



**WACO**

**25TH STREET**

**CORRIDOR**

# IMPLEMENTATION PLAN

City of Waco, Texas



Kimley»Horn

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# Chapter 1

## Introduction



**WACO**  
**25TH STREET**  
**CORRIDOR**

**25th Street Corridor Study**  
*Plan del Corredor de la Calle 25*

Join us and leave your  
feedback!

Únete a nosotros y deja tus  
comentarios!

Visit the website to learn more  
*Visita el sitio web para más información*

<https://www.waco-texas.com/Departments/Planning-Services/25th-Street-Corridor>



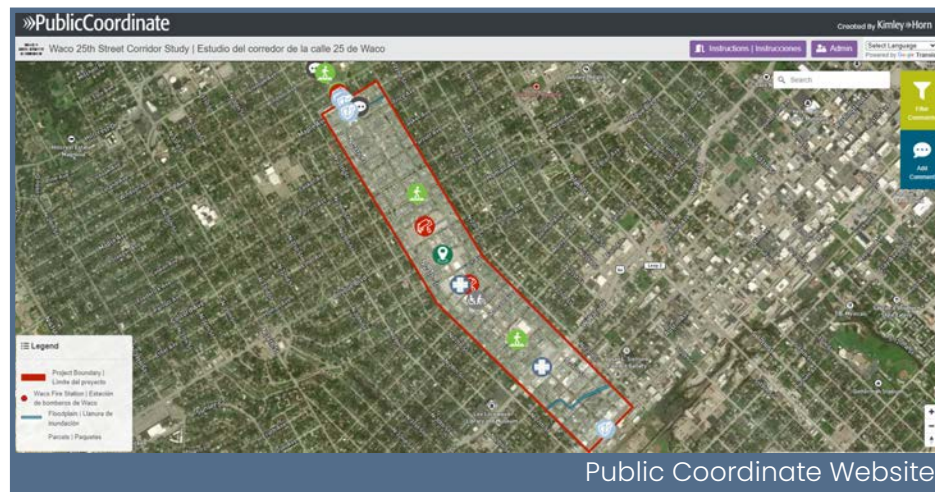
## PROJECT OVERVIEW

The 25th Street Corridor Implementation Plan provides the City of Waco and corridor stakeholders with a focused strategy to achieve the preferred vision for the future corridor as envisioned by area businesses and residents. With an emphasis on operational and aesthetic aspects of the corridor, the Plan makes recommendations for mobility (pedestrian, vehicular and bicyclist), parking, aesthetic and safety improvements intended to address specific needs identified by area stakeholders.

While the Plan establishes a long-term vision for the corridor, specific implementation recommendations are envisioned to occur throughout the short-, mid-, and long-term. Chapter 2 of this plan provides an overview of existing conditions analyzed to establish a basis for discussions of the corridor's current opportunities and constraints with area stakeholders. The overall corridor framework, which documents the area stakeholders' desires related to the future vision for the corridor, is detailed in Chapter 3. Chapter 4 identifies implementation priorities based on both stakeholder priorities combined with the logistics of funding and phasing typically associated with infrastructure improvement projects.

## PUBLIC ENGAGEMENT

Various engagement activities were utilized throughout the planning process to develop consensus related to the future vision and priorities along the 25th Street Corridor including in-person meeting and walking tours, an online survey and accompanying materials, as well as other online activities. All activities were made available to the community in both English and Spanish, and all meetings were also facilitated in both languages. Throughout the process, Kimley-Horn provided the city with content for the webpage to solicit and analyze the feedback from all the online engagements. As part of the online engagement, an interactive map survey was launched on the project website. The interactive map allowed for the public to identify areas of the 25th Street Corridor that they like, areas they think need improvements, or any other comment or idea they may have. Feedback gathered from the interactive map was recorded and analyzed with additional stakeholder and public input to be directly integrated into the 25th Street Corridor Study document.

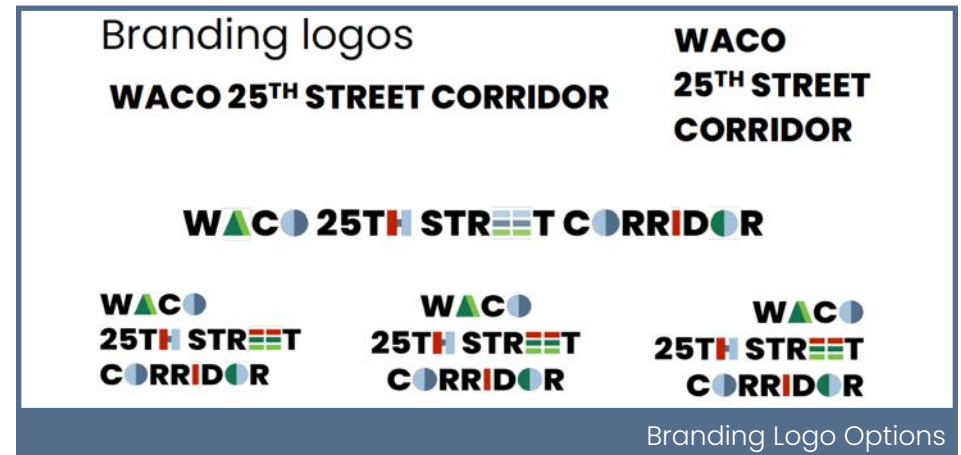


To create a distinct identity and recognizable branding for the 25th Street Corridor, a logo and branding guidelines were established to represent the project. In addition to project specific branding, various advertisements were provided to the City of Waco, including social media posts, event advertisements, A-frame signage, business cards, and yard signs to keep the public informed on important dates and input opportunities.

## 25th Street Corridor Plan Survey

As part of the public engagement effort for the 25th Corridor, a community survey was conducted to gather feedback from the community. The community survey was hosted online and was active between October 2023 – December 2023, receiving 62 responses. The survey included a total of 22 questions designed to gain a better understanding of the current perceptions and future desires for the Corridor. While the full survey results can be found in **Appendix A: Public Engagement**, some of the key takeaways from the survey included:

- Out of the 66 respondents, the largest portion (~55%) of respondents indicated that they lived within the City of Waco, but outside the study area
- Most respondents (~72%) indicated that they visited the 25th Street Corridor at least once a week (~40% visited daily and ~32% visited weekly)
- Results indicated that most participants rarely (~48%) or never (~31%) walk within the study area
- Most respondents (~58%) strongly supported the idea of converting 25th Street into a two-way street



## Waco Walks and Neighborhood Workshop #1

In-person activities included a walking tour of the corridor with area stakeholders coordinated with Waco Walks, followed by a Neighborhood Workshop, both held on November 18th, 2023, where participants were asked to share their initial perceptions of the Corridor's existing opportunities and constraints. Over 40 residents participated in this walking tour and neighborhood workshop event. Workshop participants reviewed the corridor's existing conditions and were encouraged to leave feedback at several stations regarding the community's vision for the future of the corridor.



Waco Walks Tour Photos



Neighborhood Workshop #1 Photos



Waco Walks Tour Photos

## Waco Walks and Neighborhood Workshop #2

A second Neighborhood Workshop occurred after Grassroots, who was supported by the Chamber and the City, hosted a mural unveiling event which took place nearby from 9:00am -10:00am. Approximately 25 residents and local business owners participated in mural unveiling and neighborhood workshop. At the Workshop, attendees were encouraged to leave feedback at several stations regarding the updated draft vision statement, corridor traffic configuration options, and the preferred corridor themes and elements.



Neighborhood Workshop #2 Photos



Neighborhood Workshop #2 Photos



Neighborhood Workshop #2 Photos



## STAKEHOLDER COMMITTEE

A 25th Street Stakeholder Committee, made up of 21 individuals representing businesses and neighborhoods along the Corridor, met four times throughout the duration of the project to inform and guide the plan's vision and recommendations. Online engagement activities were accomplished through a project webpage hosted by the City. The webpage featured an online survey which utilized the SurveyMonkey platform and was active between October 2023 – December 2023. 62 responses were received to the survey which included 22 questions designed to gain a better understanding of the current perceptions and future desires for the city.

- The first Stakeholder Committee Meeting was held on October 2nd, 2023. For this meeting, stakeholders received a project overview consisting of the existing corridor conditions and project schedule. Committee members were then asked to respond to several prompts regarding the overall corridor vision and 4 preliminary Character Zones. There was a high level of discussion from participants regarding the future vision for the corridor. An overview of the exhibits and the high-level takeaways are included in **Appendix A**.
- The second Stakeholder Committee Meeting was held on December 11th, 2023. In this meeting, stakeholders reviewed several draft vision statements for the corridor and design themes, as well as elements of cultural representation, gateways, street furniture, and street designs. After reviewing the materials, committee members provided their suggestions to revise the vision statement. In addition, the different aesthetic elements presented were voted on to help determine the desired visual representation of the corridor.
- The third Waco 25th Street Corridor Stakeholders Committee Meeting was held on January 22, 2024. Committee Members were briefed on the planning process to date, as well as the refined draft vision statement for the corridor, the preferred gateway elements, street furniture, and street designs, and mobility and parking layout alternates. Discussion sessions were held so Stakeholders could review each element and

give feedback on improvements, appropriateness, and potential conflicts of the proposed improvements.

- The fourth (and final) Waco 25th Street Corridor Stakeholders Committee Meeting was held on February 26, 2024. Attendees of this meeting were presented the draft framework plan, the prototypical street enlargements, implementation priorities, recommended streetscape elements, and the next steps for the project. Meeting attendants were able to ask questions and provide feedback on each of these topics.



Stakeholder Committee Meeting Photos



Stakeholder Committee Meeting Photos



Stakeholder Committee Meeting Photos



Stakeholder Committee Meeting Photos



Stakeholder Committee Meeting Photos



# Chapter 2

## Existing Conditions

When it comes to mobility, not all corridors are created equal. This chapter establishes a foundational understanding of the issues and opportunities related to the Waco 25th Street corridor, an essential cog in the recommendation process. The City of Waco provided GIS data to the project team, who evaluated the information and produced a series of

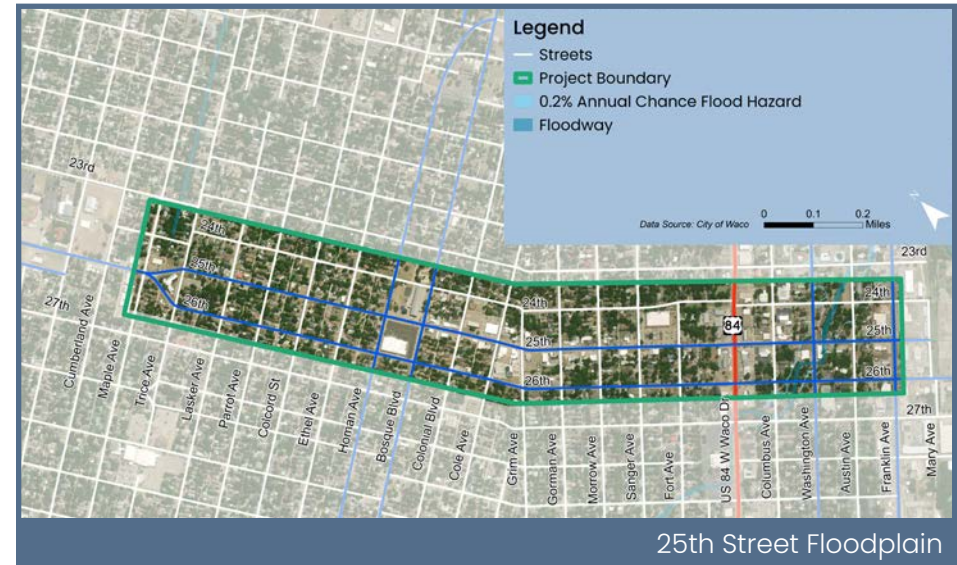
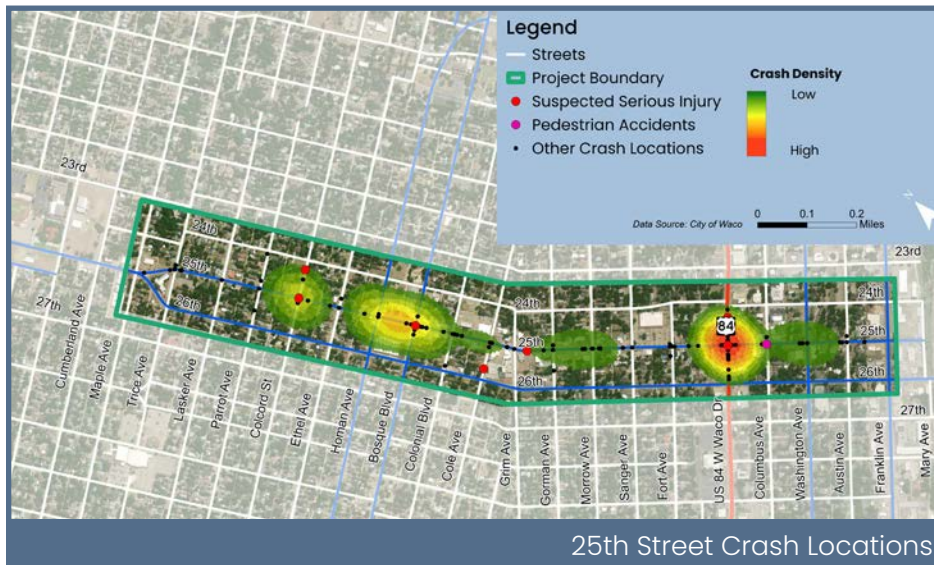
informational maps related to existing multimodal facilities, commercial parking opportunities, and an analysis of existing capacity operations at major intersections and along the overall corridor. These Existing Conditions maps guided decision making and needs assessments for both the project team and the Stakeholder Committee in the early stages of the project.

## CORRIDOR MAPPING

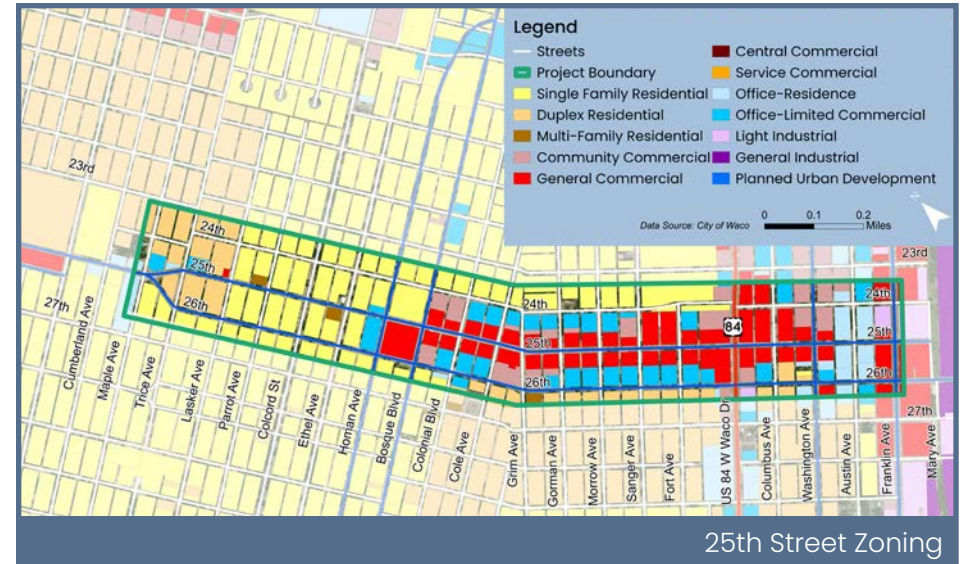
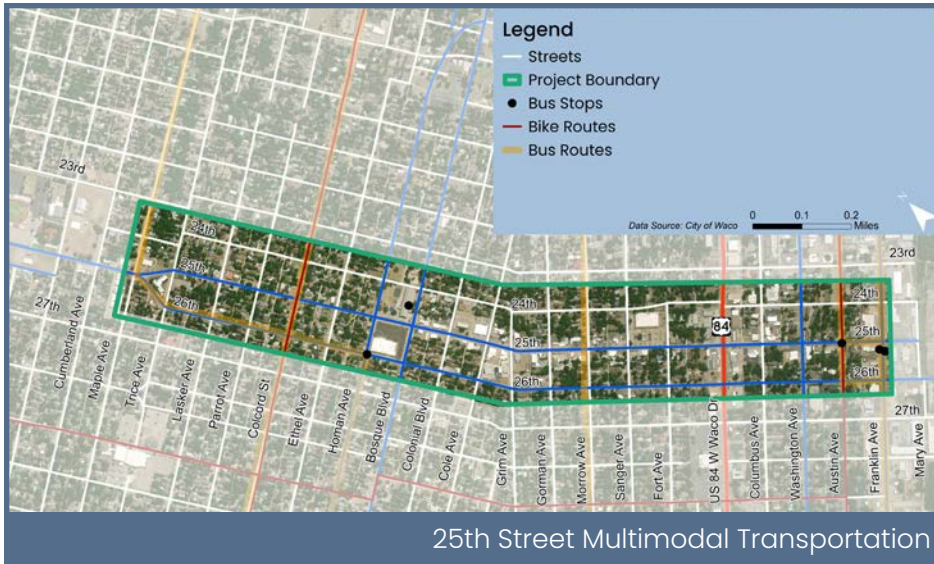
The project team produced existing conditions maps for the following data sets:

- **A Spatial Analysis of Crashes** can serve to identify streets and intersections along with their corresponding number of crashes. This analysis is particularly helpful in identifying streets or intersections that may have an elevated amount of crash incidents, or increased severity (fatal or significant injury) of occurrences.
- **Floodplain** identification helps us visualize and determine the amount of risk (or lack thereof) associated with the potential for flooding. Similarly, floodplain mapping can help identify or eliminate potential areas for future development and inform land use decisions.
- **Land Use** is the essence of planning. Historic patterns of development and utilization inform current conditions related to growth, planning, policy, and construction.
- **Zoning** goes a step further than land use by establishing allowed uses, development standards, and the geography to which they can be applied.
- **Building Footprints** help to inform about relationships with the built environment. Understanding where building footprints may or may not exist can inform future growth, land use decisions, and Capital Improvement Project (CIP) planning.
- **Sidewalk Inventory** enables us to understand where sidewalks do and do not exist. This is a critical element to better understanding the pedestrian realm.
- **Multimodal Transportation** Routes represent a comprehensive approach to understanding transportation. Unlike standard roadway classifications, multimodal transportation routes can incorporate all modes of transportation (automobile, bus, bicycle, walking, etc.) and account for a greater variety of users.
- **On-Street Parking Inventory** establishes the boundaries and quantity of designated parking for vehicles along public roads and streets. Understanding the relationship of on-street and other dedicated parking areas is critical to traffic operations, planning, and the general flow of humans.
- **Parcel Classifications** help to distinguish between private or publicly owned land. This distinction not only helps to establish property rights, but also allows us to preserve sensitive and otherwise valuable lands for intended uses.
- **Road Classifications** provide a general understanding of the physical roadway features (such as travel lanes, shoulders, and alignments) that characterize the individual thoroughfares.

