



# CITY OF HOUSTON

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Mayor

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July 25, 2017

TxDOT Houston District Office  
Attn: Director of Project Development  
P.O. 1386  
Houston, TX 77251-1386

**Re: DEIS for North Houston Highway Improvement Project (NHHIP)**

Dear Director:

Thank you for the opportunity to provide comments on the Draft Environmental Impact Statement (DEIS) for the proposed North Houston Highway Improvement Project (NHHIP). The NHHIP is a potentially transformational project that will provide desperately needed congestion relief through the heart of our city and will strengthen Houston's economy. Given the scale of the project and its location, however, the project must minimize negative impacts and improve, wherever possible, the quality of life of nearby residents and businesses.

I want to highlight here some of my highest priorities for the project:

- Minimize impacts to affordable housing resources. Planning and advanced funding for relocation of affordable homes at their replacement value, as well as relocation assistance to existing residents, should be done in a timely and comprehensive manner. This applies to the 368 units within the Houston Housing Authority Clayton Homes and Kelly Village facilities as well as the Temenos Community Development Corporation facility.
- Minimize traffic impacts on neighborhoods. The project should minimize the negative impact of commuter traffic on primarily residential neighborhoods, such as from the S.H. 288 managed lanes ramps currently proposed to exit onto Chenevert Street in Midtown.
- Minimize negative impacts to neighborhoods. The DEIS states that the preferred alternative will displace many single and multi-family homes, commercial sites, and other institutional and community resources. I am especially concerned by the DEIS's statement that all alternatives would cause disproportionate adverse impacts to minority or low-income populations. The NHHIP should provide strong connections between neighborhoods separated by the freeway; minimize right-of-way impacts to adjacent properties, including displacement of homes and businesses; and mitigate noise, air quality, visual, water quality, and environmental impacts. Unavoidable impacts should be mitigated wherever feasible.
- Accommodate high capacity transit. The NHHIP should minimize dependency on single occupant vehicles that are congesting the City's street grid. This can only be achieved if multimodal consideration of transit and freight are strongly integrated into the proposed design. TxDOT should coordinate with METRO to ensure the NHHIP accommodates the long-range transit needs of the corridor. The proposed MaX Lanes concept should be designed and operated to ensure that reliable and frequent two-way high capacity transit could be operated to connect many regional activity centers.
- Encourage multiple occupancy trips through sensible tolling practices. The "MaX" managed lanes should be operated to encourage shared trips as much as possible. Inappropriate tolling practices on the MaX

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lanes would limit the ability of such lanes to carry HOV and high-capacity transit traffic, lessening the congestion relief benefits of the project and burdening the City's street grid that distributes NHHIP trips.

- Maximize greenspace opportunities. The NHHIP creates an exciting opportunity for enhanced greenspace in the heart of Houston by using "caps" placed over a depressed freeway, reimagining the Pierce Elevated Freeway, and in other ways. These proposals present not just enhanced recreational opportunities, but can also improve connections between neighborhoods previously separated by freeways. The City applauds TxDOT for including concrete caps in the NHHIP's base design. Unfortunately, significant portions of existing greenspace, especially along bayous, are impacted by the project, in some cases through additional encroachment of widened elevated freeway. The City would like to explore the development of greenspace opportunities with TxDOT, including the following:
  - We ask TxDOT to mitigate the impacts on existing greenspace through the proposed park caps;
  - Creating active greenspace at the Midtown/Museum District cap and enhancing connections in this area, which could support transit oriented development near the Wheeler Transit Station.
  - Providing active greenspace and connection opportunities at the Downtown/EaDo District and North Main caps;
  - Connecting Sam Houston Park and Buffalo Bayou Park;
  - Greenspace opportunities from surplus right-of-way for the Pierce Elevated structure.
- Fully explore optimal connections between downtown and neighborhoods to the east. The City appreciates TxDOT's close coordination with the City and other partners to identify the best possible connections between downtown and areas east of downtown. For example, the proposed re-routing of Polk Street would result in a less direct connection between these areas. TxDOT should continue working closely with the City and other stakeholders to determine the optimal neighborhood connections across the NHHIP.
- Maximize a multi-modal approach. The project should improve mobility for all modes of transportation, not just automobiles on freeways, and should provide for improvements to the local street network as well as the regional freeway system. The NHHIP should support implementation of the Houston Bike Plan, including accommodating trails along White Oak and Little White Oak bayous underneath the NHHIP and bike facilities on bridges over the NHHIP, and utilize safe pedestrian-oriented design standards appropriate for an urban context.
- Facilitate beneficial redevelopment. The NHHIP should maximize redevelopment opportunities to enhance quality of life and strengthen the City's tax base. This includes coordination on redevelopment of surplus right-of-way and the potential realignment of the UPRR freight rail line that runs east-west through the north side of downtown.

The City's Planning and Development Department will be providing you with a separate working document that provides additional information and alternatives to consider to address the concerns in this letter.

I want to thank TxDOT for their extensive collaboration with the City on the NHHIP, and I applaud TxDOT for their openness to innovative thinking. I encourage TxDOT to continue to engage with the City, stakeholders, and the community on this project. We look forward to your responses to these comments.

