

LSC Responses to TIS Redline Comments



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Silverado Ranch, Filing 2 Transportation Memorandum (LSC #S224530) January 30, 2024

Please use the following Traffic Engineer's Statement below: 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.

¹
under my responsible charge and they the standard of care, said report was the County for traffic reports.

[Name, P.E. # _____] Date

Developer's Statement

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

A handwritten signature in blue ink, appearing to read 'D. H. Lewis', is written over a horizontal line.

2-8-24
Date

LSC Responses to TIS Redline Comments

Page: 1

☰ Number: 1 Author: HaoVo Subject: Callout Date: 5/20/2024 9:04:10 AM

Please use the following Traffic Engineer's Statement below: 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. _____ [Name, P.E.
_____] Date

🔄 Author: jchodsdon Subject: Sticky Note Date: 6/26/2024 8:51:24 AM

LSC Response: Per agreement with the Engineering Manager, Elizabeth Nijkamp a few years ago, the stamp w/ signature and date will suffice and the signature and date lines under the "Traffic Engineers Statement" are not necessary (because they would be redundant). We have followed this procedure for all reports since then.

PRIOR AREA TRAFFIC REPORTS

The following are prior LSC traffic reports prepared for Silverado Ranch: Silverado Ranch, Updated Traffic Impact Analysis – dated January 18, 2008

- Silverado Ranch *Sight Distance Memorandum* – dated March 30, 2010
- Silverado Ranch Filing No. 1 Transportation Memorandum – dated July 3, 2018

LAND USE AND ACCESS

Filing No. 2 Land Use

Figure 1 shows the site location relative to the adjacent and nearby roadways. Fifteen lots for single-family residential dwelling units are proposed with Filing 2. Figure 2 shows the site plan.

Filing No. 1 (Previous Subdivision Plat)

Approximately 4 dwelling units currently have been constructed within the adjacent Filing No. 1, with an additional 6 dwelling units still to be constructed as part of Filing 1.

Proposed Site Access and Roadway ¹

Silverado Hill Loop per F1 plat.
Please update throughout report

Access for Filing No. ² is proposed through Filing No. 1 to Drennan Road via an extension of existing ² Silverado Hill View and Drover Canyon View. Drover Canyon View connects to Drennan Road at a stop-sign-controlled T-intersection, located 1,267 feet east of Peyton Highway (centerline spacing).

Per the proposed plat, interim access would only be to Drennan Road. An interim/temporary cul-de-sac would be constructed at the east end of the subdivision. The access to Peyton Highway would not be implemented with Filing No. 2. The Preliminary Plan/PUD for the overall development site and the 2008 TIS show a second access to Peyton Highway located 1,455 feet south of Drennan Road. The completion of Silverado Hill View and this second access would be with a future phase.


A copy of the subdivision plat is shown in Figure 2 (plat drawings attached for reference), which shows the proposed lot layout, the temporary cul-de-sac, and access through Filing No. 1.

SIGHT DISTANCE

Intersection Sight Distance ³

Include this figure as
part of this report


The intersection sight distance at the since-completed intersection of Drennan Road/Drover Canyon View was addressed in the 2018 report for Filing No. 1. Please refer to the 2018 Filing No. 1 report and the prior March 30, 2010 *Sight Distance Memorandum*.

 Number: 1 Author: CDurham Subject: Callout Date: 4/2/2024 8:58:02 AM


[Silverado Hill Loop per F1 plat. Please update throughout report](#)

 Author: jchodsdon Subject: Sticky Note Date: 6/7/2024 9:33:03 PM

LSC Response: Updated as requested.

 Number: 2 Author: CDurham Subject: Highlight Date: 4/2/2024 8:57:33 AM

Silverado Hill View

 Number: 3 Author: Bret Subject: Engineer Date: 4/1/2024 2:08:18 PM

[Include this figure as part of this report](#)

 Author: jchodsdon Subject: Sticky Note Date: 6/7/2024 9:34:02 PM

LSC Response: A sight distance Figure has been included in the updated TIS.

EXISTING TRAFFIC VOLUMES

Vehicular turning-movement counts were conducted on Wednesday, August 9, 2023 from 6:30 to 8:30 a.m. and from 4:00 to 6:00 p.m. at the Peyton Highway/Drennan Road intersection. An afternoon peak-hour count was also conducted at the Drennan Road/Drover Canyon View (current Filing No. 1 access) intersection.

Figure 3 shows these turning-movement volumes, as well as the estimated current average weekday traffic volumes on the study-area roads. Raw count data are attached.

SHORT-TERM BASELINE TRAFFIC CONDITIONS

Traffic Volumes

Figure 7 shows the sum of the existing traffic volumes plus additional traffic associated with the buildout of Filing No. 1. A three percent growth rate for one year (to 2024) has also been applied to the existing volumes. These volumes represent the estimated short-term baseline traffic.


