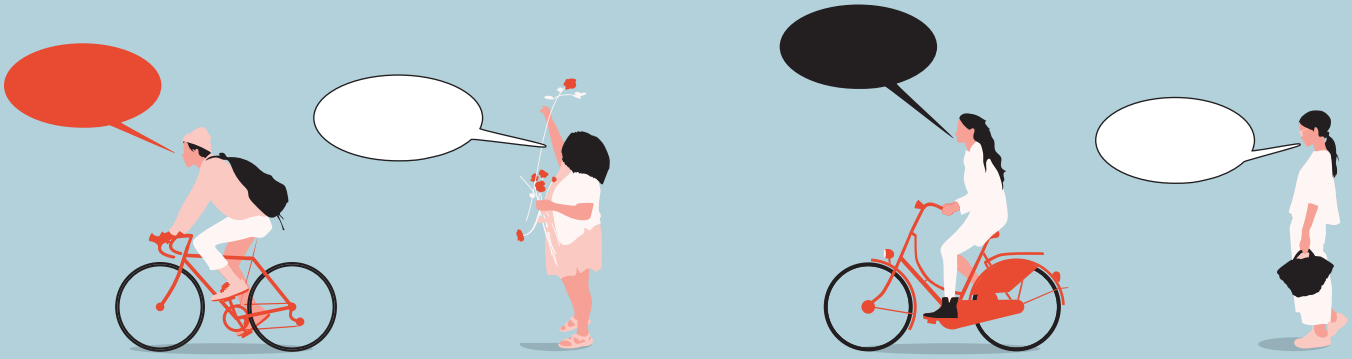
SOUTH HOUSTON

Livable Centers Study



10.31.2023 | DRAFT

LIVABLE CENTERS STUDY
Harris County Precinct 2 | South Houston

Client Team

SOUTH HOUSTON

HARRIS COUNTY PRECINCT 2 — Empower • Educate • Empower

ADRIAN GARCIA
COMMISSIONER

REVIVE 2 THRIVE
Community Revitalization Initiative

H-GAC
Houston-Galveston Area Council

Harris County
Public Health
Building a Healthy Community

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SOUTH HOUSTON

Livable Centers Study



Nature

Bikeways



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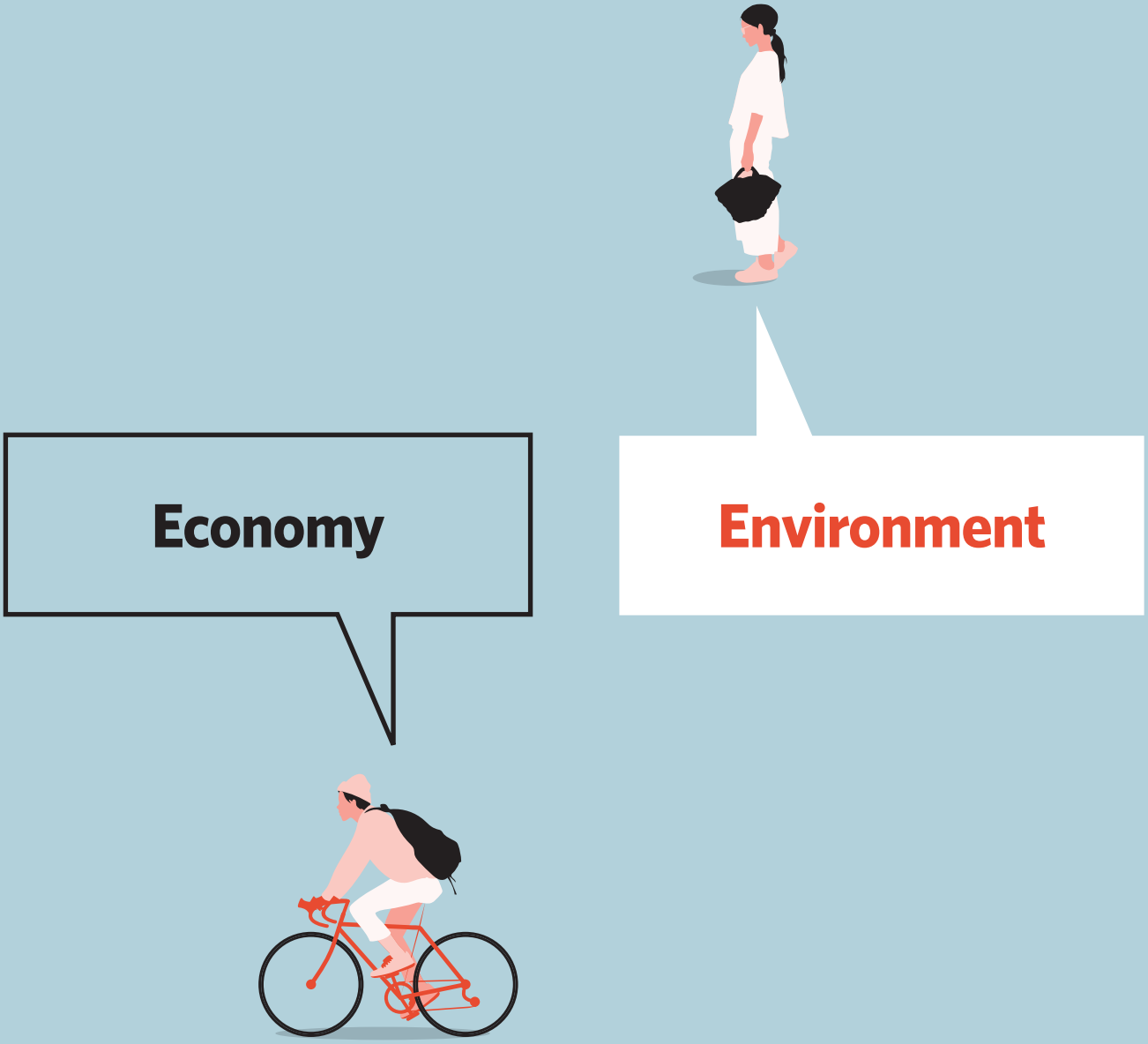
INTRODUCTION




Economy
Environment

Executive Summary

South Houston is a unique city, nestled between Houston and Pasadena to the north. It was originally named Dumont but was later renamed South Houston and incorporated into Houston in 1813. The city grew rapidly between the 1940s and 1960s, during which Spencer Highway was built with the help of local circus elephants. After 1960, South Houston started attracting more industrial manufacturing and growth slowed, contrasting with the rapid growth of other nearby Houston suburbs and satellite cities during the same time period.

Located approximately nine miles southeast of Downtown Houston, the City of South Houston is accessible to the region via the Gulf Freeway (I-45), Highway 3, College Avenue, and Spencer Hwy. South Houston is part of Harris County Precinct 2. The three-square-mile city is politically sandwiched between the Houston and Pasadena city limits, but due to its relatively small size, residents and visitors routinely move between borders and across the whole southeast area.

Today, the city comprises mostly single-family homes, a number of mobile homes, and some multi-family developments. Its residents are primarily Hispanic and low-income. The western edge is mostly made up of manufacturing warehouses, while the eastern edge has more retail and multi-family housing. The city is also home to one of two Mi Tienda grocery stores (an HEB subsidiary focused on providing Hispanic grocery items) in the Houston region and various popular local restaurants and amenities.

The South Houston Livable Centers Study (which focuses within the boundaries of South Houston's city limits) is the first major visionary plan for the city of South Houston. This transportation-focused study encourages a healthy lifestyle by adding and improving sidewalks, trails, streets, and transit connections to provide access to parks, retail, housing, and other community destinations via active transportation. The goal of this plan is to address challenges and build on the existing and exciting opportunities to ensure that South Houston is a walkable, livable city that is well integrated and connected to its immediate and larger regional surroundings and that it provides its residents with the spaces and infrastructure they need to live healthy and active lives. This can only be done by listening to and working with the community to

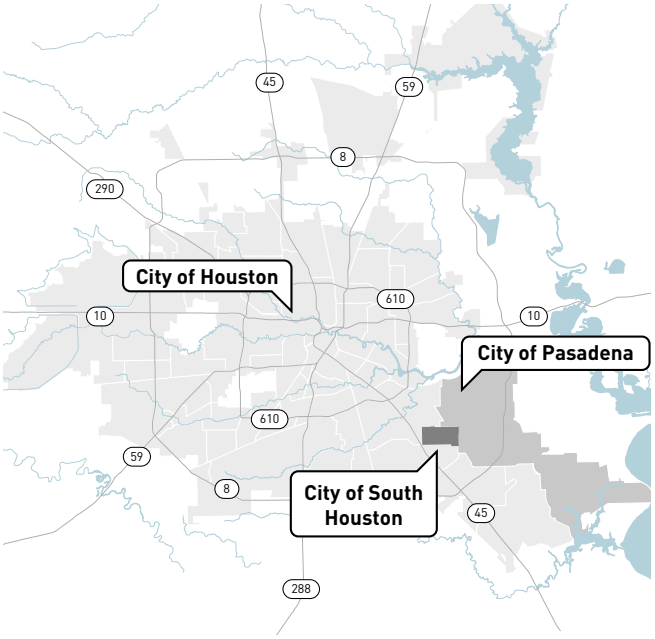


Figure 1. Context Map

The City of South Houston is smaller when compared to its neighboring cities, Houston and Pasadena.



Figure 2. Entrance Marker to South Houston



Figure 3. South Houston Aerial

South Houston's development can be seen in aerial imagery. The neighborhood's single family developments are mostly in the interior while concrete heavy industry is on the west side and a mix of retail and multi-family housing, also with very little green space, makes up the east edge of South Houston.

2 in = 1 mi

0	0.25	0.5	1 mi

N

Executive Summary

build a walkable, transit-friendly South Houston with enhanced access to employment opportunities, civic infrastructure, and recreation amenities

Understanding South Houston is an essential part of the process. We have documented existing conditions about health, connectivity and safety, parks and open space, flooding, land uses, and housing. This analysis helps us understand the challenges facing the city and the opportunities that we can build on to develop recommendations. The recommendations in this study were also greatly impacted by what we heard from the community through three rounds of outreach.

One of the main goals of the Livable Centers studies is to create places that promote healthy lifestyles, healthy communities, and greater quality of life. This goes beyond just establishing South Houston as a place that provides opportunities to increase physical activity and active transportation but that also helps people in the city feel a sense of community, improves housing quality and supply, increases flood resilience, and supports better education. We worked closely with Harris County Public Health to determine a set of health benefits that are important for South Houston and worked to ensure that the recommendations proposed in this plan address each of the desired health benefits. In the last round of public engagement, we asked the community to help us prioritize recommendations by selecting the (3) health impacts that are most important to them. This activity showed that the community's highest priorities are the benefits that are mostly likely to have a lasting impact on their quality of life.

The recommendations are separated into three categories: Focus Areas, Connectors, and City-wide recommendations. The focus areas were largely determined by what community members told us about where they choose to walk, run, and recreate. Community members said that many people chose to walk and run along Avenue G. Others said they chose to use the sidewalks around the schools near Main Street as walking and jogging tracks because they are some of the few places in South Houston with good quality sidewalks. Residents also reinforced that South Houston's parks and recreation centers are important recreation and community spaces, like Avenue A Park and the South Houston Library, South Houston City Park, and the Futbolito.

We used this feedback to establish focus areas around Avenue G, Avenue A, and Main Street that include all of these major community spaces for priority recommendations. Focusing on these areas alone would already make South Houston a more walkable place.

We also added recommendations for projects that can connect these focus areas: a trail along the Centerpoint Easement, a trail along Berry Bayou that would connect Avenue G to Avenue A, and a shared-use path along Avenue A, down to Spencer Hwy and over to Pennsylvania Street to connect the Avenue A focus area to the Main Street focus area. These connectors allow people to walk or roll safely between the focus areas and increase access to these critical community spaces .

City-wide recommendations cover the gaps left by the focus areas and the connectors. They recommend that the City, County, and Precinct redesign major roadways and intersections, add sidewalks, lighting, and shade trees along every street in South Houston, create a convenient bike network, work with METRO to add transit service to South Houston, improve the quality and supply of housing, and attract and support local businesses in the area. These are the visionary recommendations that will truly transform South Houston into a safe, walkable place to live, but the focus areas and the connectors are necessary first steps toward this vision.

We know that it can be challenging to implement transformational projects. They take time, money, and partnerships. We chose to prioritize and highlight specific areas that will have the biggest impacts on the communities of South Houston with fewer resources than tackling city-wide projects or large-scale, expensive roadway projects. We have further broken these focus area recommendations into "good," "better," and "best" phases that can be layered on each other as funding and other resources are acquired. For each focus area recommendation, the good phase represents the least that should be done to still produce an impactful project for the area that will meet the community's needs at a minimal cost. The "better" phase adds additional features that really make the focus areas places people want to seek out and spend time in. The interventions added in the "best" phase make the focus area recommendations truly transformational. They add

additional connectivity and more features that will attract people from other parts of South Houston or the neighboring areas and most completely meet the needs expressed by the community.

South Houston currently lacks many basic infrastructural elements that keep people safe and allow them to be active in their communities, but it has so much potential. The task of making South Houston a place that is truly walkable – a place where anyone can walk or bike to access all of their daily needs – will not be easy, but it will be well worth it. We imagine a South Houston where parents walk their children to school on wide shaded sidewalks, bike to work along a gorgeous bayou trail, catch the bus along Main Street, run along Avenue G for exercise on shared-use paths that are well-lit and separated from traffic, where children laugh and play on new, shaded playground equipment at Avenue A Park, where people walk to the grocery store because the intersections along Allen Genoa Road feel easy and safe to cross, and where people take quinceanera photos in front of meaningful community murals throughout town. This plan is the beginning of a new vision forSouth Houston.

EXISTING CONDITIONS



Nature

Lighting





Walkability

Bikeways




LA MICHOACANA
MEAT MARKET
FRUTERIA
CARNICERIA
PANADERIA
BORREGO TAQUERIA
TOSTADAS
FRESCAS
HAMBURGUESAS
MEXICANA
SODAS MEX.
TORTAS


HEALTH

Health

Health and the Built Environment

Social determinants of health (SDOH) encompass the environmental and social conditions that impact an individual's health throughout the course of their life, encompassing elements such as:

- Economic stability
- Educational opportunities
- Social support networks
- Access to quality healthcare services
- Neighborhood and built environment
- Access to healthy food
- Employment and working conditions

These factors can have a significant impact on health outcomes and risks and can contribute to health disparities among different populations.[1]

Evidence shows that an individual's zip code is a stronger predictor of health than their genetics.[2] The design of a community and built environment can impact health by influencing human behaviors and environmental exposures.[3] The built environment refers to the physical structures and spaces that are shape a community, such as buildings, transportation systems, homes, park, and public spaces. The built environment has a significant impact on health, as it can both support and hinder health and well-being.

The built environment, through healthy community design, can improve access to healthy food, physical activity, and public transportation, all of which influence community health and well-being.

On the other hand, the built environment can also impact health disparities and contribute to health inequities. Historically, communities of color and lower socioeconomic status (SES) have experienced inequitable investment in their community infrastructure and services. The quality of the built environment is generally poorer and makes improving health and quality of life more difficult. Many low-income communities do not have sidewalks, bike lanes, street lighting, and inadequate transportation options, or this infrastructure is outdated and not well maintained. As a result, these communities face barriers to engage in physical activity and active transportation.[4] Therefore, designing and maintaining the built environment to promote and support health and well-being is critical in addressing health disparities, improving health outcomes for all, and achieving health equity.

Health in All Policies (HiAP) is an approach to policymaking that recognizes the interrelated nature of health and well-being and seeks to incorporate health considerations into decision-making across all sectors, not just those directly related to health. The HiAP approach recognizes that health is influenced by a wide range of factors beyond the traditional healthcare system, including social, economic, and environmental factors. By incorporating health considerations into policies across multiple sectors, such as transportation, housing, and education, the HiAP approach aims to improve health outcomes and reduce health disparities.

HiAP can involve a range of activities, from increasing intersectoral collaboration and coordination, to developing and implementing policies that address the social determinants of health. The approach recognizes the importance of involving stakeholders from different sectors, including public health, community groups, and government agencies, in the decision-making process. The goal of HiAP is to create a more integrated and coordinated approach to decision-making that addresses the root causes of health, promotes health equity, and supports the health and well-being for all members of society. This plan includes a unique health lens provided by Harris County Public Health to ensure a HiAP approach is taken.

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Figure 4. Futbolito

Adults, teens, and kids stay active during the various sessions available at the South Houston Futbolito.

Health

Chronic diseases, such as heart disease, diabetes, asthma, and obesity are the leading cause of death in the United States and are responsible for a significant burden on healthcare systems. They can also lead to long-term health complications, including impaired mobility, decreased quality of life, and increased risk of premature death. Many chronic conditions are often preventable by engaging in healthy behaviors, like consuming a healthy diet, engaging in physical activity, and avoiding tobacco use.[1] Mental illness is a chronic disease that affects millions of people and has a direct relationship to physical and emotional well-being. Mental health conditions include anxiety, depression, mood disorders, and substance abuse issues.[2] Poor mental health can impair the ability to maintain good physical health or engage in healthy behaviors.[3] People with multiple chronic conditions have poorer overall health, utilize more health services, and spend more on health care.[4] It is estimated that chronic disease and mental health conditions account for 90% of the $4.1 trillion spent annually on healthcare.[5]

Although chronic diseases affect more than half the nation's population, there are definitive health inequities and disparities present in many communities. For example, low-income, Black, and Hispanic populations are at higher risk for many of these conditions, including high blood pressure, diabetes, and obesity.[6]

The health profile for the City of South Houston is concerning regarding the high rates of chronic diseases, physical inactivity, and poorer health. According to Figure 5, rates of chronic conditions like COPD, heart disease, asthma, and diabetes are similar to the city of Houston and Harris County, however a larger portion of South Houston residents are obese (41%), do not engage in physical activity (48%), and have higher rates of fair or poor health (26%). About 20% of the population suffers from depression and poor mental health (17%). Obesity and physical inactivity have negative implications for preventing chronic diseases, maintaining a healthy weight, and improving overall physical and mental health.

Additionally, 51% of South Houston residents do not have health insurance, compared to 33% in Houston and 32% in Harris County. Not having health insurance reduces access to health services for preventative and acute care and results in poorer health outcomes overall.[7] Life expectancy in the study area is lower at 76 years compared to 78 years in Houston and Harris County.[8] In 2020, the top three causes of death were COVID-19, cancer, and heart disease.

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2. Texas Department of State Health Services (2019). Behavioral risk factor surveillance system (BRFSS) 2013-2017 Data file. Retrieved from: https://dshs.texas.gov/chs/brfss/default.shtm

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8. 2010-2015 CDC-USALEEP

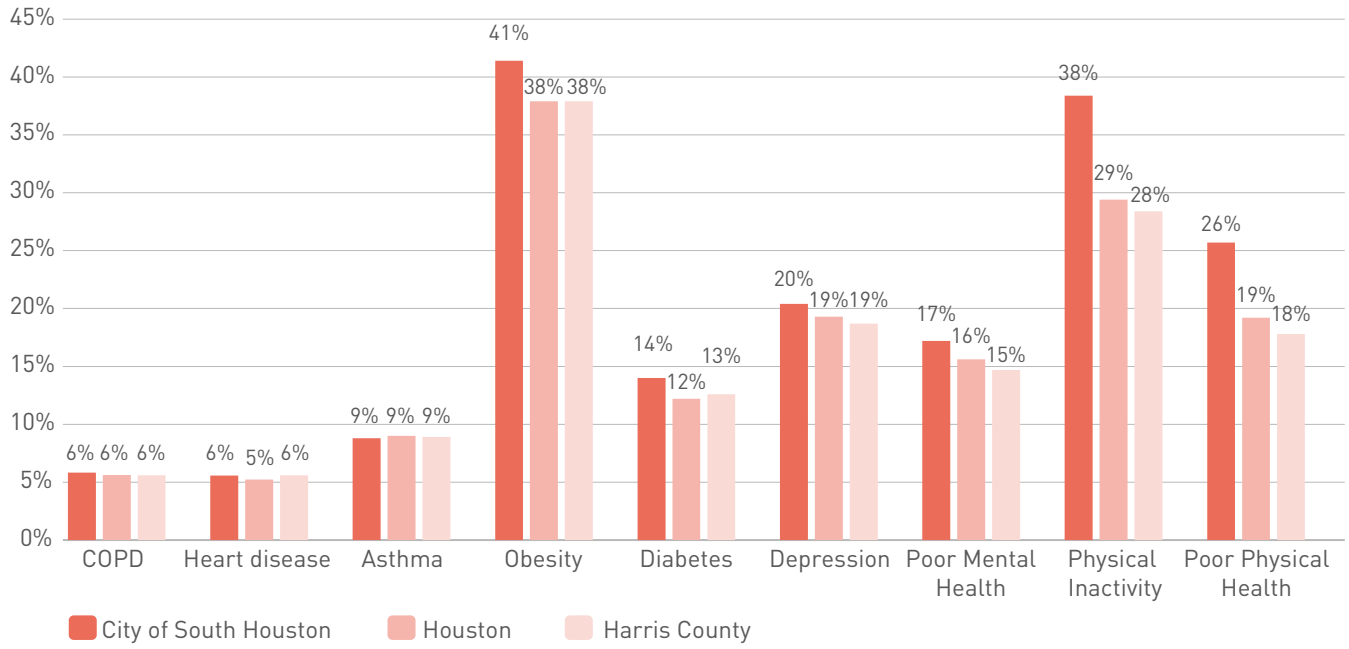
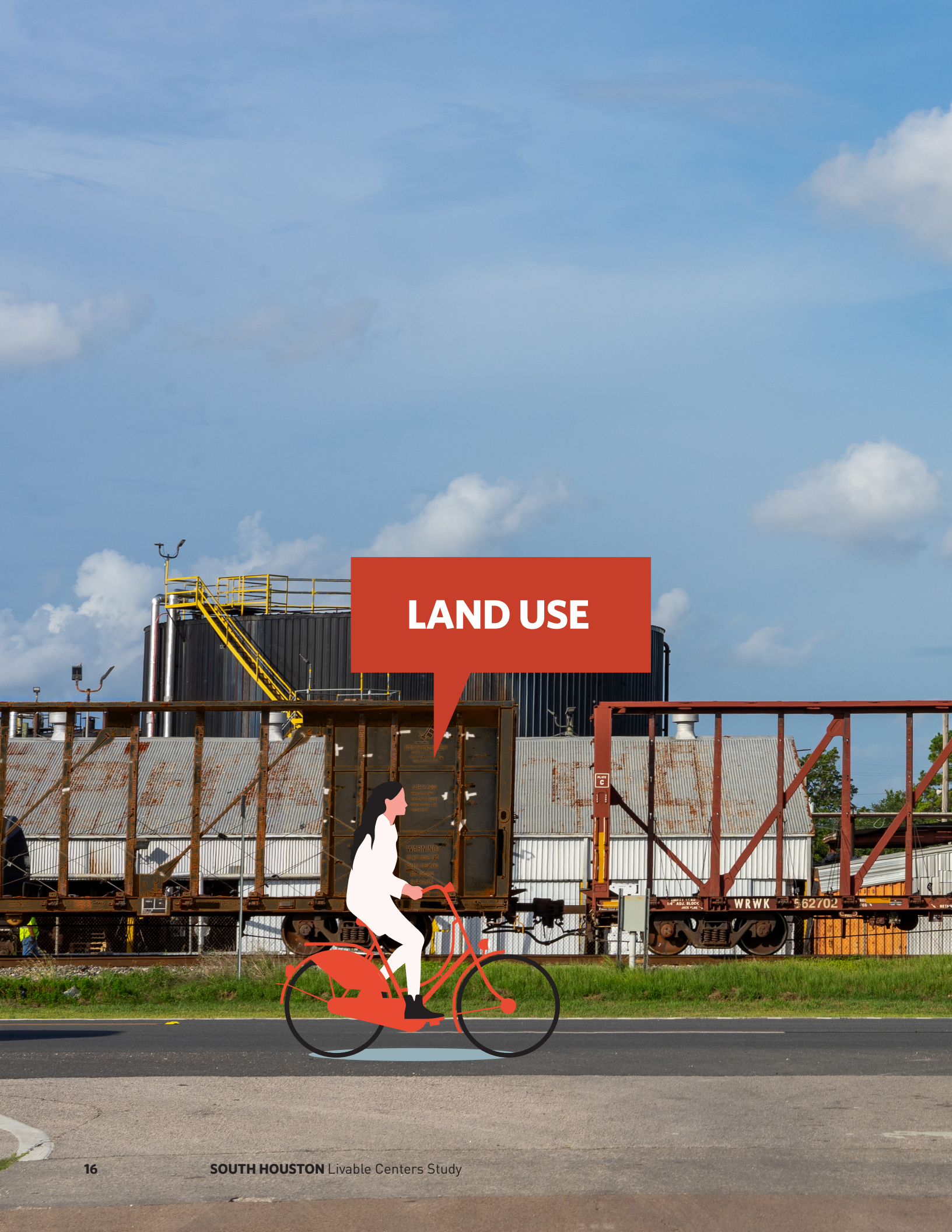


Figure 5. City of South Houston Health Profile

LAND USE




SOUTH HOUSTON TROJANS
1700 HWY 3
STOP

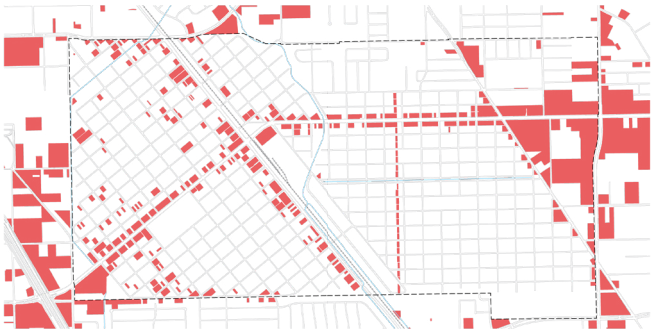
Land Use

Although small, South Houston has all of the land uses that can be found in any city: commercial, industrial and utility, institutional (education, government, medical), multifamily, single family, and park space.

Much of the land in South Houston is dedicated to single family homes, mostly located between College Ave. and Allen Genoa Rd. The area has two main commercial corridors: College Ave./ Spencer Hwy, which run east-west through the center of the city, and Galveston Rd. (Hwy 3), which runs diagonally north-south. College and Spencer are populated by heavier commercial uses, like auto shops, car dealerships, and construction supply companies, especially along Spencer Hwy. Most of the soft retail and restaurants are located along Galveston Rd. or in the commercial area between Shaver St. and Allen Genoa Rd.

Most of the industrial, institutional, and multifamily uses are located on the western half of the city, although there are a few larger multifamily complexes interspersed throughout the commercial area on the eastern edge.

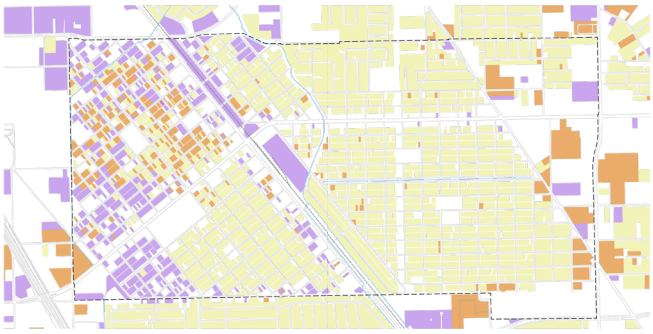
One of the more concerning aspects of the land use patterns in South Houston is the proximity of industrial uses to homes and schools. Many of the multifamily housing units in South Houston are very close to industrial sites. Many are right next door. Nearly all of the schools in the area are either bordering or very close to an industrial or utility site. This kind of proximity has been proven to have negative effects on residents, especially children. Poor air quality is directly correlated to increases in respiratory issues like asthma. The greater presence of large trucks near industrial areas also leads to increased noise pollution and air pollution, and makes the streets less safe, especially for children.



commercial

Figure 6. Commercial Land Use

The map above shows the lots that are used for commercial purposes



industrial/utility

multi-family/manufactured homes

single-family

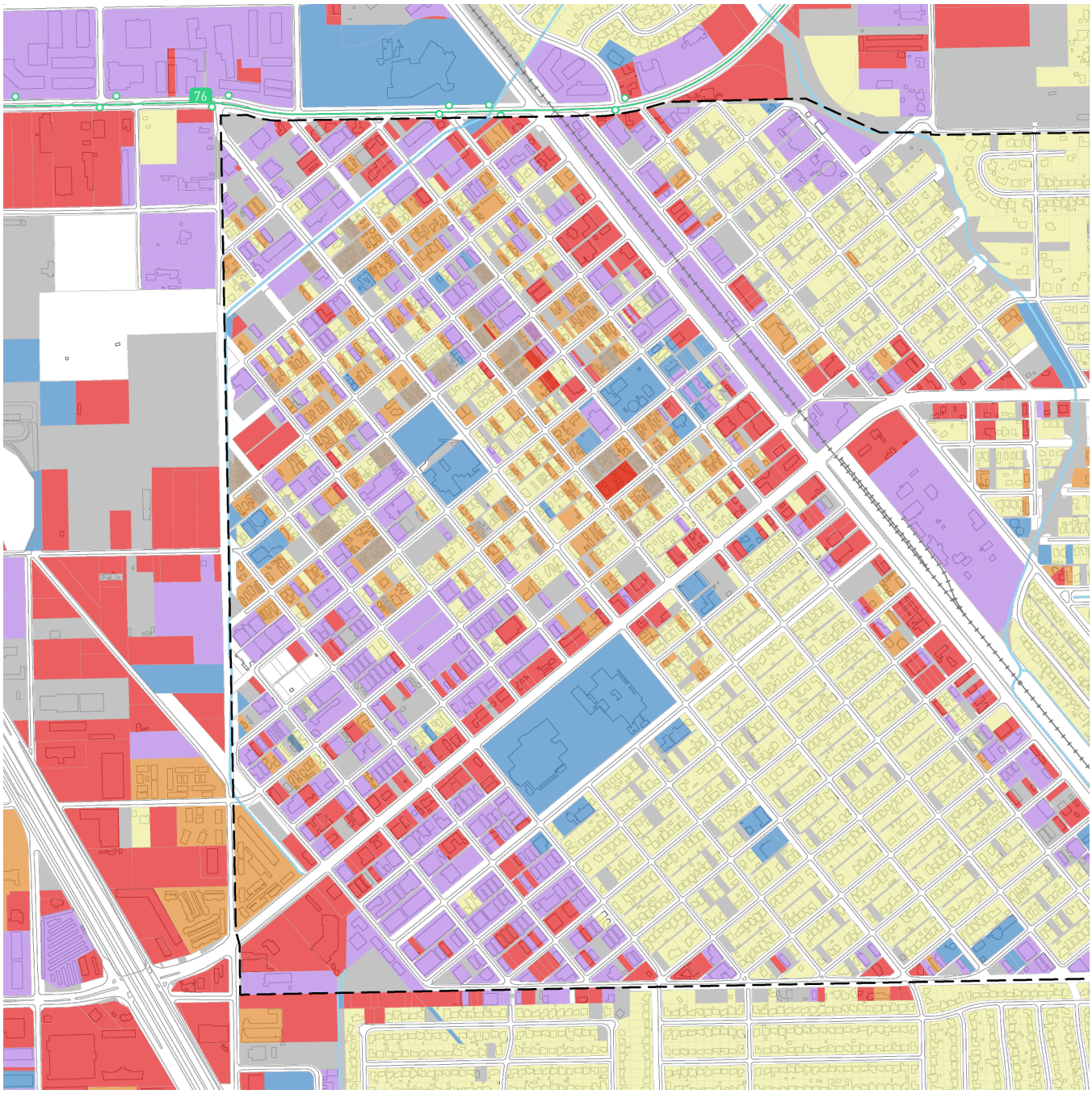
Figure 7. Industrial vs Residential Land Use

The map above shows the lots that are used for industrial, single-family residential, and multi-family residential purposes. Industrial uses are interspersed with residential in the northwest quadrant of the city. Most of the housing in that area is multi-family residential units and mobile homes.



Figure 8. Intermixing of Industrial and Housing

The image above shows the industrial context within the South Houston neighborhoods.



Land Uses Beyond South Houston

There are also several large industrial sites and a remediation site for a super fund (toxic chemical) site west of South Houston that could be affecting groundwater. To the northwest, there are more offices and industrial sites, another less-than-ideal mix of land uses. The land uses to the northeast, east, and south are less concerning: mostly commercial and residential. However, I-45 also runs right through the commercial area just to the west.

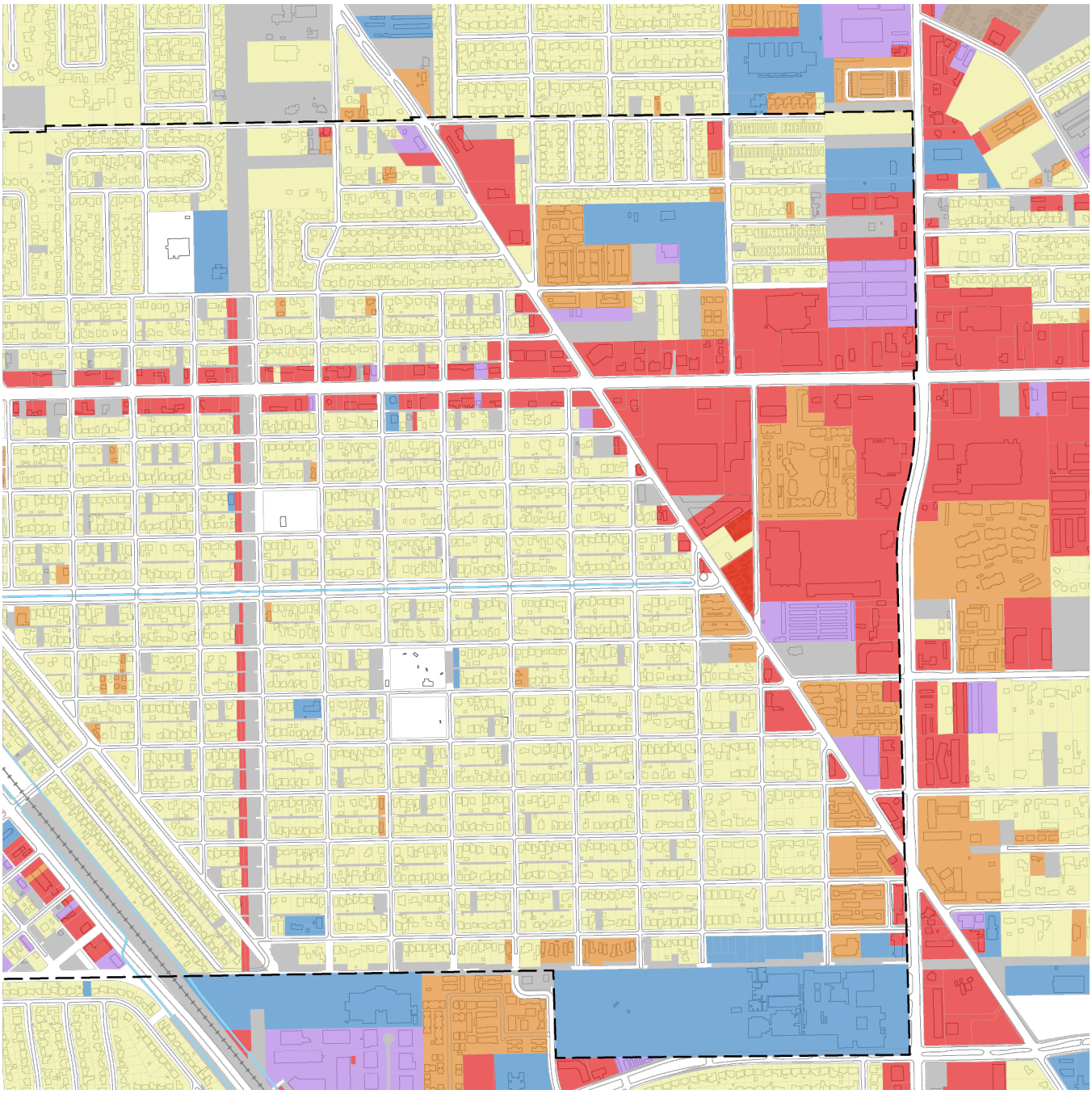


Figure 10. South Houston Land Use

The map above shows all of the land uses in South Houston. Single-family residential is located primarily in the center of the city with retail, restaurants, and other uses located along the main roads and east of Allen Genoa Rd.

Vacant Land

Compared to many places in the Houston region, South Houston does not have a lot of vacant land. The neighborhoods are fairly dense, with relatively small lots and few vacant lots between them. Likewise, the main commercial corridors also have very few vacant lots. However, South Houston does have other unused land. The street grid was set up in the pre-war era when alleys were common. Most of the alleys in South Houston have not been developed as paved areas for cars, but rather used for utilities, and informally as pedestrian pass-throughs. There is also a CenterPoint powerline easement running north-south through the center of the city. These easements have begun to be used for trails in other parts of the Houston region, and have been proposed as a possible location for new off-street trails in the South Houston area.

There are a handful of large vacant parcels in South Houston. One of the most prominent vacant sites is the old Smith School lot in the northeast corner of South Houston. It was demolished and rebuilt nearby and the land is still vacant.



Figure 12. Alleys



Figure 13. Powerline Easement

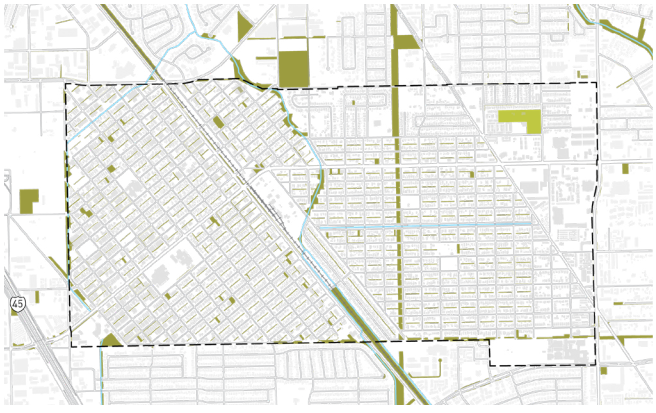


Figure 11. Undevelopable Land in South Houston

The map above shows the system of alleys throughout South Houston as well as the utility easement that runs north-south through the city.



Figure 14. Vacant Smith School Lot



Figure 15. Unused Land

The map above shows the vacant and undevelopable lots in South Houston

Vacant and Undevelopable Lots

- Vacant Lots
- Undevelopable Land

2 in = 1 mi | WGS 1984 | N

0 | 0.25 | 0.5 | 1 mi

Amenities

South Houston has all the services and amenities that come with being an incorporated City. Through our observation, we have identified the city Hall, a senior center and other municipal departments located around South Houston City Park, a USPS office, restaurants, some soft retail, supermarkets, schools, churches, community centers and parks, an urgent care, services like day care centers, social services, and laundromats, and a public library inside the neighborhood. Libraries are valuable assets and resources in communities that have been shown to positively contribute to a better quality of life. Libraries provide computer and internet access, access to textbooks, and host educational programs that assist with literacy, skill building, and employment. The presence of libraries provides opportunities to residents of all ages to improve literacy, education, and ultimately economic outcomes that impact quality of life.[1, 2]

Most of the restaurants, retail, and social services are located either along College Ave., Highway 3, or east of Allen Genoa Rd. Interestingly, the location of churches do not follow this pattern; most are located among the mixture of residential and industrial buildings northwest of College Ave. or in other neighborhoods. Religious institutions and churches are typically well rooted in a community, provide important social services, and contribute to social cohesion. They often offer activities to the community and are hubs of civic activity, especially for elderly residents. They can also serve as an avenue to deliver health messaging and programming during regular services and community meetings, and their existing meeting spaces and kitchens can also be leveraged to provide vital services in times of emergency.[3, 4]

There are also several recreation spaces that are well used by the community. The Futbolito is one of these spaces, which includes several soccer fields and a common gathering space. However, there are no formal recreation centers in the area. Some of the recreation facilities that exist are spaces that are publicly owned but not publicly accessible. To play baseball, softball or soccer, reservations are needed either through a private partner or the City. Also, each recreation space serves only one need/sport; baseball fields in one park, softball in another, and soccer in another. The result is a range of green spaces but only Avenue A Park and South Houston City Park is accessible to the general public at all times.

As we continue with the public engagement process, we continue to learn about services and amenities that are important to South Houston residents. We have learned about the importance of the Taqueria at La Michoacana on Shaver St. for South Houston High School students, as well as the rest of the places to gather in and around the intersection of Shaver St. and Edgebrook Dr. We have learned about the community involvement efforts that Panaderia Tierra Caliente provides or the popularity of places like City Cafe, Taqueria Jalisco, La Favorita, and Magic Burger. We have learned how the lack of sidewalks in the area has made the sidewalks around schools a de facto walking track for families. We continue to listen to residents to expand the list of services and amenities.

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Figure 16. Futbolito

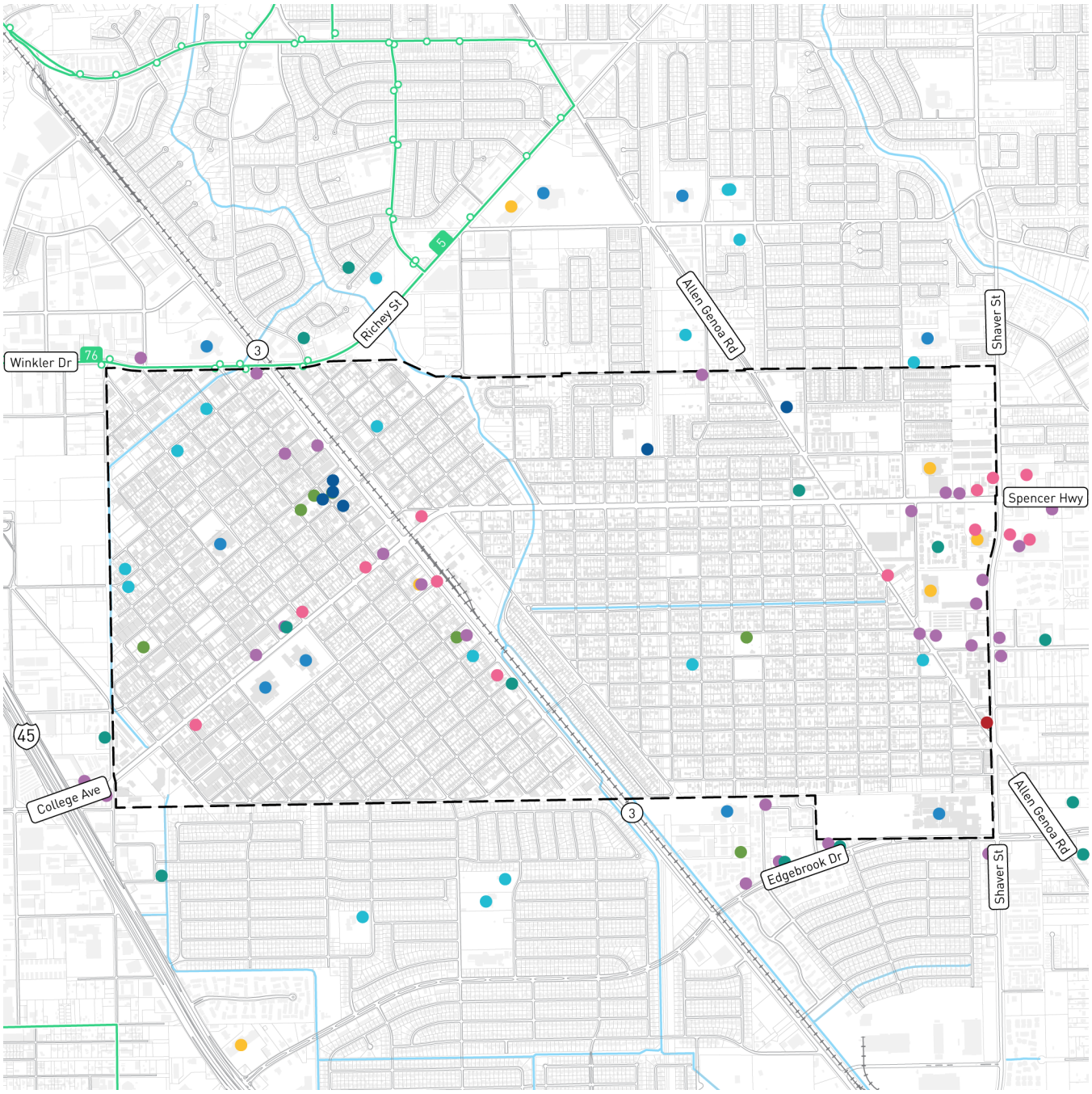


Figure 17. Services and Amenities

The map above shows the locations of some of the services and amenities in South Houston, like schools, government buildings, government services (like USPS), urgent cares, grocery stores, churches, community centers and parks, some soft retail (like clothes), and restaurants.

Services and Amenities

- Schools
- Institutions
- Social Services
- Churches
- Community Centers and Parks
- Grocery Stores
- Shopping
- Restaurants
- Urgent Cares

2 in = 1 mi | WGS 1984 | N

0 | 0.25 | 0.5 | 1 mi

Health Care Access

Healthcare access in Harris County is defined by the three A's: Availability, Acceptability, and Affordability. In the health care context, availability encompasses the geographic availability of services, transportation options to and from services, and the types of health services offered. Acceptability refers to the relationship and trust between a patient and their provider. Lastly, patients need to be able to afford health insurance and quality health services. There are several socioeconomic and cultural factors that could pose as barriers to access, such as the inability to afford insurance, language barriers, or even self-perception of overall health. In addition, limited health services, difficulty scheduling appointments, and limited transportation to clinics are barriers to healthcare. The presence of a health clinic in a community is one piece necessary for improving access, but the provision of services alone will not solve all health issues.[1]

1. Harris Cares, (2020). Harris Cares: A 2020 Vision of Health in Harris County. Harris County Public Health, Retrieved from: https://publichealth.harriscountytx.gov/Resources/Harris-Cares



Figure 18. South Houston City Park

The centrally located South Houston City Park is a recreational and symbolic public space where people walk and spend quality time.

Food Access

There are several grocery stores in and near South Houston. We are defining grocery stores as full scale full service stores with various food options. Most of the grocery stores in the city are on the eastern edge along Shaver Rd. The grocery stores in South Houston include Fiesta Mart, Mi Tienda, which is HEB's Hispanic-grocery store, and Food Town. Outside of the city limits there are two other Fiesta Marts nearby, one to the north and one to the southwest. There are also three smaller grocery stores that have a select number of options and are generally more expensiv: La Michoacana, El Rancho Supermercado, and Mexico Lindo. This last one is located in the center of South Houston, along Highway 3 and just south of College Ave.

According to the U.S. Department of Agriculture, several of the census tracts in South Houston have high percentages of low income residents that live more than half a mile to the nearest grocery store. This essentially means that there are many low income residents in South Houston that need to drive or take a bus to get to a grocery store. However, unless they live in the northwestern corner of the city, there are no bus routes within walking distance. This may lead residents to shop more often at convenience stores, which are spread out more evenly throughout the city but serve mostly processed foods and do not offer fresh produce.

The USDA does not include grocery stores like La Michoacana, El Rancho Supermercado, and Mexico Lindo Supermarkets in their data, so some residents do have more access to grocery stores than is appears by looking at the USDA data, but these types of grocery stores also tend to be more expensive and sometimes less healthy options than larger, more well-known chains. It is also worth noting that although there are grocery stores in the area, there are no grocery stores nearby that center their business on healthy foods.



Figure 19. Mi Tienda Grocery Store

The Mi Tienda grocery store in South Houston is one of two of HEB's Hispanic grocery stores in the Houston region, and people from all over the region come to shop here because of its unique market vibe. It is also an affordable grocery option.



Figure 20. La Michoacana

La Michoacana is not recognized by the USDA as a grocery store, but this chain often chooses to locate in food deserts. They are good for filling the needs left by the lack of other grocery stores, but tend to be much more expensive than more common grocery stores.

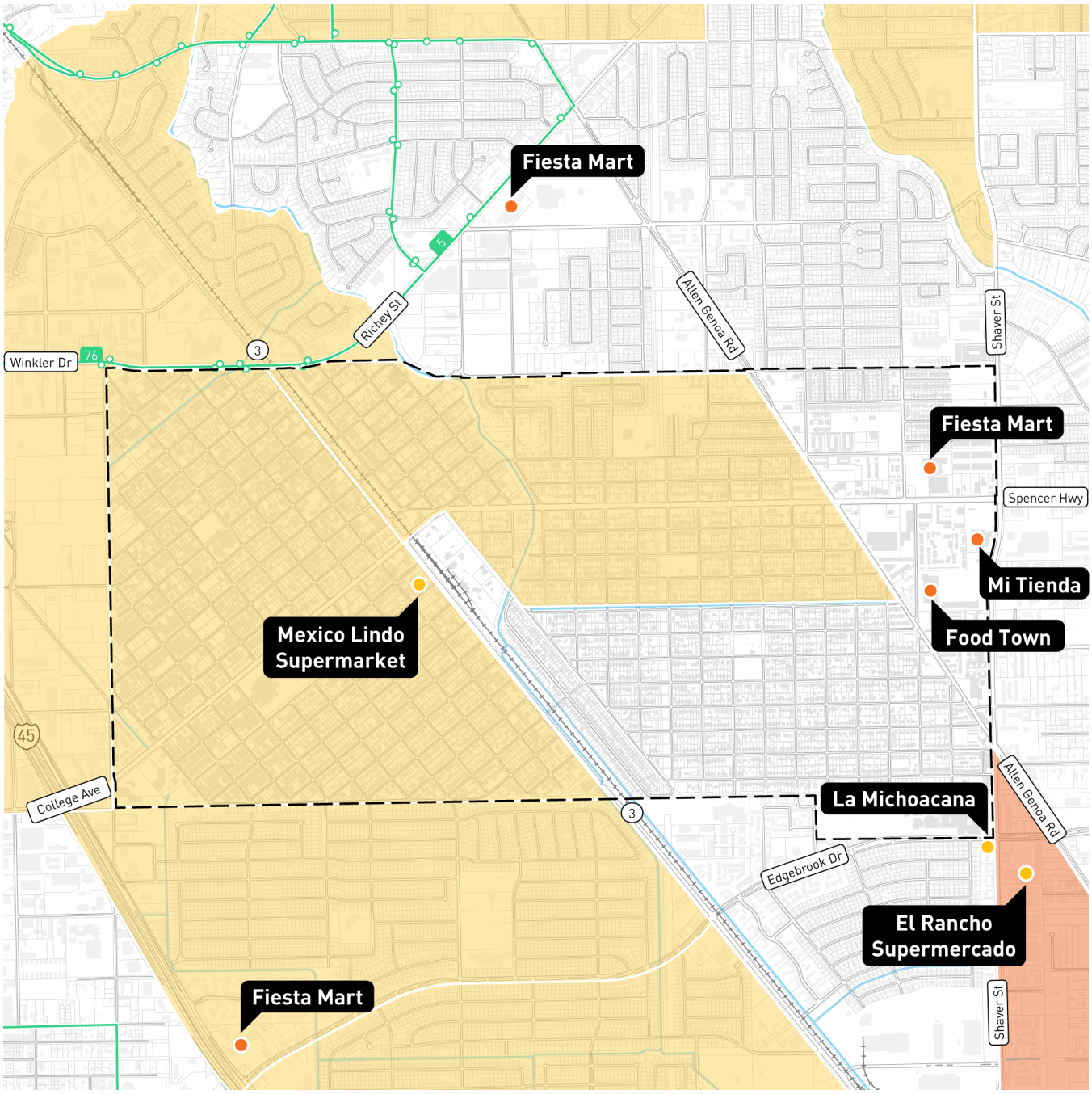


Figure 21. Grocery Stores and Supermarkets

The map above shows the USDA designated food desert census tract and the grocery stores that serve South Houston.

Low Income and Low Access to Groceries

- Grocery Stores
- Small, Expensive Grocery Stores
- Census tracts with high share of residents at more than 1/2 mile from a grocery store
- Census tracts with high share of residents at more than 1 mile from grocery store

2 in = 1 mi

0	0.25	0.5	1 mi

USDA 2019

N

Age of Housing

The City of South Houston was founded in the early 1900's at the intersection of College Ave. and Highway 3. The city experienced rapid growth between the 1940's and 1960's. During this early period most of the housing development occurred north of College and Spencer Hwy as well as along the Houston Galveston railroad.

Single-Family Housing

The neighborhood of Merilyn Place, which surrounds Avenue A Park, was fully developed during this time, differing from the infill development pattern of the rest of the city. Homes of the Merilyn Place neighborhood have similar pre-1950's style architecture with a typical one car garage. In many cases these have since been converted to bedrooms.

After 1960, the city's housing stock continued to grow incrementally, infilling vacant lots as the decades passed. As a result, the single-family housing stock today, which includes mobile homes, is very diverse in size and style. This is an opportunity for South Houston because it expresses a unique character and supports a mixed-income community.



single-family

Figure 22. Location of Single-Family Homes in South Houston







Figure 23. Single-Family Housing Examples

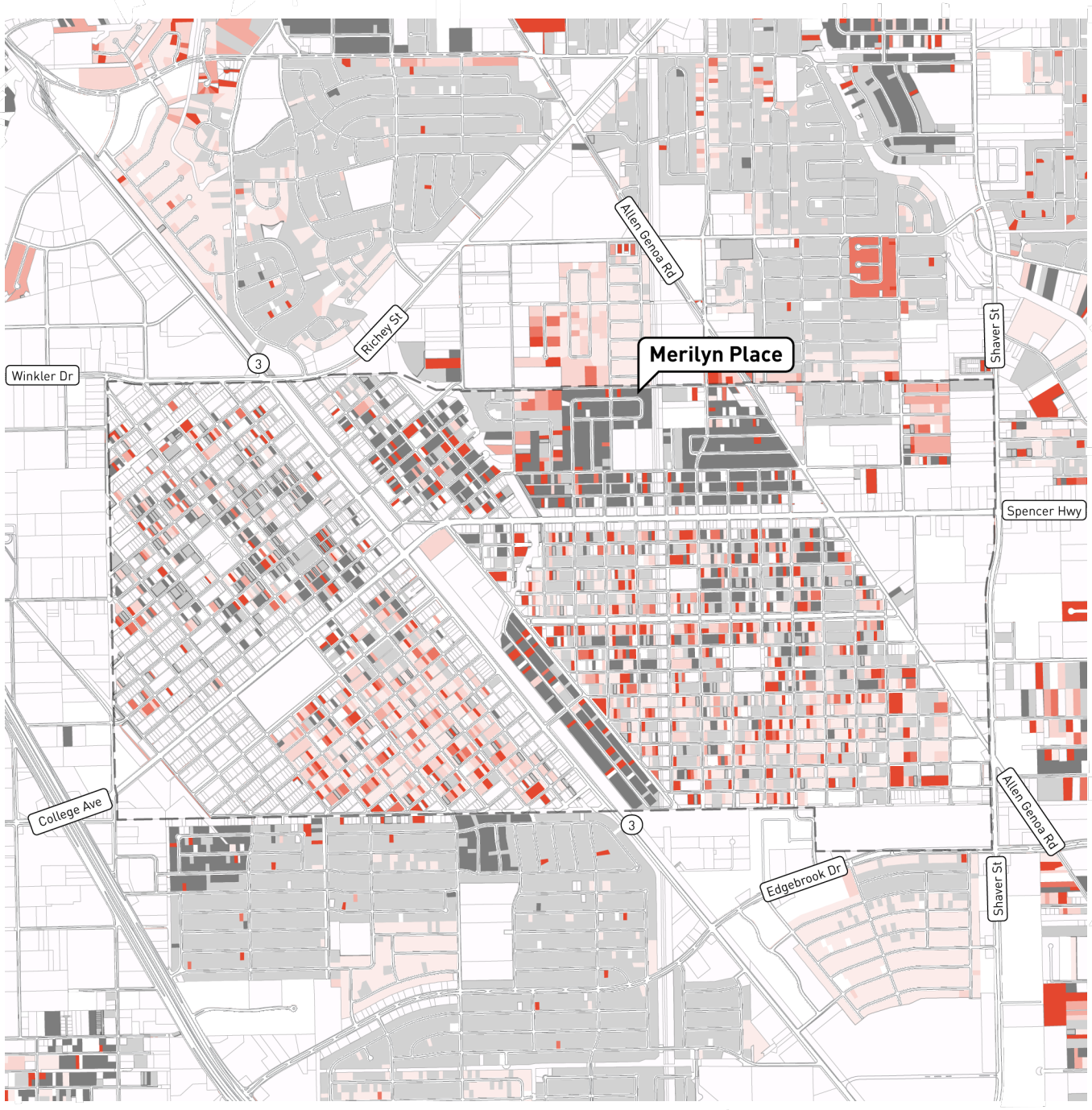


Figure 24. Single-Family Housing Age Map

South Houston developed incrementally and now has good diversity in single-family housing stock ranging from the pre-war era to present day.

Age of Housing

- Pre 1950's
- 1951-1960
- 1961-1970
- 1971-1980
- 1981-1990
- 1991-2000
- Post 2001

2 in = 1 mi HCAD 2022

0 | 0.25 | 0.5 | 1 mi

N

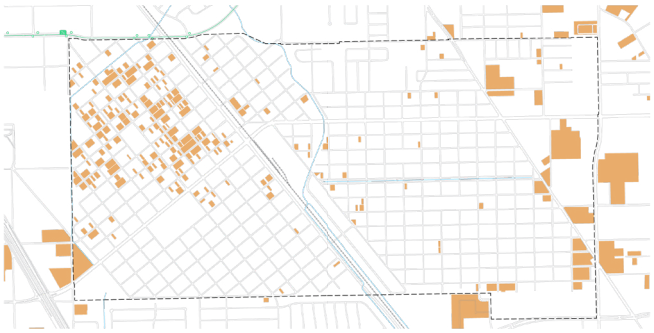
Age of Housing

Multi-Family Housing

Similar to the single-family development, multi-family developments were built in various decades throughout South Houston. The oldest multi-family complexes were built on the southwest edge of South Houston, including Tara Hall, one of the oldest in the area. There is more diversity in building age on the eastern side of South Houston, ranging from the 1960's to post 2000s. The newest multi-family developments within the city are Windsor Gardens (built in 2003) and Grace Land Apartments (built in 2019), which includes affordable housing options. According to the US Department of Housing and Urban Development, Granada Terrace Apartments, originally built in 1962, was reconstructed in 2020 as a HUD subsidized housing development with 155 subsidized units.

Mobile Homes

Mobile homes are a common housing type in South Houston. They can be considered both single-family or multi-family depending on where they are located. Mobile homes that are on a single lot are considered single-family dwellings, but homes that are located within a mobile home park are considered multi-family. Just like any other housing typology, mobile homes have a range of multi-family types. Most of the mobile homes are located north of College and west of Highway 3. Many of the lots in this area are long and skinny, which result in multi-family density.



multi-family/manufactured homes

Figure 25. Location of Multi-Family Home



Figure 26. Multi-Family Housing in South Houston



Figure 27. Newer Mobile Homes



Figure 28. Older Mobile Homes

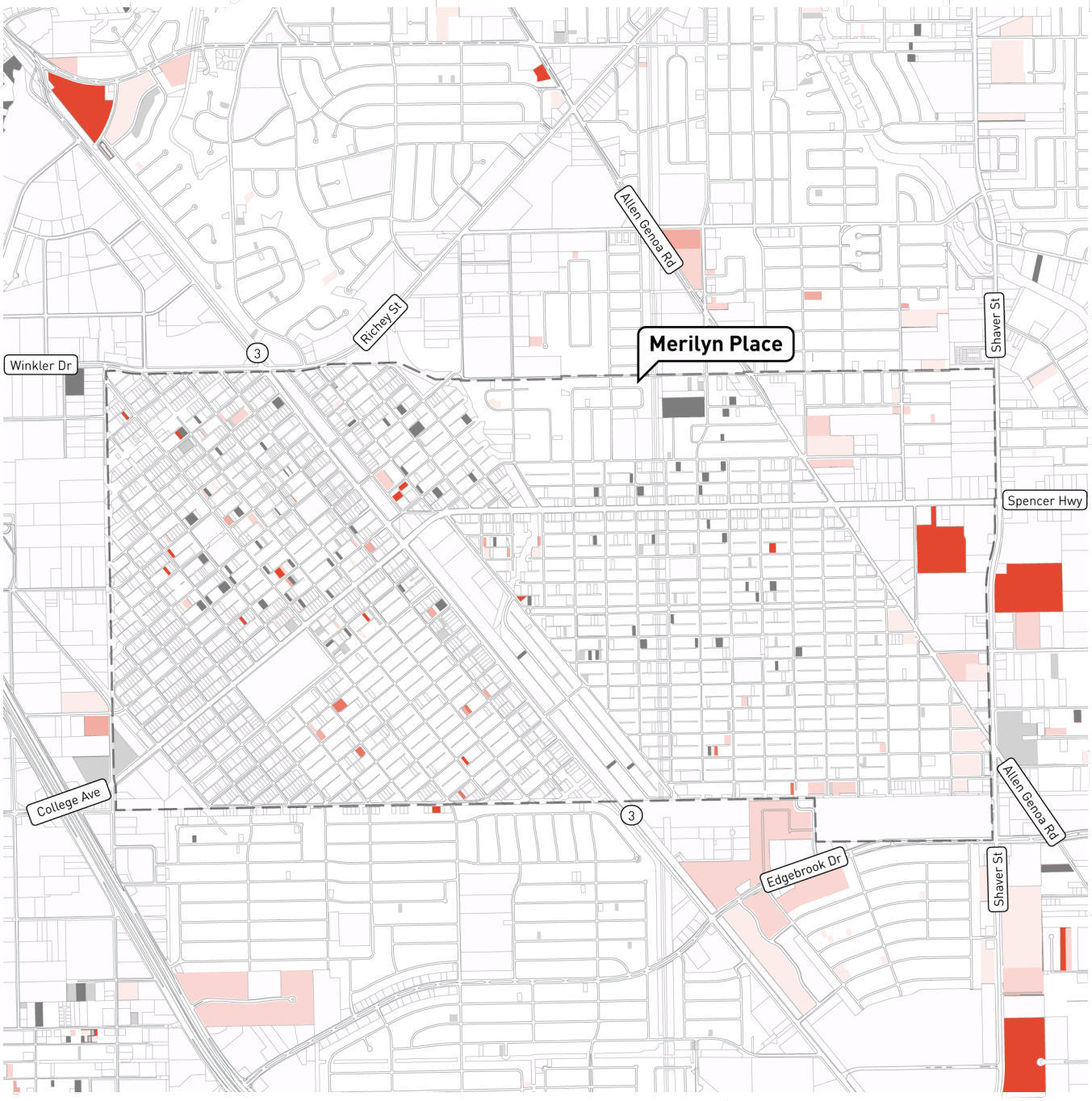


Figure 29. Multi-Family Housing Age Map

South Houston developed incrementally and now has good diversity in multi-family housing stock ranging from the pre-war era to present day.

