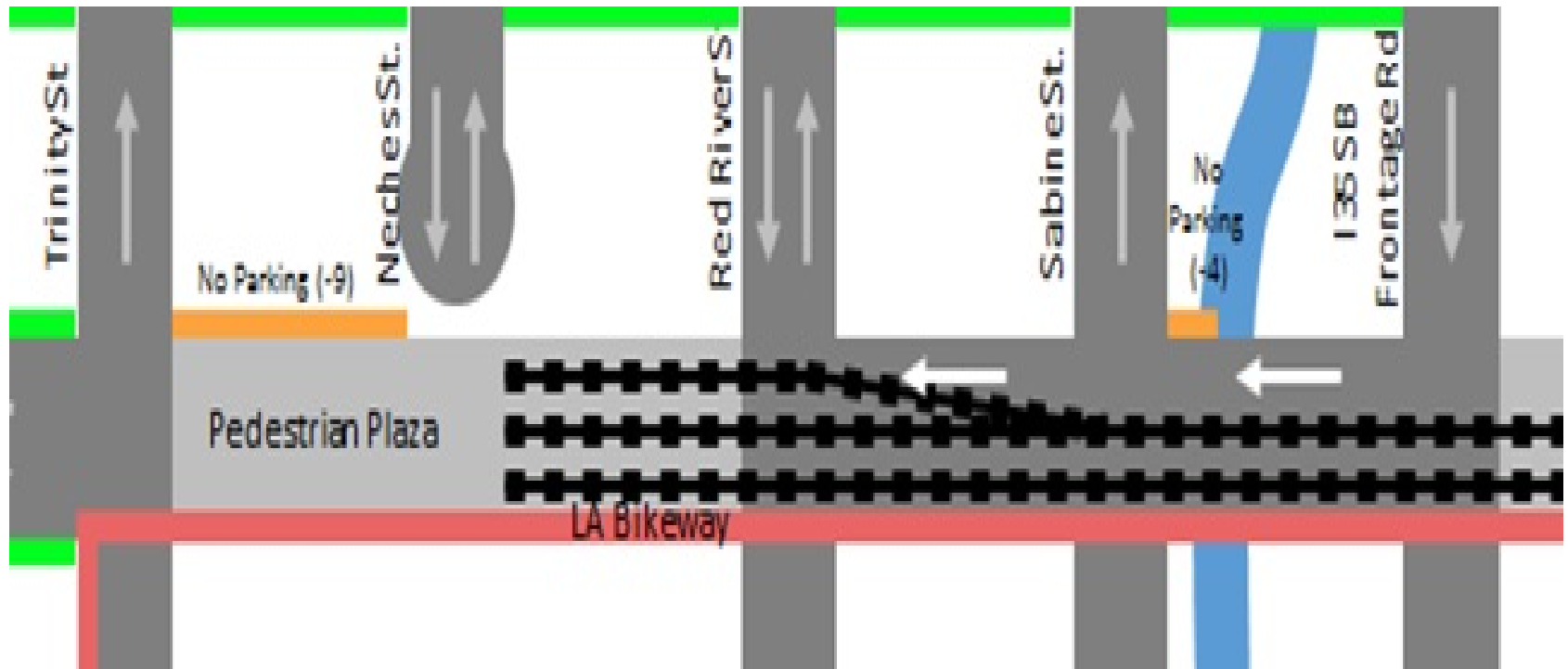


# E 4<sup>th</sup> and 5<sup>th</sup> Streets Preliminary Traffic Study

# Proposed Capital Metro Downtown Station

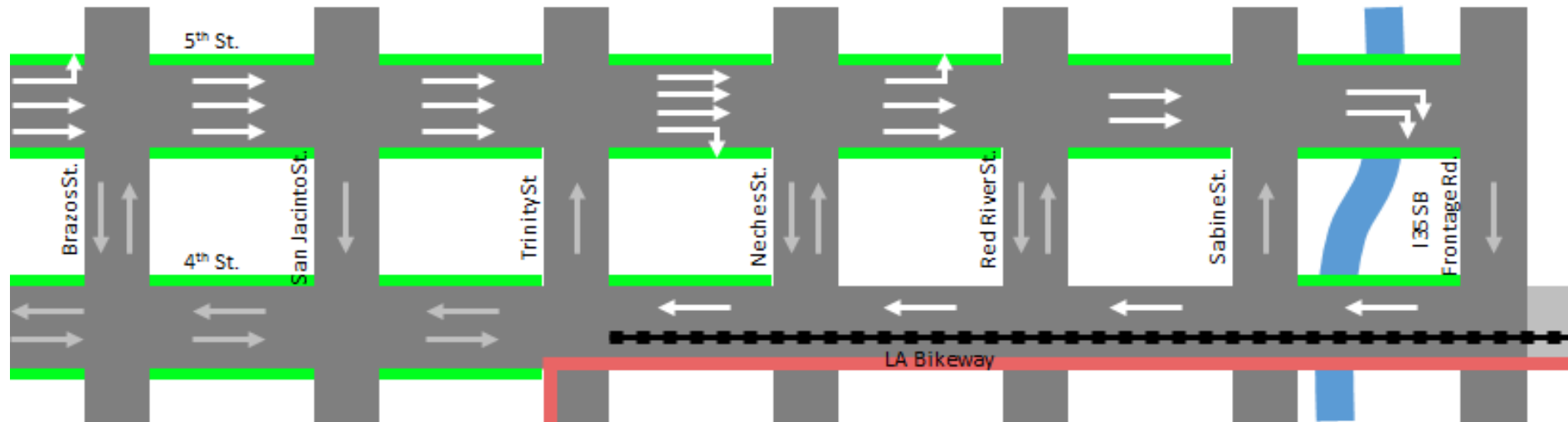


