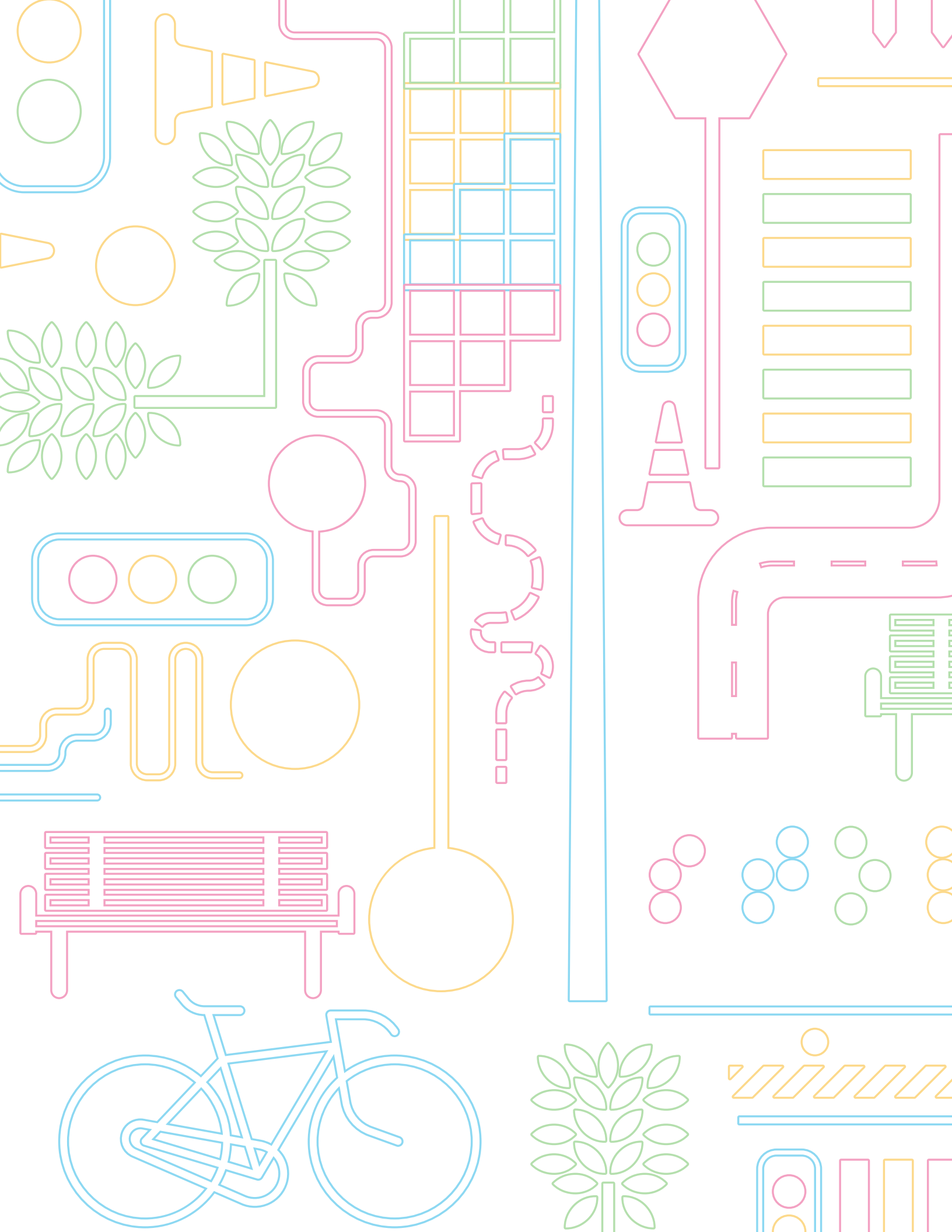


EAST ALDINE



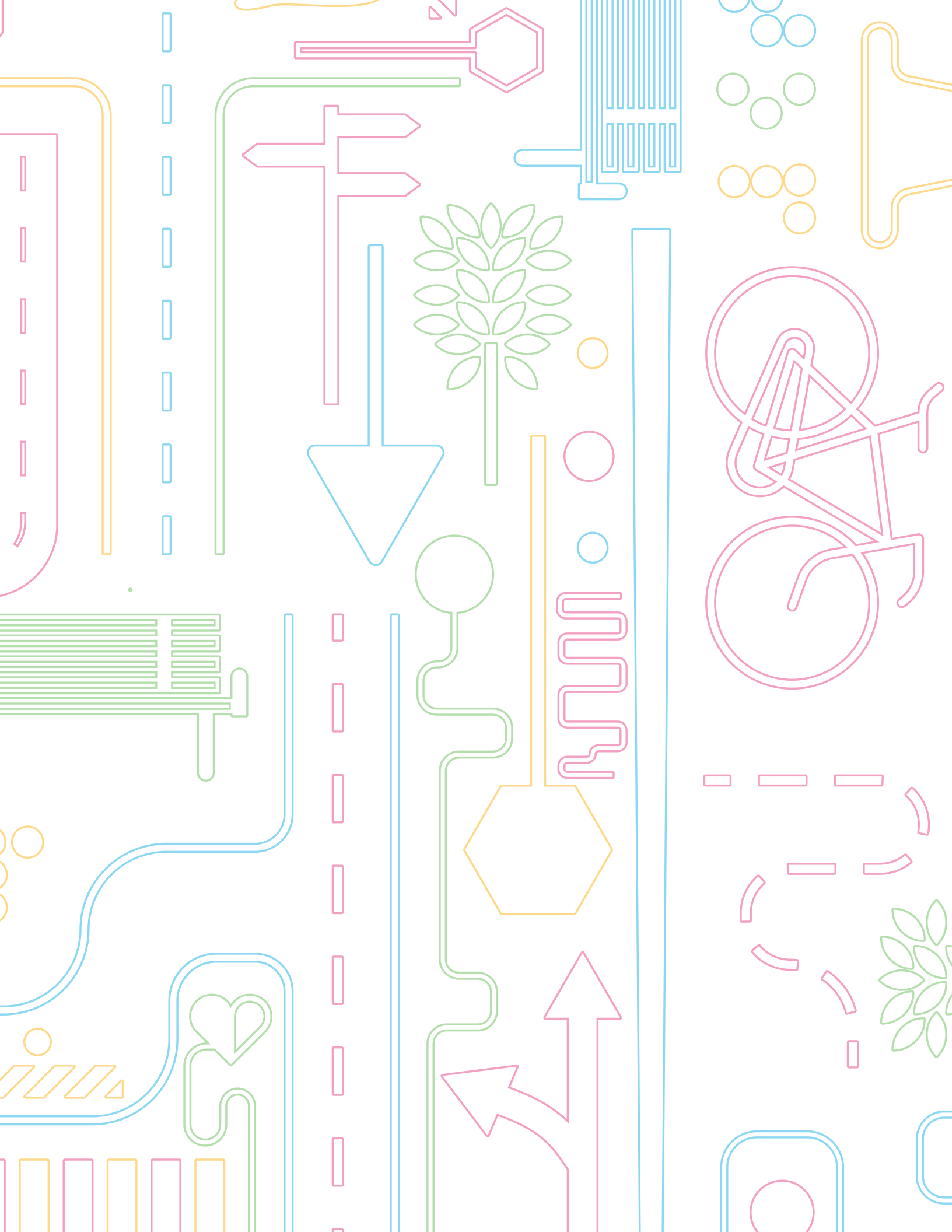
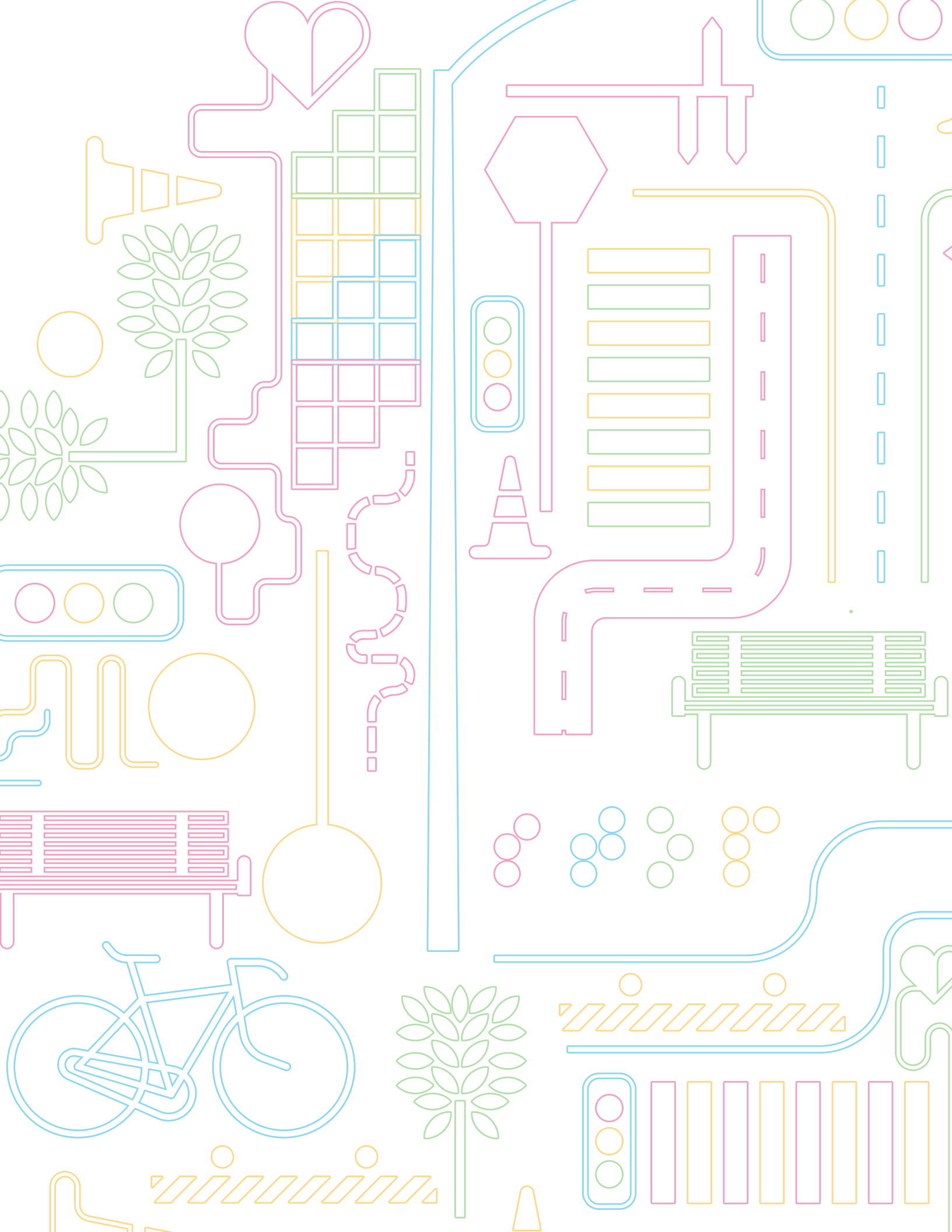


Table of Contents

<i>Executive Summary.....</i>	<i>6</i>
<i>Safe Crossings Project</i>	<i>8</i>
<i>Built Environment and Health</i>	<i>9</i>
<i>About Galena Park</i>	<i>12</i>
<i>Project Methods.....</i>	<i>15</i>
<i>Community Engagement Results and Priorities</i>	<i>18</i>
<i>Intersection Site Profile</i>	<i>21</i>
<i>Recommendations</i>	<i>22</i>
<i>References</i>	<i>28</i>



EXECUTIVE SUMMARY

The Safe Crossings Project was led by the Built Environment Unit (BE Unit) at Harris County Public Health Environmental Public Health Division with funding from the Urban Land Institute (ULI). The project aimed to improve pedestrian and bicyclist safety by identifying improvements to streets and intersections that pose a risk for increased injury in East Aldine. The project encompassed these goals:

- 1. Improve pedestrian and bicyclist safety by identifying improvements to streets and intersections that pose significant risk for increased injury**
- 2. Engage local community and stakeholders**
- 3. Improve health equity by focusing on areas of higher need**

The Safe Crossings Project incorporated multi-sector stakeholder engagement including professionals from public health, transportation, engineering and urban planning as well as local community residents and organizations. The project utilized quantitative data, such as pedestrian and bicyclist crash data, and qualitative data from resident surveys and community engagement efforts to inform what specific areas the project should focus and what improvements would benefit the community residents.

The report provides multiple recommendations for the intersections of (i) Aldine Mail Route and JFK Boulevard and (ii) Aldine Mail Route and Gloger Street including but not limited to:

- Refreshing pavement markings**
- Creating directional ADA ramps**
- Creating pedestrian refuges**
- Installing one or more sidewalks**
- Installing pedestrian scale lighting**
- Incorporating Leading Pedestrian Intervals into pedestrian crossing times**
- Installing a crosswalk**
- Incorporating shade structures at bus stops**
- Installing Accessible Pedestrian Signals and Pedestrian Push Buttons**
- Installing elevated median to reinforce existing traffic lane markings**

The initial estimate of total cost to implement the recommendations ranges from a minimum of \$100,000 to more than \$1,000,000. Implementation of the recommendations are subject to a variety of factors including availability of necessary funds, procurement of necessary approvals and documents, traffic and drainage studies, right of way limitations and execution of all necessary due diligence.

The initial estimate of total time needed to implement all recommendations is more than one year.

The concepts and recommendations included in this report are the culmination of engaging the community to understand their needs and desires for a safer, more walkable community, in addition to expert input from ULI members, Harris County Engineering Department and Asakura Robinson on best practices.

The recommendations serve as a conceptual vision for the community to spur dialogue around safe active transportation among East Aldine decision-makers as the community grows.

ACKNOWLEDGEMENTS

This project was supported by a grant from the Urban Land Institute Building Healthy Places Initiative.

SPECIAL THANKS

The BE Unit would like to thank the Steering Committee for their support and contributions to the Safe Crossings Project. Their input and expertise was invaluable throughout the project.

STEERING COMMITTEE

Harris County Public Health

Parul Pillai, MPH
Aimee Schultze, MPH, CHES[®]

Harris County Engineering

Brannan Hicks, P.E.
Amanda Jones
Tina Liu, P.E., PMP

ULI Houston, Building Healthy Places Committee

David Kim
Misty Loocke
Adele Houghton, AIA, MPH, LEED AP
Rives Taylor, FAIA
Sherry Weesner, P.E.
Lisa Graiff

Asakura Robinson

Luis Guajardo

East Aldine Management District

Veronica Sanches

PRINCIPAL AUTHORS

Parul Pillai, MPH

Program Manager
Built Environment Unit
Environmental Public Health Division
Harris County Public Health, HCPH

Aimee Schultze, MPH, CHES[®]

Community Health & Design Coordinator
Built Environment Unit
Environmental Public Health Division, HCPH

Jornae Rideaux, MPH

Health Impact Review & Policy Analyst
Built Environment Unit
Environmental Public Health Division, HCPH

HARRIS COUNTY PUBLIC HEALTH

Umair A. Shah, MD, MPH

Director and Local Health Authority

Michael Schaffer, MBA, CPO

Director, Environmental Public Health

DESIGN CONSULTANT

Asakura Robinson

SAFE CROSSINGS PROJECT

The Safe Crossings Project was initiated in the spring of 2018 by the Harris County Public Health (HCPH) Built Environment (BE) Unit with funding from the Urban Land Institute (ULI) Building Healthy Places Initiative. The project aimed to improve pedestrian and bicyclist safety by identifying improvements to streets and intersections that pose a risk for increased injury in the East Aldine community. The project encompassed the following goals:

1. Improve pedestrian and bicyclist safety by identifying improvements to streets and intersections that pose significant risk for increased injury
2. Engage local community and stakeholders
3. Improve health equity by focusing on areas of higher need

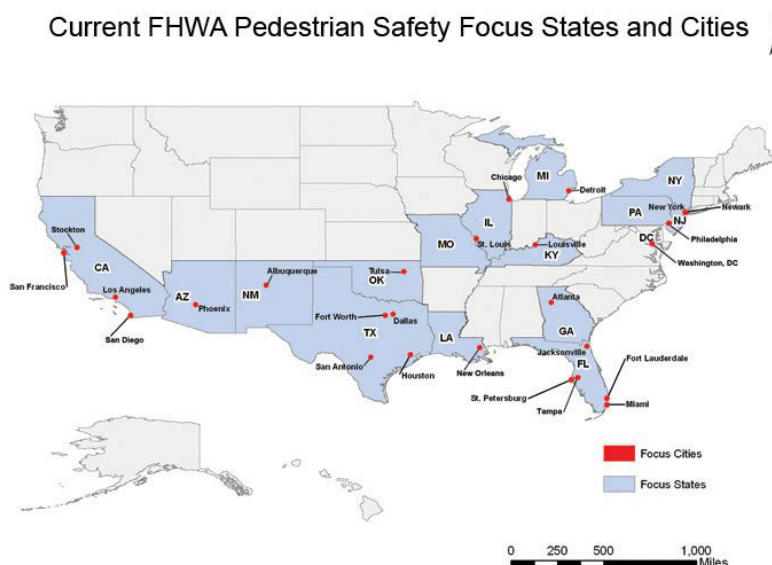
The Safe Crossings Project incorporated multi-sector stakeholder engagement including professionals from public health, transportation, engineering and urban planning as well as local community residents and organizations. The project utilized quantitative data, such as pedestrian and bicyclist crash data, and qualitative data from resident surveys and community engagement efforts to inform what specific areas the project should focus and what improvements would benefit the community residents.

