

fifth ward / buffalo bayou / east end
L I V A B L E C E N T E R S

HGAC

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executive summary



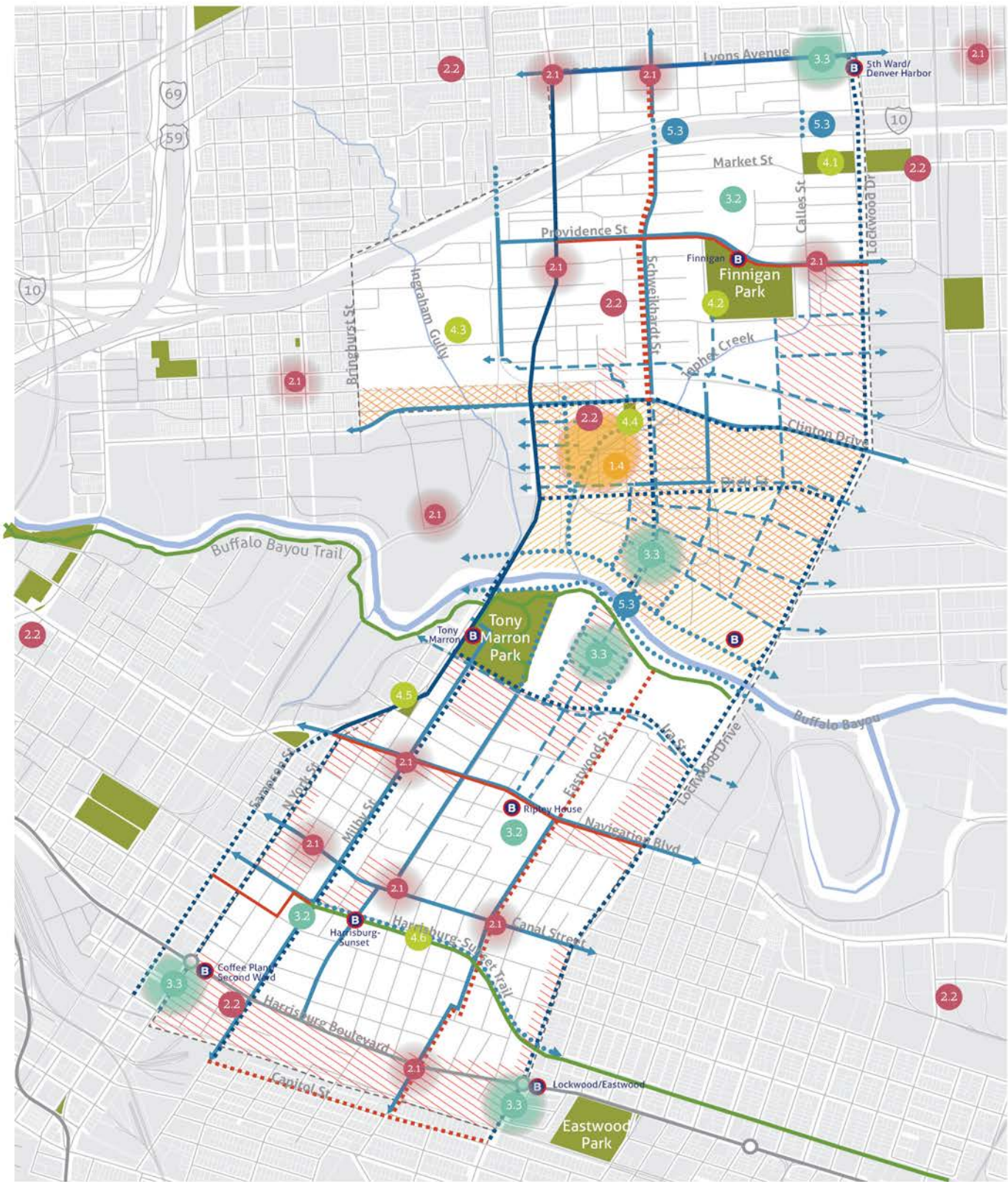
***"I love my community
because...
...my friends and
neighbors live here"***

As established by H-GAC's Livable Centers Program, the purpose of the Fifth Ward / Buffalo Bayou / East End Livable Centers is to facilitate the creation of sustainable, viable, mixed-use, and mixed-income environments. The primary stakeholders that will be responsible for implementation of the plan are the Fifth Ward Tax Increment Reinvestment Zone (18) and Fifth Ward Community Redevelopment Corporation, Greater East End Management District, and the Buffalo Bayou Partnership. Community members who were engaged throughout the planning process stressed the need to preserve the character, history, and natural amenities for existing residents. The



study area boundaries are defined by Lyons Avenue to the north; Capitol Street (south of Harrisburg Boulevard) to the south; Lockwood Avenue to the east; and Waco, Bringhurst, Hirsh and York Streets to the west. Buffalo Bayou is the prominent natural feature that flows through the study area and has been edged by industrial uses for decades. This Livable Centers study presents a unique opportunity to connect two historically divided communities.

Recommendations Summary Map



Existing Bicycle Facilities

- Bike Lane
- Bike Route
- Shared-use Path

Proposed Bicycle Facilities

- Bike Lane
- Bike Route
- B-cycle Bike Share Station

Complete Streets Framework

- Existing Streets / to be enhanced as "Complete Streets"
- Proposed "Complete Streets"
- Proposed Pedestrian/Bike Paths

- Parks
- METRORail East Line

1/2 mile

Recommendations Key

1 HOUSE

- 1.1 Pursue Minimum Lot Size & Minimum Building Line designations. *1.1 and 1.2 are not location-specific, and not shown on map.*
- 1.2 Strengthen programs directed towards the rehabilitation of single-family homes.
- 1.3 Extend the TIRZ boundary to increase its ability to provide a diversity of affordable housing options.
- 1.4 Establish a Community Land Trust to preserve long-term affordability and environmental stewardship.

2 EAT

- 2.1 Provide access to healthy food in the study area with short- and long-term grocery store models. *General locations indicated on the map.*
- 2.2 Explore opportunities for major food production -- to grow, process, and sell food within the study area. *Partners shown on map.*

3 CREATE

- 3.1 Promote adaptive reuse of existing building stock for commercial use. *Not shown on map.*
- 3.2 Support existing makerspaces, and create a business incubator to attract and retain talent, and offer vocational and professional training. *Potential locations identified on the map.*
- 3.3 Expand opportunities to sell and purchase goods and services. *General locations indicated on the map.*

4 PLAY

- 4.1 Support restoration efforts of the historic Evergreen Negro Cemetery by Project RESPECT.
- 4.2 Improve the open space conditions at Finnigan Park.
- 4.3 Ensure that adequate funding is set aside for small parks in new developments and subdivisions.
- 4.4 Expand Japhet Creek Park and greenway, while preserving and improving its natural habitats.
- 4.5 Transform Fox Park into a dog park, and explore other dog-friendly opportunities in area parks.
- 4.6 Create a linear park along the Harrisburg-Sunset Trail.

5 CONNECT

- 5.1 Create a complete streets and open space framework. *Refer to map and legend for 5.1 and 5.2.*
- 5.2 Improve bikeway and street network connectivity.
- 5.3 Construct iconic pedestrian bridges that serve as connectors and strengthen neighborhood identity.
- 5.4 Establish a connected pedestrian network. *Not shown on map.*

6 BUILD

- 6.1 Redevelop the Buffalo Bayou industrial properties.
- 6.2 Create a new waterfront village surrounded by a variety of open spaces.
- 6.3 Pursue a master development strategy.

Summary of Recommendations

The study has engaged area residents and workers, government agencies, businesses, and institutions in developing recommendations, first looking at issues related to placemaking & wayfinding, circulation & connectivity, economic development, housing choice, sustainability, and open space.

The resulting recommendations are organized within six action-oriented themes: House, Eat, Create, Play, Connect, and Build. A map showing all of the recommendations is included on pages 6 and 7.



Placemaking & Wayfinding



Circulation & Connectivity



Housing Choice



Economic Development



Sustainability



Open Space

1 HOUSE

Housing in the study area is likely to increase in demand and value due to its proximity to downtown and access to new and foreseeable amenities, such as the METRORail East Line, Harrisburg-Sunset Hike & Bike Trail, and Buffalo Bayou Hike & Bike Trail. The HOUSE recommendations seek to create a housing strategy that ensures that as residential redevelopment occurs, these neighborhoods include a variety of housing types; that housing remains affordable; and the overall character of the neighborhood is preserved.

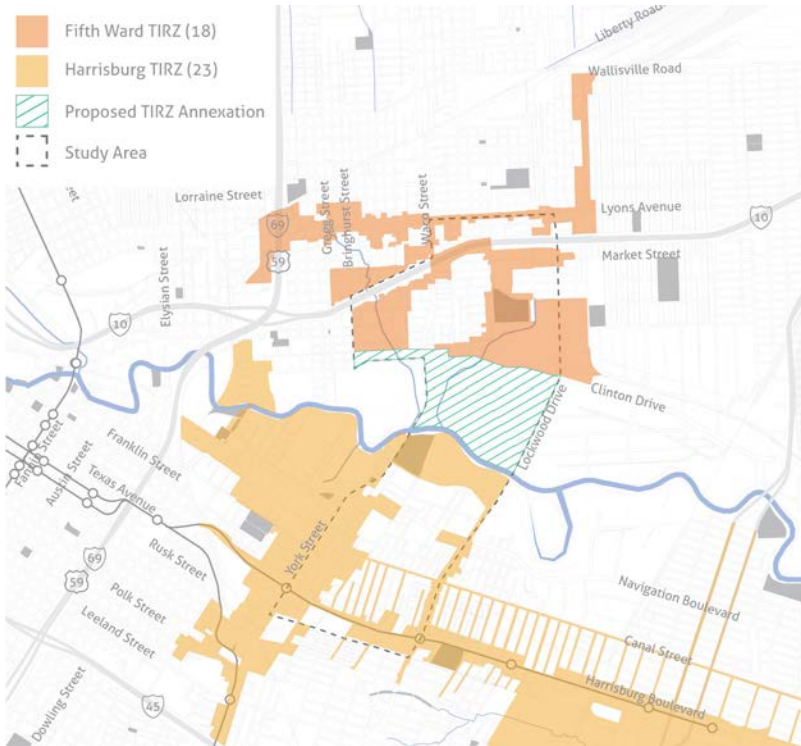
1.1 Pursue minimum lot size & minimum building line designations. It is recommended that the Implementation Task Force (established as a result of the Livable Centers planning process), other stakeholders and community organizations, and the City of Houston should cooperate to facilitate the discussion and implementation of the Minimum Lot Size and Minimum Building Line ordinances, whenever and wherever possible.

1.2 Strengthen programs directed towards the rehabilitation of single-family homes. Fifty percent of the existing housing stock within the study area boundary is in fair condition and should be prioritized for rehabilitation. It is recommended that the Fifth Ward CRC, in conjunction with its stakeholder task force members pursue Federal funding for home rehabilitation through the HOME Investment Partnership Program which helps fund the purchase, construction, or rehabilitation of affordable housing (rent or ownership), provided for people that earn, at most, 80% of area median income.

1.3 Extend the TIRZ boundary to increase its ability to provide a diversity of affordable housing options. It is recommended that an extension of the TIRZ boundaries be made to cover the areas of industrial land currently outside of the TIRZs. The ability to finance affordable housing and infrastructure would be greatly enhanced if this area were annexed. Further, it would provide an opportunity to discuss the nature of future development, and its relationship with adjacent communities. These discussions may include affordable housing and other quality of life and investment goals.

1.4 Establish Community Land Trusts to preserve long-term housing affordability and environmental stewardship. Community Land Trusts (CLT) help preserve long-term housing affordability by eliminating

land value into the cost of housing. It is recommended that Japhet Creek Community secure 501(c)(3) nonprofit status in order to establish a community land trust, and that the Fifth Ward CRC explore options for additional land trusts.



2 EAT

Access to food is a major health concern, and easily the most desired amenity in the study area. Many community members have taken matters into their own hands, and are growing food, which should be encouraged as an asset and, until the community's spending power can support a full-service grocery store, a necessity. The EAT recommendations seek to increase access to healthy foods by exploring immediate and long-term grocery store models, supporting food production within the study area, and ensuring affordable access to fresh, local produce.

Category	Recommendation		Primary Stakeholder (Implementation Partner)	Secondary Stakeholder (Supporting Partner)	Other Stakeholder (Supporting Partner)	Funding (Resource Partner)	Comments	Timeframe
HOUSE	1.1	Pursue Minimum Lot Size & Minimum Building Line designations.	Property Owners	City of Houston Planning & Development	Greater East End MD, Fifth Ward CRC	N/A		Short
	1.2	Strengthen programs directed towards the rehabilitation of single-family homes.	Fifth Ward CRC	Property owners; Habitat for Humanity	City of Houston; Harrisburg TIRZ; Private Sector; Non-Profits	City of Houston; Fifth Ward CRC; Harrisburg TIRZ; Private Sector; Non-Profits	Syncs with 1.3, 1.4, 2.2, 4.8, 5.6, and 6.3.	Short/ Medium
	1.3	Extend the TIRZ boundary to increase its ability to provide a diversity of affordable housing options.	Fifth Ward CRC Greater East End MD		City of Houston; METRO; Harrisburg TIRZ; Private Sector	City of Houston; Fifth Ward CRC; Harrisburg TIRZ; Private Sector	Syncs with 1.2, 5 and 6.2, and 6.3.	Medium
	1.4	Establish a Community Land Trust to preserve long-term housing affordability and environmental stewardship.	Japhet Creek Community Fifth Ward CRC	City of Houston	Japhet Creek Property Owners Association; Non-Profits; Buffalo Bayou Partnership	Private Sector	Syncs with 2.2, 4.4, 4.5, 5.2, 5.3, 5.5, 5.6, 6.2, and 6.3.	Short/ Medium

Category	Recommendation		Primary Stakeholder (Implementation Partner)	Secondary Stakeholder (Supporting Partner)	Other Stakeholder (Supporting Partner)	Funding (Resource Partner)	Comments	Timeframe
EAT	2.1	Provide access to healthy food in the study area with short- and long-term grocery store models.	Greater East End MD	Fifth Ward CRC; City of Houston, Planning	Can Do Houston; Private, Non-profit or Cooperative Grocery Store Investors	Greater East End MD; Fifth Ward CRC; Private Sector	Syncs with 2.2.	Short/Long
	2.2	Explore opportunities for major food production – to grow, process, and sell food within the study area.	Fifth Ward CRC	Greater East End MD; City of Houston	Can Do Houston; Cane River Garden; Farmer Street Garden; Finca Tres Robles; Last Organic Outpost; East End Farmers Market; Urban Harvest; Private Sector; Non-Profits	Private Sector	Syncs with 2.1, 3.1, 3.2, 3.3, and 6.2.	Short/Medium

2.1 Provide access to healthy food in the study area with short- and long-term grocery store models. For long-term strategies, it is recommended that the Implementation Task Force begin to identify potential sites along Lockwood Drive and Hirsch Road near Buffalo Bayou as they become available. It is important to understand the gap between the existing market strength and the amount of additional development needed to sustain a full service grocery store. A neighborhood's ability to attract and support a supermarket depends on the overall population, and the purchasing power of that population. It is recommended that the Implementation Task Force work independently or with a potential investor to review the findings of the leakage analysis that was conducted by GEEMD to explore future scenarios based on expected infill and new development along the Bayou. In the short-term, it is recommended that the stakeholders support the Healthy Cornerstore Initiative (run by Can Do Houston).

2.2 Explore opportunities for major food production – to grow, process, and sell food within the study area. In order to provide locally grown food at scale, there are three key intervention

areas: food production, farmers markets, and affordability. To encourage food production, it is recommended that the Fifth Ward CRC work with the City of Houston to establish a vacant lot program to facilitate scattered site urban farming, in which Last Organic Outpost could serve as a valuable partner for education and outreach. To support farmers markets, it is recommended that all three stakeholders devote resources to raising the profile of local food production and farmers markets, which could include marketing campaigns. To ensure that fresh local produce is affordable and accessible to all residents, it is recommended that the Fifth Ward CRC work with Can Do Houston to establish a SNAP Incentive program for Healthy Corner Stores.

3 CREATE

The Fifth and Second Wards neighborhoods have industrious histories and emerging creative energies that can be supported to enhance these assets and mobilize individuals. The CREATE recommendations seek to support existing creative energy by providing tools that encourage

entrepreneurship, and the development of skills that may establish strong industries and job creation, including makerspaces and business incubators.

3.1 Promote adaptive reuse of existing building stock for commercial use.

Adaptive reuse projects are often well-suited for startup incubators, artists, creative industries and small businesses that may not be able to afford the rents commanded by new construction. A coordinated effort to identify feasible and culturally significant projects will also help to preserve the area's identity and industrial past. It is recommended that the Greater East End Management District and the Fifth Ward CRC commission a study to identify potential adaptive reuse projects, and to consider a marketing campaign and incentive programs to encourage adaptive reuse.

3.2 Support existing makerspaces, and create a business incubator to attract and retain talent, and offer vocational and professional training. One of the great strengths of the study area is the diverse skills of its workforce. The construction, manufacturing, professional services, and education/

healthcare sectors employ a substantial percentage of the population. There are currently two makerspaces in the area that provide a variety of classes, equipment, and workspaces for members. These makerspaces, together with job training programs offered by the Fifth Ward CRC and other local organizations, and vocational programs at local schools and community colleges can become the backbone of a robust economic development strategy that builds on the existing entrepreneurial and creative strengths of the community. It is recommended that the Implementation Task Force work to encourage makerspace initiatives, business incubators, and community marketplaces.

3.3 Expand opportunities to sell and purchase goods and services. Retail spaces and marketplaces are a key aspect of activating the public realm, creating a showcase for talent in the community, and connecting the many existing creative and entrepreneurial enterprises to the community as a whole. It is recommended that the Implementation Task Force work with existing and future

Category	Recommendation		Primary Stakeholder (Implementation Partner)	Secondary Stakeholder (Supporting Partner)	Other Stakeholder (Supporting Partner)	Funding (Resource Partner)	Comments	Timeframe
CREATE	3.1	Promote adaptive reuse of existing building stock for commercial use.	Greater East End MD	Fifth Ward CRC	City of Houston; Private Sector; Non-Profits	Private Sector; Non-Profits	Syncs with 2.2 and 3.2.	Short/ Medium
	3.2	Support existing makerspaces, and create a business incubator to attract and retain talent, and offer vocational and professional training.	Greater East End MD	Fifth Ward CRC	City of Houston; Houston Makerspace; TX/RX; Beyond Careers; Private Sector; Non-Profits	Greater East End MD; Fifth Ward CRC; Private Sector; Non-Profits; Grants	Syncs with 2.2, 3.1, and 3.4	Short/ Medium
	3.3	Expand opportunities to sell and purchase goods and services.	Greater East End MD	Fifth Ward CRC	City of Houston; East End Chamber of Commerce; Legacy Community Heath; Private Sector; Non-Profits	Greater East End MD; Fifth Ward CRC; Private Sector	Syncs with 2.2, 2.3, 3.1, and 3.2.	Medium/ Long

makerspaces and business incubators to include public storefronts that can be used as classrooms, galleries, and retail spaces; and that the Greater East End Management District work to create a permanent marketplace for the Navigation Market and continue to diversify the range of vendors and add additional services, such as job fairs and showcases for local businesses and organizations.

4 PLAY

The quality spaces in the study area are significant to neighborhood identity and culture, providing common grounds for the community. Some of the spaces are in better shape than others, and community members have spoken out about what types of amenities they'd like to see added. The PLAY recommendations seek to provide amenities within neighborhoods and along Buffalo Bayou, including quality public spaces, parks and trails that increase physical activity, social interaction, improve access to destinations, and provide a cultural and community destination in itself.



Japhet Creek Park and
Greenway Concept

4.1 Support restoration efforts of the historic Evergreen Negro Cemetery by Project RESPECT. It is recommended that Fifth Ward CRC partner with Project RESPECT to improve safety conditions of the cemetery and surrounding public realm using the *Crime Prevention through Environmental Design (CPTED) principles*, which would increase lighting in and around the cemetery; create a comfortable and inviting public realm along Market Street; reduce cemetery access points; improve awareness of the site's historic relevance through art and education; and continue maintenance and upkeep of the area.

4.2 Improve the open space conditions at Finnigan Park. The open space of the park may eventually benefit from a master plan as neighborhood population increases, but short-term improvements should be directed towards accessibility across the site, and comfort in the outdoor space. It is recommended the City of Houston Parks & Recreation Department construct a walkway along the southeast edge of the baseball field, where a path has been worn in the grass from regular community use. For someone walking from the northeast corner of the site to the southwest corner, a direct path makes more sense for people passing through. It is recommended that the City of Houston Parks & Recreation Department increase tree coverage in the park, lining walkways and clustering in congregation areas. Trees for Houston and the Fifth Ward Civic Club are potential partners that may provide resources and labor, respectively, to accomplish this task.

4.3 Ensure that adequate space and funding is set aside for small parks in new developments and subdivisions.

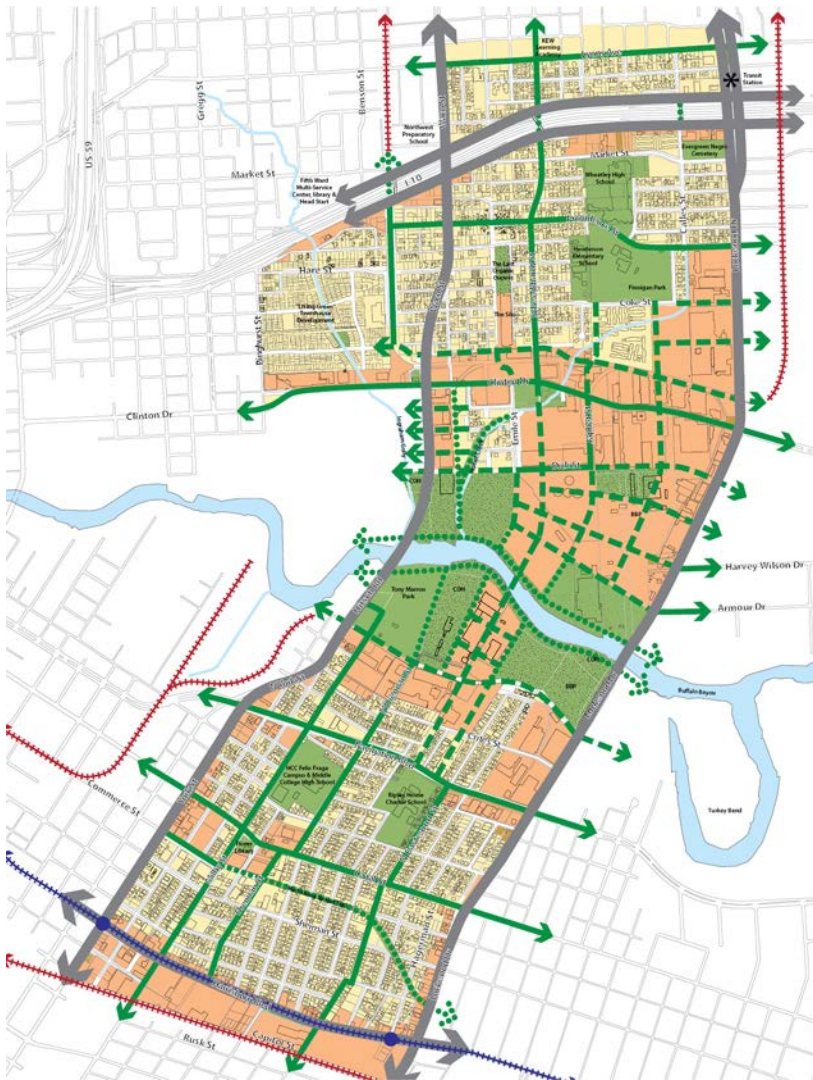
Category	Recommendation		Primary Stakeholder (Implementation Partner)	Secondary Stakeholder (Supporting Partner)	Other Stakeholder (Supporting Partner)	Funding (Resource Partner)	Comments	Timeframe
PLAY	4.1	Support restoration efforts of the historic Evergreen Negro Cemetery by Project RESPECT.	Fifth Ward CRC	Project RESPECT	City of Houston; Non-Profits	Non-Profits	Syncs with 4.2, 4.4, 4.5, and 4.6.	Short/ Medium
	4.2	Improve the open space conditions at Finnigan Park.	City of Houston Parks & Recreation	Fifth Ward CRC	Fifth Ward Civic Club; Trees for Houston		Syncs with 4.1, 4.4, 4.5, 4.6, and 5.6.	Medium
	4.3	Ensure that adequate space funding is set aside for small parks in new developments and subdivisions.	City of Houston Planning & Development	City of Houston Parks & Recreation	Private Sector			Short/Long
	4.4	Expand Japhet Creek Park and greenway, while preserving and improving its natural habitats.	City of Houston Parks & Recreation	Buffalo Bayou Partnership	Japhet Creek Community; Non-Profits	Private Sector	Syncs with 4.5, 5.1, 5.2, 5.5, 5.6, and 6.2.	Medium/ Long
	4.5	Transform Fox Park into a dog park, and explore other dog-friendly opportunities in area parks.	Greater East End MD	City of Houston; Fifth Ward CRC	Harrisburg TIRZ	City of Houston; Fifth Ward CRC; Harrisburg TIRZ		Medium/ Long
	4.6	Create a linear park along the Harrisburg-Sunset trail.	Greater East End MD	City of Houston	Harrisburg TIRZ; Private Sector	City of Houston; Harrisburg TIRZ; Grants	Syncs with 4.5, and 5.	Medium/ Long

It is recommended that the \$700 per dwelling unit that is collected by the City be spent in a way which targets the communities that are experiencing increased building densities.

4.4 Expand Japhet Creek Park and greenway, while preserving and improving its natural habitats. Situated along Japhet Creek, the City-owned Japhet Creek Park is a wonderful natural amenity that has drawn community attention and action over the years. It is recommended that the City of Houston purchase the property adjacent to the park, which currently separates two city-owned properties. By securing this land, a continuous park can be created along Japhet Creek from Emile Street to Clinton Drive. Once this land is secured, a master plan should be developed to achieve the following: increase wildlife habitat along the creek through native plantings; incorporate

green infrastructure design along the right-of-way to filter stormwater runoff before reaching the creek; construct a greenway, or low-impact trail, along the creek that will connect Buffalo Bayou to Clinton Drive, and ultimately north on Schweikhardt Street; and incorporate passive use amenities to the park, such as seating areas and outdoor classrooms.

4.5 Transform Fox Park into a dog park, and explore other dog-friendly opportunities. Community engagement efforts in the study have identified a dog park as a need for parks and open spaces within the study area. It is unclear if Fox Park is the perfect location for a full dog park, but it is recommended that the City of Houston Parks and Recreation Department, in partnership with Greater East End Management District, use the site as a testing ground for dog-friendly amenities, while seeking input from the community, and improving the dog-



Legend

- Existing Thoroughfare and Transit Streets
- Existing to be Enhanced as "Complete Streets"
- Proposed "Complete Streets"
- Proposed Pedestrian/Bike Paths
- Existing Freight Railroads
- METRORail East End Line/Rail Stops
- Existing Open Space
- Proposed Open Space
- Future Redevelopment/Reuse
- Neighborhood Preservation/Infill

friendliness of other open spaces across the study area.

4.6 Create a linear park along the Harrisburg-Sunset trail. It is recommended that Greater East End Management District, in partnership with the City of Houston Parks and Recreation Department, create a linear park adjacent to the Harrisburg-Sunset trail that may attract an increase in trail users, and encourage them to stop along their journey. The trail buffer is approximately 20 feet on either side, allowing for the addition of features that may include natural habitat plantings, playscapes, games for adults and children, exercise equipment, community gardens, and functional and interactive art.

5 CONNECT

There has been significant transportation investments in the study area, particularly in trails and light rail. However, gaps in infrastructure and the availability of destinations make it difficult to get around, especially crossing large barriers, such as highways, Buffalo Bayou and the industrial land uses that surround it. The CONNECT recommendations seek to improve accessibility by eliminating major pedestrian and bicycle barriers, and creating a street network connecting north and south of Buffalo Bayou.

5.1 Create a complete streets and open space framework. In 2013, Mayor Annise Parker released the *Houston Complete Streets and Transportation Plan* executive order, which will establish "a menu of street types based upon multi-modal classification" that also "recognizes the role streets play in drainage and water quality"

– considering both new streets and existing streets. The proposed Complete Streets and Open Space Framework Map and its corresponding street cross-sections shown and discussed on their facing pages are based on the Complete Streets concept, whereby all modes of transportation are integrated in the network.

5.2 Improve bikeway and street network connectivity. It is proposed bike lanes be incorporated on 8 major streets serving the study area, including Lockwood Drive, Clinton Drive, Schweikhardt Street, Dick Street, Foley Street, Milby Street, and Sampson/York Street. It is also proposed to incorporate new bike routes on 3 major streets serving the study area: Schweikhardt Street, Eastwood, and Rusk Street. Eight proposed B-Cycle bike share stations will better connect people to the transit, parks, trail networks, and other neighborhood destinations. It is also proposed to construct 10 new collector

street segments, shared-use paths, and 21 new bus shelters.

5.3 Construct bridges that serve as connectors, and strengthen neighborhood identity. Two new pedestrian bridges are proposed to be located over Buffalo Bayou – one will connect Japhet Creek Trail and the Southern Buffalo Bayou Trail; the other proposed to connect the north and south Buffalo Bayou Trails and will be located on the east side of the study area. Additionally, the maintenance of two IH-10 pedestrian bridges is proposed, of those aligned with Schweikhardt and Calles Streets.

5.4 Establish a connected pedestrian network. Sidewalks within the study area have been categorized into three tiers, where the Tier 1, those that serve major public destinations, should be prioritized for improvements, followed by Tier 2 and 3 as funding becomes available. All new streets should include

Category	Recommendation		Primary Stakeholder (Implementation Partner)	Secondary Stakeholder (Supporting Partner)	Other Stakeholder (Supporting Partner)	Funding (Resource Partner)	Comments	Timeframe
CONNECT	5.1	Create a complete streets and open space framework.	City of Houston	Greater East End MD; Buffalo Bayou Partnership	Harrisburg TIRZ; Private Sector; Council Districts H & B	Fifth Ward CRC; Greater East End MD; Buffalo Bayou Partnership; Harrisburg TIRZ	Syncs with 1.3, 5.2, 5.3, 5.4, 5.5, 5.6, and 6.	Medium/Long
	5.2	Improve bikeway and street network connectivity.	City of Houston	Greater East End MD; Fifth Ward CRC	Harrisburg TIRZ, Houston B-Cycle; METRO; Buffalo Bayou Partnership	Greater East End MD; Fifth Ward CRC; Harrisburg TIRZ	Syncs with 5.1, 5.2, 5.4, 5.5, 5.6, and 6.	Medium
	5.3	Construct iconic pedestrian bridges that serve as connectors and strengthen neighborhood identity.	City of Houston	Harrisburg TIRZ; Private Sector	Harrisburg TIRZ; Private Sector	Buffalo Bayou Partnership; Fifth Ward CRC; Harrisburg TIRZ; City of Houston; Private Sector	Syncs with 5.1, 5.3, 5.4, 5.5, 5.6, and 6.	Medium/Long
	5.4	Establish a connected pedestrian network.	Greater East End MD; Fifth Ward CRC; Harrisburg TIRZ	City of Houston	Harrisburg TIRZ; Private Sector	Greater East End MD; Fifth Ward CRC; Harrisburg TIRZ	Syncs with 5.1, 5.2, 5.3, 5.4, 5.6, and 6.	Short/Medium

6-foot sidewalks on both sides and pedestrian ramps that meet current ADA, TAS, and City standards.

6 BUILD

The big opportunity for “building” is redeveloping the large Buffalo Bayou-fronting industrial properties. Several of these are already abandoned and/or have been acquired by the City of Houston or the Buffalo Bayou Partnership. There is great potential to conserve public access and enjoyment of Houston’s most iconic natural asset. The BUILD recommendation seeks to transform the character of this segment of Buffalo Bayou to create a unifying amenity for the Fifth Ward and East End that includes a mix of uses: residential, commercial, parks and open space, and civic uses.

6.1 Redevelop the Buffalo Bayou industrial properties. Using feedback from community members on three potential redevelopment scenarios, a fourth has been created for the redevelopment of industrial properties. This new village will create a new heart in common with both communities, and could be developed as a dense, mixed-use node located in the center of the Study Area, midway between Lockwood Drive and Hirsch Road and on both shores of the Bayou. This will allow people to

enjoy the waterfront with direct access to cafes, shops, entertainment, mixed-use housing and offices, and cultural and civic uses.

6.2 Create a new waterfront village surrounded by a variety of open spaces.

Six large open spaces are proposed, to include Japhet Creek and Ingraham Gully conservation lands, community gardens and edible landscape fields; Tony Marron Park expansion, event spaces, Turkey Bend habitat lands, and Dick Street neighborhood park.

6.3 Pursue a master development strategy.

To implement something akin to what is depicted in the Illustrative Plan will require the City of Houston, Buffalo Bayou Partnership, the Fifth Ward Community Redevelopment Corporation, the Greater East End Management District and other partners to acquire as many of the industrial waterfront properties as possible in order to control the outcome of this important part of the Buffalo Bayou corridor. Once acquired, “the Partners” would be able to create and implement a detailed master plan. The master plan and accompanying master development agreement could be structured in a way to deliver various community benefits that could include:

- new parks, trails and open spaces,
- wildlife and habitat preserves,

Category	Recommendation		Primary Stakeholder (Implementation Partner)	Secondary Stakeholder (Supporting Partner)	Other Stakeholder (Supporting Partner)	Funding (Resource Partner)	Comments	Timeframe
BUILD	6.1	Redevelop the Buffalo Bayou industrial properties.	Buffalo Bayou Partnership	City of Houston; Greater East End MD; Fifth Ward CRC	Harrisburg TIRZ; Private Sector	Greater East End MD; Fifth Ward CRC; City of Houston; Harrisburg TIRZ; Private Sector	Syncs with 1.2, 1.3, 1.4, 4.3, 4.4, and 5.	Long
	6.2	Create a new waterfront village surrounded by a variety of open spaces.						
	6.3	Pursue a master development strategy.						



- day-lighting of both Japhet Creek and Ingraham Gully,
- Complete Streets,
- the Waterfront Promenade,
- affordable housing,
- new development and new jobs,
- a grocery store/cooperative, and
- cultural and educational facilities.

Next Steps

Each stakeholder has a role in the implementation on the Plan, which is identified in the recommendations section. There are other stakeholders and partners that will be necessary, as well, including City of Houston, Houston Parks Board, Texas Department of Transportation, Houston-Galveston Area Council, and Harris County.

It is recommended that the stakeholders form an Implementation Task Force populated with representatives of the major implementation partners and community representatives. While it is likely that some of the tasks flowing from this Plan may be implemented by an individual stakeholder, the larger and more far reaching initiatives will almost certainly require the cooperation and investment commitments of multiple partners, over many years.

introduction



Though geographically adjacent, the Fifth Ward and East End communities have historically developed independently of one another. This plan grew out of conversations and connections that developed in 2013 at the American Leadership Forum (ALF) in Houston. The ALF was established in 1980 to join and strengthen diverse leaders to better serve the public good. For over 30 years it has invited leaders from across the greater Houston community to participate in a yearlong Fellows Program in which they can engage in dialogue, differ, and build relationships. ALF strengthens Fellows' capacity to address public issues collaboratively and builds



a strong leadership network to work for positive change in the community. 2013 represented the first Community Development class, and defined by a specific geographic area, comprised of leaders from Fifth Ward and East End plus several leaders involved in development on a broader scale in Houston.

This interaction developed into a commitment to work together. Each of the fellows, passionate about their local communities, wanted to do more than talk about the challenges our communities faced. As a class project, the fellows pursued and were awarded a grant to conduct a livable centers study by the Houston-Galveston

Source: HUD-DOT-EPA
Partnership for Sustainable
Communities

Area Council (H-GAC). The training and experiences that were shared through the ALF strengthened the commitments to reaffirming the belief that Fifth Ward and East End – which have largely operated independently of each other – can do better by working together and leveraging resources for the benefit of Buffalo Bayou, the East End and Fifth Ward.

The goal of the Houston-Galveston Area Council's (H-GAC) Livable Centers Program is to facilitate the creation of sustainable, viable, mixed-use, and mixed-income environment, which are supportive of the Six Livability Principles guiding the Federal Partnership for Sustainable Communities. These Livability Principles are as follows:

- **Provide more transportation choices.**
- **Promote equitable, affordable housing.**
- **Enhance economic competitiveness.**
- **Support existing communities.**
- **Coordinate and leverage federal policies and investment.**
- **Value communities and neighborhoods.**

Funding for the Livable Centers Program is allocated through H-GAC'S Transportation Improvement Program, covering 80% of the project through federal funding with a 20% local match. The Fifth Ward / Buffalo Bayou / East End Livable Centers study was conducted in partnership with the Fifth Ward Community Redevelopment Corporation, Buffalo Bayou Partnership, and the Greater East End Management District, located in Houston's historic Fifth and Second Wards.

The Fifth Ward Community Redevelopment Corporation (5th Ward CRC) was created 26 years ago by local community and church leaders. Its purpose is to assist the city in "governmental functions to promote the common good and general welfare of the Fifth Ward area of Houston and neighboring areas," and is the administrator of the Tax Increment Reinvestment Zone Number 18 (TIRZ 18) to promote economic development. Through multiple studies, the Fifth Ward CRC is implementing a community vision.

The Greater East End Management District (GEEMD) was created in 1999 by the 76th Legislature, and works to fund infrastructure improvements, beautification projects, assist with security and public safety needs, and workforce development through assessments received from commercial properties within its district boundaries. Funding programs are designated by GEEMD's board of directors.

Buffalo Bayou Partnership (BBP), founded in 1986 by Houston Mayor Kathy Whitmire, is a nonprofit organization that is active in developing major construction and service projects along Buffalo Bayou, including landscaping, trails, bridges, events, and tours. BBP's 20-year master plan envisions the bayou as a recreation resource that facilitates transportation access, environmental quality and flood management. The East Sector of the master plan recognizes the unique cultural diversity of the area, and identifies the opportunity to integrate neighborhoods, and revitalize the historic industrial parks through investment along Buffalo Bayou.

Study Area

The study area includes parts of the historic Fifth and Second Wards, with its boundaries defined by Lyons Avenue to the north, Capitol Street (south of Harrisburg Boulevard) to the south, Lockwood Avenue to the east, Waco, Bringham, Hirsh and York Streets to the west. Buffalo Bayou is a prominent and defining water feature that flows through the study area, with its connecting waterways, Japhet Creek and Ingraham Gully. The study area boundary intersects with two Tax Increment Reinvestment Zones – TIRZ 18: Fifth Ward and TIRZ 23: Harrisburg. Greater East End Management District covers the majority of the study area, as far north as Clinton Drive. Important public amenities in the study area include the Buffalo Bayou trail, Harrisburg-Sunset trail, METRORail East Line, Tony Marron Park and Finnigan Park.

Project Goals

The following project goals were developed through discussion with the project team, H-GAC, and the stakeholders to develop a highly implementable plan.

engage

- Partner with each other to create an implementable plan
- Take an active role in shaping our communities
- Participate in community events and activities

invest

- Build new infrastructure with public funds and grants
- Attract housing, jobs, and retail through private investment
- Enhance community capacity to implement a larger shared vision

bridge

- Link across infrastructure and other physical barriers
- Transform Buffalo Bayou into a shared signature open space
- Foster communication and shared goals among communities

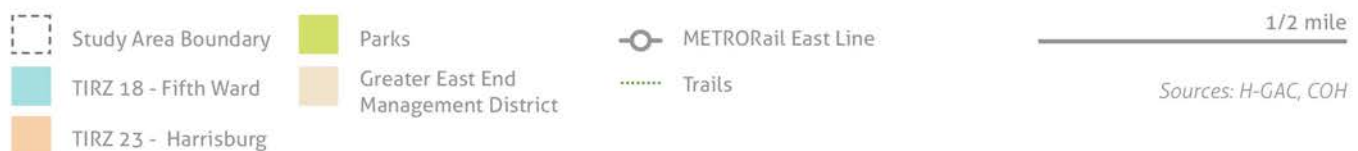
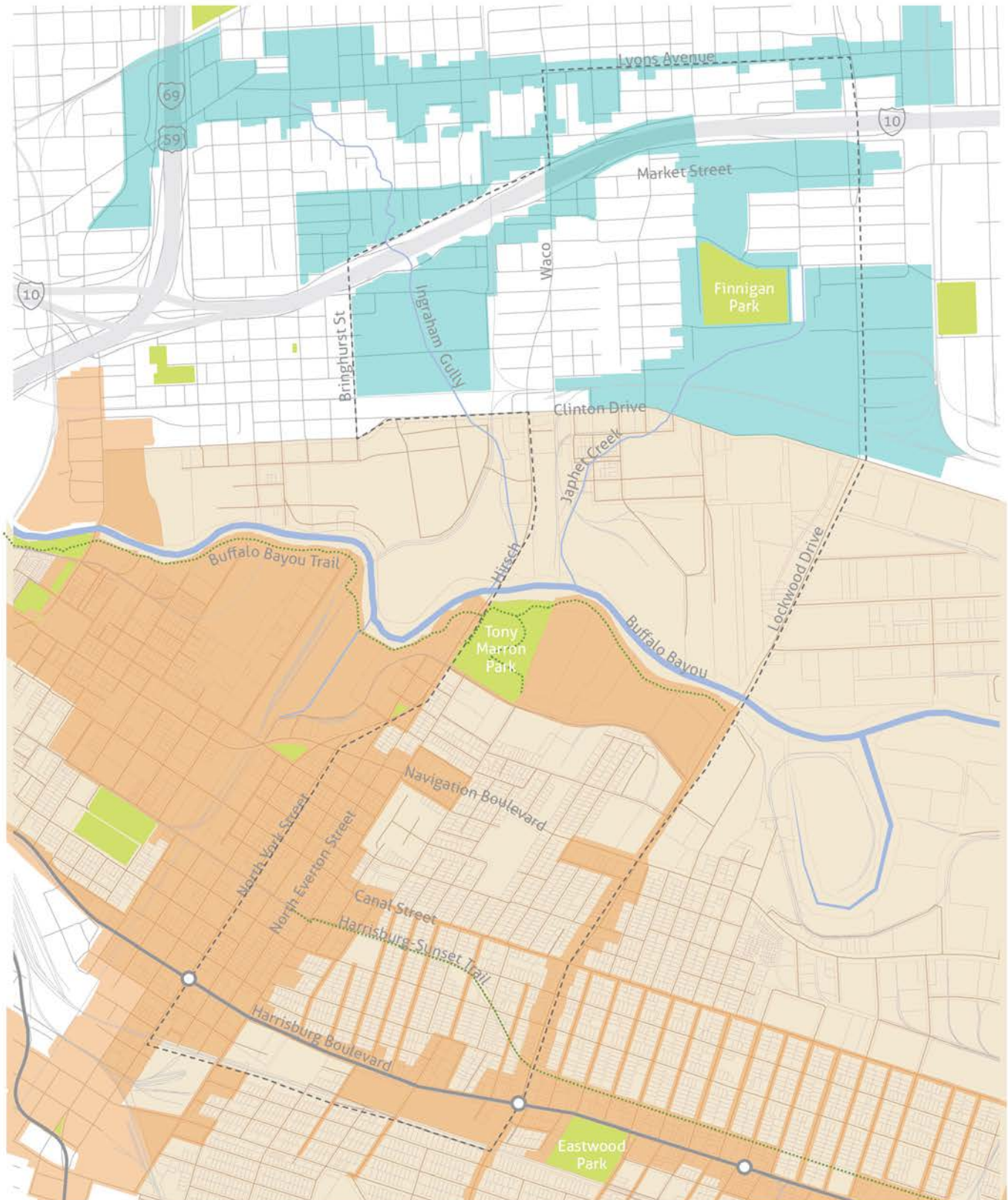
represent

- Celebrate the local cultures, identities, histories and happenings
- Change negative perceptions and highlight strengths
- Tell the stories of the people of the Fifth Ward and East End

balance

- Ensure affordable housing is a part of new growth
- Diversify uses and transportation choices
- Integrate natural and urban systems
- Encourage health and wellness

Fifth Ward / Buffalo Bayou / East End Livable Centers Study Area



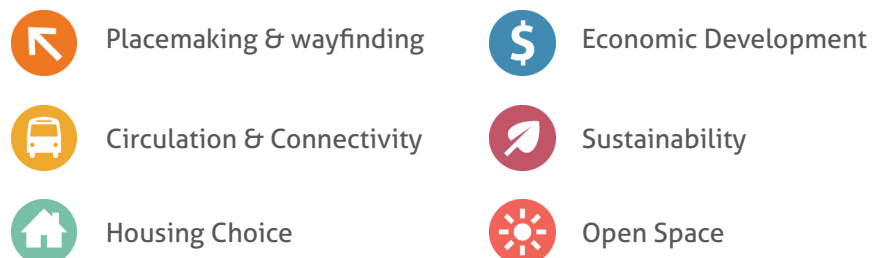
Sources: H-GAC, COH

Project Timeline

The plan was developed in a ten-month period and consisted of four phases: existing conditions (3 months), conceptual planning (3 months), design development (2 months), and phasing & implementation (2 months). During this period, three public meetings were held, among other public engagement efforts.



The study has engaged area residents and workers, government agencies, businesses, and institutions in developing recommendations, first looking at issues related to placemaking & wayfinding, circulation & connectivity, economic development, housing choice, sustainability, and open space.



public engagement



Recognizing that thoughtful public engagement is an essential component to creating a strong, implementable plan, our team went through diligent efforts to reach the community throughout the project. The project's team connection to the community included a strong partnership with project stakeholders (Fifth Ward Community Redevelopment Corporation, Buffalo Bayou Partnership, and Greater East



End Management District), establishing community liaisons in the Fifth Ward and East End, creating a social media presence, tapping into existing community events, and involving local organizations in the outreach efforts (including hosting workshops). Additionally, Spanish translation was provided for all outreach materials, such as posters and flyers, as well as verbal translation at community meetings.

subject areas

In approaching the existing conditions analysis, the following six subject areas were explored in order to frame the opportunities and challenges that would be reflected in the final recommendations of the study. These subject areas were used to organized the initial community engagement efforts, allowing individuals to focus their feedback in areas that were most important to them, and are later reflected in the conceptual plan, where there is overlap between subject areas.

The subject areas and their descriptions are listed below.



Placemaking & Wayfinding

Placemaking & Wayfinding are supported by elements of the community that bring a sense of place, pride, and identity. This can be achieved by highlighting cultural amenities, landmarks, history and people.



Circulation & Connectivity

Circulation & Connectivity addresses transportation in all its forms: automobility, bicycling, pedestrian facilities, transit, roadways, and railroad. These modes should work together to serve the population for personal and economic needs.



Housing Choice

As a city's form and demographics change, so does its housing and building needs. Housing Choice looks at the existing housing stock's ability to meet housing needs, where the needs are projected to go, and how best to plan for growth.



Economic Development

Economic Development is influenced by corporations, small businesses, developers, entrepreneurs, management entities, and government policy. By looking at the retail, job, and development needs in the community, investment can be targeted.



Sustainability

Sustainability often addresses the social, economic and environmental conditions. For the purpose of this study, the focus is environmental sustainability, to improve the health of natural systems, including air, water, land, human and wildlife.



Open Space

Open space, including natural areas and parks, are important to the health and quality of life. Members of the community should have reasonable access to these spaces, where amenities and connectivity may improve their usefulness.



Public Meeting participants at the Silo in the Fifth Ward, giving feedback at the Sustainability table.

Social Media

To encourage continuous feedback and allow for regular updates, the team set up a Facebook page, available at www.facebook.com/5WBBEELC, which received over 480 “likes”, or followers, who receive updates, invitations and other important information. This page may remain active beyond the course of the project to continue to inform followers of progress, as the recommendations enter into the implementation process.

Initial Public Meetings

The initial set of public meetings were held on two consecutive dates – the first at the Silo in the Fifth Ward, which had over 100 attendees; and the second at Houston Community College Felix Fraga Campus in the East End, which had approximately 50 attendees. The meetings were organized in open house form, intended to fulfill the following goals:

- Inform the public about the history and timeline of the project and the goals of the Livable Centers program;
- Present preliminary findings regarding the community;
- Listen to public aspirations and concerns and identify community

goals; and

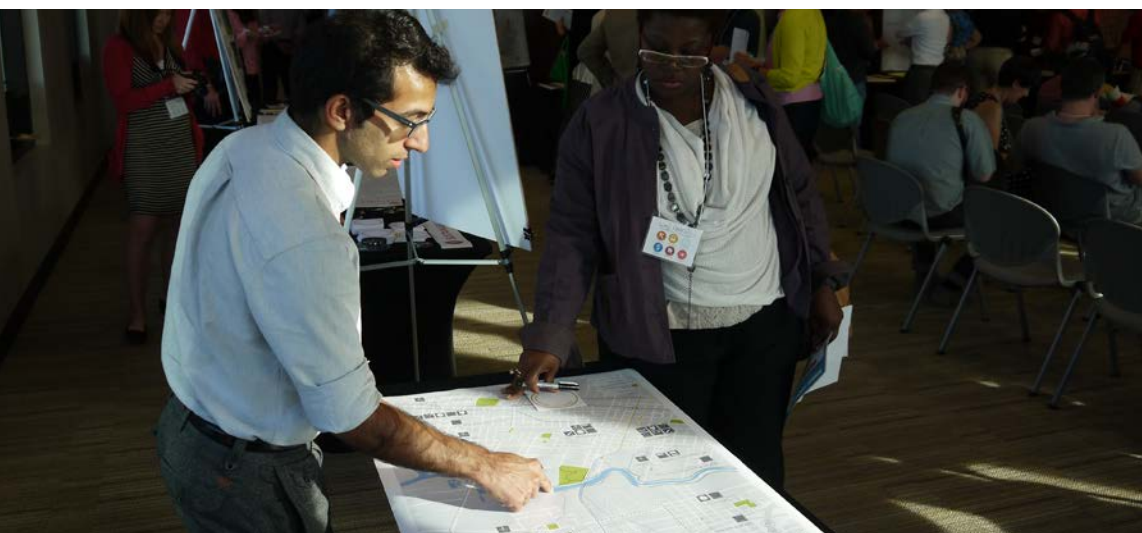
- Fill in gaps in team member knowledge regarding the study area and its history.

Upon arriving at the events, attendees were given a lanyard nametag with icons representing the following six subject areas: Placemaking & Wayfinding, Circulation & Connectivity, Economic Development, Housing Choice, Sustainability, and Open Space. They were encouraged to fill icon blanks on their name tag with corresponding stickers for the subjects that they were most interested in. After giving a presentation, participants were invited to visit all the workshop tables, one for each subject area, or just those that they are interested in. Information on specific community feedback can be reviewed in the Existing Conditions section.

Second Public Meeting

After reviewing the existing conditions and receiving feedback from the community, the project team developed a conceptual plan that integrates the six before mentioned subject areas, to create six action-oriented themes for recommendations – House, Eat, Create, Play, Connect, and Build. The second public meeting allowed the community to respond

480+
Facebook
followers
receive
regular
updates on
the study



Initial public meetings at the Silo in the Fifth Ward and Houston Community College in the East End

to these and provide more targeted feedback. The meeting was held at Houston Makerspace in the Second Ward / East End, and attracted 108 attendees. Prior to the Livable Centers presentation, two community organizations gave presentations about the services they offer – SER-Jobs for Progress and Houston Makerspace (the event’s host). These opening presentations gave added usefulness to the meetings for participants, allowing them to learn how to access useful resources.

Following a presentation on what was learned from the initial public meetings and on overview of the conceptual plan, participants were invited to visit the six boards, discuss them with the project team, give feedback, and vote for preferred recommendations.