Sincerely,



Sylvester Turner  
Mayor

ST:pw

cc: Quincy Allen, PE, District Engineer, Texas Department of Transportation

City of Houston Comments  
DEIS for North Houston Highway Improvement Project

These comments of the City of Houston’s Planning and Development Department on the Draft Environmental Impact Statement (DEIS) for the Texas Department of Transportation’s (TxDOT) North Houston Highway Improvement Project (NHHIP) are organized into four sections:

- A. General Comments
- B. Segment 1
- C. Segment 2
- D. Segment 3

A. GENERAL COMMENTS

The project will result in significant impacts for local network connectivity for motorists, bicyclists, pedestrians, transit users, and freight. A focus on design of safe intersections, sidewalks, bikeways, transit stops, frontage roads, and connections has the potential to greatly enhance mobility options for all users. This means thinking beyond the direct right-of-way of the project to understand opportunities and impacts on street, bikeway, greenway, and transit networks. It also means working to tie communities together, not separating them further with wide freeways serving as barriers. It also requires careful planning and a greater level of detail than has been provided by the current schematics.

The City’s Planning and Development Department previously submitted comments on this project on May 29, 2015, after public meeting #4. TxDOT should continue to closely coordinate with the City of Houston, METRO and other entities such as Management Districts and TIRZs to ensure that major issues are resolved early in the design phase of the project.

Noise, Air Quality, Water Quality, Aesthetics, and Other Environmental Impacts

The project will have a significant noise, air quality, and environmental impacts on neighboring communities, business, and residents. Plans should designate where noise walls are proposed to mitigate neighborhood impacts. Add landscaping along freeway lanes and frontage roads plus noise walls where appropriate to mitigate for the increased noise traffic created by a wider freeway. Develop a landscape plan and plan for public art and coordinate with the City and stakeholders along the corridor to reduce visual and air quality impacts along the corridor, and to improve water quality.

The NHHIP creates an exciting opportunity for enhanced greenspace in the heart of Houston by using “caps” placed over a depressed freeway, reimagining the Pierce Elevated Freeway, and in other ways. These proposals present not just enhanced recreational opportunities, but can also improve connections between neighborhoods previously separated by freeways. The City applauds TxDOT for including concrete caps in the NHHIP’s base design.

Unfortunately, significant portions of existing greenspace, especially along bayous, are impacted by the project, in some cases through additional encroachment of widened elevated freeway. As a result of these impacts, the City asks TxDOT to mitigate the impacts on existing greenspace through development of the proposed park caps.

Economic Development, Displacement, Environmental Justice

The DEIS states that the preferred alternative will require the displacement of many single and multi-family homes, commercial sites, and other institutional and community resources. The DEIS notes that all alternatives would cause disproportionate high and adverse impacts to minority or low-income populations, yet does not adequately address mitigation for these impacts. Much of the project is in or adjacent to Complete Communities, including Third Ward, Second Ward, Near Northside, and Acres

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Home. The City is making efforts to improve these neighborhoods so that all of Houston's residents and business owners can have access to quality services and amenities. The City recommends further evaluating design solutions to limit the impact on these communities and businesses where possible.

The project has an excessively wide footprint in Segment 1 in particular, which will cause a significant impact to neighborhoods and businesses. Right of way impacts could be reduced by solutions such as:

- 1) Grade separating some of the managed lanes in the center of the project;
- 2) Reducing the number and/or width of frontage road lanes; and
- 3) In some instances, reducing the separation between main lanes and the frontage roads.

The City of Houston is concerned about the potential loss of sales and property tax revenue that might result from the proposed alternative, which potentially might exceed \$130 million annually. This is a significant economic impact both on the City of Houston and for the neighborhoods in the vicinity of the project. The design should be optimized to support high quality development opportunities that are beneficial to the City of Houston and the surrounding communities to mitigate these impacts, especially in areas where the project eliminates significant existing tax base. Please consider ways in which the project could offset the potential loss of revenue to the City by coordinating planning for redevelopment adjacent to the project that would generate new tax revenue for the City.

Indirect Impacts

The DEIS concludes that the project is not expected to induce growth, as most of the area of influence is already developed. It does not acknowledge that much of the surrounding areas are still relatively low density and can accommodate growth. The NHHIP should minimize the encouragement of single occupant vehicle trips. Instead, the NHHIP should encourage shared trips to minimize impacts to the City roadway network, which must distribute these trips. The conclusion in the DEIS that the proposed project is not expected to induce growth should be re-examined.

The City of Houston provides the following comments for consideration in improving the overall project and to address these significant impacts.

1. Utilize context sensitive design guidelines such as the ITE – Design Walkable Urban Thoroughfares: A Context Sensitive Approach and NACTO – Urban Street Design Guide, to comply with the City's Complete Streets policy. While the freeways are designed to FHWA and AASHTO design guidelines, all frontage roads, adjoining local streets and intersections should be designed consistently with the City's Context Sensitive Design Guidelines.
2. Maintain and improve connections between neighborhoods separated by the NHHIP. Avoid reducing street connectivity. Improve connectivity for all modes of transportation, inclusive of people on foot, people on bicycles, transit users, and for freight.
3. The project should optimize the local street network and avoid relocating congestion from freeways to local streets. In some areas, for example, lane configurations on local street crossings of the NHHIP appear excessive, some access roads appear to be designed in excess of necessary capacity, and some local street crossings over the freeway are proposed for elimination, reducing local access and circulation.
4. Current and future bicycle infrastructure and bicycle connectivity must be preserved and enhanced where feasible. Providing for high-comfort bikeway connectivity across and along the proposed project is essential. Improved bicycle connections are needed to address the impact of barriers between neighborhoods, especially between neighborhoods and the Central

