

INTRODUCTION

PURPOSE OF THE TRANSPORTATION IMPROVEMENT PROGRAM (TIP)

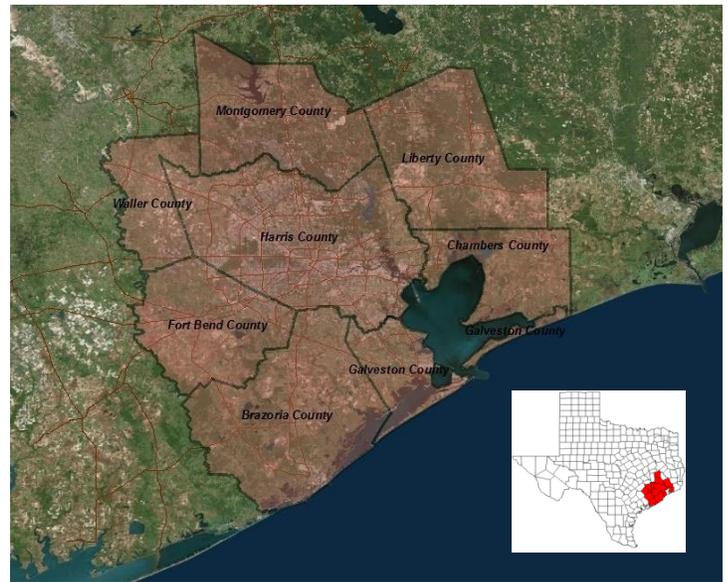
The Transportation Improvement program (TIP) is a staged, four-year program of projects proposed for funding by federal, State, and local sources within the Houston-Galveston Metropolitan Area. The 2017-2020 TIP has been developed by the Houston-Galveston Area Council (H-GAC) in cooperation with local governments, the Texas Department of Transportation (TxDOT), and local transportation agencies. Projects in the 2017-2020 TIP have been identified as priorities for the Houston region.

THE REGION DEFINED

H-GAC serves as the metropolitan planning organization (MPO) for the eight county region depicted in Figure 1. The MPO is a federally mandated and federally funded transportation policy-making organization that is made up of representatives from local government and governmental transportation authorities. The designation of the MPO is by agreement among the units of general-purpose local governments and the Governor of Texas.

Approximately 6.5 million people reside within the eight counties and the regional economy supports more than 3.1 million jobs.

Figure 1



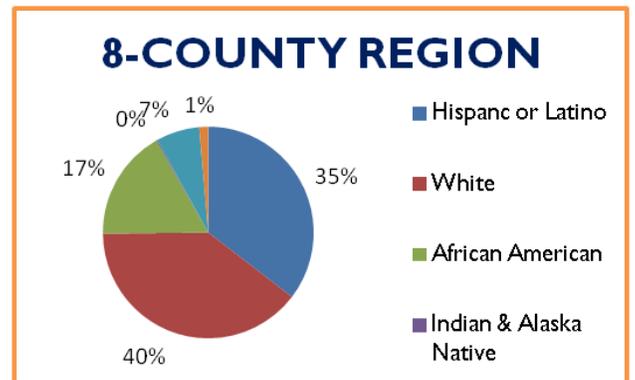
Region Demographics									
	Brazoria	Chambers	Fort Bend	Galveston	Harris	Liberty	Montgomery	Waller	Total:
Population	345,300	40,100	738,000	333,900	4,358,400	75,400	587,100	39,500	6,517,800
Jobs	91,300	14,400	185,800	104,800	2,522,400	14,400	168,300	12,500	3,113,700

Source: H-GAC, Regional Growth Forecast

The region continues to experience rapid growth with recent estimate suggesting population gains of 120,000 new residents each year, almost half of whom are moving to the region from other parts of the State, nation and world.

As a consequence, the region displays tremendous ethnic and cultural diversity.

