

## II. Existing Conditions

The Heights-Northside Sub-regional Study provides mobility solutions for those living, working, and traveling through the study area. To better understand the mobility issues, both quantitative and qualitative data were utilized. Examples of quantitative data include an evaluation of area demographics, vehicular traffic counts, transit ridership, right-of-way evaluations, and other corridor-specific plans. Qualitative data, acquired directly through public and stakeholder feedback, was further evaluated. Examples include locations of desired bike facilities, concerns regarding safety at intersection crossings, as well as locations of perceived congestion by the public.

For more information regarding analysis not highlighted directly in this chapter, see

[Appendix A: Data Collection](#).

Based on analysis highlighted in subsequent pages of this chapter, the Heights-Northside area maintain a level of congestion that is deemed acceptable by traffic engineering standards. The study area, however, is anticipated to see a large percentage of growth both in population and development. With this growth, increase in traffic congestion is expected, but projected traffic levels allow for flexibility within the existing system where certain transportation options - such as a reduction in the existing number of lanes - may be considered. The existing bike and transit networks within the study area are well-represented; however, the location of and safety associated with associated facility type may not be appropriate.



## 2.1 2013 Major Thoroughfare and Freeway Plan

The City of Houston's Major Thoroughfare and Freeway Plan (MTFP) identifies all major corridors within the City of Houston and its surrounding extraterritorial jurisdiction (ETJ). Freeways and Major Thoroughfares represent those roadways which adhere to the movement of large volumes of traffic (regardless of mode) over long distances. Collectors and Local Streets form the network that provides access to residential properties, private developments, and other neighborhood amenities such as parks, schools, or grocery stores. Based on these definitions, Freeways and Major Thoroughfares are designed to optimize mobility, while Collectors and Local Streets provide the greatest potential for increased access. The MTFP maintains the provided hierarchical classification for Major Thoroughfares and associated Collector Streets.

The Heights-Northside area is well-represented by all hierarchal street types which are mostly arranged in an elongated street grid commonly associated with historic suburban development patterns. Several corridors, however, are aligned diagonally through the corridor including:

- Hempstead Road
- Katy Road
- TC Jester Boulevard
- North Main Street
- Fulton Street

North-south movement is funneled to those Major Thoroughfares which provide for traffic movement through the study area, as well as access over or under surrounding interstates.

Two north-south couplets are in operation today: 1) Shepherd/Durham pairing in the Heights area and 2) Hardy/Elysian in the Northside. Corridors connecting the IH 610 loop to US 59 typically change name and cross section design at least once throughout the Heights and Northside areas. These two communities are ultimately separated by IH 45, which bisects the study area and limits continuous east-west flow of traffic to the following key corridors:

- Cavalcade/20th Street
- Patton Street
- North Main Street
- White Oak/Quitman

The White Oak Bayou transverses the study area diagonally, largely in alignment with TC Jester within the Heights area. It creates a physical barrier between Downtown and the Northside communities.

Finally, although the Hardy Toll Road does not physically occupy this study area, its primary access from Downtown is the Elysian-Hardy couplet which transcends the Northside section of this greater study area. The potential impact of the Tollway expansion within this study area will be taken into account upon evaluation of future conditions as it relates to surrounding communities.

The identified gaps in the system show a need for increased connectivity between the Heights and Northside communities, as well as enhanced connection via bayous.

The City's current MTFP identifies (as shown in [Figure 2.1](#)) the Major Thoroughfares and Major Collectors within the study area that have sufficient width (solid lines), need to be widened (double dashed line), or need to be acquired (dashed line).