Levels of Service

The following intersections have been analyzed to determine the short-term baseline intersection levels of service for the AM and PM peak-hour time periods:


- Peyton Highway/Drennan Road
- Drennan Road/Drover Canyon View

Level of service (LOS) is a quantitative measure of the level of congestion or delay at an intersection and is indicated on a scale from "A" to "F." LOS A is indicative of little congestion or delay. LOS F indicates a high level of congestion or delay. Table 1 shows the level of service delay ranges for signalized and unsignalized intersections.

Long-range conditions also need to be looked at. ¹

 Number: 1 Author: CDurham Subject: Text Box Date: 4/2/2024 9:19:21 AM

[Long-range conditions also need to be looked at.](#)

 Author: jchodsdon Subject: Sticky Note Date: 6/26/2024 8:51:55 AM
LSC Response: Updated as requested.

ESTIMATED 20-YEAR FUTURE TRAFFIC VOLUMES

The 2008 Preliminary Plan TIS report presented future, 20- year traffic volumes. Those volumes included the trips to be generated by Filing No. 2.

Future background traffic estimated for adjacent Drennan Road and Peyton Highway in the 2008 Preliminary Plan TIS report is likely conservative, even for 2043. Those original estimates had anticipated a higher level of development within the Ellicott Springs Sketch Plan area to the east.

Based on the current 2023 traffic count data collected, the overall increase in vehicle traffic at the intersection of Peyton Highway/Drennan Road has only increased by 27 total vehicles during the AM peak and 26 total vehicles during the PM peak over the past five years. A portion of these additional trips are likely generated by Filing No. 1, which was considered site traffic in the 2008 study, and not included in the background traffic projections. Please refer to Table 4 for more details:

- AM peak hour – increased by 27 total vehicles from July 2018 to August 2023
- PM peak hour – increased by 26 total vehicles from July 2018 to August 2023

Table 4: Comparison of Approach Volumes at Peyton Highway/Drennan Road (2023 vs. 2018)

Roadway		AM Peak			PM Peak		
Approach	Name	2018	2023	Change	2018	2023	Change
SB	Peyton Hwy	16	20	4	17	37	20
WB	Drennan Rd	6	23	17	5	10	5
NB	Peyton Hwy	15	21	6	20	26	6
EB	Drennan Rd	3	3	0	14	9	-5
Total		40	67	27	56	82	26

Projected 2040 volumes in the current EPC *Major Transportation Corridors Plan (MTCP)* indicate about 3,300 vehicles per day (vpd) on Peyton Highway south of Drennan Road, which is lower than the estimated 2030 total volume in the 2006 TIS (3,750).

The *MTCP* also indicates about 3,500 vehicles per day on Drennan road west of Peyton Highway, which is significantly lower than the estimated 2030 total volume in the 2006 TIS (7,750). Current daily volumes on Drennan Road are likely between about 260 per day, based on factored peak-hour count data.


Please provide name of TIS, prepared by whom, approved date, and excerpt.

DRENNAN ROAD RELATIVE TRAFFIC IMPACT

The estimated existing and projected short-term total average daily traffic (ADT) impacts have been compared to the roadway design ADTs shown in Tables 2-4 and 2-5 of the *ECM*. Figure 3 shows estimated **existing** annual average daily traffic (AADT) estimates on the adjacent roadways. These are based on peak-period data collected and other available 24-hour data on

Number: 1 Author: HaoVo Subject: Callout Date: 3/28/2024 12:35:10 PM

Please provide name of TIS, prepared by whom, approved date, and excerpt.

 Author: jchodsdon Subject: Sticky Note Date: 6/7/2024 9:37:25 PM

LSC Response: This reference has been corrected to "the 2008 TIS," which is identified in detail in the third paragraph.

nearby roadways. Figure 7 shows the estimated short-term total ADTs on the study-area roadways.

Drennan Road is currently a gravel roadway. The *ECM* design ADT for a gravel roadway is 200 vehicles per day. Based on the LSC-estimated existing daily volume shown in Figure 3, the ADT on Drennan Road east of Peyton Highway to Drover Canyon View is approximately 275 vpd. This is an existing deficiency as the *ECM* 200-vpd design ADT for a gravel roadway is exceeded.

Figure 7 shows the projected short-term total ADT volumes. Based on LSC estimates, with the addition of projected Filing No. 2 site-generated trips plus trips to be generated by future new homes on the remainder of the currently-undeveloped, Filing No. 1 lots, this segment of Drennan Road is projected to be approximately 515 ADT based on the short-term analysis scenario. Note: some existing trips may include those associated with new home construction, which would be temporary.

The 2040 *MTCP* classifies Drennan Road as a “Collector.” Under 2040 improvements, the *MTCP* calls for a Drennan Road upgrade to a 24-foot, paved (ur

1
It should be 32 ft paved width (*ECM*, chapter 2, table 2-5). Please revise.

SUBDIVISION ROADWAY CLASSIFICATION

The proposed roadway within Filing 2, Silverado Hill View, is proposed as a private, crushed asphalt, local roadway.

2
Crushed asphalt is not allowed, please revise to aggregate base course per County approved gravel pavement design
4

AUXILIARY TURN-LANE NEEDS ANALYSIS

Filing No. 2 will **not** “trigger” the requirement for any auxiliary left- or right-turn lanes at the site access or at the Peyton Highway/Drennan Road intersection – based on the projected short-term total traffic volumes.

