



PLANNING AND ZONING COMMISSION AGENDA
THURSDAY, JUNE 1, 2023, 4:00 PM
CITY HALL COUNCIL CHAMBERS
701 MAIN STREET, KERRVILLE, TEXAS



1 MINUTES

- 1.A Approval of Meeting Minutes from May 11, 2023 regular meeting.

Attachments:

[*20230511_PZ Meeting Minutes_draft.pdf*](#)

2 CONSIDERATION AND FINAL ACTION

- 2.A A final plat establishing Comanche Trace, Phase 12A, an 8.88 acre tract of land located in the William Watt Survey No. 65, Abstract No. 364, Kerr County, Texas, and being a portion of a called 1131.78 acre tract of land as described in Volume 971, Page 698 of the Real Property Records of Kerr County, Texas. (Case 2023-019)

Attachments:

[*2023-019_Proposed Final Plat_Comanche Trace Ph 12A.pdf*](#)

3 PUBLIC HEARING, CONSIDERATION & ACTION

- 3.A Ordinance No. 2023-12. An Ordinance amending Chapter 60 of the Code of Ordinances, City of Kerrville, Texas, such chapter more commonly known as the City's Zoning Code; by amending said code to revise regulations pertaining to the location of accessory buildings and structures within the front setback as to fences; providing a cumulative clause; providing for severability; providing an effective date; ordering publication; and providing other matters relating to the subject. (Case No. 2023-013)

3.B

An ordinance to annex into the City of Kerrville's incorporated limits a 214.1 acre tract of land situated in the Samuel Wallace Survey Number 114, Abstract No. 348, and Samuel Wallace Survey Number 113, Abstract No. 347, Kerr County, Texas, including a segment of Olympic Drive right-of-way, with a zoning classification of Agriculture (AG), Planned Development District (PDD), and General Commercial (C-3); and more commonly known as 2945 Loop 534. (Case No. PZ-2023-6)

Attachments:

[PZ-2023-6_Annexation Location Map.pdf](#)
[PZ-2023-6_Zoning Location Map_final.pdf](#)
[PZ-2023-6_Zoning Exhibit-rev 230508.pdf](#)
[PZ-2023-6_PD Description.pdf](#)
[PZ-2023-6_ TIA summary.pdf](#)

4 STAFF REPORT

5 EXECUTIVE SESSION

At any time during the meeting, the Planning and Zoning Commission may meet in executive session regarding any of the matters posted above for attorney-client consultation in compliance with the Texas Open Meetings Act.

6 ADJOURNMENT



**TO BE CONSIDERED BY THE PLANNING AND ZONING
COMMISSION
CITY OF KERRVILLE, TEXAS**

SUBJECT: Approval of Meeting Minutes from May 11, 2023 regular meeting.

AGENDA DATE OF: June 1, 2023

DATE SUBMITTED:

SUBMITTED BY: Steve Melander, City Planner

EXHIBITS:

Expenditure Required:	Remaining Budget Balance in Account:	Amount Budgeted:	Account Number:
N/A	N/A	N/A	N/A

PAYMENT TO BE MADE TO: N/A

Kerrville 2050 Item? No

Key Priority Area N/A

Guiding Principle N/A

Action Item N/A

SUMMARY STATEMENT:

RECOMMENDED ACTION:

Approve or approve with specific revisions.

ATTACHMENTS:

[20230511_PZ Meeting Minutes_draft.pdf](#)

**PLANNING & ZONING COMMISSION
REGULAR MEETING MINUTES**

**KERRVILLE, TEXAS
MAY 11, 2023**

COMMISSIONERS PRESENT:

Mike Sigerman – Chair
David Lipscomb – Vice Chair
Abram Bueche
Jeff Harris
Kim Richards

COMMISSIONERS ABSENT:

Kevin Bernhard
Tabor McMillan

CITY CORE STAFF PRESENT:

Drew Paxton
Steve Melander
Mike Hayes
Michael Hornes
Kyle Burow
Stuart Barron

CALL TO ORDER

Meeting called to order by Mike Sigerman at 4pm.

1) MINUTES

1.A Approval of Meeting Minutes from the April 6, 2023 regular meeting.

20230406_PZ Meeting Minutes_draft.pdf

Jeff Harris moved to approve the minutes; David Lipscomb seconded the motion, and the motion carried 5-0.

2) CONSIDERATION AND FINAL ACTION

2.A A preliminary plat establishing Gardens at Comanche Trace, a 111.806 acre tract of land located in the William Watt Survey No. 64, Abstract No. 363, and the William T Crook Survey No. 63, Abstract No. 116, Kerr County, Texas, and being a portion of a called 610.79 acre tract of land as described of record in Document No. 22-03728 of the Official Public Records of Kerr County, Texas. (Case 2023-003)

2023-003_Proposed Preliminary Plat_March 2023_low res.pdf
2023-003_Adequate Facilities Plan_April 2023_low res.pdf
2023-003_Conditions of Approval_Preliminary Plat.pdf

Drew Paxton presented the case.

David Lipscomb moved to approve the preliminary plat with conditions; Abram Bueche seconded the motion, and the motion carried 5-0.

3) PUBLIC HEARING, CONSIDERATION & ACTION

3.A An ordinance to change the zoning from RM (Residential Mix) to PI (Public and Institutional) on a 15.92 acre tract of land situated in Kerr County, Texas; being comprised of approximately 1.02 acres in the Thomas N. Minter Survey No. 110, Abstract No. 248 and 14.90 acres in the Samuel Wallace Survey No. 111, Abstract No. 359, Kerr County, Texas; being that same tract called 15.51 acres having been conveyed from John Bradley Roberson and Corrine M. Roberson to Brian McCarty and Maria McCarty by an Assumption Warranty Deed Executed the 28th day of September, 2001, recorded in Volume 1148, Page 610, Real Property Records Of Kerr County, Texas; and more commonly known as 199 Spur 100 N. (Case No. PZ-2023-3)

PZ-2023-3_Location Map.pdf
PZ-2023-3_Zoning Map.pdf

Drew Paxton presented the case.

Mike Wellborn was called to speak.

Drew Paxton presented additional information.

Open public hearing.

Dianne Meeker DeBarros was called to speak.

Barbara Goss Johnston was called to speak.

Close public hearing.

David Lipscomb was called to speak.

Judge Kelly was called to speak.

Mike Sigerman was called to speak.

General discussion occurred.

Jeff Harris was called to speak.

Kim Richards was called to speak.

Commission encouraged cooperation between County and adjacent property owners during project design and construction.

Jeff Harris moved to approve the ordinance; Kim Richards seconded the motion, and the motion carried 5-0.

3.B An ordinance to annex into the City of Kerrville's incorporated limits with a zoning classification of R-2 (Medium Density Residential) 111.806 acre tract of land, located in the William Watt Survey No. 64, Abs 363, and the William T Crook Survey No. 63, ABS 116, Kerr County, Texas; and generally located near the intersection of Comanche Trace Drive and Lower Turtle Creek Road. (Case No. PZ-2023-4)

PZ-2023-4_Location Map.pdf

PZ-2023-4_Annexation Survey & Field Notes.pdf

PZ-2023-4_Zoning Map.pdf

PZ-2023-4_Dittloff-In Favor.pdf

PZ-2023-4_Leporati_Opposed.pdf

Drew Paxton presented the case.

Ken Kolacny was called to speak.

Open public hearing.

Mark Mosier was called to speak.

Chris Chilos was called to speak.

Roy Martin was called to speak.

Stuart Barron was called to speak.

Ken Kolacny was called to speak.

Drew Paxton was called to speak.

Mark Mosier was called to speak.

Harold McDaniel was called to speak.

Close public hearing.

Mike Sigerman was called to speak.

David Lipscomb moved to approve the ordinance; Abram Bueche seconded the motion, and the motion carried 5-0.

3.C An ordinance to change the zoning from R-2 Medium Density Residential to C-2 Light Commercial on ABS A0106 Cage Addition, Survey 116, Acres .75; and more commonly known as 512 Yorktown Blvd. (Case No. PZ-2023-5)

PZ-2023-5_Location Map.pdf
PZ-2023-5_Zoning Map.pdf

Drew Paxton presented the case.

Open public hearing.

Denise LeMeilleur was called to speak.

Close public hearing.

Jeff Harris moved to approve the ordinance; David Lipscomb seconded the motion, and the motion carried 5-0.

4) STAFF REPORT

Next meeting June 1, 2023.

5) EXECUTIVE SESSION

None.

6) ADJOURNMENT

Meeting adjourned by Mike Sigerman at 4:53pm.

Submitted by:

Steve Melander, Planning

Approved by:

Mike Sigerman, Chair

Approval Date:



**TO BE CONSIDERED BY THE PLANNING AND ZONING
COMMISSION
CITY OF KERRVILLE, TEXAS**

SUBJECT: A final plat establishing Comanche Trace, Phase 12A, an 8.88 acre tract of land located in the William Watt Survey No. 65, Abstract No. 364, Kerr County, Texas, and being a portion of a called 1131.78 acre tract of land as described in Volume 971, Page 698 of the Real Property Records of Kerr County, Texas. (Case 2023-019)

AGENDA DATE OF: June 1, 2023

DATE SUBMITTED:

SUBMITTED BY: Steve Melander, City Planner

EXHIBITS:

Expenditure Required:	Remaining Budget Balance in Account:	Amount Budgeted:	Account Number:
N/A	N/A	N/A	N/A

PAYMENT TO BE MADE TO: N/A

Kerrville 2050 Item? Yes

Key Priority Area H - Housing

Guiding Principle N/A

Action Item N/A

SUMMARY STATEMENT:

The preliminary plat for Comanche Trace Phase 12A and 12B were approved by the Planning & Zoning Commission on July 7, 2022. This final plat submittal for Comanche Trace 12A is in conformance with City code and conditions of approval. All required improvements have been installed. Comanche Trace Phase 12B final plat will be submitted at a later date.

RECOMMENDED ACTION:

Approve the final plat.

ATTACHMENTS:

[*2023-019_Proposed Final Plat_Comanche Trace Ph 12A.pdf*](#)

KNOW ALL MEN BY THESE PRESENTS:

THAT I, KYLE L. PRESSLER DO HEREBY CERTIFY THAT I MADE AN ACTUAL AND ACCURATE SURVEY ON THE GROUND OF THE HEREON PLATTED LAND AND THAT THE CORNER MONUMENTS SHOWN HEREON WERE PROPERLY PLACED UNDER MY PERSONAL SUPERVISION IN ACCORDANCE WITH THE SUBDIVISION ORDINANCE OF THE CITY OF KERRVILLE, TEXAS.

DATED THIS ____ DAY OF _____, 20__

KYLE L. PRESSLER
REGISTERED PROFESSIONAL LAND SURVEYOR
TEXAS REGISTRATION NO. 6528

IN ACCORDANCE WITH SEC 82-33 OF THE CODE OF ORDINANCE OF THE CITY OF KERRVILLE, TEXAS, AND IN CONSIDERATION OF THE APPROVAL OF COMANCHE TRACE 12A, COMANCHE TRACE DEVELOPMENT, L.P. DOES HEREBY WAIVE ANY AND ALL CLAIMS FOR DAMAGES MADE AGAINST THE CITY OF KERRVILLE, KERR COUNTY, TEXAS, OCCASIONED BY THE ESTABLISHMENT OF GRADES OF THE ALTERATION OF THE SURFACE OF ANY PORTION OF EXISTING STREETS AND ALLEYS TO CONFORM TO THE GRADES ESTABLISHED IN THE ABOVE NAMED SUBDIVISION.

