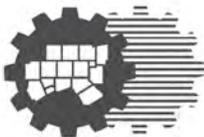


# Hickory Tree Road Planning Study



North Central Texas  
Council of Governments

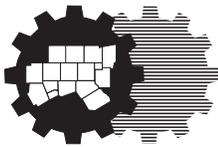
THE CITY OF  
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## What is NCTCOG?

The **North Central Texas Council of Governments** (NCTCOG) is a voluntary association of, by, and for **local governments** within the 16-county North Central Texas Region. The agency was established by state enabling legislation in 1966 to assist local governments in **planning** for common needs, **cooperating** for mutual benefit, and **coordinating** for sound regional development. Its purpose is to strengthen both the individual and collective power of local governments, and to help them recognize regional opportunities, resolve regional problems, eliminate unnecessary duplication, and make joint regional decisions – as well as to develop the means to implement those decisions.

North Central Texas is a 16-county **metropolitan region** centered around Dallas and Fort Worth. The region has a population of more than 7 million (which is larger than 38 states), and an area of approximately 12,800 square miles (which is larger than nine states). NCTCOG has 229 member governments, including all 16 counties, 167 cities, 19 independent school districts, and 27 special districts.

NCTCOG's **structure** is relatively simple. An elected or appointed public official from each member government makes up the **General Assembly** which annually elects NCTCOG's **Executive Board**. The Executive Board is composed of 17 locally elected officials and one ex-officio non-voting member of the legislature. The Executive Board is the policy-making body for all activities undertaken by NCTCOG, including program activities and decisions, regional plans, and fiscal and budgetary policies. The Board is supported by policy development, technical advisory and study **committees** – and a professional staff led by **R. Michael Eastland**, Executive Director.



NCTCOG's offices are located in Arlington in the Centerpoint Two Building at 616 Six Flags Drive (approximately one-half mile south of the main entrance to Six Flags Over Texas).

### **North Central Texas Council of Governments**

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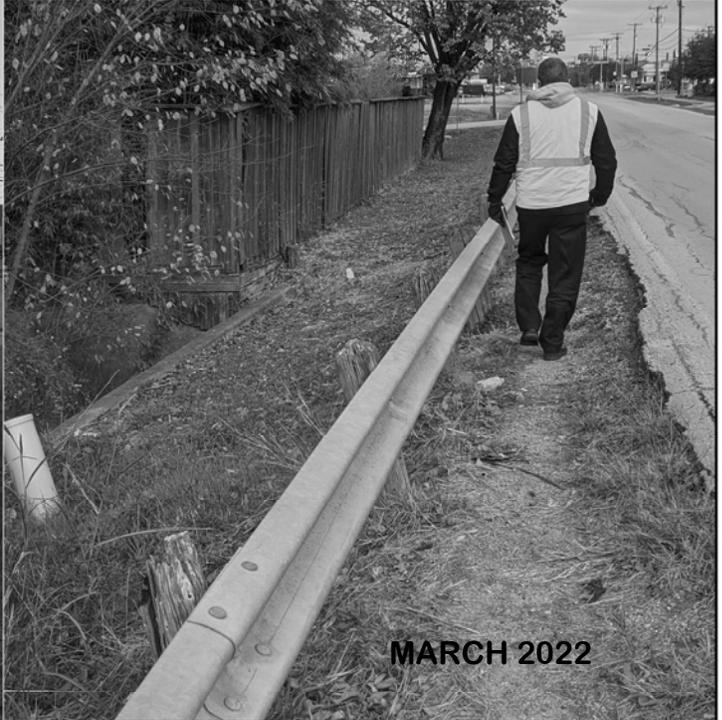
Since 1974 NCTCOG has served as the Metropolitan Planning Organization (MPO) for transportation for the Dallas-Fort Worth area. NCTCOG's Department of Transportation is responsible for the regional planning process for all modes of transportation. The department provides technical support and staff assistance to the Regional Transportation Council and its technical committees, which compose the MPO policy-making structure. In addition, the department provides technical assistance to the local governments of North Central Texas in planning, coordinating, and implementing transportation decisions.

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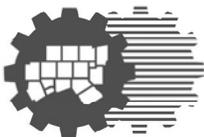
Prepared in cooperation with the U.S. Department of Transportation (Federal Highway Administration and Federal Transit Administration) and the Texas Department of Transportation.

*The contents of this report reflect the views of the authors who are responsible for the opinions, findings, and conclusions presented herein. The contents do not necessarily reflect the views or policies of the Federal Highway Administration, the Federal Transit Administration, or the Texas Department of Transportation.*

# Hickory Tree Road Planning Study



MARCH 2022



North Central Texas  
Council of Governments

THE CITY OF  
**BALCH SPRINGS**  
GROWING COMMUNITY

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---

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## **EXECUTIVE SUMMARY**

The purpose of this planning study is to examine the existing conditions and produce recommendations for Hickory Tree Road in the City of Balch Springs between Bruton Road and Elam Road to increase safety for bicyclists and pedestrians, reduce congestion, and promote economic development. Improvements to Hickory Tree Road were recommended in the *Balch Springs Mobility Plan* (2019). The City of Balch Springs requested funding and technical assistance from the North Central Texas Council of Governments (NCTCOG) for the roadway improvements in this study area.

This planning study includes an existing conditions analysis, stakeholder and public engagement, and recommendations for the roadway reconfiguration of Hickory Tree Road. NCTCOG examined crash data, demographic data, land use data, and traffic data to support existing conditions efforts. Additionally, NCTCOG and the City of Balch Springs completed a study area walk audit and school dismissal observation for Floyd Elementary School. The City of Mesquite was additionally included in the school dismissal observation of McWhorter Elementary School, which is located within the City of Mesquite.

Stakeholder and public outreach efforts were held virtually. A public roadway survey was open to the public from February 2021 to September 2021. Online stakeholder engagement meetings were held with residents and business owners and operators of the corridor, and an additional stakeholder meeting was held for staff members of the City of Balch Springs, the City of Mesquite, Dallas County, STAR Transit and the Texas Department of Transportation. An additional online public feedback opportunity included a virtual presentation of the planning study to date, preliminary recommendations, and a short feedback questionnaire.

NCTCOG staff concluded the study with various recommendations for the Hickory Tree Road study area:

1. [Roadway Cross-Section Reconfiguration](#) from the current two-lane configuration to a three-lane roadway with a continuous center turn lane and pedestrian refuge islands in strategic locations.
2. Upgraded [Bicycle and Pedestrian Infrastructure](#), including sidewalks and a multi-use path set away from the road, upgraded sidewalks and other strategic improvements for traffic safety.
3. [Land Use and Zoning](#) recommendations to increase active transportation and economic development.

Each recommendation is further discussed in Section III: Recommendations (page [III-52](#)).

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## **I. INTRODUCTION**

Hickory Tree Road between Bruton Road and Elam Road in the City of Balch Springs is a unique corridor that simultaneously serves several different roles. The roadway contains numerous local commercial and municipal destinations for residents of the city and many single-family and multi-family homes that connect directly to the roadway, and additionally functions as a pass-through route for travelers avoiding Interstate Highway (IH) 635.

Hickory Tree Road from Bruton Road to Elam Road was identified in the Balch Springs 2019 Mobility Plan as a project candidate in line with the goals of the City's Comprehensive Plan to reconfigure the corridor to a three-lane corridor with two travel lanes and a continuous center turn lane. Hickory Tree Road is a two-lane roadway with 11' travel lanes for most of the corridor and was observed having at or near capacity traffic volumes, a lack of continuous sidewalks, a lack of separation for left-turning vehicles, and a moderate crash rate between Lake June Road and Elam Road.

The North Central Texas Council of Governments (NCTCOG) was requested to award federal funds for Hickory Tree Road improvements. This planning study was completed for the Hickory Tree Road corridor to determine needs and more clearly define the scope of work. Recommendations were developed for the roadway as part of the study to fall in line with the City's Mobility Plan goals of bicycle and pedestrian safety, congestion management, and economic development. This planning study investigates the existing conditions and planning context of the roadway to inform these recommendations, including field visits, data analysis, and public engagement.

## **II. PLANNING CONTEXT**

### **Location & Surroundings**

#### **Hickory Tree Road Corridor**

The planning study corridor follows Hickory Tree Road, with its northern boundary at Bruton Road where the road continues into the City of Mesquite, and its southern boundary at Elam Road (see [Exhibit 1](#)). The study corridor is approximately two miles in length. Hickory Tree Road is a two-lane roadway with 11-foot travel lanes, apart from the area between Terry Drive and Red Bud Lane, where a center turn lane exists in front of Floyd Elementary School. The study corridor contains intermittent sidewalks and crosswalks, but no consistent pedestrian infrastructure (see [Exhibit 13](#), page [II-20](#)). The entire right-of-way (ROW) of Hickory Tree Road is in the City of Balch Springs, but some parts of the roadway touch property in the City of Mesquite, including at McWhorter Elementary School.

#### **Major Destinations**

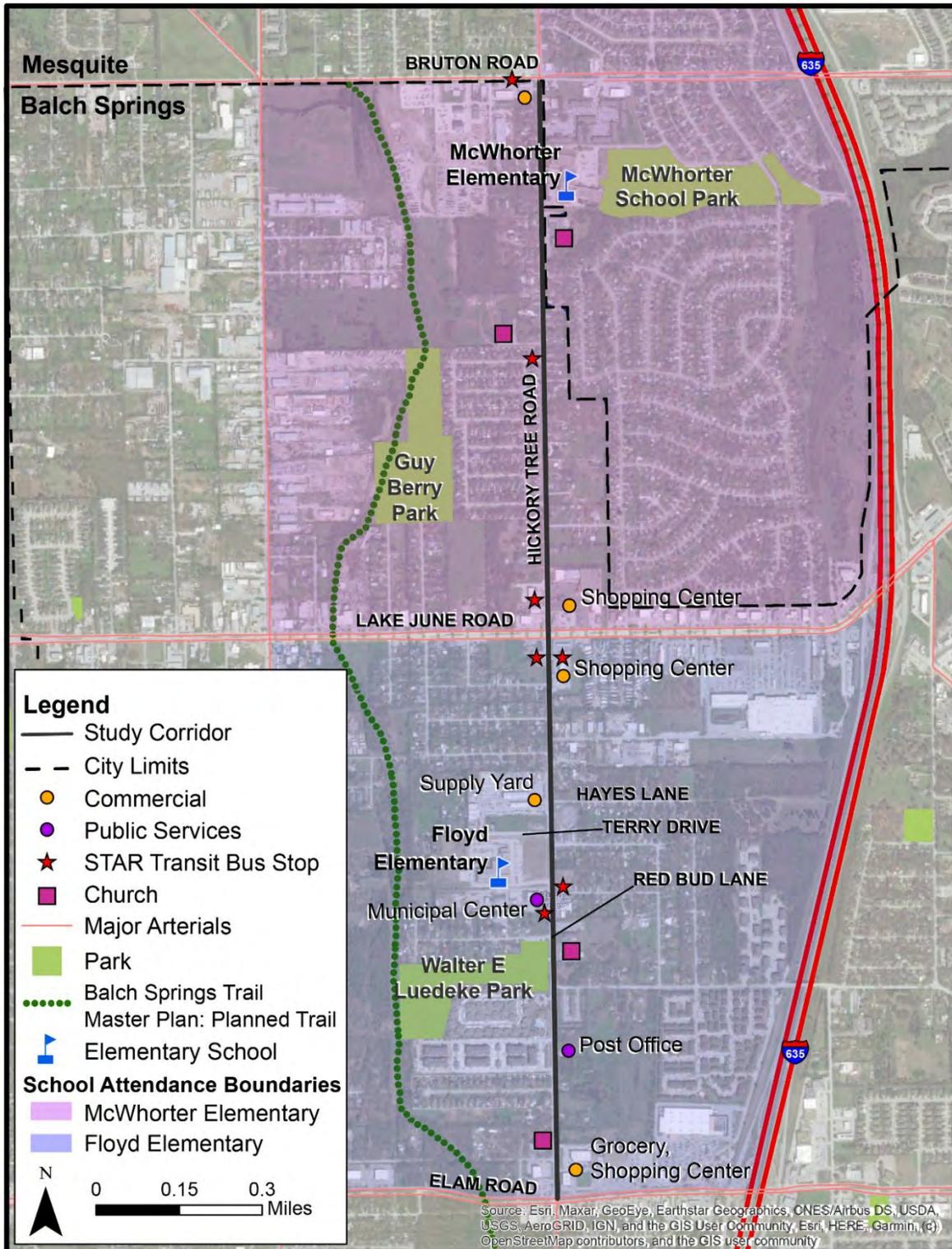
The study corridor contains many points of interest (see [Exhibit 1](#)), including two elementary schools (McWhorter Elementary and Floyd Elementary in Mesquite ISD), and three parks (McWhorter School Park, Guy Berry Park, and Walter E. Luedke Park). Hickory Tree Road north of Lake June Road falls within the attendance boundary for McWhorter Elementary and south of Lake June Road falls within the attendance boundary for Floyd Elementary. Public services on the corridor include a Post Office and Municipal Center, which contains city offices, the municipal court, and the city animal shelter. There are four churches on the corridor, as well. Commercial shopping centers are located at the intersections of Lake June Road and Hickory Tree Road, as well as Elam Road and Hickory Tree Road. A supply yard is located on the corridor across from Hayes Lane, which attracts truck traffic to the roadway. STAR Transit route 101 additionally runs through the study corridor with multiple bus stop locations. An off-street

bikeway is planned in the [Balch Springs 2036 Comprehensive Plan](#)'s<sup>1</sup> Trail Master Plan to run parallel to the Hickory Tree Road study corridor along Hickory Creek.

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<sup>1</sup> The Balch Springs 2036 Comprehensive Plan can be viewed at <https://www.cityofbalchsprings.com/365/Comprehensive-Plan>.

**Exhibit 1. Balch Springs Points of Interest**



## **Existing Conditions**

NCTCOG staff completed an existing conditions analysis for the study corridor to assess the current needs of the roadway and inform future recommendations. Data collection included a driveway inventory, crash data, traffic volumes, and field visits. Current funding on the roadway is discussed in Section IV: Implementation (page [IV-1](#)).

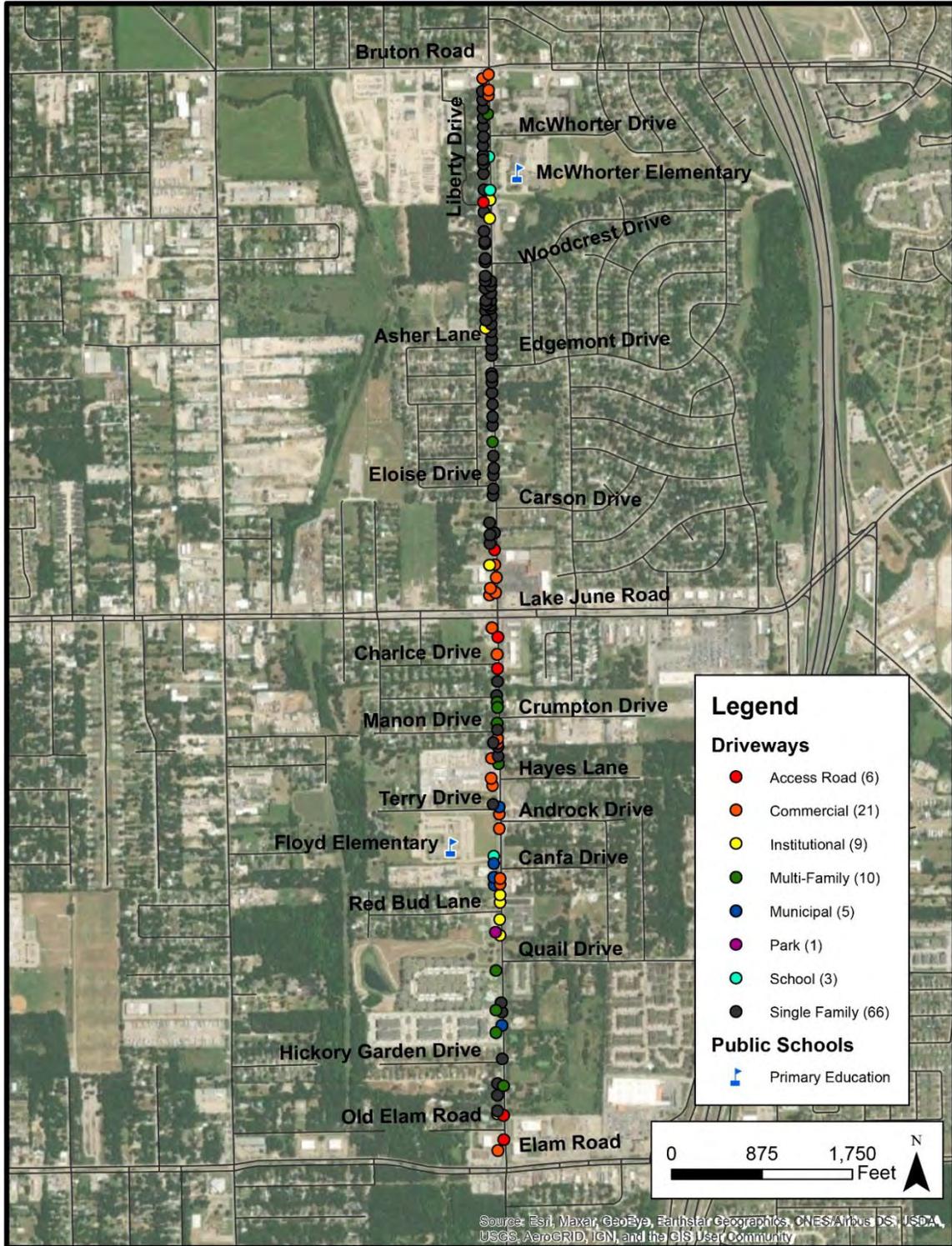
### **Driveway Inventory**

Because there are many driveways on the corridor and driveways can cause transportation impacts, a driveway inventory of the study corridor was completed (see [Exhibit 2](#)). Driveways were initially inventoried using Google Maps Street View, then manually confirmed in the field during a walk audit. Driveways were assigned one of eight driveway types:

- Access Road: Driveway provides access to a destination away from roadway (ex: shopping center).
- Commercial: Driveway serves a commercial business.
- Institutional: Driveway serves a semi-public or public non-commercial destination (ex: church).
- Multi-Family: Driveway serves a multi-family residence (ex: apartment building).
- Municipal: Driveway serves a public building (ex: post office, courthouse).
- Park: Driveway serves a public park.
- Schools: Driveway serves a school.
- Single Family: Driveway serves a single-family residence.

There were 121 total driveways on the corridor. The category with the most driveways was single family, with 66. Some single-family homes had two driveway access points to form a “loop”, where each individual access point was counted separately. The second most common driveway type on the corridor was commercial, with 21. There were 10 multi-family driveways, nine institutional driveways, six access road driveways, five municipal driveways, three school driveways, and one park driveway.

## Exhibit 2: Driveway Inventory Map



## Traffic Volumes

Existing traffic volumes are summarized in Exhibit 3. Thoroughfare traffic counts and Level of Service (LOS) analyses were completed in 2018 by the City of Balch Springs in support of their [Mobility Plan](#)<sup>2</sup>. Level of Service grades a section of roadway based on speed, travel time, and delay. Roadway sections are given a grade between A and F, with A being the highest possible grade indicating free-flowing traffic, and F indicated gridlocked traffic. An acceptable LOS grade for “good” urban roadway conditions is LOS C. The City of Balch Springs completed an updated traffic volume analysis for Hickory Tree Road as a part of their 2019 *City of Balch Springs Mobility Plan* (see [Exhibit 4](#)). The section of Hickory Tree Road between Bruton Road and Lake June Road had a traffic count of 5,812 vehicles per day, and scored a LOS grade D. The section between Lake June Road and Quail Drive had a traffic count of 9,200 vehicles and scored a LOS grade F, while the section between Quail Drive and Elam Road had a traffic count of 8,021 and scored a LOS grade E.

The study corridor contains three traffic signals: Hickory Tree Road and Bruton Road, Hickory Tree Road and Lake June Road, and Hickory Tree Road and Elam Road. The signals at Hickory Tree Road and Lake June Road and Hickory Tree Road and Elam Road are owned by the City of Balch Springs. A signal inventory provided by the City of Balch Springs reports that the cabinets for each signal are each are over 20 years old, and the controllers are <10 and >20 years old, respectively. The signals are not ADA compliant for pedestrian signals, pedestrian push buttons, or pedestrian ramps.

The City of Balch Springs has secured a Texas Department of Transportation (TxDOT) Highway Safety Improvement Program (HSIP) award for the intersection of Hickory Tree Road and Lake June Road intersection safety improvements, including a new traffic signal. For more information about the HSIP award, see Section IV: Implementation (page [IV-1](#)).

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<sup>2</sup> The *Balch Springs Mobility Plan* can be accessed at: <https://www.cityofbalchsprings.com/194/Planning-Zoning>.

**Exhibit 3: Hickory Tree Road Traffic Volume Count Locations**

<b>Segment</b>	<b>Balch Springs Count: 2018</b>	<b>NCTCOG Count: 2019</b>
Bruton Road to Edgemont Avenue	One Count: 5,812 vehicles per day	6,471 vehicles per day
Edgemont Avenue to Lake June Road		4,574 vehicles per day
Lake June Road to Quail Drive	9,200 vehicles per day	7,975 vehicles per day
Quail Drive to Elam Road	8,021 vehicles per day	5,791 vehicles per day

NCTCOG staff have concluded that the variations in traffic volumes for counts for the sections of Bruton Road to Edgemont Avenue, Edgemont Avenue to Lake June Road, and Lake June Road to Quail Drive all fall within an acceptable range of one another. There are many factors in variances of traffic count data including: day of the week, school activity, and other factors. The Quail Drive to Elam Road counts for the City of Balch Springs's number and the NCTCOG number fall out of that acceptable range and may indicate that further investigation into that section may be needed to understand the differences in the traffic counts.

**Exhibit 4: Hickory Tree Road Traffic Counts (2018)**

Bruton Road to Lake June Road



Lake June Road to Elam Road



**Legend**

- |                         |       |                       |               |
|-------------------------|-------|-----------------------|---------------|
| <b>Level of Service</b> | LOS E | Traffic Counts (2018) | Streets       |
| LOS A/B/C               | LOS F | Highways              | City Boundary |
| LOS D                   |       |                       |               |

Graphics from City of Balch Springs Mobility Plan (2019)

Additionally, as a part of the 2019 *Balch Springs Mobility Plan*, a forecasted LOS exercise was completed by the city consultant, indicating what LOS levels are anticipated to be for the year 2045 (see [Exhibit 5](#)). The forecast assumed that Hickory Tree Road would be reconstructed as a three-lane roadway with a two-way center turn lane. The sections of Hickory Tree Road between Bruton Road and Lake June Road as well as between Quail Drive and Elam Road were forecasted to score a LOS A/B/C, and the section between Lake June Road and Quail Drive was forecasted to score a LOS D. This reflected a forecasted improvement in overall traffic volumes with the 2019 *Balch Springs Mobility Plan's* recommended roadway reconstruction of a three-lane roadway with a continuous center turn lane.

**Exhibit 5: Hickory Tree Road Projected 2045 LOS**

Bruton Road to Lake June Road



Lake June Road to Elam Road



**Legend**

<b>Level of Service</b>	LOS E	Traffic Counts (2018)	Streets
LOS A/B/C	LOS F	Highways	City Boundary
LOS D			

Graphics from City of Balch Springs Mobility Plan (2019)

A traffic forecast was completed by NCTCOG to calculate estimated daily volumes for 2045. This analysis calculated potential daily volume ranges through the travel demand model and demographic forecasts for the study area while maintaining the current roadway configuration of two lanes.

The forecast estimated 2045 daily volumes for the northern half of the corridor of 6,500-9,500 for Hickory Tree Road at Bruton Road, 6,000-7,500 for Hickory Tree Road at Eloise Drive, 6,000-6,500 for Hickory Tree Road just north of Lake June Road. The estimated volumes for the northern half of the corridor according to these calculations likely will not warrant four lanes by 2045. For the southern half of the corridor, the model estimated 2045 daily volumes at 12,000-16,000 vehicles for Hickory Tree Road just south of Lake June Road, and 8,500-10,000 for Hickory Tree Road at Old Elam Road. The estimated volumes calculated by the NCTCOG forecast for the southern half of the corridor indicate that there may be traffic levels that warrant an expansion of the roadway to four lanes by 2045. However, the Federal Highway Administration (FHWA) has said the two-to-three lane roadway conversion can have operational and safety benefits – “In some cases, a three-lane cross section can provide similar operational benefits to a four-lane cross section while maintaining the safety benefits of the three-lane configuration”<sup>3</sup>.

As the roadway volumes increase, the recommendation made in the 2019 *Balch Springs Mobility Plan* for Hickory Tree Road which is a three-lane configuration will be able to accommodate volumes prior to the forecast date. For more information on Road Reconfigurations, please see the [FHWA Road Diet Informational Guide](#).

### **Crash History**

Crash data from the TxDOT Crash Records Information System was analyzed for the study corridor between 2015 and 2019. During the five-year period, there were 174 crashes. There were no fatal crashes on the study corridor during this period ([Exhibit 6](#)). The three crashes

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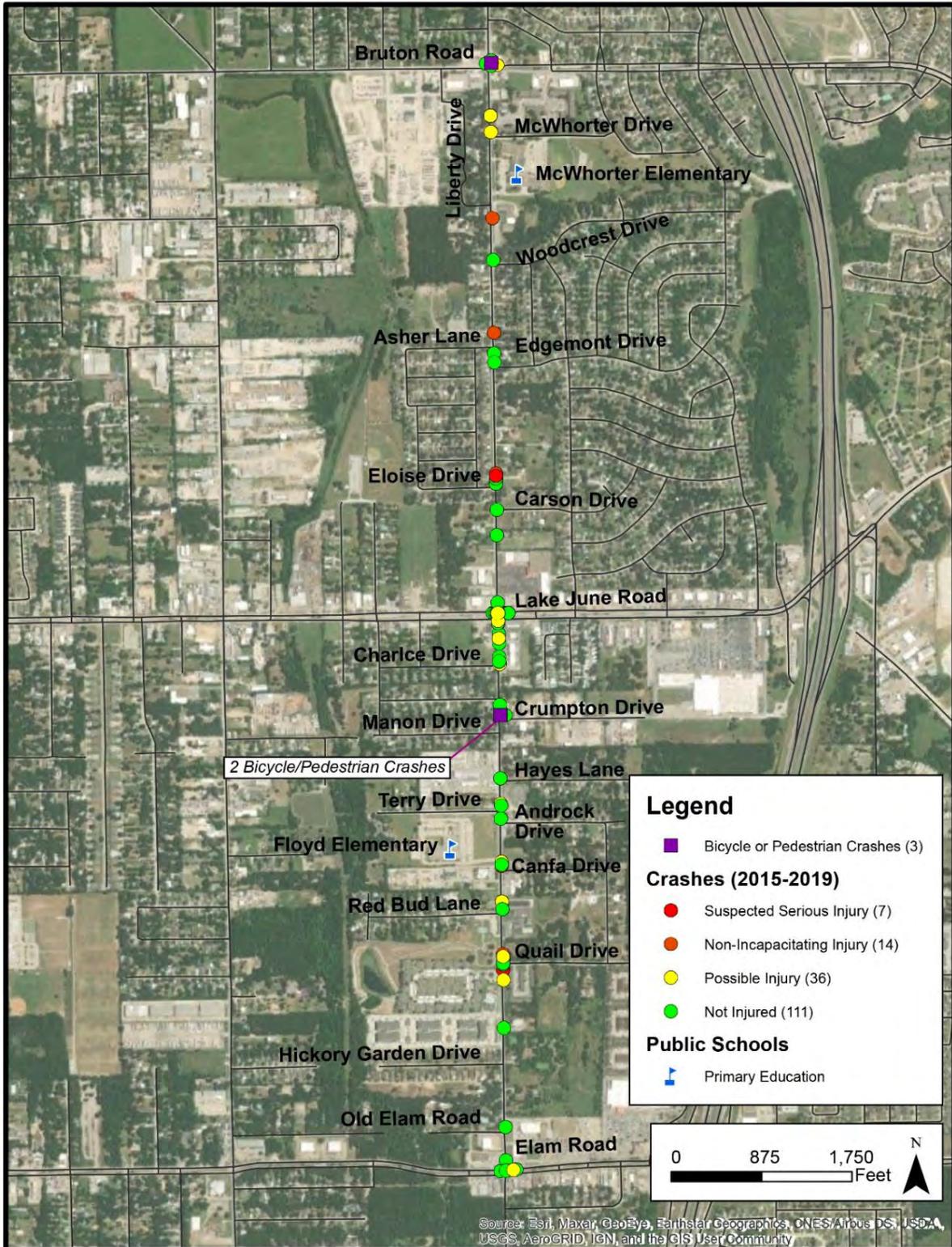
<sup>3</sup> Federal Highway Administration. *Road Diet Informational Guide*. 2014. [https://safety.fhwa.dot.gov/road\\_diets/guidance/info\\_guide/](https://safety.fhwa.dot.gov/road_diets/guidance/info_guide/)

involving pedestrians or cyclists all occurred in 2015. Two of these crashes occurred at Crumpton Drive, and the other occurred at Bruton Road. Land uses on the eastern side of Crumpton Drive are primarily auto oriented, including a tow yard and a body shop (see [Exhibit 7](#)). Crashes at the major intersections of the Hickory Tree Road study corridor are summarized in [Exhibit 8](#).

**Exhibit 6: Hickory Tree Road Crash Counts by Year (2015-2019)**

<b>Year</b>	<b>Total Crashes</b>	<b>Suspected Serious Injury</b>	<b>Bike/Ped Crash</b>
2015	34	2	3
2016	34	0	0
2017	38	1	0
2018	32	1	0
2019	36	3	0

**Exhibit 7: Study Area Crashes**



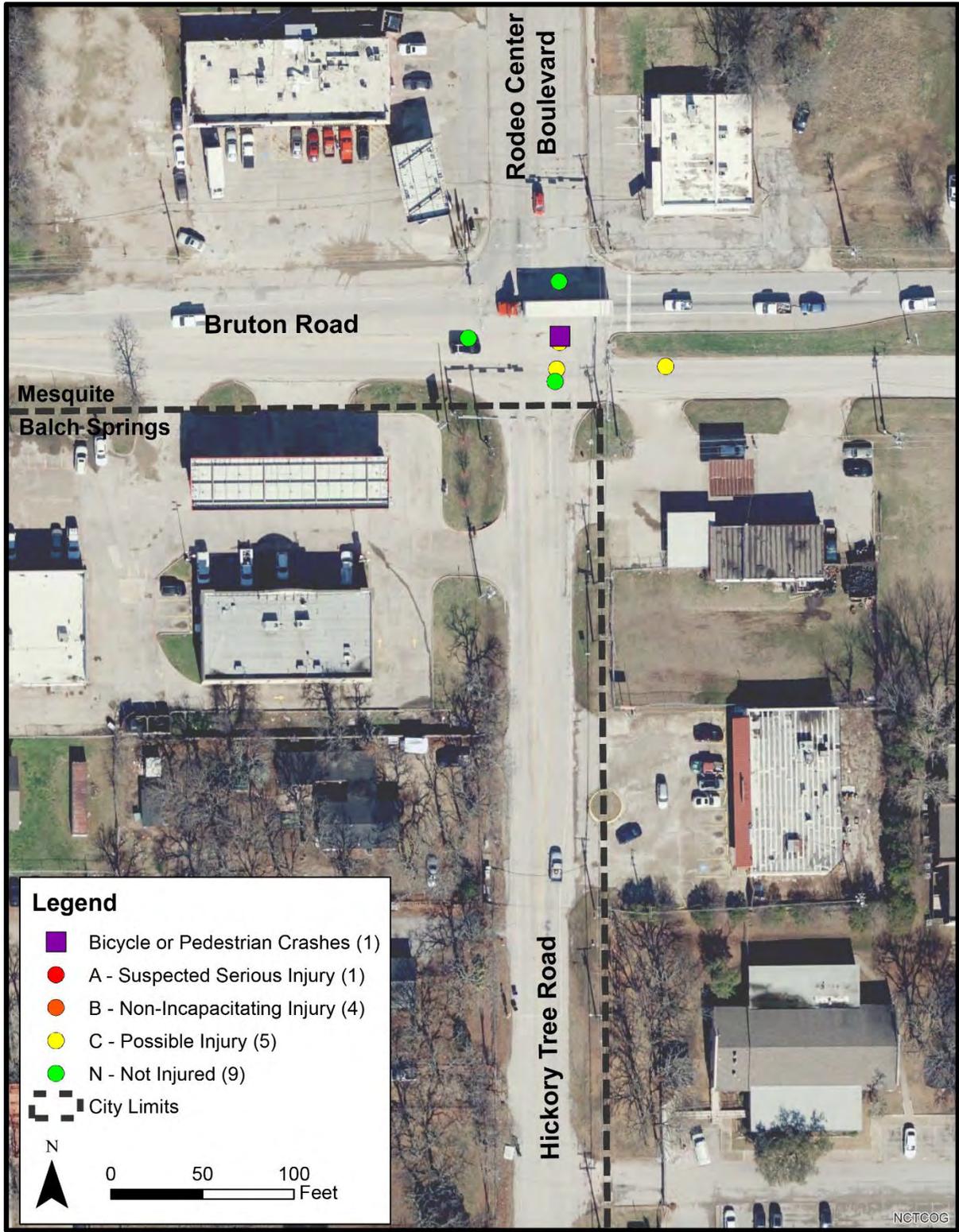
**Exhibit 8: Intersection Breakout Crash Data (2015-5019)**

<b>Major Intersecting Road</b>	<b>Total Crashes</b>	<b>Suspected Serious Injury</b>	<b>Bike/Ped Crash</b>
Bruton Road	19	1	1
Lake June Road	58	3	0
Quail Drive	13	1	0
Elam Road	39	0	0

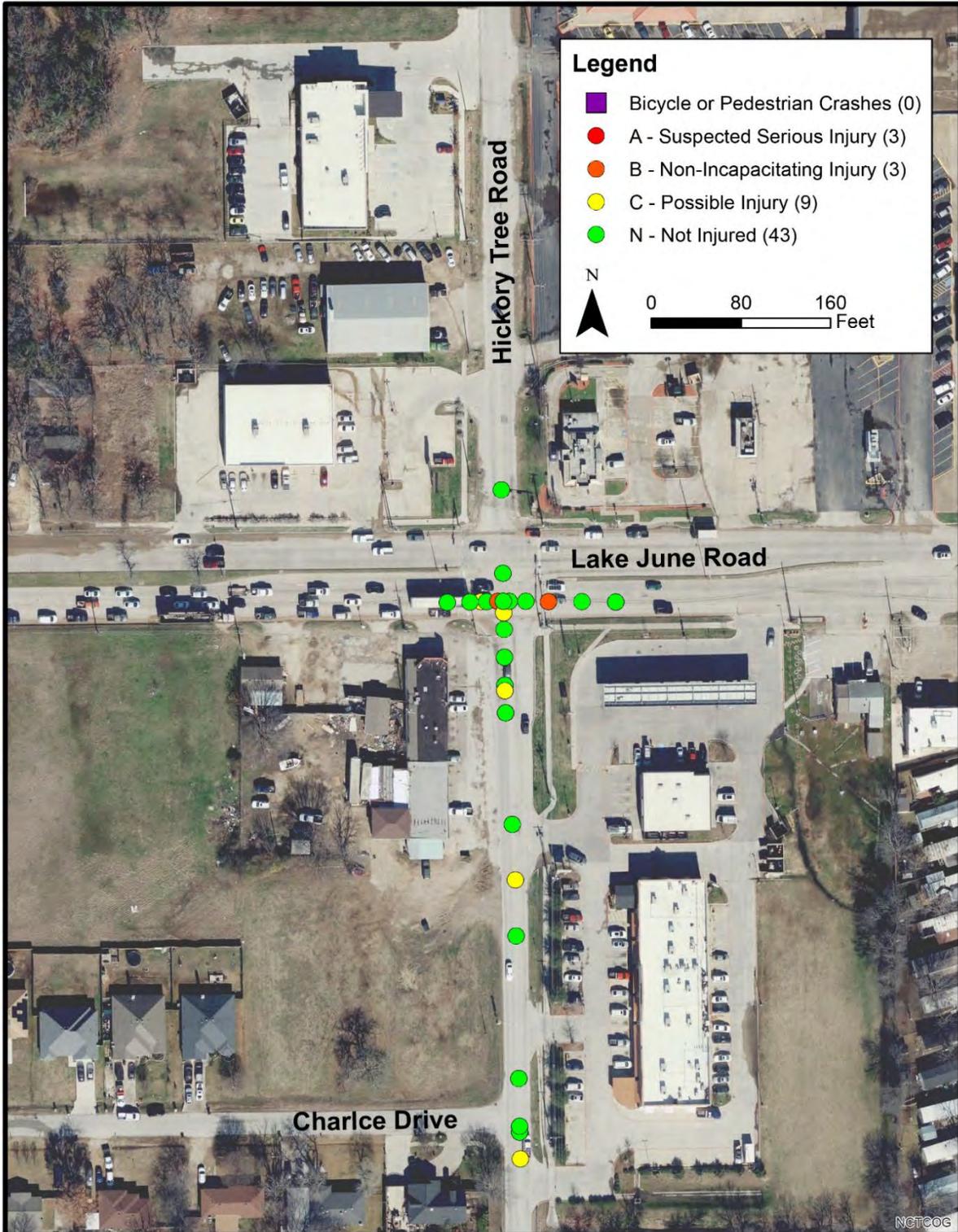
An intersection-level analysis was completed for each of the major intersections along the study corridor, including the three signalized intersections: Bruton Road ([Exhibit 9](#)), Lake June Road ([Exhibit 10](#)), and Elam Road ([Exhibit 11](#)). Quail Drive ([Exhibit 12](#)) is not a signalized intersection, but there is a stop sign for drivers turning on to Hickory Tree Road. Quail Drive serves as a popular connection eastbound to the neighborhoods on the far side of IH 635, warranting its inclusion in this more targeted analysis. Each intersection data set includes crashes within a 500-foot radius on Hickory Tree Road to account for queueing activity in the commercial centers at each of the signalized intersections.

The intersection of Hickory Tree Road and Lake June Road had the highest concentration of crashes on the study corridor. There was a notable concentration of crashes that occurred in the signal queueing area just south of the intersection for vehicles traveling north on Hickory Tree Road. Conversations with City of Balch Springs staff in the planning and public works departments, as well as input from the Balch Springs Police Department have indicated that this concentration of crashes may be caused by a long wait time for making a left turn from Hickory Tree Road to Lake June Road at the signalized intersection. Another contributing factor that was mentioned was the time of day during school peak periods of Floyd Elementary in the morning and afternoon that may also have played a role.

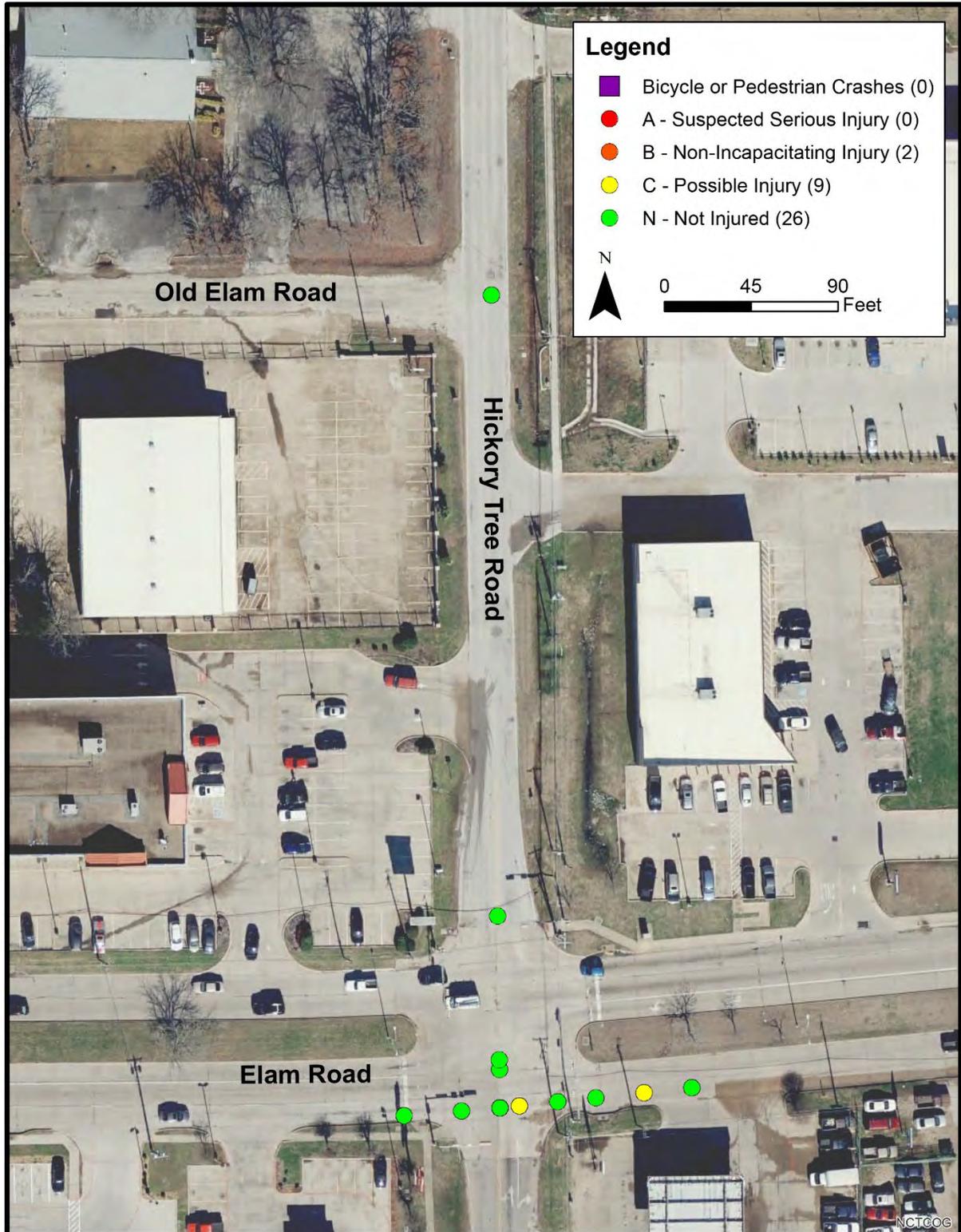
**Exhibit 9: Hickory Tree Road at Bruton Road Intersection Crash Map**



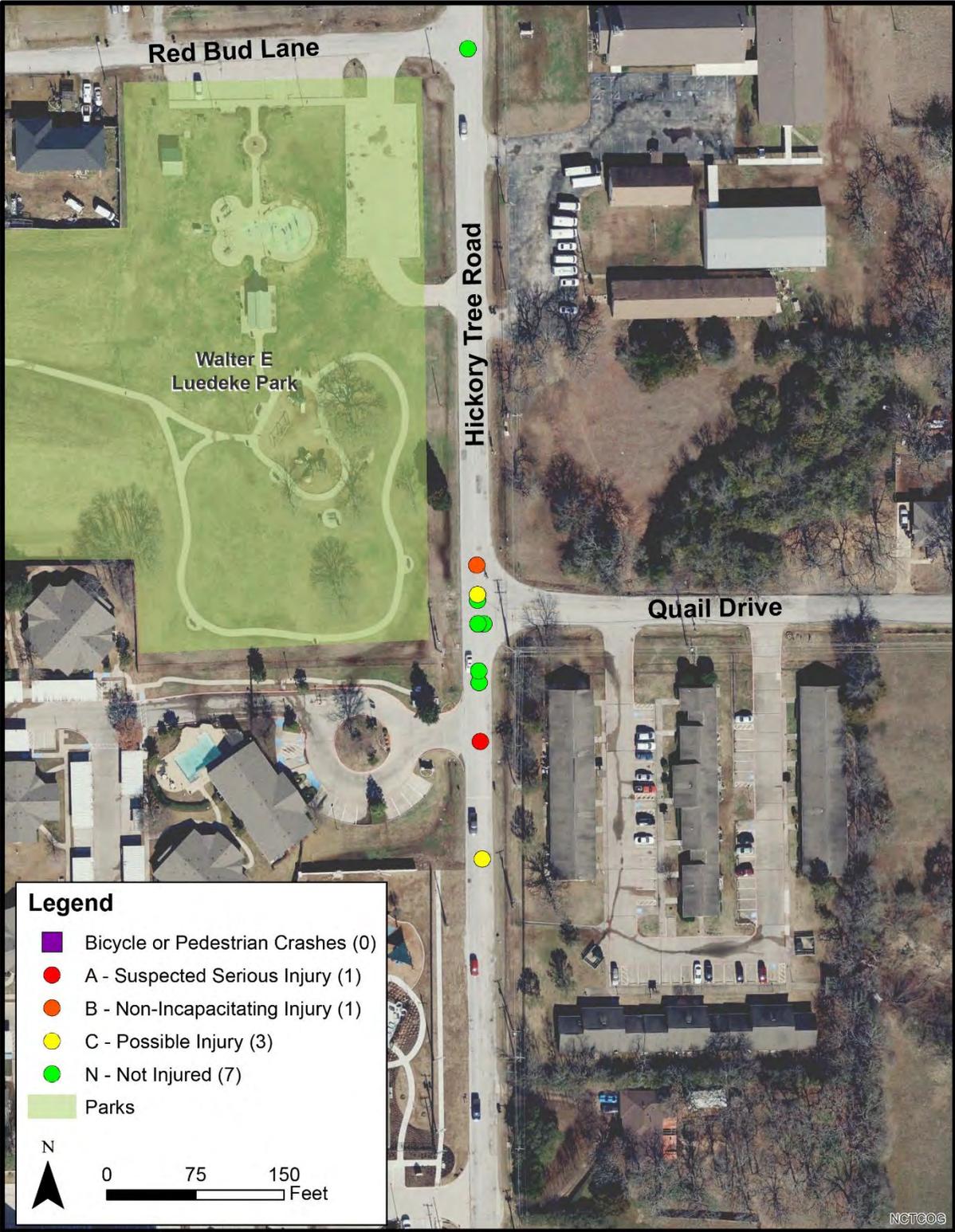
**Exhibit 10: Hickory Tree Road at Lake June Road Intersection Crash Map**



**Exhibit 11: Hickory Tree Road at Elam Road Intersection Crash Map**



**Exhibit 12: Hickory Tree Road at Quail Drive Intersection Crash Map**



## **Utilities**

There are currently many different utilities located within the right-of-way that would likely need to be addressed for roadway improvements to occur in the study area. These utilities are located both above and below ground and include fiber optic, utility poles, drainage ditches, and gas lines. These utilities may need to be relocated or reconfigured depending on project needs. A complete utility survey will be needed for future phases of this project.

