



2018-2019

Unified Planning Work Program

for the Houston-Galveston Transportation Management Area

Adopted on July 28, 2017



Resolution

NO. UPWP 18/19-1

ADOPTING THE 2018-2019 UNIFIED PLANNING WORK PROGRAM FOR TRANSPORTATION PLANNING BY THE TRANSPORTATION POLICY COUNCIL FOR THE HOUSTON-GALVESTON TRANSPORTATION MANAGEMENT AREA AND CERTIFYING COMPLIANCE WITH FEDERAL PLANNING REQUIREMENTS.

WHEREAS, the U.S. Department of Transportation, prior to the funding of any planning or capital grant project within an urban region, requires the preparation and adoption of a Unified Planning Work Program (UPWP) describing transportation planning activities to be accomplished during FY 2018-2019; and

WHEREAS, the 2018-2019 Unified Planning Work Program address the needs for planning Administration/Management, Data Development and Maintenance, Short Range Planning, Long Range Planning, and Special Studies, identifying agency responsibilities by work task and anticipated funding requirements; and

WHEREAS, the Transportation Policy Council certifies its compliance with federal planning requirements as outlined in the introduction of the 2018-2019 Unified Planning Work Program and in accordance with 23 CFR Part 450.334 and 450.220; and

WHEREAS, the Transportation Policy Council certifies its compliance with federal and state statutes in regard to debarment, lobbying, procurement practices and ethical practices.

NOW, THEREFORE, BE IT RESOLVED BY THE TRANSPORTATION POLICY COUNCIL FOR THE HOUSTON-GALVESTON TRANSPORTATION MANAGEMENT AREA THAT:

- The 2018-2019 Unified Planning Work Program (UPWP) is hereby adopted; and
- Cost overruns of up to 25 percent at the activities task level are allowable, provided that the totals as shown in the Funding Summary on Page 6-1 of the 2018-2019 UPWP are not exceeded.

PASSED AND APPROVED, this 28th day of July, 2017, at a regularly called meeting of the Transportation Policy Council for the Houston-Galveston Transportation Management Area.

APPROVED:

Hon. Matt Sebesta, Chairman
Transportation Policy Council

ATTEST:

Hon. Tom Reid, Secretary
Transportation Policy Council

2018-2019
Unified Planning Work Program
For the Houston-Galveston
Transportation Management Area

ADOPTED
July 28, 2017

Amended

October 27, 2017

December 15, 2017

January 26, 2018

March 23, 2018

April 23, 2018

August 24, 2018

September 28, 2018

December 13, 2018

DISCLAIMER

This report was prepared in cooperation with the Texas Department of Transportation, the U.S. Department of Transportation, Federal Highway Administration, and Federal Transit Administration. The contents of this report reflect the views of the authors who are solely responsible for the opinions, findings, and conclusions presented herein, and do not necessarily reflect the views or policies of the aforementioned agencies, or any other agencies, organizations, or persons that contributed to the report or that are mentioned or listed in the report.

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INTRODUCTION

2018-2019 UNIFIED PLANNING WORK PROGRAM

A. PURPOSE

The *2018-2019 Unified Planning Work Program* (UPWP) describes the transportation plans and programs and the transportation-related air quality planning activities that will be conducted during Fiscal Years 2018 and 2019 (October 1, 2017 – September 30, 2019) regardless of funding sources or agencies conducting these activities. Through the development of the UPWP, changes in regional transportation planning priorities are identified. In addition, the role of the Houston-Galveston Metropolitan Planning Organization (MPO) for the Houston-Galveston Transportation Management Area (TMA) is documented.

The process of operating, maintaining, and improving the region's surface transportation system is complex and demands ongoing regional planning efforts. Many of the activities described in this document support the collaborative and coordinated decision-making process between state and local government agencies, transportation providers, shippers, and carriers of goods, and the residents of the region. Through the cooperation of these stakeholders, the products of these planning efforts will provide the region with greater mobility benefits. The following five tasks document the transportation planning activities in the TMA in 2018-2019:

- **Task I – Administration** describes the administrative support activities such as financial management, contract management, public outreach, and the general management of the MPO.
- **Task II – Data Development and Maintenance** describes the collection, maintenance, and analysis of transportation data. These activities include the development of socio-economic forecasts and travel demand models to determine where future transportation investments will be made.
- **Task III – Short-Range Planning** addresses planning for activities taking place within a three- to ten-year timeframe, including the Transportation Improvement Program (TIP), the Ten-Year Transportation Plan, as well as transit feasibility studies, and operations planning. Task III also includes ongoing maintenance of the Regional Intelligent Transportation System (ITS), as well as efforts to improve traffic safety in the region and evacuation planning.
- **Task IV – Long Range Planning** describes planning activities for the long-term including development and maintenance of the Regional Transportation Plan (RTP) as well as ongoing initiatives regarding transportation-related air quality planning, regional bicycle

and pedestrian planning, activities involving H-GAC's Livable Centers program, and Transportation Performance Management (TPM) activities.

- **Task V – Special Studies** includes special one-time planning activities, including major corridor studies/analyses and support of tourism and transportation resiliency planning activities.

The Fixing America's Surface Transportation Act (FAST Act) requires the consideration of 10 factors in the metropolitan and statewide planning processes listed in 23 USC 134(h). The list below illustrates how the MPO addresses these factors:

- 1. Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency**
 - *The Regional Transportation Plan (RTP) focuses on strategic corridor plans that will improve the movement of people and goods within and through the region (Subtask 4.1).*
 - *The MPO supports transit service activities that foster urban redevelopment and improve access around transit stations (Subtasks 3.2 and 4.3).*
 - *The MPO supports activities of the Greater Houston Freight Committee to better incorporate private sector freight user perspectives into the transportation planning process (Subtask 4.3).*
- 2. Increase the safety of the transportation system for motorized and non-motorized users**
 - *The TIP provides funding for improved bicycling & pedestrian facilities (Subtask 3.1).*
 - *The RTP focuses on identification of crash hot spots and strategies to reduce crashes (Subtask 4.1).*
 - *The MPO convenes a Regional Safety Council to address transportation safety in the region and engages in various safety-related initiatives (Subtask 3.4).*
- 3. Increase the security of the transportation system for motorized and non-motorized users**
 - *The TIP provides funding for improved lighting in and around transit centers (Subtask 3.1).*
 - *The RTP supports connections at port entrances and exits that facilitate enhanced security (Subtask 4.1).*
 - *The MPO participates in emergency preparedness and evacuation activities initiated by state and local governments (Subtask 3.4)*

4. Increase the accessibility and mobility of people and for freight

- *The TIP project selection criteria assign benefits to projects that: a) support/improve port operations, b) remove bottlenecks & fill gaps on the existing system that inhibit the movement of people and goods, and c) provide improved access between activity centers (Subtask 3.1).*
- *The RTP focuses on strategic corridor plans that will improve the movement of people and goods within and through the region (Subtask 4.1).*

5. Protect and enhance the environment, promote energy conservation, improve quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns

- *The MPO engages in Subregional Planning initiatives designed to link local land use goals with transportation investments (Subtask 4.3).*
- *The MPO develops geographic information system (GIS) layers of regional environmental assets (Subtask 2.2).*

6. Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight

- *The Livable Centers initiative is designed to improve access and connectivity to and around transit stations (Subtask 4.4).*
- *The TIP and RTP support projects such as intermodal terminals that link a variety of modes in one station (Subtasks 3.1 and 4.1).*
- *The MPO supports regional vanpooling, carpooling and telework initiatives (Subtask 4.2).*
- *The TIP provides funding for transit implementations and studies (Subtask 3.1).*

7. Promote efficient system management and operation

- *The Congestion Management Process (CMP) focuses on identifying non-added capacity alternatives that will improve traffic flow and safety for motorists (Subtask 4.5).*
- *The RTP includes an expanded managed lane system to derive improved efficiency from new capacity projects (Subtask 4.1).*
- *The TIP provides funding for expansion of traffic management systems throughout the region (Subtask 3.1).*

- *Operations efforts, such as Intelligent Transportation Systems (ITS) Planning and Incident Management, promote lower-cost, non-added capacity alternatives for improving traffic flow (Subtask 3.3).*

8. Emphasize the preservation of the existing transportation system

- *Intelligent Transportation Systems (ITS) Planning and the development of Incident Management activities address alternatives that maximize the efficiency of the current system (Subtask 3.3).*
- *The MPO works with the state to identify major reconstruction needs over the life of the plan (Subtask 3.1).*

9. Improve the resiliency and reliability of the transportation system and reduce or mitigate storm water impacts of surface transportation

- *The MPO works with regional stakeholders to collect and analyze information to improve resiliency and reliability of the transportation system and reduce or mitigate storm water impacts on surface transportation (Subtask 5.1).*

10. Enhance travel and tourism

- *The MPO coordinates with specific representatives in the tourism industry to further understand tourism industry trends and needs related to transportation infrastructure and planning (Subtask 5.1).*
- *The MPO coordinates with specific representatives in the private transportation operators, tour bus operators and intercity bus operators to further understand industry trends and needs related to transportation infrastructure and planning (Subtask 5.1).*
- *The Livable Centers program supports the development of walkable, mixed-use places that utilize multi-modal travel choices and improve accessibility for regional residents and visitors (Subtask 4.4).*

Federal transportation legislation has placed an increased emphasis on performance-based planning and programming in order to increase accountability and transparency in regard to transportation investments. This includes the requirement that MPOs establish performance measures in conjunction with the following seven national goals outlined in U.S.C. 23 Sec 150(b):

1. **Safety** - To achieve a significant reduction in traffic fatalities and serious injuries on all public roads.
2. **Infrastructure condition** - To maintain the highway infrastructure asset system in a state of good repair.

3. **Congestion reduction** - To achieve a significant reduction in congestion on the National Highway System.
4. **System reliability** - To improve the efficiency of the surface transportation system.
5. **Freight movement and economic vitality** - To improve the national freight network, strengthen the ability of rural communities to access national and international trade markets, and support regional economic development.
6. **Environmental sustainability** - To enhance the performance of the transportation system while protecting and enhancing the natural environment.
7. **Reduced project delivery delays** - To reduce project costs, promote jobs and the economy, and expedite the movement of people and goods by accelerating project completion through eliminating delays in the project development and delivery process, including reducing regulatory burdens and improving agencies' work practices.

H-GAC, in conjunction with its update of the Regional Transportation Plan, will review and reassess performance measures to reflect the seven national goals. FHWA is currently developing guidance for MPOs to conduct performance-based planning and programming, which will be utilized along-side guidance from TxDOT to ensure consistency with statewide programming.

MPOs must also develop a public involvement process that provides complete information, timely notification, and public access to the planning process. H-GAC developed and adopted its Public Participation Plan (PPP) in 2007, which was updated in November 2012 and July 2017. The intent of the plan is to create a transportation planning process that is accessible, inclusive, and proactive. The plan is designed to educate and inform the public about transportation and related air quality issues, and to provide the public with opportunities to contribute their ideas and opinions early and often throughout the planning process.

B. DEFINITION OF SERVICE AREA

The Houston-Galveston Area Council has been designated by the Governor of Texas to serve as the Metropolitan Planning Organization (MPO) for transportation planning in the urbanized region that consists of Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, and Waller counties. This eight-county TMA includes four U.S. Census-designated urbanized areas with populations greater than 50,000 (the Houston Urbanized Area, the Texas City/La Marque Urbanized Area, The Woodlands Urbanized Area, and the Angleton/Lake Jackson Urbanized Area), with an estimated 5.9 million people in 2010. Appendix B contains a map of the Houston-Galveston TMA.

C. ORGANIZATION and STAKEHOLDERS

The Transportation Policy Council (TPC) is the policy-making board for the MPO. Its twenty-eight (28) voting members are responsible for the development and approval of transportation plans and programs within the TMA. Membership on the TPC consists of chief elected officials and their designated alternates from the seven major cities (over 50,000 in population) and each of the eight counties within the TMA. In addition, Harris, Brazoria, and Montgomery counties each have an at-large city representative appointed by the H-GAC Board of Directors. The H-GAC Board of Directors also appoints one member to the TPC to represent regional concerns. The TPC appoints one representative for “Other Transportation Interests” that would otherwise not be formally represented. The Texas Department of Transportation (TxDOT) has two representatives, one from each of their two districts in the TMA and the Metropolitan Transit Authority of Harris County (METRO) has one representative. Current TPC membership is listed in **Appendix A**.

The TPC created a standing Technical Advisory Committee (TAC) to assist with the technical aspects related to the development of the RTP; the TIP; the Regional Bicycle and Pedestrian Plan; Major Corridor Studies; and other transportation programs and plans. Its membership consists of thirty-eight (38) transportation planning and air quality experts from agencies throughout the TMA, as well as representatives from various advocacy groups with an interest in transportation decisions. The TAC exists to assure that transportation-planning decisions are considered in their broadest context. The TAC currently has established six (6) subcommittees to assist with specific program activities. These are: Regional Transportation Plan (RTP) Subcommittee, Transportation Improvement Program (TIP) Subcommittee, Transportation Demand Management (TDM) Implementation Subcommittee, Regional Transit Coordination Group, Operations Task Force, and the Pedestrian and Bicycle Subcommittee. Current TAC membership can also be found in **Appendix A**.

In 1991, the Regional Air Quality Planning Committee (RAQPAC) was specifically created to work with H-GAC staff and other governmental agencies on coordination of regional air quality programs to meet federal clean air standards and to advise the H-GAC Board of Directors and the TPC on air quality policy. This committee is composed of members representing a variety of public agencies, private industry, business, local health organizations, and citizen and environmental groups.

In 2005, the Regional Safety Council (RSC) was set up by the TPC to provide recommendations for improving transportation safety in our region. Its membership consists of professionals with backgrounds in transportation, law enforcement, emergency medical service,

injury prevention, public health, trucking, railroads, insurance, shipping, safety advocacy, and safety research.

In 2016, the Transportation Policy Council (TPC) created the Greater Houston Freight Committee to better incorporate private sector freight user perspectives into the transportation planning process. The Committee, with co-chairs appointed by the TPC, seeks to accomplish this through regular open meeting highlighting relevant industry trends and needs. The Committee identified a locally significant freight roadway network, recommended investment in critical facilities associated with a boom in petrochemical manufacturing and coordinated with Texas Freight Advisory Committee in the updating of the State Freight Mobility Plan.

D. PRIVATE SECTOR INVOLVEMENT

The private sector is actively involved in planning efforts outlined in the 2018-2019 UPWP. H-GAC utilizes private sector contractors and consultants extensively to execute many of its planning responsibilities. In addition, the private sector participates in H-GAC's transportation planning policy structure. Industry interests and business groups have representatives serving on the Technical Advisory Committee, the Regional Air Quality Planning Committee, the Regional Safety Council, the Greater Houston Freight Committee, and their respective subcommittees.