Age of Housing

- Pre 1950's
- 1951-1960
- 1961-1970
- 1971-1980
- 1981-1990
- 1991-2000
- Post 2001

2 in = 1 mi HCAD 2022

0 | 0.25 | 0.5 | 1 mi

N

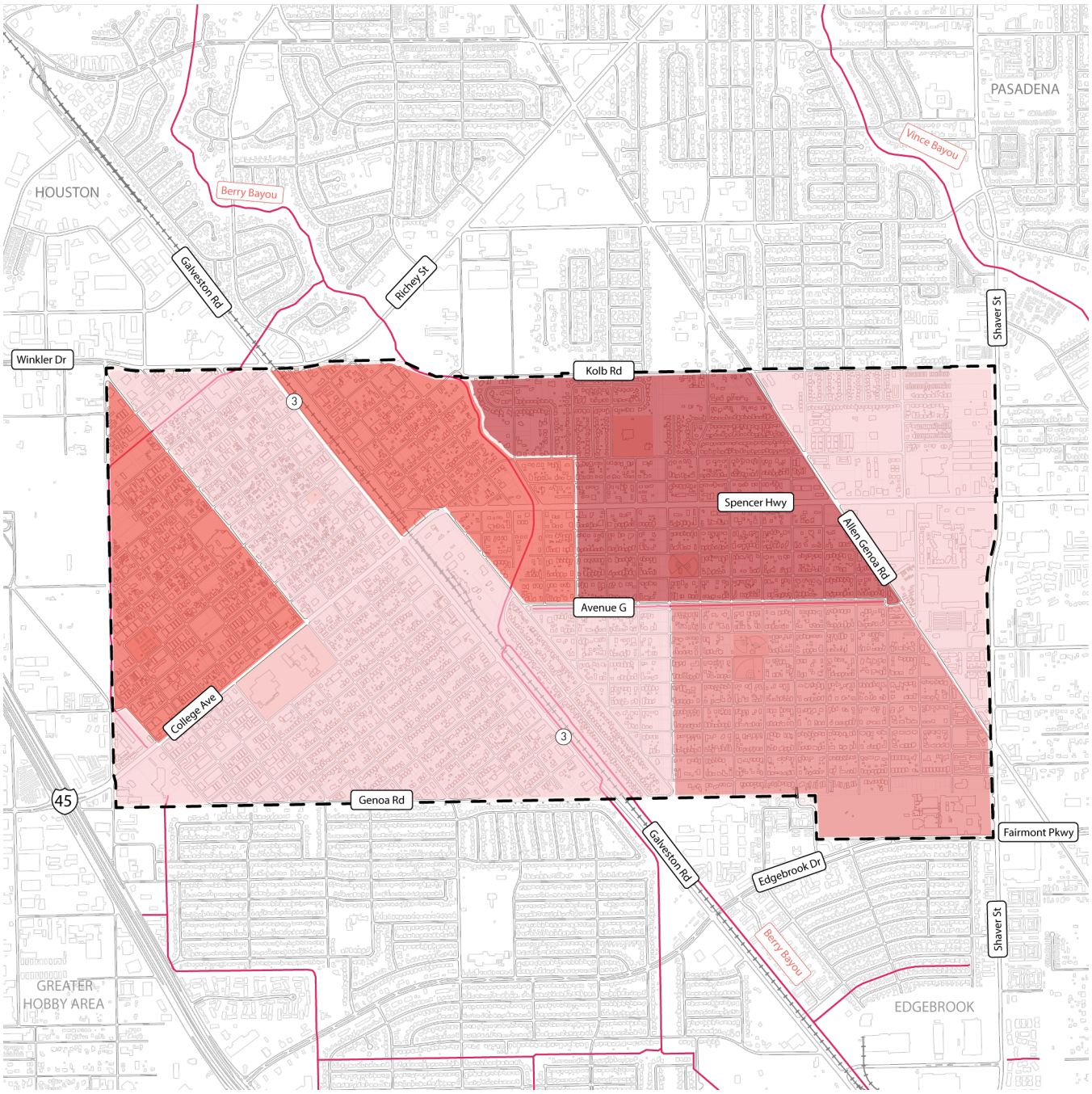
Lead Paint Pollution

Lead is an elemental heavy metal naturally found in the environment as well as manufactured products. Lead can be released directly into the air, as suspended particles, or through run-off that is absorbed into the soil or water systems. Exposure to lead-based paint is linked to impaired cognitive development and reduced impulse control.[1]

Figure 30 map shows the percent of housing units built before 1960, as an indicator of potential exposure to lead paint. According to EPA, 87% of homes built before 1940 have some lead-based paint, while 24% of homes built between 1960 and 1978 have some lead-based paint. Lead can also be found in past uses of leaded fossil fuels and some types of industrial facilities. Areas highlighted with high lead exposure are areas with typically older housing, as well as industrialized areas.

Lead pollution can persist in the environment as it can be absorbed in soils and sediments. This is especially concerning for the city of South Houston as areas around Berry Bayou with potential high exposure to lead paint pollution can carry the toxins through run-off and deposit contaminants downstream.

1. U.S. Department of Health and Human Services. 2009. "The Surgeon General's Call to Action to Promote Healthy Homes," U.S. Department of Health and Human Services, 1–2. surrounding ecosystems and public health.



Source: EPA Environmental Justice Screen and Mapping

Figure 30. Housing Built with Potential for Lead Paint

The map above shows percent of housing units built before 1960, as indicator of potential exposure to and run-off of lead paint.

Potential Lead Paint Pollution

- <50 percentile
- 50 - 60 percentile
- 60 - 70 percentile
- 70 - 80 percentile

2 in = 1 mi

0	0.25	0.5	1 mi

N

Internet Access

A connection to the internet provides access to amenities and education resources for everyone, especially children. While engagement strategies should always be diverse, knowing where internet access is low points to specific areas where digital methods are less successful. Bridging the digital divide is necessary in South Houston.

According to 2021 ACS data, internet access in South Houston varies across the neighborhood. The area north of College Ave. and east of Hwy 3 has some of the highest percent of households without access to the internet. The west side of South Houston also has households with lower internet access. With the exception of two block groups, these two areas of the city have lower median household incomes than South Houston overall.

When compared to where the highest percent of teens and children live, South Houston has great internet access. The interior of the city has the lowest percent of households without internet access but also the highest percent of population under 17 years of age. Single family homes are predominant in this area, whereas multi-family housing is more prominent in areas with less internet access. This is important as infrastructure needed for access varies depending on residential typology and whether you are an owner or a renter.

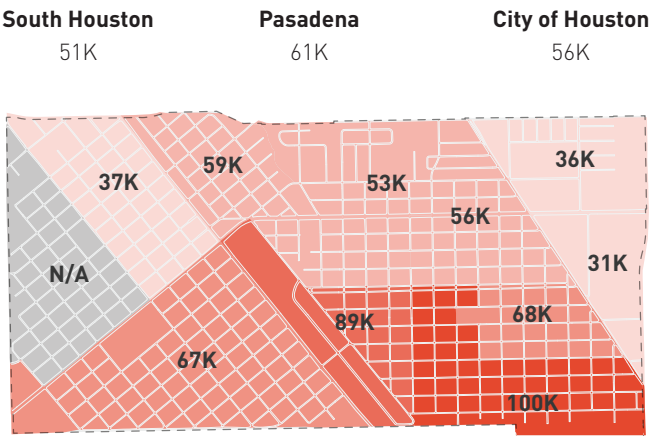


Figure 31. Median Household Income by Block Group 2021 ACS (5-Year)

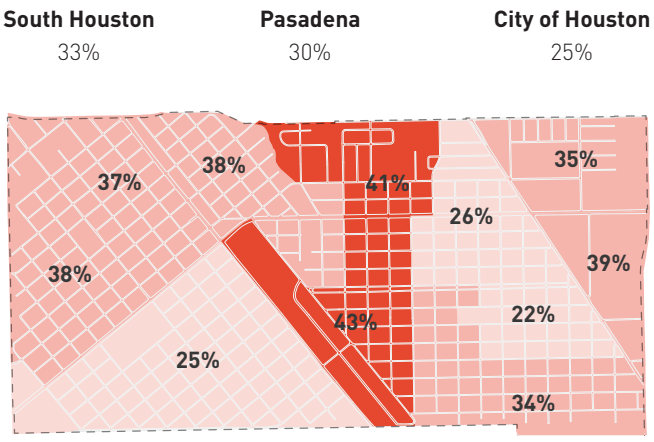


Figure 32. Population 17 Years and Younger by Block Groups 2021 ACS (5-Year)

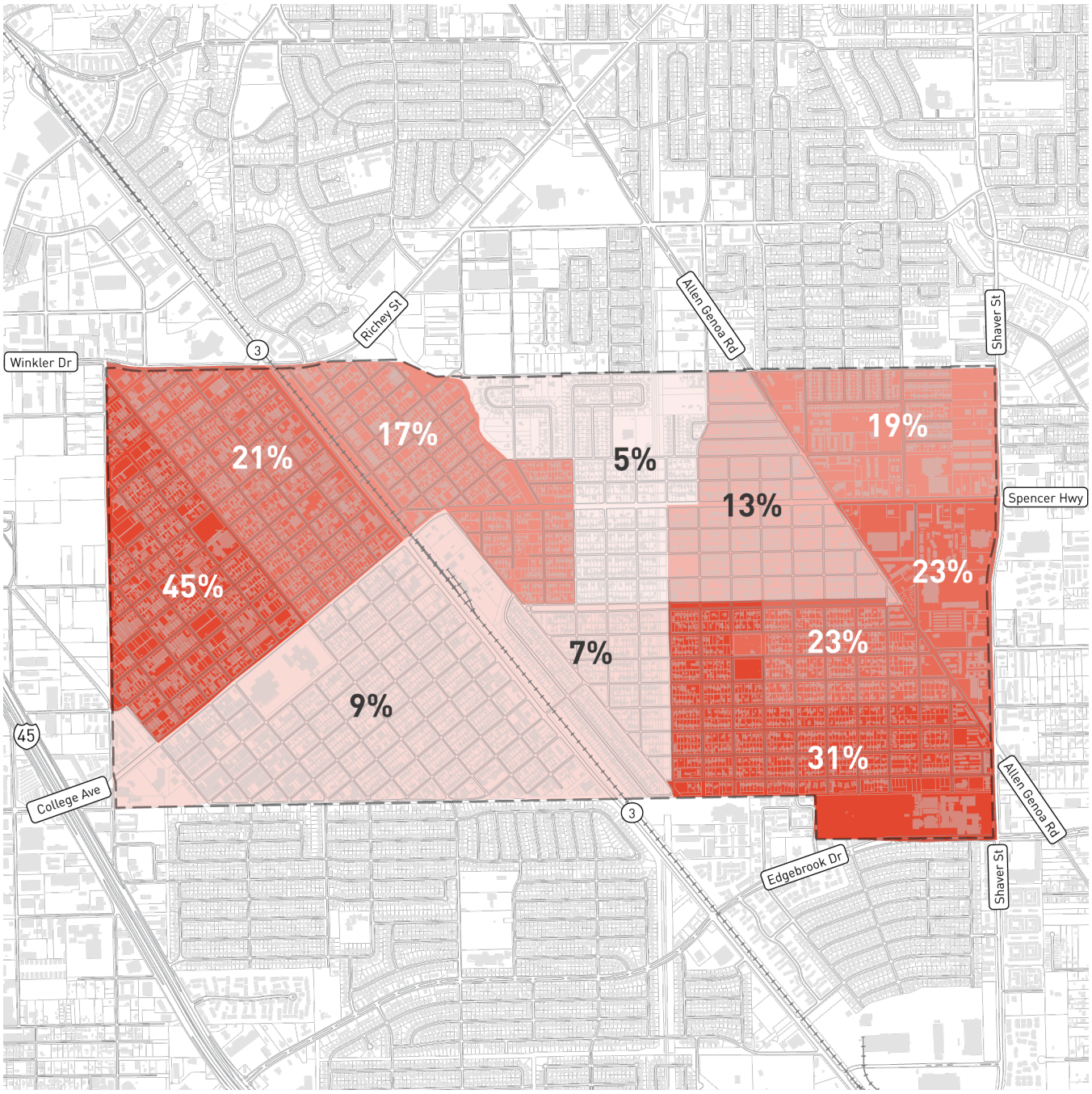


Figure 33. No Internet Access

The map above shows the percent of households without internet access by block group. The far east and far west sides of South Houston have a higher percentage of households without internet access.

No Internet Access

- Less than 5%
- 5%-10%
- 10%-15%
- 15%-20%
- 20%-25%
- More than 25%

2 in = 1 mi | 2021 ACS (5-Year) | N

0 | 0.25 | 0.5 | 1 mi

CONNECTIVITY AND SAFETY




NO
PARKING
ON
SIDEWALK
STOP
ALL WAY

Transit Service

Bus Routes

Houston METRO provides service to South Houston only via Route 76 - Evergreen. The route runs along the northwest border of the study area—along Winkler Dr. from Main St. to the west and to Hwy 3 to the east. Route 76 - Evergreen is a low frequency route that runs every 30 minutes from 8 am to 5 pm on weekdays. Early mornings, evenings, and weekends have lower frequencies of every 60 minutes. These low frequencies means that if someone misses their bus, they could be stuck waiting for long periods of time.

Near South Houston but not well connected is the Monroe Park and Ride, which has three routes: one local route that runs every 30 minutes, and two express routes that are very frequent but only during peak hours and only in one direction.

Access

Route 76 - Evergreen provides access to key areas such as:

- Groceries and shopping center near Telephone Rd. at Belfort Ave.
- Gulfgate Shopping Center
- Mason Park
- Magnolia Transit Center

Route 40 - Telephone/Heights provides access to key areas such as:

- Hobby Airport
- Gulfgate Shopping Center
- Eastwood Transit Center
- Downtown
- North Shepherd Park and Ride

Route 244 - Monroe/El Dorado P&R provides access to key areas such as:

- Express access to Downtown Houston
- Eastwood Transit Center

Route 297 - Gulf Freeway/TMC P&R provides access to key areas such as:

- The Texas Medical Center Transit Center
- Downtown Transit Center
- El Dorado Transit Center (Baybrook Mall)

The Monroe Park and Ride provides valuable access to many key areas in the region, but it is disconnected from South Houston in a way that makes it hard to reach without a car. Using Route 244- Monroe/ El Dorado P&R, one can access Downtown Houston within 22 minutes, which is an very valuable asset to have, but only if it is easy to access the park and ride.

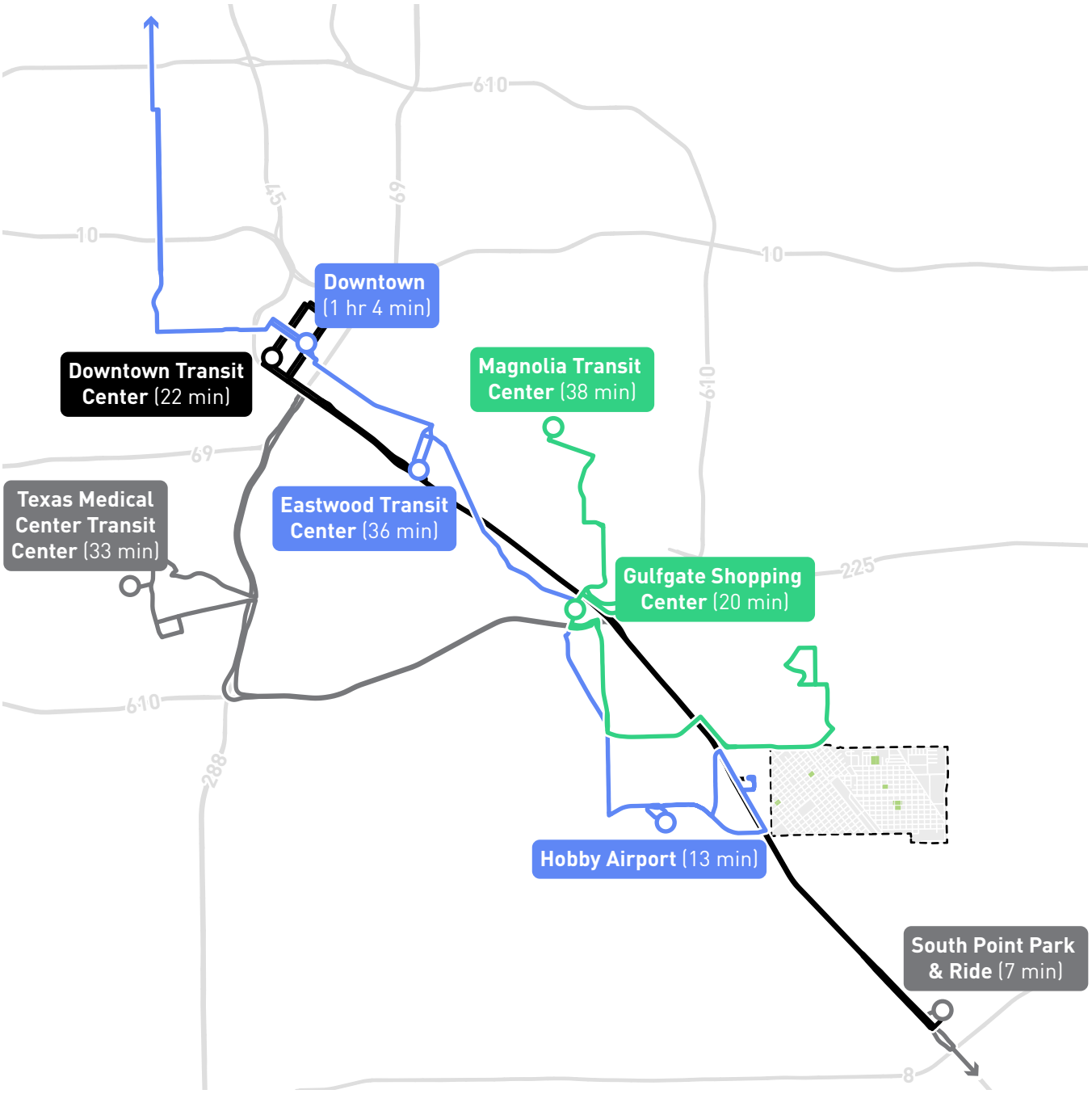


Figure 34. Regional Connectivity

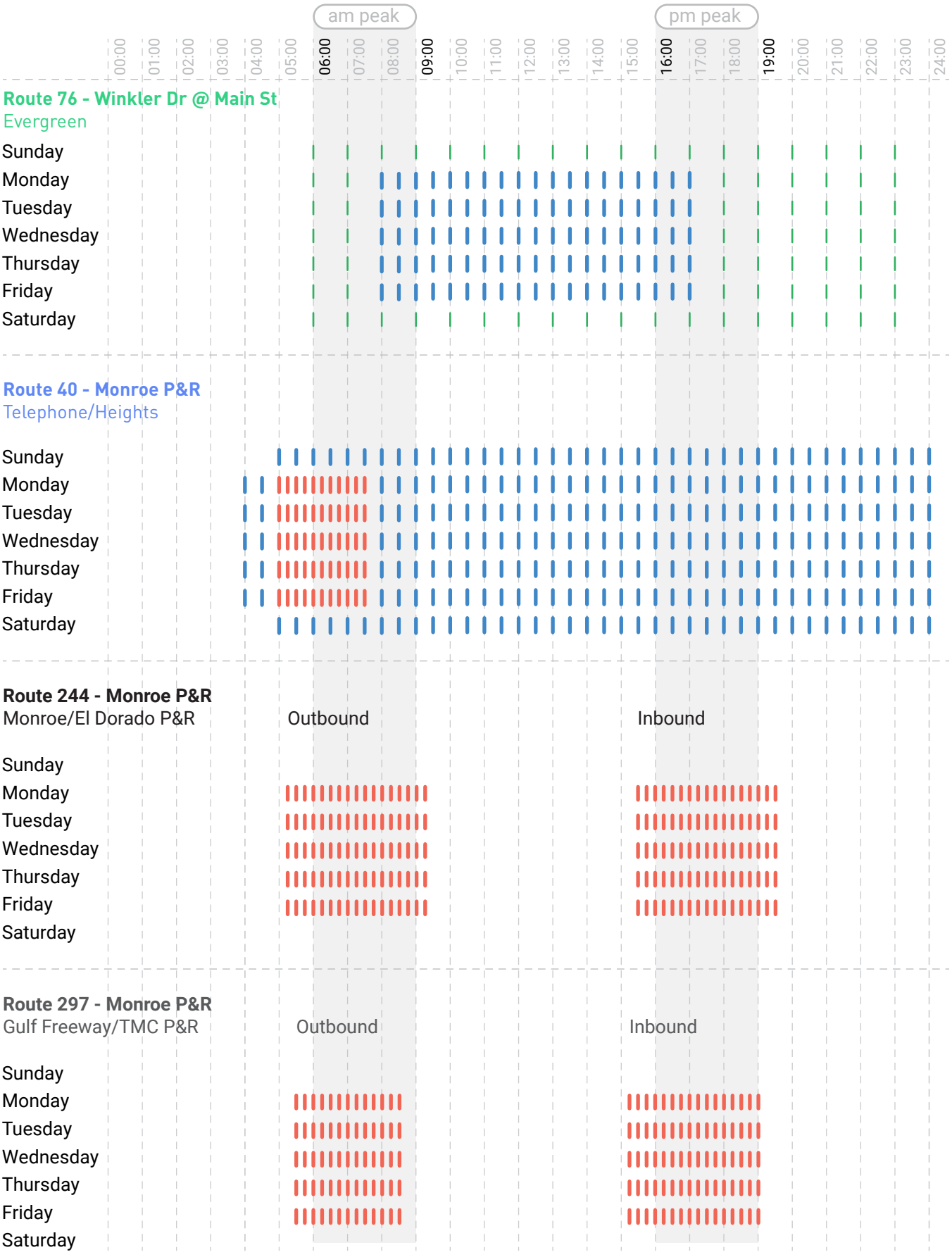
The figure above shows travel times from the various routes near South Houston to various key destinations.

Transit Routes

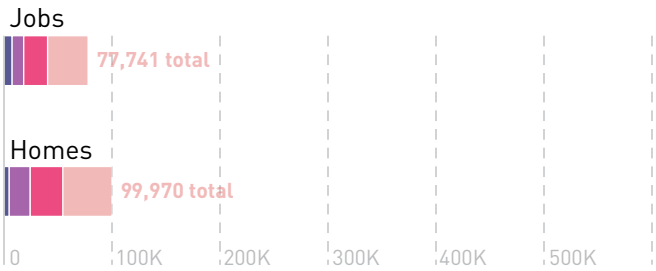
- Route 76 - Evergreen
- Route 40 - Telephone/Heights
- Route 244 - Monroe/El Dorado P&R
- Route 297 - Gulf Freeway/TMC P&R
- Key Destinations

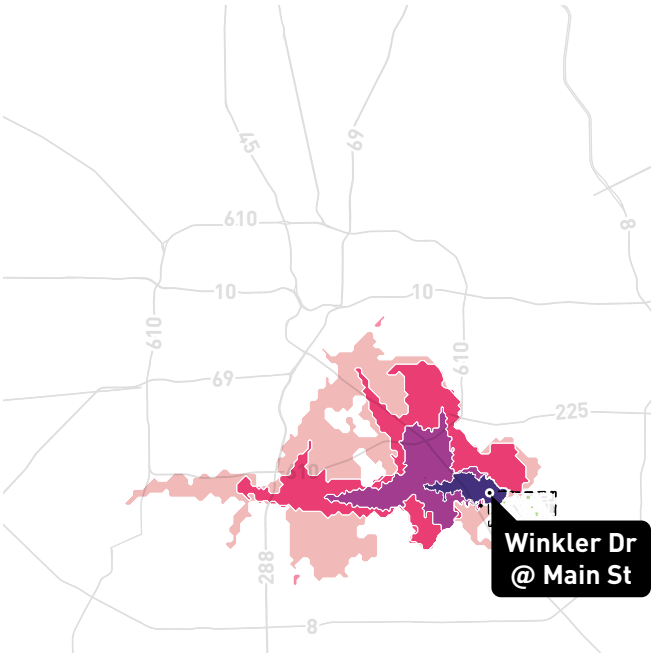
Not to a scale

N

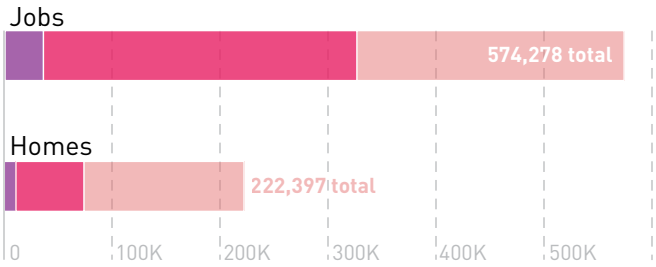

am peak
pm peak
00:00
01:00
02:00
03:00
04:00
05:00
06:00
07:00
08:00
09:00
10:00
11:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
19:00
20:00
21:00
22:00
23:00
24:00
Route 76 - Winkler Dr @ Main St
Evergreen
Sunday
Monday
Tuesday
Wednesday
Thursday
Friday
Saturday
Route 40 - Monroe P&R
Telephone/Heights
Sunday
Monday
Tuesday
Wednesday
Thursday
Friday
Saturday
Route 244 - Monroe P&R
Monroe/El Dorado P&R
Outbound
Inbound
Sunday
Monday
Tuesday
Wednesday
Thursday
Friday
Saturday
Route 297 - Monroe P&R
Gulf Freeway/TMC P&R
Outbound
Inbound
Sunday
Monday
Tuesday
Wednesday
Thursday
Friday
Saturday
≤15 min Frequency
16 - 30 min Frequency
31 - 60 min Frequency
>60 min Frequency

Winkler Dr @ Main St





Monroe P&R



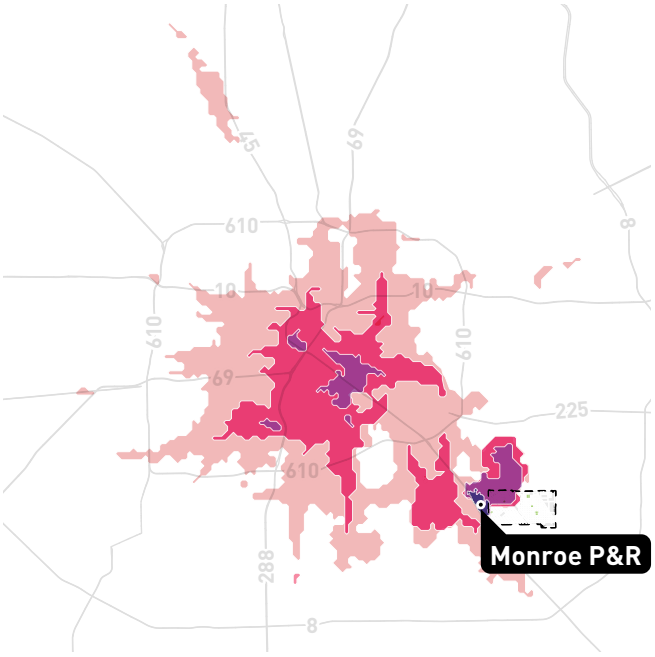


Figure 35. Transit Reach of Homes and Jobs

The figure to the left shows the frequencies of each route based on the time of day and the day of the week. The figures above graph the population and jobs reached within 15 minutes, 30 minutes, 45 minutes, and 60 minutes of south Houston via route 76 from Winkler Dr. at Main St., and via the Monroe Park and Ride. The maps to the right show the geographic area reached in those same time ranges.

Transit Reach

- 15 min access
- 30 min access
- 45 min access
- 60 min access

Not to a scale

N

Transit Service

Local Access

South Houston lacks access to any form of frequent transit. Monroe Park and Ride serves routes that travel frequently, but there is a gap in the road and a road block at the intersection of Galveston St. and Michigan St. where they would otherwise intersect with Canniff St. Because of the road block, drivers or bikers who wants to reach the Monroe Park and Ride have to travel an extra mile out of their way. While the road block could be walked or biked through, it lacks sidewalks or paths and does not offer any ADA compliant access, and is still another half mile to the park and ride from this gap in the road.

The majority of the jobs and homes in South Houston are not within a walkable distance to transit. The few areas that do have access, also lack sidewalks, ADA ramps, and structured bus stops and street trees for protection from the rain and heat. Having the proper facilities makes getting to bus stops easier for some but are crucial for others.



Figure 36. Road Block at Canniff St.

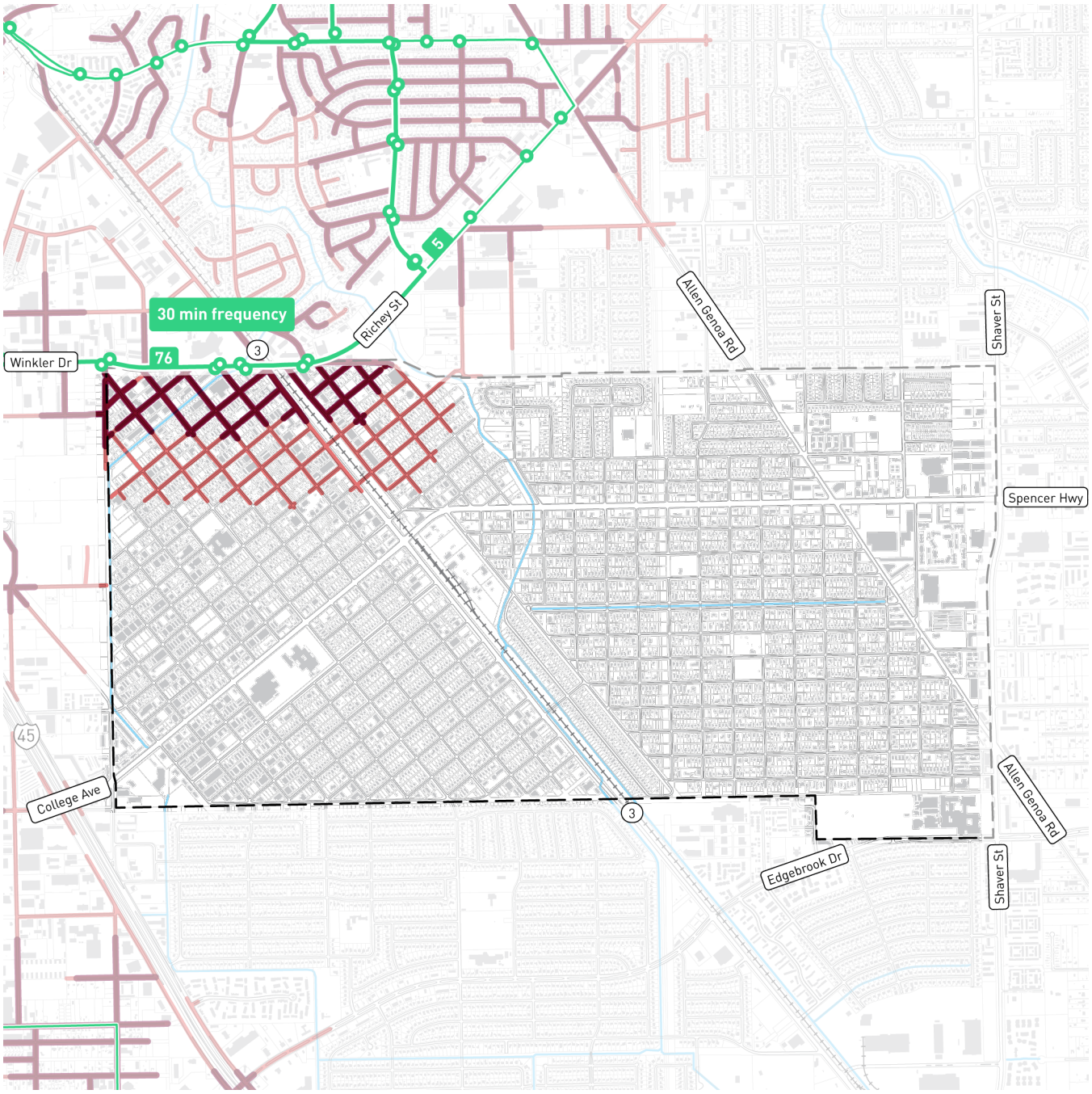


Figure 37. Walking Distance from Transit

The figure above maps walking distances from transit stops. Five and ten minute walks represent comfortable walking times for most people.

Transit

- Bus routes / stops
- 5 min walk
- 10 min walk

2 in = 1 mi

0 | 0.25 | 0.5 | 1 mi

N

Bike Plan

Bike Network

South Houston has one existing dedicated on-street bike lane along both sides of Hwy 3, a major thoroughfare through South Houston. The existing bike lanes offer little protection from the traffic volumes and vehicle speeds. There is also insufficient tree coverage to provide ample shade for bike users. The existing on-street bike lanes on Hwy 3 are proposed to connect to the Sims Bayou Greenway northwest of South Houston.

There are proposed dedicated on-street bike lanes branching into smaller arterial roads off of Hwy 3, like Winkler Dr. and Richey St., and Edgebrook Dr. There is also a proposed off-street bike lane along the CenterPoint easement, highlighting the use of the utility corridor. There are also proposed shared on-street bike lanes for Nevada St., which would turn onto Theta St. and branch off onto Marleen St. and Frey Rd. to the south beyond the city limits of South Houston.

With a rich bike and cycling culture in South Houston, it is essential that the safety, comfort, and ease of access for bike users is directly available for current residents.

Multi-modal transportation is the use of different forms of transportation, like walking, biking, using public transportation, or driving, and is a key component of a healthy community. Having sidewalks and bike lanes in a community provides safe and accessible infrastructure for active transportation, making it easier for people to incorporate physical activity into their daily routines, and reduce the risk of chronic diseases such as heart disease, stroke, and type 2 diabetes. Sidewalks and bike lanes can positively impact health by encouraging physical activity, which is a key factor in maintaining good physical and mental health and well-being.[1, 2]

Walking, biking, and using public transportation are more affordable forms of transportation compared to vehicle ownership and many low-income households have limited vehicle access.[3]

The presence of sidewalks and bike lanes can also impact health indirectly by shaping the built environment and creating connections to community resources and destinations, such as access to grocery stores, retail, and recreational spaces.

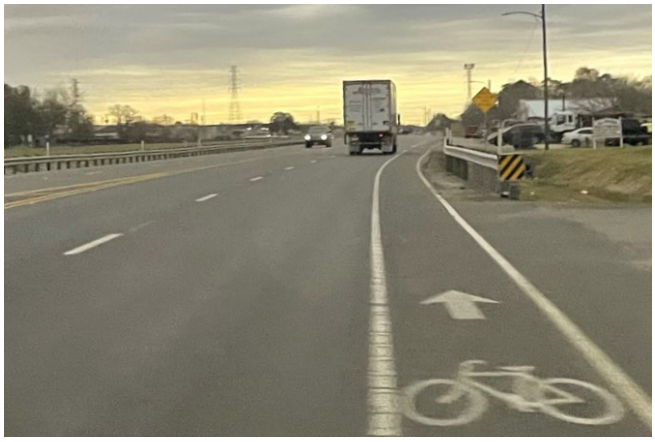


Figure 38. Bike Lanes

The image above shows the existing dedicated on-street bike lane going south on Hwy 3.

1. U.S. Department of Transportation. (2015) Active Transportation, Relationship to public health https://www.transportation.gov/mission/health/active-transportation

2. CDC. (2020, October 12). Designing Activity-Friendly Communities. Centers for Disease Control and Prevention. https://www.cdc.gov/nccdphp/dnpao/features/walk-friendly-communities/index.html

3. Tomer, A (2011). Transit Access and Zero-Vehicle Households. Brookings, Metropolitan Policy Program. https://www.brookings.edu/wp-content/uploads/2016/06/0818_transportation_tomer.pdf

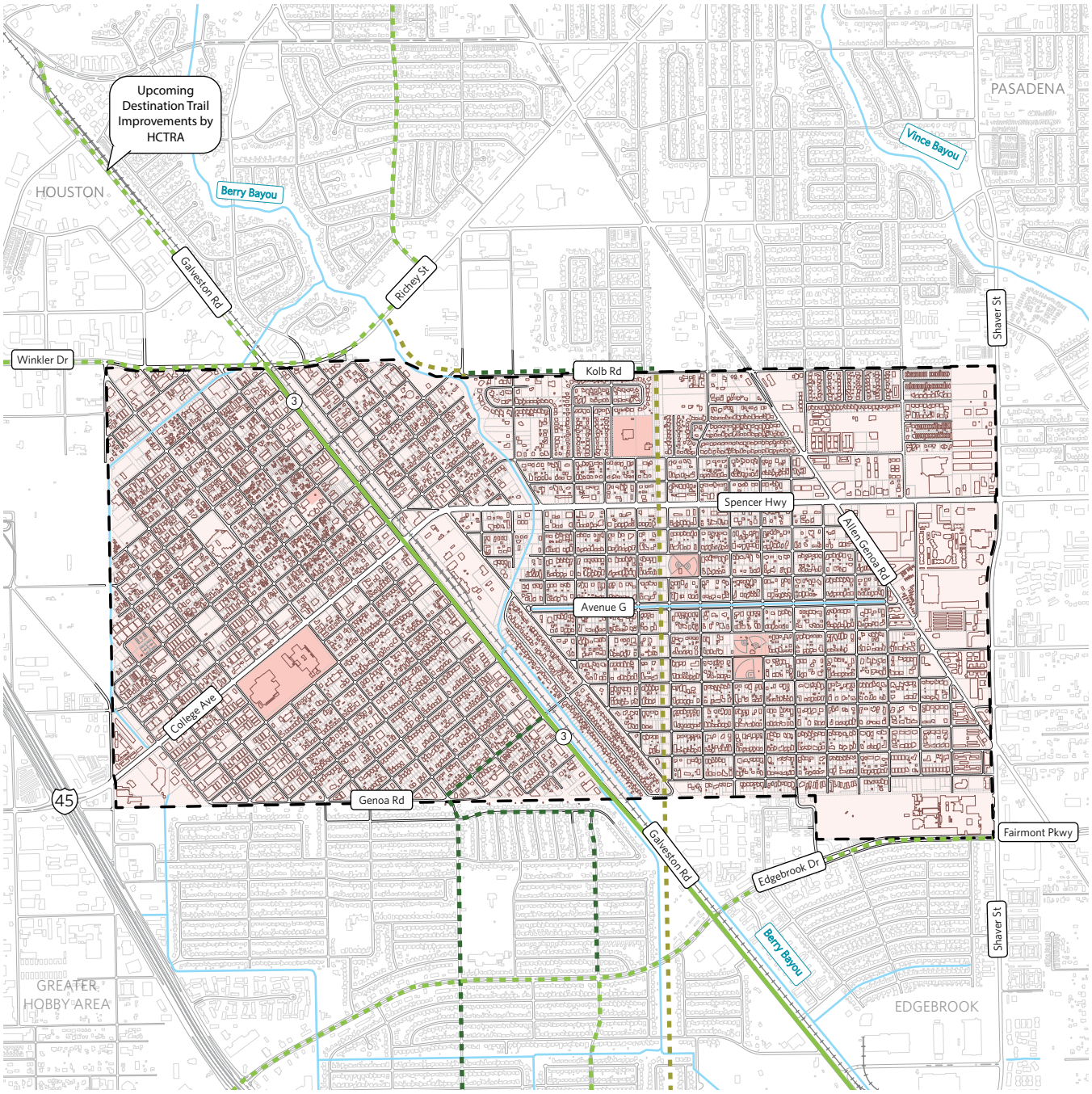


Figure 39. South Houston Bike Network

The map above shows the South Houston bike network, illustrating existing and proposed off-street, shared on-street, and dedicated on-street bike lanes.

Sidewalks

The map in Figure 43 shows a major lack of sidewalks within South Houston. Consistent and accessible pedestrian infrastructure like sidewalks, curb ramps, and safe street crossings are key factors for whether an area feels walkable.

There are segments of some streets that have sidewalks on both sides of the street, but these segments are sparse and discontinuous. Most of the sidewalks within the study area are only usable on one side of the street. Some examples of this condition are along College Ave. and Spencer Hwy as well as through several residential streets and surrounding the schools.

Although most signalized intersections along major thoroughfares have pedestrian crossing signals, it is common for there to only be sidewalks on one side of the road at those intersections. There are also intersections along Allen-Genoa that have no pedestrian crossing signals or serviceable sidewalks.

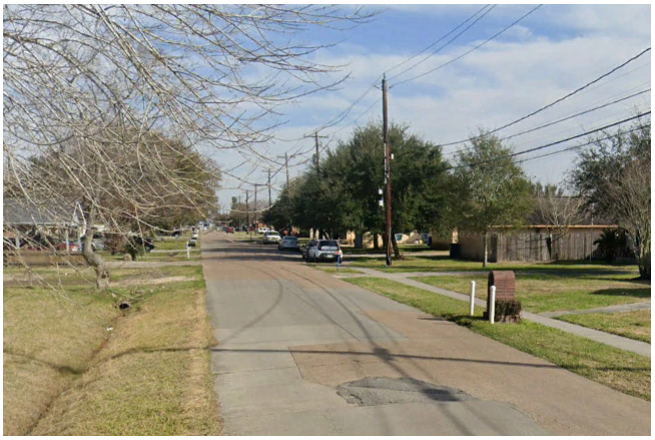


Figure 41. Sidewalks on One Side

The image above shows a residential street that has sidewalks on one side of the street.



Figure 40. No Sidewalks

The image above shows a residential street that has no sidewalks.



Figure 42. Sidewalks on Both Sides

The image above shows a residential street that has sidewalks on both sides of the street.

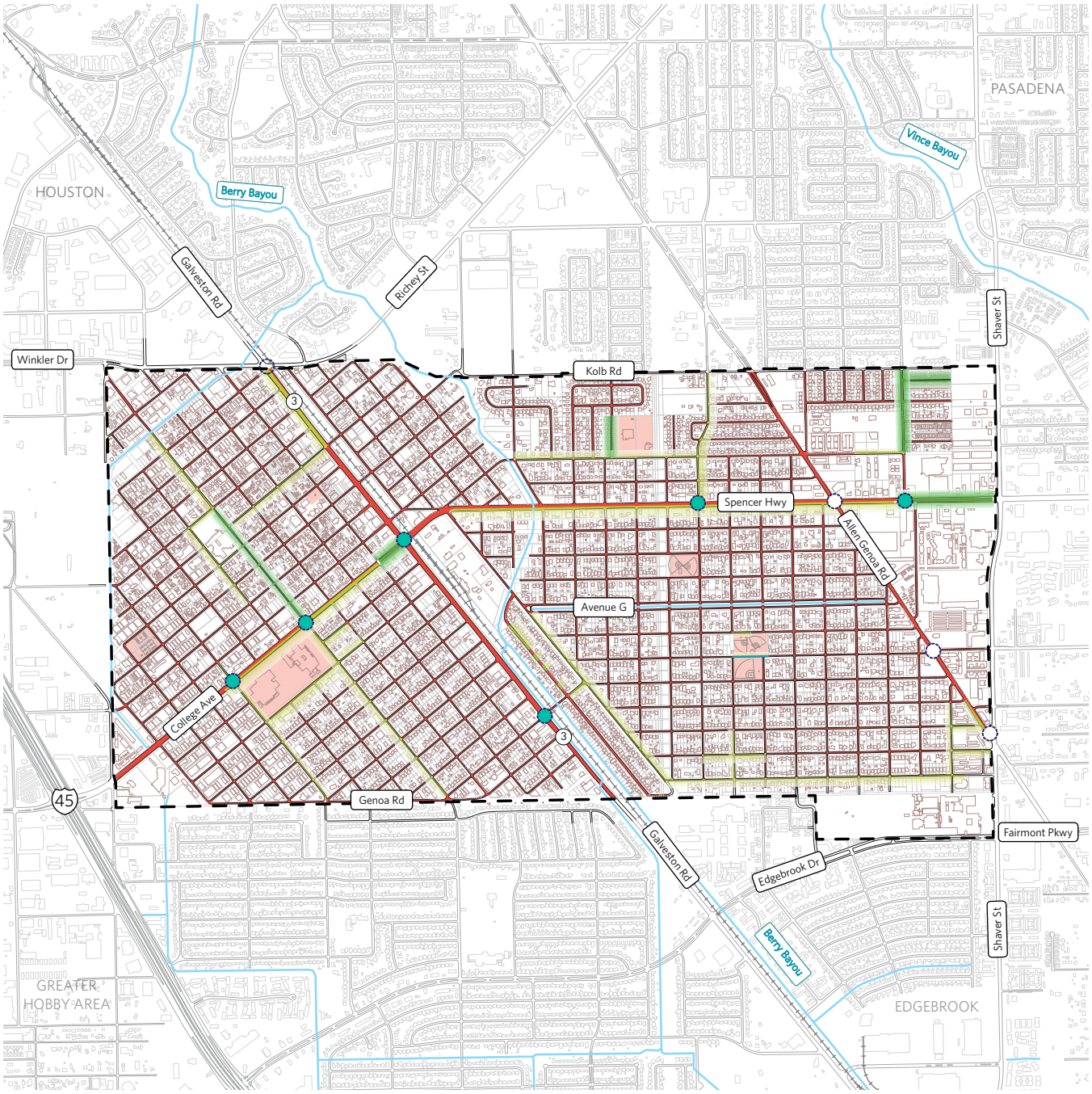


Figure 43. Sidewalks

The map above shows where sidewalk exist: where there are no sidewalks, where there are sidewalks only on one side of the road, and where there are sidewalks are on both sides of the road. Figure 43 also illustrates signalized intersections where there are no pedestrian crossings.

Sidewalk Conditions

There are relatively few sidewalks in South Houston, and where there are sidewalks, they are generally below current standards. Current sidewalk standards require sidewalks to be at least 5 feet wide. Most sidewalks in South Houston are 4 feet wide or less. This is common for places with old sidewalks that have not been updated. Since most of the sidewalks are old, there are also several areas where sidewalks are in poor condition or need replacement.

In Figure 45, sidewalks that are considered "below standards" are sidewalks that do not meet the 5-foot width requirement, but are generally passable for someone in a wheelchair or pushing a stroller. Sidewalks that need significant maintenance or need replacing are represented in red. Most of the sidewalks in South Houston are usable and do not need urgent replacing.

However, there are several places where curb ramps are crumbling or non-existent and should be constructed or reconstructed. Almost all of the usable curb ramps in the area do not meet standards, which require that curb ramps align with the direction of travel rather than being placed diagonally at street corners.







Figure 44. Sidewalk Conditions in South Houston

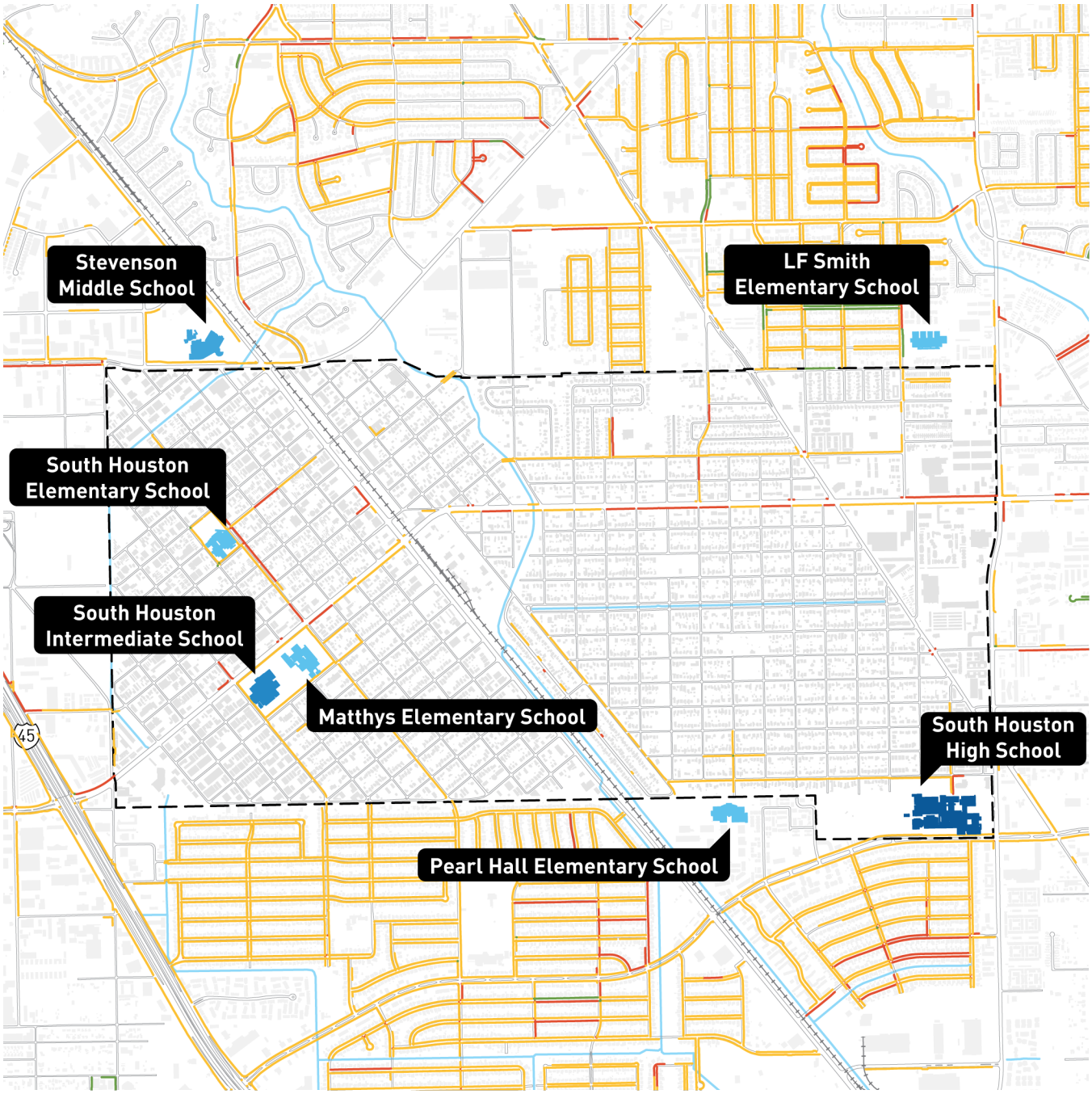


Figure 45. Sidewalk Conditions

The map above shows where sidewalks are located in and around the study area and whether they meet standards (smooth, flat, at least 5-feet wide, with curb ramps) or need replacement. Most sidewalks in the area are too old to meet current code requirements.

Schools

There are two elementary schools, one intermediate school, and one high school within the boundaries of South Houston. Another two elementary schools are located adjacent to the city boundary but their school zones include South Houston. South Houston schools are part of the Pasadena Independent School District (PISD).

The Houston Independent School District boundary touches the northwestern border of South Houston, which means that even though Stevenson Middle School is just beyond the city limits, South Houston residents do not attend the school. Instead they go slightly farther away to middle schools in Pasadena and Edgebrook.

School Attendance Zones

PISD uses four levels of schools: elementary (grades pre-K to 4th), middle (grades 5th to 6th), intermediate (grades 7th to 8th), and high (grades 9th to 12th). School attendance zones are shown to the right. For the most part, students who live in South Houston attend schools that are relatively close to where they live. There is a small percentage of students who attend Pasadena High School, which is somewhat far away.

School zones are an important geography to understand social and physical mobility patterns of parents and students. As students grow and move to all levels of the school system, they form and lose connections depending on their school zones. The school's location in relationship to its attendance zone is also important since PISD only provides bus service to students living 1 mile or more from their zoned school. Students within one mile of the school need to walk, bike, or get dropped off to reach school.

Figure 46. Elementary Schools

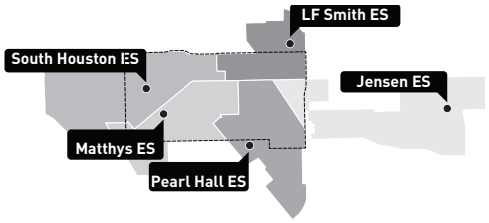


Figure 47. Middle Schools

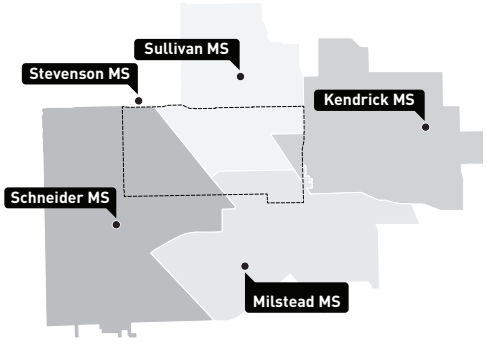
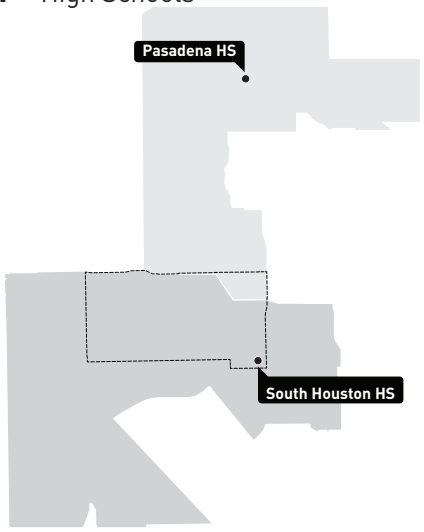


Figure 48. Intermediate Schools



Figure 49. High Schools



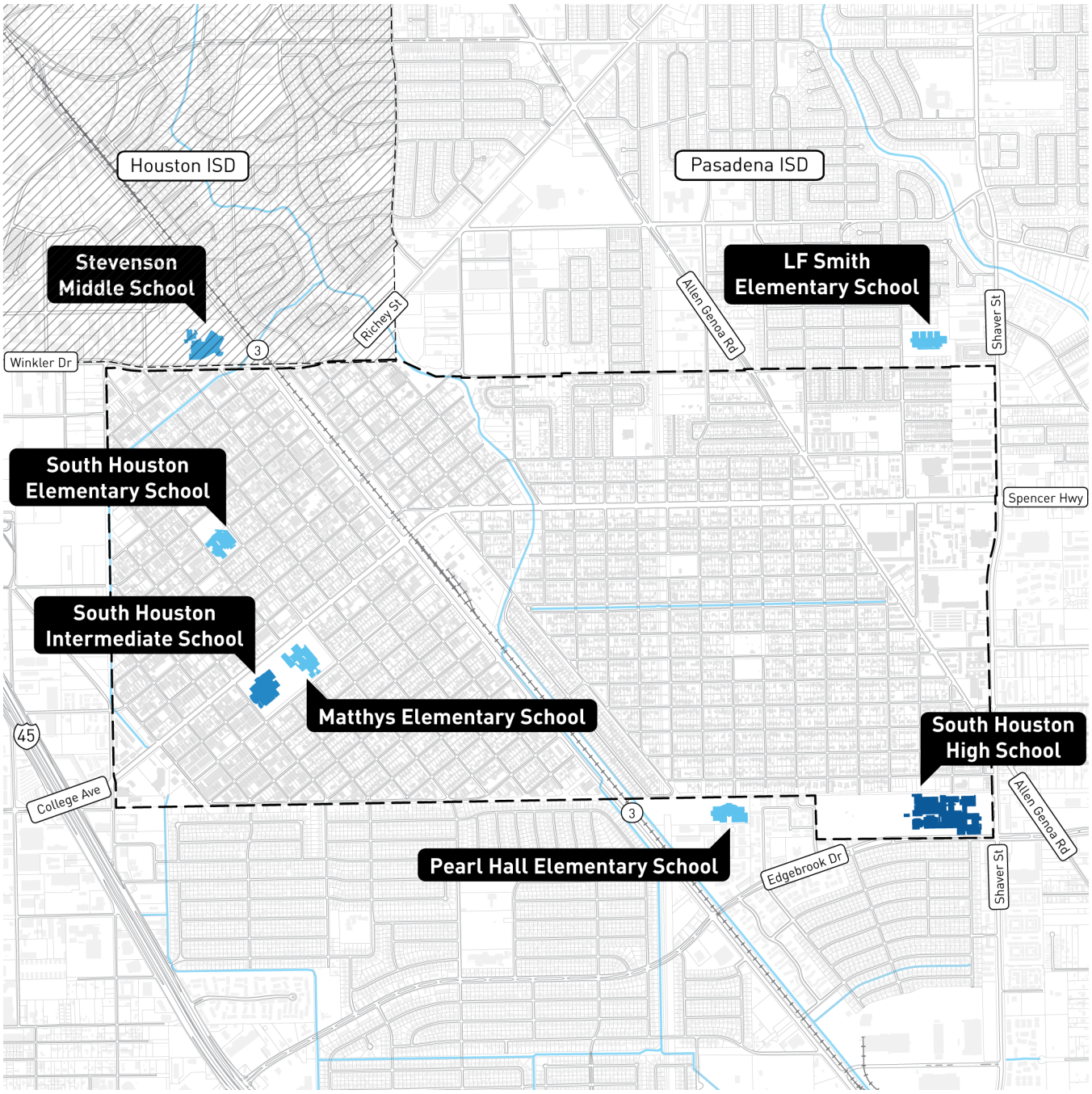


Figure 50. Schools in South Houston

The map above shows the locations of schools in and adjacent to South Houston.

Schools

- Elementary Schools
- Middle Schools
- Intermediate Schools
- High Schools

2 in = 1 mi | WGS 1984 | 0 | 0.25 | 0.5 | 1 mi | N

Routes to Schools

Children who live close to school are more likely to walk to school which helps them engage in regular physical activity and reduces their risk of developing a chronic disease.[1, 2] Safe Routes to School (SRTS) is a nationwide program that encourages children to walk, bike, or participate in other forms of active transportation on the way to and from school. SRTS includes education and encouragement strategies to support safe walking and biking in addition to identifying infrastructure improvements to create safer routes to school.[3] SRTS is a proven strategy that is endorsed by the Centers for Disease Control to have a proven impact on health and safety within 5-years of implementation.[4]

Creating safe routes to schools for students is important to keeping children safe. In the Pasadena Independent School District, which the schools in South Houston are part of, bus service is provided for students who live more than a mile from the school. That means that students who live within one mile need to walk, bike, or be driven to school. One mile is a reasonable walking distance (about a 20-minute walk), but in South Houston, most of the schools are not well served by sidewalks, adequate curb ramps, and safe intersections, which makes those walks dangerous.

The Pasadena Independent School District completed a Safe Routes to School study in 2018. However, the elementary schools that serve South Houston were included in tier 2, a list which is set to be studied more in the future. The study should be expanded to include the schools that serve South Houston so that it can address the inequity in mobility infrastructure around South Houston Schools.

1. McDonald, N. C. (2008). Children's mode choice for the school trip: the role of distance and school location in walking to school. Transportation, 35(1), 23-35.

2. Babey, S. H., Hastert, T. A., Huang, W., & Brown, E. R. (2009). Sociodemographic, family, and environmental factors associated with active commuting to school among US adolescents. Journal of public health policy, 30(1), S203-S220.

3. Safe Routes Partnership. (n.d.). What is Safe Routes to School? https://www.saferoutespartnership.org/safe-routes-school/101

4. Centers for Disease Control and Prevention. (2018). Safe Routes to School (SRTS). https://www.cdc.gov/policy/hst/hi5/saferoutes/index.html

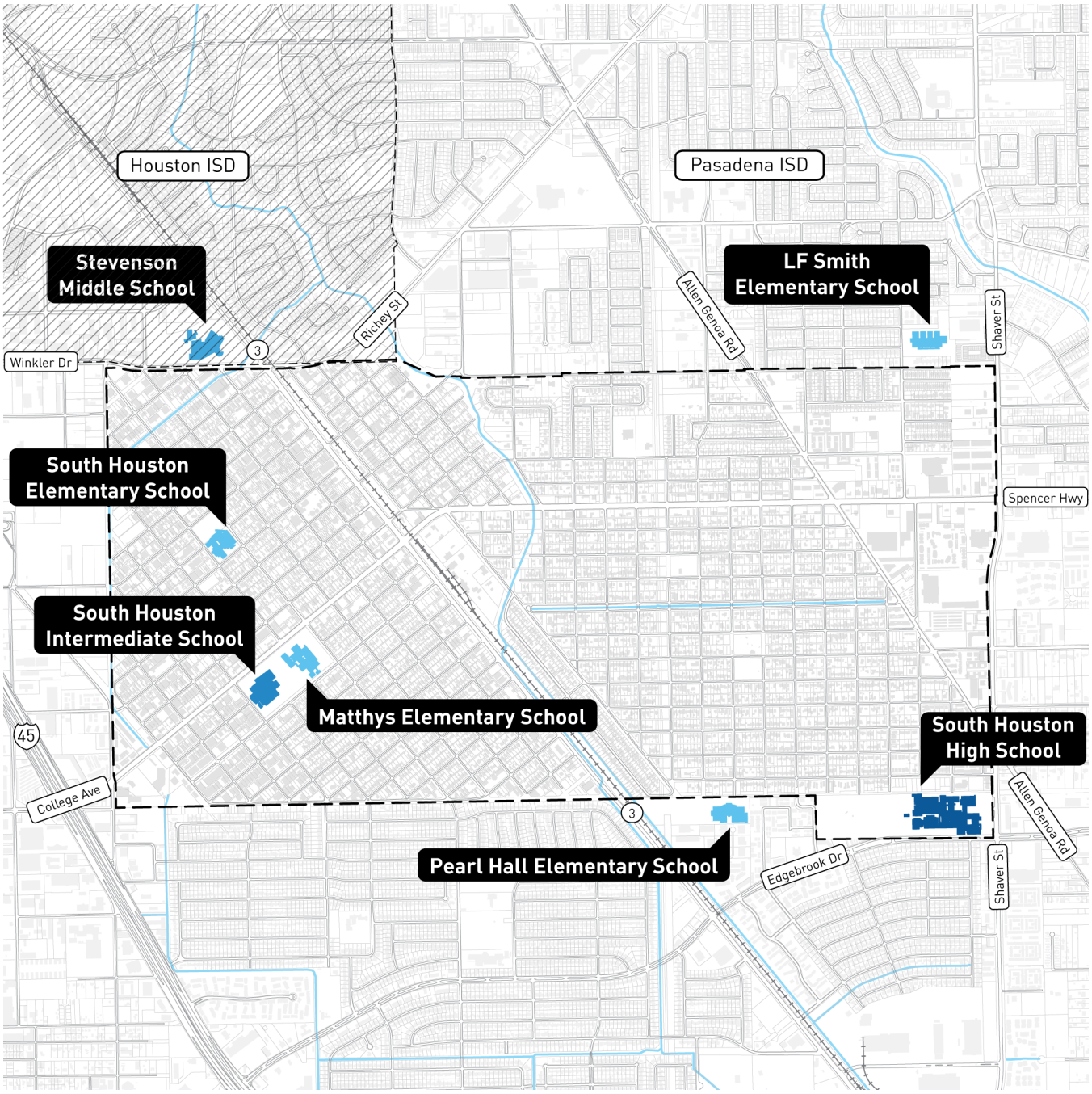


Figure 51. Location of Schools

The map above shows the locations of schools in South Houston. There are several schools within South Houston or nearby.

Schools

- Elementary Schools
- Middle Schools
- Intermediate Schools
- High Schools

2 in = 1 mi | WGS 1984

0 | 0.25 | 0.5 | 1 mi

N

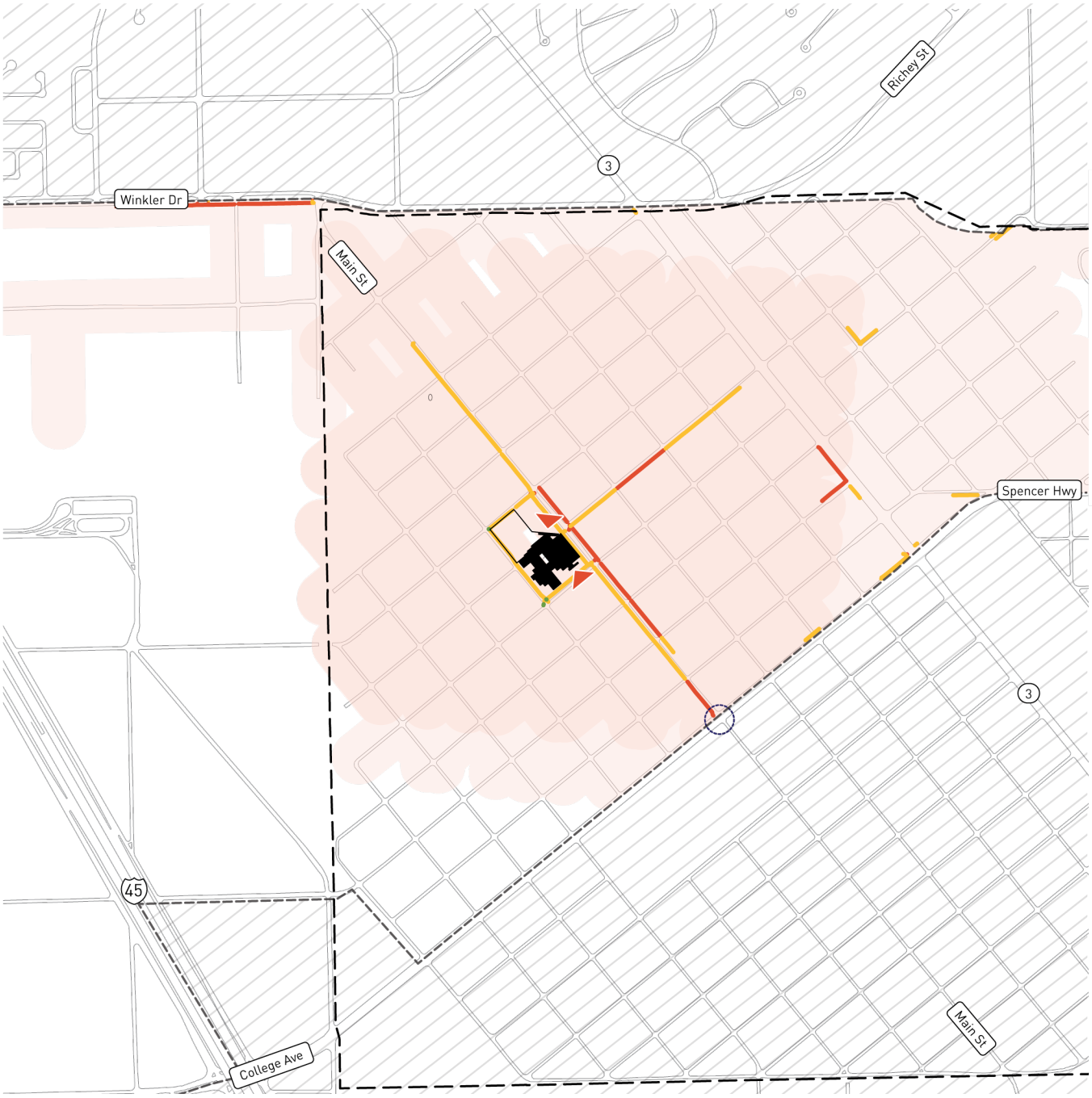


Figure 52. South Houston Elementary School

There are very few sidewalks within 1 mile and 1/2 mile of South Houston Elementary School, and some are not in good condition and should be replaced.

