II. Northwest Existing Conditions

The Mobility Plan for the Northwest Study Area is intended to develop mobility solutions for those living, working, and traveling through the 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.

PHOTO PROVIDED COURTESY CITY OF HOUSTON

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 Northwest Study Area consists of mostly Major Thoroughfares with a few Major Collectors designated on the MTFP. The prevalent issue in this region is a lack of street continuation and connectivity of existing roadways where:

- Many of the Major Thoroughfares are not yet built and hence provide for a noted gap within the existing system of roadways. Future congestion of the network depends greatly on when and where these gaps are completed.
- The White Oak Bayou presents a challenge to street connectivity especially where it intersections with major and local roadways. Due to cost associated with bridge construction, variances for roadway continuation across certain portions of these bayous are often granted.
- Given presence of industrial and manufacturing facilities within the Study Area, freight traffic movement is prevalent within this context, but more evident along corridors such as Fairbanks North Houston, Fall Brook Drive, Breen and Bingle/ North Houston Rosslyn Road.

The City of Houston'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). Most of the thoroughfares are of sufficient width, but portions of the following corridors need more right-of-way.

PHOTO PROVIDED COURTESY CITY OF HOUSTON

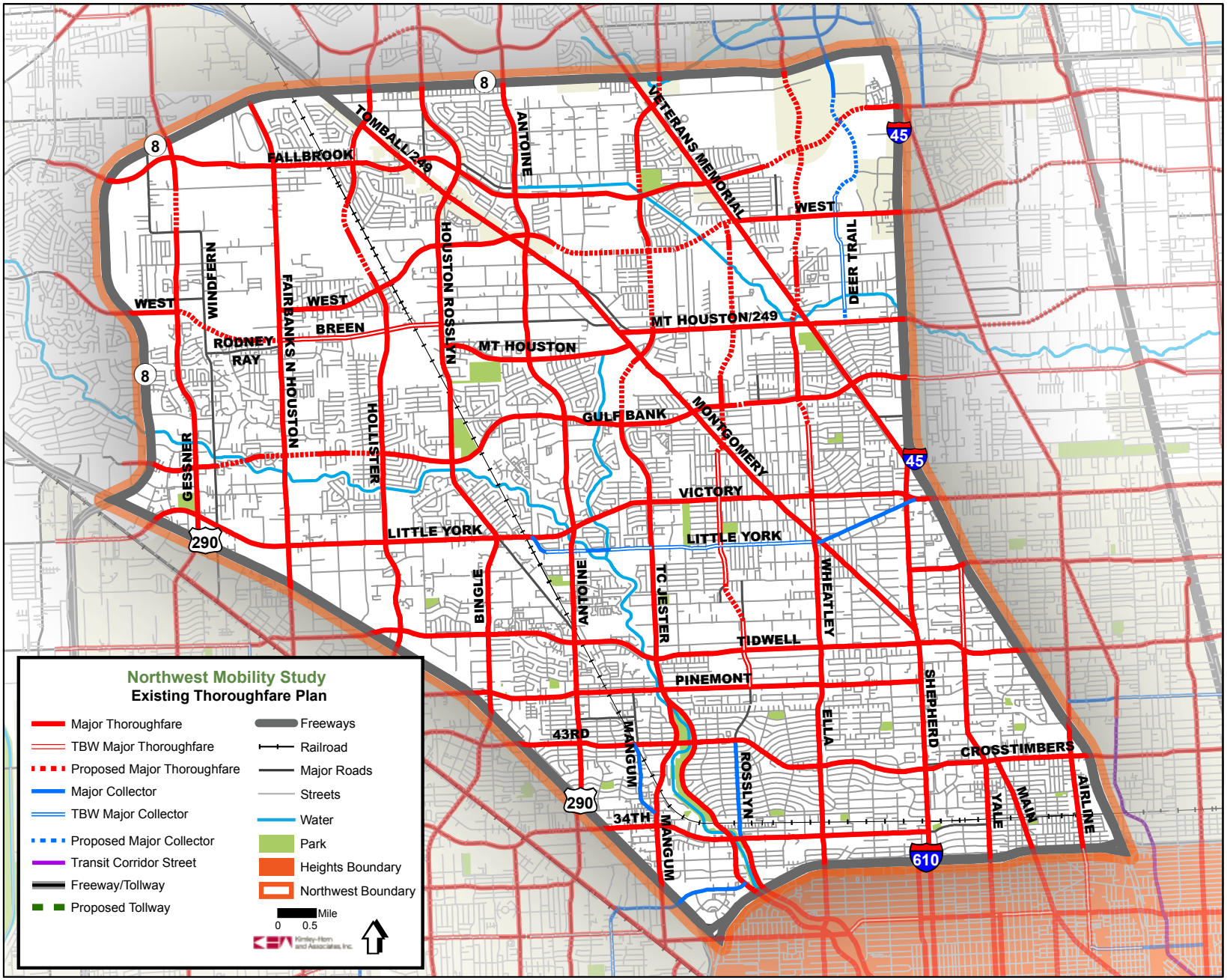

Northwest Mobility Study
Existing Thoroughfare Plan
Major Thoroughfare
TBW Major Thoroughfare
Proposed Major Thoroughfare
