

## MEETING OF THE TIP SUBCOMMITTEE HOUSTON-GALVESTON AREA COUNCIL

### Members Please Use Teams Invitation

#### Telephone Conference Information:

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Phone Conference ID: 390 704 212#

**May 5, 2021**

**1:30 p.m.**

### AGENDA

**1. Subcommittee Roll Call**

**2. Previous Meeting Summary**

*A summary of the April meeting is available at the following link.*

<https://www.h-gac.com/transportation-advisory-committee/transportation-improvement-program-subcommittee/agendas-and-minutes>

**3. Performance Measures Transit Safety Targets**

*Staff will update the subcommittee on the development of Transit Safety Performance Targets and seek a recommendation for Transportation Advisory Committee review and action.*

*Additional information on the methodology used to develop the transit safety targets is attached. Also, the draft update to the Performance Measures Appendix (B) of the 2021-2024 TIP is available at the link below.*

<https://www.h-gac.com/getmedia/9dfaac73-6cfa-455d-b75d-1eb19e1fb605/Appendix-B-FAST-Act-Compliance-Performance-Measures-June-2021>

**4. Quarterly TIP Report**

*Staff will update the Subcommittee on the status of project slated for construction or implementation in FY 2021.*

**5. Call for Project Development Update**

*Staff will continue the update on the development of the next call for projects. The draft planning criteria for the next call for projects is attached for review.*

**6. Announcements**

- TAC Meeting – May 19, 2021, 9:30 a.m., Teleconference (Zoom)
- TPC Meeting – May 21, 2021, 9:30 a.m., Teleconference (Zoom)
- TIP Subcommittee Meeting – June 2, 2021, 1:30 p.m., Teleconference (Teams)

**7. Upcoming TIP Topics**

- FY2022 Unified Transportation Program
- 2023-2026 Transportation Improvement Program Development
- H-GAC 10 Year Plan Update
- Regional Strategic Transportation Fund Program Development

**8. Adjourn**



## **PUBLIC TRANSPORTATION AGENCY SAFETY PLAN PERFORMANCE TARGETS**

H-GAC is submitting its 2021 Public Transportation Agency Safety Plan (PTASP) seven performance targets as stipulated in 23 CFR 450.306 (d) (4), along with corresponding benchmarks. The Regional Transit Coordination Subcommittee and the Transportation Safety Committee recommended the PTASP benchmarks and targets in April 2021. The resolution incorporating the Regional PTASP was passed by the Houston-Galveston MPO Transportation Policy Council on \_\_\_\_\_. H-GAC is required to submit these regional targets to the Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) by June 30, 2021.

### **Tier I Methodology and Results**

H-GAC has developed seven performance targets for the two tiers of regional agencies based on the transit agency submissions and allowable discretion. Tier I include the Metropolitan Transportation Authority of Harris County (METRO) and Island Transit (Galveston). METRO prepared its own PTASP report. Their agency comprises approximately 95% of all total vehicle revenue miles in the Houston-Galveston, MPO. Island Transit received a waiver from the FTA from submitting a PTASP report, so its data is not included in the Tier I target. Therefore, for Tier I, METRO targets became the Tier I targets for the region, as did their benchmarks or baselines.

METRO has set an aspirational target of zero fatalities related to all of its three modes: rail, fixed route and demand response. However, its targets for injuries, safety events, and Mean Distance Between Failures (MDBF) remain consistent with their five-year rolling averages between 2015 and 2019 as submitted to FTA along with its 2020 targets. In developing benchmarks, performance measures and targets, METRO used a scale of per 100,000 vehicle revenue miles. Results are captured below.