# Existing and Proposed Conditions

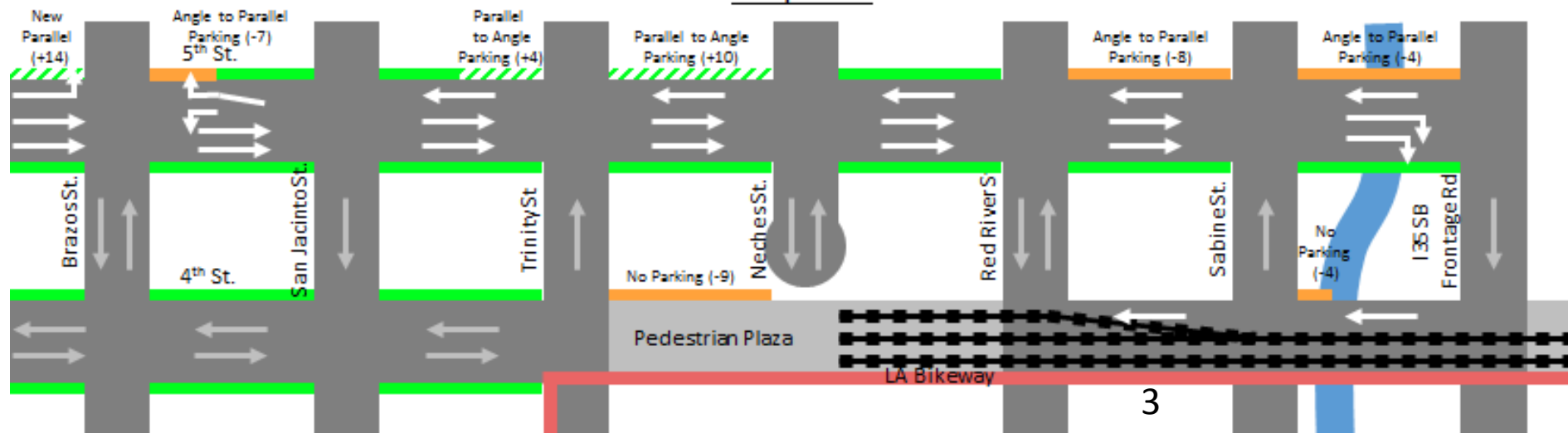
5th Street Two-way Conversion  
4th Street Closure for Downtown Station

