANCE AND SOIL STABILIZATION. ALL SOILS WITHIN THESE LIMITS SHALL BE STABILIZED BY VEGETATION OR STRUCTURE.
2. ALL CONSTRUCTION-RELATED VEHICLES MUST PARK INSIDE THE LIMITS OF CONSTRUCTION AND SERVED BY APPROPRIATE TEMPORARY CONTROLS, OR ON CITY-APPROVED SURFACES OUTSIDE THE LIMITS OF CONSTRUCTION.
3. CONTRACTOR SHALL REMOVE ALL SEDIMENT AND DEBRIS FROM CONSTRUCTED STORM SEWER SYSTEM UPON COMPLETION OF WORK.
4. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO USE WHATEVER MEANS ARE NECESSARY TO CONTROL AND LIMIT SILT AND SEDIMENT LEAVING THE SITE. SPECIFICALLY, THE CONTRACTOR SHALL PROTECT ALL PUBLIC STREETS, ALLEYS, STREAMS, STORM DRAIN SYSTEMS AND INLETS FROM EROSION DEPOSITS. THE CONTRACTOR RESPONSIBLE FOR MAINTAINING EROSION CONTROL SHALL PROVIDE STREET CLEANING ON PUBLIC STREETS IF ANY EARTH MATERIAL IS TRANSPORTED FROM THE CONSTRUCTION SITE AT THE END OF EACH DAY. EARTH MATERIAL SHALL NOT BE ALLOWED TO ACCUMULATE ON CITY AND TXDOT ROADS.
5. REFER TO TPDES STORMWATER POLLUTION PREVENTION PLAN PREPARED BY OTHERS.

EROSION CONTROL SCHEDULE AND SEQUENCING

I.	ROUGH GRADING/ DEMOLITION	CONSTRUCTION ENTRANCE/EXIT, SILT FENCE, FILTER DIKE, INLET PROTECTION, AND ROCK DAMS SHALL BE INSTALLED PRIOR TO THE INITIATION OF ROUGH GRADING AND DEMOLITION, AS NEEDED.
II.	UTILITY INSTALLATION	ALL PRIOR EROSION CONTROL MEASURES INSTALLED ABOVE TO BE MAINTAINED AS NECESSARY DURING UTILITY INSTALLATION.
III.	PAVING	ALL PRIOR EROSION CONTROL MEASURES INSTALLED ABOVE TO BE MAINTAINED AS NECESSARY DURING PAVING AND THROUGHOUT THE REMAINDER OF THE PROJECT.
IV	FINAL GRADING/ SOIL STABILIZATION/ LANDSCAPING	ALL TEMPORARY EROSION CONTROL MEASURES TO BE REMOVED AT THE CONCLUSION OF THE PROJECT AS DIRECTED BY THE CITY OR COUNTY.

NOTE: THE SEQUENCE OF CONSTRUCTION SHOWN ABOVE IS A GENERAL OVERVIEW AND IS INTENDED TO CONVEY THE GENERAL CONCEPTS OF THE EROSION CONTROL DESIGN AND SHOULD NOT BE RELIED UPON FOR CONSTRUCTION PURPOSES. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR DETAILED PHASING AND CONSTRUCTION SEQUENCING NECESSARY TO CONSTRUCT THE PROPOSED IMPROVEMENTS INCLUDED IN THESE PLANS. THE CONTRACTOR SHALL NOTIFY ENGINEER IN WRITING IMMEDIATELY, PRIOR TO AND/OR DURING CONSTRUCTION IF ANY ADDITIONAL INFORMATION ON THE CONSTRUCTION SEQUENCE IS NECESSARY. CONTRACTOR IS SOLELY RESPONSIBLE FOR COMPLYING WITH THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION AND ALL OTHER APPLICABLE LAWS.

811 Know what's below. Call before you dig.

CAUTION!!
EXISTING UNDERGROUND UTILITIES IN THE AREA CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE HORIZONTAL AND VERTICAL LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY REPAIRS TO EXISTING UTILITIES DUE TO DAMAGE INCURRED DURING CONSTRUCTION. CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES ON THE PLANS.

BENCHMARK LIST

DATUM IS NAVD '88, USING GEOID 18, BASED ON GPS OBSERVATIONS.

BM #300: MAG NAIL WITH WASHER SET STAMPED "300"
- ELEV.=1516.73'

BM #403: MAG NAIL WITH WASHER SET IN CURB
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KHA PROJECT 068686339
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SCALE AS SHOWN
DESIGNED BY JPV
DRAWN BY JPV
CHECKED BY MAS

PHASE 3H
EROSION CONTROL PLAN

Esperanza
BOERNE★TEXAS

KENDALL COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT NO. 2B

SHEET NUMBER
7

Plotted By:Kfed, Josh July 28, 2025 11:11:21am K:\proj_chs\068686339-esperanza3h\CAD\plotsheets\C-EROS_3H.dwg
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TEMPORARY EROSION CONTROL NOTES

1. THE CONTRACTOR SHALL INSTALL EROSION/SEDIMENTATION CONTROLS AND TREE/NATURAL AREA PROTECTIVE FENCING PRIOR TO ANY SITE PREPARATION WORK (CLEARING, GRUBBING OR EXCAVATION).
2. THE PLACEMENT OF EROSION/SEDIMENTATION CONTROLS SHALL BE IN ACCORDANCE WITH THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN.
3. THE PLACEMENT OF TREE/NATURAL AREA PROTECTIVE FENCING SHALL BE IN ACCORDANCE WITH STANDARD NOTES FOR TREE AND NATURAL AREA PROTECTION AND THE APPROVED GRADING/TREE AND NATURAL AREA PLAN.
4. A PRE-CONSTRUCTION CONFERENCE SHALL BE HELD ON-SITE WITH THE CONTRACTOR, DESIGN ENGINEER/PERMIT APPLICANT AND ENVIRONMENTAL INSPECTOR AFTER INSTALLATION OF THE EROSION/SEDIMENTATION CONTROLS AND TREE/NATURAL AREA PROTECTION MEASURES AND PRIOR TO BEGINNING ANY SITE PREPARATION WORK. THE CONTRACTOR SHALL NOTIFY KENDALL COUNTY AT LEAST THREE (3) DAYS PRIOR TO THE MEETING DATE.
5. ANY MAJOR VARIATION IN MATERIALS OR LOCATIONS OF CONTROLS OR FENCES FROM THOSE SHOWN ON THE APPROVED PLANS WILL REQUIRE A REVISION AND MUST BE APPROVED BY THE REVIEWING ENGINEER, ENVIRONMENTAL SPECIALIST, OR ABORIST AS APPROPRIATE. MAJOR REVISIONS MUST BE APPROVED BY THE PLANNING AND DEVELOPMENT DEPARTMENT AND THE DRAINAGE UTILITY DEPARTMENT. MINOR CHANGES OR ADDITIONAL CONTROL MEASURES TO BE MADE AS FIELD REVISIONS TO THE EROSION AND SEDIMENTATION CONTROL PLAN MAY BE REQUIRED BY THE ENVIRONMENTAL INSPECTOR DURING THE COURSE OF CONSTRUCTION TO CORRECT CONTROL INADEQUACIES AT NO ADDITIONAL COST TO THE OWNER.
6. THE CONTRACTOR IS REQUIRED TO INSPECT THE CONTROLS AND FENCES AT WEEKLY INTERVALS AND AFTER SIGNIFICANT RAINFALL EVENTS TO INSURE THAT THEY ARE FUNCTIONING PROPERLY. THE PERSON(S) RESPONSIBLE FOR MAINTENANCE OF CONTROLS AND FENCES SHALL IMMEDIATELY MAKE ANY NECESSARY REPAIRS TO DAMAGED AREAS. SILT ACCUMULATION AT CONTROLS MUST BE REMOVED WHEN THE DEPTH REACHES SIX (6) INCHES.
7. PRIOR TO FINAL ACCEPTANCE, HAUL ROADS AND WATERWAY CROSSINGS CONSTRUCTED FOR TEMPORARY CONTRACTOR ACCESS MUST BE REMOVED, ACCUMULATED SEDIMENT REMOVED FROM THE WATERWAY AND THE AREA RESTORED TO THE ORIGINAL GRADE AND REVEGETATED. ALL LAND CLEARING SHALL BE DISPOSED OF IN APPROVED SPOIL DISPOSAL SITES.
8. ALL WORK MUST STOP IF A VOID IN THE ROCK SUBSTRATE IS DISCOVERED WHICH IS; ONE SQUARE FOOT IN TOTAL AREA; BLOWS AIR FROM WITHIN THE SUBSTRATE AND/OR CONSTANTLY RECEIVES WATER DURING ANY RAIN EVENT. AT THIS TIME IT IS THE RESPONSIBILITY OF THE CONTRACTOR'S PROJECT MANGER TO IMMEDIATELY CONTACT AN ENVIRONMENTAL INSPECTOR FOR FURTHER INVESTIGATION.

PERMANENT EROSION CONTROL NOTES

ALL DISTURBED AREAS SHALL BE RESTORED AS NOTED BELOW.

A. A MINIMUM OF FOUR (4) INCHES OF TOPSOIL SHALL BE PLACED IN ALL AREAS (EXCEPT ROCK) BETWEEN THE CURB AND THE RIGHT-OF-WAY LINE.

B. THE SEEDING FOR PERMANENT EROSION CONTROL SHALL BE APPLIED OVER AREAS DISTURBED BY CONSTRUCTION AS FOLLOWS:

BROADCAST SEEDING:

1. FROM SEPTEMBER 15 TO MARCH 1, SEEDING SHALL BE WITH A COMBINATION OF 2 POUNDS PER 1000 SQUARE FEET OF UNHULLED BERMUDA AND 7 POUNDS PER 1000 SQUARE FOOT OF WINTER RYE WITH A PURITY OF 95% WITH 90% GERMINATION.
2. FROM MARCH 2 TO SEPTEMBER 14, SEEDING SHALL BE WITH HULLED BERMUDA AT A RATE OF 2 POUNDS PER 1000 SQUARE FEET WITH A PURITY OF 95% WITH 85% GERMINATION.
   A. FERTILIZER SHALL BE A PELLETED OR GRANULAR SLOW RELEASE WITH AN ANALYSIS OF 15-15-15 TO BE APPLIED ONCE AT PLANTING AND ONCE DURING THE PERIOD OF ESTABLISHMENT AT THE RATE OF 1 POUND PER 1000 SQUARE FEET.
   B. MULCH TYPE USED SHALL BE HAY, STRAW OR MULCH APPLIED AT A RATE OF 45 POUNDS PER 1000 SQUARE FEET.

HYDRAULIC SEEDING:

1. FROM SEPTEMBER 15 TO MARCH 1, SEEDING SHALL BE WITH A COMBINATION OF 1 POUND PER 1000 SQUARE FEET OF UNHULLED BERMUDA AND 7 POUNDS PER 1000 SQUARE FOOT OF WINTER RYE WITH A PURITY OF 95% WITH 90% GERMINATION.
2. FROM MARCH 2 TO SEPTEMBER 14, SEEDING SHALL BE WITH HULLED BERMUDA AT A RATE OF 1 POUND PER 1000 SQUARE FEET WITH A PURITY OF 95% WITH 85% GERMINATION.
   A. FERTILIZER SHALL BE A WATER SOLUBLE FERTILIZER WITH AN ANALYSIS OF 15-15-15 AT THE RATE OF 1.5 POUNDS PER 1000 SQUARE FEET.
   B. MULCH TYPE USED SHALL BE HAY, STRAW OR MULCH APPLIED AT A RATE OF 45 POUNDS PER 1000 SQUARE FEET, WITH SOIL TACKIFIER AT A RATE OF 1.4 POUNDS PER 1000 SQUARE FEET.

ESTABLISHMENT:

1. THE PLANTED AREA SHALL BE IRRIGATED OR SPRINKLED IN A MANNER THAT WILL NOT ERODE THE TOPSOIL, BUT WILL SUFFICIENTLY SOAK THE SOIL TO A DEPTH OF SIX (6) INCHES. THE IRRIGATION SHALL OCCUR AT TEN-DAY INTERVALS DURING THE FIRST TWO MONTHS. RAINFALL OCCURRENCES OF 1/2 INCH OR MORE SHALL POSTPONE THE WATERING SCHEDULE FOR ONE WEEK.
2. RESTORATION SHALL BE ACCEPTABLE WHEN THE GRASS HAS GROWN AT LEAST 1-1/2 INCHES HIGH WITH 95% COVERAGE, PROVIDED NO BARE SPOTS LARGER THAN 16 SQUARE FEET EXIST.
3. WHEN REQUIRED, NATIVE GRASS SEEDING SHALL COMPLY WITH REQUIREMENTS OF THE ENVIRONMENTAL CRITERIA MANUAL.

SEQUENCE OF CONSTRUCTION:

A. CALL THE "TEXAS ONE CALL CENTER" AT 1-800-344-8377 FOR UTILITY LOCATIONS AND OBTAIN PERMIT FOR ANY WORK WITHIN THE R.O.W.
B. INSTALL TEMPORARY EROSION CONTROLS AND TREE PROTECTION FENCING PRIOR TO ANY CLEARING AND GRUBBING.
C. CLEAR AND GRUB AND STRIP TOPSOIL. STOCKPILE TOPSOIL FOR LATER USE.
D. ROUGH GRADE SITE AND ROADWAYS PER GRADING PLAN.
E. INSTALL WATER AND WASTEWATER LINES AND APPURTENANCES.
F. INSTALL STORM SEWER LINES AND APPURTENANCES.
G. INSTALL TEMPORARY EROSION/SEDIMENTATION CONTROLS ON NEW STORM SEWER INLETS.
H. ENSURE THAT ALL UNDERGROUND UTILITY CROSSINGS ARE COMPLETED.
I. RAISE MANHOLE FRAMES AND COVERS TO TOP OF PROPOSED PAVEMENT OR PROPOSED FINISHED GRADE.
J. CONSTRUCT PAVED AREAS, CURBS, ISLANDS AND INSTALL INLET EROSION PROTECTION.
K. COMPLETE ESTABLISHMENT OF SITE VEGETATION AND STABILIZATION.
L. REMOVE AND DISPOSE OF TEMPORARY EROSION CONTROLS WHEN RESTORATION HAS BEEN ACCEPTED.
M. COMPLETE ANY NECESSARY FINAL DRESS UP OF AREAS DISTURBED.

SITE MAP-GENERAL NOTES

1. CONTRACTOR IS SOLELY RESPONSIBLE FOR SELECTION, IMPLEMENTATION, MAINTENANCE, AND EFFECTIVENESS OF ALL SWPPP CONTROLS - CONTROLS SHOWN ON THIS SITE MAP ARE SUGGESTED CONTROLS ONLY.
2. CONTRACTOR SHALL RECORD INSTALLATION, MAINTENANCE OR MODIFICATION, AND REMOVAL DATES FOR EACH BMP EMPLOYED (WHETHER CALLED OUT ON ORIGINAL SWPPP OR NOT) DIRECTLY ON THE SITE MAP.
3. DRAINAGE PATTERNS ARE SHOWN ON THIS PLAN BY PROPOSED AND EXISTING CONTOURS, FLOW ARROWS, AND SLOPES.
4. TEMPORARY AND PERMANENT STABILIZATION PRACTICES AND BMP'S SHALL BE INSTALLED AT THE EARLIEST POSSIBLE TIME DURING THE CONSTRUCTION SEQUENCE. AS AN EXAMPLE, PERIMETER SILT FENCE SHALL BE INSTALLED BEFORE COMMENCEMENT OF ANY GRADING ACTIVITIES. OTHER BMP'S SHALL BE INSTALLED AS SOON AS PRACTICABLE AND SHALL BE MAINTAINED UNTIL FINAL SITE STABILIZATION IS ATTAINED. CONTRACTOR SHALL ALSO REFERENCE CIVIL AND LANDSCAPE PLANS SINCE PERMANENT STABILIZATION IS PROVIDED BY LANDSCAPING, THE BUILDING(S), AND SITE PAVING.
5. BMP'S HAVE BEEN LOCATED AS INDICATED ON THIS PLAN IN ACCORDANCE WITH GENERALLY ACCEPTED ENGINEERING PRACTICES IN ORDER TO MINIMIZE SEDIMENT TRANSFER. FOR EXAMPLE: SILT FENCES LOCATED AT TOE OF SLOPE AND INLET PROTECTION FOR INLETS RECEIVING SEDIMENT FROM SITE RUN-OFF.
6. SANITARY SEWER EFFLUENT IS DISPOSED OF VIA AN ONSITE SEWER SYSTEM CONNECTED TO A MUNICIPAL SEWER SYSTEM.

SITE MAP-SITE SPECIFIC NOTES

1. CONSTRUCTION ENTRANCE SHALL BE LOCATED SO AS TO PROVIDE THE LEAST AMOUNT OF DISTURBANCE TO THE FLOW OF TRAFFIC IN AND OUT OF THE SITE. ADDITIONALLY, CONSTRUCTION ENTRANCE SHALL BE LOCATED TO COINCIDE WITH THE PHASING OF THE PAVEMENT REPLACEMENT.
2. THE NATURE OF THIS SITE'S CONSTRUCTION CONSISTS OF:
   A. CLEARING AND GRUBBING
   B. PRELIMINARY GRADING
   C. UTILITY INSTALLATION
   D. PAVEMENT CONSTRUCTION
   E. FINAL GRADING AND STABILIZATION
3. THE SOILS ON-SITE CONSIST OF MAINLY BRACKETT-REAL ASSOCIATION, 10 TO 30 PERCENT SLOPES, AND DOSS-BRACKETT ASSOCIATION, UNDULATING, PER THE USDA WEB SOIL SURVEY.
4. POST CONSTRUCTION STORM WATER POLLUTION CONTROL MEASURES INCLUDE STABILIZATION BY PERMANENT PAVING, OR LANDSCAPING.
5. DISTURBED PORTIONS OF SITE MUST BE STABILIZED. STABILIZATION PRACTICES MUST BE INITIATED WITHIN 14 DAYS IN PORTIONS OF THE SITE WHERE CONSTRUCTION HAS BEEN EITHER TEMPORARILY OR PERMANENTLY CEASED, UNLESS EXCEPTED WITHIN THE TPDES PERMIT. CONTRACTOR SHALL REMOVE TEMPORARY EROSION CONTROL DEVICES UPON COMPLETION OF STABILIZATION OR PERMANENT DRAINAGE FACILITIES.
6. ACCORDING TO FEMA'S MAP SERVICE CENTER, THE SITE IS LOCATED WITHIN UNSHADED ZONE X PER FIRM NUMBER 48259C0415F & 48259C0420F DATED DECEMBER 17, 2010.
7. CONTRACTOR IS RESPONSIBLE FOR MODIFYING THE SWPPP/SITE MAP TO INCLUDE BMP'S FOR ANY OFF-SITE MATERIAL WASTE, BORROW OR EQUIPMENT STORAGE AREAS.
8. CONTRACTOR SHALL INSPECT DISTURBED AREAS, MATERIAL STORAGE AREAS EXPOSED TO PRECIPITATION, STRUCTURAL CONTROL MEASURES, AND VEHICLE ENTRY AND EXIT AREAS AT LEAST ONCE EVERY 14 CALENDAR DAYS AND WITHIN 24 HOURS OF A STORM EVENT OF 0.5 INCHES OR GREATER.

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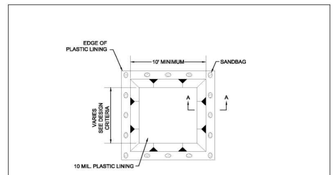
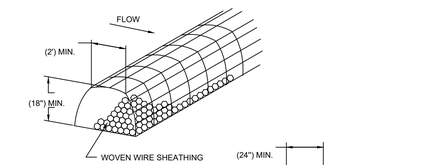


Figure 4.1 Schematics of Concrete Washout Containment

TO BE LOCATED AT (CW) SYMBOL

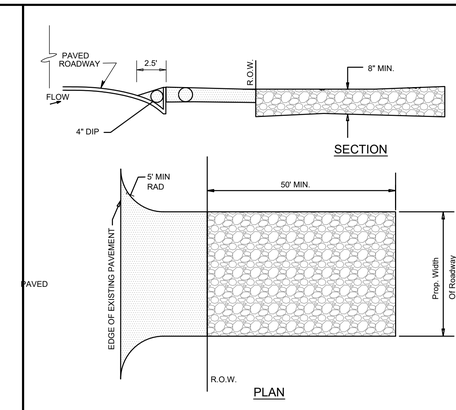
CONCRETE WASHOUT — E4



NOTES:
1. USE ONLY OPEN GRADED ROCK 100 to 200 mm (5 to 8") DIAMETER FOR STREAM FLOW CONDITIONS. USE OPEN GRADED ROCK 75 to 125 mm (3 to 5") DIAMETER FOR OTHER CONDITIONS.
2. THE ROCK BERM SHALL BE SECURED WITH A WOVEN WIRE SHEATHING HAVING MAXIMUM 25 mm (1") OPENING AND MINIMUM WIRE DIAMETER OF 12.9 mm (20 GAUGE). ROCK BERMS IN CHANNEL APPLICATIONS SHALL BE ANCHORED FIRMLY INTO THE SUBSTRATE A MINIMUM OF 150 mm (6 ") WITH T-POSTS OR WITH 15M OR 20M (#5 OR #6) REBAR, WITH MAXIMUM SPACING APART OF 1.2 m (48") ON CENTER.
3. THE ROCK BERM SHALL BE INSPECTED WEEKLY OR AFTER EACH RAIN, AND THE STONE AND/OR FABRIC CORE-WOVEN SHEATHING SHALL BE REPLACED WHEN THE STRUCTURE CEASES TO FUNCTION AS INTENDED, DUE TO SILT ACCUMULATION AMONG THE ROCKS, WASHOUT, CONSTRUCTION TRAFFIC DAMAGE, ETC.
4. WHEN SILT REACHES A DEPTH EQUAL TO ONE-THIRD THE HEIGHT OF THE BERM OR 150 mm (6"), WHICHEVER IS LESS. THE SILT SHALL BE REMOVED AND DISPOSED OF ON AN APPROVED SITE AND IN A MANNER THAT WILL NOT CREATE A SILTATION PROBLEM.
5. DAILY INSPECTION SHALL BE MADE ON SEVERE-SERVICE ROCK BERMS; SILT SHALL BE REMOVED WHEN ACCUMULATION REACHES 150 mm (6").
6. WHEN THE SITE IS COMPLETELY STABILIZED,THE BERM AND ACCUMULATED SILT SHALL BE REMOVED AND DISPOSED OF IN AN APPROVED MANNER.

TO BE LOCATED AT (RB) SYMBOL

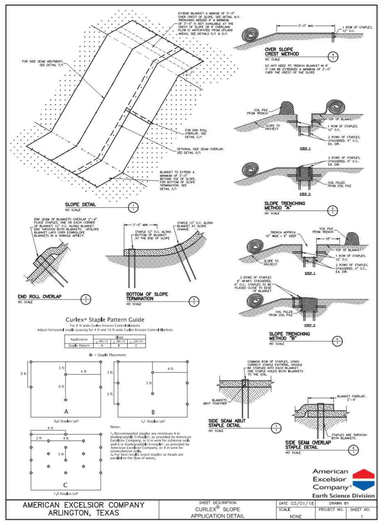
ROCK BERM — D4



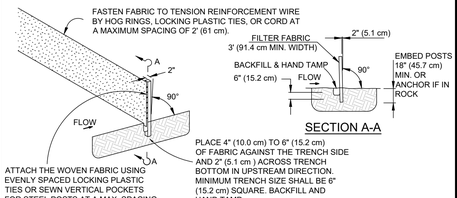
NOTES:
1. STONE SIZE - 4 TO 8 INCHES CRUSHED ROCK.
2. LENGTH - AS EFFECTIVE, BUT NOT LESS THAN 50 FEET.
3. THICKNESS - NOT LESS THAN 8 INCHES.
4. WIDTH - NOT LESS THAN FULL WIDTH OF ALL POINTS OF INGRESS OR EGRESS.
5. WASHING - WHEN NECESSARY, WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC ROADWAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE WHICH DRAINS INTO AN APPROVED TRAP OR SEDIMENT BASIN. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATERCOURSE USING APPROVED METHODS.
6. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC ROADWAYS. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND, AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC ROADWAY, MUST BE REMOVED IMMEDIATELY.
7. DRAINAGE - ENTRANCE MUST BE PROPERLY GRADED OR INCORPORATE A DRAINAGE SWALE TO PREVENT RUNOFF FROM LEAVING THE CONSTRUCTION SITE.
8. CONTRACTOR TO COORDINATE EXACT LOCATION OF THIS DETAIL.

TO BE LOCATED AT (CE) SYMBOL

CONSTRUCTION ENTRANCE — C4



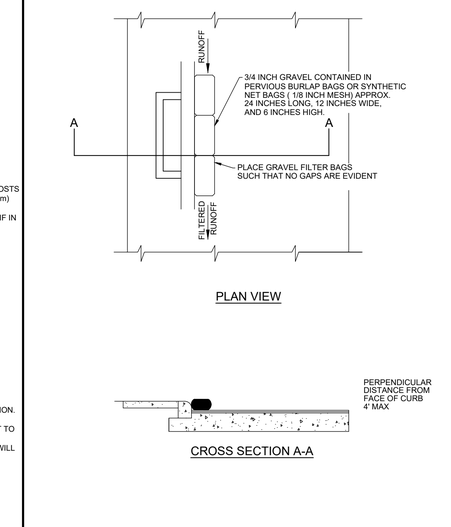
EROSION CONTROL BLANKET (ECB) — E2



NOTES:
1. THE SILT FENCING WILL BE INSPECTED WEEKLY, AND AFTER EACH RAINFALL EVENT.
2. SEDIMENT WILL BE REMOVED FROM THE SILT FENCING WHEN BUILDUP REACHES 6" (150 mm)
3. REPLACE ANY TORN FABRIC OR INSTALL A SECOND LINE OF FENCING PARALLEL TO THE TORN SECTION.
4. REPLACE OR REPAIR ANY SECTIONS CRUSHED OR COLLAPSED IN THE COURSE OF CONSTRUCTION ACTIVITY. IF A SECTION OF FENCE IS OBSTRUCTING VEHICULAR ACCESS, CONSIDER RELOCATING IT TO A SPOT WHERE IT WILL PROVIDE EQUAL PROTECTION, BUT WILL NOT OBSTRUCT VEHICLES.
5. WHEN CONSTRUCTION IS COMPLETE, THE SEDIMENT SHOULD BE DISPOSED OF IN A MANNER THAT WILL NOT CAUSE ADDITIONAL SILTATION AND THE PRIOR LOCATION OF THE SILT FENCE SHOULD BE REVEGETATED. THE FENCE ITSELF SHOULD BE DISPOSED OF IN AN APPROVED LANDFILL.

TO BE LOCATED AT (SF) SYMBOL

SILT FENCE DETAIL — D2

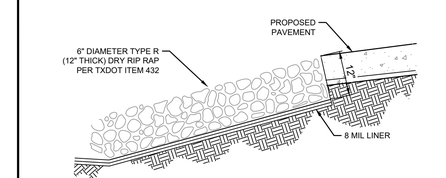


TO BE LOCATED AT (GB) SYMBOL

GRAVEL FILTER BAGS DETAIL — C2

E1

D1



TO BE LOCATED AT (RR) SYMBOL

TYPICAL RIP RAP SLOPE PROTECTION — A3

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WWW.KIMLEY-HORN.COM TBPE: FIRM NO. 928

No.	REVISIONS	DATE	BY

MICHAEL A. SCHOLZE — 131737 — LICENSED PROFESSIONAL ENGINEER — 7/28/2025

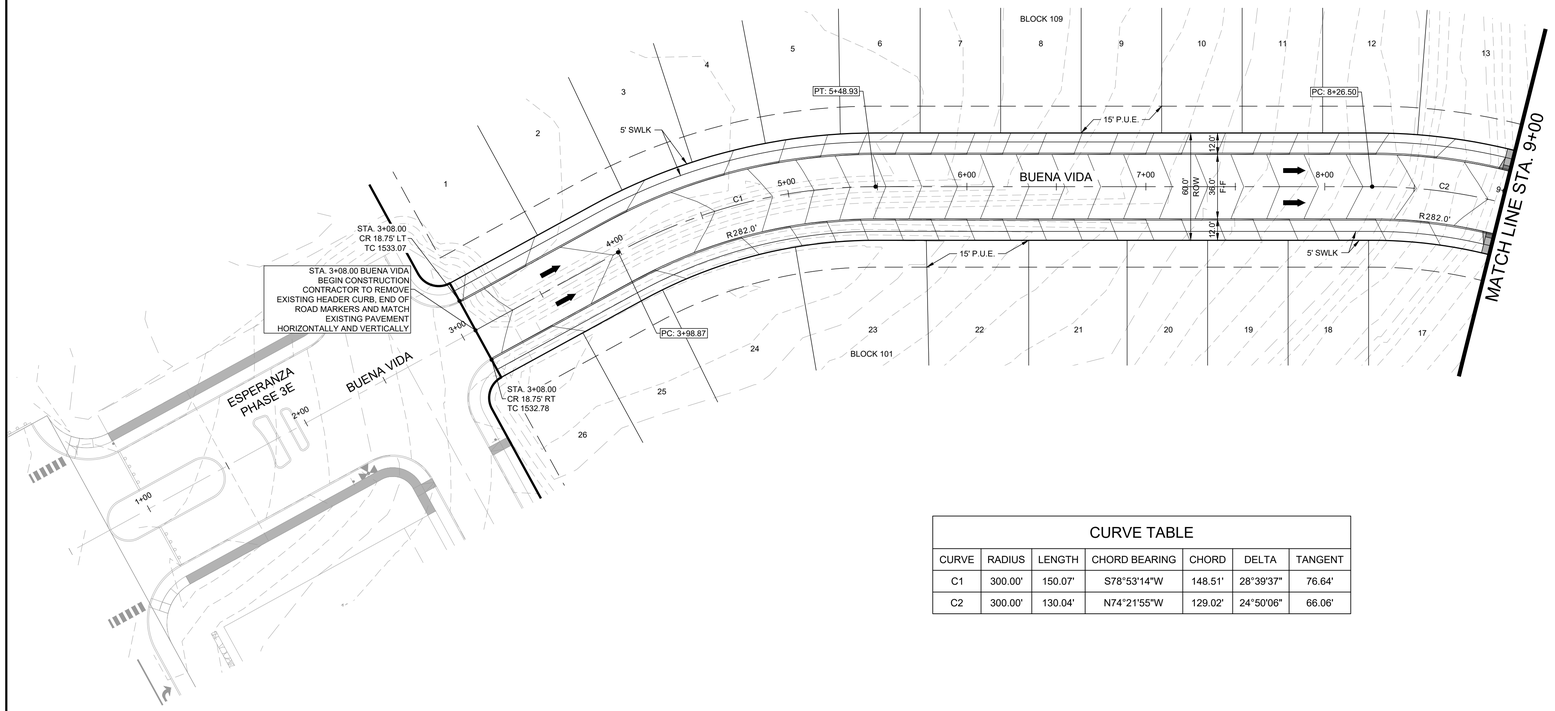
KHA PROJECT	066866339
DATE	7/28/2025
SCALE	AS SHOWN
DESIGNED BY	JPV
DRAWN BY	JPV
CHECKED BY	MAS

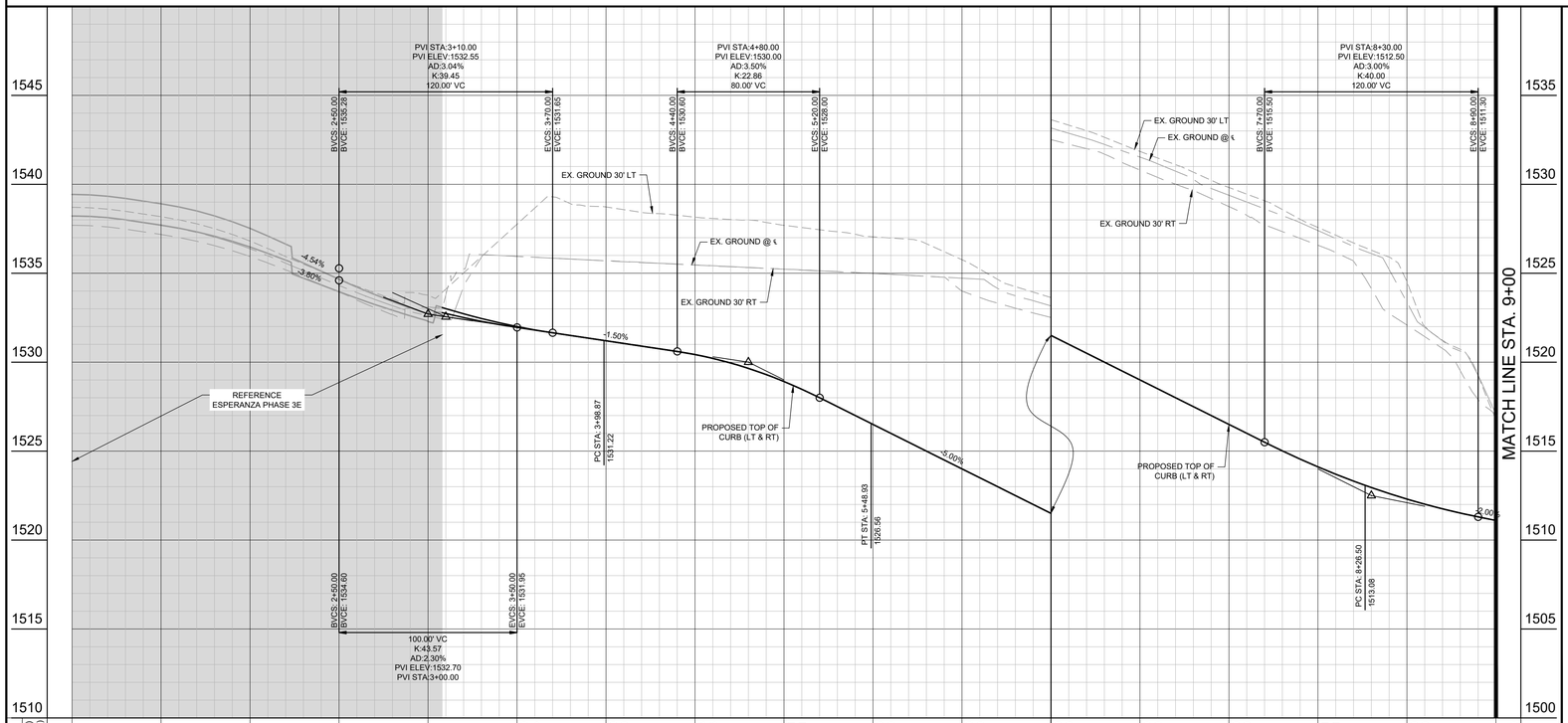
PHASE 3H
EROSION CONTROL DETAILS

Esperanza — BORNE★TEXAS

KENDALL COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT NO. 2B

SHEET NUMBER
8





GRAPHIC SCALE IN FEET
0 20 40 80

LEGEND

	RIGHT-OF-WAY LINE
HP	PROFILE HIGH POINT
	WASHOUT CROWN SECTION
	SIDEWALK TO BE BUILT BY DEVELOPER
	STREET DRAINAGE FLOW DIRECTION
1600.00	PAVEMENT SPOT ELEVATION
PC	POINT OF CURVATURE
PT	POINT OF TANGENCY
PI	POINT OF INTERSECTION
CR	CURB RETURN
1500.00 TC	TOP OF CURB ELEVATION
1500.00 TP	TOP OF PAVEMENT ELEVATION

NOTES:
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2. ALL RAMPS AND ANY PROPOSED SIDEWALKS THAT ARE NOT CONSTRUCTED BY THE DEVELOPER SHALL BE CONSTRUCTED BY THE HOME BUILDER
3. REFER TO STORM DRAIN PLAN FOR INLET SIZES. STORM STRUCTURES SHALL BE BUILT BASED ON STORM PLAN SPECIFICATIONS.
4. SEE SHEET 16 FOR TYPICAL PAVEMENT SECTION AND DETAILS.
5. NO VALVES, HYDRANTS, ETC. SHALL BE CONSTRUCTED WITHIN CURBS, SIDEWALKS, OR DRIVEWAYS
6. SEE SHEET 15 FOR SIGNAGE AND STRIPING DETAILS

CURVE TABLE

CURVE	RADIUS	LENGTH	CHORD BEARING	CHORD	DELTA	TANGENT
C1	300.00'	150.07'	S78°53'14"W	148.51'	28°39'37"	76.64'
C2	300.00'	130.04'	N74°21'55"W	129.02'	24°50'06"	66.06'

PROFILE SCALE
1" = 40' HORIZONTAL
1" = 4' VERTICAL

811 Know what's below. Call before you dig.

CAUTION!!
EXISTING UNDERGROUND UTILITIES IN THE AREA CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE HORIZONTAL AND VERTICAL LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY REPAIRS TO EXISTING UTILITIES DUE TO DAMAGE INCURRED DURING CONSTRUCTION. CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES ON THE PLANS.

BENCHMARK LIST

DATUM IS NAVD '88, USING GEOID 18, BASED ON GPS OBSERVATIONS.