Across the country, pedestrian deaths increased by 27% from 2007-2016 and Texas was ranked 9th highest with a pedestrian fatality rate of 2.44 per 100k in 2016. Locally, Harris County was the 3rd highest county in number of pedestrian fatalities with 128 pedestrian deaths, just behind Maricopa and Los Angeles counties.¹ The Federal Highway Safety Administration (FHWA) has identified Texas and the City of Houston as focus areas to improve pedestrian safety. Additionally, there have been local efforts to improve pedestrian and bicyclist safety, including the Houston Bike Plan, Bayou Greenways Plan, and others across the county.

As HCPH strives to improve community health across the county through health promotion and disease prevention efforts, improving the built environment using upstream solutions has the potential to impact a large proportion of the population. Through the Safe Crossings Project, the BE Unit aims to reduce pedestrian and bicyclist injuries and deaths by creating a safer environment to walk and bike throughout the community.

Figure 1:

Current FHWA Pedestrian Safety Focus States and Cities



U.S. Department of Transportation: Federal Highway Administration. (2012). Map of Pedestrian Safety Focus States and Cities. Retrieved from Pedestrian and Bicycle: https://safety.fhwa.dot.gov/ped_bike/pedforum/2012/winter/largemap.cfm

BUILT ENVIRONMENT AND HEALTH

“We know that the transportation choices we make play an important role in building and maintaining healthy communities. For example, safer roadways and traffic patterns reduce crashes. Streets where walkers and bikers are protected from motor vehicles encourage people to get more exercise as part of their daily routines. Increasing the transportation options available in a community helps reduce congestion and air pollution even as it ensures that communities have access to necessary services like full-service grocery stores and doctors’ offices.”

- Former Transportation Secretary Ray LaHood

The Centers for Disease Control (CDC) defines the built environment as “the human-made physical places and spaces in which people live, work, recreate, and travel on a day-to-day basis, including buildings, streets and roads, transportation systems, parks and public spaces.” Promoting active transportation through the built environment has become a key element in combating chronic diseases, as physical activity is a contributing factor in preventing heart disease, diabetes, stroke, and obesity.² Because the built environment has a significant impact on the health of individuals and can strengthen and connect communities, it is essential to look at upstream solutions that improve the built environment by providing streets and spaces that are safe, clean and attractive.²⁻³ For example, sidewalks and bike trails not only provide opportunities for recreation and exercise, they provide destination access that promotes active transportation. Coupled with improved road design and traffic engineering, the risk of injury for pedestrians and bicyclists can be reduced.² Trails that run through both urban and natural areas are more likely to be utilized because they provide numerous access points to community destinations like parks, retail and employment.⁴ In addition, active transportation also leads to improvements in social and mental health as a result of exposure to nature and benefits of physical activity.² Factors that limit active transportation include weather, cleanliness, noise, crime and perception of safety, as well as location and accessibility.⁴⁻⁶ Currently, approximately 1 in 3 adults meets the recommendations for regular moderate physical activity, defined as at least 150 minutes a week, highlighting the need to improve health behaviors and physical activity to positively impact health outcomes.²

Healthy People 2020 is a U.S. Department of Health and Human Services national initiative that establishes a set of 10-year goals and objectives to improve the health of all groups by providing measurable goals that are applicable at the national, state, and local levels. The importance of active transportation in the built environment is highlighted by some of the goals of Healthy People 2020 including:⁷

- **“Increase proportion of trips made by walking”**
- **“Increase the proportion of trips made by bicycling”**
- **“Increase legislative policies for the built environment that enhance access to and availability of physical activity opportunities”**

Attaining the goals outlined in Healthy People 2020 requires pursuing opportunities such as the Safe Crossings Project. The Safe Crossings Project facilitates pedestrian and bicyclist safety by recommending improvements to streets and intersections that pose a risk for increased injury in low to moderate income and minority communities in Harris County. The project incorporated upstream solutions by engaging key decision makers early on, as well as a panel of subject area experts coupled with data on existing infrastructure conditions and pedestrian and bicyclist crash data.

IMPACTS OF THE BUILT ENVIRONMENT

INFRASTRUCTURE

Physical inactivity is reduced by designing street networks and infrastructure that promote walking and bicycling.³ Common pedestrian and bike infrastructure include bike lanes, curb extensions, lighting, sidewalks, shared-lane markings, high visibility signage and designated crosswalks.⁸ The presence of these elements has been shown to increase walking and bicycling, thereby lowering an individual's risk of being obese or overweight, while reducing vehicular usage over time.⁹⁻¹⁰



www.pedbikeimages.org / Carl Sundstrom



www.pedbikeimages.org / Dan Burden



www.pedbikeimages.org / Carl Sundstrom



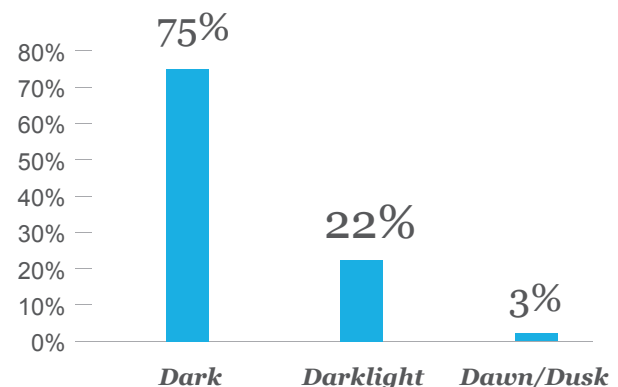
www.pedbikeimages.org / Dan Burden

SAFETY

The built environment impacts an individual's actual safety as well as perception of safety through elements of roadway design and lighting, both of which affect usage of outdoor space.¹¹ The presence of lighting can increase pedestrian and bicyclist comfort and safety and promote active transportation.⁴ Improved lighting increases visibility of motorists and pedestrians in low-light conditions, leading to reductions in the number of vehicle and pedestrian crashes. According to the Governors Highway Safety Administration, the majority of pedestrian fatalities in 2016 occurred in the dark.¹ In Texas, specifically, 80% of pedestrian fatalities between 2014-2016 occurred in the dark.

Roadway design plays an important role in shaping interactions between vehicles, pedestrians, and bicyclists along streets and at intersections. There are number of proven roadway design interventions and countermeasures that have been shown to reduce pedestrian injuries through crash reduction.¹²⁻¹³ The US Department of Transportation Federal Highway Safety Administration has a resource on proven safety countermeasures for transportation agencies that enhance safety on all types of roads and are effective in reducing the risk of pedestrian and bicycle collisions.¹⁴

Figure 2: 2016 Pedestrian Fatalities by Light Level



Source: Governors Highway Safety Administration, 2017

CRIME

Crime is inversely related to the use of outdoor space and therefore can negatively impact health and health outcomes within a community. Perceived lack of safety is associated with poorer health and limited physical activity while long-term exposure to crime is associated with higher BMI, especially among vulnerable groups such as women and children.¹⁵⁻¹⁶ For minority groups, who are already at a higher risk for obesity and associated negative health outcomes and who often live in low-income neighborhoods, violent crime limits opportunities to be physically active.¹⁷⁻¹⁸ The built environment can be designed to minimize opportunities for crime through the use of lighting and other features allowing for improved physical activity.¹⁹

EQUITY

Historically, communities of color and lower socioeconomic status face inequities in the quality of the built environment in which they live and work. Many of the communities face additional barriers to adequate transportation and healthcare access. There are more than 10 million American households without access to a vehicle and the percentage is higher among African Americans (20%) and Latinos (12%), as compared to Whites (6%).²⁰ Racial disparities can be seen among the low-income population as well.²¹ A third of low-income African Americans lack access to a car, in comparison to 12% of low-income whites.²² These communities that have limited access to a personal vehicle or rely on available, and sometimes limited, public transportation must use active transportation to access education, employment, and community resources. Often times, due to lack of investment within these communities, the built environment plays a significant role in the negative health outcomes of the community. For example, the presence and quality of sidewalks, crosswalks, and other pedestrian infrastructure is generally poorer in communities with lower socioeconomic status, thus creating barriers for active transportation and further contributing to health inequities in those neighborhoods.²³

POLICY

Local, state, and federal policies promoting health and safety in the built environment facilitate physical activity and create more resilient communities. A multi-disciplinary approach coordinated on all levels of government can result in built environment improvements and complex behavioral changes within communities.²⁴ Policy-related elements that effect the built environment include zoning codes, building codes, street standards, and strategic planning.²⁴ Planning processes and policies that incorporate healthy community design into active transportation policies can result in increased usage as well as promote positive health outcomes. For example, zoning laws can separate manufacturing and industrial businesses from residential areas or facilitate higher building density to create more walkable and bikeable areas, local and state governments can pass bonds that pay for improvements to the built environment, and the federal government can regulate built environment elements such as wastewater management and pollutants.²⁵ Overall, as shown in the figure below, policy and regulatory mechanisms play a significant role in shaping the built environment and the resulting health outcomes of the community.

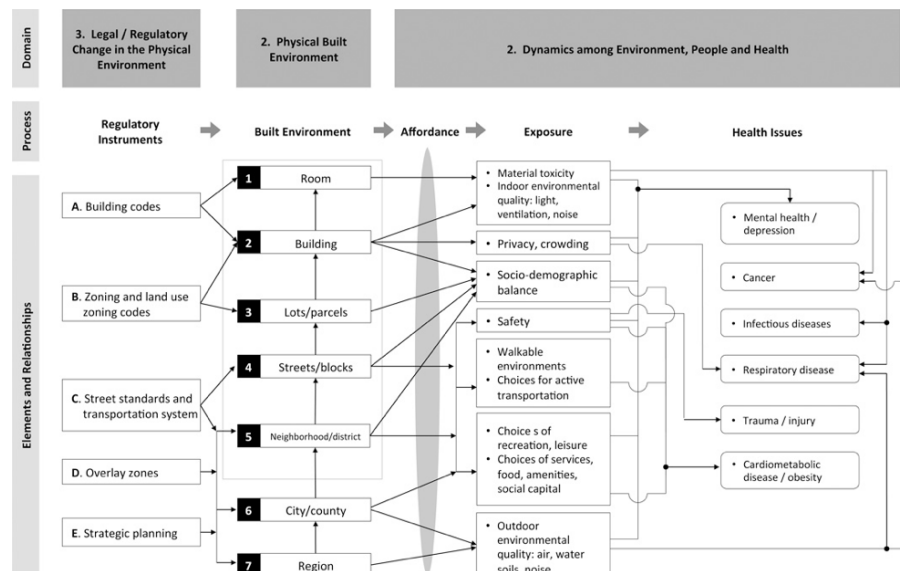


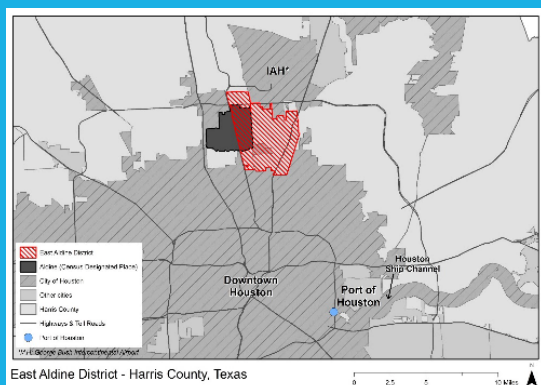
Figure 3: Built Environment Change Framework
Source: Berke, Vernez-Moudon 2014

About East Aldine

East Aldine (EA) Management District is located in unincorporated Harris County, approximately 10 miles north of downtown Houston and south of Bush Intercontinental Airport. The management district was established by the Texas State Legislature in 2001 as a governmental entity to enhance the physical, social, and economic well-being of the community.

East Aldine is completely surrounded, but was never incorporated by the City of Houston. While the City of Houston is required to provide sewer, water, and trash services to areas within its jurisdiction, as well as manage the development of the physical infrastructure, communities in unincorporated Harris County, such as East Aldine, rely on a variety of mechanisms, such as Public Utility Districts, Municipal Utility Districts and County Offices, to provide basic services. The development and management of services are funded by a 1-cent sales tax on retail sales. As East Aldine has become more urbanized, the need for basic services is increasingly evident and the Management District has developed service plans to identify and respond to needed improvements within the community.

Figure 4: East Aldine Geographic Boundaries, Harris County, Texas



Source: East Aldine Health Impact Assessment

POPULATION CHARACTERISTICS

East Aldine is an unincorporated management district in northern Harris County with 87,847 residents with roughly equal number of males and females (49.6% male and 50.4% female). East Aldine is a rapidly growing community composed primarily of young minorities with over one-third of the area younger than 19 with 67% of the population identifying as Hispanic and 17% as African American.

Figure 5: Age Distribution in East Aldine

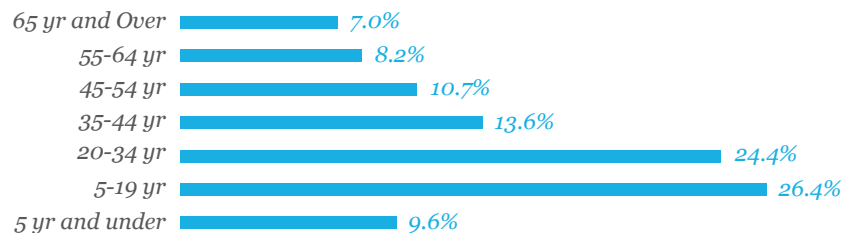


Figure 5: United States Census Bureau. (2018). 2012-2016 5 Year Estimates American Fact Finder Tool: Table S0101. Retrieved from American Community Survey.

Figure 6: Education Attainment

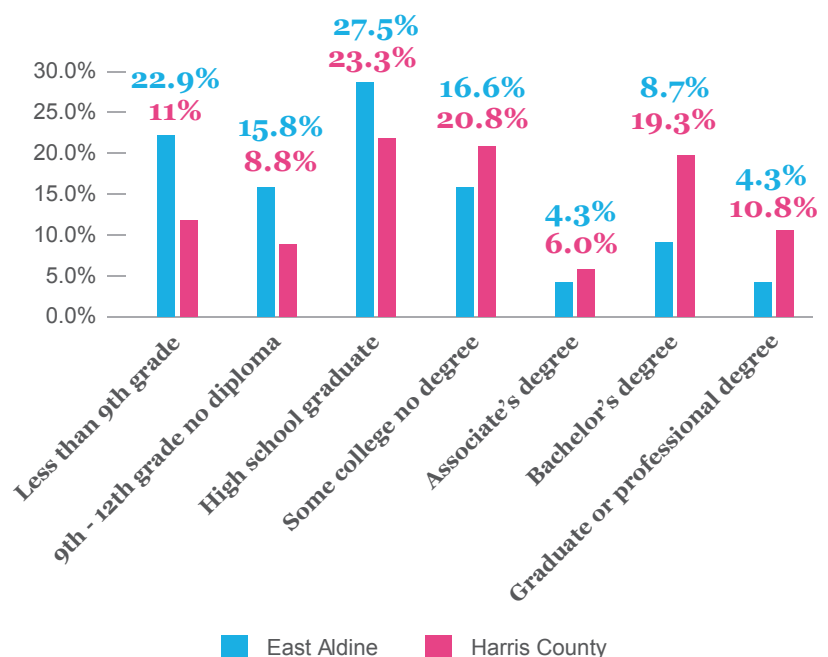


Figure 6: United States Census Bureau. (2018). 2012-2016 5 Year Estimates American Fact Finder Tool: Table S1501. Retrieved from American Community Survey.