Private businesses also serve on steering committees, which provide guidance for various transportation-related plans & studies. Transportation Management Organizations (TMOs) also provide opportunities for private sector involvement related to ridesharing, vanpooling, and other trip reduction activities. H-GAC provided start-up funds for many area TMOs, which assist employers in implementing transportation demand management (TDM) strategies such as carpooling and vanpooling.

H-GAC staff continues to provide technical assistance to private and public transit and para-transit operators in the planning and delivery of expanded transit services in coordination with METRO and other regional public transportation providers. Staff will continue to work through the FTA 5307 and FTA 5311 programs to expand the public transportation services through public/private partnership agreements.

E. PLANNING ISSUES AND EMPHASIS AREAS

Regional Transportation Plan – The MPO will be completing an update of the Regional Transportation Plan (RTP) in FY 2018-19. Key focus areas for the 2045 RTP include the connection between transportation and land use, an analysis of regional transit needs and

opportunities, environmental considerations and implications for project development, an enhanced congestion management system, and a consideration of the growth in regional freight activity and the related infrastructure needed to improve regional multi-modal mobility. In addition, emphasis will be placed on the development of performance measures to ascertain the benefits of the region's improvements.

Freight Planning – H-GAC will work on addressing the recommendations of the Regional Goods Movement Study and the Port Area Mobility Study. Freight facilities and services are strongly linked to regional economic competitiveness and quality of life and, from a transportation perspective, freight shipments continue to grow steadily across all modes. Planning for freight is also an effective means of addressing safety, security, environmental, and air quality issues. A major objective of the freight program will be to initiate and sustain meaningful outreach to the local freight community and to build awareness and expertise among planners and the general public. A freight advisory committee will be the focal point of this effort.

Safety Planning – H-GAC will continue to assess safety data as it is provided to determine the problem areas in terms of traffic safety. Staff will continue work on a regional safety plan based on the data assessments and provide potential countermeasures for consideration. H-GAC will also continue to provide technical support on traffic safety issues, including the support of various outreach initiatives to promote safer driving.

Air Quality Planning - Air quality planning efforts are aimed at finding control strategies and policies to ensure that on-road mobile sources in the eight-county Houston-Galveston-Brazoria nonattainment area comply with federal pollution standards and State Implementation Plan (SIP) requirements. Activities include engaging with regional business/industry leaders, environmental organizations, and federal, state and local governments to develop/review clean air strategies, aiding in the implementation of SIP strategies through demonstration projects and contractual programs.

Livable Centers – H-GAC will continue to provide outreach, training, and technical assistance to local governments and private developers to help achieve an improved connection between development patterns and the transportation system. H-GAC's Livable Centers program provides local governments with opportunities to assess new strategies and utilize best practices in land use/transportation coordination. The Livable Centers program helps to create quality, mixed-use places that provide multi-modal transportation options through studies and implementation projects.

Bicycle and Pedestrian Planning – H-GAC will continue support for the implementation of the Transportation Policy Council's adopted pedestrian and bicycle policy goals and recommended actions. This includes maintenance of the Regional Bikeway Plan, the development of a long-

range bicycle system plan in conjunction with the 2045 RTP, provision of technical support to local governments, and the hosting of training sessions for best practices.

In addition, The US Department of Transportation issued a set of Planning Emphasis Areas to be identified within the UPWP. The lists below illustrate how the MPO addresses these Emphasis Areas:

1. Transition to Performance Based Planning and Programming

- **Subtask 3.4** – Staff conducts an annual assessment of crash statistics to assess the regional crash experience and utilize the information for planning efforts to improve regional traffic safety.
- **Subtask 4.1** - The update of the Regional Transportation Plan (RTP) will continue to assess potential performance measures, which will be utilized in project selection criteria and project prioritization to link RTP goals and objectives.
- **Subtask 4.3** - calls for the development of freight performance measures to gauge system conditions and use, evaluate transportation programs and projects, and help decision-makers to allocate limited resources.
- **Subtask 4.5** – The Congestion Management Process calls for tracking and updating of congestion indices, which will play a role in assessing system performance and for project prioritization in the RTP process.

2. Ensure a Regional Approach to Transportation Planning by Promoting Cooperation and Coordination across Transit Agency, MPO and State Boundaries

- The Houston-Galveston MPO has representation from TxDOT's Beaumont District, which covers the Beaumont MPO, as well as two counties within the Houston-Galveston MPO.
- **Subtask 4.2** – H-GAC Air Quality Program staff meet with their NCTCOG counterparts to share information on regional air quality programs, including vehicle replacement and commute alternative programs.
- **Subtask 5.2** - Evacuation Planning activities include the planning and coordination of regional evacuation activities.

3. Access to Essential Services – as part of the transportation planning process, identify transportation connectivity gaps in access to essential services.

- **Subtask 3.2** - Short-Range Transit Planning activities include the planning and coordination of public transportation projects that operate in underserved areas of

the region, and provide service to low-income, physically and mentally-challenged, and elderly populations that may not have access to an automobile.

- **Subtask 4.1** - The RTP addresses the incorporation of Environmental Justice to identify socially and economically-disadvantaged areas of the region, their proximity to jobs, and access to transit options.
- **Subtask 4.3** - Bicycle/Pedestrian System Planning addresses non-motorized options of travel, including the identification of facilities and proposed improvements to facilities to allow those users safe access to their destinations.

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TASK I

PROGRAM MANAGEMENT

The purposes of the activities listed under Task I are to provide administrative support to the transportation planning process for the eight-county Houston-Galveston Transportation Management Area (TMA) and to facilitate interagency cooperation and coordination.

OBJECTIVES:

- Continue implementation of a Comprehensive, Continuing and Cooperative, regional transportation planning process per 23 USC 134(c).
- Maintain the operations of the MPO, including the fiscal management, handling of personnel matters, and the procurement of equipment and supplies required for operations.
- Develop public information exchange and education programs that increase public interest and participation in ongoing transportation and air quality planning activities.
- Promote public involvement and communication in “best practices” for land use/ transportation interactions.
- Conduct proactive public outreach in development of the Regional Transportation Plan (RTP) including robust public engagement.
- Obtain and maintain computer hardware, software, technical support, and training necessary to maintain transportation and related air quality planning activities.

EXPECTED PRODUCTS:

- New 2-year Unified Planning Work Program (UPWP) for FY 2020-2021.
- Monthly meetings of the Transportation Policy Council (TPC), Technical Advisory Committee (TAC) as well as associated subcommittees and working groups as needed.
- Public information materials and public interaction in a variety of formats, including emails, letters, brochures, websites, surveys, videos, social media postings, etc.
- Monthly regional transportation newsletters resulting in a better-informed public.
- Public outreach events for both updates of current and development of future regional transportation plans (e.g. 2040 Regional Transportation Plan, 2017-2020 Transportation Improvement Plan).

PREVIOUS WORK

- 40 consultant and pass-through contracts were awarded for planning projects, including the thoroughfare plans for Fort Bend and Montgomery Counties, an air quality multi-pollutant

analysis, incident management training, travel demand model support, tour-based truck model development, and the Ports Area Mobility Study.

- MPO staff utilized a 20% goal for the participation of Disadvantaged Business Enterprises in Department of Transportation assisted contracts for 2014-2016. The goal was available for public inspection and comments for forty-five days.
- MPO staff assisted local governments with federal grant applications, including applications under the “TIGER VIII” and “Fastlane” program. These activities are ongoing.
- MPO staff prepared meeting agendas, meeting notices, minutes and agenda item background materials for 10 TPC and TAC meetings during the 2016-2017 fiscal years, as well as annual workshops for TPC and TAC members in 2016 and 2017.
- MPO staff maintained the 2016-2017 UPWP with 13 amendments during the two-year period to reflect changes and additions to included projects and activities. This activity will continue with the 2018-2019 UPWP.
- MPO staff produced the Vision transportation e-newsletter monthly.
- MPO staff produced and distributed the annual Regional Mobility Report.
- MPO staff continued development of the H-GAC YouTube channel to distribute transportation-related video materials and uploaded 73 transportation-related videos during the FY 2016-2017 period.
- Staff participated in meetings of the Association of Metropolitan Planning Organizations (AMPO), Texas Metropolitan Planning Organizations (TEMPO), National Association of Regional Councils (NARC), Texas Association of Regional Councils (TARC), Transportation Research Board (TRB), American Association of State Highway and Transportation Officials (AASHTO), ITS Texas and other transportation planning organizations. This activity is ongoing.

SUBTASK 1.1 Program Support / Unified Planning Work Program (MPO)

This subtask includes all administrative support for the MPO planning program in general, including the financial management of the MPO’s operations, contract management, departmental reporting, the provision of technical assistance to member agencies, and participation in state and national organizations involved in transportation planning and development. Approval of out-of-state travel will be sought from the Texas Department of Transportation prior to travel.

This subtask also includes the development and maintenance of the Unified Planning Work Program (UPWP), which describes the transportation plans and programs and the transportation-related air quality planning activities conducted during the fiscal year(s) regardless of funding sources or agencies conducting these activities.

1.1a Program Support & Administration

- Manage contracts and agreements between the MPO and participating agencies or subcontractors.
- Maintain financial records for departmental contracts and ensure payment of invoices.
- Maintain the federal certification of the Houston-Galveston Transportation Management Area's transportation planning process, related requirements associated with the budgeting and expenditures of Federal, State, and local funding, including the Annual Performance & Expenditure Report (APER), the Disadvantaged Business Enterprise goal development, and self-certification assurances.
- Provide technical assistance to local governments, public agencies, other qualified grant sponsors, and staff regarding federal grant applications, TRACS, transportation planning activities, and transportation management issues.
- Provide technical assistance to the Transportation Policy Council (TPC), the Technical Advisory Committee (TAC), and other associated committees and subcommittees. Technical assistance includes preparing meeting materials, meeting notices, maintaining meeting records, an annual training workshop for the respective members, and other assistance as directed.
- Provide food and non-alcoholic beverages, pending TxDOT approval, at selected meetings and events when deemed appropriate.
- Conduct non-lobbying participation in the Association of Metropolitan Planning Organizations (AMPO), Texas Metropolitan Planning Organizations (TEMPO), National Association of Regional Councils (NARC), Texas Association of Regional Councils (TARC), Transportation Research Board (TRB), American Association of State Highway and Transportation Officials (AASHTO), ITS Texas, and other organizations that enhance the planning process. This may include agency memberships in these organizations (individual memberships are not a reimbursable expense).
- Provide analysis of State and federal laws, regulations, and legislation for TPC and TAC members, and local government officials to aid them in the application of regional transportation policy strategies.
- Maintain historical data, publications, and map warehousing/archive libraries, along with an online-query system for public research and access to historical information.
- The acquisition of supplies, services, software, and equipment to support MPO operations. Equipment purchases over \$5,000 per unit (including the cost of any modifications, attachments, accessories or auxiliary apparatus necessary to make it usable for the purpose for which it is acquired) require prior State and Federal approval.
- Engage in transportation planning-related travel, with prior State and Federal Approval for all travel taking place out-of-state.

- Acquire legal defense/advice with prior State and Federal approval for conformity determinations and other issues as determined to be necessary and reasonable to carry out the metropolitan planning process per 23 CFR 420.113.

1.1b Unified Planning Work Program Development

- Maintain the 2018-2019 Unified Planning Work Program (UPWP), reflecting current plans, programs, and regional priorities, by amendments approved by the TPC, TxDOT, FHWA, and FTA.
- Develop and adopt the 2020-2021 Unified Planning Work Program per schedule determined by staff in coordination with other transportation partners.

SUBTASK 1.2 Public Involvement and Outreach Program

MPO staff engages in an ongoing, inclusive, and active public involvement process for transportation planning. The goals and objectives of the public involvement process are described in the Public Participation Plan, with the primary objective to provide timely, accurate, and complete information to the public on important transportation issues and solicit feedback as appropriate. Fulfilling this objective requires the continuous development of visualization techniques, educational materials, transportation websites, newsletters, and other public outreach activities.

1.2a Public Involvement

- Conduct public outreach activities and provide administrative and outreach support for public meetings that correspond with current and future transportation projects, plans, and studies by publishing legal notices, press releases and advertisements, conducting public meeting arrangements, slideshow presentation and production, and development of educational materials for distribution at the meetings.
- Provide public information on regional transportation issues through a multitude of outreach activities including public meetings, television, radio, digital and social media, and print.
- Solicit public comments on transportation programs, projects, and policies and to respond to public comment in a timely fashion.
- Create graphics and other visualization components to deliver information to interested parties through digital media communications including websites, webinars, social media, video and audio technologies, and photography.

- Develop and maintain listservs and community contact lists to ensure adequate distribution and notices of public meetings and materials to interested parties.
- Provide live-streaming of Transportation Policy Committee meetings and other meetings and events as determined.
- Develop partnerships with community organizations to provide public information on regional transportation issues, projects, and studies.
- A consultant will be utilized to assist with the purchase of media and advertisements for hurricane preparedness media campaign.

1.2b Policy and Government Affairs

- Provide MPO comments to federal and state agencies regarding proposed rules as part of the rule-making process.
- Organize seminars, peer exchanges, and peer reviews as necessary to facilitate communication between MPOs, federal, state, and local agencies.
- Provide food and non-alcoholic beverages, pending TxDOT approval, at selected meetings and events when deemed appropriate.
- Provide outreach support including briefings and printed materials for policy-makers on federal and state issues relevant to the regional transportation planning process.

TASK I FUNDING SUMMARY TABLE

Task 1 Funding Summary Table

TASK 1 - FY 2018	Task 1.1	Task 1.2	Task 1 Total
RESPONSIBLE AGENCY	MPO	MPO	
FHWA-FTA TPF	\$ 1,961,268	\$ 996,691	\$ 2,957,959
STP - Cat 7			
TxDOT State Funds			
FTA 5304/5307/5309/5339			
Other Local			
TOTAL	\$ 1,961,268	\$ 996,691	\$ 2,957,959
TASK 1 - FY 2019	Task 1.1	Task 1.2	Task 1 Total
RESPONSIBLE AGENCY	MPO	MPO	
FHWA-FTA TPF	\$ 2,136,325	\$ 1,517,764	\$ 3,654,089
STP - Cat 7			
TxDOT State Funds			
FTA 5304/5307/5309/5339			
Other Local			
TOTAL	\$ 2,136,325	\$ 1,517,764	\$ 3,654,089

TxDOT will apply transportation development credits sufficient to provide the match for FHWA PL-112 and FTA Section 5303 programs. As the credits reflect neither cash nor man-hours, they are not reflected in the funding tables.

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TASK II

DATA DEVELOPMENT AND MAINTENANCE

The purposes of the activities listed under Task II are to collect, update, model and maintain the basis data and tools required for executing the planning activities described in this document.

