LSC Responses to TIS Redline Comments

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Sterling Ranch Filing No. 5
Traffic Impact Study
(LSC #S224610)
August 17, 2023

Project # PUDSP-23-002 [1]

Traffic Engineer's Statement

This 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.

COLORADO LICENSED
JEFFREY C. HODSDON
31684
8-17-23
PROFESSIONAL ENGINEER

Developer's Statement

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

V.P.

8/14/2023
Date

LSC Responses to TIS Redline Comments

Page: 1

Number: 1 Author: CDurham Subject: Text Box Date: 10/2/2023 08:03:11 -06'00'

Project # PUDSP-23-002

Author: kdferrin Subject: Sticky Note Date: 11/14/2023 09:52:46

LSC Response: The additional information has been added as requested.

- Findings and recommendations for study-area roadways and intersections, including number of lanes, auxiliary turn lanes, intersection traffic control, etc.; and
- The project's obligation to the County roadway improvement fee program.

REPORT SCENARIOS

Short-Term Scenario

The short-term scenario includes the roadway segments to be added in the short term only, as shown in Figure 2. This scenario includes traffic to be generated by the currently-proposed Copper Chase at Sterling Ranch and traffic to be generated in the short term by buildout of Homestead at Sterling Ranch, Branding Iron at Sterling Ranch, Sterling Ranch Filings 2-4, Homestead North at Sterling Ranch Filings 1-3, the Retreat at TimberRidge Filings 1-3, Sterling Ranch East Filings 1 and 2, FourSquare at Sterling Ranch East, and Copper Chase at Sterling Ranch. Trips projected from these other short-term developments outside of the currently-proposed Sterling Ranch Filing No. 5 are included as short-term "background traffic" in this report.

1 Copper Chase at Sterling Ranch

Previously mentioned earlier in sentence 2

Long-Term Scenario

The long-term scenario is essentially the same as the 2043 long-term scenario contained in the LSC February 10, 2023 Master TIS with additional detail added for this application – including the analysis of minor intersections and street segments that are part of the currently-proposed development. The study area of this report is more focused than the Sketch Plan.

include project name & number the report was submitted with 3

RECENT TRAFFIC REPORTS

- LSC completed an updated master traffic study (MTIS) for the entire Sterling Ranch development, dated March 17, 2023. Appendix Table 1 includes a link to the El Paso County Electronic Development Application Review Program (EDARP) page where a copy of the latest version of that MTIS can be obtained.
- A list of other traffic studies within Sterling Ranch and in the vicinity of the area of study completed within the past five years (that LSC is aware of) is attached for reference (Appendix Table 1).
- El Paso County is currently studying the Briargate Stapleton Corridor as part of a Pikes Peak Rural Transportation Authority (PPRTA) study. A draft version of the *Briargate-Stapleton Corridor Study* by Wilson & Company was published December 9, 2021.

EXISTING ROAD AND TRAFFIC CONDITIONS

The adjacent streets are shown in Figures 1 and 2 and are described below. Copies of the *2016 El Paso County Major Transportation Corridors Plan* (*MTCP*), *2040 Roadway Plan*, and *2016 MTCP*

Page: 6

Number: 1 Author: CDurham Subject: Highlight Date: 10/2/2023 07:56:31 -06'00'
Copper Chase at Sterling Ranch

Number: 2 Author: CDurham Subject: Callout Date: 10/2/2023 07:56:25 -06'00'
Previously mentioned earlier in sentence

Author: kdferrin Subject: Sticky Note Date: 11/14/2023 09:52:42
LSC Response: The text has been revised.

Number: 3 Author: CDurham Subject: Callout Date: 10/2/2023 08:03:42 -06'00'
include project name & number the report was submitted with

Author: kdferrin Subject: Sticky Note Date: 11/14/2023 09:52:37
LSC Response: The additional information has been added as requested.

TRIP GENERATION

Sterling Ranch Filing No. 5 site-generated vehicle trips have been estimated using the nationally-published trip-generation rates from *Trip Generation, 11th Edition*, 2021 by the Institute of Transportation Engineers (ITE). Table 1 shows the trip-generation estimate. Table 1 also shows the trip-generation estimate for the same parcel assumed in the *Sterling Ranch Master TIS* for comparison.