# WACO 25<sup>TH</sup> STREET CORRIDOR IMPLEMENTATION PLAN



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## 25TH STREET EXISTING CONDITIONS

### Lane Configuration

Between the cross streets of Maple Avenue and Franklin Avenue, 25th Street is configured with three one-way vehicle lanes intended for northwest travel. In terms of land uses served, the corridor is driven primarily by urban residential uses north of Homan Avenue. South of Homan, 25th Street primarily serves a more mixed use of developments, including both residential and commercial properties.

### Traffic Volumes

Estimated daily volumes along 25th Street are reported at approximately 5,178 daily trips. North of Waco Drive, peak hour volumes were calculated at 326 vehicles per hour (VPH) during the AM peak and 596 VPH during the PM peak. Intersection peak hour volumes along the corridor can be found in exhibits provided in **Appendix B: Waco Corridor Analysis**.

### Capacity Operations

Intersection operations are important to the overall performance and experience for vehicles, as well as users of other modes at the intersection. Ideal intersections should operate under conditions with good traffic flow and limited congestion delays. Roadway geometry, traffic control, signal timings, and traffic volumes are all important factors that contribute to determining the Level of Service (LOS) and delay at an intersection.

Intersection capacity results from this type of analysis are listed in terms of Level of Service. LOS is a qualitative term describing operating conditions that a driver can realistically expect to experience while traveling on a specific roadway during a specific time interval. In its most boiled down and distilled being, LOS indicates how freely a vehicle can expect to travel along a defined street or road. LOS classifications range from A (very little delay) to F (long delays and congestion). LOS category D is typically considered the threshold target for design and evaluation purposes in the City of Waco. The Definition of Level of Service table on the following page outlines the LOS thresholds based on average vehicle delays.



Definition of Level of Service

LEVEL OF SERVICE	AVERAGE CONTROL DELAY PER VEHICLE (SECONDS/VEHICLE)		DESCRIPTION
	SIGNALIZED	UNSIGNALIZED	
A and B	<p>≤ 10 (A)</p> <p>&gt; 10 and ≤ 20 (B)</p>	<p>≤ 10 (A)</p> <p>&gt; 10 and ≤ 15 (B)</p>	No delays at intersections with continuous flow traffic. Uncongested operations; high frequency of long gaps available for all left and right-turning traffic; no observable queues.
C	> 20 and ≤ 35	> 15 and ≤ 25	Moderate delays at intersections with satisfactory to good traffic flow. Light congestion; infrequent backups on critical approaches.
D	> 35 and ≤ 55	> 25 and ≤ 35	Increased probability of delays along every approach. Significant congestion on critical approaches, but intersection functional. No long-standing lines formed.
E	> 55 and ≤ 80	> 35 and ≤ 50	Heavy traffic flow condition. Heavy delays probable. No available gaps for cross-street traffic or main street turning traffic. Limit of stable flow.
F	> 80	> 50	Unstable traffic flow. Heavy congestion. Traffic moves in forced flow condition. Average delays greater than one minute highly probable. Total breakdown.

The acknowledged source for determining overall intersection capacity is the current edition of the Highway Capacity Manual (HCM). The corridor intersections were analyzed based on average stop-controlled delay for signalized or unsignalized intersections using the Synchro IITM software, which utilizes the HCM procedure to calculate LOS. AM and PM peak hour LOS analyses were completed for each corridor intersection. The full analysis reports are provided in **Appendix C: Franklin Signal Warrant**, but it's important to note that the only intersection to receive a failing LOS designation was the intersection of 25th Street and Franklin Avenue.

## Thoroughfare Operations

The user experience resulting from operations along a thoroughfare and between traffic-controlled intersections is an additional consideration to be evaluated, as this measure is directly related to the perception of the user experience. Ultimately, the capacity and congestion on a roadway segment is what we think of in conjunction with wait time at lights and intersections. The roadway classification, number of lanes, and traffic volumes are all important factors in determining the operations along a given thoroughfare. Given the context of 25th Street as a three-lane undivided, 30-mph facility, standard practices would indicate that for a road of this type, a single lane of traffic should have a maximum capacity of 5,000 vehicles per day per lane (VPDPL). An analysis was performed for intersection level of service at the following intersections with both 25th Street and 26th Street:

- Maple Avenue
- Homan Avenue
- US 84 (Waco Drive)
- Washington Avenue
- Franklin Avenue
- Colcord Avenue
- Bosque Boulevard
- Columbus Avenue
- Austin Avenue

Based on the LOS analysis of the select intersections along 25th Street, all intersections currently function at acceptable operating conditions, except for the intersection of 25th & Franklin Avenue. The northbound approach at Franklin operates at failing conditions with a delay of approximately 45 seconds and queues of 2-3 vehicles at the stop-controlled approach. Based on existing volumes, the intersection is anticipated to meet peak hour signal warrants during both the AM and PM peak hours.

Assuming the three lanes along 25th Street, the maximum capacity should not exceed 15,000 total daily trips. Based on the reported 5,178 daily volumes along the corridor, 25th Street appears to provide wholly adequate capacity to support the current vehicle demand. Between the cross streets of Maple Avenue and Franklin Avenue, 26th Street is configured with three one-way vehicle lanes intended for southeast travel. Estimated daily volumes along 26th Street are reported at approximately 5,628 daily trips. Based on an analysis of both intersection capacity and thoroughfare capacity, 26th Street was found to have acceptable operating levels of service along the corridor.



# Chapter 3

## Corridor Framework

## INTRODUCTION

The 25th Street Corridor Framework chapter delves into the corridor's context, theming, vision statement, streetscape elements, mobility concepts, streetscape designs, and prototypical enlargements. Over several months the project team has worked closely with the Stakeholder Committee, the public, and city staff to craft and refine what the ideal 25th Street Corridor would look like. This process required the team to synthesize many different voices and ideas to create a plan that not only fostered a safer and healthier environment but also served the diverse community of the corridor. The following sections will delve deeper into the final recommendations the team has for the corridor and the benefits of their implementation.

## CORRIDOR CONTEXT

### History/Background

In the beginning phases of the planning process the project team walked the 25th Street Corridor and documented the historical, architectural, cultural, and natural elements that currently exist. Some of the elements evaluated on the walking tour throughout the corridor are inventoried and included:

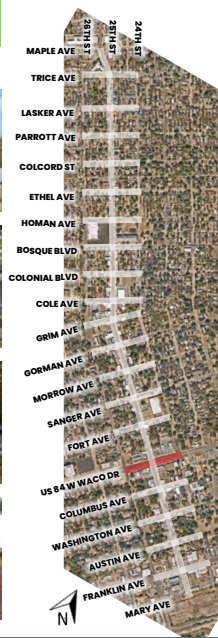
- Residential Character and typologies
- Transportation considerations (Roadways, Transit, Sidewalk, Trails, On-Street Parking, and Multimodal Infrastructure)
- Landscaping
- Business Activity Centers and Hubs
- Community Assets (Amenities, Facilities, Destinations, Parks and Open Space)
- Streetscaping and the Pedestrian Realm

From the process of documenting, classifying, and weighing public input, two alternate corridor themes emerged. These themes were continuously refined based on public input and the development of the preferred vision statement and eventually combined into the preferred corridor theme. The two initial themes presented were:

- Contextual Architecture
- Local Culture

## CORRIDOR INFLUENCE AREAS - NEIGHBORHOODS, SUB-AREAS, AND CHARACTER AREAS

### SINGLE FAMILY (1-STORY)



Corridor Influence Areas

## TRANSPORTATION - CURRENT ROADWAYS, TRANSIT, SIDEWALKS, TRAILS, ON-STREET PARKING, AND BICYCLE INFRASTRUCTURE



Corridor Transportation

## CORRIDOR INFLUENCE AREAS - NEIGHBORHOODS, SUB-AREAS, AND CHARACTER AREAS

### SINGLE FAMILY (2-STORY)



Corridor Influence Areas

## CORRIDOR INFLUENCE AREAS - NEIGHBORHOODS, SUB-AREAS, AND CHARACTER AREAS

### MULTI-FAMILY



Corridor Influence Areas

### INFILL HOUSING



## CORRIDOR ANCHORS - BUSINESS ACTIVITY CENTERS AND HUBS



Corridor Anchors

## STREETSCAPE - BENCHES, BOLLARDS, RETAINING WALLS, TRASH RECEPTACLES, TRAFFIC SIGNALS AND STREETLIGHTS



Corridor Streetscape

## COMMUNITY ASSETS - AMENITIES, FACILITIES, DESTINATIONS, AND PARKS/OPEN SPACE



Corridor Community Assets

## LANDSCAPE - TREES, SHRUBS, AND GROUNDCOVER



Corridor Landscape

## Contextual Architecture Theme

The Contextual Architecture Theme is reflective of the variety of architectural styles present in various sections of the corridor. Art-deco windows, craftsman-style homes in the north and south neighborhoods, and vibrant paving patterns are all elements the Stakeholder Committee liked and felt represented the corridor. This theme could be further developed in the corridor by adopting colorful glasswork and art-deco inspired forms in concrete and metal.

## Local Culture Theme

The Local Culture Theme was inspired by built elements as well as the diversity of local businesses that contribute to the corridor's success. Local Cultural themes can be implemented by amplifying existing features such as calavera tiles, potted plants, archways, and bold colors.



# STREETSCAPE VISION

Over several meetings with the public and the Stakeholder Committee, the Preferred Vision Statement, Preferred Corridor Theme, and Preferred Streetscape Elements were developed to guide the plan's priorities and objectives. The Preferred Vision Statement informed the final Preferred Corridor Theme which in turn established the Preferred Streetscape Elements palette.

## Preferred Vision Statement

A vision statement is an integral part of determining the community's values to guide action, goals for the corridor, source of motivation, outlines the desired future state. The established Preferred Vision Statements is as follows:

“The 25th Street corridor will be a living testament to its past while safely and comfortably moving people through its robust, accessible pedestrian-friendly street network. The corridor will be a source of pride for residents and business owners and a destination that will attract visitors from near and far. Through thoughtful planning and engagement with the community, we aim to create a corridor that pays homage to the corridor's historical roots, including inspiration from the Hispanic/Latino community, Victorian Arts and Craft-style homes, Art Deco architecture, and more.”

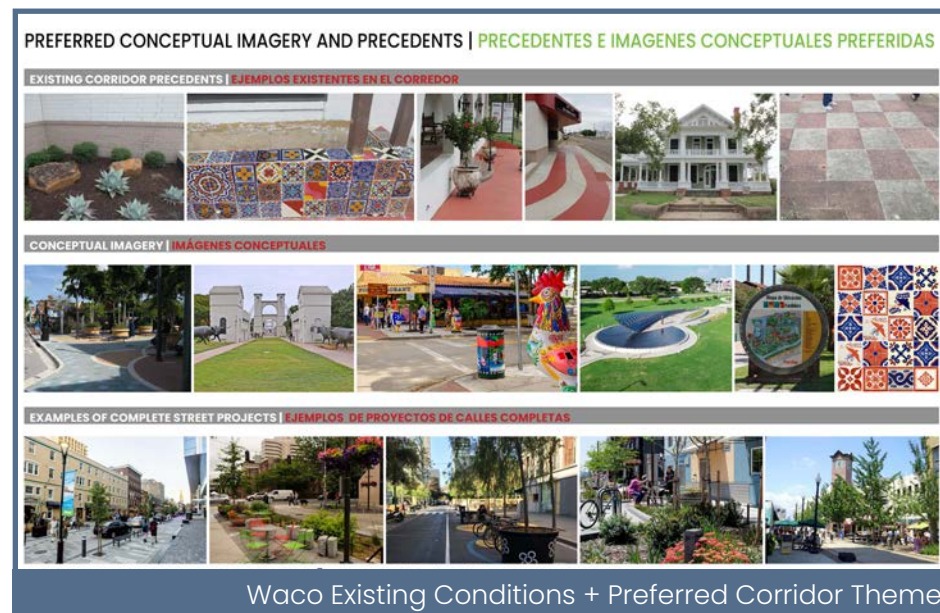


## Preferred Corridor Theme

The preferred corridor theme, as similarly stated in the vision statement, seeks to blend and enhance the existing elements of Hispanic/Latino community, Victorian Arts and Craft-style homes, and art deco architecture. The intention is to use currently existing materials in the corridor, such as the calavera tiles, vibrant colors, and art-deco glasswork in conjunction with the preferred streetscape elements to create a corridor that honors its history and embraces its present.

## Preferred Streetscape Elements

The following streetscape elements were chosen by the public and the Stakeholder Committee through several rounds of voting. The elements shown were chosen for their potential to maintain relevance over time, ability to be colored customized to fit in with different zones, and for being complimentary to the cultural and architectural Preferred Corridor Theme.



## MOBILITY CONCEPTS

Three alternative concepts were proposed for the 25th Street cross section to address several key issues observed along the corridor, including speeding concerns, enhanced multimodal operations, increased parking, and improved connectivity. Each corridor option was analyzed for projected level of service operations to evaluate the effects of the proposed mitigations on the vehicular network. Ultimately, the proposed corridor options included:

- Concept 1: Traffic Lane Reduction with Parallel Parking
- Concept 2: Opposing Traffic Lanes with Parallel Parking
- Concept 3: Opposing Traffic Lanes with Dual Parallel Parking

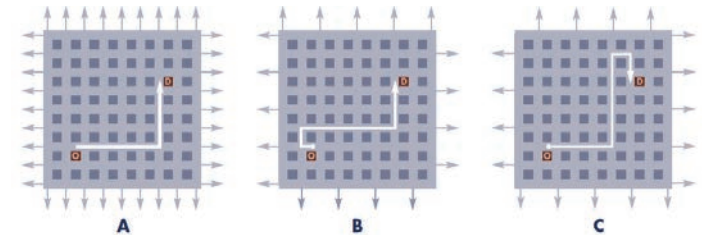


Conventional wisdom dictates that one-way streets are preferable in a downtown setting because they have a greater vehicle-moving capacity and fewer conflicting turning movements than two-way streets. Resultingly, the 25th and 26th Street Corridors were identified as potential candidates for conversion to two-way operations. These corridors have been analyzed to estimate intersection level of service if each were converted to two-way operation.

Among the reasons for converting one-way streets to two-way streets are improved circulation, shorter trip lengths (graphic below), less confusion for visitors and a more livable and pedestrian-friendly corridor. Critics of this approach have argued that these benefits are not worth the loss in vehicle-moving capacity and that it adds additional conflict points. However, recent research has shown that while one-way streets do provide a greater vehicle-moving capacity when analyzed individually, two-way streets provide a greater trip-serving capacity to the network overall. This was found to be especially true in smaller cities.

The analysis showed that with one lane in each direction and dedicated left-turn pockets, the corridors will operate at an acceptable level of service (C or better) in the AM or PM Peak Hours except for the stop-controlled northbound (NB) approach at Franklin Avenue and 25th Street.

When modeled as a two-way operation, the stop-controlled NB intersection of Franklin Avenue and 25th Street remains at a failing level of service. Placement of a traffic signal on Franklin Avenue and 25th Street that is coordinated with 26th street will result in an acceptable level of service.



Routes Taken Between the Same Origin-Destination Pair in:  
 A) Two-Way Street Network  
 B) One-Way Street Network with Deviation at Origin  
 C) One-Way Street Network with Deviation at Destination

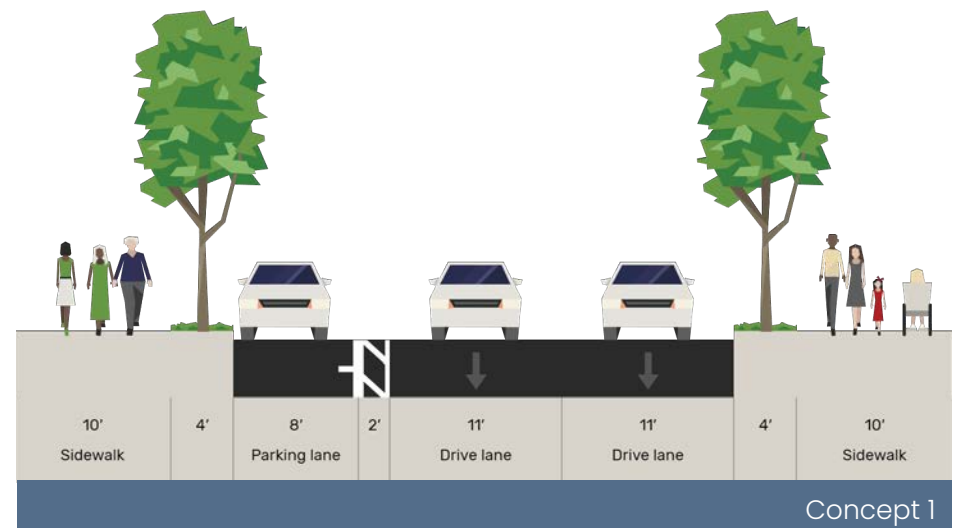
Rutas tomadas entre el mismo par origen-destino en:  
 A) Calles de doble sentido  
 B) Calles de sentido único con desviación en origen  
 C) Calles de sentido único con desviación en destino

Source: *Two-Way Street Networks: More Efficient than Previously Thought?*; Gayah, Vikash V.; 2012

## Concept 1: Traffic Lane Reduction with Parallel Parking

### Description/Changes in Lane Configuration

- This concept introduces additional parking options along 25th Street by reducing the total lane count along the corridor and maintaining the remaining two lanes.
- This concept also proposes a 10-foot shared-use path for walking and bicycling and other micromobility options, and a 4-foot landscape buffer on both sides of the street accommodating street trees to enhance the parklike feel.



