



PLANNING &  
DEVELOPMENT  
DEPARTMENT



March 27, 2023

## Acres Home Mobility Study Final Report





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Houston Public Works and the City of Houston  
Planning & Development Department



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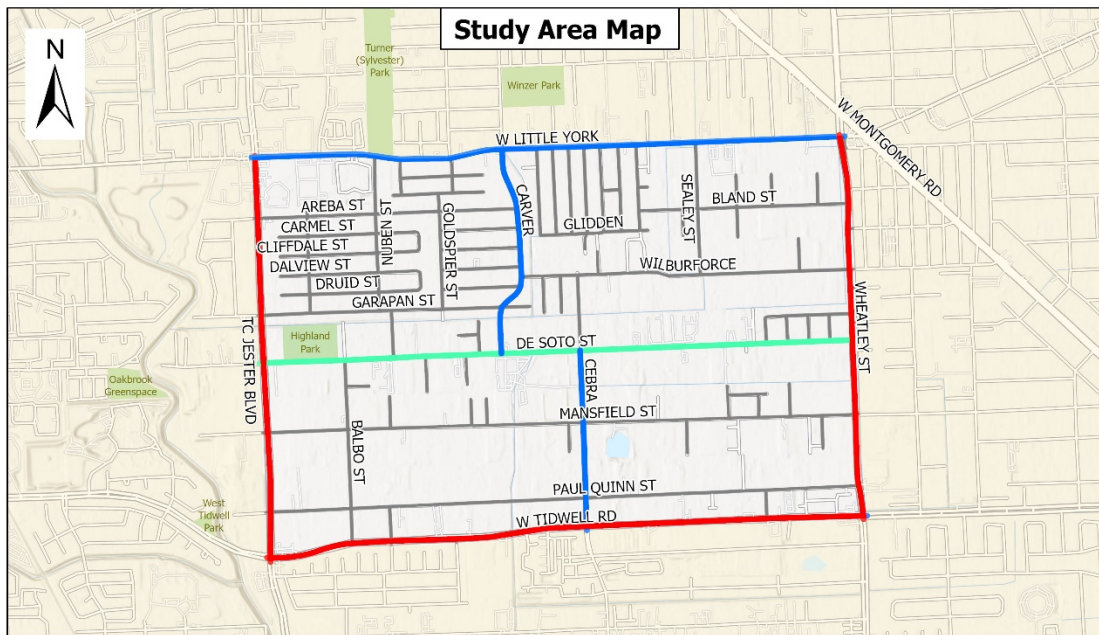
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- Appendix A: Data Collection Memorandum
- Appendix B: Existing Conditions Analysis
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# 1 Executive Summary

The City of Houston Planning and Development Department, in collaboration with Houston Public Works, commissioned the Acres Home Mobility Study (Study) to evaluate ways to improve circulation in the Acres Home Study Area, which currently features multiple mobility challenges in addition to unprecedented growth.

The Study Area is located in Houston's Acres Home Super Neighborhood, bounded by West Little York Road on the north, West Tidwell Road on the south, Wheatley Street on the east, and TC Jester Boulevard on the west.



The objective of this study was to evaluate connectivity within the area, specifically the lack of north-south street connectivity, and related mobility deficiencies. The Study Area is rapidly densifying and the existing street network is insufficient to provide adequate access and circulation for the new developments. As development continues, there will be fewer opportunities to expand the street network and make transportation improvements, so it is critical to develop a mobility plan to supplement and enhance redevelopment.

The Study is intended to identify transportation-related improvements that meet the community's desire and need for a more complete transportation network and more mobility options. To achieve these goals, this Plan proposes a long-term, comprehensive network of roadway and connectivity improvements, as well as bicycle and pedestrian infrastructure that will connect residents and create a space for all users to safely travel. Key stakeholders were engaged early in the process, including Acres Home residents, City of Houston, developers, and Houston METRO. Three public meetings were held at key Study milestones: Existing Conditions, Gap Analysis, and

Mobility Plan. During these meetings, discussions were held, and input collected to clearly identify the residents' top mobility priorities, which include making safety improvements to existing streets and constructing new sidewalks, bike lanes, and greenways.

The Study identified several mobility improvement strategies that synthesized information and resident feedback in the following areas:

- Safety
- Sidewalks
- Bicycle Facilities
- Pavement Improvements
- Connectivity

Residents' safety concerns included speeding, the presence of school children, turn signal needs, speed bumps, and other general safety improvements. Potential safety improvements have been preliminarily identified at several specific locations in the Study Area, and general recommendations include further safety review analyses including but not limited to lighting, traffic calming devices, pedestrian access, and signal timing. Additional potential safety enhancements include dynamic speed display devices, high intensity activity crosswalks, chicanes, channelizing devices, corner extensions, and raised intersections.

Sidewalk connectivity is one of the top transportation related concerns of residents in the Study Area, and while the city's ultimate goal is to add safe pedestrian access to all roadways as they are improved, existing constraints (e.g. limited ROW, open ditches) pose a challenge. The major recommendations to address residents' sidewalk needs include requiring developers to meet current sidewalk requirements on new developments and adding sidewalks to streets that do not have sidewalks on both sides, which include Carver Road, Garapan Street, De Soto Street, Cebra Street, and Wilburforce Street. Several alternative street cross sections have been developed to show how these improvements could be incorporated on streets in the Study Area.

Bicycle facilities are another area of concern for Acres Home residents, as there are few bicycle facilities in the area. While several streets in the Study Area are included in the City of Houston's Bike Plan for future improvements, including off-street routes, dedicated and protected on-street bike lanes, and shared on-street facilities, the plan does not provide for funding or implementation. Additional optimal street cross sections were developed for this Study, including dedicated and protected on-street facilities on West Tidwell Road, and shared on-street facilities along Wilburforce Street and Balbo Street. The images below demonstrate an improvement that has been recommended on Wilburforce Street.





Pavement condition was another concern of Acres Home residents, and an evaluation of pavement conditions informed recommendations presented in this Study. Significant pavement improvements are needed in the area, and potential pavement improvements have been prioritized in the Study Area based on severity of pavement conditions

Connectivity is a unique concern in the Study Area given the narrow existing streets, limited existing north-south connectivity, rapidly growing population, and lack of multimodal options. Perhaps most impactful is the unique existing parcel geometry (narrow lots) combined with new street development requirements (50-ft right-of-way [ROW]/street dedication when developing 80-ft wide lots), which has caused multiple variance applications and excessive east-west street spacing in the Study Area. This history of exemption has impacted the ability of the neighborhood to improve mobility and grow sustainably. There are several existing road improvement projects in the Study Area currently identified in the city's Capital Improvement Program (CIP) that would help enhance mobility. This Study has identified a few more, including improvements to Balbo Street, Bethune Drive/Cebra Street, and Sealey Street. Alternative typical roadway cross sections that utilize a slightly narrower ROW (40 ft) have been developed to provide roadway improvement options that may be applicable within the given constraints of the Study Area. Potential street extensions have also been identified to enhance north-south connectivity, including Carver Road and Cebra Street.

Potential funding sources have been identified for all recommended improvements, and include a mix of federal, state, and local resources, as well as developers. In addition, the City of Houston has several options for resources that include CIP funds, such as council district service funds, neighborhood traffic management program funds, sidewalk programs, the Mayor's street rehabilitation program, and the Sidewalk Fund which was approved by city council on January 25, 2023 and will be effective from March 1, 2023.

Using the information presented in this Study report, next steps include exploring the identified funding opportunities to implement the projects identified in this report.



## 2 Introduction

This report, prepared by RS&H, Inc., documents the recommended mobility solutions and final recommendations resulting from the Acres Home Mobility Study. The Acres Home Mobility Study Area is approximately 2.1 square miles in Houston’s Acres Home Super Neighborhood, bounded by West Little York Road on the north, West Tidwell Road on the south, Wheatley Street on the east, and TC Jester Boulevard on the west. Other location references include the 77091 zip code and City Council District “B.” **Figure 1** depicts the location of the project study area.