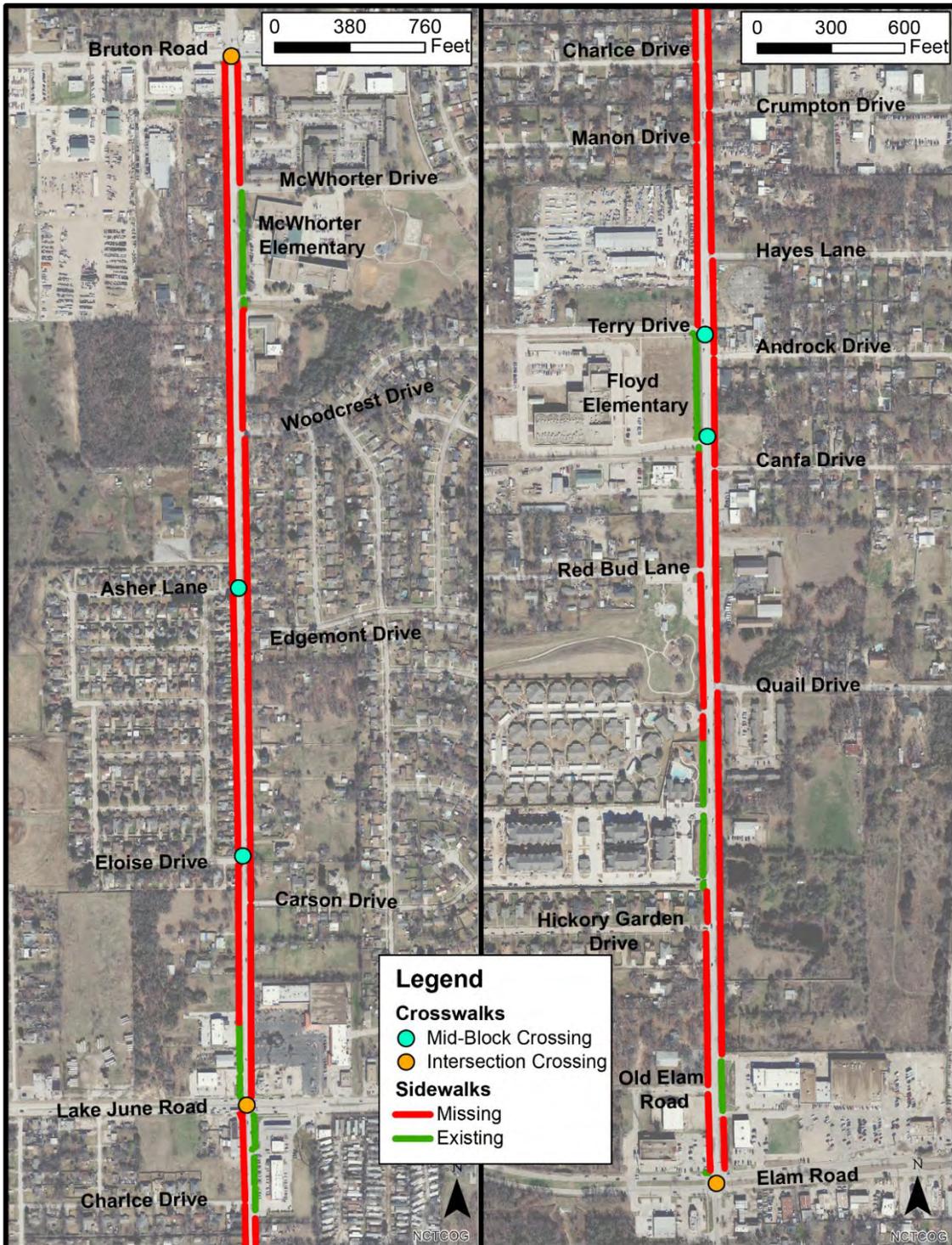
## **Bicyclist and Pedestrian Safety**

The current roadway has very limited infrastructure for bicycles and pedestrians. Crosswalk paint is worn, and sidewalks are limited along the corridor. Existing sidewalks are all 4 feet wide and in good condition ([Exhibit 13](#)). Desire paths, paths worn into the dirt from repeat walking, are present along the corridor where sidewalks are not present ([Exhibit 14](#)). There were three crashes on the corridor between 2015 and 2020 that involved a cyclist or pedestrian, none of which were fatal. There is evidence of pedestrian and bicycle usage on the corridor. Pedestrians were observed using the corridor and worn dirt paths along the roadway, and bicyclists were observed riding in the travel lanes with traffic. These observations indicate a desire of residents to walk and bike along the corridor.

**Exhibit 13: Pedestrian Infrastructure Inventory Within 200 Feet of Hickory Tree Road**

**Northern Half: Bruton Road to Charlice Drive**

**Southern Half: Charlice Drive to Elam Road**



#### **Exhibit 14: Desire Paths on Hickory Tree Road**



#### **Pass-Through Traffic**

The study corridor contains many local destinations, but also serves as a through route for vehicles traveling north-south in Balch Springs. City staff have observed that Hickory Tree Road is used as a cut-through route for drivers avoiding the Elam Road/IH 635 interchange, as drivers travel to the interchange at Lake June/IH 635 instead. Drivers also use Hickory Tree Road to avoid a five-way intersection at Bruton Road and Peachtree Road. No action is needed because of this dual use, but the road users and purpose should be considered while making recommendations (see [Exhibit 15](#) for a visual representation of the pass-through considerations on the study corridor).



## **Access Management**

Access Management is defined by the [Federal Highway Administration](#) as “the proactive management of vehicular access points to land parcels adjacent to all manner of roadways”<sup>4</sup>. Understanding the context of all direct destinations that require access from Hickory Tree Road, typically from direct driveways, can allow for recommendations to address making destinations safer and more efficient to access. NCTCOG’s driveway inventory of the study corridor (see [Exhibit 2](#)) counted 121 driveways on the corridor. Sixty-six driveways were characterized as single-family, and 21 driveways were characterized as commercial. Since the study corridor is a two-lane roadway, drivers waiting to complete left turns cause congestion and back-ups, as the road becomes blocked in that travel direction until the turn can be safely completed.

## **Walk Audit**

### Methods

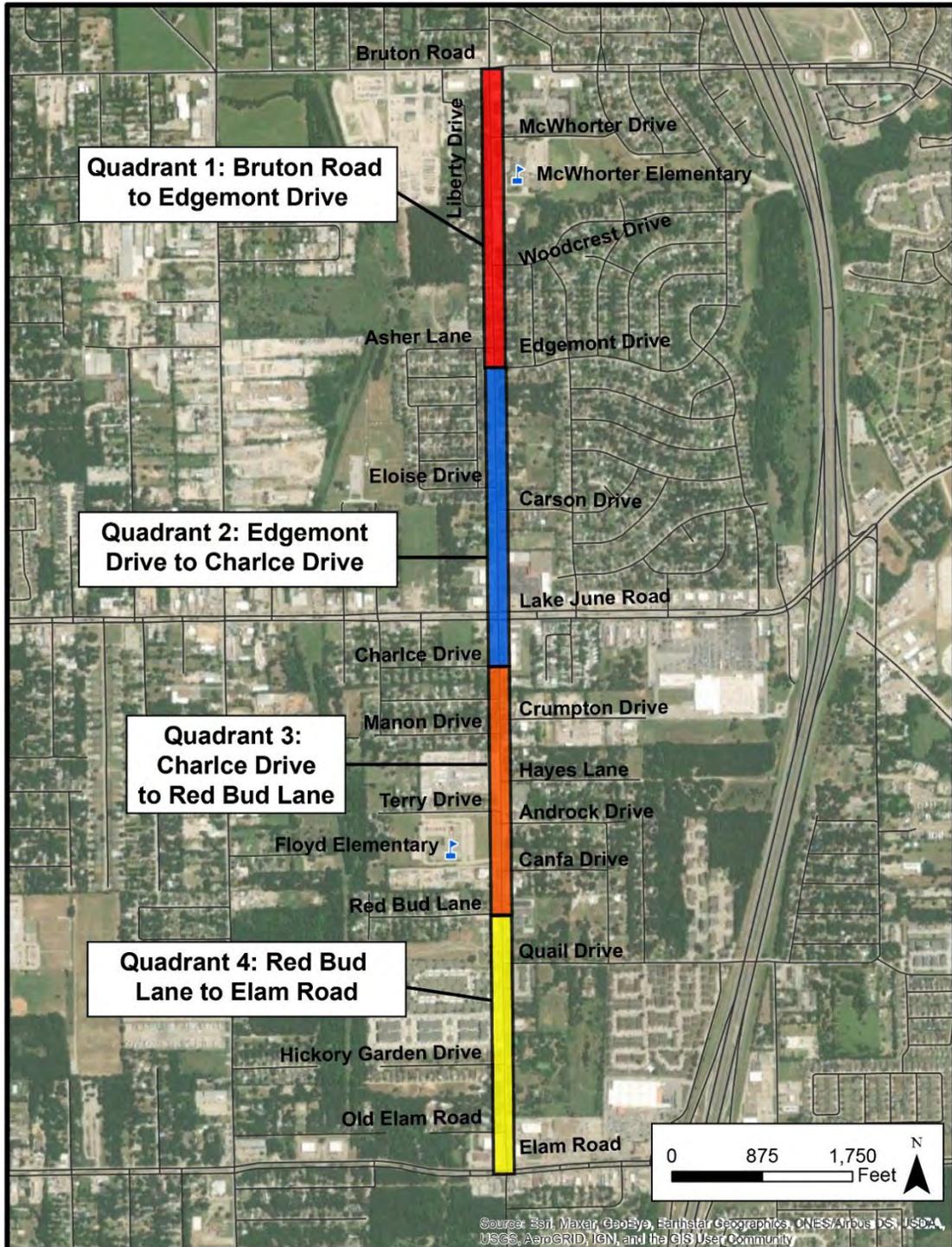
A walk audit was completed on the entire study corridor between Bruton Road and Hickory Tree Road on December 3, 2020. The goal of the walk audit was to assess the current conditions of the roadway for all road users, assess current infrastructure on the corridor, and observe how the corridor is currently used. The walk audit was completed by NCTCOG and City of Balch Springs staff.

The corridor was broken up into four sections, approximately a half-mile in length (see [Exhibit 16](#)). Participants split into four groups. Each group walked a different section of the corridor, and documented observations using a map, a series of questions, and photographs. Worksheets and maps provided to participants during the walk audit can be found in the Appendix (page [VI-1](#)).

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<sup>4</sup> For more information from FHWA about Access Management, please visit: [https://ops.fhwa.dot.gov/access\\_mgmt/what\\_is\\_accsmgmt.htm](https://ops.fhwa.dot.gov/access_mgmt/what_is_accsmgmt.htm).

**Exhibit 16: Hickory Tree Road Walk Audit Quadrants**



## Key Findings

Key findings on the corridor included strong evidence for pedestrian activity, including nearly continuous “desire lines,” worn-in walking paths where there are no sidewalks, on the side of the roads. These indicated that pedestrians are using the side of the road to walk to destinations, even though there are many challenges for pedestrians to travel safely and comfortably. Challenges observed during the walk audit included the presence of drainage ditches pavement cracking, water lines, trash cans, mailboxes, litter, and other debris along the roads. The crosswalk and road paint were very faded, which could cause issues for drivers seeing and anticipating pedestrian activity See [Exhibit 17](#), [Exhibit 18](#), and [Exhibit 19](#) for examples of existing pedestrian conditions. Speeding was also observed, as well as very few drivers giving enough space to safely pass pedestrians and bikers. See [Exhibit 20](#) for a summary table of observations and comments from the audit teams.

### **Exhibit 17: Blockages and Pavement Cracking**



**Exhibit 18: Pedestrian Desire Path Along the Roadway**



**Exhibit 19: Crosswalk at Lake June Road**



**Exhibit 20: Hickory Tree Road Walk Audit Comments**

<b>Section</b>	<b>Walking</b>	<b>Crossing</b>	<b>Other Users</b>	<b>Miscellaneous Notes</b>
<b>1: Bruton Road to Edgemont Road</b>	<ul style="list-style-type: none"> <li>Sufficient shoulder space without having to walk in travel lanes, but pavement cracking, drainage ditches and debris are present on section.</li> <li>Sidewalks are present in front of McWhorter Elementary</li> <li>Desire path in the grass present near the school.</li> </ul>	<ul style="list-style-type: none"> <li>Some crossing locations at Bruton Road did not have a push button.</li> <li>Crosswalk paint was very faded.</li> <li>Crosswalk times may be too short for slower pedestrians</li> <li>Curb ramps were not present at Eloise Drive</li> </ul>	<ul style="list-style-type: none"> <li>Cars: no unsafe behaviors observed</li> </ul>	
<b>2: Edgemont Road to Charlice Drive</b>	<ul style="list-style-type: none"> <li>Small section of sidewalks north of Lake June Road, 4', some cracking</li> <li>Walking along the road did not feel safe, felt very exposed to traffic</li> <li>Desire path in grass south of Charlice Drive</li> </ul>	<ul style="list-style-type: none"> <li>Crosswalk paint was very faded</li> <li>Crosswalk time at Lake June Road felt sufficient</li> </ul>	<ul style="list-style-type: none"> <li>Cars: no unsafe behaviors observed</li> <li>Pedestrian: walking in road</li> </ul>	<ul style="list-style-type: none"> <li>Industrial warehouse complex between Terry Drive and Manon Drive with heavy in/out usage</li> <li>General roadway striping is in poor condition</li> </ul>
<b>3: Charlice Drive to Red Bud Lane</b>	<ul style="list-style-type: none"> <li>Sidewalks at Floyd Elementary: 4' in good condition</li> <li>Blockages on shoulder forced pedestrians to walk in the road to pass</li> <li>Pedestrians felt very exposed to traffic</li> <li>Desire paths found along the quadrant</li> </ul>	<ul style="list-style-type: none"> <li>Crosswalk at Floyd Elementary, paint was very faded</li> </ul>	<ul style="list-style-type: none"> <li>Cars: speeding, passing distance</li> <li>Pedestrians</li> <li>Bicyclists</li> </ul>	<ul style="list-style-type: none"> <li>General roadway striping is in poor condition</li> </ul>
<b>4: Red Bud Lane to Elam Road</b>	<ul style="list-style-type: none"> <li>Some sidewalk segments south of Quail Drive, near Old Elam Road</li> <li>Some sidewalks were covered in construction debris</li> <li>Areas without sidewalks in areas were overgrown, forcing pedestrian into the roadway</li> <li>Desire paths in all places without a sidewalk</li> <li>Walking felt very exposed to traffic</li> </ul>	<ul style="list-style-type: none"> <li>Crosswalks are very faded at Elam Road</li> <li>Crosswalk times may be too short for slower pedestrians</li> </ul>	<ul style="list-style-type: none"> <li>Cars: speeding, passing distance</li> <li>Pedestrians</li> </ul>	<ul style="list-style-type: none"> <li>General roadway striping is in poor condition</li> <li>Post office driveway has a large curb pedestrians must walk over</li> </ul>

## **School Site Visits**

School site visits were conducted on the two elementary schools on the corridor, McWhorter Elementary and Floyd Elementary, during afternoon dismissals. The McWhorter Elementary visit was on May 4, 2021, and the Floyd Elementary visit was on May 6, 2021. The goal of these site visits was to observe the roadway conditions on Hickory Tree Road during the dismissal period, including parent pick-ups, student walking habits, and traffic congestion due to driveway queueing.

### McWhorter Elementary

The dismissal observation at McWhorter Elementary was completed with staff from the City of Balch Springs and the City of Mesquite. The City of Mesquite was included in this dismissal observation because although Hickory Tree Road is within the city boundaries of Balch Springs, McWhorter Elementary is part of the City of Mesquite (see [Exhibit 1](#), page [II-3](#) for a visual representation of the city limit boundaries). See [Exhibit 21](#) for the full table of observations and comments, and [Exhibit 22](#) for a site map and break-down of the observed congestion during the dismissal observation.

The dismissal observation and additional conversations with school staff at McWhorter Elementary revealed that there was a significant amount of congestion on Hickory Tree Road due to parent pick-ups. Parents queued on Hickory Tree Road to enter the front driveway to pick up students in grades K-2. There was additional queueing for parents waiting on Hickory Tree Road to turn onto McWhorter Road to access the rear driveway that serves students in grades 3-5 and their younger siblings. There were some walkers traveling south on Hickory Tree Road, but most students were driven, or crossed McWhorter Drive to be picked up in the Arroyo Vista parking lot ([Exhibit 22](#)).

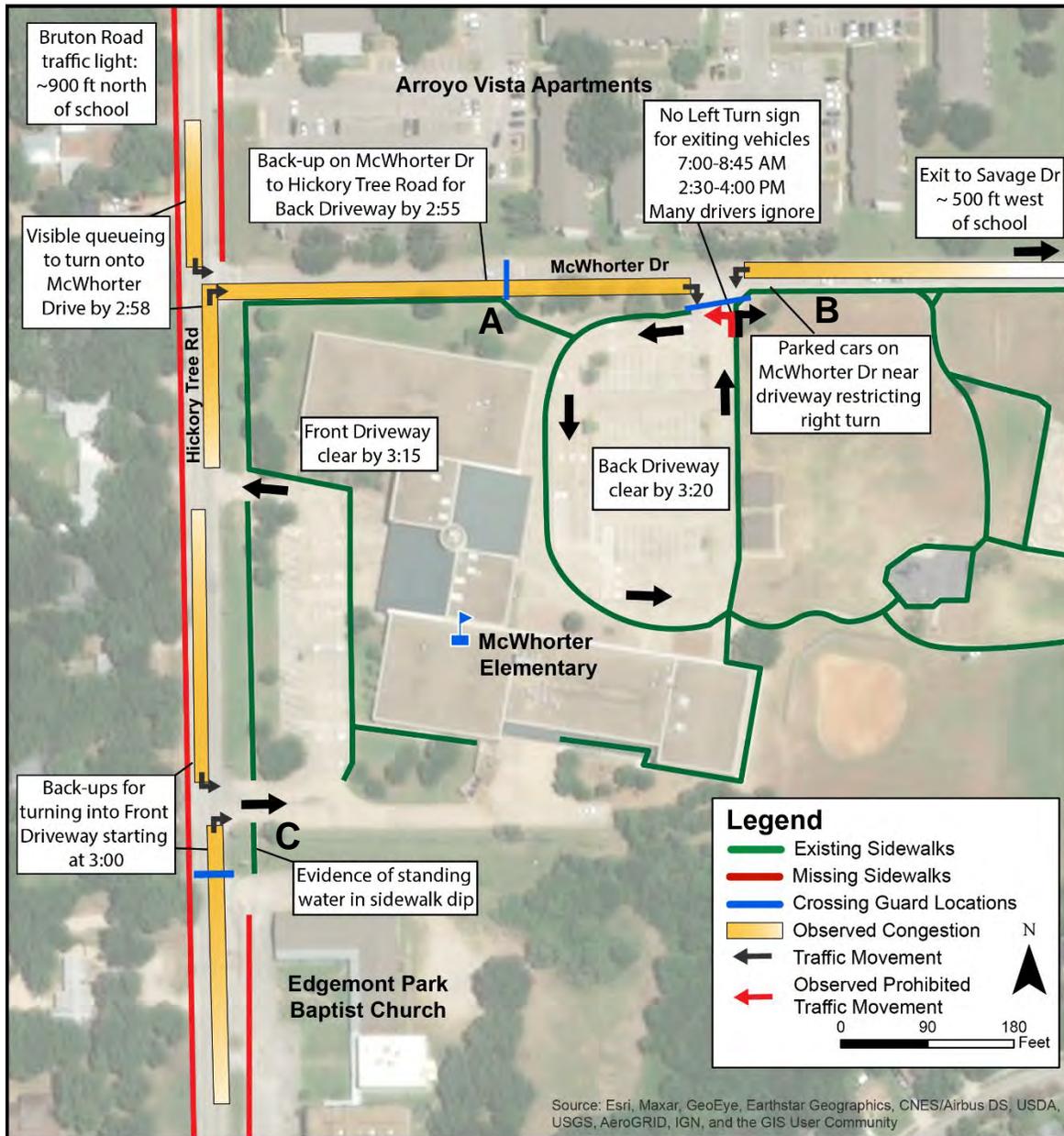
A visual representation of congestion during the dismissal observation at McWhorter Elementary ([Exhibit 22](#)) was created to consolidate the multiple perspectives of dismissal from each of the participants in the observation. The blue lines in each map represent the locations where crossing guards were stationed along the roadways to stop traffic for children to cross.

The red gradient lines represent areas of observed congestion during the dismissal period. The entire bar represents the approximate furthest extent of the congestion, and the darker red portion of the bar represents the areas of roadway that most frequently had queueing during the dismissal period. The black arrows represent traffic movements for parents and guardians picking up students by car. The red arrow represents the prohibited left turn movement that many drivers ignore while exiting the rear school driveway onto McWhorter Drive. The green and red lines represent a basic sidewalk inventory around the school property and Hickory Tree Road. See [Exhibit 23-Exhibit 27](#) for images documenting observed conditions.

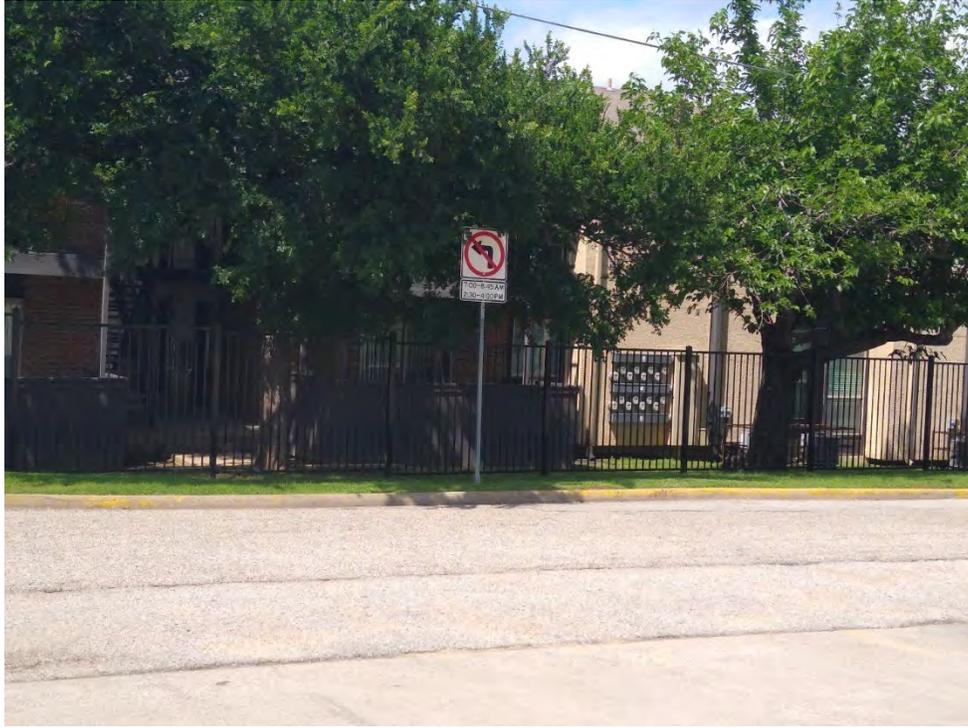
**Exhibit 21: McWhorter Elementary Dismissal Observation Comments**

Observation Location	Walking/Sidewalks	Crossing	Driver Behavior
<p><b>A: McWhorter Drive, near Arroyo Vista crosswalk/entry</b></p>	<ul style="list-style-type: none"> <li>• Complete sidewalks along school grounds.</li> <li>• Most walkers leaving from back side of school cross at the Arroyo Vista sidewalk</li> <li>• Walkers are released before car pick-ups begin</li> </ul>	<ul style="list-style-type: none"> <li>• Crossing guard stationed on McWhorter Drive at the Arroyo Vista crosswalk</li> <li>• Additional crossing guard stops traffic for children crossing the rear driveway</li> </ul>	<ul style="list-style-type: none"> <li>• Parents line both sides of the rear driveway for pick-up</li> <li>• Queueing typically backs up both directions on McWhorter Drive</li> <li>• Signage prohibits left turns out of the rear driveway, but is largely ignored (See Exhibit 22)</li> <li>• Cars unsuccessfully try to pass car queue on McWhorter Drive</li> <li>• Rear driveway pick-up is typically complete at 3:20 from a 3:05 dismissal</li> <li>• Parent pick-ups of students released as walkers from the Arroyo Vista parking lot were observed</li> </ul>
<p><b>B: McWhorter Drive, rear driveway exit</b></p>	<ul style="list-style-type: none"> <li>• Sidewalks exist on both sides of the street along school property and then continue on the south side of the street along McWhorter School Park</li> <li>• Sidewalks appear to be 5'</li> <li>• Walkers are separated from car pick-ups</li> </ul>	<ul style="list-style-type: none"> <li>• Crosswalks are visible but could use restriping</li> <li>• Crossing guard stationed at the rear driveway and at Arroyo Vista</li> <li>• Walkers crossed at the driveway and continued on the sidewalk towards Savage Drive</li> </ul>	<ul style="list-style-type: none"> <li>• On-street parking west of the school driveway causes delays during pick up as busses and larger vehicles have difficulty exiting the driveway</li> <li>• McWhorter Drive backs up before and during the dismissal period</li> </ul>
<p><b>C: Hickory Tree Rd, front of school driveway</b></p>	<ul style="list-style-type: none"> <li>• Sidewalks line the school grounds. A dip on the south side of the southern driveway has evidence of previous standing water</li> <li>• No continuous sidewalks from the school to exit the property</li> <li>• Approximately 17 students walked south along Hickory Tree Road</li> </ul>	<ul style="list-style-type: none"> <li>• No clear crosswalk on Hickory Tree Road at the school.</li> <li>• A crossing guard is stationed at the north driveway of Edgemont Park Baptist Church to allow walkers to cross</li> <li>• Curb ramps are only present on school property</li> </ul>	<ul style="list-style-type: none"> <li>• Short light cycle at Bruton Road causes traffic back-ups on Hickory Tree Road to reach the school ~900 ft away</li> <li>• Hickory Tree Road was blocked at 3:00 because the front driveway pick-up queue overflowed onto the road</li> <li>• Most drivers followed the speed limit</li> <li>• Parent pick-ups of students released as walkers from the church parking lot were observed.</li> </ul>

**Exhibit 22: McWhorter Elementary Congestion Map**



**Exhibit 23: McWhorter Drive No Left Turn Sign**



**Exhibit 24: Congestion on McWhorter Drive and Hickory Tree Road**



**Exhibit 25: Queueing on Hickory Tree Road to turn right on McWhorter Drive looking north**



**Exhibit 26: Queueing on Hickory Tree Road to turn right on McWhorter Drive looking south**



**Exhibit 27: Crossing guard stopping traffic to allow vehicles to exit front driveway to**

**Hickory Tree Road**



### Floyd Elementary

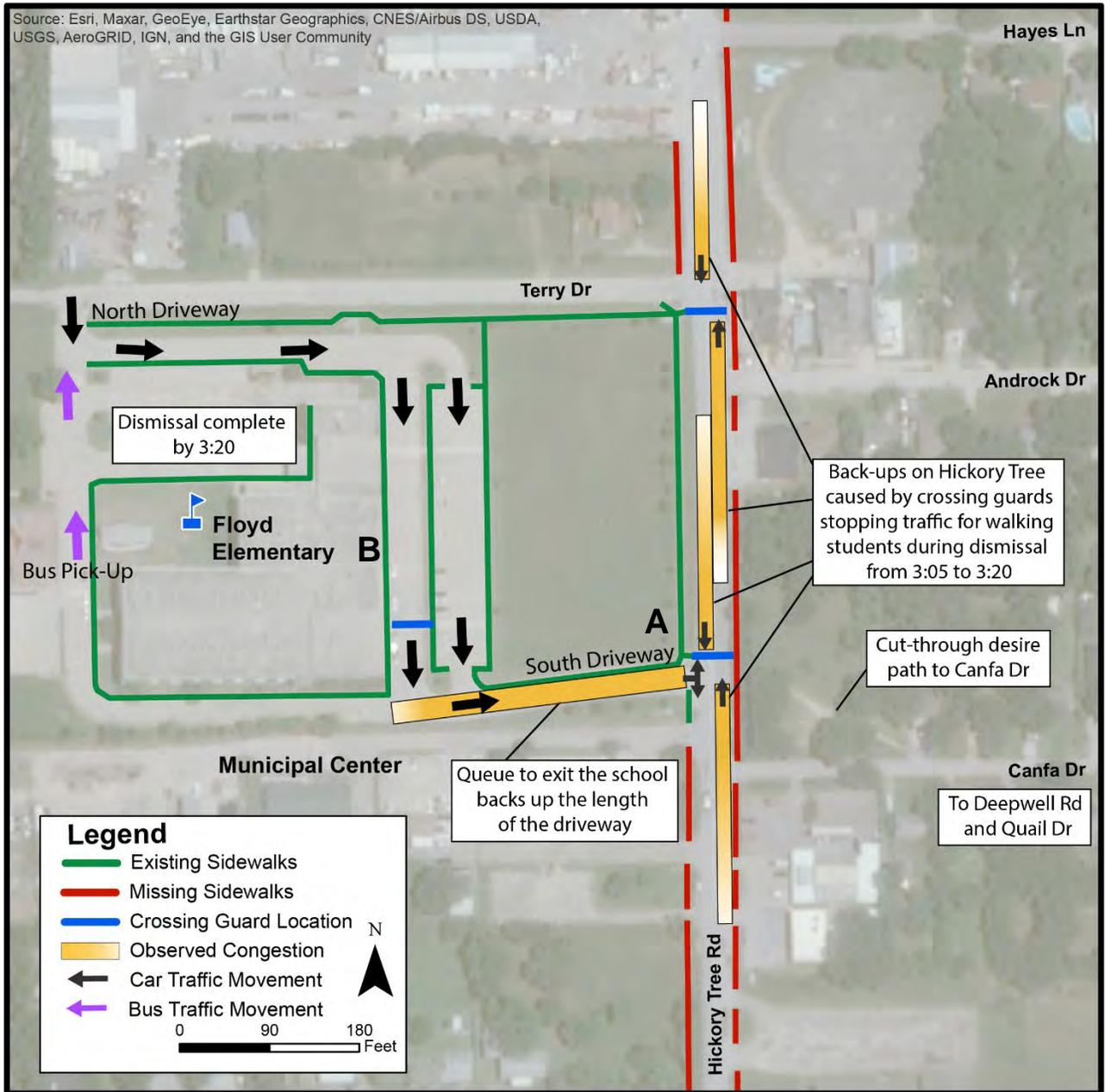
The dismissal observation was completed with staff from the City of Balch Springs. The dismissal observation as well as conversations with school staff at Floyd Elementary revealed that there were not significant amounts of queueing related to entering the school. Cars exiting the driveway, however, experienced significant queueing. Left turns from the school driveway to Hickory Tree Road experienced the longest delay. Congestion and delays for vehicles traveling on Hickory Tree Road during dismissal were caused mostly by crossing guards stopping traffic to allow students and their families to safely cross the road. There are two school busses that load students on the rear side of the building and exit the school grounds via the entrance-only driveway on Terry Drive. A full table of comments from the dismissal observation can be found in [Exhibit 28](#).

A visual representation of congestion during the dismissal observation at Floyd Elementary ([Exhibit 29](#)) was created to consolidate the multiple perspectives of dismissal from each of the participants in the observation. The blue lines in each map represent the locations where crossing guards were stationed along the roadways to stop traffic for children to cross. The orange gradient lines represent areas of observed congestion during the dismissal period. The entire bar represents the approximate furthest extent of the congestion, and the darker orange portion of the bar represents the areas of roadway that most frequently had queueing during the dismissal period. The black arrows represent traffic movements for parents and guardians picking up students by car. The purple arrows represent the exit pattern of the two school busses from school grounds. The green and red lines represent a basic sidewalk inventory around the school property and Hickory Tree Road. See [Exhibit 30](#) and [Exhibit 31](#) for images documenting observed conditions.

**Exhibit 28: Floyd Elementary Dismissal Observation Comments**

<b>Observation Location</b>	<b>Walking/Sidewalks</b>	<b>Crossing</b>	<b>Driver Behavior</b>
<b>A: Hickory Tree Road at southern driveway</b>	<ul style="list-style-type: none"> <li>• Sidewalks exist on the west side of Hickory Tree Road in front of the school, and are wide enough for two people to comfortably walk side-by-side (5')</li> <li>• Drainage ditches are very steep and make walking where there is no sidewalk very difficult.</li> <li>• Most walkers cross at the southern driveway to continue down Canfa Drive, to Deepwell Rd, and on to Quail Drive to avoid Hickory Tree Road. These students walk on a well-worn path through an empty lot after crossing the street.</li> <li>• A smaller group of walkers crossed Hickory Tree Road at Terry Drive to reach Androck Drive.</li> <li>• A good number of adults pick up their walking students.</li> </ul>	<ul style="list-style-type: none"> <li>• Basic crosswalks exist to cross the southern driveway and Hickory Tree Road. They are in fair condition.</li> <li>• Crossing guards are stationed at Hickory Tree Road and Terry Drive, Hickory Tree Road and the southern driveway, and at the main crosswalk directly in front of the school driveway.</li> </ul>	<ul style="list-style-type: none"> <li>• Drivers obeyed crossing guards.</li> <li>• Stopped traffic for student crossing caused back-ups to span the length of the school at the height of dismissal.</li> <li>• Left turns exiting the school driveway backed up the length of the school driveway. Right turns moved more efficiently, but still experienced some delay.</li> </ul>
<b>B: Interior driveway</b>	<ul style="list-style-type: none"> <li>• Students walk along Hickory Tree to apartments, multi-family, single-family, and residential communities next to municipal center.</li> <li>• Sidewalks are wide enough for side-by-side walking</li> </ul>	<ul style="list-style-type: none"> <li>• Curb ramps exist at the sidewalks with Terry Drive and the school driveway</li> </ul>	<ul style="list-style-type: none"> <li>• 3 lanes for stacking on school property</li> <li>• Crossing guard is stationed near stacking lane</li> <li>• Drivers obeyed Terry Drive school driveway's entrance-only rules</li> <li>• Two school busses conduct rear pick-up near the Terry Drive entrance and exit back on to Terry Drive</li> </ul>

**Exhibit 29: Floyd Elementary Congestion Map**



**Exhibit 30: Students Crossing Hickory Tree Road at the Southern Driveway**



**Exhibit 31: Southern Driveway Congestion During Dismissal**



## Study Area Demographics

Demographic information from the United States 2019 American Community Survey (ACS) as well as the 2020 Decennial Census were analyzed to better understand the user groups and population directly adjacent to the study corridor. NCTCOG population estimates data shows that there were approximately 24,960 residents in the City of Balch Springs on January 1, 2021<sup>5</sup>. The study corridor is home to approximately 28.8 percent of the city's residents. See [Exhibit 33](#) for maps the of ACS and Census block groups used.

Age census data was taken from the 2019 American Community Survey, as their block groups more closely matched the study area of Hickory Tree Road and surrounding neighborhoods that connect to the roadway than the 2020 Decennial Census. There is a large population of school-aged children, most of whom are not of driving age and may rely more on walking or biking to reach local destinations ([Exhibit 32](#)).

**Exhibit 32: Hickory Tree Road Study Area Population by Age (2019 American Community Survey)**<sup>6</sup>

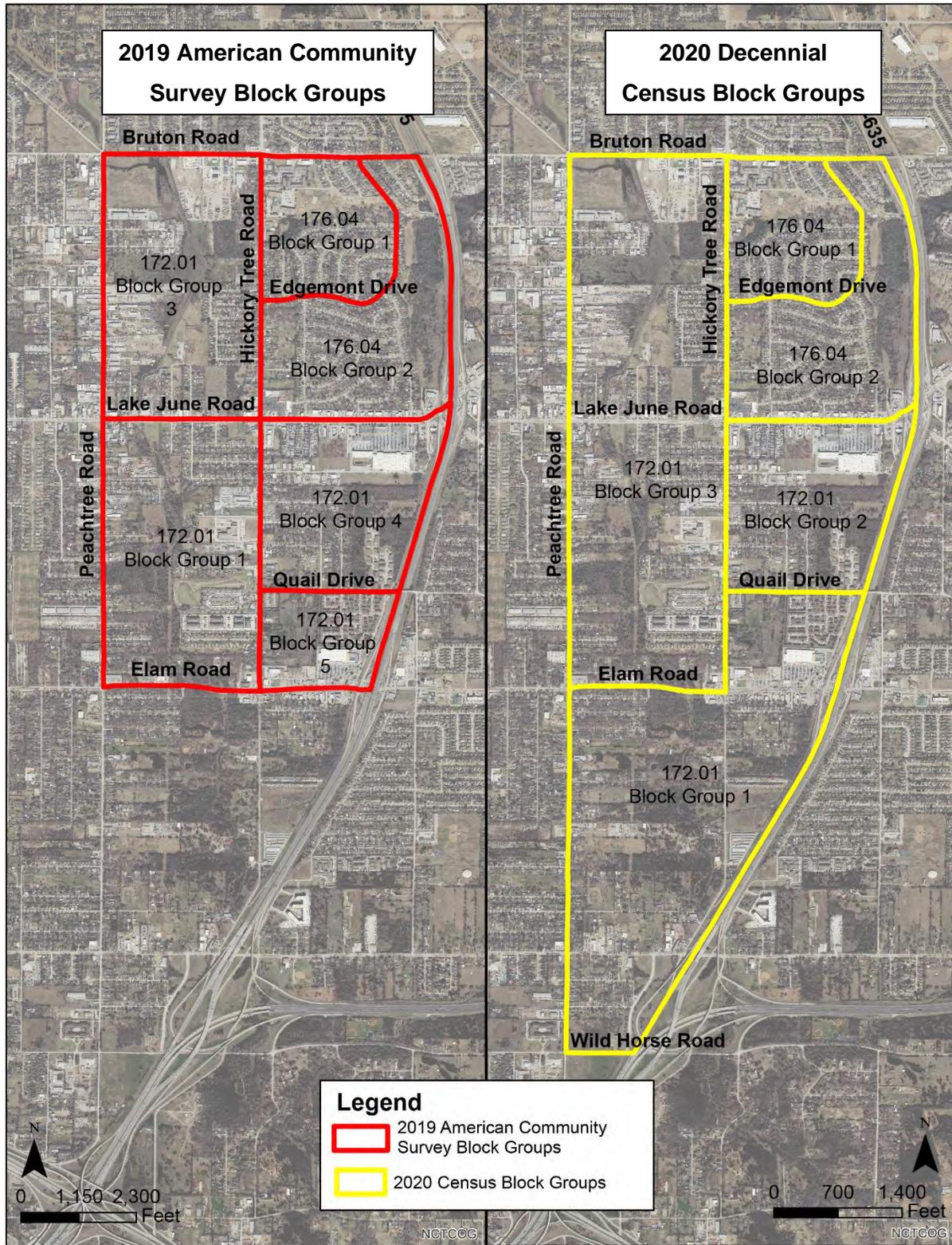
<b>Total Population</b>	<b>0-9</b>	<b>10 to 19</b>	<b>20-39</b>	<b>40-60</b>	<b>60+</b>
7220	1416	1380	2039	641	390
100%	19.6%	19.1%	28.2%	8.8%	5.4%

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<sup>5</sup> [2021 NCTCOG Population Estimates Publication | North Central Texas Council of Governments \(arcgis.com\)](#)

<sup>6</sup> Census Tract 172.01: Block Groups 1, 3, 4, 5; Census Tract 176.04, Block Groups 1, 2

**Exhibit 33: Census Block Groups for Study Area Demographics**



Race and ethnicity data was sourced from the 2020 Decennial census. The study area is home to a large population of people identifying as Hispanic/Latino, making up 68 percent of the area population (see [Exhibit 34](#)).

NCTCOG’s Environmental Justice Index (EJI)<sup>7</sup> found that from the 2015-2019 ACS Estimates that three out of the five census block groups that are adjacent to the Hickory Tree Road study corridor were above the regional percentage for both minority population counts as well as poverty (see [Exhibit 35](#)). The remaining two block groups contained above average populations of minority groups.

**Exhibit 34: Race/ Ethnicity for Residents of Hickory Tree Road Study Corridor (2020 Decennial Census)<sup>8</sup>**

Total	Hispanic/ Latino	Not Hispanic/Latino								
		All	One Race							Two or More Races
			All	White	Black	Native American	Asian	Pacific Islander	Other	
7083	4813	2270	2152	1211	892	15	17	0	17	118
100%	67.9%	32%	30.3%	17%	12.6%	0.2%	.2%	0%	.2%	1.7%

**Income and Employment**

The 2019 American Community Survey recorded the median household income for the study area as \$55,082.75<sup>9</sup>. The median household income for Dallas County in 2019 was \$59,607, and \$51,446 for the City of Balch Springs during the same time period<sup>10</sup>. The unemployment rate for the City of Balch Springs was reported by the Bureau of Labor Statistics as 5.3 percent in November 2021, compared to Dallas County’s reported rate of 4.3 percent in the same time period.

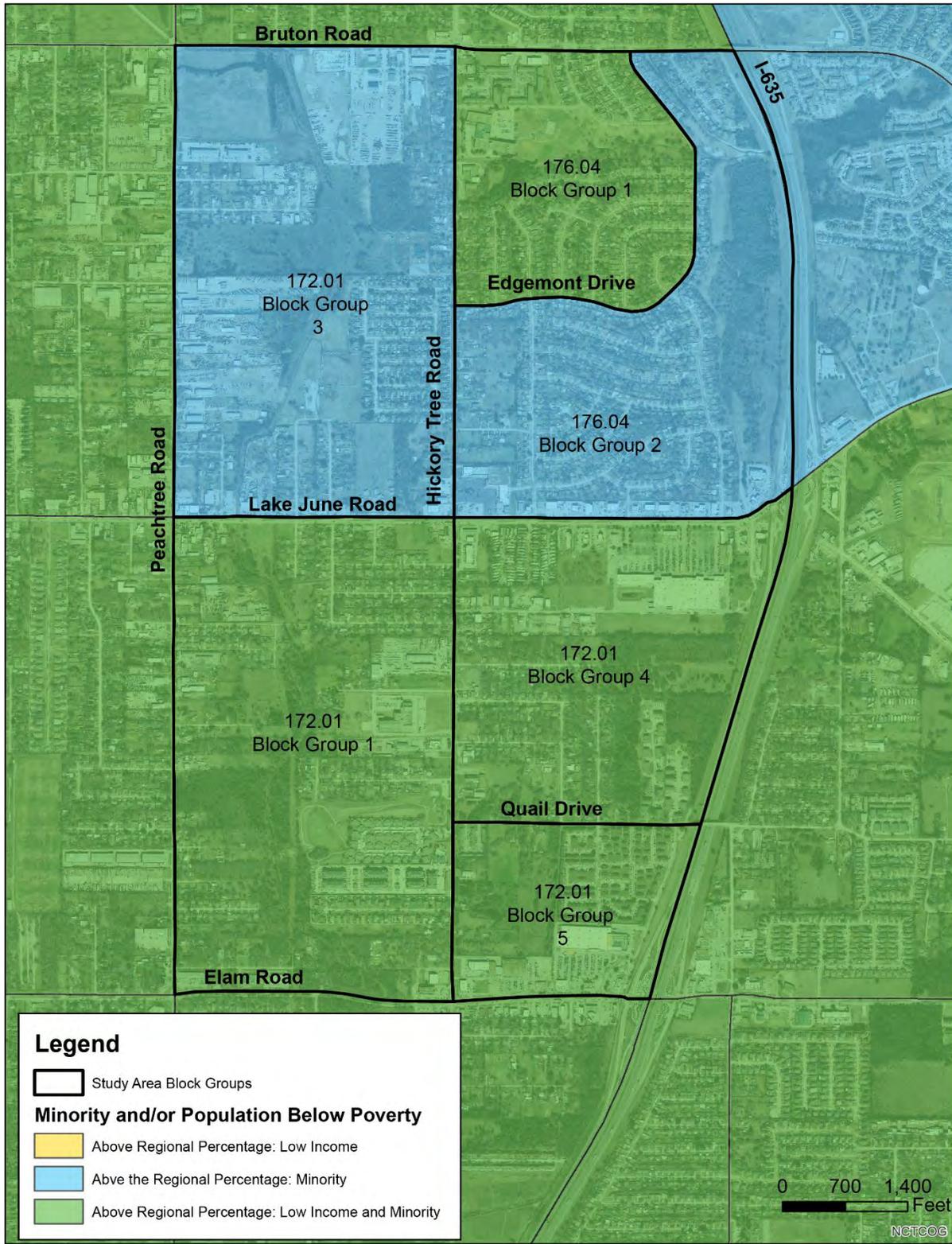
<sup>7</sup> NCTCOG’s EJI maps can be found at <https://www.nctcog.org/trans/quality/ej>

<sup>8</sup> Census Tract 172.01: Block Groups 2, 3; Census Tract 176.04: Block Groups 1, 2

<sup>9</sup> Census Tract 172.01: Block Groups 2, 3; Census Tract 176.04: Block Groups 1, 2

<sup>10</sup> U.S. Census Bureau, "Median Household Income (in 2019 Dollars), 2015-2019" – Dallas County, Texas; Balch Springs City, Texas" Quick Facts <https://www.census.gov/quickfacts/fact/table/dallascountytexas,balchspringscitytexas/INC110219>

**Exhibit 35: Study Area Minority and/or Population Below Poverty**



## **Key Findings**

Key Findings from the existing conditions investigations revealed evidence of a desire on the part of residents for walking along the study corridor, school traffic during dismissal causing congestion issues, and many driveways and side streets with high volumes of left-turn movements. Through the walk audit, the study team observed a near-constant presence of desire lines next to the roadways from people walking along the road to reach nearby destinations. The study team also observed many students walking home from Floyd Elementary and crossing Hickory Tree Road to reach the residential neighborhoods. Creating safer walking and biking conditions for people who already walk and bike on the roadway, as well as encouraging people who are reluctant but interested in walking or biking, is a high priority for this study.