- Business District. In areas where vehicular connectivity may be removed, options should be evaluated to preserve pedestrian and bicycle connectivity.
5. The proposed schematic drawing does not identify sidewalks along sections of the proposed project. In general, sidewalks should be provided along all frontage roads and public streets in all typical sections. Ensure bridge widths throughout the project include sufficient space for quality sidewalks and high comfort bikeways as called for in City of Houston standards and guidelines, rather than be designed to match existing cross-sections or old standards. Ensure all bridges across the freeway and street crossings under the freeway provide for minimum 6' unobstructed sidewalks. Where appropriate, wider sidewalks should be provided since there is a limited buffer between the vehicular lanes and the pedestrian.
  6. All lanes on city streets and frontage roads should comply with City of Houston's 11' lane standards and encourage appropriate travel speeds and safe travel. 12' lanes are freeway lane standards and not appropriate for local streets. They encourage excessive speeds through urban area where higher speeds are out of context and unsafe.
  7. Define which intersections are proposed with traffic signals and all-way stop control. It is not possible to fully assess whether the design supports safe walkability, bikeability, and transit use without this information. Traffic control recommendations should be developed with multi-modal safety and connections in mind.
  8. Design standards for bicyclists and pedestrians need to be set to reflect the Houston Bike Plan's high comfort commitment. Elements like wide outside lanes for bicyclists, which are likely to be eliminated as guidance from the next AASHTO bikeway design guide, should not be included.
  9. Protected bikeways or side paths set behind the curb should be designed for all bike connections. Bike lanes should be 6' wide minimum. 14' wide outside lanes on frontage roads designed as shared bicycle facilities are unacceptable and should not be included in this project. Intersections should be designed for safe crossing to accommodate bikeways and sidewalks.
  10. The proposed bicycle lanes along the outside of the frontage roads do not provide adequate protection for cyclists and create more opportunity for bicycle/motorist collisions. Along frontage roads, the bikeways constructed in this project need to sustain a high level of comfort for both motorists and cyclists to create a clear and safe space for both parties to travel. It is recommended any bikeway associated with these roadways be completely separated from vehicular traffic, be positioned behind the outermost curb, be at least 6 feet wide, and be separated from pedestrian traffic.
  11. An intersection is the most likely place for a vehicle-bicycle collision. A protected intersection (or Dutch Junction) for bicyclists and pedestrians is recommended and makes travel considerably safer for all parties. This design includes small islands as buffers from right-turning motorists. Green paint is then used to direct the cyclist from one protected lane to the next in a circular fashion moving counter-clockwise. College Station, TX has already completed a similar design and the protected intersection in the Energy Corridor in Houston is planned to be implemented in the fall. Please use these as acceptable examples.
  12. Multiple streets have been shown with sweeping, large radius turns. This design makes it difficult for both the motorist and the cyclist to anticipate a potential collision. This project should take the opportunity to minimize these issues, especially in areas where large numbers of people walking can be expected around Downtown and Buffalo Bayou. Sweeping right turns need to be avoided at all locations.
  13. At time of design, the City will coordinate with TxDOT to verify the optimal lane configurations for all City street connections and bridges affected by the NHHIP.

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14. In general, creating excess unproductive space should be avoided in street design (e.g., small triangles of isolated land) unless there is clear plan to address the use of the space (e.g. public art projects).
15. Coordinate with the City on how to make detention areas attractive and usable spaces.
16. The City looks forward to coordinating with TxDOT on the proposed deck structures across the freeway. The project should provide safe access to the deck areas across frontage roads.
17. Excessively wide frontage roads present a barrier for local pedestrian and bicycle circulation, and these impacts are likely to fall disproportionately on minority or low-income populations as identified in the Environmental Justice section of the DEIS. Some of the proposed frontage roads may have more lanes than needed. Please provide traffic modeling and justification for any access roads in excess of two lanes.
18. Transit, including how the NHHIP can be designed to support faster transit trips between major activity centers and destinations, should be much more prominently considered in the plan. This should include rail expansion opportunities as well as the potential for an optimized express bus network. METRO is currently updating their long-range capital plan, and this plan may identify recommendations for transit needs along the NHHIP corridor. Upon completion of this plan, the City requests that the project be re-evaluated to accommodate these transit needs.
19. The entire design should be reviewed to ensure optimized bus stop locations have been considered. Stops (and access to stops) must be designed to ADA and METRO standards with room for shelters to support a high quality transit experience.
20. Integrate freight and transit needs into the proposed design. Activity centers are located throughout the region and integrating two-way high capacity transit into the design will benefit both City and regional mobility. The MaX lanes should be operated to incentivize shared trips in multi-occupant vehicles and operated to ensure that reliable and frequent two-way high capacity transit could be operated to connect many regional activity centers. The MaX Lanes should be connected to managed lanes on intersecting facilities such as IH-10 and IH-69 where feasible, enabling a network of transit movement to activity centers through the region. If the potential exists for managed lanes on other facilities, the NHHIP should accommodate a future connection to these lanes as well.
21. The "MaX" managed lanes should be operated to encourage shared trips as much as possible. Inappropriate tolling practices on the MaX lanes, such as inappropriately low toll fares, would diminish the travel time advantage enjoyed by multi-occupant vehicles, limiting the ability of such lanes to carry HOV and high-capacity transit traffic. A reduction in shared-trip vehicles will lessen the congestion relief benefits of the project and burden the City's street network that must distribute the traffic from the NHHIP. Please engage the City as decisions are made regarding tolling.