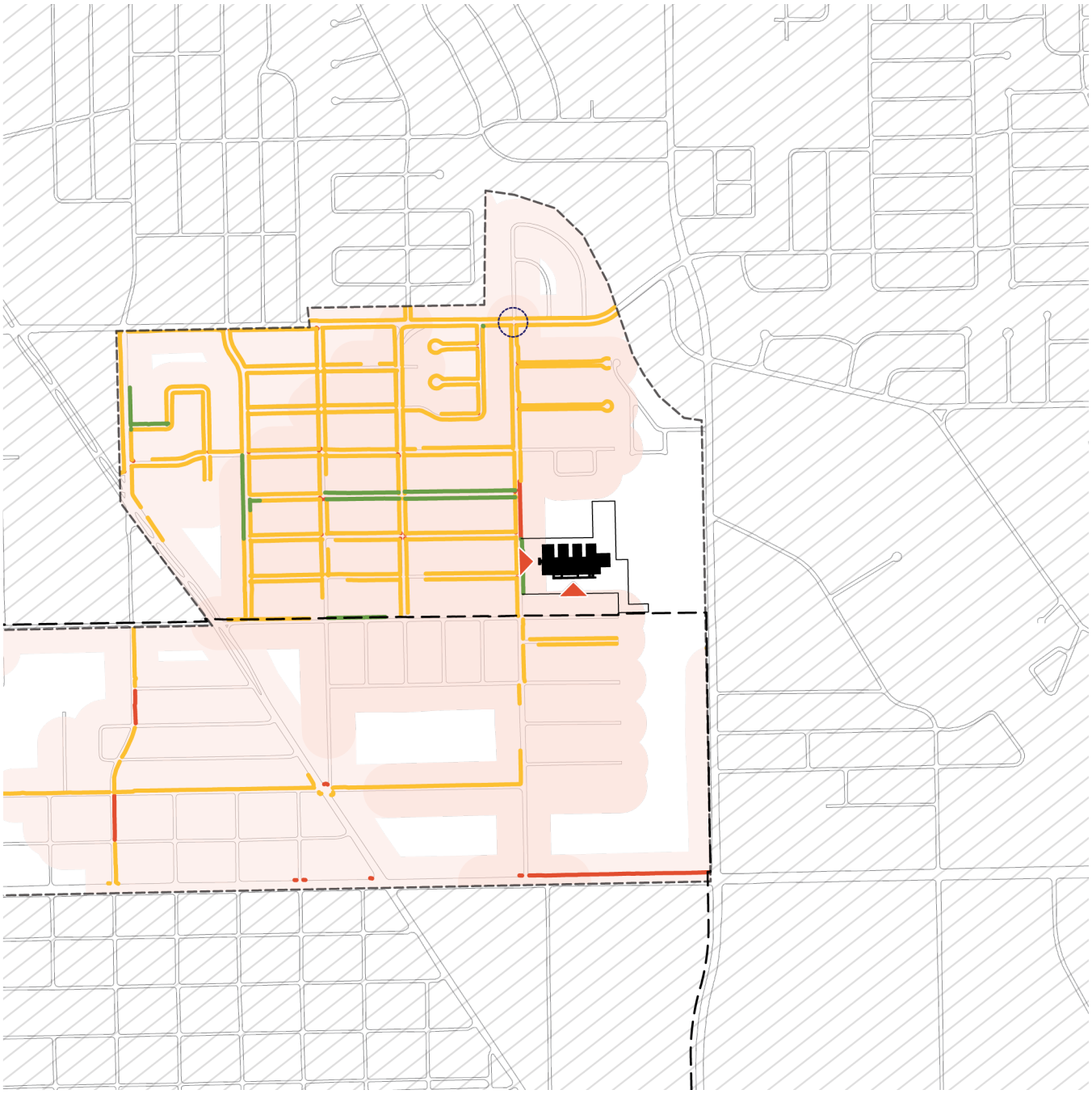


Figure 53. LF Smith Elementary School

LF Smith Elementary School is located in Pasadena and is well served by sidewalks. However, within the boundaries of South Houston, there are not many sidewalks within 1 mile and 1/2 mile, and some are not in good condition and should be replaced.

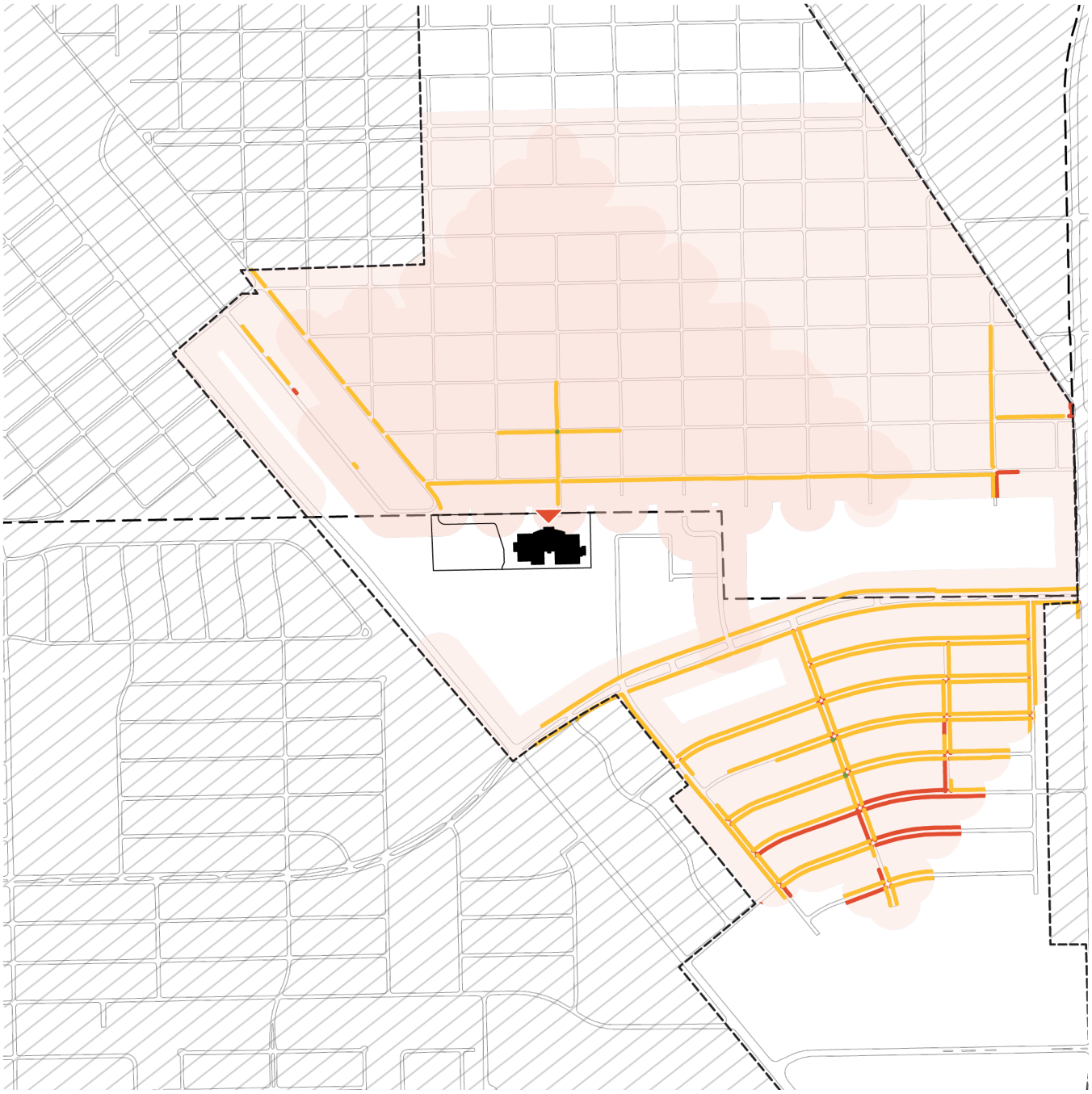


Figure 54. Pearl Hall Elementary School

There are very few sidewalks within 1 mile and 1/2 mile of Pearl Hall Elementary School to the north. There is a decent network of sidewalks in the neighborhood to the south of the school, but there is no safe connection between the neighborhood and the school.

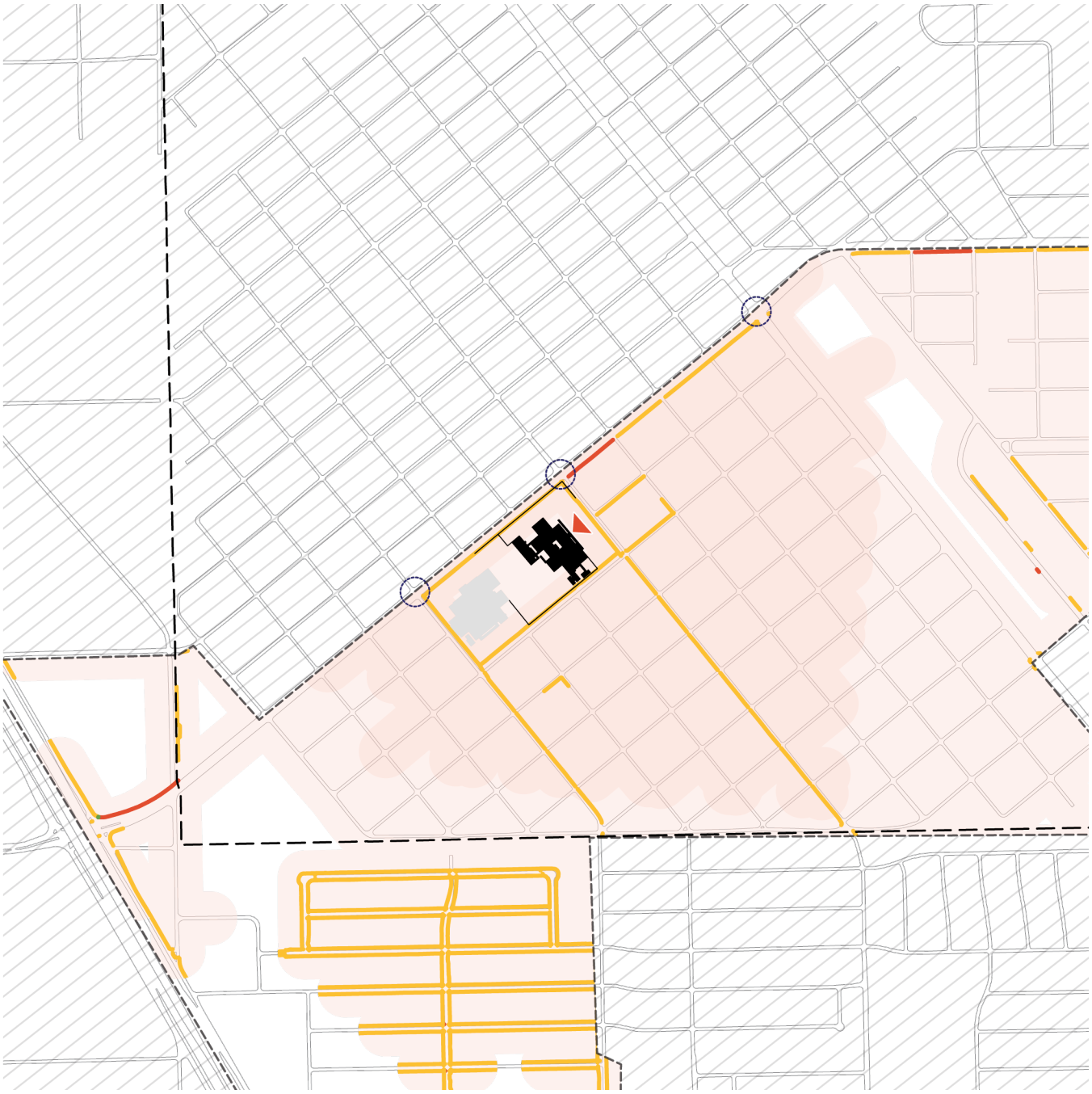


Figure 55. Matthys Elementary School

There are very few sidewalks within 1 mile and 1/2 mile of South Houston Elementary School, and some are not in good condition and should be replaced. However, there are a few signalized intersections across College Ave. that have pedestrian crossings, which makes it easier for children to get to school safely.

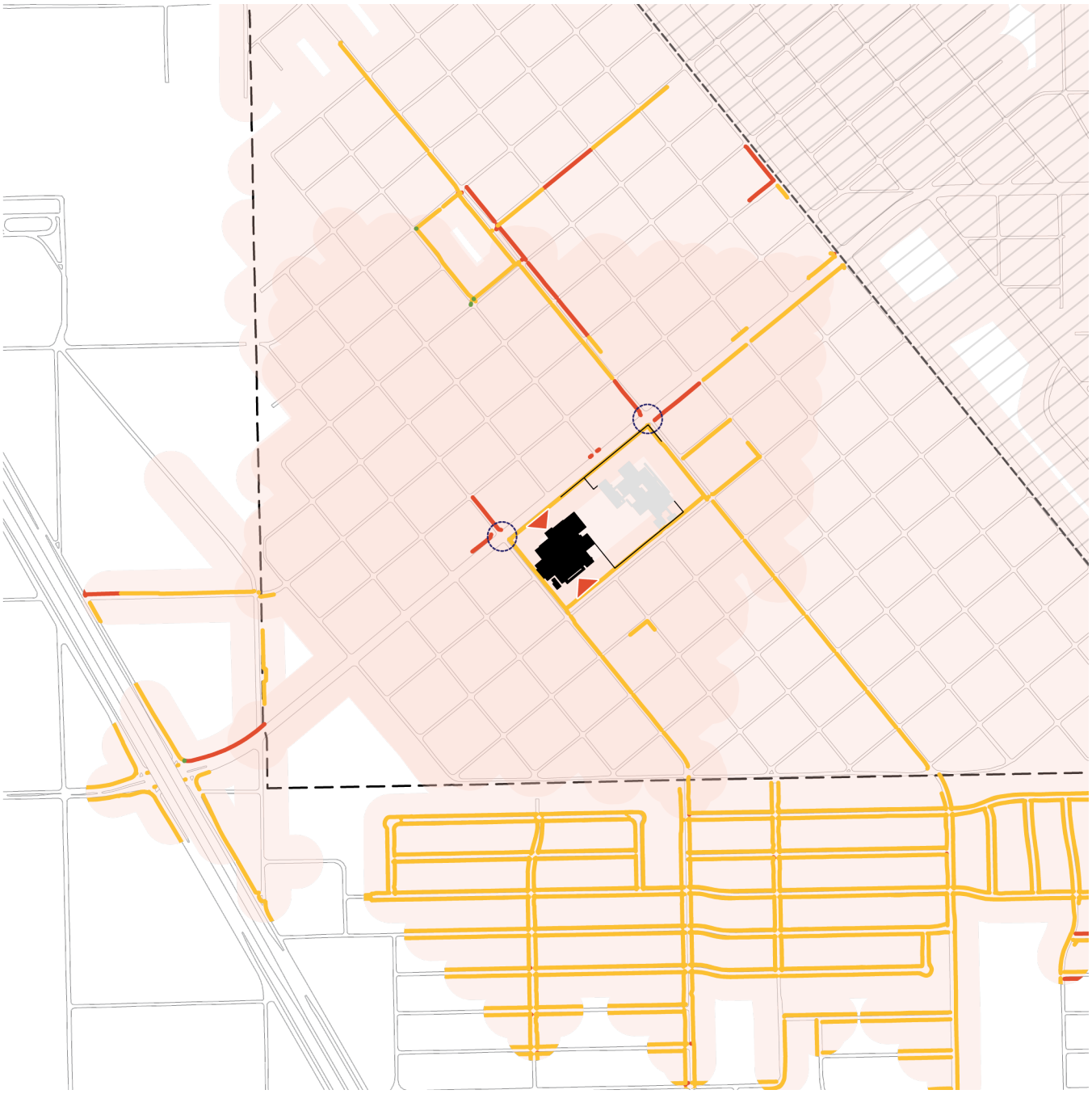


Figure 56. South Houston Intermediate School

There are very few sidewalks within 1 mile and 1/2 mile of South Houston Intermediate School, and some are not in good condition and should be replaced. However, there are two signalized intersections across College Ave. that have pedestrian crossings, which makes it easier for children to get to school safely.

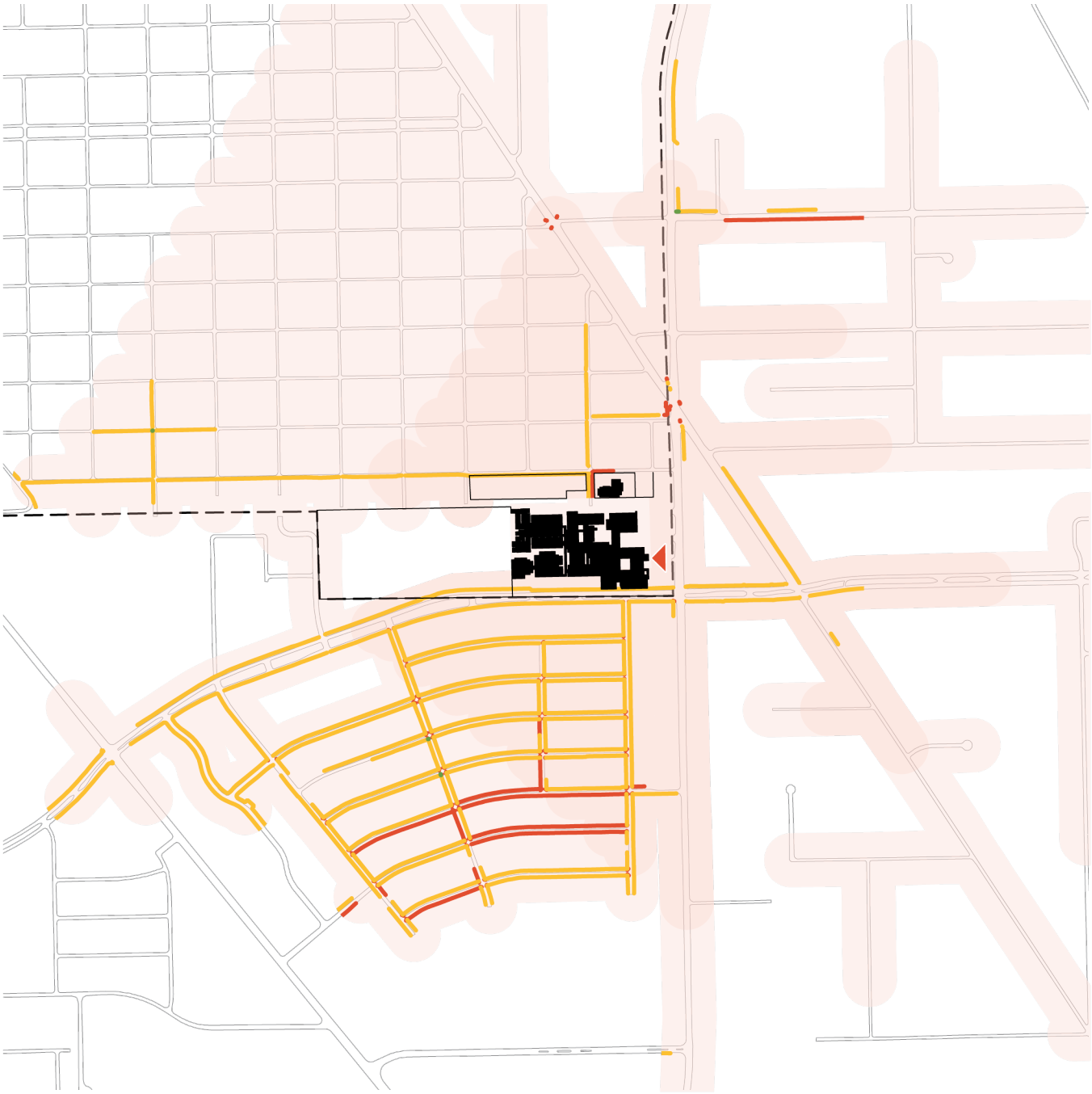


Figure 57. South Houston High School

Within the boundaries of South Houston, there are few sidewalks within 1 mile and 1/2 mile of South Houston High School. The neighbofhoods south of the high school have more sidewalk coverage, but it would beuseful to have sidewalks in front of the school and safe crossings along Shaver Rd.

Multi-Family Entrances

Multi-Family Access Conditions

The map in Figure 59 showcases the existing multi-family apartment complexes that exist within South Houston. The study illustrates that access to these apartment complexes are located facing major thoroughfares, such as College Ave., Spencer Hwy, and Allen-Genoa Rd.

The highest density of multi-family residences exists along Allen-Genoa Rd. However, there are little to no pedestrian sidewalks available to access these communities, as shown in the map in Figure 59. This displays a reliance on vehicular modes to access these communities and makes walking to them unsafe.



Figure 58. Typical Apartment Entrance

The image above shows the entrance to Terracita Apartments on Allen-Genoa Rd., a typical condition for many of the multi-family complexes in South Houston.

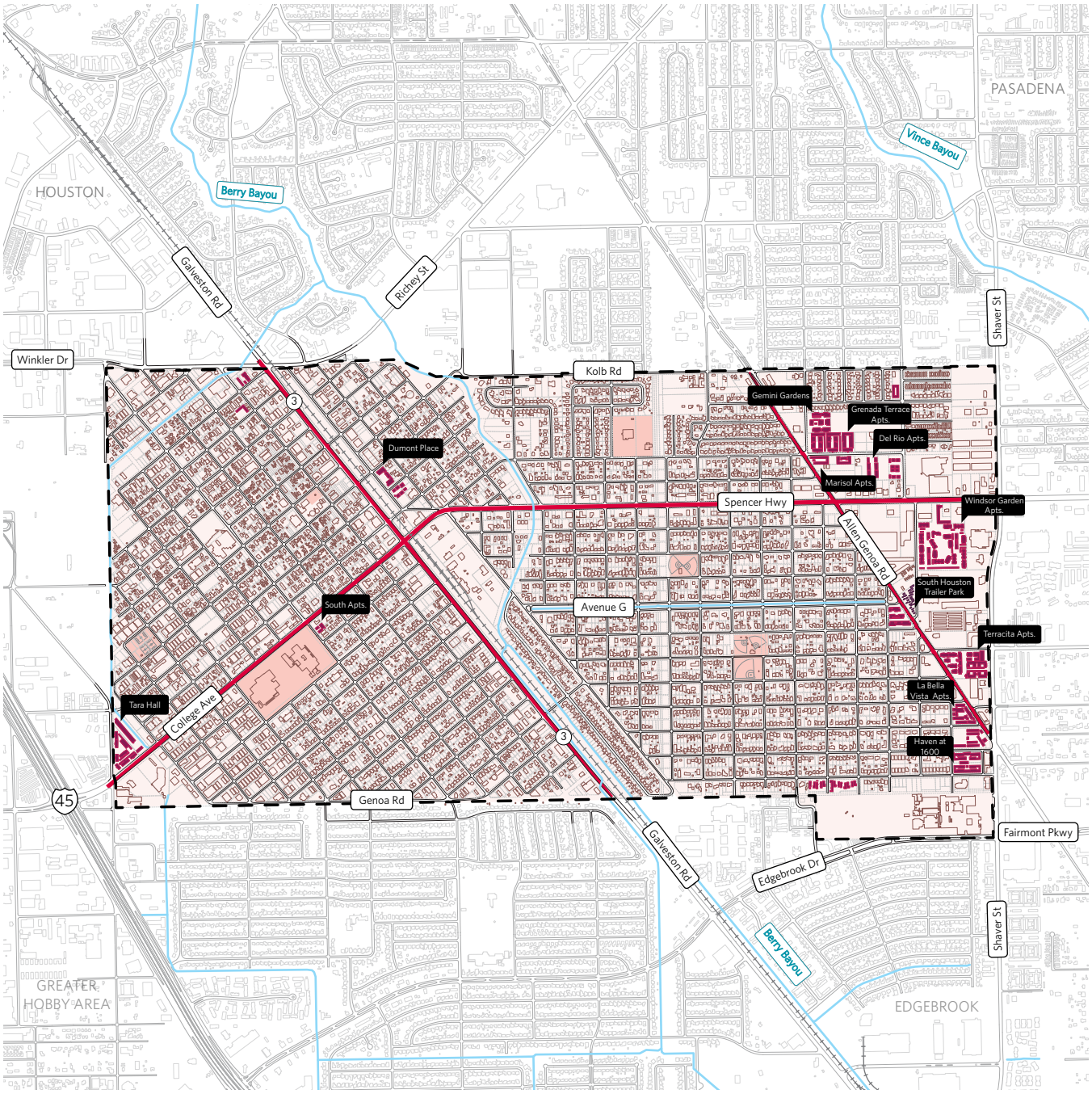


Figure 59. Multi-Family Apartment Complexes

The map above shows existing multi-family apartment complexes and the major roads used by residents to access these spaces.

2 in = 1 mi

0 | 0.25 | 0.5 | 1 mi

N

Branding and Wayfinding

Branding

The City of South Houston has several monumental signage elements that act as city gateways and create a sense of identity, heritage, and branding within the city.

There is city signage on the northwest corner of South Houston on Winkler Dr. that introduces the city limits. Along Hwy 3, there is also an existing heritage monument commemorating the history of South Houston. Towards the southeast corner, leaving the city limits of South Houston, is a sign welcoming visitors to the City of Pasadena.

Some iconographic markers of South Houston include its public murals, such as the one at the Futbolito. Another unique identifier includes the original McDonald's arch sign along Hwy 3, which only exists in 12 other states.



Figure 60. City of South Houston Sign

The image above shows the existing City of South Houston signage on Winkler Dr.

Wayfinding

Wayfinding is the use of signage or other visual cues to help occupants and visitors orient themselves and navigate the city. Wayfinding systems should encourage walking and using transit by providing essential and accessible information.

The City of South Houston lacks a legible wayfinding system, which would be useful because popular destinations are not always located along major thoroughfares. The visible signage available is mostly for land use directly along these major roads, such as the Mi Tienda sign.

Metro bus stop signs, just outside of South Houston study area, are also hard to see and hard for pedestrians to access. As seen in Figure 61, the signage for the bus stop is not highly visible and the area around it provides little comfort for users.



Figure 61. Bus Stop Sign

The image above shows the existing bus stop for Metro bus line 76 along Winkler Dr., just outside of South Houston study area.

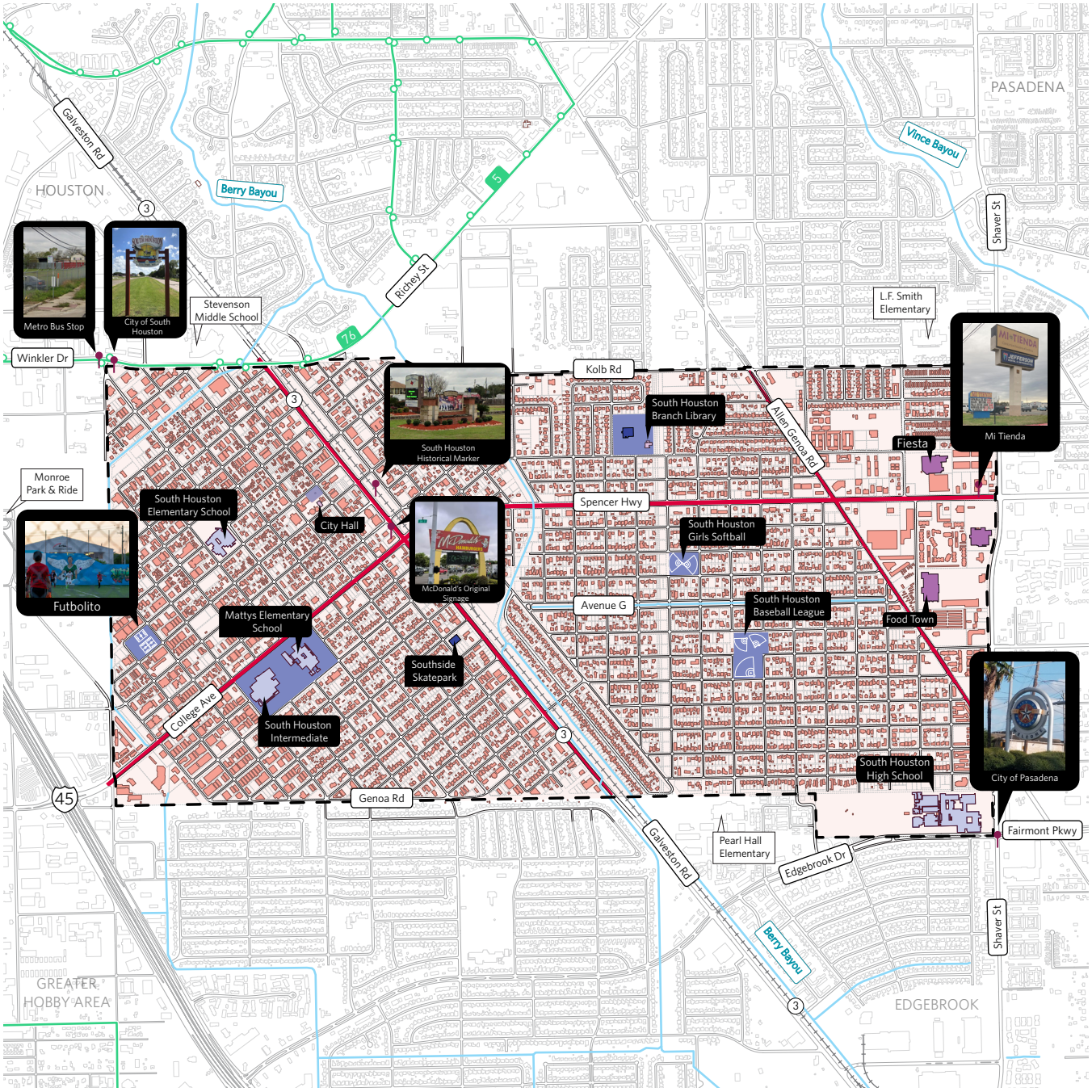


Figure 62. Signage and Wayfinding Map

The map above marks existing monumental signage and unique identifiers within South Houston, as well as illustrating major streets and destinations.

Lighting

Figure 63 plots streetlights that showcase night-time lighting conditions within the study area. Adequately lit spaces encourage walkability and promote a sense of safety after dark by increasing visibility and connectivity to destinations.

Lighting in a community can play a significant role in pedestrian safety. Adequate lighting can increase visibility and make it easier for pedestrians to see and be seen by drivers, reducing the risk of accidents and injuries. Dark or poorly lit areas can also be perceived as unsafe, leading to decreased pedestrian activity and a reduced sense of community. Data shows that most pedestrian and bicyclist fatalities occur in dark conditions and have been increasing in Texas in recent years.[1,2] As a result, lighting can help create a sense of safety and discourage criminal activity, making it more desirable for pedestrians to walk at night. Adequate lighting can also improve wayfinding, making it easier for pedestrians to navigate their surroundings and find their way.[3, 4]

The study displays that the majority of South Houston has updated LED lighting, with only dimmer sodium lighting sparsely placed throughout the city. The major thoroughfares are well-lit with updated LED lighting. However, internal and residential streets have little to no illumination. Streetlights in most residential areas are located at the corners of each block.

1. Harris Cares, 2020. Harris Cares: A 2020 Vision of Health in Harris County. Harris County Public Health, Retrieved from https://publichealth.harriscountytx.gov/Resources/Harris-Cares

2. Pedestrian Traffic Fatalities by State, 2021 Preliminary Data. Governors Highway Safety Association. https://www.ghsa.org/resources/Pedestrians22

3. Harris Cares, 2020. Harris Cares: A 2020 Vision of Health in Harris County. Harris County Public Health, Retrieved from https://publichealth.harriscountytx.gov/Resources/Harris-Cares

4. Reynolds, K. D., Wolch, J., Byrne, J., Chou, C. P., Feng, G., Weaver, S., & Jerrett, M. (2007). Trail characteristics as correlates of urban trail use. American Journal of Health Promotion, 21(4_suppl), 335-345.

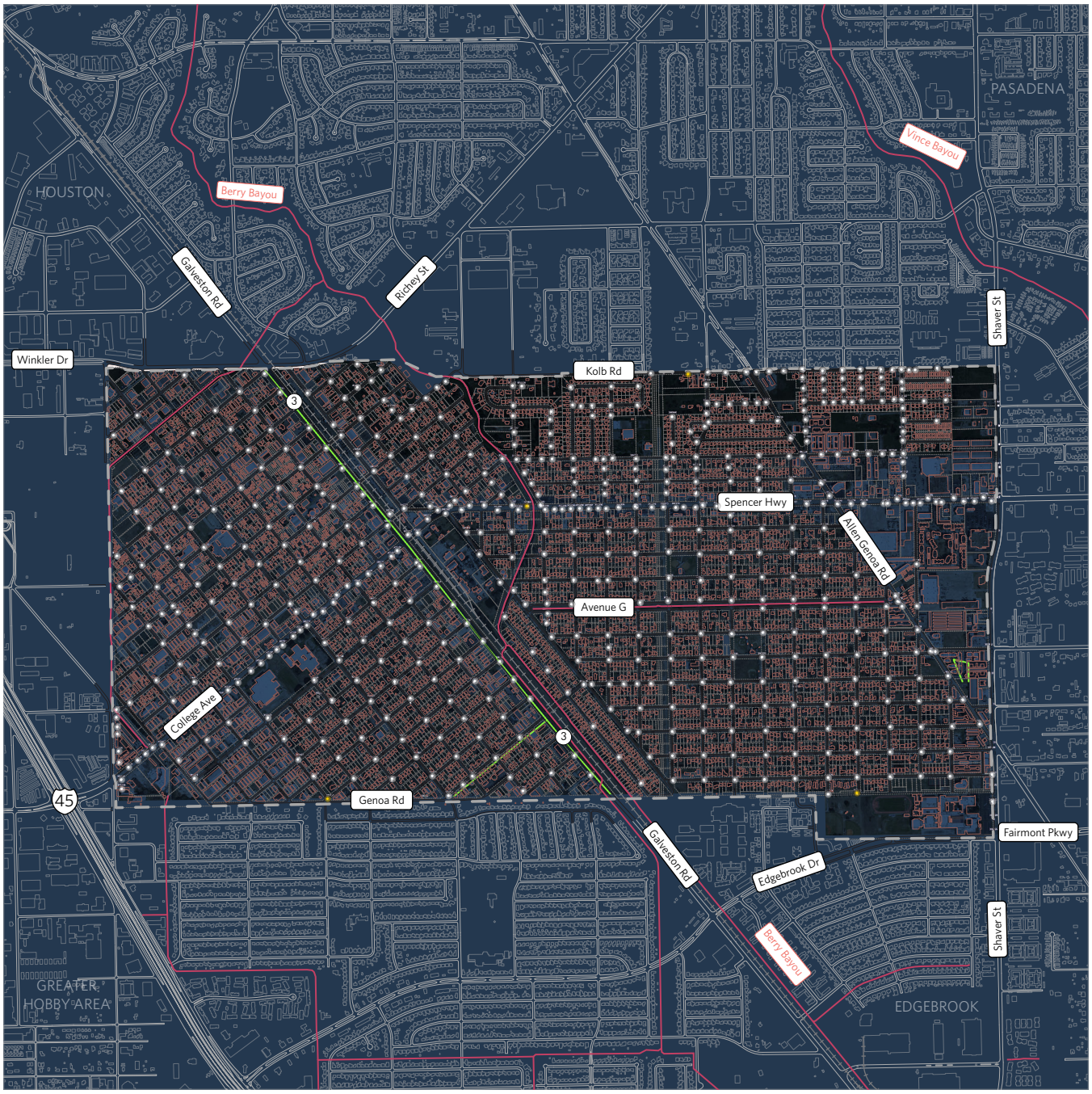


Figure 63. Lighting

The map above plots existing night-time lighting conditions from public street lights that are LED or sodium.

Lighting

- sodium lights
- LED lights

2 in = 1 mi

0 | 0.25 | 0.5 | 1 mi

N

Safety

Addressing roadway safety issues is necessary as a part of making South Houston a livable center. The number of crashes per year in South Houston has been increasing since the beginning of the pandemic - a part of a national trend.

Crash Density and Hot Spots

Unsurprisingly, most crashes between vehicles,bikes, pedestrians, etc. happen along the major roadways in South Houston: College Ave., Spencer Hwy., Galveston Rd., and S. Allen-Genoa Rd. These are roadways with high travel volumes, and they also tend to be wide, which encourages faster driving speeds. There are also a few surprising areas with high rates of crashes. The intersection of Texas St. and Avenue L has an extremely large number of crashes for a residential area with fairly low crash rates in the immediate surrounding area. Avenue A and 8th St., Austin St. between Iowa Ave. and Minnesota Ave., and Winkler Dr. also see relatively high crash rates.

About 50% of crashes occur at an intersection or are related to events that happened at an intersection. Intersections are often the most dangerous part of a street.

Fatalities and Serious Injuries

Since 2013, about 3% of people involved in crashes in South Houston have experienced a serious injury or died. Serious injuries and fatalities are more likely to happen on major roadways where speeds are faster and volumes are higher. Behaviors that increase the likelihood of an injury or death, like speeding, can be dis-encouraged through street design.



Figure 64. Roadways in South Houston

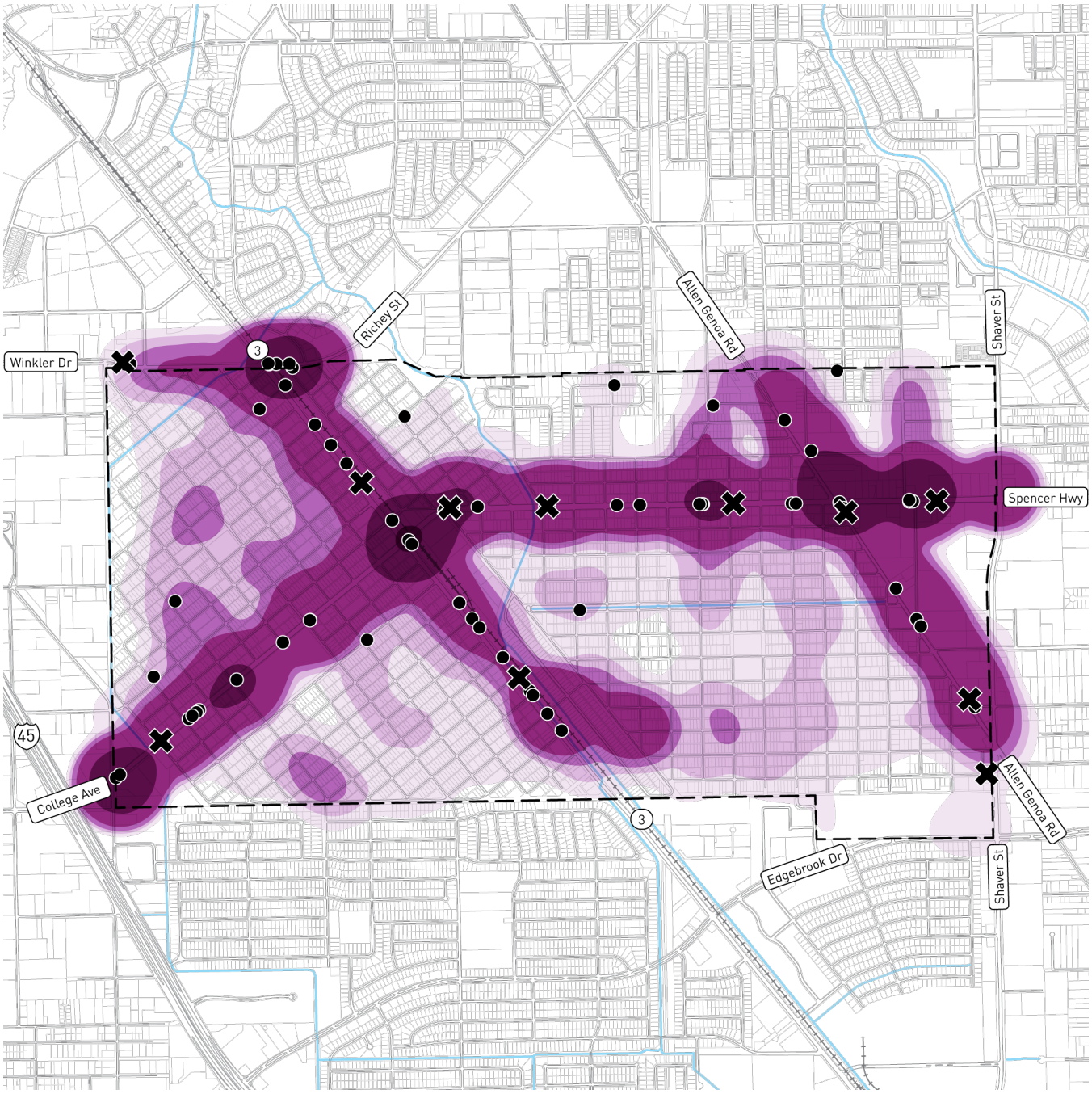


Figure 65. Crashes

The map above shows a heat map of all crashes between 2013 and 2022 and where they occurred. This includes all vehicle, motorcycle, bike, pedestrian, etc. crashes that occurred on the roadway. The vast majority of the crashes shown are vehicle crashes. The map also shows where the most severe injuries from these crashes occurred.

Intersections

Intersections are some of the most dangerous parts of the roadway, since they often have the most potential conflicts (cars turning, people crossing car traffic lanes, etc.) Intersections along major roads, like College Ave., Spencer Hwy., Galveston Rd., and Allen Genoa Rd., are particularly dangerous. Most intersection crashes occur along these major roads. The intersection of Texas St. and Avenue L also has an extremely large number of crashes for a residential area with fairly low crash rates in the immediate surrounding area.



Figure 66. College Ave. and Highway 3 intersection

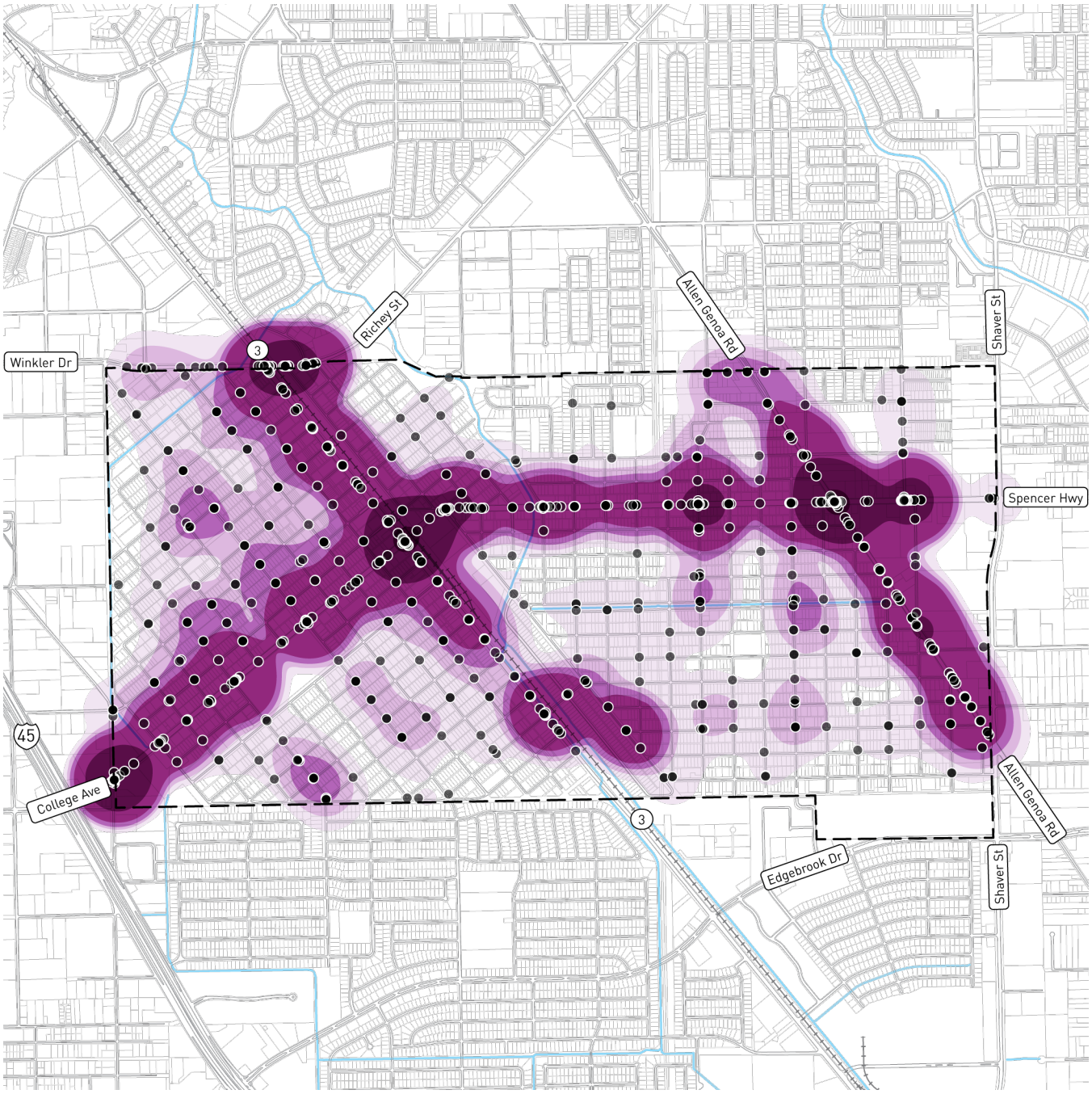


Figure 67. Crashes at Intersections

The map above shows a heat map of the number of crashes that happen at intersections.

Pedestrian and Bike Crashes

Approximately 1% of crashes that have happened in South Houston since 2013 have involved a pedestrian or cyclist. These crashes are particularly dangerous; of crashes that involve a serious injury or fatality, 12% involved a pedestrian or cyclist. Over 25% of cyclists or pedestrians involved in a crash are children under the age of 18. Making biking and walking safer is a critical part of encouraging people to use these modes to travel more sustainably, and is important for protecting the lives of people who already choose to or need to bike or walk. In early public outreach, people mentioned that bike lanes and sidewalks would make them feel safer biking and walking in the area.



Figure 68. Intersection in South Houston

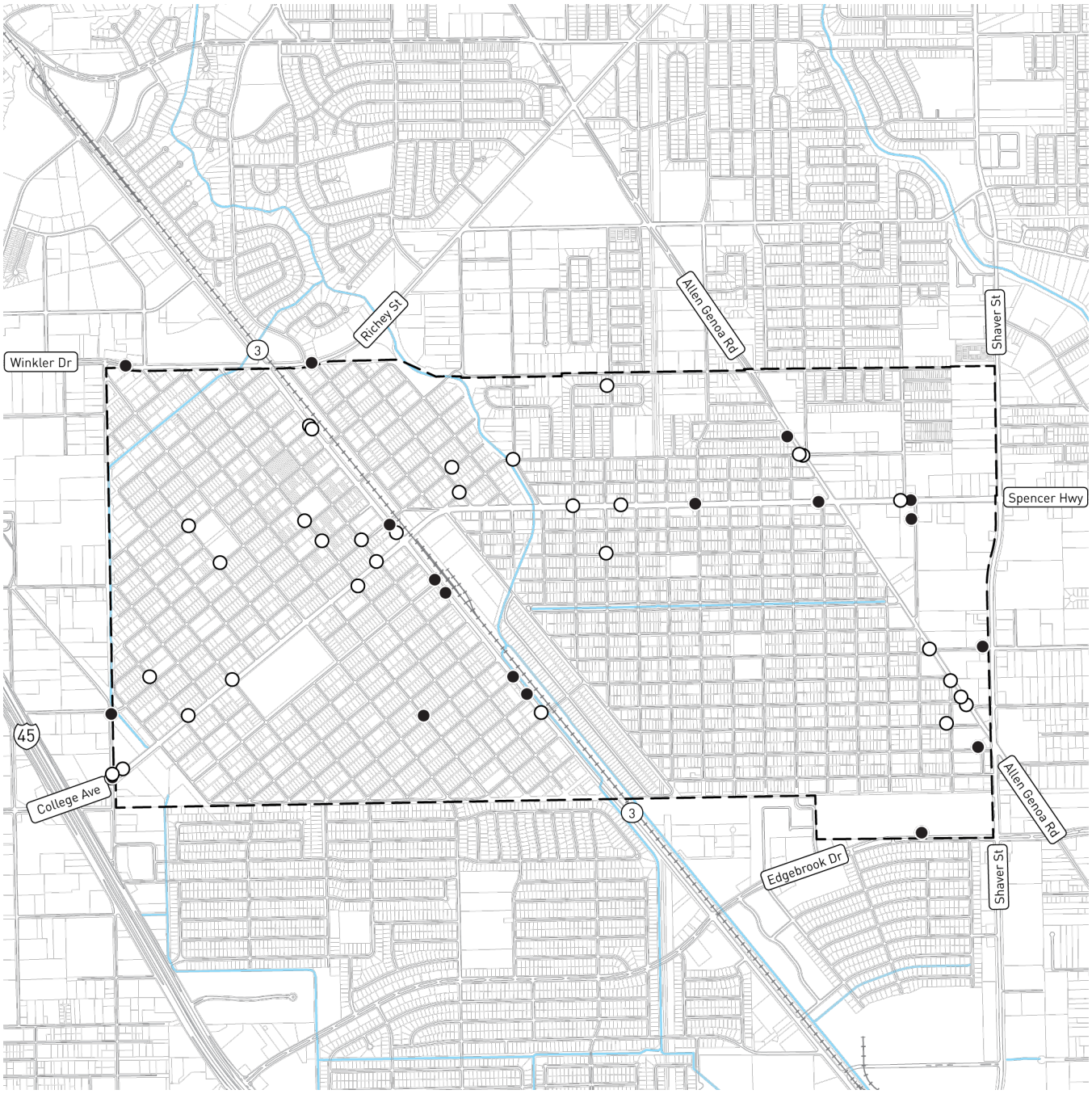


Figure 69. Ped/Bike Crashes

The map above shows the location of crashes involving pedestrians and cyclists.

Ped-Bike Crashes

- ● Crash involving cyclist
- ○ Crash involving pedestrian

2 in = 1 mi CRIS 2013-2022

0 | 0.25 | 0.5 | 1 mi

N

High Injury Network (VisionZero)

Houston is dedicated to the VisionZero initiative, striving to eliminate traffic-related fatalities by establishing a framework for "safe systems." This comprehensive safety approach places emphasis on designing a forgiving mobility system that minimizes the impact of human errors. These strategies can include comprehensive speed management, safer street design, and protected lanes for pedestrians and non-vehicular modes of transportation.

The map in Figure 70 shows the Harris County's High Injury Network (HIN). It shows high crash data along College Ave., Edgebrook Dr., and Hwy 3. The study overlaps the High Injury Network with the bike plan in order to anticipate any potential vulnerable areas for non-vehicular modes of transit along the High Injury Network. The goal is to integrate a mobility network that improves safety for all modes of transportation, promoting a healthier, more equitable and sustainable community.

A major high injury network corridor within the study area is along Hwy 3. The existing road has an unprotected, dedicated on-street bike lane on both sides of the highway, which makes this corridor a highly vulnerable area.

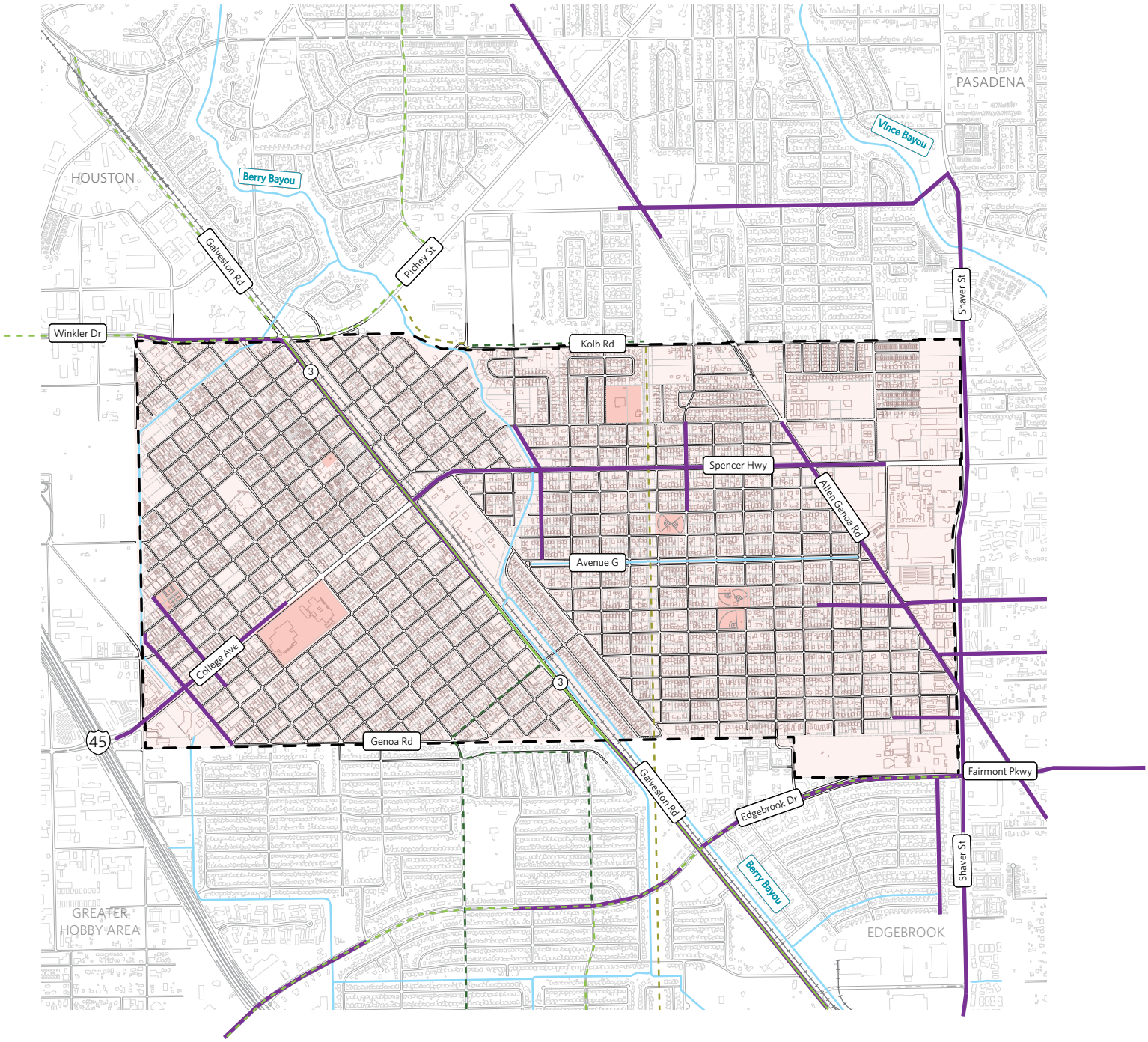


Figure 70. High Injury Network

The map above shows the High Injury Network from Houston's VisionZero plan overlapped with South Houston's bike plan of existing and proposed bike lanes.

Bike Network

- existing
- proposed
- off-street
- shared on-street
- dedicated on-street

High Injury Network

- high-injury network (VisionZero)

2 in = 1 mi

0 | 0.25 | 0.5 | 1 mi

N

ROW Assessment

In general the allocation of space within street right-of-ways in South Houston is fairly consistent. Most of the city exists on the pre-war era street grid, which leaves consistent street right-of-ways throughout most of the city – usually around 50 feet of right-of-way with narrow 2 lane streets with 10-foot lanes, even in the more commercial and industrial areas.

In contrast, the major thoroughfares (Highway 3, College Ave., Spencer Hwy, and Allen Genoa Rd.) are very wide. College Ave. and Spencer Hwy both have three 12-foot wide traffic lanes in each direction, a wide middle turn lane and a small amount of buffer space between the street curb and the property lines, with very few sidewalks. Highway 3 is similar, with only two travel lanes in each direction, a middle turn lane at intersections, new painted bike lane on the shoulders, and open ditches on both sides. This is a road that would greatly benefit from more protection for the bike lanes, which are nice to have, but still feel risky to use for most riders.

Allen Genoa Rd. is a smaller road compared to the other thoroughfares, but still has two 12-foot lanes in each direction, a small amount of space between the curb and the property lines, and no sidewalks.



Figure 71. Sidewalks and Bike Lanes

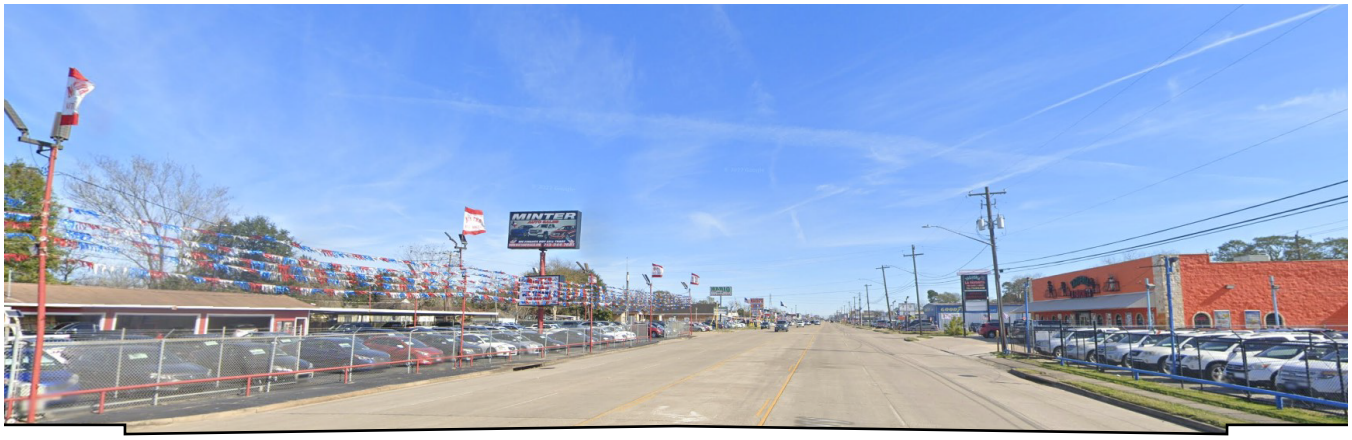
The map above shows where sidewalks (yellow) and bike lanes (green) exist in South Houston. Most of the sidewalks exist along College Ave., Spencer Hwy, and Main St. Bike lanes are only located along Hwy 3. For more information on sidewalks and sidewalk conditions, see page 48, and for information on the bike plan, see page 46.



Figure 72. Highway 3 Bike Lane

The newly painted bike lane on Highway 3 has a small buffer.

Spencer Hwy



9'	12'	12'	12'	14'	12'	12'	12'	3'	4'	2'
Grass	Travel Lane	Travel Lane	Travel Lane	Middle Turn Lane	Travel Lane	Travel Lane	Travel Lane	Sidewalk		

100' ROW

College Ave

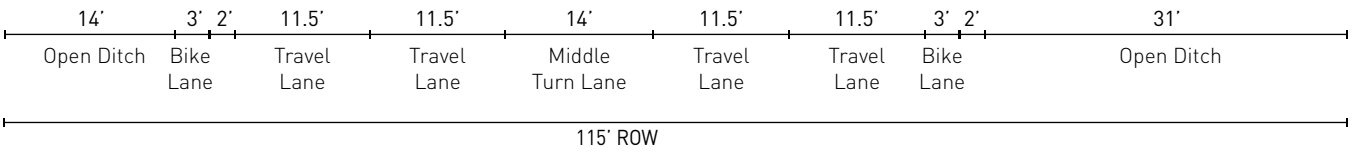


9'	12'	12'	12'	14'	12'	12'	12'	3'	4'	2'
Grass	Travel Lane	Travel Lane	Travel Lane	Middle Turn Lane	Travel Lane	Travel Lane	Travel Lane	Sidewalk		

100' ROW

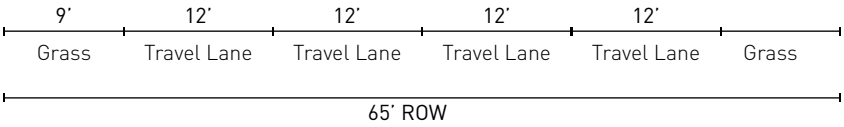
Highway 3



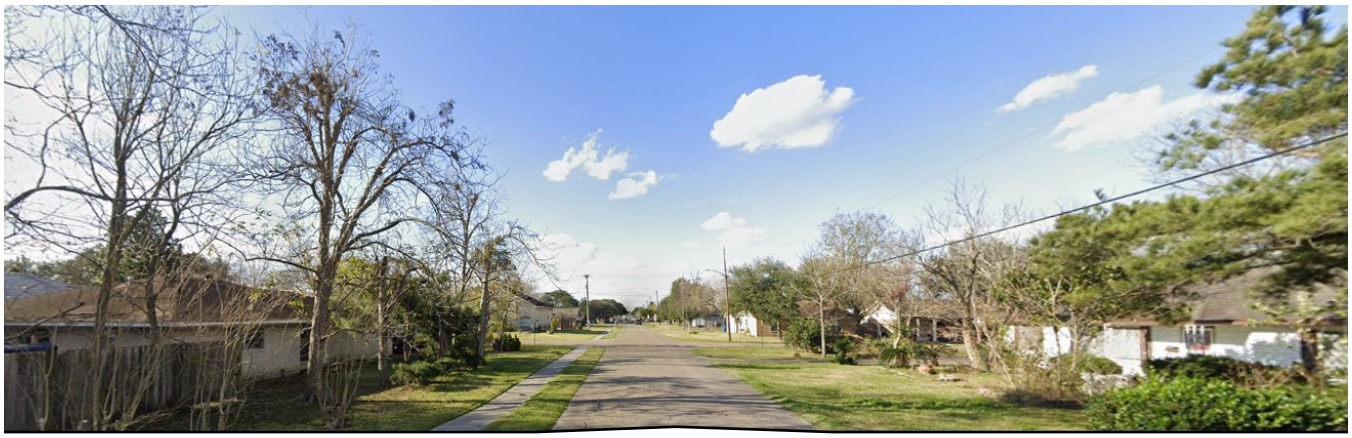


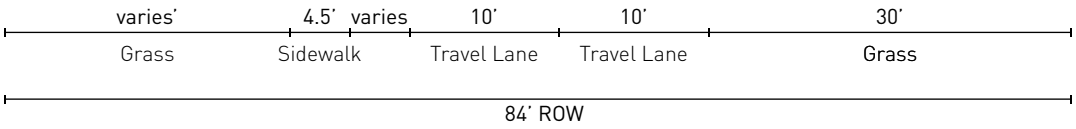
Allen Genoa Rd





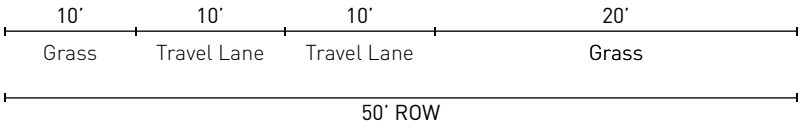
Main St





Typical Neighborhood Street








PARKS AND OPEN SPACES
STOP
NO PARKING ON SIDEWALK

Park Access and Ownership

Park Access

South Houston has several parks and green spaces that are available for recreational use. However, the majority of these green spaces have private gated access with only public access for events. The only parks and green spaces that are available to the public is the park by City Hall, Avenue A Park, and the public walking track by Matthys Elementary. The closest parks with accessible amenities is Strawberry Park (located 1.2 miles away from South Houston's city limits) and Burke Crenshaw Park (2.5 miles from South Houston's city limits).

