Date: November 2021

Bachman Area Planning Technical Memorandum

North Central Texas Council of Governments

Subject: Study Area Refinement

Background

The primary purpose of this memorandum for the Bachman Area Planning Study is to review how the study area boundary was refined. The City of Dallas initially noted these community-identified issues highlighting priority areas:

- Safe passage across NW Highway at multiple locations, not just large intersections
- Traffic calming and beautification of major roads in the area
- Wide and useful sidewalks along all of NW Highway, Webb Chapel, Marsh/Lemmon, Lovers Lane, Mockingbird and Harry Hines. Sidewalks that would make it easy for the community to access grocery stores, libraries, recreation centers and public transportation (bus and rail stops)
- Dedicated pedestrian/cycling lanes at NW Highway and Denton Dr/Webb Chapel Bridge /Lemmon Ave and NW Highway Bridge
- Connectivity to Northaven Trail, Campion Trail, Trinity Strand (Medical District) Trail, and the future Trinity Skyline Trail
- Re-envisioning the Denton Dr, Harry Hines and NW Highway intersection. This is a major entry way into Dallas and an eye-sore
- Extending the NCTCOG-funded Harry Hines analysis to Walnut Hill
- Extending the NCTCOG-funded NW Highway (Inwood/Hillcrest) analysis west to Harry Hines

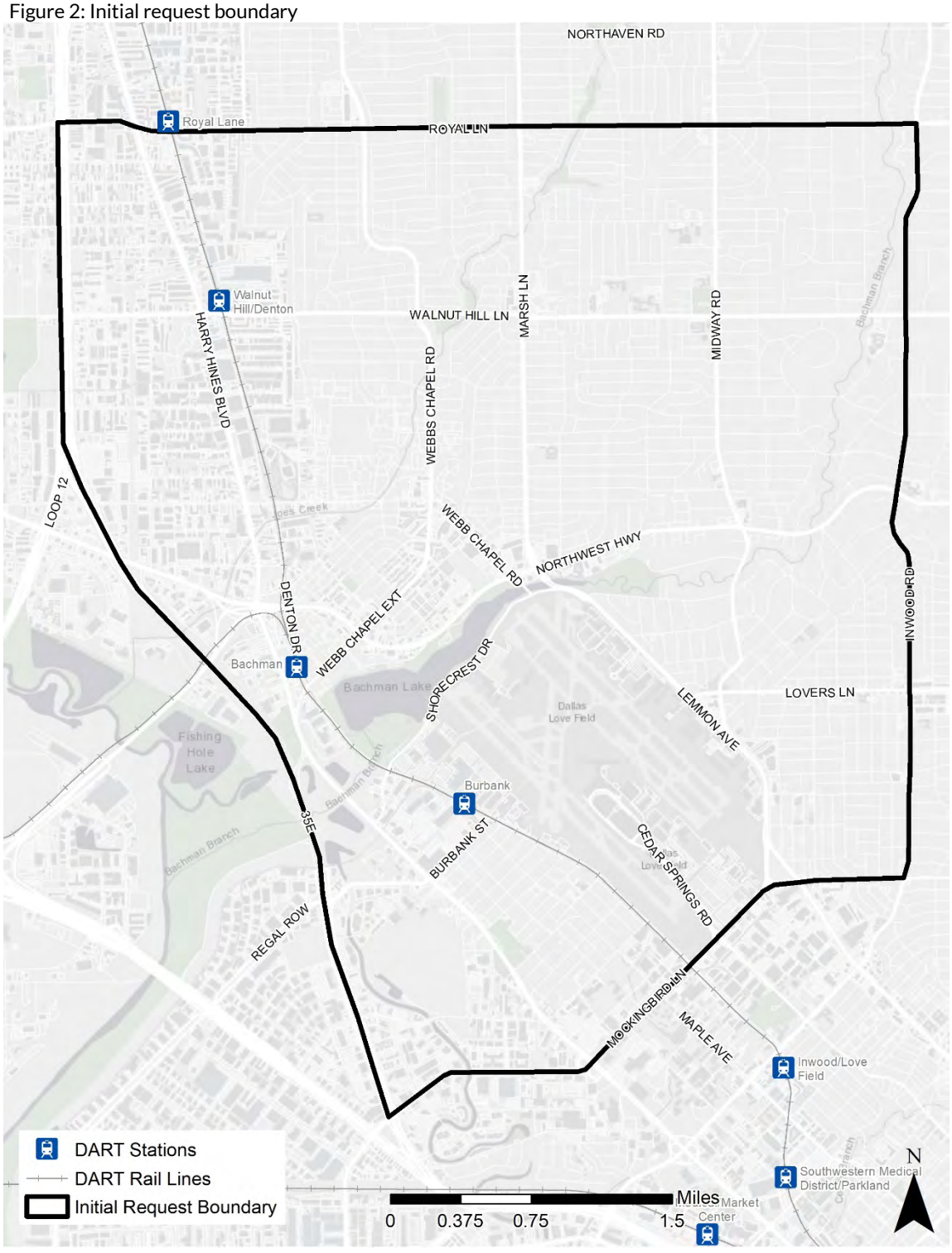
Following a request from City of Dallas, other community members provided comments reinforcing these issues.

Figure 1: Issues noted by the City of Dallas and City Council districts (Based on 2020 city council members)

Initial Request Boundary

The preliminary study boundary originated from the initial request and was presented to NCTCOG's Regional Transportation Council in August 2020. The limits of this boundary (clockwise from the northern limit) are Royal Lane, Inwood Road, Mockingbird Lane, and Interstate Highway 35E. Figure 2 displays a map of this boundary.