B. SEGMENT 1.

1. Segment 1 has a significant impact, approximately 212 acres, due to the proposed widening of the roadway. Identify other options and engage the surrounding neighborhoods to limit this impact on the community. The project should provide appropriate mitigation and funding for relocation assistance for displaced residents and businesses.
2. The project has an excessively wide footprint in Segment 1, which will cause a significant impact to neighborhoods and businesses. This is due to a combination of 3 or more lane frontage roads, wide frontage road lanes, wide spacing between the freeway and the frontage roads, and putting the MaX Lanes at grade, rather than elevating them. Consider alternatives which would

narrow the footprint of the freeway and reduce the impacts on neighborhoods, including reducing the number of frontage road lanes to two in each direction, reducing the spacing between the freeway and the frontage roads, reducing lane width of the outside lane of the frontage roads, and/or elevating the MaX Lanes.

3. Consider extension and direct connection from IH-45 MaX lanes to Greens Road to serve the Greenspoint area. This would help with redevelopment of the area and support potential METRO limited stop service on the Downtown to Airport Route.
4. In accordance with the Houston Bike Plan, ensure that the Halls Bayou crossing north of W. Mt. Houston is designed to allow trail crossings under the freeway and frontage roads.
5. Connections on Crosstimbers, Victoria/Lyerly, Tidwell Rd., Cortlandt/E Witcher, Rosamond, W. Parker Road, Rittenhouse, etc. need to be designed with features that allow for high comfort and safety at intersections for bicyclists and pedestrians. These are vital connections for pedestrians and bicyclists in Independence Heights, Garden Oaks, Oak Forest and Acres Home areas to reach either Little White Oak Bayou or the METRO Red Line into downtown.
6. The HOV ramp from Airline Dr. to Independence Heights and the Northside communities is being removed. Provide alternative access for these communities to managed lanes.
7. Provide a local street connection between Veterans Memorial and IH 45 southbound frontage road along the METRO T-Ramp.
8. Evaluate how the Airline, Victoria Drive and Northbound IH-45 Intersection would operate safely to people traveling through any mode of travel. Existing configuration should be improved to ensure safety for all users of the roadway.
9. Clarify plan for Werner Street in northeast corner of Tidwell intersection with IH-45. Evaluate if a cul-de-sac with access further north could be better than the proposed T shaped design.
10. The intersections should be designed with special care for safe, comfortable crossings for pedestrians. Most arterials crossing IH-45 are on METRO's bus network, have significant nearby boardings, and will require safe crossings to serve stops for people traveling in both directions.
11. The intersection of Shepherd and IH-45 is directly adjacent to the N. Shepherd Park & Ride. This intersection should be assessed to ensure that is safely traversable by people walking.
12. N. Shepherd Transit Center would be logical extension for METRO Red Line. We encourage consideration of how that connection could be made and to consider that in design so as to not preclude options. For example, consider making West Little York and Parker crossing spans wide enough as these would be potential points for light rail to cross IH-45 to reach N. Shepherd.
13. An intersection design that incorporates a free flow right turn lane with a pedestrian island creates an unsafe environment for pedestrians since many drivers do not yield to pedestrians at such intersections. Additionally, a number of intersections have dedicated right turn lanes. Ensure the traffic counts warrant dedicated right turns. Multi-lane frontage roads are daunting for pedestrians to cross. Please provide traffic modeling and justification for any access roads in excess of two lanes. Coordinate with City of Houston on all intersection designs.
14. Provide traffic modeling and justify the need for a 5-lane frontage road for the portion IH 45 between West Road and Blue Bell Road, a minor collector street.
15. Ensure sufficient clearance across Halls Bayou to allow for adequate natural drainage conveyance, and a pedestrian and bicycle trail along the bayou. These recommendations are consistent with the HCFCD's Halls Bayou study.

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16. Coordinate with City of Houston and Houston Parks Board to develop opportunities for parks and open space along Little White Oak Bayou between I 610 and E. Parker Road and Shepherd. Consider developing the detention basin between I-610 and Crosstimbers as a wet bottom basin and publicly-accessible green space tied the bikeway along the bayou. Consider a trash mitigation system that will collect both heavy debris and floating debris.
17. Coordinate with City of Houston and Houston Parks Board for opportunities to develop opportunities for parks and open space along Halls Bayou along I 45.
18. All alternatives would result in traffic noise impacts. The current DEIS does not adequately address noise mitigation in Segment 1.

