### **LSC Responses to TIS Redline Comments**



LSC TRANSPORTATION CONSULTANTS, INC. 2504 East Pikes Peak Avenue, Suite 304 Colorado Springs, CO 80909 (719) 633-2868 FAX (719) 633-5430 E-mail: <u>lsc@lsctrans.com</u> Website: http://www.lsctrans.com

1

# 6001 E. Platte Special Use Transportation Memorandum (LSC #S244110) May 10, 2024

Please include project No. PPR2418

### 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.



### **Developer's Statement**

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

Date

# LSC Responses to TIS Redline Comments

## Page: 1

Number: 1 Author: HaoVo Subject: Callout Date: 6/17/2024 4:06:12 PM

Please include project No. PPR2418

Author: jchodsdon Subject: Sticky Note Date: 8/30/2024 3:09:27 PM LSC Response: A reference to this project has been added.



LSC TRANSPORTATION CONSULTANTS, INC. 2504 East Pikes Peak Avenue, Suite 304 Colorado Springs, CO 80909 (719) 633-2868 FAX (719) 633-5430 E-mail: <u>lsc@lsctrans.com</u> Website: http://www.lsctrans.com

May 10, 2024

Keith Moore RMG – Rocky Mountain Group PO Box 50917 Colorado Springs, CO 80918

RE: 6001 E. Platte Avenue Special Use Transportation Memorandum El Paso County, CO LSC #S244110

Dear Mr. Moore,

LSC Transportation Consultants, Inc. has prepared this transportation memorandum for the proposed development of the property located at 6001 East Platte Avenue in Colorado Springs, Colorado. Located at El Paso County parcel ID 5418000075, the 17.22-acre parcel is planned to be developed with 622 mini-warehouse storage units, 168 RV/boat storage spaces, and 58,000 square feet of warehouse buildings.

### North side? 1

Access to the development will be from the 2 buth-side, US Hwy 24 (Platte Ave.) frontage road (Motel Road). No direct access would be provided to the "mainline" of US Hwy 24 (Platte Avenue).

This report has been prepared for submittal to El Paso County and CDOT. It is our understanding that the land use applications will include Preliminary Plan, Final Plat, special use, and Site Development plan.

### **REPORT CONTENTS**

The preparation of this report included the following:

- Inventory of existing adjacent and nearby area street system. This included surface conditions, functional classifications, roadway widths, lane configurations, traffic control, posted speed limits, pavement markings, intersection and access spacing, roadway and intersection alignments, auxiliary turn lanes, intersection sight distances, etc.;
- Summary of morning and late-afternoon peak-hour turning-movement traffic counts at the following intersections:
  - Platte Avenue/Motel Road (right-in/right out (RIRO) access)
  - Motel Road/Platte Avenue frontage road
  - Platte Avenue/Hathaway Drive
  - o Hathaway Drive/Platte Avenue frontage road

Number: 1	Author: CDurham	Subject: Text Box	Date: 6/19/2024 2:23:04 PM			
North side?						
LSC Respon	ise: South side is corre	ect.				
T Number: 2	Author: CDurham	Subject: Highlight	Date: 6/19/2024 2:14:44 PM			
south-side						

- Estimates of short-term baseline traffic volumes, which have been revised to reflect the required closure of the Motel Road RIRO connection to the US Hwy 24 "mainline"; baseline volumes also include anticipated trips to be generated by other area developments;
- Review other recent studies completed in this area and use of applicable data/transferrable information/analysis etc. from these previous LSC studies adjacent to the site were also utilized;
- Estimates of average weekday and peak-hour trip generation for the proposed development;
- Estimation of directional distribution of site-generated vehicle trips on the area street system, the study-area intersections, and the proposed site-access points on Motel Road;
- Projections of site-generated turning-movement traffic volumes at the following "study-area" intersections:
  - Platte Avenue/Hathaway Drive
  - Hathaway Drive/Platte Avenue frontage road
- Estimates of long-term background-traffic volumes at the study-area intersections;
- Total traffic (site traffic-plus-baseline/background traffic) projections at the study-area intersections for the short and long term;
- Level of service (LOS) analysis at the study-area intersections;
- Evaluation of existing, short-term, and long-term projected intersection volumes to determine the potential need for any new auxiliary right-/left-turn lanes, based on the criteria in CDOT's *State Highway Access Code;*
- Other recommended improvements/modifications to the study-area streets and intersections, including street system/intersection improvements, intersection traffic control, and/or signage and pavement-marking modifications as required; and
- Summary of compiled data, analysis, findings, and recommendations.