DATED THIS ____ DAY OF _____, 20__

COMANCHE TRACE DEVELOPMENT COMPANY, LP
STEVEN C. HELD, PRESIDENT/CEO

STATE OF TEXAS
COUNTY OF KERR

THAT I, STEVEN C. HELD, BEING A DULY AUTHORIZED REPRESENTATIVE FOR COMANCHE TRACE DEVELOPMENT COMPANY, LP, THE OWNER OF THE LAND SHOWN AND PLATTED HEREON FOR SUBDIVISION, HEREBY ADOPT THIS PLAT OF SUBDIVISION, ESTABLISH THE MINIMUM BUILDING RESTRICTION LINES AND DEDICATE ALL EASEMENTS FOR PURPOSES NOTED.

WITNESS MY HAND THIS ____ DAY OF _____, 20__

COMANCHE TRACE DEVELOPMENT COMPANY, LP
STEVEN C. HELD, PRESIDENT/CEO

STATE OF TEXAS
COUNTY OF KERR

BEFORE ME, THE UNDERSIGNED AUTHORITY ON THIS DAY PERSONALLY APPEARED STEVEN C. HELD, 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 FOR THE STATE OF TEXAS

I HEREBY CERTIFY THAT THIS SUBDIVISION PLAT MEETS THE CITY MASTER GRID SYSTEM REGARDING STREET NAMES AND ADDRESSES ASSIGNED BY THE CITY OF KERRVILLE PLANNING DIVISION.

_____, 20__
DREW PAXTON, DIRECTOR OF PLANNING & DEVELOPMENT

I HEREBY CERTIFY THAT THE SUBDIVISION PLATTED HEREON HAS BEEN FOUND TO COMPLY WITH THE SUBDIVISION REGULATIONS OF KERRVILLE, TEXAS AND THAT IT HAS BEEN APPROVED FOR RECORDING IN THE OFFICE OF THE KERR COUNTY CLERK.

_____, 20__
CHAIRPERSON, CITY OF KERRVILLE PLANNING AND ZONING COMMISSION

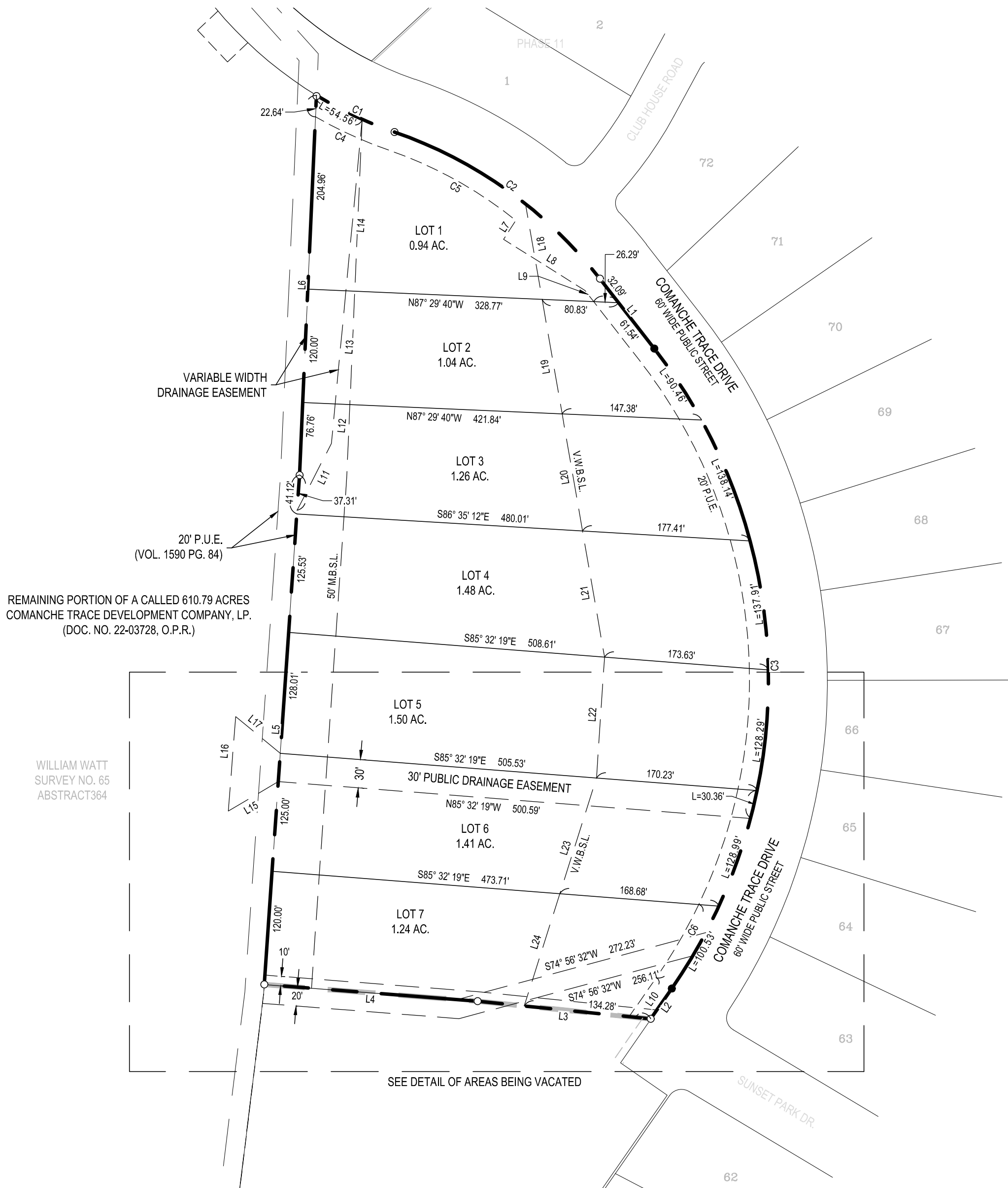
I HEREBY CERTIFY THAT THE SUBDIVISION PLATTED HEREON HAS BEEN FOUND TO COMPLY WITH THE SUBDIVISION REGULATIONS OF KERRVILLE, TEXAS AND THAT IT IS EXISTING IN AN ACCEPTABLE MANNER AND IS CURRENTLY SERVED BY PUBLIC INFRASTRUCTURE.

DATED THIS ____ DAY OF _____, 20__

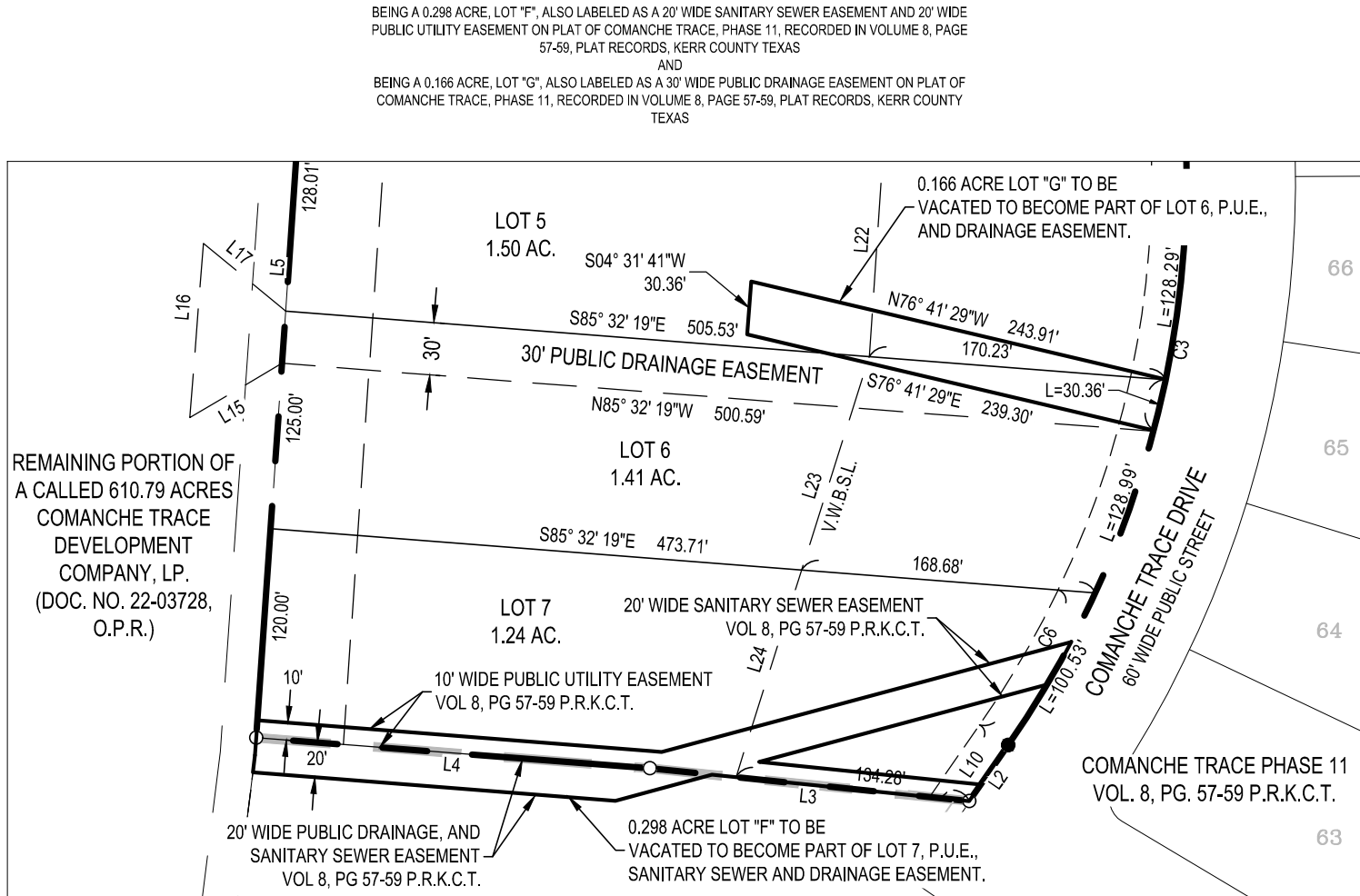
KYLE BUROW, CITY ENGINEER

A FINAL PLAT ESTABLISHING COMANCHE TRACE, PHASE 12A

A 8.88 ACRE TRACT OF LAND LOCATED IN THE WILLIAM WATT SURVEY NO. 65, ABSTRACT NO. 364, KERR COUNTY, TEXAS, AND BEING A PORTION OF A CALLED 1131.78 ACRE TRACT OF LAND AS DESCRIBED IN VOLUME 971, PAGE 698 OF THE REAL PROPERTY RECORDS OF KERR COUNTY, TEXAS.