C. SEGMENT 2

1. Ensure that noise impacts, irrespective of existing conditions, are mitigated appropriately with options such as noise/sound walls including the southeast corner of I 610 and I 45 adjacent to Delaney Street.
2. Connectivity in and out of Northside neighborhoods needs to be addressed in a way that it becomes improved, not made worse, by the new design in both Segment 2 and in Segment 3. Clarify the termini of streets like North Ave, Woodland and Farwood. Do they cul-de-sac or connect to frontage roads? Connections appear preferable.
3. Consider extending the IH-610 segment east to allow the Helmers Street connection across the freeway. Helmers would be a useful north-south connection, as it continues from Fulton Street on the south to Berry Street on the north, a distance of almost 3 miles. Right now the only north-south connections through this area are Fulton and Irvington, and Fulton has METRO Red Line impacts.
4. Assess the option to bring the trail underneath the freight railroad north of Stoke Road. If the trail cannot travel under the freight rail line, integrate the trail into the frontage road design to cross the rail ROW.
5. The entire design should be reviewed to ensure optimized bus stop locations have been considered and stops (and access to stops) would be designed to ADA and METRO standards to support a high quality transit experience. This is most critical for the Cavalcade St. bridge crossing and the operation of the existing Route 44 METRO bus route which travels on a section of Main St. and Houston Avenue impacted by the NHHIP project.
6. Justify the need and provide traffic modeling for the proposed multi-lane frontage road along northbound I 45 between Quitman and N. Main. A single existing lane north of Quitman is expanded to 4 lanes at N. Main Street creating impact on adjacent properties. Additionally, this creates a design that encourages high speed adjacent to the proposed park deck.
7. Add safe pedestrian crossings and bike lanes to cross and continue east on Cavalcade, Patton, and Cottage St-Searle Dr. These streets are to have access to the red line stops at Cavalcade and Moody Park, as well as shops, the MD Anderson YMCA, and the new park.
8. Ensure the proposed deck park near North Main Street is accessible for pedestrians and bicyclists. The multilane frontage roads and U turn ramps create challenges for pedestrian and bicycle access to the proposed deck park. Consider relocation, removal, or by-pass of these U-turn lanes and design of frontage roads to allow safe access to the park space.
9. Although below grade near Woodland Park, the freeway creates noise impacts on Woodland Park. Provide sound mitigation with an additional shielding using tall trees and vegetation.



10. The proposed removal of the North Street bridge introduces a significant impact on the ability of Near Northside residents to access park and recreation facilities west of IH45. Removal of this important local connection should be reconsidered and/or appropriately mitigated.
11. Improve the pedestrian accessibility to Woodland Park along Little White Oak Bayou east of I-45. This could be accomplished through an improved channel conduit under I-45 that would provide a multi-use path along the bayou connecting Woodland Park on the west of I-45 to the hike and bike path along Little White Oak Bayou on the east side of I-45. Improve the greenspace along Little White Oak Bayou east of I-45, with hike and bike trails connecting to Moody Park.
12. Little White Oak Bayou represents a prime opportunity to extend open space connectivity north from White Oak Bayou Greenway to Woodlands Park, Moody Park, and beyond up to Halls Bayou. It also connects neighborhoods like Near Northside, Independence Heights, and Acres Home directly impacted by the NHHIP. It is imperative that the project enhance and not degrade the ecological value and open space potential offered by Little White Oak Bayou. Coordinate with City of Houston and Houston Parks Board for opportunities to develop opportunities for parks and open space along Little White Oak Bayou. Create a hike and bike trail along the length of Little White Oak Bayou, east and west of I-45, to provide public access to the channel and to connect the detention ponds, Moody Park, Woodland Park and up to I-610.
13. Ensure that the design allows trail connectivity along Little White Oak Bayou, connecting neighborhoods to parks and open space, wherever it crosses freeways including at the IH-610 to IH-45 N interchange. In accordance with the Houston Bike Plan, this bayou section is an important piece of expanding the high comfort bicycle network that provides connectivity from outside the N Loop 610, under I-45, and into downtown. This bayou is a connector for bicyclists, pedestrians, and naturalists and is unaddressed in this design and crossings (Hogan/Crockett, Houston, Quitman/White Oak Dr., Main St, Patton, Cottage etc.). Allowing full access to Little White Oak Bayou needs to be maintained and carefully designed with high comfort bicycle and pedestrian crossings underneath the NHHIP. The project should replace the existing culvert north of Patton Street with a bridge span designed to allow trails on both sides of the bayou. At the I-610 crossing of the Bayou, a safe bicycle route along the bayou should be included, including a safe crossing of the proposed frontage roads. Please also consider a high comfort bike lane at signalized frontage road intersections.
14. Connect the existing bike trail along Little White Oak Bayou between Enid and Cavalcade, on the west side of I-45, to a new park at the retention pond areas on the east side of I-45 (where Love's Truck stop is currently), and on to the Moody Park/Woodland Park/White Oak Bayou trail. Mitigate for loss of green space along the Bayou in this area and replace the trail with an equivalent trail.
15. In its current condition, Little White Oak Bayou does not extend across I 610 and I 45 in its natural state. Design the freeway such that Little White Oak Bayou is to be maintained as a natural greenway, with the ability to extend multiuse trails along the bayou to connect the Heights, Northside, Acres Home and Independence Heights neighborhoods.
16. Little White Oak Bayou suffers from freeway pollution from both run-off and litter. Current TXDOT plans include detention basins on the east side of the freeway along the Little White Oak Bayou channel. Consider creating detention ponds that are open and unfenced, planted with native plants which filter dissolved pollutants from freeway run-off. Install a trash mitigation system that will collect both heavy debris and floating debris. There are several locations along Little White Oak Bayou where this could be installed and maintained. Ideally it would be located upstream of both Moody Park and Woodland Park.

17. Reconfigure the design of the local network to the new frontage road along I 610 and I 45 on the northeast side of the interchange. Create a two-way T-intersection instead of the proposed one way connection to Reid Road. Evaluate the option to extend Melbourne Street to the I 45 northbound frontage road.
18. The City appreciates the extension of frontage roads under the IH-610 at IH-45 interchange. These roadways and intersections should be designed to also allow safe pedestrian and bicycle crossings. The large radius turn lanes are not typically supportive of safe, comfortable crossings at these locations. Ensure the design maintains safe multi-modal accessibility across the IH 45 and I 610 interchange. This is particularly critical for bicycle and pedestrian access.