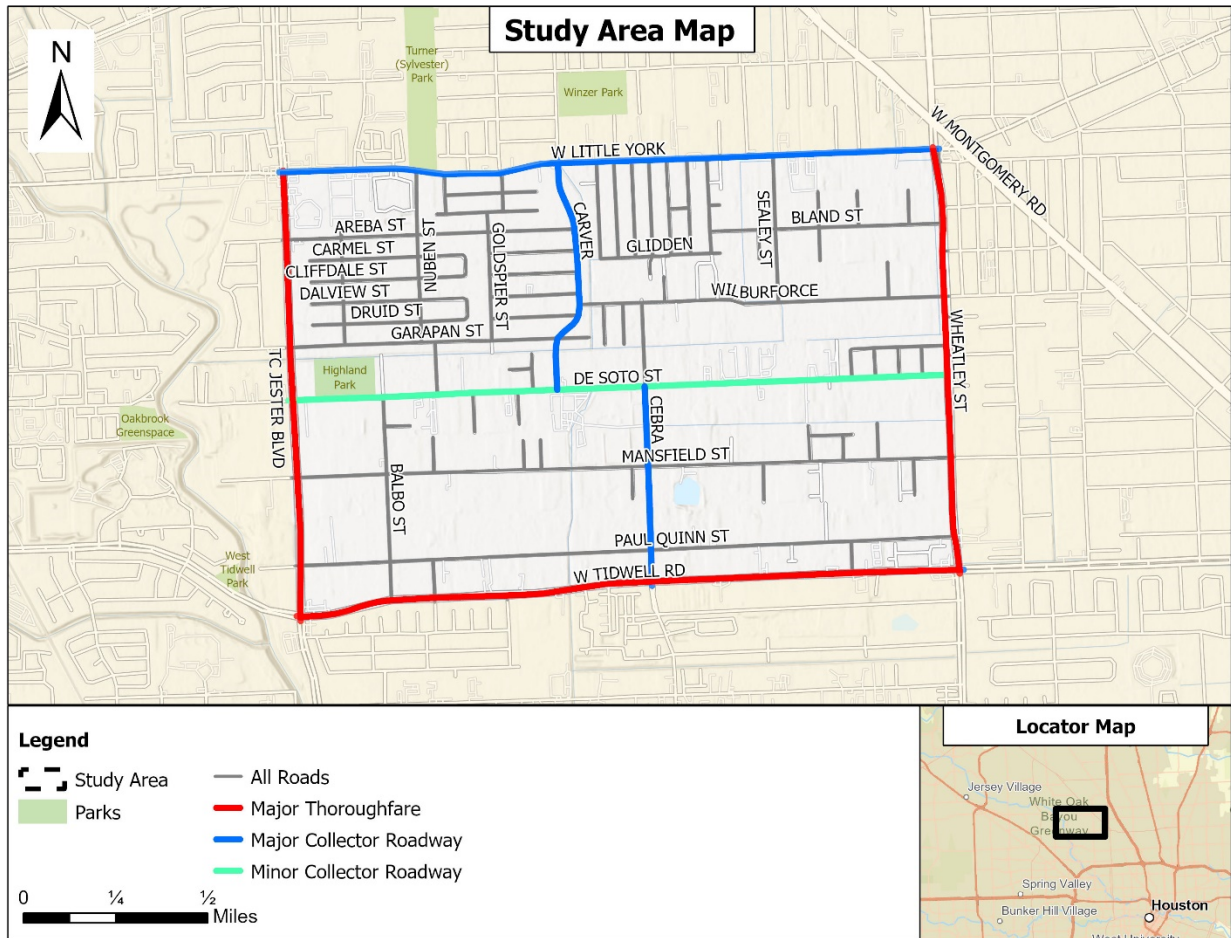


Figure 1: Acres Home Study Area

Acres Home is an historic neighborhood that was once considered the South’s largest unincorporated black community (Acres Home Center for Business and Economic Development, Inc., n.d.). It was established during World War I, settled by African Americans mainly from rural areas, with the goal of developing properties large enough to contain small gardens and to raise chickens and other small farm animals. The study area was originally platted in the 1920s. It was established as a low-density rural area with limited north-south street connectivity. Most originally created lots are 80-ft wide, 500-ft long, and one acre in size. Many streets in this area are open ditched streets with narrow pavement. The existing streets were sufficient to move people around

when the neighborhood was originally established. However, since 2016, the area has experienced significant redevelopment growth. 14.5% of the land has been redeveloped in the past six years. Many original lots have been subdivided. On average, each original one-acre lot is subdivided into 19 smaller lots. As a result, more than 2400 new single-family residential lots have been created in this area. The redevelopment trend creates serious mobility and accessibility challenges for the existing and future residents in this neighborhood. It is very important to develop a comprehensive approach to enhance the street network, develop strategies to promote multimodal transportation, and improve transportation safety in the area. Mayor Turner instructed the City of Houston Planning and Development Department (P&D) to conduct a mobility study to address these challenges before it's too late. As a result, in February 2022, P&D, Houston Public and Works (HPW) initiated a mobility study in this area.

The mobility study included data collection, an existing conditions analysis, and a gap-analysis to develop the final Study Area Mobility Plan, presented in this document.

## 3 Project Overview

### 3.1 Purpose and Goals

The purpose of the Acres Home Mobility Study is to identify transportation-related improvements that address multimodal needs and growth-related mobility concerns in the project area, specifically the lack of north-south street connectivity and related transportation deficiencies.

This study builds off the following five goals from the Acres Home Complete Community Action Plan (City of Houston Planning and Development Department, 2018):

1. Creating safe streets
2. Building great streets
3. Improving flood resiliency
4. Expanding mobility options
5. Creating a network of active transportation facilities for hiking, biking, and horseback-riding.

### 3.2 Stakeholders

Key stakeholders were engaged at all stages of this study. These include:

- Acres Home Residents
- City of Houston Departments (P&D, HPW, Administration & Regulatory Affairs, Mayor's Office for People with Disabilities)
- Developers
- Metropolitan Transit Authority of Harris County (METRO)

### 3.3 Public Involvement

The Acres Home Mobility Study included three public meetings, one for each of the three project phases: Existing Conditions Analysis; Gap Analysis; and Mobility Plan. All meetings were held at the Acres Home Community Center at 6 pm.

- The Existing Conditions Analysis public meeting was held on June 7, 2022
- The Gap Analysis public meeting was held on August 9, 2022
- The Final Recommendations public meeting was held on October 6, 2022

The community was involved in the process and provided information regarding the neighborhood, history of the Complete Community Action Plan, specific input on needs in the area, and input on the final recommendations presented. Comments from the public were considered by the city and further information, as well as attendees' ideas and prioritization suggestions, is provided in the Public Meeting Notes in **Appendix C**.

Meeting attendees were asked at the first meeting to prioritize the areas in which they would spend money if they were making decisions. The highest priority item is *Encourage less development/growth*, which City staff explained is not possible due to state law and the City of Houston Code of Ordinances. However, this plan was created to help facilitate responsible growth in the area. The highest priority items that the city can address are *Making safety improvements on existing streets* and *Construction of sidewalks, bike lanes, and greenways*. All priorities, and how they were scored by study participants, are listed in **Table 1**.

Where would you spend your money?	Priority Score
Encourage less development/growth	10
Making safety improvements on existing streets (e.g. crosswalks, protected bike lanes, traffic light upgrades, etc.)	9
Construction of sidewalks, bike lanes, and greenways	8
Widening existing roadways	7
Maintaining existing roadways, sidewalks, etc.	6
Improvement in street appearance (signage, landscaping, etc.)	5
Building new streets and roadways	4
Public transportation expansion/enhancement (e.g. more METRO stops, more frequent buses)	3
Encourage increased carpooling/vanpooling	2
Other	1

Table 1: Public Priorities for the Acres Home Mobility Study Area

The public was clear that their main need is for safe multimodal options. It is important to the neighborhood to maintain the feel of the area while creating safe routes for pedestrians and

bicyclists to get around. It was voiced, and the project team noticed, that there is a significant amount of pedestrian and bicycle activity at night in this area. The existing roadways are straight and there are many concerns of speeding and inadequate lighting, which can lead to unsafe driving conditions, creating safety concerns for pedestrians.

### 3.4 Action Priorities

After key stakeholders (as defined in **Section 3.2**) were identified, actions were prioritized based on cost and time. For example, sidewalk and bike lane upgrades, and new roadway extensions will take longer time, while improved lighting, adding speed humps, and other minor roadway updates will take shorter time. The cost for the major projects will be much higher than the cost of minor projects. An Action Item Priority Matrix is shown in **Figure 2**.

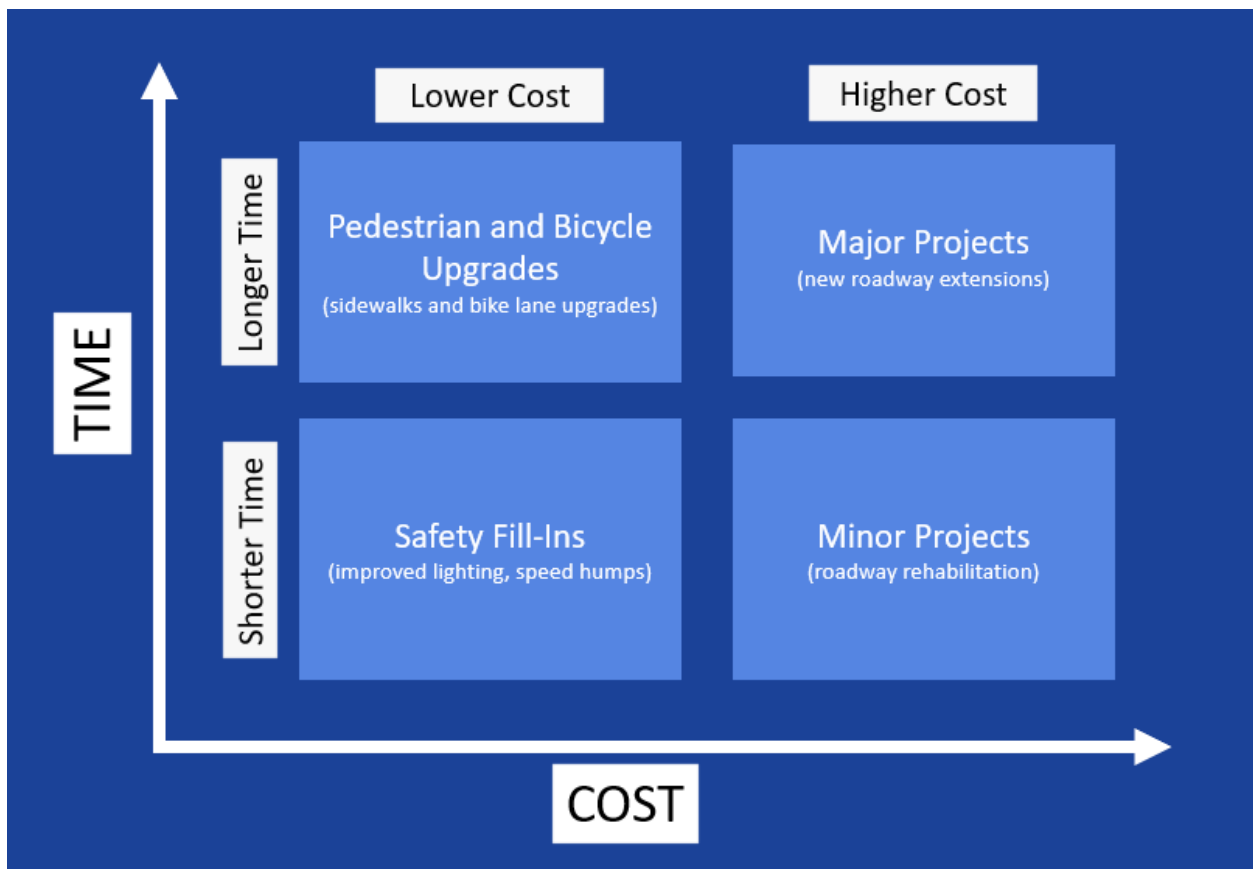


Figure 2: Action Priority Matrix

## 4 Data Collection

Data Collection was completed on April 27<sup>th</sup>, 2022. The data collection efforts consisted of collecting previous plans and studies and geospatial data related to socio-economics, environmental constraints, multimodal transportation, land use, safety, and development activity,

as well as traffic turning movement counts and field observations. A list of data collected, including the agency source and published date, is attached in the Data Compendium of **Appendix A**.