Park Ownership

The majority of parks and green spaces are owned by the City of South Houston. These properties are open to public, aside from the South Houston Softball and Baseball Leagues that are privately owned and gated for member use. The other primary owner of parks and green spaces in South Houston is Pasadena ISD where parks and recreational spaces around schools are typically gated for use by the school district.



Figure 73. Private Parks

The image above shows gated, private access to the South Houston baseball fields.

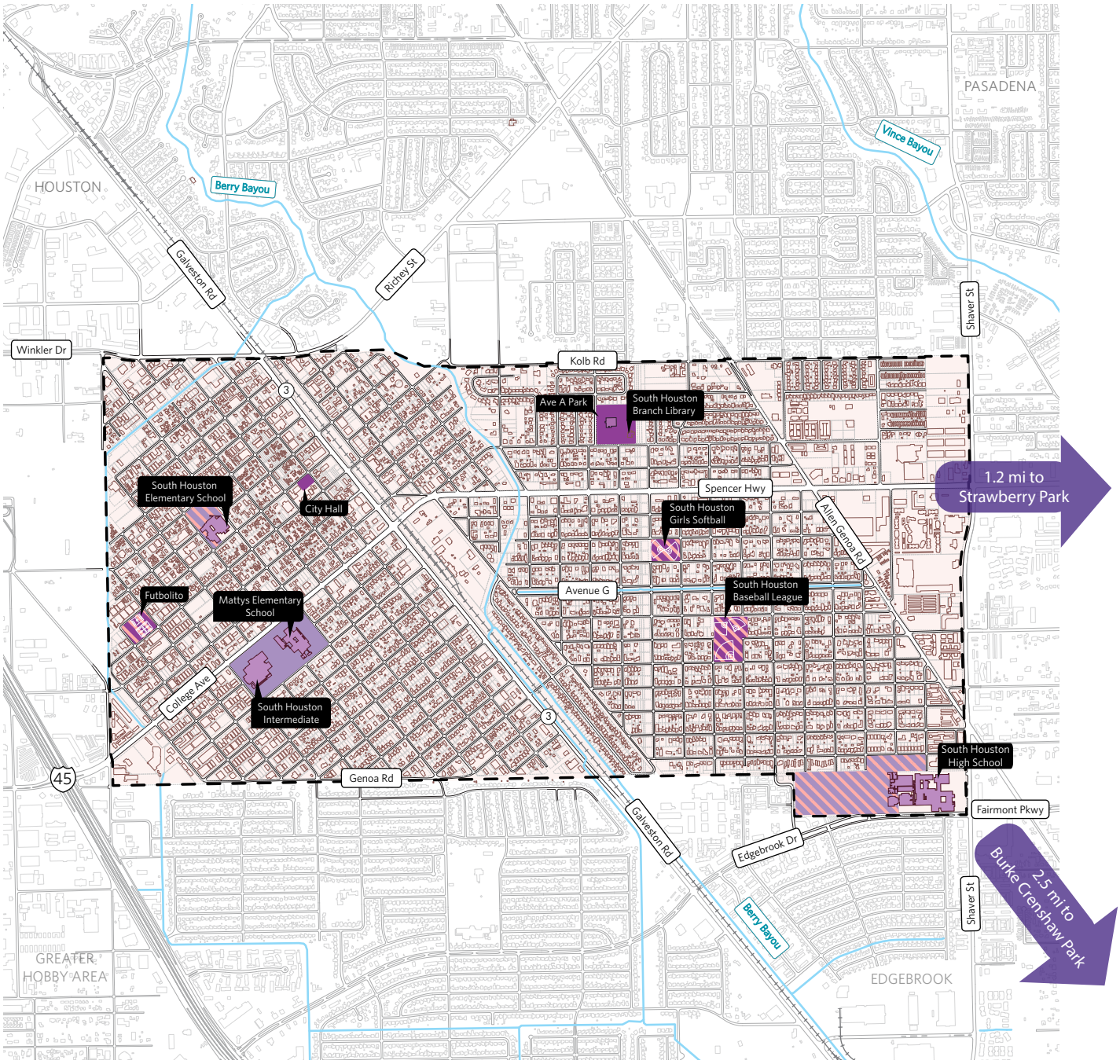


Figure 74. Park Access

The map above shows park access and ownership of the existing green spaces within South Houston.

Park Access and Ownership

- owned pasadena isd
- owned city of south houston
- private access

2 in = 1 mi

0 | 0.25 | 0.5 | 1 mi

N

Walking Shed to Green Spaces

Access to parks and green spaces have a positive impact on the physical and mental health of the population. Parks provide free opportunities for physical activity, recreation, and social interaction, which can help reduce stress, improve mental health, and increase physical fitness. They also provide a safe and attractive environment for people to spend time outdoors, which can promote healthy habits, reduce air pollution, and improve overall well-being. However, a lack of park access or poor park quality can negatively impact population health, especially in communities with limited recreational options.[1]

Usage of park space is impacted by a number of complex and interconnected variables, including size, accessibility, proximity to home, quality, perceptions of security and safety, and a sense of community cohesion. Not everyone will use a park in the same way, but larger parks and green space tend to be used for more active uses, like sports activities, while smaller green space lends itself to more passive or social activities.[2] Accessibility and proximity to home are two other important factors in park use. Studies show that a reasonable distance most people will walk is about half a mile or 10 minutes.[3] According to a State Indicator Report on Physical Activity, less than 38% of the U.S. population lives within a half-mile of a park.[4]

Figure 75 map shows that more than half of the population of South Houston resides within 10-minute walking distance to a park or green space. However, with poor pedestrian amenities, walking or biking to these parks and green spaces may be unsafe, inaccessible, or take longer than projected. Overall, investing in quality of parks and greenspace, and increasing safety and accessibility to parks could help encourage park use and improve the health and well-being of a community.

There are no existing dedicated trails or walking tracks within the Study Area. The only open walking track for residents are the public sidewalks along the block for Matthys Elementary School and South Houston Intermediate.

1. Lynch, M., L.H. Spencer & R.T. Edwards. (2020). A Systematic Review Exploring the Economic Valuation of Accessing and Using Green and Blue Spaces to Improve Public Health. International Journal of Environmental Research and Public Health. 17(11), 4142.

2. Lee, A.C.K., H.C. Jordan, J. Horsley. (2015). Value of urban green spaces in promoting healthy living and wellbeing: prospects for planning. Risk Management and Healthcare Policy. 15(8), 131-137

3. U.S. Department of Transportation's National Highway Traffic Safety Administration and the Bureau of Transportation Statistics, National Survey of Pedestrian and Bicyclist Attitudes and Behaviors, 2012.

4. Cohen, D. A., McKenzie, T. L., Sehgal, A., Williamson, S., Golinelli, D., & Lurie, N. (2007). Contribution of public parks to physical activity. American journal of public health, 97(3), 509–514.

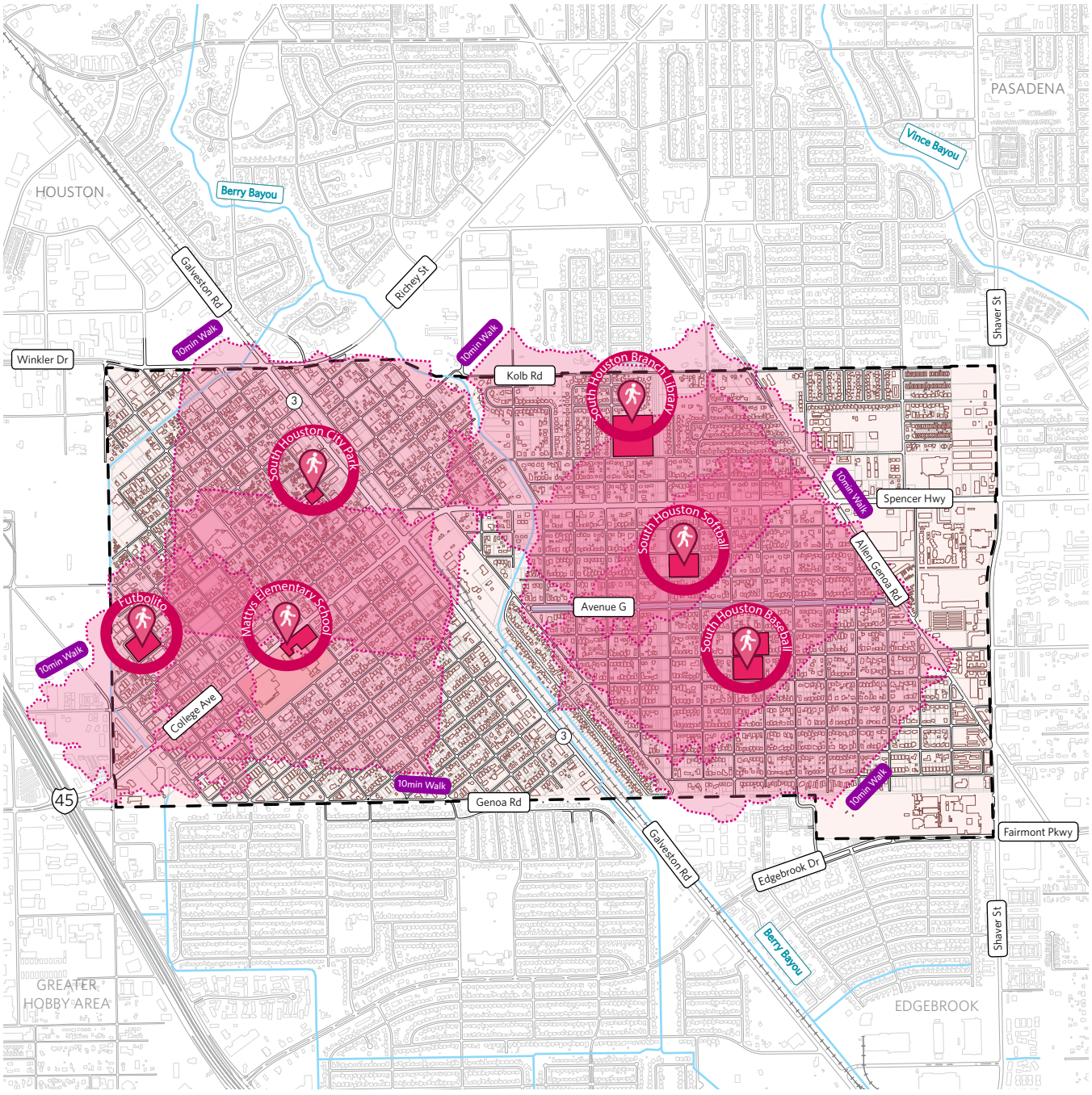


Figure 75. Walking sheds to Green Spaces

The map above shows public and neighborhood parks and green spaces within a 10-min walking distance.

2 in = 1 mi

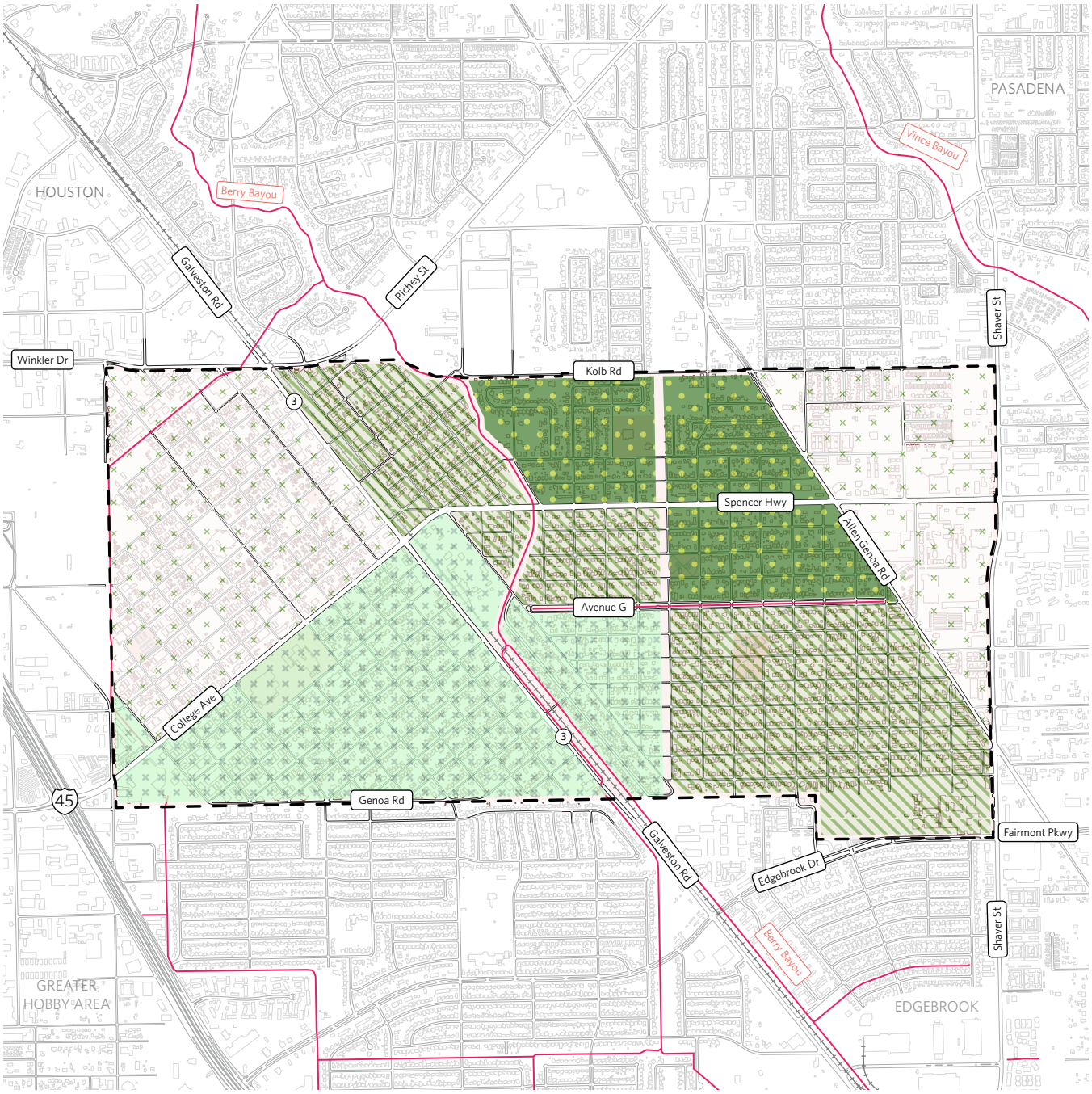
0 | 0.25 | 0.5 | 1 mi

N

Tree Canopy Coverage

The benefits of trees include reducing air temperature through evaporative cooling and providing shade from direct heat. Trees can also improve air quality, which is essential for highly industrialized areas. Tree canopies are an important tool to mitigate environmental inequalities and promote public health.

The map in Figure 76 illustrates the range of tree canopy coverage from 5% to 20% coverage. The commercialized area on the east side of Allen-Genoa has as little as 8% tree canopy coverage. The industrialized areas west of Hwy 3 has sparse canopy coverage, ranging from 11% to 18% canopy coverage. The residential areas have the most canopy coverage, ranging between 20-25% tree canopy coverage.



Source: Tree Equity Score

Figure 76. Tree Canopy Coverage

The map above shows the percent of tree canopy coverage per region within the City of South Houston.

Tree Canopy Coverage

- 0% - 10% coverage
- 10% - 15% coverage
- 15% - 20% coverage
- 20% - 25% coverage

2 in = 1 mi

0	0.25	0.5	1 mi

N

Urban Wildlife Habitat Connectivity

One of the critical issues facing urban wildlife is safe connectivity. Wildlife movement, especially in urban environments where habitat is fragmented and lost by development, is essential in the conservation of biodiversity of native wildlife flora and fauna. This allows species to migrate to other habitat areas throughout their lifespan. The wildlife observations within this study are aimed at identifying strategies and opportunities to restore a network of healthy urban wildlife throughout the watershed.

One Health is the intersection between human, animal/wildlife, and environmental health outcomes, acknowledging that human health is closely connected to the health of animals and their shared environment. Integrating One Health concepts into urban planning and design brings additive benefits, including equitable access to nature, disease control, heat and flood abatement, improved air and water quality, and improved community well-being, among others.[1] Setting up a foundation for One Health also helps to ensure that these cumulative benefits can build over time.

1. One Health Basics | One Health | CDC. (n.d.). Retrieved February 14, 2023, from https://www.cdc.gov/onehealth/basics/index.html

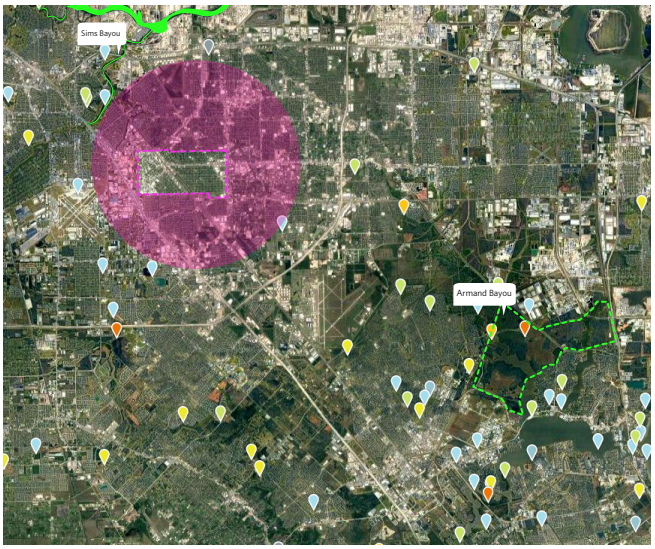
Macro Habitats

Figure 77 observes birding hot spots and the number of species reported. It also indicates the disparity of bird species observed in South Houston, showcasing a lack of bird-friendly habitats in the area that can promote biodiversity within the watershed.

Links and Patches

The Berry Bayou and Vince Bayou watershed is comprised of several detention basins that are used to hold run-off from both bayous. Restoring land use as patches of healthy micro habitats in these areas can improve biodiversity, as well as provide opportunities for recreation, and improve public health.

South Houston's Berry Bayou and neighboring Vince Bayou is well suited to play a larger role as an urban wildlife connectivity corridor linking Sims Bayou/ Buffalo Bayou and the Armand Bayou Nature Center.



Number Of Species Observed

Source: eBird

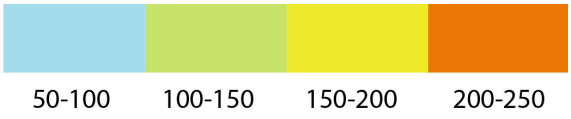


Figure 77. Birding

The image above displays birding hot spots and the absence of species reported around the South Houston area.

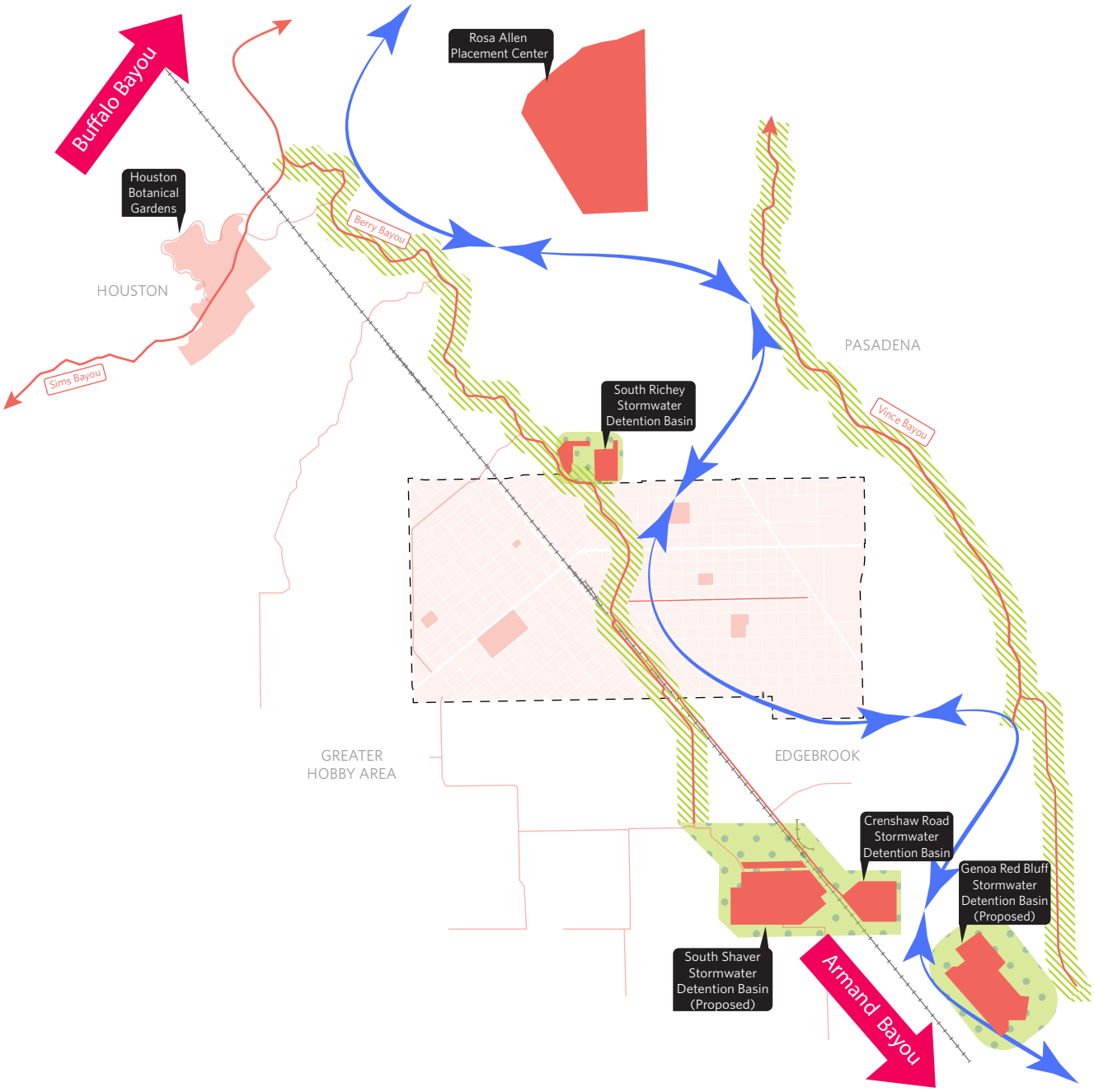


Figure 78. Wildlife Connectivity

The map above illustrates Berry Bayou and Vince Bayou as wildlife connectivity corridors that link Sims Bayou and Armand Bayou, with detention basins as "patches" of restorative habitats for wildlife to migrate in between.

Flooding

- detention basins
- restorative habitat patches
- restorative habitat links
- wildlife connectivity corridors

1 in = 1 mi

0 0.25 0.5 1 mi

N

Urban Heat

Urban Heat Effect

Urban heat island effect occurs when areas replace natural land cover with paving and developments that absorb and retain heat. Areas without adequate cooling mitigation strategies, such as shading from tree canopies, can increase ambient temperatures up to 15-20 degrees. This increase of ambient heat can deter walkability and increase discomfort for non-vehicular mobility.

Figures A-F diagrams the surface temperatures surrounding buildings and areas shaded by tree canopies. Each zone is categorized according to percentage of tree canopy coverage. The studies show that the densest tree canopies are concentrated in residential areas. Areas with more industrialized, commercial or mixed-land use tend to have sparse tree canopy coverage and therefore, less shaded areas to cool down ambient heat. There are also little to no public tree canopies along sidewalks, making the edges of streets to be the most warm areas without proper shading.

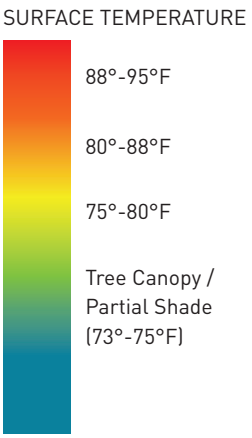


Figure 79.

The chart above shows range of surface temperatures. The urban heat impacts are studied during the summer months in South Houston.

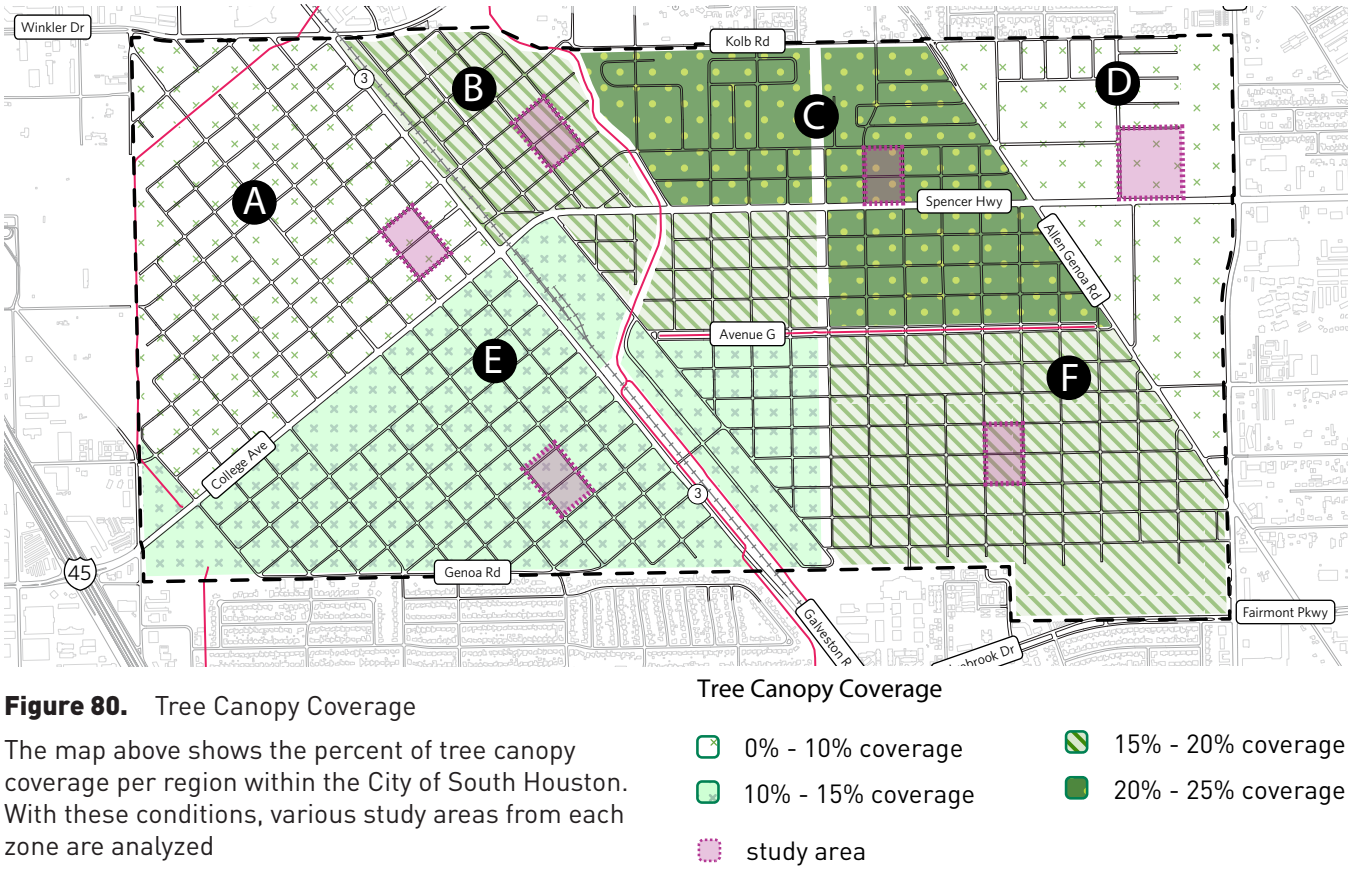


Figure 80. Tree Canopy Coverage

The map above shows the percent of tree canopy coverage per region within the City of South Houston. With these conditions, various study areas from each zone are analyzed

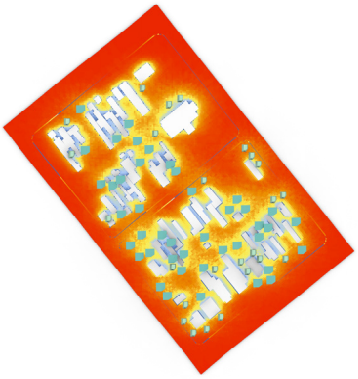


Figure A

Figure A is a urban heat study within Zone A, a mixed-use neighborhood with 11% tree canopy coverage with the highest density of trees around residential areas.



Figure B

Figure B is a urban heat study within Zone B, a mixed-use neighborhood with 20% tree canopy coverage.

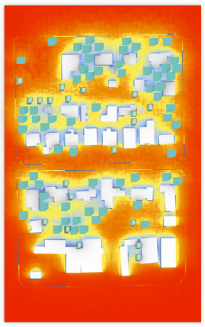


Figure C

Figure C is a urban heat study within zone C, a residential area with 25% tree canopy coverage.

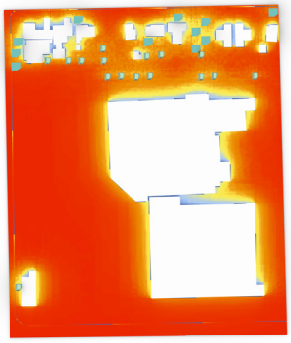


Figure D

Figure D is a urban heat study within zone D, a predominately commercial area with 8% tree canopy coverage.

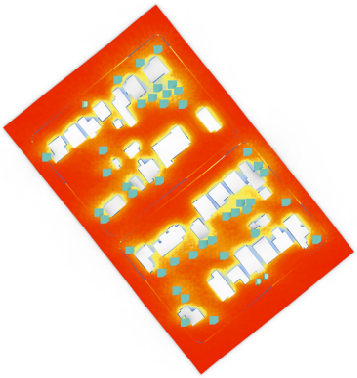


Figure E

Figure E is a urban heat study within zone E, a predominately residential neighborhood with 14% tree canopy coverage.

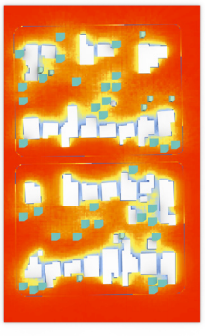


Figure F

Figure F is a urban heat study within zone F, a residential area with 20% tree canopy coverage.

Easement Corridors

Utility Corridors

Figure 84 map displays a network of utility corridors from various infrastructure easements. In highlighting these areas, we can investigate spatial opportunities for potential land use that can promote a network of greener infrastructure and connectivity within the study area.

Drainage Easement

Figure 82 image shows the drainage easement that branches off of Berry Bayou. These drainage channels are used to manage and control the capacity of storm water run off that eventually drains into detention basins outside of the study area. Avenue G has a large drainage easement running from Berry Bayou to Allen-Genoa Rd.

CenterPoint Easement

Figure 81 image shows the CenterPoint Easement cutting through South Houston parallel to 7th St. Along the easement, there is a proposed hike and bike trail outlining the use of utility easements through an agreement with Harris County and CenterPoint to expand the public use of these infrastructure corridors.

Gas line Easement

Figure 83 image shows gas line running parallel to the railroad tracks on Hwy 3. The gas line right-of-way has potential and capacities for low-profile planting that can enhance the major corridor that runs through South Houston.



Figure 82. Drainage Easement

The image above shows the drainage easement along Avenue G.



Figure 81. CenterPoint Easement

The image above shows the CenterPoint power line easement.



Figure 83. Gas Lines

The image above shows gas line maker alongside the railroad tracks along Hwy 3.

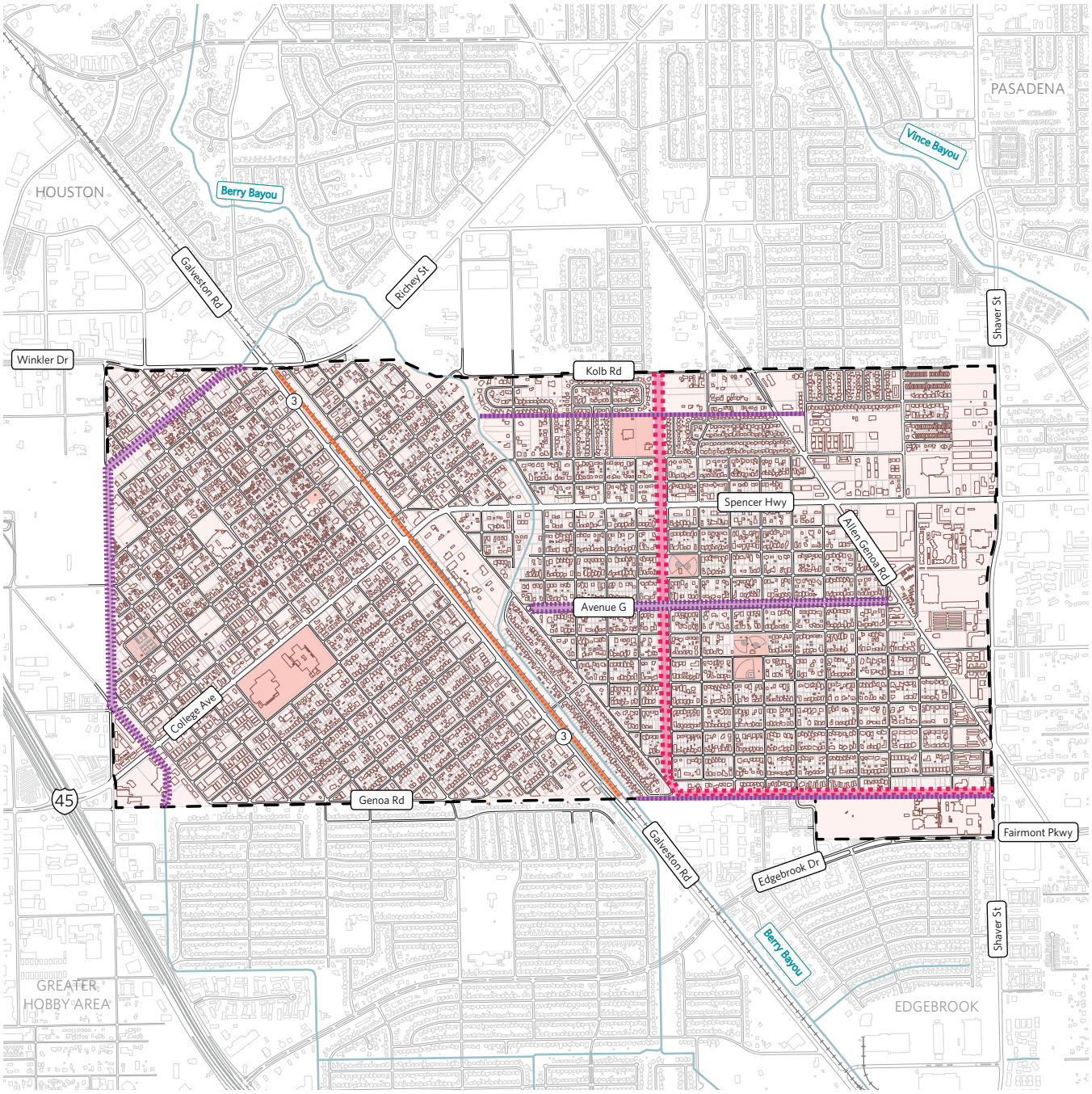


Figure 84. Easements

The map above shows existing infrastructure and utility easements within South Houston.

Easement

- drainage easement
- centerpoint powerline easement
- gasline easement

2 in = 1 mi

0 | 0.25 | 0.5 | 1 mi

N




FLOODING

Flooding

Floodplains

South Houston has a high flood risk. At the regional scale, the city is bisected by Berry Bayou, bordered by a major channel (C106-03-00), drained by other smaller Berry Bayou tributaries, and affected by Vince Bayou's floodplain. At the local scale, South Houston has both open ditches and a closed storm sewer system which does not typically include curbs and sidewalks, and mainly consists of grass-surrounded storm drains.

72% of South Houston is in the floodplain. When divided by flood risk, 5.6 percent of the area is within the floodway, 36.7 percent is within the 100-year floodplain, and 72 percent is within the 500 year floodplain. The floodplains cover commercial, industrial, and residential areas, especially the area west of Highway 3 and south of College Ave. Flooding also significantly affects much of the immediately adjacent areas to the east and south. Virtually all of the area within the city limits that is west of Allen Genoa Rd, is within either the 100-year or 500-year floodplain related to Vince Bayou. Allen Genoa Rd. serves as the boundary between the Vince Bayou and Sims Bayou watersheds.

Flooding events increase risk of physical injury, trauma, skin infections, and gastrointestinal illness as a result of exposure to debris, bacteria, viruses, fungus, and various chemicals in water. Human and animal waste can contaminate flood waters and cause gastrointestinal illness and wound infections. The presence of mold in homes and businesses after flooding events can lead to and worsen respiratory issues such as asthma, bronchitis, or other respiratory infections.[1]

The pools of stagnant water left behind after flooding are the ideal breeding ground for mosquitoes. In the weeks following a flooding event, increased populations of mosquitoes are usually observed. Mosquitoes are mainly a nuisance pest, but some species can transmit deadly vector-borne diseases, such as West Nile virus, Dengue and St. Louis Encephalitis.[2]

1. Centers for Disease Control and Prevention. (2019). Flood Waters or Standing Waters. Retrieved from https://www.cdc.gov/healthywater/emergency/extreme-weather/floods-standingwater.html

2. Mosquito and Vector Control-Harris County Public Health (n.d.). Retrieved from http://publichealth.harriscountytx.gov/About/Organization-Offices/Mosquito-and-Vector-Control

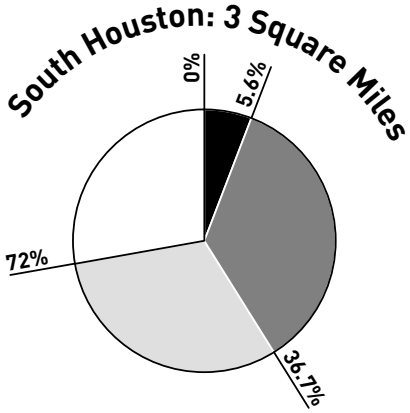


Figure 85. % Land Area in the Floodplain

The chart and map above shows the breakdown of the percentage of South Houston that is in the floodplain.



Figure 86. Neighborhood storm drain system



Figure 87. Neighborhood open ditch system

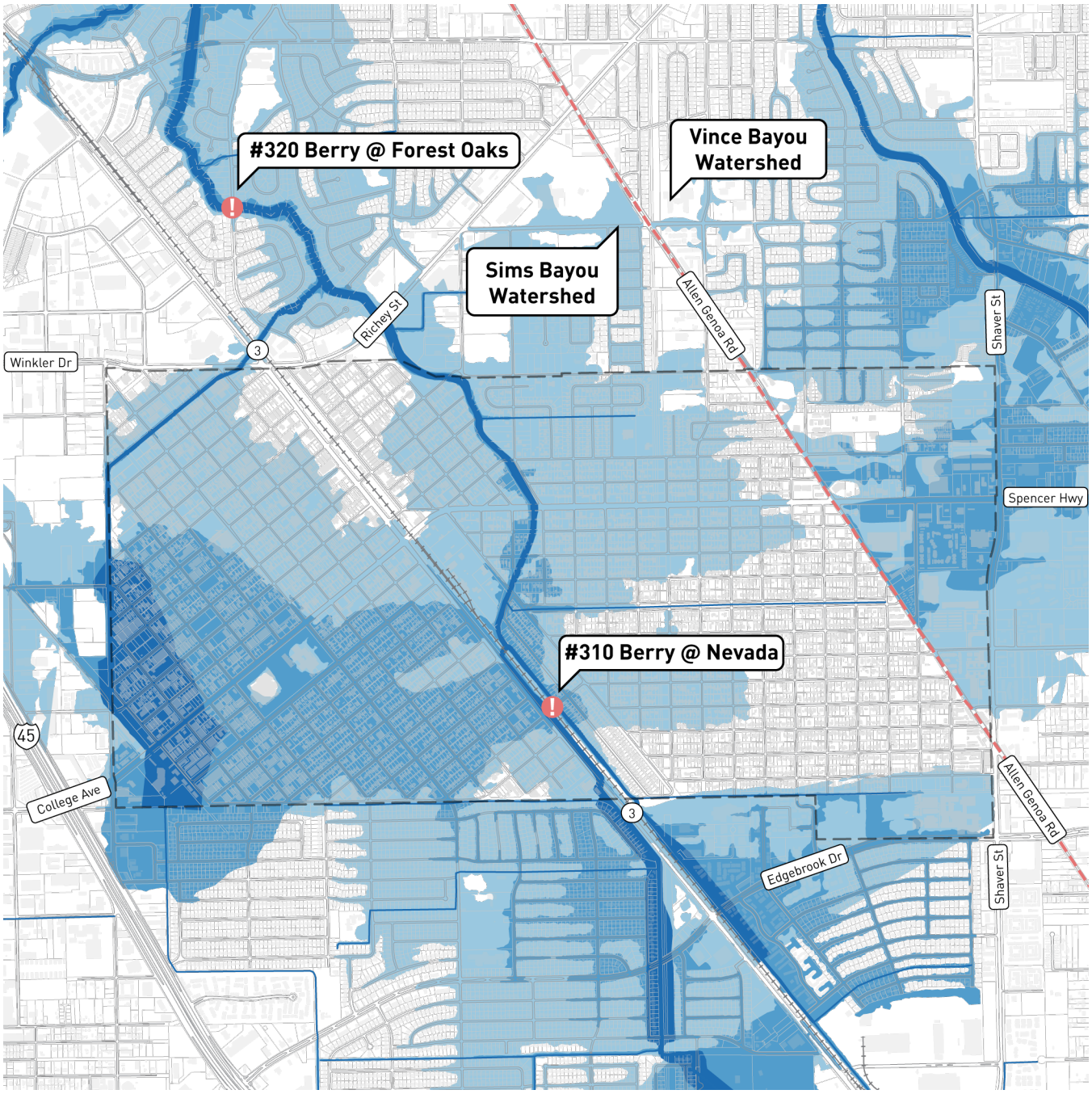


Figure 88. Floodways in South Houston

The map above shows the FEMA floodways in relation to South Houston. The majority of the city is within the100-year and 500-year floodplain.

Flooding

- floodway
- 100-year floodplain
- 500-year floodplain
- Watershed Boundary

2 in = 1 mi

0	0.25	0.5	1 mi

FEMA (NFHL 2019)

N

Historic Flooding

Hurricane Harvey

At the time of this report, it has been more than 5 years since Hurricane Harvey made landfall, made its way slowly through the Southeast Texas region and dropped a record amount of rainfall on the Greater Houston Region. Southeast Houston, which includes the City of South Houston and other neighborhoods like Edgebrook and South Belt / Ellington, were hit particularly hard. Hurricane Harvey is an example of the new climate normal that has resulted in the need to plan and build processes for greater resiliency.

South Houston was flooded during Hurricane Harvey. According to the Harris County Flood Control stormwater gauge located at Berry Bayou and Nevada Ave., an astonishing 43.9 inches of rain fell in the area during the four day flood event, from Saturday August 26th to Tuesday August 29th, 2017. The highest amount of rain, in the shortest amount of time, fell in four hours between Saturday night at 9:00 p.m. and Early Sunday at 1:00am and added up to 14.5 inches of rain. To compare this, the new Atlas 14 defines a 100-year storm event as 18 inches of rain in 24 hours.

As a result of the heavy rainfall during this short period of time, the banks of Berry Bayou were over-topped from just before midnight to early Sunday morning, the same time that water entered the homes of South Houston and Edgebrook residents. Unlike other places in Houston that had water for longer periods of time, Berry Bayou drained after this initial flooding and the water stayed within its banks for the rest of the flood event. Nonetheless, the 8-10 hours were enough to cause physical and traumatic harm to residents.

The latest Harris County Appraisal District parcel data shows renovated structures after 2017. The main cause of this renovation is presumed to be Hurricane Harvey flooding. As we move forward, these properties, and surrounding neighbors who might not have been recorded in the remodel process, continue to be in danger and prone to future storm events.

There are many paths to resiliency. Building regulations are one important tool. Currently, the City of South Houston's code states "New construction and substantial improvement of any residential structure shall have the lowest floor (including basement), elevated to or above the base flood elevation." There are also provisions for non-residential structures and parcel treatments.

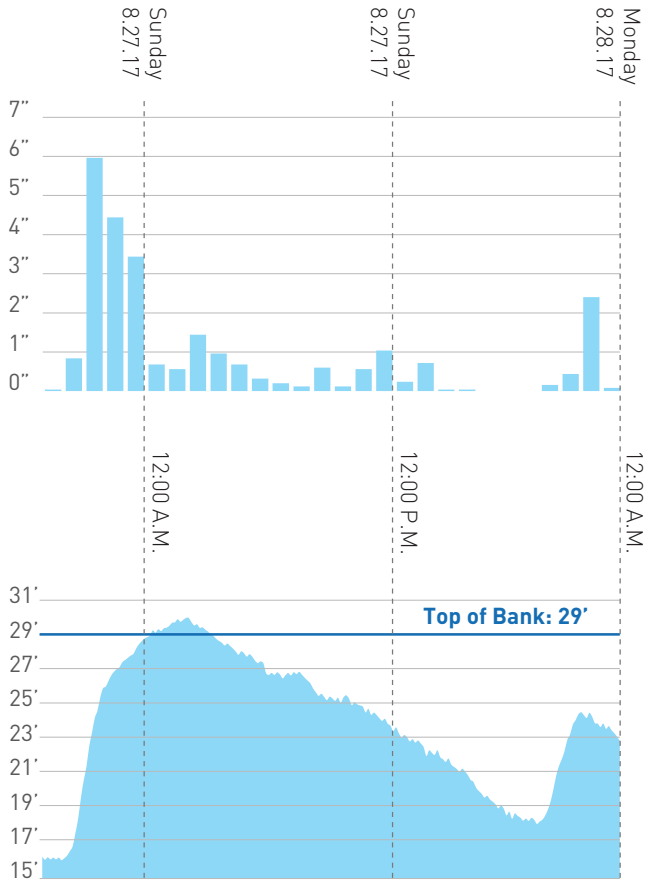


Figure 89. Hurricane Harvey Flooding Levels

Most of the flooding in South Houston and the Edgebrook neighborhood occurred during the early hours Sunday morning. During the rest of the rain event, Berry Bayou did not over top its banks.

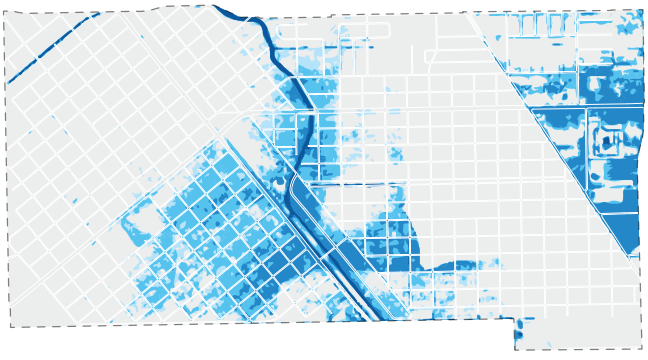


Figure 90. Rainfall Amount in 4 Hours

The map above shows how in a matter of 4 hours, South Houston received almost 15 inches of rain which quickly cause devastating flooding.

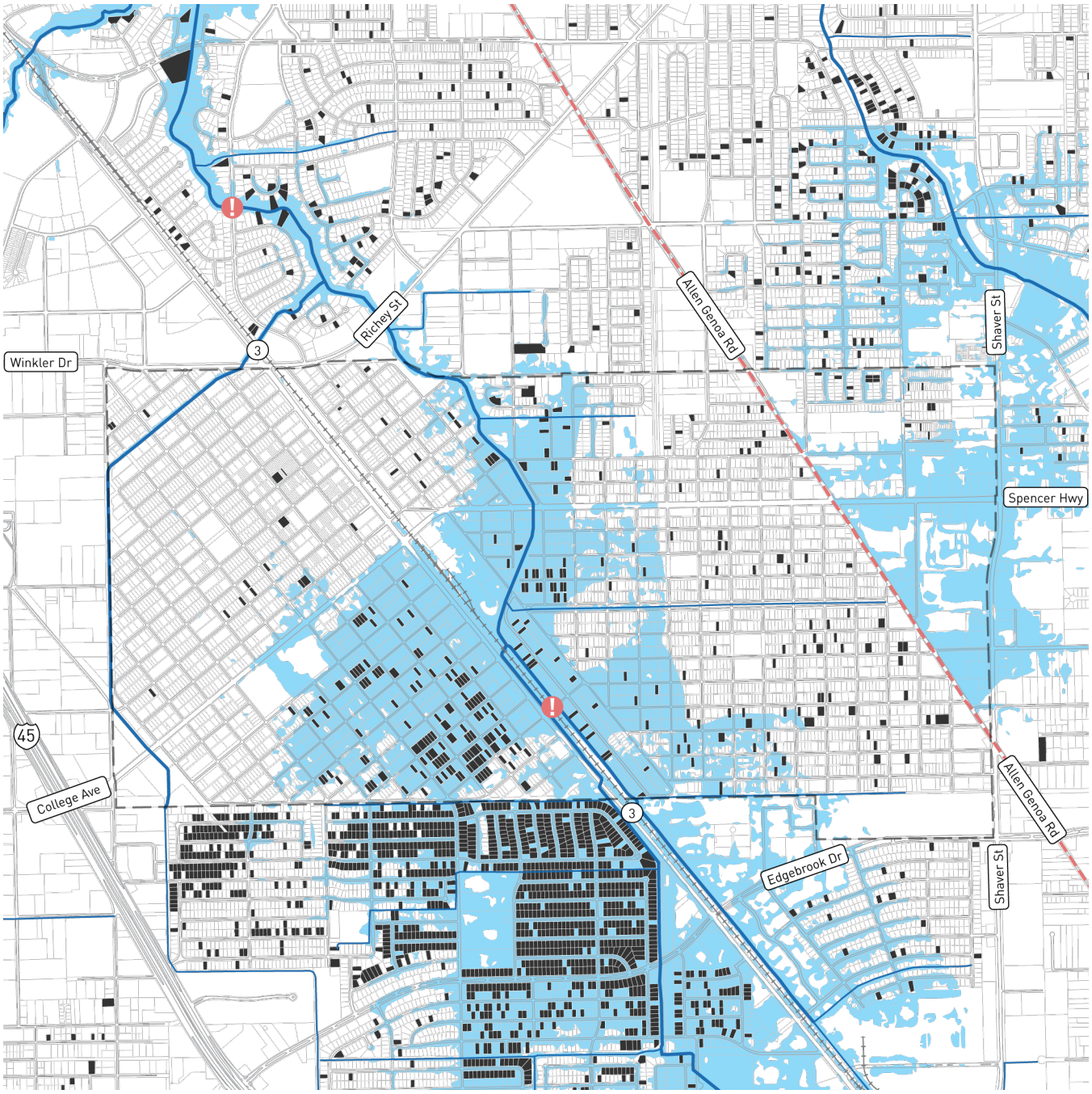


Figure 91. Flooding During Hurricane Harvey

The figure above shows the extensive flooding by Hurricane Harvey, as estimated by the Harris County Flood Control District, at approximately 5:00 a.m. on Sunday August 27th, 2017.

Harvey Flooding

- HCFCD Estimated Flooding During Harvey
- Remodeled Homes 2017-2022
- HCFCD Stream Elevation Sensor
- Watershed Boundary
- Bayou and Drainage

2 in = 1 mi HCFCD, HCAD 2022

0 | 0.25 | 0.5 | 1 mi

N

Flood Risk Improvements

Drainage Improvements

The section of Berry Bayou that runs through South Houston was channelized: lined in concrete and straightened out. This was done to increase the carrying capacity of the bayou by allowing the water to flow faster and more directly. However, as the areas near channelized bayous get developed, the increase in impervious cover can make them more susceptible to flooding as they end up needing to convey more runoff than they were designed for. Since the channelization, most of the land area in South Houston has been developed.

More recently, channel C106-03-00, another source of flooding, was also channelized after Hurricane Harvey. According to the Harris County Flood Control District, this improvement will remove the 1 percent (100-year) floodplain from hundreds of homes and businesses. A series of other drainage improvements have been done to other tributaries, and there are several more conveyance improvement projects planned. These include improvements to channels southwest of the study area.

There are three detention basins that serve Berry Bayou; the South Richey Stormwater Detention Basin, the South Shaver Stormwater Detention Basin, and the Crenshaw Road Stormwater Detention Basin. The South Shaver Stormwater Detention Basin is currently under construction and is proposed to preserve existing wetlands, add recreational trails, and a new street with access to Milstead Middle School. The proposed trails will connect to Wilson Memorial Park to the north and the sidewalks along Shaver St. to the southeast.

In 2021, Harris County Flood Control District is also conducted a watershed-wide plan for major stormwater improvements in the Vince Bayou watershed, with funds from the U.S. Department of Housing and Urban Development Community Block Grant-Disaster Recovery Program (CDBG-DR). This plan resulted in a series of recommendations which will require additional design and planning before proceeding to construction. However, the intent is that it wil ensurethat future flood risk reduction projects will work together and be sequenced in a way that will provide maximum benefit.



Figure 92. Berry Bayou

Berry Bayou is one of the main sources of flooding in South Houston



Figure 93. Newly channelized C106-03-00



Figure 94. South Shaver Stormwater Detention Basin

The South Shaver Stormwater Detention Basin in its current construction stage.

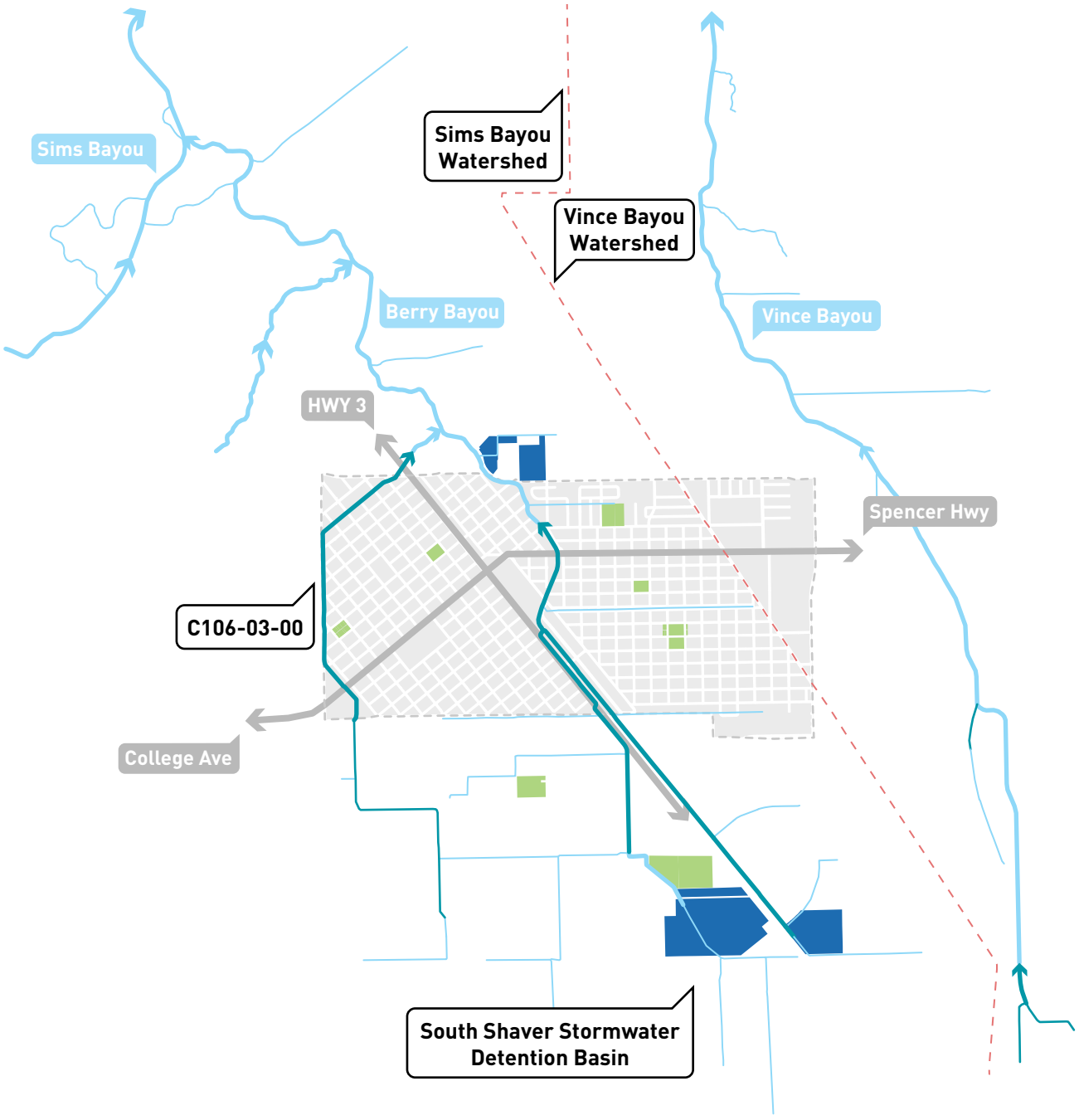


Figure 95. Waterways and Flooding Prevention

The diagram above shows the watersheds, drainage channels, and detention basins that serve the City of South Houston.

Flooding

- Detention Basins
- Parks
- Major Natural Drainage
- Minor Natural Drainage
- Channelized Drainage
- Watershed Boundary

2 in = 1 mi | FEMA (NFHL 2019) | N

0 | 0.75 | 1.5 | 2.5 mi

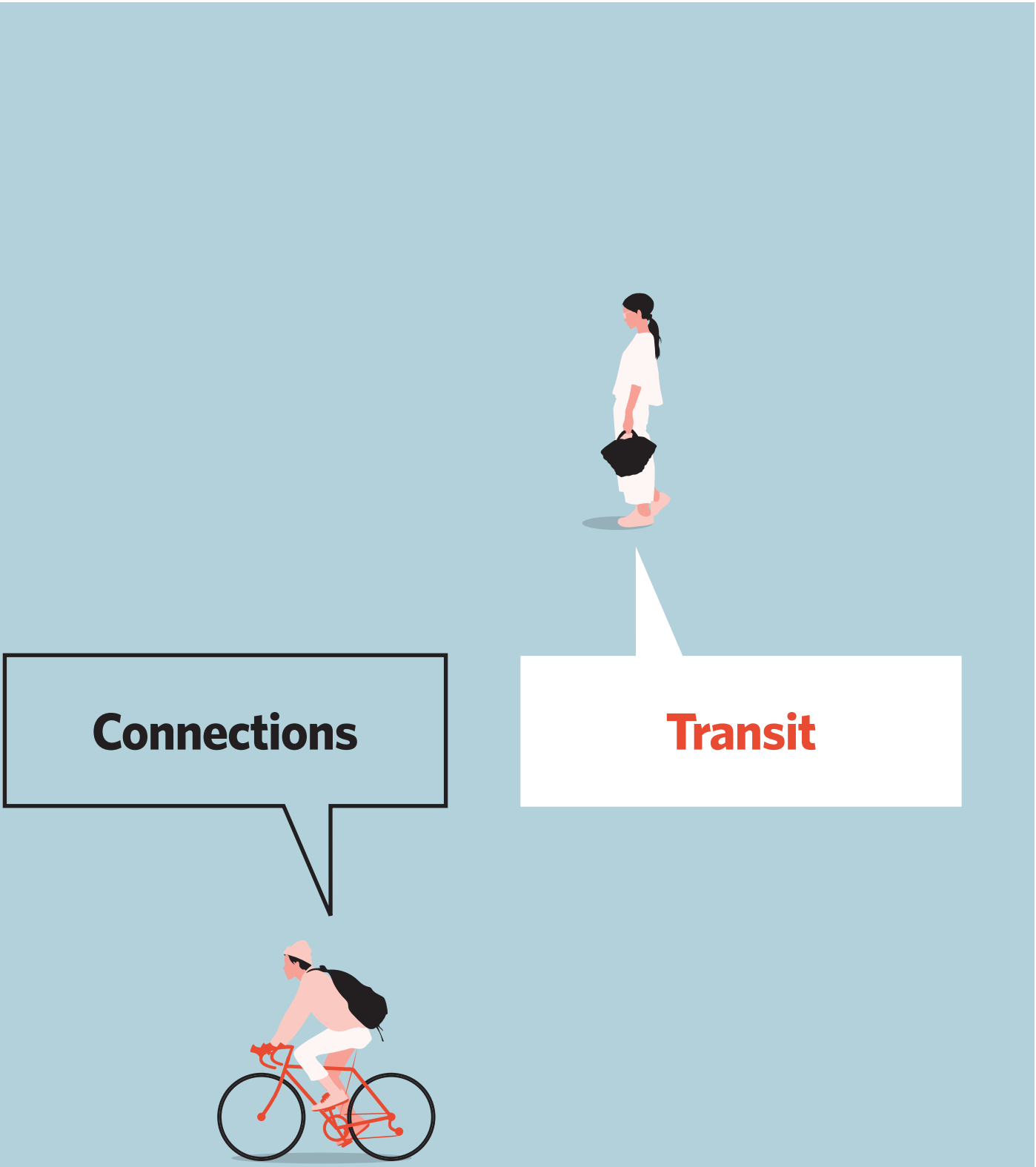
RECOMMENDATIONS



Health

Recreation




Connections
Transit

Livability Principles and Health Benefits

Livability Principles

As a means of fostering stronger, more sustainable local economies, the U.S. Department of Housing and Urban Development (HUD) and the U.S. Environmental Protection Agency (EPA) worked together to develop six "Livability Principles." These principles are as follows:

1. Provide More Transportation Choices
2. Promote Equitable, Affordable Housing
3. Enhance Economic Competitiveness
4. Support Existing Communities
5. Coordinate Policies and Leverage Investment
6. Value Communities and Neighborhoods

The livability principles act as goals for the Livable Centers studies and guide the creation of recommendations to ensure that the study supports all six principles.

The idea behind the livability principles is that they promote healthy communities, both in terms of individual health and the health of the local economy and environment. Because the recommendations that result from Livable Centers studies often result in positive health impacts for community members, it was important for the project team to work closely with Harris County Public Health to ensure that they incorporated the full spectrum of health benefits for each recommendation and modified them to maximize the health benefits.

Public Health Benefits

Improving community health is one of the main goals of Livable Centers studies. The 2020 Behavioral Risk Factor Surveillance System (BRFSS) found that South Houston has significantly higher rates of physical inactivity and poor physical health compared to Houston and Harris County. Some of this may be due to factors such as income, time poverty, proximity to environmental pollutants like the highway, the airport, and industrial uses like concrete batch plants. However, it is also likely that some of this disparity in health stems from a lack of infrastructure that supports physical activity and physical health, like sidewalks, access to parks and recreation centers, access to trails, and access to public transportation.

The health benefits of the recommendations range from environmental health factors like heat and air pollution reduction to infrastructural health factors like access to recreation and road safety to social health factors like housing and mental health.