Sterling Ranch Filing No. 5 is expected to generate 596 vehicle trips on the average weekday, with about half entering and half exiting the site during a 24-hour period. During the morning peak hour, which generally occurs for one hour between 6:30 and 8:30 a.m., about 11 vehicles would enter and 32 vehicles would exit the site. During the afternoon peak hour, which generally occurs for one hour between 4:15 and 6:15 p.m., about 33 vehicles would enter and 21 vehicles would exit the site.

Include what the overall change in daily and am/pm peak trips is from the previous Master TIS [1]

TRIP DISTRIBUTION AND ASSIGNMENT

The directional distribution of the site-generated traffic volumes on the street and roadway system serving the site is an important factor in determining the site's traffic impacts. The distribution estimates for short-term and long-term residential-related traffic are shown in Figure 5. The short-term directional-distribution estimate assumes the short-term roadway network shown in Figure 2 only and the long-term directional-distribution estimate assumes buildout of the roadway network. The directional-distribution estimates are based, in part, on the estimates contained in the sketch plan TIS report. Factors include: the location of the site with respect to the Colorado Springs metropolitan area, the planned access system for the site, the street and roadway system serving the site, and the land uses proposed for the site.

When the distribution percentages (from Figure 5) are applied to the new, external trip-generation estimates (from Table 1), the resulting site-generated traffic volumes can be determined. Figures 6 and 7 show the short-term and long-term site-generated traffic volumes, respectively. The short-term site-generated traffic volumes assume only the street network shown in Figure 2 and the long-term site-generated traffic volumes assume buildout of the area roadway network.

BACKGROUND TRAFFIC VOLUMES

Background traffic is the traffic estimated to be on the adjacent roadways and at adjacent intersections without the proposed development's trip generation of site-generated traffic volumes. Background traffic (for a specified horizon year) includes the through traffic and the traffic generated by nearby developments (existing and planned, including traffic generated by existing and planned developments within the greater Sterling Ranch overall development) but assumes zero traffic generated by land uses within Sterling Ranch Filing No. 5.

Page: 9

Number: 1 Author: CDurham Subject: Text Box Date: 10/2/2023 08:16:20 -06'00'

Include what the overall change in daily and am/pm peak trips is from the previous Master TIS

Author: kdferrin Subject: Sticky Note Date: 11/14/2023 09:52:33

LSC Response: The additional information has been added as requested.

Marksheffel/Vollmer

Table 3 shows the results of the analysis for the intersection of Marksheffel/Vollmer. As shown in Table 3, in the short-term, only three of the hours analyzed are projected to meet the thresholds for an Eight-Hour Vehicular-Volume Traffic-Signal Warrant and none of the hours analyzed are projected to meet the thresholds for a Four-Hour Vehicular-Volume Traffic-Signal Warrant. This analysis indicates that traffic-signal warrant(s) will likely **not** be met at the intersection of Marksheffel/Vollmer in the short-term.

Marksheffel/Sterling Ranch

Table 4 shows the results of the analysis for the intersection of Marksheffel/Sterling Ranch. As shown in Table 4, in the short-term, only four of the hours analyzed are projected to meet the thresholds for an Eight-Hour Vehicular-Volume Traffic-Signal and only one of the hours analyzed are projected to meet the thresholds for a Four-Hour Vehicular-Volume Traffic-Signal Warrant. This analysis indicates that traffic-signal warrant(s) will likely **not** be met at the intersection of Marksheffel/Sterling Ranch in the short-term.

SUBDIVISION STREET CLASSIFICATIONS

All of the internal streets within Sterling Ranch Filing No. 5 should be classified as Urban Local. Figure 12 shows the recommended street classifications for the internal streets and the streets in the vicinity of the site.

DEVIATION REQUESTS

Deviation request was not included in submittal package. Please include with next submittal for review. 1

A PUD modification for driveway frontage has been included with this submittal.

ROADWAY IMPROVEMENTS

Table 4 from the *Sterling Ranch Sketch Plan Amendment Master TIS* contained a summary of needed area improvements. Appendix Table 2 is a copy of this table with the improvements needed either prior to or with Sterling Ranch Filing No. 5 highlighted. Please see Figure 13 for a map of the key street-segment locations. These recommendations are consistent with the LSC Sketch Plan TIS report.

