EXECUTIVE SUMMARY

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The Houston-Galveston Area Council (H-GAC) and the City of Pearland partnered to conduct a City-wide Mobility Plan that addressed City's existing and future transportation needs.

The study included public engagement to understand residents' challenges and priorities related to mobility in Pearland. To improve connectivity, efficiency, and safety, the study updated City's Thoroughfare Plan and developed recommendations for short, medium, and long-term transportation projects that can be implemented by the City with strategic partnerships in the region to maintain a general quality of life in this cherished community.

PROJECT VISION

The Pearland Mobility Plan will prioritize multi-modal improvements and strategies to improve mobility for people, goods, and services; enhance safety; and accommodate growth. Furthermore, the Plan will develop a trackable list of projects and initiatives for the future.

GOAL 1: MOVE PEOPLE AND GOODS EFFICIENTLY

- Update Thoroughfare Plan
- Traffic Analysis
- Incorporate Transit Study Recommendations

GOAL 2: IMPROVE SAFETY

- Countermeasures for Crash hotspots
- Improve Bike and Pedestrian Connections

GOAL 3: STRENGTHEN REGIONAL ECONOMIC COMPETITIVENESS

- Transportation and Development Policy Review
- Project Prioritization & Dashboard

Recap of the Project Process

EXISTING CONDITIONS

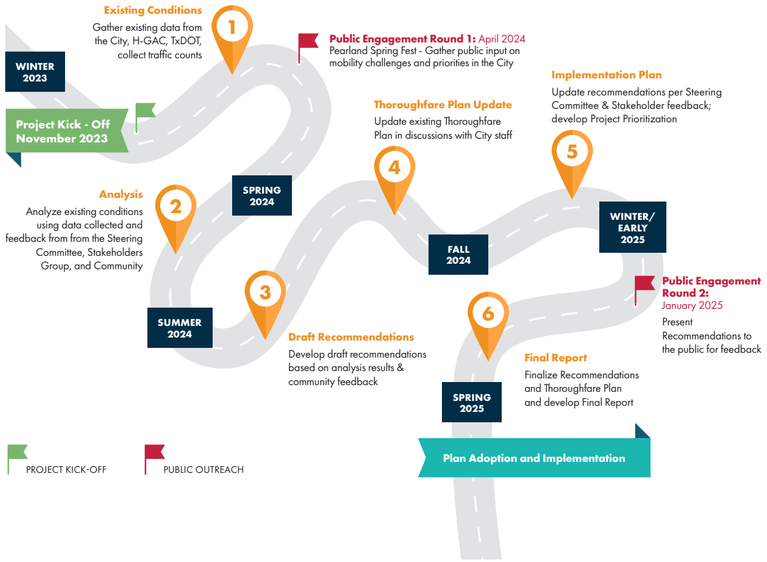
The project team collected demographics data and created a series of maps that reflected a variety of transportation related data, including crash history and existing roadway networks. Previous planning documents were reviewed so that recommendations are in line with prior planning efforts.

ANALYSIS & RECOMMENDATIONS DEVELOPMENT

A traffic model was created for 60 intersections to analyze peak-hour conditions to develop short- and medium-term intersection improvements.

Bicycle and pedestrian improvements were identified through public feedback. A 7-year analysis of crash data helped develop a high injury network, leading to the identification of countermeasure improvements at the top four intersections and two corridors. Additionally, traffic technology and policy recommendations were formulated to further enhance safety.

STEPS TAKEN FOR THE PEARLAND MOBILITY PLAN



THOROUGHFARE PLAN UPDATE

Future traffic growth in the City was projected using H-GAC's 2045 Travel Demand Model. By combining model results, on-going development information across the City, and discussions with staff, the Thoroughfare Plan was updated (last updated in 2021).

IMPLEMENTATION PROCESS

The project team developed a prioritization tool and an online dashboard to support the implementation process following the completion of the project. The prioritization tool is intended to guide decision-making and ranking of ongoing city projects.