Among those 25 years of age or older, East Aldine residents have a lower educational attainment compared to their counterparts in Harris County, with approximately 66% of the population completing high school or less.

The unemployment rate in East Aldine is similar to that of Harris County, however the average household income is lower (\$56,266 in EA vs \$83,156 in HC) and the prevalence of poverty is significantly higher in East Aldine (29.1% in EA

vs 17.4% in HC). Uninsured rates are higher in East Aldine (32.02% in EA vs 22.2% in HC), while Medicare rates are lower compared to that of Harris County, indicating a potential gap in healthcare coverage.

While the majority of East Aldine households have access to a car, 38% have access to only one vehicle, forcing additional family members to rely on other means of transportation. Individual access to a personal vehicle may be limited based on socioeconomic factors, such as income. East Aldine does have limited bus service through Houston METRO Service.

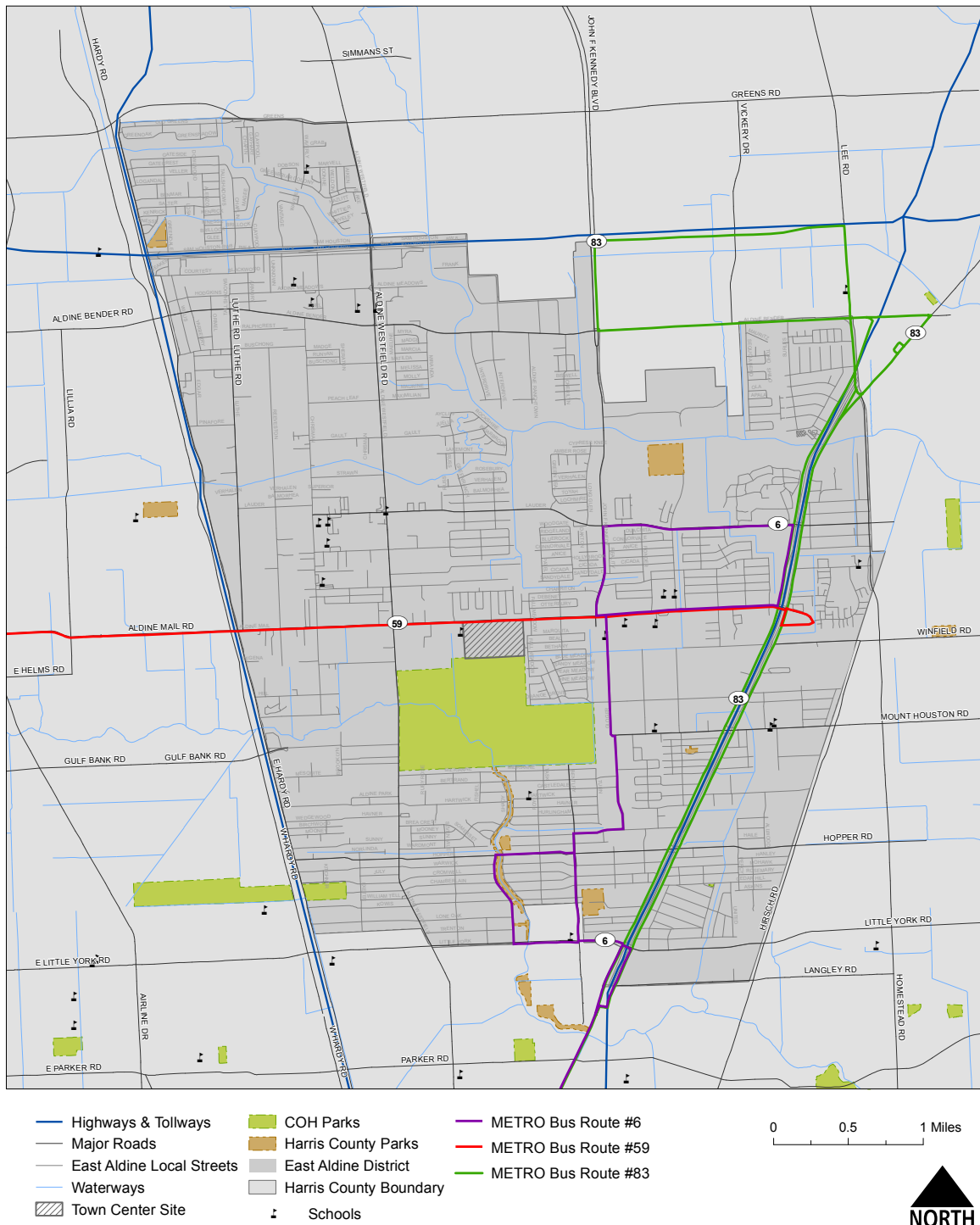


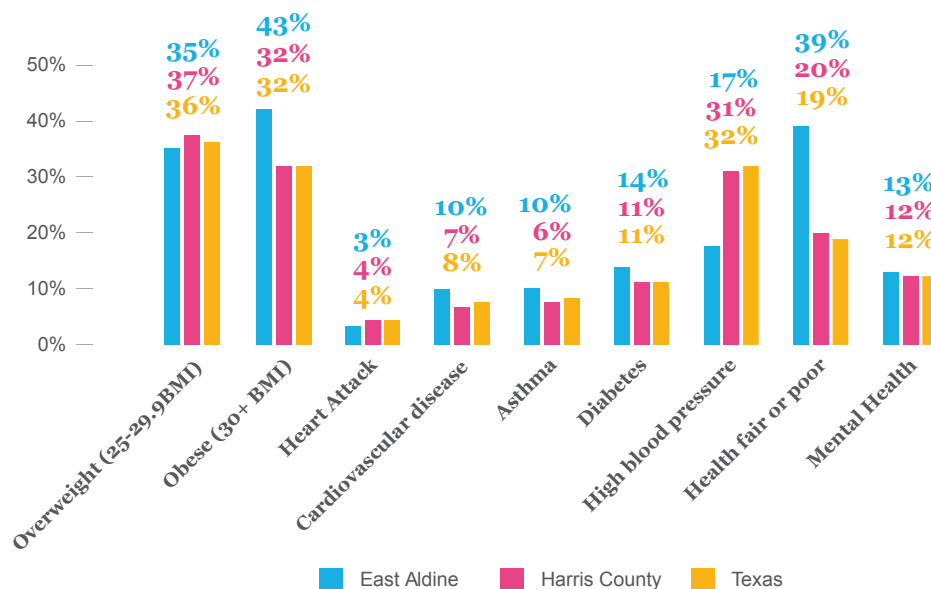
Figure 7: East Aldine METRO Service Stops

BASELINE HEALTH CONDITIONS

A significant percentage of the population in East Aldine have been diagnosed as obese (43%), which is higher than the rates in Harris County and Texas. The data highlights the need for systemic obesity reduction efforts in the area. Additionally, 39% of residents have self-reported fair or poor health, indicating that there may be additional public health needs to address in East Aldine to improve overall quality of life. Given the population and area of East Aldine is small in proportion to Harris County and Texas, these findings may not be significant but they still highlight the burden of chronic diseases and poor health in the community.

In 2015, five of the top ten causes of death in Harris County were attributed to chronic diseases,²⁶ with heart disease remaining as the leading cause of death in the U.S. since 1921.²⁷ Chronic diseases related to physical activity and nutrition continue to remain a significant public health threat throughout the state and Harris County. Accidents are ranked as the 3rd leading cause of death in Harris County, highlighting the need to examine and address issues around pedestrian and bicyclist safety.²⁶ In Aldine, in 2014, accidents are ranked as the 3rd leading cause of death, behind heart disease and cancer (Appendix A, Community Health Profiles).

Figure 8: Health Profile for East Aldine



*Note: The zip codes used to make the geographic boundaries for East Aldine (77093, 77039, 77032) extend beyond the area of the East Aldine Management District, thus containing a sample size larger than the population residing within the boundaries of the District. The following estimates in East Aldine had relative standard errors of greater than 30% and should be taken with caution: heart attack, cardiovascular disease, asthma, diabetes, high blood pressure, mental health. Source: Texas Department of State Health Services, Center for Health Statistics, Texas Behavioral Risk Factor Surveillance System, 2011-2017. (TDSHS b, 2011-2017)

PEDESTRIAN AND BICYCLE COLLISIONS

Between 2013 and 2017 there were a total of 147 vehicular and pedestrian and bicycle collisions in East Aldine. Of these, there were 14 deaths, 59 injuries, and 55 possible injuries. The remaining collisions were 14 without injury and 5 with an unknown injury status.

VIOLENT CRIME

Violent crime in this data is defined as either assault, assault with a weapon, robbery, homicide or sexual assault. East Aldine has had a total of 3,465 violent crimes between 2013-2017, including assault (1,498), robbery (942), assault with a weapon (679), sexual assault (321) and homicide (25).

PEDESTRIAN AND BICYCLE CONDITIONS

East Aldine has limited sidewalks and bicycle infrastructure, therefore reducing mobility and making walking and bicycling dangerous at times. The built environment conditions make pedestrians and bicyclists vulnerable to injuries and fatalities.

PROJECT METHODS

Data was collected for the Safe Crossings Project through a variety of methods, including an environmental scan, pedestrian and bicycle collision data, demographic data, resident surveys and key informant interviews. Additionally, a community stakeholder event was held to better understand the local resident needs and concerns.

The American Community Survey 2016 five-year estimate data was used to ascertain demographic information of the community. Data on pedestrian and bicyclist collision data was obtained from the Texas Department of Transportation (TxDOT) and violent crime from the Harris County Sherriff's office was collected for the years 2013-2017. The health data are 7-year prevalence estimates from 2011-2017 obtained from Texas Behavioral Risk Factor Surveillance Survey (BRFSS) through the Center for Health Statistics. 7-year prevalence estimates and 3 zip codes (77093, 77039, 77032) that contain East Aldine were chosen to produce large enough sample sizes for reliability.

QUANTITATIVE DATA COLLECTION

Environmental Scan Tool

The Environmental Scan Tool (EST) was utilized to examine the physical environment within a 1 mile radius of Keith Weiss Park and the East Aldine Town Center. This data was previously recorded in 2015 as part of a Health Impact Assessment for the Town Center. The data collected included detailed information on the pedestrian, bicycle, and vehicular infrastructure along each full street segment (e.g., road condition, sidewalk availability, sidewalk condition, presence of street trees, bike infrastructure, etc.), as well as the collection of Global Positioning System (GPS) coordinates for certain street elements and traffic control devices (e.g., bus stops, stop signs, ADA ramps, pedestrian crossing signals, etc.).

Each team had one rater completing the tool on a tablet using the online platform. The other rater completed a paper tool for validity, inter-rater reliability and logistic purposes (e.g., in the event no internet access was available or the tablet malfunctioned). Upon completion, the two surveyors would address any differences in rating and submit the completed surveys through the online platform.

Pedestrian and Bicycle Collision Data

The Texas Department of Transportation's (TxDOT) Crash Records Information System (CRIS) includes information about pedestrian- and bicycle-vehicle collisions that occurred in Harris County and East Aldine from 2013-2017. Collisions were weighted using the U.S Department of Transportation Value of Statistical Life (VSL).²⁸ To identify the top 5 dangerous intersections in East Aldine, a 150ft buffer was mapped around each intersection and the total number of collisions within this buffer was examined and ranked by highest to lowest VSL. One limitation to this method is that mid-block collisions were not included. (Appendix C).

Crime

The data used for analysis of crime in East Aldine was obtained from the Harris County Sheriff's Office and included all crime incidents that occurred in the area from January 1, 2013 to January 31, 2017. Types of violent crime that may potentially harm pedestrians and bicyclists, including assaults, robberies, and murder, were extracted from the dataset (Appendix D).

QUALITATIVE DATA COLLECTION

Key Informant Interviews:

Key informant interviews were conducted to obtain detailed information from local leaders and residents of EA, as well as content experts, on their knowledge, attitudes, and beliefs about the status of pedestrian and bicycle infrastructure in the district, as well as desired locations in need to safety improvements. Interview questions were decided upon as a team and collaboratively revised to ensure all relevant topics were comprehensively addressed.

Interviews began with an introductory explanation of the Safe Crossings project and its objectives, as well as a description of the project's outcome and interview ground rules. Consent forms were reviewed and signed prior to continuing with the interview process. A terminology sheet, maps of the interviewee's respective community for visual identification of problem areas, and an answer sheet for Likert scale-based questions were also provided to reference during the interview. Prior to starting the interview consent to record was confirmed and an opportunity for interviewees to ask any clarifying questions was given.

Two team members were present for each interview, with one serving as an active interviewer and the other as note taker. During the interview, the key informant was allowed to take breaks or request to end the interview at any time. Recorded interviews were downloaded, transcribed, and reviewed by another BE Unit staff member for accuracy. All files were saved with no identifying information to maintain the confidentiality of the key informant. Following review, themes were extracted from the content of the interviews using NVivo Transcription software.

Resident Survey

Resident surveys were created to obtain community input on areas where residents frequently walk or bicycle and their perception of safety in these areas. The surveys included a questionnaire in English and Spanish along with maps for residents to mark specific intersections and/or streets. The survey was administered during a Back to School Fair at the local BakerRipley community center in August 2018. Results were analyzed and mapped in ArcGIS to examine trends in responses.

Community Engagement

In addition to the qualitative data collection methods listed above, community outreach was initiated and established through a community stakeholder workshop, led by the BE Unit and Asakura Robinson. Stakeholders were identified with the assistance of local leaders from the management district, BakerRipley staff and ULI members. Prospective attendees for the East Aldine community workshop included school administrative officials, Aldine ISD school board representatives, Harris County Engineering Department representatives, members of ULI, East Aldine Management District staff, BakerRipley staff and local residents.

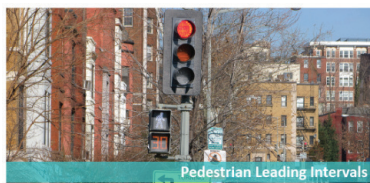
A presentation explaining the objectives of the project was provided for community stakeholders at the event, detailing the project's goals, current progress, future plans, and prospective identified intersections within the community. Community stakeholders were divided into focus groups for two scheduled breakout sessions and a prepared guide of Safe Crossings related questions was distributed to stimulate discussion and exchange of ideas. Questions included:

1. What does a safe crossing mean to you?
2. Who are we designing for?
3. Which design features are essential?
4. How would people benefit?

Participants were also asked to rate the priority of specific pedestrian infrastructure features and improvements that they would like to see in the community. Responses were recorded by a scribe and results were analyzed by the Asakura Robinson team with consultation from the BE unit (Appendix E).



Picturing Crossings



ENVIRONMENTAL SCAN TOOL RESULTS

PEDESTRIAN AND BICYCLE CONDITIONS

Data on the pedestrian and bicycle environment was collected using the BE Unit's Environmental Scan Tool (EST). The tool provided data on the walking and bicycling environment including sidewalk characteristics, street characteristics, crossing aids and signage, land use, and services and amenities. Majority of the segments examined consisted mostly of single-family homes. Other land uses within the segments were multi-family housing, offices, schools or churches, commercial retail or restaurants, industrial, recreation or parks, utilities, and vacant or undeveloped lots.

Most of the segments do not have a sidewalk (86%) and of the few segments that did, only 11% of the sidewalks continued to the end of the block on at least one side of the street. Most sidewalks were in good condition (i.e. rated very few bumps, cracks or unkempt landscaping), were made of concrete and were 3-4ft in width. Majority of the contiguous sidewalks in East Aldine were limited to Aldine Mail Route, however many were deemed not safe or accessible for pedestrians of all abilities, raising concern for individuals with additional mobility needs (i.e. wheelchairs). This was based off the surveyor's best judgement if they thought a person of any age or ability could access and use the sidewalk.