D. SEGMENT 3

Segment 3 South: US 59/IH-69

1. Ensure proposed design accommodates future two-way high capacity transit on IH- 69/US 59 with particular focus on Spur 527. Direct or expedited connections from the existing HOV/HOT to Wheeler Transit Center should also be explored.
2. With the proposed reconfiguration of I 69 at Wheeler Transit Center (TC), there is an opportunity to improve multi-modal circulation, increase access to the transit center, create open space, and provide for future transit capacity with the University Corridor and US 90A transit connections. The City has initiated discussions with Metro and the Midtown TIRZ regarding jointly developing a plan for this area. Continue to coordinate with these entities to ensure this area, including the proposed deck park cap, is designed to maximize future transit and development opportunities.
3. The current schematic does not show an exit point for the Wheeler TC driveway. Identify how the design of the street network could minimize train/roadway conflicts (e.g., train does not cross streets in the middle of intersections) while maximizing transit operations and TOD potential. Design should accommodate future two-way express bus service on IH-69 with focus on Spur 527. Direct or expedited HOV connections to Wheeler TC should also be explored.
4. Ensure the Wheeler bridge is designed to accommodate the proposed University Corridor LRT, 4 vehicular Lanes, and pedestrian accommodations.
5. Evaluate options to maintain the Blodgett connection from San Jacinto to Main St. This street provides a useful connection to the bus operations at the Transit Center. With the redesign of the San Jacinto on-ramp to east side of street, this connection should be achievable.
6. The IH-69 exit to Main Street near the Wheeler Transit Center should be designed to allow improved pedestrian and bicycle connectivity and safe crossings as identified in Houston Bike Plan/METRO Bike & Ride studies.
7. Ensure all bridges, including Montrose, La Branch, Austin, and Almeda, are wide enough for safe pedestrian and bicycle crossings.
8. In accordance with the Houston Bike Plan, the project should accommodate a separated pedestrian and bicycle facility along the south side of IH-69 between Graustark and Main Street. Evaluate feasibility and accommodate a grade separated trail extension below Montrose bridge since midblock crossing at the bridge may be challenging.
9. Re-evaluate the loss of the existing downtown connector tied into Franklin to see if it could be better used as part of express bus network or as an alignment for a light rail extension.
10. As currently proposed, the primary access to and egress from the SH 288 managed lanes would be provided on Chenevert Street south of Elgin. This causes negative impacts to the residential area of eastern Midtown. The freeway ramps would disrupt the neighborhood fabric and

encourage unsafe vehicle speeds in a residential area. The design should be reconfigured to connect the 288 managed lane entrance and exit ramps to Hamilton and Chartres that serve as the frontage roads. Doing so would provide a more direct route than Midtown surface streets with fewer impacts to residential areas. If Chenevert connection is maintained, there should be design elements in place to slow traffic through the neighborhood to appropriate speeds. Area south of Baldwin Park should be redesigned to reflect a neighborhood context without sweeping high speed curves in streets. Francis Street could be designed as a T- intersection with Chenevert. This would allow the block between Chenevert, Francis, Jackson, and Stewart to be reassembled as a full city block for green space or development opportunities.

11. The proposed access from Chenevert to the extension of Hamilton Street can be designed as a 2 lane local street. As part of the removal of the ramps from Chenevert, the grid of local streets should be reconnected including Francis, Chenevert, and Holman Streets. Reintroducing the grid of the streets would create surplus land that TxDOT could utilize for the development of affordable housing. Connecting Holman Street through to Hamilton Street would obviate the need for the freeway-style ramps connecting to Chenevert Street south of Holman Street. Removing them would be more consistent with the context of the neighborhood while improving safety, reducing right-of-way acquisition, and creating more surplus right-of-way.
12. Coordinate with the City to consider widening the Alameda bridge to allow simple buffer buildings (e.g. IH-670 in Columbus, OH). This would reduce the view of freeway and make a more seamless commercial corridor experience on this important roadway.
13. Justify why Caroline Street warrants 4 lanes with a dedicated left turn lane at Wheeler Street. Maintain the current 4 lane configuration with a wide median across I 69 to maintain the existing character of Caroline Street. City supports preserving the existing esplanade and does not support removing esplanade to create a dedicated left turn lane.
14. Where frontage roads are proposed, such as between Midtown and Museum Park or between Downtown and the East End, please define which intersections would be proposed for signalization or all-way stop control. This will greatly impact people's ability to cross at these locations, especially those walking or biking. Please consider all of these intersections for either a signal or all-way stop control.
15. Tuam Street is a local street and does not warrant a 4 lane cross section. Redesign as 2 lanes with left turn lanes and dedicated bike lanes.
16. Re-evaluate the need for 5 lanes on McGowen Street. Two lanes with dedicated left turn lane and bike lanes may be adequate based on the existing and projected capacity. Revise the design of Hamilton and McGowen to remove the free flowing right turn lane.
17. The proposed Chartres Street at McGowen Street location should be redesigned to limit ROW taking on new residential development.
18. Redesign the Webster Street and Hamilton Street intersection as a T intersection to improve pedestrian accessibility.
19. Southbound Hamilton at McGowen and northbound Chartres at Elgin should be designed without sweeping right turn lanes.
20. Include bike lanes and wide sidewalks on Elgin, Tuam and McGowen bridges.
21. Coordinate with the City and the Midtown Management District to include decorative lighting on new bridges along I 69 in a manner similar to those in Montrose along I-69.