The following auxiliary lanes shown will be required with Sterling Ranch Filing No. 5 if not completed with Sterling Ranch Filing No. 2. Note: These are shown on the construction plans by JR Engineering for these adjacent roadways and construction is underway:

Page: 13

Number: 1 Author: CDurham Subject: Callout Date: 10/2/2023 08:24:49 -06'00'

Deviation request was not included in submittal package. Please include with next submittal for review.

Author: kdferrin Subject: Sticky Note Date: 11/14/2023 09:52:27

LSC Response: This section has been revised to indicate that no deviations to the *ECM* criteria will be requested with this filing.

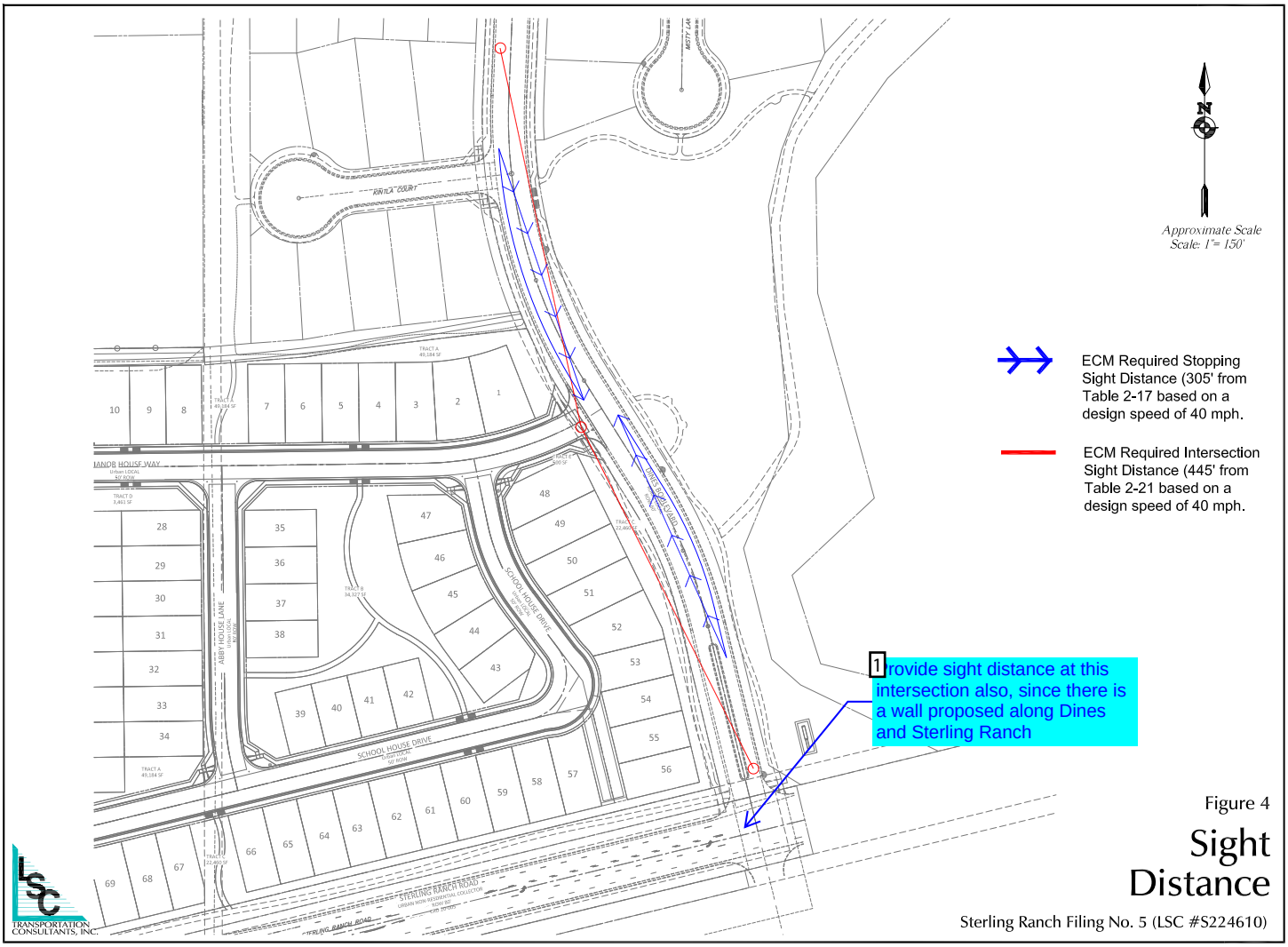


Figure 4

Sight Distance

Sterling Ranch Filing No. 5 (LSC #S224610)