Few crossing aids or signage were present for pedestrians to safely cross the street, including pedestrian signals and buttons and ADA accessible ramps. Accessible ramps, access to pedestrian signal buttons and proper signage to alert drivers to look for those crossing, allow for safe passage of pedestrians.

There are no bicycle facilities present in East Aldine in terms of shared or dedicated bicycle lanes. There is bus service in East Aldine but the bus stops have limited shade cover or sidewalk connections. Bus stops were confined to major roads in the district, such as Aldine Mail Route, JFK, Gloger, and Highway 59.

In terms of the comfort of the environment, the streets were fairly clean and absent of litter or graffiti, however shade was absent on most streets segments which can contribute to an uncomfortable walking environment in the Texas heat. Lighting was absent in most street segments and at intersections, presenting a safety issue in low-light or dark conditions.

The most common storm water collection system were swales or drainage ditches. Pedestrians walking along a swale or drainage ditch with limited sidewalks highlights the need for road safety improvements. There were few speed bumps or school zone signs present, both which are used as traffic calming tools especially near schools.

The data supports concerns of an unsafe walking and bicycling environment around East Aldine and in accessing the community's resources due to the limited pedestrian and bicycle infrastructure, inaccessible sidewalks, and limited supporting infrastructure such as crosswalks, lighting, and signage.

COMMUNITY ENGAGEMENT RESULTS AND PRIORITIES

KEY INFORMANT INTERVIEWS

Major themes identified for East Aldine were separated into safety concerns and infrastructure barriers with sub-themes of community attitudes, needed improvements and barriers to accessibility and health equity. There was significant overlap between the two major themes, indicating that certain sub-themes as well as pedestrian and bicycle features are not mutually exclusive.

Major safety issues that were discussed were the need for additional sidewalks and crosswalks. Speeding on

major streets and the prevalence of traffic accidents and fatalities were also highlighted as a safety concern given the lack of sidewalks or sidewalks that are placed close to the roadway and their influence on actual and perceived safety. Additionally, the absence of dedicated or off-street bicycle lanes and sidewalks were identified as barriers to accessibility given the high population of transit users and walkers in the community. The absence of efficient public transportation was also mentioned. Children safely walking to and from school was also a major concern, not only because of the limited pedestrian and bicycle infrastructure, but also due to perceived and actual crime, the presence of undeveloped and vacant properties and the presence of stray animals in the community. The need for more lighting across the community was mentioned as a safety concern given the number of individuals and students walking in low- or no-light conditions during peak traffic times. Community attitudes around safety included dangerous social norms such as jaywalking and distracted driving indicating the need for more crosswalks and mid-block crossings at long street segments and for more education and awareness around pedestrian behavior and safe driving.

Similarly, the need for more sidewalks was the most frequently mentioned infrastructure issue followed by improved crosswalks, the need for mid-block crossings, and the desire for dedicated bicycle infrastructure. Maintenance of existing infrastructure, such as the quality of sidewalks and crosswalks or the quality and absence of lighting was highlighted, not only to support active transportation but also to improve safety and maintain accessibility for persons with disabilities or mobility issues. Key informants would also like to see more off-streets trails and sidewalks to support safer active transportation that is separated from busy roadways and to provide more access to nature and green space.

Woven into both major themes was the underlying barrier to health equity due to the low socioeconomic status of the community and its residents, the lack of community resources or the limited infrastructure to reach existing resources, and the limited financial budget of the management district to support all needs and services.

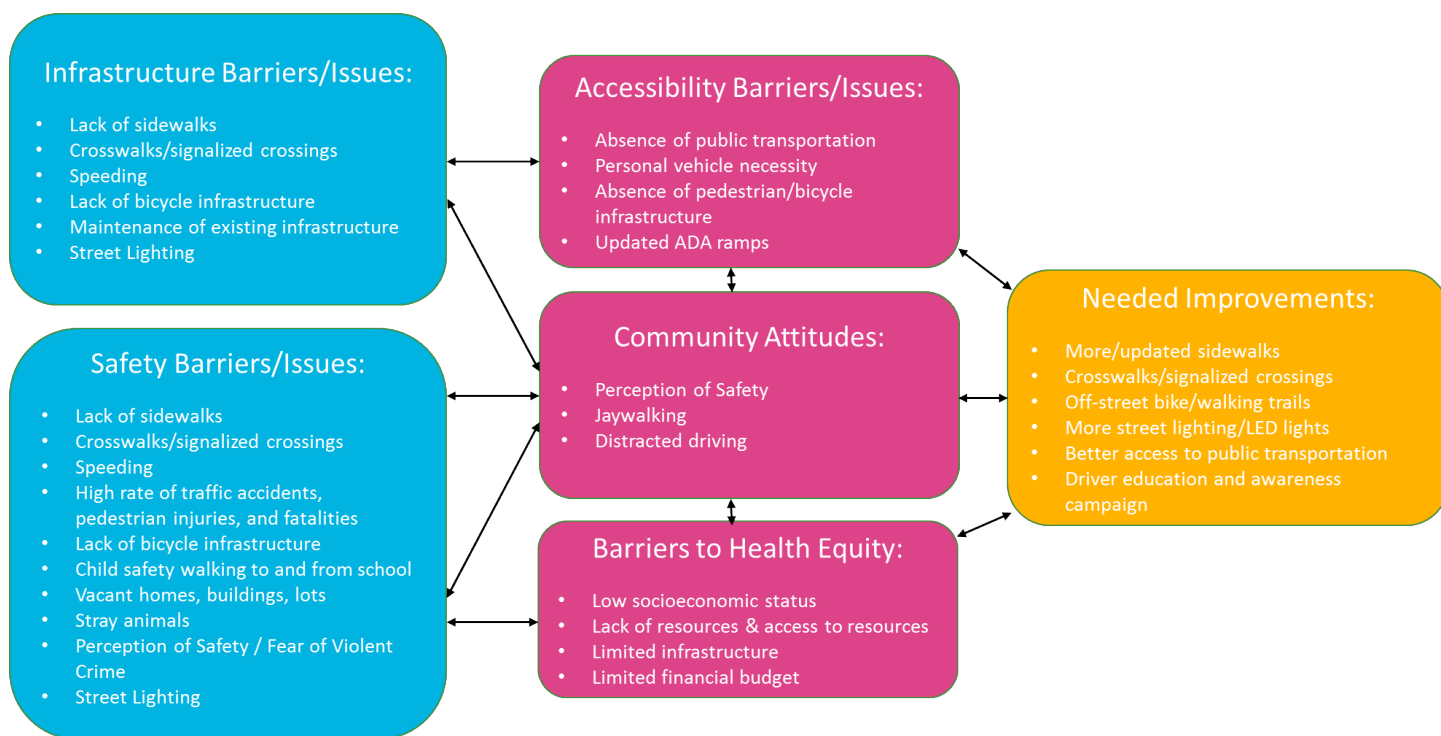


Figure 9: East Aldine Key Informant Interview Analysis

RESIDENT SURVEY

Seventy-six resident surveys were completed during the Back to School Fair in August 2018. Majority of respondents (64%) indicated they do walk in East Aldine for either transportation, exercise, or recreation, and they typically see other people walking in East Aldine (78%). Just over half (55%) of the respondents felt the sidewalks and roads were unsafe for walking. There were 2 major themes that resulted from responses relating to pedestrian safety and pedestrian comfort. The theme of pedestrian safety highlighted the need for sidewalks and street lighting as well as the amount of heavy traffic and speed of traffic in the area, which is both a safety and comfort issue. The need for sidewalks were mentioned by 43% of respondents and street lighting by 20%. In terms of pedestrian comfort, residents expressed concern with how narrow the existing sidewalks were and how they were placed too close to the road. Respondents desired some type of barrier or separation from the roadway and heavy traffic. Respondents also mentioned that crime and animals are deterrents to walking.

When asked what streets were uncomfortable to walk or bicycle on, Aldine Mail Route, Aldine Westfield, John F Kennedy Blvd, Bertrand, and Lauder Road were most frequently cited. Uncomfortable intersections were Aldine Mail Route and Hwy 59 near the Northwood Plaza shopping center and Aldine Mail Route and John F Kennedy Blvd. Respondents identified that they most frequently walk on Aldine Mail Route, Aldine Westfield, John F Kennedy Boulevard, and Lauder Road.

There was also mention of how uncomfortable it was to cross Aldine Mail Route near MacArthur High School, especially during peak traffic times. A student fatality at this location was frequently discussed with the residents. One limitation of this survey is that respondents were majority parents or grandparents and responses may have skewed towards the needs for their children.

COMMUNITY ENGAGEMENT

The community stakeholder event in East Aldine was held in November 2018 at the BakerRipley campus. The event was attended by 17 stakeholders representing local community leaders, residents and content experts from East Aldine Management District, Aldine ISD and MacArthur High School, Houston METRO, City of Houston Planning and Development, Harris County Engineering Department, Asakura Robinson and ULI members. Major themes and needs were examined and analyzed by Asakura Robinson with consultation from the BE Unit. The community stakeholder event in East Aldine was held in November 2018 at the BakerRipley campus. The event was attended by 17 stakeholders representing local community leaders, residents and content experts from East Aldine Management District, Aldine ISD and MacArthur High School, Houston METRO, City of Houston Planning and Development, Harris County Engineering Department, Asakura Robinson and ULI members. Major themes and needs were examined and analyzed by Asakura Robinson with consultation from the BE Unit.

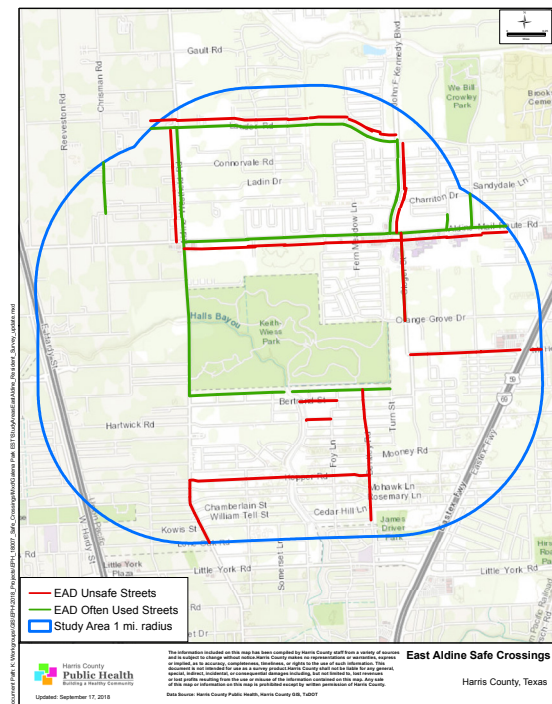


Figure 10: East Aldine Resident Survey Map

“Anytime all road users can access destinations equitably is a win.”
– East Aldine Stakeholder

When asked “What does a safe crossing mean to you?” four themes emerged around crosswalks, pedestrian infrastructure, traffic calming, and education and awareness. Respondents discussed not only the presence of crosswalks but also additional features such as raised crosswalks, mid-block crossings, curb ramps, and crossing guards near schools. The need for sidewalks was evident when discussing pedestrian infrastructure but also the shift to prioritizing and designing for pedestrians. Traffic calming measures that were mentioned were lower speed limits, tightening turning radii at intersections, limiting right turns on red, and additional traffic control devices at crosswalks. Lastly, education for both pedestrians and drivers was cited given the trends in distracted driving and walking and the need for additional signage and lighting to improve awareness.

Throughout the remainder of the discussion, participants discussed how designing for pedestrians and bicyclists includes the entire community, including people and businesses – those that walk, bicycle, or use public transportation, individuals with mobility issues, children and families – and which design features are essential. In ranking features of a safe crossing, local stakeholders identified pedestrian refuge islands and wayfinding/branding has the highest priority. Pedestrian leading intervals also featured high, capturing the public’s experience with signal timing that residents felt was insufficient to allow safe crossing across the area’s major arterial roadways. The overall lack of sidewalks and the uncomfortable condition of navigating existing sidewalks and driveways was highlighted among participants as a threat to children, elderly, and people with disabilities, depriving them of independence in navigating through their neighborhood. According to the stakeholders, the benefits of designing for pedestrians and including essential features would result in improved choice of transportation, increased use of transit and less traffic, less pedestrian injuries and fatalities, and overall improvements in physical activity.



Figure 11: Who are we designing for?

Lastly, the final goal of the stakeholder engagement was to gain consensus on a preferred location that would benefit from engineering improvements and recommendations. Consensus did not emerge from the stakeholders, though two areas were recommended. Participants suggested safer connections to the school campus area on Aldine Mail Route between John F. Kennedy (JFK) Boulevard and Determined Drive. Gloger Street was also suggested due to its lack of sidewalks and open ditches that students walk through, though this is more of a linear/sidewalk need and not a safe crossing project. After further consultation with the Steering Committee, the recommendations provided in this report focus on Aldine Mail Route between JFK Boulevard and Gloger Street (Appendix E).

INTERSECTION SITE PROFILE

JOHN F KENNEDY (JFK) BOULEVARD AND GLOGER STREET AT ALDINE MAIL ROUTE

This site includes two separate but neighboring intersections along the stretch of Aldine Mail Route at JFK Boulevard and at Gloger Street. These intersections are very busy during school drop off and pick up times due to the close proximity of two Aldine ISD schools. Between the MacArthur 9th grade campus on Gloger Street and the MacArthur High School on Aldine Mail Route, there are approximately 5,000 students being transported to this area in the mornings and afternoons. Sidewalks exist on both sides of Aldine Mail Route with accompanying ADA ramps, pedestrian push buttons, and pedestrian signals heads. JFK Blvd and Gloger Streets do not contain sidewalks on either side of the roadways. METRO Bus stops on are located on the major thoroughfares within close proximity to intersections, along Aldine Mail Route, Gloger, and JFK Boulevard but lack sidewalk connections in some areas. Crosswalks at both intersections are painted with continental striping, common for crosswalks located near schools.

There are a number of documented collisions at this site. Between 2013 and 2017, within the 150ft radius of the JFK Boulevard and Aldine Mail Route intersection there were 3 collisions - 2 involving pedestrians and 1 bicyclist. At Aldine Mail Route and Gloger Street, there was 1 collision involving a bicyclist in the same time period. Outside the 150ft radius but within close proximity to both intersections 2 fatalities occurred mid-block– one on JFK Boulevard and one on Aldine Mail Route. Both fatalities occurred in the morning in low-light conditions. This section of Aldine Mail Route is also a hot spot for crime, specifically assault with deadly weapon and robbery (Appendix D).

RECOMMENDATIONS

Across the East Aldine District, there is a strong desire by community residents to have more access to sidewalks and pedestrian infrastructure. This is a low-income, minority community that has limited access to transportation and public transit, and many currently rely on walking or bicycling to get to a METRO stop or their final destination. Based on the data and community feedback described in this report, it is suggested that the East Aldine Management District explore opportunities to install additional sidewalks in the community to facilitate a safer environment pedestrians and bicyclists. This could be done through a variety plans, such as an Active Transportation Plan, Mobility Plan or even a Safe Routes to School Plan.

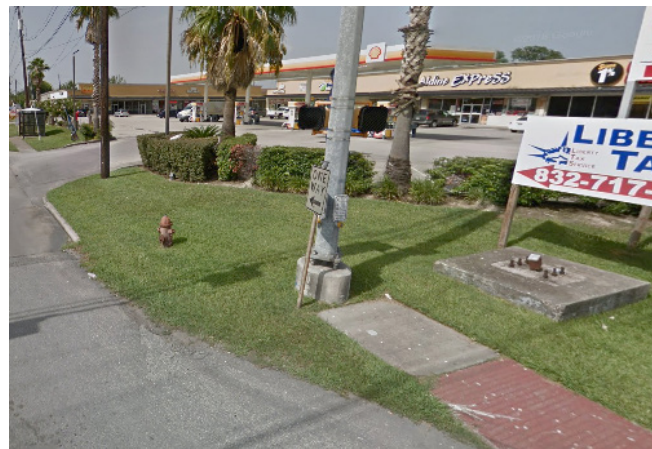


Figure 12: Need for additional sidewalks in East Aldine

This is considered a long-term initiative that will likely require the involvement of additional traffic studies and infrastructure improvements, and engage multiple stakeholders to implement, but one that could have a positive and long-lasting effect on the quality of life for East Aldine residents.

