

May 13, 2020

Ms. Tina Salazar
Principal, Akins High School
10701 South 1st Street
Austin, Texas 78748
(512) 841-9905
tina.salazar@austinisd.org

RE: Akins High School Observations and Potential Improvements

Dear Ms. Salazar,

WGI has reviewed the traffic operations around and within the Akins High School in Austin, Texas adjacent to the proposed South 1st Street Apartments development (**Attachment 1**). The purpose of this memorandum is to provide an assessment of existing conditions and issues, as well as to provide potential solutions regarding traffic operations and improvements for students and staff of the school while coinciding with the potential improvements proposed with the construction of the South 1st Street Apartments and required by the Austin Transportation Department (ATD).

OBSERVATIONS

One day of observations was conducted Thursday, March 12 from 8:30 AM to 9:30 AM and 4:00 to 5:00 PM local time. South 1st Street and the parent drop-off/pick-up loop were areas of focus to determine existing operations and problem areas. A summary of the observed existing operations of Akins High School during drop-off and pick-up times can be found in **Attachment 2**.

All images referenced in the below section about observations can be found in **Attachment 3**.

WGI staff spent a significant portion of time during the morning observation period analyzing operations along South 1st Street and the west side of the high school as the official drop-off loop is situation on the south end of the high school along South 1st Street.

MORNING DROP-OFF/ARRIVALS

From 8:00 AM to 8:45 AM, the drop-off loop was serving one to four cars at a time and operating smoothly (**Image 1**). Some patrons were parking in the visitor spots within the drop-off loop instead of utilizing the loop to drop-off the students. Students driving themselves were mostly entering via South 1st Street and parking in the lot on the west side of the building.

Beginning just before 8:50 AM, an increase in demand for the drop-off loop occurred. At approximately 8:50 AM, vehicles began to spill out on to South 1st Street at the entrance of the drop-off loop. Vehicles from Old San Antonio Road cut through the parking lots south of the building to bypass the drop-off queue and create additional congestion at the drop-off loop. Vehicles continued to alter the intended flow of the drop-off loop and cut through the parking lot to the north and exit via other South 1st Street access points.

At 8:55 AM, approximately 13 vehicles were waiting to exit the drop-off loop to South 1st Street. The Pedestrian Hybrid Beacon (PHB) south of the school at Desert Primrose Drive occasionally gave vehicles egressing on South 1st Street gaps in traffic (**Image 2**) to make their intended movement.

Operations and queues begin to subside at 9:00 AM and are all contained within on-site facilities. Throughout the morning observation period, no drop-offs were observed directly on South 1st Street.

AFTERNOON PICK-UP/DEPARTURES

Upon arrival to the high school at 4:00 PM (30 minutes before the dismissal period), there were vehicles parking in the protected bike lane along South 1st Street and the pick-up loop was filled to capacity (**Image 3**).

As 4:30 PM approached, any available gap on South 1st Street was filled by a vehicle waiting to pick-up (**Image 4**), extending from several hundred feet north and south of the access driveways. As drivers became desperate for a parking space, some would wait on the inside travel lane on South 1st Street just south of the pick-up loop access or pile into the access driveway itself (**Image 5**).

Once the bell rings at 4:30 PM for dismissal, students quickly begin to disperse to the vehicles in the parking lot, pick-up loop or begin to walk over to South 1st Street to find their vehicle. With the countless vehicles parked along South 1st Street, the dangerous egressing movements from the school's access driveways began as vehicles leaving the school have very limited sight distance. Vehicles on South 1st Street began to slow down as they entered the area near the school as they know that there are vehicles abruptly pulling out into flowing traffic. Another dangerous behavior that was observed several times was a vehicle stopping in the outside travel lane on South 1st Street to let a person quickly jump in the car (**Image 6**).

At 4:45 PM, the congestion surrounding the school in the pick-up loop, parking lot, and on South 1st Street has significantly subsided. Some vehicles still remain on South 1st Street as they wait for their student to exit the building, but they are very sparse. The queues of the pick-up loop are contained within the site at this time. This indicates that though there is more than 50 minutes of queuing and congestion, less than 15 minutes of it is associated with the actual pick-up of students. The remainder is associated with vehicles arriving before there are any students to pick-up.

