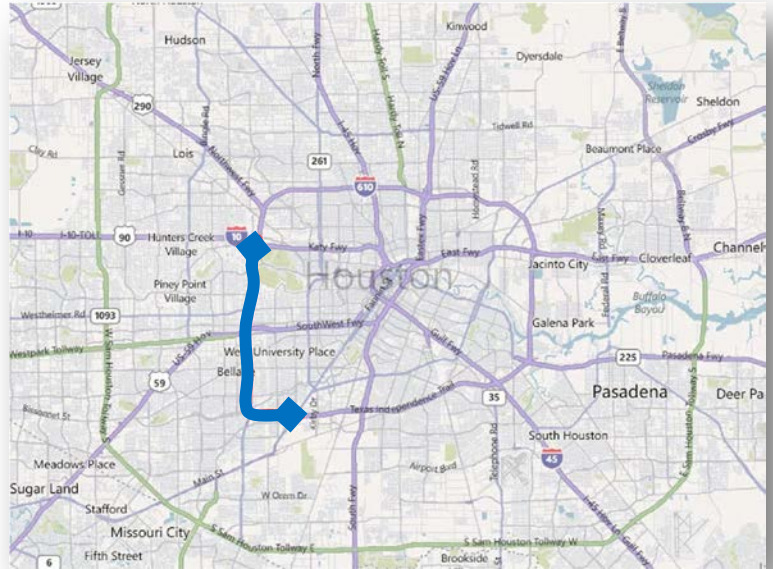


# IH 610 (WEST LOOP)

## US 90 (S. Main) to IH 10 (Katy Fwy)

### Current Conditions

In the northern portion of this segment, between IH 10 (Katy Freeway) and South Post Oak Road, IH 610 (West Loop) passes through the Galleria with a 10-lane typical section (four general purpose lanes and one auxiliary lane in each direction) and braided entry/exit ramps. Frontage roads on this portion are continuous except at the interchanges with US 59 (Southwest Freeway), where southbound frontage road traffic is forced onto Hidalgo Street and one block west to Post Oak Boulevard, providing access to the Westpark Tollway via Westpark Drive.

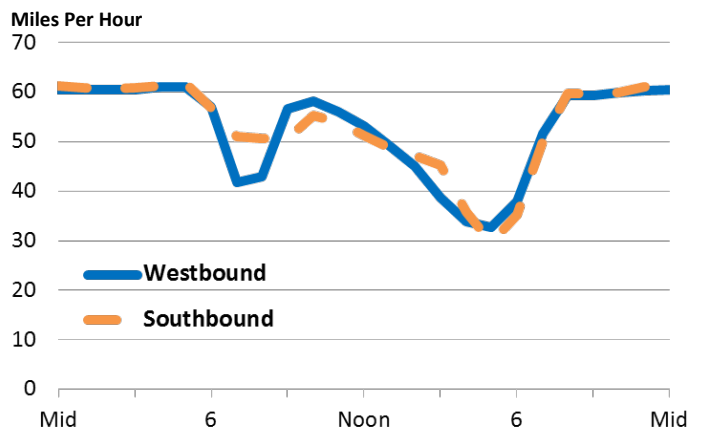


In the southern portion of the segment, between South Post Oak Road and US 90 (South Main), IH 610 (South Loop) widens to a 10- to 12-lane typical section with five general purpose lanes in each direction and an auxiliary lane provided between some ramps. Entrance and exit ramp configurations vary throughout this portion with ramps typically merging directly with general purpose lanes.

The Uptown district is both a high employment center and a primary entertainment and retail destination. Traffic in both directions on IH 610 is typically heaviest during the morning and evening rush hour periods. However, traffic often remains heavy through off-peak hours due to the Galleria’s retail and entertainment attractors.

- Segment Length: 8.8 miles.
- Road Type: 10-lane divided freeway.
- Annual Hours of Delay: 5,410,000.
- Texas Congestion Index: 2.02.
- Commuter Stress Index: 2.28.

<b>2010 Rank: 18</b>	<b>2013 Rank: 6</b>
<b>Annual Hrs of Delay/Mile:</b>	<b>614,000</b>
<b>Congestion Time:</b>	<b>10 Hours</b>
<b>Annual Cost of Delay:</b>	<b>\$113.8 Million</b>
<b>Average Daily Traffic:</b>	<b>187,000 Vehicles</b>



Intelligent Transportation Systems (ITS) infrastructure along this corridor includes:

- Travel time monitoring system covering the entire segment
- 12 CCTV cameras to aid incident management
- Five dynamic message signs
- Two flow signals.

## Possible Congestion Causes

The West Loop corridor was originally designated as a freeway in 1954 and right-of-way clearance was completed in 1961. The section of the freeway near the city's Uptown district opened in 1964, and the entire West Loop segment of IH 610 was completed in 1968.

This portion of the loop serves traffic moving between major east-west corridors such as IH 10, US 59, and US 90, all of which run to and from downtown Houston. Additionally, the Uptown district, on the west side of IH 610, is one of the largest non-downtown employment centers in the United States. Among other major attractors, the Uptown district includes the Galleria Mall and Williams Tower.