## 5 Existing Conditions

The Existing Conditions Analysis was completed on July 8<sup>th</sup>, 2022. Existing conditions in the Acres Home study area were assessed based on review of previous studies, desktop review of GIS and other publicly available spatial data, and data collected in the field. The team evaluated the study area based on the following categories:

1. Previous Studies
2. Population Data
3. Socio-Economic Data
4. Environmental Constraints
5. Transportation Network
6. Traffic Trends
7. Land Use Trends
8. Development Activity
9. Crash Analysis

This data was reviewed and summarized in **Appendix B**. Afterwards, a gap analysis was conducted to see where there were missing pieces to each component of the project. At this stage, recommendations were made and taken to the public for input. That input was considered and summarized in subsequent sections.

## 6 Recommended Mobility Improvement Strategies

### 6.1 Safety

Safety was the number one concern voiced by the public during public meetings. Speeding issues and a lack of pedestrian facilities result in real and perceived safety concerns in the Acres Home Mobility Study Area.

#### 6.1.1 Resident Feedback on Safety Issues

Comments received from Acres Home residents about safety include:

- Multiple speeding issues along Carver Road and De Soto Street
- West Little York Road should have traffic calming elements because Carver Road at West Little York Road is a major collector for school children
- Left turn signal needed at West Tidwell Road and Rosslyn Road
- Intersection of Carver Road and Wilburforce Street need safety improvements
- General need for speed bumps

## 6.1.2 Safety Improvement Options

The recommended solution to safety issues and concerns in the study area is three-fold:

- Identify locations with high pedestrian volumes and add safety improvements
- Identify locations with high vehicular crash rates and high-speed traffic and add safety improvements
- Improve pedestrian safety awareness

Without conducting a safety review, it is difficult to pinpoint what exact safety measures are needed in what location. Further evaluations will need to be conducted to identify potential projects. A few locations that the project team noted safety could be improved based on the criteria above are:

1. The intersection of West Little York Road and Wheatley Street has a high number of crashes (Texas Department of Transportation, 2022). It is suggested to look at the existing lighting and signal timing.
2. Carver Road has a considerable number of safety complaints and was identified as a road where pedestrian facilities should be prioritized. This is because of the high amount of existing pedestrian traffic and the adjacent schools. The existing lighting on Carver Road is also lacking and could be the reason that there are several crashes documented.
3. West Little York Road had multiple speeding complaints where a traffic calming measure could be beneficial, especially considering the amount of pedestrian traffic. The intersection of West Little York Road and Carver Road is not currently up to ADA Standards so updates should be made to that intersection.
4. De Soto Street, Mansfield Street, and Paul Quinn Street all have complaints about speeding that would be consistent with the straight nature of the street. De Soto Street, in particular, was identified as a minor collector in the City of Houston's Major Thoroughfare and Freeway Plan (MTFP). If pedestrian facilities are added to any of these roads, the designer should consider upgrades to pedestrian crossings and traffic calming measures to slow down vehicular traffic.
5. West TC Jester Boulevard has existing sidewalks on either side but no connection to the opposite side of the road between West Little York Road and West Tidwell Road, a 1.2-mile difference. The project team noted people crossing the street near De Soto Street so a pedestrian crossing could be helpful here.
6. Balbo Street is a narrow street that provides access to the park and community center and should be reviewed for intersection improvements.
7. The signal timing should be reviewed at West Tidwell Road and Cebra Street.

Traffic calming is another way to address most of the residents' concerns. It refers to improving street features to reduce the negative effects of speeding and cut-through traffic while enhancing safety for pedestrians and bicyclists. These improvements are dependent on the street



classification: local, collector, and thoroughfare roadways. Local roads generally have fewer than 8,000 vehicles per day and primarily provide access to residential properties. These roads would include most roads within the inside of the study area. A Collector has anywhere from 8,000-10,000 vehicles per day and connects local streets to arterial streets. The streets in the Study Area that are thoroughfares are TC Jester Boulevard, West Tidwell Road, and Wheatley Street. West Little York Road, Carver Road, and Cebra Street are considered major collector roadways, which connects to local highways and has more than 10,000 cars per day. De Soto Street is identified as a minor collector in the MTFP. These distinctions are important because traffic calming measures are typically appropriate on two-lane local residential streets with lower traffic volumes. Certain traffic calming measures may not be used on major collectors or thoroughfare roadways. Other safety improvements will be considered for collector and thoroughfare roadways.

Examples of traffic calming that may be effective include rumble strips, speed cushions, speed bumps, and raised crosswalks. These are relatively short-term solutions that could be implemented in approximately 6 to 12 months if funding is secured and can help to improve multimodal safety. Sometimes additional signage can help support other safety improvements in a cost-effective way to reduce the speed of cars traveling in the area, so adding more signage will help supplement other safety improvements.

There are additional speed control options that would require a traffic study to prove there are adequate pedestrian numbers. These additional measures include:

- Dynamic Speed Display Devices (DSDD)
  - Show a vehicle's speed as the driver approaches the device
  - Can be placed permanently, but they are usually mobile and can be moved to different locations
- High Intensity Activity Crosswalk (HAWK) or Rectangular Rapid Flashing Beacon (RRFB)
  - Special beacons placed at striped and un-signalized crosswalks
  - Activated by a push button and require vehicles to stop when activated

Roadway design plays a crucial role in improving traffic safety. Features such as chicanes, channelizing devices, corner extensions, and raised intersections are all options that could be explored.

- Chicanes add extra turns on roads to slow traffic for safety
- Channelizing devices (e.g. cones, tubular markers, vertical panels, drums, barricades, and temporarily raised islands) provide for smooth and gradual vehicular traffic flow from one lane to another, or into a narrower traveled way
- Corner extensions visually and physically narrow the roadway, creating safer and shorter crossings for pedestrians

- Raised intersections, like speed humps and other vertical speed control elements, reinforce slow speeds and encourage motorists to yield to pedestrians at the crosswalk by creating a safe, slow-speed crossing and public space at minor intersections

### 6.1.3 Safety Improvement Funding Opportunities

Several funding opportunities as described in **Section 7** may be available to add safety improvements to the study area:

- State/ Federal Grants
- Capital Improvement Project (CIP) Fund
- Council District Service Fund (CDSF)
- Neighborhood Traffic Management Program (NTMP)

## 6.2 Sidewalks

### 6.2.1 Resident Feedback on Sidewalk Issues

Sidewalk connectivity was one of the top transportation-related concerns of Acres Home residents. The city's future plans include adding safe pedestrian access to all roadways as they are improved. This is particularly challenging in an area like Acres Home that has limited right-of-way (ROW) and open ditches. The roadways are already narrow and increasing the impervious area by adding sidewalks could require a closed drainage system, which significantly increases the cost. Comments received about sidewalks include:

- All of the streets should have sidewalks
- Add sidewalks on Mansfield, Carver Road, De Soto Street, Paul Quinn Street, and Wilburforce Street
- Housing developers should be required to construct sidewalks
- Some sidewalks on Wheatley Street/Ella Boulevard have mailboxes that are blocking wheelchair users

### 6.2.2 Sidewalk Improvement Options

The recommended approach to addressing sidewalk concerns in the study area is two-pronged:

- Require new developments to meet current sidewalk requirements (construct sidewalks or pay Sidewalk in Lieu of Fee, once approved)
- Identify locations where sidewalks and/or sidewalk upgrades are needed

The sidewalk improvements should include additional features to create designated crossing locations, such as crosswalk signing and pavement marking. Additional crosswalk safety improvements should be reviewed at high traffic areas. Observations done as part of the Data Collection Phase of this study were made during morning and mid-morning hours, via video

documentation. However, most of the pedestrian traffic viewed by the project team was during additional field visits at night so any future studies need to include late hours.

Several specific sidewalk improvements are identified (**Figure 3**). The existing conditions were reviewed on each road to see which roads could accommodate one or two sidewalks and where the majority of those sidewalks could be located. The main improvements include:

- Adding sidewalks/walking paths on both sides of Carver Road
- Extending the sidewalks on Garapan Street to Carver Road
- Adding sidewalk improvements along De Soto Street
- Adding sidewalks on Cebra Street between De Soto Street and West Tidwell Road
- Adding sidewalks on Wilburforce Street between Carver Road and Wheatley Street
- 