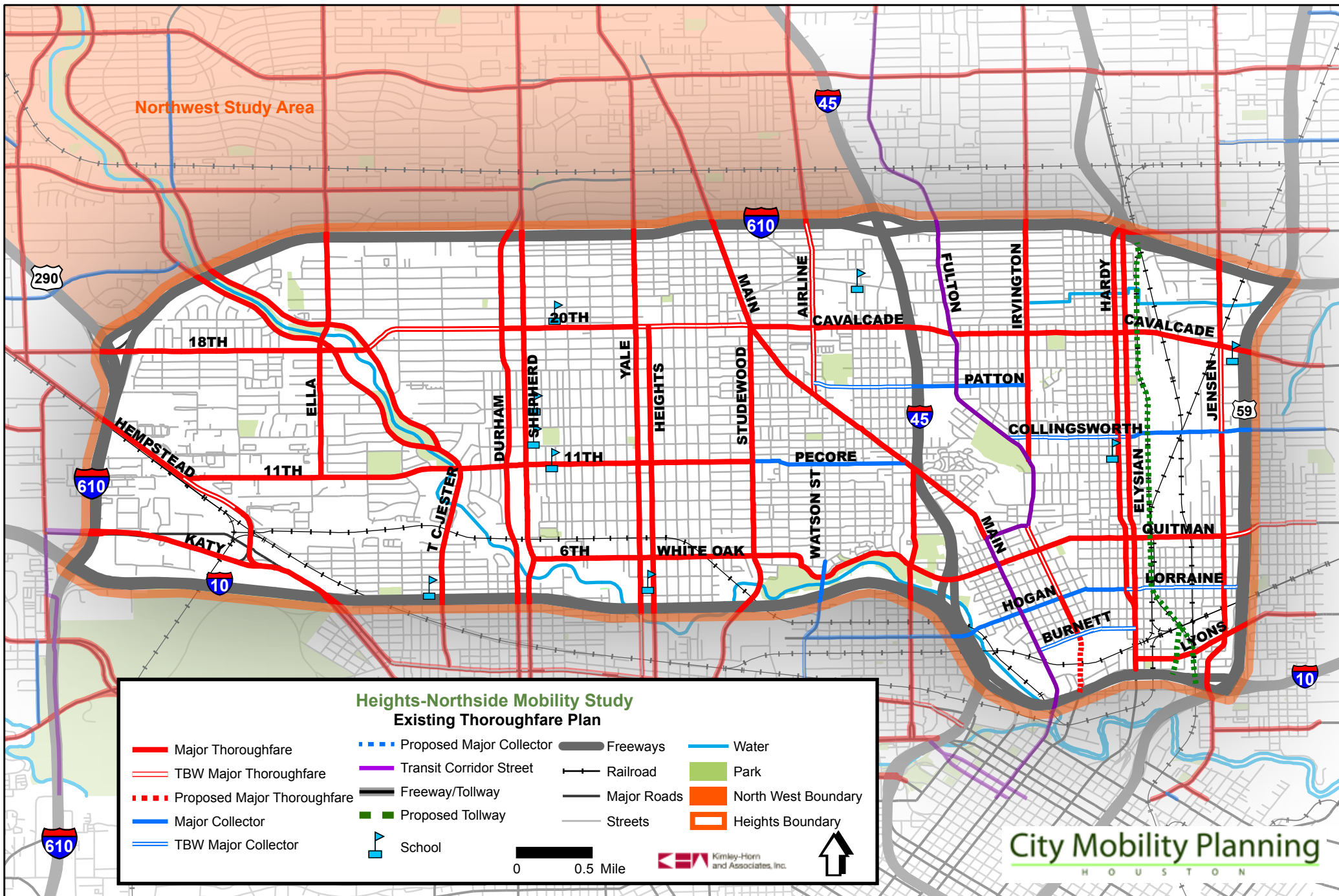


FIGURE 2.1



## 2.2 Existing Transit Routes

The Metropolitan Transit Authority of Harris County (METRO) is the transit service provider for the City of Houston. Within the Heights and Northside study area there are 26 transit routes with bus stops, as shown in [Figure 2.2](#). The majority of the corridors are served by at least one bus route. Bus routes move riders locally within the Heights and Northside areas, and regionally to destinations such as Downtown. Most routes focus on facilitating the north/south movement of passengers.