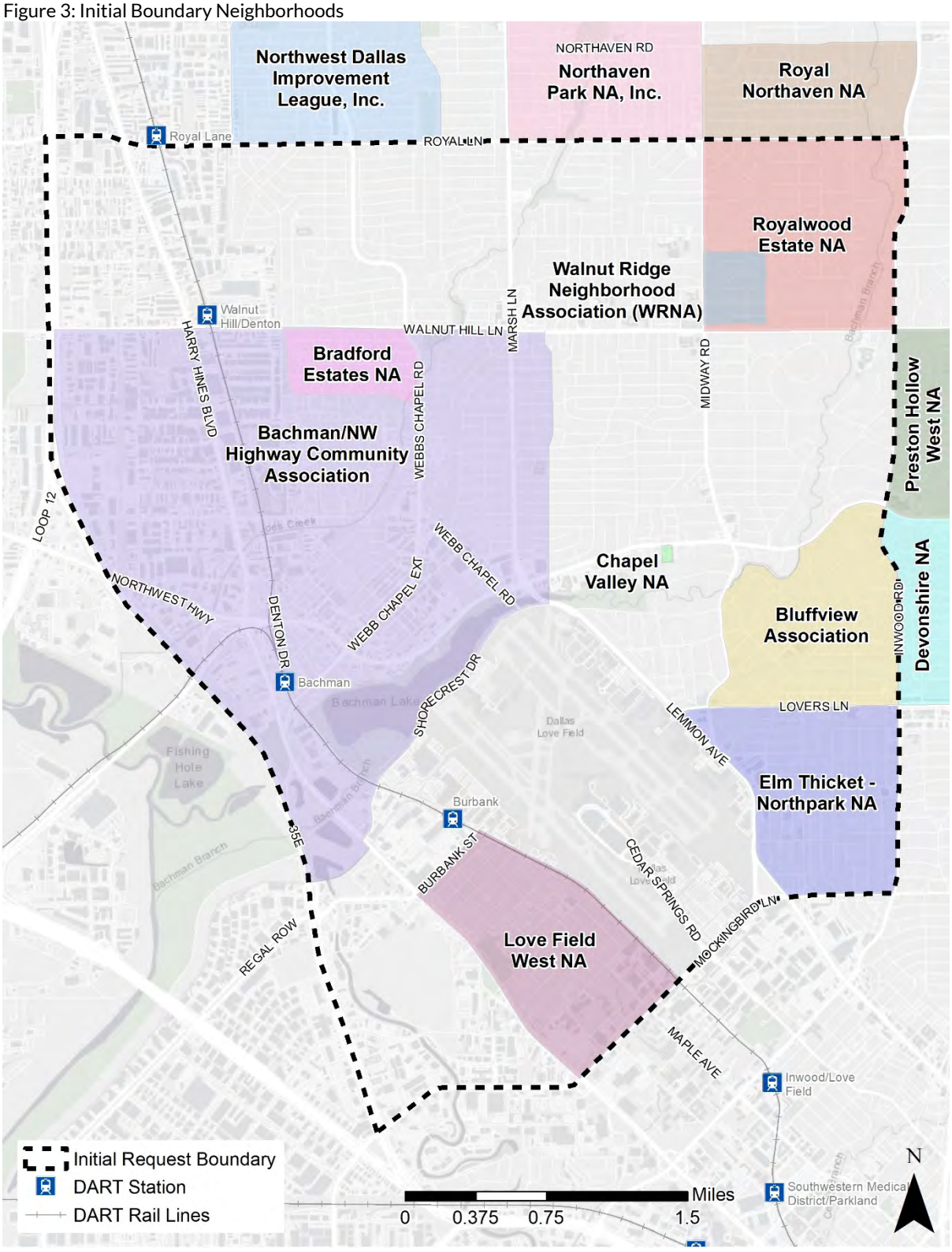
Figure 2: Initial request boundary



Initial Boundary Neighborhoods

Using spatial data from City of Dallas, eight neighborhood associations within the initial request boundary and five directly adjacent to the area were identified.

Figure 3: Initial Boundary Neighborhoods



Refining the Study Area Boundary

The following factors were evaluated to focus the study area:

A) The existing trail network,

B) DART rail station locations,

C) Other area transportation studies,

D) Environmental justice factors, and

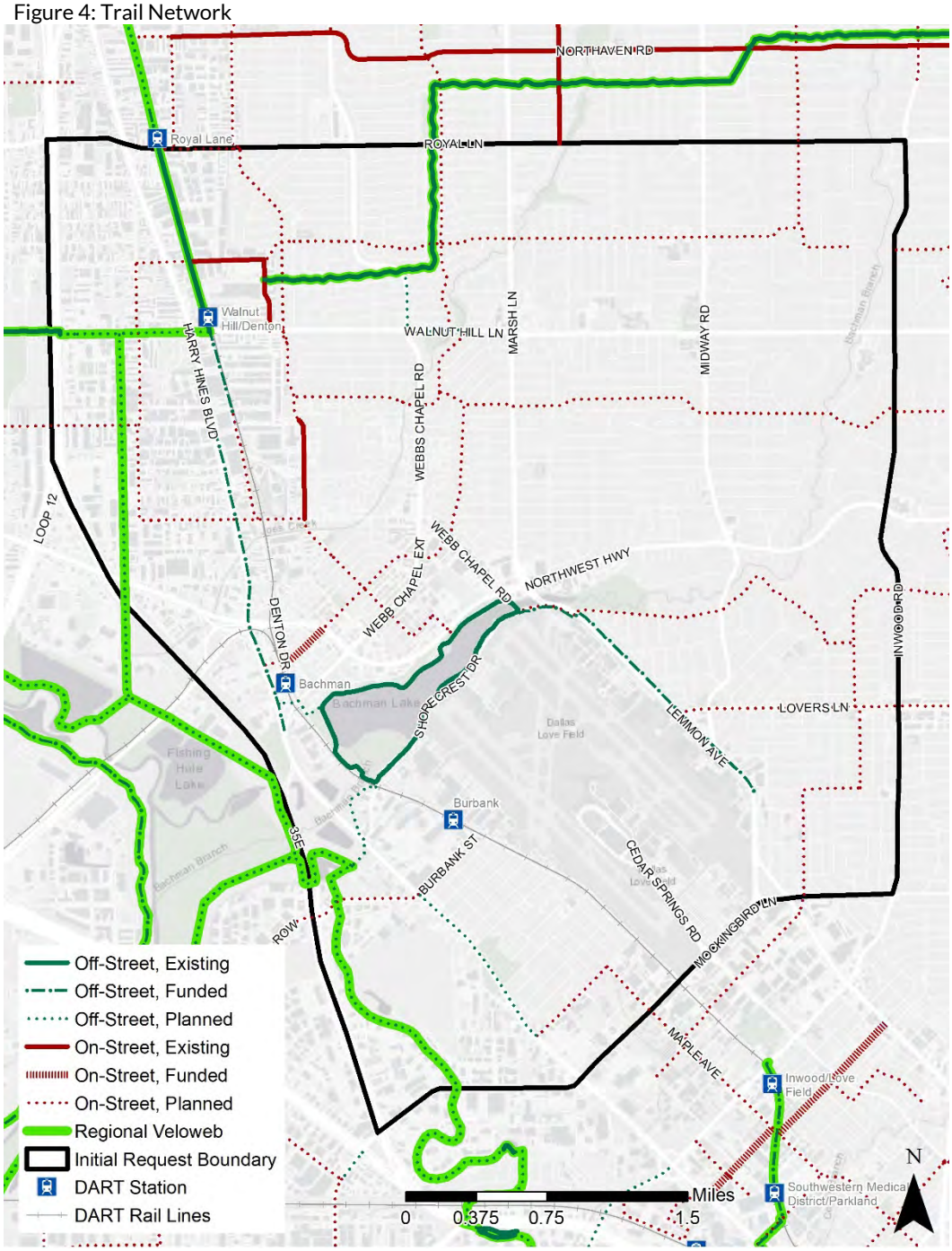
E) Safety data.