Reduced Heat

Higher temperatures in cities can exacerbate heat-related illnesses such as heat stroke, heat exhaustion, and dehydration, particularly in vulnerable populations, including children, older adults, and those with pre-existing medical conditions. Managing urban heat through tree plantings, shade structures, and increased access to green spaces can help reduce exposure to heat and improve heat-related health outcomes in urban populations.[1,2]

Reduced Air Pollution

Air pollution can have significant negative impacts on health. Traffic is one of the most significant sources of indoor and outdoor air pollution. People who live, work, or attend school near major roads are at a higher risk of developing asthma, bronchitis, lung cancer, and cardiovascular disease from exposure to air pollutants and particulate matter.[3] Long-term exposure to air pollution has been linked to cognitive decline and mental health issues as well. In areas with heavy traffic and in close proximity to industry, fewer people tend to walk for transportation or recreation and experience higher levels of stress and anxiety.[4,5,6] Increasing access to pedestrian and bicycle infrastructure to reduce reliance on vehicles can decrease traffic congestion and improve air quality conditions in addition to improving physical and mental health.

Increased Access to Nature

Access to parks and green spaces has a positive impact on physical and mental health. Parks provide free opportunities for physical activity, recreation, and social interaction, which can help reduce stress, improve mental health, and increase physical fitness. They also provide a safe and attractive environment for people to spend time outdoors, which can promote healthy habits and improve overall well-being. Exposure to nature and outdoor physical activity can benefit mental health by reducing stress and anxiety.[7] The presence of green space and natural environments can also help reduce air pollution and the urban heat island effect. Conversely, a lack of park access or poor park quality can reduce park use and negatively impact population health, especially in communities with limited recreational options.[8] Overall, investing in

the quality of parks and greenspace, and increasing safety and accessibility to parks could help encourage park usage and improve the health and well-being of a community.

Increased Physical Activity
Pedestrian and bicycle infrastructure, such as sidewalks, pedestrian crossings, and dedicated bike lanes provide safe spaces for pedestrians and bicyclists to navigate a community. Having safe and accessible pedestrian and bicycle infrastructure to nearby parks, schools, work, or retail is vital to facilitate walking or biking. These modes of transportation promote health by integrating physical activity into daily life, thereby reducing the risk of chronic conditions like obesity, cardiovascular diseases, and diabetes, and improving mental health.[9]

Improved Accessibility
Well-connected and accessible neighborhoods allow pedestrians to access essential services such as healthcare facilities, schools, workplaces, and recreational areas. They are particularly crucial for older adults and people with disabilities. Well-maintained sidewalks, curb ramps, and wheelchair-accessible crossings enable those with mobility impairments to move around independently and safely.[10]

Improved Community Safety at night
Dark or poorly lit areas in a community can be perceived as unsafe and discourage use during evenings and early mornings. Adequate lighting provides a greater sense of personal security by enhancing visibility and allowing people to see their surroundings. As a result, lighting can help deter criminal activity and encourage communities to gather at night in parks and public spaces. Well-lit pathways and community spaces can also improve wayfinding by making it more accessible for pedestrians, bicyclists, and persons with visual impairments to navigate their surroundings and find their way.[11,12]

Better Pedestrian & Bicycle Safety
Well-designed and connected active infrastructure can enhance pedestrian and bicyclist safety by minimizing the potential for accidents with vehicles. Sidewalks, protected bike lanes, marked crosswalks, pedestrian and bicycle signals, and traffic calming measures help reduce the risk of collisions and improve overall road safety. Streetlights also increase the visibility of pedestrians and bicyclists and improve safety in low light conditions such as evenings and early mornings. These infrastructure elements are crucial for protecting pedestrians from vehicular traffic and ensuring their safety while traveling.[13,14]

Pedestrian safety is critical in school zones where children are walking to and from school. Sidewalks, crosswalks, traffic-calming measures, and reduced vehicle speeds help protect children and families and encourage active transportation to school. Students who walk or bike to and from school experience health benefits from regular physical activity as well as improved academic performance. Students who actively commute to school arrive ready to learn, have increased focus, better problem-solving capability, and perform better on tests.[15]

Improved Quality of Housing
Poor housing quality directly impacts the health and safety of residents. Poor indoor air quality, limited access to air conditioning and heating, and pests can all contribute to the development of chronic diseases, such as asthma, COPD, and other negative health outcomes.[16] Exposure to mold and allergens from dust mites, cockroaches, and rodents in the home is associated with childhood asthma, while lead-based paint exposure is linked to impaired cognitive development and reduced impulse control.[17] Rehabilitating and updating homes to improve housing quality could improve the health of some residents, especially young children.

More Affordable Housing
Housing affordability has indirect impacts on health. Households spending 30% or more of their income on housing costs are referred to as housing-cost-burdened households. Lack of affordable housing can have a significant negative impact on quality of life, leading to several health and social problems. Individuals and families who spend a large portion of their income on housing may have difficulty affording other necessities such as food, healthcare, and transportation, leading to increased financial stress and insecurity.[18]

Access to affordable housing can improve quality of life by providing stability, security, and improved living conditions. It can also reduce stress and provide greater access to educational and employment opportunities, by reducing financial barriers, leading to improved health outcomes and overall well-being. Therefore, increasing access to affordable housing is important for addressing health disparities.

Increased Economic opportunity
Economic opportunity is critical to health and quality of life. Communities with access to equitable economic opportunities are more likely to have access to jobs, essential goods and services, a livable income, and health insurance. Individuals report better mental, physical, and overall health in communities with greater economic opportunity.[19]

Communities with greater population density, mixed land uses, and a connected street network encourage walking and cycling and support the use of public transportation.[20,21] Multimodal transportation also has a number of economic benefits as walkable and bikeable communities have been shown to improve the resale value of homes, attract new businesses, and increase retail sales.[22] A complete transportation network also increases the range of jobs and educational opportunities that would otherwise only be reachable by car.

Improved Sense of Community (Art and Placemaking)
Placemaking, or enhancing community spaces through art and culture, that draws on the unique characteristics of the community is a way to connect people to where they live, create a sense of belonging and build community pride.[23] Placemaking can improve social interactions and connectedness which can positively impact physical and mental health. Strong social ties lower the risk of social isolation which helps to increase life expectancy and reduce rates of depression and chronic diseases.[24] Community art can also serve as destinations that attract visitors, create places that people want to be, and spur economic development. Overall, integrating art into community spaces builds social cohesion, improves health, and enhances quality of life.

Improved Education
Early childhood education sets the foundation and trajectory for educational success which has a demonstrated positive impact on long term health outcomes and employment.[25,26] Head Start and other early childhood programs provide resources to develop healthy habits and behaviors from a young age such as being active and coping with stress and emotions.[27] Educational attainment opens access to better job opportunities with health-promoting benefits, including health insurance, paid leave, and retirement benefits.[28] In the long term, opportunities for quality education from pre-kindergarten through higher education benefit both community health and the economy.

Improved Flood Resilience
Flood events impact all facets of a community, from infrastructure and commercial industries to residential homes and belongings. The effects of flooding can be expansive and destructive; consequently, flooding events pose a number of physical and mental health risks to affected communities. Exposure to flood waters can result in skin rashes and infected wounds from exposure to bacterial and industrial contaminants, while post-flood exposures can result in gastroenteritis, respiratory illness, vector-borne disease, and poor mental health from heightened stress and anxiety.[29,30,31]

For more information go to the harris county website: https://publichealth.harriscountytx.gov

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Community Feedback and Recommendations

This Livable Centers study kicked off with a community listening session that included a group of activities titled "My Life in South Houston," where residents pinned where they lived, where they worked, and where they visited, as well as how they use various spaces in the City. The team learned that many people use places like Avenue G and the sidewalks around schoolyards in the area for recreation, like walking and running. On Avenue G, they often have to walk or run on the road or along the ditch in the dark with headlamps or flashlights because the lighting is inadequate. People who live closer to the schools prefer to exercise there because the schoolyards have sidewalks all the way around them, which feels much safer than walking or running in the street. Community members also shared that Avenue A Park, the South Houston Public Library, South Houston City Park, and other recreation spaces like the Futbolito are important to the community.

The project team came back to the community again during the summer and asked people what kind of projects they would like to see in their communities, specifically in the areas that had been identified as particularly important in the kickoff meeting: Avenue G area, Avenue A area (including Avenue A Park and the library), and the Main Street area (including the South Houston City Park). The engagement activity, "Coaches Corner," was adapted for various events and venues, including, an afternoon soccer training session at the Futbolito and the 4th of July celebration under the Avenue A Pavilion. The community further confirmed that the identified focus areas can really benefit from improvements to pedestrian and bike infrastructure, lighting, and shade, in addition to other things like community services, transit access, art, and better flood resilience.

The project team also continuously heard about prominent city-wide challenges. Some of these include the lack of sidewalks on neighborhood streets outside of the focus areas identified earlier, lighting needs inside neighborhoods, low park access due to public vs private designations, and overall availability of programmed community spaces.

All this community feedback, an existing conditions analysis, and meetings with stakeholders resulted in three tiers of recommendations to transform South Houston into the walkable, bikeable, livable place that South Houstonians deserve.



Figure 96. Kickoff meeting at the South Houston Branch Libray



Figure 97. Second round of engagement at the Futbolito soccer fields



Figure 98. Second round of engagement at the annual South Houston July 4th Celebration at Avenue A Park



Figure 99. Final round of engagement at the South Houston Branch Libray's Fall and Halloween Festival

In late October, the project team came back to the community, presented the three tiers of recommendations, and asked residents to help prioritize recommendations based on what kind of health benefits the community members felt were most important to them, their family, and their community. The top priority health benefits selected were: Improved Community Safety at night, Improved Education, Increased Physical Activity, More Affordable Housing, and Better Pedestrian & Bicycle Safety.

This list clearly shows that South Houston residents want to improve the quality of life in South Houston. The recommendations in the report reflect these needs and will improve neighborhood spaces to meet these priority needs. Some of the recommendations that result in better outcomes for the top health impact priorities include: street improvement projects (which include better lighting), specific safe routes to schools which are proven to improve academic performance, improved programming for the community center, more support for the library to continue its events, and a variety of neighborhood specific housing programs.

People also cared about Improved Quality of Housing, Reduced Air Pollution, and Increased Access to Nature. Recommendations such as housing maintenance programs, multimodal and transit projects, and a robust neighborhood and citywide trail system support these important health benefits.

Recommendations for neighborhood focus areas, Avenue G, Avenue A, and Main Street, are the top priority. They are intended to be phased to have the largest impact. Connector recommendations propose projects that tie the focus areas together to create a bigger network of connected, walkable, bikeable places in South Houston. City-wide recommendations are not dependent on any of the focus area recommendations but are important long-term projects to fill in the gaps and bring tremendous improvements to the whole city of South Houston.

Phasing

These recommendations cannot all be done at the same time. Many of the projects in this study are ambitious, expensive, and transformative. It often takes years to fully design, fund, and construct projects that make dramatic changes, so the project team developed a phasing approach for each of the focus area recommendations to help the city and county get projects on the ground quickly. If all of these interventions are implemented, they will add up to be a great project, but in the meantime, completing the first phase will still result in a good project for South Houston residents to enjoy. The three phases are:

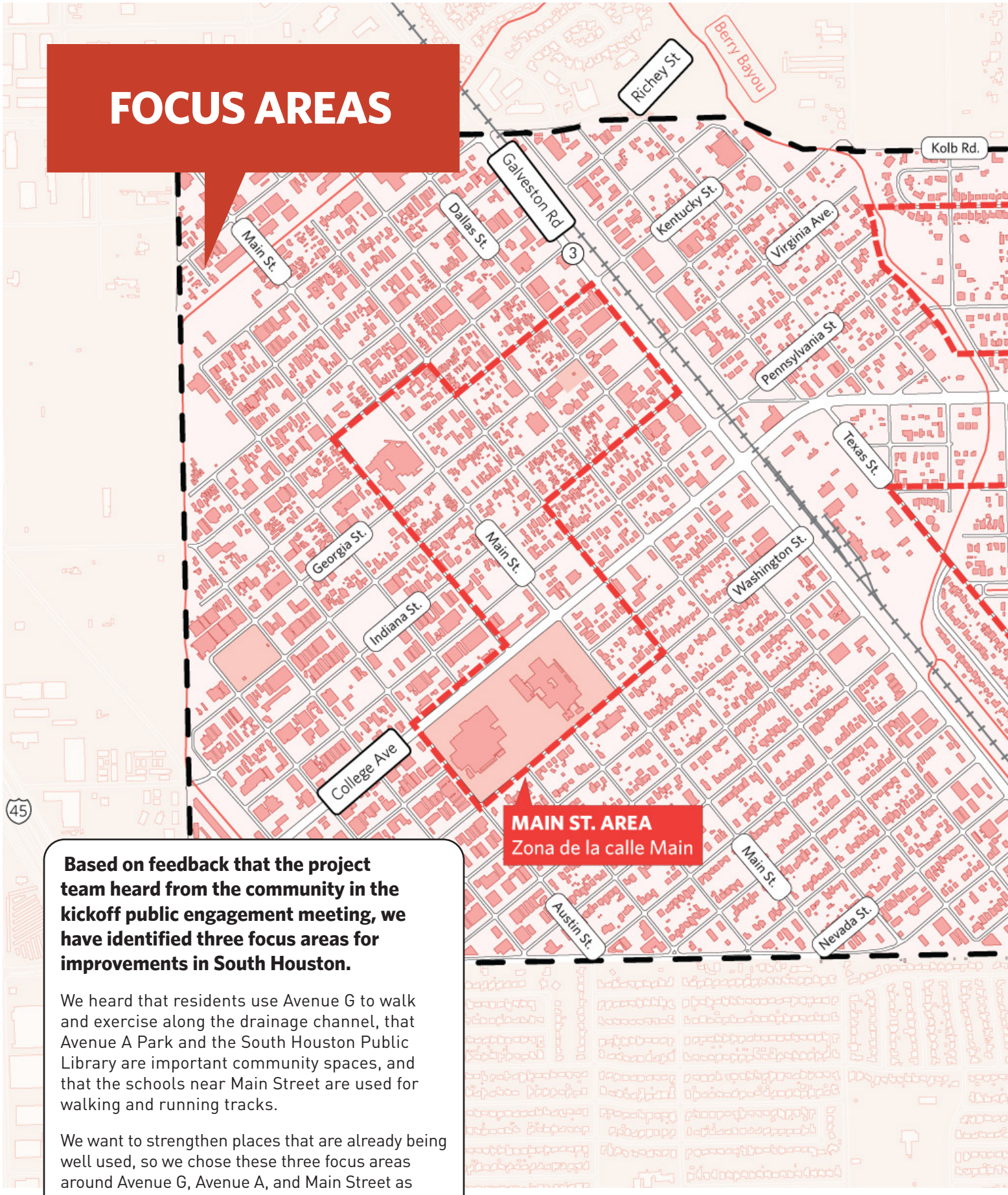
- **GOOD**
  This phase identifies a set of projects that generally require little capital cost or minimal partnerships – the low-hanging fruit interventions that can be implemented easily and quickly – but still produce benefits for the neighborhood. Some projects in this category may still be expensive or hard to implement but are worth the extra money and effort to make the improvements, and doing less will likely result in a project that does not meet the needs of the community.

- **BETTER**
  The next phase of projects is the interventions that would build on the GOOD set of projects. These are interventions that might be a little harder to implement, but will add additional safety, comfort, or connections when combined with the first phase of projects.

- **BEST**
  The final phase of projects make the recommendations truly transformational. They add additional connectivity and more features that will attract people from other parts of South Houston or the neighboring areas and most completely meet the needs expressed by the community.

Projects have been categorized into these phases as a way to show priority and potential phasing. Ideally, every recommendation should strive to be implemented at the BETTER or BEST phase. While GOOD projects will provide community amenities that will keep people safe from traffic and meet their needs, they do not always include important aspects of community design that will encourage people to use these spaces. Things like adequate pedestrian lighting and shade trees are often included as part of the BETTER tier of projects but are still incredibly important for health, comfort, and perceived safety and may be the difference between the space being used mostly by those who are already using it, and the space being used by many more people who have been attracted to this space because it is an important new community asset. In some cases, interventions in the BETTER category may make more financial or phasing sense to be implemented at the same time as interventions in the GOOD category if funding and/or partnerships allow.

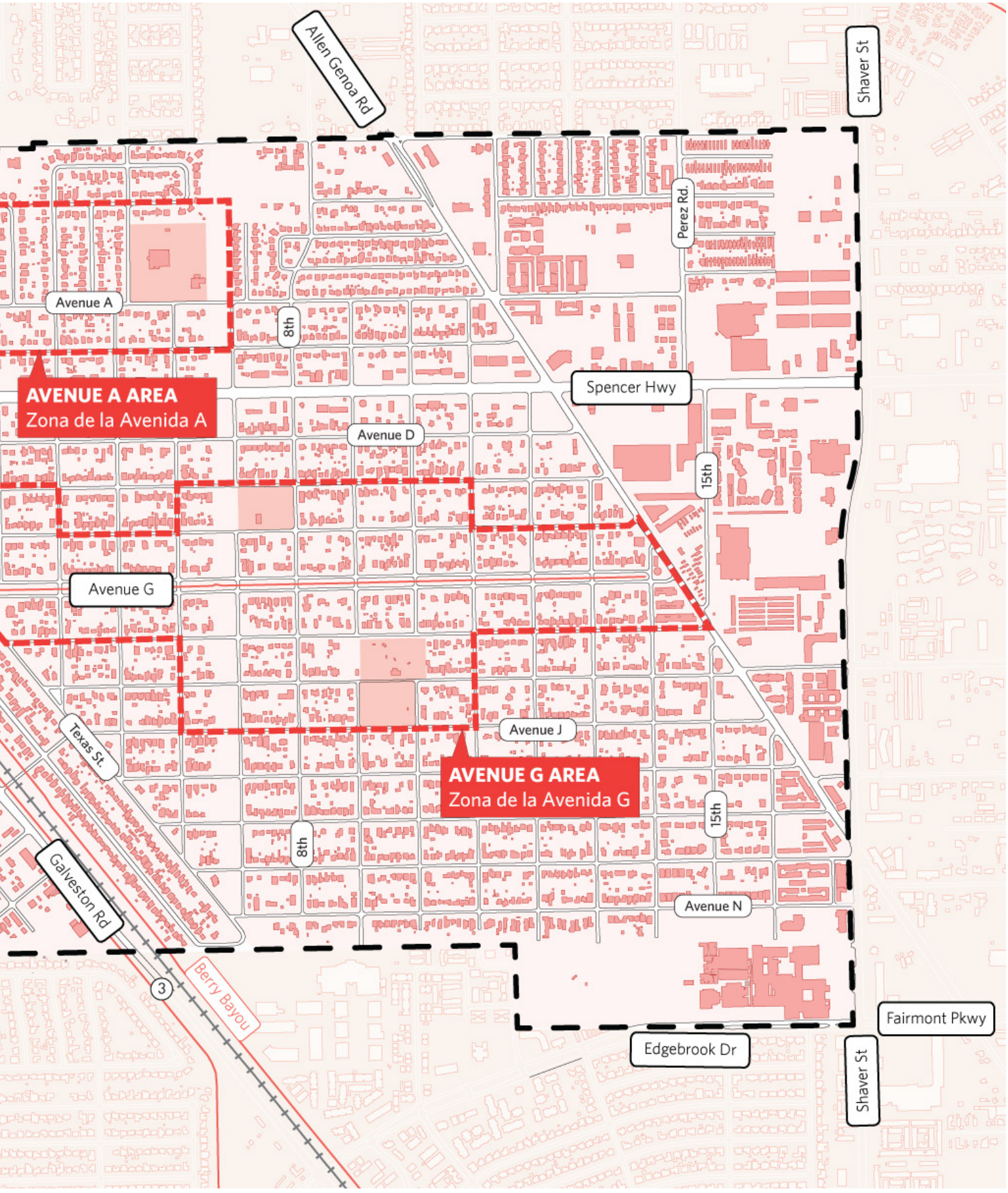
FOCUS AREAS



Based on feedback that the project team heard from the community in the kickoff public engagement meeting, we have identified three focus areas for improvements in South Houston.

We heard that residents use Avenue G to walk and exercise along the drainage channel, that Avenue A Park and the South Houston Public Library are important community spaces, and that the schools near Main Street are used for walking and running tracks.

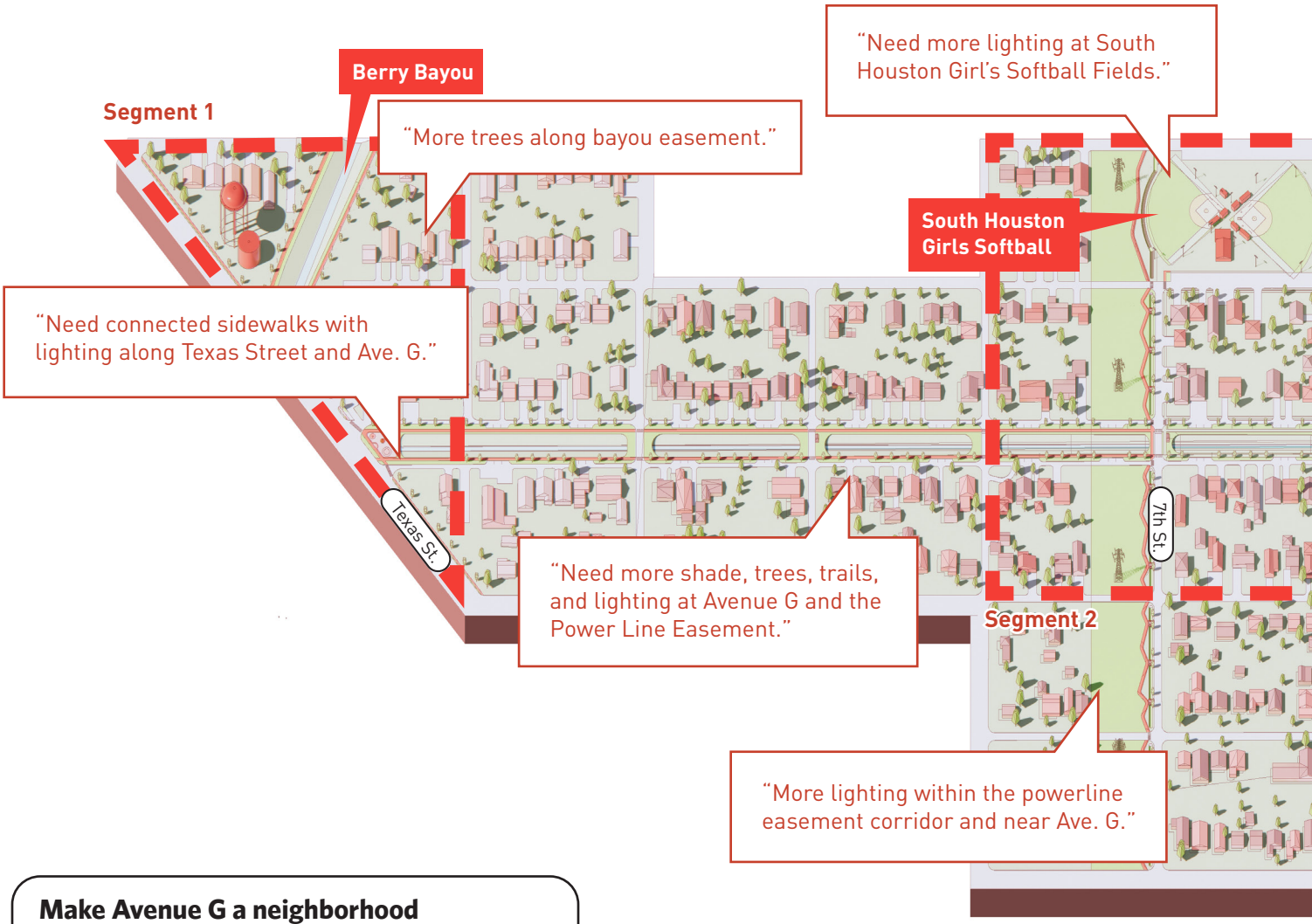
We want to strengthen places that are already being well used, so we chose these three focus areas around Avenue G, Avenue A, and Main Street as priority community spaces within South Houston.


Allen Genoa Rd
Shaver St
Perez Rd.
Avenue A
8th
AVENUE A AREA
Zona de la Avenida A
Spencer Hwy
Avenue D
15th
Avenue G
Texas St.
Avenue J
AVENUE G AREA
Zona de la Avenida G
15th
8th
Galveston Rd
Avenue N
3
Berry Bayou
Fairmont Pkwy
Edgebrook Dr
Shaver St


STOP



Avenue G Focus Area



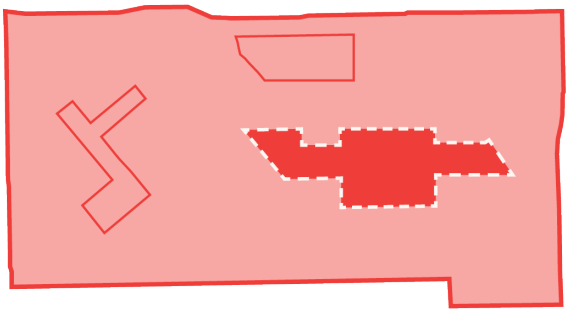
Make Avenue G a neighborhood outdoor recreation space.

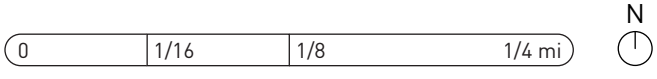
This recommendation proposes that Avenue G be reconstructed as one lane in one direction on each side of the drainage channel with a 5-foot wide shared-use path on both sides of the drainage channel lined with shade trees and additional pedestrian-scale lighting. The street should also include sidewalks along the residential sides of the street. At the eastern and western ends of Avenue G, there are water towers that would be perfect places for new community murals, acting as community landmarks for this area. Local art can also be incorporated along the length of Avenue G. Along the Avenue, outdoor fitness stations can be located in pockets of open space where the cross streets cross the drainage channel, which will allow residents to use Avenue G not only as a walking or jogging route but for all-around fitness activities.

Sidewalks along 7th Street and 8th Street can provide ped/bike access to the South Houston Girls Softball League fields, and sidewalks along 9th Street and 10th Street can also provide access to the South Houston Baseball League fields. The softball and baseball fields are currently reserved for league games only, but they should be open for the leisure use of the general public.

Avenue G can also be connected to a new connector trail along Berry Bayou by extending the shared-use trail along Texas Street between Avenue G and Berry Bayou. A separate proposed trail through the CenterPoint easement next to 7th Street could also connect the Avenue G neighborhood recreation space to the South Houston Public Library and Avenue A Park to the north and Pearl Hall Elementary School to the South.


"Bike trail down Ave. G"
Avenue G
10th St.
Allen-Genoa Rd
South Houston
Baseball League




0
1/16
1/8
1/4 mi
N

Avenue G Focus Area

Segment 1



Livability Principles Supported

Provide more transportation choices

Value Communities and Neighborhoods

Support Existing Communities

Segment 2



0 | 100 | 200 | 500 ft

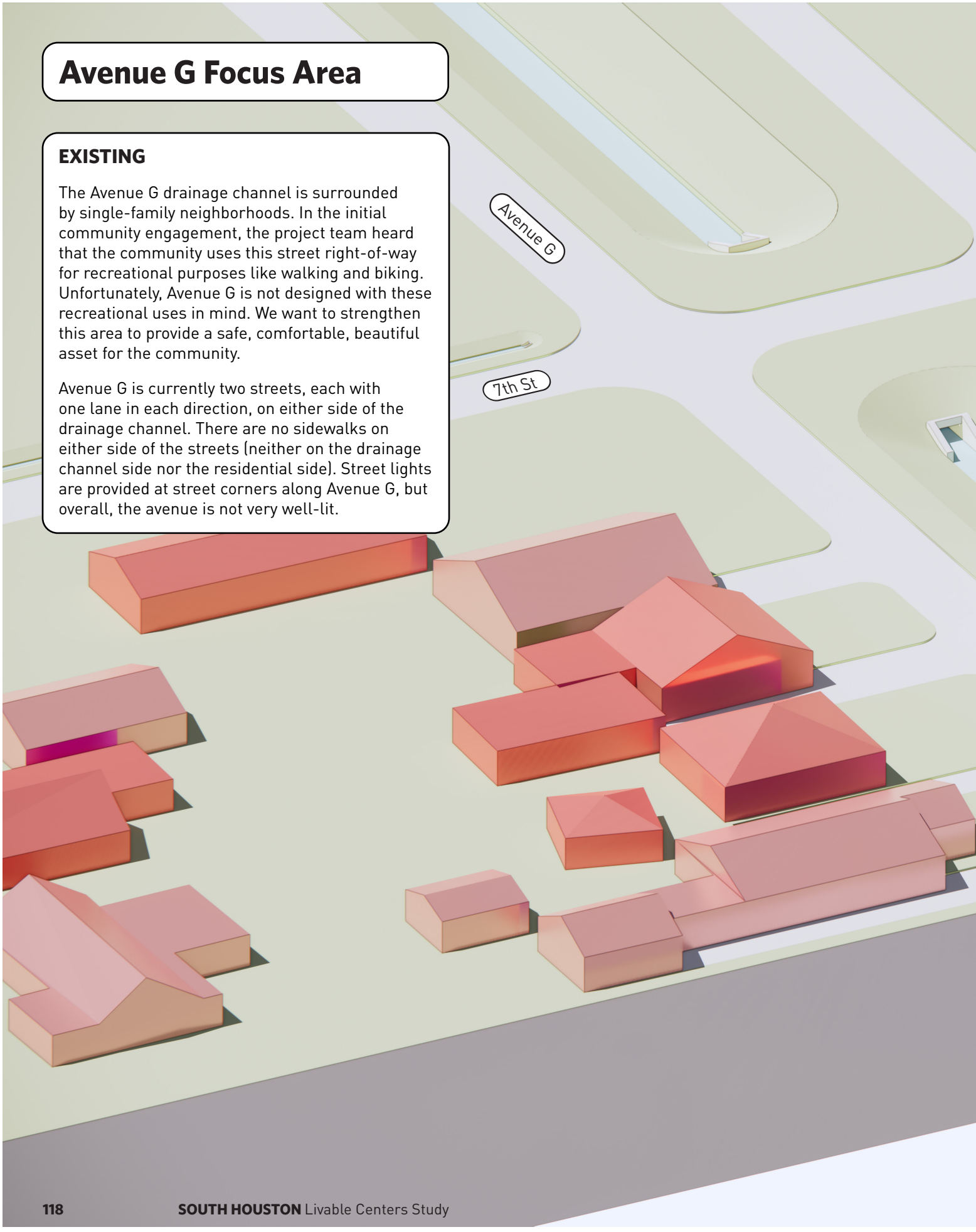
N

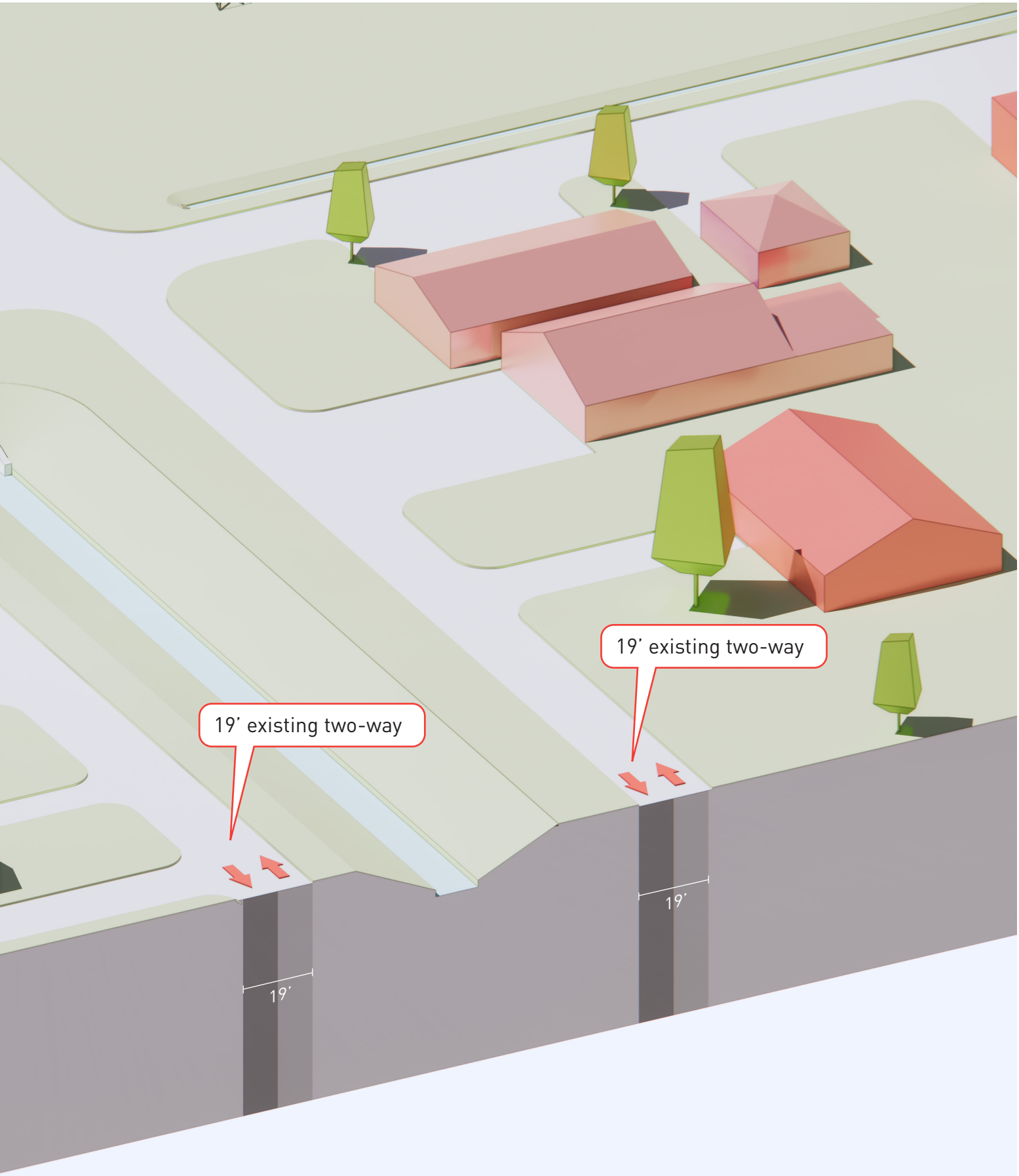
Avenue G Focus Area

EXISTING

The Avenue G drainage channel is surrounded by single-family neighborhoods. In the initial community engagement, the project team heard that the community uses this street right-of-way for recreational purposes like walking and biking. Unfortunately, Avenue G is not designed with these recreational uses in mind. We want to strengthen this area to provide a safe, comfortable, beautiful asset for the community.

Avenue G is currently two streets, each with one lane in each direction, on either side of the drainage channel. There are no sidewalks on either side of the streets (neither on the drainage channel side nor the residential side). Street lights are provided at street corners along Avenue G, but overall, the avenue is not very well-lit.



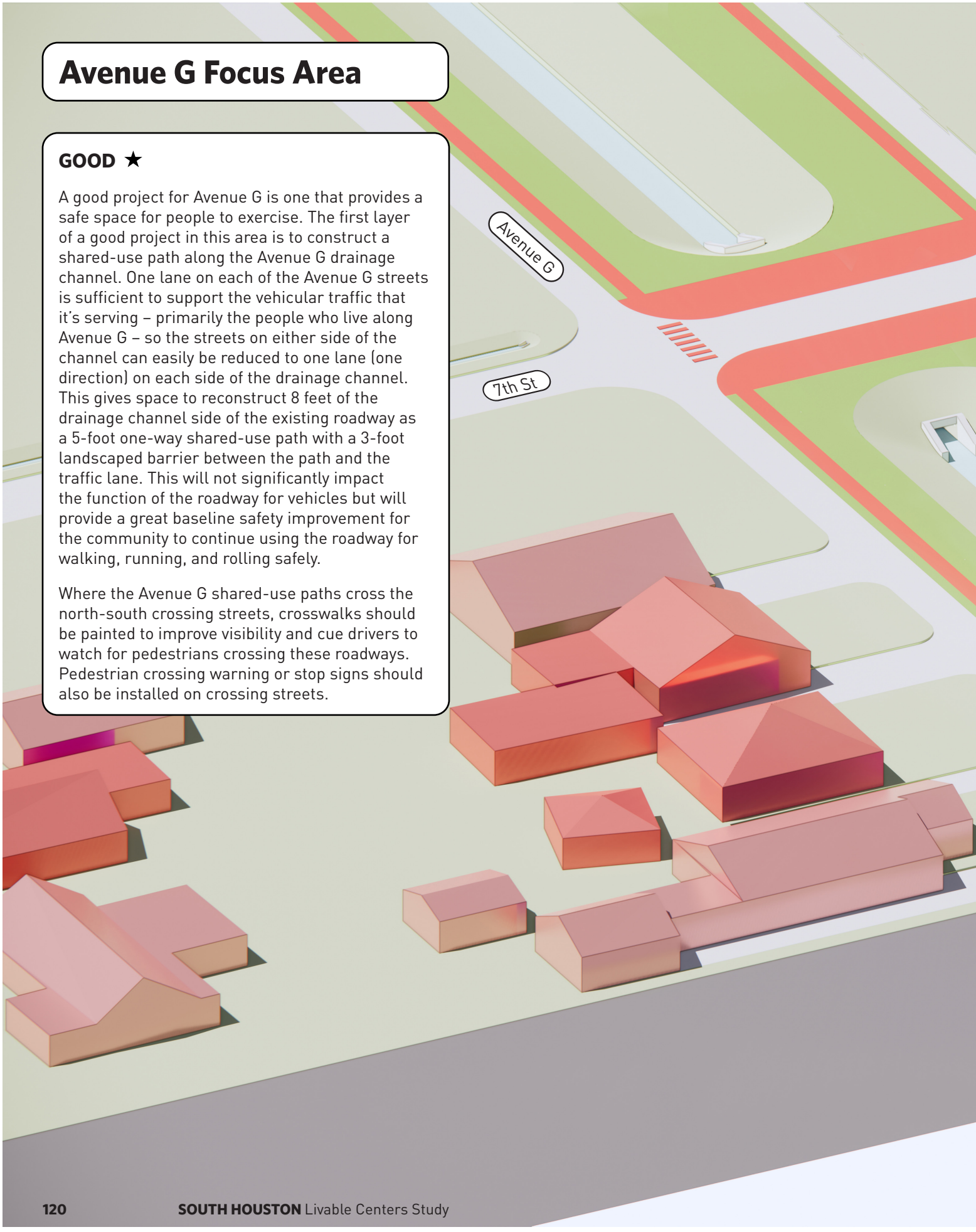

19’ existing two-way
19’ existing two-way
19’
19’

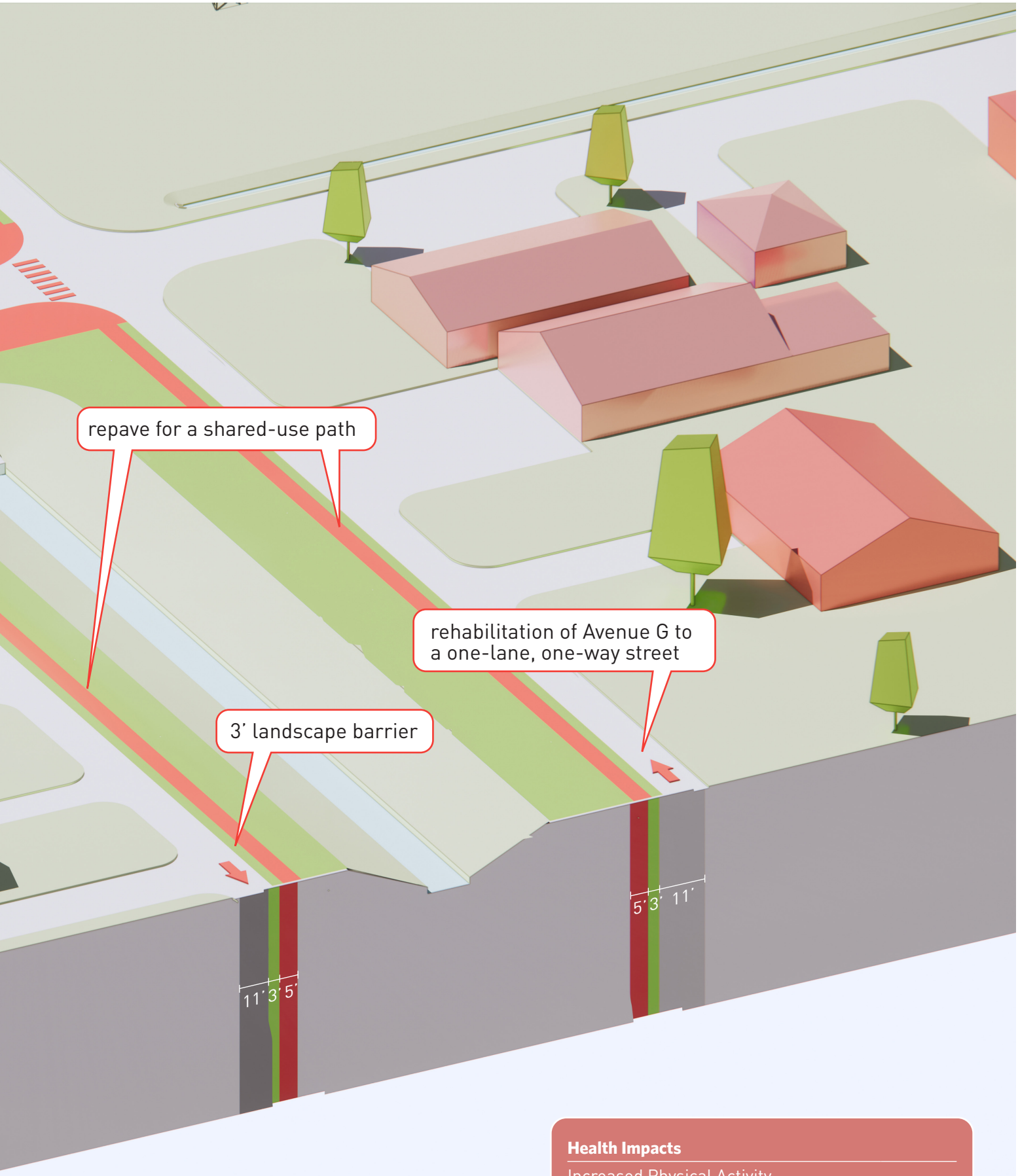
Avenue G Focus Area

GOOD ★

A good project for Avenue G is one that provides a safe space for people to exercise. The first layer of a good project in this area is to construct a shared-use path along the Avenue G drainage channel. One lane on each of the Avenue G streets is sufficient to support the vehicular traffic that it's serving – primarily the people who live along Avenue G – so the streets on either side of the channel can easily be reduced to one lane (one direction) on each side of the drainage channel. This gives space to reconstruct 8 feet of the drainage channel side of the existing roadway as a 5-foot one-way shared-use path with a 3-foot landscaped barrier between the path and the traffic lane. This will not significantly impact the function of the roadway for vehicles but will provide a great baseline safety improvement for the community to continue using the roadway for walking, running, and rolling safely.

Where the Avenue G shared-use paths cross the north-south crossing streets, crosswalks should be painted to improve visibility and cue drivers to watch for pedestrians crossing these roadways. Pedestrian crossing warning or stop signs should also be installed on crossing streets.





Health Impacts

Increased Physical Activity

Better Pedestrian & Bicycle Safety

Avenue G Focus Area

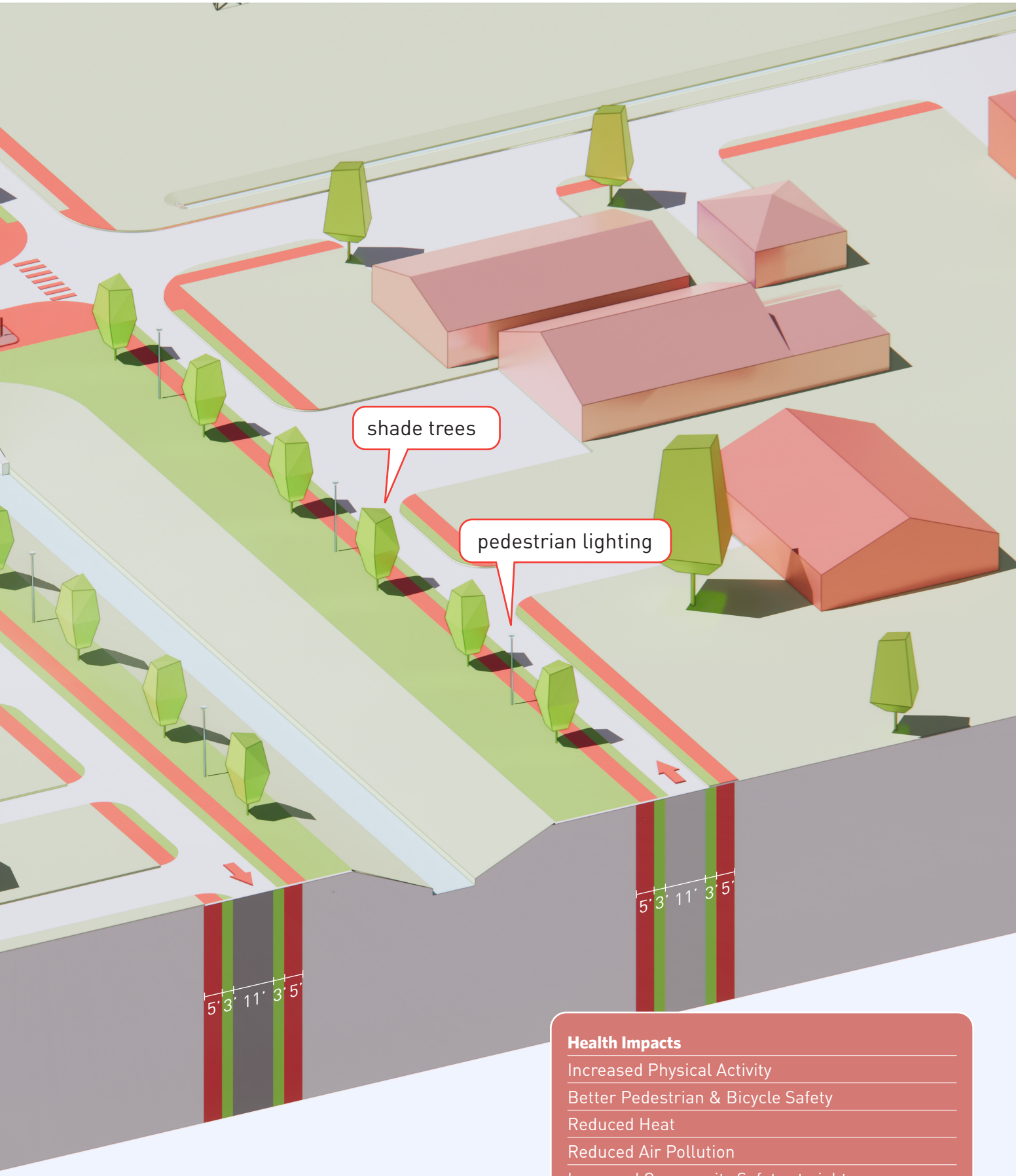
BETTER ★★

A better version of an Avenue G redesign would combine reduced traffic lanes and a shared-use path with shade trees, additional pedestrian-scale lighting, and furnishings like benches, water fountains, and dog waste stations. Fitness stations could also be located along avenues where there is space for them, such as in the space next to the cross streets where they cross the drainage channel and at the intersection of Avenue G and Texas Ave. Fitness stations should be protected from vehicular traffic with physical barriers like wheel stops, jersey barriers, concrete curbs, or larger vegetation like trees or bushes.

This project version should also include standard 5-foot (or wider) sidewalks on the residential sides of Avenue G. Although there is already a shared-use path on the drainage channel side of the street, sidewalks on the residential side would provide important access to the houses along Avenue G for people who use wheelchairs or other mobility devices who would otherwise have to walk or roll in the street.

Avenue G is bookended by water towers on both the east and the west ends of the street. The water towers/tanks are great opportunities to create community landmarks by adding murals by local artists.





Health Impacts

- Increased Physical Activity
- Better Pedestrian & Bicycle Safety
- Reduced Heat
- Reduced Air Pollution
- Improved Community Safety at night
- Improved Sense of Community

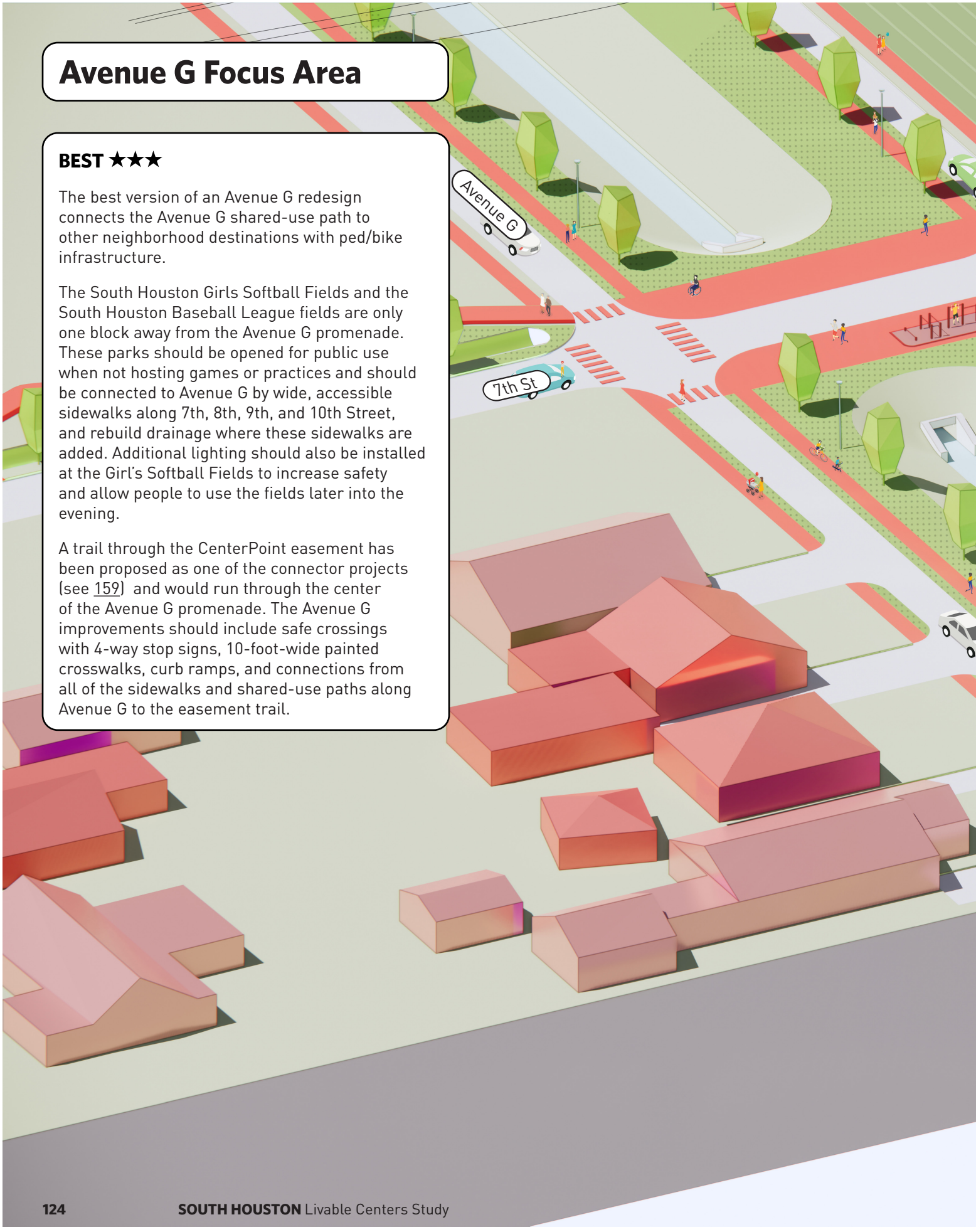
Avenue G Focus Area

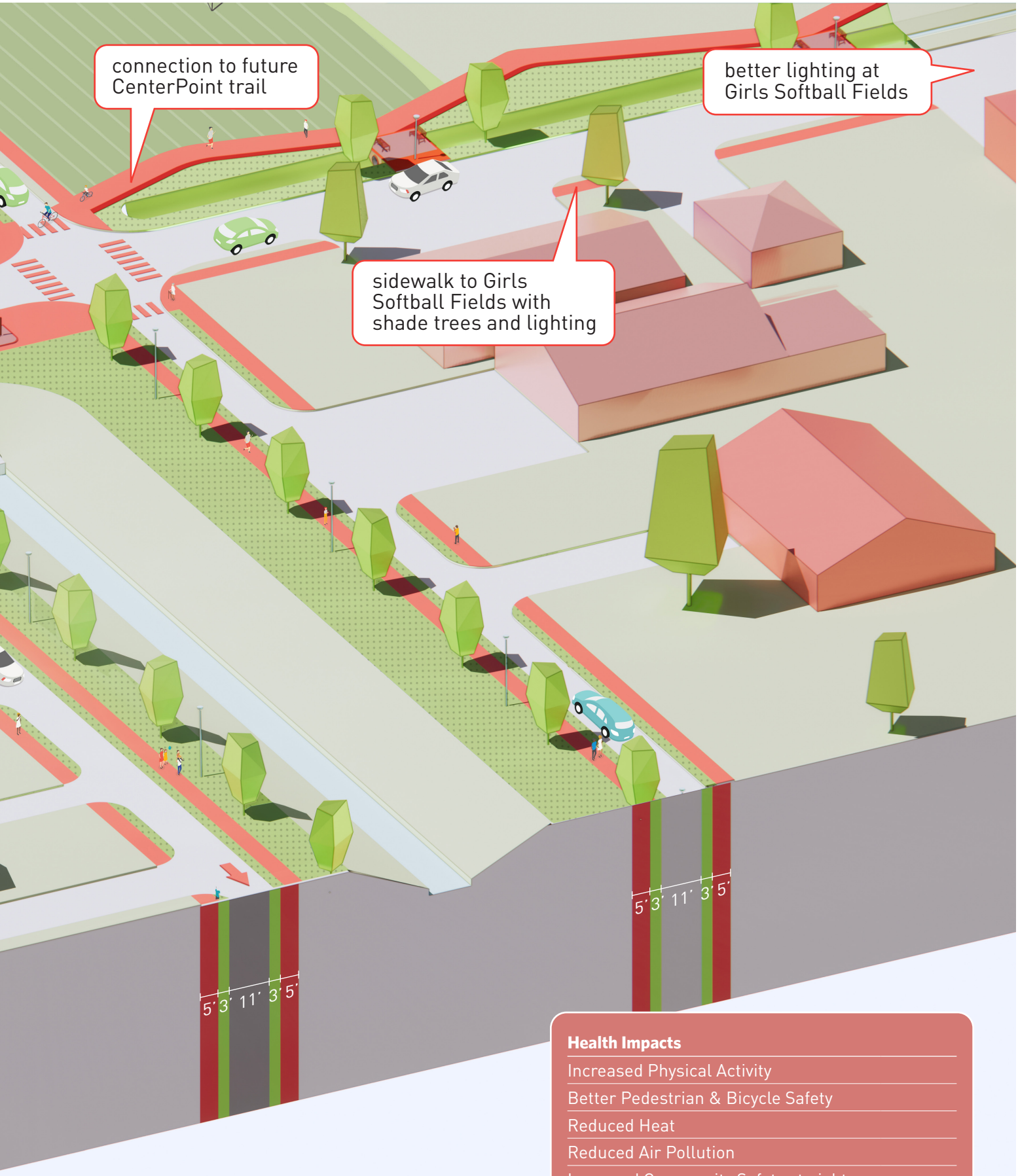
BEST ★★★

The best version of an Avenue G redesign connects the Avenue G shared-use path to other neighborhood destinations with ped/bike infrastructure.

The South Houston Girls Softball Fields and the South Houston Baseball League fields are only one block away from the Avenue G promenade. These parks should be opened for public use when not hosting games or practices and should be connected to Avenue G by wide, accessible sidewalks along 7th, 8th, 9th, and 10th Street, and rebuild drainage where these sidewalks are added. Additional lighting should also be installed at the Girl's Softball Fields to increase safety and allow people to use the fields later into the evening.

A trail through the CenterPoint easement has been proposed as one of the connector projects (see 159) and would run through the center of the Avenue G promenade. The Avenue G improvements should include safe crossings with 4-way stop signs, 10-foot-wide painted crosswalks, curb ramps, and connections from all of the sidewalks and shared-use paths along Avenue G to the easement trail.





Health Impacts

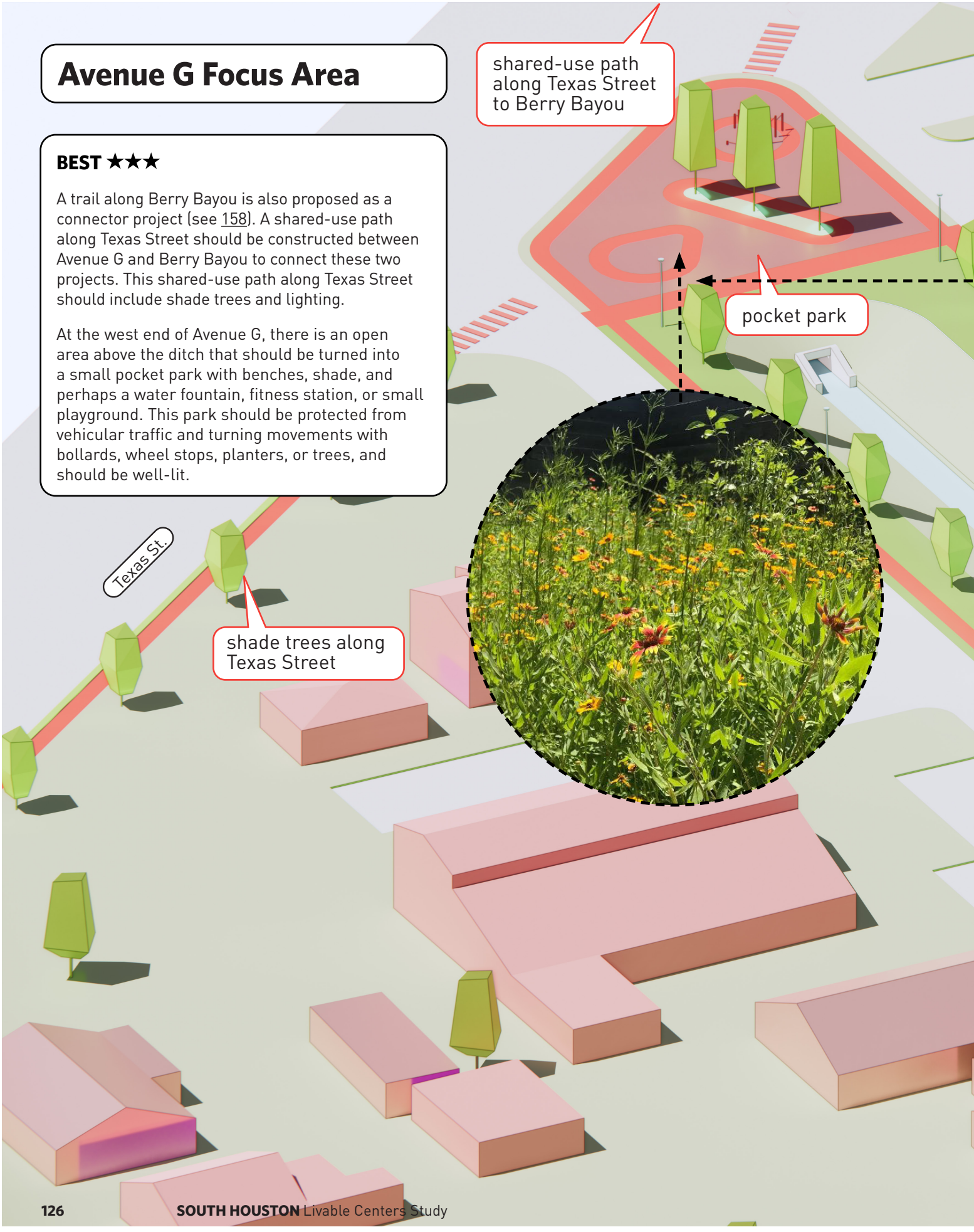
- Increased Physical Activity
- Better Pedestrian & Bicycle Safety
- Reduced Heat
- Reduced Air Pollution
- Improved Community Safety at night
- Improved Sense of Community

Avenue G Focus Area

BEST ★★★

A trail along Berry Bayou is also proposed as a connector project (see 158). A shared-use path along Texas Street should be constructed between Avenue G and Berry Bayou to connect these two projects. This shared-use path along Texas Street should include shade trees and lighting.

At the west end of Avenue G, there is an open area above the ditch that should be turned into a small pocket park with benches, shade, and perhaps a water fountain, fitness station, or small playground. This park should be protected from vehicular traffic and turning movements with bollards, wheel stops, planters, or trees, and should be well-lit.





Health Impacts
Increased Physical Activity
Better Pedestrian & Bicycle Safety
Reduced Heat
Reduced Air Pollution
Improved Community Safety at night
Improved Sense of Community





Avenue A Focus Area



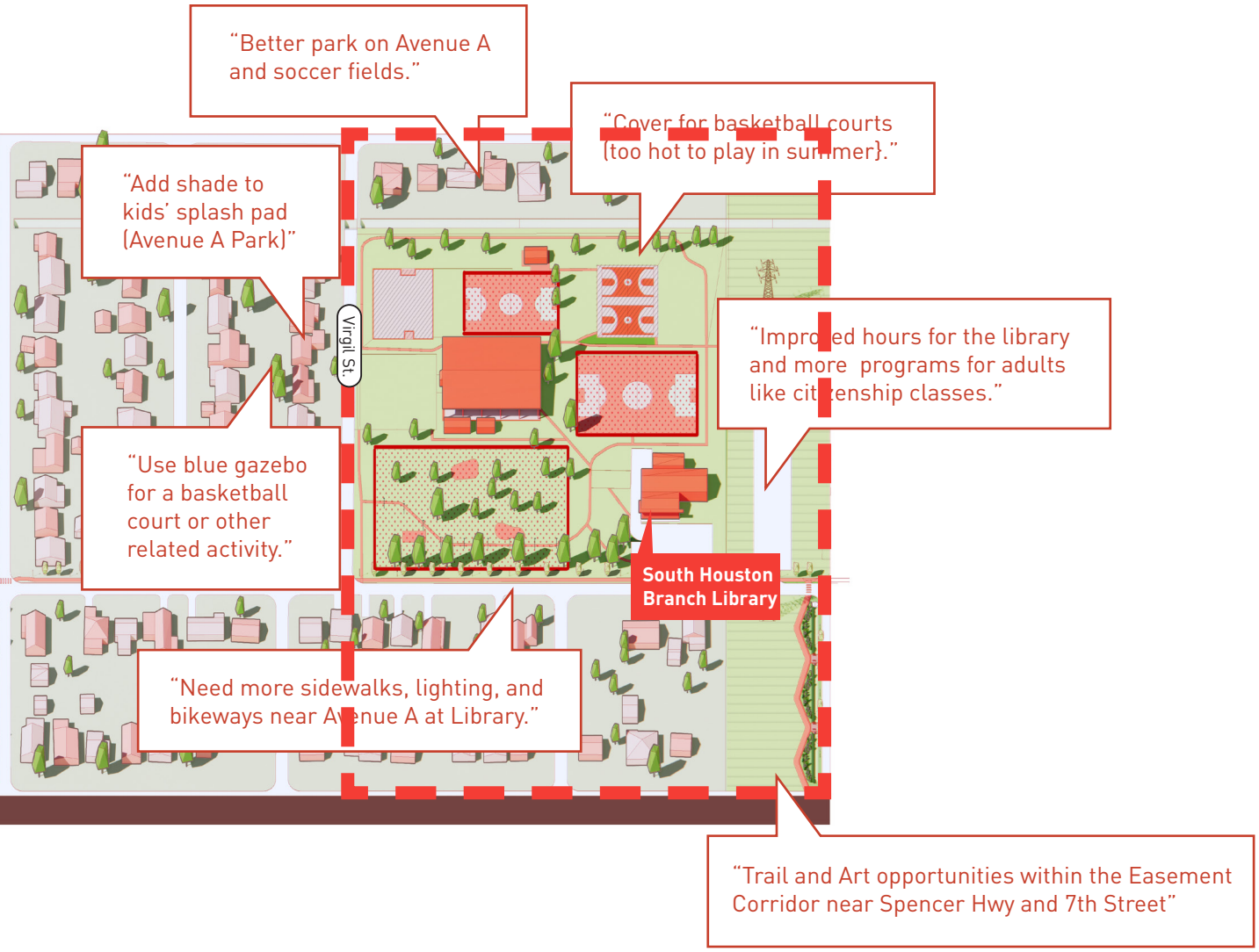
Improve Avenue A Park and make it a city-wide outdoor recreation network hub.