Final Public Meeting

Over eighty people attended the final public meeting at Wheatley High School in the Fifth Ward. This meeting was designed to gain community interest and continued participation in the final recommendations. Each recommendation category was paired with a sign-up sheet to allow participants to submit their interest, which will be useful to the Task Force that will be established to oversee the success of implementation.

Focus Groups

To supplement the public meetings, focus groups were held with community leaders and business owners in the neighborhoods. These open ended conversations were intended to draw additional information from specific groups to help tailor recommendations and build capacity for implementation.

Community Events

Representatives from the project team also utilized existing community

events to inform community members about the project, gain feedback about the project based on the progress at that time, and offer opportunities to get connected, through Facebook, email, or text message, throughout the course of the project. The events that team hosted tables at were Transported + Renewed (organized by Houston Arts Alliance) with tables at Ripley House and Eastwood Park – reaching more than 60 participants, and Sunday Streets HTX (organized by Go Healthy Houston, an initiative launched by Mayor Annise Parker) with a table on the Hirsh Road bridge above Buffalo Bayou – reaching approximately 70 participants.

Additionally, the outreach team hosted a separate workshop to educate community members on how to apply for a Minimum Lot Size designation, which is a resulting recommendation of the study to help preserve the character of the neighborhood. Thirty-five residents attended, creating a solid team to petition other property owners in gaining support for the designation on their block.

Project team members also made themselves available for civic club and super neighborhood meetings throughout the study area.

Implementation Workshop

During the design development phase, the project team met with community leaders and stakeholders to finalize the recommendations, determine implementation steps, and set priorities. Held in the form of a workshop, the intent was to:

- Present recommended projects based on the concepts and goals;
- Present plausible and attainable funding options available;
- Prioritize projects for implementation; and
- Develop a timeline for implementation.



Sunday Streets HTX participants giving feedback on the vision for Buffalo Bayou



Sunday Streets HTX participants on the Hirsch Road bridge, with view of Downtown Houston

existing conditions



The purpose of existing conditions analysis is to identify opportunities and challenges that could be addressed in the final recommendations to create a truly livable community, both separately within the Fifth Ward and East End, and joining the two to optimize the effectiveness of the resources and amenities in their respective neighborhoods. As discussed in the Public Engagement section, six subject areas were explored, organizing research and feedback efforts. These are Placemaking & Wayfinding, Circulation & Connectivity, Economic Development, Housing Choice, Sustainability, and Open Space.



placemaking & wayfinding



Residents of the Fifth Ward and East End neighborhoods cite a strong sense of community, deep-rooted history, and diversity as the most important reasons they love living there. It is clear, therefore, that many members of these communities are connected with each other, have formed personal networks, and relate to their neighborhoods such that they recognize the area as a valuable “place”. However, residents must also deal with negative perceptions of their communities as well as difficulty retaining youth who seek education and employment elsewhere.

Despite the positive feelings many residents expressed for the Fifth Ward and East



End, they also often admitted to not using or being aware of local community places and/or assets such as the library or community garden. The section of the Buffalo Bayou that divides the two neighborhoods was also described by locals as being unusable and the effects of the surrounding industrial operations as destructive.

There is a great opportunity to use the existing community networks to increase resident engagement, take better advantage of community places and assets, establish a shared destination around the Bayou, and reverse negative perceptions. This section seeks to understand who lives here and what makes the community.

This 1913 street map of Houston clearly shows the separate development of the Fifth and Second Wards. Buffalo Bayou, running through the middle, forms a barrier between the communities, and much of the study area for this project are still undeveloped. The core of the Fifth Ward along Lyons Avenue and Market Street exists, as does the Second Ward between Canal Street (called German Street until World War I) and Harrisburg Street. At this time, the City Limit bisects our study area.



The Fifth and Second Wards have had a historical impact much greater than their size.

In many ways, the Fifth and Second Wards of Houston developed in parallel to each other, indeed, geographically, this is literally the case. Two of Houston's earliest neighborhoods, each community developed along major east-west roads leading out of town, one community to the north of Buffalo Bayou and one to the south. Yet, each also developed with a strong relationship to the Bayou, its industrial employment base and the numerous railroads that served those spaces.

The Second Ward, which was located to the rear of Houston's main train station (the current location of Minute Maid Park) served as a landing place for immigrant communities from an early time. For most of the 19th century, German-Catholics made up the bulk of the population (Canal Street was

called German Street until around the time of World War I), but by the early decades of the 20th century, a vibrant Mexican born and Mexican-American community had begun to take hold and remains the dominant community in the neighborhood to this day.

The Fifth Ward, north of the Bayou and slightly more removed from the central business district focused then upon what has become Market Square, had few inhabitants prior to the Civil War, after which freedmen began to settle the area. In 1866, it gained representation in Houston's city government and the 1880s were the community's first great boom period due to new rail lines being placed through the community.

Though originally about half black and half white, through the establishment of African-American churches and other

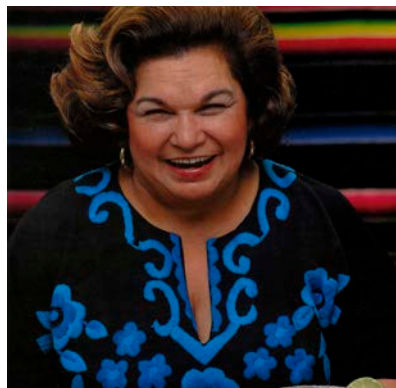
cultural institutions the neighborhood had become predominantly black by the early 1920s. It also included a small "Frenchtown," which was home to many African-Americans of French or Spanish Decent. Lyons Avenue, the main commercial corridor, was an important part of of Houston's African American community before the 1970s.

The Fifth Ward is also home to the city's first settlement house, first black art and music venues, and of numerous historic churches. The neighborhood raised, among others, pioneering educators, statesmen and stateswomen, athletes, and musicians.

Both working class communities had significant local business districts which served many community needs and both developed cultural innovations which would spread not just to the rest of Houston but throughout the United States. Indeed, the Fifth and Second Wards have had a historical impact much greater than their size and humble origins.

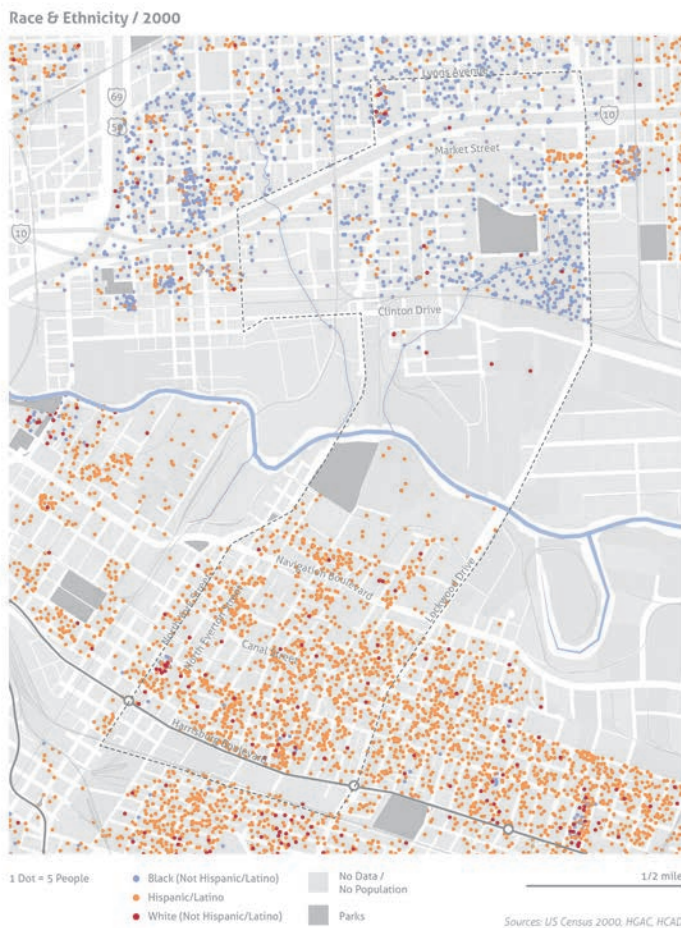
The Second Ward is truly one of the places in which Mexican cooking was introduced to the country and in which Tex-Mex cooking was developed. Local restaurateur Ninfa Lorenzo is often credited as one of the main introducers of fajitas to the US. Meanwhile, the Fifth Ward was a constant site of musical innovation, and was likely the site of the invention of Zydeco music. Numerous nationally known blues and jazz musicians also were born, raised and worked in the neighborhood and much of the original southern rap came out of the community, breaking the west coast-east coast monopoly on hip-hop.

Perhaps the best known residents of the neighborhood, Congresspeople Barbara Jordan and Mickey Leland



were both graduates of the Fifth Ward's Wheatley High School. As two groundbreaking African-American politicians in Texas and the US, their influence is still deeply felt.

Top Left to Bottom Right: Barbara Jordan, Arnett Cobb, Ninfa Lorenzo, Mickey Leland, Don Robey and Carl Crawford are just a few of the residents of the Fifth and Second Wards who have contributed to the culture and history of Houston, Texas and the United States.



Population & Neighborhood

The Study Area is not only physically, but also demographically divided by the Buffalo Bayou area. There is little to no resident population near the Bayou, where most of the land is used by industry or is vacant, and demographic characteristics often differ between the Fifth Ward neighborhood of the study area, which is north of the Bayou, and the East End neighborhood south of the Bayou.

The population seems to have changed slightly between 2000 and 2010. Many parts of the study area show small reductions in density and there is clearly an increase in the Hispanic/Latino population in the Fifth Ward as well as a small increase in the White population, especially in the area of the

Fifth Ward just west of the study area boundaries. Race and ethnicity have not changed significantly in the East End in the same time period.

Compared to the population of Houston overall, the residents in the study area show significantly higher unemployment numbers and much lower household incomes. Depending on census tract, unemployment can be as high as 14% in some parts of the study area, compared to 9% in Houston generally.

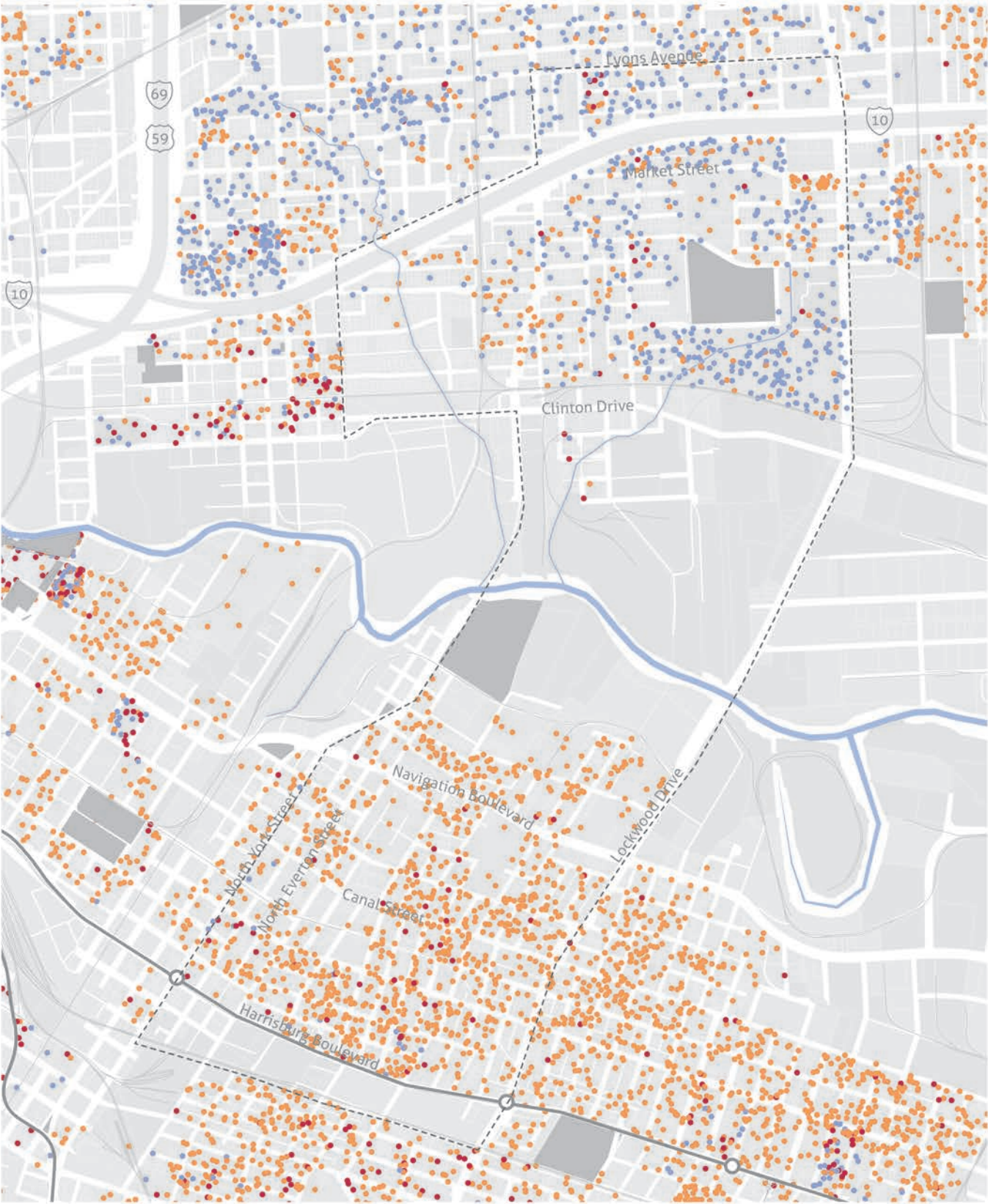
Community Assets

Public engagement revealed that residents of the study area take pride in their neighborhoods' cultural diversity and deep-rooted history. Their pride is supported by the many community assets and resources found throughout the study area in the form of community places for gathering and learning as well as in public art and culture.

Places like The Last Organic Outpost and Ripley House are well established in their neighborhoods and widely recognized by local residents as important places. Other assets such as The Silo and Houston Makerspace, which was recently started in the East End, have yet to be taken full advantage of but have great potential to contribute to the community.

However, there is an imbalance of community places and a disconnect in the community network within the study area from the Fifth Ward to the East End. For example, there are more identifiable community places in the East End than there are in the Fifth Ward, as well as more cultural expression through public artwork.

Race & Ethnicity / 2010



1 Dot = 5 People

- Black (Not Hispanic/Latino)
- Hispanic/Latino
- White (Not Hispanic/Latino)

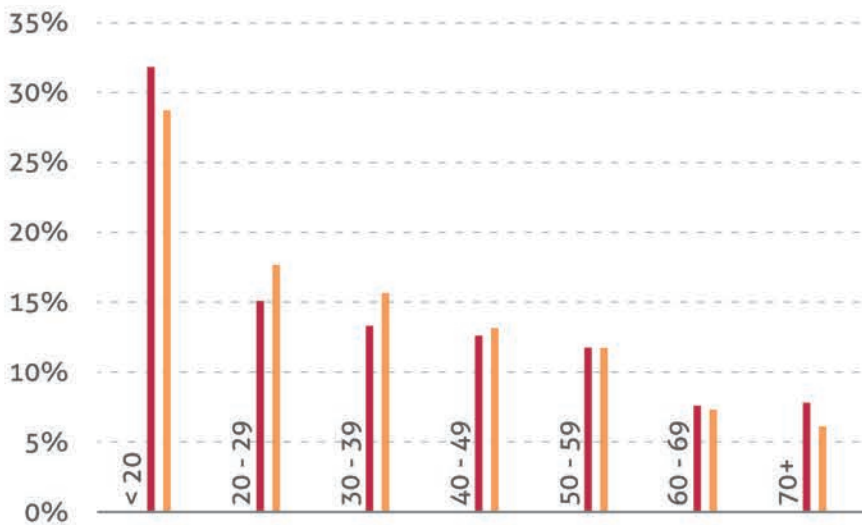
- No Data / No Population
- Parks

1/2 mile

Sources: US Census 2010, H-GAC, HCAD

demographic & economic characteristics

Age Distribution



Unemployment

11.8% **9%**

Public Transit Commute

8.3% **4.4%**

Mean Commute Time

26.1 min **25.8 min**

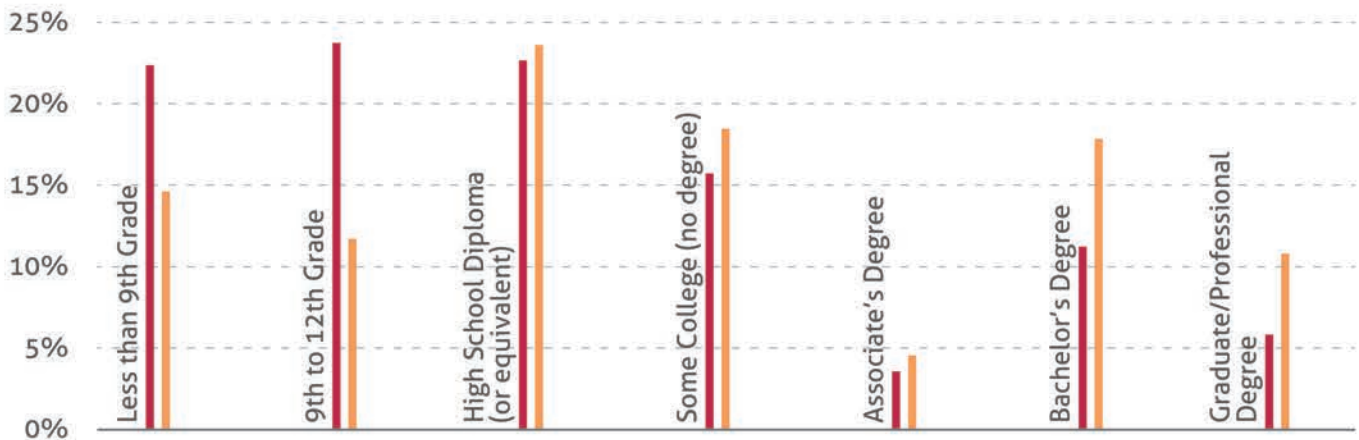
Families Below Poverty Level

37.5% **18.8%**

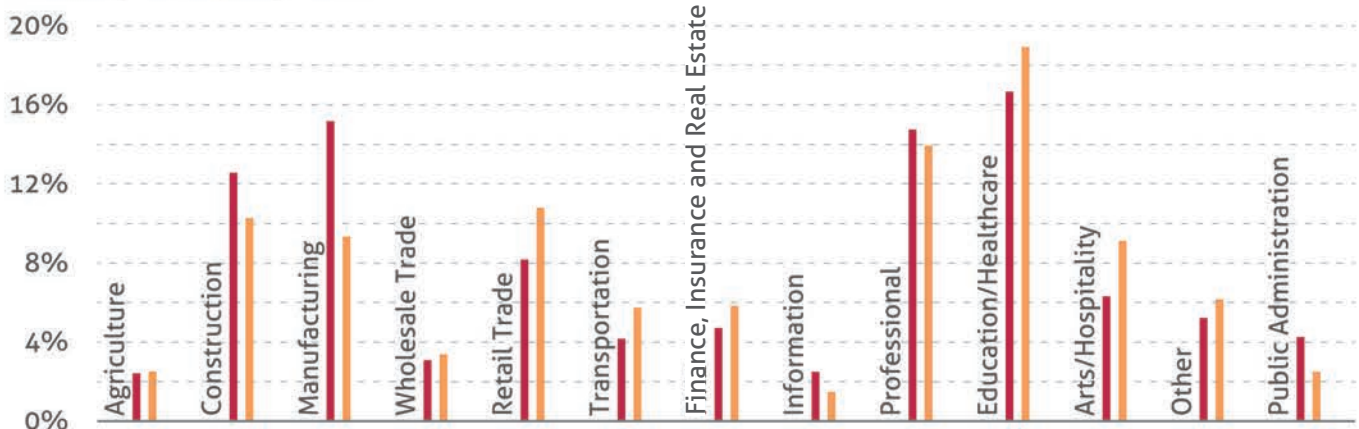
Median Household Income

\$14,341- **\$44,648**
\$34,557

Educational Attainment



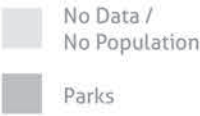
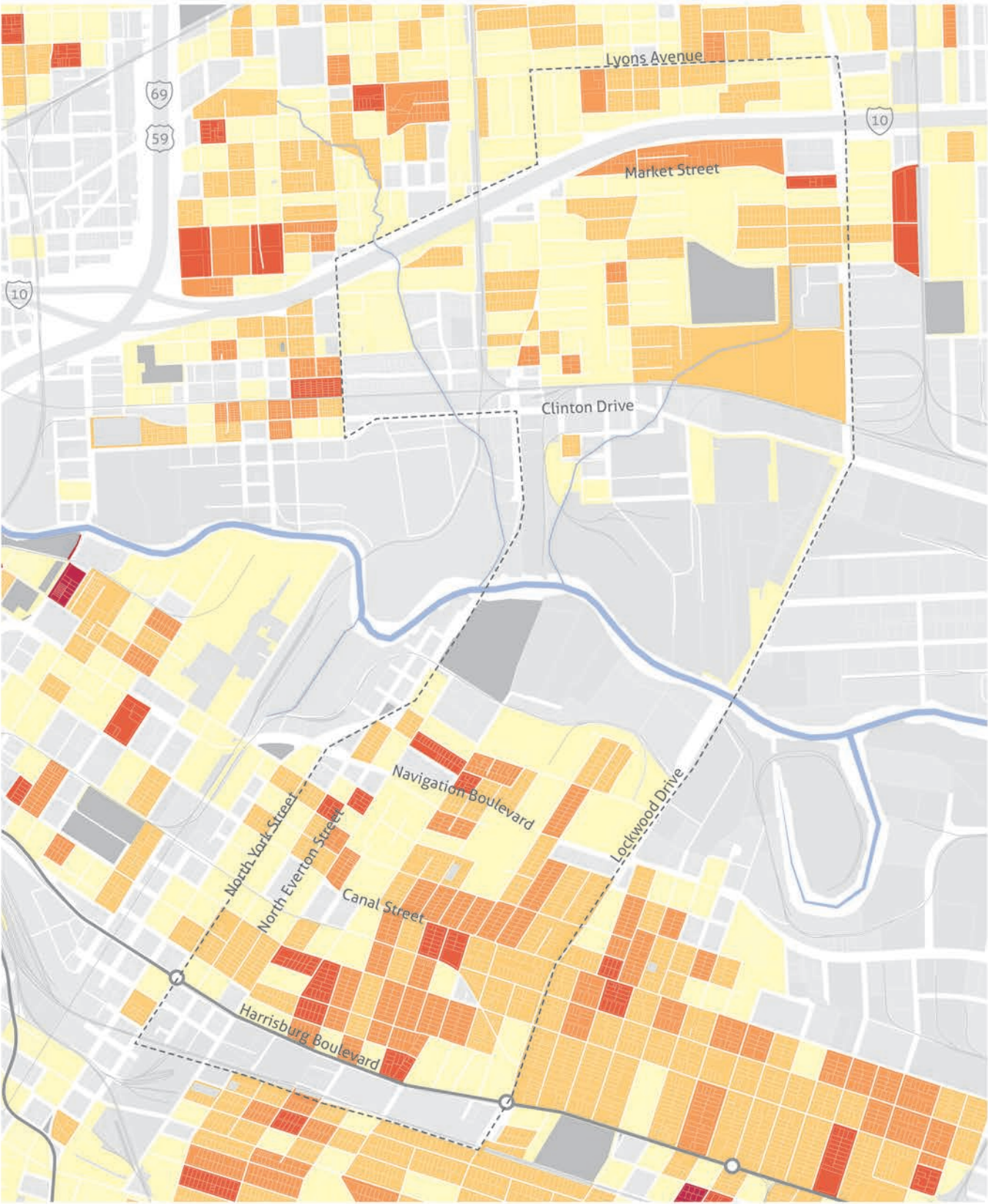
Industry of Employment



Sources: Census 2010, ACS 2012

*The Study Area statistics are based on Census tracts 2113, 2114, 3101, & 3104. These tracts extend beyond the boundaries of the Study Area.

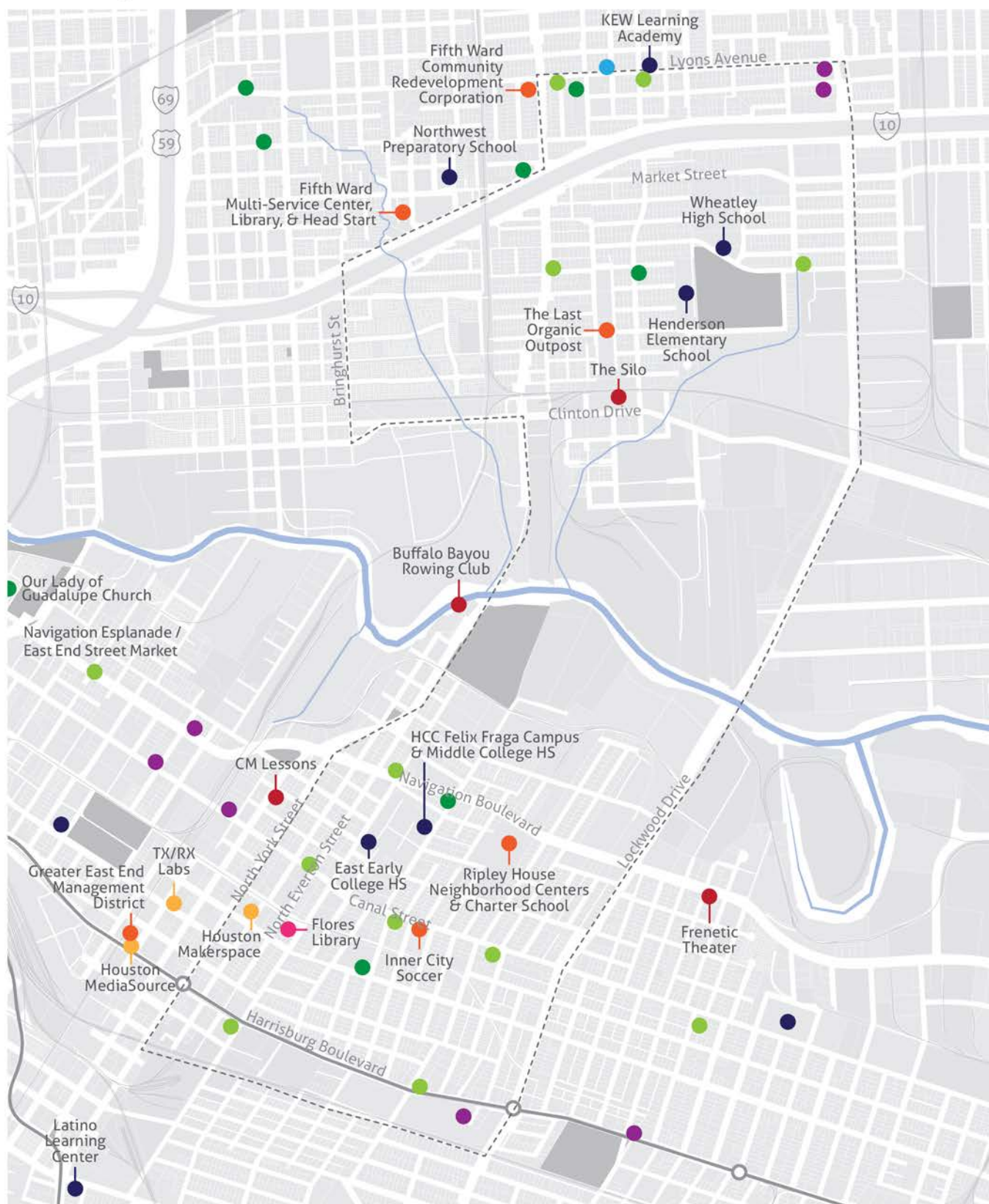
Population Density / 2010



1/2 mile

Sources: US Census 2010, H-GAC, HCAD

Community Asset & Resources



- | | | |
|----------------------|------------------|------------|
| ● Arts/Culture | ● Education | ● Library |
| ● Child Care | ● Grocery/Market | ● Religion |
| ● Community Services | ● Healthcare | ● Tech |

1/2 mile

Sources: US Census 2010, H-GAC, HCAD

significant community assets



1 / The Last Organic Outpost

A local urban farm focused on community education and remedying food deserts in the 5th Ward.



2 / Flores Library

The only major public library in the study area, Flores features bilingual events and artwork by local artists.



3 / Ripley House

Run by Neighborhood Centers, Inc. Provides community events and education as well as a charter school.



4 / HCC Felix Fraga Campus

One of the HCC Southeast College campuses and the location of Middle College High School.



5,6 / TX/RX Labs & Houston Makerspace

Hacker/maker spaces that provide tools, classes, urban garden, and studio space.



7 / Fifth Ward Multi-Service Center

Resources including a library, family support, health services, and senior citizen program.

significant community assets

8 / Navigation Esplanade

East End Foundation



9 / East End Street Market

Jon Shapley, Houston Chronicle



10 / Our Lady of Guadalupe Church

11 / JAM Park and Splash Pad



12 / "Fruits of the Fifth Ward"

13 / "Conduit" at Eastwood Park



significant community assets



14/ Frenetic Theater in the East End



15 / "East End: Birth Place of Houston"



16 / Deluxe Theater



17 / "Ventanas de Oportunidad"



18 / "Navigation" for Transported & Renewed

circulation & connectivity



By creating a transportation network that provides quality options for residents, the system is better able to serve the needs of the community by allowing people to make decisions within their means. In an equitable system, communities would have safe routes to reliable public transportation and destinations. One important reality in the context of the study area is that more than a quarter of households don't have access to a personal vehicle, making them reliant on other means of transportation despite living amongst land uses that have been distributed in ways that prioritize the automobile transportation. Due to years of disinvestment within



the study area, residents lack the availability of destinations within walking distance. By focusing on creating a livable center, recommendations will consider how to improve connectivity and circulation, thus improving residents' ability to fulfill their daily needs through better access to grocery stores, hospitals and clinics, and other job and activity centers.

Because the study area has been studied numerous times by multiple entities, the intent of this section is to focus on the implementation of key recommendations from previous studies.

Table 3.1 Census Tract Boundaries

Census Tract	General Neighborhood	Boundaries
2113	Central 5th Ward	SPRR to IH-10, US-59 to Lockwood
2114	Southern 5th Ward	IH-10 to Buffalo Bayou, US-59 to Lockwood
3101	East End near Downtown	Buffalo Bayou to Walker, US-59 to Milby
3104	Central East End	Buffalo Bayou to UPRR, Milby to Lockwood

Source: U.S. Census Bureau

The U.S. Census Bureau annually conducts the American Community Survey (ACS), a statistical survey based on data formerly collected as part of the long-form decennial Census, including education, income, family relationships, housing, employment, and transportation.

For this study, the project team collected data from the 2012 ACS on Journey-to-Work (the major mode by which one travels to work each day), and Vehicles Available (motorized vehicles available for use by the household). The Census Tracts (data collection areas) are slightly larger than the Livable Center study area, but provide a reasonable estimate of the existing conditions.

Transportation Options

Approximately 28% of households within the study area don't have a vehicle available, according to 2012 American Community Survey data, which is roughly three times as high as household percentages within the city as a whole. Census Tract estimates of households without vehicles range from 18 to 44%. In the City and County as a whole, 7 to 10% of households have no vehicle available (shown in Table 3.3. Vehicle Availability). Still, 71.7% of workers within the study area drive alone to work, which is slightly smaller than the City and County percentages (by a difference of 3.7 and 6.6%). These conditions are to be expected in a central-city location, and is consistent with the higher transit use and walking rates, however this lack of automobile access may also be due to the financial burden of owning a vehicle, considering roughly 41% of people in the study area are living below the poverty line.

By improving conditions for walking, biking, and accessing public transportation within the study area, these options can become preferred modes for residents, regardless of whether or not a vehicle is available to them. These improvements may include eliminating gaps in pedestrian and bicycle networks, improving safety and comfort conditions, and increasing the number of destinations within the study area.

With two METRORail stations within the study area, and a transit center at the northeast corner of the boundary, these may be prime locations for serving a high number of residents who utilize transit regularly, and improve the convenience of these services for their daily needs.

Table 3.2: Journey to Work

Means of Travel to Work	Census Tract 2113	Census Tract 2114	Census Tract 3101	Census Tract 3104	Study Area	City of Houston	Harris County	State of Texas
Drive Alone	66.8%	83.7%	72.1%	64.6%	71.7%	75.4%	78.3%	79.5%
Carpooled	18.2%	11.7%	8.1%	13.5%	12.1%	12.6%	12%	11.4%
Public Transportation	8.8%	1.6%	11.1%	10%	8.4%	4.5%	3%	1.6%
Walked	4.3%	1.6%	1.1%	0.6%	1.7%	2.1%	1.5%	1.7%
Taxi/Motorcycle/Bicycle	0.7%	1.3%	1.8%	8%	3%	2%	2%	1.8%
Worked at Home	1.3%	0%	5.9%	3.3%	3.2%	3.1%	3.2%	4%

Table 3.3: Vehicle Availability

Vehicle Availability	Census Tract 2113	Census Tract 2114	Census Tract 3101	Census Tract 3104	Study Area	City of Houston	Harris County	State of Texas
No Vehicle Available	43.9%	29.5%	18.1%	21.1%	27.8%	10%	7%	5.9%
1 Vehicle Available	36.1%	29.3%	51%	45.4%	41.7%	43.4%	37.5%	34.5%
2 or More Vehicles	20.1%	41.2%	30.9%	33.5%	30.5%	46.6%	55.5%	59.6%

Source: 2012 American Community Survey

transit system changes

METRO System Reimagining

Frequency is the single most important component of high-quality transit, and is a feature of METRO's revised bus network. METRO ridership decreased 20 percent from 1999 to 2012 despite an overall increase in the amount of service options offered over that same time period. To change this trend, every METRO bus route is planned to be redesigned as part of its reimagined network. Officially known as the Transit Reimagining Plan, the study was developed to use existing METRO resources to make the core bus network more useful to more people in more places, with an implementation schedule of 1-2 years. The METRO Board approved the plan in early 2015 for implementation in the fall.

As part of the improvements proposed in the Reimagining study, more than 1.1 million residents will soon be located within a half mile of the improved seven-day-a-week

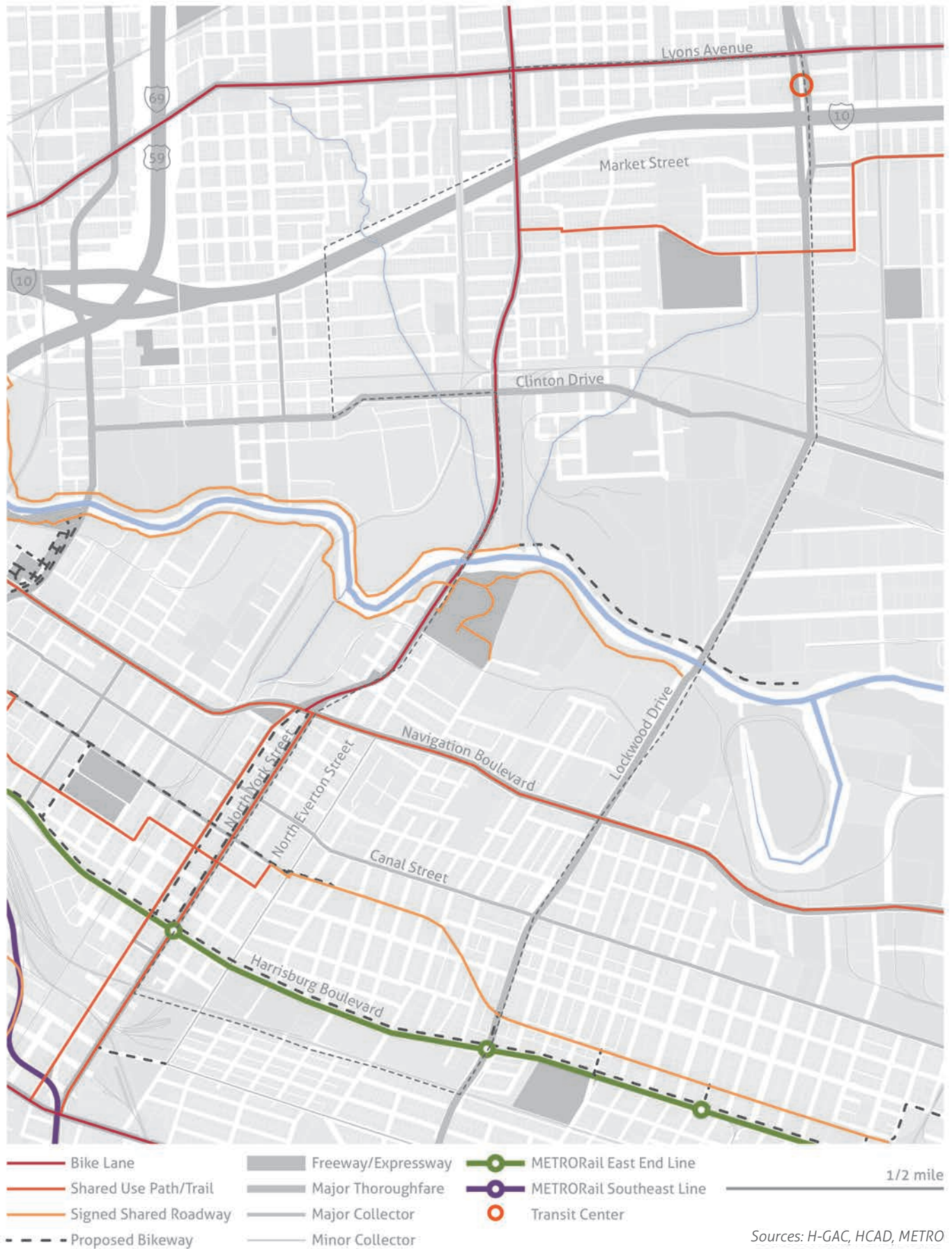
frequent bus service, which is more than double the current number. Additional improvements that are expected include increased weekend service, service focused on densely-populated areas, fewer trips that require downtown connections, and more logical routes that follow a grid street network. The overall plan was developed to be revenue- and capital-neutral, meaning that the cost of operating the network as well as the vehicle count remains the same as in the current system.

These system changes will effect service within the study area, including the loss of one route, the replacement of two routes by the METRORail Green Line, and an increase in frequent service for most routes. These changes are shown in Table 3.4, and are explained in greater detail in the following section. It is recommended that future transit improvement consider restoring service to Navigation Boulevard, especially as the land between the bayou and Navigation develops.

Table 3.4: Comparison of Existing and Reimagined System Map

Corridor			Existing System Map		Reimagined System Map	
Street	From	To	Route #	Time Between Buses	Route #	Time Between Buses
Canal St	York St	Lockwood Dr	48	60	12	30
Canal St	York St	Lockwood Dr	37	60	12	30
Clinton Dr	York St	Lockwood Dr	30	30	17	60
Harrisburg Blvd	York St	Lockwood Dr	50	10, 12, or 15	LRT	12
IH-10	York St	Lockwood Dr	137	60	120/121	30
Lockwood Dr	Harrisburg Blvd	Lyons Ave	42	60	63	10, 12, or 15
Lyons Ave	York St	Lockwood Dr	80	30	15	30
Lyons Ave	York St	Lockwood Dr	29	60	Removed	
Navigation Blvd	Jensen Dr	75th	37	60	Removed	
Navigation Blvd	Jensen Dr	Wayside Dr	48	60	Removed	
Unchanged Routes						
Finnigan Park Area (Multiple)	York St	Lockwood Dr	11	60	77	60

Transportation



Review of Study Area Changes

With the proposed changes of the METRO System Reimagining project, service will be discontinued along Navigation Boulevard between York Street and Lockwood Drive, removing hourly Routes 37 and 48 from the existing bus route. The east-west route along Clinton Drive will see reduced service frequency, with buses now arriving once an hour instead of every 30 minutes. Hourly service for the Route 80 loop that travels along Lyons Avenue will also be removed from the new route map. METRORail's East End Line runs parallel to Harrisburg Blvd and offer additional transit options along this corridor. As a result, buses will no longer travel along the Harrisburg Blvd corridor in the reimagined system map, though transit headway improves to a 12-minute base and 6-minute peak.

Twice as many buses will travel along the east-west IH-10 route each hour in the reimagined plan versus the existing plan, arriving every 30 minutes instead of hourly. Transit service along the north-south Lockwood Drive corridor will see a significant increase in frequency, with arrivals every 10-15 minutes between Harrisburg Blvd and the Fifth Ward/Denver Harbor Transit Center.

The current Route 11, Almeda/Nance, which travels through the Finnegan Park neighborhood as part of a route otherwise mostly north of IH 10, is renumbered to #77 but otherwise unchanged within the study area. Local service northeast of the study area is reduced; many of these routes did use the Fifth Ward Transit Center as a base.

Through previous studies that have been conducted within the Livable Centers study area, various needs have already been identified, which will be considered through the development of study recommendations. Below is a selection of the transportation and circulation recommendations from those studies, which were deemed most relevant to this study.

East End Mobility Study (2012)

- Numerous sidewalk gaps along York Street and Sampson Street are particularly detrimental to pedestrian mobility because of the importance of those roads for north-south movement
- Further analysis needed at Navigation at Sampson & York

Short-Term

- Develop Canal St, Polk St, and Sampson St/York St as priority transit corridors.
- Implement pedestrian improvements (Navigation Blvd, Sampson St, and York St)
- On-street bicycle facility improvements (Eastwood St from Lockwood to north of Navigation)

Medium-Term

- Develop Navigation Blvd as a priority transit corridor

Long-Term

- Include bicycle facilities along Lockwood Drive (Polk – Buffalo Bayou) when the road is constructed
- Complete Buffalo Bayou trail (US 59 – Lockwood) network
- Pedestrian and bicyclist bridges



Eight bus routes connect through the Fifth Ward / Denver Harbor Transit Center (011, 026, 029, 030, 080, 137, and 348), offering service to many destinations, including Fiesta Supermarket, East Houston Regional Medical Center, U of H (Downtown and Main Campus), Downtown, Minute Maid Park, VA Hospital, Houston Community College - Main Campus, Texas Southern University, Rice University, M.D. Anderson Cancer Center, VA Hospital, and the Houston Food Bank.

over buffalo bayou (east of Hirsch)

Buffalo Bayou and Beyond (2002)

- New transit corridors along Clinton and Navigation Blvds will guide and direct envelopment eastward
- Boat landings, some with parking, are proposed at Jensen, North York, Lockwood, Navigation Landing, and Hidalgo Park.

East End Livable Center Plan (2009)

- Change Navigation corridor into the heart of the community
- 4 corridors mainly targeted include Navigation, Canal, Sampson, and York.

Greater East End Livable Centers Master Plan (2011)

- Navigation Blvd to serve as the "Main Street"
- A trolley circulator route should be implemented to connect main locations in downtown, with service along Navigation Blvd and the potential Town Center development along Buffalo Bayou near Sampson and York.
- Canal and Commerce St have to be strengthened as east-west connectors.
- GEEMD would like to create a parking district

Fifth Ward Pedestrian and Bicyclist Special Districts Study (2011)

- Improve access to Buffalo Bayou Trail
- Lyons Avenue Bicycle Lane Coloration
- North-South Bike Trail along

Benson and Rail Track

- Finnegan Park Bike Trail Connector
- East-West Baron St "Bike Boulevard"
- Waco St (IH 10 overpass) sidewalk widening
- Hare St and IH 10 EB Feeder New Sidewalks
- Fifth Ward Housing Study (2011)
- Transit routes do not provide high frequency service. No "signature" transit line.
- Halliburton site could provide access to Buffalo Bayou(off Clinton, west of Hirsch)

The project team determined the following issues to be the priorities for transportation and circulation:

- Sidewalk improvements along Navigation, Canal, Lockwood, and York.
- Pedestrian improvements around IH-10 crossings: Waco and Lockwood roadway overpasses, Schweikhardt and Calles pedestrian overpasses.
- Potential connections from Lockwood and York bridges to Buffalo Bayou trail(s).

Identified transit improvements of these previous studies place emphasis along Clinton, Navigation, and Canal, including new transit service. Of these streets, the reimagined network shows routes with 30-minute headways along Lyons and Canal, with 60-minute headways along Clinton. No service is proposed along Navigation, in contrast to many of the previous study recommendations.

field observations



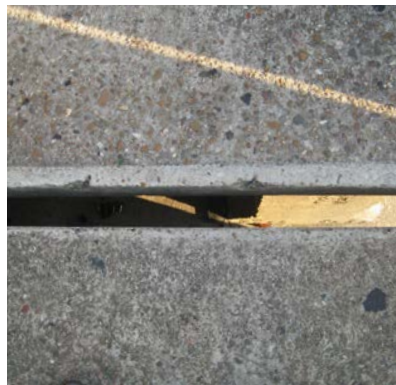
Waco IH-10 Overpass | Faded crosswalk and pavement markings



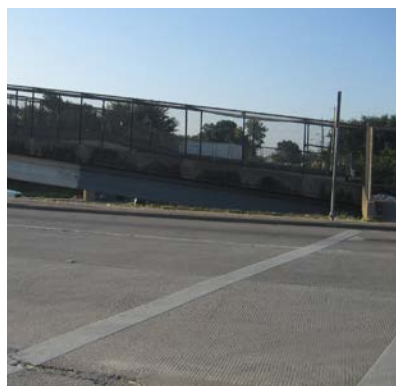
Waco IH-10 Overpass | Non ADA-compliant ramps, poor landscape maintenance



Schweikhardt IH-10 Pedestrian Overpass | Pedestrian hazards



Calles IH-10 Pedestrian Overpass



Field Observations

A field visit was conducted on Tuesday, September 9, 2014 to visit key connectivity points within the study area. Below are the observations of the pedestrian and bicycle conditions in the study area.

Waco IH-10 Overpass

At 4 feet wide, sidewalks are narrow. Some pedestrian ramps are not ADA compliant. Crosswalks and pavement markings on the bridge are faded at several locations. Landscaping is an issue. There are vines on bridge fence and grass across sidewalks. Some cables are low on the bridge and some are exposed. The median on the bridge is broken into small pieces. A bike lane is located on the bridge going northbound.

Schweikhardt IH-10 Pedestrian Overpass

The overpass functions well, but some maintenance is needed. Trash and broken glass present a pedestrian hazard, and approximately 3-inch gaps in the middle of the bridge are not covered by concrete joint material. The crosswalk across East Freeway is faded, which connect sidewalks along Schweikhardt up to Finnegan Park.

Calles IH-10 Pedestrian Overpass

The overpass functions well but maintenance and improvements are needed. Landscaping is an issue on both adjacent ramps leading to the overpass. Curbs on both entrances of the bridge are not ADA compliant. Lots of trash and broken glass are present and constitute a pedestrian hazard. The eastbound IH-10 off ramp is close to the pedestrian bridge, causing pedestrians to run across East Freeway. Heavy pedestrian



Lockwood IH-10 Overpass



Lockwood Sidewalk Gaps

activity was observed using this overpass, possibly to walk to Wheatley High School. Sidewalks are located along Calles up to Finnegan Park.

Lockwood IH-10 Overpass

The overpass is split into two one-way streets. Part of the fence separating the two sides of the street is broken and may be a hazard for IH-10 below. Some pedestrian ramps are not ADA compliant. Sidewalks are narrow, at 4 feet wide. Crosswalks are faded. Landscaping is an issue on two corners of the bridge. The southeast corner has a pedestrian signal covered with vines and push button out of reach because of shrubs. The northeast corner has landscaping around a guardrail which blocks vehicles making a right turn. Some electrical pull box lids are missing, causing a tripping hazard. Denver Harbor METRO station is located on the north side of the bridge.

Lockwood Sidewalk Gaps

Below is a list of sidewalk gaps found along Lockwood Drive.

Southbound

- Tree cracked sidewalk (Arapahoe Street to Margarita Street)
- Sidewalk does not connect over tracks (Railroad Track north of Clinton Drive)
- Many sidewalk gaps (Clinton Drive to Harvey Wilson Drive)
- No sidewalk, but loose gravel creates a path (South of the Buffalo Bayou Bridge)

Northbound

- Sidewalk before and after track is in bad condition (Railroad Track north of Clinton Drive)
- Gaps and many hazardous cracks

field observations

(Sonora Street to Arapahoe Street)

Lockwood Buffalo Bayou Bridge

The bridge has been maintained well, however pedestrian sidewalks and connectivity need improvement. The sidewalk is narrow going northbound and the southbound side does not connect to a sidewalk on the ground.

Hirsch/York Buffalo Bayou Bridge

The bridge has been maintained well, however pedestrian sidewalks and connectivity need improvement. The sidewalk is narrow going northbound and the southbound does not connect to a sidewalk on the ground.

York/Hirsch/Waco Sidewalk Gaps

Southbound

- Many sidewalk gaps (East Freeway to Sharon)
- Landscape issues (Sharon to Hare)
- Landscape and gap issues (Cline to Railroad tracks)
- Sidewalk gap by driveway (South of Buffalo Bayou)
- Landscape issues (North of Hutcheson)
- Sidewalk gaps (Harrisburg to Capitol)

Northbound

- Small gap due to landscape (South of the Buffalo Bayou Bridge)
- Sidewalk gaps (North of the Buffalo Bayou Bridge to Clinton)
- Landscape issues (Railroad tracks to Gunter)



Lockwood Buffalo Bayou Bridge



Hirsch/York Buffalo Bayou Bridge

field observations



Coffee Plant/Second Ward LRT Station



Lockwood/Eastwood LRT Station

All pedestrian ramps and pavement markings are new. Harrisburg Boulevard has a speed limit of 35mph. A traffic signal is located in the middle of a pedestrian crosswalk which separates the east and west LRT stations.

Coffee Plant/Second Ward LRT Station

All pedestrian ramps and pavement markings are new. Harrisburg Boulevard has a speed limit of 35mph.

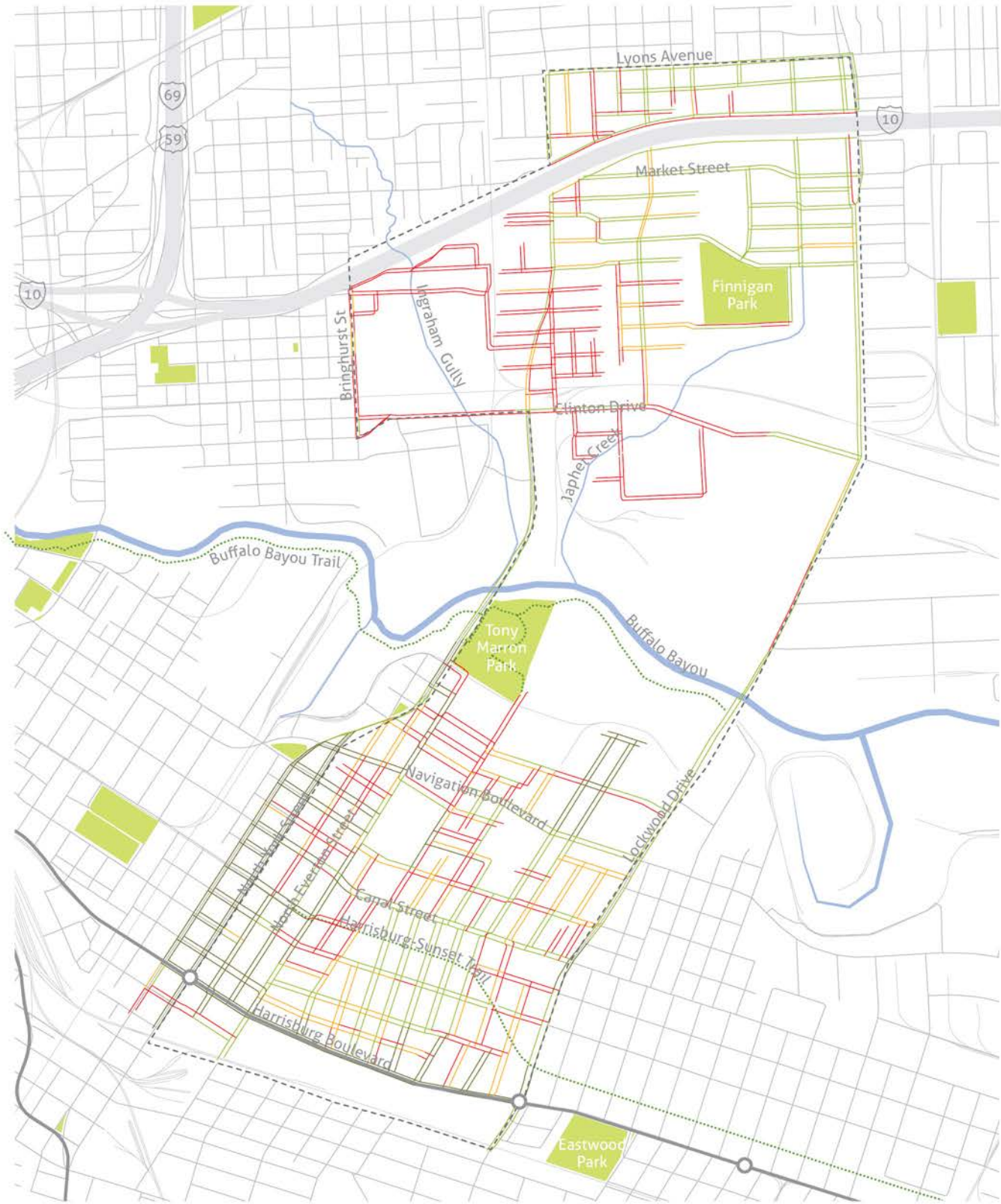
Harrisburg and Sunset Rail Trails

The trail ends westbound at Drennan Street which is a T-intersection. The east approach directs bicyclist to a bike route. All three intersection legs do not have pavement markings.