School traffic caused delays for vehicles traveling on Hickory Tree Road during dismissal times at both elementary schools. Though it is only a short portion of the day, strategies that relieve congestion while maintaining roadway safety for students walking and biking home from school should be considered in developing solutions. A TxDOT Safe Routes to School grant was awarded for Floyd Elementary to construct sidewalks on local neighborhood side streets to increase walkability to the school. For more information on this grant, and a map of the funded sidewalks, see Section IV: Implementation (page [IV-1](#)).

Hickory Tree Road in the study area simultaneously serves two very different functions: it is both a residential street with many driveways for single-family homes and destinations such as schools that residents need to access, and a corridor for pass-through traffic. Queueing and congestion occur when a vehicle must wait in the travel lane to make a left turn, since Hickory Tree Road in the study area is almost exclusively a two-lane roadway, apart from in front of Floyd Elementary. Maintaining access to these driveways while reducing interruptions to travel should be a factor in future solutions.

## **Public Engagement**

### **Online Public Survey**

#### **Method:**

An online public survey was conducted to gather information about the study corridor, and the ways that residents and visitors were using the corridor and was open from February 2021 to October 2021. The City of Balch Springs promoted the survey through social media posts, placement on the City's website, and written advertisements in City mailings, including water bills and the city newsletter. The survey included 28 questions, some in multiple-choice format and others in an open-ended format. Question content included travel modes on the study corridor, safety concerns, and future visions for the corridor. The survey received 162 responses.

#### **Key Findings:**

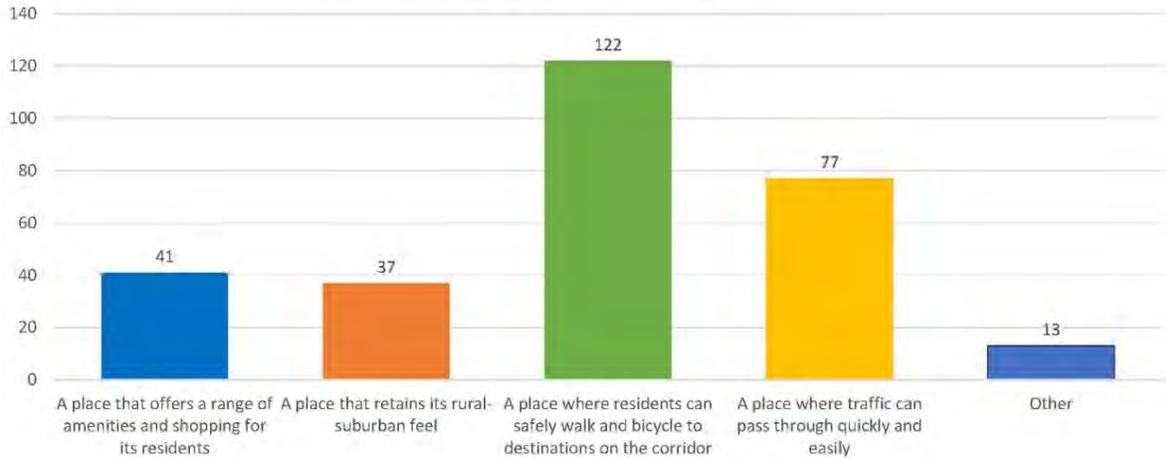
There were many key take-aways from the survey. Most respondents supported safer walking and biking along the corridor. Though fewer respondents regularly walk or bike along Hickory Tree Road, there was a strong interest in doing so if safe bicycle and pedestrian infrastructure options could be provided (See [Exhibit 36](#)). Most respondents expressed a desire to walk to schools and parks.

Driveway exits were also a point of difficulty along the study corridor, as most respondents reported having difficulty exiting driveways at least weekly. Commercial driveways were reported as the most difficult driveways to exit. Floyd Elementary and the Post Office were identified specifically as the most challenging places to exit. Most respondents additionally experienced delays on Hickory Tree Road due to traffic congestion. Many different concerns with driver behaviors were identified by respondents, but speeding was chosen most frequently.

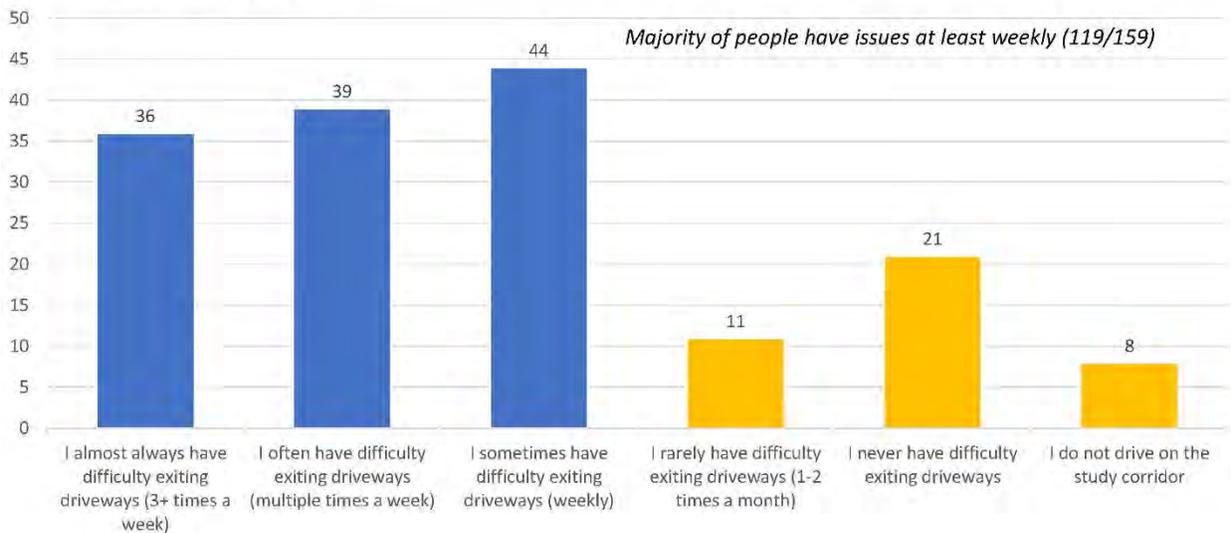
Exhibit 36 contains selected questions and results from the online public survey. The entire survey and responses can be found in the Appendix (page [VI-1](#)).

**Exhibit 36: Hickory Tree Road Online Public Survey Selected Results**

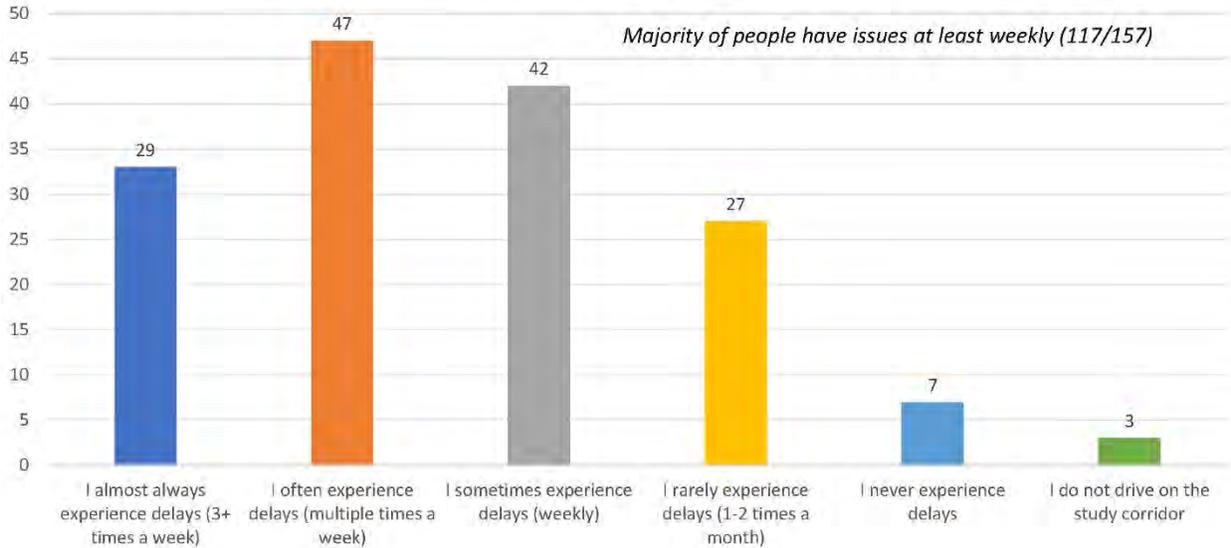
1. “What is your vision for the corridor study area in the future? Select all that apply.” (162 Responses)



4. “Rate the difficulty of exiting driveways on the study corridor.” (159 Responses)

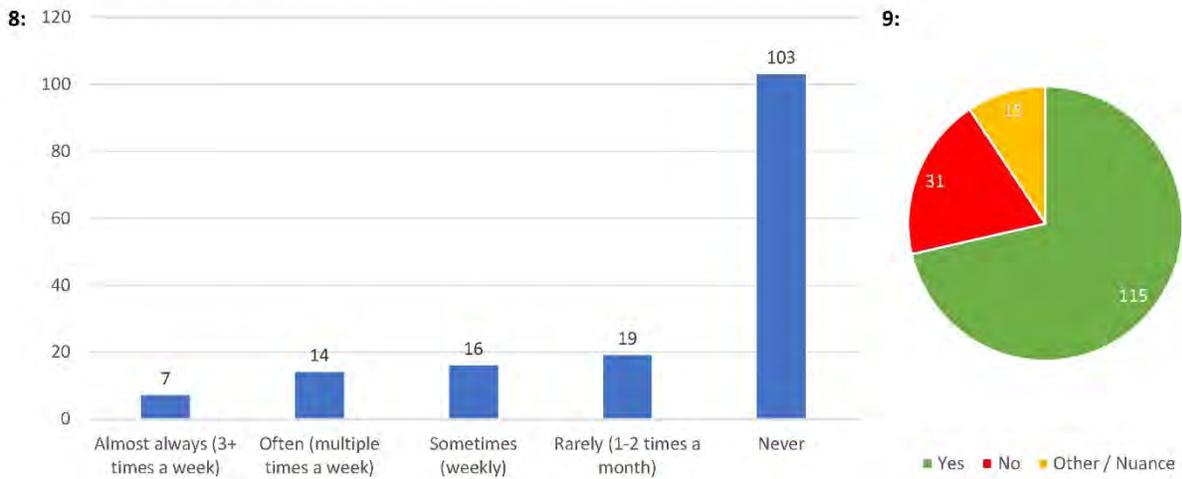


7. "How often do you experience delays due to traffic congestion while driving on the study corridor?" (159 Responses)

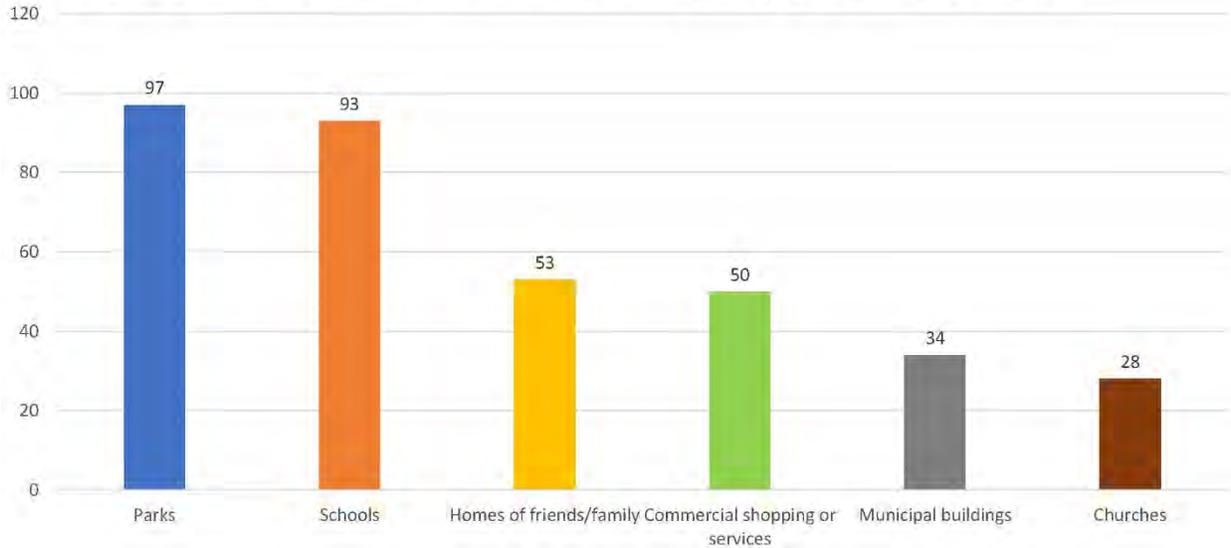


8. Do you walk along the study corridor? (159 Responses)

9. Would you like to be able to walk, or walk more along the study corridor? (161 Responses)

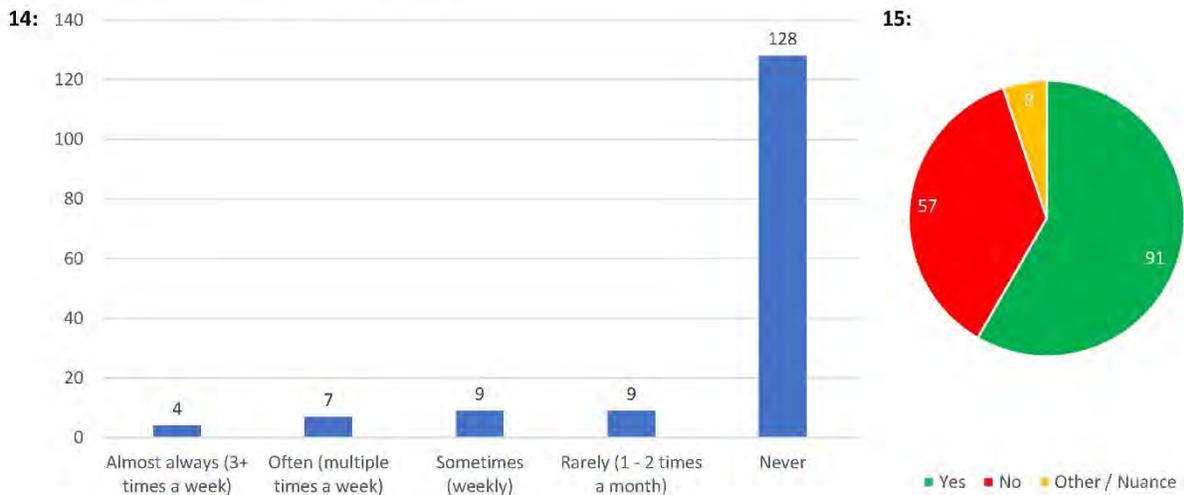


10. "If you answered Yes to the previous question, what specific locations would you like to walk to/from? Select all that apply." (127 Responses)

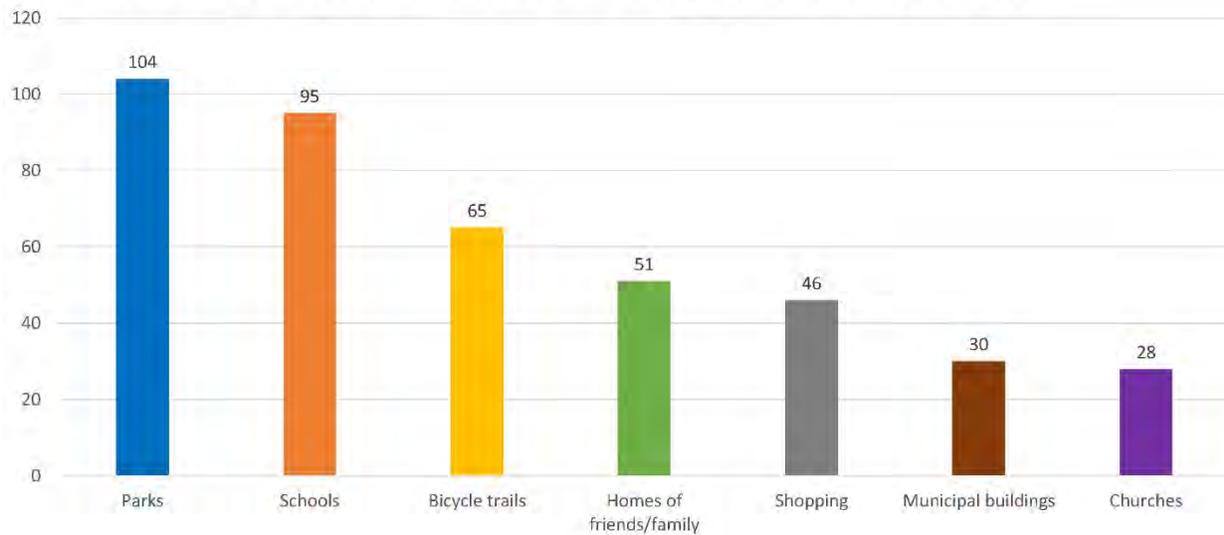


14. Do you bicycle along the study corridor? (157 Responses)

15. Would you like to be able to bicycle, or bicycle more along the study corridor? (156 Responses)



16. "What destinations along the study corridor would be the most desirable to bicycle to? Select all that apply" (136 Responses)



## **Stakeholder Meetings**

Stakeholder meetings were held virtually during June 2021 to present the project background, existing conditions and data collection, major considerations, and preliminary high-level recommendations for feedback. Meetings featured a presentation by NCTCOG staff followed by a question-and-answer session with NCTCOG and City of Balch Springs staff. Stakeholders were generally positive about the work underway but had several future construction-related questions that were unrelated to the planning study but addressed by City of Balch Springs staff.

### Technical Stakeholder Meeting

The Technical Stakeholder meeting took place on June 29, 2021. This stakeholder group was comprised of staff from the City of Balch Springs, Dallas County, TxDOT, City of Mesquite, Mesquite ISD, and STAR Transit. Stakeholders were identified by City of Balch Springs and NCTCOG staff members. Twenty-four stakeholders attended the meeting virtually. A point of further investigation and future development that came from this stakeholder meeting was an identified opportunity to strengthen pedestrian routes from McWhorter Elementary School through the McWhorter School Park. Many school students live in the neighborhoods directly south of McWhorter Elementary, and the park pedestrian routes could be improved to provide alternative ways away from major roadways for students to travel home from school. Additional information from this meeting, including the meeting notes, a satellite image of McWhorter School Park, and PowerPoint presentation can be found in the Appendix (page [VI-1](#)).

### Resident Stakeholder Meeting

The Resident Stakeholder meeting also took place on June 29, 2021. This stakeholder group was identified from databases from the City of Balch Springs of residential parcel owners within 1,000 feet of the Hickory Tree Road study corridor. Parcels located within the City of Mesquite were additionally verified by their city staff. The City of Balch Springs staff sent postcards to all identified stakeholders informing them of the meeting. Notification was additionally given to apartment building managers and owners to inform their tenants of the meeting. Twenty residents attended this meeting virtually.

Key findings from this meeting included concerns and questions about right-of-way needs, drainage, and flooding. Residents were concerned about the possibility of their homes being taken during right-of-way acquisition for the preliminary recommendations that were presented, but the City of Balch Springs clarified that they do not anticipate a need to acquire any occupied homes or buildings for the project. There were general concerns surrounding the recommendation to expand the roadway that may limit current parking configurations that currently include roadway right-of-way for businesses, such as Binford Supply. Parking will need to be addressed in the future design stage of this project. There were questions about utilities currently located in the right-of-way, and City staff clarified that any affected utilities would be relocated prior to roadway reconstruction, and that there would be no change in utility availability because of relocation.

City staff informed a resident that asked about current drainage ditches that the roadway would be converted to a curb-and-gutter drainage system during reconstruction. Another resident asked about the current water main and flooding issues, and City staff informed them that the current water line would be replaced during reconstruction. The flooding issues would be addressed with the new curb-and-gutter system, which would store stormwater underground. Additional information from this meeting, including the meeting notes, meeting invitation, and PowerPoint presentation can be found in the Appendix (page [VI-1](#)).

#### Business Owner, Business Tenant, and Property Owner Stakeholder Meeting

The Business Owner, Business Tenant, and Property Owner Stakeholder Meeting was held on June 30, 2021. This group was identified from a list of parcel owners within 1,000 feet of the Hickory Tree Road study corridor of businesses owners, business tenants, multi-family building owners, and other commercial property owners. Postcards were sent out by the City of Balch Springs informing them of the meeting. Twelve stakeholders attended this meeting virtually.

Key findings from this meeting were concerns about traffic and right-of-way. Participants asked about traffic management and road closures during construction, and the City of Balch Springs

staff explained that traffic control plans will be submitted by the contractors and must be approved by City staff. City staff also said that parcel owners affected by roadway closures and construction will be contacted during the design phase for additional meetings and discussion. Another question was asked about the possibility of a three-way stop sign at the intersection of Quail Road and Hickory Tree Road. City staff said that there are no current recommendations or suggestions for a three-way stop at that location, but plans are not finalized and that may be considered in the later design phase. Additional information from this meeting, including the meeting notes, meeting invitation, and PowerPoint presentation can be found in the Appendix (page [VI-1](#)).

### Virtual Open House

The Virtual Open House was open to the public from September 20, 2021, to November 5, 2021, and hosted on the NCTCOG website. The City of Balch Springs promoted the survey through social media posts, placement on the City's website, and written advertisements in City mailings, including water bills and the city newsletter.

The Virtual Open House consisted of a recorded video presentation led by NCTCOG staff, additional maps and visuals to review, and a short questionnaire. The video presentation reviewed the planning study's activities to date, including field visits and project activities, preliminary survey results, existing conditions on the corridor, major considerations, and preliminary recommendations for the roadway. A short form was additionally presented to participants to collect feedback about the planning study and preliminary recommendations. The Virtual Open House had three respondents to the questionnaire, and 55 views of the video presentation at the time of writing (February 2022).

Responses to the Virtual Open House were generally positive. Respondents were supportive of pedestrian and bicycle improvements on the corridor. There were concerns about the possibility of ROW being taken for improvements. Places that respondents identified as areas that may need additional safety considerations included the CVS Pharmacy and surrounding shopping area near the intersection with Elam Road, as well as additional concern for traffic

conditions near Floyd Elementary. An additional comment suggested that pedestrian walkways and islands include vegetation and shade trees for air quality and shade. It was requested that green infrastructure be incorporated into the project to return water to the landscape instead of only the wastewater system. Additional information from this public engagement opportunity, including the PowerPoint presentation, questionnaire, and link to the Virtual Open House video presentation can be found in the Appendix (page [VI-1](#)).

### **Overall Conclusions and Findings**

The public engagement portion of the study revealed many things about the community's goals for the project, the way that people currently travel along the road, and current challenges around traveling the roadway. Public engagement revealed that though there is a relatively low number of people currently walking or biking along the corridor, there is a high desire for the ability to walk and bike to destinations on the corridor. Parks and Schools were identified as a high priority destination for people to be able to walk and bike to along the corridor.

Reducing traffic congestion along the corridor was additionally identified as a high priority for many people. The elementary schools were identified as high-traffic areas during arrival and dismissal times, and most people who responded to the survey cited traffic delays on the corridor at least once a week. Similarly, entering and exiting driveways along the corridor was identified as a challenge in commercial, residential, and school locations. Concerns about ROW acquisition from business owners and homeowners to accommodate new pedestrian and bicycle infrastructure also were raised during stakeholder meetings and the virtual open house.

## **III. RECOMMENDATIONS**

NCTCOG staff considered the result of the existing conditions analysis and public engagement to develop recommendations that would best meet the needs of the surrounding community and fulfill the goals of the study.

## **Roadway Cross-Section Reconfiguration**

This planning project is meant to support and provide recommendations for roadway improvements to better suit the needs and desires of the surrounding community. The major recommendation is a roadway reconfiguration spanning the length of the Hickory Tree Road study area, from Elam Road to Bruton Road. Roadway reconfigurations redesign the existing road to meet community needs. Roadway reconfigurations can range from recommendations for restriping and changing the roadway lines, up to a complete roadway reconstruction. Reconfigurations can increase roadway safety, mobility, and access, and can allow for a greater range of users to travel safely and comfortably. This section of the report will outline recommendations for the reconfiguration of the study corridor.

### **Recommendation:**

The existing cross-section of Hickory Tree Road from Bruton Road to Elam Road, excluding a small segment in front of Floyd Elementary, is a two-lane roadway with 11-foot travel lanes (see [Exhibit 37](#)). The typical right-of-way width on this corridor is 60 feet. The cross-section contains limited sections of 5-foot sidewalks as well as continuous drainage ditches in most locations.

### **Exhibit 37: Current Hickory Tree Road Configuration (60 Feet)**

Image Courtesy of Streetmix



The recommended reconfiguration for the Hickory Tree Road study area is a three-lane roadway with a continuous center left turn lane with pedestrian refuge islands at key crossing locations ([Exhibit 38](#)).

The roadway configuration will be paired with recommendations for new and enhanced bicycle and pedestrian infrastructure, including shared use paths, sidewalks, pedestrian refuge islands, sidewalk driveway treatments, pedestrian hybrid beacons, curb radius tightening, and crosswalk visibility enhancements. To accommodate the additional lane, it is recommended for the roadway right-of-way to be expanded an additional 10 to 70 feet. In the current two-lane roadway configuration, all vehicles must stop and wait for the first vehicle to turn, causing congestion and delays. The center turn lane addition to the roadway will remove congestion caused by vehicles waiting to turn left from the stream of traffic. This maximizes access to businesses, allowing turns from both travel directions to be made with relative ease. The center turn lane eliminates the congestion from waiting vehicles and will allow drivers to pass through the study corridor with fewer delays.

Major considerations in this recommendation were maintaining access to existing driveways, current and future traffic volumes and delays, queueing for school pick-ups and drop offs, and bicycle and pedestrian safety. This configuration offers many benefits in congestion management and maintaining access to homes and businesses on the corridor and provides safe, dedicated, and enhanced space for active transportation. The Federal Highway Administration has stated that the three-lane roadway configuration with a continuous center turn lane can handle a similar level of vehicle traffic as a four-lane roadway<sup>11</sup>. [Exhibit 38](#) shows a birds-eye view of the proposed improvements, including the center turn lane, pedestrian refuge island, and various bicycle and pedestrian safety infrastructure. These will be discussed further in Bicycle and Pedestrian Infrastructure Recommendations (page [III-5](#)).

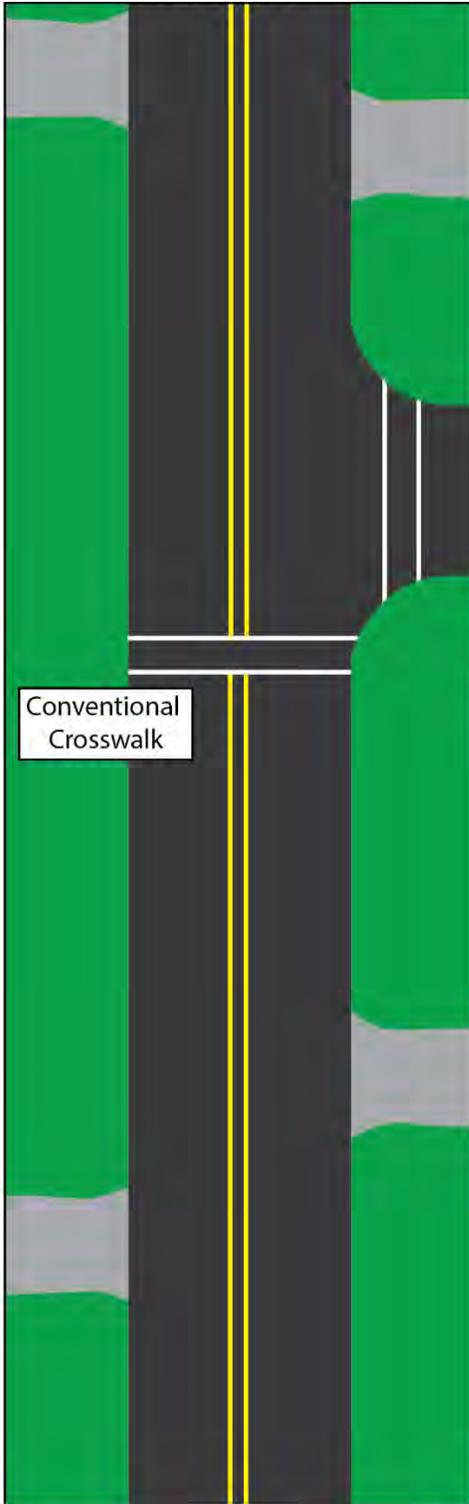
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<sup>11</sup> Federal Highway Administration, *Road Diet Informational Guide*, (2014).

**Exhibit 38: Current and Recommended Roadway Configurations**

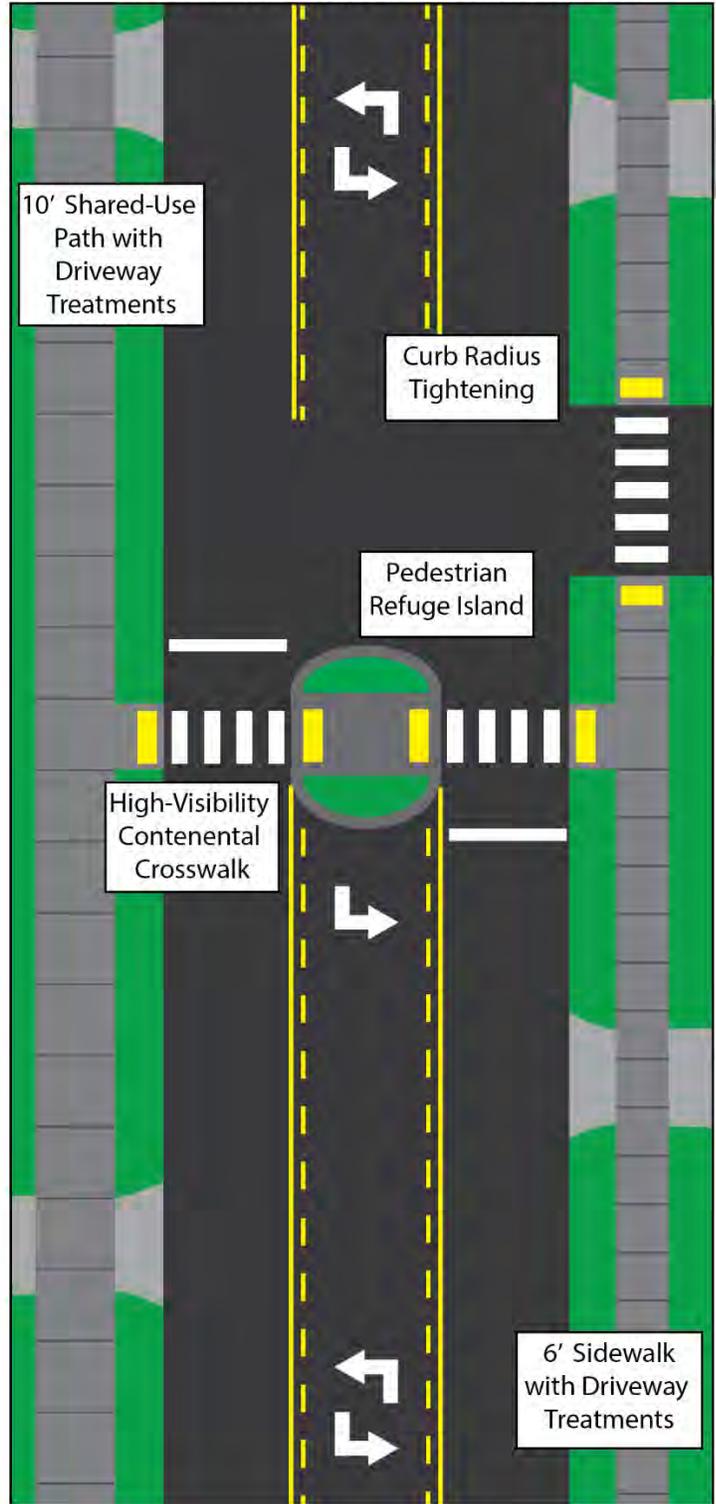
**Current Cross-Section:**

60' Right of Way  
Two 11' Travel Lanes



**Proposed Cross-Section:**

70' Right of Way  
Two 11' Travel Lanes, One 12' Center Turn Lane



## **Right-of-way**

The current right-of-way for the Hickory Tree Road study corridor is 60 feet except for the 7/11 at the intersection of Hickory Tree Road and Bruton Road, which is narrower. There may be a need to acquire an additional 10 feet of right-of-way for roadway reconfiguration purposes. Additional discussion with residents and business owners during the design phase of implementation would be led by the City of Balch Springs.

## **Bicycle and Pedestrian Infrastructure Recommendations**

Below is a summary and description of the types of bicycle and pedestrian infrastructure treatments recommended as a part of this study. Each of these recommendations will work to create safer conditions for pedestrians and bicyclists along the study corridor.

### **Shared-use paths:**

Shared-use paths ([Exhibit 39](#)) are paths that are meant to be used by both bicyclists and pedestrians that are set away from the roadway. The American Association of State Highway and Transportation Officials requires shared-use paths to be at least 10 feet wide. Shared-use paths can also be defined as bicycle trails. Bicycle lanes are a FHWA Proven Safety Countermeasure. FHWA guidance has stated that bicycle lane additions on urban two-lane undivided roadways can result in a 30% reduction in crashes, and separated bicycle lanes may provide further safety benefits<sup>12</sup>.

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<sup>12</sup> Federal Highway Administration *Proven Safety Countermeasures: Bicycle Lanes*  
<https://safety.fhwa.dot.gov/provencountermeasures/bike-lanes.cfm>

**Exhibit 39: Shared Use Path**  
(Image Courtesy of City of Fort Worth)



**Sidewalks:**

Sidewalks are primarily meant to be used by pedestrians and offer a safe walking space away from the roadway travel lanes. Texas law does permit bicyclists to ride on the sidewalk. The recommended minimum width for sidewalks to ensure pedestrian comfort is five feet, though six-foot-wide sidewalks are preferred when possible. Sidewalks are a FHWA Proven Safety Countermeasure and can cause a 65-89% reduction in crashes involving pedestrians walking along roadways.<sup>13</sup>

**Pedestrian Refuge Islands:**

Pedestrian refuge islands create a “middle point” for pedestrians and cyclists crossing the street in a crosswalk to wait for traffic to clear before they continue across the road ([Exhibit 40](#)). This allows for pedestrians to focus on safely crossing one travel lane at a time and reduces the amount of time spent crossing travel lanes. These islands would replace the center turn lane at key locations, which may include schools, parks, and other high-traffic crosswalks. Pedestrian

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<sup>13</sup> Federal Highway Association, *Proven Safety Countermeasures: Walkways*.  
<https://safety.fhwa.dot.gov/provencountermeasures/walkways.cfm>

refuge islands are designated as a FHWA Proven Safety Countermeasure and can result in a 56% reduction in pedestrian crashes<sup>14</sup>.

### **Exhibit 40: Pedestrian Refuge Island**

(Image Courtesy of Dan Burden)



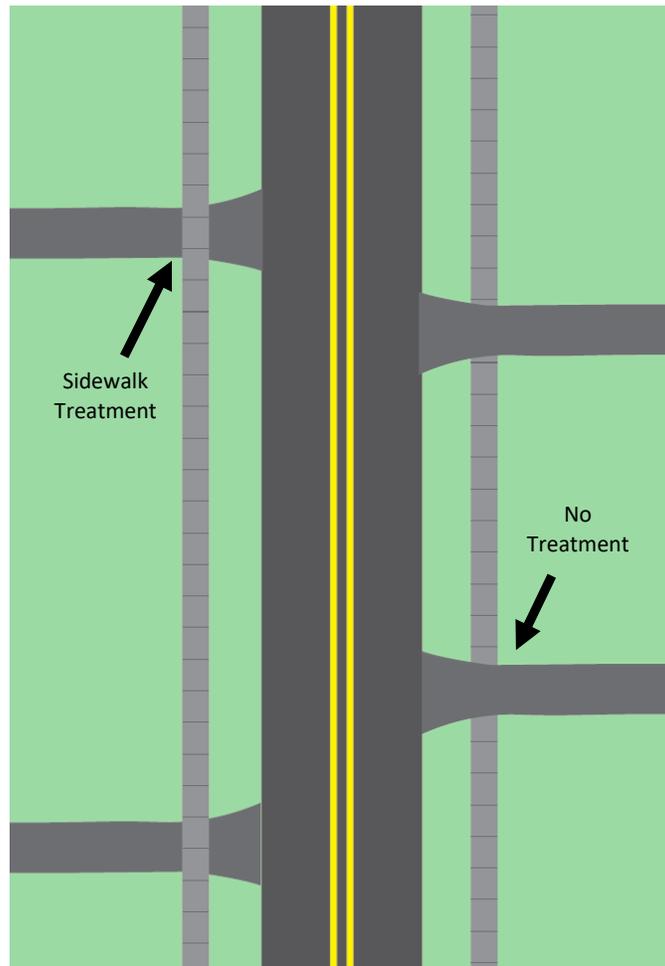
### **Sidewalk Driveway Treatments:**

Sidewalk driveway treatments involve continuing sidewalks and shared-use path pavement styles across driveways ([Exhibit 41](#)). This treatment is meant to remind drivers that they are crossing over the space meant for pedestrians and bicyclists and remind them to look out for those roadway users while crossing over to merge into the roadway.

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<sup>14</sup> Federal Highway Association *Proven Safety Countermeasures: Medians and Pedestrian Refuge Islands in Urban and Suburban Areas*  
[https://safety.fhwa.dot.gov/provencountermeasures/ped\\_medians.cfm](https://safety.fhwa.dot.gov/provencountermeasures/ped_medians.cfm)

### Exhibit 41: Sidewalk Driveway Treatments



#### Pedestrian Hybrid Beacon:

Pedestrian hybrid beacons are a special pedestrian and bicycle indicator that warns vehicle traffic of a person waiting to cross at a crosswalk ([Exhibit 42](#)). The pedestrian activates the beacon using a push-button, which activates streetlights that halt traffic to allow the pedestrian to cross the street. These beacons are designed for use on busy roadways and crosswalks located in the middle of blocks without other controls to stop vehicles, such as stop signs or a stoplight. Pedestrian hybrid beacons can be used in conjunction with pedestrian refuge islands. Possible placements for these beacons would be at schools, parks, and any other areas with crosswalk safety concerns. Pedestrian Hybrid Beacons are a FHWA Proven Safety

Countermeasure and can result in a 55% reduction in pedestrian crashes, a 29% reduction in total crashes, and a 15% reduction in serious injury or fatal crashes<sup>15</sup>.

#### **Exhibit 42: Pedestrian Hybrid Beacon**



#### **Curb Radius Tightening:**

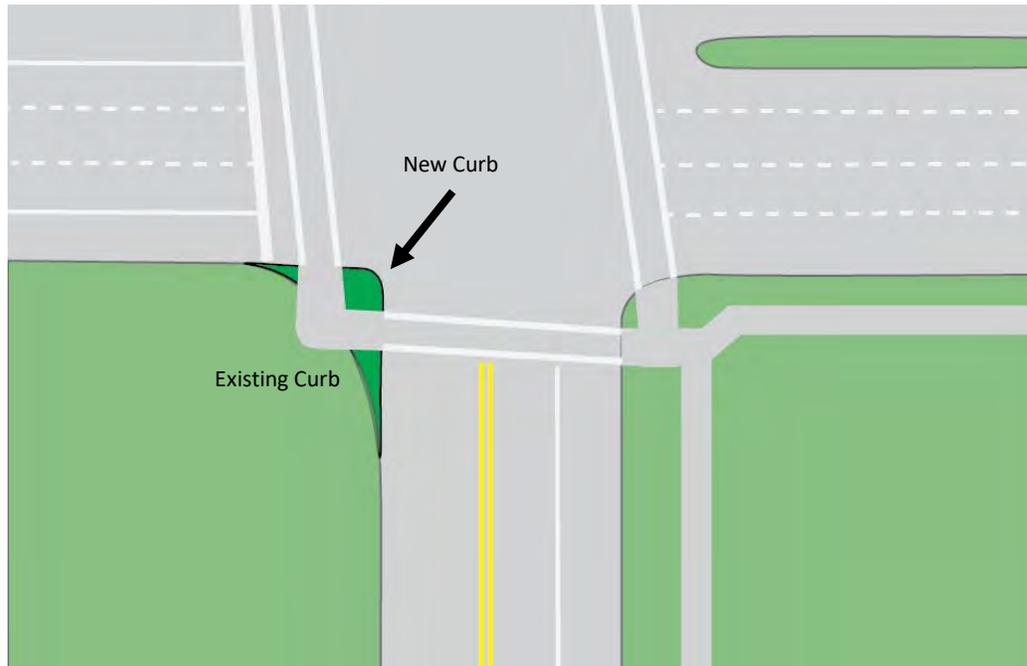
Curb radius tightening involves removing wide arched intersection corners in favor of right-angled corners ([Exhibit 43](#)). The tighter turning angle forces drivers to slow down to complete the turn, which ensures that drivers have more time to spot both existing crosswalks and the presence of crossing pedestrians. Crossing distances for pedestrians also become shorter with curb radius tightening, meaning pedestrians spend less time in traffic lanes. There should be considerations for truck or emergency vehicle traffic, however, as some large vehicles may not be able to successfully clear the tighter corners. The National Association of Transportation Officials [Urban Street Design Guide](#)<sup>16</sup> identifies bulb-outs/curb extensions as a method to visually and physically narrow the roadway.

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<sup>15</sup> Federal Highway Administration, *Proven Safety Countermeasures: Pedestrian Hybrid Beacons*. [https://safety.fhwa.dot.gov/provencountermeasures/ped\\_hybrid\\_beacon.cfm](https://safety.fhwa.dot.gov/provencountermeasures/ped_hybrid_beacon.cfm)

<sup>16</sup> The National Association of Transportation Officials *Urban Street Design Guide*: <https://nacto.org/publication/urban-street-design-guide/>

### **Exhibit 43: Curb Radius Tightening**



### **High Visibility Crosswalks/Crosswalk Enhancements:**

There are many different methods for increasing the visibility of crosswalks, including higher-visibility paint patterns, special high-visibility paint, signage, and additional lighting. High-visibility paint patterns include continental crosswalks, or “zebra-striped” crosswalks. Stop lines can be painted on to the ground to indicate to drivers the correct distance to stop in advance of the crosswalk while allowing pedestrians to cross the crosswalk. High-visibility paint can reflect light and be more easily spotted in low-light conditions. Signage and lighting help to further indicate to drivers that there may be pedestrians in the area. FHWA has designated crosswalk visibility enhancements as a Proven Safety Countermeasure, stating that high visibility crosswalks can reduce pedestrian injury crashes by up to 40%, intersection lighting by 42%, and advance stop markings and signs by 25%<sup>17</sup>. Locations for crosswalk enhancements should be determined during the design phase of the project. [Exhibit 44](#) below shows examples of crosswalk enhancements.

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<sup>17</sup> Federal Highway Administration, *Proven Safety Countermeasures: Crosswalk Visibility Enhancements* <https://safety.fhwa.dot.gov/provencountermeasures/crosswalk-visibility.cfm>

## **Exhibit 44: Crosswalk Enhancements**



### **Land Use and Zoning**

The land use context of the area surrounding a roadway plays a large factor in its function to carry vehicles, but more importantly, sets the environment to either encourage or discourage walking. This section reviews the current Balch Springs Zoning Ordinance, Future Land Use Plan, and provides recommendations to help the corridor achieve its goals of multimodality and economic development.

#### **Current Regulation:**

Existing regulations in the [Balch Springs Zoning Ordinance](#)<sup>18</sup> feature elements that can help regulate the pedestrian environment, with regulations on setbacks, lot and building widths, and building heights. The Balch Springs zoning map for the study corridor is shown in [Exhibit 45](#) and [Exhibit 46](#). All non-residential building forms have design requirements included in the

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<sup>18</sup> The Zoning Ordinance document can be found at: <https://www.cityofbalchsprings.com/194/Planning-Zoning>

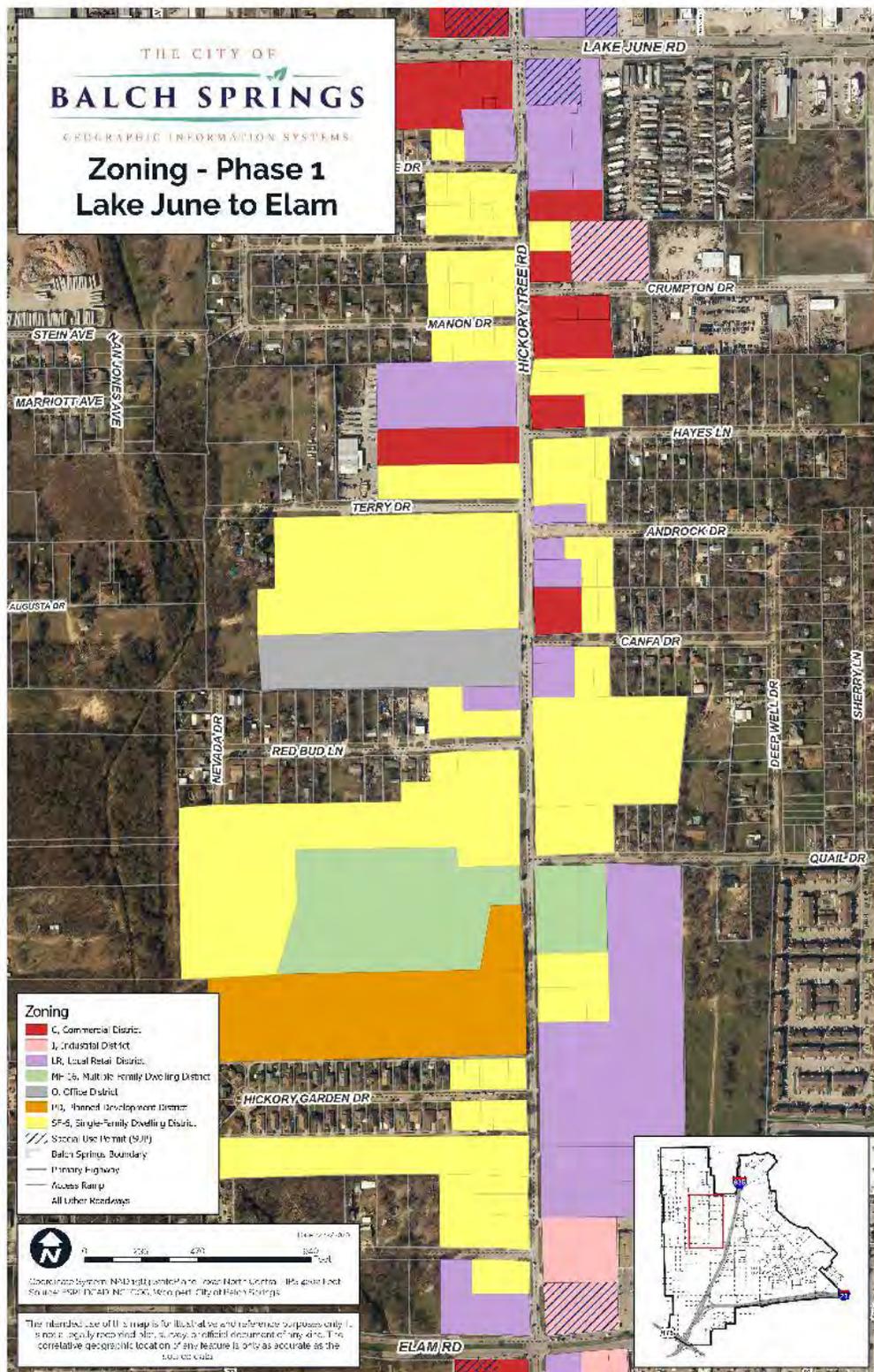
zoning code, including front-facing facades, and other design elements to create a more inviting and aesthetically pleasing environment.