### PRIOR AREA TRAFFIC REPORTS

LSC utilized the following previous traffic reports to assist in the production of this report:

- 6435 E. Platte Avenue Special Use February 21, 2024 (by LSC)
- *WireNut* August 10, 2023 (by LSC)
- *HCD Drilling* April 20, 2022 (by LSC)
- Freedom Springs July 2018 (by LSC)

Include review of Project PPR2415 - Western Townhomes as they impact the Hathaway/Platte frontage intersection

### LAND USE AND ACCESS

### Site Land Use

Figure 1 shows the site location relative to the adjacent and nearby streets. The proposed special-use site located at 6001 East Platte Avenue in Colorado Springs, Colorado. Located at El Paso County parcel ID 5418000075, the 17.22-acre parcel is planned to be developed for

 Number: 1
 Author: CDurham
 Subject: Text Box
 Date: 6/19/2024 2:23:13 PM

 Include review of Project PPR2415 - Western Townhomes as they impact the Hathaway/Platte frontage intersection

## Author: jchodsdon Subject: Sticky Note Date: 8/30/2024 3:10:15 PM

LSC Response: References to this new project have been added to the report. However, given the configuration of the three-quarter movement intersection with Highway 24, that PPR2415 is on the opposite side of Highway 24, and considering the CDOT-required closure of the right-in/right-out and associated improvements, PPR2415 added traffic won't change the turning movements to/from the south side of Highway 24, which are relevant to this analysis. Traffic added by from PPR2415 won't change the recommendations for this project. Moreover, the TIS was approved by CDOT.

622 mini-warehouse storage units, 168 RV/boat storage spaces, and 58,000 square feet of warehouse buildings. Please refer to Table 1 below for a summary of the phasing for the overall development.

Land Use	Units	Phase 1	Phase 2	Phase 3	Total			
Warehouse	Square Feet	0	0	58 <i>,</i> 000	58 <i>,</i> 000			
Mini-Warehouse	Storage Units	358	264	0	622			
RV/Vehicle/Boat Storage	Parking Spaces	85	83	0	168			

### Table 1: Land Use Summary

A copy of the site plan is shown in Figure 2.

### Site Access

Access to the development will be from the **Douth-side**, US Highway 24 (Platte Avenue) frontage road (Motel Road). No direct access would be provided to Platte Avenue. Moreover, per CDOT, the mid-block right-in/right-out (RIRO) access on Platte Avenue to the frontage road will need to be permanently closed. All traffic using this RI/RO, including this project's traffic, would need to use the three-quarter-movement access connection to the "mainline" of US Highway 24, the frontage road at Hathaway Drive.

Recent TIS reports for parcels within this area have reflected a CDOT directive to the applicant for the "HCD Drilling" to close the existing right-in/right-out (RIRO) vehicular connection to the US Highway (Hwy) 24 "mainline." This RIRO connection is located 925 feet west of the frontage road/three-quarter-movement intersection and approximately 790 feet east of this site's access (centerline distance). With the closure of the RIRO, the existing three-quarter-movement connection to the US Hwy 24 mainline will remain open to provide access to this area. The short-and long-term (20-year horizon) scenarios assume closure of the RIRO.

### SITE ACCESS SIGHT DISTANCE

### **CDOT Requirements**

The proposed site-access point must meet Colorado State Highway Access Code standards for<br/>sight distance.Image: Colorado State Highway Access Code standards for<br/>Image: Code State Hi

### Entering Sight Distance

With an assumed 25-mph posted speed limit (unposted in the vicinity of the site), the minimum required entering/intersection sight distance for the westbound approach at the proposed site-access locations is 250 feet for passenger vehicles and 325 feet for single-unit trucks (per Table 4-2 of the *State Highway Access Code*). The site-access driveway is at the west end of the

