



MEMORANDUM

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

FROM: Paul Brown, FHU

DATE: April 23, 2022

SUBJECT: **On-Call Contract #17-067H-1; PO # 8115428**
Traffic Impact Study Reviews
Task Order #3: Flying Horse North Sketch Plan TIS Review

This memorandum provides a list of comments on the Flying Horse North Sketch Plan TIS based on requirements provided in the County's Engineering Criteria Manual (ECM), Appendix B.

Comments

Comments on the TIS 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 TIS Comments

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

1. The ECM requires a TDM assessment, pedestrian / bicycle evaluations, and a safety analysis for a Master Traffic Study (B.2.4.A). Please add these elements to the TIS.
2. The TIS provides traffic counts collected within one year of submittal that were collected just after the Thanksgiving holiday weekend. No mention is made regarding holiday adjustments or pandemic impacts. The ECM requires that the TIS use reliable data to develop consistent existing year volumes (B.3.1.A). There may be available CDOT OTIS data along SH 21 or SH 83 that could support this evaluation.
3. The existing and short-range analyses in TIS Appendix C use HCM defaults for peak hour factors, percent heavy vehicles, and other inputs. Update in accordance with ECM Section B3.1.B.
4. The TIS makes various trip generation assumptions that are not well documented. Please add text clarifying how these assumptions were reached or update the analyses as needed (ECM B.3.3.B).
 - a. FHU was unable to determine which residential areas were single family detached versus single family attached in the Sketch Plan. Document sources or revise as needed.
 - b. The commercial areas total 19.4 acres, which would represent approximately 211ksf of commercial space based on the documented 0.25 FAR. However, the TIS evaluated 185ksf. Document sources or revise as needed.
5. The internal capture calculations appear to reflect a 10% reduction applied to trip generation. However, internal attractions must equal productions. Update internal capture analysis and document per methods in the ITE Trip Generation Handbook and NCHRP 684 (ECM B.3.3.E.2).
6. Project-specific mitigation measures are presented in Chapter VI but are not summarized in Chapter VII. Please compile and summarize these improvements in accordance with ECM B.6.1.D.

Technical Report Comments

The following are general comments on the TIS analyses that could affect the conclusions reached.

7. There are several conceptual site access points shown on Sketch Plan Sheets 2 and 3 that appear to connect the study area to other subdivisions, including a connection to Holmes Road on the south and Providence Point Estates on the north. Although the TIS assumption that most Flying Horse access would be provided by Old Stagecoach Road is reasonable, these secondary connections should be evaluated in the TIS. This is particularly important for Parcels Q, R and S.
8. Although the ECM does not require a progression analysis for Master Traffic Studies, the TIS mentions progression benefits on unsignalized minor street approaches several times. If the applicant is relying on progression for mitigations, the analysis should be included.
9. The TIS notes that signal timings were held constant for all years on page 6 while page 12 states that they were optimized in the 2042 analysis. Subsequent sections state that signal timing optimization was used as a mitigation measure. Clarify if 2042 timings were optimized and what operational benefits were achieved.
10. The auxiliary turn lane analysis on pages 26 and 27 concludes that turn lanes are needed at several locations but no commitment is made to provide this infrastructure. While we understand that turn lane details will be determined in future evaluations, adequate right of way should be identified in the sketch plan to ensure that these mitigations are not precluded.
11. The queue length analysis on page 36 would benefit from a summary table per ECM B.8. While we understand that turn lane details will be determined in future evaluations, adequate right of way should be identified in the sketch plan to ensure that these mitigations are not precluded.

Additional comments on the technical report can be found in the Flying Horse North Sketch Plan TIS PDF document in Bluebeam.

Sketch Plan Comments

Although not a formal part of FHU's review, we have noted the following items in the sketch plan that could require updates to the traffic study. The applicant's traffic consultant should work with the development team to ensure consistency between the sketch plan and the TIS as the issues below are addressed.

- General Note 1 on Sheet 1 refers to 1,471 DU while the remaining sketch plan sheets and the TIS refer to 1,571 dwelling units. Clarify.
- There are references to City of Colorado Springs requirements on Sheet 1. Clarify if the City's requirements will also apply to the TIS, or if this is in error in the Sketch Plan.

Conclusions

Based on the comments above, we feel that the subject TIA should be updated and resubmitted. The revised study should refine the project trip generation and distribution, clarify future improvements, and provide missing analyses.