Harrisburg and Sunset Trails

Sidewalk Assessment



housing choice



*"I love my community
because...
...my neighbors are
awesome."*

Having a supply of quality housing options is one of the most important building blocks to creating a healthy, stable neighborhood and community. This chapter aims to understand the existing conditions, opportunities and challenges in the Study Area. After conducting a "windshield survey" to better understand the existing housing types and conditions in the Study Area, a few challenges became evident: the need for general repair and maintenance of the existing housing; the need to increase housing diversity or options; the need for "infill" development to build out existing blocks in the centers of the core, single-family areas; and the need to



bring the neighborhood to the Bayou-frontages, connecting them with the vitality of this signature open space. These needs - as well as the increasing development pressure from the west to create blocks of townhouse condominiums - present both challenges and opportunities for the Fifth Ward and the East End in the immediate future, in terms of maintaining housing affordability as well as achieving higher-quality and more diverse types of housing that can better address the needs and desires of current and future residents.

The “Silo” area of the Fifth Ward has the “Last Organic Outpost” at its heart.



Fifth Ward:
668 acres

East End:
528 acres

Neighborhood Characteristics

The Fifth Ward: This portion of the Study Area to the north of Buffalo Bayou is somewhat fragmented due to several factors: the presence of still-active freight rail lines; the Interstate 10 that cuts through the Fifth Ward and isolates the northernmost Lyons Avenue corridor and neighborhood from the rest of the Study Area to the south; the presence of large industrial tracts that have wedged in between existing older single-family areas homes; and finally due to the loss of many individual houses over that last several years. This physical fragmentation has led to some amount of social fragmentation: the lack of a continuous presence of occupied and maintained, quality housing lead to lack of social cohesion and community identity.

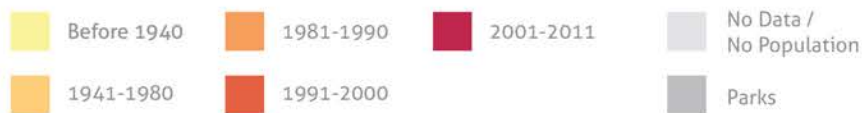
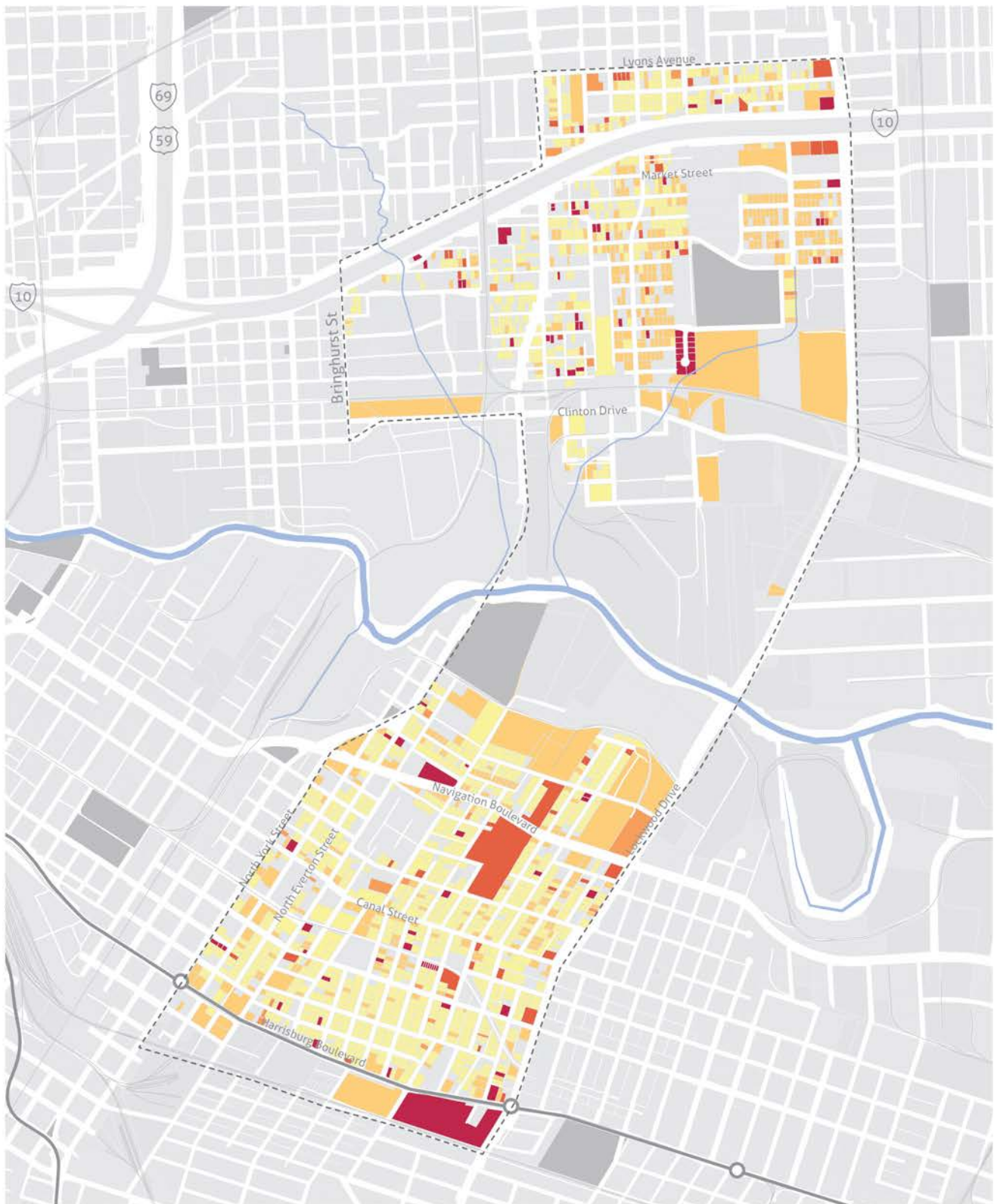
The Fifth Ward and East End areas further break down into smaller areas or “subdistricts”: areas that are distinct from another, either because of their being separated by major roadway or railways, or because of differing building types or land uses. Identifying sub-districts can be helpful in the delineations on areas of distinct cohesion, that could become “initiative areas” that could be more easily organized for grass roots, as well as public and private or public/private

improvement initiatives.

In the Fifth Ward portion of the Study Area, there appear to be eight identifiable subdistricts, including:

- the somewhat isolated and sparsely-developed area west of Press Street and adjacent railroad tracks,
- the 36-acre MDI site, which is currently vacant, cleared land that has been subdivided as small-lot, single-family townhouse condominiums,
- the west-of-Hirsch/Waco Street neighborhood, but east of the Press Street
- the “Silo” area with the Last Organic Outpost at its center,
- the largest, Finnegan Park-anchored area, including Wheatley High and Henderson Elementary
- the small Japhet Creek residential enclave, surrounded by industrial properties,
- the Buffalo Bayou-focused industrial properties, including those fronting Clinton and Lockwood drives, and
- the Lyons Avenue historic “main street” corridor and neighborhood to its south and north of I-10.

Building Age



Sources: HCAD, COH

The length of Canal Street in the East End is a mixed-use corridor.



"Bungalows"



"Shotguns"

The East End: The neighborhood in this part of the Study Area is both more cohesive, with fewer vacant lots and less incursion by the industrial properties along the Bayou and Lockwood Drive into core, single-family neighborhood. Homes are generally better maintained than in the Fifth Ward, and more of the housing stock is intact, with fewer vacant lots and very few abandoned-looking properties.

The East End portion of the Study Area could be subdivided into six subdistricts, including:

- the Bayou-fronting and Lockwood Drive-fronting largely industrial properties, including Tony Marron Park,
- the Navigation Boulevard commercial corridor - with its well-loved Mexican restaurants and its new promenade,
- the Canal Street commercial corridor,
- the Harrisburg commercial corridor with light rail service,
- the west-of-Milby Street neighborhood, west of York Street, and
- the east-of-Milby Street neighborhood, east of Lockwood Drive.

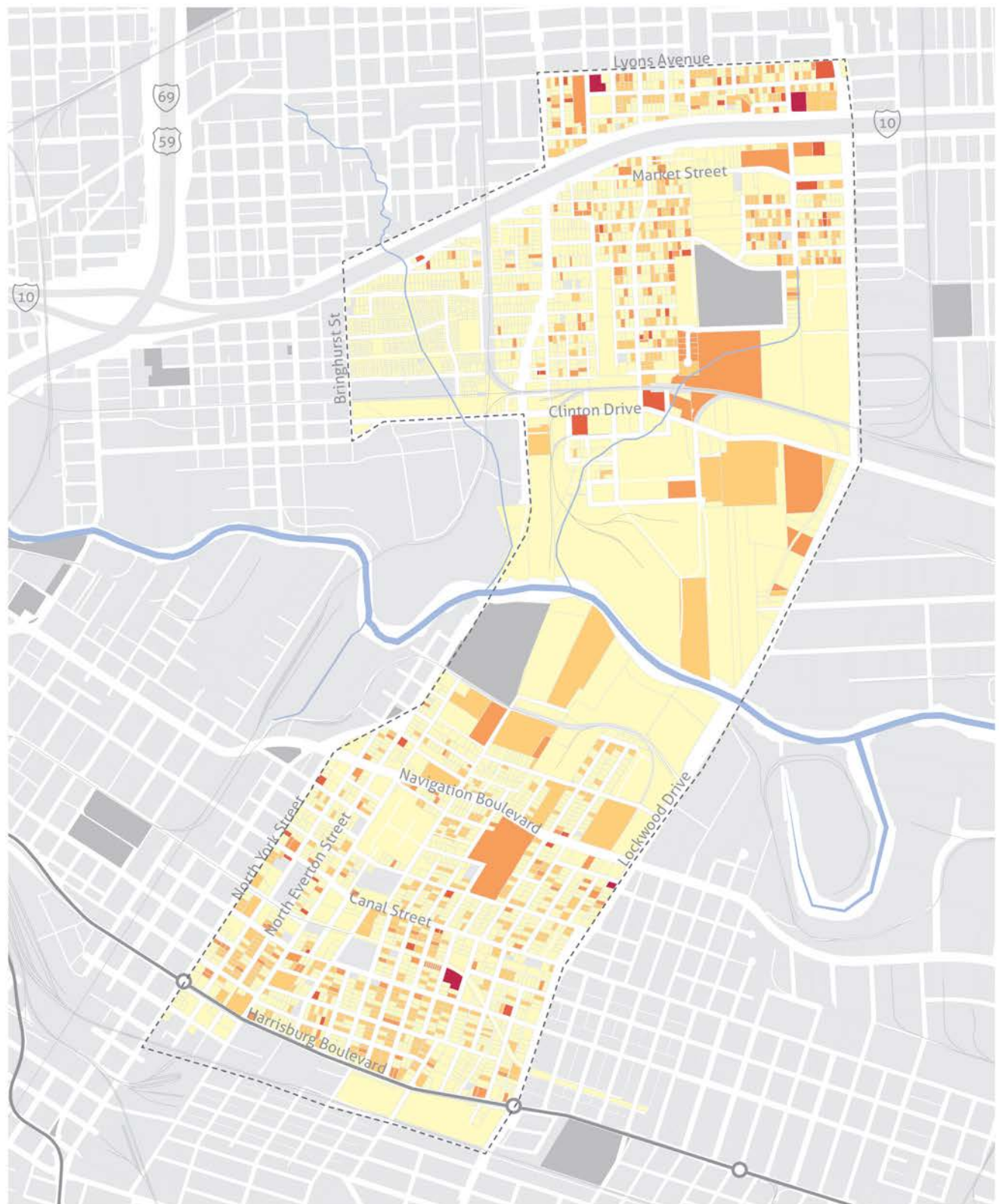
Existing Housing Types

The Study Area has 10 different housing types present, although only four types of housing make up over 90% of the total housing stock. Between the East End and Fifth Ward areas of the overall study area, about 71% of housing structures are single-family (detached) "bungalow" houses, built on 50-foot wide by 100-foot deep lots. Other housing types range from other types of single-family, detached dwellings to duplexes, quadruplexes, small single apartment buildings and few larger apartment complexes. There are no mid-rise or high-rise multi-family (apartment or condominium) structures in or near the Study Area.

Study Area Building Type Counts

Bungalow	1407
Shotgun	146
Older Single Family	20
Suburban (with Garage)	121
Suburban (without Garage)	43
Duplex	125
Quadruplex	56
Small Apartments	20
Townhouse	60
Large Apartment	50
TOTAL	1994

Improvement Value to Land Value Ratio



1/2 mile

Sources: HCAD 2014, H-GAC

housing: existing conditions



Duplexes



"Older Single Family"



"Suburban with Garage"



"Suburban with No Garage"

"Bungalows" (71%): These were generally built between the 1920s and 1940s and are one-story tall, and contain about 1,000 square feet. The bungalow type was derived from the turn-of-the-century "Arts and Crafts" or "Craftsman" style, although those in the study area are very modest versions of this style, which is typified by a one to one-and-a-half story, pier-and-beam home, with wood siding and a large front porch. Given the high number of these units throughout the Study Area that appear exactly alike, i.e., with little or no variation between them, these homes may have been built from kits obtained from Sears or another mail-order company. In the East End, this type is sometimes accompanied by an accessory dwelling unit located to the rear of the lot, either above or within a garage or shed structure that was probably not original to the lot.

"Shotguns" (7%): An important architectural style for housing the Gulf Coast region, the "shotgun" house is also present in the Study Area, making up approximately 7% of the existing housing stock. These 146 homes are typically one-story and are characterized by the arrangement of rooms one that are linked, one behind the other, rather than by a hallway. These shotguns are pier-and-beam construction with wood framing and siding, with a front porch, and are more modest in size than the bungalows, typically only 500-750 square feet. There are many more shotguns present in the Fifth Ward part of the Study Area than in the East End.

"Older Single-Family" (1%): There are a few older homes that are neither bungalows or shotguns – that may have been the main house of an original

landowner, as in the case of one of the homes in the Japhet Creek area. They are of pier-and-beam construction, wood siding, and one or two-story, Victorian-era inspired houses, and could be up to 2,000 square feet in size.

"Suburban with Garage" (6%): The newest homes constructed which are sprinkled throughout the Study Area are of a typical suburban character of slab-on-grade and masonry construction, with one- to two-stories, with street-facing garages that are part of the building, low hipped roofs and some or all masonry veneer. These were built between the 1970s and the 2000s and are a strong departure from the existing character of the surrounding homes. They make up about 6% of the houses within the Study Area.

"Suburban with No Garage" (2%): At the same time, there are more than 40 newer single-family homes that were built without street-facing garages. They are still usually one- to two-stories and have suburban characteristics, that is slab-on-grade, with some or all masonry veneer.

Duplexes (6%): Another 6% of the housing is made up of duplexes, of which the two units are arranged in a variety of ways: side-by-side units; stacked vertically with one above the other, or one in front of the other. Most of these appear to be pre-World War II structures - with a few exceptions dating from the 1980s and 1990s.

Quadruplexes (3%): There are about 50 quadruplexes throughout the Study Area. These are typically, two-story, pier-on-beam, masonry buildings resembling small apartment buildings or

large, single-family homes with multiple entrances. This type is more prevalent in the East End, and are located within the core, single-family area, often on the same, 50 by 100-foot lots used for single-family homes.

Small Apartments (1%): Some smaller apartment buildings are part of the existing housing stock. These tend to have smaller units, rather than those of the duplexes and quadruplexes, yet are still smaller-scaled buildings of two stories, of both masonry and wood construction, that are not part of a complex, i.e., they are a single building – not part of a complex of buildings.

Townhouses (<1%): A housing type that is growing in popularity in the Houston close-to-downtown area and whose presence has only recently been seen in the Study Area is the single-family, townhouse or rowhouse condominium. Many of this type are being constructed near Downtown and are luxury units of three to four stories, with slab-on-grade construction and masonry facades. These often have integral garages and gated driveways. So far, there is only one instance of this housing type in the East End, though there are many recently-constructed examples surrounding the site, particularly to the west of the Study Area. One large development on the old MDI Superfund Site will provide about 500 new units of this kind.

Large Apartments (2%): There are four, large apartment complexes comprised of about 50 individual buildings. Two of these, located near Finnegan Park in the Fifth Ward, are “Section 8” housing projects: Cleme Manor and Wheatley Manor Apartments. These represent the densest housing type in the area, although none of these is more than three stories tall.

Conditions and Regulations Affecting Housing Development in the Study Area

Zoning: In Houston - which has no zoning ordinance - new housing may generally be developed on any existing lot of any kind anywhere in the city. Single-family lots may be combined to create larger tracts and new apartments or condos may be developed, up to as much as 27 dwelling units per acre. This means that a developer could create three townhouse-style condo units on a 5,000 square foot lot typical in the study area. With eight such single-family lots, which represents about a half-block of homes in the Study Area, one could develop about 24 housing units, in effect tripling the density from that which exists today.

The Study Area has many sites that would seem to attract this kind of development or redevelopment, so the lack of zoning, the demand for housing close to downtown, the relatively inexpensive property prices all combine to create the ideal conditions to build new housing for young professional couples and singles in the Study Area. Evidence of this is already present just to the west of the Study Area in the Fifth Ward, where gated townhouse condos already exist, and where the 36-acre former MDI site (in the westernmost portion Study Area) is platted for this kind of development.

Deed Restrictions: Certain neighborhoods in Houston, such as the Heights, have sought to preserve their existing, single-family character, and have been able to do so through passing deed restrictions to set minimum lot standards. This disallows the subdivision of a parcel of land into very small lots that has become a standard practice for many developers creating condominium units. As witnessed at the two community workshops in September in



Large Apartments



Quadruplexes

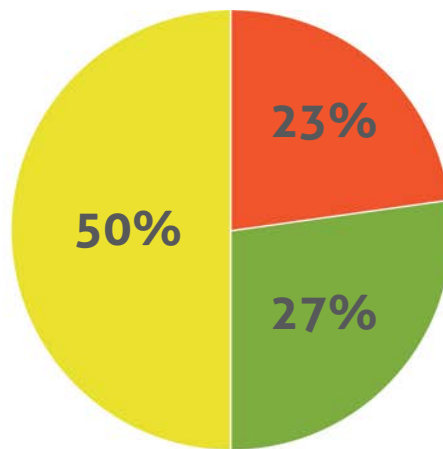


Small Apartments

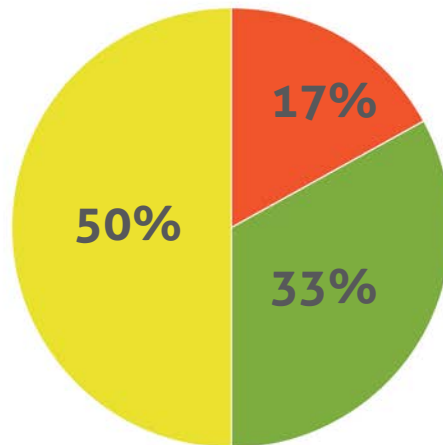


Townhouses

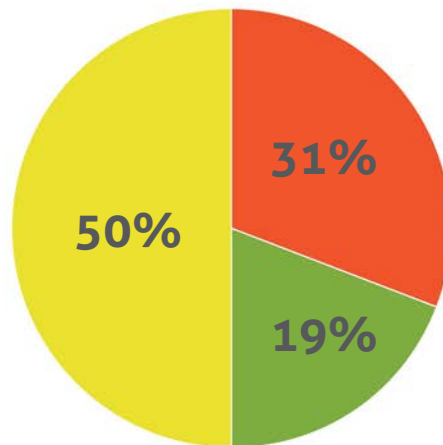
Overall Study Area



East End Area



Fifth Ward Area



good fair poor

These pie charts indicate the physical condition of housing stock in the Study Area.

the Fifth Ward and in the East End, many people expressed interest in preserving the existing single-family lots and/or homes in the core of the neighborhoods - particularly the bungalow house type. If this is a broadly-held community desire, then consideration of using deed restrictions to preserve these areas should be considered.

Site Development Standards: There are regulations governing placement of a building on its lot (building setbacks) and the minimum amount of off-street parking required - given the type of building or land use that is to be developed. For single-family homes, two spaces are required, and for an accessory dwelling unit under 900 square feet, only one space is required. A three or more bedroom apartment unit also requires two spaces, whereas an efficiency unit only requires 1.25 spaces.

These parking requirements are fairly typical and not particularly challenging to achieve, but since providing on-site parking is a component in the cost of housing - and sometimes a very significant one - many cities have reduced parking requirements in central areas of town, such as the Study Area, where transit is accessible and frequent. In Houston's "TOD" (transit-oriented development) areas, a 20% reduction in parking is allowed, but only for non-residential uses. Many cities which are concerned about creating affordable housing units allow or are considering allowing the construction of "micro-units" or extra small units ideal for the single dweller who needs a more affordable option. These are being built with zero to one-half a space required.

Building Conditions

One of the clear patterns to emerge from our windshield assessment is that much of the housing stock is

aging (most over 50 years old) and has suffered from lack of maintenance. The Fifth Ward's housing is in considerably worse condition than that of the East End. The assessment rated buildings as to whether they appeared in good, fair or poor condition, per the following guidelines:

- **Good:** Structurally sound, good roof, plumb walls and floors, well-maintained.
- **Fair:** Structurally sound, may need foundation leveling, minor repairs, new roof, cladding refurbishment, paint, and other minor maintenance.
- **Poor:** Not structurally sound, with walls, foundation and/or roof failure(s), chronic lack of maintenance.

Overall, only about 27% of the 1,994 housing structures surveyed appeared in good condition, about 50% of the structures were in fair condition, and the remaining 23% were in poor condition.

When looking specifically at the Fifth Ward and East End sections of the Study Area, the localized patterns become more obvious, where over 31% of housing in the Fifth Ward was determined to be in poor condition, compared to about 17% in the East End, whereas, only about 19% of housing in the Fifth Ward was listed as good, compared to about 33% in the East End.

The East End has also seen more new housing in recent years compared to the Fifth Ward, with new and large homes dotting the area and overall maintenance at visibly higher levels. The Fifth Ward has many more vacant lots and abandoned structures that are possibly beyond rehabilitation. Very few full blocks exist in the Fifth Ward section of the Study Area that would be considered in good condition. The



Good Condition



Fair Condition



Poor Condition

housing: existing conditions

disparities between the two sections of the Study Area will be important to consider as future strategies for housing development are planned.

Challenges and Opportunities

The initial assessment of housing in the Fifth Ward and East End Study Area has produced a few key observations and important questions for the future of the neighborhoods:

- As most of the housing is meant for a single family, there is a very clear lack of housing diversity throughout the Study Area. However, there are many infill sites and redevelopment sites along the periphery of the single-

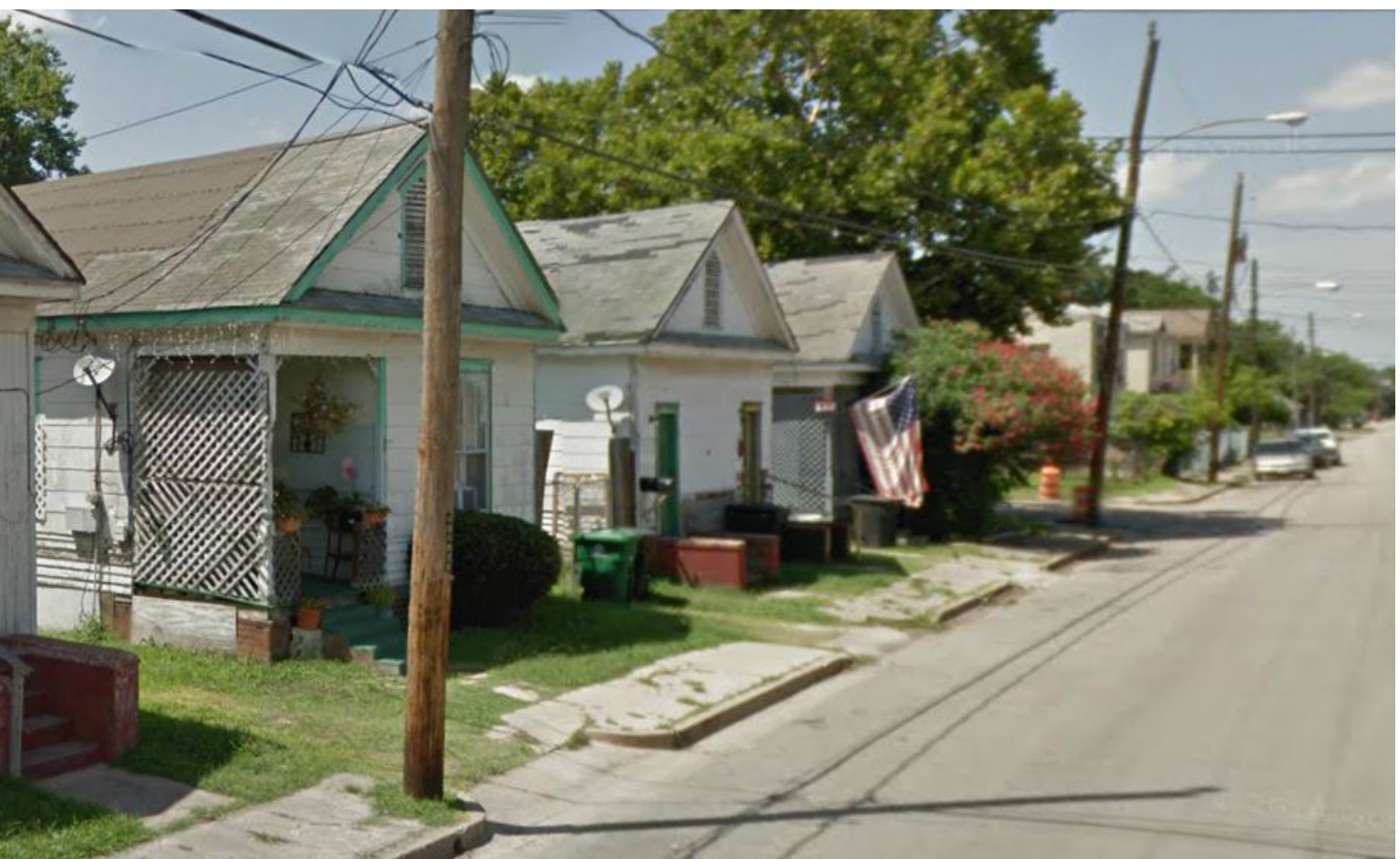
family areas and along the Bayou that create ample opportunity to build different kinds of living opportunities for people at all ages, incomes and life situations.

- Aging structures and lack of maintenance are creating deteriorating housing conditions, yet there is an interest in maintaining the historic character. Mortgage assistance programs are available through Houston Habitat for Humanity, the Community Covenant CDC (Community Development Corporation), and others to assist with refurbishing these homes or replacing them with new structures.

North Milby Street, East End



- The lack of zoning regulations creates an “open season” for any new housing types that may or may not be desirable or affordable to existing residents in the Study Area. Establishing a land trust could ensure that affordable units remain affordable through time.
- Increasing demand for housing in proximity to Downtown Houston is creating development pressure on the Study Area, which can be leveraged as an opportunity to improve community life. As new development occurs, there are ways to persuade the private sector – through infrastructure investments such as improved streets, lighting, landscaping, parks and recreational facilities, etc. - to create the kinds of cohesive neighborhoods where people thrive.
- The Buffalo Bayou frontages for both the East End and the Fifth Ward create landmark opportunities for new, mid-rise and even high-rise living, as these redevelop over the next generation. Such redevelopments create the opportunity to improve access to the Bayou from these neighborhoods and to create a positive edge to the hike-and-bike trail and parkland along it.



economic development



*"I love my community
because..."*

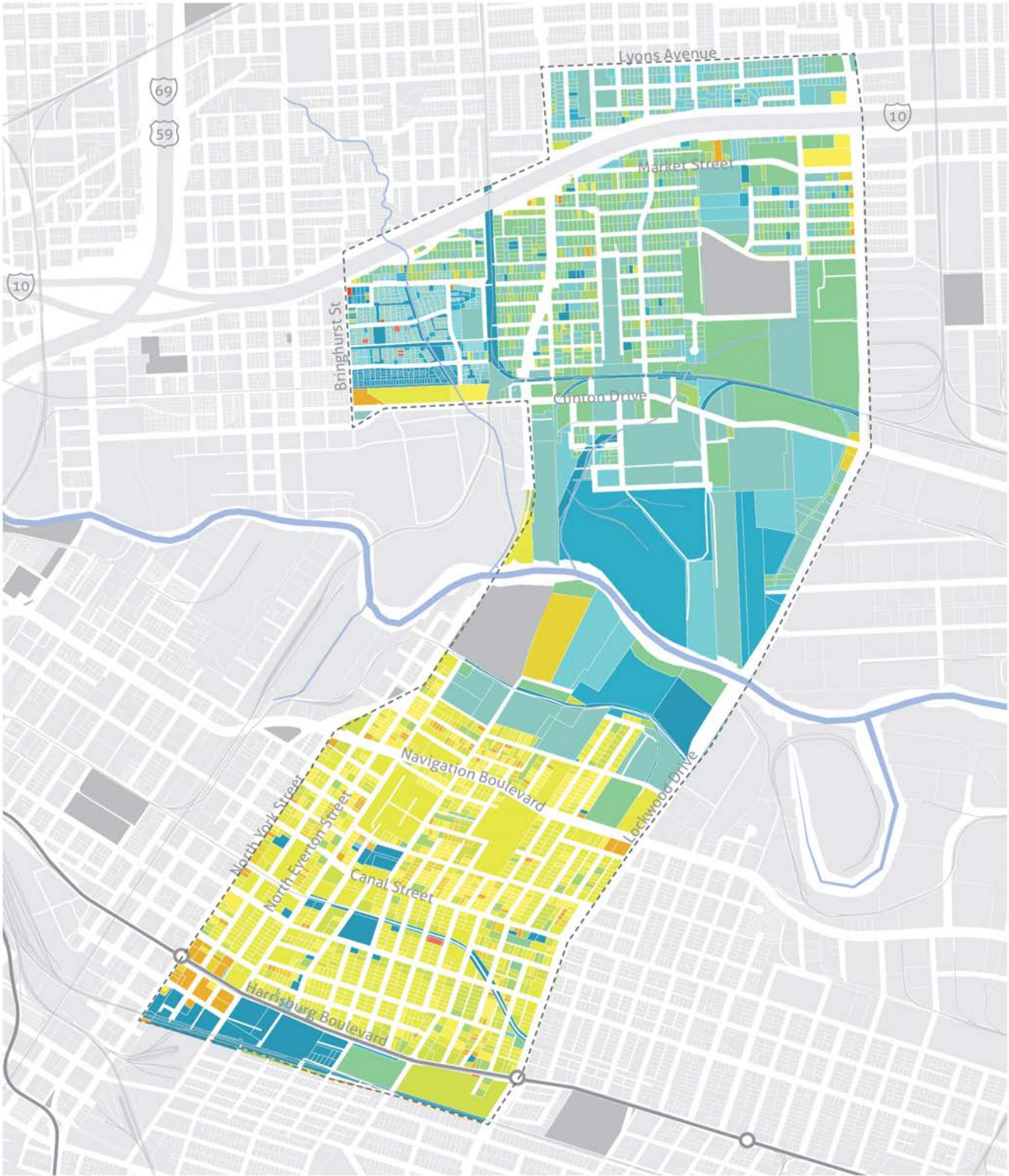
*...of the potential for
a new economy around
food and cooperation."*

The study area is expected to experience development pressures with growing attractiveness due to a variety of positive attributes: its proximity to downtown, affordability compared to other nearby neighborhoods, increased pedestrian and bicycle infrastructure investments by the Greater East End Management District and Buffalo Bayou Partnership, and the opening of the METRORail Green Line that connects to the downtown Central Business District and other light rail connections. Lots are still affordable in the area, with roughly 50% of single-family residential lots appraised at under \$7 per square foot in 2011, as can be seen in the map on the



following page. A Majority of the study area's land value remained the same from 2010 to 2011 with the exception of much of the Fifth Ward experiencing a slight increase. An increased investment will improve spending power in the neighborhood and consequently an increase in services, however there are two primary concerns of existing residents: how soon these services will come and will they be included in the improvements.

Land Value per Square Foot / 2011



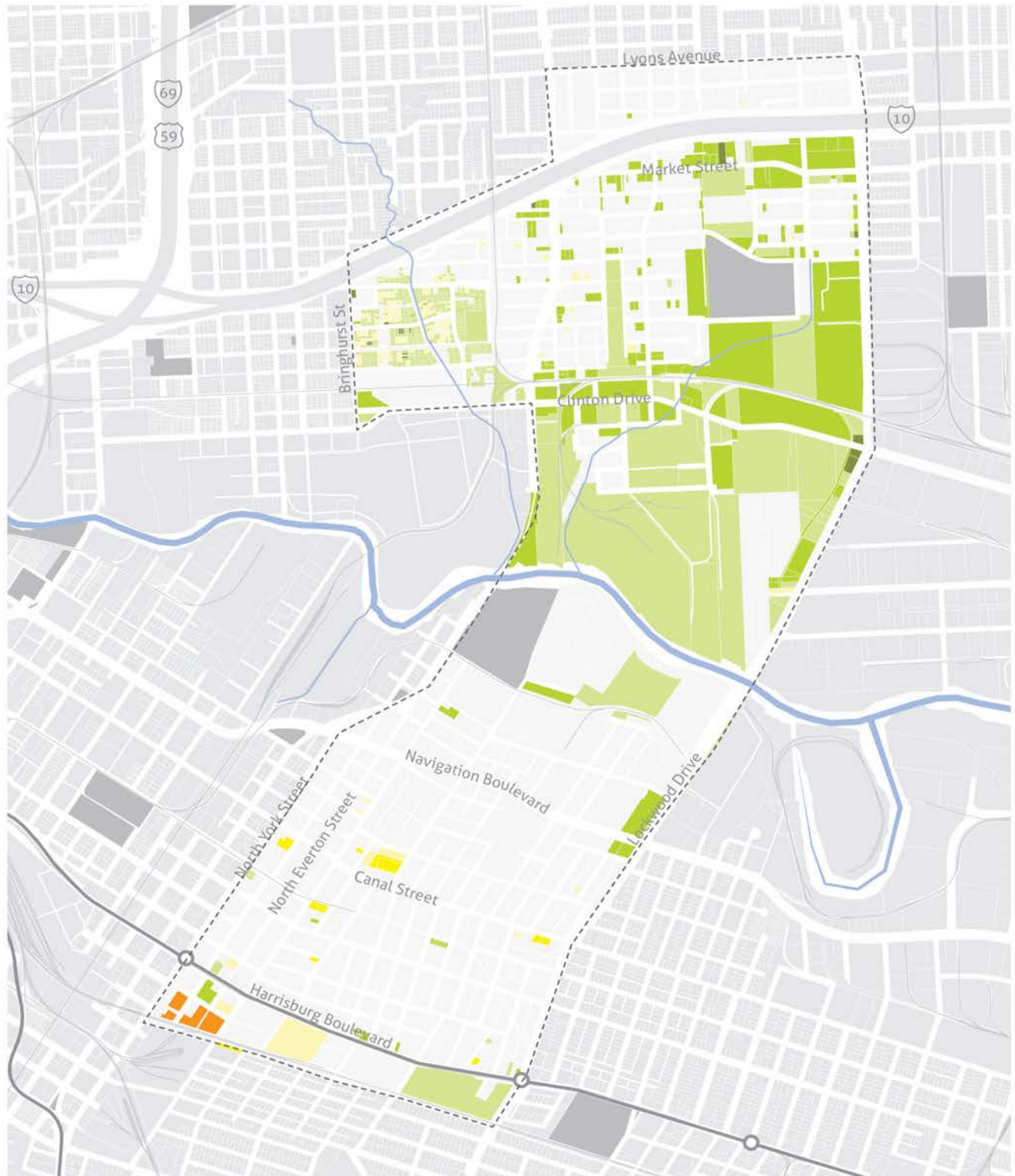
Land Value (Dollar per Square Foot)



Sources: HGAC, HCAD

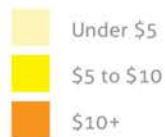
Sources: H-GAC, HCAD

Change in Land Value per Square Foot / 2010 to 2011



Change in Land Value
(Dollar per Square Foot)

Decrease



Increase



No Change in Land Value

No Data

Parks

Sources: H-GAC, HCAD

Uniquely designed street furniture was included as part of major improvements to the public realm by the Greater East End Management District in 2013. This functional art piece serves as a bench at a METRO bus stop.



**more than
250,000
low-
income
residents
of Houston
don't live
within a
mile of a
grocery
store.**

Initial investments are likely to be seen through single family housing developments, such as the newly constructed condos and townhomes commonly seen in the inner-loop of Houston. One indication of this foresight is the replatting of a Superfund site in Fifth Ward (formally Many Diversified Interests, Inc., or MDI) into approximately 450 lots ranging from 0.03 to 0.16 acres. Longer-term investments may include the redevelopment of large-parcel lots along Buffalo Bayou, which have been identified through this project as a key opportunity to physically and culturally link the Fifth Ward and East End as a way to serve both neighborhoods as services are improved in the area.

The types of services desired within the study area by existing residents includes very basic needs such as access to fresh foods, health services, job growth and skills development. In conversations at the initial public meetings, residents often stressed that they are interested in being part of the positive economic changes in their community.

According to research by the University of Houston Community Design Resource Center, more than 250,000 low-income residents of Houston don't live within a mile of a grocery store; and of those residents

25% don't have access to a vehicle. These food desert conditions are exemplary of the study area, a reality experienced by many residents on a daily basis, where it's estimated that 28% of households in the study area don't have access to a vehicle, according to 2012 American Community Survey 5-year estimates. The desire for a grocery store was discussed with an overwhelming consensus during the Fifth Ward public meeting. Some expressed this in terms of a desire for healthy food alternatives to existing quick serve and convenience stores, while others desired for a more comprehensive selection of foods and general grocery items. For many, having food options that are conveniently located is important because many residents lack independent transportation. There are several food gardens in the community that help fulfill this need, which is seen as a cost effective way to provide healthy food options. It may also serve as a community building tool, but is not the sole answer to the food desert concerns faced by residents. Residents of East End expressed a very strong desire for a convenient secure grocery store offering a full service pharmacy, fresh healthy produce, and a broad selection of staples. Other needs expressed include health care partnerships,

wellness centers, doctor's offices, and emergency clinics. By improving infrastructure connections, a goal would be to establish retail and healthcare amenities that serve both communities north and south of Buffalo Bayou.

Job creation is an important element of economic development within the study area, to give residents greater control over their livelihood; attracting employers, promoting entrepreneurship and developing skillsets. Public meeting participants expressed a desire to build on the community strengths via business incubators designed to link skilled and entrepreneurial community members with mentors, investors, co-ops, grants and small business loans. Many believe that the Fifth Ward is on the cusp of a transformation, and expressed the hope that local business and local labor will participate in any construction or reconstruction boom. Additionally, East End is home to many creators whose work can be better supported through social and physical infrastructure.

Housing is clearly seen as an economic development opportunity, and while there was an expressed desire to ensure an affordable component to any housing program, there did not seem to be much resistance to townhomes, detached single family, or live-work designs. It should be noted that some did express a concern that any revitalization effort would result in the gentrified displacement of existing residents. Housing choice is also viewed as central to East End's economy, and there is an interest in maintaining a diverse selection for current and future residents for micro housing, townhomes, detached single family, mixed-use, live work, historically preserved, and creative sustainable/adaptive reuse options. Despite this interest in diverse housing types, there is a concern that revitalization efforts will not be respectful of the historic character in Fifth Ward and East End. In this respect and others, there is considerable interest in the possibilities



Coffee Plant/Second Ward METRORail station along the Green Line on Harrisburg Blvd



Historic building stock within the study area are attractive assets for redevelopment efforts.



Historic character of common single-family housing types



Newer housing developments are scattered through the study area.

of enforcing a regulatory framework of the area. Some participants suggested East End neighborhoods could benefit from tax incentives for historical reuse and façade improvements, well articulated commercial design standards, local assistance managing the City's regulatory grid, and better coordination among the various overlapping jurisdictions, including METRO, City of Houston, Harris County, GEEMD, and HISD, among others.

In an area with a strong cultural history, and deep seated roots within the community, developing a grassroots economic development strategy will be important to empower residents to have greater control in their environment. While outside investment is welcome and in many respects needed, growth in these neighborhoods should build on existing strengths, including the people, built environment, and natural amenities that make it so unique.

Project Stakeholders

To build on the assets within the community are three strong partners involved in the development of this plan: Fifth Ward Redevelopment Corporation, Buffalo Bayou Partnership, and Greater East End Management District.

The Fifth Ward portion of the Study Area includes Tax Increment Reinvestment Zone No. 18, City of Houston, a.k.a. the Fifth Ward TIRZ. The Fifth Ward TIRZ functions in conjunction with the Fifth Ward Community Redevelopment Corporation. Following is an overview of these entities.

Tax Increment Reinvestment Zone No. 18, City of Houston, the Fifth Ward TIRZ / The Fifth Ward TIRZ (the "TIRZ") was created by City Council on July 21, 1999 with a 30-year duration, and will terminate in 2029. At creation the TIRZ contained approximately 241 acres and included the Fifth Ward and Denver Harbor area. In 2008 the TIRZ

was enlarged to take in tracts of land immediate adjacent to the TIRZ that shared the then existing community characteristics. The Fifth Ward TIRZ currently contains 498 acres.

According to the original Project Plan and Reinvestment Zone Financing Plan states, the creation of the TIRZ was intended to establish framework and create conditions "...whereby development and redevelopment can occur to: stabilize and turn around a declining tax base, establish the basis for a consistency of land uses, and strengthen the character of residential and commercial properties."

Participants

The City of Houston and Houston Independent School District ("HISD") both participate in the TIRZ. The City participates at 100% of its tax rate. HISD committed to 100% participation with several conditions for reduction of that participation based on the impact of school district funding from the State of Texas. HISD was also provided with the potential use of tax increment toward educational facilities within the TIRZ.

Eligible Improvements

The Final Project and Financing Plan contains the following descriptions of eligible projects:

- Land Assembly & Historic Preservation
- Roadway/Sidewalk Construction
- Water/Sewer Construction
- Other Projects
 - Brownfield Remediation
 - Demolition Costs
 - Area Park & Recreation Redevelopment
 - Gateway Improvements
 - Streetscape, landscape & Lighting Improvements

- Bus Stop/Shelter Improvements
- Creation

In 2008 the Project and Financing Plan was amended to include:

- Affordable Housing
- Lyons Ave. Improvements
- Developer Reimbursement
- Administration
- Financing Costs

Total Estimated Project Costs

The total estimated cost for the eligible projects listed in the Final Project and Financing Plan is \$6,880,000. The total cost for the eligible projects listed in the 2008 Plan Amendment added \$18,100,000 in additional project cost.

The Fifth Ward Community Redevelopment Corporation / The Fifth Ward Community Redevelopment Corporation ("5th Ward CRC" or "CRC") is a Texas Local Government Corporation founded 26 years ago by community and church leaders. The City Resolution approving the CRC states its purpose as being :

"...authorized to aid, assist, and act on behalf of the City in the performance of its governmental functions to promote the common good and general welfare of the Fifth Ward area of Houston and neighboring areas, as more particularly described in City of Houston Ordinances No. 1999-766 and 2001-404 and as the boundaries of Reinvestment Zone Number 18 may be changed from time to time; to promote, develop, encourage and maintain employment, commerce and economic development in Houston..."

Duties and Responsibilities

The 5th Ward CRC functions as the administrative arm for the TIRZ. The creation Resolution delegates certain powers and responsibilities to the CRC.

Among these authorizations are the following:

- To aid and assist the City and the TIRZ in preparation of the final Project Plan and Reinvestment Zone Financing Plan;
- To develop a policy to finance development and redevelopment of residential, educational facilities, commercial, park/open space properties and other land uses in the Fifth Ward area; and
- To develop and implement a redevelopment policy for the Fifth Ward Area, including the acquisition of land for redevelopment purposes.

Via a council adopted agreement among the City, TIRZ, and CRC, known as the “Tri-Party” Agreement, the City and TIRZ further delegated certain other responsibilities and authority to the CRC with regard to administration of the TIRZ. These include, but are not limited to, the following:

- Make recommendations to the TIRZ Board and the City with respect to the redevelopment of the TIRZ area;
- Perform and engage in activities relating to the acquisition, development, leasing and sale of land and other properties;
- Engage in development and redevelopment activities;
- Construct and improve infrastructure in the TIRZ;
- Enter into Development Agreements with Developers/ Builders in the TIRZ;
- Issue, sell or deliver its bonds, notes or other obligations;
- Services to be provided by the CRC include:
 - Management and Administrative Services and Consultants;
 - Services with respect to the

- Project Plan and Financing Plan, Enlargement of the TIRZ, and Amendments to the Project Plan and Financing Plan;
- Review and analysis of the Tax Roll for the TIRZ to ensure accuracy in the market value of properties within the TIRZ;
- Establish and administer a Public Safety Program;
- 5th Ward Area Planning, Design, and Infrastructure Improvements;
- Infrastructure Construction and Construction of TIRZ Projects;
- Land Acquisition, Development, and Redevelopment;
- Provide the services of Subcontractors as needed.

On April 20, 2010, the City, the TIRZ, and the CRC entered into an Affordable Housing Agreement to annually transmit to the City one-third of one hundred percent of the City’s tax increment paid to the CRC in accordance with the Tri-Party Agreement. This obligation is subordinate to other obligations incurred prior to the Affordable Housing Agreement.

The City agrees to use these funds only for the provision of affordable housing. The City’s Housing and Community Development Department (“HCDD”) is charged with using these funds for low-income housing purposes. In accordance with this mandate HCDD will give preference to down-payment assistance for single-family homes purchased at prices less than the median price in the region, in an effort to attract residents with a mix of incomes in the area; and give preference to houses in the Fifth Ward area.

The East End portion of the Study Area includes the Greater East End Management District and Tax Increment Reinvestment Zone No. 23, City of Houston, a.k.a. Harrisburg TIRZ 23 or TIRZ 23. Following is an overview of these districts.

The Greater East End Management District / The District was created in 1999 by the 76th Legislature and its enabling legislation is codified as Chapter 3807 of the Texas Special Districts Local Law Code. The District's website contains the following on the District's Purpose:

"The District receives assessments from commercial property owners and uses funds for infrastructure improvements, beautification, security and public safety, workforce development, and other programs as designated by its board of directors."

The District's Mission Statement is:

"The Greater East End Management District will work with its rate payers, the community, and government partners to ensure that the District becomes a dynamic and distinct community."

The website further describes the areas of focus for the District as follows:

"All programs and services are approved by a District Board of Directors comprised of East End commercial property owners, business owners, and residents, and are developed to:

- *Create a safe environment within the District in both perception and reality.*
- *Enhance the image of the District.*
- *Improve infrastructure and amenities in the District.*

- *Attract more business and investments to the District.*
- *Improve business opportunities, in order to increase economic activity for the business property owners, tenants and their customers."*

Service Plan

The District adopted its first five-year Service Plan in 1999. The District is currently implementing its third Service Plan, a 10-year plan, for 2014-2023. The service areas targeted for funding are listed as:

- Security and Public Safety
- Business Development
- Visual and Infrastructure Improvements
- Services and Maintenance
- Communications and Marketing
- District Administration

Assessment Rate

The District's assessment rate under the current plan is \$0.15/\$100 valuation. This assessment rate generated approximately \$1.7 million annually, according to the District's website.

Tax Increment Reinvestment Zone No. 23, City of Houston, the Harrisburg TIRZ / The Harrisburg TIRZ was created by City Council on Oct. 18, 2011. It contains approximately 1,600 acres and was created for a 30-year period, ending Dec. 31, 2040. The City of Houston website states the purpose of the TIRZ as follows:

"The Project and Reinvestment Zone Financing Plan will create an investment tool for new construction and the redevelopment of the area. The proposed TIRZ will help finance approximately \$128 million of improvements and services needed to support the repositioning and revitalization of the East End. Those improvements include:

- *Design and construction of public utilities including water, wastewater and storm water systems;*
- *Design and construction of major and minor roadways and streets including improvements/enhancements;*
- *Cultural and Public Facility Improvements;*
- *Parks and Recreational Facilities; and*
- *Economic Development”*

Participants

The City is the only participant in the Harrisburg TIRZ, starting in the first ten years at 100%, declining in the second 10 years to 90%, and decreasing to 80% for the last ten years.

Project and Financing Plan Eligible Improvements

The Final Project and Financing Plan contains the following descriptions of eligible projects:

- Public utility improvement
- Roadway, streets, sidewalks, lighting, ROW acquisition
- Light Rail Underpass infrastructure improvements
- Cultural and public facilities
- Parks and recreational facilities
- Economic development
- Affordable housing
- TIRZ creation and management
- City administration
- Financing costs

Total Estimated Project Costs

The total of estimated cost for the eligible projects listed in the Final Plan is \$128,908,488.

sustainability



Sustainability is often defined by the conditions that ensure the long-term social, economic, and environmental health of a community. The intent of this section is to focus on environmental sustainability, and its impact on the quality of life for area residents and future generations. There are environmental consequences to the way cities are built and the systems created to move people, produce goods, dispose of waste, etc. Without considering these impacts, outcomes may be strongly directed towards other goals, such as efficiency, cost saving or economic growth, yet compromise the natural environment and public health. According to the 2011 U.S.



Geological Survey data, 40% of the study area is developed with high intensity, a land cover classification that typically includes apartment complexes or commercial and industrial land uses – development types that inhibit plant and wildlife to flourish due to parking lots, built structures, and other impervious surfaces. In order to balance the natural and urban systems, we must ensure that growth, development and industry are conducted through sustainable practices and that community members are engaged and can advocate for creating a healthy environment.

environmental impacts

Pollution and the detrimental effects of industrial uses were often cited as major concerns.

