

**MEETING OF THE RTP SUBCOMMITTEE  
HOUSTON-GALVESTON AREA COUNCIL**

**MEMBERS PLEASE USE THE TEAMS INVITATION**

**TELECONFERENCE PARTICIPATION VIA MICROSOFT TEAMS**

[+1 346-262-0140](tel:+13462620140) United States, Houston (Toll)

Conference ID: 641 945 004#

**July 14, 2021**

**1:30PM**

**AGENDA**

1. Call to Order  
*Roll Call Attendance*
2. Acceptance of Minutes  
*From meeting of June 9, 2021*
3. Discussion of the 2045 RTP Updating Strategy  
*Staff will present and ask for comments on initial strategy for updating the 2045 RTP*
4. Announcements
  - a. Next TPC Meeting – July 23, 2021 at 9:30AM (Teleconference)
  - b. Next RTP Subcommittee Meeting – August 11, 2021 at 1:30PM (Teleconference)
  - c. Next TAC Meeting – August 18, 2021 at 9:30AM (Teleconference)
5. Adjourn

# RTP Subcommittee Roster

| Primary-Name         | Organization                      | Alternate-Name          | Organization               |
|----------------------|-----------------------------------|-------------------------|----------------------------|
| Monique Johnson      | City of Sugar Land                | Krystal LaStrape        | City of Sugar Land         |
| Bill Zrioka          | Houston Airport System            | David Leslie            | Houston Airport System     |
| Andrea French        | TAG-Houston Region                | Nikki Knight            | Southeast Management Dist. |
| Elijah Williams      | Energy Corridor                   | Elizabeth Whitton, AICP | Energy Corridor            |
| Iris Gonzalez        | Coalition for Env., Equity & Res. | Jonathan Brooks         | LINK Houston               |
| Adam France, AICP    | City of Conroe                    | Chris Bogert, P.E.      | City of Conroe             |
| Christopher Sims     | City of League City               | Hon. Chad Tressler      | City of League City        |
| Matt Hanks           | Brazoria County                   | Karen McKinnon          | Brazoria County            |
| David Fields         | City of Houston-P&D               | Katrina Bayer           | City of Houston-PW         |
| Hon. Jay Knight      | Liberty County                    | David Douglas           | Liberty County             |
| Loyd Smith, P.E.     | Harris County                     | Bryan Brown             | Harris County              |
| Morad Kabiri, P.E.   | City of Friendswood               | Robert Upton, P.E.      | City of Pearland           |
| Nick Woolery         | City of Baytown                   | Frank Simoneaux         | City of Baytown            |
| Yancy Scott          | Waller County                     | Jared Chen              | Waller County              |
| Katherine Parker     | Gulf Coast Rail District          | Carol Lewis, PhD        | TSU                        |
| Bruce Mann           | Port of Houston                   | Rohit Saxena            | Port of Houston            |
| Rodger Rees          | Port of Galveston                 | Brett Milutin           | Port of Galveston          |
| Charles Airiohuodion | TxDOT-HOU                         | Jeffrey English         | TxDOT-HOU                  |
| Lisa Collins         | TxDOT-BMT                         | Scott Ayres             | TxDOT-BMT                  |
| Ken Fickes           | Harris County                     | Vernon Chambers         | Harris County              |
| Perri D'Armond       | Fort Bend County                  | Stacy Slawinski         | Fort Bend County           |
| Kenneth Brown        | METRO                             | Philip Brenner          | METRO                      |
| John Tyler           | HCTRA                             | Dale Hilliard           | HCTRA                      |

**MEETING OF THE RTP SUBCOMMITTEE  
HOUSTON-GALVESTON AREA COUNCIL  
TELECONFERENCE PARTICIPATION VIA MICROSOFT TEAMS  
May 12, 2021  
1:30PM  
Minutes**

**Member Attendance:**

| <b>Primary-Name</b>        | <b>Present</b> | <b>Alternate-Name</b> | <b>Present</b> |
|----------------------------|----------------|-----------------------|----------------|
| Morad Kabiri, Chair        | Yes            | Robert Upton          | No             |
| Perri D'Armond, Vice Chair | Yes            | Stacy Slawinski       | No             |
| Monique Johnson            | Yes            | Krystal LaStrape      | Yes            |
| Bill Zrioka                | Yes            | David Leslie          | No             |
| Andrea French              | No             | Nikki Knight          | Yes            |
| Elijah Williams            | Yes            | Elizabeth Whitton     | Yes            |
| Iris Gonzalez              | No             | Jonathan Brooks       | Yes            |
| Adam France                | Yes            | Chris Bogert          | No             |
| Christopher Sims           | Yes            | Hon. Chad Tressler    | No             |
| Matt Hanks                 | Yes            | Karen McKinnon        | No             |
| David Fields               | Yes            | Katrina Bayer         | No             |
| Hon. Jay Knight            | No             | David Douglas         | No             |
| Loyd Smith                 | Yes            | Bryan Brown           | No             |
| Nick Woolery               | Yes            | Frank Simoneaux       | No             |
| Yancy Scott                | Yes            | Jared Chen            | No             |
| Katherine Parker           | Yes            | Carol Lewis           | No             |
| Bruce Mann                 | Yes            | Rohit Saxena          | No             |
| Rodger Rees                | Yes            | Brett Milutin         | No             |
| Charles Airiohuodion       | Yes            | Jeffrey English       | Yes            |
| Lisa Collins               | Yes            | Scott Ayres           | No             |
| Ken Fickes                 | Yes            | Vernon Chambers       | No             |
| Kenneth Brown              | Yes            | Philip Brenner        | No             |
| John Tyler                 | No             | Dale Hilliard         | No             |

**Others Present:** Alan Clark, Alberto Lyne, Andrew Mao, Ayo Jibowu, Adam Beckom, Catherine McCreight, Dale (guest), Jim Dickinson, Diane Domagas, David Fink, Ben Finley, Stephan Gage, Shixin Gao, Brandy George, Thomas Gray, Donte Green, Veronica Green, Harrison (guest), Sandra Holliday, James Koch, Susan Jaworski, Jay (Guest), Sharon Ju, Catherine Kato, Megan Kennison, Sanford Klanfer, Justin Kuzila, Shirley Li, Graciela Lubertino, Jim Mahood, Patrick Mandapaka, Lucinda Martinez, Carlene Mullins, Karen Owen, Frank Pagliei, Ruth Henshall, Ruthanne Haut, Chris Van Slyke, Veronica Waller, Gilbert Washington, Christopher Whaley

**Staff Participating:**

Mike Burns, Craig Raborn, Vishu Lingala

1. Call to Order  
Chair Morad K called the meeting to order at 1:31PM and conducted roll call to ensure a quorum. Morad K confirmed that a quorum was present.
2. Acceptance of Minutes  
Jonathan B made a motion to approve, Ken F seconded.

The motion was approved unanimously.

3. Discussion and Possible Recommendations on Requested RTP Amendments

Vishu L presented a summary of the requested RTP Amendments for highway and transit projects, and the associated public outreach. He noted that at the May TPC, TAC, and RTP Subcommittee meetings that staff received 141 comments during both rounds of public review and would be preparing a summary report of the comments received. The report will be posted on the 2045 RTP webpage and the Subcommittee will be notified once it is finalized.