The mobility needs of our region are similarly varied, and the funding commitments documented within the TIP reflect a continuous, comprehensive and coordinated approach to transportation planning.



Source: US Census, 2012 American Communities Survey

RELATIONSHIP WITH OTHER PLANS AND PROGRAMS

H-GAC, serving as the MPO for the Houston-Galveston area, has the responsibility of preparing and maintaining two key elements of the regional planning process: the metropolitan transportation plan (MTP) and the transportation improvement program (TIP). In addition, areas greater than 200,000 in population, such as the Houston-Galveston area, are designated as Transportation Management Areas (TMA) according to planning regulations, and must also have in place a congestion management process (CMP). Because the counties of Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, and Waller have been designated as nonattainment areas for the pollutant ozone, the MPO coordinates the development of a metropolitan transportation plan with the process of developing Transportation Control Measures (TCMs) for the SIP, as required by the federal Clean Air Act (CAA). The 2017-2020 TIP was developed through a coordinated process maintaining consistency with these planning documents:

- ❖ 2040 RTP – The Houston-Galveston Regional Transportation Plan;
- ❖ TXDOT Unified Transportation Program (UTP) and Statewide Transportation Improvement Program (STIP)

2040 RTP – The Houston-Galveston Regional Transportation Plan

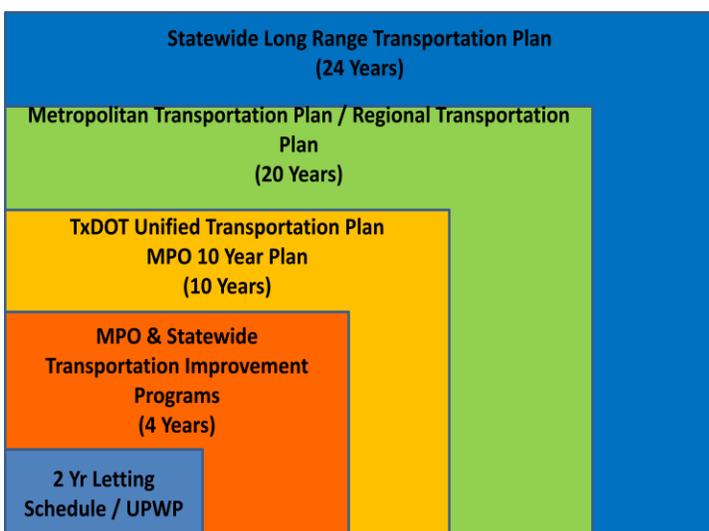
The 2040 RTP has been shaped by the public in almost 60 presentations and public meetings, with at least 1,500 people providing input. The RTP is approved and adopted by the Transportation Policy Council (TPC) of H-GAC. This plan document describes a regional vision, goals, and implementation strategies as well as the current transportation system. The current and future population and jobs that use the system are represented in this plan. Fair treatment of the diverse population, fiscal constraint, and conformity with national air quality standards drive key transportation planning strategies represented in the RTP. The implementation of the 2040 RTP is analyzed to understand more fully what the future of transportation in the Houston-Galveston region will look like.

TxDOT Unified Transportation Program (UTP) and Statewide Transportation Improvement Program (STIP)

The UTP is TxDOT's 10-year planning document that guides the planning and development of each TxDOT District's transportation improvements. The UTP is developed annually in accordance with the Texas Administrative Code (TAC §16.105) and is approved by the Texas Transportation Commission annually prior to August 31. The UTP authorizes projects for construction, development and planning activities and includes projects involving highways, aviation, public transportation, and state and coastal waterways.

Planning rules require that the TIP be constrained by available financial resources in the first four year; however, based on State law, TxDOT programs the UTP over ten years. Hence, the UTP

Figure 2



may contain additional projects beyond those included in the TIP.