Environmental Impacts

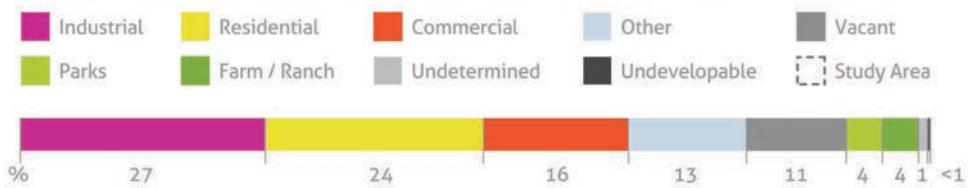
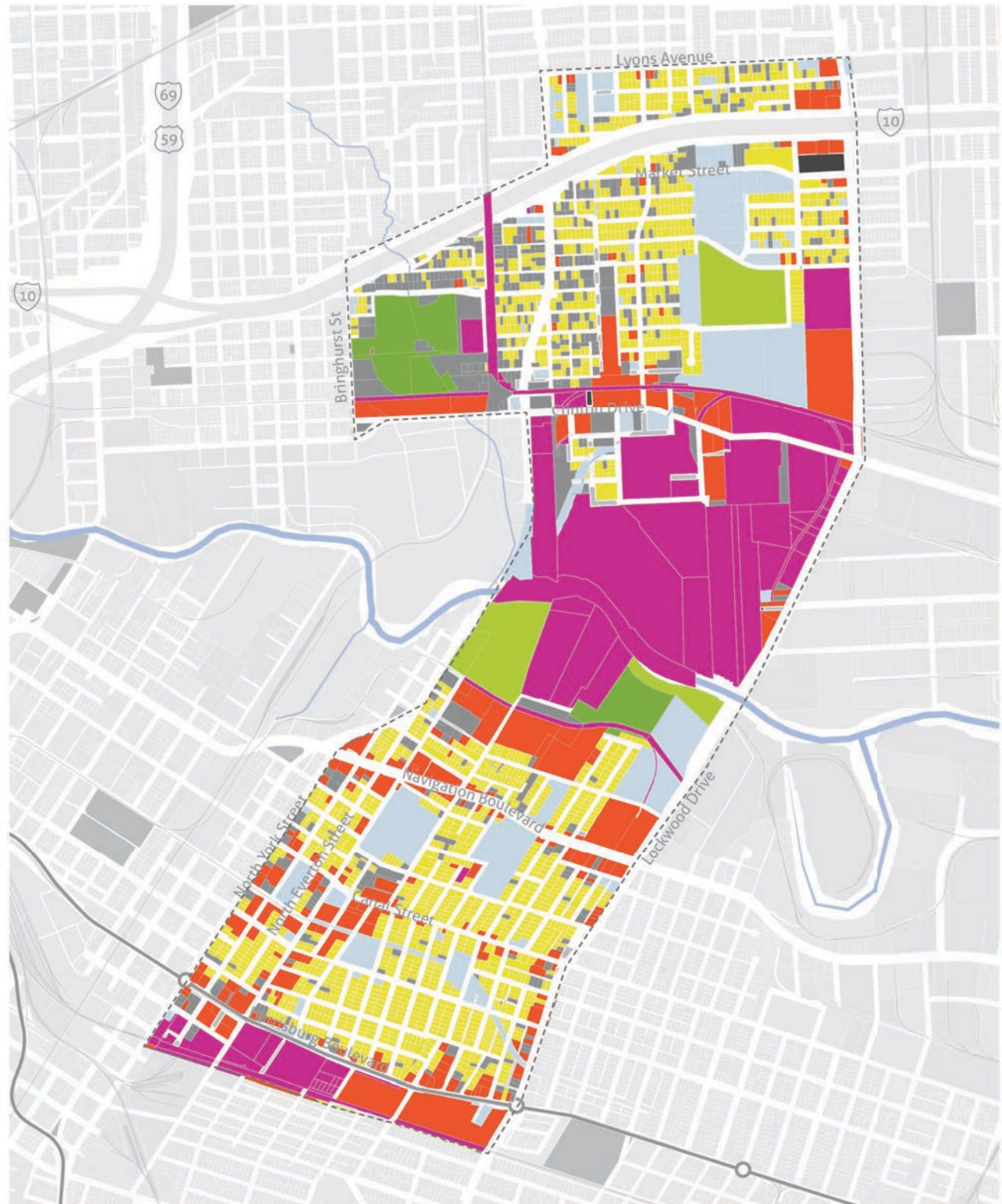
There are several sources of pollution within the study area, including automobile traffic on IH-10, vehicle idling at congestion points, truck traffic through neighborhood streets, heavy industrial uses, and illegal dumping. According to a Port Community Survey conducted by the Healthy Port Communities Coalition, major area pollution in five communities including Fifth Ward (others being Pasadena, Denver Harbor and Manchester) are caused by industry sources, truck and rail traffic. Twenty seven percent of adult survey respondents indicated they had been diagnosed with asthma or other respiratory diseases, which can be exacerbated by diesel rail operations, where exhaust may also be linked several types of cancer. In conversations with community members during the Livable Centers public meetings, pollution and the detrimental effects of industrial uses were often cited as major concerns – the direct effects of existing industry in the Fifth Ward, and the indirect effects of having a high volume of large trucks, abandoned warehouses and former industrial sites in the East End.

Alternatively, there are many positive attributes that can be embraced to improve environmental sustainability within the community, such as Buffalo Bayou Partnership's commitment to trails along the bayou, which provides alternatives to automobile transportation for residents; the presence of strong local organizations, urban farms and green jobs programs in the East End and community partners like Ripley House. Last Organic Outpost, Japhet Creek Nature Conservancy and East End Greenbelt are examples of organizations within the community

that foster environmental stewardship through education, outreach and service projects.

The presence of Buffalo Bayou, which flows between the Fifth Ward and East End and into Fifth Ward through Japhet Creek, is an incredible natural resource that has served a great economic purpose in the region, providing boat access to the industries that line its banks. Unfortunately, these industries have presented a number of negative externalities on the environmental quality of the land, water, wildlife habitats, and imposed health concerns for surrounding communities. Many of the industrial uses along the bayou are still thriving, but rising development pressure, a renewed sense of environmental stewardship, and many other factors indicate that the area will transition away from industry and towards land conservation and urban development. The challenge faced is how to manage this transition and ensure a high quality of life for current and future residents.

Land Use / 2010



Source:
Houston-Galveston Area Council

stormwater management



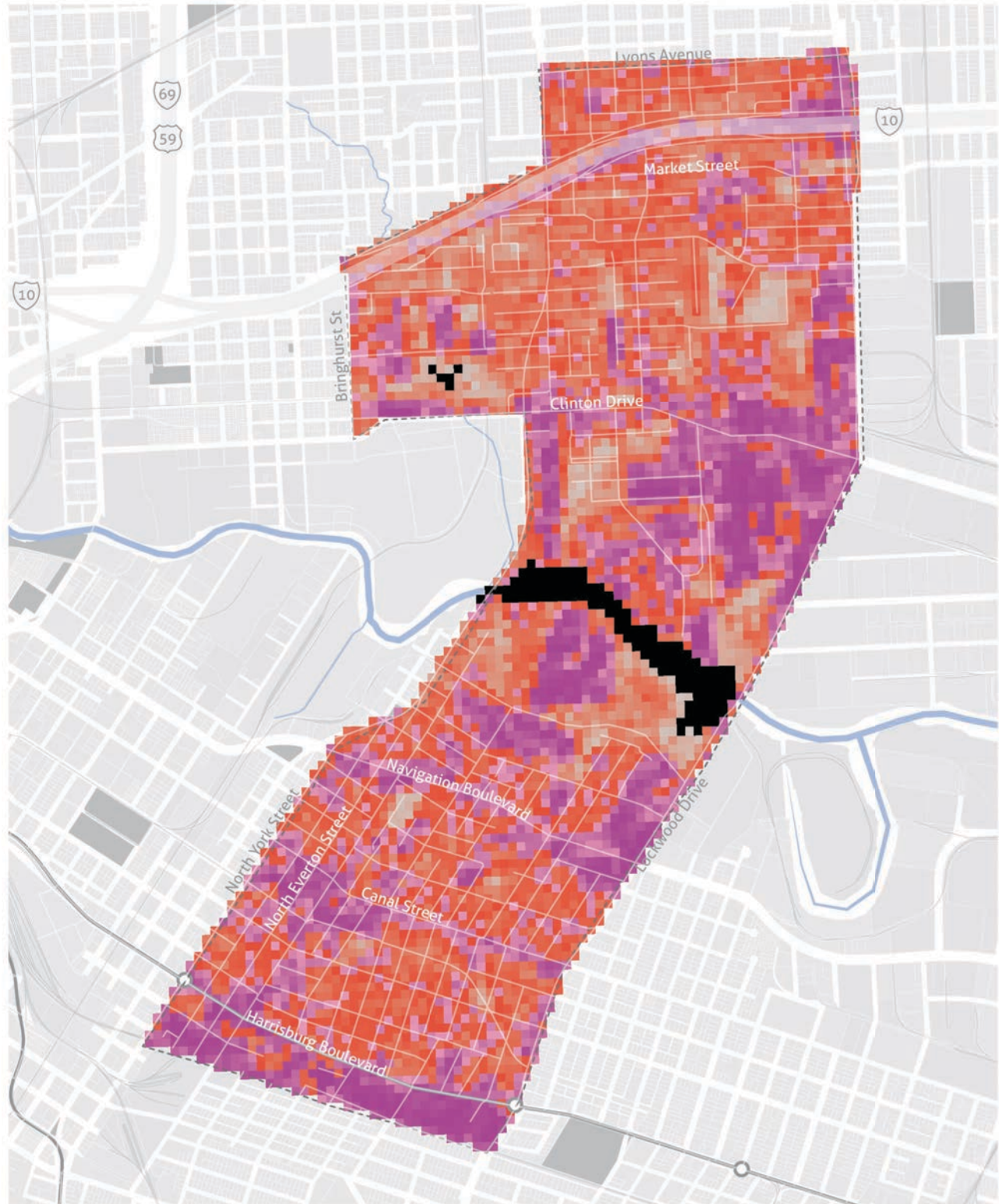
Common storm water management technique used within Houston neighborhoods, to collect water in drainage ditches

Stormwater Management

According to 2011 U.S. Geological Survey data, 42% of the study area is 80% to 100% impervious, which are areas that redirect a high portion of its stormwater runoff into the sewage system. Consequences of this development pattern increases chances of flooding in heavy rainfalls by contributing to an overloading of the sewage system. Additionally, the impervious surfaces redirect water off site that could otherwise be used for plant irrigation, which would help reduce unnecessary potable water usage. Neighborhood drainage ditches provide an opportunity for stormwater infiltration, but have presented other concerns to community members by limited the right-of-way for pedestrian walkways and attracting illegal dumping, which can inhibit water flow and worsen mosquito conditions.

Moving forward with a Livable Centers plan, it is crucial that development patterns are sensitive to environmental conditions and promote healthy natural systems; that residents are encouraged to make healthy choices as a consequence of this built environment that is enhanced by natural beauty; and that the community gains a strong sense of pride and responsibility to sustain these neighborhood assets through service and education.

Percent Developed Imperviousness / 2011



Percent Imperviousness

0%

80%

100%

1/2 mile

Sources: USGS, HGAC

Percent of Total Area

58%

42%

open space



There are several open spaces, parks, trails, and natural landscapes in and around the Study Area that serve community and environmental needs. These public spaces are valuable resources. Parks and open spaces have proven to be tools for community revitalization, social engagement, and economic development. They have the potential to improve the safety of neighborhoods by increasing community use and surveillance of their neighborhoods. These spaces are venues for celebrating life and culture through art and events. Health and quality of life is improved through increased physical activity and exercise. Certain design techniques, such as green



infrastructure, can have rehabilitating effects of the habitats and water quality of natural systems. Finally, these spaces provide an educational opportunity for children who may be introduced to topics of healthy lifestyles, food production, and the natural environment.

This section is intended to identify areas where there is a lack of open space or inaccessibility, missed opportunities for quality spaces for social or environmental benefit, and existing facilities that could be improved through increased investment, programming, maintenance, or added facilities.

access to open spaces

Community members would like improved amenities to include dog parks, connected trails, water features, and outdoor event and performance spaces.

Community input regarding existing open spaces in the Fifth Ward and East End offered similar concerns, including accessibility (discontinuity of existing trails, the lack of sidewalks, trails, and bike lanes); the need for better maintenance, lighting, visibility and surveillance; the need for increased shade, a plan to address the homeless community in public spaces, the prevalence of stray dogs, and the need for bi-lingual information.

In exploring the types of amenities that community members would like to see in parks and open spaces, many common ideas were expressed, such as directional signage to points of interest, dog parks, expansion of the Buffalo Bayou trail, drinking fountains, water features like swimming pools, splashpads, natural swimming areas along the bayou, outdoor gathering, performance and event space.

Park Service Areas

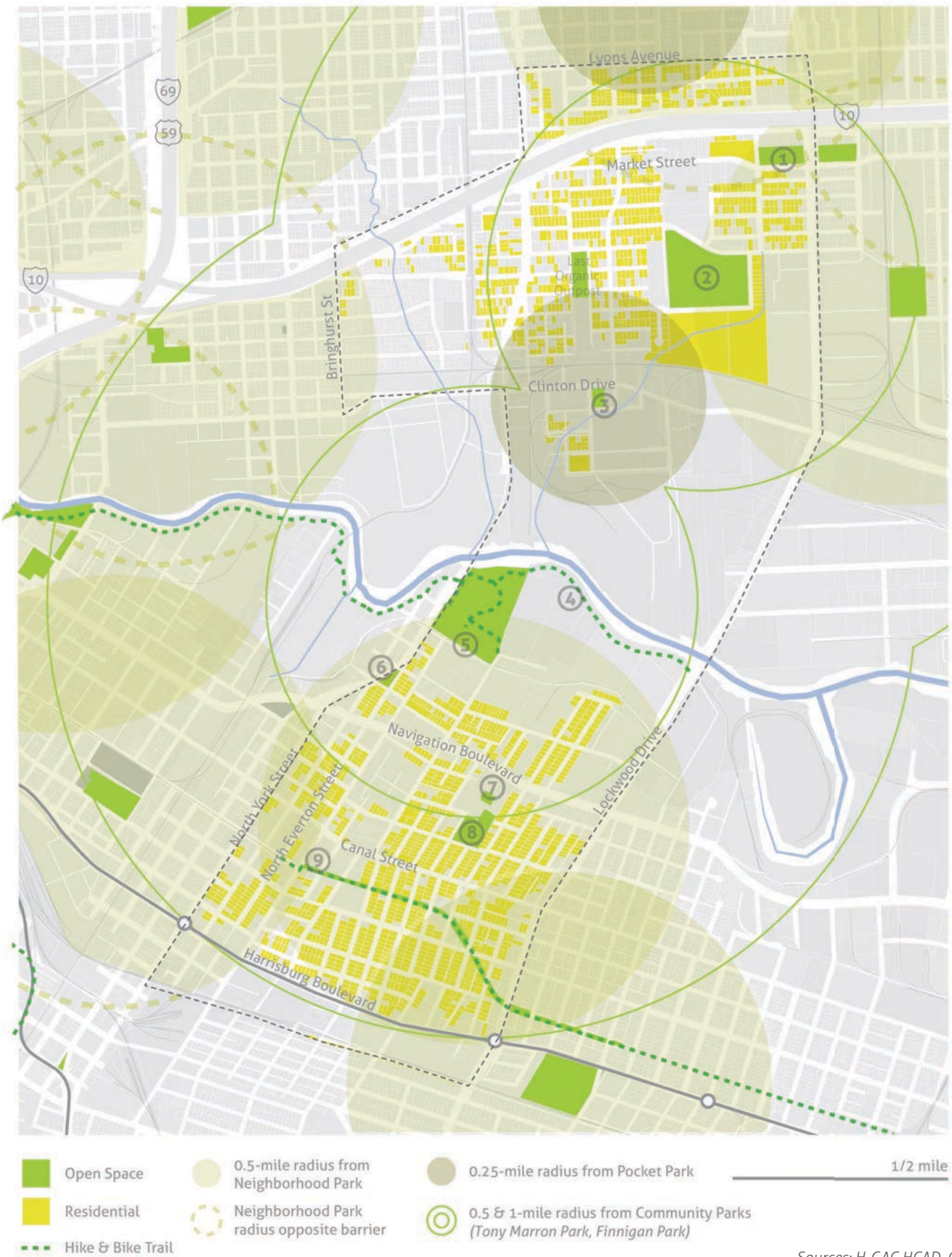
By examining the appropriate service areas of parks based on the classifications of the City of Houston's 2007 Parks and Recreation Master Plan, gaps in the park system are found within the Study Area. A full list of classifications, service areas and typical facilities can be referenced in Appendix I. There are two Community Parks within the Study Area with a 5-mile service area, Finnigan Park in Fifth Ward and Tony Marron Park in East End. Residents in the northwest section of the Study Area have the least accessibility to parks, which can be seen in the map on the opposite page. With the potential redevelopment in this area, the creation of a neighborhood and/or pocket park would serve existing and future residents.

Existing Open Spaces

Open Space number labels correspond to the map on the facing page

#	Open Space	Classification	Size	Facilities / Amenities
FIFTH WARD				
1	Evergreen Negro Cemetery	Other: Cemetery	5 acres	Green space, cemetery
2	Finnigan Park	Community Park <i>5-mile service area</i>	16 acres	Community center, baseball, basketball, tennis, trail, playground, swimming pool, picnic, pavilion, benches / seating, green space
3	Japhet Creek	Pocket Park <i>0.25-mile service area</i>	0.8 acres	Green space
EAST END				
4	Buffalo Bayou Hike & Bike Trail	Linear Park / Greenway		Walking and biking trail, green space
5	Tony Marron Park	Community Park <i>5-mile service area</i>	19 acres	Soccer, spraygrounds, pavilion, playground, trail, green space, picnic, benches / seating
6	Fox Park	Esplanades, Boulevard, Medians	0.3 acres	Green space (unimproved)
7	Ripley House	Plaza or Square	0.4 acres	Green space, picnic, benches / seating
8	Ripley House	Neighborhood Park <i>0.5-mile service area</i>	3 acres	Basketball, baseball, playground
9	Harrisburg & Sunset Hike & Bike Trail	Linear Park / Greenway		Trail, green space, benches / seating

Open Space and Access to Parks



Sources: H-GAC HCAD, COH

analysis of existing spaces



Evergreen Negro Cemetery



Finnigan Park: northside along Sonora Street

Analysis of Existing Spaces

Through an analysis of the strengths, weaknesses, opportunities and threats of existing spaces, a plan can be developed for the expansion and improvement of open spaces, programs and facilities to better serve the community's needs. An overview of the existing open spaces and amenities is shown in the table on the previous page, which are reviewed in greater detail in the following pages.

1 / Evergreen Negro Cemetery,

a Historic Texas Cemetery (established in 1896), is the third oldest African-American Cemetery in Houston located in Fifth Ward on Market Street between Calles Street, Lockwood Drive and Sakowitz Street. The cemetery was co-founded by an emancipated slave-turned businessman, A.K. Kelley. The cemetery is the final resting place of former slaves, World War I veterans, and Buffalo Soldiers, however most of the individuals buried here (estimated over 4,500) are unknown, in unmarked graves. The cemetery suffered from a lack of attention and had been abandoned by the 1950s. In 1960, 490 graves were removed for the construction of Lockwood Drive, which cut the cemetery in two. Several community members indicated at the public meetings that the cemetery needs proper restoration and maintenance. In the past community-led groups have worked together to rehabilitate the cemetery (including the Texas Trailblazers and Project Respect), but sustaining efforts should be put in place to restore this historic asset.

Strengths

- Historic relevance
- Texas Historical Commission

analysis of existing spaces

Weaknesses

- Abandoned and in need of rehabilitation
- Missing records and graves

Opportunities

- Partnerships (Project Respect, Texas Trailblazers)
- Incorporate passive use and education

Threats

- Worsened condition without a maintenance plan

2 / Finnigan Park is a public facility, located adjacent to Wheatley High School, Henderson Elementary School, and a multi-family housing development. The land was donated to the City of Houston by Annette Finnigan in 1940 for a park intended for the African American community. This was during the era of racial segregation, and Emancipation Park was the only other green space in Houston for African Americans. Today the park is a valuable asset with many amenities, including a

community center, playground, tennis courts, swimming pool, indoor gym, weight room, and a 0.65-mile hike-and-bike trail. The community center has been redesigned as a multi-purpose facility, as part of the Finnigan Park Project, which helps serve various educational, recreational, and social needs of the community. The City of Houston Parks and Recreation Department website features a calendar to track the programs that are available throughout the month, including aerobics, yoga, line dancing, weight training, and Zumba.

Strengths

- Provides a variety of amenities
- Located adjacent to schools and multi-family developments

Weaknesses

Lacking adequate tree coverage along trail and in open spaces

- Design lacks spatial hierarchy
- Fences inhibit site permeability (access)

Bibliography

Gray, Lisa, "Grave Importance," *Houston Press*, 2000 Sep 28.

Evergreen Negro Cemetery, findagrave.com.

Houston Parks and Recreation Department, Finnigan Community Center.

Harris County Precinct One, Finnigan Community Center.



Finnigan Park lacks site permeability; a worn path in the grass indicates people are creating a more direct route through the park.

analysis of existing spaces

Opportunities

- Redesign of a portion of the site to improve walkway connections
- Location for B-Cycle Station

Threats

- Real or perceived danger in large open space

Association and the Japhet Creek Nature Conservancy. The community has a vision to expand the park, which would require the City of Houston to purchase additional parcels along Clinton Drive; and develop pathways that connect people from Buffalo Bayou into Fifth Ward.

Japhet Creek was the site for the first Houston Green Fingers project, an initiative intended to improve connectivity, water quality, and strengthen community ties to the environment. The project, called The Dis(solve): Natural Signs, was a collaboration between University of Houston School of Art, Graphic Communications Program, and the Gerald D. Hines College of Architecture. The results were nine installations designed to bring public awareness to Japhet Creek, nature, water, and industry.

Strengths

- Strong community support
- Improved water and wildlife conditions, and awareness

Weaknesses

- Lacks connectivity to Buffalo Bayou
- Waterway partially culverted

Opportunities

- Nature trail from Buffalo Bayou
- Daylight parts of the creek
- Increased amenities at park

Threats

- Development of adjacent properties that inhibit the community's vision for the open space

Bibliography

Japhet Creek, Our History.

Society for Experimental Graphic Design, "(Dis)solve: The Japhet Creek Project".

Buffalo Bayou Partnerships, "Hike and Bike Trails".

3 / Japhet Creek is a tributary that flows north from Buffalo Bayou. Just under one acre of land adjacent to the creek has become part of the City of Houston's Park Program, which will provide public access to the stream, where wildlife and nature can be enjoyed. From the 1920's to the 1950's, the quality of the creek was devastated by dumping of rice hulls from nearby rice mills, animal waste from a nearby slaughterhouse, construction waste and various other sources of illegal dumping. More recently, the creek has received attention from environmentalists, advocates and volunteer service to restore the quality of the stream, plant species, and consequently, the wildlife whose habitat have been rejuvenated. These efforts has been sustained by the Japhet Creek Community



Japhet Creek Park sculpture

analysis of existing spaces

4 / Buffalo Bayou Hike & Bike Trail

The Buffalo Bayou Partnership has made it a top priority to develop contiguous trails on both the north and south banks of Buffalo Bayou, which will result in a 20-mile long hike-and-bike trail system. Several segments have been completed: Sabine to Bagby, Sesquicentennial Park to UH Downtown (North Side Trail), McKee Street to North York. Trail connections within the study area stop at Lockwood Avenue, but are also discontinuous. Many community members have expressed a desire to continue the trail, including areas where the hard surface path terminates forcing cyclists to walk their bikes. Community members also have safety concerns around the lack of lighting and maintenance in some areas.

Strengths

- Public support for trails
- Connection to Downtown

Weaknesses

- Limited surveillance along the trail due to singular uses

Opportunities

- Funding mechanisms for completing trail
- Public easement

Threats

- Land owners not complying with community's vision for redevelopment

5 / Tony Marron Park, a 19-acre site in East End's Second Ward along Buffalo Bayou that was designated in 1987, and revived into a public amenity in 2005 through a public-private partnership with the Park People, a non-profit



Buffalo Bayou Hike & Bike Trail: unfinished, east-facing from edge of Tony Marron Park



Buffalo Bayou Hike & Bike Trail within Tony Marron Park

analysis of existing spaces



View of downtown (top, west-facing) and Tony Marron soccer field (bottom, east-facing) from Buffalo Bayou Hike & Bike Trail below the Hirsch Road overpass



Playground at Tony Marron Park

citizen's organization that advocates for and participates in the preservation and expansion of park, natural areas, and trails in Houston. The park features a trail, sports fields, playground, picnic tables and other user amenities. The landscape design is both beautiful and functional by providing users with shade and fields to play, and addressing storm water runoff.

Adjoining Buffalo Bayou with a connection to downtown, the park is uniquely situated. However, much of the land immediately adjacent to Tony Marron Park and within a half-mile radius are industrial uses, making it difficult for surrounding neighborhoods to access. Furthermore, existing trail connections to the park are challenging, due to the discontinuity of the Buffalo Bayou Hike & Bike Trail and the overpass roadway infrastructure surrounding the site that make navigation difficult.

Strengths

- Access from Buffalo Bayou Trail
- Water frontage
- Attractive and functional design

Weaknesses

- Difficult to access, except by car
- Surrounded by industrial uses

Opportunities

- Potential for water access
- Increased activity with area redevelopment and trail connections
- Location for B-Cycle Bike Share Station

No Threats to Mention

6 / Fox Park is a small triangular green space between a busy corridor (N York St) and a residential neighborhood. There

analysis of existing spaces



Fox Park: triangular green space with potential for incorporating passive use amenities

are mature and young trees on site that provide healthy shade coverage. The site is clean and attractive, but usability is limited and it is ADA inaccessible.

Strengths

- Tree coverage
- Proximity to neighborhood
- Clean

Weaknesses

- Lacks ADA accessibility
- Lacks lighting or user amenities
- High speed traffic on Hirsch will require significant fencing for safety.

Opportunities

- Addition of pervious ADA accessible trail and passive use amenities (benches, lighting, etc.)
- Made dog friendly with compostable waste bag dispenser and trash receptacle

No Threats to Mention

7 & 8 / Ripley House is home to Neighborhood Centers Inc. and Ripley House Charter School and is aimed at strengthening underserved

neighborhoods to raise the quality of life for residents. NCI and the charter school are important community assets, and the passive and active open spaces on site offer an added amenity to area residents. The site's open spaces consist of a central plaza, where large oaks trees shade a picnic area, perfect for community gatherings. The recreational facilities on site (covered basketball court, baseball field, and playground) are used during school hours and are publicly accessible in off hours.

Strengths

- Neighborhood Centers and Ripley House Charter School partnerships
- Well maintained spaces

Weaknesses

- Lacking bike racks oriented towards park and plaza users

Opportunities

- Coordinate increased community use through organized sports games, exercise gatherings and courtyard events

No Threats to Mention

analysis of existing spaces



Harrisburg and Sunset Hike & Bike Trail west end entrance at Commerce Street

9 / Harrisburg-Sunset Hike & Bike Trail is a rails-to-trails project, converting a former railroad line into a 10-foot wide asphalt trail for pedestrians and bicyclists. The trail is 5 miles long, including 0.5 miles that crosses the width of the Study Area through East End. The trail provides access to downtown, and future connections to South 70th Street would connect it to Brays Bayou, and consequently, a number of destinations in southeast Houston.

The trail is easy to access and feels safe to use for many reasons: it crosses through an active residential neighborhood; the intersections have low-speed traffic with trail-oriented street signage, lighting, benches, and tree coverage create a comfortable environment.

Additional amenities may be incorporated along the trail and in adjacent parcels to increase the visibility of the community to passers-by and create added usefulness of the route.

Strengths

- Accessible by surrounding neighborhood
- Clear trail-oriented street signage
- User amenities: lighting, benches,

trash receptacles, tree coverage

- Connection to Brays Bayou from Magnolia Park Transit Station

Weaknesses

- Fenced off sites adjacent the trail

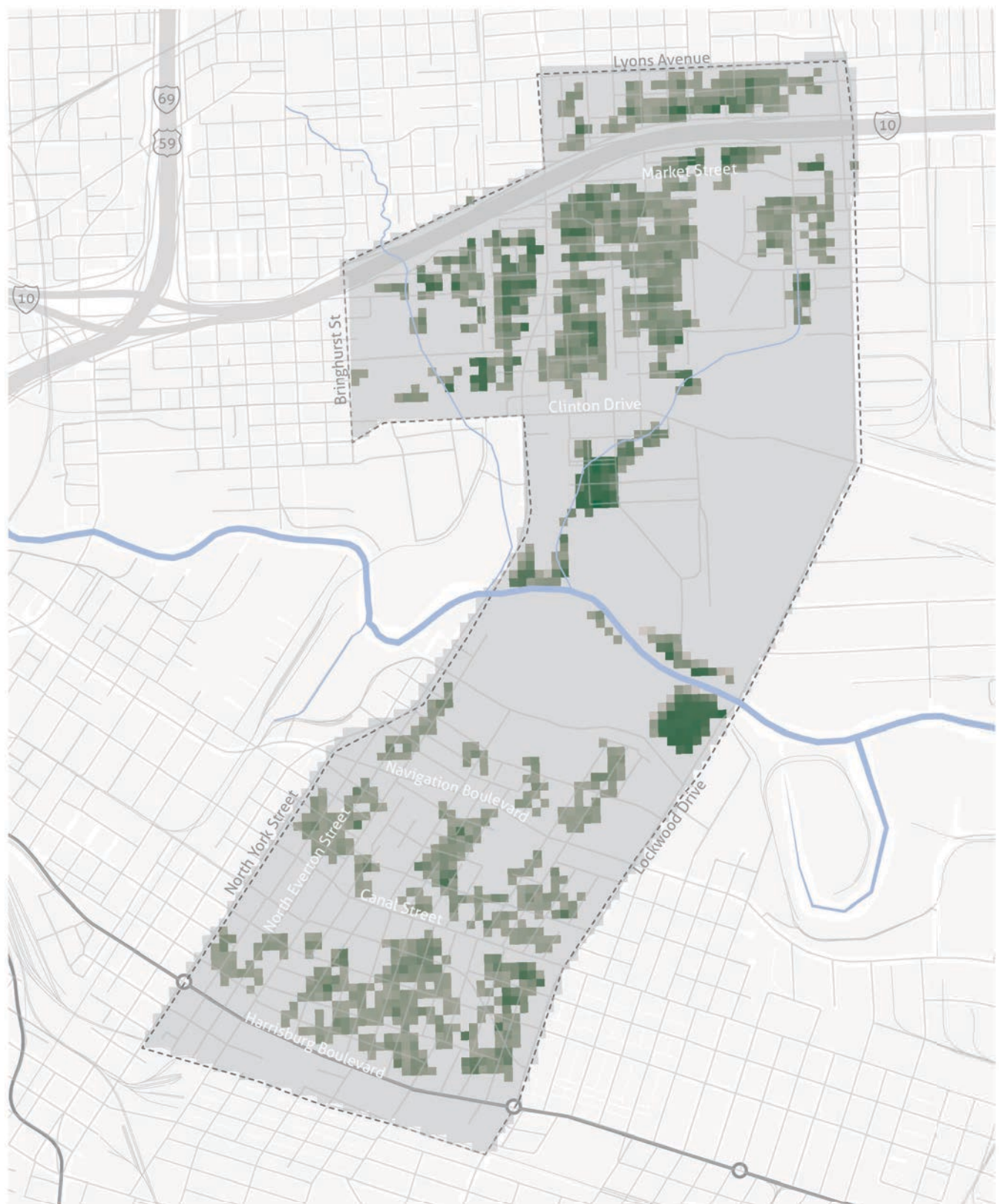
Opportunities

- Wayfinding signage to points of interest and other trail connections
- Adjacent plaza or playground at the corner of Super and Sherman Street
- Future B-Cycle Bike Share Station (Drennan and Commerce Street)

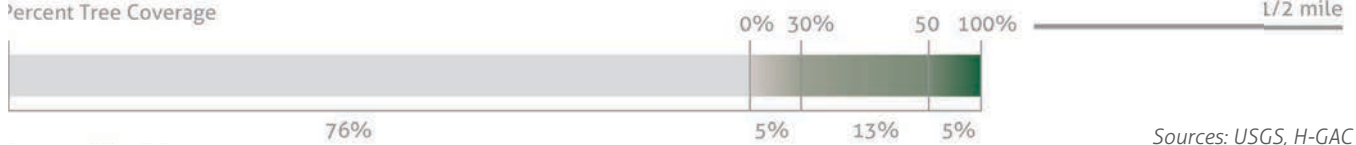
No threats to mention

In addition to these designated spaces, the general quality of outdoor spaces should be improved to be more comfortable and inviting. Many community members have indicated that a lack of shade trees is an issue that should be addressed. According to 2001 U.S. Geological Survey data, 76% of the study area lacks tree coverage. By improving existing parks and identifying opportunities for new open spaces within the study area, residents can be encouraged to spend time outdoors for exercise, play, and social gatherings.

Tree Canopy / 2001



Percent Tree Coverage



Sources: USGS, H-GAC

bayou visioning

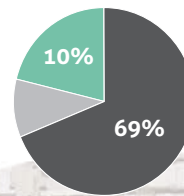
Buffalo Bayou

The project team hosted a information table at the Sunday Streets HTX event in December 2014, where visitors had the opportunity to vote on how the area surrounding the bayou would develop, and what types of open space access they'd like to see at this unique amenity.

The parcels surrounding Buffalo Bayou, as shown in the aerial image below, is currently 69% industrial land use and 10% parks. Considering the anticipated redevelopment of this area, we asked people to indicate what balance of natural area and urban development they'd like to see. A majority of voters (59%) preferred somewhere between 70 / 30% (Natural to Urban) and 50 / 50.

This area around Buffalo Bayou, within the study area, is currently made up of:

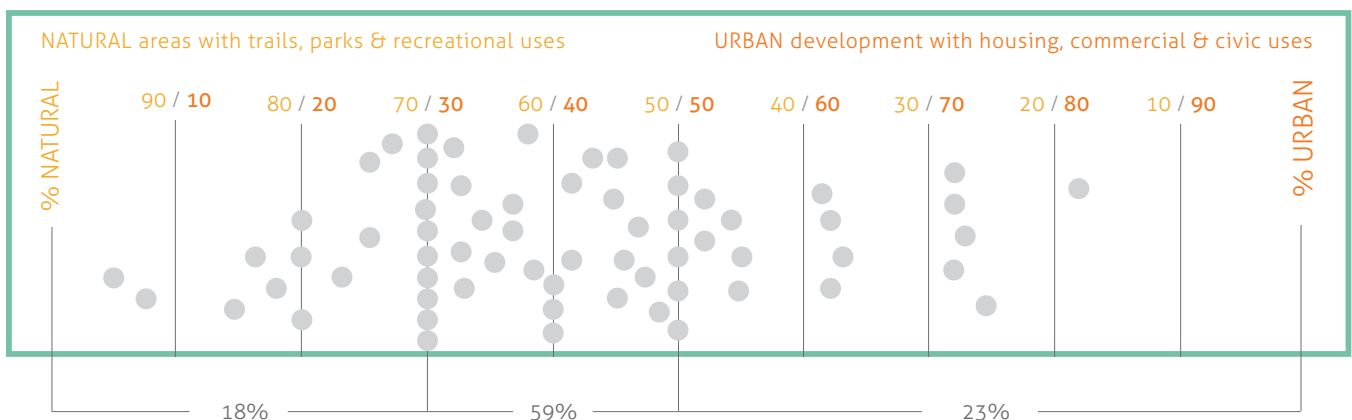
69% INDUSTRIAL
10% PARKS



4% Vacant
4% Farm/Ranch (not in use)
3.5% Commercial
1.3% Residential
7.7% Other / Undetermined
source: H-GAC (Land Use, 2010)

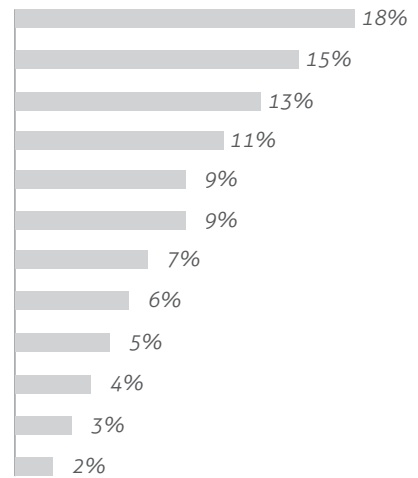
The second part of this input was to learn what type of design and programming people would like to see along the bayou. Each participant was given two votes, with the top three being a hike & bike trail, waterfront park & plaza, and mixed-use development. The preferences are listed on the facing page with the voting results.

Sixty-six Sunday Streets HTX participants voted on the chart below to indicate the appropriate balance of natural area and urban development around Buffalo Bayou within the study area



Preferred Design and/or Programming along Buffalo Bayou:

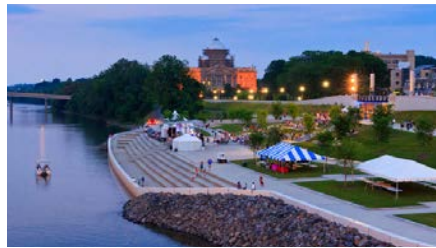
1. Hike & Bike Trail
2. Waterfront Park & Plaza
3. Mixed-use Development
4. Boat Launch
5. Promenade with Adjacent Development
6. Floating Pool
7. Passive Park Space
8. Event Space
9. Mid-rise Residential with Public Access
10. Wading Pool
11. Water Play Area
12. Floating Deck



1 / hike & bike trail



2 / waterfront park & plaza



3 / mixed-use development



4 / boat launch



5 / promenade with adjacent development



6 / floating pool



7 / passive park space



8 / event space



9 / mid-rise residential with public access



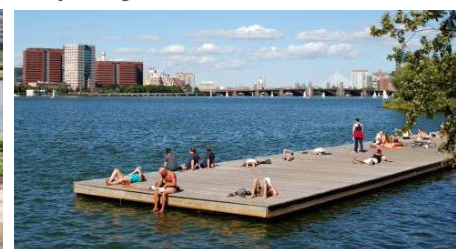
10 / wading pool



11 / water play area



12 / floating deck



recommendations



*"I love my community
because..."*

*...of the rich Latino
history & culture.
#2ndWard"*

Building upon the foundation of facts and figures, field observation and community input, the project team, in collaboration with the project stakeholders, developed a framework of recommendations to help achieve the communities' visions for the future. Each recommendation is grouped into one of six categories, each of which is an action verb. This is intended as a reminder to the community to actively pursue their vision in order to establish meaningful and sustained change in the community.






The recommendations are further grouped into policies, projects and programs, which is intended to create a robust strategy for action. Each recommendation is also tied to one or more of the six Livability Principals of the Federal Partnership for Sustainable Communities in order to promote opportunities for federal funding and to one or more of the project goals.

The recommendations have been organized into six action-oriented categories: house, eat, create, play, connect, and build. Together these address the six subject areas that were explored through the existing conditions analysis. Each recommendation within these categories will indicate the Type: Project, Program, and/or Policy,

RECOMMENDATION CATEGORY SUBJECT AREAS

1 HOUSE	     
2 EAT	     
3 CREATE	     
4 PLAY	     
5 CONNECT	     
6 BUILD	     

TYPE

-  **Project** / something physical or built, like a roadway, sidewalk, or garden
-  **Program** / one-time events or ongoing initiatives, often organized by an entity to help fulfill a goal or mission
-  **Policy** / establishing legal norms, rewriting rules to change or establish standards

Each recommendation will indicate how it fulfills the six Livability Principles used to guide the Federal Partnership for Sustainable Communities, and the project goals established at the beginning of this Livable Centers study.

LIVABILITY PRINCIPLES

- ① Provide more transportation choices.
- ② Promote equitable, affordable housing.
- ③ Enhance economic competitiveness.
- ④ Support existing communities.
- ⑤ Coordinate and leverage federal policies and investment.
- ⑥ Value communities and neighborhoods.

PROJECT GOALS

- engage** ① Partner with each other to create an implementable plan.
Take an active role in shaping our communities.
Participate in community events and activities.
- invest** ② Build new infrastructure with public funds and grants.
Attract housing, jobs, and retail through private investment.
Enhance community capacity to implement a larger shared vision.
- bridge** ③ Link across infrastructure and other physical barriers.
Transform Buffalo Bayou into a shared signature open space.
Foster communication and shared goals among communities.
- represent** ④ Celebrate the local cultures, identities, histories and happenings.
Change negative perceptions and highlight strengths.
Tell the stories of the people of the Fifth Ward and East End.
- balance** ⑤ Ensure affordable housing is a part of new growth.
Diversify uses and transportation choices.
Integrate natural and urban systems.
Encourage health and wellness.

1 HOUSE



Subject Areas

Housing in the study area is likely to increase in demand and value due to its proximity to downtown and access to new and foreseeable amenities, such as the METRORail East Line, Harrisburg-Sunset Hike & Bike Trail, and Buffalo Bayou Hike & Bike Trail. The HOUSE recommendations seek to create a housing strategy that ensures that as residential redevelopment occurs, neighborhoods include a variety of housing types; that housing remains affordable; and the character of the neighborhood is preserved while also providing denser housing options to increase the community's spending power.

Pursue Minimum Lot Size & Minimum Building Line designations.



TYPE



LIVABILITY PRINCIPLES



PROJECT GOALS

IMPLEMENTOR

Property Owners

PARTNERS

City of Houston
Fifth Ward CRC
Second Ward Superneighborhood
Association

The existing character of neighborhoods is at risk of being compromised by redevelopment among residential areas, where historic bungalow and shotgun style houses are common, among other detached single family units, typically on 5,000 square foot (50' x 100') lots. New townhouses, apartments and condominiums have been developing rapidly as the area becomes increasingly popular due to its proximity to downtown, and other amenities found in surrounding neighborhoods.

These redevelopment patterns are common in neighborhoods of Houston within the IH-610 loop, as increased density often makes sense. However, an Amendment to Chapter 42 of the Code of Ordinances (Section 42-197), related to developments, subdivisions and platting allows neighborhoods to prevent intensification by establishing a deed restriction in targeted areas.

The City Code of Ordinances authorizes the establishment of a Minimum Lot Size (MLS) and Minimum Building Line (MBL) designation within existing residential neighborhoods, allowing property owners to petition the City to protect the character of their neighborhood.



Houston example, new development changing neighborhood character / Source: Google Earth

These ordinances are self imposed, meaning, residents within an area must petition to have the minimums imposed. Generally, a special minimum lot size is the minimum lot size standard currently met by at least 70% of the application area (Section 42-197 of Chapter 42). Applications from the City designated Historic Districts use the slightly lower threshold of 60%. By establishing this standard, lots cannot be subdivided below the "special minimum" lot size in the designated area. Similar to the lot size, a minimum building line or setback, is the minimum building line currently met by at least 70% of the structures in the application area (Section 42-170 of Chapter 42).

It is recommended that the Implementation Task Force (established as a result of the Livable Centers planning process), other stakeholders and community organizations, and the City of Houston should cooperate to facilitate the discussion and implementation of these ordinances, whenever and wherever possible. Planning efforts in the study area are already underway, which include map generation, meetings with City officials, and block walking.

Example of block parcels with building footprints



Potential redevelopment with lot size & building line restrictions, maintaining neighborhood character



Potential redevelopment without deed restriction



Redevelopment Options / Preservation of Neighborhood Character



*Single-Family Housing
50' x 100' lots*

*"Patio Home"
Contemporary Sidehall
Camelback Shotgun
Double Shotgun*

Strengthen programs directed towards the rehabilitation of single-family homes.



TYPE



LIVABILITY PRINCIPLES



PROJECT GOALS

IMPLEMENTOR

Fifth Ward CRC

PARTNERS

*Property owners
Habitat for Humanity
City of Houston*

Fifty percent of the existing housing stock both in Fifth Ward and East End (within the study area boundary) is in fair condition and should be prioritized for rehabilitation. Homes in fair condition are structurally sound, may need foundation leveling, new roofing, cladding refurbishment, paint, and other minor repairs. Twenty-three percent of housing stock in the study area is in poor condition, which are not structurally sound with chronic lack of maintenance, and are often beyond rehabilitation. In these cases, demolition and reconstruction may be necessary.

It is recommended that the Fifth Ward CRC, in conjunction with its stakeholder task force members pursue Federal funding for home rehabilitation through the HOME Investment Partnership Program which helps fund the purchase, construction, or rehabilitation of affordable housing (rent or ownership), provided for people that earn at most 80% of area median income. Many families in the study area would be eligible for such funding as 38% are below the poverty level. Funding is provided to state and local governments which may be pursued through a partnership with local non-profits.

Extend the TIRZ boundary to increase its ability to provide a diversity of affordable housing options.



TYPE



LIVABILITY PRINCIPLES



PROJECT GOALS

IMPLEMENTOR

Fifth Ward CRC
Greater East End MD

PARTNERS

City of Houston
Developers

Currently, areas of the Fifth Ward and East End are among the most affordable communities inside Houston's Loop 610. Rents in the area are below regional averages, as are lot and home prices.

Houston's economy continues to be among the fastest growing in the nation. This growth fuels a consistent demand for housing, and increases the attractiveness of properties inside the Loop like those in the Fifth Ward and East End. Areas that have experienced a decrease in owner-occupied housing units or having greater vacancies are more susceptible to multi-family redevelopment. These new housing developments are important for providing the diversity of housing options that are needed in the area, for a diversity of incomes, family structures, and lifestyle preferences.

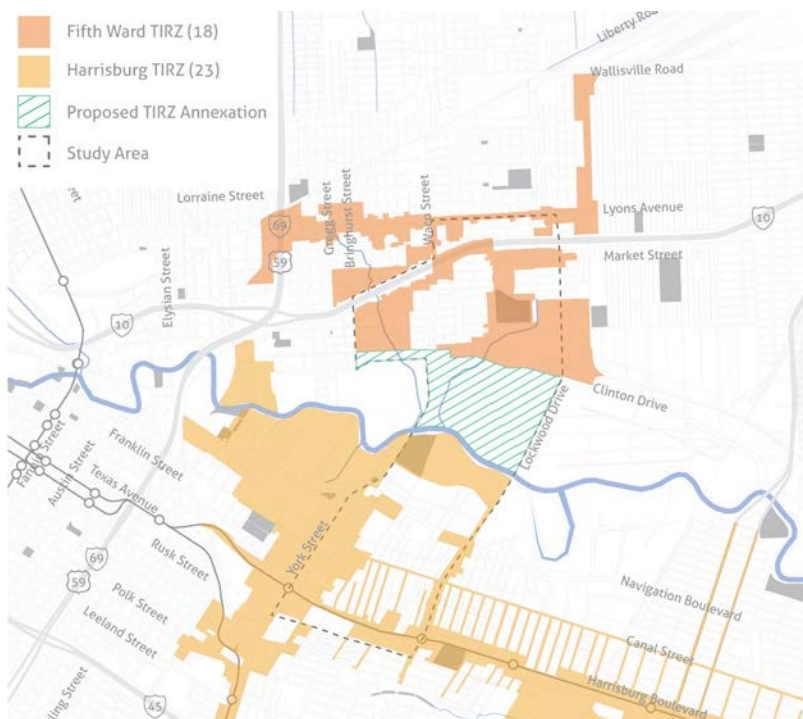
New homes will almost certainly be more expensive than existing homes, and leases associated with rental properties will almost certainly increase as well. As this happens, it will make it more difficult for fixed, low, and moderate income residents to remain in the community.

The Fifth Ward CRC, and other stakeholders (i.e., Habitat for Humanity) currently work to identify, purchase, and provide affordable housing within the study area. This program is funded via TIRZ and grant dollars and will become more difficult to administer as real estate prices increase.

It is recommended that the Fifth Ward TIRZ and CRC and the Greater East End Management District and Harrisburg TIRZ negotiate an extension the boundary of the TIRZ boundaries to incorporate the land currently not covered by a TIRZ. The current boundaries of the Fifth Ward TIRZ only extends as far south as Clinton Drive. The Harrisburg TIRZ boundaries end on the south side of Buffalo Bayou. The industrial area of the study area between Clinton Drive and Buffalo Bayou is not within a TIRZ. As this area redevelops, the properties within will have an impact on surrounding residential neighborhoods.

The ability to finance affordable housing and infrastructure would be greatly enhanced if this area were annexed. Further, it would provide an opportunity to discuss the nature of future development, and its relationship with adjacent communities. These discussions may include affordable housing and other quality of life and investment goals.

Proposed TIRZ annexation 1 mile



Redevelopment Options / Diversification of Housing Stock



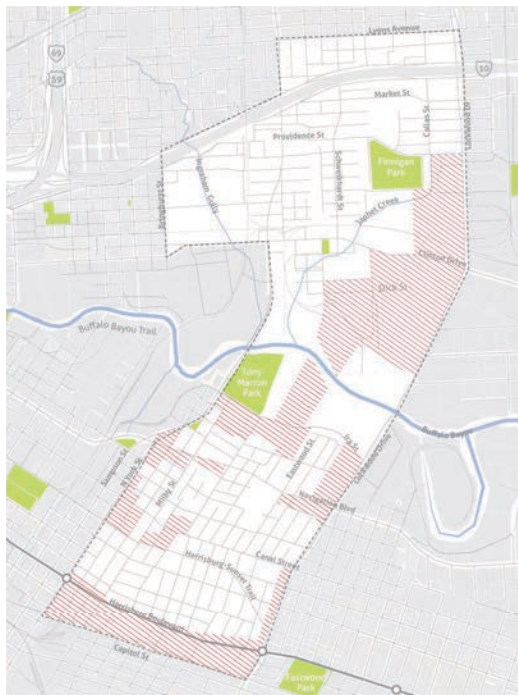
Multi-Family Housing
150' x 200' lots

Garden Court Homes
Rowhouses
Live/Work Units
Small Apartments/Quadruplexes
Zero-Lot Line Homes



Larger Redevelopment Projects
500' x 200' lots

Large Apartments
Vertical Mixed Use Buildings



Potential Redevelopment Areas
for multi-family housing and
larger redevelopment projects

Potential Development Areas
to diversify the housing stock
Study Area
Parks
METRORail East Line

Establish Community Land Trusts to preserve long-term housing affordability and environmental stewardship.



TYPE

① ② ③ ④ ⑤ ⑥

LIVABILITY PRINCIPLES

① ② ③ ④ ⑤

PROJECT GOALS

IMPLEMENTOR

Japhet Creek Community
Fifth Ward CRC

PARTNERS

City of Houston

Community Land Trusts (CLTs) are non-profit organizations—governed by a board of CLT residents, community and public representatives—that provide community assets and permanently affordable housing opportunities for families and communities. CLTs acquire and hold land and property long-term in order to create permanently affordable housing for homeowners and renters.

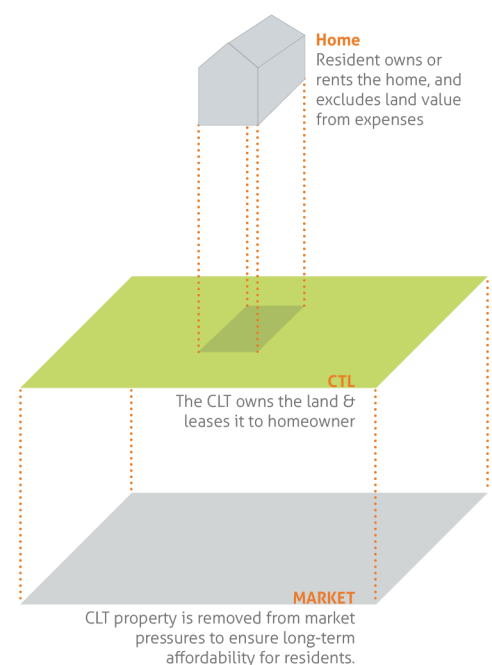
In January 2012, Texas Senate Bill 402 enabled 501(c)(3) non-profit organizations to be designated as CLTs by local ordinance if they were created to acquire and hold land for the benefit of preserving long-term affordable housing. Though CLTs are not required to have this designation to form as a non-profit or acquire land, the designation allows CLTs to remain tax exempt. CLTs must obtain a yearly audit in order to take advantage of this taxation benefit.

