



SM ROCHA, LLC

TRAFFIC AND TRANSPORTATION CONSULTANTS

April 26, 2022

Loren Morland
Classic SRJ Land, LLC
2138 Flying Horse Club Drive
Colorado Springs, Colorado 80921

Engineering Review

07/20/2022 3:13:31 PM

dsdrice

JeffRice@elpasoco.com

(719) 520-7877

EPC Planning & Community
Development Department

[See comment letter](#)

**RE: Sterling Ranch East (Phase I) Preliminary Plan / Traffic Generation Analysis
El Paso County, Colorado**

Dear Mr. Moreland,

SM ROCHA, LLC is pleased to provide traffic generation information for the development entitled Sterling Ranch East (Phase I) Preliminary Plan. This development is generally located on the northwest and southwest corners of future Briargate Parkway and future Sterling Ranch Road intersection in El Paso County, Colorado.

The intent of this analysis is to present traffic volumes likely generated by the proposed development, provide a traffic volume comparison to previous land use assumptions defined in Sterling Ranch Sketch Plan Amendment and related traffic analysis¹ and consider potential impacts to the adjacent roadway network.

The following is a summary of analysis results.

**Compare to the
2018 Sketch Plan
Amendment as well**

Site Description and Access

Land for the development is currently vacant and surrounded by an existing or proposed mix of light industrial, commercial, and residential land uses. The proposed development is understood to entail new construction accommodations for 761 residential dwelling units, a 600-student elementary school, and a 1,100-student middle school.

Proposed access to the development is provided at the following locations:

Sterling Ranch Road (South of Briargate Parkway)

- Full-movement access at northwest corner of elementary school site,
- Full-movement access at Overland Park Road,
- Full-movement access at Sunnyvale,

¹ Sterling Ranch Sketch Plan Amendment, Traffic Generation Analysis, SM ROCHA LLC, April 25, 2022.

- Full-movement access at Lake Tahoe,
- Full-movement access at Newport Beach,
- Full-movement access at southeast corner of middle school site and future collector street,
- Full-movement access at northeast corner of middle school site.

Briargate Parkway (West of Sterling Ranch Road)

- Full-movement intersection at Sterling Ranch Road,
- 3/4-movement (no left turn egress) access at northwest corner of middle school site,
- 3/4-movement (no left turn egress) access at Boulder City.

Sterling Ranch Road (North of Briargate Parkway)

- Full-movement access at Vancouver.

General site location is shown on Figure 1.

A conceptual site plan, as prepared by Classic Consulting, including proposed access locations is shown on Figure 2. This plan is provided for illustrative purposes.

The referenced Sketch Plan Amendment traffic analysis separated the proposed development area into traffic analysis zones (TAZs). The proposed development includes TAZs 9 through 11 and 20 from the Sketch Plan Amendment.

Figure 3, provided for reference, is a copy of the Sketch Plan Amendment TAZ figure which has been modified (highlighted) to illustrate TAZs considered for the proposed development.