AREAS BEING VACATED



LINE TABLE		
LINE	BEARING	DISTANCE
L1	S37° 57' 32"E	93.62'
L2	S34° 50' 56"W	39.01'
L3	N84° 10' 04"W	183.93'
L4	N85° 32' 19"W	226.07'
L5	N03° 56' 59"E	539.67'
L6	N02° 34' 03"E	401.71'
L7	S32° 41' 36"W	23.86'
L8	S57° 51' 17"E	101.53'
L9	S37° 51' 32"E	15.03'
L10	S34° 50' 56"W	50.11'
L11	S27° 10' 24"W	79.49'
L12	S05° 26' 05"W	41.87'
L13	S05° 26' 05"W	120.16'
L14	S05° 26' 05"W	182.09'
L15	S59° 27' 41"W	61.37'
L16	N04° 27' 41"E	100.21'
L17	S50° 32' 19"E	61.04'
L18	N09° 53' 59"W	102.54'
L19	N09° 53' 59"W	122.87'
L20	N09° 53' 59"W	125.59'
L21	N09° 53' 59"W	135.29'
L22	N03° 48' 27"E	128.01'
L23	N17° 35' 19"E	128.35'
L24	N17° 35' 19"E	124.44'

CURVE TABLE					
CURVE	RADIUS	LENGTH	DELTA	CHORD BEARING	CHORD LENGTH
C1	430.00'	91.24'	12°09'25"	S64° 51' 43"E	91.06'
C2	470.00'	270.55'	32°58'53"	S54° 26' 59"E	266.83'
C3	570.00'	724.32'	72°48'28"	S01° 33' 18"E	676.56'
C4	450.00'	84.62'	10°46'28"	S65° 33' 11"E	84.50'
C5	450.00'	154.73'	19°42'02"	S61° 05' 24"E	153.97'
C6	550.00'	89.59'	9°20'00"	S30° 10' 55"W	89.49'

NOTES:

- THE PROPERTY SHOWN HEREON IS LOCATED COMPLETELY WITHIN ZONE X ACCORDING TO THE FLOOD INSURANCE RATE MAP (FIRM) FOR KERR COUNTY, TEXAS (REF.: MAP NO.48265C0659F) MAP DATE: MARCH 03, 2011.
- BEARINGS AND DISTANCES SHOWN HEREON ARE EITHER NEWLY CREATED OR BEAR NO SIGNIFICANT DIFFERENCES FROM THE RECORD CALLS FOR THEIR RESPECTIVE LINES.
- BUILDING SETBACKS WILL BE IN ACCORDANCE WITH THE CITY OF KERRVILLE COMPREHENSIVE ZONING ORDINANCE AND ANY APPLICABLE RESTRICTIONS ESTABLISHED BY COMANCHE TRACE RANCH & GOLF CLUB.
- BEARINGS ARE BASED ON THE STATE PLANE COORDINATE SYSTEM ESTABLISHED FOR THE TEXAS SOUTH CENTRAL ZONE 4204, NORTH AMERICAN DATUM (NAD) OF 1983.
- ORIGINAL SURVEY LINES SHOWN ARE APPROXIMATE. NO ATTEMPT HAS BEEN MADE TO LOCATE ORIGINAL SURVEY LINES.
- THE PRELIMINARY PLAT OF COMANCHE TRACE PHASE 12A & 12B WAS APPROVED BY THE CITY OF KERRVILLE PLANNING & ZONING COMMISSION ON JULY 22, 2022 (FILE NO. 2022-035).

FILED FOR RECORD ON THE ____ DAY OF _____, 2022
AT ____ O'CLOCK ____ M.
RECORDED ON THE ____ DAY OF _____, 2022
AT ____ O'CLOCK ____ M. IN FILE # ____ OF ____
THE PLAT RECORDS OF KERR COUNTY, TEXAS.

JACKIE DOWDY, KERR COUNTY CLERK

MATKIN
HOOPER

8 SPENCER ROAD SUITE 100
BOERNE, TEXAS 78009
OFFICE: 830.240.2800 FAX: 830.240.0500
TEXAS REGISTERED ENGINEERING FIRM E-1004512
TEXAS REGISTERED SURVEYING FIRM E-10024000
CIVIL ENGINEERS SURVEYORS LAND-PLANNERS CONSTRUCTION MANAGERS CONSULTANTS

ENGINEERING
& SURVEYING

DATE: MAY 2023
MHES JOB NO. - 2041.32
CITY OF KERRVILLE
PLAT FILE # 2023-XXXXXX

SHEET 1 OF 1



**TO BE CONSIDERED BY THE PLANNING AND ZONING
COMMISSION
CITY OF KERRVILLE, TEXAS**

SUBJECT: Ordinance No. 2023-12. An Ordinance amending Chapter 60 of the Code of Ordinances, City of Kerrville, Texas, such chapter more commonly known as the City's Zoning Code; by amending said code to revise regulations pertaining to the location of accessory buildings and structures within the front setback as to fences; providing a cumulative clause; providing for severability; providing an effective date; ordering publication; and providing other matters relating to the subject. (Case No. 2023-013)

AGENDA DATE OF: June 1, 2023

DATE SUBMITTED: March 29, 2023

SUBMITTED BY: Drew Paxton, Planning Director

EXHIBITS:

Expenditure Required:	Remaining Budget Balance in Account:	Amount Budgeted:	Account Number:
\$0	\$0	\$0	N/A

PAYMENT TO BE MADE TO: N/A

Kerrville 2050 Item?	Yes
Key Priority Area	C - Community / Neighborhood Character and Place Making
Guiding Principle	N/A
Action Item	N/A

SUMMARY STATEMENT:

As a part of the City's commitment to the regular review of the zoning code, the sections related to *Location of accessory buildings or structures beyond setback* has raised some concerns as it relates to fences. The City has had several building permit applications for fences to be built that do not conform to the "ornamental fence" style. Overall, the fence requirements lack definition and clarity. As this was discussed with the Planning and Zoning Commission, the following items were identified for a potential amendment to the code.

The goal is to amend the zoning code to provide both flexibility and clarity on the fence material regulations, allow for fence types/materials other than "ornamental fence", and continue to prevent view obstruction along the street.

Previously, the Planning and Zoning Commission (P&Z) made recommendations to City Council to remove the requirement for ornamental style fence materials, thereby allowing other visually non-obstructing materials.

At one of the City Council meetings, citizens brought up the limited height requirement for solid fencing in the front yard, requesting consideration for fencing as tall 48 inches. Since this height limitation was not discussed with P&Z, City Council has asked the P&Z to review the height restrictions and make a recommendation.

As previously presented and recommended.

Regarding fences in the front yard, as defined by the zoning district front,

- shall not exceed 30 inches in height for solid fences, and/or
- shall not exceed 72 inches for see-through (or non-visibility obstructing) fences, i.e. post and rail, hog wire panels, etc.
- fences may be constructed as a combination of solid and see-through, so long as the solid portions do not exceed 30 inches in height from the ground.
- Height shall be measured from the ground level, constructed berms, mounds, or retaining walls.

Kerrville citizens and City Council has asked P&Z to consider and discuss adjusting the maximum height for solid fences to 48 inches.

The fence exception portion of the zoning code is repeated in most zoning districts. As such, the following sections will be amended:

- 60-50(a) (7) a. - RE
- 60-50 (b) (7) a. - R-1
- 60-50 (c) (7) a. - R-1A
- 60-50 (d) (9) a. - R-2
- 60-50 (e) (7) a. - R-3
- 60-50 (f) (9) a. - RM
- 60-50 (g) (7) a. - RT
- 60-51 (a) (4) - C-1
- 60-51 (b) (4) - C-2
- 60-51 (c) (4) - C-3
- 60-52 (a) (6) - DAC
- 60-52 (b) (5) - MU
- 60-52 (d) (4) a. - PI
- 60-52 (e) (4) - AD

RECOMMENDED ACTION:

Approve Ordinance No. 2023-12 on First Reading.



**TO BE CONSIDERED BY THE PLANNING AND ZONING
COMMISSION
CITY OF KERRVILLE, TEXAS**

SUBJECT:

An ordinance to annex into the City of Kerrville's incorporated limits a 214.1 acre tract of land situated in the Samuel Wallace Survey Number 114, Abstract No. 348, and Samuel Wallace Survey Number 113, Abstract No. 347, Kerr County, Texas, including a segment of Olympic Drive right-of-way, with a zoning classification of Agriculture (AG), Planned Development District (PDD), and General Commercial (C-3); and more commonly known as 2945 Loop 534. (Case No. PZ-2023-6)

AGENDA DATE OF: June 1, 2023

DATE SUBMITTED:

SUBMITTED BY: Drew Paxton, Planning Director

EXHIBITS:

Expenditure Required:	Remaining Budget Balance in Account:	Amount Budgeted:	Account Number:
N/A	N/A	N/A	N/A

PAYMENT TO BE MADE TO: N/A

Kerrville 2050 Item? Yes

Key Priority Area H - Housing

Guiding Principle N/A

Action Item N/A

SUMMARY STATEMENT:

An ordinance to annex into the City of Kerrville's incorporated limits a 214.1 acre tract of land situated in the Samuel Wallace Survey Number 114, Abstract No. 348, and Samuel Wallace Survey Number 113, Abstract No. 347, Kerr County, Texas, including a segment of Olympic Drive right-of-way, with a zoning classification of Agriculture (AG), Planned Development District (PDD), and General Commercial (C-3); and more commonly known as 2945 Loop 534. (Case No. PZ-2023-6)

Procedural Requirements

The City, in accordance with state law, mailed 44 letters on 5/18/2023 to adjacent property owners. The City published a similar notice in the Kerrville Daily Times on 5/11/2023. Signs were also posted on the property in accordance with current zoning code.

Staff Analysis and Recommendation

Consistency with the Kerrville 2050 Comprehensive Plan: The property is within the Strategic Catalyst Area No. 8 which is the area that “surrounds Loop 534 and is largely undeveloped. In the future it will likely serve as a link to Tivy High School.” (Kerrville 2050, 2018) Since the adoption of the Kerrville 2050 Comprehensive Plan, Hal Peterson Middle School has been constructed to the south of this property and has expanded the anchor that KISD facilities serve in the area. The SCA 8 focuses on both residential and commercial for the area and the community. This request for annexation and Residential Planned Development and commercial is consistent with the Future Land Use Plan of the Kerrville 2050 Plan.

Adjacent Zoning and Land Uses:

Subject Property

Current Zoning: None.

Existing Land Uses: Vacant

Direction: North

Current Zoning: R-1

Existing Land Uses: Residential and vacant land.

Direction: West

Current Zoning: R-1 and R-2

Existing Land Uses: Residential.

Direction: South

Current Zoning: PI and R-2

Existing Land Uses: Hal Peterson Middle School and residential.

Direction: East

Current Zoning: AG and PI

Existing Land Uses: Loop 534 and church property and vacant land (across Loop 534)

Thoroughfare Plan: There should be no impact to the thoroughfare plan as these developments are anticipated within the Thoroughfare Plan, adjacent to the Loop 534 (major arterial) and Olympic Drive (collector).

Traffic Impact: With much of the development fronting Loop 534 and the request for Planned Development District zoning, the Traffic Impact Analysis was required as a part of the application. The TIA summary is attached. Any improvements necessary for the build out of the development are required to be built/installed at the development's expense.

Parking: To be determined, per project, at the time of the building permit.