The recommendations below are site specific to the identified intersections described in the report. The table below outlines the recommendations, the population impacted by the specific recommendation, as well as the anticipated health benefit(s). Recommendations in the table are sorted by priority based on community feedback.

Intersection at Aldine Mail Route and JFK Boulevard

- Refresh pavement marking due to normal wear and tear on the roadway and update condition of truncated dome on existing ADA ramps.
- Explore ability to create directional ADA ramps to provide an improved landing space for pedestrians, to create a pedestrian refuge, and improve accessibility for mobility-impaired users.
- Install sidewalks on both sides of JFK Boulevard to connect to existing METRO bus stops and to entrances to residential neighborhoods, providing safe pedestrian access to students and residents who currently walk along this roadway.

- Place sidewalks to continue seamlessly across driveways at the same elevation.
- Explore opportunities to add pedestrian-scale lighting to increase visibility.
- Incorporate a Leading Pedestrian Interval into pedestrian crossing times to allow pedestrians a 'head start' into the crosswalk before movement of vehicles. Feasibility of incorporating this feature will be based on the results of a traffic signal operation study.
- Install Accessible Pedestrian Signals (APS) and Pedestrian Pushbutton with audible and braille features that allow people with visual and audible impairments to make use of push buttons and crosswalks.
- Examine opportunities to improve the placement of the pedestrian push buttons to provide enhanced accessibility for mobility impaired users.
- Discuss opportunities with METRO to provide shade structure for nearby bus stops.



Figure 13: Wheelchair user waiting to cross JFK



Figure 14: Updates needed on existing ADA Ramps

Intersection at Aldine Mail Route and Gloger Street

- Refresh pavement marking due to normal wear and tear on the roadway and update condition of truncated domes on existing ADA ramps.
- Explore ability to create directional ADA ramps to provide an improved landing space for pedestrians, to create a pedestrian refuge, and improve accessibility for mobility-impaired users.
- Install sidewalks on both sides of Gloger Street to connect to the MacArthur 9th grade campus and existing METRO bus stops providing safe pedestrian access to students and resident who currently walk along this roadway.
- Widen sidewalks on Aldine Mail Route in front of MacArthur High.
- Place sidewalks to continue seamlessly across driveways at the same elevation.
- Explore opportunities to add pedestrian-scale lighting to increase visibility.
- Incorporate a Leading Pedestrian Interval into pedestrian crossing times to allow pedestrians a 'head start' into the crosswalk before movement of vehicles. Feasibility of incorporating this feature will be based on the results of a traffic signal operation study.
- Install Accessible Pedestrian Signals (APS) and Pedestrian Pushbutton with audible and braille features that allow people with visual and audible impairments to make use of push buttons and crosswalks.
- Examine opportunities to improve the placement of the pedestrian push buttons to provide enhanced accessibility for mobility impaired users.
- Study the necessity of an additional crosswalk with accompanying ADA ramp and Accessible Pedestrian Signals (APS) and Pedestrian Push Button on the Westside of the intersection to provide a dedicated pedestrian realm where pedestrians may already be crossing.
- Install elevated median on Aldine Mail Route to reinforce existing traffic lane markings

Recommendation	Category	Vulnerable Population	Health Benefit	Community Priority	Phasing*	Cost**
Refresh pavement markings and update condition of truncated domes on existing ADA ramps	Crosswalk	Anyone walking; People with Physical Impairments and Children	Improves accessibility for visually impaired; Improved visibility	High	Short	Low
Update existing curb ramps to Directional Curb ramps and create a pedestrian refuge and landing space at each corner	Ramps	People with Visual and Physical Impairments; Elderly	Improves directionality for visually impaired; Aligns with crosswalk	High	Short	Low
Install sidewalks on Gloger Street south of Aldine Mail Route to connect METRO stop and MacArthur 9th grade campus	Sidewalk	Anyone walking; People with Physical Impairments and Children	Reduces risk of pedestrian injury by 65-89%. ¹ Improved Accessibility	High	Long	High
Install sidewalks on JFK Boulevard to connect to METRO stop and residential neighborhoods	Sidewalk	Anyone walking; People with Physical Impairments and Children	Reduces risk of pedestrian injury by 65-89%. ² Improved Accessibility	High	Long	High
Widen sidewalks on Aldine Mail Route in front of the school.	Sidewalk	Anyone walking; People with Physical Impairments and Children	Improves Accessibility; Improves pedestrian comfort	High	Long	High
Install pedestrian-scale lighting	Lighting	Anyone walking; People with Physical Impairments and Children	Improved visibility. Improved pedestrian safety and prevents crime. ³	High	Short	Medium
Incorporate Leading Pedestrian Interval at traffic signals	Traffic Signals	Anyone walking	Reduces pedestrian-vehicle collisions as much as 60%. ⁴	High	Short	Low
Install Accessible Pedestrian Signals and Pedestrian Push button with audible and braille features that allow people with visual and audible impairments to make use of push buttons and crosswalks	Traffic Signals	People with Visual and Hearing Impairments	Improves accessibility for visually impaired	Medium	Short	Low
Install a crosswalk on the Westside of Gloger Street at Aldine Mail Route with accompanying ADA ramp and pedestrian push buttons	Crosswalk	Anyone walking; People with Visual and Physical Impairments	Improves Accessibility, Dedicated pedestrian realm will direct pedestrians to desirable crossing locations. Installing crosswalk reduced "fatal/injury" crash severity by 60%	Medium	Long	Medium
Improve placement of pedestrian push buttons near each ramp	Traffic Signals	People with Physical Impairments and Children	Improves accessibility	Medium	Short	Low
Incorporate shade structures at bus stops	Shade	Anyone walking; People with Physical Impairments and Children	Improved protection from weather.	Medium	Short	Low
Install elevated median on Aldine Mail Route at Gloger Street to reinforce existing traffic lane markings	Crosswalk	Anyone walking; People with Visual and Physical Impairments	Improves Accessibility, Dedicated pedestrian realm	Medium	Long	Medium
Sidewalks are recommended to continue seamlessly across driveways at the same elevation or "level"	Driveways	People with Physical Impairments	Improves accessibility; Improves pedestrian comfort	Low	Long	Medium-High

*Phasing timeline: Short-term is defined as less than 1 year (< 1year) and long-term is defined at more than 1 year (> 1 year) for implementation

**Cost: Low = \$0-\$75,000, Medium = \$75,000 - \$150,000, High = \$150,000+

1 Desktop Reference for Crash Reduction Factors, FHWA-SA-08-011, Table 11. <https://safety.fhwa.dot.gov/provencountermeasures/walkways/>

2 A.C. Fayish and Frank Gross, "Safety effectiveness of leading pedestrian intervals evaluated by a before-after study with comparison groups," Transportation Research Record No. 2198 (2010): 15-22.

3 Loukaitou-Sideris A. (2006). Is it safe to walk? Neighborhood safety and security considerations and their effects on walking. 7 «ann LiL;20:219-232.



EAST ALDINE

RECOMMENDATION RENDERING - BEFORE / AFTER



by sakura
robinson



EAST ALDINE

RECOMMENDATION RENDERING



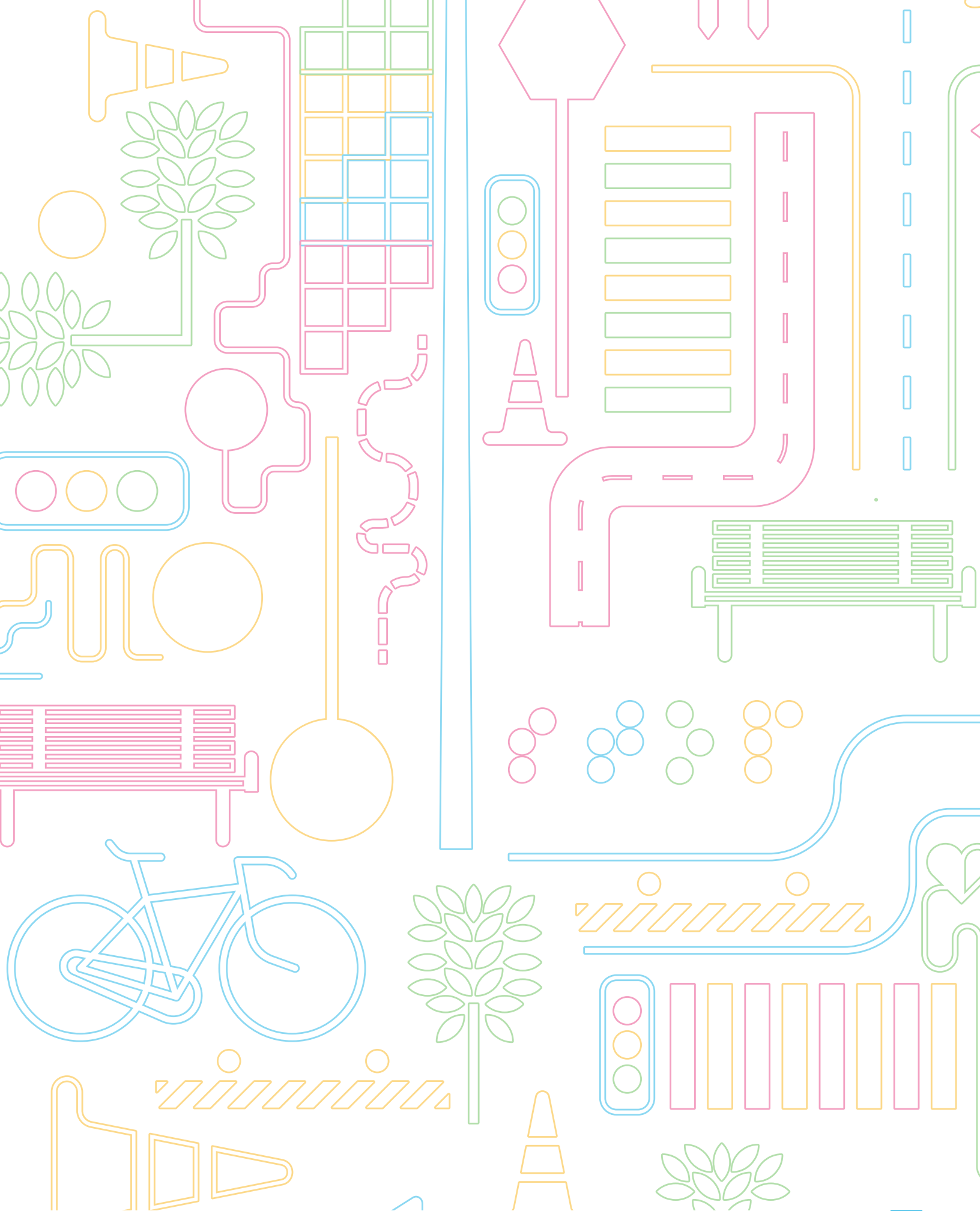
akura
robinson

References

1. Governors Highway Safety Administration (GHSA) (2017), Pedestrian Traffic Fatalities by State: 2017 Preliminary Data. <https://www.ghsa.org/resources/spotlight-pedestrians18>
2. Centers for Disease Control and Prevention (CDC) (2017). Physical Inactivity. Retrieved from Gateway to Health Communication & Social Marketing Practice: <https://www.cdc.gov/healthcommunication/toolstemplates/entertainment/tips/PhysicalInactivity.html>
3. Kent, J., & Thompson, S. (2012). Health and the built environment: exploring foundations for a new interdisciplinary profession. *Journal of Environmental and Public Health*, 2012.
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.
5. Hunter, W., Huang, H. (1995). User counts on bicycle lanes and multiuse trails in the United States. *Transport Res Record*.1995; 1502: 45–57.
6. Troped, P., Saunders, R., Pate, R. (2001). Associations between self-reported and objective physical environmental factors and use of a community rail-trail. *Prev Med*. 2001;32:191–200.
7. Office of Disease Prevention and Health Promotion. (2018, July). Physical Activity. Retrieved from HealthyPeople.gov: <https://www.healthypeople.gov/2020/topics-objectives/topic/physical-activity>.
8. U.S. Department of Transportation (USDOT). (August 2012). Health and transportation: a critical intersection [blog]. Fast Lane. Retrieved from: <http://cvta.org/member-news/104-public-news/542-health-and-transportation-a-critical-intersection.html>
9. Saelens, B. E., Sallis, J. F., & Frank, L. D. (2003). Environmental correlates of walking and cycling: findings from the transportation, urban design, and planning literatures. *Annals of behavioral medicine*, 25(2), 80-91.
10. Sallis, J. F., Saelens, B. E., Frank, L. D., Conway, T. L., Slymen, D. J., Cain, K. L., ... & Kerr, J. (2009). Neighborhood built environment and income: examining multiple health outcomes. *Social science & medicine*, 68(7), 1285-1293.
11. Bracy, N. L., Millstein, R. A., Carlson, J. A., Conway, T. L., Sallis, J. F., Saelens, B. E., ... & King, A. C. (2014). Is the relationship between the built environment and physical activity moderated by perceptions of crime and safety? *International Journal of Behavioral Nutrition and Physical Activity*, 11(1), 24.
12. Rothman, L., Macarthur, C., To, T., Buliung, R., & Howard, A. (2014). Motor vehicle-pedestrian collisions and walking to school: the role of the built environment. *Pediatrics*, peds-2013.
13. Chen, L., Chen, C., Ewing, R., McKnight, C. E., Srinivasan, R., & Roe, M. (2013). Safety countermeasures and crash reduction in New York City—Experience and lessons learned. *Accident Analysis & Prevention*, 50, 312-322.
14. U.S. Department of Transportation (USDOT). (2017). Federal Highway Safety Administration, Office of Safety. Proven Safety Countermeasures. <https://safety.fhwa.dot.gov/provencountermeasures/>. Accessed June 2018.