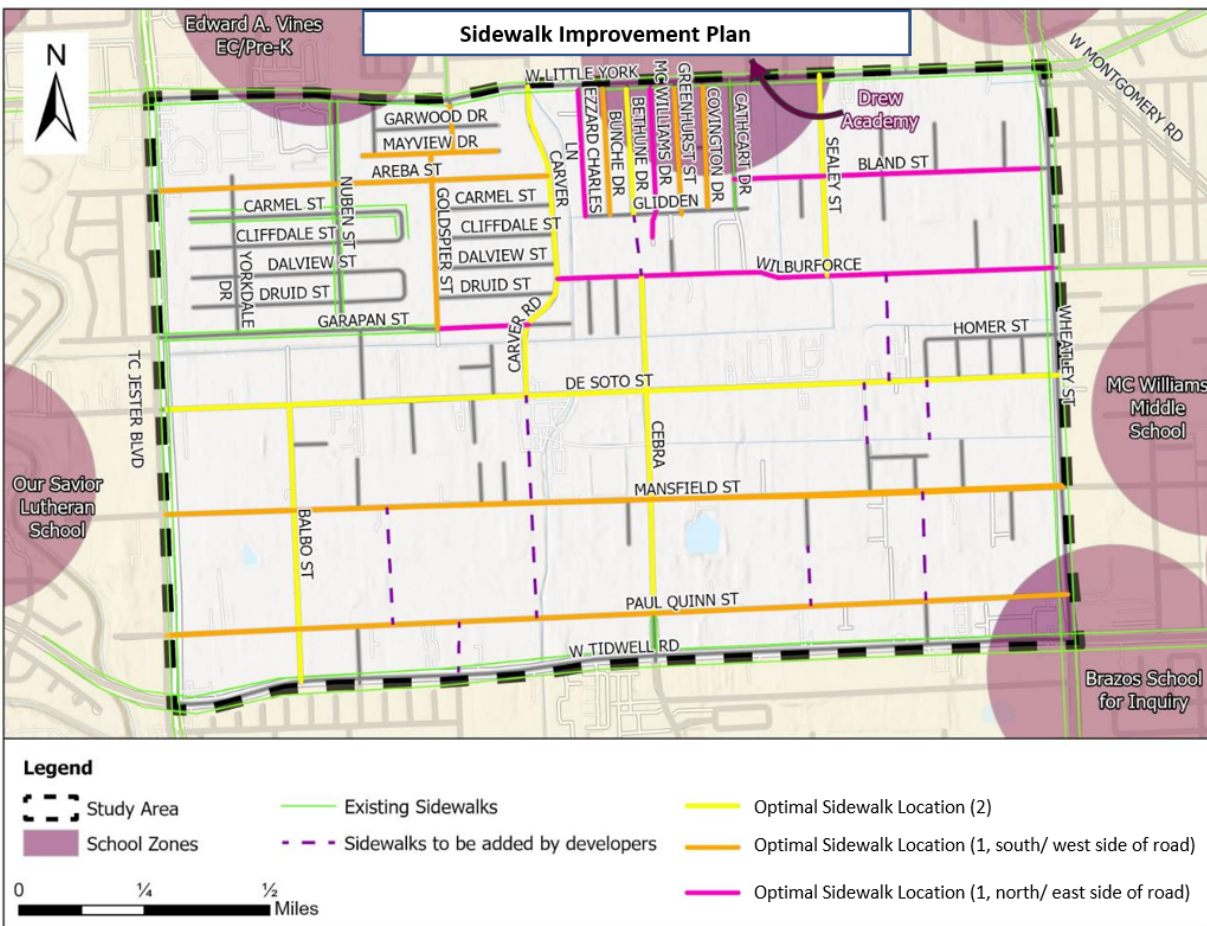


Figure 3: Sidewalk Improvement Plan

The city’s ultimate goal is for every street in the study area to have sidewalks on both sides. To achieve this, the lane configuration of certain roads may have to be modified to incorporate sidewalks. Renderings were developed to show the public both existing conditions and alternative designs. (**Figures 4, 5, and 6**).





Figure 4: Existing De Soto Street



Figure 5: De Soto Street with Two Sidewalks

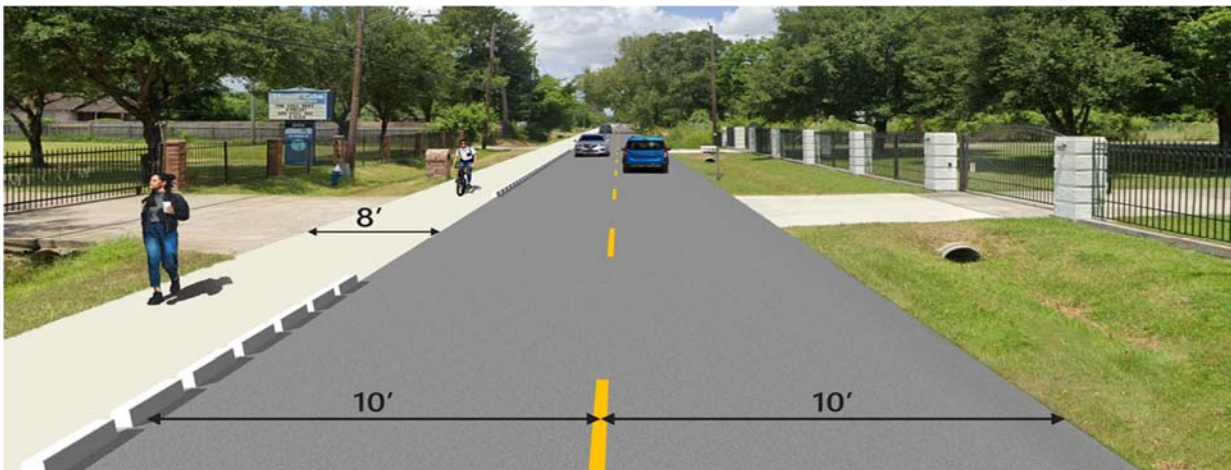


Figure 6: De Soto Street with a Shared Use Path

### 6.2.3 Sidewalk Improvement Funding Opportunities

Several funding opportunities as described in **Section 7** may be available to add sidewalk improvements to the study area:

- State/ Federal Grants
- City Sidewalk Programs
- CDSF
- Developers

## 6.3 Bicycle Facilities

The Acres Home Mobility Study Area has very few safe facilities for cyclists. Bicycle mobility was an important transportation concern for Acres Home residents and has a large impact on the mobility of the area.

### 6.3.1 Resident Feedback on Bicycle Facilities

Most public input indicated that residents want more and better bicycle facilities in the area though there were some residents who believe the major streets in the area are too dangerous for any bicycle facilities because of the existing narrow lane widths and high vehicular travel speed. Comments received about bicycle facilities include:

- Add bike lanes to the roads off Glidden, in the Drew Academy school zone
- Bike lanes are a must on West Tidwell Road
- Add bike lanes on TC Jester Boulevard
- Please add off street bike lanes on Wilburforce Street
- Remove proposed bike lanes on major streets and De Soto Street, as it is too dangerous

### 6.3.2 Bicycle Facility Improvement Options

The most efficient way to realize residents' bicycle facility requests is to identify locations where specific bike lane projects can be added to the City of Houston Bike Plan. Adding to the Bike Plan map is the first step, but it does not implement or fund the projects. The City's Bike Plan Prioritization Methodology will identify the order of bike project funding.

In the study area, there are planned off-street, dedicated on-street, and planned shared on-street bicycle facilities (these routes are part of the Houston Bike Plan). Additional potential dedicated on-street and shared on-street bicycle facilities are suggested for inclusion in the Houston Bike Plan. Existing, planned, and optimal bicycle facilities are illustrated in **Figure 7**.

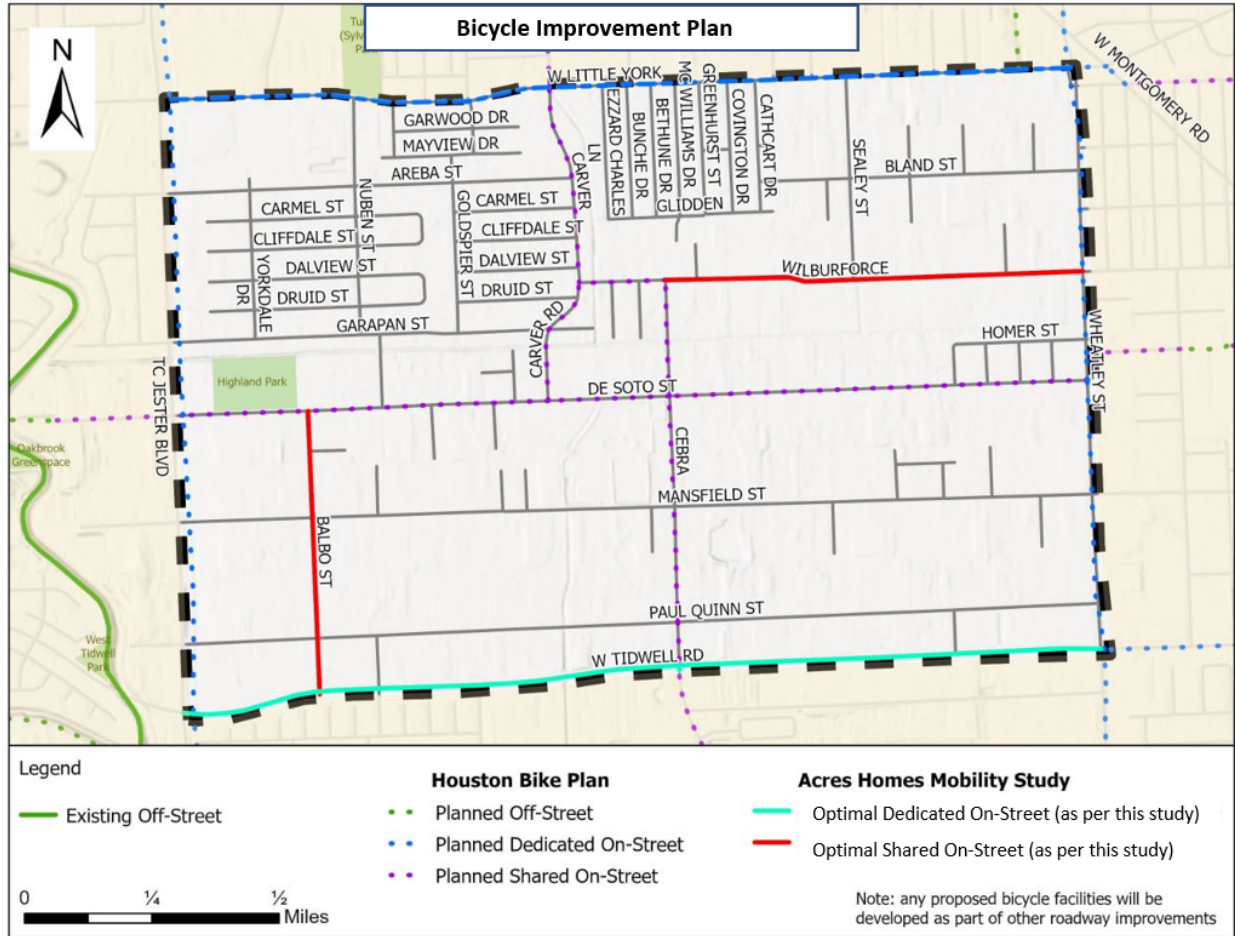


Figure 7: Bicycle Improvement Plan

Dedicated bike lanes are an option along wider streets, such as West Tidwell Road. Shared on-street bike lanes are an option for streets with lower vehicle volumes and speeds. Many streets in the Acres Home neighborhood, such as Wilburforce Street, will need to utilize this option because of the narrow ROW. Further coordination was done with HPW to ensure that the recommended shared on-street bike lanes are safe on Wilburforce Street and Balbo Street. The city determined that these two streets would be appropriate candidates for a neighborhood bikeway because of the low traffic volume. Public meeting renderings for existing Wilburforce Street and recommended improvements (including shared on-street bike lanes), are shown in **Figures 8 and 9**.