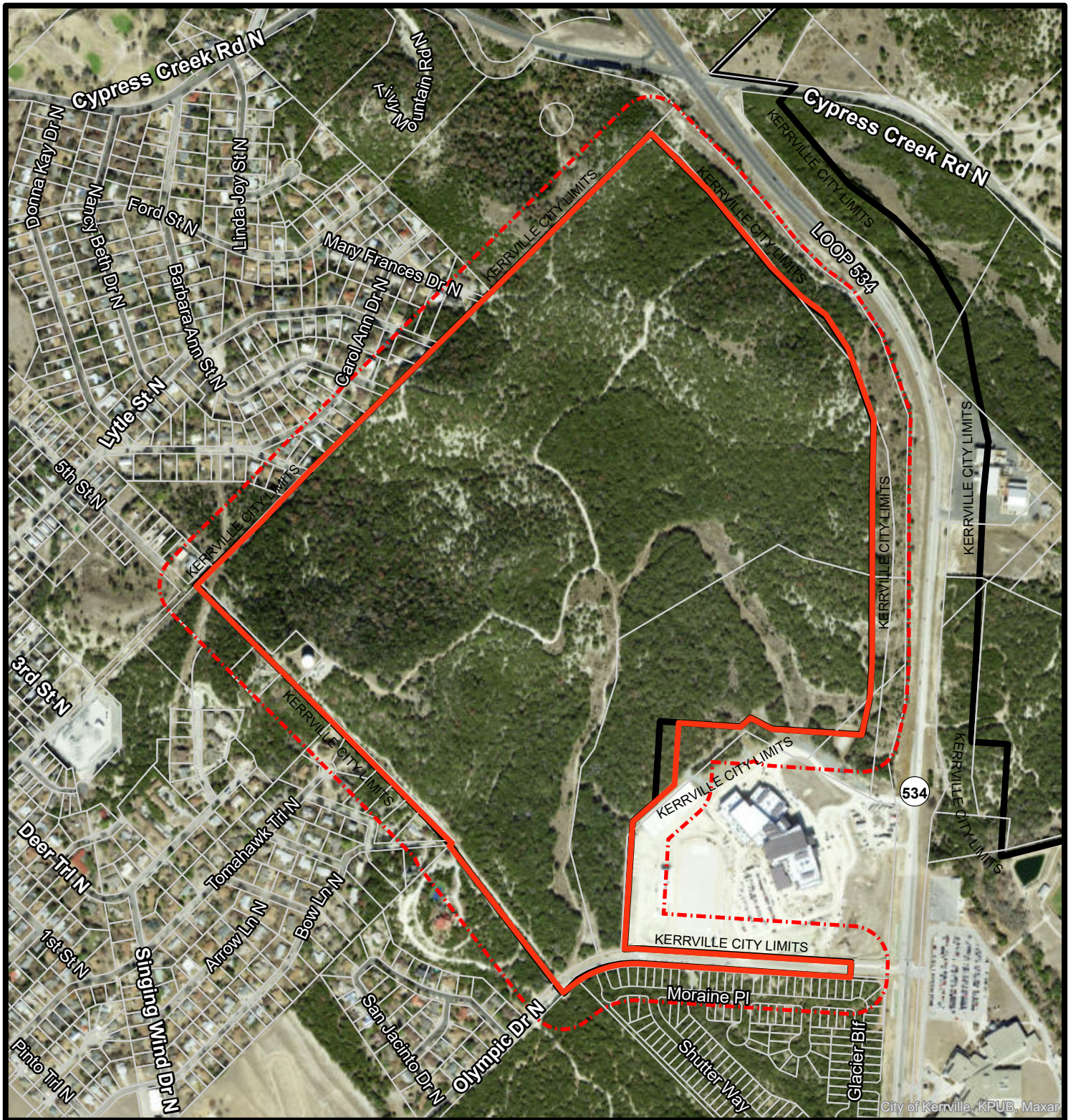
Recommendation: Based on the consistency with the Kerrville 2050 Comprehensive Plan, staff recommends the case for approval.

RECOMMENDED ACTION:

Approve the ordinance.

ATTACHMENTS:

[*PZ-2023-6_Annexation Location Map.pdf*](#)
[*PZ-2023-6_Zoning Location Map_final.pdf*](#)
[*PZ-2023-6_Zoning Exhibit-rev 230508.pdf*](#)
[*PZ-2023-6_PD Description.pdf*](#)
[*PZ-2023-6_TIA summary.pdf*](#)



Location Map

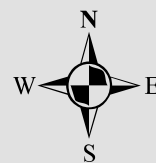
PZ-2023-6

Location:

Schreiner Lennar Annexation & Zoning Area

Legend

- Subject Properties
- - - 200 Feet Notification Area



0 250 500 1,000

Scale In Feet

05/16/2023



Location Map

PZ-2023-6

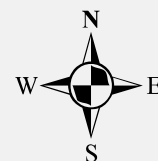
Location:

Schreiner Lennar Proposed Development

05/18/2023

Legend

- Subject Properties
- 200 Feet Notification Area

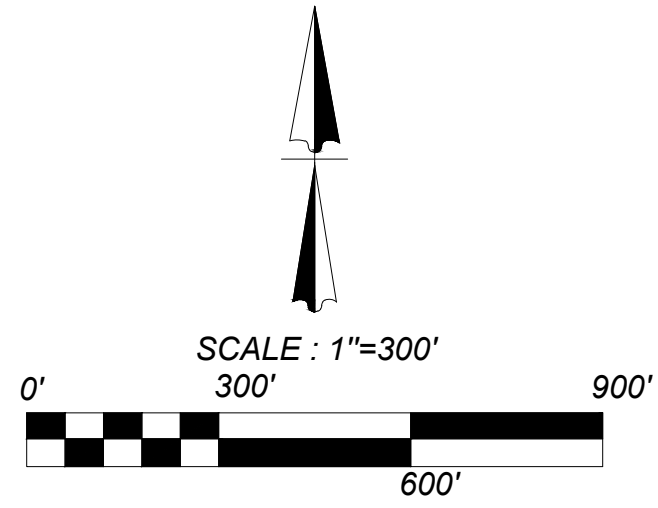
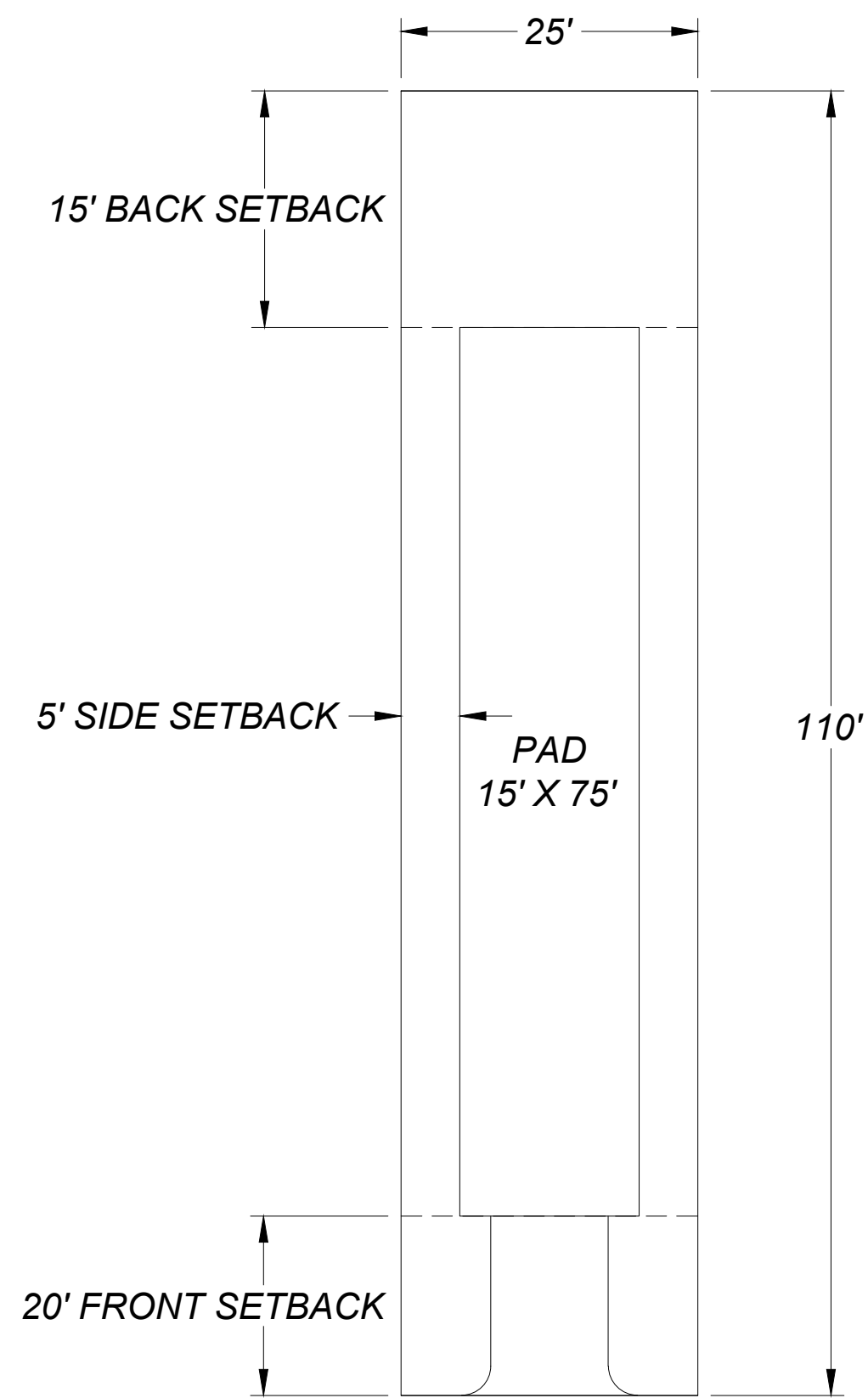