### **Tier II Methodology and Results**

Five additional urban agencies comprise Tier II in the Houston-Galveston MPO. They are: Fort Bend Transit, Harris County Transit, The Woodlands Township, Gulf Coast Transit District, and Conroe Connection. H-GAC has developed seven performance targets for fixed route (including commuter service) and demand response service for this tier. The five agencies in Tier II used a consultant hired by TxDOT to complete their PTASP reports. All vehicle revenue miles in a year are included by each agency. Transit agencies had a wide range of vehicle revenue miles according to the most recent 2019 National Transit Database. Averaging them equally by dividing the sum of their targets and benchmarks by five for fixed routes and four for demand response would give targets that would be not reflective of total vehicle revenue miles for Tier II. As a result, we took a weighted average to vehicle revenue miles among all the agencies to develop the targets and benchmarks. Results are captured below.



### Tier 1 Benchmarks and Targets

|   |             | METRO            |                     |
|---|-------------|------------------|---------------------|
|   |             | TIER I           |                     |
| <b>Rates are per 100K Vehicle Revenue Miles</b> |             | <b>Benchmark</b> | <b>2021 Targets</b> |
|   | <b>MODE</b> |                  |                     |
| Fatalities                                      | Bus         | 2                | 0                   |
| Fatality Rate                                   |             | 0.003            | 0                   |
| Injuries  |             | 194              | 194                 |
| Injury Rates                                    |             | 0.37             | 0.258               |
| Safety Events                                   |             | 136              | 136                 |
| Safety Event Rates                              |             | 0.258            | 0.258               |
| Mean Distance Between Failures                  |             | 10,084           | 10,084              |
|   |             |                  |                     |
| Fatalities                                      | Rail        | 4                | 0                   |
| Fatality Rate                                   |             | 0.122            | 0                   |
| Injuries  |             | 50               | 50                  |
| Injury Rates                                    |             | 1.466            | 1.466               |
| Safety Events                                   |             | 121              | 121                 |
| Safety Event Rates                              |             | 3.51             | 3.51                |
| Mean Distance Between Failures                  |             | 9,292            | 9,292               |
|   |             |                  |                     |
| Fatalities                                      | Paratransit | 0                | 0                   |
| Fatality Rate                                   |             | 0                | 0                   |
| Injuries  |             | 35               | 35                  |
| Injury Rates                                    |             | 0.174            | 0.174               |
| Safety Events                                   |             | 39               | 39                  |
| Safety Event Rates                              |             | 0.19             | 0.19                |
| Mean Distance Between Failures                  |             | 22,039           | 22,039              |



### Tier II Benchmarks and Targets

| Rates are per Vehicle Revenue Mile | OTHER PROVIDERS |            |              |
|------------------------------------|-----------------|------------|--------------|
|                                    | TIER II         |            |              |
|                                    | MODE            | Benchmarks | 2021 Targets |
| Fatalities                         | Fixed Route     | 0          | 0            |
| Fatality Rate                      |                 | 0          | 0            |
| Injuries                           |                 | 0.58       | 0.49         |
| Injury Rates                       |                 | 0.0000017  | 0.0000008    |
| Safety Events                      |                 | 0.96       | 0.82         |
| Safety Event Rates                 |                 | 0.0000030  | 0.0000020    |
| Mean Distance Between Failures     |                 | 82,544     | 82,544       |
|                                    |                 |            |              |
| Fatalities                         | Demand Response | 0          | 0            |
| Fatality Rate                      |                 | 0          | 0            |
| Injuries                           |                 | 1.34       | 1.34         |
| Injury Rates                       |                 | 0.0000013  | 0.0000013    |
| Safety Events                      |                 | 2.53       | 1.93         |
| Safety Event Rates                 |                 | 0.0000019  | 0.0000015    |
| Mean Distance Between Failures     |                 | 386,106    | 386,106      |

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### 2021 Houston – Galveston Area Council – Call for Projects

#### Investment categories

H-GAC will accept funding requests in five investment categories. The definitions of these investment categories are as follows:

Major Investments: All roadway, freight or transit projects that have a total project cost of \$100M or more. Total project cost will include engineering (including environmental), right of way, and construction phases. Project costs expended on planning, development, or implementation activities of the project by the time project is selected in the call will not be reimbursed<sup>1</sup>.