By examining these factors, a more strategic boundary focused closely on the transportation context was developed. The study area developed will center on more holistic improvements to underserved communities without duplicating projects already underway.

A) Trail Network

Two significant existing trails within the initial request boundary, Northaven Trail and Bachman Lake Trail, were identified by stakeholders as critical assets in need of regional connections. A funded extension of Irving's Campion Trail provides a significant future connection for this area of Dallas to NCTCOG's Regional Veloweb corridor planned along the Elm Fork of the Trinity River. Funded improvements on Denton Drive, Harry Hines Blvd, and Lemmon Avenue combined with a planned trail loop around Love Field frame a focus of increased bike connectivity to regional trails.

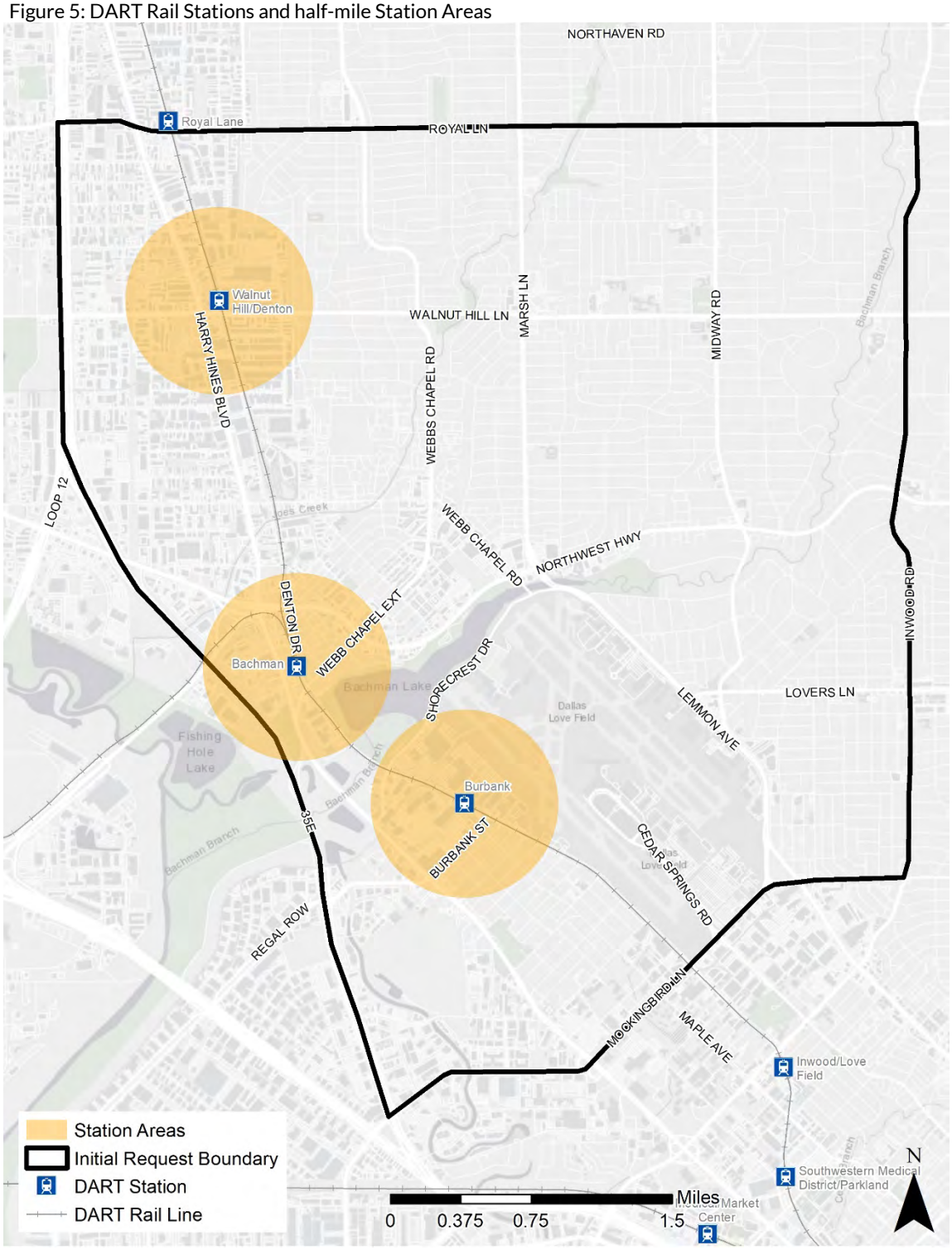
Figure 4: Trail Network



B) DART Rail Stations

There are three stations located in the initial request boundary. The Walnut Hill/Denton Station area was specifically mentioned as a location of importance due to redevelopment need after the October 2019 tornado damage. The Bachman and Burbank stations were mentioned by stakeholders and are key neighborhood transit hubs.