0 250 500 1,000

Scale In Feet

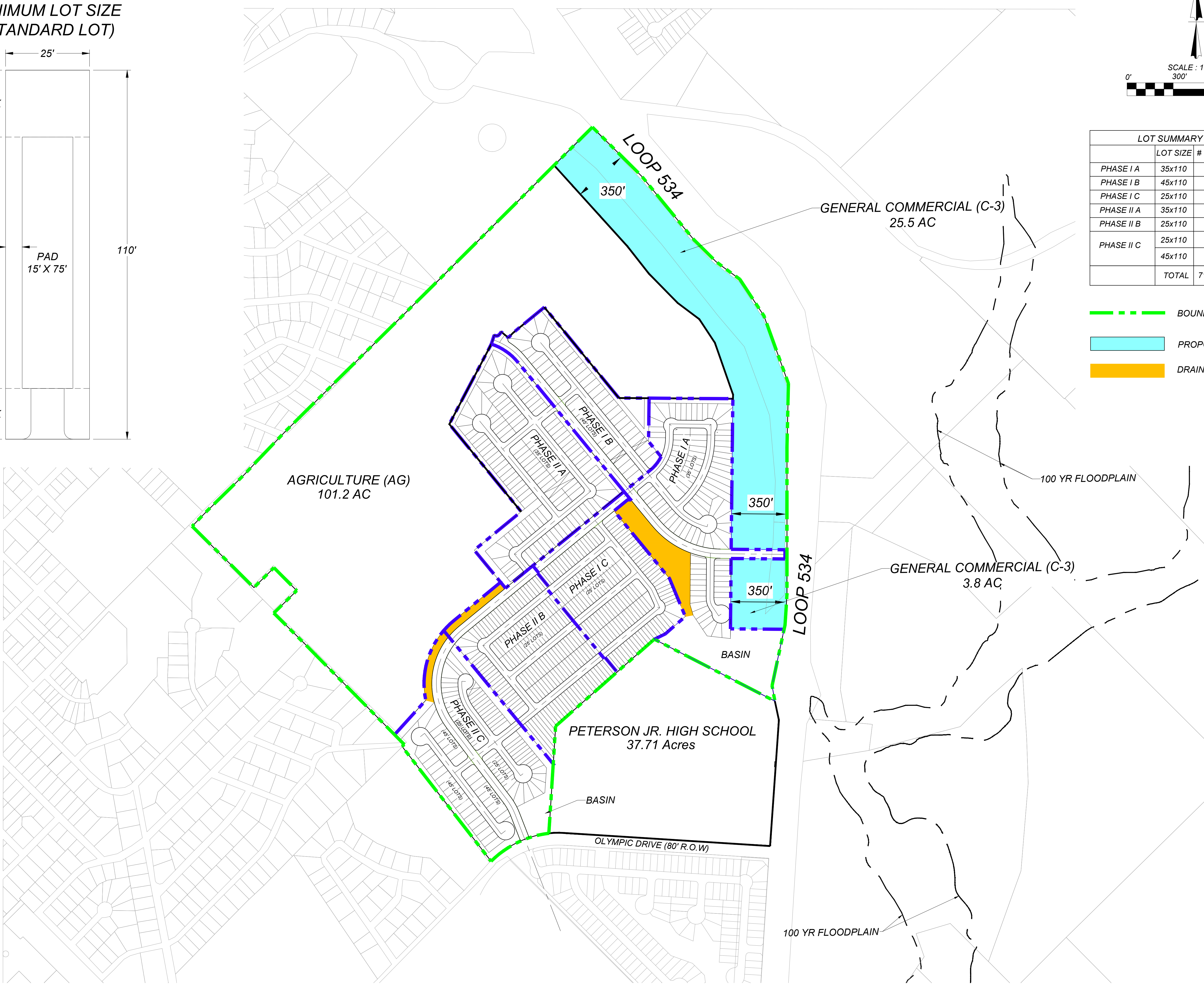
This product is for informational purposes and may not have been prepared for or be suitable for legal, engineering, or surveying purposes. It does not represent an on-the-ground survey and represents only approximate relative locations.

MINIMUM LOT SIZE
(STANDARD LOT)



LOT SUMMARY TABLE			
	LOT SIZE	# OF LOTS	ACREAGE
PHASE I A	35x110	149	23.47
PHASE I B	45x110	50	10.94
PHASE I C	25x110	141	13.13
PHASE II A	35x110	126	19.13
PHASE II B	25x110	158	15.19
PHASE II C	25x110	60	18.47
	45x110	35	
	TOTAL	719 LOTS	100.33 AC.

- BOUNDARY
- PROPOSED COMMERCIAL
- DRAINAGE



ISSUE DATE
REVISIONS

KERRVILLE LOOP 534 TRACT
KERRVILLE, TEXAS
ACREAGE LAYOUT EXHIBIT

May 8, 2023

City of Kerrville - Planning & Zoning Commission
701 Main Street
Kerrville, TX 78028

Windridge Subdivision
Dear Board Members,

This document outlines the *PD Conditions*, as required by Article VIII, Section 60-52(c)(8)b. of the Code of Ordinances, for the proposed Planned Development. **Table 1** addresses Items 1, 2, and 3 of the *PD Conditions*. **Table 2** addresses Items 4, 5, 6 and 7. There is currently no area reserved for landscaping and/or open space (Item 8). Efforts will be made to have grass lined drainage facilities throughout the PD. A minimum building height is not applicable (Item 9). The maximum building height is 35' (Item 10). The single-family residential portion of the PD will require a minimum of two (2) parking spots per lot. The commercial portion will follow Article XII, Section 60-104 for parking standards (Item 11). The maintenance of all open space, greenbelts, parks, tree save areas, drainage easements and any other easements of any nature within this subdivision shall be the responsibility of the property owners, or the property owners' association or its successors or assigns and not the responsibility of the City of Kerrville or Kerr County (Item 12).

Table 1: Land Use Characteristics	
Land Use	Acreage
Total Area	230.9 Acres
Single Family Residential Area	100.3 Acres
Commercial Area 1	25.5 Acres
Commercial Area 2	3.8 Acres
Remainder (AG):	101.2 Acres

Table 2:Standard Lot Characteristics*	
Minimum Lot Width	25 Feet
Minimum Lot Depth	110 Feet
Minimum Lot Area	2750 SF
Minimum Front Setback	20 Feet
Minimum Side Setback	5 Feet
Minimum Rear Setback	15 Feet

***Note: Non-Standard Lots may have reduced minimum setbacks**

Sincerely,

Colliers Engineering & Design, Inc.



Jeff Martin, P.E.
Senior Project Manager



Engineering
& Design

Traffic Impact Analysis

April 28, 2023

Windridge


City of Kerrville ETJ, Kerr County, Texas



Prepared for:

Lennar Homes of Texas
100 NE Loop 410
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Project No. 23004077A

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Introduction

This Traffic Impact Analysis has been prepared for Lennar Homes of Texas ("Applicant") in association with a proposed mixed-use development ("Project") within the City of Kerrville ETJ, Kerr County, Texas. The proposed development is anticipated to consist of 721 residential dwellings and 214,000 SF of commercial space, developed in three (3) phases. Phase 1 will consist of 340 single-family residential dwellings; Phase 2 will consist of 381 single-family residential dwellings; and Phase 3 will consist of 214,000 SF of commercial space. The site is bounded by Veterans Highway (Loop 534) to the east, Olympic Drive and Hal Peterson Middle School to the south, and residential land uses to the north and the west. A Site Location Map and the Site Exhibit are included as **Figures 1** and **2** in **Appendix B**.

Access to the site is proposed via three (3) driveways along Veterans Highway (Loop 534), north of Hal Peterson Middle School, and one (1) driveway along Olympic Drive, west of Hal Peterson Middle School. The Residential Site Driveway along Veterans Highway (Loop 534) is proposed as a full-movement, signalized three-leg intersection located approximately 1,950' north of Olympic Drive. The Southern Commercial Driveway is proposed as a 3/4 access, restricting exiting left turns, opposite to the existing Calvary Temple Church driveway. The Northern Commercial Driveway is proposed as a right-in/right-out-only access. The Residential Site Driveway along Olympic Drive is proposed as a full-movement access that will create the fourth leg of the intersection with the adjacent residential development by others. The driveway locations are consistent with the required 425' driveway spacing per Table 2-2 within the Texas Department of Transportation's (TxDOT) *Access Management Manual*.

A TIA scoping meeting was held on April 28, 2023 with TxDOT and the City of Kerrville. The TIA scoping document and meeting minutes are included in **Appendix A**. This study presents an evaluation of the current and future traffic conditions in the vicinity of the Project. Specific elements included in this study are:

- An inventory of the roadway facilities in the vicinity of the project, including the existing physical and traffic operating characteristics;
- Determination of the Existing Conditions;
- Site Generated Trips as described in the ITE Trip Generation Manual, 11th Edition;
- Trip Distribution and Assignment;
- Forecast of 2025 No-Build Traffic Volumes;
- Forecast of the 2025 Phase 1 Build Traffic Volumes;
- Forecast of 2028 No-Build Traffic Volumes;
- Peak Hour Capacity Analysis for the 2028 No-Build Conditions;
- Forecast of the 2028 Phase 2 Build Traffic Volumes;
- Forecast of the 2028 Phase 3 Build Traffic Volumes;
- Peak Hour Capacity Analysis for the 2028 Phase 3 Build Conditions; and
- Summary and Conclusions.

Existing Roadway Conditions

A field investigation was conducted adjacent to the project site to obtain an inventory of existing roadway conditions, posted traffic controls, adjacent land uses, lane configurations, and existing traffic patterns.

Roadways

Veterans Highway (Loop 534) is a minor arterial highway under jurisdiction of the Texas Department of Transportation (TxDOT) with a general north-south orientation. The roadway provides one (1) travel lane in each direction, separated by a striped median. The posted speed limit is 55 mph.

Tivy Street/Cypress Creek Road (FM 1341) is an east-west oriented roadway under jurisdiction of the Texas Department of Transportation (TxDOT). The roadway provides one (1) travel lane in each direction with a posted speed limit of 35 mph. West of its intersection with Veterans Highway (Loop 534), the roadway is designated as Tivy Street and classified as a minor arterial. East of its intersection with Veterans Highway (Loop 534), the roadway is designated as Cypress Creek Road and classified as a major collector.

Olympic Drive is a major collector roadway under jurisdiction of the City of Kerrville with a general east-west orientation. The roadway provides one (1) travel lane in each direction. The posted speed limit is 30 mph.

Intersections

Veterans Highway (Loop 534) & Tivy Street/Cypress Creek Road (FM 1341) is a signalized four-leg intersection. The northbound approach of Veterans Highway (Loop 534) provides one (1) dedicated left-turn lane, one (1) dedicated through lane, and one (1) shared through/right-turn lane with yield-controlled channelization for the right-turn movement. The southbound approach of Veterans Highway (Loop 534) provides one (1) dedicated left-turn lane, two (2) dedicated through lanes, and one (1) dedicated right-turn lane with yield-controlled channelization. The eastbound approach of Tivy Street (FM 1341) and the westbound approach of Cypress Creek Road (FM 1341) each provide one (1) shared left-turn/through lane and one (1) dedicated right-turn lane. The traffic signal controller printout is provided in **Appendix C**.

Veterans Highway (Loop 534) & Olympic Drive/Tivy High School is a signalized four-leg intersection. The northbound and southbound approaches of Veterans Highway (Loop 534) each provide one (1) dedicated left-turn lane, one (1) dedicated through lane, and one (1) dedicated right-turn lane. The eastbound approach of Olympic Drive and the westbound approach of the Tivy High School driveway each provide one (1) shared left-turn/through lane and one (1) dedicated right-turn lane. The traffic signal controller printout is provided in **Appendix C**.

Existing Traffic Conditions

Turning Movement Counts

Traffic volume data was collected within the study area to gain an understanding of the existing roadway conditions and operations through turning movement counts (TMC) conducted on Tuesday, April 18, 2023 from 7:00 AM to 9:00 AM and 4:00 PM to 6:00 PM at the following intersections:

- Veterans Highway (Loop 534) & Tivy Street/Cypress Creek Road (FM 1341); and
- Veterans Highway (Loop 534) & Olympic Drive/Tivy High School.

The data collection efforts are detailed in **Table 1**. The processed TMC data is provided in **Appendix C**.

Table 1 – Data Collection Efforts and Established Network Peak Hours

Peak Period	Date Collected	Traffic Count Time Frame	Established Network Peak Hour
Weekday Morning	Tuesday, April 18, 2023	7:00 AM – 9:00 AM	7:15 AM – 8:15 AM
Weekday Evening		4:00 PM – 6:00 PM	4:00 PM – 5:00 PM

Automatic Traffic Recorders

Additionally, Automatic Traffic Recorders (ATR) were installed along Veterans Highway (Loop 534), north of Hal Peterson Middle School, and along Olympic Drive, west of Hal Peterson Middle School, to collect 24 hours of traffic data. Data was collected on Tuesday, April 18, 2023 from 12:00 AM to 12:00 AM. The processed ATR data is provided in **Appendix C**.