## Advantages

- Fewer lanes encourage drivers to slow down
- Promotes walkability by reducing pedestrian crossing times
- Opportunities to allocate additional pavement for multimodal purposes
- Reduction of multiple crash types

## Disadvantages

- Wider lanes can encourage speeding
- Can create maneuverability issues for larger vehicles

## Concept 2: Opposing Traffic Lanes with Parallel Parking

### Description/Changes in Lane Configuration

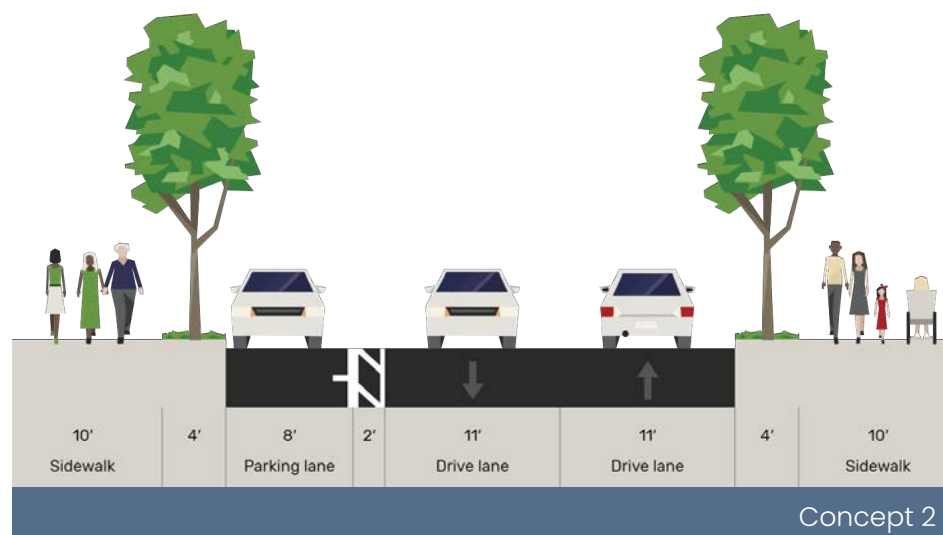
- This concept reconfigures the existing three lanes along 25th Street into two lanes of opposing through traffic and a single lane of parallel parking. Given the additional direction proposed along 25th Street, this concept also assumes the reconfiguration of 26th Street into a lower-stress, two-lane, two-way residential facility.
- This concept also proposes a 10-foot shared-use path for walking and bicycling and other micromobility options, and a 4-foot landscape buffer on both sides of the street accommodating street trees to enhance the parklike feel.

### Conceptual Traffic Volume Assumptions

- Due to the additional direction of traffic introduced along 25th Street, traffic volumes were adjusted along the couplet to project anticipated changes in traffic patterns. The analysis takes the combined daily volumes along both 25th Street and 26th Street and assumes 90% of the combined total along 25th Street, with the remaining 10% of the combined total traffic assumed along 26th Street.

## Advantages

- Reduction of multiple crash types
- Two-ways tend to have lower speeds than one-ways
- More comfortable pedestrian crossing experience
- Can lead to increased travel times
- Can create maneuverability issues for larger vehicles



Concept 2

**Disadvantages**

- Can lead to increased travel times
- Can create maneuverability issues for larger vehicles

## Concept 3: Opposing Traffic Lanes with Dual Parallel Parking

**Description/Changes in Lane Configuration**

This concept reconfigures the existing three lanes along 25th Street into two lanes of opposing through traffic with one lane of parallel parking along either side of the corridor.

This concept also proposes an 8-foot sidewalk for walking and bicycling and other micromobility options, and a 3-foot landscape buffer on both sides of the street accommodating street trees to enhance the parklike feel.

**Conceptual Traffic Volume Assumptions**

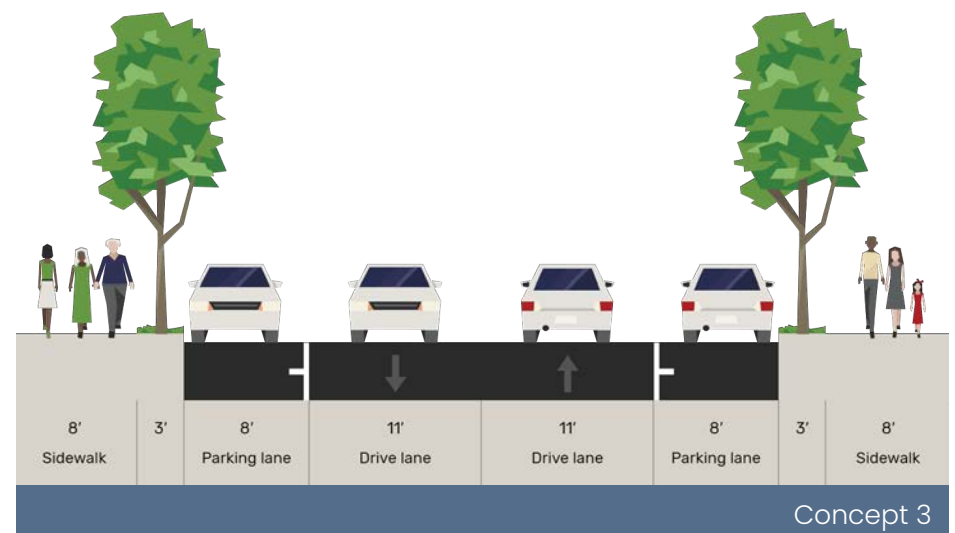
Due to the additional direction of traffic introduced along 25th Street, traffic volumes were adjusted along the couplet to project anticipated changes in traffic patterns. The analysis takes the combined daily volumes along both 25th Street and 26th Street and assumes 90% of the combined total along 25th Street, with the remaining 10% of the combined total traffic assumed along 26th Street.

**Advantages**

- Reduction of multiple crash types
- Two-ways tend to have lower speeds than one-ways
- More comfortable pedestrian crossing experience

**Disadvantages**

- Can lead to increased travel times
- Can create maneuverability issues for larger vehicles



	25TH EXISTING	25TH CONCEPT 1	25TH CONCEPT 2	25TH CONCEPT 3
<b>CONCEPT</b>	Existing Lane Configuration	Traffic Lane Reduction with Parallel Parking	Opposing Traffic Lanes with Parallel Parking	Opposing Traffic Lanes with Dual Parallel Parking
<b>VEHICULAR REALM</b>	Three 12-foot vehicular one-way travel lanes and a posted speed limit of 30 mph.	Two 12-foot vehicular one-way travel lanes, a single 10-foot on-street parallel parking lane, and a posted speed limit of 30 mph.	Two 12-foot vehicular two-way travel lanes, a single 10-foot on-street parallel parking lane, and a posted speed limit of 30 mph.	Two 11-foot vehicular two-way travel lanes, two 8-foot on-street parallel parking lanes, and a posted speed limit of 30 mph.
<b>MULTIMODAL/ PEDESTRIAN REALM</b>	Sidewalk facilities are inconsistently present along one or both sides of the street often with varying widths and distances from the street edge. There is no dedicated space for bicycling. More than 90% of sidewalk facilities provided along 25th Street are less than 6 feet in width. Wider segments are provided along 25th in high-activity retail locations.	An 8-foot sidewalk for walking and bicycling and other micromobility options, and a 4-foot landscape buffer on both sides of the street accommodating street trees to enhance the parklike feel.		An 8-foot sidewalk for walking and bicycling and other micromobility options, and a 3-foot landscape buffer on both sides of the street accommodating street trees to enhance the parklike feel.
<b>VOLUME CONSIDERATIONS</b> (reported as Avg. Daily Traffic, ADT)	ADT 5,178	ADT 5,178	ADT 9,725*	
<b>ADVANTAGES</b>	<ul style="list-style-type: none"> <li>Familiar commute times and traffic operations for vehicles and multimodal users</li> <li>Current lane configuration reduces maneuverability issues for larger vehicles</li> </ul>	<ul style="list-style-type: none"> <li>Reduction of multiple crash types</li> <li>Fewer lanes encourage drivers to slow down</li> <li>Promotes walkability by reducing pedestrian crossing times</li> <li>Opportunities to allocate additional pavement for multimodal purposes</li> </ul>	<ul style="list-style-type: none"> <li>Reduction of multiple crash types</li> <li>Two-ways tend to have lower speeds than one-ways</li> <li>More comfortable pedestrian crossing experience</li> </ul>	
<b>DISADVANTAGES</b>	<ul style="list-style-type: none"> <li>Speeding observed throughout the corridor</li> <li>Limited parking opportunities</li> <li>Higher rate of historical crashes at high-activity road segments and intersections</li> </ul>	<ul style="list-style-type: none"> <li>Wider lanes can encourage speeding</li> <li>Can create maneuverability issues for larger vehicles</li> </ul>	<ul style="list-style-type: none"> <li>Can lead to increased travel times</li> <li>Can create maneuverability issues for larger vehicles</li> </ul>	

\*Because this conceptual scenario assumes bidirectional operations along 25th Street, more traffic is anticipated to utilize this corridor over 26th Street. To represent this projected shift in traffic, adjustments were made to the existing volume data based on the combined total of 10,806 daily vehicles between the coupled roadways. Based on these projections, the analysis assumes 90% of the combined total to be traveling along the upgraded 25th Street corridor, with the remaining 10% assumed along 26th Street.

## Additional Mobility Recommendations

### 26th Street Concept

Based on the coupled configuration of 25th and 26th Streets, operations along 26th Street are anticipated to be affected by changes in traffic and operations along 25th Street with the proposed mitigations. Considering this potential shift in traffic, as well as the increase in direct residential connections when compared to 25th Street, an additional concept was developed as a proposed new cross section for 26th Street, shown:

#### Description/Changes in Lane Configuration

- This concept reconfigures the existing three lanes along 26th Street into two lanes of opposing through traffic with a two-way cycle track along the corridor.
- Along with the cycle track, this concept also proposes an 8-foot sidewalk for walking and bicycling and other micromobility options, and a 4-foot landscape buffer on both sides of the street accommodating street trees to enhance the parklike feel.

#### Conceptual Traffic Volume Assumptions

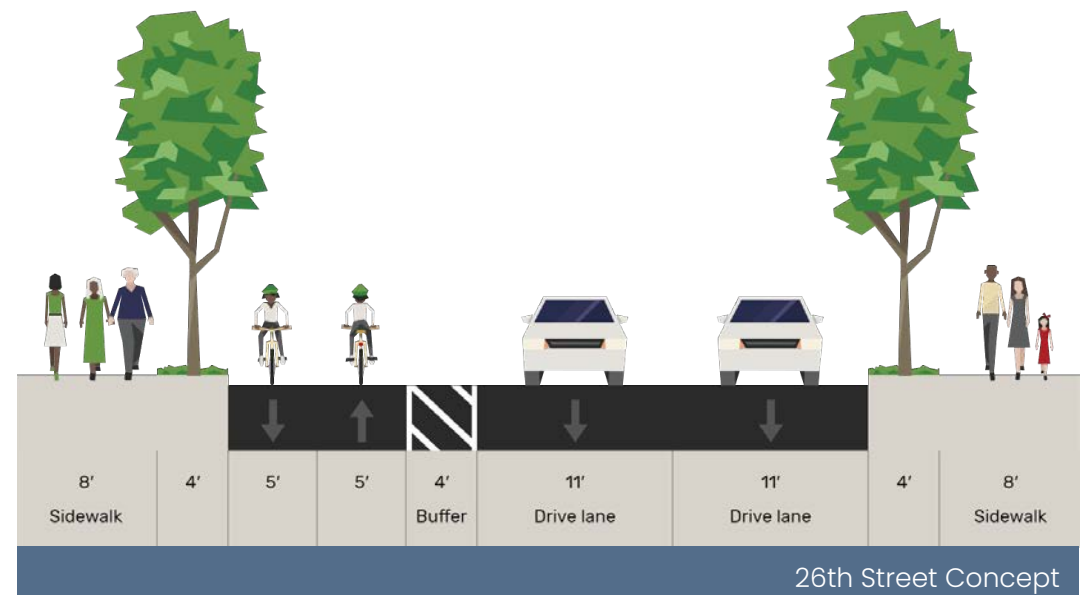
Due to the additional direction of traffic introduced along 25th Street, traffic volumes were adjusted along the couplet to project anticipated changes in traffic patterns. The analysis takes the combined daily volumes along both 25th Street and 26th Street and assumes 90% of the combined total along 25th Street, with the remaining 10% of the combined total traffic assumed along 26th Street.

#### Advantages

- Improved pedestrian and bicycle safety
- Encourages more types of multimodal travel
- Opportunities for enhanced landscaping that can attract customers to businesses along the 25th Street corridor

#### Disadvantages

- Users will need time to adapt to new operations
- May increase vehicle commute times
- Potential for safety issues if bike lanes are used by motorbikes



	26TH EXISTING	26TH CONCEPT
<b>CONCEPT</b>	Existing Lane Configuration	Residential Context with Cycle Track
<b>VEHICULAR REALM</b>	Three 12-foot vehicular one-way travel lanes and a posted speed limit of 30 mph.	Two 11-foot vehicular two-way travel lanes, a single 10-foot two-way cycle track, and a posted speed limit of 30 mph.
<b>MULTIMODAL/ PEDESTRIAN REALM</b>	Sidewalk facilities are inconsistently present along one or both sides of the street often with varying widths and distances from the street edge. There is no dedicated space for bicycling.	A single 10-foot two-way cycle track, and an 8-foot pedestrian sidewalk with a 4-foot landscape buffer on both sides of the street accommodating street trees to enhance the parklike feel.
<b>VOLUME CONSIDERATIONS</b> (reported as Avg. Daily Traffic, ADT)	ADT 5,628	ADT 1,081*
<b>ADVANTAGES</b>	<ul style="list-style-type: none"> <li>Familiar commute times and traffic operations for vehicles and multimodal users</li> <li>Current lane configuration reduces maneuverability issues for larger vehicles</li> </ul>	<ul style="list-style-type: none"> <li>Improved pedestrian and bicycle safety</li> <li>Encourages more types of multimodal travel</li> <li>Opportunities for enhanced landscaping that can attract customers to businesses along the 25th Street corridor</li> </ul>
<b>DISADVANTAGES</b>	<ul style="list-style-type: none"> <li>Ongoing concerns for bicyclist and pedestrian safety</li> <li>Limited options for enhanced landscaping opportunities</li> </ul>	<ul style="list-style-type: none"> <li>Users will need time to adapt to new operations</li> <li>May increase vehicle commute times</li> <li>Potential for safety issues if bike lanes are used by motorbikes</li> </ul>

\*Because this conceptual scenario assumes bidirectional operations along 25th Street, more traffic is anticipated to utilize this corridor over 26th Street. To represent this projected shift in traffic, adjustments were made to the existing volume data based on the combined total of 10,806 daily vehicles between the coupled roadways. Based on these projections, the analysis assumes 90% of the combined total to be traveling along the upgraded 25th Street corridor, with the remaining 10% assumed along 26th Street.

## Traffic Signal at 25th & Franklin Avenue

An analysis of peak hour traffic at the intersection of 25th Street & Franklin Avenue indicates failing level of service operations, with a delay of approximately 45 seconds and queues of 2-3 vehicles at the stop-controlled approach. Based on existing volumes, the intersection is anticipated to meet peak hour signal warrants during both the AM and PM peak hours. For this reason, signalization is recommended for consideration at the intersection.

## Roundabout at 25th/26th & Maple Avenue

With the proposed mitigations for both 25th and 26th Streets, a reconfiguration will be needed to support the lane adjustments implemented along the corridors. The modern roundabout is an intersection with a circular configuration that safely and efficiently moves traffic. Roundabouts feature channelized, curved approaches that reduce vehicle speed, entry yield control that gives right-of way to circulating traffic, and counterclockwise flow around a central island that minimizes conflict points. The net result of lower speeds and reduced conflicts at roundabouts is an environment where crashes that cause injury or fatality are substantially reduced.

Proposed below is a mitigation option that reconfigures the existing traffic signal at Maple Avenue into a multi-leg roundabout to serve as an entry point into the system.



Opportunity to implement a roundabout at the intersection of Maple Avenue and 25th/26th Street.

Oportunidad de implementar una rotonda en la intersección de Maple Avenue y Calle 25 y 26

Opportunity to vacate segment of 26th Street to Colcord and convert to a pocket park or other community space.

Oportunidad de desalojar el segmento de Calle 26 hacia Colcord y convertirlo en un parque o espacio comunitario

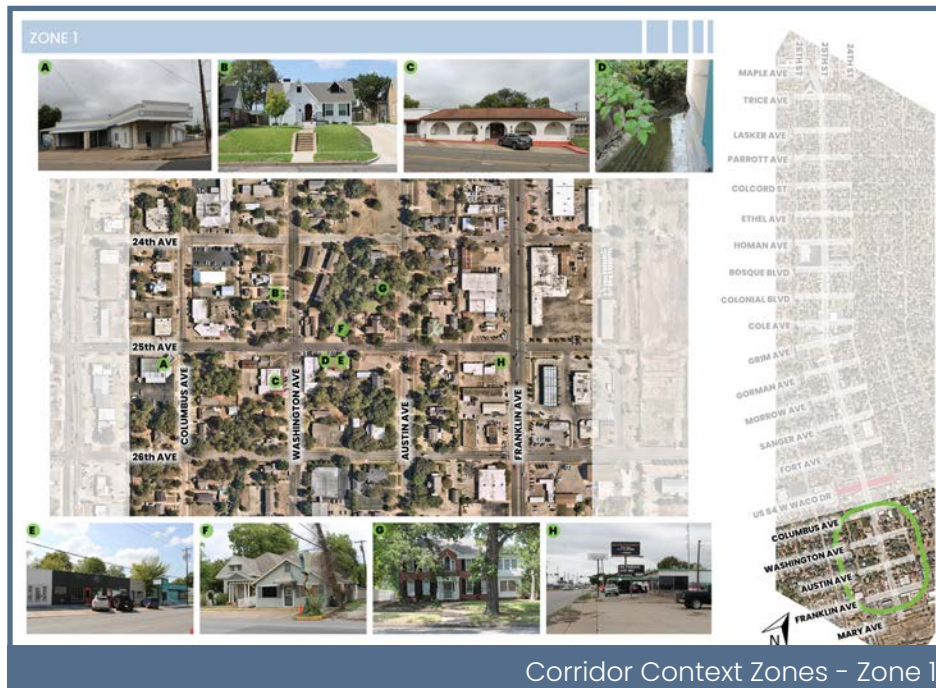
# FRAMEWORK PLAN

## Overall Framework Plan

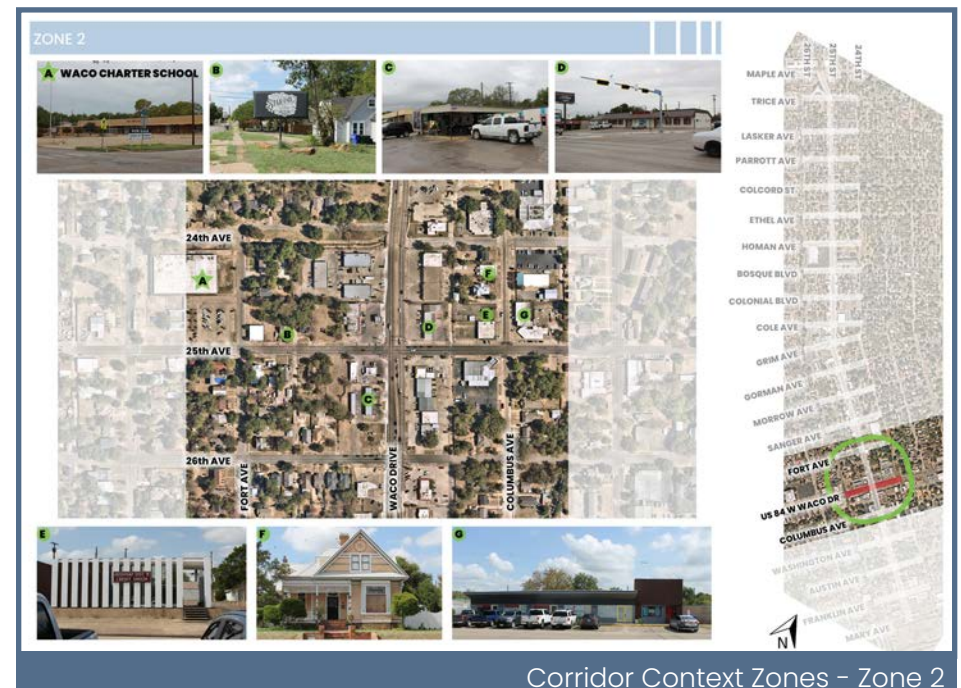
The Overall Framework Plan outlines a vision for the 25th Street Corridor that addresses the community’s need for safety, parking, walkability, and identity. The Plan shows the project site segmented into 4 zones, which were created with respect to the local character and land-use. Utilizing the current land-use, the Corridor was categorized into 3 prototypical street designs:

- Residential Parallel 1-side (east)
- Commercial Parallel 2-side
- Residential Parallel 1-side (west)

Reclassifying the existing corridor into a two-way road with on-street parking will enhance pedestrian and vehicular safety while contributing to the long-term vitality of 25th Streets’ businesses and cu-culture. Major and minor gateway opportunities were identified and marked on the Framework plan. The project team identified these areas as the best possible locations for public art or other branding opportunities based on community feedback and traffic patterns.