Another source of delay is the IH 610/US 59 interchange, which has both high volumes and geometric constraints. In order to provide access to westbound US 59, an entrance ramp runs parallel to southbound IH 610 for about one mile north of the interchange. Another design challenge is the IH 610/US 59 interface with the Westpark Tollway and HOV facility, both of which have ramp connections in the vicinity. These constraints have been exacerbated by very high growth rates in the suburban southwest.

Some other causes for congestion in this segment include:

- High travel demand (traffic volumes)
- Several on and off ramps to collector streets with ½ mile spacing between them.
- Incoming traffic from US 290, IH 10, and US 59.
- Major interchanges at the beginning and middle of the segment.

## Projects in Progress or Completed

### *Reconstruction of West Loop*

Starting in 1997 TxDOT began efforts to improve the condition of the West Loop. Construction to enhance on and off ramps but not add any further capacity to the freeway started in 1999. The freeway has received continued

improvements to its access points since 1999 and has expanded from four lanes in each direction to five each way with wide shoulders on each side for increased safety.

### *Incident Clearance*

SAFEClear, the City of Houston's rapid clearance program, provides quick response and towing of crashed and disabled vehicles, reducing secondary crashes and congestion. More than 60 private contractor tow trucks rapidly respond to all incidents. Before 2010, approximately two-thirds of all incidents were detected by roving tow trucks and 90 percent were detected and cleared within 20 minutes by SAFEClear. However, effectiveness of this program was reduced in the summer of 2010 when city budget cuts caused a \$50 fee to be instituted for the previously free tows. Average incident clearance time (from tow authorization to clear) increased from 14 minutes in 2010 to 27 minutes in 2011.

TxDOT, METRO, and Harris County operate fewer than a dozen Motorist Assistance Program (MAP) pickup trucks as a free assistance program to provide minor aid to stranded motorists. The program also reduces traffic congestion and improves highway safety. In addition, a heavy tow truck contract allows quick removal of large trucks.

Houston TranStar traffic and emergency management center is the coordination hub for all incident management. TranStar is a consortium of four agencies: TxDOT, the City of Houston, METRO, and Harris County. Traffic incidents are detected, verified, and the public is notified through the ITS system. When an incident is verified, dispatch and response are coordinated amongst the agencies involved.

### *Travel Options*

The Houston-Galveston Area Council's (H-GAC) Commute Solutions program funds, promotes, and provides administrative support to various commute alternative projects. The program provides public education to commuters and

employers on the available commuting options in the region and the benefits of using alternative transportation modes. The Commute Solutions program also provides literature and public outreach on carpooling, vanpools, transit, guaranteed ride home, teleworking, alternate work schedules, and parking management.

#### *Shared Commuting*

NuRide is an online rideshare marketing program that provides ride matches and rewards users for recording their alternative commute trips (i.e., ridesharing, bus, rail, telecommute, walk, bike, and compressed work week). The H-GAC NuRide program is the nation's largest ridematching rewards program, with over 20,247 registered riders. Since its inception in June 2005, the program has resulted in 6.68 million fewer car trips preventing 77,118 tons of emissions.

NuRide reports 2.14 million public transportation trips, 4.29 million carpool and vanpool trips, 99,935 walking trips, and 169,994 biking trips.

METRO operates the STAR Vanpool program, ranked as the third largest vanpool program nationally by passenger trips and passenger miles in the 2012 American Public Transportation Association (APTA) Fact Book.

#### *Flextime*

Many employers offer flexible work schedules, with around 350 employers participating annually in the Flex in the City Program.

#### *Incentive Driven TDM Programs*

Many large companies in the Texas Medical Center, the Energy Corridor, and downtown subsidize all or part of their employees' vanpool or transit commuting costs.

Twenty-five companies are voluntarily participating in the Commute Champion Program enabling H-GAC to document emission reductions related to their commuter benefits. Additionally, 38 companies and 17 local governments are participating in the Clean Air Champion Program in which they voluntarily provide information enabling H-GAC to document their regional efforts to decrease emissions.

#### *Teleworking*

Approximately 170,000 of the trips recorded by the NuRide program are telecommuter trips.

#### *Guaranteed Ride Home Programs*

The GRH program provides emergency rides home to transit and rideshare users to address one of the main concerns of those who leave their car at home. All registered users of METRO bus and STAR vanpool riders, registered TREK



Express users, and Fort Bend County Transit users have access to three free rides home per calendar year.

#### *Houston Area Transit Service*

METRO provides local and express bus service via 97 routes, serving approximately 233,068 average daily boardings (weekday – FY 2013). METRO also operates 32 park-and-ride routes serving approximately 29,200 average daily boardings (weekday – FY2012). METRO operates light rail transit along a 7.5-mile section serving downtown, the Texas Medical Center, and the Reliant Center with 37,650 average daily boardings (weekday – FY2013). METRO plans to add two new light rail lines (University and Uptown).