The TMC and ATR data were cross-referenced and found to be accurate and consistent, thus the TMC data was utilized to establish the Existing Traffic Volumes. A Volume Flow Diagram illustrating the 2023 Existing Conditions is provided as **Figure 3** in **Appendix B**.

Trip Generation and Distribution

Trip Generation

The ability of any roadway network to serve anticipated traffic volumes is measured by comparing peak hour traffic volumes to roadway capacities. Thus, it is essential to determine the hourly traffic volumes to be generated by the Project and to add them to the No-Build traffic volumes during the peak hours.

Trip generation estimates for the proposed development were made utilizing data published under Land Use Codes 210 – Single-Family Detached Housing and 820 – Shopping Plaza (>150k) in the Institute of Transportation Engineers' (ITE) publication *Trip Generation Manual, 11th Edition*. This publication sets forth trip generation rates based on traffic counts conducted at research sites throughout the country. The comprehensive trip generation worksheets are provided in **Appendix D**.

Internal Trip Capture

Internal capture is identified as the ability to access multiple land uses by either pedestrian or vehicular means without the need to travel on the major street system. Internal capture rates are the percentage reductions applicable to the site generated trips and are provided within ITE's *Trip Generation User's Guide and Handbook*.

The ITE provides internal capture rates describing trip origins and trip destinations to/from restaurant and retail developments. The rates are an estimate of typical internal capture experienced at multi-land-use sites studied. For the Project, internal trip capture rates were applied to the proposed residential and commercial land uses. The internal capture worksheets are provided in **Appendix D**.

Pass-By Trips

A pass-by trip is defined by the ITE as a trip that is made as an intermediate stop while traveling to the primary trip destination without route diversion. The identification of pass-by trips is important to traffic analysis, as pass-by trips generated by sites are counted as part of the existing traffic volumes. As a result, this trip is not "new" to the roadway network; it already existed prior to the development being constructed. However, pass-by trips do not reduce the trip generation at the site access.

Data published within the ITE *Trip Generation Manual, 11th Edition* for Land Use Code 820 – Shopping Plaza (>150k) was utilized for the commercial portion of the Project. A pass-by percentage of 29% was applied to the weekday evening peak hour. The estimated trip generation for the Project is detailed in **Table 2**.

Table 2 – Trip Generation Summary

Phase	ITE Land Use Code	Size	AM Peak Hour			PM Peak Hour		
			Enter	Exit	Total	Enter	Exit	Total
Phase 1	LUC 210 – Single-Family Detached Housing	340 units	59	179	238	201	119	320
Phase 2	LUC 210 – Single-Family Detached Housing	381 units	67	200	267	226	132	358
Phase 3	LUC 820 – Shopping Center (>150k)	214,000 SF	111	69	180	349	379	728
	Internal Trip Capture (LUC 820 -> LUC 210)		4	3	7	35	99	134
	Internal Trip Capture (LUC 210 -> LUC 820)		3	4	7	99	35	134
	Total External Trips		104	62	166	215	245	460
	Pass-By Trips (29% PM)		-	-	-	67	67	134
	Primary Trips		104	62	166	148	178	326
Total Trips			237	448	685	776	630	1,406
Total Internal Trip Capture			7	7	14	134	134	268
Total External Trips			230	441	671	642	496	1,138
Total Pass-By Trips			-	-	-	67	67	134
Total Primary Trips			230	441	671	575	429	1,004

Trip Distribution

Trip distribution methodology was developed based on existing travel patterns within the adjacent roadway network, adjacent land uses, proposed land uses, development locations, access locations, and the proximity of the major arterials within the vicinity of the site.

Primary Trip Distribution

The following trip distribution pattern was established for primary trips based upon a review of the existing roadway volumes, adjacent land uses, other approved TIA distributions, and proposed driveway configurations:

- To/From Veterans Highway (Loop 534), North of Site – 40%;
- To/From Tivy Street (FM 1341), West of Site – 15%;
- To/From Olympic Drive, West of Site – 15%; and
- To/From Veterans Highway (Loop 534), South of Site – 30%.

Volume Flow Diagrams illustrating the Trip Distribution and Site Generated Trips for Phase 1 of the Project are provided as **Figures 4 and 5** in **Appendix B**. Volume Flow Diagrams illustrating the Trip Distribution and Site Generated Trips for Phase 2 of the Project are provided as **Figures 9 and 10** in **Appendix B**. Volume Flow Diagrams illustrating the Primary Trip Distribution and Primary Site Generated Trips for Phase 3 of the Project are provided as **Figures 13 and 14** in **Appendix B**.

Pass-By Trip Distribution

The following trip distribution pattern was established for pass-by trips based upon a review of the existing roadway volumes, adjacent land uses, and proposed driveway configurations:

- To/From Veterans Highway (Loop 534), North of Site – 50%; and
- To/From Veterans Highway (Loop 534), South of Site – 50%.

Volume Flow Diagrams illustrating the Pass-By Trip Distribution and the Pass-By Site Generated Trips for Phase 3 of the Project are provided as **Figures 15 and 16** in **Appendix B**. A Volume Flow Diagram illustrating the Total Site Generated Trips for Phase 3 of the Project is provided as **Figure 17** in **Appendix B**.

Future Traffic Conditions

To determine the traffic impact of the development, an estimation of the traffic operational characteristics at the Build date, without the construction of the project (or “No-Build” condition), is made. The existing volumes have been projected to the Build years of 2025 and 2028.

Background Growth

A background growth rate was identified to estimate the future traffic volumes during the buildout years. The TxDOT Traffic Count Database System (TCDS) and the approved adjacent development TIA (by others) were used to estimate an annual background growth rate of 2.5%. The growth rate was applied to the transient traffic volumes within the study area to account for general increases in traffic due to regional population and employment growth by the build year.

Adjacent Developments

Colliers Engineering & Design contacted the City of Kerrville to determine if there are any planned or approved developments within the vicinity of the study area. The following adjacent development is approved and under construction:

- Kerrville Residential – This site is located at the southwest corner of Veterans Highway (Loop 534) & Olympic Drive and will be developed with 130 single-family residential dwellings. The site generated trips were included within the study area per the *Traffic Impact Analysis* prepared by Kimley Horn, last revised March 2021. Trip generation information from the Adjacent Development TIA is provided in **Appendix C**. It is noted the trips were redistributed per the existing roadway geometry of Olympic Drive, which did not extend to Veterans Highway (Loop 534) when the TIA was prepared. A Volume Flow Diagram illustrating the Adjacent Development Trip Generation is provided as **Figure 6** in **Appendix B**.

2025 No-Build Conditions

The 2025 No-Build traffic volumes were forecasted by applying the background growth rate to the existing traffic volumes before including the trips to be generated by the adjacent development. A Volume Flow Diagram illustrating the 2025 No-Build Conditions is provided as **Figure 7** in **Appendix B**.

2025 Phase 1 Build Conditions

The 2025 Phase 1 Build traffic volumes were forecasted by adding the site generated traffic of Phase 1 of the Project to the 2025 No-Build traffic volumes within the roadway network. A Volume Flow Diagram illustrating the 2025 Phase 1 Build Conditions is provided as **Figure 8** in **Appendix B**.

2028 No-Build Conditions

The 2028 No-Build traffic volumes were forecasted by applying the background growth rate to the existing traffic volumes before including the trips to be generated by the adjacent development. A Volume Flow Diagram illustrating the 2028 No-Build Conditions is provided as **Figure 11** in **Appendix B**.

2028 Phase 2 Build Conditions

The 2028 Phase 2 Build traffic volumes were forecasted by adding the total site generated traffic of Phases 1 and 2 of the Project to the 2028 No-Build traffic volumes within the roadway network. A Volume Flow Diagram illustrating the 2028 Phase 2 Build Conditions is provided as **Figure 12** in **Appendix B**.

2028 Phase 3 Build Conditions

The 2028 Phase 3 Build traffic volumes were forecasted by adding the total site generated traffic of Phases 1, 2, and 3 of the Project to the 2028 No-Build traffic volumes within the roadway network. A Volume Flow Diagram illustrating the 2028 Phase 3 Build Conditions is provided as **Figure 18** in **Appendix B**.

Traffic Signal Assessment

Traffic Signal Need

To promote acceptable operations beginning with Phase 1 of the development, a traffic signal will be required at the Residential Site Driveway along Veterans Highway (Loop 534). A traffic signal will allow left turns to safely exit the site onto Veterans Highway (Loop 534). A traffic signal at this location will also allow vehicles entering from and exiting to the north to bypass Olympic Drive, thereby reducing the traffic impact of the Project on the intersection of Veterans Highway (Loop 534) & Olympic Drive/Tivy High School. The following capacity analyses consider a traffic signal at the Residential Site Driveway along Veterans Highway (Loop 534) to promote acceptable operations. A traffic signal warrant report will be submitted under separate cover.

Traffic Signal Location

The proposed traffic signal location is consistent with the City of Kerrville 2050 Comprehensive Plan and Throughfare Plan, which depicts a future collector roadway crossing Loop 534 at the approximate location of the proposed signal. At the scoping meeting, the proposed traffic signal location and distances to existing intersections and driveways was discussed. There will be approximately 1950' between the proposed traffic signal and the traffic signal at Olympic Drive. There will be approximately 1000' between the proposed traffic signal and the Middle School access point to the south. These distances were determined to be acceptable at the scoping meeting.

Turn Lane Evaluation

Deceleration Lane Warrants

A left-turn and right-turn deceleration lane evaluation was conducted at the proposed site driveways along Veterans Highway (Loop 534) and along Olympic Drive. The deceleration lane analysis was conducted in accordance with the TxDOT Access Management Manual and the TxDOT Roadway Design Manual standards. Left-turn and right-turn lanes are required at driveways or street intersections with 50 peak hour trips or more. It is noted that TxDOT standards were utilized along Olympic Drive to provide a conservative estimate. The deceleration lane evaluations at the site driveways under the 2028 Phase 3 Build condition are provided in **Tables 3 – 6**.

Table 3 – Turn Lane Summary – Northern Commercial Driveway

Time Period	Movement		Traffic Volume	Turn Lane Warranted?	Turn Lane Length
AM Peak	SB	R	36	No	370'
PM Peak	SB	R	67	Yes	370'

Based upon the anticipated Phase 3 Build traffic volumes, a southbound right-turn lane is warranted at the Northern Commercial Driveway. It is proposed to provide a 370' right-turn lane (30' storage length + 340' deceleration length, inclusive of a 100' taper) in accordance with TxDOT standards.

Table 4 – Turn Lane Summary – Southern Commercial Driveway

Time Period	Movement		Traffic Volume	Turn Lane Warranted?	Turn Lane Length
AM Peak	NB	L	47	No	440'
	SB	R	21	No	370'
PM Peak	NB	L	101	Yes	440'
	SB	R	47	No	370'

Based upon the anticipated Phase 3 Build traffic volumes, a northbound left-turn lane is warranted at the Southern Commercial Driveway. It is proposed to provide a 440' left-turn lane (100' storage length + 340' deceleration length, inclusive of a 100' taper) in accordance with TxDOT standards. A Veterans Highway (Loop 534) southbound right-turn is not warranted at the Southern Commercial Driveway based upon volume alone. However, to enhance safety as the posted speed limit of Loop 534 is 55mph, a 370' right-turn lane (30' storage length + 340' deceleration length, inclusive of a 100' taper) is proposed along the Veterans Highway (Loop 534) southbound approach.