Major Collector
TBW Major Collector
Proposed Major Collector
Transit Corridor Street
Freeway/Tollway
Proposed Tollway
Freeways
Railroad
Major Roads
Streets
Water
Park
Heights Boundary
Northwest Boundary
Mile
0 0.5
Kimley-Horn and Associates, Inc.
8
45
290
610
FALLBROOK
TOMBALL/249
ANTOINE
VETERANS MEMORIAL
WEST
DEER TRAIL
WINDFERN
FAIRBANKS N HOUSTON
HOUSTON ROSSLYN
BREEN
RODNEY RAY
MT HOUSTON
MT HOUSTON/249
GULF BANK
MONTGOMERY
HOLLISTER
GESSNER
VICTORY
LITTLE YORK
BINGLE
TC JESTER
WHEATLEY
TIDWELL
PINEMONT
SHEPHERD
ELLA
43RD
MANGUM
ROSSLYN
CROSSTIMBERS
YALE
MAIN
AIRLINE
34TH

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. Currently, 14 transit routes with bus stops exist within the Northwest Study Area, as shown by Figure 2.2. Routes within the Northwest Area facilitate the movement of passengers mostly within the city limits of Houston, or along the freeways.

Many neighborhoods within the Study Area are not served by a transit route, and the location of Park and Ride facilities are spaced far apart in this expansive area. The METRO Park and Ride facilities are located in two areas: Veterans Memorial Dr. at Shepherd Drive and Tomball Parkway at Seton Lake Drive. A third Park and Ride location - Pinemont Drive at Federal Plaza Drive - closed in January of 2014 due to the expansion of the U.S. 290 corridor. Rider traffic is anticipated to be diverted to the Northwest Transit Center near the 610 Loop at Little York Drive and West Montgomery Drive or the West Little York Park and Ride which lies just west of the study area south of U.S. 290.

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 over aching 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.