Expand<sup>2</sup> All roadway, freight or transit projects that expand the network capacity. Project costs expended on planning, development, or implementation activities of the project by the time project is selected in the call will not be reimbursed<sup>2</sup>.

Manage: All roadway, freight or transit projects that improve operations existing networks. Project costs expended on planning, development, or implementation activities of the project by the time project is selected in the call will not be reimbursed.

Maintain: All roadway, freight or transit projects that extend the useful life of the existing networks or improves resiliency of the existing networks. Project costs expended on planning, development, or implementation activities of the project by the time project is selected in the call will not be reimbursed<sup>2</sup>.

Active Transportation: All projects that expand, manage, or maintain bicycle and pedestrian infrastructure that provide alternative choices to essential trip making. Project costs expended on planning, development, or implementation activities of the project by the time project is selected in the call will not be reimbursed<sup>2</sup>.

Example projects for each investment categories are included in attachment A.

<sup>1</sup>All projects that contain addition of through lanes must be submitted in expand investment category. Projects submitted in incorrect investment category will not be considered for scoring.

<sup>2</sup>Project costs expended on project development activities for transit projects that have pre-award authority or a letter of no prejudice from Federal Transit Authority may be eligible for reimbursement consistent with FTA guidelines.

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### **Example Projects**

Example project types can be found in Attachment A of this document.

### **Scoring and Weights**

All proposed projects submitted in Major Investment, Expand, Manage, or Maintain investment categories will be scored up to 200 total points. Benefits/costs ratios at 50% weight (100 points) and planning factors at 50% weight (100 points). All benefits and costs will be submitted in present values (base year costs (2021)). All proposed projects should submit safety, delay reductions, and emission reductions benefits. Safety benefits will be considered for 50%, delay reduction will be considered for 30%, and emission reductions will be considered for 20% of the Benefit/cost analysis score. Templates for the Benefit/Cost Analysis will be provided.

All proposed projects submitted in Active Transportation investment category will be scored on Benefit/Cost analysis at 20% (40 points) weight and planning factors at 80% (160 points) weight. All benefits and costs will be submitted in present values. All proposed projects should submit safety and emissions benefits. Cost effectiveness and health benefits of the project is still being considered to the included in the Benefit/Cost analysis.

### **Total Project Cost**

Consistent with the TPC guidance all proposed project's total project cost will include estimated costs for construction, engineering (including environmental), and right of way (including utility relocation) phases of the project. If required right of way is donated or previously purchased current appraised value of the required right of way may be used in the total project cost.

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**Planning Factors**

**Category – Major Investments, Expand – Roadways/Freight**

| <b>2021 Call Planning Factors Major Investments, Expand – Roadways/Freight - Max 100 points</b> | <b>% Score</b> |
|---|----------------|
| Safety  | 10             |
| Multimodal accommodations/improvements  | 15             |
| Congestion management   | 5              |
| Resiliency  | 10             |
| Connectivity to jobs  | 10             |
| Transportation equity   | 10             |
| Avoid/eliminate at-grade railroad crossing  | 5              |
| Functional class/freight network/evacuation routes  | 5              |
| Improvements to existing/addition of new technology (ITS, CV/AV technology)                     | 10             |
| Planning coordination   | 10             |
| Urban/rural/transitioning   | 5              |
| Environmental/ecological  | 5              |
| Total   | 100            |

*If proposed project is a construction of a roadway in new location or an extension of an existing project, evaluation is based on a parallel link to which the proposed project provides an alternative route.*

**Category –Manage – Roadways/Freight**

| <b>2021 Call Planning Factors Manage, Roadways/Freight - Max 100 points</b> | <b>% Score</b> |
|---|----------------|
| Safety  | 10             |
| Multimodal accommodations   | 15             |
| Congestion management   | 10             |
| Resiliency  | 10             |
| Connectivity to jobs  | 10             |
| Transportation equity   | 10             |
| Avoid/eliminate at-grade railroad crossing                                  | 5              |
| Functional class/freight network/evacuation routes                          | 5              |
| Improvements to existing/addition of new technology (ITS, CV/AV technology) | 10             |
| Planning coordination   | 10             |
| Urban/rural/transitioning   | 5              |
| Total   | 100            |

