# HOW HOUSTON MOVES: A LOCAL'S GUIDE TO TRANSPORTATION UPGRADES IN HOUSTON







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AT LARGE, HOUSTON CITY COUNCIL

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P.E., METRO BOARD MEMBER





# **Tourism Summit 2019**

Quincy Allen, P.E. Houston District Engineer April 2019 Today, as many as 17 million drivers\* may travel Texas roadways each day, making congestion relief a priority.

#### texasclearlanes.com

\*Texas Dept. of Public Safety



Mission: Through collaboration and leadership, we deliver a safe, reliable and integrated transportation system that enables the movement of people and goods.

# **HOUSTON DISTRICT**

- Plans, designs, builds, operates and maintains the state transportation system in six counties: Brazoria, Fort Bend, Galveston, Harris, Montgomery and Waller.
- Encompasses 5,856 square miles.
- Serves approximately 5.8 million people.
- Approximately 5.1 million registered vehicles.
- Current FTE count is appropriately **1,200**.
- Seven area offices and nine maintenance sections.
- Operation of the Galveston/Port Bolivar Ferry Service



# **HOUSTON DISTRICT FUN FACTS\***

- HOU maintains and operates a total of 10,567 lane miles of pavement.
  - Cover the distance from Los Angeles to New York and back, twice. [2462 miles each way]
- Motorists in our region drive approximately 173 million miles per day.
  - Motorists in the HOU drive enough miles to get to sun and back every day. (Sun = 93 million mi from earth)
- Of that 173 million, there are more than 10 million vehicle miles of daily truck traffic on the Houston District system.
  - The HOU carries enough daily truck traffic to go all the way around the earth 401 times. (circumference of the earth = 24,900 miles)



#### \*Updated per demographics available for FY 2015

# Working With Others to Improve Our Mobility



# HOUSTON TRANSTAR

- State of Texas (TxDOT)
- Harris County
- City of Houston
- Metropolitan Transit Authority of Harris County
- Houston TranStar Benefits
  - Houston TranStar has saved motorists nearly \$2.8 billion in lower travel time costs between 1997-2010.
  - Real-Time Traffic Map gives an instant view of current traffic conditions, 24/7 at <u>www.houstontranstar.org</u>.
  - Provide incident management support to other agencies.



# ACTIVE HIGH-PRIORITY PROJECTS

## **SH 288 PROJECT OVERVIEW**



#### TxDOT Project:

- Limits: SH 288 Toll Lanes in Harris County, 10.3 miles from the Harris/Brazoria County Line to US59/I-69
- Project scope includes:
  - A toll concession, under a CDA for a 52 year term
  - 4 tolled lanes (2 each direction) within existing SH 288 median
  - 2 tolled direct connectors to Holcombe Boulevard near the Texas Medical Center (inbound and outbound)
  - Innovative ATC: Reconstruction of all 8 direct connectors at I-610 with added access to toll lanes
  - Addition of 8 new tolled direct connectors at Beltway 8
  - Developer to operate and maintain facility from ROW to ROW, including general purpose/free lanes

# I-610/I-69 INTERCHANGE (WEST LOOP)

#### Interchange Reconstruction

- Construct five new direct connectors
- Construct access ramps
- Realign Post Oak Boulevard
- Reconstruct the I-610 main lane bridge
- Corridor Selected by MPO as Local Priority
- Purpose & Need
  - Congestion relief
  - Increase safety
  - Improve operational efficiency

#### **Current Status**

- Let August 2017
  - Estimated completion Spring 2021
- Low Bid \$259 Million
- Project Ground breaking November 2017,
  - Utility and Storm Sewer work underway
  - Major construction begins Spring 2018



NOTE: Highlighted areas show general forations and are not drawn to scale.