BM #300: MAG NAIL WITH WASHER SET STAMPED "300"
- ELEV.=1516.73'

BM #403: MAG NAIL WITH WASHER SET IN CURB
- ELEV.=1546.85'

BM #404: MAG NAIL WITH WASHER SET IN CURB
- ELEV.=1538.40'

BM #51000:
- ELEV.=1492.78'

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STATE OF TEXAS
MICHAEL A. SCHOLZE
131737
LICENSED PROFESSIONAL ENGINEER
7/28/2025

KHA PROJECT 068686339
DATE 7/28/2025
SCALE AS SHOWN
DESIGNED BY JPV
DRAWN BY JPV
CHECKED BY MAS

PHASE 3H
PAVING PLAN & PROFILE
BUENA VIDA

Esperanza
BORGEN★TEXAS

KENDALL COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT NO. 2B

SHEET NUMBER
9

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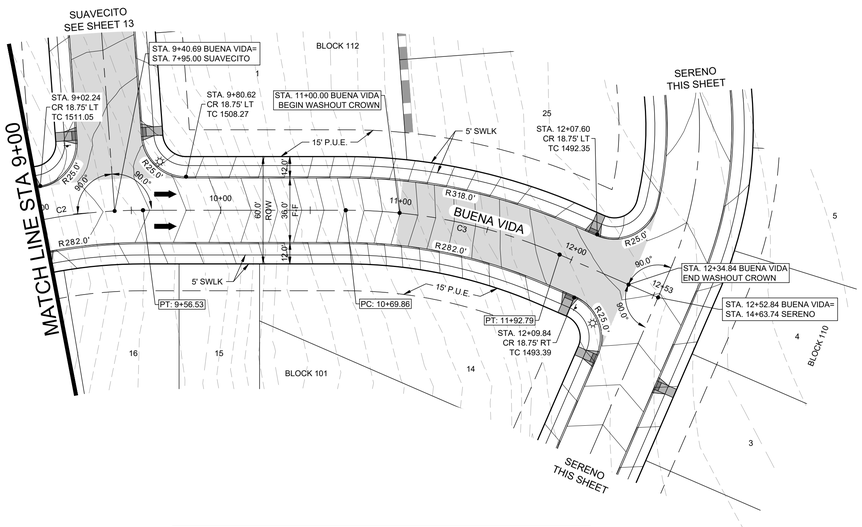

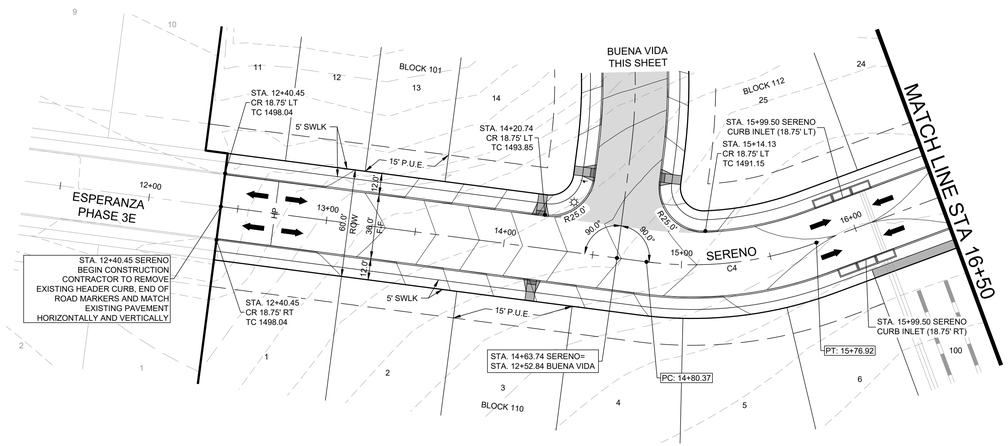

GRAPHIC SCALE IN FEET
0 20 40 80

LEGEND

	RIGHT-OF-WAY LINE
HP	PROFILE HIGH POINT
	WASHOUT CROWN SECTION
	SIDEWALK TO BE BUILT BY DEVELOPER
	STREET DRAINAGE FLOW DIRECTION
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CURVE TABLE						
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C2	300.00'	130.04'	N74°21'55"W	129.02'	24°50'06"	66.06'
C3	300.00'	122.93'	N50°12'31"W	122.07'	23°28'40"	62.34'

CURVE TABLE						
CURVE	RADIUS	LENGTH	CHORD BEARING	CHORD	DELTA	TANGENT
C4	199.87'	96.55'	S37°41'28"W	95.61'	27°40'42"	49.24'

BUENA VIDA

SERENO

PROFILE SCALE
1" = 40' HORIZONTAL
1" = 4' VERTICAL

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STATE OF TEXAS
MICHAEL A. SCHOLZE
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BUENA VIDA & SERENO

Esperanza
BORENE★TEXAS

KENDALL COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT NO. 2B

SHEET NUMBER
10

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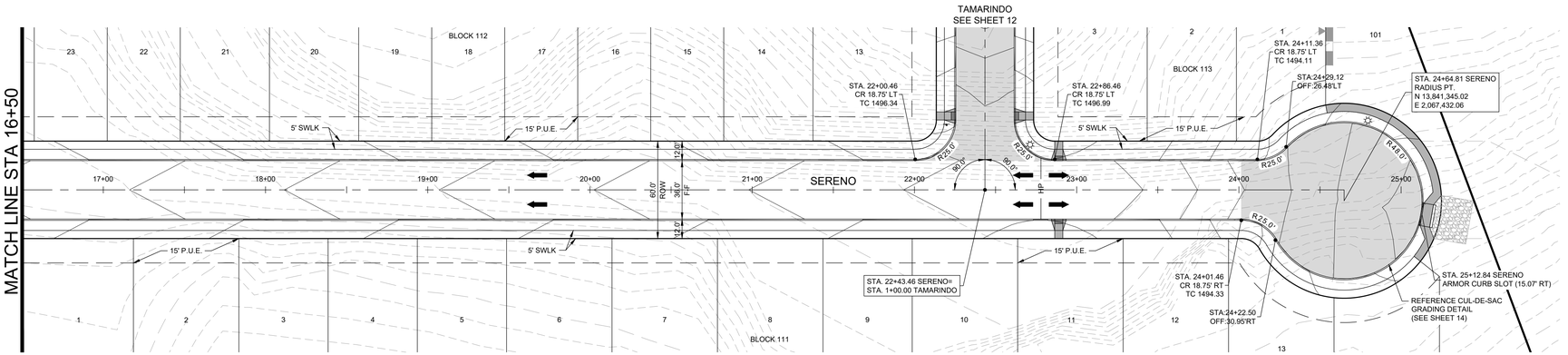

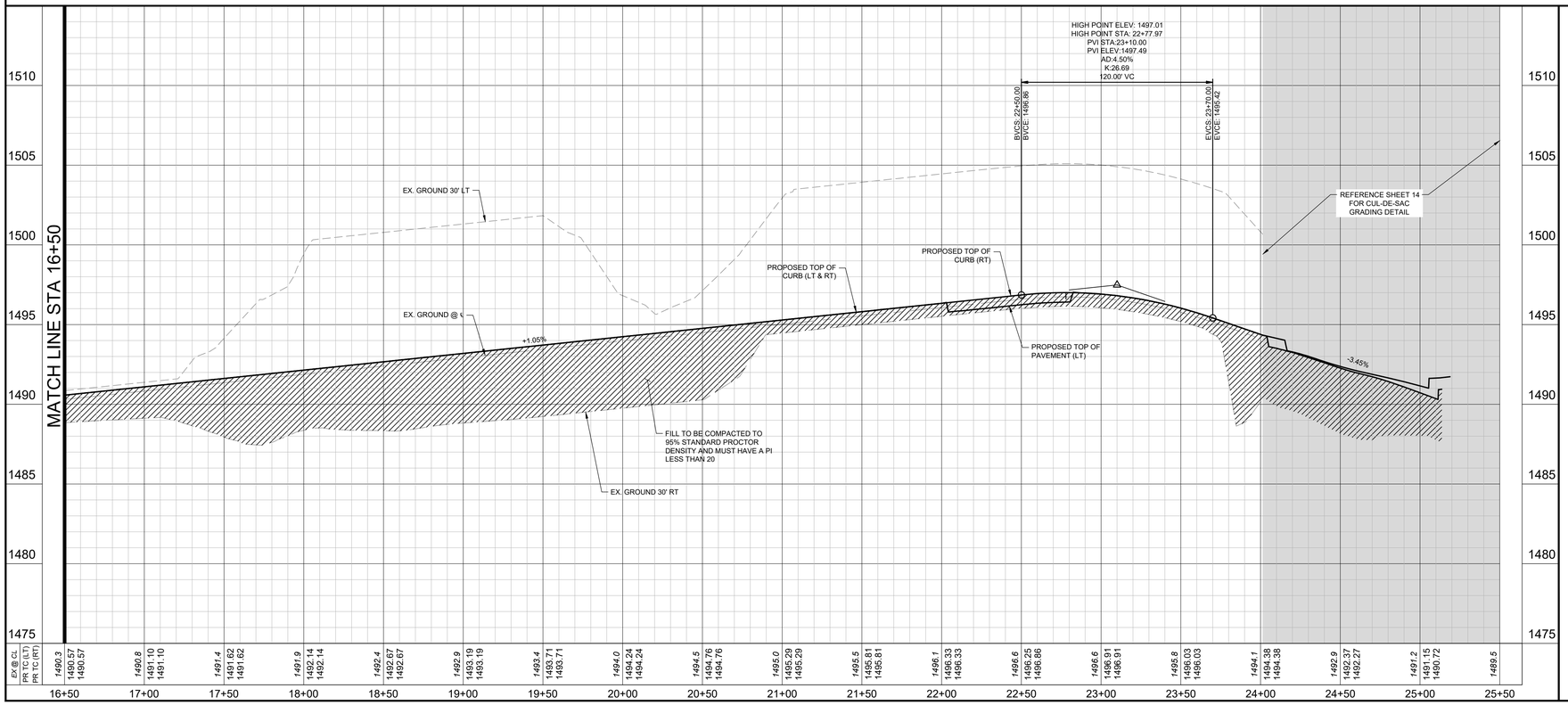

GRAPHIC SCALE IN FEET
0 20 40 80

LEGEND

RIGHT-OF-WAY LINE	
HP PROFILE HIGH POINT	
WASHOUT CROWN SECTION	
SIDEWALK TO BE BUILT BY DEVELOPER	
STREET DRAINAGE FLOW DIRECTION	
1600.00	PAVEMENT SPOT ELEVATION
PC	POINT OF CURVATURE
PT	POINT OF TANGENCY
PI	POINT OF INTERSECTION
CR	CURB RETURN
1500.00 TC	TOP OF CURB ELEVATION
1500.00 TP	TOP OF PAVEMENT ELEVATION

NOTES:
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3. REFER TO STORM DRAIN PLAN FOR INLET SIZES. STORM STRUCTURES SHALL BE BUILT BASED ON STORM PLAN SPECIFICATIONS.
4. SEE SHEET 16 FOR TYPICAL PAVEMENT SECTION AND DETAILS.
5. NO VALVES, HYDRANTS, ETC. SHALL BE CONSTRUCTED WITHIN CURBS, SIDEWALKS, OR DRIVEWAYS.
6. SEE SHEET 15 FOR SIGNAGE AND STRIPING DETAILS

PROFILE SCALE
1" = 40' HORIZONTAL
1" = 4' VERTICAL

811 Know what's below. Call before you dig.

CAUTION!!!
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BENCHMARK LIST

DATUM IS NAVD '88, USING GEOID 18, BASED ON GPS OBSERVATIONS.

BM #300: MAG NAIL WITH WASHER SET STAMPED "300"
- ELEV.=1516.73'

BM #403: MAG NAIL WITH WASHER SET IN CURB
- ELEV.=1546.85'

BM #404: MAG NAIL WITH WASHER SET IN CURB
- ELEV.=1538.40'

BM #51000:
- ELEV.=1492.78'

No.	REVISIONS	DATE	BY

Kimley»Horn
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10101 REUNION PLACE, SUITE 400, SAN ANTONIO, TX 78216
PHONE: 210-541-9166 FAX: 210-541-9889
WWW.KIMLEY-HORN.COM TBPE FIRM NO. 928

STATE OF TEXAS
MICHAEL A. SCHOLZE
131737
LICENSED PROFESSIONAL ENGINEER
7/28/2025

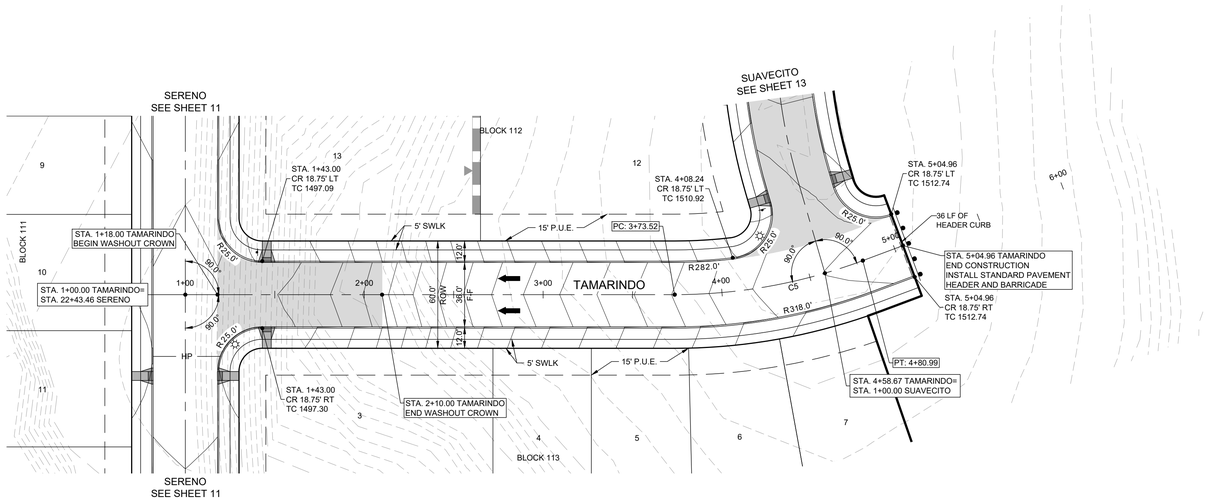
KHA PROJECT	068686339
DATE	7/28/2025
SCALE	AS SHOWN
DESIGNED BY	JPV
DRAWN BY	JPV
CHECKED BY	MAS

PHASE 3H
PAVING PLAN & PROFILE
SERENO

Esperanza
BORENE ★ TEXAS

KENDALL COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT NO. 2B

SHEET NUMBER
11



CURVE TABLE						
CURVE	RADIUS	LENGTH	CHORD BEARING	CHORD	DELTA	TANGENT
C5	300.00'	107.46'	S76°24'36"E	106.89'	20°31'27"	54.31'

GRAPHIC SCALE IN FEET
0 20 40 80

NORTH

LEGEND

RIGHT-OF-WAY LINE	
HP	PROFILE HIGH POINT
	WASHOUT CROWN SECTION
	SIDEWALK TO BE BUILT BY DEVELOPER
	STREET DRAINAGE FLOW DIRECTION
1600.00	PAVEMENT SPOT ELEVATION
PC	POINT OF CURVATURE
PT	POINT OF TANGENCY
PI	POINT OF INTERSECTION
CR	CURB RETURN
1500.00 TC	TOP OF CURB ELEVATION
1500.00 TP	TOP OF PAVEMENT ELEVATION

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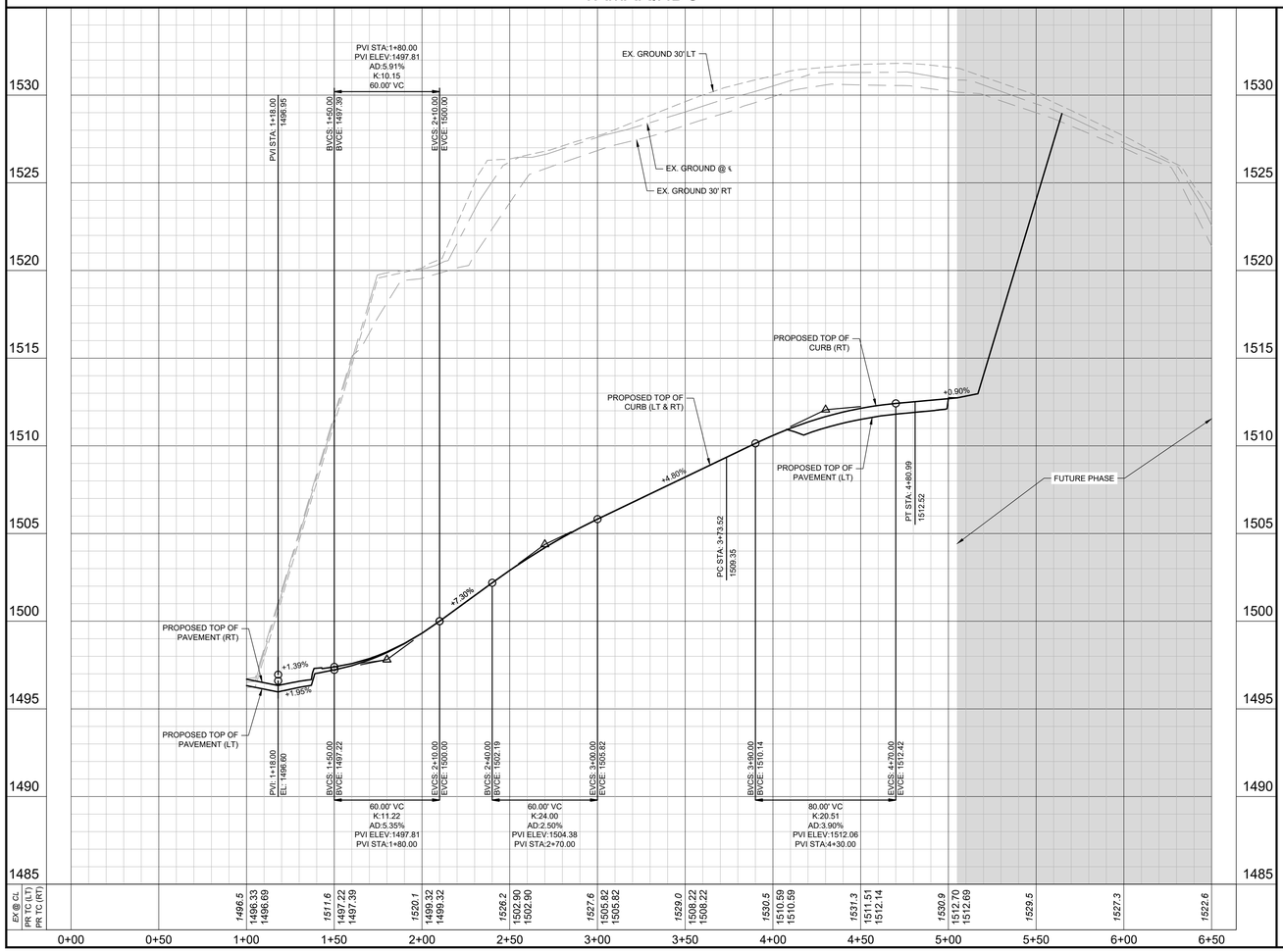
TAMARINDO



PROFILE SCALE
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PHONE: 210-541-9166 FAX: 210-541-8699
WWW.KIMLEY-HORN.COM TBPE FIRM NO. 928

STATE OF TEXAS
MICHAEL A. SCHOLZE
131737
LICENSED PROFESSIONAL ENGINEER
7/28/2025

KHA PROJECT	068686339
DATE	7/28/2025
SCALE	AS SHOWN
DESIGNED BY	JPV
DRAWN BY	JPV
CHECKED BY	MAS

PHASE 3H
PAVING PLAN & PROFILE
TAMARINDO

Esperanza
BORNE ★ TEXAS

KENDALL COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT NO. 2B

SHEET NUMBER
12

Plotted By: Vinet, Josh July 28, 2025 11:12:12am K:\san_ptx\068686339-esperanza3h\CAD\sitesheets\C-PAVE-3H.dwg
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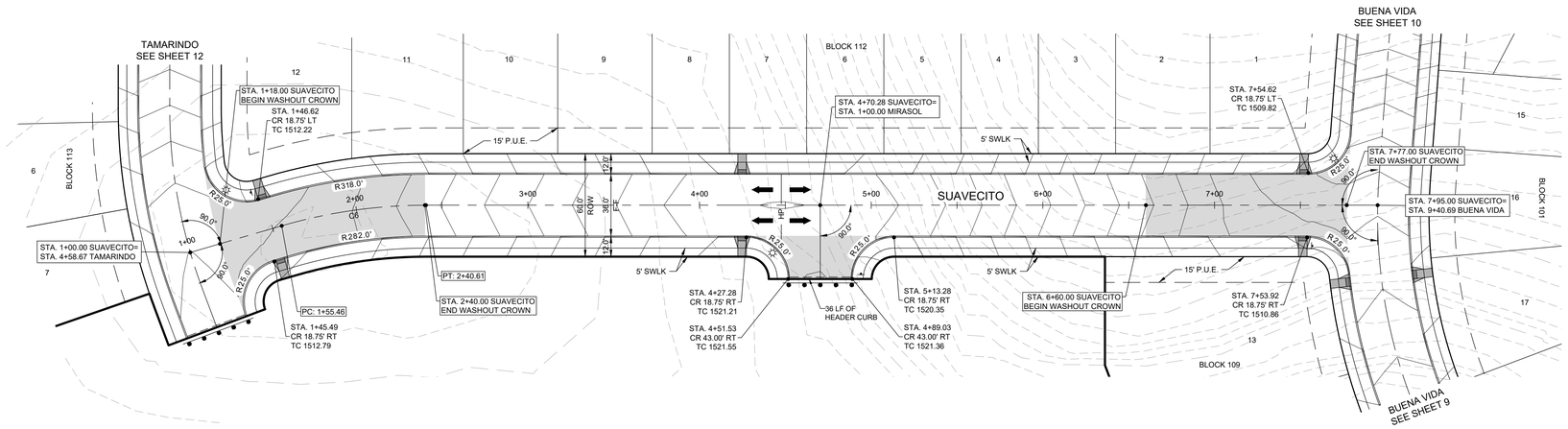
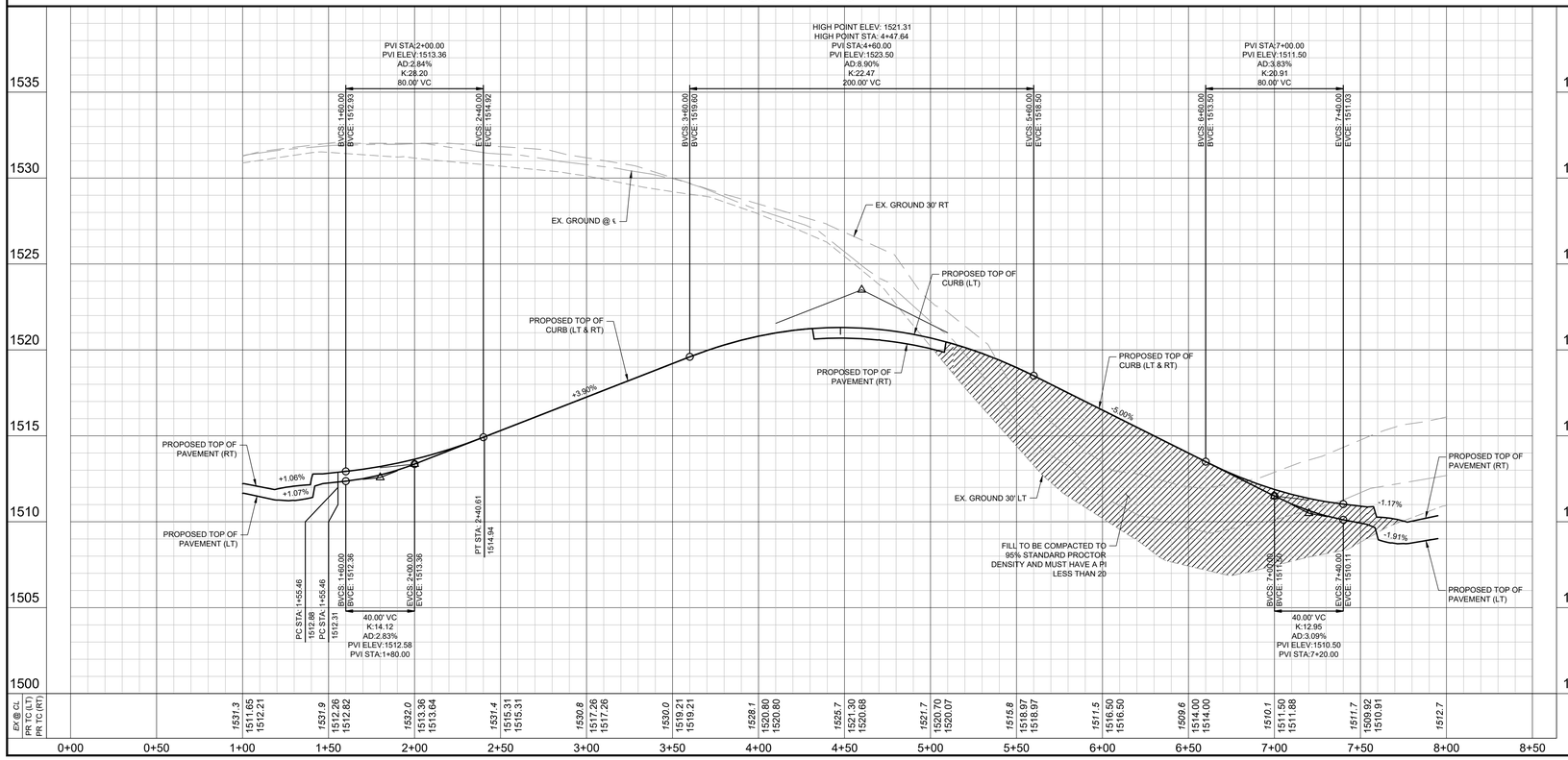


CURVE TABLE						
CURVE	RADIUS	LENGTH	CHORD BEARING	CHORD	DELTA	TANGENT
C6	300.00'	85.15'	N15°43'15"E	84.86'	16°15'44"	42.86'

SUAVECITO



GRAPHIC SCALE IN FEET
0 20 40 80

LEGEND

	RIGHT-OF-WAY LINE
HP	PROFILE HIGH POINT
	WASHOUT CROWN SECTION
	SIDEWALK TO BE BUILT BY DEVELOPER
	STREET DRAINAGE FLOW DIRECTION
1600.00	PAVEMENT SPOT ELEVATION
PC	POINT OF CURVATURE
PT	POINT OF TANGENCY
PI	POINT OF INTERSECTION
CR	CURB RETURN
1500.00 TC	TOP OF CURB ELEVATION
1500.00 TP	TOP OF PAVEMENT ELEVATION

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STATE OF TEXAS
MICHAEL A. SCHOLZE
131737
LICENSED
PROFESSIONAL ENGINEER
7/28/2025

KHA PROJECT 068686339
DATE 7/28/2025
SCALE AS SHOWN
DESIGNED BY JPV
DRAWN BY JPV
CHECKED BY MAS

PHASE 3H
PAVING PLAN & PROFILE
SUAVECITO

Esperanza
BORENE★TEXAS

KENDALL COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT NO. 2B

SHEET NUMBER
13

Plotted By: Vinet, Josh July 28, 2025 11:12:22am K:\spvs_civil\068686339-esperanza3h\CAD\plansheets\C-PAVE_3H.dwg
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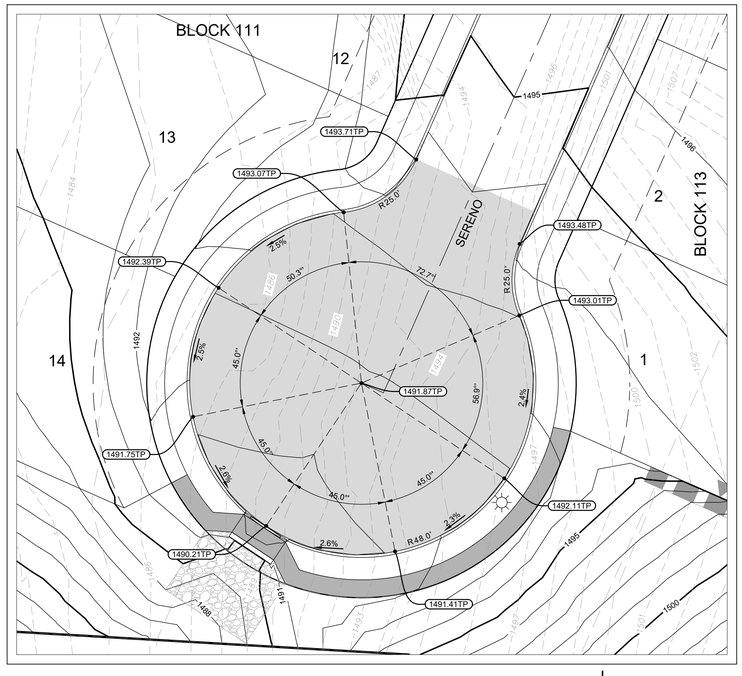

SERENO CUL-DE-SAC DETAIL
SCALE: 1" = 20'

NORTH

LEGEND

	RIGHT-OF-WAY LINE
HP	PROFILE HIGH POINT
	WASHOUT CROWN SECTION
	SIDEWALK TO BE BUILT BY DEVELOPER
	STREET DRAINAGE FLOW DIRECTION
	PAVEMENT SPOT ELEVATION
PC	POINT OF CURVATURE
PT	POINT OF TANGENCY
PI	POINT OF INTERSECTION
CR	CURB RETURN
1600.65 TP	TOP OF PAVEMENT ELEVATION

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STATE OF TEXAS
MICHAEL A. SCHOLZE
131737
LICENSED PROFESSIONAL ENGINEER
7/28/2025

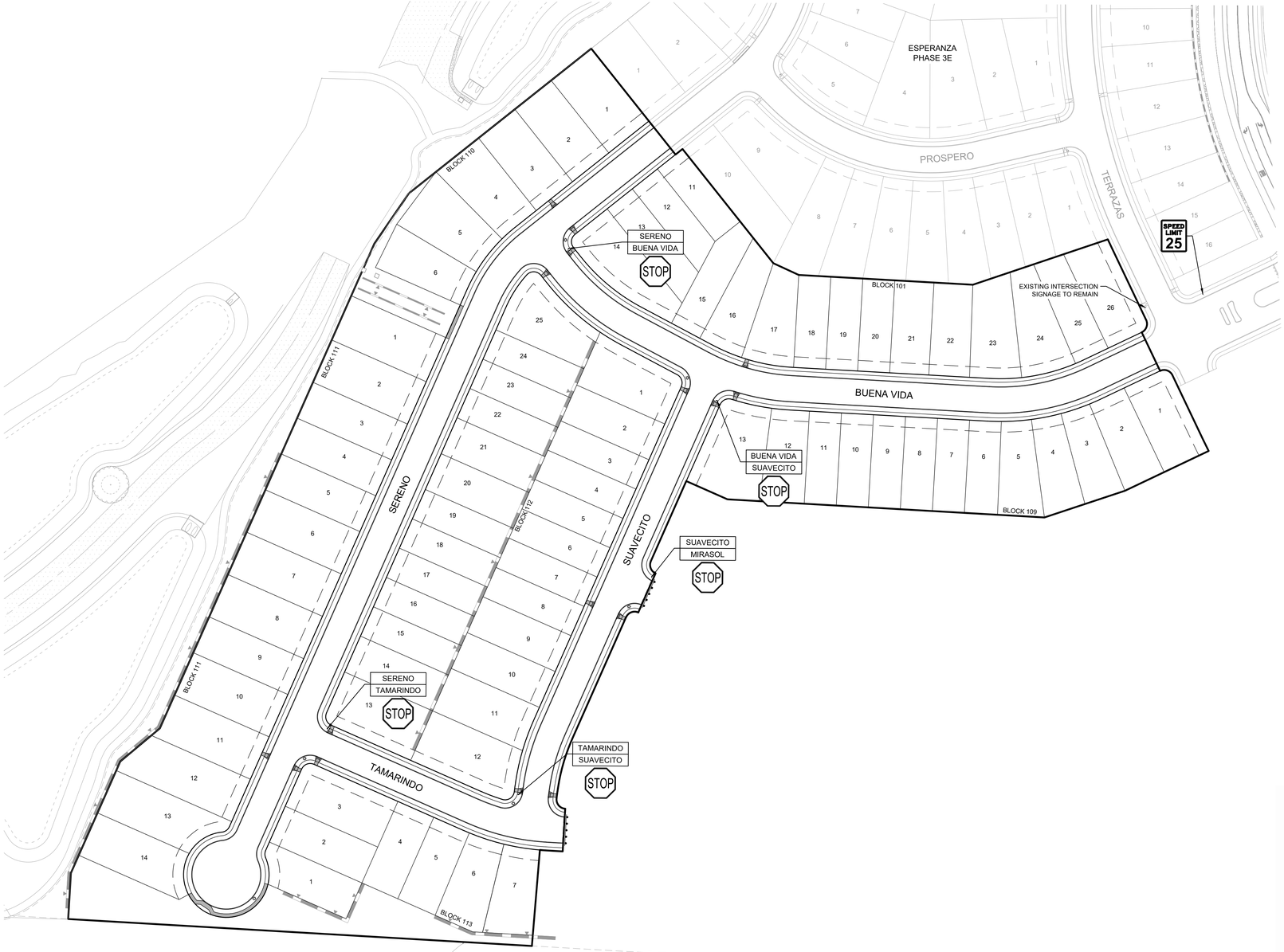
KHA PROJECT	068686339
DATE	7/28/2025
SCALE	AS SHOWN
DESIGNED BY	JPV
DRAWN BY	JPV
CHECKED BY	MAS

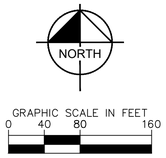
PHASE 3H
CUL-DE-SAC DETAIL

Esperanza
BORNE★TEXAS

KENDALL COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT NO. 2B

SHEET NUMBER
14





GRAPHIC SCALE IN FEET
0 40 80 160

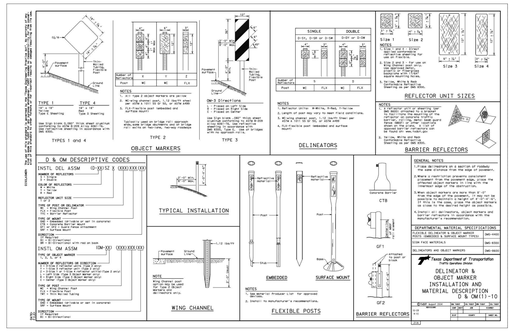
STOP SIGN (R1-1)

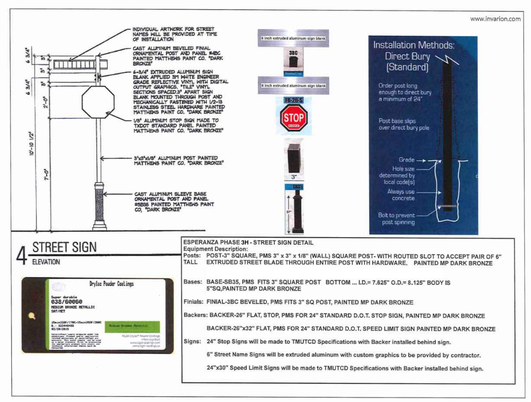
SYMBOL	DESC.
STREET / STREET	STREET NAME SIGN
▼▼▼▼▼	TYPE 4 OBJECT MARKERS ON THIN-WALLED TUBING POSTS AND WEDGE STEEL ANCHORS (SEE DETAIL THIS SHEET)

SPEED LIMIT (R2-1)

NOTES

1. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL REGULATORY AND WARNING SIGNS, STREETS NAME SIGNS AND SIGN MOUNTS IN ACCORDANCE WITH APPROVED ENGINEERING PLANS.
2. REGULATORY SIGNS AND POLES MUST MATCH TEXAS MUTCD SPECIFICATIONS.





4 STREET SIGN
ELEVATION

ESPERANZA PHASE 3H - STREET SIGN DETAIL
Equipment Description:
Posts: POST-3" SQUARE, PMS 3" x 3" x 1/8" (WALL) SQUARE POST- WITH ROUTED SLOT TO ACCEPT PAIR OF 6" TALL EXTRUDED STREET BLADE THROUGH ENTIRE POST WITH HARDWARE, PAINTED MP DARK BRONZE

Bases: BASE-SB38, PMS FITS 3" SQUARE POST BOTTOM ..... I.D.= 7.625" O.D.= 8.125" BODY IS 5"SQ.PAINTED MP DARK BRONZE

Finials: FINIAL-3BC BEVELED, PMS FITS 3" SQ POST, PAINTED MP DARK BRONZE

Backers: BACKER-26" FLAT, STOP, PMS FOR 24" STANDARD D.O.T. STOP SIGN, PAINTED MP DARK BRONZE
BACKER-26"x32" FLAT, PMS FOR 24" STANDARD D.O.T. SPEED LIMIT SIGN PAINTED MP DARK BRONZE

Signs: 24" Stop Signs will be made to TMUTCD Specifications with Backer installed behind sign.
6" Street Name Signs will be extruded aluminum with custom graphics to be provided by contractor.
24"x30" Speed Limit Signs will be made to TMUTCD Specifications with Backer installed behind sign.

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CHECKED BY MAS

PHASE 3H
SIGNAGE PLAN

Esperanza
BOERNE • TEXAS

KENDALL COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT NO. 2B

SHEET NUMBER
15

Plotted By:Vinet, Josh July 28, 2025 11:12:49am K:\San_Anto\068686339-esperanza3h\CAD\plansheets\C-SIGN-3H.dwg
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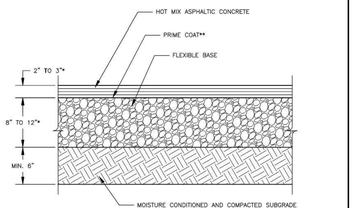
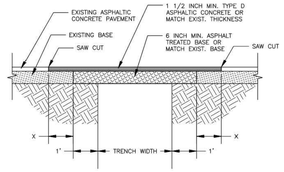


*THICKNESS VARIES DEPENDING UPON PAVEMENT DESIGN AND GEOTECHNICAL REPORT. REFER TO PLAN X-SECTIONS AND DETAILS FOR SPECIFIED PAVEMENT DESIGN.

**PROVIDE TACK COAT IN ADDITION TO PRIME COAT IMMEDIATELY PRIOR TO PLACING ASPHALTIC CONCRETE AS NEEDED TO SEAL AND ENSURE ADHERENCE.

NOTES:
1. PROVIDE 1 SET OF CORES FOR EACH DAY OF PAVING OR PER 500 TONS.

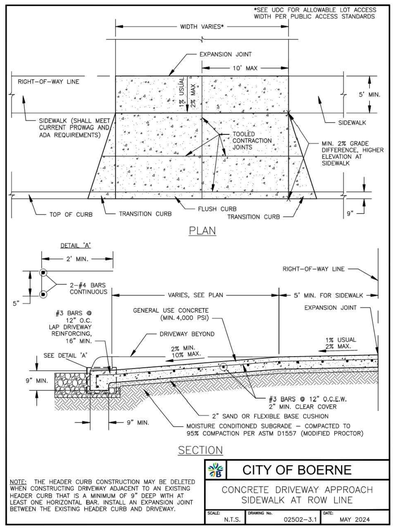
CITY OF BOERNE
ASPHALTIC CONCRETE PAVEMENT SECTION
SCALE: N.T.S. | DRAWING No.: 02513-1.0 | DATE: MAY 2024



PCI RANGE	ADDITIONAL WIDTH OF ASPHALT REPAIR
PCI<50	X=1'
50≤PCI<85	X=10' and CURB-TO-CURB
85≤PCI≤100	CURB-TO-CURB and BLOCK-TO-BLOCK

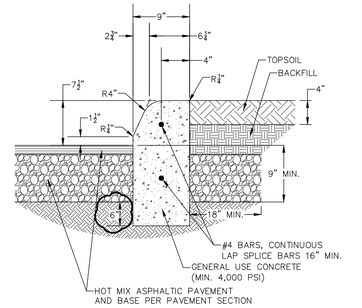
NOTES:
1. STREET PCI VALUES MAY BE PROVIDED BY THE ENGINEERING AND MOBILITY DEPARTMENT UPON REQUEST.

CITY OF BOERNE
ASPHALTIC CONCRETE PAVEMENT REPAIR
SCALE: N.T.S. | DRAWING No.: 02513-1.1 | DATE: MAY 2024



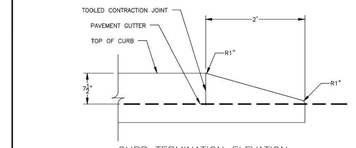
NOTE: THE HEADER CURB CONSTRUCTION MAY BE DELETED WHEN CONSTRUCTING DRIVEWAY ADJACENT TO AN EXISTING HEADER CURB THAT IS A MINIMUM OF 9" DEEP WITH AT LEAST ONE HORIZONTAL BAR. INSTALL AN EXPANSION JOINT BETWEEN THE EXISTING HEADER CURB AND DRIVEWAY.