The study area is also home to the recently constructed METRO Red Line light-rail, which travels along North Main Street, Boundary Street, and Fulton Street. METRORail provides connections into the downtown area and further south to other activity centers, such as

the Texas Medical Center. As the light-rail continues to expand through the year 2025, expansion of the line within the study area and placement of transit stations, must be taken into consideration during planning and development decision-making processes.

METRO is also undergoing a transit system reimagining project that takes a fresh look at the METRO bus network. Although the study is pending completion, the overarching goal is to improve and expand upon existing transit service by consolidating routes and increasing frequency. As such, all recommendations emerging from this Study Area analysis is fully vetted by participating METRO Stakeholder committee members.



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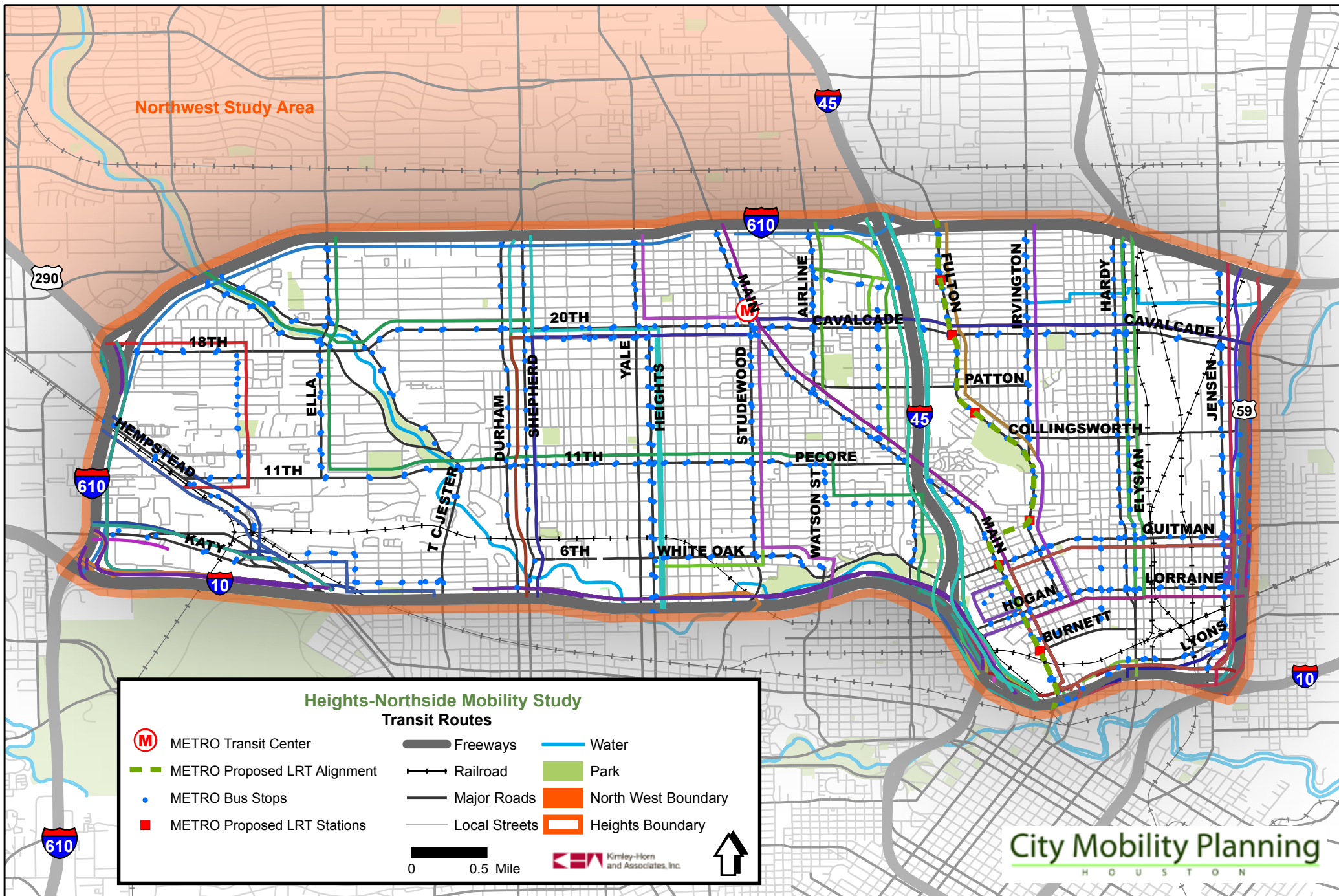