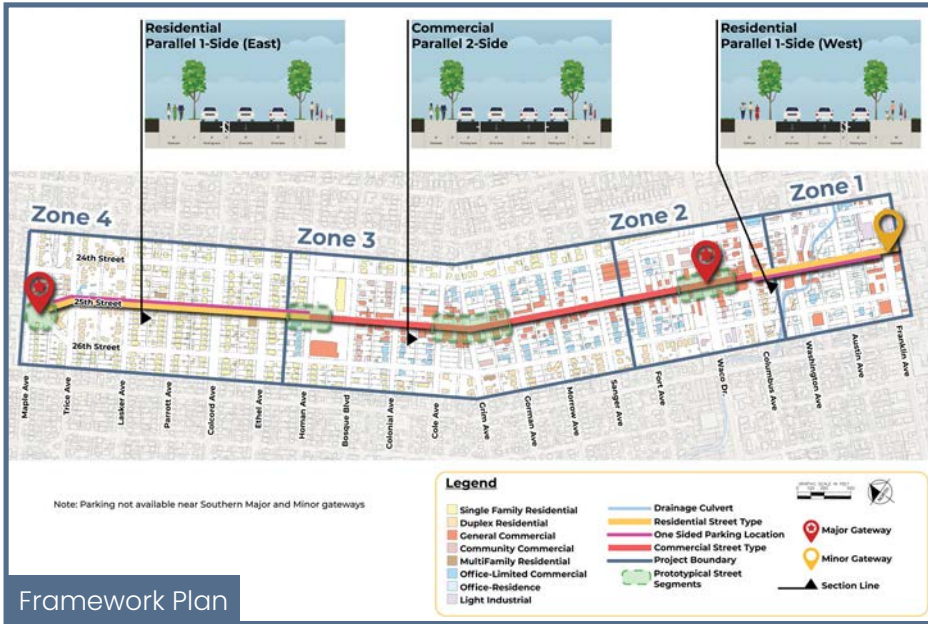


Corridor Context Zones - Zone 1

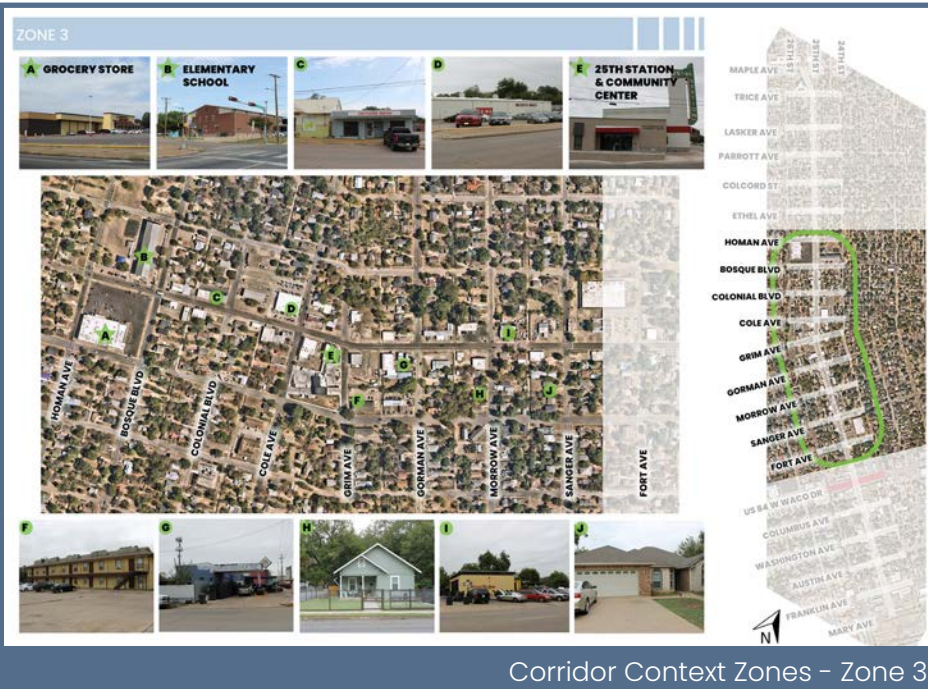


Corridor Context Zones - Zone 2





Framework Plan



## Prototypical Street Designs

### Residential Parallel 1-Side

There are two forms of the Residential Parallel 1-Side Prototypical Street Design – one with parking on the east side and one with parking on the west. Zones 1 and 4 are primarily characterized by residential and office uses, but do also contain some commercial buildings throughout. As such, this Prototypical Street design was chosen to incorporate the necessary flexibility of alternating on-street parking to accommodate businesses, while also accounting for larger sidewalks to serve the local population. The inclusion of the 4' buffers on both sides doubles as a safety measure for pedestrians using the corridor, as well as a traffic calming measure.



### Commercial Parallel 2-Side

In the framework plan, much of the corridor in Zones 2 and 3 is designated as Commercial Parallel 2-Side. This street design prioritizes on street parking to support the existing and future local business throughout the corridor, but still incorporates enhanced sidewalks to encourage walkability for both locals and visitors of the corridor. The included parallel parking on both sides in conjunction with the 3' buffers will encourage drivers to slow down when driving through the corridor, enhancing safety and the pedestrian experience.



## Prototypical Enlargement Plans

The locations of the prototypical enlargement plans are identified in green on the framework plan. These plans illustrate how the Prototypical Street design cross sections could be implemented in different areas along the corridor in conjunction with other streetscape and pedestrian enhancements. Several safety features and corridor enhancements (pedestrian lighting, sidewalk buffers, enhanced paving, street trees, and street furniture) are consistently shown throughout each enlargement. These elements are significant to making the corridor safer, more comfortable, and more inviting for both residents and visitors.

### North Gateway

The Intersection of Maple and 25th street was identified as the major north entrance into 25th street. Presently, The North Gateway is a five-point intersection where the southbound 2-way 25th street splits into one-way 25th and 26th. The prototypical street designs would convert both 25th and 26th into 2-way streets which would allow the North Gateway to convert from a 5-point signalized intersection to a 4-point roundabout. The proposed roundabout would act as a branding/art opportunity location while the 26th street connection would be closed and transformed into community-building opportunity space. In the North Gateway rendering, the street is proposed as a Community Garden with turfstone pavers to provide alley access for the adjacent properties.



North Gateway

### Homan Avenue

The Homan Avenue Prototypical Enlargement Plan illustrates the transition between the Residential 1-sided parking in Zone 1 to the Commercial 2-sided parking in Zone 2. Pedestrian safety enhancements such as marked crosswalks, sidewalk buffers, and streetlighting are all shown.



Homan Avenue

### Grim Avenue

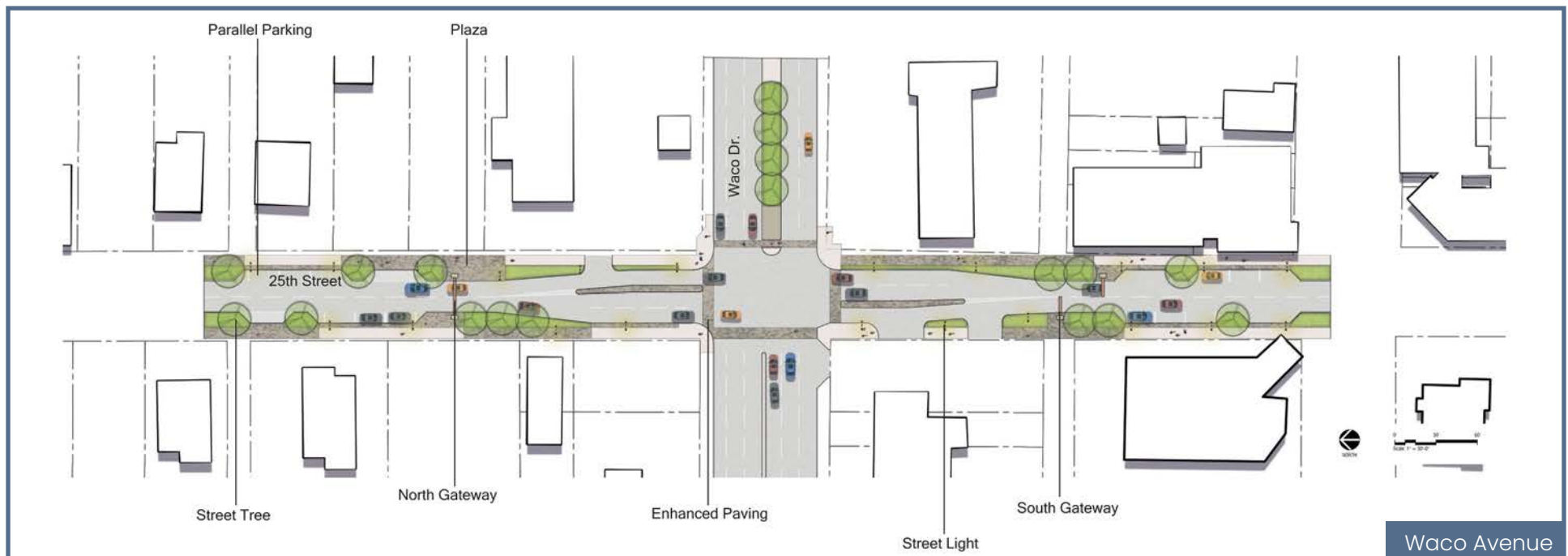
The Grim Avenue Prototypical Enlargement Plan demonstrates a commercial streetscape with parallel parking on both sides. The 25th Street Fire Station is located on Grim Avenue and serves as a major focal point in the community. Based on this, the project team has proposed converting the adjoining space into a plaza to potentially host municipal outreach events. The outdoor seating and lawn area shown in the render were designed with the support of local business owners located on Grim who expressed a desire to convert the paved lot into a gathering space for local restaurants or a pocket park.

### Waco Drive

The Waco Drive Prototypical Enlargement Plan is in Zone 2 and demonstrates the major Southern entryway into the 25th Street Corridor. The enlargement shows a North and South Gateway location which would act as corridor entry signs and branding opportunities. The markers are located in open areas that can be further enhanced into plazas with incorporation of street furniture.



Grim Avenue



Waco Avenue



# Chapter 4

## Implementation Priorities



# INTRODUCTION

As part of the Waco 25th Corridor study, an inventory of key priorities and corresponding implementation considerations are laid out within this chapter. The Implementation considerations laid out in this chapter are a cumulative result of the existing conditions analysis, public input, and stakeholder priorities. Utilizing a thorough review of the Corridor’s existing conditions, public input gathered from the online survey, the interactive map, four workshops with the Stakeholder Committee, and additional community events, several significant themes emerged. Responding to and addressing key opportunities and concerns related to the individual themes serves as the basis of this chapter. The resulting implementation considerations are categorized into three duration categories; short-term (0-2 years), medium-term (2-5 years), and long-term (5+ years).

# STAKEHOLDER PRIORITIES

As part of the final Stakeholder Committee Meeting, stakeholders were tasked with ranking a list of 14 identified corridor priorities from their Highest Priority (1 point), High Priority (2 points) or medium priority (3 points). To ensure the results were not skewed, participants were instructed to submit five priorities to be ranked 1, five priorities to be ranked 2, and four priorities to be ranked 3. The submissions were compiled and totaled, resulting in the highest corridor priority having the least points, and the lowest priority receiving the most points.

Stakeholders were informed that all priorities were important and would be eventually pursued and that the activity was only to determine which avenues for funding were pursued first. Local business owners also filled out the form and submitted their votes at a separate date. All the votes, from both the committee and local business owners, have been tallied and the final ranking are shown below.

## Combined Priority Results

PRIORITY	RANKING	POINTS
Improved Pedestrian Safety	1	25
Improved Lighting	2	31
Improved Traffic Flow/Capacity	3	35
TIE: Improved Vehicular Safety TIE: Traffic Calming	4	36
Improved Business Access	6	39
Creating a Unique Corridor within Waco	7	42
Maximizing On-street Parking	8	43
Improved Landscaping	9	45
Improved Business Deliveries	10	52
Improved Transit	11	56
TIE: Improved Bicyclist Safety TIE: Providing Plazas/Community Gathering Spaces	12	59
Increasing Public Art	14	63

## Priority Themes

Once stakeholder priorities were provided, an evaluation of all inputs was conducted. Upon review of the priority inputs, several themes began to emerge. Those emerging themes became the impetus for an evaluation methodology that was created to apply and measure against the four Character Zones that were established throughout the Corridor. The chart below represents the Priority Themes that were created to represent and summarize the broader categories of Priority Ranking Criteria provided by stakeholders:

PRIORITY THEMES	PRIORITY RANKING CRITERIA
Pedestrian Comfort	<ul style="list-style-type: none"> <li>▪ Improved Pedestrian Safety</li> <li>▪ Improved Lighting</li> </ul>
Traffic Safety and Flow	<ul style="list-style-type: none"> <li>▪ Improved Traffic Flow / Capacity</li> <li>▪ Improved Vehicular Safety</li> <li>▪ Traffic Calming</li> <li>▪ Maximizing On-Street Parking</li> </ul>
Character	<ul style="list-style-type: none"> <li>▪ Improved Business Access</li> <li>▪ Creating a Unique Corridor within Waco</li> <li>▪ Improved Landscaping</li> <li>▪ Providing Plazas/Community Gathering Spaces</li> </ul>
Multimodal Connectivity	<ul style="list-style-type: none"> <li>▪ Improved Business Deliveries</li> <li>▪ Improved Transit</li> <li>▪ Improved Bicycle Safety</li> </ul>

- **Pedestrian Comfort** – The 25th corridor has ample opportunity to improve how it caters to the pedestrian experience through safety, mobility, and urban design considerations. Throughout the planning process, the most common theme that emerged was a desire for an elevated pedestrian experience throughout the corridor. Several of the priority ranking criteria that stakeholders identified as most important to the corridor include improving pedestrian safety and lighting. A list of special implementation considerations is included later in this chapter to help identify strategies to improve pedestrian comfort.
- **Traffic Safety and Flow** – People in cars will continue to make mistakes, but a corridor can safeguard against the ramifications and ensure that those mistakes result in the least significant damage possible. The built roadway environment and policies enacted can lessen the severity of crashes, while creating a more welcoming and approachable (for all) environment. Efforts to calm traffic, maximize on-street parking, and improve traffic flow are all considerations that were supported and prioritized by stakeholders.

- Character** – The character of the 25th Corridor is defined by a kit of parts. There is no singular approach to implementing or influencing the character of an area, but rather it’s a result of all considerations from the planning process. For example, traffic flow and safety can have profound impacts on how users perceive the character of the corridor. High speeds and more lanes of traffic create a significant barrier to pedestrian travel while also detracting from pedestrian comfort with increased noise, sound, and environmental pollution. Similarly, the destinations and land use along the corridor contribute to the character, as active spaces and public gathering places create a sense of community and encourage others to spend their time there. Urban design elements like gateway features, Corridor-specific branding and wayfinding, and landscaping can all create a sense of place within the city, allowing visitors to feel like they’re in an identifiable area opposed to a haphazard corridor. In summary, the input received throughout the planning process indicated a desire for the 25th Corridor to embody a character rich in culture, history, and recognition.
- Multimodal Connectivity** – Improving the mobility of the 25th Corridor spans beyond just automobiles. The impacts that are considered with regards to connectivity are often centered around conventional transportation planning, those that are easily quantifiable like travel time, financial costs for operating and improving the roadway, and crash risk. The overlooked elements are generally less quantifiable, but paramount to achieving a well-functioning corridor. Some of these considerations include the impacts on non-auto users (barrier effect), environmental and social impacts, land use relationships, and general preferences for alternative transportation options (walking, biking, etc.) Catering to pedestrian mobility through a variety of transportation and access options can improve vibrancy, economic prosperity, and the character of the Corridor.

## CHARACTER ZONE PRIORITIZATION MATRIX

Like the priority ranking exercise that stakeholders went through, the resulting priority themes were utilized for evaluation and prioritization within the four Character Zones. In addition to the priority themes that were identified, an analysis of existing conditions needs to be addressed was enacted by the project team. The elements of the existing conditions analysis that were analyzed included: the analysis of crashes, sidewalk inventory, presence of multimodal transportation, on-street parking inventory, and existing level of service. A similar methodology was utilized to evaluate the Character Zones, with the highest overall score representing the lowest priority, and the lowest score representing the highest priority.

### Combined Priority Results

CHARACTER ZONE	PEDESTRIAN COMFORT	TRAFFIC SAFETY AND FLOW	CHARACTER	MULTIMODAL CONNECTIVITY	EXISTING CONDITIONS NEEDS	OVERALL SCORE
Zone 1	3	3	3	1	2	12
Zone 2	2	4	2	2	3	13
Zone 3	1	1	1	3	1	7
Zone 4	4	2	4	4	4	18



Overall, Zone 3 was identified as the highest priority Character Zone. Zone 3 ranked the highest priority in terms of Pedestrian Comfort, Traffic Safety and Flow, Character, and the Existing Conditions Needs. The intersections at 25th Street along Bosque Boulevard and Homan Avenue are critical pedestrian comfort and traffic safety concerns as they provide access to Provident Heights Elementary and Poco Loco Supermercado. Addressing the crash density along 25th Street between Homan Avenue and Bosque Boulevard is an additional safety priority that should be prioritized. The intersection of 25th Street and Grim Avenue provides one of the most significant opportunities to enhance the existing character of the corridor by leveraging the Waco Fire Station 6 improvements and branding. Promoting multimodal access through this Character Zone would improve the character and support economic vitality for the existing and potential future commercial businesses that populate a majority of the Zone as well.