Segment 3 East: IH-69, IH-45, SH 288

1. Planning and advanced funding for relocation of affordable homes at their replacement value, as well as relocation assistance to existing residents, should be done in timely and

comprehensive manner. This applies to the 368 units within the Houston Housing Authority Clayton Homes and Kelly Village facilities as well as the Temenos Community Development Corporation facility.

2. The area around the proposed expansion on the east side of Chartres St has multiple historic resources that will be removed. Though not designated, most buildings that are proposed for demolition serve the community economically and as a sense of place and context for the Cheek-Neal Coffee Co. Building. Effects on this area and buildings should be considered.
3. Connectivity between Downtown and neighborhoods to the east side has historically been limited and the project should maximize these connections to the degree feasible.
4. The City appreciates TxDOT's previous and extensive attempts to find solutions for the Polk Street connection. Given the limited east-west connectivity in the area, doing everything possible to maintain a direct Polk Street connection is important. Please provide written verification on the feasibility of revising the design to bring freeway lane ramps down below grade further north than currently proposed, so that these ramps enter the trench between Polk and Rusk. This proposal would enable a straight, direct Polk crossing as exists today. The City understands that this change would reduce the size of the proposed park cap by several blocks. A Polk Street pedestrian and bicycle link is a critical connection to Downtown. The Lamar Street bike lane is proposed to be extended along Polk Street to connect East Downtown and other East End neighborhoods to Downtown, Main Street Rail and Buffalo Bayou. In any scenario, maintain this pedestrian-bicycle connection.
5. The City and partners may envision the downtown/EaDo park cap as an active greenspace with one to two story buildings. The freeway support structure should be designed with this in mind.
6. Connect Leeland to a Leeland/Bell one-way pair as it is currently. This will require redesign of the freeway off-ramp connected to Bell. If Polk connection is eliminated, TxDOT should identify a project for grade separation of Leeland at the West Belt so that a major east west connection exists without the barrier between Eastwood and Downtown.
7. Include either a Runnels to McKee or a Canal to Ruiz connection. The loss of Runnels cuts off the area of the East End north of the West Belt Subdivision rail line and limits access to Downtown to just the Franklin/Navigation underpass. One of these connections should be established.
8. The existing two-way connection of Nance Street to Jensen is being replaced by a one-way frontage road along Rothwell. Identify another two-way connection between Jensen and Nance Street. This is important since the westbound frontage road along IH-10 is not proposed to be extended across IH-69.
9. Identify options for ingress and egress from I 69 near Buffalo Bayou to improve access to and from Downtown, East Downtown, East End, and 5<sup>th</sup> Ward. This could include, for example, evaluating options for exit and/or entrance ramps to the freeway.
10. The proposed design has limited connectivity to the 5<sup>th</sup> Ward areas north of Buffalo Bayou. The exit ramp for Jensen previously proposed has been removed. Provide alternate access from 5<sup>th</sup> Ward to mitigate any loss of access. Evaluate options to extend Bringhurst across I 10 to enhance connectivity across I 10. Providing an additional crossing of IH-10 between Gregg St and Hirsch St would be beneficial, given potential nearby redevelopment.
11. Maintain Walker Street crossing between St. Emanuel and Hamilton as an extension of Columbia Tap trail to west side of SB frontage road (instead of as a street crossing) then bring trail south to Polk St. along the back of the convention center.
12. Ensure Buffalo Bayou trails can connect to East End/Fifth Ward though detention area and freeway crossings. This is critical connection for the East End.
13. Consider making more bridges and related traffic control two-way (e.g., Leeland, Commerce).

- This should be paired with consideration of more two-way streets in the southeast area of downtown, which has been proposed at a concept level in the draft Plan Downtown.
14. The loss of Downtown to East End/East Downtown connectivity at Polk and Runnels also impacts METRO service from the East End to Downtown. This will increase complexity for routes 40, 41, and 48, impact reliability for customers, and potentially incur service costs for METRO. Keeping Polk open would mitigate some of these issues and is recommended.
  15. Proposed Lamar St at St. Emanuel intersection is difficult to see on the schematic but seems awkward with difficult geometry.
  16. When reconstructing METRO's Green/Purple line crossing of I69/I45 trench between East End and downtown, design larger radii turns to support faster train operation speeds. Improve signal operations for rail crossing at St. Emanuel and design Hamilton crossing to work effectively.
  17. Coordinate with the City of Houston and METRO about the potential for dedicated transit lanes on Capital and Rusk as well as rail connection through proposed cap park.
  18. Ensure potential bottle necks are evaluated and eliminated as needed:
    - a. Evaluate if the IH-45/IH-69N to IH-10 Ramp can be separated to eliminate some of the likely weaving through that section.
    - b. IH-69S south of downtown merges seven southbound lanes into six lanes, which drop to four lanes once two lanes exit to local streets on south end of midtown. This could result in a major bottleneck similar to the existing IH-69 NB at the Spur.
  19. In the area north of Minute Maid Park, the operations of the proposed southbound frontage road and existing Hamilton appear problematic. Having two parallel one-way streets traveling the same direction and located 100' apart could create conflicting queues for motorists both on these streets and crossing them. Consider consolidating these streets or revising ramp access.
  20. Ensure underpass at Commerce/Navigation proposed by GCFRD can be constructed with acceptable and safe grades/visibility for all modes of traffic.
  21. The intersection of Franklin and St. Emanuel frontage road may require reconsideration given existing grades, typical travel speeds, and sight distance, should the full underpass be built.
  22. Ensure rail underpasses are built with drainage improvements to avoid flooding.
  23. Ensure at grade crossings of railroads is avoided in the proposed design for enhanced freight and vehicular circulation and safety.
  24. Consider designing the proposed detention basin north of Runnels as a wet bottom basin that is a publicly accessible gateway feature from the bayou trail system.