Not to Scale

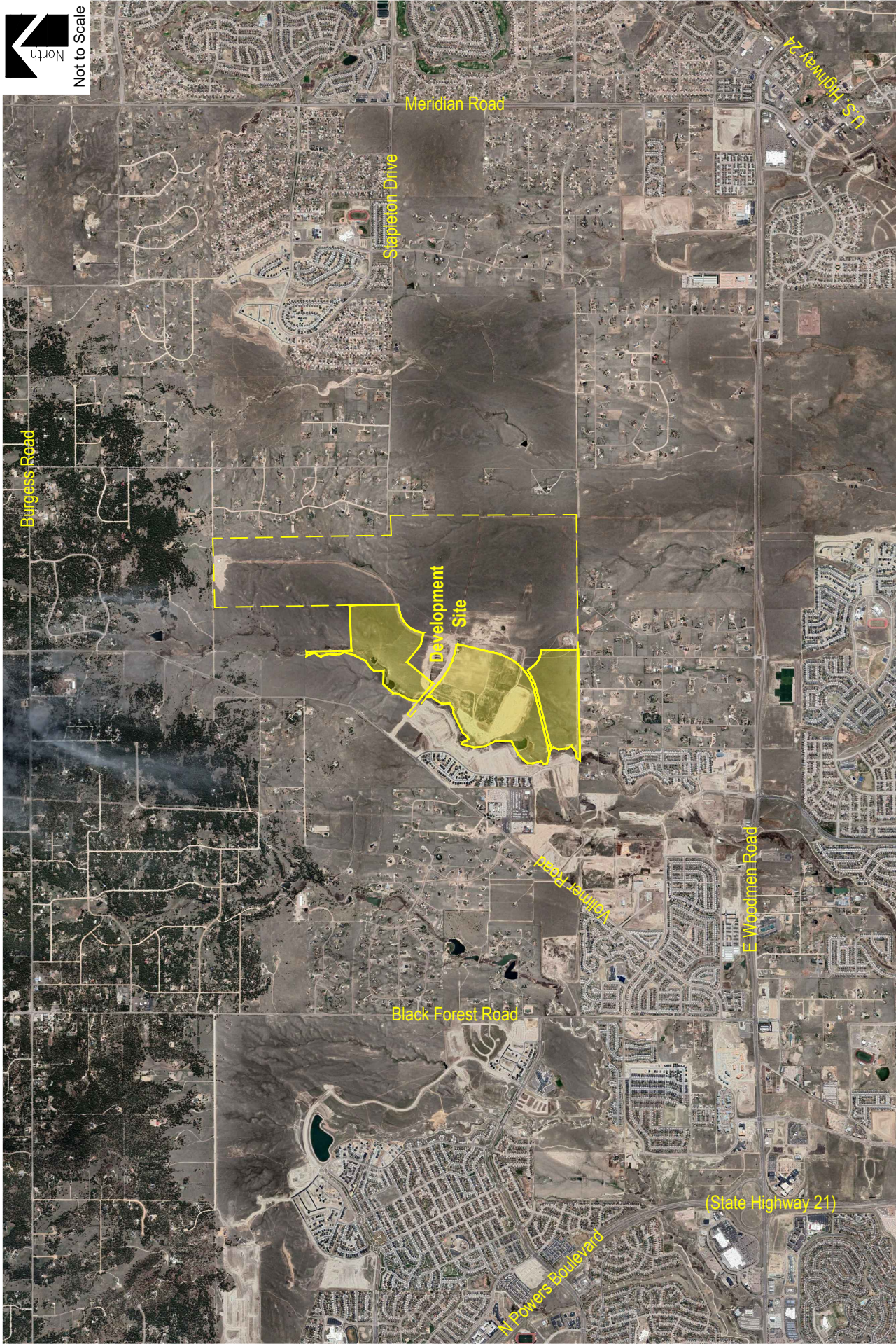


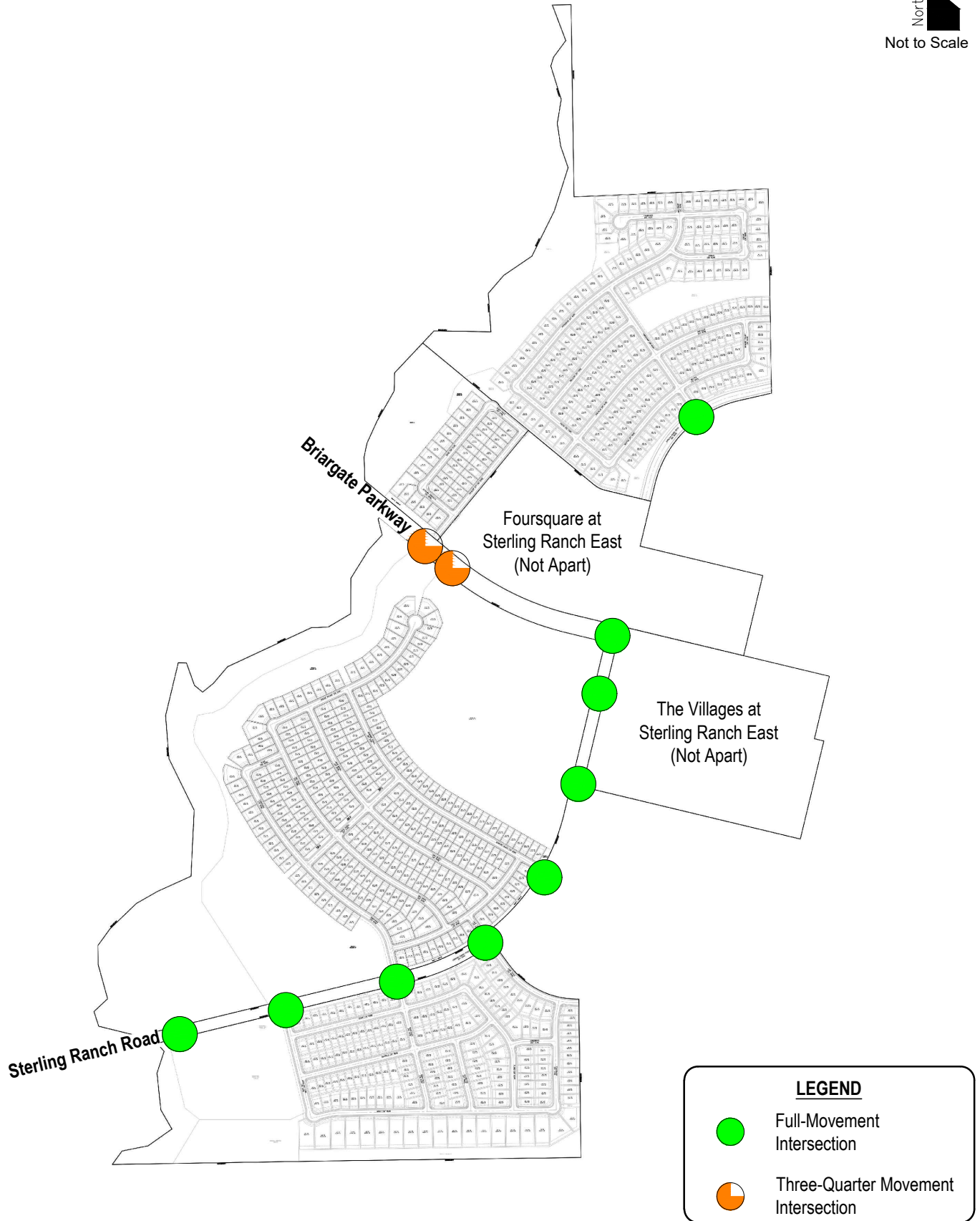
Figure 1
SITE LOCATION