Character Zone 1 ranked second amongst the four Zones in terms of priority, which was primarily driven by the potential for multimodal connectivity and addressing existing conditions needs that were uncovered. Connecting east of Zone 1 to Bell's Hill Park and ultimately north to Downtown Waco was identified as a priority for stakeholders when considering multimodal connectivity. Addressing traffic and congestion issues at the intersection of 25th Street and Franklin Avenue would alleviate the most significant level of service concern that exists throughout the Corridor. Establishing a minor gateway at the eastern extents of the corridor (25th Street and Franklin Avenue) would serve to enhance the corridor's regional appeal and create a sense of arrival for those traveling North or South along Franklin Avenue.

Character Zone 2 ranked third in the prioritization exercise but should be considered through a similar lens as Character Zone 1 in terms of priority. There may be efficiencies in completing future improvement projects between Zone 3 and 4, which are adjacent to one another, that should be considered when projects are contemplated. Zone 2 does offer one of the premier character and branding opportunities throughout the corridor, at the intersection of 25th Street and Waco Drive. Similarly, addressing the significant crash density and improving pedestrian connectivity at the intersection of 25th Street and Waco Drive should be a priority consideration.

The Character Zone that ranked highest in score and lowest in priority was Zone 4, which is primarily characterized by residential development on the western portion of the Corridor. This Character Zone shows some of the greatest potential for transformational traffic reconfiguration through implementation of the proposed roundabout concept at the intersection of 25th and 26th Streets and Maple Avenue. Not only would the slower speed reduce conflicts and potential issues at this intersection, but it would open the vacated portion of 26th Street that could be transformed into a community asset in the form of gathering space and a major gateway branding treatment. Although this project would serve a variety of the identified priorities, it would also be the most significant cost burden.

## SPECIAL IMPLEMENTATION CONSIDERATIONS

The Special Implementation Considerations contained in this section of the report are intended to correspond to the Character Zone Prioritization Matrix provided earlier in this section. Opposed to providing a laundry list of strategies to implement, this approach is intended to provide flexibility to the city with options for future decision-making criteria and considerations that are based on input from the planning process. These Special Implementation Considerations are intended to serve as a prioritized guide for future decision-makers to implement at the appropriate time, with available funds.

PRIORITY THEME	IMPLEMENTATION CONSIDERATION	PRIORITY: SHORT-TERM (0-2 YEARS) MID-TERM (2-5 YEARS) LONG-TERM (5+ YEARS)	COST: \$ \$\$ \$\$\$	LOCATION: CORRIDOR-WIDE MAJOR INTERSECTION SPECIFIC
Pedestrian Comfort (PC)				
	PC.1: Repair damaged sidewalks, clear overgrowth, and construct new segments to fill in sidewalk gaps.	Short-term	\$	Corridor-Wide
	PC.2: Construct ADA compliant ramps at all curb cuts, prioritizing installation at traffic heavy routes, working out towards the entire corridor.	Short-term	\$\$	Corridor-Wide
	PC.3: Amplify visibility for pedestrian crossings by implementing painted crosswalks, enhanced paving, crosswalk signage, pedestrian signal equipment, and pedestrian islands.	Short-term	\$	Major Intersections
	PC.4: Calm traffic by installing curb extensions to narrow roadways and shorten crosswalk distances.	Short-term	\$\$	Corridor-Wide
	PC.5: Install push-button crossing signals at intersections and appropriate mid-block crossings	Short-term	\$	Major Intersections
	PC.6: Install pedestrian-scale light posts along the corridor.	Mid-term	\$\$	Corridor-Wide
	PC.7: Provide pedestrian refuge islands/ landing spaces for pedestrians to stop in while crossing.	Mid-term	\$	Corridor-Wide

PRIORITY THEME	IMPLEMENTATION CONSIDERATION	PRIORITY: SHORT-TERM (0-2 YEARS) MID-TERM (2-5 YEARS) LONG-TERM (5+ YEARS)	COST: \$ \$\$ \$\$\$	LOCATION: CORRIDOR-WIDE MAJOR INTERSECTION SPECIFIC
Traffic Safety and Flow (TS)				
	TS.1: Convert the corridor from 3 one-way lanes to 2 lanes with opposing traffic by restriping the corridor and infilling the border with on-street parking, sidewalks, and curb extensions.	Long-term	\$\$\$	Corridor-Wide
	TS.2: Install street lighting at a consistent interval throughout the corridor to improve safety and visibility.	Mid-term	\$\$	Corridor-Wide
	TS.3: Upgrade existing traffic signals to include pedestrian signals and improve signal timings.	Short-term	\$	Major Intersections
	TS.4: Install speed feedback signage in primarily residential areas and in high accident areas.	Short-term	\$	Specific
	TS.5: Work with local authorities to enforce speed limits and traffic calming measures.	Long-term	\$	Corridor-Wide

PRIORITY THEME	IMPLEMENTATION CONSIDERATION	PRIORITY: SHORT-TERM (0-2 YEARS) MID-TERM (2-5 YEARS) LONG-TERM (5+ YEARS)	COST: \$ \$\$ \$\$\$	LOCATION: CORRIDOR-WIDE MAJOR INTERSECTION SPECIFIC
Character (C)				
	C.1: Construct north and south gateway features at the intersection of 25th street and Waco Drive that match theming recommendations.	Short-term	\$\$\$	Major Intersections
	C.2: Enhance the corridor and local business by installing street trees, vegetative buffers, and planters.	Long-term	\$	Corridor-Wide
	C.3: Install the recommended street furniture to serve aesthetic, community gathering, and mobility stop needs.	Mid-term	\$\$	Corridor-Wide
	C.4: Explore partnerships with local organizations/businesses to host community clean-ups.	Short-term	\$	Corridor-Wide
	C.5: Explore grants to upgrade existing building facades with aesthetic and practical improvements.	Short-term	\$	Specific (Commercial properties)
	C.6: Encourage placemaking and community building by constructing public gathering spaces that can host social and recreational opportunities.	Long-term	\$\$	Specific (Gateway locations)

PRIORITY THEME	IMPLEMENTATION CONSIDERATION	PRIORITY: SHORT-TERM (0-2 YEARS) MID-TERM (2-5 YEARS) LONG-TERM (5+ YEARS)	COST: \$ \$\$ \$\$\$	LOCATION: CORRIDOR-WIDE MAJOR INTERSECTION SPECIFIC
Multimodal Connectivity (MC)				
	MC.1: Expand sidewalks with widths less than 12-feet to better accommodate bicyclists and pedestrians.	Long-term	\$\$	Corridor-Wide
	MC.2: Install a bicycle lane on 26th street and connect it to the sidewalks on 25th street.	Long-term	\$	Specific (26th Street segment)
	MC.3: Convert the space surrounding the gateways into a community space with enhanced paving, street furniture, and vegetation.	Long-term	\$\$\$	Specific (Gateway locations)

# Appendix A

Public Engagement



# 25<sup>th</sup> Street Corridor Plan Survey Report

Waco, Texas

January 2024

DRAFT

**Kimley»»Horn**



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Q17: What are some key pieces of the 25th Street's heritage and history that should be incorporated into future public realm improvements? This could be a historic icon, monument, historic event, structure, cultural events, etc.....	20
Q18: Based on your vision for the future of the 25th Street corridor study area, which of the following photos of existing elements describes this vision? .....	21
Q19: Please select your age range.....	22
Q20: Please select all that apply.....	23
Q21: Are you of Hispanic, Latino, or of Spanish origin?.....	24
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## Survey Summary

The City of Waco is conducting a corridor study for 25<sup>th</sup> street. *The Waco 25<sup>th</sup> Street Corridor Study* will capture a snapshot of how the corridor operates today, and will outline a vision of how the City should develop the corridor over the next 10 to 20 years.

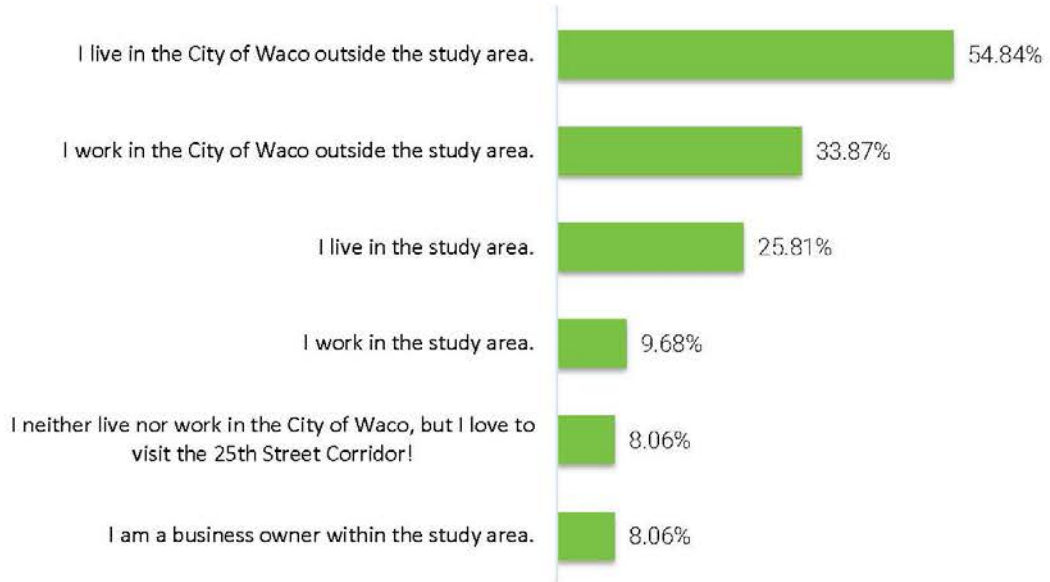
A community survey was conducted to gather feedback from the community as part of the public engagement outreach.



The community survey for the *25th Street Corridor Plan* was hosted on the SurveyMonkey platform, which was active between October 2023 – December 2023 and received **62 responses**. The survey included a total of **22 questions** to gain a better understanding of the current perceptions and future desires for the city. This survey summary report is a recap of the responses gathered from the online survey.



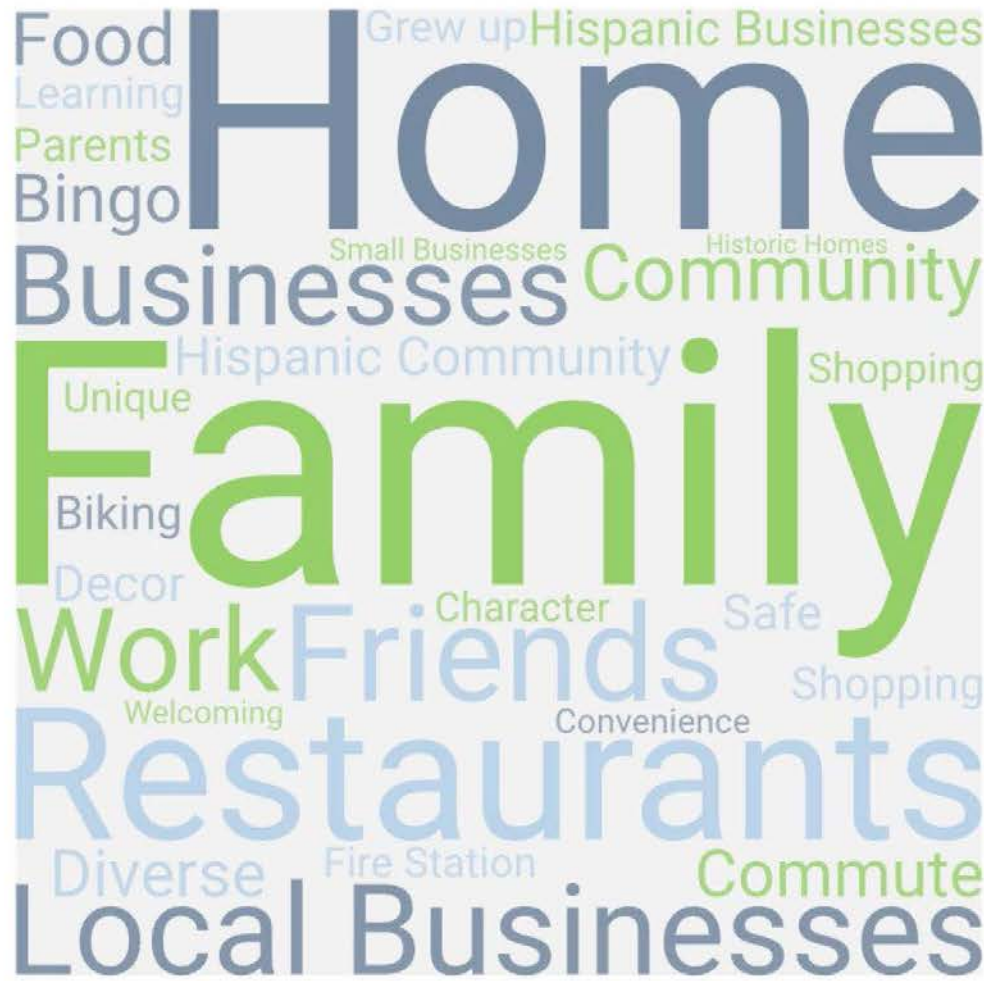
**Q1: Do you live and/or work in the 25th Street corridor study area? (Please select all that apply.)**



Out of the 66 respondents, the largest portion (~55%) of respondents indicated that they lived within the City of Waco, but outside the study area. The next two most popular responses included: I work in the City of Waco outside the study area (~34%) and I live in the study area at (~26%).



**Q2: Tell us why you love to visit the 25th Street corridor.**  
**What brings you here?**

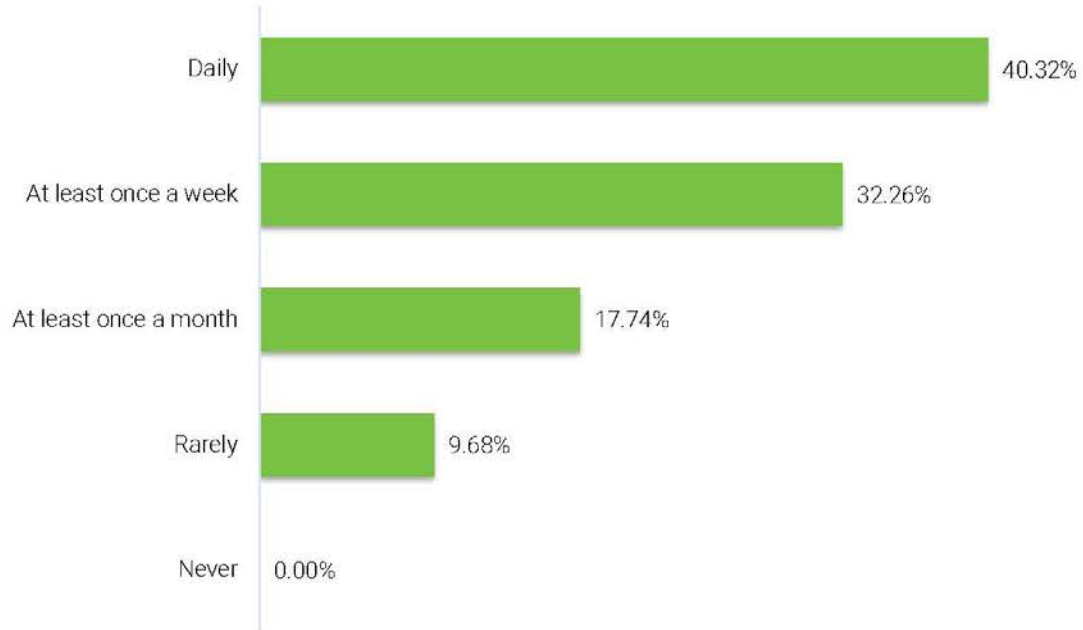


Respondents wrote in responses to the question above, which resulted in a word cloud representing the frequency of words or terms mentioned. The bigger the word the more it was used, and the smaller the word the less it was used.

The Feedback results showcase that the 25th Street corridor draws visitors for various reasons, but the most frequent responses included the words/phrases: home, family and friends, work, restaurants, and local businesses.



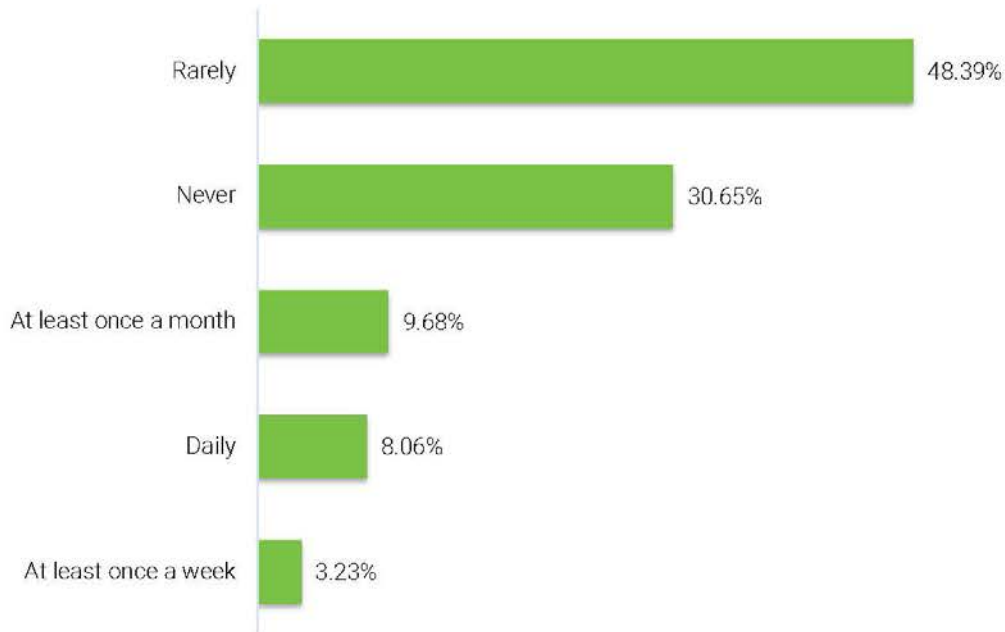
**Q3: How often do you visit the 25th Street corridor?**



The majority of respondents (~72%) indicated that they visited the 25<sup>th</sup> St corridor at least once a week (~40% visited daily and ~32% visited weekly). Less than 20% of respondents indicated that they visited the corridor at least once a month and only ~10% reported rare visits.



**Q4: How often do you walk in the 25th Street corridor study area?**



The survey results indicate that most participants rarely (~48%) or never (~31%) walk within the study area. A smaller percentage of respondents reported walking once a month (~10%), around 8% walk within the study area daily, and the smallest percentage of respondents (~3%) at least once a week.