Craig R summarized the review and evaluation criteria. He mentioned that the primary goal was to ensure that the current RTP vision is considered and not substantially altered, noting that approval is not automatic and that an evaluation is necessary to develop recommended actions. He noted that the criteria included consideration the level of urgency, alignment with recent MPO study or plan, demonstrated some jurisdictional support to the request, evaluation of previous reviews, consistency with current RTP, and consideration of any high-level Environmental Justice and Environmental Impact risks.

Vishu L summarized the draft staff recommendations for the 2045 RTP Amendments, which are categorized into three types of approval. The first type of recommendations are projects that are recommended for approval as requested. These included SH288, SH35, I-10E Bridge, I-610E Bridge, I-610S, SL8, SH6, SH99 Segment E and F-2 as requested. The second type of recommendation involves a conditional approval for both segments of SH36A and the I-45/I-10W interchange. The southern section of SH36A is recommended to be included in the RTP implementation schedule contingent upon completion of an expedited planning study to consider the corridor needs and alignment alternatives prior to proceeding to the Environmental phase of the design process. Similarly, the northern section of the SH36A is recommended to be included in the RTP implementation schedule contingent upon completion of a study of needs and alignment alternatives with a condition that the project does not adversely impact property owned or controlled through conservation easements by the Katy Prairie Conservancy. The I-45/I-10W interchange project is recommended contingent upon the completion of a Title VI complaint review by the Federal Highway Administration. The third type of recommendation involves an approval only to include in the RTP as expedited planning studies that evaluate the needs and recommend a scope for the requested projects prior to including them in the RTP implementation schedule. These projects include the SH35, Hempstead Road, I-10W Inner Katy, and I-610W. The type of recommendation requires TPC approval of study recommendations prior to including these projects into the RTP implementation schedule. He summarized the next steps, which include seeking approval of transit project amendments in July, and then, if staff recommendations regarding the amends are approved, start another conformity determination process from July to September with the conformity determination submitted to FHWA in November following TAC/TPC approval.

Craig R noted that the three type of recommendations are draft and for discussion with TxDOT and the Subcommittee. He also noted that the third type of recommendation related to expedited planning studies involves establishing a new Planning and Readiness Program to address issues with delivering projects in the fiscal years they are originally programmed, and to help build consensus and finish MPO planning for high-impact projects. This program would be funded with up to additional 1% of regional STBG suballocation.

Bruce M asked if projects like the 610E Bridge Replacement would be subject to the Planning and Readiness Program, or if they can proceed.

Craig R clarified that the 610E Bridge Replacement was consistent with the regional and local plans and are recommended by staff to be amended as proposed.

Jonathan B thanked staff and noted that it seems like a reasonable approach that addresses comments in a manner that provides a path forward.

Alan C noted that METRO is in the process of hiring a firm for the I-10W Inner Katy BRT design and asked what impact the HGAC recommendation would have on METRO's project since addition study could create some delay.

Craig R responded that the study needs are recommended to be expedited to minimize delays to METRO and TxDOT projects.

Charles A noted that TxDOT has not seen HGAC staff recommendations yet and they appear to conflict with TxDOT plans and that any delay would impact both I-10W Inner Katy projects. A new air quality conformity due to changes will impact schedules for projects. Suggested waiting for TxDOT responses to amendment comments before making a recommendation. He noted that the 610W corridor has been critically congested and was included in the 2008 plan and removed due to funding.

Craig R responded that recommendations are draft and developed recently. RTP projects need to reflect the RTP vision. He noted that he will coordinate with TxDOT following the meeting.

Charles A responded that once TxDOT responses to comments will reflect alignment with the RTP.

Craig R noted that TxDOT has done well handling the volume of comments and looks forward to coordination to review the responses.

Jonathan B asked a question in the chat to clarify the Inner Katy expedited study only includes the TxDOT project or also includes the METRO project.

Craig R responded that since both are in the corridor that the study includes both projects.

Bruce M asked if this issue was informational or is action needed.

Craig R responded that TAC will be taking action next week since their recommendation is more critical for TPC review for the end of the month.

Bruce M asked for clarity if this would be an action for TAC

Craig R clarified that a recommendation will be provided to TAC for approval for TPC review.

James K asked if SH36A North isn't on the list and asked what it wouldn't be an expedited study.

Craig R responded that SH36A North is a 2040 project, so it does not need to be expedited.

James K noted a design challenge that the Inner Katy project conflicts with the METRO project and the project needs to cross a facility to be rebuilt and one project should not preclude another project.

Craig R responded that a design challenge is why an expedited study is recommended with a goal of resolving the challenge so the projects could advance.

David F thanked staff for the effort to find a path forward. He asked will responses to comments be provided to the TAC members.

Craig R responded that about 95% of the comments are done with the last 5% being the more complex comments that require a response.

Andrew M thanked staff for developing a process. He asked how projects get fairly evaluated if criteria is developed after projects are submitted.

Craig R responded that ideally the same process used for the 2018 call for projects. He reviewed the recommended considerations for reviewing the amendments and noted that they aligned with federal regulations and noted that the amendments also needed to align with the region's vision.

And noted that if a project has previously been included and then removed from the RTP indicates that there are consensus issues the MPO staff could help resolve.

Charles A asked if there was a checklist.

Craig R responded that the evaluation document is very rough to share and will share with TxDOT after the meeting to review.

Charles A asked if this is going to be the process going forward.

Craig R responded that the process could evolve going forward and that the TPC policy and prioritization work group established a process for project selection. The process and scoring were informal and informed the evaluation considerations for the amendments. TAC, TIP, and RTP committees need to develop a formal structure for amendments.

Charles A noted that his question related to the process for amendments and evaluating comments to the amendments.

Craig R anticipated that staff will be developing a full step by step process that aligns with TxDOT.

Morad K asked for a motion for a recommendation.

Jonathan Brook made a motion recommending concurrence with the process present by staff to move this process forward contingent on staff finalizing a recommendation for TAC. Seconded by Ken F. The vote was eighteen (18) in favor with Charles A abstaining until receiving more information on the staff recommendation.

4. Announcements

- a. Next TAC Meeting – June 16, 2021 at 9:30AM (Teleconference)
- b. Next TPC Meeting – June 25, 2021 at 9:30AM (Teleconference)
- c. Next RTP Subcommittee Meeting – July 14, 2021 at 1:30PM (Teleconference)

Morad K summarized the future meetings under the announcements.

5. Adjourn

Morad K asked for a motion to adjourn the meeting. A motion was made by Bruce M and seconded by Loyd S to adjourn. The motion was approved unanimously. The meeting adjourned at 2:40PM.

