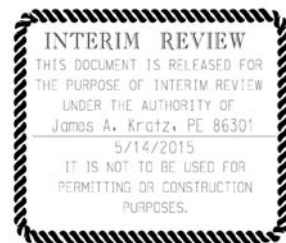


# Pressler Street Extension Traffic Study

## May 2015

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Prepared For:

City of Austin Transportation Department  
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Prepared By:

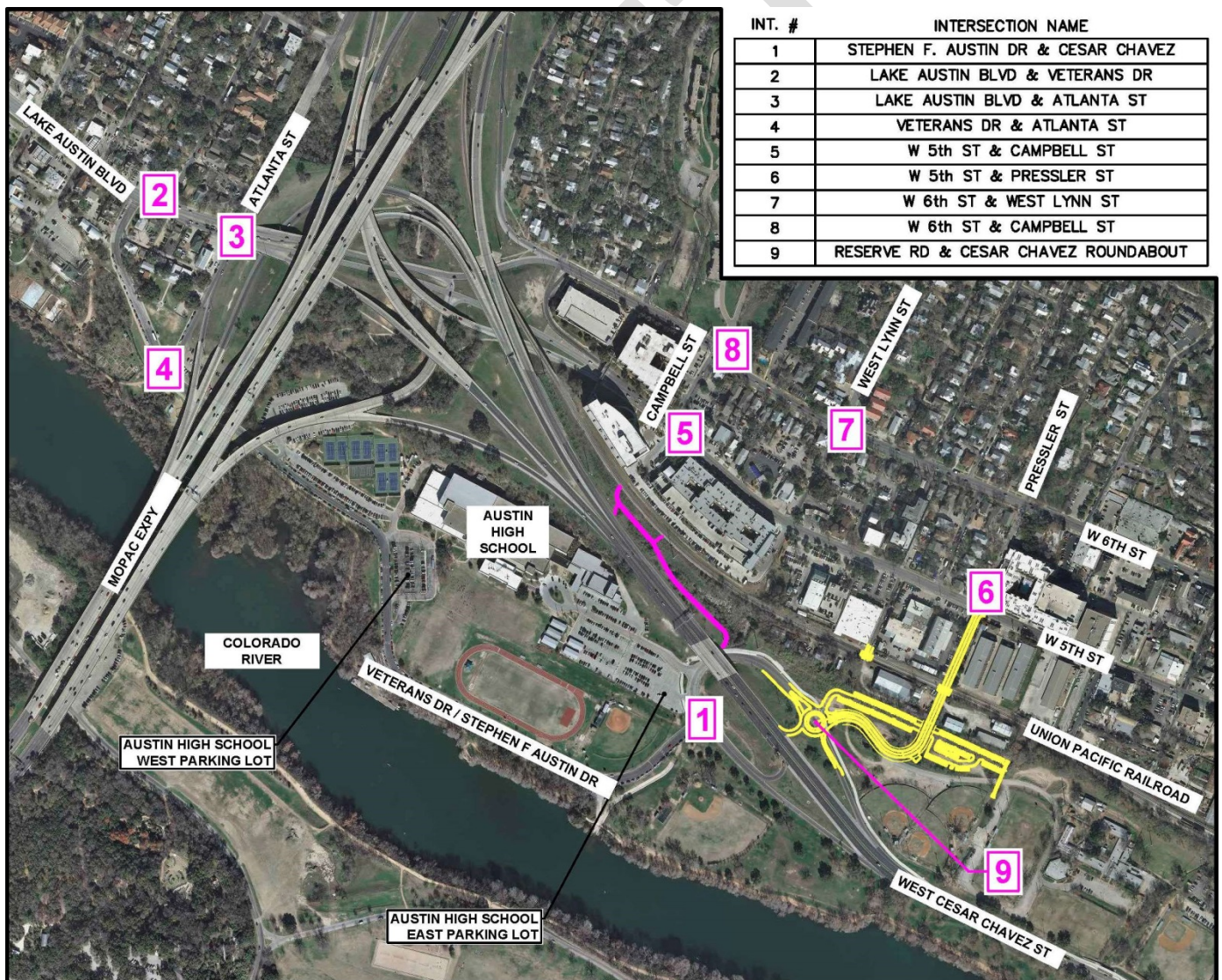
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## Executive Summary

The City of Austin has retained Jacobs Engineering Group Inc. (Jacobs) to perform a traffic study for the proposed connection of Pressler Street. The City of Austin is preparing the design for connecting Pressler Street from its current terminus south of the Union Pacific Railroad tracks to Reserve Road/Cesar Chavez Street. Jacobs collected traffic data and parking information, analyzed parking management strategies, developed traffic projections, performed traffic simulation, and analyzed the Pressler Street connection and the roadways around Austin High School in Austin, Texas.