T Numb	er: 1	Author: CDurham	Subject: Highlight	Date: 6/19/2024 2:23:24 PM		
south-	side					
Numb	er: 2	Author: HaoVo	Subject: Callout	Date: 6/13/2024 10:36:35 AM		
Please show exhibit of sight distance.						
	🛶 Author: jchodsdon Subject: Sticky Note Date: 8/30/2024 3:10:32 PM					

LSC Response: Added as requested.

south frontage road. Therefore, entering sight distance may not be necessary (with essentially no through traffic on the frontage road). Sight distance along the highway may be sufficient. **Sight Distance Along Highway** 

The minimum required "sight distance along a highway" for both approaches at the proposed site-access locations is 150 feet for passenger vehicles (per Table 4-1 of the *State Highway Access Code*). The westbound approach is likely the only applicable approach for this as there is no eastbound approach to this site access. Sight-distance field measurements for the eastbound approach to the proposed site-access location to the frontage road meets the required 150-foot requirement.

**ROAD AND TRAFFIC CONDITION** Fovide an exhibit showing all streets adjacent to the project. Please

Figure 1 shows the streets adjacent to and in the vicinity of the site. Adjacent roads serving the site are identified below, followed by a brief description of each:

**Platte Avenue (US Highway 24)** is a four-lane east/west state highway that locally extends from Colorado Springs to Falcon. US Hwy 24 is classified as an Expressway by the Colorado Department of Transportation and is shown as an Expressway on the County *Major Transportation Corridors Plan (MTCP)*. The US Hwy 24/Road intersection is grade-separated. There is an existing at-grade three-quarter-movement intersection in the vicinity of the site at Hathaway Drive. Figure 28 of CDOT's *US 24 Planning and Environmental Linkage (PEL) Study* shows that the three-quarter access intersection at US Hwy 24 just south of Hathaway Drive will remain unchanged through 2040. Please refer to the "Site Access" section above regarding the anticipated/assumed closure of the existing RIRO connection to the US Hwy 24 mainline.

Urban local roadway

**Motel Road** is a **Bwo-lane non-arterial street** without a posted speed limit in the vicinity of the site. Eastbound right-turn auxiliary turn lanes currently exist at both stop-sign-controlled frontage-road connections to Platte Avenue.

**Hathaway Drive** is the north leg/connection to the three-quarter-movement intersection with US Hwy 24. Approximately 50 feet north of US Hwy 24, there is a yield-sign-controlled T-intersection.

### **Existing Traffic Volumes**

Vehicular turning-movement counts were conducted at the following intersections and dates/times:

- Platte Avenue/Hathaway Drive (three-quarter-movement access)
  - Thursday, April 11, 2024 from 6:30 8:30 a.m.
  - Wednesday, April 10, 2022 from 4:00 6:00 p.m.
- Motel Road/Hathaway Drive (south of Platte Avenue)
  - Thursday, April 11, 2024 from 6:30 8:30 a.m.

Number: 1 Date: 6/13/2024 10:30:05 AM Author: HaoVo Subject: Callout Figure 1 is a vicinity map which does not show and lable all streets (Motel Rd, Hathaway Dr.) adjacent to the proposed project. Please provide an exhibit showing all streets adjacent to the project. Author: jchodsdon Subject: Sticky Note Date: 8/30/2024 3:12:35 PM LSC Response: Updated as requested. Number: 2 Author: HaoVo Subject: Callout Date: 6/13/2024 9:09:17 AM Urban local roadway Author: jchodsdon Subject: Sticky Note Date: 8/30/2024 3:12:29 PM LSC Response: Revised as requested. TNumber: 3 Author: HaoVo Subject: Highlight Date: 6/13/2024 9:04:25 AM two-lane non-arterial stree

Edarp Number, approval date, and

Excerpts are needed.

- Wednesday, April 10, 2022 from 4:00 6:00 p.m.
- Platte Avenue/RIRO access to Motel Road
  - Thursday, April 18, 2024 from 6:30 8:30 a.m.
  - Thursday, April 18, 2022 from 4:00 6:00 p.m.
  - Motel Road/frontage road RIRO access (south of Platte Avenue)
    - Thursday, April 18, 2024 from 6:30 8:30 a.m.
    - Thursday, April 18, 2022 from 4:00 6:00 p.m.