Peyton Highway/Drennan Road

Southbound-Left-Turn Lane

The southbound-left-turn volume at Peyton Highway/Drennan Road is **not** expected to exceed the *ECM*-minimum left-turn volume threshold prescribing an exclusive turn lane (25 vehicles per hour on a Minor Arterial), based on the projected short-term total volumes.

Northbound-Right-Turn Lane

The northbound-right-turn volume at Peyton Highway/Drennan Road is **not** expected to exceed the *ECM*-minimum right-turn volume threshold prescribing an exclusive turn lane (50 vehicles per hour on a Minor Arterial), based on the projected short-term total volumes.

5
What about long-term?

☰ Number: 1 Author: HaoVo Subject: Callout Date: 6/7/2024 9:58:10 PM

[It should be 32 ft paved width \(ECM, chapter 2, table 2-5\). Please revise.](#)

↻ Author: jchodsdon Subject: Sticky Note Date: 6/26/2024 8:52:34 AM

LSC Response: This paragraph is actually calling out the 2016 MTCP identified improvement and not the ECM standard cross section for this classification. In response to the comment, the following has been added to the end of this paragraph: *The ECM standard cross section for a Rural Major Collector includes a 32-foot paved width (ECM, Chapter 2, Table 2-5).*

T Number: 2 Author: Bret Subject: Engineer Date: 3/27/2024 4:42:08 PM

crushed

T Number: 3 Author: Bret Subject: Engineer Date: 3/27/2024 4:42:15 PM

asphalt

☰ Number: 4 Author: Bret Subject: Engineer Date: 3/27/2024 4:41:46 PM

[Crushed asphalt is not allowed, please revise to aggregate base course per County approved gravel pavement design](#)

↻ Author: jchodsdon Subject: Sticky Note Date: 6/26/2024 8:53:01 AM

LSC Response: This paragraph has been revised to include a reference to the deviation request included with this resubmittal.

☰ Number: 5 Author: CDurham Subject: Callout Date: 4/2/2024 9:13:57 AM

[What about long-term?](#)

↻ Author: jchodsdon Subject: Sticky Note Date: 6/26/2024 8:53:22 AM

LSC Response: Updated as requested.

Drover Canyon View/Drennan Road

The turning volumes at Drover Canyon View/Drennan Road are not projected to exceed the *ECM*-minimum volume thresholds prescribing exclusive right- or left-turn lanes, based on the projected short-term total volumes.

WAIVERS AND DEVIATION REQUESTS

Deviation Request

A deviation request for interim/temporary length of cul-de-sac has been prepared and is included with this submittal.

Land Development Code Waiver

A waiver to LDC Section 8.4.4.E.3 is requested to permit a crushed asphalt-surface, private, local roadway as part of this application. Please refer to the waiver request included with this submittal for additional details.

ROADWAY IMPROVEMENT FEE PROGRAM

Anticipated Fees and PID Option

Waiver was not found in submittal package. Please provide with next review cycle. ¹

This project will be required to participate in the El Paso County Road Improvement Fee Program. The applicant will join the 10-mil PID. The 10-mil PID building permit fee portion associated with this option is \$1,221 per single-family dwelling unit. Based on 15 lots for Filing 2 only, the total building permit fee would be \$18,315.


Potentially Reimbursable Improvements Under the MTCP Fee Program

Nearby improvement projects which are potentially reimbursable under the Fee Program are (from Map 13 on the *MTCP*) include:

- P8 – Drennan Road from Curtis Road to Ellicott Highway (upgrade from 2-lane Rural gravel road to a 2-lane Unimproved County Road (\$7,148,000))

Given the rural location, pedestrian facilities do not currently exist on Peyton Highway or Drennan Road adjacent to the site. The following multi-modal improvement projects are shown adjacent to the site on “Map 15: Bicycle and Pedestrian Network and Improvements” on El Paso County’s *Major Transportation Corridors Plan (MTCP)*:

- M1 – Peyton Highway from Squirrel Creek Road to Falcon Highway - 15.93 miles of new bicycle lanes.
- P8 – Drennan Road from Curtis Road to Ellicott Highway - proposed bicycle route as part of future roadway upgrades/widening project.

 Number: 1 Author: CDurham Subject: Callout Date: 4/2/2024 9:31:43 AM

Waiver was not found in submittal package. Please provide with next review cycle.

 Author: jchodsdon Subject: Sticky Note Date: 6/26/2024 8:53:47 AM

LSC Response: This paragraph has been revised to include a reference to the deviation request included with this resubmittal.

Figures 1-7

Provide a figure for sight distance and stopping sight distance at intersection of Drennan Rd and Drover Canyon View ¹

☰ Number: 1 Author: Bret Subject: Engineer Date: 4/1/2024 2:05:57 PM

Provide a figure for sight distance and stopping sight distance at intersection of Drennan Rd and Drover Canyon View

↩ Author: jchodsdon Subject: Sticky Note Date: 6/26/2024 8:54:10 AM

LSC Response: A sight-distance Figure has been included in the updated TIS.