OBJECTIVES:

- To collect, process, and analyze socioeconomic data necessary to develop and implement regional transportation plans and systems.
- To develop and maintain advanced state-of-the-practice travel demand modeling tools and explore advanced practice modeling methods that enhances the region's capabilities for regional, sub regional, and corridor planning and analysis.
- To participate in the ongoing data collection efforts of other transportation agencies in the region and expedite the sharing of roadway inventory data and candidate roadway project information between transportation agencies.
- To maintain a regional database clearinghouse on the H-GAC Transportation web pages to provide easier access to the large quantities of data generated by the various transportation agencies.

EXPECTED PRODUCTS:

- Socioeconomic databases to be used for transportation planning and modeling activities.
- Annual releases of population, employment and land use forecast data for public use.
- Transportation model validations based on revised freeway traffic counts and speed data for.
- Advanced-practice regional travel models that incorporate updated modeling practices and theories as well as new travel survey data.
- Cartographic materials in support of public outreach and environmental justice programs.
- The review and assessment of traffic data used in base year networks, including Automated Vehicle Identification (AVI), Wavetronic, Bluetooth, private data and Automatic Traffic Recorder (ATR) data resulting in an improved regional transportation modeling network.
- Emissions analyses of transportation projects using the MOVES model.

PREVIOUS WORK

- Monitored releases of aggregate socioeconomic data from federal and state agencies, and other public and private sources and maintained and updated relevant databases with the provided information.
- Updated the model Buildings and model Parcels base year data from 2010 to 2014, by collecting and processing the 2014 County Appraisal data. H-GAC Staff will continue maintaining and updating databases with such information.
- Updated the Annual Regional Growth forecast demographic and economic forecasting model.
- Implemented a series of modifications and updates to the H-GAC's land-use micro forecasting model. This activity is ongoing.
- Developed a scenario-based, regionally integrated land use-transportation small-area population and employment forecast.
- Enhanced the GIS capabilities that support Cube Voyager modeling software through customized menus, macros and programs to perform some repetitive tasks of the 4-step modeling processes.
- Enhanced mapping and plotting techniques for display and evaluation of transportation tasks through the use of Geographic Information System (GIS).
- Provided modeling supports for conformity, and various corridor studies within the region using GIS and Cube Voyager GIS functionalities.
- Calculated population within a quarter mile buffer of regional transit networks with results displayed in an ArcGIS map.
- Utilized GIS to support planning activities of the agency and to provide technical support and assistance to member agencies.
- Began work on a Tour-Based-Truck model. This activity is ongoing.
- Conducted traffic speed and count collection on the freeway system to validate travel demand models.
- Staff continued to provide both GIS and modeling support for the regional conformity analysis through added capacity projects development, highway and transit networks development and coding, and the modeling of the various required scenario years.
- Provided travel modeling and forecast technical assistance for a corridor study of Kirkwood Drive in city of Meadows Place.

SUBTASK 2.1 Socioeconomic Data and Models

Subtask 2.1 addresses the ongoing development of socioeconomic data and socioeconomic forecasting models, along with informational services and analytical support of Transportation planning activities and studies.

2.1a Socioeconomic Data

- Staff will continue monitoring releases of aggregate socioeconomic data from federal and state agencies, and other public and private sources. Staff will continue maintaining and updating databases with such information.
- Staff will continue researching, obtaining, and processing information on the location, timing, and details of planned development projects in the region. Staff will continue maintaining and updating databases with such information.
- Staff will continue researching, obtaining, processing, and synthesizing disaggregate information on parcels, buildings, businesses, and households in the region. Staff will continue maintaining and updating databases with such information.
- Staff will redevelop the current Adobe Flex based Eco-Logical Tool within the JavaScript framework to reproduce and enhance its current functionality.

2.1b Socioeconomic Models

- Staff will continue improving and enhancing the existing operational version of the demographic and economic macro forecasting model.
- Staff will continue improving and enhancing the existing operational version of the land-use micro forecasting model.
- Staff, in cooperation with the Travel Demand Modeling group, will develop scenario-based regional integrated “land use-transportation” small-area population and employment forecasts for transportation planning purposes.
- Staff will institute high, medium, and low migration scenarios, which produces three alternatives sets of population and employment control totals.
- Staff will develop person and household-level forecast data as an input to the travel demand model.

2.1c Information Services and Analytical Support

- Staff will continue improving and enhancing the existing web-based mapping and database query applications allowing easy access to socioeconomic data by transportation partners and public.
- Staff will provide informational services and analytical support regional transportation agencies, local governments and their consultants in support of regional transportation planning activities and studies.

SUBTASK 2.2 Physical Features, Data, & Modeling Support (MPO)

Subtask 2.2 describes the ongoing development, maintenance, and training activities associated with travel demand data development, mapping, and modeling. This subtask describes efforts directed toward the continued development, enhancement, and maintenance of the MPO's travel demand models, including the physical collection, entry, preliminary tabulation, GIS-based mapping, maintenance, and analysis of transportation-related data.

2.2a Transportation Data & Modeling Support

- Use geographic information systems (GIS) to develop menus, macros, programs, and user manuals needed to display and evaluate transportation tasks.
- Maintain, refine, and enhance the data required to operate the travel demand models, including the road network, segment nodes, and traffic analysis zones.
- Provide programming support for modeling and GIS applications.
- Create maps and other GIS related publications as needed.
- Maintain the GIS based Project Viewer for TIP and RTP projects.
- Apply GIS and cartographic modeling techniques to enhance spatial analysis of demographic and travel data.
- Develop and support a region traffic data viewer.
- Attend meetings and participate on committees of the GIS user groups, network users groups and other technical support groups as needed.
- Continue staff training on Cube suite of software.
- A consultant will be utilized to determine the method, cost and design for collecting household origin and destination data. These data will be used for updating the regional travel demand model (TPF).
- A consultant will be utilized to conduct onboard origin-destination survey for transit services operated by regional transit providers (TPF).
- Staff will acquire roadway speed data and develop an interface to facilitate its use.

2.2b Travel Demand Forecasting

- A consultant will be utilized to assist with technical support for the implementation and improvement of the Cube model set (Transportation Planning Funds (TPF)).
- A consultant will be utilized to assist with the collection of speed, classification and count data on select on-system and off-system roadways within the MPO region (TPF).
- Support development of the TIP, RTP, Subregional Planning, and other studies as needed, including but not limited to toll revenue studies, member agency mobility plans, and environmental justice assessments.
- A consultant will be utilized to assist with the review and assessment of existing evacuation analysis tools for application in the MPO region (TPF).
- Review and assess demographic data and other model inputs.

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- Continue development of a mesoscopic model for use in corridor and regional analyses.
- Continue work on air quality conformity to demonstrate that projected regional emissions from the Regional Transportation Plan do not exceed the region's motor vehicle emissions budgets stated in the State Implementation Plan.
- A consultant will be utilized to assist with the continued development of a Cube Cargo based tour truck model (TPF).
- A consultant will be utilized to assist with and assessment of data needs and development of quantitative tools to create a model-based approach to analyzing non-motorized demand (TPF).
- A consultant will be utilized to assist with the calibration and validation of the regional transit model set using data from the 2017 transit onboard survey (TPF).
- A consultant will be utilized to assist with participate in a pooled funding project with AASHTO, FHWA, and other partners for the development of a quick-running strategic model capable of assessing emerging challenges such as shared mobility, automated vehicles, and roadway pricing policies (TPF).
- Develop a regional base map for use with the Statewide Traffic Analysis and Reporting Systems (STARS II) to input data into the federal Highway Performance Monitoring System.

TASK II FUNDING SUMMARY TABLE

Task 2 Funding Summary Table

TASK 2 - FY 2018	Task 2.1	Task 2.2	Task 2 Total
RESPONSIBLE AGENCY	MPO	MPO	
FHWA-FTA TPF	\$ 981,285	\$ 3,342,167	\$ 4,323,452
STP - Cat 7		\$ -	\$ -
TxDOT State Funds		\$ -	\$ -
FTA 5304/5307/5309/5339			\$ -
Other Local		\$ -	\$ -
TOTAL	\$ 981,285	\$ 3,357,167	\$ 4,338,452
TASK 2 - FY 2019	Task 2.1	Task 2.2	Task 2 Total
RESPONSIBLE AGENCY	MPO	MPO	
FHWA-FTA TPF	\$ 1,006,583	\$ 2,808,635	\$ 3,815,218
STP - Cat 7		\$ -	\$ -
TxDOT State Funds		\$ -	\$ -
FTA 5304/5307/5309/5339			\$ -
Other Local		\$ -	\$ -
TOTAL	\$ 1,006,583	\$ 2,808,635	\$ 3,815,218

TxDOT will apply transportation development credits sufficient to provide the match for FHWA PL-112 and FTA Section 5303 programs. As the credits reflect neither cash nor man-hours, they are not reflected in the funding tables.

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TASK III

SHORT-RANGE PLANNING

The work elements contained in Task III include the development of the Transportation Improvement Program (TIP), the Ten-Year Transportation Plan, as well as transit feasibility studies, and operations planning. Short-range planning efforts will also be focused on the continued coordination and development of transit and Transportation Demand Management (TDM) projects. Task III also includes ongoing maintenance of the Regional Intelligent Transportation System (ITS), as well as efforts to improve traffic safety in the region and evacuation planning.

OBJECTIVES:

- Support the development of short-range transportation planning consistent with federal planning and air quality requirements.
- Facilitate implementation of transportation projects and programs in the TIP through coordination and consultation with local implementing agencies.
- Involve the private sector in the planning of transit services and the joint development of transit facilities.
- Maintain and enhance the transportation project database.
- Revise and maintain the Regional ITS Architecture.
- Identify best practices and funding for enhanced regional incident management.
- Continue support for TDM activities that are consistent with recommendations from earlier planning studies.
- Continue to seek improved mobility options for people who have limited mobility choices today. That group includes youth, seniors, persons with disabilities, and others. This objective will be accomplished by improving access to jobs, training opportunities, and educational, social, medical, and recreational activities.
- To expand our knowledge of the quantity, severity, and causes of traffic accidents in the region and look for cost effective solutions.
- Assist local stakeholders with coordination of evacuation activities.

EXPECTED PRODUCTS:

- The development of TIP and Regional Transportation Plan (RTP) project tracking system.
- Modification of the existing 2017-20 TIP.
- Development of the 2019-2022 TIP.

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Task III – Short Range Planning

- Maintenance of the 10-year plan for the use of funding allocated to the region, consistent with the TIP and RTP.
- Continued enhancement of the Call for Projects and Project Evaluation processes.
- The provision of assistance to local governments for environmental analyses of projects.
- An update to the regional ITS Architecture.
- The implementation of enhanced freeway incident management programs in the region.
- The development of a traffic safety plan which is to be integrated into the 2040 RTP through amendment or update.
- An updated of the annual State of Safety in the Region reports outlining the traffic safety situation in the region.
- The support of state and local government hurricane evacuation planning, coordination, and implementation efforts.

PREVIOUS WORK

- Staff procured a consultant to assist with updated project database. Migration to the new online platform will occur in FY2017 and continue into FY 2018.
- Staff supported the work of the TIP Subcommittee and TAC, resulting in Policy Council approval of project selections from the 2015 Call for Projects in October and November 2015.
- Public meetings were conducted through in FY 2016 for major amendments to the 2015-2018 TIP and the draft 2017-2020 TIP.
- The 2017-2020 TIP was approved by the TPC in May and submitted for inclusion into the Statewide Transportation Improvement Plan (STIP).
- H-GAC (as fiscal agent for the MPO) established an agreement with Google Transit on behalf of smaller transit operators in the region and began implementation of a regional trip planner.
- Staff updated regional demographic data, revised the transit need index methodology and maps showing areas of highest transit needs, locations of poverty households and persons with Limited English Proficiency (LEP). This information was incorporated into the Regionally Coordinated Transportation Plan (RCTP) update.
- Staff assisted local agencies and their consultants with crash data assessments.
- Staff completed The Regional State of Safety Report in 2016 which provides a compendium of transportation safety statistics from 2009 through 2015. Staff conducted an update of this information in 2017.
- Staff participated in hurricane evacuation outreach events and coordination meetings with local governments throughout the FY 2016.

SUBTASK 3.1 Transportation Project Programming

As the MPO, H-GAC is responsible for the coordination and programming of federal and state transportation funds allocated to the region with the state, providers of public transportation and local governments. In addition, H-GAC plans and programs include all regionally significant transportation investments, regardless of funding source.

3.1a Transportation Improvement Program

The Transportation Improvement Program (TIP) is a cooperatively-developed, four-year program outlining transit, highway, and traffic improvements, as well as other transportation- and air quality-related activities within the MPO planning area. The purpose of the TIP is to inform the public regarding the commitment of funds to implement transportation improvement projects, including those selected by the TPC. The TIP must be consistent with the Regional Transportation Plan (see Subtask 4.1), conform to adopted vehicle emissions reduction targets, and be financially constrained within reasonable estimates of federal, state, and local revenues for the four-year time frame.

- Develop and maintain the Transportation Improvement Program, including development of the initial document and required amendments.
- Analyze proposed amendments to the current TIP for conformity implications, financial impact, and administrative changes.

3.1b Ten-Year Transportation Plan

H-GAC's MPO Transportation Policy Council also makes funding commitments beyond the four years of the TIP. These commitments, along with those made by the state, are included in a Ten-Year Plan. This document reflects MPO action on the TIP and RTP and is coordinated with TxDOT's 10-Year Unified Transportation Program (UTP).

- Consistent with the TIP and RTP, maintain a 10-year plan for the use of funding allocated to the region.
- Produce electronic and printed materials to illustrate the projects and programs funded in the Ten-Year Plan.

3.1c Project Evaluation and Prioritization

The MPO works with the state and project sponsors to consider project funding requests using evaluation criteria developed through the coordinated planning process. This includes consideration of project benefits using quantitative analysis and qualitative factors, anticipated project costs, and the suitability and readiness of projects to be successfully delivered under federal and state requirements.

- Reassess and modify Call for Projects processes, including submission requirements, readiness determination, timing, and project evaluation criteria.
- A consultant will be utilized to assist in the development and utilization of benefit/cost analysis (BCA) and economic impact analysis (EIA) techniques to support the evaluation of project funding proposals (Transportation Planning Funds (TPF)).
- A consultant will be utilized as necessary to assist with project solicitations for the TIP and Ten-Year Plan (TPF).
- Coordinate with TxDOT regarding statewide project evaluation and selection processes.
- Provide presentations and conduct workshops to inform potential project sponsors regarding project funding opportunities and evaluation requirements.

3.1d Project Tracking, Monitoring and Support

As the MPO, H-GAC maintains a database of project information to support production of TIP, Ten-Year Plan and RTP documentation and to track the progress of projects toward implementation. The project database is linked to internal and external data sources and provides content to the H-GAC and partner agency websites. H-GAC requires sponsors to provide regular updates on the status of their projects and maintains systems to collect and analyze this information. H-GAC also conducts project development educational workshops to share information and best-practices with partner agencies with the aim of improving on-time on-budget project delivery.