- Parking to Remain or Existing
- Parking to be Added
- Parking to be Removed

Existing

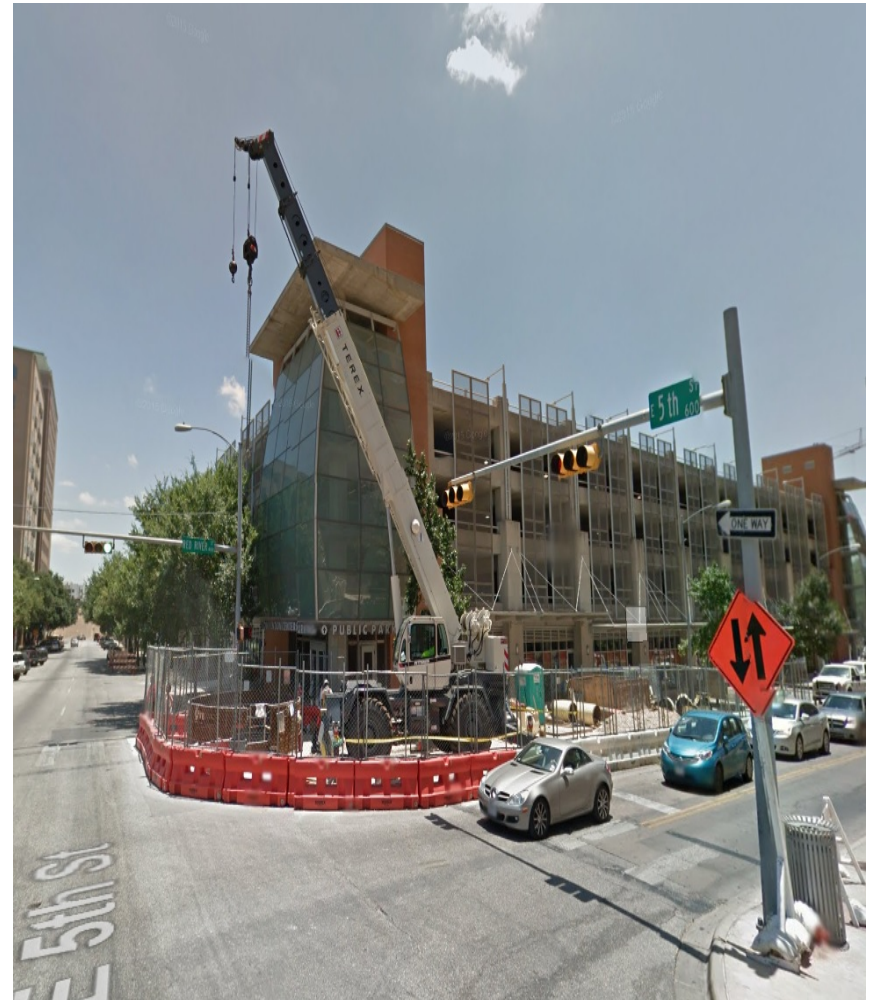


Proposed



# Intersection Traffic Counts

- Traffic Counts by Cap Metro contract
  - Turning movement counts at every intersection on 5<sup>th</sup> and 4<sup>th</sup> from Brazos to IH 35
  - Included the Hilton garage entrance/exit
  - For PM peak and the “entertainment hour” peak
  - Pedestrian and bicycles were also counted
  - Volumes were very conservatively assigned to the proposed conditions