CITY OF BOERNE
CONCRETE DRIVEWAY APPROACH SIDEWALK AT ROW LINE
SCALE: N.T.S. | DRAWING No.: 02502-3.1 | DATE: MAY 2024



NOTES:
1. STANDARD CURB MUST BE REMOVED AND REPLACED WITH A HEADER CURB TO ACCOMMODATE DRIVEWAYS.
2. THE ALTERNATIVE DEEP CURB MAY BE SAW CUT HORIZONTALLY TO ACHIEVE A HEADER CURB SECTION FOR DRIVEWAYS.
3. FOR ALL CURB PROVIDE MINIMUM EVERY 10' CONTRACTION JOINTS AND EVERY 50' EXPANSION JOINTS AND AT CURB RETURNS. IF CONCRETE PAVEMENT, MATCH JOINTS IN PAVEMENT. SEE SPECIFICATION 02502 FOR ADDITIONAL INFORMATION.
4. CURB EXPOSURE SHALL BE WITHIN 7-8".
5. FLEX BASE AND SUBGRADE SHALL EXTEND AT LEAST 18" BEHIND THE BACK OF CURB IN ALL CASES.
6. SUBGRADE SHALL BE MOISTURE CONDITIONED AND COMPACTED TO 95% COMPACTION PER ASTM D1557 (MODIFIED PROCTOR).

CURB TYPE "A"
TO BE USED ON LOCAL STREETS
WHERE DRIVEWAY APRONS ARE PRESENT



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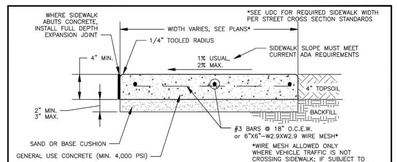
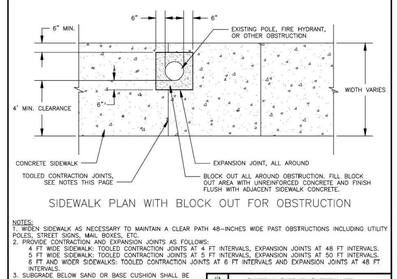
1. STANDARD CURB MUST BE REMOVED AND REPLACED WITH A HEADER CURB TO ACCOMMODATE DRIVEWAYS.
2. THE ALTERNATIVE DEEP CURB MAY BE SAW CUT HORIZONTALLY TO ACHIEVE A HEADER CURB SECTION FOR DRIVEWAYS.
3. FOR ALL CURB PROVIDE MINIMUM EVERY 10' CONTRACTION JOINTS AND EVERY 50' EXPANSION JOINTS AND AT CURB RETURNS. IF CONCRETE PAVEMENT, MATCH JOINTS IN PAVEMENT. SEE SPECIFICATION 02502 FOR ADDITIONAL INFORMATION.
4. CURB EXPOSURE SHALL BE WITHIN 7-8".
5. FLEX BASE AND SUBGRADE SHALL EXTEND AT LEAST 18" BEHIND THE BACK OF CURB IN ALL CASES.
6. SUBGRADE SHALL BE MOISTURE CONDITIONED AND COMPACTED TO 95% COMPACTION PER ASTM D1557 (MODIFIED PROCTOR).

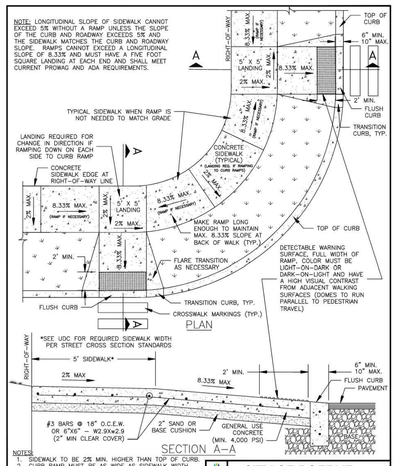
CITY OF BOERNE
CONCRETE CURB TERMINATION AND HEADER CURB
SCALE: N.T.S. | DRAWING No.: 02502-2.1 | DATE: MAY 2024





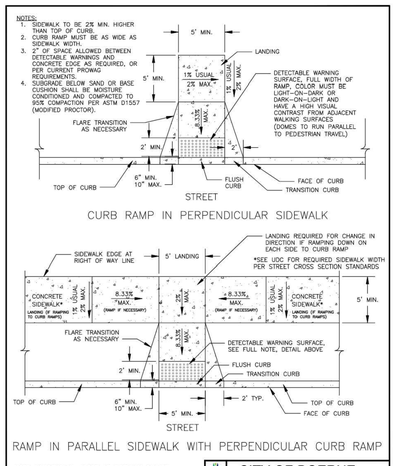
NOTES:
1. WIDEN SIDEWALK AS NECESSARY TO MAINTAIN A CLEAR PATH 48–INCHES WIDE PAST OBSTRUCTIONS INCLUDING UTILITY POLES, STREET SIGNS, MAIL BOXES, ETC.
2. PROVIDE CONTRACTION AND EXPANSION JOINTS AS FOLLOWS:
   4 FT WIDE SIDEWALK: TOOLED CONTRACTION JOINTS AT 4 FT INTERVALS, EXPANSION JOINTS AT 48 FT INTERVALS.
   5 FT WIDE SIDEWALK: TOOLED CONTRACTION JOINTS AT 5 FT INTERVALS, EXPANSION JOINTS AT 50 FT INTERVALS.
   6 FT AND WIDER SIDEWALKS: TOOLED CONTRACTION JOINTS AT 6 FT INTERVALS AND EXPANSION JOINTS AT 48 FT INTERVALS.
3. SUBGRADE BELOW SAND OR BASE CUSHION SHALL BE MOISTURE CONDITIONED AND COMPACTED TO 95% COMPACTION PER ASTM D1557 (MODIFIED PROCTOR).

CITY OF BOERNE
CONCRETE SIDEWALK
SCALE: N.T.S. | DRAWING No.: 02502-4.0 | DATE: MAY 2024



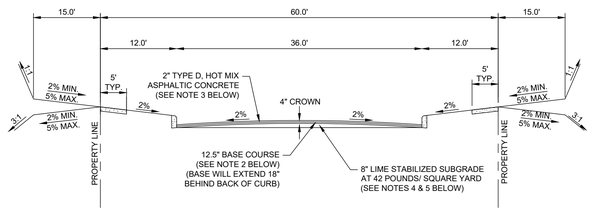
NOTES:
1. SIDEWALK TO BE 2% MIN. HIGHER THAN TOP OF CURB.
2. CURB RAMP MUST BE AS WIDE AS SIDEWALK WIDTH.
3. 2" OF SPACE ALLOWED BETWEEN DETECTABLE WARNINGS AND CONCRETE EDGE AS REQUIRED, OR PER CURRENT PROWAG REQUIREMENTS.
4. SUBGRADE BELOW SAND OR BASE CUSHION SHALL BE MOISTURE CONDITIONED AND COMPACTED TO 95% COMPACTION PER ASTM D1557 (MODIFIED PROCTOR).

CITY OF BOERNE
SIDEWALK CURB RAMP ON RADIUS SIDEWALK AT ROW LINE
SCALE: N.T.S. | DRAWING No.: 02502-4.2 | DATE: MAY 2024



NOTE: LONGITUDINAL SLOPE OF SIDEWALK CANNOT EXCEED 5% WITHOUT A RAMP UNLESS THE SLOPE OF THE CURB AND ROADWAY EXCEEDS 5% AND THE SIDEWALK MATCHES THE CURB AND ROADWAY SLOPE. RAMPS CANNOT EXCEED A LONGITUDINAL SLOPE OF 8.33% AND MUST HAVE A FIVE FOOT SQUARE LANDING AT EACH END AND MEET CURRENT PROWAG AND ADA REQUIREMENTS.

CITY OF BOERNE
SIDEWALK CURB RAMPS SIDEWALK AT ROW LINE
SCALE: N.T.S. | DRAWING No.: 02502-4.1 | DATE: MAY 2024



LOCAL SECTION (LOTS LESS THAN 65' WIDE)
N.T.S.

PAVEMENT SECTION NOTES

1. ALL VEGETATION AND TOPSOIL CONTAINING ORGANIC MATERIAL SHOULD BE CLEARED AND GRUBBED AT THE BEGINNING OF EARTHWORK CONSTRUCTION. THE SUBGRADE SHALL BE COMPACTED AND FIELD QUALITY CONTROL SHALL BE PERFORMED AS DESCRIBED IN PART 3.8, 02200-EARTHWORK, CITY OF BOERNE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, JULY 2015.
2. FLEXIBLE BASE COURSE SHOULD CONFORM TO TXDOT ITEM 247, TYPE A, GRADE 1 OR 2. THE FLEXIBLE BASE FIELD QUALITY CONTROL SHALL BE PERFORMED AS DESCRIBED IN PART 3.4, 02513-ASPHALTIC CONCRETE VEHICULAR PAVING, CITY OF BOERNE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, JULY 2015.
3. WEARING (SURFACE) COURSE SHOULD CONFORM TO AND INSTALLED PER CITY OF BOERNE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, JULY 2015. THE WEARING (SURFACE) COURSE FIELD QUALITY CONTROL SHALL BE PERFORMED AS DESCRIBED IN PART 3.4, 02513-ASPHALTIC CONCRETE VEHICULAR PAVING, CITY OF BOERNE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, JULY 2015.
4. WHERE THE PLASTICITY INDEX OF THE SUB GRADE SOIL ON WHICH STREET IS TO BE BUILT IS IN EXCESS OF 20, THE PAVEMENT DESIGN SHALL INCLUDE SUB GRADE STABILIZATION (8" MIN. HYDRATED LIME IN SLURRY FORM.) ALL LIME TREATMENT SHALL BE PERFORMED AS DESCRIBED IN PART 3.6, 02200-EARTHWORK, CITY OF BOERNE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, JULY 2015. PER GEOTECHNICAL REPORT, A LIME CONTENT OF 42 LBS PER SQ YARD FOR 8 INCH DEPTH OF STABILIZATION IS RECOMMENDED. CONTRACTOR TO BID AS 100% LIME. EXACT LIMITS TO BE DETERMINED IN FIELD.
5. IF SURFICIAL CLAYS ARE COMPLETELY REMOVED EXPOSING ROCK, OR IF ROCK MILLINGS OR RIPPED, WEATHERED LIMESTONE IS USED AS FILL, LIME TREATMENT OF SUBGRADE CAN BE ELIMINATED. ONCE STREET GRADES ARE CUT TO SUBGRADE DESIGN ENGINEER AND GEOTECHNICAL ENGINEER WILL REVIEW EXPOSED MATERIAL FOR DETERMINATION OF PAVEMENT SECTIONS.

REFERENCE GEOTECHNICAL REPORT BY InTEC, PROJECT NO. S251149, DATED JULY 11, 2025 FOR ADDITIONAL INFORMATION.

No.	REVISIONS	DATE	BY

Kimley»Horn

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MICHAEL A. SCHOLZE
131737
LICENSED PROFESSIONAL ENGINEER
7/28/2025

KHA PROJECT 068686339
DATE 7/28/2025
SCALE AS SHOWN
DESIGNED BY JPV
DRAWN BY JPV
CHECKED BY MAS

PHASE 3H
PAVING DETAILS

Esperanza
BOERNE • TEXAS

KENDALL COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT NO. 2B

SHEET NUMBER
16

Plotted By: Vinod, Jeah July 28, 2025 11:13:18am K:\proj_civil\068686339–esperanza3h\CAD\standards\C-DTLS–PAVE–3H.dwg
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NORTH

GRAPHIC SCALE IN FEET
0 50 100 200

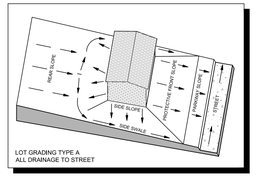
LEGEND

0 / 0.00	BASIN NAME / ACRES
(X)	POINT OF ANALYSIS
(SC)	STREET CAPACITY ANALYSIS POINT
(CD)	CHANNEL/CULVERT ANALYSIS POINT
1500	EXISTING CONTOUR
	PROPOSED CONTOUR
	DRAINAGE AREA
	TIME OF CONCENTRATION FLOW PATH (NODE INDICATES FLOW TYPE)
A, B, C	LOT GRADING TYPE

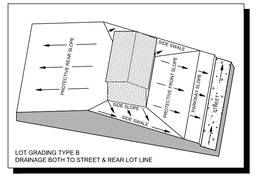
PEAK FLOW SUMMARY

ANALYSIS POINT	CONTRIBUTING BASINS	A	IMPERVIOUS COVER		Tc	Q-2	Q-5	Q-10	Q-25	Q-50	Q-100
		(ac)	(ac)	%	(min)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)
4	4	6.58	4.61	70%	9.6	22.9	28.7	33.6	44.7	55.5	64.3
5	5	3.70	3.13	85%	5.0	17.6	22.0	25.7	33.9	42.2	49.0
6.1	6.1	5.00	3.50	70%	10.5	16.8	21.1	24.6	32.8	40.6	47.1
6.2	6.2	1.32	0.92	70%	8.0	4.9	6.1	7.2	9.6	11.8	13.7
6.3	6.3	6.83	4.78	70%	11.9	21.8	27.3	31.9	42.3	52.4	60.8
6	6.1,6.2,6.3	13.15	9.21	70%	11.9	41.9	52.5	61.3	81.5	100.9	117.0
7	7	4.28	3.74	87%	5.0	20.6	25.8	30.2	40.2	49.4	57.9
8	8	4.41	3.09	70%	11.2	14.4	18.1	21.1	28.1	34.7	40.3
9	9	10.75	7.53	70%	17.8	28.5	35.7	41.7	55.3	68.4	79.3
10	10	45.76	24.00	52%	21.2	97.8	122.7	143.0	189.5	233.4	272.1
11	11	45.81	1.97	4%	14.4	74.0	92.8	108.3	144.2	174.8	204.4
12	12	29.56	5.50	19%	23.3	44.9	56.2	65.6	86.0	105.1	121.9
13	13	103.36	43.62	42%	21.6	200.4	251.1	293.0	391.3	478.0	559.4
14	14	1.39	0.97	70%	8.5	5.1	6.3	7.4	9.8	12.2	14.2

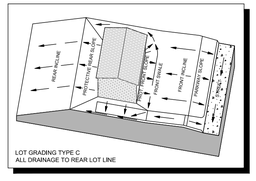
NOTES:
1. BASINS 4 & 5 ARE CONTAINED WITHIN BASIN DA-4 FROM THE PONDS DRAINAGE STUDY.
2. BASINS 6.1, 6.2, & 6.3 COMBINE TO MAKE BASIN 6. BASINS 6 & 7 HAVE BEEN PREVIOUSLY STUDIED AS BASIN DA-6, SEE PONDS DRAINAGE STUDY.
3. BASINS 8, 9, & 10 ARE CONTAINED WITHIN BASIN B2. THESE BASINS ARE ANALOGOUS TO AREA OF BASINS A31, A32, A41, A42, & A43 PREVIOUSLY APPROVED WITHIN THE 3D DRAINAGE STUDY. THIS BASIN WAS ALSO STUDIED IN THE PONDS DRAINAGE STUDY.
4. BASIN 11 CORRESPONDS WITH BASIN B3, SEE PONDS DRAINAGE STUDY.
5. BASINS 12 & 14 CORRESPOND TO BASIN 12 FROM PHASE 3E WHICH CORRESPONDS TO BASIN B1-B FROM THE PONDS DRAINAGE STUDY.
6. BASIN 13 CORRESPONDS WITH BASIN "CHANNEL" FROM PHASE 3E.



LOT GRADING TYPE A
ALL DRAINAGE TO STREET



LOT GRADING TYPE B
DRAINAGE BOTH TO STREET & REAR LOT LINE



LOT GRADING TYPE C
ALL DRAINAGE TO REAR LOT LINE

No.	REVISIONS	DATE	BY

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STATE OF TEXAS
MICHAEL A. SCHOLZE
131737
LICENSED PROFESSIONAL ENGINEER
7/28/2025

KHA PROJECT	068686339
DATE	7/28/2025
SCALE	AS SHOWN
DESIGNED BY	JPV
DRAWN BY	JPV
CHECKED BY	MAS

PHASE 3H
DRAINAGE AREA MAP

Esperanza
BOERNE • TEXAS

KENDALL COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT NO. 2B

SHEET NUMBER
17

Plotted By: Vinet, Josh July 28, 2025 11:13:38am K:\sna_civil\068686339--esperanza3h\CAD\plansheet\C-DAMP--3H.dwg
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PEAK FLOW CALCULATIONS

ANALYSIS POINT	CONTRI-BUTING BASINS	AREA "A"	RUNOFF COEFFICIENT "C"								TIME OF CONCENTRATION CALCULATIONS												RAINFALL INTENSITY "I"						UNITS FACTOR	FLOW RATE "Q"					
			IMPERVIOUS COVER		"C" FACTOR						SHEET FLOW				SHALLOW CONC.				CHANNEL FLOW			TOT.												
		A			C-2	C-5	C-10	C-25	C-50	C-100	L	n	S	Tt	L	n	S	Tt	L	V	Tt	Tc	I-2	I-5	I-10	I-25	I-50	I-100		Q-2	Q-5	Q-10	Q-25	Q-50	Q-100
		(ac)	(ac)	I.C. %	C-2	C-5	C-10	C-25	C-50	C-100	(ft)		(ft/ft)	(min)	(ft)		(ft/ft)	(min)	(ft)	(fps)	(min)	(min)	(in/hr)	(in/hr)	(in/hr)	(in/hr)	(in/hr)	(in/hr)		(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
4	4	6.58	4.61	70%	0.67	0.67	0.67	0.74	0.81	0.84	50	0.30	0.020	2.5	300	0.30	0.067	5.8	460	6.00	1.3	9.6	5.14	6.46	7.55	9.12	10.32	11.55	1.008	22.9	28.7	33.6	44.7	55.5	64.3
5	5	3.70	3.13	85%	0.74	0.74	0.74	0.81	0.89	0.92	-	-	-	-	-	-	-	-	-	-	-	5.0	6.36	7.97	9.32	11.22	12.72	14.28	1.008	17.6	22.0	25.7	33.9	42.2	49.0
6.1	6.1	5.00	3.50	70%	0.67	0.67	0.67	0.74	0.81	0.84	55	0.30	0.020	2.8	130	0.30	0.015	5.3	855	6.00	2.4	10.5	4.97	6.24	7.29	8.80	9.96	11.13	1.008	16.8	21.1	24.6	32.8	40.6	47.1
6.2	6.2	1.32	0.92	70%	0.67	0.67	0.67	0.74	0.81	0.84	35	0.30	0.020	1.8	135	0.30	0.015	5.5	270	6.00	0.8	8.0	5.50	6.89	8.06	9.70	10.98	12.30	1.008	4.9	6.1	7.2	9.6	11.8	13.7
6.3	6.3	6.83	4.78	70%	0.67	0.67	0.67	0.74	0.81	0.84	55	0.30	0.020	2.8	265	0.30	0.030	7.6	535	6.00	1.5	11.9	4.72	5.91	6.91	8.31	9.40	10.51	1.008	21.8	27.3	31.9	42.3	52.4	60.8
6	6.1,6.2,6.3	13.15	9.21	70%	0.67	0.67	0.67	0.74	0.81	0.84	55	0.30	0.020	2.8	265	0.30	0.030	7.6	535	6.00	1.5	11.9	4.72	5.91	6.91	8.31	9.40	10.51	1.008	41.9	52.5	61.3	81.5	100.9	117.0
7	7	4.28	3.74	87%	0.75	0.75	0.75	0.83	0.90	0.94	-	-	-	-	-	-	-	-	-	-	-	5.0	6.36	7.97	9.32	11.22	12.72	14.28	1.008	20.6	25.8	30.2	40.2	49.4	57.9
8	8	4.41	3.09	70%	0.67	0.67	0.67	0.74	0.81	0.84	35	0.30	0.020	1.8	245	0.30	0.020	8.7	275	6.00	0.8	11.2	4.84	6.07	7.08	8.53	9.64	10.78	1.008	14.4	18.1	21.1	28.1	34.7	40.3
9	9	10.75	7.53	70%	0.67	0.67	0.67	0.74	0.81	0.84	45	0.30	0.020	2.3	410	0.30	0.020	14.5	360	6.00	1.0	17.8	3.92	4.92	5.74	6.90	7.79	8.71	1.008	28.5	35.7	41.7	55.3	68.4	79.3
10	10	45.76	24.00	52%	0.59	0.59	0.59	0.65	0.71	0.74	300	0.30	0.015	17.5	-	-	-	-	1338	6.00	3.7	21.2	3.59	4.51	5.26	6.32	7.13	7.97	1.008	97.8	122.7	143.0	189.5	233.4	272.1
11	11	45.81	1.97	4%	0.37	0.37	0.37	0.41	0.44	0.46	100	0.30	0.029	4.2	409	0.20	0.114	4.0	1792	4.81	6.2	14.4	4.33	5.43	6.34	7.61	8.60	9.62	1.008	74.0	92.8	108.3	144.2	174.8	204.4
12	12	29.56	5.50	19%	0.44	0.44	0.44	0.48	0.52	0.54	100	0.60	0.095	4.6	876	0.30	0.067	16.9	397	3.89	1.7	23.3	3.43	4.29	5.01	6.01	6.79	7.58	1.008	44.9	56.2	65.6	86.0	105.1	121.9
13	13	103.36	43.62	42%	0.54	0.54	0.54	0.60	0.65	0.68	100	0.20	0.073	1.8	511	0.20	0.068	6.5	5304	6.65	13.3	21.6	3.56	4.46	5.21	6.26	7.06	7.90	1.008	200.4	251.1	293.0	391.3	478.0	559.4
14	14	1.39	0.97	70%	0.67	0.67	0.67	0.74	0.81	0.84	50	0.30	0.020	2.5	133	0.30	0.015	5.4	210	6.00	0.6	8.5	5.39	6.75	7.89	9.50	10.75	12.04	1.008	5.1	6.3	7.4	9.8	12.2	14.2

STREET CAPACITY CALCULATIONS (HEC-22 METHODOLOGY)

STREET ANALYSIS POINT	STREET NAME	CONTRI-BUTING BASIN	STREET CLASS	STREET SHAPE	DESIGN STORM: 5-YR			CHECK STORM: 100-YR			ROADWAY DATA			SLOPE USED FOR CALCS	RESULTS					
					BASIN	CARRY-OVER	TOTAL	BASIN	CARRY-OVER	TOTAL					5-YEAR			100-YEAR		
											S	Sx	n		Q	d	V	Q	d	V
					(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(ft/ft)	(ft/ft)	-	(ft/ft)	(cfs)	(ft)	(fps)	(cfs)	(ft)	(fps)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
S1	BUENA VIDA	6.1	Local	Superelevated	21.1	-	21.1	47.1	-	47.1	0.020	0.020	0.020	0.020	21.1	0.46	3.92	47.1	0.63	4.78
S2	SERENO	6 (S2)	Local	Crowned	26.6	-	26.6	59.6	-	59.6	0.020	0.020	0.020	0.010	26.6	0.43	2.92	59.6	0.59	4.02
S3	TAMARINDO	6.3	Local	Washed	27.3	-	27.3	60.8	-	60.8	0.020	0.020	0.020	0.020	27.3	0.44	3.64	60.8	0.57	5.01
S4	SERENO	6.3	Local	Crowned	27.3	-	27.3	60.8	-	60.8	0.011	0.020	0.020	0.005	27.3	0.49	2.43	60.8	0.72	3.05
S5	SERENO	14	Local	Crowned	6.3	-	6.3	14.2	-	14.2	0.035	0.020	0.020	0.035	6.3	0.21	2.99	14.2	0.28	3.66

CURB INLET CALCULATIONS (HEC-22 METHODOLOGY)

INLET ANALYSIS POINT	INLET NAME	CONTRI-BUTING BASIN	DESIGN STORM: 5-YEAR			CHECK STORM: 100-YEAR			# OF INLETS	TOTAL FLOW TO EACH INLET		INLET LOCATION	D.S. INLET	ROADWAY DATA			SLOPE USED FOR CALCS	FLOW DEPTH (5-YR)	FLOW DEPTH (100-YR)	LENGTH REQUIRED		LENGTH CHOSEN	INLET PERFORMACE						
			BASIN	CARRY-OVER	TOTAL	BASIN	CARRY-OVER	TOTAL		5-YR	100-YR			S	Sx	n				5-YR	100-YR		5-YEAR			100-YEAR		
																							$Q_{CAPTURE}$	Q_{BYPASS}	E	$Q_{CAPTURE}$	Q_{BYPASS}	E
			(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)		(cfs)	(cfs)			(ft/ft)	(ft/ft)	-	(ft/ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(cfs)	(cfs)	%	(cfs)	(cfs)	%
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
6	A4 & A5	6	52.5	-	52.5	117.0	-	117.0	2	26.25	58.50	Sag	-	0.011	0.020	0.020	0.005	0.50	0.85	24.75	24.88	30	52.50	-	100%	117.00	-	100%
14	B1	14	6.3	-	6.3	14.2	-	14.2	1	6.30	14.20	Sag	-	0.035	0.020	0.020	0.035	0.50	0.85	5.94	5.68	10	6.30	-	100%	14.20	-	100%

Plotted By: Ford, Josh July 28, 2025 11:13:43am K:\sna_civ\068866339-esperanza3h\CAD\sheets\C-DAMP-3H.dwg
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No.	REVISIONS	DATE	BY

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PHONE: 210-541-9166 FAX: 210-541-8699
WWW.KIMLEY-HORN.COM TBPE FIRM NO. 928

STATE OF TEXAS
MICHAEL A. SCHOLZE
131737
LICENSED PROFESSIONAL ENGINEER
7/28/2025

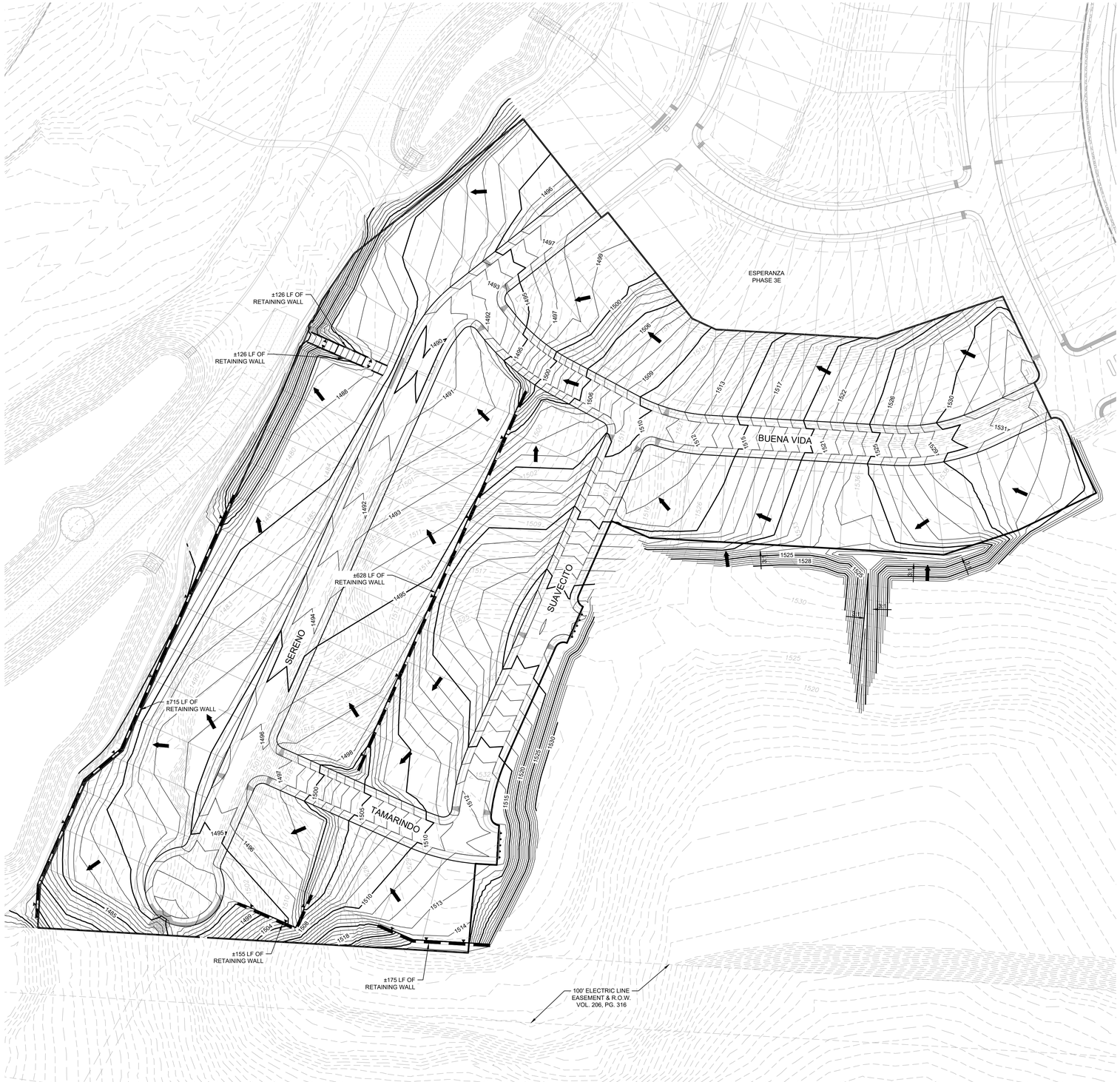
KHA PROJECT	068866339
DATE	7/28/2025
SCALE	AS SHOWN
DESIGNED BY	JPV
DRAWN BY	JPV
CHECKED BY	MAS

PHASE 3H
DRAINAGE AREA CALCULATIONS

Esperanza
BOERNE ★ TEXAS

KENDALL COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT NO. 2B

SHEET NUMBER
18



NORTH

GRAPHIC SCALE IN FEET
0 40 80 160

LEGEND

1520	PROPOSED CONTOURS
1520	EXISTING CONTOURS
	PROPOSED SCREENING WALL (BY OTHERS)
	PROPOSED RETAINING WALL (TRIANGLE INDICATES EXPOSED FACE)
2.0%	PROPOSED SLOPE TAG
TW	FINISHED GRADE AT TOP OF WALL
BW	FINISHED GRADE AT BASE OF WALL
C	LOT GRADING TYPE

NOTES

1. ALL SPOT GRADES ARE TO TOP OF PAVEMENT (TP) OR TOP OF GRATE (TG), UNLESS OTHERWISE NOTED AS TC (TOP OF CURB). CONTRACTOR TO ADD 7.5" FOR TOP OF CURB AS NECESSARY.
2. NO EARTHEN SLOPE SHALL BE GREATER THAN 3:1, UNLESS OTHERWISE NOTED.
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5. GENERAL CONTRACTOR TO REFERENCE NOTE 1 REGARDING SPOT ELEVATIONS, COORDINATE WITH DIRT AND LANDSCAPE SUBCONTRACTORS REGARDING PROPOSED SOD AND HYDROMULCH LOCATIONS TO ENSURE ADEQUATE CUT FOR FUTURE VEGETATION.
6. EXISTING MANHOLE TOPS, VALVE BOXES, ETC. ARE TO BE ADJUSTED AS REQUIRED TO MATCH PROPOSED GRADES. IF NECESSARY, READJUSTMENTS SHALL BE PERFORMED UPON COMPLETION OF PAVING AND FINE GRADING TO ENSURE A SMOOTH TRANSITION.

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BENCHMARK LIST

DATUM IS NAVD '88, USING GEOID 18, BASED ON GPS OBSERVATIONS.

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- ELEV.=1492.78'

No.	REVISIONS	DATE	BY

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STATE OF TEXAS
MICHAEL A. SCHOLZE
131737
LICENSED PROFESSIONAL ENGINEER
7/28/2025

KHA PROJECT	068686339
DATE	7/28/2025
SCALE	AS SHOWN
DESIGNED BY	JPV
DRAWN BY	JPV
CHECKED BY	MAS

PHASE 3H
OVERALL GRADING PLAN

Esperanza
BOERNE ★ TEXAS

KENDALL COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT NO. 2B

SHEET NUMBER
19

Plotted By:Vinot, Josh July 28, 2025 11:13:56am K:\san_civil\068686339-esperanza3h\CAD\sheetset\C-GRAD-3H.dwg
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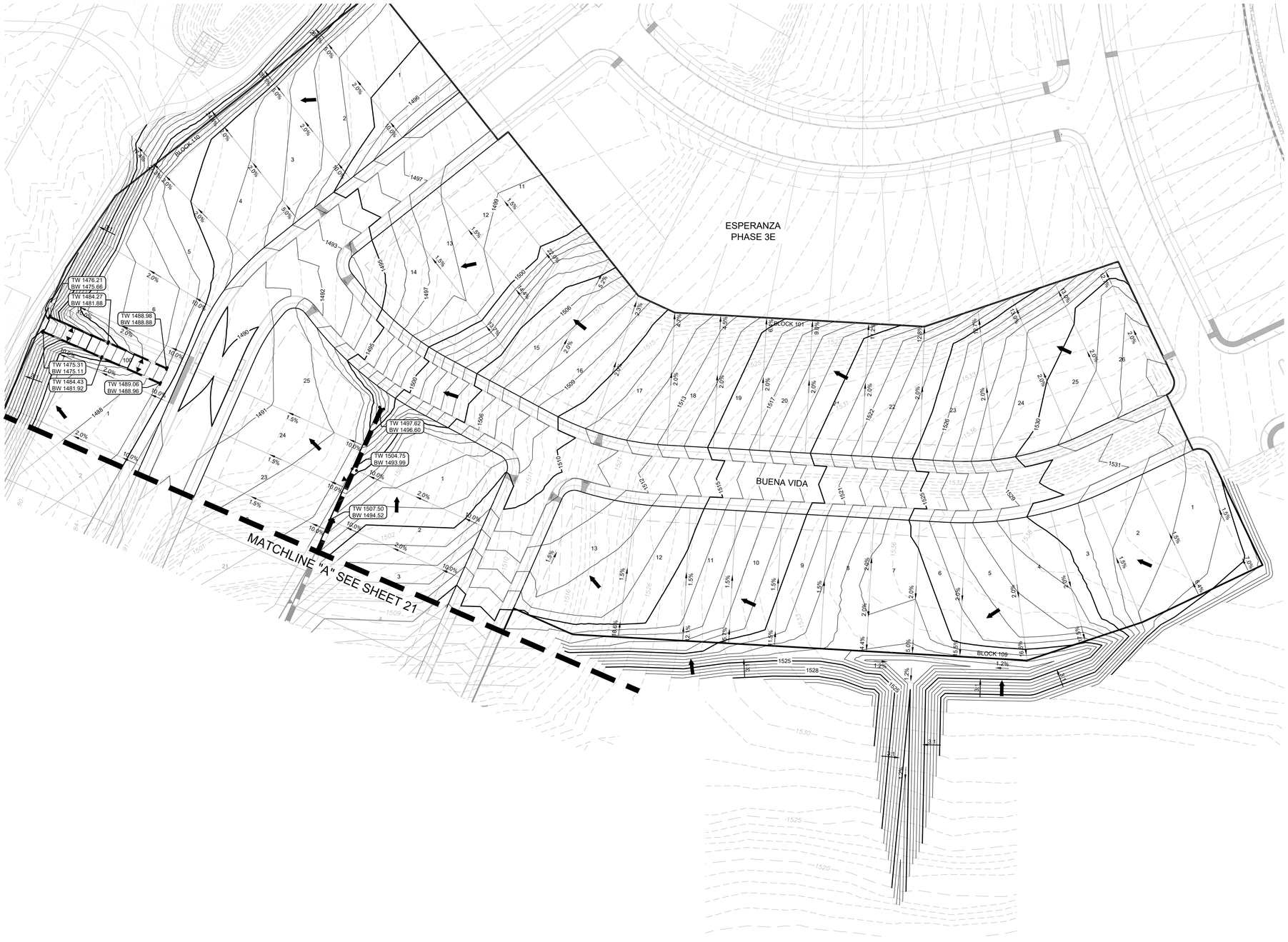

NORTH

GRAPHIC SCALE IN FEET
0 25 50 100

LEGEND

1520	PROPOSED CONTOURS
1520	EXISTING CONTOURS
	PROPOSED SCREENING WALL (BY OTHERS)
	PROPOSED RETAINING WALL (TRIANGLE INDICATES EXPOSED FACE)
2.0%	PROPOSED SLOPE TAG
TW	FINISHED GRADE AT TOP OF WALL
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No.	REVISIONS	DATE	BY

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STATE OF TEXAS
MICHAEL A. SCHOLZE
131737
LICENSED PROFESSIONAL ENGINEER
7/28/2025

KHA PROJECT	068686339
DATE	7/28/2025
SCALE	AS SHOWN
DESIGNED BY	JPV
DRAWN BY	JPV
CHECKED BY	MAS

PHASE 3H
GRADING PLAN
(SHEET 1 OF 2)

Esperanza
BOERNE • TEXAS

KENDALL COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT NO. 2B

SHEET NUMBER
20

NORTH

GRAPHIC SCALE IN FEET
0 25 50 100

LEGEND

1520	PROPOSED CONTOURS
1520	EXISTING CONTOURS
	PROPOSED SCREENING WALL (BY OTHERS)
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BENCHMARK LIST

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BM #404: MAG NAIL WITH WASHER SET IN CURB

- ELEV.=1538.40'

BM #51000:

- ELEV.=1492.78'

No.	REVISIONS	DATE	BY

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STATE OF TEXAS
MICHAEL A. SCHOLZE
131737
LICENSED PROFESSIONAL ENGINEER
7/28/2025

KHA PROJECT	068686339
DATE	7/28/2025
SCALE	AS SHOWN
DESIGNED BY	JPV
DRAWN BY	JPV
CHECKED BY	MAS

PHASE 3H
GRADING PLAN
(SHEET 2 OF 2)

Esperanza
BORENE★TEXAS

KENDALL COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT NO. 2B

SHEET NUMBER
21

Plotted By: Vinet, Josh July 28, 2025 11:14:09am K:\pro_chi\068686339-esperanza3h\CAD\plansheets\C-GRAD-3H.dwg
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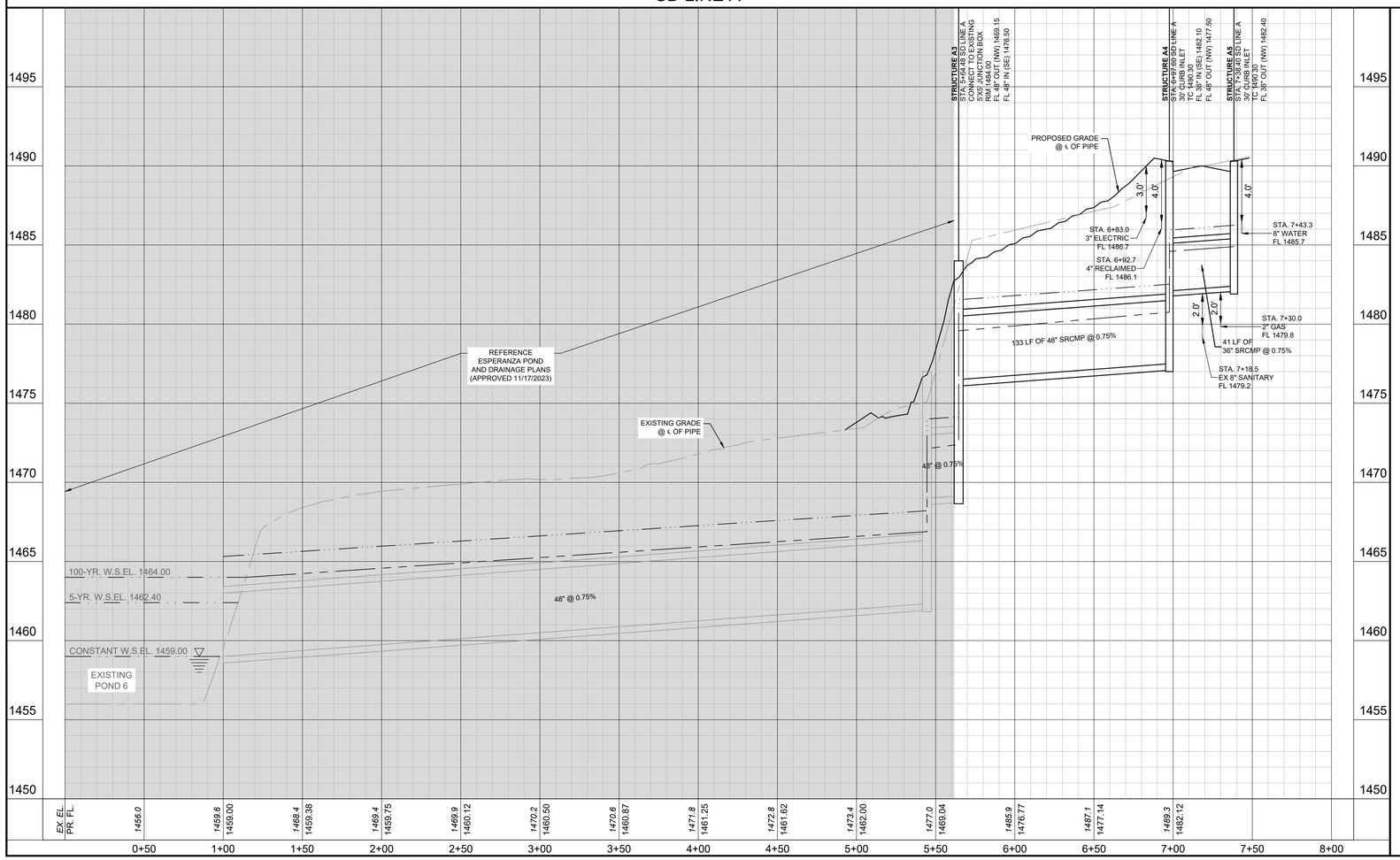
SD LINE A



GRAPHIC SCALE IN FEET
0 20 40 80

LEGEND

- PROPOSED EASEMENT
- W — PROPOSED WATER LINE
- PROPOSED RECLAIM WATER LINE
- SS — EXISTING SANITARY SEWER LINE
- GAS — PROPOSED GAS LINE
- PROPOSED STORM DRAIN
- PROPOSED JUNCTION BOX
- PROPOSED CURB INLET
- PROPOSED FIRE HYDRANT
- S — PROPOSED SEWER MANHOLE
- 100 YEAR HGL
- 100 YEAR EGL
- SOD CHANNEL

NOTES:
1. ALL STORM SEWER PIPE WITHIN PUBLIC EASEMENTS/R.O.W. SHALL BE SPIRAL RIBBED CORRUGATED METAL PIPE (SRCMP) POLYMER COATED, ASTM A742.
2. ALL CONCRETE RIPRAP SHALL DEVELOP A MINIMUM COMPRESSIVE STRENGTH OF NOT LESS THAN 4,000 PSI IN 28 DAYS.