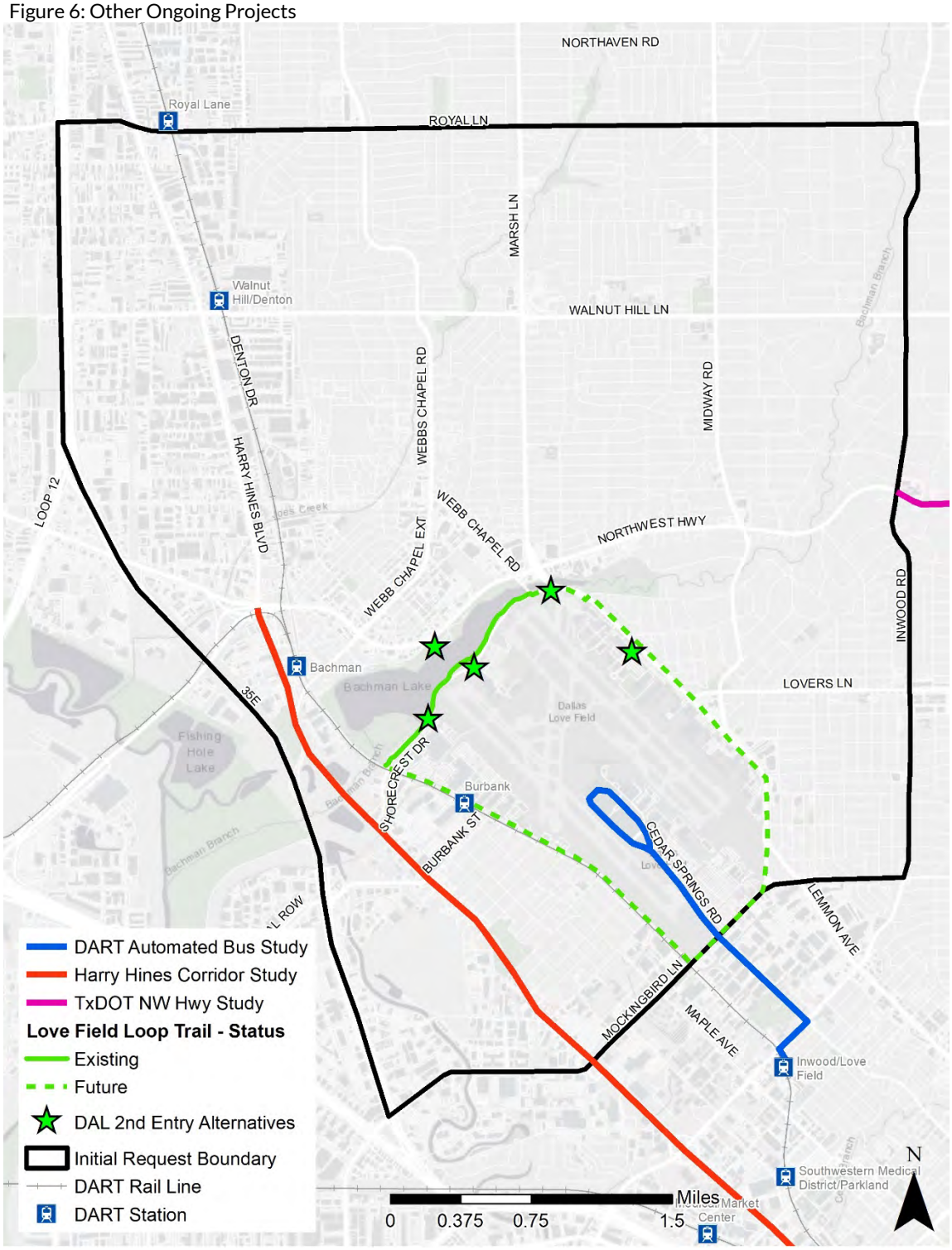
Figure 5: DART Rail Stations and half-mile Station Areas



C) Other Area Transportation Studies

The map below displays ongoing planning projects within or near the study area. Coordinating information and sharing findings among these projects with the Bachman Area Planning Study will help avoid duplication of work and improve outcomes for the broader community. More information on each project can be found here: www.nctcog.org/BachmanArea.

Figure 6: Other Ongoing Projects



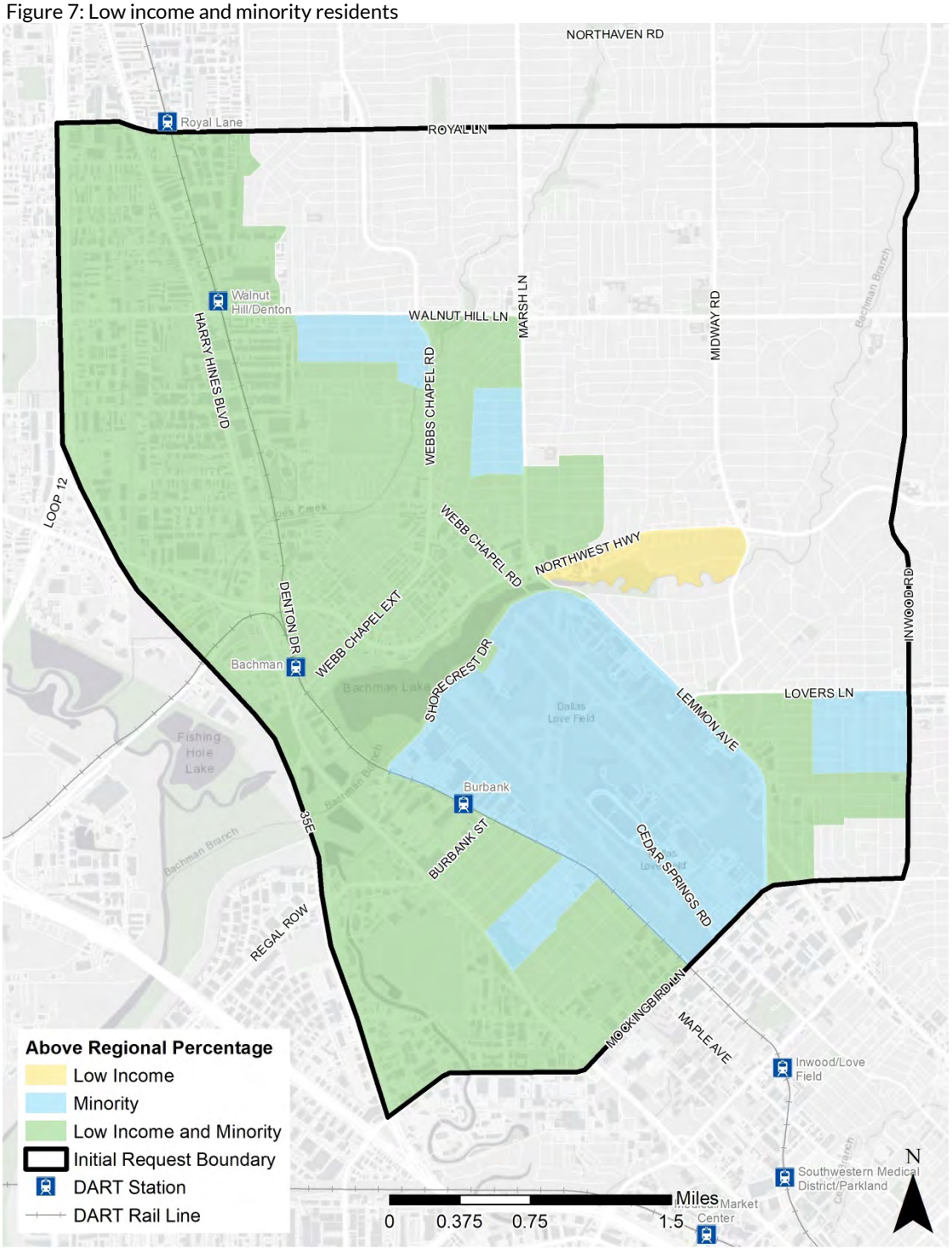
D) NCTCOG Environmental Justice

The establishment of the boundary included utilization of environmental justice factors and demographic data to further understand the Bachman Area. This included income and race/ethnicity differences (Figure 5), population density (Figure 6), and zero car household concentrations (Figure 7), among other data. Description and details on the source of NCTCOG's Environmental Justice data can found at www.nctcog.org/EJ.

Generally, it was found that the northwest quarter of the initial request boundary is significantly different than other neighborhoods when considering environmental justice factors. The final study boundary focuses on communities outside the northwest side that data indicate of more environmental justice concern.