PHOTO PROVIDED COURTESY CITY OF HOUSTON

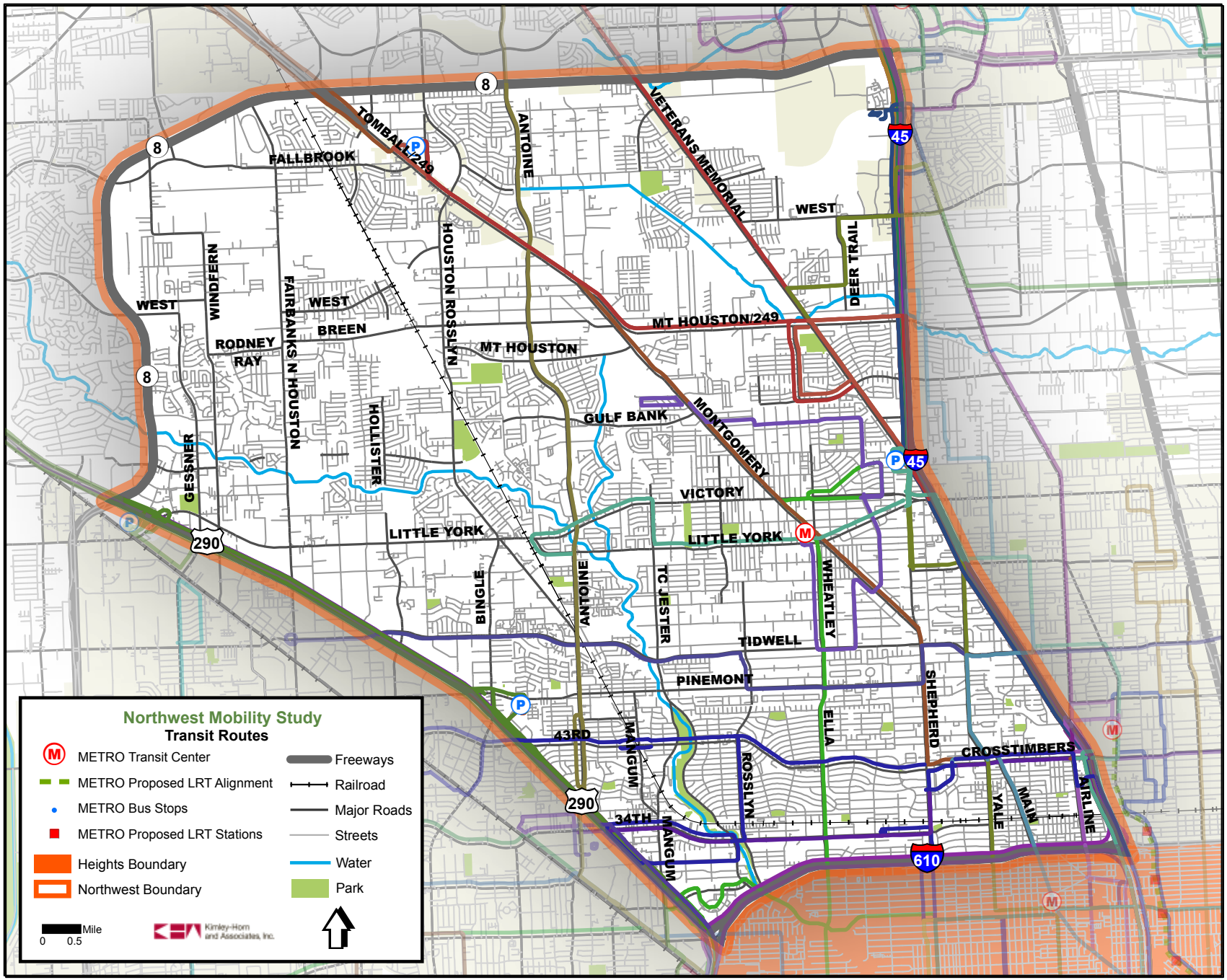

Northwest Mobility Study
Transit Routes
METRO Transit Center
METRO Proposed LRT Alignment
METRO Bus Stops
METRO Proposed LRT Stations
Heights Boundary
Northwest Boundary
Freeways
Railroad
Major Roads
Streets
Water
Park
Mile
0 0.5
Kimley-Horn and Associates, Inc.
TOMBALL/249
FALLBROOK
ANTOINE
VETERANS MEMORIAL
WEST
DEER TRAIL
WINDFERN
FAIRBANKS N HOUSTON
WEST
WEST
BREEN
RODNEY
RAY
HOUSTON ROSSLYN
MT HOUSTON
MT HOUSTON/249
GULF BANK
MONTGOMERY
HOLLISTER
GESSNER
VICTORY
LITTLE YORK
LITTLE YORK
BINGLE
ANTOINE
TC JESTER
WHEATLEY
TIDWELL
PINEMONT
SHEPHERD
ELLA
43RD
MANGUM
ROSSLYN
CROSSTIMBERS
YALE
MAIN
AIRLINE
34TH
MANGUM
8
8
8
45
45
290
290
610

FIGURE 2.2

2.3 Existing Bicycle Facilities

There are a limited number of existing bicycle facilities in the Northwest Study Area, and are mainly located within the City Limits. Bicycle facilities for the City of Houston are divided into four types: bike lane, shared lane (also known as a sharrow), shared-use path, and signed bike route. The existing facilities are identified in Figure 2.3. Three of these four types are found in the Study Area - the Northwest does not have any designated shared lanes. A shared-use path exists on Antoine Drive from the White Oak Bayou shared-use trail to Pinemont Drive.