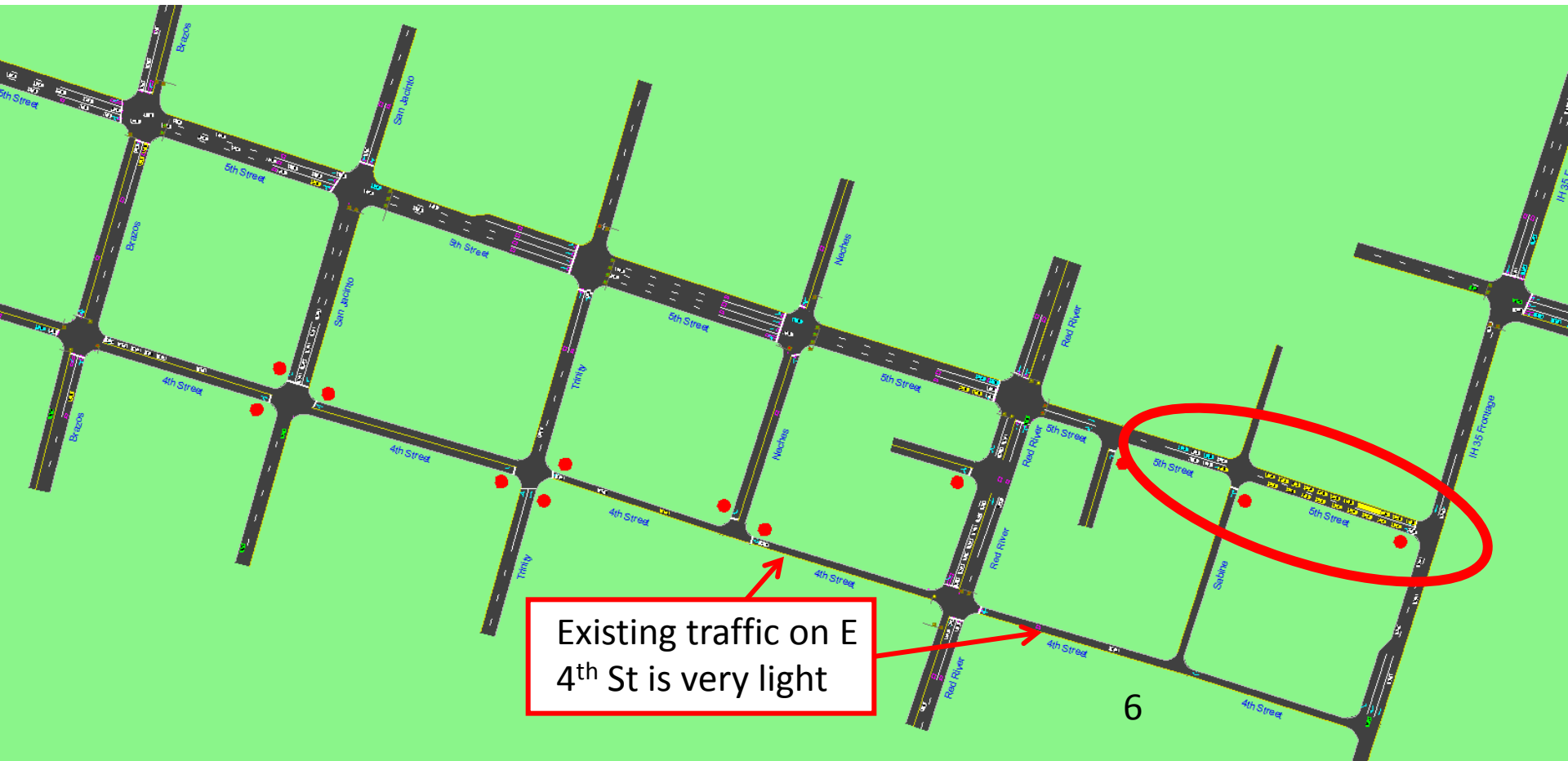
# Travel time and tested scenarios

- Bluetooth data for 5<sup>th</sup> St – real travel times from Congress to Red River for the past 18 months
- Real life test scenario during chilled water line and Westin construction on East 5<sup>th</sup> St
  - Water line project took three years
  - Much of East 5<sup>th</sup> St was down to two lanes
  - No significant delays observed during construction