Japhet Creek Community already serves some of the functions of a community land trust; Jim Ohmart and Eileen Hatcher own and rent out homes near Japhet Creek at an affordable rate, and their long-term goal is stability rather than profit. Japhet Creek Community is a strong candidate to establish a CLT by recruiting a Board of Directors and securing 501(c)(3) nonprofit status. This CLT could help fulfill the organization's vision for the neighborhood, including preservation of the affordability and environmental integrity of the area. The Community's long-term vision for the neighborhood would involve a cooperative-like environmentally sensitive housing arranged around shared common spaces, such as laundry facilities, workshops,

dining areas, gardens, etc. The proposed nonprofit organization's mission might include preserving housing affordability, environmental stewardship, and the preservation of open spaces and gardens for community use.

Additionally, the CLT model can also provide for the goals of the Fifth Ward CRC and it is recommended that additional research be conducted to identify opportunities for a Fifth Ward CLT. Some options for additional initial projects from Japhet Creek Community or a Fifth Ward CLT could be:

- **Create traditional shared-equity, single-family homeownership using the standard Texas CLT ground lease.** The CLT would purchase vacant lots or homes in the neighborhood at an affordable price, and secure additional





Japhet Creek Community

Photos courtesy Michael Paulsen, Houston Chronicle

subsidy through the HOME program. The goal would be to sell each home to a new homeowner who earns 80% or less of Area Median Income and keep it affordable long-term; each homeowner under this model agrees when purchasing the home to resell it at an affordable price (determined by a formula) to the next buyer. Single-family areas that are likely to rise in value over the next five years (areas adjacent to important commercial corridors or recreational assets) are particularly suited for this type of affordability preservation.

- **Develop multi-family mixed-income, mixed-use properties along commercial corridors and on Bayou-fronting sites.** A CLT can play an important role in acquiring land in key areas early, before values rise, and working with partners to redevelop these sites, enabling “built-in” perpetual rental affordability as the neighborhood grows. The CLT can also help “set the tone” for redevelopment in the area by defining the scale of building the community prefers – townhomes, small-scale multi-family development, or larger-scale development – and by including or not including ground-floor commercial in multi-family developments.
- **Create green spaces and water management projects.** CLTs are distinct from typical “land trusts” in that they are typically oriented toward developing properties, while land trusts often focus on preserving green space exclusively. However, CLTs can also preserve green space, develop recreational space, facilitate water management projects, and preserve habitat by purchasing land and holding it long-term while facilitating the flow of needed funds for landscape management.

2 EAT



Subject Areas

Access to food is a major health concern, and easily the most desired amenity in the study area. Many community members have taken matters into their own hands, and are growing food, which should be encouraged as an asset and, until the community's spending power can support a full-service grocery store, a necessity. The EAT recommendations seek to increase access to healthy foods by exploring immediate and long-term grocery store models, supporting food production within the study area, and ensuring affordable access to fresh, local produce.

Provide access to healthy food in the study area with short- and long-term grocery store models.

TYPE

LIVABILITY PRINCIPLES

1

2

3

4

5

6

PROJECT GOALS

1

2

3

4

5

IMPLEMENTOR

Greater East End MD

PARTNERS

Can Do Houston
Fifth Ward CRC
Private, Non-profit, or
Cooperative Grocery Store
Investors

Long Term Strategies

There are several large sites to the north and south of Buffalo Bayou, within the study area, where a new supermarket could potentially be located, which would benefit both the Fifth Ward and the East End communities. A smaller, local supermarket requires 70,000 SF site, about the size of a single block, while larger supermarkets may require up to 300,000 SF. It is recommended that the Implementation Task Force begin to identify potential sites along Lockwood Drive and Hirsch Road near Buffalo Bayou as they become available.

The area has a strong network of roads and transit options, and available affordable land, but current market conditions are not sufficient to support a new grocery store. Contributing factors include the area’s low population density, and consequently its low purchasing power, and the proximity to other grocery options in adjacent communities, which affects the market conditions. However, these impediments are beginning to show signs of easing. New housing developments promise new residents, and the sale of large commercial and industrial tracts holds

the promise of substantial growth in the near future.

It is important to understand the gap between the existing market strength and the amount of additional development needed to sustain a full service grocery store. A neighborhood’s ability to attract and support a supermarket depends on the overall population, the purchasing power of that population, and the distance to existing stores. A “leakage analysis” is a type of economic study that identifies how much money residents of the neighborhood spend at stores outside the neighborhood, and therefore indicates whether there is enough market demand to support a new store.

Greater East End Management has conducted a leakage analysis, and it is recommended that the Implementation Task Force work independently or with a potential investor to review the findings and explore future scenarios based on expected infill and new development along the Bayou.

Once those conditions have been defined, the Task Force can assess the extent to which their combined tools can mitigate those concerns. The task force

Potential Options
Based on the Outcome
of a Market Study
(annual community
spending)

Source: Searching for Markets,
Community Development
Financial Institutions Fund /
The Reinvestment Fund / 2012

< 6 \$million	\$6 to 12 million	\$12 to 24 million	> \$24 million
The market cannot support a new store. Work with existing stores on product availability	The market can potentially support a small new store, or the expansion of existing stores.	The market can potentially support a full-service supermarket.	The market can potentially support multiple full-service supermarkets.

should consider traditional grocery store models, as well as alternative models, such as a non-profit or cooperative store, and explore funding sources and economic development tools available through the City, County, State, and Federal Governments.

It is recommended that a market study be conducted by a food distributor in order to identify the scale of the gap.

Build capacity of existing cornerstores to provide fresh produce through a Healthy Cornerstore program.



Explore alternative grocery store models, including cooperatives and non-profits.



Provide education and resources to encourage shoppers buy healthier food.



Short Term Strategies

While a large new grocery store may be a necessary long-term solution, there are a dozen smaller convenience stores scattered across the study area. These stores generally stock snacks and processed foods with little or no fresh produce due to a lack of capacity and demand. In the near future, helping these stores develop the capacity to stock fresh produce is the best way to provide access to healthy food.

There are numerous examples of successful programs in Detroit, New York, Baltimore, and many other cities that have helped small neighborhood stores stock fresh produce. Can Do Houston, a local non-profit organization, is currently running a Healthy Cornerstore Pilot Program in Sunnyside / Southeast Houston and will soon expand into the Fifth Ward.

It is recommended that the stakeholders support this initiative wherever possible, especially by providing streetscape and mobility improvements adjacent to stores in the pilot program to increase connectivity and accessibility.

Helping these smaller neighborhood stores to thrive will also create better neighborhoods in the long term. A network of smaller neighborhood stores is inherently more supportive of walking, biking, and transit than a single larger store. It is recommended that the Fifth Ward CRC and Greater East End Management District consider the potential economic effects on these existing local stores when seeking to develop a new full-service supermarket.

Explore opportunities for major food production – to grow, process, and sell food within the study area.



TYPE

① ② ③ ④ ⑤ ⑥

LIVABILITY PRINCIPLES

① ② ③ ④ ⑤

PROJECT GOALS

IMPLEMENTOR

Greater East End
Management District
Fifth Ward CRC
City of Houston

PARTNERS

Can Do Houston
Cane River Garden
Farmer Street Garden
Finca Tres Robles
Last Organic Outpost
East End Farmers Market
Urban Harvest

The study area contains significant potential for a large scale urban agriculture network. In addition to increasing access to healthy food through outside investment in brick-and-mortar stores, locally grown food provides an affordable and sustainable way to improve access to fresh food. The presence of agriculture also provides opportunities for education and building community. In order to provide locally grown food at scale, there are three key intervention areas: food production, farmers markets, and affordability.

Food Production

There is a major urban farming initiative within the study area, which can be seen at Last Organic Outpost, and several smaller farms and gardens in the adjacent areas: Cane River Garden, Farmer Street Garden, and Finca Tres Robles. It is recommended that the Fifth Ward CRC, Buffalo Bayou Partnership and East End Management District work with these organizations to promote greater production of food in the area whenever possible.

There are over 750 vacant lots in the study area – over 100 acres of vacant land that covers just over 10% of the study area. Scattered site urban farming at various scales on public or CRC-owned vacant land through a waiver or license program can help turn these vacant lots into permanent or temporary farms and gardens. While pollution and soil quality is problematic in this area, small and temporary initiatives can use raised beds, planters, and other easy-to-implement techniques that mitigate pollution. For larger food production

initiatives, resources and funding for soil testing and mitigation will be crucial.

It is recommended that the Fifth Ward CRC work with the City of Houston to establish a vacant lot program to facilitate scattered site urban farming, in which Last Organic Outpost could serve as a valuable partner for education and outreach.

Farmers Markets

The East End Street Market at Navigation Esplanade is a newly established weekly market which is now operational and serving as an outlet to Last Organic Outpost and Finca Tres Robles, two urban gardens in and near the study area. There is an interest in establishing a market on Lyons Avenue in Fifth Ward. It is recommended that the Greater East End Management District (GEEMD) facilitate partnerships and opportunities for local farms and gardens at the East End Market. This recommendation is already underway, as GEEMD has committed that half of the vendors will be people from East End. In addition, they offer classes through the University of Houston for new entrepreneurs. It is also recommended that the Fifth Ward CRC establish partnerships between these organizations and local convenience stores through Can Do Houston's Healthy Cornerstore program.

A recent study by the Project for Public Spaces, *Farmers Markets as a Strategy to Improve Access to Healthy Food for Low-Income Families*, and Communities, indicates that the two most prevalent reasons why people do not shop at farmers markets are a lack of



***"We're taking
land that
basically wasn't
being used for
anything of value
and turning it
into a fertile land
area."***

***- Joe Nelson Icet,
Last Organic Outpost***

information and the need to complete all of their shopping at one destination.

In order to strengthen existing farmers markets and ensure the success of future markets, it is recommended that all three stakeholders devote resources to raising the profile of local food production and farmers markets. This could include both marketing campaigns as well as creating a permanent plaza, marketplace, or other improvements to enhance the visibility and physical presence of markets, similar to the Navigation Esplanade, which provides a venue for the East End Street Market.

Affordability

It is crucial to ensure that fresh local produce is affordable and accessible to residents of all income levels, whether at farmers' markets or at convenience stores. Over the last decade, there has been a push at the state and federal levels to allow SNAP recipients to spend their dollars at farmers markets. This process is governed by the USDA and can be completed by the market manager or by individual vendors.

According to an interview with Diane Barber, the managing director of the East End Foundation (posted in the Houston Chronicle in April 2015), the East End

Farmers Market is the first in Houston to accept electronic food stamps. Similar efforts should be expanded to continue improving people's access to healthy foods. To further encourage and enable low-income families to shop at local farmers markets, SNAP Incentive Programs have been implemented at over 500 farmers markets nationally. These programs use a combination of USDA grants and private donations to provide a match of up to \$15 for each dollar spent by low-income shoppers at farmers' markets. A double dollar program is especially appropriate in this context because the subsidies benefit both the low-income families who receive them and the local markets and farms where these subsidies are spent.

A new federal funding program, the Food Insecurity Nutrition Incentive Program (FINI), is expected to provide up to \$20 million dollars annually in matching grants to farmers markets for five years.

Greater East End Management District is the first farmers market to accept SNAP payments. It is recommended that the Fifth Ward CRC work with Can Do Houston to establish a SNAP Incentive program for Healthy Corner Stores.

Tim Carma, "Farm bill contains farmers market program that food advocates for poor see as hopeful," January 2014, Available at the Washington Post.

Potential Grant Opportunities:

- Community Food Projects Competitive Grants Program (USDA)
- Farmers Market Promotion Program (USDA)
- Local Foods Promotion Program (USDA)
- Food Insecurity Nutrition Incentive Program (USDA)

Economic Development Tools:

- Chapter 380 Economic Development Grant (Local - COH)
- New Market Tax Credits (Federal Government)
- Community Development Block Grant (Houston Redevelopment Authority)
- Community Economic Development - HFFI Grants (Federal - USHHS)

3 CREATE



Subject Areas

The Fifth and Second Wards neighborhoods have industrious histories and emerging creative energies that can be supported to enhance these assets and mobilize individuals. The CREATE recommendations seek to support existing creative energy found by providing tools that encourage entrepreneurship, and the development of skills that may establish strong industries and job creation, including makerspaces and business incubators.

3.1 Promote adaptive reuse of existing building stock for commercial use.



TYPE

① ② ③ ④ ⑤ ⑥

LIVABILITY PRINCIPLES

① ② ③ ④ ⑤

PROJECT GOALS

IMPLEMENTOR

Greater East End
Management District
Fifth Ward CRC

PARTNERS

City of Houston
Private Sector
Non-profits

Changing demographics and market conditions in the study area have resulted in a shift away from industrial and shipping operations. Many warehouses and industrial buildings are vacant, and this trend will continue as more industrial operations leave the area. While some of these buildings are not fit for rehabilitation, adaptive reuse and preservation can often be much more sustainable and with much lower barriers to investment than new construction. As a result, adaptive reuse projects are often well-suited for startup incubators, artists, creative industries and small businesses that may not be able to afford the rents commanded by new construction. A coordinated effort to identify feasible and culturally significant projects will also help to preserve the area's identity and industrial past.

It is recommended that the Greater East End Management District and the Fifth Ward CRC commission a study to identify potential adaptive reuse projects, and to consider a marketing

campaign and incentive programs to encourage adaptive reuse.

Adaptive Reuse Opportunities & Typologies



500 - 3,000 Teaching space with minimal full-time staff or infrastructure



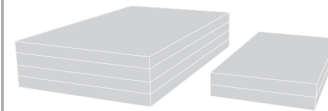
1,000 - 8,000 Volunteer-run space for teaching classes with some tools and space to share



4,000 - 25,000+ Individuals and small businesses pay rent to share space and equipment, allowing outside use at a nominal fee



8,000 - 40,000+ Community workshop that features educational programs and membership access to shared tools, storage and other resources



40,000 - 150,000+

Facility that allows the rental of large spaces for startup businesses (200 to 1,000+ sq ft), with potential features including mentorship, shared tools and resources

Source: Cavalcanti, Gui, "Making Makerspaces: Creating a Business Model, MAKE (June 2013).



3.2 Support existing makerspaces, and create a business incubator to attract and retain talent, and offer vocational and professional training.



TYPE

① ② ③ ④ ⑤ ⑥

LIVABILITY PRINCIPLES

① ② ③ ④ ⑤

PROJECT GOALS

IMPLEMENTOR

*Fifth Ward CRC
Greater East End
Management District*

PARTNERS

*Houston Makerspace
TX/RX
Beyond Careers*

Public meeting participants expressed a desire to build on the community strengths via business incubators designed to link skilled and entrepreneurial community members with mentors, investors, co-ops, grants and small business loans.

One of the great strengths of the study area is the diverse skills of its workforce. The construction, manufacturing, professional services, and education/healthcare sectors employ a substantial percentage of the population. There are currently two makerspaces in the area that provide a variety of classes, equipment, and workspaces for members. These services assist with skills training and prepare people for licensure and certification. Houston Makerspace, in particular, is steadily growing, expanding their services, and may seek to expand space.

These makerspaces, together with job training programs offered by the Fifth Ward CRC and other local organizations, and vocational programs at local schools and community colleges can become the backbone of a robust

economic development strategy that builds on the existing entrepreneurial and creative strengths of the community. These initiatives are complementary, and should be co-housed in existing building stock to maximize creative and operational synergy, reduce cost, and establish a more easily recognizable community asset.

Funding for MakerSpaces can come in a variety of forms. Many small maker initiatives have received seed capital via crowdsourcing sites like Kickstarter and Indiegogo. There are a number of grant opportunities available for larger programs sponsored by major institutions, including: Lego Education Grants, The Toyota Foundation, Motorola Solutions, The Advancing Informal STEM Learning Program (National Science Foundation), and The Minority Science and Engineering Improvement Program (US Department of Education).

It is recommended that the Implementation Task Force work to encourage makerspace initiatives, business incubators, and community marketplaces.

EXISTING NEARBY RESOURCES		Opportunities for Added Resources
Houston Makerspace (21,000 sq ft)	TXRX Labs (30,000 sq ft)	
Wood Shop	Wood Shop	Robotics & Drones Lab
Metal Shop	Metal Fabrication Lab	Young Makers Workshop
Rapid Prototyping Shop	Rapid Fabrication Lab	Kitchen - Food Lab
Print Shop	Electronics Lab	Video Production Studio
Ceramics Shop	Machine Shop	Recording Studio
Jewelry Shop	Bike Maintenance	Gaming Studio
Textiles Shop	Repair Shop	Print Press / Silk Screening
Classroom	Art Lab	Greenhouse
Conference Room	Coworking Space	Paint Booth
Computer Lab	Computer Lab	Drop-in / Appointment Service
Product Photography Studio	Firing & Finishing Booth	Retail Store
Community Garden		Vocational Training

Expand opportunities to sell and purchase goods and services.

TYPE



1 2 3 4 5 6

LIVABILITY PRINCIPLES

1 2 3 4 5

PROJECT GOALS

IMPLEMENTOR

Fifth Ward CRC
Greater East End
Management District

PARTNERS

East End Chamber of
Commerce
Legacy Community Health

Feedback from public meetings revealed a high interest in expanding opportunities to sell and purchase goods and services. There are numerous opportunities to build on existing strengths and create synergies with other recommendations.

Retail spaces and marketplaces are a key aspect of activating the public realm, creating a showcase for talent in the community, and connecting the many existing creative and entrepreneurial enterprises to the community as a whole. Often, public markets suffer because their location is driven by pragmatism - an available but isolated parcel, or the space under a highway underpass - rather than seeking to create a 100% corner that can easily become part of everybody's routine.

It is recommended that the Implementation Task Force work with existing and future makerspaces and business incubators to include public storefronts that can be used as classrooms, galleries, and retail spaces.

It is also recommended that the Greater East End Management District work to create a permanent marketplace for the Navigation Market and continue to diversify the range of vendors and add additional services, such as job fairs and showcases for local businesses and organizations.



Artists & Fleas. A flea market in New York, NY



Findlay Market, Cincinnati Ohio



Ponce City Market, Atlanta Georgia.



Mini Maker Faire, Minneapolis, MN: A showcase for local manufacturing and makerspaces.

4 PLAY



Subject Areas

.....

The quality spaces in the study area are significant to neighborhood identity and culture, providing common grounds for the community. Some of the spaces are in better shape than others, and community members have spoken out about what types of amenities they'd like to see added.

The PLAY recommendations seek to provide amenities within neighborhoods and along Buffalo Bayou, including quality public spaces, parks and trails that increase physical activity, social interaction, improve access to destinations, and provide a cultural and community destination in itself.

Support restoration efforts of the historic Evergreen Negro Cemetery by Project RESPECT.



TYPE

① ② ③ ④ ⑤ ⑥

LIVABILITY PRINCIPLES

① ② ③ ④ ⑤

PROJECT GOALS

IMPLEMENTER

Fifth Ward CRC

PARTNERS

Project RESPECT
City of Houston

The historic Evergreen Negro Cemetery is roughly 5 acres, which is bisected by the study area boundary. It is estimated that the cemetery consists of over 4,500 burials, including at least 17 former slaves, of which 12 were Buffalo Soldiers. Deeds to the property were transferred to a group of African American buyers in 1929, but conditions of the site have since suffered from abandonment and destruction due to the excavation of 490 graves in the 1957 expansion of Lockwood Drive. Unfortunately crime rates surrounding the site are high, where increased awareness and community involvement can play a role in site restoration, and partnerships are essential. Ultimately, this cultural landscape should be a reflection of the rich history of Fifth Ward, to include the exceptional stories of individuals who are buried there, and create a safe and comfortable place to visit.

The poor condition of historic African American cemeteries is not just a local issue, but one that is faced in communities across the country. In Texas this has been addressed through state legislature -- 1995 House Bill 814 sought to address neglected and abandoned cemeteries by allowing one of two outcomes: the declaration of a nuisance leading to enjoined existence; or allowing non-profit organizations to take responsibility for their management.

Project RESPECT, dedicated to cultural resource management, has led maintenance of this and several other historic African American cemeteries. In a 2012 statement, Project RESPECT

declared that its next charge was to institute "a commemorative celebration for those Soldiers scattered among the ruins of our abandoned and forgotten cemeteries, in Texas, across the United States and eventually International." This organization and its community partners envision the cemetery as a place where art, history, science, and technology merge to share the history of the community and the leaders buried at the site.

Recommendations

It is recommended that the Fifth Ward CRC pursue a historical landmark designation through the City of Houston.

It is recommended that Fifth Ward CRC partner with Project RESPECT to improve safety conditions of the cemetery and surrounding public realm using the *Crime Prevention through Environmental Design (CPTED) principles*, as described below:

1. Natural Surveillance: ensure that people in and around the space can be easily seen by others. Because the cemetery is located at the back of a building, the space is not well situated to be monitored by business owners and their patrons. However, there are several opportunities to improve surveillance of the space, such as:

- Increase lighting in and around the cemetery, which may be achieved through motion-sensor lighting on the back of the buildings that line the north edge of the cemetery, and pedestrian lighting along the sidewalk.

- Create a comfortable and inviting environment in the public realm along Market Street, including street furniture, such as benches, trash receptacles, a bus shelter, and signage; and shade from tree coverage, which will be established as existing young trees mature.
- Prohibit on-street parking on the north side on Market Street, where it is adjacent to the cemetery. The parked vehicles restrict views of the cemetery, and the ability for public surveillance of the site. This may be enforced through signage, or achieved through a redesign of the roadway that gives more space to pedestrians and for landscape vegetation, street furniture, and walkway.

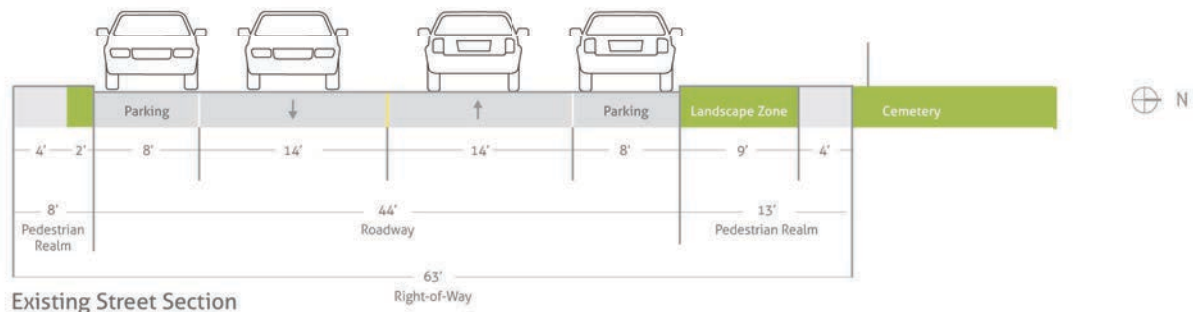
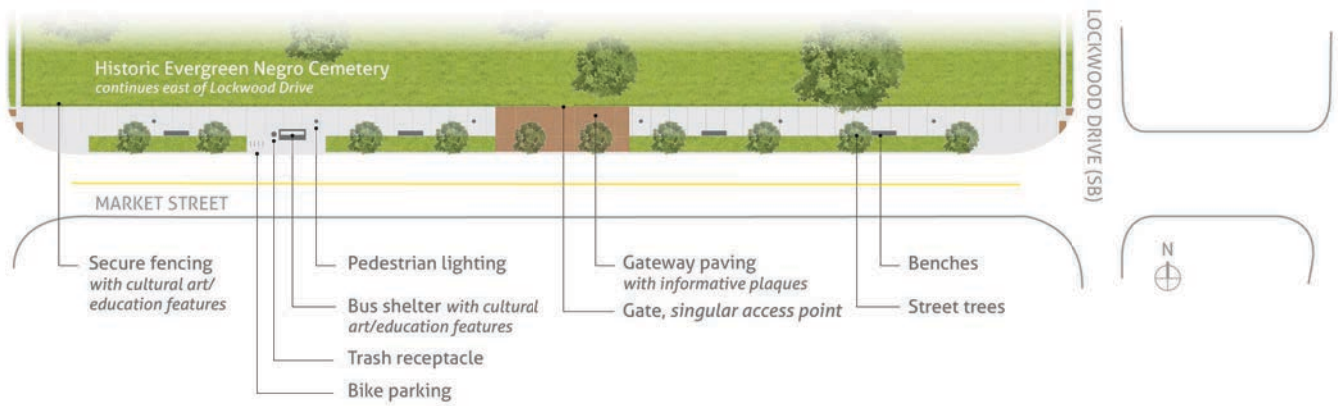
2. Natural Access Control: create a natural and understood point of ingress and egress through physical features. Reducing the points of access to predictable locations improves the predictability of people's actions, and discourages criminal activity in the cemetery. Project RESPECT is currently replacing the existing fence, which will prevent people from aimlessly passing through space.

3. Territoriality: Portray ownership of space through design, signage, care, etc. This principle claims that territorial reinforcement of spaces sends a message that the space is cared for, and influences how the space is used by others. The cemetery as a cultural landscape should

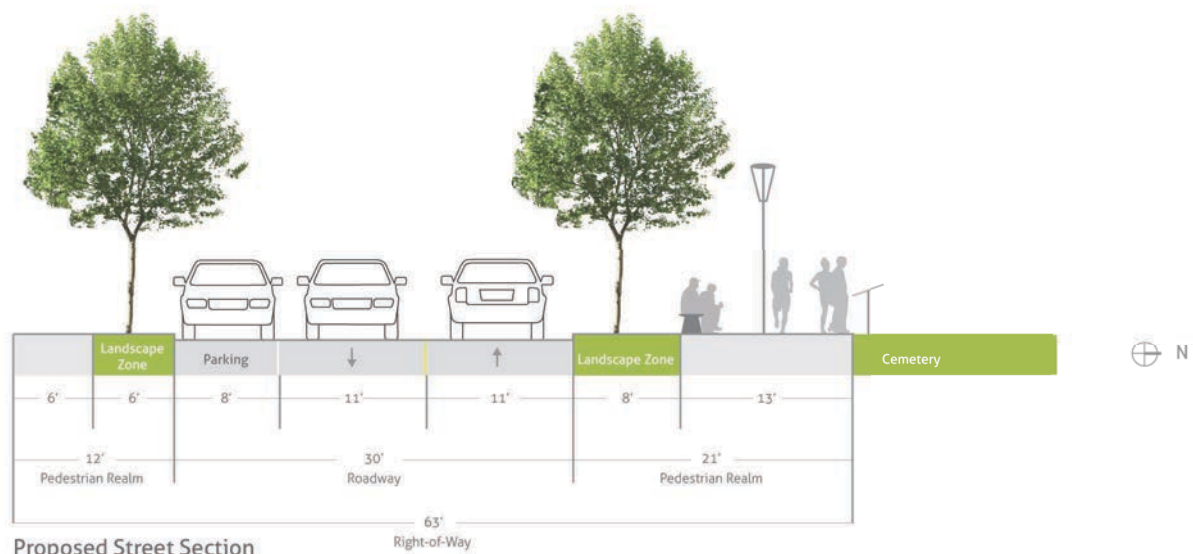
signify a space for reflection, education, etc. through its design and care, which may be reinforced through signage and art. If the cemetery appears abandoned, people may attempt to use the space for illegal or unwanted activity. It is recommended that the Fifth Ward CRC coordinate with Project RESPECT to develop a cultural landscape plan for the cemetery that would establish projects to improve awareness of the site's historic relevance, and incorporate art, science and technology to celebrate community history. These projects may include sidewalk plaques, street furniture, rear building murals, gateway signage, historic markers, audio marquees, and a median art and planting project recognizing the excavation of almost 500 graves at Lockwood Drive. Efforts to pursue grant funding for these projects may be broad, relating to arts, culture, historic preservation, parks, and environmental resources.

4. Maintenance: Maintain upkeep in the landscape, including grass and plant upkeep, trash pickup, etc. Project RESPECT is committed to maintenance of Evergreen Negro Cemetery, and benefits from volunteer efforts of its community partners. Fifth Ward CRC should assist Project RESPECT in gaining volunteer support from the community, including school, religious groups, civic clubs, etc.

Cost Estimate: \$460,000



Existing Street Section



Proposed Street Section

Improve the open space conditions at Finnigan Park.



IMPLEMENTOR

City of Houston Parks and Recreation Department

PARTNERS

Fifth Ward Civic Club
Fifth Ward CRC
Trees for Houston

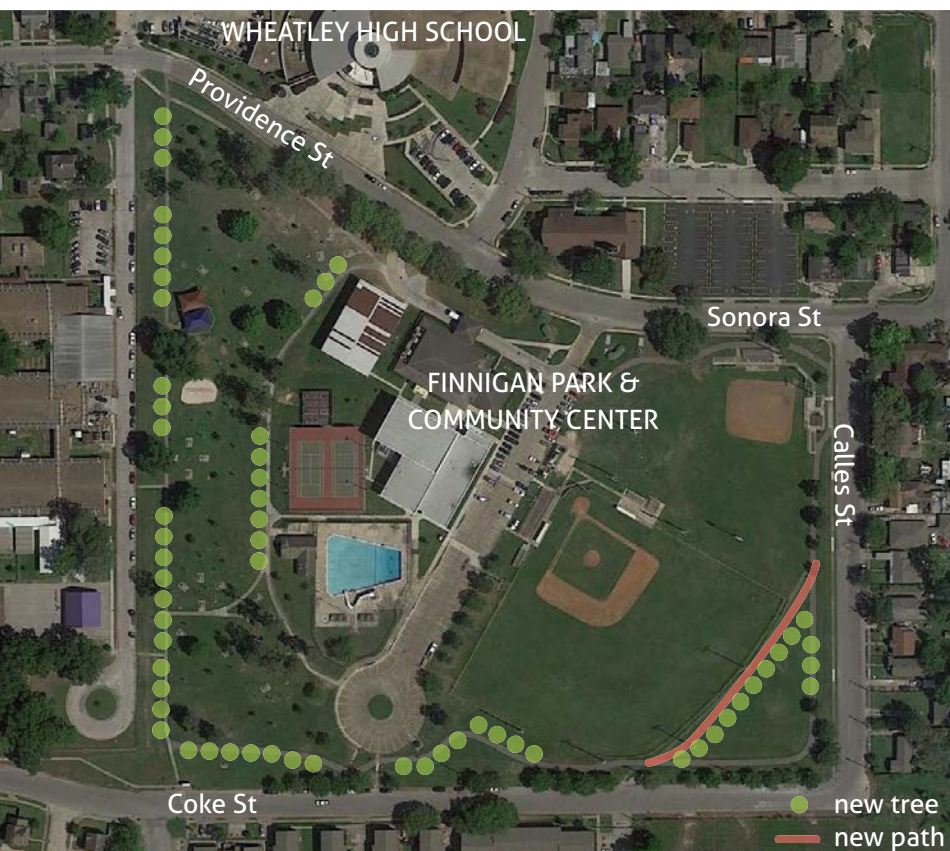
Finnigan Park is well situated for community use, located adjacent to Wheatley High School and a multi-family apartment complex. Additionally, the facility offers a wide range of services to the public, including exercise classes. The open space of the park may eventually benefit from a master plan as neighborhood population increases, but short-term improvements should be directed towards accessibility across the site, and comfort in the outdoor space.

It is recommended the City of Houston Parks & Recreation Department construct a walkway along the southeast edge of the baseball field, where a path has been worn in the grass from regular

community use. For someone walking from the northeast corner of the site to the southwest corner, a direct path makes more sense for people passing through. This worn path is an indication that the original design doesn't suit all user needs, where the paved path is likely used by people exercising. Current trail pavement condition is acceptable, but may require repavement in the next few years.

It is recommended that the City of Houston Parks & Recreation Department increase tree coverage in the park, lining walkways and clustering in congregation areas. There are several large oak trees on the north side of the park along Providence Street that provide incredible shade, which is essential on hot summer days in Houston. Existing pine trees and immature trees scattered throughout the site do not offer sufficient relief from the sun. Trees for Houston and the Fifth Ward Civic Club are potential partners that may provide resources and labor, respectively, to accomplish this task. Additionally, nearby schools and neighbors should be engaged for the event to build community ownership in the park.

Cost Estimate: \$16,000



Ensure that adequate space and funding is set aside for small parks in new developments and subdivisions.



IMPLEMENTOR

City of Houston

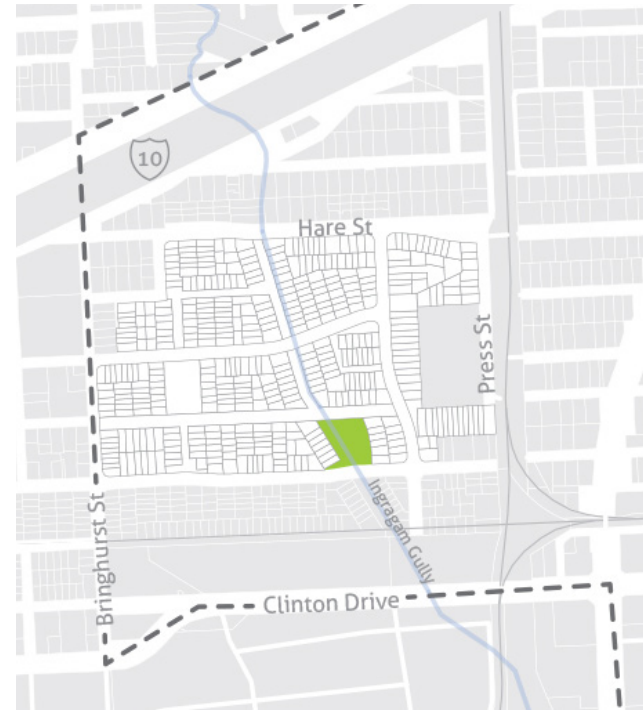
PARTNERS

Developer

On the west edge of the study area, within the Fifth Ward, is a 36-acre area known as the MDI Superfund Site, after the previous owner, Many Diversified Interests (MDI). It is now planned for the development of over 500 homes, called Living Green. The increase in residences also offers the opportunity for increased amenities in the area.

Section 42-251 Parks and Open Spaces of the City of Houston Code of Ordinances was established to ensure that adequate parks, recreational amenities, and open space for new residential areas is provided. This ordinance offers two options for developers: dedicate acreage in the amount of 1.8 acres per 100 dwelling units; or pay \$700 per dwelling unit. It is recommended that, in the second case, funding collected in lieu of open space provision be spent in a way which targets the communities which are experiencing increased building densities.

Dedicated fee may be used towards added amenities for the park space. City of Houston park classifications describe typical amenities for a pocket park (<1 acre) to include a small playground, picnic tables, and plantings. Incorporating dog-friendly amenities are highly recommended, as it has been identified by the community as an existing need, which is likely to increase with new residential development.



Expand Japhet Creek Park and greenway, while preserving and improving its natural habitats.



LIVABILITY PRINCIPLES



PROJECT GOALS

IMPLEMENTOR

City of Houston

PARTNERS

Japhet Creek Community
Buffalo Bayou Partnership



Japhet Creek Park is owned by the City of Houston, which is situated along Japhet Creek, a wonderful natural amenity that has drawn community attention and action over the years. Additional partners have been involved to gain awareness of the Creek, its wildlife, and ecological importance through art projects within the park and public realm. This site is sure to continue to be a treasure, offering natural reprieve amidst its urban setting.

It is recommended that the City of Houston purchase the property adjacent to the park, which currently separates two city-owned properties. By securing this land, a continuous park can be created along Japhet Creek from Emile Street to Clinton Drive. Once this land is secured, a master plan should

be developed to achieve the following: increase wildlife habitat along the creek through native plantings; incorporate green infrastructure design along the right-of-way to filter stormwater runoff before reaching the creek; construct a greenway, or low-impact trail, along the Creek that will connect Buffalo Bayou to Clinton Drive, and ultimately north on Schweikhardt Street; and incorporate passive use amenities to the park, such as seating areas and outdoor classrooms. Schweikhardt Street should continue south of Clinton Drive for non-motorized vehicles.

Cost Estimate: \$550,000, including land purchase

Transform Fox Park into a dog park, and explore other dog-friendly opportunities.



TYPE



LIVABILITY PRINCIPLES



PROJECT GOALS

IMPLEMENTOR

Greater East End MD

PARTNERS

City of Houston Parks & Recreation

**Cost Estimate: \$5,000
- \$100,000 (for full
park design)**

Fox Park is an existing, underutilized space located at the corner of Fox Street and North Everton Street. There is a sidewalk on one side of the park that runs parallel to North York Street, but otherwise the park is grassy area with a Houston Parks and Recreation Department sign that reads Fox Park. Community engagement efforts in the study have identified a dog park as a need for parks and open spaces within the study area. Fox Park can currently accommodate dog walkers as is, since a grassy area is all that is needed for walking a leashed dog. The next level may be to designate a fenced area and other added amenities which might include a dog waste bag dispenser, drinking fountain (for dogs and humans), seating, or covered seating (with tree shade or canopy structure).

There is limited funding available for dog parks, which may be seen as a luxury amenity in cities, however dog ownership can also increase the physical

activity in a community that seeks out these parks for their pets. One funding opportunity may be through PetSafe's Bark For Your Park competition, which would provide \$100,000 for winners.

The City and stakeholders should encourage developers to establish dog parks and dog amenities in areas with a dense human population, where an increase in dog population is also likely. The following features may be considered for a larger scale dog park: dog wash area, hardscape surfaces, pond or splash pad, and a secure fencing with security gate that prevents other dogs from escaping as visitors come and go.

Low to high investment in dog-friendly areas and dog parks



Create a linear park along the Harrisburg-Sunset trail.

TYPE



LIVABILITY PRINCIPLES



PROJECT GOALS

IMPLEMENTOR

Greater East End
Management District

PARTNERS

City of Houston Parks &
Recreation Department

The Harrisburg-Sunset Hike & Bike trail is a 5-mile long shared-use path that offers a safe and enjoyable way to travel through End East. As an amenity that serves both residents and area visitors, there is great potential to increase the usefulness of the trail by utilizing the buffer for added features.

It is recommended that Greater East End Management District, in partnership with the City of Houston Parks and Recreation Department, create a linear park adjacent to the trail that may attract an increase in trail users, and encourage them to stop along their journey. The trail buffer is approximately 20 feet on either side, allowing for the addition of features that may include natural

habitat plantings, playscapes, games for adults and children, exercise equipment, community gardens, and functional and interactive art. Determining the character or intent of the linear park, and how it ties into larger community goals and initiatives may strengthen grant proposals when pursuing project funding -- For example, pursuing grants related to food access (community gardens), healthy community initiatives (community gardens, exercise equipment, playscapes), art proposals, and environmental quality.

Cost Estimate: \$10,000 - \$50,000

exercise equipment



playscapes



games



art



gardens



5 CONNECT



Subject Areas

There has been significant transportation investments in the study area, particularly in trails and light rail. However, gaps in infrastructure and the availability of destinations make it difficult to get around, especially crossing large barriers, such as highways, Buffalo Bayou and the industrial land uses that surround it.

The CONNECT recommendations seek to improve accessibility by eliminating major pedestrian and bicycle barriers, and creating a street network connecting north and south of Buffalo Bayou.

See Appendix II for a comparison between Houston, San Antonio, and Dallas right-of-way and street intersection standards.

Neighborhood Standards

A defined grid system has been established on both sides of the Buffalo Bayou. On the north, plats have an average perimeter length of 1,600 feet and the longer blockface runs east and west. The northern grid system begins north of Clinton Drive, about 2,200 feet from Buffalo Bayou. South of the Buffalo Bayou, plats have an average perimeter length of 1,500 feet and the longer blockface runs north and south. This grid system begins 1,600 feet south of the Buffalo Bayou at Crites Street.

While an overall grid is recommended, the exact dimensions and street spacing may depend on the development scenario selected for the current industrial properties.

Houston has a similar ROW standard as San Antonio, so it is recommended to use San Antonio's street intersection spacing standards listed below for collector roads in the study area.

- 200 feet or the minimum distance to accommodate a turn lane as required under subsection 35-502(a)(7)(d) where collectors intersect with one another.
- 400 feet or the minimum distance to accommodate a turn lane as required under subsection 35-502(a)(7)(d) where collectors intersect with an arterial.

San Antonio also uses a useful connectivity index that can be used in the study area to determine if cul-de-sacs properly fit into the network. In general, more connectivity is better, so cul-de-sacs should be avoided unless topography or other boundaries demand them.

It is recommended to use Dallas' railroad standards listed below when a new street is located near a railroad ROW.

- An alley approach must not be located within 50 feet of a railroad ROW.
- If one of the streets crosses the railroad ROW at grade the intersection of two streets must not be located within 115 feet of a railroad ROW.

Houston currently does not have perimeter standards for blocks; therefore, it is recommended to follow Dallas' standards listed below due to the similarities found between the study area and Dallas. Small block sizes (in this case regulated by perimeter) are a major element in preserving non-motorized connectivity and human-scale development.

- Any single block longer than 500 feet must include a pedestrian passage available at all times to the general public.
- Block perimeters may not exceed 1,600 linear feet as measured along the inner edges of each street right-of-way. A maximum of 2,400 linear feet is allowed under certain conditions.

Houston's Complete Streets Manual should be followed once it has been approved by the City.

Create a complete streets and open space framework.



TYPE

1 2 3 4 5 6

LIVABILITY PRINCIPLES

1 2 3 4 5

PROJECT GOALS

IMPLEMENTOR

City of Houston

PARTNERS

Council Districts H & B
Greater East End
Management District
Buffalo Bayou Partnership
Fifth Ward CRC

In 2013, Mayor Annise Parker released the *Houston Complete Streets and Transportation Plan* executive order, which will establish “a menu of street types based upon multi-modal classification” that also “recognizes the role streets play in drainage and water quality” – considering both new streets and existing streets. This emerging *Houston Complete Streets and Transportation Plan* aims to “benefit from community input and thought rendered through reports such as the *Livable Center Studies and Scenic Houston’s Streetscape Resource Guide*. The proposed Complete Streets and Open Space Framework Map and its corresponding street cross-sections shown and discussed on their facing pages are based on the Complete Streets concept, whereby all modes of transportation are integrated in the network.

Furthermore, any street that is reconstructed under the ReBuild Houston program utilizes the Mayor’s Complete Streets Executive Order.

Public communication and outreach during pre-engineering will provide input into context of roadway design. Use of this framework by developers must be designed within the parameters of Chapter 10 of the City of Houston Infrastructure Design Manual or early approval of the City Engineer and City Traffic Engineer.

The following streets are those framing the extended Bayou redevelopment area, along with their type and status, according to the 2013 Major Thoroughfare & Freeway Plan (MTFP, City of Houston):

- Clinton Drive to the north, thoroughfare (to be widened);
- Hirsch Road to the west (becomes York Street and Waco Street), thoroughfare (sufficient width);
- Lockwood Drive to the east, principle thoroughfare (sufficient width/to be widened); and
- Navigation Boulevard to the south, thoroughfare (sufficient width).

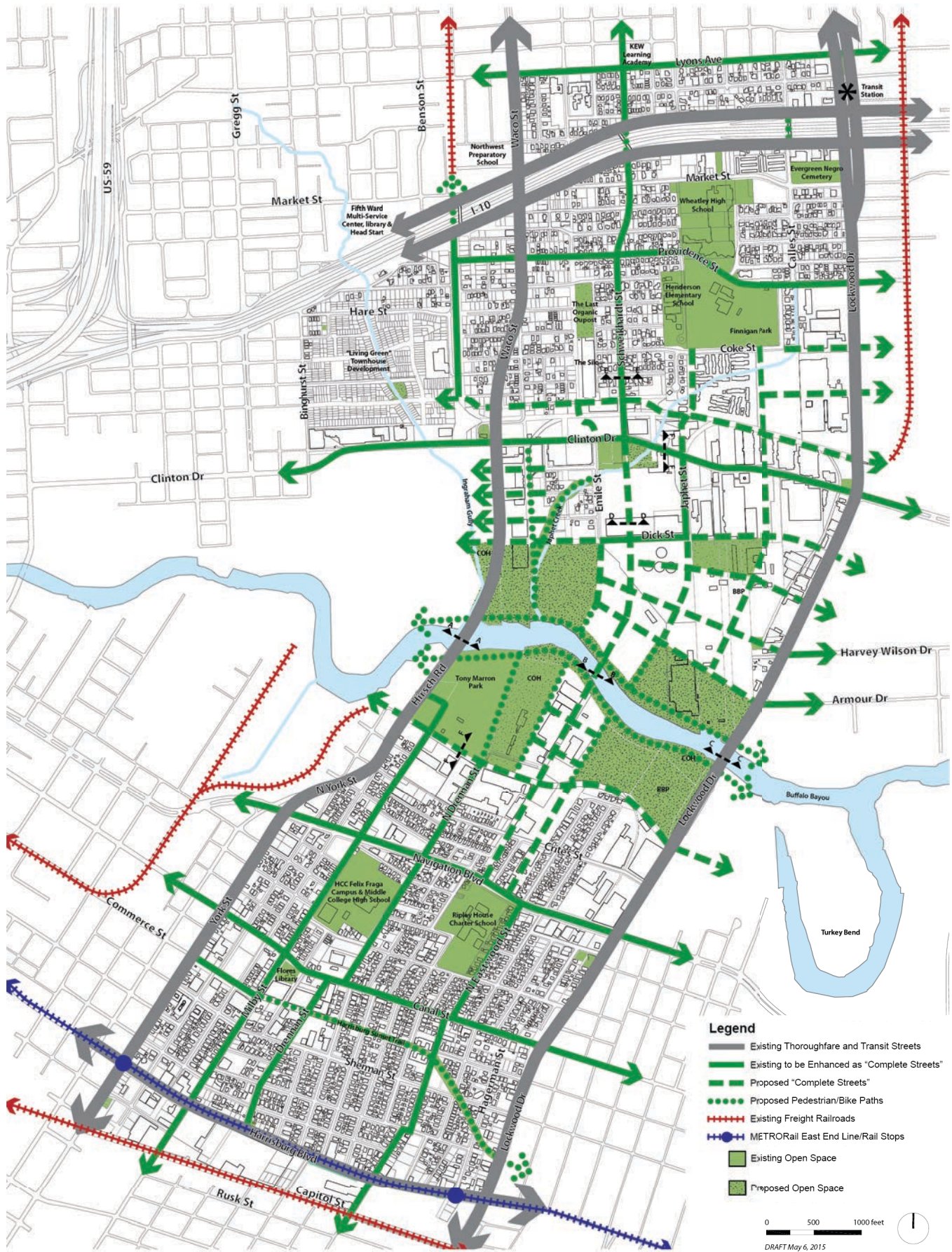
Cycle Tracks Separated from Auto Traffic by Planted Median



Bio-filtration in Sidewalk Area



Complete Streets and Open Space Framework Map



Hirsch Road & Lockwood Drive



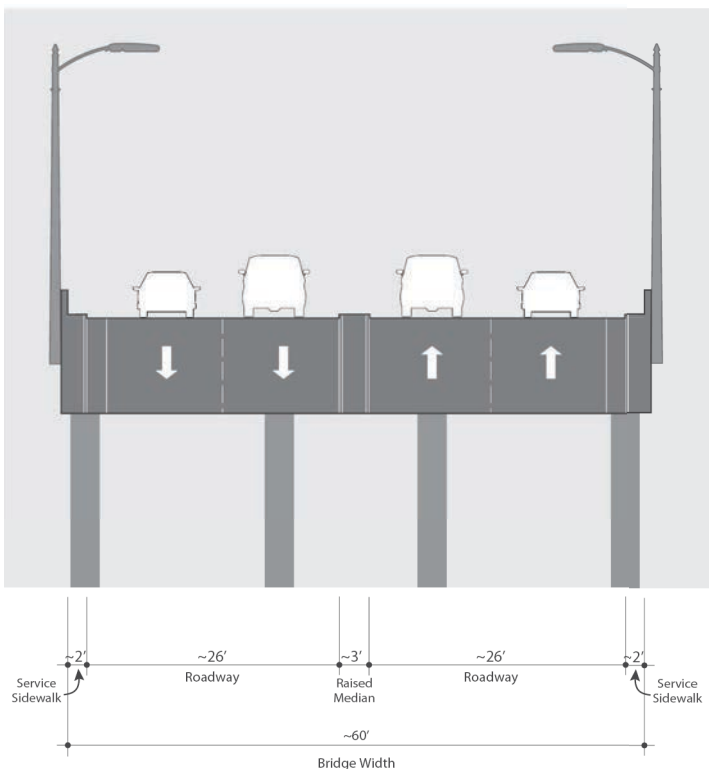
Hirsch Road Bridge looking south

The study area contains two major northbound and southbound links in the network, York/Hirsch and Lockwood Drive bridges over Buffalo Bayou. Average Daily Traffic (ADT) volumes were provided by the City of Houston for both bridges. York/Hirsch is currently a four-lane bridge with a 60-foot ROW and an ADT of 6,863 (recorded in 2012).

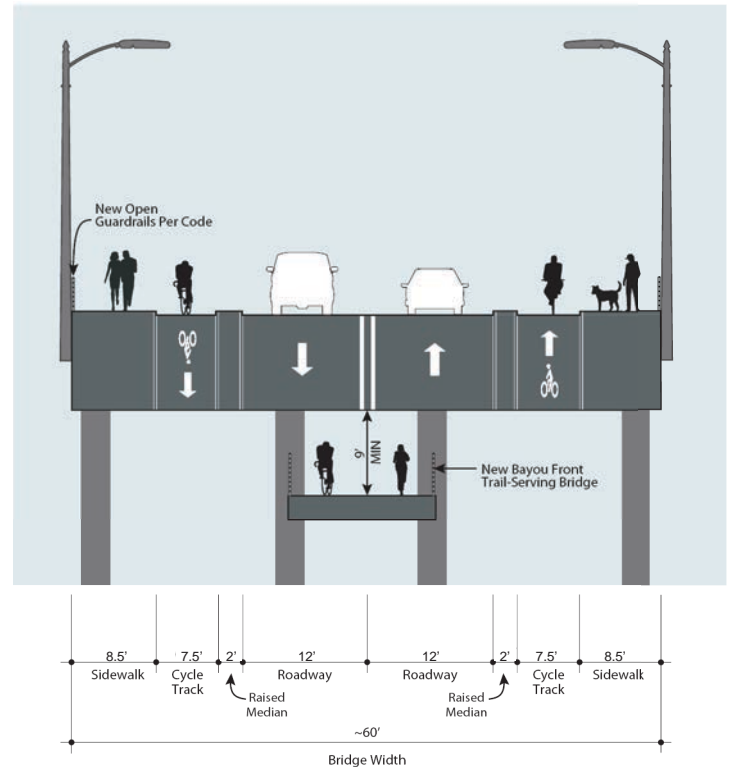
Lockwood Drive is currently a six-lane bridge with an 85-foot ROW and an ADT of 16,276 (recorded in 2009).

It is recommended to reconfigure both the York/Hirsch and Lockwood bridges to make them pedestrian friendly by including bicycle lanes and widening sidewalks. Bicycle lanes can be as narrow as 5 feet but 6 feet is recommended for two-way bikeways to allow cyclists to comfortably pass each other. It is also recommended to start the proposed bicycle lanes or a bicycle route at Clinton Drive and end at the Harrisburg/Sunset Trails, to provide better regional connectivity, as well as to provide opportunities for connections to the underdeveloped areas surrounding the Buffalo Bayou.