Generally, parcels surrounding the three signalized intersections of Bruton Road, Lake June Road, and Elam Road are characterized by Commercial and Local Retail zoning. The section of the corridor between Lake June Road and Elam Road ([Exhibit 46](#)) is generally characterized by a more diverse mix of zoning designations, including Single Family, as well as Local Retail, Commercial, Planned Development, and Multiple-Family.

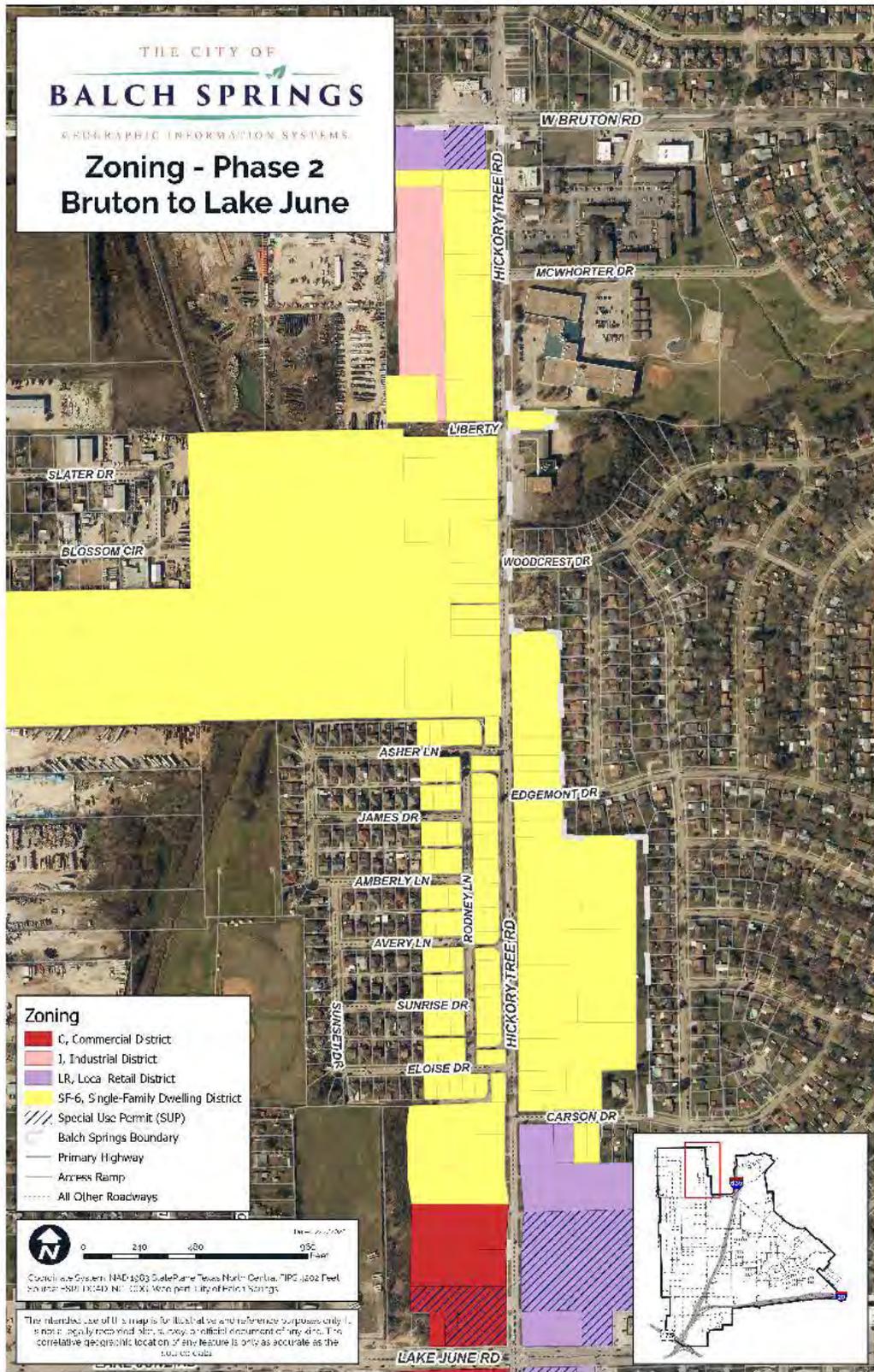
This section is characterized as “Phase 1” by the City of Balch Springs for reconfiguration, as there is currently funding designated for its reconfiguration. The section of the corridor between Bruton Road and Lake June Road ([Exhibit 46](#)) is generally characterized by single-family zoning. This section is characterized as “Phase 2” by the City of Balch Springs for reconfiguration, as there is not currently funding designated for this roadway but is being studied for future reconfiguration. Funding sources and location will be discussed in detail in Section IV: Implementation (page [IV-1](#)).

The zoning code as it is written for the residential areas does not include automobile-oriented building forms. Residential forms can promote active transportation to other residential destinations, as well as to the adjoining public services in the area and commercial nodes. Setbacks in the multi-family zone and Local Retail zones are very deep, however. Reconsideration of these setbacks to bring building frontage closer to sidewalks with parking on the side or rear may help to increase pedestrian access and comfort, especially for the Local Retail zone which would be expected to have a higher walking potential than the multi-family zone. The only industrial zoned parcel on the corridor is an auto part store. The City of Balch Springs’ zoning code does feature a mixed-use development form, but it is not currently used on the Hickory Tree Road study corridor.

**Exhibit 45: Hickory Tree Road from Bruton Road to Lake June Road Zoning Map**



**Exhibit 46: Hickory Tree Road from Lake June to Elam Road Zoning Map**



### **Zoning Recommendations:**

The mixed-use zoning, which is planned for in the Balch Springs future land use plan, allows for a variety of uses, and requires a minimum setback of 15 feet. As discussed previously, this setback distance is not ideal for pedestrian access and comfort. Currently, no parcels are zoned as mixed use in the study corridor. However, the Balch Springs future land use map ([Exhibit 47](#)) included in the City of Balch Springs Comprehensive Plan illustrates areas on the corridor planned for mixed-use between Old Elam Road and Hickory Garden Drive, the area south of Quail Drive to the current shopping center at Elam Road, and the area on and north of Red Bud Lane to Terry Drive, which includes Floyd Elementary. Balch Springs may want to consider planning for additional areas of mixed-used development around their commercial nodes, as they may facilitate a more accessible and comfortable environment for walking and/or biking to desirable local destinations. Also, to implement the mixed-use plans reflected in the future land use map, Balch Springs should consider rezoning the relevant parcels to allow mixed use in those areas as redevelopment occurs.

The Balch Springs Zoning code may not need a full revision to meet the City's goal of multimodal travel for the study corridor, but the city should consider if current setbacks are inviting and safe for pedestrians. The City may also consider more distinction in permitted uses between their commercial zoning (low intensity commercial, storage, and warehousing) and local retail zoning (local retail trade and businesses primarily serving surrounding neighborhoods) to make one or the other more pedestrian-oriented and removing more auto-oriented uses. Land uses that involve large amounts of land and heavy truck traffic may not be ideal for promoting walkability and multimodal travel. The Commercial Zoning only has a setback of 5 feet, but Local Retail, which would be considered more pedestrian-oriented with a goal of serving surrounding neighborhoods, has a setback of 20 feet.

The adoption of a Form-Based Code, which focuses primarily on the quality, form, and relationship between streetscapes and building facades to create pedestrian-friendly environments, could be considered as a possible strategy to improve walkability in the urban form on the study corridor while enabling mixed-use development. For more information on

Form-Based Codes, please see the NCTCOG [Sustainable Zoning Guidebook](#)<sup>19</sup>. Additional Form-Based Code resources include the [Form-Based Codes Institute](#)<sup>20</sup>, which publishes educational materials and research on form-based codes.

**Exhibit 47: City of Balch Springs Future Land Use Maps for Study Corridor**



<sup>19</sup> The Guidebook can be found at: [https://www.nctcog.org/nctcog/media/Transportation/DocsMaps/Plan/Landuse/Dev/Guidebook\\_FINAL\\_121\\_316.pdf](https://www.nctcog.org/nctcog/media/Transportation/DocsMaps/Plan/Landuse/Dev/Guidebook_FINAL_121_316.pdf)

<sup>20</sup> Form-Based Code Institute: <https://formbasedcodes.org/about/>.

## **IV. IMPLEMENTATION**

### **INTRODUCTION**

The Hickory Tree Road study corridor included segments from the City of Balch Springs' 2036 Comprehensive Plan that were designated as high priority and medium priority. Hickory Tree Road between Lake June Road and Elam Road is designated as a high priority roadway project and has local, state, and federal funding programmed for its reconfiguration. The section of the corridor between Bruton Road and Lake June Road is not currently funded but is included in this study and could be implemented as a future phase of the Hickory Tree Road corridor project. Studying the entire corridor was intended to provide a comprehensive approach to the ultimate build out and to develop preliminary cross sections and recommendations that could be brought forward to the design phase of the Lake June Road to Elam Road section.

### **TIMELINE**

Following the conclusion of the planning study, the southern section of the corridor Lake June Road to Elam Road, will move into the design phase, right-of-way acquisition, utilities relocation, and ultimately construction. These phases will each take approximately a year, with the project design in Fiscal Year (FY) 2022, right-of-way acquisition occurring in FY 2023, utilities relocation in FY 2024, and construction in FY 2025. There will be additional discussion and meetings with property owners during the right-of-way acquisition phase once the final roadway design is complete. There will also be public outreach regarding the construction schedule and traffic access plans prior to beginning construction, to ensure that businesses and schools can continue to be safely accessed during construction.

### **FUNDING SOURCES AND COST:**

See [Exhibit 48](#) for a summary of funding sources and [Exhibit 49](#) for a map of the portions of the project funded by each source. The approximate cost for design and construction of the recommended improvements to Hickory Tree Road between Elam Road and Lake June is \$14 million. The estimated cost for improvements to Hickory Tree Road between Bruton Road and

Lake June Road was reported in the *2019 Balch Springs Mobility Plan* as \$6.2 million. This cost was reported for planning purposes only and was prior to completion of this planning study. The cost for Bruton Road to Lake June Road will need to be revisited before the design phase of that project.

The funding sources for the current project, Elam Road to Lake June Road, are summarized in [Exhibit 48](#) and include the City of Balch Springs, Dallas County, TxDOT, and federal funding through NCTCOG. The scope for the Safe Routes to School (SRTS) funding originally included some sections along Hickory Tree Road. Once the funding was secured for Hickory Tree Road improvements, NCTCOG and the City of Balch Springs negotiated with TxDOT to adjust the scope of the SRTS grant for Floyd Elementary to move sidewalk segments that were planned for Hickory Tree Road on to side streets. The reasons for doing this was to maximize connections to the school and avoid the necessity of having to remove previously completed sections along Hickory Tree Road when that road is reconstructed from Elam Road to Lake June Road. Segments on Hickory Tree Road were moved to Lake June Road to fill a sidewalk gap in front of a residential park, and to extend the originally planned sidewalks on Quail Drive to complete a pedestrian connection to apartment complexes on Quail Drive ([Exhibit 49](#)). Explanations of the funding sources are provided following [Exhibit 48](#).

**Exhibit 48: Hickory Tree Road Reconstruction Funding Sources Table**

<b>Funding Source</b>	<b>Project Part</b>	<b>Amount</b>	<b>Notes</b>
Dallas County	Design/Match/Construction	\$5,342,700	“Seed Money” to facilitate other funding opportunities
Regional TDCs	Local Match	260,000	Credit for local match
NCTCOG – Federal Funding (CMAQ, STBG)	Construction	\$8,202,300	Balance of construction costs
TxDOT	Highway Safety Improvement Program	\$467,206	Improvements to intersection of Lake June and Hickory Tree Road (new signal)
<b>Total</b>		<b>\$14,012,206</b>	

*Other Hickory Tree Road funding sources:*

TxDOT	Safe Routes to School	\$963,225	Sidewalks – Initial segments were relocated from Hickory Tree Road to other neighborhood streets
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**Explanation of Funding Sources**

**Regional Transportation Development Credits**

NCTCOG, as the Metropolitan Planning Organization (MPO) for the Dallas-Fort Worth region, earns Transportation Development Credits (TDCs) when toll revenues are used to fund capital projects on public highways within the 12-county area that NCTCOG serves. These credits can serve as a substitute for the required local cash match when federal funds are programmed for a project. Cities within the 12-county area can also earn TDCs voluntarily by adopting NCTCOG policy bundles. These policy bundles reflect the goals of NCTCOG’s *Mobility 2045*, the region’s current Metropolitan Transportation Plan. Cities earn TDCs by adopting 50 percent of the policies presented. Balch Springs does not have awarded TDCs through this process, and NCTCOG elected to use TDCs earned by the MPO to offset the local match requirement for the

federal funds. It is important to note that TDCs do not award real money but can be used in lieu of a local match that cities normally must provide in federal transportation projects<sup>21</sup>.

#### Congestion Mitigation and Air Quality Improvement Program Funding

The Congestion Mitigation and Air Quality Improvement Program (CMAQ) is a federal funding program that funds projects that contribute to improved air quality, including bicycle and pedestrian facilities. For all CMAQ-funded projects, the MPO must demonstrate that the project creates an air-quality improvement or emissions benefit<sup>22</sup>.

#### Surface Transportation Block Grant Funding

Surface Transportation Block Grant (STBG) funds (previously called STP-MM) fund surface transportation projects and mobility improvements to the transportation system, such as roadway construction or reconstruction, roadway widenings, and bottleneck removal projects<sup>14</sup>.

#### TxDOT Highway Safety Improvement Program

The Highway Safety Improvement Program (HSIP) is administered by TxDOT with federal funds and is designated for projects that aim to reduce fatalities and injuries<sup>23</sup>.

#### TxDOT Safe Routes to School Funding

Safe Routes to School projects are funded via the TxDOT Transportation Alternatives Set-Aside (TA) program allocation for communities with populations less than 200,000. To be eligible for SRTS funding, a project must include bicycle and pedestrian infrastructure components and be intended to enable and encourage students to walk or bicycle safely to a primary school (K-8).

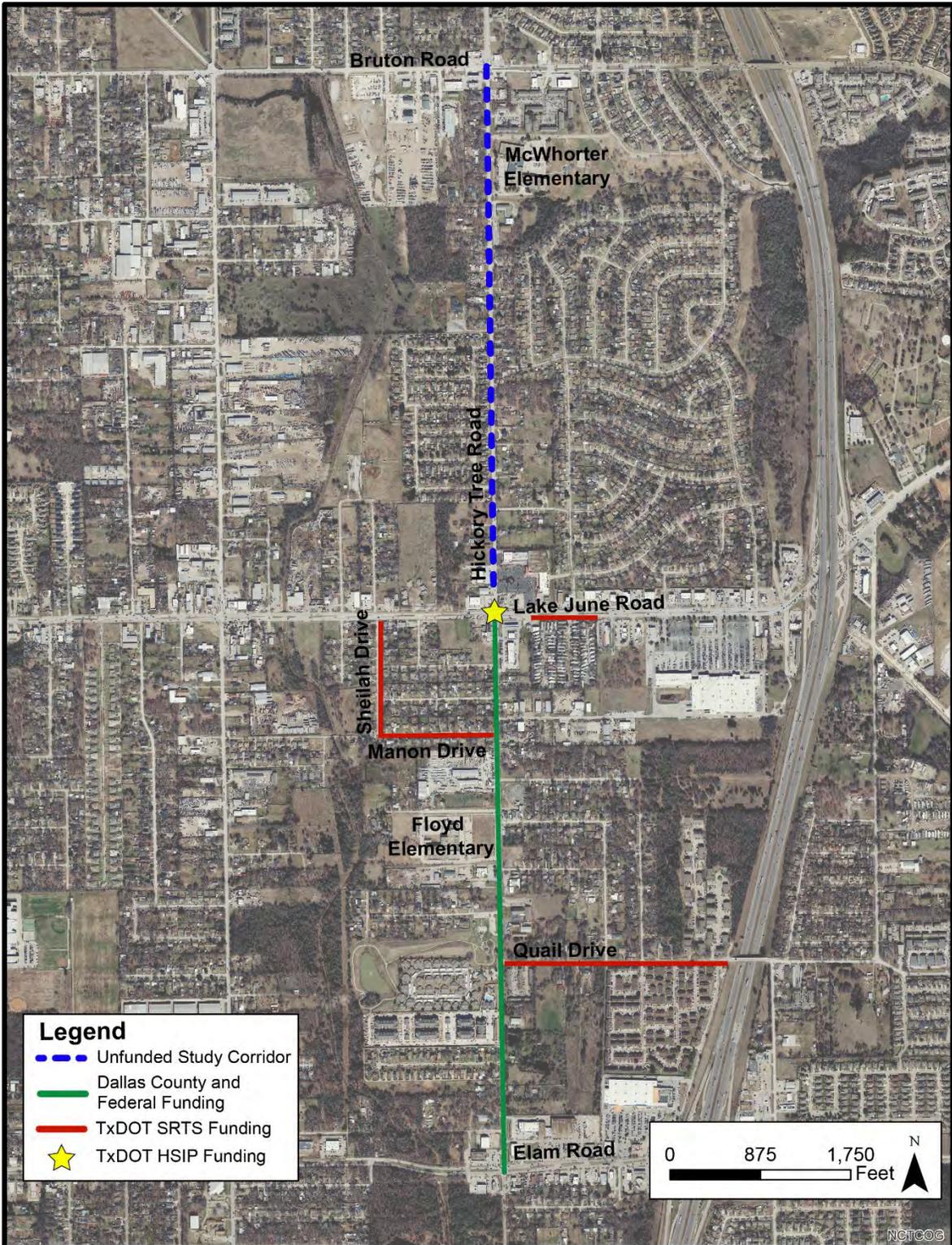
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<sup>21</sup> For more information about TDCs, please visit <https://www.nctcog.org/trans/funds/tip/funding-programs/transportation-development-credits>.

<sup>22</sup> For more information about STBG and CMAQ funds, please visit <https://www.nctcog.org/trans/funds/tip/frequently-asked-questions-about-the-transportatio#q3>

<sup>23</sup> For more information about the TxDOT HSIP program, please visit <https://ftp.txdot.gov/pub/txdot-info/trf/hsip/hsip-guidance.pdf>

**Exhibit 49: Hickory Tree Road Funding Sources Map**



## **NEXT STEPS**

For the Elam Road to Lake June Road section, the City of Balch Springs staff will need to complete design and engineering processes to further refine the roadway design recommendations provided in Section III: Recommendations (page [III-52](#)). The design phase will provide design alternatives for the roadway and refined cost estimates and will solicit additional public feedback on the roadway design and alternatives.

City staff will need to survey the corridor to confirm the amount of right-of-way that is needed for the project and reach out to affected property owners regarding right-of-way acquisition during the design phase. City staff will additionally need to identify the utilities on the corridor that will need to be relocated and work with utility companies to develop a relocation plan to be completed before construction of the roadway begins.

City staff will also need to develop a plan for access to affected homes and businesses during the construction phase. Coordinating when roads will be under construction and communicating closure and detour information to the public will be essential to minimizing interruptions and safety concerns during construction. It is of the utmost importance to ensure the safety of school students walking to and from school near construction sites, as well as keeping businesses open and active during construction.

Since the Hickory Tree Road reconfiguration project, TxDOT SRTS-funded project, and TxDOT HSIP-funded project are three individual projects in the same geographic area, city staff will have to coordinate closely with TxDOT to ensure timing and design align properly and there are no redundancies in construction. City staff should discuss opportunities with TxDOT to consolidate agreements and project reporting and oversight. It may be beneficial for TxDOT and the City of Balch Springs to adopt a phasing approach for the project schedules.

## **V. CONCLUSIONS**

Hickory Tree Road is a unique roadway that serves both as a residential and a commercial/municipal corridor. The roadway has many single-family residences and driveways as well as a variety of major destinations including municipal buildings, two elementary schools, three parks, multiple churches, and commercial centers. On top of being a roadway with many local destinations, it additionally serves pass-through traffic as a parallel route to IH 635. The corridor was recommended in the 2019 *Balch Springs Mobility Plan* for reconfiguration to increase bicycle and pedestrian safety, congestion management, and economic development. These goals informed the recommendations provided in this report.

The current configuration of a two-lane roadway has caused issues of congestion and access to destinations for those who work and live on Hickory Tree Road. Congestion and long waiting times for cars stopped to make left turns have contributed to crashes on the corridor and at the major intersections. The school traffic on the corridor additionally causes issues of congestion during arrival and dismissal. Many residents and school staff expressed concern about the safety of school students walking and biking to and from school along Hickory Tree Road.

There is strong evidence of walking along the corridor from desire paths along the roadway, but there were also many identified challenges to walking, including limited sidewalks, blockages, pavement cracking, and drainage ditches. There are also issues of unsafe behavior by motorists near bicyclists and pedestrians on the study corridor.

Public engagement showed that there is a strong desire to walk and bike along Hickory Tree Road, but most respondents do not walk currently because of traffic safety concerns. Respondents expressed a strong interest in walking and biking to schools and parks on the study corridor. Respondents additionally expressed that traffic congestion and driveway exits were problematic on the corridor.

NCTCOG has recommended a reconfiguration on the corridor to a three-lane roadway with a continuous center turn lane and pedestrian refuge islands at key locations. The roadway

configuration will be paired with recommendations for new and enhanced bicycle and pedestrian infrastructure, including shared use paths, sidewalks, pedestrian refuge islands, sidewalk driveway treatments, pedestrian hybrid beacons, curb radius tightening, and crosswalk visibility enhancements. This configuration will increase bicycle and pedestrian safety and comfort while traveling on the corridor and make destinations via active transportation more accessible. The configuration will also help to mitigate congestion on the corridor by removing turning traffic from the travel lane and allowing the stream of traffic to continue, as well as maximize access to businesses and other corridor destinations. Additional recommendations were made for zoning and land-use practices increase the comfort and desire of active transportation through the urban form.

## **VI. APPENDIX**

1. Walk Audit Worksheet
2. Walk Audit Maps Provided
3. McWhorter Elementary School Dismissal Observation Sheet
4. McWhorter EI School Dismissal HTR Context Map
5. Floyd EI School Dismissal Sheet
6. Floyd EI School Dismissal HTR Context Map
7. Online Public Survey & Responses
8. Stakeholders: Technical Meeting Notes
9. Stakeholders: Technical Satellite Image of McWhorter Elementary
10. Stakeholders: Technical PowerPoint
11. Stakeholders: Residential Meeting Notes
12. Stakeholders: Residential PowerPoint
13. Stakeholders: Business Meeting Notes
14. Stakeholders: Business PowerPoint
15. Res and Bus Stakeholder Sample Meeting Invitation
16. Virtual Open House Presentation
17. Virtual Open House Feedback Questionnaire Responses
18. Virtual Open House Video Link
19. Design Guidance Documents Referenced

**Appendix Exhibit 1: Walk Audit Observation Worksheets**

<p><b>Balch Springs Walk Audit Quadrant 1: Bruton Rd to Edgemont Dr</b>          As you walk the route, please take notes. Number any location-specific notes with a corresponding number on the map.</p>	<p><b>Walking:</b>          Are there sidewalks?          If so, where?</p> <ul style="list-style-type: none"> <li>• How wide are they?</li> <li>• Are there any bumps or cracks?</li> <li>• Are there any blockages?</li> </ul> <p>If not, is there room to walk?</p> <ul style="list-style-type: none"> <li>• Is there any evidence of walking? (ex: dirt trails)</li> <li>• Are there any blockages?</li> </ul> <p>How exposed to traffic do you feel?          Does it feel safe to walk? Why/Why not?</p>	<p><b>Streets &amp; Intersections:</b>          What kinds of crossings do you encounter on your walk?</p> <ul style="list-style-type: none"> <li>• Ex: Crosswalk, Unmarked Crossing</li> <li>• If the crosswalk has a pedestrian button, is the interval to cross long enough?</li> <li>• Are there curb ramps? Do they line up with the crosswalk?</li> <li>• Are there sidewalks or crossings to places people might want to walk? (ex: schools, library, etc)</li> </ul> <p>What condition is the road paint in?</p> <ul style="list-style-type: none"> <li>• Crosswalks, Shoulders, Centerlines, etc</li> </ul> <p>Do driveways along this route affect the comfort or safety of your walk?</p>	<p><b>Road Users:</b>          What kinds of road users do you encounter?</p> <ul style="list-style-type: none"> <li>• Ex: Other pedestrians, bikers, passenger cars, commercial trucks</li> </ul> <p>Did you witness unsafe road behaviors from other road users?</p> <ul style="list-style-type: none"> <li>• Ex: Speeding, Running stop signs</li> </ul> <p>Do drivers yield to pedestrians on the roadway and exiting driveways?</p>
		<p><b>Legend</b></p> <ul style="list-style-type: none"> <li>• Driveways</li> <li>— Sidewalk</li> <li>— Crosswalk</li> <li>— Roads</li> </ul>	



## Balch Springs Walk Audit Quadrant 2: Edgemont Dr to Charlice Dr

As you walk the route, please take notes. Number any location-specific notes with a corresponding number on the map.

**Walking:**  
 Are there sidewalks?  
 If so, where?

- How wide are they?
- Are there any bumps or cracks?
- Are there any blockages?

If not, is there room to walk?

- Is there any evidence of walking? (ex: dirt trails)
- Are there any blockages?

How exposed to traffic do you feel?  
 Does it feel safe to walk? Why/Why not?

**Streets & Intersections:**  
 What kinds of crossings do you encounter on your walk?

- Ex: Crosswalk, Unmarked Crossing
- If the crosswalk has a pedestrian button, is the interval to cross long enough?
- Are there curb ramps? Do they line up with the crosswalk?
- Are there sidewalks or crossings to places people might want to walk? (ex: schools, library, etc)

What condition is the road paint in?

- Crosswalks, Shoulders, Centerlines, etc

Do driveways along this route affect the comfort or safety of your walk?

**Road Users:**  
 What kinds of road users do you encounter?

- Ex: Other pedestrians, bikers, passenger cars, commercial trucks

Did you witness unsafe road behaviors from other road users?

- Ex: Speeding, Running stop signs

Do drivers yield to pedestrians on the roadway and exiting driveways?

<h3>Balch Springs Walk Audit Quadrant 3: Charlce Dr to Red Bud Ln</h3> <p>As you walk the route, please take notes. Number any location-specific notes with a corresponding number on the map.</p>	<p><b>Walking:</b></p> <p>Are there sidewalks? If so, where?</p> <ul style="list-style-type: none"> <li>• <i>How wide are they?</i></li> <li>• <i>Are there any bumps or cracks?</i></li> <li>• <i>Are there any blockages?</i></li> </ul> <p>If not, is there room to walk?</p> <ul style="list-style-type: none"> <li>• <i>Is there any evidence of walking? (ex: dirt trails)</i></li> <li>• <i>Are there any blockages?</i></li> </ul> <p>How exposed to traffic do you feel? Does it feel safe to walk? Why/Why not?</p>	<p><b>Streets &amp; Intersections:</b></p> <p>What kinds of crossings do you encounter on your walk?</p> <ul style="list-style-type: none"> <li>• <i>Ex: Crosswalk, Unmarked Crossing</i></li> <li>• <i>If the crosswalk has a pedestrian button, is the interval to cross long enough?</i></li> <li>• <i>Are there curb ramps? Do they line up with the crosswalk?</i></li> <li>• <i>Are there sidewalks or crossings to places people might want to walk? (ex: schools, library, etc)</i></li> </ul> <p>What condition is the road paint in?</p> <ul style="list-style-type: none"> <li>• <i>Crosswalks, Shoulders, Centerlines, etc</i></li> </ul> <p>Do driveways along this route affect the comfort or safety of your walk?</p>	<p><b>Road Users:</b></p> <p>What kinds of road users do you encounter?</p> <ul style="list-style-type: none"> <li>• <i>Ex: Other pedestrians, bikers, passenger cars, commercial trucks</i></li> </ul> <p>Did you witness unsafe road behaviors from other road users?</p> <ul style="list-style-type: none"> <li>• <i>Ex: Speeding, Running stop signs</i></li> </ul> <p>Do drivers yield to pedestrians on the roadway and exiting driveways?</p>



## Balch Springs Walk Audit Quadrant 4: Red Bud Ln to Elam Rd

As you walk the route, please take notes. Number any location-specific notes with a corresponding number on the map.

**Walking:**  
 Are there sidewalks?  
 If so, where?

- How wide are they?
- Are there any bumps or cracks?
- Are there any blockages?

If not, is there room to walk?

- Is there any evidence of walking? (ex: dirt trails)
- Are there any blockages?

How exposed to traffic do you feel?  
 Does it feel safe to walk? Why/Why not?

**Streets & Intersections:**  
 What kinds of crossings do you encounter on your walk?

- Ex: Crosswalk, Unmarked Crossing
- If the crosswalk has a pedestrian button, is the interval to cross long enough?
- Are there curb ramps? Do they line up with the crosswalk?
- Are there sidewalks or crossings to places people might want to walk? (ex: schools, library, etc)

What condition is the road paint in?

- Crosswalks, Shoulders, Centerlines, etc

Do driveways along this route affect the comfort or safety of your walk?

**Road Users:**  
 What kinds of road users do you encounter?

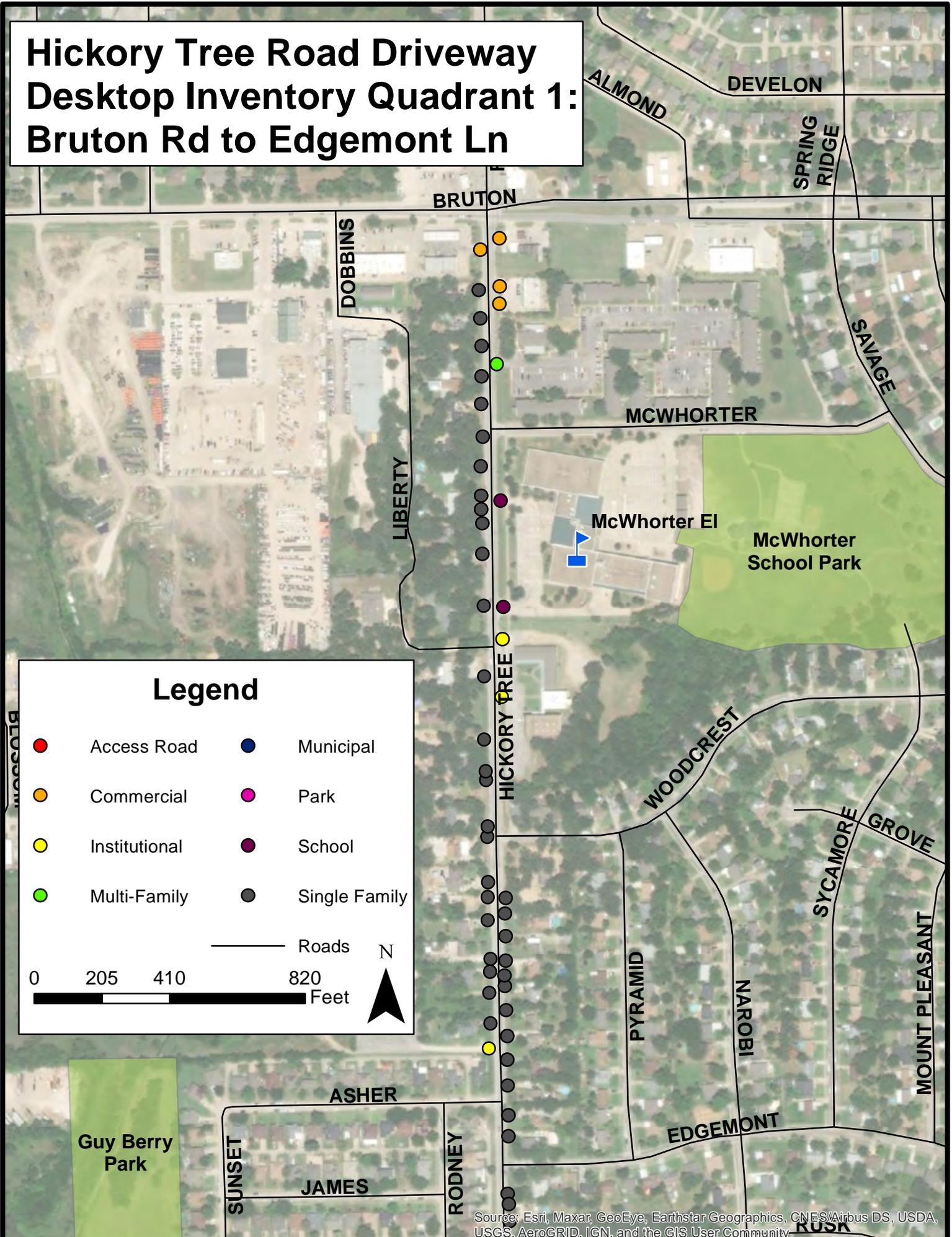
- Ex: Other pedestrians, bikers, passenger cars, commercial trucks

Did you witness unsafe road behaviors from other road users?

- Ex: Speeding, Running stop signs

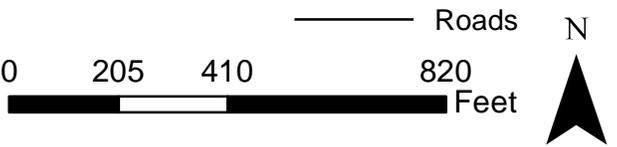
Do drivers yield to pedestrians on the roadway and exiting driveways?

# Hickory Tree Road Driveway Desktop Inventory Quadrant 1: Bruton Rd to Edgemont Ln

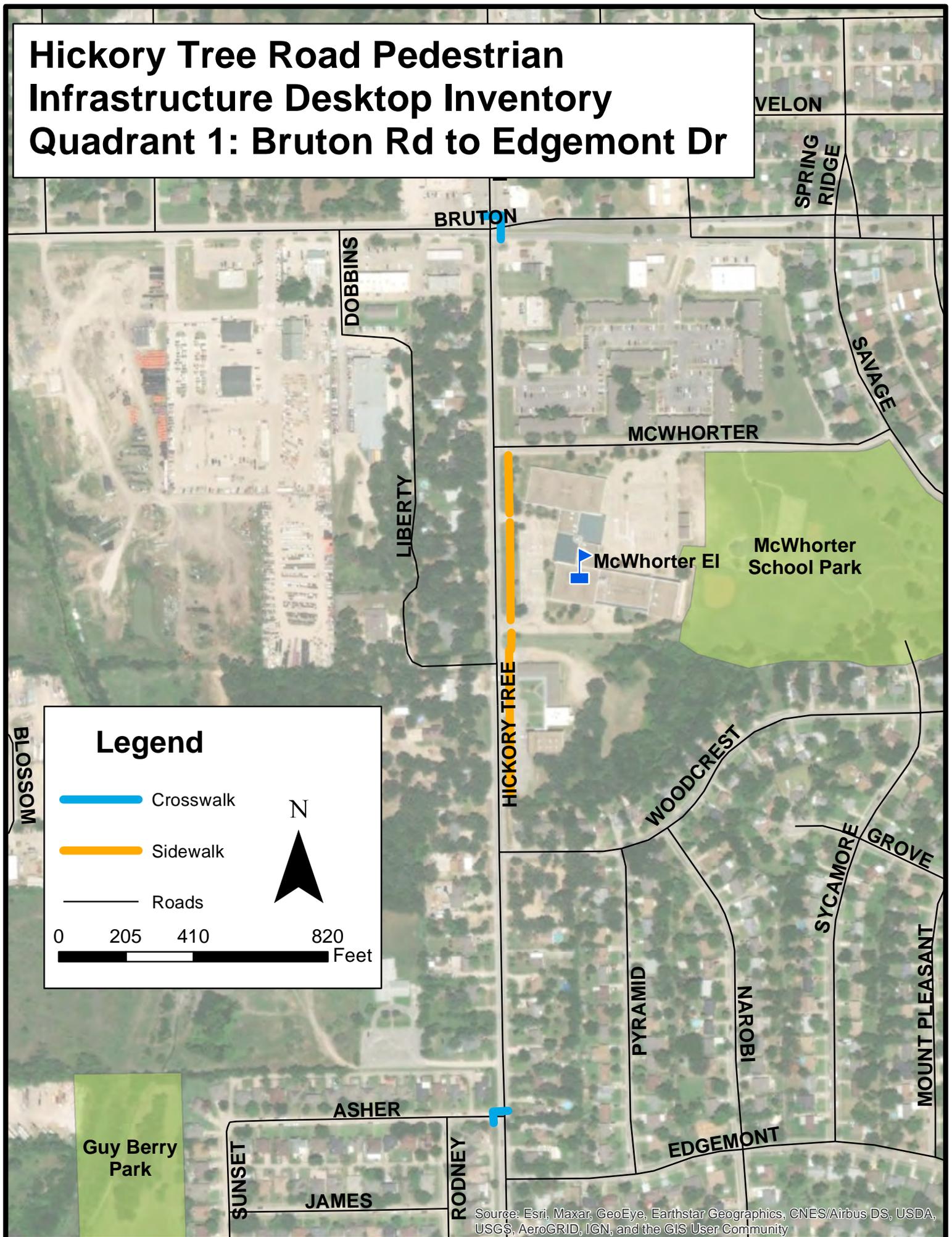


## Legend

- Access Road
- Commercial
- Institutional
- Multi-Family
- Municipal
- Park
- School
- Single Family



# Hickory Tree Road Pedestrian Infrastructure Desktop Inventory Quadrant 1: Bruton Rd to Edgemont Dr



## Legend

 Crosswalk

 Sidewalk

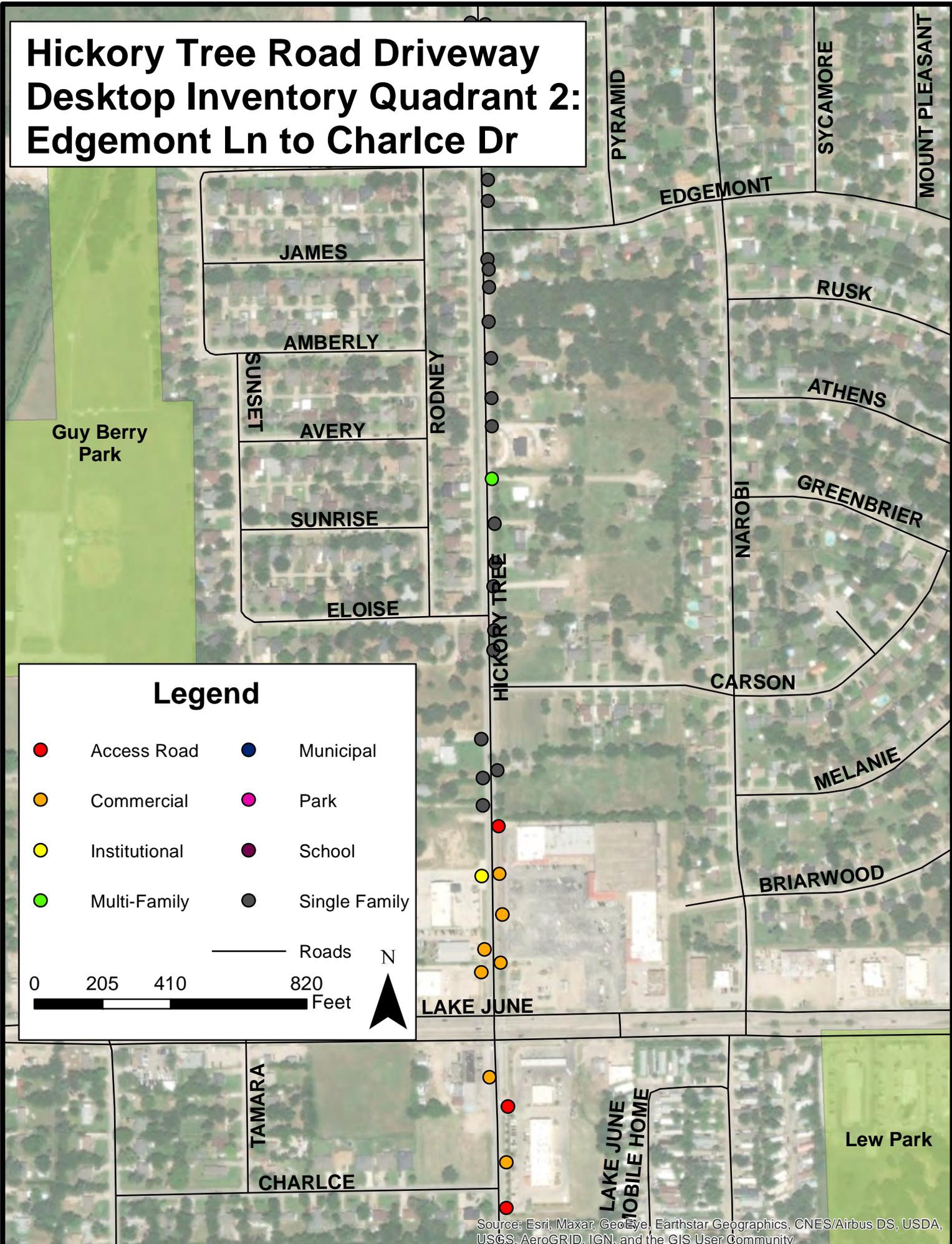
 Roads

N



0 205 410 820 Feet

# Hickory Tree Road Driveway Desktop Inventory Quadrant 2: Edgemont Ln to Charlice Dr



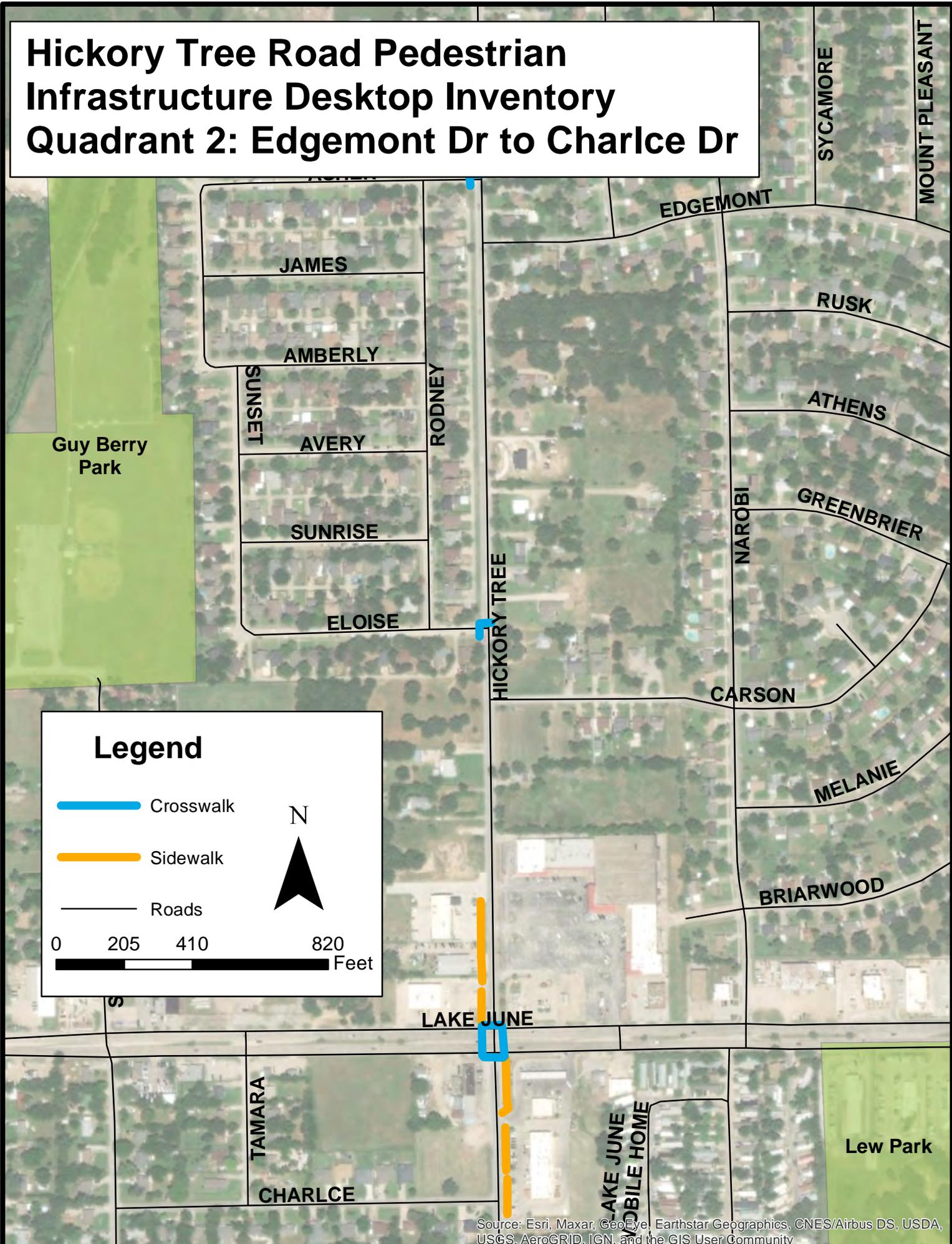
## Legend

- |   |   |
|---|---|
| <span style="color: red;">●</span> Access Road      | <span style="color: blue;">●</span> Municipal     |
| <span style="color: orange;">●</span> Commercial    | <span style="color: magenta;">●</span> Park       |
| <span style="color: yellow;">●</span> Institutional | <span style="color: purple;">●</span> School      |
| <span style="color: green;">●</span> Multi-Family   | <span style="color: grey;">●</span> Single Family |