Minutes submitted by: Mike Burns



# Regional Transportation Plan Update



Mike Burns, AICP  
RTP Subcommittee – 07/14/2021

# Regional Transportation Plan (RTP) Purpose

- Federally required
- Minimum 20-year outlook
- Updated every 4 years
- Targets federal, state, local resources for transportation investments
- Aligns with federal, state, regional, local vision
- Fiscally constrained





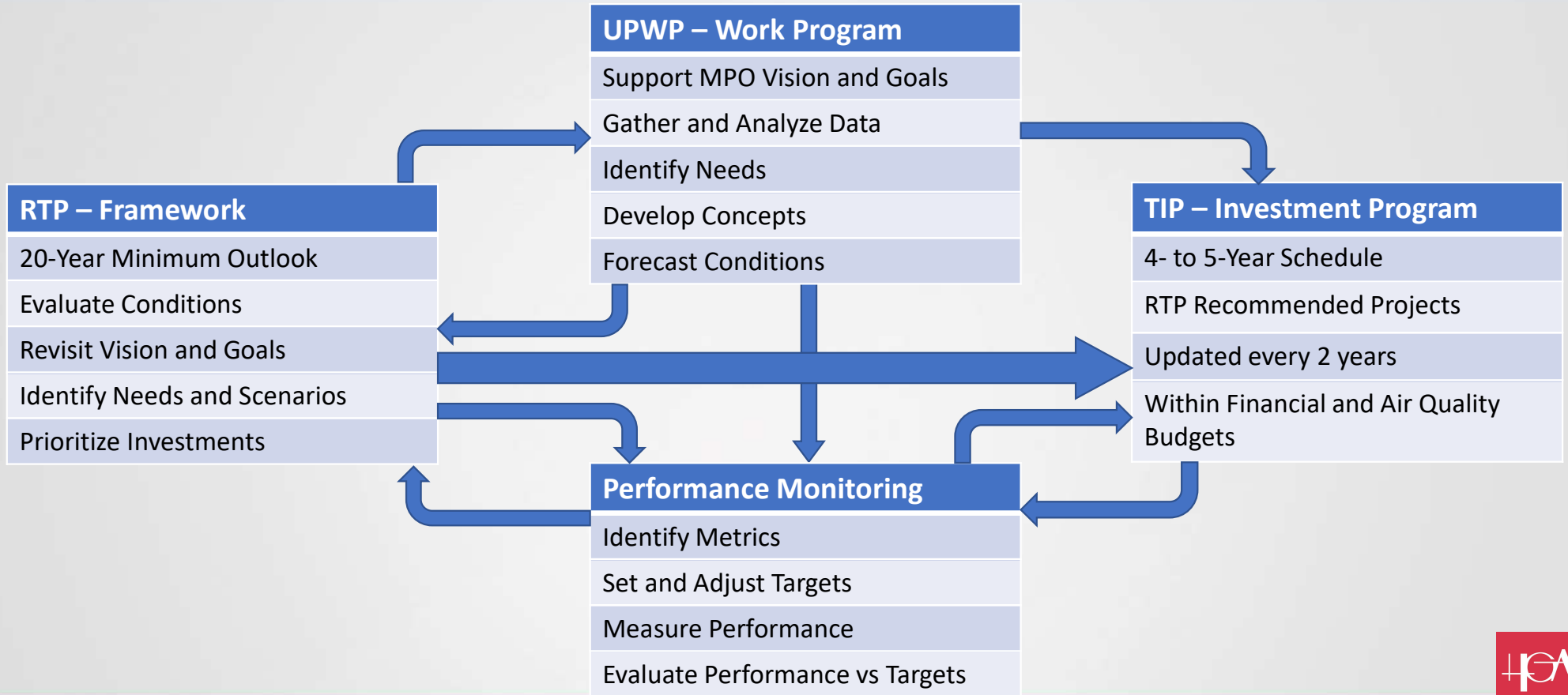
# Relationship with Other Programming Documents



## TxDOT Family of Transportation Plans



# Relationship with Other Programming Documents



# RTP Guidance

## General / Regional Vision

|                  |   |
|------------------|---|
| Planning Horizon | Identify goals, objectives, and performance measure-based needs for the <u>2050</u> planning horizon for funding schedule and air quality conformity. |
| Trends           | Update regional demographic projections   |
|                  | Update regional technological, economic, and land use projections   |
| Outreach         | Develop an on-line engagement portal ( <a href="http://engage.h-gac.com">engage.h-gac.com</a> )   |
|                  | Develop strategy for traditionally-underserved populations  |
|                  | Coordinate with federally required stakeholders   |
| Needs            | Identify problem areas and needs based on performance measures  |
| Vision Statement | Develop draft to be reviewed based on qualitative and quantitative data and other regional planning efforts   |
|                  | Statement should reflect transportation goals and priorities  |

# RTP Guidance

| Goals & Objectives   |  |
|----------------------|--|
| Objectives           | Align with the 10 federally required planning factors (23 CFR 450.306)   |
|                      | Align with established and ongoing planning efforts  |
|                      | Align with regional land use and economic development efforts  |
| Performance Measures | Describe federal and any regional PMs with rationale for targets based on vision and goals                                     |
|                      | Include reference to the H-GAC Mobility Report   |
| Project Evaluation   | Describe data-driven approach and regional coordination that align with federal planning factors and regional vision and goals |
|                      | Update based on objectives and performance targets   |
|                      | Consider regional and state capital planning priorities  |

# RTP Guidance

## Needs Analysis

Performance Measures

Analyze projects considered for program schedule to discern impacts on federal and regional performance measures

Long-range scoring and targets should be set to assist decision-making

Refer to needs analysis of supporting regional planning documents

Air Quality

Align with regional air quality conformity targets

Consider establishing regional Greenhouse Gas (CO<sub>2</sub>) analysis and targets with Regional Air Quality Subcommittees

Title VI/EJ Analysis

Score projects in terms of their impact on Title VI and environmental justice populations using relevant tools and techniques

Prioritize projects that are supported by public planning documents and Title VI equity analysis

Develop discussion and mapping of equity analysis

# RTP Guidance

| Project Prioritization |   |
|------------------------|---|
| Major Improvements     | Anticipated regional projects that <u>expand capacity and are over \$100M</u> should be explicit  |
|                        | Transit improvements intended for the TIP should be descriptive and explicit to allow for accurate impact analyses  |
| Scenarios              | Consider alternative demographic, economic, investment, funding scenarios   |
|                        | Consider funding scenario of say +/- 10% change in funding outside of fiscal constraints of the UTP for decision-making; or consider an illustrative list |
| Fiscal Constraint      | The final filter to consider when identifying projects to be programmed in the fiscally constrained RTP schedule.   |
|                        | The regional vision, goals, and <u>readiness</u> should drive the prioritization of projects for the TIP years and outer bands of the RTP                 |
|                        | Projects outside of constraint without identified funding should be included and discussed in case funding becomes available in the future                |

# RTP Update Schedule

- Current Plan Adopted April 24, 2019 by TPC
  - Conformity Concurrence August 2, 2019
- Expires: RTP: April 10, 2023, Conformity: August 2, 2023