FIGURE 2.2



## 2.3 Existing Bicycle Facilities

Bicycle facilities in the City of Houston are divided into four types: bike lane, shared lane (also known as a Sharrow), shared-use path/trail, and signed bike route. The existing facilities are identified in [Figure 2.3](#). Shared lanes, are not present in this study area.

As corridors transition through different road designs, bicycle facility types also change. This transition mostly occurs between designated on-street bike lanes and signed bike routes. For a more detailed description of bike facilities as defined by the City, see [Chapter 5.4. Bicycle and Facility User](#).

Current facilities that provide a complete north/south or east/west connection are limited due to issues with underpasses at the interstates. Cavalcade and the White Oak Bayou Trail are currently the only facilities to cross under IH 45.

The White Oak Bayou Trail (shared-use path), follows the bayou as it moves from the north-west towards the downtown area. This trail provides an off-street facility for bicyclists which limits their interaction with automobiles. Connections to this trail via on-street bicycle facilities are limited. Direct connections to the White Oak Bayou exist at Ella, 11th, and TC Jester.

Initial analysis of this network indicates a strong need to increase the number of connections to the White Oak Bayou Trail. Also lacking are east-west connections for bicycles between the Heights and Northside communities. Expansion of the network for safe on-street and off-street bicycle facilities has the potential to create a well-traversed biking system for both recreational and commuting users..



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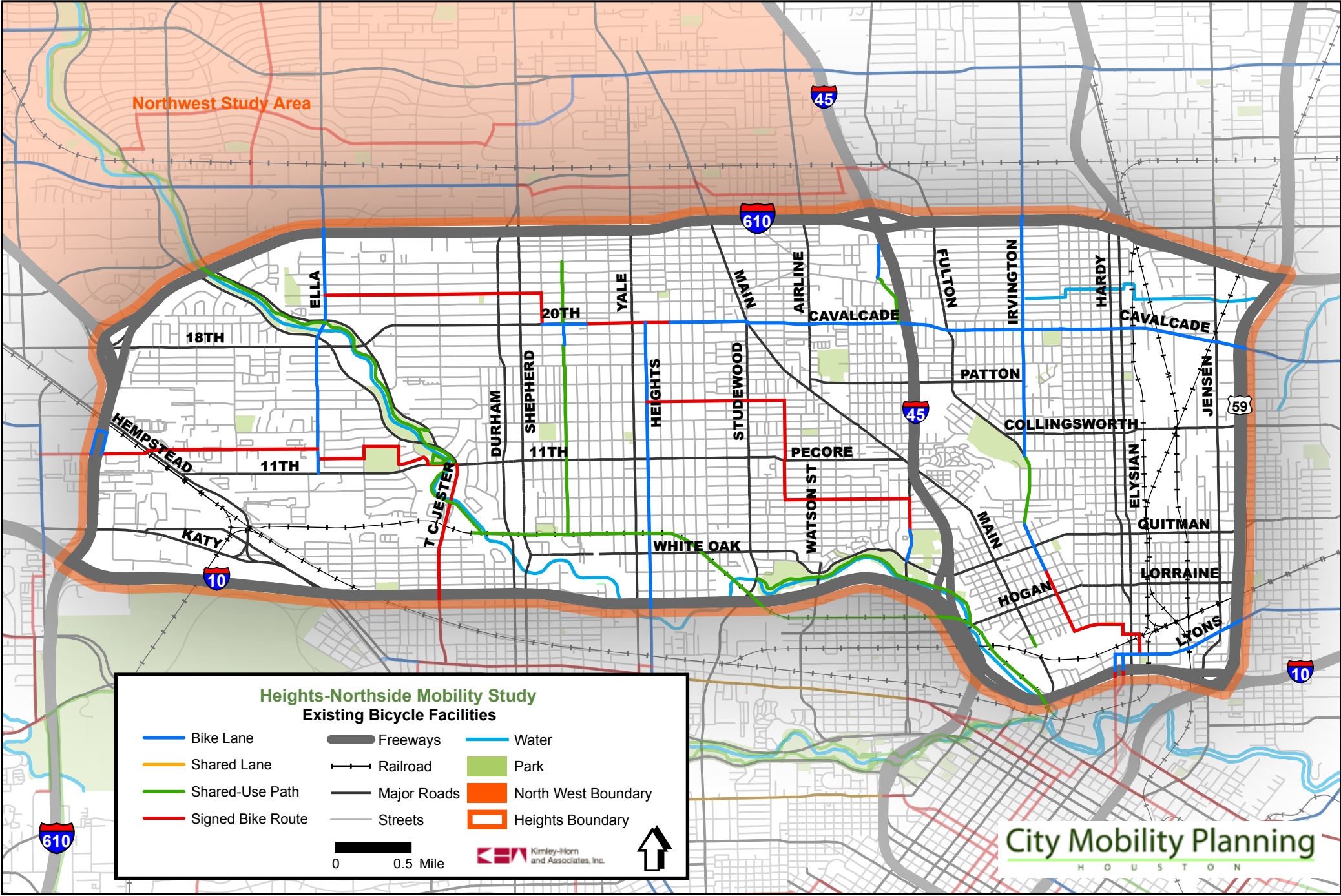