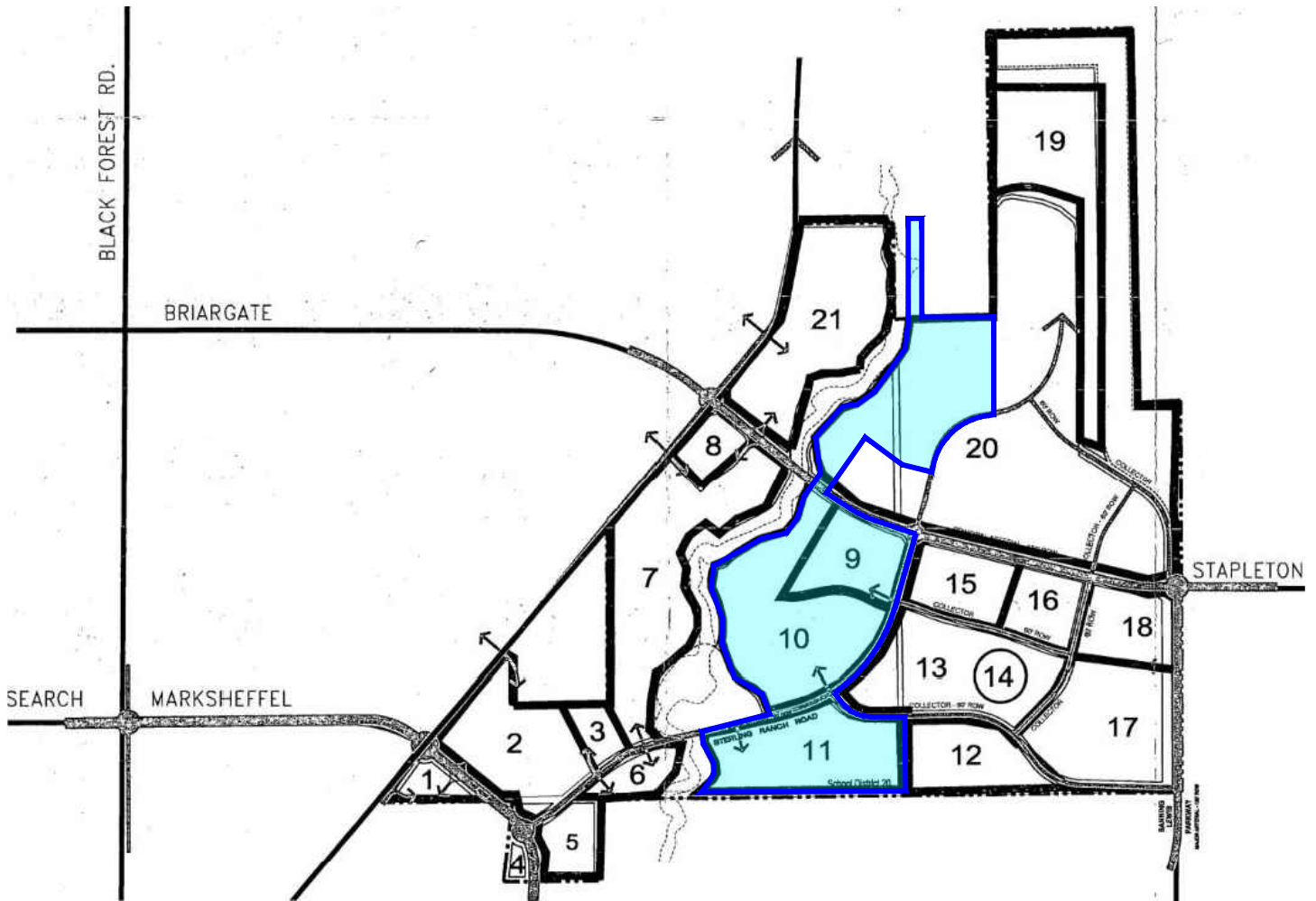
STERLING RANCH EAST PHASE 1 PRELIMINARY PLAN
Traffic Generation Analysis