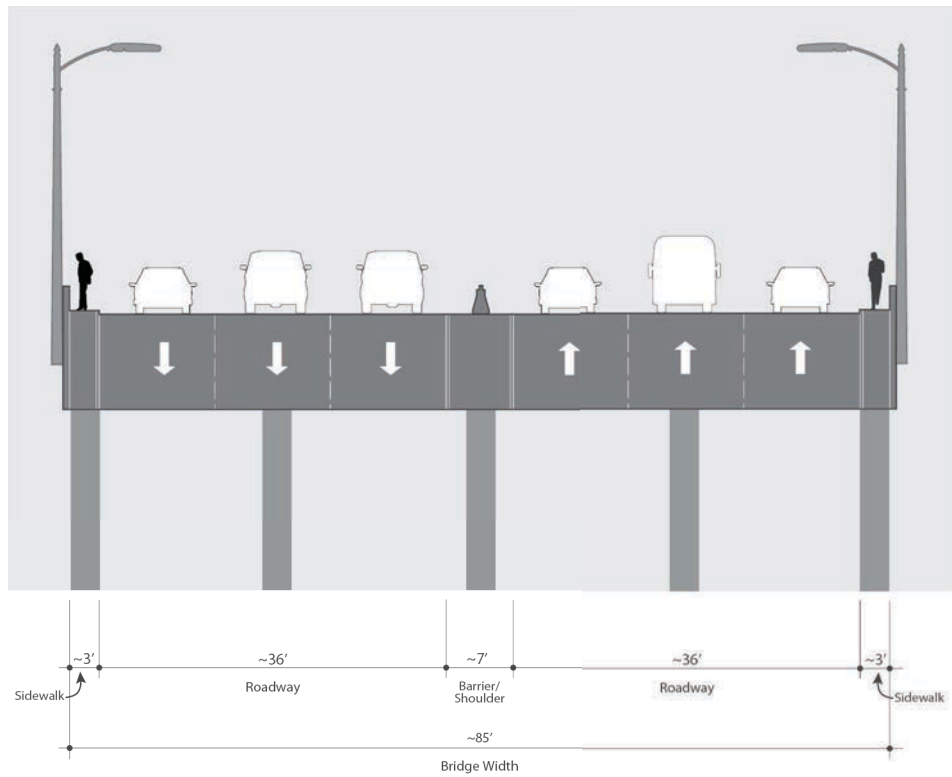
The 800-foot-long York/Hirsch bridge can be converted into two vehicle lanes, a northbound and southbound bicycle lane, and wider sidewalks. The bicycle lanes are proposed to tie into Tony Marron Park and the Buffalo Bayou Hike and Bike Trail.



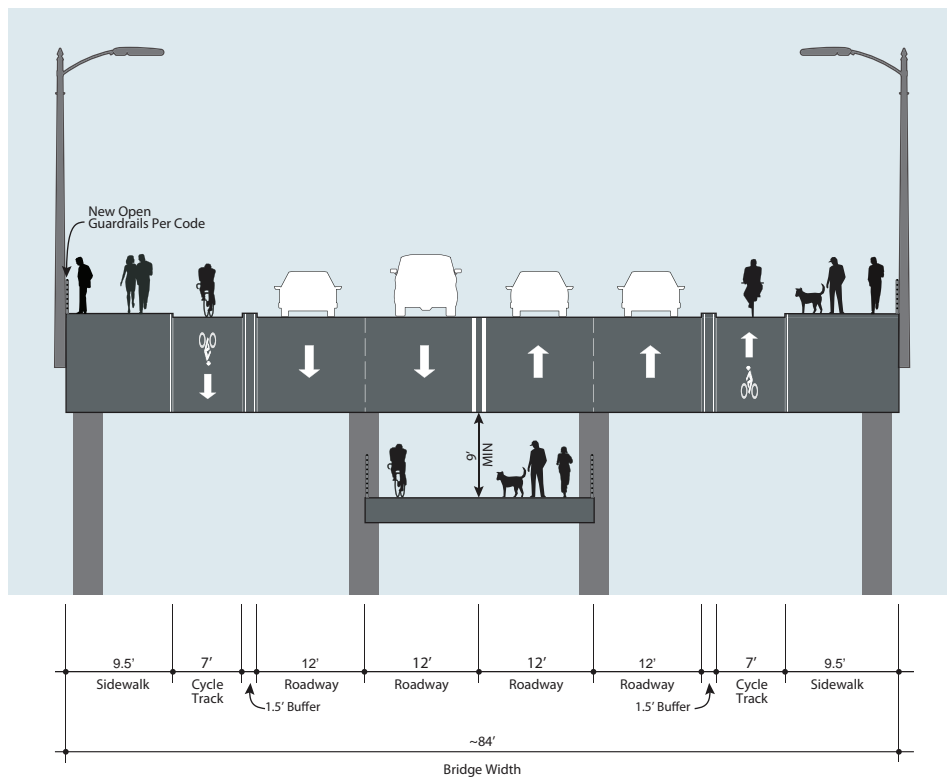
SECTION AA: EXISTING HIRSCH ROAD BRIDGE
(two lanes each way, narrow service sidewalk, raised median)



SECTION AA: PROPOSED HIRSCH ROAD BRIDGE
(remove existing center median, one travel lane each direction, new bike/pedestrian bridge below)



SECTION CC: EXISTING LOCKWOOD DRIVE BRIDGE
(three lanes each way, narrow service sidewalk, center barrier)



SECTION CC: PROPOSED LOCKWOOD DRIVE BRIDGE
(two lanes each way, one-way cycle tracks, new bike/pedestrian bridge below)

The 1,220-foot-long Lockwood bridge can be converted into four vehicle lanes, a northbound and southbound bicycle lane, and wider sidewalks. The bicycle lanes are proposed to tie into the Buffalo Bayou Hike and Bike Trail.

For both proposed bridges improvements, the roadway configurations will have to transition to existing roadway geometry at both ends. This transition is shown conceptually in the detail on the left.

Cost Estimate

York/Hirsch bridge reconfiguration is estimated to cost \$2,088,000, assuming replacement of the bridge slab. Slab and pavement condition was not assessed, and the planned service life of the bridge relative to its age is not known.

Lockwood bridge reconfiguration is estimated to cost approximately \$3,863,496, assuming replacement of the bridge slab. Again, slab and pavement condition was not assessed, and the planned service life of the bridge relative to its age is not known.

Both Hirsch Road and Lockwood Drive are wide arterials that do not have adequate pedestrian or bicycle facilities. See the cross-sections below and on the facing page, showing both the existing and proposed conditions for each. These sections are taken at the bridges and show, by converting one vehicle lane in each direction, how these streets could become Complete Streets, with wide sidewalks and one-way “cycle tracks”. Cycle tracks are on-street bicycle lanes that are protected from traffic with a median or buffer area, and are the best practices approach for safely accommodating bicycles on this type of high-speed and/or high-volume roadway. In addition, as both bridges allow for high, boat-way clearances, it would be possible to build new pedestrian/bicycle bridge crossings below the existing bridge decks to enable a direct, shoreline-to-shoreline crossing.

Schweikhardt Street

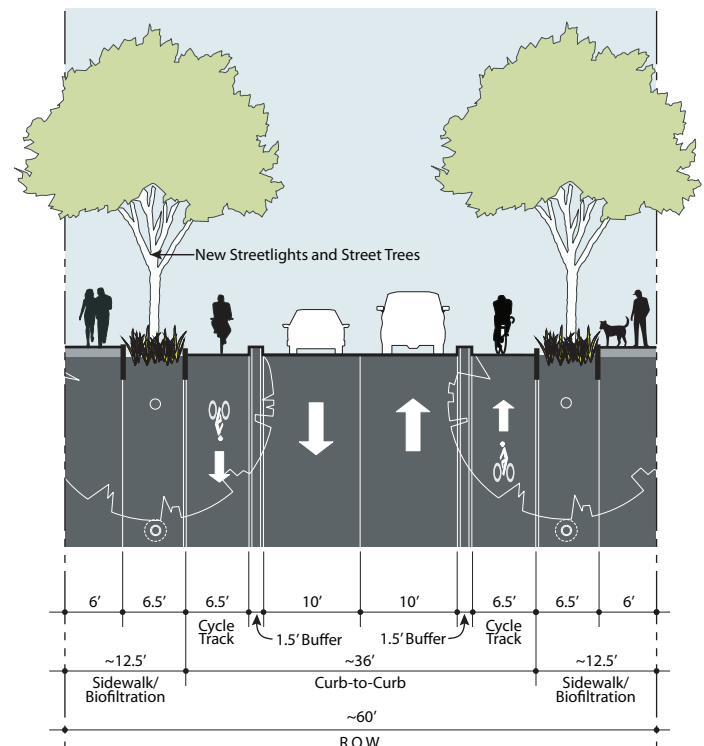


Schweikhardt Street looking north to The Silo

ground-level cafes, retail and cultural/ community uses along it, as is desired by many community members.

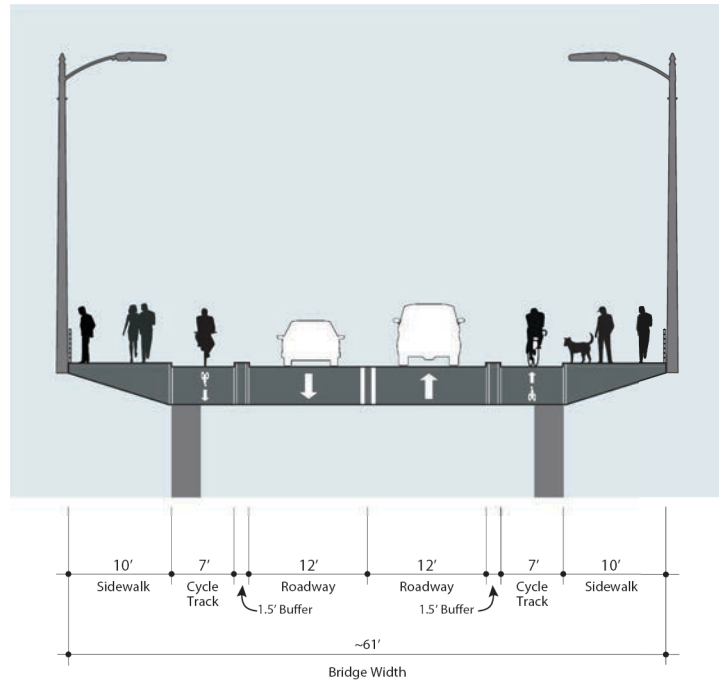
See the existing and proposed cross-sections for both the existing, 60-foot wide Schweikhardt Street right-of-way, and its proposed 86-foot wide Complete Streets expansion.

Schweikhardt Street is proposed to be extended southward through the Japhet Creek Park, crossing the Bayou at the midpoint of the Study Area. Between the two existing bridges at Hirsch Road and Lockwood Drive, and stopping at Navigation Boulevard at the Ripley House. This new street extension would be the main, north-south spine for the new Bayou area, allowing some development to come all the way to the edge of the Bayou in the form of a waterfront promenade with

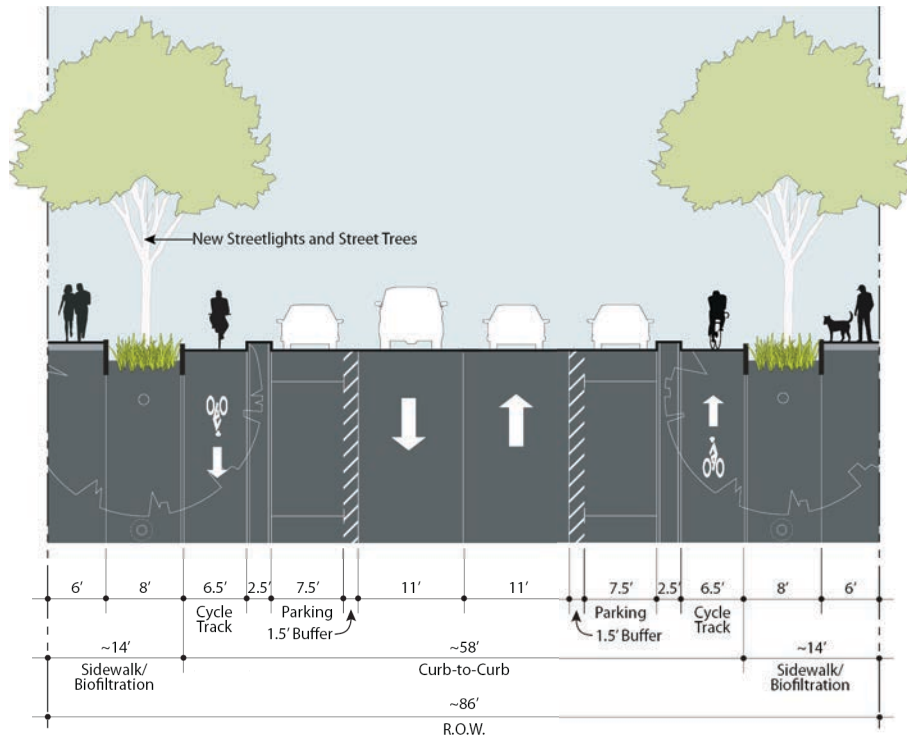


SECTION EE: EXISTING SCHWEIKHARDT STREET
(one lane each way, parallel parking each side)

SECTION EE: PROPOSED SCHWEIKHARDT STREET RETROFIT
(one lane each way, one-way cycle tracks, underground utilities)



SECTION BB: PROPOSED SCHWEIKHARDT STREET BRIDGE
(one lane each way, one-way cycle tracks)



SECTION DD: PROPOSED NEW SEGMENT OF SCHWEIKHARDT STREET
(one lane and parallel parking each way, one-way cycle tracks and bio-filtration)

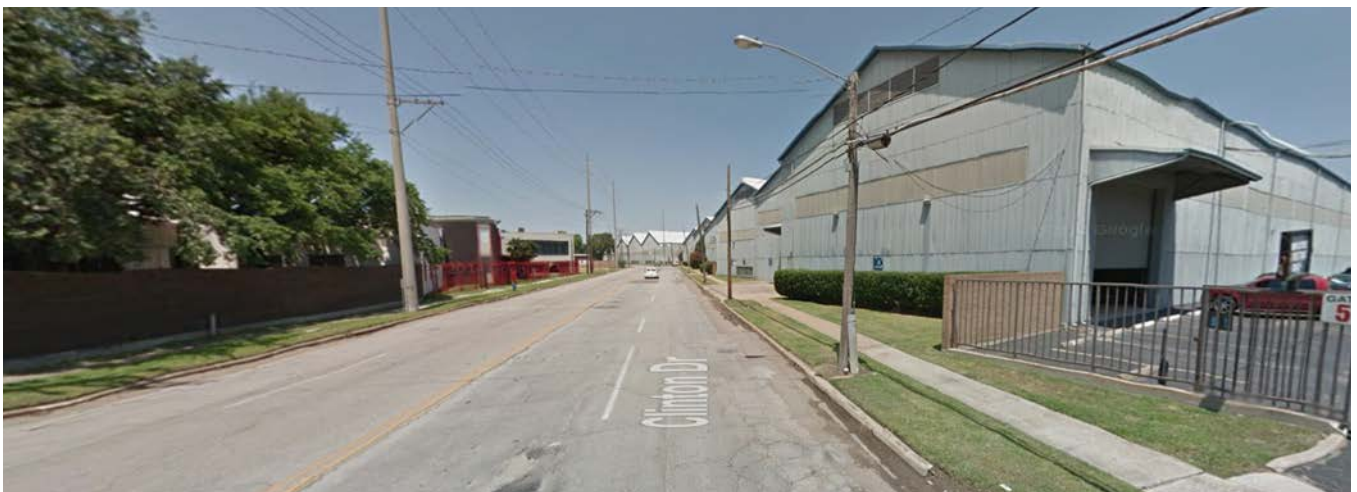
Clinton Drive

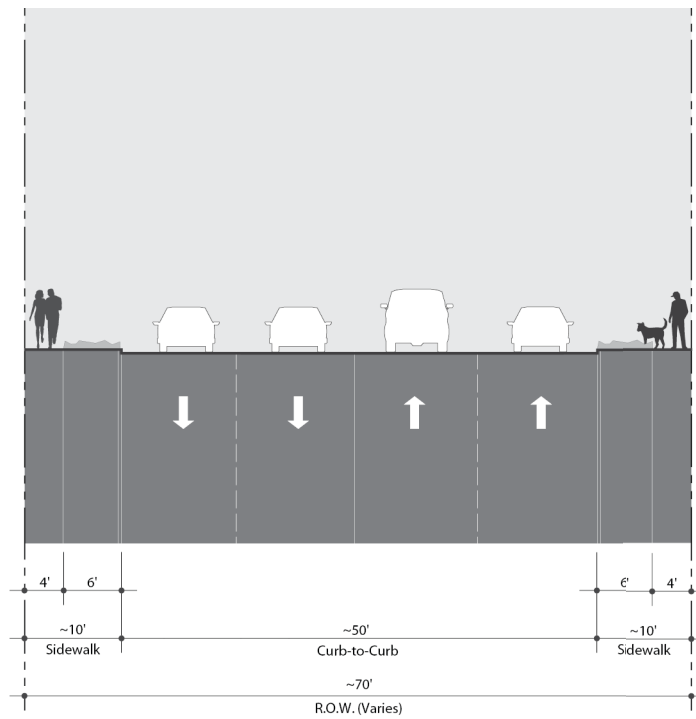
Clinton Drive crosses the entire Study area, east to west, and is proposed for improvement from a two-lane each way, heavy industry-serving road to a community boulevard with a landscaped median allowing for left turns, cycle tracks and wide, shaded sidewalks. A similar, new street "Foley Boulevard" is proposed in the East End, within the existing freight railroad spur ROW, which would traverse the entire Study Area and beyond, joining Foley where it intersects with Hirsch Road.

As part of the Complete Streets improvements for any new or existing street, the following items should be provided:

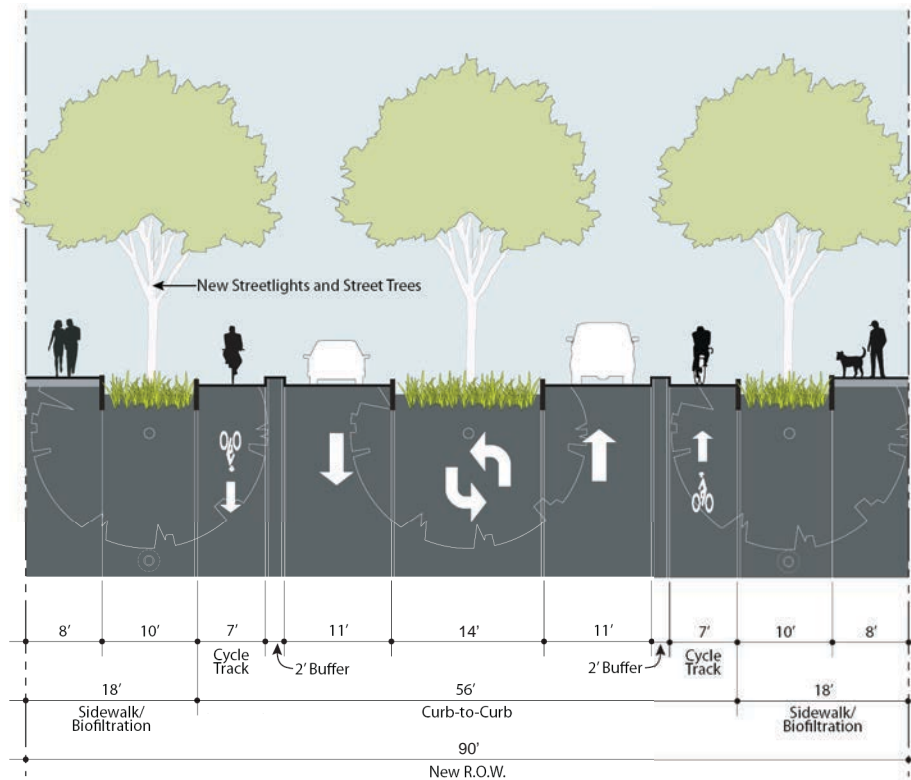
- Underground the overhead utilities, if possible, in order to create space for shade trees and to de-clutter the streetscape.
- Preserve existing quality trees within the streetscapes, and add new street trees along curbsides to provide shade, habitat, and a buffer to pedestrians from the street edge.
- Provide new, full cut-off LED streetlighting poles in line with the street trees along the curbside.
- Enhance all bus stops with shelters and way-finding that incorporate a sense of place and history.
- Provide waste and recycling bins, benches, bike racks, pet stations, and other furnishings along key pedestrian streets, such as Schweikhardt Street.
- On streets with no parking, provide for bio-filtration in the form of a rain garden, as shown on many of the sections, in order to address storm water runoff and drainage in an ecological way.

Other desirable new or enhanced street and trail connections are proposed on the Complete Streets and Open Space Framework Map. The hope is that this system of pathways and open spaces can link the two communities at every level - physically, socially, environmentally and economically. This new and enhanced network will create a sustainable and accessible framework for desired redevelopment of the currently industrial, Buffalo Bayou-related properties discussed below.





SECTION FF: EXISTING CLINTON DRIVE
(two lanes each way)



SECTION FF: PROPOSED CLINTON DRIVE AND FOLEY BOULEVARD
(one lane each way, left turn median, one-way cycle tracks and bio-filtration)

Improve bikeway and street network connectivity.



TYPE

1 2 3 4 5 6

LIVABILITY PRINCIPLES

1 2 3 4 5

PROJECT GOALS

IMPLEMENTOR

City of Houston

PARTNERS

Greater East End
Management District
Buffalo Bayou Partnership
METRO
Houston B-cycle

The existing street network immediately north of Buffalo Bayou is composed primarily of five local streets, in addition to the main thoroughfares of Waco Street and Clinton and Lockwood Drives. Streets aligned north and south include Ida, Emile, and Japhet while streets serving the east and west direction include Billy and Dick. Note that many of these streets are very short and the current grid has many gaps and incomplete sections, especially south of Clinton Drive. Of these local streets, Emile, Japhet, and Dick are proposed to be extended as part of the redevelopment described in Chapter 6, "Build." Additionally, the Complete Streets and Open Space Framework Map in Recommendation 5.1 presents proposed street segments north of the bayou to create an accessible street network. The north side will require numerous local street additions to create a suitable redevelopment framework, including both north-south and east-west.

The existing street network immediately south of Buffalo Bayou has a more complete grid than the north side, especially south of Navigation Boulevard, but few streets extend to Tony Marron Park or the bayou itself. Streets aligned north and south include Milby, Drennan, Eastwood, and Super while Crites Street serves the east and west direction. Of these, Drennan, Eastwood, and Super are proposed to be extended as part of the redevelopment described in Chapter 6, "Build." Additionally, 6 new street segments are proposed south of the bayou to create an accessible street network. The south side has an

established set of north-south streets, of which some will need to be extended to the bayou, so the primary additions will need to be east-west.

Bikeway Network

It is proposed to incorporate new bike lanes on 8 major streets serving the study area. Lockwood Drive is proposed to have two 6 foot-wide bike lanes from Lyons Avenue to Rusk Street, which covers a distance of 14,000 feet and estimated to cost \$1,461,600. Clinton Drive is proposed to have two 6 foot-wide bike lanes from Hirsch Road to Lockwood Drive, which covers a distance of 3,950 feet and estimated to cost \$412,380. The proposed Schweikhardt Street is proposed to have two 6 foot-wide bike lanes from Clinton to Buffalo Bayou, which covers a distance of 2,500 feet and estimated to cost \$261,000. The proposed Dick Street is proposed to have two 6 foot-wide bike lanes from Hirsch to Lockwood, which covers a distance of 3,500 feet and estimated to cost \$365,400. The proposed Foley Street is proposed to have two 6 foot-wide bike lanes from Hirsch to Lockwood, which covers a distance of 3,200 feet and estimated to cost \$334,080. Milby Street is proposed to have two 6 foot-wide bike lanes from Foley to Rusk, which covers a distance of 5,500 feet and estimated to cost \$574,200. Sampson/York Street is proposed to have two 6 foot-wide bike lanes from Navigation to Capitol, which covers a distance of 4,000 feet and estimated to cost \$417,600.

It is proposed to incorporate new bike routes on 3 major streets serving the study area. Schweikhardt Street

is proposed to have a bike route from Lyons to Clinton, which covers a distance of 3,500 feet and estimated to cost \$60,900. Eastwood Street is proposed to have a bike route from Buffalo Bayou to Rusk, which covers a distance of 6,000 feet and estimated to cost \$104,400. Rusk Street is proposed to have a bike route from Milby to Lockwood, which covers a distance of 3,300 feet and estimated to cost \$57,420.

All cost estimates include partial roadway reconstruction of the outer lane, including curb and gutter pan. Costs would be less if the roadway is in good enough condition that only restriping is required.

B-Cycle Bike Share

Due to the proposed Hike and Bike Trails and new bike lanes, the demand for loaner bicycles will increase. B-Cycle, a private company, has established numerous bike-share stations in central Houston, and it is proposed that their network be expanded with 8 stations within the study area, located near transit stations, recreational areas, and major attractors.

- Harrisburg Blvd and N York St (Coffee Plant / Second Ward METRORail)
- Harrisburg Blvd and Lockwood Dr (Lockwood / Eastwood METRORail)
- Commerce St and Drennan St (terminus of Harrisburg and Sunset H&B Trail)
- Navigation Blvd and Sidney St (Ripley House)
- Lemke St and N York St (Tony Marron Park parking lot)
- Armour Drive and north Buffalo Bayou Hike and Bike Trail (east of Buffalo Bayou)
- Sonora St and Finnigan Park (Finnigan Park parking lot)

- Farmer St and Lockwood Dr (Fifth Ward / Denver Harbor Transit Center)

Street Network

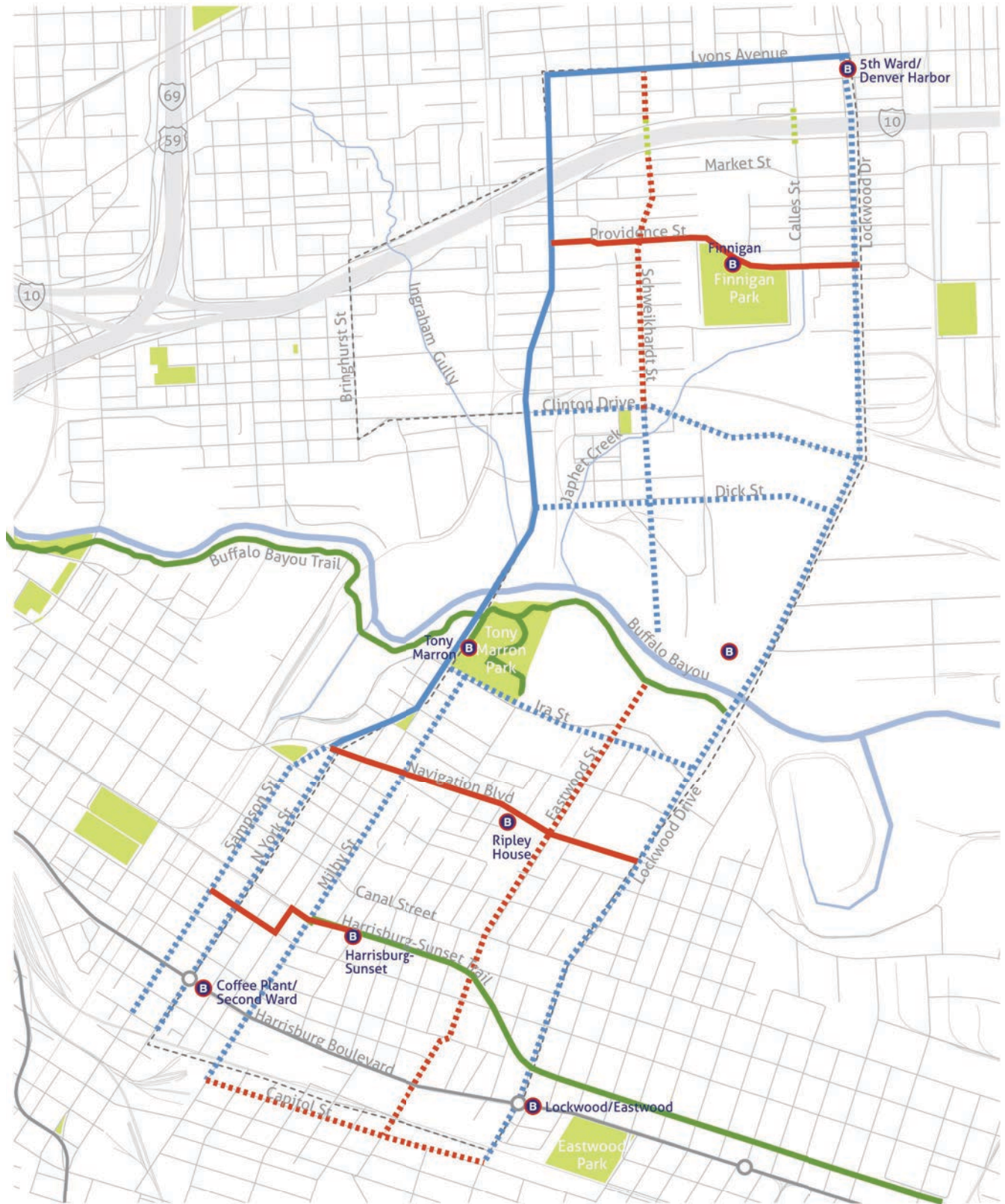
It is recommended to define the street network directly north and south of the Buffalo Bayou to improve the connectivity on both areas in the event that the existing industrial land uses relocate, making the site available for redevelopment. It is proposed to construct 15 new local street segments totaling 2.94 miles and estimated to cost \$17,625,815. Two additional local street segments, totaling 0.42 miles, would require reconfiguration and is estimated to cost \$3,127,161. Local street cost estimates include a 20% increase for installing culverts. A typical section of a proposed local street is shown on the following page.

It is proposed to construct 10 new collector street segments totaling 3 miles and estimated to cost \$17,238,902, which would only incur when development demands. Three additional collector street segments, totaling 0.34 miles, would require reconfiguration and is estimated to cost \$2,448,708. Additionally, Eastwood Street is proposed to connect to a third bridge for vehicles crossing Buffalo Bayou within the study area, which is estimated to cost \$3,654,000. A typical section of a proposed collector street is shown on the following page.

Market Street, from Schweikhardt to Lockwood, is proposed to be redeveloped by installing lighting, benches, bike racks, and trash receptacles, which is estimated to cost \$807,070. This road serves as a collector street for Wheatley High School and Evergreen Cemetery.

Two trails are proposed north of the Buffalo Bayou. Japhet Creek multi-use trail is proposed to be 12 feet wide, 0.63 miles long (Buffalo Bayou to Finnigan Park), and estimated to cost

Proposed Bicycle Network



Existing Bicycle Facilities

- Bike Lane
- Bike Route
- Shared-use Path

Proposed Bicycle Facilities

- ⋯ Bike Lane
- ⋯ Bike Route
- ⋯ Shared-use Bridge

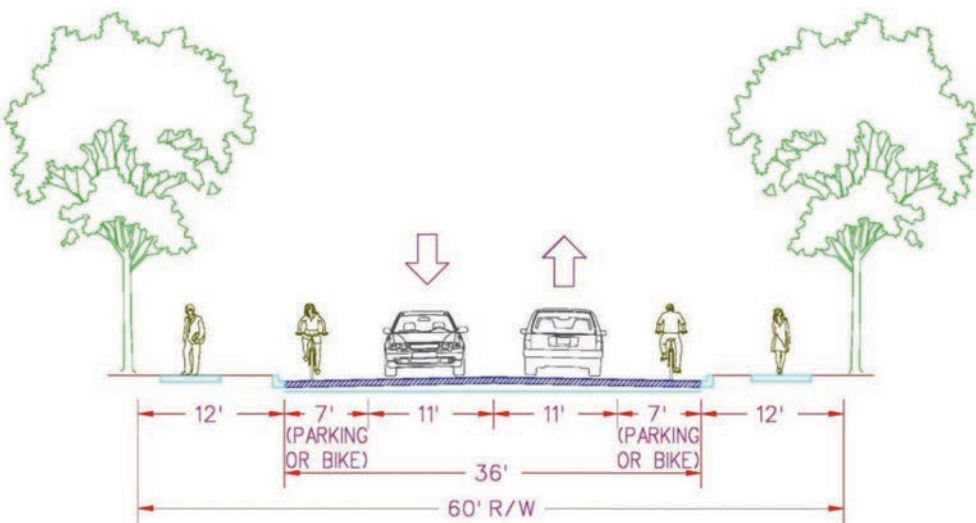
B B-cycle Bike Share Station

■ Parks

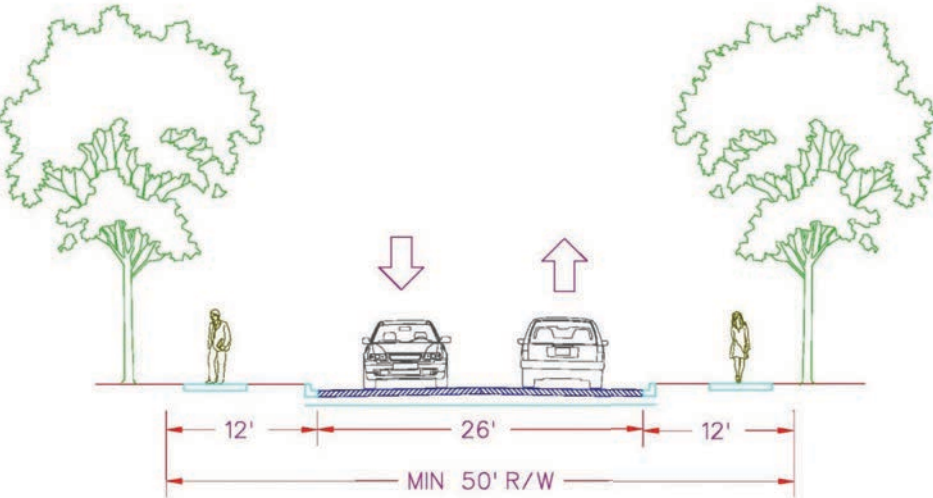
○ METRORail East Line

1/2 mile

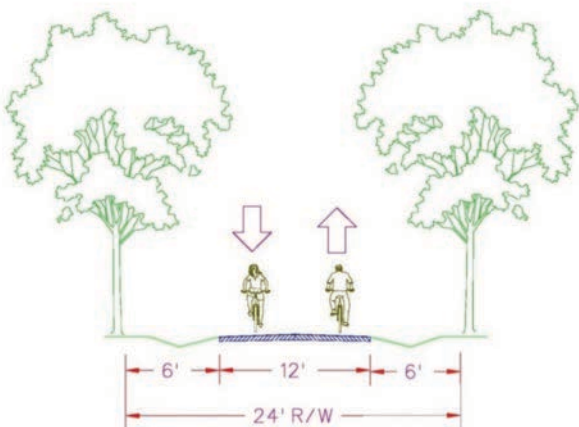
Sources: H-GAC, COH, LAN



Collector Street Typical Section



Local Street Typical Section



Trail Typical Section

\$65,781. The proposed Buffalo Bayou multi-use trail would serve pedestrians and cyclists north of the bayou and proposed to be 12 feet wide, 0.61 miles long (Hirsch to Lockwood), and estimated to cost \$645,606. Both trails are proposed to have a configuration as the typical section shown on the left.

Several METRO bus stops were determined to need bus shelters due to poor existing conditions and key locations at major intersections within the study area. Below is a list of 21 bus stops proposed to be renovated with a bus shelter; the total construction cost is estimated at \$105,000. All new shelter locations shall be checked for proper sight distances.

- Providence St at Waco St (WB)
- Hirsch Rd at Gillespie St (SB)
- York St at Ball St (SB)
- Sampson St at Preston St (SB)
- York St at Garrow (NB)
- Harrisburg Blvd at Sampson St (EB)
- Harrisburg Blvd at York St (EB)
- York St at Capitol (NB)
- Clinton Dr at Schweikhardt St (EB)
- Market St at Calles St (WB)
- Lockwood Dr at East Freeway (SB)
- Lockwood Dr at Stonewall St (NB)
- Lockwood Dr at Clinton Dr (NB)
- Lockwood Dr at Harvey Wilson Dr (NB)
- Lockwood Dr at Crites (NB)
- Lockwood Dr at Crites (SB)
- Lockwood Dr at Navigation Blvd (NB)
- Lockwood Dr at Navigation Blvd (SB)
- Lockwood Dr at Canal St (NB)
- Lockwood Dr at Harrisburg (NB)
- Lockwood Dr at Harrisburg (SB)

Proposed Transit Improvements



Planned Bus Network (from METRO System Reimagining)
Expected to take effect in August 2015

1/2 mile

- 10/11 Dallas Polk
- 12 Memorial Canal
- 15 Lyons
- 16 White Oak Quitman
- 17 Ella 11th Clinton
- 20 MLK Lockwood Calvacade
- 62 Cullen Hirsh
- 65 Homestead Greens
- 66 OST Wayside
- 77 Market
- 120 FW/DH Northshore Flyer
- 376 FW/DH Flex

- Proposed Bus Shelter
- METRORail East Line

Sources: H-GAC, METRO, LAN

Construct bridges that serve as connectors, and strengthen neighborhood identity.



TYPE

1 2 3 4 5 6

LIVABILITY PRINCIPLES

1 2 3 4 5

PROJECT GOALS

IMPLEMENTOR

City of Houston

PARTNERS

TxDOT
Greater East End
Management District
Fifth Ward CRC

Buffalo Bayou

Two new pedestrian bridges are proposed to be located over Buffalo Bayou. One will connect Japhet Creek Trail and the Southern Buffalo Bayou Trail. The second pedestrian bridge is proposed to connect the north and south Buffalo Bayou Trails and will be located on the east side of the study area. Both are estimated to be 14 feet wide, 500 feet long, and the construction fee is estimated to be \$751,100 each. The location of these bridges is not tied to a specific street since the street grid is not yet in place in these areas. Depending on the development scenario selected, the bridges should align with one or more streets or pedestrian ways. It is also recommended to design a unique or iconic bridge type, similar to what has been done in the reaches of the Bayou in and west of Downtown. Sample bridges in this area include the ones just east of Montrose Boulevard and the one at Jackson Hill.

An additional pedestrian bridge is proposed to be located over Clinton Drive to connect both segments of the proposed Japhet Creek Trail. It is estimated to be 14 feet wide, 200 feet long, and the construction fee is estimated to be \$353,220. The construction of “pedestrian bridges” over the bayous is not a funded category in the City’s Capital Improvement Projects, and other funding sources will need to be acquired.

IH-10 Pedestrian Bridges

Two pedestrian bridges are located within the study area and both give commuters access to the north and south side of IH-10. The first bridge, shown in the left Figure, is aligned with Schweikhardt Street and spans 320 feet. This pedestrian bridge is in fair condition but maintenance is required. The bridge is filled with trash and broken glass which constitute a pedestrian hazard, pedestrian ramps are worn, and a concrete gap needs to be covered (shown in the images on the following page).

The second pedestrian bridge is aligned with Calles Street and spans 365 feet across IH-10. This pedestrian bridge is in fair condition but maintenance is required. The bridge is filled with trash and broken glass which constitute a pedestrian hazard, pedestrian ramps are needed and poorly-maintained landscaping surrounds both bridge entrances. This bridge was observed to be heavily used by pedestrians, possibly from the nearby Phyllis Wheatley High School. The eastbound IH-10 off ramp is 215 feet from the bridge, and the high speed of traffic causes pedestrians to run across the East Freeway feeder road.



Recommendations

It is recommended both pedestrian bridges undergo maintenance to make them more attractive and safer for their users in the short-term. Bridge replacement is not now recommended at any specific time, though for the long-term, the City or other responsible entity should perform a more thorough engineering assessment to determine their remaining useful life. The bridges do provide needed north-south connectivity, and it would be unacceptable to simply remove them.

The maintenance cost estimate includes landscape maintenance, litter removal, fencing, armor joints, pedestrian ramps, and traffic control. The maintenance is proposed to occur once and estimated to cost \$125,280 for the Schweikhardt pedestrian bridge \$142,898 for the Calles pedestrian bridge.

Each new 380 foot-long pedestrian bridge is estimated to cost \$641,611. This includes traffic control on IH-10. It is recommended, once it is time to replace the pedestrian bridges, they be turned into 14 foot wide shared-use bridges to give cyclists safer routes over IH-10. The cost listed assumes a simple replacement structure of similar style to the existing bridges; as part of the upgrades and economic development of the area, it is recommended that an iconic/unique structure be developed, to both increase visibility and confirm a sense of public investment in the area. Examples include the arched (roadway) bridges over US 59 in Montrose, and the different designs for pedestrian bridges along Buffalo Bayou west of Downtown.



Calles Street bridge across IH-10

Establish a connected pedestrian network.



IMPLEMENTOR

Greater East End
Management District
Fifth Ward CRC

PARTNERS

City of Houston

Existing Conditions

During a field visit on Tuesday, September 9, 2014 many sidewalks were noticed to be in poor condition within the study area. For example, the figure below shows the lack of connectivity between sidewalks south of the Lockwood Buffalo Bayou Bridge. Below is a list of blocks whose sidewalks require maintenance and/or repair. Tier 1 sidewalks are directly adjacent to major destinations like transit stations, commercial facilities, schools, and the Buffalo Bayou. Tier 2 sidewalks serve the major destinations previously mentioned. Streets aligned along the north-south direction, like Lockwood Drive and York/Hirsch/Waco, were mainly studied to reinforce the north-south connectivity over Buffalo Bayou. Tier 3 consists of all other streets (major and local) in the study area; it is of course important to focus on major streets, but from an accessibility standpoint, they represent only a portion of what is required to make the area truly walkable. Local streets must be improved as well.

Tier 1 sidewalks total approximately

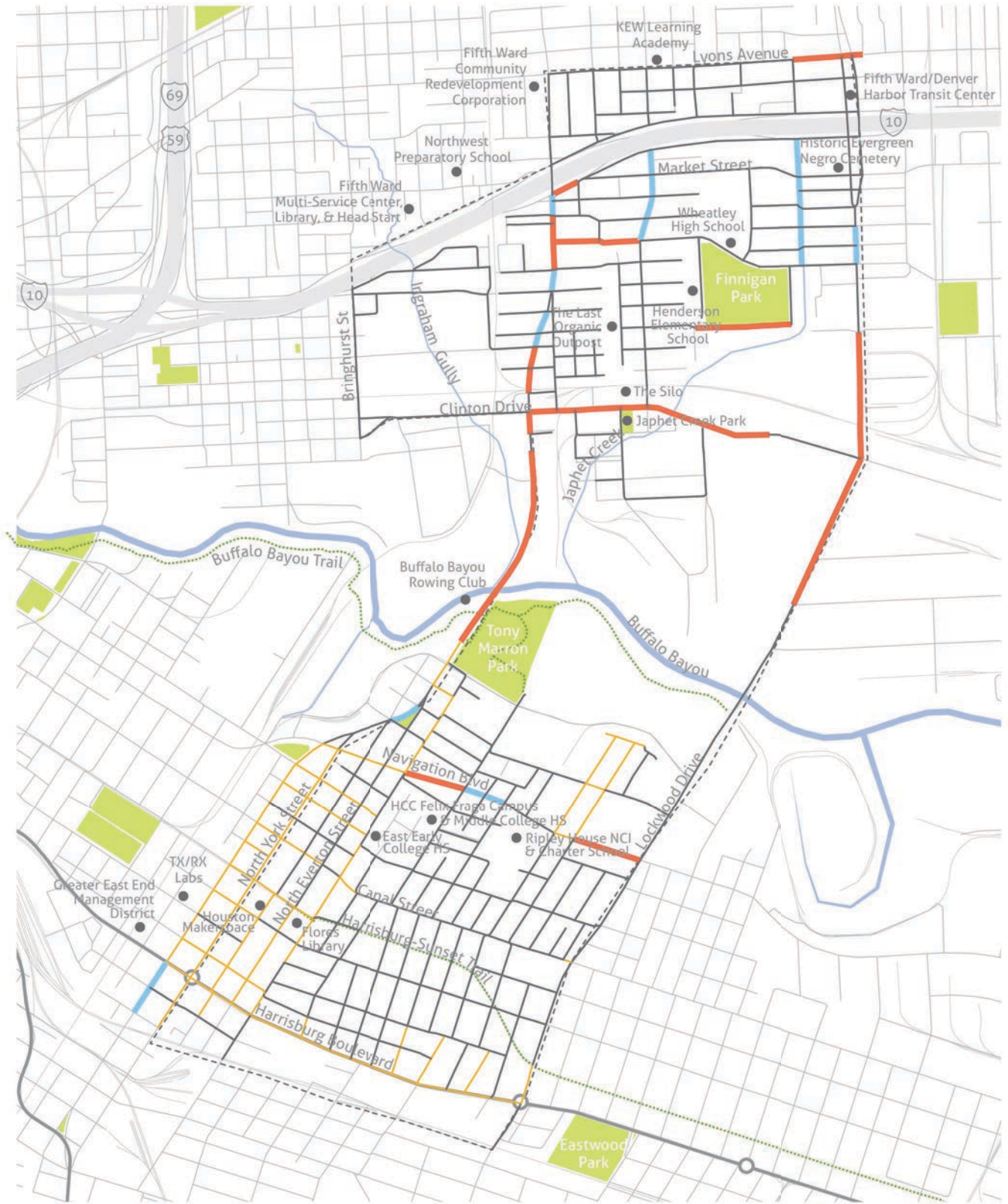
12,715 linear feet; tier 2 sidewalks total approximately 6,184 linear feet, both itemized in the table below. Tier 3 consists of all remaining streets in the study area and totals approximately 360,000 linear feet (sidewalks estimated as double the total street length).

Recommendations

It is recommended for Tier 1 sidewalks and pedestrian ramps to be addressed first as they serve major public destinations in the study area. Walking is an important form of transportation; therefore, all new streets proposed to be located within the study area should include 6 foot-wide sidewalks on both sides and pedestrian ramps that meet current ADA, TAS, and City standards. Sidewalks should follow the City's current standard of 6 feet for transit corridors. Tier 2 and Tier 3 sidewalks should be improved in turn as funding becomes available.



Proposed Sidewalk Improvements



- Sidewalk Improvements**
- Completed (GEEMD)
 - Tier 1 sidewalks
 - Tier 2 sidewalks
 - All other sidewalks

- Parks
- METRORail East Line
- Trails
- Neighborhood Destinations

1/2 mile

Sources: H-GAC, COH, METRO, GEEMD

Sidewalks are not constructed as separately funded projects for Capital Improvement Projects, with the exception of the Pedestrian Accessible Review (PAR) program. Current city standards call for the construction of a minimum 5-foot wide unobstructed sidewalk unless it is on a transit corridor/ "A" Street or a specific adjacent land use requires a wider pedestrian path. Source: City of Houston Public Works and Engineering Department.

Cost Estimate

Installing a missing sidewalk would cost \$6 per square foot. Removing and replacing an existing sidewalk would cost \$8 per square foot. Based on the City of Houston standard of 5-foot-wide sidewalks, this translates to \$30 and \$40 per linear foot, respectively. Required street trees, as per City of Houston ordinances, are estimated to cost \$28 per linear foot of replaced/installed sidewalk. Along major streets in the East End Management District, benches, trash receptacles, bike racks, cast stone street names, and bronze medallions, are indicated in earlier planning documents; these are included on Tier 1 and Tier 2 segments located in Greater East End Management District and estimated to cost \$97 per linear foot of sidewalk based on previous work by the Goodman Corporation. On local streets that are currently not curb-and-gutter, the installation of a new sidewalk may require a 24" culvert. None of the Tier 1 and Tier 2 sidewalks require this additional work. Culverts are estimated to cost approximately \$2 per linear foot of replaced/installed sidewalk and may be required on approximately 50% of the Tier 3 streets; the Tier 3 cost estimate includes this.

The recommended Tier 1 sidewalk redevelopment is estimated to cost approximately \$5,411,000. Tier 2 is estimated to cost approximately an additional \$1,544,000. Tier 3 is estimated to cost approximately an additional \$22,158,480. Note that many neighborhood streets may need resurfacing or reconstruction, although a pavement condition assessment was not part of this project. It is recommended that the City of Houston continue its existing pavement condition assessment by prioritizing this area before any major sidewalk or bike-lane construction takes place, as it may be advisable to complete any required overall roadway work at the same time.

SIDEWALK MAINTENANCE: Tier 1			In a Special District?		
Description	Condition	Length (FT)	GEEMD	TIRZ #23	TIRZ #18
Lockwood SB (Railroad track north of Clinton)	Missing	105	no	no	yes
Lockwood SB (Clinton to Harvey Wilson)	Poor	1,030	yes	no	no
Lockwood SB (South of the Buffalo Bayou Bridge)	Missing	160	yes	yes	no
Lockwood NB (Railroad track north of Clinton)	Missing	60	no	no	yes
Waco SB (Sharon to Buck)	Poor	590	no	no	partially
Hirsch SB (Cline to Railroad tracks)	Poor & Missing	260	no	no	no
Hirsch SB & NB (South of Buffalo Bayou Bridge)	Missing	100	yes	yes	no
Hirsch NB (North of Buffalo Bayou Bridge to Clinton)	Poor & Missing	800	yes	no	no
Hirsch NB (Railroad track to Gillespie)	Poor & Missing	480	no	no	no
East Freeway EB (Waco to Upton)	Poor	150	no	no	yes
Lyons WB (At Lockwood)	Poor	80	no	no	yes
Coke EB (Finnigan Park to Calles)	Missing	630	no	no	yes
Providence EB (Waco to Schweikhardt)	Poor	950	no	no	no
Providence WB (Waco to Schweikhardt)	Poor	870	no	no	no
Clinton EB (Ida to Emile)	Poor	500	yes	no	no
Clinton EB (Emile to E of Japhet)	Missing	1,270	yes	no	no
Clinton WB (Hirsch to Schweikhardt)	Poor	1,320	yes	no	mostly
Clinton WB (Schweikhardt to E of Japhet)	Missing	1,100	yes	no	yes
Navigation EB (Everton to Drennan)	Poor	860	yes	yes	no
Navigation EB (Super to Lockwood)	Poor	730	yes	yes	no
Navigation WB (Drennan to Milby)	Poor	440	yes	yes	no
Missing Length		4,225			
Poor Length		8,260			
Total Length		12,485			

SIDEWALK MAINTENANCE: Tier 2			In a Special District?		
Description	Condition	Length (FT)	GEEMD	TIRZ #23	TIRZ #18
Lockwood SB (Arapahoe to Margarita)	Poor	50	no	no	no
Lockwood NB (Sonora to Arapahoe)	Poor	329	no	no	no
Waco SB (East Freeway to Sharon)	Poor	125	no	no	yes
Waco SB (Buck to Hare)	Poor	180	no	no	no
York SB (North of Hutcheson)	Poor	150	yes	yes	no
Sampson SB (Harrisburg to Capitol)	Poor & Missing	580	yes	yes	no
Hirsch NB (Gillespie to Gunter)	Poor	360	no	no	no
Schweikhardt NB (East Fwy to Providence)	Poor	880	no	no	no
Schweikhardt SB (East Fwy to Providence)	Poor	880	no	no	no
Calles NB (East Fwy to Sonora)	Poor	680	no	no	partially
Calles SB (Arapahoe to Margarita)	Poor	200	no	no	no
Clinton EB (Hirsch to Ida)	Missing	500	yes	no	no
Navigation EB (Drennan to Estelle)	Poor	220	yes	no	no
Navigation WB (Eastwood to Super)	Poor	180	yes	no	no
Navigation WB (Drennan to Sidney)	Poor	420	yes	no	no
Navigation WB (Drennan to Milby)	Missing	220	yes	yes	no
Missing Length		1,300	1,300		
Poor Length		4,654	970		
Total Length		5,954	2,270		

6 BUILD



Subject Areas

The big opportunity for “building” is redeveloping the large Buffalo Bayou-fronting industrial properties. Several of these are already abandoned and/or have been acquired by the City of Houston or the Buffalo Bayou Partnership. There is great potential to conserve public access and enjoyment of Houston’s most iconic natural asset. The BUILD recommendation seeks to transform the character of this segment of Buffalo Bayou to create a unifying amenity for the Fifth Ward and East End that includes a mix of uses: residential, commercial, parks and open space, and civic uses.