Table 5 – Turn Lane Summary – Residential Site Driveway along Loop 534

Time Period	Movement		Traffic Volume	Turn Lane Warranted?	Turn Lane Length
AM Peak	NB	L	28	No	440'
	SB	R	69	Yes	370'
PM Peak	NB	L	94	Yes	440'
	SB	R	235	Yes	370'

Based upon the anticipated Phase 3 Build traffic volumes, a northbound left-turn lane is warranted at the Residential Site Driveway along Veterans Highway (Loop 534). It is proposed to provide a 440' left-turn lane (100' storage length + 340' deceleration length, inclusive of a 100' taper) in accordance with TxDOT standards. A southbound right-turn lane is also warranted; therefore, it is proposed to provide a 370' right-turn lane (30' storage length + 340' deceleration length, inclusive of a 100' taper) in accordance with TxDOT standards.

Table 6 – Turn Lane Summary – Residential Driveway along Olympic Drive

Time Period	Movement		Traffic Volume	Turn Lane Warranted?	Turn Lane Length
AM Peak	EB	L	19	No	250'
	WB	R	10	No	N/A
PM Peak	EB	L	64	Yes	250'
	WB	R	34	No	N/A

Based upon the anticipated Phase 3 Build traffic volumes, an eastbound left-turn lane is warranted at the Residential Site Driveway along Olympic Drive. It is proposed to provide a 250' left-turn lane (100' storage length + 150' deceleration length, inclusive of a 50' taper) in accordance with TxDOT standards. A westbound right-turn lane is not warranted.

Acceleration Lane Warrants

As requested at the TIA scoping meeting, southbound right-turn acceleration lanes will be provided at the Loop 534 unsignalized access points.

HCM Capacity Analysis

The peak hour traffic operations within the project vicinity were evaluated at the study intersection. The analyses were performed using the latest version of *Synchro Trafficware*, a traffic analysis and simulation program. The results of these analyses provide Levels of Service (LOS), volume/capacity descriptions, and average seconds of delay for the intersection movements.

The efficiency with which an intersection operates is a function of volume and capacity. The capacity of an intersection is the volume of vehicles it can accommodate during a given time period. LOS is a qualitative measure describing operational conditions within a traffic stream in terms of traffic characteristics such as freedom to maneuver, traffic interruption, comfort, and convenience. Six (6) LOS are defined for each type of facility with analysis procedures available. Levels of Service range from "A" through "F," with Level "A" representing excellent conditions with no delays, and failure and deficient operations denoted by Level "F." The HCM LOS criteria for signalized and unsignalized intersections are provided in **Table 7**.

Table 7 – HCM LOS/Delay Criteria

Level of Service	Average Control Delay (sec/veh)	
	Signalized Intersections	Unsignalized Intersections
A	≤ 10	≤ 10
B	> 10 – 20	> 10 – 15
C	> 20 – 35	> 15 – 25
D	> 35 – 55	> 25 – 35
E	> 55 – 80	> 35 – 50
F	> 80	> 50

The Levels of Service for the 2028 No-Build and Phase 3 Build Conditions are summarized in **Tables 8 – 11**. The capacity analysis calculation worksheets are provided in **Appendix E**.

Table 8 – Overall Level of Service Summary (1 of 2)

Intersection	Movement		2028 No-Build				2028 Build (without Mitigation)			
			AM Peak		PM Peak		AM Peak		PM Peak	
			LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
Veterans Highway (Loop 534) (NB/SB) & Tivy Street (FM 1341) (EB)/Cypress Creek Road (FM 1341) (WB)	EB	LT	C	24.9	C	32.5	C	25.5	D	37.4
		R	C	22.6	A	8.2	C	29.6	A	9.6
	WB	LT	C	22.6	C	24.8	C	23.7	C	28.9
		R	A	0.1	A	0.1	A	0.1	A	0.2
	NB	L	F	146.8	E	68.0	F	330.0	F	194.7
		TR	B	14.0	B	11.1	B	16.2	B	11.2
	SB	L	D	36.0	C	31.2	D	38.0	D	36.9
		T	C	30.9	C	26.2	C	33.6	C	27.3
		R	A	0.4	A	0.6	A	0.4	A	0.4
	Overall		D	41.5	C	25.9	E	74.2	D	45.9
Veterans Highway (Loop 534) (NB/SB) & Olympic Drive (EB)/ Tivy High School (WB)	EB	LT	E	78.1	D	54.7	F	87.0	E	57.3
		R	B	10.6	A	8.2	B	12.1	A	7.8
	WB	LT	E	73.5	E	57.9	E	73.6	E	61.5
		R	B	12.2	A	5.2	B	12.2	A	5.3
	NB	L	C	29.6	B	16.9	E	63.1	C	25.6
		T	E	71.5	D	42.7	F	100.3	F	88.4
		R	A	6.4	A	0.1	A	6.4	A	0.1
	SB	L	D	51.3	B	16.5	E	62.8	B	19.7
		T	D	51.4	D	43.9	F	87.1	F	115.5
		R	A	3.0	A	1.6	A	4.4	A	5.4
	Overall		D	49.1	D	38.4	E	67.8	E	77.6
	Olympic Drive (EB/WB) & Adjacent Development (NB)/ Residential Site Driveway (SB)	EB	L	-	-	-	-	a	8.0	a
WB		L	a	7.8	a	7.4	a	7.9	a	7.5
NB		L(T)R	b	13.0	b	10.5	c	16.8	b	14.2
SB		LTR	-	-	-	-	b	13.6	b	12.1

Note: Uppercase indicates a signalized intersection; lowercase indicates an unsignalized intersection.

Table 9 – Overall Level of Service Summary (2 of 2)

Intersection	Movement		2028 No-Build				2028 Build (without Mitigation)			
			AM Peak		PM Peak		AM Peak		PM Peak	
			LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
Veterans Highway (Loop 534) (NB/SB) & Northern Commercial Driveway (EB)	EB	R	-	-	-	-	c	21.9	c	18.5
Veterans Highway (Loop 534) (NB/SB) & Southern Commercial Driveway (EB)/Calvary Temple Church (WB)	EB	R	-	-	-	-	c	22.0	c	19.2
	WB	LR	-	-	-	-	c	19.5	c	17.9
	NB	L	-	-	-	-	b	11.9	b	11.1
	SB	L	-	-	-	-	b	10.8	b	10.4
Veterans Highway (Loop 534) (NB/SB) & Residential Site Driveway (EB)	EB	L	-	-	-	-	E	74.6	D	54.5
		R	-	-	-	-	B	10.5	A	9.3
	NB	L	-	-	-	-	B	10.6	B	11.4
		T	-	-	-	-	B	13.5	A	16.8
	SB	T	-	-	-	-	C	34.1	C	25.4
		R	-	-	-	-	A	2.3	A	2.6
	Overall		-	-	-	-	C	28.8	C	22.3

Note: Uppercase indicates a signalized intersection; lowercase indicates an unsignalized intersection.

Veterans Highway (Loop 534) & Tivy Street/Cypress Creek Road (FM 1341)

2028 No-Build Analysis

Under the 2028 No-Build condition, all intersection movements will operate at Levels of Service “E” or better during both peak hours studied, with the exception of the northbound left-turn movement, which will experience delays during the weekday morning peak hour. The intersection will operate at overall Levels of Service “D” or better during both peak hours studied.

2028 Phase 3 Build Analysis

Under the 2028 Phase 3 Build condition without mitigation, all intersection movements will continue to operate at or near 2028 No-Build Levels of Service during both peak hours studied. Without mitigation, the northbound left-turn movement would continue to experience delays during both peak hours studied. The intersection will operate at overall Levels of Service “E” or better during both peak hours studied.

2028 Phase 3 Build with Mitigation Analysis

Under the 2028 Phase 3 Build condition with mitigation, it is proposed to add overlap phasing for the eastbound right-turn movement with the northbound left-turn lead phase. It is also proposed to reallocate time from the southbound through phase to extend the northbound left-turn lead phase. As the overlap phase would operate concurrently with the northbound left turns, additional green time is provided, and fewer timing gap-outs are anticipated to occur. The proposed mitigation would require modification to the Tivy Street eastbound signal head(s) and require additional signage. All changes are subject to TxDOT approval.

With the proposed improvements, all intersection movements will operate at Levels of Service "D" or better during both peak hours studied. The intersection will operate at an overall Level of Service "C" during both peak hours studied. The Levels of Service for the 2028 No-Build and Phase 3 Build with Mitigation Conditions are summarized in **Table 10**.

Table 10 – Mitigated Level of Service Summary – Loop 534 & FM 1341

Intersection			Movement		2028 No-Build				2028 Build with Mitigation			
					AM Peak		PM Peak		AM Peak		PM Peak	
					LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
Veterans Highway (Loop 534) (NB/SB) & Tivy Street (FM 1341) (EB)/Cypress Creek Road (FM 1341) (WB)			EB	LT	C	24.9	C	32.5	D	40.0	D	44.8
				R	C	22.6	A	8.2	C	20.3	B	13.0
			WB	LT	C	22.6	C	24.8	C	33.4	C	33.4
				R	A	0.1	A	0.1	A	0.2	A	0.2
			NB	L	F	146.8	E	68.0	D	44.7	D	54.9
				TR	B	14.0	B	11.1	A	8.8	B	10.1
			SB	L	D	36.0	C	31.2	D	37.5	D	41.5
				T	C	30.9	C	26.2	C	30.3	C	33.9
				R	A	0.4	A	0.6	A	0.3	A	0.5
			Overall			D	41.5	C	25.9	C	23.7	C

Veterans Highway (Loop 534) & Olympic Drive/Tivy High School

2028 No-Build Analysis

Under the 2028 No-Build condition, all intersection movements will operate at Levels of Service "E" or better during both peak hours studied. The intersection will operate at an overall Level of Service "D" during both peak hours studied.

2028 Phase 3 Build Analysis

Under the 2028 Phase 3 Build condition without mitigation, all intersection movements will continue to operate at or near 2028 No-Build Levels of Service during both peak hours studied, with the

exception of the northbound and southbound left-turn movements, which will operate at a Level of Service “E” during the weekday morning peak hour, and the southbound through movement, which will experience delays during both peak hours studied. The intersection will operate at an overall Level of Service “E” during both peak hours studied.

2028 Phase 3 Build with Mitigation Analysis

Under the 2028 Phase 3 Build condition with mitigation, it is proposed to enhance and modify the eastbound and westbound minor street lane geometry and capacity, improve the traffic signal phasing and timing, and install additional signal equipment. Along the eastbound approach of Olympic Drive, it is proposed to restripe the existing shared left-turn/through lane as a dedicated left-turn lane and the existing dedicated right-turn lane as a shared through/right-turn lane. Along the westbound approach of the Tivy High School driveway, it is proposed to add capacity by widening the southeast corner of the intersection to increase the number of approach lanes along the westbound approach of the Tivy High School driveway from two (2) to three (3). The lane assignment would be improved to a dedicated left-turn lane, a dedicated through lane, and a dedicated right-turn lane. With dedicated left-turn lanes along the eastbound and westbound approaches, the signal phasing can be improved to provide concurrent protected-permitted phasing for the left-turn movements. All changes are subject to TxDOT approval.