**Category – Maintain - Roadways/Freight**

| <b>2021 Call Planning Factors Maintain, Roadways/Freight - Max 100 points</b> | <b>% Score</b> |
|---|----------------|
| Safety  | 10             |
| Multimodal accommodations   | 15             |
| Pavement condition  | 10             |
| Resiliency  | 10             |
| Connectivity to jobs  | 10             |
| Transportation equity   | 10             |
| Avoid/eliminate at-grade railroad crossing                                    | 5              |
| Functional class /freight network/evacuation routes                           | 5              |
| Improvements to existing/addition of new technology (ITS, CV/AV technology)   | 10             |
| Planning coordination   | 10             |
| Urban/rural/transitioning areas   | 5              |
| Total   | 100            |

**Planning factors criteria evaluation for roadway/freight projects in all Investment Categories**

**Safety:** Evaluation based on history of existing crashes at project location and estimated crashes reduced as a result of the proposed major investment project.

- Proposed projects resulting in higher possible crashes will score higher points. Possible crashes are defined as potential crashes (that do not have primary contributing factor as speeding or impaired driver) that could occur at project location if proposed project is not implemented.

**Multimodal accommodations/improvements (non-freeways):** Evaluation based on project providing new multimodal access or improving existing multimodal accommodations such as:

- Providing new ADA accessible sidewalk on one or both sides.
  - Projects providing wider sidewalks will score higher points.
- Improving existing sidewalk to an ADA accessible sidewalk on one or both sides.
  - Improved sidewalks will score higher points.
- Providing new bike lane/shared use path on one or both sides.
  - Projects providing wider bike lanes/shared use path with buffer (separated from vehicular traffic) will score higher points.
- Improving existing bike lanes/shared use path on one or both sides.



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- Projects improving existing bike lanes/shared use path to wider bike lanes/shared use path with buffer (separated from vehicular traffic) will score higher points.
- Providing new access to transit.
  - Proposed project results in a new transit service (BRT, park & ride, signature, express, local bus service).
- Improving existing transit service.
  - Proposed project results in improving existing transit service (frequency of an existing BRT, park & ride, signature, express, local bus service).

**Multimodal accommodations/improvements (limited access highways/freeways):** Evaluation based on project providing new multimodal access or improving existing multimodal accommodations such as:

- Providing new managed lanes in one or both directions.
  - Projects providing new all-day managed lanes in both directions will score higher points.
- Improving existing managed lanes.
  - Expansion of peak period one direction managed lanes to all day bi-directional managed lanes will score higher points.
- Providing new access to transit.
  - Proposed project results in a new transit service (BRT, park & ride, signature, express, local bus service).
- Improving existing transit service.
  - Proposed project results in improving existing transit service (frequency of an existing BRT, park & ride, signature, express, local bus service).

**Congestion management:** Evaluation based on existing delay (from the COMPAT tool) and potential alleviation of congestion measured by the delay reduction factor (Source: <https://policy.tti.tamu.edu/congestion/estimating-congestion-benefits-of-transportation-projects-with-fixit-2-0/>).

- Proposed projects resulting in higher delay reduction will score higher points.

**Resiliency:** Evaluation based on existing criticality, vulnerability, and network redundancy scores based on the regional resilience tool (<https://datalab.h-gac.com/resilience/>).

- Higher vulnerability and criticality score will score higher.