.....

In looking at the 1,210 acres of Study Area, there are several striking existing features that must be addressed if both the East End and the Fifth Ward neighborhoods are to evolve in a sustainable way. First, the loss of remaining historic housing stock and the vacant lots - particularly in the Fifth Ward - undermine its viability of a cohesive community. Second, the predominance of large industrial tracts fronting Buffalo Bayou – many of which are vacant - are a major barrier between the neighborhoods and this great open space asset.

Therefore, the two key BUILD recommendations are:

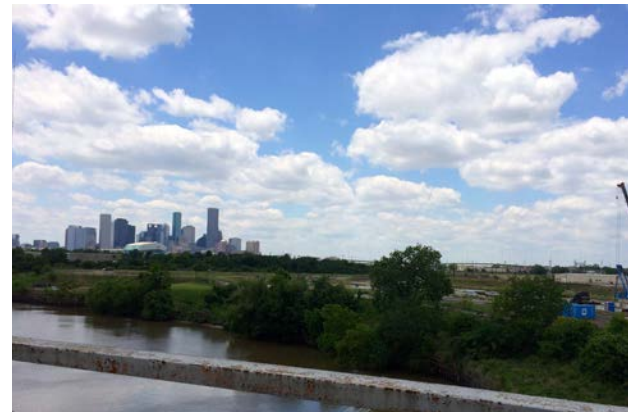
1. To preserve, sensitively infill, and revitalize the core single-family areas in both the East End and the Fifth Ward (which has been discussed in the HOUSE chapter above); and
2. To establish a planning framework for the large, Bayou-fronting properties that:
 - balances open space and new, mixed use development,
 - connects and unites the two neighborhoods,
 - restores the ecological integrity of the area; and
 - brings appropriate new investment.

While there has historically been a strong sense of community in both the East End and the Fifth Ward, as evidenced by the many churches and older single-family homes, there is a concern on both sides of the Bayou that their neighborhoods are at risk of losing

their unique, historic character through tear-downs and redevelopment. Given the proximity of the Study Area to downtown, the promise of the Bayou as a major public amenity, the special character of these neighborhoods, as well as the townhouse redevelopment that has already occurred at its western edge, there is no doubt that significant private redevelopment is in store for both communities.



Northern Shore of Buffalo Bayou Study Area



View of downtown from the Hirsch Road Bridge over Buffalo Bayou

This chapter focuses on the second of the two BUILD recommendations: how best to redevelop the almost 250 acres of industrial properties in the Study Area in a way that links to, is compatible with and supportive of the existing communities on both sides of the Bayou, as well as the Bayou itself.

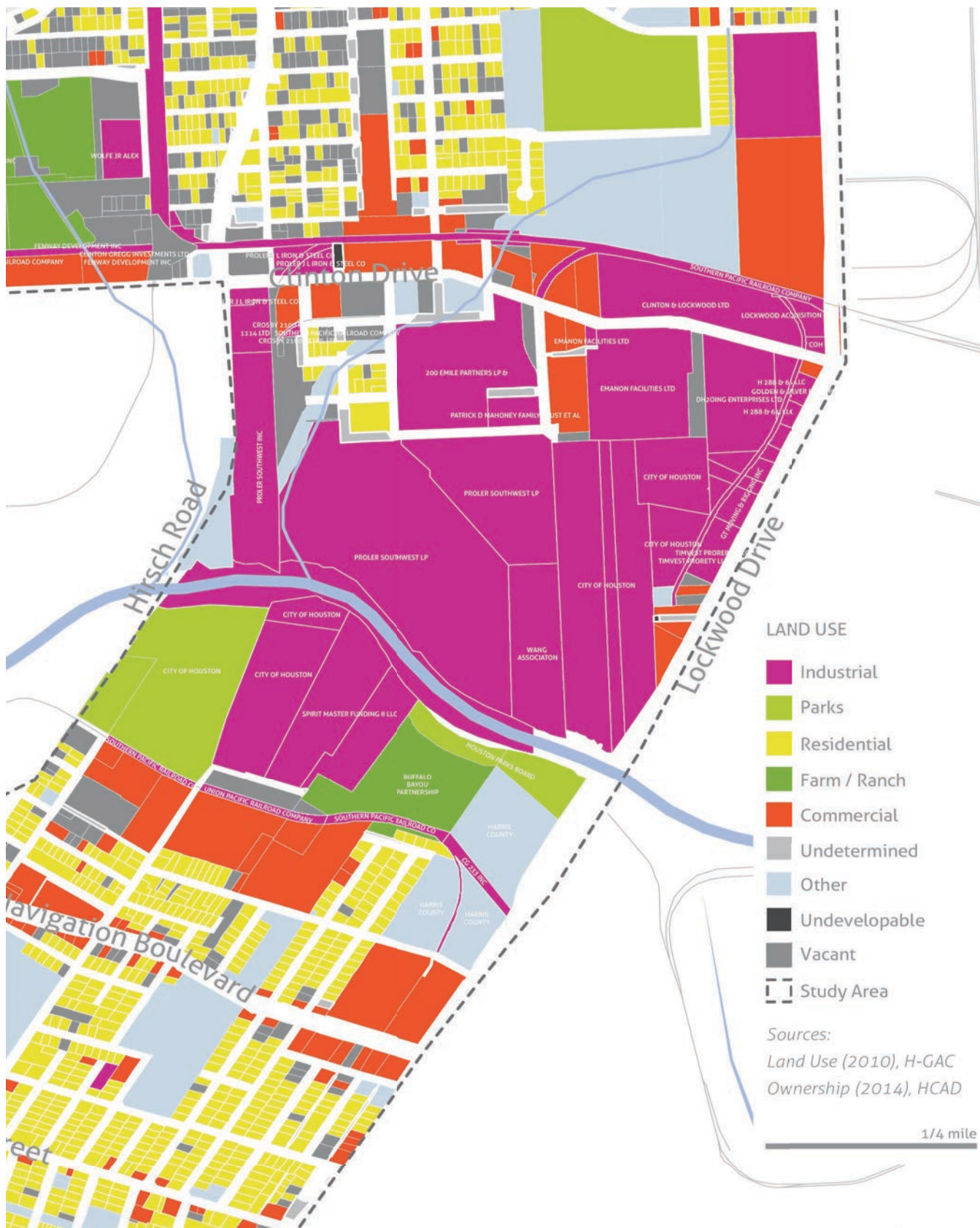
The City of Houston (COH) and the Buffalo Bayou Partnership (BBP) have taken leadership in this arena through their acquisition of 88.3 acres of the Bayou-fronting properties, within and just east of the Study Area, and on both sides of the Bayou. See Map of Publicly-Owned, Bayou-Fronting Properties on the facing page. The BBP aims to acquire as many of these properties as possible, or at minimum, acquire generous easements along the shorelines to extend and complete a hike-and-bike trail system as far as Turkey Bend on the south side of the Bayou, immediately east of the Study Area. This will serve the two communities, link them directly to the downtown, and create the kind of open space amenity that will make the Study Area highly attractive to new residents and businesses.

The redevelopment of these deep, industrial properties in an orderly and positive way, hinges on being able to create and adopt (as part of the City of Houston's Complete Streets and Transportation Plan) a basic network of "Complete Streets" and open spaces that establish the framework and scale for new development; and if and when this land is sold for redevelopment. The CONNECT chapter has made recommendations about how best to approach implementing a more multi-

modal transportation network for the existing streets and trails, and the following section of the BUILD chapter describes a strategy for creating a new, "Complete Streets" network for the Bayou-fronting properties. The proposed street system extends the existing network north-south and across the Bayou, and east-west, to link the Study Area with adjacent areas. The proposed complete streets network sets a framework of appropriately-sized blocks for open space and new development. As redevelopment occurs, additional transit service should be allocated as well.

The scenarios developed in this chapter are conceptual only, and actual redevelopment would be adapted to fit the parcels as they become available.

Map of Publicly-Owned Bayou-Fronting Properties (Per Head, 2014)



6.1 Redevelop the Buffalo Bayou industrial properties.



TYPE



LIVABILITY PRINCIPLES



PROJECT GOALS

IMPLEMENTOR

Buffalo Bayou Partnership

PARTNERS

*City of Houston
Private Sector
Greater East End
Management District
Fifth Ward CRC*

Perhaps the largest opportunity for building is in the redevelopment of the large Buffalo Bayou-fronting industrial properties. Several of these are already abandoned and/or have been acquired by the City of Houston or the Buffalo Bayou Partnership (BBP), with the intent of completing the envisioned 10-mile greenway system of great urban parks, linking Memorial Park on the west to the Ship Channel's Turning Basin (Turkey Bend), just east of the Study Area. Ultimately, BBP hopes to acquire as many Bayou-fronting properties as possible to conserve public access and enjoyment of what is called "Houston's most iconic natural asset". However, the outcome of the potential developments are dependent on what properties become available for sale, and BBP's ability to acquire them.

Three Possible Scenarios

The three possible scenarios shown on the following pages for redeveloping the industrial properties flanking the Bayou were presented to the community and stakeholders from November 2013 through February 2014. These describe three possible approaches to establishing a new street network, open space and new development. For comparative purposes, each of the scenarios set aside roughly the

same amount of open space, although its location and distribution varied considerably. Scenario 1 concentrated all of the open space directly along the shoreline, while Scenario 3 distributed the open space throughout the Fifth Ward and East End neighborhoods, and Scenario 2 represented a middle ground between the two.

All scenarios contemplated extending the existing roadway system through the Bayou-fronting industrial properties, as it is assumed that one day these will transition to a broad mix of other uses and activities, including parks and greenways, urban agriculture, recreational playfields, special parks, civic institutions and services, residential and office buildings, retail shops and restaurants. A new street network that defines reasonably-sized, developable blocks will connect the single-family neighborhoods of the Fifth Ward and East End to the amenities and new activities at the Buffalo Bayou waterfront.

The community was asked to comment on which scenario they preferred, and more specifically, what they felt were the desired elements of each. Ultimately, the community was evenly split in their support of the three, and a new, "hybrid" scenario was developed from the most favored elements of each. The three scenarios are described and illustrated on the following pages.

Aerial Map of Buffalo Bayou-Fronting Properties with Key Shoreline Views



1) Hirsch Road Bridge looking west



2) Hirsch Road Bridge looking east



3) Hike-and-Bike Trail looking west



4) Hike-and-bike trail looking north



5) Under Lockwood Drive Bridge looking west to hike-and-bike trail



6) Lockwood Drive looking east to BBP-owned property

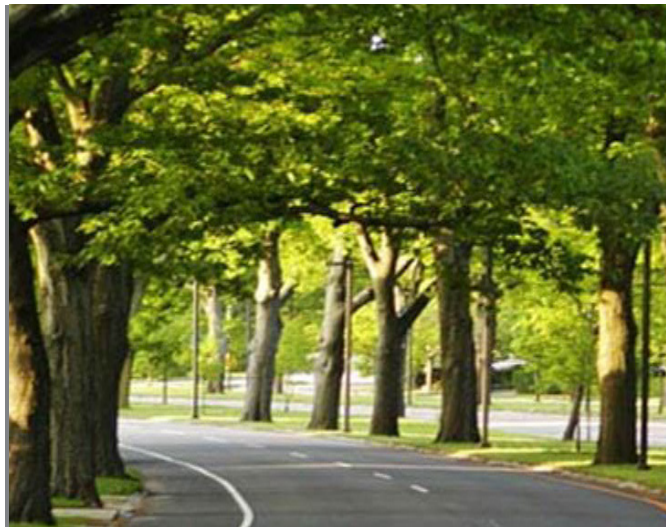
Scenario 1: “Full Depth” Bayou-Fronting Open Space

Convert all publicly-owned land - as well as any Bayou-fronting industrial lands acquired - to parks and open space. Link these spaces to the 5th Ward and the East End by extending a system of “green fingers” comprised of streets and trails through to the Bayou shores, where a continuous waterfront trail system would be located along both its sides.

Today, Buffalo Bayou Partnership (BBP) and the City of Houston (COH) already own property fronting the Bayou in the Study Area. Simply converting these to open space would create approximately 100 acres of new open space. In doing so, BBP would need to acquire access easements of at least 50 to 100 feet wide from Bayou-fronting property owners, so that this region-serving trail system may be accomplished along both sides of the Bayou. This incremental approach to establishing the Bayou-fronting parkland could result in a “necklace” of parks linked by shoreline trails and waterfront-oriented development on the privately-owned, industrial properties, but it could also miss such opportunities if these property owners do not cooperate.



Back Bay Fens, Boston, Massachusetts: aerial photo and parkway road



Scenario 1: "Full Depth" Bayou-Fronting Open Space



Waterfront Park, Louisville, Kentucky



Hermann Park, Houston, Texas

Scenario 2: Continuous Shoreline Open Space Corridor

Collaborate with private property owners to create a broad, linear park along the Bayou - similar to its western segment. Orchestrate land trades and strategic acquisitions to promote a consistent and coordinated pattern of open space and development along the shoreline.

Today, by leveraging the significant value of its land, BBP in conjunction with other partners, could incentivize major property owners along the Bayou to develop a consistent setback from the shoreline, resulting in a major east-west parkway system and an appropriately-scaled pattern of roadways connecting to the inland neighborhoods. Utilizing land trades, the BBP and COH could promote a more coordinated pattern of waterfront-oriented development aimed at achieving a high-quality environment with compatible development, and a bicycle and pedestrian-friendly place.



Western reach of Buffalo Bayou

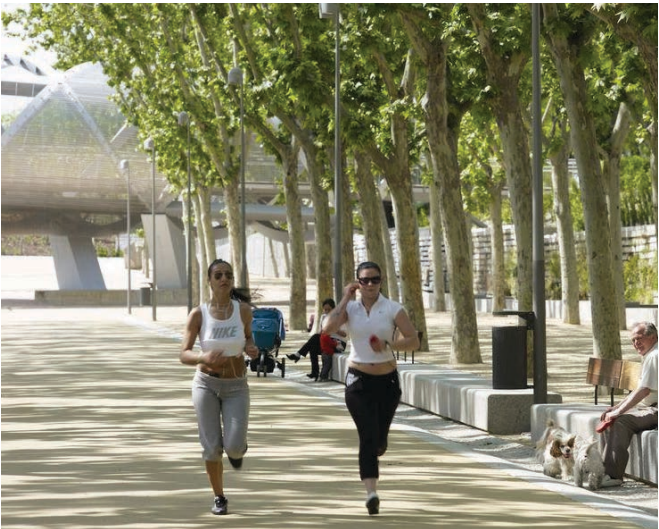


Crissy Fields, San Francisco, California: public green and shoreline trail

Scenario 2: Continuous Shoreline Open Space Corridor



Rio Madrid, Spain: riverfront promenade linking major new parks



Scenario 3: Active Shoreline Promenade

Collaborate with property owners throughout the entire Study Area to create a diverse network of open spaces along the Bayou and within the East End and Fifth Ward neighborhoods.

This strategy calls for the BBP and its partners to work with property owners throughout the Study Area to develop a comprehensive network of open spaces which could include:

1. A diverse system of waterfront open spaces from urban promenades to large parks;
2. North-south green fingers along newly developed streets to connect the Bayou with upland neighborhoods and their key open spaces, schools and community facilities; and
3. A system of smaller parks within walking distance of all homes in the existing and new neighborhoods.

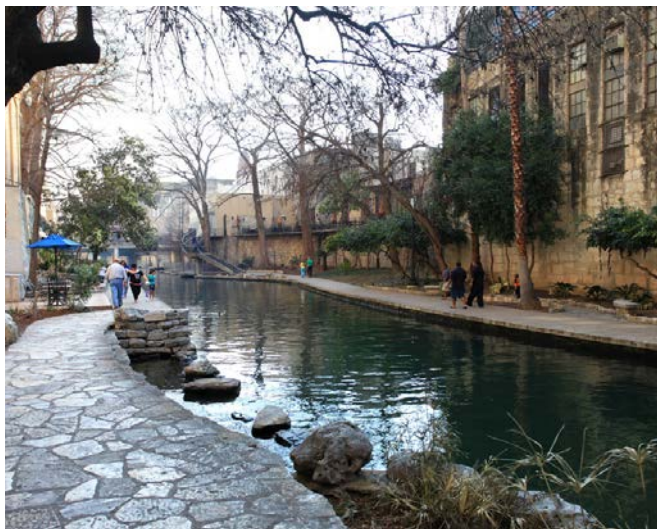
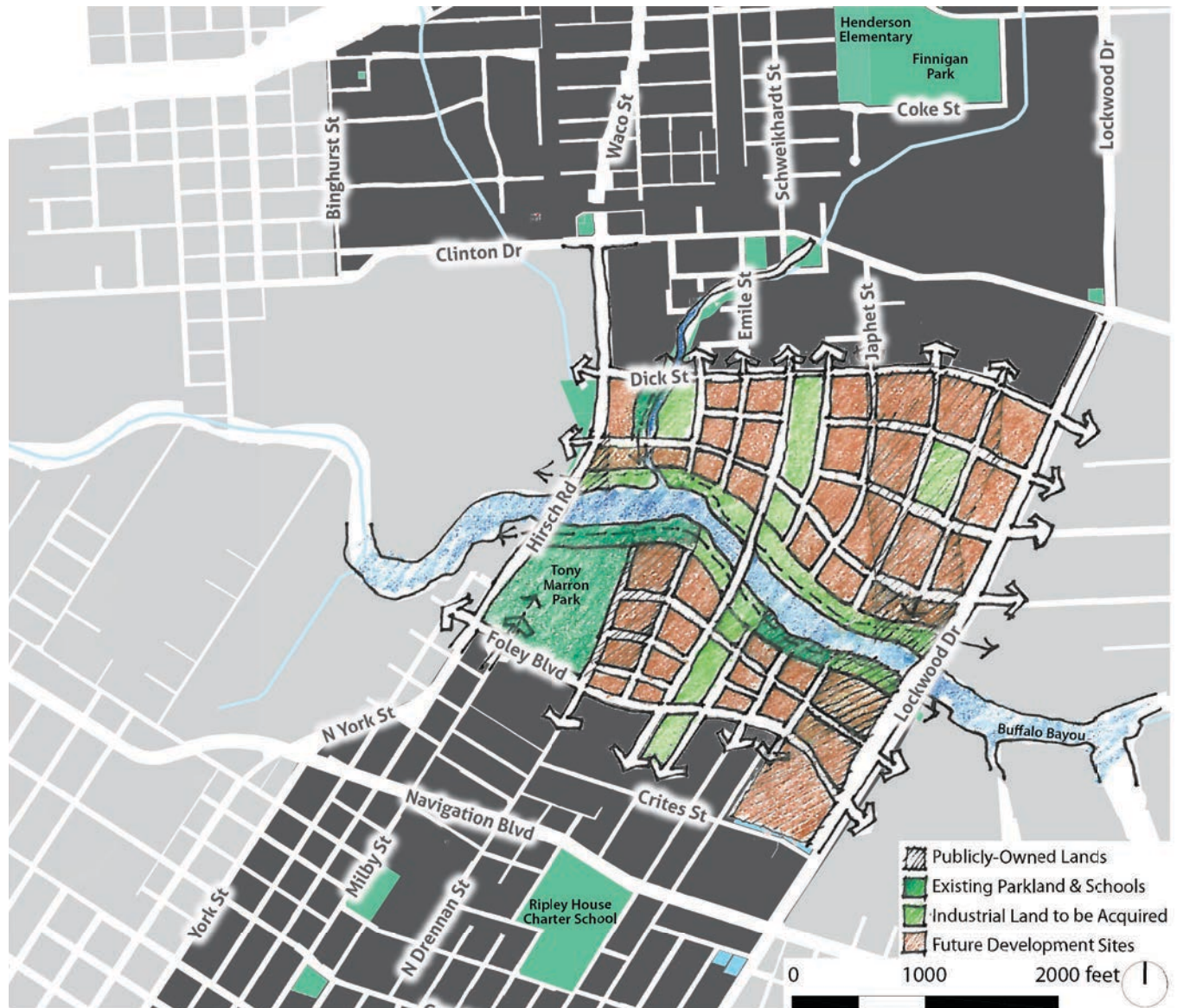


Granville Island, Vancouver, Canada



Coal Harbour, Vancouver, Canada

Scenario 3: Active Shoreline Promenade



Riverwalk, San Antonio, Texas: original promenade (left) and the River North (right)

The Hybrid Scenario

A fourth, “hybrid” scenario (right) was developed after a final meeting with the three stakeholders and the City of Houston, integrating the community’s most desired features of each of the three scenarios. A new Complete Streets grid of streets and trails creates the framework for a future master plan that ensures good connectivity for transit, cars, bicycles and pedestrians throughout the Study Area. These new streets - that would be adopted as part of Houston’s Transportation/Thoroughfare Plan - also define a system of new, public open spaces and developable blocks that may be further subdivided, as smaller, local roads or pathways are introduced.

As discussed above, a new, multi-modal Schwiekhardt Street Bridge will connect the two communities across the Bayou from one another, around which will be a new “Waterfront Village” surrounded by open spaces and anchored to the shoreline with a pedestrian, “Waterfront Promenade” about one-quarter mile long.

This new village will create a new heart in common with both communities,

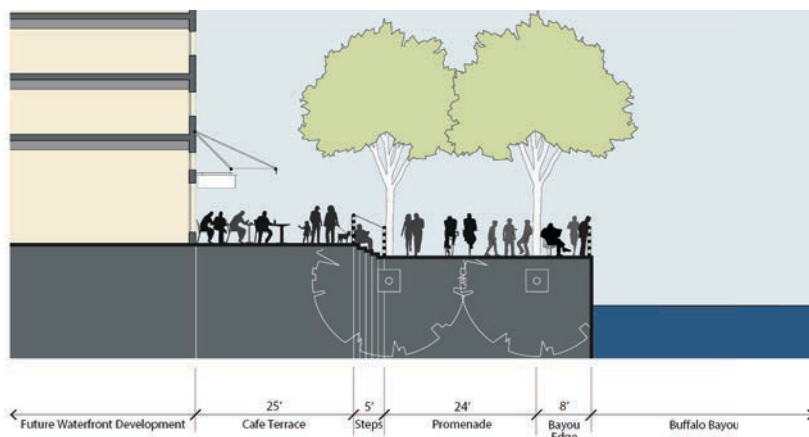
and could be developed as a dense, mixed-use node located in the center of the Study Area, midway between Lockwood Drive and Hirsch Road and on both shores of the Bayou. This - the densest and most highly-public zone in the Study Area - will allow people to enjoy the waterfront with direct access to cafes, shops, entertainment, mixed-use housing and offices, and cultural and civic uses.

On the Future Redevelopment/Reuse Concept Plan (right), this area is color-coded as follows:

- **green**, signifying existing and proposed parks and open spaces;
- **yellow**, signifying areas of the core neighborhoods where preservation of the single-family character is important;
- **orange**, signifying those areas desired for redevelopment and/or adaptive reuse of existing structures.

The “green” and “orange” areas are concentrated along the industrial Bayou waterfront - south of Clinton Drive in the Fifth Ward and north of Navigation Boulevard in the East End. These are linked through the system of Complete Streets that connect the neighborhoods to one another, to the Bayou-front and to adjacent areas. In addition, some new open spaces and greenways, as well as enhancements of existing parks and open spaces, are proposed farther inland of the Bayou - as desired by the community during the testing of the three scenarios. The redevelopment of the “orange” areas are currently occupied by business owners, and their interest is necessary to achieve the vision of the Conceptual Plan.

Cross-section through Waterfront Promenade



Future Redevelopment/Reuse Concept Plan



Create a new waterfront village surrounded by a variety of open spaces.



TYPE



LIVABILITY PRINCIPLES



PROJECT GOALS

IMPLEMENTOR

Buffalo Bayou Partnership

PARTNERS

*City of Houston
Japhet Creek Community
Greater East End
Management District
Fifth Ward CRC
Private Sector*

Illustrative Plan of the Buffalo Bayou Redevelopment Areas

The Illustrative Plan (right) shows one possible “build-out” of the Bayou-fronting industrial properties south of an improved and extended Dick Street in the Fifth Ward, and those north of the new “Foley Boulevard” in the East End - currently a freight railroad spur. This Plan illustrates a possible configuration of new development and open space that create the Waterfront Village. The north and south halves of the Waterfront Village area are about 50 acres of new mixed-use development – which could include private residential and office towers with ground-level retail, restaurants and entertainment, as well as cultural or civic buildings and facilities. A large, “in-bayou” swimming pool and community/civic center along the southern half of the Waterfront Promenade is proposed. The Waterfront Village creates a “bridge” of active, mixed-use development that not only physically and socially connects the East End and the Fifth Ward, but would

also - as part of a master development agreement - create an ongoing revenue stream to enhance, operate and maintain community open spaces, parks, streets, housing, etc.

Within the Illustrative Plan, there are six large, new open spaces proposed that include:

1. Japhet Creek and Ingraham Gully Conservation Lands: The areas within and south of the existing Japhet Creek Neighborhood and along the north shore of the Bayou are a significant wildlife habitat that could be enhanced and preserved as such - with rustic trails and wetlands platforms for observing birds, an outdoor classroom and a conservation laboratory. A master plan should include plans to completely “day-light” - or expose - both Japhet Creek and Ingraham Gully, restore their ecosystems, and provide public access along them.

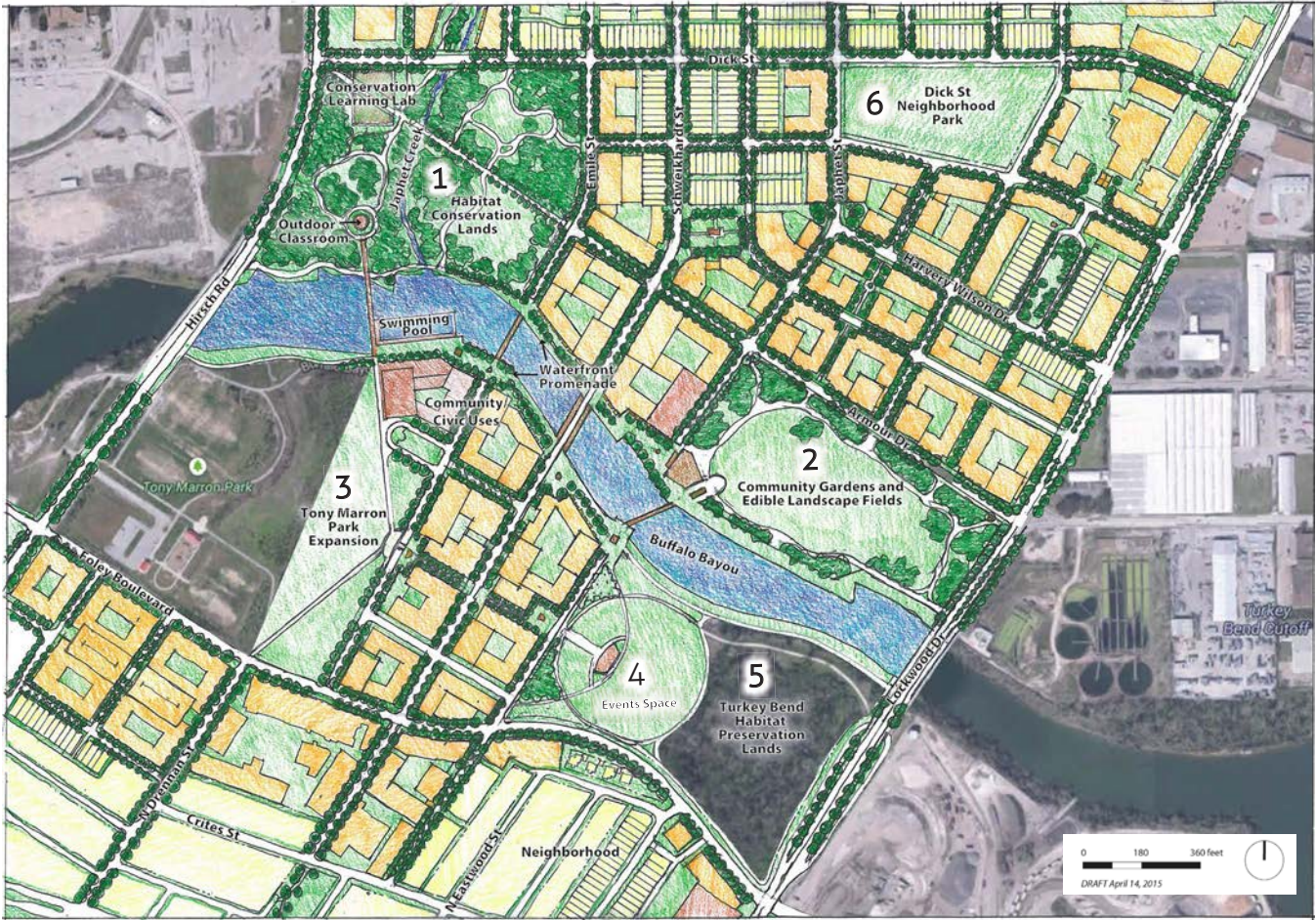
2. Community Gardens and Edible Landscape Fields: In conjunction with



Pearl District, Portland, Oregon: public park with waterplay and renovated warehouse storefront



Illustrative Plan of Bayou-fronting properties



Nature trails that respect the wetlands areas



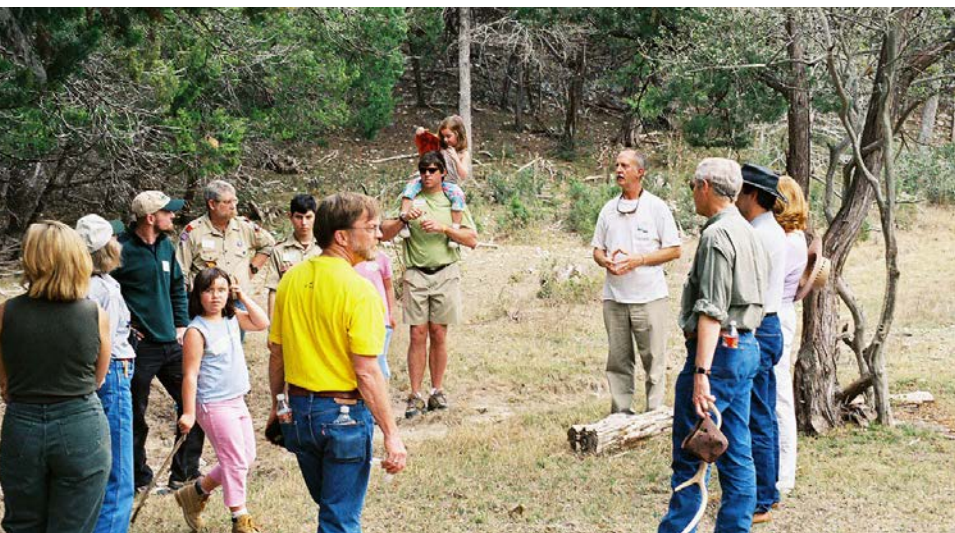
Back Bay Fens, Boston, Massachusetts: Community "Victory Gardens"



Zilker Park, Austin, Texas



Events Space



Wildlife Preserve

the BBP's idea of reusing the City's old water treatment plant immediately east of Lockwood Drive along the north shore of the Bayou for permaculture, the proposed open space on the west side of Lockwood Drive could provide a major set of community gardens and greenhouses, surrounded by "edible landscape". This area is well-placed to become a "food hub", which is generally defined by the USDA as "facilities that manage the aggregation, storage, processing, distribution and/or marketing of locally and regionally-produced food." A food hub can fulfill from one to all of these functions and come in a variety of shapes and sizes. Given the "food desert" nature of the area, creating these kinds of spaces could provide access to fresh food, and access to meaningful careers that do not necessarily require college education – all in a spectacular bayou setting.

3. Tony Marron Park Expansion: On the southeast shore of the Study Area, the COH owns the land immediately east of the Tony Marron Park. An expansion of this park, including a new parking area at the southern edge of the site accessible via the new Foley Boulevard, would allow more people to enjoy the amenities of the park (soccer, community pavilion, picnicking, biking, walking, jogging, restrooms, etc.), as well as the new Southern Waterfront Promenade discussed above. Tony Marron Park would also link across the new Waterfront Village to the Events Space described below. This park can also easily be connected to the neighborhood through Milby Street.

4. Events Space: Immediately east of the Waterfront Village South is a large, flexible-use Events Space that could take the form of a gently-sloped amphitheater focused on a covered stage structure on its west end. New,



North Park, San Jose, California

shaded trails and paths circumnavigate the Events Space and are surrounded by upland, native trees and landscape. This could be the site for regionally-scaled events and be an important source of revenue for the project.

5. Turkey Bend Habitat Lands: Extending eastward from the Events Space is a densely-wooded, undeveloped tract that could be preserved as habitat, with trails on its periphery, rather than through this undisturbed natural area. This parkland could continue under of the Lockwood Street bridge to connect to Turkey Bend, which ultimately could be re-vegetated into a nature preserve with trails, as the current industrial activities there are reduced or terminated.

6. Dick Street Neighborhood Park: A larger, inland tract is proposed as a park for the new neighborhood shown surrounding it on all sides. This new park is an example of what could be made possible if the partners were able to control the industrial properties all the way north to Dick Street, and even Clinton Drive. This park could be the focal point for a new, mixed-use neighborhood providing local residents with facilities for recreation, health and

congregation.

If these two, Bayou-fronting areas between Dick Street and the future Foley Boulevard were to develop as shown, there would be about 50 acres of new, mixed-use development and about 50 acres of new civic and open space. However, this is just one possible build-out among others that could deliver a positive future for these important, historic neighborhoods in Houston that are already undergoing significant change – one that could help give these communities, the community, the City, the Fifth Ward Community Redevelopment Corporation, the East End Management District, the Buffalo Bayou Partnership a stronger voice in how that change happens.

6.3 Pursue a master development strategy.



IMPLEMENTOR

Buffalo Bayou Partnership

PARTNERS

*Private Sector
City of Houston
Greater East End
Management District
Fifth Ward CRC*

To implement something akin to what is depicted in the Illustrative Plan will require the City of Houston, Buffalo Bayou Partnership, the Fifth Ward Community Redevelopment Corporation, the Greater East End Management District and other partners to acquire as many of the industrial waterfront properties as possible in order to control the outcome of this important part of the Buffalo Bayou corridor. Once acquired, “the Partners” would be able to create and implement a detailed master plan of the entire Study Area that not only provides clear direction for the waterfront open space, but also the other “orange areas” where development and/or reuse is envisioned. Acquiring the properties enables the Partners to implement the desired vision with the assistance of private sector partner(s), who will bring development know-how, capital and financing. The Partners could assist in funding and/or constructing the public space, drainage,

transportation and utility infrastructure, as well as any affordable housing and community facilities.

The master plan and accompanying master development agreement could be structured in a way to deliver various community benefits that could include:

- new parks, trails and open spaces,
- wildlife and habitat preserves,
- day-lighting of both Japhet Creek and Ingraham Gully,
- Complete Streets,
- the Waterfront Promenade,
- affordable housing,
- new development and new jobs,
- a grocery store/cooperative, and
- cultural and educational facilities.

This process will require a highly-coordinated effort between the Partners which will be carefully documented in a master development agreement between the Partners and a master developer – that private sector partner who is capable of orchestrating the entire development process. Once a



Mueller, Austin, Texas



Mueller, Austin, Texas

redevelopment master plan is adopted by the Partners and the community, then the Partners would solicit for such a master developer, following a process similar to the one that the City of Austin created for the 700-acre Mueller Airport Redevelopment or the one that the City of San Antonio developed for the River North extension of the San Antonio Riverwalk.

Today, the next step is for the Partners to develop a community-oriented master plan and implementation strategy, in concert with area property owners. Later this year, the BBP is planning to solicit for a professional design team to master plan the new open spaces for this reach of the Buffalo Bayou corridor. This master plan should be extended to include the entire Study Area, and the design consultant team should include a real estate economist to conduct market analysis and test various alternative development and open space scenarios - with, for example, greater or fewer community benefits, in order to understand the cost/benefit of the various scenarios. The Partners will then be equipped to finalize the best master plan approach and building program, and the consultant team can set out a

clear strategy for land acquisition and disposition, phasing and financing.

The final master plan and program would then become exhibits within a solicitation for a master developer. Finally, a master developer would be selected by the Partners, and a master development agreement negotiated and finalized – a process that can take several years. It will be important that the master plan and the final master development agreement set the guiding principles for the project that can be tied to performance measures and milestones, and that the agreement define clear roles and responsibilities of each party.

Perhaps most importantly, the master plan should be flexible in terms of uses and development types, so that it can be both market-driven and community-responsive through what could be as much as a 20-year development horizon.



Pearl Brewery, San Antonio, Texas



Pearl Brewery, San Antonio, Texas

implementation



*"I love my community
because..."*

*...I love my
community."*

While the City of Houston does not have land use zoning regulations, the City does have a variety of development ordinances and regulations that impact projects in emerging areas like the Historic Fifth Ward and East End, as well as Buffalo Bayou. In a zoned city, land uses and attendant building uses are regulated according to the permitted uses for each zoning classification (residential uses in residential zones and commercial uses in commercial zones) and typical uses allowed in different zoning districts, especially residential uses and non-residential uses, are not allowed as a combination in single zoning categories.



Typical zoning regulations may actually deter investment and redevelopment initiatives because they more rigidly enforce a separation of land uses and building uses both horizontally and vertically on a site, whereas areas like the Fifth Ward, East End and Buffalo Bayou corridor may desire mixed uses in closer proximity to each other. Therefore, Houston's lack of zoning may actually enhance the ability of private markets to revitalize an area due to this lack of mixed use prohibition, but there are other underlying development codes that need to be navigated in order to successfully revitalize communities as complex as those in the subject area.

Additionally, each stakeholder has tools that it each stakeholder has tools that can be used to influence economic development, and which can support its charter. While the tools of the municipally chartered entities (Fifth Ward CRC, COH, etc.) are similar, they are distinctly different from those of the Buffalo Bayou Partnership and business / real estate investment community. When combined, the tools and expertise of the regional stakeholders are broad, and powerful.

Next, the discussion looks at opportunities and barriers in terms of development regulations and ordinances; as well as incentive based tools at the disposal of each primary stakeholder: Fifth Ward Community Redevelopment Corporation, the Greater East End Management District, and the Buffalo Bayou Partnership.

Review of Stakeholder Assets & Abilities

The following table outlines the various opportunities each primary stakeholder has to participate in economic development activity, and infrastructure financing.

A. Fifth Ward Tax Increment Reinvestment Zone (TIRZ) 18 / Community Redevelopment Corporation (CRC)

Purpose:
To establish a framework and create conditions for redevelopment to occur that will stabilize a declining tax base, establish the basis for a consistency of land uses and strengthen the character or residential and commercial properties.

Assets:
Property Value / Increment

Abilities:
Historic Preservation, Roadway/ Sidewalk Construction, Water/ Sewer Construction, Brownfield Remediation, Demolition Costs, Area Park & Recreation Redevelopment, Gateway Improvements, Streetscape, landscape & Lighting Improvements, Bus Stop/Shelter Improvements, Land Acquisition, Development, Redevelopment, Affordable Housing, etc.

Termination:
The TIRZ will terminate in 2029.

The exhibit on the facing page shows the boundaries of the Fifth Ward TIRZ and broader operating boundaries of the Fifth Ward Ward CRC.

B. Greater East End Management District (GEEMD)

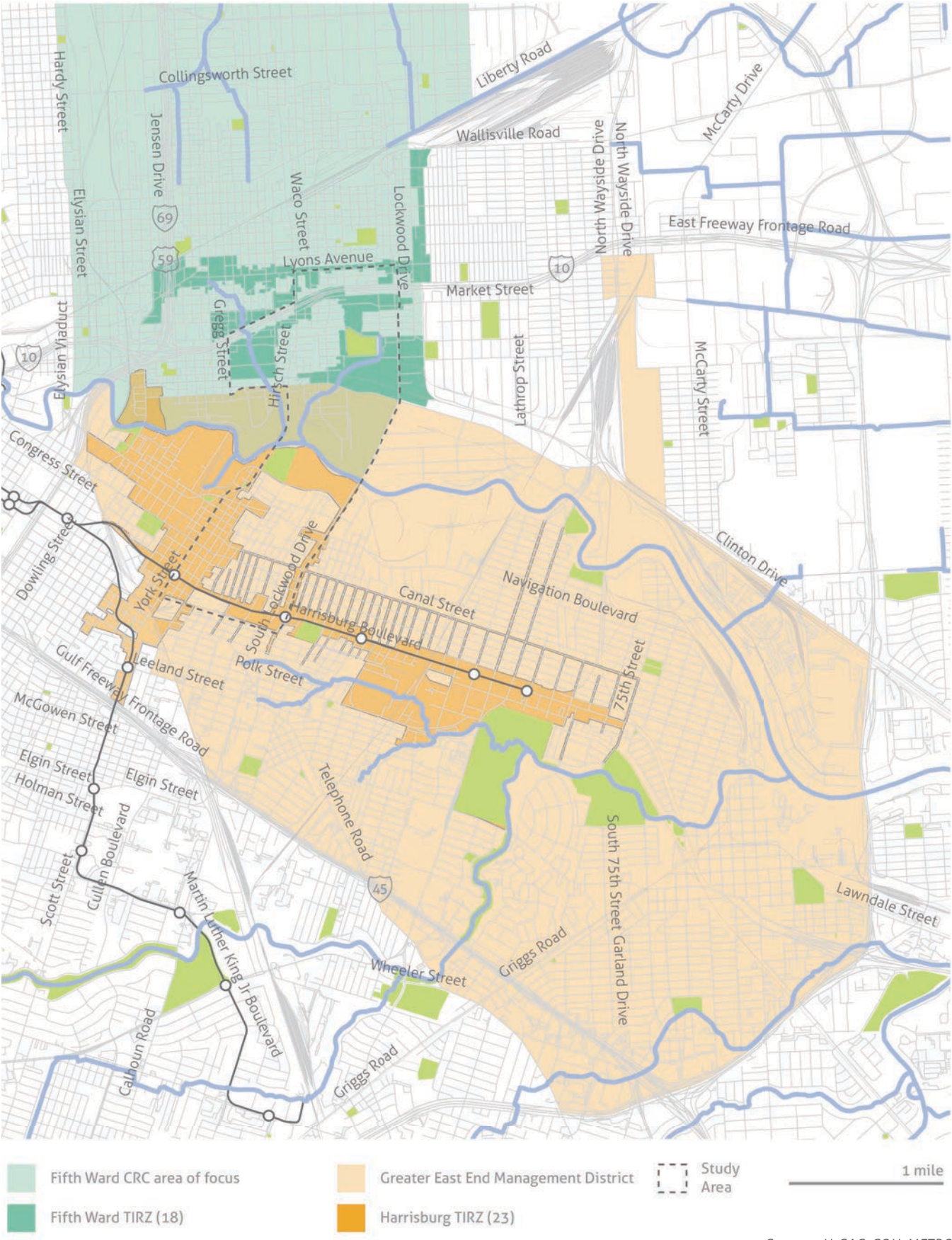
Purpose:
The Greater East End Management District was established by state legislature, a tool for economic development and revitalization of the area. The Greater East End Management District works with rate payers, the community, and government partners to ensure that the District is a dynamic and distinct community.

Assets:
Assessments from commercial property owners, and grants.

Abilities:
Security & Public Safety, Business Development, Visual & Infrastructure Improvements, Services & Maintenance, Communications & Marketing, etc.

Termination:
The current Assessment Plan expires in 2023. The District has no termination date.

Fifth Ward and East End Boundaries



Sources: H-GAC, COH, METRO

C. Buffalo Bayou Partnership

Purpose:

Buffalo Bayou Partnership is the non-profit organization revitalizing and transforming Buffalo Bayou, Houston's most significant natural resource. Buffalo Bayou Partnership also seeks ways to activate Buffalo Bayou through pedestrian, boating and biking amenities; volunteer activities; permanent and temporary art installations; and wide-ranging tours and events.

Assets:

Donations

Abilities:

Conservation, Recreation, Flood Management, Ecosystem Restoration, Parks Construction, Hike & Bike Trail Construction & Maintenance, Allen's Landing Revitalization, Bayou Cleanup & Preservation, Programming, Stewardship, etc.

Termination:

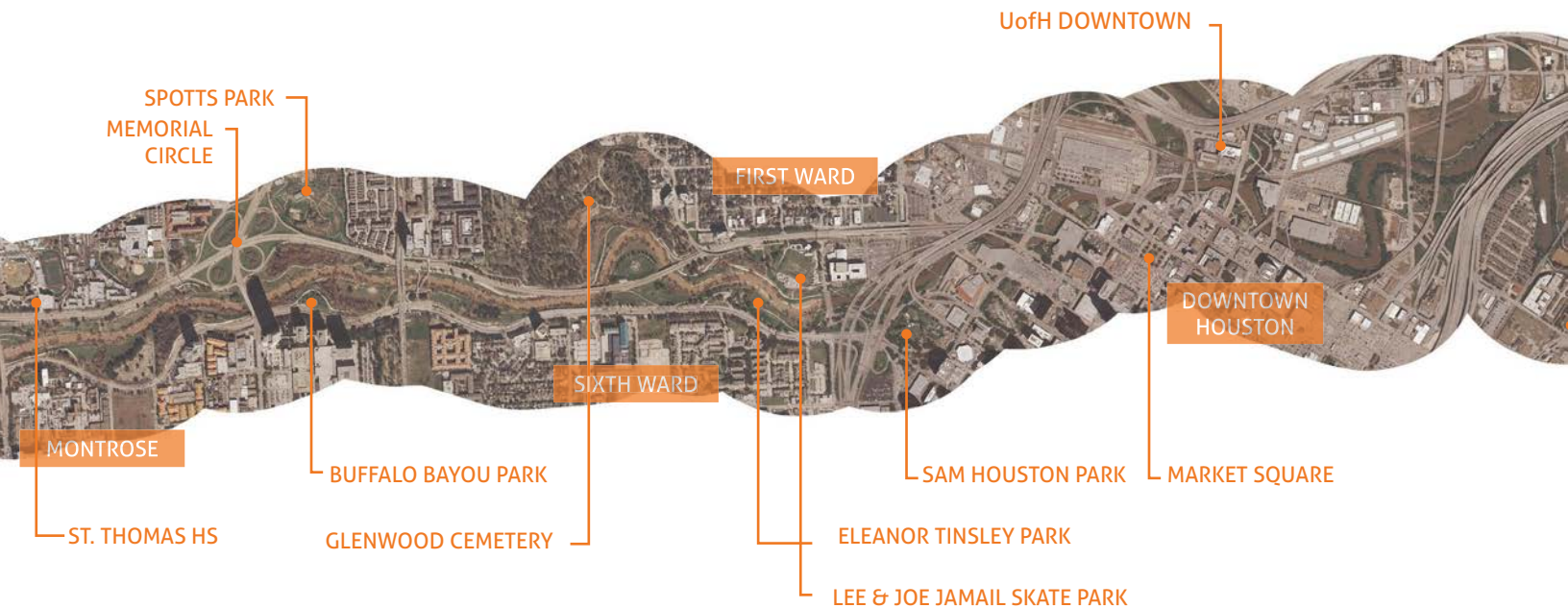
The Partnership does not have an end date.

The exhibit on the facing page shows the boundaries of the Buffalo Bayou Partnership as it passes through the subject area.

D. City of Houston

Purpose:

"...City Council shall ...enact and enforce all ordinances necessary to protect life, health and property; to prevent and summarily abate and remove nuisances; to preserve and promote good government, order, security, amusement, peace, quiet, education, prosperity and the general welfare of said City and its inhabitants..."



Assets:

Taxes, Fees, Assessments, Fines, Grants;
and Departmental Resources

Abilities:

Mayor's Office of Economic
Development (TIRZ, 380, DPC, etc.)
Planning and Development Services
(Chapter 42, MTFP)
Public Works and Engineering (CIP,
Rebuild Houston)
Housing and Community Development
(Affordable Housing)
Parks and Recreation

Termination:

The City exists in perpetuity.

The exhibit on the facing page shows
the City of Houston Council Districts in
the study area.