Figure 8: Existing Wilburforce Street

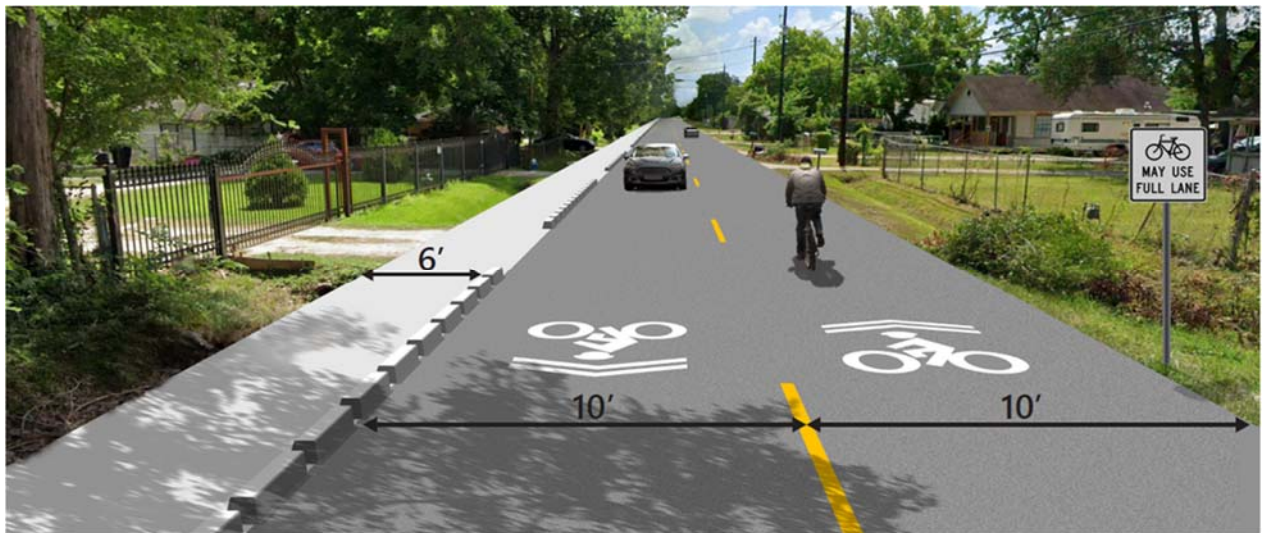


Figure 9: Sidewalk along One Side of Wilburforce Street

Renderings for what the recommended separated bike lane on West Tidwell Road will look like, based on the updated Infrastructure Design Manual (IDM) guidance are included in **Figures 10** and **11**.



Figure 10: Existing West Tidwell Road

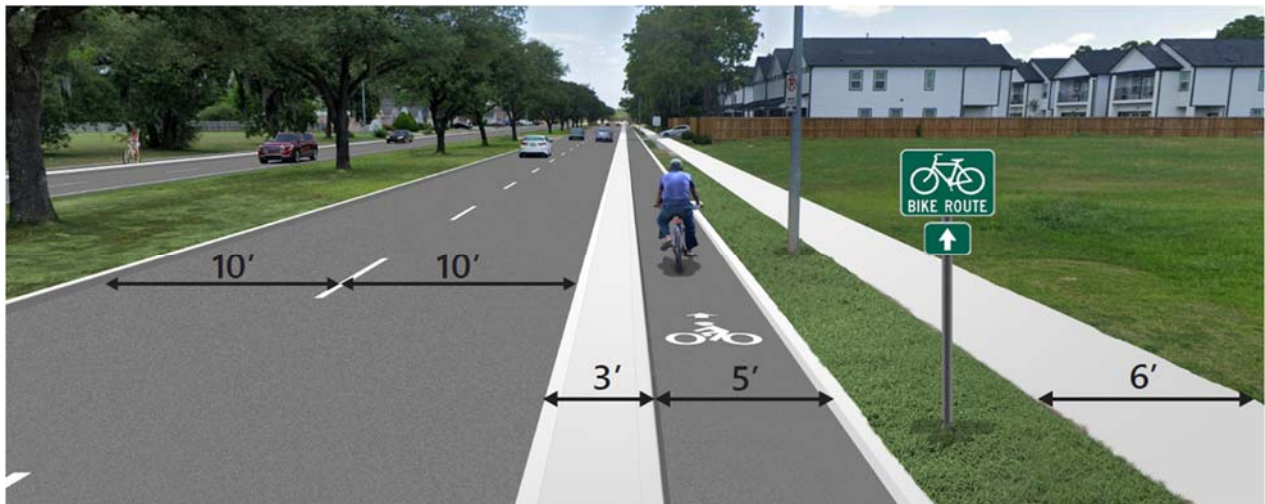


Figure 11: Separated Bike Lane on West Tidwell Road

### 6.3.3 Bicycle Facility Funding Opportunities

Several funding opportunities as described in **Section 7** may be available to add bicycle facilities to the study area:

- City of Houston Bicycle Program
- State/ Federal Grants
- CDSF

## 6.4 Pavement Improvements

The pavement conditions provided by the city were used for this analysis. On many streets in the Acres Home Mobility Study Area, pavement conditions are poor to very poor.



### 6.4.1 Resident Feedback on Pavement Issues

Comments received about pavement conditions include:

- The end of Greenhurst Street is unpaved
- Widen Rosslyn Street with improvements
- Sealey Street needs improvements

### 6.4.2 Pavement Improvement Options

The recommended pavement improvements in the study area are shown in **Figure 12**. Pavement improvements were identified from the Pavement Condition Index (PCI) in this area. All the sections identified as “Priority 1” currently have very poor pavement conditions and need overlays to improve ride quality and extend the life of the road. Other pavement issues, such as potholes and low spots that collect water, may also be improved by roadway overlays. There may also be pavement improvements done by developers to ensure minimum pavement criteria are met.

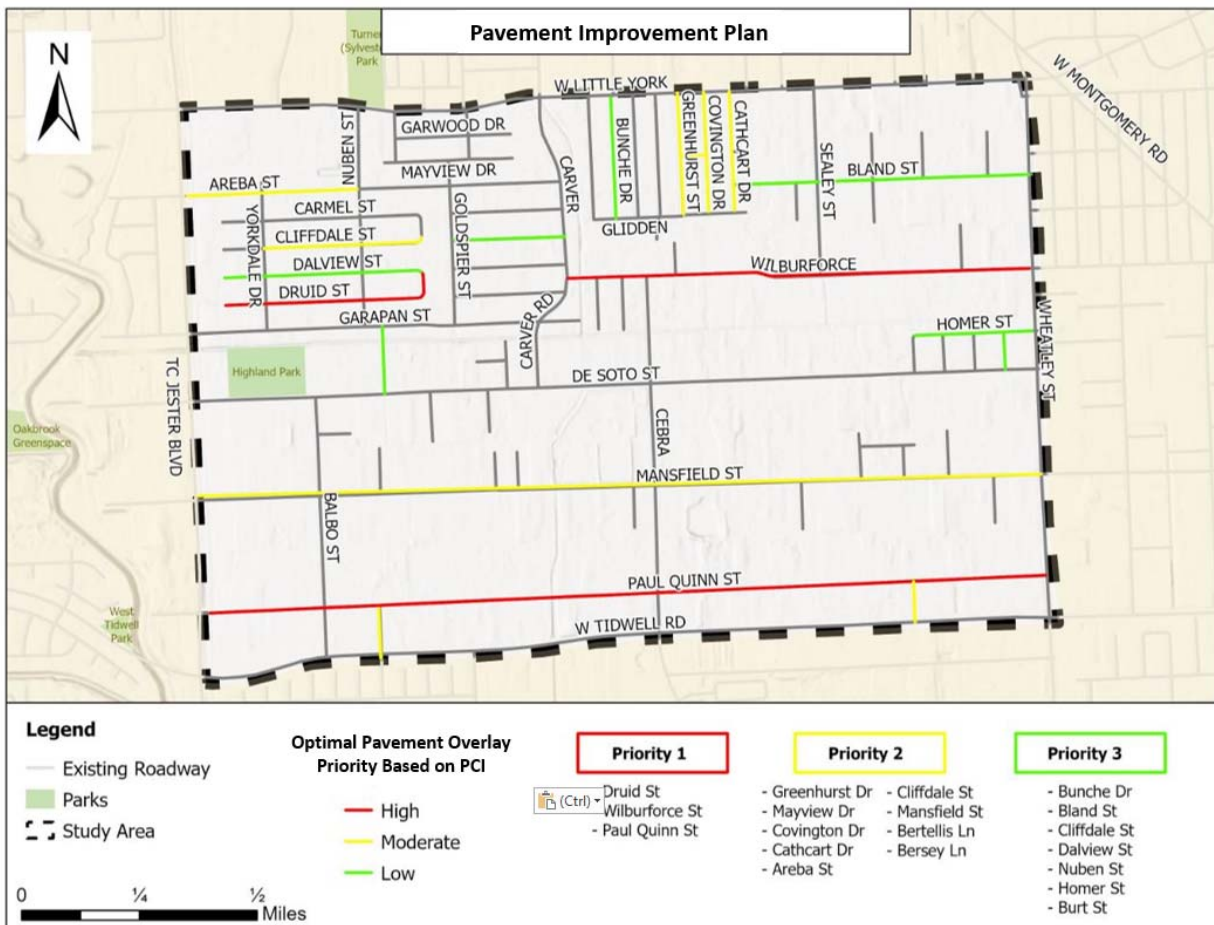


Figure 12: Pavement Improvement Plan

### 6.4.3 Pavement Improvement Funding Opportunities

Several funding opportunities as described in **Section 7** may be available for pavement improvements in the study area:

- CIP
- CDSF
- Street Rehabilitation Program

## 6.5 Connectivity

To improve traffic circulation and promote a safe multimodal transportation network, the City of Houston Code of Ordinances Chapter 42 establishes maximum intersection spacing and minimum ROW width requirements based on street classifications. The study area has limited north-south connectivity and many of its streets are very narrow; the issues caused by both of these items are anticipated to worsen due to the population growth occurring in the area. Depending on the location and existing conditions, redevelopments on some lots are required to dedicate a 50-ft wide north-south public street and provide street widening along existing streets to meet the ordinance requirements. However, strict compliance of the ordinance will require developers dedicate a 50-ft wide ROW out of an 80-ft wide lot, making the lot undevelopable. As a result, multiple applicants submitted variance applications to not provide the required 50-ft wide ROW dedication and allow excessive east-west intersection spacing in this area. The Planning Commission consistently granted this type of variance because strict compliance of the ordinance will create disproportionate development costs by requiring more than half of the land to be dedicated for ROW purpose. However, with the increase of development in the area, an increase in vehicle trips is expected. Exempting north-south street dedication will deny the area the opportunity to improve mobility and accessibility. To help the neighborhood grow sustainably, it's very important and necessary to explore options to improve north-south connectivity in the area.

### 6.5.1 Resident Feedback on Connectivity Issues

During the Final Recommendations Public Meeting, only one comment was received that was related to connectivity issues. The comment was specific to the recommended Carver Road extension, as one resident stated, "I am excited about the extension of Carver."

### 6.5.2 Connectivity Improvement Options

Considering the unique existing conditions and the ongoing redevelopment trend in the study area, in concert with HPW, P&D determined it would be feasible to add more smaller streets in single-family residential area which allow walking, biking, and driving, and will help mitigate impacts to local residents. **Figure 13** identifies some feasible locations for new north-south public streets in the study area.

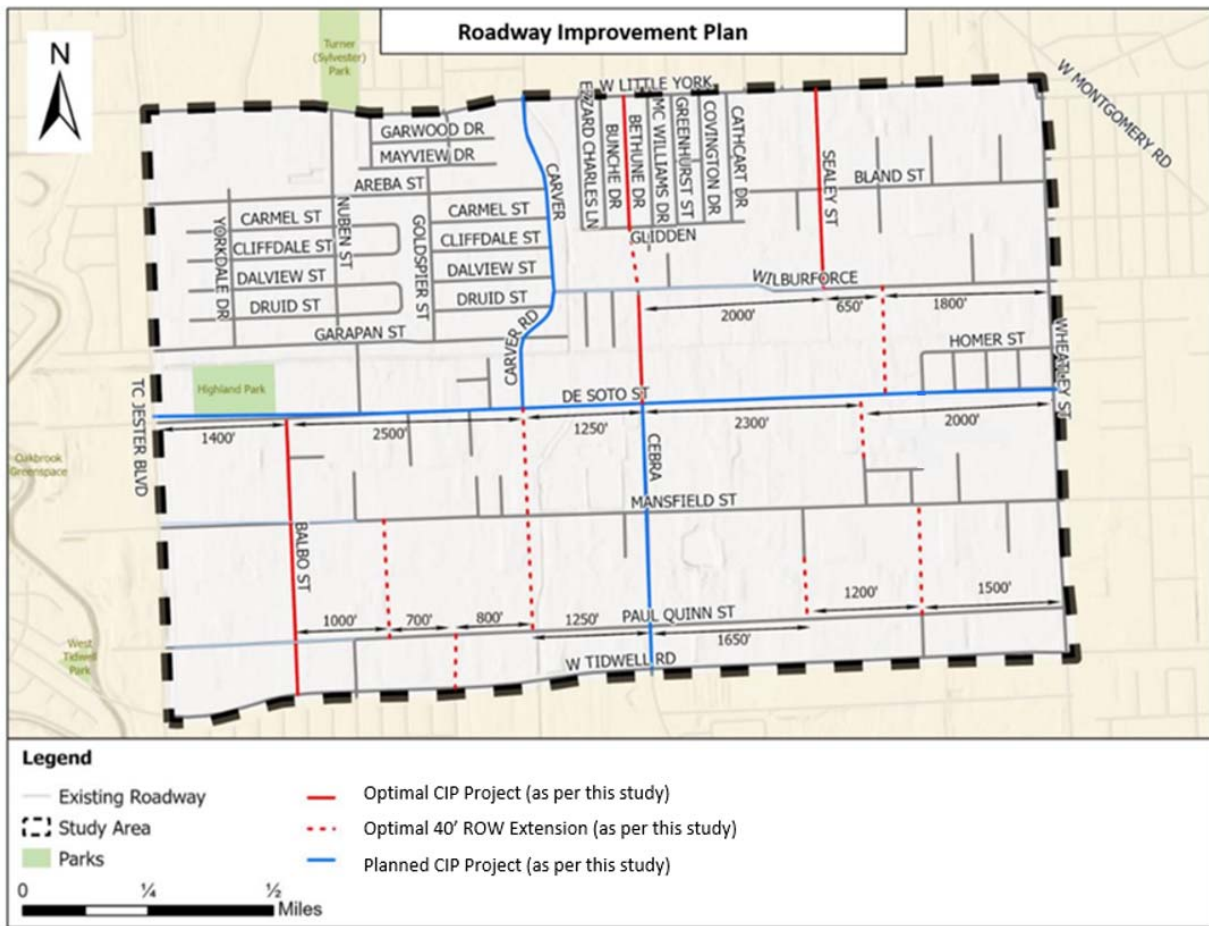


Figure 13: Roadway Improvement Plan

The Planned CIP projects shown in **Figure 13** are projects that have been previously mentioned in other planning documents but do not currently have any funding, so they are not in the 5-year plan. The optimal CIP Projects identified in this plan are for Balbo Street, Bethune Drive/Cebra Street, and Sealey Street.

Balbo Street was identified as needing roadway improvements because of the existing roadway conditions. The pavement is in poor condition and the existing nine-foot travel lanes are not up to current IDM requirement of 10-feet. Balbo Street was also identified for a shared on-street bike lane and to accommodate a sidewalk on either side of the road. It was identified that more multimodal options were needed because of its proximity to Highland Park and the Highland Park Community Center. This will also move some bicycle traffic from Cebra Street onto Balbo Street, where there is less vehicular traffic.

Bethune Drive/Cebra Street was identified as needing roadway improvements to tie into the existing Planned CIP Project on Cebra Street and recommended Extension between Cebra Street and Bethune Drive. This will create a seamless north/south connection through the project area to move traffic. These updates will allow for sidewalks to be built on either side of Cebra Street and Bethune Drive.

Sealey Street was the last roadway identified as an optimal CIP Project. Sealey Street is currently the only straight connection between West Little York Road and Wilburforce Street and future improvements will help with the flow of traffic. The existing Sealey Street has a low pavement condition index and needs to be updated. Roadway updates will be critical in ensuring that there is space for two sidewalks without creating drainage issues.

**Figure 14** shows the recommended 40-ft wide roadway design for single-family residential developments. This design allows for two vehicle lanes, landscaping, and sidewalks on both sides. The recommended 40-ft wide roadways mainly serve as neighborhood streets which would help residents commute safely within their community. If a site is developed for non-single family residential uses, the developer should construct the new roadway per the ordinance requirements.

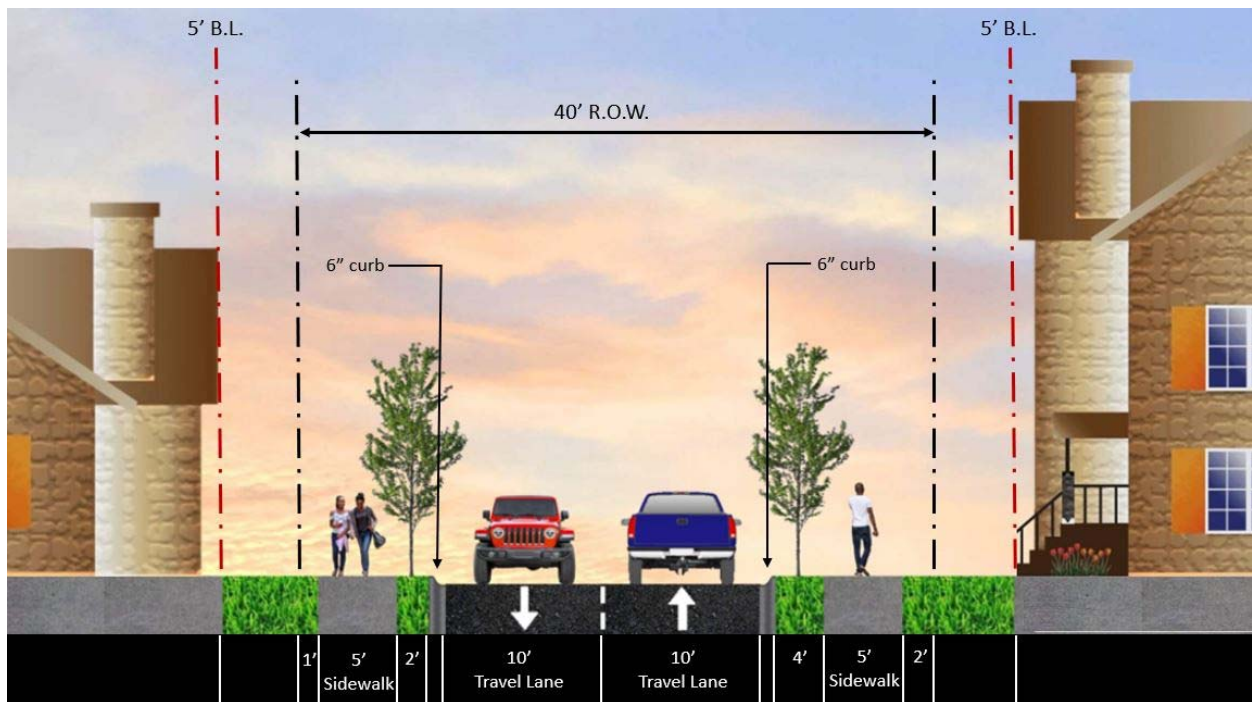


Figure 14: Recommended 40-ft wide Roadway Design



When it's feasible, the 40-ft wide streets will be dedicated from a lot with wide frontage. When there are no wide lots at the locations where a north-south street is needed, P&D and HPW will support partial roadway dedication from two adjacent lots as illustrated in **Figure 15**. When the first lot is developed, 30-ft ROW will be dedicated to accommodate a 21-ft wide curb and gutter roadway and an 8-ft wide pedestrian realm with a 5-ft wide unobstructed sidewalk. No on-street parking will be allowed on this roadway. When the neighboring property develops, they will dedicate an additional 10-ft to complete the 40-ft roadway design.