PROFILE SCALE
1" = 40' HORIZONTAL
1" = 4' VERTICAL

TRENCH EXCAVATION SAFETY PROTECTION

CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLY WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

UTILITY TRENCH COMPACTION

ALL UTILITY TRENCH COMPACTION TESTS WITHIN THE PAVEMENT SECTION SHALL BE THE RESPONSIBILITY OF THE DEVELOPER'S GEO-TECHNICAL ENGINEER. FILL MATERIAL SHALL BE PLACED IN UNIFORM LAYERS NOT TO EXCEED TWELVE-INCHES (12") LOOSE. EACH LAYER OF MATERIAL SHALL BE COMPACTED TO A MINIMUM 95% DENSITY AND TESTED FOR DENSITY AND MOISTURE IN ACCORDANCE WITH TEST METHODE TEX-113-E, TEX-114-E, TEX-115-E. THE NUMBER AND LOCATION OF REQUIRED TESTS SHALL BE DETERMINED BY THE GEO-TECHNICAL ENGINEER AND APPROVED BY THE CITY OF BOERNE STREET INSPECTOR. AT A MINIMUM, TESTS SHALL BE TAKEN EVERY 100 LF FOR EACH LIFT. UPON COMPLETION OF TESTING THE GEO-TECHNICAL ENGINEER WILL PROVIDE THE CITY OF BOERNE STREET INSPECTOR WITH ALL TESTING DOCUMENTATION AND A CERTIFICATION STATING THAT THE PLACEMENT OF FILL MATERIAL HAS BEEN COMPLETED IN ACCORDANCE WITH THE PLANS.

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STATE OF TEXAS
MICHAEL A. SCHOLZE
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LICENSED
PROFESSIONAL ENGINEER
7/28/2025

KHA PROJECT	068686339
DATE	7/28/2025
SCALE	AS SHOWN
DESIGNED BY	JPV
DRAWN BY	JPV
CHECKED BY	MAS

PHASE 3H
STORM DRAIN PLAN & PROFILE
SD LINE A

Esperanza
BOERNE • TEXAS

KENDALL COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT NO. 2B

SHEET NUMBER
22

Plotted By: Vinet, Josh July 28, 2025 11:21:03am K:\san_ptx\068686339-esperanza3h\CAD\sheets\C-STRM-3H.dwg
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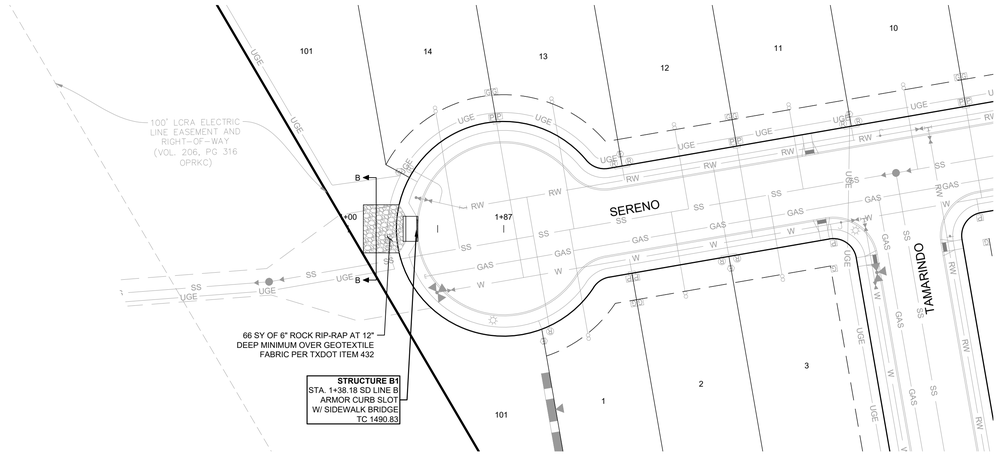

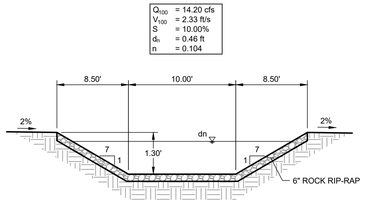

ROCK RIP-RAP OUTFALL SECTION B-B

N.T.S.

GRAPHIC SCALE IN FEET
0 20 40 80

LEGEND

	PROPOSED EASEMENT
W	PROPOSED WATER LINE
	PROPOSED RECLAIM WATER LINE
SS	EXISTING SANITARY SEWER LINE
GAS	PROPOSED GAS LINE
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2. ALL CONCRETE RIPRAP SHALL DEVELOP A MINIMUM COMPRESSIVE STRENGTH OF NOT LESS THAN 4,000 PSI IN 28 DAYS.

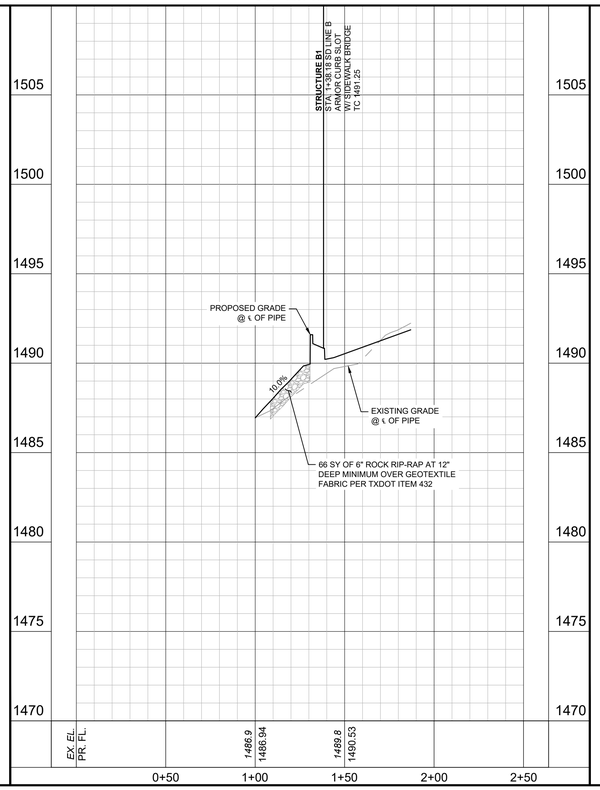
TRENCH EXCAVATION SAFETY PROTECTION

CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLY WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

UTILITY TRENCH COMPACTION

ALL UTILITY TRENCH COMPACTION TESTS WITHIN THE PAVEMENT SECTION SHALL BE THE RESPONSIBILITY OF THE DEVELOPER'S GEO-TECHNICAL ENGINEER. FILL MATERIAL SHALL BE PLACED IN UNIFORM LAYERS NOT TO EXCEED TWELVE-INCHES (12") LOOSE. EACH LAYER OF MATERIAL SHALL BE COMPACTED TO A MINIMUM 95% DENSITY AND TESTED FOR DENSITY AND MOISTURE IN ACCORDANCE WITH TEST METHODE TEX-113-E, TEX-114-E, TEX-115-E. THE NUMBER AND LOCATION OF REQUIRED TESTS SHALL BE DETERMINED BY THE GEO-TECHNICAL ENGINEER AND APPROVED BY THE CITY OF BOERNE STREET INSPECTOR. AT A MINIMUM, TESTS SHALL BE TAKEN EVERY 100 LF FOR EACH LIFT. UPON COMPLETION OF TESTING THE GEO-TECHNICAL ENGINEER WILL PROVIDE THE CITY OF BOERNE STREET INSPECTOR WITH ALL TESTING DOCUMENTATION AND A CERTIFICATION STATING THAT THE PLACEMENT OF FILL MATERIAL HAS BEEN COMPLETED IN ACCORDANCE WITH THE PLANS.

SD LINE B



PROFILE SCALE
1" = 40' HORIZONTAL
1" = 4' VERTICAL

811 Know what's below. Call before you dig.

CAUTION!!
EXISTING UNDERGROUND UTILITIES IN THE AREA CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE HORIZONTAL AND VERTICAL LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY REPAIRS TO EXISTING UTILITIES DUE TO DAMAGE INCURRED DURING CONSTRUCTION. CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES ON THE PLANS.

BENCHMARK LIST

DATUM IS NAVD '88, USING GEOID 18, BASED ON GPS OBSERVATIONS.

BM #300: MAG NAIL WITH WASHER SET STAMPED "300"
- ELEV.=1516.73'

BM #403: MAG NAIL WITH WASHER SET IN CURB
- ELEV.=1546.85'

BM #404: MAG NAIL WITH WASHER SET IN CURB
- ELEV.=1538.40'

BM #51000:
- ELEV.=1492.78'

No.	REVISIONS	DATE	BY

Kimley»Horn
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10101 REUNION PLACE, SUITE 400, SAN ANTONIO, TX 78216
PHONE: 210-541-9166 FAX: 210-541-8699
WWW.KIMLEY-HORN.COM TBPE FIRM NO. 928

STATE OF TEXAS
MICHAEL A. SCHOLZE
131737
LICENSED PROFESSIONAL ENGINEER
7/28/2025

KHA PROJECT	068686339		
DATE	7/28/2025		
SCALE	AS SHOWN	DESIGNED BY	JPV
		DRAWN BY	JPV
		CHECKED BY	MAS

PHASE 3H
STORM DRAIN PLAN & PROFILE
SD LINE B

Esperanza
BOERNE ★ TEXAS

KENDALL COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT NO. 2B

SHEET NUMBER
23

Plotted By: Vinod Joshi July 28, 2025 11:21:09am K:\proj_civil\068686339-esperanza3b\CAD\plotsheets\C-STRM-3H.dwg
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STORM DRAIN CALCULATIONS - 5 YEAR

PIPE				UPSTREAM INLET						SYSTEM			FULL FLOW CAP	TOTAL PIPE FLOW	V	S	ELEVATIONS									
																	INVERT		HGL		CROWN		EGL		GROUND	
NAME	LENGTH	SIZE	n	NAME	BASIN	A	C	Tc	Q	Tc	I	Q					DS	US	DS	US	DS	US	DS	US	DS	US
	(ft)					(ac)		(min)	(cfs)	(min)	(in/hr)	(cfs)	(cfs)	(cfs)	(fps)	(%)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
SD LINE A																										
A2 TO A1	444	48 in	0.013	-	-	-	-	-	-	12.3	5.84	51.86	124.40	51.86	9.45	0.75	1459.00	1462.33	1462.40	1464.50	1463.00	1466.33	1462.72	1465.37	1465.00	1477.00
A3 TO A2	20	48 in	0.013	-	-	-	-	-	-	12.2	5.85	51.92	124.39	51.92	9.45	0.75	1469.00	1469.15	1470.95	1471.31	1473.00	1473.15	1472.08	1472.18	1477.00	1484.00
A4 TO A3	133	48 in	0.013	A4	6A	6.58	0.67	11.9	26.25	12.0	5.89	52.34	124.37	52.34	9.47	0.75	1476.50	1477.50	1478.33	1479.67	1480.50	1481.50	1479.69	1480.55	1484.00	1490.30
A5 TO A4	41	36 in	0.013	A5	6B	6.58	0.67	11.9	26.25	11.9	5.91	26.25	57.76	26.25	7.98	0.75	1482.10	1482.40	1483.56	1484.06	1485.10	1485.40	1484.48	1484.73	1490.30	1490.30

STORM DRAIN CALCULATIONS - 100 YEAR

PIPE				UPSTREAM INLET						SYSTEM			FULL FLOW CAP	TOTAL PIPE FLOW	V	S	ELEVATIONS									
																	INVERT		HGL		CROWN		EGL		GROUND	
NAME	LENGTH	SIZE	n	NAME	BASIN	A	C	Tc	Q	Tc	I	Q					DS	US	DS	US	DS	US	DS	US	DS	US
	(ft)					(ac)		(min)	(cfs)	(min)	(in/hr)	(cfs)	(cfs)	(cfs)	(fps)	(%)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
SD LINE A																										
A2 TO A1	444	48 in	0.013	-	-	-	-	-	-	12.2	10.40	115.75	124.40	115.75	9.21	0.75	1459.00	1462.33	1464.00	1466.89	1463.00	1466.33	1465.32	1468.21	1465.00	1477.00
A3 TO A2	20	48 in	0.013	-	-	-	-	-	-	12.2	10.41	115.88	124.39	115.88	11.25	0.75	1469.00	1469.15	1472.13	1472.40	1473.00	1473.15	1474.01	1474.15	1477.00	1484.00
A4 TO A3	133	48 in	0.013	A4	6A	6.58	0.84	11.9	58.51	12.0	10.48	116.69	124.37	116.69	11.25	0.75	1476.50	1477.50	1479.58	1480.76	1480.50	1481.50	1481.54	1482.52	1484.00	1490.30
A5 TO A4	41	36 in	0.013	A5	6B	6.58	0.84	11.9	58.51	11.9	10.51	58.51	57.76	58.51	9.31	0.75	1482.10	1482.40	1484.59	1484.90	1485.10	1485.40	1485.94	1486.25	1490.30	1490.30

Plotted By: Vinet, Josh July 28, 2025 11:21:13am K:\spnv_civil\06868633\9-esperanza3h\CAD\storsheet\C-STRM_3H.dwg
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No.	REVISIONS	DATE	BY

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WWW.KIMLEY-HORN.COM TBPE FIRM NO. 928

STATE OF TEXAS
MICHAEL A. SCHOLZE
131737
LICENSED PROFESSIONAL ENGINEER
7/28/2025

KHA PROJECT 068686339
DATE 7/28/2025
SCALE AS SHOWN
DESIGNED BY JPV
DRAWN BY JPV
CHECKED BY MAS

PHASE 3H
STORM DRAIN CALCULATIONS

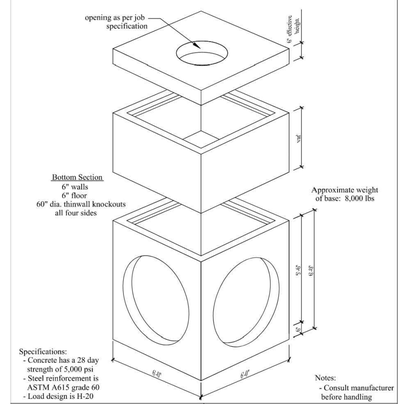
Esperanza
BORNE★TEXAS

KENDALL COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT NO. 2B

SHEET NUMBER
24

NOTE: USE THIS DETAIL OR APPROVED EQUAL

5' x 5' x var Junction Box



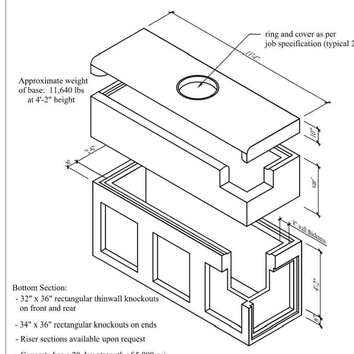
Specifications:
- Concrete has a 28 day strength of 5,000 psi
- Steel reinforcement is ASTM A615 grade 60
- Load design is H-20

Notes:
- Consult manufacturer before handling

CAPITAL PRECAST, INC.	FOR	5' x 5' x var Junction Box	
6995 SOUTH OLD BASTROP HWY SAN MARCOS, TEXAS 78666 PH. (830) 606-6200	JOB		
	DRAWN: RW	DATE: 12/1/2015	Rev. No.
	TILT	catalog junction boxes 5x5X	SHEET 1 OF 1

NOTE: USE THIS DETAIL OR APPROVED EQUAL

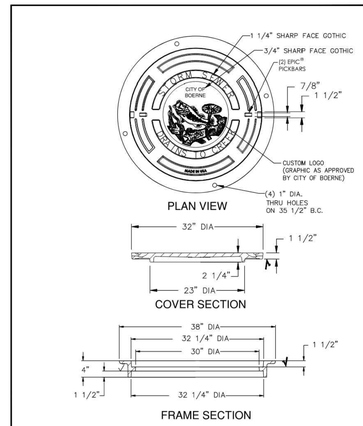
City of San Antonio
10' Curb Inlet with Variable Invert



Bottom Section:
- 32" x 36" rectangular thinwall knockouts on front and rear
- 34" x 36" rectangular knockouts on ends
- Riser sections available upon request
- Concrete has a 28 day strength of 5,000 psi
- Steel reinforcement is ASTM A615 grade 60
- Load design is H-20

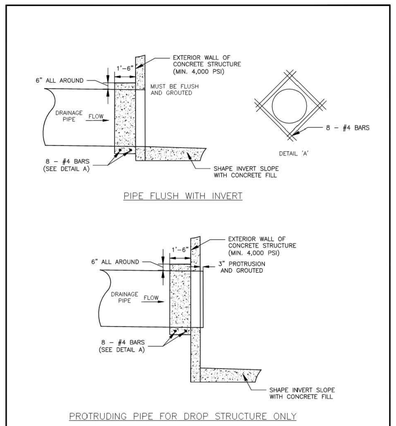
Notes:
- Consult manufacturer before handling

CAPITAL PRECAST, INC.	FOR	10' Curb Inlet with Variable Invert - San Antonio	
6995 SOUTH OLD BASTROP HWY SAN MARCOS, TEXAS 78666 PH. (830) 606-6200	JOB		
	DRAWN: RW	DATE: 12/1/2015	Rev. No.
	TILT	catalog curbinlets 10' curb SA variable	SHEET 1 OF 1



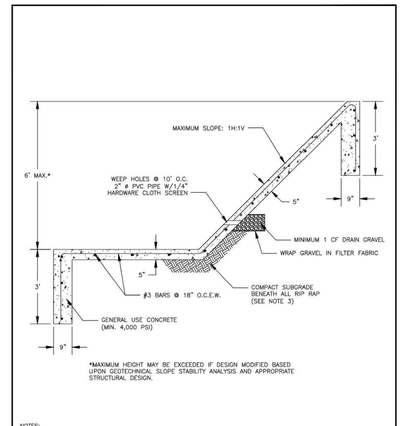
NOTES:
1. ALL FRAME AND COVERS MUST BE HEAVY DUTY VEHICLE LOAD RATING.
2. USE OF FRAME AND COVERS WITH CITY OF BOERNE NAME AND LOGO ONLY FOR PUBLIC INFRASTRUCTURE OWNED AND MAINTAINED BY THE CITY OF BOERNE.
3. FRAME AND COVER AS MANUFACTURED BY EAST JORDAN IRON WORKS OR APPROVED EQUAL.

CITY OF BOERNE		
STANDARD STORM MANHOLE FRAME AND COVER		
SCALE: N.T.S.	DRAWING No.: 02423-1.2	DATE: MAY 2024



NOTES:
1. CONTRACTOR SHALL INSTALL CONCRETE COLLARS ON ALL DRAINAGE PIPE CONNECTIONS TO PRECAST CONCRETE STRUCTURES.

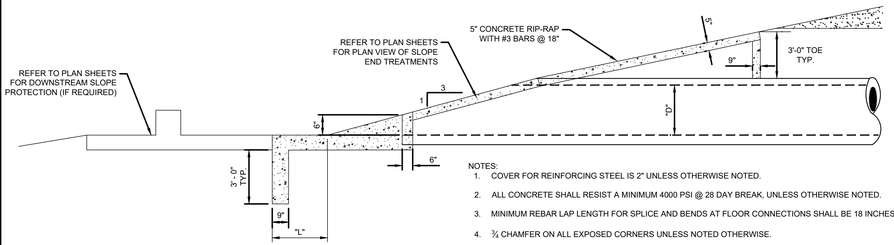
CITY OF BOERNE		
CONCRETE COLLAR DETAIL		
SCALE: N.T.S.	DRAWING No.: 02423-1.3	DATE: MAY 2024



*MAXIMUM HEIGHT MAY BE EXCEEDED IF DESIGN MODIFIED BASED UPON GEOTECHNICAL SLOPE STABILITY ANALYSIS AND APPROPRIATE STRUCTURAL DESIGN.

NOTES:
1. PROVIDE EXPANSION JOINTS AT A MINIMUM 40' SPACING AND CONTRACTION JOINTS MINIMUM 10' SPACING.
2. JOINT PLAN TO BE PROVIDED BY ENGINEER FOR REVIEW AND APPROVAL BY THE CITY PRIOR TO INSTALLATION.
3. COMPACT SUBGRADE TO 95% OF THE OPTIMUM DENSITY PER ASTM D1557 (MODIFIED PROCTOR) AND SPECIFICATION 02221.

CITY OF BOERNE		
CONCRETE RIP-RAP TYPICAL SECTION		
SCALE: N.T.S.	DRAWING No.: 02423-1.1	DATE: MAY 2024



NOTES:
1. COVER FOR REINFORCING STEEL IS 2" UNLESS OTHERWISE NOTED.
2. ALL CONCRETE SHALL RESIST A MINIMUM 4000 PSI @ 28 DAY BREAK, UNLESS OTHERWISE NOTED.
3. MINIMUM REBAR LAP LENGTH FOR SPLICE AND BENDS AT FLOOR CONNECTIONS SHALL BE 18 INCHES.
4. ¾ CHAMFER ON ALL EXPOSED CORNERS UNLESS NOTED OTHERWISE.

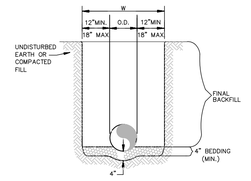
GENERAL SLOPED END TREATMENT DETAIL

N.T.S.

DIMENSIONS FOR CIRCULAR PIPE CULVERTS		
"D" INSIDE DIAMETER OF PIPE	"L"	"W" WIDTH OF HEADWALL
18"	2'-0"	4'-6"
21"	2'-6"	5'-3"
24"	3'-0"	6'-0"
30"	4'-0"	7'-6"
36"	5'-0"	9'-0"
42"	6'-0"	10'-6"
48"	7'-0"	12'-0"
54"	8'-0"	13'-6"
60"	9'-0"	15'-0"

GENERAL NOTES

1. BEDDING SHALL BE CLASS I-A WORKED BY HAND. IF GROUNDWATER IS ANTICIPATED, THEN BEDDING SHALL BE CLASS I-B COMPACTED TO 85% STANDARD PROCTOR.
2. HAUNCHING SHALL BE WORKED AROUND THE PIPE BY HAND TO ELIMINATE VOIDS AND SHALL BE CLASS I-A OR CLASS I-B OR CLASS II COMPACTED TO 85% PROCTOR.
3. INITIAL BACKFILL SHALL BE CLASS I-A WORKED BY HAND, OR CLASS I-B OR CLASS II COMPACTED TO 85% STANDARD PROCTOR.
4. INITIAL BACKFILL NOT UNDER PAVED AREAS CAN BE CLASS III COMPACTED TO 90% STANDARD PROCTOR.
5. FINAL BACKFILL SHALL BE CLASS I, II, OR III COMPACTED AS NOTED IN NOTES 3. AND 4.
6. FINAL BACKFILL NOT UNDER PAVED AREAS CAN BE CLASS IV-A COMPACTED TO 95% STANDARD PROCTOR.
7. ALL MATERIALS ARE CLASSIFIED IN ACCORDANCE WITH ASTM D 2321-LATEST EDITION.
8. ALL MATERIALS SHALL BE INSTALLED IN MAXIMUM 8" LOOSE LIFTS IN ACCORDANCE WITH ASTM D 698. CLASS III AND IV-A MATERIALS SHALL BE COMPACTED NEAR OPTIMUM MOISTURE CONTENT.
9. FILL SALVAGED FROM EXCAVATION SHALL BE FREE OF DEBRIS, ORGANICS AND ROCKS LARGER THAN 3".
10. ALL TRENCH EXCAVATIONS SHALL BE SLOPED, SHORED, SHEETED, BRACED, OR OTHERWISE SUPPORTED IN COMPLIANCE WITH OSHA REGULATIONS AND LOCAL ORDINANCES. (SEE SPECIFICATIONS)



REINFORCED CONCRETE PIPE (RCP) AND SPIRAL RIB PIPE SMALLER THAN 60" DIA.

STORM SEWER TRENCH AND BEDDING

N.T.S.

WEATHERED CONCRETE RIP-RAP FINISH

No.	REVISIONS	DATE	BY

Kimley»Horn

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PHONE: 210-541-9166 FAX: 210-541-8699
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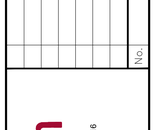

KHA PROJECT 068686339
DATE 7/28/2025
SCALE AS SHOWN
DESIGNED BY JPV
DRAWN BY JPV
CHECKED BY MAS

PHASE 3H
STORM DRAIN DETAILS (SHEET 1 OF 2)

Esperanza
BOERNE ★ TEXAS

KENDALL COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT NO. 2B

SHEET NUMBER
25

Plotted By: Vinot, Josh July 28, 2025 11:21:42am K:\sno_civil\068686339--esperanza3h\CAD\plansheets\C-DTLS-STRM_3H.dwg
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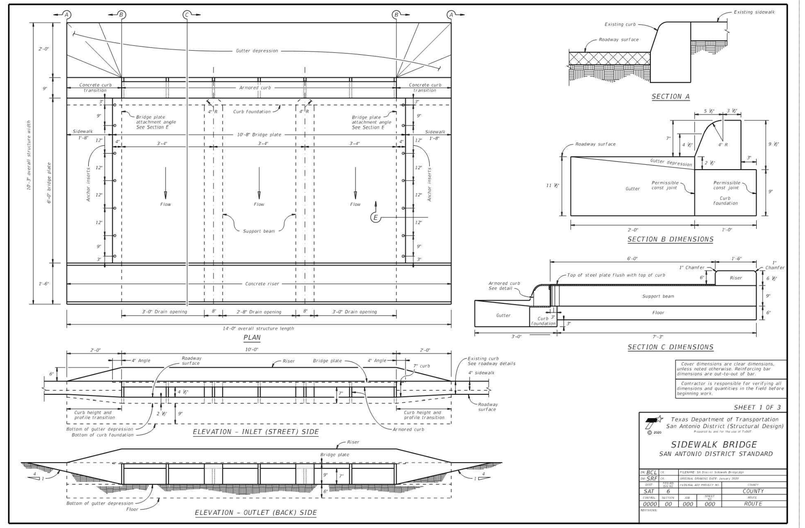


Cover dimensions are clear dimensions, unless noted otherwise. Reinforcing bar dimensions are out-to-out of bar.

Contractor is responsible for verifying all dimensions and quantities in the field before beginning work.

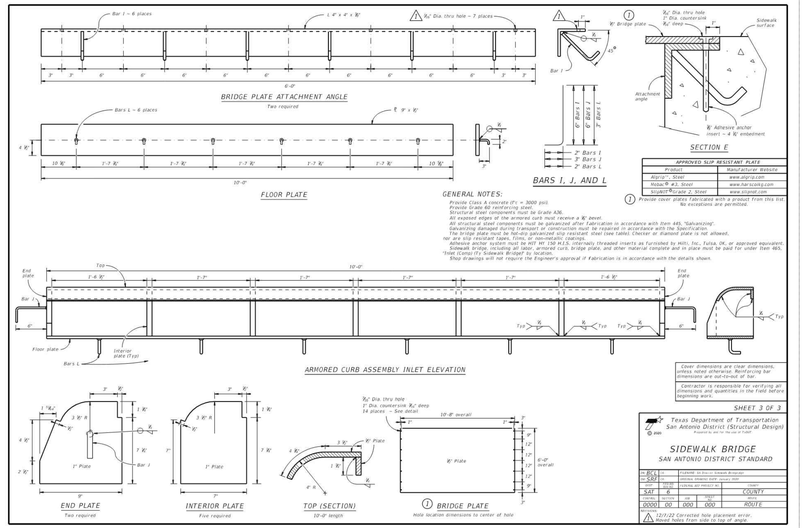
SHEET 1 OF 3

Texas Department of Transportation
San Antonio District (Structural Design)
Prepared by and for the use of TxDOT

SIDEWALK BRIDGE
SAN ANTONIO DISTRICT STANDARD

FED.RD.DIV.NO.	FISCAL YR	TOTAL SHEETS	SHEET NO.
6	SAT	6	
CONTROL	SECTION	JOB	HIGHWAY NO.
0000	00	000	
DISTRICT	COUNTY		
SAT			

REVISIONS	DATE	SHEET NO.
10/22	Corrected hole placement error, moved holes from side to top of angle	3



APPROVED SLIP RESISTANT PLATE	
Product	Manufacturer Website
Alpro™, Steel	www.alpro.com
Hilos™ #3, Steel	www.harcosteg.com
Slipfit™ Grade 2, Steel	www.slipnot.com

① Provide cover plates fabricated with a product from this list. No excessions are permitted.

Cover dimensions are clear dimensions, unless noted otherwise. Reinforcing bar dimensions are out-to-out of bar.

Contractor is responsible for verifying all dimensions and quantities in the field before beginning work.

SHEET 3 OF 3

Texas Department of Transportation
San Antonio District (Structural Design)
Prepared by and for the use of TxDOT

SIDEWALK BRIDGE
SAN ANTONIO DISTRICT STANDARD

FED.RD.DIV.NO.	FISCAL YR	TOTAL SHEETS	SHEET NO.
6	SAT	6	
CONTROL	SECTION	JOB	HIGHWAY NO.
0000	00	000	
DISTRICT	COUNTY		
SAT			

REVISIONS	DATE	SHEET NO.
10/22	Corrected hole placement error, moved holes from side to top of angle	3

NOTES:
1. ALL CONCRETE MUST BE MINIMUM 4,000 PSI PER CITY OF BOERNE SPECIFICATION.

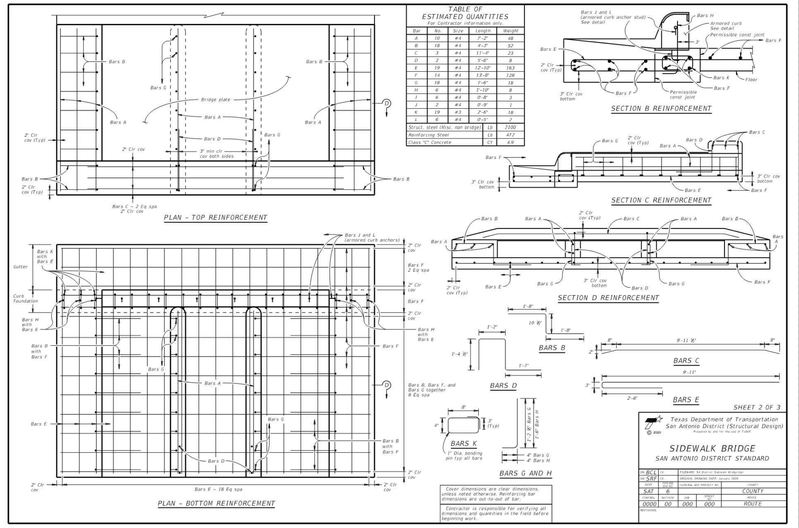


TABLE OF ESTIMATED QUANTITIES For contractor information only				
Bar	No.	Size	Length	Weight
A	10	#4	7'-2"	48
B	18	#4	4'-7"	57
C	3	#4	11'-4"	23
D	2	#4	3'-0"	4
E	19	#4	12'-10"	163
F	18	#4	13'-8"	128
G	18	#3	2'-8"	18
H	6	#4	1'-10"	8
I	6	#3	2'-8"	3
J	2	#4	9'-8"	1
K	18	#3	2'-8"	18
L	6	#4	9'-2"	7
Steel, total (Grs. non-epoxy)			LB.	2100
Reinforcing Steel			LB.	472
Class "C" Concrete			C.Y.	4.9

Cover dimensions are clear dimensions, unless noted otherwise. Reinforcing bar dimensions are out-to-out of bar.

Contractor is responsible for verifying all dimensions and quantities in the field before beginning work.

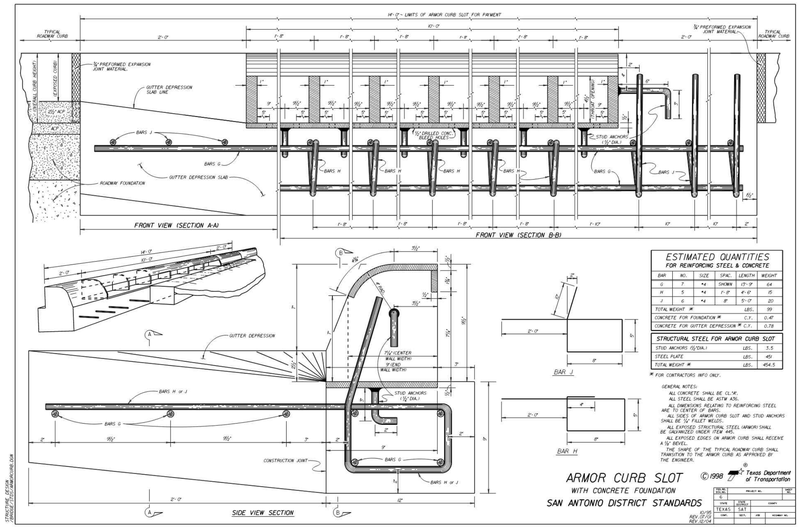
SHEET 2 OF 3

Texas Department of Transportation
San Antonio District (Structural Design)
Prepared by and for the use of TxDOT

SIDEWALK BRIDGE
SAN ANTONIO DISTRICT STANDARD

FED.RD.DIV.NO.	FISCAL YR	TOTAL SHEETS	SHEET NO.
6	SAT	6	
CONTROL	SECTION	JOB	HIGHWAY NO.
0000	00	000	
DISTRICT	COUNTY		
SAT			

REVISIONS	DATE	SHEET NO.



ESTIMATED QUANTITIES
FOR REINFORCING STEEL & CONCRETE

BAR	NO.	SIZE	SPAC.	LENGTH	WEIGHT
G	7	#4	SHOWN	13'-9"	64
H	5	#4	1'-0"	4'-6"	15
I	6	#4	8"	9'-0"	20
TOTAL WEIGHT #				LBS.	99
CONCRETE FOR FOUNDATION #				C.Y.	0.47
CONCRETE FOR GUTTER DEPRESSION #				C.Y.	0.78

STRUCTURAL STEEL FOR ARMOR CURB SLOT

STEEL ANCHORS (1/2"DIA.)	LBS.	5.5
STEEL PLATE	LBS.	451
TOTAL WEIGHT #	LBS.	456.5

FOR CONTRACTORS INFO ONLY.

GENERAL NOTES:
ALL CONCRETE SHALL BE CL"A".
ALL STEEL SHALL BE ASTM A36.
ALL DIMENSIONS RELATING TO REINFORCING STEEL ARE TO CENTER OF BARS.
ALL SIDES OF ARMOR CURB SLOT AND STUD ANCHORS SHALL BE ¼" FILLET WELDS.
ALL EXPOSED STRUCTURAL STEEL (ARMOR) SHALL BE GALVANIZED UNDER ITEM 445.
ALL EXPOSED EDGES ON ARMOR CURB SHALL RECEIVE A ½" BEVEL.
THE SHAPE OF THE TYPICAL ROADWAY CURB SHALL TRANSITION TO THE ARMOR CURB AS APPROVED BY THE ENGINEER.

ARMOR CURB SLOT
WITH CONCRETE FOUNDATION
SAN ANTONIO DISTRICT STANDARDS

© 1998 Texas Department of Transportation

FED.RD.DIV.NO.	PROJECT NO.	SHEET NO.
6		
CONTROL	SECTION	JOB
TEXAS	SAT	
DISTRICT	COUNTY	
SAT		

REVISED 10-20 REVISED 7-95

NOTES:
1. ALL CONCRETE MUST BE MINIMUM 4,000 PSI PER CITY OF BOERNE SPECIFICATION.