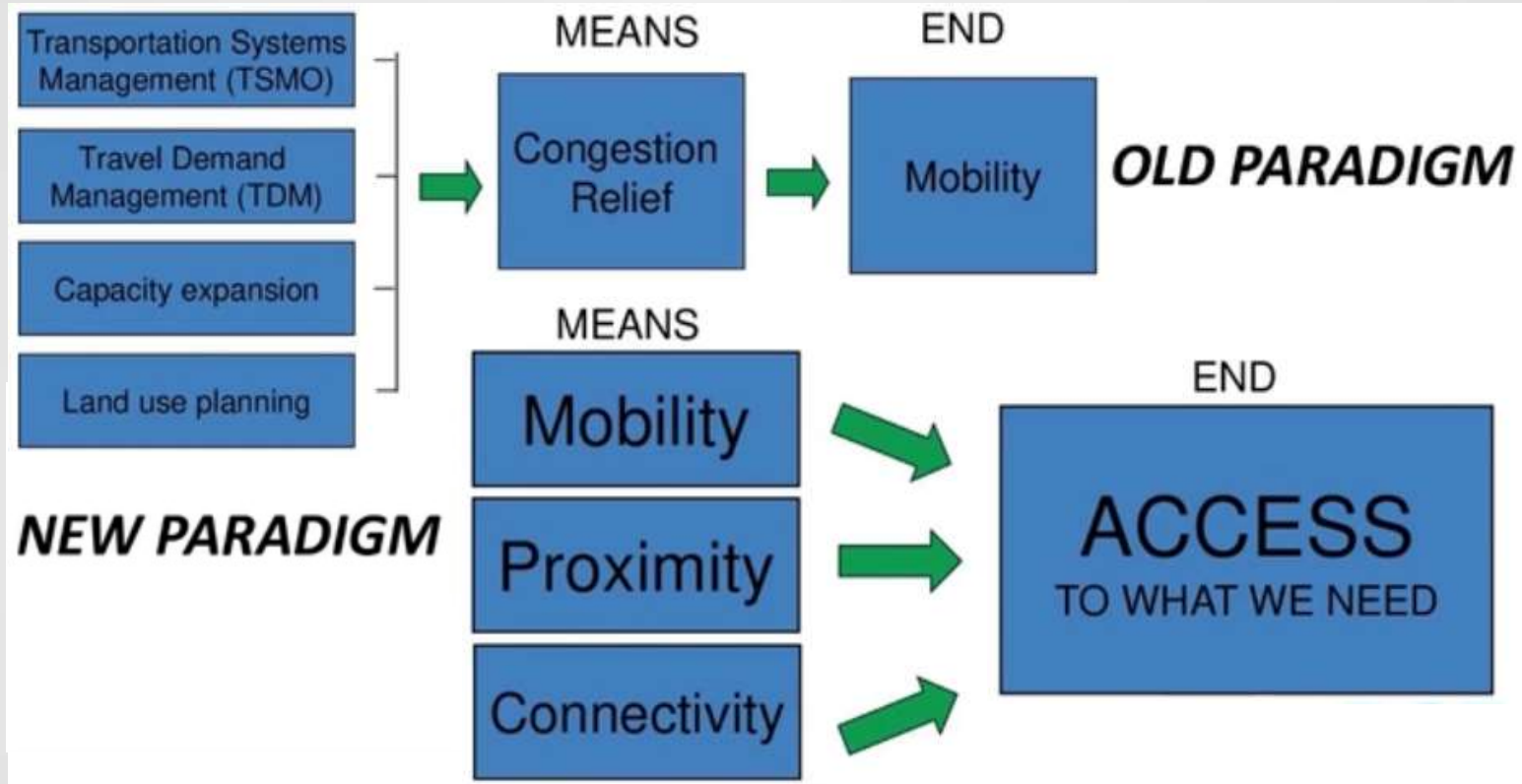
# Plan Elements



- Introduction
  - Purpose
  - Federal Statute Requirements
- Public Participation Strategy
  - Public Meetings
  - Public Survey
- Regional Profile
  - Population and Land Use Descriptions
- Vision / Goals / Performance Measures
  - Development Patterns, System Assets, Transportation Demand / System Management
  - Safety, Resiliency, Natural / Cultural Resources