The overall study area for the project was bounded by 9<sup>th</sup> Street to the north, Hearn Street on the west, Lady Bird Lake to the south, and Lamar Boulevard to the east. Based on the analysis and results within the report, we offer the following findings and recommendations for each location within the study area. These recommendations are illustrated in the Exhibit A.



**Exhibit A – Pressler Street Extension Recommendations**



### *Overall Findings*

- The addition of the Pressler Street Connection does not adversely impact the overall Level of Service (LOS) of the study area.
- The PM traffic peak hour (defined as 5:00 PM to 6:00 PM) shows a delay savings of 4 minutes per vehicle, or 768 hours of cumulative travel time savings for the 12,111 vehicles within the study area during that hour.
- The proposed improvements create a 17 second delay for the Stephen F. Austin & Cesar Chavez intersection during the school peak hour (defined as 4:00 PM to 5:00 PM) and no change during the PM traffic peak hour. The delay is a result of the additional school and commuter traffic that is expected to take advantage of the new Pressler Street Connection between 5<sup>th</sup> / 6<sup>th</sup> Streets and Austin High School / Cesar Chavez Street.
- The addition of the Pressler Street Connection has no impact to intersection delays during the AM peak hour (defined as 7:00 AM to 8:00 AM).
- The addition of the Pressler Street Connection reduces the intersection delays along westbound 6<sup>th</sup> Street between Pressler Street and Veterans Drive by a total of 4.5 minutes per vehicle during the PM school peak and a total of 3.5 minutes per vehicle during PM traffic peak.

### *Pressler Street Improvements*

- Jacobs concludes that the Pressler Street Connection improves the connectivity and relieves existing congestion along routes within the study area during the peak hours. This connection provides an alternate north/south route between MoPac and Lamar Boulevard, connecting 5<sup>th</sup> Street, 6<sup>th</sup> Street, Cesar Chavez Street, and Stephen F. Austin Drive. This alternate route will allow drivers to vary their route as traffic patterns/congestion forms throughout the system.
- Jacobs recommends Pressler Street be converted from one-way northbound to one-way southbound between 5<sup>th</sup> and 6<sup>th</sup> Streets to facilitate traffic flow from westbound 6<sup>th</sup> Street to Austin High School and Cesar Chavez Street.
- Jacobs finds that while the at-grade train crossing between 5<sup>th</sup> Street and Cesar Chavez Street will result in delays when a train is present, the vehicular queues associated with that train event will have minimal effect on adjacent intersections along the proposed Pressler Street.
- The roundabout included in the Pressler Street Connection will operate at an acceptable LOS for the year 2020 during the PM school peak hour (LOS C) and the PM traffic peak hour (LOS B). These LOS scores equate to an average of 21 seconds of delay per vehicle and 13 second of delay per vehicle, respectively.
- During the PM school peak hour, the travel time from the student parking lot to westbound Cesar Chavez Street just east of the MoPac northbound/southbound split is expected to increase from 54 seconds in 2015 to 72 seconds in 2020, an increase of 18 seconds under the No-Build conditions. That same route will take 98 seconds in 2020 if the Pressler Street Connection is constructed. This results in an additional delay of 26 seconds. The reason that the travel time is longer for the Build condition than the No-Build condition is due to the shift of traffic from 6<sup>th</sup> Street to Cesar Chavez Street using the Pressler Street Connection during the PM school peak hour.

### *Pressler Street Improvements - Continued*

- During the PM traffic peak hour, the travel time from the teacher parking lot to westbound Cesar Chavez Street just east of the MoPac northbound/southbound split is expected to remain the same 34 second delay in the 2020 No-Build conditions as it is in 2015. That 34 second delay is expected to increase to 56 seconds increase in 2020 if the Pressler Street Connection is constructed. The reason that the travel time is longer for the Build condition than the No-Build condition is due to the shift of traffic from 6<sup>th</sup> Street to Cesar Chavez Street using the Pressler Street Connection during the PM traffic peak hour.
- The planned improvements of the MoPac South Managed Lanes project are expected to alleviate some of the traffic congestion on westbound Cesar Chavez Street with this additional roadway capacity. These improvements include but are not limited to two managed lanes in each direction, access points to the managed lanes, and entrance and exit ramp changes.
- While the pedestrian traffic count at the UPRR track is minimal, the Pressler Street Connection project is anticipated to include fences along the UPRR tracks encouraging students to use the safer crossing at Pressler Street. The City of Austin is also working with UPRR to include both vehicular gates and pedestrian gates at the Pressler Street Connection across the UPRR tracks.