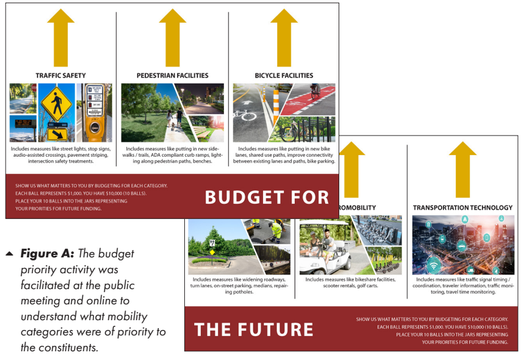
Public Engagement and Schedule of Events

1ST ROUND OF PUBLIC ENGAGEMENT

In the first round of public engagement efforts, the focus was on learning what is working, what is not working, and suggestions on improving the mobility network.

Efforts Included:

- Two Steering Committee Meetings (January 23 and May 30, 2024)
- Stakeholder Meeting (March 18, 2024)
- Public Meeting - Pearland Spring Fest (April 6, 2024)
  - Online Engagement (April 1st – April 26, 2024)
  - Survey Questionnaire
  - Budget Prioritization Activity



▲ ***Figure A:*** *The budget priority activity was facilitated at the public meeting and online to understand what mobility categories were of priority to the constituents.*

2ND ROUND OF PUBLIC ENGAGEMENT

In the second round of public engagement, the project team presented the findings and Draft recommendations to the public to get their feedback and update the recommendations, if needed.

Efforts Included:

- Two Steering Committee Meetings (September 18, 2024, and February 20, 2025)
- Stakeholder Meeting (November 7, 2024)
- Public Meeting - Pearland Farmer's Market (January 18, 2025)
  - Online Engagement (January 14 – February 14,2025)
  - Shared Draft Recommendations
  - Received Public Feedback

▲ ***Figure B:*** *The project team talking with constituents about the proposed mobility improvement recommendations at Farmer's Market*

Recommended Improvements

A list of recommendations was developed under the following categories. The recommendations were also classified as 'Short', 'Medium', and 'Long' term projects from an implementation time frame. For the complete list of recommended projects and associated implementation timeframes, please see Chapter 6: Implementation Plan.

ACTIVE TRANSPORTATION NETWORK

Enhances facilities for pedestrians, cyclists, and other non-motorized modes of transportation.

INTERSECTION IMPROVEMENTS

Improves traffic operations at intersections to mitigate congestion.

SAFETY IMPROVEMENTS

Addresses identified existing safety concerns and risk factors.

TECHNOLOGY

Integrates advanced technology solutions consistently to optimize transportation systems and traffic management.

POLICY

Updates and introduces policies that support and promote efficient and safe transportation.

THOROUGHFARE PLAN UPDATES

Updates the Thoroughfare Plan to accommodate growth and changes in travel patterns.

The recommendations are also categorized by implementation timeframes to allow an actionable phased approach:

SHORT-TERM (0-5 years)

Immediate actions that address urgent needs and quick wins.

MEDIUM-TERM (6-10 years)

Strategic projects that require planning and coordination but are vital for mid-term goals.

LONG-TERM (11+ years)

Long-range initiatives designed to align with the city's future vision and sustained growth. In this plan, the Thoroughfare Plan Update falls under the Long-Term recommendations.

Thoroughfare Plan Update

A Thoroughfare Plan is a long range planning tool that identifies approximate alignment of future roadway connections, classification of roadways, and typical cross-sections based on projected travel demand patterns. It also allows the City to preserve right-of-way for future roadways. The project team used combination of H-GAC Travel Demand Model results, existing and proposed developments across the City, and discussions with Staff to develop the Updated Thoroughfare Plan. There were a total of 12 updates that varied from changing the roadway classification, alignment, and extending or removing roadway link segments. Below map shows the Updated Thoroughfare Plan.