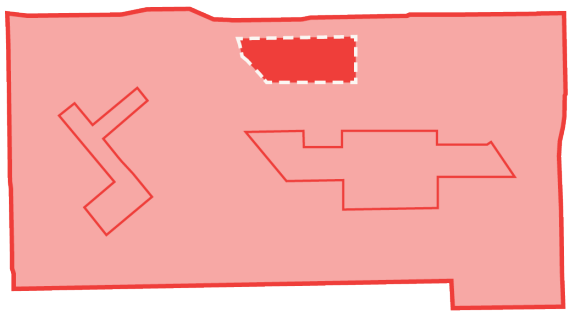
Avenue A Park is a popular destination for residents in South Houston, but it needs some upgrades to serve the community's needs, such as upgraded playground equipment with a shade structure, shade structures for the splash pad and basketball court, better lighting so the park can be used in the evenings, and additional amenities like public soccer fields. There is also an opportunity to partner with the South Houston Public Library to program community events for people of all ages. The park pavilion could be a good place for community events to happen, especially if infrastructure like lighting and water fountains are installed.

This recommendation also proposes widening the existing sidewalk along Avenue A to accommodate people walking and rolling, installing sidewalks on both sides of the street, improving street crossings like installing ADA curb ramps, and converting the drainage system to a closed storm sewer system so that the sidewalks do not get flooded. Avenue A should be lined with shade trees and pedestrian-scale lighting.

The proposed trail through the CenterPoint easement would run right next to the Library and provide the perfect opportunity to design a connection to Avenue A Park and the library. A wide pedestrian crossing with flashing pedestrian signals should be installed across Avenue A to ensure that the Avenue A trail is connected to the CenterPoint trail.

There are plans to create a detention pond where Merylin Ditch meets the bayou. This detention pond should be designed to incorporate recreation like a walking trail, fitness stations, benches, etc., and a shared-use path should be constructed along the bayou to connect it to Avenue A.



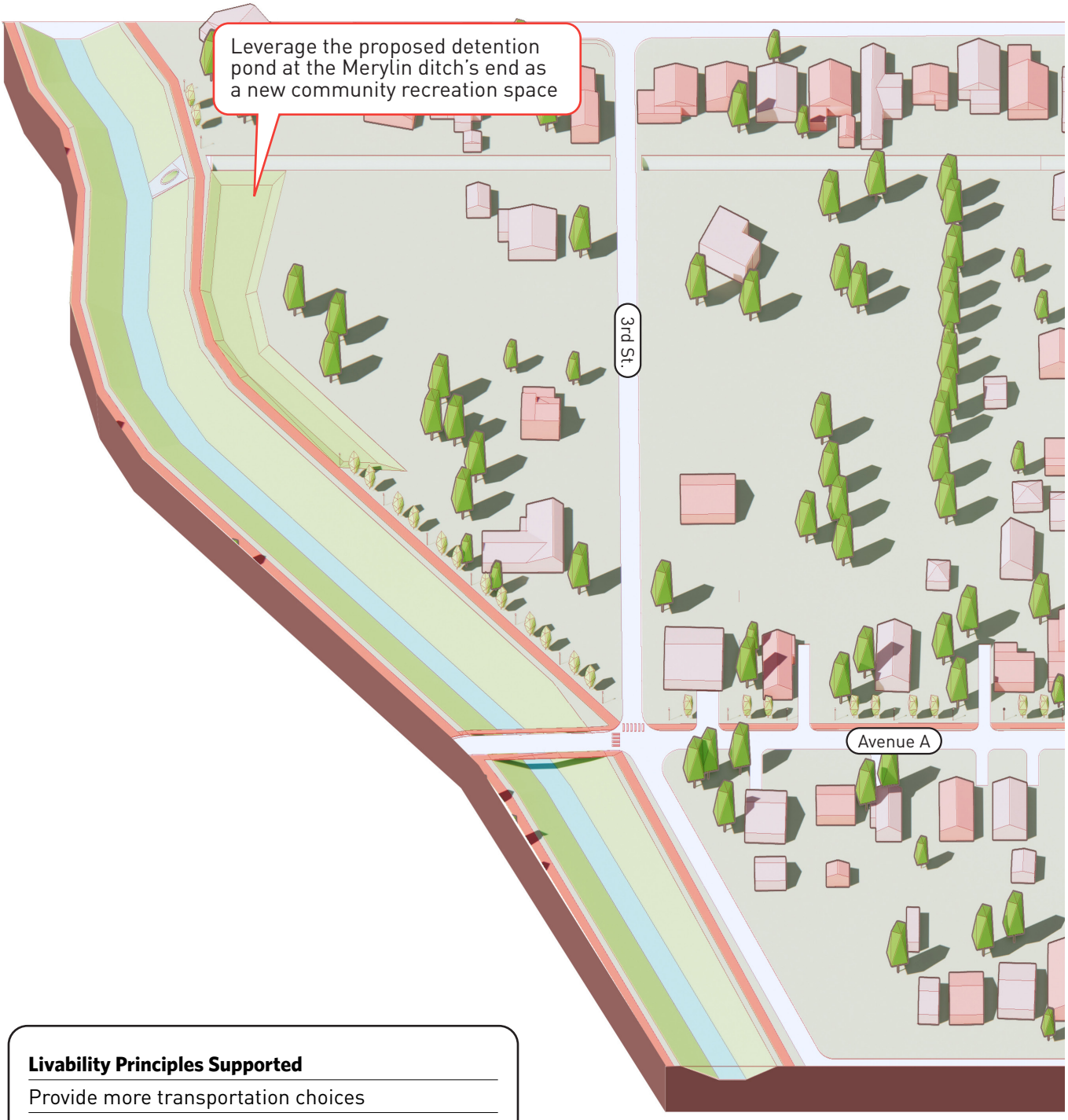


0 | 200 | 400 | 800 ft

N

Avenue A Focus Area

Segment 1



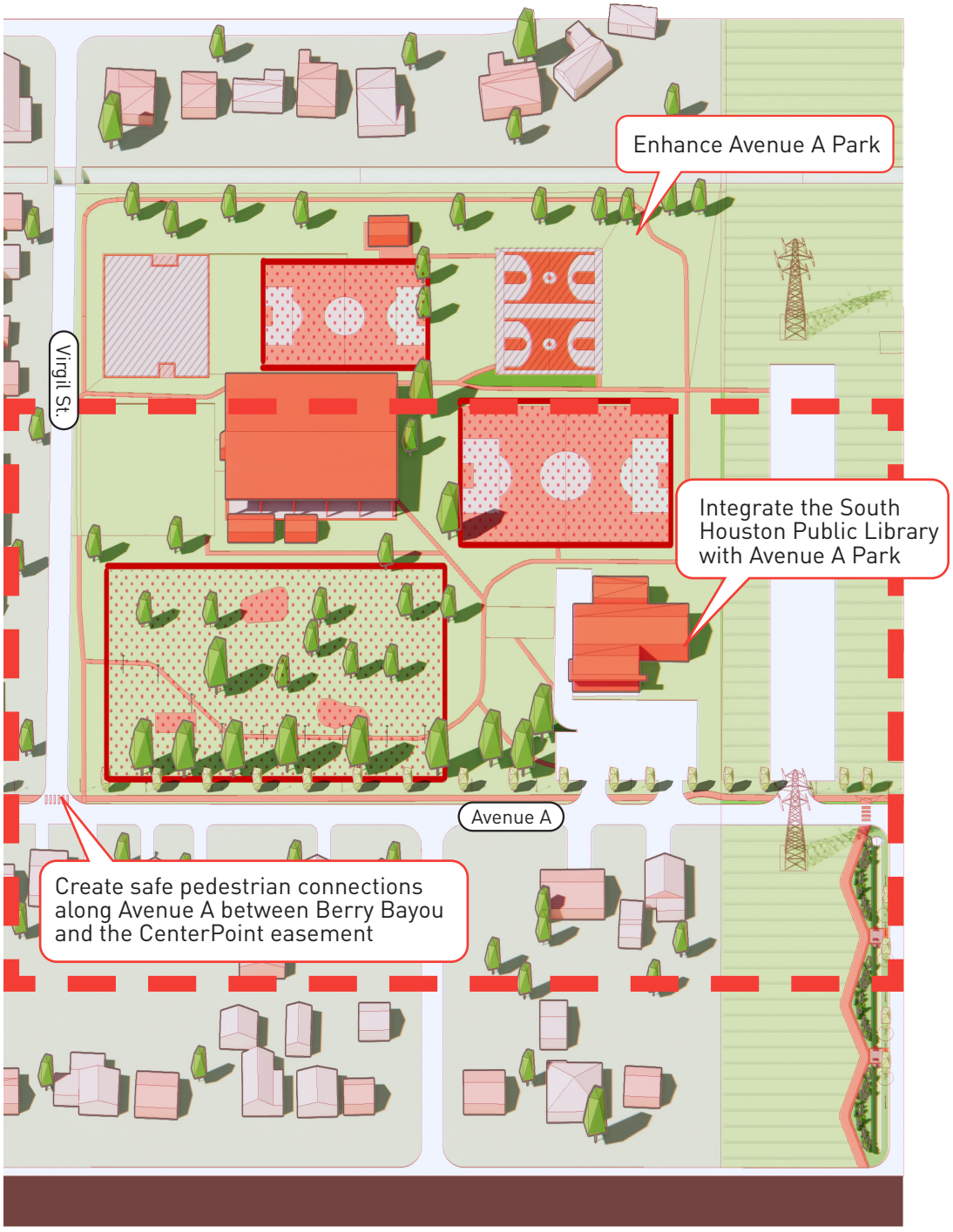
Livability Principles Supported

Provide more transportation choices

Value Communities and Neighborhoods

Support Existing Communities

Segment 2



0 | 100 | 200 | 500 ft

N

Avenue A Focus Area

EXISTING

Avenue A Park is South Houston's largest park and functions as one of its most important community spaces. The South Houston Public Library branch is located on the same block, directly adjacent to the park, and hosts a variety of events and classes for all ages. The park includes old metal playground equipment, a covered pavilion, a splash pad, unsheltered basketball courts, a couple of skateboard ramps, and open lawns with trees. Old metal play structures at the park likely don't meet current requirements for playground safety and can be especially unsafe during the summer when the sun can heat up the metal to unsafe temperatures.

The park is located right along Avenue A, which is one of the only streets in this neighborhood with a sidewalk, but the sidewalk is narrow, poorly maintained, and only exists on the north side of the street. Avenue A runs from Berry Bayou (where a shared-use trail is proposed), past the park, library, the Centerpoint easement (where another shared-use trail is proposed), and through more single-family neighborhoods to the east. This street could be an important pedestrian and bike connection through South Houston, especially since it is parallel to Spencer Hwy, which is very dangerous to walk or bike along and has no pedestrian or bike infrastructure.




20'
2'
4'

Avenue A Focus Area

GOOD ★

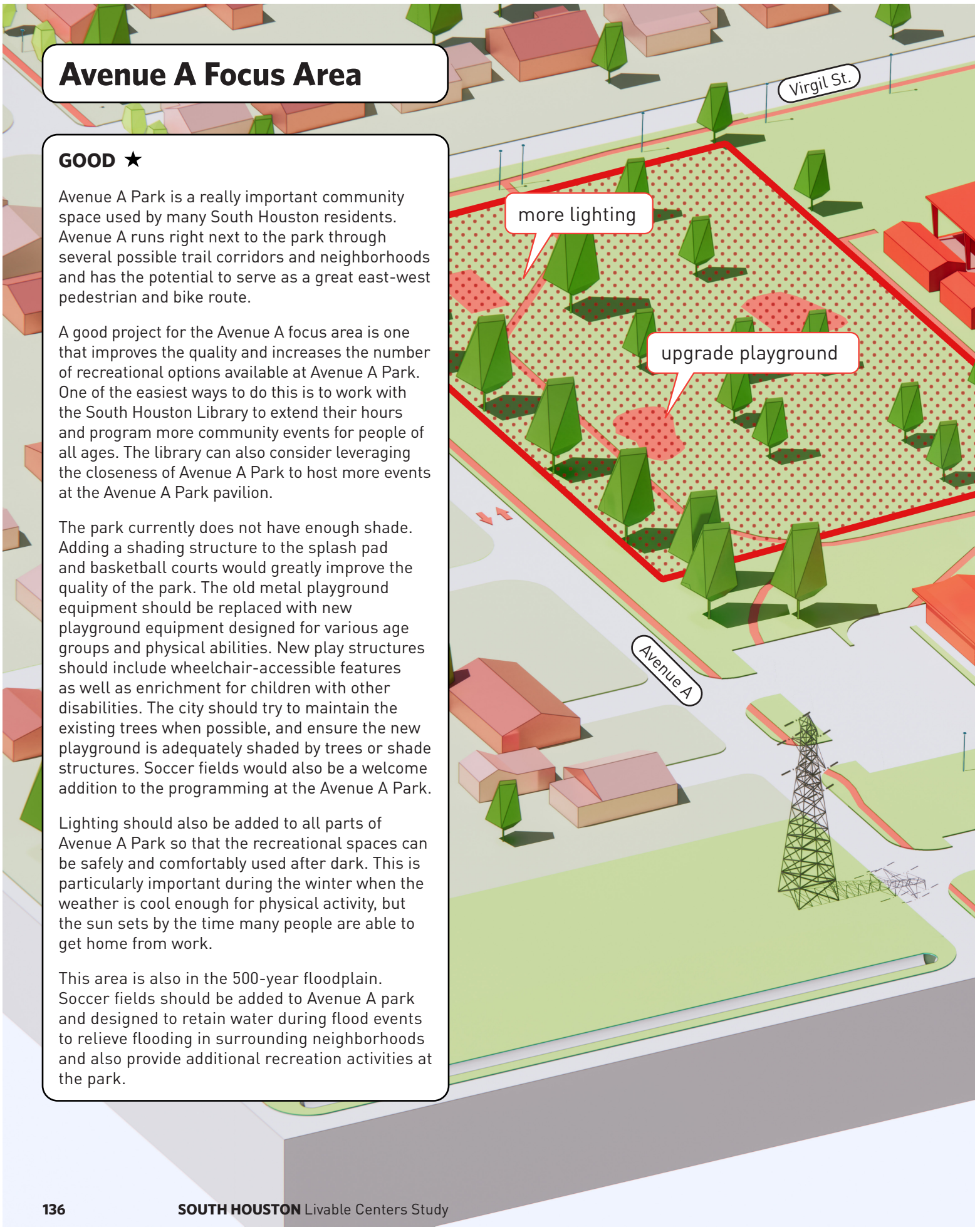
Avenue A Park is a really important community space used by many South Houston residents. Avenue A runs right next to the park through several possible trail corridors and neighborhoods and has the potential to serve as a great east-west pedestrian and bike route.

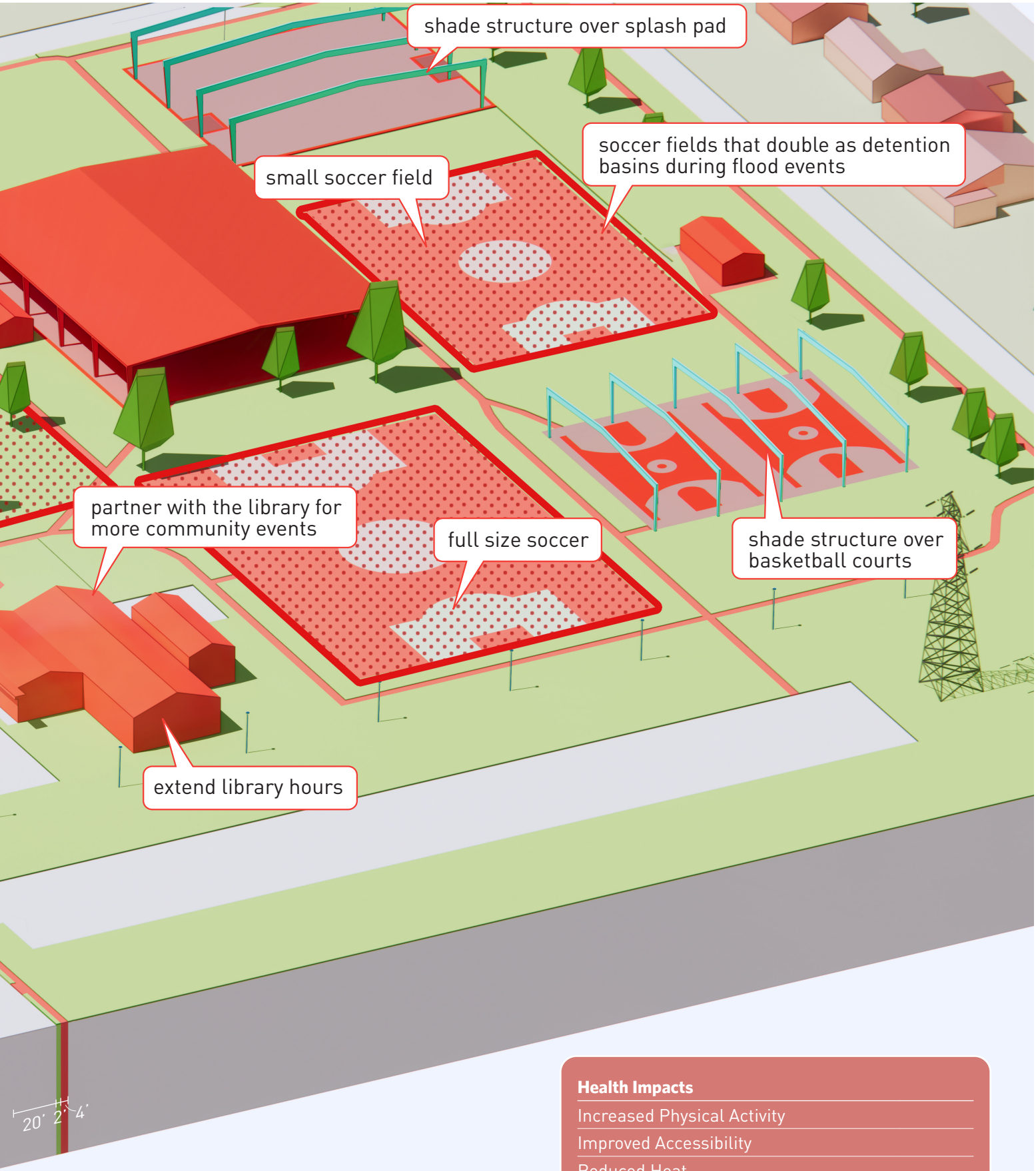
A good project for the Avenue A focus area is one that improves the quality and increases the number of recreational options available at Avenue A Park. One of the easiest ways to do this is to work with the South Houston Library to extend their hours and program more community events for people of all ages. The library can also consider leveraging the closeness of Avenue A Park to host more events at the Avenue A Park pavilion.

The park currently does not have enough shade. Adding a shading structure to the splash pad and basketball courts would greatly improve the quality of the park. The old metal playground equipment should be replaced with new playground equipment designed for various age groups and physical abilities. New play structures should include wheelchair-accessible features as well as enrichment for children with other disabilities. The city should try to maintain the existing trees when possible, and ensure the new playground is adequately shaded by trees or shade structures. Soccer fields would also be a welcome addition to the programming at the Avenue A Park.

Lighting should also be added to all parts of Avenue A Park so that the recreational spaces can be safely and comfortably used after dark. This is particularly important during the winter when the weather is cool enough for physical activity, but the sun sets by the time many people are able to get home from work.

This area is also in the 500-year floodplain. Soccer fields should be added to Avenue A park and designed to retain water during flood events to relieve flooding in surrounding neighborhoods and also provide additional recreation activities at the park.

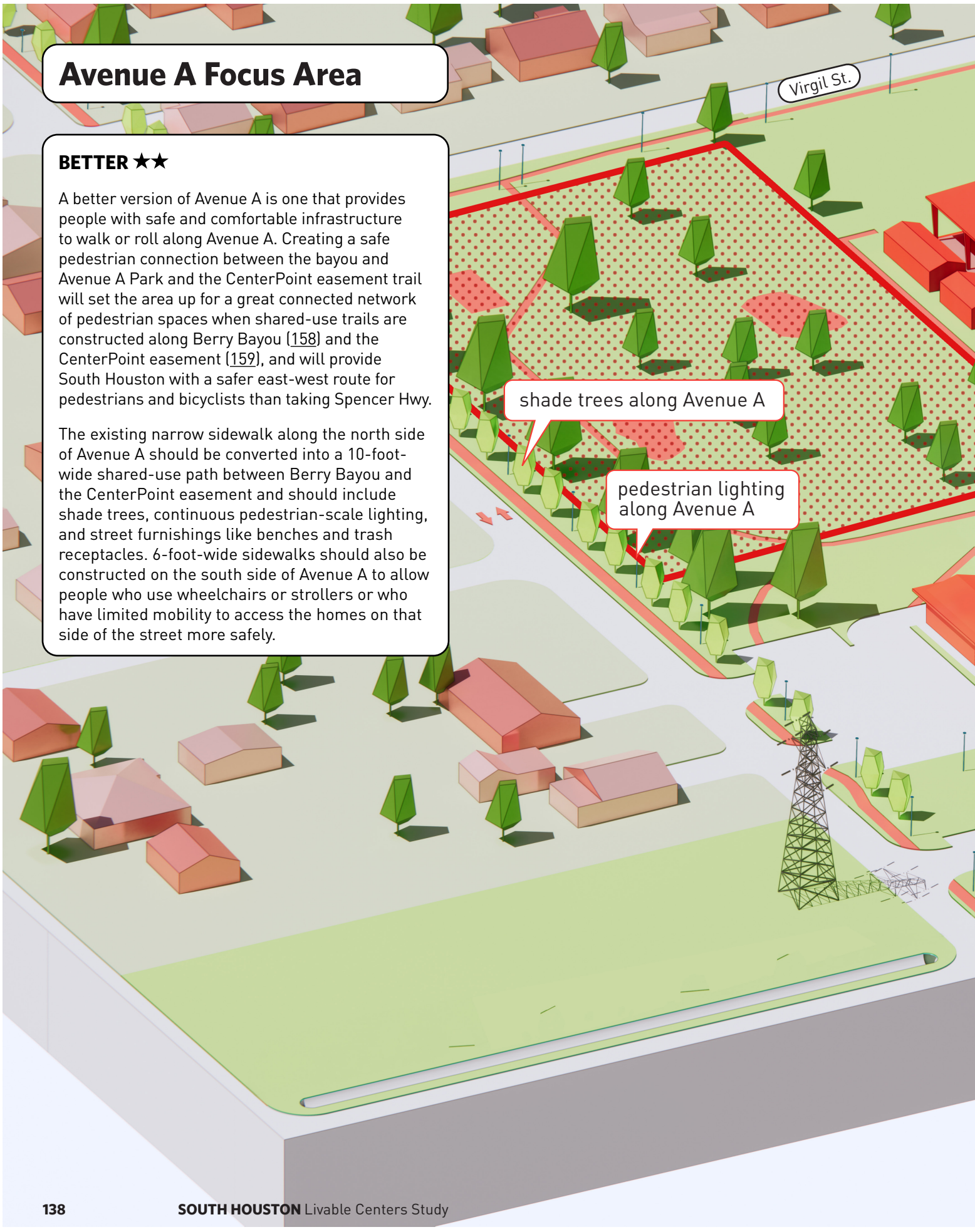




Health Impacts

- Increased Physical Activity
- Improved Accessibility
- Reduced Heat
- Improved Community Safety at night
- Improved Flood Resilience

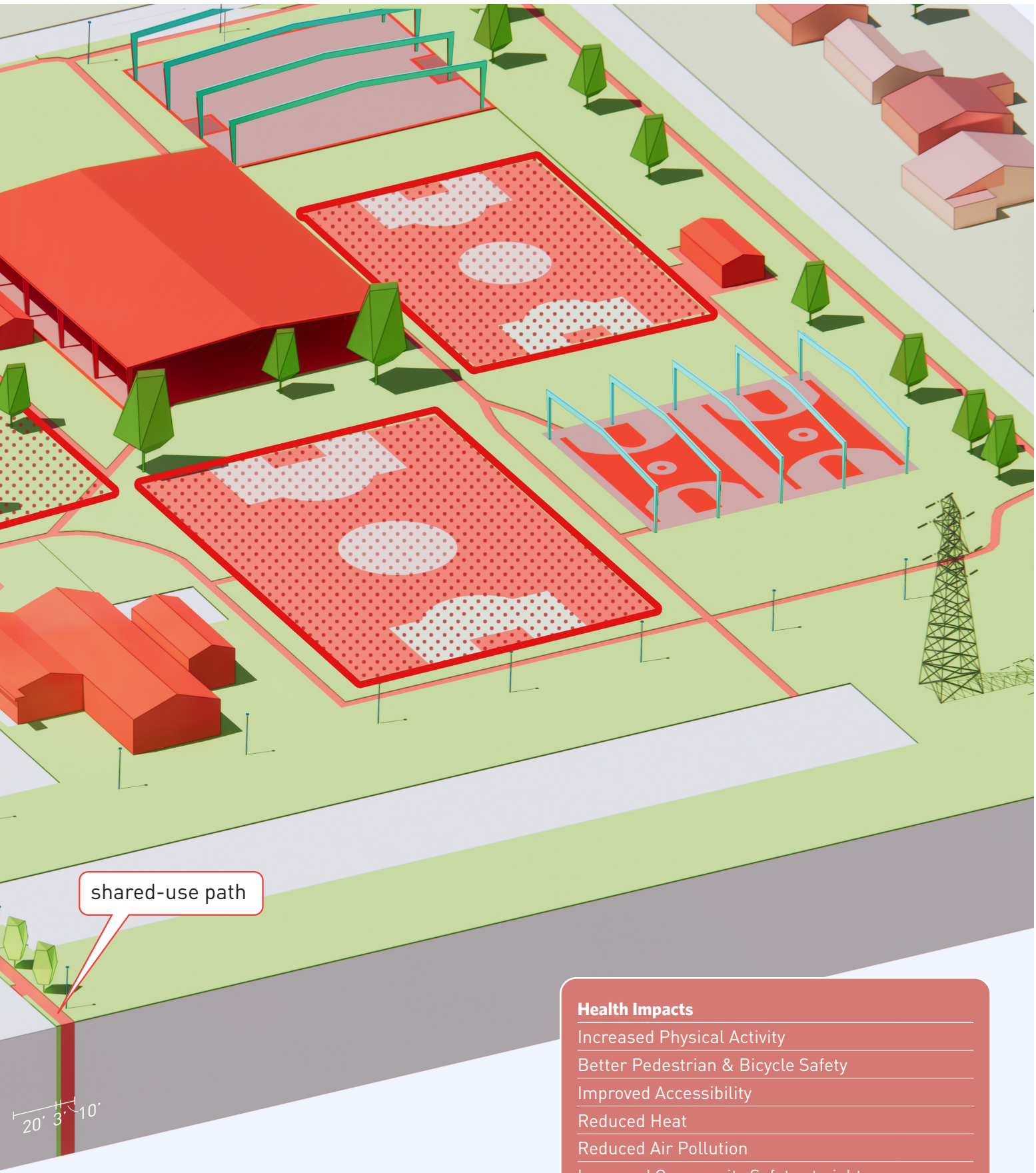
Avenue A Focus Area



BETTER ★★

A better version of Avenue A is one that provides people with safe and comfortable infrastructure to walk or roll along Avenue A. Creating a safe pedestrian connection between the bayou and Avenue A Park and the CenterPoint easement trail will set the area up for a great connected network of pedestrian spaces when shared-use trails are constructed along Berry Bayou (158) and the CenterPoint easement (159), and will provide South Houston with a safer east-west route for pedestrians and bicyclists than taking Spencer Hwy.

The existing narrow sidewalk along the north side of Avenue A should be converted into a 10-foot-wide shared-use path between Berry Bayou and the CenterPoint easement and should include shade trees, continuous pedestrian-scale lighting, and street furnishings like benches and trash receptacles. 6-foot-wide sidewalks should also be constructed on the south side of Avenue A to allow people who use wheelchairs or strollers or who have limited mobility to access the homes on that side of the street more safely.



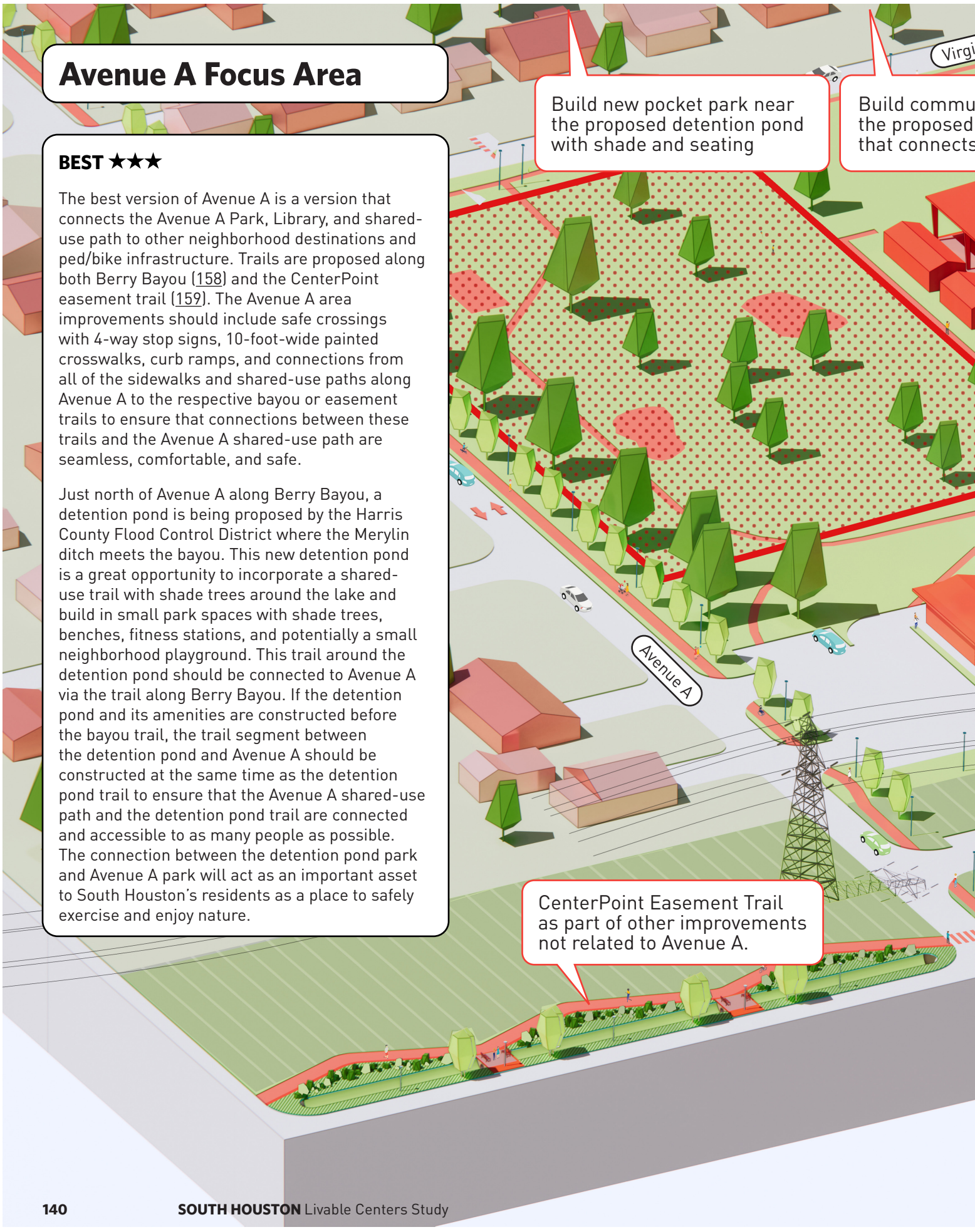
Health Impacts
Increased Physical Activity
Better Pedestrian & Bicycle Safety
Improved Accessibility
Reduced Heat
Reduced Air Pollution
Improved Community Safety at night
Improved Sense of Community
Improved Flood Resilience

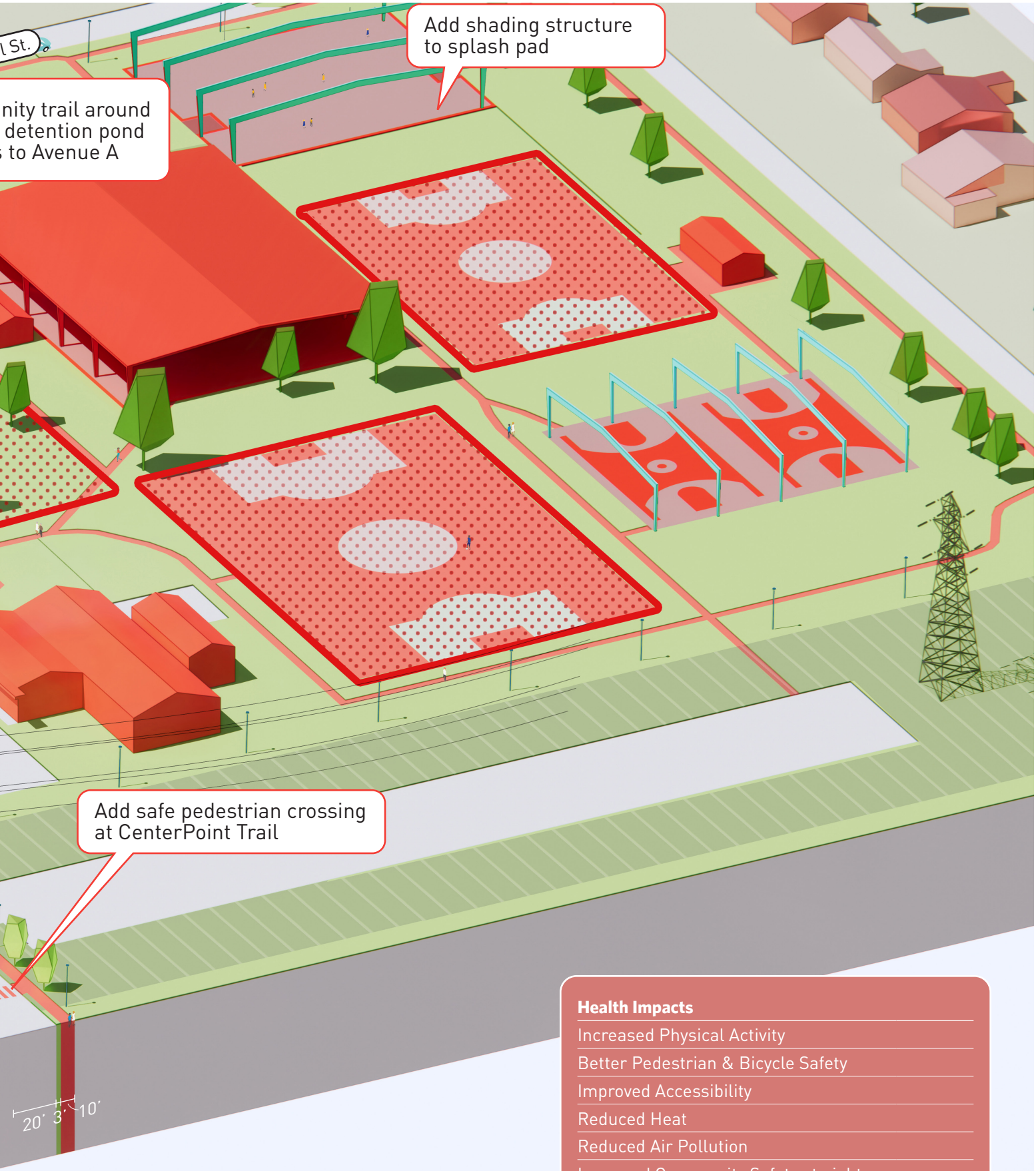
Avenue A Focus Area

BEST ★★★

The best version of Avenue A is a version that connects the Avenue A Park, Library, and shared-use path to other neighborhood destinations and ped/bike infrastructure. Trails are proposed along both Berry Bayou (158) and the CenterPoint easement trail (159). The Avenue A area improvements should include safe crossings with 4-way stop signs, 10-foot-wide painted crosswalks, curb ramps, and connections from all of the sidewalks and shared-use paths along Avenue A to the respective bayou or easement trails to ensure that connections between these trails and the Avenue A shared-use path are seamless, comfortable, and safe.

Just north of Avenue A along Berry Bayou, a detention pond is being proposed by the Harris County Flood Control District where the Merylin ditch meets the bayou. This new detention pond is a great opportunity to incorporate a shared-use trail with shade trees around the lake and build in small park spaces with shade trees, benches, fitness stations, and potentially a small neighborhood playground. This trail around the detention pond should be connected to Avenue A via the trail along Berry Bayou. If the detention pond and its amenities are constructed before the bayou trail, the trail segment between the detention pond and Avenue A should be constructed at the same time as the detention pond trail to ensure that the Avenue A shared-use path and the detention pond trail are connected and accessible to as many people as possible. The connection between the detention pond park and Avenue A park will act as an important asset to South Houston's residents as a place to safely exercise and enjoy nature.





Health Impacts
Increased Physical Activity
Better Pedestrian & Bicycle Safety
Improved Accessibility
Reduced Heat
Reduced Air Pollution
Improved Community Safety at night
Improved Sense of Community
Improved Flood Resilience


NO
BICYCLES
SKATEBOARD
PLAYING BALL
ALLOWED IN THE
GAZEBO AREA
NO
ALCOHOLIC BEVERAGES
VIOLATORS WILL BE
PROSECUTED



Main Street Focus Area

Transform South Houston's Main St. and civic area into a multi-modal city center.

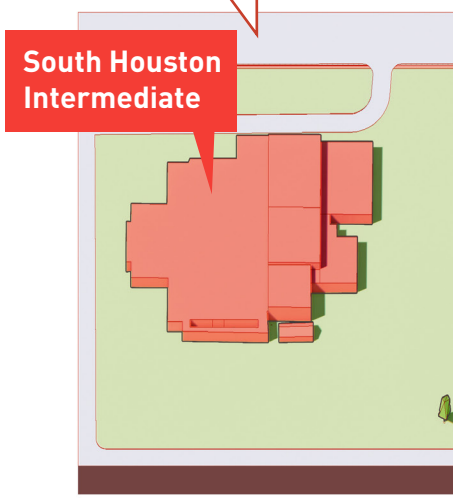
This recommendation proposes reconstructing Main Street with curbs, a closed storm sewer system, and 8-foot-wide shared-use sidewalks without adding additional vehicular lanes. The street would be lined with shade trees in a buffer between the street and the sidewalks and would also have additional pedestrian-scale lighting. The right-of-way is wide enough that pull-in style parking could be provided along sections of the road and interspersed with smaller pocket parks or plazas for food trucks or pop-up vendors and local art. Street crossings, like the one at College and Main, should also be upgraded with refreshed painting on crosswalks, reduced curb radii, new ADA curb ramps at all crossings, install leading pedestrian signals if applicable, and pedestrian signals at important non-signalized intersections like the ones near schools. Also consider interventions like limiting right on red or building raised crosswalks. The City of South Houston should work with Metro to route a bus route through Main Street to bring transit access to South Houston and give easier access to the Monroe Transit Center and the many destinations that are accessible via transit from there.

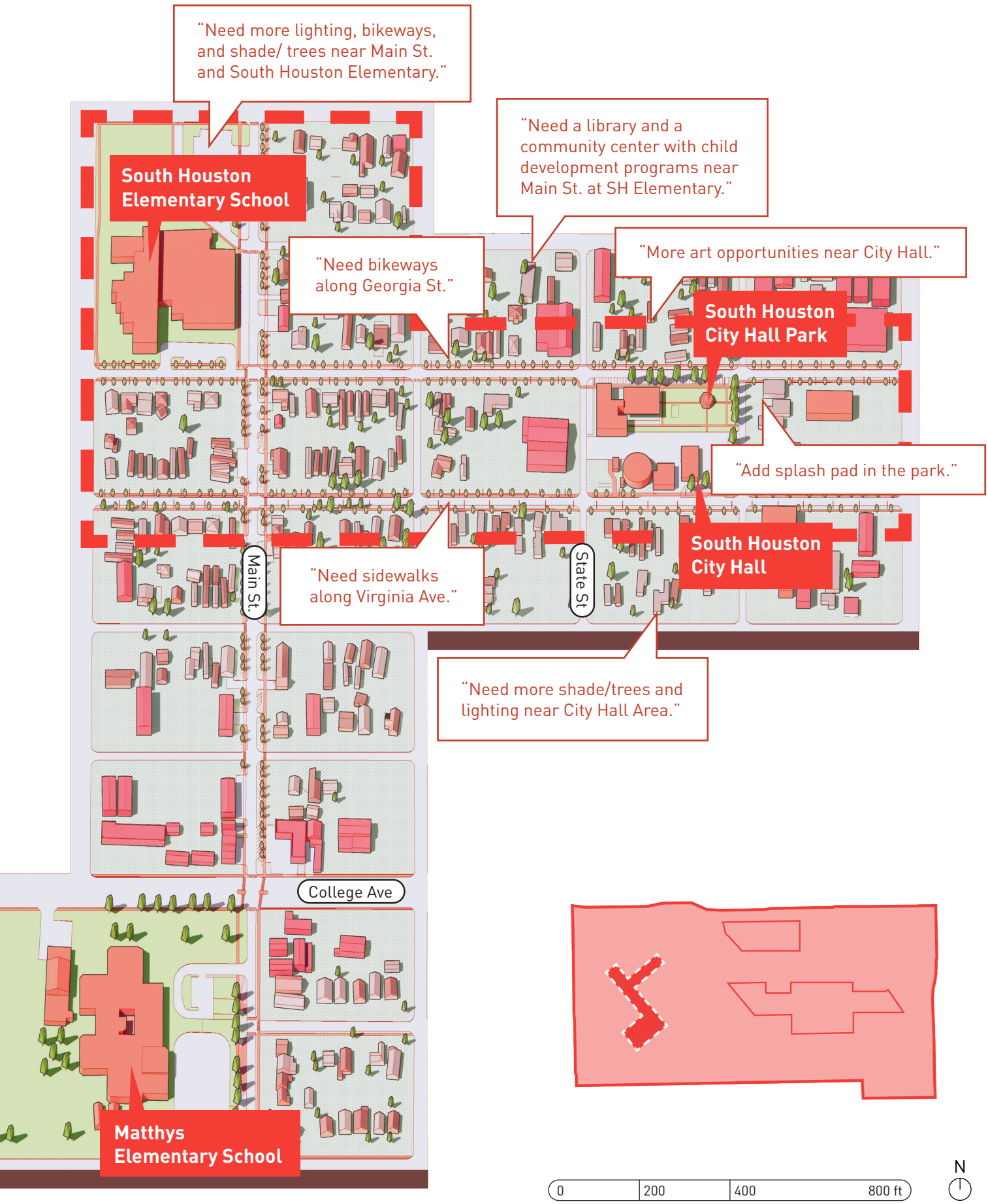
Sidewalks and intersection improvements should be added along Georgia Street and Virginia Avenue to provide safe walking and rolling access to South Houston City Park, the South Houston Senior Citizen Center, and the other civic buildings in that area. These streets should also include street trees and pedestrian-scale lighting. Since the sidewalks around the two elementary schools (South Houston and Matthy's) and the South Houston Intermediate School are commonly used as walking or jogging loops, the improvements along Main Street should be concentrated between the two schools. The City should also work with Pasadena Independent School District (PISD) to allow the public to use the playgrounds and fields at these schools when school is not in session, similar to the SPARK Parks program. Sidewalks, intersection improvements, street trees, and lighting should be extended southeast along Georgia Street all the way to Futbolito to complete a network of recreation spaces in the area (the schools, Futbolito, and South Houston City Park).

Among the new safe connections made in this area, safe routes to school should be established. These are routes that children commonly use to walk or bike to school and sometimes are routes between the school and a large parking lot where parents can drive to and then walk with their child the rest of the way to school to alleviate or avoid the drop-off traffic. The streets identified as safe routes to school should have wide sidewalks, shade trees, lighting, and safe crossings. Crossings should have flashing beacons or traffic signals, crosswalks, and ADA curb ramps. Traffic calming measures like medians (if applicable), raised crosswalks, speed humps, stop signs, "Children Crossing" warning signs, etc., should be used to make drivers aware that they should be cautious of children. Simply supplying crossing guards or red flags at the intersection is not sufficient.

New programs and policies should also be enacted to support local businesses, like a revolving loan fund and grants to improve existing storefronts. A local business incubator-type service could be established near the area (perhaps along Pennsylvania Street between Waco Street and Main Street).

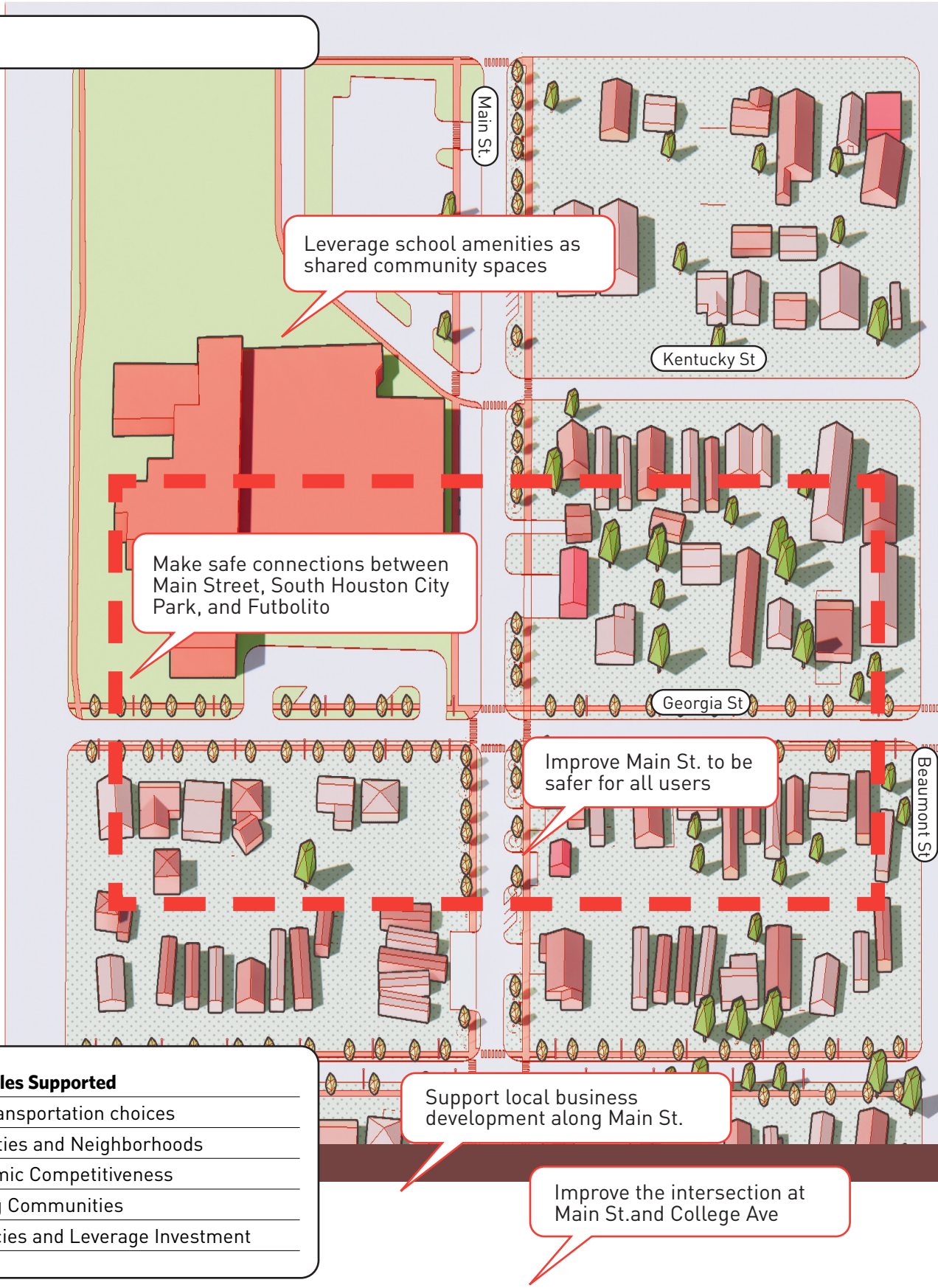
"Need a library and a community center with child development programs near Main St. at SH Elementary."




"Need more lighting, bikeways, and shade/ trees near Main St. and South Houston Elementary."
South Houston Elementary School
"Need a library and a community center with child development programs near Main St. at SH Elementary."
"Need bikeways along Georgia St."
"More art opportunities near City Hall."
South Houston City Hall Park
"Add splash pad in the park."
South Houston City Hall
Main St.
State St
"Need sidewalks along Virginia Ave."
"Need more shade/trees and lighting near City Hall Area."
College Ave
Matthys Elementary School
0
200
400
800 ft
N

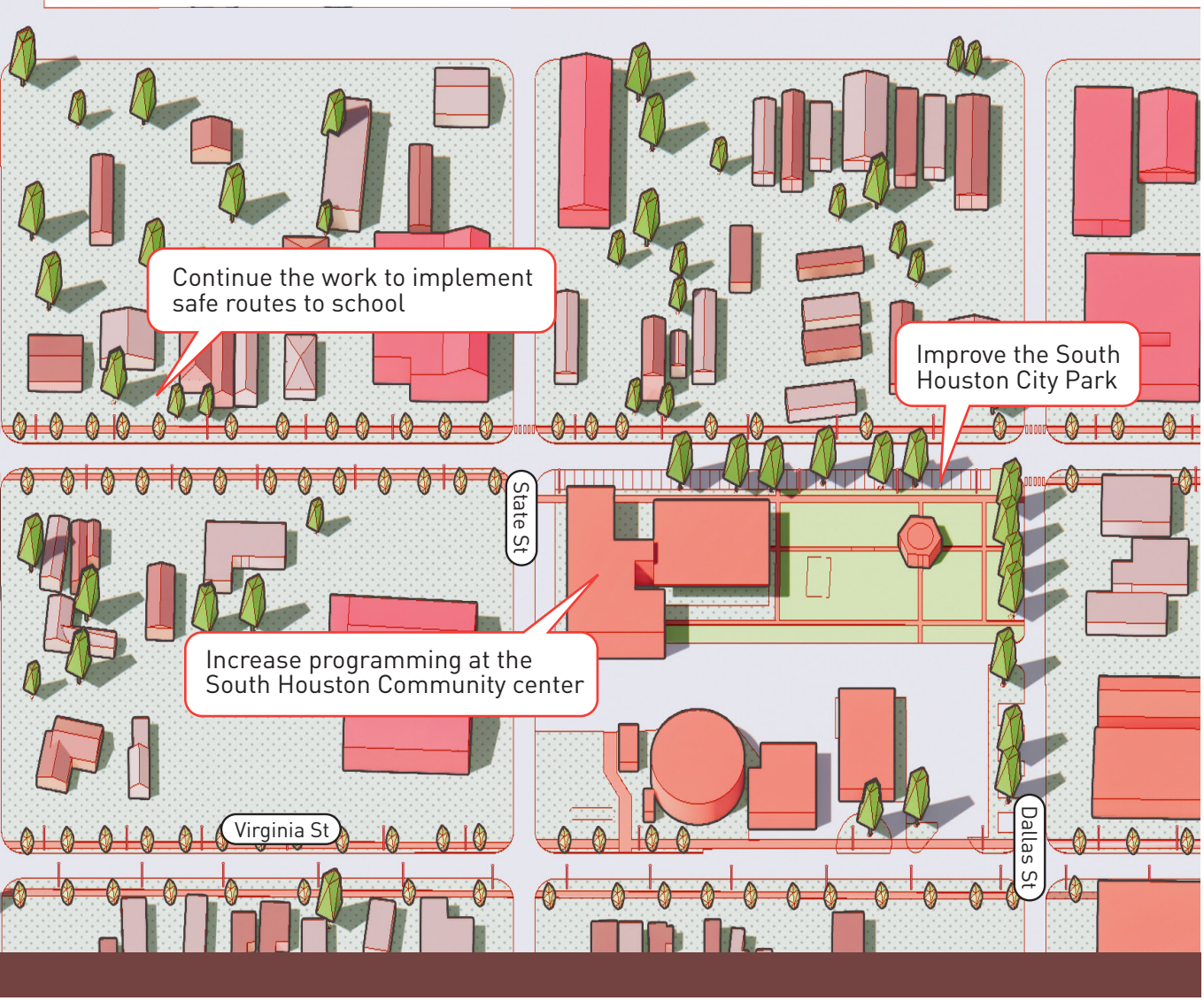
Main Street Focus Area

Segment 1



Livability Principles Supported

Provide more transportation choices
Value Communities and Neighborhoods
Enhance Economic Competitiveness
Support Existing Communities
Coordinate Policies and Leverage Investment



0 | 100 | 200 | 500 ft

N

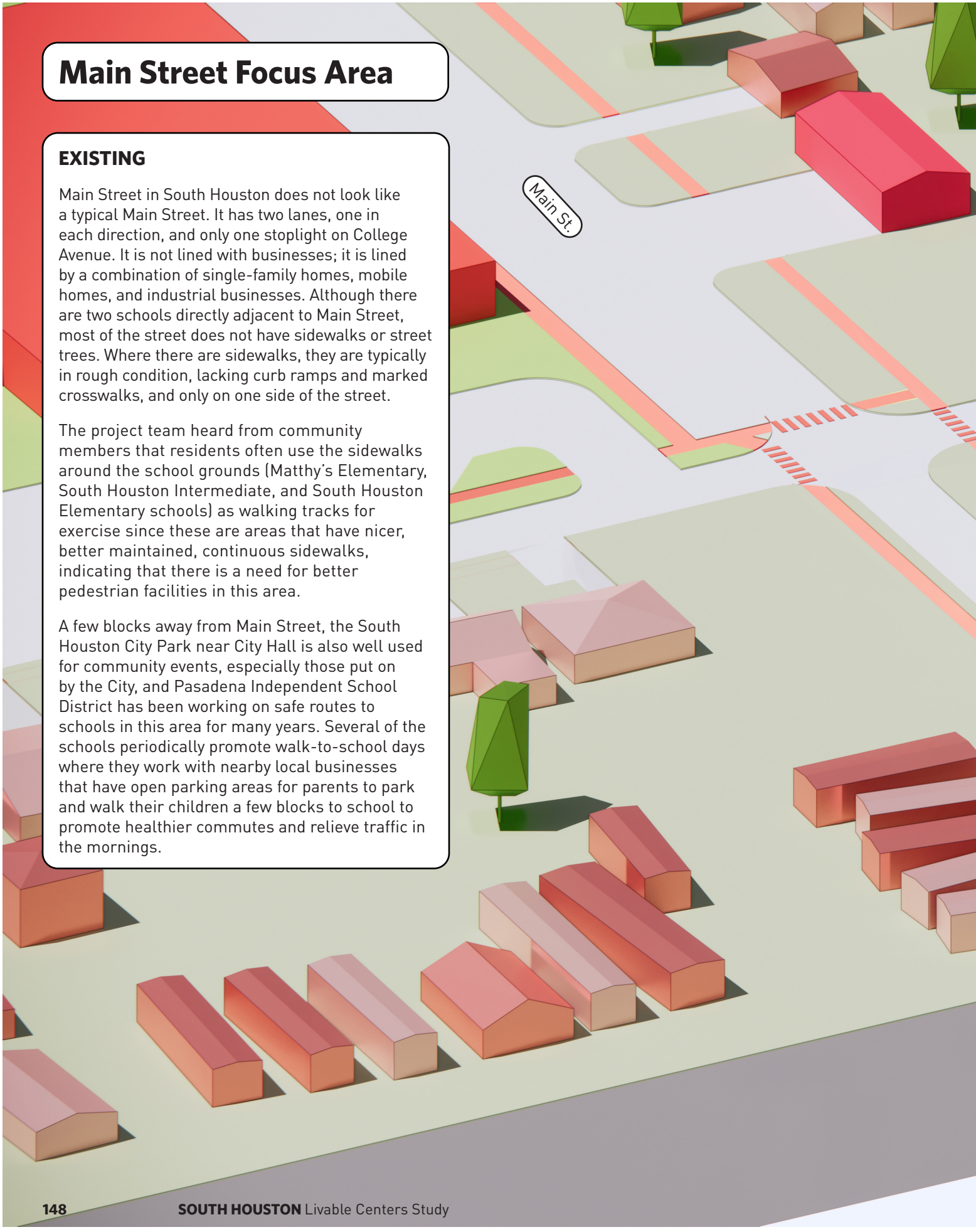
Main Street Focus Area

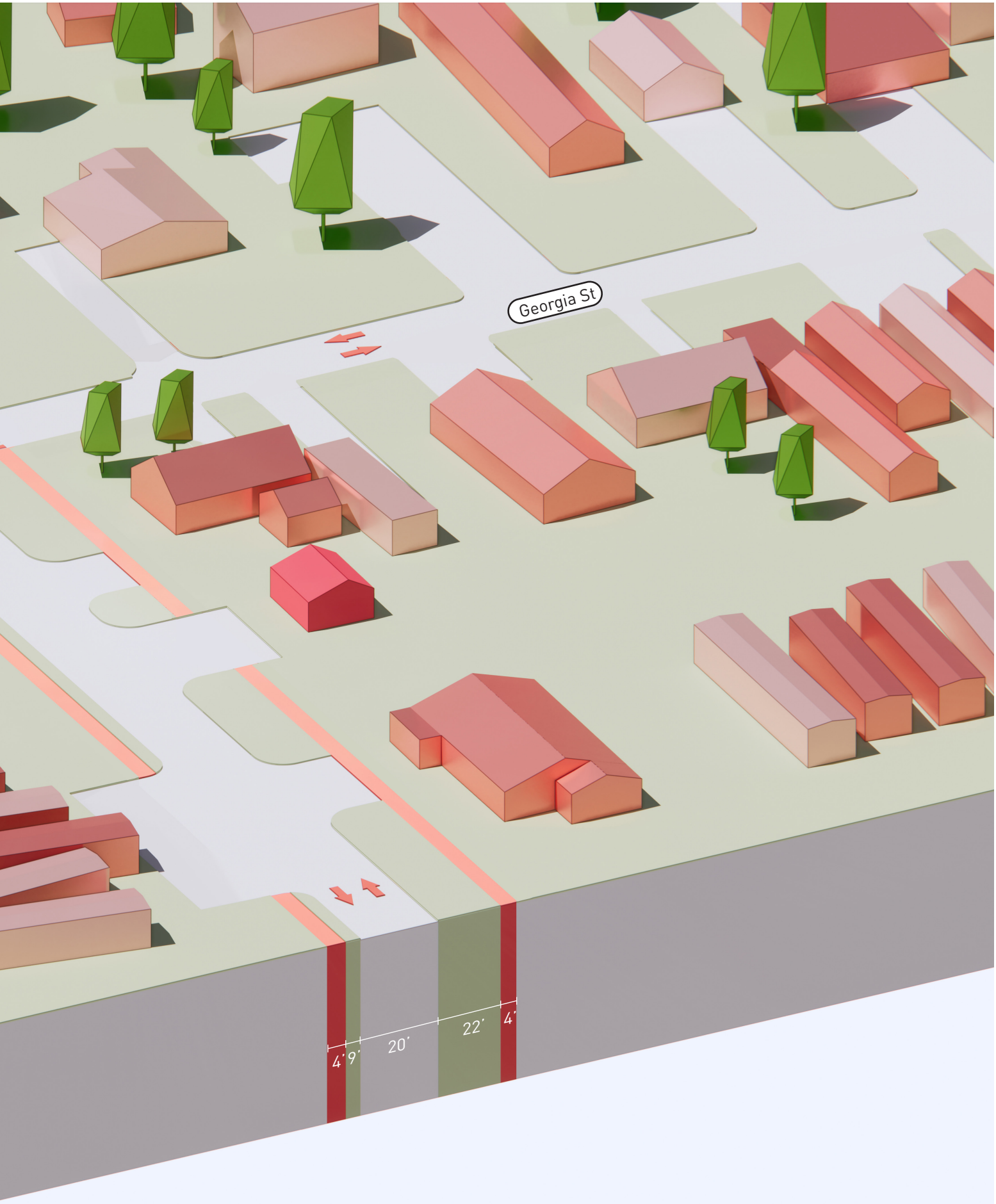
EXISTING

Main Street in South Houston does not look like a typical Main Street. It has two lanes, one in each direction, and only one stoplight on College Avenue. It is not lined with businesses; it is lined by a combination of single-family homes, mobile homes, and industrial businesses. Although there are two schools directly adjacent to Main Street, most of the street does not have sidewalks or street trees. Where there are sidewalks, they are typically in rough condition, lacking curb ramps and marked crosswalks, and only on one side of the street.

The project team heard from community members that residents often use the sidewalks around the school grounds (Matthy's Elementary, South Houston Intermediate, and South Houston Elementary schools) as walking tracks for exercise since these are areas that have nicer, better maintained, continuous sidewalks, indicating that there is a need for better pedestrian facilities in this area.

A few blocks away from Main Street, the South Houston City Park near City Hall is also well used for community events, especially those put on by the City, and Pasadena Independent School District has been working on safe routes to schools in this area for many years. Several of the schools periodically promote walk-to-school days where they work with nearby local businesses that have open parking areas for parents to park and walk their children a few blocks to school to promote healthier commutes and relieve traffic in the mornings.