Segment 3 North: I 45, I 10

1. Address the increased barrier between the Northside neighborhood and the Central Business District due to the wider footprint of the roadway.
2. This realigned segment of I 10 and I 45 has significant impact on existing businesses in an area already impacted by freight rail lines. Coordinate with the City and UPRR on the potential to realign the freight main along the passenger main to remove rail crossings through Downtown.
3. Planning and design should facilitate connection between area north of UPRR on the north side of the post office site to Downtown. This could potentially be incorporated into the design for the Downtown Connector, and/or the Bagby and Washington Avenue extension design.
4. Plan for the extension of San Jacinto Street to Fulton including potential grade separation at the UP Passenger Main crossing which is impactful to drivers and transit in this area.
5. Provide improved version of existing pedestrian and bicycle bridge crossings of freeway east of Elysian and link to a new north-south trail connecting to Near Northside.
6. The schematic drawings should define or allow street network under the freeway segment of IH-

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- 10 north of Downtown designated "Excess ROW."
7. McKee and Hardy streets provide pedestrian bicycle connectivity between Buffalo Bayou and the Northside neighborhood. Ensure bridges across I 10 are designed to incorporate safe pedestrian crossing and high comfort bike facilities.
  8. The loss of the existing downtown connector tied into Franklin should be re-evaluated to see if it could be used as part of a high capacity transit network or light rail extension.
  9. Coordinate with the City, METRO and Texas Central Partners to accommodate a high capacity transit connection to the Northwest Transit Center and proposed High Speed Rail Terminal. The existing I 10 corridor west of Segment 3 could be planned to include the extension of METRO's purple and green lines. The current NHHIP plans do not consider this connectivity, and in fact, might preclude it, since the plans call for the demolition of the HOV ramp.
  10. The City requests that TxDOT begin a collaborative design process with the City and METRO to plan how connection of future I-10 high capacity facilities would connect to the downtown grid.
  11. Reconstruct Hogan, Quitman, McKee and Hardy bridges with safe pedestrian and bike friendly crossings and sidewalks.
  12. The proposed realignment of the freeway near Hardy Yards will have significant noise and visual impacts. The current DEIS does not adequately address mitigation along this area.
  13. The DEIS does not adequately reflect the impact on White Oak Bayou greenway. Coordinate with stakeholders to mitigate these impacts.

Segment 3 West: Downtown Connector, Pierce Elevated

1. Review potential to maintain IH-10 HOV Connector near Amtrak Station coordinating with METRO to address express transit connectivity from downtown to NW transit center. If the IH-10 Connector is removed as proposed, allow provision for Washington Ave. connection.
2. Allow for Houston Avenue realignment and direct connection to Walker/McKinney as proposed by the Downtown District.
3. Allow for reconnection of Dart Street under the freeway to allow direct local access from the First Ward to Downtown, as proposed by the Downtown District.
4. The proposed one way connection from Walker/McKinney loop street should be removed since it separates Sam Houston Park from Buffalo Bayou. This is also a key biking and jogging route from downtown to the bayou and creates a dangerous crossing point on a heavily-used route.
5. In the proposed configuration along Heiner Street between the Fourth Ward and Downtown, the facility will have a narrower footprint than exists now. This presents the opportunity to use the leftover space to create a linear park connecting Midtown and Fourth Ward to Buffalo Bayou. Consider incorporating this into the proposal or designing the facility in such a way to accommodate this.
6. The proposed Downtown Connector should be designed to allow Andrews Street to connect from 4<sup>th</sup> Ward to Downtown. If a regular street connection is not possible, then the connection could be built as a walking and biking path to connect 4th Ward to Downtown.
7. Evaluate whether the downtown connector on the west side of downtown could be brought down to grade further north, so that the elevated section ends near West Dallas and Allen Parkway. This will allow for more green space, room for multi-modal transportation facilities, and restoration of the historic street grid in this area south of W. Dallas Street.
8. Instead of an off-ramp from a cloverleaf ramp, connect Clay Street as a two-way road between Allen Parkway and Dallas Street to provide access to Sam Houston and Buffalo Bayou Parks.
9. Potential impacts to visual quality, noise, and historic resources need to be more closely considered for Sam Houston Park.

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10. Sabine Street at Allen Parkway should be a T-intersection without the sweeping right turn.
11. The realignment of I 45 along Pierce Elevated creates a unique opportunity to connect adjoining neighborhoods with a unique urban space. We look forward to working with TxDOT to discuss options along this corridor.
12. Coordinate with the City regarding the future of the Pierce Elevated Freeway, including options such as its demolition or its preservation and repurposing. If preferred by the City, locate and design the downtown connectors to preserve some of the existing freeway bridge structures.