Kimley»Horn
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10101 REUNION PLACE, SUITE 400, SAN ANTONIO, TX 78216
PHONE: 210-541-9166 FAX: 210-541-8699
WWW.KIMLEY-HORN.COM TBPE FIRM NO. 928

STATE OF TEXAS
MICHAEL A. SCHOLZE
1311737
LICENSED PROFESSIONAL ENGINEER
7/28/2025

KHA PROJECT	066866339
DATE	7/26/2025
SCALE	AS SHOWN
DESIGNED BY	JPV
DRAWN BY	JPV
CHECKED BY	MAS

No.	REVISIONS	DATE	BY

PHASE 3H
STORM DRAIN DETAILS
(SHEET 2 OF 2)

Esperanza
BORNE★TEXAS

KENDALL COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT NO. 28

SHEET NUMBER
26

Plotted By: Vinod, Josh July 28, 2025 11:22:07am K:\srv_civil\068686339-esperanza3h\CAD\plotsheets\C-UTIL-3H.dwg
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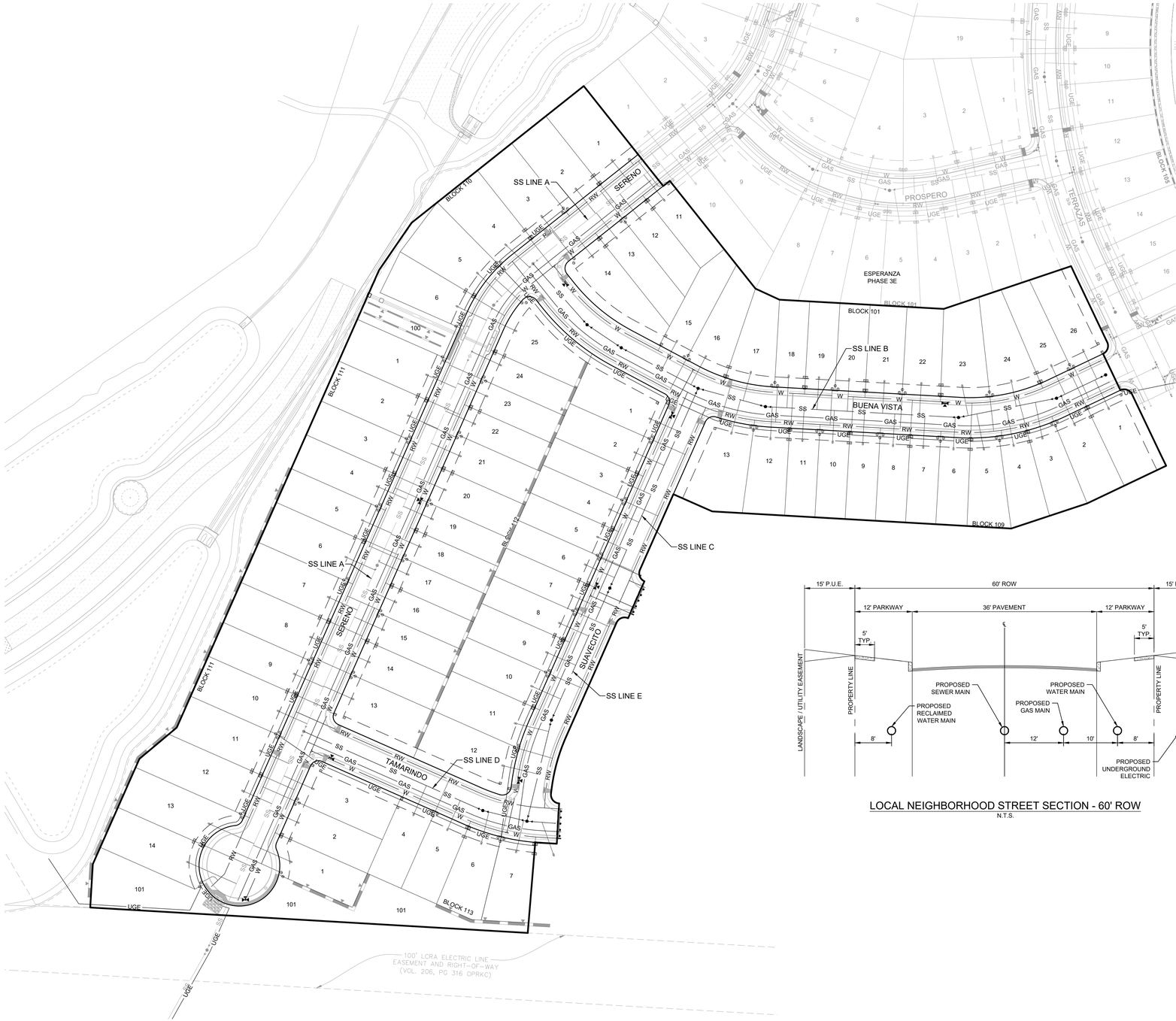

LOCAL NEIGHBORHOOD STREET SECTION - 60' ROW
N.T.S.

NORTH

GRAPHIC SCALE IN FEET
0 40 80 160

LEGEND

W	PROPOSED RESIDENTIAL POTABLE WATER MAIN
RW	PROPOSED RESIDENTIAL RECLAIMED WATER MAIN
SS	PROPOSED SANITARY SEWER MAIN
GAS	PROPOSED GAS MAIN
UGE	PROPOSED UNDERGROUND ELECTRIC LINE
W	EXISTING POTABLE WATER MAIN
RW	EXISTING RECLAIMED WATER MAIN
SS	EXISTING SANITARY SEWER MAIN
	PROPOSED FIRE HYDRANT
	PROPOSED WATER VALVE
	PROPOSED BLOW OFF VALVE
	PROPOSED SANITARY SEWER MANHOLE
	PROPOSED VENTED SANITARY SEWER MANHOLE
G	PROPOSED GAS SERVICE
E	PROPOSED ELECTRIC SERVICE

NOTES:
1. VALVES AT TEES SHALL BE AS CLOSE TO THE TEE AS POSSIBLE.

811 Know what's below. Call before you dig.

CAUTION!!
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KHA PROJECT 068686339			
DATE	7/28/2025		
SCALE	AS SHOWN	DESIGNED BY	JPV
		DRAWN BY	JPV
		CHECKED BY	MAS

PHASE 3H
OVERALL UTILITY PLAN

Esperanza
BORNE★TEXAS

KENDALL COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT NO. 2B

SHEET NUMBER
27

Plotted By: Vinod, Jash July 28, 2025 11:33:16am K:\proj_civil\068686339--esperanza3h\CAD\plansheets\C-SSPP_3H.dwg
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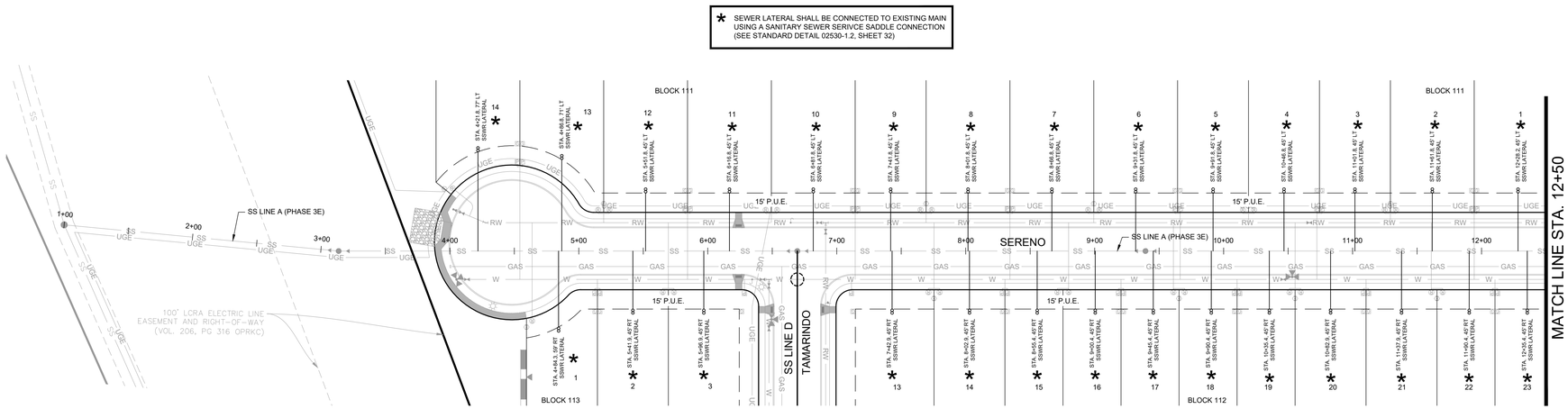

* SEWER LATERAL SHALL BE CONNECTED TO EXISTING MAIN USING A SANITARY SEWER SERIVCE SADDLE CONNECTION (SEE STANDARD DETAIL 02530-1.2, SHEET 32)

GRAPHIC SCALE IN FEET
0 25 50 100

LEGEND

- PROPOSED SANITARY SEWER MANHOLE
- PROPOSED VENTED SANITARY SEWER MANHOLE
- PROPOSED SANITARY SEWER LINE
- PROPOSED SANITARY SEWER LATERAL
- WATER AND SANITARY SEWER CROSSING (SEE NOTE 9 THIS SHEET)

NOTES:
1. CONTRACTOR TO FIELD VERIFY LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION. CONTACT ENGINEER IF FIELD CONDITIONS VARY.
2. ALL 8" SANITARY SEWER PIPE AND FITTINGS IN THIS PROJECT ARE P.V.C. SDR-35, ASTM D-3034, D-3212, F-477. AT WATERLINE CROSSINGS AND WHERE WATER AND SANITARY SEWER MAINS OR LATERALS ARE PARALLEL AND SEPARATION DISTANCE CAN NOT BE ACHIEVED AS PER 30 TAC §217.13, PRESSURE RATED PIPE AWWA C900,CLASS 150 (WHITE IN COLOR) IS USED INSTEAD.
3. CONTRACTOR TO INSTALL SANITARY SEWER CLEANOUT AT EVERY LATERAL LOCATION.
4. ALL 6" SANITARY SEWER LATERALS SHALL BE CONSTRUCTED WITH A SLOPE OF 2%.
5. SDR-26 PVC SHALL BE USED ON ALL LINES DEEPER THAN 14'.
6. SEE SANITARY SEWER SERVICE LATERAL DETAIL, SHEET 32.
7. CONTRACTORS TO ADJUST TOP OF MANHOLES TO MATCH FINISHED GROUND ELEVATIONS.
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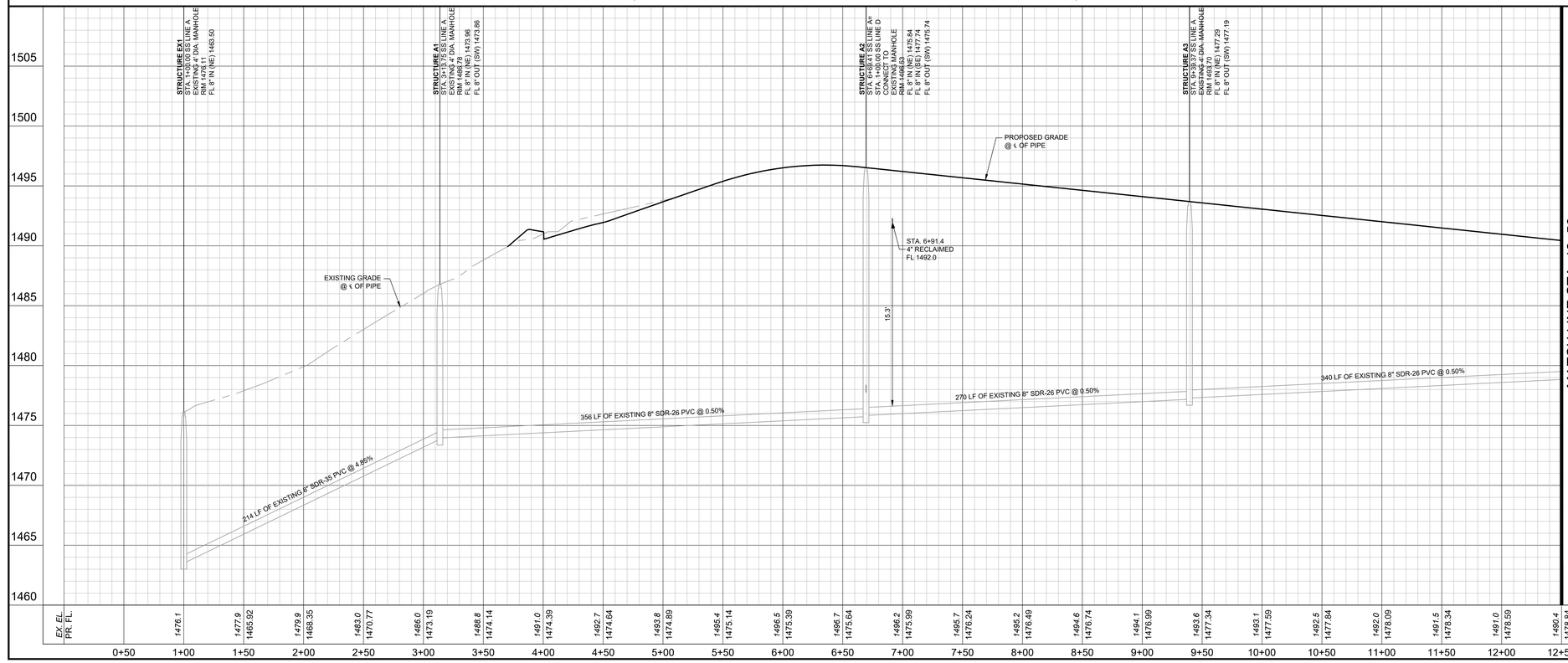
SS LINE A (NEW LATERALS TO BE INSTALLED ON EXISTING MAIN)



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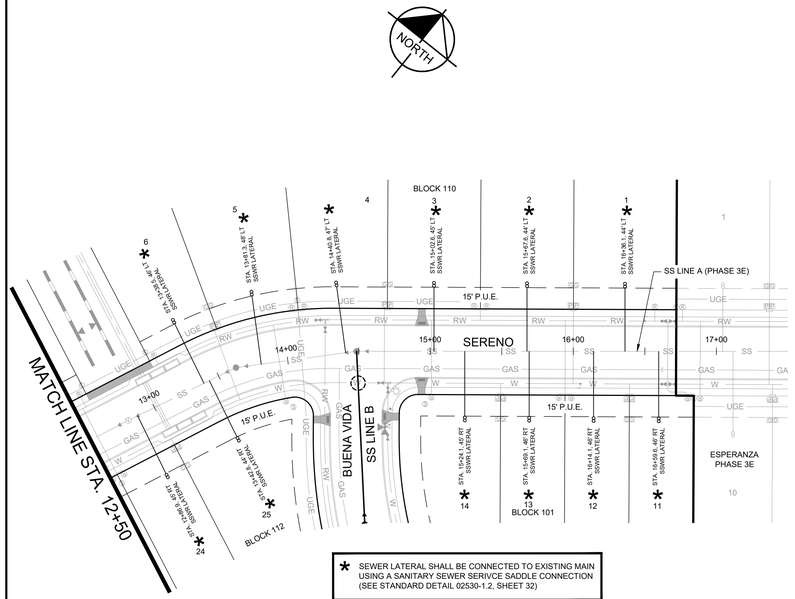
KHA PROJECT 068686339
DATE 7/28/2025
SCALE AS SHOWN
DESIGNED BY JPV
DRAWN BY JPV
CHECKED BY MAS

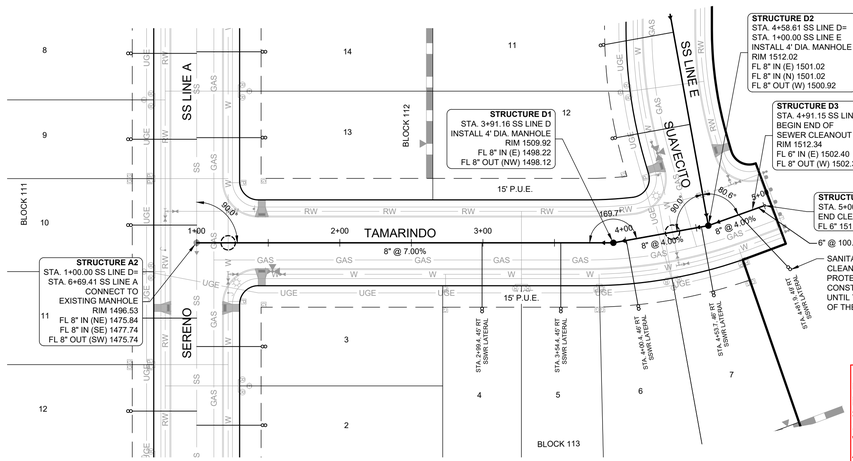
PHASE 3H
SANITARY SEWER PLAN & PROFILE SS LINE A

Esperanza BOERNE • TEXAS

KENDALL COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT NO. 2B

SHEET NUMBER
28





GRAPHIC SCALE IN FEET
0 25 50 100

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FYI: Please clarify note for pressure rated pipe required. The sewer profile calls for SDR 26 PVC Pipe at Waterline Crossings; Assuming this would be ASTM D2241 Pressure PVC Pipe, Class 160.

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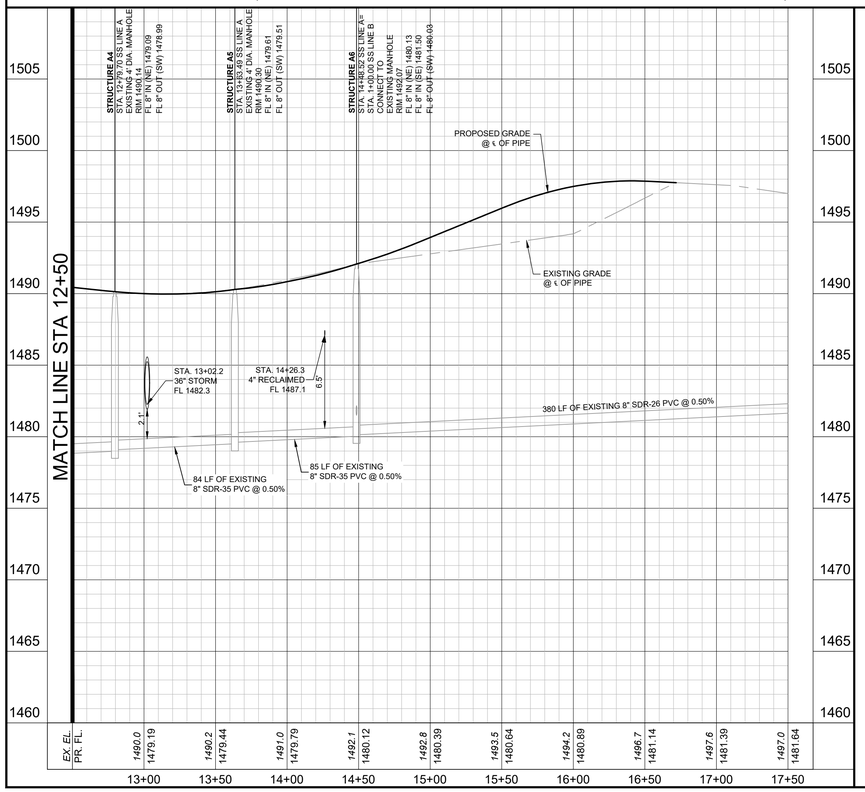
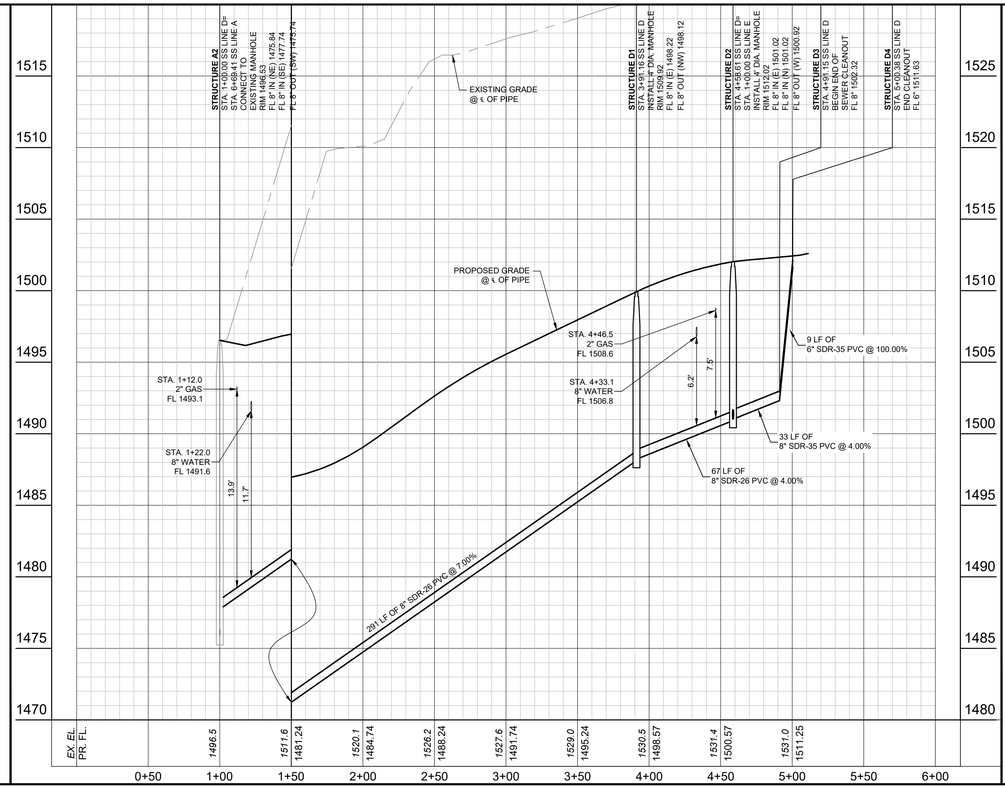


SS LINE D



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STATE OF TEXAS
MICHAEL A. SCHOLZE
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LICENSED PROFESSIONAL ENGINEER
7/28/2025

KHA PROJECT	068686339
DATE	7/28/2025
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PHASE 3H
SANITARY SEWER PLAN & PROFILE SS LINE A & D

Esperanza
BOERNE ★ TEXAS

KENDALL COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT NO. 2B

SHEET NUMBER
29

Plotted By: Vinci, Josh July 28, 2025 11:33:22am K:\san_ci\068686339-esperanza3h\CAD\standards\C-SSPP-3H.dwg
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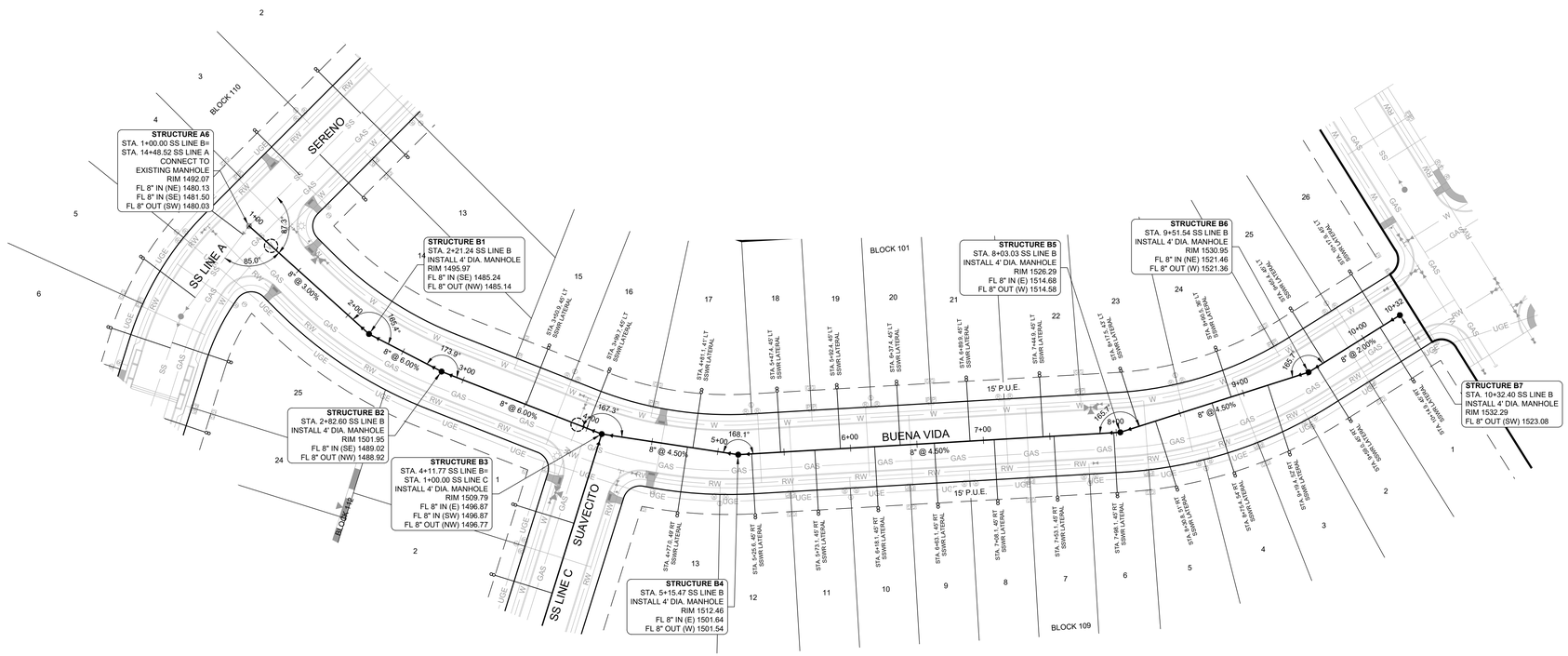

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     2 FOOT MINIMUM VERTICAL SEPARATION WITH SANITARY SEWER MAIN STABILIZED WITH CEMENT STABILIZED SAND OR WITH CASING PIPE.
   - DOMESTIC WATER MAIN OVER PRESSURE RATED SANITARY SEWER MAIN OR LATERAL
     6 INCH MINIMUM VERTICAL SEPARATION WITH PRESSURE RATED SANITARY SEWER MAIN STABILIZED WITH CEMENT STABILIZED SAND.
   - NON PRESSURE RATED SANITARY SEWER MAIN OR LATERAL OVER DOMESTIC WATER MAIN
     1 FOOT MINIMAL VERTICAL WITH SANITARY SEWER PIPE ENCASED IN CASING PIPE AND DOMESTIC WATER LINE CONSTRUCTED OF DI OR STEEL PIPE.
   - PRESSURE RATED SANITARY SEWER MAIN OR LATERAL OVER DOMESTIC WATER MAIN
     1 FOOT MINIMAL VERTICAL WITH PRESSURE RATED SANITARY SEWER PIPE AND DOMESTIC WATER LINE CONSTRUCTED OF DI OR STEEL PIPE.

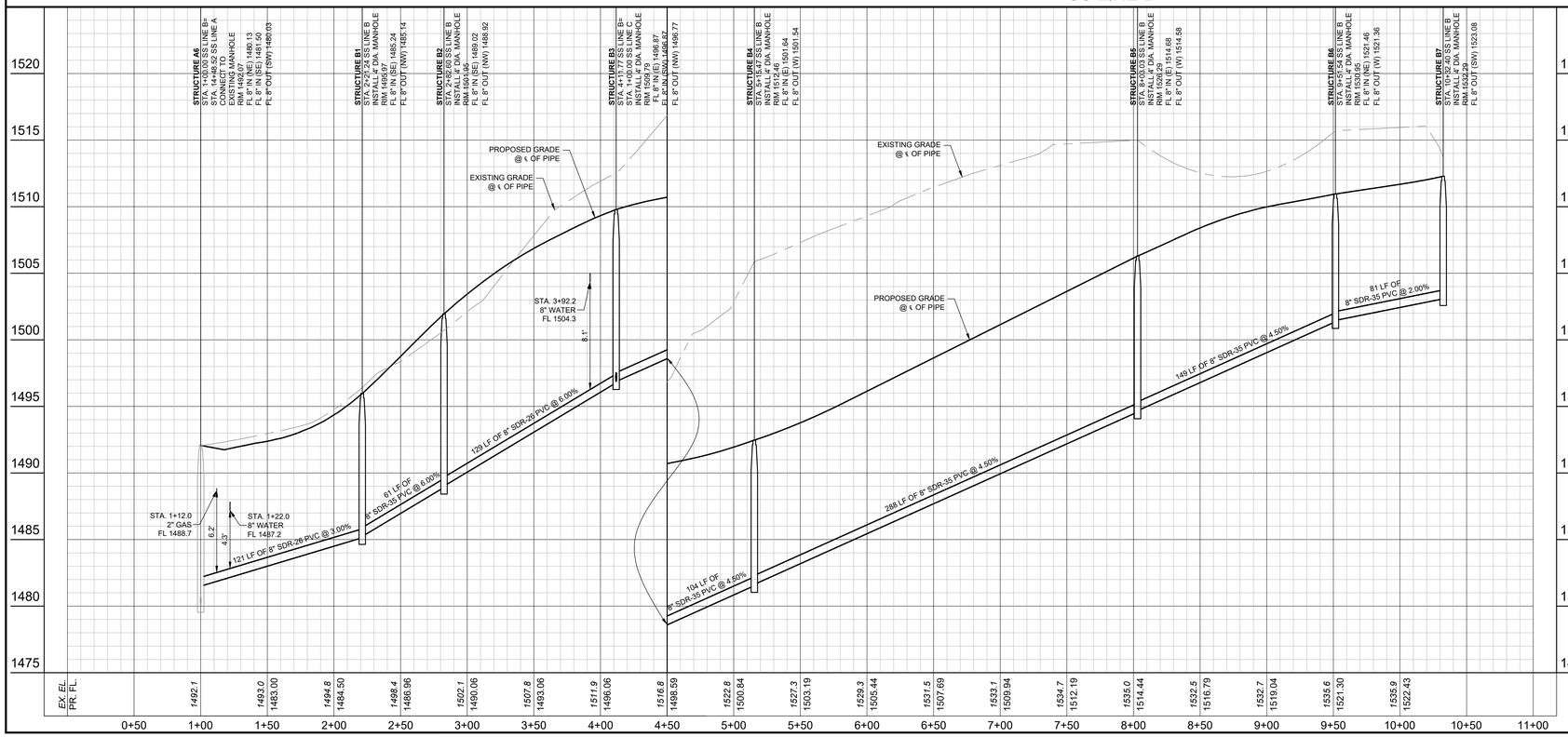
UTILITY TRENCH COMPACTION

ALL UTILITY TRENCH COMPACTION TESTS WITHIN THE PAVEMENT SECTION SHALL BE THE RESPONSIBILITY OF THE DEVELOPER'S GEO-TECHNICAL ENGINEER. FILL MATERIAL SHALL BE PLACED IN UNIFORM LAYERS NOT TO EXCEED TWELVE-INCHES (12") LOOSE. EACH LAYER OF MATERIAL SHALL BE COMPACTED TO A MINIMUM 95% DENSITY AND TESTED FOR DENSITY AND MOISTURE IN ACCORDANCE WITH TEST METHODE TEX-113-E, TEX-114-E, TEX-115-E. THE NUMBER AND LOCATION OF REQUIRED TESTS SHALL BE DETERMINED BY THE GEO-TECHNICAL ENGINEER AND APPROVED BY THE CITY OF BOERNE STREET INSPECTOR. AT A MINIMUM, TESTS SHALL BE TAKEN EVERY 100 LF FOR EACH LIFT. UPON COMPLETION OF TESTING THE GEO-TECHNICAL ENGINEER WILL PROVIDE THE CITY OF BOERNE STREET INSPECTOR WITH ALL TESTING DOCUMENTATION AND A CERTIFICATION STATING THAT THE PLACEMENT OF FILL MATERIAL HAS BEEN COMPLETED IN ACCORDANCE WITH THE PLANS.

TRENCH EXCAVATION SAFETY PROTECTION

CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLY WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

SS LINE B



PROFILE SCALE
1" = 50' HORIZONTAL
1" = 5' VERTICAL

811 Know what's below. Call before you dig.

CAUTION!!
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BENCHMARK LIST

DATUM IS NAVD '88, USING GEOID 18, BASED ON GPS OBSERVATIONS.

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BM #51000:
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No.	REVISIONS	DATE	BY

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PHONE: 210-541-9166 FAX: 210-541-9889
WWW.KIMLEY-HORN.COM TBPE FIRM NO. 928

STATE OF TEXAS
MICHAEL A. SCHOLZE
1317137
LICENSED PROFESSIONAL ENGINEER
7/28/2025

KHA PROJECT	068686339
DATE	7/28/2025
SCALE	AS SHOWN
DESIGNED BY	JPV
DRAWN BY	JPV
CHECKED BY	MAS

PHASE 3H
SANITARY SEWER PLAN & PROFILE SS LINE B

Esperanza BOERNE • TEXAS

KENDALL COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT NO. 2B

SHEET NUMBER
30

Plotted By: Jpv, Josh July 28, 2025 11:33:20am K:\san_ant\068686339-esperanza3h\CAD\sheets\C-SSPP-3H.dwg
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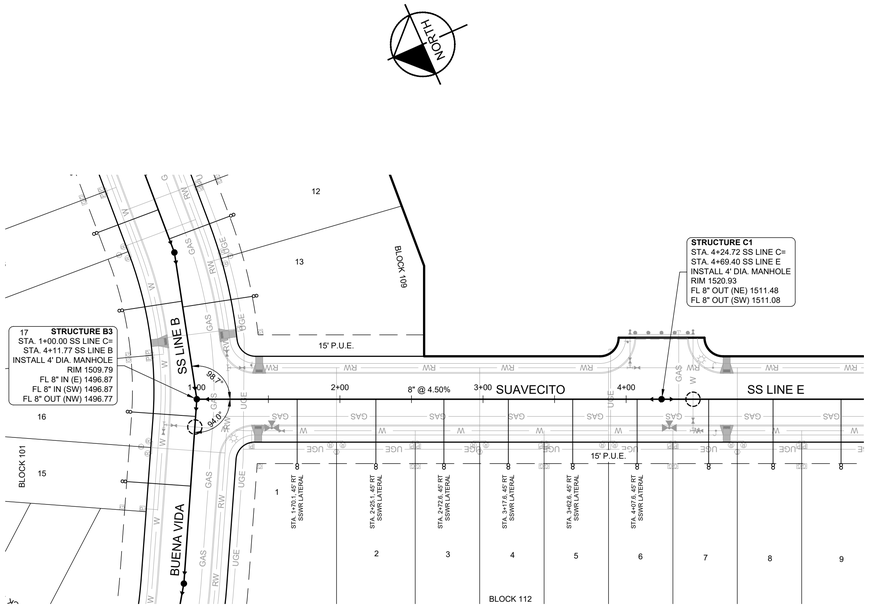

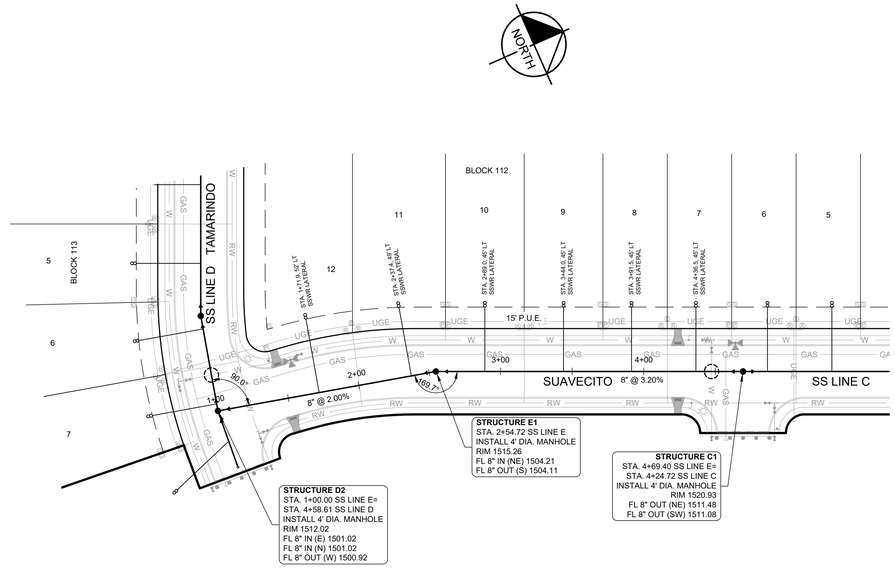

GRAPHIC SCALE IN FEET
0 25 50 100

LEGEND

- PROPOSED SANITARY SEWER MANHOLE
- PROPOSED VENTED SANITARY SEWER MANHOLE
- PROPOSED SANITARY SEWER LINE
- PROPOSED SANITARY SEWER LATERAL
- WATER AND SANITARY SEWER CROSSING (SEE NOTE 9 THIS SHEET)

NOTES:

1. CONTRACTOR TO FIELD VERIFY LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION. CONTACT ENGINEER IF FIELD CONDITIONS VARY.
2. ALL 8" SANITARY SEWER PIPE AND FITTINGS IN THIS PROJECT ARE P.V.C. SDR-35, ASTM D-3034, D-3212, F-477. AT WATERLINE CROSSINGS AND WHERE WATER AND SANITARY SEWER MAINS OR LATERALS ARE PARALLEL AND SEPARATION DISTANCE CAN NOT BE ACHIEVED AS PER 30 TAC §217.13, PRESSURE RATED PIPE AWWA C900,CLASS 150 (WHITE IN COLOR) IS USED INSTEAD.
3. CONTRACTOR TO INSTALL SANITARY SEWER CLEANOUT AT EVERY LATERAL LOCATION.
4. ALL 6" SANITARY SEWER LATERALS SHALL BE CONSTRUCTED WITH A SLOPE OF 2%.
5. SDR-26 PVC SHALL BE USED ON ALL LINES DEEPER THAN 14'.
6. SEE SANITARY SEWER SERVICE LATERAL DETAIL, SHEET 32.
7. CONTRACTORS TO ADJUST TOP OF MANHOLES TO MATCH FINISHED GROUND ELEVATIONS.
8. CONTRACTOR TO ADD SERVICES TO EXISTING SANITARY SEWER LINE USING APPROVED INSERTA-TEE FITTINGS AS MANUFACTURED BY FOWLER INDUSTRIES, OR EQUAL.
9. HORIZONTAL AND VERTICAL SEPARATION BETWEEN SANITARY SEWER MAINS OR LATERALS AND WATER MAINS SHALL BE 9 FOOT MINIMUM. IF THIS SEPARATION IS NOT POSSIBLE, CONTRACTOR SHALL COMPLY WITH MORE CONSERVATIVE REQUIREMENTS AS LISTED IN TAC 290.44(E)(4)(B) [DESIGN CRITERIA FOR DOMESTIC WASTEWATER SYSTEMS] AND/OR TAC 217.53(D) [PUBLIC DRINKING WATER]. FOR VERTICAL SEPARATION LESS THAN 9 FEET THE FOLLOWING APPLIES:
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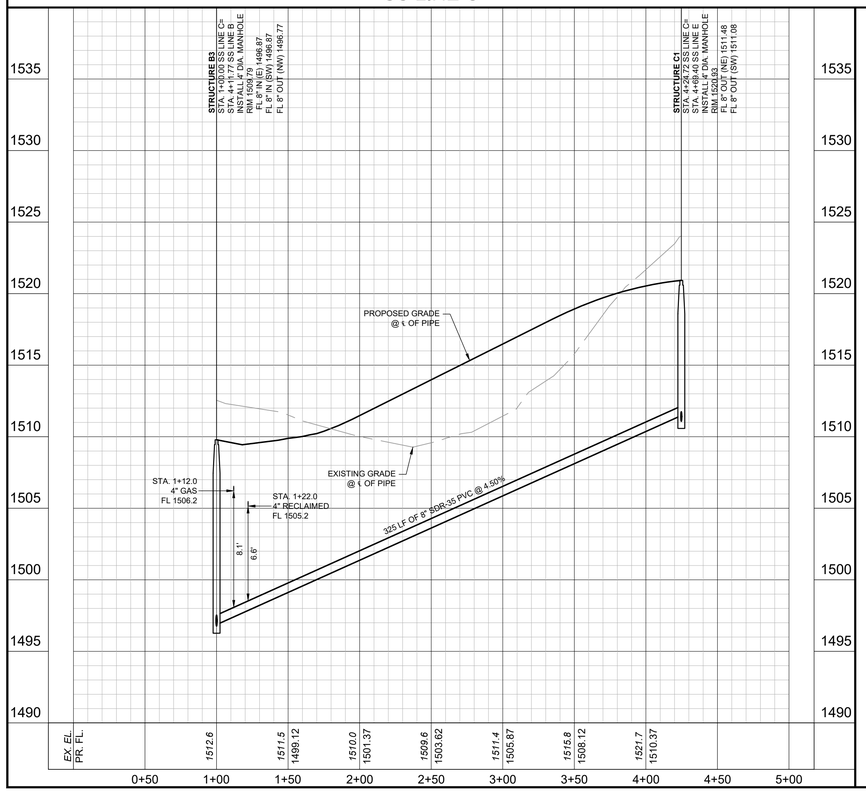
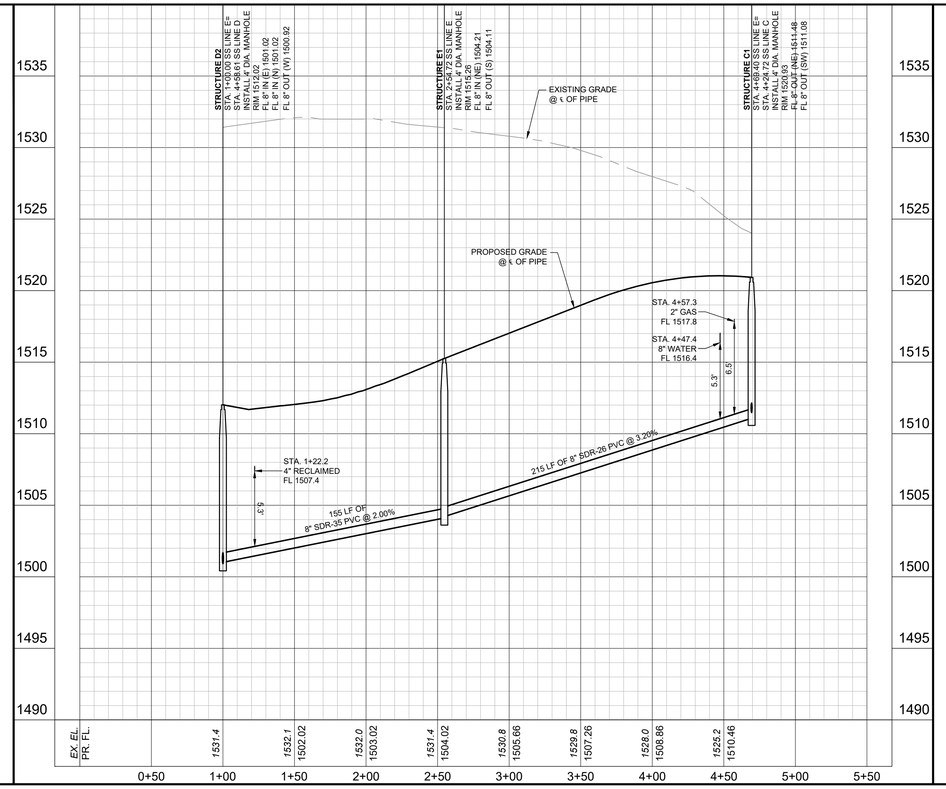
SS LINE C



SS LINE E



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STATE OF TEXAS
MICHAEL A. SCHOLZE
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LICENSED PROFESSIONAL ENGINEER
7/28/2025

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DRAWN BY	JPV
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PHASE 3H
SANITARY SEWER PLAN & PROFILE SS LINE C & E

Esperanza
BOERNE ★ TEXAS

KENDALL COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT NO. 2B

SHEET NUMBER
31

Plotted By: Jpv, Josh July 28, 2025 11:33:36am K:\san_ci\068686339-esperanza3h\CAD\sheets\C-SSPP-3H.dwg
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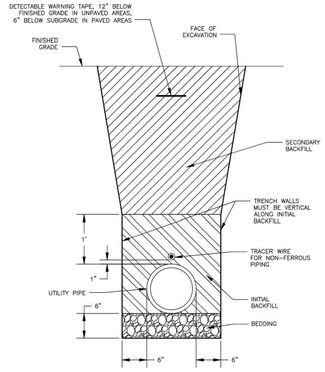
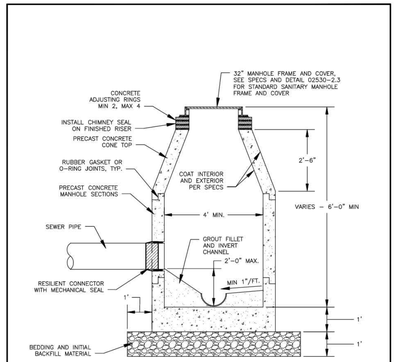


NOTES:
1. TYPICAL BEDDING PER APPLICABLE UTILITY BACKFILL STANDARD SPECIFICATIONS.
2. SECONDARY BACKFILL TO BE COMPACTED IN LIFTS PER ASTM D1557 (MODIFIED PROCTOR) AND SPECIFICATION 02221.

CITY OF BOERNE

UTILITY PIPE TRENCH

SCALE: N.T.S. | DRAWING No.: 02221–1.0 | DATE: MAY 2024

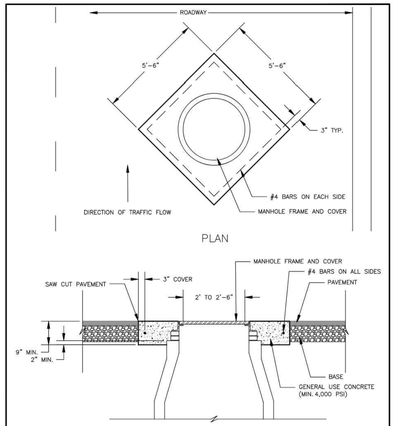


NOTES:
1. IF WATERTIGHT MANHOLE IS USED, COVER MUST BE VENTED PER THE TCEQ REQUIREMENTS.
2. SANITARY SEWER MANHOLE MUST PASS VACUUM TESTING PER SPECIFICATION 02530.
3. ALL BACKFILL SHALL BE MOISTURE CONDITIONED AND COMPACTED TO 95% COMPACTION PER ASTM D1557 (MODIFIED PROCTOR).

CITY OF BOERNE

STANDARD SANITARY SEWER MANHOLE

SCALE: N.T.S. | DRAWING No.: 02530–2.0 | DATE: MAY 2024

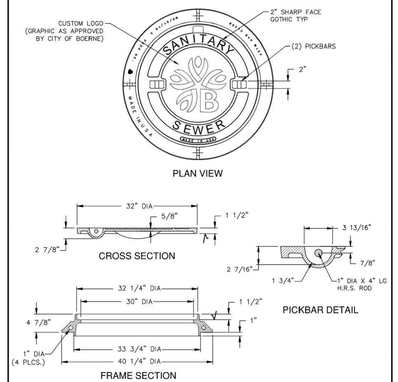


NOTES:
1. IN PAVED AREAS, SET TOP OF FRAME TO MATCH PAVEMENT GRADES AND FINISH CONCRETE FLUSH WITH TOP OF FRAME.
2. IN UNPAVED AREAS, SET TOP OF FRAME 1" TO 2" ABOVE FINISHED GRADE AND FINISH CONCRETE FLUSH WITH FINISHED GRADE.
3. CONSTRUCT CONCRETE RING ENCASEMENT ON ALL MANHOLES.
4. IF MANHOLE IS LOCATED OFF–SITE, ENSURE MANHOLE IS AT LEAST 6" EXPOSED ABOVE GRADE..

CITY OF BOERNE

MANHOLE RING ENCASEMENT

SCALE: N.T.S. | DRAWING No.: 02530–2.2 | DATE: MAY 2024

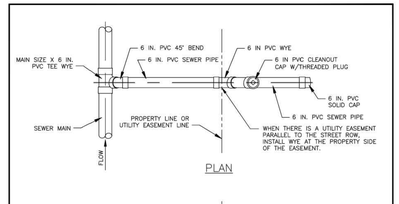


NOTES:
1. ALL FRAME AND COVERS MUST BE HEAVY DUTY VEHICLE LOAD RATING.
2. IF WATERTIGHT MANHOLE IS USED, COVER MUST BE VENTED PER THE TCEQ REQUIREMENTS.
3. USE OF FRAME AND COVERS WITH CITY OF BOERNE NAME AND LOGO ONLY FOR PUBLIC INFRASTRUCTURE OWNED AND MAINTAINED BY THE CITY OF BOERNE.
4. FRAME AND COVER AS MANUFACTURED BY EAST JORDAN IRON WORKS OR APPROVED EQUAL.

CITY OF BOERNE

STANDARD SANITARY MANHOLE FRAME AND COVER

SCALE: N.T.S. | DRAWING No.: 02530–2.3A | DATE: MAY 2024



NOTES:
1. NO ADDITIONAL BENDS ALLOWED BEYOND THE SINGLE 45–DEGREE BEND AFTER CONNECTION TO SEWER MAIN FOR SEWER SERVICE WITHIN ROW.

CITY OF BOERNE

STANDARD SANITARY SEWER SERVICE LATERAL

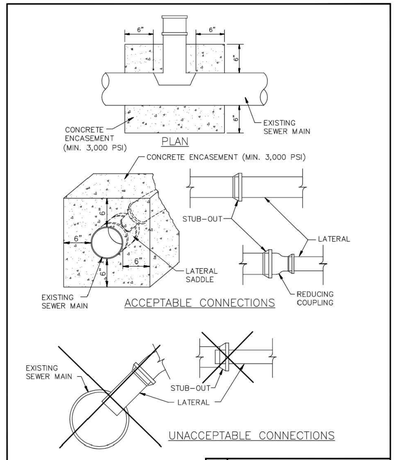
SCALE: N.T.S. | DRAWING No.: 02530–1.0 | DATE: MAY 2024

NOTES:
1. USE DEEP SANITARY SEWER SERVICE LATERAL WHEN THE MAIN DEPTH IS GREATER THAN 7' BELOW FINISHED GRADE.
2. INSTALL SERVICE LATERAL 2' MINIMUM BELOW CURB, OR 3' MINIMUM BELOW FINISHED GRADE WHEN NOT IN STREET. INSTALL SERVICE DEEPER WHEN LOT BEING SERVED SLOPES AWAY FROM SEWER MAIN. LATERAL DEPTH AT CURB OR PROPERTY LINE SHOULD NOT EXCEED 7'.
3. COMPLETE DEEP SANITARY SEWER SERVICE LATERAL AS PER THE STANDARD SANITARY SEWER SERVICE LATERAL DETAIL 02530–1.0.
4. NO ADDITIONAL BENDS ALLOWED BEYOND THE SINGLE 45–DEGREE BEND AFTER CONNECTION TO SEWER MAIN FOR SEWER SERVICE WITHIN ROW.

CITY OF BOERNE

DEEP SANITARY SEWER SERVICE LATERAL

SCALE: N.T.S. | DRAWING No.: 02530–1.1 | DATE: MAY 2024

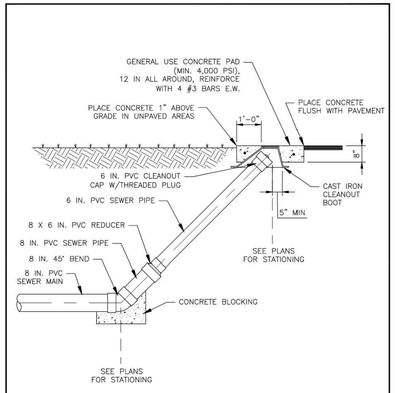


NOTE:
CONNECT THE SADDLE TO THE EXISTING MAIN PERMANENTLY USING CLAMPS AS RECOMMENDED BY THE MANUFACTURER.

CITY OF BOERNE

SANITARY SEWER SERVICE SADDLE CONNECTION

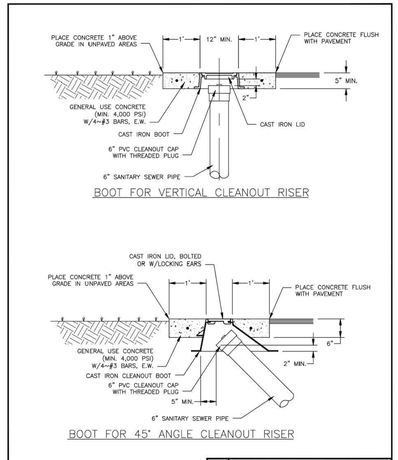
SCALE: N.T.S. | DRAWING No.: 02530–1.2 | DATE: MAY 2024



CITY OF BOERNE

END OF SEWER CLEANOUT

SCALE: N.T.S. | DRAWING No.: 02530–3.0 | DATE: MAY 2024



CITY OF BOERNE

CAST IRON CLEANOUT BOOT

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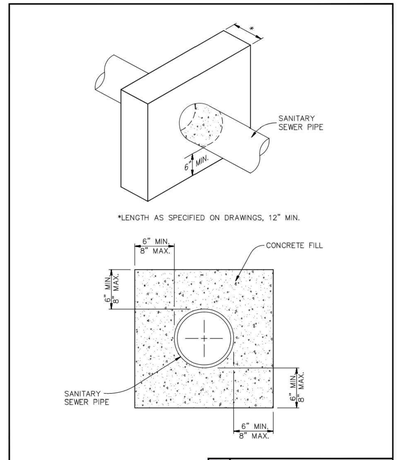
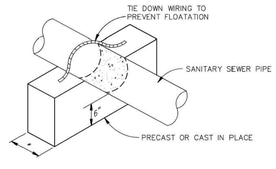


CITY OF BOERNE

SANITARY SEWER CONCRETE ENCASEMENT

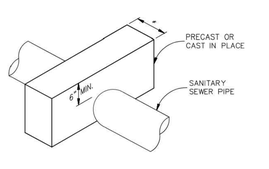
SCALE: N.T.S. | DRAWING No.: 02530–4.0 | DATE: MAY 2024



CITY OF BOERNE

SANITARY SEWER CONCRETE CRADLE

SCALE: N.T.S. | DRAWING No.: 02530–4.1 | DATE: MAY 2024



CITY OF BOERNE

SANITARY SEWER CONCRETE SADDLE

SCALE: N.T.S. | DRAWING No.: 02530–4.2 | DATE: MAY 2024

No.	REVISIONS	DATE	BY

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CHECKED BY MAS

PHASE 3H
SANITARY SEWER DETAILS

Esperanza
BOERNE★TEXAS

KENDALL COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT NO. 2B

SHEET NUMBER
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Plotted By:Vinet, Josh July 28, 2025 11:34:03am K:\san_civil\068686339–esperanza3h\C40\plansheets\C–DTLS–SSWR–3H.dwg
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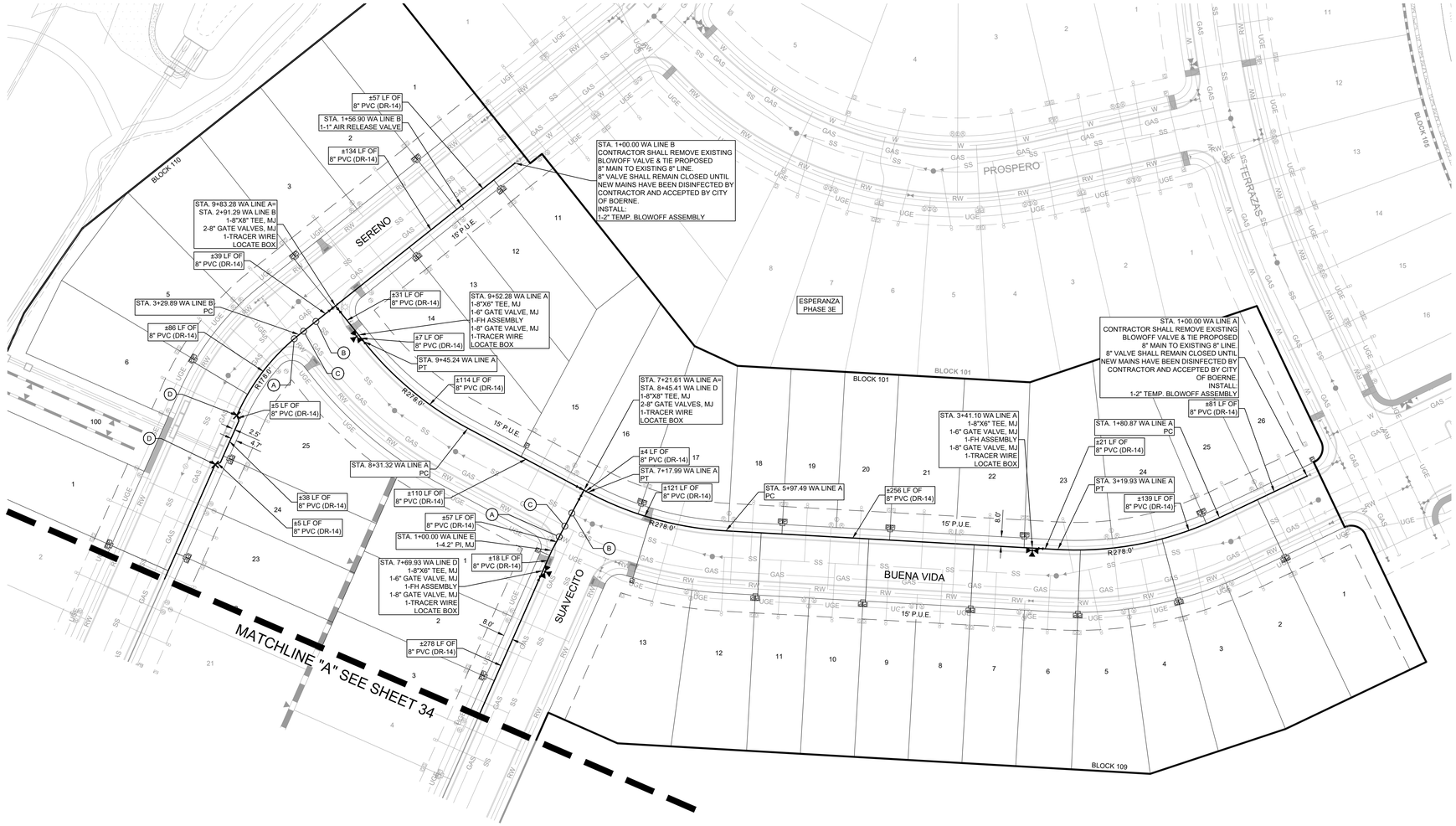
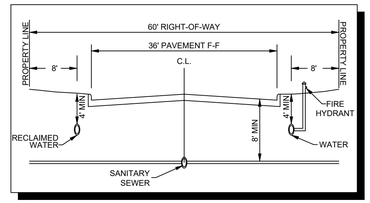


TYPICAL UTILITY LOCATION



NORTH

GRAPHIC SCALE IN FEET
0 25 50 100

LEGEND

- PROPOSED POTABLE WATER MAIN
- EXISTING POTABLE WATER MAIN
- PROPOSED WATER VALVE
- PROPOSED WATER SERVICE
- PROPOSED PRESSURE REDUCING VALVE (BY HOME BUILDER)
- PROPOSED FIRE HYDRANT
- PROPOSED BLOW OFF VALVE
- PROPOSED AIR RELEASE VALVE
- PROPOSED DUAL DOMESTIC WATER SERVICE
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- (C) WATER AND UTILITY CROSSING (REF. DETAIL, SHEET 38)
- (D) WATER AND CURB INLET HORIZONTAL BEND (REF. DETAIL, SHEET 38)
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No.	REVISIONS	DATE	BY

Kimley»Horn
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10101 REUNION PLACE, SUITE 400, SAN ANTONIO, TX 78216
PHONE: 210-541-9166 FAX: 210-541-8699
WWW.KIMLEY-HORN.COM TBPE FIRM NO. 928

STATE OF TEXAS
MICHAEL A. SCHOLZE
131737
LICENSED PROFESSIONAL ENGINEER
7/28/2025

KHA PROJECT	068686339		
DATE	7/28/2025		
SCALE	AS SHOWN	DESIGNED BY	JPV
		DRAWN BY	JPV
		CHECKED BY	MAS

PHASE 3H
WATER PLAN
(SHEET 1 OF 2)

Esperanza
BOERNE ★ TEXAS

KENDALL COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT NO. 2B

SHEET NUMBER
33

Plotted By:Vinet, Josh July 28, 2025 11:34:23am K:\san_civil\068686339--esperanza3h\CAD\plansheets\C-WATR-3H.dwg
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Plotted By: Vinod, Jash July 28, 2025 11:34:32am K:\San_Anto\068686339-esperanza3h\CAD\plansheet\C-WATR_3H.dwg
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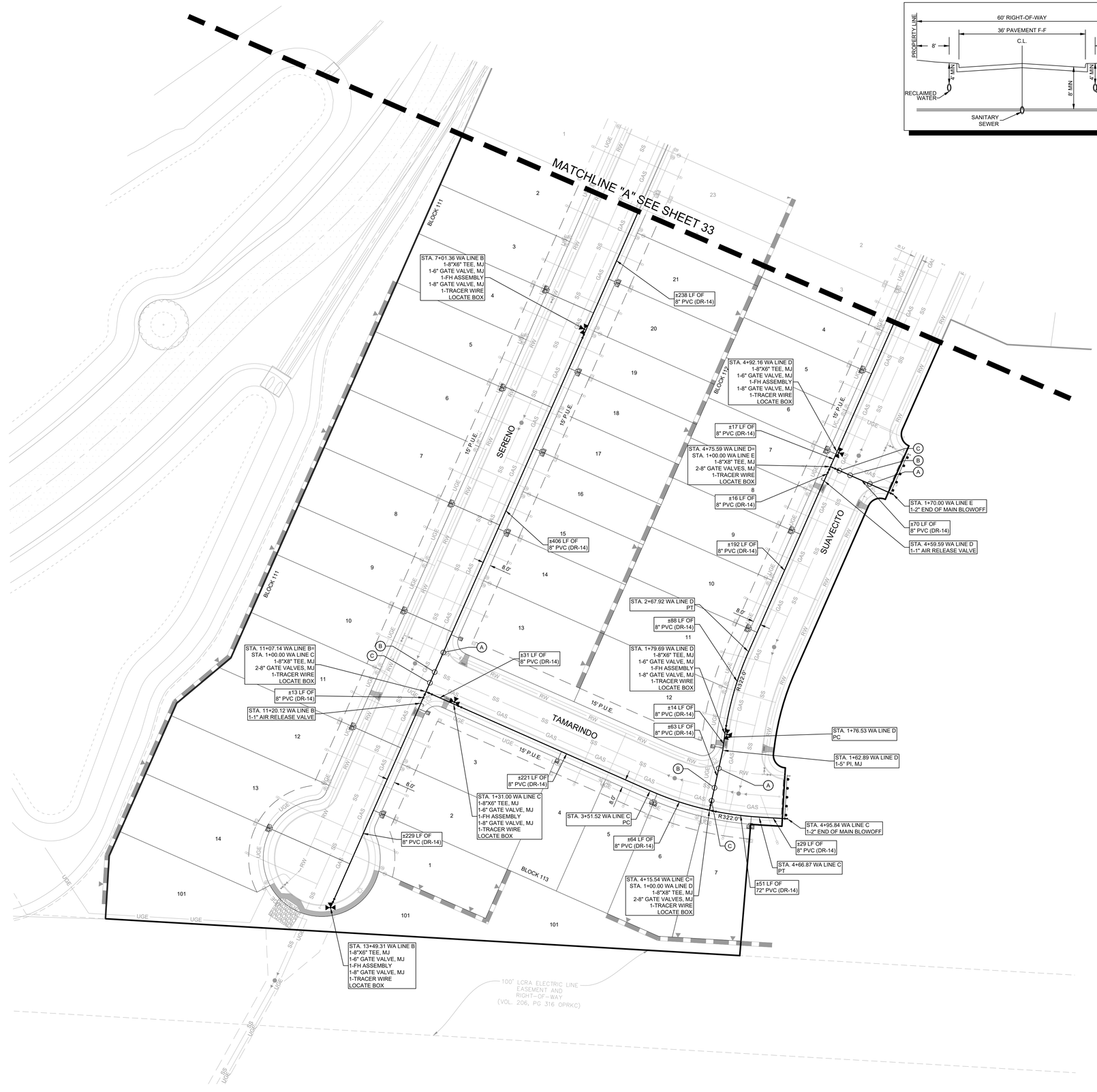

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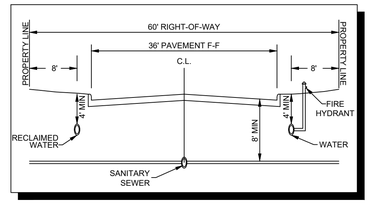

NORTH

GRAPHIC SCALE IN FEET
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No.	REVISIONS	DATE	BY

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STATE OF TEXAS
MICHAEL A. SCHOLZE
131737
LICENSED PROFESSIONAL ENGINEER
7/28/2025

KHA PROJECT	068686339
DATE	7/28/2025
SCALE	AS SHOWN
DESIGNED BY	JPV
DRAWN BY	JPV
CHECKED BY	MAS

PHASE 3H
WATER PLAN
(SHEET 2 OF 2)

Esperanza
BORNE ★ TEXAS

KENDALL COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT NO. 2B

SHEET NUMBER
34

Plotted By: Vinod, Josh July 28, 2025 11:36:03am K:\pro_civil\068686339-esperanza3A\CAD\plansheets\C-RECL-3H.dwg
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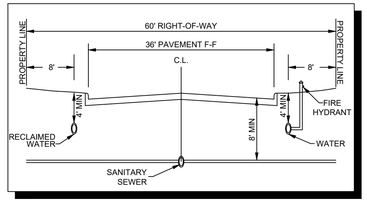

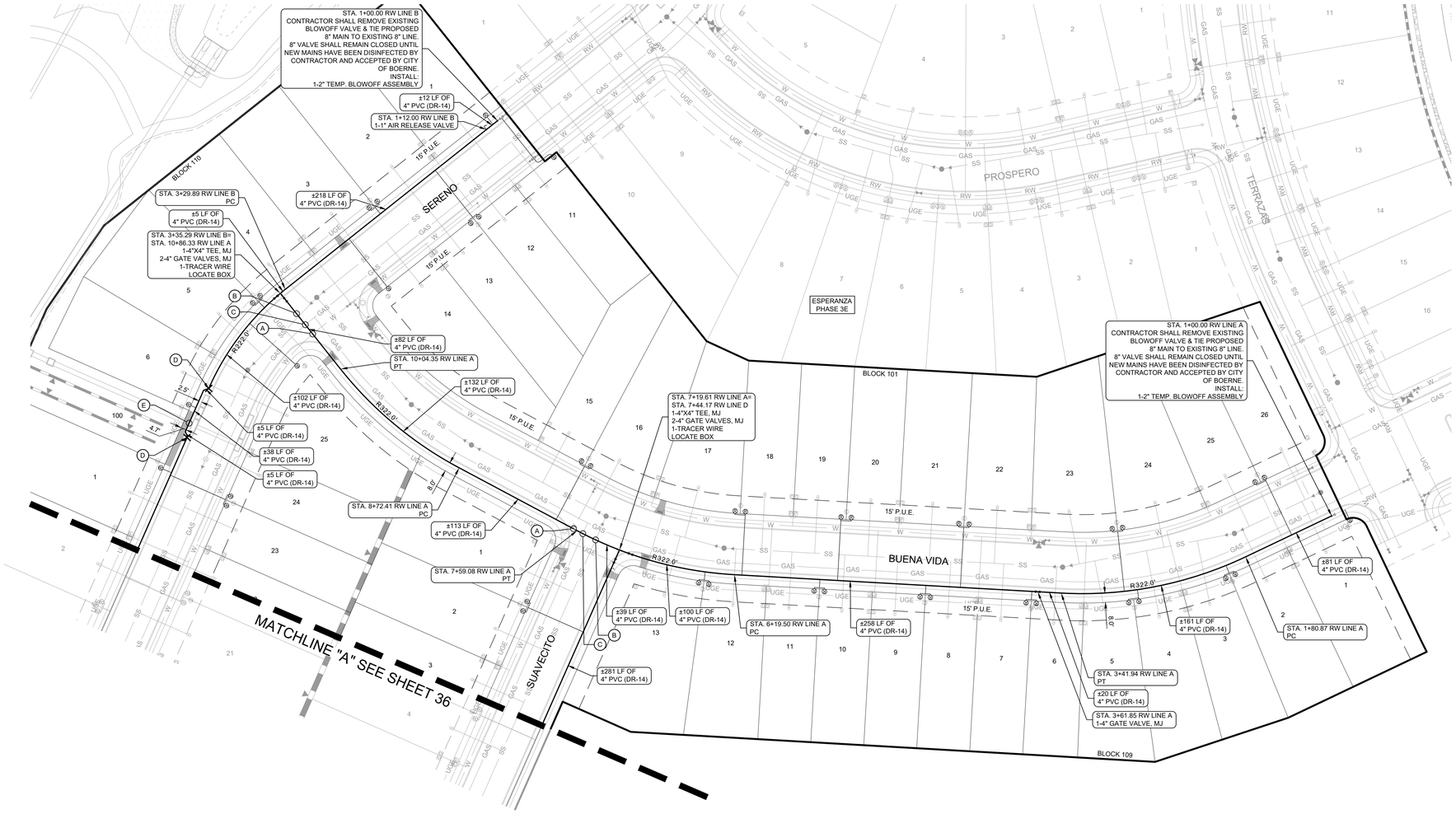

GRAPHIC SCALE IN FEET
0 25 50 100

LEGEND

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MICHAEL A. SCHOLZE
STATE OF TEXAS
1311737
LICENSED PROFESSIONAL ENGINEER
7/28/2025

KHA PROJECT	068686339
DATE	7/28/2025
SCALE	AS SHOWN
DESIGNED BY	JPV
DRAWN BY	JPV
CHECKED BY	MAS

PHASE 3H
RECLAIMED WATER PLAN (SHEET 1 OF 2)

Esperanza
BOERNE ★ TEXAS

KENDALL COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT NO. 2B

SHEET NUMBER
35

Plotted By: Vinod, Josh July 28, 2025 11:35:10am K:\pro_civil\068686339-esperanza3A\CAD\plansheets\C-RECL-3H.dwg
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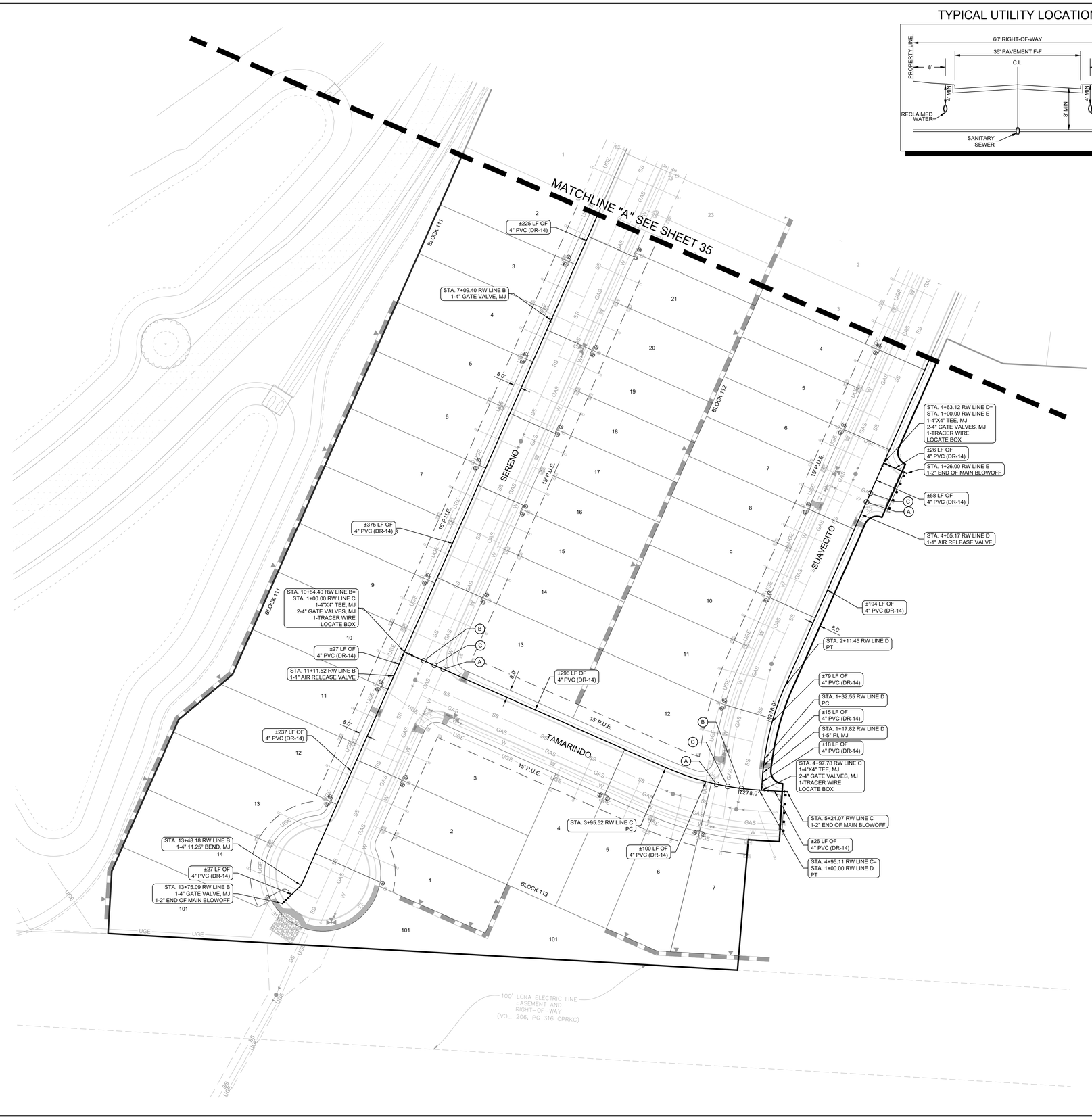

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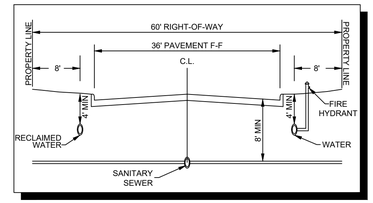

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8. SEE RESTRAINED LENGTH TABLES ON SHEET 38 FOR RESTRAINED LENGTH REQUIREMENTS AT BENDS AND VALVES/DEADENDS.
9. ALL DOMESTIC AND RECYCLE SERVICES AT SINGLE FAMILY LOT WILL BE 3/4". REF. SHEET 37 FOR DUAL SERVICE CONNECTION.
10. ALL ELECTRIC AND GAS LINES AND SERVICES SHOWN FOR COORDINATION PURPOSE ONLY. REFER TO SCHNEIDER PLANS FOR DESIGN INFORMATION.
11. ALL 12" WATER MAINS (DOMESTIC AND RECLAIMED) ARE MASTER DISTRICT FACILITIES. ALL METER/LATERAL SERVICES ARE DRAWN FOR REFERENCE ONLY. CONTRACTOR SHALL REF. SHEET 37 FOR UTILITY CONNECTIONS.

811 Know what's below. Call before you dig.

CAUTION!!
EXISTING UNDERGROUND UTILITIES IN THE AREA CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE HORIZONTAL AND VERTICAL LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY REPAIRS TO EXISTING UTILITIES DUE TO DAMAGE INCURRED DURING CONSTRUCTION. CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES ON THE PLANS.

BENCHMARK LIST

DATUM IS NAVD '88, USING GEOID 18, BASED ON GPS OBSERVATIONS.

BM #300: MAG NAIL WITH WASHER SET STAMPED "300"
- ELEV.=1516.73'

BM #403: MAG NAIL WITH WASHER SET IN CURB
- ELEV.=1546.85'

BM #404: MAG NAIL WITH WASHER SET IN CURB
- ELEV.=1538.40'

BM #51000:
- ELEV.=1492.78'

No.	REVISIONS	DATE	BY

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STATE OF TEXAS
MICHAEL A. SCHOLZE
131737
LICENSED PROFESSIONAL ENGINEER
7/28/2025

KHA PROJECT	068686339
DATE	7/28/2025
SCALE	AS SHOWN
DESIGNED BY	JPV
DRAWN BY	JPV
CHECKED BY	MAS

PHASE 3H
RECLAIMED WATER PLAN (SHEET 2 OF 2)

Esperanza
BORENE ★ TEXAS

KENDALL COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT NO. 2B

SHEET NUMBER
36

CITY OF BOERNE

TYPICAL SUBDIVISION UTILITY SERVICE LAYOUT

ELECTRIC IN ROW & SIDEWALK AT CURB

SCALE:	DRAWING No.	DATE:
N.T.S.	00000-1.0	MAY 2024

CITY OF BOERNE

TYPICAL SUBDIVISION UTILITY SERVICE LAYOUT

ELECTRIC IN EASEMENT & SIDEWALK AT ROW LINE

SCALE:	DRAWING No.	DATE:
N.T.S.	00000-1.1	MAY 2024

NOTES:
1. INSTALL LOCATE BOX WITH EVERY VALVE OR GROUP OF VALVES WITHIN 10-FEET OR EACH OTHER.
2. FOR GAS MAINS, LOCATE BOX REQUIRED EVERY 500-FEET.
3. BOX TO BE LOCATED WITHIN 5' OF PROPERTY PIN SO NOT IN STREET OR DRIVEWAY

CITY OF BOERNE

TRACER WIRE LOCATE BOX

SCALE:	DRAWING No.	DATE:
N.T.S.	02560-1.2	MAY 2024

NOTES:
1. POLY WRAP ALL DUCTILE IRON BELOW GRADE.
2. RESTRAIN ALL JOINTS.

CITY OF BOERNE

FIRE HYDRANT ASSEMBLY

SCALE:	DRAWING No.	DATE:
N.T.S.	02660-2.0	MAY 2024

NOTES:
1. PRIOR APPROVAL OF THE CITY OF BOERNE REQUIRED TO USE THIS DETAIL.
2. POLY WRAP ALL DUCTILE IRON BELOW GRADE.
3. RESTRAIN ALL JOINTS.