**Connectivity to jobs:** Evaluation based on project location and improving or providing connectivity to jobs.

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- Proposed projects located in urban areas:
  - Providing new connectivity to or improving existing connectivity to first 1000 jobs will score 5 points, every 200 jobs beyond that will score 1 extra point up to a maximum of 10 points.
- Proposed projects located in rural areas:
  - Providing new connectivity to or improving existing connectivity to first 500 jobs will score 5 points, every 100 jobs beyond that will score 1 extra point up to a maximum of 10 points.

**Transportation equity:** Evaluation based on proposed project's benefits provided (improving access and connectivity to multimodal transportation network) to underserved/disadvantage communities as measured by Livable Centers Needs Index provided at <https://datalab.h-gac.com/ace/>.

- Proposed projects will score higher points if the livability needs index score (0-100) is higher.

**Avoid/eliminate at-grade railroad crossing:** Evaluation based on proposed project eliminating or avoiding an at-grade railroad crossing.

- Proposed projects score higher points if it avoids or eliminates at-grade railroad crossing.
- Proposed projects will score higher points if it serves higher rail traffic.

**Functional class/freight network/evacuation routes:** Evaluation based on the project location and travel demand (ADT/ Truck ADT).

- Proposed project will score higher points if it is located on a roadway with higher federal functional classification, state or regional freight networks or state designated evacuation route.
- Proposed projects will score higher points if it serves higher vehicular traffic.

**Improvements to existing/addition of new technology (ITS, CV/AV technology):** Evaluation based on proposed project providing new or addition of new technology to existing or new roadway.

**Planning coordination:** Evaluation based on proposed project going through some public review.

- Projects recommended in regional, sub-regional, or local government approved plans or studies will score higher points.

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- Projects sponsors will be required to submit documentation of planning coordination efforts occurred (public meetings, meetings with local government agencies where the proposed project is located).
- If the proposed project intersects or affects assets owned by or maintained by agencies other than the project sponsor, then project sponsor will be required to provide documentation of planning coordination efforts occurred between agencies.

**Urban/rural areas:** Evaluation based on project location and potential travel demand.

- Proposed projects that are located in rural areas or areas that are transitioning into urban areas from rural areas with higher travel demands will score higher points.
- Proposed projects that are located urban areas will score no points.

**Environmental/ecological:** Evaluation based on project location and the Red Flag Investigation Report from the H-GAC EcoLogical Tool. *(Evaluation criteria is considered for proposed roadway/freight projects submitted in Major investments and Expand investment categories).*

- Proposed projects with fewer historical and archeological sites within ¼ miles of the project will score higher points.
- Proposed projects with fewer acres of wetlands and floodways within ¼ miles of the project will score higher points.

**Pavement condition:** Evaluation based on proposed projects current pavement condition and potential extension of useful life of the facility. *(Evaluation criteria is considered for the proposed roadway/freight projects submitted in the Maintain investment category).*

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### Category – Major Investments, Expand – Transit

| <b>2021 Call Planning Factors Expand, Transit - Max 100 points</b>             | <b>% Score</b> |
|--|----------------|
| Safety   | 10             |
| Connectivity to employment/schools/medical facilities/other points of interest | 25             |
| Improves multimodal connectivity   | 15             |
| Congestion management (vehicular congestion)                                   | 5              |
| Improvements to existing/addition of new technology (ITS, CV/AV technology)    | 10             |
| Multi-jurisdictions/transit service connectivity (multiple transit districts)  | 10             |
| Urban/rural connectivity   | 5              |
| Transportation equity  | 10             |
| Planning coordination  | 10             |
| Total  | 100            |

### Category – Manage – Transit

| <b>2021 Call Planning Factors Manage, Transit - Max 100 points</b>             | <b>% Score</b> |
|--|----------------|
| Safety   | 10             |
| Current-estimated ridership  | 10             |
| Connectivity to employment/schools/medical facilities/other points of interest | 25             |
| Improves multimodal connectivity   | 15             |
| Congestion management (vehicular congestion)                                   | 5              |
| Improves transit reliability (transit travel time)                             | 5              |
| Improvements to existing/addition of new technology (ITS, CV/AV technology)    | 10             |
| Transportation equity  | 10             |
| Planning coordination  | 10             |
| Total  | 100            |