Existing morning and evening weekday peak-hour traffic volumes at these intersections are shown in Figure 3. Raw count reports are attached. 1

### Short-Term Baseline Traffic Volumes

### Please provide the year information for the short-term study.

Figure 4 shows estimated "short-term baseline" traffic volumes on the study-area streets and at the study-area intersections (short-term peak-hour turning-movement volumes). Previous LSC traffic counts from I2C's recent nearby studies were also referenced to establish short-term baseline traffic volumes, as those estimates include the completion of the 6435 E. Platte Storage, HCD Drilling, and WireNut developments in the vicinity that were assumed to have been completed for the short-term baseline scenario.

The short-term baseline volumes also reflect LSQ adjustments accounting for the required closure of the existing RIRO connection to the US Hwy 24 mainline, located approximately 925 feet west the US Hwy 24/three-quarter access intersection. The short-term baseline scenario assumes all existing traffic using this RIRO reassigned to the existing three-quarter access to reflect adjusted traffic patterns. Anticipated future area trips generated were also assigned to the Please include the name of TIS, and three-quarter-only.

# Field Observations at US Highway 24/Three-Quarter Access prepared by whom for reference.

LSC conducted field observations of operations at the three-guarter access to US Hwy 24 during both the morning and afternoon peak hours. The eastbound-left/U-turn-lane queue was consistently 6-12 vehicles, with multiple occurrences of additional vehicles arriving at the back of queue as the queue began to clear. In general, drivers making an eastbound-U-turn contributed more towards control delay for this turning movement, often waiting 3-5 minutes before enough of a gap formed upstream on Platte Avenue for them to safely conduct a U-turn.

Several vehicles (mostly heavy vehicles from businesses located on the Motel Road/Platte Avenue frontage road) were observed to turn eastbound-left onto Hathaway Drive rather than waiting in the eastbound-U-turn queue. After turning eastbound-left onto Hathaway Drive, these drivers would immediately make a northbound-U-turn in the wider intersection of Hathaway Drive/Ford Road before turning 180 degrees back towards Platte Avenue to turn southbound-right onto Platte Avenue. This turning-movement combination was observed to be noticeably quicker for vehicles wishing to travel back towards downtown Colorado Springs

Number: 1	Author: HaoVo	Subject: Callout	Date: 6/13/2024 10:43:46 AM				
Please provide the year information for the short-term study.							
1							
Author: jc	hodsdon Subject: Stic	ky Note Date: 8/30/2	024 3:12:21 PM				
LSC Response	onse: Added as request	ed.					
T Number: 2	Author: HaoVo	Subject: Highlight	Date: 6/12/2024 3:49:19 PM				
SC's recent nearb	SC's recent nearby studies						
Number: 3	Author: HaoVo	Subject: Callout	Date: 6/13/2024 10:33:02 AM				
Please includ	Please include the name of TIS, and Edarp Number, approval date, and prepared by whom for reference. Excerpts are						
needed.							
Author: jchodsdon Subject: Sticky Note Date: 8/30/2024 3:12:12 PM							
LSC Response: Added as requested.							

date, prepared by whom.

compared to those drivers completing a standard eastbound-U-turn movement at Platte Avenue/Hathaway Drive.

Page 6

Northbound and southbound right-turning vehicles were seen using their respective right-turn acceleration lane to merge into through traffic on Platte Avenue. The eastbound right-turn acceleration lane is continuous to Peterson Boulevard (approximately one-quarter mile to the east), while on the north side of Platte, the westbound right-turn acceleration lane is continuous to Valley Drive (about one-quarter mile to the west).

### **TRIP GENERATION**

Estimates of the vehicle trips projected to be generated by the proposed development have been made using the nationally published trip-generation rates from Trip Generation, 11th Edition, 2021 by the Institute of Transportation Engineers (ITE). Corresponding trip-generation rates from the following ITE Land Use categories have been used to develop trip-generation estimates for Please provide name of the proposed site: other studies, approval

- "150 Warehouse"
- "151 Mini-Warehouse"

RV/Boat Storage trip-generation rates are not available for the proposed land use. As such, trip-generation rates for this site have been based on the studies completed for RV-storage facilities. Please refer to Appendix A for details.