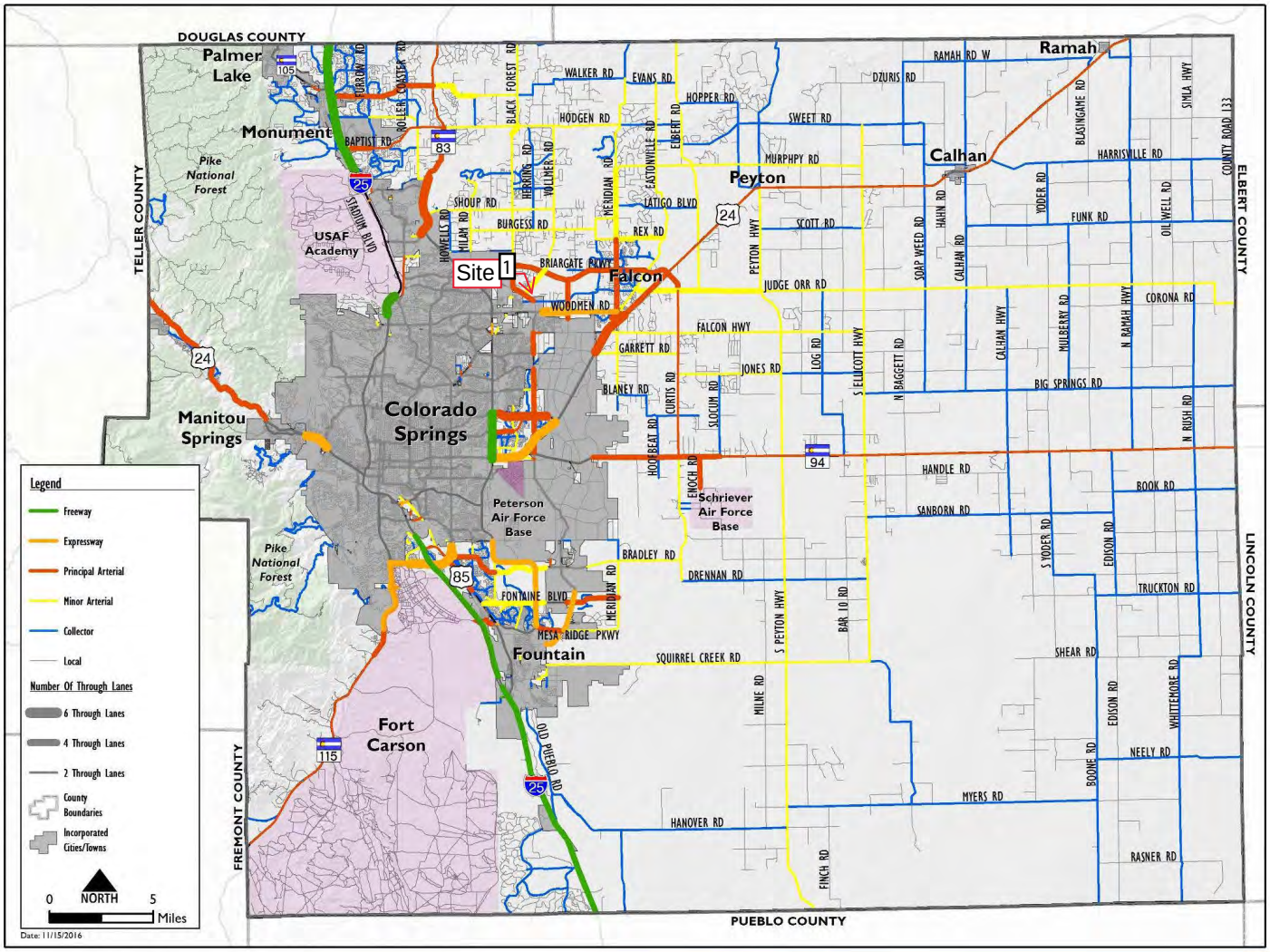
Page: 24

Number: 1 Author: CDurham Subject: Callout Date: 10/2/2023 14:11:32 -06'00'

Provide sight distance at this intersection also, since there is a wall proposed along Dines and Sterling Ranch

Author: kdferrin Subject: Sticky Note Date: 11/14/2023 09:52:22

LSC Response: The additional information has been added as requested.