# PM Peak - Existing Conditions

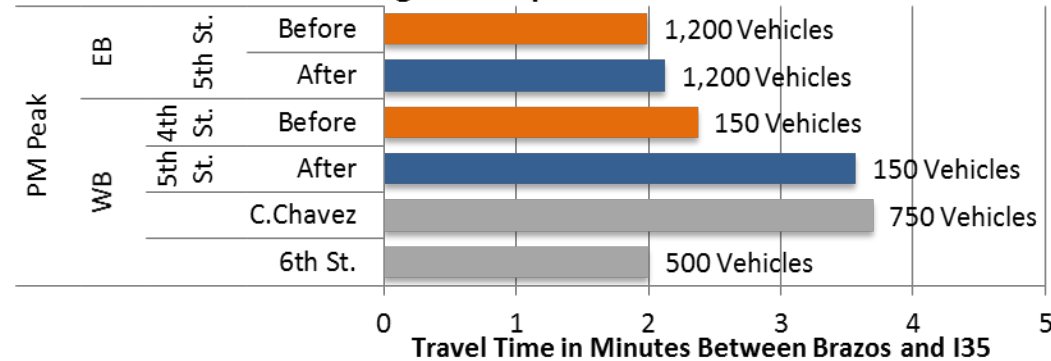
- In the PM peak capacity for eastbound 5th Street is generally limited to the approach at the I35 frontage Road
- Travel times for the existing model were calibrated to observed conditions.



# PM Peak – Proposed Conditions

- In the PM peak proposed condition, capacity constrained by the SB IH35 Frontage Rd
- No capacity impacts are anticipated
- 4<sup>th</sup> St westbound travel times are increased but volumes are very, very low (110 v/hr)
- 6<sup>th</sup> St has excess capacity during PM peak for WB traffic (travel time to Brazos is approx. two minutes)

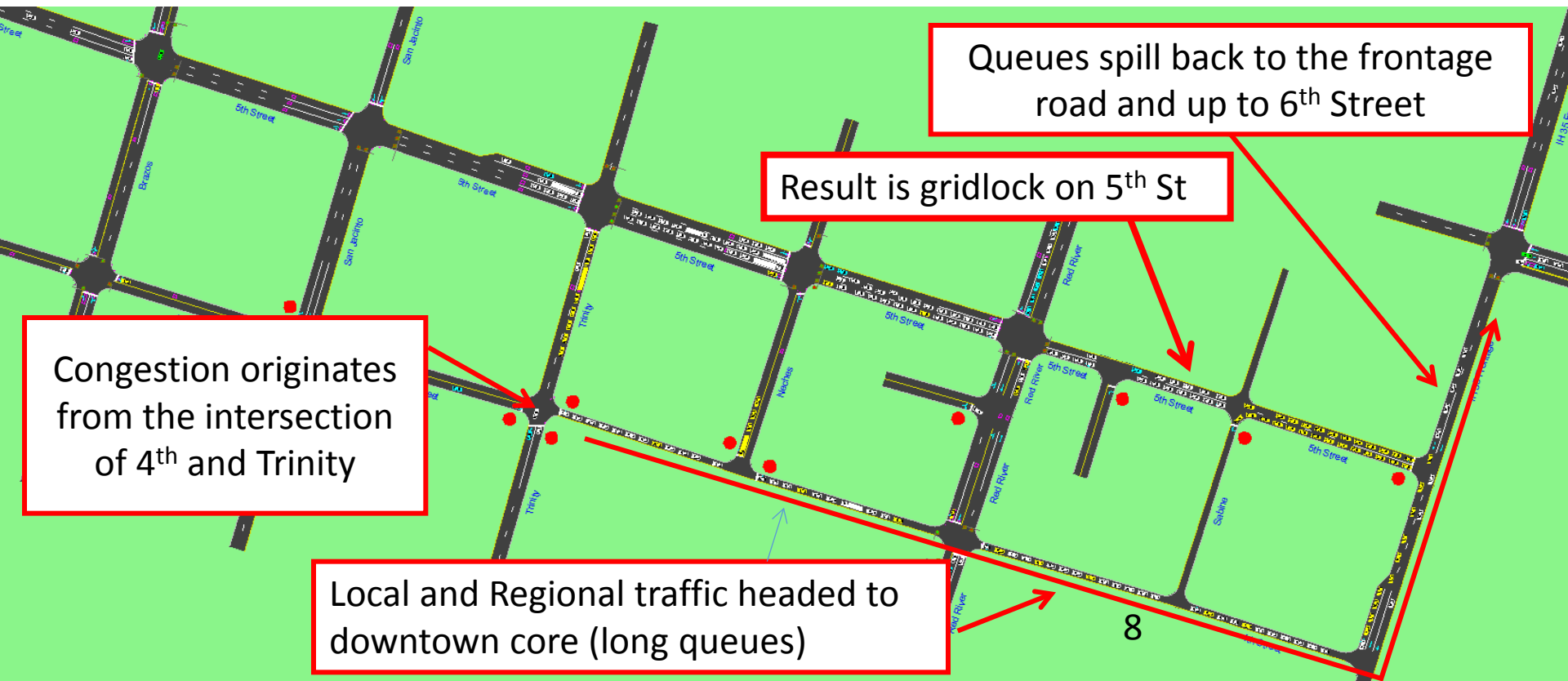
**PM Peak Travel Time Comparison  
Existing and Proposed Conditions**