Figure 2 depicts the structure of the various documents and how they relate to one another. In order for any of these additional projects to move into the programming and construction stages, they must be included in the TIP, and subsequently the STIP. Appendix D of the TIP contains a list of projects that are not planned for construction within the four-year time frame of the TIP, but are references in the current TIP while engineering, feasibility, environmental clearance, or other pre-construction efforts are on-going.

TxDOT's UTP is used as a guideline for programming projects in the STIP. In metropolitan areas, projects are programmed in Metropolitan TIPs, and then included in the STIP. Projects in rural areas of the State are programmed into the STIP through TxDOT Districts. The TxDOT Houston District's UTP is available on the TxDOT website.

TIP FUNDING AND PROJECT SELECTION

The transportation project selection and approval process involves shared decision-making. The TPC has primary responsibility for project selection under four funding categories: Category 2 – Metropolitan and Urban Corridor Projects, Category 5 – Congestion Mitigation and Air Quality (CMAQ), Category 7 – Surface Transportation Program – Metropolitan Mobility (STP-MM), and Category 9 – Transportation alternatives Program (TAP). These funding categories have specific eligibility requirements as defined in the federal regulatory code.

TPC approves all projects included in the TIP but many are developed and selected in other forums. For example, the Texas Transportation Commission selects major mobility, maintenance, rehabilitation, and safety projects on the state system. It also selects bridge program projects both on and off the state system. With the exception of the Houston, Conroe, and The Woodlands Urbanized Areas (UZA), the state administers the region's transit funding programs. H-GAC facilitates discussions between local transit agencies on the division of federal funds allocated to the two large UZAs.