- A consultant will be utilized to continue the development and improvement of the online project information database to allow for enhanced project tracking and access by member agencies (TPF).
- Track and report on the development status of projects using information from available databases and sponsor data requests.
- Provide planning assistance to local governments in the development of candidate and selected TIP projects with the objective of accelerating project delivery and reducing unanticipated changes in project scope and cost.
- Staff will utilize software to continue the development and improvement of the online project information database to allow for enhanced project tracking and access by member agencies.

SUBTASK 3.2 Planning Support for Transit Service Implementation

The MPO provides a forum for coordination between the providers of public transportation within the region and the development of new and expanded transit services. These short-term focused efforts assist transit providers and local government partners in their implementation of priorities established in the Regional Transportation Plan and other regional transit planning products. This subtask includes the identification of eligible planning activities performed by transit providers using Urbanized Area (5307) federal transit formula funds.

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Task III – Short Range Planning

- Provide planning support for the Commuter and Transit Pilot Program, including evaluation/monitoring of program design and performance and coordination with potential service providers.
- A consultant will be utilized to evaluate the effectiveness of new innovative mobility options for local governments and transit agencies that promote and enhance regional connectivity (TPF).
- Support designated recipients of FTA formula funds in their annual development of programs of projects. Current designated recipients are shown below.

Area	Designated Recipient(s)
Houston UZA	METRO
Conroe--The Woodlands UZA	City of Conroe The Woodlands Township
Small Urban UZAs and Rural	TxDOT

- Planning projects performed by transit providers using FTA 5307 funds. Eligible project activities include, but are not limited to, system planning, project planning and preliminary engineering, maintenance plans, asset management plans, safety plans, and management and operation studies. The following table reflects both the ongoing work and special projects (e.g. special planning studies, major data collection/surveys, planning for specific capital projects, etc.) conducted by regional transit agencies.

Transit Provider	2018 Planning Budget	2019 Planning Budget	Ongoing Planning Activities	Special Planning Activities
Gulf Coast Center {Lake Jackson/Angleton UZA}	\$102,800	\$102,800	General transit service planning including RTP, TIP, and UPWP submittals. Grant development and post-award technical support. Participate on H-GAC transportation planning committees. Evaluate funded projects, including federal compliance.	Planning for Southern Brazoria County Administration/Fleet Storage Facility.

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Harris County Transit {Houston UZA}	\$864,000	\$900,000	Grant management, routine service planning, mapping and project planning, interagency and internal data collection. Training for Federal requirements and operational development; engineering and design studies for sidewalk and crosswalk improvements.	On board mystery shopper, quality assurance checks; expansion of services for RIDES. Additional trainings for federal compliance, safety planning for bus routes and bus operations. Contractor safety plans and safety monitoring.
Gulf Coast Center {Texas City UZA}	\$73,200	\$73,200	General transit service planning including RTP, TIP, and UPWP submittals. Grant development and post-award technical support. Participate on H-GAC transportation planning committees. Evaluate funded projects, including federal compliance.	
City of Conroe {Conroe/Woodlands UZA}	\$224,000	\$224,000	Grant management and oversight, transit, capital and finance planning, program coordination and administration, compliance, procurement, implementation and oversight	Service expansion planning assistance, transit asset management and safety management plans
The Woodlands Township {Conroe/Woodlands UZA}	\$220,000	\$220,000	Data collection & analysis related to The Woodlands Express & Town Center Trolleys, UZA Administration, Marketing	Capital Projects related to transit enhancements for bike/ped connectivity to Park & Ride locations
Fort Bend County Transit {Houston UZA}	\$700,825	\$711,050	General planning activities related to financial, operational, marketing and reporting activities. Routine transit service studies	Phase II Long/Short Range Plan Update, Continuation of Rail Study with Gulf Coast Rail District.

SUBTASK 3.3 Regional Incident Management/Operations and Intelligent Transportation Systems (ITS) Planning

The aim of Regional Operations Planning is to improve efficiency and safety of the transportation system in the area through deployment of advanced technologies and systems management techniques. Operations strategies and ITS technologies offer benefits ranging from improved safety on the existing transportation infrastructure to enhanced travel information to users of the transportation facilities.

3.3a ITS

The MPO has been tasked with the development and maintenance of the ITS Architecture, which provides a blueprint on how the various ITS elements implemented throughout the region interact with each other to allow for improved system operations. With changes in technology, this Architecture needs revisiting to better describe the activity and connectivity of these systems.

- Maintain and revise information on the regional ITS Architecture when needed.
- A consultant will be utilized to update the regional ITS Architecture and other ITS-related documents based on Regional Transportation Systems Management and Operations (TSMO) Self-Assessment (TPF).
- Distribute planning information regarding ITS architecture to public sector entities in the TMA involved in the implementation of ITS.

3.3b Incident Management

Incident management activities have been recognized as a critical component in congestion management. The MPO will work with various stakeholders to implement the recommendations from the Regional Incident Management Strategic Plan including freeway surveillance, Quick Clearance increased presence of law enforcement, and program coordination.

- Coordinate and partner with Houston TranStar to provide support for regional incident management activities.
- A consultant will be utilized to support training for regional incident management responders based on the FHWA's Strategic Highway Research Program 2 (SHRP2).
- Continue coordination with local governments and agencies to plan for the implementation of expanded incident management activities throughout the region.

SUBTASK 3.4 Safety Planning

This subtask promotes the continued pursuit and analysis of safety issues as they relate to our long-range planning efforts. These efforts range from the collection of crash data to the sponsoring of planning studies and initiatives to address high crash locations. A multi-disciplinary Regional Safety Council has been developed to bring interested and involved parties to the table to address regional safety in a holistic manner.

3.4a Safety Data Analysis, Reporting, and Planning

- Produce an annual State of Safety in the Region report, summarizing the regional crash experience and various efforts to address traffic-related crashes in the region.
- Develop a Regional Transportation Safety Plan to identify areas of concern in transportation safety, appropriate countermeasures for addressing safety issues, and funding sources for remediating these issues (to be incorporated into the RTP).
- Research and analyze crash data from TxDOT's Crash Record Information System (CRIS) and assist agencies in assessing problem locations with CRIS data.
- A consultant will be utilized to conduct safety analysis at pilot intersection locations that have high crash density (TPF).

3.4b Safety Outreach

- Conduct non-lobbying participation in local, state, and national initiatives involved in promoting increased traffic safety.
- Coordinate trainings and workshops on safety-related issues for agencies and regional implementers, if available or needed.
- A consultant will be utilized to assist in conducting public outreach for traffic safety in the region, including the development and delivery of education and information to the public about traffic safety matters, including but not limited to bicycling, distracted driving, driving while intoxicated, safety around commercial vehicles, and motorcycle safety. Activities will include the development of informational handouts, the development of public safety announcements on the radio and the dissemination of information on bicycle safety techniques to local governments, schools, and other interested organizations (Surface Transportation Program (STP)).
- Conduct consultant contract management and oversight activities for traffic safety public outreach project.

SUBTASK 3.5 Evacuation Planning

The massive evacuation from the Houston metropolitan area in response to Hurricane Rita brought into sharp focus the difficulties in evacuating the metropolitan region efficiently and safely. Past planning activities have focused on traffic operations, communications and logistics. Operational improvements have focused on accident detection and management, changes in transit vehicle routing and scheduling, the elimination of bottlenecks at specific intersections and contra- flow lane operations. Current activities have included improving communications with the public and within the emergency response community.

- Continue development and maintenance of the Web Based Evacuation Map, which allows for the tracking by local governments of law enforcement and transportation resource deployments during a hurricane evacuation.
- Update and maintain the Zip Zone and Evacuation Route maps and provide to interested parties as requested.
- Provide on-going support and training to local governments and State regarding evacuation planning.

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Task III – Short Range Planning

TASK III FUNDING SUMMARY TABLE

Task 3 Funding Summary Table

TASK 3 - FY 2018	Task 3.1	Task 3.2	Task 3.3	Task 3.4	Task 3.5	Task 3 Total
RESPONSIBLE AGENCY	MPO	MPO/LOCAL TRANSIT AGENCIES	MPO	MPO	MPO	
FHWA-FTA TPF	\$ 873,562	\$ 243,479	\$ 356,469	\$ 267,003	\$ 65,064	\$ 1,805,578
STP - Cat 7	\$ -	\$ -	\$ -	\$ 325,000		\$ 325,000
TxDOT State Funds	\$ -	\$ -	\$ 9,900	\$ -		\$ 9,900
FTA 5304/5307/5309/5339		\$ 2,184,825				\$ 2,184,825
Other Local	\$ -	\$ -	\$ -	\$ -		\$ -
TOTAL	\$ 873,562	\$ 2,428,304	\$ 366,369	\$ 592,003	\$ 65,064	\$ 4,325,303
TASK 3 - FY 2019	Task 3.1	Task 3.2	Task 3.3	Task 3.4	Task 3.5	Task 3 Total
RESPONSIBLE AGENCY	MPO	MPO/LOCAL TRANSIT AGENCIES	MPO	MPO	MPO	
FHWA-FTA TPF	\$ 626,887	\$ 64,569	\$ 78,461	\$ 264,219	\$ 51,640	\$ 1,085,776
STP - Cat 7	\$ -	\$ -	\$ -	\$ 733,000	\$ -	\$ 733,000
TxDOT State Funds	\$ -	\$ -	\$ 9,900	\$ -	\$ -	\$ 9,900
FTA 5304/5307/5309/5339	\$ -	\$ 2,231,050	\$ -	\$ -	\$ -	\$ 2,231,050
Other Local	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL	\$ 626,887	\$ 2,295,619	\$ 88,361	\$ 997,219	\$ 51,640	\$ 4,059,726

TxDOT will apply transportation development credits sufficient to provide the match for FHWA PL-112 and FTA Section 5303 programs. As the credits reflect neither cash nor man-hours, they are not reflected in the funding tables.

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TASK IV

LONG-RANGE PLANNING

The work elements contained in Task IV include the development and maintenance of the Regional Transportation Plan (RTP) as well as ongoing initiatives regarding transportation-related air quality planning, regional bicycle and pedestrian planning, activities involving the MPO's Livable Centers program, and Transportation Performance Management (TPM) activities.

OBJECTIVES

- Develop an update to the Regional Transportation Plan.
- Develop regional, subregional, and local area plans; continued emphasis on analyses of alternative land use and transportation system development scenarios, safety and security related projects, goods movement, and regional public transportation needs.
- Develop performance measures used to gauge potential projects (project selection), project performance (project evaluation), plan performance (plan evaluation), and planning process performance (planning process evaluation).
- Address federal performance based planning requirements including the adoption of performance measure targets in the areas of system condition, safety, congestion and air quality, and freight.
- To comply with the Clean Air Act as outlined in the State Implementation Plan (SIP), its development and revisions, and to provide implementation assistance for local governments.
- To provide local governments with information regarding the strategies, alternatives, implications, and consequences of SIP measures.
- To develop and/or update mobile emission inventories and participate in the establishment of emissions budgets for ozone precursors emitted by the region's transportation system.
- To calculate the conformity of the RTP to the air quality emission budgets from the State Implementation Plan.
- Promotion of public involvement and communication in 'best practices' for land use/transportation coordination.
- Development of additional Livable Centers plans and projects, assisting local governments in creating quality mixed-use places that reduce dependence on single-occupancy vehicles.
- Encourage strategies designed to decrease the share of trips made by single-occupancy vehicles and promote alternatives such as walking, biking, telework, vanpool, and carpool.
- Integrate and maintain the congestion management process (CMP) into the RTP.

- Develop an update to H-GAC Regional Thoroughfare Plan.

EXPECTED PRODUCTS

- 2045 Regional Transportation Plan (RTP) update, which will consider the prioritization of candidate projects for inclusion into the plan's recommendations, update future revenue estimates, and consider alternative funding scenarios.
- Update of financial models used in development the RTP.
- Regional project sponsor assistance with project development and environmental mitigation planning activities.
- The coordination and selection of long-range targets for performance measures identified in the FAST Act.
- Participation in State Implementation Plan (SIP) development, coordination, and implementation efforts.
- Support of air quality projects for local governments.
- Documentation of efforts to meet the motor vehicle emission budgets, including analysis of project implementation and prioritization, capacity enhancements, environmental status, environmental justice, performance measures, scenario planning, and costs.
- Update to the Regional Thoroughfare Plan.
- Bicycle/Pedestrian Special District study to assist local areas in identifying areas with high potential to increase the walking and bike mode share.
- Livable Centers studies to assist local areas in creating walkable, mixed-use places that provide transportation options.

PREVIOUS WORK

- Update of the revenue forecast model used for the RTP.
- Conducted analysis of value capture of transportation investments along the US 290/Hempstead corridor.
- Completed major thoroughfare plan for the counties of Montgomery and Fort Bend.
- Completed a study to identify post-trip transportation needs (including passenger pick-up, taxi/limousine, rental car, public transportation) for passengers utilizing the proposed High Speed Rail system.
- MPO staff assisted with the Bicycle Master Plan for the City of Houston was completed during FY 2016 and all deliverables were received
- The Congestion Management Plan (CMP) Significant roadway network map was revised to reflect roadway classification upgrades and new roadway development in accordance

with proposed federal guidance.

- Assisted in the monitoring and evaluation of transportation system management (TSM) and transportation demand management (TDM) solution effectiveness as they related to congestion mitigation, air quality benefits, and safety.
- Provided ongoing support to the Regional Air Quality Planning Advisory Committee (RAQPAC), its Executive Committee and other air quality subcommittees.
- Determined the emissions benefits and cost effectiveness for VMEPs in the upcoming 2019 – 2020 Transportation Improvement Program.
- Completed and published the 2015 Air Quality Initiatives Report. The final version was completed and distributed in May.
- Organized a workshop in partnership with TxDOT to discuss how TxDOT works with local governments to improve pedestrian/bicycle mobility.
- An online form was incorporated into H-GAC's Regional Bikeway Viewer to allow local governments to report updates to bikeways in their community. Updates will continue to be made to the Regional Bikeway Viewer as necessary.
- Completed a Special Districts study in the Greenway Plaza area of Houston to identify specific infrastructure implementation projects that will improve pedestrian and bicyclist mobility in areas where significant opportunities to replace automobile trips with other modes exist
- Completed three Livable Centers studies in the Kashmere Gardens, Museum Park and Hobby Area.
- Began three additional Livable Centers studies in the Mont Belvieu, Westchase and Spring Branch areas.

