



# I-45 NHHIP Segment 1 General Update

For additional information about the Project, visit us online at: [www.txdot.gov/nhhp](http://www.txdot.gov/nhhp)



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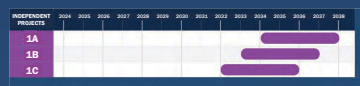
## KEY INFORMATION

This segment will improve the I-45 between I-610 and Beltway 8 by widening the roadway to accommodate four lanes known as MaX lanes. The roadway would have:

- Four general purpose lanes in each direction with auxiliary lanes.
- Two MaX lane sin each direction operating 24/7 carrying HOV (high-occupancy vehicle) and METRO bus traffic.
- Addition of full-width shoulders
- Addition of bicycle/pedestrian features frontage roads
- Enhanced bicycle/pedestrian features on streets crossing I-45

Drainage in this segment would be improved for residents and businesses along I-45 with the addition of 11 new detention ponds including a joint regional detention pond facility with Harris County Flood Control District (HCFCD) on Halls Bayou just east of I-45, and with the use of increased storm sewer pipe sizes to provide in-line detention.

## CONSTRUCTION PHASING



## PROJECT FUNDING

INDEPENDENT PROJECTS	ESTIMATED CONTRACT COST	CURRENT FUNDING
1A	\$296,800,000	-
1B	\$386,400,000	-
1C	\$224,000,000	-

**TOTAL COST = \$907,200,000**

The Segment 1 projects are unfunded and are not actively in detailed design.

The project brings significant economic impacts to the Houston area as well as much needed safety improvements to one of the state's most congested highways. Some 92,000 direct jobs are being created with an additional 89,000 indirect jobs generated from this project. The overall statewide economic impact of NHHIP is estimated at \$19.2 billion.

The future of transportation is changing and the infrastructure in the nation's fourth largest city needs to change with it. Parts of the I-45 corridor have not changed since being constructed over 50 years ago. The I-45 improvement project not only brings these highways up to current standards, but also prepares for the future by improving resiliency to weather events and providing safer more efficient travel that could accommodate the transition to electric and self-driving vehicles. And, importantly, it will increase the opportunity for transit and high-occupancy vehicles as a mode choice for those traveling along the I-45 North Houston corridor. Additionally, the neighborhoods in the project area will see many specific benefits beyond the economic and safety improvements.

## INDEPENDENCE HEIGHTS

Independence Heights is the first African American municipality in Texas, and is in TxDOT's I-45 North Houston Highway Improvement Project (NHHIP) area.

### Flood Control

**FLOODING RISK REDUCED**  
TxDOT worked with HCFCD and the City of Houston to develop a drainage plan extending from downtown up Little White Bayou to Independence Heights that improves hydrologic chokepoints and drainage to the west (with more capacity coming from White Oaks).

**TRAIL SUPPORT**  
The community has some support for hills and bike trail as long as it does not result in additional displacement of residents.

### Historical

**AFRICAN AMERICAN HISTORY HIGHLIGHTED**  
Updated the historic resources survey report to include discussion of Independence Heights as first African American town in Texas and document history.

**COMMUNITY SIGNAGE**  
Provide additional funding for community gateways, wayfinding signage in the neighborhood, street sign upgrades.

### Weatherization Program

**MITIGATE DUST AND NOISE IMPACT**  
For qualifying minority and low-income, single-family residential households, to mitigate dust and noise impacts during construction.

### Green Space/ Air Quality/ Aesthetics

**SMALL ACCESSIBLE PARK**  
Pocket park near Greater Mount Airy Missionary Baptist Church.

**IMPROVED AIR QUALITY**  
During construction, TxDOT will monitor PM2.5, NOx, CO and priority MSRT pollutants.

**MINIMIZE POLLUTANTS AND RUN-OFF**  
Native vegetation buffer along freeway post-construction.

### Cultural Planning Process

**DOCUMENTATION OF HISTORIC ASSETS**  
TxDOT hired a consultant to work on planning processes which included windshield survey and documentation of the community's historic assets, that will be featured on the National Historic Emancipation Trail.