Most facilities within this area have developed as a way to bring cyclists to the White Oak Bayou Trail. Bike lanes and bike routes transition across the major east/west corridors where the corridor's street designs change. The on-street network is lacking north of Pinemont Drive The expansion of the White Oak Bayou Trail will call for additional bicycle facilities to enable the movement of bikers from the neighborhoods to the trail.

Initial analysis of the network indicates a need to develop and expand the existing bicycle network. Specific attention should be given to:

- Movement of cyclists to the northern portion of the study area where on-street bike facilities are less likely do to corridor constraints and related speeds associated with regional roadways.
- Interstate crossings under surrounding Freeways between the Heights, Northside and the Greater Heights or Northwest neighborhoods.
- Key connection points - or trail heads - from on-street to off-street bike facility networks.

PHOTO PROVIDED COURTESY CITY OF HOUSTON

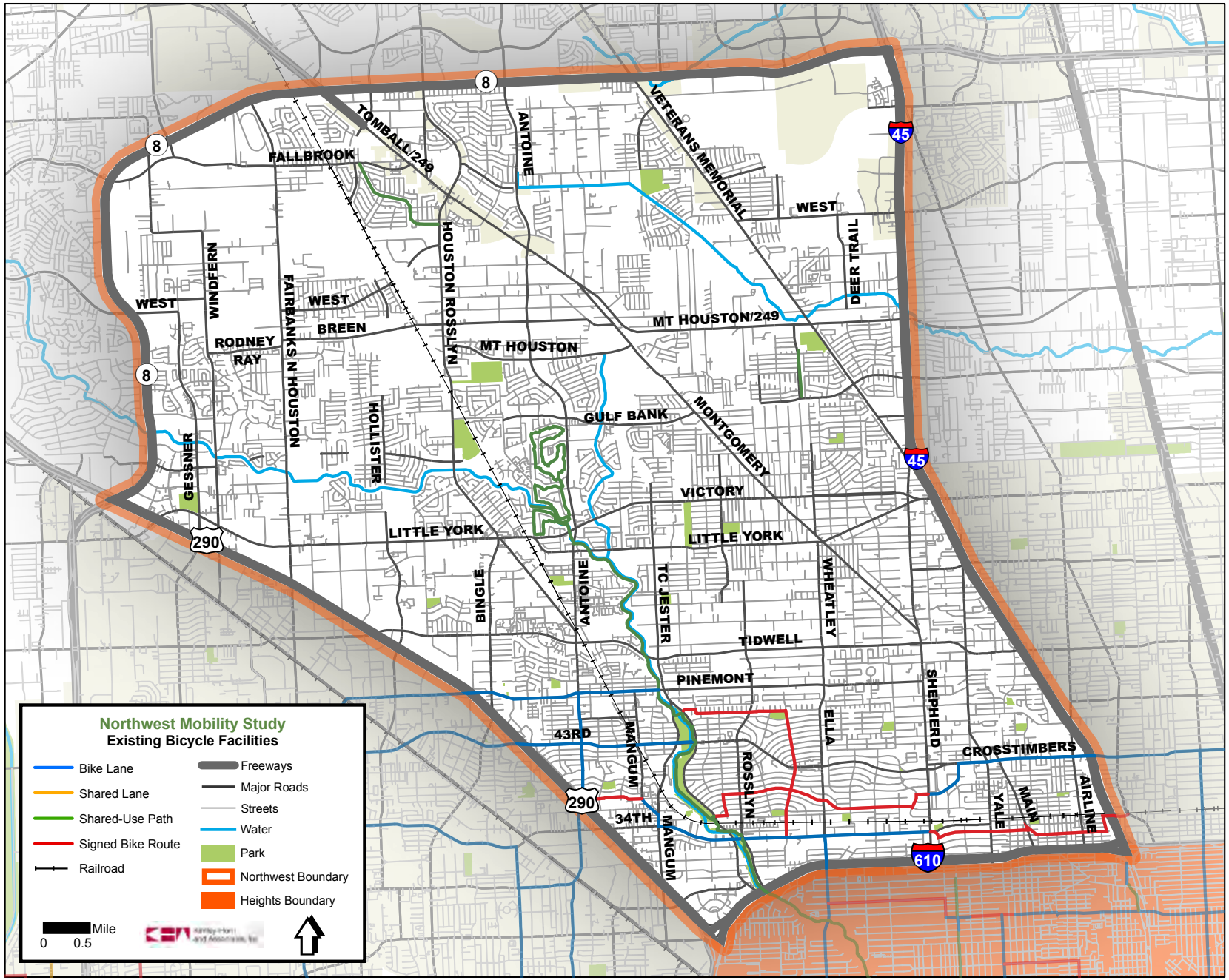

Northwest Mobility Study
Existing Bicycle Facilities
Bike Lane
Shared Lane
Shared-Use Path
Signed Bike Route
Railroad
Freeways
Major Roads
Streets
Water
Park
Northwest Boundary
Heights Boundary
Mile
0 0.5
8
45
610
290
TOMBALL/249
FALLBROOK
ANTOINE
VETERANS MEMORIAL
WEST
DEER TRAIL
WINDFERN
FAIRBANKS N HOUSTON
HOUSTON ROSSLYN
MT HOUSTON/249
MT HOUSTON
BREEN
RODNEY RAY
GULF BANK
MONTGOMERY
HOLLISTER
GESSNER
VICTORY
LITTLE YORK
BINGLE
TC JESTER
WHEATLEY
TIDWELL
PINEMONT
SHEPHERD
ELLA
43RD
MANGUM
ROSSLYN
CROSSTIMBERS
YALE
MAIN
AIRLINE
34TH