SUBTASK 4.1 Investment Priorities and Project Planning

4.1a Regional Transportation Plan (RTP) Development

As the designated MPO for the region, H-GAC is responsible for developing and maintaining a long-range transportation plan that establishes goals and objectives, articulates priority areas of investment, and coordinates local and state efforts to improve the performance of the regional transportation system. Key focus areas for the RTP include: development of vision and goal statements; use of performance measures for evaluating current and future system performance and investment effectiveness; an assessment of regional transit needs and opportunities; environmental considerations and implications for project development; and consideration of infrastructure needs to facilitate the movement of goods as well as people.

- Develop an update to the Regional Transportation Plan, including revised demographic and economic forecast scenarios, estimates of reasonably
- available revenue, investment

priorities for projects and programs, and determination of conformity with regional air quality goals;

- Monitor changes to planning and project assumptions and amend the RTP as necessary;
- A consultant will be utilized for the evaluation of potential high capacity transit services and service concepts, including discussion of performance outcomes and concepts for use in development of 2045 Regional Transportation Plan (TPF).

4.1b Financial Planning

The MPO undertakes several efforts to understand federal state and local investment in transportation and to support the development of financially constrained plans and programs. This includes the development of financial models and the study of specific revenue measures and financing strategies to inform regional and local decision-making.

- Consultant will be utilized to maintain and update financial models to reflect data from current financial reports and reasonable future revenue sources.
- Provide planning support to local governments and transportation agencies to evaluate the use of innovative financing strategies.
- Consider and recommend opportunities to use transportation development credits to advance regional investment priorities.

4.1c Project Development and Mitigation Planning

The MPO supports the sponsor evaluation of project alternatives during the planning and environmental review stages of project development to ensure consistency with the RTP and consider regional approaches to the mitigation of impacts.

- Provide planning assistance to TxDOT and local governments in the development of pre-environmental and environmental analyses related to proposed projects and support the enhancement of transportation planning and environmental linkages. Work shall not include any project engineering and design.
- A consultant will be utilized to maintain and update the Eco-Logical Environmental Screening tool (Transportation Planning Funds (TPF)).
- Coordinate with the state, resource agencies and local governments to prepare Regional Mitigation Plans and Implementation Strategies.
- Serve as a resource for planning partners, counties, subrecipients, etc. in meeting Title VI, Environmental Justice (EJ), and public participation mandates.
- Develop a report on environmental justice planning activities and analysis.

SUBTASK 4.2 Air Quality Planning

Air Quality Planning supports all regional efforts to comply with federal air quality standards, while seeking to preserve the region's transportation needs and economic vitality. The

MPO works closely with federal, state, and local officials, planning and regulatory agencies, and area stakeholders to develop on-road mobile emission budgets and emission reduction strategies to demonstrate attainment, model transportation conformity, and monitor and track TCMs, SIP weight of evidence measures, and VMEPs. Some of these measures when needed are included in the on-road emission inventories for the Reasonable Further Progress State Implementation Plan (SIP) and for the Attainment Demonstration SIP. H-GAC provides support and guidance for regional congestion mitigation and air quality improvement programs for compliance with the SIP and federal clean air requirements.

- Develop, coordinate, and participate in responses to state and federal air quality plans and new regulations affecting the region. Examine legal and sanction ramifications regarding different standards for the region.
- Provide coordination, participation, and expertise to local and statewide air quality planning committees.
- Provide staff support to H-GAC advisory committees and subcommittees such as the Regional Air Quality Planning Advisory Committee (RAQPAC). Research air quality issues and make recommendations regarding air quality issues to committee members and advise on project selection for the State Implementation Plan (SIP) to the H-GAC Board of Directors and the Transportation Policy Council.
- Revise, print, and distribute the Annual Air Quality Initiatives Report.
- Analyze available on road inventory with respect to size, age, and potential technology upgrades for additional emissions benefits in H-GAC air quality programs including existing and potential TCMs, SIP weight of evidence measures, and VMEPs. Seek additional commitments from implementing agencies (TPF).
- Complete annual update of PM_{2.5} Advance Path Forward Plan. Develop potential control strategies for PM_{2.5} emissions in response to the needs identified in the revised Plan utilizing potential strategies throughout the region.
- Provide staff training, public relations and/or sponsorship support for air quality technical workshops. Staff training will include technical training on new EPA emissions models and federal air quality standards. Public outreach activities will be conducted to educate stakeholders and the public on regional air quality issues.
- Research emission reduction concepts and analyze potential regional impact scenarios, present research to regional stakeholders to develop consensus and encourage regional commitments, and work to identify and apply for funding directly or support stakeholder efforts in their own application process.
- Survey intercity tour, transit, and school buses for fleet and vehicle size, fuel usage, and age distributions to determine inventory share of emissions.
- A consultant will be utilized to analyze and inventory regional medium- and heavy-duty vehicle idling emissions (including school buses). In addition to the inventory, this analysis

will present a spatial analysis of emission generation, including source locations, vehicles information, speeds, levels of traffic (TPF).

- A consultant will be utilized for a study analyzing travel patterns, idling, and emissions of drayage trucks operating in and around the Port of Houston area. (TPF/Local).
- Update regional alternative fuel inventory and infrastructure plan, providing coordination with TxDOT, FHWA and Department of Energy where needed. Research and develop a cost effectiveness comparison of different alternative fuels to diesel and gasoline based on emissions, speed, and operational cost efficiencies. Identify barriers to the expansion of clean alternative fuel technologies. Develop planning materials for presentation to stakeholders.

SUBTASK 4.3. Multimodal System Planning

This subtask will focus on the continued transportation planning considering various transportation modes and connections among modes. This area focuses on thoroughfare planning, freight, transit, bicycle, and pedestrian planning. Activities in this subtask include existing condition assessments, review and coordination among local transportation plans, technical assistance, capacity building tools and activities, coordination with subcommittees, development of recommendations, implementation plans, and performance measures to advance multimodal planning.

4.3a. Thoroughfare Planning

The objective of this subtask is to undertake planning and coordination of local thoroughfare plans by representing the single source of information that identifies the thoroughfare planning efforts in the region. The Regional Thoroughfare Plan, to be developed, incorporates the primary features of local government thoroughfare planning efforts into a single, comprehensive transportation plan to promote region wide consistency and continuity regarding arterial street alignments and function between jurisdictions to help guide local government thoroughfare planning decisions on facilities that have inter-jurisdictional and regional significance.

- Coordinate with the State and local governments to update thoroughfare plans. This includes a review of existing thoroughfare plans and associated policies.
- Develop a Regional Thoroughfare Plan that includes existing and future transportation corridors that have been identified in State, county and city thoroughfare plans.
- A consultant will be utilized to update the Brazoria County Thoroughfare Plan and associated policies (TPF/Local).
- Conduct consultant contract management and oversight activities for active thoroughfare studies.

4.3b. Freight

A major objective of the freight program will be to build freight database, plan for a well-connected freight network, sustain outreach to the local freight community, and to build awareness and expertise among planners and the general public on freight related issues.

- Support state-level freight planning efforts.
- Conduct research and provide updates to committees on freight legislation, policies, and ordinance, and best practices.
- Monitor and update the Critical Urban Freight Corridors and work with partners to identify deficiencies on the network and potential projects.
- Create a freight database and develop a freight data portal to facilitate the exchange of information.
- Develop and conduct a freight educational outreach effort, as recommended by the Regional Goods Movement Study, to engage shippers, intermodal interests, freight stakeholders and the public.
- A consultant will be utilized to conduct the Ports Area Mobility Study to assess potential system improvement alternatives for freight movement as identified from recommendations from the Regional Goods Movement Study (Surface Transportation Program (STP)).
- Conduct consultant contract management and oversight activities for the Ports Area Mobility Study.
- A consultant will be utilized to update the 2012 Regional Goods Movement Study--a long-range plan for the goods movement system in the Houston-Galveston region (STP).
- Conduct consultant contract management and oversight activities for update to 2012 Regional Goods Movement Study.
- Assist in the update of the 2007 Houston Region Freight Rail Study to address deficiencies in the Houston region's freight network (roads, ports, and railroads) and to develop ways to accommodate and capitalize on future freight movements.

4.3c. Subregional Planning Initiatives

The objective of this subtask is to conduct subregional planning projects in various counties, cities, or subareas of the region. These projects may include analysis of existing transportation and land uses, stakeholder and public outreach, transportation modeling, scenario development, and development of recommendations for subareas to guide future transportation infrastructure investment.

- A consultant will be utilized to conduct the SH 146 Subregional Study, including the analysis of current and future transportation infrastructure and land use in Eastern Harris

County and Western portions of Chambers County to include the Cities of Baytown and Mont Belvieu (STP/Local).

- A consultant will be utilized to conduct a subregional analysis of current and future transportation infrastructure and land use in Waller County (STP/Local).
- A consultant will be utilized to conduct subregional mobility study for Southeast Houston of current and future transportation infrastructure and land use (STP/Local).
- Conduct consultant contract management and oversight activities for active subregional studies.
- Conduct mobility and access management studies to assist local governments to mitigate congestion and improve safety.

4.3d. Transit Planning

The objective of this subtask is to undertake planning and coordination projects for public transportation services in underserved areas of the region. These projects may take the form of transit feasibility assessments or coordination plans that will include the development of a five-year financial plan for new or expanded services. The target populations of this coordinated planning effort are the elderly, physically and mentally challenged persons, and low-income individuals, particularly those without access to an automobile or those living in areas with inadequate public transit services.

4.3d.1 Transit Coordinated Planning

The purpose of the regionally coordinated transportation planning effort is to provide more efficient and effective public transportation services, especially for priority populations including seniors (65 and older), persons with disabilities, persons with low incomes, veterans, youth, and others. This effort includes developing, adopting, implementing and updating a coordinated public transit/human services plan as well as assessing progress of activities called for in the plan. The coordinated plan provides strategies for meeting the public's transportation needs and prioritizes transportation services for funding and implementation.

- Provide monitoring and planning support for the implementation of priority projects identified in the Regionally Coordinated Transportation Plan (RCTP). Activity may include counties adjacent to MPO region, but not beyond 13-county H-GAC region.
- Coordinate with local transit service providers to initiate plans for the development of new or expanded transit services in counties adjacent to Harris County including but not limited to; Brazoria, Fort Bend, Galveston, Liberty, Montgomery and Waller Counties (where feasible).

4.3d.2 Transit System Planning

The subtask will focus on the update the recommendations in the Regional Transit Framework Study (RTFS) to reflect new demographic, economic and ridership data and include updated long-range plans from METRO and other regional transit providers. Prepare financially-constrained capital and service recommendations in RTFS for inclusion in RTP. Refine regional transit coordination, integration and implementation recommendations in Framework for ongoing promotion and collaboration with regional transit providers.

- Develop implementation plan for the recommendations discussed in the Regional Transit Framework, including regional transit planning, coordination, integration, and financing for a regional transit framework. Activity may include counties adjacent to MPO region, but not beyond 13-county H-GAC region.
- A consultant will be utilized for planning support to assist with the coordination of strategies (with local stakeholders) to mitigate regional transit gaps (TPF). Activity may include counties adjacent to MPO region, but not beyond 13-county H-GAC region.

4.3d.3. Transit Oriented Development (TOD) Planning

The objective of this task is to conduct planning activities to support TOD in the region. The task will include coordination activities with local governments and public transportation providers to identify opportunities for Transit Oriented Design in conjunction with their plans for existing and proposed services.

- Continue to work with local governments and other transportation agencies to create TOD and transportation data inventory around transit stations to include station, station area, and development data around transit stations.
- A consultant will be utilized to work with local governments to conduct TOD planning to improve first-mile and last-mile connections, and to improve economic potential of station areas (TPF).
- Work with local governments and transit agencies to create a TOD strategy for the region.

4.3e Bicycle/Pedestrian Planning

The Transportation Policy Council (TPC) adopted the 2040 Regional Pedestrian and Bicycle Plan, which identifies actions that can be taken to improve the safety, comfort and

convenience of walking and biking. This subtask programs support for the continued implementation of the Transportation Policy Council's adopted policy recommendations. Tasks include bicycle pedestrian data collection, mapping, reporting, analysis, outreach, and system planning.

4.3e.1. Bicycle/Pedestrian Data Collection, Mapping, and Reporting

- Continue to work with local governments and other transportation agencies to improve the accuracy of existing pedestrian and bicycle mapping tools.
- A consultant will be utilized to work with local governments, transportation agencies, research organizations, improvement districts, and non-profits to collect data on the number of pedestrians and bicyclists using transportation facilities. The information will be used to coordinate regular pedestrian and bicycle counts and surveys at locations throughout the TMA. Maintain existing pedestrian/bicycle counters and purchase additional devices as needed. The data from the count efforts will be used to determine existing facility usage; calculate travel demand and air quality benefits associated with investments in pedestrian/bicyclist infrastructure; and document trends of facility usage over time (TPF).

4.3e.2. Bicycle/Pedestrian Planning

- Maintain an up-to-date Regional Bikeway Plan that identifies existing and planned bicycle facilities, system gaps, and future facility needs.
- A consultant will be utilized to collect GIS data on existing pedestrian facilities for utilization in a GIS layer on existing regional transportation maps (TPF).
- Conduct consultant contract management and oversight activities for pedestrian facility GIS layer project.
- Provide technical assistance to local governments and other transportation agencies to identify bicycle and pedestrian issues, opportunities, needs and barriers, and provide assistance in project planning and conceptual design.
- Conduct Special Districts studies to plan for bicycle/pedestrian improvements
 - A consultant will be utilized to conduct Special Districts study in Spring Branch area of Houston to identify specific infrastructure improvements that can improve pedestrian and bicyclist mobility within the Spring Branch district (TPF/Local).
 - A consultant will be utilized to conduct two Special Districts studies to identify specific infrastructure improvements that can improve pedestrian and bicyclist mobility (TPF/Local).

- Conduct consultant contract management and oversight activities for active Special District Studies
- Conduct a bicycle and pedestrian multimodal performance measure pilot program in partnership with partnering local governments to test new tools assessing the connectivity of bicycle and pedestrian infrastructure within communities.
- Supplemental funding will be utilized for Testing Bicycle and Pedestrian multi-modal network connectivity pilot project.
- Develop and share resources local governments and other transportation agencies can utilize to learn about “best practices” based on implementation case studies. Resources will include innovative bicycle/pedestrian polices, programs, and practices related to design and maintenance for pedestrian and bicyclist facilities; improving connectivity; project management; cost estimation; and/or pedestrian-bicyclist safety.

4.3e.3. Bicycle/Pedestrian Outreach

- Conduct or host topical pedestrian/bicycle training workshops for local government agencies, organizations, and interested groups.

SUBTASK 4.4 Livable Centers

This subtask provides outreach and technical assistance to local governments and private developers to achieve more efficient coordination between development patterns and the transportation system; to develop policies, plans and projects that will help achieve this objective within MPO Transportation Management Area (TMA).