# Hickory Tree Road Pedestrian Infrastructure Desktop Inventory

## Quadrant 2: Edgemont Dr to Charlce Dr



### Legend

 Crosswalk

 Sidewalk

 Roads

N

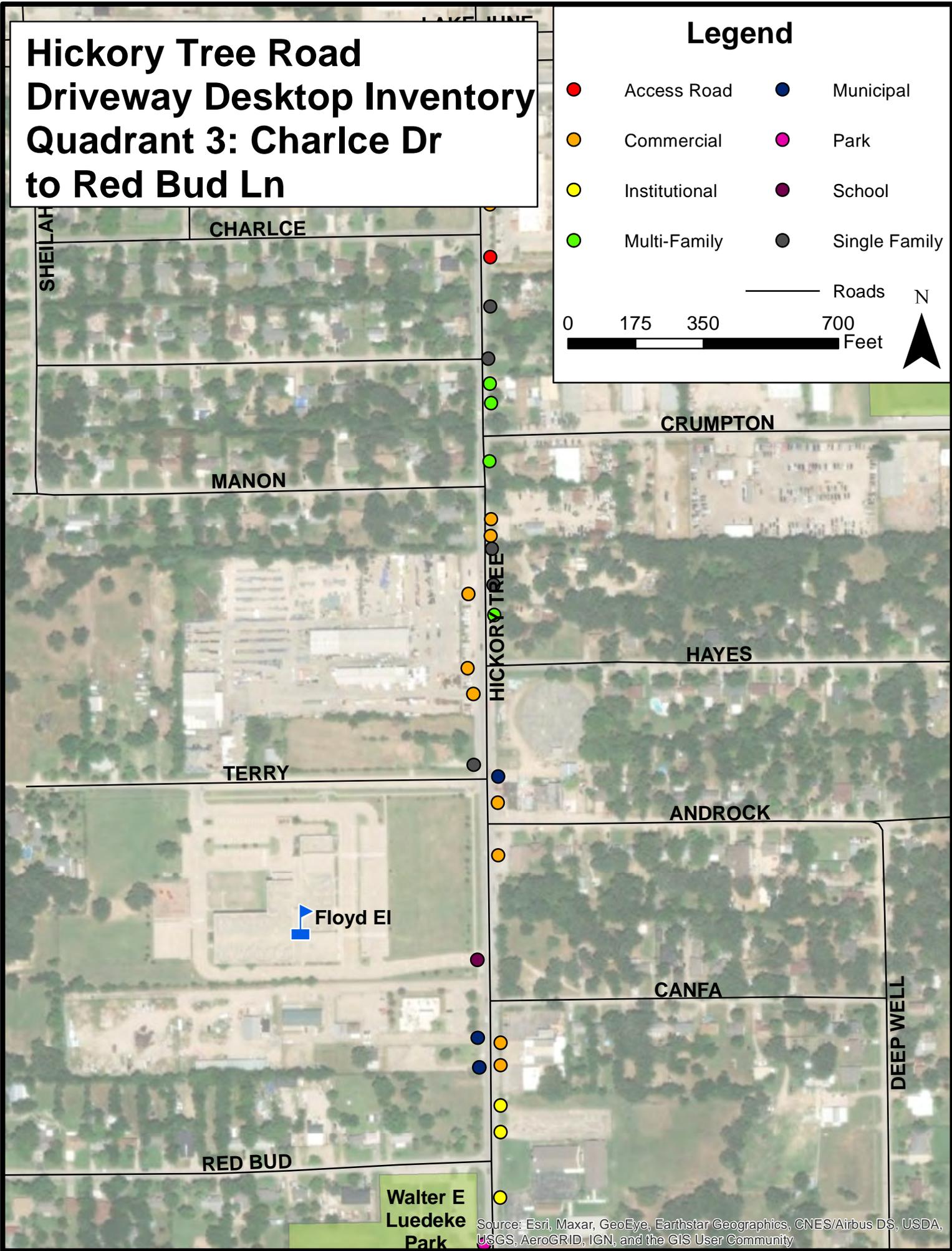


0 205 410 820 Feet

# Hickory Tree Road Driveway Desktop Inventory Quadrant 3: Charlce Dr to Red Bud Ln

## Legend

- Access Road
- Commercial
- Institutional
- Multi-Family
- Municipal
- Park
- School
- Single Family



Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

# Hickory Tree Road Pedestrian Infrastructure Desktop Inventory Quadrant 3: Charlce Dr to Red Bud Ln

## Legend

 Crosswalk

 Sidewalk

 Roads

N



0 175 350 700 Feet

SHEILAH

CHARLCE

MANON

TERRY

Floyd El

RED BUD

Walter E  
Luedeke Park

VAROBI

CRUMPTON

HICKORY TREE

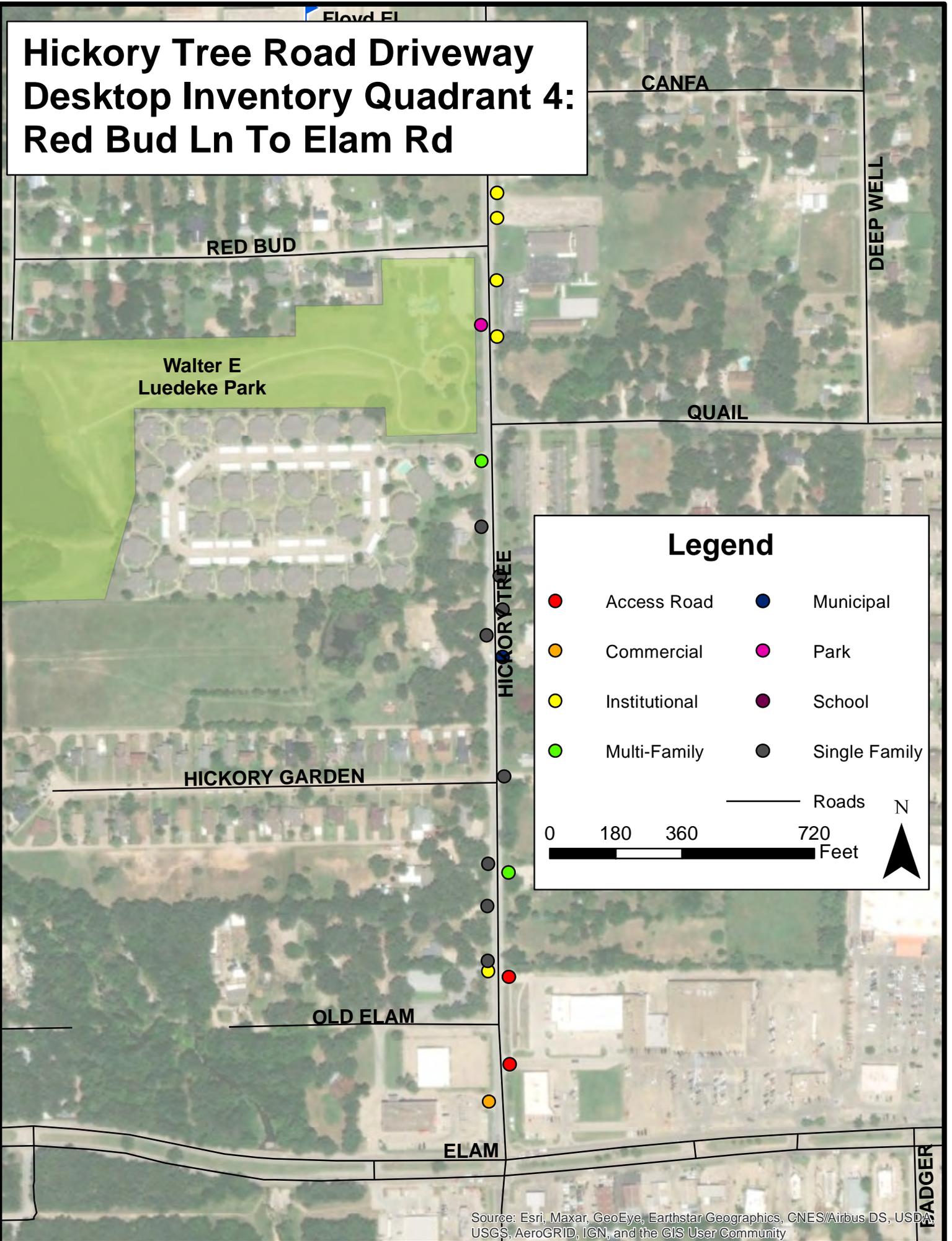
HAYES

ANDROCK

CANFA

DEEP WELL

# Hickory Tree Road Driveway Desktop Inventory Quadrant 4: Red Bud Ln To Elam Rd



### Legend

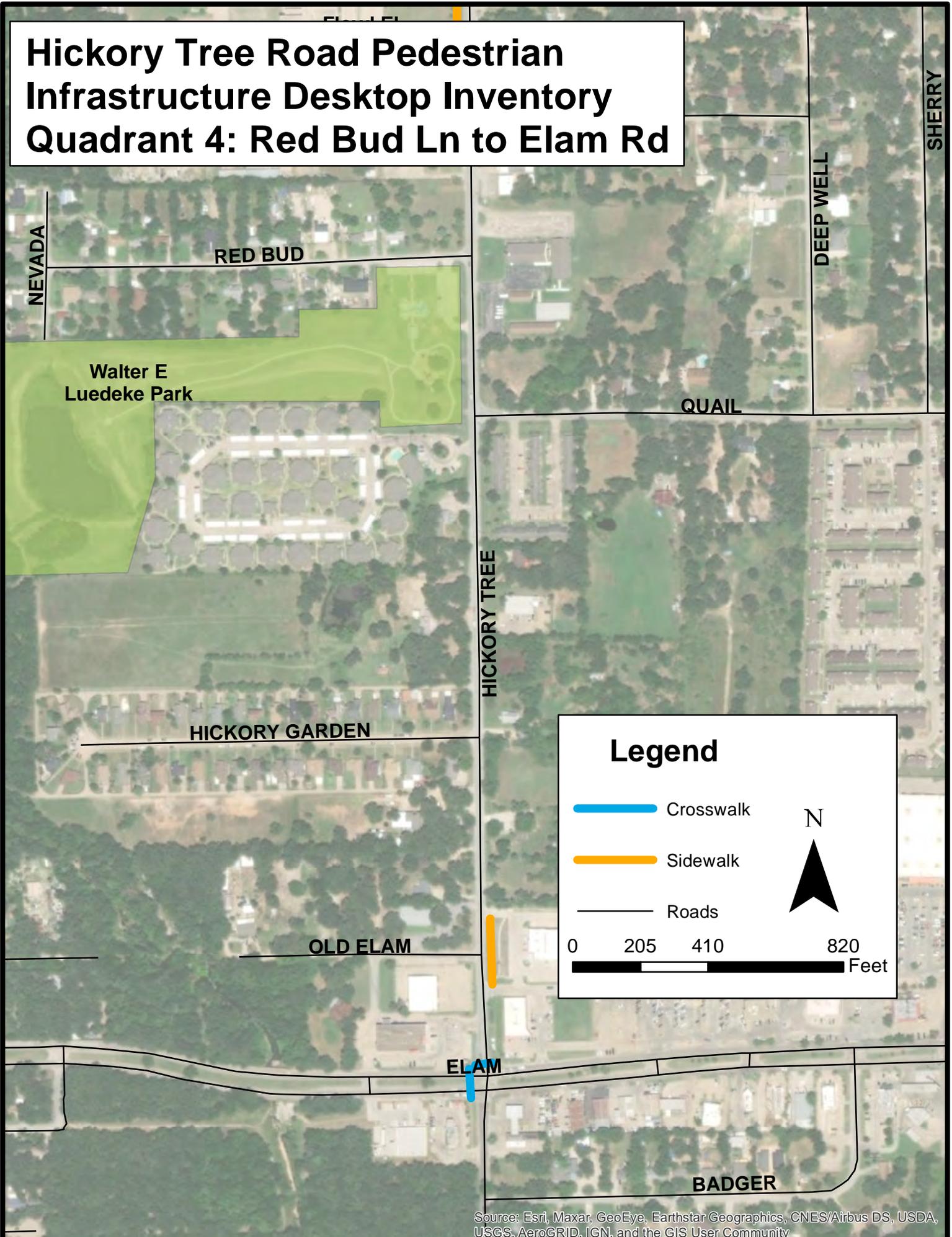
<span style="color: red;">●</span> Access Road	<span style="color: blue;">●</span> Municipal
<span style="color: orange;">●</span> Commercial	<span style="color: pink;">●</span> Park
<span style="color: yellow;">●</span> Institutional	<span style="color: purple;">●</span> School
<span style="color: green;">●</span> Multi-Family	<span style="color: grey;">●</span> Single Family

— Roads

0 180 360 720 Feet

N

# Hickory Tree Road Pedestrian Infrastructure Desktop Inventory Quadrant 4: Red Bud Ln to Elam Rd



NEVADA

RED BUD

Walter E  
Luedeke Park

HICKORY GARDEN

OLD ELAM

ELAM

BADGER

DEEP WELL

SHERRY

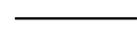
QUAIL

HICKORY TREE

## Legend

 Crosswalk

 Sidewalk

 Roads

N



0 205 410 820 Feet

# McWhorter Elementary Walk Audit

Date: 5/6/21

Name & Org:



Please take notes on the following focus areas and any other observations. Number any location-specific notes with a corresponding number on the map. Use the backside of this page if you need more space.

**Sidewalks:**

Are existing sidewalks wide enough for people to walk side-by-side?  
 If there is no sidewalk, is there enough space to walk away from traffic?

**Street/Driveway Crossings:**

Are crossings easy to use, safe, and visible to other road users?  
 Are people crossing at other places than the crosswalks? Where?  
 Are there curb ramps?

**School Zone:**

Are walkers separated from car pick-ups?  
 Are there continuous sidewalks for students to use to exit the property?  
 Are there crossing guards? Where?

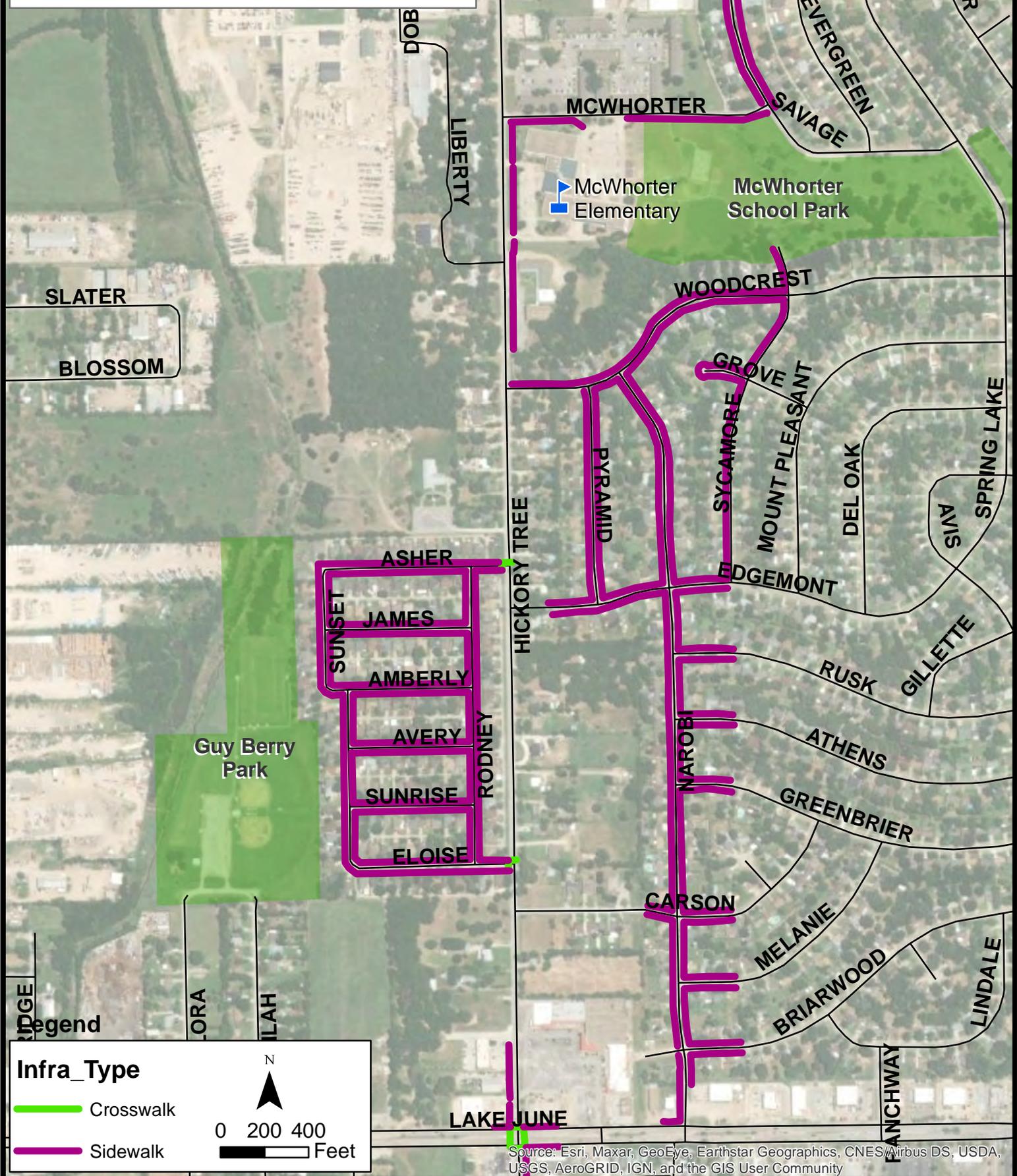
**Drivers:**

Are there unsafe driver behaviors?  
 If there is congestion, where is it and how far is it backing up?  
 Are drivers obeying signage/crossing guards?

**Pedestrians:**

What direction are most students walking?

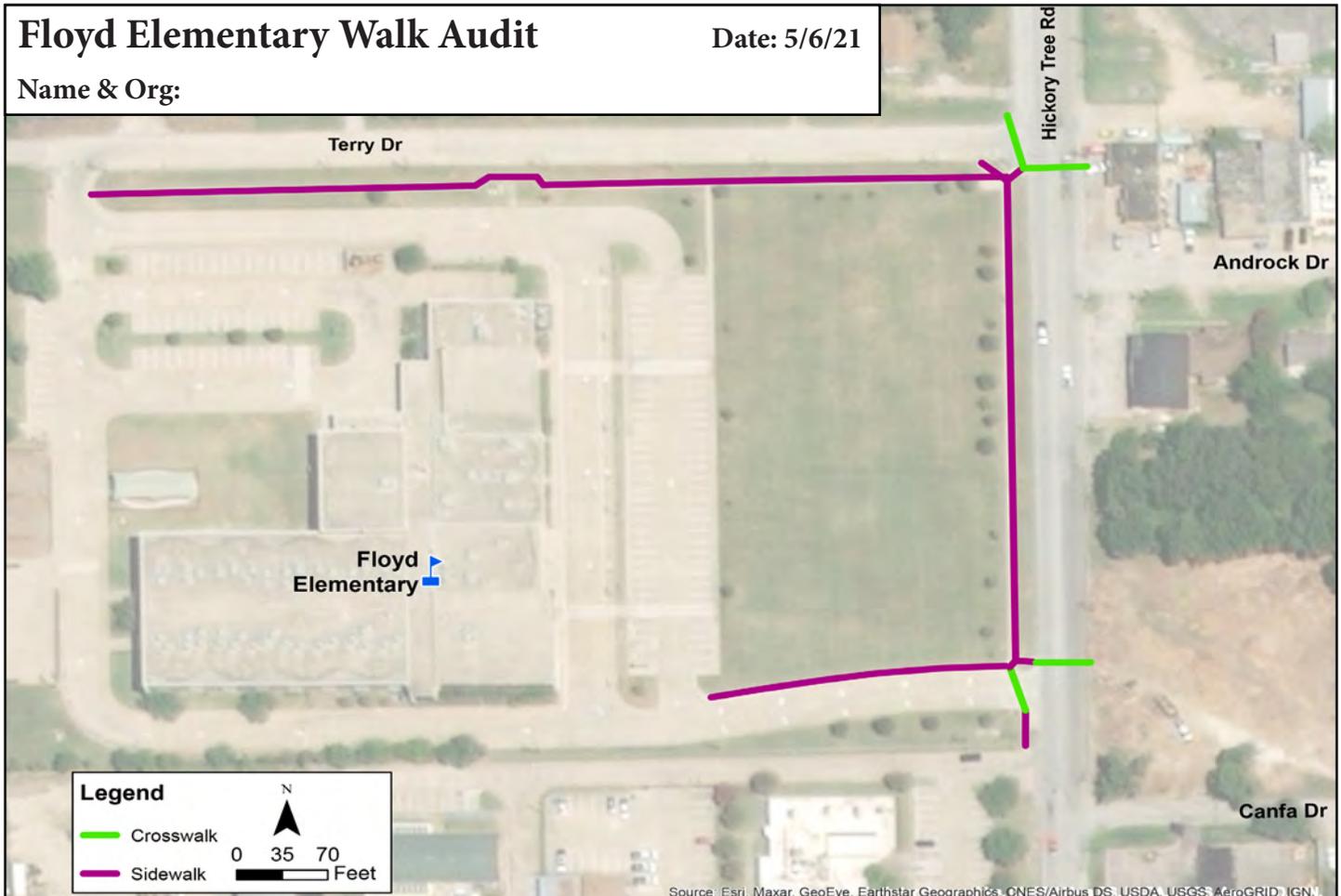
# Pedestrian Infrastructure Within ~1100ft of Hickory Tree Rd



**Floyd Elementary Walk Audit**

Date: 5/6/21

Name &amp; Org:



Please take notes on the following focus areas and any other observations. Number any location-specific notes with a corresponding number on the map. Use the backside of this page if you need more space.

**Sidewalks:**

Are existing sidewalks wide enough for side-by-side walking?  
If there is no sidewalk, is there enough space to walk away from traffic?

**Street/Driveway Crossings:**

Are crossings easy to use, safe, and visible to other road users?  
Are people crossing at other places than the crosswalks? Where?  
Are there curb ramps?

**School Zone:**

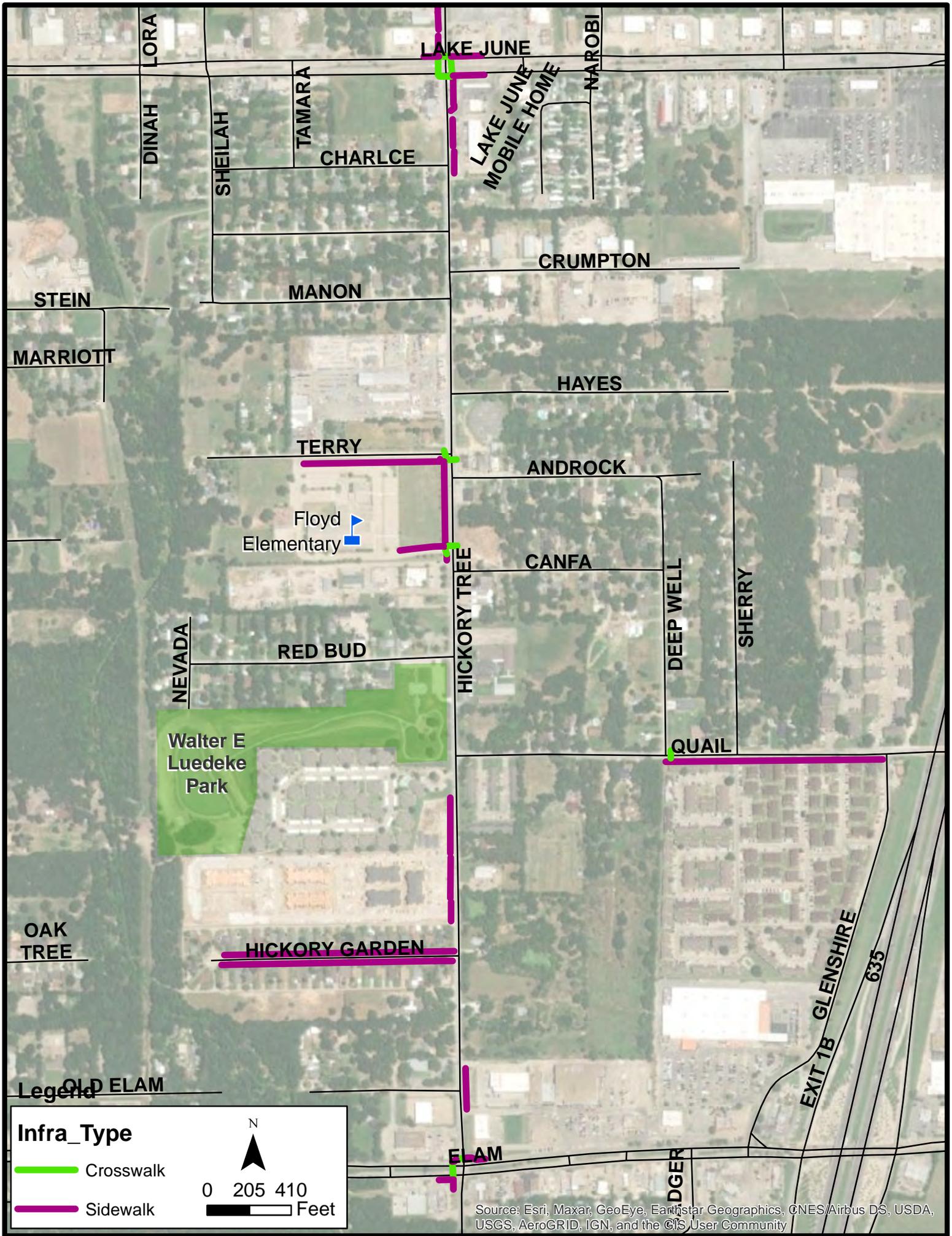
Are walkers separated from car pick-ups?  
Are there continuous sidewalks for students to use to exit the property?  
Are there crossing guards? Where?

**Drivers:**

Are there unsafe driver behaviors?  
If there is congestion, where is it and how far is it backing up?  
Are drivers obeying signage/crossing guards?

**Pedestrians:**

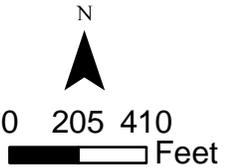
What direction are most students walking?



Legend

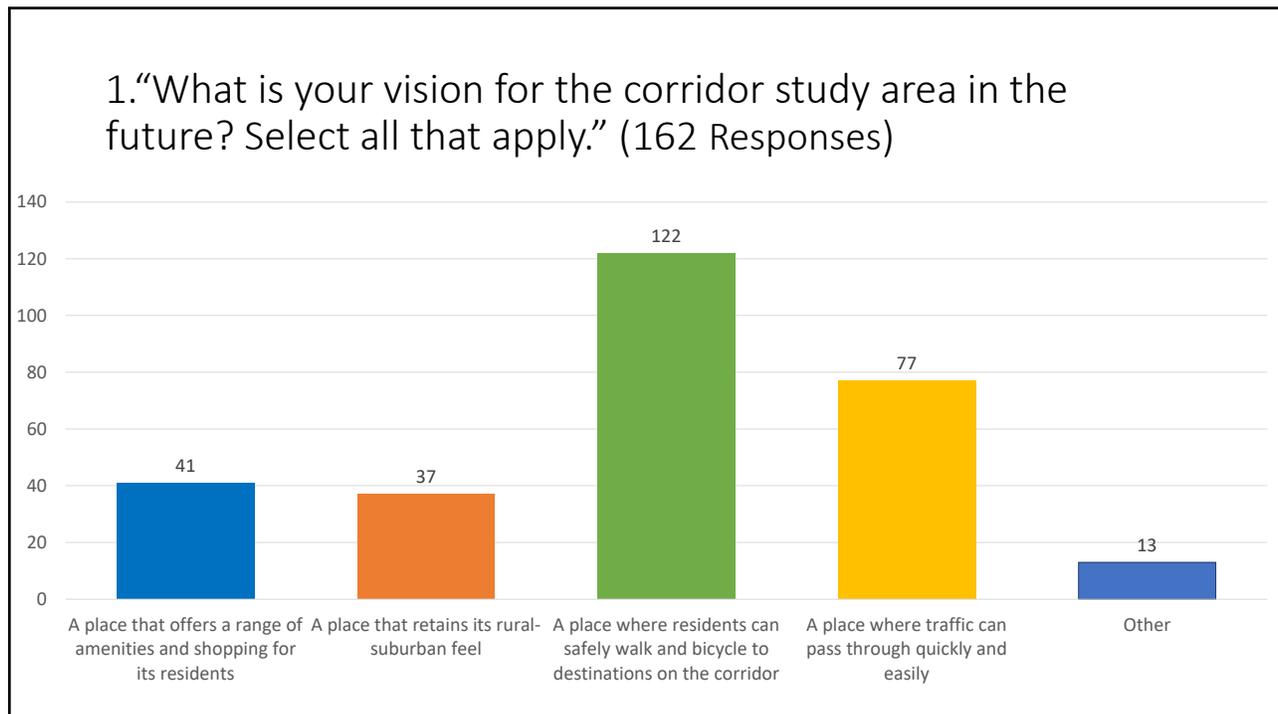
Infra\_Type

- Crosswalk
- Sidewalk

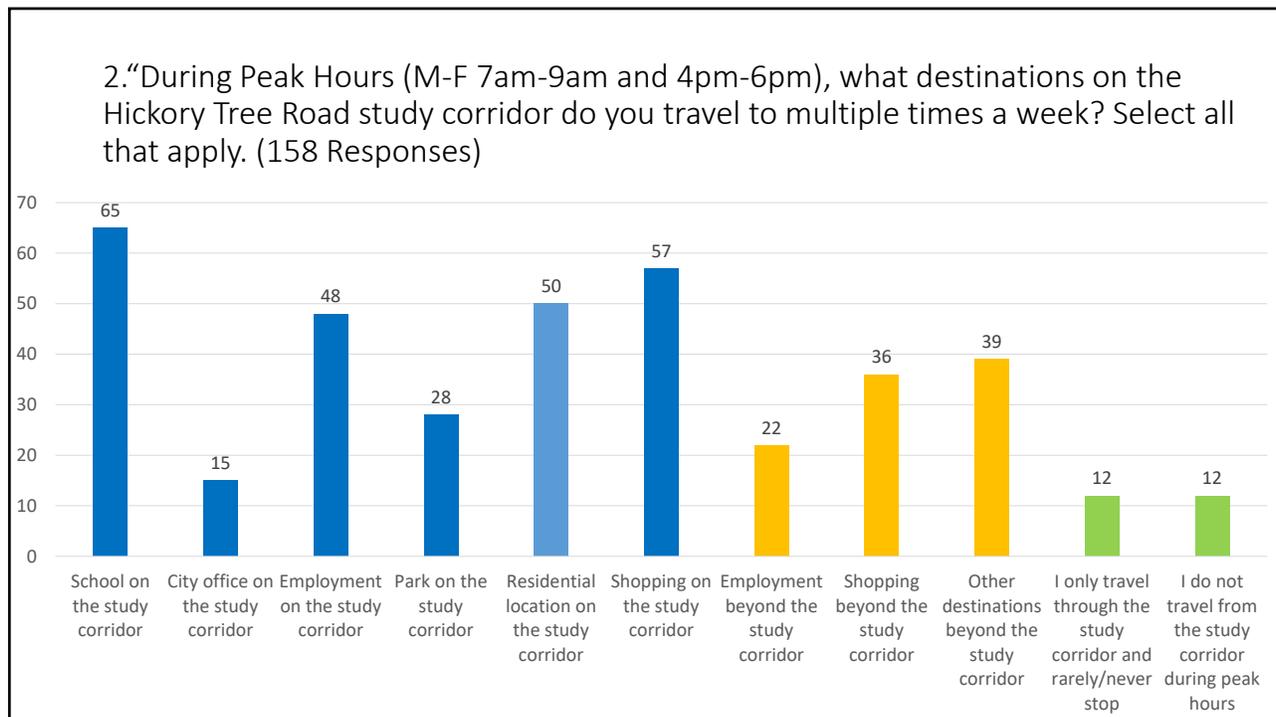


# Balch Springs Public Online Survey Results:

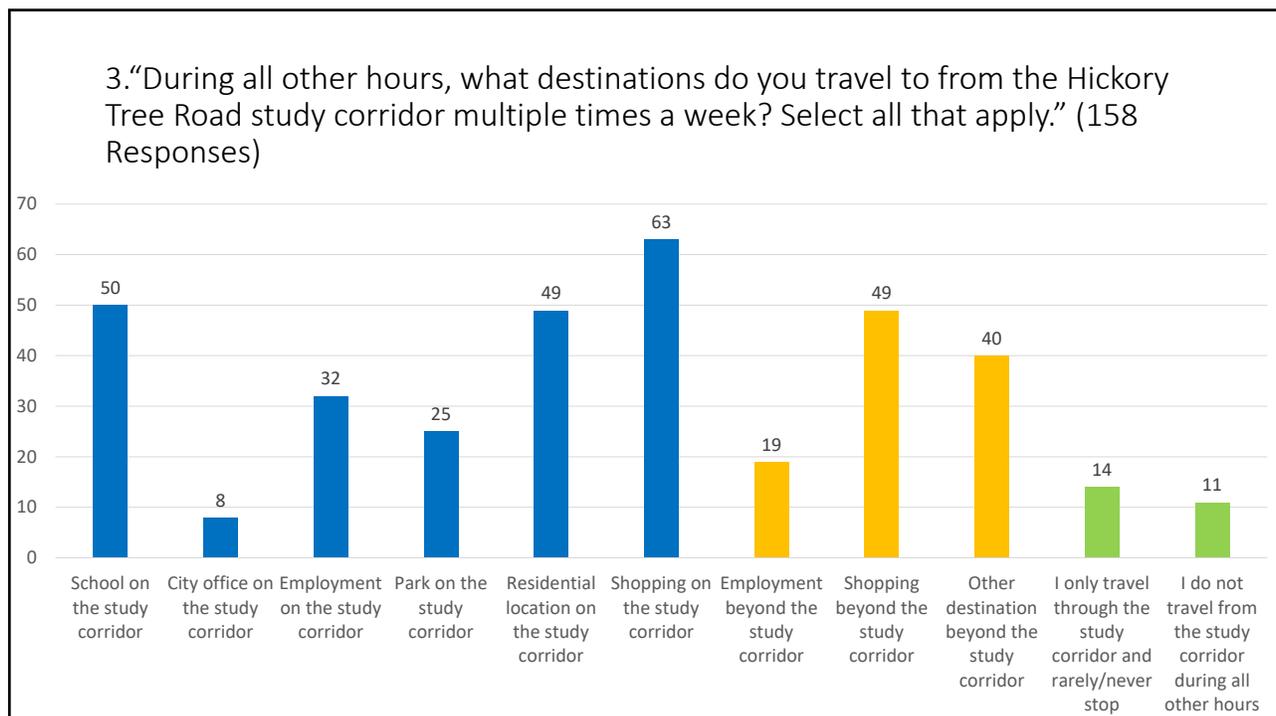
1



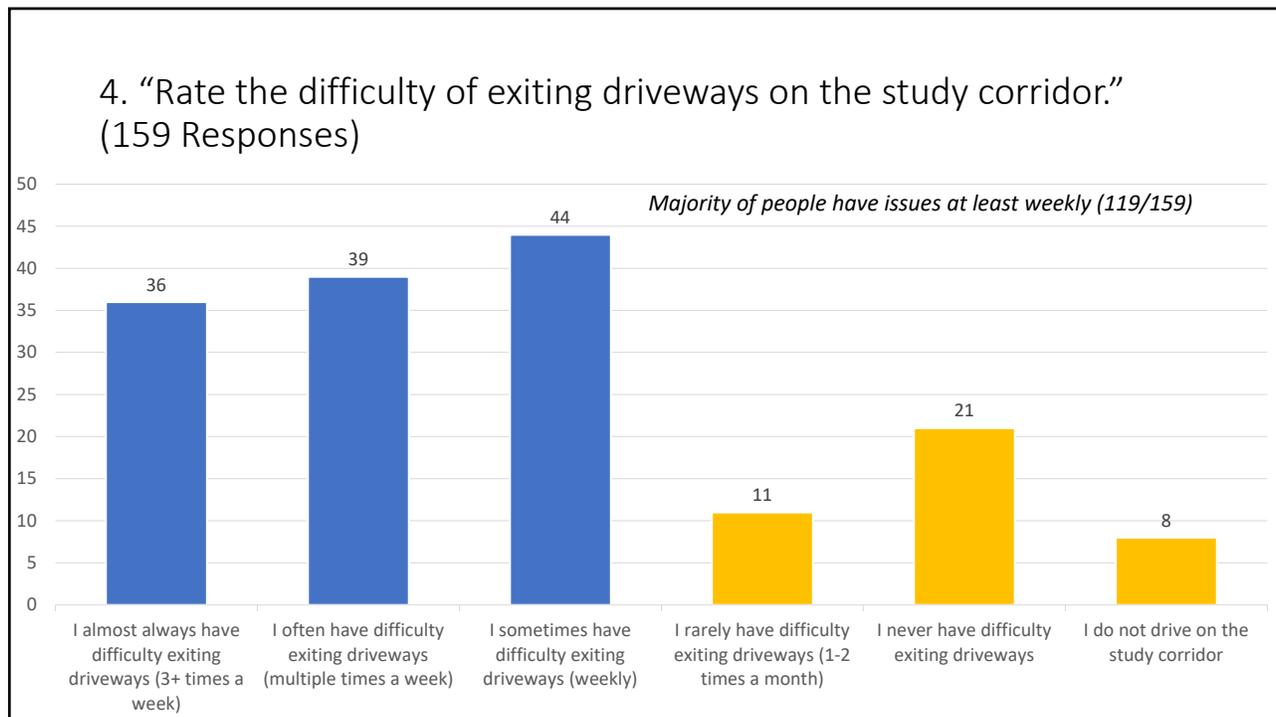
2



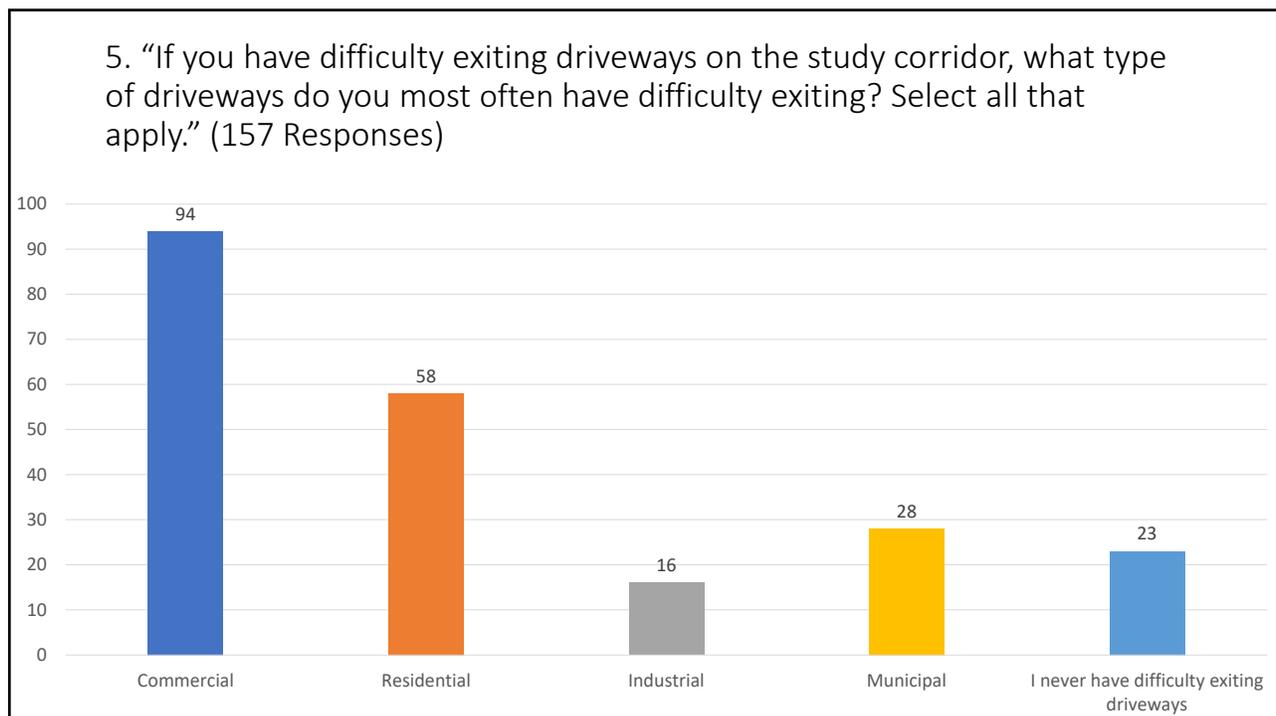
3



4



5



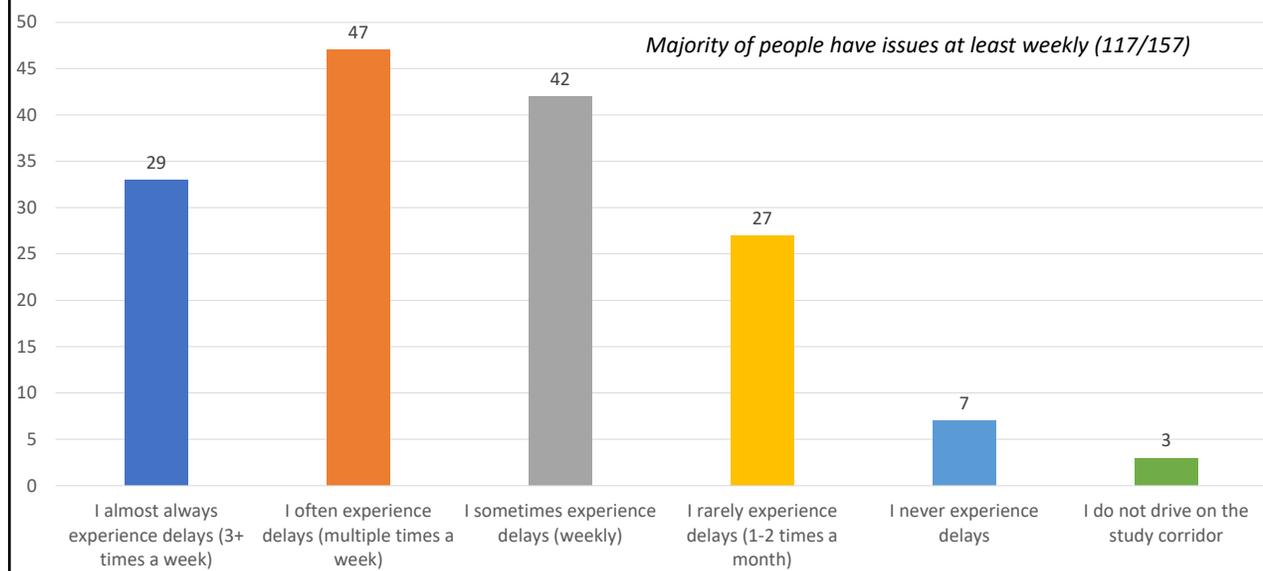
6

6. Are there any specific problem locations where you have difficulty exiting driveways that you would like to share? (Open Ended, 83 Responses)

- Floyd Elementary: 18
- Post Office: 17
- Elam Rd at Hickory Tree Rd: 14
- Quail Dr: 8
- Binford Supply: 6
- El Molinito Tortillería: 4
- McWhorter Elementary: 4
- Lake June Rd at Hickory Tree Rd: 4
- Hickory Tree Rd and Bruton Rd: 2
- Manon Dr: 1
- Nail Salon: 1
- All Left Turns: 1
- Luedeke Park: 1
- Hickory Gardens Alleyway: 1
- Municipal Center: 1

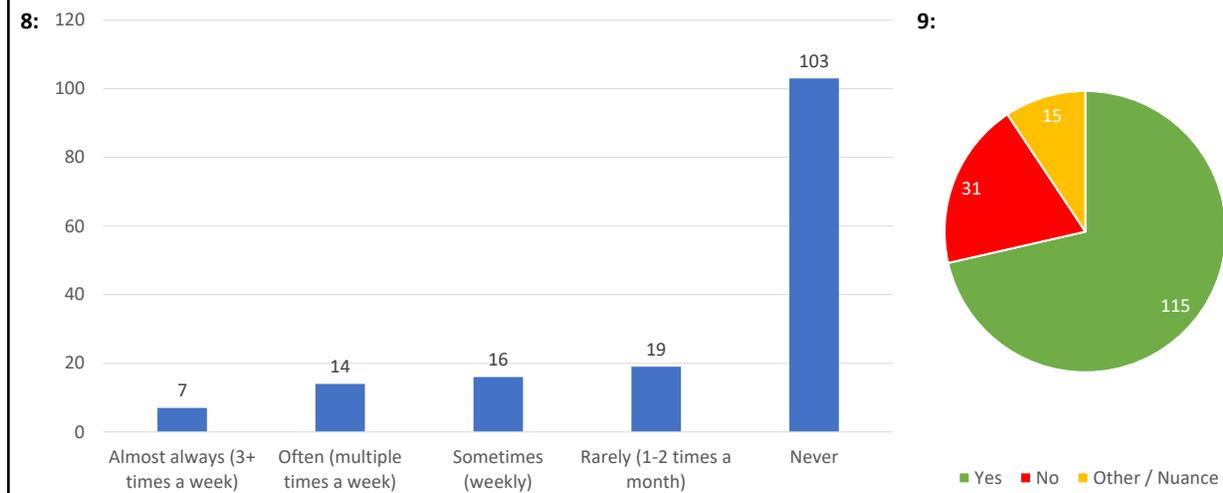
7

7. "How often do you experience delays due to traffic congestion while driving on the study corridor?" (159 Responses)