FIGURE 2.3

2.4 Existing Travel Conditions by Period of Day

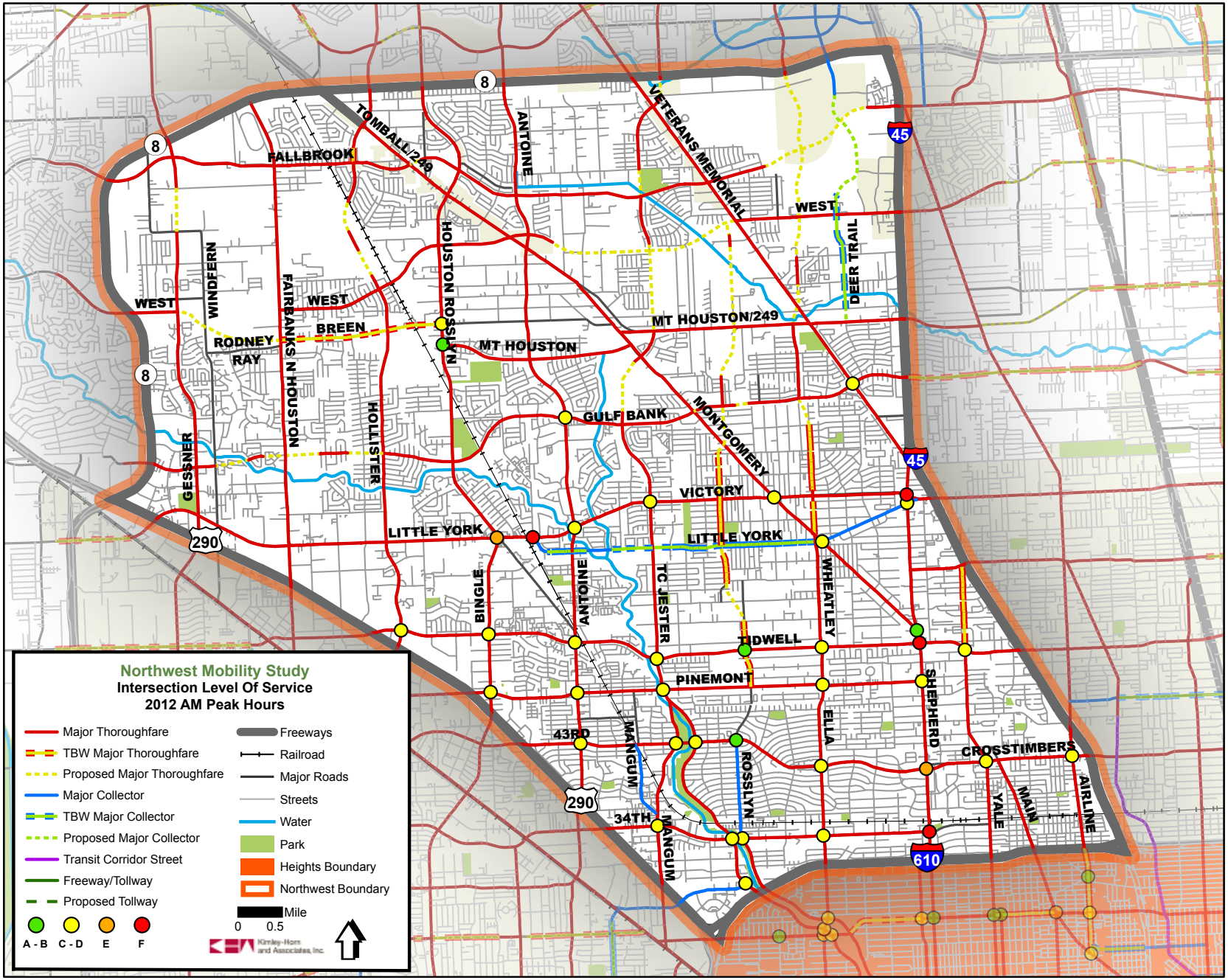
Intersection Congestion

Intersection traffic counts and signal data are limited for this study area. Forty-one intersections were analyzed using SYNCHRO traffic analysis software. Vailable 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 with a rating of LOS E or LOS F, and thus representing maximum failure include:

- Victory at Little York: AM = LOS F; PM = LOS F
- Victory at Shepherd: AM = LOS F; PM = No Failure
- Little York at Houston Rosslyn: AM = LOS E; LOS E
- Tidwell at Shepherd: AM = LOS F; PM = LOS F
- 34th and Mangum: AM = No Failure; PM = LOS E
- 34th at Shepherd: AM = LOS F; PM = No Failure