### *MoPac Southbound Improvements*

- The traffic congestion on southbound MoPac near the Lake Austin Boulevard / 6<sup>th</sup> Street entrance ramp impacts the ability for traffic to turn southbound from 6<sup>th</sup> Street / Lake Austin Boulevard. The delay creates a queue that extends to the edge of the study boundary.
- The southbound queue is anticipated to eventually impact the MoPac northbound exit lanes, to the point that traffic destined for eastbound Cesar Chavez Street and westbound Lake Austin Boulevard attempts to merge up to a mile south of the river, with last-minute merges affecting all lanes on northbound MoPac.
- This merging activity restricts the ability for northbound traffic to proceed past the Cesar Chavez Street / 5<sup>th</sup> Street exit.
- Additional southbound MoPac capacity should be added to alleviate the congestion along both southbound and northbound MoPac, Lake Austin Boulevard, Cesar Chavez Street, and 6<sup>th</sup> Street. This improvement would also help the traffic accessing MoPac from 6<sup>th</sup> Street and Lake Austin Boulevard.

### *MoPac Northbound Improvements*

- The proposed Managed Lane allows traffic to utilize the Cesar Chavez Street ramp to travel north.
- Southbound MoPac causes delays on northbound MoPac due to the queue on Lake Austin Boulevard/6<sup>th</sup> Street. West bound traffic on 6<sup>th</sup> Street is prevented from turning south bound onto MoPac south. This delay causes a queue which blocks northbound traffic exiting MoPac at the Cesar Chavez/5<sup>th</sup> Street exit. This queue affects all four northbound main lanes of MoPac. Based on our observations, it is possible that some of the traffic may look for alternative routes (e.g. exit MoPac at Bee Caves Road, Spy Glass Drive, use Barton Springs Road, etc.).

### *Cesar Chavez Street Improvements*

- Coordination with TxDOT should be made to restripe the westbound exit lane from Cesar Chavez Street to MoPac, increasing the weaving distance.
- Coordination with TxDOT should be made to re-stripe the turn-around area under the main lanes of Cesar Chavez Street to allow parking/waiting near Austin High School.

### *Veterans Avenue/Stephen F. Austin Improvements*

- No parking zones should be designated for 150 feet on both the eastbound and westbound approach to the Cesar Chavez Loop intersection.
- A dedicated right-turn lane should be designated at the intersection with Cesar Chavez Loop.
- No parking or waiting zone should be designated for northbound Stephen F. Austin Drive between the entrance and exit driveways at the west faculty parking lot.
- A dedicated left-turn lane should be designated between the entrance and exit driveways at the west faculty parking lot for southbound Stephen F. Austin Drive turning into the student drop-off/pick-up area.
- No parking or waiting zone should be designated for northbound Stephen F. Austin Drive between the closed driveway and entrance driveway at the west faculty parking lot.
- A dedicated right-turn lane should be designated at the west faculty parking lot for northbound Stephen F. Austin Drive turning into the student drop-off/pick-up area.
- The left-turn and right turn lanes at the entrance to the west faculty parking lot will allow vehicles to proceed through on Stephen F. Austin Drive during the PM school peak hour.
- Veterans Drive contains defined parking spots on both sides from Lake Austin Boulevard to the west faculty parking lot. We recommend adding defined parking spots on both sides of Stephen F. Austin Drive with the exception of the No Parking Zones mentioned above to reduce inconsistent parking along the street.
- Signal timing at Lake Austin Boulevard should be modified to account for the reduced traffic on westbound 6<sup>th</sup> Street/Lake Austin Boulevard and allow additional time for Atlanta Street traffic to proceed through the intersection.

### ***Austin High School East Parking Lot Improvements***

- Reconfigure the student lot to define the circulation path, islands, and driving aisles. Direct vehicles using islands to the right to the north aisle upon entering the parking lot from the Cesar Chavez Loop driveway. Direct vehicles using islands in the middle aisle to either back to the north aisle or to the exit. Direct vehicles in the south aisle to the exit.
- Reconfigure the parking to have perpendicular parking spots on the north aisle closet to the school, head-in parking on the middle aisle, and back-in parking on the south aisle by the softball field.

### ***Austin High School West Faculty Parking Lot Improvements***

- Restripe the waiting zones on the driveway loop to better define where vehicles need to wait to pick-up students during the school dismissal period.
- Add No Parking or Waiting areas in the curve radius leading into the waiting zones.
- Reconfigure the approach to the exit driveway to two lanes on the inside and a Bus waiting area along the outside curb section. To complete the reconfiguration, widen the pavement marking hatched area to redirect vehicles.
- Reconfigure the exit driveway to 24 feet in width (left turn lane and right turn lane) by adding a hatched painted island or rebuilding the curb and gutter.