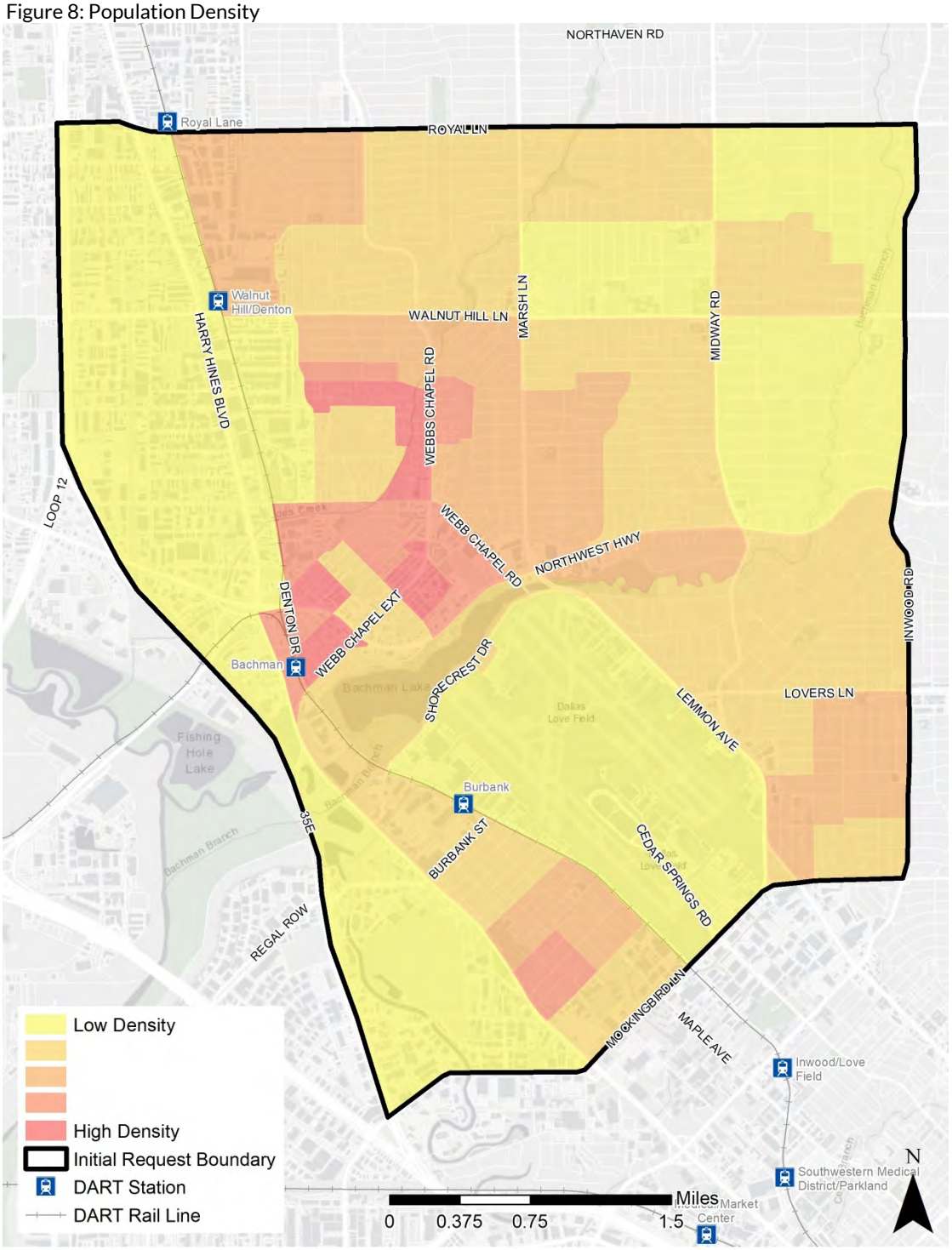
As seen in Figure 7, there is a regionally high percentage of low income and minority residents that stretches from the Bachman neighborhood to the northern boundary at Royal Lane. There is also a concentration of such residents in the Elm Thicket neighborhood south of Lovers Lane. The residents of the northwestern half of the original boundary are largely white (non-Latino) and not low income.

Figure 7: Low income and minority residents



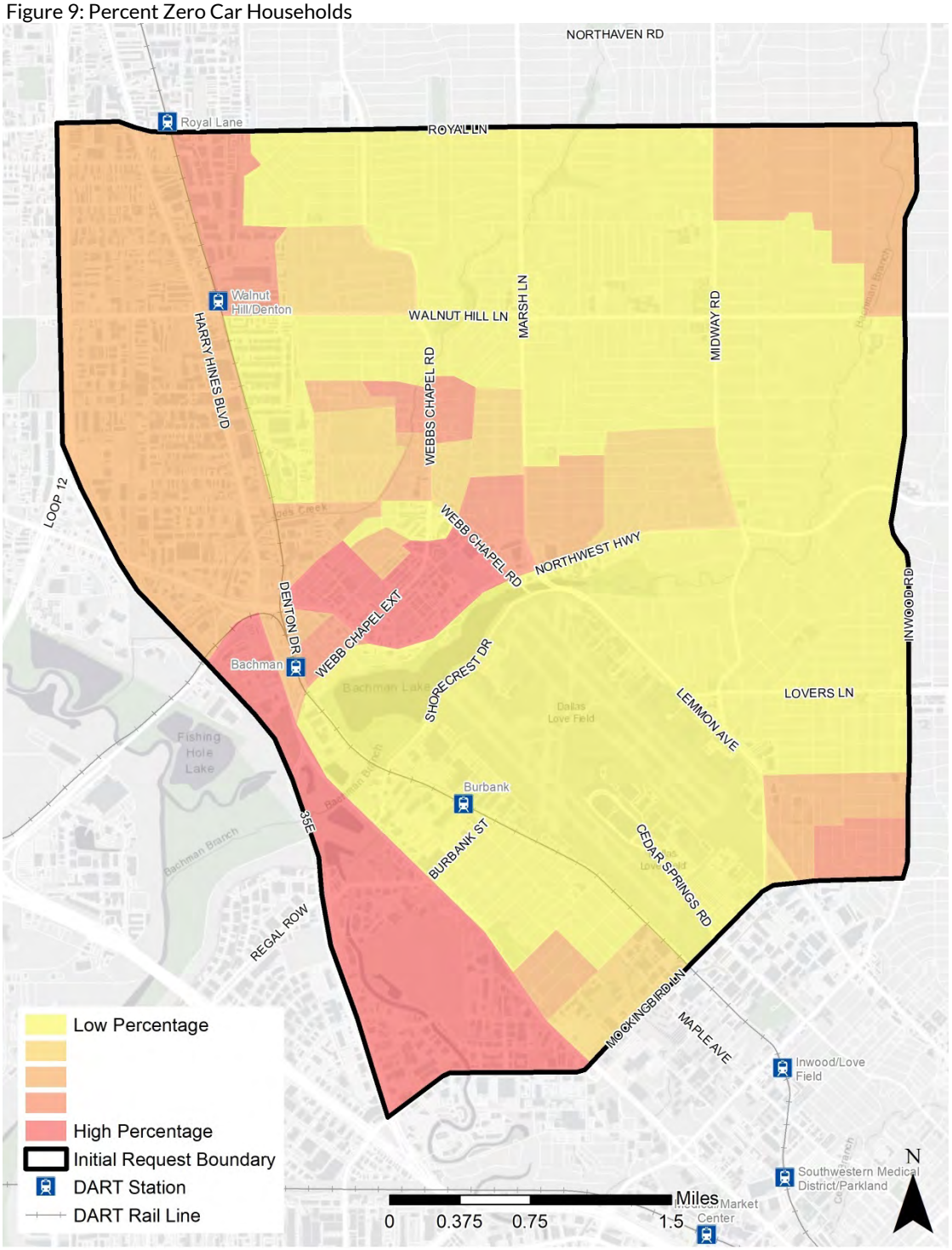
Population density in the original boundary is mostly low except for the Bachman neighborhood where there is a concentration of multi-family residential development and larger household sizes. The Elm Thicket and Love Field West neighborhoods also have moderate density.