With the proposed improvements, all intersection movements will operate at Levels of Service “D” or better during both peak hours studied. The intersection will operate at an overall Level of Service “D” during both peak hours studied. The Levels of Service for the 2028 No-Build and Phase 3 Build with Mitigation Conditions are summarized in **Table 11**.

Table 11 – Mitigated Level of Service Summary – Loop 534 & Olympic Drive/Tivy High School

Intersection	Movement	2028 No-Build				2028 Build with Mitigation			
		AM Peak		PM Peak		AM Peak		PM Peak	
		LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
Veterans Highway (Loop 534) (NB/SB) & Olympic Drive (EB)/ Tivy High School (WB)	EB	LT	E 78.1	D 54.7		D 44.7		D 50.3	
		R	B 10.6	A 8.2		D 53.9		B 13.9	
	WB	L	E 73.5	E 57.9		D 42.6		C 34.9	
		T				D 39.2		D 54.7	
		R	B 12.2	A 5.2		A 7.2		A 7.0	
	NB	L	C 29.6	B 16.9		D 36.4		C 24.3	
		T	E 71.5	D 42.7		D 52.3		D 40.3	
		R	A 6.4	A 0.1		A 4.8		A 0.0	
		L	D 51.3	B 16.5		D 44.8		B 13.3	
	SB	T	D 51.4	D 43.9		D 47.9		D 46.4	
		R	A 3.0	A 1.6		A 3.3		A 3.6	
	Overall		D 49.1	D 38.4		D 41.9		D 37.5	

Olympic Drive & Adjacent Development/Residential Site Driveway

2028 No-Build Analysis

Under the 2028 No-Build condition, all intersection movements will operate at Levels of Service “B” or better during both peak hours studied.

2028 Phase 3 Build Analysis

Under the 2028 Phase 3 Build condition, it is proposed to construct the Residential Site Driveway as the fourth leg of the intersection. All intersection movements will operate at Levels of Service “C” or better during both peak hours studied. The calculated 95th percentile queues of approximately one (1) vehicle or less along the Residential Site Driveway during both peak hours studied can be accommodated within the layout of the site.

Veterans Highway (Loop 534) & Northern Commercial Driveway

2028 Phase 3 Build Analysis

Under the 2028 Phase 3 Build condition, it is proposed to construct the Northern Commercial Driveway to provide right-in/right-out-only access. The westbound right-turn movement will operate at a Level of Service “C” during both peak hours studied. The calculated 95th percentile queues of approximately one (1) vehicle or less along the Northern Commercial Driveway during both peak hours studied can be accommodated within the layout of the site.

Veterans Highway (Loop 534) & Southern Commercial Driveway/Calvary Temple Church

2028 Phase 3 Build Analysis

Under the 2028 Phase 3 Build condition, it is proposed to construct the Southern Commercial Driveway to provide 3/4 access, restricting exiting left turns, opposite to the existing Calvary Temple Church driveway. All intersection movements will operate at Levels of Service “C” or better during both peak hours studied. The calculated 95th percentile queues of approximately one (1) vehicle or less along the Southern Commercial Driveway during both peak hours studied can be accommodated within the layout of the site.

Veterans Highway (Loop 534) & Residential Site Driveway

2028 Phase 3 Build Analysis

Under the 2028 Phase 3 Build condition, it is proposed to construct the Residential Site Driveway to provide full-movement access with a traffic signal. All movements along Veterans Highway (Loop 534) will operate at Levels of Service “C” or better during both peak hours studied. The eastbound left-turn movement of the Residential Site Driveway will operate at a Level of Service “E” and “D” during the weekday morning and evening peak hours, respectively. The intersection will operate at an overall Level of Service “C” during both peak hours studied.

Sight Distance Analysis

In accordance with Chapter 2, Section 4 of the TxDOT *Roadway Design Manual*, intersection sight distance criteria were utilized from Sections 9.5.3.2 of the American Association of State Highway and Transportation Officials' (AASHTO) publication, *A Policy on Geometric Design of Highways and Streets, 2018*. Case B1 – Left Turn From Stop, Case B2 – Right Turn From Stop, and Case F – Left Turn from the Major Road were reviewed at the applicable turning maneuvers.

Table 12 – Sight Distance Analysis

Location	Turn Type	Design Speed	Required Design Intersection Sight Distance
Veterans Highway (Loop 534) & Northern Commercial Driveway	Case B2 – Right Turn from Stop	65 mph	625'
Veterans Highway (Loop 534) & Southern Commercial Driveway	Case B2 – Right Turn from Stop	65 mph	625'
	Case F – Left Turn from Major Road		530'
Veterans Highway (Loop 534) & Residential Site Driveway	Case B2 – Right Turn from Stop	65 mph	625'
	Case F – Left Turn from Major Road		530'
Olympic Drive & Adjacent Development/ Residential Site Driveway	Case B1 – Left Turn from Stop	40 mph	445'
	Case F – Left Turn from Major Road		325'

Based upon a field investigation, the applicable design intersection sight distances can be met at the proposed site driveways. During TxDOT driveway permitting and when more specific information is available on the site driveway location, site driveway design, and site layout (including signage, buildings, etc), the available intersection sight distances should be reassessed to confirm the design intersection sight distances are still met for final driveway design/permitting.

Summary and Conclusions

This Traffic Impact Analysis evaluated the proposed mixed-use development within the City of Kerrville ETJ, Kerr County, Texas. The findings of the Traffic Impact Analysis are summarized as follows:

1. The Applicant proposes to develop the site with a mixed-use development consisting of 721 residential dwellings and 214,000 SF of commercial space, developed in three (3) phases. Phase 1 will consist of 340 single-family residential dwellings; Phase 2 will consist of 381 single-family residential dwellings; and Phase 3 will consist of 214,000 SF of commercial space.
2. Access to the site is proposed via three (3) driveways along Veterans Highway (Loop 534) and one (1) driveway along Olympic Drive. The Residential Site Driveway along Veterans Highway (Loop 534) is proposed as a full-movement, signalized three-leg intersection located approximately 1,950' north of Olympic Drive. The Southern Commercial Driveway is proposed as a 3/4 access, restricting exiting left turns, opposite to the existing Calvary Temple Church driveway. The Northern Commercial Driveway is proposed as a right-in/right-out-only access. The Residential Site Driveway along Olympic Drive is proposed as a full-movement access that will create the fourth leg of the intersection with the adjacent residential development by others.
3. At the intersection of Veterans Highway (Loop 534) & Tivy Street/Cypress Creek Road (FM 1341), it is proposed to add overlap phasing for the eastbound right-turn movement with the northbound left-turn lead phase. It is also proposed to reallocate time from the southbound through phase to extend the northbound left-turn lead phase. As the overlap phase would operate concurrently with the northbound left turns, additional green time is provided, and fewer timing gap-outs are anticipated to occur. The proposed mitigation would require modification to the Tivy Street eastbound signal head(s) and require additional signage. All changes are subject to TxDOT approval. Under the 2028 Phase 3 Build with Mitigation conditions, all intersection movements will operate at Levels of Service "D" or better during both peak hours studied. The intersection will operate at an overall Level of Service "C" during both peak hours studied.
4. At the intersection of Veterans Highway (Loop 534) & Olympic Drive/Tivy High School, it is proposed to enhance and modify the eastbound and westbound minor street lane geometry and capacity, improve the traffic signal phasing and timing, and install additional signal equipment. Along the eastbound approach of Olympic Drive, it is proposed to restripe the existing shared left-turn/through lane as a dedicated left-turn lane and the existing dedicated right-turn lane as a shared through/right-turn lane. Along the westbound approach of the Tivy High School driveway, it is proposed to add capacity by widening the southeast corner of the intersection to increase the number of approach lanes along the westbound approach of the Tivy High School driveway from two (2) to three (3). The lane assignment would be improved to a dedicated left-turn lane, a dedicated through lane, and a dedicated right-turn lane. With dedicated left-turn lanes along the eastbound and westbound approaches, the signal phasing can be improved to provide concurrent protected-permitted phasing for the left-turn

movements. All changes are subject to TxDOT approval. Under the 2028 Phase 3 Build with Mitigation conditions, all intersection movements will operate at Levels of Service "D" or better during both peak hours studied. The intersection will operate at an overall Level of Service "D" during both peak hours studied.

5. Under the 2028 Phase 3 Build conditions, all movements at the intersection of Olympic Drive & Adjacent Development/Residential Site Driveway will operate at Levels of Service "C" or better during both peak hours studied. The calculated 95th percentile queue lengths of approximately one (1) vehicle or less during both peak hours studied can be accommodated within the layout of the site. In accordance with TxDOT standards, it is proposed to provide a 250' left-turn lane along the eastbound approach of Olympic Drive.
6. Under the 2028 Phase 3 Build conditions, the westbound right-turn movement at the Northern Commercial Driveway along Veterans Highway (Loop 534) will operate at a Level of Service "C" during both peak hours studied. The calculated 95th percentile queue lengths of approximately one (1) vehicle or less during both peak hours studied can be accommodated within the layout of the site. In accordance with TxDOT standards, it is proposed to provide a 370' right-turn lane along the southbound approach of Veterans Highway (Loop 534). A right-turn acceleration lane will be provided.
7. Under the 2028 Phase 3 Build conditions, all movements at the Southern Commercial Driveway along Veterans Highway (Loop 534) will operate at Levels of Service "C" or better during both peak hours studied. The calculated 95th percentile queue lengths of approximately one (1) vehicle or less during both peak hours studied can be accommodated within the layout of the site. In accordance with TxDOT standards, it is proposed to provide a 440' left-turn lane along the northbound approach of Veterans Highway (Loop 534). Per the request of TxDOT, a 370' right-turn lane is proposed along the southbound approach of Veterans Highway (Loop 534). A right-turn acceleration lane will be provided.
8. To promote acceptable operations beginning with Phase 1 of the development, a traffic signal will be required at the proposed Residential Site Driveway along Veterans Highway (Loop 534). A traffic signal will allow left turns to safely exit the site onto Veterans Highway (Loop 534). A traffic signal at this location will also allow vehicles entering from and exiting to the north to bypass Olympic Drive, thereby reducing the traffic impact of the Project on the intersection of Veterans Highway (Loop 534) & Olympic Drive/Tivy High School. A traffic signal warrant report will be submitted under separate cover. The proposed traffic signal location is consistent with the City of Kerrville 2050 Comprehensive Plan and Throughfare Plan, which depicts a future collector roadway crossing Loop 534 at the approximate location of the proposed signal. In accordance with TxDOT standards, it is proposed to provide a 440' left-turn lane along the northbound approach of Veterans Highway (Loop 534) and a 370' right-turn lane along the southbound approach of Veterans Highway (Loop 534).

9. Under the 2028 Phase 3 Build conditions, all movements along Veterans Highway (Loop 534) at the proposed Residential Site Driveway will operate at Levels of Service "C" or better during both peak hours studied. The eastbound left-turn movement from the Residential Site Driveway will operate at a Level of Service "E" and "D" during the weekday morning and evening peak hours, respectively. The intersection will operate at an overall Level of Service "C" during both peak hours studied.
10. Based upon a field investigation, the applicable design intersection sight distances can be met at the proposed site driveways. During TxDOT driveway permitting and when more specific information is available on the site driveway location, site driveway design, and site layout (including signage, buildings, etc), the available intersection sight distances should be reassessed to confirm the design intersection sight distances are still met for final driveway design/permitting.

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