Safe Streets, Safe Communities:
Walking and Biking Infrastructure in Gulfton

Photo credit: Sandra Rodriguez
Efforts to improve street safety in the Houston region are tied to residents’ ability to access socioeconomic opportunities using different travel modes. Gulfton has the potential to be a more walkable neighborhood because various community resources, commercial activities, schools and residential units are often within walking or biking distance.

However, 149 people were either killed or injured while walking between 2010 – 2017 according to TxDOT.\(^1\) This report provides insights into concerns about the availability and conditions of biking and walking facilities and infrastructure in the neighborhood.

Several neighborhood walks were organized so that community leaders and citizen volunteers can participate in assessing availability and conditions of existing sidewalks, bikeways and other street elements such as street lighting and building conditions. The project aims to build an inventory of sidewalks, intersections and bikeways in different neighborhoods in Houston.

The street and biking inventory was collected by the Kinder Institute Transportation and Housing group during the summer and fall of 2018. In addition, resident volunteers and community leaders walked through the neighborhood and provided their assessment on May 19 and June 28, 2018.

The team leveraged a list of street infrastructure and facilities used by the Houston-Galveston Area Councils (H-GAC) Pedestrian Evaluation tool,\(^2\) the Active Living Research Pedestrian Environment Data Scan (PEDS) tool\(^3\) and the Microscale Audit of Pedestrian Streetscapes (MAPS) tool.\(^4\)

The questions listed for the walk audit were shared and developed through participation in several meeting groups that included H-GAC, Metro, TEI, the City of Houston, Bike Houston and other stakeholders.

Key Findings

Of the 486 street segments in the neighborhood, 36 percent of the segments do not have sidewalks.

41 percent of the existing sidewalks have some kind of obstruction, such as gaps, parked cars and tree or shrub overgrowth.

Only 6 percent of segments have either signage or striping that indicate a shared bike route or dedicated bikeways.

Although Gulfton has the highest transit ridership in the city, 59 percent of sidewalks where transit stop exist have some kind of obstruction.

Of the 183 intersections assessed, 43 percent of these intersections do not have any ramp access or both pre- and post-crossing segments.
The Gulfton street inventory audit is supplemented by a community survey that identifies vehicle-related crashes or near-accidents in the neighborhood. The study finds that although Gulfton is somewhat walkable and is well served by public transit, some areas face safety issues related to crime and traffic. This assessment can provide a starting guide for future investments and build upon existing efforts.

In 2017, the Houston City Council adopted a bike plan with $3.5 million grant funding to construct 23 linear miles of new on-street bicycle facilities. Harris County’s Precinct 1 also allocated a $10 million commitment to jumpstart work repainting bike lanes, developing safer intersections and other improvements aimed at making riding a bike in Houston easier.

Such bicycling and walking initiatives in relation to safety, public health, local economies and equity reflect a call not only for local but also national attention. Groups such as the Alliance for Biking and Walking, the National Conference of State Legislatures and the U.S. Department of Transportation and Federal Highway Administration are leading the way in conducting studies that help identify gaps across different communities.
Sidewalks and Intersections

The major types of obstructions identified in the neighborhood inventory include gaps in sidewalks, parked cars and tree or shrub overgrowth. Figure 1 shows the location of existing sidewalks (green) and segments that do not have a sidewalk (red). It also outlines sidewalks with the presence of trip hazards such as overgrowth, uneven surface cover or gaps and other obstructions (yellow). The walk audit also captured information on the availability of pedestrian walk signs, crosswalk markings and wheelchair-accessible ramps as well as pedestrian islands at intersections.

Figure 2 shows overall, 47 percent of all 183 intersections have ramps at both pre- and post-crossings (green). Approximately, 43 percent of all intersections are without any ramps (red). A small percent of intersections have ramps but only at either the pre-or post-crossing segment (yellow).

Figure 2: Ramp conditions
**Bikeways**

The availability of bikeways can provide an important connection between transit stops and other important places for residents. A previous study provides insight into how bike routes are poorly connected to METRO bus stops and other important destinations.

The assessment of availability and conditions of bikeways includes information about whether the bikeway is a protected, shared or designated lane, its width and condition such as visibility of striping. Since the audit was conducted by walking, the assessment does not capture the connectivity of the bikeways. Rather, Figure 3 below shows street segments with either visible bike route signage or striping for a designated bikeway (blue). Commonly found problems are the lack of signage for bike route and faded bike lane striping.

As the city continues the implementation of its Houston Bike Plan, the neighborhood could benefit from improvements in signage, street design and more protection from traffic.

**Figure 3: Bikeway conditions**

Maps drawn by Geilil Haile
Future Directions

Information about availability and conditions of walking and biking infrastructure can be used to inform agencies and decision-makers when making future investments in a particular neighborhood. We plan to conduct assessments in other neighborhoods and will make the data publicly available through the Houston Community Data Connections (HCDC) platform.8

We seek to offer potential comparisons across different neighborhoods beginning with those designated as Complete Communities neighborhoods. Further evaluation of connectivity from walking and biking infrastructure to important destinations such as work, school and grocery stores is needed.

Collecting original data such as this requires a large amount of time and resources that many communities may not have. This report - in combination with the Gulfton community profile page in HCDC - seek to provide opportunities for residents, organizations and policymakers to access up-to-date information on availability and conditions of walking and biking infrastructure to inform future decisions about residents’ safety and overall quality of life.
Acknowledgements

We would like to thank all the volunteers and partner organizations who were instrumental in making the neighborhood walk audit possible. Norma Delgado and Asuncion “Concha” Perez, and Yeni Gonzalez are some of our resident volunteers. Bipana Chundali, Moni Giri, Rashda Ahmed, Riyasa Shrestha, Faith Afolabi, Rosemary Osei, and Devin Foley who participated in the City of Houston’s Summer Youth Employment Program placed at the City of Houston’s Public Health Department also contributed to the data collection process.

References