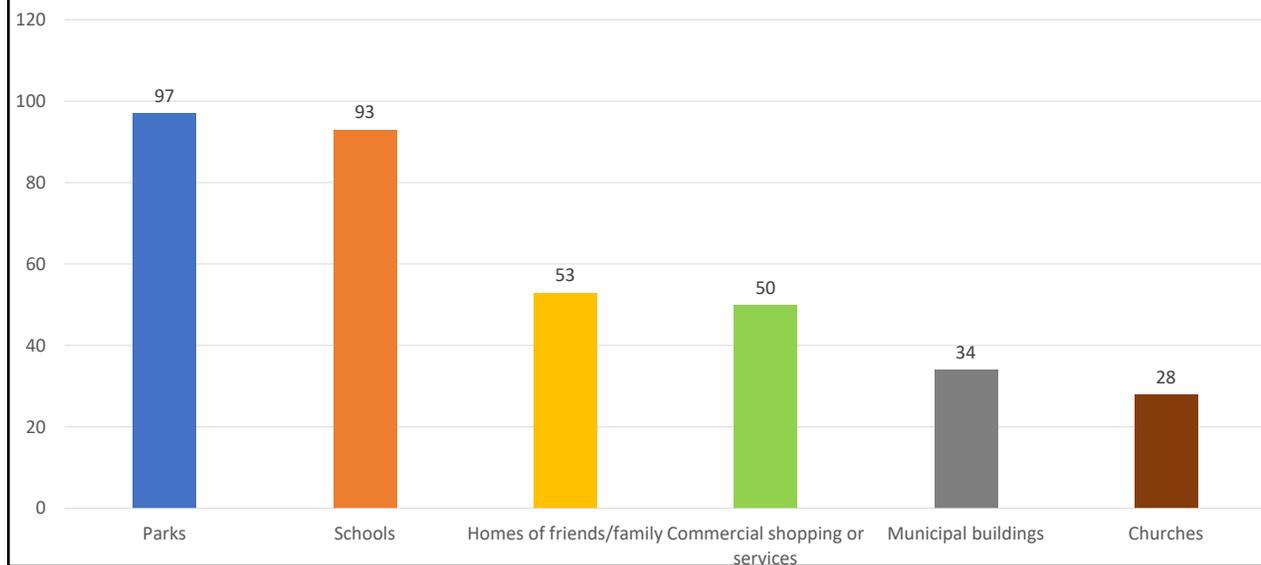
8

8. Do you walk along the study corridor? (159 Responses)  
 9. Would you like to be able to walk, or walk more along the study corridor? (161 Responses)

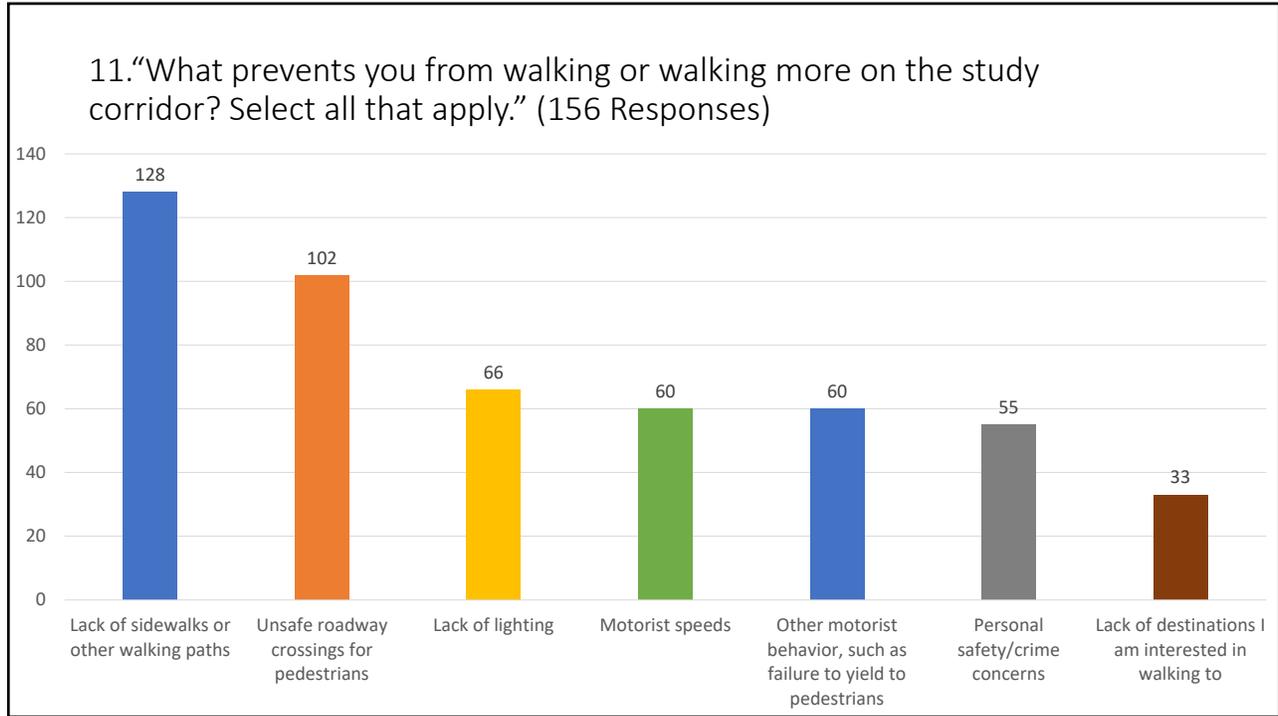


9

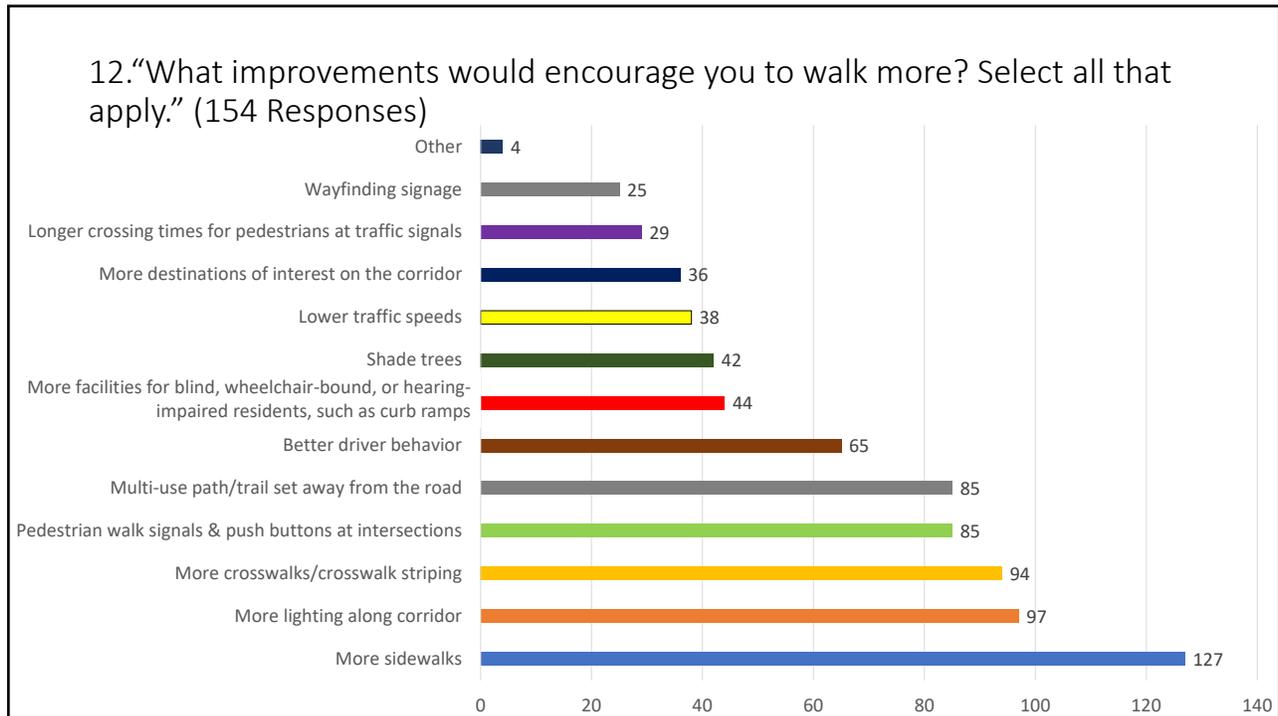
10. "If you answered Yes to the previous question, what specific locations would you like to walk to/from? Select all that apply." (127 Responses)



10



11



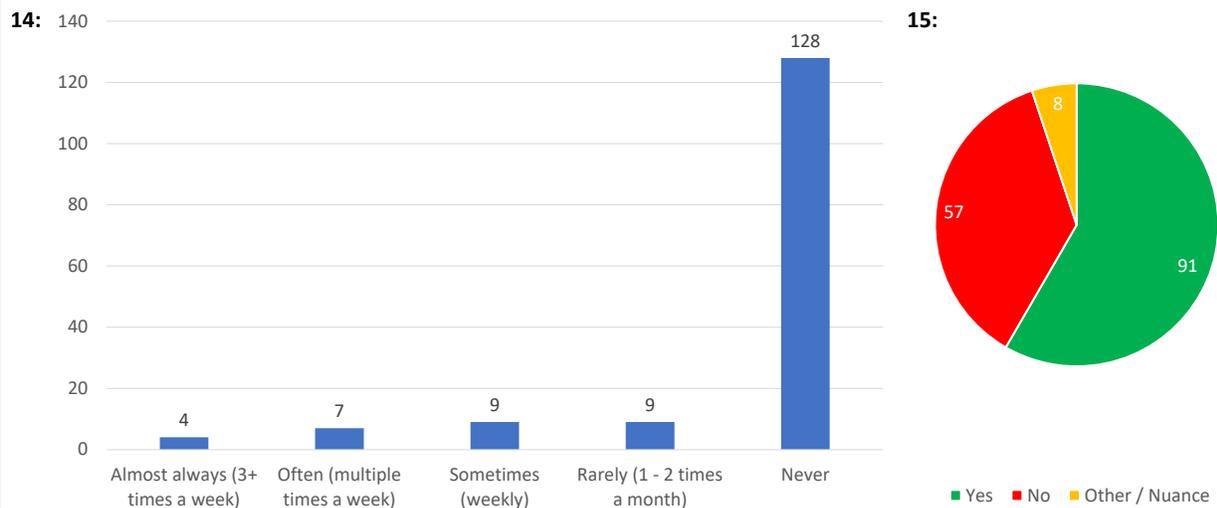
12

13. "Please note any specific intersections or destinations on the study corridor where you would like to see pedestrian access and safety improved." (Open Ended – 83 Responses)

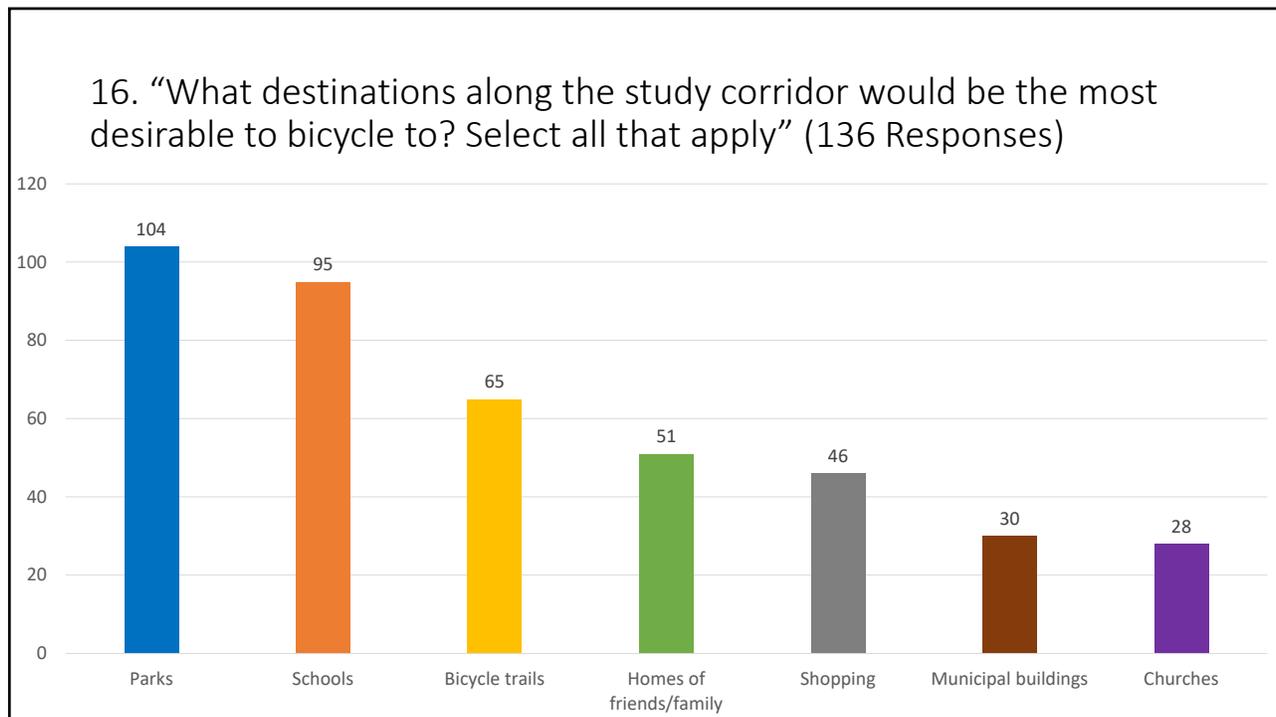
- Schools + Surrounding Locations: 29
- Entire Corridor: 12
- School and Park: 10
- At Quail Dr: 9
- Elam Rd to Lake June Rd: 7
- Elam Rd & Hickory Tree Rd: 6
- Lake June Rd & Hickory Tree Rd: 2
- Post Office: 2
- Shopping Areas: 2
- Asher Ln and Hickory Tree Rd: 2
- Bruton and Hickory Tree Rd: 1
- Hickory Tree Rd and Crumpton Rd: 1
- Municipal Center: 1
- All Crossing Areas: 1

13

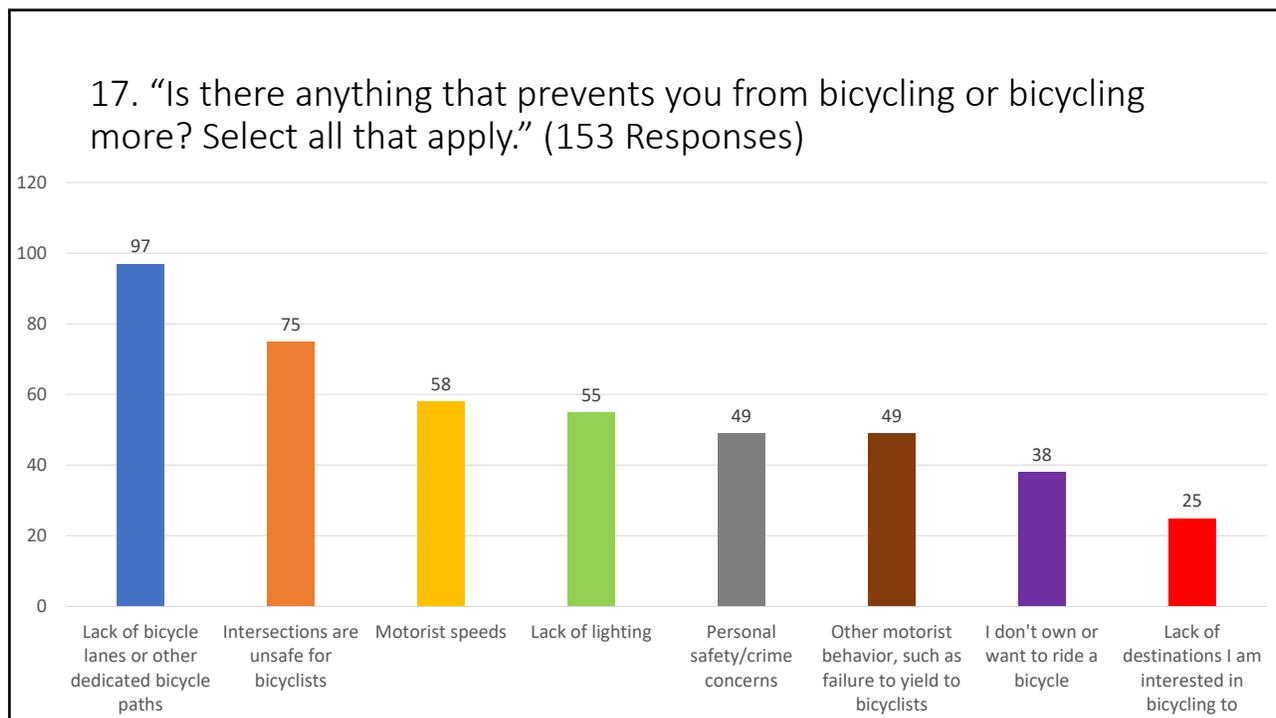
14. Do you bicycle along the study corridor? (157 Responses)  
 15. Would you like to be able to bicycle, or bicycle more along the study corridor? (156 Responses)



14

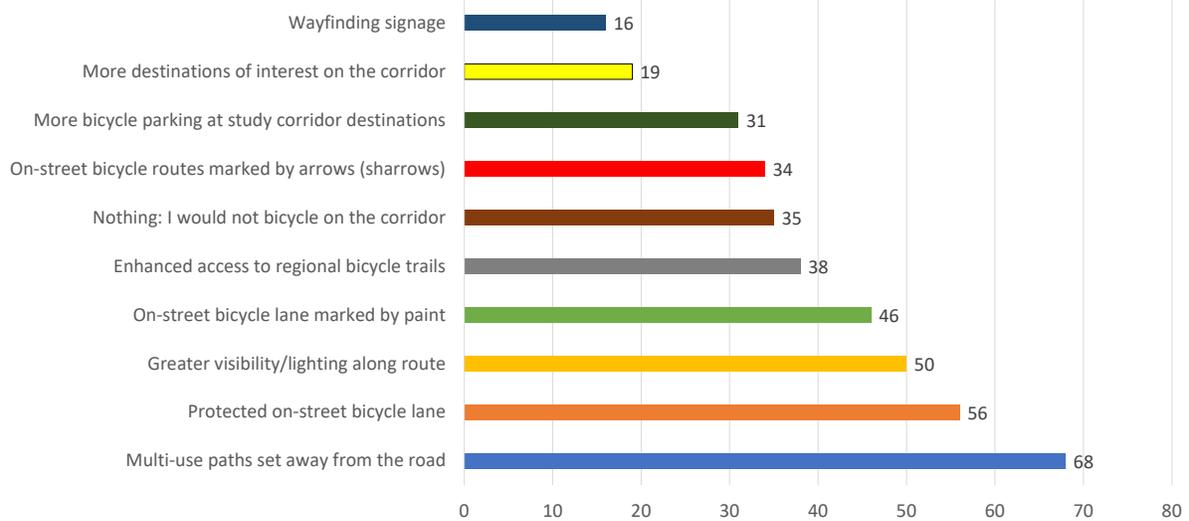


15



16

18. "What improvements would encourage you to bicycle more? Select all that apply." (145 Responses)



17

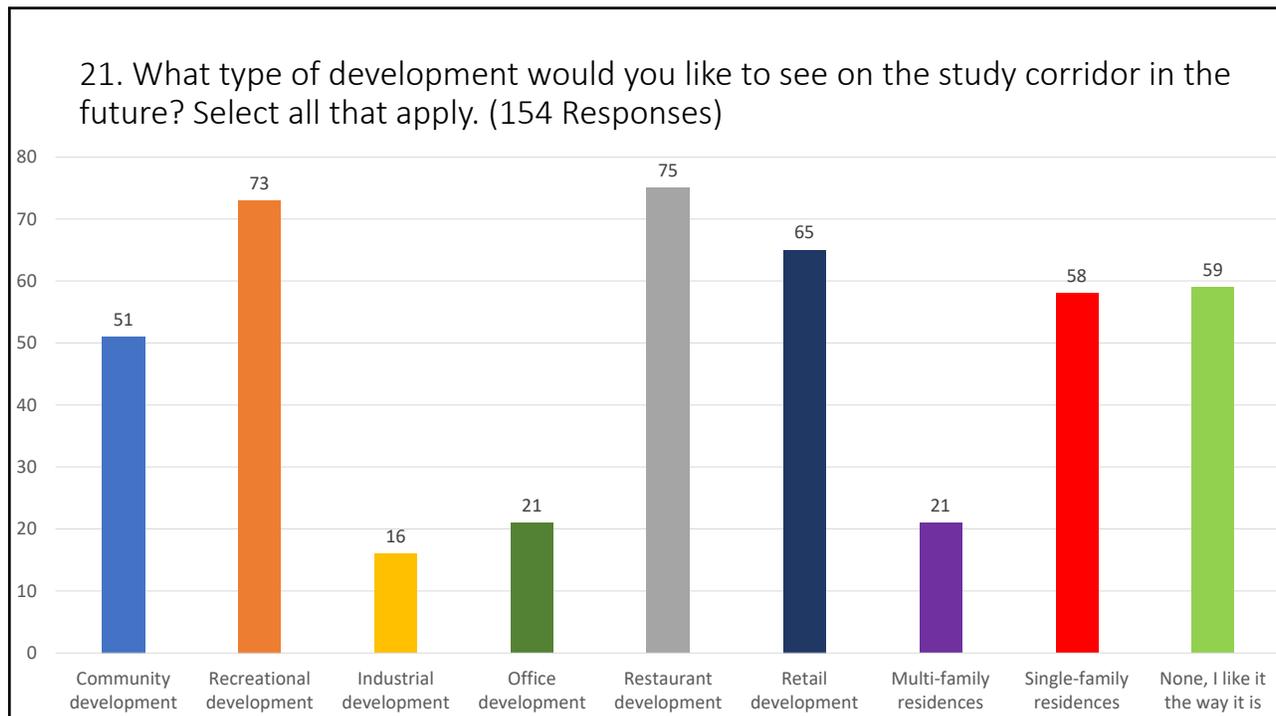
19. "Please note any specific intersections or destinations on the study corridor where you would like to see bicycle access and safety improved." (Open Ended – 60 Responses)

- School Zones: 18
- Entire Corridor: 12
- Park: 9
- Quail Dr: 7
- Elam Rd: 6
- Bruton Rd to Lake June Rd: 2
- Lake June Rd: 2
- Municipal Center: 2
- Eloise/Rodney/Asher Neighborhood: 2
- Post Office: 1
- Lake June Rd to Elam Rd: 1

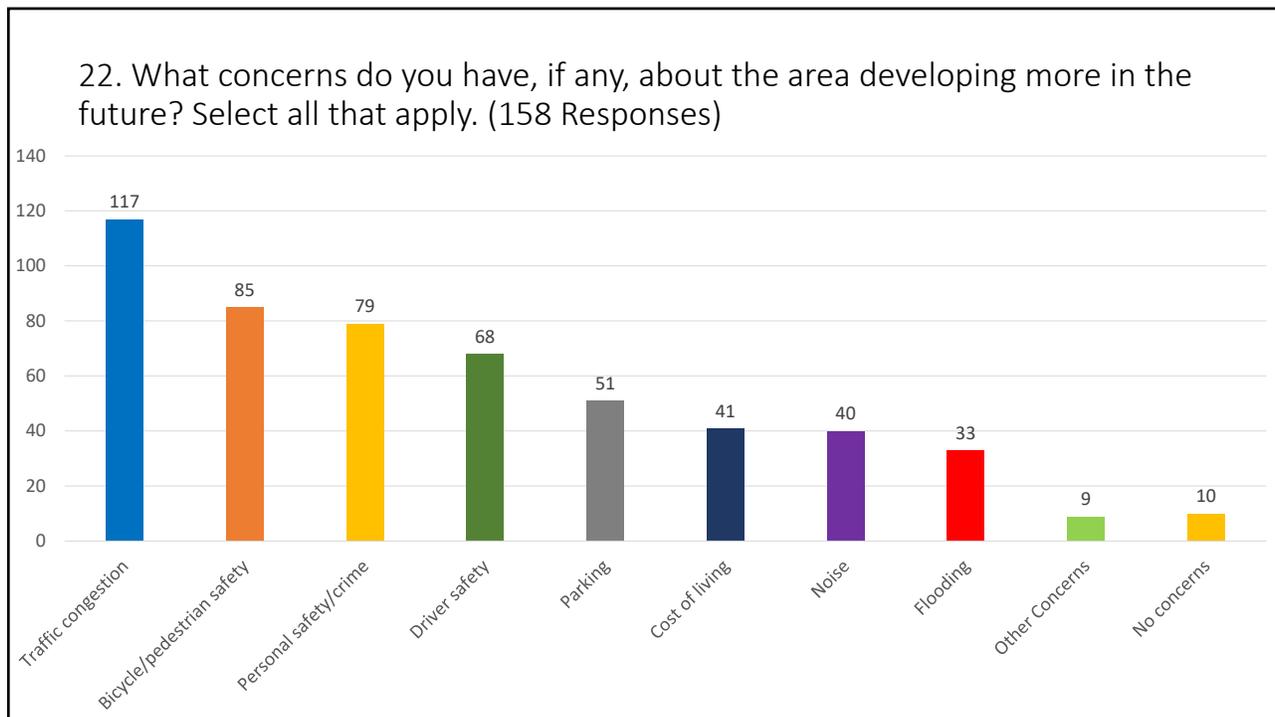
18



19



20



21

23. Please provide any additional commentary about the study corridor below (44 Responses) (1-9)

Need corner ramps for wheelchair.
No more apartments Please
Roads, Roads Roads. A face-lift will immediately improve the appearance of the city and sense of driving security to commuters.
No more apartments or dollar stores or liquor stores or phone stores or fast food stores. Put up a major retail store like Best buy or Target or Nordstrom's. Stop putting stores targeted for poor people in the area. We need more upscale stores in the area so I don't have to keep driving to Frisco and Plano and Allen area. How about a stadium that supports minor league hockey or baseball. A dual purpose stadium like the Allen event center. A retail center like the shops on legacy. All you people focus on are the poor people taking government hand outs. Where's the shopping for people who have money or are at least middle class? Balch Springs is becoming a crime ridden dump because you don't have any high end retail stores for a better class of people to shop. It's becoming the next south Dallas and pleasant Grove with drugs, crime, shootings and theft. Add some more police officers.
to many apartments and traffic in a confined space , flooding area throughout hickory tree , Elam and Peachtree, City does a good job on most things but performs poorly on maintain existing ditches , I live on Robin and it constantly floods from Peachtree Drainage and no one seems to care same for Hickory tree and Elam
Questions don't adequately address the future land use proposed for the Hickory Cree corridor.
No more apartments please
When is this happening?
I hope something comes from this survey. Our kids need safe routes to schools and it's not there along hickory tree. The roads are horrible they were in bad condition before the winter storm and now it's worse!!! Stop patching the street and just put a nice safe long lasting proper street in its place!

22

23. Please provide any additional commentary about the study corridor below (44 Responses) (10-21)

Fix the road from elam to lake june!!! Stop putting laundry mats and self storage facilities.
There are a large number of children walking to/from school. There need to be sidewalks available for their safety.
The fact that there are NO sidewalks for our kids is awful!!!! We need sidewalks and more safety around FLOYD!
Safety bu Floyd Elementary
more precaution signs, bicycle trail , lighting
I would please like a sidewalk.
our children need safe walking sidewalks along the road
Can't wait to see it ready!!
Hickory Tree is long past due to be updated and fixed. I worry for the safety of anyone but especially the kids who must walk daily to school in this area. Many are walking before it is light or at dusk.
Please help us get sidewalks by Floyd Elementary, so that our students can walk home safely.
I think all of these questions are ridiculous. Most of them seem like a given without all the extra complex language. Fix the roads so you don't have to keep fixing them every month. Make an effort to make the roads better and assume the best of people. The amount of questions that had the blame on taxpayers and residents of this area is disturbing. This is coming from a very young resident. I know a lot of terms are coming to an end this year get it together or get out.
We need safer roads for pedestrians who travel this route. Possibly a light by Quail, as I have witnessed several cars pass stop sign or not completely stop when turning.

23

23. Please provide any additional commentary about the study corridor below (44 Responses) (23-33)

That the street is really bad and we do need sidewalks for are pedestrians and are safety.
The road is in terrible shape. Walking and biking is nice but being able to drive safely should be the priority.
Could have a lot of potential for citizens if properly planned
I've lived on Crumpton Rd all my life and I've always had troubles as a kid walking from place to place mainly due to lack of sidewalks and also safety reasons. There's been plenty of times something almost happened to me just trying to walk home. Now that I'm older I'd love to see more restaurants, retail, and homes. If I could I would love to grow my family in Balch Springs but I'd only do that if I knew my kids will be safe & not go through what I have.
Please address the situation of cars blocking the right of way traffic when picking up their kids at McWhorter Elementary School!!!!
Presently, the road in that area is too narrow for the amount of current traffic received and it needs to be (re)paved.
Hickory Tree Road is AWFUL.
Hickory Tree Rd. is absolutely the most awful street. It needs to be repaved all the way down from Elam to Bruton. It is very hard on vehicles not to mention no one wants to drive down it because of the pot holes. It needs to be repaved properly and not just patched. Those nice apartments were put in and you cant even drive in front of them its so bad. I would not want to live there.
Bad road conditions on Hickory Tree, bad lighting and no sidewalks
STREET CONDITIONS ARE HORRIBLE!!!! The streets need to be paved properly, not filled with gravel. Sidewalks are extremely necessary. It is more residential than commercial and there are no safe ways to walk and/or cross the streets.
When are you gonna make us sell our home to you the investors are very insulting to you

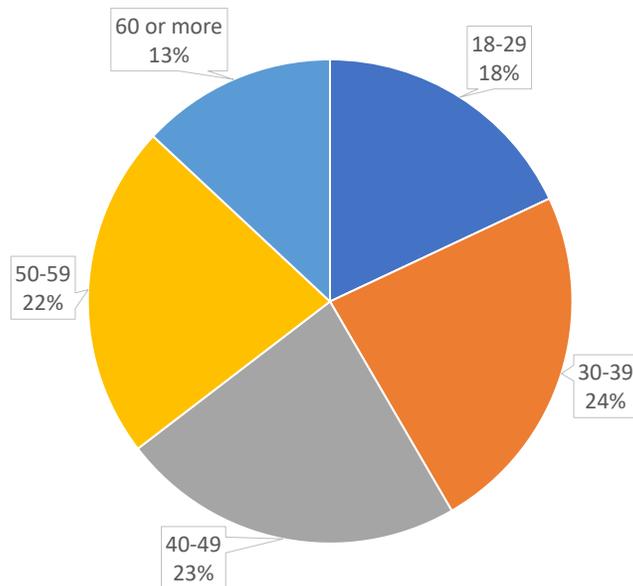
24

23. Please provide any additional commentary about the study corridor below (44 Responses) (34-44)

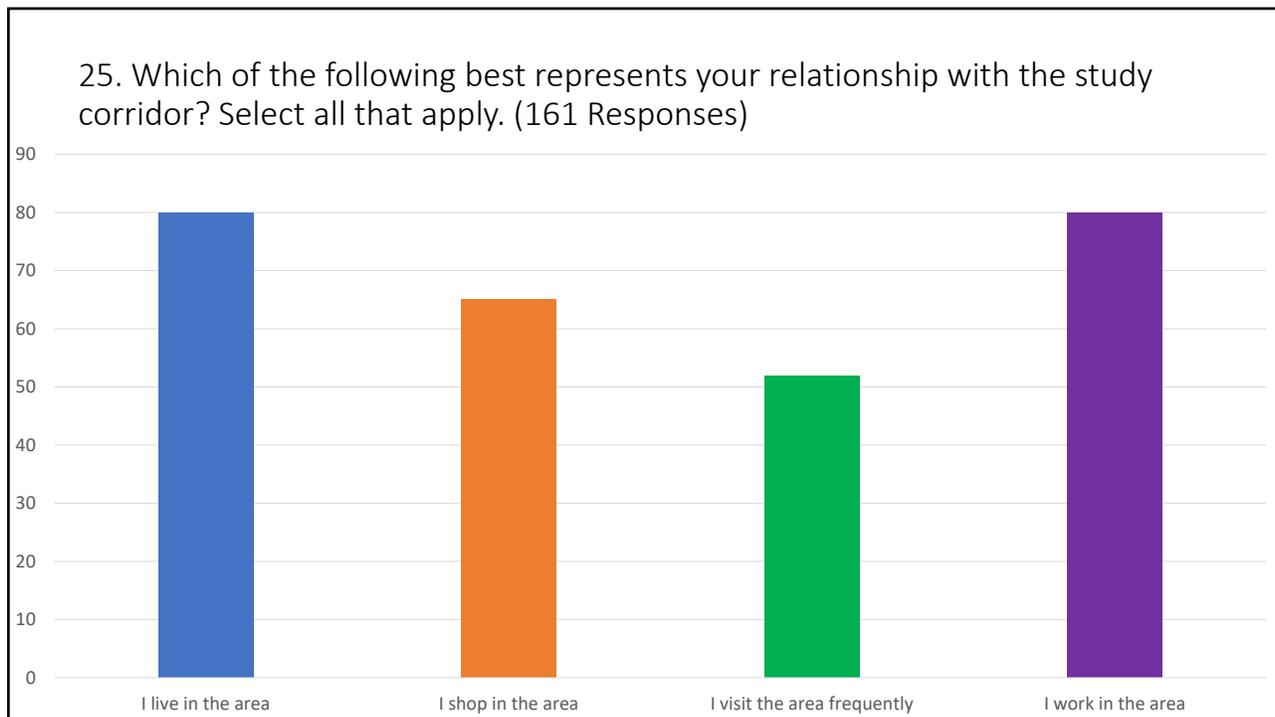
POTHOLE FREE
Please address safety and roads in areas adjacent to corridor.
I feel that no additional businesses should be brought to Balch Springs, until all the main streets are fixed (Elam, Lake June, Hickory Tree, Peach Tree, and Pioneer. It is an embarrassment to the City.
I helped a lady get out of the ditch in front of my house who was run off the roadside by a truck driver. She was on a motorized scooter/seat. She should have been on the other side of the road where there is a sidewalk in front of the school.
I am concerned about access to businesses and loss of land by expanding the ROW for paths that will not be used regularly.
Please leave the way it is.
Please do not take the parking away from Binford supply, this would be a major blow to our employees
I would like the road to be even and level. The holes and cracks in the road are very uncomfortable to travel on, as well as creating a hazard for drivers. I would like the road to be made more efficient for motorists, with little concern to pedestrians or bicyclists.
No more apartments
This area is an industrial/commercial corridor. The roads need to be improved to handle the traffic flow. The tax dollars collected by the city from existing Industrial/Commercial businesses pay for these needed improvements. Please do not ignore these revenues. Work out a plan for all. And focus on a safer environment.
This area is an industrial/commercial corridor. The roads need to be improved to handle the traffic flow. The tax dollars collected by the city from existing Industrial/Commercial businesses pay for these needed improvements. Please do not ignore these revenues. Work out a plan for all. And focus on a safer environment.
More access to parking. Need to improve roads so it does not look and drive like a third world country. The roads are in such bad shape. The attempts to patch it are done poorly.
lets get it done right for safety and the community.

25

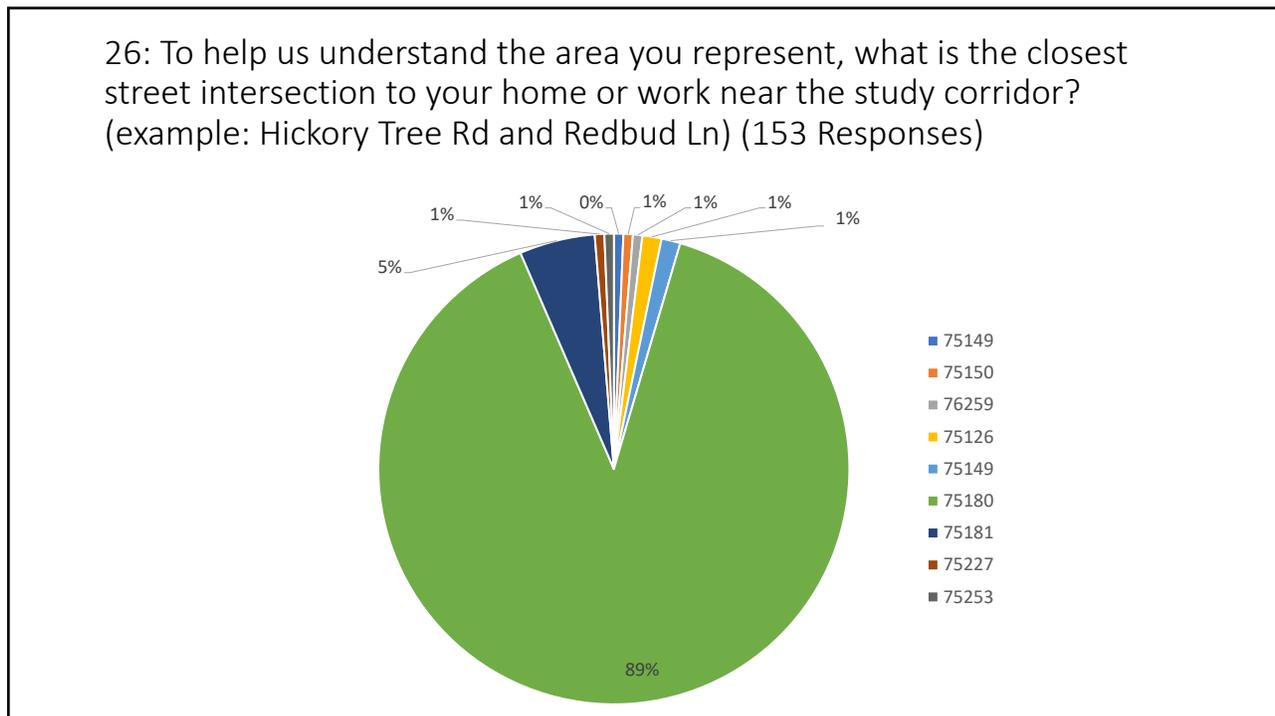
24. What is your age? (161 Responses)



26



27



28

27: To help us understand the area you represent, what is the closest street intersection to your home or work near the study corridor? (example: Hickory Tree Rd and Redbud Ln) (141 Responses)

**22 Responses:**

- Quail Dr and Hickory Tree Rd

**19 Responses:**

- Elam Rd and Hickory Tree Rd
- Lake June Rd and Hickory Tree Rd

**15 Responses:**

- Hickory Tree Rd

**8 Responses:**

- Terry Ln and Hickory Tree Rd

**6 Responses:**

- Hayes Ln and Hickory Tree Rd
- Asher Ln and Hickory Tree Rd
- Canfa Dr and Hickory Tree Rd

**4 Responses:**

- Bruton Rd and Hickory Tree Rd
- Seagoville Rd

**3 Responses**

- Belt Line Rd
- Shepherd Ln and Elam Rd
- Peachtree Rd and Elam Rd

**2 Responses**

- Floyd Elementary
- Edgemont Dr and Hickory Tree Rd
- Eloise Dr and Hickory Tree Rd
- Mayes Ln and Hickory Tree Rd
- Marriott Ave and Hickory Tree Rd

**1 Response**

- Crumpton Rd and Hickory Tree Rd
- Badger Dr and Hickory Tree Rd
- Arrowdell Dr
- Forestdale Ln and Wildwood Ln

# Meeting Minutes

Subject	Balch Springs Hickory Tree Road Planning Study	Date	6/29/2021
Facilitator	Shawn Conrad	Time	1:00 PM
Location	Zoom	Recorded by	Erin Curry
Attendees	Shawn Conrad, Erin Curry (NCTCOG); Chris Dyser, William Freeman, Suzy Cluse, Brad Harris, Mark Maret (City of Balch Springs); Alan McNeil, Maher Ghanayem, Rachael Twiggs (TxDOT); Jonathan Toffer, Micah Baker, Alberta Blair (Dallas County); Angel Rivera, James Gadson (Mesquite ISD); Wes McClure, John Mears, Eric Gallt (City of Mesquite); Kim Britton (STAR Transit)		

Meeting Purpose	Balch Springs Technical Stakeholder Meeting
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## Discussion Items

1. The North Central Texas Council of Governments (NCTCOG) staff are developing a roadway improvement planning study for Hickory Tree Road from Bruton Road to Elam Road, in collaboration with the City of Balch Springs. The goals of the plan are to develop context-sensitive recommendations for the corridor, enhance the bicycle/pedestrian experience along the corridor, connect key amenities and services along the corridor, and facilitate economic opportunity. NCTCOG staff discussed the project background, existing conditions and data collection, major considerations, and preliminary high-level recommendations on the corridor, including the cross-section recommendation of a three-lane roadway with a center turn lane, pedestrian refuge islands at select locations, sidewalks, and a shared-use path. **This preliminary recommendation would require 70' of right-of-way (ROW), expanding from the current 60' of ROW.**
2. Wes McClure discussed that during the school site visit conducted on May 4<sup>th</sup>, 2021, the McWhorter Elementary School principal had mentioned that students dismiss from different areas of the building, with some walking south or north on Hickory Tree Road, and some walking through the park behind the school that connects to the neighborhood to the south. He said that there could be a good opportunity to strengthen the connection of the park with the adjoining neighborhood via a sidewalk or path so students could avoid walking south on Hickory Tree Road.
3. Angel Rivera asked about the project schedule. Balch Springs staff said that they are looking at Fiscal Year (FY) 22 for the design process, ROW acquisition in FY 23, utility improvements in FY24 and construction in FY 25. There would be no impacts for this coming school year, but they would continue to keep Mesquite ISD informed. Angel Rivera will share contact information for the new Floyd Elementary School principal with Balch Springs and NCTCOG staff.
4. James Gadson asked if the slides presented would be provided. NCTCOG staff informed the group that the slides would be posted to the NCTCOG website at [www.nctcog.org/landuseplanning](http://www.nctcog.org/landuseplanning).