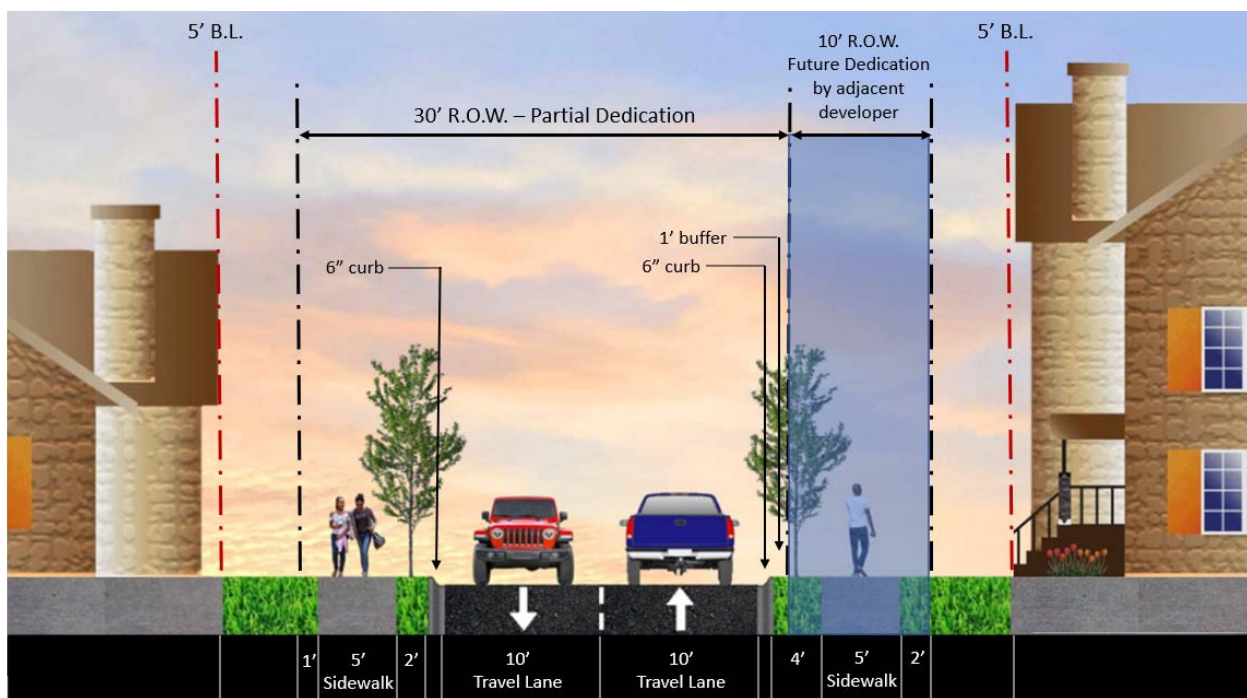


Figure 15: Recommended Roadway Design of the Partial Dedication

The north-south streets recommended in **Figure 13** are determined based on the following factors:

1. Lot frontage and lot size. Most of the original 1-acre lots within the study area are only 80-ft wide. Requiring a standard 50-ft wide north-south ROW dedication out of an 80-ft wide lot will create disproportionate cost and make the narrow lot undevelopable. When other conditions are similar, it's more feasible to require ROW dedication on lots with wider street frontage and larger size.
2. Property ownership. Roadway construction will be hard to implement when multiple property owners are required to make partial dedication to the same ROW at the same time. When a street is not fully dedicated and constructed, partial dedication and construction will not improve the area's mobility and accessibility. Instead, it will create

maintenance and safety challenges. The recommended 30/10 split of roadway dedication illustrated in **Figure 15** will provide the needed connectivity and ensure safe access and circulation in the neighborhood, while preserving sufficient buildable area for the development.

3. Intersection spacing. Chapter 42 of the City of Houston Code of Ordinances requires maximum 1400-ft intersection spacing along a local street. When feasible, the proposed north-south street location should meet the ordinance requirements. Some of the north-south streets identified in **Figure 13** do not meet the maximum 1400-ft intersection spacing ordinance requirements. The main reason is that strict compliance of the intersection spacing requirements will require partial ROW dedication and construction from multiple property owners.

In brief, considering the unique existing conditions and development characteristics in the study area, it is very challenging to find ideal street locations meeting all criteria. The potential north-south streets identified in **Figure 13** are the most feasible locations. Based on P&D and HPW's evaluation, the recommended 40-ft wide roadway design is sensitive to the local context in this neighborhood and is consistent with the ongoing city initiatives, such as Vision Zero, Resilient Houston, Houston Complete Streets, and Transportation Plan. Therefore, the two departments will support the variance requests to allow 40-ft wide public ROW dedication indicated in **Figure 13** when the corresponding lots are redeveloped. However, this does not mean that the design can be applied city wide. It does not set precedence for other areas. In general, roadway design should meet the Infrastructure Design Manual requirements. HPW may approve substandard roadway design in unique circumstances based on a case-by-case evaluation.

### 6.5.3 Connectivity Funding Opportunities

Several funding opportunities described in **Section 7** may be available for connectivity improvements in the study area:

- Developers
- CDSF
- Federal Grants
- CIP

## 7 Funding Opportunities for Recommended Improvements

Several funding opportunities may be available for the recommended improvement strategies discussed in **Section 6**.

While most relevant information on the funding opportunities described in this section is available online, each funding source has a different, specific process within which projects are reviewed

and funding awarded. Initial inquiries to the Acres Home community liaison may be the most appropriate starting point for those interested in further discussions on funding.

## 7.1 State/ Federal Grants

There are twelve categories of TxDOT funding for transportation funding in Texas. Three of them (Categories 10-12) are strategic and discretionary funding categories allocated for specially defined uses by the Texas Transportation Commission or the TxDOT Districts and are not generally used to fund local projects. Categories 1-9 should be considered as potential funding sources for City of Houston roadway improvement projects. Though they are not restricted to projects on the TxDOT state system, most of the decisions about the state sources are made by TxDOT Districts and projects on the state system have a better chance for funding. Four of the TxDOT funding categories (Categories 2, 5, 7, and 9) are distributed within urbanized areas by the MPO, so coordination with the Houston-Galveston Area Council (H-GAC) will be important, as H-GAC coordinates and updates the Transportation Improvement Program (TIP) project list on an annual basis. Projects identified later in this report should be evaluated to determine eligibility for the TIP, which is funded by the Federal Highway Administration (FHWA).

Category 9 is particularly important to the city because it covers the Transportation Alternatives Set-Aside (TA) Program. TA projects must be related to bicycle, pedestrian, and/or micro mobility facilities. For 2023, new project categories expand eligibility to include large-scale active transportation, active transportation network enhancements, and active transportation non-infrastructure. **Figure 16** details TxDOT's TA evaluation requirements. The community can work with the city to apply for the TA Grant to support pedestrian/bicycle improvement projects in the area. More information about the current statewide TIP program can be found on TxDOT's website (Texas Department of Transportation, 2022).

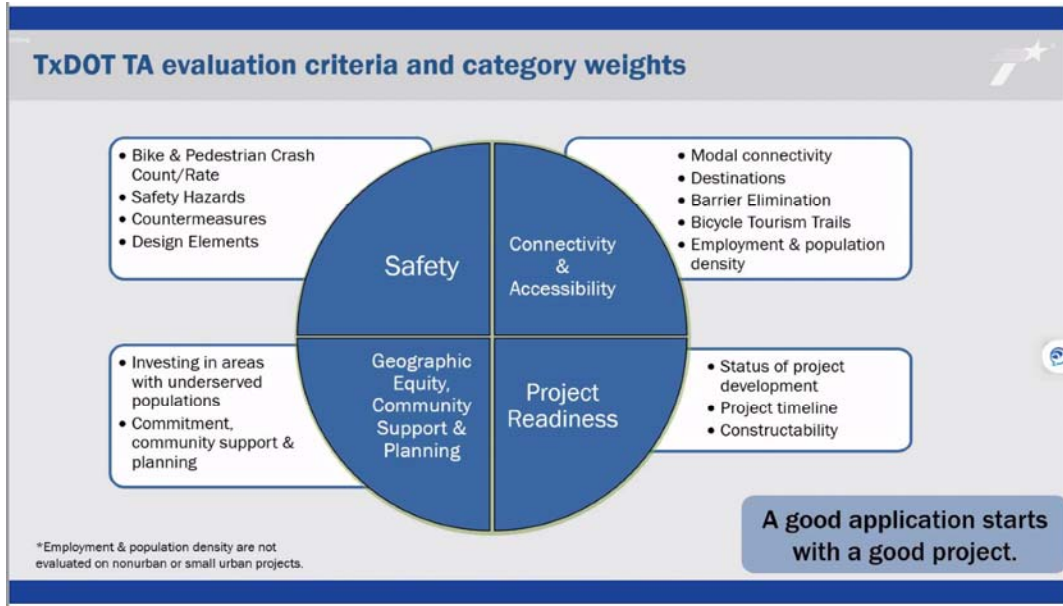


Figure 16: TxDOT’s TA Evaluation Requirements

The opportunities for specialized federal funds for unfunded city projects may be somewhat limited outside of the federal funds distributed through H-GAC and TxDOT funding categories. One particular source of grant funding that is part of the Bipartisan Infrastructure Law (BIL) is the Rebuilding American Infrastructure With Sustainability And Equity (RAISE) Grants program (formerly known as BUILD and TIGER), and may be a viable funding option. RAISE grants have awarded over \$8.935 billion to projects in all 50 states, the District of Columbia, and Puerto Rico since 2009. Projects for RAISE funding are evaluated based on merit criteria that include safety, environmental sustainability, quality of life, economic competitiveness, state of good repair, innovation, and partnership. Within these criteria, USDOT gives priority to projects that can demonstrate improvements to racial equity, reduce impacts of climate change, and create good-paying jobs. More information on RAISE grants can be found on the US Department of Transportation’s website (US Department of Transportation, 2022).