# RTP Vision



Source: Stephanie Pollack, Acting FHWA Administrator

# RTP Vision

## MOBILITY



## ACCESS



Work from Home

Remote Learning

Telemedicine

Retail Delivery

# RTP Vision, Goals, Performance Measures

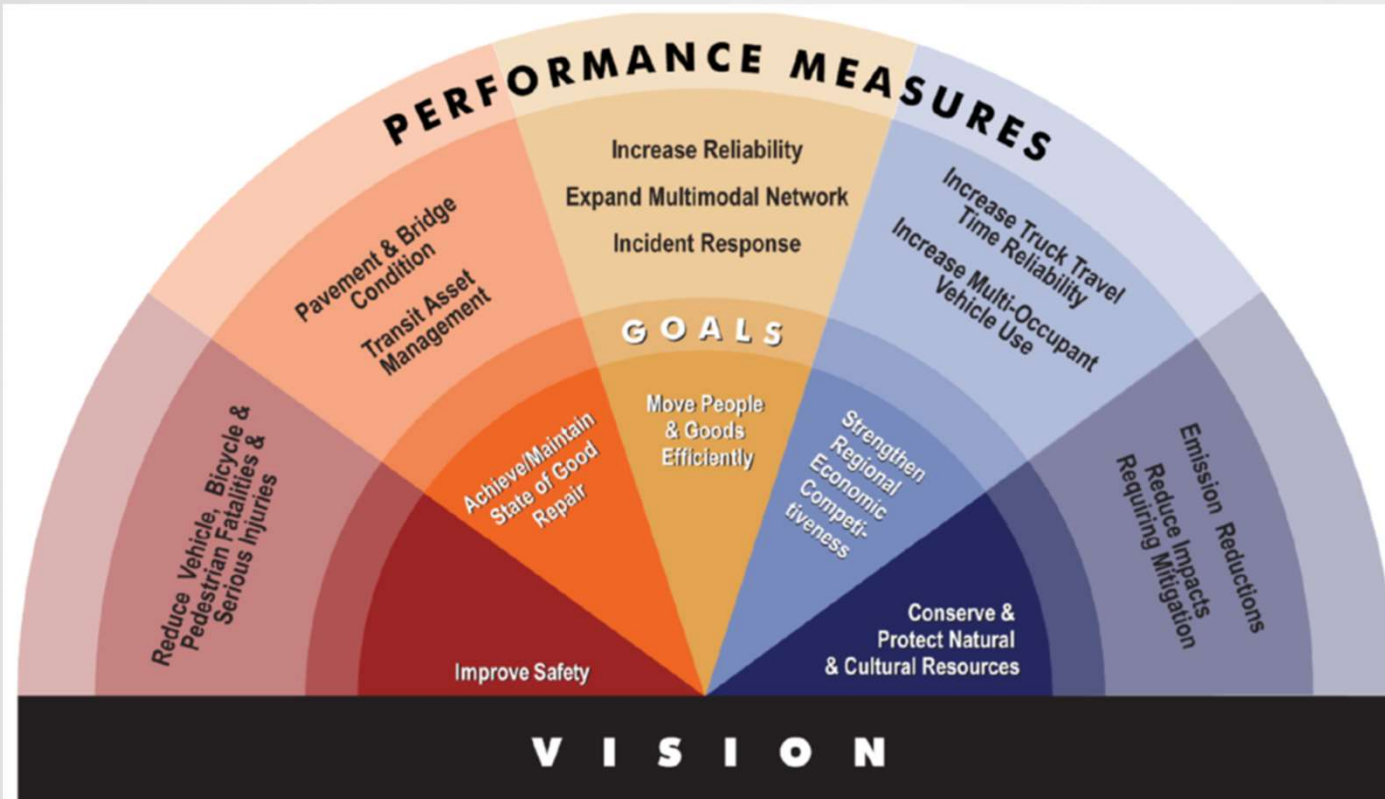


Figure 2-1: 2045 RTP Vision, Goals, and Performance Measures

# RTP Vision – Needs TAC/TPC Review

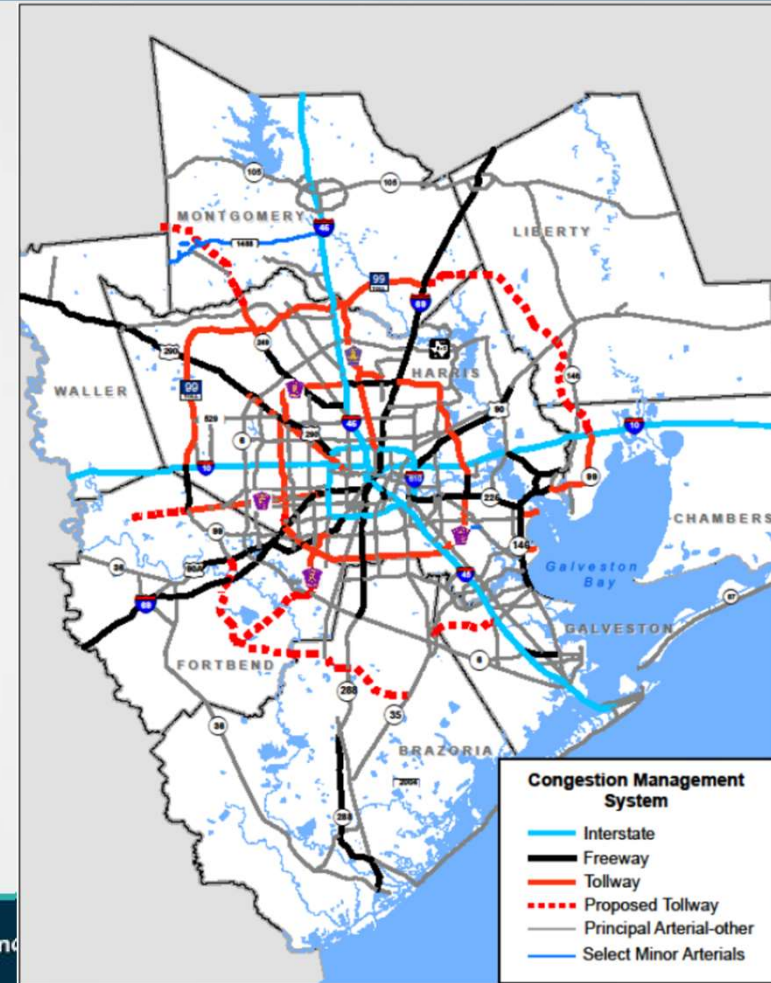
| Vision           |   |
|------------------|---|
| 2040             | In the year 2040, our region will have a multimodal transportation system through coordinated investments that supports a desirable quality of life, enhanced economic vitality and increased safety, access and mobility.  |
| Existing         | <b>In the year 2045, our region <u>will have an integrated multimodal transportation system, achieved through coordinated public and private investments</u> that support a desirable quality of life, enhanced <u>economic vitality</u> and increased safety, access, and <u>mobility</u>.</b>         |
| Draft Suggestion | <i>In the year 2050, our region <u>will have equitably invested in a resilient multimodal transportation system by embracing technology and innovation</u> that supports economic vitality and a desirable quality of life <u>with enhancements to safety, access, and the natural environment</u>.</i> |
| Other: NCTCOG    | To improve the region’s mobility today and tomorrow by embracing technology and innovation.   |

# RTP Goals – Needs TAC/TPC Review

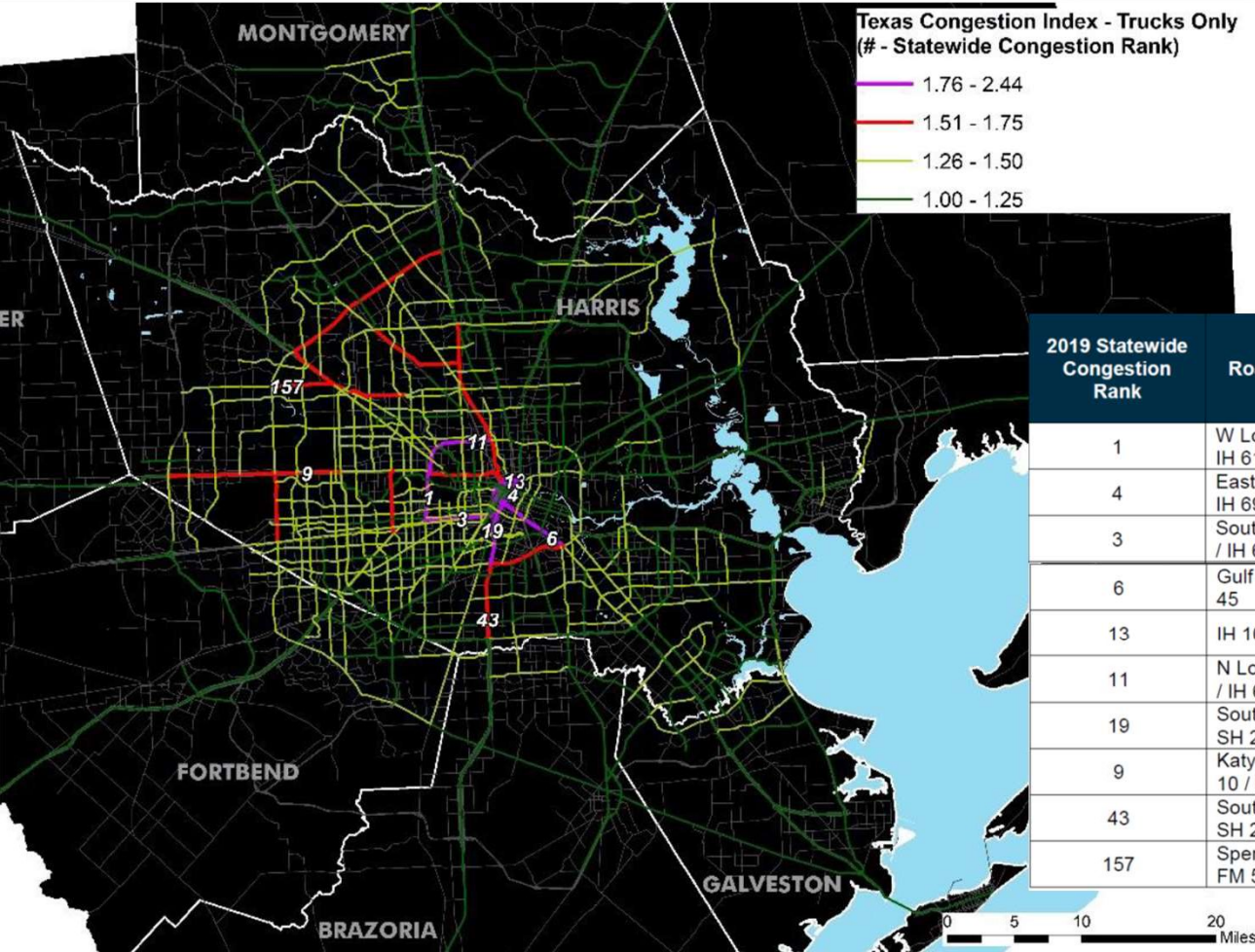
| Goals             |  |
|-------------------|--|
| <b>Existing</b>   | <b>Improve Safety</b>  |
| <i>Suggestion</i> | <i>Improve Safety <b>and Security</b></i>  |
| <b>Existing</b>   | <b>Achieve &amp; Maintain a State of Good Repair</b>                                       |
| <i>Suggestion</i> | <i>Maintain and <b>Modernize to a Resilient System</b></i>                                 |
| <b>Existing</b>   | <b>Move People &amp; Goods Efficiently</b>   |
| <i>Suggestion</i> | <i>Move People &amp; Goods Efficiently and <b>Reliably</b></i>                             |
| <b>Existing</b>   | <b>Strengthen Regional Economic Competitiveness</b>  |
| <i>Suggestion</i> | <i><b>Ensure Economic Vitality by Enabling Global Competitiveness and Productivity</b></i> |
| <b>Existing</b>   | <b>Conserve &amp; Protect Natural &amp; Cultural Resources</b>                             |
| <i>Suggestion</i> | <i>Keep</i>  |
| <b>NEW?</b>       | <b><i>Invest equitably in the region</i></b>   |