### Noise Mitigation

**SOUND WALLS**  
Being provided at property specific level and offering additional sound walls.

### KEY TAKEAWAY

TxDOT has fully, completely, and in good faith complied with all legal requirements in planning for and evaluating alternatives and impacts of the NHHIP. Moreover, TxDOT has committed to many significant actions bringing multiple benefits to the community.

## POTENTIAL FOOTPRINT REDUCTION

TxDOT remains committed to evaluating reasonable opportunities to reduce the project footprint in Segment 1 in ways that would not compromise the Purpose and Need of the project, as described in the Record of Decision (ROD).

As noted in the VRA, TxDOT agrees that requests to reduce the Project footprint should be evaluated with a focus on the following:

- Strengthening Houston's economy.
- Reducing flooding on and off the freeway.
- Making travel safer for all road users.
- Providing long-term capacity for all users of the roadway, including automobile, freight, and transit.
- Serving and preserving the neighborhoods along the corridor while enhancing connectivity between neighborhoods.
- Mitigating impacts to existing parks and open space while creating additional opportunity for open space.
- Ensuring accessible evacuation routes.

TxDOT agrees to use the least amount of right-of-way as allowed and defined by law, after evaluation of the project footprint.

It is important to note that any proposals to reduce the Project footprint must not compromise safety, flooding mitigation, design standards, freight mobility and evacuation effectiveness.

## ROW REDUCTION METHODOLOGY/ GUIDELINES

- Meets Project Purpose and Need as stated in Record of Decision (ROD)
  - No design exceptions
  - No reduction in capacity
- Consider braided ramps where applicable
  - Braided ramps are where the exit/entrance ramps are in the same space, with one over the other
- No elevated MaX lanes
- Minimum 20-foot border width on frontage roads
  - All frontage roads to include bicycle/pedestrian facilities (no on-street bicycle facilities allowed)
  - Potential sound wall locations
- Evaluate different ramp envelopes (this is the distance needed between the inside edge of frontage road and general purpose lanes for the ramps)

## DRAINAGE

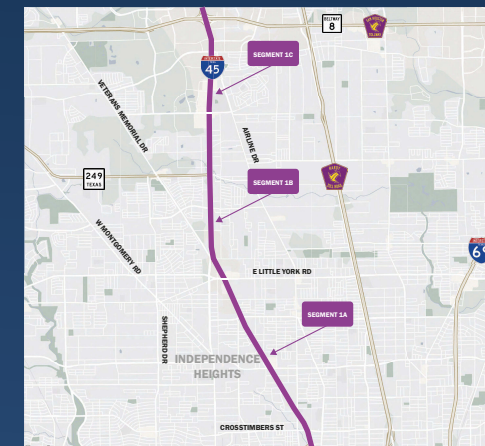
- Detention Pond locations were revised based on updated Drainage Studies completed in 2021.
- Revised pond locations shown on Segment 1 plan view.



## KEY DESIGN CONSIDERATIONS

- Evaluate wider bridges at Halls Bayou crossing and other locations identified with HCFCD to accommodate future channel widenings.
- Evaluate new trails along channel crossing under I-45.
- Proposed new overpass as depicted in the FEIS schematics at Blue Bell Road in accordance with MOU between TxDOT and the City of Houston.
- Enhanced pedestrian and bicycle realms along all streets crossing I-45.
- Provide 12 feet frontage road lanes with curb and buffer to pedestrian and bicycle accommodations.
- Provide continuous two-lane frontage roads with auxiliary lanes between ramps.
- Proposed I-45 MaX Lanes in center to provide two-lanes each direction with 24-hour/7 days-a-week operations including high occupancy vehicles (HOV), METRO bus and rubber-tire high-capacity transit, and future autonomous vehicles.
- Bring all lane widths, shoulder widths, and geometry to current design standards.
- I-45 MaX Lane Connectivity to Beltway 8 Direct Connectors.
- I-45 Frontage Road entrance southbound and exit northbound from I-45 MaX Lanes directly to the frontage roads between West Road and Aldine Bender Road.
- (K1 & K2) I-45 General Purpose Lane access to and from I-45 MaX Lanes between W. Mount Houston Road and West Road; and between Tidwell Road and Parker Road.
- Provide I-45 MaX Lane access to existing METRO Park and Ride Shepherd and Veterans Memorial Drive.
- Reconstruct direct connectors to and from Shepherd Road to I-45 General Purpose Lanes.

