

August 14, 2024

Grant Rilling
CDOT Region 1 Traffic
2829 W Howard Place, 2nd Floor
Denver, CO 80204

Re: QuikTrip 4263 – Aurora
SEC Parker Road (SH-83) & Havana Street (SH-30)
Traffic Impact Study Comment Response Letter

Dear Mr. Rilling:

Thank you for the CDOT Traffic review comments dated July, 25, 2024 provided for the QuikTrip 4263 – Aurora Traffic Impact Study completed in June 2024. The purpose of this letter is to provide responses to the comments to assist CDOT with review of the updated traffic study.

Traffic Comment #1: Why is the cross access to Burger King currently blocked? My guess is that one development was required to provide cross access, but that the other lot was already built, and wouldn't be required to allow such cross access until it developed in turn. That point is now. Cross access should be properly assessed, and agreements researched to determine the plan here. Is it in anybody's deed? Personally, I think cross access should be provided as it allows the Burger King to be served by full movement intersections further south via the parking lot.

Response: While the cross access may improve access between the two developments, both the QuikTrip property owner and the Burking King do not desire cross access. There is not easement there that would require the cross access. The City of Aurora agreed that the cross access could remain closed in the pre-application meeting.

Traffic Comment #2: TIS page 32 – 2050 striping changes (NB to WB dual left) are infeasible. The pavement available for the second turn lane is actually offset so that the signal doesn't have to be split phases. The third westbound through is set to be eliminated by and upcoming project by 2030 (BRT).

Response: While the intersection geometry does not support dual northbound and southbound left turn lanes running concurrently, the phasing for the northbound and southbound movements would not need to be exclusively split phased to allow dual northbound left turn lanes. Either the northbound or southbound left turn movement could lead with the respective through movement and the other lag. This would allow the northbound and southbound through movements to still run concurrently for a portion of the green time, while allowing northbound and southbound left turns to not run concurrently. For long-term planning level purposes only, this intersection has been evaluated with and without northbound dual left turn lanes for 2050 in the revised study.

The analysis was revised to remove the third westbound through lane in the 2050 total traffic scenario due to the BRT project.

Traffic Comment #3: No safety analysis has been performed. Such an analysis is required by the state highway access code. I see a potential broadside pattern associated with accesses on Paker Road which should be discussed.

Response: A crash data summary is now provided in Section 5.6 of the report. A discussion of potential patterns is discussed within that section of the report.

Traffic Comment #4: TIS page 32 – MUTCD 11th edition is referenced in error. Colorado has not yet adopted the 11th edition, and likely won't for another year or more. Revise to read as "currently adopted version," given that this development may take a while and could see the new MUTCD adopted before completion.

Response: The MUTCD reference has been modified in the revised report.

Traffic Comment #5: TIS page 61 – number of fueling positions given as 18, while the letter of intent states that 16 vehicle fueling position will be used. Which is it?

Response: 18 vehicle fueling positions are planned to be constructed and has been confirmed with the project team.

Traffic Comment #6: Square forage of convenience store given as 4.5-5k, while the letter of intent states it will be 5,312 SF. Which is correct?

Response: ITE land use code 945 – Convenience Store/Gas Station provides a land use subcategory of 4-5.5k (not 4.5-5k) for the size of the Convenience Store. The building size of 5,312 SF is correct. The appropriate land use subcategory was used. No revisions to the trip generation were made.

Traffic Comment #7: TIS page 63 – where did these timings come from? They show a 3.5 second yellow time, but that seems short (I calculated it as 4.5 to 5 seconds depending on roadway grade).

Response: The signal timing in all scenarios was updated to reflect a 4.5 yellow clearance time based on calculations. The analysis results were revised appropriately where applicable.

Traffic Comment #8: TIS page 76 – V/C ratios for this (2050 background AM) are higher than those on page 80 (2050 total AM). How does that work? Verify there's not an error. It looks to me like you've assumed 2 NB left turn lanes for the total scenario, but not for the background scenario. There may be other changes as well (3 WB through lanes) This keeps it from being an apples-to-apples comparison. Additionally, neither of those improvements will be present in 2050 without an intersection rebuild, given the geometry restrictions present (NB and SB lefts would conflict if a second NBLT lane is built). The same thing has probably happened in the PM analysis.

Response: The 2050 total traffic scenario included the recommended improvements to reduce traffic delays at the study intersection. While this does not provide an apples to apples comparison between the 2050 background and 2050 total traffic scenarios, the analysis results showed that the recommended improvements improved the expected delays at the intersection. The poor operations shown in the 2050 background scenario show that improvements are likely needed to improve operations at the intersection without the addition of project traffic if forecasted traffic volumes are observed in the future.

As stated in the response to comment #2 above, while the intersection geometry does not support dual northbound and southbound left turn lanes running concurrently, the phasing for the northbound and southbound movements would not need to be exclusively split phased to allow dual northbound left turn lanes. Either the northbound or southbound left turn movement

could lead with the respective through movement and the other lag. This would allow the northbound and southbound through movements to still run concurrently for a portion of the green time, while allowing northbound and southbound left turns to not run concurrently. For long-term planning level purposes only, this intersection has been evaluated with and without northbound dual left turn lanes for 2050 in the revised study.

The analysis was revised to exclude the recommended third WB through lane as previously noted based on the planned BRT line in the future.

We appreciate comments received and your willingness for continued coordination on this project. If there are any questions or if anything else is needed, please feel free to contact me.

Sincerely,
KIMLEY-HORN AND ASSOCIATES, INC.



Jeffrey R. Planck, P.E.
Project Traffic Manager