# Other Plan Elements - Roadways

- Congestion Management Process
- Eliminate Traffic Fatalities by 2050
  - H-GAC aspirational goal
- Pavement and Bridge Condition
  - Asset Management
- Complete Streets
  - Accommodate all system users and abilities through an accepted policy, comprehensive inventory, and project evaluations
- Intelligent Transportation Systems



# Other RTP Elements – Freight Network



## Freight Network

- National Highway System
- Intermodal Connectors to Airport, Seaport, Rail

| 2019 Statewide Congestion Rank | Road Name                     | From                     | To                            | Texas Congestion Index (trucks only) |
|--------------------------------|-------------------------------|--------------------------|-------------------------------|--------------------------------------|
| 1                              | W Loop Fwy / IH 610           | Katy Fwy / IH 10 / US 90 | Southwest Fwy / US 59 / IH 69 | 2.44                                 |
| 4                              | Eastex Fwy / IH 69 / US 59    | SH 288                   | IH 10                         | 2.43                                 |
| 3                              | Southwest Fwy / IH 69 / US 59 | W Loop Fwy / IH 610      | South Fwy / SH 288            | 2.08                                 |
| 6                              | Gulf Fwy / IH 45              | IH 10 / US 90            | S Loop E Fwy / IH 610         | 1.83                                 |
| 13                             | IH 10 / US 90                 | North Fwy / IH 45        | Eastex Fwy / US 59            | 1.82                                 |
| 11                             | N Loop W Fwy / IH 610         | North Fwy / IH 45        | Katy Fwy / IH 10 / US 90      | 1.8                                  |
| 19                             | South Fwy / SH 288            | Gulf Fwy / IH 45         | S Loop W Fwy / IH 610         | 1.76                                 |
| 9                              | Katy Fwy / IH 10 / US 90      | N Eldridge Pkwy          | Sam Houston Tollway W / SL 8  | 1.71                                 |
| 43                             | South Fwy / SH 288            | S Loop W Fwy / IH 610    | Sam Houston Tollway S / SL 8  | 1.64                                 |
| 157                            | Spencer Rd / FM 529           | SH 6                     | Northwest Fwy / US 290        | 1.64                                 |

Intermodal Mobility

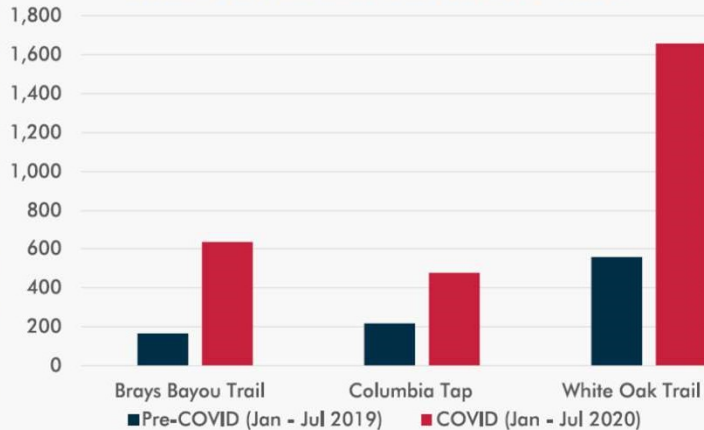
# Other RTP Elements – Active Transportation

## Active Transportation

- Bicycle Network
- Pedestrian Network

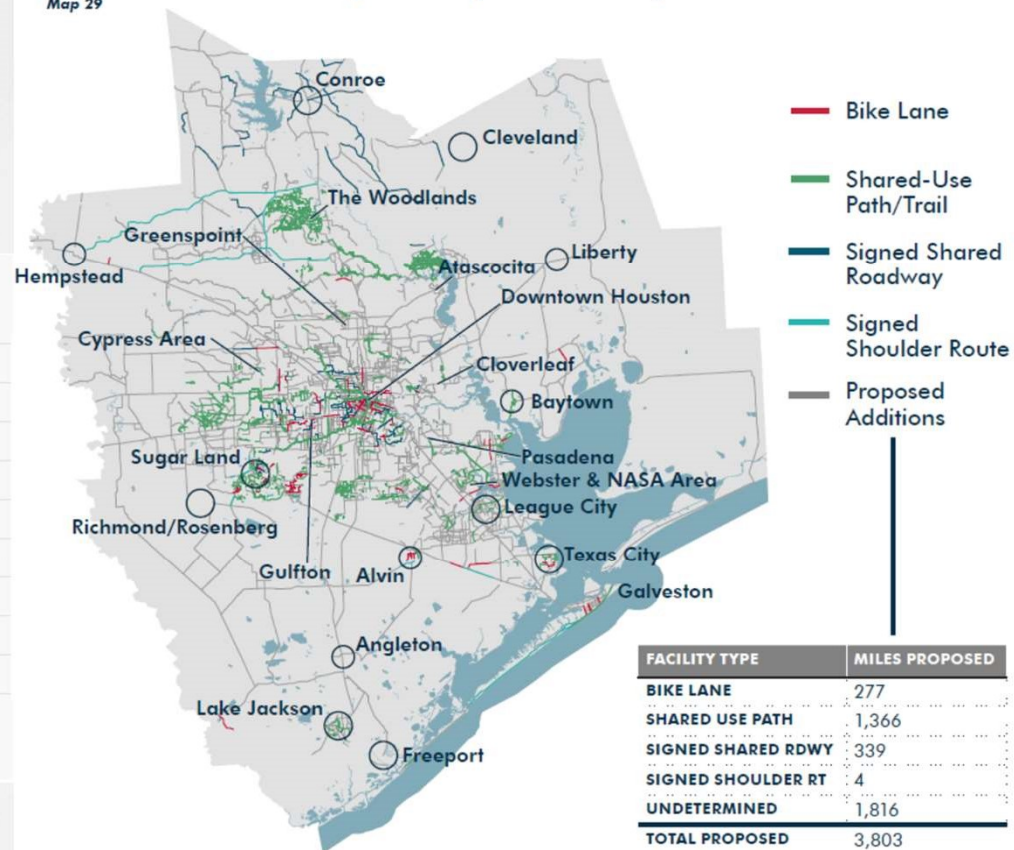


Figure 4: Increase in Bicycle Ridership on Brays Bayou, Columbia Tap, and White Oak Trails 2019 to 2020