April 2022
Page 3

SM ROCHA, LLC
Traffic and Transportation Consultants







STERLING RANCH EAST PHASE 1 PRELIMINARY PLAN

Traffic Generation Analysis

SM ROCHA, LLC

Traffic and Transportation Consultants

Figure 3
TRAFFIC ANALYSIS ZONES

April 2022

Page 5

Vehicle Trip Generation

Standard traffic generation characteristics compiled by the Institute of Transportation Engineers (ITE) in their report entitled Trip Generation Manual, 11th Edition, were applied to the proposed land uses in order to estimate the average daily traffic (ADT) and peak hour vehicle trips. A vehicle trip is defined as a one-way vehicle movement from point of origin to point of destination.

Table 1 presents average trip generation rates for the development area proposed. Use of average trip generation rates presents a conservative analysis and is consistent with the referenced Sketch Plan Amendment and associated traffic analysis. ITE land use codes described below were used for analysis and comparison because of their best fit to the previously assumed and proposed land use.

Table 1 – Trip Generation Rates

ITE CODELAND USEUNIT			TRIP GENERATION RATES						
			24 HOUR	AM PEAK HOUR			PM PEAK HOUR		
				ENTER	EXIT	TOTAL	ENTER	EXIT	TOTAL
210	Single-Family Detached Housing	DU	9.43	0.18	0.52	0.70	0.59	0.35	0.94
520	Elementary School	STU	2.27	0.40	0.34	0.74	0.07	0.09	0.16
522	Middle School / Junior High School	STU	2.10	0.36	0.31	0.67	0.07	0.08	0.15

Key: DU = Dwelling Units. STU = Students.

Note: All data and calculations above are subject to being rounded to nearest value.

Provide
Multi-family (220)

Table 2 summarizes the projected ADT and peak hour traffic volumes likely generated by the land use area proposed, upon assumed build-out, and provides comparison to traffic volume estimates of assumed land uses and densities as described in the Sketch Plan Amendment.

Table 2 – Trip Generation Summary

ITE					TOTAL TRIPS GENERATED						
					24 HOUR	AM PEAK HOUR			PM PEAK HOUR		
						ENTER	EXIT	TOTAL	ENTER	EXIT	TOTAL
TAZ	CODE	LAND USE	SIZE								
<u>Sterling Ranch Sketch Plan Amendment **</u>											
9	522	Middle School / Junior High School	1,100 STU	2,310	398	339	737	79	86	165	
10	210	Single-Family Detached Housing	294 DU	2,772	54	152	206	174	102	276	
11	210	Single-Family Detached Housing	187 DU	1,763	34	97	131	111	65	176	
11	520	Elementary School	600 STU	1,362	240	204	444	44	52	96	
20	220	Multifamily (Low-Rise)	184 DU	1,240	18	56	74	59	35	94	
Previously Assumed Total:					9,447	744	848	1,592	467	340	807
<u>Sterling Ranch East Phase 1 Preliminary Plan - Proposed</u>											
9	522	Middle School / Junior High School	1,100 STU	2,310	398	339	737	79	86	165	
10	210	Single-Family Detached Housing	294 DU	2,772	54	152	206	174	102	276	
11	210	Single-Family Detached Housing	187 DU	1,763	34	97	131	111	65	176	
11	520	Elementary School	600 STU	1,362	240	204	444	44	52	96	
20	220	Multifamily (Low-Rise)	184 DU	1,240	18	56	74	59	35	94	
Proposed Total:					9,447	744	848	1,591	467	340	2,079
Difference Total:					0	0	0	0	0	0	0

Key: ** = Trip generation information from ITE's Trip Generation Manual, 11th Edition.