CITY OF BOERNE

FIRE HYDRANT ALTERNATE INSTALLATION

SCALE:	DRAWING No.	DATE:
N.T.S	02660-2.1	MAY 2024

NOTES:
1. TRACER WIRE REQUIRED IF POLYETHYLENE (PE) WATER SERVICE LINE IS USED.

CITY OF BOERNE

DUAL 3/4 IN WATER SERVICES

SCALE:	DRAWING No.	DATE:
N.T.S.	02660-4.1	MAY 2024

NOTES:
1. TRACER WIRE REQUIRED IF POLYETHYLENE (PE) WATER SERVICE LINE IS USED.

CITY OF BOERNE

3/4 TO 2 IN SINGLE WATER SERVICE

SCALE:	DRAWING No.	DATE:
N.T.S.	02660-4.0	MAY 2024

NOTES:
1. ENCASE VALVES IN POLYETHYLENE.
2. PROVIDE STEM EXTENSIONS FOR OPERATING NUT WHEN NUT IS MORE THAN 4' BELOW FINISHED GRADE.
3. ALL BACKFILL SHALL BE MOISTURE CONDITIONED AND COMPACTED TO 95% COMPACTION PER ASTM D1557 (MODIFIED PROCTOR).
4. WHERE MULTIPLE VALVES ARE PROPOSED WITHIN 10-FEET OF EACH OTHER, MAY ROUTE TO A SINGLE TRACER WIRE LOCATE BOX; OTHERWISE A LOCATE BOX IS REQUIRED FOR EACH INDIVIDUAL VALVE.
5. ALL POTABLE WATER GATE VALVES SHALL BE OPEN LEFT (COUNTER CLOCKWISE).

CITY OF BOERNE

WATER GATE VALVE AND VALVE BOX

SCALE:	DRAWING No.	DATE:
N.T.S.	02660-1.0	MAY 2024

NOTES:
1. MATCH FLUSH IN PAVED AREAS. SET BOX AND CONCRETE 1" ±1/2" ABOVE FINISHED GRADE IN UNPAVED AREAS.
2. PROVIDE RESTRAINED LENGTHS AS SHOWN BY DESIGN ENGINEER IN THE APPROVED DRAWINGS.
3. ALL BACKFILL SHALL BE MOISTURE CONDITIONED AND COMPACTED TO 95% COMPACTION PER ASTM D1557 (MODIFIED PROCTOR).

CITY OF BOERNE

PERMANENT END OF WATER MAIN BLOW-OFF ASSEMBLY

SCALE:	DRAWING No.	DATE:
N.T.S.	02660-3.1	MAY 2024

CITY OF BOERNE

1 IN AIR RELEASE VALVE FOR RECLAIMED WATER MAINS

SCALE:	DRAWING No.	DATE:
N.T.S.	02670-2.0	MAY 2024

NOTES:
1. TRACER WIRE REQUIRED IF POLYETHYLENE (PE) WATER SERVICE LINE IS USED.
2. PAINT ALL PARTS TO SERVICE LINE PURPLE.

CITY OF BOERNE

DUAL 3/4 IN RECLAIMED WATER SERVICES

SCALE:	DRAWING No.	DATE:
N.T.S.	02670-3.1	MAY 2024

NOTES:
1. TRACER WIRE REQUIRED IF POLYETHYLENE (PE) WATER SERVICE LINE IS USED.
2. PAINT ALL PARTS TO SERVICE LINE PURPLE.

CITY OF BOERNE

3/4 TO 2 IN SINGLE RECLAIMED WATER SERVICE

SCALE:	DRAWING No.	DATE:
N.T.S.	02670-3.0	MAY 2024

NOTES:
1. ENCASE VALVES IN PURPLE POLYETHYLENE.
2. PROVIDE STEM EXTENSIONS FOR OPERATING NUT WHEN NUT IS MORE THAN 4' BELOW FINISHED GRADE.
3. ALL BACKFILL SHALL BE MOISTURE CONDITIONED AND COMPACTED TO 95% COMPACTION PER ASTM D1557 (MODIFIED PROCTOR).
4. WHERE MULTIPLE VALVES ARE PROPOSED WITHIN 10-FEET OF EACH OTHER, MAY ROUTE TO A SINGLE TRACER WIRE LOCATE BOX; OTHERWISE A LOCATE BOX IS REQUIRED FOR EACH INDIVIDUAL VALVE.
5. PAINT VALVE AND VALVE BOX PURPLE.
6. ALL RECLAIMED WATER GATE VALVES SHALL BE OPEN RIGHT (CLOCKWISE).

CITY OF BOERNE

RECLAIMED WATER GATE VALVE AND VALVE BOX

SCALE:	DRAWING No.	DATE:
N.T.S.	02670-1.0	MAY 2024

NOTES:
1. MATCH FLUSH IN PAVED AREAS. SET BOX AND CONCRETE 1" ±1/2" ABOVE FINISHED GRADE IN UNPAVED AREAS.
2. PROVIDE RESTRAINED LENGTHS AS SHOWN BY DESIGN ENGINEER IN THE APPROVED DRAWINGS.
3. ALL BACKFILL SHALL BE MOISTURE CONDITIONED AND COMPACTED TO 95% COMPACTION PER ASTM D1557 (MODIFIED PROCTOR).
4. PAINT VALVE AND VALVE BOX PURPLE.
5. ALL RECLAIMED WATER GATE VALVES SHALL BE OPEN RIGHT (CLOCKWISE).

CITY OF BOERNE

PERMANENT END OF RECLAIMED WATER MAIN BLOW-OFF ASSEMBLY

SCALE:	DRAWING No.	DATE:
N.T.S.	02670-2.1	MAY 2024

CITY OF BOERNE

1 IN AIR RELEASE VALVE FOR RECLAIMED WATER MAINS

SCALE:	DRAWING No.	DATE:
N.T.S.	02670-2.0	MAY 2024

No.	REVISIONS	DATE	BY

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MICHAEL A. SCHOLZE
131737
LICENSED PROFESSIONAL ENGINEER
7/28/2025

KHA PROJECT	068663.39
DATE	7/28/2025
SCALE	AS SHOWN
DESIGNED BY	JPV
DRAWN BY	JPV
CHECKED BY	MAS

PHASE 3H
WATER DETAILS
(SHEET 1 OF 2)

Esparza
BOERNE ★ TEXAS

KENDALL COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT NO. 2B

SHEET NUMBER
37

Plotted By: Jpv at: July 28, 2025 11:35:10am K:\San_dis\068663.39-esparza3h\CAD\standards\C-DTLS-WATR-3H.dwg
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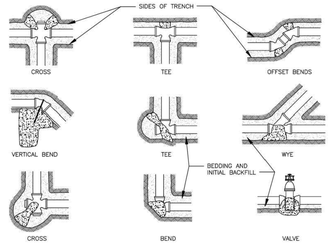
Standard Service Schedule	Service Saddle PVC	Service Saddle CI	Service Saddle HDPE	Corporation Stop	Angle Stop	Stainless Steel Stiffeners for HDPE Pipe	Meter Box Body	Meter Box Lid
¾" service	James Jones 369 or equal (¾" thread). *Reclaimed same material painted Portstone 532C per 09905	James Jones 379 or equal (¾" thread). *Reclaimed same material painted Portstone 532C per 09905	Requires Engineer approval prior to installation	Mueller B-24258N with lock wing, quarter turn Ford. *Reclaimed required. Reclaimed same material painted Portstone 532C per 09905	Mueller B-24278N with lock wing, quarter turn Ford. *Reclaimed same material painted Portstone 532C per 09905	Mueller 304S39 or approved equal	DFW Plastics DFW1730C-18	DFW Plastics DFW1730C-ASTM-LID (Reclaimed requires DFW1730C-ASTMLID-RA)
1" service	James Jones 369 or equal (1" thread). *Reclaimed same material painted Portstone 532C per 09905	James Jones 379 or equal (1" thread). *Reclaimed same material painted Portstone 532C per 09905	Requires Engineer approval prior to installation	Mueller B-24258N with lock wing, quarter turn Ford. *Reclaimed same material painted Portstone 532C per 09905	Mueller B-24278N with lock wing, quarter turn Ford. *Reclaimed same material painted Portstone 532C per 09905	Mueller 304S39 or approved equal	DFW Plastics DFW1730C-18	DFW Plastics DFW1730C-ASTM-LID (Reclaimed requires DFW1730C-ASTMLID-RA)
1.5" service	James Jones 369 or equal (1.5" thread). *Reclaimed same material painted Portstone 532C per 09905	James Jones 379 or equal (1.5" thread). *Reclaimed same material painted Portstone 532C per 09905	Requires Engineer approval prior to installation	Mueller B-24258N with lock wing, quarter turn Ford. *Reclaimed same material painted Portstone 532C per 09905	Mueller B-24278N with lock wing, quarter turn Ford. *Reclaimed same material painted Portstone 532C per 09905	Mueller 304S41 or approved equal	DFW Plastics DFW1730C-18	DFW Plastics DFW1730C-1IDA-Ltd (Reclaimed requires DFW1730C-ASTMIDA-Ltd)
2" service	James Jones 369 or equal (2" thread). *Reclaimed same material painted Portstone 532C per 09905	James Jones 379 or equal (2" thread). *Reclaimed same material painted Portstone 532C per 09905	Requires Engineer approval prior to installation	Mueller B-24258N with lock wing, quarter turn Ford. *Reclaimed same material painted Portstone 532C per 09905	Mueller B-24278N with lock wing, quarter turn Ford. *Reclaimed same material painted Portstone 532C per 09905	Mueller 304S43 or approved equal	DFW Plastics DFW1730C-18	DFW Plastics DFW1730C-1IDA-Ltd (Reclaimed requires DFW1730C-ASTMIDA-Ltd)
3" service and larger	**Requires approval drawings from the Design Engineer prior to installation**							

* Dual service Tee – Mueller H-15381N 1" x 3/4" x 3/4" 150 Centerline Compression Connection for CTS O.D. tubing all ends.
* All other fittings require approval prior to installation

CITY OF BOERNE

WATER AND RECLAIMED SERVICE SCHEDULE

SCALE: N.T.S. | DRAWING No.: 02660-4.3 | DATE: MAY 2024



BLOCKING AREA IN SQUARE FEET IN ROCK WALL TRENCH

SIZE PIPE	TEES & DEAD ENDS	90° BENDS	45° BENDS	22 1/2° BENDS
6"	2	2	1	1
8"	3	4	2	1
12"	6	9	5	2
16"	11	15	8	4

BLOCKING AREA IN SQUARE FEET IN OTHER THAN ROCK WALL TRENCH

SIZE PIPE	TEES & DEAD ENDS	90° BENDS	45° BENDS	22 1/2° BENDS
6"	3	4	2	1
8"	4	6	4	2
12"	10	14	8	4
16"	18	25	14	7

BLOCKING AREA FOR 200 PSI TEST AND 175 PSI WORKING PRESSURES.

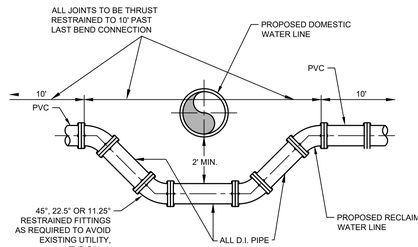
THRUST BLOCKING SHALL BE CONCRETE FILL, MIN. 3,000 PSI

THRUST BLOCKS ARE RECOMMENDED BUT NOT REQUIRED IF RESTRAINTS ARE PROVIDED PER RESTRAINED LENGTHS AS SHOWN ON APPROVED PLANS.

CITY OF BOERNE

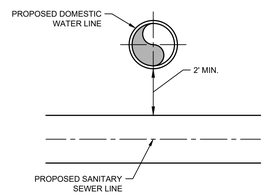
CONCRETE THRUST BLOCKING

SCALE: N.T.S. | DRAWING No.: 02660-1.1 | DATE: MAY 2024

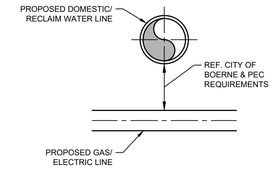


NOTE: ROUTE WATER LINE & FIRE HYDRANT LINES AS NECESSARY TO AVOID OTHER UTILITIES. MAINTAIN MINIMUM 4' COVER.

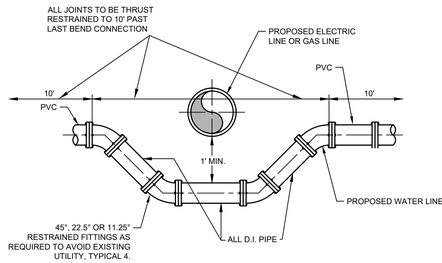
(A) WATER & RECLAIMED WATER CROSSING



(B) WATER & SANITARY SEWER CROSSING

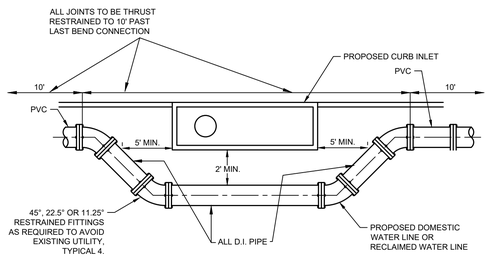


(C) WATER & UTILITIY CROSSING



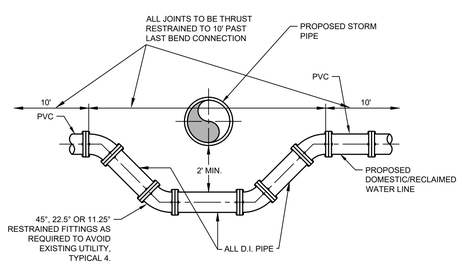
NOTE: ROUTE WATER LINE & FIRE HYDRANT LINES AS NECESSARY TO AVOID OTHER UTILITIES. MAINTAIN MINIMUM 4' COVER.

(C) WATER & UTILITIY CROSSING



NOTE: ROUTE WATER LINE & FIRE HYDRANT LINES AS NECESSARY TO AVOID OTHER UTILITIES. MAINTAIN MINIMUM 4' COVER.

(D) WATER/RECLAIMED WATER & CURB INLET HORIZONTAL BEND



NOTE: ROUTE WATER LINE & FIRE HYDRANT LINES AS NECESSARY TO AVOID OTHER UTILITIES. MAINTAIN MINIMUM 4' COVER.

(E) WATER/RECLAIMED WATER & STORM CROSSING

No.	REVISIONS	DATE	BY

Kimley»Horn

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STATE OF TEXAS
MICHAEL A. SCHOLZE
131737
LICENSED PROFESSIONAL ENGINEER
7/28/2025

KHA PROJECT 068686339
DATE 7/28/2025
SCALE AS SHOWN
DESIGNED BY JPV
DRAWN BY JPV
CHECKED BY MAS

PHASE 3H
WATER DETAILS (SHEET 2 OF 2)

Esperanza BOERNE ★ TEXAS

KENDALL COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT NO. 2B

SHEET NUMBER
38

Plotted By:Prot, Josh July 28, 2025 11:35:22am K:\san_civ\068686339-esperanza3h\CAD\sheets\C-DTL-WATR-3H.dwg
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UTILITY GENERAL NOTES:

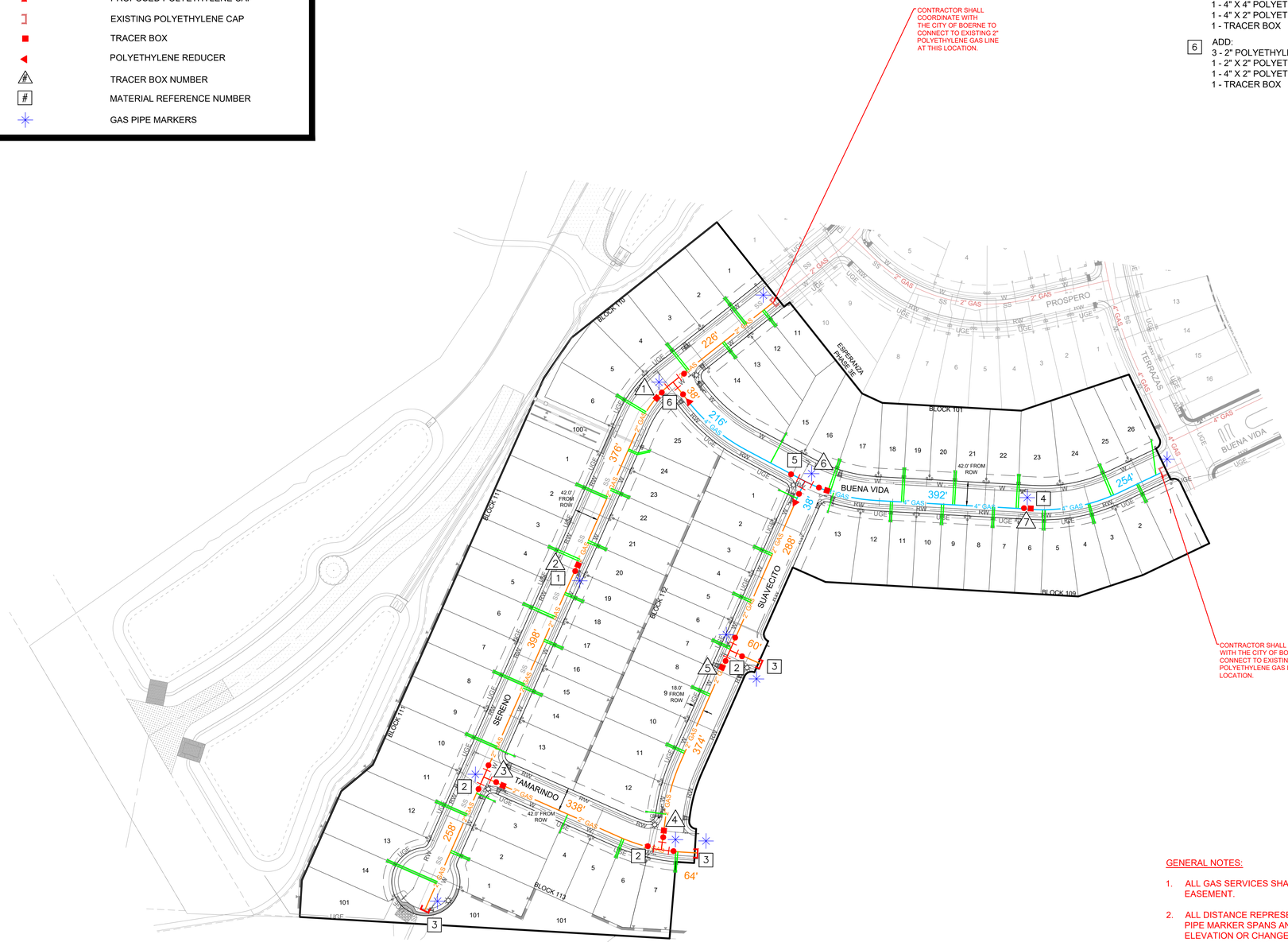
1. ALL MATERIAL AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THIS PROJECT SHALL CONFORM TO ALL APPLICABLE CITY OF BOERNE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, LATEST EDITION, AS WELL AS OTHER SAFETY CODES AND INSPECTION PREVISIONS APPLICABLE TO THE PROJECT.
2. ALL GAS DISTRIBUTION LINES SHALL BE YELLOW SDR-11 POLYETHYLENE PIPE MEETING ASTM D3350, BY PERFORMANCE PIPE, DRISCOPLEX 6500 WITH NO SUBSTITUTIONS.
3. ALL MAINS SHALL BE CLEAR OF ALL FOREIGN MATERIAL BLOWN WITH DRY COMPRESSED AIR AND PRESSURED TESTED AS PER THE CITY OF BOERNE'S STANDARD SPECIFICATIONS.
4. FOR PURPOSES OF RECORD DRAWINGS FOR THE CITY OF BOERNE, THE CONTRACTOR SHALL FURNISH THE ENGINEER WITH ALL THE FINAL MEASUREMENTS, TAPS, AND LENGTH OF SERVICE CONNECTIONS.
5. THE LOCATIONS AND DEPTHS OF EXISTING/PROPOSED UTILITIES SHOWN ON THESE PLANS ARE APPROXIMATE ONLY. ACTUAL LOCATIONS AND DEPTHS OF UTILITIES MUST BE FIELD VERIFIED OR COORDINATED W/ OTHER PARTIES BY THE CONTRACTOR PRIOR TO CONSTRUCTION. AND DAMAGE TO EXISTING UTILITIES SHALL BE REPAIRED BY THE CONTRACTOR AT HIS EXPENSE.
6. ALL GARBAGE OR SPOIL MATERIAL FROM THIS WORK SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR, AT HIS EXPENSE.
7. FINAL CONNECTION TO THE EXISTING GAS MAIN SHALL NOT BE MADE UNTIL THE MAIN HAS BEEN PRESSURE TESTED AND APPROVED FOR CONNECTION BY THE CITY OF BOERNE.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUIRING ALL PERMITS, TESTS, APPROVALS AND ACCEPTANCES REQUIRED TO COMPLETE CONSTRUCTION OF THIS PROJECT.
9. ALL ITEMS NOT SPECIFICALLY CALLED FOR ON THE PLANS, OR IN THE SPECIFICATIONS, BUT NECESSARY TO REASONABLY CONSTRUCT THE FACILITY OR IMPROVEMENT, SHALL BE CONSIDERED INCIDENTAL TO THE OVERALL PROJECT AND NO SEPARATE PAYMENTS WILL BE MADE FOR THESE ITEMS .
10. DEPTH OF BURY FOR ALL GAS PIPING SHALL BE A MINIMUM OF 3' FROM FINAL GRADE UNLESS OTHERWISE NOTED OR APPROVED BY THE CITY OF BOERNE.
11. CONTRACTOR TO GRADE SITE TO WITHIN +/- 0.10' BEFORE THE INSTALLATION OF UTILITIES TO ENSURE PROPER COVER IS ACHIEVED
12. CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF UNDERGROUND UTILITITES AND DRAINAGE STRUCTURES WHETHER SHOWN ON THE PLANS OR NOT.
13. THE CONTRACTOR SHALL NOTIFY THE GOVERNMENTAL AND/OR UTILITY COMPANIES REGARDING THE LOCATION OF EXISTING FACILTIIES PRIOR TO CONSTRUCTION.
14. THE CONTRACTOR SHALL EXCAVATE AROUND EXISTING UTILITIES WHICH INTERSECT THE PROPOSED ALIGNMENT OF UTILITIES WHICH INTERSECT THE PROPOSED ALIGNMENT OF THE SERVICES AND NOTIFY THE ENGINEER OF POTENTIAL CONFLICTS, PRIOR TO ANY CONSTRUCTION IN THE AREA.
15. ALL DISTURBED AREAS WITHIN EASEMENTS SHALL BE HYDRO-MULCHED IN ACCORDANCE WITH THE CITY OF BOERNE'S SUBDIVISION ORDINANCE.
16. UTILITY TRENCH COMPACTION: ALL UTILITY TRENCH COMPACTION TESTS WITHIN THE STREET RIGHT-OF-WAY SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR'S GEO-TECHNICAL ENGINEER. FILL MATERIAL SHALL BE PLACED IN UNIFORM LAYERS NOT TO EXCEED EIGHT INCHES (8") LOOSE. EACH LAYER OF MATERIAL SHALL BE COMPACTED TO 95% MODIFIED PROCTOR ASTM 1557 AS SPECIFIED AND DESCRIBED IN ACCORDANCE WITH THE CITY OF BOERNE'S PROJECT SPECIFICATION - SECTION 02221.
17. CONTRACTOR TO PHASE CONSTRUCTION SUCH THAT ALL GAS INFRASTRUCTURE MEETS THE CITY OF BOERNE MINIMUM COVER REQUIREMENTS PRIOR TO BEING ACTIVE FOR SERVICE.
18. THE CITY OF BOERNE SHALL INSTALL EXCESS FLOW VALVES (EFV) ON SERVICES.

LEGEND

4" GAS	PROPOSED 4" POLYETHYLENE GAS LINE
2" GAS	PROPOSED 2" POLYETHYLENE GAS LINE
	PROPOSED 1" POLYETHYLENE GAS SERVICE
4" GAS	EXISTING 4" POLYETHYLENE GAS LINE
2" GAS	EXISTING 2" POLYETHYLENE GAS LINE
	POLYETHYLENE TEE
	POLYETHYLENE GAS VALVE & VALVE BOX
	PROPOSED POLYETHYLENE CAP
	EXISTING POLYETHYLENE CAP
	TRACER BOX
	POLYETHYLENE REDUCER
	TRACER BOX NUMBER
#	MATERIAL REFERENCE NUMBER
	GAS PIPE MARKERS

NORTH

GRAPHIC SCALE IN FEET
0 50 100 200



1 ADD:
1 - 2" POLYETHYLENE GAS VALVE AND VALVE BOX
1 - TRACER BOX

2 ADD:
3 - 2" POLYETHYLENE GAS VALVE AND VALVE BOX
1 - 2" X 2" POLYETHYLENE TEE
1 - TRACER BOX

3 ADD:
1 - 2" POLYETHYLENE CAP

4 ADD:
1 - 4" POLYETHYLENE GAS VALVE AND VALVE BOX
1 - TRACER BOX

5 ADD:
3 - 4" POLYETHYLENE GAS VALVE AND VALVE BOX
1 - 4" X 4" POLYETHYLENE TEE
1 - 4" X 2" POLYETHYLENE REDUCER
1 - TRACER BOX

6 ADD:
3 - 2" POLYETHYLENE GAS VALVE AND VALVE BOX
1 - 2" X 2" POLYETHYLENE TEE
1 - 4" X 2" POLYETHYLENE REDUCER
1 - TRACER BOX

GENERAL NOTES:

1. ALL GAS SERVICES SHALL BE INSTALLED 1' PAST UTILITY EASEMENT.
2. ALL DISTANCE REPRESENT GAS PIPE MARKER TO GAS PIPE MARKER SPANS AND DO NOT ACCOUNT FOR ELEVATION OR CHANGES IN ALIGNMENT ASSOCIATED WITH EVENTS DESCRIBED IN THE UTILITY GENERAL NOTES.
3. THE CITY OF BOERNE REQUIRES THE FOLLOWING BE PROVIDED WITH THE GAS PLAN OF RECORD DRAWINGS - PRINTLINE DATA AND PIPE TESTING INFORMATION AS FOLLOWS:
   - DATE OF FINAL TEST (DATE OF START/DATE OF FINISH)
   - SPECIFIED AIR PRESSURE
   - ACTUAL AIR PRESSURE AT START OF TEST
   - ACTUAL AIR PRESSURE AT END OF TEST
   - TEMPERATURE AT START OF TEST
   - TEMPERATURE AT END OF TEST
   - ELAPSED TIME

CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLY WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATION. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS COVERING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATIONS.

THIS DRAWING IS CERTIFIED TO BE CORRECT FOR THE NEW FACILITIES SHOWN ONLY. INFORMATION CONCERNING EXISTING FACILITIES PROVIDED BY OTHERS HAS NOT BEEN VERIFIED.

No.	REVISIONS	DATE	BY

Kimley»Horn

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10101 REUNION PLACE, SUITE 400, SAN ANTONIO, TX 78216
PHONE: 210-541-1166 FAX: 210-541-1699
WWW.KIMLEY-HORN.COM TBPE FIRM NO. 928

STATE OF TEXAS
MARIO A. VALDEZ
121595
REGISTERED PROFESSIONAL ENGINEER
7/28/2025

KHA PROJECT	068686339
DATE	7/28/2025
SCALE	AS SHOWN
DESIGNED BY	EG
DRAWN BY	EG
CHECKED BY	MAV

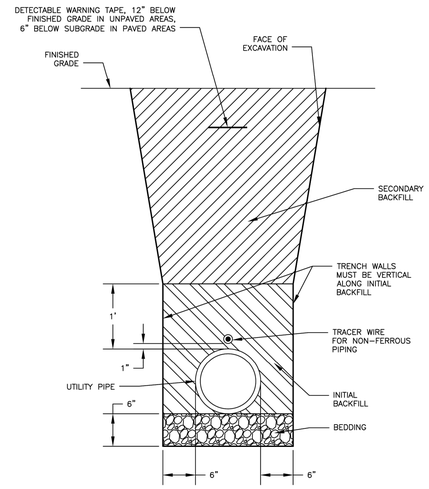
PHASE 3H
NATURAL GAS LAYOUT

Esperanza
BORNE★TEXAS

KENDALL COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT NO. 2B

SHEET NUMBER
G1

Plotted By: Vinet, Josh July 28, 2025 11:36:34am K:\pro_civil\068686339-esperanza3h\CAD\plansheets\C-GAS-3H.dwg
This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

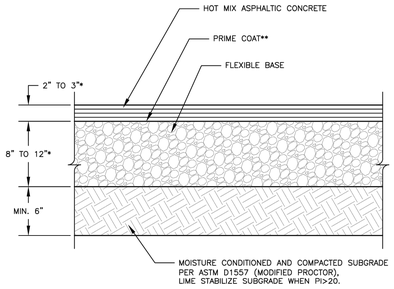


NOTES:
1. TYPICAL BEDDING PER APPLICABLE UTILITY BACKFILL STANDARD SPECIFICATIONS.
2. SECONDARY BACKFILL TO BE COMPACTED IN LIFTS PER ASTM D1557 (MODIFIED PROCTOR) AND SPECIFICATION 02221.

CITY OF BOERNE

UTILITY PIPE TRENCH

SCALE:	DRAWING No.	DATE:
N.T.S.	02221-1.0	MAY 2024



*THICKNESS VARIES DEPENDING UPON PAVEMENT DESIGN AND GEOTECHNICAL REPORT. REFER TO PLAN X-SECTIONS AND DETAILS FOR SPECIFIED PAVEMENT DESIGN.

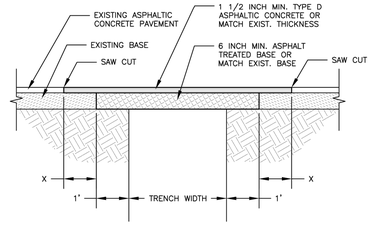
**PROVIDE TACK COAT IN ADDITION TO PRIME COAT IMMEDIATELY PRIOR TO PLACING ASPHALTIC CONCRETE AS NEEDED TO SEAL AND ENSURE ADHERENCE.

NOTES:
1. PROVIDE 1 SET OF CORES FOR EACH DAY OF PAVING OR PER 500 TONS.

CITY OF BOERNE

ASPHALTIC CONCRETE PAVEMENT SECTION

SCALE:	DRAWING No.	DATE:
N.T.S.	02513-1.0	MAY 2024



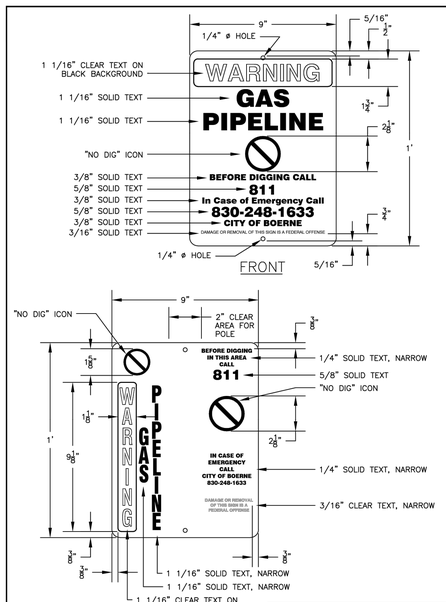
PCI RANGE	ADDITIONAL WIDTH OF ASPHALT REPAIR
PCI<50	X=1'
50≤PCI<85	X=10" and CURB-TO-CURB
85≤PCI≤100	CURB-TO-CURB and BLOCK-TO-BLOCK

NOTES:
1. STREET PCI VALUES MAY BE PROVIDED BY THE ENGINEERING AND MOBILITY DEPARTMENT UPON REQUEST.

CITY OF BOERNE

ASPHALTIC CONCRETE PAVEMENT REPAIR

SCALE:	DRAWING No.	DATE:
N.T.S.	02513-1.1	MAY 2024

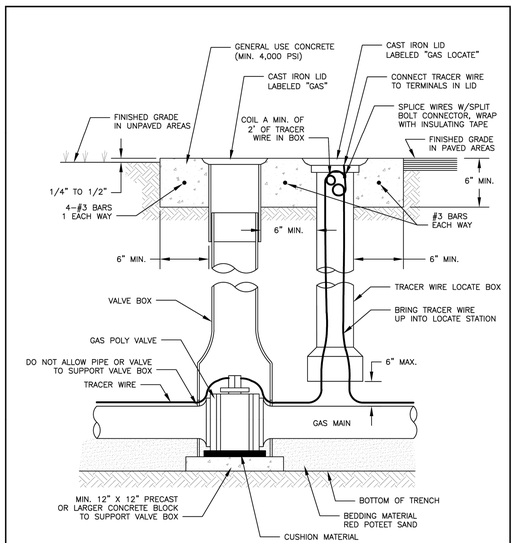


NOTE: MOUNT SIGN ON STEEL POST, 5'-6" ABOVE FINISHED GRADE.

CITY OF BOERNE

GAS WARNING SIGN

SCALE:	DRAWING No.	DATE:
N.T.S.	02560-1.1	MAY 2024

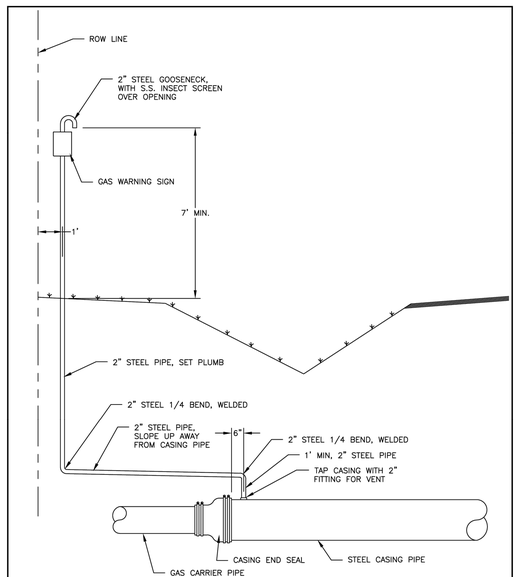


NOTES:
1. WHERE MULTIPLE VALVES ARE PROPOSED WITHIN 10-FEET OF EACH OTHER, MAY ROUTE TO A SINGLE TRACER WIRE LOCATE BOX; OTHERWISE A LOCATE BOX IS REQUIRED FOR EACH INDIVIDUAL VALVE OR EVERY 500-FEET.
2. ALL BACKFILL SHALL BE MOISTURE CONDITIONED AND COMPACTED TO 95% COMPACTION PER ASTM D1557 (MODIFIED PROCTOR).

CITY OF BOERNE

GAS VALVE AND VALVE BOX

SCALE:	DRAWING No.	DATE:
N.T.S.	02560-1.0	MAY 2024

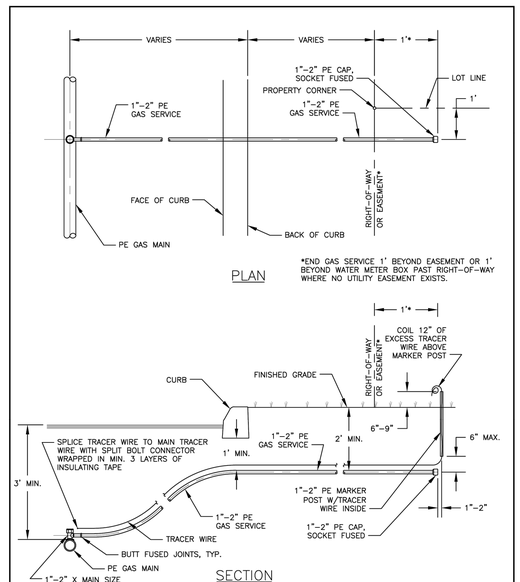


PROFILE

CITY OF BOERNE

CASING VENT FOR GAS MAIN UNDERCROSSING

SCALE:	DRAWING No.	DATE:
N.T.S.	02224-1.1	MAY 2024



NOTES:
1. EXCESS FLOW VALVE (EFV) TO BE INSTALLED BY THE CITY OF BOERNE UTILITIES DEPARTMENT.
2. GAS SERVICE SIZE TO BE DETERMINED BY CITY OF BOERNE UTILITIES DEPARTMENT.