- Assist project sponsors in completing project readiness component for TIP eligibility or for other funding sources, including planning-related assistance regarding the environmental processes, planning level costs, and partnership development.
- Refine criteria and conduct livable center project evaluation for next TIP funding round and other potential funding programs.
- Provide technical assistance with land use/transportation-related RTP elements, preparation for 2045 RTP, Subregional Planning program and public outreach efforts.
- Conduct training workshops for local government staff and officials on implementing land use-transportation coordination principles such as context sensitive solutions, financing livable centers, urban design, and sustainability. Training may include cost-benefit assessments, non-traditional funding sources, transit accessibility, land valuation, trip reduction data and implementation of projects.

2018-2019 Unified Planning Work Program
Task IV – Long Range Planning

- Maintain updated database and map of significant centers, mixed use, transit oriented development, or sustainable mobility projects and local government planning and implementation projects pertaining to land use-transportation program. Develop criteria defining what constitutes transit-oriented development in the Greater Houston region and track transit-oriented development (existing and proposed).
- Develop economic valuation report examining completed Livable Centers studies. Working with local project sponsors, track completed and planned implementation of Livable Centers study recommendations, including funding sources and estimates of private development in study areas. Develop mechanism to receive on-going updates from project sponsors as projects are implemented.
- Coordinate with past Livable Centers project sponsors for further implementation of Livable Centers study recommendations. One-on-one assistance may include examination of challenges faced by project sponsors and assistance with public engagement.
- Demonstrate best practices in land use-transportation coordination such as through ‘Instant Impact’ (small-scale, low-cost demonstration projects) by working with interested local partners.
- Seek to identify new sources of funding to help support Livable Centers planning in diverse communities throughout the TMA.
- Develop guide for local governments that provides technical assistance on tools that influence land use. The guide will explore the economic value that such tools provide.
- A consultant will be utilized to conduct Livable Centers Studies in conjunction with local project sponsors to facilitate the creation of more compact, walkable, mixed-use places in the region. Studies will provide a framework for promoting efficient use of existing infrastructure, creating multi-modal travel choices, improving accessibility and circulation, and leveraging private resources for strategic investment. Studies will identify TIP eligible transportation projects and include an air-quality benefit calculation (STP/Local).
- Conduct consultant contract management and oversight activities for active Livable Centers Studies.
- Conduct Livable Centers Call for Planning Study Partners. New study applications will be received and evaluated for future funding consideration. On-line application system will be developed, and presentations will be made to interested local partners to make them aware of the call process and timeline.

SUBTASK 4.5 Transportation Performance Management

Transportation Performance Management (TPM) is a strategic approach that uses system information to inform investment and policy decision to achieve adopted performance goals. TPM allows H-GAC to gauge system conditions and use, evaluate transportation programs and projects and help decision-makers allocate limited resources more effectively.

4.5a Performance Measures and Targets

Performance measures are key metrics selected to understand the current, anticipated and desired level of performance and to illustrate tradeoffs between resource allocation scenarios and investment strategies. For each measure, a targeted level of performance is selected to gauge the effectiveness of actual investments over time.

- Calculate and monitor adopted federal performance measures.
- Coordinate with state and providers of public transportation to select regional target values for each performance measure.
- Develop additional performance measures in support of RTP, TIP and other regional priorities.

4.5.b Congestion Management Process

The Congestion Management Process (CMP) involves the analysis of system, corridor and segment-level performance data to understand the location, extent and duration congestion within the transportation system. Using this data H-GAC informs the selection of performance measure targets related to multimodal congestion and identifies strategies to mitigate and manage congestion. Roadway projects providing additional capacity for single-occupant vehicles are required to conduct an analysis demonstrating alignment with the targeted levels of performance and mitigation strategies.

- Produce annual report on the state of congestion within the H-GAC planning area.
- Revise CMP monitoring network to reflect roadway classification changes and new roadway development, as needed.
- Continue to monitor and evaluate transportation system management (TSM) and transportation demand management (TDM) solution effectiveness as they relate to congestion mitigation, air quality benefits, and safety.
- Prepare a regional congestion management plan, including goals to reduce vehicle miles of travel during peak commuting periods and improvements to job accessibility.
- Prepare corridor-based congestion management analyses to evaluate the applicability of regional mitigation strategies and identify key congestion hotspots.
- A consultant will be utilized to review congestion management analyses prepared by sponsors for other roadway capacity projects (TPF).

TASK IV FUNDING SUMMARY TABLE

Task 4 Funding Summary Table

TASK 4 - FY 2018	Task 4.1	Task 4.2	Task 4.3	Task 4.4	Task 4.5	Task 4 Total
RESPONSIBLE AGENCY	MPO	MPO	MPO	MPO	MPO	
FHWA-FTA TPF	\$ 581,224	\$ 525,636	\$ 1,514,812	\$ 298,666	\$ 264,337	\$ 3,184,674
STP - Cat 7	\$ -	\$ -	\$ 1,840,000	\$ 543,415	\$ -	\$ 2,383,415
FHWA - HRD	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TxDOT State Funds	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
FTA 5304/5307/5309/5339	\$ -	\$ -	\$ 25,000	\$ -	\$ -	\$ 25,000
Other Local	\$ -	\$ 12,500	\$ 323,333	\$ 243,354	\$ -	\$ 579,187
TOTAL	\$ 581,224	\$ 538,136	\$ 3,703,145	\$ 1,085,435	\$ 264,337	\$ 6,172,276
TASK 4 - FY 2019						
RESPONSIBLE AGENCY	Task 4.1	Task 4.2	Task 4.3	Task 4.4	Task 4.5	Task 4 Total
	MPO	MPO	MPO	MPO	MPO	
FHWA-FTA TPF	\$ 517,096	\$ 487,172	\$ 1,671,451	\$ 288,824	\$ 271,339	\$ 3,235,882
STP - Cat 7	\$ -	\$ -	\$ 300,000	\$ 1,862,766	\$ -	\$ 2,162,766
FHWA - HRD	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TxDOT State Funds	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
FTA 5304/5307/5309/5339	\$ -	\$ -	\$ 25,000	\$ -	\$ -	\$ 25,000
Other Local	\$ -	\$ -	\$ 75,000	\$ 465,692	\$ 107,500	\$ 648,192
TOTAL	\$ 517,096	\$ 487,172	\$ 2,071,451	\$ 2,617,282	\$ 378,839	\$ 6,071,840

TxDOT will apply transportation development credits sufficient to provide the match for FHWA PL-112 and FTA Section 5303 programs. As the credits reflect neither cash nor man-hours, they are not reflected in the funding tables.

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TASK V

SPECIAL PLANNING STUDIES

The special studies of Task V include special one-time planning activities, including major corridor studies/analyses and support of tourism and transportation resiliency planning activities.

OBJECTIVES

- Coordinate the region's Major Corridor Studies and analyses.
- Identify and coordinate regional tourism needs.
- Identify and coordinate regional private transportation operators.
- Collect and analyze information regarding transportation resiliency.

EXPECTED PRODUCTS

- Regional commuter/high-speed rail corridor study.
- Planning and Environmental Linkage study of the SH 225 corridor.
- Special project reports on tourism and transportation resiliency.

PREVIOUS WORK

- H-GAC staff completed the US 59/IH 69 Corridor Mitigation Study.

SUBTASK 5.1 SPECIAL STUDIES

This task includes special corridor studies, planning and environmental linkages, and other analysis specific to transportation issues of regional significance, beyond the scope of previous tasks.

- Support TxDOT's study to assess access for commuter and high-speed rail on US 290 to an intermodal terminal within the Central Business District.
- A consultant will be utilized to conduct a Planning Environmental Linkages (PEL) study of the SH 225 corridor to consider the land use and mobility needs and the ability of existing infrastructure to support current and future growth (STP).
- Conduct consultant contract management and oversight activities for SH 225 PEL study.
- Identify and coordinate with specific representatives in the tourism industry to further understand tourism industry trends and needs related to transportation infrastructure and planning.

- Identify and coordinate with specific representatives in the private transportation operators, tour bus operators and intercity bus operators to further understand industry trends and needs related to transportation infrastructure and planning.
- Collect and analyze information to improve resiliency and reliability of the transportation system and reduce or mitigate stormwater impacts on surface transportation.
- Conduct a Resilience and Durability to Extreme Weather study assessing the vulnerability and potential risk of a transportation system to extreme weather impacts or other current and future environmental conditions utilizing FHWA's Vulnerability Assessment Framework.

TASK V FUNDING SUMMARY TABLE

TASK 5 - FY 2018	Task 5.1	Task 5 Total
RESPONSIBLE AGENCY	MPO	
FHWA-FTA TPF	\$ 72,321	\$ 72,321
STP - Cat 7	\$ 1,500,000	\$ 1,500,000
FHWA-STRDD	\$ 90,000	\$ 90,000
TxDOT State Funds	\$ -	\$ -
FTA 5304/5307/5309/5339	\$ -	\$ -
Other Local	\$ 45,000	\$ 45,000
TOTAL	\$ 1,707,321	\$ 1,707,321
TASK 5 - FY 2019	Task 5.1	Task 5 Total
RESPONSIBLE AGENCY	MPO	
FHWA-FTA TPF	\$ 363,636	\$ 363,636
STP - Cat 7	\$ 2,000,000	\$ 2,000,000
FHWA-STRDD	\$ -	\$ -
TxDOT State Funds	\$ 125,000	\$ 125,000
FTA 5304/5307/5309/5339	\$ -	\$ -
Other Local	\$ -	\$ -
TOTAL	\$ 2,488,636	\$ 2,488,636

TxDOT will apply transportation development credits sufficient to provide the match for FHWA PL-112 and FTA Section 5303 programs. As the credits reflect neither cash nor man-hours, they are not reflected in the funding tables.

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2018-2019 UPWP FUNDING SUMMARY

2018-19 UPWP Funding Summary

FY 2018	Task 1	Task 2	Task 3	Task 4	Task 5	TOTAL
	Admin. / Mgmt.	Data Modeling & Maintenance	Short Range Planning	Long Range Planning	Special Studies	
RESPONSIBLE AGENCY	MPO	MPO	MPO/LOCAL TRANSIT AGENCIES	MPO	MPO	
FHWA-FTA TPF	\$ 2,957,959	\$ 4,323,452	\$ 1,805,578	\$ 3,184,674	\$ 72,321	\$12,343,984
STP - Cat 7	\$ -	\$ -	\$ 325,000	\$ 2,383,415	\$ 1,500,000	\$ 4,208,415
FHWA-STRDD	\$ -	\$ -	\$ -	\$ -	\$ 90,000	\$ 90,000
FHWA - HRD	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TxDOT State Funds	\$ -	\$ -	\$ 9,900	\$ -	\$ -	\$ 9,900
FTA	\$ -	\$ -	\$ 2,184,825	\$ 25,000	\$ -	\$ 2,209,825
Other Local	\$ -	\$ -	\$ -	\$ 579,187	\$ 45,000	\$ 624,187
TOTAL	\$ 2,957,959	\$ 4,323,452	\$ 4,325,303	\$ 6,172,276	\$ 1,707,321	\$19,486,311

FY 2019	Task 1	Task 2	Task 3	Task 4	Task 5	TOTAL
	Admin. / Mgmt.	Data Modeling & Maintenance	Short Range Planning	Long Range Planning	Special Studies	
RESPONSIBLE AGENCY	MPO	MPO	MPO/LOCAL TRANSIT AGENCIES	MPO	MPO	
FHWA-FTA TPF	\$ 3,654,089	\$ 3,815,218	\$ 1,085,776	\$ 3,235,882	\$ 363,636	\$12,154,601
STP - Cat 7	\$ -	\$ -	\$ 733,000	\$ 2,162,766	\$ 2,000,000	\$ 4,895,766
FHWA-STRDD	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
FHWA - HRD	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TxDOT State Funds	\$ -	\$ -	\$ 9,900	\$ -	\$ 125,000	\$ 134,900
FTA	\$ -	\$ -	\$ 2,231,050	\$ 25,000	\$ -	\$ 2,256,050
Other Local	\$ -	\$ -	\$ -	\$ 648,192	\$ -	\$ 648,192
TOTAL	\$ 3,654,089	\$ 3,815,218	\$ 4,059,726	\$ 6,071,840	\$ 2,488,636	\$20,089,509

FY 18/19 TOTAL	Task 1	Task 2	Task 3	Task 4	Task 5	TOTAL
	Admin. / Mgmt.	Data Modeling & Maintenance	Short Range Planning	Long Range Planning	Special Studies	
RESPONSIBLE AGENCY	MPO	MPO	MPO/LOCAL TRANSIT AGENCIES	MPO	MPO	
FHWA-FTA TPF	\$ 6,612,048	\$ 8,138,670	\$ 2,891,354	\$ 6,420,556	\$ 435,957	\$24,498,585
STP - Cat 7	\$ -	\$ -	\$ 1,058,000	\$ 4,546,181	\$ 3,500,000	\$ 9,104,181
FHWA-STRDD	\$ -	\$ -	\$ -	\$ -	\$ 90,000	\$ 90,000
FHWA - HRD	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TxDOT State Funds	\$ -	\$ -	\$ 19,800	\$ -	\$ 125,000	\$ 144,800
FTA	\$ -	\$ -	\$ 4,415,875	\$ 50,000	\$ -	\$ 4,465,875
Other Local	\$ -	\$ -	\$ -	\$ 1,227,379	\$ 45,000	\$ 1,272,379
TOTAL	\$ 6,612,048	\$ 8,138,670	\$ 8,385,029	\$12,244,116	\$ 4,195,957	\$39,575,820

TRANSPORTATION PLANNING FUNDS (TPF) ONLY

Transportation Planning Funds (FHWA PL-112/FTA 5303) funding estimate: \$ 22,856,357
 Estimated FHWA PL-112 Carryover from FY 2017-18: \$ 9,835,763
TOTAL TPF AVAILABLE: \$ 32,692,120

TOTAL TPF PROGRAMMED: \$ 24,498,585
UNDER (OVER) PROGRAMMED: \$ 8,193,535

By minute order, the Texas Transportation Commission authorizes the use of transportation development credits as TxDOT's non-Federal share for FHWA (PL-112) and FTA 5303 funds. As the credits reflect neither cash nor man-hours, they are not reflected in the funding tables.

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APPENDIX A
COMMITTEE MEMBERSHIP

Transportation Policy Council (TPC)

The Transportation Policy Council (TPC) was formed in 1992 to provide policy guidance and overall coordination of the transportation planning activities within the region. The TPC consists of 28 members representing cities and counties, the Texas Department of Transportation (TxDOT), the Metropolitan Transit Authority of Harris County (METRO) one at-large member appointed by the H-GAC Board of Directors representing cities with a population greater than 50,000, and one voting member position for representation from the Gulf Coast Rail District.