#### *Corridor Transit Service*

Along the West Loop of IH 610, METRO has several bus routes providing service alongside or next to the freeway. The most notable of these is Route 33, which operates from before 5:00 a.m. to after 11:00 p.m. on weekdays and averages approximately 4,913 daily boardings (weekday – FY2013). The 38.16 boardings per revenue hour for this route represent the 4<sup>th</sup> highest amount for bus routes in the METRO system during the 2013 fiscal year to date. There are two transit centers along the corridor, Northwest Transit Center (16 routes serviced) and Bellaire Transit Center (five routes serviced), as well as the West Loop Park-and-Ride (three routes serviced). Route 33 has stops at all three of these locations.

The Uptown Line project, one of the future projects in the METRO Rail system plan, is near the corridor. This project originated from the outcomes of the Uptown-West Loop Planning Study by METRO in 2004, which analyzed the area west of the IH 610 West Loop between IH 10 and US 59 with the purpose of increasing transit ridership and transportation infrastructure in the area.

The line would begin at the Northwest Transit Center near IH 10 and follow Post Oak Drive southward alongside IH 610 until just after

US 59, where its terminus would connect it with the Bellaire Station of the future University Line. The line would run approximately four miles. Currently plans for the line are to operate it as a Bus Rapid Transit (BRT) service, but infrastructure will be designed to allow conversion to light rail vehicles in the future.

#### **Planning Efforts to Date**

##### *Connection Ramp to US 59*

The only current TxDOT project on IH 610 itself is a connection ramp between the freeway from US 59 northbound to near IH 610 and Bissonnet Street. The length of the ramp will be just over one mile. The project is currently in the initial design submittal stages, having reached 30 percent completion in June 2012. It is scheduled to be ready to receive contractor bids in July 2015.

##### *US 290 Interchange*

Immediately north of the segment, the IH 610/US 290 interchange is under construction. The project will build direct connector ramps from US 290 to IH 10 and reconstruct the IH 610 mainlanes between US 290 and IH 10.

##### *2011-2014 Transportation Improvement Program*

The most significant projects in the Houston-Galveston Area Council's Transportation Improvement Program (TIP) are the five new light rail lines for METRO. The TIP refers to the Uptown Line as a light rail line, contradicting other reports stating it will be a BRT service.

##### *2035 Regional Transportation Plan*

The Houston-Galveston Area Council published an update to the 2035 Regional Transportation Plan in 2007. The plan includes projects such as a downtown intermodal terminal, 81 miles of light rail, 84 miles of commuter rail transit, and ten new transit facilities. While the plan has a regional focus rather than a corridor focus its recommendations echo other efforts planning for more transit investment.

## **Next Steps**

### ***Inner West Loop Mobility Study***

The City of Houston and Kimley-Horn recently concluded a study of the area directly east of the IH 610 West Loop between IH 10 and US 59. It evaluated the street network and considered the possible acquisition of right-of-way for future needs. The outcomes of the study are part of the Rebuild Houston Initiative, which defines projects for consideration with different city departments, as well as the Major Thoroughfare and Freeway Plan. Some of the critical corridors found to be in need of the most improvement were:

- Alabama St.
- Richmond Ave.
- Westheimer Rd.

This study and the suggested improvements to capacity and transit planning should be considered in order to help alleviate congestion on the West Loop segment.

### ***US 59 South/IH 610 West Interchange Reconstruction***

TxDOT plans to conduct a study about improvements to the entire interchange between IH 610 and US 59, including the reconstruction of connectors in both directions between the two freeways and of the main lane bridge of IH 610. This study would also examine the realignment of Post Oak Boulevard near the intersection in order to assist with accommodations for METRO, namely the future Uptown Line.

### ***Use of HOV or HOT lanes on IH 610***

Currently there are no high occupancy lanes on the West Loop corridor, despite the daily congestion there. A study on the effects of installing a managed or tolled lane on the freeway to alleviate congestion is encouraged.

### ***Support for Aggressive Incident Management***

The Motorist Assistance Program has assisted with minor repairs and stalled vehicles for 20 years. SAFEClear, the City of Houston's rapid clearance program has been successful, since 2005, in reducing incident clearance times and improving safety. Crash reductions between 10 and 15 percent were reported for the first four years of the program. Recent funding cuts have mandated that motorists have to pay for the tow, and the tows have been made optional. The number of tows has, therefore, been reduced by approximately 70 percent. Dedicated funding resources or a different operating strategy should be found for programs such as MAP and SAFEClear to advance incident management strategies.

### ***Feasibility Study for Implementation of Active Traffic Management Strategies***

Improving the operation of the existing freeway allows the greatest return on the roadway investment. An active traffic management feasibility study could identify freeway locations that may benefit from operational treatments such as dynamic rerouting, dynamic traveler information, and variable speed limits.

### ***Evaluation of Travel Option Strategies***

A feasibility study to examine potential benefits and implementation strategies for travel options in the corridor could prove beneficial. Travel option strategies include, but are not limited to, flex-time, carpooling, and employer sponsored vanpooling, transit, and parking incentives. Additionally, the study could include an assessment of current programs that offer such travel options to determine regional best practices and opportunities for coordination.