POTENTIAL IMPROVEMENTS

AKINS HIGH SCHOOL IMPROVEMENTS

WGI has identified three sets of improvements to better contain Akins High School traffic on-site. All of these improvements would coincide with the approved off-site improvements related to the multi-family development adjacent to the high school, which are:

- A traffic signal at South 1st Street and the central school access driveway
 - Wayne Riddell Loop will be extended to South 1st Street and this will become a four-legged intersection
- Converting the protected bike lanes on South 1st Street to buffered bike lanes
 - Plastic vertical delineators will be installed in the two-foot-wide buffer to create additional protection for cyclists
 - This will prevent vehicles from parking in the bike lanes while waiting for afternoon dismissal

Again, these improvements were previously identified by ATD as part of the Austin Strategic Mobility Plan and are the responsibility of the development applicant to implement as a condition of approval for the development (or any development on the property).

The potential improvements in **Attachment 4** are as follows:

- Change existing flow of drop-off/pick-up circulation
 - Close southern/main driveway that connects directly to the drop-off/pick-up loop
 - Vehicles can enter and exit from the South 1st Street / Wayne Riddell Loop / Akins High School Central Access intersection where the new traffic signal will be installed
- Temporarily close access connecting to drop-off/pick-up loop to remove additional flow of vehicles at the loop
 - Setting out and removing three standard traffic cones for both the drop-off and pick-up period would suffice
- Close several accesses to the drive isle to create queue space for vehicles utilizing the new signal at South 1st Street / Wayne Riddell Loop / Akins High School Central Access
 - Closing access points to the drive isle in the parking lot south of the central driveway will create additional queueing space internal to the site
 - This will also lower the amount of conflict points within the parking lot

OLD SAN ANTONIO ROAD IMPROVEMENTS

Separate from the improvements provided by the multi-family project, the City of Austin has plans to improve Old San Antonio Road. The east-west section of Old San Antonio Road just south of Southpark Meadows is a low water crossing and is very dangerous when flooded. The City of Austin had originally proposed permanently closing the road; however, based on public feedback, they are proposing that the

road remain open until a traffic light has been installed at FM 1626 and Old San Antonio Road. For the time-being, cul-de-sacs will be constructed on either side of the flood area to make turning around easier when the road is flooded. Permanent gates on either side of the flood area will also be installed to provide a more effective barricade during floods than the current system of using portable barricades. The gates will remain open during normal conditions. The City of Austin is ultimately making the recommendation to eventually close the road based on cost, constructability, and effectiveness.

NEXT STEPS

Should Akins High School decide to go forth with any of the recommended mitigations, WGI would be happy to aid Akins High School through a municipal process or offer any planning/construction services to take these ideas from concept to design and implementation. Currently, the afternoon pick-up situation presents issues within the public right-of-way that would be the school's responsibility to improve. If you have any questions, comments, or concerns regarding the analysis or recommendations, please contact me at (512) 669-5560 or madeleine.hirsch@WGInc.com / dan.hennessey@WGInc.com.