Northwest Mobility Study
Intersection Level Of Service
2012 AM Peak Hours
Major Thoroughfare
TBW Major Thoroughfare
Proposed Major Thoroughfare
Major Collector
TBW Major Collector
Proposed Major Collector
Transit Corridor Street
Freeway/Tollway
Proposed Tollway
A - B
C - D
E
F
Freeways
Railroad
Major Roads
Streets
Water
Park
Heights Boundary
Northwest Boundary
Mile
0
0.5
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LITTLE YORK
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TC JESTER
WHEATLEY
TIDWELL
PINEMONT
SHEPHERD
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ROSSLYN
CROSSTIMBERS
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AIRLINE
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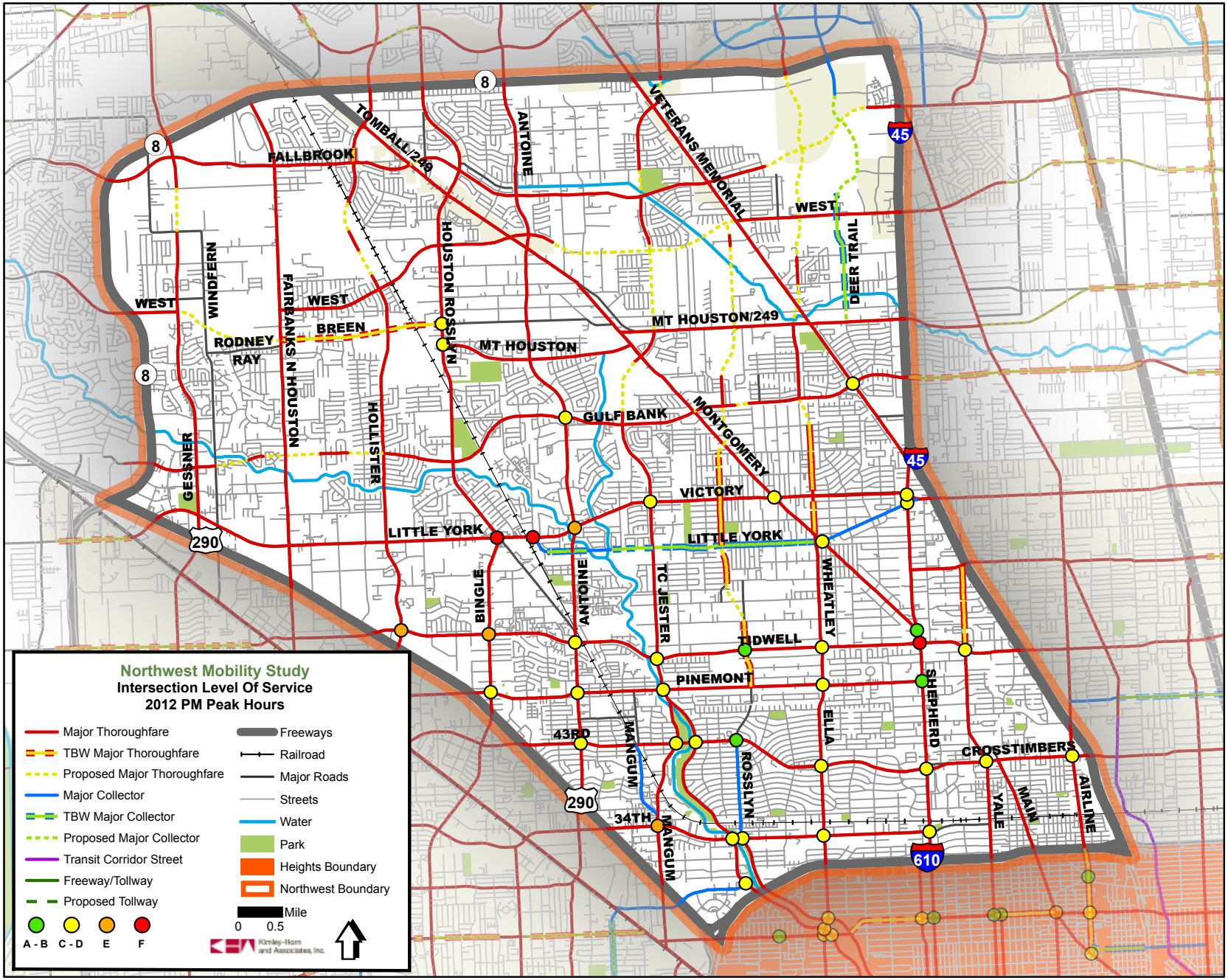
610

FIGURE 2.4


Northwest Mobility Study
Intersection Level Of Service
2012 PM Peak Hours
Major Thoroughfare
TBW Major Thoroughfare
Proposed Major Thoroughfare
Major Collector
TBW Major Collector
Proposed Major Collector
Transit Corridor Street
Freeway/Tollway
Proposed Tollway
A - B
C - D
E
F
Freeways
Railroad
Major Roads
Streets
Water
Park
Heights Boundary
Northwest Boundary
Mile
0
0.5
Kimley-Horn and Associates, Inc.
FALLBROOK
TOMBALL/249
ANTOINE
VETERANS MEMORIAL
WEST
DEER TRAIL
WINDFERN
FAIRBANKS N HOUSTON
HOUSTON ROSSLYN
MT HOUSTON/249
RODNEY RAY
BREEN
MT HOUSTON
GULF BANK
MONTGOMERY
HOLLISTER
GESSNER
VICTORY
LITTLE YORK
BINGLE
TC JESTER
WHEATLEY
TIDWELL
PINEMONT
SHEPHERD
ELLA
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MANGUM
ROSSLYN
CROSSTIMBERS
YALE
MAIN
AIRLINE
34TH
8
45
290
610

FIGURE 2.5

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