**Q5: If you do walk along the 25th Street corridor, what are some streetscape improvements you would like to see that would make your walk more comfortable?**

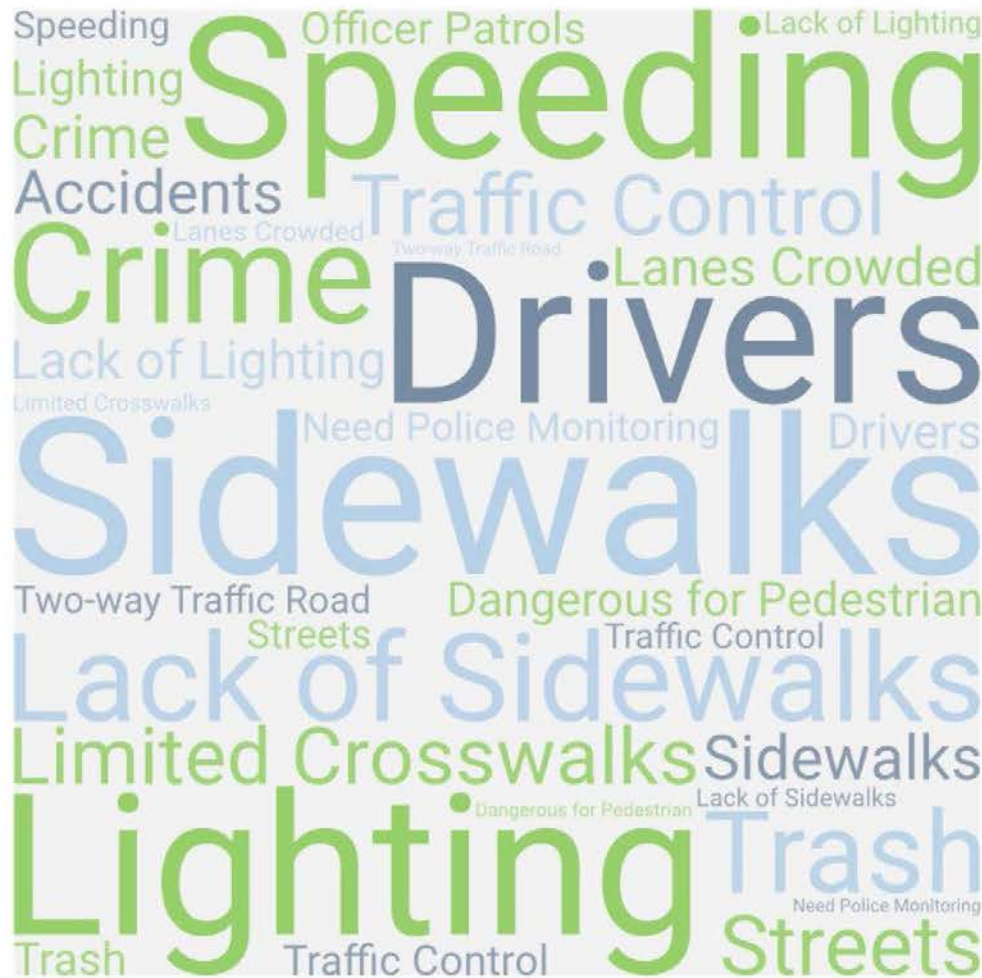


Respondents wrote in responses to the question above, which resulted in a word cloud representing the frequency of words or terms mentioned. The bigger the word the more it was used, and the smaller the word the less it was used.

Participants in the survey were asked about potential improvements to make individuals along the 25th street corridor more comfortable to walk within. Many respondents identified safety concerns and need for improved infrastructure, including the need for improved lighting, traffic stops, sidewalk infrastructure, and overall walkability.



**Q6: Do you have any concerns about pedestrian safety along the 25th Street corridor? If so, please explain.**

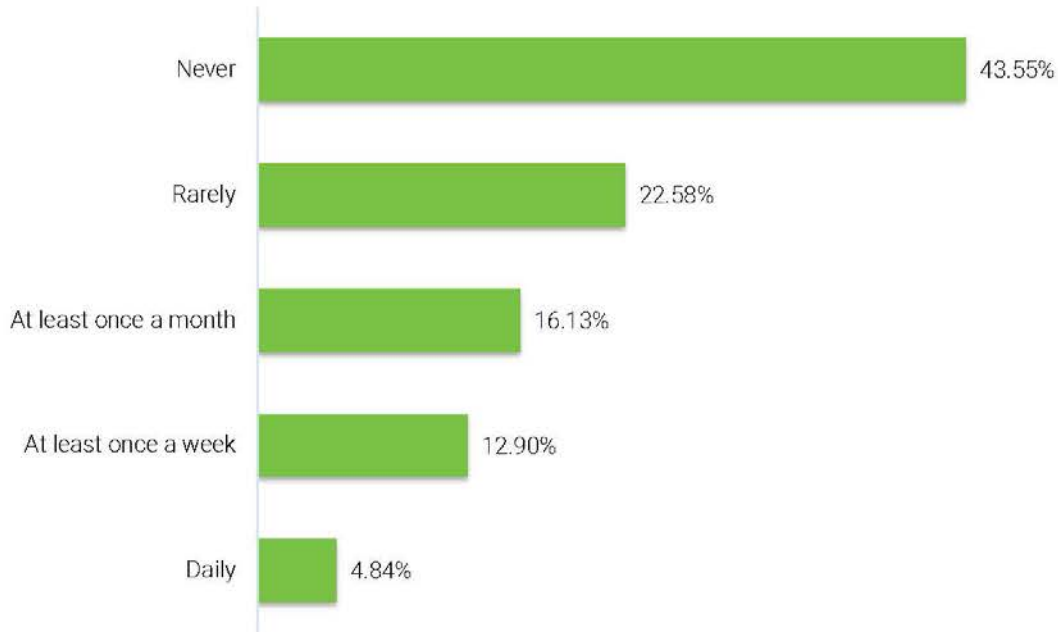


Respondents wrote in responses to the question above, which resulted in a word cloud representing the frequency of words or terms mentioned. The bigger the word the more it was used, and the smaller the word the less it was used.

Feedback from participants highlighted several pedestrian safety concerns regarding the corridor. The most prominent issues raised were related to speeding, inadequate lighting, insufficient sidewalk infrastructure, crime and safety, and a lack of pedestrian-friendliness.



**Q7: If bike lanes or alternative bicycle facilities such as shared use paths were constructed along the corridor, how often would you use them?**



The survey results indicated varying anticipated usage levels for bike lanes or alternative bicycle facilities. Approximately 44% of respondents stated they would never use them, while ~23% indicated rare usage. Around 16% expressed a likelihood of using them at least once a month, followed by ~13% at least once a week and ~5% on a daily basis.





**Q8: Please provide any additional feedback you may have about potential bicycle facilities along the 25th Street corridor.**



Respondents wrote in responses to the question above, which resulted in a word cloud representing the frequency of words or terms mentioned. The bigger the word the more it was used, and the smaller the word the less it was used.

The survey asked respondents to provide feedback regarding the need for biking infrastructure improvements in the study area. Suggestions included implementing protected bike lanes, enhancing safety measures, addressing issues with traffic and speeding, and providing more security. While some believe these improvements are necessary, others showed concerns or caution for making such improvements.



**Q9: Currently, most of the 25th Street corridor is lined with sidewalks on both sides of the streets, but many of the existing sidewalks need significant repair. Which sidewalks do you think should be repaired first?**



Respondents wrote in responses to the question above, which resulted in a word cloud representing the frequency of words or terms mentioned. The bigger the word the more it was used, and the smaller the word the less it was used.

Respondents identified multiple areas where sidewalk repairs are needed, including Gorman, Bosque, Waco Drive, and many others throughout the city, as well as a general need to improve sidewalk conditions throughout the entirety of the city.



**Q10: The community has expressed concerns about ADA accessibility issues along 25th Street. Where do you experience accessibility issues the most along the corridor?**

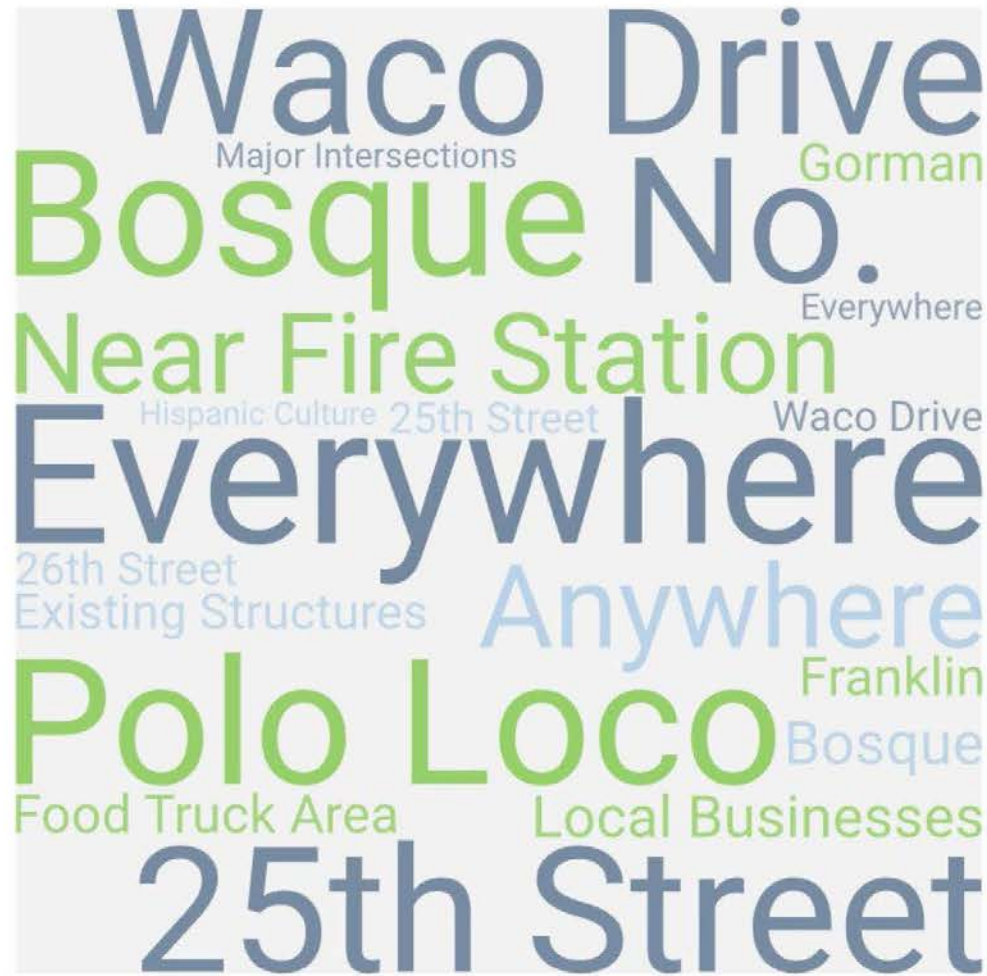


Respondents wrote in responses to the question above, which resulted in a word cloud representing the frequency of words or terms mentioned. The bigger the word the more it was used, and the smaller the word the less it was used.

The surveyors identified several concerns regarding ADA accessibility issues in the study area. These concerns include street crossings, the entirety of the 25th Street corridor, businesses along the route, limited parking, and the roads Bosque, Marrow, and Gorman.



**Q11: Where would you like to see new murals or public art be installed along the 25th Street corridor?**



Respondents wrote in responses to the question above, which resulted in a word cloud representing the frequency of words or terms mentioned. The bigger the word the more it was used, and the smaller the word the less it was used.

The survey results indicate a strong desire for new murals or public art installations in various locations. Specific locations include the fire station, Waco Drive, the corridor, and Bosque Street.



**Q12: A method to promote a more vibrant, urban environment is to convert one-way streets to two-way. Doing this can enhance pedestrian safety, improve traffic flow, and promote new economic activity for businesses previously interacting with only one direction of traffic. Converting 25th Street to a two-way street is being considered as part of this study. How do you initially feel about the ideas of converting 25th street to a two-way street?**



Based on the survey results, the majority of respondents (~58%) strongly supported the conversion of 25th Street into a two-way street. A smaller percentage (~18%) preferred to keep it as a one-way street. Some respondents (~13%) had no opinion and (~11%) were unsure.



**Q13: Please provide any additional feedback you may have on the previous question about converting 25th Street to a two-way street.**

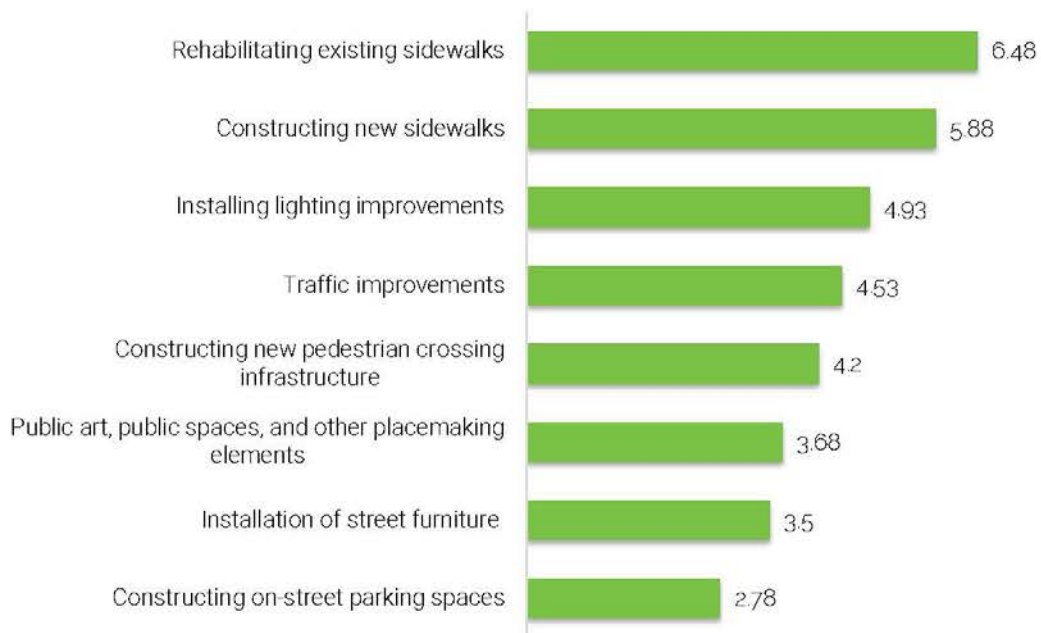


Respondents wrote in responses to the question above, which resulted in a word cloud representing the frequency of words or terms mentioned. The bigger the word the more it was used, and the smaller the word the less it was used.

The feedback regarding converting the 25th Street corridor into a two-way street was divided, with most expressing support, citing efficiency and safety, and others advocating for it to remain a one-lane street, citing safety and lack of right-of-way.



**Q14: All types of corridor improvement projects are extremely valuable to the long-term success of a vibrant 25th Street. However, because funding is limited, the City is seeking to understand which projects you want seen implemented first along the corridor. Please rank the following corridor improvement project types based on how you think the City should implement projects along 25th Street:**



Weighted scores are calculated by assigning numerical values to rankings and multiplying them by the corresponding weights assigned to each ranking. These scores are then added together to provide an overall weighted score for each item being ranked.

The survey results indicate that participants ranked the top three improvements for the study area as follows: rehabilitating existing sidewalks received the highest ranking, followed by constructing new sidewalk infrastructure, and installing lighting improvements.



**Q15: Do you have any additional feedback to provide on which projects you consider a high priority along the 25th Street corridor?**



Respondents wrote in responses to the question above, and the word cloud depicted is a representation of the different words mentioned. The bigger the word the more it was used, and the smaller the word the less it was used.

The survey results highlighted key areas of improvement for the 25th Street Corridor. The respondents indicated their priorities lied with enhancing sidewalk infrastructure, implementing street lighting and other streetscape elements, ensuring cleaner streets, prioritizing pedestrian safety, and enforcing the speed limit.





**Q16: What key word or phrase describes your vision of the 25th Street corridor in the future?**



Respondents wrote in responses to the question above, which resulted in a word cloud representing the frequency of words or terms mentioned. The bigger the word the more it was used, and the smaller the word the less it was used.

Respondents indicated they had a desire for a future that creates a more walkable, cleaner, and safer corridor. An emphasis on diversity and inclusion of Hispanic culture and community was also indicated.



**Q17: What are some key pieces of the 25th Street's heritage and history that should be incorporated into future public realm improvements? This could be a historic icon, monument, historic event, structure, cultural events, etc.**



Respondents wrote in responses to the question above, which resulted in a word cloud representing the frequency of words or terms mentioned. The bigger the word the more it was used, and the smaller the word the less it was used.

The feedback received highlighted several key elements that should be incorporated into future public realm improvements. These include the 25th Street Theater, art, murals, safety, parades, and the celebration of Latino heritage.



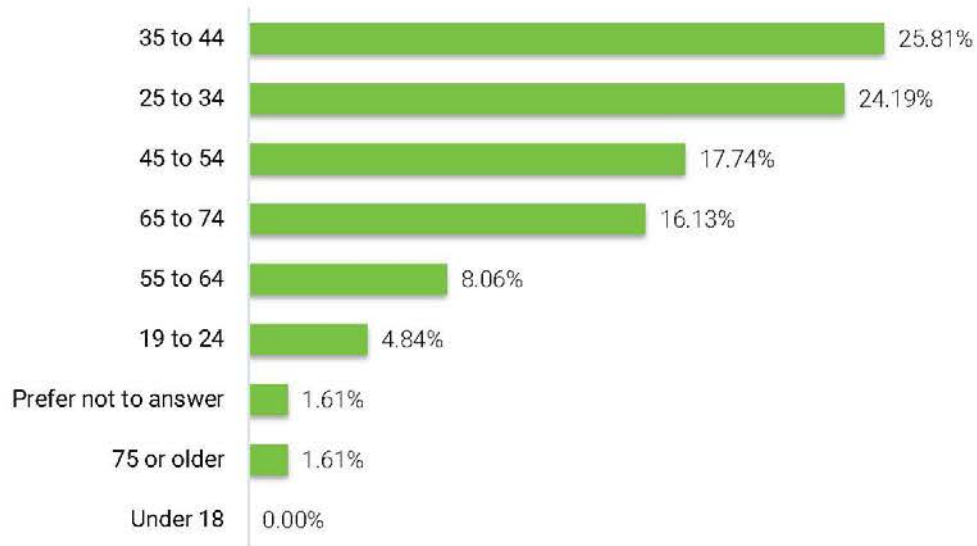
**Q18: Based on your vision for the future of the 25th Street corridor study area, which of the following photos of existing elements describes this vision?**



The top three existing elements describing the participants vision of the future are the 25<sup>th</sup> Street Theatre (~73%), Artistic Tiling (~67%), and Spanish Classical architectural elements (~52%).