It should be noted that while funding may be granted from the above-mentioned state and federal resources, this funding does not typically cover 100% of the costs associated with a project, and usually will require a local match or contribution to access the state/federal funding.

## 7.2 Capital Improvement Project (CIP) Fund

In early November 2022, Houston residents voted to support bond packages totaling approximately \$1.7 billion. Approximately \$900 million of this money will be used for construction and maintenance of transportation and stormwater drainage infrastructure, including roadways and facilities for pedestrians and cyclists. Currently, there is no funding allocated for any projects in the Study Area. As referenced previously, the projects identified in this report should be

reviewed to determine eligibility for the H-GAC TIP. Projects that are on the TIP have a higher likelihood of inclusion as a part of the CIP program, further increasing the potential of being constructed. Similar to state and federal grants, projects in the TIP require a local match to secure funding. Information on the current H-GAC TIP can be found on H-GAC's website (Houston-Galveston Area Council, 2022).

New roadway construction in the study area will be done by developers when they develop their sites. Improvements on existing roadways can be made through the CIP. There are two kinds of CIP projects: planned CIP projects and potential CIP projects. The planned CIP projects will be funded by the city in its projected CIP list while the potential CIP projects are ones that will be proposed to be added to the CIP list. Details about the planned CIP projects are available on the City of Houston's website (City of Houston's Capital Improvement Plan, 2022).

### 7.3 Council District Service Fund (CDSF)

The Houston CDSF Program establishes a method to address minor neighborhood issues. Funding is allocated to each District Council Member. Council allocates an equal amount to each member, and it is based on neighborhood needs and constituents' input.

The process starts by requesting a project. Once it is approved, HPW has to provide an estimate for the Council Member's approval. When the Council Member approves the estimate, it gets pushed to the finance department to approve and allocate funding. The current CDSF dashboard is available for viewing online (City of Houston, n.d.).

### 7.4 Neighborhood Traffic Management Program (NTMP)

The Neighborhood Traffic Management Program (NTMP) addresses traffic related problems in residential neighborhoods, including excessive vehicular speed and cut-through traffic. The NTMP implements "traffic calming" measures aimed at enhancing safety for all roadway users, such as speed cushions, traffic circles, median islands, curb extensions, and diversion techniques. The program includes two types of processes: a volume control process and a speed control process.

Residents and neighborhood associations are eligible participants, and the funding goes through HPW. Currently there are no available funds for NTMP projects. However, applications are accepted at all times, and when funds are available, NTMP intervention may be made by one or more residents/property owners and are reviewed by HPW to determine eligibility. Final plans require city council approval. Funding approval for speed control projects (i.e. speed cushions only) takes about 4 months; volume control projects take about 18 months to 2 years. NTMP Application forms and more information can be found online (Houston Public Works, n.d.).

## 7.5 City Sidewalk Programs

The City of Houston currently has two programs that may be utilized to mitigate sidewalk issues in the study area; a general sidewalk fund is also outlined in **Section 7.5.1.3**. Information on the programs described in Sections 7.5.1.1 and 7.5.1.2 can be found online (Houston Public Works, n.d.).

### 7.5.1.1 *Pedestrian Accessibility Review Program*

The city places the highest priority on sidewalk improvement requests submitted by citizens with disabilities. Under the Pedestrian Accessibility Review Program, up to 1,500 linear feet of improved sidewalk accessibility will be developed so that people with disabilities can safely travel to work, school, and other daily necessities. All of these requests are subject to the Mayor's Office for People with Disabilities' approval. Depending on funding availability, requests are usually acted upon in 6 to 24 months.

### 7.5.1.2 *School Sidewalk Program*

The School Sidewalk program provides funding to construct sidewalks up to four blocks from an existing school, not including sidewalks around the perimeter of the school. Applications may be made on the HPW website (Houston Public Works, n.d.). The city will not approve requests under this program if there is an existing sidewalk on either side of the street along the path requested.

### 7.5.1.3 *Sidewalk Fund*

Many neighborhood streets in Houston were built without sidewalks. As more and more single-family residential homes along these streets are reconstructed, the city requires developers to construct sidewalks. This results in a piecemeal approach and discontinuous sidewalks, which limits the benefits to pedestrians.

The city has approved an option to pay a fee in lieu of developing sidewalks instead of receiving a variance without penalty. The fee would be calculated based on the sidewalk construction cost per square foot. Fees collected in this manner would allow the city to establish a sidewalk fund to construct sidewalks later.

The fund will ensure a more complete sidewalk network. The city is proposing to create 17 sidewalk sectors in the city. 70% of the collected sidewalk fee will go to the sidewalk fund and be allocated to construct sidewalks in the same sidewalk sector where the fee is collected. The other 30% of the collected fee will be allocated to construct sidewalks city-wide. The intent of 70/30 split is to achieve a complete sidewalk network in the entire city, not just in certain areas. There are areas in the city with less development activity and these areas may receive less money from the sidewalk fund. The 70/30 split would help to balance the sidewalk projects throughout the city. The Chief Transportation Planner will coordinate with other departments and stakeholders to



identify sidewalk projects and prioritize the sidewalk projects based on five major factors. The five major factors are pedestrian safety, existing transportation facilities, presence of major trip generators (such as schools, parks, libraries, churches), demographics and equity, and available funding.

This program was approved by Houston City Council on January 25, 2023. It will be effective from March 1, 2023.

## 7.6 Street Rehabilitation Program

The Mayor's Street Rehabilitation Program is a data-driven initiative that allocates funding for upgrades to local streets and major thoroughfares based on the community's needs. The program is intended to improve 210 lane miles of streets each year, which includes street surfaces, curbs, stormwater inlets, sidewalks, and accessibility ramps. The rehabilitation projects are allocated based on the proportion of streets in each council district and prioritized based on objective criteria, with council member participation and sharing the schedule for the rehabilitation of every street.

PCI is a rating from 0 to 100 that is used to provide a snapshot of the condition of a road. The International Roughness Index (IRI) is a similar measurement standard that is used by roadway professionals as an international standard to quantify road surface roughness. PCI is a numerical indicator of the condition of the pavement while IRI is an indicator of ride quality ("smoothness" or "bumpy-ness"). The city maintains pavement condition data for the entire pavement network of Houston on a roughly block-by-block basis. These data segments are aggregated into project-sized areas (a major street between 2 major intersections, or combining all local streets in a neighborhood), and their PCI and IRI are averaged. For major thoroughfares, the numerical rank is based off of 60% PCI, 30% IRI, and 10% traffic counts. For local streets, the neighborhood groupings are ranked numerically based on a score of 50% PCI and 50% IRI. The worst-scoring segments are selected for rehabilitation each year (with possible exceptions for conflicting Capital Improvement Projects).

Lane-miles of street improvements are based on the amount of pavement in each Council District, such that the city will rehabilitate approximately 2% of local asphalt streets, 1.3% of local concrete streets, 2% of major roadways (regardless of pavement type), as well as 2 lane-miles of district choice for local streets, and 2 lane-miles of district choice for major roadways. That choice is entirely at the discretion of the district. This allows the community to voice their opinion on what streets need to be updated and in what order. For more information on this program, it is recommended to contact the respective council member for the district in question.

## 7.7 Developers

Because new developments create demand for infrastructure improvement, developers are currently required by the city to construct sidewalks when they develop the land. Many developers are currently receiving variances because of the challenging conditions with limited ROW and open ditches. The city hopes to address this with the newly established Sidewalk Fund.

One intent of this document is to identify new north/south connector streets that are needed in the neighborhood. Future developers will be required to donate the necessary ROW to build new streets to connect the neighborhood. This will help alleviate the additional traffic that will be put into the neighborhood because of the development.

## 8 Conclusion

Given the projected growth in the Study Area and the current state of the existing infrastructure, implementation of the improvements listed above could have a significant positive impact not only on mobility in this community, but also on various socioeconomic issues that hinge on transportation in the area, including access to employment, education, health, and other opportunities and necessities.

The goals of this study are consistent with the Acres Home Complete Communities Action Plan, which identifies the mobility and infrastructure goals as: create safe streets, build great streets, improve flood resiliency, expand mobility, and create a network of hike, bike, and bridle trails. These goals were developed through the Acres Home Complete Community.

This Mobility Study is an important tool for the City of Houston Planning and Development Department and Houston Public Works, in that it provides a detailed list of projects that address community concerns and improve safety and multimodal access in the Study Area. This information will inform future project scoping efforts. Results from this study will also provide helpful guidance to City staff as they are identifying future project funding and partnership opportunities. Additionally, as new developments seek review and permit approvals from the City, there will be opportunities for private development to deliver improvements identified in this Mobility Study. Communication and coordination with stakeholders and the overall community, centering local knowledge, is crucial to achieving the suggested improvements.

## 9 References

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