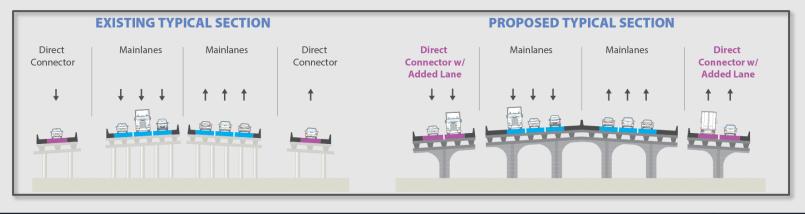
TidOT graphic

# #1 MOST CONGESTED IN 2017<sup>•</sup>

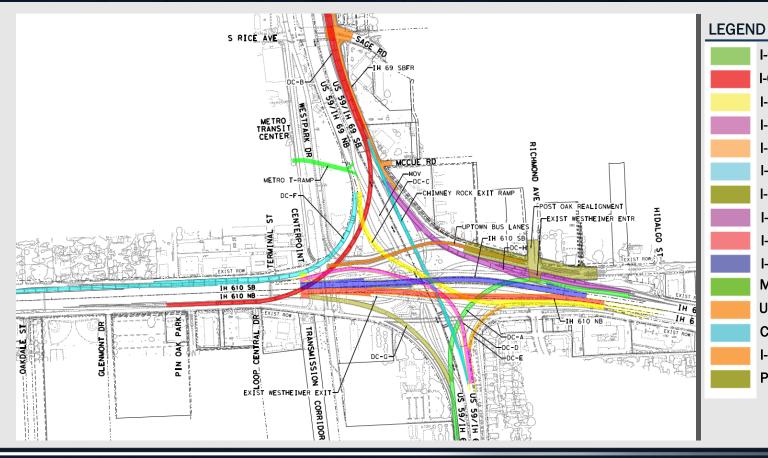
## **PROJECT DETAILS**

- Reconstructs one-lane connectors to two-lane connectors
- Upgrades interchange to current design standards
- Adds shoulders on I-610 West Loop main lane bridge
- Increases vertical clearances
- Increases sight distances
- Adds detention ponds
- Eliminates major weaving





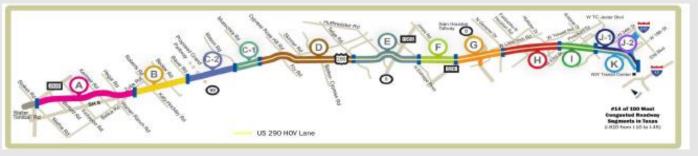
## **OVERALL PROJECT SCHEMATIC**



I-610 SB to I-69 NB I-610 NB to I-69 SB I-69 NB to I-610 NB I-69 SB to I-610 SB I-69 SB to I-610 NB I-69 NB to I-610 SB I-610 NB TO I-69 NB I-610 SB TO I-69 SB I-610 NB, MAIN LANES I-610 SB, MAIN LANES METRO T-RAMP UPTOWN BUS LANES CHIMNEY ROCK, EXIT RAMP I-69 SB FREEWAY POST OAK RECONSTRUCTION

## **US 290 PROGRAM**

- Reconstruction & widening of 38 miles
  - ✓ 250,000 vehicles a day, 3 segments on 100 Most Congested list
  - ✓ TxDOT proceeding with additional general purpose lanes & single HOV/HOT lane configuration
- 13 active projects
- \$1.1B under construction
- Achieved substantial completion w/mainlanes in final configuration the end of 2018
- TxDOT sole owner, operator and maintainer of facility





## SH 146 FROM RED BLUFF IN SEABROOK TO FM 518 IN KEMAH

- Reconstruct & widen from a 6- lane to a 12-lane facility including:
  - Grade separations at major intersections
  - Access roads in selected locations
  - Express lanes over Clear Creek
  - Bike Path on the west side & sidewalk on the east side
- Approx. 34 acres of Right-of-Way Needed
  - Successfully negotiated with UPRR
  - 90 Parcel of ROW (2 residential and 72 businesses)
- Recently Let May 2018
  - 36-48 month construction
- Estimated Cost \$180 Million



