



MEMORANDUM

TO: Elizabeth Nijkamp, Engineer Review Manager, El Paso County

FROM: Paul Brown, FHU

DATE: July 12, 2022

SUBJECT: **On-Call Contract #17-067H-1; PO # 8115428**
Traffic Impact Study Reviews
Task Order #6: Lorson Ranch Commercial TIS Review (P2211)

This memorandum provides a list of comments on the June 2022 Lorson Ranch Commercial Traffic Impact Study (TIS) prepared by Matrix Design Group for The Landhuis Company. Our comments are based on requirements provided in the County's Engineering Criteria Manual (ECM), Appendix B.

Comments

Comments on the TIA are divided into general requirements to conform to ECM TIA report requirements and technical and report specific comments that request further clarification or missing information.

General Comments

The following are general requirements that need to be met in the Lorson Ranch Commercial TIS to meet ECM requirements:

1. The current TIS provides a review of safety data in the study area in accordance with ECM Section B.2.4.B. However, it does not draw any conclusions based on these data. It is unclear if the calculated crash rates are typical, if study area crash types exceed norms, and if the potential for crash reductions may exist. Hence, it is not possible to determine if safety mitigations could be required as part of the project.
2. The trip generation and distribution in the TIS should be updated.
 - a. Internal capture has been applied to the trip generation for the commercial development. Per NCHRP Report 684 (referenced in the ITE Trip Generation Handbook), no internal capture should be applied for trips between uses within the retail category (NCHRP Report 684, page 5).
 - b. Although the use of pass-by trips for a gas station is reasonable, Section B.3.3.E of the ECM requires that data be provided regarding the source of the values used in this TIS, instead of assuming values as noted in the text on page 17.
 - c. The trip distribution appears to be based solely on existing daily traffic volumes presented TIS Figure 5. Given the growing nature of this area, other trip distribution data should be considered, such as information from the various studies listed on TIS page 9. Further, distributions between other portions of Lorson Ranch and the commercial site should be considered (particularly north and south along Carriage Meadows Drive).
3. The intersection analyses have several key shortcomings.
 - a. The peak hour factors shown in the intersection analysis printouts (various appendixes) do not meet the requirements of ECM Section B.3.1.B.
 - b. Existing signal timings were not obtained and applied at the Marksheffel Road / Fontaine Boulevard intersection under existing conditions.

- c. Section B2.4.B of the ECM requires an evaluation of traffic signal progression. Bandwidth targets are provided in ECM Section B.4.1.B. The TIS disregards signal progression, and states that signal operations have been evaluated “independently of any coordination between signals” (page 25). The signalized analyses need to be updated to reflect progression in accordance with the ECM requirements. Signal cycle lengths should be constrained accordingly.
 - d. Traffic signal warrants were evaluated using “a standardized distribution of traffic throughout the day” (TIS page 25). Given that project-specific daily traffic distributions are presented in Appendix A of the TIS, these analyses should be updated.
 - e. Throughout the report, yellow + all-red times appear to use the software defaults. Given the 45mph speed limit along Fontaine Boulevard and the 55mph speed limit along Marksheffel Road, these default values are not appropriate. Please update accordingly.
4. We recommend disapproval of the deviation request for a new access along Fontaine Boulevard from a traffic perspective.
- a. The access serves less than 160 vehicle trips (combined entering and exiting) based on Figure 9 and Figure 10 in the TIS.
 - b. Based on the 2040 Total Traffic levels of service shown in Table 12 and Table 13, the Fontaine Boulevard / Carriage Meadows Drive intersection (#3) and the Access 2 / Carriage Meadows Drive intersection (#20) should be able to accommodate these trips.
 - c. Fontaine Boulevard is forecasted to operate about 5% over its theoretical capacity adjacent to the new access per the text on page 38 of the TIS.
 - d. The deviation request form does not demonstrate conformance with ECM Section 2.4.1.B, including Table 2-35. This information is also not presented in the TIS.

Technical Report Comments

Comments on the technical report can be found in the Lorson Ranch Commercial PDF and the Lorson Ranch Commercial Deviation Request PDF documents in Bluebeam.

Conclusions

Based on the comments above, we feel that the subject TIA should be updated and resubmitted. The revised study should refine the trip generation and distribution, update the operational analyses, and either remove the Fontaine Boulevard site access or provide additional justification for retaining it.