Figure 8: Population Density



Zero-car household concentration follows a similar pattern as other demographic data where the Bachman Area has a high concentration of such households while the rest of the original boundary has fewer zero-car households except for the Love Field West and Elm Thicket neighborhoods, which have moderate concentrations.

Figure 9: Percent Zero Car Households



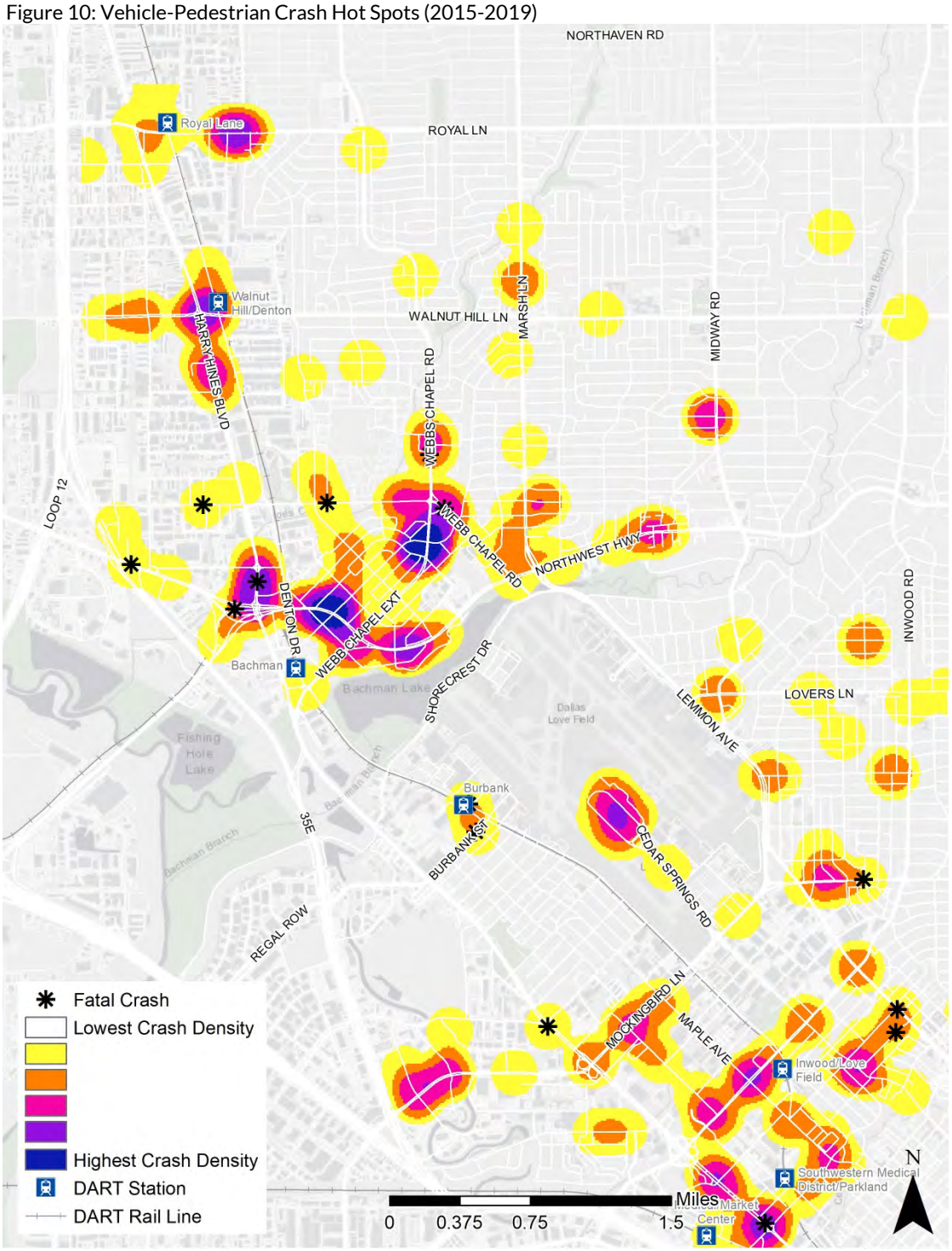
G) Safety

Crash data including vehicle-pedestrian (Figure 10), vehicle-bicycle (Figure 11), and vehicle-vehicle (Figure 12) crashes was also taken into consideration. Data for reportable crashes from 2015 to 2019 was collected from TxDOT's Crash Records Information System and analyzed to find locations with significant number and concentration of crashes, or "hot spots" in the study area. A "Reportable Motor Vehicle Traffic Crash" is defined by TxDOT as any crash involving motor vehicle in transport that occurs or originates on a traffic way, results in injury to or death of any person, or damage to the property of any one person to the apparent extent of $1,000. A traffic way is defined as any land way open to the public as a matter of right or custom for moving persons or property from one place to another.

Corridors that were found to have significant hot spots include Webb Chapel Ext, Webb Chapel Rd, Northwest Hwy, and Lemmon Ave. Typically, crashes occurred at major intersections, however, Northwest Hwy showed a significant pattern of non-major intersection and mid-block crashes between Harry Hines Blvd and Lemmon Ave. The concentration of crashes in these areas contributed to the refinement of focus areas and corridors.