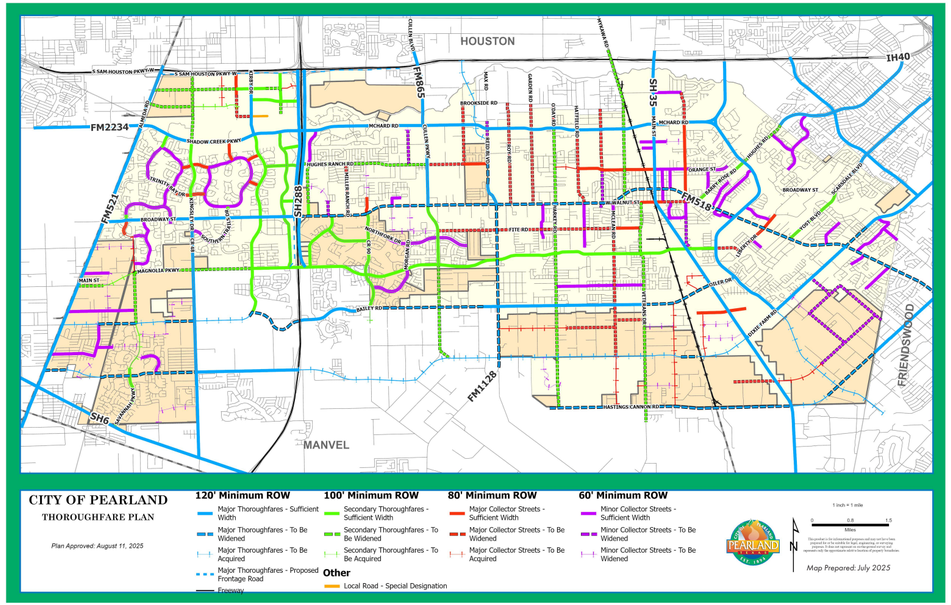


Figure G: *Updated 2025 Thoroughfare Plan map, adopted by City Council on August 11, 2025.*

Implementation Plan

The following four categories of performance measures have been created to guide future project prioritization. In the development of these categories and associated scoring criteria, along with the data analysis, the project team looked at existing efforts from the City and public engagement feedback. See Chapter 6: Implementation Plan for the project prioritization matrix.

The proposed recommendations of this Plan will provide benefits aimed at improving the City's transportation infrastructure and multimodal experience. The list of roadway improvements focuses on reducing congestion which will also lead to lower automobile emissions. These recommendations are further enhanced by technology solutions designed to improve the driver experience and safety measures. To improve overall network mobility, the Plan includes active transportation recommendations that aim to expand the existing sidewalk network for all users.

I. SAFETY

This category evaluates projects based on enhancing road safety for different users. The category leverages historical crash data and the high-injury network developed as part of this study, and uses following criteria and corresponding performance measures to prioritize the projects:

II. RELIABILITY

This category evaluates projects if they would lead to consistent travel times and connections due to: increased roadway capacity (adding lanes, turn bays, missing roadway link); or leveraging technology to improve efficiency. This category was evaluated using two main criteria:

III. MOBILITY

This category evaluates projects on multi-modal accessibility and connectivity and uses below criteria:

IV. PROJECT READINESS

This category examines the level of coordination effort needed outside of the City's immediate authority, and focuses on the following sub-categories of evaluation criteria:

Pearland Mobility Plan Project Recommendations List

ACTIVE TRANSPORTATION (SHORT-TERM 0-5 YEARS)