## Regional Vision: Existing and Proposed Bikeways

Map 29





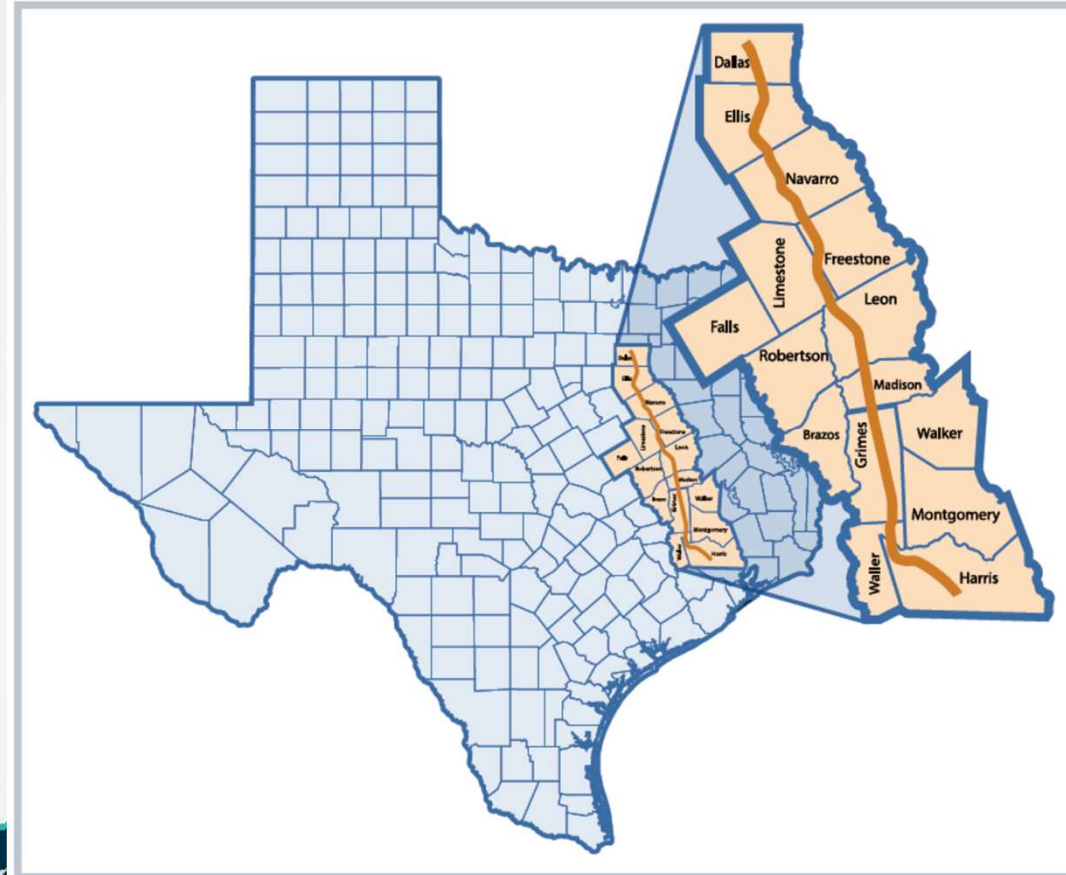


# Other RTP Elements – Passenger Rail

## ■ Texas Central Railway

- September 10, 2020:
  - Federal Railroad Administration issued its Rule of Particular Applicability (RPA) and Record of Decision (ROD)
- Potential ridership estimated at:
  - 6 million annual by 2029
  - More than 13 million annual passengers by 2050

Figure 3-15: Proposed Route of the Texas Central Railway



Source: Texas Central Railway (n.d.), "The Project." 101

# Other RTP Elements – Aviation

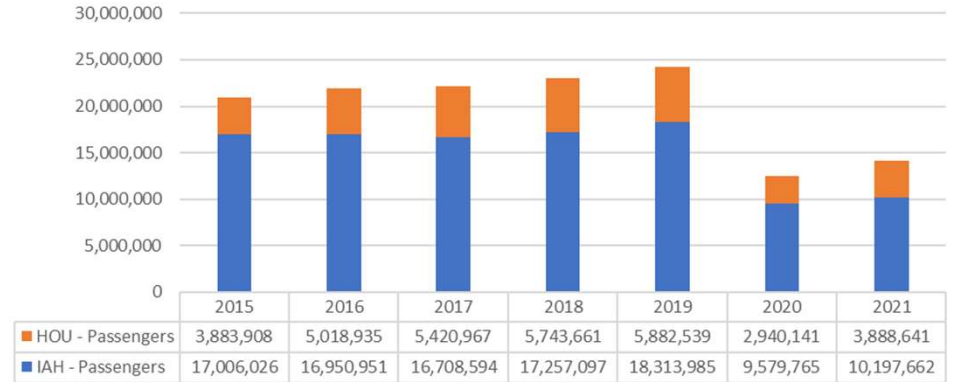
## Aviation

- IAH and HOU
  - Commercial Passengers and Air Cargo
- Spaceport
  - Research, Development, Tourism Factor

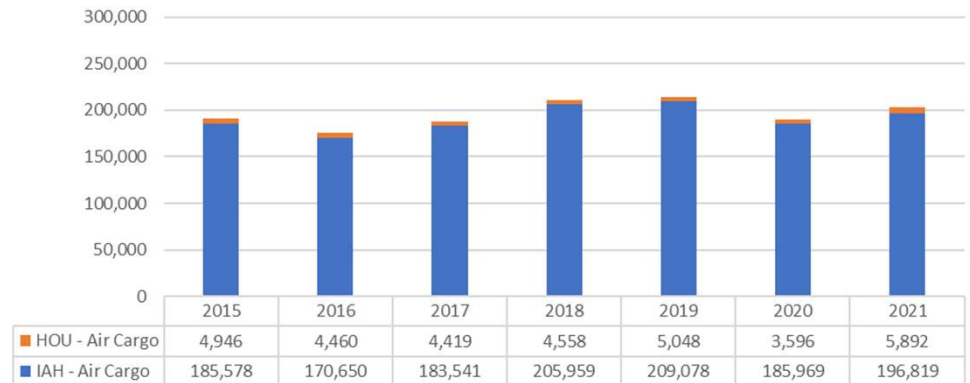
### Ellington's Development Area



IAH & HOU - Total Passengers to Date




IAH & HOU - Total Cargo to Date (Metric Tons)




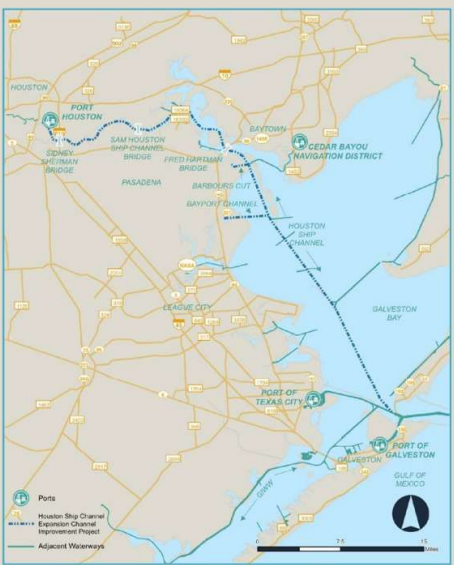
# Other RTP Elements – Maritime / Waterways / Ferries

- Maritime (TxDOT Division)
- Ferry Operations (Texas Transportation Plan)



**HOUSTON SHIP CHANNEL EXPANSION CHANNEL IMPROVEMENT PROJECT FEASIBILITY STUDY**






| Project Details                              |   |
|--|---|
| Non-Federal Sponsor (NFS)                    | Port of Houston Authority               |
| Study Authority                              | Section 210 - Flood Control Act of 1970 |
| Channel Length (Current / Proposed)          | 50 miles   50 miles                     |
| Channel Depth [Ft. MLW] (Current / Proposed) | 37.5'   41.5'<br>41.5'   46.5'          |
| Channel Width [Ft] (Current / Proposed)      | 400'   530'<br>530'   700'              |

**Waterway and Project Description**

The Houston Ship Channel (HSC) is in southeast Texas, crossing portions of Harris, Galveston, and Chambers counties. The HSC is uniquely complex. In addition to the main 50-mile long channel, the HSC system facilitates four deep-draft tributary channels along with multiple shallow-draft channels and cuts.