Sincerely,

WGI



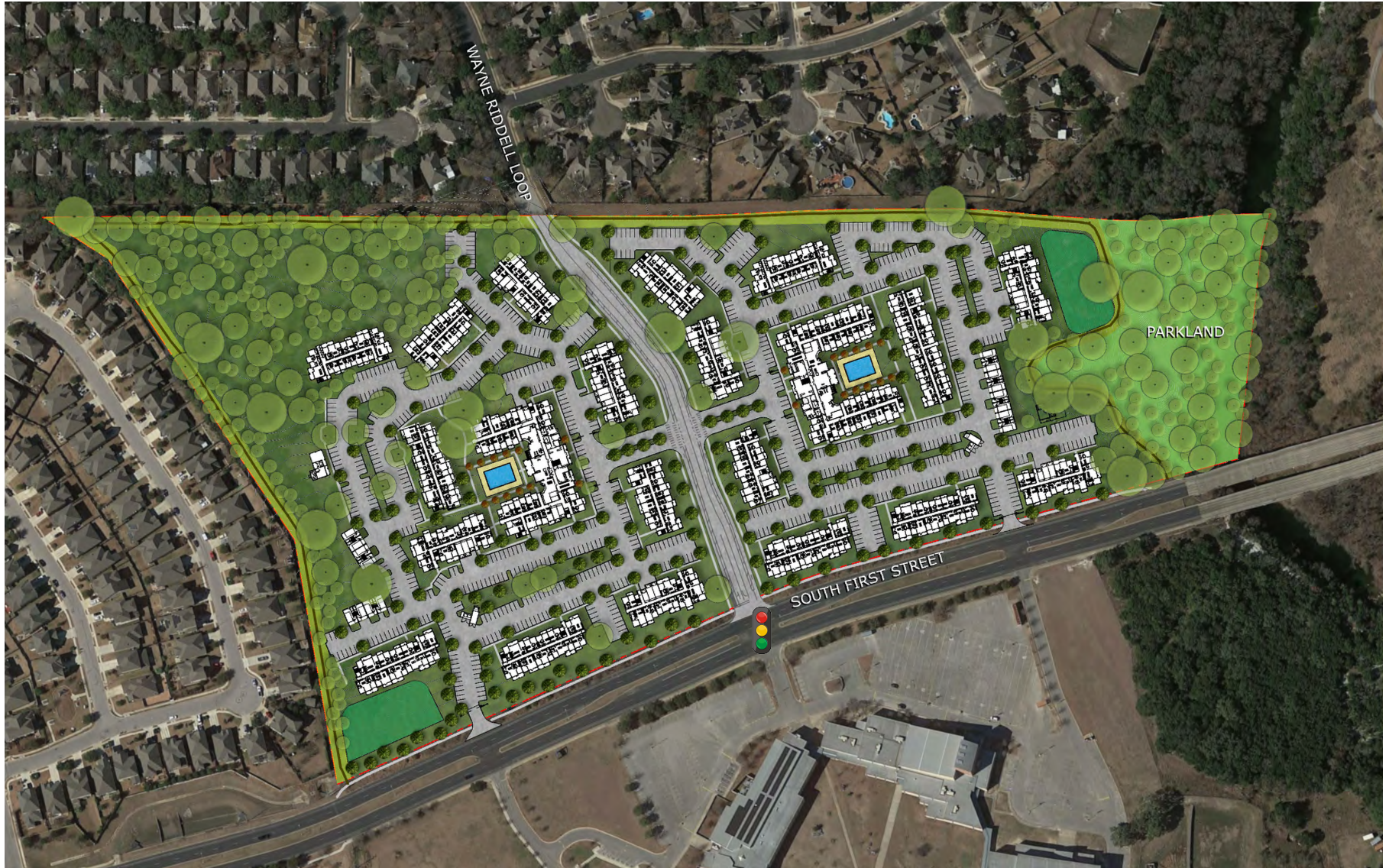
Madeleine Hirsch, E.I.T.
Graduate Engineer, Mobility



Dan Hennessey, P.E., PTOE
Director, Mobility

Attachments

- Attachment 1 – South 1st Street Apartments Site Plan
- Attachment 2 – Existing Conditions
- Attachment 3 – Observation Photos
- Attachment 4 – Akins High School Potential Improvements



Key:

- = Drop-Off/Pick-Up Loop (In)
- = Drop-Off/Pick-Up Loop (Out)
- = Short-Cut to Drop-Off/Pick-Up Loop
- = Short-Cut from Drop-Off/Pick-Up Loop
- = Queue for Pick-Up

Left turns out of the driveways are allowed, but observed mostly right turns out due to high volume of South 1st Street traffic

Vehicles park in buffered bike lane on South 1st Street due to lack of capacity in pick-up loop and traffic volumes on South 1st Street