FIGURE 2.3



## 2.4 Existing Sidewalk Facilities

A characteristic of the Heights-Northside area is an elongated street grid. Small, inter-connected grids are imbedded among the Major Thoroughfares, making the environment conducive to walking. **Figure 2.4** represents data collected by the Greater Heights Super Neighborhood which highlights sidewalk gaps along prominent roadways. Given the scope of this study, local streets were not evaluated. However, where appropriate, key connections to the greater transportation network (i.e. transit stops and bayou trails) were considered.

The system map shows that the Heights area generally has a well-connected roadway system. Missing sidewalk links are found along Major Thoroughfares creates barriers for the movement of pedestrian to and from key transit stops as well as within the

neighborhood itself. The Northside area has substantially more gaps, with many on main roadways where pedestrian use is high.

The system gaps indicate a need for sidewalks along corridors that are in the vicinities of schools and other destinations, such as parks. Data for the condition of existing sidewalks is not represented on this map, but has a strong impact on the pedestrian network. The information provided may assist in the prioritization process of sidewalk construction in the near and long term.



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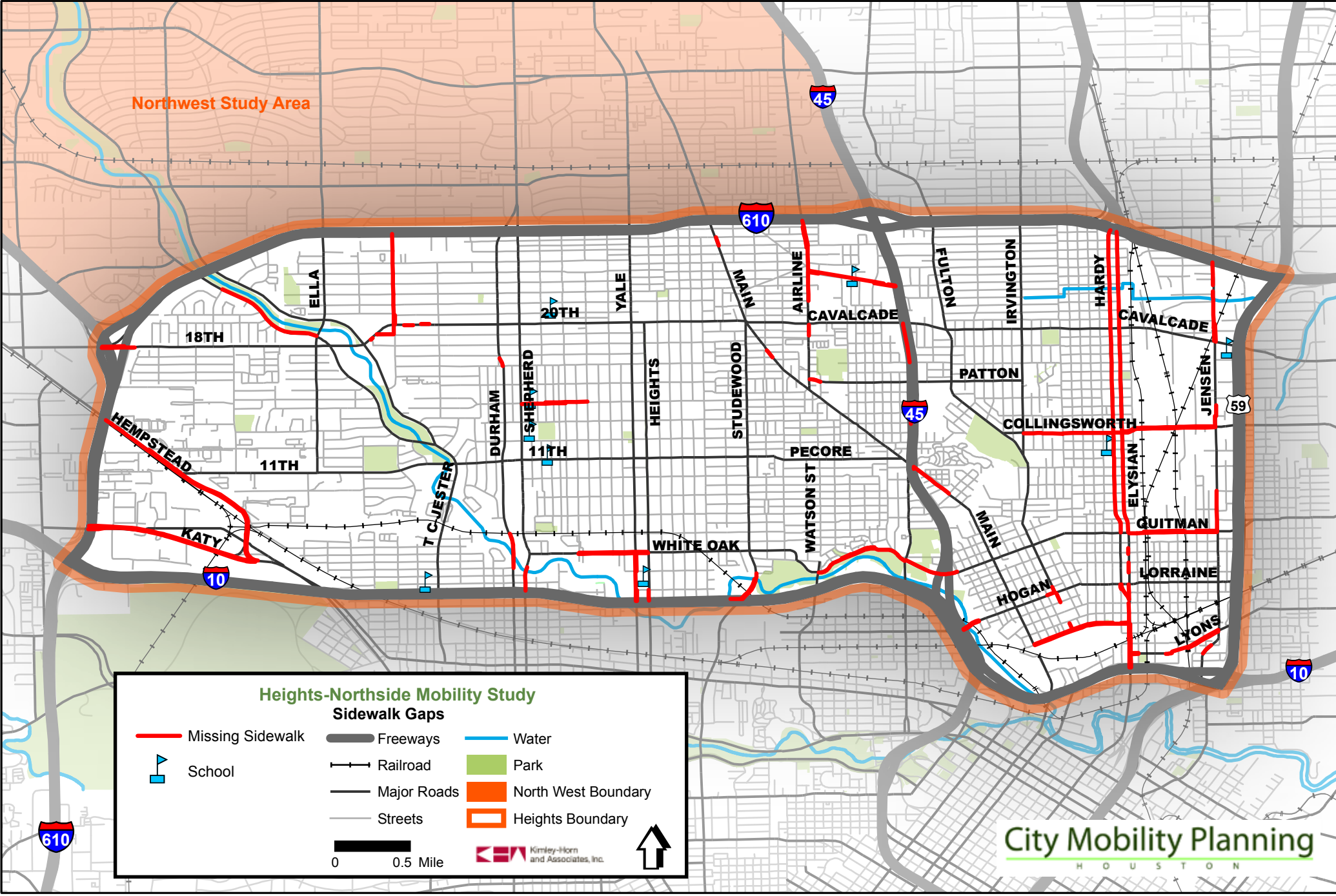


FIGURE 2.4