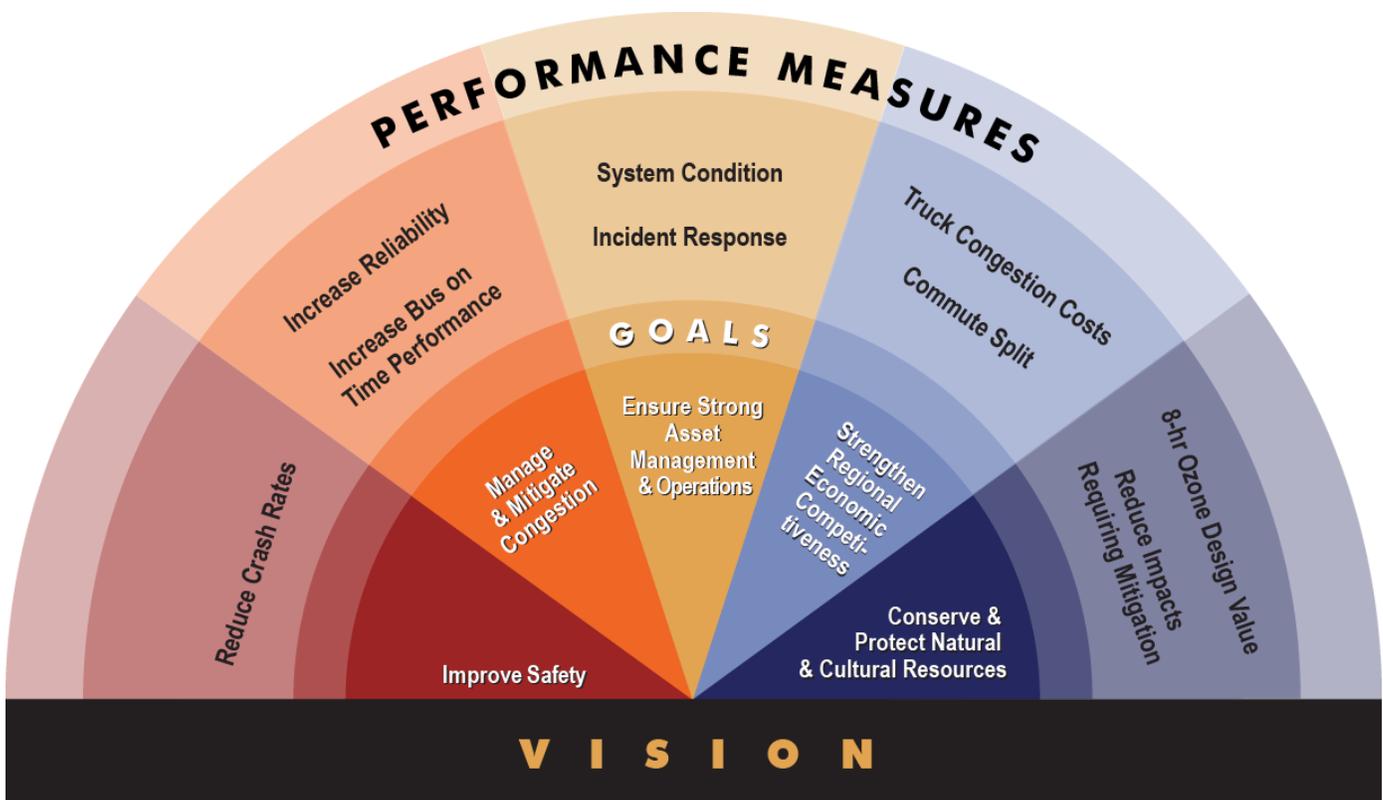
PERFORMANCE OUTCOMES

The 2017-2020 TIP continues to build upon the goals and strategies articulated in the 2040 RTP. The performance measures included in the 2040 RTP were crafted in accordance with the federal surface transportation legislation Moving Ahead for Progress in the 21st Century, or MAP-21. While federal

rulemaking implementing these statutory provisions has not been completed, the 2017-2020 TIP utilizes the progress already achieved to support decisions on transportation investment aligned with the following goals:

1. **Improve Safety**
2. **Manage and Mitigate Congestion**
3. **Ensure Strong Asset Management and Operations**
4. **Strengthen Regional Economic Competitiveness**
5. **Conserve and Protect Natural and Cultural Resources**

The project selection process utilized during development of the 2017-2020 TIP assessed major investment-level applications based on the 2040 RTP's five goals and performance measures. By incorporating 2040 RTP goals into short-range programming activity, the performance measures have achieved a strong coordination between the region's vision for the future and the investments made today.



AIR QUALITY

Air quality is influenced by a number of factors, including topography, weather conditions, and sources created by human interactions with the environment, including but not limited to agriculture, manufacturing, domestic

product use, and transportation. Because transportation sources contribute to air pollution, the Clean Air Act (CAA) of 1990 identifies actions to be taken by states and MPOs to reduce emissions.

The U.S. Environmental Protection Agency (EPA) has designated the eight-county Houston-Galveston-Brazoria area as nonattainment for ground-level ozone (O₃). While transportation is not this region's sole source of ozone pre-cursor pollutants, continued reductions of pollutants from on-road vehicles is an essential part of our plan to attain clean air standards. The Plan and TIP are required to conform to emission limits established by the Texas Commission on Environmental Quality (TCEQ) and approved by the EPA. Consequentially, it is the MPOs role in air quality planning to assess the impact of planned transportation projects on air quality and to identify programs and projects that will help reduce emissions.

The CAA requires TCEQ to develop a plan called a State Implementation Plan (SIP) to show how the state will meet the National Ambient Air Quality Standards (NAAQS) for each type of air pollutant.