Additional flow creates congestion near drop-off/pick-up zone

Official Pick-Up and Drop-Off Loop

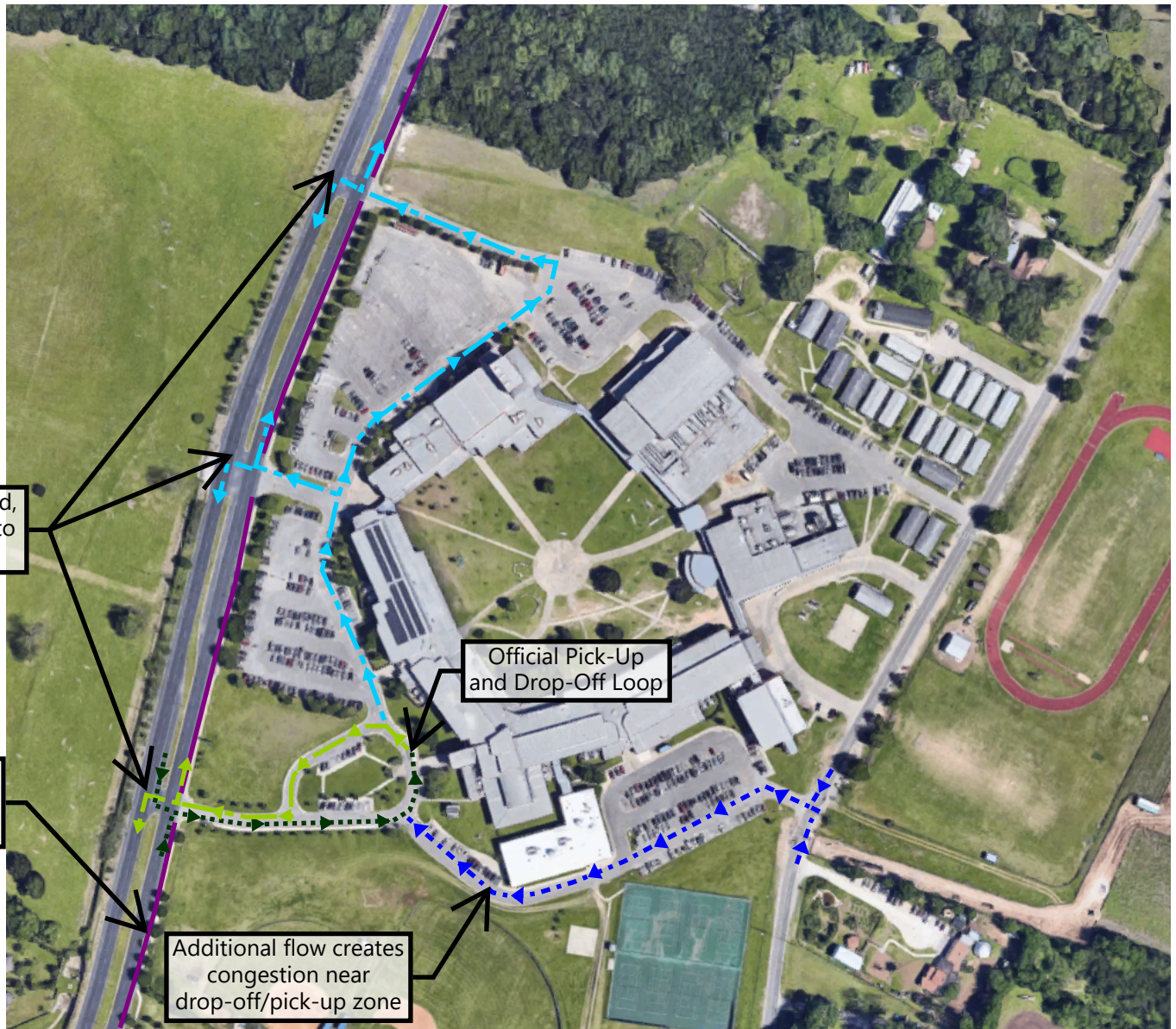




Image 1: Drop-off loop operating smoothly at 8:30 AM



Image 2: PHB creating gaps in South 1st Street traffic