# Entertainment Peak– Existing Conditions

- The Entertainment Peak is when 6<sup>th</sup> Street is closed and there are heavy downtown bound traffic flows that are handled by 4<sup>th</sup> Street (typically 8pm - Midnight on Thurs-Sat and during all-day festivals)
- This congestion pattern results in extremely long travel times multiple times a week during 6<sup>th</sup> St closure

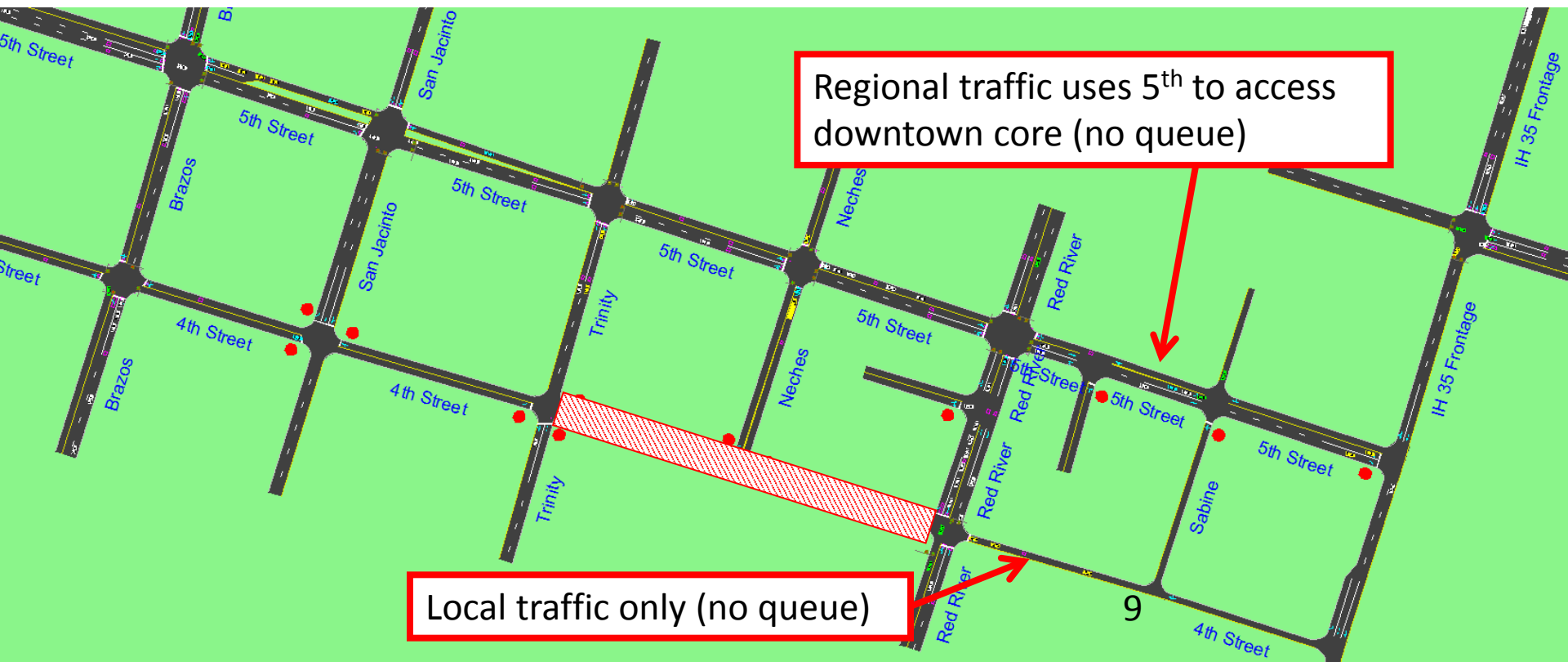
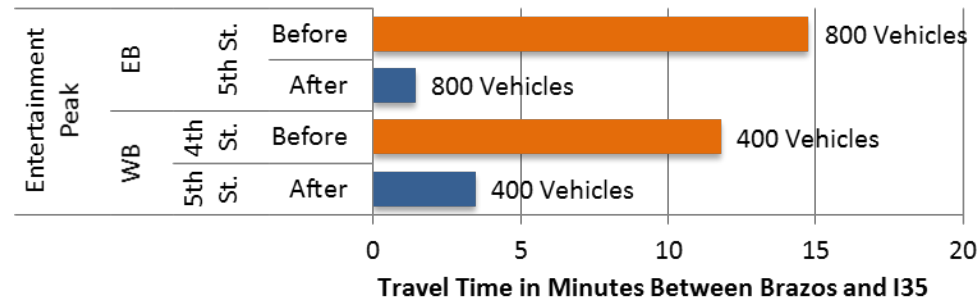