## 2.5 Existing Travel Conditions by Period of Day

### Intersection Congestion

Intersection traffic counts and signal data are limited for this study area. Twenty-six intersections within the Heights study area were analyzed, but data was not collected for the Northside area due to ongoing construction of the Red Line light-rail during the time period of this study. Available information was divided into two periods for study: AM peak period and PM peak period, when corridors are most heavily utilized by commuting traffic. [Figures 2.5 and 2.6](#) depict level of service (LOS) at each intersection. LOS is a qualitative measure that gauges congestion on a grading scale similar to scholastic grading: LOS A represents free flowing traffic conditions with little or no delays and LOS F represents severe congestion, characterized by long queues and delays.

Certain intersections adjacent to highways are TxDOT property, and as such not within the scope of this study. Future coordination with TxDOT is essential to fully understand the best treatment options available to the City, and as approved by TxDOT. Similarly, where intersections are within a certain proximity of roadway, highway, or light-rail construction, intersection congestion was not evaluated. Current traffic patterns do not reflect (what will be) normal traffic patterns once construction is complete. Traffic patterns are expected to normalize one year after construction is complete.

Intersections within the Heights currently rate between LOS A and LOS D. These ratings are at or above the acceptable level set by the City of Houston and show that the Heights area is not categorized as “congested.”