Table 2 below presents a summary of the estimated site trip generation. A detailed trip-generation estimate for the site, including ITE rates land uses, is presented Table 3 (attached). The proposed sketch plan is attached for reference.

The proposed land uses are projected to generate about 275 total vehicle trips on the average weekday during a 24-hour period, with approximately half entering and half exiting the site. During the morning peak hour, approximately 31 entering vehicles and 13 exiting vehicles are estimated to be generated. Approximately 18 entering and 34 exiting vehicles are estimated to be generated by the site during the afternoon peak hour.

Analysis Poriod	Trips Generated					
Analysis Feriou	Entering	Exiting	Total			
Morning Peak Hour (veh./hour)	31	13	44			
Afternoon Peak Hour (veh./hour)	18	34	52			
Daily/24-hour (veh./day)	138	138	275			

Table 2: Estimated Site Vehicle-Trip Generation (Total Driveway Trips)

 Number: 1
 Author: HaoVo
 Subject: Callout
 Date: 6/13/2024 8:05:42 AM

 Please provide name of other studies, approval date, prepared by whom.

 Author: jchodsdon
 Subject: Sticky Note
 Date: 8/30/2024 3:12:05 PM

 LSC Response: Appendix A provides the name of the studies and who prepared them.

 Regarding approvals of the projects in Appendix A, a Google Maps search of the three projects indicated two of the three projects appear to have moved forward. The Long Beach one appears to have had issues not related to traffic.

 Number: 2
 Author: HaoVo
 Subject: Highlight
 Date: 6/12/2024 3:54:45 PM

### TRIP DISTRIBUTION AND ASSIGNMENT

### **Trip Directional Distribution**

Estimating the directional distribution of site-generated vehicle trips to the study-area roads and intersections is a necessary component in determining the site's traffic impacts. Figure 5 shows the percentages of the site-generated vehicle trips projected to be oriented to and from the site's major approaches. This report utilizes a similar directional distribution as the outdoor storage, HCD Drilling and WireNut reports, with localized trip-routing adjustments specific to the location of and access to/from this proposed outdoor storage site.

### **Site-Generated Traffic**

Figure 6 shows the projected site-generated traffic volumes for the weekday morning and evening peak hours. Site-generated traffic volumes at the study-area intersections have been calculated by applying the directional-distribution percentages estimated by LSC (from Figure 5) to the trip-generation estimates (from Table 2).

### Short-Term Baseline-Plus-Site-Generated Traffic Volumes

Figure 7 shows the sum of the short-term baseline traffic volumes (from Figure 4) and site-generated peak-hour traffic volumes (shown in Figure 6). These volumes represent the projected short-term total traffic, assuming completion of the site development.

### Estimated Future 2044 Background Traffic Volumes

Figure 9 shows the projected 20-year background traffic volumes for the year 2044. Estimated 2044 background through traffic volumes on Platte Avenue, Hathaway Drive, and Motel Road are based on projected background growth of undeveloped parcels in the vicinity of the site. Estimates include the completion of the 6435 Platte Outdoor Storage, HCD Drilling, and WireNut Include traffic generation from developments in the vicinity that are assumed to have been completed.

Note: The trips shown turning to and from the east leg of the US Hwy 24/three-quarter access intersection were included in prior TIS reports and were intended to account for potential changes in land use on this parcel (now accounted for in this study by "site-generated" traffic) and/or trips to/from the district water/wastewater facility accessed at the east end of the frontage road. This report retains these turning-movement estimates, but this is likely a conservative assumption if the water/wastewater facility (present and future) average peak-hour traffic is accurately represented by the existing counts in Figure 3.

d2OT's 20-year growth factor for Platte Avenue is 1.27, representing a 1.35 percent annual growth rate. Projected 20-year background traffic volumes do **not** include projected traffic to be generated by this proposed outdoor storage site.

What is the name of the CDOT document showing the growth factor for Platte Avenue? Please include information such as table number and or figure number, the name of the document, and the year of revision. Also, remember to include the name of the document in the reference section.

3



LSC Response: Added as requested.

### EL PASO COUNTY ROAD IMPACT FEE PROGRAM

This project will be required to participate in the El Paso County Road Improvement Fee Program. The site's square footage was applied to the current fee-program rates for the applicable land uses and results in a fee amount of \$212,089. Please refer to Table 5 for more details.

