



MEMORANDUM

To: Sangeeta Jain
Planning & Development Review
Department

Date: July 31, 2015

Project: Champions Tract 3

CC:

From: André H. Betit, Jr. PE
Brian Craig, PE
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Austin Transportation Department

Re: TIA Comments

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The Traffic Engineering and Arterial Management Divisions have reviewed the January 8, 2015 traffic report regarding the "*Champions Tract 3 TIA*", prepared by Kimley Horn. The proposal calls for constructing a 325 unit apartment building, 50,000 SF of General Office, and 30,000 SF Specialty Retail. The development would be constructed on the south side of FM 2222 between City Park Road and Loop 360 and will be constructed in 2 zones. The following comments summarize our review findings:

1. LOS Analysis: City Park Road has been restriped to include 2 northbound left-turn lanes. We recommend that the analysis be updated accordingly.
2. Proposed Development: The current proposed development has no connection between Zone 1 and Zone 2 of the development. Providing this connection would reduce the traffic impacts on City Park Road and FM 2222 since the multifamily residential units could access the retail internally. In addition, an internal trip reduction factor can also be applied. We recommend that both a vehicular and bicycle/pedestrian connection be provided between Zone 1 and Zone 2. If the internal connection between Zone 1 and Zone 2 is provided, we recommend that the Applicant provide calculations using ITE methodology supporting an internal capture rate.
3. Trip Generation: The TIA Scoping Document included Appendix A indicates that no internal trips will be allowed for this development. However, Table 1 includes an internal capture reduction for Zone 2. In addition, the total number of trips shown for Zone 2 indicates that the internal trip reduction was doubled from what is identified. We recommend that the internal trip reduction be removed from the trip generation shown for Zone 2.
4. Trip Distribution: The TIA indicates that no right turns will be made from Driveway 3 onto City Park Road. We request that the Applicant explain why the vehicles making a left onto 2222 from Driveway 1 would not make the right onto City Park



Road at Driveway 3 and then a left at the signalized intersection of City Park Road and 2222.

5. LOS Tables: It is preferred that LOS tables have v/c, delay, 95% queue length, and LOS reported for each approach of an intersection (using the 2010 HCM methodology) in a tabular form in the TIA.
6. LOS Analysis: Please include 95% queue length and signal phasing and timing diagram (split and phase diagram) in Synchro Reports for all analysis periods.
7. LOS Analysis: For the intersections of Loop 360/FM 2222 and Loop 360/Lakewood, when comparing the analysis between the 2016 No-Build condition and the 2016 Build condition for the AM peak hour, it appears that the delay on individual approaches was reduced while traffic volume was increased. We recommend that the Applicant provide clarification for how this delay reduction occurred.
8. LOS Analysis - Mitigation: For the Loop 360 SB/FM 2222 intersection, during the AM peak hour, the westbound left approach delay was reduced from 59 seconds to 19 seconds. However, the eastbound through approach delay was increased from 53 seconds to 65 seconds. During the PM peak hour, the eastbound through approach delay was reduced from 145 seconds to 104 seconds. However, the southbound left approach delay increased from 138 seconds to 192 seconds and the southbound through approach increased from 140 seconds to 192 seconds.

Similarly, for the City Park Road/FM 2222 intersection, during the PM peak hour, the northbound left approach delay was reduced from 346 seconds to 132 seconds. However, the northwestbound left approach delay was increased from 65 seconds to 104 seconds.

Additionally, for the Loop 360/FM 2222 intersection, during the PM peak hour, the northbound left approach delay was reduced from 178 seconds to 145 seconds and the northbound through approach delay was reduced from 184 seconds to 149 seconds. However, the westbound approach delay was increased from 56 seconds to 116 seconds.

We recommend that the Applicant review and revise the proposed mitigation such that the mitigation does not adversely affect one approach to better serve another.

9. Driveway 1: The intersection analysis presented in the TIA Report shows that Driveway 1 on FM 2222 would fail due to the left-in and left-out movements. In particular, the traffic analysis results presented in the TIA Report show that the left-out vehicles on Driveway 1 won't have a safe gap to make the left-out maneuvers. While left-in vehicles (from FM 2222 to Driveway 1) can stack on the center-turn lane and wait for a gap in the eastbound traffic stream, the left-out vehicles have to find a safe gap in both eastbound and westbound traffic streams (on FM 2222),



which won't be available (based on the results presented in the TIA Report). We recommend the Applicant restrict left outs at Driveway 1 (by providing channelized right-out). Zone 1 has an additional driveway (Driveway 3) off City Park Road, where vehicles would be able to make safe right-outs on to City Park Road and then turn left on to westbound FM 2222 at the signalized intersection.

10. Driveway 2: – Same comment as #8. The intersection analysis results presented in the TIA Report show that the Driveway 2 on FM 2222 would fail due to the left-in and left-out movements. While left-in vehicles (from FM 2222 to Driveway 2) can stack on the center-turn lane and wait for a gap in the eastbound traffic stream (on FM 2222), the left-out vehicles at Driveway 2 have to find a safe gap in both directions – eastbound and westbound traffic stream, which won't be available (based on the results presented in the TIA Report). We recommend that the Applicant restrict left-outs (by providing channelized right-out) and have an internal connection between Zone 1 and Zone 2 (as per comment # 2). That way the few vehicles that are expected to travel westbound on FM 2222, would be able to make right turns at City Park Road and then turn left on to westbound FM 2222 at the signalized intersection.
11. TXDOT Review: The Applicant should be aware that TXDOT also needs to approve and review the driveways on FM 2222.