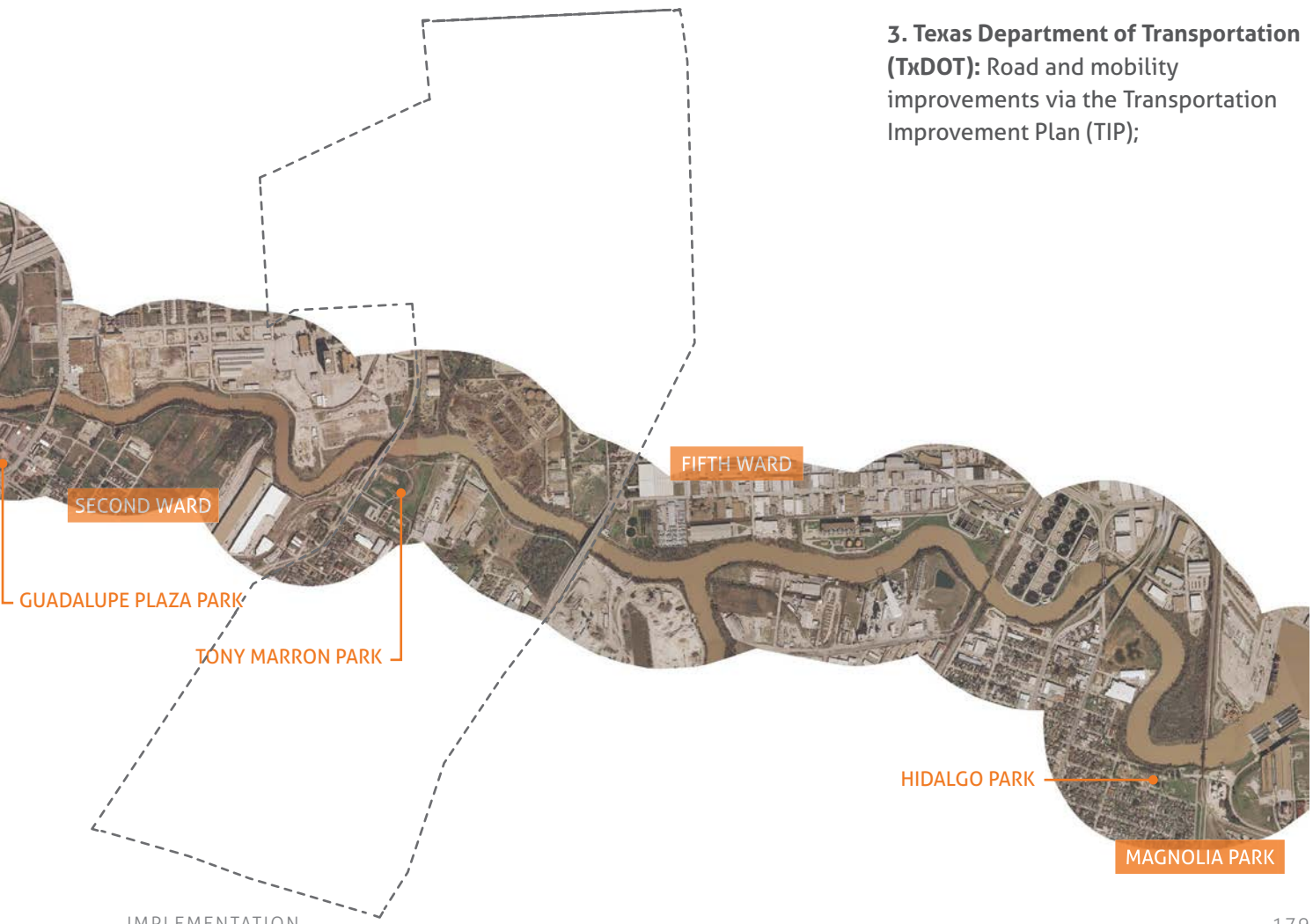
E. Other Important Stakeholders

In addition to the aforementioned
primary stakeholders, the subject
area enjoys the support of a series of
other stakeholders, each with unique
charters, and capacities to help with
economic development, planning, and
infrastructure initiatives. The following
is a partial listing of those entities:

1. Harrisburg TIRZ: Public Utility
Improvements, Roadway, Streets,
Sidewalks, Lighting, ROW Acquisition,
Light Rail Underpass Infrastructure
Improvements, Cultural & Public
Facilities, Parks & Recreational
Facilities, Economic Development,
Affordable Housing, etc.;

2. The Houston Parks Board (HPB):
Parkland Acquisition;

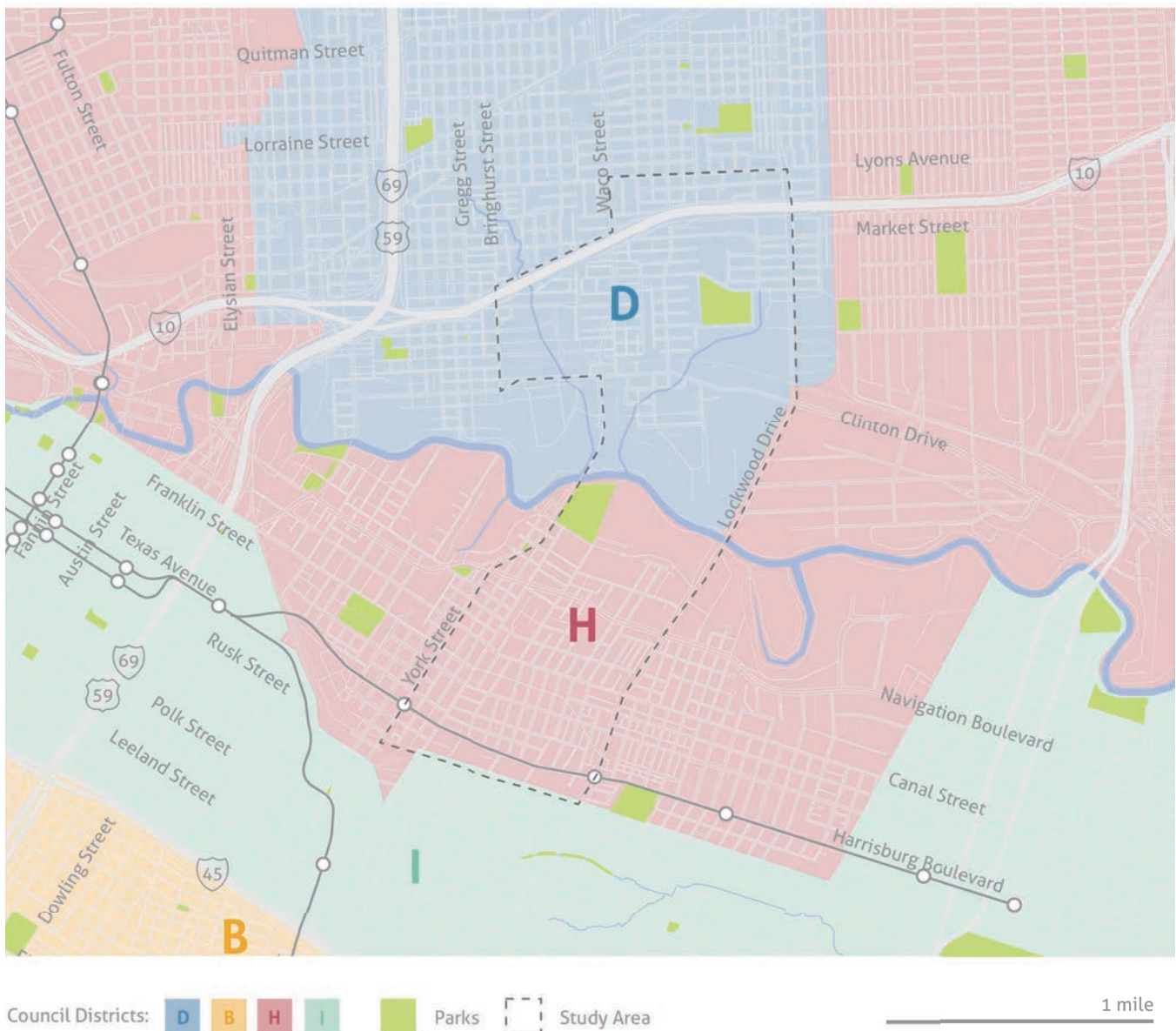
**3. Texas Department of Transportation
(TxDOT):** Road and mobility
improvements via the Transportation
Improvement Plan (TIP);



4. Houston-Galveston Area Council (H-GAC): Planning services to ensure the regional transportation systems is improved; adequate street, utility, health, educational, recreational, and other essential facilities are provided as the communities, areas, and regions grow; healthful surroundings for family life in residential areas are provided; etc.

5. Harris County: Commissioners Court's functions include, but are not limited to, building and maintenance of county roads, bridges, parks and libraries.

City of Houston Council Districts / 2015



Sources: City of Houston

Initial Implementation Recommendations

The diversity of stakeholders within the subject area, and the complexity of the issues challenging the community necessitate a deliberate and collaborative long term implementation strategy. Each stakeholder will lead and support initiatives as appropriate, given the location and nature of an initiative.

Tables 5.1 - 5.6, beginning of the following page, suggest a structural framework around which such an effort may be effective. The following section, however, shall serve as a model, framing issues, and offering scenario by which projects may be addressed.

A. Implementation Task Force

It is recommended that the stakeholders form an Implementation Task Force populated with representatives of the major implementation partners and community representatives (5th Ward CRC, GEEMD, BBP, COH, real estate community, business community, residents). While it is likely that some of the tasks flowing from this Plan may be implemented by an individual stakeholder, the larger and more far reaching initiatives will almost certainly require the cooperation and investment commitments of multiple partners, over many years.

The Task Force should be chartered with prioritizing projects, tracking progress, communicating with the public, and negotiating mutually satisfactory solutions to challenges encountered along the way with the goal of enhancing the quality of life and investment within the subject area.

B. Annexation of Territory into Fifth Ward TIRZ and CRC

It is recommended that the 5th Ward TIRZ and CRC, in conjunction with its stakeholder task force members, petition the City of Houston to extend the boundary of the TIRZ south to Buffalo Bayou. The current boundaries only extend as far south as Clinton Drive. The Harrisburg TIRZ boundaries end on the south side of Buffalo Bayou. Thus, the industrial area of the study area between Clinton Drive and Buffalo Bayou is not within a TIRZ. As this area redevelops, the properties within will have an impact on surrounding residential neighborhoods.

The Fifth Ward TIRZ's ability to finance affordable housing, and infrastructure would be greatly enhanced if this area were annexed. Further, it would provide the TIRZ with an opportunity to discuss the nature of future development, and its relationship with adjacent communities. These discussions may include affordable housing and other quality of life and investment goals.

C. Implementation Model

The following outline designed to provide model for how the Task Force may organize efforts to implement projects within the subject area. This series of recommendations attempts to build upon the structure and capacity suggested above, and deploy that to the benefit of specific projects in specific areas of the study area. Implementation Summary Charts on the following page.

D. Implementation Summary

As discussed in the preceding examples, and outlined in the following Implementation Tables, the project and programming recommendations will require the combined efforts of a collection of stakeholders, over a number of years. However, the formidable array of assets and resources suggest the study area can and will continue to improve for the betterment of those interested in living, working, investing, and playing along the beautiful banks of Buffalo Bayou, or within the historic and iconic Fifth Ward and East End.

Table 5.1. HOUSE

Category	Recommendation		Primary Stakeholder (Implementation Partner)	Secondary Stakeholder (Supporting Partner)	Other Stakeholder (Supporting Partner)	Funding (Resource Partner)	Comments
HOUSE	1.1	Pursue Minimum Lot Size & Minimum Building Line designations.	Property Owners	City of Houston Planning & Development	Greater East End MD, Fifth Ward CRC	N/A	
	1.2	Strengthen programs directed towards the rehabilitation of single-family homes.	Fifth Ward CRC	Property owners; Habitat for Humanity	City of Houston; Harrisburg TIRZ; Private Sector; Non-Profits	City of Houston; Fifth Ward CRC; Harrisburg TIRZ; Private Sector; Non-Profits	Syncs with 1.3, 1.4, 2.2, 4.8, 5.6, and 6.3.
	1.3	Extend the TIRZ boundary to increase its ability to provide a diversity of affordable housing options.	Fifth Ward CRC Greater East End MD		City of Houston; METRO; Harrisburg TIRZ; Private Sector	City of Houston; Fifth Ward CRC; Harrisburg TIRZ; Private Sector	Syncs with 1.2, 5 and 6.2, and 6.3.
	1.4	Establish a Community Land Trust to preserve long-term housing affordability and environmental stewardship.	Japhet Creek Community Fifth Ward CRC	City of Houston	Japhet Creek Property Owners Association; Non-Profits; Buffalo Bayou Partnership	Private Sector	Syncs with 2.2, 4.4, 4.5, 5.2, 5.3, 5.5, 5.6, 6.2, and 6.3.

Table 5.2. EAT

Category	Recommendation		Primary Stakeholder (Implementation Partner)	Secondary Stakeholder (Supporting Partner)	Other Stakeholder (Supporting Partner)	Funding (Resource Partner)	Comments
EAT	2.1	Provide access to healthy food in the study area with short- and long-term grocery store models.	Greater East End MD	Fifth Ward CRC; City of Houston, Planning	Can Do Houston; Private, Non-profit or Cooperative Grocery Store Investors	Greater East End MD; Fifth Ward CRC; Private Sector	Syncs with 2.2.
	2.2	Explore opportunities for major food production – to grow, process, and sell food within the study area.	Fifth Ward CRC	Greater East End MD; City of Houston	Can Do Houston; Cane River Garden; Farmer Street Garden; Finca Tres Robles; Last Organic Outpost; East End Farmers Market; Urban Harvest; Private Sector; Non-Profits	Private Sector	Syncs with 2.1, 3.1, 3.2, 3.3, and 6.2.

Table 5.3. CREATE

Category	Recommendation		Primary Stakeholder (Implementation Partner)	Secondary Stakeholder (Supporting Partner)	Other Stakeholder (Supporting Partner)	Funding (Resource Partner)	Comments
CREATE	3.1	Promote adaptive reuse of existing building stock for commercial use.	Greater East End MD	Fifth Ward CRC	City of Houston; Private Sector; Non-Profits	Private Sector; Non-Profits	Syncs with 2.2 and 3.2.
	3.2	Support existing makerspaces, and create a business incubator to attract and retain talent, and offer vocational and professional training.	Greater East End MD	Fifth Ward CRC	City of Houston; Houston Makerspace; TX/RX; Beyond Careers; Private Sector; Non-Profits	Greater East End MD; Fifth Ward CRC; Private Sector; Non-Profits; Grants	Syncs with 2.2, 3.1, and 3.4
	3.3	Expand opportunities to sell and purchase goods and services.	Greater East End MD	Fifth Ward CRC	City of Houston; East End Chamber of Commerce; Legacy Community Heath; Private Sector; Non-Profits	Greater East End MD; Fifth Ward CRC; Private Sector	Syncs with 2.2, 2.3, 3.1, and 3.2.

Table 5.4. PLAY

Category	Recommendation		Primary Stakeholder (Implementation Partner)	Secondary Stakeholder (Supporting Partner)	Other Stakeholder (Supporting Partner)	Funding (Resource Partner)	Comments
PLAY	4.1	Support restoration efforts of the historic Evergreen Negro Cemetery by Project RESPECT.	Fifth Ward CRC	Project RESPECT	City of Houston; Non-Profits	Non-Profits	Syncs with 4.2, 4.4, 4.5, and 4.6.
	4.2	Improve the open space conditions at Finnigan Park.	City of Houston Parks & Recreation	Fifth Ward CRC	Fifth Ward Civic Club; Trees for Houston		Syncs with 4.1, 4.4, 4.5, 4.6, and 5.6.
	4.3	Ensure that adequate space funding is set aside for small parks in new developments and subdivisions.	City of Houston Planning & Development	City of Houston Parks & Recreation	Private Sector		
	4.4	Expand Japhet Creek Park and greenway, while preserving and improving its natural habitats.	City of Houston Parks & Recreation	Buffalo Bayou Partnership	Japhet Creek Community; Non-Profits	Private Sector	Syncs with 4.5, 5.1, 5.2, 5.5, 5.6, and 6.2.
	4.5	Transform Fox Park into a dog park, and explore other dog-friendly opportunities in area parks.	Greater East End MD	City of Houston; Fifth Ward CRC	Harrisburg TIRZ	City of Houston; Fifth Ward CRC; Harrisburg TIRZ	
	4.6	Create a linear park along the Harrisburg-Sunset trail.	Greater East End MD	City of Houston	Harrisburg TIRZ; Private Sector	City of Houston; Harrisburg TIRZ; Grants	Syncs with 4.5, and 5.

Table 5.5. CONNECT

Category	Recommendation		Primary Stakeholder (Implementation Partner)	Secondary Stakeholder (Supporting Partner)	Other Stakeholder (Supporting Partner)	Funding (Resource Partner)	Comments
CONNECT	5.1	Create a complete streets and open space framework.	City of Houston	Greater East End MD; Buffalo Bayou Partnership	Harrisburg TIRZ; Private Sector; Council Districts H & B	Fifth Ward CRC; Greater East End MD; Buffalo Bayou Partnership; Harrisburg TIRZ	Syncs with 1.3, 5.2, 5.3, 5.4, 5.5, 5.6, and 6.
	5.2	Improve bikeway and street network connectivity.	City of Houston	Greater East End MD; Fifth Ward CRC	Harrisburg TIRZ, Houston B-Cycle; METRO; Buffalo Bayou Partnership	Greater East End MD; Fifth Ward CRC; Harrisburg TIRZ	Syncs with 5.1, 5.2, 5.4, 5.5, 5.6, and 6.
	5.3	Construct iconic pedestrian bridges that serve as connectors and strengthen neighborhood identity.	City of Houston	Harrisburg TIRZ; Private Sector	Harrisburg TIRZ; Private Sector	Buffalo Bayou Partnership; Fifth Ward CRC; Harrisburg TIRZ; City of Houston; Private Sector	Syncs with 5.1, 5.3, 5.4, 5.5, 5.6, and 6.
	5.4	Establish a connected pedestrian network.	Greater East End MD; Fifth Ward CRC; Harrisburg TIRZ	City of Houston	Greater East End MD; Fifth Ward CRC; Harrisburg TIRZ	Greater East End MD; Fifth Ward CRC; Harrisburg TIRZ	Syncs with 5.1, 5.2, 5.3, 5.4, 5.6, and 6.

Table 5.6. BUILD

Category	Recommendation		Primary Stakeholder (Implementation Partner)	Secondary Stakeholder (Supporting Partner)	Other Stakeholder (Supporting Partner)	Funding (Resource Partner)	Comments
BUILD	6.1	Redevelop the Buffalo Bayou industrial properties.	Buffalo Bayou Partnership	City of Houston; Greater East End MD; Fifth Ward CRC	Harrisburg TIRZ; Private Sector	Greater East End MD; Fifth Ward CRC; City of Houston; Harrisburg TIRZ; Private Sector	Syncs with 1.2, 1.3, 1.4, 4.3, 4.4, and 5.
	6.2	Create a new waterfront village surrounded by a variety of open spaces.					
	6.3	Pursue a master development strategy.					

appendix



*"I love my community
because...
...its history"*



APPENDIX I
Park Classifications, City of Houston Parks and Recreation Department

Classifications	Typical Development	Optional Facilities	Inappropriate Facilities	Lighting	Parking
Pocket Park <i>Less than 1 acre; ¼ mile service area</i>	Playground (small), Picnic tables, site furnishings, plantings	Gazebo, gardens, art, natural habitat	Sport courts and fields, restrooms, pool	Security only	For maintenance only
Neighborhood Park <i>1 to 15 acres; ½ mile service area</i>	Playground, open space, walking trails, picnic tables, site furnishings, natural habitat, plantings	Sports practice fields, picnic shelter, multi-use courts, gardens, lighted trails	Lit athletic fields, recreation center, multi-use pavilion, pool, sprayground, tennis courts, restrooms	Security only	On-street and maintenance
Community Park <i>16 to 150 acres; 5 mile service area</i>	Playground, practice and game (lights), multi-use courts, trails, picnic, group picnic, open space and natural habitat, site furnishings, plantings	Recreation center, tennis courts (2-4), multi-use pavilion, pool, sprayground, screened portable toilets		Fields courts, playground, trails and parking	Parking lot
Regional <i>Over 150 acres; entire region service area</i>	Playground, open space and reserves, natural habitat, sports complexes (lights) and concessions, multi-use courts, trails, picnic areas, picnic pavilions, restrooms, site furnishings, plantings	Golf course, tennis center (8 or more courts), multi-use pavilions, pool or natatorium, sprayground, mature trails or nature area, multi-purpose center, senior center, fishing access, horticultural center and other unique recreation activities		Fields and courts, security for playground and trails, parking, park drives, trails	Parking lot(s) and possible interior drives
Linear Park/ Greenway	Trails, natural habitat, site furnishings, plantings	Small picnic area, small playground, screened portable toilets, exercise stations, art, lighted trails		Security only	Parking lot if along major thoroughfare
Park Reserve and Natural Area <i>Over 5 Acres</i>	Unpaved trails, wildlife observation stations, drinking fountains at trail heads, fishing access, natural habitat, signage	Screened portable toilets	Sport courts and fields, playgrounds	None	Parking lot with gate
Plaza or Square <i>Less than 10 acres; service area varies</i>	Focal points such as fountains, monuments, public art, banners or flags; special paving, extensive plantings, decorative site furnishings, drinking fountains, signage	Small stage, shade structure		General site and accent lighting	No surface parking; garage parking if downtown
Cultural or Historical Park <i>Less than 25 acres; service area varies</i>	Focal point such as fountains, monuments, historical buildings or art; special signage, historic markers and interpretive graphics, streetscape furnishings, plantings	Picnic area, visitors information center		General site and accent lighting	Parking lot with bus parking
Esplanades, Boulevards and Medians	Landscape enhancements	Lighting, sculptures, signage	Playgrounds or related recreation amenities	N/A	N/A
Sports Complex	Lighted game fields or courts, playground, restrooms, concessions, trails, picnic pavilions, restrooms, site furnishings, plantings	Lighted practice fields	Dog parks, spraygrounds, swimming pools, nature preserves	Fields and courts, security for playground, and trails, parking, park drives, trails	Parking lot(s), bus parking and possible interior drives
Recreation/ Community Center	Indoor facilities that serve recreation programming and community related services	Can be stand-alone or within a park or like site	N/A/	General site, parking and security	Parking lot
Golf Course	Dependent on market	Reservation facilities	Playgrounds, sports fields	Parking and security	Parking lot

APPENDIX II

Right-of-Way and Street Intersection Standards

It's important to continue to recognize that streets form not only pathways for vehicle circulation, but for pedestrian and bicycle access as well as community open space. A robust and interconnected street grid, such as is found in the older neighborhoods of the study area, helps define a more traditional streetscape, provides better access through shorter distances to transit stops, and allows for more varied street types while avoiding excessive vehicle space. For these reasons, as well as the continuity created when developing new neighborhoods adjacent to older ones, we recommend continuing the existing street grid as much as possible, with local streets and minor collectors organized into short, rectangular or square blocks.

City Standards

Houston's Code of Ordinance was compared to Dallas' and San Antonio's street geometric standards.

Four sources were utilized to compare street standards within cities; Houston Code of Ordinance – Chapter 42, Dallas Division 51A, Dallas Paving Design Manual, and San Antonio Unified Development Code – Section 35.

Right-of-Way

The table below lists right-of-way (ROW) standards in three different cities. Out of the three, Dallas has the most detailed descriptions and provides a pedestrian passage ROW width.

Street Intersections

Each Houston local street shall intersect with a public street that intersects with two different public

Right-of-Way

Location	Description	Standard
Houston	Local Street	50 feet – Adjacent to single-family residential lots
		60 feet – Other development
	Alley	20 feet
Dallas	Parallel Parking (MS-1A)	62 feet
	Angle 60° Parking (MS-1B)	84 feet
	Parallel Parking (MS-2A)	57 feet
	Yield w/ Parallel Parking (MS-2B)	47 feet
	Service Street (MS-3A)	52 feet
	Commercial Alley (MS-4A)	22 feet
	Residential Alley (MS-4B)	18 feet
	Shared Access Area	20 feet
	Pedestrian Passage	8 feet
San Antonio	Type A Conventional Street	50 feet – 75% single-family or duplex residential
	Type B Conventional Street	60 feet – Residential not included in Type A
	Traditional Local Street	48 feet
	Conventional Alley	24 feet
	Traditional Alley	20 feet

streets and is not a permanent access easement at least every 1,400 feet.

In Dallas, any single block longer than 500 feet must include a pedestrian passage available at all times to the general public. Block perimeters may not exceed 1,600 linear feet as measured along the inner edges of each street right-of-way. A maximum of 2,400 linear feet is allowed under certain conditions. Dallas' Paving Design Manual states that an intersection shall not have more than four street approaches.

San Antonio blocks shall have an average length not exceeding 400 feet, with no block exceeding 700 feet in length. They shall also have an average perimeter not exceeding 1,200 feet, with no block exceeding 1,600 feet.

Culs-de-sac

A Houston cul-de-sac shall not serve a single-family residential development that will generate more than 350 vehicle trips a day at the intersection of the cul-de-sac with a through street. A

cul-de-sac that has a length of not more than 350 feet from the centerline of its intersection with the nearest street shall have a paving width of at least 24 feet.

San Antonio cul-de-sac streets greater than 150 feet from the centerline of the cross street's pavement to the center point of the cul-de-sac turnaround shall be designed with a minimum 100 foot diameter right-of-way and a minimum 96 foot diameter pavement surface. Cul-de-sacs less than 150 feet in length shall provide a minimum of 80 feet of pavement width with 100 feet of right-of-way. San Antonio uses a connectivity index that preserves the opportunity to provide culs-de-sac while, at the same, maintaining the integrity of the network as a whole. The streets within any proposed subdivision shall provide a connectivity ratio of not less than 1.20. The connectivity ratio shall be computed by dividing the number of street links by the number of nodes

Street Intersections

Location	Description	Standard
Houston	Local Street	75 feet – Minimum distance along local street
Dallas	Local Street	150 feet – Minimum distance to next local street
	Local Street	170 feet – Minimum distance to residential collector
	Local Street <i>intersection non-dividing thoroughfare</i>	190 feet – Minimum distance to residential collector
	Local/Residential Collector <i>intersection undivided thoroughfare</i>	190 feet – Minimum distance to collector thoroughfare
		250 feet – Minimum distance to minor arterial street
		290 feet – Minimum distance to principal arterial street
San Antonio	Local Street (Type A)	125 feet – Minimum distance to next local street
	Local Street (Type A) <i>intersecting collector</i>	150 feet – Or minimum to accommodate turn lane
	Collector <i>intersecting collector</i>	200 feet – Or minimum to accommodate turn lane
	Collector <i>intersecting collector</i>	400 feet – Or minimum to accommodate turn lane

within the subdivision. The connectivity index does not apply to subdivisions with less than 125 single-family lots.

Private Streets

A Houston development plat that contains a multi-family residential building shall provide at least one private street. The minimum right-of-way width for a private street shall be 28 feet. At the option of an applicant, for a distance of not more than 100 feet from the intersection of the private street and the right-of-way of a public street, the right-of-way width of the private street may be comprised of two paving sections of not less than 20 feet each, separated by a curbed section of not less than five feet and not more than 20 feet in width. Intersections along private streets shall be a minimum of 65 feet apart. A type 2 permanent access easement may not be a direct straight-line extension of a public street.

The design standards and construction specifications of private streets in San Antonio shall be the same as for public streets except when a right-of-way of 50 feet for a local Type A streets and 60 feet for local Type B streets shall not be required.

Dead-End Streets

A Houston multi-family residential development on a tract of land of one acre or less shall not be required to provide more than one point of access to a public street. A dead-end private street intersecting with a public street or with a private street may be extended up to 200 feet without a turnaround.

The length of a permanent dead-end street must not exceed 600 feet in Dallas. Permanent dead-end alleys are prohibited. The distance between access points from streets or other alleys should not exceed 1,200 feet, as measured along the centerline of alley. A maximum of 2,000 feet is allowed

under certain circumstances. An alley approach must not be located within 50 feet of a railroad ROW.

In the case of collector, local, or marginal access streets, no new half-street rights-of-way shall be platted in San Antonio. Dead-end streets shall be prohibited except as short stubs to permit future expansion. A "short stub" is defined as being the average depth of the adjacent lot(s) within the subdivision, being a maximum of 150 feet. Stub outs greater than 1 lot in depth may be allowed with the dedication of a turnaround easement. For adjacent lots greater than ½ acre, a stub street may require a turnaround easement.

Transit

The intersection of two streets in Dallas must not be located within 115 feet of a railroad ROW if one of the streets crosses the railroad ROW at grade.

Complete Streets Manual

Many cities, including Houston, Dallas and San Antonio, have established or are in the process of creating a Complete Streets Manual. They suggest certain street layouts and geometry to serve different modes of transportation within a street's ROW. The City of Houston issued a complete streets executive order in November 2013.

APPENDIX III

Air Quality Benefits

Premise of Benefits

One objective of the overall Livable Centers Program is to fund strategic infrastructure investments to improve safety and mobility for non-motorized travel. Several of the project recommendations are to provide attractive and functional sidewalks in the areas in which they are most needed, namely where sidewalks do not exist, or where existing sidewalks have deteriorated and are in poor condition. Other improvements enhance pedestrian and bicyclist safety, through illumination, signalization, signage and striping. These improvements will make these travel modes more attractive. It will also increase the attractiveness of transit as a travel mode, as transit patrons typically access the transit on foot. Additionally, the recognition of bicycle travel through Bikeshare locations and additional lanes and routes will make this travel mode more visible and more attractive. The net result anticipated is a modest decrease in automobile trips, vehicle miles traveled, and associated vehicle emissions.

Key Data and Assumptions

- 100,632 vehicle trips in Traffic Analysis Zones (see Table 1)
- 8.25 miles per vehicle trip
- 0.9% reduction in vehicle trips due to projects
- intrazonal vehicle type mix appropriate to local streets

Results

- VOC reduced: 3.796 kg/day
- NOx reduced: 7.820 kg/day

Calculations

There are very few studies on the effect of microscale pedestrian

improvements on travel patterns. The “Making the Land Use, Transportation, Air Quality Connection” (LUTRAQ) demonstration project is one such study (1,000 Friends of Oregon (1993). Making the Land Use Transportation Air Quality Connection—The Pedestrian Environment—Volume 4A. Available at: <http://ntl.bts.gov/DOCS/tped.html>) Special attention was given to the quality of the pedestrian environment as gauged by the Pedestrian Environment Factor (PEF), a composite measure of “pedestrian friendliness”. The four variables included in the PEF are: ease of street crossings, sidewalk continuity, local street characteristics (grid vs. cul-de-sac) and topography. Each of these is given a score of 1-3, resulting in a maximum PEF score of 12. Most significant to this project was the finding that a higher PEF score for a zone was accompanied by a lower automobile mode share for that zone. A one-point increase in PEF was accompanied by a decrease in automobile mode share of 1.8 percent.

The improvements proposed here cover approximately 36 linear miles of neighborhood streets in the study area. Although PEF was not field-verified, this improvement is expected to increase the PEF score by 1 based on facility continuity benefits. While the Portland study would suggest a 1.8 percent decrease in automobile mode share, H-GAC estimates a more conservative 0.9 percent decrease.

H-GAC’s travel demand model uses Traffic Analysis Zones (TAZs) bounded by major streets and physical features. The TAZs approximating the study area, and the total number of vehicle trips in those TAZs, are shown in Table 1 on the following page.

Table 1: TAZs Within or Adjacent to Study Area

Appropriate TAZ Boundaries					Person-Trips/ Day
TAZ #	North	South	East	West	
266	Lyons Ave.	IH 10	Hirsch Rd.	US 59	4,182
268	Clinton Dr.	Buffalo Bayou	Hirsch Rd.	Jensen Dr.	2,368
269	IH 10	Clinton Dr.	Hirsch Rd.	Jensen Dr.	3,768
270	IH 10	Clinton Dr.	Lockwood Dr.	Hirsch Rd.	5,831
271	Clinton Dr.	Buffalo Bayou	Lockwood Dr.	Hirsch Rd.	2,323
272	IH 10	Clinton Dr.	Kress St.	Lockwood Dr.	6,697
277	Clinton Dr.	Buffalo Bayou	Wayside	Lockwood Dr.	4,939
279	Wallisville Rd.	IH 10	Kress St.	Lockwood Dr.	8,991
282	UP Railroad+	IH 10	Lockwood Dr.	Waco St.	5,823
647	Navigation Blvd.	Commerce St.	Milby St.	Jensen Dr.	4,946
648	Buffalo Bayou	Navigation Blvd.	Milby St.	Jensen Dr.	2,134
650	Harrisburg Blvd.	Walker St.	Milby St.	Bastrop St.	9,711
651	Commerce St.	Harrisburg Blvd.	Milby St.	METRORail S.E.	5,079
674	Canal St.	GH&H Railroad*	Lockwood Dr.	Milby St.	8,485
675	Navigation Blvd.	Canal St.	Lockwood Dr.	Milby St.	4,352
676	Buffalo Bayou	Navigation Blvd.	Lockwood Dr.	Milby St.	3,030
677	Canal St.	GH&H Railroad*	HB&T Railroad**	Lockwood Dr.	13,031
678	Navigation Blvd.	Canal St.	HB&T Railroad**	Lockwood Dr.	4,744
679	Buffalo Bayou	Navigation Blvd.	HB&T Railroad**	Lockwood Dr.	1,841
Total Person-Trips in Selected TAZs					102,275

+southwest-to-northeast, feeding into Englewood Yard

*parallel to and south of Harrisburg Blvd. (approximate ROW of Capitol St.)

**parallel to and east of Hughes Road

Source: Houston-Galveston Area Council, Travel Demand Model, 2014

The total number of person-trips generated by these zones is 102,275 per day. This is according to data from the 2014 regional travel model, provided by David Gao of H-GAC in March 2015. Table 2 below shows the calculation of average vehicle occupancy, from the same data sources.

Table 2: Study Area Auto Occupancy Rate

Trip Purpose	Person-Trips	Vehicle Trips	Vehicle Occupancy
Home-Based Work	4,058,574	3,856,814	1.052
Home-Based Non-Work	10,106,851	10,019,591	1.009
Non-Home-Based	6,276,122	6,236,838	1.006
Total Annual Trips	20,441,547	20,113,243	1.016

Source: Houston-Galveston Area Council, Travel Demand Model, 2014

Study Area Person-Trips: 102,275 per day

Persons per Vehicle: 1.016

Study Area Vehicle Trips: 100,632 per day

Average Regional Trip Distance as reported in 2011: 10.31 miles

It is reasonable to assume that in the central city, trip distance is shorter.

VMT per day at 10.31 miles/trip

Thus the total vehicle trips in the study area are person-trips divided by persons per vehicle: $102,275 / 1.016 = 100,632$.

The average vehicle trip distance for the region is 10.31 miles, also from the H-GAC regional model, but for 2011, the latest date for which it was available. As per the "Houston Community Sustainability Quality of Life Atlas," published by the Rice University – Shell Center for Sustainability, neighborhoods in central Houston have per-household vehicle-miles-traveled (VMT) of up to one-third less than the regional average. The lowest annual VMT/household was in Museum Park, at 11,687, 66% of the regional average of 17,534.

Sources:

<http://shellcenter.rice.edu/content.aspx?id=390>

<http://issuu.com/sustainablehouston/docs/snbreportqolatlas2014/119>

This reduced VMT means that a given number of central-city dwellers potentially have a lower average trip distance, as well as potentially fewer trips overall. Since we have trips/day accounted for, it is reasonable to assume an average trip distance of approximately 80% of the regional average:

$$10.31 \text{ miles} \times 0.80 = 8.25 \text{ miles}$$

VMT reduced are calculated to be 7,592 per day based on multiplication of the average trip distance (8.25), number of vehicle trips in the zone (100,632) and the percentage of trips reduced by the project (0.9%).

$$8.25 \times 100,632 = 843,564$$

$$843,564 \times 0.009 = 7,592 \text{ mi/day}$$

Vehicle emissions are calculated by multiplying VMT by the weighted average emission rates by vehicle type (average emission rates by vehicle type multiplied by the fraction of such

vehicles measured regionally on the Local (intrazonal) road type as shown in Table 3 below, provided by H-GAC for the Fifth Ward Pedestrian/Bicyclist Special District Study of 2011).

Table 3: Vehicle Mix and Average Emission Rates by EPA Vehicle Type

Vehicle Type	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	All Vehicles
Local Roads	59.0%	24.2%	7.2%	3.2%	0.2%	0.3%	5.9%	0.1%	100.0%
Emissions									
VOC (g/mile)	0.40	0.47	0.45	1.36	0.06	0.10	1.12	4.65	0.50
NOx (g/mile)	0.62	0.66	0.77	3.87	0.50	0.54	5.58	0.97	1.03

Source: Houston-Galveston Area Council, Travel Demand Model, 2011

VMT reduction: 7592 mi/day

VOC reduction: 3796 g/day

NOx reduction: 7820 g/day

APPENDIX IV

Pedestrian Improvements: Opinion of Probable Costs

Assumptions and Methodology

The tables in this appendix represent an opinion of probable cost for recommended sidewalk improvements summarized by street. The full cost estimates are available as a separate appendix volume.

Tier 1 sidewalks are directly adjacent to major destinations like transit stations, commercial facilities, schools, and the Buffalo Bayou. Tier 2 sidewalks serve the major destinations previously mentioned. Tier 3 consists of all other streets (major and local) in the study area that have not been recently improved. Tier 4 consists of streets that have recently been constructed.

The assumptions used for standards and costs are shown in Table 1. The scope of work needed was calculated based on a combination of existing conditions: streets rated 'new' or 'good' do not need any further improvements except for bus shelters when applicable; streets rated 'poor' require demolition and reconstruction; and streets rated 'missing' require construction but not demolition. The type of improvements necessary were calculated based on MTFP classification: local streets require only paving, ADA ramps, striping, and landscaping; whereas collectors and thoroughfares also include pedestrian lighting and street amenities.

STANDARDS		
	UNIT	AMT
Street Tree Spacing	FT	30
Ped Light Spacing	FT	60
Sidewalk Width	FT	6
Bus Shelter Spacing	BLOCK	0.1
Curb-to-sidewalk width	FT	2
Amenity Spacing	FT	1000

COSTS				
ITEM	UNIT	UNIT COST	COST/LF	SOURCE
Land Use				
Sidewalks (width)				
Demolition	LF	10		GEEMD 2015
Installation	LF	30		GEEMD 2015
Driveways (depth)				
Demolition	SF	3		2009 Reference
Installation	SF	9		2009 Reference
Ramps				
Demolition	Each	100		LAN 2015
Installation	Each	1500		LAN 2015
Striping	Budget	3000		2009 Reference
Lighting (spacing)	Each	7500		GEEMD 2015
Landscaping				
Trees (spacing)	Each	750		GEEMD 2015
Curb to sidewalk treatment	SF	9		2009 Reference
Irrigation / Tree	Each	100		2009 Reference
Street Amenities				
Seating	Each	5000		LAN 2015
Bike Racks	Each	1000		2009 Reference
Waste Receptacles	Each	1000		2009 Reference
Bus Shelters	Each	6000		2009 Reference

Sidewalk Assessment and Cost Estimates Summary Table

Street Name	Length (Linear Feet)					Missing	MFTP	Transit Tier	Total Cost	Street Furniture			Land- scaping Cost	Transit Cost
	Total	New	Good	Poor	Paving Cost					Cost	Cost			
CLINTON DR	5660		844	252	4564	Major Tfare	Bus	1	\$1,290,733	\$146,977	\$72,163	\$877,273	\$160,362	\$33,959
COKE ST	2226		791		1435	Local		1	\$106,121	\$43,055			\$63,066	
EAST FWY	335			335		Freeway		1	\$22,911	\$13,411			\$9,500	
HIRSCH RD	4969		3870	802	297	Major Tfare	Bus	1	\$1,045,166	\$40,999	\$63,356	\$770,206	\$140,790	\$29,814
LOCKWOOD DR	6638		4779	1286	573	Major Tfare		1	\$1,370,188	\$68,622	\$84,632	\$1,028,862	\$188,072	
LYONS AVE	1369		1369			Major Tfare	Bus	1	\$276,611		\$17,452	\$212,164	\$38,783	\$8,213
N YORK ST	1524		1524			Major Tfare		1	\$298,794		\$19,429	\$236,191	\$43,175	
NAVIGATION BLVD	3051		1612	1439		Major Tfare		1	\$655,849	\$57,579	\$38,902	\$472,920	\$86,448	
PROVIDENCE ST	2012		952	1060		Local		1	\$99,387	\$42,384			\$57,003	
WACO ST	1252		1252			Major Tfare		1	\$245,451		\$15,960	\$194,024	\$35,467	
CALLES ST	2927		2688	240		Local		2	\$92,537	\$9,594			\$82,942	
HIRSCH RD	870		435		435	Major Tfare	Bus	2	\$188,895	\$13,052	\$11,094	\$134,873	\$24,654	\$5,221
LOCKWOOD DR	881		656	225		Major Tfare		2	\$181,810	\$8,997	\$11,237	\$136,606	\$24,971	
N YORK ST	737		737			Major Tfare		2	\$144,492		\$9,395	\$114,218	\$20,879	
NAVIGATION BLVD	1448		1448			Major Tfare		2	\$283,934		\$18,462	\$224,444	\$41,027	
SAMPSON ST	1381		348	348	686	Major Coll		2	\$305,374	\$34,485	\$17,614	\$214,132	\$39,142	
SCHWEIKHARDT ST	2141			2141		Local		2	\$146,287	\$85,632			\$60,656	
WACO ST	984		733		251	Major Tfare		2	\$200,374	\$7,515	\$12,540	\$152,451	\$27,867	
AMBOY ST	456				456	Local		3	\$26,622	\$13,692			\$12,931	
ARAPAHOE ST	2413		2413			Local		3	\$68,378				\$68,378	
BARON	628				628	Local		3	\$36,614	\$18,830			\$17,784	
BASIL ST	996				996	Local		3	\$58,080	\$29,870			\$28,210	
BERING ST	2671		979	497	1195	Local		3	\$131,400	\$55,725			\$75,675	
BILLY ST	1041				1041	Local		3	\$60,747	\$31,241			\$29,506	
BLANCHE ST	1326			1326		Local		3	\$90,624	\$53,048			\$37,576	
BRADY ST	1990			331	1659	Local		3	\$119,392	\$63,010			\$56,383	
BRINGHURST ST	3449		230	963	2255	Local		3	\$203,912	\$106,202			\$97,710	
BUCK ST	7036		2192	749	4094	Local		3	\$352,147	\$152,800			\$199,347	
BURCH ST	1435				1435	Local		3	\$83,695	\$43,043			\$40,652	
CALLES ST	2586		2586			Local		3	\$73,278				\$73,278	
CANAL CT	732				732	Local		3	\$42,724	\$21,972			\$20,752	
CANAL ST	5722		5474		247	Major Coll	Bus	3	\$1,163,692	\$7,425	\$72,952	\$886,869	\$162,116	\$34,330
CAPRON ST	496				496	Local		3	\$28,953	\$14,890			\$14,063	
CHISUM ST	1834		917		917	Local		3	\$79,465	\$27,507			\$51,958	
CHRISTENSEN ST	933		466		466	Local		3	\$40,425	\$13,993			\$26,432	
CLINE ST	2343				2343	Local		3	\$136,659	\$70,282			\$66,377	
CLINTON DR	6289		2370		3919	Major Tfare	Bus	3	\$1,388,439	\$117,560	\$80,183	\$974,777	\$178,185	\$37,733
COKE ST	4124			1728	2396	Local		3	\$257,836	\$140,995			\$116,841	
COMMERCE ST	1093				1093	Local		3	\$63,772	\$32,797			\$30,975	
CRETE ST	906				906	Local		3	\$52,829	\$27,169			\$25,660	

Street Name	Length (Linear Feet)					MFTP	Transit Tier	Total Cost	Paving Cost	Street Furniture Cost	Ped Light Cost	Land-scaping Cost	Transit Cost
	Total	New	Good	Poor	Missing								
CRITES ST	4017		1338	1091	1588	Local	3	\$205,092	\$91,285			\$113,807	
DAN ST	1656				1656	Local	3	\$96,574	\$49,666			\$46,907	
DICK ST	1873				1873	Local	3	\$109,257	\$56,189			\$53,068	
DRENNAN ST	3169		770	1185	1213	Local	3	\$173,593	\$83,809			\$89,784	
DUNN ST	455				455	Local	3	\$26,534	\$13,646			\$12,888	
EAST FWY	11067		6992		4075	Freeway	3	\$435,796	\$122,242			\$313,554	
EASTWOOD ST	2536		1268	474	794	Local	3	\$114,626	\$42,774			\$71,852	
EDMUND ST	2576			1450	1126	Local	3	\$164,784	\$91,790			\$72,994	
EGAN ST	805				805	Local	3	\$46,973	\$24,158			\$22,815	
EMILE ST	4414			744	3670	Local	3	\$264,917	\$139,855			\$125,062	
ENGELKE ST	2133	715.43		715	702	Local	3	\$89,842	\$49,680			\$40,163	
ESTELLE ST	3688		3111	264	312	Local	3	\$124,433	\$19,943			\$104,490	
FARMER ST	5458		5458			Local	3	\$154,643				\$154,643	
FINNIGAN DR	2166		2166			Local	3	\$61,361				\$61,361	
FOLEY ST	551				551	Local	3	\$32,124	\$16,521			\$15,603	
FOX ST	3576		455	1413	1708	Local	3	\$209,101	\$107,769			\$101,332	
FREUND ST	549				549	Local	3	\$32,005	\$16,460			\$15,545	
GARROW ST	6913	655	2901	1679	1679	Local	3	\$294,832	\$117,508			\$177,324	
GILLESPIE ST	1399			1793	1399	Local	3	\$81,608	\$41,970			\$39,638	
GRACE ST	2085			518	292	Local	3	\$139,525	\$80,463			\$59,062	
GUNTER ST	3792			2382	3274	Local	3	\$226,405	\$118,953			\$107,452	
HAGERMAN ST	2777			605	394	Local	3	\$185,794	\$107,122			\$78,672	
HARE ST	6942			614	638	Local	3	\$411,010	\$214,313			\$196,697	
HIRSCH RD	1282		3669	432	236	Major Tfare	Bus	\$283,339	\$24,351	\$198,646		\$36,312	\$7,690
HUNT ST	3669					Local	3	\$103,947				\$103,947	
IDA ST	1116				1116	Local	3	\$65,115	\$33,487			\$31,627	
INMAN ST	634				634	Local	3	\$36,975	\$19,016			\$17,959	
IRA ST	470	470				Local	3						
JAPHET ST	1530				1530	Local	3	\$89,258	\$45,904			\$43,354	
JENKINS ST	2535		2535			Local	3	\$71,814				\$71,814	
KENDALL ST	1623				1623	Local	3	\$94,697	\$48,701			\$45,996	
LOCKWOOD DR	16241		14846		1395	Major Tfare	3	\$3,226,488	\$41,862	\$207,075	\$2,517,385	\$460,167	
LOVEJOY ST	3786		1160	1186	1440	Local	3	\$197,923	\$90,645			\$107,278	
LYONS AVE	5655		5655			Major Tfare	Bus	\$1,142,845	\$29,126	\$72,105	\$876,574	\$160,234	\$33,932
MAPLEWOOD CT	971				971	Local	3	\$56,635				\$27,508	
MARGARITA ST	2498		1226	1272		Local	3	\$121,653	\$50,874			\$70,779	
MARKET ST	6504		6504			Local	3	\$184,294				\$184,294	
MCLEARY ST	476				476	Local	3	\$27,777	\$14,286			\$13,492	
MELVA ST	732				732	Local	3	\$42,710	\$21,965			\$20,745	
MENARD ST	1043			521	521	Local	3	\$66,052	\$36,503			\$29,550	
MERKEL	1343				1343	Local	3	\$78,348	\$40,293			\$38,055	
MILBY ST	2071		2071			Minor Coll	3	\$406,063		\$26,404	\$320,985	\$58,675	
MYSTIC	1017		511		506	Local	3	\$44,000	\$15,178			\$28,821	
N DRENNAN ST	5770	1021		292	4458	Local	3	\$279,978	\$145,405			\$134,572	
N EASTWOOD ST	2843		2843			Local	3	\$80,546				\$80,546	

Street Name	Length (Linear Feet)					MFTP	Transit Tier	Total Cost	Street Furniture				Land-scaping Cost	Transit Cost
	Total	New	Good	Poor	Missing				Paving Cost	Cost	Ped Light Cost	Cost		
N ESTELLE ST	2920		571	1473	877	Local	3	\$167,950	\$85,207				\$82,743	
N EVERTON ST	5810		1501	2099	2209	Local	3	\$314,860	\$150,252				\$164,608	
N HAGERMAN ST	2317		996	1321		Local	3	\$118,466	\$52,824				\$65,642	
N HUTCHESON ST	4856			1865	2992	Local	3	\$301,937	\$164,338				\$137,598	
N JENKINS ST	2858		1300	1190	368	Local	3	\$139,641	\$58,657				\$80,985	
N KENDALL ST	1004			502	502	Local	3	\$63,572	\$35,132				\$28,440	
N MILBY ST	2521		1510	485	526	Minor Coll	3	\$529,457	\$35,158	\$32,141	\$390,734	\$71,424	\$116,862	
N SAMPSON ST	754		754			Major Coll	3	\$147,836		\$9,613	\$116,862		\$21,362	
N SIDNEY ST	4199		999	464	2735	Local	3	\$219,593	\$100,632				\$118,960	
N SUPER ST	2829		1167	1662		Local	3	\$146,649	\$66,484				\$80,165	
N YORK ST	2045	513	1532			Major TFare	3	\$300,481		\$19,538	\$237,524		\$43,418	
NANCE ST	506				506	Local	3	\$29,512	\$15,177				\$14,334	
NAVIGATION BLVD	1344		1344			Major TFare	3	\$263,474		\$17,132	\$208,271		\$38,071	
NIMROD ST	1047				1047	Local	3	\$61,059	\$31,402				\$29,657	
ORANGE ST	1526			297	1229	Local	3	\$91,989	\$48,750				\$43,239	
POLLARD	611				611	Local	3	\$35,651	\$18,335				\$17,316	
PRESS ST	1950				1950	Local	3	\$113,776	\$58,513				\$55,263	
PROVIDENCE ST	3271		2520		751	Local	3	\$115,220	\$22,536				\$92,685	
ROTMAN	1361				1361	Local	3	\$79,390	\$40,829				\$38,561	
S LOCKWOOD DR	3014		3014			Major TFare	3	\$590,930		\$38,424	\$467,119		\$85,387	
SALTUS ST	2295			328	1967	Local	3	\$137,150	\$72,129				\$65,021	
SAN JOSE ST	1191		1191			Local	3	\$33,756					\$33,756	
SAN JUAN ST	2433		2433			Local	3	\$68,941					\$68,941	
SCHROEDER ST	2133		547	613	973	Local	3	\$114,175	\$53,730				\$60,445	
SCHWEIKHARDT ST	5164		3814	675	675	Local	3	\$193,561	\$47,252				\$146,309	
SHARON ST	4488		2492	921	1076	Local	3	\$196,261	\$69,094				\$127,167	
SHERMAN ST	7051		3798	462	2791	Local	3	\$301,989	\$102,209				\$199,779	
SIDNEY ST	2543		2543			Local	3	\$72,048					\$72,048	
SOLO ST	1176		530	323	323	Local	3	\$55,888	\$22,582				\$33,306	
SONDICK CT	1064				1064	Local	3	\$62,082	\$31,928				\$30,154	
SONORA ST	2665		2665			Local	3	\$75,508					\$75,508	
SUBURBAN	1624			1624		Local	3	\$110,991	\$64,970				\$46,021	
SUPER	1168			584	584	Local	3	\$73,943	\$40,863				\$33,080	
SUPER ST	2454			835	1618	Local	3	\$151,477	\$81,960				\$69,517	
TEXAS ST	2295		498		1797	Local	3	\$118,928	\$53,910				\$65,018	
TRALLE ST	1468			1468		Local	3	\$100,285	\$58,703				\$41,582	
UPTON	788				788	Local	3	\$45,968	\$23,641				\$22,327	
VERNON ST	3370		2762		608	Local	3	\$113,705	\$18,228				\$95,477	
WACO ST	4,728		1,953		2,776	Major TFare	3	\$1,010,442	\$83,275	\$60,288	\$732,908		\$133,972	
WILMER ST	4,195		260	3,189	746	Local	3	\$268,800	\$149,946				\$118,854	
WIPPRECHT ST	878		517		361	Local	3	\$35,715	\$10,829				\$24,887	
YATES ST	1,026		513		513	Local	3	\$44,451	\$15,387				\$29,064	
BALL ST	536	536				Local	4							
BOB ST	1,146	1,146				Local	4							
CANAL ST	2,348	2,348				Major Coll	4	\$14,088						\$14,088

Street Name	Length (Linear Feet)									Total Cost					Land- scaping Cost	Transit Cost
	Total	New	Good	Poor	Missing	MFTP	Transit	Tier	Paving Cost		Street Furniture Cost	Ped Light Cost	Cost			
COMMERCE ST	2,311	2,311				Local		4								
CRITES ST	464	464				Local		4								
DRENNAN ST	508	508				Local		4								
EASTWOOD ST	1,287	1,287				Local		4								
ENGELKE ST	2,266	2,266				Local		4								
EVERTON ST	2,675	2,675				Local		4								
HARRISBURG BLVD	8,924	8,924				Transit Corr	L Rail	4								
HUTCHESON ST	3,406	3,406				Local		4								
IRA ST	459	459				Local		4								
LOCKWOOD DR	542	542				Major TFare		4								
MC ASHAN ST	660	660				Local		4								
MILBY ST	1,819	1,819				Minor Coll		4								
N EASTWOOD ST	2,653	2,653				Local		4								
N MILBY ST	4,069	4,069				Local		4								
N SAMPSON ST	3,566	3,566				Major Coll		4								
N SUPER ST	2,644	2,644				Local		4								
N YORK ST	4,778	4,778				Major TFare		4								
NAVIGATION BLVD	2,034	2,034				Major TFare		4								
PRESTON ST	2,333	2,333				Local		4								
RUNNELS ST	2,290	2,290				Local		4								
S LOCKWOOD DR	1,732	1,732				Major TFare		4								
SAMPSON ST	2,689	2,689				Major Coll		4								
SHERMAN ST	1,222	1,222				Local		4								
SIDNEY ST	1,177	1,177				Local		4								
YORK ST	4,076	4,076				Major TFare		4								
Tier 1	29,035		16,992	5,174	6,869				\$5,411,211	\$413,028	\$311,893	\$3,791,640	\$822,664	\$71,986		
Tier 2	11,370		7,045	2,954	1,371				\$1,543,702	\$159,276	\$80,343	\$976,724	\$322,139	\$5,221		
Tier 3	291,845	3,375	127,446	45,990	115,035				\$22,158,480	\$5,290,627	\$652,196	\$7,928,653	\$8,173,319	\$113,685		
Tier 4	64,615	64,615							\$14,088					\$14,088		
Total	396,865	67,990	151,483	54,117	123,275				\$29,127,482	\$5,862,931	\$1,044,432	\$12,697,017	\$9,318,123	\$204,980		