	Project Location	Description
SHORT-TERM	1. **McHard Road and Stone Road**	▸ Install sidewalk infrastructure on Stone Road to connect existing neighborhood to the shared use path on McHard Road
	2. **McHard Road and Max Road**	▸ Install sidewalk infrastructure on Max Road to connect existing neighborhood to the shared use path on McHard Road
	3. **McHard Road and O'Day Road**	▸ Install sidewalk infrastructure on O'Day Road to connect existing neighborhood to the shared use path on McHard Road
	4. **McHard Road and Roy Road**	▸ Install sidewalk infrastructure on Roy Road to connect existing neighborhood to the shared use path on McHard Road
	5. **McHard Road and Garden Road**	▸ Install sidewalk infrastructure on Garden Road to connect existing neighborhood to the shared use path on McHard Road
	6. **McHard Road and Mykawa Road**	▸ Install sidewalk infrastructure on Mykawa Road to connect existing neighborhood to the shared use path on McHard Road
	7. **Veterans Drive, between Elaine Way and Stonebridge Drive**	▸ Install sidewalk along West side of Veterans Drive, to connect existing sidewalk along Verterans Drive to Magonlia Parkway
	8. **Manvel Road, between Fite Road and Magnolia Parkway**	▸ Coordinate with the Pearland Independent School District to address pedestrian mobility and safety concerns in this area. Consider installing advanced warning signage for vehicles for school crossing and midblock crosswalk marking with appropriate traffic control (such as Rectangular Rapid Flashing Beacon). TxDOT has ongoing project to design roadway improvements in this section of Manvel Road. Preliminary schematic plans for Manvel Road (FM 1128) indicate proposed medians and sidewalks but based on TxDOT project findings, none of the side streets meet criteria for a new traffic signal on Manvel Road.
	9. **Pearland Parkway and Oiler Drive**	▸ Install new pedestrian crosswalk, signing and marking on Oiler Drive at Towne Lake Drive and on Pearland Pkwy at High School driveway on the north side of the school. Similar to the existing conditions along Manvel Road and Rogers Middle School / Berry Miller Junior High, Pearland High School is situated next to multiple large residential subdivisions with several students walking to the school.
	10. **City Wide**	▸ Conduct an Americans with Disabilities Act (ADA) Transition Plan

ACTIVE TRANSPORTATION (MEDIUM-TERM 6-11 YEARS)

	Project Location	Description
	1. **Walnut Street Railroad Crossing**	▸ Install at-grade sidewalk across railroad, to connect existing sidewalks along both sides of the railroad crossing

INTERSECTION PROJECTS (SHORT-TERM 0-5 YEARS)

	Project Location	Description
SHORT-TERM	1. **SH 35 at McHard Road**	▸ Add eastbound right-turn lane on McHard Road and southbound right-turn lane on SH 35 ▸ Update traffic signal pole locations in northwest and southwest corners ▸ Update sidewalk and ADA facilities on northwest and southwest corners
	2. **SH 35 at Orange Street**	▸ Update east-west signal phasing ▸ Add flashing yellow arrow displays for eastbound and westbound left-turns
	3. **SH 35 at Magnolia Road**	▸ Restripe eastbound and westbound lanes on Magnolia Road ▸ Update east-west signal phasing
	4. **SH 35 at Bailey Road**	▸ Add eastbound and westbound right-turn lanes on Bailey Road; add southbound right-turn lane on SH 35 ▸ Replace existing 'span-wire' signal with new 'mast-arm' signal ▸ Modify existing sidewalk and ADA facilities impacted in all four corners of the intersection
	5. **Pearland Parkway at Hughes Road**	▸ Restripe east and west approaches on Hughes Road ▸ Add northbound right turn lane on Pearland Pkwy ▸ Update east-west signal phasing
	6. **Pearland Parkway at Province Village**	▸ Restripe east and west approaches on Province Village Dr ▸ Update east-west signal phasing
	7. **Pearland Parkway at FM 518**	▸ Add westbound right turn lane on FM 518 ▸ Adjust signal timing
	8. **Pearland Parkway at John Lizer Road**	▸ Add southbound right-turn lane on Pearland Pkwy ▸ Adjust signal timing

SAFETY COUNTERMEASURE PROJECTS (SHORT-TERM 0-5 YEARS)

	Project Location	Description
SHORT-TERM	1. **Shadow Creek Parkway at Kingsley Drive**	▸ Change left-turn signal phasing on Shadow Creek Pkwy from Permitted-Protected to Protected-Only phasing.
	2. **McHard Road at Old Alvin Road**	▸ Install Advance Warning Flashers on all four approaches
	3. **Dixie Farm Road at Oakbrook Drive**	▸ Install Advance Warning Signs on Dixie Farm Road
	4. **Dixie Farm Road at Hastings Friendswood Road**	▸ Install Traffic Signalization – Currently Underway by City
	5. **Kirby Road from Shadow Creek Parkway to Magnolia Parkway**	▸ Install Warning/Guide Signs on Minor Approach ▸ Keep Vegetation Trimmed ▸ Install Pavement Markings
	6. **FM 2234 from SH 288 to Reflection Bay Drive**	▸ Improve/Install missing sidewalks links along FM 2234 ▸ Install/Upgrade pedestrian signals to Accessible Pedestrian Signal (APS) units at existing signals along FM 2234 from SH 288-Reflection Bay Dr