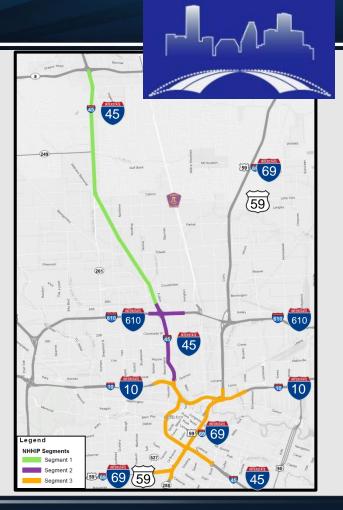


# TRANSFORMING HOUSTON TRANSPORTATION

NORTH HOUSTON HIGHWAY IMPROVEMENT PROJECT

# **NHHIP: THE CHALLLENGE**

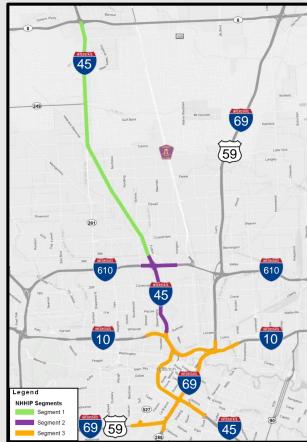
- 2005: Major Investment Study (MIS) to address projected growth and identified freeway and transit-oriented development opportunities along the corridor
- 2011: determined that a big fix was needed for downtown freeway system (1-45/I-10/I-69) versus piecemeal projects
- Goal: provide a <u>safer facility</u> with <u>additional capacity</u> for projected demand by <u>incorporating transit opportunities</u>, travel demand strategies, and <u>flexible operations</u>
  - Extensive outreach/partnering program with community stakeholders, the City of Houston, Harris County, and Downtown-area Management Districts (250+ meetings)



### North Houston Highway Improvement Project

# **PROJECT OVERVIEW**

- Environmental Impact Statement (EIS)
- Project divided into 3 Segments
  - Segment 1: Beltway 8 to I-610 (9 mi)
  - Segment 2: I-610 to I-10 (3 mi)
  - Segment 3: Downtown Loop System (12.3 mi)
- Goal: provide a <u>safer facility</u> with <u>additional capacity</u> for projected demand by incorporating <u>transit opportunities</u>, travel demand strategies, and <u>flexible operations</u>
- One "Proposed Recommended Alternative" per segment = single corridor end to end (24 mi total)



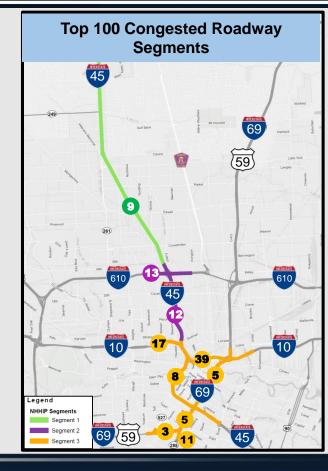
# **NEED AND PURPOSE FOR PROPOSED PROJECT**

#### Need for Proposed Project

- Population and employment increases
- Manage projected traffic growth
- Bring to current design and safety standards
- Move traffic efficiently, including evacuation events

### <u>Purpose</u> of Proposed Project

- Manage congestion
- Enhance safety
- Provide expanded transit and carpool opportunities with 2-way, 24/7 operations
- Improve mobility and operational efficiency
- NHHIP has <u>9 of the Top 40</u> Most Congested Roadways in Texas

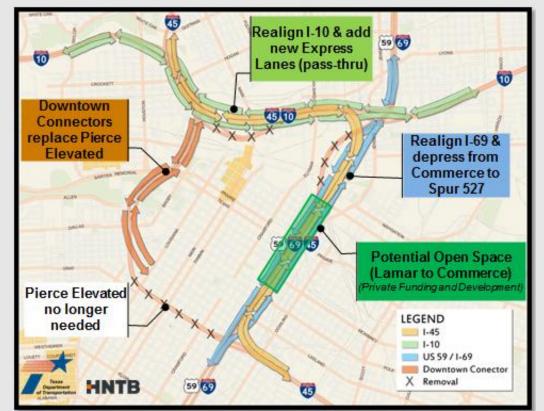


## **BENEFITS OF THE PROPOSED PROJECT**

- +24 mph = 55 mph free flow speed\* (Year 2040 AM Peak)
- 50% reduction in delay during peak hour around downtown\*
- Region-wide reduction in delay and increase to average speeds\*

\*Potential major air quality improvement for the region – positive overall impacts





#### **PRELIMINARY-SUBJECT TO CHANGE**

## **POTENTIAL GREEN SPACE BEHIND THE GRB**





## **NHHIP: NEW OPPORTUNITIES**

## **Central Houston, Inc.**

# studying economic benefits of the planned NHHIP project





Potential economic development opportunities ranging from \$5-9B

North Houston Highway Improvement Project

# **Houston District Resources & Questions**

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