### Category – Maintain – Transit

| <b>2021 Call Planning Factors Maintain, Transit - Max 100 points</b>            | <b>% Score</b> |
|---|----------------|
| Safety  | 10             |
| Current-estimated ridership   | 10             |
| Connectivity to employment/schools/medical facilities/other points of interest  | 25             |
| Improvements to access to physically challenged individuals (ADA accessibility) | 5              |
| Improves useful life of facility/asset  | 10             |
| Transit maintenance   | 10             |
| Improvements to existing/addition of new technology (ITS, CV/AV technology)     | 10             |
| Transportation equity   | 10             |
| Planning coordination   | 10             |
| Total   | 100            |

**Planning factors criteria evaluation for transit projects in all Investment Categories**

**Safety:** Evaluation based on estimated crashes reduced as a result of the transit project.

- Projects with higher reductions will score higher points.

**Connectivity to employment/schools/medical facilities/other points of interest:** Evaluation based on direct connectivity through transit service and with proximity to transit service.

- Projects that improve transit route that is directly connected (or is within ¼ mile) to more jobs or hospital or schools (K-12 and college) and community centers will score higher points.

**Improves multimodal connectivity:** Evaluation based on improvements to other modes along with transit.

**Congestion management:** Evaluation based on estimated vehicular delay reduced as a result of the transit project.

**Improvements to existing/addition of new technology (ITS, CV/AV technology):** Evaluation based on improvements to existing technology or addition of new technology to an existing transit asset (Vehicles or transit facility).

**Multi-Jurisdictions/multi transit service connectivity:** Evaluation based on connectivity between transit services provided by multiple transit services within the same or multiple transit districts. *(Criteria considered for transit projects in major investments and expand investment categories).*

- Projects that provide non-existent connectivity or improves existing connectivity between bus-light rail services or between two or more transit districts will score higher points.

**Improvements to access to physically challenged individuals (ADA accessibility):** Evaluation based on improvements to ADA accessibility.

**Urban/rural connectivity:** Evaluation based on location of the transit service and whether the transit service is being provided to locations where transit service does not exist.

**Transportation equity:** Evaluation based on the proposed project's benefits provided (improving access and connectivity to multimodal transportation network) to

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underserved/disadvantage communities as measured by the Livable Centers Needs Index provided at <https://datalab.h-gac.com/ace/>.

- Proposed projects will score higher points if the livability needs index score (0-100); and,
- Serves (directly connects or within a ¼ mile distance of) census block groups with zero car households

**Planning coordination:** Evaluation based on the proposed project going through some public review.

- Projects recommended in regional, sub-regional, or local government approved plans or studies will score higher points.
- Projects sponsors will be required to submit documentation of planning coordination efforts occurred (public meetings, meetings with local government agencies where the proposed project is located).
- If the proposed project intersects or affects assets owned by or maintained by agencies other than the project sponsor, then project sponsor will be required to provide documentation of planning coordination efforts occurred between agencies.

**Current and estimated ridership:** Evaluation based on current and future estimated daily total ridership values after project implementation. *(Criteria is considered for transit projects in manage and maintain investment categories).*

- Projects with higher future estimated daily total ridership values will score higher points.

**Improves transit reliability:** Evaluation based on improvements to transit travel time reductions or increase in transit service frequency. *(Criteria considered for transit projects in manage investment categories).*

**Improvements to access for physically challenged individuals (ADA accessibility):** Evaluation based on improvements to ADA accessibility. *(Criteria considered for transit projects in maintain investment categories).*

**Improves useful life of facility/asset:** Evaluation based on extension of useful life of existing asset. *(Criteria considered for transit projects in maintain investment categories).*

**Transit Maintenance:** Evaluation based on existence of an asset maintenance plan and budget. *(Criteria considered for transit projects in maintain investment categories).*