McWhorter Elementary

MCWHORTER

SAVAGE

EVERGREEN

POPLAR

SPRING LAKE

HICKORY TREE

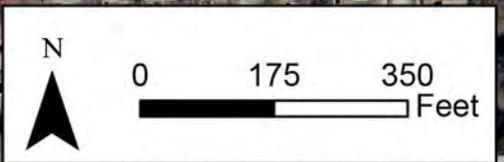
WOODCREST

MOUNT PLEASANT

PYRAMID

NAROB

SYCAMORE GROVE



## Balch Springs Hickory Tree Road Planning Study Technical Stakeholder Meeting

6/29/21

Appendix 10: Stakeholders Technical Powerpoint

1

## Project Background

2

### Milestones to Date

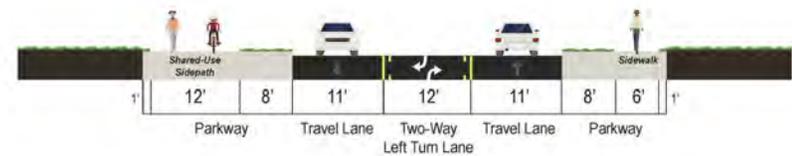
- May 2020: City submitted funding proposal to NCTCOG
- June 2020: RTC approved corridor planning study to be conducted by NCTCOG staff to develop context-sensitive corridor plan facilitating economic growth
  - Elam Road to Bruton Road
- April 2021: RTC approved COVID Round 4 funding award for Phase 1 Hickory Tree Road construction: Elam Road to Lake June
  - \$13.5M Total Awarded: \$8.2M Federal / \$5.3M Local (County) / 260K TDCs
  - COG staff funding used to start planning work and the \$500 K moved to design
- Anticipated FY 22-25: Engineering, Right of Way, Utilities, & Construction

3

3

### City Initial Funding Request

- Widen two-lane road to three-lane with continuous center turn lane
- Wide shared-use sidepath and sidewalks with buffers
- Right-of-Way needed: 70'
- City is prioritizing southern segment (Elam – Lake June)

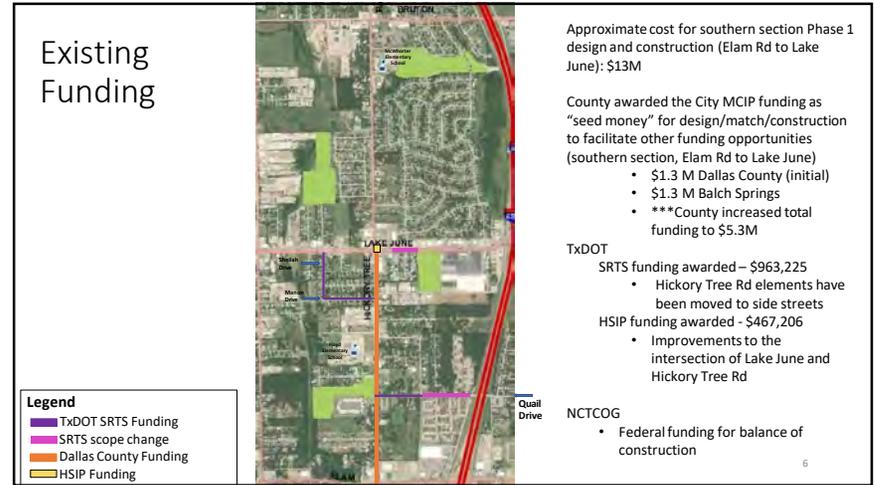


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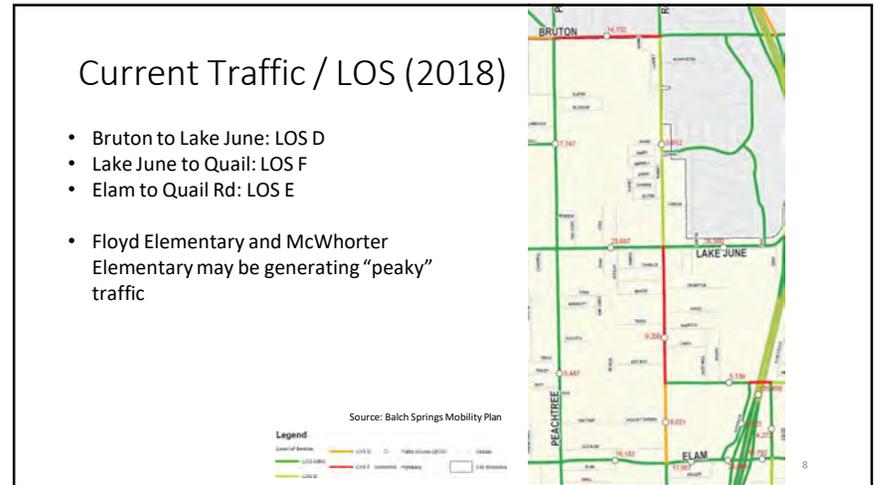
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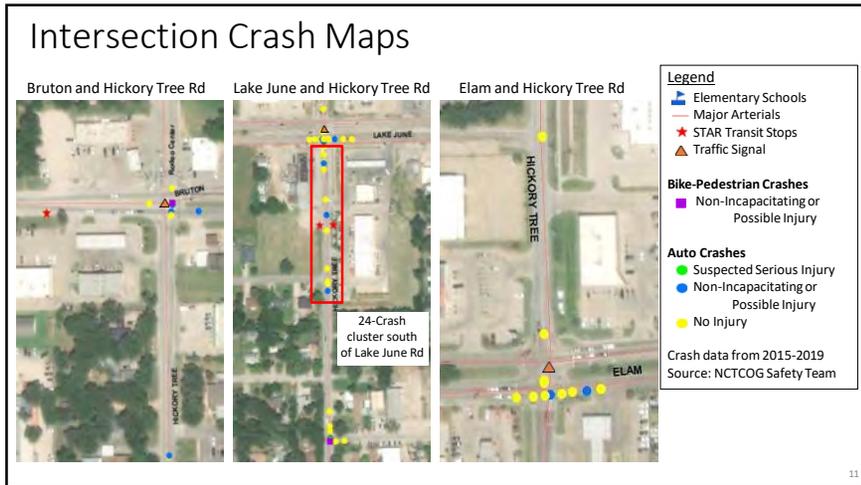
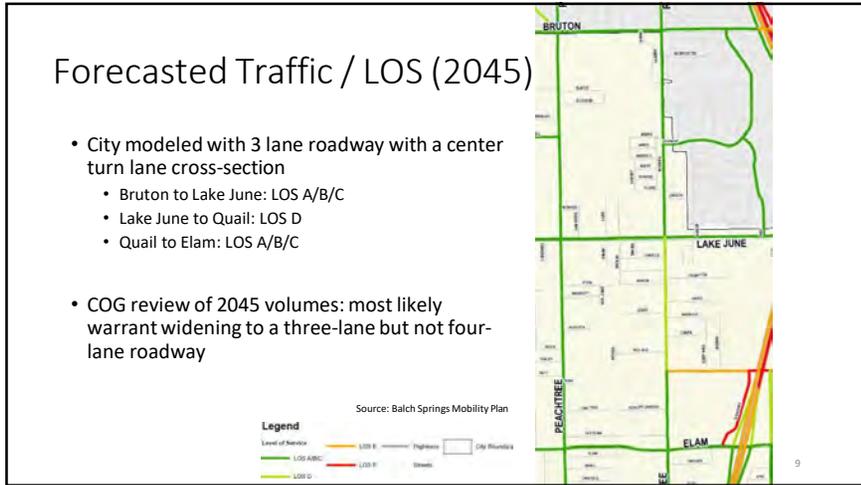
6

## Data Collection / Existing Conditions

7



8



### Walk Audit With City of Balch Springs: 12/3/20

- Findings:
  - Pedestrian desire is evident in areas sidewalks do not exist
  - Many challenges for less mobile pedestrians to walk safely outside of the travel lanes:
    - Drainage ditches, pavement cracking, water lines, trash cans, mailboxes, litter and debris along the road
  - Crosswalks and road paint were very faded
  - Drivers were seen speeding, and few gave space to pass pedestrians safely

### School Site Visit: McWhorter Elementary 5/4/21

Observations:

- Students in grades K-2 with no older siblings are picked up in front driveway along Hickory Tree Road
- Back-up from driveway queuing overflow on Hickory Tree Road peaked 3:04-3:10 (3:05 dismissal)
- Additional back-up on Hickory Tree Road was caused by cars attempting to turn onto McWhorter Dr for back driveway pickup
- Students walking southbound on Hickory Tree walk in small grassy area along roadway to avoid drainage ditch



13

### McWhorter Elementary: Congestion Mapping



14

### School Site Visit: Floyd Elementary 5/6/21

- Back ups on Hickory Tree Rd caused by crossing guard stoppages to let children cross
  - Crossing Locations: Terry Dr & Southern driveway near Canfa Dr
  - Most students crossed at the southern driveway to walk down Canfa Dr to the townhomes on Quail.
- Walkers walked along the southern driveway and to the sidewalk to exit the school
- Cars waiting to turn from the driveway backed up to the school building.



15

### Floyd Elementary: Congestion Mapping



16

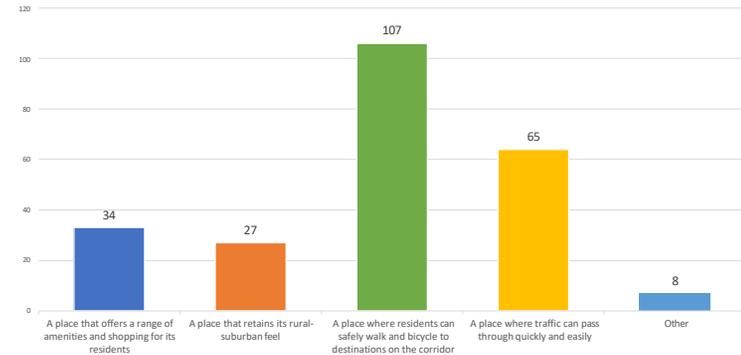
## Online Survey

- Live from February 2021 onward (expected close date is September 2021)
- Hosted on Balch Springs' website
  - <http://www.cityofbalchsprings.com/443/Hickory-Tree-Rd-Survey>
- Questions about travel modes on study corridor, safety concerns, and future visions for the corridor



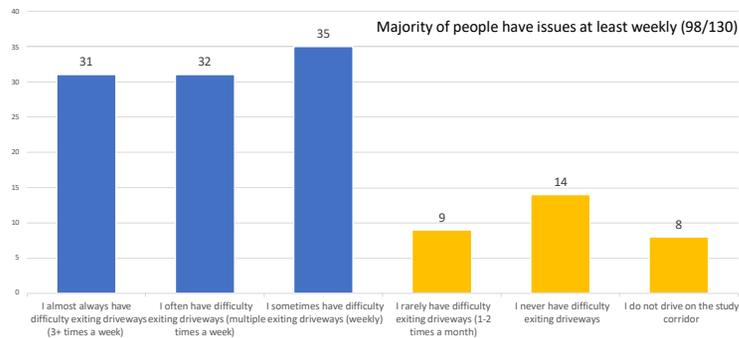
17

## Preliminary Survey Results: "What is your vision for the corridor study area in the future? Select all that apply." (132 Responses)



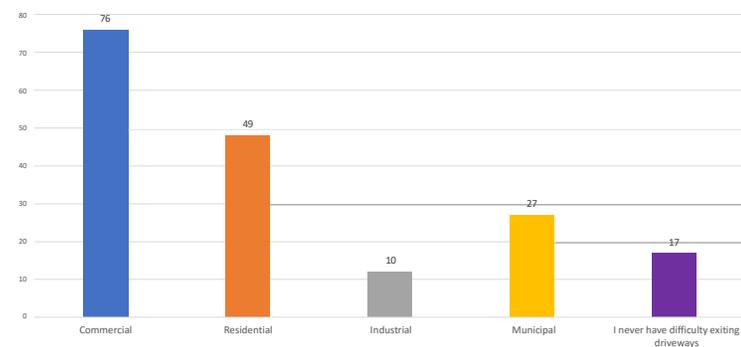
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## Preliminary Survey Results: "Rate the difficulty of exiting driveways on the study corridor." (130 Responses)

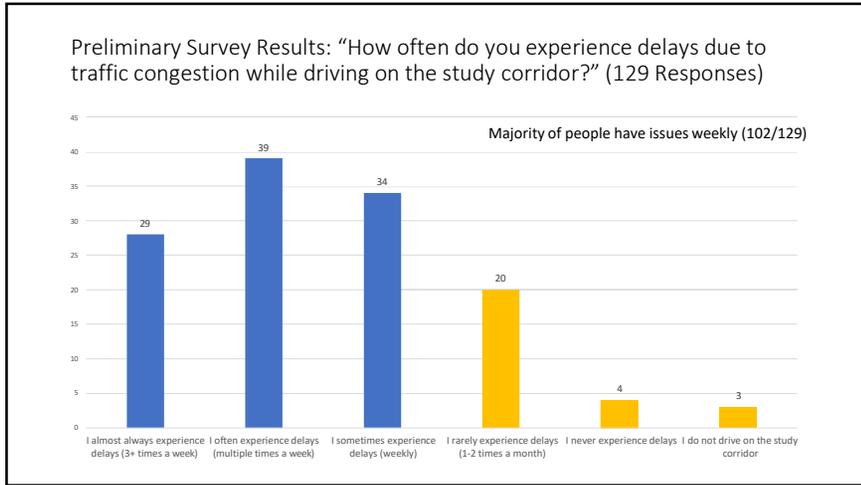


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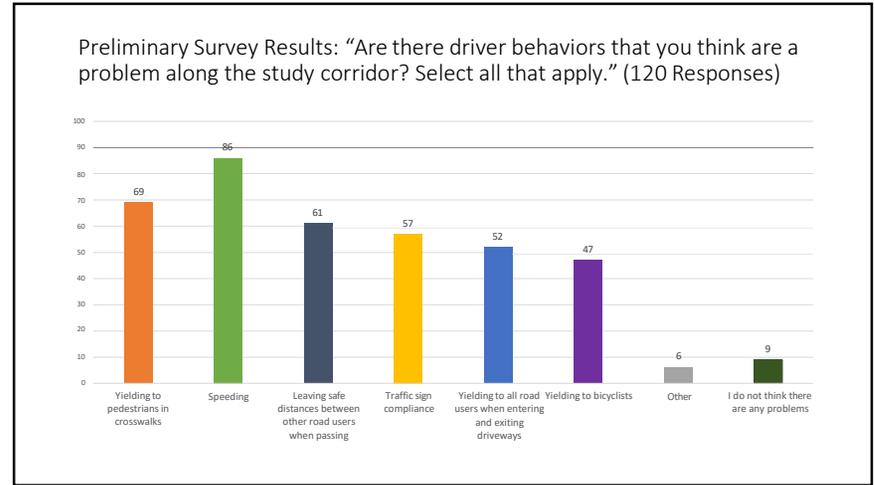
## Preliminary Survey Results: "If you have difficulty exiting driveways on the study corridor, what type of driveways do you most often have difficulty exiting? Select all that apply." (127 Responses)



20



21



22

Major Considerations

23

Utilities

Many areas with above and below ground utilities will need to be addressed.

Examples include:

- Fiber optic
- Utility poles
- Drainage ditches
- Gas lines

24

## Access Management

- Numerous residential, some commercial and municipal driveways along entire corridor
- Congestion management from turn queueing
- Maintaining access to driveways/businesses

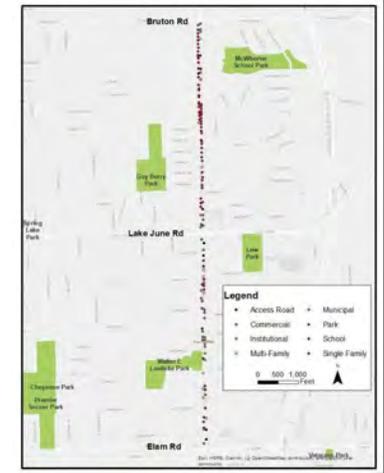


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## Access Management

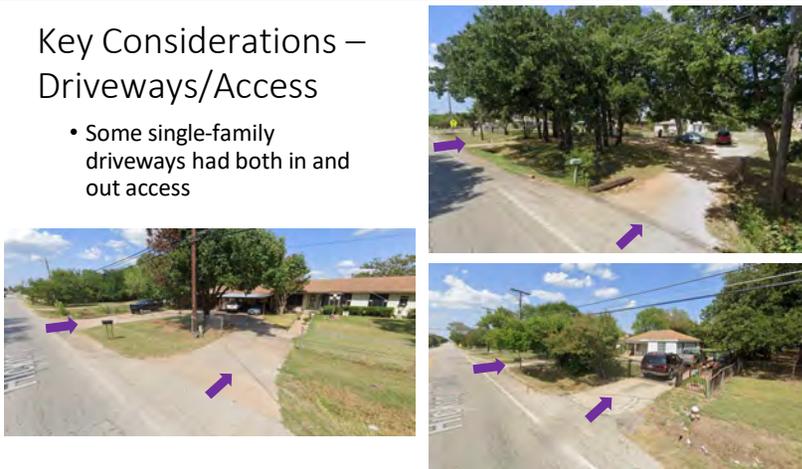
- 121 Driveways on corridor
  - 66 Single Family, 21 Commercial
- 98/130 survey respondents reported difficulty exiting driveways at least once a week
  - 31/130: Almost Always (3+ times/week)
  - 32/130: Often (multiple times/week)
  - 35/130: Sometimes (weekly)
- Commercial driveways were the most challenging (76/127), followed by residential (48/127)



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## Key Considerations – Driveways/Access

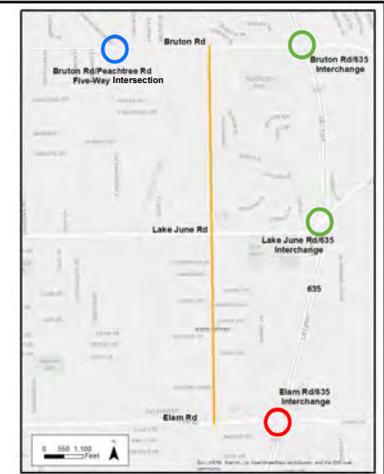
- Some single-family driveways had both in and out access



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## Key Considerations – Pass-Through Traffic

- Hickory Tree is used for cut-through traffic by people avoiding the Elam Road/635 interchange.
- Drivers use Hickory Tree road to access 635 to the north or south of Elam Rd
- Drivers use Hickory Tree road to avoid a five-way intersection/signal at Bruton/Peachtree



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# Preliminary Recommendations

29

## Corridor Cross-Section: Three-lane roadway with center turn lane and pedestrian refuge islands at key crossing locations

Major Considerations:	Why:
<ul style="list-style-type: none"> <li>• Access management/driveways</li> <li>• Traffic volumes/LOS</li> <li>• Queuing for pick up/drop-off at schools</li> <li>• Bike/ped safety</li> <li>• Pedestrian crossing treatments</li> </ul>	<ul style="list-style-type: none"> <li>• Improve access to businesses/residences</li> <li>• Improve congestion</li> <li>• Maintain ROW for bike/ped</li> <li>• Improve safety for bike/ped</li> <li>• Future traffic volumes</li> <li>• Similar operational benefits to four-lane roadway</li> </ul>

30

### NCTCOG Recommendation vs Current Cross-Section:

**Recommended:**  
3-Lane Cross-Section with Added Ped Refuges:  
70' ROW

12' Multi-Use Path for bikes and pedestrians + buffer space from roadway

Maintain travel lane widths and add pedestrian refuge island/center turn lane

6' Sidewalk for pedestrians and buffer space from roadway

**Current Cross-Section:**  
2-Lanes with no Bike/Ped Amenities:  
60' ROW

31

### Center Turn Lane

- Allows for left and right driveway exits
- Congestion-causing left turn queuing moved out of travel lane
- Maximizes access to businesses
- Carries similar capacity to four-lane roadway (FHWA)
- Majority of people have issues at least weekly exiting driveways (97/128)

Imagery Provided by Google

32

### Crossing Safety Concepts: Pedestrian Refuge Island

- Key Midblock Crossing Locations to consider:
  - Schools
  - Luedeke Park
  - Other high-traffic crosswalks, as needed
- Center turn lane may be limited near a pedestrian refuge island
- Design considerations:
  - Mid-block vs intersection
  - Landscaping
  - Signalization
  - Signage
- Design and aesthetics for Pedestrian Refuge Islands will be part of discussion for the City-led engineering project



FHWA guidance supports Ped Refuge islands for 3-lane 35 mph

### North Texas Examples: Pedestrian Refuge Island in a Three-Lane Roadway

[Spurwood Dr](#), Carrollton TX



[NW Summercrest Blvd](#), Burleson TX



### Pedestrian Refuge Island Preliminary Placement Recommendations



### Bike/Pedestrian Infrastructure Concepts

- Sidewalks and Shared-use Bike and Pedestrian Path
- Community concern over current configuration's unsafe walking spaces
  - Student safety walking to and from school was a high concern in survey responses
- 107/132 initial respondents to the Community Survey want safe walking and biking infrastructure on Hickory Tree Road

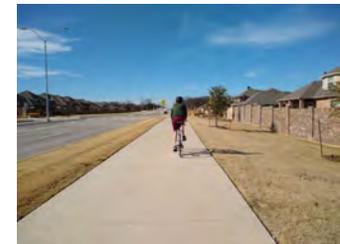
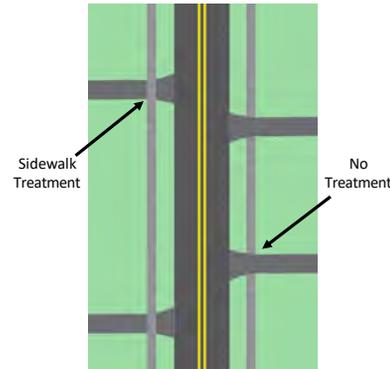


Photo Courtesy of Fort Worth

## Pedestrian Safety Concept: Sidewalk Driveway Treatments

- Sidewalks are paved over driveways to alert drivers to the shared space
- Continuous walking path for pedestrians reduces interruptions in flat pavement
- Benefits pedestrians with limited mobility, wheelchair users, and pedestrians with strollers



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## Crossing Safety Concepts

- Improve visibility of crosswalks in all weather and lighting conditions
- Concepts for all mid-block crosswalks:
  - High Visibility Crosswalk Paint
  - Advance Warning Signs
  - Advance Stop Lines
  - Additional Lighting



Photo Courtesy of Dan Sundstrom

38

## Crossing Safety Concepts: Pedestrian Hybrid Beacon

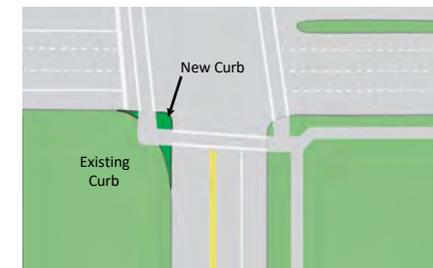
- Beacon activates to temporarily halt traffic to allow pedestrians to cross
- Designed for use on busy roadways at mid-block locations and uncontrolled crossings
- Possible uses include:
  - Schools
  - Parks
  - Any other areas with safety concerns



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## Crossing Safety Concepts: Curb Radius Tightening

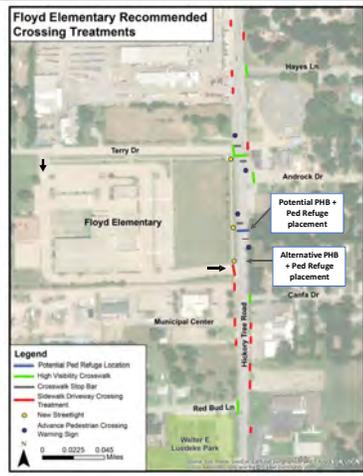
- Shortens crosswalk distance
- Reduces time spent in the roadway
- Slows right turn vehicle speeds and increases visibility of crosswalk and pedestrians
- Possible Locations
  - Hickory Tree Rd & Lake June Rd
  - Hickory Tree Rd & Bruton Rd
  - Hickory Tree Rd & Elam Rd
  - Hickory Tree Rd & Quail Dr



40

### School-Specific Recommendations

- Terry Dr Crosswalk
  - Existing crosswalk crosses Hickory Tree Road in the left turn lane - move to north side of intersection
- Pedestrian Hybrid Beacon
- Sidewalk driveway treatments



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### Commercial Area-Specific Recommendations

- Multi-use path/sidewalk (cross sections)
- Curb extensions or reduced curb radius – Lake June
  - Large/emergency vehicle turning considerations
- Pave sidewalks over driveways to show priority for bikes/pedestrians
- Repaint crosswalks and add high visibility treatments to mid-block locations
- Add additional lighting



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### Residential Area-Specific Recommendations

- Multi-use path/sidewalk (cross sections)
- Curb extensions as needed
- Continue sidewalks over driveways to show priority for bikes/pedestrians
- Crosswalks are high visibility at unsignalized locations on Hickory Tree Road
- Add lighting/advance warning signage at all crosswalk locations



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### Next Steps:

<p>Stakeholder Meetings: 6/29 and 6/30</p>	<p>Public Feedback (Online Public Engagement Opportunity): Expected: August-September 2021</p>	<p>Complete Planning Study Reviews &amp; Revisions: Expected November 2021</p>
<p>Project Design: FY 22 ROW Acquisition: FY 23 Utilities: FY 24 Construction: FY 25</p>	<p>ROW Acquisition Meetings with property owners after final roadway design complete</p>	<p>Construction &amp; Utilities Construction schedule and traffic access discussion to come</p>

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## Questions and Feedback

45

## Discussion Questions

- Are there concerns related to the study corridor that have been brought to you by residents or stakeholders that we may have overlooked?
- Do you have any concerns with the recommendations presented today?
- Are there any barriers that you can identify related to implementing these recommendations?

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## Contact Us



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Erin Curry  
Transportation Planner  
[ECurry@nctcog.org](mailto:ECurry@nctcog.org)

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# Meeting Minutes

Subject	Balch Springs Hickory Tree Road Planning Study	Date	6/29/2021
Facilitator	Shawn Conrad	Time	6:00 pm
Location	Zoom	Recorded by	Erin Curry
Representatives	Shawn Conrad, Erin Curry (NCTCOG); Chris Dyser, William Freeman, Suzy Cluse (Balch Springs)		

Meeting Purpose	Balch Springs Resident Stakeholder Meeting
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## Discussion Items

1. The North Central Texas Council of Governments (NCTCOG) staff are developing a roadway improvement planning study for Hickory Tree Road from Bruton Road to Elam Road, in collaboration with the City of Balch Springs. The goals of the plan are to develop context-sensitive recommendations for the corridor, enhance the bicycle/pedestrian experience along the corridor, connect key amenities and services along the corridor, and facilitate economic opportunity. NCTCOG staff discussed the project background, existing conditions and data collection, major considerations, and preliminary high-level recommendations on the corridor, including the cross-section recommendation of a three-lane roadway with a center turn lane, pedestrian refuge islands at select locations, sidewalks, and a shared-use path. **This preliminary recommendation would require 70' of right-of-way (ROW), expanding from the current 60' ROW.**
2. A resident expressed concern about whether the City would need to take homes as a part of reconstruction. City staff clarified that this is very preliminary, and the project is still in the planning stage. There will be no final decisions on ROW until the engineering and design phase during fiscal year 2022 to determine the final layout of the road. City staff stated that taking homes will not be needed for this project and that most right-of-way issues will be with utilities and creek crossings. City staff also stated that the public will be engaged during the entire process, including ROW acquisition.
3. A resident asked about funding for projects outside of the Hickory Tree Road corridor, specifically around Rodney Lane. City staff said that this meeting is specifically for the Hickory Tree Road corridor, but that they were aware of the road issues within the neighborhood and are working to resolve them.
4. A resident asked if the recommended cross-section of three lanes would be for the extent of the study area. City staff confirmed that was the case, **and that the roadway would need an additional 10' of ROW.** City staff also clarified that project recommendations included a sidewalk on one side of the road and a shared-use path on the other side. The resident additionally asked about what would happen to gas lines and drainage ditches if they were located in the space that the City would need to acquire for ROW. City staff explained that the current drainage ditches would be converted into a curb and gutter drainage system. Any gas lines affected by roadway construction would be relocated, but there would be no change in gas availability to residents.
5. A resident asked if project representatives were coordinating with the City of Mesquite. The City of Balch Springs staff responded that coordination with City of Mesquite staff regarding this project is ongoing.
6. A resident asked about the drainage and water main on the corridor. City staff responded that the water line would be replaced prior to roadway construction and that they are aware of the issues with the current line. They

additionally explained that the roadway would be converted to a curb and gutter drainage system, and the drainage ditches would be removed in favor of underground stormwater storage.

7. A resident asked if there were satellite images available with the proposed cross-section overlaid. NCTCOG staff responded that those were not yet available.

8. A resident asked about parking for businesses that use frontage space in their lots. City staff explained that while ROW space is used as parking in some areas, the businesses that use that space do not own the property. The issue will have to be addressed during design of the project.

9. A resident asked about how congestion would be reduced by adding the center turn lane to the roadway cross-section. NCTCOG staff explained that the center turn lane eliminates traffic congestion that is caused by vehicles that are stopped and waiting to make a left turn, allowing them to wait without blocking traffic. NCTCOG staff also explained that the third lane can increase capacity to almost the level of a four-lane roadway. The three-lane configuration maintains a balance between allowing cars to flow along the roadway and maintaining access to homes and businesses.

10. A resident asked about 18-wheelers on Hickory Tree Road, and enforcement of truck rules. City staff clarified that while Hickory Tree Road is not a truck route, trucks have the right to use the roadway to make direct deliveries; afterward, they must return to the **City's** truck routes using the most direct route possible. City staff said that the police department is monitoring the situation.

11. A resident asked about funding for the project. NCTCOG staff explained that the funding for construction from Elam Road to Lake June Road has been programmed and approved by the Regional Transportation Council and is now in the federal approval process. NCTCOG does not foresee any issues with federal and state approval and expects it to be complete within the next six months.

**Balch Springs**  
**Hickory Tree Road Corridor Planning Study**  
**Resident Stakeholder Meeting**  
 6/29/21

1

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## Meeting Purpose

- The City of Balch Springs is pursuing reconstruction of Hickory Tree Road from Elam Road to Bruton Road to better accommodate bicycle/pedestrian access, traffic, and economic development.
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3

## Project Background

4

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- May 2020: City submitted funding proposal to NCTCOG
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  - Elam Road to Bruton Road
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  - \$13.5M Total: \$8.2M Federal / \$5.3M Local (County) / 260K Regional Transportation Development Credits
  - Anticipated FY 22-25: Engineering, Right of Way, Utilities, & Construction
- Funding partners include NCTCOG, County, TxDOT, and City of Balch Springs

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## Planning Project Goals

- Develop Context-Sensitive Design recommendations for the corridor
  - Design that is meant to fit the environments of the area surrounding it and meet the needs of the community
- Enhance bicycle/pedestrian experience along the study corridor
  - Increase safety for bicyclists and pedestrians
  - Increase comfort
- Connect key amenities and services along the study corridor
  - Schools, Parks, Municipal Buildings, Commercial Areas
- Facilitate economic opportunity along the study corridor

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## Planning Project Limits

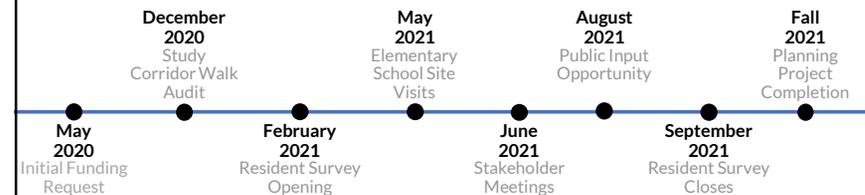
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Corridor length: 2.03 miles



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## Timeline



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# Data Collection / Existing Conditions

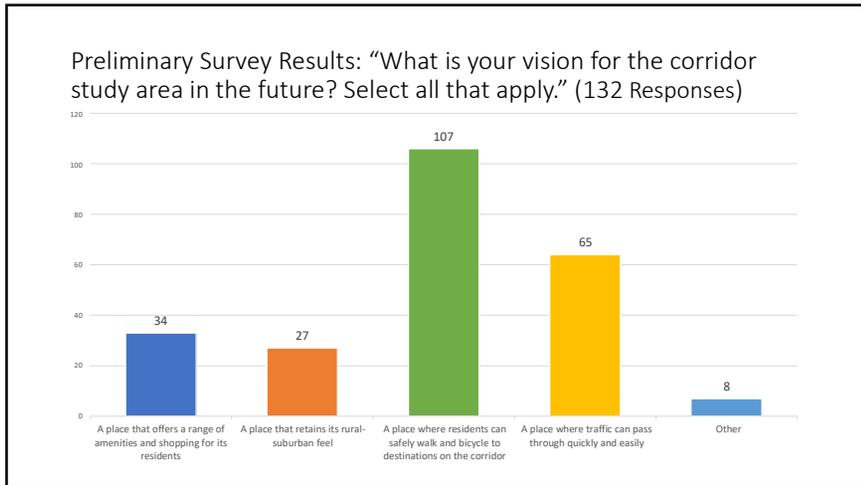
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## Online Survey

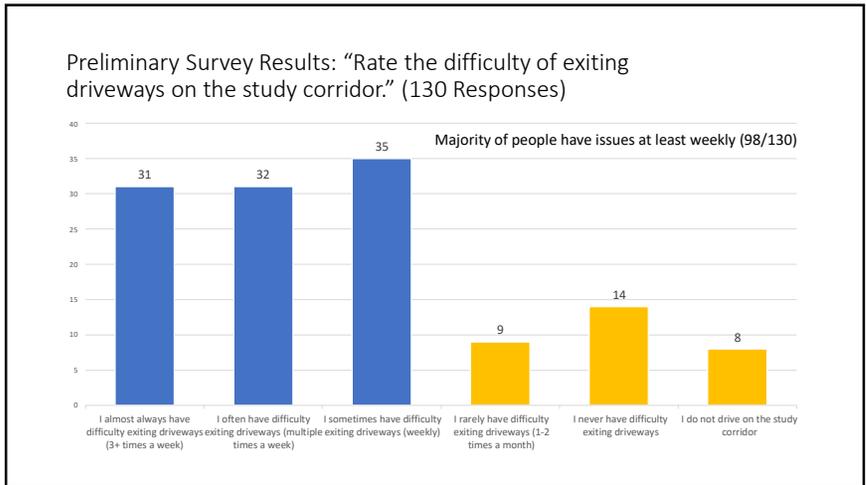
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- Questions about travel modes on study corridor, safety concerns, and future visions for the corridor



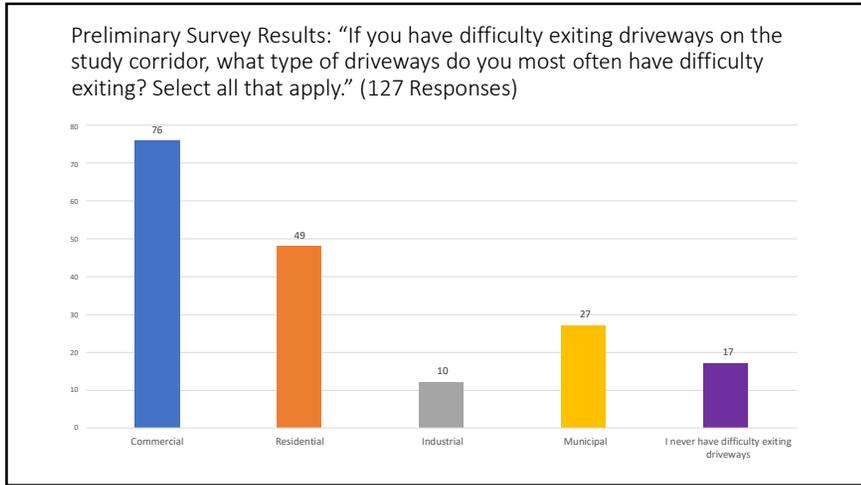
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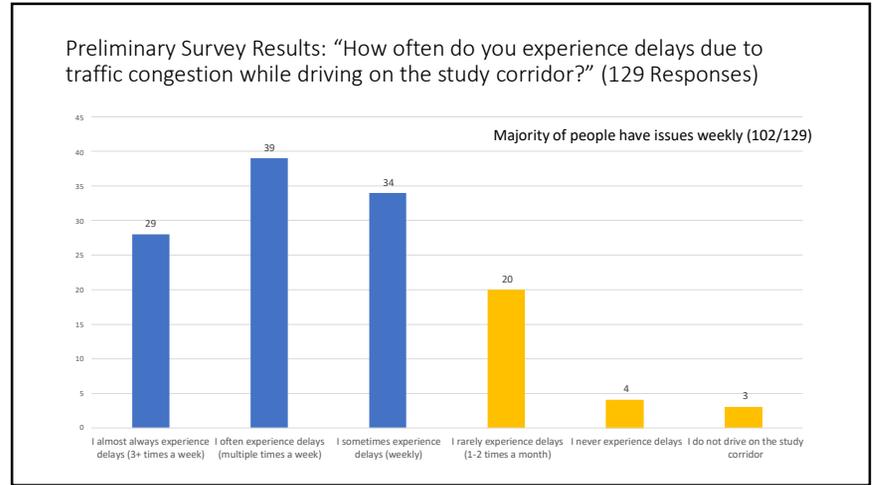
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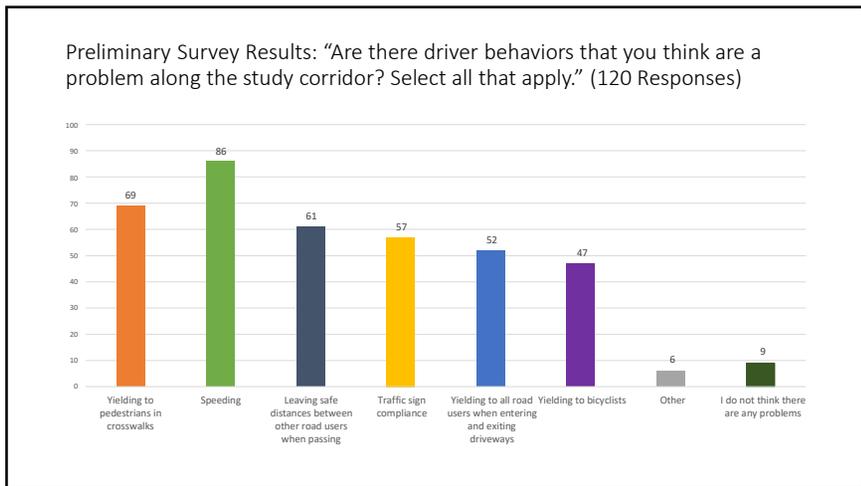
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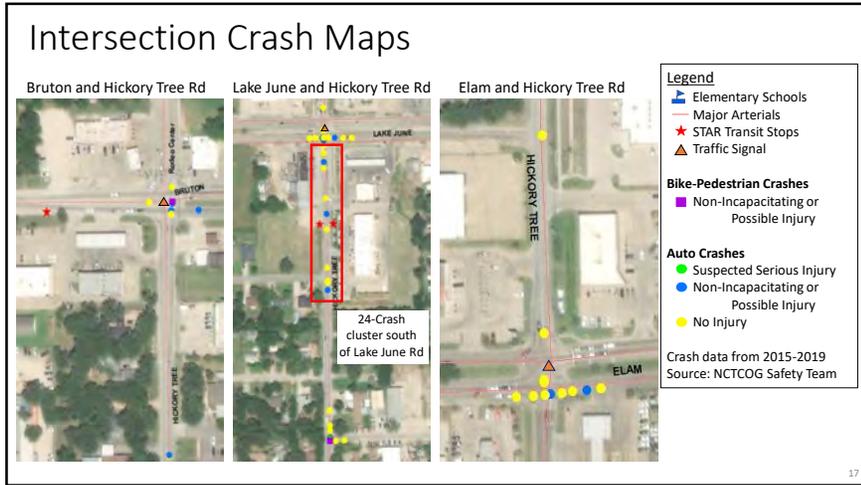
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### Walk Audit With City of Balch Springs: 12/3/20

- Findings:**
  - Pedestrian desire is evident in areas sidewalks do not exist
  - Many challenges for less mobile pedestrians to walk safely outside of travel lanes
    - Drainage ditches, pavement cracking, water lines, trash cans, mailboxes, litter and debris along the road
  - Crosswalks and road paint very faded
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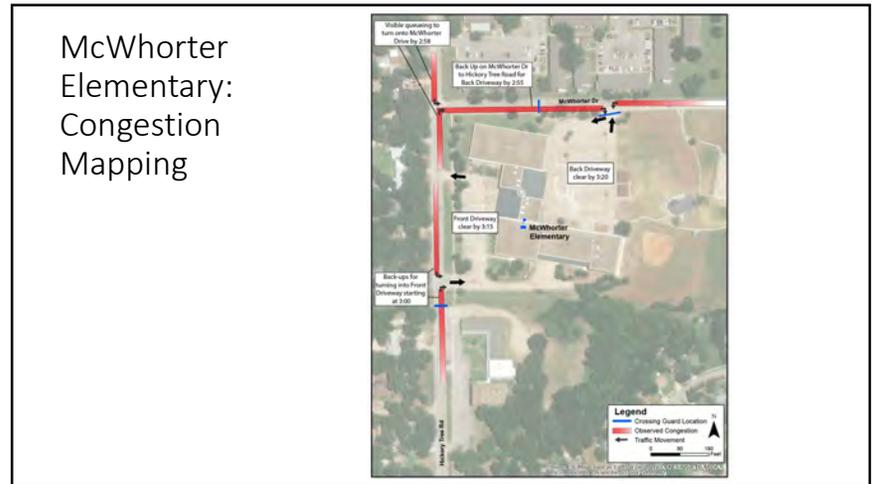
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Observations:

- Students in grades K-2 with no older siblings are picked up in front driveway along Hickory Tree Road
- Back-up from driveway queuing overflow on Hickory Tree Road peaked 3:04-3:10 (3:05 dismissal)
- Additional back-up on Hickory Tree Road was caused by cars attempting to turn onto McWhorter Dr for back driveway pickup
- Students walking southbound on Hickory Tree walk in small grassy area along roadway to avoid drainage ditch

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  - Most students crossed at the southern driveway to walk down Canfa Dr to the townhomes on Quail.
- Walkers walked along the southern driveway and to the sidewalk to exit the school
- Cars waiting to turn from the driveway backed up to the school building.



21

## Floyd Elementary: Congestion Mapping



22

## Major Considerations

23

## Utilities

Many areas with above and below ground utilities may need to be moved.

Examples include:

- Fiber optic
- Utility poles
- Drainage ditches
- Gas lines



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## Access Management

- Access Management: Techniques to increase roadway capacity, manage congestion, and reduce crashes with entrances and exits to the roadway
- Numerous residential, some commercial and municipal driveways along entire corridor

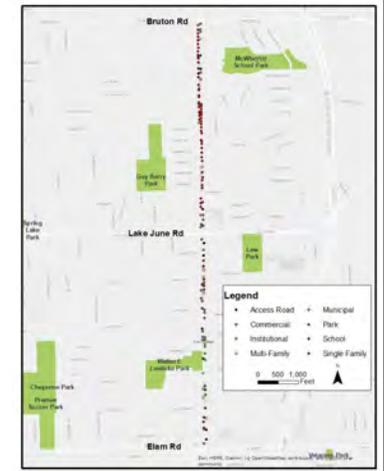


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## Access Management – Driveways

- 121 Driveways on corridor
  - 66 Single Family, 21 Commercial
- 98/130 survey respondents reported difficulty exiting driveways at least once a week
  - 31/130: Almost Always (3+ times/week)
  - 32/130: Often (multiple times/week)
  - 35/130: Sometimes (weekly)
- Commercial driveways were the most challenging (76/127), followed by residential (49/127)



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## Key Considerations – Pass-Through Traffic

- Hickory Tree is used for cut-through traffic by people avoiding the Elam Road/635 interchange.
- Drivers use Hickory Tree road to access 635 to the north or south of Elam Rd
- Drivers use Hickory Tree road to avoid a five-way intersection/signal at Bruton/Peachtree



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## Preliminary Recommendations

28

**NCTCOG's Cross-Section Recommendation:**  
**Three-lane roadway with center turn lane and pedestrian refuge islands at key crossing locations**

Major Considerations:	Why:
<ul style="list-style-type: none"> <li>• Access to homes/businesses</li> <li>• Congestion management</li> <li>• Queuing for pick up/drop-off at schools</li> <li>• Bicycle/pedestrian safety and improvements</li> <li>• Pedestrian crossing treatments</li> </ul>	<ul style="list-style-type: none"> <li>• Improve access to businesses / residences</li> <li>• Improve congestion</li> <li>• Room for bicyclists and pedestrians to travel safely</li> <li>• Improve safety for bicycle/pedestrian</li> <li>• Future traffic volumes</li> </ul>

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**NCTCOG Recommendation vs Current Cross-Section:**

**Recommended:**  
 3-Lane Cross-Section with Added Ped Refuges:  
70' ROW

**Current Cross-Section:**  
 2-Lanes with no Bike/Ped Amenities:  
60' ROW

30

**Center Turn Lane**

- Allows for left and right driveway exits
- Vehicles waiting to turn left no longer cause back-ups
- Maximizes access to businesses
- Majority of people have issues at least weekly exiting driveways (97/128)

Imagery Provided by Google

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**Crossing Safety Concepts: Pedestrian Refuge Island**

- Increases safety for pedestrians crossing a multi-lane road
- Allows pedestrians to focus on one direction of traffic at a time
- Priority Placement Locations
  - Schools
  - Luedeke Park
  - Other high-traffic crosswalks, as needed
- Design and aesthetics for Pedestrian Refuge Islands will be part of discussion for the City-led engineering project

Photo Courtesy of Dan Burden

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### North Texas Examples: Pedestrian Refuge Island in a Three-Lane Roadway

Spurwood Dr, Carrollton TX

NW Summercrest Blvd, Burleson TX



Imagery Provided by Google

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### Pedestrian Refuge Island Preliminary Placement Recommendations



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### Bike/Pedestrian Infrastructure Concepts

- Sidewalks and Shared-use Paths
  - Sidewalks: 5-6', meant for pedestrians
  - Shared-use Path: >10', shared by bikes and pedestrians
- Community concern over current roadway's unsafe walking spaces
  - Student safety walking to and from school a high concern in survey responses
- 107/132 initial respondents to the Community Survey want safe walking and biking infrastructure on Hickory Tree Road

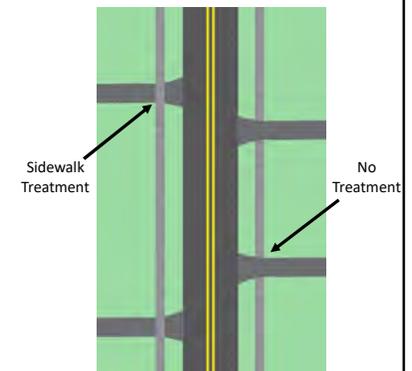


Shared-use Path: Photo Courtesy of Fort Worth

35

### Pedestrian Safety Concept: Sidewalk Driveway Treatments

- Sidewalks are continued over driveways to alert drivers to the shared space
- Continuous walking path for pedestrians reduces interruptions in flat pavement
- Benefits pedestrians with limited mobility, wheelchair users, and pedestrians with strollers



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### Crossing Safety Concepts

- Improve visibility of crosswalks in all weather and lighting conditions
- Concepts for all mid-block crosswalks:
  - High Visibility Crosswalk Paint
  - Crosswalk Warning Signs
  - Vehicle Stop Lines
  - Additional Lighting



Photo Courtesy of Dan Sundstrom

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### Crossing Safety Concepts: Pedestrian Hybrid Beacon

- Beacon activates to temporarily halt traffic to allow pedestrians to safely cross
- Once pedestrian crosses, road returns to normal conditions
- Possible locations include:
  - Schools
  - Parks
  - Any other areas with safety concerns



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### Crossing Safety Concepts: Curb Radius Tightening

- Shortens crosswalk distance
  - Benefits slower pedestrians
- Reduces time spent in the roadway
- Slows right turn vehicle speeds and increases visibility of crosswalk and pedestrians
- Possible Locations
  - Hickory Tree Rd & Lake June Rd
  - Hickory Tree Rd & Bruton Rd
  - Hickory Tree Rd & Elam Rd
  - Hickory Tree Rd & Quail Dr



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### Next Steps:

<p><b>Stakeholder Meetings:</b> 6/29 and 6/30</p>	<p><b>Public Feedback</b> (Online Public Engagement Opportunity): Expected: August-September 2021</p>	<p><b>Complete Planning Study</b> Reviews &amp; Revisions: Expected November 2021</p>
<p><b>Project Design: FY 22</b> <b>ROW Acquisition: FY 23</b> <b>Utilities: FY 24</b> <b>Construction: FY 25</b></p>	<p><b>ROW Acquisition</b> Meetings with property owners after final roadway design complete</p>	<p><b>Construction &amp; Utilities</b> Construction schedule and traffic access discussion to come</p>

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## Questions and Feedback

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## Discussion Questions - Residents

- What concerns do you have with the present-day corridor?
- How would you describe the corridor today generally?
- How would you describe the corridor in terms of traffic and safety?
- What would you like to see for this corridor in the future?
- Do you have any concerns about the roadway improvement concepts presented today?