The HSC Improvement Project includes widening the HSC to 700 feet from Bolivar Roads to Barbours Cut Channel near Boggy Bayou. From Boggy Bayou, the HSC has various width and depth configurations, reducing in both depth and width as the channel moves upstream of Boggy Bayou first, then Sims Bayou second, and ultimately terminates at the Main Turning Basin immediately upstream of the I-610 Bridge. This results in addressing the project as six unique segments: four segments in the main channel, Barbours Cut, and Bayport Channel.

The Recommended Plan in the Chief's Report to the Secretary of the Army proposes a wide range of channel improvements, including widening of HSC segments from Bolivar Roads to Barbours Cut, deepening the HSC from Boggy Bayou to the Main Turning Basin, federalization of NFS improvements to Barbours Cut and Bayport Channel, and various bend easings and flare expansions.

|  |  |
|--|--|
| Project Cost: \$876,848,000**                                  |  |
| ** Expected first construction cost based on Feasibility Study |  |
| Federally Allocated Funds as of 2020: \$1.1 M                  |  |

**Key Waterway Facts**

- The HSC is the busiest waterway in the U.S.
- Receives 8,000 vessel calls annually
- Transporting more than 230 million tons of cargo
- Serves the largest petrochemical complex in the nation
- Serves Port Houston which provides:
  - \$265 million in economic impact
  - \$5 billion in local & state taxes
  - 1.2 million jobs throughout Texas

**Project Benefits**

The HSC serves a large and diverse group of users, and as a result, provides transit access for a varied vessel fleet. This project would provide for more safe and efficient vessel transit along the channel. Examples of benefits that can be achieved through implementation of this project include:

- Reduced "lightering" for Very Large Crude Carriers, which entails the process of transferring cargo from larger to smaller draft vessels
- Increased barge movement efficiency and safety
- Vessels longer than 1,200-feet overall would have access, which they currently do not because of bend restrictions
- Vessels longer than 1,100-feet would not be restricted to one-way traffic, which causes channel congestion

The expansion project will help alleviate these issues by improving the use and navigation for current and future vessels. This will help reduce delays, and increase safety and economic growth.

**Project Readiness and Implementation**

The Feasibility Study and Environmental Impact Statement were completed in late 2019. Both were made public in January 2020. The USACE Chief's Report was signed in April 2020. The project received \$1.13 million in the USACE FY 2020 work plan for pre-construction, engineering and design. The project is awaiting federal authorization for construction.

**Waterway Supported Port Facilities**

Ro/Ro

Bulk

Fishing

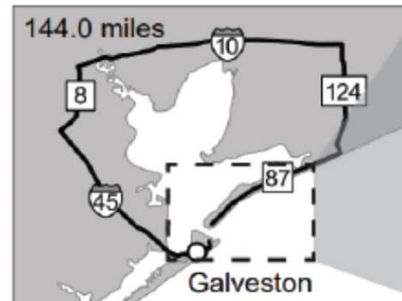
Energy

Break Bulk

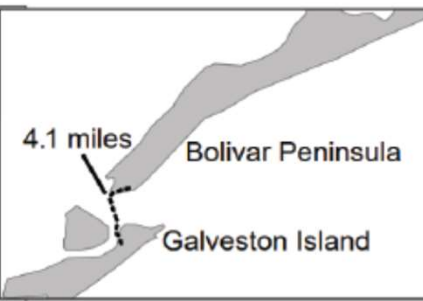
Container

### Port Bolivar to Galveston Highway vs. Ferry Route

144.0 miles



4.1 miles



**Source: Legislative Budget Board Staff (2019).**

| Ferry     | Fleet Size | Fleet Capacity                |
|-----------|------------|-------------------------------|
| Galveston | 6 boats    | 500 passengers<br>70 vehicles |

**Source: Legislative Budget Board Staff (2019), Overview of State Ferry System Operations.**

# Other RTP Elements – Parking

- Parking
  - Parking Management Strategies used in the region



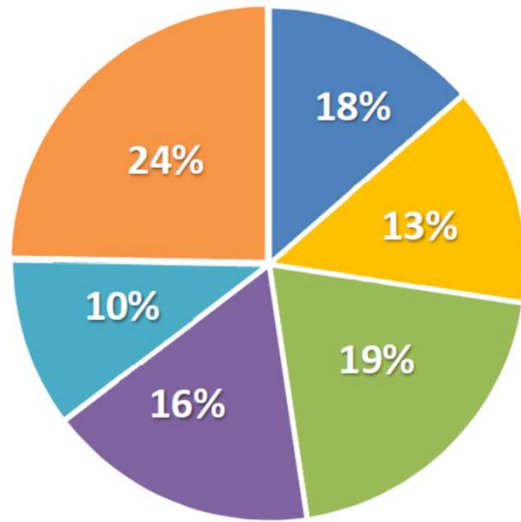
# Other RTP Elements



- Safety and Security
- Livable Centers – Live, Work, Play within Proximity
  - Housing + Transportation Costs
- Climate Change and Resiliency Strategy
- Action Plan
- Air Quality Conformity

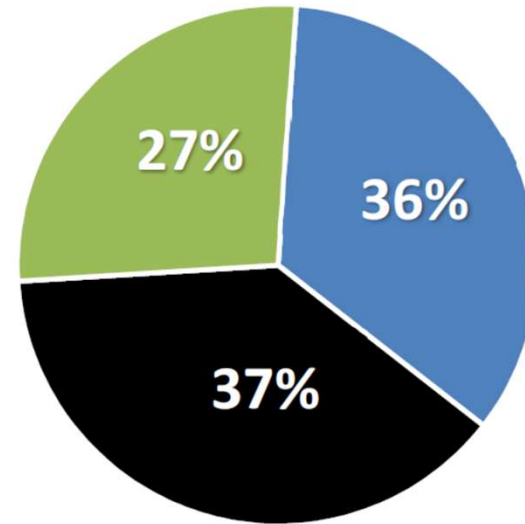
# Financials for Action Plan

2045 RTP Revenue by Source  
Total: \$147 Billion



- Federal Revenues
- Local Revenues
- METRO Farebox
- State Highway Revenues
- METRO Sales Tax
- Toll Roads

2045 RTP Expenditures by Strategy  
Total: \$132 Billion



- Expand
- Maintain
- Manage

# Other RTP Elements – Conformity

- Federal Air Quality Budget / Performance Target

Table 6.3: Conformity Analysis Results versus HGB Serious RFP MVEBs

| Year | NOx Emissions (tpd) | NOx Budget (tpd) | VOC Emissions (tpd) | VOC Budget (tpd) | VMT         |
|------|---------------------|------------------|---------------------|------------------|-------------|
| 2020 | 77.03               | 87.69            | 51.04               | 57.70            | 188,200,352 |
| 2030 | 43.54               | 87.69            | 33.01               | 57.70            | 228,967,318 |
| 2040 | 37.96               | 87.69            | 24.84               | 57.70            | 267,995,566 |
| 2045 | 40.25               | 87.69            | 25.32               | 57.70            | 286,876,227 |

- Regional Performance Target?
  - Greenhouse gas emission (CO<sup>2</sup>)
  - CO<sub>2</sub>-equivalent CO<sub>2</sub>e



# Questions

- Current Plan Adopted April 24, 2019 by TPC
  - Conformity Concurrence August 2, 2019
- Expires: RTP: April 10, 2023, Conformity: August 2, 2023