Georgia St
4'
9'
20'
22'
4'

Main Street Focus Area

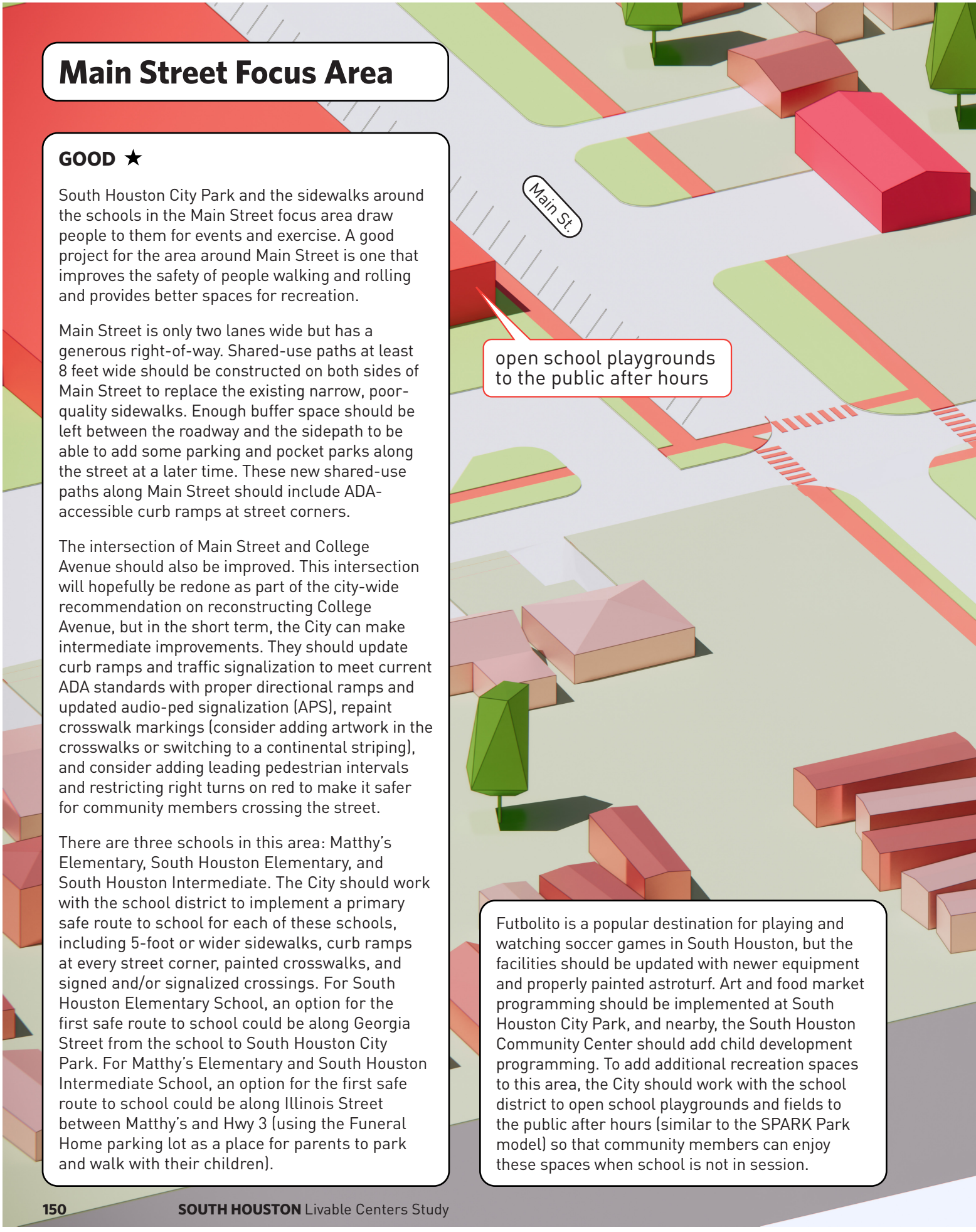
GOOD ★

South Houston City Park and the sidewalks around the schools in the Main Street focus area draw people to them for events and exercise. A good project for the area around Main Street is one that improves the safety of people walking and rolling and provides better spaces for recreation.

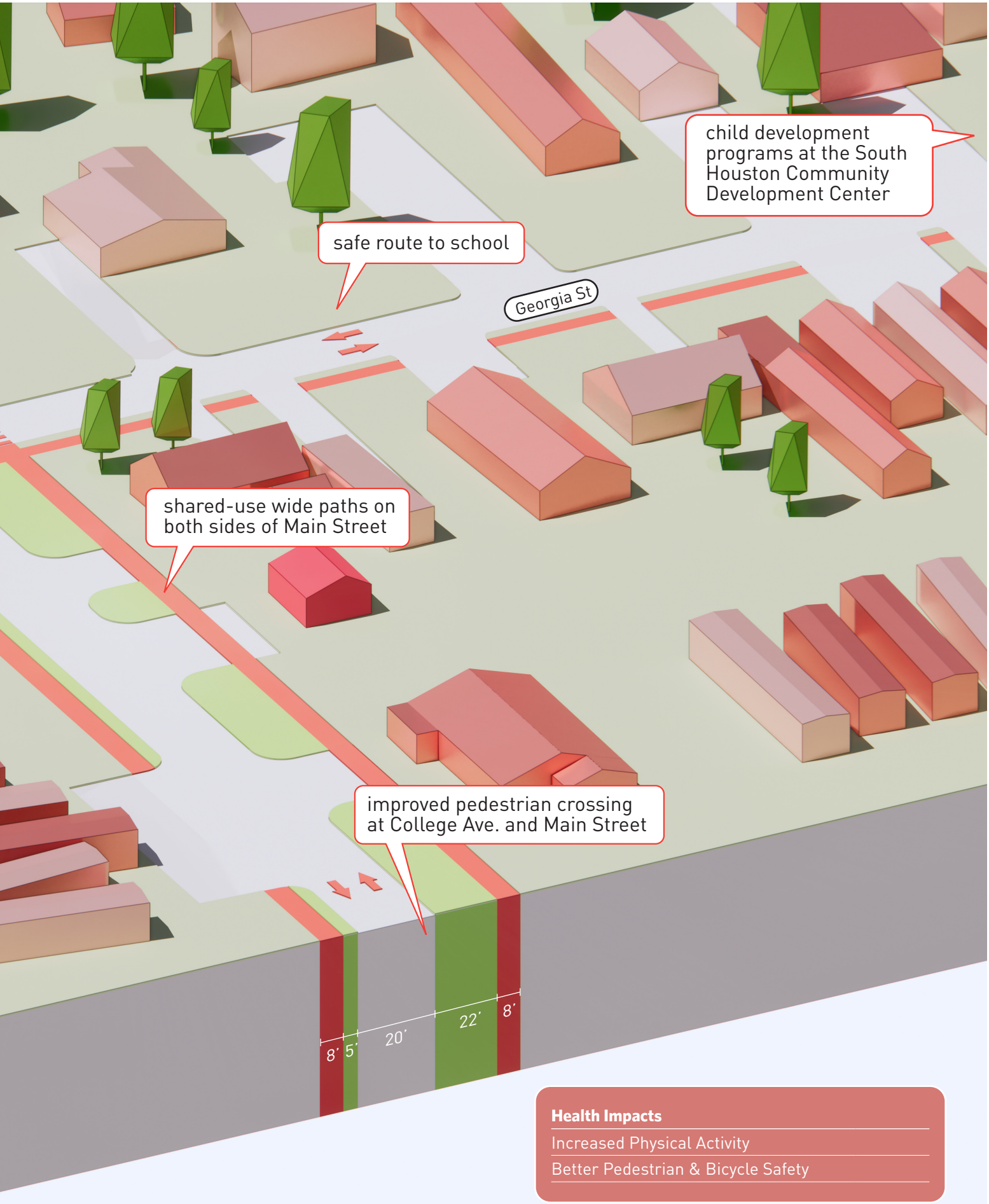
Main Street is only two lanes wide but has a generous right-of-way. Shared-use paths at least 8 feet wide should be constructed on both sides of Main Street to replace the existing narrow, poor-quality sidewalks. Enough buffer space should be left between the roadway and the sidepath to be able to add some parking and pocket parks along the street at a later time. These new shared-use paths along Main Street should include ADA-accessible curb ramps at street corners.

The intersection of Main Street and College Avenue should also be improved. This intersection will hopefully be redone as part of the city-wide recommendation on reconstructing College Avenue, but in the short term, the City can make intermediate improvements. They should update curb ramps and traffic signalization to meet current ADA standards with proper directional ramps and updated audio-ped signalization (APS), repaint crosswalk markings (consider adding artwork in the crosswalks or switching to a continental striping), and consider adding leading pedestrian intervals and restricting right turns on red to make it safer for community members crossing the street.

There are three schools in this area: Matthy's Elementary, South Houston Elementary, and South Houston Intermediate. The City should work with the school district to implement a primary safe route to school for each of these schools, including 5-foot or wider sidewalks, curb ramps at every street corner, painted crosswalks, and signed and/or signalized crossings. For South Houston Elementary School, an option for the first safe route to school could be along Georgia Street from the school to South Houston City Park. For Matthy's Elementary and South Houston Intermediate School, an option for the first safe route to school could be along Illinois Street between Matthy's and Hwy 3 (using the Funeral Home parking lot as a place for parents to park and walk with their children).



Futbolito is a popular destination for playing and watching soccer games in South Houston, but the facilities should be updated with newer equipment and properly painted astroturf. Art and food market programming should be implemented at South Houston City Park, and nearby, the South Houston Community Center should add child development programming. To add additional recreation spaces to this area, the City should work with the school district to open school playgrounds and fields to the public after hours (similar to the SPARK Park model) so that community members can enjoy these spaces when school is not in session.



Health Impacts

Increased Physical Activity

Better Pedestrian & Bicycle Safety

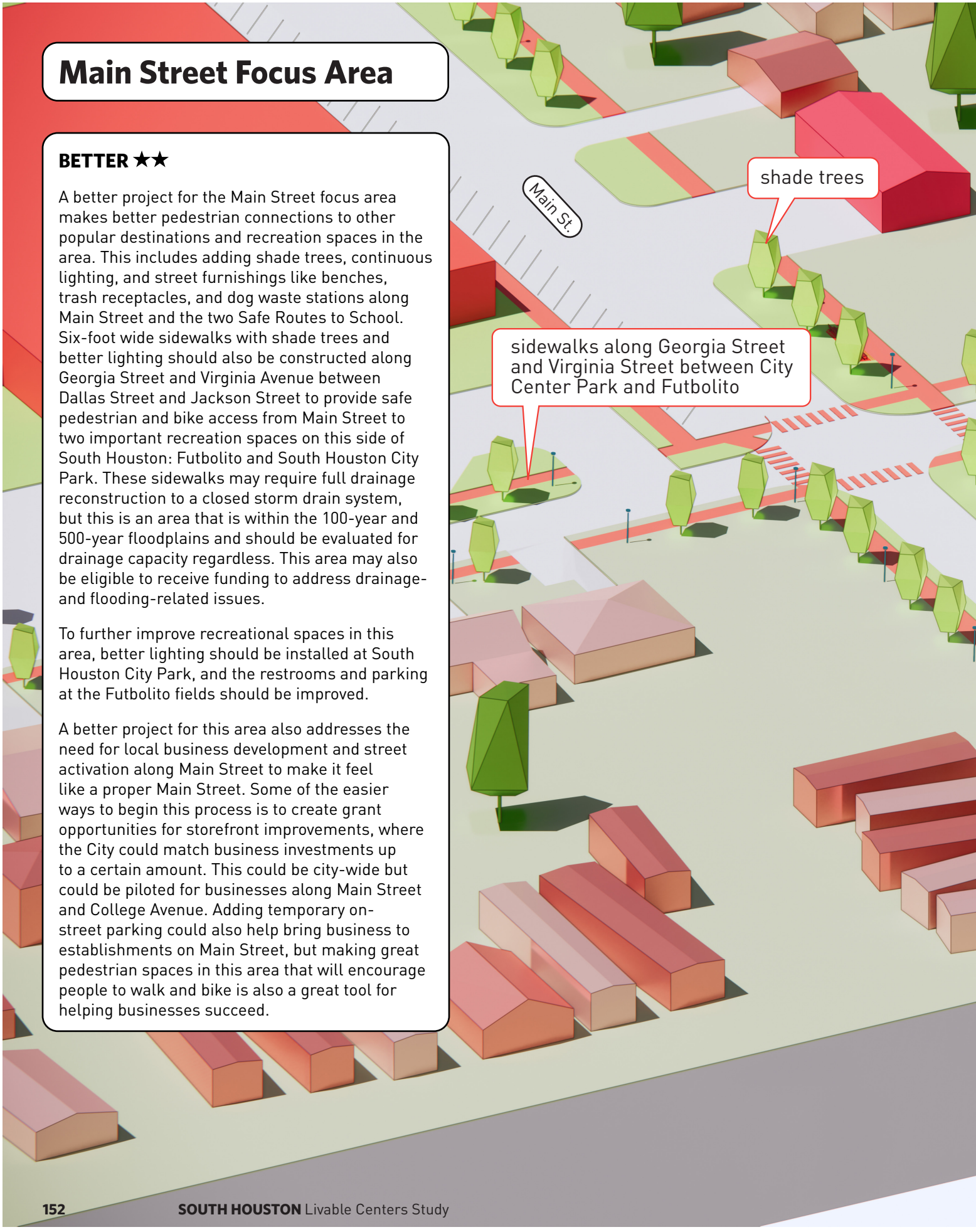
Main Street Focus Area

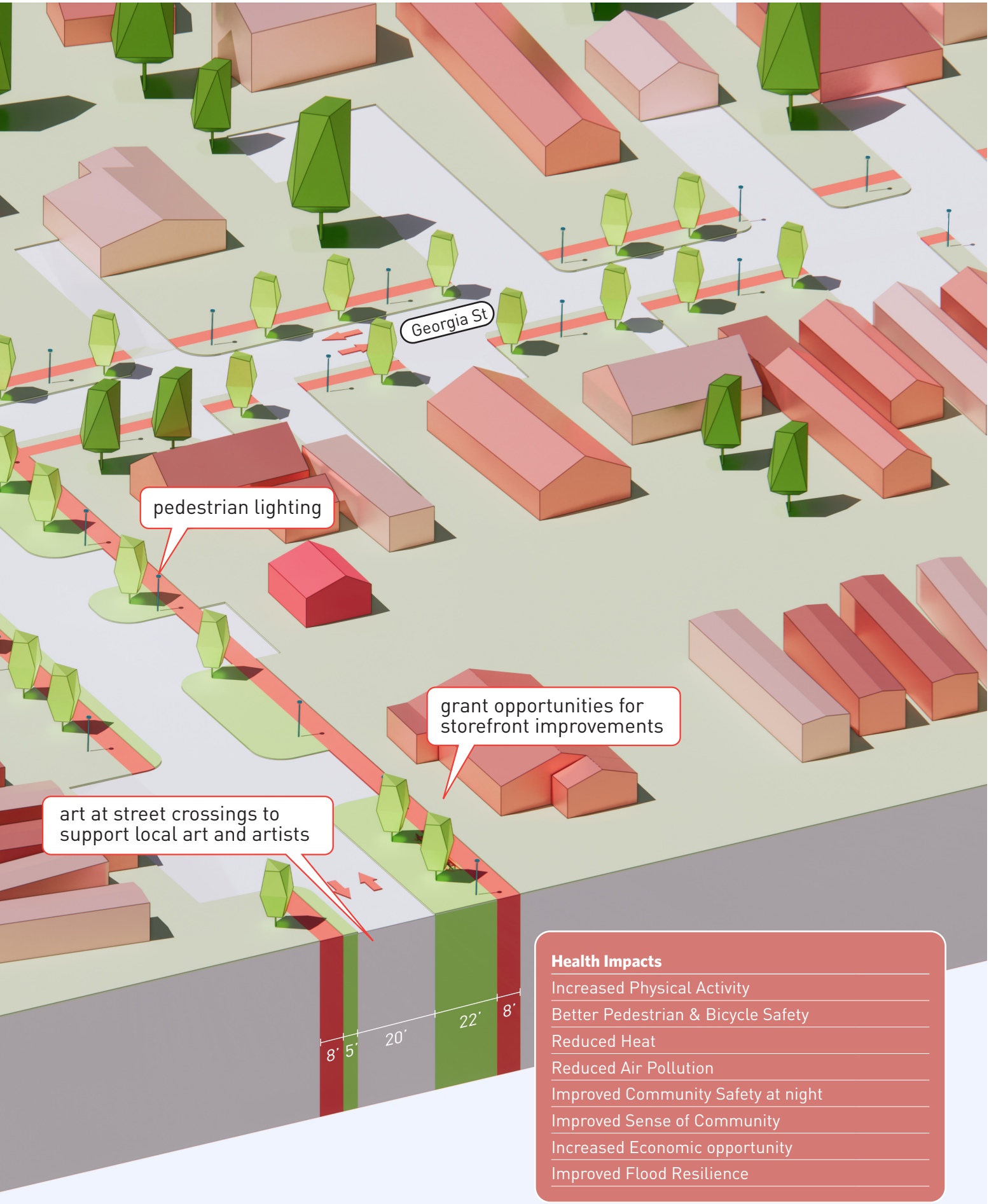
BETTER ★★

A better project for the Main Street focus area makes better pedestrian connections to other popular destinations and recreation spaces in the area. This includes adding shade trees, continuous lighting, and street furnishings like benches, trash receptacles, and dog waste stations along Main Street and the two Safe Routes to School. Six-foot wide sidewalks with shade trees and better lighting should also be constructed along Georgia Street and Virginia Avenue between Dallas Street and Jackson Street to provide safe pedestrian and bike access from Main Street to two important recreation spaces on this side of South Houston: Futbolito and South Houston City Park. These sidewalks may require full drainage reconstruction to a closed storm drain system, but this is an area that is within the 100-year and 500-year floodplains and should be evaluated for drainage capacity regardless. This area may also be eligible to receive funding to address drainage- and flooding-related issues.

To further improve recreational spaces in this area, better lighting should be installed at South Houston City Park, and the restrooms and parking at the Futbolito fields should be improved.

A better project for this area also addresses the need for local business development and street activation along Main Street to make it feel like a proper Main Street. Some of the easier ways to begin this process is to create grant opportunities for storefront improvements, where the City could match business investments up to a certain amount. This could be city-wide but could be piloted for businesses along Main Street and College Avenue. Adding temporary on-street parking could also help bring business to establishments on Main Street, but making great pedestrian spaces in this area that will encourage people to walk and bike is also a great tool for helping businesses succeed.





Health Impacts
Increased Physical Activity
Better Pedestrian & Bicycle Safety
Reduced Heat
Reduced Air Pollution
Improved Community Safety at night
Improved Sense of Community
Increased Economic opportunity
Improved Flood Resilience

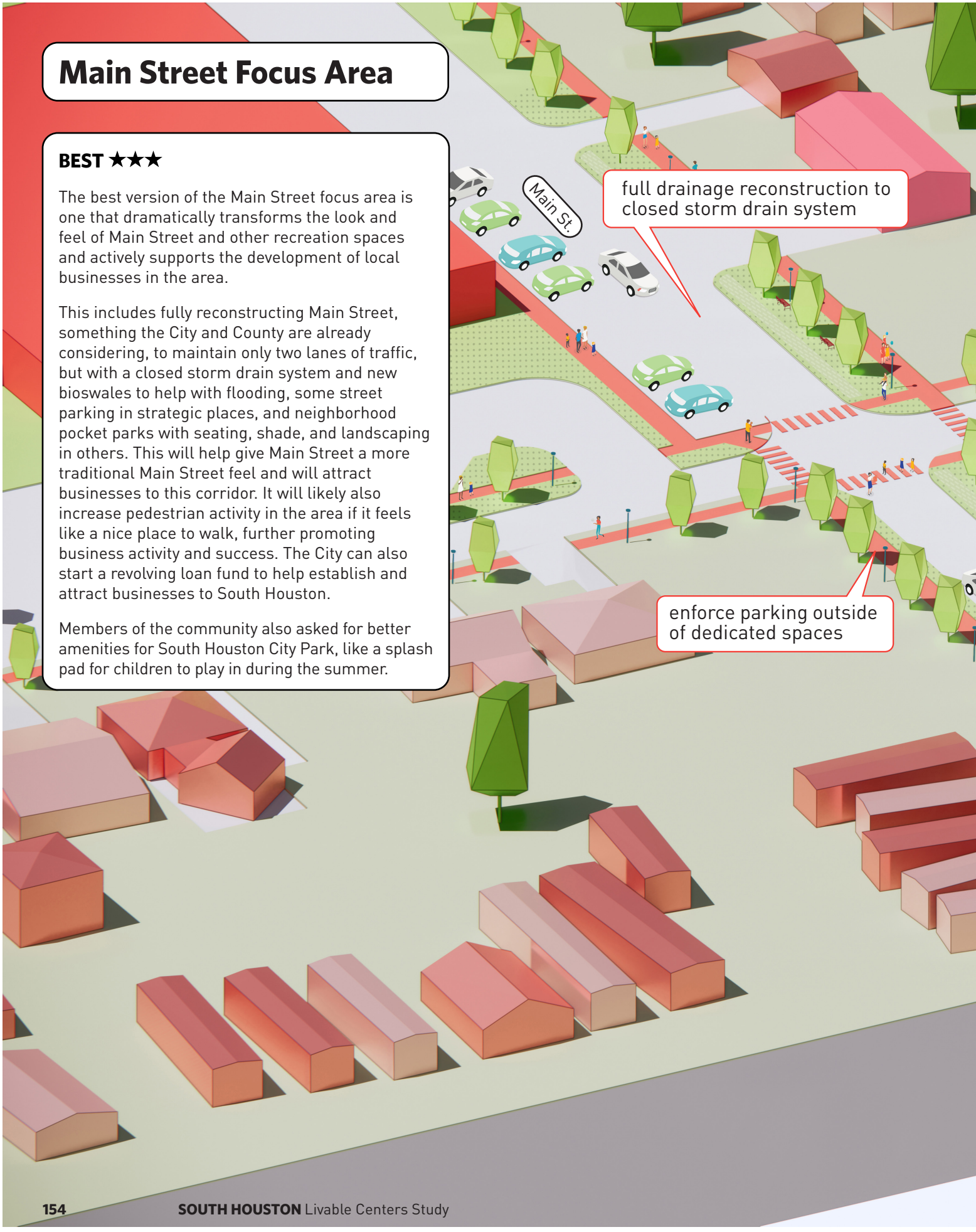
Main Street Focus Area

BEST ★★★

The best version of the Main Street focus area is one that dramatically transforms the look and feel of Main Street and other recreation spaces and actively supports the development of local businesses in the area.

This includes fully reconstructing Main Street, something the City and County are already considering, to maintain only two lanes of traffic, but with a closed storm drain system and new bioswales to help with flooding, some street parking in strategic places, and neighborhood pocket parks with seating, shade, and landscaping in others. This will help give Main Street a more traditional Main Street feel and will attract businesses to this corridor. It will likely also increase pedestrian activity in the area if it feels like a nice place to walk, further promoting business activity and success. The City can also start a revolving loan fund to help establish and attract businesses to South Houston.

Members of the community also asked for better amenities for South Houston City Park, like a splash pad for children to play in during the summer.





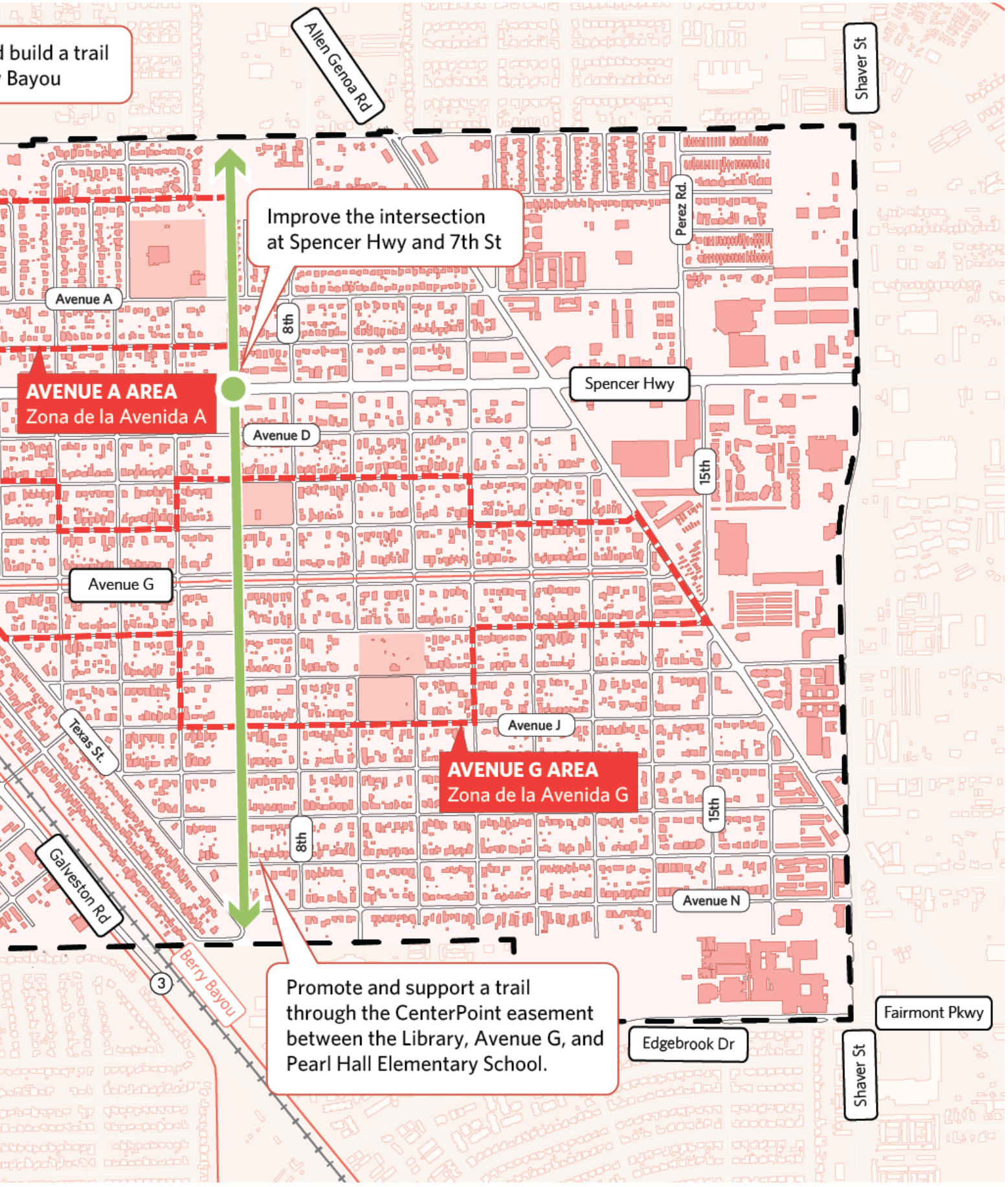
Health Impacts
Increased Physical Activity
Better Pedestrian & Bicycle Safety
Reduced Heat
Reduced Air Pollution
Improved Community Safety at night
Improved Sense of Community
Increased Economic opportunity
Improved Flood Resilience

CONNECTORS



The connector recommendations build upon the focus area recommendations by linking the focus areas together and allowing residents to enjoy other neighborhoods and other recreation spaces via safe, comfortable, all-ages-and-abilities infrastructure.

Two of these connector projects follow a precedent in the Houston region by utilizing existing natural and man-made features like bayous and powerline easements. They can seamlessly be integrated into a much broader, region-wide network of shared-use paths and trails but in the meantime provide much-needed pedestrian and bike connectivity through an area with very few sidewalks and even fewer bike lanes. When these connector projects and the focus area recommendations are complete, they will create a well-connected, high quality set of recreation spaces in South Houston that include several miles of shaded and well-lit shared-use trails, improved intersection safety, new and improved parks, and community spaces with a variety of play fields, outdoor fitness equipment, and community art.

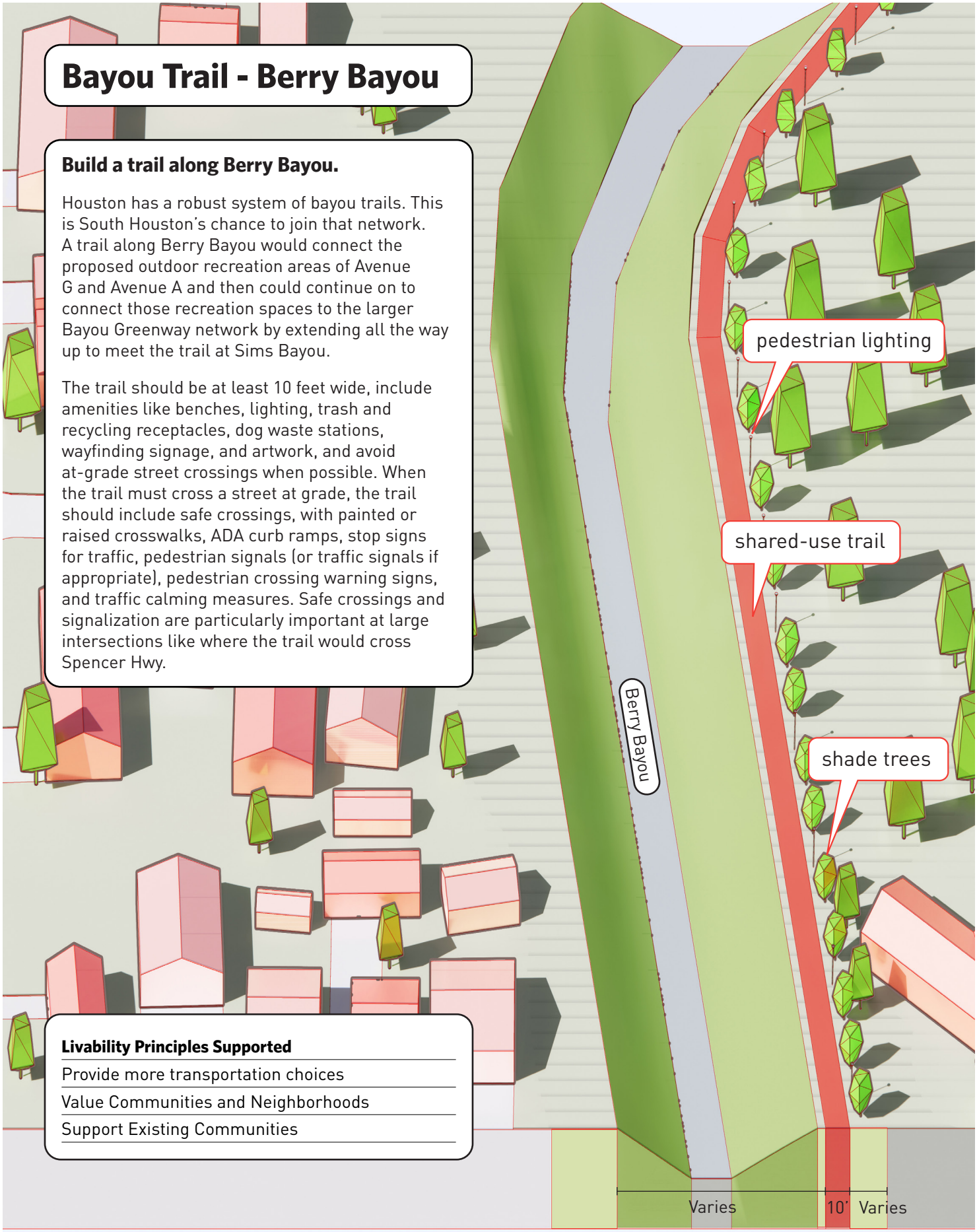

d build a trail
Bayou
Allen Genoa Rd
Shaver St
Improve the intersection at Spencer Hwy and 7th St
Perez Rd.
Avenue A
8th
AVENUE A AREA
Zona de la Avenida A
Spencer Hwy
Avenue D
15th
Avenue G
Texas St.
Avenue J
AVENUE G AREA
Zona de la Avenida G
15th
8th
Galveston Rd
Avenue N
Berry Bayou
3
Promote and support a trail through the CenterPoint easement between the Library, Avenue G, and Pearl Hall Elementary School.
Fairmont Pkwy
Edgebrook Dr
Shaver St

Bayou Trail - Berry Bayou

Build a trail along Berry Bayou.

Houston has a robust system of bayou trails. This is South Houston's chance to join that network. A trail along Berry Bayou would connect the proposed outdoor recreation areas of Avenue G and Avenue A and then could continue on to connect those recreation spaces to the larger Bayou Greenway network by extending all the way up to meet the trail at Sims Bayou.

The trail should be at least 10 feet wide, include amenities like benches, lighting, trash and recycling receptacles, dog waste stations, wayfinding signage, and artwork, and avoid at-grade street crossings when possible. When the trail must cross a street at grade, the trail should include safe crossings, with painted or raised crosswalks, ADA curb ramps, stop signs for traffic, pedestrian signals (or traffic signals if appropriate), pedestrian crossing warning signs, and traffic calming measures. Safe crossings and signalization are particularly important at large intersections like where the trail would cross Spencer Hwy.



Livability Principles Supported

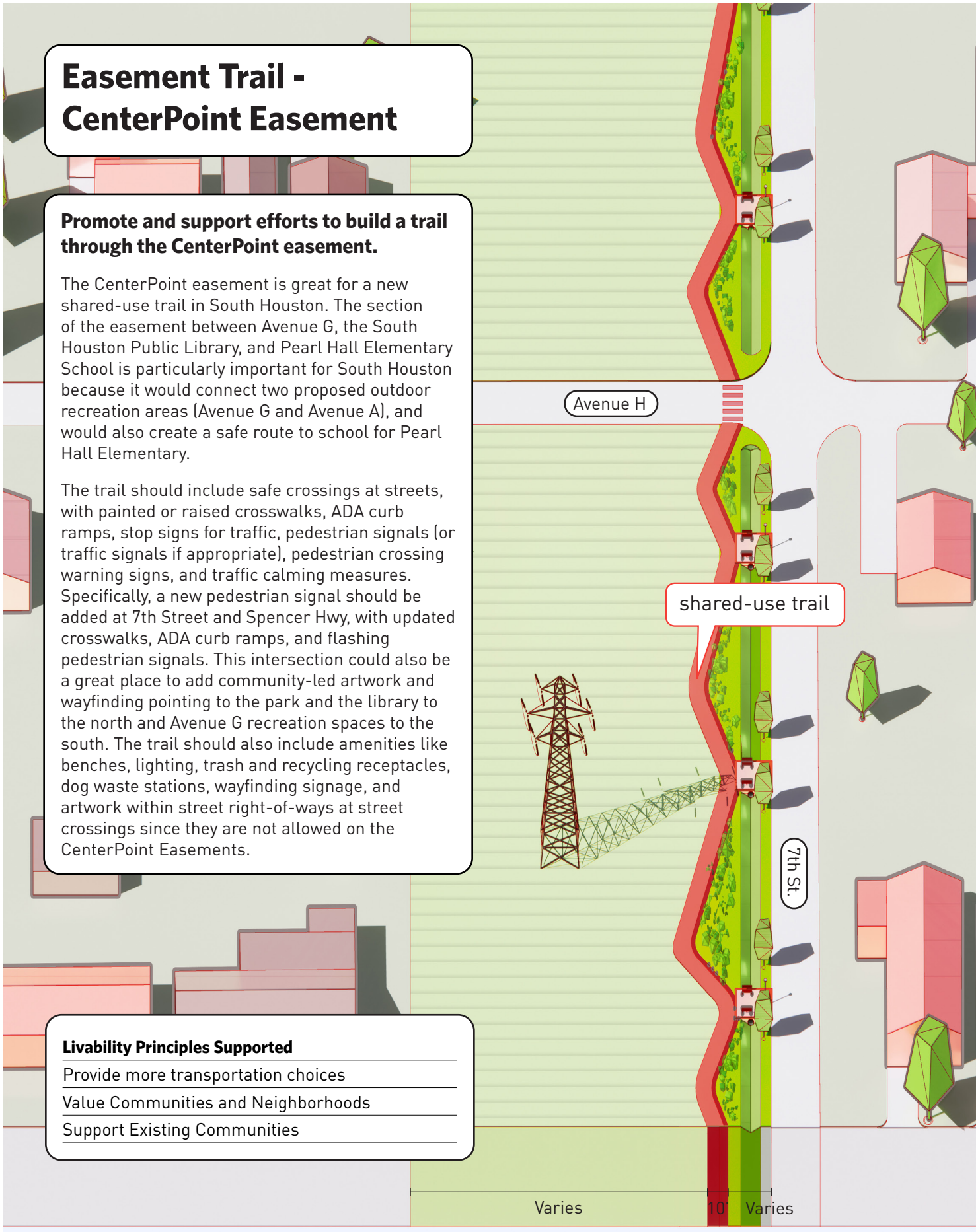
Provide more transportation choices
Value Communities and Neighborhoods
Support Existing Communities

Easement Trail - CenterPoint Easement

Promote and support efforts to build a trail through the CenterPoint easement.

The CenterPoint easement is great for a new shared-use trail in South Houston. The section of the easement between Avenue G, the South Houston Public Library, and Pearl Hall Elementary School is particularly important for South Houston because it would connect two proposed outdoor recreation areas (Avenue G and Avenue A), and would also create a safe route to school for Pearl Hall Elementary.

The trail should include safe crossings at streets, with painted or raised crosswalks, ADA curb ramps, stop signs for traffic, pedestrian signals (or traffic signals if appropriate), pedestrian crossing warning signs, and traffic calming measures. Specifically, a new pedestrian signal should be added at 7th Street and Spencer Hwy, with updated crosswalks, ADA curb ramps, and flashing pedestrian signals. This intersection could also be a great place to add community-led artwork and wayfinding pointing to the park and the library to the north and Avenue G recreation spaces to the south. The trail should also include amenities like benches, lighting, trash and recycling receptacles, dog waste stations, wayfinding signage, and artwork within street right-of-ways at street crossings since they are not allowed on the CenterPoint Easements.



Livability Principles Supported
Provide more transportation choices
Value Communities and Neighborhoods
Support Existing Communities

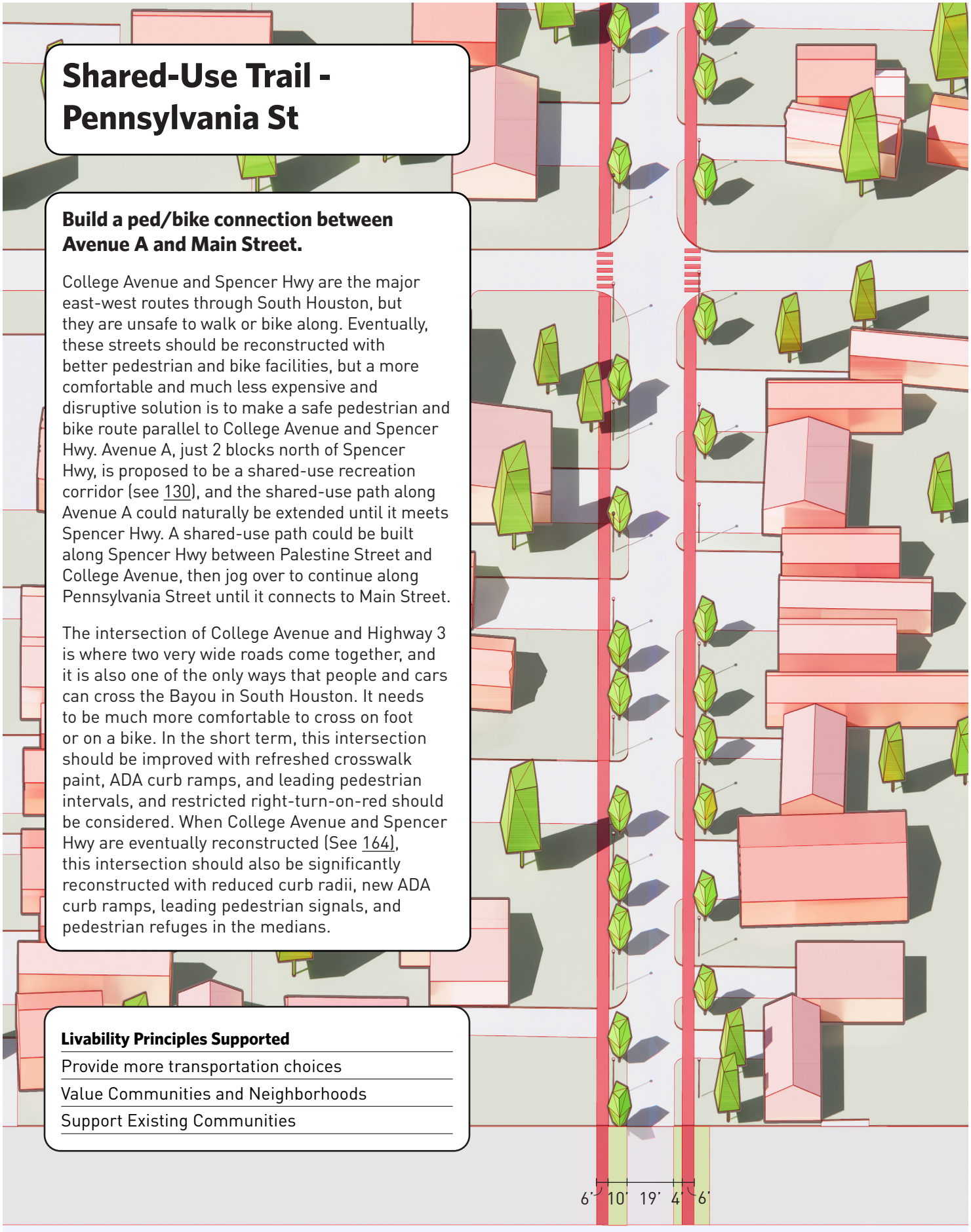
Shared-Use Trail - Pennsylvania St

Build a ped/bike connection between Avenue A and Main Street.

College Avenue and Spencer Hwy are the major east-west routes through South Houston, but they are unsafe to walk or bike along. Eventually, these streets should be reconstructed with better pedestrian and bike facilities, but a more comfortable and much less expensive and disruptive solution is to make a safe pedestrian and bike route parallel to College Avenue and Spencer Hwy. Avenue A, just 2 blocks north of Spencer Hwy, is proposed to be a shared-use recreation corridor (see 130), and the shared-use path along Avenue A could naturally be extended until it meets Spencer Hwy. A shared-use path could be built along Spencer Hwy between Palestine Street and College Avenue, then jog over to continue along Pennsylvania Street until it connects to Main Street.

The intersection of College Avenue and Highway 3 is where two very wide roads come together, and it is also one of the only ways that people and cars can cross the Bayou in South Houston. It needs to be much more comfortable to cross on foot or on a bike. In the short term, this intersection should be improved with refreshed crosswalk paint, ADA curb ramps, and leading pedestrian intervals, and restricted right-turn-on-red should be considered. When College Avenue and Spencer Hwy are eventually reconstructed (See 164), this intersection should also be significantly reconstructed with reduced curb radii, new ADA curb ramps, leading pedestrian signals, and pedestrian refuges in the medians.

Livability Principles Supported
Provide more transportation choices
Value Communities and Neighborhoods
Support Existing Communities



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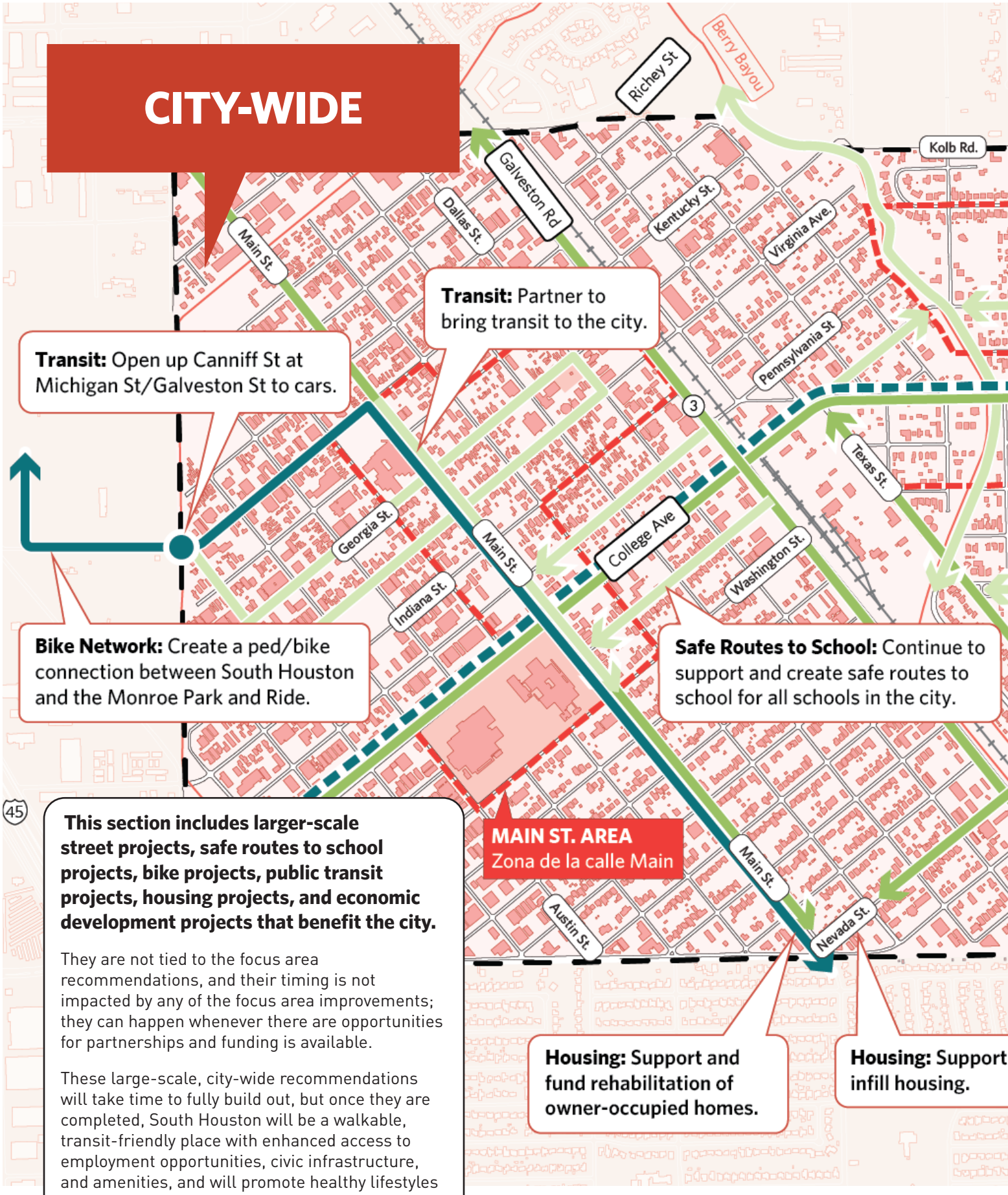
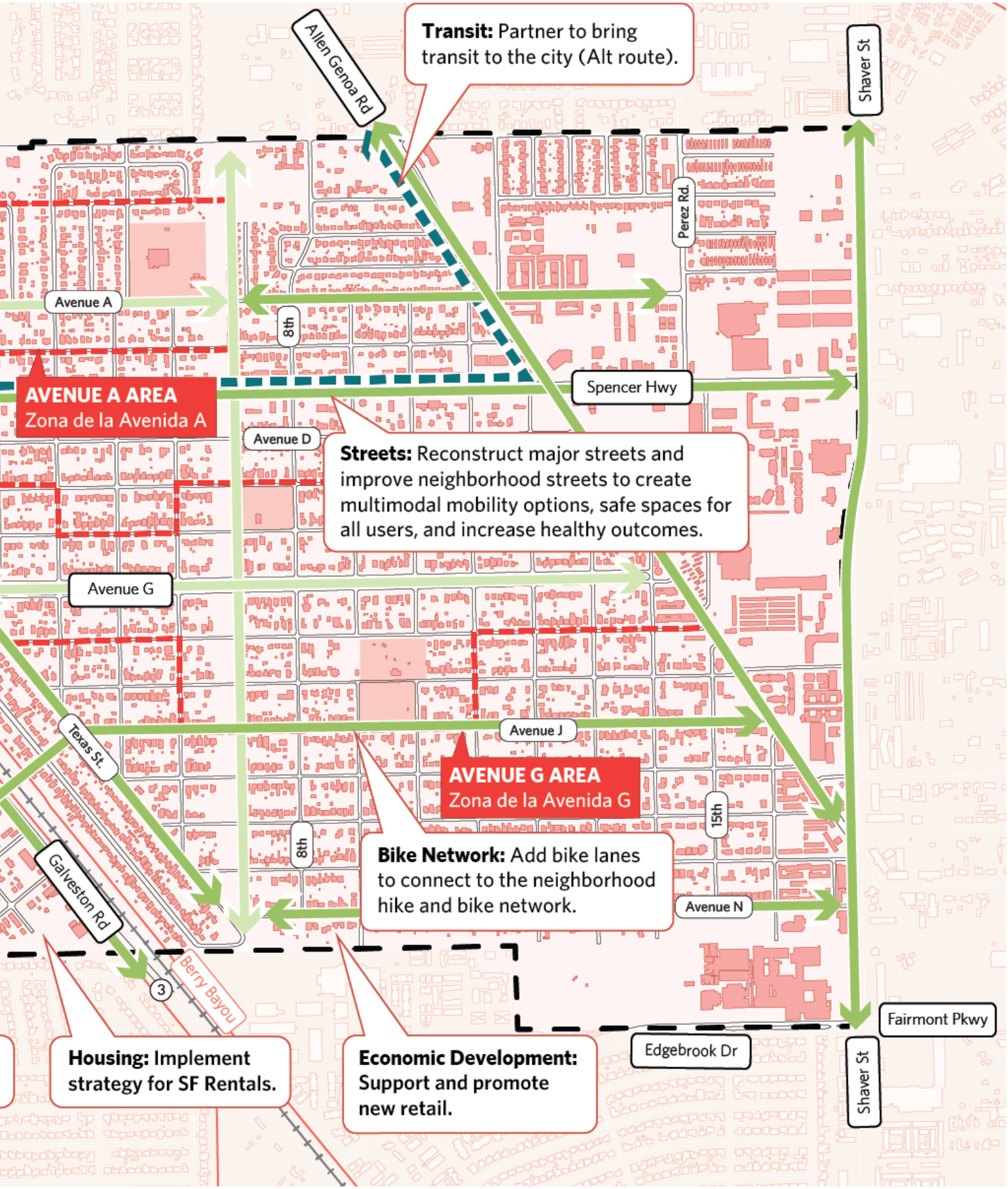


This section includes larger-scale street projects, safe routes to school projects, bike projects, public transit projects, housing projects, and economic development projects that benefit the city.

They are not tied to the focus area recommendations, and their timing is not impacted by any of the focus area improvements; they can happen whenever there are opportunities for partnerships and funding is available.

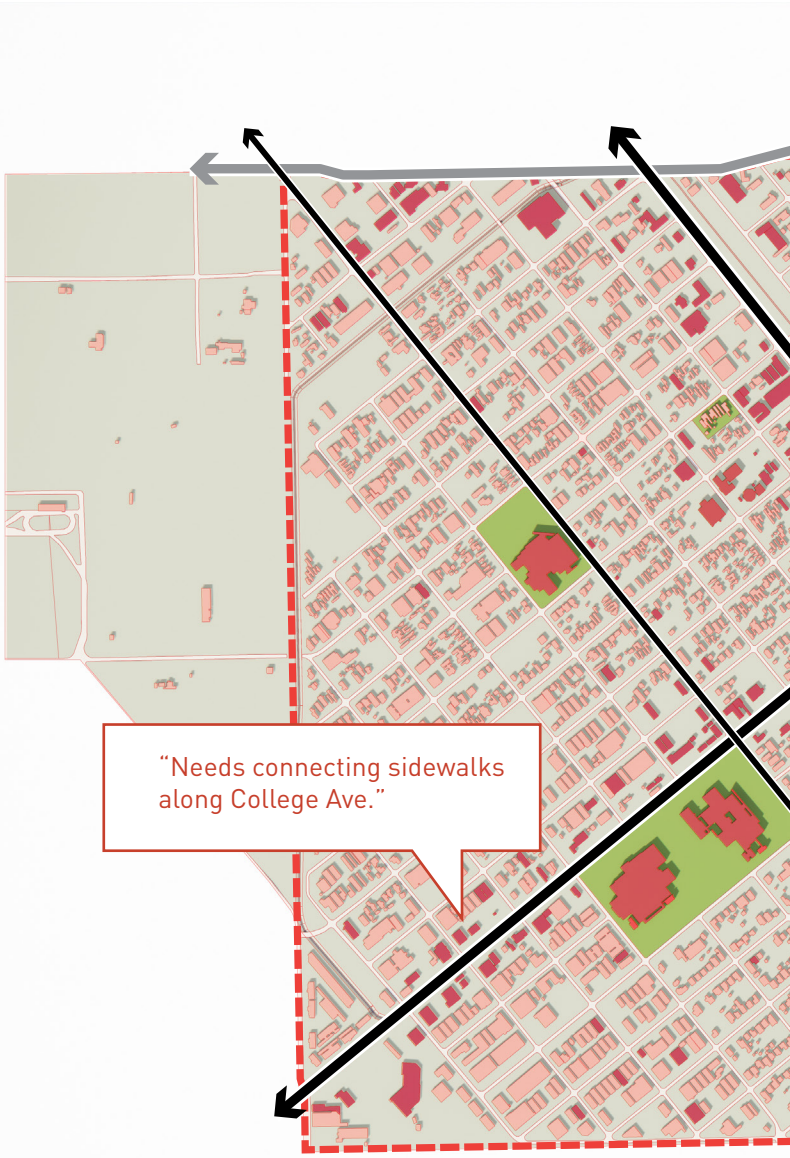
These large-scale, city-wide recommendations will take time to fully build out, but once they are completed, South Houston will be a walkable, transit-friendly place with enhanced access to employment opportunities, civic infrastructure, and amenities, and will promote healthy lifestyles and improve the residents' quality of life.


Transit: Partner to bring transit to the city (Alt route).
Allen Genoa Rd
Shaver St
Perez Rd.
Avenue A
8th
AVENUE A AREA
Zona de la Avenida A
Spencer Hwy
Avenue D
Streets: Reconstruct major streets and improve neighborhood streets to create multimodal mobility options, safe spaces for all users, and increase healthy outcomes.
Avenue G
Texas St.
Avenue J
AVENUE G AREA
Zona de la Avenida G
15th
8th
Bike Network: Add bike lanes to connect to the neighborhood hike and bike network.
Galveston Rd
Avenue N
Berry Bayou
3
Fairmont Pkwy
Edgebrook Dr
Shaver St
Housing: Implement strategy for SF Rentals.
Economic Development: Support and promote new retail.

Streets

The analysis of existing conditions and the feedback the project team received both made it clear that the whole city is in need of street improvements that make it safer for everyone.

Each street project will start with an additional traffic study to determine the right level of interventions improve safety for all users. A major street like College Avenue will require a different treatment than a neighborhood street because of its current and desired level of service, its proximity to homes and businesses, and its right-of-way dimension. These recommended improvements to the street network of South Houston create multimodal options and safe spaces for all, increase healthy outcomes, and make South Houston streets safe spaces for driving, walking, biking, and rolling.



Livability Principles Supported

Provide more transportation choices
Value Communities and Neighborhoods
Support Existing Communities

Legend

- Major Street Reconstruction
- Minor Street Improvements


"improve streets; add more sidewalks."
"Need sidewalks with trees along Spencer Hwy."
"Need more sidewalks everywhere in this area."

Major Street Reconstruction

Major streets have high volumes of travel because they connect the city to surrounding amenities and jobs. Some major corridors are state-owned streets that require partnerships to improve them, like Hwy 3 and the South Houston portion of Wrinkler Drive which are owned by the Texas Department of Transportation (TxDOT).

Major streets need safe, separated spaces for people to walk and roll, like protected bike lanes and 6-foot sidewalks or 10'+ wide shared-use paths on each side of the street, wide landscaped buffers between the street and the sidewalk, street trees to provide shade and protection from vehicles, adequate pedestrian-scale lighting to provide a sense of safety, ADA curb ramps at intersections, improved street crossings, and medians, if applicable.

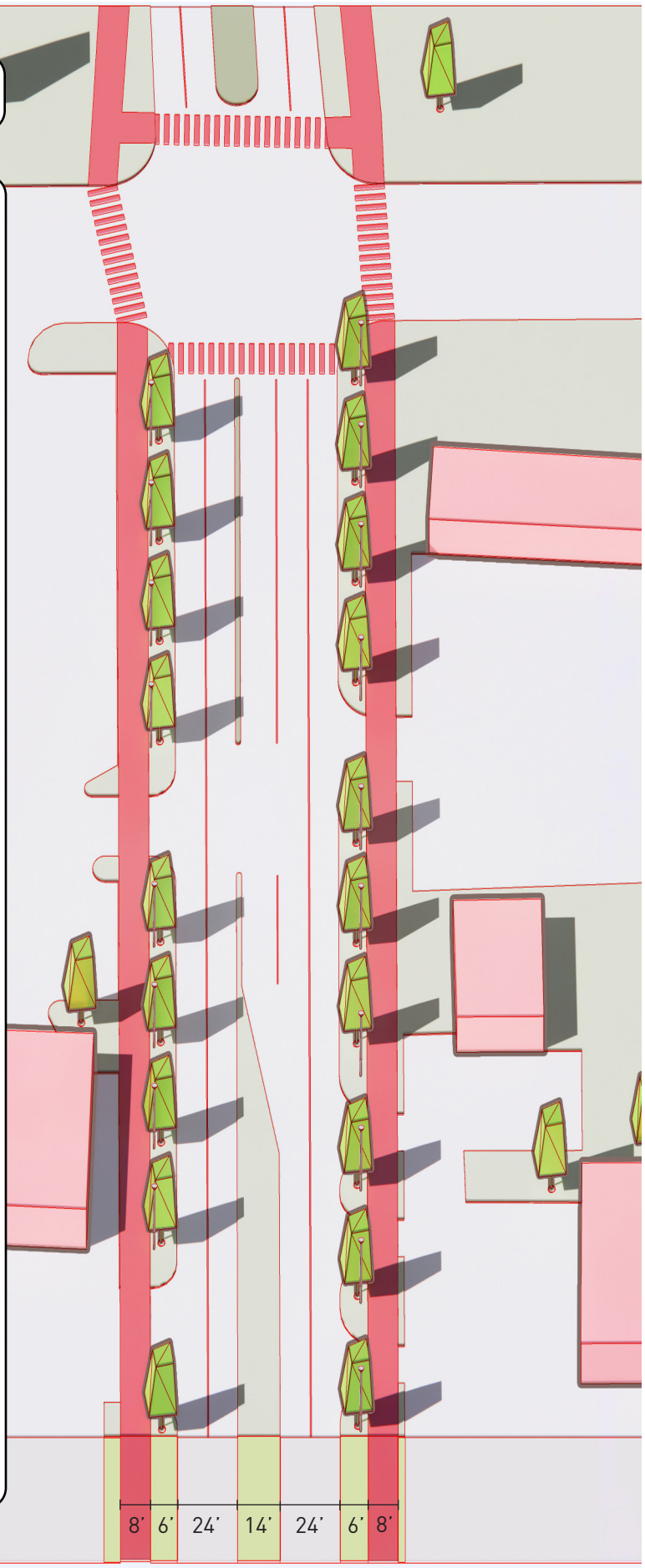
Major streets also need to function well for cars, and each will require a traffic study. If ROW availability is limited, space for people to walk and roll should be prioritized over preserving traffic lanes, which might mean reducing lanes.

Primary major roadways to focus on:

- Reconstruct College Avenue to include 10'+ wide shared-use paths and shade trees on both sides (requires reducing lanes).
- Reconstruct Spencer Hwy to include 10'+ wide shared-use paths and shade trees on both sides (requires reducing lanes).
- Reconstruct Allen Genoa Rd. to include 10'+ wide shared-use paths, shade trees, and lighting (requires reducing lanes).
- Add sidewalks, wider buffers, and protective barriers along the existing bike lanes, shade trees, and lighting along Hwy 3.

Secondary major roadways to focus on:

- Add 8'+ wide shared-use paths, shade trees, and lighting along Shaver Street.
- Reconstruct Winkler Dr. to include 10'+ wide shared-use paths and shade trees on both sides (requires reducing lanes).



Neighborhood Street Improvements

Neighborhood streets are the lifeline for neighborhood connectivity and are often safer for walking and rolling. While a few streets in the focus areas are prioritized as recreation spaces or connectors, all neighborhood streets in South Houston need improvements to be safe and inviting.

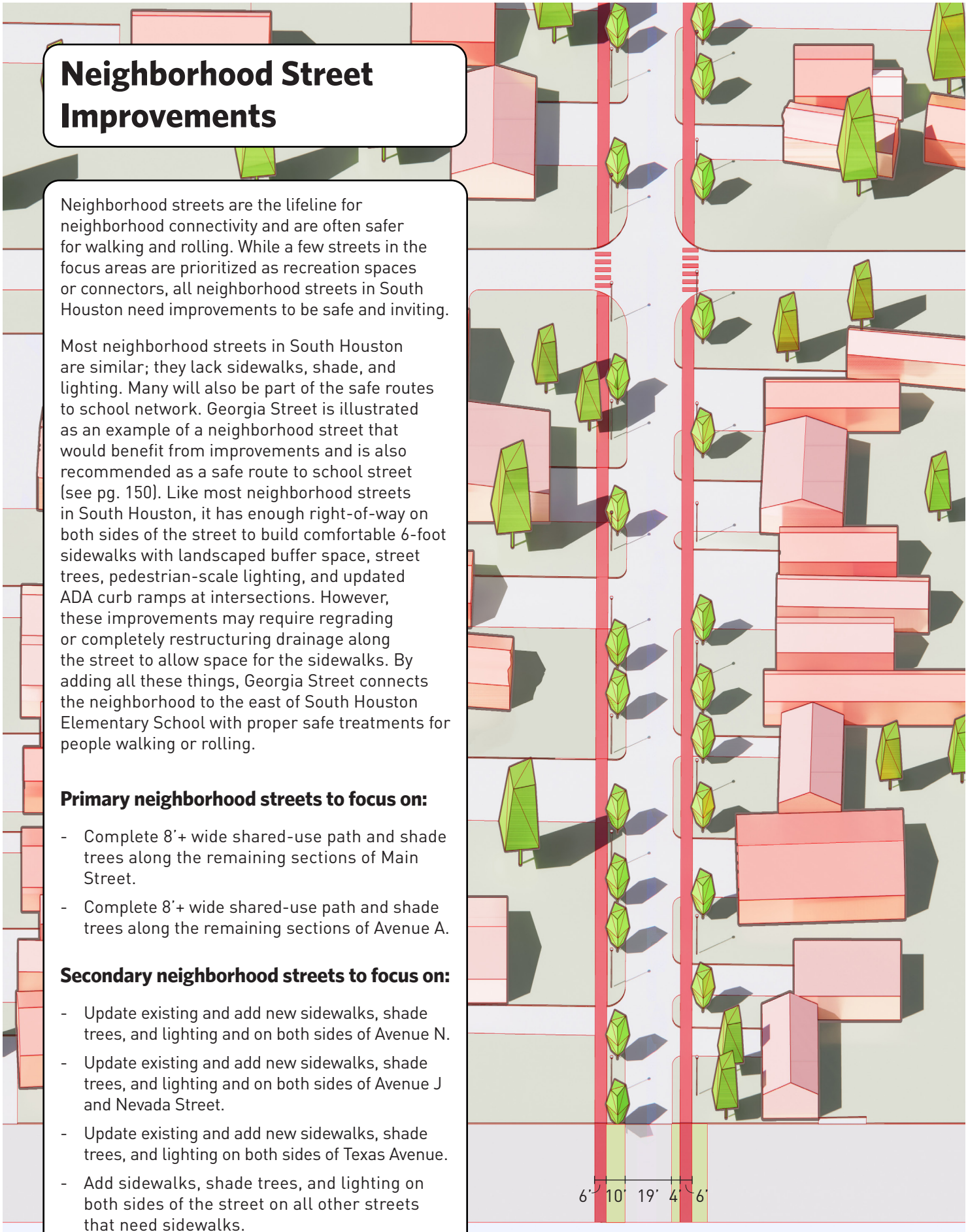
Most neighborhood streets in South Houston are similar; they lack sidewalks, shade, and lighting. Many will also be part of the safe routes to school network. Georgia Street is illustrated as an example of a neighborhood street that would benefit from improvements and is also recommended as a safe route to school street (see pg. 150). Like most neighborhood streets in South Houston, it has enough right-of-way on both sides of the street to build comfortable 6-foot sidewalks with landscaped buffer space, street trees, pedestrian-scale lighting, and updated ADA curb ramps at intersections. However, these improvements may require regrading or completely restructuring drainage along the street to allow space for the sidewalks. By adding all these things, Georgia Street connects the neighborhood to the east of South Houston Elementary School with proper safe treatments for people walking or rolling.

Primary neighborhood streets to focus on:

- Complete 8'+ wide shared-use path and shade trees along the remaining sections of Main Street.
- Complete 8'+ wide shared-use path and shade trees along the remaining sections of Avenue A.

Secondary neighborhood streets to focus on:

- Update existing and add new sidewalks, shade trees, and lighting and on both sides of Avenue N.
- Update existing and add new sidewalks, shade trees, and lighting and on both sides of Avenue J and Nevada Street.
- Update existing and add new sidewalks, shade trees, and lighting on both sides of Texas Avenue.
- Add sidewalks, shade trees, and lighting on both sides of the street on all other streets that need sidewalks.



Safe Routes to School

Safe Routes to School is an initiative that promotes walking and biking to school by improving pedestrian and bike infrastructure. This recommendation builds on the streets recommendation; these routes should be prioritized for street and intersection safety within a mile radius of each school that South Houston students attend. Pasadena ISD does not provide bus service to students within one mile of a school, so parents have to drop off their children, or students have to walk to school.