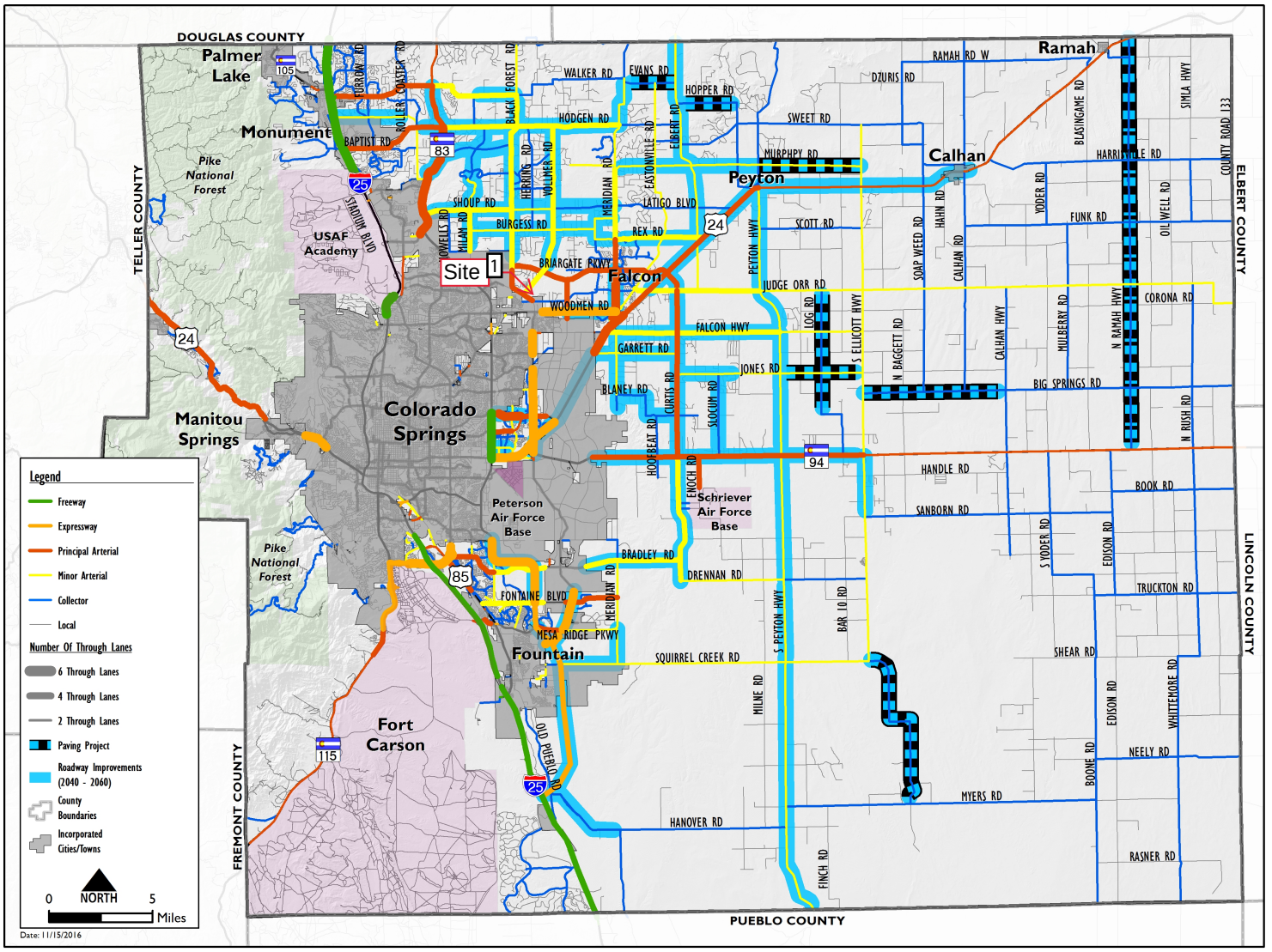
Map 14: 2040 Roadway Plan (Classification and Lanes)

Page: 72

Number: 1 Author: Kirstin Subject: Callout Date: 5/5/2023 13:43:48 -06'00'

Site

Map 17: 2060 Corridor Preservation



Page: 73

Number: 1 Author: Kirstin Subject: Callout Date: 5/5/2023 13:44:10 -06'00'

Site