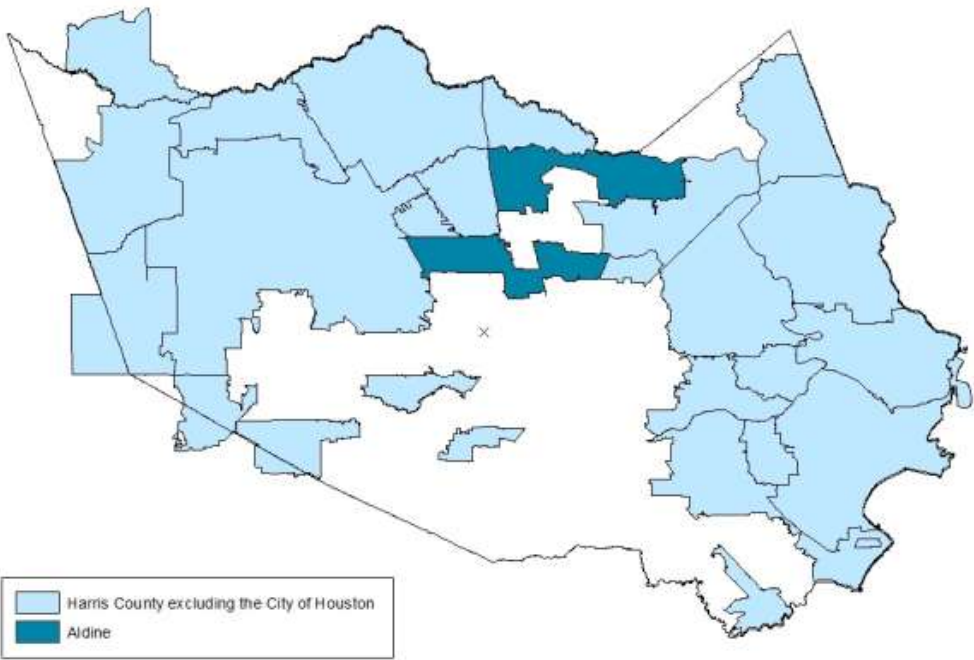
15. Richardson, A. S., Troxel, W. M., Ghosh-Dastidar, M., Hunter, G. P., Beckman, R., Colabianchi, N., ... & Dubowitz, T. (2017). Pathways through which higher neighborhood crime is longitudinally associated with greater body mass index. *International Journal of Behavioral Nutrition and Physical Activity*, 14(1), 155.
16. Foster, S., & Giles-Corti, B. (2008). The built environment, neighborhood crime and constrained physical activity: an exploration of inconsistent findings. *Preventive medicine*, 47(3), 241-251.
17. McDonald, N.C. (August 2008). The Effect of Objectively Measured Crime on Walking in Minority Adults. *The Science of Health Promotion*, 22(6), 433-436.
18. Hale, C. (1996). Fear of crime: a review of the literature. *Int. Rev. Vict.* 4, 79–150.
19. Loukaitou-Sideris A. (2006). Is it safe to walk? Neighborhood safety and security considerations and their effects on walking. 7 «ann LiL;20:219-232.
20. National Equity Atlas. (2018). Indicators: Car access United States. Retrieved May 7, 2019 from National Equity Atlas : https://nationalequityatlas.org/indicators/Car_access.
21. American Association of State Highway and Transportation Officials (AASHTO). (2013). *Commuting in America 2013: The National Report on Commuting Patterns and Trends*. http://traveltrends.transportation.org/Documents/B7_Vehicle%20and%20Transit%20Availability_CA07-4_web.pdf. Accessed February 2019.
22. Bell, J., & Cohen, L. (2009). *The Transportation Prescription: Bold New Ideas for Healthy, Equitable Transportation Reform in America*. PolicyLink, Convergence Partnership and Prevention Institute. Retrieved February 20, 2019. <https://www.preventioninstitute.org/publications/the-transportation-prescription-bold-new-ideas-for-healthy-equitable-transportation-reform-in-america>.
23. Thornton, C. M., Conway, T. L., Cain, K. L., Gavand, K. A., Saelens, B. E., Frank, L. D., ... & Sallis, J. F. (2016). Disparities in pedestrian streetscape environments by income and race/ethnicity. *SSM-population health*, 2, 206-216.
24. Berke, E. M., & Vernez-Moudon, A. (2014). Built environment change: a framework to support health-enhancing behaviour through environmental policy and health research. *J Epidemiol Community Health*, jech-2012.
25. Perdue, W. C., Stone, L. A., & Gostin, L. O. (2003). The built environment and its relationship to the public's health: the legal framework. *American Journal of Public Health*, 93(9), 1390-1394.
26. Texas Department of State Health Services (DSHS), Center for Health Statistics. <http://healthdata.dshs.texas.gov/VitalStatistics/Death>. Accessed March 2019.
27. Greenlund, K. J., Giles, W. H., Keenan, N. L. et al. (2006). Heart disease and stroke mortality in the twentieth century. In Ward, J. W. & Warren, C. (Eds.), *Silent Victories: The History and Practice of Public Health in Twentieth Century America*. Oxford, England: Oxford University Press.
28. U.S. Department of Transportation (USDOT). (2015). *Revised Departmental Guidance on Valuation of a Statistical Life in Economic Analysis*. Retrieved from Transportation Policy: <https://www.transportation.gov/office-policy/transportation-policy/revised-departmental-guidance-on-valuation-of-a-statistical-life-in-economic-analysis>. Accessed June 2018.

29. Cummings, P.L.; Schwaller, E.; Wesely, S.; Choi, L.E. (2016). Shah, U.; Becker, L.; Schaffer, M. (Dept.). East Aldine District's Town Center Development: A Health Impact Assessment in Harris County, Texas. Full Report. Harris County Public Health.





COMMUNITY HEALTH PROFILE



2014 Aldine

Aldine at a Glance

Harris County Public Health and Environmental Services (HCPHES) developed 22 community-specific health profiles to describe and monitor the health of residents in Harris County.

The following community health profile provides an overview of health status for the Aldine area in Harris County, Texas. The profile identifies opportunities for health improvement by comparing the health indicators of the Aldine area with those of Harris County excluding Houston (HCxH) overall.

- The percent of adults without health insurance is higher in the Aldine area than in HCxH.
- Adults in the Aldine area are less likely to engage in higher levels of regular physical activity, more likely to engage in binge drinking, and more likely to be obese than adults in HCxH.
- Some areas within Aldine have limited access to healthy food and is identified as a “food desert.”
- The Aldine area has higher incidence rates of gonorrhea and chlamydia among 15-44 year olds than HCxH.
- The teen birth rate is higher in this community than in overall HCxH.

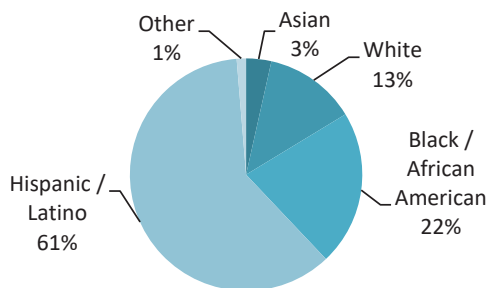
This profile provides important information about the health of Aldine residents, however, it does not address all health issues and their causes.

Community Health Profile: Aldine Area

Demographics

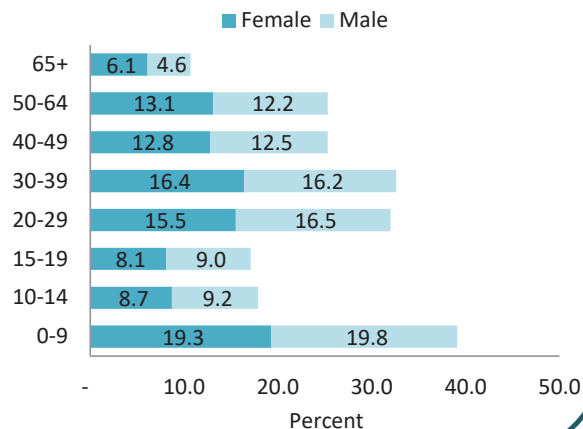
The Aldine area includes the zip codes 77037, 77038, 77039, 77073, 77086, and 77338,¹ which account for a total population of 170,864 individuals.² The Median Household Income is \$44,624, compared to \$67,794 for Harris County excluding the City of Houston (HCxH).^{3,4}

Race / Ethnicity²



Gender by Age

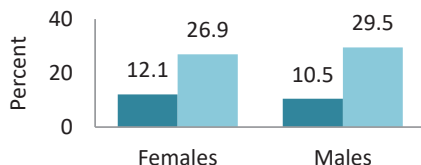
Percent of females and males by age group²



Social Determinants

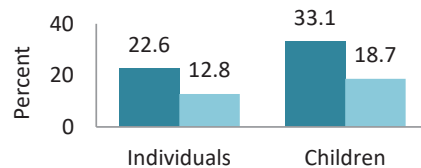
Education

Percent of population age 25+ with four year college degree or higher³



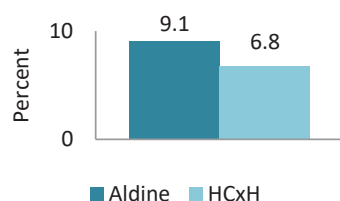
Poverty

Percent of individuals (all ages) and children (<18) living below the poverty line³



Unemployment

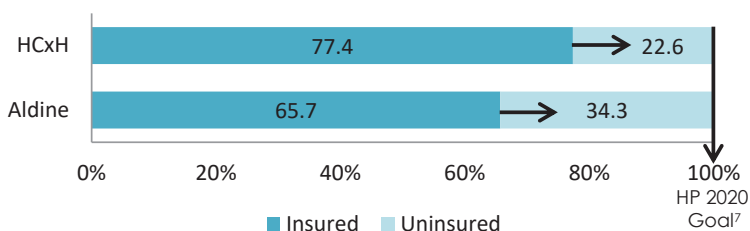
Percent of population age 16+ unemployed but seeking work³



Access to Care

Insurance Status

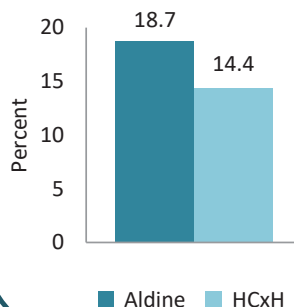
Percent of individuals (18+) with and without insurance coverage.⁵
The Aldine community is a health professional shortage area.⁶



Overall Health

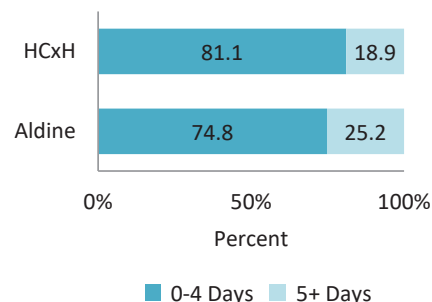
Self-Reported Health Status

Percent of adults (18+) reporting fair or poor health⁸



Physically Healthy Days

Percent of adults (18+) reporting poor physical health 0 to 4 or 5+ days per month⁸



Health Behaviors

Lifestyle Factors

Diet

Percent of adults (18+) who report consuming 5+ servings of fruits & vegetables per day⁸

Physical Activity

Percent of adults (18+) who report engaging in physical activity for at least 30 minutes, 5 or more times per week⁸

Obesity

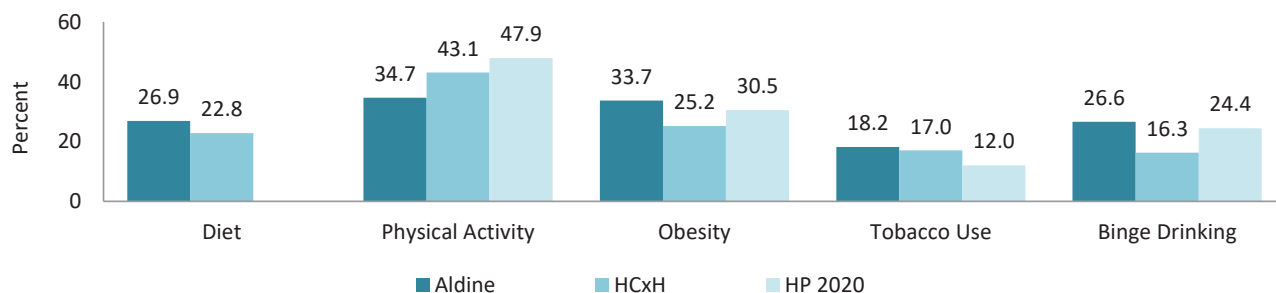
Percent of adults (18+) who report a BMI ≥ 30 ⁸

Tobacco Use

Percent of adults (18+) who report current cigarette smoking⁸

Binge Drinking

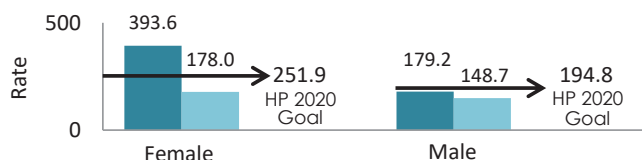
Percent of adults (18+) who report binge drinking in past 30 days⁸



Sexual Health

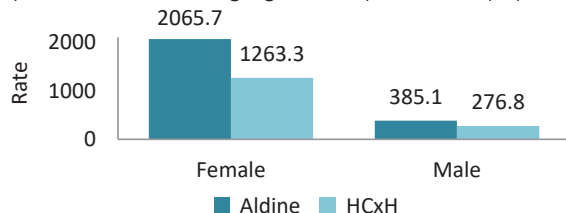
Gonorrhea Incidence

Gonorrhea case rate among ages 15-44 per 100,000 population⁹



Chlamydia Incidence

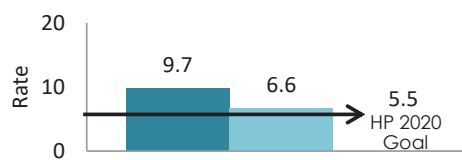
Chlamydia case rate among ages 15-44 per 100,000 population⁹



Public Safety

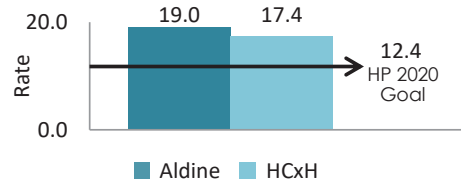
Homicides

Homicide rate per 100,000 population¹⁰



Motor Vehicle Deaths

Motor Vehicle death rate per 100,000 population¹⁰



Built Environment

The **built environment** includes all of the natural and human-formed conditions that impact our quality of life. The CDC defines healthy places as, "those designed and built to improve the quality of life for all people who live, work, worship, learn, and play within their borders." Healthy community design can improve people's health by increasing physical activity, reducing injury, and increasing access to healthy food, among others.¹¹

Access to Healthy Food

Some communities have limited access to healthy food and are referred to as "food deserts." Limited access to fresh fruits and vegetables reduces opportunities to practice healthy eating, which can improve health outcomes. The United States Department of Agriculture (USDA) has identified food deserts throughout the U.S. by census tracts. The following communities in HCxH have census tracts that have been identified as food deserts: **Aldine**, Clear Creek, Galena Park, Humble, La Porte, North Forest, Sheldon and Spring.¹²

Health Status

Leading Causes of Death

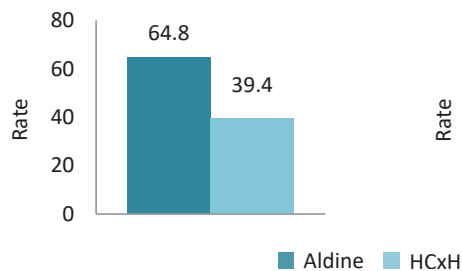
Aldine's leading cause of death is **heart disease**, followed by cancer, accidents, stroke, and chronic lower respiratory disease. These top five causes account for 63.4% of all deaths in the Aldine area.^{10,13}

Heart Disease	Cancer	Accidents	Stroke	Lower Resp.	Diabetes	Homicide	Septicemia	Kidney-Related	Suicide	All Other
25.4%	20.3%	8.4%	5.2%	4.1%	3.8%	2.4%	1.9%	1.7%	1.6%	25.3%

Maternal & Child Health

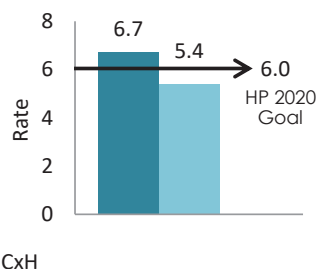
Births to Teens

Live births per 1,000 females aged 15 to 19 years¹⁴



Infant Deaths

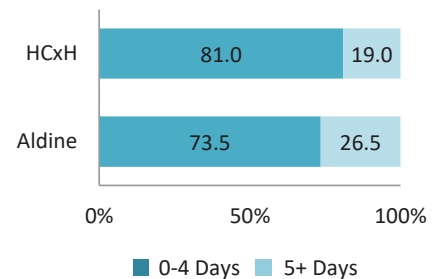
Infant (newborn to 1 year) death rate per 1,000 live births¹⁵



Mental Health

Mentally Healthy Days

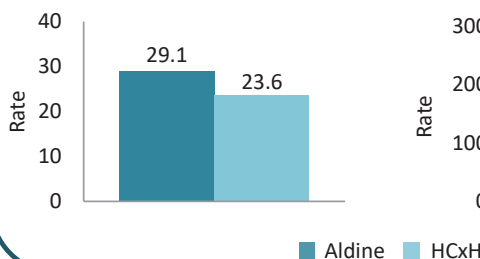
Percent of adults (18+) reporting not good mental health 0 to 4 or 5+ days per month⁸