POLICY RECOMMENDATIONS

	Regulation Document	Location in Document	Item	Suggested Action	Recommendations
SHORT-TERM	**Engineering Design Criteria Manual**	Sections 1.8.2, 1.8.3, 1.8.4	Construction Procedure Requirements	Revise	RE-examine required time for notices, consider increasing notice timeframe to accommodate staff availbility
		3.5	Extra Territorial Jurisdiction	Revise	Include language pertaining to S.B. 2038, which went into effect on September 1, 2023, generally authorizes residents of a city's extraterritorial jurisdiction ("ETJ") to petition for removal from the city's ETJ under certain circumstances. Chapter 6 of Design Manual was updated last on October, 2020
		6.1.2	Roadway Design Criteria - Roadside Ditches	Revise	No new streets with roadside ditch is allowed. The standard detail for Asphalt cross-section showing a roadside ditch shall be used for rehabilitation projects only
		6.1.5	Deviations from these Design Criteria	Revise	To allow consistent implementation of design criteria, specify responsible City of Pearland Department(s) and/or designated staff to permit deviations from design criteria
	Engineering Design Criteria Manual, Pearland Thoroughfare Plan (October 2020, with amendments in chapter 2, 5, 7, and 9 in December 2023)	6.3. and 6.4 (Design Manual)	Thoroughfare, Roadway Classifications	Revise	Provide consistent roadway classification cross-sections between the City's Engineering Design Criteria Manual and provisions in the Unified Development Code
	None	-	Coordination between Pearland and Other Agencies	Propose	Develop a coordinated review process with TxDOT and neighboring jurisdictions for future development plats with property boundaries that front TxDOT and/or other jurisdiction owned roadway.
	Subdivision Regulations, Unified Development Code (UDC)	Division 11	Sidewalk Requirements	Revise	2021 Multi-modal plan first noted this item. Update language, existing language for existing vacant parcels is misleading
		Division 11	Sidewalk Requirements	Revise	Update existing UDC to clarify responsible party for coordinating both sides of street for sidewalks
		Varies	TIA Requirement	Revise	Specify all times, not to be determined by City Engineer
		Section 3.2.2.6	Roadway Participation Policies	Revise	Consider Revising based on percentage, not 22' of pavement standard

INTERSECTION PROJECTS (MEDIUM-TERM 6-11 YEARS)

	Project Location	Description
MEDIUM-TERM	**1. SH 35 at Orange Street**	▸ Add westbound right-turn lane on Orange Street ▸ Adjust signal timing
	2. SH 35 at Bailey Road	▸ Add second left northbound turn lane on SH 35 ▸ Modify sidewalk and ADA facilities in the southwest corner ▸ Update east-west signal phasing
	3. SH 35 at Dixie Farm Road	▸ Add northbound right-turn lane on SH 35 ▸ Modify sidewalk, relocate signal pole in median and modify ADA facilities in the southeast corner ▸ Adjust signal timing
	4. SH 35 at Hastings Canon Road	▸ Add eastbound right-turn lane on Hastings Canon Road ▸ Replace existing 'span-wire' signal with new 'mast-arm' signal ▸ Adjust signal timing
	5. Pearland Parkway at Hughes Road	▸ Add a second southbound left-turn lane on Pearland Pwky ▸ Add a second westbound left-turn lane on Hughes Road ▸ Modify signal head layouts for southbound and westbound left turn lane additions ▸ Adjust signal phasing and signal timing
	6. Pearland Parkway at FM 518	▸ Add eastbound right-turn lane on FM 518; and add eastbound and westbound right-turn lanes on Pearland Pkwy ▸ Modify sidewalk and ADA facilities in the A northwest and B southeast corners ▸ Adjust signal timing
	7. Pearland Parkway at John Lizer Road	▸ Widen John Lizer road to a four lane divided section from Pearland Parkway to just west of existing bridge (approximately 1000 Feet) ▸ Modify sidewalk and ADA facilities in the northeast and southeast corners ▸ Remove split phase
	8. Pearland Parkway at Dixie Farm Road	▸ Add westbound right-turn lane on Dixie Farm Road ▸ Modify sidewalk and ADA facilities at the northeast and northwest corners of the intersection ▸ Relocate existing traffic signal pole in the northwest corner of the intersection ▸ Adjust signal timing

