



## I-45 North Houston Highway Improvement Project

# LOWER THE HIGHWAYS



## Why Is TxDOT Proposing to Lower the Highways in Segment 3?

The decision to depress or elevate a freeway is based on several factors. The primary considerations include how to most effectively address safety issues, enhance connectivity and reduce congestion.

Over the course of the project, the Texas Department of Transportation (TxDOT) has analyzed numerous alternatives to be responsive to the project's stated purpose and need. The overarching goal is to increase both freeway and local street mobility and reduce crashes while minimizing impacts to adjacent neighborhoods and businesses. Recognizing I-45 is a primary hurricane evacuation route was also a key factor. The ability to keep this roadway open during extreme weather events was critical in the analysis process.

The primary focus for improvements was removing weaving sections where drivers have to change lanes one or more times to make a freeway-to-freeway connection or to get to their exit ramp. This was particularly challenging with the four freeways that converge around Downtown Houston: I-45, I-10, US 59/I-69, and SH 288.

The alternatives analysis for the project included a comprehensive update to the I-45/Hardy Corridor Traffic Study. This update highlighted the following:

1. The volume of traffic on each of the Downtown highways is projected to exceed the capacity of the Downtown existing interchanges in the future.
2. Over 50% of the traffic passing through Downtown from the north side on I-45 desires to go to the US 59/I-69 compared to the SH 288 or continue onto I-45; 70 percent of drivers entering Downtown on US 59/I-69 want to continue along US 59/I-69.
3. Of the three fully directional interchanges in the Downtown system, the traffic study showed that the I-45/US 59/I-69/SH 288 interchange south of Downtown is the primary reason for the daily congestion experienced on the entire Downtown system.
4. The existing configuration of the I-45/US 59/I-69/SH 288 interchange requires drivers traveling south on US 59/I-69 from the north side of Downtown to weave over at least one lane.



Artist rendering of deck/open space over IH-45 and US 59/I-69 would require additional development and funding by entities other than TxDOT.

To solve the crash, connectivity and congestion issues, we had to think big. The alternatives had to provide drivers the option of going through or to Downtown while providing enough advance notice to make the commitment and avoid what happens today: drivers making last minute decisions to exit or change lanes.

TxDOT studied elevated lanes, depressed lanes, underground tunnels, and combinations of all three. The only alternative that had a significant and positive impact was to depress US 59/I-69 between Commerce St and Spur 527 and to shift I-45 from the current alignment along Pierce Elevated to be parallel with I-10 on the north side of Downtown and US 59/I-69 on the west side of Downtown.

This configuration provides an effective separation of Downtown destined traffic from through traffic and drastically eliminates sections where drivers need to weave into and out of lanes to get where they need to go.

Our analysis shows this configuration will reduce crashes by at least 30% to as much as 59% compared to the No-Build Alternative, increase travel time reliability, and increase travel speeds by 20-25 mph during peak periods.<sup>1</sup>

<sup>1</sup> Federal Highway Administration (FHWA) NHHIP Segments 2 and 3 Interstate Access Justification Report (IAJR), August 2020.

## Will this Highway Project Make Flooding Worse?

No. This project will collect, convey and detain the storm water runoff from not only the highways, but also from the adjacent properties that are currently draining to the highways. Depressed sections of the proposed project will be designed to handle extreme weather events with rainfall levels similar to the region's three most recent flood events (Hurricane Harvey in 2017, Tax Day in 2016, and Memorial Day in 2015). Additionally, the project will be designed to meet and/or exceed the most recent guideline set by the Harris County Flood Control District (HCFCF). In some cases, there may be water over the roadway during such an extreme rainfall event, but the road is designed to still be passable. For more information, please see the NHHIP paper on *Addressing Flooding*.

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To learn more about NHHIP,  
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