## SEGMENT 1 PROJECT LIMITS



## PROPOSED TYPICAL SECTION



## DESIGN REQUEST & RESPONSE

REQUEST	RESPONSE
1. Reconnect Blue Bell Rd. across I-45.	1. Reconnect Blue Bell Rd. across I-45 to allow for safer circulation from west side of I-45.
2. Avoid impacts to Trinity South Missionary Wenchy Center.	2. Reconnect design to avoid Trinity South Missionary Wenchy Center.
3. Plan frontage roads in other areas focus on at least lanes with low or no impacts on National Assessment of City Transportation Alternatives (NACTA) Urban Street Design Guide as a reference, and consistent to City of Houston's Urban Street Design Guide as a reference, and consistent to the existing layout in both areas.	3. City streets that cross or connect to NHHIP will follow the City of Houston design standards and standards. The NHHIP project will be implemented in the design where feasible. In addition, TxDOT will coordinate with the City of Houston regarding the specific design of the city street network adjacent to and crossing the NHHIP. TxDOT will coordinate with the City of Houston regarding the design of the city street network adjacent to and crossing the NHHIP. TxDOT will coordinate with the City of Houston regarding the design of the city street network adjacent to and crossing the NHHIP. TxDOT will coordinate with the City of Houston regarding the design of the city street network adjacent to and crossing the NHHIP.
1. All intersections should be designed for safe crossings and accessibility for pedestrians associated with adjacent METRO bus stops.	1. TxDOT coordinates with the City of Houston regarding the specific design of the city street network adjacent to and crossing the NHHIP. TxDOT will coordinate with the City of Houston regarding the design of the city street network adjacent to and crossing the NHHIP. TxDOT will coordinate with the City of Houston regarding the design of the city street network adjacent to and crossing the NHHIP.
2. All lanes on city streets and frontage roads should comply with City of Houston's 11' lane standards. Multiple streets have been shown with narrower, single-lane lanes project should consider these streets.	2. TxDOT coordinates with the City of Houston regarding the specific design of the city street network adjacent to and crossing the NHHIP. TxDOT will coordinate with the City of Houston regarding the design of the city street network adjacent to and crossing the NHHIP. TxDOT will coordinate with the City of Houston regarding the design of the city street network adjacent to and crossing the NHHIP.
3. Utility which intersections are proposed with traffic signals and urban stop control.	3. TxDOT coordinates with the City of Houston regarding the specific design of the city street network adjacent to and crossing the NHHIP. TxDOT will coordinate with the City of Houston regarding the design of the city street network adjacent to and crossing the NHHIP. TxDOT will coordinate with the City of Houston regarding the design of the city street network adjacent to and crossing the NHHIP.
1. Aldine Drive, Veterans Drive and northbound I-45 intersection should remain viable for access through it in event of construction.	1. TxDOT studied the Aldine Drive/Veterans Drive I-45 intersection, but due to the complexity and level of work involved in this intersection, it could not be reopened without major projects to adjacent businesses. TxDOT's focus was ensuring the intersection was designed to enhance safety and mobility for all users. Aldine Drive and Veterans Drive will be widened to the intersection, and relocated during the widening and with the traffic signal design, to ensure safety for all modes of travel.
2. Consider entrance and direct connection from I-45 MaX lanes to Green Road.	2. TxDOT studied the Aldine Drive/Veterans Drive I-45 intersection, but due to the complexity and level of work involved in this intersection, it could not be reopened without major projects to adjacent businesses. TxDOT's focus was ensuring the intersection was designed to enhance safety and mobility for all users. Aldine Drive and Veterans Drive will be widened to the intersection, and relocated during the widening and with the traffic signal design, to ensure safety for all modes of travel.
	2. Adding a connector from the I-45 MaX lanes and Green Road is outside of the project limits. TxDOT has not yet completed a separate ongoing project (I-45 North Houston to Green Road) from the project limits (I-610 to Beltway 8).



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