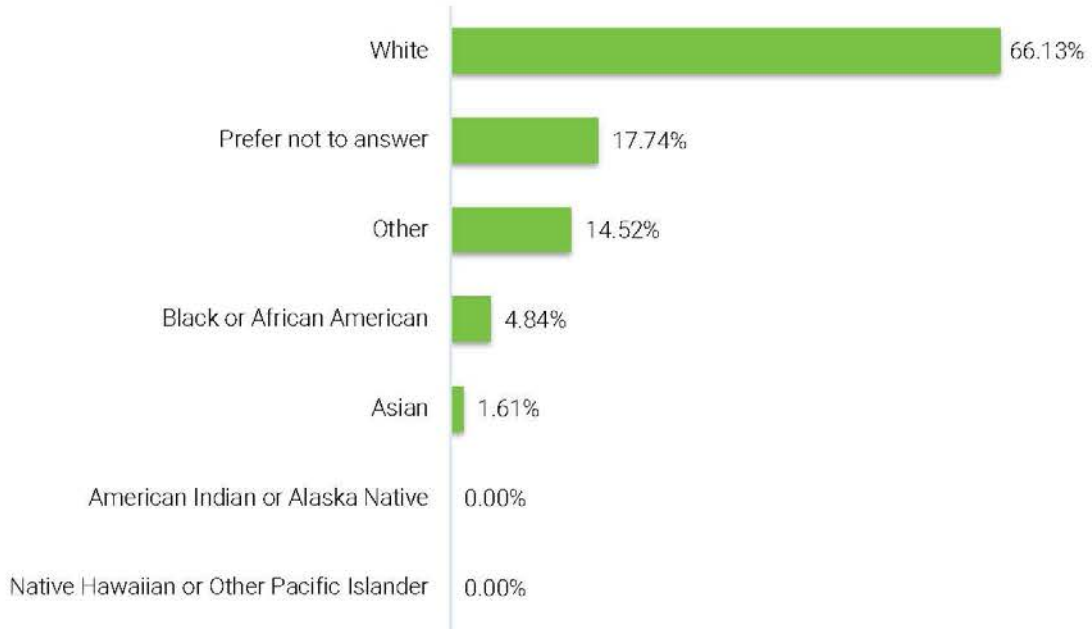
**Q19: Please select your age range.**



The majority of respondents (~68%) fall within the young to middle aged adult category (25-54).



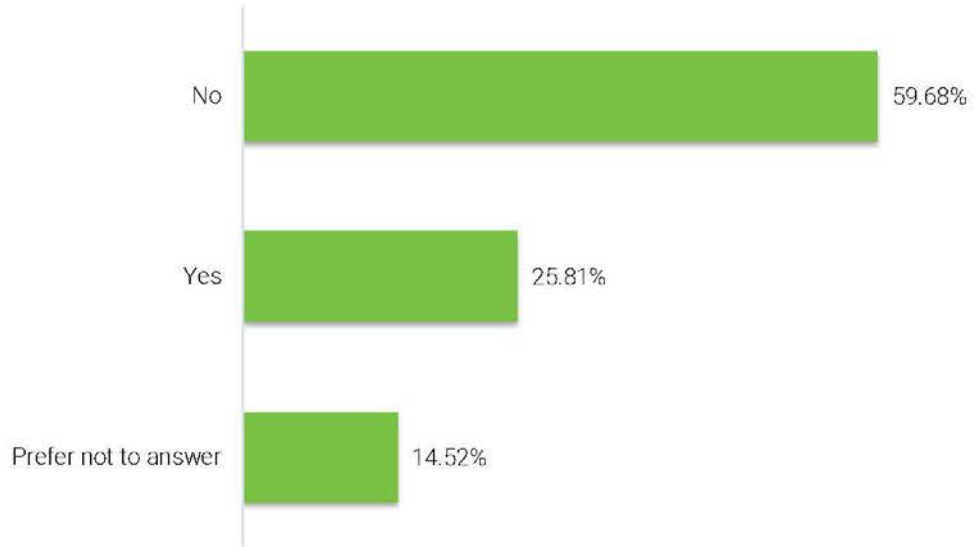
**Q20: Please select all that apply:**



The majority of respondents (~66%) are White, with a large portion (combined ~32%) of respondents choosing the Other category or preferring not to answer. Smaller groups of the populations included Black or African American (~5%) and Asian (~2%).



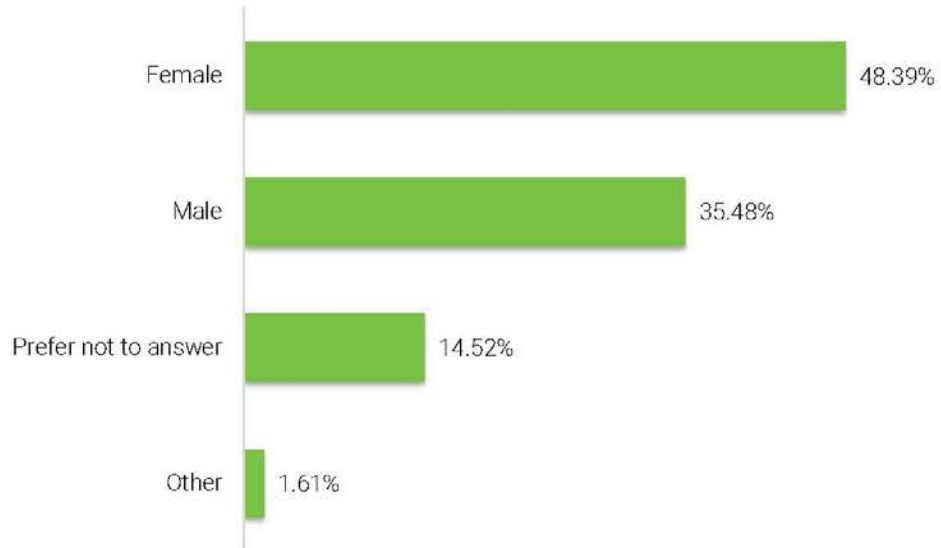
**Q21: Are you of Hispanic, Latino, or of Spanish origin?**



One quarter of respondents indicated that they were of Hispanic, Latino, or Spanish origin.



**Q22: Please select your gender identity.**



Of the survey respondents, a little bit more than 48% of indicate they identified as female and 35% identified as male. The remaining 16% of respondents identified as Other or preferred not to answer.

# Appendix B

## Waco Corridor Analysis



## Waco Corridor Analysis

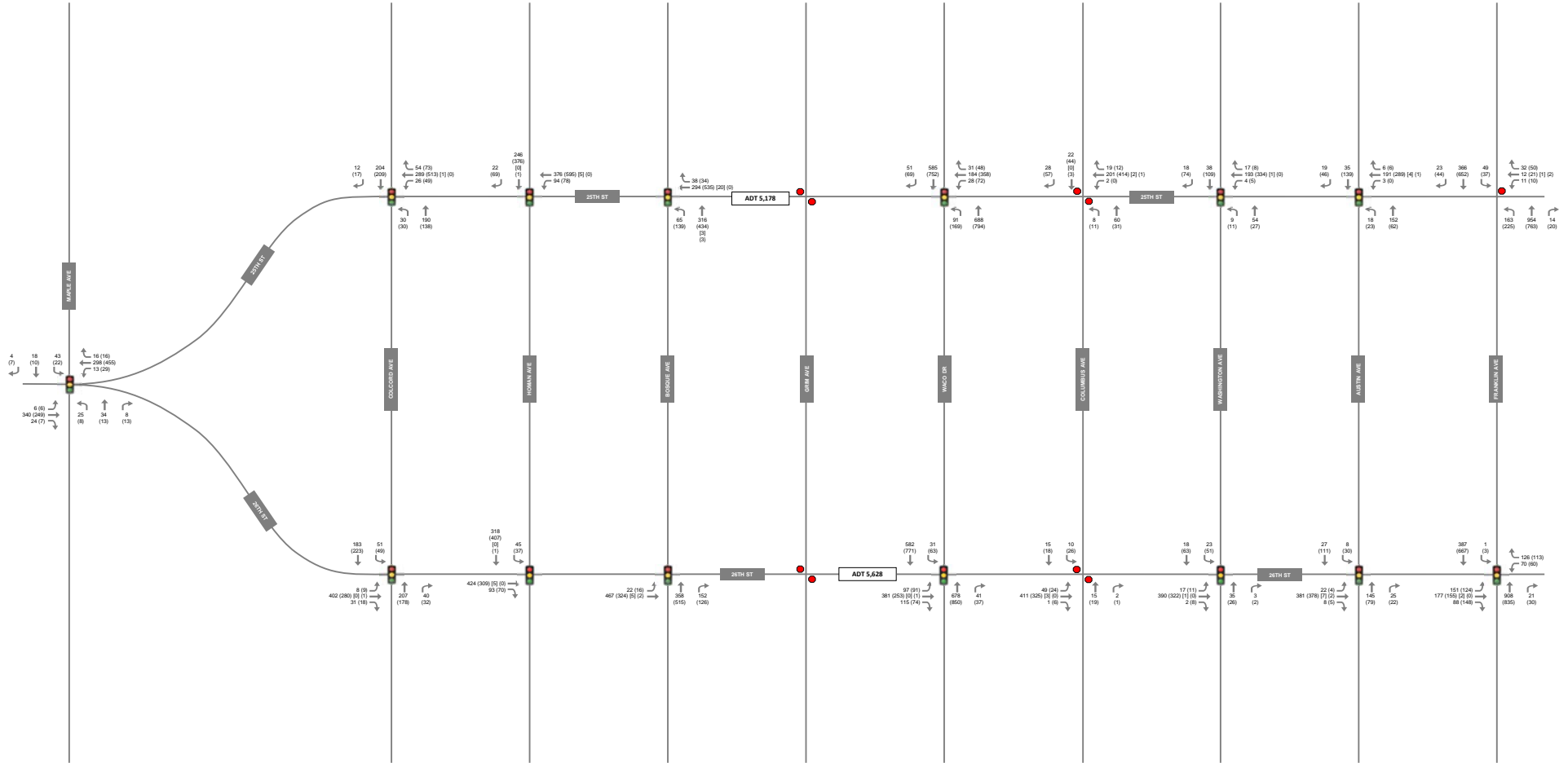
**LEGEND**

W (X) | Y | (Z)  
 W = AM Peak Hour Turning Movements  
 X = PM Peak Hour Turning Movements  
 Y = AM Peak Hour Pedestrian Movements  
 Z = PM Peak Hour Pedestrian Movements

Existing Facility

● Stop-Controlled Approach  
 ● Signalized Intersection

Values may not sum from point-to-point due to rounding and presence of smaller driveways not included in analysis.



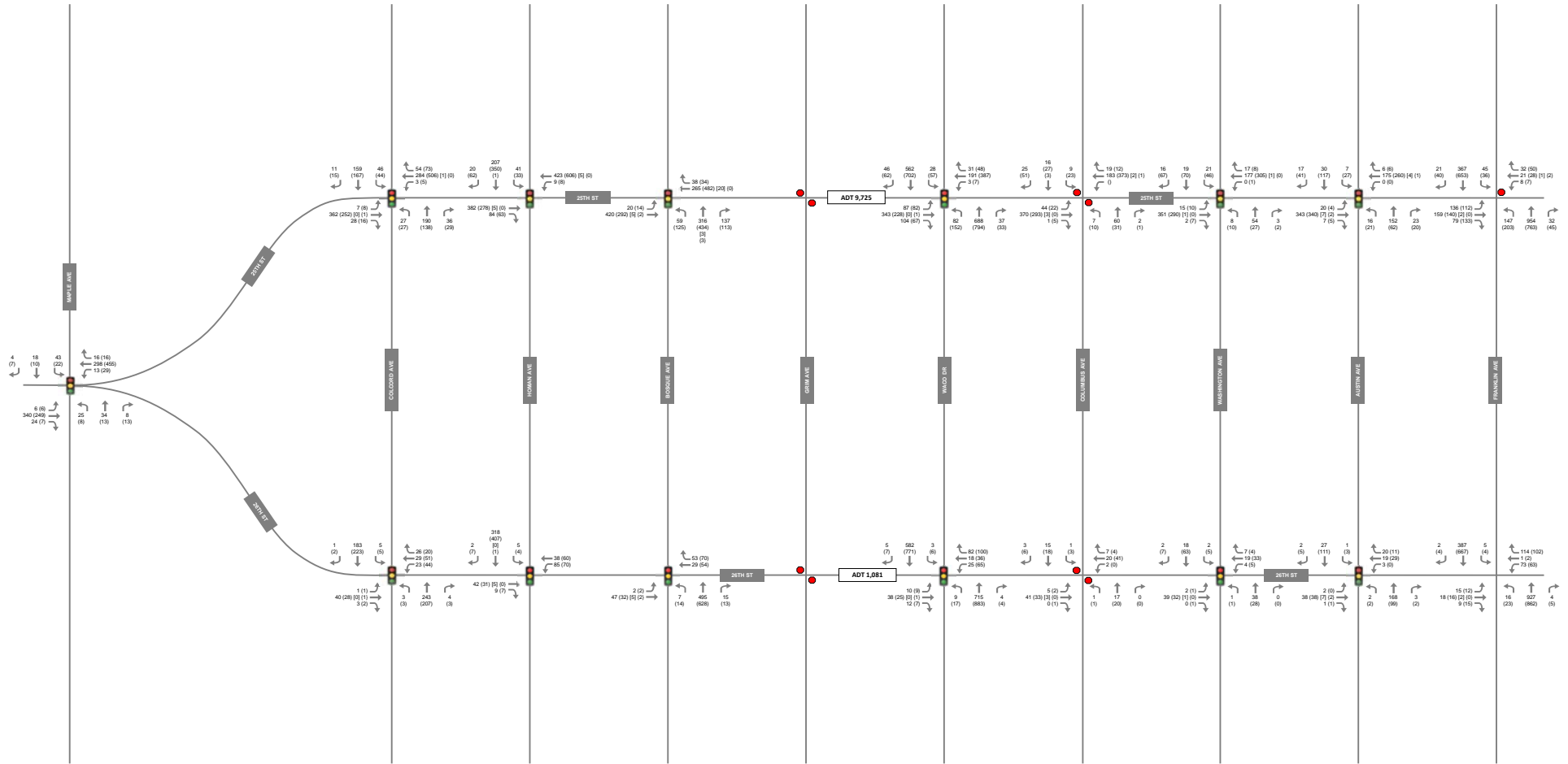
## Waco Corridor Analysis

**LEGEND**

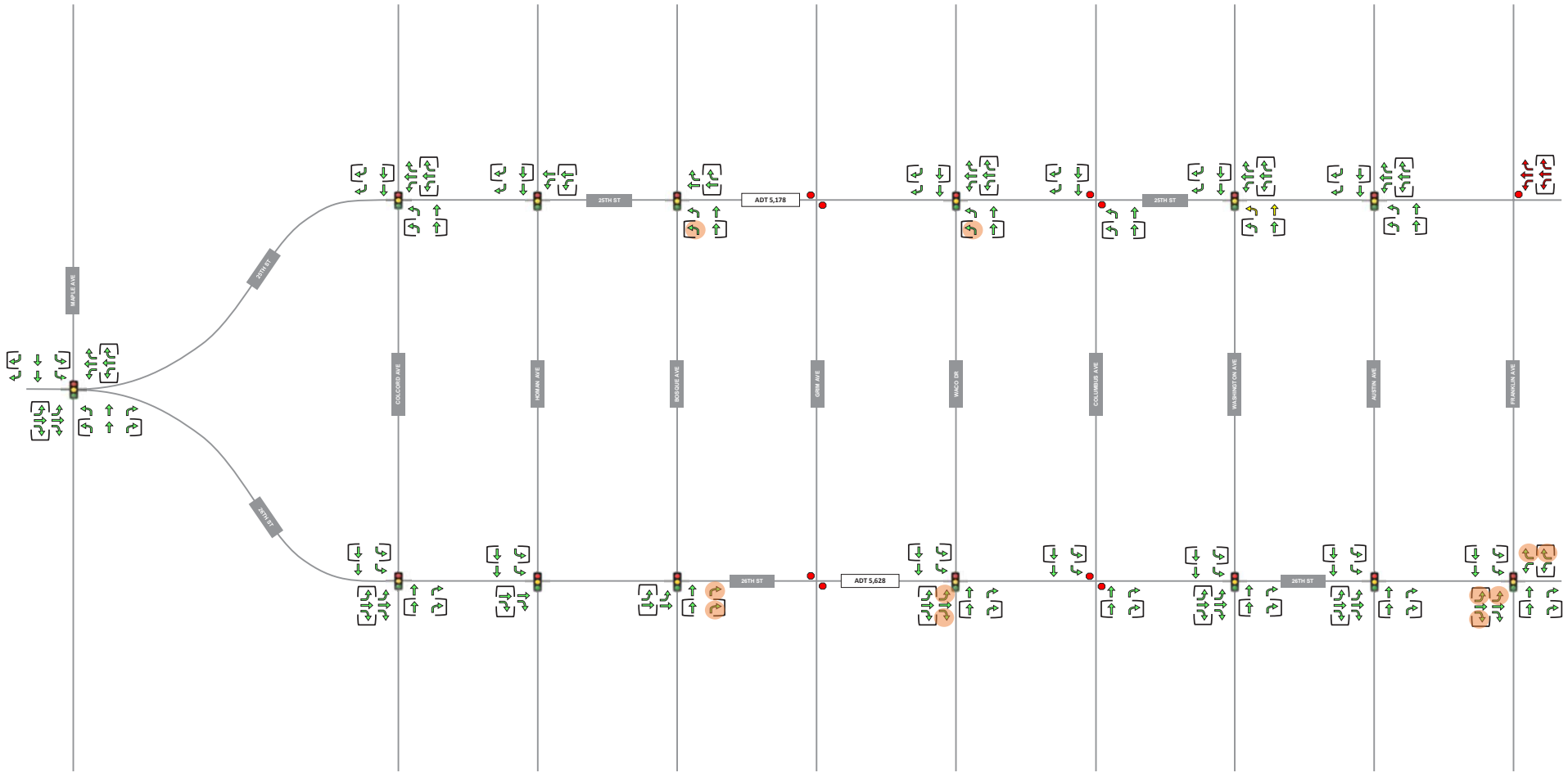
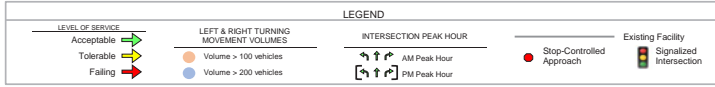
W (X) [Y] (Z)  
 W = AM Peak Hour Turning Movements  
 X = PM Peak Hour Turning Movements  
 Y = AM Peak Hour Pedestrian Movements  
 Z = PM Peak Hour Pedestrian Movements

Existing Facility  
 Stop-Controlled Approach  
 Signalized Intersection

Volumes may not sum from point to point due to rounding and presence of smaller driveways not included in analysis.