# Entertainment Peak – Proposed Conditions With Signal Timing Changes

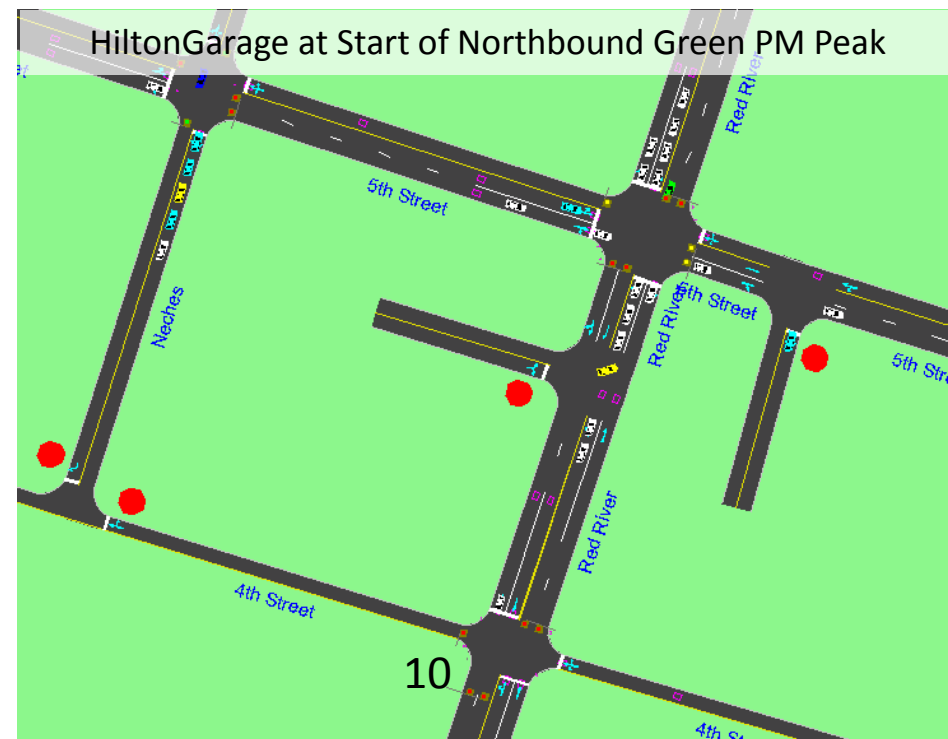
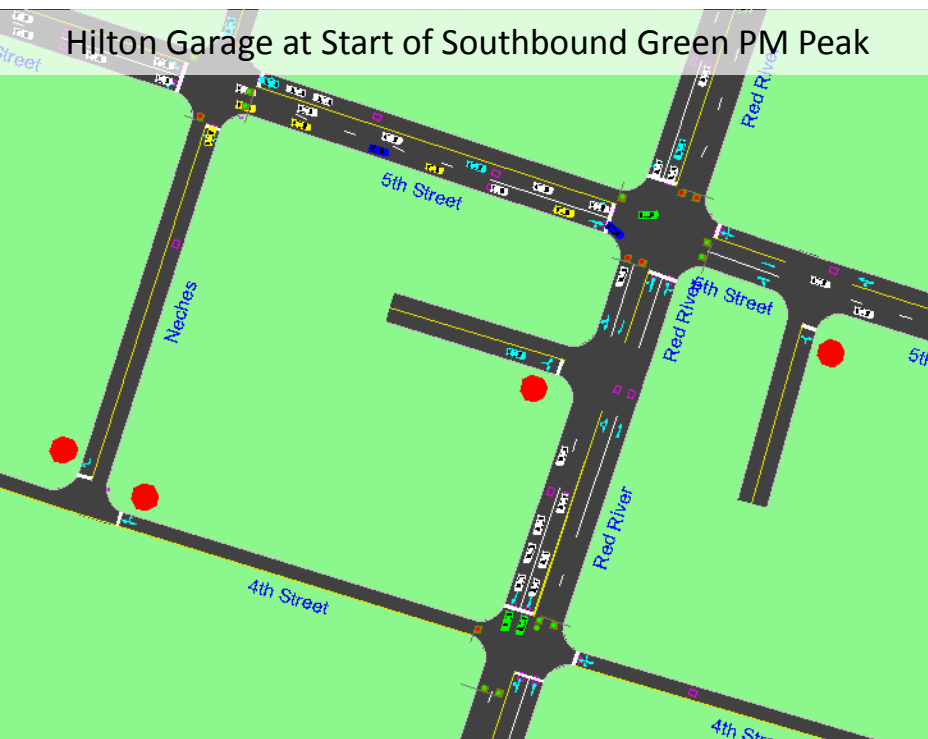
- With the addition of a westbound lane to 5th Street, the westbound traffic gridlock can be *eliminated*.
- The proposed conditions should result in travel times that are 3-10x shorter

Entertainment Peak Travel Time Comparison  
Existing and Proposed Conditions



# PM Peak Hilton Garage Exit

- Counts were collected at the Hilton Garage in the PM and entertainment peak hours
- In the PM Peak hour approximately 70 vehicles exited the garage, slightly over one a minute
- Modeling shows that consistent north and southbound gaps on Red River are available in both peaks
- We can adjust signal timing on Red River to ensure gaps are available
- If problem persists, building operator has option to hire officer to assist



# Conclusions

- East 5<sup>th</sup> St two-way from IH35 to Brazos is superior to current configuration (regardless of 4<sup>th</sup> St status)
  - Delay reduced
  - Travel times to Hilton improved
- Demand for 4<sup>th</sup> St restored to local access (very low volumes)
- For westbound vehicles, access is more efficient for Hilton, Convention Center Garage, Convention Center, and other stakeholders west of Trinity with a higher quality roadway
- No change for eastbound vehicles
- Can accomplish with current authority and restrict 4<sup>th</sup> St to transit/pedestrian/bicycle only
- ATD plans to implement WB lane on E 5<sup>th</sup> St in April or May 2017