Designing a safe route to school on a street with parking availability benefits parents that can park further away from school to avoid traffic and walk with their child to school as well as students living close enough to the safe route to school to use it to walk to school. Safe routes to school have increased safety components like 6-foot-wide sidewalks, improved intersections with wider crosswalks, updated ADA curb ramps, and pedestrian signals or flashing beacons. On streets that have a lot of student foot traffic before and after school, it may also be appropriate to construct wider sidewalks than would otherwise be built.

Georgia Street and Illinois Street are identified as examples of safe routes to school (see 150 and 167), but there are many more routes that should also be focused on.

First-priority improvements:

- Improve popular, priority signalizations not on the baseline safe routes to school routes.
- Construct at least one safe route(s) to each school.

Second-priority improvements:

- Construct a secondary set of defined routes to each school.

Third-priority improvements:

- Complete a sidewalk/crossing network within 1/4-mile walk of each school.
- Complete a sidewalk/crossing network within 1/2-mile walk of each school.

Livability Principles Supported

Provide more transportation choices

Value Communities and Neighborhoods

Support Existing Communities



Legend

First Priority Routes

Priority Intersections to Improve

1/4 mile walk from a school


"improve streets; add more sidewalks."
"Need sidewalks with trees along Spencer Hwy."
"Need more sidewalks everywhere in this area."

Bike Network

This recommendation lays out a vision for a network of bike infrastructure in South Houston that will allow people to choose to walk or bike to destinations within the city rather than drive, and can also connect to the wider regional bike network.

Currently, the only bike lane in the City is along Highway 3. It is narrow, protected only by a narrow painted buffer, and feels unsafe to use given the speed cars are driving on the highway. This bike lane should be widened and protected with a physical barrier. The shared use paths proposed for Avenue G and Avenue A in the Focus Area recommendations (see 110) also play a key role in this network.

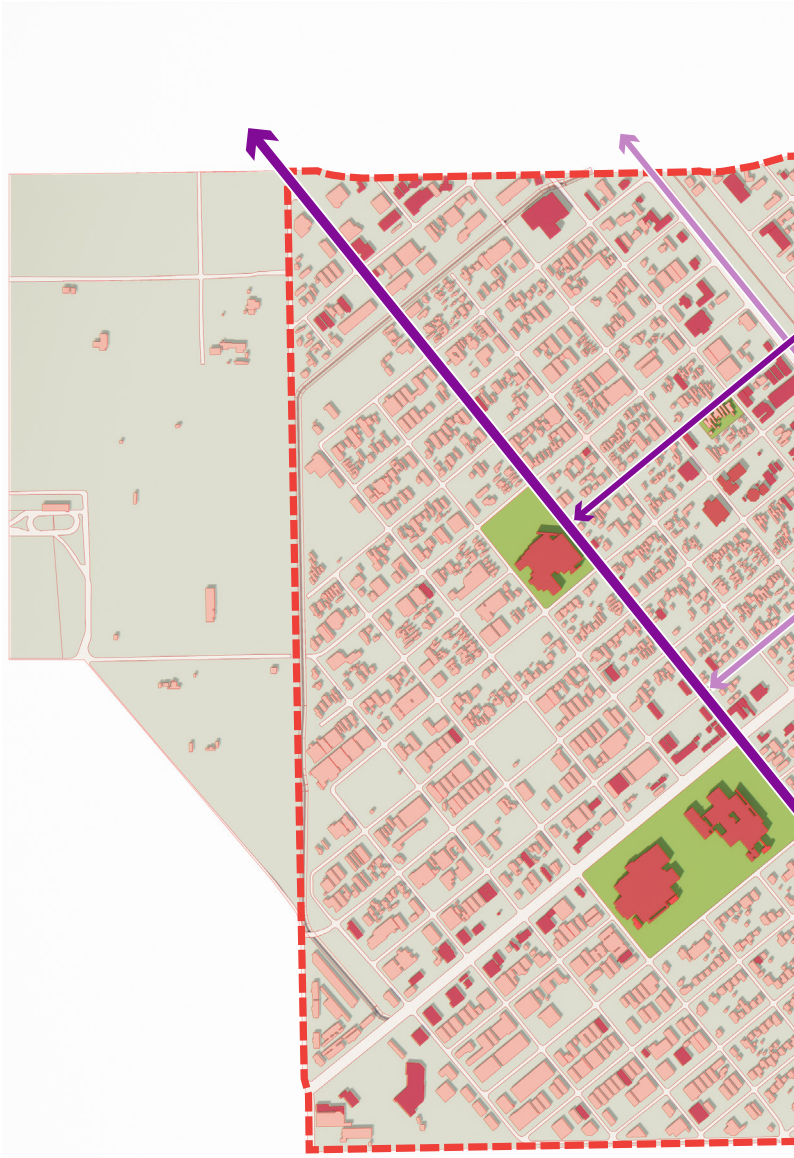
The Houston region has a network of shared-use trails along many of the bayous and has begun constructing shared-use trails along utility easements. This network includes a proposed shared-use trail through the CenterPoint easement (see 159), a shared-use trail along Berry Bayou (see 158) that could eventually connect all the way to Sims Bayou, shared-use paths on Main St, and bike lanes on Avenue J that would extend east to the Vince Bayou trail and Strawberry Park and west along Nevada Street through the proposed bike lanes in Edgebrook.

Primary list of roadways to focus on:

- Complete shared-use path on Main Street north and south of the focus area.
- Bike lanes or shared-use path on Nevada Street.
- Bike lanes or shared-use path on Avenue N.

Secondary list of roadways to focus on:

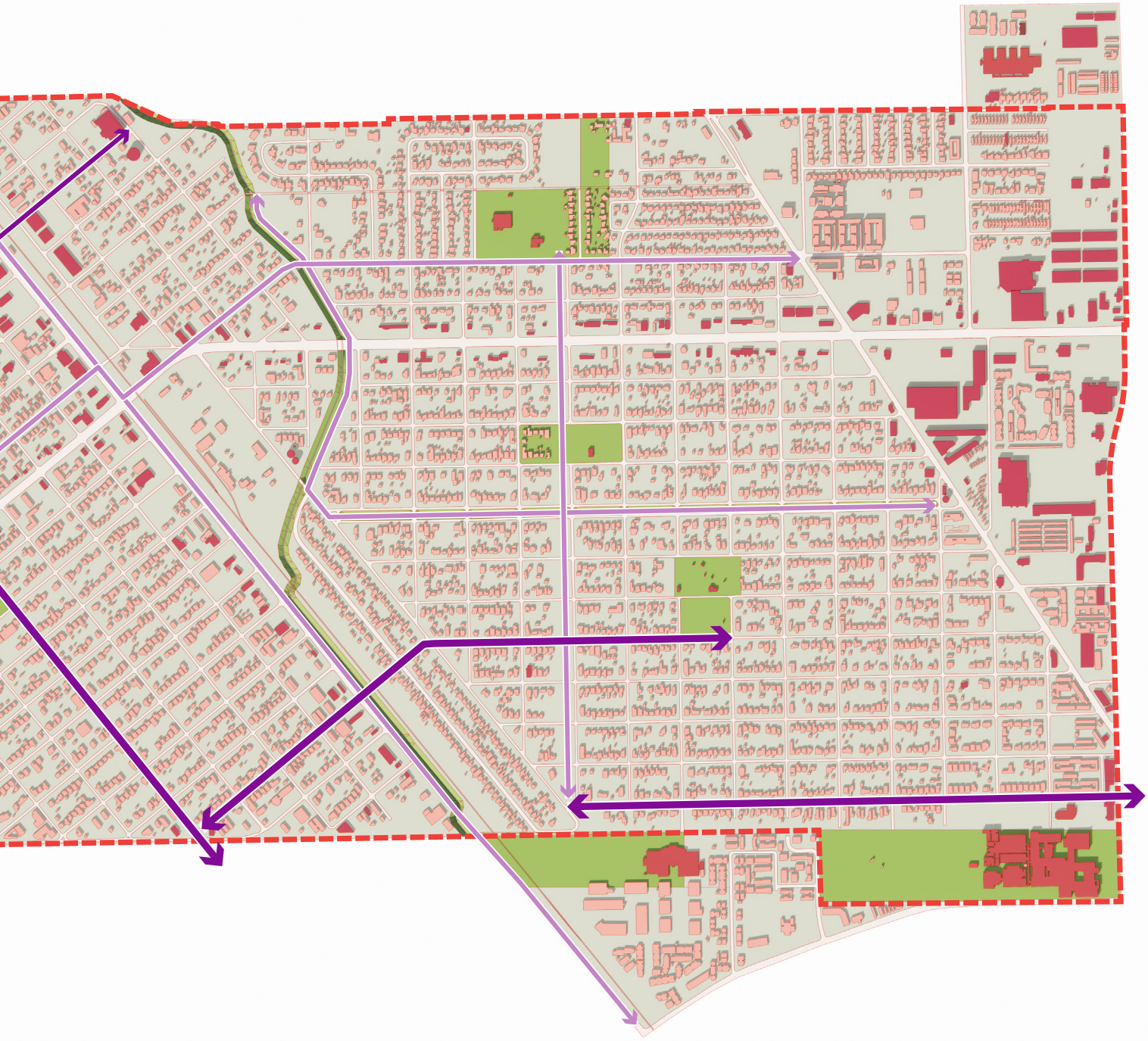
- Kentucky from Hwy 3 to Berry Bayou.
- Avenue J from Nevada Street to the South Houston Baseball league fields.



Legend

- Primary Roadways for Bike Infrastructure
- Secondary Roadways for Bike Infrastructure
- Existing Bike infrastructure or bikeways proposed in other recommendations

Livability Principles Supported
Provide more transportation choices
Value Communities and Neighborhoods
Support Existing Communities



Transit

Residents in South Houston have very little access to public transportation because it is not part of either METRO's service area or Pasadena's transportation service area. However, it is very close to Monroe Park and Ride, a transit hub with connections to Hobby Airport, Downtown, the Texas Medical Center (TMC), and other regional destinations and employment centers. The Monroe Park and Ride is a manageable walk or bike ride from parts of South Houston, but due to a road closure, it is not currently accessible. Adding a pedestrian and bike connection between Michigan Street/Galveston Street and Canniff Street would make a walk or bike to the park and ride much easier. Sidewalks or a shared-use path should also be added along Canniff Street and Monroe Pr 7 Drive to make the walk to the park and ride safer for people walking or rolling. New sidewalks or shared-use paths should also be constructed along Michigan Street between Galveston Street and Main Street and along Galveston Street between Michigan Street and Georgia Street to fully connect the park and ride to the proposed Main Street improvement projects (see 144).

The City of South Houston should also work with METRO to route a bus through South Houston. There are two main options to do this: route a bus down Main Street and connect it to the Monroe Park and Ride to bring transit access from South Houston to the many destinations that are accessible via the park and ride, or work with METRO and Pasadena to allow a route to travel through a small part of Pasadena (even if it does not make any stops along the way) so that a bus route could be established down the northern part of Allen Genoa Road to Spencer Hwy, Along College Avenue, and back up to the park and ride. This route would be more complicated to set up but would serve many more South Houston residents with useful bus connections. Bus routes that are set up in South Houston should run continuously all day, all week long, to accommodate people who do not work 9-5 jobs.

Livability Principles Supported
Provide more transportation choices
Value Communities and Neighborhoods
Support Existing Communities



Legend

- Primary Roadways for Bike Infrastructure
- Secondary Roadways for Bike Infrastructure
- Open Street Closure



Housing

South Houston's housing stock is older, and most homes in the area are single-family homes. There are also very few vacant lots in South Houston, so there are not a lot of places to build new housing. However, much of the older housing stock is susceptible to flooding or has survived flooding in the past, and much of the housing have high levels of lead paint, which is common in older housing.

This recommendation proposes rehabilitating homes that are exhibiting signs of age due to lack of upkeep, flooding, age, etc. This can be done by incentives to improve living conditions directly or by the City using their powers to help residents. The city could offer incentives to homeowners, landlords, and contractors to restore homes and could consider creating Neighborhood Empowerment Zones to allow tax rebates or abatements for housing rehabilitation.

Neighborhood Empowerment Zones could also allow permit fee reductions, tax rebates, or abatements for housing construction, especially for missing middle housing like townhomes, duplexes, and ADU's, which are great options for the limited infill lots available. Adding additional housing in the $200 to $300 price range and single-family rentals priced from $1.23 to $1.50 per square foot will help attract younger families to the area, and allowing ADUs to be constructed can help existing homeowners supplement their mortgage while providing additional housing units. Creating pre-approved structure designs for townhomes, duplexes, and single family homes can allow homes to be built faster and cheaper.

Livability Principles Supported
Promote Equitable, Affordable Housing
Value Communities and Neighborhoods

Economic Development

Support and promote new retail.

One of the Livable Centers Study principles is to "Enhance Economic Competitiveness." This can be done in South Houston through a few different strategies. The City can offer incentives for existing retail property to upgrade their facades, which will help draw customers. To support and promote new retail, the City can help establish a revolving loan fund to assist new businesses with low-interest financing for capital investments like building construction or interior buildouts, which could be piloted along Main Street and College Avenue as part of the Main Street focus area improvements (see 144)

A new retail center (potentially along Main Street) up to 43,000 square feet would be a welcome addition in South Houston, especially if it were set up to help facilitate local businesses that provide services like food and drink, healthcare (like dentists and chiropractors, etc), beauty and grooming, fitness, daycare centers, and other types of retail that are currently lacking in the area. This could be set up as a business incubator space that could be subsidized to help establish and support these small, local businesses. Having more of these types of businesses will help South Houston attract even more commercial activity, including large chains and other, more established businesses, and can open up lower rental areas to mom-and-pop shops and overall provide more services for South Houston residents.

Livability Principles Supported
Enhance Economic Copmetitiveness
Coordinate Policies and Leverage Investment

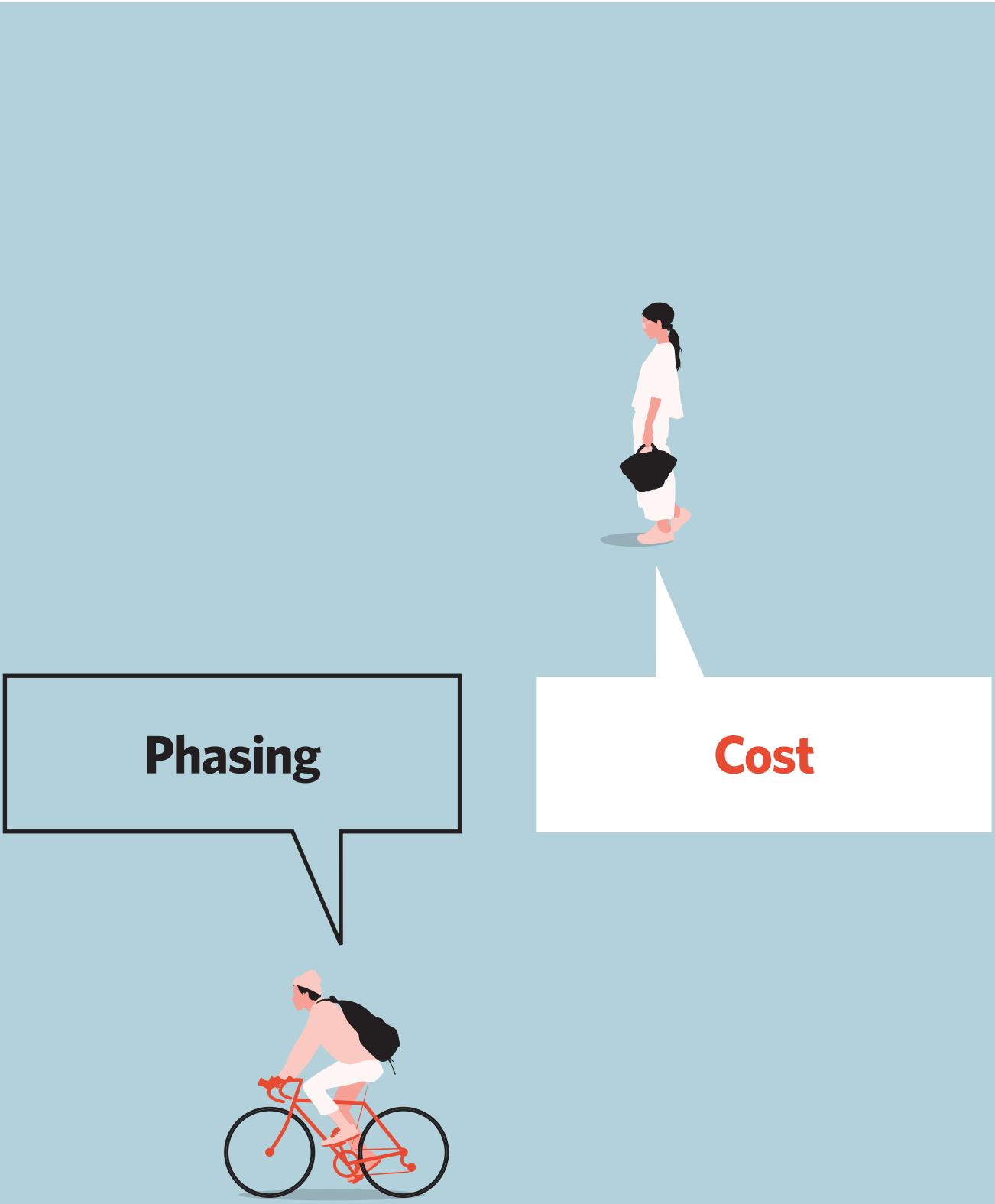
IMPLEMENTATION



Priority

Construction




Phasing
Cost

Recommendation Matrix

Focus Area Recommendations

Recommendation	Phase	Intervention	Type	Potential Partners
Avenue G Focus Area				
Convert Ave G into a neighborhood promenade	Good	Convert two-way street to one-way vehicular 11-foot lane street. Demo and repave 8' feet for shared use path along Ave G on each side of the drainage channel. The shared-use path requires 3' of separation from vehicular traffic that includes a physical barrier such as parking stops, leaving a 5-foot one-way shared-use path.	Project	City of South Houston Public Works, HC Precinct 2, H-GAC, HCFCD, Trees for Houston, CenterPoint
	Better	Build a 5-6' sidewalk along Ave G on the residential side, which may require regrading ditches.	Project	
	Better	Add shade trees along the shared-use path on Avenue G	Project	
	Better	Improve and add lighting along the shared-use path on Avenue G	Project	
	Better	Add furnishings along the shared-use path on Avenue G	Project	
	Better	Add fitness stations along Avenue G where there is space at cross streets that have stop signs (protected by physical barriers)	Project	
Create community landmarks	Better	Commission a mural on the water tanks on both ends of Aveneue G in the focus area to create a community landmark	Project	City of South Houston Public Works
Create safe pedestrian connections to the softball and baseball fields	Best	Build a sidewalk from Ave G to the Girls Softball League fields and to the South Houston Baseball League fields. Includes re-building drainage where sidepaths are added. (7th St and 9th and 10th St)	Project	City of South Houston Public Works, HC Precinct 2
Improve safety at the Girls Softball Fields	Best	Increase pedestrian scale lighting at the Girls Softball fields	Project	South Houston Girls Softball Association, City of South Houston Public Works, CenterPoint
Improve ped/bike experience along Texas St.	Best	Add a trail along Texas St to connect the future trails at Berry Bayou and Avenue G	Project	City of South Houston, HC Precinct 2, Trees for Houston, Houston Parks Board, CenterPoint
		Add shading/trees along Texas St	Project	
		Add lighting along Texas St	Project	
		Rebuild the Texas St bridge at Berry Bayou to accomodate a 8' trail	Project	
Turn the open space at Avenue G and Texas Ave into a small park	Best	Turn the open space at Avenue G and Texas Ave into a small park. Consider a small playground or more fitness stations, benches, maybe a water fountain, etc	Project	City of South Houston, HC Precinct 2
Build safe intersection treatments at Avenue G and 7th St to link to a trail through the CenterPoint easement	Best	Paint crosswalks at all Avenue G and 7th St crossings to ensure that people walking and rolling can safely access the easement trail from any direction.	Project	City of South Houston, HC Precinct 2

Focus Area Recommendations

Recommendation	Phase	Intervention	Type	Potential Partners
Avenue A Focus Area				
Enhance Avenue A Park	Good	Partner with the South Houston Library to program hold more community events for people of all ages	Program	City of South Houston Public Works, Precinct 2, Houston Parks Board, CenterPoint
	Good	Add shading structure to splash pad	Project	
	Good	Add shading structure to basketball court	Project	
	Good	Improve park lighting for evening use	Project	
	Good	Upgrade playground	Project	
	Good	Add a soccer field to Avenue A Park that doubles as detention during flood events	Project	
Create safe pedestrian connections along Avenue A between Berry Bayou and the CenterPoint easement	Better	Convert the sidewalk along Avenue A into a 10' wide path connecting the Easement to Berry Bayou	Project	City of South Houston Public Works, Trees for Houston, CenterPoint
	Better	Add shade trees along Avenue A	Project	
	Better	Improve lighting along Avenue A	Project	
Integrate the South Houston Public Library with Avenue A Park	Good	Leverage the South Houston Library's rich programing with the closeness to Avenue A Park and the park's open pavilion	Program	South Houston Public Library, City of South Houston Public Works, community groups
	Good	Extend library hours	Program	
Leverage the proposed detention pond at the Merylin ditch's end as a new community recreation space	Best	Build a community trail around the proposed detention pond that connects to Avenue A	Project	City of South Houston Public Works, HC Precinct 2, Trees for Houston, Houston Parks Board, HCFCD
	Best	Build a new pocket park near the proposed detention pond with a shaded seating area	Project	

Recommendation Matrix

Focus Area Recommendations

Recommendation	Phase	Intervention	Type	Potential Partners
Main Street Focus Area				
Improve Main St. to be safer for all users	Good	Build a 8' wide shared-use path along both sides of Main St	Program	PISD, City of South Houston Public Works, HC Precinct 2, CenterPoint
	Better	Add shade trees along Main St	Project	
	Better	Improve lighting along Main St	Project	
	Best	Implement full road and drainage reconstruction to closed storm drain system along Main St. Maintain two traffic lanes only	Project	
	Best	Add some street parking along Main St interspersed with green spaces and bioswales	Project	
	Best	Enforce parking and dedicated on-street parking spaces to discourage parking	Program	
Leverage school amenities as shared community spaces	Good	Work with school district to open school playgrounds and sidewalks to the public after hours	Program	PISD, SPARK Park, City of South Houston Public Works, Houston Parks Board
Continue the work to implement safe routes to school	Good	Add 6' wide sidewalks on both sides of Georgia St from Hwy 3 to Galveston St to connect to South Houston Elementary and Improve street crossings. Update curb ramps, paint/repaint crosswalks, install traffic signals for pedestrian signals if applicable	Project	City of South Houston Public Works, HC Precinct 2, Trees for Houston, Houston Parks Board, HCFCD
	Good	Add 6' wide sidewalks on both sides of Illinois St from Hwy 3 to Main St to connect to South Houston Elementary. Improve sidewalks and street crossings. Update curb ramps, paint/repaint crosswalks, install traffic signals or pedestrian signals if applicable	Project	
	Better	Add shade trees along the safe route to school.	Project	
	Better	Add pedestrian-scale lighting along the safe routes to school.	Project	
Improve the intersection at Main St. and College Ave	Good	Repaint and widen crosswalks, decrease curb radius if possible, upgrade curb ramps to meet ADA standards, install leading pedestrian signal, consider limiting right on red	Project	City of South Houston Public Works
	Good	Include area-specific/local art at the crosswalk	Project	
Increase programming at the South Houston Community Center	Good	Create child development programs at the South Houston Community Center. It is the only public area for activities West of Hwy 3	Program	City of South Houston
Improve the South Houston City Park	Good	Incorporate food market programming around South Houston City Park	Program	City of South Houston Public Works, Precinct 2, CenterPoint
	Good	Fund art opportunities for South Houston City Park	Project	
	Better	Improve lighting at South Houston City Park	Project	
	Best	Add a splash pad to South Houston City Park	Project	
Enhance the Futbolito fields	Good	Update the sports equipment/fields	Project	City of South Houston Public Works, Precinct 2, Ramon Solis (futbolito manager)
	Better	Improve restrooms	Project	
	Better	Improve parking	Project	
Make safe connections between Main St., South Houston City Park, and Futbolito	Better	Add sidewalks between the Futbolito and South Houston City Park along Georgia St and Virginia Ave (may require full drainage reconstruction to closed storm drain system)	Project	City of South Houston Public Works, HC Precinct 2, CenterPoint
	Better	Add shade trees along Georgia St and Virginia Ave	Project	
	Better	Add pedestrian-scale lighting along Georgia st and Virginia Ave	Project	
Support local business development along Main St.	Better	Seek grant opportunities for storefront improvements	Program	City of South Houston
	Better	Add on-street parking to lower the need for on-site parking	Project	
	Best	Start a revolving loan fund for eligible businesses	Program	

Connector Recommendations

Recommendation	Phase	Intervention	Type	Potential Partners
Bayou Trail - Berry Bayou				
Partner and build a trail along Berry Bayou	Best	Build a 10' wide trail along Berry Bayou between Avenue G and Spencer Hwy	Program	City of South Houston Public Works, HC Precinct 2, HCFCD, Houston Parks Board, Trees for Houston
	Best	Add shade trees along Berry Bayou Trail	Project	
	Future - by others	Build a 10' wide trail along Berry Bayou from Spencer Hwy to connect to Sims Bayou Trail	Project	
Easement Trail - CenterPoint Easement				
Promote and support a trail through the CenterPoint easement between the Library, Avenue G, and Pearl Hall Elementary School	Best	Build a 10' wide trail along easement	Project	City of South Houston Public Works, HC Precinct 2, Trees for Houston, Houston Parks Board
	Best	Add lighting and other amenities at major street intersections	Project	
	Best	Add artwork at major street intersections	Project	
Improve the intersection at Spencer Hwy and 7th St	Best	Improve street crossing at Spenver Hwy and 7th St. Add 10'-wide crosswalks, decrease curb radius if possible, upgrade curb ramps to meet ADA standards, add pedestrian signal, consider limiting right on red	Project	City of South Houston Public Works
	Best	Art opportunities at easement, 7th St, and at intersection	Project	
Shared-Use Trail - Pennsylvania St				
Build a 10' shared-use path between Berry Bayou and Main Street parallel to College Ave	Best	Extend the10' wide Avenue A shared-use path along York St west of Berry Bayou until Spencer Hwy	Project	City of South Houston Public Works
	Best	Build 10' wide shared-use path along Pennsylvania St between Hwy 3 and Main St	Project	
Improve the intersection at College Ave at Hwy 3	Best	Repaint and widen crosswalks, decrease curb radius if possible, upgrade curb ramps to meet ADA standards, install leading pedestrian signal, consider limiting right on red		TxDOT, City of South Houston Public Works
	Best	Add sidewalks along Spencer Hwy across the railroad tracks to meet existing sidewalks starting at Texas St		
	Best	Include area-specific/local art at the crosswalk		

Recommendation Matrix

City-Wide Recommendations

Recommendation	Phase	Intervention	Type	Potential Partners
Streets				
Reconstruct major streets to create multimodal mobility options, safe space for all users, and increase healthy outcomes	First	Reconstruct College Ave. to include 10'+ wide shared-use paths and shade trees on both sides (requires reducing lanes).	Project	City of South Houston Public Works, HC Precinct 2, HCFCD, Houston Parks Board, Trees for Houston
	First	Reconstruct Spencer Hwy to include 10'+ wide shared-use paths and shade trees on both sides (requires reducing lanes).	Project	
	First	Reconstruct Allen Genoa Rd. to include 10'+ wide shared-use paths, shade trees, and lighting (requires reducing lanes).	Project	
	First	Add sidewalks, wider buffers and protective barriers along the existing bike lanes, shade trees, and lighting along Hwy 3.	Project	
	Second	Add 8'+ wide shared-use paths, shade trees, and lighting along Shaver St.	Project	
	Second	Reconstruct Winkler Dr. to include 10'+ wide shared-use paths and shade trees on both sides (requires reducing lanes).	Project	
Improve neighborhood streets to create multimodal mobility options, safe space for all users, and increase healthy outcomes	First	Complete 8'+ wide shared-use path and shade trees along the remaining sections of Main St.	Project	City of South Houston Public Works, HC Precinct 2, HCFCD, Houston Parks Board, Trees for Houston
	First	Complete 8'+ wide shared-use path and shade trees along the remaining sections of Avenue A.	Project	
	Second	Update existing and add new sidewalks, shade trees, and lighting and on both sides of Avenue N.	Project	
	Second	Update existing and add new sidewalks, shade trees, and lighting and on both sides of Avenue J and Nevada St.	Project	
	Second	Update existing and add new sidewalks, shade trees, and lighting on both sides of Texas Ave.	Project	
	Second	Add sidewalks, shade trees, and lighting on both sides of the street on all other streets that need sidewalks.	Project	
Safe Routes to School				
Continue to support and create safe routes to school for all schools in the city	First	Improve popular, priority signalizations not on the baseline safe routes to school routes	Project	City of South Houston Public Works, HC Precinct 2, Trees for Houston, Houston Parks Board
	First	Construct at least one safe route(s) to each school	Project	
	Second	Construct secondary set of defined routes to each school	Project	
	Third	Complete a sidewalk/crossing network within 1/4-mile walk of each school	Project	
	Third	Complete a sidewalk/crossing network within 1/2-mile walk of each school	Project	
Improve the intersection at Spencer Hwy and 7th St	Best	Improve street crossing at Spenver Hwy and 7th St. Add 10'-wide crosswalks, decrease curb radius if possible, upgrade curb ramps to meet ADA standards, add pedestrian signal, consider limiting right on red	Project	City of South Houston Public Works
	Best	Art opportunities at easement, 7th St, and at intersection	Project	

City-Wide Recommendations

Recommendation	Phase	Intervention	Type	Potential Partners
Bike Network				
Add bike lanes to connect to the neighborhood hike and bike network	First	Complete shared-use path on Main Street north and south of the focus area	Project	City of South Houston Public Works
	First	Bike lanes or shared-use path on Nevada Street	Project	
	First	Bike lanes or shared-use path on Avenue N	Project	
	Second	Kentucky from Hwy 3 to Berry Bayou	Project	
	Second	Avenue J from Nevada Street to the South Houston Baseball league fields	Project	
Transit				
Create a ped/bike connection between South Houston and the Monroe Park and Ride	Good	Remove roadblock on Canniff St at the intersection of Michgan St and Galveston St, remove overgrown vegetation, and add a ped/bike connection across the missing section of road where the roadblock is.	Project	City of South Houston Public Works, METRO
	Better	Add sidewalks or a shared-use trail along Canniff St and Monroed Pr Dr between the intersection of Canniff St and Michigan St/Galveston St and the park and ride. This may require reconstruction of drainage.	Project	
	Better	Add sidewalks or a shared-use path along Michigan St between Galveston St and Main St and along Galeveston St between Michigan St and Georgia St. This may require reconstruction of drainage.	Project	
	Better	Add shading/trees along Michigan St, Canniff St, Monroe Pr Dr, and Galveston St	Project	
	Better	Add lighting along Michigan St, Canniff St, Monroe Pr Dr, and Galveston St	Project	
Partner to bring transit to the city	Best	Pilot a transit route along Main St (stop at South Houston Elementary)	Program	City of South Houston Public Works, METRO, City of Pasadena
	Best	Add transit service to South Houston along Main St or along Allen Genoa, Spencer Hwy, and College Ave		
Housing				
Support and fund rehabilitation of owner-occupied homes	Better	Offer incentives for remodeling, repairs, etc	Program	City of South Houston
	Best	Consider Neighborhood Empowerment Zone to allow tax rebates / abatements for housing rehab	Policy	
Support infill housing	Best	Attract Younger families with homes priced from $200-$300 can be in the form of SFR, townhomes, duplexes, could have ADUs for additional attainable rental housing and owners' mortgage qualifying income	Program / Poject	City of South Houston, private developers
	Better	Consider Neighborhood Empowerment Zone to allow permit fee reductions / tax rebates / abatements for housing construction	Policy	
Implement strategy for SF Rentals	Best	Townhomes, Duplexes, SF homes priced from $1.23 to $1.50psf	Program / Project	City of South Houston, private developers
	Better	Create pre-approved structure designs	Program	
Housing				
Support and promote new retail	Best	Up to 43k sf - facilitating local businesses in the categories of food and drink; personal services including healthcare (dentist, chiropractor, etc.), beauty / grooming places such as various types of salons; and fitness, health and wellness businesses, such as a local cross fit, yoga, pilates, or alternative health niche businesses.	Program / Project	City of South Houston, private developers, property owners, small business assistance and financing organizations and agencies
	Better	Seed revolving loan fund to assist new businesses with low-interest financing	Program	
	Better	Offer incentives for existing retail property facade and rehabs	Program	

Cost Estimates

The following section details the estimated cost for all of the South Houston Livable Centers Recommendations. We divided the different Matrices to fit their type, and programs, projects, and policies differ in the style of costing.

The cost estimates show order of magnitude costs for each project recommended. These costs are reflected in 2023 dollars. These costs may vary depending on the outcome of further engineering and design proposals. Project costs should be used for project planning purposes.

Avenue G Focus Area Recommendations

GOOD

Recommendation	Item	Description	Unit Cost	Unit	Quanity	Subtotal
Convert Ave G into a neighborhood promenade.	Prep ROW	Removal of shrubs, trees, debris, etc. clearing ROW	$ 5,000	STA	120	$ 600,000 **
	Excavation	Excavation for proposed roadway and general grading	$ 30	CY	8,444	$ 253,330 **
	Removals	Removal of the existing 19' asphalt road	$ 11	SY	25,333	$ 278,663 **
	Traffic control plan	TCP is based on per month unit cost	$ 7,000	MO	6	$ 42,000 **
	Storm water pollution prevention plan	Lump Sum estimate.	$ 72,000	LS	1	$ 72,000 **
	New Pavement or Asphalt	New 19' pavement/asphalt layer that inlcudes both one-way lane, barrier space and shared use path	$ 650	SY	25,333	$ 16,466,667 **
	*Shared Path Separation	Physical temporary barrier	$ 7	LF	11,500	$ 80,500
	*Shared Path Separation	3' Landscape swale or native platings - include range of prices on low vs high end	$ 11	LF	11,500	$ 126,500
	Landscaping	Sodding	$ 11	SY	3,833	$ 42,167
	Traffic Signals	Installation of new stop signs throughout the corridor. Direct replacement of existing number of stop signs.	$ 750	EA	44	$ 33,000
				Recommendation Subtotal		***$ 282,167***
GOOD: Subtotal (Without Repavement)						**$ 282,167**
GOOD: Subtotal (With Repavement)**						**$ 17,994,826****
The GOOD option can be done without repaving, but repaving will result in a higher quality ped /bike shared path and street.						
20% Contingency (With Repavement)**						**$ 3,598,965****
GOOD: TOTAL (With Repavement)**						**$ 21,593,792 ****

*There are two types of barrier separation at different price points

BETTER

Recommendation	Item	Description	Unit Cost	Unit	Quanity	Subtotal
Convert Ave G into a neighborhood promenade	New Pavement or Asphalt (Includes all construction prep work. See GOOD table for breakdown)		$ 72,000	LS	1	$ 17,712,660**
	Storm water pollution prevention plan		$ 72,000	LS	1	$ 72,000
	New sidewalks	6' sidewalks	$ 7	SF	44,500	$ 311,500
	Crosswalks	Continental striping	$ 1,000	EA	24	$ 24,000
	Curb Ramps		$ 5,000	EA	48	$ 240,000
	*Increase residential ditch drainage capacity		$ 30	SF	44,500	$ 1,335,000
	Mailbox relocation		$ 1,100	EA	115	$ 126,500
	Street trees	32 of trees per block	$ 1,000	EA	370	$ 370,000
	Lighting element	16 of lights per block	$ 12,000	EA	185	$ 2,220,000
	Benches	benches per block	$ 3,000	EA	46	$ 138,000
	Outdoor Fitness Equipment	fitness stations sets at every intersection	$ 3,000	EA	21	$ 63,000
			Recommendation Subtotal			***$ 4,900,000***
Create community landmarks	Create a Community Art Grant	2 prices for local artists as part of the Community Art Grant	$ 10,000	EA	2	$ 20,000
			Recommendation Subtotal			***$ 20,000***
BETTER: Subtotal (Without Repavement)						$ 4,920,000
BETTER: Subtotal (With Repavement)						$ 22,914,827 **
If not included in the GOOD option, repavement should be done in the BETTER option.						
20% Contingency (With Repavement)**						$4,582,965**
BETTER: TOTAL (With Repavement)**						$27,497,792 **

*Drainage modification recommends increasing the capacity of the residential ditch. Depending on the project assesment, there may be a need of inline detention

BEST

Recommendation	Item	Description	Unit Cost	Unit	Quanity	Subtotal
Turn the open space at Avenue G and Texas Ave into a small park	Crosswalks	10' wide four-way continental striping crosswalks	$ 1,000	EA	4	$ 4,000
	Pedestrian Signal or Equivalent	Crossing signals at major intersections, preferibly flashing beacons	$ 175,000	EA	2	$ 350,000
			Recommendation Subtotal			***$ 354,000***

Build safe intersection treatments at Avenue G and 7th St to link to a trail through the CenterPoint easement	Prep ROW		$ 5,000	STA	3	$ 15,000
	Excavation		$ 30	CY	2,556	$ 76,667
	Removals		$ 11	SY	7,670	$ 84,370
	Storm water pollution prevention plan		$ 3	LF	300	$ 900
	New grading		$ 30	CY	2,556	$ 76,667
	Playground	Children Play Area (2-5 yr. and 6-12 yr.)	$ 220,000	EA	1	$ 220,000
	Outdoor Fitness Equipment	1 Fitness station set	$ 3,000	EA	1	$ 3,000
	Benches	benches for one park space	$ 3,000	EA	2	$ 6,000
	Water Fountain	1 Water Fountain	$ 5,000	EA	1	$ 5,000
			Recommendation Subtotal			***$ 487,603***
Create safe pedestrian connections to the softball and baseball fields	Storm water pollution prevention plan		$ 3.00	LF	3,500	$ 10,500
	Excavation		$ 30	CY	1,170	$ 35,100
	Removals		$ 11	SY	3,888	$ 42,768
	Sidewalks	6" sidewalks on one side of the street	$ 7	SF	14,000	$ 98,000
	Crosswalks	Continental striping	$ 1,000	EA	8	$ 8,000
	Curb Ramps		$ 5,000	EA	8	$ 40,000
	*Drainage modification/ Culverts		$ 150,000	LS	1	$ 150,000
	Utility Adjustments		$ 50,000	LS	1	$ 50,000
	Traffic Signals		$ 750	EA	8	$ 6,000
			Recommendation Subtotal			***$ 440,368***
Improve safety at the Girls Softball Fields	Lighting element	Pedestrian scale lighting for the permieter and inside of the softball fields	$ 12,000	EA	28	$ 336,000
			Recommendation Subtotal			***$ 336,000***
Improve ped/bike experience along Texas St.	Storm water pollution prevention plan		$ 3	LF	1580	$ 4,740
	Excavation		$ 30	CY	580	$ 17,400
	Removals		$ 11	SY	1,756	$ 19,311
	New shared path	10' shared path between Berry Bayou and Avenue G	$ 140	SY	1,756	$ 245,778
	Curb Ramps		$ 3,000	EA	15	$ 45,000
	Traffic signals		$ 1,000,000	EA	6	$ 6,000,000
	Irrigation of Street Trees	Install Underground irrigation system including wet connection and meter	$ 30,000	LS	1	$ 30,000
	*Draingage modification/ Culverts		$ 75,000	LS	1	$ 75,000
	Street trees		$ 1,000	EA	45	$ 45,000
	*Lighting element		$ 12,000	EA	28	$ 336,000
			Recommendation Subtotal			***$ 6,818,229***
BEST: Subtotal						$ 8,436,200
20% Contingency						$ 1,687,240
BEST: TOTAL						$ 10,123,440

*Drainage modification might be required after project assesment

*CenterPoint agreement needed

Avenue A Focus Area Recommendations

GOOD

Recommendation	Item	Description	Unit Cost	Unit	Quanity	Subtotal
Enhance Avenue A Park	Shading structure	125' x 100' shading structure for the existing splash pad	$ 1,000,000	EA	1	$ 1,000,000
	Shading structure	120' x 100' shading structure for the existing basketball courts	$ 960,000	EA	1	$ 960,000
	Site Lighting (pole lights, security lighting, trail lighting)	"Pedestrian scale lighting fixtures along the paths and the existing and proposed amenities"	$ 15,000	EA	50	$ 750,000
	Playground	Children Play Area (2-5 yr. and 6-12 yr.)	$ 220,000	EA	1	$ 220,000
	Youth size soccer field	Sport Fields	$ 58,052	EA	2	$ 116,104
	Soccer field as detention	Volume needed for detention	$ 30	CY		
	Sports field lighting	Solar lighting fixtures	$ 16,500	EA	10	$ 165,000
			Recommendation Subtotal			***$ 3,211,104***
Integrate the South Houston Public Library with Avenue A Park	Community event grant	Grant for activities to be held at the library	$ 10,000	EA	1	$ 10,000
			Recommendation Subtotal			***$ 10,000***
GOOD: Subtotal						$ 3,221,104
20% Contingency						$ 644,221
GOOD: TOTAL						$ 3,865,325

BETTER

Recommendation	Item	Description	Unit Cost	Unit	Quanity	Subtotal
Create safe pedestrian connections along Avenue A between Berry Bayou and the CenterPoint easement (Sidewalk maintenance project)	Storm water pollution prevention plan		$ 3.00	LF	1,900	$ 5,700
	Prep ROW		$ 5,000	STA	190	$ 950,000
	Traffic control plan		$ 7,000	MO	4	$ 28,000
	Excavation	Existing 4' sidewalk	$ 30	CY	557	$ 16,710
	Removals	Existing 4' sidewalk	$ 11	SY	1,688	$ 18,568
	Sidewalks	8-10' shared path along the north side of Avenue A	$ 7	SF	7,600	$ 53,200
	Crosswalks	Continental Striping	$ 1,000	EA	8	$ 8,000
	*Draingage modification/ Culverts		$ 95,000	LS	1	$ 95,000
	Curb Ramps	Curb ramps needed	$ 3,000	EA	11	$ 33,000
	Street trees	Trees along Avenue A	$ 1,000	EA	55	$ 55,000
	Lighting fixture	Lighting provided by CenterPoint	$ 12,000	EA	40	$ 480,000
			Recommendation Subtotal			***$ 1,743,178***
BETTER: Subtotal						$ 1,743,178
20% Contingency						$ 348,636
BETTER: TOTAL						$ 2,091,814

*During project assesment, the Merylin Ditch detention pond may provide extra detention capacity

BEST						
Recommendation	Item	Description	Unit Cost	Unit	Quanity	Subtotal
Leverage the proposed detention pond at the Merylin ditch's end as a new community recreation space	Prep ROW		$ 5,000	STA	7	$ 35,000
	Excavation		$ 30	CY	77	$ 2,310
	Removals		$ 11	SY	233	$ 2,563
	Traffic control plan		$ 7,000	MO	3	$ 21,000
	Storm water pollution prevention plan		$ 3	LF	700	$ 2,100
	Shared use path	10 ft shared path around the detention basin	$140	SY	233	$ 32,620
			Recommendation Subtotal			***$ 95,593***
BEST: Subtotal						$ 95,593
20% Contingency						$ 19,119
BEST: TOTAL						$ 114,712

Main Street Focus Area Recommendations

GOOD						
Recommendation	Item	Description	Unit Cost	Unit	Quanity	Subtotal
Improve Main St. to be safer for all users	Prep Row		$ 5,000	STA	55	$ 275,000
	Excavation		$ 30	CY	2,420	$ 72,600
	Removals		$ 11	SY	7,333	$ 80,663
	Traffic Control Plan		$ 7,000	MO	6	$ 42,000
	Storm water pollution prevention plan		$ 3	LF	5,500	$ 16,500
	Shared Path	8' Shared Path on both sides of Main St	$ 7	SF	5,500	$ 38,500
	Crosswalks	Continental Striping	$ 1,000	EA	8	$ 8,000
	*Drainage modification/ culverts		$ 275,000	LS	1	$ 275,000
	Curb Ramps	Curb ramps needed	$ 5,000	EA	42	$ 210,000
			Recommendation Subtotal			***$ 1,018,263***
Continue the work to implement safe routes to school	Crosswalks	Continental Striping	$ 1,000	EA	28	$ 28,000
	Traffic Signals		$ 750	EA	30	$ 22,500
			Recommendation Subtotal			***$ 50,500***
Increase programming at the South Houston Community Center	Community event grant	Grant for activities to be held at the community center	$ 10,000	EA	1	$ 10,000
			Recommendation Subtotal			***$ 10,000***

Improve the South Houston City Park	Create a Community Art Grant	2 prices for local artists as part of the Community Art Grant	$ 6,000	EA	2	$ 12,000
	Food trucks plan		$ 20,000	EA	1	$ 20,000
			Recommendation Subtotal			***$ 32,000***
Leverage school amenities as shared community spaces	SPARK park plan		$ 20,000	EA	1	$ 20,000
			Recommendation Subtotal			***$ 20,000***
GOOD: Subtotal						$ 1,130,763
20% Contingency						$ 226,153
GOOD: TOTAL						$ 1,356,916

*Drainage modification might be required after project assesment

BETTER

Recommendation	Item	Description	Unit Cost	Unit	Quanity	Subtotal
Improve Main St. to be safer for all users	Street trees	Trees along Main St	$ 1,000	EA	85	$ 85,000
	Lighting element		$ 12,000	EA	60	$ 720,000
			Recommendation Subtotal			***$ 805,000***
Make safe connections between Main St., South Houston City Park, and Futbolito	Excavation		$ 30	CY	4,740	$ 142,200
	Removals		$ 11	SY	14,355	$ 157,905
	Traffic control plan		$ 7,000	MO	8	$ 56,000
	Storm water pollution prevention plan		$ 3	LF	12,920	$ 38,760
	Sidewalks	6' on both sides of Georgia St and Virginia St	$ 7	SF	12,920	$ 90,440
	Crosswalks	Continental striping	$ 1,000	EA	64	$ 64,000
	Curb Ramps		$ 5,000	EA	128	$ 640,000
	*Drainage modification/ culverts		$ 646,000	LS	1	$ 646,000
	Utility Adjustments		$ 213,200	LS	1	$ 213,200
	Traffic Signals	"44 Stop Signs 4 School Zone Signs 2 Other"	$ 750	EA	50	$ 37,500
	Mailbox Relocation		$ 1,100	EA	140	$ 154,000
	Street trees		$ 1,000	EA	224	$ 224,000
	Lighting element		$ 12,000	EA	168	$ 2,016,000
			Recommendation Subtotal			***$ 4,480,005***

Implement safe routes to school for South Houston Elementary and Mathys Elementary School	Excavation		$ 30	CY	3,226	$ 96,780
	Removals		$ 11	SY	9,777	$ 107,547
	Traffic control plan		$ 7,000	MO	6	$ 42,000
	Storm water pollution prevention plan		$ 3	LF	11,000	$ 33,000
	Curb Ramps		$ 5,000	EA	52	$ 260,000
	Sidewalks	6' sidewalks on Virginia St and Illinois St	$ 7	SF	66,000	$ 462,000
			Recommendation Subtotal			***$ 1,001,327***
Improve the South Houston City Park	Light fixtures	Possibility for solar lighting	$ 12,000.00	EA	1	$ 12,000
			Recommendation Subtotal			***$ 12,000***
BETTER: Subtotal						$ 6,298,332
20% Contingency						$ 1,259,666
BETTER: TOTAL						$ 7,557,998
*Drainage modification might be required after project assesment						

BEST

Recommendation	Item	Description	Unit Cost	Unit	Quanity	Subtotal
Improve Main St. to be safer for all users	Prep Row		$ 5,000	STA	55	$ 275,000
	Excavation		$ 30	CY	2,420	$ 72,600
	Removals		$ 11	SY	7,333	$ 80,663
	Storm water pollution prevention plan		$ 3	LF	5,500	$ 16,500
	Traffic control plan		$ 7,000	MO	8	$ 56,000
	Crosswalks	Continental striping	$ 1,000	EA	25	$ 25,000
	*Draingage modification/ Culverts		$ 275,000	LS	1	$ 275,000
	Curb Ramps		$ 5,000	EA	42	$ 210,000
	Utility Adjustments		$ 90,750	LS	1	$ 90,750
	Traffic Signals	"25 Stop Signs 2 Speed Limit Signs 7 School Zone Signs Other Parking and Truck Restriction Signs"	$ 750	EA	40	$ 30,000
	Landscaping	Sodding	$ 11	SY	7,333	$ 80,663
	Benches	# of Benches	$ 3,000	EA	50	$ 150,000
	Sidewalks	8' Sidewalks	$ 7	SF	5,500	$ 38,500
			Recommendation Subtotal			***$ 1,400,676***

Continue the work to implement safe routes to school	Street trees	$ 1,000	EA	176	$ 176,000
	Lighting	$ 12,000	EA	132	$ 1,584,000
		Recommendation Subtotal			***$ 1,760,000***
Improve the South Houston City Park	Excavation	$ 30	CY	110	$ 3,300
	Removals	$ 11	SY	333	$ 3,663
	Traffic control plan	$ 7,000	MO	1	$ 7,000
	Storm water pollution prevention plan	$ 3	LF	551	$ 1,653
	Splash Pad	$ 300,000	EA	1	$ 300,000
		Recommendation Subtotal			***$ 315,616***
BEST: Subtotal					$ 3,476,292
20% Contingency					$ 695,258
BEST: TOTAL					$ 4,171,550

*Drainage modification might be required after project assesment

Connector Recommendations

Recommendation	Item	Description	Unit Cost	Unit	Quanity	Subtotal
Bayou Trail - Berry Bayou						
Partner and build a trail along Berry Bayou	Construction prep along the length of the trail	Clearing vegetation/preparing soil and stormwater pollution protection along the length of the trail, and construction barricades	$ 5.65	LF	5250	$ 29,663
	Street crossings prep and removal	Necessary removal on two sides of the street at each road crossing, construction signs, and traffic control	$ 9,450	EA	7	$ 66,150
	Trails - paving & drainage	Excavation, 6" deep concrete trail, subgrade	$ 112.90	SY	8166	$ 921,941
	Street crossings	ADA ramps, collapsible bollards, wooden bollards, and crosswalks	$ 6,250	EA	7	$ 43,750
	Trailheads/ Neighborhood Gateways	ADA rams, collapsible bollards, wooden bollards, and landscaping	$ 27,000	EA	2	$ 54,000
	Under Crossing - Freeway/ Major Street		$ 300,000	EA	1	$ 300,000
	Under Street Crossing - Minor Street		$ 150,000	EA	2	$ 300,000
	Pedestrian Signal or Equivalent		$ 175,000	EA	1	$ 175,000
	Landscaping	Sodding	$ 11	SY	8166	$ 89,826
	Lighting	Solar luminaires spaces at 100'	$ 12,000	EA	53	$ 636,000
	trail trees?		$ 1,000	EA	210	$ 210,000
Subtotal						$ 2,826,330
20% Contingency						$ 565,266
TOTAL						$ 3,391,596

Connector Recommendations

Recommendation	Item	Description	Unit Cost	Unit	Quanity	Subtotal
Easement Trail - CenterPoint Easement						
Promote and support a trail through the CenterPoint easement between the Library, Avenue G, and Pearl Hall Elementary School	Construction prep along the length of the trail	Clearing vegetation/preparing soil and stormwater pollution protection along the length of the trail, and construction barricades	$ 5.65	LF	5800	$ 32,770
	Street crossings prep and removal	Necessary removal on two sides of the street at each road crossing, construction signs, and traffic control	$ 9,450	EA	15	$ 141,750
	Trails - paving & drainage	Excavation, 6" deep concrete trail, subgrade	$ 112.90	SY	9022	$ 1,018,584
	Street crossings	ADA ramps, collapsible bollards, wooden bollards, and crosswalks	$ 6,250	EA	30	$ 187,500
	Trailheads/ Neighborhood Gateways	ADA rams, collapsible bollards, wooden bollards, and landscaping	$ 27,000	EA	4	$ 108,000
	Landscaping	Sodding	$ 11	SY	9022	$ 99,242
	Lighting	Lighting Fixtures at major intersections	$ 12,000	EA	190	$ 2,280,000
	Artwork Grant	Creating an artwork grant; application and distribution process	$ 10,000	EA	1	$ 10,000
			Recommendation Subtotal			***$ 3,877,846***
Add a pedestrian signal or equivalent crossing at Spencer Hwy and 7th St	Excavation		$ 30	CY	81	$ 2,430
	Removals		$ 11	SY	244	$ 2,684
	Traffic control plan		$ 7,000	MO	2	$ 14,000
	Storm water pollution prevention plan		$ 3	LF	650	$ 1,950
	Traffic signals	New safe crossing at 7th and Spencer Hwy. Updated autio ped signalization (APS)	$ 1,000	EA	4	$ 4,000
	Lighting	Lighting at all four corners	$ 12,000	EA		
	Curb ramps		$ 3,000	EA	8	$ 24,000
	Crosswalks	Continental striping	$ 3,000	EA	4	$ 12,000
	Pedestrian Signal or Equivalent	Crossing signal	$ 175,000	EA	1	$ 175,000
	Artwork Grant	Creating an artwork grant; application and distribution process	$ 10,000	EA	1	$ 10,000
			Recommendation Subtotal			***$ 246,064***
Subtotal						$ 4,123,910
20% Contingency						$ 824,782
TOTAL						$ 4,948,692

Connector Recommendations

Recommendation	Item	Description	Unit Cost	Unit	Quanity	Subtotal
Shared-Use Trail - Pennsylvania St						
Build a 10' shared-use path between Berry Bayou and Main Street parallel to College Ave	Prep Row		$ 5,000	STA	78	$ 390,000
	Traffic Control Plan		$ 7,000	MO	6	$ 42,000
	Storm water pollution prevention plan		$ 3	LF	7800	$ 23,400
	Excavation		$ 30	CY	4000	$ 120,000
	Removals		$ 11	SY	12133	$ 133,463
	Shared Path	10' shared path along the north side of York St	$ 7	SF	39,000	$ 273,000
	Crosswalks	Continental striping	$ 1,000	EA	8	$ 8,000
	Curb Ramps	Curb ramps needed	$ 3,000	EA	19	$ 57,000
	Traffic Signals	Typical traffic signage relocation like stop signs, speed limit, and others	$ 750	EA	13	$ 9,750
	Mailbox Relocation		$ 1,100	EA	4	$ 4,400
			Recommendation Subtotal			***$ 671,013***
Improve the intersection at College Ave at Hwy 3	Excavation		$ 30	CY	28	$ 840
	Removals		$ 11	SY	86	$ 946
	Traffic control plan		$ 7,000	MO	3	$ 21,000
	Storm water pollution prevention plan		$ 3	LF	500	$ 1,500
	Crosswalks	Continental striping	$ 1,000	EA	4	$ 4,000
	Curb Ramps	Curb ramps needed	$ 3,000	EA	8	$ 24,000
	Pedestrian Signal or Equivalent		$ 175,000	EA	4	$ 700,000
			Recommendation Subtotal			***$ 752,286***
Subtotal						$ 1,423,299
20% Contingency						$ 284,660
TOTAL						$ 1,707,959

City-Wide Recommendations

Recommendation	Item	Description	Unit Cost	Unit	Quanity	Subtotal
Streets						
Reconstruct major streets to create multimodal mobility options, safe space for all users, and increase healthy outcomes	Prep Row		$ 5,000	STA	143	$ 715,000
	Excavation		$ 30	CY	14,219	$ 426,570
	Removals		$ 11	SY	43,088	$ 473,968
	*Traffic Control Plan		$ 7,000	MO	16	$ 112,000
	Storm water pollution prevention plan		$ 25,000	MI	2.6	$ 65,000
	New sidewalks	10" Shared Use Paths	$ 7	SF	277000	$ 1,939,000
	Crosswalks	Continental striping	$ 1,000	EA	20	$ 20,000
	Curb Ramps		$ 3,000	EA	200	$ 600,000
	Landscaping	Sodding	$ 11	SY	43,088	$ 473,968
	Utility Adjustments		$ 457,050	LS	1	$ 457,050
	Storm Sewer		$ 1,385,000	LS	1	$ 1,385,000
	Traffic Signals/Signage		$ 1,000,000	LS	12	$ 12,000,000
	Street trees	Trees along College Ave	$ 1,000	EA	1,108	$ 1,108,000
	Lighting fixture	Lighting provided by CenterPoint	$ 3,000	EA	277	$ 831,000
Subtotal						$ 19,904,056
20% Contingency						$ 3,980,811
TOTAL						$ 23,884,867

*Drainage modification might be required after project assesment

City-Wide Recommendations

Recommendation	Item	Description	Unit Cost	Unit	Quanity	Subtotal
Streets						
Improve neighborhood streets to create multimodal mobility options, safe space for all users, and increase healthy outcomes	Prep Row		$ 5,000	STA	41	$ 205,000
	Excavation		$ 30	CY	3,043	$ 91,290
	Removals		$ 11	SY	9,222	$ 101,442
	Traffic Control Plan		$ 7,000	MO	6	$ 42,000
	Storm water pollution prevention plan		$ 3	LF	4,150	$ 12,450
	New sidewalks	6' Sidewalks on both sides of Georgia St	$ 7	SF	49,800	$ 348,600
	Crosswalks	Continental striping	$ 1,000	EA	40.0	$ 40,000
	Curb Ramps		$ 5,000	EA	80.0	$ 400,000
	Landscaping	Sodding	$ 11	SY	9,222	$ 101,442
	Mailbox Relocation		$ 1,100	EA	70	$ 77,000
	Utility Adjustments		$ 136,950	LS	1	$ 136,950
	*Draingage modification/ Culverts?		$ 415,000	LS	1	$ 415,000
	Traffic Signals/Signage		$ 750	EA	24	$ 18,000
	Street trees	Approximately 8 trees per block (7 blocks)	$ 1,000	EA	332	$ 332,000
	Lighting fixture	Approximately 6 light fictures per block (7 blocks)	$ 3,000	EA	83	$ 249,000
Subtotal						$ 2,570,174
20% Contingency						$ 514,035
TOTAL						$ 3,084,209
*Drainage modification might be required after project assesment						
*Minor Street may not need a traffic control plan. To be determined by engineer						

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Benefits

Air Quality Benefits Estimate

The ultimate goal of the recommendations outlined in this document is to make South Houston more livable. This includes several benefits, one of which is improved air quality.

This document shows that there are many ways to improve livability in the area, from small things like adding and improving sidewalks and crosswalks, to adding a bus route and connections to the park and ride, to developing a bike network that includes high-comfort trails along the Bayou and the CenterPoint easement. Almost every recommendation in this plan focuses on improving walkability, bikability, and safety to improve non-car transit use within the area itself.

Almost all of the recommendations have some positive implication for the transit mode share of South Houston, meaning that as these recommendations are implemented, the area should see a decrease in the number of car-based trips that are made. This will also result in a reduction of toxic emissions that come from cars, like Nitric Oxides (NOx), Carbon emissions like CO_2, and Hidrocarbon emissions (HC).

The calculations below attempt to make a rough (and simplified) estimate of potential emissions reductions for the area, using trip data from the study area, an estimated mode shift rate, average miles per trip in the area, and national emissions averages.

Data and Assumptions

The basis of these emissions calculations are the number of total trips and the average miles per trip for the area (collected from the H-GAC Origin-Destination table).

The Mode Shift Rate is the rate of change from car trips to non-car trips. This is the major variable in these calculations and is an estimation.

Because the recommendations range from small implementations to large scale development plans with highly variable results depending on how they are implemented, we have decided to run the calculations based on a high mode shift estimate and a lower mode shift estimate.

To gauge an appropriate high mode shift rate, we compared South Houston's current percentage of workers who drive alone to work (73.5%) to Magnolia Park (70.6%). Magnolia Park is similar density and demographics to South Houston and has greater access to transit and trails, so it is a reasonable area to aspire to. The 3.1% difference between South Houston and Magnolia Park driving rates, multiplied by two (6.2%)because non-car trips are much likely to be non-work trips, is used in our calculations as the high mode shift rate.

For the low mode shift rate, we assumed a third of the high mode shift (two percent) because there are a lot of long trips happening in South Houston and not very many trips happening under a mile. Converting long car trips to active transportation will depend greatly on the areas around South Houston and the amount of public transportation provided.

Emissions data is the estimated average emissions of all vehicles, based on:

Results

Annual Emissions Reduction (Low Estimate):

NOx: 1,317 Kg/year

CO_2: 10,054 Kg/year

HC: 699 Kg/year

Annual Emissions Reduction (High Estimate):

NOx: 4,083 Kg/year

CO_2: 31,167 Kg/year

HC: 2,166 Kg/year

Resources Used

Trip Data:
2017 Origin-Destination Data, H-GAC Travel Demand Model

Mode Share (for Comparison):
ACS Transportation to Work Variables

Emissions Data:
Estimated U.S. Average Vehicle Emissions Rates per Vehicle by Vehicle Type Using Gasoline and Diesel, from the US Department of Transportation

Equivalencies:
Greenhouse Gas Equivalencies Calculator, Environmental Protection Agency

Mode (Bike / Ped / Transit) Share Shift (Low Estimate)

	Equation	Quantity	Units
Total Trips	a	48,358	trips/day
Mode Shift Rate	b	2	%
Trips Reduced	c=a*b	967	trips
Miles per Trip	d	7.12	miles/trip
Vehicle Miles Traveled Replaced	e=c*d	6,886	miles
Emmissions Factors			
NOx	f	0.524	g/mile
CO_2	g	4.000	g/mile
HC	h	0.278	g/mile
Total Emmissions Reduced			
NOx	i=e*f/1000	3.61	kg
CO_2	j=e*g/1000	27.54	kg
HC	k=e*h/1000	1.91	kg
Annual Conversion	l	365	days/year
Annual Emmissions Reduction*			
NOx	m=i*l	1,317	kg/year
CO_2	n=j*l	10,054	kg/year
HC	o=k*l	699	kg/year

***This is roughly equivalent to greenhouse gas emissions from:**

- 8,323,043 miles driven by an average gasoline-powered passenger vehicle
- 365,330 gallons of gasoline consumed
- 632 homes' electricity use for one year

or greenhouse gas emissions avoided by:

- 140,535 trash bags of waste recycled instead of landfilled
- 123,053 incandescent lamps switched to LEDs

or carbon sequestered by:

- 21.5 acres of U.S. forests preserved from conversion to cropland in one year

Mode (Bike / Ped / Transit) Share Shift (High Estimate)

	Equation	Quantity	Units
Total Trips	a	48,358	trips/day
Mode Shift Rate	b	6.2	%
Trips Reduced	c=a*b	2,998	trips
Miles per Trip	d	7.12	miles/trip
Vehicle Miles Traveled Replaced	e=c*d	21,347	miles
Emmissions Factors			
NOx	f	0.524	g/mile
CO_2	g	4.000	g/mile
HC	h	0.278	g/mile
Total Emmissions Reduced			
NOx	i=e*f/1000	11.19	kg
CO_2	j=e*g/1000	85.39	kg
HC	k=e*h/1000	5.93	kg
Annual Conversion	l	365	days/year
Annual Emmissions Reduction*			
NOx	m=i*l	4,083	kg/year
CO_2	n=j*l	31,167	kg/year
HC	o=k*l	2,166	kg/year

***This is roughly equivalent to greenhouse gas emissions from:**

- 16,233,673 miles driven by an average gasoline-powered passenger vehicle
- 712,558 gallons of gasoline consumed
- 1,232 homes' electricity use for one year

or greenhouse gas emissions avoided by:

- 274,106 trash bags of waste recycled instead of landfilled
- 240,008 incandescent lamps switched to LEDs

or carbon sequestered by:

- 42 acres of U.S. forests preserved from conversion to cropland in one year

SOUTH HOUSTON

Livable Centers Study

Houston-Galveston Area Council

SOUTH HOUSTON

HARRIS COUNTY PRECINCT 2

ADRIAN GARCIA COMMISSIONER

REVIVE 2 THRIVE

Community Revitalization Initiative