LONG-TERM PROJECT RECOMMENDATION (11+ YEARS)

	Major Thoroughfare	Recommended Improvement
LONG-TERM	1. Reid Blvd	▸ Extend Reid Boulevard from McHard Road to Beltway 8. Match the 4-lane boulevard cross-section of Reid Blvd (McHard to FM 518) to provide connectivity to Beltway 8
	2. Dixie Farm Road	▸ Extend Dixie Farm Road (four lane divided) from SH 35 to Veterans Dr
	Secondary Thoroughfare	**Recommended Improvement**
	3. Harkey Road	▸ Widen existing 2-lane roadway from CR 100 to FM 518 to a 4-lane undivided concrete curb and gutter cross-section with a 10' shared use path
	4. O'Day Road	▸ Widen existing 2-lane asphalt roadway from FM 518 to McHard Road to 4-lane concrete divided roadway with curb & gutter, underground drainage, and a single 10' sidewalk along one site
	5. Veterans Drive	▸ Widen existing 2-lane asphalt roadway from Bailey Avenue to Walnut Street to 4-lane concrete divided roadway with curb & gutter, underground drainage, and a single 10' sidewalk along one site
	6. Mykawa Road	▸ Widen existing 2-lane asphalt roadway from FM 518 to Beltway 8 to 4-lane concrete divided roadway with curb & gutter, underground drainage, and a single 10' sidewalk along one site
	7. Cullen Pkwy	▸ Widen existing 2-lane asphalt roadway from Magnolia Pkwy to Bailey Road to 4-lane concrete divided roadway with curb & gutter, underground drainage, and a single 10' sidewalk along one site
	8. Kingsley Blvd	▸ Widen existing 2-lane roadway from Clear Creek Pkwy to Beltway 8 to a 4-lane undivided concrete curb and gutter cross-section with a 10' shared use path

	Major Collector	Recommended Improvement
LONG-TERM	9. Roy Road	▸ Widen existing 2-lane roadway to a 4-lane undivided concrete curb and gutter cross-section with a 10' shared use path from McHard Road to FM 518
	10. Garden Road	▸ Widen existing 2-lane roadway to a 4-lane undivided concrete curb and gutter cross-section with a 10' shared use path from McHard Road to FM 518
	11. Hatfield Road	▸ Widen existing 2-lane roadway to a 4-lane undivided concrete curb and gutter cross-section with a 10' shared use path from McHard Road to FM 518
	12. Old Alvin Road	▸ Widen existing 2-lane roadway from McHard Road to Knapp Road to a 4-lane undivided concrete curb and gutter cross-section with a 10' shared use path on one side of the road
	13. Fite Road	▸ Widen existing 2-lane roadway from McLean Road to Cullen Pkwy to a 4-lane undivided concrete curb and gutter cross-section with a 10' shared use path on one side of the road
	14. Miller Ranch Road	▸ Widen existing 2-lane roadway to a 4-lane undivided concrete curb and gutter cross-section with a 10' shared use path from Hughes Ranch Road to FM 518.
	15. Hughes Ranch Road	▸ Widen existing 2-lane roadway from Stone Road to Cullen Pkwy to a 4-lane undivided concrete curb and gutter cross-section with a 10' shared use path on one side of the road