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El Paso County

From: Brian Horan, PE, PTOE
Date: $\quad$ May 16, 2024
Re: Owl Place Storage: Traffic Memorandum El Paso County, CO


## INTRODUCTION

The Applicant, Meridian Storage, proposes to develop the site consistent with the approved Traffic Impact Study (TIS) dated July 10, 2023. This memo will address comments provided by the County to analyze the proposed access points. In addition, this memo recommends the gate placement at the site entrances to ensure queues do not back into the local roadway network. The site is bound by Eastonville Rd to the south, Meridian Road to the east, and property lines to the north and west, as detailed in Figure 1.


Figure 1 - Site Location

## EXISTING CONDITIONS

The proposed development will be located on the 15.3-acre site to the northwest of Meridian Rd \& Owl Place. The property that comprises the application area is located on El Paso County Parcel Numbers 5301001001,5301001002 , and 5301001014 . Upon completion, the site will be bounded by Eastonville Rd to the south, Meridian Road to the east, and property lines to the north and west. Access to the southern side of the proposed development will be provided via one full movement access along Owl Place. In addition, Meridian Park Dr will be extended to the south, providing access to the northern side of the development. Access along Meridian Park Drive is provided via a full movement access for both the eastern and western portions as well as an additional access point to the north for only the eastern portion of the site.

## TRIP GENERATION

Trip generation forecasts for the site were based on rates/equations published in the Institute of Transportation Engineers (ITE) Trip Generation Manual, 11th Edition and industry standard methodologies and as provided in the approved TIS. The trip generation of the proposed development are provided in Table 1 below. The use is expected to generate 3 AM peak hour, 4 PM peak hour, and 46 daily trips upon completion.

As mentioned above, the Applicant is proposing three accesses to the site via Owl Place. Upon construction of the development, Meridian Park Dr will be extended south through the middle of the site to Owl Place. There will be two site accesses for the east side of the site and one site access for the west side of the site. The existing Owl Place \& Meridian Road full movement intersection is proposed to close coincident with these extensions in order to provide continual access to Owl Place. Based on the trip generation contained herein, the proposed development will not significantly impact the surrounding corridor.

Table 1
Meridian Storage
Site Trip Generation

| Land Use | Use Code | Amount | Units | AM Peak Hour |  |  | PM Peak Hour |  |  | Average <br> Daily <br> Trips |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | In | Out | Total | In | Out | Total |  |
| Proposed Development (Mini-Warehouse) | 151 | 254 | Units | 2 | 1 | 3 | 2 | 2 | 4 | 46 |

Note(s):
(1) Trip generation based on the Institute of Transportation Engineers' Trip Generation Manual, 11th Edition

## AUXILIARY LANES

The turn lane warrants along Meridian Park Dr were evaluated using the El Paso County, Colorado Engineering Criteria Manual. Chapter 2, Section 2.3 - Roadway Design to determine the volume thresholds that will warrant a turn lane. The El Paso County criteria for left and right turn lanes on local roads is provided below:

Exclusive Left Turn Lane Required. Exclusive left turn lanes shall be provided wherever left turn lanes are specified as being needed by an approved TIS, identified in the MTCP, required by the ECM, or determined to be warranted by the ECM Administrator. Information in the TIS shall be used to determine whether an exclusive left turn lane is warranted. Warrant determinations shall also be based on this chapter, which include:

- Minor Arterials (State Highway Access Code Designation - RB for Rural and NR-B for Urban) and Lower Classifications Left Turn Lane: A left turn lane is required for any access with a projected peak hour ingress turning volume of 25 VPH or greater.

Exclusive Right Turn Lanes Required. Exclusive right turn lanes shall be provided wherever right turn lanes are specified as being needed by an approved TIS, identified in the MTCP, required by the ECM or determined to be warranted by the ECM Administrator. Information in the TIS shall be used to determine whether an exclusive right turn lane is warranted. Warrant determinations shall also be based on this chapter, which include:

- Minor Arterials (State Highway Access Code Designation - RB for Rural and NR-B for Urban) and Lower Classifications Right Turn Lane: A right turn lane is required for any access with a projected peak hour right turning volume of 50 VPH or greater. An acceleration lane is generally not required.

The proposed development trip generation is not forecasted to exceed 4 vph . The generated trips will be split between entering/exiting movements as well as multiple access points, making it highly unlikely for an entering movement to reach the turn lane thresholds. As such, it is recommended that Meridian Park Dr remain a two-lane local road upon completion of the site.

## TRUCK TURNS

An autoturn analysis was conducted for the RV/boat storage access using a firetruck as the design vehicle. It was determined that the trucks would be able to turn into and out of the site without needing to use the opposing lane of Meridian Park Dr. The curb return radius is recommended to be $25^{\prime}$ for aligned access location at the center of the site. The truck turning template is provided in the attachments.

## ACCESS GATE PLACEMENT

Drivers will have to pass through a gate, located at the entrance of each site access, in order to access the site. Since the peak forecasted entering volume is 2 vph , there is unlikely to be any queueing at the gates. As such, it is recommended that the gate locations be a minimum offset $25^{\prime}$ from Meridian Park Drive to accommodate any vehicle trying to enter the site.

## CONCLUSIONS

The conclusions of this analysis are as follows:

1. The subject site is a standalone project in the County of El Paso, Colorado.
2. The proposed project is forecasted to generate 3 new AM trips, 4 new PM trips, and 46 new daily trips on average upon build out in 2023.
3. Based on the trip generation contained herein, the proposed development will not have a noticeable impact on traffic operations through the study network.
4. No turn lanes along Meridian Park Dr are recommended due to the low forecasted turning volumes into the site.
5. Based on the truck turn exhibit, it can be concluded that trucks will be able to enter and exit the site.
6. It is recommended that the gates at the site accesses be offset $25^{\prime}$ from Meridian Park Dr to provide storage for any vehicle entering the site.

We trust that the information contained herein satisfy the request of the County of El Paso, Colorado. If you have any questions or need further information, please contact Brian Horan at BrianHoran@gallowayus.com or 303-770-8884.

## Attachment I <br> Site Plan <br> Truck Turn Exhibit