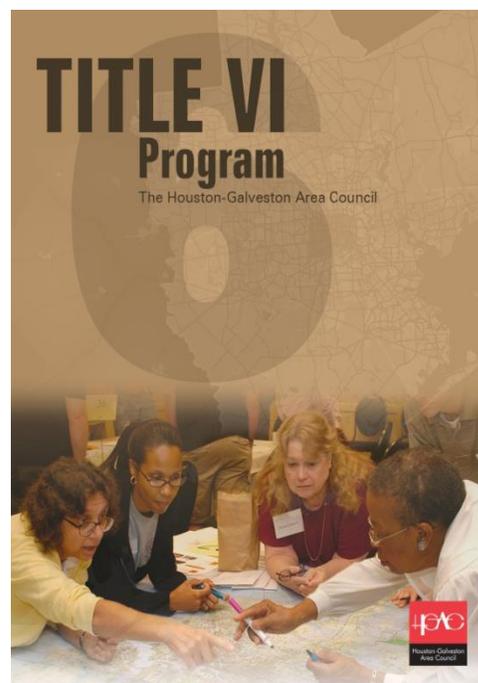
The 2017-2020 TIP relies on demonstration of air quality conformity currently under development. Federal approval by the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) is anticipated to be received in June 2016. The conformity determination is being made using motor vehicles emissions budgets for the ozone precursors nitrogen oxides (NO_x) and volatile organic compounds (VOC) established for the Houston-Galveston-Brazoria Attainment Demonstration and Reasonable Further Progress State Implementation Plan Revisions for the 1997 Eight-Hour Ozone Standard (SIP). Further detail on the current conformity analysis is available on H-GAC's website at http://www.h-gac.com/taq/airquality_model/conformity.

PUBLIC INVOLVEMENT

The Houston-Galveston Area Council and the Houston-Galveston Area MPO have a very robust public participation process. The MPO recognizes that public participation is an essential part of the development and implementation of a transportation project. Public involvement is an ongoing aspect of the project planning process that encourages and solicits input and provides a forum for the public to become fully informed about project development. H-GAC has developed several important programs to ensure full public involvement, environmental justice and public participation.

Title VI Protections

Title VI of the Civil Rights Act of 1964 as amended, (42 USC 2000d to 2000-4) (23 CFR Part 200 and 49 CFR Part 21) states "No person in the United States shall, on the ground of race, color, or national origin be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance". Subsequent laws, regulations, directives, and executive orders have expanded the criteria for which discrimination is prohibited to include disability, sex, age, income, and limited proficiency in English.



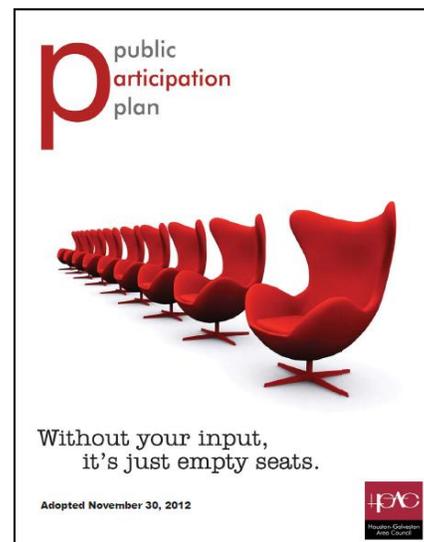
Throughout the transportation planning process, the H-GAC MPO extends public participation to all populations. The TIP is developed to ensure Environmental Justice and nondiscrimination are cornerstones in its development. The complete Title VI Program can be accessed at www.h-gac.com/taq/title-vi/default.aspx.

Environmental Justice (EJ) & the Public Participation Plan (PPP)

In accordance with federal guidance, the MPO prepares and adopts a TIP that:

- ❖ Avoids and minimizes disproportionate health, environmental, social, and economic impacts on at-risk populations;
- ❖ Implements public outreach strategies that maximize EJ participation in transportation decision-making processes;
- ❖ Is informed by project-level analysis to identify benefits and burdens to EJ communities; and,
- ❖ Sustains and promotes equitable distribution of benefits.

Key objectives of H-GAC's EJ processes are described in H-GAC's PPP available at <http://www.h-gac.com/taq/publications/current/default.aspx> and the Title VI Program which can be accessed at www.h-gac.com/taq/title-vi/default.aspx.



The intent of the PPP is to promote understanding and participation in the regional transportation planning process. There are many opportunities for the public to comment on the TIP.