All members of the TPC are local elected officials, officials of public agencies that administer or operate major modes of transportation in the Houston-Galveston Transportation Management Area, or appropriate officials of the Texas Department of Transportation. TPC also examines the adequacy and appropriateness of the continuing transportation planning process and reviews various agreements entered into for the execution of transportation planning, including the Unified Planning Work Program (UPWP) and the Transportation Improvement Program (TIP).

Regional Safety Council (RSC)

The TPC established the Regional Safety Council (RSC) in 2005 to address the region's increasing traffic safety issues and to advise and make recommendations to the TPC regarding traffic safety policy. The RSC consists of 24 members from a broad spectrum of safety-related professions, including officials and professionals from local and State governments, transportation, law enforcement, health care, insurance, trucking, railroads and non-profit organizations involved in safety.

Greater Houston Freight Committee

In 2016, the TPC created the Greater Houston Freight Committee with the goal of better incorporating private sector freight user perspectives into the transportation planning process. The Committee, with co-chairs appointed by the TPC, seeks to accomplish this through regular open meeting highlighting relevant industry trends and needs. The Committee has identified a locally significant freight roadway network, recommended investment in critical facilities associated with a boom in petrochemical manufacturing and coordinated with Texas Freight Advisory Committee in the updating of the State Freight Mobility Plan.

TPC Officers

Representing	Officer	Alternate
Brazoria County	Chairman Hon. L.M. “Matt” Sebesta, Jr. County Judge	David Linder Commissioner, Pct. 2
Chambers County	First Vice Chair Rusty Senac County Commissioner	Robert Hall, P.E. County Engineer
Galveston County	Second Vice Chair Ken Clark County Commissioner	Hon. Mark Henry County Judge
City of Pearland	Secretary Hon. Tom Reid Mayor	Jon Branson Deputy City Manger
Harris County	Past Chair Hon. Ed Emmett County Judge	Jack Morman County Commissioner

TPC Members

Representing	Member	Alternate
TxDOT Houston District	Quincy Allen, P.E. District Engineer	Eliza C. Paul, P.E. Deputy District Engineer
Liberty County	Greg Arthur County Commissioner, Pct. 2	Leon Wilson County Commissioner, Pct. 4
City of Conroe	Scott Taylor Director of Public Works	Thomas Woolley Project Manager
City of Pasadena	Hon. Darrell Morrison Council Member	Sara Benavides, P.E.
Gulf Coast Rail District	Bert Keller Chairman	Maureen Crocker Executive Director
City of Missouri City	Scott Elmer, P.E. Assistant City Manager	Shashi Kumar, P.E. Director, Public Works & Engineering
TxDOT Beaumont District	Tucker Ferguson, P.E. District Engineer	Adam Jack, P.E. Director, Transportation Planning

2018-2019 Unified Planning Work Program
Appendix A – Committee Membership

Representing	Member	Alternate
Smaller Cities, Harris County	Hon. Pat McLaughlan Council Member, City of Bellaire	Hon. Glenn Royal Mayor, City of Seabrook
Fort Bend County	Hon. James Patterson County Commissioner, Pct. 4	Paulette Shelton Directory of Public Transportation
City of Sugar Land	Hon. Joe Zimmerman Mayor	Hon. Amy Mitchell Council Member, District 3
City of League City	Hon. Larry Millican Council Member	John Baumgartner City Manager
METRO	Carrin Patman Chair	Thomas Lambert President & CEO
City of Texas City	Doug Kneupper, P.E. City Engineer	VACANT
City of Houston	Karun Sreerama, P.E. Director, Public Works & Engineering	Jeff Weatherford, P.E. PTOE Deputy Director
City of Houston	Hon. David Robinson Council Member, At-Large 2	Hon. Karla Cisneros Council Member, District H
City of Baytown	Hon. David McCartney Council Member, District 6	Hon. Robert Hoskins Council Member, District 5
Montgomery County	Charlie Riley County Commissioner, Pct. 2	Hon. Craig Doyal County Judge
City of Houston	Hon. Larry Green Council Member, District K	Hon. Amanda Edwards Council Member, At-Large 4
Harris County	Steve Radack County Commissioner, Pct. 3	Gary Trietsch, P.E. Director, Harris County Toll Road Authority
Other Transportation Interests	Janiece Longoria Chairman, Port of Houston	Phyllis Saathoff, Executive Director Port Freeport
City of Galveston	Hon. Craig Brown Council Member	Rick Beverlin Assistant City Manager
Waller County	Justin Beckendorff County Commissioner, Pct. 4	Yancy Scott, P.E. County Engineer

Representing	Member	Alternate
H-GAC At-Large	Jack Steele Executive Director, H-GAC	Chuck Wemple Director of Operations

TPC Ex-Officio Members

Representing	Ex-Officio Member
Texas House of Representatives	Representative Rick Miller
Texas State Senate	Senator Sylvia Garcia
Freight Rail Interests	Hugh McCulley, BSNF Railroad
Freight Rail Interests	Brenda Mainwaring, Union Pacific Railroad
TxDOT Yoakum District	Paul Reitz, P.E., District Engineer
Wharton County	Hon. Phillip Spenrath, County Judge

Technical Advisory Committee (TAC)

The Technical Advisory Committee (TAC) reviews and evaluates H-GAC's regional transportation plans and provides its recommendations to the TPC. The TAC is an appointed body, which is comprised of representatives of member governments and special citizen interest groups with expertise in transportation planning. TAC members are appointed by the TPC to assist with the coordination of the Transportation Improvement Program, Metropolitan Transportation Plan and other transportation planning activities.

The Technical Advisory Committee is comprised of elected officials, agency staff, or when appropriate, citizens who have expertise or interest in developing transportation and land use plans, implementing transportation projects, or in related fields. TAC membership reflects the diversity of transportation modes and interests affected by transportation policy decisions to assure transportation planning decisions are considered in their broadest context. The TAC advises the TPC in its development of the UPWP, and the Regional Transportation Plan (RTP) and assists with the development of the Transportation Improvement Program (TIP).

To more efficiently perform its advisory duties, the TAC has created the following subcommittees:

Operations Task Force - The Operations Task Force is responsible for the development of a comprehensive conceptual plan for regional traffic operations projects.

Pedestrian & Bicycle Subcommittee - The Pedestrian and Bicycle Subcommittee is responsible for providing guidance and recommendations to MPO staff in updating and implementation of the Regional Bikeway Plan.

Regional Transit Coordination (RTC) Subcommittee - The RTC Subcommittee is responsible for providing guidance regarding the implementation of regional transit coordination pilot projects. The subcommittee also assists with development of initiatives that expand and improve the efficiency and effectiveness of the current regional transit system.

Regional Transportation Plan (RTP) Subcommittee - The RTP Subcommittee is responsible for assisting MPO staff in the development of the Regional Transportation Plan. The subcommittee examines and makes recommendations regarding proposed RTP projects and activities and ensures that these proposals are consistent with the TIP and other regional plans.

Transportation Improvement Plan (TIP) Subcommittee - The TIP Subcommittee is responsible for providing guidance to MPO staff in the development of the TIP. The subcommittee recommends guidelines for the ranking of proposed TIP projects, as well as provides guidance for major TIP amendments and funding decisions.

Transportation Air Quality (TAQ) Subcommittee - The TAQ Subcommittee is responsible for assisting MPO staff in expanding existing air quality programs and projects and developing new programs for TIP consideration as well as the analysis and development of on-road transportation emission reduction measures.

TAC OFFICERS

Representing	Officer	Alternate
Fort Bend County	Chairman Richard Stolleis, P.E. County Engineer	Charles Dean, P.E. Assistant County Engineer
City of Pearland	1st Vice Chair Trent Epperson Assistant City Manager	Robert D. Upton, P.E. Director of Engineering
Smaller Cities	2nd Vice Chair Greg Smith City Administrator City of Shenandoah	Sharon Valiante Director, Public Works City of Fulshear
Environmental & Planning	Immediate Past Chair VACANT	Jack R. Whaley, P.E. Director, Houston TranStar

TAC MEMBERS

Representing	Primary	Alternate
City of Pasadena	Sarah Benavides, P.E. Sr. Assistant Director, Public Wks	Robin Green, P.E. Director, Public Works
City of Baytown	Jose Pastrana Director of Engineering	Kevin Harvill Assistant Director, Public Works
Intermodal Interests	Maureen Crocker Executive Director Gulf Coast Rail District	Dr. Carol Lewis Director, Center for Transp. Policy Texas Southern University
Citizen and Business Interests	Augustus "Auggie" Campbell President & CEO West Houston Association	Irma Sanchez Vice President of Projects Westchase District

2018-2019 Unified Planning Work Program
Appendix A – Committee Membership

Representing	Primary	Alternate
Harris County	Loyd Smith, P.E. Manager, Transportation Planning	David Goldberg, P.E. Manager, General Services
City of Missouri City	Scott Elmer, P.E. Assistant City Manager	Jessica Kokes Interim Assistant Director, Public Works
Citizen and Business Interests	Bob Eury President Central Houston, Inc.	Regina Morales President Fort Bend County Chamber Alliance
Urban Transit	Ken Fickes Transit Services Director	Vernon Chambers Transportation Coordinator
Brazoria County	Matt Hanks, P.E. County Engineer	Trey Haskins, P.E. Assistant County Engineer
METRO	Clint Harbert Sr. Director of Planning	Robert Trevino, P.E. Executive Vice President
City of Sugar Land	Lisa Kocich-Meyer, AICP Director of Planning	Bill Tobin Manager, Transp. & Mobility Planning
Montgomery County	Jeff Johnson, P.E. Transportation Manager	J. Ross McCall, P.E. County Engineer, III
Waller County	Yancy Scott, P.E. County Engineer	DeWayne Davis Assistant County Engineer
City of Texas City	Doug Kneupper, P.E. City Engineer	VACANT
TxDOT-Houston District	William "Bill" Brudnick, P.E. Director Transportation Planning & Development	Andrew Mao, P.E. Director, Advanced Transportation Planning
Environmental/Planning	Terri Vela City Manager, City of Richmond	Christina Bune Manager, Finance & Administration Fort Bend County

2018-2019 Unified Planning Work Program
Appendix A – Committee Membership

Representing	Primary	Alternate
Environmental/Planning	Christopher LaRue The Woodlands Township	Don Norrell President, The Woodlands Township
TxDOT Beaumont District	Adam Jack, P.E. Director Transportation Planning & Development	Scott Ayres, P.E. Planning Engineer
Intermodal Interests	Clark Martinson General Manager Energy Corridor District	Richard Zientek Director, Public Affairs Union Pacific Railroad
Galveston County	Michael Shannon, P.E. County Engineer	Nancy Baher Assistant County Engineer
Chambers County	Bobby Hall, P.E. County Engineer	Rusty Senac Commissioner, Pct. 4
Rural Transit	Paulette Shelton Transit Director Fort Bend County Public Transportation	Claudia Wicks Colorado Valley Transit District
Environmental & Planning	Theresa Rodriguez President, BayTran	John Isom Waller County EDC
Regional Planning	Jeff Taebel, FAICP H-GAC At-Large	Chuck Wemple Chief Operating Officer, H- GAC
Intermodal Interests	Bruce Mann Director, Freight Mobility Port of Houston Authority	Jeremy Phillips Sr. Director of Infrastructure, Pct. 2
Intermodal Interests	John Tyler, P.E. Deputy Director, Engineering Harris County Toll Road Authority	Dr. Jim Condrey Board Chairman Fort Bend County Toll Road Authority
City of Galveston	Kyle Hockersmith, P.E. Director, Public Works	Daniel Christodoss City Engineer
Environmental & Planning	Patrick Walsh, P.E. Director, Public Works & Engineering City of Houston	VACANT

2018-2019 Unified Planning Work Program
Appendix A – Committee Membership

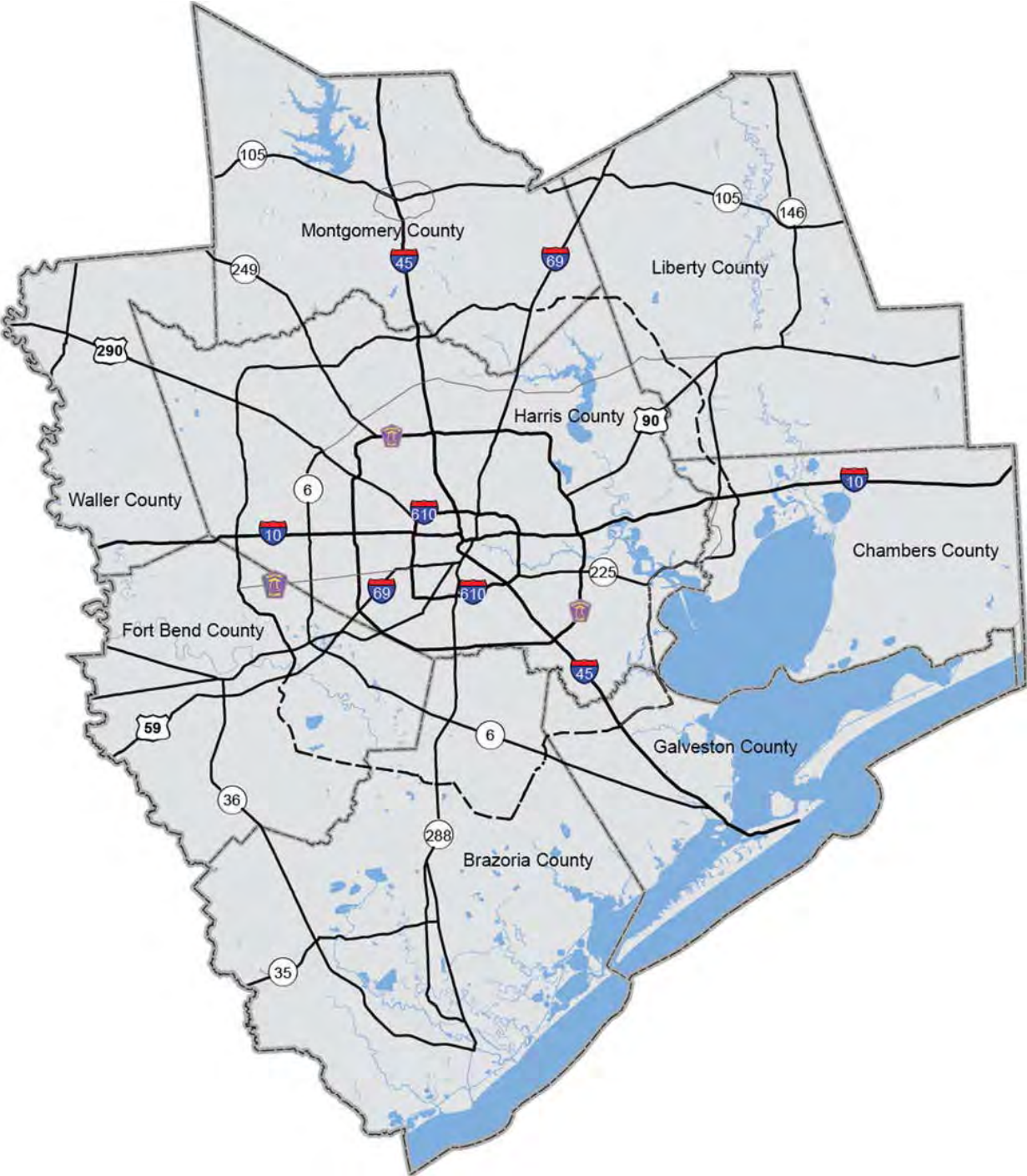
Representing	Primary	Alternate
Liberty County	Mike McCarty County Commissioner, Pct. 1	Louis Bergman County Engineer
City of Houston	Jeff Weatherford, P.E. Deputy Director Public Works & Engineering	Carol Haddock, P.E. Deputy Director Public Works & Engineering
Intermodal Interests	Mike Wilson Director, Economic Development Port of Freeport	Roger Quiroga Director, Economic Development Port of Galveston
City of Conroe	Thomas Woolley Assistant Director, Projects & Transp.	Adam France Development Coordinator
City of League City	Gabriel Menendez Director, Public Works	John Baumgartner Deputy City Manager
Intermodal Interests	Bill Zrioka Senior Project Manager Houston Airport System	Carlos Ortiz Assistant Director of Planning Houston Airport System