Chronic Disease

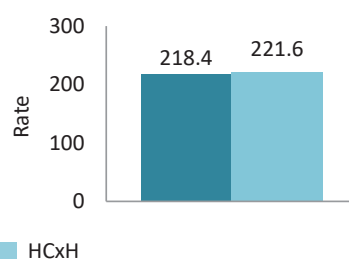
Diabetes

Diabetes-related death rate per 100,000 population¹⁰



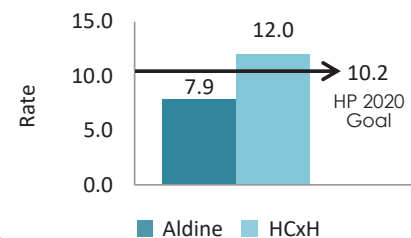
Heart Disease

Heart disease death rate per 100,000 population¹⁰



Suicide

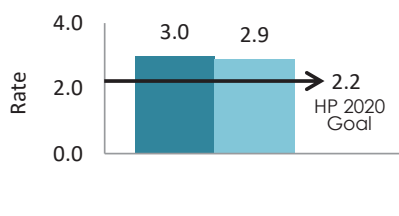
Suicide rate per 100,000 population¹⁰



Cancer

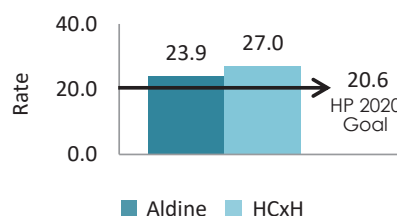
Cervical Cancer

Cervical cancer death rate per 100,000 female population¹⁰



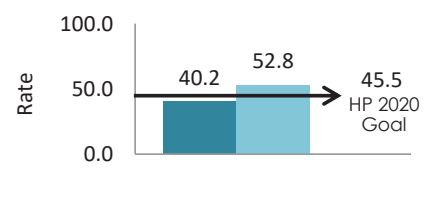
Breast Cancer

Breast cancer death rate per 100,000 female population¹⁰



Lung Cancer

Lung cancer death rate per 100,000 population¹⁰



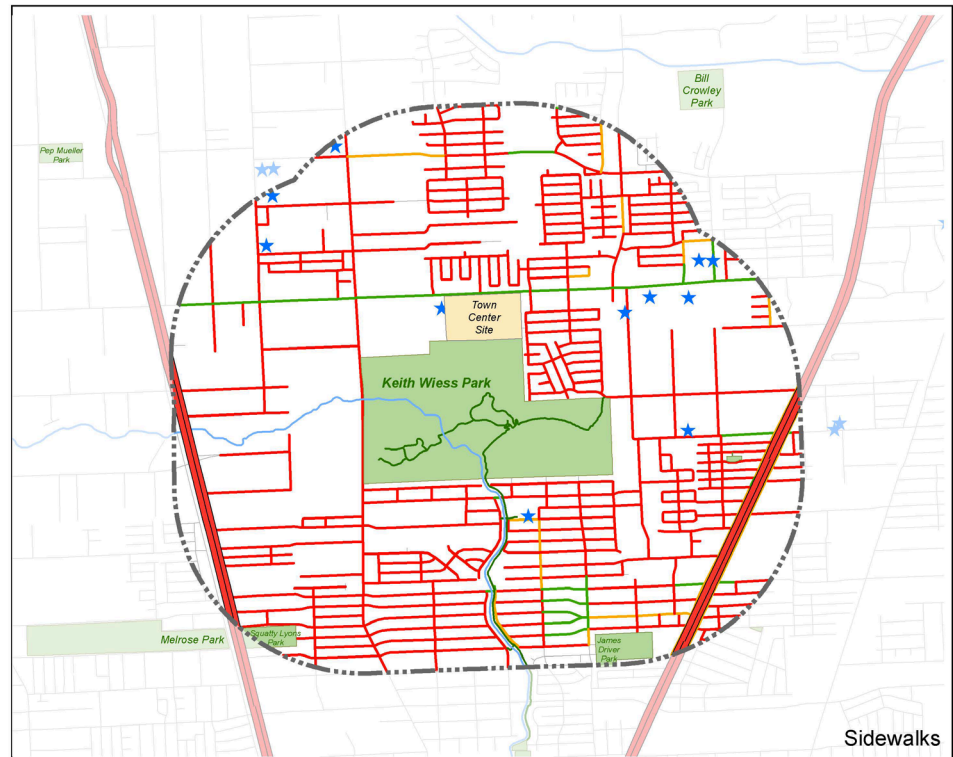
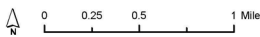
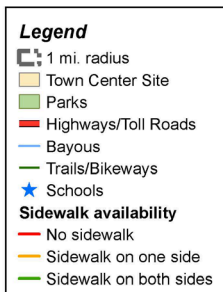
End Notes

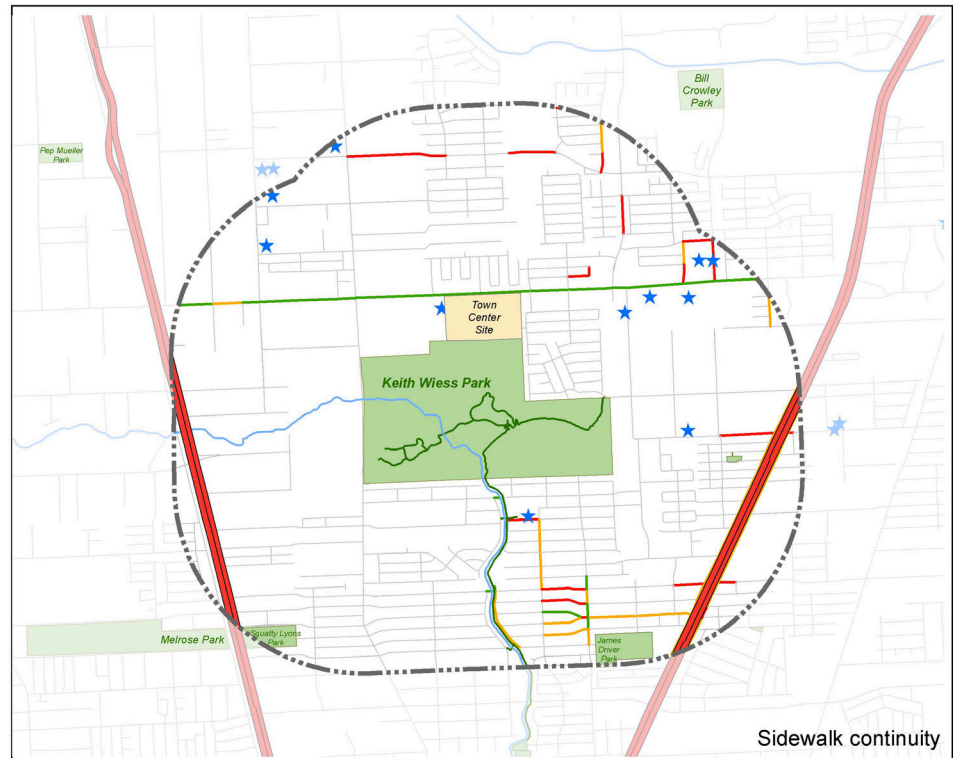
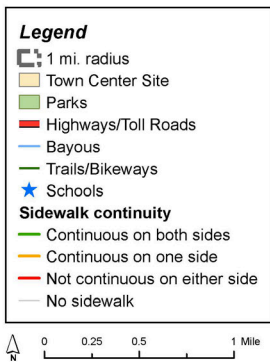
Sources

- ¹ The community areas were developed using 59 zip codes, excluding the City of Houston. For more information, please contact the Office of Policy and Planning at opp@hcuphes.org.
- ² Census Bureau 2010
- ³ American Community Survey 2007-2011
- ⁴ Throughout the profiles, the jurisdiction of Harris County excluding the City of Houston is abbreviated as HCxH.
- ⁵ UT School of Public Health, Health of Houston Survey, 2010
- ⁶ Federally designated Health Professional Shortage Areas (HPSAs) lack a sufficient ratio of primary medical care, dental or mental health providers to the population. Find further information at <http://www.hrsa.gov/shortage/>.
- ⁷ The abbreviation HP2020 stands for Healthy People 2020. Further information can be found at www.healthypeople.gov.
- ⁸ Texas Department of Health Services, Center for Health Statistics, Behavioral Risk Factor Surveillance System 2004-2010
- ⁹ Texas Department of Health Services, HIV and STD Program, 2010
- ¹⁰ Texas Department of Health Services, Center for Health Statistics, 2001-2008 Average Age-Adjusted Rates. Kidney-related refers to nephritis, nephrotic syndrome, and nephrosis.
- ¹¹ To learn more about the built environment and healthy places, visit <http://www.cdc.gov/healthyplaces/about.htm>.
- ¹² For more information about USDA defined food deserts, visit <http://www.ers.usda.gov/data-products/food-desert-locator.aspx>.
- ¹³ Note that the 'Leading Causes of Death' percentages may not sum exactly to 100% due to rounding error.
- ¹⁴ UT School of Public Health, Prevention Research Center, 2011
- ¹⁵ Texas Department of Health Services, Center for Health Statistics, 2000-2008

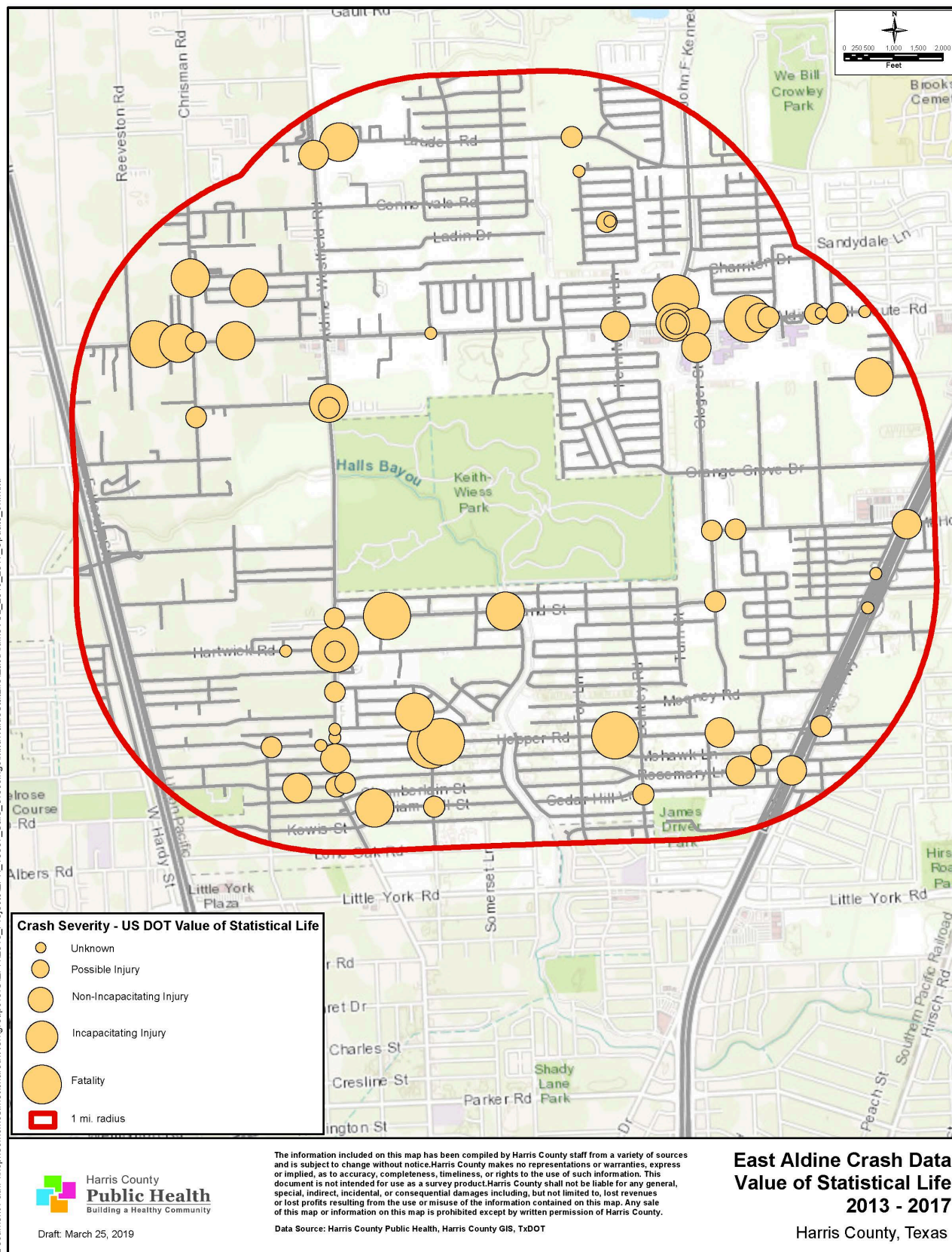
Appendix B:

Environmental Scan Results (2016)





Appendix C: USDOT Value of Statistical Life



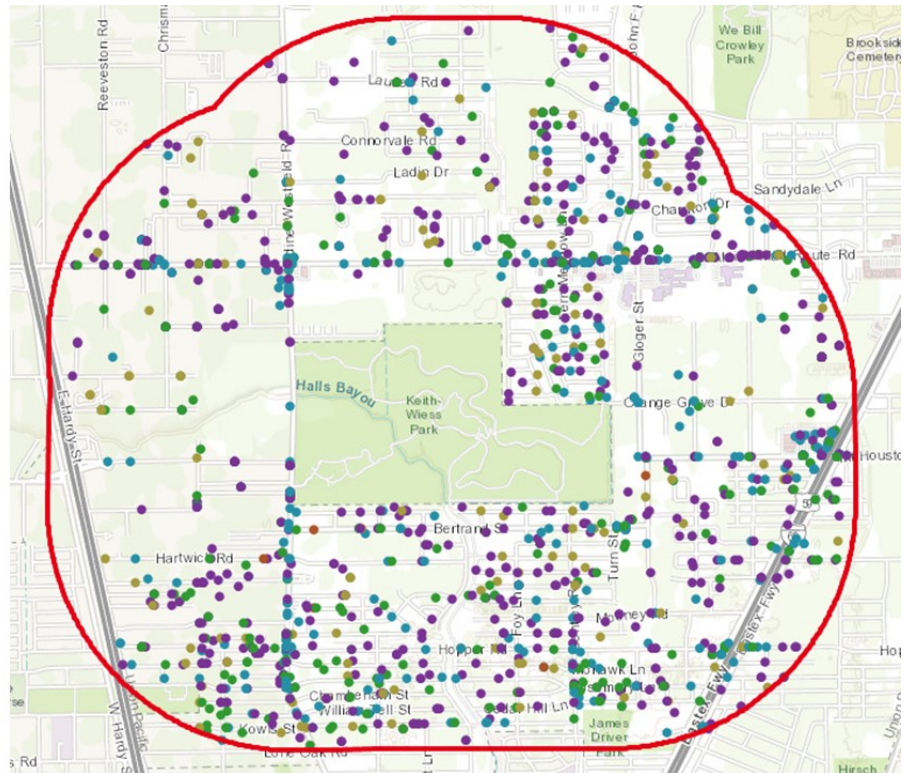
Weighted Values:

Crash Severity	US DOT Value of Statistical Life
Fatality	9.6000
Incapacitating Injury	2.5536
Non-Incapacitating Injury	0.4512
Possible Injury	0.0288
Not Injured	0.0072
Unknown	0.0072

Appendix D: East Aldine Violent Crime

Violent crime type

- Assault
- Assault with Deadly Weapon
- Robbery
- Sexual Assault



Data Sources:
2013-2017 Harris County Sheriff's Office

Assault with Deadly Weapon Hot Spot



Data Sources: 2013-2017 Harris County Sheriff's Office

Robbery Hot Spot



Data Sources: 2013-2017 Harris County Sheriff's Office

Sexual Assault Hot Spot



Data Sources: 2013-2017 Harris County Sheriff's Office

Appendix E:

Community Engagement Results

ULI Safe Crossings

Design Recommendations



Project Team

HARRIS COUNTY PUBLIC HEALTH



URBAN LAND INSTITUTE



HARRIS COUNTY ENGINEERING DEPARTMENT



CONSULTANT TEAM



Keiji Asakura, Principal-In-Charge

Managing Principal
Keiji@asakurarobinson.com
713-725-3884

Luis Guajardo, Project Manager

Senior Planner
Luis@asakurarobinson.com
956-458-6327

Wei Xiao, Urban Design Lead

Urban Designer
Wei@asakurarobinson.com
512-968-2576

Introduction

The project team conducted two strategy sessions (Galena Park and East Aldine) with community leaders and members of the Urban Land Institute's Building Healthy Places Initiative. Below is a summary of design recommendations put forth by the consultant team, Asakura Robinson, based on the input received in both communities and national best practices on safe street and intersection design. The following manuals were consulted, in addition to the public's input, and inform the recommendations listed here prior to going into conceptual design. The TX MUTCD was also reviewed to document how best practices could be incorporated by Harris County Engineering Department (HCED). HCED has developed its own set of recommendations for these crossings, in accordance with the County's design standards. The listed recommendations in this document do not represent HCED's design recommendations.