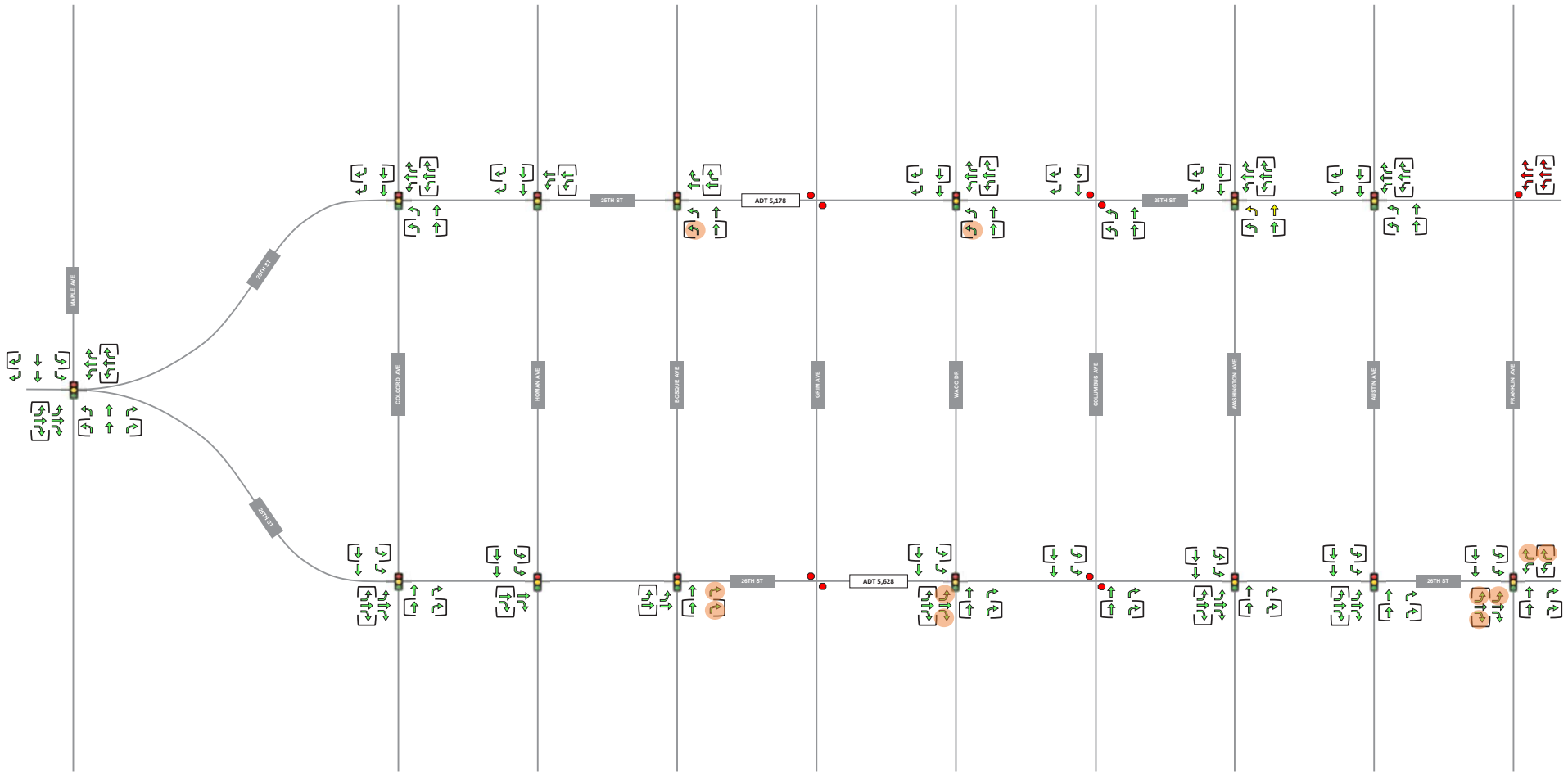


## Waco Corridor Analysis



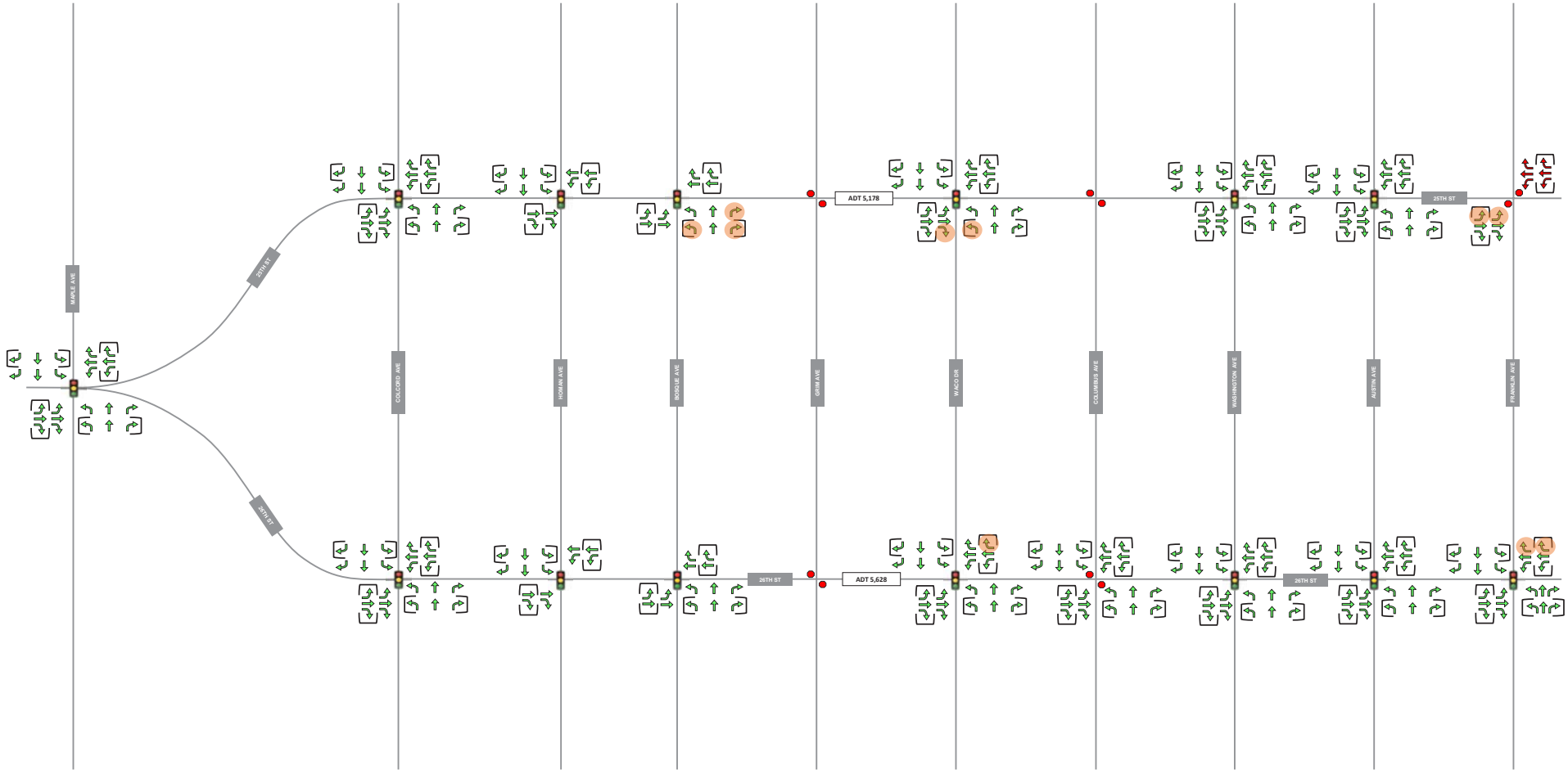
## Waco Corridor Analysis

LEVEL OF SERVICE		LEFT & RIGHT TURNING MOVEMENT VOLUMES		INTERSECTION PEAK HOUR		Existing Facility	
Acceptable			Volume > 100 vehicles		AM Peak Hour		Stop-Controlled Approach
Tolerable			Volume > 200 vehicles		PM Peak Hour		Signalized Intersection
Failing							



# Waco Corridor Analysis

LEVEL OF SERVICE		LEGEND	
Acceptable		LEFT & RIGHT TURNING MOVEMENT VOLUMES	INTERSECTION PEAK HOUR
Tolerable		Volume > 100 vehicles	AM Peak Hour
Falling		Volume > 200 vehicles	PM Peak Hour
		Existing Facility	Stop-Controlled Approach
			Signalized Intersection



# Appendix C

Franklin Signal Warrant

# Franklin Signal Warrant

**TRAFFIC SIGNAL WARRANT ANALYSIS (2011 TXM UTCD)**

MAJOR STREET: Franklin Avenue NB SB # OF APPROACH LANES:

MINOR STREET: 25th Street EB WB # OF APPROACH LANES:

CITY, STATE: Waco, TX

COMMENTS: Existing (2023)

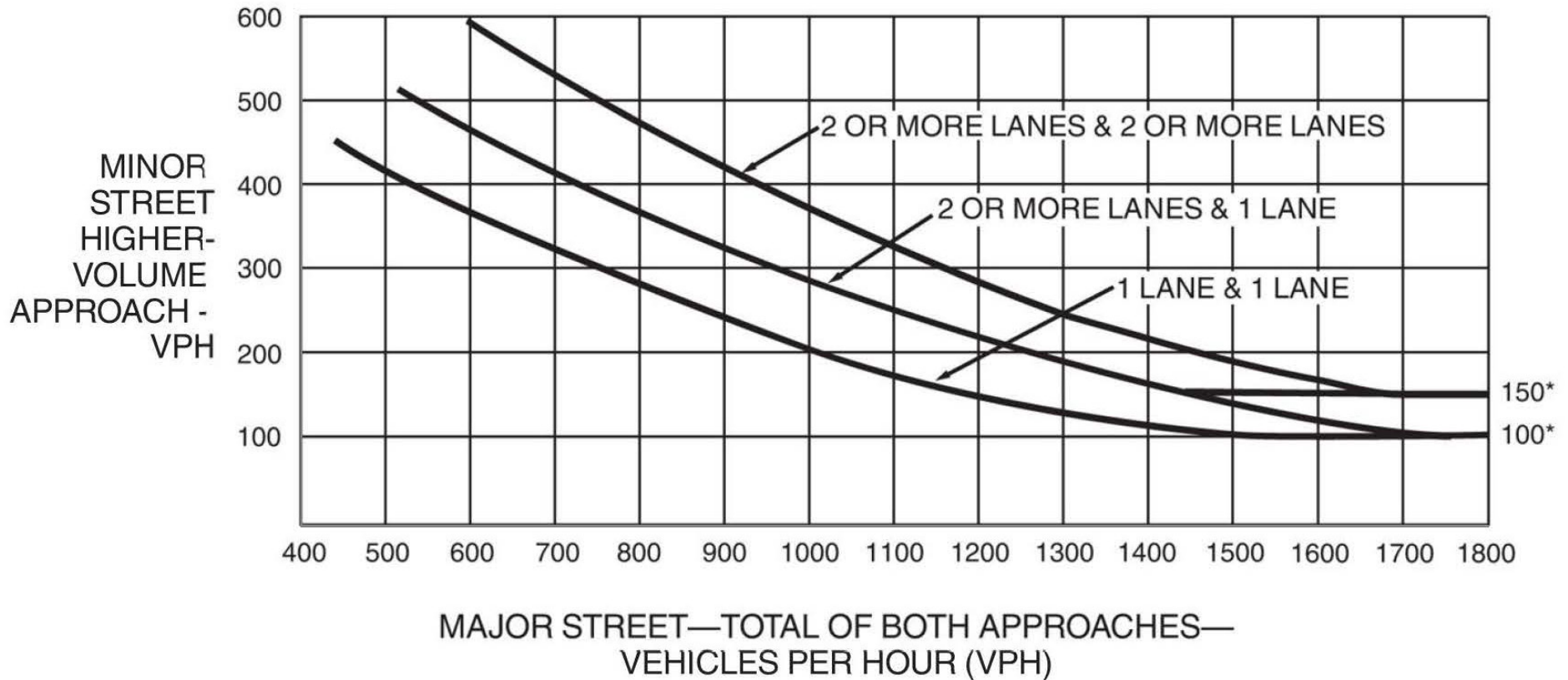
ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N):   
 85TH PERCENTILE SPEED OR POSTED SPEED LIMIT GREATER THAN 40 MPH ON MAJOR STREET (Y OR N):

	MAJOR ST TWO-WAY TRAFFIC	MINOR ST TRAFFIC HEAVY LEG	WARRANT 1 - Condition A, Part 1			WARRANT 1 - Condition B, Part 1			WARRANT 1 - Condition A, Part 2			WARRANT 1 - Condition B, Part 2			WARRANT 2	WARRANT 3
			MAIN LINE	SIDE STREET	BOTH MET	MAIN LINE	SIDE STREET	BOTH MET	MAIN LINE	SIDE STREET	BOTH MET	MAIN LINE	SIDE STREET	BOTH MET	Four-Hour	Peak Hour
<b>THRESHOLD VALUES</b>			<b>420</b>	<b>105</b>		<b>630</b>	<b>53</b>		<b>336</b>	<b>84</b>		<b>504</b>	<b>42</b>			
07:00 AM TO 08:00 AM	0	0														
08:00 AM TO 09:00 AM	55	1131		Y			Y			Y			Y		Y	
09:00 AM TO 10:00 AM	0	0														
10:00 AM TO 11:00 AM	0	0														
11:00 AM TO 12:00 PM	0	0														
12:00 PM TO 01:00 PM	0	0														
01:00 PM TO 02:00 PM	0	0														
02:00 PM TO 03:00 PM	0	0														
03:00 PM TO 04:00 PM	0	0														
04:00 PM TO 05:00 PM	0	0														
05:00 PM TO 06:00 PM	81	1008		Y			Y			Y			Y		Y	
06:00 PM TO 07:00 PM	0	0														
07:00 PM TO 08:00 PM	0	0														
07:00 PM TO 08:00 PM	0	0														
08:00 PM TO 09:00 PM	0	0														
	136	2,139	0	2	0	0	2	0	0	2	0	0	2	0	2	
			8 HOURS NEEDED			8 HOURS NEEDED			8 HOURS NEEDED for both Condition A & B						4 HRS NEEDED	1 HR NEEDED
			NOT SATISFIED			NOT SATISFIED			NOT SATISFIED						NOT SATISFIED	SATISFIED

03/20/24  
 Kimley-Horn and Associates, Inc.

## Franklin Signal Warrant

**Figure 4C-3. Warrant 3, Peak Hour**

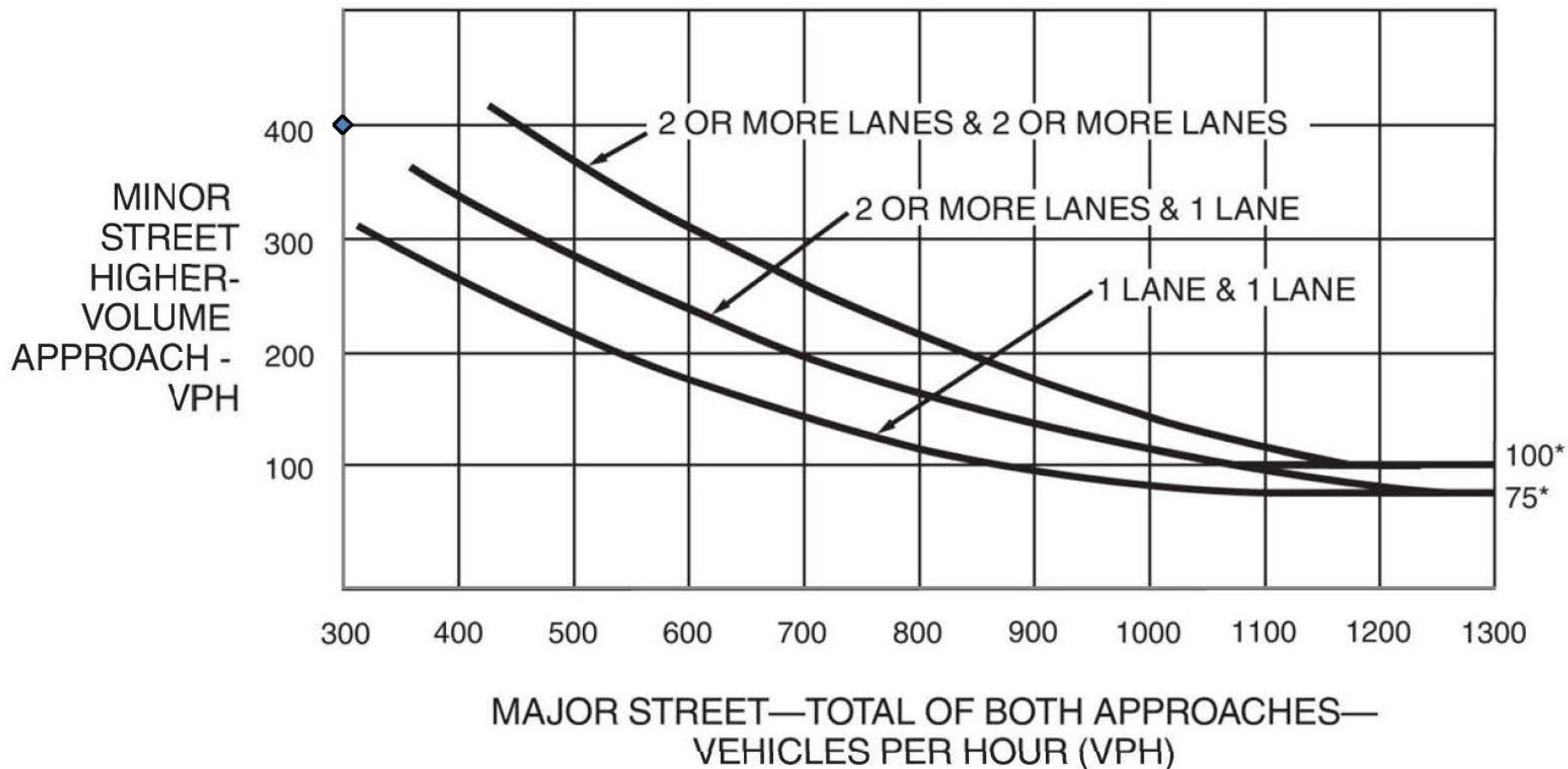


\*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.



## Franklin Signal Warrant

**Figure 4C-4. Warrant 3, Peak Hour (70% Factor)**  
 (COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



\*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.



# CITY OF WACO, TEXAS

Kimley»Horn