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## Contact Us



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Erin Curry  
Transportation Planner  
[ECurry@nctcog.org](mailto:ECurry@nctcog.org)

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# Meeting Minutes

Subject	Balch Springs Hickory Tree Road Planning Study	Date	6/30/2021
Facilitator	Shawn Conrad	Time	6:00 pm
Location	Zoom	Recorded by	Erin Curry
Representatives	Shawn Conrad, Erin Curry (NCTCOG); Chris Dyser, Brad Harris, Suzy Cluse (Balch Springs)		

Meeting Purpose	Balch Springs Business Owner, Business Tenant, and Property Owner Stakeholder Meeting
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## Discussion Items

1. The North Central Texas Council of Governments (NCTCOG) staff are developing a roadway improvement planning study for Hickory Tree Road from Bruton Road to Elam Road, in collaboration with the City of Balch Springs. The goals of the plan are to develop context-sensitive recommendations for the corridor, enhance the bicycle/pedestrian experience along the corridor, connect key amenities and services along the corridor, and facilitate economic opportunity. NCTCOG staff discussed the project background, existing conditions and data collection, major considerations, and preliminary high-level recommendations on the corridor, including the cross-section recommendation of a three-lane roadway with a center turn lane, pedestrian refuge islands at select locations, sidewalks, and a shared-use path. **This preliminary recommendation would require 70' of right-of-way (ROW), expanding from the current 60' ROW.**
2. A participant asked about the schedule for reconstruction of the roadway. NCTCOG staff said that construction on Phase 1 of the project, Hickory Tree Road from Elam Road to Lake June Road, is anticipated in Fiscal Year (FY) 2025.
3. A participant asked how traffic will be managed during construction. City staff stated that traffic control will be a future planning process during and after the design process. City staff also explained that contractors must submit a traffic control plan to the City that will have to be approved by staff. Affected parcel owners will be contacted during the design phase, and additional meetings and discussions will be held.
4. A participant asked about whether the plan included a four-lane cross-section. NCTCOG staff clarified that four lanes are not warranted with either current or future traffic projections and are not part of the preliminary recommendations.
5. A participant asked about the possibility of a three-way stop sign at the intersection of Hickory Tree Road and Quail Road. NCTCOG staff and City staff explained that there were no current recommendations or suggestions for a three-way stop at that location, but plans are not finalized and it may be considered in the design phase.
6. A participant asked about reimbursement for any right-of-way needed for the project. City staff explained that acquisition from this project **would go through the City's regular reimbursement process, but discussions on that issue would not happen until FY 2023.** City staff also explained that once the final roadway configuration is complete and approved, there will be a series of meetings with affected property owners.

**Balch Springs**  
**Hickory Tree Road Corridor Planning Study**  
**Business & Property Owner**  
**Stakeholder Meeting**  
 6/30/21

1

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3

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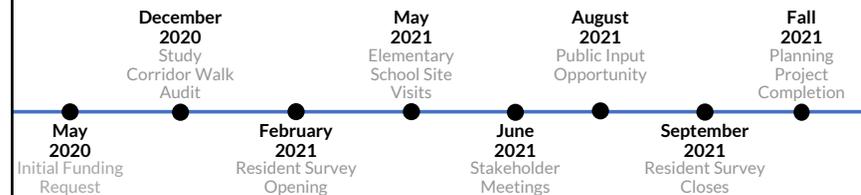
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## Timeline



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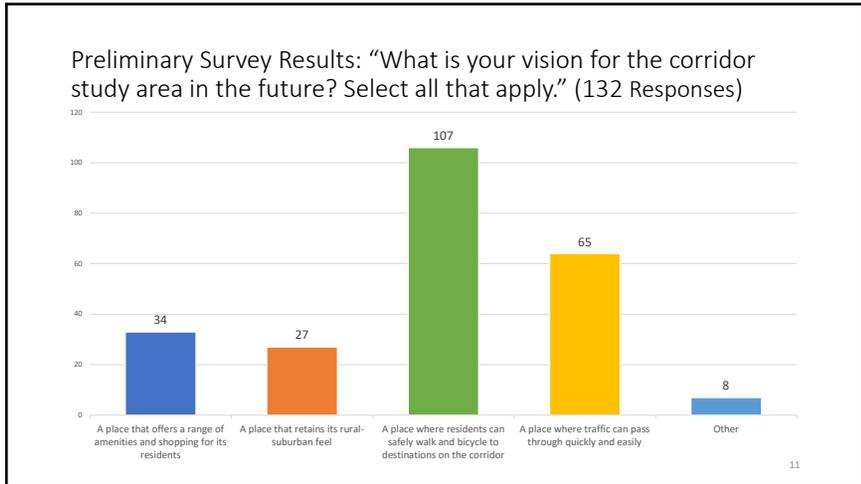
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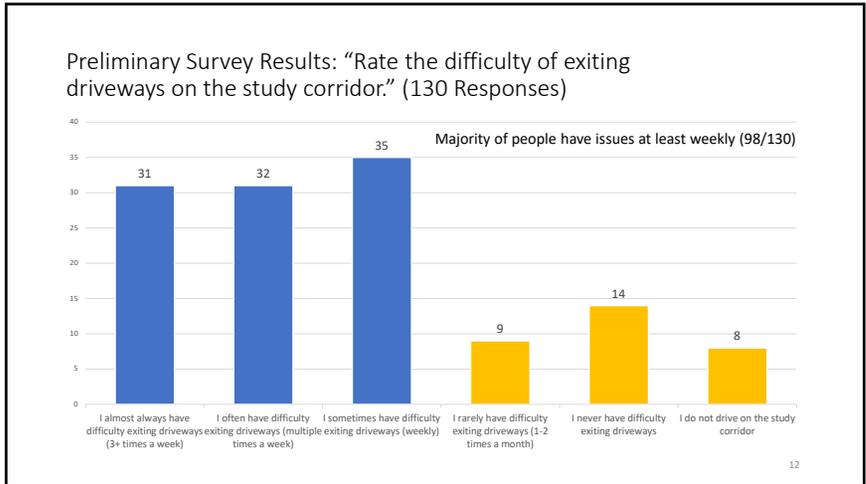
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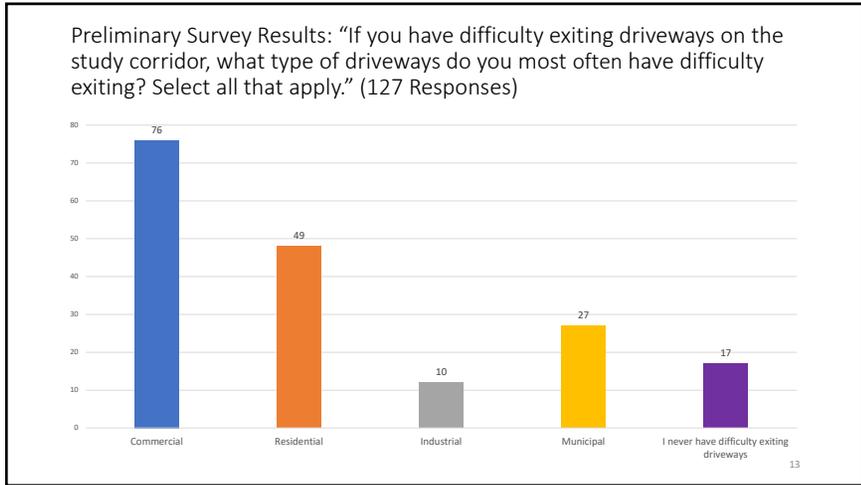
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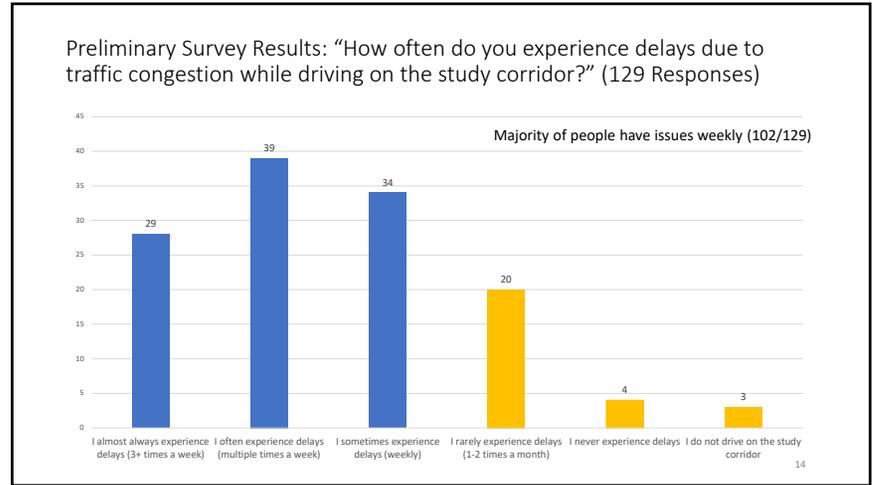
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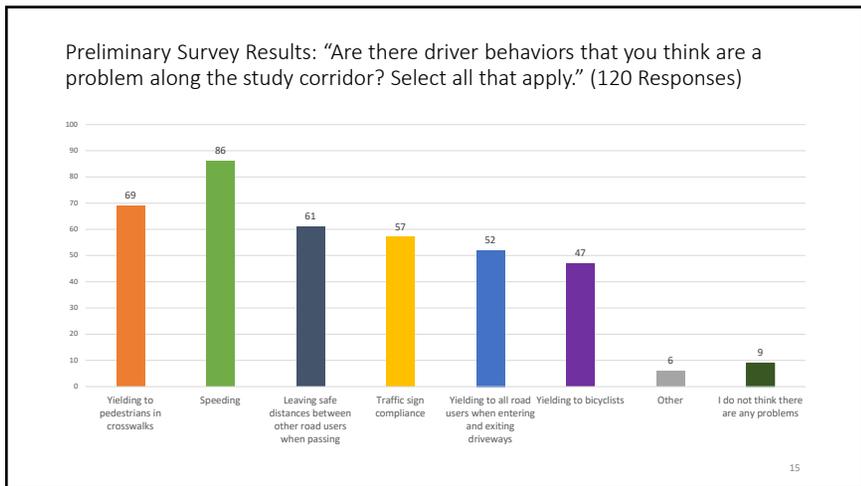
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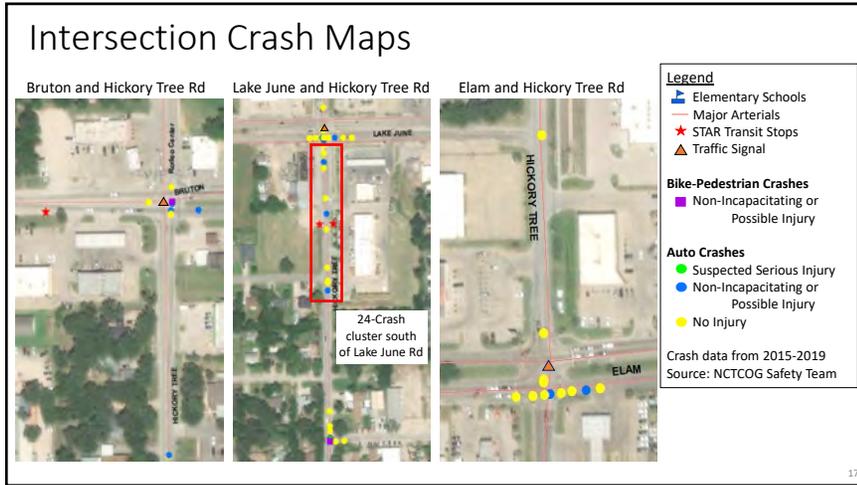
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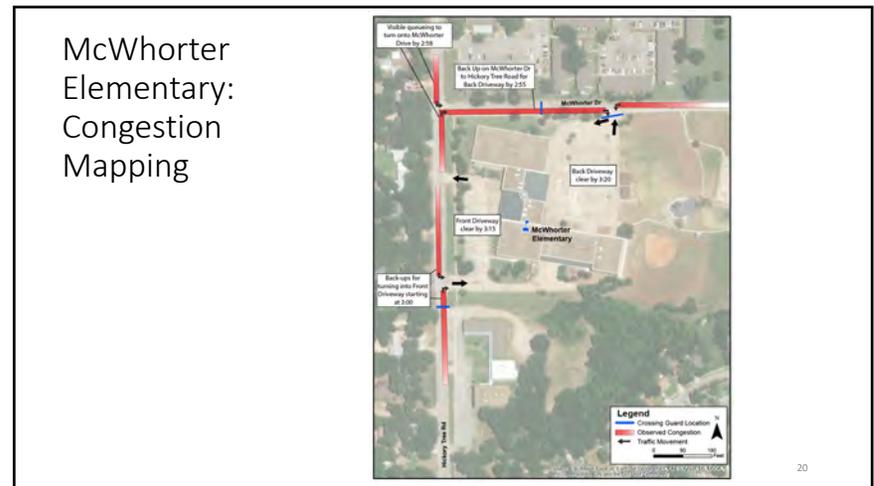
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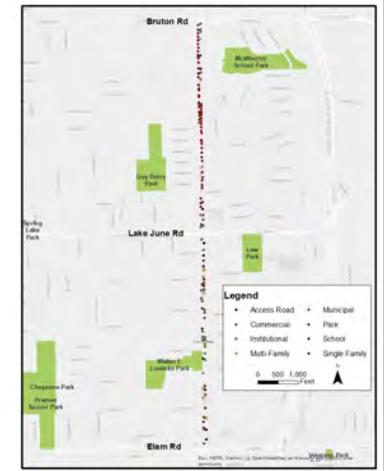


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**NCTCOG Recommendation vs Current Cross-Section:**

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70' ROW

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Imagery Provided by Google

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  - Luedeke Park
  - Other high-traffic crosswalks, as needed
- Design and aesthetics for Pedestrian Refuge Islands will be part of discussion for the City-led engineering project

Photo Courtesy of Dan Burden

32

## North Texas Examples: Pedestrian Refuge Island in a Three-Lane Roadway

Spurwood Dr, Carrollton TX

NW Summercrest Blvd, Burleson TX



Imagery Provided by Google

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## Pedestrian Refuge Island Preliminary Placement Recommendations

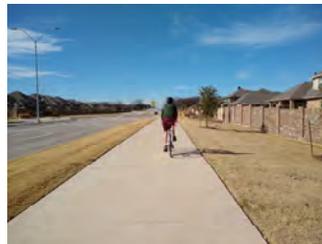


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## Bike/Pedestrian Infrastructure Concepts

- Sidewalks and Shared-use Paths
  - Sidewalks: 5-6', meant for pedestrians
  - Shared-use Path: >10', shared by bikes and pedestrians
- Community concern over current roadway's unsafe walking spaces
  - Student safety walking to and from school a high concern in survey responses
- 107/132 initial respondents to the Community Survey want safe walking and biking infrastructure on Hickory Tree Road



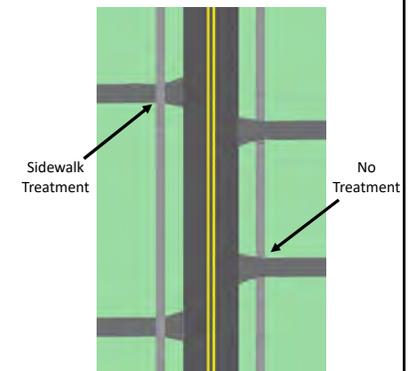
Shared-use Path: Photo Courtesy of Fort Worth

35

35

## Pedestrian Safety Concept: Sidewalk Driveway Treatments

- Sidewalks are continued over driveways to alert drivers to the shared space
- Continuous walking path for pedestrians reduces interruptions in flat pavement
- Benefits pedestrians with limited mobility, wheelchair users, and pedestrians with strollers



36

36

## Crossing Safety Concepts

- Improve visibility of crosswalks in all weather and lighting conditions
- Concepts for all mid-block crosswalks:
  - High Visibility Crosswalk Paint
  - Crosswalk Warning Signs
  - Vehicle Stop Lines
  - Additional Lighting



Photo Courtesy of Dan Sundstrom

37

37

## Crossing Safety Concepts: Pedestrian Hybrid Beacon

- Beacon activates to temporarily halt traffic to allow pedestrians to safely cross
- Once pedestrian crosses, road returns to normal conditions
- Possible locations include:
  - Schools
  - Parks
  - Any other areas with safety concerns

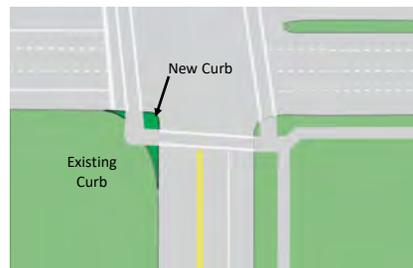


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## Crossing Safety Concepts: Curb Radius Tightening

- Shortens crosswalk distance
  - Benefits slower pedestrians
- Reduces time spent in the roadway
- Slows right turn vehicle speeds and increases visibility of crosswalk and pedestrians
- Possible Locations
  - Hickory Tree Rd & Lake June Rd
  - Hickory Tree Rd & Bruton Rd
  - Hickory Tree Rd & Elam Rd
  - Hickory Tree Rd & Quail Dr



39

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## Next Steps:

Stakeholder Meetings:  
6/29 and 6/30

Public Feedback  
(Online Public Engagement Opportunity):  
Expected: August-September 2021

Complete Planning Study  
Reviews & Revisions:  
Expected November 2021

Project Design: FY 22  
ROW Acquisition: FY 23  
Utilities: FY 24  
Construction: FY 25

ROW Acquisition  
Meetings with property owners after final roadway design complete

Construction & Utilities  
Construction schedule and traffic access discussion to come

40

40

## Questions and Feedback

41

## Discussion Questions - Businesses

- How would you describe the corridor today generally? What concerns do you have, if any?
- What problems currently exist with accessing your business from the study corridor?
- How do people usually travel to your business? Do you or any of your employees walk or bike to work on the corridor?
- What on the roadway would most benefit economic development/your business?
- How would you describe the corridor in terms of traffic and safety?
- What concerns do you have with the present-day corridor?
- What would you like to see for this corridor in the future?
- Do you have any concerns about the roadway improvement concepts presented today? <sup>42</sup>

42

## Contact Us



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[KWeaver@nctcog.org](mailto:KWeaver@nctcog.org)



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Community Development Department  
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Erin Curry  
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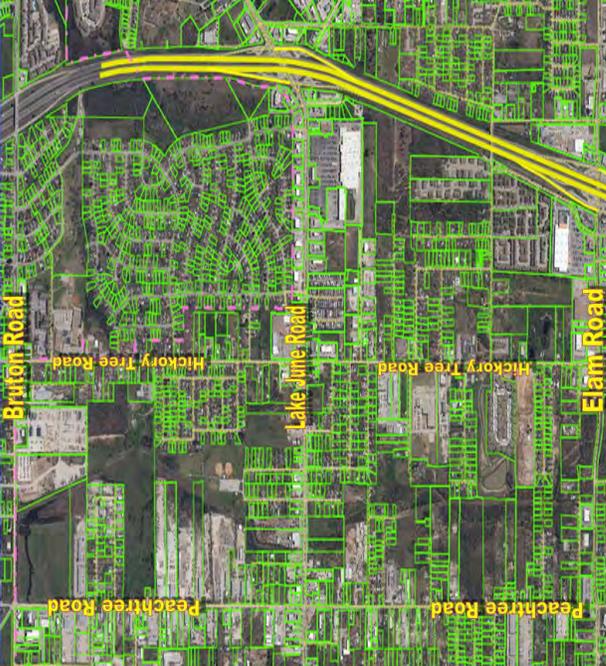
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# Appendix Exhibit 15: Sample Resident and Business Owner Stakeholder Meeting Postcard Notifications

## Meeting Postcard Notifications

SUMMARY OF PROPOSAL



**PUBLIC HEARING NOTIFICATION**

Date: 6/29/21 (Residents) @ 6pm  
6/30/21 (Business Owners) @ 6pm

Online Stakeholder Engagement Mtg. online w/Zoom (See Below)

Visit City Website:  
<https://www.cityofbalchsprings.com/443/Hickory-Tree-Rd-Survey>

**For more information:**  
Robin Hall/Cris Dyer  
P&Z Department  
972-286-4477, ext.122/ext.212 or  
[rhall@cityofbalchsprings.com](mailto:rhall@cityofbalchsprings.com)/  
[cdyer@cityofbalchsprings.com](mailto:cdyer@cityofbalchsprings.com)

The City of Balch Springs is conducting a planning study on Hickory Tree Road from Bruton Rd to Elam Rd. Supporting this project, the City is reaching out to all corridor stakeholders to get their input on current issues, future visions for development and economic opportunity. There will be an online stakeholder engagement meeting on Zoom on 6/29/21 at 6pm for residents and 6/30/21 at 6pm for business owners/tenants and property owners along the Hickory Tree Road corridor. For more information on how to register for the stakeholder meeting, please visit: <https://www.cityofbalchsprings.com/443/Hickory-Tree-Rd-Survey>

Balch Springs  
Hickory Tree Road Corridor Planning Study  
Online Public Engagement

1

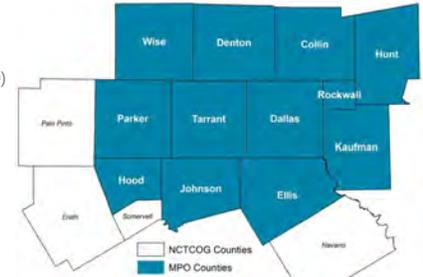
### About NCTCOG

#### North Central Texas Council of Governments (NCTCOG)

Metropolitan Planning Organization (MPO)  
for the Dallas-Fort Worth region

#### Regional Transportation Council (RTC)

Transportation Actions  
Funding of "Projects and Programs"  
Effectiveness and Equity



[www.nctcog.org](http://www.nctcog.org)

2

2

### Project Background

3

### Planning Project Purpose

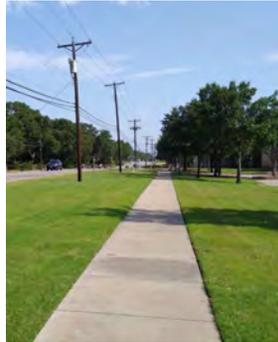
- The City of Balch Springs is pursuing reconstruction of Hickory Tree Road from Elam Road to Bruton Road to better accommodate bicycle/pedestrian access, traffic, and economic development.
- NCTCOG is conducting a planning study of the corridor to **identify high-level concepts and recommendations** for the development of the roadway design.



4

## Public Engagement Goals

- This public engagement opportunity is part of the public process for obtaining feedback on the proposed concepts and recommendations to ensure the project will achieve community goals.
- The purpose of this public engagement is to obtain feedback from community members who live/work on or visit the study corridor.



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## Planning Project Goals

- Develop Context-Sensitive Design recommendations for the corridor
  - Design that fits the roadway’s human and natural environment and meet the needs of the community
- Intent of Recommendations:
  - Enhance bicycle/pedestrian experience
    - Increase safety
    - Increase comfort
  - Connect key amenities and services
    - Schools, parks, municipal buildings, commercial areas
  - Facilitate economic opportunity



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## Project Timeline

- May 2020: City submitted funding proposal to NCTCOG
- June 2020: RTC funded corridor planning study by NCTCOG staff to develop context-sensitive corridor plan from Elam Road to Bruton Road
- April 2021: RTC approved COVID Round 4 funding award for Phase 1 Hickory Tree Road construction: Elam Road to Lake June
  - \$13.5M Total: \$8.2M Federal / \$5.3M Local (County) / 260K Regional Transportation Development Credits
- Anticipated FY 22-25: Engineering, Right of Way, Utilities, & Construction
- Funding partners include NCTCOG, County, TxDOT, and City of Balch Springs



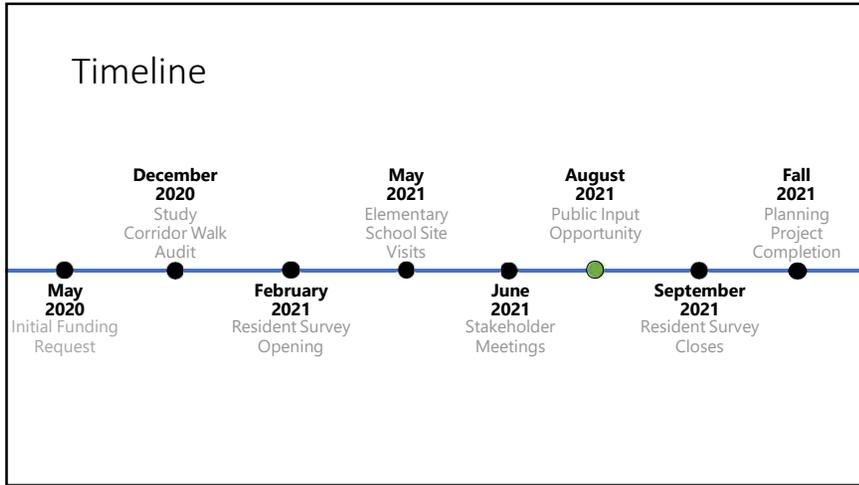
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## Planning Project Limits

Project Limits: Hickory Tree Road, from Bruton Rd to Elam Road  
 Corridor length: 2.03 miles



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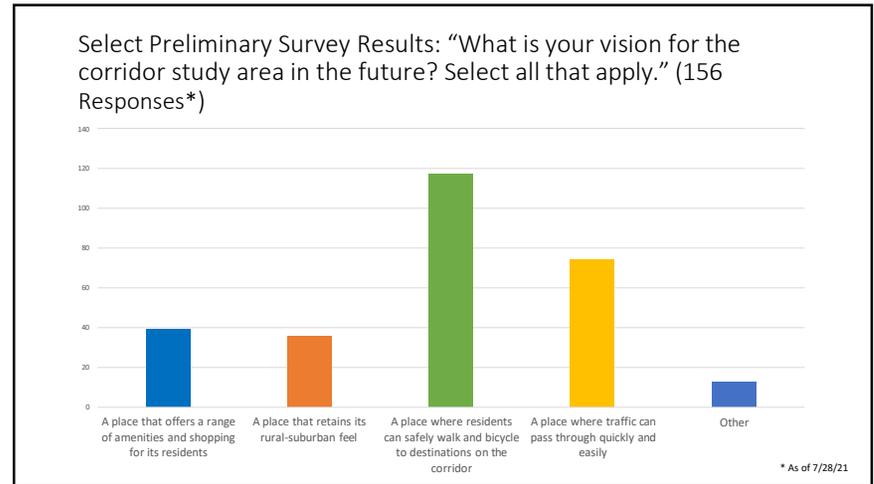


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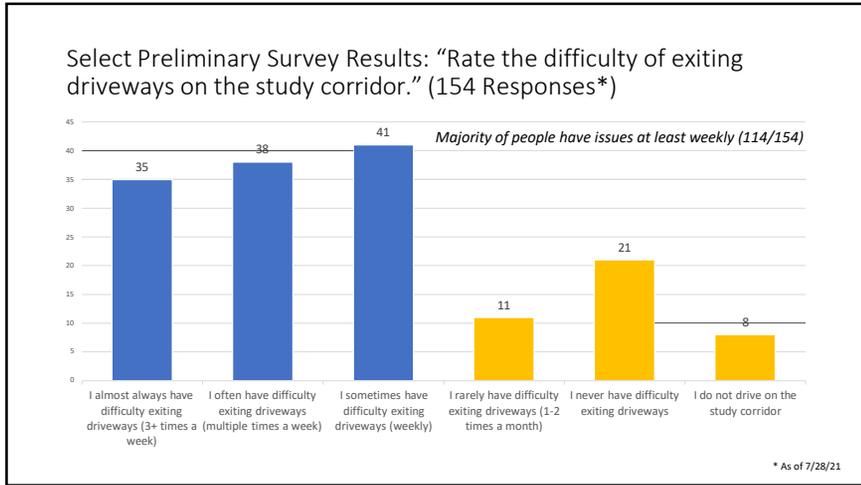
### Online Survey

- Live from February 2021-Present
  - Expected close in September 2021
- Hosted on Balch Springs' website
  - <http://www.cityofbalchsprings.com/443/Hickory-Tree-Rd-Survey>
  - **Please take the survey!**
- Questions about travel modes on study corridor, safety concerns, and future visions for the corridor
- Survey results to present date on public engagement web page

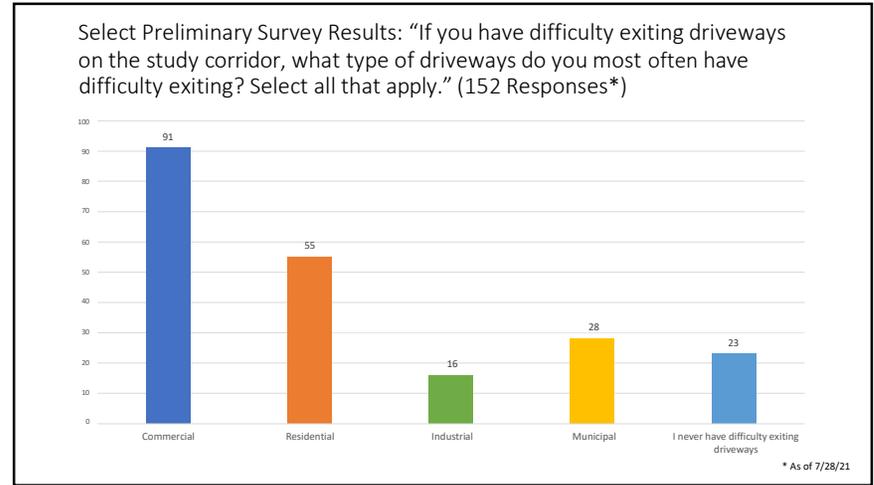
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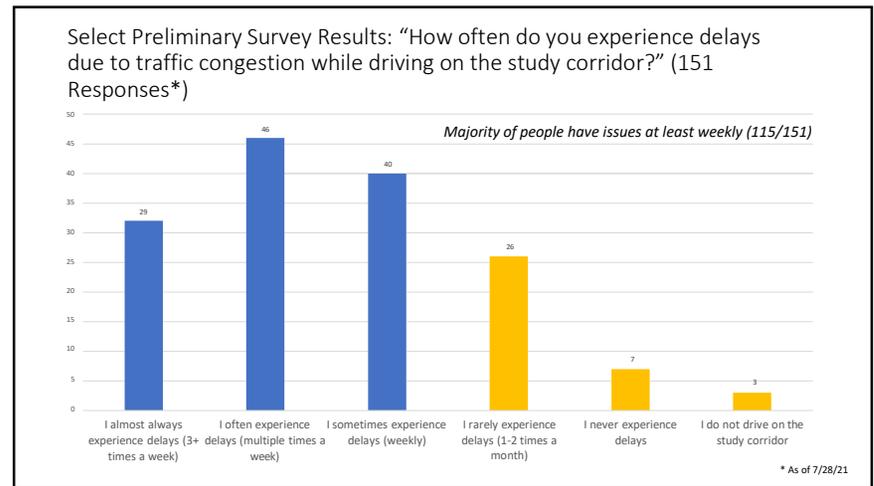
14

Select Preliminary Survey Results: Are there any specific problem locations where you have difficulty exiting driveways that you would like to share?

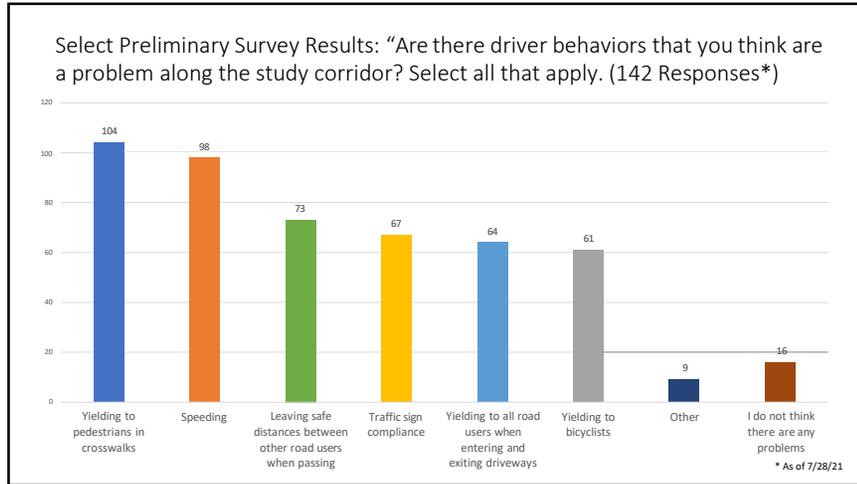
**Most Popular Responses:**

- Floyd Elementary: 18
- Post Office: 16
- Elam Rd at Hickory Tree Road: 14
- Quail Dr: 8
- Binford Supply: 6
- El Molinito Tortillería: 4
- McWhorter Elementary: 4
- Lake June Rd at Hickory Tree Road: 4

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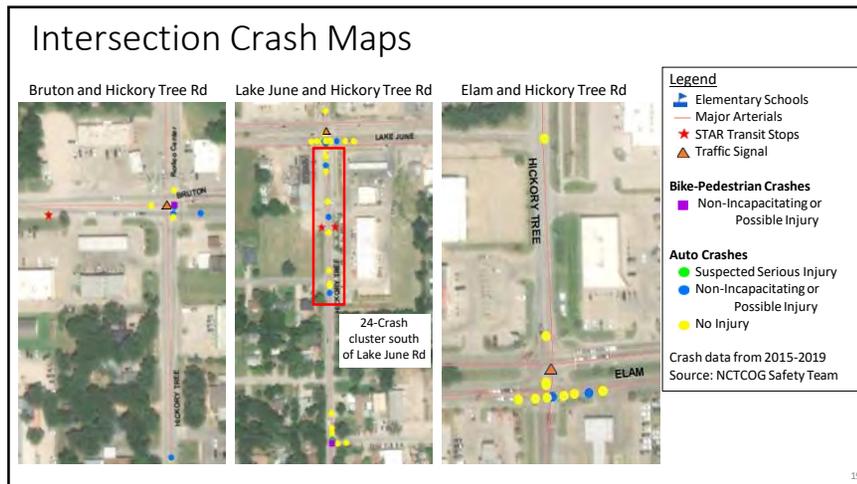
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### Walk Audit With City of Balch Springs: 12/3/20

- Goal: Examine existing conditions of the study area, identify existing problems
- Findings:
  - Pedestrian desire is evident in areas sidewalks do not exist
  - Many challenges for less mobile pedestrians to walk safely outside of travel lanes
    - Drainage ditches, pavement cracking, water lines, trash cans, mailboxes, litter and debris along the road
  - Crosswalks and road paint very faded
  - Drivers speeding observed; few gave space to pass pedestrians safely

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## School Site Visit: McWhorter Elementary 5/4/21

Goal: Observe school dismissal process and surrounding roadway conditions during the pick-up window

Observations:

- Students in grades K-2 with no older siblings are picked up in front driveway along Hickory Tree Road
- Back-up from driveway queuing overflow on Hickory Tree Road peaked 3:04-3:10 (3:05 dismissal)
- Additional back-up on Hickory Tree Road was caused by cars attempting to turn onto McWhorter Dr for back driveway pickup
- Students walking southbound on Hickory Tree walk in small grassy area along roadway to avoid drainage ditch



21

## McWhorter Elementary: Congestion Mapping



22

## School Site Visit: Floyd Elementary 5/6/21

Goal: Observe school dismissal process and surrounding roadway conditions during the pick-up window

Observations:

- Back ups on Hickory Tree Rd caused by crossing guard stoppages to let children cross
  - Crossing Locations: Terry Dr & Southern driveway near Canfa Dr
  - Most students crossed at the southern driveway to walk down Canfa Dr to the townhomes on Quail.
- Students walked along the southern driveway and to the sidewalk to exit the school
- Cars waiting to turn from the driveway backed up to the school building



23

## Floyd Elementary: Congestion Mapping



24

# Major Considerations

25

## Utilities

Many areas with above and below ground utilities may need to be moved.

Examples include:

- Fiber optic
- Utility poles
- Drainage ditches
- Gas lines



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## Access Management

- Access Management: Techniques to increase roadway capacity, manage congestion, and reduce crashes with entrances and exits to the roadway
- Numerous residential, some commercial and municipal driveways along entire corridor

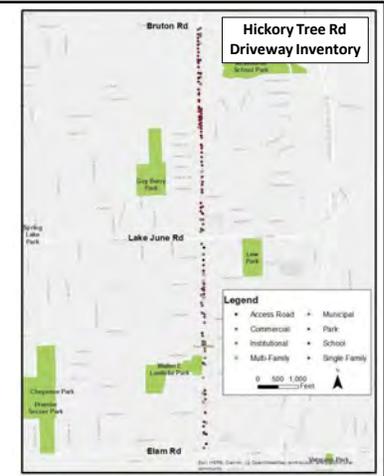


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## Access Management – Driveways

- 121 Driveways on corridor
  - 66 Single Family, 21 Commercial
- 114/154 survey respondents reported difficulty exiting driveways at least once a week
  - 35/154: Almost Always (3+ times/week)
  - 38/154: Often (multiple times/week)
  - 41/154: Sometimes (weekly)
- Commercial driveways were the most challenging (91/152), followed by residential (55/152)



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### Key Considerations – Pass-Through Traffic

Pass-Through Traffic: traffic that is traveling on the roadway that does not begin or end on the study corridor

- Hickory Tree is used for cut-through traffic by people avoiding the Elam Road/635 interchange.
- Drivers use Hickory Tree road to access 635 to the north or south of Elam Rd
- Drivers use Hickory Tree road to avoid a five-way intersection/signal at Bruton/Peachtree

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## Preliminary Recommendations

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### NCTCOG's Cross-Section Recommendation:

#### Three-lane roadway with center turn lane and pedestrian refuge islands at key crossing locations

Major Considerations:	Why:
<ul style="list-style-type: none"> <li>Access to homes/businesses</li> <li>Congestion management</li> <li>Queuing for pick up/drop-off at schools</li> <li>Bicycle/pedestrian safety and improvements</li> <li>Pedestrian crossing treatments</li> </ul>	<ul style="list-style-type: none"> <li>Improve access to businesses / residences</li> <li>Improve congestion</li> <li>Room for bicyclists and pedestrians to travel safely</li> <li>Improve safety for bicycle/pedestrian</li> <li>Future traffic volumes</li> </ul>

31

### NCTCOG Recommendation vs Current Cross-Section:

**Recommended:**  
3-Lane Cross-Section with Added Ped Refuges:  
70' ROW

**Current Cross-Section:**  
2-Lanes with no Bike/Ped Amenities:  
60' ROW

12' Multi-Use Path for bikes and pedestrians + buffer space from roadway

Maintain travel lane widths and add pedestrian refuge island/center turn lane

6' Sidewalk for pedestrians and buffer space from roadway

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## Center Turn Lane

- Allows for left and right driveway exits
- Vehicles waiting to turn left no longer cause back-ups
- Maximizes access to businesses
- Majority of people have issues at least weekly exiting driveways (114/154)



Imagery Provided by Google

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## Crossing Safety Concepts: Pedestrian Refuge Island

- Increases safety for pedestrians crossing a multi-lane road
- Allows pedestrians to focus on one direction of traffic at a time
- Priority Placement Locations
  - Schools
  - Luedeke Park
  - Other high-traffic crosswalks, as needed
- Design and aesthetics for Pedestrian Refuge Islands will be part of discussion for the City-led engineering phase



Photo Courtesy of Dan Burden

34

## North Texas Examples: Pedestrian Refuge Island in a Three-Lane Roadway

[Spurwood Dr](#), Carrollton TX

[NW Summercrest Blvd](#), Burleson TX

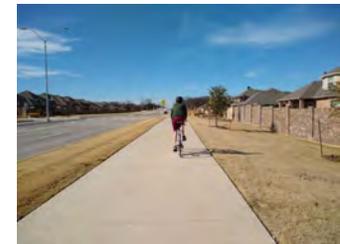


Imagery Provided by Google

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## Bike/Pedestrian Infrastructure Concepts

- Sidewalks and Shared-use Paths
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- Existing community concern over current roadway's unsafe walking spaces
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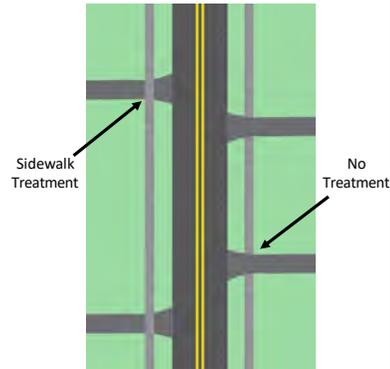


Shared-use Path: Photo Courtesy of City of Fort Worth

36

## Pedestrian Safety Concept: Sidewalk Driveway Treatments

- Sidewalks are continued over driveways to alert drivers to the shared space
- Continuous walking path for pedestrians reduces interruptions in flat pavement
- Benefits pedestrians with limited mobility, wheelchair users, and pedestrians with strollers



37

## Crossing Safety Concepts

- Improve visibility of crosswalks in all weather and lighting conditions
- Concepts for all mid-block crosswalks:
  - High Visibility Crosswalk Paint
  - Crosswalk Warning Signs
  - Vehicle Stop Lines
  - Additional Lighting



Photo Courtesy of Dan Sundstrom

38

## Crossing Safety Concepts: Pedestrian Hybrid Beacon

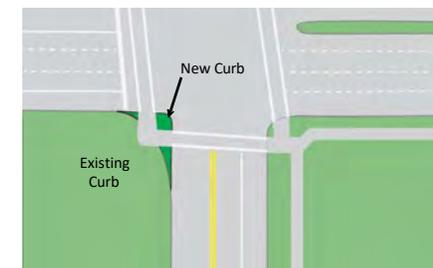
- Beacon activates to temporarily halt traffic to allow pedestrians to safely cross
- Once pedestrian crosses, road returns to normal conditions
- Possible locations include:
  - Schools
  - Parks
  - Any other areas with safety concerns
- Video Explanation of Beacon available on Public Engagement Page



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## Crossing Safety Concepts: Curb Radius Tightening

- Shortens crosswalk distance
  - Benefits slower pedestrians
- Reduces time spent in the roadway
- Slows right turn vehicle speeds and increases visibility of crosswalk and pedestrians
- Possible Locations
  - Hickory Tree Rd & Lake June Rd
  - Hickory Tree Rd & Bruton Rd
  - Hickory Tree Rd & Elam Rd
  - Hickory Tree Rd & Quail Dr



40

### Pedestrian Enhancements Preliminary Placement Recommendations

- Lake June Road to Bruton Road

\* Map is also be posted on project webpage

41

### Pedestrian Enhancements Preliminary Placement Recommendations

- Elam to Lake June Road

\* Map is also be posted on project webpage

42

### Pedestrian Enhancement Concepts

Charts are not drawn to scale

\* Visual is also be posted on project webpage

43

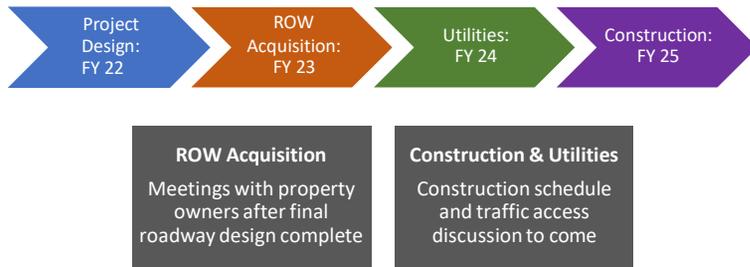
### Next Steps: Planning Study Conclusion

Public Feedback  
(Online Public Engagement Opportunity):  
August-September 2021

Complete Planning Study  
Reviews & Revisions:  
Expected November 2021

44

## Next Steps: Post-Planning Study



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## Get Involved!

- Provide feedback on this planning project & recommendations
  - Review maps, graphics, and external resources
  - Complete feedback questionnaire
- Take the Hickory Tree Road Corridor survey
  - Hosted on the Balch Springs Website
  - <https://www.cityofbalchsprings.com/443/Hickory-Tree-Rd-Survey>
- Contact Us: Emails on next slide

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## Contact Us



Karla Weaver  
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Erin Curry  
Transportation Planner  
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### Hickory Tree Road Online Public Input Opportunity Responses (1-3)

1. What is your relationship to the study corridor (Hickory Tree Road from Bruton Rd to Elam Rd)? Please select all that apply.
  - I live in the area; I shop in the area; I visit the area frequently
  - I live in the area; I shop in the area; I visit the area frequently
  - I live in the area
  
2. What infrastructure items presented during the video do you like the most, and why? (Ex: Center Turn Lane, Pedestrian Refuge Islands, Sidewalks, Shared-Use Path, Crosswalk Visibility Enhancements,...)
  - Shared-Use Path
  - I am excited about all the potential upgrades, but especially like the shared-use path, refuge islands, and crosswalk visibility enhancements. Balch Springs isn't exactly pedestrian/biker friendly, and I believe these enhancements will make us a safer and healthier community. I wish we could have many more sidewalks and biking areas throughout the City...it would greatly enhance the quality of life here.
  - i just want to know about my home. 2100 RODNEY LN CORNER HOME LOT ON ASHER AND HICKORY TREE. WHERE MY HOME IS
  
3. What infrastructure items presented during the video did you not like, and why?
  - N/A
  - I have no dislikes. All the proposed items are excellent. Please do it all! The time it's going to take to finish construction is disappointing...I wish we could get it done much sooner!
  - WHERE MY IS AND ALL THE TRAFFIC PEOPLE AND CRIMEYES
  
4. Do you have any concerns about the proposed Hickory Tree Road cross-section, and why?
  - No concerns
  - N/A
  - I BOUGHT THIS HOME TO RETIRE AND THIS IS THE LAST HOME OUR SON LIVED IN
  
5. Are there any areas on Hickory Tree Road with safety issues that we have overlooked? Please include the location and nature of the safety issue.
  - Entering CVS Pharmacy and surrounding shopping area entering and exiting North and South bound.
  - None I can think of off the top of my head
  - ALOT YOU SAY MY CORNER LOW ACCIDENTS THAT IS NOT SO I AM TIRED OF THE TRAFFIC ISSUE BECAUSE OF THE SCHOOL
  
6. Are there any possible locations that we have not identified that would benefit from a pedestrian refuge island? Where?
  - Entering and exiting CVS Pharmacy
  - Please make use of the pedestrian walkways and islands as potential for more vegetation, shade trees especially. We are quite sick of seeing everything getting completely paved over. We need more green spaces to improve airquality, provide relief from heat waves, and prepare for

impacts of climate change. I would also like to see construction planned that makes use of the water runoff to "plant" it where it can sink into the ground and nourish the landscape, instead of just going into wastewater lines.

- NOT SURE

7. Do you have any additional commentary on the Hickory Tree Road Planning Study?

- No
- [respondent left blank]
- IT IS A WHOLE COMMUNITY CONCERN

**Appendix Exhibit 18: Virtual Open House Video Link**

[Balch Springs Public Input Opportunity - YouTube](#)