Due to heavy volumes, Studewood/North Main and 20th Street currently, is the only intersection within the study area operating at LOS E during the peak periods. An intersection failure of LOS F does not exist at present day volumes.



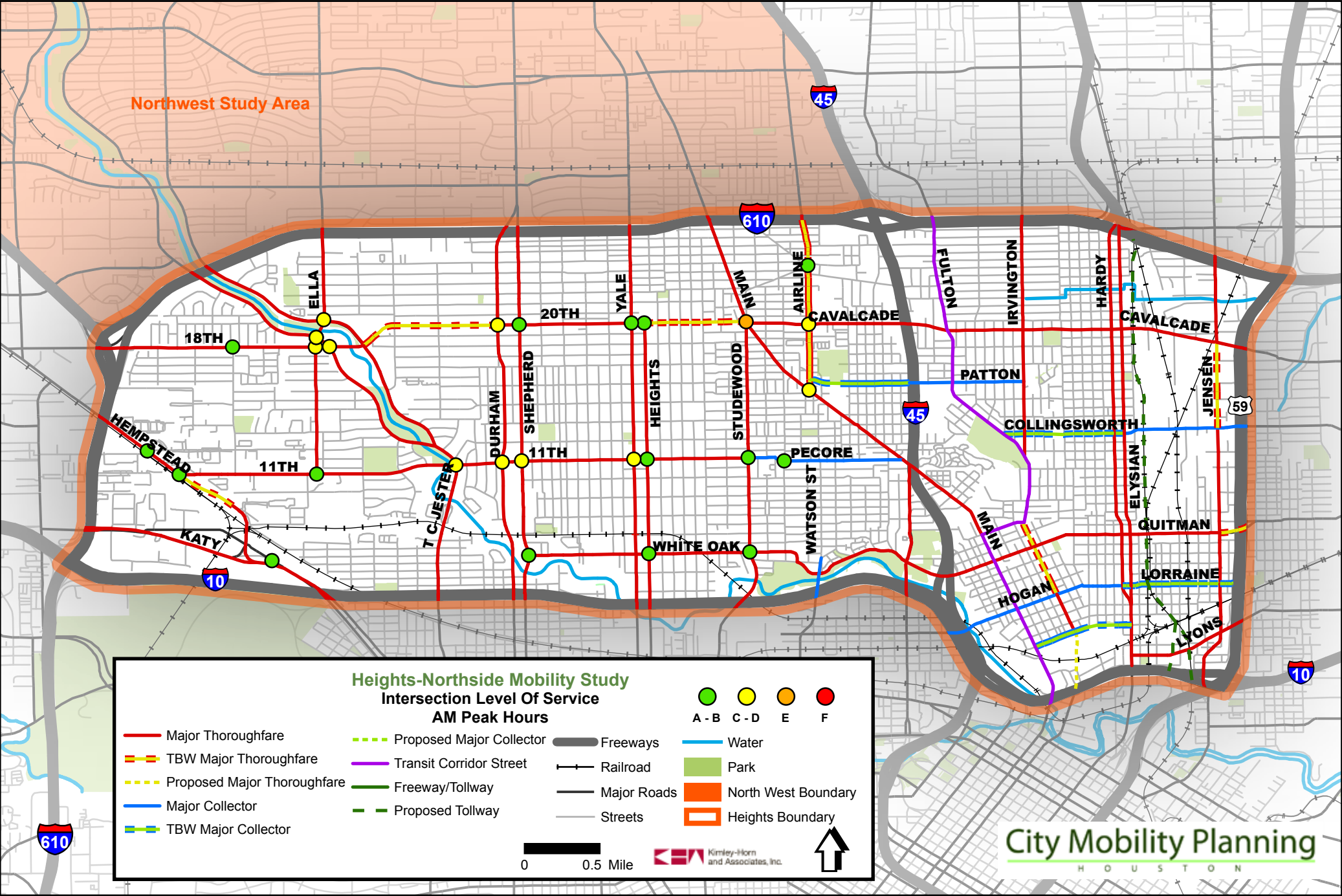


FIGURE 2.5

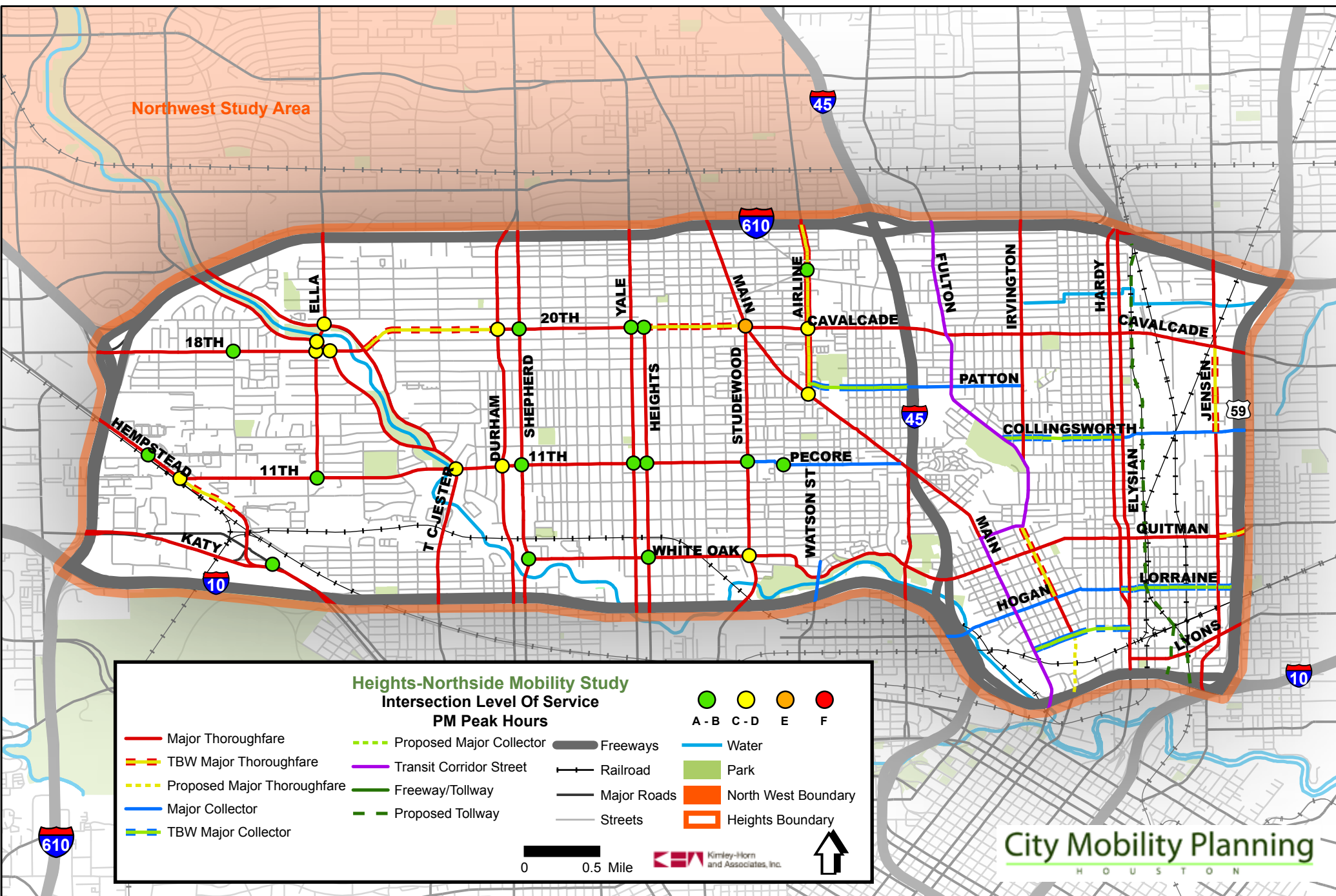


FIGURE 2.6



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