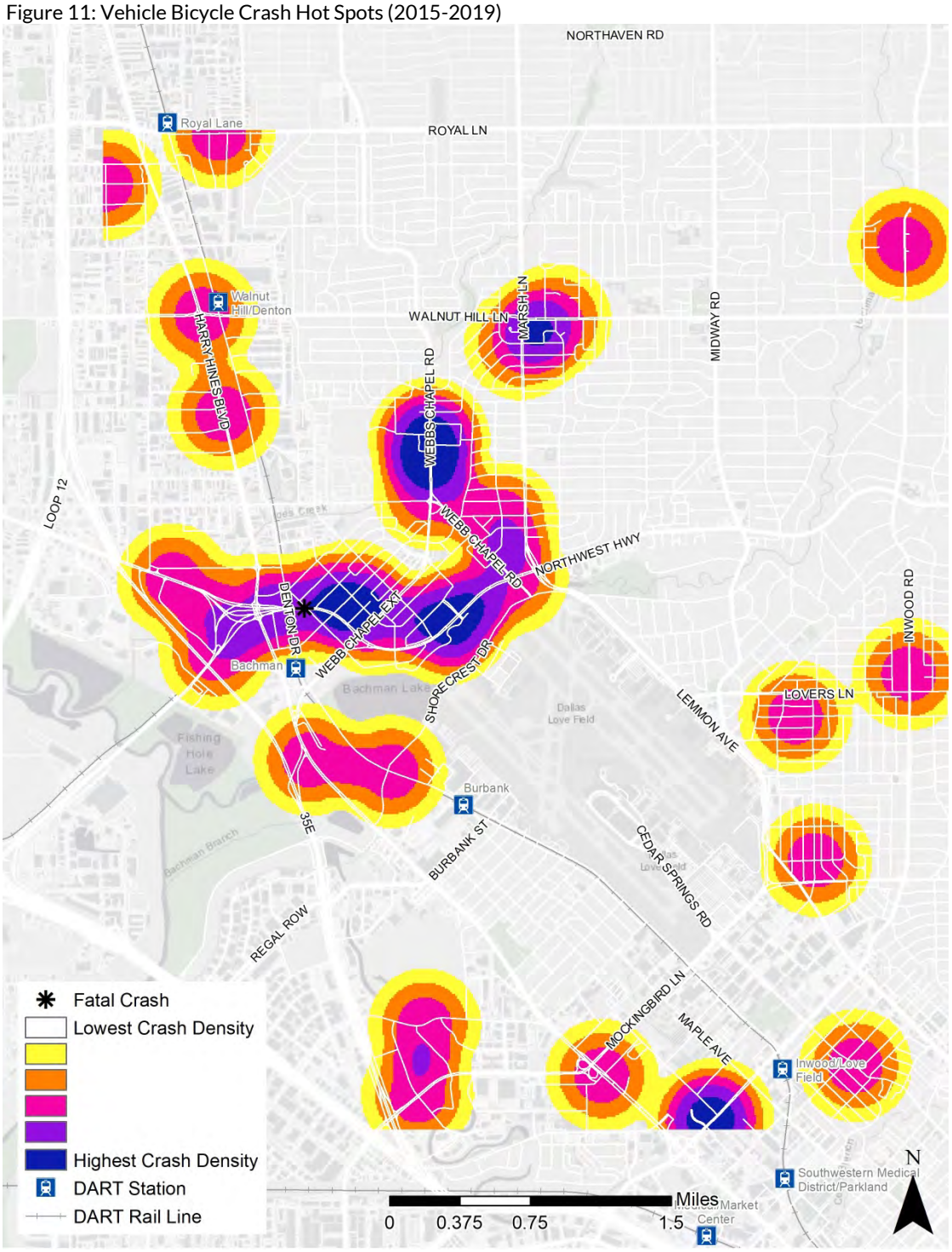
There were 209 vehicle-pedestrian crashes in the area shown in Figure 10 from 2015 to 2019. The largest hot spot is along Northwest Hwy from Harry Hines Blvd to Lakefield Blvd (26 crashes). The other major hot spot is centered at the intersection of Webb Chapel Ext and Larga Dr (7 crashes).

Figure 10: Vehicle-Pedestrian Crash Hot Spots (2015-2019)



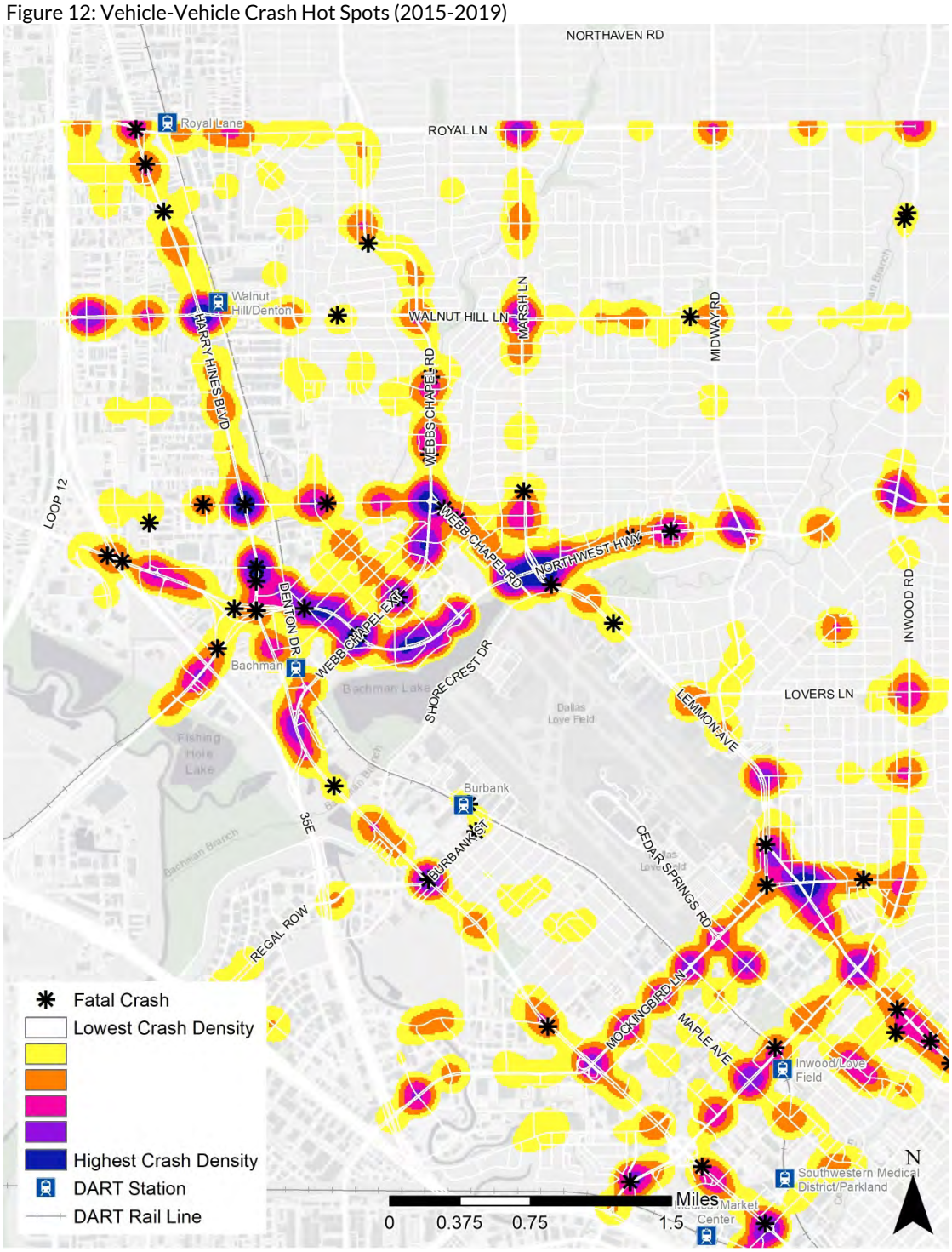
There were 34 bicycle-vehicle crashes in the area from 2015 to 2019. Hot spots for these types of crashes were most common along Northwest Hwy from Harry Hines Blvd to Lemmon Ave (five crashes) as well as along Webb Chapel Rd (three crashes), specifically near Hidalgo Dr. Although vehicle-bicycle crash counts are lower in magnitude than vehicle-pedestrian crashes because fewer people bike overall, but the general pattern still resembles that of vehicle-pedestrian crashes and vehicle-vehicle crashes.