- Institute of Transportation Engineers (ITE) Designing Walkable Urban Thoroughfares: A Context Sensitive Approach
- Federal Highway Administration (FHWA) Achieving Multimodal Networks
- FHWA Guide for Improving Pedestrian Safety at Uncontrolled Crossing Locations
- National Association of City Transportation Officials (NACTO) Urban Street Design Guide
- Urban Land Institute's (ULI) Building Healthy Places Toolkit



Community Engagement

The project team convened 2 strategy sessions with community stakeholders in Galena Park and East Aldine. The agenda included a presentation on the project and data collection conducted by Harris County Public Health. This was followed by a workshop exercise that started with a series of conceptual, big-picture questions, and was followed by a table exercise with precedent images of crossing treatments asking participants to rank them in low, mid and high priority.

Presentation (30 minutes)

- Project Overview and Schedule
- Existing Conditions Data Collection
- Intro to Consultant Team

Workshop (60 minutes)

- Design Criteria and Priorities (30 minutes)
- Table Exercise - Picturing Crossings (30 minutes)

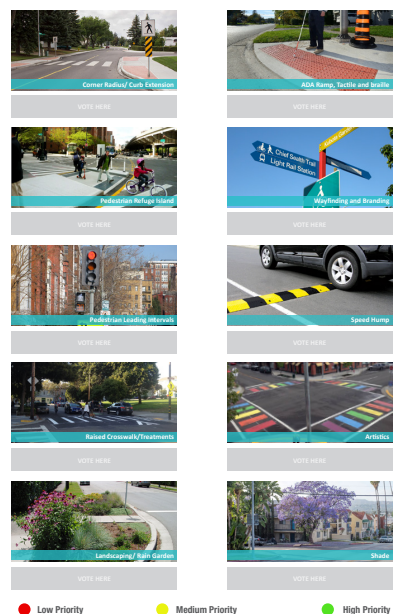
Design Criteria and Priorities was framed around asking participants the following questions:

- What does a safe crossing mean to you?
- Who are we designing for?
- What features are essential for a safe crossing?
- How should people benefit from an improved crossing?

Picturing Crossings exercise in Galena Park displayed here:



PICTURING CROSSINGS



Community Engagement

East Aldine Feedback

I. What does safe crossing mean to you?

- Sidewalks
- Speed Limits
- Crosswalks
- Education (Pedestrian & motorists)
- Signage/Orientation
- Tightening turning radius
- Curb Ramps
- Limiting right turn on red
- Mid-block crossing
- Prioritization/designing for pedestrians
- Enforcement
- Traffic control for people
- Pedestrian refuge on wide streets
- Crossing guards
- Get to destinations safely
- Sense of safety
- Low speed limit streets
- Educate parents and students who are not paying attention to signage
- Make lighting
- Raised crosswalk

II. Who are we designing for?

- Businesses
- Schools
- Seniors
- Children
- Disabled people
- Bus riders
- Everyone
- Pedestrians
- Bikers
- Skateboarders
- Students/parents walking kids to school

III. Which design features are essential?

- Sidewalks
- LED lights - school zones, pedestrian signals
- Drainage
- Engagement with civic groups on adjacent road projects
- County ROW issues on Aldine Westfield @ Hawkins Ave
- Trees/Vegetation/Air Quality mitigation/ Central plant median

Community Engagement

- Gloger St - High student traffic
- Safe routes to school for area within 2 miles
- Funds (currently is limited)
- Signals in front of schools
- Traffic calming in residential streets

IIII. How will people benefit?

- Less facilities
- Increase physical activity
- Less traffic
- Choice in mode of transportation
- Increase usage of public transit

Location Preference:

Consensus did not emerge from group participants, though two areas were recommended. Participants suggested safer connections to the school campus area on Aldine Mail Route between JFK and Determined. Gloger street was also suggested due to its lack of sidewalks and open ditches that students walk through, though this is more of a linear/sidewalk need and not a safe crossing project. The recommendation is to focus on Aldine Mail Route between JFK and Gloger Street.

Additional Comments:

- Lighting is needed in the area.
- Sidewalks need to be completed in some areas.
- Anytime all road-users can access destinations equitably is a win.
- Safety is imperative for everyone, so any traffic calming features, especially those that provide visibility are vital.
- Have final deliverables presented to civic leaders industry.
- Sidewalk is needed towards schools.
- Speed humps are needed on Bertrand St near stop signs.



Community Engagement

Results

East Aldine residents identified pedestrian refuge islands and wayfinding/branding as the highest priority interventions. Pedestrian leading intervals also featured high, capturing the public's experience with signal timing that preferences motor vehicles and is too limited for safe crossing on the area's major arterials. The overall lack of sidewalks and the uncomfortable condition of navigating existing sidewalks and driveways was highlighted among participants as a threat to children, elderly, and people with disabilities, as depriving them of independence in navigating through their neighborhood. Perpendicular ramps and crosswalks

Content	Low Priority	Mid Priority	High Priority
Corner Radius/Curb Extension	3	3	1
ADA Ramp, Tactile and Braille	8	1	0
Pedestrian Refuge Island	0	4	9
Wayfinding and Branding	1	1	6
Pedestrian Leading Intervals	0	2	5
Speed Hump	2	3	4
Raised Crosswalk/ Treatments	0	3	3
Artistics	8	2	0
Landscaping/ Rain Garden	4	5	0
Shade	4	6	0

HARRIS COUNTY

ENGINEERING DEPARTMENT

1001 Preston, 7th Floor
Houston, Texas 77002
(713) 755-5370

DATE: January 17th, 2019

TO: Harris County Public Health

ATTN: Aimee Schultze

CC: Brannan Hicks
Stuart Corder

FROM: Tina Liu, P.E.
Transportation and Planning Division

**SUBJECT: Aldine Mail Route Road at Gloger Street
Study: Safety Analysis**

In coordination with the Harris County Public Health Department, we conducted a traffic study at the intersection of Aldine Mail Route Road and John F Kennedy Boulevard and Aldine Mail Route Road at Gloger Street. Our findings and recommendations are as follows.

Aldine Mail Route Road is a five-lane undivided major thoroughfare in the east-west direction with a posted speed limit of 35 MPH. There are sidewalks existing on both sides of the street. John F Kennedy Boulevard is a four-lane divided major thoroughfare in the north-south direction with curb and gutter cross section and posted speed limit of 30 MPH. John F Kennedy Boulevard intersects Aldine Mail Route Road and terminates approximately 300 feet south of the intersection. Gloger Street is a two-lane undivided roadway with roadside ditches. Gloger Street intersects Aldine Mail Route Road to the south with a posted speed limit of 30 MPH. Both intersections are located within a school zone where the posted speed limit is 20 MPH during school bell times. There are 4 Aldine ISD schools located in the vicinity of these intersections.

We conducted a site visit and observed the following conditions:

- Both intersections are connected with sidewalks on the north and south side of Aldine Mail Route Road.
- Both intersections have ADA compliant ramp, pedestrian push buttons, and pedestrian heads.
- Both intersections have continental sidewalks, a typical measure for crosswalks located within a school zone.
- During school hours, there are police officers monitoring several pedestrian crossings along Aldine Mail Route in the vicinity of the local schools.
- During school bell times, the westbound left turn traffic volume at Gloger Street is high, which results in some vehicles making a U-Turn at John F Kennedy

HARRIS COUNTY

ENGINEERING DEPARTMENT

**1001 Preston, 7th Floor
Houston, Texas 77002
(713) 755-5370**

Boulevard to avoid the left turn lane at Gloger Street. The eastbound vehicles making a right turn onto Gloger Street block the intersection intermittently, reducing the number of left turns that can be made at the intersection.

Several maintenance and operations based improvements were completed in this section of Aldine Mail Route in the past 2 years.

Based on our review of the site and observations as noted above, both intersections are designed to provide safe pedestrian crossings. We recommend refreshing the pavement markings and minor ramp improvements as shown on the attached sketch to improve pedestrian operations at these intersections.

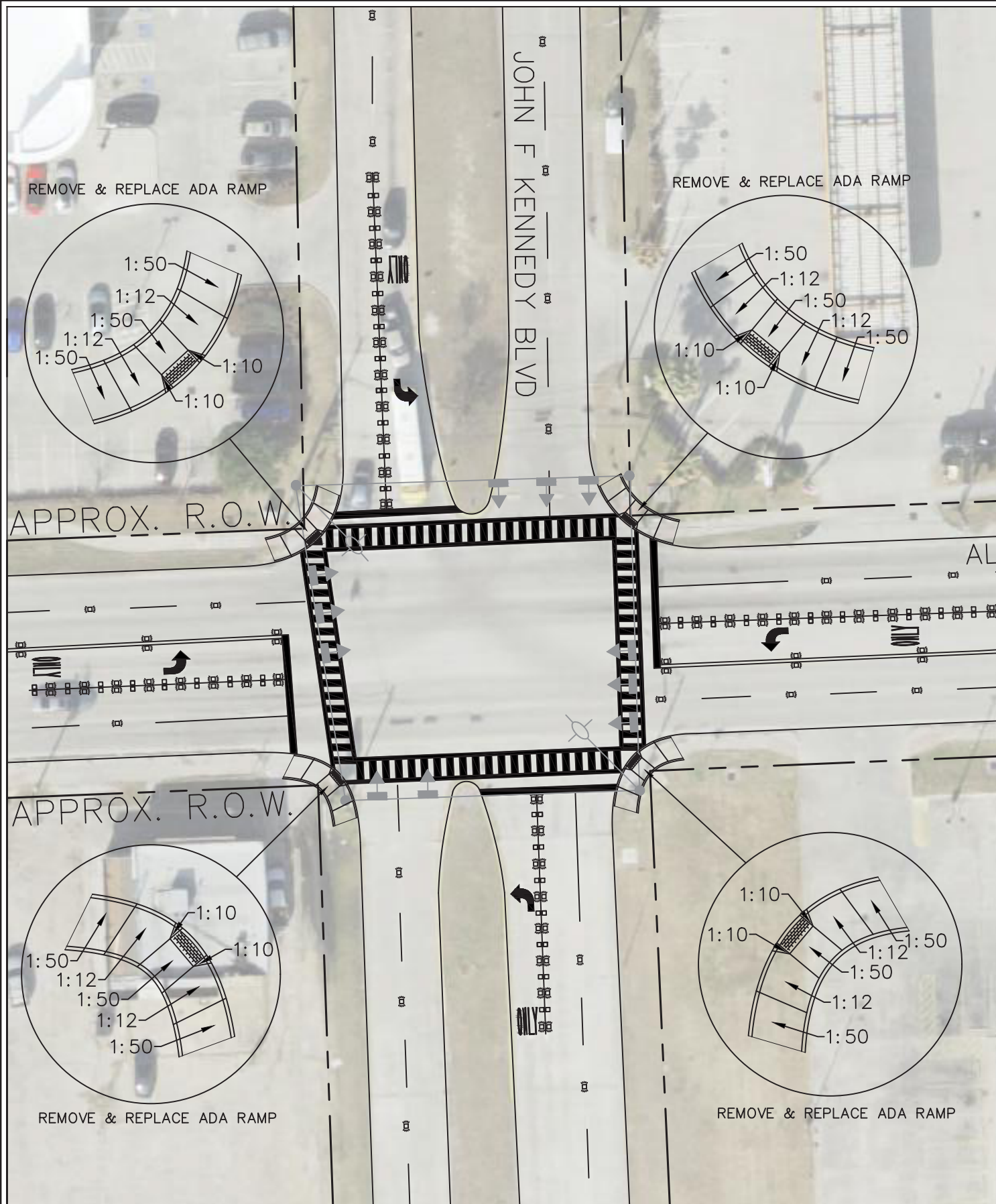
The level of service or delay experienced during school bell times, and is not observed at other times of the day. The adjacent schools are campuses which were constructed over 40 years ago and were design limited on site vehicle storage for bell time operations.

The study was done in accordance with the 2011 Texas Manual on Uniform Traffic Control Devices.

Should you need additional information, please advise.

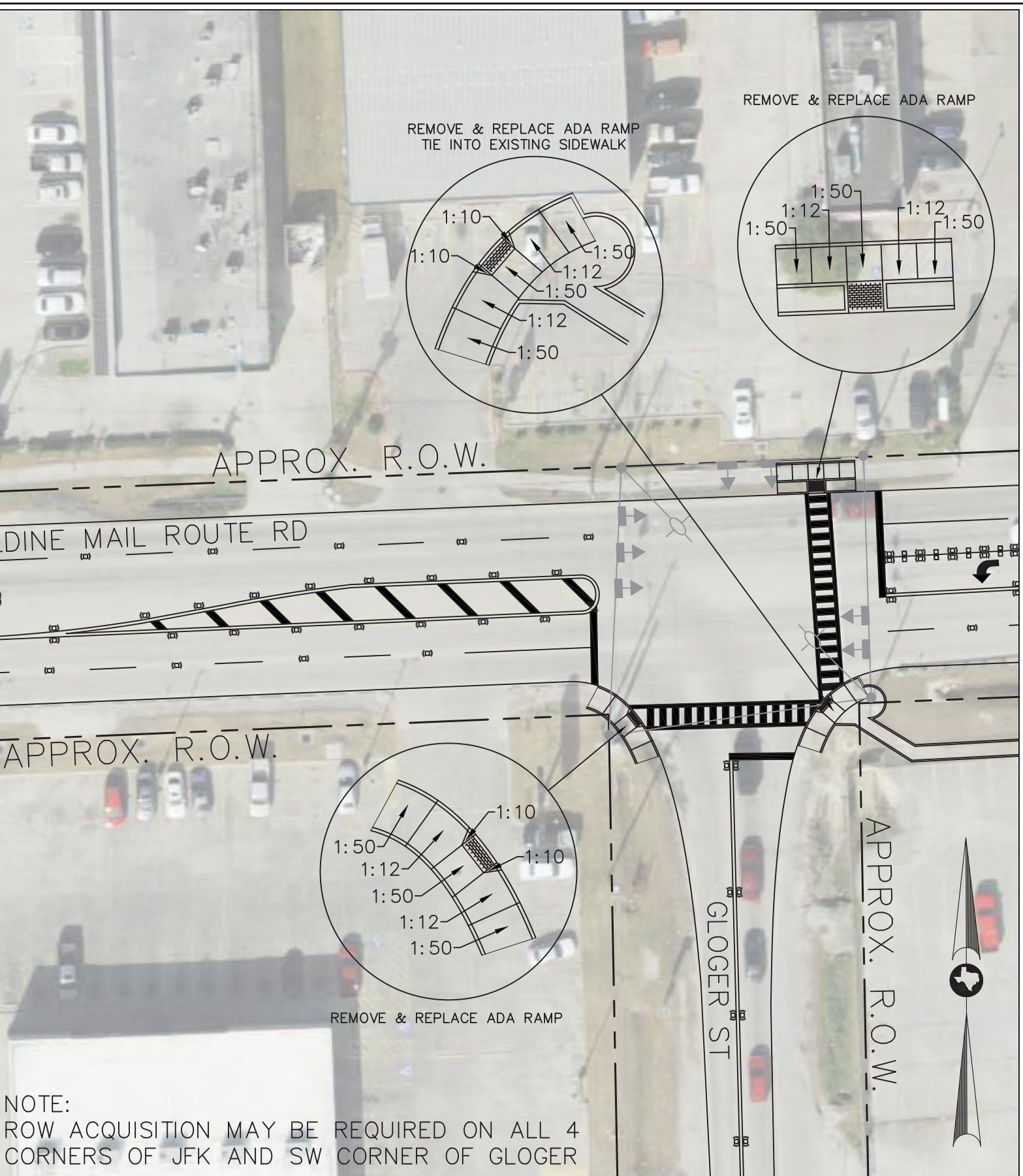
TL:BS
Attachment:Sketch

J:\TRAFFIC\Mlydon\Studies\Precinct 2\2018\Aldine Mail Route Rd & JFK Blvd\Aldine Mail Route Rd & JFK Blvd.dwg



NO.	REVISIONS	DATE	NAME
1			
2			
3			
4			
5			

HARRIS COUNTY
ENGINEERING DEPARTMENT



PROJECT TITLE:		ALDINE MAIL ROUTE RD & JOHN F KENNEDY BLVD
SHEET DESCRIPTION:		URBAN LAND INSTITUTE
DRAWN BY:		SCHEMATIC LAYOUT
M.L.		DATE: 1/7/2019
CK'D BY:		SHEET NO: 155
SCALE:		1" = 10'



Harris County
Public Health
Building a Healthy Community