CITY OF BOERNE

1"-2" SINGLE GAS SERVICE

SCALE:	DRAWING No.	DATE:
N.T.S.	02560-1.3	MAY 2024

No.	REVISIONS	DATE	BY

Kimley»Horn
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10101 REUNION PLACE, SUITE 400, SAN ANTONIO, TX 78216
PHONE: 210-541-9166 FAX: 210-541-8699
WWW.KIMLEY-HORN.COM TBPE FIRM NO. 928

STATE OF TEXAS
MARIO A. VALDEZ
121595
REGISTERED PROFESSIONAL ENGINEER
7/28/2025

KHA PROJECT	068668339
DATE	7/28/2025
SCALE	AS SHOWN
DESIGNED BY	EG
DRAWN BY	EG
CHECKED BY	MAV

PHASE 3H

NATURAL GAS DETAILS

Esperanza
BOERNE • TEXAS

KENDALL COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT NO. 2B

SHEET NUMBER
G2

Plotted By: Vinal, Josh July 28, 2025 11:36:41am K:\spn_o_chn\068668339-esperanza3h\CAD\standards\C-GAS-3H.dwg
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KIMLEY HORN AND ASSOCIATES

ESPERANZA PHASE 3H

UNDERGROUND ELECTRICAL PLANS

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GENERAL DRAWINGS

E0	PROJECT COVER SHEET AND DRAWING LIST
E1	DRAWING KEY MAP
E2	UNDERGROUND ELECTRICAL DISTRIBUTION LAYOUT (SHEET 1 OF 3)
E3	UNDERGROUND ELECTRICAL DISTRIBUTION LAYOUT (SHEET 2 OF 3)
E4	UNDERGROUND ELECTRICAL DISTRIBUTION LAYOUT (SHEET 3 OF 3)
E5	UNDERGROUND ELECTRIC ALIGNMENT & STREETLIGHT DETAIL

REV LIST:

1 REVISION 1: E0, E1, E2, E3

ISSUED: 05-19-25
FOR CONSTRUCTION

STATE OF TEXAS
CHRISTOPHER T. HARPER
106036
LICENSED
PROFESSIONAL ENGINEER

Chris Harper
2025.07.03
18:25:12 -05'00'

NO	DATE	REVISION	BY	CHK	APPD
1	07-03-25	REVISION 1	PS	CTH	CTH

	DATE	BY
DRWN	04-30-25	PS
CHK	05-19-25	CTH
APPD	05-19-25	CTH

POWEREDBYSENERGY.COM
TEXAS REGISTRATION NUMBER F-1594

SENERGY™ POWERED BY SCHNEIDER ENGINEERING

KIMLEY-HORN AND ASSOCIATES

ESPERANZA PHASE 3H

PROJECT COVER SHEET AND DRAWING LIST

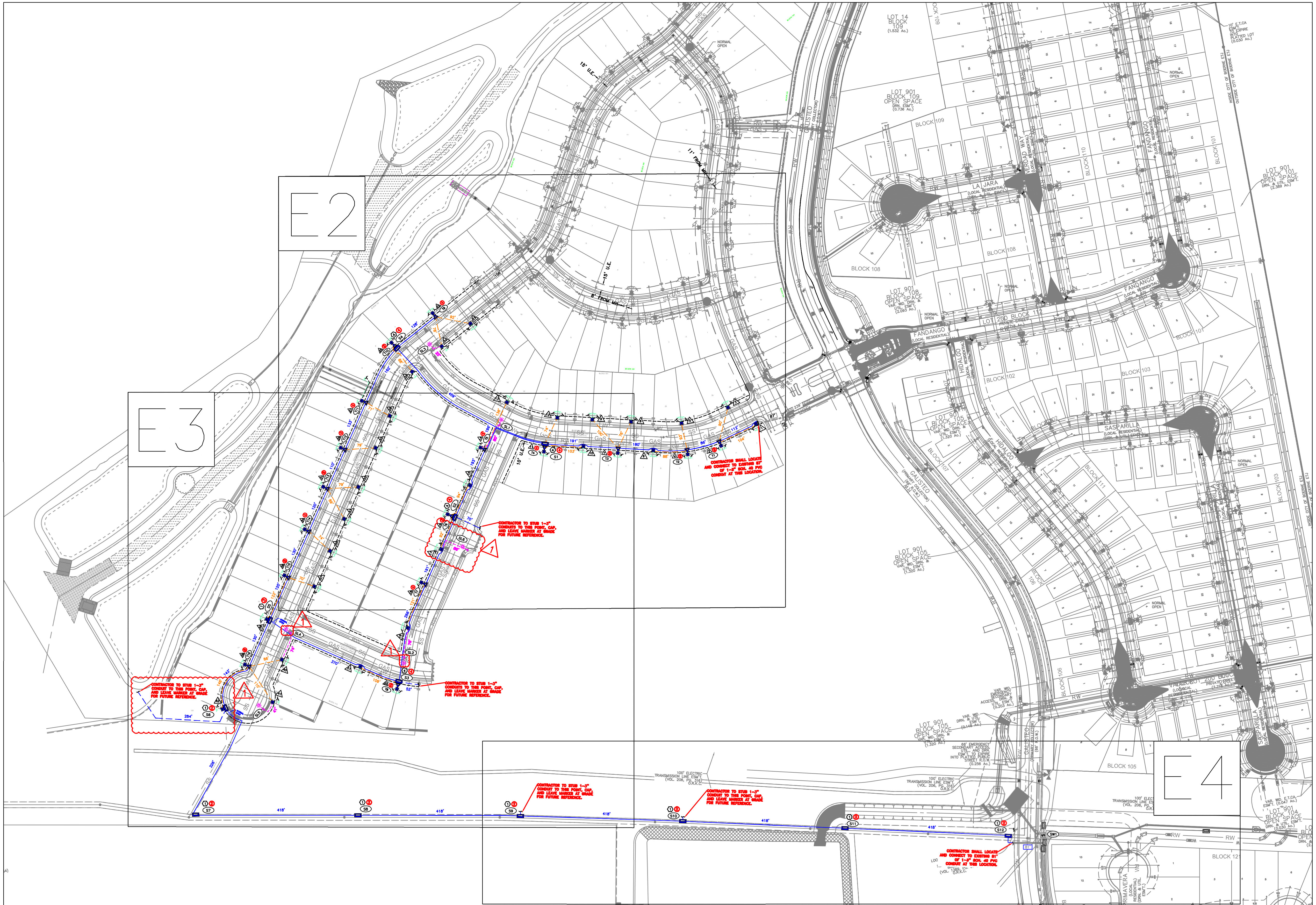
SCALE FOR 34 x 22 DWG: N.T.S.

DRAWING NO.: E0

25KHA32-R00000003352

SYSTEM VOLTAGE: 14.4/24.9 kV

06/26/2025 5:00 PM * jpecero * N:\KHA\25KHA32-R00000003352 Esperanza Phase 3H\Drawings\Plan View\E0 - Cover Sheet.dwg



N
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LEGEND

SERVICE PHASING	LOTS
AØ SERVICE	0
BØ SERVICE	79
CØ SERVICE	0
TOTAL	79

ISSUED: 05-19-25
FOR CONSTRUCTION

STATE OF TEXAS
CHRISTOPHER T. HARPER
106036
LICENSED PROFESSIONAL ENGINEER

Chris Harper
2025.07.03
18:25:40 -05'00'

NO	DATE	REVISION	BY	CHK	APPD	NO	DATE	REVISION	BY	CHK	APPD
1	07-03-25	UPDATED STREETLIGHT AND STUB	PS	CTH	CTH						

25KHA32-R00000003352

	DATE	BY
DRWN	04-30-25	PS
CHK	05-19-25	CTH
APPD	05-19-25	CTH

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TEXAS REGISTRATION
NUMBER F-1594

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KIMLEY-HORN AND ASSOCIATES
ESPERANZA PHASE 3H

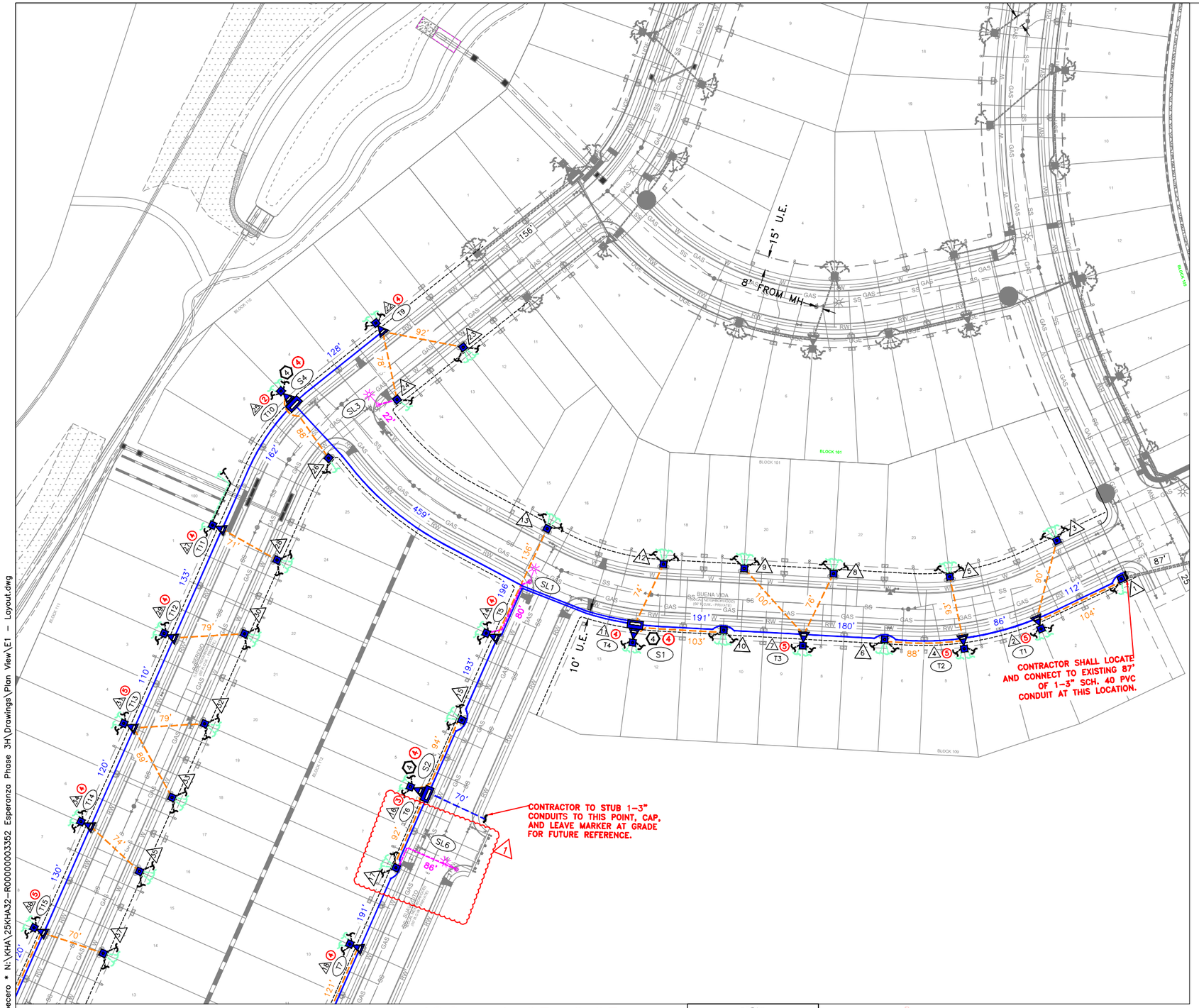
DRAWING KEY
MAP

SCALE FOR 34 x 22 DWG
N.T.S.

DRAWING NO.
E1

SYSTEM VOLTAGE: 14.4/24.9 kV

07/03/2025 2:52 PM * jpecero * N:\KHA\25KHA32-R00000003352 Esperanza Phase 3H\Drawings\Plan View\E1 - Layout.dwg



N
W E
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1. PROPOSED SMALL PAD FOR 1ø SECTIONALIZING BOX (DETAIL 530-010)
2. PROPOSED SMALL PAD FOR 3ø SECTIONALIZING BOX (DETAIL 530-020)
3. PROPOSED LARGE PAD FOR 3ø SECTIONALIZING BOX (DETAIL 530-022)
4. PROPOSED SMALL PAD FOR 1ø COMBINATION SECTIONALIZING BOX (DETAIL 530-023)
5. PROPOSED SMALL PAD FOR 3ø COMBINATION SECTIONALIZING BOX (DETAIL 530-024)
6. PROPOSED LARGE PAD FOR 3ø COMBINATION SECTIONALIZING BOX (DETAIL 530-026)

SYMBOLS

EXISTING	RISER POLE
REMOVE	
NEW	
EXISTING	POLE
REMOVE	
NEW	
NEW 200A 1ø SECTIONALIZING BOX — A PHASE B PHASE C PHASE	
NEW 200A 3ø SECTIONALIZING BOX	
NEW 1ø PADMOUNT TRANSFORMER — A PHASE B PHASE C PHASE	
PROPOSED 1ø & 3ø COMBINATION PAD (COLOR BY PHASE)	
NEW 1ø SECONDARY PEDESTAL — A PHASE B PHASE C PHASE	
EXISTING EQUIPMENT (COLOR BY PHASE) — JBOX XFMR SEC PED	
EXISTING 200A 3ø JUNCTION BOX	
EXISTING 600A 3ø JUNCTION BOX	
EXISTING STREET LIGHT	
PROPOSED STREET LIGHT	
NUMBER OF CONDUITS EXITING	
BOLLARD	

LEGEND

SERVICE PHASING	LOTS
Aø SERVICE	0
Bø SERVICE	79
Cø SERVICE	0
TOTAL	79

Aø, Bø, Cø	PRIMARY: 1/0 AL W/ FULL CONCENTRIC JACKETED NEUTRAL, 25 kV, XLPE, 260 MIL INSUL. IN 3" MIN. PVC SCH. 40, ELECT. CONDUIT
	100' – 3ø CONDUIT POINT TO POINT DISTANCE 100' – 1ø, PHASE A CONDUIT POINT TO POINT DISTANCE 100' – 1ø, PHASE B CONDUIT POINT TO POINT DISTANCE 100' – 1ø, PHASE C CONDUIT POINT TO POINT DISTANCE
	VACANT Aø(EMPTY) 3" CONDUIT OR AS SPECIFIED
	VACANT Bø(EMPTY) 3" CONDUIT OR AS SPECIFIED
	VACANT Cø(EMPTY) 3" CONDUIT OR AS SPECIFIED
	VACANT (EMPTY) 3" CONDUIT OR AS SPECIFIED
	SECONDARY: 4/0 AL, 600V, TRIPLEX IN 3" PVC SCH 40, ELECT. CONDUIT
	SECONDARY: 350 MCM AL, 600V, TRIPLEX IN 3" PVC SCH 40, ELECT. CONDUIT
	2" TEMPORARY ELECTRIC SERVICE
	STREET LIGHT CABLE, 600V, #10 COPPER (2EA.), INSTALLED IN 1" PVC SCH 40 ELECT. CONDUIT OR AS SPECIFIED
	EXISTING UNDERGROUND ELECTRICAL CONDUIT
	ELECTRICAL UTILITY EASEMENT

GENERAL NOTES:

1. ALL PRIMARY CONDUIT SHALL BE SCHEDULE 40 3" PVC PER LEGEND.
2. CONSTRUCTION SHALL TAG AND CODE CABLE IN THE FIELD TO IDENTIFY PHASES.
3. ALL PRIMARY CABLE SHALL BE #1/0 AL 25 kV.
4. ALL PAD-MOUNTED ENCLOSURES INCLUDING TRANSFORMERS, SHALL BE GROUNDED IN SUCH A MANNER THAT TWO SEPARATE CONNECTIONS EXIST BETWEEN THE ENCLOSURE AND THE GROUND ROD(S). IF METER PEDESTALS, TRANSFORMERS, AND SECTIONALIZING CABINETS ARE WITHIN 10 FEET OF EACH OTHER A #2 CU. SOLID BARE WIRE SHALL TIE ALL GROUND RODS TOGETHER.
5. SECTIONALIZING CABINETS, TRANSFORMERS, EASEMENTS, CABLE, AND WIRE ARE NOT SHOWN TO SCALE IN THIS DRAWING.
6. EASEMENTS TO BE DEDICATED BY DEVELOPER TO COVER ALL ELECTRIC FACILITIES.
7. ALL ELECTRIC STREET CROSSINGS AND SERVICE EXTENSION TRENCHES TO INCLUDE TEL. & CATV.
8. IF ANY ELECTRIC FACILITIES ARE SUSCEPTIBLE TO DAMAGE FROM VEHICULAR TRAFFIC, BOLLARDS SHALL BE PLACED AROUND THE EQUIPMENT TO PREVENT DAMAGE.
9. FOR ANY PAD LOCATED IN DRAINAGE EASEMENT OR EROSION PRONE AREAS, CONTRACTOR SHALL BUILD UP PAD SITE AND REINFORCE WITH CONCRETE TO PREVENT EROSION.
10. ALL CONSTRUCTION SHALL CONFORM TO PEC STANDARDS AND PRACTICES,
11. DEVELOPER SHALL PROVIDE ALL WEATHER ACCESS ROAD WHERE UNDERGROUND ELECTRIC IS INSTALLED ON BACK OR SIDE OF LOT.
12. CONTRACTOR SHALL REFER TO PEC'S UNDERGROUND INSTALLATION SPECIFICATIONS DOCUMENTS FOUND ON THEIR WEBSITE: WWW.PEC.COOP/YOUR-SERVICE/CONSTRUCTION-DEVELOPMENT/ FOR INSTALLATION OF ELECTRICAL FACILITIES.
13. STREETLIGHT SHALL BE MANUFACTURED BY VISIONAIRE LIGHTING AND MODEL NUMBERS AS FOLLOWS:
    STREETLIGHT BASE: DCB-21 (BZ)
    STREETLIGHT POLE: RTSP-25-11-12BC-136-T3R-BZ-HHC
    STREETLIGHT ARM: VA101 (BZ)
    STREETLIGHT LED: ODN-2-L-T2-96LC-5-4K-UNV-UAM-BZ-C5-H3

ISSUED: 05-19-25
FOR CONSTRUCTION

STATE OF TEXAS
CHRISTOPHER T. HARPER
106036
LICENSED
PROFESSIONAL ENGINEER

Chris Harper
2025.07.03
18:26:03 -05'00'

NO	DATE	REVISION	BY	CHK	APPD
1	07-03-25	UPDATED STREETLIGHT	PS	CTH	CTH

	DATE	BY
DRWN	04-30-25	PS
CHK	05-19-25	CTH
APPD	05-19-25	CTH

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TEXAS REGISTRATION NUMBER F-1594

SENERGY. POWERED BY COMMERCIAL ENGINEERING

KIMLEY-HORN AND ASSOCIATES

ESPERANZA PHASE 3H

UNDERGROUND ELECTRICAL DISTRIBUTION LAYOUT
(SHEET 1 OF 3)

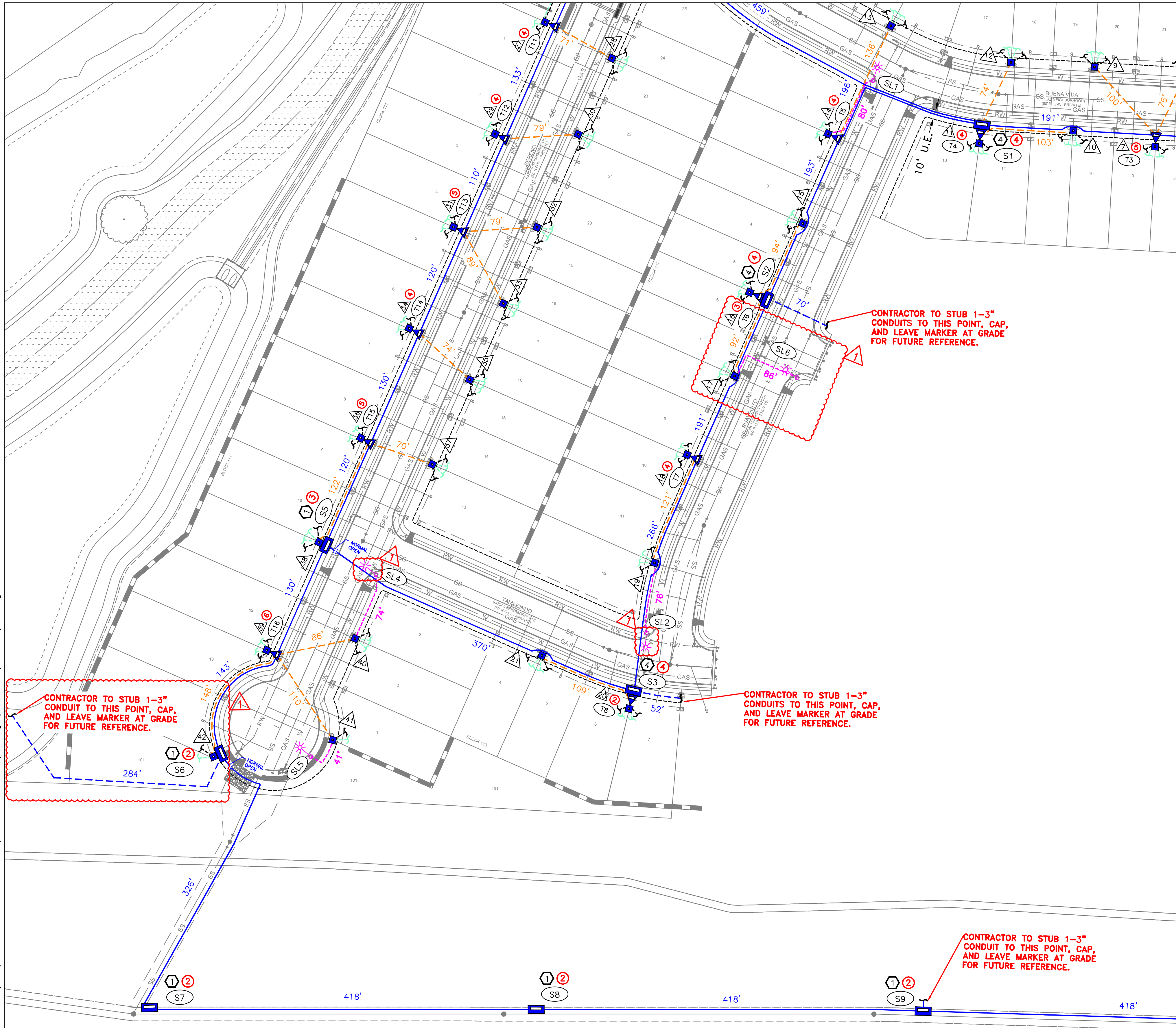
SCALE FOR 34 x 22 DWG
1" = 60'

DRAWING NO.
E2

25KHA32-R00000003352

SYSTEM VOLTAGE: 14.4/24.9 kV

07/03/2025 2:52 PM * jpecero * N:\KHA\25KHA32-R00000003352 Esperanza Phase 3H\Drawings\Plan View\E1 - Layout.dwg



N
W E
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1. PROPOSED SMALL PAD FOR 1ø SECTIONALIZING BOX (DETAIL 530–010)
2. PROPOSED SMALL PAD FOR 3ø SECTIONALIZING BOX (DETAIL 530–020)
3. PROPOSED LARGE PAD FOR 3ø SECTIONALIZING BOX (DETAIL 530–022)
4. PROPOSED SMALL PAD FOR 1ø COMBINATION SECTIONALIZING BOX (DETAIL 530–023)
5. PROPOSED SMALL PAD FOR 3ø COMBINATION SECTIONALIZING BOX (DETAIL 530–024)
6. PROPOSED LARGE PAD FOR 3ø COMBINATION SECTIONALIZING BOX (DETAIL 530–026)

SYMBOLS

EXISTING	RISER POLE
REMOVE	RISER POLE
NEW	RISER POLE
EXISTING	POLE
REMOVE	POLE
NEW	POLE
NEW 200A 1ø SECTIONALIZING BOX: A PHASE, B PHASE, C PHASE	
NEW 200A 3ø SECTIONALIZING BOX	
NEW 1ø PADMOUNT TRANSFORMER: A PHASE, B PHASE, C PHASE	
PROPOSED 1ø & 3ø COMBINATION PAD (COLOR BY PHASE)	
NEW 1ø SECONDARY PEDESTAL: A PHASE, B PHASE, C PHASE	
EXISTING EQUIPMENT (COLOR BY PHASE): JBOX, XFMR, SEC PED	
EXISTING 200A 3ø JUNCTION BOX	
EXISTING 600A 3ø JUNCTION BOX	
EXISTING STREET LIGHT	
PROPOSED STREET LIGHT	
NUMBER OF CONDUITS EXITING	
BOLLARD	

LEGEND

SERVICE PHASING	LOTS
Aø SERVICE	0
Bø SERVICE	79
Cø SERVICE	0
TOTAL	79

Aø Bø Cø	PRIMARY: 1/0 AL W/ FULL CONCENTRIC JACKETED NEUTRAL, 25 kV, XLPE, 260 MIL INSUL. IN 3" MIN. PVC SCH. 40, ELECT. CONDUIT
100' – 3ø CONDUIT POINT TO POINT DISTANCE 100' – 1ø, PHASE A CONDUIT POINT TO POINT DISTANCE 100' – 1ø, PHASE B CONDUIT POINT TO POINT DISTANCE 100' – 1ø, PHASE C CONDUIT POINT TO POINT DISTANCE	
	VACANT Aø(EMPTY) 3" CONDUIT OR AS SPECIFIED
	VACANT Bø(EMPTY) 3" CONDUIT OR AS SPECIFIED
	VACANT Cø(EMPTY) 3" CONDUIT OR AS SPECIFIED
	VACANT (EMPTY) 3" CONDUIT OR AS SPECIFIED
	SECONDARY: 4/0 AL, 600V, TRIPLEX IN 3" PVC SCH 40, ELECT. CONDUIT
	SECONDARY: 350 MCM AL, 600V, TRIPLEX IN 3" PVC SCH 40, ELECT. CONDUIT
	2" TEMPORARY ELECTRIC SERVICE
	STREET LIGHT CABLE, 600V, #10 COPPER (2EA.), INSTALLED IN 1" PVC SCH 40 ELECT. CONDUIT OR AS SPECIFIED
	EXISTING UNDERGROUND ELECTRICAL CONDUIT
	ELECTRICAL UTILITY EASEMENT

GENERAL NOTES:

1. ALL PRIMARY CONDUIT SHALL BE SCHEDULE 40 3" PVC PER LEGEND.
2. CONSTRUCTION SHALL TAG AND CODE CABLE IN THE FIELD TO IDENTIFY PHASES.
3. ALL PRIMARY CABLE SHALL BE #1/0 AL 25 kV.
4. ALL PAD–MOUNTED ENCLOSURES INCLUDING TRANSFORMERS, SHALL BE GROUNDED IN SUCH A MANNER THAT TWO SEPARATE CONNECTIONS EXIST BETWEEN THE ENCLOSURE AND THE GROUND ROD(S). IF METER PEDESTALS, TRANSFORMERS, AND SECTIONALIZING CABINETS ARE WITHIN 10 FEET OF EACH OTHER A #2 CU. SOLID BARE WIRE SHALL TIE ALL GROUND RODS TOGETHER.
5. SECTIONALIZING CABINETS, TRANSFORMERS, EASEMENTS, CABLE, AND WIRE ARE NOT SHOWN TO SCALE IN THIS DRAWING.
6. EASEMENTS TO BE DEDICATED BY DEVELOPER TO COVER ALL ELECTRIC FACILITIES.
7. ALL ELECTRIC STREET CROSSINGS AND SERVICE EXTENSION TRENCHES TO INCLUDE TEL. & CATV.
8. IF ANY ELECTRIC FACILITIES ARE SUSCEPTIBLE TO DAMAGE FROM VEHICULAR TRAFFIC, BOLLARDS SHALL BE PLACED AROUND THE EQUIPMENT TO PREVENT DAMAGE.
9. FOR ANY PAD LOCATED IN DRAINAGE EASEMENT OR EROSION PRONE AREAS, CONTRACTOR SHALL BUILD UP PAD SITE AND REINFORCE WITH CONCRETE TO PREVENT EROSION.
10. ALL CONSTRUCTION SHALL CONFORM TO PEC STANDARDS AND PRACTICES.
11. DEVELOPER SHALL PROVIDE ALL WEATHER ACCESS ROAD WHERE UNDERGROUND ELECTRIC IS INSTALLED ON BACK OR SIDE OF LOT.
12. CONTRACTOR SHALL REFER TO PEC'S UNDERGROUND INSTALLATION SPECIFICATIONS DOCUMENTS FOUND ON THEIR WEBSITE: WWW.PEC.COOP/YOUR–SERVICE/CONSTRUCTION–DEVELOPMENT/ FOR INSTALLATION OF ELECTRICAL FACILITIES.
13. STREETLIGHT SHALL BE MANUFACTURED BY VISIONAIRE LIGHTING AND MODEL NUMBERS AS FOLLOWS:
    STREETLIGHT BASE: DCB–21 (BZ)
    STREETLIGHT POLE: RTSP–25–11–12BC–136–T3R–BZ–HHC
    STREETLIGHT ARM: VA101 (BZ)
    STREETLIGHT LED: ODN–2–L–T2–96LC–5–4K–UNV–UAM–BZ–C5–H3

ISSUED: 05-19-25
FOR CONSTRUCTION

STATE OF TEXAS — CHRISTOPHER T. HARPER — 106036 — LICENSED PROFESSIONAL ENGINEER

Chris Harper
2025.07.03
18:26:25 -05'00'

NO	DATE	REVISION	BY	CHK	APPD	NO	DATE	REVISION	BY	CHK	APPD
1	07–03–25	UPDATED STREETLIGHTS AND STUB	PS	CTH	CTH						

25KHA32–R00000003352

	DATE	BY
DRWN	04–30–25	PS
CHK	05–19–25	CTH
APPD	05–19–25	CTH

POWEREDBYSENERGY.COM
TEXAS REGISTRATION NUMBER F-1594

SENERGY™ POWERED BY SCHNEIDER ENGINEERING

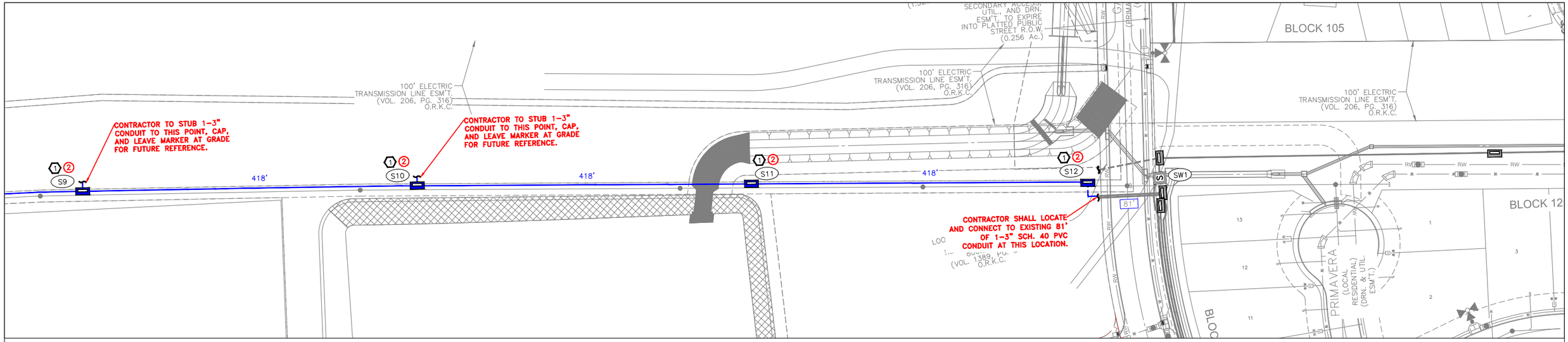
KIMLEY-HORN AND ASSOCIATES
ESPERANZA PHASE 3H

UNDERGROUND ELECTRICAL DISTRIBUTION LAYOUT
(SHEET 2 OF 3)

SCALE FOR 34 x 22 DWG 1"=60'
DRAWING NO. E3

SYSTEM VOLTAGE: 14.4/24.9 kV

07/03/2025 2:52 PM * jpecero * N:\KHA\25KHA32–R00000003352 Esperanza Phase 3H\Drawings\Plan View\E1 – Layout.dwg



N
W E
S

1. PROPOSED SMALL PAD FOR 1ø SECTIONALIZING BOX (DETAIL 530-010)
2. PROPOSED SMALL PAD FOR 3ø SECTIONALIZING BOX (DETAIL 530-020)
3. PROPOSED LARGE PAD FOR 3ø SECTIONALIZING BOX (DETAIL 530-022)
4. PROPOSED SMALL PAD FOR 1ø COMBINATION SECTIONALIZING BOX (DETAIL 530-023)
5. PROPOSED SMALL PAD FOR 3ø COMBINATION SECTIONALIZING BOX (DETAIL 530-024)
6. PROPOSED LARGE PAD FOR 3ø COMBINATION SECTIONALIZING BOX (DETAIL 530-026)

SYMBOLS

EXISTING	RISER POLE
REMOVE	
NEW	
EXISTING	POLE
REMOVE	
NEW	
NEW 200A 1ø SECTIONALIZING BOX (A PHASE, B PHASE, C PHASE)	
NEW 200A 3ø SECTIONALIZING BOX	
NEW 1ø PADMOUNT TRANSFORMER (A PHASE, B PHASE, C PHASE)	
PROPOSED 1ø & 3ø COMBINATION PAD (COLOR BY PHASE)	
NEW 1ø SECONDARY PEDESTAL (A PHASE, B PHASE, C PHASE)	
EXISTING EQUIPMENT (COLOR BY PHASE) (JBOX, XFMR, SEC PED)	
EXISTING 200A 3ø JUNCTION BOX	
EXISTING 600A 3ø JUNCTION BOX	
EXISTING STREET LIGHT	
PROPOSED STREET LIGHT	
NUMBER OF CONDUITS EXITING	
BOLLARD	

LEGEND

SERVICE PHASING	LOTS
Aø SERVICE	0
Bø SERVICE	79
Cø SERVICE	0
TOTAL	0

Aø Bø Cø	PRIMARY: 1/0 AL W/ FULL CONCENTRIC JACKETED NEUTRAL, 25 kV, XLPE, 260 MIL INSUL. IN 3" MIN. PVC SCH. 40, ELECT. CONDUIT
100'	3ø CONDUIT POINT TO POINT DISTANCE
100'	1ø, PHASE A CONDUIT POINT TO POINT DISTANCE
100'	1ø, PHASE B CONDUIT POINT TO POINT DISTANCE
100'	1ø, PHASE C CONDUIT POINT TO POINT DISTANCE
	VACANT Aø(EMPTY) 3" CONDUIT OR AS SPECIFIED
	VACANT Bø(EMPTY) 3" CONDUIT OR AS SPECIFIED
	VACANT Cø(EMPTY) 3" CONDUIT OR AS SPECIFIED
	VACANT (EMPTY) 3" CONDUIT OR AS SPECIFIED
	SECONDARY: 4/0 AL, 600V, TRIPLEX IN 3" PVC SCH 40, ELECT. CONDUIT
	SECONDARY: 350 MCM AL, 600V, TRIPLEX IN 3" PVC SCH 40, ELECT. CONDUIT
	2" TEMPORARY ELECTRIC SERVICE
	STREET LIGHT CABLE, 600V, #10 COPPER (2EA.), INSTALLED IN 1" PVC SCH 40 ELECT. CONDUIT OR AS SPECIFIED
	EXISTING UNDERGROUND ELECTRICAL CONDUIT
	ELECTRICAL UTILITY EASEMENT

GENERAL NOTES:

1. ALL PRIMARY CONDUIT SHALL BE SCHEDULE 40 3" PVC PER LEGEND.
2. CONSTRUCTION SHALL TAG AND CODE CABLE IN THE FIELD TO IDENTIFY PHASES.
3. ALL PRIMARY CABLE SHALL BE #1/0 AL 25 kV.
4. ALL PAD-MOUNTED ENCLOSURES INCLUDING TRANSFORMERS, SHALL BE GROUNDED IN SUCH A MANNER THAT TWO SEPARATE CONNECTIONS EXIST BETWEEN THE ENCLOSURE AND THE GROUND ROD(S). IF METER PEDESTALS, TRANSFORMERS, AND SECTIONALIZING CABINETS ARE WITHIN 10 FEET OF EACH OTHER A #2 CU. SOLID BARE WIRE SHALL TIE ALL GROUND RODS TOGETHER.
5. SECTIONALIZING CABINETS, TRANSFORMERS, EASEMENTS, CABLE, AND WIRE ARE NOT SHOWN TO SCALE IN THIS DRAWING.
6. EASEMENTS TO BE DEDICATED BY DEVELOPER TO COVER ALL ELECTRIC FACILITIES.
7. ALL ELECTRIC STREET CROSSINGS AND SERVICE EXTENSION TRENCHES TO INCLUDE TEL. & CATV.
8. IF ANY ELECTRIC FACILITIES ARE SUSCEPTIBLE TO DAMAGE FROM VEHICULAR TRAFFIC, BOLLARDS SHALL BE PLACED AROUND THE EQUIPMENT TO PREVENT DAMAGE.
9. FOR ANY PAD LOCATED IN DRAINAGE EASEMENT OR EROSION PRONE AREAS, CONTRACTOR SHALL BUILD UP PAD SITE AND REINFORCE WITH CONCRETE TO PREVENT EROSION.
10. ALL CONSTRUCTION SHALL CONFORM TO PEC STANDARDS AND PRACTICES,
11. DEVELOPER SHALL PROVIDE ALL WEATHER ACCESS ROAD WHERE UNDERGROUND ELECTRIC IS INSTALLED ON BACK OR SIDE OF LOT.
12. CONTRACTOR SHALL REFER TO PEC'S UNDERGROUND INSTALLATION SPECIFICATIONS DOCUMENTS FOUND ON THEIR WEBSITE: WWW.PEC.COOP/YOUR-SERVICE/CONSTRUCTION-DEVELOPMENT/ FOR INSTALLATION OF ELECTRICAL FACILITIES.
13. STREETLIGHT SHALL BE MANUFACTURED BY VISIONAIRE LIGHTING AND MODEL NUMBERS AS FOLLOWS:
    STREETLIGHT BASE: DCB-21 (BZ)
    STREETLIGHT POLE: RTSP-25-11-12BC-136-T3R-BZ-HHC
    STREETLIGHT ARM: VA101 (BZ)
    STREETLIGHT LED: ODN-2-L-T2-96LC-5-4K-UNV-UAM-BZ-C5-H3

ISSUED: 05-19-25
FOR CONSTRUCTION

STATE OF TEXAS
CHRISTOPHER T. HARPER
106036
LICENSED
PROFESSIONAL ENGINEER

Chris Harper
2025.07.03
18:26:47 -05'00'

NO	DATE	REVISION	BY	CHK	APPD

	DATE	BY
DRWN	04-30-25	PS
CHK	05-19-25	CTH
APPD	05-19-25	CTH

POWEREDBYSENERGY.COM
TEXAS REGISTRATION NUMBER F-1594

SENERGY
POWERED BY SCHNEIDER ELECTRIC

KIMLEY-HORN AND ASSOCIATES

ESPERANZA PHASE 3H

UNDERGROUND ELECTRICAL DISTRIBUTION LAYOUT
(SHEET 3 OF 3)

SCALE FOR 34 x 22 DWG: 1"=60'

DRAWING NO. E4

25KHA32-R00000003352

SYSTEM VOLTAGE: 14.4/24.9 kV

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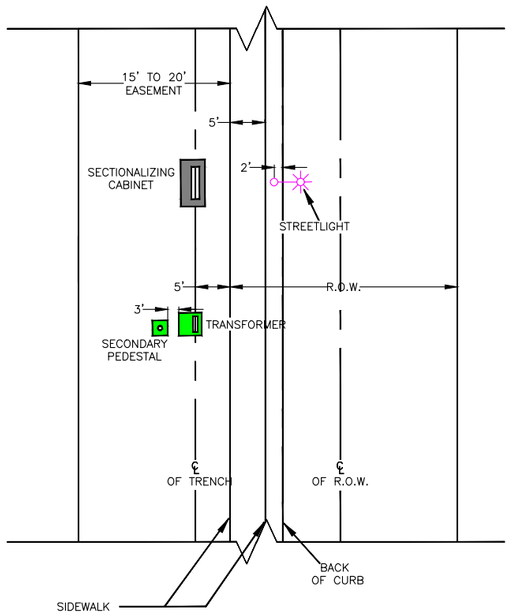
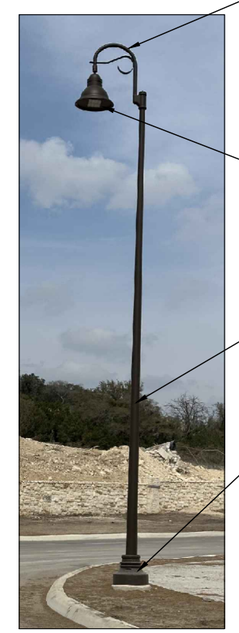


UNDERGROUND ELECTRIC ALIGNMENT DETAIL



STREETLIGHT DETAIL

ISSUED: 05-19-25
FOR CONSTRUCTION

STATE OF TEXAS
CHRISTOPHER T. HARPER
106036
LICENSED
PROFESSIONAL ENGINEER

Chris Harper
2025.07.03
18:27:20 -05'00'

NO	DATE	REVISION	BY	CHK	APPD	NO	DATE	REVISION	BY	CHK	APPD

	DATE	BY
DRWN	04-30-25	PS
CHK	05-19-25	CTH
APPD	05-19-25	CTH

POWEREDBYSENERGY.COM
TEXAS REGISTRATION NUMBER F-1594

SENERGY
POWERED BY HOMETOWN ENGINEERING

KIMLEY-HORN AND ASSOCIATES

ESPERANZA PHASE 3H

UNDERGROUND ELECTRIC ALIGNMENT & STREETLIGHT DETAIL

SCALE FOR 34 x 22 DWG: N.T.S.

DRAWING NO. E5

25KHA32-R00000003352

SYSTEM VOLTAGE: 14.4/24.9 kV

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