Note: All data and calculations above are subject to being rounded to nearest value.

As Table 2 shows, the proposed development area has the potential to generate approximately 9,447 daily trips with 1,591 of those occurring during the morning peak hour and 2,079 during the afternoon peak hour.

Table 2 further illustrates no change in traffic volume generation as originally estimated in the Sketch Plan Amendment.

Adjustments to Trip Generation Rates

A development of this type is likely to attract trips from within area land uses (internal capture) as well as pass-by or diverted link trips from the adjacent roadway system. This potential for trip reduction was originally considered in the approved overall Sterling Ranch Sketch Plan and associated master traffic impact study² where a 60 percent internal capture reduction was assumed for the school land use. However, no trip reduction was taken in this comparison analysis. This assumption provides for a conservative analysis of potential trip generation based on the proposed land uses.

Development Impacts

As Table 2 shows, there is no increase in daily and peak hour traffic volumes anticipated for the proposed development. Moreover, no negative impact to operations of roadways and intersections or roadway classifications, as previously planned and approved for the overall Sterling Ranch development area, is anticipated.

Street Classifications

Recommended classifications for proposed internal streets is a combination of urban local and urban local (low volume) as shown in the proposed preliminary plan document. Internal street intersections including site access intersections with Sterling Ranch Road and Briargate Parkway are proposed to operate under a stop-controlled condition. A stop-controlled intersection is defined as a roadway intersection where vehicle rights-of-way are controlled by one or more "STOP" signs.

Classifications for Sterling Ranch Road (2-lane urban non-residential collector with painted center median) and Briargate Parkway (4-lane urban principal arterial) are already determined. The intersection of Briargate Parkway and Sterling Ranch Road is envisioned to operate under traffic signal control.

² Sterling Ranch Updated Traffic Impact Analysis, LSC Transportation Consultants Inc., June 5, 2008.

Roadway Improvements

Consistent with roadway improvements recommended with adjacent development occurring along the Sterling Ranch Road and Briargate Parkway corridors, right-turn and left-turn deceleration lanes are recommended at proposed site accesses. These turn lanes, pursuant to County design standards along with referenced intersection control, are included in the street improvement plans³ currently under County review. No deviation to proposed street improvement plans is recommended.

Additionally, the referenced street improvement plans propose full roadway width construction of Sterling Ranch Road from Briargate Parkway to Dines Boulevard, and Briargate Parkway from Sterling Ranch Road to Vollmer Road.

Conclusion

This analysis assessed traffic generation for the Sterling Ranch East (Phase I) Preliminary Plan, provided a traffic volume comparison to land use assumptions for the applicable Sketch Plan Amendment area, and considered potential impacts to the adjacent roadway network.

It is our professional opinion that the proposed site-generated traffic resulting from the proposed development is expected to create no negative impact to traffic operations for the surrounding roadway network (existing or proposed), nor cause change to previously approved roadway classifications or current roadway design plans. Analysis of site-generated traffic concludes that proposed development traffic volume is in compliance with that assumed in the Sketch Plan Amendment. All conclusions and recommendations presented in previously approved referenced studies or improvement plans remain valid.

Traffic Engineer's Statement

The attached traffic report and supporting information were prepared under my responsible charge and they comport with the standard of care. So far as is consistent with the standard of care, said report was prepared in general conformance with the criteria established by the County for traffic reports.

 Move to signature page

³ Sterling Ranch Road & Briargate Parkway Street Plans, JR Engineering, February 10, 2022.

Provide signature block
on this page.

We trust that our findings will assist in the planning and approval of the Sterling Ranch East (Phase I) Preliminary Plan. Please contact us should further assistance be needed.

Sincerely,

SM ROCHA, LLC

Traffic and Transportation Consultants



Mike Rocha
Principal



Fred Lantz, PE
Traffic Engineer

Developer's Statement

I, the Developer, have read and will comply with all commitments made on my behalf within this report.

Developer

Date