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The Shops at Meridian Ranch Lot 4
Transportation Memorandum
(LSC #184510)
July 3, 2018

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.

← Provide PE signature and seal with final copy

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 is written over a horizontal line.

7/11/18
Date

Add File
"PPR18033"



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July 3, 2018

Mr. Raul Guzman
Tech Contractors
P.O. Box 80036
San Diego, CA 92138

RE: The Shops at Meridian Ranch Lot 4
El Paso County, CO
Traffic Technical Memorandum
LSC #184510

Dear Mr. Guzman:

LSC Transportation Consultants, Inc. has prepared this traffic technical memorandum comparing the currently proposed land use and estimated vehicle-trip generation for Lot 4 of the Shops at Meridian Ranch to the land use and trip generation assumed in the *Meridian Ranch Commercial Residential Filing 4B Traffic Technical Memorandum* by LSC dated July 22, 2014. The site is located north of Stapleton Drive and east of Meridian Road in El Paso County, Colorado. The site location is shown in Figure 1.

LAND USE AND ACCESS

The site plan used in the July 22, 2014 traffic impact study for the buildout of the Meridian Ranch Commercial site showed 58,005 square feet of retail floor space, plus a gas station with a 5,000-square-foot convenience store. However, as at the time most of the site plan was conceptual only, it was decided that the trip generation estimate and analysis of traffic impacts should be studied for a maximum potential land use of up to 90,000 square feet of retail floor space in addition to the gas station.

Since completion of that report, two buildings with 9,481 square feet of floor space each and one building with 10,532 square feet of floor space have been constructed on Lot 3 for a total square footage of 29,494.

The currently proposed plan for Lot 4 of the Shops at Meridian Ranch includes two buildings with a total of 29,494 square feet of floor space. The site plan is shown in Figure 2. Full-movement access for this lot is proposed to Fleece Flower Way. An additional full-movement access to

Tourmaline Drive is proposed midway between Meridian Road and Tourmaline Drive. The July 2014 study assumed a right-in/right-out only access at this location. A deviation to the El Paso County *Engineering Criteria Manual (ECM)* request is being submitted for the proposed spacing of the access.

If the remaining Shops at Meridian Ranch site area is developed as shown on the July 22, 2014 site plan, the resulting buildout land use would total about 80,700 square feet of retail floor space plus a potential future gas station. This would be 9,300 square feet below the maximum potential land use of 90,000 square feet used in the July 2014 trip generation estimate and traffic analysis.

ACCESS SIGHT DISTANCE

Figure 3 shows the required *El Paso County Engineer Criteria Manual (ECM)* lines-of-sight at the proposed access to Tourmaline Drive. The sight distance analysis to the east is based on a travel speed of 25 miles per hour (the posted limit) on Tourmaline Drive. The sight distance analysis to the west is based on a travel speed of 15 mph as vehicles approaching the access from this direction will be traveling at a slower speed as they maneuver through the right-in/right-out (future three-quarter movement) Tourmaline Drive/Meridian Road intersection. As the ECM does not provide required sight distances for travel speeds lower than 25 mph the required distances to the west were calculated using the American Association of State Highway and Transportation Officials (AASHTO) standard. These standards are generally consistent with the ECM criteria. Areas along and north of these lines would need to have low-level landscaping and be free of other obstructions (such as monument signs and parking areas) that would restrict the drivers' line of sight. Landscaping should be low—about 18 inches or lower in height to the east of the passenger vehicle lines of sight shown.

TRIP GENERATION

Estimates of the traffic volumes expected to be generated by the site have been made using the nationally published trip generation rates found in *Trip Generation, 10th Edition, 2017* by the Institute of Transportation Engineers (ITE). Table 1 shows the results of the trip generation estimates. Also shown in the table for comparison are the original buildout trip generation estimates as presented in the July 22, 2014 traffic study.

As shown in Table 1, the proposed buildings for Lot 4 are projected to generate about 1,273 new vehicle-trips on the average weekday, with about one-half of the vehicles entering and one-half of the vehicles exiting in a 24-hour period. During the morning peak hour, which generally occurs for one hour between 6:30 and 8:30 a.m., about 43 vehicles would enter and 26 vehicles would exit the site. During the afternoon peak hour, which generally occurs for one hour between 4:30 and 6:30 p.m., about 83 vehicles would enter and 90 vehicles would exit the site.

Assuming Lots 1 and 2 are developed with a gas station with 20 vehicle fueling positions and 19,800 additional square feet of retail floor space, the entire Shops at Meridian Ranch development is projected to generate about 4,989 vehicle-trips on the average weekday. This is about 443 fewer vehicle trips per day than was estimated in the July 2014 study. During the morning peak hour about 231 would enter and 184 vehicles would exit the entire Shops at Meridian Ranch development. This is about 49 more entering vehicles and 32 more exiting vehicles than was estimated in the July 2014 study. During the afternoon peak hour about 349 would enter and 361 vehicles would exit the entire Shops at Meridian Ranch development. This is about 62 fewer entering vehicles and 61 fewer exiting vehicles than was estimated in the July 2014 study.

The increase in the projected morning peak-hour trip generation despite the decrease in total floor area is due to a change in the trip generation rates for ITE Land Use 820 Shopping Center from the 9th edition of *Trip Generation* which were used in the 2014 report and the rates shown in the 10th edition which were used for the current trip generation estimate.

The increase in trip generation estimate during the average morning peak hour should not present a problem, however, as the access points and adjacent intersections will be designed for the afternoon peak-hour traffic, which is significantly higher than the morning peak hour.

TOTAL TRAFFIC

Please refer to the *Meridian Ranch Commercial Residential Filing 4B Traffic Technical Memorandum* by LSC dated July 22, 2014 for the projected long-term total traffic volumes and level of service analysis.

SITE AND ACCESS TRUCK TURNING ANALYSIS

Figures 4 through 6 present the results of a preliminary truck turning analysis using AutoTurn. The figures show turning paths for WB-50 and SU (Single Unit) trucks. These are intended to assist with the planning of the site with respect to delivery truck access and to identify potential truck turning paths in County right-of-way.

RECOMMENDATIONS

- Based on the criteria contained in the ECM and the projected turning volumes shown in Figure 11a of the *Meridian Ranch Commercial Residential Filing 4B Traffic Technical Memorandum* by LSC dated July 22, 2014 an eastbound right-turn deceleration lane would **not** be required on Tourmaline Drive approaching the proposed access point.

- This property is within the Woodmen Road Metropolitan District and applicable fees would apply.

* * * * *

Please contact me if you have any questions

Respectfully submitted,

LSC TRANSPORTATION CONSULTANTS, INC.

By: Jeffrey C. Hodsdon, P.E., PTOE
Principal

JCH:KDF:bjwb

Enclosures: Table 1
Figures 1-6 ← Attach these figures
Site Plan

Markup Summary

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Statement