Table 5. El tabe county houd improvement ree						
Land Use	Size	Units	\$ per Unit	Cost		
Warehouse	58.000	KSF	\$1,865	\$108,170		
RV/Boat Storage	34	Trips/Day	\$398.55	\$9,814		
Mini-Warehouse	129.800	KSF	\$725	\$94,105		
	1 Total	\$212,089				
footprint area of the "stalls" at the			at the			

same rate as the mini-warehouse

of \$725/1000 sf

### Table 5: El Paso County Road Improvement Fee

### CONCLUSIONS

- The site is projected to generate about 275 new driveway vehicle trips on the average weekday.
- During the weekday morning peak hour of adjacent street traffic, 31 vehicles would enter the site while 13 vehicles would exit.
- During the weekday evening peak hour of adjacent street traffic, 18 vehicles would enter the site while 34 vehicles would exit.
- Please refer to the "Level of Service" section above for detailed LOS analysis results for individual turning movements and approaches at all studied intersections, during both peak hours for the short term and the 2044 horizon year.
- CDOT has identified the requirements for this and other projects in this area served by Motel Road (the SH 24G south-side frontage road).
- CDOT access permits will be required for this project as indicated in the section above.



 Number: 1
 Author: CDurham
 Subject: Text Box
 Date: 6/19/2024 2:45:37 PM

 RV storage is based on the footprint area of the "stalls" at the same rate as the mini-warehouse of \$725/1000 sf

 Author: jchodsdon
 Subject: Sticky Note
 Date: 8/30/2024 1:54:54 PM

 LSC Response: This has been revised in the updated report.

 Number: 2
 Author: HaoVo
 Subject: Callout

 Date: 6/13/2024 11:11:22 AM

 Please discuss any roadway improvements needed within the project area.

Author: jchodsdon Subject: Sticky Note Date: 8/30/2024 12:47:07 PM

LSC Response: Added to the report - references the report section and July 2024 CDOT letter.



Number: 1 Author: HaoVo Subject: Callout Date: 6/13/2024 10:43:34 AM

Please provide the year information for the short-term study.

Author: jchodsdon Subject: Sticky Note Date: 8/30/2024 12:47:32 PM

LSC Response: Added as requested.



Number: 1 Author: HaoVo Subject: Callout Date: 6/13/2024 10:43:28 AM

Please provide the year information for the short-term study.

Author: jchodsdon Subject: Sticky Note Date: 8/30/2024 12:48:00 PM

LSC Response: Added as requested.

## Appendix A

# **Trip Generation Rate Estimate**

## Land Use: RV & Boat Storage

LSC estimates of trip-generation rates for the proposed RV & Boat Storage land use for this project have been based on averages of rates from the following table:

				Trip Generation Rates				
				Weekd	Weekday A.M. We		/eekday P.M.	
ITE Land Use Code	Land Use	Units <sup>1</sup>	Average Weekday	In	Out	In	Out	
<u>RV Storag</u>	ge Trip Generation Report - Valley	y Park, St. Louis, MO fo	the RV Sto	rage facilit	y to be locat	ted at 802	Porest	
Avenue b	oy The Traffic Group							
- -	RV Storage - Data Point 1 RV Storage - Data Point 2 RV Storage - Data Point 3	100 Storage Units 100 Storage Units 100 Storage Units	10.78 10.8 17.23	(duplicate	e data point)			
Trip Generation Analysis for the Proposed Self-Storage and RV Storage Facility at 3701 Pacific Place, Long Beach, California, by LSA Associates								
-	RV Storage - Data Point 1	100 Storage Units	17.23	0.50	0.47	0.93	1.12	
<u>Route 52</u> -	RV Traffic Impact Study in Weld ( RV Storage - Data Point 1	<u>County, CO (2017) by</u> 100 Storage Units	Sustainable	e Traffic So	lutions, Inc.	0.36	0.48	
	Average Rates		12.94	0.50	0.47	0.65	0.80	
					Revised JCI	H 6-15-20	23	

Mumber: 1

Author: HaoVo

Subject: Highlight Date: 6/12/2024 3:54:51 PM