Figure 11: Vehicle Bicycle Crash Hot Spots (2015-2019)



There were 2,008 vehicle-vehicle crashes that resulted in an injury or death in the study area from 2015 to 2019. While there are hot spots at almost every major intersection, the most significant hot spots were along Northwest Hwy from Harry Hines Blvd to Lakefield Blvd (148 crashes) and Mockingbird Ln from Harry Hines Blvd to Lemmon Ave (133 crashes). Other problem areas include Webb Chapel Ext from NW Hwy to Lombardy Ln (88 crashes) and Northwest Hwy from Webb Chapel Rd to Lemmon Ave (50 crashes).

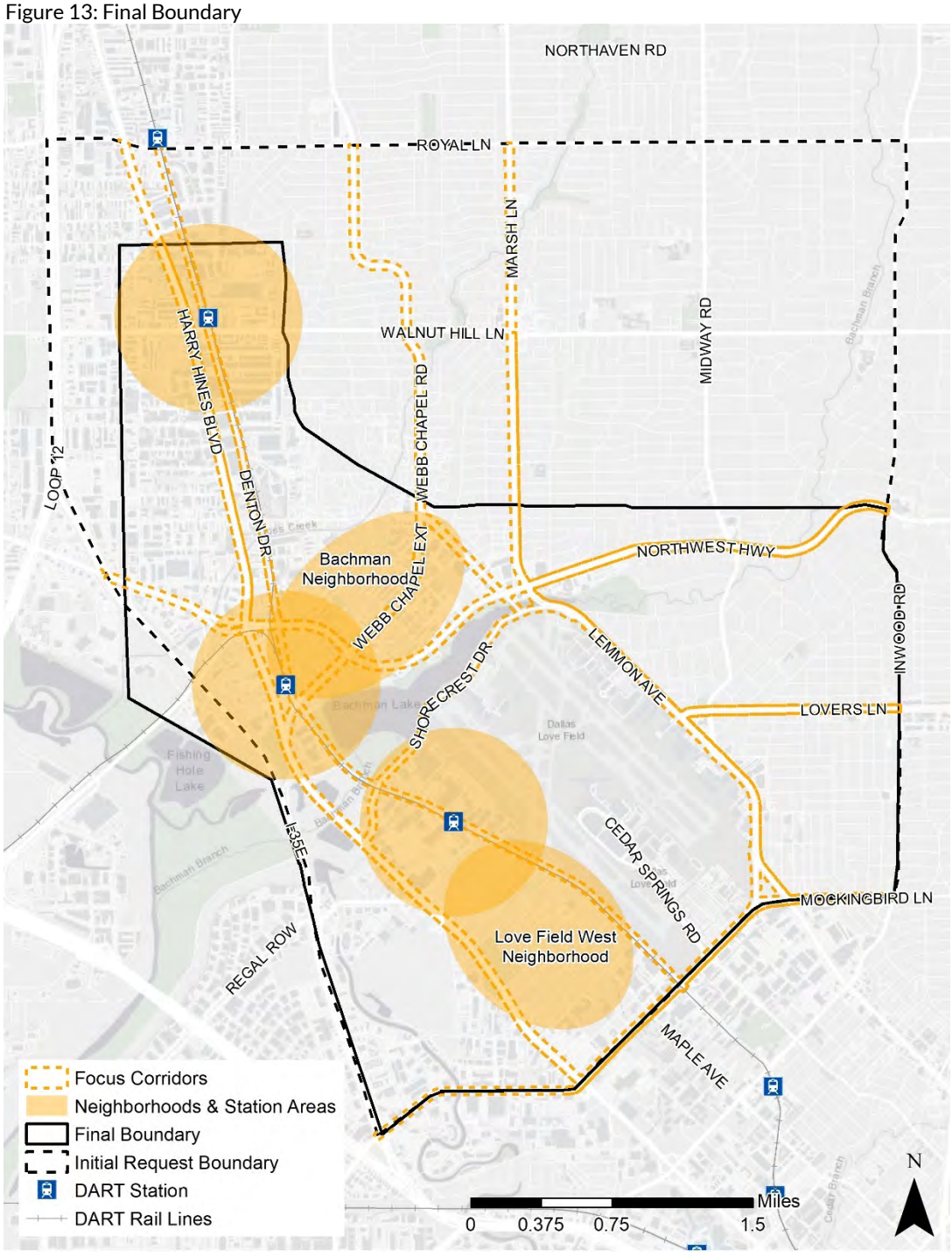
Figure 12: Vehicle-Vehicle Crash Hot Spots (2015-2019)



Final Boundary and Focus Areas

Taking into consideration initial stakeholder input, the trail network, DART rail stations, other ongoing projects, environmental justice/demographic factors, and crash data, the boundary was refined to focus on key areas and corridors (Figure 13). Areas within a half-mile of three rail stations, the Bachman and Love Field West neighborhoods, and nine priority corridors in the boundary were chosen as focus areas/corridors due to their elevated need for public investment and safety improvements.

Figure 13: Final Boundary



Next Steps

Using the refined boundary and focus areas, NCTCOG staff will continue to examine existing conditions and analyze spatial data to further knowledge of the study area built-environment, natural environment, and residents. Recommendations will be made with attention to equity, environmental factors, and economic sustainability primarily within this geography.