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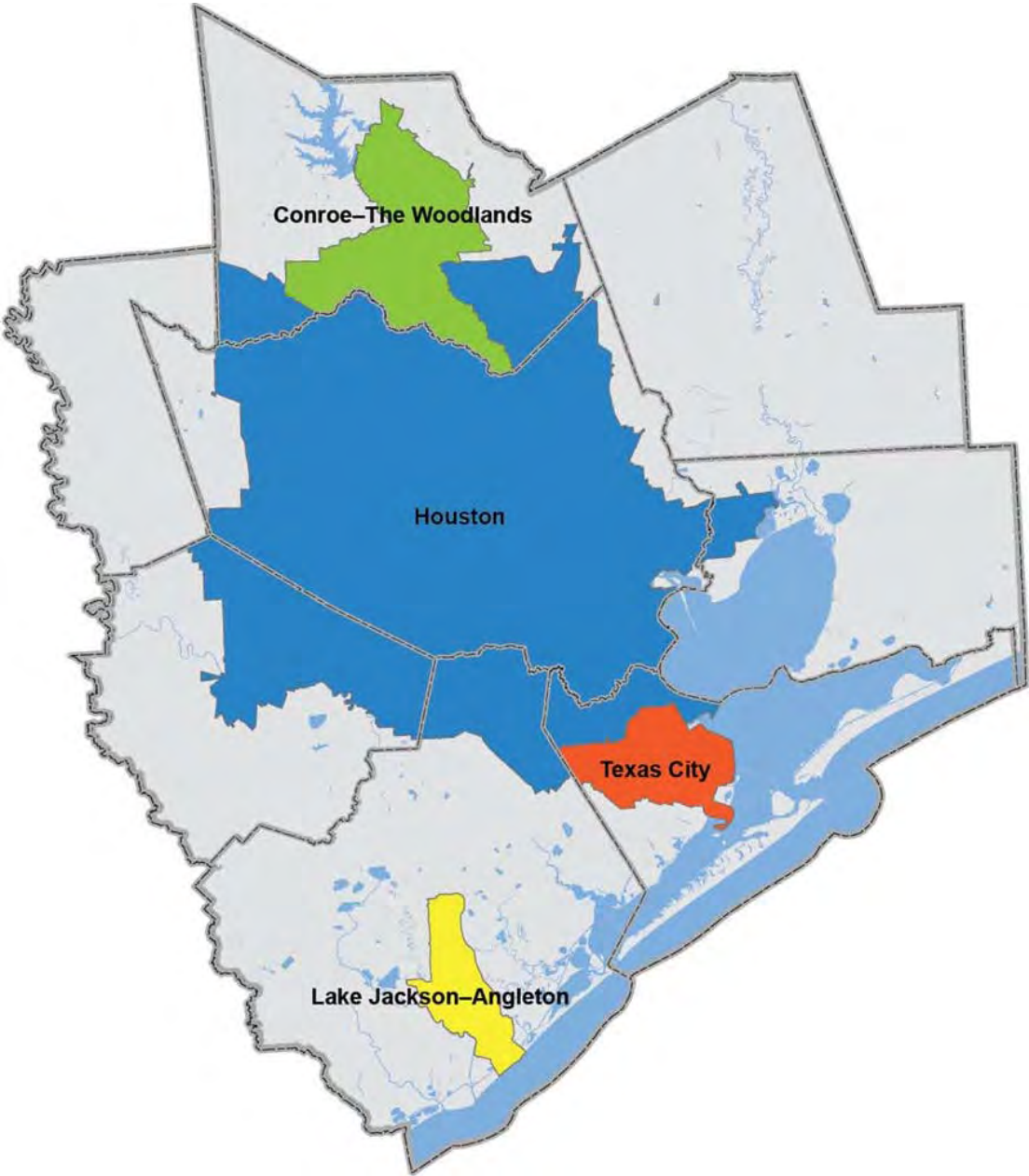
APPENDIX B

**MAPS OF THE HOUSTON-GALVESTON TRANSPORTATION
MANAGEMENT AREA (TMA) AND URBANIZED AREAS (UZA)**

Eight-County Houston-Galveston



Transportation Management Area Urbanized Area Boundaries



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APPENDIX C
DEBARMENT CERTIFICATION

DEBARMENT CERTIFICATION
(Negotiated Contracts)

- (1) The **HOUSTON-GALVESTON AREA COUNCIL MPO** as **CONTRACTOR** certifies to the best of its knowledge and belief that it and its principals:
- (a) Are not presently debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded from covered transactions by any federal department or agency;
 - (b) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public* transaction or contract under a public transaction; violation of federal or state antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
 - (c) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity* with commission of any of the offenses enumerated in paragraph (1)(b) of this certification; and
 - (d) Have not within a three-year period preceding this application/proposal had one or more public transactions* terminated for cause or default.
- (2) Where the **CONTRACTOR** is unable to certify to any of the statements in this certification, such **CONTRACTOR** shall attach an explanation to this certification.

**federal, state or local*



Signature – Hon. Matt Sebesta

Chairman, Transportation Policy Council
Title

July 28, 2017
Date

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APPENDIX D

LOBBYING CERTIFICATION

LOBBYING CERTIFICATION
CERTIFICATION FOR CONTRACTS, GRANTS,
LOANS AND COOPERATIVE AGREEMENTS

The undersigned certifies to the best of his or her knowledge and belief, that:

- (1) No federal appropriated funds have been paid or will be paid by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any federal contract, the making of any federal grant, the making of any federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any federal contract, grant, loan, or agreement.
- (2) If any funds other than federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form - LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.
- (3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclosure accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for

each such failure.



Signature

Chairman, Transportation Policy Council

Title

July 28, 2017

Date

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APPENDIX E
CERTIFICATION OF COMPLIANCE

CERTIFICATION OF COMPLIANCE

I, **Hon. Matt Sebesta, Chairman** a duly authorized officer/representative of the Houston-Galveston Area Council (MPO), do hereby certify that the contract and procurement procedures that are in effect and used by the forenamed MPO are in compliance with 2 CFR 200, "Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards," as it may be revised or superseded.

July 28, 2017


Date

Sign

an,

Transportation Policy Council

Attest:



Alan Clark

Alan Clark
MPO Director

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APPENDIX F

**CERTIFICATION OF INTERNAL ETHICS
AND COMPLIANCE PROGRAM**

CERTIFICATION OF INTERNAL ETHICS AND COMPLIANCE PROGRAM

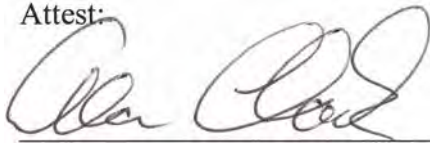
I, Hon. Matt Sebesta, Chairman a duly authorized officer/representative of the Houston-Galveston Area Council (MPO) do hereby certify that the forenamed MPO has adopted and does enforce an internal ethics and compliance program that is designed to detect and prevent violations of law, including regulations and ethical standards applicable to this entity or its officers or employees and that the internal ethics and compliance program satisfies the requirements of by 43 TAC§ 31.39 "Required Internal Ethics and Compliance Program" and 43 TAC§ 10.51 "Internal Ethics and Compliance Program" as may be revised orsu :: e de R /1 /1 ff7f "-

Jul.t 28, 2017

Date


Signature - Hon. Matt Sebesta, Chairman,
Transportation Policy Council

Attest:



Alan Clark

Alan Clark
MPO Director

APPENDIX G

**PUBLIC OUTREACH EFFORTS FOR THE
2018-2019 UNIFIED PLANNING WORK PROGRAM**

Public Outreach Efforts for the 2018-2019 Unified Planning Work Program

The Draft 2018-2019 Unified Planning Work Program (UPWP) was made available to the public on June 19, 2017, which began the 30-day comment period scheduled to end officially on July 19, 2017. A public meeting was held on June 29, 2017 at the offices of the Houston-Galveston Area Council. The following items document the Public Outreach efforts:

Advertising

- Paid advertising in the Chronicle purchased June 2, 2017
- Chronicle advertisement published June 4, 2017
- Paid Spanish-language advertising in La Voz purchased June 2, 2017
- La Voz Advertisement published June 14, 2017
- Meeting alert/Press Release emailed to TAC and TPC members and alternates, as well as other interested parties on June 20, 2017. The alert contained a link to the draft document posted on the H-GAC website.
- A Media Alert was sent to local media outlets on June 21, 2017.

Document Distribution

A draft of the 2018-2019 UPWP was sent to TxDOT on June 1, 2017. A copy of the draft 2018-2019 UPWP was placed on the H-GAC webpage on June 12, 2017. A link to the document online was sent to TAC and TPC as well as other interested parties on June 16, 2017. The draft document was previewed at the TAC and TPC meetings, held on June 14, 2017 and June 28, 2017 respectively.

Public Meeting – June 29, 2017

The public meeting was held on June 29, 2017 in Conference Room A at the offices of the Houston-Galveston Area Council from 5:30 p.m. to 7:00 p.m. The agenda of the public meeting included a brief introduction and PowerPoint presentation. During the presentation, the audience was encouraged to ask questions and provide comments.

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APPENDIX H
LOCALLY FUNDED PLANNING ACTIVITIES

FY 2018-2019 Locally Funded Planning Activities

ENERGY CORRIDOR DISTRICT

TDM and Transportation Planning, Design and Engineering:

- Transportation General Engineering - \$15,000
- Traffic Signal Synchronization - \$25,000
- Transit and Circulator Planning - \$30,000
- Energy Corridor Carshare Program - \$45,000
- Flood Resiliency Plan - \$55,000
- Bike-To-Work Day Ride Matching - \$5,000
- Transportation Demand Management (TDM) Events - \$5,000
- IH 10 Frontage Road Safety Engineering and Improvements - \$60,000
- Memorial Eldridge Intersection Dutch Junction Enhancements - \$1,133,247
- Grisby Square Parklet, Streetscape and Public Art - \$490,300
- SH 6 And Grisby Road Intersection Traffic Signals - \$50,000
- Dockless Bike Share Program – In-Kind, Staff
- Addicks P&R Bike Station Plan – In-Kind, Staff

Sidewalks and Trails Planning, Design And Engineering:

- Addicks P&R Ped Bike Connection to Trails And Streets Planning and Design - \$20,000
- Area-Wide Sidewalks Planning, Design and Construction - \$645,000
- TCEQ/Harris County LIP Bus Shelters and Connectivity - \$118,500
- Woodbranch Footbridge Turkey Creek Connection to Addicks Dam Trail - \$40,000
- Park Row Streetscape Guidelines = \$30,000
- Park Row Sidewalk Planning and Design \$60,000
- Langham Creek Park Trails Planning and Design - \$90,000

PORT HOUSTON

Through FY2018-19, Port Houston (PHA) will continue to make significant investments in its marine facilities and landside infrastructure to improve operational efficiencies and increase throughput capacities. These investments by PHA are required to accommodate greater trade volumes forecasted to grow along with the population and economic strength of the region and state, as evidenced most immediately with the increase in shipping transiting the expanded Panama Canal and the level of private sector investments in petrochemical plant production capacities.

The FY2018 Capital Improvement Program (CIP) approved by the Port Commission totals \$275 million, funded by operating revenues, and includes projects and studies prioritizing: (A) the Recapitalization of existing facilities to sustain services and enhance productivity; (B) expansions of Capacity to accommodate trade growth; (C) collaborative work with the US Army Corp of Engineers on Houston Ship Channel (HSC) and Dredged Material Placement Area developments;

2018-2019 Unified Planning Work Program
Appendix H – Locally Funded Planning Activities

and (D) ongoing equipment maintenance and replacements. The PHA FY2019 capital budget forecast of \$148 million comprises a similar mix of investments, and collectively the FY2018-19 CIPs constitute the initial years of PHA’s planned, 10-year \$2.7 billion CIP.

In particular this long-range capital investment program works to support federal priorities as authorized by Congress for ongoing work with the US Corps of Engineers to conduct a 3-year, \$3 million feasibility study of the HSC. This current work is evaluating the extension of water depths and widening of the HSC for improved operating capacities and the introduction of passing lanes and mid-bay anchorages. Competitive benefit/cost ratios are required components of this study, and project implementation is subject to subsequent federal approval and appropriations. Following these federal actions, the cumulative cost of these channel improvements for PHA could be from \$300 to \$600 million, including environmental mitigation and restoration work elements.

PHA’s long-range CIP also supports collaboration with regional, state, and federal transportation agencies to advance the prioritization and programming of 27 essential landside freight mobility improvement projects identified by PHA. These projects include last-mile connectors and corridor capacity improvements for roadway and railway transportations systems that serve as key drivers of regional prosperity and economic competitiveness of the greater Houston gateway region. Examples of these critical freight mobility projects are the Barbour’s Cut Direct Connectors and Penn City Connector; Jacintoport Road Improvement and Direct Connectors; widening of SH-146 and SH-225 as key freight corridors; and the Broadway Double Track Project and Bayport Mainline Rail Track rail corridor projects.

CITY OF PASADENA

During the FY 2018-2019 period, the City of Pasadena anticipates the following locally-funded planning activities:

Department	Transportation Planning Initiative	FY 2018	FY 2019
Public Works	Transportation Planning	\$ 100,000	\$ 100,000
Special Projects	Public Transit Local Cost Share	\$ 362,300	\$ 362,300
Planning	Livable Centers Study	\$ 70,000	\$ 14,000
	TOTAL	\$ 532,300	\$ 476,300

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